Addendum I

From data-month September 2002 onwards, the printed ISC Bulletins have been generated directly from the ISC Relational Database.

From data-month October 2002, a new location program ISCloc has been used in operations. Also, the IASPEI standard seismic phase list has now been adopted by the ISC, please see the last pages of this Bulletin for details.

From data-month January 2003 onwards, an updated regionalisation scheme has been adopted (Young,J.B., B.W.Presgrave, H.Aichele, D.A.Wiens, E.A.Flinn The Flinn-Engdahl Regionalisation Scheme: the 1995 Revision, Physics of the Earth and Planetary Interiors 96 (1996), 223-297)

These developments have prompted the need to review and revise the format of the Bulletin.

The following example illustrates the changes :-

September 2002

*NEIC **01** 18:45:41.7±1.7, 21°.70S×179°.55W, h600^{km}, mb4.6/6,*
Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
*IDC **01** 18:45:46.3±2.6, 21°.76S×179°.70W, h627^{km}±37^{km}, mb3.5/4,*
mb1 3.7/4, mb1mx3.2/14, Error ellipse: s-maj=83.2km
s-min=20.6km az=159.0
ISC 01 18:45:43.1±2.7, **22°.3S**±0°.2×**179°.6W**±0°.3, **h613**^{km}±42^{km},
n22, σ**1°.15**/21, **mb4.4**/9, **1C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HBZ	**Hicks Bay**	**15.41**	**186**	*e*P	**P**	**18 48 53.1**	**-1.7**
URZ	**Urewera**	**16.21**	**189**	P	**P**	**18 49 01.5**	**-0.9**
MRZ	**Mangatainoka R**	**18.81**	**192**	*e*P	**P**	**18 49 26.7**	**0.0**
DIW	**D'Urville Isla**	**19.30**	**195**	*e*P	**P**	**18 49 27.3**	**-3.9**
CAW	**Cannon Point**	**19.34**	**192**	*e*P	**P**	**18 49 31.7**	**+0.1**
OTW	**Orongorongo Tu**	**19.52**	**192**	*e*P	**P**	**18 49 33.0**	**-0.2**
MOW	**Moikau**	**19.61**	**192**	*e*P	**P**	**18 49 35.5**	**+1.5**
THZ	**Tophouse**	**20.46**	**196**	*e*P	**P**	**18 49 42.0**	**+0.2**
KHZ	**Kahutara**	**20.93**	**194**	P	**P**	**18 49 46.2**	**+0.2**
ARMA	**Armidale**	**27.03**	**246**	*e*P	**P**	**18 50 42.4**	**+2.3**
	4.9nm,0.5s,mb4.4						
CTA	**Charters Tower**	**31.93**	**267**	⇑*i*P	**P**	**18 51 22.3**	**+0.4**
	13nm,0.5s,mb4.8						
STKA	**Stephens Creek**	**35.75**	**246**	*e*P	**P**	**18 51 55.3**	**+1.8**
	3.1nm,0.4s,mb4.2						
ASAR	**Alice Springs**	**42.74**	**259**	P	**P**	**18 52 50.1**	**+0.3**
	9.8nm,0.5s,mb4.6,baz=92,slow=8.2,SNR=47						
ASAR				S	**S**	**18 58 31.3**	**-0.1**
	1.0nm,0.8s,baz=95,slow=15,SNR=5.7						
ASPA	**Alice Springs**	**42.74**	**259**	*e*P	**P**	**18 52 50.1**	**+0.2**
WRA	**Warramunga Arr**	**42.96**	**264**	P	**P**	**18 52 51.0**	**-0.7**
	1.8nm,0.3s,mb4.0,baz=96,slow=7.8,SNR=93						
WRA				S	**S**	**18 58 33.0**	**-1.5**
	0.3nm,0.9s,baz=99,slow=14,SNR=3.0						
KAKA	**Kakadu**	**46.64**	**273**	*e*P	**P**	**18 53 18.2**	**-1.8**
	14nm,0.4s,mb4.8						
FITZ	**Fitzroy Crossi**	**51.39**	**264**	*e*P	**P**	**18 53 54.3**	**-0.7**
	12nm,0.3s,mb4.8						
MBWA	**Marble Bar**	**56.08**	**259**	*e*P	**P**	**18 54 27.1**	**-0.7**
	11nm,0.6s,mb4.2						
CMAR	**Chiang Mai Arr**	**89.35**	**290**	P	**P**	**18 57 38.1**	**+1.0**
	1.3nm,0.8s,mb3.8,baz=135,slow=3.1,SNR=8.1						
ARCES	**ARCESS Array B**	**130.36**	**349**	PKP	PKP	19 03 43.7	-0.5
	0.7nm,0.6s,baz=282,slow=4.2,SNR=3.5						
FINES	**FINESS Array B**	**137.02**	**342**	PKP	PKP	19 03 57.3	+0.5
	3.7nm,1.1s,baz=158,slow=3.2,SNR=3.4						
MLR	**Muntele Rosu**	**148.85**	**324**	PKPbc	PKP	19 04 22.7	+5.2
	0.2nm,0.7s,baz=1.2,slow=23,SNR=2.3						

Epicentral Estimates

Origin times - The superscripts have been removed and a simpler format adopted.
Magnitudes - All magnitudes that were reported to the ISC are now shown. Only two per agency were allowed in the past.
Error Ellipses - The keywords have been shortened.

Observational Data

The station code, station name, epicentral distance and azimuth are all shown in **bold** for Initial phases. For Secondary phases, only the station code (in normal font) is repeated.

Phase ID's - The Operator's identification is shown in normal font. The Operator's residual is no longer printed. When the arrival time of an initial or secondary phase has contributed to the location - the ISC's identification, the arrival time and the ISC's travel-time residual are all shown in **bold** .

Phase Parameters - The following parameters are included on supplementary lines where appropriate :-

Component, amplitude and period (or logA/T) - reported by the Operator.
Station magnitude estimate - computed by the ISC.
Slowness, Back-Azimuth, Signal-to-Noise ratio - measured by the Operator.

Addendum II

From data-month January 2006 the ISC hypocentres are computed using the AK135 earth velocity model (*Kennett, B.L.N. Engdahl, E.R. & Buland R., 1995. Constraints on seismic velocities in the Earth from travel times, Geophys J Int, 122, 108-124; B.L.N. Kennett, 2005. Seismological tables: ak135. Research School of Earth Sciences, the Australian National University, Canberra*) and then reviewed by the ISC seismologists. The ISC still produces the hypocentre solutions based on Jeffreys-Bullen travel time tables (agency code ISCJB), yet these solutions are no longer reviewed.

The ISC is planning to re-compute the entire ISC dataset using AK135 once new location procedures are designed, tested, discussed and approved by the ISC Governing Council. Until that time the automatic ISCJB locations will continue to be produced alongside the AK135 solutions to observe the long-time continuity of the ISC Bulletin.

Addendum III

From data month January 2009 the ISC hypocentres are computed using the new ISC location algorithm and all reported IASPEI seismic phases, for which ak135 predictions are available. This algorithm is described in: *Bondár, I. and D.A. Storchak (2011), Improved location procedures at the International Seismological Centre, Geophys. J. Int., 186, 1220-1244, doi:10.1111/j.1365-246X.2011.05107.x*

The alternative locations based on JB-tables are still produced with the original location algorithm for consistency with the past data. It is still the plan that by the middle of calendar year 2014 all ISC locations (1960-2008) are going to be re-computed with the new locatin algorithm and ak135 as part of the ISC Bulletin Re-Build project, sponsored by the US NSF and several agencies from Japan, China and India.

ATH **01** *00:00:37.8, 38.24N×20.39E, h12km±1km, ML2.8/7, Error ellipse: s-maj=1.8km s-min=1.1km az=259.0*

THE **01** *00:00:37.9, 38.22N×20.39E, h12km, ML3.2/7, Error ellipse: s-maj=1.0km s-min=0.4km az=230.0*

ISC 01 00:00:37.6±1.1, 38.24N±0.03×20.39E±0.05, h14km±5km, n29, σ0.43/48, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.04	55	P	Pg	00 00 40.1	0.0
KEF4				S	Sg	00 00 41.4	-0.4
KEF3	Kipouria, Keph	0.04	222	P	Pg	00 00 40.2	+0.1
KEF3				S	Sg	00 00 41.9	0.0
CHV1	Chavriata, Kef	0.05	183	P	Pg	00 00 40.2	0.0
CHV1				S	Sg	00 00 41.9	0.0
	30µm,0.3s						
LXR1	Lixouri, Cepha	0.06	130	P	Pg	00 00 40.2	0.0
LXR1				S	Sg	00 00 42.0	0.0
	74µm,0.3s						
KEF1	Kardakata, Kep	0.08	58	P	Pg	00 00 40.4	-0.1
KEF1				S	Sg	00 00 42.1	-0.3
ARG2	Argostoli	0.10	125	P	Pg	00 00 40.6	-0.1
ARG2				S	Sg	00 00 42.5	-0.2
	35µm,0.1s						
KEF2	Argostoli. Kep	0.11	131	P	Pg	00 00 40.7	0.0
KEF2				S	Sg	00 00 42.4	-0.5
VLS	Valsamata	0.17	110	P	Pg	00 00 41.5	-0.2
VLS				S	Sg	00 00 44.3	-0.2
	10µm,0.2s						
VLS	Valsamata	0.17	110	P	Pg	00 00 41.5	-0.2
VLS				S	Sg	00 00 44.3	-0.2
VLS				AML	AML	00 00 44.4	
	comp=N,25994µm,0.3s						
VLS				AML	AML	00 00 44.6	
	comp=E,13913µm,0.1s						
VSK1	VASILIKIADES	0.22	39	P	Pg	00 00 42.8	+0.3
VSK1				S	Sg	00 00 46.4	+0.5
	comp=E,7µm,0.3s						
KFL	Anninata	0.34	112	P	Pg	00 00 44.5	-0.1
KFL				S	Sg	00 00 49.9	+0.6
KFL	Anninata	0.34	112	P	Pg	00 00 44.5	-0.1
KFL				S	Sg	00 00 49.1	-0.2
VLMS	Volimes, Zakyn	0.42	148	P	Pg	00 00 46.0	0.0
VLMS				S	Sb	00 00 52.7	-0.4
VLMS				AML	AML	00 00 53.2	
	comp=N,3832µm,0.4s						
VLMS				AML	AML	00 00 54.3	
	comp=E,2625µm,0.1s						
EVGI	Lefkada island	0.44	29	P	Pg	00 00 46.6	+0.2
EVGI				S	Sb	00 00 53.4	-0.3
	comp=E,842nm,0.1s						
EVGI	Lefkada island	0.44	29	P	Pg	00 00 46.5	+0.2
EVGI				S	Sg	00 00 53.2	+0.9
MGNA	Meganis	0.53	37	P	Pg	00 00 47.9	-0.1
MGNA				S	Sg	00 00 54.1	-0.9
MGNA				AML	AML	00 00 56.8	
	comp=N,1534µm,0.2s						
MGNA				AML	AML	00 00 59.2	
	comp=E,1320µm,0.2s						
LKD2	Lefkada island	0.59	21	P	Pg	00 00 47.8	-1.4
LKD2				AML	AML	00 01 07.3	
	comp=E,664µm,0.4s						
LKD2				AML	AML	00 01 07.6	
	comp=N,639µm,0.3s						
PDO	Prodromos	0.72	60	P	Pg	00 00 51.5	-0.2
PDO				S	Sb	00 01 02.8	+0.9
	comp=N,1µm,0.3s						
PDO	Prodromos	0.72	60	P	Pg	00 00 51.5	-0.2
PDO				AML	AML	00 01 04.6	
	comp=E,1342µm,0.3s						
PDO				AML	AML	00 01 06.1	
	comp=N,2629µm,0.3s						
RLS	Riolos of Patr	0.87	101	P	Pg	00 00 54.0	-0.5
PVO	Paravola	0.97	67	P	Pg	00 00 56.4	0.0
PVO				AML	AML	00 01 13.0	
	comp=N,1772µm,0.3s						
PVO				AML	AML	00 01 13.2	
	comp=E,1971µm,0.3s						
DRO	Drossia	1.08	105	P	Pb	00 00 57.9	-0.3
DRO				S	Sn	00 01 13.7	+0.4
EFP	Efpalio	1.21	80	P	Pn	00 00 59.6	-0.5
ANX	Ano Chora	1.26	73	P	Pn	00 01 01.3	+0.3
ANX				S	Sn	00 01 18.1	+0.4
ANX				AML	AML	00 01 25.7	
	comp=N,733µm,0.5s						
ANX				AML	AML	00 01 25.9	
	comp=E,606µm,0.6s						
AMT	Artemida-Makis	1.26	123	P	Pb	00 01 01.4	+0.2
EVR	Evrytania	1.31	58	P	Pn	00 01 01.9	+0.3
SERG	Sergoula	1.33	82	P	Pn	00 01 01.7	-0.1
KLV	Kalavryta, Ach	1.41	97	P	Pn	00 01 03.2	+0.3
AGG	Agios Georgios	1.71	62	P	Pg	00 01 10.0	-0.6

IDC **01** *00:00:45.8±0.5, 51.20N×178.12W, h0km, mb4.5/28, mb1 4.7/31, mb1mx4.6/37, mbtmp4.5/31, ML5.0/3, MS4.0/26, Ms1 4.0/26, ms1mx3.9/47, Error ellipse: s-maj=16.1km s-min=10.4km az=168.0*

MOS **01** *00:00:47.5±0.9, 51.15N×178.10W, h24km, mb5.0/49, MS4.3/5, Error ellipse: s-maj=8.0km s-min=5.9km az=97.5*

AEIC **01** *00:00:49±2.1, 51.07N±0.06×178.06W±0.09, h11km±3km, ML4.7/41, mb5.0/450(NEIC), Error ellipse: s-maj=9.3km s-min=6.5km az=135.0*

NEIC **01** *00:00:49.4±1.6, 51.02N±0.05×178.14W±0.07, h27km±3km, Error ellipse: s-maj=8.7km s-min=4.7km az=147.0*

BJI **01** *00:00:49.6±0.0, 51.41N×178.40W, h33km, mB5.1/43, mb4.8/56, Ms4.6/29, Ms7 4.4/28*

GCMT **01** *00:00:51.0±0.3, 51.22N±0.02×178.04W±0.04, h22km, MW4.9/86, Moment Tensor Solution. s44,c54; s86,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.63±.14; $M_{\theta\theta}$-2.06±.10; $M_{\phi\phi}$-0.57±.09; $M_{r\theta}$0.63±.15; $M_{\theta\phi}$-1.11±.06; $M_{\phi r}$0.37±.14; Best double couple: M_o2.74100×10^{16} NP1:ϕ_s243.00000°,δ37.00000°,λ91.00000°. NP2: ϕ_s61.00000°,δ53.00000°,λ89.00000°. Principal axes: T 2.7290, Plg82.0000°, Azm327.0000°; N 0.0180, Plg1.0000°, Azm62.0000°; P -2.7520, Plg8.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 00:00:47.1±1.6, 50.95N±0.05×178.15W±0.03, h13km±9km, n932, σ1.11/821, mb5.0/262, MS4.2/40, 24C-10D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TASE	Tanaga Southea	0.89	4		Pb	00 01 04.7	+0.2
GALAA	Gareloi Lava P	0.90	334		Pb	00 01 05.2	+0.5
GAEA	Gareloi East	0.91	336		Pb	00 01 05.4	+0.6
TAFP	Tanaga Falls P	0.95	6		Pb	00 01 05.4	-0.1
KIMD	Kanaga Island	0.99	35		Pn	00 01 05.9	-0.3
KIWB	Kanaga Island	1.10	34		Pn	00 01 07.6	-0.6
KIKV	Kanaga Island	1.11	33		Pn	00 01 07.8	-0.6
KICM	Kanaga Island	1.14	31		Pn	00 01 08.8	0.0
ADK	Adak	1.31	44		Pn	00 01 10.5	-0.6
ADK	Adak	1.31	44	P	Pn	00 01 10.5	-0.6
ADAG	Mount Adagdak	1.41	43		Pn	00 01 12.8	+0.2
GSTD	Great Sitkin T	1.67	48		Pn	00 01 16.9	+0.7
GSTD					Sb	00 01 39.1	+0.4
GSMY	Great Sitkin M	1.70	49		Pn	00 01 16.9	+0.3
GSTR	Great Sitkin T	1.73	48		Pn	00 01 16.5	-0.5
ATKA	Atka Island	2.76	62		Pn	00 01 30.6	-0.5
ATKA	Atka Island	2.76	62		Sn	00 02 06.7	+2.3
KOKL	Mount Kliuchef	2.81	59		Pn	00 01 33.6	+1.7
KOKL					Sn	00 02 07.7	+2.0
KOFP	Korovin Flat P	2.85	61		Pn	00 01 34.5	+2.1
SMY	Shemya	5.13	293		Pn	00 02 04.2	+0.6
SMY	Shemya	5.13	293	P	Pn	00 02 04.2	+0.6
NIKH	Nikolski High	6.09	67		Pn	00 02 16.5	-0.3
OKSP	Okmok Steeple	6.49	65		Pn	00 02 24.6	+2.2
OKTU	Okmok Mt. Tuli	6.67	65		Pn	00 02 27.1	+2.2
MGOD	Makushin Gods	7.46	63		Pn	00 02 37.9	+2.2
MREP	Makushin Rep't	7.54	63		Pn	00 02 38.8	+2.1
MSW	Makushin Switc	7.55	62		Pn	00 02 39.3	+2.4
MSW					Sn	00 04 05.3	+3.0
MTBL	Makushin Table	7.63	62		Pn	00 02 40.6	+2.7
UNV	Unalaska Valle	7.69	63		Sn	00 04 09.7	+4.1
UNV	Unalaska Valle	7.69	63		Pn	00 02 38.7	0.0
AKRB	Akutan Reef Bi	8.02	62		Pn	00 02 47.1	+3.8
AKMO	Akutan Morgan	8.04	62		Pn	00 02 45.9	+2.3
AKMO					Sn	00 04 18.3	+4.0
AKGG	Akutan Green G	8.09	62		Pn	00 02 46.3	+2.2
AKBBA	Akutan Broad B	8.09	62		Pn	00 02 46.8	+2.6
AKLV	Akutan Long Va	8.09	62		Pn	00 02 47.0	+2.7
AKUT	Akutan	8.19	62	Pn	Pn	00 02 46.4	+0.8
AKSA	Akutan Strait	8.23	62		Pn	00 02 48.8	+2.7
WESP	Westdahl Peak	8.88	61		Pn	00 02 58.0	+2.8
WESE	West Dahl East	8.95	62		Pn	00 02 59.0	+2.9
SSBA	Shishaldin	9.30	60		Pn	00 03 03.2	+2.3
FALS	False Pass	9.72	61		Pn	00 03 08.0	+1.5
SDPT	Sand Point	11.48	61		Pn	00 03 30.8	+0.2
CNBA	Chernabura Isl	11.85	64		Pn	00 03 35.9	+0.2
GAMB	Gambell	13.31	13	Pn	Pn	00 03 56.1	+0.6
CHIR	Chirikof Islan	14.27	61	Pn	Pn	00 04 06.9	-1.8
PET	Petropavlovsk	14.43	287	eP	P	00 04 20.0	+2.2
PET				eS	Sn	00 06 59.8	+9.1
PET				MLR	MLR		
	comp=Z,1µm,16.0s						
PET				MLR	MLR		
	comp=Z,2µm,17.0s						
PEA0B	Petropavlovsk-	15.01	288	Pn	P	00 04 23.8	-0.4
PEA0B				IAmb	IAmb	00 04 32.5	
	comp=Z,33nm,1.0s						
PEA0B	Petropavlovsk-	15.01	288	P	P	00 04 23.8	-0.4
PEA0B				pmax	pmax		
	comp=Z,33nm,1.0s						
PETK	Petropavlovsk-	15.01	288	Pn	Pn	00 04 20.4	+1.6
	comp=Z,0.5nm,0.3s,baz=98,slow=16,SNR=5.7						
PETK	Petropavlovsk-	15.01	288		P	00 04 24.4	+0.2
SII	Sitkinak Islan	15.20	59		Pn	00 04 20.5	-0.8
SII				IAmb	IAmb	00 04 29.6	
	comp=Z,42nm,0.6s						
ANM	Nome	15.21	21	P	P	00 04 26.3	0.0
ANM	Nome	15.21	21	P	P	00 04 26.3	0.0
ANM				pmax	pmax		
	comp=Z,12nm,0.7s						
OHAK	Old Harbor	15.82	57		Pn	00 04 27.3	-2.1
OHAK				IAmb	IAmb	00 04 36.8	
	comp=Z,110nm,0.7s						
KDAK	Kodiak Island	16.32	55	Pn	Pn	00 04 32.6	-3.2
	comp=Z,3.7nm,0.3s,baz=190,slow=3.8,SNR=45						
KDAK				Sn	Sn	00 07 34.3	-2.2
	comp=Z,0.3nm,0.3s,baz=46,slow=23,SNR=5.3						
KDAK	Kodiak Island	16.32	55		Pn	00 04 32.7	-3.1
KDAK				IAmb	IAmb	00 04 43.6	
	comp=Z,57nm,0.6s						
KDAK	Kodiak Island	16.32	55	P	Pn	00 04 32.7	-3.1
KDAK						00 07 34.3	
KDAK				pmax	pmax		
	comp=Z,57nm,0.6s						
RSO	Redoubt South	17.08	46	P	P	00 04 47.8	+0.4
CNPM	China Poot	17.47	50	IAmb	IAmb	00 04 57.0	
	comp=Z,73nm,0.7s						
SKT	Skwentna	18.23	43	IAmb	IAmb	00 05 05.1	
	comp=Z,72nm,0.7s						
PPLA	Purkeypile	18.38	39	IAmb	IAmb	00 05 08.2	
	comp=Z,43nm,0.6s						
SEW	Seward	18.50	49	IAmb	IAmb	00 05 12.6	
	comp=Z,67nm,0.7s						
BILL	Bilibino	18.77	342	P	Pn	00 05 06.6	+0.5
BILL	Bilibino	18.77	342	i P	Pn	00 05 07.2	+1.1
BILL				pmax	pmax		
	comp=Z,24nm,0.8s						
BILL				MLR	MLR		
	comp=Z,303nm,17.0s						
PMR	Palmer	19.13	45	P	P	00 05 09.4	-0.3
PMR	Palmer	19.13	45	P	P	00 05 09.4	-0.3
PMR				pmax	pmax		
	comp=Z,12nm,0.7s						
KTH	Kantishna Hill	19.19	39	IAmb	IAmb	00 05 16.2	
	comp=Z,95nm,0.8s						
KNK	Knik Glacier	19.38	46	IAmb	IAmb	00 05 18.6	
	comp=Z,87nm,0.7s						
TRF	Thorofare Moun	19.40	39	IAmb	IAmb	00 05 20.4	
	comp=Z,83nm,0.9s						
BPAW	Bear Paw Mtn.	19.44	37	IAmb	IAmb	00 05 19.3	
	comp=Z,42nm,0.7s						
IMAR	Indian Mountai	19.53	30	P	P	00 05 14.1	+0.1
MA2	Magadan	19.54	308	P	P	00 05 13.0	-1.2
	comp=Z,1.1nm,0.3s,baz=90,slow=16,SNR=2.4						
MA2	Magadan	19.54	308	IAmb	IAmb	00 05 17.8	
	comp=Z,7.8nm,0.6s						
MA2	Magadan	19.54	308	i P	P	00 05 14.2	0.0
MA2				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SML	Sawmill	19.57	45	P	P	00 05 14.4	-0.1
SML				IAmb	IAmb	00 05 22.0	
	comp=Z,35nm,0.7s						
SEY	Seymchan	19.84	318	P	P	00 05 17.6	+0.2
	comp=Z,0.6nm,0.3s,baz=121,slow=11,SNR=19						
SEY	Seymchan	19.84	318	i P	P	00 05 17.8	+0.4
GLI	Glacier Island	19.84	48	IAmb	IAmb	00 05 24.2	
	comp=Z,40nm,0.6s						
MID	Middleton Isla	19.87	52	P	P	00 05 17.8	+0.1
MID				IAmb	IAmb	00 05 23.4	
	comp=Z,126nm,0.9s						
MID	Middleton Isla	19.87	52	P	P	00 05 17.8	+0.1
MID				pmax	pmax		
	comp=Z,126nm,0.9s						
RND	Reindeer	19.96	40	IAmb	IAmb	00 05 25.9	
	comp=Z,48nm,0.6s						
HIN	Hinchinbrook I	20.00	50	IAmb	IAmb	00 05 25.7	
	comp=Z,39nm,0.6s						
MLY	Manley	20.01	35	IAmb	IAmb	00 05 25.0	
	comp=Z,59nm,0.8s						
SCM	Sheep Creek Mo	20.02	45	P	P	00 05 18.2	-1.3
SCM				IAmb	IAmb	00 05 27.4	
	comp=Z,84nm,0.7s						
SCM	Sheep Creek Mo	20.02	45	P	P	00 05 18.2	-1.3
SCM				pmax	pmax		
	comp=Z,84nm,0.7s						
BWN	Browne	20.06	38	IAmb	IAmb	00 05 24.9	
	comp=Z,56nm,0.8s						
MCK	McKinley	20.07	39	IAmb	IAmb	00 05 27.5	
	comp=Z,36nm,0.8s						
FID	Port Fidalgo	20.10	49	IAmb	IAmb	00 05 26.7	
	comp=Z,57nm,0.7s						
NEA	Nenana	20.40	37	IAmb	IAmb	00 05 31.4	
	comp=Z,38nm,0.8s						
EYAK	Cordova Ski Ar	20.40	49	P	P	00 05 22.7	-0.8
RAGM	Ragged Mountai	20.88	50	P	P	00 05 30.1	+1.2
MDM	Murphy Dome	20.90	37	IAmb	IAmb	00 05 43.8	
	comp=Z,48nm,0.8s						
TCOL	CIGO, UAF Yank	21.00	37	P	Pn	00 05 31.9	-0.7
	baz=243,SNR=7.6						
COLA	College	21.00	37	P	P	00 05 29.7	-0.2
COLA				IAmb	IAmb	00 05 38.4	
	comp=Z,39nm,0.7s						
COLA	College	21.00	37	P	P	00 05 29.7	-0.2
COLA				pmax	pmax		
	comp=Z,39nm,0.7s						
HDA	Harding Lake	21.15	39	IAmb	IAmb	00 05 45.9	
	comp=Z,23nm,0.6s						
HDA	Harding Lake	21.15	39	P	P	00 05 31.2	-0.3
	baz=245,SNR=30						
PAX	Paxson	21.21	43	P	P	00 05 31.1	-1.3
PAX	Paxson	21.21	43	P	P	00 05 31.1	-1.3
PAX				pmax	pmax		
	comp=Z,20nm,0.7s						
SUCK	Suckling Hills	21.26	51	P	P	00 05 33.2	+0.4
POKR	Poker Plat Res	21.27	37	P	P	00 05 32.8	-0.1
	baz=243,SNR=13						
IL31		21.32	38	P	P	00 05 33.2	-0.2
IL31				IAmb	IAmb	00 05 52.3	
	comp=Z,27nm,0.8s						
ILAR	Eielson Array	21.32	38	P	P	00 05 31.7	-1.8
	comp=Z,2.4nm,0.6s,baz=238,slow=8.1,SNR=32						
ILAR				PcP	PcP	00 09 36.7	-0.4
	comp=Z,0.7nm,0.5s,baz=291,slow=3.5,SNR=6.4						
COLD	Coldfoot	21.41	30	P	P	00 05 36.0	+1.6
VRDI	Verde Repeater	21.65	48	P	P	00 05 37.3	+0.1
CRQM	Cirque	21.70	50	P	P	00 05 38.9	+1.2
CRQM				IAmb	IAmb	00 05 56.7	
	comp=Z,32nm,0.7s						
RIDG	Independent Ri	21.74	41	IAmb	IAmb	00 05 46.0	
	comp=Z,33nm,0.7s						
WAX	Waxell Ridge	21.78	51	P	P	00 05 39.6	+1.1
TGL	Tana Glacier	21.85	50	P	P	00 05 39.5	+0.2
MCARA	McCarthy VSAT	21.88	48	IAmb	IAmb	00 05 53.7	
	comp=Z,57nm,0.8s						
MENT	Mentasta	21.96	44	P	P	00 05 40.3	-0.1
DOT	Dot Lake	22.04	42	IAmb	IAmb	00 05 45.5	
	comp=Z,38nm,0.6s						
BALM	Baldy	22.13	49	P	P	00 05 43.3	+1.0
SCRK	Sand Creek	22.18	41	IAmb	IAmb	00 05 46.7	
	comp=Z,30nm,0.7s						
MESA	MESA	22.18	51	P	P	00 05 43.6	+0.7
TOLK	Toolik Lake Re	22.45	27	P	P	00 05 45.7	+0.1
	baz=232,SNR=17						
BARN	Barnard Glacie	22.47	49	P	P	00 05 45.5	-0.5
CTGM	Chitina Glacie	22.61	50	P	P	00 05 46.8	-0.6
CTGM				IAmb	IAmb	00 05 58.8	
	comp=Z,38nm,0.7s						
FYU	Fort Yukon	22.74	34	IAmb	IAmb	00 05 53.0	
	comp=Z,37nm,0.7s						
PCA	Pinnacle	23.01	52	P	P	00 05 50.8	-0.8
PCA				IAmb	IAmb	00 06 03.4	
	comp=Z,20nm,0.7s						
YKU2	Yakutat	23.25	53	P	P	00 05 53.3	-0.6
EGAK	Eagle	23.61	40	IAmb	IAmb	00 05 58.4	
	comp=Z,18nm,0.7s						
TYV	Tymovskoe	24.52	285	eP	P	00 06 08.3	+2.2
TYV				pmax	pmax		
	comp=Z,24nm,0.5s						
SKAG	Skagway	25.46	54	P	P	00 06 13.0	-1.5
SIT	Sitka	25.55	59	P	P	00 06 14.8	-0.5
SIT	Sitka	25.55	59	P	P	00 06 14.8	-0.5
SIT				pmax	pmax		
	comp=Z,11nm,0.8s						
BESE	Bessie Mountai	25.72	56	P	P	00 06 16.1	-0.8
WHY	Whitehorse	25.72	51	P	P	00 06 16.1	-0.9
YSS	Yuzh-Sakhalins	25.77	276	eP	P	00 06 14.8	-2.6
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,700nm,15.0s						
EPYK	Eagle Plains	25.84	38	P	P	00 06 16.1	-1.9
	baz=254,SNR=12						
INK	Inuvik	27.57	34	P	P	00 06 32.4	-1.1
	comp=Z,4.0nm,0.6s,baz=245,slow=7.6,SNR=26						
INK				PcP	PcP	00 09 50.1	-0.5
	comp=Z,1.1nm,0.6s,baz=289,slow=2.4,SNR=3.3						
DIB	Dawson Inlet,	27.80	67	P	P	00 06 36.3	+0.7
DIB				IAmb	IAmb	00 06 43.1	
	comp=Z,21nm,0.9s						
GRNR	Gornyy	28.33	288	eP	P	00 06 39.2	-1.3
GRNR				i		00 17 27.9	
GRNR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GRNR				MLR	MLR		
	comp=Z,370nm,18.0s						
BBB	Bella Bella	30.63	68	P	P	00 07 00.2	-0.5
BBB				IAmb	IAmb	00 07 07.6	
	comp=Z,16nm,0.9s						
C36M	Paulatuk	31.15	34		PcP	00 09 59.8	+0.1
C36M	Paulatuk	31.15	34	P	P	00 07 04.0	-1.1
	baz=262						
TIXI	Tiksi	31.21	331	P	P	00 07 06.1	+0.4
	comp=Z,2.7nm,0.6s,baz=112,slow=10.0,SNR=7.9						
TIXI				PcP	PcP	00 09 59.4	-0.5
	comp=Z,2.9nm,0.6s,baz=44,slow=1.1,SNR=4.8						
TIXI	Tiksi	31.21	331	P	P	00 07 07.5	+1.8
TIXI					PcP	00 09 59.9	0.0
TIXI	Tiksi	31.21	331	i P	P	00 07 06.7	+1.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KLR	Kul'dur	31.70	287	⇑iP	P	00 07 10.5	+0.3
KLR				pmax	pmax		
	comp=Z,25nm,0.6s						
ZEA	Zeya	32.79	297	eP	P	00 07 19.1	-0.6
ZEA				pmax	pmax		
	comp=Z,28nm,1.2s						
H11N2	WAKE ISLAND Hy	33.32	206	T	T	00 44 13.2	
	baz=18,slow=76,SNR=77						
H11N3	WAKE ISLAND Hy	33.33	206	T	T	00 43 27.1	
	SNR=103						
H11N1	WAKE ISLAND Hy	33.34	206	T	T	00 44 20.2	
	baz=16,slow=76,SNR=84						
USA0B	Ussuriysk Arra	33.76	278	P	P	00 07 28.8	+0.5
USA0B				IAmb	IAmb	00 07 29.9	
	comp=Z,6.8nm,0.6s						
USA0B	Ussuriysk Arra	33.76	278	P	P	00 07 28.8	+0.5
USA0B				pmax	pmax		
	comp=Z,7.0nm,0.6s						
USRK	Ussuriysk Ar.	33.76	278	P	P	00 07 28.8	+0.5
	comp=Z,7.0nm,0.5s,baz=60,slow=9.5,SNR=30						
USRK				PcP	PcP	00 10 07.8	+0.4
	comp=Z,1.3nm,0.6s,baz=61,slow=2.9,SNR=5.3						
USRK				LR	LR	00 19 45.7	
	comp=Z,175nm,21.7s,baz=40,slow=34						
MAJO	Matsushiro	34.13	262	P	P	00 07 33.8	+2.1
MAJO				IAmb	IAmb	00 07 34.8	
	comp=Z,9.8nm,0.8s						
MAJO	Matsushiro	34.13	262	P	P	00 07 33.8	+2.1
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MJAR	Matsushiro Arr	34.13	262	P	P	00 07 33.3	+1.7
	comp=Z,4.8nm,0.6s,baz=49,slow=7.9,SNR=17						
MJAR				PcP	PcP	00 10 09.2	+0.6
	comp=Z,0.7nm,0.3s,baz=73,slow=1.9,SNR=4.4						
MJAR				LR	LR	00 19 28.6	
	comp=Z,239nm,21.6s,baz=65,slow=33						
MJB9	Matsu-Tunnel	34.13	262	P	P	00 07 32.9	+1.2
MJB9				IAmb	IAmb	00 07 34.8	
	comp=Z,10nm,0.8s						
H11S1	WAKE ISLAND Hy	34.54	206	T	T	00 44 47.3	
	baz=17,slow=76,SNR=175						
H11S2	WAKE ISLAND Hy	34.56	206	T	T	00 44 48.6	
	baz=17,slow=76,SNR=92						
H11S3	WAKE ISLAND Hy	34.56	206	T	T	00 44 53.5	
	baz=17,slow=76,SNR=97						
PGC	Sidney	34.70	72	P	P	00 07 37.7	+1.3
PGC				IAmb	IAmb	00 07 47.6	
	comp=Z,8.3nm,0.8s						
LLLB	Lillooet	34.84	68	P	P	00 07 38.1	+0.5
LLLB				IAmb	IAmb	00 07 54.7	
	comp=Z,9.4nm,0.7s						
MDJ	Mudanjiang	35.05	280	P	P	00 07 40.8	+1.3
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,300nm,6.0s						
YKA	Yellowknife Ar	35.23	46	P	P	00 07 39.8	-1.0
	comp=Z,6.5nm,0.7s,baz=287,slow=7.3,SNR=42						
YKA				PcP	PcP	00 10 11.9	+0.6
	comp=Z,0.6nm,0.6s,baz=281,slow=3.0,SNR=4.5						
YKA				LR	LR	00 23 56.5	
	comp=Z,354nm,18.5s,baz=0.0,slow=40						
D03D	Eldon	35.40	73	P	P	00 07 45.0	+2.5
	baz=297,SNR=12						
E03A	Lebam	35.56	75	P	P	00 07 45.2	+1.4
E03A				IAmb	IAmb	00 07 46.7	
	comp=Z,19nm,0.9s						
B05A	Bryant	35.68	72	P	P	00 07 47.1	+2.2
	baz=296,SNR=9.6						
F03A	Seaside	35.85	76	P	P	00 07 47.6	+1.2
F03A				IAmb	IAmb	00 08 01.8	
	comp=Z,45nm,1.2s						
KHLU	Kahalu`u	35.89	142	P	P	00 07 48.7	+1.7
KHLU				IAmb	IAmb	00 08 07.3	
	comp=Z,32nm,1.0s						
B06A	Marblemount	35.94	71	P	P	00 07 46.8	-0.2
B06A				IAmb	IAmb	00 07 49.9	
	comp=Z,9.0nm,0.6s						
HMH	Humu‘ula Sheep	36.04	142	P	P	00 07 50.1	+1.5
HMH				IAmb	IAmb	00 08 01.1	
	comp=Z,28nm,1.1s						
E04D	Cinebar	36.17	75	P	P	00 07 51.9	+2.9
	baz=298,SNR=8.6						
D05A	Enumclaw	36.23	73	P	P	00 07 48.6	-0.9
D05A				IAmb	IAmb	00 07 53.1	
	comp=Z,32nm,0.7s						
AIN	Ainahou	36.26	142	P	P	00 07 53.1	+2.8
AIN				IAmb	IAmb	00 08 00.5	
	comp=Z,45nm,1.0s						
SBLHI	Steaming Bluff	36.29	142	P	P	00 07 52.6	+2.2
PUH	Pauahi	36.35	142	P	P	00 07 51.9	+0.9
HLP	Hilina Pali	36.39	142	P	P	00 07 53.3	+2.1
LON	Longmire	36.54	74	IAmb	IAmb	00 07 55.6	
	comp=Z,14nm,0.7s						
F04A	Amboy	36.55	76	P	P	00 07 52.4	+0.1
F04A				IAmb	IAmb	00 07 55.0	
	comp=Z,25nm,0.6s						
COR	Corvallis	36.67	78	P	P	00 07 53.2	-0.1
COR				IAmb	IAmb	00 08 03.0	
	comp=Z,31nm,0.9s						
COR	Corvallis	36.67	78	P	P	00 07 53.2	-0.1
COR				pmax	pmax		
	comp=Z,31nm,0.9s						
KEBM	Edson Butte	36.91	81	P	P	00 07 55.3	-0.2
KEBM				IAmb	IAmb	00 08 10.9	

comp=Z,34nm,1.1s
H04D Lebanon 37.05 78 P P 00 07 59.0 +2.5
baz=300
B08A Colville Reser 37.29 70 IAmb IAmb 00 08 01.6
comp=Z,15nm,0.7s
H04A Detroit Lake 37.31 77 IAmb IAmb 00 08 01.7
comp=Z,19nm,0.8s
KBO Bosley Butte 37.32 82 P P 00 07 58.2 -0.9
KBO IAmb IAmb 00 08 01.1
comp=Z,19nm,1.2s
G05D Wamic, OR 37.56 76 P P 00 08 03.3 +2.3
baz=300
I04A Tendick Farm, 37.62 79 P P 00 08 03.7 +2.2
baz=301,SNR=7.1
E07A Sunnyside 37.81 73 P P 00 08 04.6 +1.5
E07A IAmb IAmb 00 08 05.2
comp=Z,11nm,0.7s
KRMB Red Mountain 37.90 83 P P 00 08 04.4 +0.4
HUMO Hull Mountain 37.91 81 P P 00 08 04.0 0.0
I05D Terrebonne, OR 38.01 77 P P 00 08 06.9 +2.1
baz=301
HAWA Hanford 38.09 73 IAmb IAmb 00 08 07.9
comp=Z,31nm,0.7s
F07A Phinny Hill Vi 38.09 74 IAmb IAmb 00 08 08.1
comp=Z,24nm,0.7s
J04D Umpqua Nationa 38.10 79 P P 00 08 08.2 +2.5
baz=302
D08A Wollman Farm, 38.14 72 IAmb IAmb 00 08 07.8
comp=Z,15nm,0.6s
C09A Chrisman Ranch 38.18 71 IAmb IAmb 00 08 08.1
comp=Z,16nm,0.7s
E08A Dider Farm, El 38.33 73 P P 00 08 07.9 +0.5
E08A IAmb IAmb 00 08 24.9
comp=Z,21nm,1.1s
KHMM Horse Mountain 38.37 83 P P 00 08 09.4 +1.4
L04D Klamath Falls 38.52 81 P P 00 08 12.4 +3.1
baz=303
PINE Pine Mountain 38.53 78 P P 00 08 10.9 +1.6
YBH Yreka Blue Hor 38.53 82 P P 00 08 12.0 +2.7
YBH Yreka Blue Hor 38.53 82 P P 00 08 12.0 +2.7
YBH pmax pmax
comp=Z,6.0nm,1.1s
BOD Bodaibo 38.56 307 eP P 00 08 08.8 -0.4
BOD pmax pmax
comp=Z,8.0nm,1.9s
J05D Fort Rock, OR 38.62 79 P P 00 08 12.6 +2.5
baz=302,SNR=5.7
NEW Newport 38.65 69 IAmb IAmb 00 08 12.4
comp=Z,20nm,0.6s
NEW Newport 38.65 69 P P 00 08 11.2 +1.1
baz=298,SNR=28
HIA Hailar 38.83 293 P P 00 08 11.8 +0.2
HIA Hailar 38.83 293 P P 00 08 11.8 +0.2
HIA pmax pmax
comp=Z,7.0nm,0.7s
E09A Wood Farm, Sta 38.87 72 IAmb IAmb 00 08 29.9
comp=Z,23nm,1.2s
N02D Trinity Center 38.96 83 P P 00 08 15.9 +3.1
baz=304
M04C Macdoel 39.05 81 P P 00 08 16.1 +2.4
baz=304
K05A Summer Lake 39.13 79 P P 00 08 16.5 +2.1
KCPM Cahto Peak 39.14 85 P P 00 08 14.4 0.0
KCPM IAmb IAmb 00 08 14.9
comp=Z,18nm,1.0s
I07A Izee 39.27 76 IAmb IAmb 00 08 18.1
comp=Z,15nm,0.7s
O02D Mt. Diablo Mer 39.35 84 P P 00 08 18.8 +2.6
baz=305
F10A Beach Ranch, E 39.69 73 P P 00 08 19.5 +0.6
O03E Paynes Creek 39.91 83 P P 00 08 23.5 +2.7
baz=305
MOD Modoc Plateau 39.94 80 P P 00 08 23.0 +1.8
RES Resolute Bay 39.96 24 P P 00 08 19.8 -0.9
RES Resolute Bay 39.96 24 P P 00 08 19.8 -0.9
RES pmax pmax
comp=Z,1.0nm,0.7s
KSRS Korea Array 40.06 272 P P 00 08 23.4 +1.5
comp=Z,2.3nm,0.7s,baz=58,slow=8.1,SNR=12
KSRS LR LR 00 22 28.6
comp=Z,134nm,20.8s,baz=53,slow=32
J08A Circle Bar Ran 40.28 77 IAmb IAmb 00 08 26.4
comp=Z,12nm,0.7s
ORV Oroville 40.52 84 P P 00 08 27.1 +1.3
ORV Oroville 40.52 84 P P 00 08 27.1 +1.3
ORV pmax pmax
comp=Z,4.0nm,1.0s
WVOR Wild Horse Val 40.69 78 IAmb IAmb 00 08 36.0
comp=Z,16nm,0.8s
JNU Nakatsue 40.94 264 IAmb IAmb 00 08 31.6
comp=Z,13nm,0.8s
MSO Missoula 41.23 70 P P 00 08 32.3 +0.7
baz=300,SNR=19
PAHR Pah Rah Range 41.82 72 P P 00 08 38.0 +1.8
MFID Camas Ranch 41.88 75 P P 00 08 37.6 +0.6
PNTR Pine Nut 41.99 83 P P 00 08 40.0 +1.9
PNTR IAmb IAmb 00 08 56.2
comp=Z,17nm,0.7s
YERR Yerington 42.28 83 P P 00 08 42.3 +1.9
LRM Limekiln Ridge 42.63 70 P P 00 08 40.8 -2.5
PMPB Monarch Peak 42.98 87 P P 00 08 45.8 -0.2
PMPB IAmb IAmb 00 08 56.3
comp=Z,24nm,1.2s
EGMT Eagleton 43.08 66 IAmb IAmb 00 08 49.1
comp=Z,14nm,0.7s
EGMT Eagleton 43.08 66 P P 00 08 47.3 +0.6
baz=301,SNR=7.7
NVAR Mina Array Bea 43.20 83 P P 00 08 49.3 +1.4
comp=Z,1.3nm,0.7s,baz=296,slow=7.2,SNR=11
NVAR PcP PcP 00 10 37.9 +0.7
comp=Z,1.5nm,0.7s,baz=265,slow=3.0,SNR=5.2
NVAR LR LR 00 24 05.4
comp=Z,47nm,19.1s,baz=265,slow=32
NVAR Mina Array Bea 43.20 83 P P 00 08 48.8 +0.9
PAGB Antelope Grade 43.63 87 P P 00 08 51.4 +0.2
YHB Horse Butte 43.95 71 P P 00 08 54.5 +0.6
FFC Flin Flon 44.06 54 P P 00 08 53.3 -1.1
FFC PcP 00 10 40.5 +1.0
FFC Flin Flon 44.06 54 P P 00 08 53.3 -1.1
FFC 00 10 40.5
FFC pmax pmax
comp=Z,2.0nm,0.7s
H17A Grant Village 44.52 71 IAmb IAmb 00 09 16.4
comp=Z,20nm,1.1s
H17A Grant Village 44.52 71 P P 00 09 01.0 +2.5
baz=304,SNR=14
LKWY Lake 44.53 71 IAmb IAmb 00 09 01.6
comp=Z,16nm,0.8s
CWC Cottonwood Cre 44.55 85 P P 00 09 00.4 +1.6
baz=309
FLWY Flagg Ranch 44.62 71 IAmb IAmb 00 09 16.9
comp=Z,17nm,1.0s
RLMT Red Lodge 44.90 69 P P 00 09 02.5 +1.0
baz=304,SNR=24
R11A Troy Canyon, C 44.95 81 P P 00 09 03.1 +1.2
baz=308,SNR=7.9
MPMC Manual Prospec 45.16 85 P P 00 09 04.9 +1.2
baz=309
TPNV Topopah Spring 45.39 83 IAmb IAmb 00 09 17.2
comp=Z,10nm,0.8s
TPNV Topopah Spring 45.39 83 P P 00 09 06.9 +1.5
baz=309,SNR=6.6
LRMC Laurel Mtn Rad 45.41 86 P P 00 09 06.6 +1.0
baz=310
DUG Dugway, Tooele 45.56 77 IAmb IAmb 00 09 16.3
comp=Z,10nm,0.8s
DUG Dugway, Tooele 45.56 77 P P 00 09 08.4 +1.7
baz=307,SNR=11
LAO LASA Array 45.82 66 P P 00 09 07.8 -0.8
LAO IAmb IAmb 00 09 11.4
comp=Z,27nm,0.8s
LAO LASA Array 45.82 66 P P 00 09 09.7 +1.1
baz=303,SNR=5.8
BJI Beijing 45.87 283 eP P 00 09 10.0 +1.1
BJI pmax pmax
comp=Z,5.0nm,0.7s
BJI LR LR
comp=Z,160nm,5.7s
BJI LR LR
comp=Z,210nm,5.5s
BJI LR LR
comp=Z,210nm,26.5s
TCUT Toone Canyon 45.88 75 P P 00 09 09.4 0.0
BJT Baijiatuau 45.89 283 P P 00 09 09.0 -0.1
BJT Baijiatuau 45.89 283 P P 00 09 09.0 -0.1
BJT pmax pmax

comp=Z,5.0nm,0.6s
FCC Fort Churchill 45.96 46 IAmb IAmb 00 09 14.6
comp=Z,6.7nm,0.7s
PD31 Pinedale Array 46.05 72 IAmb IAmb 00 09 12.3
comp=Z,21nm,0.7s
PDAR Pinedale Array 46.05 72 P P 00 09 11.3 +0.7
comp=Z,21nm,0.6s,baz=300,slow=3.9,SNR=208
PDAR LR LR 00 25 59.1
comp=Z,114nm,20.9s,baz=313,slow=33
PDAR Pinedale Array 46.05 72 P P 00 09 11.2 +0.5
GSC Goldstone, Bar 46.07 85 IAmb IAmb 00 09 24.7
comp=Z,9.5nm,0.7s
GSC Goldstone, Bar 46.07 85 P P 00 09 12.1 +1.3
baz=310
TLY Talaya 46.64 303 P P 00 09 14.2 -0.7
TLY IAmb IAmb 00 09 16.7
comp=Z,5.6nm,0.6s
TLY Talaya 46.64 303 iP P 00 09 14.4 -0.5
TLY pmax pmax
comp=Z,4.0nm,0.5s
TCRU Three Creeks R 46.74 79 P P 00 09 17.2 +1.0
ULN Ulaanbaatar 46.82 297 P P 00 09 17.3 +0.7
ULN IAmb IAmb 00 09 18.1
comp=Z,12nm,0.7s
ULN Ulaanbaatar 46.82 297 ceP P 00 09 16.7 +0.1
ULN pmax pmax
comp=Z,10.0nm,0.6s
GMRC Granite Mounta 47.13 85 P P 00 09 20.2 +1.1
baz=310
SONM Songino Array 47.21 297 P P 00 09 20.5 +0.9
comp=Z,6.5nm,0.6s,baz=60,slow=9.4,SNR=90
SONM PcP PcP 00 10 52.9 +2.2
comp=Z,1.8nm,0.6s,baz=54,slow=4.4,SNR=3.9
SONM ScP ScP 00 14 47.9 +3.7
comp=Z,0.9nm,0.9s,baz=52,slow=1.7,SNR=5.1
SONM LR LR 00 30 10.5
comp=Z,514nm,19.5s,baz=50,slow=38
SONM Songino Array 47.21 297 P P 00 09 19.9 +0.4
LCMT Little Creek M 47.23 81 P P 00 09 20.5 +0.6
PFO Pinyon Flats O 47.38 87 P P 00 09 21.4 +0.3
PFO Pinyon Flats O 47.38 87 P P 00 09 21.4 +0.3
PFO pmax pmax
comp=Z,3.0nm,0.8s
XPFO Pion Flat 47.38 87 P P 00 09 21.5 +0.4
ZAK Zakamensk 47.53 302 eP P 00 09 20.7 -1.3
ZAK pmax pmax
comp=Z,7.0nm,1.3s
PKCU Pink Cliffs 47.55 80 P P 00 09 23.7 +1.2
SRU San Rafael Swe 47.62 77 P P 00 09 23.6 +0.6
SRU San Rafael Swe 47.62 77 P P 00 09 23.6 +0.6
SRU pmax pmax
comp=Z,14nm,0.7s
K22A Casper 47.93 71 P P 00 09 24.8 -0.5
K22A IAmb IAmb 00 09 26.4
comp=Z,12nm,0.8s
K22A Casper 47.93 71 P P 00 09 25.7 +0.4
baz=306,SNR=7.7
W13A Hualapai Mount 48.04 83 P P 00 09 26.1 -0.1
RWWY Rawlins 48.09 72 P P 00 09 26.2 -0.5
RWWY IAmb IAmb 00 09 42.4
comp=Z,17nm,1.1s
U15A North Rim 48.19 81 IAmb IAmb 00 09 45.6
comp=Z,8.0nm,0.8s
HHC Hu-ho-hao-te 48.20 287 eP P 00 09 28.5 +1.2
HHC pP pwP 00 09 37.4 +1.3
HHC sP sP 00 09 42.7 +12
HHC PcP PcP 00 10 55.5 +1.1
HHC PP PP 00 11 19.7 +0.3
HHC pmax pmax
comp=Z,5.0nm,0.7s
HHC pmax pmax
comp=Z,52nm,5.2s
HHC LR LR
comp=Z,160nm,17.0s
HHC LR LR
comp=Z,170nm,13.6s
HHC LR LR
comp=Z,150nm,14.5s
O20A White River Ci 48.40 74 P P 00 09 29.8 +0.8
baz=308,SNR=41
RSSD Black Hills 48.54 68 P P 00 09 30.3 +0.2
RSSD IAmb IAmb 00 09 31.3
comp=Z,12nm,0.6s
RSSD Black Hills 48.54 68 P P 00 09 30.3 +0.2
RSSD pmax pmax
comp=Z,13nm,0.6s
RSSD Black Hills 48.54 68 P P 00 09 30.3 +0.2
baz=306
MDND Maddock 48.92 61 P P 00 09 33.1 +0.4
baz=305
NJ2 Nanjing 49.24 273 eP P 00 09 37.5 +2.3
NJ2 pmax pmax
comp=Z,5.0nm,0.6s
N23A Red Feather La 49.33 72 P P 00 09 36.4 +0.2
N23A IAmb IAmb 00 09 53.2
comp=Z,11nm,0.9s
N23A Red Feather La 49.33 72 P P 00 09 37.1 +0.9
baz=308,SNR=7.9
WUAZ Wupatki 49.35 81 P P 00 09 36.8 +0.6
WUAZ Wupatki 49.35 81 P P 00 09 37.7 +1.5
baz=310
ULM Lac du Bonnet 49.57 57 P P 00 09 37.1 -0.5
comp=Z,4.6nm,0.5s,baz=303,slow=6.9,SNR=20
ULM LR LR 00 31 23.0
comp=Z,147nm,18.1s,baz=314,slow=37
ULM Lac du Bonnet 49.57 57 IAmb IAmb 00 09 37.6
comp=Z,5.1nm,0.6s
SMCO Snowmass 49.76 75 P P 00 09 39.4 -0.2
SMCO IAmb IAmb 00 09 41.5
comp=Z,8.5nm,0.7s
MVCO Mesa Verde 50.05 78 P P 00 09 42.6 +0.9
baz=310
ISCO Idaho Springs 50.20 73 P P 00 09 44.1 +1.2
baz=308,SNR=7.6
W18A Petrified Fore 50.63 80 P P 00 09 46.0 0.0
W18A IAmb IAmb 00 10 01.9
comp=Z,10.0nm,0.8s
S22A 4UR Ranch, Cre 50.74 76 P P 00 09 48.6 +1.6
baz=310,SNR=8.5
214A Organ Pipe Nat 50.78 86 P P 00 09 46.9 0.0
X18A Snowflake 50.88 81 P P 00 09 49.0 +1.1
X18A IAmb IAmb 00 10 03.3
comp=Z,5.6nm,0.6s
Q24A Divide 51.00 74 P P 00 09 48.4 -0.5
Q24A Divide 51.00 74 P P 00 09 49.5 +0.6
baz=309
SUSD Miller 51.28 64 P P 00 09 50.9 +0.3
baz=307
SDCO Great Sand Dun 51.56 75 P P 00 09 54.1 +1.0
baz=310,SNR=9.2
TUC Tucson 51.82 84 P P 00 09 56.0 +1.2
TUC Tucson 51.82 84 P P 00 09 56.0 +1.2
TUC pmax pmax
comp=Z,5.0nm,1.0s
TUC Tucson 51.82 84 P P 00 09 56.0 +1.2
baz=312
KSCO Kaye Shedlock' 52.50 72 P P 00 10 00.5 +0.6
KSCO IAmb IAmb 00 10 01.5
comp=Z,19nm,0.5s
T25A Trinidad 52.61 75 IAmb IAmb 00 10 03.0
comp=Z,16nm,0.9s
T25A Trinidad 52.61 75 P P 00 10 01.9 +1.1
baz=310,SNR=9.4
ANMO Albuquerque 52.78 78 P P 00 10 03.2 +1.1
ANMO Albuquerque 52.78 78 ceP P 00 10 02.4 +0.3
ANMO pmax pmax
comp=Z,3.0nm,1.3s
ANMO Albuquerque 52.78 78 P P 00 10 03.2 +1.1
baz=311
ECSD EROS Data Cent 53.05 64 P P 00 10 03.0 -0.8
baz=309,SNR=6.5
WHN Wuhan 53.10 275 P P 00 10 04.4 +0.2
EYMN Ely 53.26 57 P P 00 10 04.8 -0.4
baz=308,SNR=5.3
121A Cookes Peak, D 53.55 82 P P 00 10 08.9 +1.2
baz=312
BGNE Belgrade 53.63 67 P P 00 10 08.5 +0.4
baz=310
SSLB Suanglung 53.67 263 P P 00 10 09.0 +0.5
SSLB IAmb IAmb 00 10 16.8
comp=Z,14nm,0.7s
YULB Yu-li 53.74 263 P P 00 10 09.7 +0.6
YULB IAmb IAmb 00 10 19.2
comp=Z,10nm,1.0s
E38A The Farm, Brul 54.06 58 IAmb IAmb 00 10 11.0
comp=Z,12nm,0.7s

XAN Xi'an 54.15 282 P P 00 10 11.9 -0.1
XAN pP pwP 00 10 28.3 +7.6
XAN pmax pmax
comp=Z,7.0nm,1.4s
XAN pmax pmax
comp=Z,89nm,3.6s
CBKS Cedar Bluff 54.35 70 P P 00 10 14.2 +0.8
baz=311,SNR=8.8
ZAA0 Zalesovo Array 54.62 314 PcP 00 11 18.5 +0.6
ZALV Zalesovo Beam 54.62 314 P P 00 10 14.8 -0.3
comp=Z,0.7nm,0.5s,baz=30,slow=5.8,SNR=4.4
ZALV PcP PcP 00 11 18.1 +0.2
comp=Z,6.2nm,0.6s,baz=38,slow=3.6,SNR=26
ZALV LR LR 00 34 32.3
comp=Z,173nm,19.7s,baz=39,slow=37
ZALV Zalesovo Beam 54.62 314 iP P 00 10 15.3 +0.2
ZALV pmax pmax
comp=Z,1.0nm,0.4s
D41A Chassel 55.36 56 IAmb IAmb 00 10 24.6
comp=Z,13nm,0.8s
MNTX Cornudas Mount 55.61 81 P P 00 10 23.3 +0.7
baz=313
G40A Rib Lake 55.64 59 IAmb IAmb 00 10 22.9
comp=Z,6.4nm,0.6s
MSTX Muleshoe 55.70 77 IAmb IAmb 00 10 31.9
comp=Z,14nm,1.1s
MSTX Muleshoe 55.70 77 P P 00 10 24.9 +1.6
baz=312
AMTX Amarillo 55.76 75 P P 00 10 24.5 +0.8
baz=312
LZH Lanzhou 55.90 287 eP P 00 10 26.0 +1.2
LZH pP pwP 00 10 36.9 +3.3
LZH sP sP 00 10 42.9 +15
LZH pmax pmax
comp=Z,21nm,1.1s
LZH pmax pmax
comp=Z,190nm,5.0s
LZH LR LR
comp=Z,270nm,14.0s
LZH LR LR
comp=Z,260nm,14.1s
LZH LR LR
comp=Z,280nm,14.6s
KSU1 Kansas State U 56.02 68 P P 00 10 25.3 -0.1
baz=311,SNR=9.2
GTA Gaotai 56.11 292 ⇑P P 00 10 26.8 +0.6
GTA pP pwP 00 10 36.1 +1.1
GTA sP sP 00 10 40.7 +11
GTA pmax pmax
comp=Z,12nm,0.9s
GTA pmax pmax
comp=Z,140nm,5.4s
GTA LR LR
comp=Z,140nm,20.9s
GTA LR LR
comp=Z,190nm,20.3s
GTA LR LR
comp=Z,280nm,20.0s
SCIA State Center 56.14 64 IAmb IAmb 00 10 27.1
comp=Z,18nm,0.8s
SCIA State Center 56.14 64 P P 00 10 26.5 +0.3
baz=311
I40A Norwalk 56.30 60 IAmb IAmb 00 10 27.6
comp=Z,9.7nm,0.6s
ENH Enshi 56.34 278 IAmb IAmb 00 10 28.9
comp=Z,6.8nm,0.6s
E44A Grand Marais A 57.03 55 P P 00 10 32.9 +0.5
baz=311
JFWS Jewell Farm 57.14 61 IAmb IAmb 00 10 33.8
comp=Z,13nm,0.6s
JFWS Jewell Farm 57.14 61 P P 00 10 32.6 -0.7
baz=311,SNR=5.8
L40A Anamosa 57.16 62 IAmb IAmb 00 10 37.2
comp=Z,11nm,0.7s
I42A Draeger Farm, 57.23 59 IAmb IAmb 00 10 35.0
comp=Z,11nm,0.7s
H43A Windswept, Lux 57.47 58 IAmb IAmb 00 10 36.6
comp=Z,19nm,0.7s
WMOK Wichita Mounta 57.62 73 P P 00 10 37.4 +0.5
baz=313,SNR=10
D46A Sault St. Mari 57.82 54 P P 00 10 37.7 -0.3
baz=312
F45A CMU Biological 57.86 56 P P 00 10 38.1 -0.1
baz=312
E46A Sault Ste Mari 58.03 55 IAmb IAmb 00 10 40.4
comp=Z,12nm,0.7s
D47A Chapleau 58.18 53 P P 00 10 40.3 -0.3
baz=312,SNR=6.6
TXAR Lajitas Array 58.31 81 P P 00 10 41.9 +0.1
comp=Z,2.3nm,0.6s,baz=302,slow=4.9,SNR=44
E47A Iron Bridge 58.50 54 P P 00 10 42.8 0.0
baz=312,SNR=7.0
ABTX Abilene, Hawle 58.53 76 IAmb IAmb 00 10 53.1
comp=Z,8.1nm,0.8s
ABTX Abilene, Hawle 58.53 76 P P 00 10 43.7 +0.5
baz=314
ARCES ARCESS Array B 58.58 350 P P 00 10 41.4 -1.6
comp=Z,3.3nm,0.6s,baz=27,slow=7.4,SNR=27
TUL1 Leonard 58.63 70 IAmb IAmb 00 10 44.7
comp=Z,10nm,0.7s
TUL1 Leonard 58.63 70 P P 00 10 43.9 0.0
baz=313
D48A Paudash Townsh 58.76 52 P P 00 10 44.2 -0.4
baz=313,SNR=5.6
H46A Fife Lake 58.79 57 P P 00 10 44.9 +0.1
baz=313
D49A Beulah Townshi 58.92 52 P P 00 10 45.7 0.0
baz=313,SNR=5.6
MATQ Matagami 59.02 48 P P 00 10 45.3 -1.1
baz=314
I46A Reed City 59.06 57 P P 00 10 47.1 +0.4
baz=313
HDIL Hopedale 59.25 62 P P 00 10 48.0 -0.1
baz=313,SNR=5.4
J46A Howard City 59.36 58 P P 00 10 49.3 +0.6
baz=313
M44A Midewin, Midew 59.38 61 IAmb IAmb 00 10 49.7
comp=Z,21nm,0.8s
CD2 Chengdu 59.47 282 P P 00 10 49.5 -0.3
CD2 pmax pmax
comp=Z,10.0nm,0.6s
HHAR Hobbs 59.47 69 IAmb IAmb 00 10 51.2
comp=Z,9.2nm,0.6s
I47A Gladwin 59.51 57 P P 00 10 50.4 +0.6
baz=313
F49A Sandfield 59.60 54 P P 00 10 50.8 +0.4
baz=313
KURK Kurchatov 59.61 314 P P 00 10 49.1 -1.3
KURK Kurchatov 59.61 314 iP P 00 10 48.9 -1.5
KURK pmax pmax
comp=Z,3.0nm,0.6s
H48A Harrisville 59.66 55 P P 00 10 51.4 +0.5
baz=313
K46A Dorr 59.73 59 P P 00 10 51.4 0.0
baz=313,SNR=15
LSQQ Lebel-sur-Quev 59.81 48 P P 00 10 50.4 -1.4
baz=314
I48A Sherman Twp 59.82 56 P P 00 10 52.3 +0.4
baz=313
CCM Cathedral Cave 59.84 66 P P 00 10 51.4 -0.8
CCM IAmb IAmb 00 10 53.3
comp=Z,12nm,0.6s
CCM Cathedral Cave 59.84 66 P P 00 10 51.4 -0.8
CCM pmax pmax
comp=Z,12nm,0.6s
CCM Cathedral Cave 59.84 66 P P 00 10 51.3 -0.8
baz=313
J47A Sunmer 59.87 58 P P 00 10 52.7 +0.4
baz=313
JCT Junction City 59.92 78 IAmb IAmb 00 11 11.7
comp=Z,5.4nm,0.7s
WMQ Urumqi 59.92 303 eP P 00 10 53.7 +1.0
WMQ sP pwP 00 11 11.6 +10
WMQ pmax pmax
comp=Z,9.0nm,0.7s
WMQ pmax pmax
comp=Z,150nm,5.5s
WMQ LR LR
comp=Z,440nm,26.5s
WMQ LR LR
comp=Z,280nm,22.7s
D51A Lot 18 Range I 60.02 51 P P 00 10 52.7 -0.6
baz=314
U40A Yellville 60.06 68 IAmb IAmb 00 10 53.6
comp=Z,12nm,0.7s
U40A Yellville 60.06 68 P P 00 10 52.8 -1.0
baz=314,SNR=17

SCHQ	Schefferville	60.08	38	P	P	00 10 53.0	-0.6
	comp=Z,1.8nm,0.6s,baz=325,slow=6.8,SNR=6.7						
SCHQ				PcP	PcP	00 11 39.5	+0.2
	comp=Z,1.5nm,0.6s,baz=300,slow=4.9,SNR=4.0						
SCHQ				LR	LR	00 38 05.6	
	comp=Z,215nm,19.2s,baz=314,slow=37						
SCHQ	Schefferville	60.08	38	IAmb	IAmb	00 10 55.1	
	comp=Z,5.5nm,1.1s						
K47A	Vermontville	60.17	58	P	P	00 10 54.6	+0.2
	baz=314,SNR=5.8						
VLDQ	Val d'Or	60.25	49	IAmb	IAmb	00 10 53.2	
	comp=Z,7.0nm,0.7s						
W39A	Magazine	60.31	70	IAmb	IAmb	00 10 55.8	
	comp=Z,6.9nm,0.7s						
W39A	Magazine	60.31	70	P	P	00 10 55.4	0.0
	baz=314,SNR=6.1						
WHTX	Lake Whitney,	60.31	75	IAmb	IAmb	00 10 56.8	
	comp=Z,10nm,0.6s						
WHTX	Lake Whitney,	60.31	75	P	P	00 10 56.2	+0.7
E51A	G1948 Merrick	60.35	52	P	P	00 10 55.1	-0.5
	baz=314						
J48A	Bridge Port	60.38	57	P	P	00 10 56.2	+0.3
	baz=314,SNR=6.2						
I49A	Point Hope	60.45	56	P	P	00 10 56.7	+0.5
	baz=314						
L47A	Sherwood	60.53	59	P	P	00 10 56.7	-0.1
	baz=314,SNR=10						
K48A	Perry	60.55	57	P	P	00 10 57.3	+0.4
	baz=314,SNR=8.9						
F51A	Arnstein	60.56	52	P	P	00 10 56.7	-0.3
	baz=314						
SFIN	Lafayette	60.59	61	P	P	00 10 57.8	+0.5
	baz=314,SNR=18						
MK31	Makanchi Array	60.62	309	iP	P	00 10 55.5	-1.9
MKAR	Makanchi Array	60.62	309	P	P	00 10 55.7	-1.7
	comp=Z,4.7nm,0.6s,baz=49,slow=5.4,SNR=69						
MKAR				LR	LR	00 37 28.7	
	comp=Z,202nm,21.4s,baz=37,slow=36						
J49A	Marlette	60.68	56	P	P	00 10 58.4	+0.5
	baz=314						
KRVT	Keravat (AS076	60.70	215	LR	LR	00 31 36.5	
	comp=Z,103nm,20.0s,baz=38,slow=30						
M47A	Cromwell	60.73	60	P	P	00 10 58.3	+0.1
	baz=314						
MAKZ	Makanchi	60.77	309	P	P	00 10 57.2	-1.2
MAKZ				IAmb	IAmb	00 10 59.1	
	comp=Z,4.7nm,0.7s						
MAKZ	Makanchi	60.77	309	P	P	00 10 57.2	-1.2
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GYA	Guiyang	60.78	277⇑	iP	P	00 10 58.5	-0.4
GYA				pP	pwP	00 11 10.6	+2.9
GYA				PP	PP	00 13 12.5	-0.1
GYA				S	S	00 19 10.7	-5.2
GYA				pmax	pmax		
	comp=Z,20nm,0.5s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=Z,220nm,17.6s						
GYA				LR	LR		
	comp=Z,240nm,17.8s						
GYA				LR	LR		
	comp=Z,260nm,17.5s						
MIAR	Mount Ida	60.88	70	IAmb	IAmb	00 11 15.9	
	comp=Z,9.1nm,0.7s						
MIAR	Mount Ida	60.88	70	P	P	00 10 59.8	+0.5
	baz=314,SNR=10						
K49A	Clarkson	60.91	57	P	P	00 11 00.3	+0.9
	baz=314,SNR=14						
E52A	Mattawa	60.94	51	P	P	00 10 58.9	-0.6
	baz=315						
L48A	N Adams	60.97	58	P	P	00 11 00.1	+0.2
	baz=314,SNR=13						
N47A	Urbana	61.02	60	P	P	00 10 59.4	-0.8
	baz=314,SNR=6.8						
WHAR	Wooly Hollow	61.13	69	IAmb	IAmb	00 11 01.4	
	comp=Z,10nm,1.0s						
PBMO	Poplar Bluff	61.19	66	IAmb	IAmb	00 11 01.5	
	comp=Z,14nm,0.8s						
L49A	Milan	61.22	58	P	P	00 11 02.1	+0.6
	baz=314,SNR=14						
S44A	Carbondale	61.23	65	IAmb	IAmb	00 11 02.5	
	comp=Z,13nm,0.6s						
W41B	Gary Mavity, V	61.23	69	IAmb	IAmb	00 11 02.1	
	comp=Z,9.2nm,0.7s						
W41B	Gary Mavity, V	61.23	69	P	P	00 11 01.2	-0.5
	baz=314,SNR=7.9						
LCAR	Lake Charles	61.25	67	IAmb	IAmb	00 11 02.2	
	comp=Z,8.0nm,0.8s						
D54A	Lac Fusel, La	61.31	50	P	P	00 11 00.9	-1.2
	baz=315,SNR=5.1						
K50A	Casco	61.36	57	P	P	00 11 02.8	+0.3
	baz=314						
X40A	Basin Creek Fa	61.36	70	IAmb	IAmb	00 11 18.0	
	comp=Z,5.2nm,0.8s						
X40A	Basin Creek Fa	61.36	70	P	P	00 11 02.8	+0.2
	baz=314						
E53A	Dumoine, Ponti	61.36	51	P	P	00 11 01.8	-0.7
	baz=315						
N48A	Decatur	61.40	60	P	P	00 11 02.4	-0.3
	baz=314,SNR=13						
ALGO	Algonquin Park	61.47	51	P	P	00 11 03.4	+0.3
	baz=315						
H52A	Wyevale	61.47	54	P	P	00 11 03.3	+0.1
	baz=315,SNR=13						
I51A	Listowel	61.48	55	P	P	00 11 04.5	+1.2
	baz=315						
BRVK	Borovoye	61.50	320	P	P	00 11 03.1	-0.2
BRVK				IAmb	IAmb	00 11 03.7	
	comp=Z,4.2nm,0.5s						
BRVK	Borovoye	61.50	320	P	P	00 11 03.1	-0.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
M49A	Liberty Center	61.55	58	P	P	00 11 04.0	+0.2
	baz=314,SNR=6.3						
E54A	Lac Daplat, Po	61.56	51	P	P	00 11 02.6	-1.1
	baz=315,SNR=5.8						
O48A	Farmland	61.75	60	P	P	00 11 04.5	-0.6
	baz=314,SNR=24						
SADO	Sadowa	61.76	53	IAmb	IAmb	00 11 05.5	
	comp=Z,10nm,0.7s						
L50A	Kingsville	61.77	57	P	P	00 11 05.6	+0.3
	baz=315,SNR=8.3						
G53A	Haliburton	61.77	52	P	P	00 11 05.3	+0.1
	baz=315,SNR=17						
N49A	Columbus Grove	61.82	59	P	P	00 11 05.6	+0.1
	baz=314,SNR=14						
G54A	Lake Saint Pet	61.85	52	P	P	00 11 05.1	-0.7
	baz=315						
D55A	Sainte-Anne-du	61.97	49	P	P	00 11 05.6	-0.9
	baz=316,SNR=7.7						
M50A	Fremont	62.09	58	P	P	00 11 07.6	+0.2
	baz=315						
P48A	Milroy	62.16	61	P	P	00 11 07.7	-0.2
	baz=315,SNR=25						
J52A	Paris	62.16	55	P	P	00 11 08.4	+0.5
	baz=315						
SVE	Sverdlovsk	62.17	328	eP	P	00 11 08.2	+0.5
H53A	Bobcaygeon	62.18	53	P	P	00 11 08.0	0.0
	baz=315,SNR=5.2						
O49A	Covington	62.25	60	IAmb	IAmb	00 11 08.6	
	comp=Z,14nm,0.8s						
O49A	Covington	62.25	60	P	P	00 11 08.4	-0.1
	baz=315						
D56A	ZEC Mazanza, M	62.29	49	P	P	00 11 07.5	-1.2
	baz=316						
Q48A	North Vernon	62.36	62	P	P	00 11 09.1	-0.1
	baz=315						
N50A	Nevada	62.48	59	P	P	00 11 10.6	+0.5
	baz=315,SNR=11						
P49A	Miami Univ. Ec	62.50	60	P	P	00 11 09.9	-0.3
	baz=315,SNR=12						
E56A	St. Veronique	62.52	49	P	P	00 11 09.1	-1.1
	baz=316						
WCI	Wyandotte Cave	62.53	63	P	P	00 11 10.7	+0.3
WCI				IAmb	IAmb	00 11 12.4	
	comp=Z,14nm,0.8s						
WCI	Wyandotte Cave	62.53	63	P	P	00 11 10.7	+0.3
WCI				pmax	pmax		
	comp=Z,14nm,0.8s						
WCI	Wyandotte Cave	62.53	63	P	P	00 11 10.7	+0.3
	baz=315						
M51A	Elyria	62.61	58	P	P	00 11 11.0	+0.1
	baz=315						
G55A	Calabogie	62.63	51	P	P	00 11 10.1	-0.8
	baz=316,SNR=7.7						
O50A	Cable	62.67	59	P	P	00 11 11.5	+0.2
	baz=315,SNR=24						
D57A	Chemin Vers le	62.72	48	P	P	00 11 10.1	-1.5
	baz=317						
Q49A	Aurora	62.77	61	P	P	00 11 12.0	0.0
	baz=315						
N51A	Ashland	62.80	58	P	P	00 11 12.2	0.0
	baz=315,SNR=5.9						
I55A	Frankford	62.89	53	P	P	00 11 12.8	+0.1
	baz=316,SNR=5.2						
M52A	Chesterland	62.90	57	P	P	00 11 12.9	+0.1
	baz=315,SNR=7.2						
H55A	Tweed	62.90	52	P	P	00 11 12.7	-0.1
	baz=316						
P50A	Jamestown	62.95	60	P	P	00 11 13.3	+0.1
	baz=315,SNR=28						
ACSO	Alum Creek Sta	62.95	59	P	P	00 11 13.5	+0.3
	baz=315,SNR=7.6						
LATQ	La Tuque	62.98	47	IAmb	IAmb	00 11 13.3	
	comp=Z,4.5nm,0.7s						
LATQ	La Tuque	62.98	47	P	P	00 11 12.2	-1.0
	baz=317						
E57A	Chemin Saint G	63.04	49	P	P	00 11 12.3	-1.4
	baz=317						
J54A	Appleton	63.08	54	P	P	00 11 14.4	+0.4
	baz=316						
WVT	Waverly	63.14	65	P	P	00 11 14.8	+0.3
WVT				IAmb	IAmb	00 11 16.0	
	comp=Z,8.9nm,0.7s						
WVT	Waverly	63.14	65	P	P	00 11 14.8	+0.3
WVT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WVT	Waverly	63.14	65	P	P	00 11 14.8	+0.3
	baz=315						
D58A	Chemin du LacG	63.14	48	P	P	00 11 12.7	-1.6
	baz=317						
L53A	Girard	63.18	56	P	P	00 11 15.1	+0.4
	baz=316						
ARU	Arti	63.18	329	P	P	00 11 13.5	-0.9
ARU				IAmb	IAmb	00 11 14.8	
	comp=Z,10.0nm,0.5s						
ARU	Arti	63.18	329c	iP	P	00 11 13.6	-0.9
ARU						00 13 29.3	
ARU				S	S	00 19 46.1	+0.9
ARU				SS	SS	00 23 51.5	+1.3
ARU				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ERPA	Erie	63.21	56	IAmb	IAmb	00 11 16.9	
	comp=Z,18nm,0.8s						
O51A	Pataskala	63.22	59	P	P	00 11 15.1	+0.2
	baz=315,SNR=11						
N52A	McGinn's Farm,	63.24	58	P	P	00 11 15.2	+0.1
	baz=315						
H56A	Elgin	63.33	51	P	P	00 11 15.3	-0.3
	baz=316						
M53A	WI Miller and	63.33	57	P	P	00 11 16.2	+0.5
	baz=316,SNR=9.0						
OXF	Oxford	63.36	67	P	P	00 11 15.9	0.0
	baz=315,SNR=7.0						
Q50A	Georgetown	63.39	61	P	P	00 11 16.5	+0.4
	baz=315,SNR=20						
S49A	Springfield	63.41	62	P	P	00 11 16.2	-0.1
	baz=315,SNR=5.8						
P51A	Williamsport	63.44	60	P	P	00 11 16.4	0.0
	baz=315,SNR=7.6						
L54A	Sinclairville	63.47	55	P	P	00 11 17.1	+0.4
	baz=316,SNR=7.1						
J55A	Hilton	63.50	53	P	P	00 11 17.1	+0.3
	baz=316						
K54A	Basiliko Farm,	63.53	54	P	P	00 11 17.4	+0.4
	baz=316,SNR=6.9						
G57A	Newington	63.59	50	P	P	00 11 16.2	-1.1
	baz=317						
R50A	Paris	63.59	61	P	P	00 11 18.1	+0.6
	baz=315,SNR=6.5						
Q51A	Peebles	63.61	60	P	P	00 11 17.9	+0.3
	baz=316,SNR=18						
D59A	Saint-Raymond	63.69	47	P	P	00 11 16.9	-1.0
	baz=318						
N53A	Lisbon	63.70	57	IAmb	IAmb	00 11 24.4	
	comp=Z,13nm,1.1s						
N53A	Lisbon	63.70	57	P	P	00 11 18.0	-0.2
	baz=316						
T49A	Edmonton	63.75	63	IAmb	IAmb	00 11 22.0	
	comp=Z,8.9nm,0.6s						
T49A	Edmonton	63.75	63	P	P	00 11 18.9	+0.3
	baz=315,SNR=7.9						
K55A	Perry	63.76	54	P	P	00 11 18.8	+0.3
	baz=316,SNR=6.2						
M54A	Oil Creek Stat	63.81	56	IAmb	IAmb	00 11 20.2	
	comp=Z,11nm,0.7s						
M54A	Oil Creek Stat	63.81	56	P	P	00 11 19.1	+0.2
	baz=316						
P52A	Corning	63.84	59	P	P	00 11 19.1	0.0
	baz=316,SNR=5.1						
MMNY	Mt. Morris Dam	63.84	54	P	P	00 11 19.0	0.0
H57A	Richville	63.85	51	P	P	00 11 18.5	-0.5
	baz=317						
O53A	New Philadelph	63.89	58	P	P	00 11 19.7	+0.2
	baz=316,SNR=6.1						
L55A	Hinsdale	63.97	55	P	P	00 11 20.3	+0.4
	baz=316						
S50A	Richmond	63.98	62	P	P	00 11 20.2	+0.2
	baz=316,SNR=6.5						
J56A	Wolcott	63.98	53	P	P	00 11 19.4	-0.6
J56A	Wolcott	63.98	53	P	P	00 11 20.0	+0.1
	baz=316						
V48A	Smith Brothers	63.99	65	IAmb	IAmb	00 11 21.1	
	comp=Z,12nm,0.7s						
R51A	Hillsboro	63.99	61	P	P	00 11 20.9	+0.8
	baz=316,SNR=48						
CLTN	Cedars of Leba	64.02	64	IAmb	IAmb	00 11 22.6	
	comp=Z,12nm,0.7s						
N54A	Moraine State	64.03	56	P	P	00 11 20.6	+0.2
	baz=316,SNR=9.9						
U49A	Red Boiling Sp	64.03	64	P	P	00 11 20.6	+0.2
	baz=316,SNR=7.7						
I57A	Carthage	64.10	52	P	P	00 11 20.1	-0.6
	baz=317						
K56A	Middlesex	64.16	54	P	P	00 11 21.8	+0.6
	baz=316,SNR=17						
D60A	Saint Jean D'O	64.18	47	P	P	00 11 19.8	-1.3
	baz=318						
T50A	Nancy	64.20	63	P	P	00 11 21.8	+0.3
	baz=316,SNR=9.8						
Q52A	Bidwell	64.24	59	P	P	00 11 21.9	+0.2
	baz=316,SNR=8.9						
M55A	Ridgway	64.31	55	IAmb	IAmb	00 11 23.0	
	comp=Z,9.8nm,0.7s						
M55A	Ridgway	64.31	55	P	P	00 11 22.5	+0.3
	baz=316,SNR=5.3						
J57A	Williamstown	64.32	52	P	P	00 11 22.6	+0.4
J57A				IAmb	IAmb	00 11 30.9	
	comp=Z,12nm,1.1s						
E60A	Ste Agathe de	64.34	47	P	P	00 11 21.1	-1.1
	baz=318						
P53A	Whipple	64.34	58	P	P	00 11 22.6	+0.2
	baz=316,SNR=8.5						
O54A	Avella	64.39	57	P	P	00 11 22.4	-0.2
O54A	Avella	64.39	57	P	P	00 11 23.0	+0.3
	baz=316,SNR=8.3						
L56A	Greenwood	64.45	54	P	P	00 11 23.2	+0.1
L56A	Greenwood	64.45	54	P	P	00 11 23.6	+0.5
	baz=317,SNR=20						
S51A	Beattyville	64.46	61	P	P	00 11 23.4	+0.3
	baz=316,SNR=10						
H58A	Gabriels	64.48	50	P	P	00 11 21.7	-1.5
	baz=317						
R52A	Catlettsburg	64.48	60	P	P	00 11 23.7	+0.4
	baz=316,SNR=11						
PDGK	Podgornoye	64.48	308	P	P	00 11 23.1	-0.3
V49A	McMinnville	64.50	64	P	P	00 11 23.4	0.0
	baz=316,SNR=15						
H59A	Cadyville	64.55	50	P	P	00 11 22.7	-1.0
	baz=317						
K57A	Scipio Center	64.55	53	P	P	00 11 23.8	+0.1
	baz=317						
M56A	Emporium	64.60	55	IAmb	IAmb	00 11 26.6	
	comp=Z,12nm,0.7s						
M56A	Emporium	64.60	55	P	P	00 11 24.2	+0.1
	baz=317						
U50A	Jamestown	64.63	63	P	P	00 11 24.5	+0.1
	baz=316,SNR=7.3						
N55A	Marion Center	64.69	56	P	P	00 11 24.6	-0.1
	baz=316						
Q53A	Leroy	64.72	59	P	P	00 11 25.6	+0.7
	baz=316,SNR=23						
T51A	Gray	64.74	62	P	P	00 11 25.5	+0.4
	baz=316,SNR=8.1						
344A	Westbrook Farm	64.75	71	P	P	00 11 25.1	0.0
344A				IAmb	IAmb	00 11 27.3	
	comp=Z,16nm,0.7s						
P54A	Burton	64.75	58	P	P	00 11 25.4	+0.3
	baz=316,SNR=6.2						
W49A	Belvidere	64.75	65	P	P	00 11 25.2	+0.1
	baz=316,SNR=10						
X48A	Hartselle	64.78	66	IAmb	IAmb	00 11 25.4	
	comp=Z,9.3nm,0.6s						
NCB	Newcomb	64.78	51	P	P	00 11 24.6	-0.6
NCB				IAmb	IAmb	00 11 25.3	
	comp=Z,5.1nm,0.6s						
R53A	Hurricane	64.87	60	P	P	00 11 26.5	+0.6
	baz=316,SNR=12						
SWET	Sewanee	64.87	65	IAmb	IAmb	00 11 26.3	
	comp=Z,15nm,0.7s						
D62A	Allapoint, All	64.91	45	P	P	00 11 25.6	-0.4
D62A				IAmb	IAmb	00 11 32.3	
	comp=Z,8.8nm,0.7s						
D62A	Allapoint, All	64.91	45	P	P	00 11 25.1	-0.8
	baz=319						
L57A	Andrews Acres	64.91	54	P	P	00 11 26.4	+0.3
	baz=317,SNR=9.5						
O55A	Ligonier	64.94	57	P	P	00 11 26.1	-0.2
	baz=317						
N56A	West Decatur	64.95	56	P	P	00 11 26.5	+0.1
	baz=317						
K58A	Earlville	64.96	53	P	P	00 11 26.3	-0.2
	baz=317						
Q54A	Coxs Mills	65.00	59	IAmb	IAmb	00 11 32.6	
	comp=Z,12nm,0.7s						
Q54A	Coxs Mills	65.00	59	P	P	00 11 27.2	+0.5
	baz=316						
J59A	Piesco	65.02	51	P	P	00 11 25.8	-1.0
	baz=318						
V50A	Pikevile	65.02	64	P	P	00 11 27.1	+0.2
	baz=316,SNR=13						
MCWV	Mont Chateau	65.05	57	P	P	00 11 26.7	-0.2
MCWV				IAmb	IAmb	00 11 28.0	
	comp=Z,5.6nm,0.7s						
MCWV	Mont Chateau	65.05	57	P	P	00 11 27.4	+0.4
	baz=316						
I59A	Olmsteadville	65.08	51	P	P	00 11 26.5	-0.7
	baz=318						
G61A	St-Isidore-de-	65.11	48	P	P	00 11 26.6	-0.7
	baz=318						
U51A	La Follette	65.12	63	P	P	00 11 27.8	+0.3
	baz=316,SNR=7.7						
P55A	Reedsville	65.17	58	P	P	00 11 28.2	+0.4
	baz=317,SNR=5.3						
T52A	Hallie	65.18	61	P	P	00 11 28.9	+1.0
	baz=316						
BINY	Binghamton	65.21	53	IAmb	IAmb	00 11 28.8	
	comp=Z,12nm,0.7s						
BINY	Binghamton	65.21	53	P	P	00 11 28.3	+0.3
	baz=317,SNR=6.1						
S53A	Williamson	65.24	60	P	P	00 11 29.1	+0.8
	baz=316						
M57A	Sunshine Farm,	65.25	54	IAmb	IAmb	00 11 29.7	
	comp=Z,12nm,0.7s						
M57A	Sunshine Farm,	65.25	54	P	P	00 11 28.4	+0.2
	baz=317,SNR=5.4						
TZTN	Tazewell	65.27	62	P	P	00 11 29.2	+0.7
	baz=316,SNR=5.2						
O56A	Blue Knob Stat	65.28	56	P	P	00 11 28.3	-0.2
	baz=317						
I60A	Shoreham	65.33	50	P	P	00 11 28.5	-0.2
	baz=318						
V51A	Loudon	65.35	63	P	P	00 11 29.1	+0.1
	baz=316,SNR=13						
K59A	Cooperstown	65.35	52	P	P	00 11 29.0	+0.1
	baz=318						
SSPA	Standing Stone	65.37	55	P	P	00 11 29.2	+0.2
SSPA				IAmb	IAmb	00 11 30.4	
	comp=Z,9.5nm,0.8s						
SSPA	Standing Stone	65.37	55	P	P	00 11 29.2	+0.2
	baz=317						
L58A	Harry Jones Me	65.39	53	P	P	00 11 29.5	+0.3
	baz=317,SNR=8.6						
Q55A	Buckhannon	65.40	58	P	P	00 11 29.9	+0.6
	baz=317,SNR=7.3						
N57A	Milroy	65.46	55	P	P	00 11 29.7	+0.1
	baz=317						
U52A	Thorn Hill	65.48	62	P	P	00 11 30.4	+0.6
	baz=316						
H61A	Lyndonville	65.48	49	P	P	00 11 29.2	-0.5
	baz=318						
R54A	Victor	65.50	59	P	P	00 11 30.6	+0.7
	baz=317,SNR=8.2						
T53A	Wise	65.52	61	P	P	00 11 30.9	+0.8
	baz=316,SNR=9.8						
Y49A	Blount Mountai	65.57	66	IAmb	IAmb	00 11 36.9	
	comp=Z,9.5nm,0.7s						
M58A	Price's Panora	65.57	54	P	P	00 11 30.7	+0.3
	baz=317,SNR=5.0						
W51A	Cleveland	65.58	64	P	P	00 11 30.4	-0.1
	baz=316,SNR=8.2						
S54A	Dingess, Beckl	65.60	60	P	P	00 11 30.6	0.0
S54A	Dingess, Beckl	65.60	60	P	P	00 11 31.1	+0.5
	baz=317,SNR=7.9						
G62A	West of Eustis	65.63	48	IAmb	IAmb	00 11 31.5	
	comp=Z,13nm,0.6s						
G62A	West of Eustis	65.63	48	P	P	00 11 30.2	-0.5
	baz=319						
L59A	Walton	65.69	53	IAmb	IAmb	00 11 32.4	
	comp=Z,15nm,0.8s						
L59A	Walton	65.69	53	P	P	00 11 31.2	+0.1
	baz=318						
E63A	Oxbow	65.69	46	P	P	00 11 29.9	-1.2
	baz=319						
P56A	Dayton Farm, R	65.69	57	P	P	00 11 31.6	+0.4
	baz=317,SNR=5.5						
LBNH	Lisbon	65.70	49	P	P	00 11 30.4	-0.7
	baz=318						
J60A	Lant Hill Farm	65.72	51	P	P	00 11 30.9	-0.3
	baz=318						
V52A	Sevierville	65.75	63	IAmb	IAmb	00 11 37.0	
	comp=Z,16nm,0.7s						
V52A	Sevierville	65.75	63	P	P	00 11 31.9	+0.4
	baz=316,SNR=6.9						
TKL	Tuckaleechee C	65.78	63	IAmb	IAmb	00 11 35.5	
	comp=Z,12nm,0.6s						
O57A	Amberson	65.81	56	P	P	00 11 32.2	+0.2
	baz=317,SNR=6.1						
H62A	Milan	65.82	49	P	P	00 11 31.2	-0.7
	baz=319						
N58A	Sunbury	65.83	55	IAmb	IAmb	00 11 33.4	
	comp=Z,7.4nm,0.7s						
N58A	Sunbury	65.83	55	P	P	00 11 32.1	+0.1
	baz=317						
Q56A	Snyder Ridge,	65.85	57	P	P	00 11 32.4	+0.2
	baz=317						
R55A	Marlinton	65.90	59	P	P	00 11 32.8	+0.3
R55A				IAmb	IAmb	00 11 36.0	
	comp=Z,10nm,0.7s						
R55A	Marlinton	65.90	59	P	P	00 11 32.9	+0.3
	baz=317,SNR=6.6						
U53A	Fall Branch	65.94	62	P	P	00 11 33.3	+0.5
	baz=317,SNR=6.3						
X51A	Calhoun	65.95	64	P	P	00 11 33.0	+0.1
	baz=316						
E64A	Bridgewater	65.96	45	P	P	00 11 31.5	-1.2
	baz=320						
T54A	Tazewell	65.99	60	P	P	00 11 34.0	+0.8
	baz=317,SNR=20						
S55A	Lewisburg	66.06	59	P	P	00 11 34.0	+0.4
	baz=317,SNR=6.9						
J61A	Chester	66.06	50	P	P	00 11 33.3	-0.1
	baz=318						
W52A	Murphy	66.10	63	P	P	00 11 33.9	0.0
	baz=317,SNR=9.9						
G63A	Kingsbury	66.13	47	P	P	00 11 33.4	-0.5
	baz=319						
P57A	Homestead Farm	66.15	56	P	P	00 11 34.0	-0.1
	baz=317						
F64A	Sherman	66.15	46	P	P	00 11 33.1	-0.9
	baz=320						
R56A	Bull Pasture M	66.19	58	P	P	00 11 34.4	-0.1
	baz=317,SNR=5.2						
SLVN	Son La	66.22	275	P	P	00 11 35.9	+1.1
U54A	Nelsons Funny	66.25	61	P	P	00 11 34.8	-0.1
U54A	Nelsons Funny	66.25	61	P	P	00 11 35.8	+1.0
	baz=317,SNR=16						
O58A	Lewisberry	66.25	55	P	P	00 11 34.8	+0.1
	baz=318						
L60A	Shokan	66.25	52	P	P	00 11 35.2	+0.5
	baz=318						

I62A Tamworth 66.25 49 P P 00 11 34.3 -0.4
baz=319
N59A State Game Lan 66.26 54 IAmb IAmb 00 11 35.6
comp=Z,14nm,0.7s
N59A State Game Lan 66.26 54 P P 00 11 35.1 +0.3
baz=318,SNR=11
Z50A Ashland 66.29 66 P P 00 11 34.9 -0.2
baz=317,SNR=18
FINES FINESS Array B 66.29 348 P P 00 11 33.2 -1.4
comp=Z,4.4nm,0.7s,baz=18,slow=5.5,SNR=16
FINES LR LR 00 44 55.9
comp=Z,87nm,18.2s,baz=236,slow=40
FINES FINESS Array B 66.29 348 i P P 00 11 33.5 -1.1
FINES pmax pmax
comp=Z,4.0nm,0.7s
V53A Saluda 66.31 62 P P 00 11 36.0 +0.8
baz=317,SNR=11
Y51A Rockmart 66.31 65 P P 00 11 34.9 -0.4
baz=317,SNR=13
T55A Pulaski 66.38 60 P P 00 11 36.6 +0.9
baz=317,SNR=5.9
X52A Dahlonega 66.47 64 P P 00 11 36.7 +0.4
baz=317,SNR=18
W53A Cullowhee 66.48 63 P P 00 11 37.0 +0.5
baz=317,SNR=11
O59A Robesonia 66.49 55 P P 00 11 36.3 0.0
baz=318
J62A Henniker 66.51 50 P P 00 11 35.9 -0.5
baz=319
BLA Blacksburg 66.51 60 P P 00 11 37.3 +0.8
baz=317,SNR=9.7
M60A Port Jervis 66.54 53 P P 00 11 36.5 -0.1
baz=318,SNR=5.3
N60A Cedar Hill Far 66.63 54 P P 00 11 37.3 +0.2
baz=318,SNR=5.4
MVL Millersville 66.64 55 IAmb IAmb 00 11 39.9
comp=Z,8.2nm,0.8s
S56A Natural Bridge 66.64 59 P P 00 11 37.9 +0.7
baz=317,SNR=6.7
Z51A Franklin 66.67 66 IAmb IAmb 00 11 39.7
comp=Z,17nm,0.9s
U55A TA2, Sparta 66.69 61 P P 00 11 38.3 +0.6
baz=317,SNR=21
V54A Nebo 66.72 62 P P 00 11 38.5 +0.7
baz=317,SNR=23
Q58A Fox Den Farm, 66.72 57 P P 00 11 37.8 +0.1
baz=318
ODNJ Ogdensburg 66.73 53 IAmb IAmb 00 11 38.1
comp=Z,8.1nm,0.8s
R57A Stanardsville 66.74 58 P P 00 11 38.5 +0.6
baz=317,SNR=9.2
KSCT Kent School, K 66.81 52 P P 00 11 37.1 -1.2
KSCT IAmb IAmb 00 11 40.1
comp=Z,5.6nm,0.8s
T56A Rocky Mt 66.86 59 P P 00 11 39.0 +0.3
baz=317
P59A Jarrettsville 66.88 55 P P 00 11 38.9 +0.1
baz=318
X53A Estanollee 66.88 63 P P 00 11 39.5 +0.6
baz=317,SNR=13
O60A Telford 66.89 54 P P 00 11 38.9 +0.1
baz=318
S57A Dark Hollow, R 66.91 58 IAmb IAmb 00 11 40.2
comp=Z,7.8nm,0.6s
S57A Dark Hollow, R 66.91 58 P P 00 11 39.6 +0.6
baz=317
Y52A Lilburn 66.91 64 P P 00 11 39.1 0.0
baz=317,SNR=11
M61A Granite Spring 66.98 52 P P 00 11 39.1 -0.3
baz=318
R58A Rapidan 67.02 57 P P 00 11 40.0 +0.4
baz=318
V55A Taylorsville 67.07 61 P P 00 11 40.6 +0.5
baz=317,SNR=9.7
W54A Cherokee Point 67.09 62 P P 00 11 40.6 +0.4
baz=317,SNR=6.0
PAL Palisades 67.14 53 P P 00 11 40.1 -0.2
PAL IAmb IAmb 00 11 40.9
comp=Z,15nm,0.7s
PAL Palisades 67.14 53 P P 00 11 40.1 -0.2
PAL pmax pmax
comp=Z,15nm,0.7s
PAL Palisades 67.14 53 P P 00 11 40.1 -0.2
baz=318
PSUB Penn St. - Bra 67.15 54 P P 00 11 40.1 -0.4
U56A King 67.16 60 P P 00 11 41.3 +0.7
baz=317,SNR=5.7
Y53A Monroe 67.19 64 P P 00 11 41.0 +0.1
baz=317,SNR=13
Z52A Williamson 67.20 65 P P 00 11 40.7 -0.2
baz=317,SNR=7.1
FRU1 Bishkek 67.26 310 P P 00 11 41.1 -0.1
FRU1 Bishkek 67.26 310 P P 00 11 41.1 -0.1
FRU1 pmax pmax
comp=Z,10.0nm,0.4s
T57A Hurt 67.30 59 P P 00 11 41.5 0.0
baz=318,SNR=7.4
WSPT Westport, CT 67.30 52 P P 00 11 40.8 -0.7
WSPT IAmb IAmb 00 11 42.2
comp=Z,11nm,0.7s
R58B Mineral 67.33 57 P P 00 11 41.1 -0.5
R58B IAmb IAmb 00 11 43.0
comp=Z,5.9nm,0.6s
R58B Mineral 67.33 57 P P 00 11 41.9 +0.2
baz=318
SANVU Saraoutou 67.35 195 P P 00 11 41.6 -0.2
SANVU IAmb IAmb 00 11 58.4
comp=Z,17nm,1.0s
X54A Belton 67.37 63 P P 00 11 42.7 +0.8
baz=317,SNR=14
152A Waverly Hall 67.41 66 P P 00 11 41.6 -0.6
baz=317
CBN Corbin Frederi 67.42 57 P P 00 11 41.7 -0.5
CBN IAmb IAmb 00 11 43.1
comp=Z,13nm,0.8s
AAK Ala-Archa 67.45 310 P P 00 11 41.7 -0.9
AAK IAmb IAmb 00 11 44.1
comp=Z,3.4nm,0.6s
AAK Ala-Archa 67.45 310 i P P 00 11 39.2 -3.4
AAK pmax pmax
comp=Z,9.0nm,1.8s
O61A Allentown 67.49 54 P P 00 11 43.1 +0.5
baz=318
V56A Mocksville 67.50 61 P P 00 11 43.4 +0.6
baz=318,SNR=10
S58A Poland Farm, P 67.50 58 P P 00 11 42.5 -0.2
S58A IAmb IAmb 00 11 44.0
comp=Z,7.5nm,0.8s
S58A Poland Farm, P 67.50 58 P P 00 11 42.9 +0.2
baz=318
KMSC Kings Mountain 67.52 62 P P 00 11 43.4 +0.5
baz=317,SNR=21
GOGA Godfrey 67.58 64 IAmb IAmb 00 11 44.5
comp=Z,14nm,0.7s
GOGA Godfrey 67.58 64 P P 00 11 42.9 -0.4
baz=317,SNR=7.8
Z53A Monticello 67.62 65 P P 00 11 43.3 -0.3
baz=317,SNR=17
NRN Naryn 67.62 309 P P 00 11 43.2 -0.7
NRN Naryn 67.62 309 P P 00 11 43.2 -0.7
NRN pmax pmax
comp=Z,5.0nm,1.2s
U57A Blanch 67.67 59 P P 00 11 44.4 +0.6
baz=318
Y54A Tignall 67.70 64 P P 00 11 44.2 +0.2
baz=317,SNR=17
T58A Grand View Acr 67.73 59 P P 00 11 44.4 +0.2
baz=318
LMN Caledonia Moun 67.74 44 P P 00 11 43.0 -1.1
LMN IAmb IAmb 00 11 44.1
comp=Z,11nm,0.8s
S59A Mechanicsville 67.79 57 P P 00 11 45.0 +0.5
baz=318
TNTI Ternate 67.81 242 P P 00 11 43.1 -1.8
V57A Coltrane Farms 67.83 60 P P 00 11 45.1 +0.2
baz=318
X55A Gracelyn & Ava 67.84 62 P P 00 11 45.5 +0.5
baz=318,SNR=17
252A Lumpkin 67.89 66 P P 00 11 44.7 -0.5
baz=317
NC204 NORSAR Array S 67.89 355 P P 00 11 43.6 -1.3
NC204 IAmb IAmb 00 11 54.0
comp=Z,24nm,1.1s
NC303 NORSAR Array S 67.91 355 P P 00 11 41.6 -3.4
NC303 IAmb IAmb 00 11 47.7
comp=Z,16nm,1.1s
W56A Indian Trail 67.94 61 P P 00 11 45.9 +0.4
baz=318
LSA Lhasa 67.97 290 P P 00 11 48.0 +1.6
LSA pmax pmax
comp=Z,26nm,0.7s
TAOE Nuku Hiva Isla 68.03 139 eLR LR 00 32 49.2
comp=Z,332nm,23.6s
Z54A Sparta 68.07 64 P P 00 11 46.2 -0.2
baz=318,SNR=9.2
NB2 NORSAR Subarra 68.11 355 P P 00 11 44.8 -1.5
comp=Z,2.9nm,0.7s,baz=7.4,slow=6.9
NOA NORSAR Array B 68.11 355 P P 00 11 44.7 -1.5
comp=Z,1.8nm,0.6s,baz=1.4,slow=5.7,SNR=16
NOA LR LR 00 42 50.9
comp=Z,46nm,19.1s,baz=345,slow=37
Y55A Saluda 68.11 63 P P 00 11 47.1 +0.5
baz=318,SNR=13
352A Blakely 68.15 67 P P 00 11 47.1 +0.2
baz=317
X56A White Oak 68.17 62 P P 00 11 47.4 +0.5
baz=318,SNR=7.8
JSC Jenkinsville 68.19 62 IAmb IAmb 00 11 48.4
comp=Z,12nm,0.6s
T59A Double "B" Far 68.24 58 IAmb IAmb 00 11 48.6
comp=Z,13nm,0.7s
T59A Double "B" Far 68.24 58 P P 00 11 47.7 +0.3
baz=318
W57A Gilead 68.26 61 IAmb IAmb 00 11 48.2
comp=Z,15nm,0.7s
W57A Gilead 68.26 61 P P 00 11 47.8 +0.3
baz=318,SNR=5.7
V58A Windy Hill, Pi 68.27 60 IAmb IAmb 00 11 48.9
comp=Z,15nm,0.7s
V58A Windy Hill, Pi 68.27 60 P P 00 11 47.9 +0.4
baz=318,SNR=5.5
AKTO Aktyubinsk 68.27 325 P P 00 11 46.5 -0.9
FAKI Fak Fak 68.27 235 P P 00 11 47.7 -0.1
154A Montrose 68.37 65 P P 00 11 47.9 -0.4
baz=318
Z55A Blythe 68.48 64 P P 00 11 49.4 +0.5
baz=318
AB31 Akbulak array 68.53 323 eP P 00 11 48.0 -1.0
ABKAR Akbulak array 68.53 323 P P 00 11 48.9 -0.1
ABKAR Akbulak array 68.53 323 IAmb IAmb 00 11 55.0
comp=Z,2.2nm,0.7s
T60A Surry 68.55 57 P P 00 11 49.1 -0.3
U59A Littleton 68.57 59 IAmb IAmb 00 11 54.4
comp=Z,5.3nm,0.9s
U59A Littleton 68.57 59 P P 00 11 50.1 +0.6
baz=318
X57A Johnson Farm, 68.71 61 P P 00 11 51.2 +0.9
baz=318
155A Kite 68.73 64 P P 00 11 50.5 0.0
baz=318
254A Abbeville 68.76 65 P P 00 11 50.5 -0.1
baz=318
V59A Middlesex 68.77 59 P P 00 11 51.1 +0.5
baz=318,SNR=10
W58A Raeford 68.77 60 P P 00 11 51.1 +0.4
baz=318,SNR=6.4
U60A Pendleton 68.82 58 P P 00 11 51.7 +0.7
baz=318
Z56A Williston 68.83 63 P P 00 11 51.9 +0.7
baz=318,SNR=8.0
Y57A Sumter 68.87 62 P P 00 11 52.2 +0.8
baz=318
KK31 Karatay Array 68.98 313 IAmb IAmb 00 11 52.5
comp=Z,4.1nm,0.5s
KK31 Karatay Array 68.98 313 eP P 00 11 51.0 -0.9
KKAR Karatay Array 68.98 313 P P 00 11 50.8 -1.1
KKAR Karatay Array 68.98 313 IAmb IAmb 00 11 52.5
comp=Z,4.1nm,0.5s
KKAR Karatay Array 68.98 313 P P 00 11 50.8 -1.1
KSH Kashi 69.08 307 P P 00 11 56.5 +3.7
KSH pP pwP 00 12 01.9 +0.1
KSH PP PP 00 14 31.9 +7.0
KSH ScP 00 16 23.7
KSH S S 00 20 59.1 +1.3
KSH SS SS 00 25 27.5 +4.7
KSH pmax pmax
comp=Z,15nm,0.7s
KSH pmax pmax
comp=Z,86nm,3.8s
KSH LR LR
comp=Z,90nm,9.1s
KSH LR LR
comp=Z,380nm,10.7s
W59A Clinton 69.10 60 P P 00 11 53.6 +0.9
baz=318
ARSB Arslanbob 69.18 310 P P 00 11 53.4 0.0
ARSB Arslanbob 69.18 310 P P 00 11 53.4 0.0
ARSB pmax pmax
comp=Z,3.0nm,0.7s
Z57A Bowman 69.23 63 P P 00 11 54.6 +1.0
baz=318,SNR=5.2
255A Hazlehurst 69.24 65 P P 00 11 54.1 +0.5
baz=318
156A Sylvania 69.26 64 P P 00 11 54.9 +1.2
baz=318
V60A Jim Taylor Roa 69.29 59 P P 00 11 54.1 +0.2
U61A Possum Corner 69.31 58 P P 00 11 54.2 +0.1
Y58A Scranton 69.36 62 P P 00 11 55.1 +0.7
baz=318
157A Early Branch 69.52 63 P P 00 11 56.7 +1.3
baz=318
W60A Pink Hill 69.58 59 P P 00 11 56.6 +0.8
baz=319
V61A Roper 69.64 58 P P 00 11 57.3 +1.2
baz=319
NHSC New Hope 69.67 62 P P 00 11 57.2 +0.9
NHSC New Hope 69.67 62 P P 00 11 57.4 +1.1
baz=318
Z58A St. Stephen 69.70 62 P P 00 11 57.3 +0.8
baz=318
Y59A Loris 69.74 61 P P 00 11 57.4 +0.7
baz=318
X60A Albert Glenn T 69.79 60 P P 00 11 57.8 +0.7
baz=319,SNR=6.4
RGRS Roger Stewart 69.81 63 P P 00 11 57.8 +0.6
CSU Charleston Sou 69.82 62 P P 00 11 57.3 +0.1
257A Skidaway Islan 70.03 64 P P 00 11 56.3 -2.2
Y60A Bolivia 70.09 60 P P 00 11 58.9 0.0
OBN Obninsk 70.41 340 P P 00 11 59.8 -0.7
OBN Obninsk 70.41 340 i P P 00 11 59.0 -1.5
OBN i 00 14 37.1
OBN pmax pmax
comp=Z,8.0nm,0.8s
OBN MLR MLR
comp=Z,158nm,18.0s
PMOR Pomariorio Ree 70.81 149 eT T 01 29 40.3
comp=Z,5.4nm,0.2s
CHTO Chiang Mai 71.20 277 P P 00 12 06.3 +0.4
CHTO Chiang Mai 71.20 277 P P 00 12 06.3 +0.4
CHTO pmax pmax
comp=Z,4.0nm,1.1s
CMAR Chiang Mai Arr 71.47 277 P P 00 12 07.6 +0.1
comp=Z,0.9nm,0.3s,baz=30,slow=5.7,SNR=6.7
CMAR LR LR 00 47 47.7
comp=Z,53nm,18.9s,baz=64,slow=40
CMAR Chiang Mai Arr 71.47 277 ceP P 00 12 05.0 -2.5
CMAR pmax pmax
comp=Z,1.0nm,0.3s
TAPN Taplejung 71.74 291 eP P 00 12 10.3 +0.9
comp=Z,113nm,1.0s
LUWI Luwuk 71.88 244 P P 00 12 10.6 +0.6
ODAN Odare 72.30 291 eP P 00 12 13.4 +0.7
comp=Z,30nm,0.7s
GUN Gumba 72.40 293 eP P 00 12 14.5 +1.1
comp=Z,196nm,0.8s
JIRN Jiri 72.41 292 eP P 00 12 14.4 +0.9
comp=Z,109nm,0.6s
PPT Papeete 72.69 151 LR LR 00 35 16.7
comp=Z,110nm,20.9s,baz=340,slow=28
RAMN Ramite 72.70 291 eP P 00 12 15.8 +0.7
comp=Z,63nm,0.5s
PPT2 Papeete2 72.71 151 eLR LR 00 34 34.6
comp=Z,94nm,23.0s
VRH Novokhopyorsk 72.75 335 eP P 00 12 12.7 -1.9
VRH pmax pmax
comp=Z,10.0nm,0.6s
KKN Kakani 72.84 293 eP P 00 12 16.9 +1.0
comp=Z,34nm,0.6s
PKI Pulchoki 72.93 293 eP P 00 12 17.1 +0.5
PKIN Phulchoki 72.93 293 eP P 00 12 17.1 +0.6
comp=Z,33nm,0.6s
GKN Gorkha 73.05 294 eP P 00 12 17.9 +0.8
comp=Z,41nm,0.7s
DANN Dangsing 73.30 294 eP P 00 12 19.5 +0.8
comp=Z,72nm,0.8s
VSR Storozhevoye 73.39 337 eP P 00 12 16.5 -2.0
VSR pmax pmax
comp=Z,30nm,1.7s
RAR Rarotonga 73.65 162 LR LR 00 39 24.0
comp=Z,200nm,19.0s,baz=325,slow=31
KOLN Koldanda 73.83 294 eP P 00 12 22.3 +0.6
NIL Nilore 75.00 305 P P 00 12 29.0 +0.8
NIL Nilore 75.00 305 P P 00 12 29.0 +0.8
NIL pmax pmax
comp=Z,20nm,0.6s
AKASG Malin Array Be 76.08 342 P P 00 12 32.6 -1.4
comp=Z,10nm,0.6s,baz=22,slow=5.7,SNR=36
AKASG LR LR 00 49 33.2
comp=Z,84nm,19.3s,baz=295,slow=39
AKASG Malin Array Be 76.08 342 ceP P 00 12 33.2 -0.8
AKASG pmax pmax
comp=Z,11nm,0.6s
AKBB Malin Array Si 76.08 342 IAmb IAmb 00 12 34.9
comp=Z,12nm,0.7s
KBL Kabul 76.42 308 P P 00 12 35.6 -1.0
KBL IAmb IAmb 00 12 36.9
comp=Z,12nm,0.7s
KBL Kabul 76.42 308 P P 00 12 35.6 -1.0
KBL pmax pmax
comp=Z,12nm,0.7s
MTN Manton Dam 77.32 231 P P 00 12 42.2 +0.8
CLL Collm 77.68 353 i P P 00 12 41.9 -1.1
comp=Z,37nm,2.0s
CLL ePP PP 00 15 37.0 -0.4
CLL Collm 77.68 353 i P P 00 12 41.9 -1.1
CLL pmax pmax
comp=Z,37nm,2.0s
GOF Gofitskoye 77.94 331 ⇑iP P 00 12 44.5 -0.1
GOF pmax pmax
comp=Z,43nm,0.7s
TBI Tubuai 78.19 153 eLR LR 00 36 57.7
comp=Z,155nm,25.2s
UPC Upice 78.20 351 eP P 00 12 45.6 -0.4
UPC Upice 78.20 351 eP P 00 12 45.6 -0.4
BBSR BB Station 78.48 52 P P 00 12 43.3 -4.5
BBSR IAmb IAmb 00 12 52.8
comp=Z,19nm,1.0s
GEYT Alibeck 78.68 318 P P 00 12 48.4 -0.5
comp=Z,2.8nm,0.8s,baz=349,slow=6.2,SNR=5.3
GEYT LR LR 00 50 25.9
comp=Z,192nm,19.8s,baz=270,slow=38
GEYT Alibeck 78.68 318 P P 00 12 49.0 +0.1
SORM Soroca 78.70 342 ⇑P P 00 12 47.9 -0.9
NKC Novy Kostel 78.79 353 eP P 00 12 48.9 -0.4
NKC Novy Kostel 78.79 353 eP P 00 12 48.9 -0.4
PRU Pruhonice 78.86 352 eP P 00 12 48.9 -0.7
PRU Pruhonice 78.86 352 eP P 00 12 48.9 -0.7
GOPC GO Pecny, Ondr 78.91 352 eP P 00 12 49.2 -0.7
GOPC GO Pecny, Ondr 78.91 352 eP P 00 12 49.2 -0.7
KOLS Kolonicke sedl 78.97 346 eP P 00 12 50.4 +0.1
KOLS Kolonicke sedl 78.97 346 eP P 00 12 50.4 +0.1
KIV Kislovodsk 79.04 331 ⇓P P 00 12 50.9 0.0
KIV Kislovodsk 79.04 331 P P 00 12 50.9 0.0
KIV IAmb IAmb 00 12 54.4
comp=Z,9.5nm,0.7s
KIV Kislovodsk 79.04 331 eP P 00 12 50.7 -0.2
KIV pmax pmax
comp=Z,41nm,1.0s
KIV MLR MLR
comp=Z,275nm,19.0s
CRVS Cervenica-Dubn 79.12 347 eP P 00 12 51.2 +0.1
CRVS Cervenica-Dubn 79.12 347 eP P 00 12 51.2 +0.1
LANS Liptovska Anna 79.14 348 eP P 00 12 51.6 +0.3
LANS pmax pmax
comp=Z,4.0nm,0.7s
LANS Liptovska Anna 79.14 348 eP P 00 12 51.6 +0.3
KBZ Khabaz 79.18 331 P P 00 12 51.4 0.0
comp=Z,6.8nm,0.7s,baz=114,slow=2.2,SNR=25
KBZ LR LR 00 53 00.7
comp=Z,148nm,18.6s,baz=18,slow=40
UZH Uzhgorod 79.26 346 eP P 00 12 51.5 -0.3
UZH e 00 12 59.3
UZH e 00 13 05.2
AKT Akhty 79.62 327 eP P 00 12 54.1 0.0
AKT e 00 13 01.6
AKT pmax pmax
comp=Z,19nm,0.8s
TRPA Tarpa 79.71 346 ⇑P P 00 12 54.1 -0.2
ZEI Tsey 79.72 330 eP P 00 12 53.3 -1.4
ZEI pmax pmax
comp=Z,16nm,0.6s
BUR08 Bucovina Ar. S 79.75 344 IAmb IAmb 00 12 55.4
comp=Z,8.5nm,0.7s
BURAR Bucovina Array 79.78 344 ⇑P P 00 12 54.3 -0.5
BURAR Bucovina Array 79.78 344 P P 00 12 54.3 -0.5
MILM Milestii Mici 79.78 342 ⇑P P 00 12 53.9 -0.7
KHC Kasperske Hory 79.79 352 eP P 00 12 54.1 -0.7
KHC ex x 00 12 58.3
KHC Kasperske Hory 79.79 352 eP P 00 12 54.1 -0.7
KHC e 00 12 58.3
HRA Herat 79.81 313 IAmb IAmb 00 12 56.7
comp=Z,6.5nm,0.7s
GERES GERESS Array B 80.06 352 P P 00 12 55.5 -0.9
comp=Z,1.9nm,0.6s,baz=2.3,slow=6.7,SNR=12
MODS Modra-Piesok 80.17 350 eP P 00 12 56.1 -0.7
MODS Modra-Piesok 80.17 350 eP P 00 12 56.1 -0.7
BIZ Bicaz 80.27 343 ⇓P P 00 12 57.7 +0.3
LEOM Leova 80.32 342 ⇓P P 00 12 57.3 -0.3
KULM Kulim 80.37 267 P P 00 12 58.1 -0.3
ARCR ARCALIA 80.44 345 ⇑P P 00 12 58.8 +0.6
TESR Tescani 80.58 343 ⇓P P 00 12 58.5 -0.6
BIR Birlad 80.64 342 ⇑P P 00 12 59.7 +0.3
CONA Conrad Observa 80.77 351 eP P 00 12 59.7 -0.4
comp=Z,3.7nm,0.7s,SNR=7.7
GHRR 80.88 342 ⇓P P 00 13 00.7 +0.1
KNRA Kununurra 80.92 231 P P 00 13 00.8 -0.3
KNRA IAmb IAmb 00 13 03.8
comp=Z,23nm,1.1s
AKH Akhalkalaki 81.09 330 P P 00 13 02.1 0.0
AKH IAmb IAmb 00 13 03.9
comp=Z,8.1nm,0.7s
AKH Akhalkalaki 81.09 330 P P 00 13 02.1 0.0
AKH pmax pmax
comp=Z,8.0nm,0.7s
VRI Vrincioaia 81.19 343 ⇑P P 00 13 02.2 -0.1
PLOR Plostina 81.22 343 ⇓P P 00 13 02.4 -0.2
ODBI Odobesti 81.23 342 ⇓P P 00 13 03.8 +1.3
TLCR 81.44 341 ⇓P P 00 13 03.5 0.0
ARSA Arzberg 81.47 351 eP P 00 13 03.6 -0.2
comp=Z,6.3nm,0.8s
BISRR Bisoca 81.50 343 ⇓P P 00 13 04.8 +0.8
CFR Carcaliu 81.58 342 ⇑P P 00 13 04.1 -0.2
GRER 81.61 342 ⇑P P 00 13 05.7 +1.1
SIRR Siria 81.66 346 ⇑P P 00 13 04.5 -0.3
MLR Muntele Rosu 81.70 343 LR LR 00 54 42.7
comp=Z,107nm,18.1s,baz=301,slow=40
WATA Walderalm 81.73 353 eP P 00 13 04.3 -1.1
comp=Z,6.3nm,0.8s
MOTA Moosalm 81.76 354 eP P 00 13 04.7 -0.8
comp=Z,5.0nm,0.8s
WB0 Warramunga Arr 81.82 225 P P 00 13 05.8 0.0
GNI Garni 81.82 328 LR LR 00 54 21.5
comp=Z,130nm,19.4s,baz=22,slow=39
GNI Garni 81.82 328 P P 00 13 07.2 +1.2
GNI IAmb IAmb 00 13 21.9
comp=Z,9.3nm,0.9s
GNI Garni 81.82 328 P P 00 13 07.2 +1.2
GNI pmax pmax
comp=Z,9.0nm,0.9s
KBA Koelnbreinsper 81.85 352 eP P 00 13 05.5 -0.5
comp=Z,18nm,0.7s,SNR=16
WR0 Warramunga Arr 81.92 224 P P 00 13 06.8 +0.5
WR0 IAmb IAmb 00 13 07.5
comp=Z,5.4nm,0.6s
WRAB Tennant Creek 81.98 224 P P 00 13 06.3 -0.4
WRAB IAmb IAmb 00 13 08.9
comp=Z,12nm,0.5s
WRAB Tennant Creek 81.98 224 P P 00 13 06.3 -0.4
WRAB pmax pmax
comp=Z,12nm,0.5s
WRA Warramunga Arr 81.99 224 P P 00 13 06.8 +0.1
comp=Z,2.7nm,0.6s,baz=33,slow=6.0,SNR=4.6
WRA LR LR 00 47 05.4
comp=Z,67nm,20.3s,baz=40,slow=34
WRA Warramunga Arr 81.99 224 IAmb IAmb 00 13 10.8
comp=Z,0.2nm,0.8s
SOKA Soboth 82.09 351 eP P 00 13 06.6 -0.5
comp=Z,6.4nm,0.6s,SNR=5.8

FETA	**Feichten**	**82.11**	**354**	eP	**P**	**00 13 06.9**	**-0.5**
	comp=Z,5.0nm,0.8s						
ABTA	**Abfaltersbach**	**82.25**	**353**	eP	**P**	**00 13 06.5**	**-1.5**
	comp=Z,10nm,1.4s						
OBKA	**Obir**	**82.30**	**351**	eP	**P**	**00 13 08.5**	**+0.3**
	comp=Z,9.5nm,0.7s,SNR=5.7						
BZS	**Buzias**	**82.30**	**346**	⇑P	**P**	**00 13 07.6**	**-0.6**
GZR	**Gura Zlata**	**82.34**	**345**	⇑P	**P**	**00 13 08.5**	**0.0**
DAVOX	**Davos/Dischmat**	**82.40**	**354**	LR	LR	00 56 08.4	
	comp=Z,157nm,19.0s,baz=257,slow=40						
FUORN	**Ofenpass-Fuorn**	**82.54**	**354**	IAmb	IAmb	00 13 15.3	
	comp=Z,7.2nm,0.6s						
HUMR	**Humele**	**82.81**	**344**	⇑P	**P**	**00 13 10.3**	**-0.5**
PSI	**Prapat**	**83.38**	**266**	P	**P**	**00 13 14.2**	**-0.1**
PSI				pmax	pmax		
	comp=Z,11nm,1.1s						
RPSI	**Rantau Prapat**	**83.46**	**266**	P	**P**	**00 13 14.2**	**-0.4**
RPSI				IAmb	IAmb	00 13 30.6	
	comp=Z,11nm,1.1s						
PLVB	**Pleven**	**83.97**	**344**	⇑P	**P**	**00 13 16.5**	**-0.3**
DIVS	**Divibare**	**84.03**	**347**	eP	**P**	**00 13 16.4**	**-0.8**
HAPS	**Han Pijesak,BI**	**84.18**	**348**	eP	**P**	**00 13 17.0**	**-1.1**
BBLS	**Lazići**	**84.34**	**347**	eP	**P**	**00 13 18.8**	**0.0**
FITZ	**Fitzroy Crossi**	**84.53**	**233**	P	**P**	**00 13 20.0**	**+0.2**
FITZ				IAmb	IAmb	00 13 21.8	
	comp=Z,8.9nm,0.8s						
RUDO	**Rudo**	**84.59**	**347**	eP	**P**	**00 13 19.3**	**-0.7**
HYB	**Hyderabad**	**84.75**	**291**	iP	**P**	**00 13 22.0**	**+0.8**
VTS	**Vitosha**	**84.96**	**344**	⇓P	**P**	**00 13 21.2**	**-0.9**
VTS	**Vitosha**	**84.96**	**344**	IAmb	IAmb	00 13 22.3	
	comp=Z,10.0nm,0.7s						
UPM	**Unac-Piva**	**85.06**	**348**	eP	**P**	**00 13 22.0**	**-0.6**
GSI	**Gunungsitoli**	**85.38**	**266**	P	**P**	**00 13 22.7**	**-1.7**
GSI				IAmb	IAmb	00 13 40.4	
	comp=Z,13nm,0.9s						
BRY	**Bratogost**	**85.40**	**348**	eP	**P**	**00 13 23.1**	**-1.2**
MDUB	**Mudurnu**	**85.40**	**338**	P	**P**	**00 13 21.8**	**-2.4**
AS31	**Alice Springs**	**85.45**	**223**	P	**P**	**00 13 23.5**	**-0.9**
ASAR	**Alice Springs**	**85.45**	**223**	P	**P**	**00 13 25.5**	**+1.1**
	comp=Z,4.3nm,0.7s,baz=25,slow=5.6,SNR=68						
ASAR				LR	LR	00 49 28.9	
	comp=Z,62nm,19.7s,baz=48,slow=34						
ASAR	**Alice Springs**	**85.45**	**223**	P	**P**	**00 13 24.9**	**+0.5**
ASAR	**Alice Springs**	**85.45**	**223**	P	**P**	**00 13 24.9**	**+0.5**
BR131	**Keskin Array S**	**85.50**	**336**	IAmb	IAmb	00 13 25.2	
	comp=Z,5.1nm,0.7s						
BRTR	**Keskin Array B**	**85.50**	**336**	P	**P**	**00 13 24.5**	**-0.3**
	comp=Z,5.2nm,0.7s,baz=52,slow=2.5,SNR=30						
BRTR				LR	LR	00 57 07.4	
	comp=Z,31nm,18.4s,baz=39,slow=40						
BRTR	**Keskin Array B**	**85.50**	**336**	P	**P**	**00 13 24.1**	**-0.7**
STON	**Ston**	**85.54**	**348**	eP	**P**	**00 13 22.8**	**-1.9**
ANTO	**Ankara**	**85.58**	**337**	P	**P**	**00 13 24.0**	**-1.1**
ANTO				IAmb	IAmb	00 13 26.1	
	comp=Z,12nm,0.8s						
ANTO	**Ankara**	**85.58**	**337**	P	**P**	**00 13 24.0**	**-1.1**
ANTO				pmax	pmax		
	comp=Z,12nm,0.8s						
TREB	**Trebinje**	**85.61**	**348**	eP	**P**	**00 13 23.5**	**-1.6**
PDG	**Podgorica**	**85.77**	**347**	⇑P	**P**	**00 13 25.4**	**-0.5**
PDG	**Podgorica**	**85.77**	**347**	eP	**P**	**00 13 24.9**	**-1.0**
HCY	**Herceg Novi**	**85.86**	**348**	eP	**P**	**00 13 24.8**	**-1.5**
DRME	**Dracevica, Mon**	**86.02**	**347**	eP	**P**	**00 13 25.8**	**-1.3**
CASP	**Castiglione de**	**86.31**	**353**	P	**P**	**00 13 28.0**	**-0.6**
LATE	**Laterza**	**86.41**	**353**	P	**P**	**00 13 29.2**	**+0.1**
AQU	**L'Aquila**	**86.53**	**351**	eP	**P**	**00 13 29.0**	**-0.7**
AQU	**L'Aquila**	**86.53**	**351**	P	**P**	**00 13 29.6**	**-0.1**
AQU	**L'Aquila**	**86.53**	**351**	P	**P**	**00 13 29.6**	**-0.1**
AQU				pmax	pmax		
	comp=Z,50nm,1.1s						
GAZ	**Gaziantep**	**86.91**	**332**	P	**P**	**00 13 30.9**	**-0.8**
GAZ				IAmb	IAmb	00 13 32.9	
	comp=Z,5.3nm,0.8s						
FNA	**Florina**	**87.06**	**345**	IAmb	IAmb	00 13 33.2	
	comp=Z,12nm,0.8s						
HIZ	**Hauiti**	**89.30**	**185**	P	**P**	**00 13 39.7**	**-2.8**
IGPR	**InterUniversit**	**89.34**	**62**	P	**P**	**00 13 41.8**	**-1.6**
MTP	**Monte Pirata**	**89.54**	**61**	P	**P**	**00 13 42.6**	**-1.7**
ESBB	**Sonseca Array**	**89.61**	**4**	P	**P**	**00 13 43.2**	**-1.2**
ESDC	**Sonseca Array**	**89.61**	**4**	P	**P**	**00 13 43.4**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=350,slow=4.0,SNR=17						
ESDC	**Sonseca Array**	**89.61**	**4**	P	**P**	**00 13 43.5**	**-1.0**
STKA	**Stephens Creek**	**89.79**	**213**	P	**P**	**00 13 46.9**	**+1.8**
	comp=Z,5.0nm,0.6s,baz=352,slow=6.1,SNR=25						
STKA	**Stephens Creek**	**89.79**	**213**	P	**P**	**00 13 45.7**	**+0.6**
CSS	**Mathiatis**	**90.07**	**335**	P	**P**	**00 13 46.6**	**-0.1**
CSS				IAmb	IAmb	00 13 49.7	
	comp=Z,7.7nm,1.0s						
PSAA2	**Pilbara Seismi**	**90.38**	**235**	P	**P**	**00 13 45.8**	**-2.2**
PSAA2				IAmb	IAmb	00 13 47.4	
	comp=Z,18nm,1.1s						
PSA00	**Pilbara Seismi**	**90.39**	**235**	P	**P**	**00 13 46.3**	**-1.8**
PSA00				IAmb	IAmb	00 13 48.2	
	comp=Z,12nm,1.1s						
PSAA3	**Pilbara Seismi**	**90.39**	**235**	P	**P**	**00 13 46.7**	**-1.4**
PSAA3				IAmb	IAmb	00 13 48.3	
	comp=Z,11nm,1.0s						
PSAB3	**Pilbara Seismi**	**90.40**	**235**	P	**P**	**00 13 46.2**	**-1.9**
PSAB3				IAmb	IAmb	00 13 49.0	
	comp=Z,12nm,1.1s						
KARP	**Karpathos**	**91.03**	**340**	P	**P**	**00 13 48.9**	**-2.3**
KARP				IAmb	IAmb	00 13 52.1	
	comp=Z,14nm,1.0s						
CMWZ	**Cape Campbell**	**92.56**	**186**	P	**P**	**00 13 58.6**	**+0.9**
TORD	**Torodi Ar. Bea**	**116.17**	**0**	PKP	**PKPdf**	**00 19 29.4**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=353,slow=2.5,SNR=9.5						
DBIC	**Dimbokro**	**122.32**	**8**	PKP	**PKPdf**	**00 19 41.6**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=326,slow=2.7,SNR=6.4						
PLCA	**Paso Flores**	**130.45**	**108**	PKP	**PKiKP**	**00 19 57.5**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=300,slow=2.7,SNR=3.8						
TSUM	**Tsumeb**	**145.96**	**333**		**PKPbc**	**00 20 26.6**	**0.0**
MAW	**Mawson**	**146.40**	**217**	PKPbc	**PKPab**	**00 20 27.4**	**+0.1**
	comp=Z,4.9nm,0.5s,baz=106,slow=6.7,SNR=15						
BOSA	**Boshof**	**151.57**	**313**	PKPbc	**PKiKP**	**00 20 41.4**	**0.0**
	comp=Z,8.9nm,0.6s,baz=15,slow=2.6,SNR=40						
BOSA				PKPab	**PKPab**	**00 20 50.2**	**+0.7**
	comp=Z,5.5nm,0.6s,baz=336,slow=3.2,SNR=7.0						

*ATH **01** 00:02:27.9,38°.23N×20°.38E,h10km±1km,ML2.4/3,Error ellipse: s-maj=1.9km s-min=1.2km az=265.0*
*THE **01** 00:02:27.8,38°.22N×20°.40E,h12km,ML2.8/5,Error ellipse: s-maj=0.8km s-min=0.3km az=232.0*
ISC 01 00:02:27.6±1.5,**38°.22N**±0°.03×**20°.41E**±0°.05,**h13**km±6km, **n20**,σ**0.31**/35,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	**Lixouri, Cepha**	**0.03**	**130**	P	**Pg**	**00 02 30.0**	**+0.1**
LXR1				S	**Sg**	**00 02 31.8**	**+0.3**
	24μm,0.3s						
KEF4	**Livadi, Kephal**	**0.04**	**24**	P	**Pg**	**00 02 30.0**	**0.0**
KEF4				S	**Sg**	**00 02 31.2**	**-0.4**
CHV1	**Chavriata, Kef**	**0.04**	**205**	P	**Pg**	**00 02 30.0**	**+0.1**
CHV1				S	**Sg**	**00 02 31.7**	**+0.1**
	11μm,0.2s						
KEF3	**Kipouria, Keph**	**0.05**	**246**	P	**Pg**	**00 02 30.0**	**0.0**
KEF3				S	**Sg**	**00 02 31.6**	**-0.1**
KEF1	**Kardakata, Kep**	**0.07**	**43**	P	**Pg**	**00 02 30.2**	**0.0**
KEF1				S	**Sg**	**00 02 31.9**	**-0.2**
ARG2	**Argostoli**	**0.08**	**124**	P	**Pg**	**00 02 30.4**	**+0.1**
ARG2				S	**Sg**	**00 02 32.2**	**0.0**
	14μm,0.1s						
KEF2	**Argostoli. Kep**	**0.09**	**132**	P	**Pg**	**00 02 30.6**	**+0.2**
KEF2				S	**Sg**	**00 02 32.3**	**+0.2**
VLS	**Valsamata**	**0.15**	**107**	P	**Pg**	**00 02 31.3**	**+0.1**
VLS				S	**Sg**	**00 02 34.1**	**+0.2**
	3μm,0.2s						
VLS	**Valsamata**	**0.15**	**107**	P	**Pg**	**00 02 31.4**	**+0.1**
VLS				S	**Sg**	**00 02 34.0**	**+0.2**
VLS				AML	AML	00 02 34.2	
	comp=N,7318μm,0.3s						
VLS				AML	AML	00 02 34.3	
	comp=E,5182μm,0.1s						
VSK1	**VASILIKIADES**	**0.22**	**34**	P	**Pg**	**00 02 32.6**	**+0.1**
VSK1				S	**Sg**	**00 02 36.3**	**+0.5**
	comp=E,1μm,0.3s						
FSK	**Fiskardo**	**0.27**	**28**	P	**Pg**	**00 02 33.3**	**+0.1**
FSK				S	**Sg**	**00 02 37.7**	**+0.8**
FSK	**Fiskardo**	**0.27**	**28**	P	**Pg**	**00 02 33.3**	**+0.1**
FSK				S	**Sg**	**00 02 36.7**	**-0.3**
FSK				AML	AML	00 02 38.0	
	comp=N,1927μm,0.3s						
FSK				AML	AML	00 02 38.1	
	comp=E,2579μm,0.2s						
KFL	**Anninata**	**0.32**	**110**	P	**Pg**	**00 02 34.4**	**+0.2**
VLMS	**Volimes, Zakyn**	**0.40**	**149**	P	**Pg**	**00 02 35.8**	**+0.1**
VLMS				S	**Sb**	**00 02 42.5**	**-0.2**
VLMS				AML	AML	00 02 44.3	
	comp=E,1233μm,0.1s						
VLMS				AML	AML	00 02 44.8	
	comp=N,1575μm,0.1s						
EVGI	**Lefkada island**	**0.44**	**26**	P	**Pg**	**00 02 36.4**	**0.0**
EVGI				S	**Sg**	**00 02 43.3**	**+0.9**
EVGI	**Lefkada island**	**0.44**	**26**	P	**Pg**	**00 02 36.5**	**0.0**
EVGI				S	**Sb**	**00 02 43.6**	**-0.3**
MGNA	**Meganis**	**0.53**	**35**	P	**Pg**	**00 02 37.8**	**-0.2**
LKD2	**Lefkada island**	**0.60**	**19**	P	**Pg**	**00 02 39.4**	**+0.1**
PDO	**Prodromos**	**0.72**	**58**	P	**Pg**	**00 02 41.3**	**-0.2**
PVO	**Paravola**	**0.96**	**66**	P	**Pg**	**00 02 45.6**	**-0.6**

RSPR 01 00:22:15.3,19°.05N×67°.57W,h25km±7km,**MD2.6**/4,**1C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.73**	**143**	⇓eP	Pb	00 22 27.6	-1.8
AGPR	**Aguadilla, PR**	**0.73**	**143**	eS	Sb	00 22 37.3	-1.7
PCDR	**Punta Cana, DR**	**0.93**	**235**	⇓eP	Pb	00 22 30.6	-2.3
PCDR	**Punta Cana, DR**	**0.93**	**235**	eS	Sb	00 22 42.4	-2.4
LSP	**Las Mesas**	**0.99**	**152**	⇓eP	Pn	00 22 31.4	-2.3
LSP	**Las Mesas**	**0.99**	**152**	eS	Sb	00 22 43.8	-2.6
LSP	**Las Mesas**	**0.99**	**152**		Pn	00 22 31.4	-2.3
LSP					Sb	00 22 43.8	-2.6
CRPR	**Cabo Rojo, PR**	**1.13**	**157**	⇑eP	Pn	00 22 33.7	-1.8
CRPR	**Cabo Rojo, PR**	**1.13**	**157**	eS	Sn	00 22 47.4	-2.9

IDC 01 00:23:02.7±3.1,**14°.44S**×**166°.74E**,**h0**km,**mb3.9**/4, **mb1 4.1**/5,**mb1mx3.8**/32,**mbtmp4.0**/5,**ML4.3**/1,**Error ellipse: s-maj=65.5km s-min=38.8km az=90.0,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.59**	**182**	Pn	Pn	00 24 56.0	+1.2
	4.2nm,0.3s,baz=4.6,slow=19,SNR=41						
DZM				Sn	Sn	00 26 14.1	-7.5
	4.0nm,0.3s,baz=329,slow=23,SNR=8.5						
STKA	**Stephens Creek**	**28.80**	**229**	P	P	00 29 01.6	-0.9
	3.0nm,0.5s,baz=45,slow=12,SNR=15						
WRA	**Warramunga Arr**	**31.40**	**255**	P	P	00 29 26.4	+0.7
	0.3nm,0.6s,baz=79,slow=6.0,SNR=2.9						
ASAR	**Alice Springs**	**32.30**	**249**	P	P	00 29 33.6	0.0
	1.0nm,0.6s,baz=82,slow=9.2,SNR=17						
MKAR	**Makanchi Array**	**96.65**	**316**	P	P	00 36 34.5	-0.3
	0.1nm,0.5s,baz=116,slow=3.4,SNR=3.3						

*SNET **01** 00:41:15.2±0.9,12°.94N×88°.82W,h54km±8km,ML3.7*
*UCR **01** 00:41:15.4±1.1,12°.94N×88°.61W,h54km±9km,ML3.7*
ISC 01 00:41:15.2±2.2,**12°.9N**±0°.1×**88°.61W**±0°.05,**h53**km±15km, **n43**,σ**0.41**/61,**4D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.43**	**6**	eP	**Pn**	**00 41 25.9**	**-0.1**
ALJI				eS	**Sn**	**00 41 33.4**	**-0.2**
ALJI				IAML		00 41 34.8	
	comp=Z,4μm,0.1s						
ALJI	**Alcalda de J**	**0.43**	**6**	eP	**Pn**	**00 41 25.9**	**-0.1**
ALJI				eS	**Sn**	**00 41 33.4**	**-0.2**
ALJI				IAML		00 41 34.8	
	comp=Z,4μm,0.1s						
JUCU	**Jucuar¡n**	**0.50**	**45**	⇓eP	**Pn**	**00 41 26.6**	**-0.2**
JUCU				eS	**Sn**	**00 41 35.5**	**+0.4**
JUCU	**Jucuar¡n**	**0.50**	**45**	⇓eP	**Pn**	**00 41 26.6**	**-0.2**
JUCU				eS	**Sn**	**00 41 35.5**	**+0.4**
COEB	**Comit de Eme**	**0.60**	**8**	eP	**Pn**	**00 41 27.9**	**-0.1**
COEB				eS	**Sn**	**00 41 37.6**	**+0.3**
COEB	**Comit de Eme**	**0.60**	**8**	eP	**Pn**	**00 41 27.9**	**-0.1**
COEB				eS	**Sn**	**00 41 37.6**	**+0.3**
TECA	**Tecapa**	**0.60**	**10**	eP	**Pn**	**00 41 28.0**	**-0.1**
TECA	**Tecapa**	**0.60**	**10**	eP	**Pn**	**00 41 28.0**	**-0.1**
LCY	**Lacayo**	**0.61**	**31**	eP	**Pn**	**00 41 28.0**	**-0.1**
LCY	**Lacayo**	**0.61**	**31**	eP	**Pn**	**00 41 28.0**	**-0.1**
VSM	**San Miguel**	**0.62**	**32**	eP	**Pn**	**00 41 28.6**	**+0.1**
VSM	**San Miguel**	**0.62**	**32**	eP	**Pn**	**00 41 28.6**	**+0.1**
PACA	**Pacayal**	**0.64**	**26**	⇓eP	**Pn**	**00 41 28.5**	**0.0**
PACA				eS	**Sn**	**00 41 38.8**	**+0.8**
PACA	**Pacayal**	**0.64**	**26**	⇓eP	**Pn**	**00 41 28.5**	**0.0**
PACA				eS	**Sn**	**00 41 38.8**	**+0.8**
BLLM	**Bellamira**	**0.66**	**34**	eP	**Pn**	**00 41 28.5**	**-0.1**
BLLM	**Bellamira**	**0.66**	**34**	eP	**Pn**	**00 41 28.5**	**-0.1**
UESV	**Universidad de**	**0.76**	**347**	eP	**Pn**	**00 41 29.7**	**-0.2**
UESV				eS	**Sn**	**00 41 39.5**	**-1.0**
UESV				IAML		00 41 43.9	
	comp=Z,3μm,0.3s						
UESV	**Universidad de**	**0.76**	**347**	eP	**Pn**	**00 41 29.7**	**-0.2**
UESV				eS	**Sn**	**00 41 39.5**	**-1.0**
UESV				IAML		00 41 43.9	
	comp=Z,3μm,0.3s						
COEG	**Centro de Oper**	**0.77**	**340**	eP	**Pn**	**00 41 29.6**	**-0.5**
COEG				eS	**Sn**	**00 41 40.2**	**-0.6**
COEG	**Centro de Oper**	**0.77**	**340**	eP	**Pn**	**00 41 29.6**	**-0.5**
COEG				eS	**Sn**	**00 41 40.2**	**-0.6**
LCND	**La Caada**	**0.82**	**60**	eP	**Pn**	**00 41 30.3**	**-0.3**
LCND				eS	**Sn**	**00 41 42.2**	**+0.3**
LCND				IAML		00 41 44.6	
	comp=Z,2μm,0.2s						
LCND	**La Caada**	**0.82**	**60**	eP	**Pn**	**00 41 30.3**	**-0.3**
LCND				eS	**Sn**	**00 41 42.2**	**+0.3**
LCND				IAML		00 41 44.6	
	comp=Z,2μm,0.2s						
LFRS	**El Faro**	**0.84**	**329**	eP	**Pn**	**00 41 30.6**	**-0.5**
LFRS				eS	**Sn**	**00 41 43.4**	**+0.7**
CNCH	**Conchagua**	**0.85**	**63**	eP	**Pn**	**00 41 30.7**	**-0.5**
CNCH	**Conchagua**	**0.85**	**63**	eP	**Pn**	**00 41 30.7**	**-0.5**
PAVA	**Las Pavas**	**0.87**	**339**	eP	**Pn**	**00 41 31.3**	**-0.1**
PAVA				eS	**Sn**	**00 41 43.5**	**+0.2**
PAVA	**Las Pavas**	**0.87**	**339**	eP	**Pn**	**00 41 31.3**	**-0.1**
PAVA				eS	**Sn**	**00 41 43.5**	**+0.2**
FAGO	**Alcalda de S**	**0.94**	**32**	eP	**Pn**	**00 41 31.9**	**-0.2**
FAGO	**Alcalda de S**	**0.94**	**32**	eP	**Pn**	**00 41 31.9**	**-0.2**
LBRS	**Las Brisas**	**0.94**	**334**	eP	**Pn**	**00 41 32.4**	**+0.1**
LFU	**La Fuente**	**0.98**	**330**	eP	**Pn**	**00 41 32.6**	**-0.2**
LFU				eS	**Sn**	**00 41 46.5**	**+0.7**
LFU	**La Fuente**	**0.98**	**330**	eP	**Pn**	**00 41 32.6**	**-0.2**
LFU				eS	**Sn**	**00 41 46.5**	**+0.7**
SNET	**Serv Nac Est T**	**0.99**	**323**	IAML		00 41 47.7	
	comp=Z,1μm,0.2s						
SNET	**Serv Nac Est T**	**0.99**	**323**	IAML		00 41 47.7	
	comp=Z,1μm,0.2s						
BOQS	**Boqueron**	**1.06**	**322**	eP	**Pn**	**00 41 33.8**	**-0.2**
BOQS				eS	**Sn**	**00 41 48.8**	**+0.9**
LLGN	**La Laguna**	**1.30**	**346**	eP	**Pn**	**00 41 37.1**	**-0.1**
LLGN	**La Laguna**	**1.30**	**346**	eP	**Pn**	**00 41 37.1**	**-0.1**
SBLS	**San Blas**	**1.36**	**314**	eP	**Pn**	**00 41 38.4**	**+0.3**
SBLS	**San Blas**	**1.36**	**314**	eP	**Pn**	**00 41 38.4**	**+0.3**
MTO3	**Montecristo**	**1.66**	**334**	eP	**Pn**	**00 41 41.9**	**-0.3**
MTO3	**Montecristo**	**1.66**	**334**	eP	**Pn**	**00 41 41.9**	**-0.3**
IXG	**Ixpaco**	**2.18**	**306**	eP	**Pn**	**00 41 49.0**	**-0.3**
IXG	**Ixpaco**	**2.18**	**306**	eP	**Pn**	**00 41 49.0**	**-0.3**

*NEIC **01** 00:41:25.3±1.3,42°.36S±0°.04×173°.11E±0°.08,h13km±1km, Error ellipse: s-maj=8.8km s-min=5.3km az=123.0*
*WEL **01** 00:41:25.1,42°S±4°×17°3E±°,h12km,ML4.3/12, MLv4.3/71,Error ellipse: s-maj=0.0km s-min=0.0km az=0.8*
ISC 01 00:41:25.7±0.9,**42°.36S**±0°.03×**173°.14E**±0°.03,**h15**km,**n105**, σ**1.32**/108,**South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.30**	**101**		**Pg**	**00 41 32.4**	**+0.3**
KHZ	**Kahutara**	**0.30**	**101**	P	**Pg**	**00 41 32.4**	**+0.3**
KHZ				S	**Sg**	**00 41 37.4**	**+0.9**
THZ	**Tophouse**	**0.62**	**344**		**Pg**	**00 41 37.4**	**-0.6**
THZ	**Tophouse**	**0.62**	**344**	P	**Pg**	**00 41 37.5**	**-0.4**
THZ				S	**Sg**	**00 41 45.4**	**-0.8**
LTZ	**Lake Taylor**	**0.77**	**236**		**Pb**	**00 41 40.4**	**-0.4**
LTZ	**Lake Taylor**	**0.77**	**236**	P	**Pb**	**00 41 40.4**	**-0.4**
BSWZ	**Blackbirch Sta**	**0.85**	**41**		**Pb**	**00 41 41.8**	**-0.4**
BSWZ	**Blackbirch Sta**	**0.85**	**41**	P	**Pb**	**00 41 41.9**	**-0.2**
CMWZ	**Cape Campbell**	**1.01**	**53**		**Pg**	**00 41 46.0**	**+0.7**
CMWZ	**Cape Campbell**	**1.01**	**53**	P	**Pg**	**00 41 46.2**	**+1.0**
TUWZ	**Tuamarina**	**1.11**	**33**		**Pb**	**00 41 46.0**	**-0.6**
TUWZ	**Tuamarina**	**1.11**	**33**	P	**Pb**	**00 41 46.2**	**-0.3**
NNZ	**Nelson**	**1.16**	**9**		**Pn**	**00 41 46.8**	**-0.5**
NNZ	**Nelson**	**1.16**	**9**	P	**Pn**	**00 41 46.5**	**-0.9**
DSZ	**Denniston Nort**	**1.17**	**301**	P	**Pg**	**00 41 47.9**	**-0.3**
DSZ				S	**Sg**	**00 42 05.0**	**+1.5**
OXZ	**Oxford**	**1.26**	**220**		**Pb**	**00 41 48.9**	**-0.4**
OXZ	**Oxford**	**1.26**	**220**	P	**Pb**	**00 41 48.8**	**-0.4**
INZ	**Inchbonnie**	**1.30**	**253**	P	**Pb**	**00 41 49.5**	**-0.4**
OKCZ	**Okains Bay**	**1.36**	**182**	P	**Pb**	**00 41 50.4**	**-0.6**
MQZ	**McQueen's Vall**	**1.39**	**195**		**Pn**	**00 41 50.3**	**-0.3**
MQZ	**McQueen's Vall**	**1.39**	**195**	P	**Pn**	**00 41 50.1**	**-0.5**
TCW	**Tory Channel**	**1.43**	**37**	P	**Pn**	**00 41 51.3**	**+0.2**
AKCZ	**Akaroa Harbour**	**1.52**	**186**	P	**Pn**	**00 41 52.2**	**-0.3**
SNZO	**South Karori**	**1.57**	**49**		**Pn**	**00 41 53.6**	**+0.6**
QRZ	**Quartz Range**	**1.60**	**343**		**Pb**	**00 41 54.1**	**-0.9**
QRZ	**Quartz Range**	**1.60**	**343**	P	**Pb**	**00 41 54.6**	**-0.4**
BHW	**Baring Head**	**1.61**	**54**		**Pn**	**00 41 53.8**	**+0.2**
BHW	**Baring Head**	**1.61**	**54**	P	**Pn**	**00 41 53.9**	**+0.3**
DUWZ	**D'Urville Isla**	**1.66**	**21**	P	**Pb**	**00 41 55.3**	**-0.8**
PLWZ	**Palliser**	**1.77**	**64**		**Pn**	**00 41 55.4**	**-0.4**
PLWZ	**Palliser**	**1.77**	**64**	P	**Pn**	**00 41 55.5**	**-0.3**
MSWZ	**Moikau Station**	**1.84**	**60**		**Pn**	**00 41 56.4**	**-0.4**
MSWZ	**Moikau Station**	**1.84**	**60**	P	**Pn**	**00 41 56.6**	**-0.2**
WVZ	**Waitaha Valley**	**1.91**	**247**	P	**Pb**	**00 41 58.9**	**-1.3**
CAW	**Cannon Point**	**1.91**	**50**	P	**Pn**	**00 41 58.0**	**+0.3**
PAWZ	**Paruwai Farm**	**1.97**	**61**	P	**Pn**	**00 41 58.2**	**-0.4**
KIW	**Kapiti Island**	**2.00**	**42**	P	**Pn**	**00 41 59.7**	**+0.7**
RPZ	**Rata Peaks**	**2.04**	**228**		**Pn**	**00 41 59.6**	**0.0**
RPZ	**Rata Peaks**	**2.04**	**228**	P	**Pn**	**00 41 59.3**	**-0.2**
TRWZ	**Traveller**	**2.13**	**64**	P	**Pn**	**00 42 00.1**	**-0.7**
MTW	**Mount Morrison**	**2.14**	**57**	P	**Pn**	**00 42 00.3**	**-0.6**
OGWZ	**Otaki Gorge**	**2.17**	**45**	P	**Pn**	**00 42 01.7**	**+0.4**
HOWZ	**Holdsworth Sta**	**2.31**	**51**	P	**Pn**	**00 42 02.7**	**-0.4**
TMWZ	**Te Maipa**	**2.41**	**60**	P	**Pn**	**00 42 03.7**	**-1.0**
MRZ	**Mangatainoka R**	**2.50**	**48**	P	**Pn**	**00 42 05.5**	**-0.3**
FOZ	**Fox Glacier**	**2.71**	**243**		**Pn**	**00 42 08.0**	**-0.6**
FOZ	**Fox Glacier**	**2.71**	**243**	P	**Pn**	**00 42 10.3**	**+1.6**
POWZ	**Post Office Ro**	**2.79**	**46**	P	**Pn**	**00 42 10.2**	**+0.3**
PRWZ	**Pori Road**	**2.79**	**51**	P	**Pn**	**00 42 09.5**	**-0.3**
BFZ	**Birch Farm**	**2.87**	**55**		**Pn**	**00 42 11.0**	**0.0**
BFZ	**Birch Farm**	**2.87**	**55**	P	**Pn**	**00 42 09.7**	**-1.3**
WAZ	**Wanganui**	**2.95**	**29**	P	**Pb**	**00 42 15.3**	**-2.7**
LBZ	**Lake Benmore**	**2.96**	**226**		**Pn**	**00 42 11.8**	**-0.3**
LBZ	**Lake Benmore**	**2.96**	**226**	P	**Pn**	**00 42 12.3**	**+0.2**
NMEZ	**Namu Road**	**3.00**	**11**	P	**Pb**	**00 42 16.9**	**-1.9**
DVHZ	**Dannevirke**	**3.07**	**49**	P	**Pn**	**00 42 12.7**	**-1.1**
TSZ	**Takapari Road**	**3.13**	**44**	P	**Pb**	**00 42 21.8**	**+0.7**
PKE	**Pukeiti**	**3.23**	**12**	P	**Pb**	**00 42 18.8**	**+2.9**
ODZ	**Otahua Downs**	**3.23**	**213**		**Pn**	**00 42 15.7**	**-0.3**
ODZ	**Otahua Downs**	**3.23**	**213**	P	**Pn**	**00 42 15.4**	**-0.5**
PNHZ	**Pukenui**	**3.37**	**44**	P	**Pb**	**00 42 25.2**	**+0.1**
MHEZ	**Mangahewa**	**3.40**	**16**	P	**Pb**	**00 42 22.6**	**-3.0**
VRZ	**Vera Road**	**3.46**	**21**	P	**Pn**	**00 42 22.6**	**+3.6**
MOVZ	**Moawhango**	**3.55**	**35**	P	**Pn**	**00 42 21.6**	**+1.1**
WHVZ	**Whangaehu Hut**	**3.59**	**32**	P	**Pn**	**00 42 23.1**	**+2.0**
FWVZ	**Far West T-bar**	**3.60**	**31**	P	**Pn**	**00 42 22.6**	**+1.4**
JCZ	**Jackson Bay**	**3.61**	**240**	P	**Pn**	**00 42 21.6**	**+0.4**
BHHZ	**Black Hill Sta**	**3.62**	**39**	P	**Pn**	**00 42 21.9**	**+0.6**
TUVZ	**Tukino**	**3.63**	**33**	P	**Pn**	**00 42 23.2**	**+1.7**
KRHZ	**Kereru**	**3.65**	**43**	P	**Pn**	**00 42 20.8**	**-0.9**
NGZ	**Ngauruhoe**	**3.69**	**31**	P	**Pb**	**00 42 28.9**	**-1.8**
TWVZ	**Taurewa**	**3.72**	**29**	P	**Pn**	**00 42 24.4**	**+1.7**
KRVZ	**Karewarewa**	**3.78**	**31**	P	**Pb**	**00 42 29.8**	**-2.4**
KAHZ	**Kahuranaki**	**3.82**	**49**	P	**Pn**	**00 42 27.6**	**+3.6**
KWHZ	**Kaweka Forest**	**3.85**	**41**	P	**Pn**	**00 42 26.9**	**+2.4**
WKZ	**Wanaka**	**3.88**	**229**		**Pn**	**00 42 23.4**	**-1.5**
WKZ	**Wanaka**	**3.88**	**229**	P	**Pn**	**00 42 24.2**	**-0.6**
HHSZ	**Highcliff Hill**	**3.97**	**207**	P	**Pn**	**00 42 25.7**	**-0.4**
EAZ	**Earnscleugh**	**3.99**	**223**	P	**Pn**	**00 42 26.4**	**0.0**
HIZ	**Hauiti**	**4.06**	**19**		**Pn**	**00 42 28.3**	**+1.0**
HIZ	**Hauiti**	**4.06**	**19**	P	**Pn**	**00 42 29.6**	**+2.3**
BKZ	**Black Stump Fm**	**4.08**	**40**		**Pn**	**00 42 27.6**	**-0.1**
BKZ	**Black Stump Fm**	**4.08**	**40**	P	**Pn**	**00 42 27.9**	**+0.2**
TUZ	**Tuapeka**	**4.39**	**214**	P	**Pn**	**00 42 31.4**	**-0.4**
TLZ	**Tolley Road**	**4.42**	**25**	P	**Pn**	**00 42 36.4**	**+4.1**
MTHZ	**Maungataniwha**	**4.50**	**40**	P	**Pn**	**00 42 33.0**	**-0.3**
MLZ	**Mavora Lakes**	**4.71**	**229**		**Pn**	**00 42 35.6**	**-0.6**
MLZ	**Mavora Lakes**	**4.71**	**229**	P	**Pn**	**00 42 35.7**	**-0.6**
TOZ	**Tahuroa Road**	**4.97**	**22**	P	**Pn**	**00 42 41.3**	**+1.6**
SYZ	**Scrubby Hill**	**5.06**	**213**	P	**Pn**	**00 42 41.0**	**0.0**
URZ	**Urewera**	**5.10**	**38**		**Pn**	**00 42 41.4**	**-0.1**
URZ	**Urewera**	**5.10**	**38**	P	**Pn**	**00 42 40.7**	**-0.8**
WHZ	**Wether Hill Ro**	**5.14**	**225**		**Pn**	**00 42 41.0**	**-1.1**
DCZ	**Deep Cove**	**5.32**	**232**	Pn	**Pn**	**00 42 43.9**	**-0.7**
AWAZ	**Awhitu Peninsu**	**5.42**	**13**	P	**Pn**	**00 42 48.1**	**+2.2**
MKAZ	**Moumakai**	**5.48**	**17**	P	**Pn**	**00 42 48.6**	**+1.9**
ETAZ	**East Tamaki Re**	**5.57**	**15**	P	**Pn**	**00 42 51.1**	**+3.0**
TWGZ	**Tauwharepare**	**5.58**	**43**	P	**Pn**	**00 42 49.7**	**+1.4**
MBAZ	**Motutapu North**	**5.75**	**14**	P	**Pn**	**00 42 52.8**	**+2.3**
WIAZ	**Waiheke Island**	**5.77**	**16**	P	**Pn**	**00 42 53.1**	**+2.3**
APZ	**The Paps**	**5.79**	**218**	P	**Pn**	**00 42 49.1**	**-2.0**
HAZ	**Te Kaha**	**5.82**	**39**	P	**Pn**	**00 42 50.7**	**-0.7**
PYZ	**Puysegur Point**	**6.00**	**228**	Pn	**Pn**	**00 42 52.9**	**-1.0**
OUZ	**Omahuta**	**7.14**	**3**	Pn	**Pn**	**00 43 11.0**	**+1.4**
OUZ	**Omahuta**	**7.14**	**3**	P	**Pn**	**00 43 12.1**	**+2.5**

*NEIC **01** 00:45:43.1±1.0,7°.3S±0°.1×121°.0E±0°.1,h537km±14km, mb4.2/9,Error ellipse: s-maj=22.5km s-min=16.6km az=55.0*
*IDC **01** 00:45:43.3±1.2,7°.21S×121°.10E,h534km±14km,mb3.1/3, mb1 3.2/6,mb1mx2.7/61,mbtmp4.0/6,Error ellipse: s-maj=118.4km s-min=15.2km az=57.0*
ISC 01 00:45:43.4±0.7,**7°.3S**±0°.1×**121°.0E**±0°.1,**h550**km,**n22**, σ**1.22**/24,**mb4.3**/5,**Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.59**	**331**	P	**P**	**00 46 54.8**	**-1.2**
	11nm,0.3s,baz=145,slow=4.2,SNR=21						
KAPI	**Kappang**	**2.59**	**331**	P	**P**	**00 46 54.6**	**-1.4**
JAGI	**Jajag, Banyuwa**	**6.91**	**260**	P	**P**	**00 47 28.2**	**-2.4**
BKB	**Balikpapan**	**7.27**	**325**	P	**P**	**00 47 34.4**	**+0.4**
KNRA	**Kununurra**	**11.27**	**138**	P	**P**	**00 48 14.2**	**-0.1**
FITZ	**Fitzroy Crossi**	**11.65**	**158**	P	**P**	**00 48 18.2**	**-0.1**
	0.4nm,0.3s,baz=346,slow=12,SNR=9.4						
FITZ	**Fitzroy Crossi**	**11.65**	**158**	P	**P**	**00 48 17.9**	**-0.3**
FAKI	**Fak Fak**	**11.99**	**69**	P	**P**	**00 48 20.0**	**-1.9**
KSM	**Kuching**	**13.79**	**309**	P	**P**	**00 48 40.8**	**+0.3**
WB0	**Warramunga Arr**	**17.95**	**135**	P	**P**	**00 49 21.6**	**+0.8**
WB0				IAmb	IAmb	00 49 24.6	
	comp=Z,5.7nm,1.1s						
WRA	**Warramunga Arr**	**18.03**	**136**	P	**P**	**00 49 22.3**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=316,slow=10,SNR=2.3						
WRA	**Warramunga Arr**	**18.03**	**136**	P	**P**	**00 49 21.9**	**+0.3**
WR0	**Warramunga Arr**	**18.18**	**135**	P	**P**	**00 49 23.3**	**+0.4**
AS31	**Alice Springs**	**20.45**	**144**	P	**P**	**00 49 43.7**	**+0.1**
ASAR	**Alice Springs**	**20.45**	**144**	P	**P**	**00 49 44.2**	**+0.7**
	comp=Z,1.4nm,0.4s,baz=320,slow=8.3,SNR=32						
ASAR				PcP	**PcP**	**00 53 31.9**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=336,slow=1.7,SNR=6.5						
ASAR				ScP	**ScP**	**00 56 18.6**	**+2.9**
	comp=Z,0.5nm,0.6s,baz=332,slow=2.1,SNR=4.7						
FORT	**Forrest**	**24.28**	**165**	P	**P**	**00 50 18.3**	**+0.6**
NWAO	**Narrogin (SRO)**	**25.76**	**187**	P	**P**	**00 50 29.7**	**-1.0**
NWAO				IAmb	IAmb	00 50 47.5	
	comp=Z,10nm,1.1s						
BBOO	**Buckleboo**	**28.98**	**153**	P	**P**	**00 50 59.7**	**+0.7**
BBOO				IAmb	IAmb	00 51 13.6	
	comp=Z,9.7nm,1.1s						
STKA	**Stephens Creek**	**31.08**	**145**	P	**P**	**00 51 18.4**	**+1.3**
	comp=Z,3.6nm,0.4s,baz=316,slow=8.9,SNR=15						
STKA	**Stephens Creek**	**31.08**	**145**	P	**P**	**00 51 18.4**	**+1.3**
LTZ	**Lake Taylor**	**57.15**	**137**	P	**P**	**00 54 37.2**	**-0.9**
LTZ				IAmb	IAmb	00 54 43.1	
	comp=Z,6.2nm,0.9s						
MKAR	**Makanchi Array**	**63.89**	**331**	P	**P**	**00 55 23.2**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=133,slow=6.1,SNR=7.5						

*THE **01** 00:48:54.9,38°.21N×20°.40E,h13km±1km,ML2.9/5,Error ellipse: s-maj=1.2km s-min=0.5km az=194.0*
*ATH **01** 00:48:55.3,38°.22N×20°.39E,h11km±1km,ML2.3/3,Error ellipse: s-maj=2.2km s-min=1.3km az=261.0*
ISC 01 00:48:54.9±1.5,**38°.22N**±0°.03×**20°.40E**±0°.06,**h13**km±6km, **n15**,σ**0.36**/29,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.04**	**199**	P	**Pg**	**00 48 57.3**	**+0.1**
CHV1				S	**Sg**	**00 48 58.9**	**0.0**
	8μm,0.3s						
LXR1	**Lixouri, Cepha**	**0.04**	**118**	P	**Pg**	**00 48 57.4**	**+0.2**
LXR1				S	**Sg**	**00 48 59.2**	**+0.3**
	21μm,0.4s						
KEF3	**Kipouria, Keph**	**0.04**	**249**	P	**Pg**	**00 48 57.4**	**+0.1**
KEF3				S	**Sg**	**00 48 59.2**	**+0.2**
KEF4	**Livadi, Kephal**	**0.05**	**29**	P	**Pg**	**00 48 57.3**	**-0.1**
KEF4				S	**Sg**	**00 48 58.8**	**-0.3**
ARG2	**Argostoli**	**0.08**	**119**	P	**Pg**	**00 48 57.8**	**+0.2**
ARG2				S	**Sg**	**00 48 59.5**	**-0.1**
	9μm,0.1s						
KEF1	**Kardakata, Kep**	**0.08**	**44**	P	**Pg**	**00 48 57.7**	**0.0**
KEF1				S	**Sg**	**00 48 59.4**	**-0.3**
KEF2	**Argostoli. Kep**	**0.09**	**126**	P	**Pg**	**00 48 57.9**	**+0.2**
KEF2				S	**Sg**	**00 48 59.4**	**-0.4**
VLS	**Valsamata**	**0.16**	**105**	P	**Pg**	**00 48 58.7**	**0.0**
VLS				S	**Sg**	**00 49 01.4**	**+0.1**
	3μm,0.1s						
VLS	**Valsamata**	**0.16**	**105**	P	**Pg**	**00 48 58.7**	**0.0**
VLS				S	**Sg**	**00 49 01.4**	**+0.1**
VLS				AML	AML	00 49 01.6	
	comp=N,6839μm,0.1s						
VLS				AML	AML	00 49 01.8	
	comp=E,5640μm,0.2s						
VSK1	**VASILIKIADES**	**0.23**	**35**	P	**Pg**	**00 49 00.1**	**+0.2**
VSK1				S	**Sg**	**00 49 04.0**	**+0.7**
	comp=E,5μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.40**	**148**	P	**Pg**	**00 49 03.1**	**+0.2**
VLMS				S	**Sb**	**00 49 09.5**	**-0.4**
VLMS				AML	AML	00 49 10.0	
	comp=E,879μm,0.2s						
VLMS				AML	AML	00 49 15.5	
	comp=N,1111μm,0.4s						
EVGI	**Lefkada island**	**0.45**	**27**	P	**Pg**	**00 49 03.5**	**-0.3**
EVGI				S	**Sb**	**00 49 11.1**	**-0.2**
EVGI	**Lefkada island**	**0.45**	**27**	P	**Pg**	**00 49 03.1**	**-0.7**
EVGI				S	**Sb**	**00 49 11.1**	**-0.2**
MGNA	**Meganis**	**0.54**	**35**	P	**Pg**	**00 49 05.3**	**-0.1**
MGNA				S	**Sg**	**00 49 13.6**	**+1.0**
MGNA				AML	AML	00 49 14.1	
	comp=E,657μm,0.1s						
MGNA				AML	AML	00 49 14.1	
	comp=N,845μm,0.1s						
LKD2	**Lefkada island**	**0.61**	**20**	P	**Pg**	**00 49 07.1**	**+0.4**

*JMA **01** 00:49:56.8±0.1, 40.°91N×142.°13E, h51km±2km, M3.8*
JMA Felt II J1.
*NEIC **01** 00:49:59.6±0.8, 40.°97N±0.°02×142.°1E±0.°1, h77km±8km, mb4.3/10, Error ellipse: s-maj=12.0km s-min=2.8km az=80.0*
*IDC **01** 00:49:59.2±2.2, 40.°93N×142.°13E, h76km±17km, mb3.6/8, mb1 3.6/11, mb1mx3.3/55, mbtmp3.8/11, MS3.3/2, Ms1 3.3/2, ms1mx2.5/40, Error ellipse: s-maj=27.3km s-min=14.8km az=109.0*
ISC 01 00:49:57.6±0.9, 40.°90N±0.°03×142.°03E±0.°06, h59km±8km, n47, σ1.°18/54, mb3.9/14, 1C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JARK	**Aomorirokkasho**	**0.51**	**283**	⇓P	**Pn**	**00 50 09.2**	**-0.4**
JARK				S	**Sn**	**00 50 17.8**	**-0.5**
JAHD	**Aomorihigashid**	**0.64**	**305**	⇓P	**Pn**	**00 50 10.5**	**-0.5**
JANG	**Nango**	**0.65**	**217**	⇓P	**Pn**	**00 50 10.7**	**-0.6**
JANG				S	**Sn**	**00 50 20.5**	**-0.7**
JKEN	**Kujiedanarisaw**	**0.73**	**199**	⇑P	**Pn**	**00 50 11.4**	**-0.8**
JKEN				S	**Sn**	**00 50 21.9**	**-0.9**
JTM	**Tenmabayashi**	**0.73**	**262**	⇓P	**Pn**	**00 50 12.0**	**-0.2**
JTM				S	**Sn**	**00 50 22.9**	**0.0**
JOT	**Ohata**	**0.88**	**304**	⇓P	**Pn**	**00 50 13.6**	**-0.5**
JOT				S	**Sn**	**00 50 25.8**	**-0.4**
JKB	**Kayabe**	**1.24**	**323**	⇓P	**Pn**	**00 50 18.3**	**-0.5**
JKB				S	**Sn**	**00 50 33.8**	**-0.8**
JAH	**Hinai**	**1.27**	**237**	P	**Pn**	**00 50 19.6**	**+0.4**
JAH				S	**Sn**	**00 50 36.5**	**+1.1**
JSR	**Shiriuchi**	**1.37**	**298**	P	**Pn**	**00 50 20.7**	**+0.2**
ERM	**Erimo**	**1.40**	**37**		**Pn**	**00 50 22.0**	**+1.0**
JNBK	**Urakawa-nobuka**	**1.48**	**21**	P	**Pn**	**00 50 22.5**	**+0.4**
JOM	**Ohasama**	**1.53**	**202**	P	**Pn**	**00 50 22.7**	**0.0**
JOM				S	**Sn**	**00 50 41.1**	**-0.5**
JIW	**Iwasaki**	**1.56**	**259**	P	**Pn**	**00 50 23.4**	**+0.2**
JNB	**Noboribetsu**	**1.73**	**335**	P	**Pn**	**00 50 24.5**	**-0.9**
JYM2	**Yakumo 2**	**1.74**	**315**	P	**Pn**	**00 50 25.8**	**+0.3**
JYM2				eS	**Sn**	**00 50 47.3**	**+0.6**
ASAJ	**Asahikawa**	**3.24**	**7**	P	**Pn**	**00 50 46.5**	**+0.4**
	3.9nm,0.3s,baz=224,slow=11,SNR=8.9						
ASAJ				S	**Sn**	**00 51 24.9**	**+1.5**
	2.2nm,0.3s,baz=36,slow=30,SNR=3.8						
JKA	**Kamikawa-asahi**	**3.24**	**7**		**Pn**	**00 50 46.5**	**+0.4**
JKA					**Sn**	**00 51 24.9**	**+1.5**
MJB9	**Matsu-Tunnel**	**5.27**	**216**	Pn	**Pn**	**00 51 16.8**	**+3.0**
MAJO	**Matsushiro**	**5.28**	**216**	Pn	**Pn**	**00 51 16.9**	**+3.1**
MJAR	**Matsushiro Arr**	**5.28**	**216**	P	**Pn**	**00 51 17.0**	**+3.1**
	0.1nm,0.3s,baz=37,slow=13,SNR=3.6						
JHJ2	**Mitsune**	**7.97**	**193**	Pn	**Pn**	**00 51 53.5**	**+2.7**
USA0B	**Ussuriysk Arra**	**8.11**	**297**	Pn	**Pn**	**00 51 54.6**	**+2.0**
USRK	**Ussuriysk Ar.**	**8.11**	**297**	P	**Pn**	**00 51 54.9**	**+2.3**
	baz=99,slow=14,SNR=4.9						
KLR	**Kul'dur**	**11.05**	**322**	LR	LR	00 56 32.5	
	comp=Z,40nm,19.6s,baz=24,slow=36						
KSAR	**Wonju Array Be**	**11.51**	**257**	Pn	**Pn**	**00 52 40.9**	**+1.9**
ZALV	**Zalesovo Beam**	**39.76**	**309**	P	**P**	**00 57 24.6**	**+0.3**
	0.7nm,0.4s,baz=95,slow=9.9,SNR=5.1						
MK31	**Makanchi Array**	**42.58**	**299**	P	**P**	**00 57 47.4**	**-0.1**
MKAR	**Makanchi Array**	**42.58**	**299**	P	**P**	**00 57 47.7**	**+0.1**
	0.6nm,0.4s,baz=84,slow=11,SNR=19						
KURK	**Kurchatov**	**44.01**	**305**	P	**P**	**00 57 59.6**	**+0.6**
KURK	**Kurchatov**	**44.01**	**305**	IAmb	IAmb	00 58 06.3	
	comp=Z,2.4nm,0.9s						
KURBB	**Kurchatov Arra**	**44.09**	**305**	P	**P**	**00 57 59.6**	**0.0**
	comp=Z,0.7nm,0.5s,baz=80,slow=9.0,SNR=12						
BVAR	**Borovoye Array**	**48.39**	**310**	P	**P**	**00 58 33.3**	**-0.1**
	comp=Z,1.5nm,0.3s,baz=79,slow=9.7,SNR=14						
INK	**Inuvik**	**50.75**	**29**	P	**P**	**00 58 50.5**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=292,slow=6.7,SNR=5.5						
KKAR	**Karatay Array**	**51.68**	**298**	P	**P**	**00 58 28.4**	**-0.1**
ABKAR	**Akbulak array**	**55.87**	**308**	P	**P**	**00 59 29.0**	**+0.1**
ABKAR				IAmb	IAmb	00 59 29.5	
	comp=Z,1.4nm,0.5s						
ABKAR	**Akbulak array**	**55.87**	**308**	P	**P**	**00 59 28.8**	**-0.1**
DIB	**Dawson Inlet,**	**56.17**	**46**	P	**P**	**00 59 31.2**	**+0.2**
RES	**Resolute Bay**	**58.75**	**15**	P	**P**	**00 59 48.6**	**-0.2**
RES				IAmb	IAmb	00 59 49.1	
	comp=Z,0.6nm,0.7s						
CTA	**Charters Tower**	**60.80**	**175**	LR	LR	01 24 53.4	
	comp=Z,112nm,21.6s,baz=252,slow=34						
WR0	**Warramunga Arr**	**60.94**	**188**	P	**P**	**01 00 03.7**	**-0.8**
WR0				IAmb	IAmb	01 00 18.1	
	comp=Z,3.8nm,1.1s						
NLWA	**Neilton Lookou**	**63.79**	**49**		pP	01 00 46.1	+7.2
ASAR	**Alice Springs**	**64.68**	**188**	P	**P**	**01 00 29.1**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=227,slow=8.6,SNR=4.4						
FIA1	**FINESS Array S**	**65.63**	**332**	P	**P**	**01 00 35.2**	**+0.2**
FIA1				IAmb	IAmb	01 00 54.3	
	comp=Z,9.4nm,1.1s						
FINES	**FINESS Array B**	**65.63**	**332**	P	**P**	**01 00 34.9**	**-0.2**
	comp=Z,3.1nm,0.7s,baz=37,slow=6.7,SNR=15						
NOA	**NORSAR Array B**	**70.81**	**337**	P	**P**	**01 01 07.5**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=22,slow=2.7,SNR=2.7						
NAO01	**NORSAR Array S**	**71.07**	**337**	P	**P**	**01 01 08.0**	**-1.1**
UOSS	**Minazif**	**71.11**	**287**	P	**P**	**01 01 07.6**	**-2.3**
UOSS				IAmb	IAmb	01 01 19.6	
	comp=Z,12nm,1.1s						

NNC 01 01:00:00.6±5.9, 37.°44N×71.°13E, h0km, mb3.5, mpv3.3, 1C-2D, Error ellipse: s-maj=54.1km s-min=34.9km az=154.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.67**	**355**	Pn	Pn	01 01 27.3	+1.1
	1.0nm,0.3s,baz=176,slow=12,SNR=51						
KK31				⇓Sn	Sn	01 02 34.1	+2.0
	1.7nm,0.4s,baz=176,slow=21,SNR=8.4						
AAK	**Ala-Archa**	**5.79**	**25**	⇑Pn	Pn	01 01 27.9	0.0
	1.5nm,0.4s						
AAK				⇓Sn	Sn	01 02 35.6	+0.4
	3.5nm,0.6s						
AB31	**Akbulak array**	**14.32**	**329**	P	Pn	01 03 21.0	-3.5
	0.2nm,0.5s,baz=177,slow=8.8,SNR=6.3						

*TAP **01** 01:09:12.9, 24.°91N×122.°27E, h9km, ML2.7, D*
*JMA **01** 01:09:13.4, 24.°79N×122.°26E, h0km, M2.7*
ISC 01 01:09:13.4±1.1, 24.°85N±0.°03×122.°27E±0.°02, h7km±12km, n43, σ0.°57/62, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.30**	**302**	*i* P	**Pg**	**01 09 19.1**	**-0.3**
	baz=283						
TWB1				S	**Sg**	**01 09 23.1**	**-0.3**
	baz=283						
EOS1	**EOS1**	**0.32**	**204**	*e*P	**Pb**	**01 09 20.8**	**-0.7**
	baz=215						
TIPB	**Shuangxi**	**0.42**	**287**	P	**Pg**	**01 09 21.6**	**-0.1**
	baz=279						
TIPB				*e*S	**Sg**	**01 09 28.1**	**+0.9**
	baz=279						
TWC	**Suao**	**0.45**	**238**	*e*S	**Sb**	**01 09 30.1**	**-0.5**
	baz=233						
NWF	**Wu-fen Shan**	**0.50**	**297**	*e*S	**Sb**	**01 09 30.6**	**-1.5**
	baz=290						
WFSB	**Wu-fen Shan**	**0.50**	**297**	*e*P	**Pb**	**01 09 24.0**	**-0.5**
	baz=290						
WFSB				*e*S	**Sg**	**01 09 30.4**	**+0.8**
	baz=290						
TWE	**Neicheng**	**0.56**	**257**	*e*P	**Pb**	**01 09 24.7**	**-0.9**
	baz=251						
NANB	**Nanao**	**0.63**	**229**	*e*P	**Pg**	**01 09 25.6**	**0.0**
	baz=215						
NANB				*e*S	**Sb**	**01 09 35.5**	**-0.4**
	baz=215						
ENA	**Nanau**	**0.64**	**229**	*e*S	**Sb**	**01 09 36.0**	**0.0**
	baz=215						
ENTT	**Nioudou**	**0.67**	**252**	*e*P	**Pb**	**01 09 27.3**	**-0.3**
	baz=239						
ENTT				*e*S	**Sb**	**01 09 38.2**	**+1.1**
	baz=239						
NWLT	**Wulai**	**0.70**	**264**	*e*P	**Pb**	**01 09 28.0**	**0.0**
	baz=260						
NWLT				*e*S	**Sb**	**01 09 38.6**	**+0.7**
	baz=260						
YM01	**YM01**	**0.70**	**295**	*e*P	**Pb**	**01 09 27.6**	**-0.4**
	baz=290						
YM01				*e*S	**Sb**	**01 09 37.4**	**-0.6**
	baz=290						
YM08	**YM08**	**0.70**	**299**	*e*P	**Pg**	**01 09 27.2**	**+0.2**
	baz=290						
YM11	**YM11**	**0.71**	**297**	*e*P	**Pb**	**01 09 27.9**	**-0.3**
	baz=288						
YM05	**YM05**	**0.71**	**296**	*e*P	**Pb**	**01 09 27.7**	**-0.6**
	baz=287						
YM10	**YM10**	**0.71**	**296**	*e*P	**Pg**	**01 09 26.4**	**-0.8**
	baz=291						
JYNG	**Yonagunijimaku**	**0.73**	**123**	P	**Pg**	**01 09 27.4**	**-0.1**
JYNG				S	**Sg**	**01 09 37.5**	**+0.6**
NDT	**Datong Townshi**	**0.73**	**251**	*e*P	**Pb**	**01 09 28.3**	**-0.2**
	baz=247						
NDT				*e*S	**Sb**	**01 09 39.7**	**+1.0**
	baz=247						
YM04	**YM04**	**0.73**	**295**	*e*P	**Pb**	**01 09 27.7**	**+0.1**
	baz=290						
TWY	**Chenhua**	**0.74**	**305**	*e*P	**Pg**	**01 09 27.9**	**+0.1**
	baz=301						
TWY				*e*S	**Sg**	**01 09 37.9**	**+0.5**
	baz=301						
YOJ	**Yonaguni jima**	**0.78**	**120**	P	**Pg**	**01 09 28.2**	**-0.1**
YOJ				S	**Sb**	**01 09 39.2**	**-0.8**
PCYT	**Pengchaiyu**	**0.80**	**347**	*e*P	**Pg**	**01 09 28.0**	**-0.8**
	baz=337						
PCYT				*e*S	**Sb**	**01 09 40.6**	**-0.1**
	baz=337						
TWS1	**Kuangyinshan**	**0.81**	**288**	*e*S	**Sb**	**01 09 42.0**	**+0.9**
	baz=284						
YHNB	**Yeheng**	**0.83**	**258**	*e*P	**Pb**	**01 09 29.7**	**-0.5**
	baz=248						
YHNB				*e*S	**Sb**	**01 09 41.3**	**-0.4**
	baz=248						
NSK	**Sanguang**	**0.85**	**259**	*e*P	**Pg**	**01 09 29.8**	**+0.1**
	baz=248						
NSK				*e*S	**Sb**	**01 09 42.3**	**+0.2**
	baz=248						
NNSB	**Datong**	**0.91**	**243**	*e*P	**Pb**	**01 09 31.1**	**-0.6**
	baz=230						
NNSB				*e*S	**Sb**	**01 09 43.6**	**-0.4**
	baz=230						
NNSH	**Datong**	**0.91**	**243**	*e*P	**Pb**	**01 09 31.1**	**-0.5**
	baz=230						
NNSH				*e*S	**Sb**	**01 09 43.4**	**-0.6**
	baz=230						
NACB	**Ninganchiao**	**0.91**	**223**	*e*P	**Pg**	**01 09 30.2**	**-0.7**
	baz=222						
NACB				*e*S	**Sg**	**01 09 42.4**	**-0.4**
	baz=222						
ETLH	**Xiulin Townshi**	**0.96**	**229**	*e*P	**Pg**	**01 09 31.7**	**-0.2**
	baz=228						
ETLH				*e*S	**Sg**	**01 09 44.6**	**+0.2**
	baz=228						
WHF	**Hehuan Shan**	**1.15**	**233**	*e*P	**Pg**	**01 09 35.4**	**-0.2**
	baz=231						
LIOB	**Emei**	**1.16**	**260**	*e*P	**Pb**	**01 09 35.6**	**-0.2**
	baz=258						
LIOB				*e*S	**Sg**	**01 09 50.1**	**-0.6**
	baz=258						
TDCB	**Techi**	**1.17**	**240**	*e*P	**Pn**	**01 09 37.7**	**+1.2**
	baz=229						
CHGB	**Renai**	**1.27**	**232**	*e*P	**Pb**	**01 09 37.7**	**-0.1**
	baz=231						
WHP	**Taichung City**	**1.33**	**245**	*e*P	**Pb**	**01 09 39.6**	**+0.7**
	baz=233						
OWD	**Renai**	**1.34**	**229**	*e*P	**Pn**	**01 09 38.5**	**-0.1**
	baz=228						
IRIF	**Iriomote-Funau**	**1.42**	**111**	P	**Pg**	**01 09 40.8**	**+0.1**
VWDT	**VWDT**	**1.50**	**224**	*e*P	**Pb**	**01 09 41.5**	**-0.1**
	baz=224						
SMLT	**Sun Moon Lake**	**1.58**	**233**	*e*P	**Pg**	**01 09 43.2**	**-0.4**
	baz=219						
TYC	**Yuchr**	**1.59**	**234**	*e*P	**Pg**	**01 09 43.5**	**-0.5**
	baz=233						
SSLB	**Suanglung**	**1.60**	**229**	*e*P	**Pg**	**01 09 43.5**	**-0.6**
	baz=228						
JKRS	**Kuro-shima**	**1.70**	**111**	P	**Pg**	**01 09 46.2**	**+0.3**
YULB	**Yu-li**	**1.70**	**212**	*e*P	**Pb**	**01 09 44.6**	**-0.4**
	baz=212						
CHN5	**Tsauling**	**1.91**	**230**	*e*P	**Pb**	**01 09 49.1**	**+0.3**
	baz=229						

IDC 01 01:17:12.5±2.3, 6.°60S×149.°06E, h234km±19km, mb3.0/4, mb1 3.2/6, mb1mx3.0/37, mbtmp3.5/6, Error ellipse: s-maj=57.3km s-min=23.7km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.37**	**214**	P	Pn	01 18 09.0	+0.9
	6.5nm,0.3s,baz=41,slow=16,SNR=11						
PMG				S	S	01 18 52.2	+0.2
	18nm,0.3s,baz=349,slow=12,SNR=8.8						
WRA	**Warramunga Arr**	**19.50**	**226**	P	P	01 21 20.8	-1.5
	0.2nm,0.3s,baz=57,slow=10,SNR=4.9						
ASAR	**Alice Springs**	**22.37**	**219**	P	P	01 21 52.4	+1.0
	0.6nm,0.4s,baz=32,slow=8.6,SNR=12						
FITZ	**Fitzroy Crossi**	**25.53**	**241**	P	P	01 22 21.5	+1.4
	1.0nm,0.3s,baz=41,slow=11,SNR=4.6						
MKAR	**Makanchi Array**	**79.26**	**320**	P	P	01 28 50.6	-1.4
	0.1nm,0.5s,baz=94,slow=6.1,SNR=2.8						
ILAR	**Eielson Array**	**85.23**	**23**	P	P	01 29 24.1	+1.6
	0.4nm,0.6s,baz=250,slow=4.7,SNR=7.3						
TORD	**Torodi Ar. Bea**	**147.22**	**284**	PKPbc	PKPdf	01 36 27.4	+0.7
	0.4nm,0.6s,baz=66,slow=3.0,SNR=4.9						

*JMA **01** 01:25:14.6±0.1, 24.°07N×122.°49E, h42km±3km, M2.2*
*TAP **01** 01:25:15.6, 24.°16N×122.°46E, h45km, ML2.9, D*
ISC 01 01:25:14.8±1.0, 24.°10N±0.°03×122.°50E±0.°02, h31km±10km, n83, σ1.°34/142, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.54**	**50**	P	**Pb**	**01 25 26.1**	**+0.2**
JYNG				*e*S	**Sb**	**01 25 34.2**	**+0.8**
EOS1	**EOS1**	**0.56**	**323**	*e*P	**Pb**	**01 25 26.8**	**+0.6**
	baz=316						
EOS1				*e*S	**Sb**	**01 25 35.7**	**+1.7**
	baz=316						
YOJ	**Yonaguni jima**	**0.59**	**53**	P	**Pb**	**01 25 26.9**	**+0.2**
YOJ				*e*S	**Sb**	**01 25 35.3**	**+0.4**
NANB	**Nanao**	**0.76**	**295**	*e*P	**Pb**	**01 25 29.2**	**-0.3**
	baz=299						
NANB				*e*S	**Sb**	**01 25 39.1**	**-0.4**
	baz=299						
ENA	**Nanau**	**0.76**	**295**	*e*P	**Pb**	**01 25 29.4**	**-0.3**
	baz=298						
ENA				*e*S	**Sb**	**01 25 39.9**	**+0.2**
	baz=298						
TWC	**Suao**	**0.78**	**311**	P	**Pb**	**01 25 29.4**	**-0.5**
	baz=309						
TWC				*e*S	**Sb**	**01 25 39.5**	**-0.7**
	baz=309						
TWD	**Chiawan**	**0.82**	**269**	*e*P	**Pb**	**01 25 30.1**	**-0.6**
	baz=254						
TWD				*e*S	**Sb**	**01 25 41.0**	**-0.4**
	baz=254						
NACB	**Ninganchiao**	**0.83**	**275**	P	**Pb**	**01 25 30.1**	**-0.6**
	baz=260						
NACB				*e*S	**Sb**	**01 25 41.2**	**-0.4**
	baz=260						
ENLB	**Shoufeng**	**0.84**	**256**	*e*P	**Pb**	**01 25 28.9**	**-2.1**
	baz=244						
ENLB				*e*S	**Sb**	**01 25 41.6**	**-0.4**
	baz=244						
EGS		**0.90**	**325**	*e*P	**Pb**	**01 25 31.4**	**-0.5**
	baz=315						
EGS				*e*S	**Sb**	**01 25 43.5**	**-0.1**
	baz=315						
ETLH	**Xiulin Townshi**	**0.93**	**276**	*e*P	**Pb**	**01 25 31.7**	**-0.8**
	baz=273						
ETLH				*e*S	**Sb**	**01 25 44.2**	**-0.4**
	baz=273						
NTC	**Toucheng**	**0.96**	**321**	*e*P	**Pb**	**01 25 32.7**	**-0.3**
	baz=320						
NTC				*e*S	**Sb**	**01 25 44.6**	**-0.8**
	baz=320						
TWE	**Neicheng**	**0.97**	**309**	*e*P	**Pb**	**01 25 32.5**	**-0.6**
	baz=308						
TWE				*e*S	**Sb**	**01 25 45.1**	**-0.6**
	baz=308						
ENTT	**Nioudou**	**1.00**	**302**	*e*P	**Pn**	**01 25 33.1**	**+0.3**
	baz=300						
ENTT				*e*S	**Sb**	**01 25 46.0**	**-0.5**
	baz=300						
TWB1	**Santiao Chiao**	**1.01**	**333**	*e*P	**Pn**	**01 25 32.8**	**-0.1**
	baz=344						
TWB1				*e*S	**Sb**	**01 25 45.0**	**-1.8**
	baz=344						
ESL	**Shilin**	**1.02**	**254**	*e*P	**Pn**	**01 25 32.3**	**-0.6**
	baz=241						
ESL				*e*S	**Sb**	**01 25 45.5**	**-1.5**
	baz=241						
SLBB	**Yuanshan**	**1.02**	**310**	*e*P	**Pn**	**01 25 33.9**	**+0.9**
	baz=308						
NDT	**Datong Townshi**	**1.03**	**299**	*e*P	**Pn**	**01 25 33.2**	**+0.1**
	baz=288						
NDT				*e*S	**Sb**	**01 25 46.4**	**-0.8**
	baz=288						
TIPB	**Shuangxi**	**1.06**	**325**	*e*P	**Pn**	**01 25 33.2**	**-0.3**
	baz=324						
TIPB				*e*S	**Sb**	**01 25 46.8**	**-1.4**
	baz=324						
NNSB	**Datong**	**1.07**	**288**	*e*P	**Pn**	**01 25 33.8**	**0.0**
	baz=285						
NNSH	**Datong**	**1.07**	**288**	*e*P	**Pn**	**01 25 33.9**	**+0.1**
	baz=285						
EGFH	**Guangfu**	**1.07**	**246**	*e*P	**Pn**	**01 25 33.4**	**-0.3**
	baz=243						
EGFH				*e*S	**Sb**	**01 25 46.9**	**-1.6**
	baz=243						
NNS	**Nan Shan**	**1.08**	**288**	*e*P	**Pn**	**01 25 34.0**	**0.0**
	baz=286						
WHF	**Hehuan Shan**	**1.13**	**272**	*e*P	**Pn**	**01 25 34.8**	**-0.1**
	baz=258						
WHF				*e*S	**Sb**	**01 25 49.9**	**-0.6**
	baz=258						
NWLT	**Wulai**	**1.13**	**307**	*e*P	**Pn**	**01 25 34.8**	**+0.3**
	baz=296						
NWLT				*e*S	**Sb**	**01 25 49.2**	**-0.9**
	baz=296						
IRIF	**Iriomote-Funau**	**1.15**	**78**	P	**Pn**	**01 25 34.8**	**0.0**
IRIF				*e*S	**Sb**	**01 25 49.6**	**-1.1**
HGSD	**Ruisui**	**1.16**	**238**	*e*P	**Pn**	**01 25 34.5**	**-0.4**
	baz=235						
HGSD				*e*S	**Sn**	**01 25 49.0**	**-0.6**
	baz=235						
NWF	**Wu-fen Shan**	**1.16**	**326**	*e*P	**Pn**	**01 25 34.9**	**-0.2**
	baz=325						
NWF				*e*S	**Sn**	**01 25 49.6**	**-0.4**
	baz=325						
WFSB	**Wu-fen Shan**	**1.16**	**326**	*e*P	**Pn**	**01 25 34.7**	**-0.2**
	baz=325						
WFSB				*e*S	**Sn**	**01 25 49.5**	**-0.3**
	baz=325						
YHNB	**Yeheng**	**1.17**	**299**	*e*P	**Pn**	**01 25 35.6**	**+0.5**
	baz=297						
YHNB				*e*S	**Sn**	**01 25 50.1**	**+0.1**
	baz=297						
NSK	**Sanguang**	**1.19**	**299**	P	**Pn**	**01 25 35.8**	**+0.4**
	baz=297						
NSK				*e*S	**Sn**	**01 25 50.3**	**-0.1**
	baz=297						
CHGB	**Renai**	**1.21**	**268**	*e*P	**Pn**	**01 25 35.3**	**-0.5**
	baz=255						
CHGB				*e*S	**Sn**	**01 25 51.3**	**0.0**
	baz=255						
OWD	**Renai**	**1.22**	**263**	P	**Pn**	**01 25 35.9**	**+0.1**
	baz=260						
OWD				S	**Sn**	**01 25 50.6**	**-0.7**
	baz=260						
EHY	**Hungye**	**1.23**	**241**	*e*P	**Pn**	**01 25 35.7**	**-0.2**
	baz=250						
EHY				*e*S	**Sn**	**01 25 50.5**	**-1.0**
	baz=250						
NHDH	**Xindian Distri**	**1.23**	**314**	*e*S	**Sn**	**01 25 52.7**	**+1.2**
	baz=326						
TDCB	**Techi**	**1.23**	**277**	*e*P	**Pn**	**01 25 36.2**	**+0.1**
	baz=263						
TDCB				*e*S	**Sn**	**01 25 51.8**	**+0.1**
	baz=263						
TATO	**Taipei**	**1.26**	**314**	*e*S	**Sn**	**01 25 52.4**	**+0.1**
	baz=325						
VWDT	**VWDT**	**1.29**	**255**	P	**Pn**	**01 25 37.3**	**+0.7**
	baz=241						
VWDT				*e*S	**Sn**	**01 25 53.2**	**+0.3**
	baz=241						
YULB	**Yu-li**	**1.31**	**237**	*e*P	**Pn**	**01 25 36.9**	**0.0**
	baz=247						
YULB				*e*S	**Sn**	**01 25 51.4**	**-2.1**
	baz=247						
TWF1	**Yuli**	**1.33**	**236**	*e*P	**Pn**	**01 25 37.3**	**0.0**
	baz=224						
TWF1				*e*S	**Sn**	**01 25 54.2**	**+0.2**
	baz=224						
WLTB	**Daxi**	**1.36**	**304**	*e*S	**Sn**	**01 25 56.0**	**+1.4**
	baz=291						
YM04	**YM04**	**1.36**	**320**	*e*S	**Sn**	**01 25 53.8**	**-1.0**
	baz=319						
JKRS	**Kuro-shima**	**1.39**	**84**	P	**Pn**	**01 25 38.6**	**+0.6**
JKRS				*e*S	**Sn**	**01 25 56.3**	**+1.0**
FULB	**Fuli**	**1.43**	**231**	*e*P	**Pn**	**01 25 38.8**	**+0.2**
	baz=218						
FULB				*e*S	**Sn**	**01 25 55.2**	**-1.1**
	baz=218						
WHP	**Taichung City**	**1.43**	**277**	*e*P	**Pn**	**01 25 39.3**	**+0.6**
	baz=265						
WHP				*e*S	**Sn**	**01 25 57.5**	**+1.0**
	baz=265						
DPDB	**Guoxing**	**1.44**	**268**	*e*P	**Pn**	**01 25 39.5**	**+0.7**
	baz=265						
CHKT	**Chengkung**	**1.44**	**226**	*e*S	**Sn**	**01 25 54.9**	**-1.8**
	baz=216						
SSLB	**Suanglung**	**1.45**	**258**	*e*P	**Pn**	**01 25 39.5**	**+0.5**
	baz=255						
SSLB				*e*S	**Sn**	**01 25 56.8**	**0.0**
	baz=255						
LIOB	**Emei**	**1.46**	**292**	*e*P	**Pn**	**01 25 40.2**	**+1.2**
	baz=290						
LIOB				*e*S	**Sn**	**01 25 58.8**	**+1.7**
	baz=290						
NSTT	**Nanjuang**	**1.46**	**291**	*e*P	**Pn**	**01 25 40.2**	**+1.1**
	baz=289						
NSTT				*e*S	**Sn**	**01 25 58.2**	**+1.0**
	baz=289						

SMLT	**Sun Moon Lake**	**1.48**	**262**	eP	**Pn**	**01 25 40.2**	**+0.8**
	baz=259						
SMLT				eS	**Sn**	**01 25 59.4**	**+1.6**
	baz=259						
TYC	**Yuchr**	**1.51**	**263**	P	**Pn**	**01 25 40.6**	**+0.9**
	baz=260						
JIJ	**Ishigaki jima**	**1.52**	**80**	P	**Pn**	**01 25 39.7**	**-0.2**
JIJ				eS	**Sn**	**01 25 57.7**	**-1.0**
YUS	**Yu-Shan**	**1.54**	**247**	eP	**Pn**	**01 25 41.5**	**+0.9**
	baz=244						
YUS				eS	**Sn**	**01 25 59.5**	**-0.4**
	baz=244						
WHYT	**Xinyi Township**	**1.56**	**255**	eP	**Pn**	**01 25 41.8**	**+1.3**
	baz=247						
TWQ1	**Liyutan**	**1.59**	**279**	eP	**Pn**	**01 25 42.5**	**+1.6**
	baz=276						
TWQ1				eS	**Sn**	**01 26 02.1**	**+1.7**
	baz=276						
NMLH	**Miaoli**	**1.61**	**286**	eP	**Pn**	**01 25 42.5**	**+1.3**
	baz=283						
NMLH				eS	**Sn**	**01 26 02.4**	**+1.4**
	baz=283						
ELDTW	**Lidau**	**1.64**	**236**	eP	**Pn**	**01 25 41.5**	**-0.1**
	baz=234						
ELDTW				eS	**Sn**	**01 25 59.4**	**-2.2**
	baz=234						
WJS	**Zhushan**	**1.64**	**261**	eP	**Pn**	**01 25 43.7**	**+2.1**
	baz=258						
WJS				eS	**Sb**	**01 26 06.1**	**+1.3**
	baz=258						
ALS	**Alishan**	**1.66**	**249**	eP	**Pn**	**01 25 43.5**	**+1.4**
	baz=247						
TWH	**Lutao**	**1.67**	**214**	eP	**Pn**	**01 25 41.9**	**-0.1**
	baz=211						
TWH				eS	**Sn**	**01 26 00.8**	**-1.6**
	baz=211						
WNT	**Mingjian**	**1.67**	**263**	eP	**Pn**	**01 25 44.2**	**+2.3**
	baz=260						
WNT				eS	**Sn**	**01 26 05.3**	**+2.9**
	baz=260						
CHN5	**Tsauling**	**1.74**	**254**	eP	**Pn**	**01 25 44.5**	**+1.5**
	baz=251						
CHN5				eS	**Sn**	**01 26 06.2**	**+2.0**
	baz=251						
TWGBT	**Beinan**	**1.83**	**226**	eS	**Sn**	**01 26 04.0**	**-2.2**
	baz=234						
TWG	**Pinlang**	**1.83**	**226**	eS	**Sn**	**01 26 04.9**	**-1.3**
	baz=234						
WDLH	**Douliu**	**1.84**	**257**	eP	**Pn**	**01 25 46.1**	**+1.8**
	baz=255						
WDLH				eS	**Sb**	**01 26 10.4**	**-0.1**
	baz=255						
STYT	**Tauyuan**	**1.85**	**240**	eS	**Sn**	**01 26 07.8**	**+1.0**
	baz=237						
TPUB	**Ta-pu**	**1.89**	**245**	eS	**Sn**	**01 26 10.1**	**+2.3**
	baz=243						
CHN4	**Tsaushan**	**1.90**	**247**	eP	**Pn**	**01 25 47.4**	**+2.3**
	baz=245						
CHN4				eS	**Sn**	**01 26 11.1**	**+3.0**
	baz=245						
WTP	**Ta-pu**	**1.93**	**244**	eP	**Pn**	**01 25 47.5**	**+2.0**
	baz=241						
WTP				eS	**Sn**	**01 26 12.0**	**+3.2**
	baz=241						
RLNB	**Erlin**	**1.97**	**264**	eS	**Sn**	**01 26 11.3**	**+1.7**
	baz=261						
CHY	**Chiayi**	**1.99**	**253**	eP	**Pn**	**01 25 48.0**	**+1.6**
	baz=250						
CHN1	**Nanshi**	**2.02**	**244**	eP	**Pn**	**01 25 48.8**	**+1.9**
	baz=241						
CHN1				eS	**Sn**	**01 26 14.5**	**+3.3**
	baz=241						
SLGT	**Liugui**	**2.03**	**237**	eP	**Pn**	**01 25 49.0**	**+2.2**
	baz=228						
SLGT				eS	**Sn**	**01 26 14.8**	**+3.6**
	baz=228						
SGST	**Jiashian**	**2.03**	**240**	eP	**Pn**	**01 25 48.4**	**+1.5**
	baz=238						
SGST				eS	**Sn**	**01 26 14.0**	**+2.8**
	baz=238						
SNST	**Tainan City**	**2.03**	**245**	eP	**Pn**	**01 25 49.5**	**+2.5**
	baz=243						
ECL	**Taimali**	**2.06**	**224**	eS	**Sn**	**01 26 10.2**	**-1.8**
	baz=222						
SSD	**Sandimen**	**2.18**	**232**	eS	**Sn**	**01 26 17.5**	**+2.5**
	baz=226						
MASBT	**Mashibuluo**	**2.27**	**229**	eP	**Pn**	**01 25 51.5**	**+1.3**
	baz=221						
SCZT	**Fangliau**	**2.44**	**225**	eP	**Pn**	**01 25 56.0**	**+3.4**
	baz=220						
SCZT				eS	**Sn**	**01 26 23.0**	**+1.6**
	baz=220						
PHUB	**P'eng-hu**	**2.74**	**258**	eS	**Sn**	**01 26 29.3**	**+0.5**
	baz=268						
VWUC	**VWUC**	**2.91**	**288**	eP	**Pn**	**01 25 58.6**	**-0.4**
	baz=286						
VWUC				eS	**Sn**	**01 26 30.4**	**-2.6**
	baz=286						
KNMB	**Chin-men Tao**	**3.77**	**276**	eP	**Pn**	**01 26 10.2**	**-0.5**
	baz=263						
KNMB				eS	**Sn**	**01 26 51.3**	**-2.8**
	baz=263						

*PAS **01** 01:25:17.7±1.5, 34.°22N±0.°02×119.°57W±0.°02, h13km±3km, ML3.1/171, Error ellipse: s-maj=2.7km s-min=2.1km az=172.0*
*SCEDC **01** 01:25:17.7, 34.°22N×119.°57W, h13km*
*ANF **01** 01:25:17.2±0.2, 34.°25N×119.°56W, h19km±1km, ML3.1/23, Error ellipse: s-maj=1.9km s-min=1.4km az=61.0*
NEIC 01 01:25:17.4±1.9**, 34.°221N**±0.°007×**119.°55W**±0.°02**, h22**km±7km**, Error ellipse: s-maj=2.4km s-min=0.9km az=102.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZ2	**Santa Cruz Isl**	**0.24**	**197**		Pb	01 25 23.4	0.0
SCZ2					Sb	01 25 28.3	+0.8
SCZ2	**Santa Cruz Isl**	**0.24**	**197**	P	Pb	01 25 23.5	+0.1
	baz=14,SNR=123						
SCZ2				S	Sb	01 25 28.2	+0.7
	baz=14						
SBC	**Santa Barbara**	**0.26**	**329**		Pn	01 25 26.4	+0.5
SBC	**Santa Barbara**	**0.26**	**329**	P	Pb	01 25 22.5	-1.2
	baz=152,SNR=13						
SBC				S	Sb	01 25 26.7	-1.2
	baz=152						
BLG	**Laguna Peak, P**	**0.42**	**105**		Pb	01 25 26.0	-0.1
BLG					Sb	01 25 32.3	+0.3
BLG	**Laguna Peak, P**	**0.42**	**105**	P	Pb	01 25 26.0	-0.1
	baz=285,SNR=11						
BLG				S	Sb	01 25 32.8	+0.8
	baz=285						
RYS	**Reyes Peak**	**0.45**	**21**		Pb	01 25 26.3	-0.5
SYP	**Santa Ynez Pea**	**0.47**	**311**		Pb	01 25 26.6	-0.5
SYP					Sb	01 25 33.6	+0.1
BALC	**Balcom Canyon**	**0.49**	**80**		Pb	01 25 28.2	+0.8
FIGC	**Figueroa Mtn.**	**0.62**	**325**		Pb	01 25 29.5	-0.2
FIGC					Sn	01 25 39.3	-1.1
AGOC	**Agoura**	**0.66**	**96**		Sn	01 25 39.5	+0.7
MPI	**Mount Pinos, F**	**0.68**	**30**		Pb	01 25 30.0	-0.8
MPI					Sb	01 25 40.1	+0.2
ABL	**Mount Abel**	**0.69**	**23**		Pb	01 25 30.2	-0.6
BSM	**San Miguel Isl**	**0.69**	**255**		Pb	01 25 30.2	-0.5
BSM					Sb	01 25 39.8	0.0
PKM	**Mcpherson Peak**	**0.70**	**342**		Pb	01 25 30.5	-0.6
PKM					Sb	01 25 40.6	+0.2
PKM	**Mcpherson Peak**	**0.70**	**342**	P	Pb	01 25 30.5	-0.6
	baz=163,SNR=44						
PKM				S	Sb	01 25 40.8	+0.5
	baz=163						
BCW	**Bitter Crk WRg**	**0.73**	**9**		Sn	01 25 42.4	-0.6
PYR	**Pyramid**	**0.75**	**62**		Pb	01 25 32.1	+0.2
OAT	**Oat Mountain**	**0.79**	**81**		Pb	01 25 32.3	-0.1
OSI	**Osito Audit: C**	**0.79**	**60**		Pb	01 25 32.7	+0.2
OSI	**Osito Audit: C**	**0.79**	**60**		Sb	01 25 43.6	+0.8
OSI	**Osito Audit: C**	**0.79**	**60**	Pg	Pb	01 25 32.2	-0.2
OSI	**Osito Audit: C**	**0.79**	**60**	Sg	Sb	01 25 43.0	+0.3
OSI	**Osito Audit: C**	**0.79**	**60**	P	Pb	01 25 32.8	+0.3
	baz=240						
OSI				S	Sn	01 25 43.6	-0.8
	baz=240						
GATR	**Gnd/Air Tx Cnt**	**0.85**	**293**		Pb	01 25 33.2	-0.3
GATR					Sb	01 25 42.9	-1.7
SBI	**Santa Barbara**	**0.86**	**149**		Pb	01 25 33.5	-0.1
SBI					Sn	01 25 46.6	+0.7
DJJ	**Donna J Jenkin**	**0.92**	**97**		Pb	01 25 33.9	-0.7
DJJ					Sb	01 25 46.3	0.0
BTPC	**Burnt Peak**	**0.93**	**60**		Pb	01 25 34.7	-0.2
IR2C	**Iron Canyon**	**0.97**	**80**		Pb	01 25 35.5	0.0
SNCC	**San Nicolas Is**	**0.97**	**179**		Pb	01 25 35.6	-0.1
SNCC	**San Nicolas Is**	**0.97**	**179**	P	Pn	01 25 35.7	0.0
	baz=358,SNR=5.6						
SNCC				S	Sn	01 25 49.7	+0.9
	baz=358						
THC	**Tehachapi Micr**	**1.00**	**47**		Pb	01 25 35.9	-0.4
THC					Sn	01 25 49.6	-0.3
DECC	**Green Verdugo**	**1.01**	**88**		Pb	01 25 35.8	-0.5
DECC	**Green Verdugo**	**1.01**	**88**	P	Pb	01 25 35.7	-0.5
	baz=268						
DECC				S	Sn	01 25 50.2	+0.4
	baz=268						
CRGC	**Crocker Grade**	**1.03**	**352**		Pn	01 25 36.9	+0.3
GR2C	**Griffith Obs.**	**1.04**	**95**		Pn	01 25 36.0	-0.7
GR2C					Sb	01 25 49.9	-0.1
TJR	**Tejon Ranch**	**1.04**	**39**		Pb	01 25 36.8	0.0
TJR					Sn	01 25 50.6	-0.1
BCH	**Branch Mountai**	**1.06**	**336**		Pn	01 25 36.7	-0.3
RPV	**Rancho Palos V**	**1.07**	**116**		Pb	01 25 37.1	-0.1
RPV					Sn	01 25 53.6	+2.5
ARVC	**Arvin**	**1.08**	**33**		Pn	01 25 37.3	+0.1
ARVC	**Arvin**	**1.08**	**33**	Pg	Pb	01 25 37.7	+0.2
	baz=214,SNR=70						
LEOC	**Leona Valley**	**1.11**	**68**		Pn	01 25 37.6	-0.1
CARC	**Carrizo Plain**	**1.11**	**347**		Pb	01 25 38.1	+0.1
ALPC	**Antelope**	**1.13**	**65**		Sn	01 25 53.1	+0.1
PASC	**Pasadena Art C**	**1.13**	**92**		Pn	01 25 37.5	-0.5
PASC					Sn	01 25 52.8	0.0
PASC	**Pasadena Art C**	**1.13**	**92**		Pn	01 25 37.3	-0.7
SMMC	**Simmler**	**1.15**	**342**		Pn	01 25 38.4	+0.1
SMMC	**Simmler**	**1.15**	**342**	Pg	Pb	01 25 39.0	+0.4
	baz=162,SNR=29						
SMMC				Sg	Sn	01 25 54.6	+1.2
	baz=162						
FMP	**Fort Macarthur**	**1.16**	**116**		Pn	01 25 38.5	+0.2
FMP	**Fort Macarthur**	**1.16**	**116**	P	Pn	01 25 38.5	+0.2
	baz=296						
FMP				S	Sn	01 25 55.2	+1.7
	baz=296						
FOXC	**Fox Airport**	**1.21**	**64**		Pb	01 25 40.0	+0.3
TEJ	**El Tejon**	**1.23**	**35**		Pn	01 25 39.3	-0.1
MWC	**Mount Wilson**	**1.24**	**89**		Pn	01 25 39.1	-0.5
MWC	**Mount Wilson**	**1.24**	**89**		Sb	01 25 56.5	+0.7
MWC	**Mount Wilson**	**1.24**	**89**		Pn	01 25 39.4	-0.2
CIS	**Catalina Islan**	**1.25**	**130**	Pb	Pb	01 25 40.8	+0.5
	baz=311,SNR=9.0						
CIS				S	Sb	01 25 58.5	+2.5
	baz=311						
CIAC	**Catalina I. Ai**	**1.25**	**130**		Pn	01 25 39.4	-0.2
CIAC					Sb	01 25 58.6	+2.6
CHFC	**Chilao Flat St**	**1.27**	**85**		Pn	01 25 39.7	-0.3
LRRC	**Littlerock Res**	**1.30**	**76**		Pn	01 25 40.5	+0.4
PEM	**Pine Mountain**	**1.40**	**92**		Pn	01 25 42.5	-0.3
XTL	**Crystal Lake,**	**1.40**	**86**		Pn	01 25 42.0	+0.2
HOLC	**Holcomb Ridge**	**1.43**	**80**		Pb	01 25 43.0	-0.5
EDW2	**Edwards Air Fo**	**1.44**	**62**		Pb	01 25 43.1	-0.5
EDW2					Sb	01 26 02.1	+0.5
EDW2	**Edwards Air Fo**	**1.44**	**62**	Pb	Pb	01 25 43.3	-0.3
	baz=243,SNR=92						
EDW2				S	Sb	01 26 02.0	+0.4
	baz=243						
WOFM	**Oak Flat**	**1.48**	**27**		Pn	01 25 43.5	+0.6
SBB	**Saddle Back Bu**	**1.50**	**71**		Pb	01 25 44.6	-0.1
SBB					Sb	01 26 03.4	+0.2
SSK	**Sunset Peak**	**1.54**	**90**		Pb	01 25 44.7	-0.6
BFSC	**Mount Baldy Ra**	**1.57**	**89**	Pb	Pb	01 25 45.3	-0.5
	baz=270,SNR=36						
BFSC				Sb	Sb	01 26 06.2	+1.0
	baz=270						
PAGB	**Antelope Grade**	**1.61**	**339**		Pb	01 25 46.2	-0.3
VES	**Vestal, Richgr**	**1.66**	**13**	Pb	Pb	01 25 46.7	-0.6
	baz=194,SNR=51						
ISA	**Isabella, Lake**	**1.69**	**31**		Pb	01 25 46.9	-0.9
ISA	**Isabella, Lake**	**1.69**	**31**	Pb	Pb	01 25 47.4	-0.4
	baz=212,SNR=40						
BLDC	**Black Mountain**	**1.72**	**320**		Pn	01 25 46.0	0.0
PMPB	**Monarch Peak**	**2.24**	**333**	Pn	Pn	01 25 54.5	+1.3
109C	**Camp Elliot, M**	**2.44**	**122**	Pn	Pn	01 25 56.6	+0.7
MPMC	**Manual Prospec**	**2.49**	**42**	Pb	Pb	01 26 02.5	+0.9
	baz=223,SNR=39						
MPMC				Pg	Pn	01 26 04.5	+7.6
	baz=223						
CWC	**Cottonwood Cre**	**2.52**	**28**	Pb	Pb	01 26 01.8	-0.2
	baz=209						
DAC	**Darwin (Calif)**	**2.60**	**37**	Pn	Pn	01 25 59.5	+1.2
DAC					Pb	01 26 07.3	+3.9
PFO	**Pinyon Flats O**	**2.64**	**102**		Pb	01 26 07.5	+3.4
XPFO	**Pion Flat**	**2.65**	**102**		Pb	01 26 06.8	+2.7
HEC	**Hector,Ludlow**	**2.72**	**76**	Pb	Pb	01 26 04.9	-0.6
	baz=258,SNR=7.5						
HEC				S	Sn	01 26 34.1	+1.9
	baz=258						
BAR	**Barrett**	**2.86**	**122**	Pn	Pn	01 26 02.8	+1.1
BELC	**Belle Mtn. Jos**	**2.96**	**93**	Pb	Pb	01 26 08.8	-0.7
	baz=275						
SAO	**San Andreas Ge**	**2.97**	**329**	Pn	Pn	01 26 05.5	+2.3
SHOC	**Shoshone, Teco**	**3.17**	**57**	Pg	Pb	01 26 18.5	+5.5
	baz=239,SNR=7.6						
TUQ	**Turquoise Moun**	**3.22**	**67**	Pg	Pb	01 26 18.3	+4.3
	baz=249,SNR=12						
GMRC	**Granite Mounta**	**3.26**	**79**	S	Sn	01 26 46.4	+0.8
	baz=261						
TPNV	**Topopah Spring**	**3.83**	**44**	Pn	Pn	01 26 14.3	-0.8
TPNV					Pb	01 26 27.9	+3.6
TPNV	**Topopah Spring**	**3.83**	**44**	Pg	Pb	01 26 28.2	+3.9
	baz=226,SNR=17						
CMB	**Columbia Colle**	**3.87**	**350**	Pn	Pn	01 26 14.9	-0.7
GLA	**Glamis**	**4.11**	**105**	Pn	Pn	01 26 19.0	+0.1
Y12C	**Blythe**	**4.20**	**95**	Pn	Pn	01 26 19.4	-0.8
Y12C					Pb	01 26 37.5	+6.9
SHPR	**Sheep Range**	**4.25**	**56**	Pn	Pn	01 26 19.6	-1.4
SHPR					Pb	01 26 37.7	+6.2
WAKR	**Walker**	**4.28**	**1**	Pg	Pb	01 26 33.4	+1.4
NVAR	**Mina Array Bea**	**4.32**	**13**	Pn	Pn	01 26 22.3	+0.3
NVAR					Pb	01 26 33.5	+0.8
NV11	**Mina Array Sit**	**4.35**	**15**		Pb	01 26 33.9	+0.6
RYN	**Ryan**	**4.48**	**10**	Pn	Pn	01 26 24.0	-0.1
W13A	**Hualapai Mount**	**4.75**	**78**		Pb	01 26 28.6	+0.7
YERR	**Yerington**	**4.76**	**3**		Pb	01 26 42.3	+2.0
PNTR	**Pine Nut**	**4.86**	**360**	Pn	Pn	01 26 28.6	-0.8
PNTR					Pb	01 26 43.9	+2.0
KVN	**Kaiserville**	**4.96**	**13**		Pb	01 26 48.4	+4.8
VCNR	**Virginia City**	**5.07**	**359**	Pn	Pn	01 26 32.7	+0.5
R11A	**Troy Canyon, C**	**5.22**	**37**	Pn	Pn	01 26 34.5	+0.3
R11A					Pb	01 26 56.6	+8.6
PAHR	**Pah Rah Range**	**5.48**	**1**	Pn	Pn	01 26 37.0	-0.8
PAHR					Pb	01 26 56.7	+4.3
BEKR	**Beckworth**	**5.67**	**354**	Pn	Pn	01 26 40.7	+0.2
LCMT	**Little Creek M**	**5.84**	**60**	Pn	Pn	01 26 44.0	+1.1
CCUT	**Cedar City**	**6.02**	**55**		Pb	01 27 09.2	+7.5
PSUT	**Pine Spring**	**6.29**	**45**	Pg	Pb	01 27 15.3	+8.9
U15A	**North Rim**	**6.33**	**68**	Pn	Pn	01 26 49.5	-0.1

*NIED **01** 01:41:00, 24.°40N×122.°00E, h5km, Mw3.9 Best double couple: $M_0$6.70000×10^{14} NP1:ϕ_s292.00000°, δ84.00000°, λ-16.00000°. NP2:ϕ_s24.00000°, δ74.00000°, λ-174.00000°.*
*JMA **01** 01:41:05.3±0.1, 24.°41N×121.°96E, h23km, M4.0*
*TAP **01** 01:41:05.4, 24.°45N×121.°96E, h13km, ML4.1, B*
*ASIES **01** 01:41:05.8, 24.°46N×121.°92E, h15km, MW3.4*
*IDC **01** 01:41:06.8±1.3, 24.°07N×121.°13E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/33, mbtmp3.5/5, ML3.4/1, MS3.1/6, Ms1 3.1/6, ms1mx2.8/38, Error ellipse: s-maj=71.4km s-min=21.6km az=69.0*
ISC 01 01:41:05.4±0.8**, 24.°44N**±0.°01×**121.°99E**±0.°01**, h10**km±5km**, n144,** σ**0.s87**/218**, mb3.5**/4**, MS2.9**/3**, 24C-30D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.17**	**50**	⇓P	**Pg**	**01 41 09.9**	**+0.8**
	baz=50						
EOS1				S	**Sb**	**01 41 13.5**	**+2.0**
	baz=50						
TWC	**Suao**	**0.21**	**322**	⇑iP	**Pg**	**01 41 09.8**	**-0.1**
	baz=336						
TWC				iS	**Sg**	**01 41 12.3**	**-0.5**
	baz=336						
NANB	**Nanao**	**0.22**	**266**	⇓iP	**Pg**	**01 41 09.9**	**-0.1**
	baz=270						
NANB				iS	**Sg**	**01 41 12.8**	**-0.3**
	baz=270						
ENA	**Nanau**	**0.23**	**267**	⇓iP	**Pg**	**01 41 09.9**	**-0.2**
	baz=269						
ENA				iS	**Sg**	**01 41 12.9**	**-0.4**
	baz=269						
ILA	**Ilan**	**0.39**	**326**	⇑iP	**Pb**	**01 41 13.5**	**-0.9**
	baz=328						
ILA				S	**Sg**	**01 41 18.5**	**+0.1**
	baz=328						
EGS		**0.41**	**352**	⇑iP	**Pg**	**01 41 13.7**	**+0.2**
EGS				S	**Sg**	**01 41 19.0**	**+0.2**
	baz=349						
TWE	**Neicheng**	**0.41**	**313**	⇑iP	**Pg**	**01 41 13.4**	**0.0**
	baz=319						
TWE				S	**Sg**	**01 41 18.0**	**-0.8**
	baz=319						
ENTT	**Nioudou**	**0.43**	**297**	⇑iP	**Pg**	**01 41 13.9**	**0.0**
	baz=297						
ENTT				eS	**Sg**	**01 41 18.8**	**-1.0**
	baz=297						
NTC	**Toucheng**	**0.44**	**340**	⇑eP	**Pb**	**01 41 14.2**	**-1.0**
	baz=342						
NTC				S	**Sb**	**01 41 21.0**	**-0.8**
	baz=342						
SLBB	**Yuanshan**	**0.45**	**314**	⇑iP	**Pb**	**01 41 14.5**	**-0.9**
	baz=318						
SLBB				eS	**Sg**	**01 41 20.0**	**-0.2**
	baz=318						
NACB	**Ninganchiao**	**0.45**	**234**	⇓P	**Pg**	**01 41 13.9**	**-0.3**
	baz=231						
NACB				S	**Sg**	**01 41 19.7**	**-0.5**
	baz=231						
NDT	**Datong Townshi**	**0.46**	**290**	⇓P	**Pb**	**01 41 14.5**	**-1.1**
	baz=290						
NDT				S	**Sg**	**01 41 20.2**	**-0.5**
	baz=290						
TWD	**Chiawan**	**0.51**	**225**	⇓iP	**Pg**	**01 41 15.1**	**-0.2**
	baz=227						
TWD				S	**Sg**	**01 41 22.0**	**-0.1**
	baz=227						
ETLH	**Xiulin Townshi**	**0.52**	**243**	⇓P	**Pg**	**01 41 15.2**	**-0.3**
	baz=241						
ETLH				S	**Sb**	**01 41 22.8**	**-1.5**
	baz=241						
TIPB	**Shuangxi**	**0.55**	**344**	⇑iP	**Pg**	**01 41 16.2**	**+0.1**
	baz=352						
TIPB				S	**Sg**	**01 41 22.9**	**-0.5**
	baz=352						
NNSB	**Datong**	**0.55**	**269**	⇓P	**Pg**	**01 41 16.0**	**-0.2**
	baz=268						
NNSB				S	**Sg**	**01 41 22.9**	**-0.7**
	baz=268						
NNSH	**Datong**	**0.55**	**269**	⇓iP	**Pg**	**01 41 16.0**	**-0.2**
	baz=268						
NNSH				eS	**Sg**	**01 41 23.0**	**-0.6**
	baz=268						
NWLT	**Wulai**	**0.56**	**307**	⇑eP	**Pb**	**01 41 16.4**	**-0.9**
	baz=299						
NWLT				eS	**Sg**	**01 41 23.1**	**-0.5**
	baz=299						
NNS	**Nan Shan**	**0.56**	**270**	⇓iP	**Pg**	**01 41 16.2**	**-0.2**
	baz=269						
NNS				iS	**Sg**	**01 41 23.2**	**-0.7**
	baz=269						
TWB1	**Santiao Chiao**	**0.56**	**360**	⇑iP	**Pg**	**01 41 16.4**	**0.0**
	baz=354						
TWB1				S	**Sg**	**01 41 23.7**	**-0.1**
	baz=354						
HWA	**Hwalien**	**0.58**	**217**	eP	**Pb**	**01 41 17.3**	**-0.3**
	baz=222						
YHNB	**Yeheng**	**0.60**	**292**	⇓P	**Pb**	**01 41 17.3**	**-0.8**
	baz=297						
YHNB				S	**Sg**	**01 41 24.3**	**-0.9**
	baz=297						
NSK	**Sanguang**	**0.62**	**292**	P	**Pb**	**01 41 17.5**	**-0.9**
	baz=297						
NSK				S	**Sg**	**01 41 25.1**	**-0.6**
	baz=297						
ENLB	**Shoufeng**	**0.64**	**214**	P	**Pb**	**01 41 18.3**	**-0.4**
	baz=218						
ENLB				S	**Sn**	**01 41 29.6**	**-1.2**
	baz=218						
TWA	**Mucha**	**0.65**	**325**	⇑iP	**Pb**	**01 41 18.4**	**-0.5**
	baz=326						
TWA				eS	**Sb**	**01 41 26.6**	**-1.4**
	baz=326						
NWF	**Wu-fen Shan**	**0.66**	**343**	⇑iP	**Pb**	**01 41 18.5**	**-0.5**
	baz=333						
NWF				S	**Sb**	**01 41 27.6**	**-0.6**
	baz=333						
WFSB	**Wu-fen Shan**	**0.66**	**343**	⇑P	**Pb**	**01 41 18.5**	**-0.4**
	baz=333						
WFSB				S	**Sb**	**01 41 27.5**	**-0.6**
	baz=333						
NHDH	**Xindian Distri**	**0.67**	**321**	eP	**Pb**	**01 41 18.9**	**-0.3**
	baz=310						
NHDH				eS	**Sb**	**01 41 27.1**	**-1.4**
	baz=310						
TATO	**Taipei**	**0.70**	**319**	⇑P	**Pb**	**01 41 19.4**	**-0.3**
	baz=313						
WHF	**Hehuan Shan**	**0.72**	**246**	⇓iP	**Pg**	**01 41 19.2**	**-0.3**
	baz=255						
WHF				S	**Sg**	**01 41 29.0**	**-0.1**
	baz=255						
TAP	**Taipei**	**0.74**	**324**	eP	**Pb**	**01 41 20.4**	**0.0**
	baz=314						
TAP				eS	**Sb**	**01 41 28.9**	**-0.5**
	baz=314						
TWT	**Tachien**	**0.77**	**256**	⇓eP	**Pb**	**01 41 20.3**	**-0.6**
	baz=255						
TWT				eS	**Sb**	**01 41 30.4**	**-1.0**
	baz=255						
TDCB	**Techi**	**0.78**	**256**	⇓P	**Pb**	**01 41 20.4**	**-0.8**
	baz=255						
TDCB				S	**Sg**	**01 41 29.8**	**-1.0**
	baz=255						
WLTB	**Daxi**	**0.79**	**301**	⇑iP	**Pn**	**01 41 21.6**	**-0.9**
	baz=301						
WLTB				S	**Sb**	**01 41 31.2**	**-0.6**
	baz=301						
YM01	**YM01**	**0.80**	**332**	⇑iP	**Pb**	**01 41 21.5**	**+0.1**
	baz=332						
YM01				S	**Sb**	**01 41 31.2**	**-1.1**
	baz=332						
ESL	**Shilin**	**0.81**	**219**	⇓P	**Pb**	**01 41 20.4**	**-0.6**
	baz=223						
ESL				eS	**Sb**	**01 41 30.3**	**-1.2**
	baz=223						
YM10	**YM10**	**0.81**	**331**	⇑iP	**Pb**	**01 41 21.8**	**-1.2**
	baz=331						
YM10				eS	**Sb**	**01 41 31.9**	**-0.7**
	baz=331						
YM11	**YM11**	**0.81**	**332**	⇑iP	**Pn**	**01 41 21.8**	**-1.2**
	baz=332						
YM11				eS	**Sg**	**01 41 31.1**	**-0.7**
	baz=332						
YM08	**YM08**	**0.83**	**334**	⇑P	**Pb**	**01 41 21.7**	**-0.2**
	baz=334						
YM08				eS	**Sb**	**01 41 31.6**	**-0.6**
	baz=334						
CHGB	**Renai**	**0.84**	**243**	⇓P	**Pg**	**01 41 21.4**	**-0.2**
	baz=251						
CHGB				S	**Sb**	**01 41 32.4**	**-1.1**
	baz=251						
TWS1	**Kuangyinshan**	**0.84**	**322**	⇑iP	**Pn**	**01 41 22.6**	**-0.6**
	baz=314						
TWS1				eS	**Sb**	**01 41 33.2**	**-0.1**
	baz=314						
ANP	**Anpu**	**0.86**	**330**	⇑P	**Pb**	**01 41 22.3**	**-0.1**
	baz=339						
ANP				eS	**Sn**	**01 41 34.2**	**-2.0**
	baz=339						
JYNG	**Yonagunijimaku**	**0.87**	**89**	P	**Pg**	**01 41 22.0**	**-0.2**
JYNG				eS	**Sg**	**01 41 33.5**	**-0.1**
NTST	**Danshui**	**0.87**	**326**	eP	**Pn**	**01 41 23.3**	**-0.4**
	baz=326						
OWD	**Renai**	**0.89**	**237**	⇓eP	**Pg**	**01 41 22.1**	**-0.5**
	baz=236						
OWD				eS	**Sg**	**01 41 33.5**	**-0.7**
	baz=236						
NCU	**National Centr**	**0.90**	**306**	P	**Pn**	**01 41 24.0**	**-0.1**
	baz=306						
NCU				eS	**Sn**	**01 41 35.5**	**-1.6**
	baz=306						

NCUH Zhongli 0.90 306 ⇑P Pn 01 41 24.1 -0.1
baz=305
NCUH eS Sn 01 41 36.2 -0.9
baz=305
TWY Chenhua 0.90 337 ⇑P Pn 01 41 23.4 -0.7
baz=337
TWY S Sb 01 41 34.9 -0.4
baz=337
LIOB Emei 0.91 283⇓iP Pn 01 41 23.6 -0.7
baz=283
LIOB eS Sb 01 41 34.8 -0.7
baz=283
NSTT Nanjuang 0.92 282 ⇓P Pn 01 41 23.5 -0.8
baz=281
NSTT S Sg 01 41 34.2 -0.9
baz=281
EGFH Guangfu 0.93 214⇓eP Pb 01 41 23.3 -0.2
baz=226
YOJ Yonaguni jima 0.93 89 P Pb 01 41 23.0 -0.6
YOJ eS Sg 01 41 35.6 +0.1
WHP Taichung City 0.97 260⇓iP Pn 01 41 24.2 -0.9
baz=260
WHP S Sb 01 41 36.2 -1.0
baz=260
SBCB Hsinchu 0.98 291 P Pn 01 41 25.4 +0.2
baz=284
SBCB S Sn 01 41 38.2 -0.8
baz=284
HSN Hsinchu 1.00 291 P Pn 01 41 25.2 -0.2
baz=287
HSN S Sn 01 41 38.1 -1.4
baz=287
VWDT VWDT 1.03 229 ⇓P Pb 01 41 24.8 -0.6
baz=232
VWDT eS Sb 01 41 38.3 -0.7
baz=232
DPDB Guoxing 1.05 248 ⇓P Pn 01 41 25.7 -0.6
baz=247
DPDB S Sb 01 41 38.5 -1.1
baz=247
HGSD Ruisui 1.08 209 P Pn 01 41 26.2 -0.3
baz=208
HGSD eS Sn 01 41 44.4 +2.9
baz=208
NMLH Miaoli 1.10 275⇓eP Pn 01 41 27.5 +0.6
baz=274
NMLH eS Sn 01 41 41.5 -0.5
baz=274
EHY Hungye 1.11 213 eP Pb 01 41 25.9 -0.8
baz=225
EHY eS Sn 01 41 41.9 -0.6
baz=225
TWQ1 Liyutan 1.11 265⇓iP Pn 01 41 27.2 +0.1
baz=265
TWQ1 S Sn 01 41 41.3 -1.1
baz=265
NSY Sanyi 1.12 269 ⇓P Pg 01 41 27.8 +0.8
baz=268
NSY eS Sn 01 41 41.6 -1.1
baz=268
SMLT Sun Moon Lake 1.14 241⇓iP Pg 01 41 27.0 -0.4
baz=247
SMLT eS Sn 01 41 42.6 -0.7
baz=247
SSLB Suanglung 1.15 236 ⇓P Pb 01 41 26.9 -0.5
baz=243
SSLB S Sb 01 41 41.2 -1.1
baz=243
TYC Yuchr 1.17 243⇓iP Pg 01 41 27.4 -0.5
baz=242
TYC S Sb 01 41 42.0 -0.8
baz=242
PTSB Yuanli 1.17 271 eP Pg 01 41 29.2 +1.3
baz=270
PCYT Pengchaiyu 1.19 4 eP Pn 01 41 27.1 -0.9
baz=4.0
YULB Yu-li 1.22 211 ⇑P Pn 01 41 28.0 -0.6
baz=221
YULB S Sg 01 41 45.5 +0.7
baz=221
TCU Taichung 1.23 257 eP Pg 01 41 30.2 +1.0
baz=257
TCU eS Sg 01 41 47.4 +2.2
baz=257
WDJ Dajia District 1.23 266 eP Pg 01 41 29.9 +0.7
baz=265
WDJ eS Sg 01 41 46.3 +1.1
baz=265
TWF1 Yuli 1.26 210 eP Pn 01 41 28.2 -0.8
baz=226
WHYT Xinyi Township 1.28 235 eP Pn 01 41 28.4 -0.9
baz=234
WJS Zhushan 1.31 242 eP Pg 01 41 31.0 +0.5
baz=235
WNT Mingjian 1.32 245 P Pg 01 41 31.4 +0.6
baz=245
WCHH Zhanghua 1.36 255 eP Pg 01 41 32.0 +0.5
baz=254
FULB Fuli 1.39 207 eP Pb 01 41 31.0 -0.5
baz=224
ALS Alishan 1.43 230 eP Pb 01 41 32.1 -0.2
baz=216
CHKT Chengkung 1.45 203 eP Pn 01 41 31.2 -0.5
baz=184
CHN5 Tsauling 1.47 235 P Pg 01 41 33.3 -0.2
baz=237
CHN5 eS Sg 01 41 52.2 -0.4
baz=237
WGK Gukeng 1.51 240 eP Pg 01 41 33.9 -0.5
baz=241
WDLH Douliu 1.52 241 eP Pg 01 41 34.8 +0.1
baz=242
ELDTW Lidau 1.53 216 eP Pn 01 41 32.8 -0.1
baz=203
RLNB Erlin 1.59 250 eP Pg 01 41 35.4 -0.5
baz=262
IRIF Iriomote-Funau 1.59 93 P Pn 01 41 32.6 -1.0
IRIF eS Sn 01 41 51.9 -2.2
WTCT Ta-ch'eng 1.66 250 eP Pb 01 41 35.7 -0.4
baz=251
CHN4 Tsaushan 1.68 230 eP Pg 01 41 36.8 -0.8
baz=232
CHN4 eS Sg 01 41 59.8 +0.4
baz=232
TPUB Ta-pu 1.69 228 P Pb 01 41 36.7 +0.2
baz=229
TPUB eS Sg 01 42 00.9 +1.2
baz=229
HATJ Hateruma jima 1.70 103 P Pn 01 41 34.6 -0.5
HATJ eS Sn 01 41 55.9 -1.0
STYT Tauyuan 1.70 222 eP Pb 01 41 36.1 -0.7
baz=223
CHY Chiayi 1.71 237⇓eP Pb 01 41 37.2 +0.2
baz=224
WTP Ta-pu 1.73 227 P Pb 01 41 37.2 -0.2
baz=229
WTP eS Sg 01 42 01.3 +0.1
baz=229
TWH Lutao 1.79 195 eP Pn 01 41 35.0 -1.2
baz=185
TWH eS Sn 01 41 56.4 -2.7
baz=185
WSF Szhu 1.80 244 eP Pb 01 41 38.3 -0.3
baz=245
TWG Pinlang 1.82 208 eP Pn 01 41 36.7 -0.1
baz=209
TWGBT Beinan 1.82 208 eP Pn 01 41 36.6 -0.2
baz=209
SNST Tainan City 1.83 229 eP Pg 01 41 39.5 -1.1
baz=231
CHN1 Nanshi 1.83 227 eP Pg 01 41 39.5 -1.1
baz=230
JKRS Kuro-shima 1.85 96 P Pn 01 41 36.7 -0.5
JKRS S Sn 01 41 59.9 -0.7
SGST Jiashian 1.87 224 eP Pb 01 41 38.6 -1.1
baz=227
SGST eS Sg 01 42 04.7 -0.8
baz=227
SLGT Liugui 1.90 221 eP Pb 01 41 39.7 -0.4
baz=224
SLGT eS Sg 01 42 04.9 -1.5
baz=224
CHN8 Yiju 1.96 237 eP Pb 01 41 41.3 +0.1
baz=239
JIJ Ishigaki jima 1.96 92 P Pn 01 41 37.5 -1.2
JIJ S Sn 01 42 01.0 -2.4
CHN3 Shinhua 2.02 228 eP Pb 01 41 41.4 -0.8
baz=231
ECL Taimali 2.07 208 eP Pn 01 41 39.7 -0.5
baz=195
SSD Sandimen 2.10 217 eP Pb 01 41 42.6 -0.9
baz=231
SSD eS Sb 01 42 10.4 +0.8
baz=231
JISG Ishigakijimahi 2.12 86 P Pn 01 41 39.8 -1.0
JISG S Sn 01 42 06.0 -1.2
TWM1 Shoushan 2.16 222 eP Pb 01 41 42.7 -1.9
baz=223
MASBT Mashibuluo 2.21 215 eP Pn 01 41 43.1 +1.0
baz=217
PTTC Pingtan 2.27 298 eP Pn 01 41 43.3 +0.3
baz=297
EAST Anshuo 2.30 207 eP Pb 01 41 45.6 -1.4
baz=195
SSPT Xinbi 2.35 214 eP Pb 01 41 46.6 -1.2
baz=217
VWUC VWUC 2.38 284 eP Pn 01 41 44.2 -0.1
baz=283
PNG Penghu 2.39 249 eP Pn 01 41 45.1 +0.5
baz=251
PHUB P'eng-hu 2.40 248 eP Pn 01 41 45.0 +0.3
baz=250
SCZT Fangliau 2.41 212 eP Pn 01 41 45.5 +0.6
baz=215
WDGT Dungji 2.44 242 eP Pn 01 41 45.9 +0.7
baz=244
JTJ Tarama 2.48 85 P Pn 01 41 45.6 -0.2
JTJ S Sn 01 42 14.8 -1.3
VCHM Qimei 2.65 243 eP Pn 01 41 47.9 -0.2
baz=245
PTMZ Houxiangcun 2.68 283 eP Pn 01 41 48.8 +0.2
baz=282
TWKBT Hengchun 2.71 204 eP Pn 01 41 49.2 +0.1
baz=191
TWK1 Hengchun 2.72 204 eP Pn 01 41 49.0 -0.1
baz=191
LYJJ Jianjiangzhen 2.91 317 eP Pn 01 41 50.6 -1.1
baz=315
JIRB Irabujima 2.92 82 P Pn 01 41 51.8 -0.1
XPSS Dashiqiu 2.96 327 eP Pn 01 41 51.7 -0.8
baz=325
JIKM Ikemajima 3.00 80 eS Sn 01 42 28.1 -0.9
JMJ2 Miyako jima3 3.05 84 P Pn 01 41 54.0 +0.3
JMJ2 eS Sn 01 42 30.6 +0.3
QZH Quanzhou 3.13 280 Pn Pn 01 41 55.9 +1.1
QZH Sn Sn 01 42 31.9 -0.3
MHZQ Yeshan 3.15 302 eP Pn 01 41 55.2 +0.2
baz=300
KNM Kinmen 3.24 270 eP Pn 01 41 58.6 +2.3
baz=269
KNMB Chin-men Tao 3.28 271 eP Pn 01 41 56.8 0.0
baz=270
AXDP Jialang 3.69 278 eP Pn 01 42 02.8 +0.4
baz=276
ZPLA Ao Xicun 3.91 263 eP Pn 01 42 05.9 +0.4
baz=263
ZZJH Jiuhuzhen 3.97 271 eP Pn 01 42 07.1 +0.7
baz=269
KSRS Korea Array 13.93 20 Pn P 01 44 35.5 +4.5
0.2nm,0.3s,baz=198,slow=11,SNR=7.1
KSRS LR LR 01 50 22.8
comp=Z,56nm,19.9s,baz=203,slow=38
XAN Xi'an 14.87 313 eP P 01 44 53.7 +12
XAN eS Sn 01 47 20.0 -0.7
JHJ Hachijo jima 2 17.82 57 LR LR 01 52 33.0
comp=Z,32nm,20.8s,baz=96,slow=37
MJAR Matsushiro Arr 18.43 45 LR LR 01 52 48.7
comp=Z,36nm,20.1s,baz=75,slow=36
ASAJ Asahikawa 25.86 36 LR LR 01 56 36.5
comp=Z,34nm,20.6s,baz=200,slow=35
KLR Kul'dur 25.90 15 LR LR 01 58 31.5
comp=Z,34nm,18.6s,baz=195,slow=40
SONM Songino Array 26.43 336 P P 01 46 44.4 +2.0
0.7nm,0.7s,baz=148,slow=8.5,SNR=5.3
MKAR Makanchi Array 38.67 315 P P 01 48 30.5 +1.3
0.4nm,0.6s,baz=99,slow=9.7,SNR=5.0
WRA Warramunga Arr 45.73 164 P P 01 49 28.7 +1.7
0.5nm,0.5s,baz=344,slow=8.5,SNR=2.4
ASAR Alice Springs 49.20 166 P P 01 49 55.7 +1.8
0.4nm,0.7s,baz=347,slow=7.1,SNR=5.0
BRTR Keskin Array B 73.61 307 LR LR 02 28 31.7
comp=Z,34nm,18.6s,baz=294,slow=39

JMA 01 01:44:08.3,24.43N×121.96E,h18km,M2.4
TAP 01 01:44:08.3,24.46N×121.96E,h13km,ML2.9,B
ISC 01 01:44:08.0±0.8,24.45N±0.02×121.98E±0.02,h13km±6km, n83,σ0.55/134,6C-7D,Taiwan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

EOS1 EOS1 0.17 53 ⇓P Pg 01 44 12.8 +0.8
baz=52
EOS1 S Sb 01 44 16.4 +0.1
baz=52
TWC Suao 0.20 323⇑iP Pg 01 44 12.6 0.0
baz=336
TWC S Sg 01 44 15.1 -0.6
baz=336
NANB Nanao 0.21 265⇓iP Pg 01 44 12.7 0.0
baz=269
NANB S Sg 01 44 15.5 -0.4
baz=269
ENA Nanau 0.22 265 ⇓P Pg 01 44 12.8 -0.1
baz=268
ENA S Sg 01 44 15.7 -0.5
baz=268
ILA Ilan 0.38 326 P Pb 01 44 16.3 -0.4
baz=328
ILA eS Sg 01 44 21.2 +0.3
baz=328
TWE Neicheng 0.40 314⇑iP Pg 01 44 16.2 +0.2
baz=319
TWE eS Sg 01 44 20.7 -0.7
baz=319
EGS 0.40 353 P Pg 01 44 16.4 +0.4
baz=350
EGS eS Sg 01 44 21.2 -0.2
baz=350
ENTT Nioudou 0.42 297 ⇑P Pg 01 44 16.7 +0.2
baz=297
ENTT S Sg 01 44 22.0 -0.2
baz=297
NTC Toucheng 0.43 341 eP Pb 01 44 17.0 -0.4
baz=342
NTC eS Sb 01 44 23.6 -0.2
baz=342
SLBB Yuanshan 0.44 314 eP Pb 01 44 17.2 -0.5
baz=315
NACB Ninganchiao 0.45 232 ⇓P Pg 01 44 16.8 -0.1
baz=230
NACB S Sg 01 44 22.8 -0.1
baz=230
NDT Datong Townshi 0.45 290 P Pb 01 44 17.5 -0.4
baz=290
NDT S Sg 01 44 23.0 -0.1
baz=290
TWD Chiawan 0.51 224 ⇓P Pg 01 44 18.0 -0.1
baz=221
TWD eS Sg 01 44 24.8 0.0
baz=221
ETLH Xiulin Townshi 0.52 242 eP Pg 01 44 18.1 -0.1
baz=241
ETLH eS Sg 01 44 25.5 +0.4
baz=241
TIPB Shuangxi 0.54 345 P Pg 01 44 19.0 +0.3
baz=353
TIPB eS Sb 01 44 26.4 -0.7
baz=353
NNSB Datong 0.55 268 eP Pg 01 44 18.7 -0.1
baz=267
NNSB S Sg 01 44 25.9 -0.2
baz=267
NNSH Datong 0.55 268 ⇓P Pg 01 44 18.9 0.0
baz=268
NNSH eS Sg 01 44 25.8 -0.3
baz=268
NWLT Wulai 0.55 307 eP Pb 01 44 19.3 -0.2
baz=299
NWLT eS Sg 01 44 26.1 0.0
baz=299
NNS Nan Shan 0.56 269 eP Pg 01 44 19.0 0.0
baz=268
NNS eS Sg 01 44 26.1 -0.3
baz=268
TWB1 Santiao Chiao 0.56 1 P Pb 01 44 19.5 -0.1
baz=354
TWB1 S Sg 01 44 26.9 +0.4
baz=354
YHNB Yeheng 0.59 292 ⇑P Pb 01 44 20.1 -0.2
baz=297
YHNB eS Sg 01 44 26.8 -0.8
baz=297
NSK Sanguang 0.61 292 ⇑P Pb 01 44 20.3 -0.3
baz=297
NSK eS Sg 01 44 27.6 -0.6
baz=297
TWA Mucha 0.64 326 eP Pb 01 44 21.1 0.0
baz=327
TWA S Sg 01 44 29.2 +0.1
baz=327
ENLB Shoufeng 0.64 213 eP Pb 01 44 21.7 +0.6
baz=220
NWF Wu-fen Shan 0.65 344 P Pb 01 44 21.7 +0.5
baz=333
NWF eS Sb 01 44 30.4 +0.2
baz=333
WFSB Wu-fen Shan 0.65 344 eP Pb 01 44 21.7 +0.5
baz=333
WFSB eS Sb 01 44 30.2 +0.1
baz=333
NHDH Xindian Distri 0.66 321 eP Pb 01 44 21.8 +0.4
baz=310
NHDH eS Sb 01 44 30.1 -0.4
baz=310
WHF Hehuan Shan 0.72 245⇓iP Pg 01 44 22.0 -0.1
baz=244
WHF S Sb 01 44 32.0 -0.6
baz=244
TWT Tachien 0.76 255 eP Pb 01 44 23.2 0.0
baz=254
TWT eS Sb 01 44 33.2 -0.3
baz=254
TDCB Techi 0.78 256 eP Pg 01 44 23.4 -0.1
baz=255
TDCB eS Sg 01 44 33.1 -0.3
baz=255
WLTB Daxi 0.78 301 eP Pb 01 44 24.0 +0.6
baz=301
WLTB eS Sb 01 44 34.1 +0.3
baz=301
YM01 YM01 0.79 332 P Pn 01 44 24.5 -0.4
baz=332
YM01 eS Sb 01 44 34.9 +0.6
baz=332
YM10 YM10 0.80 332 eP Pn 01 44 24.6 -0.5
baz=331
YM10 eS Sb 01 44 35.5 +0.8
baz=331
ESL Shilin 0.81 219 eP Pg 01 44 23.3 -0.3
baz=225
YM11 YM11 0.81 333 eP Pn 01 44 24.6 -0.5
baz=333
YM08 YM08 0.82 334 eP Pb 01 44 24.4 +0.3
baz=335
TWS1 Kuangyinshan 0.83 322 eP Pn 01 44 25.4 0.0
baz=314
TWS1 eS Sn 01 44 36.3 -1.2
baz=314
CHGB Renai 0.83 243 P Pg 01 44 24.2 -0.1
baz=251
CHGB S Sg 01 44 35.1 -0.1
baz=251
YM03 YM03 0.83 331 eP Pn 01 44 25.1 -0.4
baz=332
JYNG Yonagunijimaku 0.88 90 P Pg 01 44 25.1 +0.1
JYNG eS Sg 01 44 36.6 0.0
OWD Renai 0.88 236 eP Pb 01 44 25.4 +0.1
baz=235
OWD eS Sg 01 44 36.5 -0.4
baz=235
NCU National Centr 0.89 306 eP Pn 01 44 26.9 +0.6
baz=295
NCUH Zhongli 0.89 306 P Pn 01 44 27.2 +1.0
baz=305
NCUH eS Sn 01 44 39.9 +0.9
baz=305
TWY Chenhua 0.90 337 eP Pn 01 44 26.3 0.0
baz=337
TWY eS Sb 01 44 38.1 +0.8
baz=337
LIOB Emei 0.90 283 P Pn 01 44 26.4 0.0
baz=282
LIOB S Sb 01 44 37.6 +0.1
baz=282
NSTT Nanjuang 0.91 282 eP Pn 01 44 26.3 -0.3
baz=281
NSTT eS Sb 01 44 37.3 -0.4
baz=281
EGFH Guangfu 0.93 213 eP Pb 01 44 26.5 +0.5
baz=225
YOJ Yonaguni jima 0.94 89 eP Pb 01 44 26.1 0.0
baz=89
YOJ eS Sg 01 44 39.3 +0.8
baz=89
WHP Taichung City 0.96 260 eP Pn 01 44 27.0 -0.3
baz=259
WHP eS Sb 01 44 39.2 0.0
baz=259
SBCB Hsinchu 0.97 291 eP Pn 01 44 27.7 +0.4
baz=284
SBCB eS Sn 01 44 42.0 +1.0
baz=284
HSN Hsinchu 0.99 291 eP Pn 01 44 27.9 +0.4
baz=287
HSN eS Sn 01 44 40.5 -0.9
baz=287
VWDT VWDT 1.03 228 eP Pb 01 44 27.9 +0.2
baz=232
VWDT eS Sn 01 44 42.3 -0.2
baz=232
DPDB Guoxing 1.05 247 P Pn 01 44 28.8 +0.3
baz=246
DPDB eS Sb 01 44 41.4 -0.3
baz=246
HGSD Ruisui 1.08 208 eP Pn 01 44 29.6 +0.8
baz=208
NMLH Miaoli 1.09 275 eP Pn 01 44 30.3 +1.3
baz=274
TWQ1 Liyutan 1.11 265 eP Pn 01 44 30.2 +0.9
baz=264
NSY Sanyi 1.11 269 eP Pn 01 44 29.8 +0.5
baz=268
EHY Hungye 1.11 213 eP Pb 01 44 29.4 +0.2
baz=213
SMLT Sun Moon Lake 1.14 241 eP Pg 01 44 30.1 +0.1
baz=247
SMLT eS Sn 01 44 45.4 +0.1
baz=247
SSLB Suanglung 1.15 235 ⇑P Pn 01 44 29.9 +0.1
baz=243
SSLB eS Sb 01 44 44.5 0.0
baz=243
TYC Yuchr 1.16 242 eP Pg 01 44 30.2 -0.2
baz=242
TYC eS Sb 01 44 44.6 -0.3
baz=242
YULB Yu-li 1.22 211 eP Pn 01 44 31.1 +0.3
baz=212
WDJ Dajia District 1.23 266 eP Pg 01 44 33.3 +1.6
baz=265
TWF1 Yuli 1.26 210 eP Pb 01 44 31.8 +0.2
baz=226
WJS Zhushan 1.30 242 eP Pg 01 44 33.3 +0.2
baz=234
FULB Fuli 1.39 207 eP Pg 01 44 34.9 0.0
baz=225
CHN5 Tsauling 1.46 235 eP Pg 01 44 36.7 +0.5
baz=235
CHN5 eS Sg 01 44 56.4 +1.2
baz=235
WDLH Douliu 1.52 241 eP Pg 01 44 37.0 -0.3
baz=241
ELDTW Lidau 1.53 215 eP Pb 01 44 36.5 +0.2
baz=203
IRIF Iriomote-Funau 1.60 94 P Pn 01 44 35.6 -0.4
IRIF eS Sn 01 44 55.3 -1.1
CHN4 Tsaushan 1.68 230 eP Pg 01 44 40.3 +0.1
baz=231
TPUB Ta-pu 1.68 228 eP Pg 01 44 39.7 -0.7
baz=229
WTP Ta-pu 1.73 227 eP Pb 01 44 40.5 +0.8
baz=228
CHN1 Nanshi 1.83 227 eP Pb 01 44 41.4 0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=229						
JKRS	Kuro-shima	1.86	96	P	Pn	01 44 39.7	+0.1
JKRS				S	Sn	01 45 02.2	-0.7
SLGT	Liugui	1.90	220	eP	Pb	01 44 43.5	+1.0
	baz=222						
JIJ	Ishigaki jima	1.97	92	eS	Sn	01 45 03.7	-2.0
JISG	Ishigakijimahi	2.13	86	eS	Sn	01 45 09.6	+0.1
VWUC	VWUC	2.37	284	eP	Pn	01 44 47.3	+0.8
	baz=282						
WDGT	Dungji	2.43	241	eP	Pb	01 44 49.9	-1.8
	baz=244						
PTMZ	Houxiangcun	2.67	283	eP	Pn	01 44 51.8	+1.1
	baz=282						
XPSS	Dashiqiu	2.95	327	eP	Pn	01 44 54.3	-0.3
	baz=326						
KNMB	Chin-men Tua	3.27	271	eP	Pn	01 44 59.5	+0.5
	baz=270						

UCR 01 01:51:16.8±0.9, 12°.98N×89°.15W, h33km±2km, ML3.7
SNET 01 01:51:16.8±0.8, 12°.99N×89°.15W, h34km±2km, ML3.7
INET 01 01:51:17.6, 13°.02N×89°.08W, h32km, MD3.2, ML2.9
ISC 01 01:51:17.3±2.7, 12°.97N±0°.09×89°.15W±0°.05, h34km±3km, n47, σ0°.45/77, 1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LFRS	El Faro	0.66	8	eP	Pn	01 51 29.9	-0.4
LFRS				eS	Sn	01 51 39.8	+0.2
ALJI	Alcalda de J	0.67	58	eP	Pn	01 51 29.9	-0.4
ALJI	Alcalda de J	0.67	58	eP	Pn	01 51 29.9	-0.4
COEG	Centro de Oper	0.70	22	eP	Pn	01 51 30.2	-0.6
COEG				eS	Sn	01 51 40.1	-0.4
COEG					IAML	01 51 43.5	
	comp=Z,1µm,0.3s						
COEG	Centro de Oper	0.70	22	eP	Pn	01 51 30.2	-0.6
COEG				eS	Sn	01 51 40.1	-0.4
COEG					IAML	01 51 43.5	
	comp=Z,1µm,0.3s						
SNET	Serv Nac Est T	0.72	354	eP	Pn	01 51 30.6	-0.6
SNET				eS	Sb	01 51 41.6	+0.3
SNET					IAML	01 51 43.3	
	comp=Z,4µm,0.2s						
SNET	Serv Nac Est T	0.72	354	eP	Pn	01 51 30.6	-0.6
SNET				eS	Sb	01 51 41.6	+0.3
SNET					IAML	01 51 43.3	
	comp=Z,4µm,0.2s						
OPAM	Oficina de Pla	0.74	356	eP	Pn	01 51 31.0	-0.5
OPAM					IAML	01 51 46.2	
	comp=Z,2µm,0.1s						
OPAM	Oficina de Pla	0.74	356	eP	Pn	01 51 31.0	-0.5
OPAM					IAML	01 51 46.2	
	comp=Z,2µm,0.1s						
UEES	Universidad Ev	0.75	353	eP	Pn	01 51 30.9	-0.7
UEES				eS	Sn	01 51 42.2	+0.3
UEES	Universidad Ev	0.75	353	eP	Pn	01 51 30.9	-0.7
UEES				eS	Sn	01 51 42.2	+0.3
PAVA	Las Pavas	0.77	16	eP	Pn	01 51 31.5	-0.4
PAVA				eS	Sn	01 51 42.2	-0.1
PAVA	Las Pavas	0.77	16	eP	Pn	01 51 31.5	-0.4
PAVA				eS	Sn	01 51 42.2	-0.1
BOQS	Boqueron	0.78	351⇓	eP	Pn	01 51 31.8	-0.2
BOQS				eS	Sn	01 51 42.9	+0.3
LBRS	Las Brisas	0.78	8	eP	Pn	01 51 31.6	-0.3
LFU	La Fuente	0.78	3	eP	Pn	01 51 31.8	-0.2
LFU				eS	Sn	01 51 42.8	+0.3
LFU	La Fuente	0.78	3	eP	Pn	01 51 31.8	-0.2
LFU				eS	Sn	01 51 42.8	+0.3
COEB	Comit de Eme	0.80	49	eP	Pn	01 51 31.6	-0.7
COEB				eS	Sb	01 51 43.8	+0.2
COEB	Comit de Eme	0.80	49	eP	Pn	01 51 31.6	-0.7
COEB				eS	Sb	01 51 43.8	+0.2
TECA	Tecapa	0.82	50	eP	Pn	01 51 32.3	-0.4
TECA				eS	Sb	01 51 44.5	+0.3
TECA	Tecapa	0.82	50	eP	Pn	01 51 32.3	-0.4
TECA				eS	Sb	01 51 44.5	+0.3
JUCU	Jucuar¡n	0.92	72	eP	Pn	01 51 33.5	-0.4
JUCU				eS	Sn	01 51 46.5	+0.5
JUCU					IAML	01 51 54.2	
	comp=Z,2µm,0.3s						
JUCU	Jucuar¡n	0.92	72	eP	Pn	01 51 33.5	-0.4
JUCU				eS	Sn	01 51 46.5	+0.5
JUCU					IAML	01 51 54.2	
	comp=Z,2µm,0.3s						
PACA	Pacayal	0.95	58	eP	Pn	01 51 34.0	-0.3
PACA				eS	Sn	01 51 47.0	+0.2
PACA	Pacayal	0.95	58	eP	Pn	01 51 34.0	-0.3
PACA				eS	Sn	01 51 47.0	+0.2
LCY	Lacayo	0.95	61	eP	Pn	01 51 33.8	-0.5
LCY				eS	Sb	01 51 47.6	-0.2
LCY	Lacayo	0.95	61	eP	Pn	01 51 33.8	-0.5
LCY				eS	Sb	01 51 47.6	-0.2
VSM	San Miguel	0.97	62	eP	Pn	01 51 34.5	-0.2
VSM	San Miguel	0.97	62	eP	Pn	01 51 34.5	-0.2
CEVE	Cerro Verde	0.97	332	eP	Pn	01 51 34.3	-0.5
CEVE				eS	Sb	01 51 49.0	+0.3
CEVE					IAML	01 51 58.1	
	comp=Z,3µm,0.4s						
CEVE	Cerro Verde	0.97	332	eP	Pn	01 51 34.3	-0.5
CEVE				eS	Sb	01 51 49.0	+0.3
CEVE					IAML	01 51 58.1	
	comp=Z,3µm,0.4s						
SBLS	San Blas	0.98	332	eP	Pn	01 51 34.4	-0.5
SBLS	San Blas	0.98	332	eP	Pn	01 51 34.4	-0.5
SNJE	San Jose	1.00	334	eP	Pn	01 51 34.6	-0.5
SNJE	San Jose	1.00	334	eP	Pn	01 51 34.6	-0.5
BLLM	Bellamira	1.01	62	eP	Pn	01 51 34.8	-0.3
BLLM	Bellamira	1.01	62	eP	Pn	01 51 34.8	-0.3
RTR	El Retiro	1.04	333	eP	Pn	01 51 35.3	-0.4
RTR	El Retiro	1.04	333	eP	Pn	01 51 35.3	-0.4
FAGO	Alcalda de S	1.25	54	eP	Pn	01 51 37.6	-0.7
FAGO				eS	Sn	01 51 54.4	+0.4
FAGO	Alcalda de S	1.25	54	eP	Pn	01 51 37.6	-0.7
FAGO				eS	Sn	01 51 54.4	+0.4
LCND	La Caada	1.27	74	eP	Pn	01 51 38.2	-0.5
LCND				eS	Sn	01 51 55.3	+0.7
LCND					IAML	01 51 57.2	
	comp=Z,3µm,0.3s						
LCND	La Caada	1.27	74	eP	Pn	01 51 38.2	-0.5
LCND				eS	Sn	01 51 55.3	+0.7
LCND					IAML	01 51 57.2	
	comp=Z,3µm,0.3s						
CNCH	Conchagua	1.32	76	eP	Pn	01 51 38.8	-0.7
CNCH				eS	Sn	01 51 56.4	+0.5
CNCH	Conchagua	1.32	76	eP	Pn	01 51 38.8	-0.7
CNCH				eS	Sn	01 51 56.4	+0.5
MTO3	Montecristo	1.44	352	eP	Pn	01 51 41.0	-0.2
MTO3	Montecristo	1.44	352	eP	Pn	01 51 41.0	-0.2

IDC 01 02:02:58.6±4.5, 17°.42S×176°.11W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.8/27, mbtmp4.1/4, MS2.7/1, Ms1 2.7/1, ms1mx2.4/29, Error ellipse: s-maj=197.9km s-min=33.0km az=138.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	5.44	51	LR	LR	02 06 10.1	
	comp=Z,75nm,20.1s,baz=7.5,slow=35						
STKA	Stephens Creek	40.79	241	P	P	02 10 42.5	+0.6
	0.7nm,0.3s,baz=63,slow=9.0,SNR=4.7						
WRA	Warramunga Arr	46.88	259	P	P	02 11 30.9	-0.2
	1.2nm,0.4s,baz=97,slow=7.2,SNR=9.2						
ASAR	Alice Springs	47.03	254	P	P	02 11 31.6	-0.7
	2.0nm,0.5s,baz=89,slow=7.8,SNR=26						
ILAR	Eielson Array	84.94	12	P	P	02 15 35.2	0.0
	1.3nm,1.3s,baz=195,slow=6.2,SNR=2.9						

IDC 01 02:16:34.5±5.7, 4°.73S×153°.86E, h98km±39km, mb3.5/3, mb1 3.8/4, mb1mx3.3/37, mbtmp4.0/4, MS4.3/1, Ms1 4.3/1, ms1mx2.7/21, Error ellipse: s-maj=53.8km s-min=23.9km az=95.0, New Ireland region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.88	283	P	Pn	02 17 05.3	-0.1
	27nm,0.3s,baz=97,slow=1.6,SNR=9.9						
KRVT				S	Sn	02 17 29.3	+0.3
	36nm,0.3s,baz=330,slow=23,SNR=10						
PMG	Port Moresby	8.11	235	P	Pn	02 18 30.4	+0.9
	6.0nm,0.3s,baz=44,slow=5.7,SNR=8.1						
PMG				S	Sn	02 20 02.0	+2.3
	1.9nm,0.3s,baz=341,slow=22,SNR=2.6						
WRA	Warramunga Arr	24.29	230	P	P	02 21 43.2	+0.3
	4.4nm,0.3s,baz=98,slow=12,SNR=29						
ASAR	Alice Springs	26.92	224	P	P	02 22 05.5	-1.2
	0.2nm,0.4s,baz=54,slow=8.9,SNR=6.1						
RAO	Raoul Island	36.17	136	LR	LR	02 35 15.1	
	comp=Z,460nm,19.2s,baz=262,slow=31						
MKAR	Makanchi Array	80.97	319	P	P	02 28 39.2	+0.8
	0.1nm,0.6s,baz=96,slow=6.7,SNR=4.2						
TORD	Torodi Ar. Bea	151.29	289	PKPbc	PKPbc	02 36 17.3	-0.5
	0.5nm,0.9s,baz=96,slow=2.2,SNR=4.5						

IDC 01 02:17:07.3±2.3, 11°.72S×167°.19E, h0km, mb4.1/8, mb1 4.3/8, mb1mx4.0/31, mbtmp4.1/8, Error ellipse: s-maj=73.9km s-min=26.4km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.60	251	P	P	02 23 41.1	+0.3
	3.0nm,0.3s,baz=82,slow=9.8,SNR=9.9						
ASAR	Alice Springs	33.78	245	P	P	02 23 51.2	+0.1
	1.6nm,0.6s,baz=70,slow=9.9,SNR=14						
KSRS	Korea Array	61.23	325	P	P	02 27 25.1	+0.9
	0.7nm,0.7s,baz=145,slow=5.8,SNR=4.4						
CMAR	Chiang Mai Arr	73.68	293	P	P	02 28 43.5	+0.1
	1.1nm,0.3s,baz=119,slow=4.4,SNR=5.7						
SONM	Songino Array	80.05	323	P	P	02 29 18.7	-0.3
	0.3nm,0.5s,baz=145,slow=6.1,SNR=5.7						
ILAR	Eielson Array	83.70	18	P	P	02 29 38.5	+0.8
	0.5nm,0.6s,baz=239,slow=4.9,SNR=11						
YKA	Yellowknife Ar	94.92	27	P	P	02 30 30.5	-0.7
	0.1nm,0.4s,baz=259,slow=4.9,SNR=4.0						
MKAR	Makanchi Array	94.98	317	P	P	02 30 30.3	-1.6
	1.1nm,0.7s,baz=84,slow=7.0,SNR=15						

ATH 01 02:22:00.8, 38°.25N×20°.41E, h8km±1km, ML2.3/5, Error ellipse: s-maj=1.7km s-min=0.7km az=259.0
THE 01 02:22:00.7, 38°.23N×20°.40E, h10km±1km, ML2.8/7, Error ellipse: s-maj=1.4km s-min=0.4km az=206.0
ISC 01 02:21:59.8±1.0, 38°.24N±0°.03×20°.40E±0°.05, h14km±5km, n24, σ0°.43/43, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.03	41	P	Pg	02 22 02.2	-0.1
KEF4				S	Sg	02 22 03.4	-0.6
LXR1	Lixouri, Cepha	0.05	143	P	Pg	02 22 02.6	+0.2
LXR1				S	Sg	02 22 03.9	-0.2
	39µm,0.4s						
KEF3	Kipouria, Keph	0.06	231	P	Pg	02 22 02.7	+0.2
KEF3				S	Sg	02 22 04.3	+0.1
CHV1	Chavriata, Kef	0.06	196	P	Pg	02 22 02.7	+0.2
CHV1				S	Sg	02 22 04.5	+0.2
	26µm,0.1s						
KEF1	Kardakata, Kep	0.07	54	P	Pg	02 22 02.6	0.0
KEF1				S	Sg	02 22 03.8	-0.7
ARG2	Argostoli	0.09	132	P	Pg	02 22 03.1	+0.3
ARG2				S	Sg	02 22 04.9	+0.1
	10µm,0.1s						
KEF2	Argostoli. Kep	0.10	138	P	Pg	02 22 03.3	+0.4
KEF2				S	Sg	02 22 05.1	+0.2
VLS	Valsamata	0.16	112	P	Pb	02 22 04.1	-0.4
VLS				S	Sg	02 22 06.7	+0.4
	3µm,0.2s						
VLS	Valsamata	0.16	112	P	Pb	02 22 04.1	-0.4
VLS				S	Sg	02 22 06.8	+0.4
VLS				AML	AML	02 22 07.0	
	comp=N,4810µm,0.2s						
VLS				AML	AML	02 22 07.2	
	comp=E,4692µm,0.1s						
VSK1	VASILIKIADES	0.21	37	P	Pb	02 22 05.0	-0.4
VSK1				S	Sg	02 22 08.5	+0.7
	comp=E,2µm,0.2s						
FSK	Fiskardo	0.25	30	P	Pb	02 22 05.7	-0.4
FSK				S	Sg	02 22 09.6	+0.7
	comp=E,750nm,0.1s						
FSK	Fiskardo	0.25	30	P	Pb	02 22 05.8	-0.4
FSK				S	Sg	02 22 09.3	+0.4
FSK				AML	AML	02 22 10.2	
	comp=E,2032µm,0.1s						
FSK				AML	AML	02 22 10.5	
	comp=N,917µm,0.1s						
KFL	Anninata	0.33	113	P	Pb	02 22 07.3	-0.2
KFL				S	Sb	02 22 11.7	-0.8
KFL				AML	AML	02 22 13.2	
	comp=N,1214µm,0.3s						
KFL				AML	AML	02 22 15.3	
	comp=E,2260µm,0.4s						
VLMS	Volimes, Zakyn	0.42	150	P	Pb	02 22 08.9	+0.1
VLMS				S	Sb	02 22 15.1	+0.1
VLMS				AML	AML	02 22 16.6	
	comp=N,1578µm,0.4s						
VLMS				AML	AML	02 22 20.9	
	comp=E,1195µm,0.3s						
EVGI	Lefkada island	0.43	27	P	Pb	02 22 09.0	-0.2
EVGI				S	Sb	02 22 15.9	+0.4
EVGI	Lefkada island	0.43	27	P	Pb	02 22 08.8	-0.4
MGNA	Meganis	0.52	36	P	Pb	02 22 10.2	-0.4
MGNA				S	Sb	02 22 18.1	+0.1
LKD2	Lefkada island	0.58	20	P	Pb	02 22 12.0	+0.1
LKD2				S	Sb	02 22 19.5	-0.5
TSLK	Tsoukalades, L	0.62	19	P	Pb	02 22 12.5	+0.1
PDO	Prodromos	0.71	59	P	Pb	02 22 14.1	+0.2
PDO				S	Sn	02 22 25.2	-0.9
	comp=E,362nm,0.4s						
PDO	Prodromos	0.71	59	P	Pb	02 22 14.1	+0.2
PDO				S	Sb	02 22 24.2	+0.7
PDO				AML	AML	02 22 26.3	
	comp=N,404µm,0.4s						
PDO				AML	AML	02 22 28.6	
	comp=E,607µm,0.5s						
RLS	Riolos of Patr	0.86	102	P	Pn	02 22 17.1	-0.3
PVO	Paravola	0.96	66	P	Pn	02 22 18.9	+0.1
DRO	Drossia	1.07	105	P	Pn	02 22 21.0	+0.6

THE 01 02:35:12.4, 38°.22N×20°.45E, h16km, ML2.8/6, Error ellipse: s-maj=1.2km s-min=0.4km az=222.0
ATH 01 02:35:12.3, 38°.22N×20°.44E, h15km±1km, ML2.4/5, Error ellipse: s-maj=1.8km s-min=1.0km az=254.0
ISC 01 02:35:12.3±1.1, 38°.23N±0°.03×20°.45E±0°.04, h16km±5km, n30, σ0°.37/47, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.03	201	P	Pg	02 35 15.2	+0.1
LXR1				S	Sg	02 35 17.3	+0.3
	12µm,0.1s						
KEF4	Livadi, Kephal	0.04	326	P	Pg	02 35 15.2	0.0
KEF4				S	Sg	02 35 16.9	-0.2
KEF1	Kardakata, Kep	0.05	17	P	Pg	02 35 15.3	0.0
KEF1				S	Sg	02 35 17.1	-0.2
ARG2	Argostoli	0.06	149	P	Pg	02 35 15.2	-0.1
ARG2				S	Sg	02 35 17.1	-0.1
	13µm,0.1s						
KEF2	Argostoli. Kep	0.07	155	P	Pg	02 35 15.3	-0.1
KEF2				S	Sg	02 35 17.0	-0.4
CHV1	Chavriata, Kef	0.07	232	P	Pg	02 35 15.4	0.0
CHV1				S	Sg	02 35 17.6	+0.2
	17µm,0.2s						
KEF3	Kipouria, Keph	0.08	254	P	Pg	02 35 15.6	0.0
KEF3				S	Sg	02 35 17.6	0.0
VLS	Valsamata	0.12	114	P	Pg	02 35 15.8	-0.2
VLS				S	Sg	02 35 18.2	-0.2
	6µm,0.1s						
VLS	Valsamata	0.12	114	P	Pg	02 35 15.8	-0.2
VLS				S	Sg	02 35 17.8	-0.6
VLS				AML	AML	02 36 18.4	
	comp=E,13811µm,0.1s						
VLS				AML	AML	02 35 18.6	
	comp=N,9971µm,0.1s						
VSK1	VASILIKIADES	0.20	26	P	Pg	02 35 17.2	+0.1
FSK	Fiskardo	0.25	21	P	Pg	02 35 17.5	-0.3
FSK				S	Sg	02 35 22.2	+0.6
	comp=N,845nm,0.1s						
FSK	Fiskardo	0.25	21	P	Pg	02 35 17.0	-0.8
FSK				S	Sg	02 35 22.2	+0.6
FSK				AML	AML	02 35 22.7	
	comp=E,2434µm,0.1s						
FSK				AML	AML	02 35 22.9	
	comp=N,910µm,0.2s						
KFL	Anninata	0.29	114	P	Pg	02 35 18.5	-0.1
KFL				S	Sg	02 35 23.2	+0.4
KFL	Anninata	0.29	114	P	Pg	02 35 18.4	-0.1
KFL				S	Sg	02 35 23.2	+0.4
KFL				AML	AML	02 35 23.9	
	comp=E,3866µm,0.3s						
KFL				AML	AML	02 35 23.9	
	comp=N,3882µm,0.2s						
VLMS	Volimes, Zakyn	0.39	154	P	Pg	02 35 20.2	-0.1
VLMS				S	Sg	02 35 25.6	0.0
VLMS				AML	AML	02 35 28.1	
	comp=N,1182µm,0.2s						
VLMS				AML	AML	02 35 28.2	
	comp=E,1237µm,0.1s						
EVGI	Lefkada island	0.42	22	P	Pg	02 35 20.8	-0.1
EVGI				S	Sb	02 35 28.0	+0.3
	comp=E,420nm,0.1s						
EVGI	Lefkada island	0.42	22	P	Pg	02 35 20.9	-0.1
EVGI				S	Sg	02 35 26.5	-0.3
MGNA	Meganis	0.51	32	P	Pg	02 35 22.2	-0.2
MGNA				AML	AML	02 35 30.6	
	comp=N,392µm,0.1s						
MGNA				AML	AML	02 35 30.6	
	comp=E,488µm,0.2s						
LKD2	Lefkada island	0.58	16	P	Pg	02 35 23.5	-0.4
LKD2	Lefkada island	0.58	16	P	Pg	02 35 23.3	-0.6
TSLK	Tsoukalades, L	0.62	15	P	Pg	02 35 24.4	-0.1
TSLK	Tsoukalades, L	0.62	15	P	Pg	02 35 24.2	-0.4
PDO	Prodromos	0.69	57	P	Pg	02 35 25.7	-0.1
PDO				S	Sb	02 35 36.1	+0.9
PVO	Paravola	0.93	65	P	Pg	02 35 30.4	+0.1
DRO	Drossia	1.03	105	P	Pb	02 35 30.9	-1.0
LAKA	Lakka	1.20	89	P	Pn	02 35 34.7	+0.2
ANX	Ano Chora	1.21	72	P	Pb	02 35 35.3	+0.3
KLV	Kalavryta, Ach	1.35	97	P	Pb	02 35 37.1	-0.2
MAKR	Makrakomi, Fth	1.53	59	P	Pg	02 35 41.8	-0.1
AGG	Agios Georgios	1.67	61	P	Pg	02 35 44.0	-0.5

BJI 01 02:43:28.6±0.0, 1°.23N×126°.40E, h6km, mB4.9/34, mb4.6/50, Ms4.3/14, Ms7 4.1/13
IDC 01 02:43:31.8±0.4, 1°.54N×126°.28E, h0km, mb4.5/31, mb1 4.6/33, mb1mx4.5/54, mbtmp4.5/33, ML4.0/2, MS3.7/13, Ms1 3.7/13, ms1mx3.4/45, Error ellipse: s-maj=17.7km s-min=9.0km az=72.0
MOS 01 02:43:34.5±1.2, 1°.58N×126°.35E, h33km, mb5.0/40, Error ellipse: s-maj=10.7km s-min=5.7km az=111.3
NEIC 01 02:43:35.8±1.7, 1°.59N±0°.08×126°.39E±0°.06, h34km±3km, mb4.8/73, Error ellipse: s-maj=11.7km s-min=8.5km az=210.0
KLM 01 02:43:37.0, 1°.61N×126°.54E, h75km, mb4.9
MAN 01 02:43:39.1, 1°.89N×126°.05E, h14km
ISC 01 02:43:32.9±0.3, 1°.60N±0°.04×126°.36E±0°.05, h10km, n214, σ1°.59/211, mb4.7/87, MS3.7/18, 8C-3D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.30	129		Pn	02 43 57.0	-0.2
LUWI	Luwuk	4.45	234		Pn	02 44 43.3	+2.9
DDMP	Don Marcelino,	4.52	352	eP	Pn	02 44 44.2	+2.7
DDMP				eS	Sn	02 45 33.5	-0.7
GSPH	General Santos	4.67	343	eP	Pb	02 44 52.2	-2.8
SKMP	Bagumbayan, Su	5.21	340	eP	Pn	02 44 52.6	+1.6
SKMP				eS	Sn	02 45 50.3	-0.8
SIJI	Sorong	5.49	117	Pn	Pn	02 44 55.5	+0.8
	1.4nm,0.3s,baz=306,slow=19,SNR=3.4						
SIJI				LR	LR	02 47 29.4	
	comp=Z,1µm,19.1s,baz=40,slow=43						
DAV	Davao City (W)	5.49	352	Pn	Pn	02 45 00.3	+5.5
	68nm,0.3s,baz=31,slow=15,SNR=1.9						
DAV				Sn	Sb	02 46 08.1	-6.8
	54nm,0.3s,baz=347,slow=14,SNR=1.9						
KCP	Kidapawan	5.52	347⇓	eP	Pn	02 45 00.4	+5.2
KCP				iS	Sn	02 45 35.4	-23
BUKP	Musuan	6.37	348	eP	Pn	02 45 09.9	+3.0
BUKP				eS	Sn	02 46 19.9	+0.1
PAGZ	Pagadian	6.88	335	eP	Pn	02 45 15.8	+1.9
KAPI	Kappang	9.32	225	Pn	Pn	02 45 50.4	+3.0
	3.9nm,0.3s,baz=112,slow=3.4,SNR=8.5						
KAPI				Sn	Sn	02 47 30.5	-1.8
	0.7nm,0.3s,baz=129,slow=21,SNR=2.7						
KAPI	Kappang	9.32	225		Pn	02 45 50.7	+3.3
KAPI	Kappang	9.32	225	P	Pn	02 45 50.7	+3.3
KAPI						02 47 30.5	
KKM	Kota Kinabalu	11.04	294		Pn	02 46 12.8	+1.7
SOEI	Soe	11.47	190		Pn	02 46 18.7	+1.6
TGY	Tagaytay City	13.53	337	LR	LR	02 52 28.2	
	comp=Z,268nm,20.8s,baz=268,slow=40						
SBUM	Sibu	14.16	274	Pn	Pn	02 46 53.6	0.0
SBUM	Sibu	14.16	274	P	P	02 47 01.0	-0.3
JAGI	Jajag, Banyuwa	15.76	230	Pn	Pn	02 47 15.4	+0.3
JAGI				IAmb	IAmb	02 47 23.0	
	comp=Z,86nm,0.8s						
KSM	Kuching	16.05	270	Pn	Pn	02 47 19.5	+0.6
KSM				IAmb	IAmb	02 47 31.4	
	comp=Z,70nm,1.1s						
KSM	Kuching	16.05	270	P	P	02 47 21.0	-1.3
KNRA	Kununurra	17.33	172	Pn	Pn	02 47 34.1	-1.1
KNRA				IAmb	IAmb	02 47 36.5	
	comp=Z,108nm,1.1s						
FITZ	Fitzroy Crossi	19.59	182	P	P	02 48 00.3	-1.1
	comp=Z,0.7nm,0.3s,baz=28,slow=8.6,SNR=15						
FITZ	Fitzroy Crossi	19.59	182	P	P	02 48 00.3	-1.1
DLV	T Lat	20.49	301	P	P	02 48 10.5	-0.9
DLV				IAmb	IAmb	02 48 20.0	
	comp=Z,35nm,1.0s						
LEM	Lembang	20.50	246	LR	LR	02 57 52.9	
	comp=Z,228nm,18.1s,baz=60,slow=42						
TWG	Pinlang	21.71	347	P	P	02 48 22.0	-2.3
GUMO	Guam	21.84	56	LR	LR	02 55 43.0	
	comp=Z,199nm,20.5s,baz=126,slow=33						
YULB	Yu-li	22.21	348	P	P	02 48 28.0	-1.7
TPUB	Ta-pu	22.27	346	P	P	02 48 28.9	-1.5
TPUB				IAmb	IAmb	02 48 37.2	
	comp=Z,42nm,0.7s						
MYKOM	Kota Tinggi	22.50	271	P	P	02 48 33.6	+0.6
MYKOM				IAmb	IAmb	02 48 38.6	
	comp=Z,48nm,1.1s						
MYKOM	Kota Tinggi	22.50	271	P	P	02 48 31.0	-1.9
WB0	Warramunga Arr	22.65	160	P	P	02 48 33.6	-0.9
SSLB	Suanglung	22.67	347	P	P	02 48 33.4	-1.3
WRAB	Tennant Creek	22.79	160	P	P	02 48 34.9	-1.0
WRAB	Tennant Creek	22.79	160	ceP	P	02 48 35.2	-0.8
WRAB				pmax	pmax		
	comp=Z,93nm,1.0s						
WRA	Warramunga Arr	22.80	160	P	P	02 48 35.5	-0.5
	comp=Z,54nm,0.9s,baz=341,slow=10,SNR=52						
WRA	Warramunga Arr	22.80	160	P	P	02 48 34.4	-1.6
WRA	Warramunga Arr	22.80	160	P	P	02 48 34.4	-1.6
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WB2	Warramunga Arr	22.80	160	P	P	02 48 35.4	-0.6
WR0	Warramunga Arr	22.88	160	P	P	02 48 36.2	-0.6
WR0				IAmb	IAmb	02 48 42.0	
	comp=Z,61nm,1.1s						
PMG	Port Moresby	23.43	118	P	P	02 48 42.9	+0.4
	comp=Z,7.5nm,0.6s,baz=85,slow=18,SNR=3.0						
PMG				LR	LR	03 00 30.3	
	comp=Z,232nm,19.4s,baz=309,slow=43						
PMG	Port Moresby	23.43	118	ceP	P	02 48 42.2	-0.3
PMG				pmax	pmax		
	comp=Z,82nm,1.3s						
YHNB	Yeheng	23.43	349	P	P	02 48 41.9	-0.6
YHNB				IAmb	IAmb	02 48 49.1	
	comp=Z,18nm,0.7s						
QIZ	Qiongzhong	23.70	318	P	P	02 48 44.7	-0.5
QIZ				S	S	02 53 01.3	+0.9
QIZ				LR	LR		
	comp=Z,130nm,5.8s						
QIZ				LR	LR		
	comp=Z,210nm,18.4s						
QIZ				LR	LR		
	comp=Z,250nm,22.8s						
PSA00	Pilbara Seismi	23.90	195	IAmb	IAmb	02 48 46.9	
	comp=Z,32nm,0.7s						
JRMM	Jerantut	23.96	276	P	P	02 48 45.0	-2.8
JOW	Kunigami	25.15	4	P	P	02 49 01.5	+3.0
	comp=Z,3.9nm,0.7s,baz=172,slow=13,SNR=6.5						
JOW	Kunigami	25.15	4	IAmb	IAmb	02 49 06.0	
	comp=Z,20nm,0.7s						
BKNI	Bangkinang	25.35	267	P	P	02 49 00.1	-0.3

IPM Ipoh 25.46 277 P P 02 48 58.0 -3.4
AS31 Alice Springs 26.17 164 P P 02 49 07.1 -0.6
ASAR Alice Springs 26.17 164 P P 02 49 07.0 -0.8
comp=Z,12nm,0.8s,baz=345,slow=8.2,SNR=90
ASAR PcP PcP 02 52 34.7 -0.3
comp=Z,2.6nm,0.7s,baz=343,slow=1.9,SNR=9.6
ASAR S S 02 53 45.2 +5.5
comp=Z,2.4nm,0.8s,baz=349,slow=21,SNR=4.9
ASAR Alice Springs 26.17 164 P P 02 49 06.7 -1.1
ASAR PcP 02 52 34.5 -0.5
ASAR Alice Springs 26.17 164 P P 02 49 06.7 -1.1
KRVT Keravat (AS076 26.31 103 LR LR 02 58 01.0
comp=Z,364nm,20.9s,baz=267,slow=33
RPSI Rantau Prapat 27.44 273 P P 02 49 18.8 -0.5
RPSI IAmb IAmb 02 49 22.6
comp=Z,19nm,1.1s
PSI Prapat 27.44 273 P P 02 49 19.1 -0.4
comp=Z,8.4nm,0.8s,baz=67,slow=3.4,SNR=6.1
PSI LR LR 02 59 54.1
comp=Z,115nm,20.4s,baz=326,slow=36
PSI Prapat 27.44 273 P P 02 49 18.8 -0.7
PSI pmax pmax
comp=Z,19nm,1.1s
CTA Charters Tower 29.07 139 P P 02 49 34.1 +0.3
comp=Z,5.2nm,0.8s,baz=253,slow=3.2,SNR=4.2
SLVN Son La 29.39 313 P P 02 49 37.1 +0.4
NJ2 Nanjing 31.10 348 eP P 02 49 51.2 -0.4
NJ2 pmax pmax
comp=Z,7.0nm,0.7s
JNU Nakatsue 31.64 7 P P 02 49 57.2 +0.8
comp=Z,12nm,0.8s,baz=165,slow=7.7,SNR=7.0
JNU Nakatsue 31.64 7 IAmb IAmb 02 50 06.4
comp=Z,15nm,0.9s
CMAR Chiang Mai Arr 31.68 304 P P 02 49 58.9 +1.9
comp=Z,0.8nm,0.3s,baz=120,slow=7.0,SNR=6.6
CMAR LR LR 03 03 59.8
comp=Z,86nm,20.3s,baz=133,slow=39
CHTO Chiang Mai 31.85 304 P P 02 49 57.3 -1.1
CHTO Chiang Mai 31.85 304 P P 02 49 57.3 -1.1
CHTO pmax pmax
comp=Z,3.0nm,0.6s
FORT Forrest 32.24 177 P P 02 50 01.3 -0.4
KMI Kunming 32.65 318 P P 02 50 10.2 +4.6
ENH Enshi 32.70 332 P P 02 50 04.9 -0.9
NWAO Narrogin (SRO) 35.41 193 P P 02 50 28.1 -1.1
NWAO Narrogin (SRO) 35.41 193 P P 02 50 28.9 -0.3
NWAO IAmb IAmb 02 50 29.5
comp=Z,18nm,0.8s
NWAO Narrogin (SRO) 35.41 193 P P 02 50 28.9 -0.3
NWAO pmax pmax
comp=Z,18nm,0.8s
BBOO Buckleboo 35.43 166 P P 02 50 28.1 -1.3
KSAR Wonju Array Be 35.69 2 P P 02 50 29.8 -1.7
KSAR Wonju Array Be 35.69 2 P P 02 50 29.8 -1.7
KSRS Korea Array 35.71 2 P P 02 50 33.5 +1.9
comp=Z,1.7nm,0.6s,baz=175,slow=9.5,SNR=5.4
XAN Xi'an 36.16 335 P P 02 50 35.0 -0.7
XAN pmax pmax
comp=Z,8.0nm,0.7s
XAN pmax pmax
comp=Z,150nm,6.1s
XAN Xi'an 36.16 335 P P 02 50 35.2 -0.4
XAN IAmb IAmb 02 50 39.4
comp=Z,11nm,0.9s
XAN Xi'an 36.16 335 P P 02 50 35.3 -0.4
XAN pmax pmax
comp=Z,11nm,0.9s
CD2 Chengdu 36.16 326⇑iP P 02 50 35.1 -0.6
CD2 pmax pmax
comp=Z,10.0nm,1.3s
STKA Stephens Creek 36.30 158 P P 02 50 36.0 -0.7
comp=Z,11nm,0.8s,baz=332,slow=8.2,SNR=22
STKA Stephens Creek 36.30 158 P P 02 50 36.1 -0.7
STKA Stephens Creek 36.30 158 P P 02 50 36.1 -0.7
STKA pmax pmax
comp=Z,6.0nm,1.3s
MJAR Matsushiro Arr 36.45 16 P P 02 50 38.7 +0.6
comp=Z,4.8nm,1.1s,baz=193,slow=9.7,SNR=8.9
MJAR LR LR 03 05 23.5
comp=Z,74nm,20.8s,baz=235,slow=36
MJAR Matsushiro Arr 36.45 16 P P 02 50 37.0 -1.2
MJAR Matsushiro Arr 36.45 16 P P 02 50 37.0 -1.2
MJAR pmax pmax
comp=Z,2.0nm,1.1s
BJT Baijiatuau 39.34 348 P P 02 51 02.4 -0.1
BJT Baijiatuau 39.34 348 P P 02 51 02.4 -0.1
BJT pmax pmax
comp=Z,7.0nm,0.9s
BJI Beijing 39.37 348 eP P 02 51 05.6 +3.0
BJI pmax pmax
comp=Z,9.0nm,1.0s
ARMA Armidale 39.93 145 P P 02 51 07.3 -0.3
ARMA IAmb IAmb 02 51 15.9
comp=Z,13nm,0.9s
LZH Lanzhou 40.16 331 eP P 02 51 11.3 +1.8
LZH pP pwP 02 51 14.2 +2.0
LZH sP sP 02 51 16.5 +3.2
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,64nm,4.6s
SHL Shillong 40.87 309 P P 02 51 14.6 -1.0
SHL Shillong 40.87 309 P P 02 51 14.6 -1.0
SHL pmax pmax
comp=Z,11nm,0.8s
HHC Hu-ho-hao-te 41.30 343 eP P 02 51 23.0 +4.2
HHC pmax pmax
comp=Z,4.0nm,0.8s
HHC pmax pmax
comp=Z,37nm,4.9s
HHC LR LR
comp=Z,170nm,17.0s
HHC LR LR
comp=Z,100nm,13.6s
HHC LR LR
comp=Z,98nm,14.5s
USRK Ussuriysk Ar. 42.71 6 P P 02 51 32.1 +2.0
comp=Z,4.9nm,0.6s,baz=188,slow=7.5,SNR=11
USRK LR LR 03 09 01.8
comp=Z,39nm,21.4s,baz=193,slow=36
USRK Ussuriysk Ar. 42.71 6 P P 02 51 29.9 -0.2
USRK Ussuriysk Ar. 42.71 6 P P 02 51 29.9 -0.2
LSA Lhasa 43.59 313 P P 02 51 37.3 -0.8
LSA Lhasa 43.59 313 P P 02 51 37.3 -0.8
LSA pmax pmax
comp=Z,6.0nm,0.6s
GTA Gaotai 44.74 331 eP P 02 51 46.8 +0.1
GTA pP sP 02 51 50.4 -0.1
GTA sP pwP 02 51 53.2 +3.8
GTA PcP PP 02 53 30.0 -1.3
GTA pmax pmax
comp=Z,2.0nm,0.9s
GTA pmax pmax
comp=Z,52nm,5.1s
GTA LR LR
comp=Z,120nm,20.6s
GTA LR LR
comp=Z,140nm,18.7s
GTA LR LR
comp=Z,160nm,21.9s
YSS Yuzh-Sakhalins 47.38 15 eP P 02 52 06.8 -0.4
KLR Kul'dur 47.67 5 iP P 02 52 10.0 +0.5
KLR pmax pmax
comp=Z,9.0nm,0.8s
TAU Tasmania Unive 48.17 159 P P 02 52 12.1 -1.3
TAU Tasmania Unive 48.17 159 P P 02 52 12.1 -1.3
TAU pmax pmax
comp=Z,52nm,1.2s
ULN Ulaanbaatar 49.02 343 P P 02 52 20.4 +0.2
ULN Ulaanbaatar 49.02 343ceP P 02 52 20.3 +0.2
ULN pmax pmax
comp=Z,7.0nm,1.0s
SONM Songino Array 49.19 342 P P 02 52 22.7 +1.2
comp=Z,4.9nm,0.9s,baz=153,slow=8.9,SNR=13
SONM PcP PcP 02 53 44.9 +0.3
comp=Z,1.7nm,0.7s,baz=147,slow=5.3,SNR=4.2
SONM LR LR 03 15 17.0
comp=Z,86nm,18.8s,baz=198,slow=39
SONM Songino Array 49.19 342 P P 02 52 20.4 -1.0
SONM Songino Array 49.19 342 P P 02 52 20.4 -1.0
SONM 02 53 44.9
SONM pmax pmax
comp=Z,4.0nm,0.8s
HYB Hyderabad 49.52 292 iP P 02 52 34.0 +10
GRNR Gornyy 49.73 8⇓iP P 02 52 26.3 +1.0

GRNR eS S 02 59 39.3 +5.0
GRNR pmax pmax
comp=Z,6.0nm,1.3s
GRNR smax smax
comp=E,7.0nm,0.8s
GRNR MLR MLR
comp=Z,130nm,15.0s
ZEA Zeya 51.97 1 eP P 02 52 45.4 +3.3
ZEA pmax pmax
comp=Z,12nm,1.0s
TLY Talaya 53.43 343 eP P 02 52 56.0 +3.0
TLY pmax pmax
comp=Z,5.0nm,0.6s
TLY MLR MLR
comp=Z,206nm,7.0s
MOY Mondy 54.25 341 eP P 02 53 01.5 +2.4
WMQ Urumqi 54.26 326 eP P 02 53 01.4 +2.1
WMQ pP sP 02 53 03.2 +0.1
WMQ sP pwP 02 53 07.1 +5.1
WMQ pmax pmax
comp=Z,16nm,1.1s
WMQ pmax pmax
comp=Z,130nm,3.8s
WMQ LR LR
comp=Z,270nm,21.3s
WMQ LR LR
comp=Z,320nm,28.3s
MSVF Nonsavu 54.40 113 iP P 02 53 01.2 +0.5
BOD Bodaibo 56.91 352 eP P 02 53 16.2 -1.7
BOD pmax pmax
comp=Z,13nm,1.5s
PETK Petropavlovsk- 57.53 22 P P 02 53 23.8 +1.3
comp=Z,7.2nm,0.8s,baz=195,slow=4.6,SNR=3.8
NIL Nilore 58.94 309 P P 02 53 35.6 +2.8
NIL IAmb IAmb 02 53 54.7
comp=Z,13nm,1.1s
NIL Nilore 58.94 309 P P 02 53 35.6 +2.8
NIL pmax pmax
comp=Z,13nm,1.1s
MK31 Makanchi Array 59.09 326 P P 02 53 33.0 -0.6
MK31 IAmb IAmb 02 53 38.4
comp=Z,5.7nm,0.7s
MK31 Makanchi Array 59.09 326 P P 02 53 33.0 -0.6
MK31 pmax pmax
comp=Z,6.0nm,0.7s
MKAR Makanchi Array 59.09 326 P P 02 53 32.7 -0.9
comp=Z,4.6nm,0.5s,baz=120,slow=7.9,SNR=95
MKAR LR LR 03 19 46.0
comp=Z,79nm,22.0s,baz=103,slow=37
MKAR PKP2bc 03 23 20.8
comp=Z,0.2nm,0.7s,baz=68,slow=3.3,SNR=3.6
MKAR Makanchi Array 59.09 326 P P 02 53 33.0 -0.6
MKAR Makanchi Array 59.09 326 P P 02 53 33.0 -0.6
MAKZ Makanchi 59.28 326 P P 02 53 34.2 -0.6
MAKZ Makanchi 59.28 326 P P 02 53 34.2 -0.6
MAKZ pmax pmax
comp=Z,8.0nm,0.7s
KSH Kashi 59.30 316 P P 02 53 39.5 +4.3
KSH pP pwP 02 53 44.0 +6.0
KSH PcP PcP 02 54 24.9 +1.5
KSH PP PP 02 55 54.3 +8.0
KSH S S 03 01 47.4 +3.5
KSH pmax pmax
comp=Z,9.0nm,1.0s
KSH pmax pmax
comp=Z,180nm,5.5s
KSH LR LR
comp=Z,170nm,9.6s
KSH LR LR
comp=Z,220nm,17.3s
KSH LR LR
comp=Z,460nm,13.7s
NRN Naryn 60.14 318 IAmb IAmb 02 53 45.7
comp=Z,7.0nm,1.1s
YAK Yakutsk 60.33 2 P P 02 53 41.3 -0.4
YAK Yakutsk 60.33 2 eP P 02 53 42.3 +0.6
YAK pmax pmax
comp=Z,24nm,0.8s
YAK pmax pmax
comp=N,7.0nm,0.9s
MA2 Magadan 60.84 14 P P 02 53 43.8 -1.5
MA2 Magadan 60.84 14ceP P 02 53 47.3 +2.0
MA2 pmax pmax
comp=Z,20nm,1.3s
AAK Ala-Archa 61.69 319ceP P 02 53 53.4 +1.8
AAK pmax pmax
comp=Z,6.0nm,1.3s
ZALV Zalesovo Beam 62.31 334 P P 02 53 55.3 0.0
comp=Z,2.5nm,0.6s,baz=130,slow=5.4,SNR=8.6
ZALV Zalesovo Beam 62.31 334 P P 02 53 54.4 -0.9
KBL Kabul 62.53 308 P P 02 53 57.0 -0.5
KBL IAmb IAmb 02 54 01.2
comp=Z,9.3nm,0.8s
KBL Kabul 62.53 308 P P 02 53 57.0 -0.5
KBL pmax pmax
comp=Z,9.0nm,0.8s
BTK Batken 63.13 315 P P 02 54 01.1 -0.1
BTK IAmb IAmb 02 54 18.9
comp=Z,7.6nm,1.0s
BTK Batken 63.13 315 P P 02 54 01.1 -0.1
BTK pmax pmax
comp=Z,8.0nm,1.0s
KURK Kurchatov 63.33 328 P P 02 54 01.3 -0.9
KURK Kurchatov 63.33 328⇑iP P 02 54 01.0 -1.2
KURK pmax pmax
comp=Z,8.0nm,0.5s
SEY Seymchan 64.17 13 P P 02 54 10.0 +2.5
comp=Z,6.5nm,1.0s,baz=220,slow=8.2,SNR=10
SEY Seymchan 64.17 13⇑iP P 02 54 08.9 +1.4
KK31 Karatay Array 64.54 318 P P 02 54 09.6 -0.7
KK31 IAmb IAmb 02 54 14.8
comp=Z,5.5nm,0.9s
KK31 Karatay Array 64.54 318 P P 02 54 09.6 -0.7
KK31 pmax pmax
comp=Z,6.0nm,1.0s
KKAR Karatay Array 64.54 318 P P 02 54 09.9 -0.4
KKAR Karatay Array 64.54 318 P P 02 54 10.0 -0.4
BRVK Borovoye 68.97 328 P P 02 54 37.4 -0.9
BRVK IAmb IAmb 02 54 41.8
comp=Z,8.1nm,1.1s
BRVK Borovoye 68.97 328 P P 02 54 37.4 -0.9
BRVK pmax pmax
comp=Z,8.0nm,1.2s
TIXI Tiksi 69.96 1 P P 02 54 43.2 -0.9
TIXI IAmb IAmb 02 54 45.5
comp=Z,7.8nm,0.7s
TIXI Tiksi 69.96 1 iP P 02 54 43.7 -0.4
TIXI pmax pmax
comp=Z,6.0nm,0.6s
BILL Bilibino 71.69 15 iP P 02 54 54.9 +0.2
BILL i 02 55 09.0
BILL i 02 55 18.2
BILL pmax pmax
comp=Z,2.0nm,1.2s
GEYT Alibeck 71.94 309 P P 02 54 57.8 +0.9
comp=Z,3.2nm,0.9s,baz=172,slow=4.5,SNR=7.3
GEYT Alibeck 71.94 309 P P 02 54 58.0 +1.1
ABKAR Akbulak array 73.56 321 P P 02 55 05.5 -0.7
AKTO Aktyubinsk 75.09 322 P P 02 55 15.1 0.0
comp=Z,3.3nm,0.5s,baz=104,slow=9.8,SNR=17
SVE Sverdlovsk 75.57 329 eP P 02 55 17.8 0.0
SVE pmax pmax
comp=Z,13nm,0.9s
ARU Arti 76.53 328 P P 02 55 23.2 0.0
comp=Z,2.1nm,0.6s,baz=360,slow=1.1,SNR=10
ARU Arti 76.53 328 P P 02 55 22.3 -1.0
ARU IAmb IAmb 02 55 31.7
comp=Z,7.6nm,0.8s
ARU Arti 76.53 328d iP P 02 55 23.0 -0.2
ARU 02 58 12.7
ARU S S 03 05 10.8 +1.7
ARU SS SS 03 10 09.2 +5.1
ARU pmax pmax
comp=Z,12nm,1.3s
RAYN Ar Rayn 80.98 293 P P 02 55 48.2 -0.3
RAYN Ar Rayn 80.98 293 P P 02 55 48.2 -0.3
RAYN pmax pmax
comp=Z,5.0nm,0.9s
VNDA Vanda 81.38 173 P P 02 55 49.8 +0.4
comp=Z,7.0nm,0.9s,baz=338,slow=3.3,SNR=4.7
MAW Mawson 81.64 200 P P 02 55 51.1 +0.2
comp=Z,5.7nm,0.9s,baz=108,slow=3.2,SNR=3.9
KIRV Kirov 81.84 329 P P 02 55 52.4 +0.2
comp=Z,11nm,0.6s,baz=357,slow=1.6,SNR=5.8
ZEI Tsey 83.38 313 eP P 02 55 59.3 -1.6

ZEI pmax pmax
comp=Z,7.0nm,0.8s
AKH Akhalkalaki 83.59 311 P P 02 56 01.0 -0.9
AKH IAmb IAmb 02 56 06.9
comp=Z,9.6nm,0.9s
AKH Akhalkalaki 83.59 311 P P 02 56 01.0 -0.9
AKH pmax pmax
comp=Z,10.0nm,0.9s
KBZ Khabaz 84.17 314 P P 02 56 05.0 +0.4
comp=Z,4.5nm,0.9s,baz=137,slow=7.9,SNR=5.9
PRGR Permogore 84.19 332 eP P 02 55 58.6 -5.7
PRGR pmax pmax
comp=Z,10.0nm,0.7s
KIV Kislovodsk 84.33 314 eP P 02 56 04.6 -1.0
KIV pmax pmax
comp=Z,19nm,1.0s
IMAR Indian Mountai 84.42 24 P P 02 56 04.6 -0.8
PPT Papeete 84.82 108 LR LR 03 32 50.8
comp=Z,17nm,19.7s,baz=276,slow=35
VRH Novokhopyorsk 85.39 321 eP P 02 56 09.7 -0.9
VRH pmax pmax
comp=Z,60nm,1.6s
MLY Manley 85.55 25 IAmb IAmb 02 58 47.3
comp=Z,9.9nm,1.6s
TOLK Toolik Lake Re 86.35 21 IAmb IAmb 02 56 17.3
comp=Z,5.1nm,0.9s
VORD Divnogorie 86.91 321 eP P 02 56 17.8 -0.3
VORD pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 87.00 321 eP P 02 56 16.8 -1.7
VSR pmax pmax
comp=Z,10.0nm,0.8s
ILAR Eielson Array 87.17 25 P P 02 56 18.2 -0.9
comp=Z,1.1nm,0.9s,baz=238,slow=5.0,SNR=12
ILAR Eielson Array 87.17 25 P P 02 56 17.6 -1.5
ILAR Eielson Array 87.17 25 P P 02 56 17.6 -1.5
RIDG Independent Ri 88.04 26 IAmb IAmb 02 58 26.5
comp=Z,7.5nm,0.9s
BMAR Burnt Mountain 88.17 23 P P 02 56 24.8 +0.9
GAZ Gaziantep 88.36 307 P P 02 56 25.1 -0.4
DOT Dot Lake 88.39 27 IAmb IAmb 02 56 26.0
comp=Z,3.2nm,0.9s
OBN Obninsk 88.58 325 iP P 02 56 25.7 -0.3
OBN i 02 56 36.6
OBN i 02 56 44.3
OBN pmax pmax
comp=Z,10.0nm,1.0s
OBN MLR MLR
comp=Z,129nm,16.0s
KMBO Kilima Mbogo 89.14 269 P P 02 56 30.7 +0.9
comp=Z,2.5nm,0.8s,baz=54,slow=6.8,SNR=7.1
KMBO Kilima Mbogo 89.14 269 P P 02 56 28.9 -1.0
KMBO IAmb IAmb 02 56 35.0
comp=Z,5.2nm,1.0s
KMBO Kilima Mbogo 89.14 269 P P 02 56 28.9 -1.0
KMBO pmax pmax
comp=Z,5.0nm,1.0s
BCAR Beaver Creek A 89.43 27 P P 02 56 29.6 -0.3
BRTR Keskin Array B 91.08 310 P P 02 56 38.6 +0.3
comp=Z,1.4nm,0.8s,baz=110,slow=3.3,SNR=7.3
INK Inuvik 92.26 21 P P 02 56 42.9 0.0
comp=Z,3.2nm,1.1s,baz=279,slow=5.3,SNR=5.4
ARCES ARCESS Array B 92.30 340 P P 02 56 45.5 +2.4
comp=Z,5.5nm,0.8s,baz=46,slow=8.9,SNR=7.7
ARCES ARCESS Array B 92.30 340 P P 02 56 44.2 +1.1
ARCES ARCESS Array B 92.30 340 P P 02 56 44.2 +1.1
AKASG Malin Array Be 93.30 321 P P 02 56 48.3 +0.2
comp=Z,0.9nm,0.6s,baz=169,slow=5.1,SNR=5.0
FINES FINESS Array B 93.52 332 P P 02 56 49.4 +0.5
comp=Z,2.8nm,0.7s,baz=50,slow=6.1,SNR=11
C36M Paulatuk 95.33 20 IAmb IAmb 02 56 57.9
comp=Z,3.7nm,0.9s
BURAR Bucovina Array 96.33 318 P P 02 57 02.0 -0.2
BUR08 Bucovina Ar. S 96.34 318 P P 02 57 01.7 -0.5
YKA Yellowknife Ar 101.58 24 P Pdif 02 57 25.8 +0.6
comp=Z,0.4nm,0.7s,baz=294,slow=4.9,SNR=4.1
CLL Collm 103.13 324 eP Pdif 02 57 38.0 +5.6
ECSD EROS Data Cent 120.73 35 PKiKP 03 02 25.8 +0.1
MNTX Cornudas Mount 120.87 51 PKiKP 03 02 26.6 +0.2
SCHQ Schefferville 122.71 9 PKP PKiKP 03 02 29.3 0.0
comp=Z,1.9nm,0.9s,baz=281,slow=5.2,SNR=3.7
TXAR Lajitas Array 123.17 53 PKP PKiKP 03 02 30.8 -0.3
comp=Z,0.4nm,0.7s,baz=212,slow=1.2,SNR=4.9
TOA0 Torodi Ar. Sit 123.20 287 PKPdf 03 02 30.8 -0.4
TORD Torodi Ar. Bea 123.20 287 PKP PKPdf 03 02 30.5 -0.6
comp=Z,5.0nm,0.7s,baz=50,slow=1.9,SNR=33
TORD Torodi Ar. Bea 123.20 287 PKPdf 03 02 30.2 -0.9
DBIC Dimbokro 130.62 280 PKP PKiKP 03 02 46.1 -0.1
comp=Z,3.6nm,0.9s,baz=94,slow=1.1,SNR=4.6
GO02 Mina Guanaco 151.97 148 PKiKP 03 03 30.3 +0.3
CPUP Villa Florida 155.16 172 PKPbc PKPdf 03 03 36.8 +10
comp=Z,1.3nm,0.7s,baz=60,slow=7.8,SNR=3.0
CPUP PKPab PKPab 03 03 51.5 -0.2
comp=Z,4.5nm,1.0s,baz=201,slow=3.2,SNR=5.5

NEIC ***01*** *02:51:32.5±1.6, 22°1S±0°2×179°4W±0°2, h562km±10km, mb4.1/21, Error ellipse: s-maj=24.7km s-min=19.1km az=139.0*
IDC ***01*** *02:51:35.7±2.4, 22°03S×179°50W, h592km±28km, mb3.6/13, mb1 3.8/15, mb1mx3.5/33, mbtmp4.6/15, Error ellipse: s-maj=30.7km s-min=13.2km az=158.0*
ISC 01 02:51:35.2±0.8, 22°0S±0°2×179°5W±0°1, h592km, n39, σ1º28/30, mb4.1/21, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.79	331	P	P	02 53 02.6	-3.6
DZM	Mont Dzumac	13.01	267	P	P	02 54 24.5	+0.1
	1.5nm,0.3s,baz=320,slow=23,SNR=18						
URZ	Urewera	16.49	189	P	P	02 54 55.3	-1.9
	2.5nm,0.3s,baz=268,slow=4.7,SNR=8.3						
URZ	Urewera	16.49	189	IAmb	IAmb	02 54 58.8	
	comp=Z,82nm,1.4s						
LHI	Lord Howe Isla	21.32	239	P	P	02 55 38.3	-2.9
CTA	Charters Tower	31.96	267	P	P	02 57 15.3	+1.1
	comp=Z,16nm,0.4s,baz=93,slow=9.9,SNR=40						
PMG	Port Moresby	34.33	286	P	P	02 57 34.9	+0.7
	comp=Z,15nm,0.6s,baz=130,slow=4.8,SNR=6.2						
PMG	Port Moresby	34.33	286	P	P	02 57 34.9	+0.7
STKA	Stephens Creek	35.87	246	P	P	02 57 48.0	+1.1
	comp=Z,7.3nm,0.5s,baz=88,slow=11,SNR=26						
STKA	Stephens Creek	35.87	246	P	P	02 57 47.9	+1.1
AS31	Alice Springs	42.81	258	P	P	02 58 42.2	-0.3
AS31				IAmb	IAmb	02 58 43.6	
	comp=Z,4.1nm,0.7s						
ASAR	Alice Springs	42.81	258	P	P	02 58 42.9	+0.4
	comp=Z,14nm,0.6s,baz=99,slow=8.1,SNR=163						
ASAR				PcP	PcP	03 00 20.6	+0.6
	comp=Z,0.7nm,0.5s,baz=104,slow=3.9,SNR=4.3						
ASAR				S	S	03 04 25.4	+0.3
	comp=Z,0.6nm,0.9s,baz=99,slow=16,SNR=5.1						
ASAR	Alice Springs	42.81	258	P	P	02 58 41.4	-1.1
WB0	Warramunga Arr	42.99	264	P	P	02 58 43.5	-0.4
WB2	Warramunga Arr	42.99	264	P	P	02 58 43.9	-0.1
WRAB	Tennant Creek	43.00	264	P	P	02 58 43.7	-0.3
WRA	Warramunga Arr	43.01	264	P	P	02 58 43.9	-0.2
	comp=Z,4.8nm,0.3s,baz=96,slow=7.9,SNR=27						
FORT	Forrest	47.41	248	P	P	02 59 16.8	-0.7
FITZ	Fitzroy Crossi	51.44	264	P	P	02 59 47.6	+0.5
	comp=Z,3.5nm,0.3s,baz=82,slow=5.0,SNR=20						
FITZ	Fitzroy Crossi	51.44	264	IAmb	IAmb	02 59 47.9	
	comp=Z,7.7nm,1.1s						
MJAR	Matsushiro Arr	70.57	325	P	P	03 01 51.9	+0.1
	comp=Z,1.1nm,0.6s,baz=154,slow=6.0,SNR=4.3						
MJAR	Matsushiro Arr	70.57	325	IAmb	IAmb	03 01 54.6	
	comp=Z,3.7nm,1.3s						
YBH	Yreka Blue Hor	82.33	39	P	P	03 02 57.6	+1.5
	comp=Z,2.0nm,0.7s,baz=108,slow=3.3,SNR=6.7						
YBH	Yreka Blue Hor	82.33	39	IAmb	IAmb	03 02 57.8	
	comp=Z,2.6nm,0.8s						
NVAR	Mina Array Bea	83.07	44	P	P	03 03 00.3	+0.3
	comp=Z,1.8nm,0.8s,baz=227,slow=9.1,SNR=10						
G08A	Pilot Rock	86.65	38	IAmb	IAmb	03 03 18.7	
	comp=Z,6.0nm,1.2s						
F10A	Beach Ranch, E	88.04	38	IAmb	IAmb	03 03 24.0	
	comp=Z,4.1nm,1.0s						
TRF	Thorofare Moun	88.19	13	P	P	03 03 23.2	-0.6
TRF				IAmb	IAmb	03 03 23.7	
	comp=Z,3.8nm,0.8s						
B08A	Colville Reser	88.25	35	IAmb	IAmb	03 03 25.1	
	comp=Z,2.9nm,0.8s						
MNTX	Cornudas Mount	88.76	55	IAmb	IAmb	03 03 28.7	
	comp=Z,2.2nm,0.8s						
TX31	Lajitas Ar. Si	89.05	58	IAmb	IAmb	03 03 30.0	

	comp=Z,1.9nm,0.9s						
TX32	**Lajitas Array**	**89.05**	**58**	IAmb	IAmb	03 03 30.0	
	comp=Z,2.0nm,0.9s						
TXAR	**Lajitas Array**	**89.05**	**58**	P	**P**	03 03 29.7	+1.1
	comp=Z,1.8nm,0.9s,baz=208,slow=5.1,SNR=9.1						
TXAR	**Lajitas Array**	**89.05**	**58**	P	**P**	03 03 29.4	+0.8
CMAR	**Chiang Mai Arr**	**89.27**	**290**	P	**P**	03 03 32.2	+2.5
	comp=Z,2.6nm,0.7s,baz=138,slow=3.2,SNR=13						
ILAR	**Eielson Array**	**90.07**	**13**	P	**P**	03 03 31.6	-0.7
	comp=Z,0.3nm,0.5s,baz=212,slow=6.4,SNR=5.2						
PDAR	**Pinedale Array**	**91.01**	**44**	P	**P**	03 03 37.1	-0.4
	comp=Z,0.9nm,0.9s,baz=190,slow=2.7,SNR=5.3						
AKASG	**Malin Array Be**	**143.57**	**329**	PKP	PKPbc	03 10 01.6	-0.6
	comp=Z,0.9nm,0.3s,baz=43,slow=4.7,SNR=9.2						
BRTR	**Keskin Array B**	**146.73**	**310**	PKPbc	**PKPbc**	03 10 11.9	-0.1
	comp=Z,1.3nm,1.1s,baz=132,slow=3.2,SNR=4.0						

IDC 01 03:06:41.6±1.0, 34°45N×36°92W, h0km, mb3.8/12, mb1 4.0/12, mb1mx3.7/40, mbtmp3.8/12, MS3.6/9, Ms1 3.6/9, ms1mx3.3/35, Error ellipse: s-maj=36.3km s-min=18.4km az=23.0

NEIC 01 03:06:42.9±1.0, 34°4N±0°2×36°96W±0°06, h10km±3km, mb4.4/8, Error ellipse: s-maj=22.1km s-min=6.5km az=187.0

ISC 01 03:06:43.5±0.9, 34°4N±0°2×36°9W±0°1, h12km, n24, σ0s68/15, mb3.8/13, MS3.7/9, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**40.48**	**126**	P	**P**	03 14 21.9	-0.3
	1.9nm,0.6s,baz=323,slow=6.8,SNR=4.4						
DBIC				LR	LR	03 29 12.4	
	comp=Z,92nm,19.4s,baz=304,slow=33						
TORD	**Torodi Ar. Bea**	**40.87**	**112**	P	**P**	03 14 25.4	-0.1
	1.8nm,1.1s,baz=304,slow=6.6,SNR=4.3						
TORD				LR	LR	03 29 32.3	
	comp=Z,106nm,19.9s,baz=315,slow=34						
TORD	**Torodi Ar. Bea**	**40.87**	**112**	IAmb	IAmb	03 14 26.4	
	comp=Z,2.2nm,1.2s						
ULM	**Lac du Bonnet**	**45.15**	**309**	P	**P**	03 14 58.5	-1.3
	comp=Z,1.3nm,0.8s,baz=67,slow=7.8,SNR=3.5						
ULM				LR	LR	03 33 11.2	
	comp=Z,96nm,18.5s,baz=113,slow=35						
ULM	**Lac du Bonnet**	**45.15**	**309**	IAmb	IAmb	03 15 16.5	
	comp=Z,7.8nm,1.4s						
ROSC	**El Rosal**	**45.44**	**238**	LR	LR	03 31 26.1	
	comp=Z,92nm,20.8s,baz=352,slow=33						
H10N2	**ASCENSION HYDR**	**47.10**	**149**	T	T	04 05 22.3	
	baz=334,slow=75,SNR=96						
H10N3	**ASCENSION HYDR**	**47.10**	**149**	T	T	04 05 21.9	
	baz=334,slow=75,SNR=107						
H10N1	**ASCENSION HYDR**	**47.12**	**149**	T	T	04 05 23.0	
	baz=334,slow=75,SNR=111						
H10S3	**ASCENSION HYDR**	**48.03**	**150**	T	T	04 06 32.5	
	baz=334,slow=74,SNR=55						
H10S2	**ASCENSION HYDR**	**48.05**	**150**	T	T	04 06 32.9	
	baz=246,slow=74,SNR=51						
ARCES	**ARCESS Array B**	**48.59**	**25**	P	**P**	03 15 26.5	0.0
	comp=Z,5.1nm,1.1s,baz=249,slow=7.6,SNR=2.7						
AKASG	**Malin Array Be**	**49.70**	**50**	P	**P**	03 15 35.2	+0.1
	comp=Z,0.2nm,0.4s,baz=275,slow=6.3,SNR=2.3						
YKA	**Yellowknife Ar**	**54.52**	**326**	P	**P**	03 16 10.4	-0.4
	comp=Z,0.8nm,0.9s,baz=87,slow=7.5,SNR=6.8						
YKA				LR	LR	03 38 36.2	
	comp=Z,70nm,19.1s,baz=0.0,slow=35						
PDAR	**Pinedale Array**	**55.77**	**302**	P	**P**	03 16 20.1	-0.4
	comp=Z,0.6nm,0.9s,baz=65,slow=10,SNR=4.6						
PDAR				LR	LR	03 40 28.6	
	comp=Z,40nm,19.0s,baz=41,slow=36						
TXAR	**Lajitas Array**	**55.98**	**285**	P	**P**	03 16 23.0	+0.9
	comp=Z,1.0nm,1.0s,baz=78,slow=6.3,SNR=6.9						
TXAR				LR	LR	03 40 24.4	
	comp=Z,23nm,18.2s,baz=0.0,slow=36						
LPAZ	**La Paz**	**58.52**	**216**	LR	LR	03 39 25.8	
	comp=Z,36nm,18.2s,baz=22,slow=34						
INK	**Inuvik**	**60.84**	**335**	P	**P**	03 16 55.7	+0.5
	comp=Z,0.8nm,0.9s,baz=32,slow=4.4,SNR=3.0						
KVN	**Kaiserville**	**63.13**	**300**	P	**P**	03 17 12.4	+1.0
NVAR	**Mina Array Bea**	**63.53**	**300**	P	**P**	03 17 13.8	-0.2
	comp=Z,0.6nm,0.8s,baz=91,slow=7.2,SNR=4.1						
NVAR				LR	LR	03 45 34.4	
	comp=Z,53nm,18.2s,baz=298,slow=37						
ILAR	**Eielson Array**	**67.19**	**334**	P	**P**	03 17 37.4	+0.4
	comp=Z,0.5nm,1.1s,baz=38,slow=4.6,SNR=2.9						
MK31	**Makanchi Array**	**82.43**	**37**	P	**P**	03 19 06.6	+0.9
MK31				IAmb	IAmb	03 19 08.8	
	comp=Z,3.5nm,1.3s						
MKAR	**Makanchi Array**	**82.43**	**37**	P	**P**	03 19 05.1	-0.5
	comp=Z,1.6nm,1.0s,baz=318,slow=4.2,SNR=11						
MKAR	**Makanchi Array**	**82.43**	**37**	P	**P**	03 19 05.8	+0.1

IDC 01 03:31:02.4±4.3, 4°06S×153°12E, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.2/23, mbtmp3.3/2, Error ellipse: s-maj=203.5km s-min=55.8km az=120.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.18**	**228**	P	P	03 36 21.7	+1.0
	0.7nm,0.6s,baz=55,slow=10,SNR=2.9						
ASAR	**Alice Springs**	**26.91**	**222**	P	P	03 36 45.4	-0.1
	0.1nm,0.4s,baz=55,slow=9.1,SNR=1.9						
TORD	**Torodi Ar. Bea**	**150.37**	**290**	PKPbc	PKPbc	03 50 55.9	-1.0
	0.7nm,0.9s,baz=94,slow=4.0,SNR=2.7						

ATH 01 03:49:33.6, 38°18N×20°40E, h13km±1km, ML2.8/8, Error ellipse: s-maj=1.7km s-min=1.0km az=257.0

THE 01 03:49:33.8, 38°19N×20°40E, h12km, ML3.1/8, Error ellipse: s-maj=0.9km s-min=0.5km az=254.0

ISC 01 03:49:33.7±1.0, 38°18N±0°03×20°41E±0°04, h12km±4km, n32, σ0s49/49, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.02**	**270**	P	**Pg**	03 49 35.7	-0.2
CHV1				S	**Sg**	03 49 37.4	0.0
	56μm,0.2s						
LXR1	**Lixouri, Cepha**	**0.03**	**50**	P	**Pg**	03 49 35.9	0.0
LXR1				S	**Sg**	03 49 37.8	+0.3
	153μm,0.3s						
KEF3	**Kipouria, Keph**	**0.05**	**291**	P	**Pg**	03 49 35.9	-0.2
KEF3				S	**Sg**	03 49 37.8	0.0
ARG2	**Argostoli**	**0.06**	**95**	P	**Pg**	03 49 36.1	0.0
ARG2				S	**Sg**	03 49 37.9	0.0
	39μm,0.3s						
KEF2	**Argostoli. Kep**	**0.06**	**107**	P	**Pg**	03 49 36.2	+0.1
KEF2				S	**Sg**	03 49 38.0	+0.1
KEF4	**Livadi, Kephal**	**0.07**	**8**	P	**Pg**	03 49 36.3	0.0
KEF4				S	**Sg**	03 49 38.5	+0.3
KEF1	**Kardakata, Kep**	**0.10**	**26**	P	**Pg**	03 49 36.7	+0.1
KEF1				S	**Sg**	03 49 38.8	+0.1
VLS	**Valsamata**	**0.14**	**92**	P	**Pg**	03 49 37.0	-0.2
VLS				S	**Sg**	03 49 39.6	0.0
	8μm,0.3s						
VLS	**Valsamata**	**0.14**	**92**	P	**Pg**	03 49 37.2	0.0
VLS				S	**Sg**	03 49 39.8	+0.2
VLS				AML	AML	03 49 40.0	
	comp=N,8469μm,0.2s						
VLS				AML	AML	03 49 40.0	
	comp=E,15376μm,0.1s						
VSK1	**VASILIKIADES**	**0.26**	**28**	P	**Pg**	03 49 39.1	0.0
VSK1				S	**Sg**	03 49 43.6	+0.9
	comp=E,8μm,0.4s						
FSK	**Fiskardo**	**0.30**	**23**	P	**Pg**	03 49 39.9	+0.1
FSK				S	**Sg**	03 49 44.8	+0.8
FSK	**Fiskardo**	**0.30**	**23**	P	**Pg**	03 49 40.0	+0.1
FSK				S	**Sg**	03 49 44.9	+0.8
FSK				AML	AML	03 49 45.3	
	comp=N,3917μm,0.3s						
FSK				AML	AML	03 49 45.4	
	comp=E,4746μm,0.2s						
KFL	**Anninata**	**0.31**	**104**	P	**Pg**	03 49 39.8	-0.1
KFL				S	**Sg**	03 49 44.9	+0.8
	comp=E,4μm,0.3s						
KFL	**Anninata**	**0.31**	**104**	P	**Pg**	03 49 39.9	-0.1
VLMS	**Volimes, Zakyn**	**0.36**	**147**	P	**Pg**	03 49 41.0	0.0
VLMS				S	**Sg**	03 49 46.9	+0.9
VLMS				AML	AML	03 49 47.7	
	comp=N,7367μm,0.2s						
VLMS				AML	AML	03 49 48.0	
	comp=E,10760μm,0.2s						
EVGI	**Lefkada island**	**0.48**	**24**	P	**Pg**	03 49 42.9	-0.2
EVGI	**Lefkada island**	**0.48**	**24**	P	**Pg**	03 49 42.9	-0.2
EVGI				S	**Sg**	03 49 50.1	+0.6
MGNA	**Meganis**	**0.56**	**32**	P	**Pg**	03 49 44.2	-0.4
MGNA				AML	AML	03 49 53.7	
	comp=E,1646μm,0.2s						
MGNA				AML	AML	03 49 53.8	
	comp=N,1521μm,0.2s						
KRI1	**kERI**	**0.61**	**148**	P	**Pg**	03 49 45.9	+0.3
KRI1				S	**Sb**	03 49 54.9	0.0
	comp=N,2μm,0.4s						
LKD2	**Lefkada island**	**0.64**	**18**	P	**Pg**	03 49 45.7	-0.4
LKD2	**Lefkada island**	**0.64**	**18**	P	**Pg**	03 49 45.7	-0.4
TSLK	**Tsoukalades, L**	**0.67**	**17**	P	**Pg**	03 49 46.2	-0.5
TSLK	**Tsoukalades, L**	**0.67**	**17**	P	**Pg**	03 49 46.3	-0.5
PDO	**Prodromos**	**0.73**	**55**	P	**Pg**	03 49 47.4	-0.6
PDO	**Prodromos**	**0.73**	**55**	P	**Pg**	03 49 47.4	-0.6
PDO				AML	AML	03 50 06.5	
	comp=N,1488μm,0.6s						
PDO				AML	AML	03 50 07.8	
	comp=E,1131μm,0.4s						
RLS	**Riolos of Patr**	**0.84**	**98**	P	**Pg**	03 49 49.1	-0.9
PVO	**Paravola**	**0.98**	**63**	P	**Pb**	03 49 52.5	-0.1
PVO				S	**Sn**	03 50 08.6	+1.6
	comp=E,698nm,0.3s						
PVO	**Paravola**	**0.98**	**63**	P	**Pb**	03 49 52.3	-0.2
PVO				AML	AML	03 50 09.1	
	comp=E,1631μm,0.3s						
PVO				AML	AML	03 50 09.1	
	comp=N,1107μm,0.3s						
DRO	**Drossia**	**1.05**	**102**	P	**Pb**	03 49 53.1	-0.7
DRO				AML	AML	03 50 17.1	
	comp=E,808μm,0.8s						
DRO				AML	AML	03 50 20.1	
	comp=N,648μm,0.4s						
EFP	**Efpalio**	**1.20**	**78**	P	**Pn**	03 49 55.7	-0.6
EFP				AML	AML	03 50 20.9	
	comp=E,542μm,0.6s						
EFP				AML	AML	03 50 21.1	
	comp=N,447μm,0.5s						
KLV	**Kalavryta, Ach**	**1.38**	**95**	P	**Pn**	03 49 58.6	-0.2
AGG	**Agios Georgios**	**1.72**	**60**	P	**Pg**	03 50 06.2	-0.6

ATH 01 03:56:51.0, 38°23N×20°42E, h14km±1km, ML2.7/2, Error ellipse: s-maj=1.8km s-min=1.1km az=263.0

THE 01 03:56:51.4, 38°23N×20°45E, h12km±1km, ML2.7/6, Error ellipse: s-maj=1.1km s-min=0.5km az=232.0

ISC 01 03:56:50.4±1.4, 38°25N±0°03×20°43E±0°05, h16km±6km, n20, σ0s56/33, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.01**	**350**	P	**Pg**	03 56 53.5	+0.3
KEF4				S	**Sg**	03 56 55.4	+0.3
KEF1	**Kardakata, Kep**	**0.04**	**51**	P	**Pg**	03 56 53.0	-0.3
KEF1				S	**Sg**	03 56 55.2	0.0
LXR1	**Lixouri, Cepha**	**0.05**	**169**	P	**Pg**	03 56 53.5	+0.2
LXR1				S	**Sg**	03 56 55.3	+0.1
	6μm,0.1s						
CHV1	**Chavriata, Kef**	**0.07**	**208**	P	**Pg**	03 56 53.8	+0.3
CHV1				S	**Sg**	03 56 55.7	+0.2
	7μm,0.3s						
KEF3	**Kipouria, Keph**	**0.08**	**233**	P	**Pg**	03 56 53.9	+0.3
KEF3				S	**Sg**	03 56 55.9	+0.3
ARG2	**Argostoli**	**0.09**	**146**	P	**Pg**	03 56 53.7	+0.1
ARG2				S	**Sg**	03 56 55.3	-0.4
	15μm,0.1s						
KEF2	**Argostoli. Kep**	**0.10**	**150**	P	**Pg**	03 56 53.6	-0.2
KEF2				S	**Sg**	03 56 55.7	-0.2
VLS	**Valsamata**	**0.15**	**119**	P	**Pg**	03 56 54.4	0.0
VLS				S	**Sg**	03 56 56.9	-0.2
	5μm,0.1s						
VLS	**Valsamata**	**0.15**	**119**	P	**Pg**	03 56 54.4	0.0
VLS				S	**Sg**	03 56 56.8	-0.2
VLS				AML	AML	03 56 56.9	
	comp=N,8253μm,0.1s						
VLS				AML	AML	03 56 57.0	
	comp=E,12101μm,0.1s						
VSK1	**VASILIKIADES**	**0.19**	**34**	P	**Pg**	03 56 55.8	+0.8
VSK1				S	**Sg**	03 56 59.0	+0.8
	comp=E,3μm,0.1s						
KFL	**Anninata**	**0.32**	**116**	P	**Pg**	03 56 57.2	+0.2
KFL				S	**Sg**	03 57 02.2	+0.6
	comp=E,1μm,0.2s						
KFL	**Anninata**	**0.32**	**116**	P	**Pg**	03 56 57.3	+0.2
KFL				S	**Sg**	03 57 02.2	+0.6
EVGI	**Lefkada island**	**0.41**	**26**	P	**Pg**	03 56 56.6	-2.1
VLMS	**Volimes, Zakyn**	**0.42**	**153**	P	**Pg**	03 56 59.0	+0.1
VLMS				S	**Sb**	03 57 05.3	-0.1
VLMS				AML	AML	03 57 06.8	
	comp=E,1363μm,0.1s						
VLMS				AML	AML	03 57 07.6	
	comp=N,2339μm,0.3s						
MGNA	**Meganis**	**0.50**	**35**	P	**Pg**	03 56 60.0	-0.3
LKD2	**Lefkada island**	**0.57**	**19**	P	**Pg**	03 57 02.3	+0.6
TSLK	**Tsoukalades, L**	**0.60**	**17**	P	**Pg**	03 57 02.8	+0.6
PDO	**Prodromos**	**0.69**	**59**	P	**Pg**	03 57 04.4	+0.5
PVO	**Paravola**	**0.94**	**67**	P	**Pg**	03 57 09.1	+0.5
DRO	**Drossia**	**1.06**	**106**	P	**Pb**	03 57 09.9	-0.4

MOS 01 03:58:39.5±0.9, 56°86S×27°34W, h97km, mb6.4/20, MS5.4/5, Error ellipse: s-maj=15.7km s-min=8.3km az=97.2

BJI 01 03:58:42.2±0.0, 56°81S×27°36W, h140km, mB5.9/47

NEIC 01 03:58:44.0, 56°83S×27°34W, h125km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.43; $M_{\theta\theta}$0.79; $M_{\phi\phi}$-0.36; $M_{r\theta}$-1.29; $M_{r\phi}$-0.31; $M_{\theta\phi}$-0.85; Fault plane solution: $M_0$1.72000×10^{18} NP1:ϕ_s63.02000°, δ82.98000°, λ-112.79000°. NP2:ϕ_s316.82000°, δ23.79000°, λ-17.62000°. Principal axes: T 1.6272, Plg34.0000°, Azm172.0000°; N 0.1702, Plg23.0000°, Azm66.0000°; P -1.7974, Plg47.0000°, Azm309.0000°;

NEIC 01 03:58:44.0±1.6, 56°83S±0°09×27°3W±0°1, h130km±3km, mb6.1/156, Mwb6.1/37, Mwc6.1/84, Mww6.1, Mwc6.2(GCMT) Error ellipse: s-maj=12.9km s-min=11.1km az=205.0

NEIC 01 03:58:45, 56°81S×27°27W, h130km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.46; $M_{\theta\theta}$1.12; $M_{\phi\phi}$-0.66; $M_{r\theta}$-1.27; $M_{r\phi}$-0.74; $M_{\theta\phi}$-0.90; Fault plane solution: $M_0$1.98000×10^{18} NP1:ϕ_s327.00000°, δ38.00000°, λ-14.00000°. NP2:ϕ_s68.00000°, δ81.00000°, λ-127.00000°. Principal axes: T 1.8484, Plg27.0000°, Azm186.0000°; N 0.2387, Plg37.0000°, Azm74.0000°; P -2.0872, Plg42.0000°, Azm303.0000°;

GCMT 01 03:58:46.0±0.1, 56°97S×26°72W, h132km, MW6.2/166, Moment Tensor Solution. s166,c408; s165,c632; Duration: 2s9 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.45±.01; $M_{\theta\theta}$1.07±.01; $M_{\phi\phi}$-0.62±.01; $M_{r\theta}$-1.35±.01; $M_{r\phi}$-0.96±.01; $M_{\theta\phi}$-0.99±.01; Best double couple: $M_0$2.11200×10^{18} NP1:ϕ_s330.00000°, δ40.00000°, λ-13.00000°. NP2:ϕ_s71.00000°, δ82.00000°, λ-129.00000°. Principal axes: T 1.9140, Plg26.0000°, Azm190.0000°; N 0.3920, Plg39.0000°, Azm77.0000°; P -2.3100, Plg40.0000°, Azm305.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

IDC 01 03:58:46.3±0.6, 56°82S×27°42W, h149km±4km, mb5.8/32, mb1 5.8/34, mb1mx5.8/36, mbtmp6.2/34, MS5.2/14, Ms1 5.2/14, ms1mx4.9/24 Error ellipse: s-maj=8.9km s-min=7.3km az=37.0

NEIC 01 03:58:47, 56°99S×26°81W, h132km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.44; $M_{\theta\theta}$1.10; $M_{\phi\phi}$-0.66; $M_{r\theta}$-1.34; $M_{r\phi}$-0.91; $M_{\theta\phi}$-0.98; Fault plane solution: $M_0$2.13000×10^{18} NP1:ϕ_s329.00000°, δ40.00000°, λ-13.00000°. NP2:ϕ_s70.00000°, δ82.00000°, λ-129.00000°. Principal axes: T 1.9201, Plg26.0000°, Azm189.0000°; N 0.3641, Plg38.0000°, Azm76.0000°; P -2.2843, Plg40.0000°, Azm304.0000°;

KLM 01 03:58:55.0, 56°67S×27°60W, h228km, mb5.9

NEIC 01 03:58:57.3, 56°70S×27°11W, h152km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.36; $M_{\theta\theta}$0.98; $M_{\phi\phi}$-0.62; $M_{r\theta}$-1.19; $M_{r\phi}$-0.85; $M_{\theta\phi}$-0.82; Fault plane solution: $M_0$1.87000×10^{18} NP1:ϕ_s330.93000°, δ40.83000°, λ-12.24000°. NP2:ϕ_s70.25000°, δ82.03000°, λ-130.18000°. Principal axes: T 1.7350, Plg26.0000°, Azm191.0000°; N 0.2703, Plg40.0000°, Azm77.0000°; P -2.0053, Plg39.0000°, Azm304.0000°;

ISC 01 03:58:45.1±0.4, 56°93S±0°03×27°35W±0°03, h143km±2km, h144km:pP-P, n1317, σ1s94/1584, mb6.1/111, 34C-32D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.82**	**293**	Pn	**Pn**	04 00 09.9	+0.8
HOPE	**Hope Point**	**5.82**	**293**	P	**Pn**	04 00 10.0	+0.8
VNA1	**Neumayer--Stat**	**16.01**	**157**	P	**Pn**	04 02 22.1	+0.2
VNA1				S	**S**	04 05 21.3	+0.8
VNA1	**Neumayer--Stat**	**16.01**	**157**	ScP	**ScP**	04 10 30.9	+1.3
I27DE	**GEORG VON NEUM**	**16.04**	**157**	P	**P**	04 02 25.0	+2.2
	baz=321,slow=7.9,SNR=4.0						
VNA3	**Neumayer Olymp**	**16.19**	**159**	P	**Pn**	04 02 23.0	-1.0
VNA3				S	**Sn**	04 05 20.6	-3.5
VNA3	**Neumayer Olymp**	**16.19**	**159**	ScP	**ScP**	04 10 30.6	+0.7
VNA3	**Neumayer Olymp**	**16.19**	**159**	ScS	ScS	04 14 09.2	+0.7
VNA2	**Neumayer--Watz**	**16.41**	**157**	P	**Pn**	04 02 26.4	-0.4
	baz=310,slow=12						
VNA2				S	**S**	04 05 24.4	-4.9
	baz=318,slow=19						
VNA2	**Neumayer--Watz**	**16.41**	**157**	ScP	**ScP**	04 10 31.3	+1.0
	baz=332,slow=4.9						
VNA2	**Neumayer--Watz**	**16.41**	**157**	ScS	ScS	04 14 09.9	+0.8
	baz=322,slow=11						
SNAA	**Sanae**	**17.97**	**155**	P	**P**	04 02 44.3	+0.2
SNAA				S	**S**	04 06 01.3	-1.4
SNAA	**Sanae**	**17.97**	**155**	ScP	**ScP**	04 10 34.6	+0.9
SNAA	**Sanae**	**17.97**	**155**	ScS	ScS	04 14 15.0	+1.2
SNAA	**Sanae**	**17.97**	**155**	P	**P**	04 02 44.6	+0.5
	118nm,0.3s,baz=302,slow=9.7,SNR=1927						
SNAA				S	**S**	04 06 00.2	-2.5
	8.8nm,0.3s,baz=331,slow=21,SNR=3.5						
SNAA				ScP	**ScP**	04 10 34.6	+0.9
	14nm,0.3s,baz=295,slow=2.0,SNR=47						
SNAA				ScS	**ScS**	04 14 12.1	-1.7
	0.6nm,0.3s,baz=319,slow=12,SNR=36						
SNAA	**Sanae**	**17.97**	**155**	P	**P**	04 02 43.5	-0.7
SNAA	**Sanae**	**17.97**	**155**		ScS	04 14 14.9	+1.1
SNAA	**Sanae**	**17.97**	**155c**	iP	**P**	04 02 44.4	+0.2
EFI	**East Falkland**	**18.58**	**273**	eP	**Pn**	04 02 53.6	+0.8
EFI	**East Falkland**	**18.58**	**273**	eP	**Pn**	04 02 52.4	-0.4
EFI				pmax	pmax		
	comp=Z,3μm,0.8s						
PMSA	**Palmer Station**	**19.26**	**231**	P	**Pn**	04 03 01.2	+0.6
	comp=Z,14nm,0.3s,baz=79,slow=9.3,SNR=109						
PMSA				S	**Sn**	04 06 37.3	-0.2
	baz=311,slow=22,SNR=15						
PMSA				ScP	**ScP**	04 10 35.2	-1.2
	comp=Z,6.1nm,0.3s,baz=33,slow=2.0,SNR=15						
PMSA	**Palmer Station**	**19.26**	**231**	eP	**Pn**	04 03 01.1	+0.6
PMSA	**Palmer Station**	**19.26**	**231**	P	**Pn**	04 03 00.4	-0.2
PMSA				IAmb	IAmb	04 03 04.0	
	comp=Z,1μm,1.1s						
PMSA					**ScP**	04 10 35.7	-0.8
TROLL	**Troll, Antarti**	**19.50**	**152**	P	**P**	04 03 00.8	+0.1
TROLL				S	**S**	04 06 34.1	+1.1
NVL	**N'lazarevskaya**	**21.58**	**145**	eP	**P**	04 03 19.0	-3.9
NVL				eS	**S**	04 07 02.5	-10
NVL				e		04 07 22.0	
NVL				pmax	pmax		
	comp=Z,1μm,1.2s						
NVL				MLR	MLR		
	comp=Z,8μm,15.0s						
USHA	**Ushuaia**	**22.90**	**258**	P	**P**	04 03 37.3	+1.2
	comp=Z,399nm,0.7s,baz=102,slow=9.4,SNR=133						
USHA				S	**S**	04 07 35.2	+0.5
	comp=Z,60nm,1.2s,baz=335,slow=19,SNR=10						
USHA				ScP	**ScP**	04 10 44.5	-1.1
	comp=Z,26nm,0.6s,baz=52,slow=3.4,SNR=11						
GO10	**Punta Arenas**	**25.00**	**260**	P	**P**	04 03 55.8	+0.5
GO10				IAmb	IAmb	04 03 58.7	
	comp=Z,936nm,0.9s						
GO09	**Cerro Castillo**	**26.59**	**263**	P	**P**	04 04 09.6	0.0
OGAUY	**Aigu**	**29.26**	**309**	eP	**P**	04 04 33.2	-0.2
TRQA	**Tornquist**	**29.60**	**295**	eP	**P**	04 04 38.2	+1.7
LPA	**La Plata**	**30.20**	**304**	iP	P	04 04 34.0	-7.7
LPA				pP	pP	04 05 06.0	-5.1
LPA				sP	sP	04 05 24.5	-2.6
LPA				PP	pwP	04 05 30.2	+15
LPA				pPP		04 06 10.3	
LPA				PCP	PcP	04 07 29.5	-9.5
LPA				S	**S**	04 09 23.1	-7.2
LPA				sS	sS	04 10 14.7	-7.5
LPA				SS	**SnSn**	04 11 18.4	-2.9
LPA				SCS	**ScS**	04 14 56.8	-6.8
LPA				PKIKP	PKiKP	04 15 00.5	-10
LPA				SKIKP	SKIKP	04 18 22.7	
SYO	**Syowa Base**	**30.96**	**140**	⇓iP	**P**	04 04 46.0	-2.0
PLTB	**Pedras Altas**	**31.03**	**313**	eP	**P**	04 04 49.0	-0.1
PLCA	**Paso Flores**	**32.08**	**282**	eP	**P**	04 04 57.8	-0.6
PLCA	**Paso Flores**	**32.08**	**282**	P	**P**	04 04 57.7	-0.6
PLCA	**Paso Flores**	**32.08**	**282**	eP	**P**	04 04 57.7	-0.6
CPSB	**Capacava Do Su**	**32.17**	**314**	eP	**P**	04 04 58.7	-0.4
CNLB	**Canela**	**32.18**	**319**	eP	**P**	04 04 59.1	-0.1
QSPA	**South Pole Qui**	**33.31**	**180**	P	**P**	04 05 10.5	+1.6
	comp=Z,1μm,0.6s,baz=199,slow=1.2,SNR=2302						
QSPA				S	**S**	04 10 18.7	+0.1
	comp=Z,15nm,0.8s,baz=238,slow=23,SNR=1.2						
QSPA				ScP	**ScP**	04 11 18.3	+0.5
	comp=Z,536nm,1.0s,baz=199,slow=3.5,SNR=23						
QSPA				ScS	**ScS**	04 15 17.4	-1.3
	comp=Z,27nm,0.9s,baz=307,slow=21,SNR=7.3						
QSPA				LR	LR	04 18 08.1	
	comp=Z,4μm,21.5s,baz=189,slow=35						
QSPA	**South Pole Qui**	**33.31**	**180**	P	**P**	04 05 10.6	+1.7
ITQB	**Itaqui**	**34.10**	**311**	eP	**P**	04 05 15.4	-0.4
ITAB	**Concordia**	**34.53**	**319**	eP	**P**	04 05 19.6	0.0
MRA	**San Martin**	**35.93**	**297**	eP	**P**	04 05 30.4	-1.2
PARB	**Paraibuna**	**36.11**	**331**	eP	**P**	04 05 33.5	+0.3
TCA	**Tanti**	**36.27**	**299**	eP	**P**	04 05 32.9	-1.6
SPB	**Sao Paulo**	**36.38**	**328**	eP	**P**	04 05 34.7	-0.6
SPB				eS	**S**	04 11 13.2	+7.4
SPB	**Sao Paulo**	**36.38**	**328**	P	**P**	04 05 35.2	-0.1
VAS01	**Vassouras-RJ**	**36.57**	**334**	eP	**P**	04 05 36.2	-0.9
BO02	**Sierra Bellavi**	**36.61**	**288**	⇓iP	**P**	04 05 36.3	-1.1
ACAN	**Cantantal**	**36.77**	**295**	eP	**P**	04 05 36.8	-1.9
VAO	**Valinhos**	**36.80**	**329**	eP	**P**	04 05 39.3	+0.3
VAO				eS	**S**	04 11 20.3	+7.8
PTGB	**Pitanga**	**36.81**	**321**	eP	**P**	04 05 38.4	-0.7
AAGR	**Agrelo**	**36.95**	**292**	eP	**P**	04 05 39.3	-0.9
GO05	**Huala**	**37.05**	**287**	⇓iP	**P**	04 05 40.4	-0.6
GO05	**Huala**	**37.05**	**287**	P	**P**	04 05 39.1	-1.9
GO05				IAmb	IAmb	04 05 42.7	
	comp=Z,470nm,1.6s						
FRTB	**Fartura**	**37.25**	**325**	eP	**P**	04 05 43.3	+0.5
CPUP	**Villa Florida**	**37.34**	**312**	P	**P**	04 05 42.7	-0.7
	comp=Z,421nm,0.7s,baz=154,slow=6.8,SNR=462						
CPUP				PcP	**PcP**	04 07 59.8	+0.4
	comp=Z,76nm,0.8s,baz=124,slow=2.3,SNR=5.1						
CPUP				S	**S**	04 11 16.4	-4.1
	comp=Z,5.5nm,0.7s,baz=119,slow=7.0,SNR=1.2						
CPUP				ScP	**ScP**	04 11 31.8	-1.1
	comp=Z,47nm,0.9s,baz=170,slow=3.0,SNR=9.9						
CPUP	**Villa Florida**	**37.34**	**312**	P	**P**	04 05 42.8	-0.7
ASAL	**Salagasta**	**37.34**	**293**	eP	**P**	04 05 42.5	-1.0
FCH	**Farellones**	**37.50**	**290**	⇑iP	**P**	04 05 44.8	-0.4
RCLB	**Rio Claro- Sao**	**37.51**	**328**	eP	**P**	04 05 44.8	-0.2
CLCH	**Cerro Calan**	**37.58**	**290**	iP	**P**	04 05 45.0	-0.5
MT01	**Popeta**	**37.58**	**289**	⇑iP	**P**	04 05 42.1	-3.3
RTCV	**Cerro Valdivia**	**37.78**	**294**	eP	**P**	04 05 45.3	-2.0
CFA	**Coronel Fontan**	**37.84**	**294**	P	**P**	04 05 45.7	-2.0
	comp=Z,109nm,0.5s,baz=149,slow=9.0,SNR=146						
CFA				PcP	**PcP**	04 08 01.1	0.0
	comp=Z,47nm,0.5s,baz=161,slow=2.6,SNR=5.4						
CFA				S	**S**	04 11 22.5	-5.5
	comp=Z,39nm,1.0s,baz=276,slow=20,SNR=14						
CFA				ScP	**ScP**	04 11 32.7	-2.1
	comp=Z,50nm,0.8s,baz=109,slow=2.3,SNR=11						
CFA				ScS	**ScS**	04 15 43.4	-0.9
	comp=Z,12nm,1.0s,baz=238,slow=23,SNR=16						
PEL	**Peldehue**	**37.85**	**290**	⇑iP	**P**	04 05 45.3	-2.5
PEL	**Peldehue**	**37.85**	**290**	P	**P**	04 05 47.0	-0.8
PEL				IAmb	IAmb	04 05 49.8	
	comp=Z,952nm,1.8s						
PEL	**Peldehue**	**37.85**	**290**	P	**P**	04 05 47.0	-0.8
PEL				pmax	pmax		
	comp=Z,952nm,1.8s						
APLL	**PUNTA DE LOS L**	**37.98**	**298**	eP	**P**	04 05 47.1	-1.8

VA03 San Esteban 38.08 291⇑iP P 04 05 50.1 +0.3
BSCB Bom Sucesso 38.13 333 eP P 04 05 50.2 0.0
ROC1 El Roble 38.15 290 P P 04 05 49.8 -0.8
ROC1 El Roble 38.15 290 eP P 04 05 50.9 +0.3
ROCH El Roble 38.15 290⇑iP P 04 05 49.5 -1.1
RTLL Cerro Villicun 38.18 294⇓eP P 04 05 49.0 -1.5
RTLS Leoncito 38.21 293⇓eP P 04 05 50.6 -0.5
AMOG MOGNA 38.51 295 eP P 04 05 52.9 -0.4
TRCB Terra Rica 38.78 321 eP P 04 05 55.2 -0.4
ACLC CERRO LA CRUZ 38.99 298 eP P 04 05 56.3 -1.2
BB19B Bebedouro 39.08 328 eP P 04 05 58.0 -0.1
CYA Choya 39.26 300 eP P 04 05 57.2 -2.4
BSFB Barra de Sao F 39.36 340 eP P 04 06 00.1 -0.3
PCMB Pacaembu 39.42 324 eP P 04 06 00.5 -0.4
MAW Mawson 39.49 143 P P 04 06 01.9 +1.0
MAW IAmb IAmb 04 06 03.6
comp=Z,323nm,1.5s
MAW Mawson 39.49 143 P P 04 06 01.9 +1.0
MAW pmax pmax
comp=Z,323nm,1.5s
SJMB Sao Joao De Ma 39.55 339 eP P 04 06 01.5 -0.5
AGUA GUANDACOL 39.69 296 eP P 04 06 03.4 +0.2
VCA Vinchina 40.17 297 eP P 04 06 07.6 +0.3
GO04 Tololo Observa 40.28 293⇓iP P 04 06 08.3 +0.1
GO04 Tololo Observa 40.28 293 P P 04 06 07.2 -1.1
ITRB Iturama 40.91 326 eP P 04 06 13.2 -0.1
SUR Sutherland 40.96 74 P P 04 06 13.6 -0.1
SUR Sutherland 40.96 74 P P 04 06 13.1 -0.7
SUR S S 04 12 15.4 +0.5
IPMB Ipameri, GO 41.91 330 eP P 04 06 21.3 -0.1
AQDB Aquidauana 42.00 318 eP P 04 06 20.8 -1.3
GO03 Copiap 42.11 296 iP P 04 06 21.5 -1.5
GO03 Copiap 42.11 296 P P 04 06 21.8 -1.2
AZAP Zapla 42.51 304 eP P 04 06 26.6 +0.2
C2SB Chapadao do Su 42.58 323 eP P 04 06 26.9 +0.2
NBIT Itapeh - BA 42.92 343 eP P 04 06 29.4 -0.1
GO02 Mina Guanaco 43.83 298⇓iP P 04 06 36.1 -1.0
GO02 Mina Guanaco 43.83 298 P P 04 06 36.1 -1.0
GO02 IAmb IAmb 04 06 38.4
comp=Z,310nm,0.8s
SHEL Horse Pasture 44.04 31 P P 04 06 38.4 -0.1
SHEL Horse Pasture 44.04 31 P P 04 06 38.4 -0.1
SHEL pmax pmax
comp=Z,3µm,1.1s
BDFB Brasilia 44.09 331 P P 04 06 39.0 -0.1
comp=Z,157nm,0.6s,baz=135,slow=2.4,SNR=175
BDFB PcP PcP 04 08 21.2 -0.4
comp=Z,49nm,0.7s,baz=108,slow=3.2,SNR=2.4
BDFB LR LR 04 23 49.9
comp=Z,4µm,19.2s,baz=160,slow=34
BDFB Brasilia 44.09 331 P P 04 06 38.9 -0.1
BDFB IAmb IAmb 04 06 42.4
comp=Z,1µm,1.7s
BDFB Brasilia 44.09 331 P P 04 06 38.9 -0.1
BDFB 04 08 21.2
BDFB pmax pmax
comp=Z,1µm,1.7s
PP1B Ponte de Pedra 44.36 321 eP P 04 06 40.5 -0.5
PB14 IPOC Station P 44.67 298⇑iP P 04 06 39.1 -4.7
ARAG Araguaiana, MT 45.12 326 eP P 04 06 47.2 +0.1
SBA Scott Base 45.19 184 P P 04 06 49.5 +2.6
SBA IAmb IAmb 04 06 51.6
comp=Z,751nm,1.1s
SBA Scott Base 45.19 184 P P 04 06 49.5 +2.6
SBA pmax pmax
comp=Z,751nm,1.1s
PB15 IPOC Station P 45.43 300⇓iP P 04 06 48.8 -0.9
LVC Limon Verde 45.68 301 P P 04 06 51.4 -0.3
comp=Z,219nm,0.4s,baz=149,slow=5.2,SNR=140
LVC ScP ScP 04 12 04.7 -1.9
comp=Z,46nm,0.7s,baz=180,slow=1.7,SNR=10
LVC S S 04 13 22.3 -1.7
comp=Z,38nm,1.1s,baz=18,slow=21,SNR=6.9
LVC Limon Verde 45.68 301 eP P 04 06 51.5 -0.3
LVC Limon Verde 45.68 301 P P 04 06 51.6 -0.2
LVC IAmb IAmb 04 06 56.6
comp=Z,295nm,0.6s
LVC ScP 04 12 05.3 -1.2
LVC Limon Verde 45.68 301 eP P 04 06 51.6 -0.2
VNDA Vanda 45.68 183 P P 04 06 52.9 +2.1
comp=Z,434nm,0.9s,baz=186,slow=6.9,SNR=377
VNDA ScP ScP 04 12 06.1 +0.8
comp=Z,100nm,0.9s,baz=208,slow=3.9,SNR=18
VNDA S S 04 13 23.4 +1.1
comp=Z,9.2nm,1.0s,baz=216,slow=4.8,SNR=0.7
VNDA LR LR 04 24 42.6
comp=Z,1µm,21.2s,baz=170,slow=34
VNDA Vanda 45.68 183 P P 04 06 52.3 +1.5
VNDA Vanda 45.68 183 P P 04 06 52.3 +1.5
VNDA pmax pmax
comp=Z,1µm,1.3s
PB10 IPOC Station P 45.69 299 iP P 04 06 49.9 -1.5
PB10 IPOC Station P 45.69 299 P P 04 06 50.3 -1.2
PB06 IPOC Station P 45.91 300⇓iP P 04 06 52.2 -1.1
SALV Santo Antonio 46.22 321 eP P 04 06 55.4 -0.3
BOSA Boshof 46.28 75 iP P 04 06 56.0 -0.2
BOSA Boshof 46.28 75 P P 04 06 55.4 -0.8
comp=Z,251nm,1.0s,baz=207,slow=7.7,SNR=157
BOSA ScP ScP 04 12 07.7 -1.1
comp=Z,32nm,0.9s,baz=181,slow=3.7,SNR=6.7
BOSA S S 04 13 27.0 -5.1
comp=Z,6.2nm,1.1s,baz=352,slow=18,SNR=1.0
BOSA LR LR 04 21 31.4
comp=Z,2µm,21.1s,baz=210,slow=30
BOSA Boshof 46.28 75 iP P 04 06 56.0 -0.2
BOSA Boshof 46.28 75 P P 04 06 55.1 -1.0
BOSA IAmb IAmb 04 06 57.5
comp=Z,1µm,1.6s
BOSA ScP 04 12 08.0 -0.7
PB04 IPOC Station P 46.50 300 P P 04 06 56.8 -1.2
PB04 IAmb IAmb 04 06 59.2
comp=Z,342nm,0.8s
NBLA Lagarto - SE 46.55 346 eP P 04 06 57.7 -0.4
NBPN Ponto Novo - B 47.05 343 eP P 04 07 01.5 -0.6
PB01 IPOC Station P 47.29 301 P P 04 07 03.5 -0.6
PB01 IAmb IAmb 04 07 05.8
comp=Z,422nm,0.8s
CRZF Crozet Islands 47.54 113 P P 04 07 06.3 +0.7
CRZF IAmb IAmb 04 07 08.0
comp=Z,209nm,0.8s
PEXB Peixe 47.55 332 eP P 04 07 06.3 +0.3
NBAN Anadia - AL 47.66 348 eP P 04 07 06.2 -0.6
SIV San Ignacio 48.13 314 P P 04 07 10.0 -0.4
comp=Z,248nm,0.5s,baz=169,slow=9.9,SNR=22
SIV PcP PcP 04 08 36.5 +0.7
comp=Z,99nm,0.8s,baz=188,slow=5.0,SNR=4.0
SIV ScP ScP 04 12 15.2 -1.3
comp=Z,83nm,0.8s,baz=168,slow=3.9,SNR=13
SIV S S 04 13 56.3 -2.0
comp=Z,5.6nm,0.8s,baz=264,slow=19,SNR=1.4
GO01 Chusmiza 48.34 303 P P 04 07 12.3 -0.4
GO01 IAmb IAmb 04 07 14.5
comp=Z,320nm,0.8s
NBTA Tacaratu-PE 48.42 346 eP P 04 07 12.3 -0.4
PB11 IPOC Station P 48.48 302 P P 04 07 12.5 -0.8
PB11 IAmb IAmb 04 07 15.6
comp=Z,211nm,1.0s
NBRF Rio Formoso - 48.52 350 eP P 04 07 13.1 -0.3
H10S2 ASCENSION HYDR48.87 17 T T 05 00 09.8
baz=189,slow=74,SNR=42
H10S3 ASCENSION HYDR48.88 17 T T 05 00 12.8
baz=31,slow=74,SNR=42
LBTB Lobatse 49.35 73 P P 04 07 18.9 -1.0
LBTB IAmb IAmb 04 07 21.2
comp=Z,547nm,0.9s
LBTB Lobatse 49.35 73 P P 04 07 18.9 -1.0
LBTB pmax pmax
comp=Z,547nm,0.9s
ASCN Ascension 49.92 17 P P 04 07 24.2 +0.1
H10N1 ASCENSION HYDR49.99 17 T T 05 01 30.5
baz=188,slow=74
H10N3 ASCENSION HYDR49.99 17 T T 05 01 38.0
baz=188
H10N2 ASCENSION HYDR50.01 17 T T 05 01 35.6
baz=188,slow=74
NBLI Livramento-PB 50.01 348 eP P 04 07 24.2 -0.7
TSUM Tsumeb 50.19 60 iP P 04 07 25.7 -0.6
TSUM Tsumeb 50.19 60 S S 04 14 24.6 -2.7
comp=Z,7.4nm,1.0s,baz=79,slow=22,SNR=8.1
TSUM PKiKP PKiKP 04 15 27.9 -0.3
comp=Z,3.7nm,0.9s,baz=124,slow=3.6,SNR=3.3
TSUM Tsumeb 50.19 60 iP P 04 07 25.7 -0.6
TSUM Tsumeb 50.19 60 P P 04 07 25.5 -0.8
NBMA Muriti-CE 50.25 345 eP P 04 07 26.4 -0.1

NBPV Pedro Velho 50.77 350 eP P 04 07 30.4 -0.1
LPAZ La Paz 50.82 306 P P 04 07 31.6 0.0
comp=Z,578nm,0.5s,baz=108,slow=5.9,SNR=630
LPAZ ScP ScP 04 12 26.9 -1.9
comp=Z,25nm,0.8s,baz=162,slow=3.6,SNR=5.0
LPAZ S S 04 14 34.3 -2.6
comp=Z,27nm,0.9s,baz=251,slow=22,SNR=9.2
LPAZ La Paz 50.82 306 eP P 04 07 31.6 0.0
LPAZ La Paz 50.82 306 P P 04 07 31.6 0.0
CLDB Colider 50.94 323 eP P 04 07 29.8 -1.9
RCBR Riachuelo 51.41 349 ScP ScP 04 12 29.9 -0.7
comp=Z,138nm,1.1s,baz=162,slow=6.8,SNR=16
RCBR S S 04 14 43.1 -0.9
comp=Z,12nm,1.0s,baz=68,slow=13,SNR=1.7
RCBR Riachuelo 51.41 349 eP P 04 07 35.3 0.0
RCBR Riachuelo 51.41 349 P P 04 07 34.7 -0.6
RCBR IAmb IAmb 04 07 37.7
comp=Z,428nm,1.4s
RCBR PcP PcP 04 08 49.3 +1.5
RCBR ScP 04 12 31.9 +1.3
RCBR Riachuelo 51.41 349 P P 04 07 34.7 -0.6
RCBR 04 08 49.3
RCBR pmax pmax
comp=Z,428nm,1.4s
NBPA Parau_RN 51.63 348 eP P 04 07 36.5 -0.3
NBPB Pedra_Branca-C 52.16 345 eP P 04 07 40.8 +0.1
CASY Casey 53.10 160 P P 04 07 48.5 +1.4
NBCL Cascavel-CE 53.28 346 eP P 04 07 48.9 -0.1
NBPS Pedro II - PI 53.58 342 eP P 04 07 51.2 0.0
MSNA Messina 53.86 75 iP P 04 07 53.0 -0.3
MSNA Messina 53.86 75 iP P 04 07 53.0 -0.3
NBMO Morrinhos-CE 54.42 344 eP P 04 07 57.1 -0.2
MATP Matopo 54.63 72 iP P 04 07 57.8 -1.2
MATP Matopo 54.63 72 iP P 04 07 57.8 -1.2
SAML Samuel 55.37 315 eP P 04 08 03.4 -0.4
SAML Samuel 55.37 315 P P 04 08 03.6 -0.5
SAML Samuel 55.37 315 P P 04 08 03.6 -0.5
SAML pmax pmax
comp=Z,4µm,1.7s
MONG Mongu 56.33 63 iP P 04 08 11.2 +0.1
ITZ Itezhi-Tezhi 57.28 67 iP P 04 08 14.9 -2.9
ITZ Itezhi-Tezhi 57.28 67 iP P 04 08 16.9 -0.8
ITZ i 04 08 17.8
ITZ i 04 08 18.0
ITZ AMP 04 08 18.9
comp=Z,31µm,0.9s
NNA Nana 58.60 299 P P 04 08 26.5 -0.5
comp=Z,94nm,0.7s,baz=174,slow=7.4,SNR=42
NNA Nana 58.60 299 P P 04 08 26.6 -0.3
NNA IAmb IAmb 04 08 28.3
comp=Z,141nm,0.8s
NNA Nana 58.60 299 eP P 04 08 26.6 -0.3
NNA pmax pmax
comp=Z,190nm,0.9s
LSZ Lusaka 58.77 69 iP P 04 08 26.7 -1.5
LSZ Lusaka 58.77 69 S S 04 16 19.1 -3.1
comp=Z,2.8nm,0.9s,baz=305,slow=17,SNR=1.9
LSZ Lusaka 58.77 69 iP P 04 08 26.7 -1.5
LSZ Lusaka 58.77 69 P P 04 08 27.5 -0.7
LSZ Lusaka 58.77 69 P P 04 08 28.3 0.0
LSZ S S 04 16 20.6 -1.6
LSZ Lusaka 58.77 69 P P 04 08 27.5 -0.7
LSZ pmax pmax
comp=Z,620nm,1.0s
VOI Vohitsoka 63.15 89 P P 04 08 59.9 +2.2
SNR=7.2
RPN Rapa Nui 63.42 261 P P 04 09 00.1 +0.8
comp=Z,141nm,0.6s,baz=134,slow=2.2,SNR=15
RPN Rapa Nui 63.42 261 P P 04 09 00.8 +1.5
RPN Rapa Nui 63.42 261 P P 04 09 00.8 +1.5
RPN pmax pmax
comp=Z,1µm,1.7s
ATAH Atahualpa 63.56 300 P P 04 09 01.9 +1.1
comp=Z,107nm,0.9s,baz=160,slow=5.8,SNR=40
MDP Montagnes des 65.18 332 P P 04 09 10.4 -0.4
comp=Z,397nm,0.8s,baz=168,slow=8.2,SNR=23
MDP S S 04 17 40.2 -2.0
comp=Z,23nm,1.0s,baz=260,slow=23,SNR=3.6
LIC Lamto 65.54 25 eP P 04 09 11.1 -2.0
comp=Z,3µm,1.2s
KIC Kosan Boka 65.73 25 eP P 04 09 12.8 -1.5
comp=Z,2µm,1.2s
ABPO Ambohimpanom 65.87 88 P P 04 09 16.4 +1.0
ABPO IAmb IAmb 04 09 18.8
comp=Z,203nm,1.4s
ABPO Ambohimpanom 65.87 88 P P 04 09 16.4 +1.0
ABPO pmax pmax
comp=Z,203nm,1.4s
TIC Toumodi 65.95 24 eP P 04 09 14.8 -0.9
comp=Z,1µm,1.0s
DBIC Dimbokro 66.01 25 P P 04 09 15.4 -0.6
comp=Z,396nm,0.7s,baz=174,slow=6.0,SNR=290
DBIC S S 04 17 50.0 -2.3
comp=Z,4.4nm,0.9s,baz=22,slow=20,SNR=1.7
DBIC LR LR 04 32 20.6
comp=Z,2µm,19.6s,baz=186,slow=31
DBIC Dimbokro 66.01 25 P P 04 09 15.4 -0.6
PTLC Puerto Leguiza 68.39 308 eP P 04 09 27.8 -3.4
GUVC San Jose del G 69.61 311 eP P 04 09 37.6 -1.1
MACC Macarena, Meta 69.76 309 eP P 04 09 38.7 -0.9
FLOC Florencia 70.03 307 eP P 04 09 40.2 -1.1
OTAV Otavalo 70.08 304 eP P 04 09 42.3 +0.2
OTAV Otavalo 70.08 304 eP P 04 09 42.5 +0.3
OTAV Otavalo 70.08 304 P P 04 09 42.4 +0.3
OTAV IAmb IAmb 04 09 46.3
comp=Z,180nm,0.8s
OTAV Otavalo 70.08 304 P P 04 09 42.4 +0.3
OTAV pmax pmax
comp=Z,180nm,0.8s
GCUF Volcan Galeras 70.46 306 eP P 04 09 45.0 +0.5
PTGC Puerto Gaitan, 70.90 312 eP P 04 09 44.9 -1.6
BETC Betania 70.92 308 eP P 04 09 46.9 +0.2
BBAC Balboa, Cauca 71.12 306 eP P 04 09 47.5 -0.6
VILC Villavicencio, 71.47 310 eP P 04 09 49.2 -0.9
TUMC Tumaco 71.61 305 eP P 04 09 50.0 -0.8
TUMC Tumaco 71.61 305 P P 04 09 51.7 +0.9
PRAC Prado 71.61 309 eP P 04 09 50.3 -0.5
SACV Santiago Islan 71.70 4 P P 04 09 52.5 +1.3
SACV IAmb IAmb 04 09 53.8
comp=Z,550nm,1.4s
SBV Sambava 71.88 87 P P 04 09 54.5 +2.1
SNR=13
ORTC Ortega, Tolima 71.94 309 eP P 04 09 52.2 -0.6
CHIC Chingaza 71.95 311 eP P 04 09 51.8 -1.5
CVER Cruz Verde, Cu 71.99 310 eP P 04 09 52.7 -1.0
ORIV Oritupano 72.14 322 eP P 04 09 54.5 +0.6
ORIV Oritupano 72.14 322 P P 04 09 54.5 +0.6
ROSC El Rosal 72.39 310 P P 04 09 56.2 +0.4
comp=Z,272nm,0.9s,baz=148,slow=3.2,SNR=122
ROSC LR LR 04 42 20.4
comp=Z,1µm,20.7s,baz=172,slow=36
ROSC El Rosal 72.39 310 eP P 04 09 55.7 -0.1
ELOV Elorza 72.41 316 eP P 04 09 55.2 -0.2
YOTC Yotoco, Valle 72.48 308 eP P 04 09 54.5 -1.6
CTAB Cerro Tablazo, 72.49 310 eP P 04 09 56.7 +0.2
ANIL Santa Ana 72.53 309 eP P 04 09 55.2 -1.4
TOLC Tolima 72.58 309 eP P 04 09 55.5 -1.4
CTAU Tausa, Cundina 72.60 311 eP P 04 09 57.2 0.0
MBAR Mbarara 72.63 63 S S 04 19 12.6 +2.1
comp=Z,3.9nm,0.2s,baz=100,slow=24,SNR=0.7
MBAR Mbarara 72.63 63 P P 04 09 58.6 +1.5
MBAR IAmb IAmb 04 10 01.6
comp=Z,543nm,1.4s
MBAR Mbarara 72.63 63 P P 04 09 58.6 +1.5
MBAR pmax pmax
comp=Z,543nm,1.4s
TPP Pointe-a-Pierr 72.67 325 eP P 04 10 00.1 +3.1
TPP Pointe-a-Pierr 72.67 325 P P 04 10 00.1 +3.1
TPP Pointe-a-Pierr 72.67 325 P P 04 10 00.1 +3.1
TBH Brigand Hill 72.71 325 eP P 04 10 00.3 +3.1
TBH Brigand Hill 72.71 325 P P 04 10 00.3 +3.1
TBH Brigand Hill 72.71 325 P P 04 10 00.3 +3.1
TAMC Tame, Arauca 72.80 313 eP P 04 09 57.5 -0.3
RUSC La Rusia 72.82 312 eP P 04 09 56.9 -1.7
RREF El Recreo 72.87 309 eP P 04 09 57.9 -1.1
TRN Trinidad (W) 72.97 325 eP P 04 10 00.0 +1.3
TRN Trinidad (W) 72.97 325 P P 04 10 00.0 +1.3
TRN Trinidad (W) 72.97 325 P P 04 10 00.0 +1.3
SPBC San Pablo de B 73.01 311 eP P 04 09 56.6 -2.5
GUY2C Guyana, Caldas 73.17 309 eP P 04 09 58.8 -1.8
NORC Norcasia 73.27 310 eP P 04 09 58.2 -2.4
PLMC San Jos del P 73.28 310 eP P 04 09 59.3 -1.4
TOSP Speyside 73.31 326 eP P 04 10 01.8 +1.0

TOSP Speyside 73.31 326 P P 04 10 01.8 +1.0
TOSP Speyside 73.31 326 IAmb IAmb 04 10 03.7
comp=Z,622nm,1.9s
BARC Barichara 73.50 312 eP P 04 09 59.7 -2.5
PCRV Puerto La Cruz 73.59 322 P P 04 10 03.0 +0.5
comp=Z,811nm,0.5s,baz=140,slow=2.2,SNR=376
PCRV S SKiKP 04 19 16.3 -1.3
comp=Z,15nm,1.0s,baz=224,slow=21,SNR=2.4
BAUV El Baul 73.65 318 eP P 04 10 03.2 +0.4
BAUV El Baul 73.65 318 P P 04 10 03.2 +0.4
PIZC Pizarro, Choco 73.80 307 eP P 04 10 04.8 +1.1
TOA0 Torodi Ar. Sit 73.87 29 P P 04 10 04.3 +0.3
TOA0 Torodi Ar. Sit 73.87 29 P P 04 10 04.0 0.0
SNR=163
TOA0 S S 04 19 24.6 +0.7
TORD Torodi Ar. Bea 73.87 29 P P 04 10 04.0 0.0
comp=Z,515nm,0.8s,baz=197,slow=5.2,SNR=885
TORD S S 04 19 21.8 -2.1
comp=Z,3.8nm,0.9s,baz=216,slow=7.0,SNR=6.3
TORD LR LR 04 37 27.1
comp=Z,2µm,18.9s,baz=165,slow=32
TORD Torodi Ar. Bea 73.87 29 P P 04 10 04.0 0.0
PTBC PUERTO BERRIO, 73.97 311 eP P 04 10 01.7 -3.0
PAMC Pamplona, Colo 73.98 313 eP P 04 10 03.7 -1.6
CBOC Ciudad Bolivar 74.02 309 eP P 04 10 03.4 -1.8
HELC Santa Helena 74.11 310 eP P 04 10 03.5 -2.4
SOCV Socops 74.11 315 eP P 04 10 05.2 -0.2
BRRC Barranca, Sant 74.18 312 eP P 04 10 02.7 -3.1
GRGR Grenville 74.44 325 eP P 04 10 08.0 +0.7
GRGR Grenville 74.44 325 eS S 04 19 32.7 +2.4
GRGR Grenville 74.44 325 P P 04 10 07.1 -0.2
GRHS Sauteurs 74.53 325 eP P 04 10 08.9 +1.1
SDV Santo Domingo 74.58 315 P P 04 10 08.1 -0.2
comp=Z,450nm,0.6s,baz=162,slow=4.0,SNR=331
SDV S S 04 19 29.2 -3.0
comp=Z,4.6nm,0.8s,baz=257,slow=23,SNR=5.6
SDV Santo Domingo 74.58 315 eP P 04 10 08.1 -0.2
SDV Santo Domingo 74.58 315 P P 04 10 08.2 -0.2
GRSS Sisters 74.59 325 eP P 04 10 10.1 +1.9
GRSS Sisters 74.59 325 P P 04 10 10.1 +1.9
GRSS Sisters 74.59 325 P P 04 10 08.9 +0.8
BBSP Saint Philip 74.69 328 eP P 04 10 13.1 +4.4
BBSP Saint Philip 74.69 328 P P 04 10 13.1 +4.4
BBGH Gun Hill 74.76 327 eP P 04 10 13.1 +3.9
BBGH Gun Hill 74.76 327 P P 04 10 13.1 +3.9
BBGH Gun Hill 74.76 327 IAmb IAmb 04 10 14.6
comp=Z,2µm,1.4s
KIBK Kibwezi 74.81 70 P P 04 10 12.6 +2.9
SNR=95
SOLC Bahia Solano 74.94 308 eP P 04 10 10.0 -0.3
PAYG Puerto Ayora 74.98 293 eP P 04 10 11.0 +0.5
PAYG Puerto Ayora 74.98 293 P P 04 10 11.5 +0.9
ZARC Zaragoza, Cauc 75.00 311 eP P 04 10 08.0 -2.7
OCAC Ocana 75.05 313 eP P 04 10 07.3 -3.7
DBBC Dabeiba 75.14 309 eP P 04 10 10.3 -1.2
SVCV St. Vincent, C 75.36 326 eP P 04 10 13.7 +1.1
SVCV St. Vincent, C 75.36 326 P P 04 10 13.7 +1.1
SVB Belmont 75.39 326 eP P 04 10 13.8 +1.0
SVB Belmont 75.39 326 P P 04 10 13.8 +1.0
SVB Belmont 75.39 326 IAmb IAmb 04 10 20.1
comp=Z,532nm,0.8s
KMBO Kilima Mbogo 75.44 69 P P 04 10 15.9 +2.4
comp=Z,80nm,1.2s,baz=209,slow=6.7,SNR=98
KMBO S S 04 19 52.5 +10
comp=Z,0.4nm,0.3s,baz=286,slow=23,SNR=1.5
KMBO LR LR 04 39 31.3
comp=Z,2µm,21.2s,baz=190,slow=32
KMBO Kilima Mbogo 75.44 69 P P 04 10 16.2 +2.7
KMBO Kilima Mbogo 75.44 69 P P 04 10 17.4 +3.9
UREC San Jos de Ur 75.52 310 eP P 04 10 11.7 -1.9
SMLC San Martn de 75.86 312 eP P 04 10 13.3 -2.2
PTAC Punta Ardita, 75.94 308 eP P 04 10 16.2 +0.3
PTCN Pitcairn Islan 75.95 246 P P 04 10 17.6 +1.6
SLBI Saint Lucia, B 76.02 326 eP P 04 10 17.6 +1.3
SLBI Saint Lucia, B 76.02 326 P P 04 10 17.6 +1.3
MPOM Morne Pois Mar 76.38 327 eP P 04 10 18.7 +0.4
BIM Bigot 76.51 326 eP P 04 10 20.6 +1.5
TRMF Trois Ilets 76.53 326 eP P 04 10 20.4 +1.3
LPMF Morne Lapointe 76.54 327 eP P 04 10 20.1 +0.8
ZAM Aeronautique 76.55 326 eP P 04 10 21.3 +2.0
CODC Agustn Codazz 76.64 313 eP P 04 10 17.5 -2.3
ILAM Ilet Lapin Mar 76.70 327 eP P 04 10 21.3 +1.2
FDF Fort de France 76.74 326 eP P 04 10 20.9 +0.5
FDF Fort de France 76.74 326 eP P 04 10 22.0 +1.5
FDF Fort de France 76.74 326 P P 04 10 22.0 +1.5
FDF Fort de France 76.74 326 IAmb IAmb 04 10 24.8
comp=Z,2µm,1.5s
FDF Fort de France 76.74 326 P P 04 10 22.0 +1.5
FDF pmax pmax
comp=Z,2µm,1.5s
WHZ Wether Hill Ro 76.75 191 P P 04 10 21.3 +1.1
WHZ IAmb IAmb 04 10 23.5
comp=Z,263nm,1.1s
PML Morne Lenard 76.80 326 eP P 04 10 21.4 +0.7
GBMF Grand Be 76.81 326 eP P 04 10 22.5 +1.6
BAMF Morne Balai 76.82 326 eP P 04 10 21.9 +1.0
CXM Morne La Croix 76.82 326 eP P 04 10 22.0 +1.0
PCM Pelee Case Pet 76.84 326 eP P 04 10 21.7 +0.8
SVN Savane Anatole 76.85 326 eP P 04 10 22.9 +1.9
LCBC Los crdobas, 76.86 310 eP P 04 10 20.9 -0.2
ARGC Ariguani, Magd 76.89 312 eP P 04 10 21.2 -0.1
UPD2 Meteti 77.28 308 eP P 04 10 21.0 -2.5
SJCC San Jacinto, C 77.31 312 eP P 04 10 23.1 -0.5
DBCT Belle View Cho 77.31 326 eP P 04 10 27.0 +3.4
DBCT Belle View Cho 77.31 326 P P 04 10 27.0 +3.4
MDN Morne-Daniel 77.37 326 eP P 04 10 21.8 -2.0
MDN Morne-Daniel 77.37 326 P P 04 10 21.8 -2.0
DWS Wesley 77.58 327 eP P 04 10 26.9 +1.9
DWS Wesley 77.58 327 P P 04 10 26.9 +1.9
BBL Barber's Block 77.59 326 eP P 04 10 26.4 +1.3
BBL Barber's Block 77.59 326 P P 04 10 26.4 +1.3
AZU Azuero 77.60 306 eP P 04 10 24.9 -0.3
MDPO Dominica; Chan 77.63 326 eP P 04 10 27.6 +2.3
URIC Uribia, Colomb 77.67 315 eP P 04 10 20.3 -5.3
URIC Uribia, Colomb 77.67 315 P P 04 10 24.1 -1.5
TDBA Terre de Bas, 77.94 326 eP P 04 10 28.6 +1.5
LBZ Lake Benmore 77.98 193 IAmb IAmb 04 10 30.4
comp=Z,493nm,1.6s
SMRC Santa Marta, M 78.06 313 eP P 04 10 27.3 -0.5
CBE Ff, Capester 78.14 326 eP P 04 10 29.2 +1.0
LODK Lodwar 78.39 65 P P 04 10 33.1 +3.4
SNR=68
ABD La Joyeuse, An 78.49 327 eP P 04 10 31.5 +1.5
RPZ Rata Peaks 78.53 194 P P 04 10 31.2 +1.1
comp=Z,140nm,0.9s,baz=179,slow=5.6,SNR=36
RPZ Rata Peaks 78.53 194 P P 04 10 31.7 +1.5
RPZ IAmb IAmb 04 10 33.5
comp=Z,275nm,1.2s
BCIP Isla Barro Col 78.63 307 eP P 04 10 30.6 -0.2
BCIP Isla Barro Col 78.63 307 IAmb IAmb 04 10 33.8
comp=Z,1µm,2.0s
MLYT Lee's Yard 78.93 326 eP P 04 10 34.2 +1.7
BPA Boggy Peak 79.14 327 eP P 04 10 35.8 +2.2
BPA Boggy Peak 79.14 327 P P 04 10 35.8 +2.2
LTZ Lake Taylor 79.29 195 IAmb IAmb 04 10 38.7
comp=Z,392nm,1.1s
NVBH Bath Hotel, Ne 79.44 326 eP P 04 10 37.5 +2.4
NVBH Bath Hotel, Ne 79.44 326 P P 04 10 37.5 +2.4
NVDO Nevis, Disaste 79.44 326 eP P 04 10 36.3 +1.1
NEV Hard Times 79.44 326 eP P 04 10 37.6 +2.4
NEV Hard Times 79.44 326 P P 04 10 37.6 +2.4
NVRH Round Hill, Ne 79.49 326 eP P 04 10 38.0 +2.4
NVRH Round Hill, Ne 79.49 326 P P 04 10 38.0 +2.4
SKI Saint Kitts 79.68 326 eP P 04 10 37.1 +0.6
SKI Saint Kitts 79.68 326 P P 04 10 37.1 +0.6
SKI Saint Kitts 79.68 326 IAmb IAmb 04 10 38.9
comp=Z,971nm,0.8s
SKI Saint Kitts 79.68 326 P P 04 10 37.1 +0.6
SKI pmax pmax
comp=Z,971nm,0.8s
ANWB Willy Bob 79.70 327 eP P 04 10 36.5 -0.1
ANWB Willy Bob 79.70 327 P P 04 10 37.0 +0.4
SEUS St. Eustatius 79.90 326 eP P 04 10 38.9 +1.2
SEUS St. Eustatius 79.90 326 P P 04 10 38.9 +1.2
SEUS St. Eustatius 79.90 326 IAmb IAmb 04 10 39.8
comp=Z,890nm,0.8s
SABA Saba 80.10 325 eP P 04 10 40.1 +1.3
SABA Saba 80.10 325 P P 04 10 40.1 +1.3
SABA Saba 80.10 325 IAmb IAmb 04 10 41.6
comp=Z,1µm,0.9s
THZ Tophouse 80.20 195 IAmb IAmb 04 10 42.3
comp=Z,470nm,1.4s

SNZO South Karori 80.37 197 P P 04 10 40.3 +0.2
SNZO IAmb IAmb 04 10 43.3
comp=Z,628nm,1.4s
TAU Tasmania Unive 80.42 176 P P 04 10 41.0 +0.7
TAU IAmb IAmb 04 10 43.0
comp=Z,479nm,1.1s
TAU Tasmania Unive 80.42 176 P P 04 10 41.0 +0.7
TAU pmax pmax
comp=Z,479nm,1.2s
SMRT St. Maarten 80.46 326 eP P 04 10 40.9 +0.2
SMRT St. Maarten 80.46 326 P P 04 10 40.9 +0.2
SMRT St. Maarten 80.46 326 IAmb IAmb 04 10 42.0
comp=Z,560nm,0.8s
NNZ Nelson 80.67 196 IAmb IAmb 04 10 44.6
comp=Z,487nm,1.4s
BFZ Birch Farm 80.73 198 IAmb IAmb 04 10 45.4
comp=Z,278nm,1.1s
QRZ Quartz Range 81.17 195 IAmb IAmb 04 10 46.1
comp=Z,287nm,1.4s
HDC Heredia 81.28 304 IAmb IAmb 04 10 48.9
comp=Z,1μm,1.9s
HUMP Col San Antoni 81.43 323 IAmb IAmb 04 10 47.8
comp=Z,501nm,1.1s
SJG San Juan 81.50 323 P P 04 10 45.8 -0.3
comp=Z,209nm,0.9s,baz=93,slow=4.5,SNR=41
SJG San Juan 81.50 323 eP P 04 10 45.6 -0.5
SJG San Juan 81.50 323 P P 04 10 45.7 -0.5
SJG IAmb IAmb 04 10 47.6
comp=Z,952nm,1.6s
CBYP Canovanas 81.55 323 IAmb IAmb 04 10 47.9
comp=Z,601nm,0.9s
OBIP Obispado Ponce 81.58 323 IAmb IAmb 04 10 46.3
comp=Z,237nm,0.8s
GCPR Guaynabo City 81.66 323 IAmb IAmb 04 10 48.7
comp=Z,582nm,1.1s
AOPR Arecibo Observ 81.92 322 IAmb IAmb 04 10 50.5
comp=Z,185nm,0.7s
JTS Las Juntas de 81.92 303 P P 04 10 48.8 +0.2
comp=Z,102nm,1.0s,baz=196,slow=1.2,SNR=41
JTS S S 04 20 48.8 -1.6
comp=Z,1.3nm,0.3s,baz=344,slow=22,SNR=1.2
JTS Las Juntas de 81.92 303 P P 04 10 49.1 +0.6
JTS IAmb IAmb 04 10 51.7
comp=Z,316nm,1.3s
JTS Las Juntas de 81.92 303 d iP P 04 10 49.7 +1.2
JTS pmax pmax
comp=Z,312nm,1.4s
MPR Mayaguez 81.92 322 IAmb IAmb 04 10 49.8
comp=Z,356nm,0.9s
BHHZ Black Hill Sta 81.93 198 P P 04 10 51.3 +2.8
EMPR Esperanza - Ma 81.96 323 IAmb IAmb 04 10 49.5
comp=Z,331nm,1.1s
MOVZ Moawhango 82.06 198 P P 04 10 51.4 +2.2
AGPR Aguadilla, PR 82.15 322 IAmb IAmb 04 10 50.7
comp=Z,451nm,1.2s
BKZ Black Stump Fm 82.17 198 P P 04 10 52.0 +2.3
WHVZ Whangaehu Hut 82.21 198 P P 04 10 52.3 +2.2
FWVZ Far West T-bar 82.24 198 P P 04 10 52.1 +1.8
RIGZ Rimuhau 82.39 200 P P 04 10 53.5 +2.7
TWVZ Taurewa 82.44 198 P P 04 10 52.8 +1.6
WHTZ Whakaora 82.75 198 P P 04 10 46.2 -6.5
MWZ Matawai 82.79 199 P P 04 10 55.3 +2.3
URZ Urewera 82.94 199 P P 04 10 54.9 +1.3
comp=Z,82nm,1.0s,baz=121,slow=1.9,SNR=16
URZ S S 04 20 57.8 -2.5
comp=Z,5.6nm,0.7s,baz=198,slow=22,SNR=1.7
HIZ Hauiti 83.08 197 IAmb IAmb 04 10 56.3
comp=Z,862nm,1.8s
HIZ Hauiti 83.08 197 P P 04 10 54.4 0.0
HAZ Te Kaha 83.31 200 P P 04 10 57.3 +1.8
ACON Acoyapa 83.49 304 IAmb IAmb 04 10 57.9
comp=Z,286nm,0.9s
TOZ Tahuroa Road 83.73 198 P P 04 10 59.5 +1.8
SDDR Presa de Saban 84.08 319 IAmb IAmb 04 11 01.1
comp=Z,154nm,0.8s
TAM Tamanrasset 84.10 30 P P 04 11 01.3 +1.6
TAM IAmb IAmb 04 11 03.9
comp=Z,374nm,1.4s
TAM Tamanrasset 84.10 30 P P 04 11 01.3 +1.6
TAM pmax pmax
comp=Z,374nm,1.4s
HOJ Hope 85.27 314 iP P 04 11 06.8 +1.4
STH Stony Hill 85.36 314⇑iP P 04 11 07.3 +1.4
MCJ Malvern 85.57 313⇑iP P 04 11 08.6 +1.6
NWAO Narrogin (SRO) 85.60 151 P P 04 11 07.8 +0.6
comp=Z,31nm,0.7s,baz=175,slow=3.4,SNR=15
NWAO PP PP 04 14 27.4 +0.5
comp=Z,14nm,0.9s,baz=204,slow=5.3,SNR=3.9
NWAO Narrogin (SRO) 85.60 151 P P 04 11 07.5 +0.3
TOO Toolangi 85.66 174 P P 04 11 08.5 +1.1
TOO Toolangi 85.66 174 P P 04 11 08.5 +1.1
TOO pmax pmax
comp=Z,79nm,1.1s
MTDJ Mount Denham 85.78 313 eP P 04 11 08.5 +0.4
BBJ Bamboo Saint A 85.81 313⇑iP P 04 11 09.1 +0.8
CNCH Conchagua 85.87 302 eP P 04 11 08.2 -0.5
CNCH Conchagua 85.87 302 eP P 04 11 08.2 -0.5
LCND La Caada 85.92 302 eP P 04 11 08.1 -0.7
LCND La Caada 85.92 302 eP P 04 11 08.1 -0.7
PACA Pacayal 86.26 302 eP P 04 11 09.4 -1.2
PACA Pacayal 86.26 302 eP P 04 11 09.4 -1.2
TGUH Tegucigalpa,Un 86.29 303 eP P 04 11 10.1 -0.6
TGUH Tegucigalpa,Un 86.29 303 IAmb IAmb 04 11 13.1
comp=Z,833nm,1.9s
GRTK Grand Turk 86.35 320 IAmb IAmb 04 11 14.0
comp=Z,235nm,0.8s
GTBY Guantanamo Bay 86.37 316 eP P 04 11 12.3 +1.5
GTBY Guantanamo Bay 86.37 316 IAmb IAmb 04 11 13.7
comp=Z,284nm,1.2s
COEB Comit de Eme 86.39 301 eP P 04 11 10.4 -0.8
COEB Comit de Eme 86.39 301 eP P 04 11 10.4 -0.8
OUZ Omahuta 86.50 197 IAmb IAmb 04 11 14.7
comp=Z,278nm,1.1s
LFRS El Faro 86.75 301 eP P 04 11 12.7 -0.2
SNET Serv Nac Est T 86.88 301 P P 04 11 13.7 +0.2
SNET IAmb IAmb 04 11 14.9
comp=Z,164nm,1.1s
MTO3 Montecristo 87.56 301 eP P 04 11 16.0 -1.0
MTO3 Montecristo 87.56 301 eP P 04 11 16.0 -1.0
CAN Canberra 88.05 177 P P 04 11 20.3 +1.3
CAN IAmb IAmb 04 11 22.3
comp=Z,263nm,1.6s
CAN Canberra 88.05 177 P P 04 11 20.3 +1.3
CAN pmax pmax
comp=Z,263nm,1.6s
APG El Apazote 88.61 300 P P 04 11 21.6 -0.3
comp=Z,132nm,0.8s,baz=240,slow=1.6,SNR=130
ZGR Zagora 88.64 19 P P 04 11 25.0 +3.3
SNR=20
ZGR P P 04 11 25.0 +3.3
SNR=20
MORW Morawa 88.91 149 P P 04 11 24.0 +0.9
ATD Arta Tunnel 89.09 67 IAmb IAmb 04 11 29.3
comp=Z,224nm,1.3s
ATD Arta Tunnel 89.09 67 P P 04 11 27.8 +3.8
SNR=18
TZRR Tazzarine 89.30 19 P P 04 11 28.0 +3.3
SNR=73
TZRR P P 04 11 28.0 +3.3
SNR=73
OUK Oukaimeden 89.33 17 P P 04 11 28.4 +3.3
SNR=50
OUK P P 04 11 28.4 +3.3
SNR=50
BBOO Buckleboo 89.50 166 P P 04 11 26.4 +0.6
BBOO IAmb IAmb 04 11 28.2
comp=Z,247nm,1.0s
FUL Funchal 89.67 9 eP P 04 11 29.6 +3.4
comp=Z,421nm,1.8s
PMAR Madeira 89.74 9 eP P 04 11 30.5 +3.7
comp=Z,337nm,1.5s
PMOZ Porto Moniz, M 89.82 9 eP P 04 11 30.2 +3.2
comp=Z,335nm,1.8s
PMPS Porto Santo 90.12 9 eP P 04 11 31.4 +3.1
comp=Z,702nm,1.8s
PMPST Porto Santo, M 90.15 9 eP P 04 11 31.2 +2.8
comp=Z,818nm,1.5s
FORT Forrest 90.18 159 P P 04 11 30.1 +1.1
STKA Stephens Creek 91.04 171 P P 04 11 34.3 +1.3
comp=Z,57nm,0.7s,baz=169,slow=4.3,SNR=90
STKA PP PP 04 15 06.2 -4.1
comp=Z,21nm,0.8s,baz=165,slow=12,SNR=6.2
STKA S S 04 21 47.2 -31
comp=Z,3.1nm,0.8s,baz=278,slow=23,SNR=11
STKA PKPPKP P'P'df 04 37 06.0 -1.3
comp=Z,1.1nm,0.7s,baz=333,slow=2.3,SNR=3.0
STKA LR LR 04 50 56.5
comp=Z,2μm,19.2s,baz=185,slow=34
STKA Stephens Creek 91.04 171 P P 04 11 33.9 +0.9
STKA Stephens Creek 91.04 171 P P 04 11 33.9 +0.9
STKA pmax pmax
comp=Z,17nm,0.8s
FIGM Figuig 91.43 22 P P 04 11 39.0 +4.4
SNR=7.7
MDT Midelt 91.45 19 P P 04 11 37.0 +2.4
comp=Z,156nm,0.8s,baz=203,slow=3.6,SNR=188
MDT Midelt 91.45 19 P P 04 11 38.1 +3.5
SNR=11
AVE Averroes 91.45 17 P P 04 11 37.3 +2.8
SNR=11
AVE Averroes 91.45 17 i Pdif P 04 11 31.9 -2.6
AVE eS SKSac 04 21 55.2 +2.3
PPT Papeete 91.60 234 LR LR 04 43 59.0
comp=Z,2μm,21.8s,baz=154,slow=30
IFR Ifrane 92.05 18 i Pdif P 04 11 40.8 +3.4
IFR eS SKSac 04 22 01.4 +4.7
TEIG Tepich 92.14 305 P P 04 11 38.2 +0.3
comp=Z,193nm,0.5s,baz=141,slow=0.0,SNR=123
TEIG LR LR 04 59 22.2
comp=Z,683nm,18.1s,baz=50,slow=40
TEIG Tepich 92.14 305 eP P 04 11 37.9 -0.1
TEIG Tepich 92.14 305 P P 04 11 38.3 +0.3
TEIG IAmb IAmb 04 11 41.7
comp=Z,198nm,0.8s
RTC Rabat Centre 92.22 17 P P 04 11 39.8 +1.8
DAMY Dhamar 92.45 67 P P 04 11 42.6 +2.7
DAMY Dhamar 92.45 67 P P 04 11 44.8 +4.9
CMIG Matias Romero 92.52 298 P P 04 11 39.5 -0.3
comp=Z,38nm,0.8s,baz=123,slow=3.0,SNR=66
RAR Rarotonga 92.53 224 P P 04 11 40.4 +0.4
comp=Z,22nm,0.9s,baz=215,slow=7.5,SNR=4.8
RAR Rarotonga 92.53 224 P P 04 11 41.4 +1.4
RAR IAmb IAmb 04 11 42.4
comp=Z,260nm,1.9s
ARMA Armidale 92.99 179 P P 04 11 43.0 +0.9
061Z Ochoppi 93.99 313 P P 04 11 47.8 +1.5
baz=154
SMIR Smir Dam 94.12 18 P P 04 11 51.0 +4.3
SNR=7.4
CEU Ceuta 94.33 18 i Pdif P 04 11 50.6 +3.0
CEU eS S 04 22 44.3 -2.1
BBSR BB Station 94.41 329 P P 04 11 49.0 +0.9
BBSR IAmb IAmb 04 11 53.3
comp=Z,52nm,0.9s
TLIG Tlapa 94.73 295 IAmb IAmb 04 11 52.5
comp=Z,51nm,0.8s
SFS San Fernando 94.75 17 ePdif P 04 11 54.2 +4.6
SFS eS S 04 23 10.9 +21
060A Indiantown 94.82 314 P P 04 11 52.0 +1.9
baz=154
PFVI Vila Bisbo 95.01 15 eP P 04 11 52.9 +2.2
comp=Z,262nm,1.2s
PFVI Vila Bisbo 95.01 15 IAmb IAmb 04 11 54.7
comp=Z,150nm,1.0s
MORF Marmelete 95.20 15 eP P 04 11 51.7 0.0
MORF AMb AMB 04 11 55.8
comp=Z,175nm,1.4s
MORF eS SKSac 04 22 16.1 +2.7
MORF Marmelete 95.20 15 eP P 04 11 54.4 +2.7
comp=Z,175nm,1.4s
MORF Marmelete 95.20 15 eP P 04 11 51.7 0.0
MORF eS SKSac 04 22 16.1 +2.7
PBDV Barranco-do-Ve 95.25 15 eP P 04 11 54.4 +2.5
comp=Z,132nm,2.0s
LIJA Lijar 95.31 18 i Pdif P 04 11 55.2 +3.0
EMAL Malaga-Limoner 95.33 18 ePdif P 04 11 53.3 +1.1
EMAL eS S 04 23 01.9 +6.7
PTEO Sao Teotonio 95.43 15 eP P 04 11 55.8 +3.2
comp=Z,178nm,1.5s
SOCY Socotra 95.43 76 P P 04 11 56.6 +3.2
PVAQ Vaqueiros 95.43 16 eP P 04 11 55.3 +2.6
comp=Z,163nm,1.8s
PVAQ Vaqueiros 95.43 16 P P 04 11 55.4 +2.7
SNR=10
PVAQ Vaqueiros 95.43 16 IAmb IAmb 04 11 56.8
comp=Z,229nm,1.5s
PCVE Castro Verde 95.61 15 eP P 04 11 55.8 +2.3
comp=Z,138nm,1.9s
PNCL Nicolau / Gran 96.01 15 eP P 04 11 57.8 +2.5
comp=Z,108nm,1.9s
PBEJ Beja 96.02 15 eP P 04 11 58.2 +2.8
comp=Z,96nm,1.5s
HORN Hornachuelos 96.25 17 P P 04 11 59.5 +3.1
SNR=16
EMHD Djebel Mahouad 96.26 24 P SKKSac 04 22 51.9 +7.0
ADJB Djebel Djouab 96.33 25 P SKKSac 04 22 54.8 +9.4
EVO Evora 96.50 15 eP P 04 12 00.4 +2.9
comp=Z,84nm,2.2s
EVO Evora 96.50 15 ePdif P 04 12 03.0 +5.5
EVO Evora 96.50 15 ePP PP 04 16 03.2 +9.2
PMAFR Mafra 96.74 14 eP P 04 12 01.7 +3.1
CART Cartagena 96.76 21 eS S 04 23 17.5 +10
ABA Alger-Bouzarea 96.85 24 P SKKSac 04 22 52.3 +3.4
PESTR Estremoz 96.89 15 P P 04 12 03.4 +4.1
SNR=8.0
PMTG Montargil 97.00 15 eP P 04 12 02.3 +2.6
comp=Z,106nm,1.7s
PSA00 Pilbara Seismi 97.07 149 P Pdif 04 12 01.1 +0.3
PSA00 Pilbara Seismi 97.07 149 IAmb IAmb 04 12 01.8
comp=Z,32nm,0.9s
KEST Kesra 97.39 29 P Pdif 04 12 03.2 +1.4
comp=Z,16nm,0.7s,baz=173,slow=1.2,SNR=18
KEST LR LR 04 52 27.8
comp=Z,2μm,18.9s,baz=150,slow=33
PMRV Marv??o 97.47 15 eP Pdif 04 12 04.2 +2.3
comp=Z,73nm,2.0s
PCBR Castelo Branco 97.86 15 eP Pdif 04 12 06.4 +2.8
comp=Z,47nm,1.5s
PAB San Pablo 98.06 18 P Pdif 04 12 06.1 +1.5
PAB San Pablo 98.06 18 P Pdif 04 12 06.1 +1.5
PAB pmax pmax
comp=Z,25nm,1.0s
ASAR Alice Springs 98.17 163 P Pdif 04 12 06.1 +0.4
comp=Z,112nm,1.0s,baz=191,slow=4.1,SNR=257
ASAR PP PP 04 16 03.2 -2.6
comp=Z,17nm,0.8s,baz=193,slow=5.8,SNR=9.9
ASAR PKKP PKKPdf 04 28 36.2 +0.5
comp=Z,12nm,0.7s,baz=20,slow=2.0,SNR=36
ASAR PKKPab PKKPbc 04 29 05.6 +31
comp=Z,8.2nm,0.9s,baz=5.5,slow=4.3,SNR=10
ASAR SKKPbc SKKPbc 04 32 01.7 +5.0
comp=Z,4.4nm,0.7s,baz=359,slow=2.2,SNR=12
ASAR SKKS SKKSdf 04 35 27.8 -2.7
comp=Z,1.9nm,0.8s,baz=9.7,slow=4.0,SNR=7.7
ASAR PKPPKP P'P'df 04 36 47.8 -6.2
comp=Z,4.2nm,1.1s,baz=6.8,slow=1.9,SNR=7.3
ASAR LR LR 04 54 39.4
comp=Z,3μm,18.4s,baz=182,slow=34
ASAR Alice Springs 98.17 163 P Pdif 04 12 05.9 +0.2
ESDC Sonseca Array 98.25 18 P Pdif 04 12 07.6 +2.1
comp=Z,11nm,0.7s,baz=191,slow=4.1,SNR=47
ESDC PP PP 04 16 06.5 -1.1
comp=Z,2.9nm,0.9s,baz=194,slow=7.3,SNR=5.1
ESDC PKiKP PKiKP 04 16 38.0 +0.9
comp=Z,0.9nm,0.7s,baz=180,slow=0.7,SNR=3.6
ESDC PKKP PKKPdf 04 28 38.1 -1.0
comp=Z,0.9nm,0.8s,baz=353,slow=2.1,SNR=4.9
ESDC SKKPbc SKKPbc 04 32 03.4 -1.6
comp=Z,0.4nm,0.6s,baz=29,slow=2.9,SNR=4.7
ESDC LR LR 04 52 38.1
comp=Z,786nm,19.5s,baz=205,slow=33
ESDC Sonseca Array 98.25 18 P Pdif 04 12 06.5 +1.1
MTE Manteigas 98.40 15 eP Pdif 04 12 08.6 +2.5
PVIS Viseu 98.66 15 eP P 04 12 10.3 +3.1
UCM Universidad Co 98.99 18 ePdif Pdif 04 12 08.0 -0.7
UCM Universidad Co 98.99 18 ePP PP 04 16 10.4 -2.8
553A Crawfordville 99.24 313 IAmb IAmb 04 16 12.0
comp=Z,86nm,1.1s
Z59A Georgetown, SC 99.97 318 Pdiff Pdif 04 12 15.8 +2.7
baz=154
255A Hazlehurst 100.00 315 Pdiff Pdif 04 12 14.5 +1.1
baz=153
TIGA Tifton 100.01 314 Pdiff Pdif 04 12 14.6 +1.2
baz=152
MAHO Mahon 100.09 24 ePdif Pdif 04 12 19.7 +6.2
MAHO eS Sdif 04 23 36.0 +0.6
WHFO Wadi Hawf 100.09 73 P Pdif 04 12 16.9 +2.8
SNR=8.3
NHSC New Hope 100.18 317 Pdiff Pdif 04 12 16.6 +2.5
baz=154
Z58A St. Stephen 100.25 318 Pdiff Pdif 04 12 16.8 +2.4
baz=154
Y60A Bolivia 100.27 319 Pdiff Pdif 04 12 16.1 +1.6
baz=154
156A Sylvania 100.27 316 Pdiff Pdif 04 12 16.8 +2.3
baz=153
Y59A Loris 100.49 319 Pdiff Pdif 04 12 17.5 +2.0
baz=154
DMTO DMTO 100.54 74 P Pdif 04 12 19.6 +3.5
352A Blakely 100.58 313 Pdiff Pdif 04 12 17.1 +1.2
baz=152
155A Kite 100.61 315 Pdiff Pdif 04 12 17.6 +1.6
baz=153
X60A Albert Glenn T 100.69 320 Pdiff Pdif 04 12 18.5 +2.2
baz=154
Y58A Scranton 100.70 318 Pdiff Pdif 04 12 19.2 +2.8
baz=154
154A Montrose 100.85 315 Pdiff Pdif 04 12 18.8 +1.6
baz=153
W61A Ground Anchor 100.89 321 Pdiff Pdif 04 12 19.2 +2.0
baz=155
252A Lumpkin 100.95 313 Pdiff Pdif 04 12 18.2 +0.6
baz=152
EIL Elat 100.96 52 P Pdif 04 12 19.6 +1.9
comp=Z,4.2nm,1.1s,baz=270,slow=9.1,SNR=2.3
BRAL Brewton 101.17 311 Pdiff Pdif 04 12 21.0 +2.4
baz=151
CNNC Cliffs of the 101.26 320 Pdiff Pdif 04 12 20.8 +2.0
baz=154
V61A Roper 101.30 321 Pdiff Pdif 04 12 20.8 +1.8
baz=155
X57A Johnson Farm, 101.36 318 Pdiff Pdif 04 12 21.9 +2.5
baz=154
V60A Jim Taylor Roa 101.51 321 Pdiff Pdif 04 12 21.4 +1.5
baz=155
152A Waverly Hall 101.54 314 Pdiff Pdif 04 12 21.4 +1.2
baz=152
W58A Raeford 101.54 319 Pdiff Pdif 04 12 22.6 +2.4
baz=154
Y55A Saluda 101.55 316 Pdiff Pdif 04 12 21.4 +1.3
baz=153
Z53A Monticello 101.62 315 Pdiff Pdif 04 12 21.9 +1.3
baz=152
GOGA Godfrey 101.70 315 Pdiff Pdif 04 12 21.5 +0.6
baz=152
X56A White Oak 101.73 317 Pdiff Pdif 04 12 23.0 +2.1
baz=153
U61A Possum Corner 101.74 321 Pdiff Pdif 04 12 22.6 +1.6
baz=155
V59A Middlesex 101.86 320 Pdiff Pdif 04 12 22.4 +0.9
baz=154
Z52A Williamson 101.88 314 Pdiff Pdif 04 12 23.1 +1.4
baz=152
WRA Warramunga Arr 101.89 162 P Pdif 04 12 22.4 +0.1
comp=Z,12nm,0.7s,baz=198,slow=4.1,SNR=43
WRA PP PP 04 16 29.2 -4.8
comp=Z,10nm,0.7s,baz=191,slow=5.9,SNR=9.5
WRA PKKPbc PKKPbc 04 28 25.1 +1.2
comp=Z,18nm,0.7s,baz=1.1,slow=3.2,SNR=26
WRA PKKPab PKKPdf 04 28 50.0 +21
comp=Z,14nm,0.8s,baz=11,slow=5.1,SNR=11
WRA SKKPbc SKKPbc 04 31 51.4 +4.1
comp=Z,4.9nm,0.8s,baz=0.7,slow=2.9,SNR=10
WRAB Tennant Creek 101.90 162 i P Pdif 04 12 21.6 -0.7
WRAB pmax pmax
comp=Z,24nm,0.9s
FITZ Fitzroy Crossi 101.90 154 P Pdif 04 12 24.2 +1.9
comp=Z,5.6nm,0.8s,baz=223,slow=5.4,SNR=10
FITZ PP PP 04 16 32.3 -1.8
comp=Z,15nm,1.0s,baz=203,slow=8.4,SNR=4.5
IDI Anoyia 101.91 41 P Pdif 04 12 23.4 +1.5
comp=Z,7.2nm,0.7s,baz=82,slow=16,SNR=1.7
IDI PP PP 04 16 29.3 -6.0
comp=Z,29nm,1.0s,baz=177,slow=2.1,SNR=4.1
W57A Gilead 101.94 318 Pdiff Pdif 04 12 23.8 +1.9
baz=154
WB0 Warramunga Arr 102.07 162 Pdif 04 12 23.4 +0.3
Y53A Monroe 102.14 315 Pdiff Pdif 04 12 24.2 +1.4
baz=152
V58A Windy Hill, Pi 102.19 319 Pdiff Pdif 04 12 24.7 +1.7
baz=154
U59A Littleton 102.23 320 Pdiff Pdif 04 12 24.6 +1.4
baz=154
X54A Belton 102.28 316 Pdiff Pdif 04 12 25.5 +2.1
baz=153
Y52A Lilburn 102.33 315 Pdiff Pdif 04 12 24.5 +0.8
baz=152
KMSC Kings Mountain 102.42 317 Pdiff Pdif 04 12 25.5 +1.5
baz=153
U58A Oxford 102.53 320 Pdiff Pdif 04 12 26.1 +1.6
baz=154
Z50A Ashland 102.53 313 Pdiff Pdif 04 12 25.6 +1.0
baz=151
T60A Surry 102.57 322 Pdiff Pdif 04 12 27.0 +2.3
baz=155
X53A Estanollee 102.60 315 Pdiff Pdif 04 12 26.9 +2.0
baz=152
W54A Cherokee Point 102.69 317 Pdiff Pdif 04 12 27.1 +1.9
baz=153
T59A Double "B" Far 102.70 321 Pdiff Pdif 04 12 26.8 +1.6
baz=154
V56A Mocksville 102.71 318 Pdiff Pdif 04 12 27.7 +2.4
baz=153
Y51A Rockmart 102.76 314 Pdiff Pdif 04 12 27.3 +1.7
baz=152
U57A Blanch 102.84 319 Pdiff Pdif 04 12 27.5 +1.7
baz=154
X52A Dahlonega 102.92 315 Pdiff Pdif 04 12 27.1 +0.8
baz=152
S60A Water View 103.06 322 Pdiff Pdif 04 12 28.8 +2.0
baz=155
CTA Charters Tower 103.09 174 Pdiff Pdif 04 12 29.2 +1.6
comp=Z,11nm,1.1s,baz=225,slow=7.0,SNR=4.4
U56A King 103.14 319 Pdiff Pdif 04 12 29.4 +2.2
baz=153
V54A Nebo 103.22 317 Pdiff Pdif 04 12 30.2 +2.6
baz=153
S59A Mechanicsville 103.32 321 Pdiff Pdif 04 12 29.8 +1.8
baz=154
W52A Murphy 103.36 315 Pdiff Pdif 04 12 29.8 +1.5
baz=152
S58A Poland Farm, P 103.45 321 Pdiff Pdif 04 12 30.3 +1.8
baz=154
U55A TA2, Sparta 103.53 318 Pdiff Pdif 04 12 30.8 +1.8
baz=153
T56A Rocky Mt 103.63 319 Pdiff Pdif 04 12 32.2 +2.9
baz=153
R59A King George, V 103.66 322 Pdiff Pdif 04 12 31.6 +2.2
baz=154
R58B Mineral 103.71 321 Pdiff Pdif 04 12 31.3 +1.7
baz=154
W51A Cleveland 103.74 315 Pdiff Pdif 04 12 30.5 +0.6
baz=152
TKL Tuckaleechee C 103.80 316 Pdiff Pdif 04 12 30.0 -0.2
comp=Z,5.3nm,1.0s,baz=59,slow=2.7,SNR=3.0
S57A Dark Hollow, R 103.90 320 Pdiff Pdif 04 12 32.2 +1.7
baz=154
BLA Blacksburg 103.93 319 Pdiff Pdif 04 12 32.8 +2.0
baz=153
ASF Jabal al Asfar 103.96 52 Pdiff Pdif 04 12 33.5 +2.5
comp=Z,0.4nm,0.2s,baz=153,slow=4.5,SNR=1.8
ASF PP PKiKP 04 16 40.1 -7.6
comp=Z,2.7nm,0.7s,baz=175,slow=4.8,SNR=4.2
T55A Pulaski 103.98 319 Pdiff Pdif 04 12 32.9 +1.9
baz=153
MMAI Mount Meron Ar 104.04 50 Pdiff Pdif 04 12 33.3 +1.9
comp=Z,0.7nm,0.6s,baz=230,slow=6.8,SNR=2.3
MMAI PP PKiKP 04 16 40.2 -7.7
comp=Z,18nm,1.1s,baz=202,slow=8.6,SNR=6.7
Q59A Harwood 104.10 322 Pdiff Pdif 04 12 32.9 +1.5
baz=155
R57A Stanardsville 104.23 321 Pdiff Pdif 04 12 34.4 +2.4
baz=154
W49A Belvidere 104.30 314 Pdiff Pdif 04 12 33.7 +1.3
baz=151
V50A Pikevile 104.32 315 Pdiff Pdif 04 12 33.0 +0.5
baz=151
S55A Lewisburg 104.46 319 Pdiff Pdif 04 12 34.5 +1.4
baz=153
T53A Wise 104.50 317 Pdiff Pdif 04 12 35.6 +2.2
baz=152
Q58A Fox Den Farm, 104.52 322 Pdiff Pdif 04 12 34.5 +1.3
baz=154
U51A La Follette 104.53 316 Pdiff Pdif 04 12 34.5 +1.1
baz=152
P60A Greenville 104.62 324 Pdiff Pdif 04 12 35.0 +1.3
baz=155
R56A Bull Pasture M 104.63 320 Pdiff Pdif 04 12 36.1 +2.2
baz=154
P59A Jarrettsville 104.70 323 Pdiff Pdif 04 12 35.6 +1.6

baz=155
V49A McMinnville 104.72 314 Pdiff Pdif 04 12 34.8 +0.5
baz=151
R55A Marlinton 104.78 320 Pdiff Pdif 04 12 36.1 +1.6
baz=153
T52A Hallie 104.78 317 PKiKP PKiKP 04 16 52.1 +3.1
baz=152
Q57A Strasburg 104.85 321 Pdiff Pdif 04 12 36.2 +1.4
baz=154
U50A Jamestown 104.88 315 PKiKP PKiKP 04 16 52.6 +3.4
baz=151
P58A Pank, Wackersv 104.88 322 Pdiff Pdif 04 12 36.3 +1.4
baz=154
R54A Victor 105.00 319 PKiKP PKiKP 04 16 54.9 +5.5
baz=153
O60A Telford 105.00 324 PKiKP PKiKP 04 16 49.1 -0.2
baz=155
T51A Gray 105.02 316 PKiKP PKiKP 04 16 52.4 +2.9
baz=152
P57A Homestead Farm 105.12 322 Pdiff Pdif 04 12 37.3 +1.4
baz=154
Q56A Snyder Ridge, 105.12 321 Pdiff Pdif 04 12 37.7 +1.7
baz=154
Q56A PKiKP PKiKP 04 16 49.9 +0.3
baz=154
O59A Robesonia 105.25 323 PKiKP PKiKP 04 16 51.1 +1.4
baz=155
O58A Lewisberry 105.33 323 Pdiff Pdif 04 12 38.2 +1.4
baz=154
U49A Red Boiling Sp 105.33 315 Pdiff Pdif 04 12 37.9 +1.0
baz=151
U49A PKiKP PKiKP 04 16 52.4 +2.4
baz=151
T50A Nancy 105.41 316 Pdiff Pdif 04 12 38.3 +1.1
baz=151
T50A PKiKP PKiKP 04 16 52.6 +2.4
baz=151
N60A Cedar Hill Far 105.41 324 Pdiff Pdif 04 12 38.4 +1.2
baz=155
N60A PKiKP PKiKP 04 16 52.8 +2.8
baz=155
P56A Dayton Farm, R 105.42 321 Pdiff Pdif 04 12 38.2 +1.0
baz=154
S51A Beattyville 105.47 317 Pdiff Pdif 04 12 40.2 +2.6
baz=152
S51A PKiKP PKiKP 04 16 51.2 +0.9
baz=152
O57A Amberson 105.64 322 Pdiff Pdif 04 12 39.5 +1.3
baz=154
O57A PKiKP PKiKP 04 16 52.9 +2.4
baz=154
N59A State Game Lan 105.66 324 Pdiff Pdif 04 12 39.6 +1.3
baz=155
M60A Port Jervis 105.67 325 Pdiff Pdif 04 12 43.4 +5.1
baz=155
R52A Catlettsburg 105.74 318 Pdiff Pdif 04 12 41.0 +2.3
baz=152
T49A Edmonton 105.75 315 Pdiff Pdif 04 12 39.6 +0.9
baz=151
T49A PKiKP PKiKP 04 16 54.0 +3.3
baz=151
P55A Reedsville 105.76 320 Pdiff Pdif 04 12 40.1 +1.2
baz=153
P55A PKiKP PKiKP 04 16 51.7 +0.9
baz=153
Q53A Leroy 105.79 319 Pdiff Pdif 04 12 40.2 +1.2
baz=152
Q53A PKiKP PKiKP 04 16 51.2 +0.4
baz=152
WVT Waverly 105.80 313 Pdiff Pdif 04 12 38.9 -0.2
baz=150
N58A Sunbury 105.90 323 Pdiff Pdif 04 12 40.1 +0.8
baz=154
MCWV Mont Chateau 105.90 320 PKiKP PKiKP 04 16 51.2 +0.2
baz=153
O56A Blue Knob Stat 106.01 322 Pdiff Pdif 04 12 41.2 +1.3
baz=154
P54A Burton 106.08 320 Pdiff Pdif 04 12 40.6 +0.4
baz=153
N57A Milroy 106.10 323 Pdiff Pdif 04 12 39.4 -0.9
baz=154
N57A PKiKP PKiKP 04 16 51.9 +0.5
baz=154
SSPA Standing Stone 106.11 322 PKiKP PKiKP 04 16 52.8 +1.5
baz=154
M59A Waymart 106.12 324 Pdiff Pdif 04 12 41.7 +1.4
baz=155
M59A PKiKP PKiKP 04 16 54.0 +2.6
baz=155
Q52A Bidwell 106.15 318 Pdiff Pdif 04 12 41.7 +1.1
baz=152
Q52A PKiKP PKiKP 04 16 51.8 +0.4
baz=152
O55A Ligonier 106.21 321 Pdiff Pdif 04 12 41.7 +0.9
baz=153
O55A PKiKP PKiKP 04 16 52.4 +0.8
baz=153
JCT Junction City 106.23 301 PKiKP PKiKP 04 16 52.1 +0.2
baz=147
S49A Springfield 106.25 316 Pdiff Pdif 04 12 42.0 +1.0
baz=151
P53A Whipple 106.30 319 PKiKP PKiKP 04 16 51.7 0.0
baz=152
R50A Paris 106.31 317 PKiKP PKiKP 04 16 55.3 +3.5
baz=151
M57A Sunshine Farm, 106.49 323 PKiKP PKiKP 04 16 53.9 +1.9
baz=154
N56A West Decatur 106.50 322 Pdiff Pdif 04 12 42.9 +0.8
baz=154
N56A PKiKP PKiKP 04 16 53.7 +1.6
baz=154
J62A Henniker 106.55 328 PKiKP PKiKP 04 16 52.4 +0.4
baz=156
L59A Walton 106.58 325 PKiKP PKiKP 04 16 52.9 +0.7
baz=155
Q51A Peebles 106.60 318 Pdiff Pdif 04 12 44.2 +1.7
baz=152
Q51A PKiKP PKiKP 04 16 52.3 0.0
baz=152
N55A Marion Center 106.61 322 Pdiff Pdif 04 12 42.9 +0.3
baz=153
N55A PKiKP PKiKP 04 16 52.8 +0.5
baz=153
P52A Corning 106.69 319 PKiKP PKiKP 04 16 52.7 +0.3
baz=152
L58A Harry Jones Me 106.71 324 PKiKP PKiKP 04 16 53.1 +0.6
baz=155
W41B Gary Mavity, V 106.81 309 PKiKP PKiKP 04 16 53.6 +0.8
baz=149
BINY Binghamton 106.89 324 PKiKP PKiKP 04 16 53.6 +0.9
baz=154
P51A Williamsport 106.90 318 Pdiff Pdif 04 12 45.2 +1.4
baz=152
O53A New Philadelph 106.91 320 PKiKP PKiKP 04 16 54.2 +1.3
baz=152
M56A Emporium 106.97 322 PKiKP PKiKP 04 16 53.7 +0.7
baz=154
WCI Wyandotte Cave 107.02 315 PKiKP PKiKP 04 16 53.0 -0.1
baz=151
K59A Cooperstown 107.06 325 PKiKP PKiKP 04 16 53.7 +0.7
baz=155
N54A Moraine State 107.11 321 PKiKP PKiKP 04 16 53.2 0.0
baz=153
TXAR Lajitas Array 107.12 297 Pdiff Pdif 04 12 45.4 +0.2
comp=Z,0.8nm,0.7s,baz=146,slow=7.6,SNR=9.8
TXAR PKiKP PKiKP 04 16 54.1 +0.4
comp=Z,2.8nm,0.7s,baz=170,slow=4.8,SNR=14
TXAR PKKPbc PKKPbc 04 28 10.6 +1.8
comp=Z,1.4nm,0.9s,baz=222,slow=0.3,SNR=5.3
TXAR SKKPbc SKKPbc 04 31 38.1 -0.6
comp=Z,2.4nm,0.9s,baz=106,slow=0.2,SNR=15
M55A Ridgway 107.15 322 Pdiff Pdif 04 12 45.9 +0.9
baz=153
Q49A Aurora 107.16 317 Pdiff Pdif 04 12 47.6 +2.6
baz=151
P50A Jamestown 107.28 318 Pdiff Pdif 04 12 48.3 +2.7
baz=151
P50A PKiKP PKiKP 04 16 53.6 +0.1
baz=151
L56A Greenwood 107.34 323 Pdiff Pdif 04 12 47.0 +1.2
baz=154
L56A PKiKP PKiKP 04 16 54.2 +0.5
baz=154
Q48A North Vernon 107.41 316 PKiKP PKiKP 04 16 54.1 +0.3
baz=151
W39A Magazine 107.48 308 Pdiff Pdif 04 12 48.1 +1.5
baz=148
W39A PKiKP PKiKP 04 16 54.7 +0.7
baz=148

M54A Oil Creek Stat 107.49 321 PKiKP PKiKP 04 16 54.6 +0.7
baz=153
LBNH Lisbon 107.51 328 PKiKP PKiKP 04 16 54.5 +0.7
baz=156
ACSO Alum Creek Sta 107.53 318 PKiKP PKiKP 04 16 52.6 -1.3
baz=152
K57A Scipio Center 107.54 324 PKiKP PKiKP 04 16 54.0 0.0
baz=154
P49A Miami Univ. Ec 107.56 317 Pdiff Pdif 04 12 48.1 +1.3
baz=151
P49A PKiKP PKiKP 04 16 55.1 +1.1
baz=151
J59A Piesco 107.57 326 Pdiff Pdif 04 12 47.9 +1.1
baz=155
L55A Hinsdale 107.68 323 Pdiff Pdif 04 12 48.3 +1.0
baz=153
L55A PKiKP PKiKP 04 16 54.1 -0.1
baz=153
O50A Cable 107.69 318 PKiKP PKiKP 04 16 54.2 -0.1
baz=151
J58A Remsen 107.72 325 PKiKP PKiKP 04 16 54.3 +0.1
baz=155
P48A Milroy 107.76 316 Pdiff Pdif 04 12 49.3 +1.6
baz=151
K56A Middlesex 107.77 324 Pdiff Pdif 04 12 48.8 +1.1
baz=154
K56A PKiKP PKiKP 04 16 54.6 +0.2
baz=154
M53A WI Miller and 107.78 321 Pdiff Pdif 04 12 48.6 +0.9
baz=152
M53A PKiKP PKiKP 04 16 54.6 +0.2
baz=152
VTS Vitosha 107.90 37 ⇑P PKiKP 04 16 54.9 +0.1
DAVOX Davos/Dischmat 107.91 26 Pdiff Pdif 04 12 49.0 +0.6
baz=194,slow=8.3
DAVOX PKiKP PKiKP 04 16 55.6 +0.9
comp=Z,10nm,0.8s,baz=233,slow=4.6,SNR=11
ABTX Abilene, Hawle 107.94 302 PKiKP PKiKP 04 16 55.1 +0.1
baz=147
J57A Williamstown 107.99 325 PKiKP PKiKP 04 16 54.9 +0.2
baz=154
O49A Covington 107.99 318 Pdiff Pdif 04 12 49.9 +1.2
baz=151
O49A PKiKP PKiKP 04 16 54.0 -0.8
baz=151
L54A Sinclairville 108.02 322 Pdiff Pdif 04 12 49.4 +0.7
baz=153
L54A PKiKP PKiKP 04 16 54.4 -0.4
baz=153
K55A Perry 108.04 323 Pdiff Pdif 04 12 49.7 +0.8
baz=154
K55A PKiKP PKiKP 04 16 54.7 -0.2
baz=154
N50A Nevada 108.06 319 Pdiff Pdif 04 12 49.9 +0.9
baz=152
U40A Yellville 108.07 309 PKiKP PKiKP 04 16 55.4 +0.3
baz=148
L53A Girard 108.09 321 Pdiff Pdif 04 12 50.4 +1.3
baz=153
L53A PKiKP PKiKP 04 16 55.2 +0.2
baz=153
J56A Wolcott 108.14 324 PKiKP PKiKP 04 16 55.0 0.0
baz=154
ERPA Erie 108.14 322 PKiKP PKiKP 04 16 55.7 +0.6
baz=153
M51A Elyria 108.21 320 PKiKP PKiKP 04 16 55.4 +0.2
baz=152
FETA Feichten 108.34 26 ePKiKP PKiKP 04 16 56.6 +1.1
comp=Z,12nm,1.2s
FETA ePP PP 04 17 21.5 -1.4
comp=Z,36nm,1.2s
FETA eSKSac SKSac 04 23 16.6 +0.8
comp=Z,19nm,1.3s
FETA ePKKPdf PKKPdf 04 28 20.5 0.0
comp=Z,11nm,1.4s
O48A Farmland 108.35 317 PKiKP PKiKP 04 16 55.2 -0.3
baz=151
I57A Carthage 108.36 325 PKiKP PKiKP 04 16 55.7 +0.3
baz=154
DAVA Damuels 108.39 26 ePKiKP PKiKP 04 16 57.0 +1.4
comp=Z,16nm,0.8s
DAVA ePP PP 04 17 21.3 -1.8
comp=Z,50nm,1.5s
DAVA eSKSac SKSac 04 23 17.0 +1.0
comp=Z,18nm,1.3s
DAVA ePKKPdf PKKPdf 04 28 21.9 +1.5
comp=Z,6.2nm,0.8s
E64A Bridgewater 108.39 332 PKiKP PKiKP 04 16 55.3 -0.1
baz=158
G60A Masonville 108.41 328 PKiKP PKiKP 04 16 56.0 +0.5
baz=156
ABTA Abfaltersbach 108.53 28 ePKiKP PKiKP 04 16 56.3 +0.5
comp=Z,11nm,1.2s
ABTA iPP PP 04 17 22.1 -2.0
comp=Z,46nm,1.5s
ABTA eSKSac SKSac 04 23 18.3 +1.8
comp=Z,34nm,1.4s
ABTA iPKKPdf PKKPdf 04 28 20.4 +0.4
comp=Z,7.1nm,1.0s
E63A Oxbow 108.55 331 PKiKP PKiKP 04 16 55.5 -0.2
baz=158
N49A Columbus Grove 108.57 318 PKiKP PKiKP 04 16 55.3 -0.6
baz=151
M50A Fremont 108.58 319 PKiKP PKiKP 04 16 54.5 -1.4
baz=152
G59A Clarenceville 108.64 328 PKiKP PKiKP 04 16 55.9 0.0
baz=156
LONY Lake Ozonia 108.64 326 PKiKP PKiKP 04 16 55.5 -0.5
baz=155
SQTA Sankt Quirin 108.65 27 ePKiKP PKiKP 04 16 57.1 +1.1
comp=Z,13nm,0.7s
SQTA ePP PP 04 17 23.4 -1.6
comp=Z,96nm,1.3s
SQTA eSKSac SKSac 04 23 17.8 +0.7
comp=Z,22nm,1.1s
SQTA ePKKPdf PKKPdf 04 28 19.4 -0.5
comp=Z,15nm,1.4s
MYKA Terra Mystica 108.72 29 ePKiKP PKiKP 04 16 57.2 +1.1
comp=Z,10nm,0.7s
MYKA ePP PP 04 17 25.0 -0.4
comp=Z,39nm,1.3s
MYKA eSKSac SKSac 04 23 18.0 +0.8
comp=Z,21nm,1.5s
MOTA Moosalm 108.74 27 ePKiKP PKiKP 04 16 57.1 +0.9
comp=Z,26nm,1.5s
MOTA ePP PP 04 17 23.9 -1.8
comp=Z,80nm,1.3s
MOTA eSKSac SKSac 04 23 17.9 +0.4
comp=Z,28nm,1.4s
MOTA ePKKPdf PKKPdf 04 28 20.2 +0.5
comp=Z,24nm,1.4s
H57A Richville 108.75 326 PKiKP PKiKP 04 16 55.9 -0.2
baz=154
RETA Reutte 108.79 26 ePKiKP PKiKP 04 16 57.2 +1.0
comp=Z,9.2nm,0.7s
RETA iPP PP 04 17 24.1 -1.9
comp=Z,46nm,1.3s
RETA ePKKPdf PKKPdf 04 28 20.0 +0.4
comp=Z,12nm,1.2s
N48A Decatur 108.83 317 PKiKP PKiKP 04 16 54.8 -1.6
baz=151
OBKA Obir 108.84 29 ePP PP 04 17 25.5 -0.9
comp=Z,22nm,1.3s
OBKA ePKKPdf PKKPdf 04 28 17.7 -1.7
comp=Z,24nm,2.1s
CCM Cathedral Cave 108.85 311 Pdiff Pdif 04 12 53.5 +1.0
baz=149
CCM PKiKP PKiKP 04 16 57.0 +0.5
baz=149
WATA Walderalm 108.85 27 ePKiKP PKiKP 04 16 57.3 +0.9
comp=Z,18nm,1.2s
WATA ePP PP 04 17 24.3 -2.1
comp=Z,96nm,1.3s
WATA eSKSac SKSac 04 23 19.4 +1.5
comp=Z,39nm,1.4s
WATA ePKKPdf PKKPdf 04 28 19.9 +0.4
comp=Z,11nm,1.1s
TUL1 Leonard 108.96 307 PKiKP PKiKP 04 16 57.1 +0.3
baz=147
G58A Ormstown 108.96 327 PKiKP PKiKP 04 16 56.8 +0.3
baz=155
K52A Tillsonburg 108.98 321 PKiKP PKiKP 04 16 56.2 -0.4
baz=152
D63A Stockholm 109.03 332 PKiKP PKiKP 04 16 56.7 +0.1
baz=158
KBA Koelnbreinsper 109.05 28 ePP PP 04 17 27.1 -0.9
comp=Z,52nm,1.5s
KBA SKSac SKSac 04 23 21.0 +2.1

comp=Z,32nm,1.2s
L50A Kingsville 109.06 320 Pdiff Pdif 04 12 53.7 +0.3
baz=152
L50A PKiKP PKiKP 04 16 56.0 -0.7
baz=152
F60A Warwick 109.10 329 PKiKP PKiKP 04 16 56.7 0.0
baz=156
N47A Urbana 109.10 317 Pdiff Pdif 04 12 54.2 +0.7
baz=150
BRTR Keskin Array B 109.11 46 Pdiff Pdif 04 12 55.4 +1.6
comp=Z,1.6nm,1.1s,baz=189,slow=6.7,SNR=2.1
BRTR PKiKP PKiKP 04 16 57.5 +0.4
comp=Z,3.6nm,1.0s,baz=177,slow=3.0,SNR=7.9
BRTR PP PP 04 17 26.5 -2.0
comp=Z,14nm,1.0s,baz=188,slow=7.4,SNR=9.3
BRTR PKKPbc PKKPbc 04 28 04.0 +1.0
comp=Z,1.2nm,0.7s,baz=62,slow=1.3,SNR=4.0
BRTR PKKP PKKPdf 04 28 18.2 -0.4
comp=Z,2.1nm,0.9s,baz=29,slow=2.8,SNR=5.7
E61A Lac Etchemin 109.11 330 PKiKP PKiKP 04 16 57.1 +0.3
baz=157
SOKA Soboth 109.13 29 PP PP 04 17 28.0 -0.4
comp=Z,44nm,1.2s
SOKA eSKSac SKSac 04 23 20.7 +1.6
comp=Z,4.0nm,1.2s
SOKA iPKKPdf PKKPdf 04 28 18.4 -0.5
comp=Z,19nm,1.3s
SFIN Lafayette 109.19 316 PKiKP PKiKP 04 16 57.7 +0.7
baz=150
G57A Newington 109.20 326 PKiKP PKiKP 04 16 56.8 -0.1
baz=155
I55A Frankford 109.25 324 PKiKP PKiKP 04 16 57.0 0.0
baz=153
J52A Paris 109.30 322 Pdiff Pdif 04 12 54.6 +0.2
baz=152
J52A PKiKP PKiKP 04 16 56.9 -0.3
baz=152
WMOK Wichita Mounta 109.31 304 Pdiff Pdif 04 12 56.3 +1.5
baz=147
WMOK PKiKP PKiKP 04 16 57.7 +0.1
baz=147
E60A Ste Agathe de 109.32 329 PKiKP PKiKP 04 16 56.8 -0.3
baz=156
D62A Allapoint, All 109.32 331 PKiKP PKiKP 04 16 56.6 -0.5
baz=157
L48A N Adams 109.56 318 PKiKP PKiKP 04 16 56.6 -1.1
baz=151
D61A St Aubert, Com 109.74 330 PKiKP PKiKP 04 16 57.7 -0.2
baz=157
ARSA Arzberg 109.79 30 ePKiKP PKiKP 04 16 59.2 +1.2
comp=Z,5.2nm,0.7s
ARSA ePP PP 04 17 32.5 -0.6
comp=Z,27nm,1.1s
ARSA eSKSac SKSac 04 23 23.0 +1.4
comp=Z,8.4nm,1.1s
ARSA ePKKPdf PKKPdf 04 28 15.9 -1.6
comp=Z,9.4nm,1.2s
E58A La Victoria 109.84 328 PKiKP PKiKP 04 16 57.9 -0.2
baz=155
H53A Bobcaygeon 109.86 324 Pdiff Pdif 04 12 57.6 +0.8
baz=153
H53A PKiKP PKiKP 04 16 58.5 +0.4
baz=153
L47A Sherwood 109.87 318 Pdiff Pdif 04 12 59.4 +2.5
baz=150
G55A Calabogie 109.87 325 PKiKP PKiKP 04 16 58.3 +0.2
baz=154
COPA Copaceanca 109.90 37 ⇑P PKiKP 04 16 58.1 -0.1
MNTX Cornudas Mount 109.91 298 PKiKP PKiKP 04 16 58.6 -0.2
baz=145
I52A Shelburne 109.93 322 PKiKP PKiKP 04 16 59.0 +0.7
baz=152
I51A Listowel 109.99 322 PKiKP PKiKP 04 16 58.2 -0.3
baz=152
MOA Molln 110.01 28 ePKiKP PKiKP 04 17 00.3 +2.0
comp=Z,16nm,1.3s
MOA PP PP 04 17 33.0 -1.7
comp=Z,48nm,1.5s
MOA eSKSac SKSac 04 23 24.6 +2.1
comp=Z,14nm,1.4s
MOA ePKKPdf PKKPdf 04 28 14.3 -2.8
comp=Z,11nm,1.6s
BZS Buzias 110.07 34 ⇓P PKiKP 04 16 59.4 +0.8
E57A Chemin Saint G 110.13 328 PKiKP PKiKP 04 16 58.9 +0.2
baz=155
HUMR Humele 110.17 37 ⇓P PKiKP 04 17 00.8 +2.0
K48A Perry 110.19 319 PKiKP PKiKP 04 16 58.5 -0.4
baz=151
HDIL Hopedale 110.20 314 PKiKP PKiKP 04 16 59.5 +0.6
baz=149
SADO Sadowa 110.21 323 Pdiff Pdif 04 12 57.4 -1.1
comp=Z,4.9nm,0.9s,baz=229,slow=4.1,SNR=2.0
SADO PKiKP PKiKP 04 16 58.6 -0.3
comp=Z,9.4nm,0.7s,baz=136,slow=0.3,SNR=11
SADO PP pPKiKP 04 17 32.9 -2.9
comp=Z,18nm,1.1s,baz=105,slow=3.0,SNR=3.3
GZR Gura Zlata 110.23 35 ⇓P PKiKP 04 16 49.0 -10
L46A Eue Claire 110.30 317 PKiKP PKiKP 04 16 58.7 -0.4
baz=150
J49A Marlette 110.33 320 PKiKP PKiKP 04 16 57.7 -1.4
baz=151
H52A Wyevale 110.35 323 PKiKP PKiKP 04 16 58.8 -0.3
baz=152
G53A Haliburton 110.36 324 PKiKP PKiKP 04 16 58.8 -0.4
baz=153
URV Uravakonda 110.36 94 ePKiKP PKiKP 04 16 59.9 -0.2
K47A Vermontville 110.39 318 Pdiff Pdif 04 12 59.9 +0.6
baz=150
K47A PKiKP PKiKP 04 16 58.5 -0.8
baz=150
G54A Lake Saint Pet 110.43 324 PKiKP PKiKP 04 16 58.7 -0.6
baz=153
CONA Conrad Observa 110.50 29 ePKiKP PKiKP 04 17 00.1 +0.6
comp=Z,8.7nm,1.3s
CONA epPKiKP PP 04 17 37.6 -0.7
comp=Z,66nm,1.4s
CONA SKSac SKSac 04 23 23.8 -0.9
comp=Z,8.7nm,1.4s
CONA iPKKPdf PKKPdf 04 28 12.8 -3.5
comp=Z,7.0nm,0.8s
J48A Bridge Port 110.50 319 PKiKP PKiKP 04 16 59.2 -0.2
baz=151
E56A St. Veronique 110.52 327 PKiKP PKiKP 04 16 58.8 -0.6
baz=154
MSTX Muleshoe 110.52 301 PKiKP PKiKP 04 16 60.0 0.0
baz=146
LOT Lotru 110.60 36 ⇑P PKiKP 04 16 59.7 -0.1
D57A Chemin Vers le 110.61 328 PKiKP PKiKP 04 16 59.0 -0.5
baz=155
SIRR Siria 110.67 34 ⇑P PKiKP 04 17 00.2 +0.5
K46A Dorr 110.70 318 PKiKP PKiKP 04 16 59.0 -0.8
baz=150
SKHT Srikalahasti 110.71 97 ePdif Pdif 04 13 13.1 +12
SKHT ePP PP 04 17 42.6 +2.9
SKHT eSKSac SKSac 04 23 24.6 -2.3
I49A Point Hope 110.73 320 PKiKP PKiKP 04 16 59.0 -0.8
baz=151
E55A Montcerf-Lytto 110.74 326 PKiKP PKiKP 04 17 00.0 +0.3
baz=154
AMTX Amarillo 110.76 302 PKiKP PKiKP 04 17 00.3 -0.1
baz=146
ICOR Ion Corvin 110.77 39 ⇓P PKiKP 04 17 06.1 +6.2
GERES GERESS Array B 110.78 28 Pdiff Pdif 04 13 02.1 +1.1
comp=Z,0.5nm,0.7s,baz=212,slow=3.5,SNR=2.3
GERES PKiKP PKiKP 04 17 00.1 +0.2
comp=Z,4.6nm,0.7s,baz=166,slow=1.1,SNR=13
GERES PP PP 04 17 40.5 +0.2
comp=Z,15nm,1.0s,baz=191,slow=4.8,SNR=7.7
GERES PKKPbc PKKPbc 04 27 57.6 -0.2
comp=Z,1.8nm,0.8s,baz=33,slow=3.2,SNR=5.8
J47A Sunmer 110.82 319 PKiKP PKiKP 04 17 00.3 +0.2
baz=150
D56A ZEC Mazanza, M 110.89 327 PKiKP PKiKP 04 17 01.2 +1.1
baz=154
ALGO Algonquin Park 110.92 325 PKiKP PKiKP 04 17 00.3 +0.1
baz=153
VOIR 111.00 37 ⇓P PKiKP 04 17 01.0 +0.6
VOIR 111.00 37 ⇓PKiKP PKiKP 04 17 01.0 +0.6
KHC Kasperske Hory 111.01 27 ePDIFF Pdif 04 13 10.2 +8.3
KHC ex x 04 16 27.9
KHC ePKP PKiKP 04 17 00.2 -0.1
KHC epPKP PP 04 17 35.0 -6.9
KHC AMS AMS 05 00 40.0
comp=Z,1µm,19.8s
KHC Kasperske Hory 111.01 27 eP Pdif 04 13 10.2 +8.3
KHC e 04 17 00.2
KHC e 04 17 35.0

KHC MLR MLR
comp=Z,1µm,19.8s
E54A Lac Daplat, Po 111.07 325 PKiKP PKiKP 04 16 59.7 -0.7
baz=153
D55A Sainte-Anne-du 111.08 327 PKiKP PKiKP 04 17 00.7 +0.3
baz=154
E53A Dumoine, Ponti 111.17 325 PKiKP PKiKP 04 17 00.2 -0.4
baz=153
I48A Sherman Twp 111.25 320 PKiKP PKiKP 04 16 59.9 -0.9
baz=151
MODS Modra-Piesok 111.30 30 eP Pdif 04 13 10.2 +7.0
MODS Modra-Piesok 111.30 30 ePDIFF Pdif 04 13 10.2 +7.0
MLR Muntele Rosu 111.34 37 Pdiff Pdif 04 13 04.2 +0.6
comp=Z,2.3nm,0.8s,baz=204,slow=10.0,SNR=2.5
MLR PKiKP PKiKP 04 17 01.4 +0.2
comp=Z,11nm,0.9s,baz=125,slow=16,SNR=7.6
MLR PP PP 04 17 43.9 -0.6
comp=Z,24nm,1.2s,baz=225,slow=2.9,SNR=5.5
PSI Prapat 111.38 120 PP PP 04 17 44.4 0.0
comp=Z,11nm,1.0s,baz=182,slow=7.5,SNR=6.2
E52A Mattawa 111.40 324 PKiKP PKiKP 04 17 00.5 -0.5
baz=153
F51A Arnstein 111.49 323 PKiKP PKiKP 04 17 01.7 +0.5
baz=152
D54A Lac Fusel, La 111.55 326 PKiKP PKiKP 04 17 00.8 -0.5
baz=153
H48A Harrisville 111.57 321 PKiKP PKiKP 04 17 00.6 -0.8
baz=151
PSZ Piszkesteto 111.62 32 ⇑P PKiKP 04 17 02.4 +0.9
PSZ Piszkesteto 111.62 32 ⇑PKIKP PKiKP 04 17 02.4 +0.9
BISRR Bisoca 111.65 38 ⇓P PKiKP 04 17 02.5 +0.8
I46A Reed City 111.66 319 PKiKP PKiKP 04 17 01.1 -0.5
baz=150
KRUC Moravsky 111.68 29 ePKIKP PKiKP 04 17 02.2 +0.7
KRUC e 04 17 40.1
KRUC eSKS SKSac 04 23 28.1 -1.1
KRUC ePKKP PKKPab 04 28 04.9 +3.3
121A Cookes Peak, D 111.76 296 PKiKP PKiKP 04 17 03.2 +0.7
baz=144
VYHS Vyhne 111.84 31 eP Pdif 04 13 12.6 +7.0
VYHS e 04 17 02.5
VYHS e 04 17 48.6
VYHS Vyhne 111.84 31 ePDIFF Pdif 04 13 12.6 +7.0
VYHS e 04 17 02.4
VYHS ePP PP 04 17 48.6 +0.8
JAVC Velka Javorina 111.84 30 ePKIKP PKiKP 04 17 03.4 +1.5
JAVC e 04 17 39.5
JAVC eSKS SKSac 04 23 31.5 +1.5
E51A G1948 Merrick 111.89 324 PKiKP PKiKP 04 17 02.2 +0.2
baz=152
PLOR Plostina 111.90 38 ⇓P PKiKP 04 16 56.5 -5.6
PLOR Plostina 111.90 38 ⇓PKIKP PKiKP 04 16 56.5 -5.6
VRI Vrincioaia 111.94 38 ⇓P PKiKP 04 16 47.5 -15
VRAC Vranov 111.96 29 ePKIKP PKiKP 04 17 03.1 +1.1
VRAC e 04 17 40.6
VRAC eSKS SKSac 04 23 31.7 +1.3
VRAC ePKKP PKKPab 04 28 03.9 +3.5
VRAC Vranov 111.96 29 PKIKP PKiKP 04 17 02.2 +0.2
comp=Z,9.9nm,0.9s,baz=206,slow=2.2,SNR=7.3
VRAC PP PP 04 17 49.9 +1.3
comp=Z,6.4nm,0.6s,baz=204,slow=8.2,SNR=4.7
VRAC Vranov 111.96 29 ⇑P PKiKP 04 17 02.6 +0.6
KSU1 Kansas State U 111.98 308 PKiKP PKiKP 04 17 02.9 +0.5
baz=146
GOPC GO Pecny, Ondr 112.04 28 ePKP PKiKP 04 17 02.4 +0.2
GOPC GO Pecny, Ondr 112.04 28 ePKIKP PKiKP 04 17 02.4 +0.2
PRU Pruhonice 112.05 28 AMS AMS 05 01 30.0
comp=Z,1µm,21.9s
F49A Sandfield 112.05 322 PKiKP PKiKP 04 17 01.6 -0.7
baz=151
H46A Fife Lake 112.09 319 PKiKP PKiKP 04 17 02.6 +0.2
baz=150
GLMI Grayling 112.13 320 PKiKP PKiKP 04 17 02.4 -0.1
baz=150
G47A Hillman 112.16 320 PKiKP PKiKP 04 17 02.7 +0.2
baz=150
SRLM Srisailam 112.20 95 ePKIKP PKiKP 04 17 03.5 -0.1
F48A Evansville 112.31 322 PKiKP PKiKP 04 17 02.9 +0.1
baz=151
GHRR 112.33 38 ⇑P PKiKP 04 17 03.2 +0.4
D51A Lot 18 Range I 112.35 324 PKiKP PKiKP 04 17 02.7 -0.1
baz=152
TESR Tescani 112.48 37 ⇑P PKiKP 04 16 59.8 -3.3
KLRI Killari 112.55 91 ePKIKP PKiKP 04 17 04.1 0.0
PVCC Panska Ves 112.55 27 ePKP PKiKP 04 17 03.5 +0.4
PVCC AMS AMS 05 01 30.0
comp=Z,2µm,23.4s
PVCC Panska Ves 112.55 27 ePKIKP PKiKP 04 17 03.5 +0.4
PVCC MLR MLR
comp=Z,2µm,23.4s
ADKI Addanki 112.58 96 ePdif Pdif 04 13 11.3 +1.7
ADKI eSKSac SKSac 04 23 32.7 -1.7
JFWS Jewell Farm 112.58 315 PKiKP PKiKP 04 17 03.4 0.0
baz=148
TRPA Tarpa 112.60 34 ⇑P PKiKP 04 17 03.9 +0.7
MORC Moravsky Berou 112.64 30 ePKIKP PKiKP 04 17 04.0 +0.6
MORC eSKS SKSac 04 23 33.0 -0.2
MORC ePKKP PKKPab 04 28 01.4 +4.0
MORC Moravsky Berou 112.64 30 ⇓P PKiKP 04 17 03.7 +0.3
MORC Moravsky Berou 112.64 30 ⇓PKIKP PKiKP 04 17 03.7 +0.3
BIZ Bicaz 112.67 37 ⇓P PKiKP 04 17 04.0 +0.6
BRG Berggiesshubel 112.71 27 i PKIKP PKiKP 04 17 04.2 +0.8
BRG e*PP pPKiKP 04 17 40.9 +0.1
BRG i *SP PP 04 17 52.1 -1.8
BRG pmax pmax
comp=Z,8.0nm,1.3s
BRG pmax pmax
comp=Z,23nm,1.6s
BRG pmax pmax
comp=N,22nm,1.5s
BRG pmax pmax
comp=Z,39nm,2.0s
BRG pmax pmax
comp=Z,17nm,1.6s
E48A Lockeyer 112.72 322 PKiKP PKiKP 04 17 03.0 -0.6
baz=151
NJS Nagarjunasagar 112.80 95 ePKIKP PKiKP 04 17 04.4 -0.2
DPC Dobruska-Polom 112.84 29 ePDIFF Pdif 04 13 18.8 +8.8
DPC Dobruska-Polom 112.84 29 eP Pdif 04 13 18.8 +8.8
CLL Collm 112.88 26 ePS PS 04 27 32.0 +1.4
CLL Collm 112.88 26 i PKIKP PKiKP 04 17 04.4 +0.7
CLL e 04 17 54.0
CLL e 04 23 33.0
CLL pmax pmax
comp=Z,21nm,1.2s
CLL pmax pmax
comp=Z,7.0nm,0.8s
CLL pmax pmax
comp=Z,12nm,1.1s
CLL Collm 112.88 26 ePKKPbc PKKPbc 04 27 52.0 +1.2
comp=Z,7.0nm,0.8s
CLL Collm 112.88 26 esSSSS 04 42 22.0
CLL Collm 112.88 26 esPS 04 28 12.0
CLL Collm 112.88 26 ePKKPdf PKKPdf 04 28 14.0 +2.3
CLL Collm 112.88 26 ePPS PPS 04 28 41.0
CLL Collm 112.88 26 eSKKPbc SKKPbc 04 31 23.0 -1.1
CLL Collm 112.88 26 eSS SS 04 33 27.0 +0.2
CLL Collm 112.88 26 ePPPrev 04 35 42.0
CLL Collm 112.88 26 eSSS SSS 04 37 43.0
CLL Collm 112.88 26 e 04 39 00.0
CLL Collm 112.88 26 ePKKPab PKKPab 04 28 00.0 +3.8
comp=Z,12nm,1.1s
CLL Collm 112.88 26 e(Pdif) 04 13 18.0
CLL Collm 112.88 26 e Pdif 04 13 25.0 +15
comp=Z,50nm,2.1s
CLL Collm 112.88 26 epPdif pPdif 04 13 48.0 +2.0
CLL Collm 112.88 26 esPdif Pdif 04 14 05.0 +55
CLL Collm 112.88 26 i PKIKP PKiKP 04 17 04.4 +0.7
comp=Z,21nm,1.2s
CLL Collm 112.88 26 e PKiKP 04 17 18.0 +14
CLL Collm 112.88 26 ePP PP 04 17 54.0 -1.1
CLL Collm 112.88 26 epPP 04 18 27.0
CLL Collm 112.88 26 esPPP 04 21 06.0
CLL Collm 112.88 26 esPPPP 04 22 54.0
CLL Collm 112.88 26 eSKSac SKSac 04 23 33.0 -0.9
CLL Collm 112.88 26 LV 05 01 00.0
comp=Z,600nm,19.4s
CLL Collm 112.88 26 eSKKSac SKKSac 04 24 45.0 +3.7
CLL Collm 112.88 26 eSdif Sdif 04 25 24.0 +2.4
SCIA State Center 112.91 312 PKiKP PKiKP 04 17 05.0 +0.9
baz=147
CRVS Cervenica-Dubn 112.97 33 ePP PP 04 17 54.7 -1.1
UZH Uzhgorod 112.97 33 ePKIKP PKiKP 04 17 04.3 +0.4
UZH e 04 17 44.7
UZH i 04 17 52.8
BURAR Bucovina Array 112.98 36 ⇑P PKiKP 04 17 04.4 +0.2
BURAR Bucovina Array 112.98 36 ⇑PKIKP PKiKP 04 17 04.4 +0.2
CHVC Chvalec 112.99 28 ePKP PKiKP 04 17 05.0 +1.0
OSTC Ostas 113.00 29 ePKP PKiKP 04 17 04.5 +0.5
ANMO Albuquerque 113.07 299 PKiKP PKiKP 04 17 04.9 0.0
comp=Z,4.3nm,0.8s,baz=171,slow=6.4,SNR=11
ANMO PP PP 04 17 58.7 +1.8
comp=Z,4.2nm,0.9s,baz=149,slow=13,SNR=6.2
ANMO Albuquerque 113.07 299c iPKIKP PKiKP 04 17 04.8 0.0
ANMO pmax pmax
comp=Z,7.0nm,1.0s
ANMO Albuquerque 113.07 299 PKiKP PKiKP 04 17 05.5 +0.7
baz=144
TUC Tucson 113.07 294 PKiKP PKiKP 04 17 05.8 +1.0
baz=144
E47A Iron Bridge 113.08 322 PKiKP PKiKP 04 17 03.7 -0.5
baz=150
HYBB Hyderabad (bro 113.09 93 ePKiKP PKiKP 04 17 05.1 -0.1
CBKS Cedar Bluff 113.11 306 PKiKP PKiKP 04 17 05.4 +0.8
baz=145
D49A Beulah Townshi 113.15 323 PKiKP PKiKP 04 17 04.0 -0.3
baz=151
F45A CMU Biological 113.19 320 PKiKP PKiKP 04 17 04.5 0.0
baz=150
D48A Paudash Townsh 113.21 323 Pdiff Pdif 04 13 12.5 +0.7
baz=151
D48A PKiKP PKiKP 04 17 04.0 -0.5
baz=151
KOLS Kolonicke sedl 113.24 33 ePP PP 04 17 56.5 -1.2
KSP Ksiaz 113.28 28 ePKP PKiKP 04 17 05.8 +1.3
KSP Ksiaz 113.28 28 ePKIKP PKiKP 04 17 05.8 +1.3
LSQQ Lebel-sur-Quev 113.35 327 P PKiKP 04 17 04.2 -0.5
baz=153
MILM Milestii Mici 113.56 38 ⇓P PKiKP 04 17 05.3 +0.2
EKA Eskdalemuir Ar 113.62 15 Pdiff Pdif 04 13 12.6 -0.7
comp=Z,1.0nm,0.7s,baz=198,slow=4.5,SNR=2.5
EKA PKiKP PKiKP 04 17 05.3 +0.3
comp=Z,6.3nm,0.8s,baz=191,slow=1.7,SNR=5.3
EKA PP PP 04 18 01.8 +1.5
comp=Z,10nm,1.1s,baz=159,slow=8.1,SNR=5.3
EKA SKP SKiKP 04 20 27.0 +0.3
comp=Z,5.0nm,0.8s,baz=212,slow=2.0,SNR=6.0
KIS Kishinev 113.63 38 ePKP PKiKP 04 17 05.0 -0.2
KIS Kishinev 113.63 38 ePP PP 04 17 50.0 -10
KIS Kishinev 113.63 38 ePKIKP PKiKP 04 17 05.0 -0.2
KIS e 04 20 28.0
KIS e 04 28 40.0
KIS MLR MLR
comp=Z,700nm,20.0s
OJC Ojcow 113.67 31 ePKP PKiKP 04 17 06.2 +1.0
OJC Ojcow 113.67 31 ePKIKP PKiKP 04 17 06.2 +1.0
MYLAV Mylavaram 113.68 96 ePP PP 04 18 04.2 +3.2
D46A Sault St. Mari 113.72 321 P PKiKP 04 17 04.9 -0.6
baz=150
PMG Port Moresby 113.74 174 PP PP 04 17 59.4 -0.9
comp=Z,19nm,0.8s,baz=113,slow=3.2,SNR=3.1
PMG Port Moresby 113.74 174c iPKIKP PKiKP 04 17 07.7 +1.1
PMG pmax pmax
comp=Z,105nm,1.3s
214A Organ Pipe Nat 113.81 292 P PKiKP 04 17 06.8 +0.6
baz=143
IPM Ipoh 113.84 121 P PKiKP 04 17 07.0 +0.2
T25A Trinidad 113.88 302 P PKiKP 04 17 06.8 +0.4
baz=144
KWP Kalwaria Pacla 113.99 33 ePKP PKiKP 04 17 06.8 +0.9
KWP Kalwaria Pacla 113.99 33 ePKIKP PKiKP 04 17 06.8 +0.9
GNI Garni 114.07 53 PKiKP PKiKP 04 17 07.3 +0.7
comp=Z,3.0nm,0.5s,baz=338,slow=9.9,SNR=4.1
GNI PP PP 04 18 04.0 0.0
comp=Z,39nm,1.1s,baz=183,slow=18,SNR=6.0
GNI SKP SKPdf 04 20 28.2 -0.1
comp=Z,14nm,0.8s,baz=14,slow=1.3,SNR=5.1
E44A Grand Marais A 114.14 320 P PKiKP 04 17 06.4 +0.2
baz=149
MATQ Matagami 114.17 327 P PKPdf 04 17 05.3 -0.9
baz=152
SRSP Sriramsagar 114.20 92 ePKPdf PKPdf 04 17 06.6 -0.7
GGR Gangavaram 114.32 95 ePKPdf PKPdf 04 17 07.2 -0.3
KULM Kulim 114.37 121 P PKPdf 04 17 08.0 +0.2
BGNE Belgrade 114.55 309 P PKPdf 04 17 06.8 -0.4
baz=145
LVV L'vov 114.56 34 ePKIKP PKiKP 04 17 07.0 +0.1
KSCO Kaye Shedlock' 114.57 304 P PKiKP 04 17 07.7 +0.1
baz=144
PVM Polavaram 114.63 96 ePdif Pdif 04 13 32.1 +13
PVM ePP PP 04 18 19.4 +12
PVM eSKSac SKSac 04 23 40.8 -1.5
SDCO Great Sand Dun 114.88 301 P PKiKP 04 17 08.4 0.0
baz=144
ANN Anapa 114.90 45 i PKIKP PKPdf 04 17 06.5 -1.2
ANN pmax pmax
comp=Z,141nm,1.6s
BEL Belsk 115.40 31 ePKP PKiKP 04 17 09.8 +1.3
BEL Belsk 115.40 31 ePKIKP PKiKP 04 17 09.8 +1.3
D41A Chassel 115.46 318 PKPdf 04 17 08.8 0.0
S22A 4UR Ranch, Cre 115.50 300 P PKiKP 04 17 10.1 +0.5
baz=143
SPMN Marine on St. 115.52 315 P PKPdf 04 17 08.4 -0.5
baz=146
Q24A Divide 115.69 302 P PKiKP 04 17 10.5 +0.6
baz=144
GLA Glamis 115.71 291 PKiKP 04 17 10.4 +0.6
GLA Glamis 115.71 291 PKIKP PKiKP 04 17 10.4 +0.6
GKP Gorka Klasztor 115.73 28 ePKP PKiKP 04 17 09.8 +0.7
GKP Gorka Klasztor 115.73 28 ePKIKP PKiKP 04 17 09.8 +0.7
ECSD EROS Data Cent 115.82 311 P PKPdf 04 17 09.0 -0.6
baz=145
MVCO Mesa Verde 115.87 299 P PKiKP 04 17 10.5 +0.2
baz=143
ZEI Tsey 115.87 51 i PKIKP PKPdf 04 17 09.1 -0.9
ZEI pmax pmax
comp=Z,11nm,1.4s
WUAZ Wupatki 115.92 296 P PKiKP 04 17 11.2 +0.9
baz=143
SCHQ Schefferville 115.94 336 PKP PKPdf 04 17 08.9 -0.6
comp=Z,37nm,0.7s,baz=165,slow=0.8,SNR=69
SCHQ SKP SKPdf 04 20 30.7 -0.5
comp=Z,35nm,0.8s,baz=124,slow=2.0,SNR=13
SCHQ PKKPbc PKKPbc 04 27 40.6 +0.1
comp=Z,5.0nm,1.1s,baz=309,slow=6.5,SNR=2.7
IKP In-Ko-Pah, Jac 116.05 290 P PKiKP 04 17 11.7 +1.2
baz=142
Y12C Blythe 116.11 292 P PKiKP 04 17 11.1 +0.6
baz=142
KBZ Khabaz 116.22 50 PKP PKiKP 04 17 10.5 +0.2
comp=Z,9.0nm,0.8s,baz=247,slow=4.1,SNR=14
KBZ PP PP 04 18 16.7 -2.0
comp=Z,16nm,1.0s,baz=240,slow=9.3,SNR=5.8
KBZ SKP SKPdf 04 20 31.2 -0.8
comp=Z,14nm,0.8s,baz=153,slow=2.2,SNR=7.7
KIV Kislovodsk 116.31 49 PKiKP 04 17 11.0 +0.3
KIV Kislovodsk 116.31 49 i PKIKP PKiKP 04 17 11.7 +1.0
KIV ePS PS 04 28 00.9 -1.5
KIV eSS SS 04 34 08.8 -3.5
KIV pmax pmax
comp=Z,67nm,1.1s
KIV MLR MLR
comp=Z,1µm,22.0s
KVAR Kislovodsk Arr 116.32 49 PKP PKiKP 04 17 11.7 +1.0
comp=Z,4.4nm,0.7s,baz=225,slow=14,SNR=5.1
PDMCI Parker Dam,Lak 116.35 293 P PKiKP 04 17 11.7 +0.7
baz=142
MONP2 Monument Peak 116.40 290 P PKiKP 04 17 12.2 +0.9
baz=142
AKT Akhty 116.47 54 i PKIKP PKiKP 04 17 12.0 +0.9
AKT e 04 17 38.2
AKT e 04 18 18.2
AKT pmax pmax
comp=Z,39nm,1.0s
BC3 Big Chuckawall 116.50 291 P PKiKP 04 17 12.3 +0.9
baz=142
ISCO Idaho Springs 116.58 302 P PKiKP 04 17 12.6 +1.0
baz=143
IRM Iron Mountain 116.74 292 P PKiKP 04 17 12.5 +0.8
baz=142
MUD Monsted U'grnd 116.81 22 i P PKiKP 04 17 12.7 +1.7
MUD Monsted U'grnd 116.81 22 i PKIKP PKiKP 04 17 12.7 +1.7
AKASG Malin Array Be 116.96 37 PKP PKPdf 04 17 10.6 -0.9
comp=Z,12nm,0.6s,baz=241,slow=1.7,SNR=57
AKASG PP PP 04 18 22.5 -1.4
comp=Z,11nm,0.8s,baz=214,slow=7.4,SNR=12
AKASG SKP SKPdf 04 20 31.8 -1.4
comp=Z,17nm,0.8s,baz=236,slow=1.6,SNR=12
AKASG PKKPbc PKKPbc 04 27 35.1 -1.6
comp=Z,0.2nm,0.3s,baz=31,slow=4.2,SNR=3.0
AKASG PKKP PKKPdf 04 28 05.2 +1.4
comp=Z,1.4nm,0.8s,baz=26,slow=4.2,SNR=4.1
AKASG Malin Array Be 116.96 37c iPKIKP PKPdf 04 17 10.6 -0.9
AKASG pmax pmax
comp=Z,14nm,0.6s
TPFO Pinon Flats 116.98 291 P PKiKP 04 17 13.3 +0.9
baz=142
PFO Pinyon Flats O 116.98 291 PKP PKPdf 04 17 11.2 -1.2
comp=Z,2.9nm,0.6s,baz=184,slow=11,SNR=4.5
PFO SKP SKPdf 04 20 31.9 -2.2
comp=Z,5.3nm,0.8s,baz=216,slow=3.2,SNR=4.8
GROC Groznyy 117.02 52 i PKIKP PKiKP 04 17 12.7 +0.8
GROC e 04 18 24.4
GROC e 04 20 51.8
GROC pmax pmax
comp=Z,14nm,0.5s
BELC Belle Mtn. Jos 117.05 291 P PKiKP 04 17 13.7 +1.1
baz=142
EYMN Ely 117.29 317 P PKPdf 04 17 11.7 -0.6
baz=146
GOF Gofitskoye 117.36 49⇑ePKIKP PKiKP 04 17 13.0 +0.5
GOF pmax pmax
comp=Z,19nm,0.7s
GMRC Granite Mounta 117.50 292 P PKiKP 04 17 14.2 +0.9
baz=142
MAK Makhachkala 117.56 53 eP Pdif 04 13 31.3 +0.1
MAK i 04 17 13.4
MAK e 04 17 44.6
MAK e 04 18 26.0
MAK e 04 23 56.1
MAK ePS PKKPdf 04 28 03.3 +1.0
MAK eSS SS 04 34 33.6 +5.3
MAK pmax pmax
comp=Z,119nm,1.3s
N23A Red Feather La 117.60 303 P PKiKP 04 17 13.6 +0.1
baz=143
BBRC Big Bear Solar 117.73 291 P PKiKP 04 17 15.3 +1.4
baz=142
HRA Herat 117.84 69 PKiKP 04 17 14.5 +0.4
SUW Suwalki 118.00 31 ePKP PKiKP 04 17 13.6 +0.1
SUW Suwalki 118.00 31 PKiKP 04 17 13.7 +0.3
SUW Suwalki 118.00 31 ePKIKP PKiKP 04 17 13.6 +0.1
O20A White River Ci 118.07 301 P PKiKP 04 17 14.4 +0.1
baz=142
BFSC Mount Baldy Ra 118.09 290 P PKiKP 04 17 15.2 +0.7
baz=142
TUQ Turquoise Moun 118.14 292 P PKiKP 04 17 15.8 +1.3
baz=142
SNART Snartemo 118.19 20 ePKPdf PKiKP 04 17 14.3 +0.6
HOMB Homborsund 118.37 21 ePKPdf PKiKP 04 17 14.6 +0.6
GSC Goldstone, Bar 118.48 291 P PKiKP 04 17 16.3 +1.1
baz=141
GEYT Alibeck 118.53 64 PKP PKiKP 04 17 15.3 +0.2
comp=Z,10nm,1.2s,baz=250,slow=4.3,SNR=9.9
GEYT PP PP 04 18 30.7 -4.3
comp=Z,16nm,1.2s,baz=234,slow=7.1,SNR=7.6
GEYT SKP SKPdf 04 20 35.7 -1.1
comp=Z,9.9nm,1.0s,baz=207,slow=1.3,SNR=4.2
GEYT PKKPab PKKPab 04 27 35.2 +2.0
comp=Z,1.7nm,0.6s,baz=22,slow=8.3,SNR=4.5
GEYT Alibeck 118.53 64 PKiKP 04 17 15.7 +0.6
NRS Narsarsuaq 118.61 350 PKiKP 04 17 14.5 +0.1
NRS Narsarsuaq 118.61 350 PKIKP PKiKP 04 17 14.5 +0.1
KMY Karmoy 118.66 18 ePKPdf PKiKP 04 17 14.9 +0.3
SHOC Shoshone, Teco 118.68 292 P PKiKP 04 17 16.6 +1.1
baz=141
EDW2 Edwards Air Fo 118.77 290 P PKiKP 04 17 16.3 +0.6
baz=141
LRMC Laurel Mtn Rad 119.07 291 P PKiKP 04 17 17.3 +1.0
baz=141
BLS5 Blasjo 119.07 19 ePKPdf PKiKP 04 17 16.5 +1.1
K22A Casper 119.25 304 P PKPdf 04 17 16.0 -0.4
baz=142
RSSD Black Hills 119.30 307 PKPdf 04 17 15.8 -0.8
RSSD Black Hills 119.30 307 PKIKP PKPdf 04 17 15.8 -0.8
RSSD Black Hills 119.30 307 P PKPdf 04 17 16.1 -0.5
baz=142
FURC Furnace Creek, 119.42 292 P PKiKP 04 17 18.2 +1.4
baz=141
MPMC Manual Prospec 119.42 292 P PKiKP 04 17 17.9 +0.7
baz=141
PBUR Paburge 119.43 29 eP PKiKP 04 17 16.7 +0.5
TPNV Topopah Spring 119.48 293 P PKiKP 04 17 18.1 +0.9
baz=141
PABE Paberze 119.53 31 eP PKPdf 04 17 16.2 -0.1
PABE ePP PP 04 18 38.0 -3.4
ISA Isabella, Lake 119.62 291 P PKiKP 04 17 18.2 +0.8
baz=141
PKM Mcpherson Peak 119.71 289 P PKiKP 04 17 19.5 +1.8
baz=141
BER Bergen 119.78 18 ePKPdf PKiKP 04 17 17.4 +0.7
MICGM Minsk 119.80 34 ePKP PKiKP 04 17 17.0 +0.1
MICGM epPKP pPKPdf 04 17 47.0 -7.2
MICGM ePP PP 04 18 38.0 -5.4
MICGM ePPP PPP 04 20 36.0
MICGM eSKS SKSdf 04 23 57.0 -18
MNK Minsk 119.80 34 ePKIKP PKiKP 04 17 17.0 +0.1
MNK e 04 17 47.0
NACGM Naroch 119.82 33 e PKiKP 04 17 17.0 0.0
SIJI Sorong 119.85 155 PKP PKiKP 04 17 19.4 +0.9
comp=Z,22nm,0.4s,baz=24,slow=23,SNR=6.3
SIJI SKP SKPdf 04 20 40.1 -0.1
comp=Z,53nm,0.7s,baz=8.4,slow=4.1,SNR=11
ASK Askoy 119.85 18 ePKPdf PKiKP 04 17 17.4 +0.5
KONO Kongsberg 119.87 21 ePKPdf PKiKP 04 17 17.3 +0.4
KONO IVmB_BB 04 17 20.1
comp=Z,834nm,1.8s
KONO eSKSac SKSac 04 24 04.1 +4.7
KONO ePS PKKPdf 04 28 35.9 +37
KONO Kongsberg 119.87 21 PKiKP 04 17 17.3 +0.4
KONO Kongsberg 119.87 21c iPKIKP PKiKP 04 17 18.5 +1.6
KONO pmax pmax
comp=Z,89nm,1.7s
CWC Cottonwood Cre 120.02 291 P PKiKP 04 17 19.0 +0.8
baz=141
IIGN Ignalina 120.04 32 eP PKiKP 04 17 17.6 +0.2
IIGN ePP PP 04 18 41.1 -3.9
VES Vestal, Richgr 120.07 290 P PKiKP 04 17 18.7 +0.6
baz=141
GRAC Grapevine Rang 120.08 292 P PKiKP 04 17 19.1 +0.9
baz=141
SMMC Simmler 120.14 289 P PKiKP 04 17 20.4 +2.0
baz=141
ISAL Salakas 120.20 32 eP PKiKP 04 17 18.3 +0.6
R11A Troy Canyon, C 120.23 295 P PKiKP 04 17 19.3 +0.7
baz=141
DUG Dugway, Tooele 120.30 298 P PKiKP 04 17 19.2 +0.6
baz=141
SUE Sulen 120.32 17 ePKPdf PKiKP 04 17 18.6 +0.9
SUE eSS SS 04 34 58.6 -4.7
OSL Oslo 120.35 21 ePKPdf PKiKP 04 17 18.6 +0.8
MDND Maddock 120.37 312 P PKPdf 04 17 17.8 -0.4
baz=143
IZAR Zarasai 120.39 32 eP PKiKP 04 17 18.8 +0.7
SKAR Skarslia 120.58 19 ePKPdf PKiKP 04 17 19.1 +0.7
SKAR eSKSac SKSac 04 24 05.5 +3.5
SPMM Sapulut 120.61 137 P PKiKP 04 17 19.0 -0.8
HYA Hoyanger 120.66 18 ePKPdf PKiKP 04 17 19.2 +0.8
VORD Divnogorie 120.70 42 ePKIKP PKPdf 04 17 18.1 -0.6
VORD e 04 18 51.7
VORD pmax pmax
comp=Z,30nm,0.7s
PDAR Pinedale Array 120.74 302 PKhKP PKPpre 04 17 07.8
comp=Z,1.0nm,0.5s,baz=127,slow=2.4,SNR=9.3
PDAR PKP PKPdf 04 17 18.2 -1.2
comp=Z,11nm,0.7s,baz=137,slow=5.1,SNR=46
PDAR PP PP 04 18 50.0 -0.3
comp=Z,30nm,1.2s,baz=111,slow=8.1,SNR=8.0
PDAR SKP SKPdf 04 20 38.5 -2.6
comp=Z,4.3nm,0.8s,baz=128,slow=4.0,SNR=4.0
PDAR PKKPbc PKKPab 04 27 24.2 +0.6
comp=Z,0.9nm,0.6s,baz=29,slow=1.4,SNR=7.3
PDAR SKKPbc SKKPbc 04 30 56.6 -1.6
comp=Z,1.0nm,0.8s,baz=113,slow=1.9,SNR=3.7
PDAR Pinedale Array 120.74 302 PKPdf 04 17 18.4 -1.0
ULM Lac du Bonnet 120.83 316 PKP PKPdf 04 17 17.7 -1.3
comp=Z,68nm,0.7s,baz=133,slow=0.8,SNR=108
ULM PP PP 04 18 42.0 -8.4
comp=Z,18nm,0.7s,baz=141,slow=9.8,SNR=5.4
ULM SKP SKPdf 04 20 39.0 -1.7
comp=Z,18nm,0.8s,baz=209,slow=3.4,SNR=5.1
ULM SKKPbc SKKPbc 04 30 57.3 -1.2
comp=Z,25nm,1.0s,baz=332,slow=5.2,SNR=16
VSR Storozhevoye 120.85 42 ePKIKP PKPdf 04 17 18.0 -1.0
VSR e 04 18 51.0

VSR pmax pmax
comp=Z,90nm,1.3s
FOO Floro 120.88 17 ePKPdf PKiKP 04 17 19.5 +0.7
FOO ePS PS 04 28 41.8 -0.9
SLIT Slitere, Latvi 120.93 29 eP PKPdf 04 17 18.2 -0.7
HFS Hagfors 121.14 23 PKP PKPdf 04 17 17.7 -1.6
comp=Z,29nm,0.6s,baz=156,slow=4.7,SNR=66
HFS PP PP 04 18 43.4 -9.0
comp=Z,50nm,1.1s,baz=194,slow=5.6,SNR=6.5
HFS SKP SKPdf 04 20 40.7 -0.2
comp=Z,15nm,0.7s,baz=177,slow=3.0,SNR=7.6
NAO01 NORSAR Array S 121.22 21 PKiKP 04 17 20.0 +0.4
VORR Voronezh 121.24 42 PKiKP PKiKP 04 17 20.0 +0.1
VORR pmax pmax
comp=Z,250nm,1.0s
NC602 NORSAR Array S 121.25 21 ePKPdf PKiKP 04 17 20.1 +0.5
NC602 IVmB_BB 04 17 20.8
comp=Z,2μm,5.1s
NC602 ePP PP 04 18 52.4 -0.8
NC602 eSKSac SKSac 04 24 07.2 +3.0
NC602 eSP SP 04 28 30.7 +1.1
NC602 eSS SS 04 35 17.1 +1.9
NC602 eSS SS 04 35 17.7 +2.4
BORG Borgarnes 121.44 3 PKP PKiKP 04 17 20.7 +0.9
comp=Z,65nm,0.9s,baz=284,slow=3.1,SNR=6.2
NB2 NORSAR Subarra121.47 21 PKPdf PKPdf 04 17 19.6 -0.3
comp=Z,55nm,1.1s,baz=202,slow=1.9
NB2 NORSAR Subarra121.47 21 PKPdf PKPdf 04 17 19.6 -0.3
baz=202,slow=1.9
NOA NORSAR Array B 121.47 21 PKP PKPdf 04 17 19.9 0.0
comp=Z,38nm,0.9s,baz=203,slow=1.9,SNR=77
NOA PP PP 04 18 49.1 -5.5
comp=Z,30nm,1.3s,baz=202,slow=6.8,SNR=3.9
NOA SKP SKPdf 04 20 41.0 -0.6
comp=Z,9.2nm,0.7s,baz=203,slow=1.9,SNR=14
NOA PKKPbc PKKPbc 04 27 21.6 +1.1
comp=Z,6.9nm,0.9s,baz=26,slow=3.0,SNR=13
NOA SKKPbc SKKPbc 04 30 54.2 -3.2
comp=Z,4.7nm,1.0s,baz=16,slow=4.7,SNR=6.0
KBL Kabul 121.49 74 PKPdf 04 17 21.1 0.0
KBL Kabul 121.49 74 PKIKP PKPdf 04 17 21.1 0.0
NVAR Mina Array Bea 121.66 293 PKP PKiKP 04 17 22.1 +0.6
comp=Z,14nm,0.6s,baz=140,slow=3.3,SNR=79
NVAR PKKPbc PKKPab 04 27 20.8 +0.7
comp=Z,1.8nm,0.8s,baz=274,slow=2.4,SNR=5.7
NVAR SKKPbc SKKPbc 04 30 54.7 -0.1
comp=Z,2.5nm,0.9s,baz=282,slow=2.6,SNR=4.8
AKN Aaknes 121.75 18 ePKPdf PKiKP 04 17 21.5 +0.9
AKN eSKPdf SKiKP 04 20 43.6 +1.0
AKN eSS SS 04 35 23.0 +1.4
VRH Novokhopyorsk 121.80 44 ePKIKP PKPdf 04 17 20.5 -0.3
VRH e 04 18 53.6
VRH pmax pmax
comp=Z,90nm,0.6s
ELK Elko 121.90 297 PKP PKiKP 04 17 22.3 +0.4
comp=Z,21nm,0.8s,baz=236,slow=2.8,SNR=59
ELK PP PP 04 18 58.8 +0.6
comp=Z,5.0nm,1.1s,baz=143,slow=4.4,SNR=3.3
ELK SKP SKPdf 04 20 42.1 -1.3
comp=Z,15nm,1.0s,baz=102,slow=2.3,SNR=6.4
DOMB Dombas 121.99 19 ePKPdf PKiKP 04 17 21.4 +0.3
DOMB eSKSac SKSac 04 24 11.5 +4.8
MOOW Moose Ponds 122.05 302 PKPdf 04 17 21.7 -0.2
MOL Molde 122.21 18 ePKPdf PKiKP 04 17 22.2 +0.8
MOL ePS PS 04 28 56.7 +2.1
LAO LASA Array 122.27 307 P PKiKP 04 17 22.3 +0.2
baz=140
RLMT Red Lodge 122.42 304 P PKiKP 04 17 22.8 +0.1
baz=140
H17A Grant Village 122.47 302 P PKiKP 04 17 24.1 +1.2
baz=140
YPP Pitchstone Pla 122.48 302 PKiKP 04 17 23.9 +0.9
DGMT Dagmar 122.77 310 P PKiKP 04 17 22.9 0.0
baz=141
VSU Vasula 122.85 30 eP PKPdf 04 17 22.3 -0.3
VSU Vasula 122.85 30c iPKIKP PKiKP 04 17 23.4 +0.6
VSU pmax pmax
comp=Z,622nm,1.7s
NIL Nilore 123.05 78 PKiKP 04 17 24.2 +0.1
NIL Nilore 123.05 78 PKIKP PKiKP 04 17 24.2 +0.1
OBN Obninsk 123.10 38 PKP PKPdf 04 17 22.4 -0.7
comp=Z,18nm,0.5s,baz=90,slow=0.9,SNR=24
OBN SKP SKPdf 04 20 44.2 -0.6
comp=Z,14nm,0.7s,baz=41,slow=5.5,SNR=11
OBN Obninsk 123.10 38 PKPdf 04 17 22.8 -0.3
OBN Obninsk 123.10 38d iPKIKP PKPdf 04 17 22.8 -0.3
OBN i 04 17 52.0
OBN iSS SS 04 35 43.4 +4.6
OBN pmax pmax
comp=Z,111nm,1.1s
SMLA Simla 123.23 83 eP PKiKP 04 17 24.9 +0.5
SMLA IAmb IAmb 04 17 28.1
comp=Z,18nm,0.9s
TBLU Trondheim 123.32 19 ePKPdf PKiKP 04 17 24.4 +0.8
TBLU ePKSdf PKSdf 04 21 04.0 +4.4
TBLU ePS PS 04 29 13.5 +9.1
TBLU eSS SS 04 35 45.8 +4.4
DHRM DHARAMSHALA 123.62 81 eP PKPdf 04 17 24.6 -0.6
DHRM IAmb IAmb 04 17 28.2
comp=Z,63nm,0.8s
BEKR Beckworth 123.79 292 PKiKP 04 17 25.9 +0.3
MOS Moscow 123.96 38 iPKIKP PKPdf 04 17 24.2 -0.6
MOS pmax pmax
comp=Z,152nm,1.0s
KOLN Koldanda 124.14 91 eP PKPdf 04 17 25.9 -0.5
comp=Z,117nm,0.8s
FRB Frobisher Bay 124.45 339 SKKPbc SKKPbc 04 30 44.6 -2.7
comp=Z,2.8nm,0.8s,baz=349,slow=3.3,SNR=8.1
DANN Dangsing 124.69 90 eP PKPdf 04 17 26.0 -1.5
comp=Z,148nm,0.8s
NSS Namsos 124.80 19 ePKPdf PKiKP 04 17 27.1 +0.6
NSS eSKSac SKSac 04 24 17.0 +1.5
SFJD Kangerlussuaq 124.83 349 PKP PKPdf 04 17 25.9 -0.2
comp=Z,69nm,0.6s,baz=134,slow=2.4,SNR=12
SFJD SKP SKPdf 04 20 47.4 -0.4
comp=Z,35nm,0.9s,baz=125,slow=1.3,SNR=5.5
SFJD Kangerlussuaq 124.83 349 iP PKiKP 04 17 26.3 -0.2
SFJD i 04 20 47.5
SFJD Kangerlussuaq 124.83 349 iPKIKP PKiKP 04 17 26.3 -0.2
CM31 Chiang Mai Arr 124.83 111 PKiKP 04 17 28.3 +0.2
CMAR Chiang Mai Arr 124.83 111 PKP PKiKP 04 17 28.8 +0.7
comp=Z,27nm,0.8s,baz=235,slow=3.7,SNR=74
CMAR SKP SKPdf 04 20 49.5 +0.1
comp=Z,34nm,0.9s,baz=235,slow=3.8,SNR=19
CMAR PKKPbc PKKPab 04 27 08.3 -0.6
comp=Z,1.4nm,0.3s,baz=6.5,slow=2.6,SNR=5.6
CMAR SKKPbc SKKPbc 04 30 35.5 -6.0
comp=Z,2.0nm,0.7s,baz=355,slow=5.6,SNR=4.7
EGMT Eagleton 124.84 306 P PKiKP 04 17 27.2 0.0
baz=138
DMN Daman 124.84 92 eP PKPdf 04 17 27.4 -0.4
O03E Paynes Creek 124.84 292 P PKiKP 04 17 27.6 +0.1
baz=138
GKN Gorkha 124.89 91 eP PKPdf 04 17 27.2 -0.6
PUL Pulkovo 124.97 31c iPKIKP PKPdf 04 17 25.6 -1.0
PUL pmax pmax
comp=Z,110nm,0.6s
PKIN Phulchoki 124.98 92 eP PKPdf 04 17 27.5 -0.6
comp=Z,59nm,0.8s
PKI Pulchoki 124.98 92 eP PKPdf 04 17 27.6 -0.6
comp=Z,142nm,1.1s
SAIH SAIHA 125.04 103 eP PKiKP 04 17 29.5 +1.0
SAIH IAmb IAmb 04 17 31.4
comp=Z,39nm,0.6s
KKN Kakani 125.08 92 eP PKPdf 04 17 27.4 -0.8
comp=Z,67nm,0.7s
CHTO Chiang Mai 125.13 111 PKiKP 04 17 28.6 0.0
CHTO Chiang Mai 125.13 111 PKIKP PKiKP 04 17 28.6 0.0
RAMN Ramite 125.14 94 eP PKPdf 04 17 28.5 +0.1
comp=Z,88nm,0.5s
FINES FINESS Array B 125.21 28 PKhKP PKPpre 04 17 11.1
comp=Z,4.0nm,0.9s,baz=232,slow=1.6,SNR=4.1
FINES PKP PKPdf 04 17 26.4 -0.6
comp=Z,129nm,0.5s,baz=173,slow=1.3,SNR=271
FINES PP PP 04 19 18.9 -0.9
comp=Z,29nm,1.0s,baz=183,slow=3.8,SNR=5.1
FINES SKP SKPdf 04 20 47.8 -0.8
comp=Z,37nm,0.9s,baz=163,slow=2.0,SNR=8.3
FINES PKKPbc PKKPbc 04 27 06.5 +0.7
comp=Z,3.1nm,0.8s,baz=58,slow=4.0,SNR=4.1
FINES SKKPbc SKKPbc 04 30 40.9 -3.7
comp=Z,2.5nm,0.7s,baz=29,slow=3.2,SNR=6.1
O02D Mt. Diablo Mer 125.26 291 P PKiKP 04 17 29.6 +1.3
baz=138
JIRN Jiri 125.48 93 eP PKPdf 04 17 29.0 -0.2
comp=Z,201nm,0.5s
GUN Gumba 125.50 93 eP PKPdf 04 17 29.0 -0.2
comp=Z,85nm,0.7s
ODAN Odare 125.50 95 eP PKPdf 04 17 29.2 +0.1
comp=Z,114nm,0.8s
KCP Kidapawan 125.72 146⇑eP PKiKP 04 17 30.7 +0.7
N02D Trinity Center 125.81 292 P PKiKP 04 17 29.6 +0.2
baz=138
MSO Missoula 125.85 302 P PKiKP 04 17 29.1 -0.2
baz=138
M04C Macdoel 125.97 293 P PKiKP 04 17 30.2 +0.4
baz=138
BMO Blue Mountains 125.99 298 PKPdf 04 17 29.4 +0.2
BMO Blue Mountains 125.99 298 PKIKP PKPdf 04 17 29.4 +0.2
TAPN Taplejung 126.06 95 eP PKPdf 04 17 30.2 0.0
M02C Callahan 126.19 292 P PKiKP 04 17 30.9 +0.7
baz=137
YBH Yreka Blue Hor 126.37 292 PKP PKPdf 04 17 30.0 0.0
comp=Z,16nm,0.7s,baz=42,slow=2.1,SNR=40
L04D Klamath Falls 126.52 293 P PKiKP 04 17 30.9 0.0
baz=137
K04D Chiloquin, OR 126.54 294 P PKiKP 04 17 31.7 +0.9
baz=137
STOK Stokkvaagen 126.62 19 ePKPdf PKiKP 04 17 30.6 +0.5
FFC Flin Flon 126.66 316 PKPdf 04 17 29.8 -0.2
FFC Flin Flon 126.66 316 PKIKP PKPdf 04 17 29.8 -0.2
MOR8 Moi Rana 126.74 20 ePKPdf PKiKP 04 17 31.0 +0.6
MOR8 eSS SS 04 36 28.0 +3.8
J05D Fort Rock, OR 126.77 295 P PKiKP 04 17 32.1 +0.7
baz=137
KONS Konsvik 126.79 19 ePKPdf PKiKP 04 17 30.9 +0.5
KONS eSKPdf SKiKP 04 20 52.9 +0.4
SHL Shillong 126.92 100 eP PKiKP 04 17 32.6 +0.3
SHL ix x 04 20 36.4
ILULI Ilulissat 127.02 350 iP PKPdf 04 17 30.2 -0.1
comp=Z,148nm,0.8s
ILULI i 04 20 51.8
ILULI Ilulissat 127.02 350 PKPdf 04 17 30.5 +0.2
ILULI Ilulissat 127.02 350 iPKIKP PKPdf 04 17 30.2 -0.1
ILULI pmax pmax
comp=Z,150nm,0.8s
L02E Cave Junction 127.14 292 P PKiKP 04 17 33.0 +1.1
baz=137
J04D Umpqua Nationa 127.17 294 P PKiKP 04 17 33.1 +0.9
baz=137
SCO Scoresbysund 127.18 2 iP PKiKP 04 17 32.0 +0.9
SCO i 04 20 53.4
SCO Scoresbysund 127.18 2 PKiKP 04 17 32.6 +1.6
SCO Scoresbysund 127.18 2 iPKIKP PKiKP 04 17 32.0 +0.9
GUWA GUWAHATI 127.32 99 eP PKiKP 04 17 33.2 +0.4
GUWA IAmb IAmb 04 17 34.8
comp=Z,24nm,0.8s
K02D Willamette Mer 127.56 292 P PKiKP 04 17 33.8 +1.0
baz=137
I05D Terrebonne, OR 127.58 295 P PKiKP 04 17 33.8 +0.9
baz=136
IUG Iuzhnay 127.70 69 ePKP PKPdf 04 17 32.7 0.0
IUG ePP PP 04 19 37.4 +0.7
IUG Iuzhnay 127.70 69 ePKIKP PKPdf 04 17 32.6 0.0
IUG e 04 19 37.3
I04A Tendick Farm, 127.72 294 P PKiKP 04 17 33.2 +0.1
baz=136
AKTO Aktyubinsk 127.93 54 SKKPbc SKKPbc 04 30 31.4 -2.7
comp=Z,1.8nm,0.7s,baz=65,slow=13,SNR=3.3
AKTO Aktyubinsk 127.93 54 PKIKP PKPdf 04 17 31.7 -0.9
AB31 Akbulak array 127.94 56 iPKIKP PKPdf 04 17 31.0 -1.7
JBG Jabagly 128.16 69 iPKIKP PKPdf 04 17 33.5 0.0
JBG e 04 19 37.4
HAWA Hanford 128.18 298 PKiKP 04 17 34.1 +0.3
G05D Wamic, OR 128.22 296 P PKiKP 04 17 35.1 +1.1
baz=136
KOHI KOHIMA 128.24 102 eP PKiKP 04 17 34.6 -0.2
KOHI ix x 04 20 36.6
TEZP TEZPUR 128.25 100 eP PKPdf 04 17 34.2 +0.2
TEZP ix x 04 20 36.5
LOF Lofoten 128.33 18 ePKPdf PKiKP 04 17 33.9 +0.5
LOF eSKSac SKSac 04 24 24.8 -1.4
LOF eSS SS 04 36 45.8 +1.9
NEW Newport 128.38 302 P PKiKP 04 17 34.2 -0.1
baz=136
H04D Lebanon 128.41 295 P PKiKP 04 17 35.9 +1.5
baz=136
STEI Steigen 128.45 19 ePKPdf PKiKP 04 17 34.0 +0.4
STEI eSKSac SKSac 04 24 26.9 +0.5
STEI eSKSac SKSdf 04 24 28.1 -2.3
STEI eSKSac SKSac 04 24 28.2 +1.8
STEI eSP SP 04 29 31.6 -0.9
STEI eSS SS 04 36 50.2 +4.9
KLMR Klimovskoe 128.60 35⇓iPKPdf PKiKP 04 17 34.2 0.0
KLMR ⇓iPKPdf PKiKP 04 17 34.2 0.0
KLMR ⇓iPKPdf PKiKP 04 17 34.2 0.0
KLMR AMP 04 17 36.2
comp=Z,467nm,1.4s
KLMR ePP PP 04 19 41.4 -0.7
KLMR ex x 04 20 36.9
KLMR Klimovskoe 128.60 35d iPKIKP PKiKP 04 17 34.1 -0.1
KLMR e 04 19 41.3
KLMR pmax pmax
comp=Z,467nm,1.4s
KK31 Karatay Array 128.63 68 iPKIKP PKPdf 04 17 33.0 -1.2
KKAR Karatay Array 128.63 68 PKPdf PKiKP 04 17 34.9 0.0
KKAR Karatay Array 128.63 68 PKIKP PKiKP 04 17 34.9 0.0
I02D Swisshome 128.67 294 P PKiKP 04 17 36.5 +1.6
baz=136
COR Corvallis 128.74 294 PKiKP 04 17 35.6 +0.6
COR Corvallis 128.74 294 PKIKP PKiKP 04 17 35.6 +0.6
F05D White Salmon 128.75 297 P PKiKP 04 17 36.1 +1.0
baz=135
KSH Kashi 128.88 75 PKP PKiKP 04 17 35.4 -0.3
KSH PP PP 04 19 44.7 +0.2
KSH SKS SKSdf 04 24 31.1 -1.9
KSH SKKS SKKSac 04 26 22.6 -3.9
KSH LR LR
comp=Z,540nm,11.1s
KSH LR LR
comp=Z,1μm,14.3s
KSH LR LR
comp=Z,710nm,18.8s
G03D McMinnville, O 129.16 295 P PKiKP 04 17 37.2 +1.3
baz=135
SUMG Summit 129.45 356 iP PKiKP 04 17 36.7 +0.6
comp=Z,328nm,0.9s
SUMG i 04 20 43.8
SUMG Summit 129.45 356 PKiKP 04 17 36.0 -0.1
SUMG Summit 129.45 356 iPKIKP PKiKP 04 17 36.7 +0.6
SUMG pmax pmax
comp=Z,330nm,0.9s
ZIRO ZIRO 129.54 100 eP PKiKP 04 17 37.4 0.0
ZIRO IAmb IAmb 04 17 48.6
comp=Z,42nm,0.2s
ZIRO ix x 04 20 40.4
AML Almayashu 129.57 71 P PKiKP 04 17 37.6 +0.3
SNR=25
F04D Rainier, OR 129.66 296 P PKiKP 04 17 38.7 +1.9
baz=135
E04D Cinebar 129.77 297 P PKiKP 04 17 38.0 +1.0
baz=135
LSA Lhasa 129.78 96 PKP PKiKP 04 17 37.9 -0.3
EKS2 Erkin-Say 130.00 71 P PKiKP 04 17 38.1 +0.3
SNR=20
UCH Uchtor 130.07 72 P PKiKP 04 17 38.7 +0.3
SNR=20
KIRV Kirov 130.29 42 PKP PKiKP 04 17 37.2 -0.4
comp=Z,94nm,0.7s,baz=266,slow=0.4,SNR=49
KIRV SKPbc SKPab 04 20 45.8 -0.6
comp=Z,434nm,0.9s,baz=173,slow=0.2,SNR=48
KZA Kyzart 130.34 72 P PKiKP 04 17 39.3 +0.4
SNR=13
AAK Ala-Archa 130.35 71 P PKiKP 04 17 38.4 -0.2
SNR=26
AAK Ala-Archa 130.35 71 PKiKP 04 17 38.6 +0.1
AAK Ala-Archa 130.35 71c iPKIKP PKiKP 04 17 38.9 +0.3
AAK pmax pmax
comp=Z,105nm,1.7s
KBK Karagaybulak 130.60 72 P PKiKP 04 17 39.3 +0.2
SNR=19
TRO Tromso 130.60 19 ePKPdf PKiKP 04 17 37.7 -0.3
TRO eSKPdf SKiKP 04 21 00.5 +0.4
TRO eSKSac SKSac 04 24 35.1 +0.8
TRO eSP SP 04 29 45.8 -5.3
TRO eSS SS 04 37 08.6 -3.1
QIZ Qiongzhong 130.66 122 PKP PKPdf 04 17 38.5 -0.3
QIZ PP PP 04 19 54.0 -1.5
QIZ SKS SKSdf 04 24 36.6 -0.2
QIZ AMB AMB
comp=Z,310nm,5.5s
QIZ LR LR
comp=Z,480nm,16.7s
QIZ LR LR
comp=Z,340nm,14.2s
QIZ LR LR
comp=Z,1μm,35.3s
TMCR Tamitsa 130.67 32 ePKIKP PKPdf 04 17 36.7 -0.6
TMCR e 04 19 55.3
TMCR pmax pmax
comp=Z,447nm,1.3s
D03D Eldon 130.71 297 P PKiKP 04 17 40.0 +1.1
baz=134
B05A Bryant 130.74 299 P PKiKP 04 17 39.4 +0.5
baz=134
CHMS Chumysh 130.74 71 P PKiKP 04 17 38.9 -0.2
SNR=10.0
USP Ospenovka 130.80 71 P PKiKP 04 17 39.1 -0.2
SNR=11
KTK1 Kautokeino 130.90 22 ePKPdf PKPdf 04 17 38.1 +0.4
KTK1 IVmB_BB 04 17 39.5
comp=Z,2μm,1.4s
KTK1 ePP PP 04 19 56.4 -0.6
KTK1 e 04 20 48.3
KTK1 eSKPdf SKiKP 04 21 02.0 +1.1
SGDS Sogindy 131.00 71 iPKP PKPdf 04 17 38.1 -0.7
SGDS ePP PP 04 19 57.5 -0.6
PRGR Permogore 131.16 37⇓iPKIKP PKiKP 04 17 39.3 0.0
PRGR e 04 19 58.2
PRGR pmax pmax
comp=Z,291nm,0.9s
A04D Lummi Island 131.34 299 P PKiKP 04 17 40.8 +0.8
baz=133
ARCES ARCESS Array B 131.80 22 PKhKP PKPpre 04 17 19.2
comp=Z,2.7nm,0.6s,baz=200,slow=1.8,SNR=16
ARCES PKP PKPdf 04 17 39.1 -0.3
comp=Z,68nm,0.5s,baz=198,slow=1.3,SNR=110
ARCES PP PP 04 19 58.2 -4.5
comp=Z,37nm,0.7s,baz=206,slow=5.3,SNR=12
ARCES SKPbc SKPbc 04 20 50.4 -1.3
comp=Z,82nm,0.8s,baz=205,slow=2.6,SNR=16
ARCES PKKP PKKPdf 04 27 36.1 +0.5
comp=Z,2.8nm,0.8s,baz=338,slow=1.3,SNR=4.3
ARCES SKKPbc SKKPbc 04 30 17.4 -4.2
comp=Z,8.7nm,1.0s,baz=0.0,slow=6.2,SNR=4.4
ARCES ARCESS Array B 131.80 22 PKPdf 04 17 39.4 0.0
ARE0 ARCESS Array S 131.80 22 ePKPdf PKiKP 04 17 40.2 -0.2
ARE0 eSKPdf SKiKP 04 21 02.9 +0.2
ARE0 eSKPdf SKPdf 04 21 05.0 +4.2
ARE0 eSKPdf SKiKP 04 21 05.5 +2.8
ARE0 eSS SS 04 37 26.7 +0.3
BTLS Baital 131.81 69 ePKP PKPdf 04 17 40.0 -0.1
BTLS ePP PP 04 20 02.6 -0.6
BTLS Baital 131.81 69 ePKIKP PKPdf 04 17 40.0 -0.1
BTLS e 04 20 02.5
TNSS Tian-Shan 131.91 73 ePKP PKPdf 04 17 41.1 +0.1
TNSS Tian-Shan 131.91 73 ePKIKP PKPdf 04 17 41.0 +0.1
AAA Alma-Ata 132.01 73 ePKP PKiKP 04 17 43.1 +1.3
AAA Alma-Ata 132.01 73 ePKIKP PKiKP 04 17 43.0 +1.3
APA Apatity 132.03 27⇓iPKIKP PKPdf 04 17 39.8 -0.1
APA i*PP pPKPdf 04 18 07.7 -10
APA pmax pmax
comp=Z,46nm,0.6s
MDOK Medeo 132.05 73 ePKP PKPdf 04 17 40.2 -0.8
MDOK ePP PP 04 20 04.3 -0.7
MDOK eSS SS 04 37 36.2 +5.6
MDOK Medeo 132.05 73 ePKIKP PKPdf 04 17 40.1 -0.8
MDOK e 04 20 04.2
MDOK eSS SS 04 37 36.2 +5.6
KUU Kurty 132.19 71 iPKP PKPdf 04 17 40.9 -0.1
KUU ePP PP 04 20 04.2 -1.5
KUU Kurty 132.19 71 iPKIKP PKPdf 04 17 40.8 -0.1
KUU e 04 20 04.2
LLLB Lillooet 132.24 301 PKPdf PKiKP 04 17 41.1 +0.3
KEV Kevo 132.29 22 PKPdf 04 17 40.8 +0.5
KEV Kevo 132.29 22 PKIKP PKPdf 04 17 40.8 +0.5
HAMF Hammerfest 132.34 21 ePKPdf PKiKP 04 17 40.9 -0.5
HAMF ePP PP 04 20 06.0 -0.1
HAMF eSKPdf SKiKP 04 21 03.2 -0.5
HAMF eSP SP 04 30 11.2 +5.2
HAMF eSS SS 04 37 33.0 +0.2
ARU Arti 132.35 49 PKhKP PKPpre 04 17 30.8
comp=Z,0.9nm,0.5s,baz=338,slow=2.3,SNR=4.0
ARU PKP PKiKP 04 17 41.7 -0.2
comp=Z,13nm,0.6s,baz=207,slow=1.3,SNR=43
ARU PP PP 04 20 01.1 -5.4
comp=Z,7.9nm,0.9s,baz=217,slow=5.1,SNR=12
ARU SKPbc SKPbc 04 20 53.6 -0.4
comp=Z,43nm,0.8s,baz=264,slow=1.1,SNR=16
ARU SKKPbc SKKPbc 04 30 17.3 -1.4
comp=Z,1.5nm,0.7s,baz=54,slow=8.7,SNR=4.2
ARU Arti 132.35 49 PKPdf PKiKP 04 17 41.5 -0.3
ARU Arti 132.35 49 iPKIKP PKiKP 04 17 41.4 -0.5
CHKK Chushkaly 132.50 72 iPKP PKPdf 04 17 41.7 +0.2
CHKK Chushkaly 132.50 72 iPKIKP PKPdf 04 17 41.7 +0.2
LVZ Lovozero 132.59 27 PKPdf 04 17 41.2 +0.2
LVZ Lovozero 132.59 27c iPKIKP PKPdf 04 17 42.0 -0.1
LVZ pmax pmax
comp=Z,84nm,0.6s
SATY Saty 132.69 74 iPKP PKPdf 04 17 42.0 -0.1
SATY ePP PP 04 20 08.0 -1.0
SATY Saty 132.69 74 iPKIKP PKPdf 04 17 42.0 -0.1
SATY e 04 20 08.0
KULLO Kullorsuaq 132.74 350 iP PKPdf 04 17 41.3 +0.3
comp=Z,151nm,0.8s
KULLO i 04 20 54.7
KULLO Kullorsuaq 132.74 350 iPKIKP PKPdf 04 17 41.3 +0.3
KULLO pmax pmax
comp=Z,150nm,0.8s
UZB Uzynbulak 133.08 74 iPKP PKPdf 04 17 42.7 -0.1
UZB ePP PP 04 20 10.2 -1.3
UZB Uzynbulak 133.08 74 iPKIKP PKPdf 04 17 42.7 -0.1
UZB e 04 20 10.1
KPKS Kokpek 133.12 73 ePKP PKPdf 04 17 42.5 -0.4
KPKS ePP PP 04 20 10.4 -1.3
KPKS Kokpek 133.12 73 ePKIKP PKPdf 04 17 42.4 -0.4
KPKS e 04 20 10.4
SHLS Shalkode 133.32 74 ePKP PKiKP 04 17 44.4 -0.2
SHLS ePP PP 04 20 13.1 +0.1
SHLS Shalkode 133.32 74 ePKIKP PKiKP 04 17 44.3 -0.2
SHLS e 04 20 13.1
PDGK Podgornoye 133.45 74 PKIKP PKPdf 04 17 39.8 -3.7
SVE Sverdlovsk 133.47 49 ePKIKP PKiKP 04 17 43.8 -0.4
SVE pmax pmax
comp=Z,162nm,1.7s
DAG Danmarks Havn 133.56 3 iP PKPdf 04 17 42.4 -0.1
comp=Z,88nm,0.9s
DAG Danmarks Havn 133.56 3 iPKIKP PKPdf 04 17 42.4 -0.1
DAG pmax pmax
comp=Z,88nm,0.9s
BRZS Berezniki 134.45 63 ePKP PKPdf 04 17 45.0 0.0
BRZS ePP PP 04 20 18.5 -1.5
BRZS Berezniki 134.45 63 ePKIKP PKPdf 04 17 45.0 0.0
BRZS e 04 20 18.5
BJO1 Bjornoya 134.73 16 ePKPdf PKiKP 04 17 45.9 -0.3
BJO1 ePP PP 04 20 21.3 0.0
BJO1 eSP SP 04 30 30.5 +4.2
BJO1 eSS SS 04 38 06.1 +4.6
BRVK Borovoye 135.30 58 PKPdf PKiKP 04 17 47.7 -0.3
BRVK Borovoye 135.30 58 PKIKP PKiKP 04 17 47.7 -0.3
GYA Guiyang 135.40 113 PKP PKPdf 04 17 47.7 0.0
GYA PP PP 04 20 32.7 +6.7
GYA SKKS SKKSac 04 26 59.7 -7.2
GYA SS SS 04 38 11.3 +0.7
GYA AMB AMB
comp=Z,2μm,8.2s
GYA LR LR
comp=Z,210nm,20.8s
GYA LR LR
comp=Z,270nm,21.7s
GYA LR LR
comp=Z,290nm,21.2s
GUMO Guam 136.33 169 SKPbc SKPbc 04 21 07.7 -0.5
comp=Z,411nm,0.8s,baz=187,slow=17,SNR=17
HSPB Hornsund (broa 136.36 13 ePKPdf PKPdf 04 17 48.1 +0.4
HSPB IVmB_BB 04 17 49.5
comp=Z,606nm,1.6s
HSPB ePP PP 04 20 29.7 -1.8
HSPB eSKPdf SKPdf 04 21 07.8 -1.2
HSPB eSKPdf SKPbc 04 21 08.0 +1.6
HSPB ePKSdf PKSdf 04 21 24.4 +1.0
HSPB eSKSac SKSac 04 24 49.2 +2.0

HSPB eSKSac SKSac 04 24 49.3 +2.0
HSPB eSP SP 04 30 35.7 -4.3
HSPB eSS SS 04 38 20.2 -0.8
YKA Yellowknife Ar 136.77 317 PKhKP PKPpre 04 17 34.4
comp=Z,6.3nm,0.6s,baz=123,slow=3.9,SNR=17
YKA PKP PKPdf 04 17 48.9 0.0
comp=Z,122nm,0.6s,baz=131,slow=2.1,SNR=89
YKA PP PP 04 20 30.1 -4.1
comp=Z,21nm,0.8s,baz=123,slow=6.1,SNR=9.4
YKA SKPbc SKPbc 04 21 06.5 -1.5
comp=Z,77nm,0.8s,baz=127,slow=1.7,SNR=14
YKA PKKP PKKPdf 04 27 25.6 -0.2
comp=Z,0.4nm,0.4s,baz=343,slow=0.6,SNR=5.7
YKA SKKPbc SKKPbc 04 30 01.5 -1.0
comp=Z,17nm,1.1s,baz=309,slow=3.5,SNR=12
MAKZ Makanchi 137.09 72 PKHKP PKPpre 04 17 39.7
MK31 Makanchi Array 137.25 72 i PKHKP PKPpre 04 17 38.4
MKAR Makanchi Array 137.25 72 PKhKP PKPpre 04 17 40.2
comp=Z,2.4nm,0.6s,baz=228,slow=3.6,SNR=22
MKAR PKP PKPdf 04 17 49.4 -0.9
comp=Z,6.4nm,0.5s,baz=237,slow=2.7,SNR=26
MKAR SKPbc SKPbc 04 21 08.6 -1.4
comp=Z,158nm,0.9s,baz=254,slow=3.2,SNR=52
MKAR PKKP PKKPdf 04 27 24.9 +0.3
comp=Z,0.7nm,0.6s,baz=57,slow=4.5,SNR=4.1
MKAR SKKPbc SKKPbc 04 29 58.2 -1.2
comp=Z,3.0nm,0.9s,baz=46,slow=6.9,SNR=4.7
MKAR Makanchi Array 137.25 72 PKPdf PKPdf 04 17 51.1 +0.7
HOPEN Hopen 137.25 16 ePKPdf PKiKP 04 17 50.6 -0.7
HOPEN eSKPdf SKiKP 04 21 10.1 +1.1
HOPEN IVMs_BB IVMs_BB 04 21 10.8
comp=Z,2μm,3.2s
HOPEN eSS SS 04 38 24.5 -7.1
SPITS Spitsbergen Ar 137.45 12 PKhKP PKPpre 04 17 39.8
comp=Z,6.1nm,0.5s,baz=170,slow=10,SNR=12
SPITS PKP PKPdf 04 17 49.8 0.0
comp=Z,278nm,1.1s,baz=184,slow=6.6,SNR=20
SPITS SKPbc SKPbc 04 21 08.9 -0.8
comp=Z,138nm,0.9s,baz=146,slow=14,SNR=16
SPITS SKKPbc SKKPbc 04 29 58.6 -2.1
comp=Z,14nm,1.0s,baz=94,slow=12,SNR=2.9
CD2 Chengdu 137.50 107 PKP PKiKP 04 17 53.0 -0.3
CD2 PP PP 04 20 40.4 +1.3
CD2 SKKS 04 27 20.0
CD2 SS SS 04 38 38.8 +3.3
CD2 AMB AMB
comp=Z,2μm,6.8s
KBS Kingsbay 137.61 10 ePKPdf PKPdf 04 17 50.3 +0.2
KBS IVmB_BB 04 17 51.5
comp=Z,804nm,0.9s
KBS eSKPdf SKPbc 04 21 11.9 +1.9
KBS eSKSac SKSac 04 24 52.2 +1.9
KBS eSP SP 04 30 51.7 +1.2
KBS eSS SS 04 38 40.0 +4.3
KBS Kingsbay 137.61 10 PKPpre 04 17 44.4
KBS Kingsbay 137.61 10 PKIKP PKPdf 04 17 44.4 -5.6
KURK Kurchatov 137.86 66 PKPdf PKPdf 04 17 50.6 -0.6
KURK Kurchatov 137.86 66 PKIKP PKPdf 04 17 50.6 -0.6
WMQ Urumqi 138.16 79 eP PKPdf 04 17 44.4 -7.8
NOR Nord 138.42 2 i P PKPdf 04 17 42.9 -8.6
comp=Z,86nm,1.2s
NOR i 04 21 11.2
NOR Nord 138.42 2 i PKHKP PKPpre 04 17 42.9
NOR pmax pmax
comp=Z,86nm,1.2s
RES Resolute Bay 138.65 338 SKPbc SKPbc 04 21 12.4 -0.7
comp=Z,103nm,0.9s,baz=144,slow=2.4,SNR=22
RES SKKPbc SKKPbc 04 29 54.9 -0.9
comp=Z,25nm,0.9s,baz=306,slow=4.4,SNR=20
ZSN Zaisan 139.01 73 ePKP PKPdf 04 17 54.0 +0.4
ZSN ePP PP 04 20 48.4 -0.1
ZSN Zaisan 139.01 73 ePKIKP PKPdf 04 17 53.9 +0.4
ZSN e 04 20 48.4
TPUB Ta-pu 139.13 132 PKPdf 04 17 55.7 +1.1
QZH Quanzhou 139.73 128 i PKP PKPdf 04 17 56.4 +0.9
QZH PP PP 04 20 55.3 +2.8
QZH SKKS 04 27 31.8
QZH SS SS 04 39 03.0 +1.9
QZH LR LR
comp=Z,460nm,18.0s
QZH LR LR
comp=Z,250nm,18.9s
QZH LR LR
comp=Z,540nm,17.5s
DLBC Dease Lake 140.77 306 SKKPbc SKKPbc 04 29 43.9 -2.7
comp=Z,12nm,0.9s,baz=273,slow=0.4,SNR=3.2
LZH Lanzhou 141.53 102 ePKP PKPdf 04 17 53.4 -5.3
LZH SKKS 04 27 35.8
LZH SS SS 04 39 21.2 -1.8
LZH AMB AMB
comp=Z,2μm,9.2s
LZH LR LR
comp=Z,510nm,16.3s
LZH LR LR
comp=Z,520nm,17.0s
LZH LR LR
comp=Z,610nm,18.4s
GTA Gaotai 141.75 94 ⇑PKP PKPdf 04 17 53.9 -5.0
GTA PP PP 04 21 01.8 -3.6
GTA SKKS 04 27 42.1
GTA SS SS 04 39 24.6 -1.0
GTA AMB AMB
comp=Z,180nm,7.6s
GTA LR LR
comp=Z,190nm,22.5s
GTA LR LR
comp=Z,320nm,24.8s
GTA LR LR
comp=Z,490nm,22.2s
SIT Sitka 142.46 301 PKPdf 04 17 58.0 -1.3
SIT Sitka 142.46 301 PKIKP PKPdf 04 17 58.1 -1.3
WHN Wuhan 142.56 118 PKP PKPdf 04 17 49.4 -11
WHN pPKP PKiKP 04 18 17.1 +14
WHN PP PP 04 21 17.1 +7.2
WHN PKS PKSdf 04 21 22.9 -13
WHN SKKS 04 27 42.1
XAN Xi'an 142.65 109 PKP PKPdf 04 17 57.2 -3.4
XAN SKKS 04 27 45.6
XAN SS SS 04 39 33.4 -2.2
XAN AMB AMB
comp=Z,2μm,5.3s
XAN LR LR
comp=Z,210nm,13.3s
XAN LR LR
comp=Z,360nm,18.6s
XAN LR LR
comp=Z,630nm,43.6s
ZAA0 Zalesovo Array 142.83 65 PKPpre 04 17 56.3
ZALV Zalesovo Beam 142.83 65 PKhKP PKPpre 04 17 56.3
comp=Z,32nm,0.7s,baz=245,slow=3.9,SNR=56
ZALV SKPbc SKPbc 04 21 23.1 -1.5
comp=Z,142nm,0.9s,baz=257,slow=5.8,SNR=3.9
ZALV SKKPbc SKKPbc 04 29 37.7 -0.1
comp=Z,17nm,0.8s,baz=51,slow=4.2,SNR=19
C36M Paulatuk 143.58 324 P PKPab 04 17 57.8 -0.2
baz=113
DHAK Deception Hill 144.80 303 PKPdf 04 18 03.7 +0.2
JOW Kunigami 145.25 140 PKPbc PKPab 04 18 05.8 +0.3
comp=Z,13nm,0.9s,baz=170,slow=13,SNR=14
JOW SKPbc SKiKP 04 21 32.1 +0.3
comp=Z,35nm,1.0s,baz=159,slow=13,SNR=21
JOW Kunigami 145.25 140 PKPab 04 18 06.7 +1.1
NJ2 Nanjing 145.95 122 ePKPbc PKPab 04 18 07.7 -0.3
NJ2 PKPab PKPbc 04 18 08.8 +1.5
NJ2 pPKP pPKPdf 04 18 40.9 -2.6
NJ2 sPKP 04 18 59.5
NJ2 PP PP 04 21 32.2 +2.2
NJ2 SKKS 04 28 06.9
NJ2 AMB AMB
comp=Z,1μm,4.7s
NJ2 LR LR
comp=Z,500nm,18.9s
NJ2 LR LR
comp=Z,420nm,18.9s
NJ2 LR LR
comp=Z,890nm,19.9s
INK Inuvik 146.43 320 PKPbc PKPbc 04 18 07.4 -0.2
comp=Z,812nm,0.8s,baz=85,slow=2.6,SNR=189
INK SKPbc SKPbc 04 21 31.6 -0.9
comp=Z,115nm,0.9s,baz=98,slow=7.6,SNR=7.2
EPYK Eagle Plains 147.00 316 P PKPdf 04 18 05.5 -1.6
baz=108
HMT Hamilton 148.10 303 PKPdf 04 18 09.1 0.0
HMT PKPbc PKiKP 04 18 13.6 -0.5
BTO Baotou 148.13 102 ePKPbc PKPbc 04 18 08.4 -1.4
TIA Tai'an 148.51 116 PKPbc PKPdf 04 18 11.1 +0.7
TIA LR LR
comp=Z,310nm,12.8s
MENT Mentasta 148.77 308 PKPdf 04 18 09.5 -0.6
MENT PKPbc PKPbc 04 18 14.3 +0.2
HHC Hu-ho-hao-te 149.13 104 ePKPbc PKPdf 04 18 11.9 +0.5
HHC pPKP pPKPdf 04 18 48.8 +0.1
HHC SKKS 04 28 22.6
HHC eSS SS 04 40 47.0 -2.4
HHC AMB AMB
comp=Z,350nm,9.8s
HHC LR LR
comp=Z,180nm,15.3s
HHC LR LR
comp=Z,210nm,13.6s
HHC LR LR
comp=Z,320nm,28.9s
MOY Mondy 150.01 78 ePKPbc PKPdf 04 18 12.4 -0.1
MOY pmax pmax
comp=Z,421nm,2.3s
SCM Sheep Creek Mo 150.02 305 PKPdf 04 18 10.7 -1.4
SCM PKPbc PKiKP 04 18 18.5 +0.5
SCM Sheep Creek Mo 150.02 305 PKIKP PKPdf 04 18 10.7 -1.4
HDA Harding Lake 150.57 310 P PKPdf 04 18 10.8 -2.0
baz=104
ZAK Zakamensk 150.58 82 ePKIKP PKPdf 04 18 13.5 +0.1
ZAK pmax pmax
comp=Z,203nm,1.1s
ZAK pmax pmax
comp=Z,132nm,1.1s
ZAK pmax pmax
comp=Z,19nm,1.3s
ILAR Eielson Array 150.63 311 PKPbc PKPbc 04 18 18.5 0.0
comp=Z,577nm,0.8s,baz=125,slow=1.1,SNR=435
SONM Songino Array 150.86 88 PKP PKPdf 04 18 14.3 +0.3
comp=Z,16nm,1.1s,baz=210,slow=2.1,SNR=32
SONM PKPbc PKPbc 04 18 19.6 -0.2
comp=Z,103nm,0.6s,baz=220,slow=3.8,SNR=139
SONM Songino Array 150.86 88 PKPdf 04 18 13.4 -0.5
SONM PKPbc PKiKP 04 18 20.2 -0.1
POKR Poker Flat Res 150.94 311 P PKPdf 04 18 11.1 -2.2
baz=102
BJT Baijiatuau 150.94 110 PKPdf 04 18 14.2 0.0
BJT PKPbc PKiKP 04 18 20.8 +0.2
BJT PKPab PKPab 04 18 27.3 -0.7
BJT Baijiatuau 150.94 110 PKIKP PKiKP 04 18 20.8 +0.2
BJT 04 18 27.3
BJI Beijing 150.97 110 PKPbc PKPdf 04 18 15.1 +0.9
BJI pPKP pPKPdf 04 18 47.7 -3.7
BJI AMB AMB
comp=Z,530nm,7.8s
TCOL CIGO, UAF Yank 151.06 311 P PKPdf 04 18 11.1 -2.4
baz=102
KDAK Kodiak Island 151.12 295 PKP PKPdf 04 18 13.5 -0.3
comp=Z,9.9nm,0.7s,baz=159,slow=3.2,SNR=11
KDAK PKPbc PKiKP 04 18 20.4 +0.2
comp=Z,282nm,0.6s,baz=142,slow=1.5,SNR=162
KDAK Kodiak Island 151.12 295 PKPdf 04 18 12.7 -1.1
KDAK PKPbc PKiKP 04 18 20.5 +0.2
ULN Ulaanbaatar 151.23 89 PKPdf 04 18 14.5 0.0
ULN PKPbc PKiKP 04 18 21.2 +0.1
ULN Ulaanbaatar 151.23 89 PKIKP PKiKP 04 18 21.2 +0.1
TLY Talaya 151.44 79 PKiKP 04 18 21.6 +0.3
TLY Talaya 151.44 79c i PKIKP PKPdf 04 18 12.1 -2.5
TLY eSS SS 04 42 11.7 +57
TLY pmax pmax
comp=Z,405nm,1.0s
JNU Nakatsue 151.89 139 SKP SKPdf 04 21 35.0 -0.5
comp=Z,33nm,1.2s,baz=99,slow=1.8,SNR=5.0
JNU Nakatsue 151.89 139 PKPdf 04 18 16.2 +0.3
JNU PKPbc PKiKP 04 18 24.6 +1.8
IRK Irkutsk 152.06 79 ePKIKP PKPdf 04 18 14.9 -0.5
IRK pmax pmax
comp=Z,270nm,2.0s
TOLK Toolik Lake Re 152.29 318 P PKPdf 04 18 12.3 -3.0
baz=94
DL2 Dalian 152.83 118 PKPbc PKPdf 04 18 15.8 -1.2
DL2 sPKP 04 19 12.9
DL2 PP PP 04 22 10.3 +0.5
DL2 SS SS 04 41 31.4 +1.8
DL2 AMB AMB
comp=Z,580nm,4.8s
IMAR Indian Mountai 153.67 312 PKPdf 04 18 15.6 -1.7
IMAR PKPbc PKiKP 04 18 26.1 +0.8
IMAR PKPab PKPab 04 18 40.1 +1.2
INCN Inchon 153.98 127 PKPdf 04 18 18.8 0.0
INCN PKPbc PKiKP 04 18 27.9 +0.9
INCN Inchon 153.98 127 PKIKP PKPdf 04 18 18.8 0.0
KSAR Wonju Array Be 154.49 129 PKPdf 04 18 19.4 0.0
KSAR PKPbc PKiKP 04 18 29.5 +1.6
KSRS Korea Array 154.51 129 PKP PKPdf 04 18 20.0 +0.6
comp=Z,5.1nm,0.8s,baz=210,slow=1.1,SNR=18
KSRS PKPbc PKiKP 04 18 28.9 +0.9
comp=Z,8.3nm,0.7s,baz=184,slow=2.4,SNR=17
KSRS PKPab PKPab 04 18 43.2 +0.2
comp=Z,12nm,0.8s,baz=217,slow=3.7,SNR=11
KSRS SKP SKPdf 04 21 38.5 -0.2
comp=Z,9.0nm,1.0s,baz=198,slow=1.5,SNR=6.6
JHJ Hachijo jima 2 154.59 154 PKPbc PKiKP 04 18 29.0 +0.7
comp=Z,108nm,0.8s,baz=131,slow=16,SNR=2.7
INU Inuyama 155.96 147 PKPdf 04 18 22.5 +1.1
INU PKPab 04 18 49.6 +0.3
MJAR Matsushiro Arr 157.42 148 PKP PKPdf 04 18 23.1 -0.2
comp=Z,4.6nm,0.8s,baz=199,slow=2.5,SNR=11
MJAR PKPab PKPab 04 18 56.3 +0.7
comp=Z,22nm,0.9s,baz=202,slow=5.6,SNR=18
MJAR SKP SKPdf 04 21 41.8 -0.5
comp=Z,7.9nm,1.0s,baz=210,slow=2.0,SNR=5.2
MJAR PP PP 04 22 35.1 +0.1
comp=Z,7.5nm,0.9s,baz=198,slow=5.4,SNR=4.1
MJAR Matsushiro Arr 157.42 148 PKPdf 04 18 24.2 +0.9
MJAR PKPab PKPab 04 18 56.6 +0.9
MAJO Matsushiro 157.42 148 PKPdf 04 18 24.3 +1.0
MAJO PKPab 04 18 56.9 +1.3
MAJO Matsushiro 157.42 148 PKP2 PKPab 04 18 56.9 +1.3
MAJO 05 18 24.3
MAT Matsushiro 157.42 148 PKP PKPdf 04 18 24.1 +0.7
MJB9 Matsu-Tunnel 157.42 148 PKPdf 04 18 24.0 +0.7
MJB9 PKPab 04 18 57.0 +1.4
HIA Hailar 158.97 97 PKPdf 04 18 24.6 -0.3
HIA PKPab 04 19 02.7 +0.6
HIA Hailar 158.97 97 PKP2 PKPab 04 19 02.7 +0.6
HIA 05 18 24.6
BOD Bodaibo 159.33 71 ePKIKP PKPdf 04 18 23.3 -1.6
BOD e 04 19 03.3
BOD pmax pmax
comp=Z,63nm,1.8s
MDJ Mudanjiang 161.02 121 PKP PKPdf 04 18 28.1 +0.9
MDJ pPKP pPKPdf 04 19 01.4 -3.2
MDJ sPKP 04 19 15.1
MDJ LR LR
comp=Z,620nm,15.3s
MDJ LR LR
comp=Z,530nm,12.9s
MDJ LR LR
comp=Z,1μm,14.7s
ADK Adak 161.55 267 PKPab 04 19 12.7 -0.5
ADK Adak 161.55 267 PKP2 PKPab 04 19 12.7 -0.5
USRK Ussuriysk Ar. 161.80 126 PKP PKPdf 04 18 27.9 -0.1
comp=Z,5.2nm,0.8s,baz=216,slow=1.6,SNR=7.9
USRK PKPab PKPab 04 19 14.4 -0.1
comp=Z,9.0nm,0.7s,baz=230,slow=3.7,SNR=10.0
TIXI Tiksi 162.21 25 PKP PKPdf 04 18 25.6 -2.0
comp=Z,6.1nm,1.0s,baz=54,slow=1.5,SNR=22
TIXI PKPab PKPab 04 19 16.7 +1.1
comp=Z,129nm,1.1s,baz=331,slow=3.2,SNR=34
TIXI PP PP 04 23 00.8 0.0
comp=Z,55nm,1.1s,baz=337,slow=4.9,SNR=19
TIXI Tiksi 162.21 25 PKPdf 04 18 24.3 -3.3
ERM Erimo 163.87 154 PKPdf 04 18 30.7 +0.6
ERM Erimo 163.87 154 PKIKP PKPdf 04 18 30.7 +0.6
TEY Ternei 164.43 133⇓ePKIKP PKPdf 04 18 31.1 +0.6
TEY pmax pmax
comp=Z,10.0nm,2.4s
ZEA Zeya 165.23 92 i PKIKP PKPdf 04 18 31.1 +0.2
ZEA e 04 25 21.0
ZEA e 04 43 42.0
ZEA e 04 44 43.0
ZEA pmax pmax
comp=N,58nm,1.2s
ZEA pmax pmax
comp=E,22nm,1.2s
ZEA pmax pmax
comp=Z,85nm,1.2s
ZEA pmax pmax
comp=Z,500nm,9.0s
ZEA pmax pmax
comp=Z,1μm,7.0s
KLR Kul'dur 165.30 113 PKP PKPdf 04 18 30.8 -0.3
comp=Z,11nm,0.9s,baz=295,slow=1.9,SNR=36
KLR PKPab PKPab 04 19 28.7 -1.2
comp=Z,7.1nm,0.6s,baz=196,slow=2.2,SNR=10.0
KLR PKKS 04 30 14.5
comp=Z,8.1nm,1.2s,baz=266,slow=1.5,SNR=6.2
ASAJ Asahikawa 165.69 149 PKP PKPdf 04 18 30.8 -0.8
comp=Z,15nm,0.7s,baz=77,slow=29,SNR=3.5
ASAJ PKPab PKPab 04 19 33.2 +1.7
comp=Z,17nm,1.0s,baz=308,slow=26,SNR=4.2
BILL Bilibino 167.25 336 i PKIKP PKPdf 04 18 27.3 -4.8
BILL i 04 19 02.9
BILL i 04 19 37.9
BILL i 04 23 23.8
BILL i SS SS 04 44 07.2 +7.0
BILL pmax pmax
comp=Z,33nm,0.9s
YAK Yakutsk 167.30 57 PKP PKPdf 04 18 31.3 -0.9
comp=Z,10.0nm,0.5s,baz=215,slow=1.3,SNR=11
YAK PKPab PKPab 04 19 38.8 +0.6
comp=Z,5.7nm,0.5s,baz=283,slow=1.7,SNR=8.5
YAK Yakutsk 167.30 57 PKPdf 04 18 31.1 -1.1
YAK PKPab 04 19 38.6 +0.3
YSS Yuzh-Sakhalins 168.30 144 PKPdf 04 18 34.0 +0.6
YSS PKPab 04 19 44.4 +1.4
YSS Yuzh-Sakhalins 168.30 144 i PKIKP PKPdf 04 18 33.8 +0.4
YSS e 04 19 44.4
YSS ePPP PPP 04 27 40.4
YSS pmax pmax
comp=Z,1μm,6.8s
YSS pmax pmax
comp=Z,110nm,1.1s
YSS pmax pmax
comp=Z,2μm,6.2s
TYV Tymovskoe 171.53 132 ePKIKP PKPdf 04 18 35.7 +0.5
TYV pmax pmax
comp=Z,800nm,2.3s
TYV pmax pmax
comp=Z,72nm,1.5s
SEY Seymchan 173.98 1 PKP PKPdf 04 18 34.2 -1.6
comp=Z,43nm,1.0s,baz=123,slow=0.9,SNR=53
SEY PKPab PKPab 04 20 09.6 +1.7
comp=Z,42nm,1.0s,baz=355,slow=1.8,SNR=12
SEY PP PP 04 24 00.8 +0.3
comp=Z,36nm,1.3s,baz=78,slow=3.8,SNR=8.4
PET Petropavlovsk 174.78 224 PKPdf 04 18 36.3 0.0
PET Petropavlovsk 174.78 224 i PKIKP PKPdf 04 18 23.5 -13
PET e 04 24 13.0
PET eSS SS 04 45 17.9 +3.4
PET eSSS SSS 04 52 14.4
PET pmax pmax
comp=Z,73nm,1.3s
PEA0B Petropavlovsk- 175.19 219 PKPdf 04 18 36.3 -0.2
PEA0B Petropavlovsk- 175.19 219 PKIKP PKPdf 04 18 36.3 -0.2
PETK Petropavlovsk- 175.19 219 PKP PKPdf 04 18 36.4 -0.1
comp=Z,43nm,1.1s,baz=95,slow=7.4,SNR=12
PETK PKPab PKPab 04 20 14.6 +1.1
comp=Z,12nm,0.7s,baz=124,slow=8.4,SNR=5.1
PETK PP PP 04 24 13.0 +6.4
comp=Z,19nm,1.0s,baz=123,slow=5.5,SNR=4.9
MA2 Magadan 177.17 20 PKP PKPdf 04 18 35.5 -1.3
comp=Z,23nm,1.0s,baz=94,slow=2.6,SNR=10
MA2 Magadan 177.17 20 PKPab 04 20 23.2 +1.2

IDC 01 04:02:10.7±2.3, 14.76N×123.65E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.5/71, mbtmp3.9/5, Error ellipse: s-maj=168.5km s-min=19.8km az=66.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	32.71	176	P	P	04 08 44.2	-0.9
	1.3nm,0.3s,baz=9.4,slow=8.8,SNR=7.4						
WRA	Warramunga Arr	36.05	163	P	P	04 09 13.5	-0.6
	3.8nm,0.5s,baz=344,slow=8.9,SNR=27						
ASAR	Alice Springs	39.48	165	P	P	04 09 44.3	+1.1
	0.3nm,0.4s,baz=344,slow=7.5,SNR=11						
MKAR	Makanchi Array	46.93	322	P	P	04 10 44.6	+1.4
	0.6nm,0.6s,baz=117,slow=7.6,SNR=8.3						
KURBB	Kurchatov Arra	50.95	324	P	P	04 11 12.0	-1.9
	0.2nm,0.4s,baz=128,slow=5.7,SNR=4.2						

TAP 01 04:09:16.8, 24.43N×121.95E, h5km, ML2.9, C
JMA 01 04:09:16.0±0.1, 24.42N×121.97E, h15km, M2.3
ISC 01 04:09:16.0±0.8, 24.44N±0.02×121.99E±0.02, h12km±6km, n76, σ0.54/142, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.17	47	P	Pg	04 09 20.5	+0.7
	baz=53						
EOS1				S	Sg	04 09 24.2	+1.7
	baz=53						
TWC	Suao	0.22	322	i P	Pg	04 09 20.3	-0.4
	baz=333						
TWC				eS	Sg	04 09 22.8	-1.1
	baz=333						
NANB	Nanao	0.22	268	i P	Pg	04 09 20.5	-0.3
	baz=268						
NANB				S	Sg	04 09 23.4	-0.7
	baz=268						
ENA	Nanau	0.23	268	P	Pg	04 09 20.4	-0.5
	baz=268						
ENA				S	Sg	04 09 23.4	-0.8
	baz=268						
ILA	Ilan	0.40	326	P	Pg	04 09 24.1	+0.1
	baz=331						
ILA				S	Sg	04 09 29.8	+0.5
	baz=331						
EGS		0.41	352	P	Pg	04 09 24.4	+0.2
	baz=358						
EGS				S	Sb	04 09 31.0	-0.4
	baz=358						
TWE	Neicheng	0.41	314	i P	Pg	04 09 24.0	-0.2
	baz=319						
TWE				S	Sg	04 09 29.4	-0.3
	baz=319						
ENTT	Nioudou	0.44	298	i P	Pg	04 09 24.6	-0.2
	baz=300						
ENTT				S	Sg	04 09 29.9	-0.7
	baz=300						
NTC	Toucheng	0.44	340	P	Pg	04 09 24.6	-0.1
	baz=345						
NTC				i S	Sg	04 09 31.3	+0.6
	baz=345						
NACB	Ninganchiao	0.45	234	i P	Pg	04 09 24.5	-0.3
	baz=231						
NACB				eS	Sg	04 09 30.8	0.0
	baz=231						
SLBB	Yuanshan	0.46	314	i P	Pg	04 09 25.1	+0.1
	baz=317						
SLBB				i S	Sg	04 09 31.1	0.0
	baz=317						
NDT	Datong Townshi	0.47	291	P	Pg	04 09 25.2	0.0
	baz=292						
NDT				eS	Sg	04 09 30.9	-0.6
	baz=292						
TWD	Chiawan	0.51	226	P	Pg	04 09 25.8	-0.1
	baz=222						
TWD				eS	Sg	04 09 33.3	+0.6
	baz=222						
ETLH	Xiulin Townshi	0.52	244	P	Pg	04 09 25.9	-0.3
	baz=242						
ETLH				eS	Sg	04 09 33.2	0.0
	baz=242						
TIPB	Shuangxi	0.56	344	P	Pg	04 09 26.8	-0.1
	baz=347						
TIPB				eS	Sg	04 09 34.7	+0.4
	baz=347						
NNSH	Datong	0.56	269	P	Pg	04 09 26.6	-0.3
	baz=269						
NNSH				eS	Sg	04 09 33.5	-0.9
	baz=269						
NNSB	Datong	0.56	269	P	Pg	04 09 26.7	-0.3
	baz=269						
NNSB				eS	Sg	04 09 33.7	-0.7
	baz=269						
NWLT	Wulai	0.56	307	P	Pg	04 09 27.0	-0.1
	baz=309						
NWLT				eS	Sg	04 09 34.1	-0.4
	baz=309						
NNS	Nan Shan	0.57	271	i P	Pg	04 09 26.9	-0.3

	baz=270						
NNS				eS	Sg	04 09 33.7	-1.0
	baz=270						
TWB1	**Santiao Chiao**	**0.57**	**359**	P	**Pg**	**04 09 27.7**	**+0.5**
	baz=3.0						
TWB1				eS	Sg	04 09 35.0	+0.3
	baz=3.0						
YHNB	**Yeheng**	**0.61**	**293**	P	**Pg**	**04 09 27.8**	**-0.1**
	baz=294						
YHNB				eS	Sg	04 09 34.9	-1.1
	baz=294						
NSK	**Sanguang**	**0.63**	**293**	P	**Pg**	**04 09 28.2**	**-0.1**
	baz=294						
NSK				eS	Sg	04 09 35.7	-0.9
	baz=294						
TWA	**Mucha**	**0.66**	**325**	eP	**Pg**	**04 09 29.3**	**+0.4**
	baz=328						
TWA				eS	Sb	04 09 38.1	-0.5
	baz=328						
NWF	**Wu-fen Shan**	**0.66**	**343**	eP	**Pb**	**04 09 29.6**	**+0.1**
	baz=346						
NWF				eS	Sb	04 09 38.7	0.0
	baz=346						
WFSB	**Wu-fen Shan**	**0.66**	**343**	P	**Pb**	**04 09 29.6**	**+0.1**
	baz=346						
WFSB				eS	Sg	04 09 38.0	+0.4
	baz=346						
NHDH	**Xindian Distri**	**0.68**	**321**	eP	**Pb**	**04 09 29.6**	**-0.1**
	baz=323						
NHDH				eS	Sg	04 09 37.8	-0.3
	baz=323						
TATO	**Taipei**	**0.71**	**319**	eP	**Pg**	**04 09 30.1**	**+0.3**
	baz=322						
TATO				eS	Sg	04 09 38.5	-0.6
	baz=322						
WHF	**Hehuan Shan**	**0.73**	**247**	P	**Pg**	**04 09 29.8**	**-0.4**
	baz=245						
WHF				eS	Sg	04 09 39.9	+0.1
	baz=245						
TWT	**Tachien**	**0.77**	**256**	P	**Pg**	**04 09 31.2**	**+0.3**
	baz=255						
TWT				eS	Sg	04 09 41.2	+0.2
	baz=255						
TDCB	**Techi**	**0.78**	**257**	eP	**Pg**	**04 09 31.2**	**0.0**
	baz=256						
TDCB				eS	Sg	04 09 40.9	-0.6
	baz=256						
WLTB	**Daxi**	**0.79**	**302**	eP	**Pb**	**04 09 31.8**	**+0.1**
	baz=303						
WLTB				eS	Sg	04 09 41.9	+0.1
	baz=303						
ESL	**Shilin**	**0.80**	**220**	P	**Pg**	**04 09 31.3**	**-0.3**
	baz=217						
ESL				eS	Sg	04 09 41.6	-0.6
	baz=217						
YM10	**YM10**	**0.82**	**331**	eP	**Pb**	**04 09 32.7**	**+0.5**
	baz=333						
YM10				eS	Sb	04 09 43.5	+0.3
	baz=333						
YM11	**YM11**	**0.82**	**332**	eP	**Pb**	**04 09 32.7**	**+0.5**
	baz=334						
YM05	**YM05**	**0.82**	**332**	eP	**Pb**	**04 09 32.7**	**+0.4**
	baz=334						
YM05				eS	Sb	04 09 43.4	0.0
	baz=334						
YM04	**YM04**	**0.83**	**330**	eP	**Pb**	**04 09 32.8**	**+0.4**
	baz=332						
YM04				eS	Sb	04 09 44.2	+0.8
	baz=332						
YM08	**YM08**	**0.83**	**334**	eP	**Pb**	**04 09 32.6**	**+0.1**
	baz=336						
YM08				eS	Sb	04 09 44.1	+0.5
	baz=336						
CHGB	**Renai**	**0.84**	**244**	P	**Pg**	**04 09 32.2**	**-0.1**
	baz=242						
CHGB				eS	Sg	04 09 43.2	-0.1
	baz=242						
TWS1	**Kuangyinshan**	**0.84**	**322**	eP	**Pb**	**04 09 33.1**	**+0.5**
	baz=324						
TWS1				eS	Sb	04 09 44.6	+0.7
	baz=324						
YM03	**YM03**	**0.85**	**331**	eP	**Pg**	**04 09 32.6**	**+0.2**
	baz=333						
ANP	**Anpu**	**0.86**	**330**	eP	**Pb**	**04 09 33.1**	**+0.2**
	baz=332						
JYNG	**Yonagunijimaku**	**0.87**	**89**	P	**Pg**	**04 09 32.6**	**-0.2**
JYNG				eS	Sg	04 09 44.2	+0.1
OWD	**Renai**	**0.89**	**237**	P	**Pg**	**04 09 32.7**	**-0.5**
	baz=236						
OWD				eS	Sg	04 09 45.1	+0.3
	baz=236						
NCU	**National Centr**	**0.91**	**306**	eP	**Pn**	**04 09 34.8**	**+0.3**
	baz=307						
NCU				eS	Sb	04 09 46.6	+0.9
	baz=307						
NCUH	**Zhongli**	**0.91**	**306**	eP	**Pn**	**04 09 34.9**	**+0.3**
	baz=307						
NCUH				eS	Sn	04 09 47.1	-0.5
	baz=307						
TWY	**Chenhua**	**0.91**	**337**	eP	**Pb**	**04 09 34.2**	**+0.5**
	baz=339						
TWY				eS	Sb	04 09 45.7	-0.1
	baz=339						
LIOB	**Emei**	**0.92**	**283**	eP	**Pb**	**04 09 34.4**	**+0.5**
	baz=284						
LIOB				eS	Sg	04 09 45.4	-0.3
	baz=284						
EGFH	**Guangfu**	**0.92**	**214**	eP	**Pg**	**04 09 33.9**	**0.0**
	baz=212						
NSTT	**Nanjuang**	**0.93**	**282**	eP	**Pb**	**04 09 34.2**	**+0.2**
	baz=282						
NSTT				eS	Sg	04 09 45.6	-0.3
	baz=282						
YOJ	**Yonaguni jima**	**0.93**	**88**	eP	**Pg**	**04 09 33.8**	**-0.2**
	baz=87						
YOJ				eS	Sg	04 09 46.6	+0.6
	baz=87						
YOJ	**Yonaguni jima**	**0.93**	**88**	P	**Pg**	**04 09 33.7**	**-0.2**
YOJ				eS	Sg	04 09 46.3	+0.3
WHP	**Taichung City**	**0.97**	**261**	P	**Pg**	**04 09 34.9**	**+0.1**
	baz=260						
WHP				eS	Sg	04 09 47.4	-0.1
	baz=260						
SBCB	**Hsinchu**	**0.98**	**291**	eP	**Pn**	**04 09 36.1**	**+0.5**
	baz=292						
SBCB				eS	Sn	04 09 50.4	+0.9
	baz=292						
HSN	**Hsinchu**	**1.00**	**292**	eS	**Sb**	**04 09 48.8**	**+0.4**
	baz=294						
VWDT	**VWDT**	**1.03**	**229**	eP	**Pb**	**04 09 36.0**	**+0.1**
	baz=227						
VWDT				eS	Sb	04 09 50.1	+0.8
	baz=227						
DPDB	**Guoxing**	**1.05**	**248**	eP	**Pg**	**04 09 36.6**	**+0.2**
	baz=247						
DPDB				eS	Sg	04 09 50.0	-0.1
	baz=247						
HGSD	**Ruisui**	**1.07**	**209**	eP	**Pb**	**04 09 36.8**	**+0.3**
	baz=207						
HGSD				eS	Sn	04 09 51.8	+0.1
	baz=207						
NMLH	**Miaoli**	**1.10**	**275**	eP	**Pb**	**04 09 36.9**	**0.0**
	baz=275						
NMLH				eS	Sg	04 09 51.9	+0.4
	baz=275						
TWQ1	**Liyutan**	**1.12**	**266**	eP	**Pn**	**04 09 38.1**	**+0.7**
	baz=265						
TWQ1				eS	Sg	04 09 52.5	+0.4
	baz=265						
SSLB	**Suanglung**	**1.15**	**236**	P	**Pb**	**04 09 37.6**	**-0.2**
	baz=234						
SSLB				eS	Sb	04 09 51.9	-0.8
	baz=234						
TYC	**Yuchr**	**1.17**	**243**	eP	**Pb**	**04 09 38.1**	**+0.1**
	baz=242						
PCYT	**Pengchaiyu**	**1.19**	**3**	eP	**Pb**	**04 09 37.5**	**-1.0**
	baz=5.0						
PCYT				eS	Sb	04 09 54.1	+0.3
	baz=5.0						
YULB	**Yu-li**	**1.22**	**212**	eP	**Pn**	**04 09 39.2**	**+0.3**
	baz=210						
YULB				eS	Sn	04 09 55.8	+0.6
	baz=210						
WDJ	**Dajia District**	**1.24**	**266**	eS	**Sb**	**04 09 55.0**	**-0.2**
	baz=265						
TWF1	**Yuli**	**1.25**	**211**	eP	**Pn**	**04 09 39.5**	**+0.1**
	baz=208						
WJS	**Zhushan**	**1.31**	**242**	eP	**Pg**	**04 09 41.8**	**+0.6**
	baz=241						
WJS				eS	Sg	04 09 59.1	+0.9
	baz=241						
FULB	**Fuli**	**1.39**	**208**	eP	**Pn**	**04 09 41.0**	**-0.2**
	baz=206						
ALS	**Alishan**	**1.43**	**230**	eP	**Pg**	**04 09 43.5**	**0.0**
	baz=228						
CHN5	**Tsauling**	**1.47**	**236**	eP	**Pg**	**04 09 44.6**	**+0.5**
	baz=234						
CHN5				eS	Sg	04 10 04.2	+0.9
	baz=234						
IRIF	**Iriomote-Funau**	**1.59**	**93**	P	**Pn**	**04 09 43.1**	**-0.8**
IRIF				S	Sn	04 10 03.8	-0.5
TPUB	**Ta-pu**	**1.69**	**228**	eP	**Pb**	**04 09 47.6**	**+0.7**
	baz=227						
TPUB				eS	Sn	04 10 07.4	+0.6
	baz=227						
JKRS	**Kuro-shima**	**1.85**	**96**	P	**Pn**	**04 09 47.2**	**-0.3**
JKRS				eS	Sn	04 10 09.7	-1.1
SLGT	**Liugui**	**1.90**	**221**	eP	**Pb**	**04 09 50.6**	**+0.1**
	baz=219						
SLGT				eS	Sb	04 10 14.8	+0.7
	baz=219						
JIJ	**Ishigaki jima**	**1.96**	**92**	P	**Pn**	**04 09 49.2**	**+0.2**
JIJ				eS	Sn	04 10 11.6	-1.9
JISG	**Ishigakijimahi**	**2.12**	**85**	P	**Pn**	**04 09 50.4**	**-0.8**
JISG				S	Sn	04 10 16.6	-0.8
VWUC	**VWUC**	**2.38**	**284**	eP	**Pn**	**04 09 54.9**	**+0.1**
	baz=283						
VWUC				eS	Sn	04 10 22.3	-1.6
	baz=283						

ROM 01 04:10:47.0±0.1, 43°.394N±0°.003×12°.512E±0°.003, h5km, ML1.1/3, 5C-1D, Error ellipse: s-maj=0.3km s-min=0.1km az=31.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.05**	**122**	⇑P	Pg	04 10 48.6	+0.1
ATFO				S	Sg	04 10 49.7	+0.2
ATFO				AML	AML		
	comp=E,694μm,0.4s						
ATFO				AML	AML		
	comp=N,846μm,0.4s						
ATVO	**AVT- Monte Val**	**0.08**	**261**	⇑P	Pg	04 10 49.0	+0.1
ATVO				S	Sg	04 10 50.5	+0.4
ATVO				AML	AML		
	comp=E,212μm,0.4s						
ATVO				AML	AML		
	comp=N,207μm,0.1s						
ATVO				AML	AML		
	comp=E,212μm,0.4s						
ATPI	**Pietralunga -**	**0.10**	**305**	⇑P	Pg	04 10 49.5	+0.3
ATPI				S	Sg	04 10 51.4	+0.8
ATPI				AML	AML		
	comp=E,129μm,1.6s						
ATPI				AML	AML		
	comp=N,107μm,0.3s						
MURB	**Monte Urbino**	**0.13**	**176**	P	Pg	04 10 50.1	+0.3
PIEI	**Pieia**	**0.14**	**7**	P	Pg	04 10 50.5	+0.5
PIEI				AML	AML		
	comp=E,118μm,1.6s						
PIEI				AML	AML		
	comp=E,118μm,1.6s						
PIEI				AML	AML		
	comp=N,115μm,0.6s						
FRON	**Frontone**	**0.20**	**51**	P	Pg	04 10 51.4	+0.5
FRON				S	Sg	04 10 55.0	+1.4
NARO	**Abbazia di Nar**	**0.22**	**13**	⇑P	Pg	04 10 51.9	+0.5
ATTE	**AVT- Monte Tez**	**0.23**	**211**	⇓P	Pg	04 10 51.9	+0.4
BADI	**Badiali**	**0.23**	**301**	⇑P	Pg	04 10 52.0	+0.5
BADI				S	Sg	04 10 56.1	+1.6
BADI				AML	AML		
	comp=N,162μm,1.0s						
BADI				AML	AML		
	comp=E,117μm,1.6s						
ATCC	**AVT- Casa Cast**	**0.23**	**156**	P	Pg	04 10 52.0	+0.5
ATCC				S	Sg	04 10 56.3	+1.8
PE3	**Peglio**	**0.30**	**358**	P	Pb	04 10 54.1	-0.8

ATH 01 04:22:18.7, 38°.21N×20°.39E, h16km±1km, ML2.5/1, Error ellipse: s-maj=2.3km s-min=1.2km az=260.0
THE 01 04:22:18.9, 38°.20N×20°.40E, h16km±1km, ML2.6/5, Error ellipse: s-maj=1.1km s-min=0.5km az=189.0
ISC 01 04:22:18.8±1.3, 38°.20N±0°.04×20°.40E±0°.06, h16km±5km, n14, σ0s24/27, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.02**	**211**	P	**Pg**	**04 22 21.5**	**-0.1**
CHV1				S	**Sg**	**04 22 23.4**	**-0.2**
	14μm,0.1s						
LXR1	**Lixouri, Cepha**	**0.03**	**91**	P	**Pg**	**04 22 21.7**	**0.0**
LXR1				S	**Sg**	**04 22 23.9**	**+0.3**
	10μm,0.1s						
KEF3	**Kipouria, Keph**	**0.04**	**273**	P	**Pg**	**04 22 21.5**	**-0.2**
KEF3				S	**Sg**	**04 22 23.5**	**-0.2**
KEF4	**Livadi, Kephal**	**0.06**	**22**	P	**Pg**	**04 22 21.9**	**0.0**
KEF4				S	**Sg**	**04 22 24.1**	**+0.2**
ARG2	**Argostoli**	**0.08**	**107**	P	**Pg**	**04 22 21.9**	**-0.1**
ARG2				S	**Sg**	**04 22 24.1**	**0.0**
	3μm,0.1s						
KEF2	**Argostoli. Kep**	**0.08**	**116**	P	**Pg**	**04 22 21.9**	**-0.1**
KEF2				S	**Sg**	**04 22 24.2**	**0.0**
KEF1	**Kardakata, Kep**	**0.10**	**38**	P	**Pg**	**04 22 22.1**	**-0.1**
KEF1				S	**Sg**	**04 22 24.4**	**-0.1**
VLS	**Valsamata**	**0.15**	**99**	P	**Pg**	**04 22 22.8**	**-0.2**
VLS				S	**Sg**	**04 22 25.7**	**0.0**
	2μm,0.1s						
VLS	**Valsamata**	**0.15**	**99**	P	**Pg**	**04 22 22.7**	**-0.2**
VLS				S	**Sg**	**04 22 25.8**	**0.0**
VLS				AML	AML	04 22 25.9	
	comp=E,4854μm,0.1s						
VLS				AML	AML	04 22 25.9	
	comp=N,3625μm,0.1s						
FSK	**Fiskardo**	**0.29**	**27**	P	**Pg**	**04 22 24.7**	**-0.3**
FSK				S	**Sb**	**04 22 29.8**	**-0.4**
	comp=N,122nm,0.2s						
VLMS	**Volimes, Zakyn**	**0.39**	**147**	P	**Pg**	**04 22 26.3**	**-0.4**
VLMS				S	**Sb**	**04 22 33.1**	**+0.1**
EVGI	**Lefkada island**	**0.47**	**26**	P	**Pg**	**04 22 28.1**	**-0.1**
EVGI				S	**Sb**	**04 22 35.0**	**-0.3**
EVGI	**Lefkada island**	**0.47**	**26**	P	**Pg**	**04 22 28.0**	**-0.1**
EVGI				S	**Sb**	**04 22 34.9**	**-0.3**
LKD2	**Lefkada island**	**0.62**	**19**	P	**Pn**	**04 22 33.5**	**+0.5**

RSNC 01 04:37:05.7±1.2, 6°.83N×73°.14W, h148km±4km, ML3.4, Mw3.6, 6C-5D, Fault plane solution: NP1:φs11.00000°, δ32.00000°, λ135.00000°, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**191**	eP	Pn	04 37 25.9	-0.3
BARC				eS	Sn	04 37 40.6	-1.1
BARC				i		04 37 43.8	
	comp=Z,1μm,0.5s						
BRRC	**Barranca, Sant**	**0.64**	**296**	⇑iP	Pn	04 37 27.7	+0.1
BRRC				eS	Sn	04 37 44.1	-0.2
BRRC				i		04 37 48.1	
	comp=Z,266nm,0.4s						
PAMC	**Pamplona, Colo**	**0.67**	**40**	⇓iP	Pn	04 37 28.7	+0.3
PAMC				eS	Sn	04 37 45.6	-0.1
PAMC				i		04 37 47.9	
	comp=Z,471nm,0.4s						
RUSC	**La Rusia**	**0.93**	**177**	⇑iP	Pn	04 37 29.8	-0.5
RUSC				eS	Sn	04 37 48.6	-0.4
RUSC				i		04 37 49.6	
	comp=Z,450nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.34**	**258**	⇑iP	Pn	04 37 32.3	-1.2
PTBC				eS	Sn	04 37 53.5	-1.3
PTBC				i		04 38 00.5	
	comp=Z,383nm,0.4s						
TAMC	**Tame, Arauca**	**1.39**	**106**	⇓iP	Pn	04 37 34.3	+0.3
TAMC				eS	Sn	04 37 55.8	+0.2
OCAC	**Ocana**	**1.42**	**353**	eP	Pn	04 37 34.0	-0.4
OCAC				eS	Sn	04 37 56.0	-0.5
OCAC				i		04 38 00.0	
	comp=Z,227nm,0.7s						
SPBC	**San Pablo de B**	**1.49**	**219**	⇑iP	Pn	04 37 34.6	-0.5
SPBC				eS	Sn	04 37 57.2	-0.5
SPBC				i		04 37 59.3	
	comp=Z,438nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.83**	**291**	eP	Pn	04 37 38.2	-0.6
ZARC				eS	Sn	04 38 03.4	-0.8
CTAB	**Cerro Tablazo,**	**2.09**	**211**	eP	Pn	04 37 43.9	+1.6
CTAB				eS	Sn	04 38 13.7	+3.3
NORC	**Norcasia**	**2.13**	**234**	eP	Pn	04 37 41.6	-0.7
NORC				eS	Sn	04 38 09.4	-1.1
NORC				i		04 38 14.4	
	comp=Z,215nm,0.5s						
SMLC	**San Martn de**	**2.17**	**335**	eP	Pn	04 37 42.1	-0.7
SMLC				eS	Sn	04 38 10.6	-0.7
SMLC				i		04 38 15.4	
	comp=Z,304nm,0.1s						
CHIC	**Chingaza**	**2.26**	**195**	⇑iP	Pn	04 37 43.8	-0.5
CHIC				eS	Sn	04 38 13.1	-0.8
CHIC				i		04 38 16.5	
	comp=Z,182nm,0.4s						
CROSA	**EL ROSAL, CUND**	**2.29**	**211**	eP	Pn	04 37 45.7	+1.1
CROSA				eS	Sn	04 38 14.3	-0.1
CROSA				i		04 38 21.7	
	comp=Z,200nm,0.7s						
ROSC	**El Rosal**	**2.30**	**211**	⇑iP	Pn	04 37 45.7	+1.0
ROSC				eS	Sn	04 38 15.3	+0.7
ROSC				i		04 38 24.1	
	comp=Z,252nm,0.3s						
HELC	**Santa Helena**	**2.46**	**255**	eP	Pn	04 37 46.5	-0.1
HELC				eS	Sn	04 38 17.7	-0.3
HELC				i		04 38 25.4	
	comp=Z,156nm,0.2s						
CVER	**Cruz Verde, Cu**	**2.47**	**202**	eP	Pn	04 37 46.2	-0.6
CVER				eS	Sn	04 38 18.6	0.0
UREC	**San Jos de Ur**	**2.55**	**291**	eP	Pn	04 37 45.6	-1.8
UREC				eS	Sn	04 38 16.4	-3.1
UREC				i			
	comp=Z,143nm,0.2s						
SOCV	**Socops**	**2.69**	**57**	eP	Pn	04 37 48.3	-0.8
SOCV				eS	Sn	04 38 20.1	-2.4
GUY2C	**Guyana, Caldas**	**2.73**	**234**	eP	Pn	04 37 50.0	0.0
GUY2C				eS	Sn	04 38 24.2	0.0
GUY2C				i		04 38 31.9	
	comp=Z,156nm,0.3s						
VILC	**Villavicencio,**	**2.75**	**192**	eP	Pn	04 37 49.0	-1.0
VILC				eS	Sn	04 38 23.4	-0.8
VILC				i		04 38 26.2	
	comp=Z,168nm,0.5s						
PTGC	**Puerto Gaitan,**	**2.79**	**159**	eP	Pn	04 37 49.1	-1.3
PTGC				eS	Sn	04 38 22.3	-2.6
PTGC				i		04 38 27.2	
	comp=Z,161nm,0.3s						
RREF	**El Recreo**	**2.91**	**229**	eP	Pn	04 37 52.2	-0.4
RREF				eS	Sn	04 38 28.9	+0.3
RREF				i		04 38 38.0	
	comp=Z,150nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.01**	**252**	eP	Pn	04 37 53.5	+0.1
CBOC				eS	Sn	04 38 28.5	-1.7
CBOC				i		04 38 44.4	
	comp=Z,56nm,0.7s						
DBBC	**Dabeiba**	**3.06**	**274**	⇓iP	Pn	04 37 53.2	-0.6
DBBC				eS	Sn	04 38 27.5	-3.5
DBBC				i		04 38 33.6	
	comp=Z,116nm,0.5s						
CODC	**Agustn Codazz**	**3.10**	**354**	eP	Pn	04 37 53.1	-1.2
CODC				eS	Sn	04 38 30.7	-1.3
CODC				i		04 38 39.5	
	comp=Z,51nm,0.6s						
TOLC	**Tolima**	**3.11**	**224**	eP	Pn	04 37 55.3	+0.6
TOLC				eS	Sn	04 38 33.7	+1.1
TOLC				i		04 38 38.4	
	comp=Z,54nm,0.5s						
ARGC	**Ariguani, Magd**	**3.21**	**340**	eP	Pn	04 37 55.7	0.0
ARGC				eS	Sn	04 38 34.2	-0.1
ARGC				i		04 38 46.1	
	comp=Z,87nm,0.3s						
SDV	**Santo Domingo**	**3.22**	**50**	eP	Pn	04 37 55.5	-0.5
SDV				eS	Sn	04 38 32.7	-2.1
SDV				i		04 38 35.6	
	comp=Z,53nm,0.9s						
ANIL	**Santa Ana**	**3.23**	**224**	⇓iP	Pn	04 37 57.2	+0.9
ANIL				eS	Sn	04 38 36.3	+0.9
PRAC	**Prado**	**3.55**	**210**	eP	Pn	04 37 58.9	-1.2
PRAC				eS	Sn	04 38 41.5	-0.8
PRAC				i		04 38 45.8	
	comp=Z,125nm,0.3s						
ORTC	**Ortega, Tolima**	**3.58**	**216**	eP	Pn	04 38 00.1	-0.4
ORTC				eS	Sn	04 38 43.5	+0.5
ORTC				i		04 38 48.5	
	comp=Z,66nm,0.6s						
ELOV	**Elorza**	**3.63**	**87**	⇓eP	Pn	04 38 00.2	-0.9
SJCC	**San Jacinto, C**	**3.66**	**327**	eP	Pn	04 37 59.6	-2.0
SJCC				eS	Sn	04 38 40.6	-4.3
SJCC				i		04 38 45.0	
	comp=Z,38nm,0.4s						
PLMC	**San Jos del P**	**3.67**	**239**	eP	Pn	04 38 01.4	-0.3
PLMC				eS	Sn	04 38 44.9	-0.1
PLMC				i		04 38 52.2	
	comp=Z,94nm,0.2s						
GUVC	**San Jose del G**	**4.28**	**173**	eP	Pn	04 38 07.9	-1.7
GUVC				eS	Sn	04 38 54.6	-4.9
GUVC				i		04 38 59.2	
	comp=Z,88nm,0.2s						
SMRC	**Santa Marta, M**	**4.44**	**346**	eP	Pn	04 38 10.4	-1.4
SMRC				eS	Sn	04 38 58.5	-4.7
SMRC				i		04 39 01.5	
	comp=Z,36nm,0.5s						
MACC	**Macarena, Meta**	**4.70**	**189**	eP	Pn	04 38 12.8	-2.5
MACC				eS	Sn	04 39 02.2	-7.2
MACC				i		04 39 10.4	
	comp=Z,40nm,0.8s						
BETC	**Betania**	**4.71**	**209**	eP	Pn	04 38 13.8	-1.6
FLOC	**Florencia**	**5.78**	**206**	eP	Pn	04 38 28.5	-1.1
FLOC				i		04 40 02.7	
	comp=Z,9.9nm,1.2s						

THE 01 04:42:18.3, 38°.16N×20°.35E, h0km, ML2.8/7, Error ellipse: s-maj=0.9km s-min=0.5km az=292.0
ATH 01 04:42:18.2, 38°.17N×20°.36E, h8km±2km, ML2.6/4, Error ellipse: s-maj=2.6km s-min=1.3km az=357.0
ISC 01 04:42:18.1±1.3, 38°.16N±0°.03×20°.35E±0°.06, h6km±6km, n33, σ0s54/48, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.04**	**40**	P	**Pg**	**04 42 19.2**	**-0.2**
CHV1				S	**Sg**	**04 42 19.9**	**-0.4**
KEF3	**Kipouria, Keph**	**0.05**	**356**	P	**Pg**	**04 42 19.7**	**+0.2**
LXR1	**Lixouri, Cepha**	**0.08**	**56**	P	**Pg**	**04 42 20.1**	**+0.1**
LXR1				S	**Sg**	**04 42 21.5**	**+0.2**
KEF2	**Argostoli. Kep**	**0.11**	**85**	P	**Pg**	**04 42 20.7**	**+0.3**
KEF2				S	**Sg**	**04 42 22.2**	**+0.2**
ARG2	**Argostoli**	**0.11**	**78**	P	**Pg**	**04 42 20.7**	**+0.2**
ARG2				S	**Sg**	**04 42 22.5**	**+0.4**
	40μm,0.2s						
KEF4	**Livadi, Kephal**	**0.12**	**29**	P	**Pg**	**04 42 20.7**	**+0.1**
KEF4				S	**Sg**	**04 42 21.9**	**-0.4**
KEF1	**Kardakata, Kep**	**0.15**	**37**	P	**Pg**	**04 42 21.2**	**-0.1**
KEF1				S	**Sg**	**04 42 23.1**	**-0.2**
VLS	**Valsamata**	**0.19**	**83**	P	**Pg**	**04 42 21.9**	**0.0**
VLS				S	**Sg**	**04 42 24.7**	**+0.3**
	5μm,0.3s						
VLS	**Valsamata**	**0.19**	**83**	P	**Pg**	**04 42 21.9**	**0.0**
VLS				S	**Sg**	**04 42 24.5**	**0.0**
VSK1	**VASILIKIADES**	**0.30**	**33**	P	**Pg**	**04 42 24.0**	**-0.1**
VSK1				S	**Sg**	**04 42 28.7**	**+0.6**
	2μm,0.4s						
FSK	**Fiskardo**	**0.35**	**29**	P	**Pg**	**04 42 24.8**	**-0.1**
FSK				S	**Sg**	**04 42 30.6**	**+1.2**
	595nm,0.4s						
FSK	**Fiskardo**	**0.35**	**29**	P	**Pg**	**04 42 24.7**	**-0.1**
FSK				AML	AML	04 42 34.4	
	comp=N,1178μm,0.6s						
FSK				AML	AML	04 42 34.6	
	comp=E,1188μm,0.4s						
KFL	**Anninata**	**0.35**	**97**	P	**Pg**	**04 42 24.9**	**0.0**
KFL				S	**Sg**	**04 42 30.5**	**+1.1**
	comp=E,4μm,0.4s						
KFL	**Anninata**	**0.35**	**97**	P	**Pg**	**04 42 24.8**	**0.0**
KFL				S	**Sg**	**04 42 30.4**	**+1.0**
KFL				AML	AML	04 42 32.9	
	comp=E,8368μm,0.3s						
KFL				AML	AML	04 42 33.1	
	comp=N,7184μm,0.5s						
VLMS	**Volimes, Zakyn**	**0.37**	**139**	P	**Pg**	**04 42 25.6**	**+0.3**

VLMS AML AML 04 42 36.4
comp=E,2488μm,0.2s
VLMS AML AML 04 42 39.5
comp=N,3594μm,0.3s
EVGI Lefkada island 0.52 27 P Pg 04 42 28.0 -0.2
EVGI S **Sg 04 42 36.2 +1.2**
EVGI Lefkada island 0.52 27 P Pg 04 42 28.0 -0.2
MGNA Meganis 0.61 34 P Pg 04 42 29.4 -0.5
KRI1 kERI 0.61 143 P Pg 04 42 29.9 0.0
KRI1 S **Sb 04 42 39.6 -0.5**
comp=N,1μm,0.2s
LKD2 Lefkada island 0.68 21 P Pg 04 42 31.6 +0.5
LKD2 Lefkada island 0.68 21 P Pg 04 42 31.2 0.0
TSLK Tsoukalades, L 0.71 19 P Pg 04 42 31.2 -0.5
PDO Prodromos 0.79 56 P Pg 04 42 32.9 -0.4
PDO AML AML 04 42 52.8
comp=E,736μm,0.3s
PDO AML AML 04 42 58.5
comp=N,742μm,0.3s
RLS Riolos of Patr 0.89 96 P Pg 04 42 34.5 -0.5
PVO Paravola 1.03 63 P Pg 04 42 37.5 -0.4
PVO S **Sb 04 42 53.3 +1.2**
comp=N,418nm,0.7s
PVO Paravola 1.03 63 P Pg 04 42 37.6 -0.4
DRO Drossia 1.09 100 P Pg 04 42 38.7 -0.3
AMT Artemida-Makis 1.24 120 P Pb 04 42 42.4 +0.4
EFP Efpalio 1.25 77 P Pg 04 42 41.0 -1.1
ANX Ano Chora 1.31 70 P Pg 04 42 42.5 -0.8
SERG Sergoula 1.37 79 P Pn 04 42 43.0 -0.7
KLV Kalavryta, Ach 1.42 94 P Pn 04 42 43.9 -0.7
KALE Kalithea 1.43 80 P Pn 04 42 44.0 -0.6

IDC 01 04:47:28.5±0.9, 3.79S×99.76E, h0km, mb4.1/14, mb1 4.3/14, mb1mx4.0/47, mbtmp4.1/14, MS4.4/1, Ms1 4.4/1, ms1mx3.5/30, Error ellipse: s-maj=37.8km s-min=16.0km az=48.0
NEIC 01 04:47:32.9±1.4, 3.84S±0.08×99.79E±0.07, h31km±4km, mb4.2/10, Error ellipse: s-maj=11.7km s-min=9.5km az=213.0
ISC 01 04:47:33.4±0.6, 3.83S±0.08×99.81E±0.10, h35km, n44, σ0.93/37, mb4.2/17, Southwest of Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MNAI Manna 3.18 100 Pn Pn 04 48 21.1 +0.2
BKNI Bangkinang 4.31 17 Pn Pn 04 48 35.3 -1.1
GSI Gunungsitoli 5.57 336 Pn Pn 04 48 53.5 -0.3
CISI Cisompet, Garu 8.78 115 Pn 04 49 36.5 -1.5
COCO West Island 8.81 199 Pn Pn 04 49 37.1 -1.3
CM31 Chiang Mai Arr 22.16 358 P P 04 52 27.1 +0.7
CM31 IAmb IAmb 04 53 25.5
comp=Z,7.2nm,0.4s
CMAR Chiang Mai Arr 22.16 358 P P 04 52 25.2 -1.2
comp=Z,3.0nm,0.6s,baz=186,slow=9.2,SNR=13
CHTO Chiang Mai 22.52 358 P P 04 52 30.1 -0.1
SLVN Son La 25.33 9 P P 04 52 57.8 +0.7
SLVN IAmb IAmb 04 52 58.7
comp=Z,3.5nm,0.9s
H08S2 Diego Garcia H 27.44 261 T T 05 22 56.9
baz=82,slow=74
H08S3 Diego Garcia H 27.45 261 T T 05 23 04.2
baz=82,slow=74
H08S1 Diego Carcia H 27.46 261 T T 05 23 01.7
baz=82
H01W3 Cape Leeuwin H 33.64 158 T T 05 30 18.3
baz=336,slow=76,SNR=5.0
H01W2 Cape Leeuwin H 33.65 158 T T 05 30 11.9
baz=336,slow=76,SNR=7.8
H01W1 Cape Leeuwin H 33.65 158 T T 05 30 06.4
baz=336,slow=76,SNR=3.9
LSA Lhasa 34.36 347 P P 04 54 16.7 -0.8
ENH Enshi 35.15 15 P P 04 54 23.8 -0.1
WRA Warramunga Arr 37.26 118 P P 04 54 42.8 +0.7
comp=Z,1.2nm,0.8s,baz=297,slow=9.2,SNR=3.4
ASAR Alice Springs 38.36 124 P P 04 54 52.1 +0.6
comp=Z,1.1nm,0.8s,baz=300,slow=7.6,SNR=5.3
AS31 Alice Springs 38.36 124 P P 04 54 51.8 +0.4
XAN Xi'an 38.63 12 P P 04 54 53.2 -0.3
XAN pP sP 04 55 03.4 -2.9
XAN Xi'an 38.63 12 P P 04 54 54.2 +0.7
XAN IAmb IAmb 04 55 04.3
comp=Z,6.3nm,0.8s
STKA Stephens Creek 48.10 130 P P 04 56 10.3 +0.4
comp=Z,1.6nm,0.7s,baz=282,slow=13,SNR=4.6
STKA Stephens Creek 48.10 130 IAmb IAmb 04 57 20.2
comp=Z,2.4nm,1.6s
KSH Kashi 48.40 335 P P 04 56 14.1 +1.9
KSH pP pP 04 56 18.0 -3.1
KSH PcP **PcP 04 57 39.2 +0.9**
KSH S **S 05 03 11.9 +1.3**
SONM Songino Array 51.77 6 P P 04 56 37.1 -0.5
comp=Z,2.4nm,0.8s,baz=188,slow=9.5,SNR=12
MKAR Makanchi Array 52.73 345 P P 04 56 45.0 +0.3
comp=Z,4.0nm,0.8s,baz=149,slow=8.7,SNR=41
USRK Ussuriysk Ar. 55.85 28 LR LR 05 21 36.7
comp=Z,343nm,21.7s,baz=186,slow=37
GEYT Alibeck 56.73 321 P P 04 57 14.2 +0.3
comp=Z,2.4nm,0.9s,baz=111,slow=7.9,SNR=7.2
ZALV Zalesovo Beam 58.92 350 P P 04 57 29.1 +0.3
comp=Z,5.7nm,0.9s,baz=165,slow=6.2,SNR=21
KLR Kul'dur 59.67 24 P P 04 57 34.4 +0.2
comp=Z,0.8nm,0.6s,baz=186,slow=6.2,SNR=5.5
KBZ Khabaz 69.56 320 P P 04 58 39.4 +0.6
comp=Z,3.7nm,0.9s,baz=136,slow=6.6,SNR=6.2
BRTR Keskin Array B 74.42 313 P P 04 59 08.1 -0.2
comp=Z,1.4nm,0.5s,baz=138,slow=5.7,SNR=13
KLMR Klimovskoe 79.39 334 eP P 04 59 33.2 -2.3
KLMR AMP 04 59 39.7
comp=Z,20nm,1.8s
AKASG Malin Array Be 80.81 323 P P 04 59 42.9 -0.5
comp=Z,1.1nm,0.6s,baz=89,slow=5.0,SNR=5.1
KOLS Kolonicke sedl 84.72 320 eP P 05 00 05.7 +1.9
FINES FINESS Array B 85.64 332 P P 05 00 08.4 +0.3
comp=Z,3.5nm,1.0s,baz=115,slow=6.6,SNR=5.9
VYHS Vyhne 86.87 319 eP P 05 00 16.1 +1.5
GERES GERESS Array B 90.29 319 P P 05 00 31.5 +0.7
comp=Z,0.8nm,0.7s,baz=112,slow=1.1,SNR=4.7
H09N1 TRISTAN DA CUN 105.12 230 T T 07 00 05.1
SNR=70
NVAR Mina Array Bea 131.12 40 PKP PKiKP 05 06 43.1 -0.2
comp=Z,0.2nm,0.5s,baz=336,slow=2.0,SNR=2.4
PDAR Pinedale Array 133.25 30 PKP PKPdf 05 06 46.1 -0.2
comp=Z,0.3nm,0.9s,baz=358,slow=2.1,SNR=3.2
TXAR Lajitas Array 146.25 39 PKPbc PKPab 05 07 12.1 +0.3
comp=Z,1.7nm,0.7s,baz=296,slow=0.9,SNR=28
TXAR Lajitas Array 146.25 39 PKPab 05 07 12.2 +0.4

IDC 01 04:53:50.3±1.9, 52.62N×170.40W, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.3/55, mbtmp3.3/4, ML3.0/1, Error ellipse: s-maj=51.1km s-min=28.6km az=14.0
AEIC 01 04:54:04.5±1.2, 52.9N±0.2×169.3W±0.2, h76km±6km, ML3.2/27, Error ellipse: s-maj=38.6km s-min=8.0km az=157.0
NEIC 01 04:54:05.3±1.6, 53.0N±0.3×169.3W±0.2, h85km±4km, Error ellipse: s-maj=38.9km s-min=8.2km az=158.0
ISC 01 04:54:04.9±1.1, 52.9N±0.2×169.34W±0.10, h81km, n39, σ1.04/36, mb3.4/3, Fox Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NIKH Nikolski High 0.30 79 Pn 04 54 16.8 -0.4
NIKH **Sn 04 54 26.6 +0.2**
OKSP Okmok Steeple 0.72 62 Pn 04 54 20.8 0.0
OKWE Okmok W'ng Wal 0.86 50 Pn 04 54 22.4 0.0
OKRE Okmok R'deer P 0.93 49 Pn 04 54 23.2 +0.1
OKER Okmok East Rim 0.94 55 Pn 04 54 23.5 +0.1
OKER **Sn 04 54 39.4 +2.2**
OKFG Magazine Ridge 0.99 60 Pn 04 54 24.0 +0.2
MGOD Makushin Gods 1.72 58 Pn 04 54 33.1 0.0
MCIR Makushin Cirqu 1.79 54 Pn 04 54 34.6 +0.5
MREP Makushin Rep't 1.79 59 Pn 04 54 34.2 +0.1
MSW Makushin Switc 1.83 56 Pn 04 54 34.4 -0.1
MSW **Sn 04 54 58.1 +1.1**
MNAT Makushin Natee 1.86 58 Pn 04 54 35.3 +0.4
MTBL Makushin Table 1.91 55 Pn 04 54 36.2 +0.7
UNV Unalaska Valle 1.94 60 Pn 04 54 36.1 +0.3
UNV **Sn 04 55 00.6 +1.1**
AKRB Akutan Reef Bi 2.30 57 Pn 04 54 41.5 +0.8
AKMO Akutan Morgan 2.31 58 Pn 04 54 41.9 +1.0
AKBBA Akutan Broad B 2.35 58 Pn 04 54 42.6 +1.1
AKGG Akutan Green G 2.37 56 Pn 04 54 42.5 +0.8
AKUT Akutan 2.45 59 Pn Pn 04 54 43.8 +1.0
KOFP Korovin Flat P 2.97 259 Pn 04 54 50.8 +1.0
ATKA Atka Island 3.05 258 Pn 04 54 51.0 +0.2
SSBA Shishaldin 3.60 57 Pn 04 54 58.8 +0.4
FALS False Pass 4.01 59 Pn 04 55 03.7 -0.1
GSTR Great Sitkin T 4.19 261 Pn Pn 04 55 07.7 +1.4
GSTD Great Sitkin T 4.25 261 Pn 04 55 08.7 +1.5
ADK Adak 4.62 260 Pn Pn 04 55 11.9 -0.2
KIWB Kanaga Island 4.90 261 Pn Pn 04 55 15.4 -0.6
SDPT Sand Point 5.75 61 Pn Pn 04 55 28.1 +0.6
CNBA Chernabura Isl 6.08 68 Pn Pn 04 55 31.1 -0.8
OHAK Old Harbor 10.16 59 Pn Pn 04 56 25.0 -2.6
ILAR Eielson Array 16.49 35 Pn Pn 04 57 48.0 -2.8
0.1nm,0.3s,baz=229,slow=10,SNR=5.8
NVAR Mina Array Bea 37.66 92 P P 05 01 13.0 +0.8
0.8nm,0.8s,baz=295,slow=7.9,SNR=5.7
H11N2 WAKE ISLAND Hy 37.90 218 T T 05 42 11.8
baz=26
H11N3 WAKE ISLAND Hy 37.90 218 T T 05 42 03.0
baz=26,slow=74
H11N1 WAKE ISLAND Hy 37.91 218 T T 05 42 04.5
baz=26,slow=74
H11S1 WAKE ISLAND Hy 39.09 218 T T 05 43 27.0
baz=23,slow=76,SNR=17
H11S2 WAKE ISLAND Hy 39.10 218 T T 05 43 15.8
baz=23,slow=76,SNR=12
H11S3 WAKE ISLAND Hy 39.10 218 T T 05 43 15.2
baz=23,slow=76,SNR=10
TXAR Lajitas Array 52.72 89 P P 05 03 10.9 -0.4
0.2nm,0.5s,baz=300,slow=6.0,SNR=4.5
MKAR Makanchi Array 63.44 313 P P 05 04 19.8 -6.0
0.2nm,0.8s,baz=38,slow=7.3,SNR=2.6

IDC 01 04:54:34.4±3.8, 38.00N×75.75E, h117km±31km, mb3.3/7, mb1 3.5/10, mb1mx3.2/43, mbtmp3.7/10, Error ellipse: s-maj=28.3km s-min=21.3km az=8.0
KRNET 01 04:54:46.3±0.1, 38.82N×75.37E, mb3.3
ISC 01 04:54:38.1±1.0, 38.29N±0.09×75.69E±0.08, h150km, n29, σ1.63/33, mb3.4/7, 15C-11D, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NRN Naryn 3.15 4⇓iP Pn 04 55 27.7 0.0
baz=10.0
NRN ⇓iS Sn 04 55 57.9 -8.2
baz=10.0
ARSB Arslanbob 3.68 326⇑iP Pn 04 55 34.0 -0.3
baz=25
ARSB ⇑iS Sn 04 56 09.1 -8.9
baz=25
ARLS Aral 3.72 344⇓eP Pn 04 55 34.6 -0.2
baz=46
ARLS ⇓iS Sn 04 56 10.1 -8.8
baz=46
KZA Kyzart 3.80 355⇑iP Pn 04 55 36.5 +0.4
baz=58
KZA ⇑iS Sn 04 56 13.3 -7.9
baz=58
KZA Kyzart 3.80 355 P Pn 04 55 36.0 -0.2
SNR=11
KDJ Kajisay 4.01 16⇓iP Pn 04 55 40.6 +2.0
baz=22
KDJ ⇓iS **Sn 04 56 20.8 -4.8**
baz=22
UCH Uchtor 4.04 348⇑iP Pn 04 55 39.8 +0.6
baz=49
UCH ⇑iS Sn 04 56 18.2 -8.5
baz=49
UCH Uchtor 4.04 348 P Pn 04 55 39.6 +0.4
SNR=12
AML Almayashu 4.13 339⇑iP Pn 04 55 40.5 +0.1
baz=39
AML ⇑iS Sn 04 56 19.9 -9.0
baz=39
AML Almayashu 4.13 339 P Pn 04 55 40.8 +0.3
SNR=11
KBK Karagaybulak 4.40 353⇓iP Pn 04 55 44.2 +0.5
baz=55
KBK ⇓iS Sn 04 56 26.8 -8.1
baz=55
KBK Karagaybulak 4.40 353 P Pn 04 55 45.5 +1.7
SNR=8.2
AAK Ala-Archa 4.44 349 P Pn 04 55 44.9 +0.7
1.0nm,0.3s,baz=162,slow=12,SNR=16
AAK S **Sn 04 56 37.6 +1.9**
1.8nm,0.3s,baz=145,slow=8.7,SNR=4.8
AAK Ala-Archa 4.44 349⇓iP Pn 04 55 44.8 +0.6
baz=50
AAK ⇓iS Sn 04 56 27.4 -8.4
baz=50
AAK Ala-Archa 4.44 349 ⇑P Pn 04 55 45.8 +1.6
1.9nm,0.5s
AAK ⇑S **Sn 04 56 33.1 -2.7**
3.7nm,0.5s
ARK Arkit 4.53 322⇑iP Pn 04 55 45.5 +0.2
baz=20
ARK ⇑iS Sn 04 56 29.2 -8.5
baz=20
EKS2 Erkin-Say 4.61 342⇑iP Pn 04 55 47.0 +0.6
baz=43
EKS2 ⇑eS Sn 04 56 31.6 -8.0
baz=43
EKS2 Erkin-Say 4.61 342 P Pn 04 55 48.0 +1.6
SNR=5.3
KK31 Karatay Array 6.21 322 ⇓P Pn 04 56 07.4 -0.2
1.1nm,0.2s,baz=136,slow=13,SNR=81
KK31 ⇑S **Sn 04 57 15.9 -1.8**
8.0nm,0.5s,baz=133,slow=23,SNR=6.8
WMQ Urumqi 10.62 55 eP Pn 04 57 03.5 -2.7
GEYT Alibeck 13.85 274 P Pn 04 57 45.2 -2.8
0.6nm,0.3s,baz=104,slow=12,SNR=7.8
ZALV Zalesovo Beam 16.87 19 P Pn 04 58 25.3 +0.1
0.5nm,0.3s,baz=210,slow=11,SNR=7.3
SONM Songino Array 24.24 57 P P 04 59 41.9 +0.8
1.5nm,0.5s,baz=262,slow=10,SNR=6.4
FINES FINESS Array B 38.17 324 P P 05 01 44.1 +1.5
6.1nm,1.2s,baz=108,slow=8.9,SNR=2.9
ARCES ARCESS Array B 40.99 336 P P 05 02 07.9 +2.0
1.5nm,0.8s,baz=112,slow=9.1,SNR=2.8
NOA NORSAR Array B 45.25 322 P P 05 02 41.8 +1.6
0.7nm,0.9s,baz=108,slow=7.3,SNR=2.5
TORD Torodi Ar. Bea 69.46 271 P P 05 05 31.1 +0.7
0.2nm,0.4s,baz=43,slow=6.1,SNR=7.0
YKA Yellowknife Ar 79.22 5 P P 05 06 27.2 +1.1
0.2nm,0.5s,baz=343,slow=5.7,SNR=4.0
WRA Warramunga Arr 79.86 125 P P 05 06 28.9 -1.3
0.7nm,0.8s,baz=326,slow=4.2,SNR=2.1

IDC 01 05:03:37.8±4.3, 3.65S×99.42E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/29, mbtmp3.8/5, Error ellipse: s-maj=182.6km s-min=22.1km az=55.0, Southwest of Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 37.69 118 P P 05 10 54.4 -0.9
2.3nm,0.4s,baz=301,slow=9.0,SNR=2.5
ASAR Alice Springs 38.78 124 P P 05 11 05.5 +1.0
0.2nm,0.3s,baz=298,slow=7.8,SNR=3.0
SONM Songino Array 51.64 6 P P 05 12 46.7 +0.3
0.5nm,0.7s,baz=160,slow=9.1,SNR=4.6
MKAR Makanchi Array 52.46 345 P P 05 12 52.7 +0.3
0.5nm,0.7s,baz=145,slow=8.6,SNR=7.6
ZALV Zalesovo Beam 58.68 350 P P 05 13 36.6 -0.4
0.5nm,0.4s,baz=174,slow=6.0,SNR=4.5
TXAR Lajitas Array 146.35 38 PKPbc PKPdf 05 23 19.8 -0.6
0.4nm,0.7s,baz=285,slow=1.8,SNR=6.1

ATH 01 05:33:43.0, 38.24N×20.40E, h9km±2km, ML2.9/11, Error ellipse: s-maj=3.0km s-min=1.1km az=249.0
THE 01 05:33:43.2, 38.23N×20.39E, h9km±1km, ML3.2/9, Error ellipse: s-maj=1.3km s-min=0.6km az=252.0
ISC 01 05:33:43.0±1.1, 38.23N±0.02×20.41E±0.05, h9km±5km, n36, σ0.40/50, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.03 32 P Pg 05 33 44.2 -0.5
LXR1 Lixouri, Cepha 0.04 142 P Pg 05 33 44.8 0.0
LXR1 S **Sg 05 33 46.0 0.0**
262μm,0.3s
CHV1 Chavriata, Kef 0.05 200 P Pg 05 33 45.1 +0.2
CHV1 S **Sg 05 33 46.7 +0.5**
2066μm,0.3s
KEF3 Kipouria, Keph 0.05 236 P Pg 05 33 45.2 +0.2
KEF1 Kardakata, Kep 0.07 50 P Pg 05 33 44.8 -0.3
ARG2 Argostoli 0.09 130 P Pg 05 33 45.4 +0.1
KEF2 Argostoli. Kep 0.09 137 P Pg 05 33 45.6 +0.2
VLS Valsamata 0.16 111 P Pg 05 33 46.4 0.0
VLS S **Sg 05 33 48.9 +0.2**
13μm,0.2s
VLS Valsamata 0.16 111 P Pg 05 33 46.4 0.0
VLS S **Sg 05 33 48.9 +0.2**
VLS AML AML 05 33 49.1
comp=N,29656μm,0.3s
VLS AML AML 05 33 49.1
comp=E,22961μm,0.1s
VSK1 VASILIKIADES 0.21 35 P Pg 05 33 47.8 +0.3
VSK1 S **Sg 05 33 51.4 +0.9**
comp=E,6μm,0.3s
KFL Anninata 0.33 112 P Pg 05 33 49.6 +0.1
KFL S **Sg 05 33 54.9 +1.1**
KFL Anninata 0.33 112 P Pg 05 33 49.6 +0.1
KFL S **Sg 05 33 54.9 +1.1**
KFL AML AML 05 33 56.7
comp=E,10339μm,0.4s
KFL AML AML 05 34 02.0
comp=N,5853μm,0.7s
VLMS Volimes, Zakyn 0.41 150 P Pg 05 33 51.3 +0.3
VLMS S **Sg 05 33 56.9 +0.5**
VLMS AML AML 05 33 59.7
comp=E,2969μm,0.2s
VLMS AML AML 05 34 04.8
comp=N,5639μm,0.4s
EVGI Lefkada island 0.43 27 P Pg 05 33 51.7 +0.2
EVGI S **Sb 05 33 58.9 -0.6**
comp=N,612nm,0.1s
EVGI Lefkada island 0.43 27 P Pg 05 33 51.8 +0.2
MGNA Meganis 0.52 36 P Pg 05 33 53.1 0.0
MGNA S **Sg 05 34 00.4 +0.5**
MGNA AML AML 05 34 01.9
comp=E,2359μm,0.3s
MGNA AML AML 05 34 02.0
comp=N,1867μm,0.3s
LKD2 Lefkada island 0.59 20 P Pg 05 33 54.2 -0.3
LKD2 Lefkada island 0.59 20 P Pg 05 33 54.3 -0.1
LKD2 AML AML 05 34 10.5
comp=N,979μm,0.6s
LKD2 AML AML 05 34 11.6
comp=E,978μm,0.5s
AST1 Astakos 0.62 60 P Pg 05 33 55.0 0.0
AST1 S **Sb 05 34 05.2 +0.4**
comp=E,1μm,0.4s
TSLK Tsoukalades, L 0.62 18 P Pg 05 33 55.1 0.0
TSLK Tsoukalades, L 0.62 18 P Pg 05 33 55.0 0.0
KRI1 kERI 0.66 150 P Pg 05 33 55.3 -0.4
KRI1 S **Sb 05 34 06.0 +0.1**
comp=E,2μm,0.3s
PDO Prodromos 0.71 59 P Pg 05 33 56.7 0.0
PDO S **Sb 05 34 07.5 0.0**
comp=E,2μm,0.5s
PDO Prodromos 0.71 59 P Pg 05 33 56.7 0.0
PDO AML AML 05 34 09.6
comp=E,2727μm,0.6s
PDO AML AML 05 34 11.2
comp=N,2651μm,0.4s
RLS Riolos of Patr 0.85 102 P Pg 05 33 59.0 -0.5
RLS Riolos of Patr 0.85 102 P Pg 05 33 59.2 -0.3
PVO Paravola 0.96 66 P Pg 05 34 01.6 +0.1
PVO S **Sn 05 34 17.0 +0.5**
comp=N,902nm,0.6s
PVO Paravola 0.96 66 P Pg 05 34 01.7 +0.3
PVO AML AML 05 34 18.3
comp=E,1702μm,0.4s
PVO AML AML 05 34 23.0
comp=N,1811μm,0.8s
DRO Drossia 1.07 105 P Pg 05 34 03.0 -0.5
DRO AML AML 05 34 30.4
comp=E,1366μm,0.7s
DRO AML AML 05 34 31.6
comp=N,1553μm,0.6s
EFP Efpalio 1.20 80 P Pb 05 34 05.2 -0.6
EFP AML AML 05 34 30.5
comp=E,759μm,0.5s
EFP AML AML 05 34 32.4
comp=N,918μm,0.5s
LAKA Lakka 1.24 89 P Pn 05 34 06.2 -0.3
LAKA Lakka 1.24 89 P Pn 05 34 06.1 -0.5
ANX Ano Chora 1.24 73 P Pn 05 34 06.4 -0.2
ANX AML AML 05 34 30.9
comp=N,1991μm,0.7s
ANX AML AML 05 34 31.9
comp=E,1286μm,0.6s
AMT Artemida-Makis 1.25 124 P Pn 05 34 06.6 -0.1
AMT AML AML 05 34 34.1
comp=E,733μm,0.9s
AMT AML AML 05 34 35.9
comp=N,868μm,0.9s
SERG Sergoula 1.31 82 P Pn 05 34 07.7 +0.1
KALE Kalithea 1.37 83 P Pn 05 34 08.3 -0.1

IDC 01 05:40:48.9±0.6, 17.18N×119.45E, h0km, mb4.1/19, mb1 4.2/21, mb1mx4.1/45, mbtmp4.1/21, ML4.3/1, Error ellipse: s-maj=21.0km s-min=13.8km az=77.0
BJI 01 05:40:50.1±0.0, 17.13N×119.25E, h9km, mB4.9/18, mb4.2/28, Ms4.2/10, Ms7 4.1/8
NEIC 01 05:40:52.9±1.5, 17.14N±0.10×119.27E±0.09, h22km±5km, mb4.5/44, Error ellipse: s-maj=14.4km s-min=11.6km az=152.0
MAN 01 05:40:54.8, 17.12N×119.59E, h9km, mb5.0, ML3.9, MS3.9
ISC 01 05:40:51.8±2.3, 17.12N±0.05×119.26E±0.05, h14km±14km, n106, σ1.47/121, mb4.4/42, 3C-1D, Philippine Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BOLP Bolinao 0.97 140 eP Pb 05 41 10.1 -0.2
ABRA Dolores 1.48 69 eP Pn 05 41 16.0 -2.1
ABRA eS **Sn 05 41 35.2 -2.0**
SMPP San Manuel, Pa 1.67 125 eP Pn 05 41 19.2 -1.4
SMPP eS **Sn 05 41 39.4 -2.5**
APYP Conner 2.03 68 eP Pn 05 41 24.5 -1.1
APYP eS **Sn 05 41 50.6 -0.1**
PCPH Palayan 2.35 131⇓eP Pn 05 41 31.4 +1.4
CAUP Cauayan 2.46 94 eP Pn 05 41 33.5 +2.0
CAUP eS **Sn 05 42 00.7 -0.6**
BALP Baler 2.61 121 eP Pn 05 41 34.8 +1.2
BALP eS **Sn 05 42 04.0 -1.1**
PALP Palanan 3.03 91 eP Pn 05 41 39.7 +0.4
PALP eS **Sn 05 42 16.4 +1.0**
LQP Lukban 3.71 143⇑eP Pn 05 41 51.4 +2.5
TWG Pinlang 5.92 16 Pn Pn 05 42 18.1 -1.0
TPUB Ta-pu 6.28 12 Pn Pn 05 42 21.4 -2.6
YULB Yu-li 6.52 17 Pn 05 42 26.4 -1.0
SSLB Suanglung 6.82 13 Pn 05 42 31.3 -0.2
HKPS Hong Kong Po S 7.04 318 Pn Pn 05 42 31.8 -2.6
NACB Ninganchiao 7.35 17 Pn Pn 05 42 39.0 +0.3
KNMB Chin-men Tao 7.35 354 Pn Pn 05 42 38.0 -0.7
YHNB Yeheng 7.76 14 Pn Pn 05 42 44.7 +0.2
QIZ Qiongzhong 9.16 283 P Pn 05 43 03.1 -0.5
QIZ S **Sn 05 44 40.3 -6.2**
QIZ LR LR
comp=N,200nm,13.5s
QIZ LR LR
comp=E,200nm,13.1s
QIZ Qiongzhong 9.16 283 Pn Pn 05 43 01.9 -1.6
NJ2 Nanjing 14.87 359 eP Pn 05 44 22.8 +1.1
NJ2 pmax pmax
comp=Z,4.0nm,0.7s
SLVN Son La 15.09 289 Pn 05 44 24.8 0.0
KMI Kunming 17.34 300 P P 05 44 58.5 +3.4
KMI pmax pmax
comp=Z,56nm,0.6s
KMI LR LR
comp=N,2μm,26.6s
KMI Kunming 17.34 300 P P 05 44 55.3 +0.3
PBKT Sadao Pong 17.52 271 P P 05 44 57.4 +0.5
JNU Nakatsue 19.06 31 P P 05 45 12.3 -1.5
baz=188,slow=14,SNR=2.6
JNU Nakatsue 19.06 31 P P 05 45 14.0 +0.1
CMAR Chiang Mai Arr 19.39 277 P Pn 05 45 19.7 +1.0
0.3nm,0.3s,baz=91,slow=9.2,SNR=13
CD2 Chengdu 19.69 317⇑iP P 05 45 21.4 +0.7
CD2 pmax pmax
comp=Z,10.0nm,0.7s

KSAR Wonju Array Be 21.62 19 P P 05 45 41.7 +0.2
KSRS Korea Array 21.64 19 P P 05 45 40.8 -0.9
3.6nm,0.8s,baz=201,slow=11,SNR=11
LZH Lanzhou 23.32 327 eP P 05 46 01.0 +1.3
LZH pP sP 05 46 05.1 +0.9
LZH sP pwP 05 46 08.3 +1.0
LZH pmax pmax
comp=Z,18nm,1.0s
PSI Prapat 24.53 237 P P 05 46 13.1 +1.8
6.2nm,0.6s,baz=77,slow=6.0,SNR=5.4
HHC Hu-ho-hao-te 24.56 346 eP P 05 46 12.6 +1.2
HHC sP pwP 05 46 20.6 +1.3
HHC PP PnPn 05 46 46.7 +4.1
HHC eS S 05 50 32.4 +0.6
HHC pmax pmax
comp=Z,3.0nm,0.7s
HHC pmax pmax
comp=Z,110nm,4.3s
HHC LR LR
comp=N,130nm,9.2s
HHC LR LR
comp=E,96nm,11.3s
HHC LR LR
comp=Z,88nm,11.3s
RPSI Rantau Prapat 24.59 237 P P 05 46 12.5 +0.8
RPSI IAmb IAmb 05 46 17.8
comp=Z,13nm,1.1s
RPSI Rantau Prapat 24.59 237 P P 05 46 13.1 +1.4
SHL Shillong 26.81 293 P P 05 46 31.5 -0.5
SHL IAmb IAmb 05 46 33.0
comp=Z,14nm,1.2s
GTA Gaotai 27.93 327 ⇑P P 05 46 42.4 +0.6
GTA pmax pmax
comp=Z,2.0nm,1.1s
SONM Songino Array 32.40 344 P P 05 47 21.1 -0.2
comp=Z,1.2nm,0.6s,baz=167,slow=10,SNR=8.7
SONM Songino Array 32.40 344 P P 05 47 21.4 +0.1
KLR Kul'dur 33.59 15 P P 05 47 31.3 -0.2
comp=Z,1.6nm,0.8s,baz=240,slow=8.2,SNR=5.8
WMQ Urumqi 37.66 322 eP P 05 48 08.8 +2.2
WMQ sP pwP 05 48 15.4 +1.0
WMQ pmax pmax
comp=Z,6.0nm,0.9s
WMQ LR LR
comp=Z,130nm,19.1s
WMQ LR LR
comp=Z,240nm,24.9s
WMQ LR LR
comp=Z,360nm,20.5s
WB0 Warramunga Arr 39.56 157 P P 05 48 21.1 -1.6
WB0 IAmb IAmb 05 48 33.8
comp=Z,9.9nm,1.1s
WRA Warramunga Arr 39.70 157 P P 05 48 22.6 -1.3
comp=Z,2.8nm,0.9s,baz=339,slow=9.4,SNR=5.9
WRA Warramunga Arr 39.70 157 P P 05 48 22.5 -1.3
WB2 Warramunga Arr 39.70 157 P P 05 48 23.4 -0.4
WB2 IAmb IAmb 05 48 36.7
comp=Z,13nm,1.2s
WR0 Warramunga Arr 39.79 157 P P 05 48 23.8 -0.8
WR0 IAmb IAmb 05 48 36.1
comp=Z,18nm,1.4s
MK31 Makanchi Array 42.48 322 P P 05 48 47.7 +1.2
MKAR Makanchi Array 42.48 322 P P 05 48 46.9 +0.3
comp=Z,2.5nm,0.9s,baz=122,slow=8.7,SNR=20
MKAR PcP PcP 05 50 38.4 -0.8
comp=Z,0.7nm,0.8s,baz=103,slow=4.6,SNR=4.1
MKAR Makanchi Array 42.48 322 P P 05 48 46.8 +0.3
MKAR PcP 05 50 37.5 -1.7
MAKZ Makanchi 42.67 322 P P 05 48 47.7 -0.4
MAKZ IAmb IAmb 05 48 50.1
comp=Z,10nm,1.5s
AS31 Alice Springs 42.99 160 P P 05 48 51.6 +0.7
ASAR Alice Springs 42.99 160 P P 05 48 50.8 -0.1
comp=Z,1.2nm,0.4s,baz=339,slow=7.0,SNR=31
ASAR PcP PcP 05 50 40.6 -0.7
comp=Z,0.4nm,0.8s,baz=352,slow=4.7,SNR=2.7
ASAR Alice Springs 42.99 160 P P 05 48 51.2 +0.3
KSH Kashi 43.62 310 P P 05 48 58.7 +2.7
KSH pP pwP 05 49 03.0 -1.0
KSH PcP PcP 05 50 46.1 +2.7
KSH PcS PcS 05 54 39.1 +2.9
KSH S S 05 55 30.5 +5.1
KSH pmax pmax
comp=Z,69nm,2.0s
KSH pmax pmax
comp=Z,450nm,6.7s
KSH LR LR
comp=Z,500nm,8.0s
KSH LR LR
comp=Z,400nm,9.8s
KSH LR LR
comp=Z,420nm,12.7s
NIL Nilore 44.33 301 P P 05 49 01.5 -0.1
ZAA0 Zalesovo Array 45.40 332 P P 05 49 09.6 -0.2
ZAA0 IAmb IAmb 05 49 10.7
comp=Z,4.6nm,0.9s
ZALV Zalesovo Beam 45.40 332 P P 05 49 09.6 -0.2
comp=Z,2.9nm,0.7s,baz=128,slow=6.8,SNR=17
KURK Kurchatov 46.59 325 P P 05 49 19.7 +0.4
KK31 Karatay Array 48.62 313 P P 05 49 35.5 +0.3
KK31 IAmb IAmb 05 49 36.6
comp=Z,5.0nm,1.0s
KKAR Karatay Array 48.62 313 P P 05 49 35.0 -0.3
KKAR Karatay Array 48.62 313 P P 05 49 35.5 +0.3
KKAR IAmb IAmb 05 49 36.6
comp=Z,5.0nm,1.0s
BRVK Borovoye 52.26 325 P P 05 50 03.0 +0.5
BRVK IAmb IAmb 05 50 04.0
comp=Z,15nm,1.5s
STKA Stephens Creek 53.22 156 P P 05 50 09.1 -0.7
comp=Z,3.6nm,0.7s,baz=355,slow=6.2,SNR=7.7
STKA Stephens Creek 53.22 156 P P 05 50 09.7 -0.2
GEYT Alibeck 57.04 304 P P 05 50 38.5 +0.9
comp=Z,4.0nm,0.9s,baz=111,slow=6.5,SNR=11
GEYT Alibeck 57.04 304 P P 05 50 38.7 +1.1
GYA0B ALIBECK ARRAY 57.04 304 P P 05 50 38.4 +0.8
ABKAR Akbulak array 57.27 318 P P 05 50 38.3 -0.5
RAYN Ar Rayn 68.80 289 P P 05 51 56.3 +0.2
RAYN IAmb IAmb 05 51 56.7
comp=Z,4.0nm,0.9s
IMAR Indian Mountai 73.29 25 P P 05 52 22.4 -0.1
PPLA Purkeypile 74.26 28 P P 05 52 28.9 +0.5
OHAK Old Harbor 74.42 34 P P 05 52 30.6 +1.4
TOLK Toolik Lake Re 74.62 22 P P 05 52 30.9 +0.5
TOLK IAmb IAmb 05 52 39.0
comp=Z,4.1nm,0.9s
MLY Manley 74.64 26 P P 05 52 30.8 +0.3
MLY IAmb IAmb 05 52 39.7
comp=Z,5.0nm,0.9s
BPAW Bear Paw Mtn. 74.65 27 P P 05 52 30.6 +0.1
BPAW IAmb IAmb 05 52 39.2
comp=Z,8.1nm,1.1s
SUA Susitna One 75.12 30 P P 05 52 33.5 +0.1
ARCES ARCESS Array B 75.41 339 P P 05 52 34.1 -0.7
comp=Z,2.9nm,0.9s,baz=73,slow=7.9,SNR=3.8
RND Reindeer 75.69 28 P P 05 52 35.7 -0.9
RND IAmb IAmb 05 52 44.7
comp=Z,3.7nm,0.8s
PMR Palmer 75.87 30 P P 05 52 38.5 +1.0
PMR IAmb IAmb 05 52 47.8
comp=Z,6.2nm,1.2s
SPITS Spitsbergen Ar 75.98 348 P P 05 52 37.5 -0.4
comp=Z,9.2nm,0.8s,baz=150,slow=10,SNR=8.5
ILAR Eielson Array 76.30 26 P P 05 52 37.0 -2.9
comp=Z,0.4nm,0.8s,baz=273,slow=5.4,SNR=4.2
ILAR Eielson Array 76.30 26 P P 05 52 37.8 -2.2
FINES FINESS Array B 76.64 330 P P 05 52 40.7 -1.2
comp=Z,1.3nm,0.5s,baz=59,slow=5.7,SNR=13
FINES FINESS Array B 76.64 330 P P 05 52 41.1 -0.8
BMAR Burnt Mountain 76.68 23 P P 05 52 42.7 +0.5
AKASG Malin Array Be 76.97 319 P P 05 52 42.7 -1.3
comp=Z,0.7nm,0.7s,baz=68,slow=4.3,SNR=5.0
AKASG Malin Array Be 76.97 319 P P 05 52 42.5 -1.5
SCRK Sand Creek 77.70 27 P P 05 52 46.9 -1.1
BCAR Beaver Creek A 78.89 27 P P 05 52 55.0 +0.5
CTGM Chitina Glacie 79.68 29 P P 05 52 58.5 -0.5
CTGM IAmb IAmb 05 53 08.8
comp=Z,5.7nm,0.9s
EPYK Eagle Plains 79.96 23 P P 05 52 59.3 -0.9
EPYK IAmb IAmb 05 53 08.0
comp=Z,4.6nm,0.9s
BURAR Bucovina Array 80.22 317 P P 05 53 02.0 -0.1
INK Inuvik 80.42 21 P P 05 53 02.0 -0.6
comp=Z,0.8nm,0.8s,baz=304,slow=4.1,SNR=4.6
INK Inuvik 80.42 21 P P 05 53 01.9 -0.7
INK IAmb IAmb 05 53 02.2
comp=Z,6.9nm,1.5s
C36M Paulatuk 83.03 19 P P 05 53 15.3 -1.0
NC405 NORSAR Array S 83.35 332 P P 05 53 17.6 -0.7
NB201 NORSAR Array S 83.56 332 P P 05 53 18.5 -0.8
NB2 NORSAR Subarra 83.60 332 P P 05 53 18.8 -0.8
comp=Z,1.0nm,0.6s,baz=66,slow=4.8
NOA NORSAR Array B 83.60 332 P P 05 53 18.0 -1.6
comp=Z,1.8nm,0.7s,baz=66,slow=4.9,SNR=5.7
NC204 NORSAR Array S 83.70 333 P P 05 53 19.9 -0.3
NAO01 NORSAR Array S 83.83 332 P P 05 53 20.4 -0.3
RES Resolute Bay 85.88 9 P P 05 53 29.8 -1.0
comp=Z,0.8nm,0.8s,baz=334,slow=4.7,SNR=4.9
RES Resolute Bay 85.88 9 P P 05 53 30.0 -0.8
RES IAmb IAmb 05 53 39.1
comp=Z,2.1nm,0.8s
YKA Yellowknife Ar 90.15 22 P P 05 53 50.8 -0.6
comp=Z,0.5nm,0.7s,baz=315,slow=4.3,SNR=13
SDV Santo Domingo 152.37 21 PKPbc PKPbc 06 00 47.0 -1.7
comp=Z,4.7nm,0.8s,baz=349,slow=5.8,SNR=6.1
SDV Santo Domingo 152.37 21 PKPbc 06 00 46.4 -2.3

IDC 01 05:52:25.2±6.5, 4°.86S×105°.05W, h0km, mb3.6/7, mb1 3.9/7, mb1mx3.6/37, mbtmp3.6/7, MS3.9/3, Ms1 3.9/3, ms1mx3.4/25, Error ellipse: s-maj=189.5km s-min=104.7km az=125.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	Las Juntas de	25.05	53	LR	LR	06 05 06.4	
	comp=Z,190nm,20.7s,baz=294,slow=30						
TXAR	Lajitas Array	34.03	2	P	P	05 59 10.8	-0.4
	0.2nm,0.6s,baz=171,slow=10,SNR=3.0						
SDV	Santo Domingo	36.93	68	LR	LR	06 12 22.1	
	comp=Z,88nm,19.4s,baz=98,slow=32						
PDAR	Pinedale Array	47.58	356	P	P	06 01 03.3	+0.3
	0.2nm,0.7s,baz=159,slow=9.4,SNR=2.3						
ULM	Lac du Bonnet	55.46	7	P	P	06 02 02.0	+0.5
	1.4nm,0.8s,baz=127,slow=10,SNR=2.8						
PMSA	Palmer Station	66.53	162	LR	LR	06 25 51.1	
	comp=Z,181nm,19.8s,baz=188,slow=30						
YKA	Yellowknife Ar	67.56	355	P	P	06 03 22.9	-0.3
	0.6nm,0.8s,baz=170,slow=6.0,SNR=10						
INK	Inuvik	75.67	349	P	P	06 04 11.5	-0.4
	0.6nm,0.9s,baz=159,slow=1.9,SNR=2.1						
ILAR	Eielson Array	75.99	343	P	P	06 04 14.1	+0.2
	0.7nm,0.8s,baz=157,slow=4.9,SNR=7.5						
RES	Resolute Bay	79.66	3	P	P	06 04 34.1	0.0
	1.0nm,0.8s,baz=186,slow=12,SNR=3.8						
H11N3	WAKE ISLAND Hy	89.78	290	T	T	07 44 29.5	
	baz=96,slow=74,SNR=38						
H11N2	WAKE ISLAND Hy	89.79	290	T	T	07 44 30.5	
	baz=96,slow=74,SNR=36						
H11N1	WAKE ISLAND Hy	89.79	290	T	T	07 44 29.5	
	baz=96,slow=74,SNR=21						
H11S2	WAKE ISLAND Hy	89.86	288	T	T	07 44 41.1	
	baz=94,slow=74,SNR=18						
H11S1	WAKE ISLAND Hy	89.87	288	T	T	07 44 42.1	
	baz=94,slow=74,SNR=11						
H11S3	WAKE ISLAND Hy	89.88	288	T	T	07 44 40.8	
	baz=94,slow=74,SNR=9.7						

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*IDC **01** 05:57:24.6±0.5, 17°.14N×119°.38E, h0km, mb4.2/22, mb1 4.3/24, mb1mx4.1/54, mbtmp4.2/24, ML4.1/2, MS3.2/1, Ms1 3.4/1, ms1mx2.7/47, Error ellipse: s-maj=18.6km s-min=12.3km az=80.0*

*BJI **01** 05:57:25.7±0.0, 17°.21N×119°.16E, h5km, mB4.9/21, mb4.2/34, Ms4.1/9, Ms7 3.8/8*

*MAN **01** 05:57:26.3, 17°.25N×119°.31E, h4km, mb5.0, ML3.9, MS3.9*

*NEIC **01** 05:57:30.0±2.1, 17°.27N±0°.06×119°.23E±0°.08, h30km±5km, mb4.5/53, Error ellipse: s-maj=12.0km s-min=9.1km az=72.0*

ISC 01 05:57:26.3±1.5, 17°.19N±0°.04×119°.30E±0°.04, h8km±9km, n125, σ1§27/139, mb4.5/51, 3C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	Bolinao	0.99	144	eP	Pg	05 57 46.1	+0.7
BOLP				eS	Sn	05 58 02.3	+1.7
SIPP	Brgy, Tapao	1.32	56	⇑iP	Pn	05 57 49.6	-1.5
SIPP				eS	Sg	05 58 32.7	+24
ABRA	Dolores	1.42	71	eP	Pn	05 57 51.2	-1.2
ABRA				eS	Sg	05 58 11.9	-0.2
SMPP	San Manuel, Pa	1.67	128	eP	Pn	05 57 54.4	-1.5
SMPP				eS	Sb	05 58 19.4	+0.7
APYP	Conner	1.97	70	eP	Pb	05 58 00.7	-1.7
APYP				eS	Sb	05 58 26.3	-0.9
PCPH	Palayan	2.36	133	⇓eP	Pn	05 58 06.7	+1.3
CAUP	Cauayan	2.42	95	eP	Pn	05 58 07.8	+1.6
CAUP				eS	Sb	05 58 38.0	-2.2
BALP	Baler	2.61	123	eP	Pn	05 58 11.0	+2.2
BALP				eS	Sb	05 58 43.8	-1.9
PALP	Palanan	2.99	92	eP	Pn	05 58 14.9	+0.9
PALP				eS	Sn	05 58 51.3	+1.3
TGY	Tagaytay City	3.45	153	Pn	Pb	05 58 25.3	-2.4
	43nm,0.3s,baz=275,slow=11,SNR=3.5						
LQP	Lukban	3.74	145	⇑eP	Pn	05 58 26.5	+2.0
TWG	Pinlang	5.85	16	Pn	Pn	05 58 52.8	-0.5
TPUB	Ta-pu	6.21	11	Pn	Pn	05 58 56.2	-2.1
YULB	Yu-li	6.45	17		Pn	05 59 01.1	-0.6
SSLB	Suanglung	6.75	13		Pn	05 59 05.5	-0.3
NACB	Ninganchiao	7.28	17	Pn	Pn	05 59 14.3	+1.4
YHNB	Yeheng	7.69	14		Pn	05 59 20.6	+1.8
QIZ	Qiongzhong	9.18	283	P	Pn	05 59 38.2	-1.0
QIZ				S	Sn	06 01 20.3	-2.4
QIZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
QIZ				LR	LR		
	comp=N,220nm,10.9s						
QIZ				LR	LR		
	comp=E,240nm,16.6s						
QIZ				LR	LR		
	comp=Z,220nm,16.0s						
QIZ	Qiongzhong	9.18	283	Pn	Pn	05 59 37.7	-1.4
NJ2	Nanjing	14.81	359	eP	Pn	06 00 58.0	+1.9
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SLVN	Son La	15.11	288		Pn	06 01 00.1	-0.2
ENH	Enshi	15.81	327		Pn	06 01 08.9	-0.5
SBUM	Sibu	16.21	206	P	P	06 01 17.8	0.0
KMI	Kunming	17.34	300	P	P	06 01 31.6	+1.1
PBKT	Sadao Pong	17.56	271	P	P	06 01 32.5	-0.2
JNU	Nakatsue	18.99	31	P	P	06 01 47.4	-0.9
	0.3nm,0.3s,baz=187,slow=17,SNR=2.1						
JNU	Nakatsue	18.99	31	P	P	06 01 47.5	-0.9
XAN	Xi'an	19.20	333	P	Pn	06 01 51.4	-0.2
XAN				pP	pwP	06 01 59.2	+3.0
XAN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,120nm,4.9s						
XAN	Xi'an	19.20	333	P	Pn	06 01 51.2	-0.4
CMAR	Chiang Mai Arr	19.43	277	P	Pn	06 01 54.9	+0.5
	0.6nm,0.3s,baz=92,slow=10,SNR=17						
CMAR				LR	LR	06 09 53.4	
	comp=Z,69nm,19.5s,baz=70,slow=38						
CHTO	Chiang Mai	19.43	278	P	P	06 01 53.5	+0.2
CD2	Chengdu	19.67	317	⇑iP	Pn	06 01 56.9	-0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KSAR	Wonju Array Be	21.55	19	P	P	06 02 16.2	0.0
KSRS	Korea Array	21.57	19	P	P	06 02 16.1	-0.2
	4.4nm,0.8s,baz=201,slow=12,SNR=12						
KS19	Wonju Array Si	21.60	19	P	P	06 02 19.0	+2.3
KS19				IAmb	IAmb	06 02 27.0	
	comp=Z,27nm,1.1s						
BJI	Beijing	22.93	354	P	P	06 02 30.9	0.0
BJI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
LZH	Lanzhou	23.30	327	eP	P	06 02 36.6	+1.8
LZH				pP	pwP	06 02 40.8	+0.3
LZH				sP	sP	06 02 43.9	+6.8
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
INU	Inuyama	24.00	38	P	P	06 02 42.9	+1.3
HHC	Hu-ho-hao-te	24.51	346	eP	P	06 02 47.6	+1.3
HHC				sP	pwP	06 02 53.9	+1.8
HHC				ePP	PnPn	06 03 24.0	+6.8
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,65nm,6.1s						
HHC				LR	LR		
	comp=Z,130nm,9.9s						
HHC				LR	LR		
	comp=Z,180nm,9.9s						
HHC				LR	LR		
	comp=Z,130nm,10.6s						
PSI	Prapat	24.59	237	P	P	06 02 47.1	-0.2
	comp=Z,7.0nm,0.7s,baz=330,slow=7.4,SNR=5.4						
RPSI	Rantau Prapat	24.66	236	P	P	06 02 47.8	0.0
RPSI				IAmb	IAmb	06 02 49.2	
	comp=Z,10nm,0.9s						
RPSI	Rantau Prapat	24.66	236	P	P	06 02 47.1	-0.7
SHL	Shillong	26.82	293	P	P	06 03 06.8	-0.7
SHL				IAmb	IAmb	06 03 09.8	
	comp=Z,12nm,0.9s						
GTA	Gaotai	27.89	326	eP	P	06 03 17.8	+0.9
GTA				pP	pwP	06 03 22.6	0.0
GTA				sP	sP	06 03 26.3	+7.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
LSA	Lhasa	28.59	301	P	P	06 03 24.8	+1.2
SONM	Songino Array	32.35	344	P	P	06 03 56.3	0.0
	comp=Z,1.1nm,0.7s,baz=167,slow=11,SNR=7.0						
SONM	Songino Array	32.35	344	P	P	06 03 55.8	-0.5
KLR	Kul'dur	33.52	15	P	P	06 04 07.3	+1.0
	comp=Z,1.5nm,0.7s,baz=229,slow=6.0,SNR=6.1						
FITZ	Fitzroy Crossi	35.61	170	P	P	06 04 24.4	-0.3
	comp=Z,5.8nm,0.9s,baz=343,slow=5.6,SNR=6.1						
FITZ	Fitzroy Crossi	35.61	170	P	P	06 04 24.2	-0.5
WMQ	Urumqi	37.64	322	eP	P	06 04 43.6	+1.7
WMQ				sP	pwP	06 04 51.4	+3.8
WMQ				PP	PnPn	06 06 11.4	+2.8
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,210nm,5.7s						
WMQ				LR	LR		
	comp=Z,490nm,21.9s						
WMQ				LR	LR		
	comp=Z,570nm,20.9s						
WMQ				LR	LR		
	comp=Z,160nm,14.7s						
WB0	Warramunga Arr	39.60	157	P	P	06 04 57.8	-0.7
WB0				IAmb	IAmb	06 05 10.1	
	comp=Z,9.1nm,1.1s						
WRAB	Tennant Creek	39.74	158	P	P	06 04 59.2	-0.4
WRAB				IAmb	IAmb	06 05 14.8	
	comp=Z,8.7nm,1.0s						
WRA	Warramunga Arr	39.74	158	P	P	06 04 58.0	-1.7
	comp=Z,3.5nm,0.7s,baz=340,slow=9.2,SNR=10						
WRA	Warramunga Arr	39.74	158	P	P	06 04 58.2	-1.5
WB2	Warramunga Arr	39.75	158	P	P	06 04 58.9	-0.8
WB2				IAmb	IAmb	06 05 08.2	
	comp=Z,19nm,1.4s						
WR0	Warramunga Arr	39.83	157	P	P	06 04 58.9	-1.5
WR0				IAmb	IAmb	06 05 05.2	
	comp=Z,10nm,1.2s						
MK31	Makanchi Array	42.45	322	P	P	06 05 22.4	+0.6
MKAR	Makanchi Array	42.45	322	P	P	06 05 22.6	+0.8
	comp=Z,2.9nm,1.0s,baz=120,slow=9.1,SNR=17						
MKAR				PcP	PcP	06 07 14.3	-0.4
	comp=Z,1.0nm,0.7s,baz=97,slow=4.9,SNR=4.4						
MKAR	Makanchi Array	42.45	322	P	P	06 05 23.0	+1.2
MKAR					PcP	06 07 13.5	-1.2
MAKZ	Makanchi	42.65	322	P	P	06 05 23.7	+0.3
MAKZ				IAmb	IAmb	06 05 25.4	
	comp=Z,12nm,1.4s						
ASAR	Alice Springs	43.03	160	P	P	06 05 25.4	-1.3
	comp=Z,2.0nm,0.5s,baz=340,slow=6.7,SNR=43						
ASAR				PcP	PcP	06 07 16.5	-0.5
	comp=Z,0.6nm,0.7s,baz=337,slow=2.6,SNR=3.4						
ASAR	Alice Springs	43.03	160	P	P	06 05 25.6	-1.1
KSH	Kashi	43.62	310	P	P	06 05 33.4	+2.0
KSH				sP	pwP	06 05 40.3	+3.2
KSH				PP	PcP	06 07 17.2	-1.7
KSH				S	S	06 12 03.2	+1.9
KSH				sS	sS	06 12 11.2	+7.2
KSH				pmax	pmax		
	comp=Z,25nm,1.5s						
KSH				LR	LR		
	comp=Z,280nm,10.4s						
KSH				LR	LR		
	comp=Z,300nm,9.3s						
KSH				LR	LR		
	comp=Z,460nm,18.2s						
NRN	Naryn	44.22	312	P	P	06 05 36.6	+0.1
NRN				IAmb	IAmb	06 05 38.7	
	comp=Z,7.3nm,1.1s						
ZAA0	Zalesovo Array	45.36	332	P	P	06 05 44.9	-0.1
ZAA0				IAmb	IAmb	06 05 46.0	
	comp=Z,5.9nm,0.9s						
ZALV	Zalesovo Beam	45.36	332	P	P	06 05 44.8	-0.2
	comp=Z,4.2nm,0.8s,baz=130,slow=6.7,SNR=20						
ZALV	Zalesovo Beam	45.36	332	P	P	06 05 44.4	-0.5
KURK	Kurchatov	46.57	325	P	P	06 05 54.6	+0.1
PETK	Petropavlovsk-	46.69	31	P	P	06 05 55.1	-0.4
	comp=Z,6.2nm,0.9s,baz=234,slow=4.8,SNR=3.5						
PETK	Petropavlovsk-	46.69	31	P	P	06 05 54.6	-0.9
KK31	Karatay Array	48.61	313	P	P	06 06 10.3	-0.3
KK31				IAmb	IAmb	06 06 12.0	
	comp=Z,5.7nm,0.9s						
KKAR	Karatay Array	48.61	313	P	P	06 06 10.7	+0.1
KKAR	Karatay Array	48.61	313	P	P	06 06 10.8	+0.2
KKAR				IAmb	IAmb	06 06 12.0	
	comp=Z,5.7nm,0.9s						
SEY	Seymchan	51.13	19	P	P	06 06 30.4	+1.1
	comp=Z,0.9nm,0.5s,baz=264,slow=9.3,SNR=3.9						
BRVK	Borovoye	52.23	325	P	P	06 06 37.7	-0.1
BRVK				IAmb	IAmb	06 06 39.3	
	comp=Z,14nm,1.4s						
BBOO	Buckleboo	52.23	162	P	P	06 06 37.8	-0.2
STKA	Stephens Creek	53.26	156	P	P	06 06 45.1	-0.5
	comp=Z,4.4nm,0.6s,baz=335,slow=6.4,SNR=11						
STKA	Stephens Creek	53.26	156	P	P	06 06 45.4	-0.3
GEYT	Alibeck	57.04	304	P	P	06 07 14.0	+0.9
	comp=Z,4.1nm,0.9s,baz=146,slow=6.4,SNR=9.8						
GEYT	Alibeck	57.04	304	P	P	06 07 13.4	+0.4
ABKAR	Akbulak array	57.25	318	P	P	06 07 13.9	-0.3
ABKAR	Akbulak array	57.25	318	P	P	06 07 13.7	-0.6
ABKAR				IAmb	IAmb	06 07 14.6	
	comp=Z,3.7nm,1.1s						
KBZ	Khabaz	68.58	311	P	P	06 08 30.2	+0.4
	comp=Z,3.0nm,0.9s,baz=169,slow=5.2,SNR=4.0						
RAYN	Ar Rayn	68.82	289	P	P	06 08 31.5	-0.2
RAYN				IAmb	IAmb	06 08 32.0	
	comp=Z,7.2nm,1.1s						
IMAR	Indian Mountai	73.22	25	P	P	06 08 58.2	+0.6
PPLA	Purkeypile	74.19	28	P	P	06 09 04.8	+1.3
OHAK	Old Harbor	74.34	34	P	P	06 09 05.4	+1.1
TOLK	Toolik Lake Re	74.55	22	P	P	06 09 06.7	+1.3
TOLK				IAmb	IAmb	06 09 14.3	
	comp=Z,5.2nm,0.8s						
MLY	Manley	74.56	26	P	P	06 09 06.0	+0.4
MLY				IAmb	IAmb	06 09 14.7	
	comp=Z,6.0nm,0.8s						
BPAW	Bear Paw Mtn.	74.58	27	P	P	06 09 06.2	+0.5
BPAW				IAmb	IAmb	06 09 14.8	
	comp=Z,8.3nm,1.0s						
KDAK	Kodiak Island	74.64	34	P	P	06 09 05.2	-0.9
	comp=Z,4.1nm,0.9s,baz=284,slow=17,SNR=4.1						
KDAK	Kodiak Island	74.64	34	P	P	06 09 03.7	-2.3
SUA	Susitna One	75.05	30	P	P	06 09 08.9	+0.4
MCK	McKinley	75.53	27	P	P	06 09 11.3	+0.2
RND	Reindeer	75.62	28	P	P	06 09 11.7	0.0
RND				IAmb	IAmb	06 09 19.2	
	comp=Z,5.3nm,0.8s						
ILAR	Eielson Array	76.23	26	P	P	06 09 13.8	-1.2
	comp=Z,0.7nm,0.8s,baz=276,slow=5.6,SNR=7.5						
ILAR	Eielson Array	76.23	26	P	P	06 09 14.7	-0.4
DHY	Denali Highway	76.33	28	P	P	06 09 15.6	-0.3
DHY				IAmb	IAmb	06 09 26.1	
	comp=Z,5.8nm,1.0s						
FINES	FINESS Array B	76.60	330	P	P	06 09 15.9	-1.3
	comp=Z,6.7nm,1.1s,baz=88,slow=6.3,SNR=4.9						
FINES	FINESS Array B	76.60	330	P	P	06 09 14.9	-2.3
BMAR	Burnt Mountain	76.61	23	P	P	06 09 18.3	+1.1
RPZ	Rata Peaks	76.89	144	P	P	06 09 20.3	+1.3
AKASG	Malin Array Be	76.95	319	P	P	06 09 18.3	-1.1
	comp=Z,0.7nm,0.7s,baz=63,slow=5.6,SNR=5.5						
AKASG	Malin Array Be	76.95	319	P	P	06 09 19.7	+0.3
RIDG	Independent Ri	77.31	27	P	P	06 09 20.9	-0.4
SCRK	Sand Creek	77.63	27	P	P	06 09 23.4	+0.3
EGAK	Eagle	78.61	26	P	P	06 09 29.0	+0.6

EGAK IAmb IAmb 06 09 31.9
comp=Z,3.0nm,0.8s
BCAR Beaver Creek A 78.81 27 P P 06 09 31.9 +1.3
CTGM Chitina Glacie 79.60 29 P P 06 09 36.0 +1.9
EPYK Eagle Plains 79.88 23 P P 06 09 35.8 +0.4
EPYK IAmb IAmb 06 09 43.3
comp=Z,5.0nm,0.8s
BURAR Bucovina Array 80.20 317 P P 06 09 37.0 -0.6
INK Inuvik 80.35 21 P P 06 09 37.0 -0.7
comp=Z,1.0nm,0.8s,baz=327,slow=6.9,SNR=5.0
INK Inuvik 80.35 21 P P 06 09 37.6 -0.2
INK IAmb IAmb 06 09 47.7
comp=Z,5.0nm,1.4s
KWP Kalwaria Pacla 81.27 319 pP 06 09 48.7 +3.8
C36M Paulatuk 82.96 19 P P 06 09 50.8 -0.7
C36M IAmb IAmb 06 09 58.8
comp=Z,2.5nm,0.7s
NB2 NORSAR Subarra 83.56 332 P P 06 09 53.8 -1.1
comp=Z,1.8nm,0.8s,baz=66,slow=4.6
NOA NORSAR Array B 83.56 332 P P 06 09 53.6 -1.3
comp=Z,1.2nm,0.8s,baz=46,slow=7.7,SNR=4.2
FNA Florina 84.78 311 P P 06 10 00.6 -0.9
RES Resolute Bay 85.81 9 P P 06 10 05.4 -0.5
comp=Z,1.4nm,0.9s,baz=309,slow=7.9,SNR=5.9
RES Resolute Bay 85.81 9 P P 06 10 06.0 +0.1
RES IAmb IAmb 06 10 14.1
comp=Z,2.9nm,0.9s
YKA Yellowknife Ar 90.08 22 P P 06 10 26.3 -0.2
comp=Z,0.7nm,0.7s,baz=315,slow=4.6,SNR=16
TXAR Lajitas Array 117.88 42 PKP PKiKP 06 16 14.8 +0.5
comp=Z,0.3nm,0.9s,baz=270,slow=1.4,SNR=3.0
TXAR Lajitas Array 117.88 42 PKiKP 06 16 14.6 +0.3
SDV Santo Domingo 152.29 22 PKPbc 06 17 21.4 -2.6

GUC 01 06:23:32.0±0.6, 33.37S×70.13W, h8km±1km, ML3.3
SJA 01 06:23:33.3±0.8, 33.61S×70.54W, h10km, ML3.3, MW3.3
IDC 01 06:23:35.3±6.9, 34.08S×69.26W, h71km±55km, mb3.2/3, mb1 3.6/7, mb1mx3.4/33, mbtmp3.6/7, ML3.7/4, MS3.4/1, Ms1 3.4/1, ms1mx2.9/6, Error ellipse: s-maj=68.2km s-min=48.1km az=85.0
ISC 01 06:23:31.5±1.0, 33.36S±0.02×70.08W±0.02, h5km±8km, n43, σ1.92/66, mb3.5/3, 6D, Chile-Argentina border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FCH Farellones 0.18 279 eP Pg 06 23 35.7 +0.5
FCH iS Sg 06 23 38.7 +1.0
FCH IAML 06 23 39.1
comp=N,18µm,0.2s
CLCH Cerro Calan 0.39 264⇓iP Pg 06 23 39.5 +0.5
CLCH iS Sg 06 23 45.1 +1.0
CLCH IAML 06 23 46.1
comp=N,8µm,0.5s
MT03 Universidad Ad 0.39 249⇓iP Pg 06 23 39.2 +0.1
MT03 iS Sg 06 23 45.0 +0.8
MT03 IAML 06 23 45.6
comp=E,13µm,0.2s
FSR Penalolen 0.40 252 eP Pg 06 23 40.6 +1.3
FSR iS Sg 06 23 46.1 +1.7
LMEL Las Melosas 0.50 192⇓iP Pg 06 23 40.7 -0.6
LMEL iS Sg 06 23 47.4 -0.4
LMEL IAML 06 23 49.1
comp=N,6µm,0.2s
ANTU Antumapu 0.51 245 eP Pg 06 23 42.4 +1.0
ANTU eS Sg 06 23 49.4 +1.3
ANTU IAML 06 23 50.5
comp=E,4µm,0.4s
PEL Peldehue 0.55 292 eP Pg 06 23 42.2 +0.1
PEL eS Sg 06 23 50.1 +0.8
PEL IAML 06 23 50.8
comp=N,4µm,0.4s
PEL Peldehue 0.55 292 iP Pg 06 23 42.5 +0.4
PEL iS Sg 06 23 50.4 +1.1
MT05 Renca 0.56 266⇓iP Pg 06 23 42.7 +0.4
MT05 eS Sg 06 23 50.4 +1.0
MT05 IAML 06 23 54.3
comp=E,4µm,0.4s
VA03 San Esteban 0.71 326⇓iP Pg 06 23 46.0 +0.8
VA03 iS Sb 06 23 56.7 +0.1
VA03 IAML 06 23 57.9
comp=E,3µm,0.3s
ROCH El Roble 0.87 296 eP Pg 06 23 48.3 0.0
ROCH eS Sg 06 23 59.9 +0.3
ROC1 El Roble 0.88 295 iP Pg 06 23 48.5 +0.1
ROC1 iS Sg 06 24 00.7 +1.0
AAGR Agrelo 1.08 76 iP Pn 06 23 53.9 +0.5
AAGR IAML 06 24 27.9
comp=Z,258nm,0.8s
ARCO CERRO ARCO 1.09 62 iP Pn 06 23 53.9 +0.3
ARCO IAML 06 24 14.1
comp=Z,428nm,0.7s
MT01 Popeta 1.10 242 eP Pg 06 23 51.1 -1.6
MT01 eS Sg 06 24 06.0 -1.1
ASAL Salagasta 1.29 54 iP Pg 06 23 57.0 +0.7
ASAL IAML 06 24 23.8
comp=Z,146nm,0.4s
VA01 Torpederas 1.36 284 eP Pn 06 23 56.5 -0.7
VA01 iS Sb 06 24 14.5 -0.7
VA01 IAML 06 24 18.4
comp=N,1µm,0.3s
RTLS Leoncito 1.69 23 iP Pg 06 24 04.4 +0.6
RTLS iS Sg 06 24 30.8 +5.1
RTLS IAML 06 24 39.7
comp=Z,169nm,0.8s
LAMA Las Malvinas 1.73 156 iP Pg 06 24 05.0 +0.2
COIS El Sosneado 1.79 167 iP Pb 06 24 04.1 -0.8
COIS iS Sg 06 24 33.8 +4.6
RTCV Cerro Valdivia 1.97 41 iP Pg 06 24 09.0 -0.4
RTCV IAML 06 24 58.4
comp=Z,74nm,1.0s
MORA Malargue 2.12 156 iP Pg 06 24 11.2 -1.0
MORA iS Sg 06 24 40.2 +0.5
ZON Zonda 2.16 34 iP Pg 06 24 14.2 +1.4
ZON iS Sg 06 24 46.7 +5.8
ZON IAML 06 24 55.6
comp=Z,84nm,0.9s
PUMA Malargue 2.20 167 iP Pg 06 24 13.2 -0.4
GO05 Huala 2.25 222 iP Pn 06 24 10.4 +0.9
GO05 iS Sn 06 24 39.4 +1.6
CFA Coronel Fontan 2.34 42 P Pg 06 24 15.6 -0.8
comp=Z,30nm,0.3s,baz=223,slow=19,SNR=749
CFA S Sg 06 24 46.7 +0.1
comp=Z,32nm,0.3s,baz=130,slow=17,SNR=13
RTLL Cerro Villicun 2.43 34 iP Pg 06 24 17.1 -1.1
RTLL iS Sg 06 24 53.2 +3.5
RTLL IAML 06 24 55.7
comp=Z,164nm,0.4s
ACAN Cantantal 2.66 67 iP Pb 06 24 19.5 -0.2
ACAN iS Sg 06 24 59.2 +2.2
ACAN IAML 06 25 00.7
comp=Z,70nm,0.5s
AMOG MOGNA 2.76 30 iP Pg 06 24 23.4 -1.0
AMOG IAML 06 25 16.9
comp=Z,66nm,0.4s
GO04 Tololo Observa 3.23 349 iP Pb 06 24 28.5 -1.1
GO04 iS Sg 06 25 15.3 -0.1
MRA San Martin 3.78 77⇓iP Pn 06 24 33.5 +2.9
MRA iS Sn 06 25 31.4 -1.7
MRA IAML 06 25 37.0
comp=Z,72nm,0.6s
AGUA GUANDACOL 4.09 20 iP Pb 06 24 41.5 -2.5
AGUA iS Sg 06 25 40.6 -2.2
AGUA IAML 06 25 44.8
comp=Z,30nm,1.1s
APLL PUNTA DE LOS L 4.22 47⇑iP Pb 06 24 41.7 -4.6
APLL iS Sg 06 25 46.4 -0.8
APLL IAML 06 25 58.0
comp=Z,29nm,0.4s
ACLC CERRO LA CRUZ 4.74 35 iP Pb 06 24 50.8 -4.5
CYA Choya 6.12 38 iP Pn 06 25 07.1 +4.3
CYA IAML 06 25 28.5
comp=Z,14nm,0.4s
PB09 IPOC Station P 11.54 4 iP Pn **06 26 31.1 +14**
CPUP Villa Florida 13.09 61 P Pn 06 26 34.6 -3.5
comp=Z,0.1nm,0.3s,baz=233,slow=15,SNR=2.5
LPAZ La Paz 17.09 6 P P 06 27 37.5 +3.8
comp=Z,0.1nm,0.3s,baz=204,slow=12,SNR=6.6
SIV San Ignacio 19.11 27 P Pn 06 27 56.4 +0.2
comp=Z,0.1nm,0.3s,baz=234,slow=14,SNR=7.8
USHA Ushuaia 21.50 177 LR LR 06 37 12.2
comp=Z,114nm,19.5s,baz=180,slow=39

TXAR Lajitas Array 70.00 329 P P 06 34 45.6 +1.3
comp=Z,0.2nm,0.6s,baz=151,slow=6.5,SNR=3.6
PDAR Pinedale Array 83.95 332 P P 06 36 01.1 -1.6
comp=Z,0.2nm,0.6s,baz=133,slow=4.4,SNR=2.0
NVAR Mina Array Bea 84.31 324 P P 06 36 05.6 +0.9
comp=Z,0.4nm,0.7s,baz=153,slow=5.4,SNR=3.5

NEIC 01 06:28:59.1±1.8, 3.8S±0.1×128.7E±0.1, h148km±8km, mb4.0/8, Error ellipse: s-maj=20.0km s-min=15.4km az=96.0
IDC 01 06:29:01.0±4.1, 3.81S×128.97E, h165km±53km, mb3.1/2, mb1 3.4/5, mb1mx3.0/46, mbtmp3.8/5, Error ellipse: s-maj=72.4km s-min=17.5km az=88.0
ISC 01 06:28:59.6±1.0, 3.81S±0.09×128.8E±0.1, h150km, n17, σ0.78/19, Seram

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FAKI Fak Fak 3.59 76 Pn Pn 06 29 55.3 +0.8
FAKI Sn Sn 06 30 36.6 -0.5
SIJI Sorong 3.84 41 P Pn 06 29 58.2 +0.3
13nm,0.3s,baz=93,slow=4.8,SNR=20
SIJI S Sn 06 30 42.9 -0.3
4.5nm,0.3s,baz=252,slow=23,SNR=8.1
FITZ Fitzroy Crossi 14.52 192 P P 06 32 18.8 -1.9
0.2nm,0.3s,baz=16,slow=16,SNR=4.7
FITZ Fitzroy Crossi 14.52 192 P P 06 32 21.0 +0.4
WB0 Warramunga Arr 16.78 161 P P 06 32 45.3 -0.4
WB0 IAmb IAmb 06 32 50.0
comp=Z,12nm,1.4s
WRAB Tennant Creek 16.92 162 P P 06 32 46.5 -0.7
WRAB IAmb IAmb 06 32 59.4
comp=Z,8.8nm,1.1s
WRA Warramunga Arr 16.93 162 P P 06 32 45.8 -1.5
comp=Z,0.4nm,0.3s,baz=350,slow=12,SNR=18
WRA Warramunga Arr 16.93 162 P P 06 32 46.9 -0.3
WB2 Warramunga Arr 16.93 162 P P 06 32 46.8 -0.5
WB2 IAmb IAmb 06 32 51.8
comp=Z,26nm,1.4s
WR0 Warramunga Arr 17.01 161 P P 06 32 47.8 -0.4
WR0 IAmb IAmb 06 32 51.8
comp=Z,8.9nm,1.2s
AS31 Alice Springs 20.35 166 P P 06 33 25.0 +0.5
ASAR Alice Springs 20.35 166 P P 06 33 24.9 +0.4
comp=Z,2.2nm,0.5s,baz=346,slow=11,SNR=43
ASAR Alice Springs 20.35 166 P P 06 33 25.2 +0.7
BBOO Buckleboo 29.64 168 P P 06 34 51.0 -0.1
MKAR Makanchi Array 64.91 327 P P 06 39 23.4 +0.4
comp=Z,0.1nm,0.4s,baz=119,slow=8.0,SNR=5.5
MKAR Makanchi Array 64.91 327 P P 06 39 23.1 +0.1
MAKZ Makanchi 65.09 326 P P 06 39 23.3 -0.9
MAKZ IAmb IAmb 06 39 42.6
comp=Z,2.2nm,1.4s

BJI 01 06:31:13.8±0.0, 11.06S×165.82E, h48km, mB5.0/16, mb4.6/31, Ms4.8/5, Ms7 4.5/4
IDC 01 06:31:18.1±3.0, 10.77S×165.14E, h48km±27km, mb4.0/9, mb1 4.2/11, mb1mx3.9/39, mbtmp4.3/11, ML4.9/2, MS3.9/7, Ms1 3.9/7, ms1mx3.5/34, Error ellipse: s-maj=24.9km s-min=18.5km az=54.0
NEIC 01 06:31:18.7±1.6, 10.64S±0.09×165.19E±0.09, h46km±2km, mb4.8/26, Error ellipse: s-maj=15.7km s-min=8.9km az=221.0
ISC 01 06:31:18.5±0.5, 10.71S±0.06×165.20E±0.07, h46km, n69, σ1.58/66, mb4.7/27, MS4.3/8, 1C, Santa Cruz Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 5.09 158 Pn 06 32 32.4 +0.1
SANVU Sn Sn 06 33 30.1 +0.1
HNR Honiara 5.33 283 P Pn 06 32 33.9 -1.8
48nm,0.3s,baz=197,slow=2.4,SNR=6.7
HNR S Sn 06 33 34.7 -1.1
69nm,0.3s,baz=175,slow=11,SNR=5.4
HNR LR LR 06 34 41.3
comp=Z,2µm,18.0s,baz=98,slow=38
HNR Honiara 5.33 283 P Pn 06 32 28.0 -7.6
HNR S **Sn 06 33 39.0 +3.2**
HNR Honiara 5.33 283 Pn 06 32 34.8 -0.8
HNR Sn **Sn 06 33 36.3 +0.5**
DZM Mont Dzumac 11.36 174 P Pn 06 33 58.7 +0.4
6.5nm,0.3s,baz=14,slow=8.4,SNR=74
DZM S Sn 06 36 02.0 -1.9
baz=12,slow=6.0,SNR=3.0
DZM LR LR 06 37 47.8
comp=Z,529nm,19.4s,baz=37,slow=34
DZM Mont Dzumac 11.36 174 Pn 06 33 59.0 +0.7
NOUC Port Laguerre 11.37 175 Pn 06 33 59.6 +1.2
MSVF Nonsavu 14.27 121 P P 06 34 45.3 +1.0
PMG Port Moresby 17.81 273 LR LR 06 41 51.6
comp=Z,395nm,20.1s,baz=122,slow=36
MANU Manus Island 19.69 295 Pn 06 35 44.7 -1.3
AFI Afiamalu 22.71 100 LR LR 06 43 33.9
comp=Z,236nm,18.7s,baz=284,slow=32
H11S2 WAKE ISLAND Hy 29.06 3 T T 07 07 24.0
baz=183,slow=76,SNR=177
H11S3 WAKE ISLAND Hy 29.06 3 T T 07 07 26.3
baz=183,slow=76,SNR=114
H11S1 WAKE ISLAND Hy 29.07 3 T T 07 07 29.6
baz=183,slow=76,SNR=136
H11N1 WAKE ISLAND Hy 30.28 3 T T 07 08 59.2
baz=182,slow=76,SNR=68
H11N3 WAKE ISLAND Hy 30.29 3 T T 07 09 01.4
baz=182,slow=76,SNR=48
H11N2 WAKE ISLAND Hy 30.30 3 T T 07 08 58.5
baz=182,slow=76,SNR=34
STKA Stephens Creek 30.32 222 P P 06 37 24.9 -0.9
5.7nm,0.9s,baz=23,slow=8.5,SNR=9.0
STKA LR LR 06 49 07.9
comp=Z,242nm,18.2s,baz=46,slow=35
STKA Stephens Creek 30.32 222 P P 06 37 26.5 +0.7
WRA Warramunga Arr 31.10 249 P P 06 37 31.4 -1.4
1.6nm,0.2s,baz=77,slow=8.9,SNR=1.7
MSWZ Moikau Station 31.84 166 P P 06 37 42.2 +3.2
ASAR Alice Springs 32.47 243 P P 06 37 42.2 -2.7
0.7nm,0.8s,baz=62,slow=10,SNR=6.6
BBOO Buckleboo 34.67 226 P P 06 38 03.9 0.0
BBOO IAmb IAmb 06 38 18.7
comp=Z,18nm,1.4s
KAPI Kappang 45.34 274 P P 06 39 30.9 -1.7
HUH Hualalai 48.84 52 P P 06 39 58.6 -1.5
MLH Mauna Loa 49.08 52 P P 06 39 60.0 -1.9
MJAR Matsushiro Arr 53.43 333 LR LR 07 01 13.2
comp=Z,26nm,21.8s,baz=45,slow=34
NJ2 Nanjing 61.41 316 eP P 06 41 31.7 +1.4
NJ2 pmax pmax
comp=Z,3.0nm,0.8s
USA0B Ussuriysk Arra 62.41 334 P P 06 41 37.0 +0.3
USA0B IAmb IAmb 06 41 54.9
comp=Z,5.7nm,0.8s
USRK Ussuriysk Ar. 62.41 334 P P 06 41 36.9 +0.1
BJI Beijing 67.89 321 P P 06 42 16.0 +3.6
BJI pmax pmax
comp=Z,5.0nm,1.0s
SLVN Son La 68.08 298 P P 06 42 13.4 -0.7
HHC Hu-ho-hao-te 71.24 320 eP P 06 42 33.9 +0.7
HHC pmax pmax
comp=Z,3.0nm,1.4s
HHC pmax pmax
comp=Z,67nm,7.4s
HHC LR LR
comp=Z,110nm,11.9s
HHC LR LR
comp=Z,150nm,14.5s
CM31 Chiang Mai Arr 71.49 294 P P 06 42 35.9 +0.9
CMAR Chiang Mai Arr 71.49 294 P P 06 42 35.0 -0.1
comp=Z,1.0nm,0.5s,baz=117,slow=3.8,SNR=14
CHTO Chiang Mai 71.60 294 P P 06 42 35.6 -0.1
CD2 Chengdu 71.98 307 P P 06 42 36.9 -0.9
CD2 pmax pmax
comp=Z,10.0nm,0.5s
ULN Ulaanbaatar 77.72 324 P P 06 43 10.6 -0.2
ULN IAmb IAmb 06 43 12.0
comp=Z,9.2nm,1.1s
SVW2 Sparrevohn 77.97 18 P P 06 43 11.6 0.0
SVW2 IAmb IAmb 06 43 13.3
comp=Z,12nm,1.2s
SONM Songino Array 78.09 324 P P 06 43 12.8 +0.1
comp=Z,2.9nm,1.0s,baz=138,slow=5.3,SNR=13
SONM Songino Array 78.09 324 P P 06 43 12.5 -0.3
GTA Gaotai 78.45 314 ⇑P P 06 43 15.4 +0.5
GTA pP pP 06 43 28.0 +0.9
GTA sP pwP 06 43 33.0 +0.7
GTA pmax pmax
comp=Z,7.0nm,1.2s
GTA pmax pmax
comp=Z,30nm,4.8s
GTA LR LR
comp=Z,140nm,21.3s
GTA LR LR
comp=Z,220nm,20.9s
GTA LR LR
comp=Z,190nm,19.4s
BILL Bilibino 78.55 0 P P 06 43 14.6 -0.2
BILL IAmb IAmb 06 43 15.7
comp=Z,20nm,1.4s
QSPA South Pole Qui 79.29 180 P P 06 43 20.1 +1.0
QSPA IAmb IAmb 06 43 21.5
comp=Z,14nm,1.1s
SHL Shillong 79.89 298 P P 06 43 22.8 -0.4
RDOG Red Dog Mine 81.81 12 P P 06 43 32.5 +0.3
RDOG IAmb IAmb 06 43 33.8
comp=Z,17nm,1.4s
IMAR Indian Mountai 82.25 16 P P 06 43 34.7 0.0
BARN Barnard Glacie 82.80 23 P P 06 43 38.7 +0.9
BARN IAmb IAmb 06 43 39.9
comp=Z,12nm,1.2s
CTGM Chitina Glacie 82.87 23 P P 06 43 38.7 +0.5
HDA Harding Lake 83.10 19 P P 06 43 39.2 +0.1
HDA IAmb IAmb 06 43 40.4
comp=Z,11nm,1.3s
ILAR Eielson Array 83.37 19 P P 06 43 40.0 -0.5
comp=Z,0.8nm,0.9s,baz=234,slow=4.0,SNR=7.0
ILAR Eielson Array 83.37 19 P P 06 43 39.5 -0.9
DOT Dot Lake 83.55 20 P P 06 43 41.5 +0.1
DOT IAmb IAmb 06 43 43.3
comp=Z,8.9nm,1.3s
SCRK Sand Creek 83.79 20 P P 06 43 43.8 +1.0
SCRK IAmb IAmb 06 43 44.3
comp=Z,9.8nm,1.4s
BCAR Beaver Creek A 83.98 21 P P 06 43 43.6 -0.1
TIXI Tiksi 85.67 349 P P 06 43 51.5 -0.4
TIXI IAmb IAmb 06 43 52.3
comp=Z,9.9nm,1.4s
BMAR Burnt Mountain 85.85 17 P P 06 43 54.3 +1.3
NVAR Mina Array Bea 86.22 50 P P 06 43 54.8 -0.8
comp=Z,2.1nm,1.1s,baz=227,slow=7.7,SNR=5.6
NVAR LR LR 07 16 14.0
comp=Z,89nm,18.3s,baz=332,slow=31
NVAR Mina Array Bea 86.22 50 P P 06 43 55.5 -0.2
WMQ Urumqi 88.48 315 eP P 06 44 07.0 +0.7
WMQ LR LR
comp=Z,320nm,29.1s
MK31 Makanchi Array 92.92 317 P P 06 44 25.8 -1.1
MK31 IAmb IAmb 06 44 27.2
comp=Z,5.4nm,1.2s
MKAR Makanchi Array 92.92 317 P P 06 44 26.2 -0.6
comp=Z,1.9nm,0.9s,baz=101,slow=5.9,SNR=17
MKAR Makanchi Array 92.92 317 P P 06 44 26.0 -0.8
ZAA0 Zalesovo Array 92.98 324 P P 06 44 25.3 -1.5
ZALV Zalesovo Beam 92.98 324 P P 06 44 25.6 -1.3
comp=Z,2.2nm,0.9s,baz=105,slow=3.4,SNR=7.9
ZALV Zalesovo Beam 92.98 324 P P 06 44 25.2 -1.7
MAKZ Makanchi 93.13 317 P P 06 44 27.1 -0.6
KSH Kashi 96.13 309 P P 06 44 44.4 +2.5
KSH pP pwP 06 45 00.0 +0.6
KSH S **S 06 56 00.6 +2.8**
KSH SS **SS 07 02 37.2 +6.8**
KSH LR LR
comp=Z,300nm,14.3s
SFS San Fernando 153.21 345 PKPdf PKPdf 06 51 01.3 -3.1

ATH 01 06:39:09.5, 38.41N×20.49E, h19km±1km, ML2.8/7, Error ellipse: s-maj=2.3km s-min=0.7km az=268.0
THE 01 06:39:10.0, 38.41N×20.48E, h14km±2km, ML3.1/9, Error ellipse: s-maj=2.4km s-min=0.5km az=268.0
ISC 01 06:39:09.8±0.8, 38.41N±0.02×20.49E±0.03, h15km±5km, n36, σ0.46/57, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VSK1 VASILIKIADES 0.06 86 P Pg 06 39 11.8 -0.9
KEF1 Kardakata, Kep 0.13 185 P Pb 06 39 14.0 +0.1
KEF1 S **Sg 06 39 15.8 +0.1**
KEF4 Livadi, Kephal 0.15 198 P Pg 06 39 13.8 0.0
KEF4 S **Sg 06 39 16.9 +0.6**
LXR1 Lixouri, Cepha 0.21 190 P Pg 06 39 14.8 +0.3
LXR1 S **Sb 06 39 18.8 -0.1**
32µm,0.2s
ARG2 Argostoli 0.23 180 P Pg 06 39 14.8 0.0
ARG2 S **Sg 06 39 18.6 +0.4**
14µm,0.1s
KEF3 Kipouria, Keph 0.23 208 P Pg 06 39 15.0 +0.1
KEF3 S **Sb 06 39 19.3 -0.1**
CHV1 Chavriata, Kef 0.24 200 P Pg 06 39 15.1 +0.1
CHV1 S **Sb 06 39 19.3 -0.4**
17µm,0.2s
KEF2 Argostoli. Kep 0.24 180 P Pg 06 39 15.0 0.0
KEF2 S **Sg 06 39 18.7 +0.1**
VLS Valsamata 0.24 160 P Pg 06 39 15.0 -0.1
VLS Valsamata 0.24 160 S Sg 06 39 19.2 +0.5
VLS AML AML 06 39 20.1
comp=E,7462µm,0.2s
VLS AML AML 06 39 20.1
comp=N,7483µm,0.1s
EVGI Lefkada island 0.25 32 P Pg 06 39 15.2 -0.1
EVGI S **Sg 06 39 19.5 +0.4**
EVGI Lefkada island 0.25 32 P Pg 06 39 15.3 -0.1
EVGI S **Sg 06 39 19.4 +0.4**
MGNA Meganis 0.35 44 P Pg 06 39 16.8 -0.1
MGNA S **Sg 06 39 22.2 +0.4**
MGNA AML AML 06 39 22.5
comp=E,4998µm,0.3s
MGNA AML AML 06 39 22.6
comp=N,5830µm,0.3s
KFL Anninata 0.38 141 P Pg 06 39 17.4 -0.1
KFL S **Sb 06 39 23.7 -0.1**
comp=N,5µm,0.3s
KFL Anninata 0.38 141 P Pg 06 39 17.3 -0.1
KFL S **Sb 06 39 23.7 -0.1**
KFL AML AML 06 39 25.6
comp=N,9552µm,0.3s
KFL AML AML 06 39 26.1
comp=E,8679µm,0.3s
LKD2 Lefkada island 0.41 19 P Pg 06 39 17.9 -0.1
LKD2 S **Sb 06 39 24.3 -0.4**
comp=E,785nm,0.3s
LKD2 Lefkada island 0.41 19 P Pg 06 39 17.9 -0.1
LKD2 S **Sg 06 39 23.5 -0.1**
LKD2 AML AML 06 39 28.3
comp=E,1435µm,0.3s
LKD2 AML AML 06 39 29.0
comp=N,1706µm,0.3s
TSLK Tsoukalades, L 0.44 18 P Pg 06 39 18.4 -0.2
TSLK Tsoukalades, L 0.44 18 P Pg 06 39 18.6 0.0
AST1 Astakos 0.49 74 P Pg 06 39 19.7 +0.2
AST1 S **Sb 06 39 27.6 +0.5**
comp=N,2µm,0.3s
VLMS Volimes, Zakyn 0.55 165 P Pg 06 39 20.4 -0.1
VLMS S **Sb 06 39 28.7 +0.1**
VLMS AML AML 06 39 33.0
comp=E,4324µm,0.3s
VLMS AML AML 06 39 33.7
comp=N,3797µm,0.2s
PDO Prodromos 0.58 70 P Pg 06 39 20.9 -0.3
PDO S **Sb 06 39 29.4 -0.2**
comp=N,1µm,0.4s
PDO Prodromos 0.58 70 P Pg 06 39 21.1 -0.1
PDO AML AML 06 39 33.8
comp=E,1834µm,0.4s
PDO AML AML 06 39 37.5
comp=N,1463µm,0.3s
KRI1 kERI 0.79 160 P Pb 06 39 24.4 -0.7
KRI1 S **Sn 06 39 37.3 -0.4**
comp=N,2µm,0.2s
PVO Paravola 0.84 75 P Pg 06 39 26.2 +0.1
PVO S **Sn 06 39 40.1 +1.0**
comp=N,415nm,0.5s
PVO Paravola 0.84 75 P Pg 06 39 26.2 +0.1
PVO AML AML 06 39 41.0
comp=E,969µm,0.3s
PVO AML AML 06 39 46.2
comp=N,773µm,0.5s
RLS Riolos of Patr 0.85 114 P Pb 06 39 26.1 0.0
EVR Evrytania 1.16 63 P Pn 06 39 31.2 -0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LAKA	Lakka	1.19	98	P	Pb	06 39 31.8	-0.1
SERG	Sergoula	1.23	89	P	Pn	06 39 32.2	-0.3
TRIZ	Trizonia	1.25	91	P	Pn	06 39 32.2	-0.4
KLV	Kalavryta, Ach	1.36	105	P	Pn	06 39 34.5	+0.2
MAKR	Makrakomi, Fth	1.42	64	P	Pb	06 39 36.4	+0.4
AGG	Agios Georgios	1.57	66	P	Pb	06 39 38.7	+0.2
KIJV	Kijevo	6.38	332	ePn	Pn	06 40 44.0	+0.8
KIJV				Sn	Sn	06 41 55.3	-0.5
MORI	Morici	6.54	328	ePn	Pn	06 40 46.3	+1.0
MORI				Sn	Sn	06 41 57.5	-2.0

THE 01 06:54:11.9, 38.21N×20.43E, h14km, ML3.2/5, Error ellipse: s-maj=1.2km s-min=0.5km az=260.0
ATH 01 06:54:11.6, 38.20N×20.43E, h15km±1km, ML2.8/8, Error ellipse: s-maj=1.6km s-min=1.0km az=247.0
ISC 01 06:54:11.4±0.9, 38.21N±0.03×20.41E±0.04, h17km±4km, n45, σ0.75/63, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.02	106	P	Pg	06 54 14.3	-0.1
LXR1				S	Sg	06 54 16.2	-0.1
	119μm,0.1s						
CHV1	Chavriata, Kef	0.03	222	P	Pg	06 54 14.4	0.0
KEF3	Kipouria, Keph	0.05	265	P	Pg	06 54 14.6	+0.1
KEF3				S	Sg	06 54 16.5	0.0
KEF4	Livadi, Kephal	0.05	14	P	Pg	06 54 14.5	0.0
KEF4				S	Sg	06 54 16.1	-0.5
ARG2	Argostoli	0.07	115	P	Pg	06 54 14.4	-0.2
KEF2	Argostoli. Kep	0.07	124	P	Pg	06 54 14.5	-0.2
KEF2				S	Sg	06 54 15.9	-0.9
KEF1	Kardakata, Kep	0.09	35	P	Pg	06 54 14.7	-0.1
KEF1				S	Sg	06 54 16.5	-0.5
VLS	Valsamata	0.15	102	P	Pg	06 54 15.1	-0.4
VLS				S	Sg	06 54 17.5	-0.7
	7μm,0.1s						
VLS	Valsamata	0.15	102	P	Pg	06 54 15.2	-0.4
VLS				S	Sg	06 54 17.6	-0.7
VLS				AML	AML	06 54 17.8	
	comp=N,10277μm,0.2s						
VLS				AML	AML	06 54 17.8	
	comp=E,17357μm,0.1s						
VSK1	VASILIKIADES	0.24	31	P	Pg	06 54 16.9	+0.1
VSK1				S	Sg	06 54 21.0	+0.5
	comp=E,19μm,0.3s						
FSK	Fiskardo	0.28	26	P	Pg	06 54 17.7	+0.2
FSK	Fiskardo	0.28	26	P	Pg	06 54 17.7	+0.2
FSK				S	Sg	06 54 21.9	+0.2
FSK				AML	AML	06 54 22.6	
	comp=N,5467μm,0.4s						
FSK				AML	AML	06 54 24.8	
	comp=E,13147μm,0.2s						
KFL	Anninata	0.31	108	P	Pg	06 54 17.9	-0.2
KFL	Anninata	0.31	108	P	Pg	06 54 18.0	-0.2
KFL				S	Sg	06 54 22.2	-0.5
KFL				AML	AML	06 54 23.2	
	comp=E,16058μm,0.4s						
KFL				AML	AML	06 54 23.6	
	comp=N,7080μm,0.3s						
VLMS	Volimes, Zakyn	0.39	149	P	Pg	06 54 19.3	-0.1
VLMS				S	Sg	06 54 24.3	-0.5
VLMS				AML	AML	06 54 29.3	
	comp=E,3743μm,0.3s						
VLMS				AML	AML	06 54 29.6	
	comp=N,4680μm,0.2s						
EVGI	Lefkada island	0.46	25	P	Pg	06 54 20.6	0.0
EVGI	Lefkada island	0.46	25	P	Pg	06 54 20.6	0.0
EVGI				S	Sg	06 54 26.4	-0.5
MGNA	Meganis	0.54	34	P	Pg	06 54 21.8	-0.4
MGNA				AML	AML	06 54 33.9	
	comp=N,2107μm,0.2s						
MGNA				AML	AML	06 54 34.2	
	comp=E,1977μm,0.1s						
LKD2	Lefkada island	0.61	19	P	Pg	06 54 22.9	-0.7
LKD2	Lefkada island	0.61	19	P	Pg	06 54 22.8	-0.8
LKD2				AML	AML	06 54 40.7	
	comp=E,886μm,0.3s						
LKD2				AML	AML	06 54 41.5	
	comp=N,711μm,0.2s						
KRI1	kERI	0.63	149	P	Pg	06 54 23.7	-0.2
KRI1				S	Sb	06 54 33.4	+0.8
	comp=N,1μm,0.1s						
TSLK	Tsoukalades, L	0.65	17	P	Pg	06 54 24.1	-0.1
TSLK	Tsoukalades, L	0.65	17	P	Pg	06 54 24.0	-0.1
PDO	Prodromos	0.72	57	P	Pg	06 54 25.3	-0.3
PDO	Prodromos	0.72	57	P	Pg	06 54 25.3	-0.3
PDO				AML	AML	06 54 43.1	
	comp=E,993μm,0.6s						
PDO				AML	AML	06 54 43.1	
	comp=N,1514μm,0.4s						
RLS	Riolos of Patr	0.85	100	P	Pg	06 54 26.9	-1.0
PVO	Paravola	0.97	65	P	Pb	06 54 30.1	+0.3
PVO				S	Sn	06 54 45.5	+1.8
	comp=N,452nm,0.4s						
PVO	Paravola	0.97	65	P	Pb	06 54 30.0	+0.3
PVO				AML	AML	06 54 46.2	
	comp=E,1224μm,0.3s						
PVO				AML	AML	06 54 46.3	
	comp=N,662μm,0.3s						
EFP	Efpalio	1.20	79	P	Pn	06 54 33.0	-0.4
AMT	Artemida-Makis	1.23	123	P	Pn	06 54 34.2	+0.3
LAKA	Lakka	1.24	88	P	Pn	06 54 34.0	0.0
ANX	Ano Chora	1.25	72	P	Pn	06 54 34.5	+0.3
EVR	Evrytania	1.31	57	P	Pn	06 54 35.4	+0.3
SERG	Sergoula	1.31	80	P	Pn	06 54 35.3	+0.2
SERG	Sergoula	1.31	80	P	Pn	06 54 35.2	+0.2
KALE	Kalithea	1.37	82	P	Pn	06 54 36.1	+0.2
KLV	Kalavryta, Ach	1.38	96	P	Pn	06 54 36.5	+0.5
MAKR	Makrakomi, Fth	1.57	59	P	Pn	06 54 41.7	0.0
AGG	Agios Georgios	1.71	61	P	Pb	06 54 43.2	+0.7
THL	Klokotos Trika	1.85	42	P	Pb	06 54 44.8	0.0
AXAR	Agios Charalam	1.85	72	P	Pb	06 54 45.6	+0.8
DBRK	Dubrovnik	4.78	340	ePn	Pn	06 55 20.5	-2.2
DBRK				Sn	Sn	06 56 16.1	-1.6
STON	Ston	5.10	337	iPn	Pn	06 55 28.4	+1.4
STON				Sn	Sn	06 56 23.4	-2.0
KIJV	Kijevo	6.53	334	ePn	Pn	06 55 48.4	+1.6
KIJV				Sn	Sn	06 56 59.8	-1.1
MORI	Morici	6.68	329	ePn	Pn	06 55 50.4	+1.7
MORI				Sn	Sn	06 57 03.5	-0.9

ATH 01 07:01:53.8, 38.29N×20.39E, h8km±1km, ML2.5/14, Error ellipse: s-maj=1.5km s-min=0.7km az=239.0
THE 01 07:01:53.7, 38.27N×20.40E, h12km±1km, ML3.1/8, Error ellipse: s-maj=1.0km s-min=0.4km az=219.0
ISC 01 07:01:53.6±0.9, 38.28N±0.02×20.39E±0.04, h11km±5km, n40, σ0.42/60, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.04	131	P	Pg	07 01 55.6	-0.1
KEF4				S	Sg	07 01 56.8	-0.3
KEF1	Kardakata, Kep	0.06	93	P	Pg	07 01 55.6	-0.3
KEF1				S	Sg	07 01 56.9	-0.7
KEF3	Kipouria, Keph	0.09	203	P	Pg	07 01 56.3	+0.1
KEF3				S	Sg	07 01 57.7	-0.3
LXR1	Lixouri, Cepha	0.09	155	P	Pg	07 01 56.4	+0.2
LXR1				S	Sg	07 01 58.5	+0.4
	73μm,0.1s						
CHV1	Chavriata, Kef	0.10	184	P	Pg	07 01 56.5	+0.2
CHV1				S	Sg	07 01 58.7	+0.4
	46μm,0.2s						
ARG2	Argostoli	0.13	143	P	Pg	07 01 56.8	+0.1
ARG2				S	Sg	07 01 59.0	0.0
	19μm,0.2s						
KEF2	Argostoli. Kep	0.14	147	P	Pg	07 01 56.9	0.0
KEF2				S	Sg	07 01 59.3	+0.1
VSK1	VASILIKIADES	0.19	47	P	Pg	07 01 57.7	0.0
VSK1				S	Sg	07 02 00.9	+0.3
	3μm,0.3s						
VLS	Valsamata	0.19	123	P	Pg	07 01 57.6	-0.1
VLS				S	Sg	07 02 00.3	-0.3
	8μm,0.1s						
VLS	Valsamata	0.19	123	P	Pg	07 01 57.6	-0.1
VLS				S	Sg	07 02 00.5	0.0
VLS				AML	AML	07 02 00.6	
	comp=N,21875μm,0.2s						
VLS				AML	AML	07 02 01.4	
	comp=E,10221μm,0.1s						
KFL	Anninata	0.36	119	P	Pg	07 02 00.6	-0.2
KFL				S	Sg	07 02 06.2	+0.7
	comp=E,4μm,0.4s						
KFL	Anninata	0.36	119	P	Pg	07 02 00.6	-0.2
KFL				S	Sg	07 02 06.2	+0.7
KFL				AML	AML	07 02 06.5	
	comp=N,6922μm,0.4s						
KFL				AML	AML	07 02 06.7	
	comp=E,9091μm,0.4s						
EVGI	Lefkada island	0.40	31	P	Pg	07 02 01.5	0.0
EVGI				S	Sg	07 02 07.9	+1.0
EVGI	Lefkada island	0.40	31	P	Pg	07 02 01.6	0.0
EVGI				S	Sg	07 02 07.5	+0.7
VLMS	Volimes, Zakyn	0.46	152	P	Pg	07 02 02.6	0.0
VLMS				S	Sg	07 02 09.4	+0.7
VLMS				AML	AML	07 02 11.8	
	comp=E,9898μm,0.2s						
VLMS				AML	AML	07 02 12.5	
	comp=N,13082μm,0.2s						
MGNA	Meganis	0.49	40	P	Pg	07 02 02.9	-0.3
MGNA				S	Sg	07 02 10.1	+0.3
MGNA				AML	AML	07 02 10.9	
	comp=N,838μm,0.2s						
MGNA				AML	AML	07 02 11.0	
	comp=E,705μm,0.2s						
LKD2	Lefkada island	0.55	22	P	Pg	07 02 04.1	-0.3
LKD2	Lefkada island	0.55	22	P	Pg	07 02 04.0	-0.3
LKD2				AML	AML	07 02 20.3	
	comp=N,388μm,0.5s						
LKD2				AML	AML	07 02 22.9	
	comp=E,384μm,0.7s						
TSLK	Tsoukalades, L	0.58	21	P	Pg	07 02 04.8	-0.2
TSLK	Tsoukalades, L	0.58	21	P	Pg	07 02 04.8	-0.2
TSLK				AML	AML	07 02 20.6	
	comp=E,798μm,0.7s						
TSLK				AML	AML	07 02 21.2	
	comp=N,375μm,0.6s						
AST1	Astakos	0.61	64	P	Pg	07 02 05.3	-0.2
AST1				S	Sb	07 02 14.8	0.0
	comp=N,1μm,0.3s						
PDO	Prodromos	0.70	63	P	Pg	07 02 06.8	-0.3
PDO				S	Sb	07 02 17.2	-0.3
	comp=N,820nm,0.6s						
PDO	Prodromos	0.70	63	P	Pg	07 02 06.9	-0.3
PDO				S	Sg	07 02 16.7	+0.4
PDO				AML	AML	07 02 20.3	
	comp=N,922μm,0.4s						
PDO				AML	AML	07 02 21.3	
	comp=E,1181μm,0.6s						
KRI1	kERI	0.70	151	P	Pg	07 02 06.7	-0.6
RLS	Riolos of Patr	0.88	104	P	Pg	07 02 10.4	-0.2
RLS	Riolos of Patr	0.88	104	P	Pg	07 02 10.4	-0.2
RLS				AML	AML	07 02 24.0	
	comp=N,362μm,0.4s						
RLS				AML	AML	07 02 26.7	
	comp=E,443μm,0.3s						
PVO	Paravola	0.95	69	P	Pg	07 02 11.8	-0.2
PVO	Paravola	0.95	69	P	Pg	07 02 11.7	-0.2
PVO				AML	AML	07 02 31.7	
	comp=N,624μm,0.5s						
PVO				AML	AML	07 02 36.3	
	comp=E,708μm,0.5s						
EFP	Efpalio	1.20	83	P	Pb	07 02 15.8	-0.6
ANX	Ano Chora	1.24	75	P	Pn	07 02 17.2	+0.2
ANX				AML	AML	07 02 41.3	
	comp=N,977μm,0.6s						
ANX				AML	AML	07 02 41.6	
	comp=E,711μm,0.6s						
LAKA	Lakka	1.25	91	P	Pg	07 02 17.8	+0.1
LAKA				AML	AML	07 02 37.0	
	comp=N,403μm,0.3s						
LAKA				AML	AML	07 02 40.6	
	comp=E,259μm,0.6s						
AMT	Artemida-Makis	1.28	125	P	Pn	07 02 17.8	+0.3
AMT				AML	AML	07 02 45.8	
	comp=E,354μm,0.7s						
AMT				AML	AML	07 02 47.9	
	comp=N,390μm,0.6s						
SERG	Sergoula	1.32	84	P	Pb	07 02 18.8	+0.4
KALE	Kalithea	1.38	85	P	Pg	07 02 20.0	-0.1
KLV	Kalavryta, Ach	1.41	99	P	Pb	07 02 20.3	+0.4
KLV				AML	AML	07 02 42.4	
	comp=E,151μm,0.3s						
KLV				AML	AML	07 02 46.1	
	comp=N,182μm,0.5s						
MAKR	Makrakomi, Fth	1.55	61	P	Pg	07 02 23.1	-0.3
MAKR				AML	AML	07 02 52.3	
	comp=N,235μm,0.5s						
MAKR				AML	AML	07 02 54.1	
	comp=E,388μm,0.9s						
AGG	Agios Georgios	1.69	63	P	Pg	07 02 25.5	-0.5
PYL	PYLOS	1.75	142	P	Pg	07 02 26.7	-0.5
THL	Klokotos Trika	1.80	44	P	Pb	07 02 27.3	+0.7
KIJV	Kijevo	6.46	334	ePn	Pn	07 03 29.0	+0.3
KIJV				Sn	Sn	07 04 41.0	-1.3

NEIC 01 07:10:49.9±1.0, 59.07N±0.03×152.44W±0.07, h67km±7km, Error ellipse: s-maj=5.5km s-min=3.4km az=118.0
AEIC 01 07:10:51±1.4, 59.08N±0.04×152.45W±0.07, h58km±6km, ML3.6/154, Error ellipse: s-maj=6.2km s-min=4.5km az=150.0
ISC 01 07:10:50.3±0.9, 59.04N±0.04×152.36W±0.04, h48km±13km, n149, σ0.75/162, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AU22	Augustine Moun	0.61	303		Pn	07 11 02.9	+0.1
AU22					Sn	07 11 12.5	+0.8
AU2	Augustine Isla	0.62	303		Pn	07 11 03.0	+0.1
AUJK	Augustine Jueg	0.62	300		Pn	07 11 03.1	+0.1
AUQ	Augustine Qik'	0.62	300		Pn	07 11 03.1	+0.1
AUQ					Sn	07 11 12.9	+0.7
AUP	Augustine Pinn	0.63	301		Pn	07 11 03.3	+0.1
AUH	Augustine H	0.64	301		Pn	07 11 03.4	+0.1
AUL	Augustine Lava	0.65	302		Pn	07 11 03.3	0.0
AUL					Sn	07 11 13.8	+1.1
AUW	Augustine West	0.66	300		Pn	07 11 03.4	0.0
HOM	Homer	0.72	31		Pn	07 11 04.6	+0.3
HOM					Sn	07 11 16.0	+1.7
CNPM	China Poot	0.75	50		Pn	07 11 05.5	+0.7
CNPM					Sn	07 11 16.5	+1.3
ILS	Iliamna Low So	0.98	339		Pn	07 11 07.3	-0.6
IVE	Iliamna Volcan	1.03	341		Pn	07 11 07.8	-0.7
BRLK	Bradley Lake	1.05	46		Pn	07 11 08.7	+0.1
BRLK					Sn	07 11 23.5	+1.4
BRSE	Bradley Lake S	1.09	49		Pn	07 11 09.4	+0.2
BRSE					Sn	07 11 24.9	+1.8
ILW	Iliamna West	1.09	339		Pn	07 11 08.7	-0.7
KAHG	Katmai Hook Gl	1.26	245		Pn	07 11 12.2	+0.6
KDAK	Kodiak Island	1.27	185		Pn	07 11 12.5	+0.8
KDAK					Sn	07 11 28.9	+1.4
RED	Redoubt Volcan	1.40	352		Pn	07 11 12.9	-0.6
KAHC	Katmai Hardscr	1.43	255		Pn	07 11 13.7	-0.3
KAWH	Katmai	1.43	244		Pn	07 11 14.1	+0.2
RSO	Redoubt South	1.44	352	Pn	Pn	07 11 13.3	-0.8
RDWB	Redoubt West	1.47	351		Pn	07 11 13.9	-0.6
RDWB					Sn	07 11 32.1	-0.6
DFR	Drift River	1.56	354		Pn	07 11 15.4	-0.3
DFR					Sn	07 11 34.6	-0.3
RDJH	Redoubt Jeurge	1.57	352		Pn	07 11 15.7	-0.1
RDJH					Sn	07 11 35.0	-0.1
KCG	Knife Ck. Glac	1.61	244		Pn	07 11 16.5	+0.1
ACHA	Angle Creek He	1.76	243		Pn	07 11 18.9	+0.5
SEW	Seward	1.82	53		Pn	07 11 18.5	-0.7
SLKM	Skilak Lake	1.82	35		Pn	07 11 19.1	-0.1
CAPN	Captain Cook N	1.83	19		Pn	07 11 21.2	+1.9
ANCK	Angle Creek	1.84	244		Pn	07 11 19.9	+0.3
KELA	Mount Kelaz	1.86	252		Pn	07 11 19.5	-0.3
OHAK	Old Harbor	1.89	195		Pn	07 11 20.3	+0.2
CKL	Chakachamna La	2.16	0		Pn	07 11 24.1	+0.2
SPCR	Spurr Chakacha	2.17	2		Pn	07 11 24.4	+0.4
SPCR					Sn	07 11 50.9	+1.3
SPBG	Spurr Blockage	2.22	360		Pn	07 11 25.2	+0.5
SPWE	Spurr West	2.24	358		Pn	07 11 25.8	+0.8
SPCG	Spurr Capps Gl	2.26	4		Pn	07 11 25.8	+0.4
SPCG					Sn	07 11 53.3	+1.2
FIS	Fire Island	2.37	26		Pn	07 11 28.1	+1.6
RC01	Rabbit Creek A	2.44	32		Pn	07 11 28.5	+0.9
PLK2	Peulik 2	2.45	240		Pn	07 11 28.6	+0.8
PLK3	Peulik 3	2.46	238		Pn	07 11 28.7	+0.7
PLK1	Peulik 1	2.56	243		Pn	07 11 29.9	+0.7
SUA	Susitna One	2.56	18		Pn	07 11 29.8	+0.4
SVW2	Sparrevohn	2.62	323		Pn	07 11 28.6	-1.4
SII	Sitkinak Islan	2.67	202		Pn	07 11 30.8	-0.1
PWL	Port Wells	2.73	46		Pn	07 11 31.3	-0.3
PMR	Palmer	3.02	31		Pn	07 11 35.0	-0.6
KNK	Knik Glacier	3.07	38		Pn	07 11 35.7	-0.7
MID	Middleton Isla	3.12	80		Pn	07 11 36.6	-0.3
GHO	Glory Hole Cre	3.23	30		Pn	07 11 38.2	-0.2
GLI	Glacier Island	3.23	53		Pn	07 11 37.1	-1.3
HIN	Hinchinbrook I	3.26	63		Pn	07 11 38.7	-0.3
SML	Sawmill	3.42	34		Pn	07 11 41.5	+0.4
FID	Port Fidalgo	3.42	57		Pn	07 11 39.6	-1.5
JPK	Jack Peak	3.52	53		Pn	07 11 43.1	+0.5
EYAK	Cordova Ski Ar	3.67	63		Pn	07 11 43.8	-0.7
CHIR	Chirikof Islan	3.68	210		Pn	07 11 43.9	-0.7
SCM	Sheep Creek Mo	3.75	40		Pn	07 11 45.6	-0.1
PPLA	Purkeypile	3.87	1		Pn	07 11 47.8	+0.5
RAGM	Ragged Mountai	4.12	68		Pn	07 11 50.6	-0.1
GOAT	Goat Mountain	4.15	65		Pn	07 11 50.8	-0.4
HUR	Hurricane	4.17	17		Pn	07 11 51.7	+0.4
WAT6	Susitna Watana	4.21	31		Pn	07 11 51.9	-0.2
WAT1	Susitna Watana	4.23	24		Pn	07 11 52.4	+0.2
TT01	Tatalina	4.27	337		Pn	07 11 52.0	-0.7
TTA	Tatalina	4.29	337		Pn	07 11 52.1	-0.9
HMT	Hamilton	4.31	69		Pn	07 11 53.3	+0.1
WAT2	Susitna Watana	4.34	23		Pn	07 11 53.8	0.0
PS12	TAPS Pump St12	4.34	53		Pn	07 11 53.9	+0.1
NICHA	Nichawak Mount	4.43	71		Pn	07 11 55.0	+0.1
SUCK	Suckling Hills	4.49	73		Pn	07 11 55.9	+0.2
TRF	Thorofare Moun	4.53	12		Pn	07 11 56.5	0.0
KTH	Kantishna Hill	4.58	8		Pn	07 11 57.2	+0.2
BERG	Berg Lake	4.59	69		Pn	07 11 57.0	-0.1
RND	Reindeer	4.70	20		Pn	07 11 58.5	-0.1
DHY	Denali Highway	4.71	29		Pn	07 11 59.5	+0.5
BGLC	Bering Glacier	4.74	73		Pn	07 11 59.9	+0.7
GRIN	Grindle Hills	4.75	71		Pn	07 11 59.7	+0.3
KHIT	Khitrov Hills	4.82	69		Pn	07 12 00.0	-0.3
CHUM	Lake Minchumin	4.86	0		Pn	07 12 00.4	-0.3
GLB	Gilahina Butte	4.89	57		Pn	07 12 01.0	-0.3
CRQM	Cirque	4.95	66		Pn	07 12 01.9	-0.3
VRDI	Verde Repeater	4.96	60		Pn	07 12 01.6	-0.8
MCK	McKinley	4.99	18		Pn	07 12 02.7	+0.2
KULT	Kultieth River	5.04	72		Pn	07 12 03.4	+0.1
TGL	Tana Glacier	5.10	66		Pn	07 12 04.0	-0.1
BPAW	Bear Paw Mtn.	5.12	7		Pn	07 12 04.5	+0.2
PAX	Paxson	5.17	37		Pn	07 12 05.5	+0.3
MCARA	McCarthy VSAT	5.21	59		Pn	07 12 05.5	-0.2
KIAG	Kiagna River	5.37	65		Pn	07 12 07.6	-0.3
PTPK	Patty Peak	5.40	62		Pn	07 12 08.0	-0.4
BALM	Baldy	5.40	64		Pn	07 12 08.0	-0.3
MESA	MESA	5.41	73		Pn	07 12 09.0	+0.5
GRNC	Granite Creek	5.60	68		Pn	07 12 11.0	-0.2
RKAV	Rock Avalanche	5.72	73		Pn	07 12 13.1	+0.3
BARN	Barnard Glacie	5.73	65		Pn	07 12 12.8	-0.1
MENT	Mentasta	5.74	43		Pn	07 12 14.1	+1.2
NEA	Nenana	5.77	14		Pn	07 12 12.9	-0.3
CHX	Chaix Hills	5.81	75		Pn	07 12 14.5	+0.6
WRH	Wood River Hil	5.81	19		Pn	07 12 13.3	-0.6
CTGM	Chitina Glacie	5.86	66		Pn	07 12 14.9	+0.3
RIDG	Independent Ri	5.93	34		Pn	07 12 16.1	+0.5
HDA	Harding Lake	5.97	23		Pn	07 12 15.8	-0.1
CCB	Clear Creek Bu	6.02	19		Pn	07 12 16.3	-0.4
MLY	Manley	6.06	7		Pn	07 12 16.9	-0.3
PS08	TAPS Pump Stn8	6.11	23		Pn	07 12 17.7	-0.2
TCOL	CIGO, UAF Yank	6.22	18		Pn	07 12 19.1	-0.3
COLA	College	6.22	18		Pn	07 12 18.7	-0.7
PCA	Pinnacle	6.24	75		Pn	07 12 20.0	+0.2
MDM	Murphy Dome	6.25	16		Pn	07 12 19.3	-0.5
IL31		6.30	22		Pn	07 12 20.2	-0.3
ILAR	Eielson Array	6.30	22		Pn	07 12 19.5	-1.1
YUK2	White River	6.33	59		Pn	07 12 21.4	+0.3
SCRK	Sand Creek	6.37	35		Pn	07 12 20.9	-0.6
YUK3	Moose Creek	6.50	60		Pn	07 12 23.7	+0.2
POKR	Poker Flat Res	6.52	19		Pn	07 12 23.0	-0.5
BC03		6.53	47		Pn	07 12 23.9	+0.3
BCAR	Beaver Creek A	6.53	47		Pn	07 12 23.6	-0.1
YUK1	Sand Pete Hill	6.61	57		Pn	07 12 25.1	+0.2
PNL	Peninsula	6.66	79		Pn	07 12 25.2	-0.3
IM03		7.00	355		Pn	07 12 29.3	-0.7
IMAR	Indian Mountai	7.00	355		Pn	07 12 29.4	-0.7
YUK4	Talbot Arm	7.21	66		Pn	07 12 34.2	+0.9
PRP	Porcupine Dome	7.23	23		Pn	07 12 33.3	-0.1
YUK6	Outpost Mounta	7.28	69		Pn	07 12 34.3	+0.2
DHAK	Deception Hill	7.30	84		Pn	07 12 34.1	-0.1
YUK7	Dusty Glacier	7.33	72		Pn	07 12 35.3	+0.4
YUK5	Granite Creek	7.55	68		Pn	07 12 38.1	+0.3
HYT	Haines Junctio	7.67	70		Pn	07 12 39.7	+0.3
EGAK	Eagle	7.80	38		Pn	07 12 40.9	-0.2
DAWY	Dawson	7.97	45		Pn	07 12 43.5	+0.1
PLBC	Pleasant Camp	8.21	80		Pn	07 12 47.0	+0.3
ANM	Nome	8.27	317		Pn	07 12 47.1	-0.4
COLD	Coldfoot	8.27	6		Pn	07 12 46.9	-0.6
SKAG	Skagway	8.74	80		Pn	07 12 53.8	-0.1
WHY	Whitehorse	8.94	72		Pn	07 12 56.9	0.0
BM03	Burnt Mountain	9.10	19		Pn	07 12 58.2	-0.6
BMAR	Burnt Mountain	9.11	19		Pn	07 12 58.1	-0.9
SIT	Sitka	9.25	95	Pn	Pn	07 12 58.6	-2.3
UNV	Unalaska Valle	9.40	242		Pn	07 13 02.1	-0.8
JIS	Juneau Island	9.40	87		Pn	07 13 02.9	0.0
MSW	Makushin Switc	9.48	243		Pn	07 13 03.1	-1.0
TOLK	Toolik Lake Re	9.71	6		Pn	07 13 06.1	-1.2
CRAG	Craig	11.01	101	Pn	Pn	07 13 23.9	-1.0
WRAK	Wrangell Islan	11.01	95	Pn	Pn	07 13 24.3	-0.6
DIB	Dawson Inlet,	12.52	109	Pn	Pn	07 13 44.0	-1.5
C36M	Paulatuk	15.88	38	Pn	Pn	07 14 26.8	-3.4
RES	Resolute Bay	25.96	31	P	P	07 16 20.2	+2.5
PETK	Petropavlovsk-	27.93	280	P	P	07 16 37.2	+1.6

NEIC 01 07:15:41.5±1.8, 16.47N±0.07×98.43W±0.05, h23km±10km, Md4.1/35(MEX), Error ellipse: s-maj=11.6km s-min=3.3km az=211.0
MEX 01 07:15:43.0±1.0, 16.39N×98.42W, h7km±6km, MD4.1
ISC 01 07:15:39.2±1.6, 16.46N±0.04×98.42W±0.03, h6km±12km, n35, σ1.24/57, 1C, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.29	104		Pb	07 15 48.0	+1.2
PNIG					Sb	07 15 52.4	+0.5
PNIG	Pinotepa	0.29	104	⇑iP	Pb	07 15 48.0	+1.2
	baz=269,slow=14						
PNIG				iS	Sb	07 15 52.4	+0.5
YOIG	Yosondua	0.93	65	iP	Pb	07 15 58.8	+0.9
YOIG				iS	Sb	07 16 11.0	+0.5
TLIG	Tlapa	1.10	353		Pb	07 16 01.4	+0.7
TLIG					Sg	07 16 15.5	+0.7
TLIG	Tlapa	1.10	353		Pb	07 16 01.5	+0.7
TLIG					Sb	07 16 16.5	+0.9
TLIG	Tlapa	1.10	353	eP	Pb	07 16 01.5	+0.7
TLIG				iS	Sb	07 16 16.5	+0.9
PEIG	Puerto Escondi	1.31	110	eP	Pb	07 16 03.6	-0.4
PEIG				iS	Sb	07 16 20.2	-1.0
FTIG	Fresnillo de T	1.47	11	eP	Pb	07 16 07.5	+0.6
FTIG				iS	Sb	07 16 26.4	+0.5
HLIG	Huajuapan de L	1.48	23	eP	Pb	07 16 07.8	+0.5
VHO	Vista Hermosa	1.73	69	eP	Pn	07 16 11.1	+1.1
MEIG	Mezcala	1.85	322		Pb	07 16 13.3	-0.3
MEIG					Sn	07 16 36.5	+1.1
MEIG	Mezcala	1.85	322	eP	Pb	07 16 13.3	-0.3
MEIG				eS	Sn	07 16 36.5	+1.1
CAIG	El Cayaco	1.86	289		Pb	07 16 11.7	0.0
CAIG					Sn	07 16 35.2	-0.3
CAIG	El Cayaco	1.86	289	eP	Pb	07 16 11.7	0.0
CAIG				eS	Sn	07 16 35.2	-0.3
PLIG	Platanillo	2.18	332		Pb	07 16 18.2	-1.0
PLIG					Sn	07 16 44.4	+0.9
PLIG	Platanillo	2.18	332	eP	Pb	07 16 18.2	-1.0
PLIG				iS	Sn	07 16 44.4	+0.9
HUIG	Huatulco	2.33	107		Pn	07 16 18.2	+0.2
HUIG	Huatulco	2.33	107	eP	Pn	07 16 18.2	+0.2
ARIG	Puente Sto Nin	2.58	315		Pn	07 16 23.2	+1.7
ARIG					Sn	07 16 54.2	+0.9
ARIG	Puente Sto Nin	2.58	315	eP	Pn	07 16 23.2	+1.7
ARIG				iS	Sn	07 16 54.2	+0.9
PPM	Popocatepetl	2.60	356	eP	Pn	07 16 24.7	+2.5
PPM				iS	Sn	07 16 54.9	+0.5
AMVM	AMECAMECA	2.68	353	eP	Pg	07 16 29.8	-0.9
MAVM	Malinalco, Edo	2.69	338		Pb	07 16 27.5	-0.3
MAVM					LR	07 17 05.3	

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
MAVM	Malinalco, Edo	2.69	338	eP	Pb	07 16 27.5	-0.3
MAVM				eS	Sg	07 17 05.3	-0.3
UNM	Universidad Na	2.94	346	iS	Sn	07 16 58.2	-4.4
CVM	Colonia del Va	2.99	346	eP	Pn	07 16 25.1	-2.1
ZIIG	Zihuatanejo	3.13	292		Pb	07 16 36.4	+1.1
ZIIG					Sb	07 17 14.1	+0.4
ZIIG	Zihuatanejo	3.13	292	eP	Pb	07 16 36.4	+1.1
ZIIG				eS	Sb	07 17 14.1	+0.4
AZVM	Cuida Lopez Ma	3.21	345		Pb	07 16 37.9	+1.0
AZVM	Cuida Lopez Ma	3.21	345	eP	Pb	07 16 37.9	+1.0
CMIG	Matias Romero	3.44	79		Pn	07 16 33.7	+0.3
CMIG					Sn	07 17 14.1	-0.5
CMIG	Matias Romero	3.44	79	eP	Pn	07 16 33.7	+0.3
CMIG				iS	Sn	07 17 14.1	-0.5
MOIG	Morelia	4.14	321	Pn	Pn	07 16 45.5	+2.2
CCIG	Comitan	6.03	91	Pn	Pn	07 17 12.6	+3.4
JCT	Junction City	14.01	355		P	07 19 04.4	-2.0

IDC 01 07:21:49.7±0.8, 17°12N×119°37E, h0km, mb3.7/9, mb1 3.8/10, mb1mx3.7/50, mbtmp3.7/10, ML4.0/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/53, Error ellipse: s-maj=39.8km s-min=16.7km az=67.0

NEIC 01 07:21:51.1±1.0, 17°15N±0°08×119°4E±0°2, h7km±5km, mb4.4/7, Error ellipse: s-maj=23.2km s-min=11.5km az=87.0

ISC 01 07:21:54.4±0.7, 17°21N±0°08×119°5E±0°1, h30km, n29, σ0°96/29, mb3.8/13, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	Pinlang	5.78	15	Pn	Pn	07 23 18.6	+0.5
TPUB	Ta-pu	6.16	10	Pn	Pn	07 23 24.1	+0.8
YULB	Yu-li	6.38	15	Pn	Pn	07 23 27.2	+0.8
YULB				Sn	Sn	07 24 35.2	-3.2
YHNB	Yeheng	7.63	13	Pn	Pn	07 23 43.0	-0.6
CMAR	Chiang Mai Arr	19.58	277	P	P	07 26 18.7	-1.5
	0.2nm,0.3s,baz=80,slow=10,SNR=2.7						
KSRS	Korea Array	21.50	19	P	P	07 26 41.6	+0.9
	1.1nm,0.9s,baz=206,slow=10,SNR=3.3						
SONM	Songino Array	32.37	343	P	P	07 28 21.4	+0.1
	0.4nm,0.6s,baz=169,slow=8.8,SNR=3.8						
SONM	Songino Array	32.37	343	P	P	07 28 22.3	+0.9
ASAJ	Asahikawa	33.17	31	LR	LR	07 41 30.0	
	comp=Z,37nm,19.2s,baz=312,slow=36						
WB0	Warramunga Arr	39.56	158	P	P	07 29 22.4	-0.7
WB0				IAmb	IAmb	07 29 38.7	
	comp=Z,17nm,1.4s						
WRAB	Tennant Creek	39.70	158	P	P	07 29 23.7	-0.5
WRAB				IAmb	IAmb	07 29 25.1	
	comp=Z,11nm,1.3s						
WRA	Warramunga Arr	39.71	158	P	P	07 29 23.1	-1.1
	comp=Z,1.1nm,0.9s,baz=341,slow=8.9,SNR=2.7						
MKAR	Makanchi Array	42.53	322	P	P	07 29 47.7	+0.5
	comp=Z,0.8nm,0.9s,baz=123,slow=8.8,SNR=7.0						
MKAR	Makanchi Array	42.53	322	P	P	07 29 47.4	+0.2
ASAR	Alice Springs	43.01	160	P	P	07 29 51.2	-0.1
	comp=Z,0.4nm,0.4s,baz=338,slow=6.4,SNR=7.2						
ASAR	Alice Springs	43.01	160	P	P	07 29 50.5	-0.8
ZALV	Zalesovo Beam	45.41	332	P	P	07 30 09.6	-0.6
	comp=Z,0.5nm,0.3s,baz=111,slow=8.4,SNR=5.3						
ZALV	Zalesovo Beam	45.41	332	P	P	07 30 10.1	-0.1
KURK	Kurchatov	46.63	325	P	P	07 30 20.2	+0.4
KURK				IAmb	IAmb	07 30 21.3	
	comp=Z,6.7nm,0.9s						
KK31	Karatay Array	48.71	313	P	P	07 30 36.2	+0.1
KK31				IAmb	IAmb	07 30 37.1	
	comp=Z,1.1nm,0.8s						
KKAR	Karatay Array	48.71	313	P	P	07 30 36.2	+0.1
STKA	Stephens Creek	53.22	156	P	P	07 31 09.0	-1.1
	comp=Z,1.1nm,0.5s,baz=314,slow=7.5,SNR=3.5						
STKA	Stephens Creek	53.22	156	P	P	07 31 10.7	+0.6
ABKAR	Akbulak array	57.33	318	P	P	07 31 39.6	0.0
IMAR	Indian Mountai	73.12	25	P	P	07 33 23.4	+1.7
PYZ	Puysegur Point	76.13	148	P	P	07 33 39.0	-0.3
FINES	FINESS Array B	76.66	330	P	P	07 33 42.2	0.0
	comp=Z,3.0nm,0.9s,baz=180,slow=1.0,SNR=4.5						
FINES	FINESS Array B	76.66	330	P	P	07 33 42.3	+0.1
YKA	Yellowknife Ar	89.99	22	P	P	07 34 51.4	+0.6
	comp=Z,0.1nm,0.6s,baz=315,slow=3.9,SNR=4.0						

IDC 01 07:22:57.7±1.3, 60°96S×26°74W, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.9/28, mbtmp4.1/5, ML4.3/1, Error ellipse: s-maj=58.4km s-min=30.0km az=37.0

NEIC 01 07:22:59.6±1.5, 61°0S±0°1×26°8W±0°4, h15km±4km, mb4.4/11, Error ellipse: s-maj=31.2km s-min=5.9km az=56.0

ISC 01 07:22:58.6±0.7, 61°1S±0°2×26°7W±0°2, h10km, n30, σ1°63/28, mb4.2/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.11	150	P	Pn	07 25 53.2	+2.4
VNA3	Neumayer Olymp	12.21	153	P	Pn	07 25 54.1	+1.9
VNA3	Neumayer Olymp	12.21	153	S	Sn	07 28 01.8	-6.4
VNA2	Neumayer--Watz	12.51	150	P	Pn	07 25 58.1	+1.8
	baz=310,slow=16						
VNA2	Neumayer--Watz	12.51	150	S	Sn	07 28 09.6	-5.8
	baz=308,slow=21						
SNAA	Sanae	14.12	148	P	Pn	07 26 20.5	+2.2
SNAA	Sanae	14.12	148	Pn	Pn	07 26 20.5	+2.2
	1.3nm,0.3s,baz=311,slow=16,SNR=78						
SNAA				Sn	Sn	07 28 42.7	-12
	0.1nm,0.3s,baz=319,slow=19,SNR=3.6						
SNAA	Sanae	14.12	148		Pn	07 26 19.9	+1.6
SNAA					Sn	07 28 49.8	-5.0
QSPA	South Pole Qui	29.13	180	P	P	07 29 06.1	+6.8
QSPA				IAmb	IAmb	07 29 07.3	
	comp=Z,4.8nm,1.4s						
TRQA	Tornquist	31.85	300	P	P	07 29 24.1	+0.7
ROC1	El Roble	40.05	294	P	P	07 30 33.6	-0.3
CPUP	Villa Florida	40.49	315	P	P	07 30 36.6	-0.7
	comp=Z,1.1nm,0.5s,baz=154,slow=5.3,SNR=3.9						
CPUP	Villa Florida	40.49	315	P	P	07 30 36.8	-0.4
GO04	Tololo Observa	42.35	296	P	P	07 30 51.1	-1.7
GO04				IAmb	IAmb	07 31 03.4	
	comp=Z,31nm,1.2s						
GO02	Mina Guanaco	46.22	301	P	P	07 31 25.0	+1.1
GO02				IAmb	IAmb	07 31 28.2	
	comp=Z,7.1nm,1.1s						
SIV	San Ignacio	51.34	316	P	P	07 32 01.5	-1.5
	comp=Z,0.7nm,0.4s,baz=178,slow=12,SNR=10						
MNMC	Minye Minye	51.61	305	P	P	07 32 05.0	-0.3
MNMC				IAmb	IAmb	07 32 09.2	
	comp=Z,4.8nm,1.0s						
LPAZ	La Paz	53.62	308	P	P	07 32 21.6	+1.1
	comp=Z,0.9nm,0.5s,baz=113,slow=13,SNR=4.2						
LPAZ	La Paz	53.62	308	P	P	07 32 21.5	+0.9
SAML	Samuel	58.62	316	P	P	07 32 54.8	-0.8
SAML				IAmb	IAmb	07 32 57.4	
	comp=Z,2.0nm,0.8s						
SNZO	South Karori	76.46	196	P	P	07 34 49.7	+1.7
PAYG	Puerto Ayora	76.94	293	P	P	07 34 50.5	-0.6
TOA0	Torodi Ar. Sit	77.36	28	P	P	07 34 53.2	-0.1
TOA0				IAmb	IAmb	07 34 56.4	
	comp=Z,1.7nm,0.8s						
TORD	Torodi Ar. Bea	77.36	28	P	P	07 34 53.9	+0.6
	comp=Z,0.9nm,0.5s,baz=202,slow=5.6,SNR=7.7						
TORD	Torodi Ar. Bea	77.36	28	P	P	07 34 54.2	+1.0
YKA	Yellowknife Ar	140.00	314	PKP	PKiKP	07 42 27.1	-0.8
	comp=Z,0.3nm,0.8s,baz=141,slow=2.0,SNR=5.0						
SONM	Songino Array	150.38	95	PKPbc	PKPbc	07 42 48.9	-0.3
	comp=Z,0.3nm,0.4s,baz=197,slow=4.5,SNR=2.3						
SONM	Songino Array	150.38	95		PKPbc	07 42 49.1	0.0
ILAR	Eielson Array	153.45	304	PKPbc	PKiKP	07 42 56.4	+0.9
	comp=Z,0.5nm,1.0s,baz=146,slow=1.3,SNR=3.7						
ILAR	Eielson Array	153.45	304		PKPbc	07 42 54.8	-0.6

IDC 01 07:23:04.6±0.7, 17°13N×119°32E, h0km, mb3.9/13, mb1 4.0/14, mb1mx3.9/49, mbtmp3.9/14, ML4.2/1, MS3.2/1, Ms1 3.4/2, ms1mx2.7/52, Error ellipse: s-maj=24.5km s-min=14.7km az=61.0

NEIC 01 07:23:07.9±2.6, 17°20N±0°10×119°39E±0°04, h16km±5km, mb4.4/19, Error ellipse: s-maj=14.8km s-min=3.8km az=197.0

ISC 01 07:23:09.6±0.6, 17°20N±0°08×119°37E±0°09, h30km, n49, σ1°12/50, mb4.2/22, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZP	Santa	1.09	71		Pn	07 23 28.4	-0.5
SSLB	Suanglung	6.72	12		Pn	07 24 42.7	-3.7
NACB	Ninganchiao	7.25	16	Pn	Pn	07 24 54.9	+1.4
KNMB	Chin-men Tao	7.29	353	Pn	Pn	07 24 53.8	-0.3
YHNB	Yeheng	7.67	14	Pn	Pn	07 24 59.8	+0.4
DAV	Davao City (W)	11.75	148	LR	LR	07 31 50.8	
	comp=Z,193nm,19.0s,baz=340,slow=45						
CMAR	Chiang Mai Arr	19.49	277	P	P	07 27 32.8	-1.6
	0.3nm,0.3s,baz=101,slow=9.3,SNR=3.2						
CMAR				LR	LR	07 35 04.2	
	comp=Z,68nm,18.7s,baz=354,slow=37						
KSRS	Korea Array	21.54	19	P	P	07 27 55.5	-0.9
	2.3nm,0.7s,baz=204,slow=11,SNR=7.6						
GUMO	Guam	24.84	95	P	P	07 28 29.8	+0.3
	53nm,0.7s,baz=343,slow=14,SNR=3.0						
GUMO	Guam	24.84	95	P	P	07 28 30.0	+0.5
SONM	Songino Array	32.36	344	P	P	07 29 36.4	-0.1
	0.9nm,0.6s,baz=164,slow=10,SNR=8.1						
SONM	Songino Array	32.36	344	P	P	07 29 36.9	+0.4
KLR	Kul'dur	33.50	15	P	P	07 29 46.9	+0.7
	0.7nm,0.6s,baz=285,slow=20,SNR=3.6						
PSA00	Pilbara Seismi	38.53	179	P	P	07 30 31.1	+1.5
WB0	Warramunga Arr	39.59	157	P	P	07 30 37.2	-1.2
WB0				IAmb	IAmb	07 30 53.3	
	comp=Z,6.4nm,1.1s						
WRA	Warramunga Arr	39.73	158	P	P	07 30 37.8	-1.8
	comp=Z,2.5nm,1.0s,baz=337,slow=9.0,SNR=4.2						
WR0	Warramunga Arr	39.82	157	P	P	07 30 39.7	-0.6
WR0				IAmb	IAmb	07 30 55.3	
	comp=Z,10nm,1.2s						
MK31	Makanchi Array	42.49	322	P	P	07 31 04.4	+2.3
MKAR	Makanchi Array	42.49	322	P	P	07 31 02.5	+0.4
	comp=Z,1.7nm,0.8s,baz=124,slow=7.9,SNR=13						
MKAR				PcP	PcP	07 32 54.3	-0.2
	comp=Z,1.0nm,1.0s,baz=123,slow=4.5,SNR=3.7						
MKAR	Makanchi Array	42.49	322	P	P	07 31 04.4	+2.3
MKAR					PcP	07 32 54.4	-0.2
ASAR	Alice Springs	43.02	160	P	P	07 31 06.4	-0.3
	comp=Z,0.8nm,0.6s,baz=342,slow=6.8,SNR=11						
ASAR	Alice Springs	43.02	160	P	P	07 31 07.3	+0.6
NRN	Naryn	44.26	312	P	P	07 31 18.3	+1.5
NRN				IAmb	IAmb	07 31 19.2	
	comp=Z,9.8nm,1.3s						
ZAA0	Zalesovo Array	45.38	332	P	P	07 31 24.6	-0.5
ZAA0				IAmb	IAmb	07 31 26.5	
	comp=Z,4.1nm,1.0s						
ZALV	Zalesovo Beam	45.38	332	P	P	07 31 25.3	+0.1
	comp=Z,1.9nm,0.7s,baz=131,slow=6.5,SNR=10.0						
ZALV	Zalesovo Beam	45.38	332	P	P	07 31 24.6	-0.5
KURK	Kurchatov	46.59	325	P	P	07 31 35.5	+0.7
KK31	Karatay Array	48.65	313	P	P	07 31 50.1	-0.8
KK31				IAmb	IAmb	07 31 52.4	
	comp=Z,2.9nm,0.8s						
KKAR	Karatay Array	48.65	313	P	P	07 31 50.8	-0.2
KKAR	Karatay Array	48.65	313	P	P	07 31 51.5	+0.5
KKAR				IAmb	IAmb	07 31 52.4	
	comp=Z,2.9nm,0.8s						
BBOO	Buckleboo	52.22	162	P	P	07 32 16.9	-1.0
STKA	Stephens Creek	53.25	156	P	P	07 32 24.6	-0.9
	comp=Z,1.9nm,0.6s,baz=338,slow=3.7,SNR=4.4						
STKA	Stephens Creek	53.25	156	P	P	07 32 25.6	+0.1
GEYT	Alibeck	57.09	304	P	P	07 32 53.7	+0.3
	comp=Z,2.1nm,0.9s,baz=134,slow=6.4,SNR=5.1						
GEYT	Alibeck	57.09	304	P	P	07 32 54.3	+0.9
ABKAR	Akbulak array	57.28	318	P	P	07 32 54.1	-0.3
IMAR	Indian Mountai	73.18	25	P	P	07 34 38.5	+1.3
RSO	Redoubt South	74.17	31	P	P	07 34 42.5	-0.9
TOLK	Toolik Lake Re	74.52	22	P	P	07 34 46.8	+1.7
MLY	Manley	74.52	26	P	P	07 34 46.7	+1.5
MLY				IAmb	IAmb	07 34 55.1	
	comp=Z,3.1nm,1.0s						
SUA	Susitna One	75.01	30	P	P	07 34 49.0	+0.9
SUA				IAmb	IAmb	07 34 49.3	
	comp=Z,4.1nm,0.9s						
BWN	Browne	75.19	27	P	P	07 34 48.4	-0.6
ILAR	Eielson Array	76.19	26	P	P	07 34 54.7	0.0
	comp=Z,0.2nm,0.6s,baz=297,slow=6.0,SNR=3.5						
FINES	FINESS Array B	76.63	330	P	P	07 34 56.5	-0.7
	comp=Z,1.5nm,0.7s,baz=68,slow=10,SNR=6.3						
FINES	FINESS Array B	76.63	330	P	P	07 34 57.5	+0.3
C36M	Paulatuk	82.93	19	P	P	07 35 31.3	+0.1
NB2	NORSAR Subarra	83.58	332	P	P	07 35 34.4	-0.4
	comp=Z,0.8nm,0.7s,baz=67,slow=4.8						
NOA	NORSAR Array B	83.58	332	P	P	07 35 33.2	-1.6
	comp=Z,1.1nm,0.8s,baz=67,slow=5.0,SNR=4.0						
YKA	Yellowknife Ar	90.04	22	P	P	07 36 06.8	+0.6
	comp=Z,0.4nm,0.7s,baz=314,slow=4.2,SNR=9.3						

IDC 01 07:26:52.2±3.0, 17°11N×119°50E, h0km, mb3.4/3, mb1 3.4/3, mb1mx3.2/50, mbtmp3.4/3, Error ellipse: s-maj=388.3km s-min=209.0km az=64.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	42.63	322	P	P	07 34 50.3	0.0
	0.4nm,0.9s,baz=131,slow=8.0,SNR=2.5						
ASAR	Alice Springs	42.90	160	P	P	07 34 52.6	-0.1
	0.2nm,0.5s,baz=335,slow=6.4,SNR=4.7						
ZALV	Zalesovo Beam	45.51	332	P	P	07 35 13.1	-0.2
	0.4nm,0.5s,baz=128,slow=9.5,SNR=2.5						

IDC 01 07:33:47.9±6.0, 20°64S×178°09W, h561km±59km, mb3.2/8, mb1 3.4/9, mb1mx3.1/32, mbtmp4.1/9, Error ellipse: s-maj=56.5km s-min=28.3km az=134.0

NEIC 01 07:33:51.3±2.5, 20°5S±0°1×178°36W±0°07, h589km±8km, mb4.1/10, Error ellipse: s-maj=19.0km s-min=9.3km az=172.0

ISC 01 07:33:46.5±0.7, 20°3S±0°1×178°2W±0°1, h534km, n36, σ1°40/36, mb4.0/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.38	304	P	P	07 35 17.5	+7.1
FUNA	Funafuti	11.94	347	P	P	07 36 31.7	+7.2
DZM	Mont Dzumac	14.48	260	P	P	07 36 51.6	+0.6
	0.2nm,0.3s,baz=22,slow=12,SNR=3.1						
DZM	Mont Dzumac	14.48	260	P	P	07 36 51.9	+0.9
MXZ	Matakaoa Point	17.52	189		P	07 37 23.6	+3.0
EIDS	Eidsvold	28.77	254		P	07 39 02.3	+1.0
BBOO	Buckleboo	42.53	243	P	P	07 40 54.2	-1.0
BBOO				IAmb	IAmb	07 41 03.0	
	comp=Z,8.4nm,1.2s						
WR0	Warramunga Arr	44.30	262	P	P	07 41 09.2	0.0
WR0				IAmb	IAmb	07 41 23.9	
	comp=Z,10nm,1.3s						
AS31	Alice Springs	44.43	257	P	P	07 41 09.9	-0.3
ASAR	Alice Springs	44.44	257	P	P	07 41 09.8	-0.5
	comp=Z,2.4nm,0.8s,baz=96,slow=7.5,SNR=26						
ASAR				PcP	PcP	07 42 40.8	-1.6
	comp=Z,0.4nm,0.6s,baz=111,slow=3.9,SNR=5.5						
ASAR	Alice Springs	44.44	257	P	P	07 41 08.7	-1.5
ASAR					PcP	07 42 40.3	-2.1
WB0	Warramunga Arr	44.47	262	P	P	07 41 09.9	-0.6
WB0				IAmb	IAmb	07 41 16.1	
	comp=Z,5.8nm,1.1s						
WRAB	Tennant Creek	44.48	262	P	P	07 41 09.7	-0.9
WRAB				IAmb	IAmb	07 41 28.1	
	comp=Z,5.8nm,1.1s						
WRA	Warramunga Arr	44.49	262	P	P	07 41 09.8	-0.9
	comp=Z,0.6nm,0.3s,baz=97,slow=7.6,SNR=2.5						
WRA	Warramunga Arr	44.49	262	P	P	07 41 07.8	-2.9
FITZ	Fitzroy Crossi	52.92	262	P	P	07 42 12.7	-0.5
FITZ				IAmb	IAmb	07 42 13.1	
	comp=Z,15nm,1.3s						
QSPA	South Pole Qui	69.81	180	P	P	07 44 02.6	-0.5
MJAR	Matsushiro Arr	69.93	324	P	P	07 44 04.4	+0.3
	comp=Z,0.9nm,0.5s,baz=138,slow=6.6,SNR=3.9						
PETK	Petropavlovsk-	76.00	345	P	P	07 44 40.1	+1.6
	comp=Z,7.3nm,1.0s,baz=128,slow=3.1,SNR=2.6						
PETK	Petropavlovsk-	76.00	345	P	P	07 44 40.3	+1.8
KSRS	Korea Array	76.61	319	P	P	07 44 43.7	+1.5
	comp=Z,0.7nm,0.7s,baz=133,slow=5.8,SNR=4.3						
ILAR	Eielson Array	88.11	13	P	P	07 45 39.9	+0.1
	comp=Z,0.3nm,0.5s,baz=220,slow=5.4,SNR=4.8						
ILAR	Eielson Array	88.11	13	P	P	07 45 39.3	-0.5
PDAR	Pinedale Array	88.88	43	P	P	07 45 44.9	+0.7
	comp=Z,0.3nm,0.7s,baz=202,slow=1.9,SNR=4.3						
PDAR	Pinedale Array	88.88	43	P	P	07 45 45.6	+1.4
CMAR	Chiang Mai Arr	89.90	290	P	P	07 45 49.9	+0.8
	comp=Z,1.2nm,0.4s,baz=119,slow=3.7,SNR=4.3						
MKAR	Makanchi Array	110.93	314	PKiKP	PKiKP	07 51 18.3	-0.7
	comp=Z,0.2nm,0.5s,baz=79,slow=0.7,SNR=3.6						
ARCES	ARCESS Array B	128.66	350	PKP	PKPdf	07 51 52.1	-0.2
	comp=Z,2.0nm,0.8s,baz=52,slow=2.0,SNR=3.9						
ARCES	ARCESS Array B	128.66	350		PKPdf	07 51 51.7	-0.6
AKASG	Malin Array Be	142.73	331	PKP	PKPdf	07 52 15.3	-3.5
	comp=Z,1.4nm,0.4s,baz=43,slow=4.4,SNR=14						
AKASG	Malin Array Be	142.73	331		PKPpre	07 52 15.0	
BRTR	Keskin Array B	146.57	312	PKPbc	PKPbc	07 52 27.7	-0.9
	comp=Z,0.6nm,0.6s,baz=44,slow=4.8,SNR=3.3						
BRTR	Keskin Array B	146.57	312		PKPbc	07 52 27.9	-0.7
CLL	Collm	147.79	347	ePKPbc	PKPbc	07 52 31.0	-0.1
CLL				iPKPab	PKPab	07 52 36.0	+0.5
GERES	GERESS Array B	149.93	344	PKPbc	PKPbc	07 52 36.0	-0.6
	comp=Z,0.5nm,0.5s,baz=27,slow=3.3,SNR=3.5						
GERES	GERESS Array B	149.93	344		PKPbc	07 52 34.2	-2.4

ATH 01 08:02:55.6, 38°39N×20°45E, h18km±2km, ML3.2/14, Error ellipse: s-maj=2.8km s-min=0.8km az=262.0

THE 01 08:02:56.3, 38°41N×20°44E, h0km±2km, ML3.4/14, Error ellipse: s-maj=2.2km s-min=0.5km az=287.0

IDC 01 08:03:13.5±12.0, 39°96N×22°65E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.2/31, mbtmp3.5/5, Error ellipse: s-maj=242.1km s-min=36.7km az=35.0

ISC 01 08:02:57.4±1.0, 38°39N±0°02×20°51E±0°03, h4km±6km, n49, σ1°18/75, mb3.6/5, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	VASILIKIADES	0.05	63	P	Pg	08 02 58.3	-0.3
VSK1				S	Sg	08 02 59.4	0.0
	71µm,0.2s						
FSK	Fiskardo	0.08	30	P	Pg	08 02 58.7	-0.4
FSK	Fiskardo	0.08	30	P	Pg	08 02 58.7	-0.4
FSK				AML	AML	08 03 02.8	
	comp=E,40112µm,0.3s						
FSK				AML	AML	08 03 04.1	
	comp=N,24727µm,0.3s						
KEF1	Kardakata, Kep	0.11	195	P	Pg	08 02 59.0	-0.6
KEF1				S	Sg	08 03 01.4	+0.3
KEF4	Livadi, Kephal	0.14	207	P	Pg	08 02 59.5	-0.8
KEF4				S	Sg	08 03 02.3	+0.1
LXR1	Lixouri, Cepha	0.19	197	P	Pg	08 03 00.5	-0.7
LXR1				S	Sg	08 03 04.3	+0.6
	comp=N,100µm,0.3s						
ARG2	Argostoli	0.21	185	P	Pg	08 03 00.7	-0.7
ARG2				S	Sg	08 03 04.4	+0.2
	comp=N,72µm,0.2s						
VLS	Valsamata	0.22	163	P	Pg	08 03 01.0	-0.6
VLS				S	Sg	08 03 05.0	+0.5
	comp=N,7µm,0.2s						
VLS	Valsamata	0.22	163	P	Pg	08 03 01.0	-0.6
VLS				S	Sg	08 03 05.0	+0.5
VLS				AML	AML	08 03 05.2	
	comp=E,16943µm,0.2s						
VLS				AML	AML	08 03 08.5	
	comp=N,16178µm,0.2s						
KEF2	Argostoli. Kep	0.22	184	P	Pg	08 03 00.9	-0.8
KEF2				S	Sg	08 03 04.6	0.0
KEF3	Kipouria, Keph	0.22	215	P	Pg	08 03 00.7	-1.0
KEF3				S	Sg	08 03 04.6	0.0
CHV1	Chavriata, Kef	0.23	206	P	Pg	08 03 00.8	-1.0
CHV1				S	Sg	08 03 04.9	+0.2
	comp=N,62µm,0.4s						
EVGI	Lefkada island	0.26	26	P	Pg	08 03 01.8	-0.7
EVGI				S	Sg	08 03 06.4	+0.5
EVGI	Lefkada island	0.26	26	P	Pg	08 03 01.9	-0.6
EVGI				S	Sg	08 03 06.3	+0.4
MGNA	Meganis	0.35	39	P	Pg	08 03 03.4	-0.8
MGNA				AML	AML	08 03 09.5	
	comp=N,10392µm,0.2s						
MGNA				AML	AML	08 03 13.0	
	comp=E,6447µm,0.4s						
KFL	Anninata	0.35	142	P	Pg	08 03 03.6	-0.6
KFL				S	Sg	08 03 10.1	+1.2
	comp=E,7µm,0.3s						
KFL	Anninata	0.35	142	P	Pg	08 03 03.7	-0.6
KFL				S	Sg	08 03 10.1	+1.2
KFL				AML	AML	08 03 11.3	
	comp=E,15558µm,0.3s						
KFL				AML	AML	08 03 12.9	
	comp=N,12348µm,0.2s						
LKD2	Lefkada island	0.42	16	P	Pg	08 03 04.3	-1.2
LKD2				S	Sg	08 03 10.6	-0.3
	comp=N,3µm,0.5s						
LKD2	Lefkada island	0.42	16	P	Pg	08 03 04.4	-1.1
LKD2				S	Sg	08 03 10.2	-0.8
LKD2				AML	AML	08 03 16.5	
	comp=E,5035µm,0.3s						
LKD2				AML	AML	08 03 17.5	
	comp=N,3985µm,0.5s						
TSLK	Tsoukalades, L	0.45	15	P	Pg	08 03 05.0	-1.1
TSLK				S	Sg	08 03 12.1	+0.1
	comp=N,3µm,0.4s						
TSLK	Tsoukalades, L	0.45	15	P	Pg	08 03 05.1	-1.0
TSLK				S	Sg	08 03 12.4	+0.4
AST1	Astakos	0.48	71	P	Pg	08 03 06.2	-0.4
AST1				S	Sb	08 03 15.0	-0.8
	comp=N,6µm,0.3s						
VLMS	Volimes, Zakyn	0.52	167	P	Pg	08 03 06.4	-1.0
VLMS				AML	AML	08 03 15.9	
	comp=N,25385µm,0.4s						
VLMS				AML	AML	08 03 18.3	
	comp=E,13032µm,0.2s						
PDO	Prodromos	0.57	68	P	Pg	08 03 07.7	-0.6
PDO	Prodromos	0.57	68	P	Pg	08 03 07.8	-0.6
PDO				AML	AML	08 03 25.4	
	comp=N,4850µm,0.4s						
PDO				AML	AML	08 03 25.4	
	comp=E,4882µm,0.3s						
ZAK2	Zakynthos	0.67	153	P	Pg	08 03 09.8	-0.5
ZAK2				S	Sb	08 03 21.7	+0.3
	comp=E,9µm,0.3s						
KRI1	kERI	0.76	161	P	Pg	08 03 10.5	-1.5
KRI1				S	Sb	08 03 23.3	-0.7
	comp=E,6µm,0.2s						
RLS	Riolos of Patr	0.82	113	P	Pg	08 03 12.2	-1.0
RLS				S	Sb	08 03 25.5	-0.2
	comp=E,668nm,0.5s						
RLS	Riolos of Patr	0.82	113	P	Pg	08 03 12.2	-1.0
RLS				S	Sg	08 03 24.9	+1.1
RLS				AML	AML	08 03 34.3	
	comp=N,1309µm,0.5s						
RLS				AML	AML	08 03 34.3	
	comp=E,1355µm,0.5s						
PVO	Paravola	0.83	74	P	Pg	08 03 12.8	-0.5
PVO				S	Sb	08 03 27.4	+1.5
	comp=E,2µm,0.4s						
PVO	Paravola	0.83	74	P	Pg	08 03 12.8	-0.5
PVO				AML	AML	08 03 32.1	
	comp=N,4189µm,0.4s						
PVO				AML	AML	08 03 33.6	
	comp=E,2864µm,0.4s						
DRO	Drossia	1.04	114	P	Pg	08 03 16.0	-1.4
DRO	Drossia	1.04	114	P	Pg	08 03 15.9	-1.4
DRO				AML	AML	08 03 40.2	
	comp=N,3119µm,0.3s						
DRO				AML	AML	08 03 40.9	
	comp=E,3194µm,0.5s						
EFP	Efpalio	1.10	87	P	Pg	08 03 16.7	-1.7
EFP				S	Sn	08 03 35.3	+0.1
	comp=E,2µm,0.5s						
EFP	Efpalio	1.10	87	P	Pg	08 03 16.7	-1.7
EFP				AML	AML	08 03 40.1	
	comp=E,3983µm,0.5s						
EFP				AML	AML	08 03 40.4	
	comp=N,2608µm,0.5s						
ANX	Ano Chora	1.13	79	P	Pg	08 03 17.7	-1.3
ANX	Ano Chora	1.13	79	P	Pg	08 03 17.7	-1.3
EVR	Evrytania	1.15	62	P	Pg	08 03 17.8	-1.6
LAKA	Lakka	1.17	97	P	Pg	08 03 18.2	-1.5
LAKA				AML	AML	08 03 46.2	
	comp=N,822µm,0.8s						
LAKA				AML	AML	08 03 50.3	
	comp=E,875µm,0.6s						
SERG	Sergoula	1.22	88	P	Pg	08 03 19.0	-1.7
SERG	Sergoula	1.22	88	P	Pg	08 03 19.0	-1.7
SERG				AML	AML	08 03 42.7	
	comp=N,1875µm,0.7s						
SERG				AML	AML	08 03 43.0	
	comp=E,1442µm,0.7s						
KALE	Kalithea	1.28	89	P	Pg	08 03 20.0	-2.0
KALE				AML	AML	08 03 45.0	
	comp=E,707µm,0.6s						

KALE				AML	AML	08 03 47.0	
	comp=N,1602µm,0.7s						
KLV	**Kalavryta, Ach**	**1.34**	**104**	P	**Pg**	**08 03 21.1**	**-2.0**
KLV				S	Sn	08 03 42.3	+1.1
KLV	**Kalavryta, Ach**	**1.34**	**104**	P	**Pg**	**08 03 21.1**	**-2.0**
HFS	**Hagfors**	**22.19**	**351**	P	**P**	**08 07 58.1**	**+3.7**
	comp=N,1.6nm,0.7s,baz=147,slow=8.6,SNR=4.7						
FINES	**FINESS Array B**	**23.34**	**7**	P	**P**	**08 08 05.7**	**-0.7**
	comp=N,2.9nm,0.9s,baz=193,slow=11,SNR=3.6						
NOA	**NORSAR Array B**	**23.41**	**349**	P	**P**	**08 08 11.0**	**+3.8**
	comp=N,1.2nm,0.9s,baz=140,slow=9.6,SNR=2.5						
MKAR	**Makanchi Array**	**45.20**	**59**	P	**P**	**08 11 13.6**	**-1.8**
	comp=N,0.1nm,0.5s,baz=277,slow=8.1,SNR=5.3						
ZALV	**Zalesovo Beam**	**45.56**	**48**	P	**P**	**08 11 17.3**	**-0.8**
	comp=N,0.5nm,0.3s,baz=296,slow=9.7,SNR=2.2						

*GII **01** 08:14:00.2±0.0, 37°.26N 21°.42E, h1km*

*BJI **01** 08:14:01.0±0.0, 38°.70N 22°.70E, h12km, mB5.1/29, mb4.6/44, Ms4.9/13, Ms7 4.6/14*

*IDC **01** 08:14:02.0±0.5, 38°.71N 22°.69E, h0km, mb4.3/30, mb1 4.4/39, mb1mx4.3/51, mbtmp4.3/39, ML3.9/10, MS3.9/28, Ms1 3.9/28, ms1mx3.8/49, Error ellipse: s-maj=11.0km s-min=10.6km az=178.0*

*THE **01** 08:14:03.5, 38°.71N 22°.76E, h1km±1km, ML4.6/31, Error ellipse: s-maj=2.0km s-min=0.5km az=343.0*

*PDG **01** 08:14:03.4±0.6, 38°.72N 22°.75E, h10km, ML4.5/13, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*

*MOS **01** 08:14:03.5±1.2, 38°.76N 22°.76E, h18km, mb4.8/34, Error ellipse: s-maj=6.1km s-min=3.9km az=84.1*

*ATH **01** 08:14:03.2, 38°.70N 22°.75E, h18km±1km, ML4.5/29, Error ellipse: s-maj=1.4km s-min=0.6km az=193.0*

*HLW **01** 08:14:03.5, 38°.87N 23°.41E, h11km±9km, Md4.9, Ml4.9*

*NEIC **01** 08:14:04.5±2.1, 38°.76N±0°.03 22°.78E±0°.05, h13km±3km, Error ellipse: s-maj=6.1km s-min=4.4km az=66.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.94; $M_{\theta\theta}$0.97; $M_{\phi\phi}$-0.03; $M_{r\theta}$-0.80; $M_{\theta\phi}$0.16; $M_{\phi r}$-0.11; Fault plane solution: $M_0$1.26000×10^{16} NP1: ϕ_s260.10000°, δ25.12000°, λ-91.44000°. NP2: ϕ_s81.69000°, δ64.89000°, λ-89.32000°. Principal axes: T 1.2871, Plg20.0000°, Azm171.0000°; N -0.0579, Plg1.0000°, Azm261.0000°; P -1.2292, Plg70.0000°, Azm353.0000°;*

*MED_RC **01** 08:14:04.0±0.3, 38°.58N 22°.86E, h13km±1km, MW4.8/25, Moment Tensor Solution. Mantle waves: s25,c38; Duration: 1s1 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.57±.13; $M_{\theta\theta}$1.69±.09; $M_{\phi\phi}$-0.12±.07; $M_{r\theta}$-1.01±.16; $M_{\theta\phi}$-0.18±.05; $M_{\phi r}$-0.79±.19; Best double couple: $M_0$2.08000×10^{16} NP1: ϕ_s296.00000°, δ34.00000°, λ-52.00000°. NP2: ϕ_s72.00000°, δ64.00000°, λ-113.00000°. Principal axes: T 1.9800, Plg16.0000°, Azm179.0000°; N 0.1900, Plg20.0000°, Azm83.0000°; P -2.1700, Plg64.0000°, Azm305.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*BEO **01** 08:14:05.3±0.7, 38°.75N 22°.91E, h7km±9km, ML4.3/10*

*GCMT **01** 08:14:05.2±0.4, 38°.55N±0°.02 22°.81E±0°.04, h17km±1km, MW4.9/84, Moment Tensor Solution. s14,c16; s84,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.17±.17; $M_{\theta\theta}$2.19±.12; $M_{\phi\phi}$-0.02±.09; $M_{r\theta}$-1.06±.26; $M_{\theta\phi}$-0.36±.06; $M_{\phi r}$-0.90±.30; Best double couple: $M_0$2.59700×10^{16} NP1: ϕ_s298.00000°, δ37.00000°, λ-56.00000°. NP2: ϕ_s77.00000°, δ60.00000°, λ-113.00000°. Principal axes: T 2.4440, Plg12.0000°, Azm184.0000°; N 0.3060, Plg20.0000°, Azm89.0000°; P -2.7510, Plg67.0000°, Azm304.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*SKO **01** 08:14:08.4, 38°.70N 22°.75E, h0km*

ISC 01 08:14:04.0±0.7, 38°.70N±0°.01 22°.75E±0°.01, h13km±4km, n620, σ1s49/641, mb4.8/132, MS4.1/28, 32C-21D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AXAR	**Agios Charalam**	**0.10**	**314**	P	**Pg**	**08 14 06.4**	**-0.6**
LKR	**Lokris**	**0.20**	**104**	P	**Pg**	**08 14 08.1**	**-0.4**
LKR				S	Sg	08 14 11.8	+0.2
	216µm,0.3s						
LKR	**Lokris**	**0.20**	**104**	P	**Pg**	**08 14 08.1**	**-0.4**
LKR				S	Sg	08 14 12.1	+0.5
LKR				AML	AML	08 14 12.4	
LKR				AML	AML	08 14 13.2	
DLFA	**Delphi**	**0.30**	**222**	P	**Pg**	**08 14 09.3**	**-0.8**
DLFA				S	Sg	08 14 14.5	+0.2
AGG	**Agios Georgios**	**0.46**	**315**	P	**Pg**	**08 14 12.3**	**-0.8**
AGG				S	Sg	08 14 19.0	-0.2
	135µm,0.7s						
AGG	**Agios Georgios**	**0.46**	**315**	P	**Pg**	**08 14 12.3**	**-0.8**
AGG				S	Sg	08 14 18.9	-0.4
AGG				AML	AML	08 14 20.6	
AGG				AML	AML	08 14 20.9	
AGG	**Agios Georgios**	**0.46**	**315**	P	**Pg**	**08 14 12.2**	**-0.8**
AGG	**Agios Georgios**	**0.46**	**315**		**Pg**	**08 14 12.6**	**-0.5**
AGG				Sg	Sg	08 14 18.4	-0.8
PROD	**Prodromos**	**0.46**	**165**	P	**Pg**	**08 14 12.4**	**-0.6**
PROD				S	Sb	08 14 20.1	-0.5
KALE	**Kalithea**	**0.57**	**237**	P	**Pg**	**08 14 13.8**	**-1.3**
KALE				S	Sb	08 14 23.3	-0.5
	241µm,0.8s						
KALE	**Kalithea**	**0.57**	**237**	P	**Pg**	**08 14 14.1**	**-1.1**
KALE				S	Sg	08 14 22.6	-0.1
KALE				AML	AML	08 14 24.9	
KALE				AML	AML	08 14 26.0	
MAKR	**Makrakomi, Fth**	**0.57**	**303**	P	**Pg**	**08 14 14.3**	**-0.9**
MAKR				S	Sg	08 14 22.9	0.0
	58µm,0.5s						
MAKR	**Makrakomi, Fth**	**0.57**	**303**	P	**Pg**	**08 14 14.7**	**-0.5**
MAKR				S	Sg	08 14 22.8	0.0
MAKR				AML	AML	08 14 25.5	
MAKR				AML	AML	08 14 27.1	
SERG	**Sergoula**	**0.61**	**242**	P	**Pg**	**08 14 14.4**	**-1.6**
SERG				S	Sg	08 14 24.2	+0.1
	118µm,0.5s						
SERG	**Sergoula**	**0.61**	**242**	P	**Pg**	**08 14 14.3**	**-1.6**
SERG				S	Sg	08 14 23.9	-0.2
SERG				AML	AML	08 14 28.4	
SERG				AML	AML	08 14 29.2	
TRIZ	**Trizonia**	**0.63**	**238**	P	**Pg**	**08 14 14.7**	**-1.5**
TRIZ				S	Sg	08 14 24.4	-0.1
	192µm,0.6s						
TRIZ	**Trizonia**	**0.63**	**238**	P	**Pg**	**08 14 15.1**	**-1.1**
VIL2	**Platees**	**0.64**	**140**	P	**Pb**	**08 14 16.9**	**-0.1**
ANX	**Ano Chora**	**0.66**	**261**	P	**Pg**	**08 14 15.5**	**-1.3**
ANX				S	Sb	08 14 26.7	+0.3
	109µm,0.8s						
ANX	**Ano Chora**	**0.66**	**261**	P	**Pg**	**08 14 15.6**	**-1.2**
ANX				S	Sb	08 14 26.5	+0.1
ANX				AML	AML	08 14 31.6	
ANX				AML	AML	08 14 33.5	
MRKA	**Markates**	**0.66**	**89**	P	**Pg**	**08 14 15.6**	**-1.2**
MRKA				S	Sb	08 14 26.6	+0.2
	25µm,0.7s						
MRKA	**Markates**	**0.66**	**89**	P	**Pg**	**08 14 16.2**	**-0.6**
MRKA				S	Sg	08 14 25.8	+0.2
ALIK	**Aliki, Aigiali**	**0.67**	**229**	P	**Pg**	**08 14 16.2**	**-0.7**
ALIK				S	Sb	08 14 27.2	+0.7
VILL	**Villia**	**0.69**	**140**	P	**Pg**	**08 14 16.6**	**-0.9**
VILL				S	Sb	08 14 28.1	+0.6
	85µm,1.0s						
LTK	**Loutraki**	**0.70**	**166**	P	**Pg**	**08 14 16.6**	**-1.0**
LTK				S	Sb	08 14 28.6	+1.1
	57µm,0.4s						
LTK	**Loutraki**	**0.70**	**166**	P	**Pg**	**08 14 17.1**	**-0.5**
LTK				AML	AML	08 14 33.3	
LTK				AML	AML	08 14 34.6	
NEO	**Neokhori**	**0.71**	**31**	P	**Pg**	**08 14 16.9**	**-0.9**
NEO				S	Sg	08 14 27.3	+0.1
	96µm,0.4s						
NEO	**Neokhori**	**0.71**	**31**	P	**Pg**	**08 14 16.9**	**-0.9**
NEO				S	Sg	08 14 27.1	-0.1
NEO				AML	AML	08 14 30.5	
NEO				AML	AML	08 14 32.3	
EFP	**Efpalio**	**0.71**	**248**	P	**Pg**	**08 14 16.3**	**-1.6**
EFP				S	Sg	08 14 27.1	-0.1
	82µm,0.5s						
EFP	**Efpalio**	**0.71**	**248**	P	**Pg**	**08 14 16.7**	**-1.1**
EFP				S	Sg	08 14 27.0	-0.3
EFP				AML	AML	08 14 30.3	
EFP				AML	AML	08 14 32.7	
SKIA	**Skiathos**	**0.73**	**50**	P	**Pg**	**08 14 17.6**	**-0.6**
SKIA				S	Sg	08 14 27.9	+0.1
	44µm,0.9s						
SKIA	**Skiathos**	**0.73**	**50**	P	**Pg**	**08 14 17.7**	**-0.5**
SKIA				AML	AML	08 14 31.8	
	comp=E,64044µm,0.4s						
SKIA				AML	AML	08 14 32.1	
	comp=N,79118µm,0.9s						
LOUT	**Loutraki**	**0.73**	**166**	P	**Pg**	**08 14 17.2**	**-1.0**
LOUT				S	Sb	08 14 29.4	+0.9
	comp=N,57µm,0.7s						
LOUT	**Loutraki**	**0.73**	**166**	P	**Pg**	**08 14 17.4**	**-0.8**
LOUT				AML	AML	08 14 34.0	
	comp=N,24958µm,0.6s						
LOUT				AML	AML	08 14 37.5	
	comp=E,15063µm,0.7s						
XOR	**Xorichti**	**0.75**	**27**	P	**Pg**	**08 14 17.5**	**-1.1**
XOR				S	Sb	08 14 28.8	-0.3
	comp=E,60µm,0.6s						
XOR	**Xorichti**	**0.75**	**27**	P	**Pg**	**08 14 17.6**	**-0.9**
XOR				S	Sb	08 14 29.1	+0.1
XOR				AML	AML	08 14 32.2	
XOR				AML	AML	08 14 34.2	
LAKA	**Lakka**	**0.76**	**233**	P	**Pg**	**08 14 17.3**	**-1.4**
LAKA	**Lakka**	**0.76**	**233**	P	**Pg**	**08 14 17.3**	**-1.4**
LAKA				AML	AML	08 14 35.3	
	comp=N,43223µm,0.4s						
LAKA				AML	AML	08 14 37.6	
	comp=E,53702µm,0.8s						
EVR	**Evrytania**	**0.76**	**287**	P	**Pg**	**08 14 17.4**	**-1.4**
EVR				S	Sb	08 14 29.5	-0.1
	comp=E,29µm,0.9s						
EVR	**Evrytania**	**0.76**	**287**	P	**Pg**	**08 14 18.5**	**-0.3**
EVR				S	Sb	08 14 29.4	-0.1
EVR				AML	AML	08 14 37.6	
	comp=N,56189µm,1.0s						
EVR				AML	AML	08 14 37.9	
	comp=E,54624µm,0.8s						
KLV	**Kalavryta, Ach**	**0.81**	**216**	P	**Pg**	**08 14 17.8**	**-1.8**
KLV				S	Sn	08 14 33.0	+0.1
	comp=E,39µm,0.7s						
KLV	**Kalavryta, Ach**	**0.81**	**216**	P	**Pg**	**08 14 17.9**	**-1.7**
KLV				AML	AML	08 14 36.3	
	comp=E,88714µm,0.8s						
KLV				AML	AML	08 14 36.3	
	comp=N,66116µm,0.7s						
UPR	**University Cam**	**0.86**	**241**	P	**Pg**	**08 14 20.3**	**-0.3**
UPR	**University Cam**	**0.86**	**241**	P	**Pg**	**08 14 20.7**	**0.0**
PVO	**Paravola**	**0.96**	**265**	P	**Pb**	**08 14 21.8**	**-0.6**
PVO				S	Sn	08 14 36.8	+0.2
	comp=N,19µm,0.6s						
PVO	**Paravola**	**0.96**	**265**	P	**Pb**	**08 14 21.9**	**-0.6**
PVO				S	Sg	08 14 35.4	+0.3
PVO				AML	AML	08 14 43.6	
	comp=E,33983µm,0.8s						
PVO				AML	AML	08 14 45.6	
	comp=N,30961µm,1.1s						
AOS	**Alonnisos**	**1.00**	**62**	P	**Pb**	**08 14 21.9**	**-1.3**
AOS				S	Sb	08 14 35.3	-0.9
	comp=N,23µm,0.9s						
AOS	**Alonnisos**	**1.00**	**62**	P	**Pb**	**08 14 22.0**	**-1.1**
AOS				S	Sg	08 14 36.3	0.0
AOS				AML	AML	08 14 38.0	
	comp=N,48103µm,0.5s						
AOS				AML	AML	08 14 41.9	
	comp=E,25126µm,0.7s						
AOS	**Alonnisos**	**1.00**	**62**	P	**Pb**	**08 14 21.7**	**-1.5**
LRSO	**Larissa Observ**	**1.01**	**344**	P	**Pb**	**08 14 21.6**	**-1.7**
LRSO				S	Sn	08 14 37.4	-0.4
	comp=E,48µm,1.6s						
LRSO	**Larissa Observ**	**1.01**	**344**	P	**Pb**	**08 14 22.0**	**-1.3**
LRSO				S	Sg	08 14 36.8	+0.2
THL	**Klokotos Trika**	**1.03**	**327**	P	**Pb**	**08 14 22.4**	**-1.3**
THL				S	Sb	08 14 36.0	-1.2
	comp=E,9µm,1.2s						
THL	**Klokotos Trika**	**1.03**	**327**	P	**Pb**	**08 14 22.5**	**-1.2**
THL				AML	AML	08 14 43.3	
	comp=N,13448µm,1.0s						
THL				AML	AML	08 14 45.5	
	comp=E,20408µm,1.0s						
ATH	**Athens Observa**	**1.05**	**133**	P	**Pb**	**08 14 23.3**	**-0.7**
ATH				S	Sn	08 14 39.0	+0.1
	comp=E,57µm,0.9s						
ATH	**Athens Observa**	**1.05**	**133**	P	**Pb**	**08 14 23.2**	**-0.8**
ATH				S	Sg	08 14 38.3	+0.3
ATH				AML	AML	08 14 42.4	
ATH				AML	AML	08 14 45.0	
PTL	**Penteli**	**1.09**	**126**	P	**Pb**	**08 14 23.7**	**-1.1**
PTL				S	Sb	08 14 39.1	+0.1
	comp=E,26µm,1.1s						
PTL	**Penteli**	**1.09**	**126**	P	**Pb**	**08 14 24.0**	**-0.8**
PTL				S	Sb	08 14 39.0	+0.1
PTL				AML	AML	08 14 45.0	
	comp=N,40153µm,0.9s						
PTL				AML	AML	08 14 48.7	
	comp=E,59323µm,0.8s						
ATHU	**Athens Univers**	**1.10**	**132**	P	**Pb**	**08 14 24.0**	**-0.8**
ATHU				S	Sg	08 14 39.7	+0.3
	comp=E,21µm,1.9s						
ATHU	**Athens Univers**	**1.10**	**132**	P	**Pb**	**08 14 23.9**	**-0.9**
ATHU				AML	AML	08 14 43.9	
	comp=E,25989µm,0.5s						
ATHU				AML	AML	08 14 46.0	
	comp=N,43572µm,0.8s						
DRO	**Drossia**	**1.11**	**228**	P	**Pb**	**08 14 23.4**	**-1.6**
DRO				S	Sg	08 14 39.8	+0.1
	comp=N,38µm,0.8s						
DRO	**Drossia**	**1.11**	**228**	P	**Pb**	**08 14 23.6**	**-1.3**
VLY	**Voula,Athens**	**1.18**	**135**	P	**Pn**	**08 14 25.5**	**-0.7**
VLY				S	Sb	08 14 41.5	+0.1
	comp=N,28µm,1.0s						
VLY	**Voula,Athens**	**1.18**	**135**	P	**Pn**	**08 14 26.2**	**0.0**
VLY				S	Sg	08 14 42.6	+0.5
VLY				AML	AML	08 14 47.6	
	comp=E,68448µm,0.9s						
VLY				AML	AML	08 14 51.1	
	comp=N,38641µm,0.6s						
RLS	**Riolos of Patr**	**1.19**	**238**	P	**Pn**	**08 14 25.0**	**-1.3**
RLS				S	Sg	08 14 43.0	+0.5
	comp=N,19µm,0.8s						
RLS	**Riolos of Patr**	**1.19**	**238**	P	**Pn**	**08 14 25.2**	**-1.2**
RLS				AML	AML	08 14 47.6	
	comp=E,45102µm,0.6s						
RLS				AML	AML	08 14 48.7	
	comp=N,29174µm,0.6s						
PDO	**Prodromos**	**1.23**	**266**	P	**Pn**	**08 14 26.8**	**0.0**
DID	**Didima**	**1.25**	**162**	P	**Pn**	**08 14 26.6**	**-0.7**
DID				S	Sg	08 14 45.2	+0.8
	comp=N,21µm,0.8s						
DID	**Didima**	**1.25**	**162**	P	**Pn**	**08 14 26.5**	**-0.7**
KRND	**KRANIDI**	**1.35**	**166**	P	**Pn**	**08 14 28.6**	**+0.1**
KRND				S	Sg	08 14 47.7	+0.1
	comp=N,37µm,1.0s						
KRND	**KRANIDI**	**1.35**	**166**	P	**Pn**	**08 14 28.2**	**-0.4**
KRND				AML	AML	08 14 53.8	
	comp=E,62402µm,0.8s						
KRND				AML	AML	08 14 58.1	
	comp=N,82667µm,0.8s						
VLX	**Vlachokerasia**	**1.36**	**192**	P	**Pn**	**08 14 28.3**	**-0.4**
VLX				S	Sn	08 14 46.2	-0.4
	comp=N,27µm,0.8s						
VLX	**Vlachokerasia**	**1.36**	**192**	P	**Pn**	**08 14 28.8**	**+0.1**
LIT	**Litokhoron**	**1.41**	**352**	P	**Pn**	**08 14 28.8**	**-0.6**
LIT	**Litokhoron**	**1.41**	**352**	P	**Pn**	**08 14 29.0**	**-0.4**
LIT				AML	AML	08 14 54.9	
	comp=E,20279µm,0.6s						
LIT				AML	AML	08 14 59.4	
	comp=N,15271µm,1.0s						
LIT	**Litokhoron**	**1.41**	**352**		**Pn**	**08 14 29.1**	**-0.4**
LIT				Sg	Sg	08 14 50.2	+0.7
SKY	**Skiros Island**	**1.42**	**82**	P	**Pn**	**08 14 29.8**	**+0.3**
SKY	**Skiros Island**	**1.42**	**82**	P	**Pn**	**08 14 29.6**	**+0.1**
SKY				AML	AML	08 14 54.7	
	comp=E,22908µm,0.4s						
SKY				AML	AML	08 14 55.7	
	comp=N,12535µm,0.2s						
PAIG	**Paliouri**	**1.42**	**30**	P	**Pn**	**08 14 28.9**	**-0.6**
PAIG	**Paliouri**	**1.42**	**30**	P	**Pn**	**08 14 29.0**	**-0.5**
AMT	**Artemida-Makis**	**1.43**	**215**	P	**Pn**	**08 14 29.3**	**-0.3**
AMT	**Artemida-Makis**	**1.43**	**215**	P	**Pb**	**08 14 30.4**	**0.0**
KARY	**Karystos**	**1.49**	**116**	P	**Pn**	**08 14 30.5**	**+0.1**
KARY				S	Sn	08 14 48.8	-0.8
	comp=N,7µm,0.8s						
KARY	**Karystos**	**1.49**	**116**	P	**Pn**	**08 14 30.5**	**+0.1**
LKD2	**Lefkada island**	**1.64**	**274**	P	**Pb**	**08 14 34.7**	**+0.7**
LKD2	**Lefkada island**	**1.64**	**274**	P	**Pb**	**08 14 34.6**	**+0.6**
EVGI	**Lefkada island**	**1.64**	**268**	P	**Pb**	**08 14 34.2**	**+0.2**
TSLK	**Tsoukalades, L**	**1.64**	**275**	P	**Pg**	**08 14 34.8**	**-0.7**
KPRO	**Kipourio**	**1.65**	**320**	P	**Pn**	**08 14 33.1**	**+0.4**
KPRO	**Kipourio**	**1.65**	**320**	P	**Pn**	**08 14 33.4**	**+0.7**
ITM	**Ithomi**	**1.65**	**203**	P	**Pn**	**08 14 33.3**	**+0.7**
ITM	**Ithomi**	**1.65**	**203**	P	**Pn**	**08 14 33.3**	**+0.7**
ITM				AML	AML	08 15 04.2	
	comp=N,18024µm,0.7s						
ITM				AML	AML	08 15 06.6	
	comp=E,14908µm,0.9s						
ITM	**Ithomi**	**1.65**	**203**	eP	**Pb**	**08 14 33.9**	**-0.3**
ITM	**Ithomi**	**1.65**	**203**		**Pb**	**08 14 34.0**	**-0.3**
ITM				Sn	Sg	08 14 58.2	+1.1
KLMT	**Kalamata**	**1.72**	**199**	P	**Pb**	**08 14 34.7**	**-0.8**
FSK	**Fiskardo**	**1.73**	**263**	P	**Pg**	**08 14 36.5**	**-0.7**
JAN	**Janina**	**1.76**	**304**	P	**Pb**	**08 14 36.0**	**-0.1**
JAN	**Janina**	**1.76**	**304**	P	**Pb**	**08 14 35.7**	**-0.4**
JAN				AML	AML	08 15 10.5	
	comp=E,13640µm,1.1s						
JAN				AML	AML	08 15 16.1	
	comp=N,13334µm,0.9s						
PLG	**Polygyros**	**1.76**	**18**	P	**Pn**	**08 14 33.6**	**-0.6**
PLG	**Polygyros**	**1.76**	**18**	P	**Pn**	**08 14 33.5**	**-0.6**
PLG				AML	AML	08 15 03.6	
	comp=E,5890µm,1.1s						
PLG				AML	AML	08 15 04.5	
	comp=N,5182µm,1.1s						
KTI	**Kastanea**	**1.76**	**344**	P	**Pn**	**08 14 35.0**	**+0.7**
KZN	**Kozani**	**1.77**	**335**	P	**Pn**	**08 14 35.4**	**-1.0**
KZN	**Kozani**	**1.77**	**335**	P	**Pn**	**08 14 35.3**	**+0.9**
VLS	**Valsamata**	**1.77**	**254**	P	**Pb**	**08 14 36.7**	**+0.4**
VLS	**Valsamata**	**1.77**	**254**	P	**Pb**	**08 14 36.2**	**-0.1**
KEF1	**Kardakata, Kep**	**1.83**	**257**	P	**Pb**	**08 14 36.7**	**-0.7**
VLMS	**Volimes, Zakyn**	**1.83**	**244**	P	**Pb**	**08 14 36.9**	**-0.5**
KRI1	**kERI**	**1.84**	**236**	P	**Pb**	**08 14 37.6**	**+0.1**
KEF2	**Argostoli. Kep**	**1.85**	**254**	P	**Pb**	**08 14 37.7**	**0.0**
OUR	**Ouranopolis**	**1.89**	**30**	P	**Pn**	**08 14 35.6**	**-0.3**
OUR	**Ouranopolis**	**1.89**	**30**	eP	**Pn**	**08 14 36.4**	**+0.5**
HORT	**Hortiatis**	**1.92**	**8**	P	**Pn**	**08 14 36.0**	**-0.4**
PENT	**Pentalofos**	**1.94**	**321**	P	**Pn**	**08 14 37.9**	**+1.1**
PYL	**PYLOS**	**1.97**	**204**	P	**Pb**	**08 14 39.1**	**-0.6**
VLI	**Veliai**	**1.98**	**176**	P	**Pb**	**08 14 37.2**	**0.0**
VLI	**Veliai**	**1.98**	**176**	P	**Pn**	**08 14 37.6**	**+0.4**
SERI	**Serifos**	**2.06**	**138**	P	**Pn**	**08 14 38.5**	**+0.2**
NEST	**Nestorio**	**2.16**	**323**	P	**Pn**	**08 14 41.2**	**+1.5**
SOH	**Sokhos**	**2.17**	**12**	P	**Pn**	**08 14 40.2**	**+0.4**
SOH	**Sokhos**	**2.17**	**12**	P	**Pn**	**08 14 40.4**	**+0.5**
FNA	**Florina**	**2.33**	**334**	P	**Pn**	**08 14 43.4**	**+1.3**
FNA	**Florina**	**2.33**	**334**	ePn	**Pn**	**08 14 43.3**	**+1.2**
FNA				eSn	Sb	08 15 13.8	-0.9
FNA	**Florina**	**2.33**	**334**		**Pn**	**08 14 43.0**	**+0.9**
FNA	**Florina**	**2.33**	**334**	P	**Pn**	**08 14 43.0**	**+0.9**
THAS	**Thassos island**	**2.44**	**38**	P	**Pn**	**08 14 42.8**	**-0.6**
KTHR	**Kythira**	**2.44**	**175**	P	**Pn**	**08 14 44.5**	**+0.9**
KTHA	**Kythira Island**	**2.45**	**174**	P	**Pn**	**08 14 44.5**	**+0.8**
KTHA	**Kythira Island**	**2.45**	**174**	eP	**Pn**	**08 14 43.1**	**-0.6**
KNT	**Kendrikon**	**2.46**	**3**	P	**Pn**	**08 14 44.4**	**+0.6**
SRS	**Serrai**	**2.50**	**15**	P	**Pn**	**08 14 44.5**	**+0.1**
SRS	**Serrai**	**2.50**	**15**	ePn	**Pn**	**08 14 44.4**	**+0.1**
SRS				eSn	Sn	08 15 15.0	+0.3
CHOS	**Chios island**	**2.61**	**96**	P	**Pn**	**08 14 46.4**	**+0.5**
CHOS	**Chios island**	**2.61**	**96**	eP	**Pn**	**08 14 46.5**	**+0.5**
VAY	**Valandovo**	**2.62**	**357**	ePn	**Pn**	**08 14 46.8**	**+0.8**
VAY	**Valandovo**	**2.62**	**357**	i Pn	**Pn**	**08 14 46.8**	**+0.8**
VAY				eLg	Lg	08 15 44.9	
	comp=E,967nm,0.8s						
VAY				eLg	Lg	08 15 52.8	
	comp=N,1µm,1.1s						
TPE	**Tepelena**	**2.65**	**308**	P	**Pb**	**08 14 49.7**	**-1.6**
KAVA	**Kavala**	**2.67**	**30**	P	**Pn**	**08 14 46.0**	**-0.6**
APE	**Apeiranthos**	**2.74**	**126**	P	**Pn**	**08 14 48.0**	**+0.3**
APE	**Apeiranthos**	**2.74**	**126**	⇑P	**Pn**	**08 14 48.1**	**+0.5**
APE	**Apeiranthos**	**2.74**	**126**	eP	**Pn**	**08 14 46.4**	**-1.3**
APE	**Apeiranthos**	**2.74**	**126**	eP	**Pn**	**08 14 47.9**	**+0.3**
NVR	**Nevrokopi**	**2.78**	**18**	P	**Pn**	**08 14 48.0**	**-0.2**
SMTH	**Samothraki Isl**	**2.78**	**50**	P	**Pn**	**08 14 47.3**	**-0.9**
BOZC	**Bozcaada**	**2.81**	**65**	eP	**Pn**	**08 14 47.4**	**-1.1**
IOSP	**Ios island**	**2.82**	**134**	P	**Pn**	**08 14 49.0**	**+0.3**
OHR	**Ohrid**	**2.84**	**329**	i Pn	**Pn**	**08 14 50.7**	**+1.7**
OHR				eLg	Lg	08 15 49.5	
	comp=E,7µm,1.6s						
OHR				eLg	Lg	08 15 51.0	
	comp=N,5µm,1.3s						
GADA	**Gvkgeada**	**2.86**	**58**	eP	**Pn**	**08 14 47.2**	**-2.0**
STIP	**Stip**	**3.02**	**352**	i Pn	**Pn**	**08 14 52.6**	**+1.1**
THR5	**Thira Island,**	**3.08**	**137**	P	**Pn**	**08 14 52.6**	**+0.4**
THT2	**Imerovigli**	**3.10**	**136**	eP	**Pn**	**08 14 52.8**	**+0.2**
THR6	**Thira Island,**	**3.15**	**137**	P	**Pn**	**08 14 53.8**	**+0.6**
SANT	**Santorini**	**3.17**	**136**	⇑P	**Pn**	**08 14 54.7**	**+1.1**
SANT	**Santorini**	**3.17**	**136**	eP	**Pn**	**08 14 52.5**	**-1.1**
SANT	**Santorini**	**3.17**	**136**		**Pn**	**08 14 55.1**	**+1.5**
RODP	**Rodopos**	**3.24**	**165**	eP	**Pn**	**08 14 54.7**	**+0.2**
RDO	**Rodhopi**	**3.25**	**40**	eP	**Pn**	**08 14 54.9**	**+0.3**
DKL	**Dikili**	**3.27**	**82**	eP	**Pn**	**08 14 55.6**	**+0.8**
ENEZ	**Enez**	**3.32**	**51**	eP	**Pn**	**08 14 55.1**	**-0.5**
GELI	**Tayfur-Gelibol**	**3.34**	**58**	eP	**Pn**	**08 14 55.1**	**-0.8**
ALN	**Alexandroupoli**	**3.36**	**48**	eP	**Pn**	**08 14 53.9**	**-2.2**
ALN	**Alexandroupoli**	**3.36**	**48**		**Pn**	**08 14 55.2**	**-0.9**
ALN	**Alexandroupoli**	**3.36**	**48**	P	**Pn**	**08 14 55.2**	**-0.9**
SMG	**Samos**	**3.37**	**106**	P	**Pn**	**08 14 57.2**	**+0.9**
IMMV	**Iera Moni Meta**	**3.38**	**163**	P	**Pn**	**08 14 57.1**	**+0.6**
IMMV	**Iera Moni Meta**	**3.38**	**163**	eP	**Pn**	**08 14 57.0**	**+0.6**
BLCB	**Balcova**	**3.38**	**94**	eP	**Pn**	**08 14 58.1**	**+1.7**
TIR	**Tirane**	**3.45**	**321**	ePn	**Pn**	**08 15 00.4**	**+3.1**
TIR	**Tirane**	**3.45**	**321**	⇓P	**Pn**	**08 15 00.2**	**+2.8**
TIR	**Tirane**	**3.45**	**321**		**Pn**	**08 14 57.9**	**+0.6**
TIR	**Tirane**	**3.45**	**321**	P	**Pn**	**08 14 57.9**	**+0.6**
PHP	**Peshkopia**	**3.46**	**330**	P	**Pn**	**08 14 58.8**	**+1.2**
ERIK	**Erikli-Kesan**	**3.51**	**55**	eP	**Pn**	**08 14 56.7**	**-1.5**
LPK	**Lapseki**	**3.52**	**60**	eP	**Pn**	**08 14 58.1**	**-0.3**
KNDR	**Palaiochora Ch**	**3.54**	**167**	eP	**Pn**	**08 15 00.9**	**+2.3**
KDZ	**Kurdzhali**	**3.59**	**34**	eP	**Pn**	**08 14 57.3**	**-2.0**
SCTE	**Santa Cesarea**	**3.59**	**294**		**Pn**	**08 15 01.1**	**+1.8**
PLD	**Plovdiv**	**3.71**	**23**	ePn	**Pn**	**08 15 02.4**	**+1.4**
PLD	**Plovdiv**	**3.71**	**23**	eP	**Pn**	**08 15 00.9**	**-0.1**
BOSS	**Bosilegrad**	**3.80**	**357**	ePn	**Pn**	**08 15 03.8**	**+1.6**
IDI	**Anoyia**	**3.81**	**153**	Pn	**Pn**	**08 15 03.5**	**+1.1**
	comp=N,20nm,0.3s,baz=308,slow=2.7,SNR=54						
IDI				Sn	**Sn**	**08 15 46.0**	**-1.1**
	comp=N,14nm,0.3s,baz=340,slow=22,SNR=3.6						
IDI				LR	LR	08 17 02.4	
	comp=N,3µm,18.7s,baz=322,slow=47						
IDI	**Anoyia**	**3.81**	**153**	eP	**Pn**	**08 15 02.1**	**-0.3**
UKOP	**Uzunkopru-Edir**	**3.85**	**50**	eP	**Pn**	**08 15 02.9**	**+0.1**
HRKL	**Herakleio**	**3.87**	**150**	eP	**Pn**	**08 15 04.0**	**+0.8**
VTS	**Vitosha**	**3.93**	**5**	ePn	**Pn**	**08 15 05.2**	**+1.1**
VTS				eSn	Sn	08 15 49.1	+2.1
VTS	**Vitosha**	**3.93**	**5**	⇓P	**Pn**	**08 15 05.1**	**+0.9**
VTS	**Vitosha**	**3.93**	**5**		**Pn**	**08 15 04.8**	**+0.7**
VTS	**Vitosha**	**3.93**	**5**	P	**Pn**	**08 15 04.9**	**+0.7**
RKY	**Sarkoy-Tekirda**	**3.95**	**58**	eP	**Pn**	**08 15 00.9**	**-3.4**
TMBK	**Timbaki Herakl**	**3.97**	**155**	P	**Pn**	**08 15 07.2**	**+2.7**
GVDS	**Gavdos**	**4.00**	**164**	P	**Pn**	**08 15 06.3**	**+1.4**
GVDS	**Gavdos**	**4.00**	**164**	eP	**Pn**	**08 15 07.5**	**+2.6**
GVD	**Gavdhos**	**4.00**	**164**	eP	**Pn**	**08 15 05.7**	**+0.7**
SIVA	**Sivas**	**4.03**	**155**	P	**Pn**	**08 15 08.3**	**+2.9**
BALB	**Balikesir**	**4.10**	**75**	eP	**Pn**	**08 15 06.8**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**4.12**	**99**	eP	**Pn**	**08 15 07.9**	**+1.3**
NPS	**Neapolis**	**4.13**	**145**	P	**Pn**	**08 15 09.1**	**+2.4**
LAST	**Lasithi**	**4.16**	**147**	P	**Pn**	**08 15 08.2**	**+1.0**
BARS	**Barje**	**4.17**	**351**	ePn	**Pn**	**08 15 08.8**	**+1.5**
BARS	**Barje**	**4.17**	**351**	ePn	**Pg**	**08 15 25.8**	**+1.9**
MRMT	**Marmara Adasi**	**4.20**	**62**	eP	**Pn**	**08 15 03.2**	**-4.5**
ULC	**Ulcinj**	**4.22**	**322**	ePn	**Pn**	**08 15 09.2**	**+1.2**
ULC				eSn	Sn	08 15 58.8	+1.7
DAT	**Datca**	**4.31**	**116**	eP	**Pn**	**08 15 08.5**	**-0.8**
EDRB	**Edirne**	**4.38**	**43**	eP	**Pn**	**08 15 09.9**	**-0.3**
DRME	**Dracevica, Mon**	**4.42**	**323**	ePn	**Pn**	**08 15 12.6**	**+1.9**
DRME	**Dracevica, Mon**	**4.42**	**323**	⇑i Pn	**Pn**	**08 15 11.4**	**+0.7**
DRME				i Sn	Sn	08 16 03.1	+1.1
PVY	**Plav**	**4.43**	**332**	⇑i Pn	**Pn**	**08 15 13.1**	**+2.1**
PVY				eSn	Sn	08 16 04.8	+2.3
ZKR	**Zakros**	**4.53**	**141**	P	**Pn**	**08 15 14.8**	**+2.5**
ZKR	**Zakros**	**4.53**	**141**	eP	**Pn**	**08 15 14.9**	**+2.6**
MANT	**Manisa**	**4.56**	**91**		**Pn**	**08 15 15.3**	**+2.4**
ZAPS	**Zavoj**	**4.57**	**359**	ePn	**Pn**	**08 15 14.3**	**+1.5**
PDG	**Podgorica**	**4.58**	**326**	ePn	**Pn**	**08 15 15.4**	**+2.6**
PDG				eSn	Sn	08 16 07.8	+1.9
PDG	**Podgorica**	**4.58**	**326**	⇓P	**Pn**	**08 15 15.5**	**+2.6**

PDG Podgorica 4.58 326 ePn Pn 08 15 14.6 +1.8
PDG Podgorica 4.58 326 Pn 08 15 14.7 +1.8
TTG Podgorica 4.58 326⇑iPn Pn 08 15 14.1 +1.3
TTG eSn Sn 08 16 07.5 +1.6
BUM Brajici-Budva 4.64 322 ePn Pn 08 15 14.5 +0.7
BUM eSn Sn 08 16 09.2 +1.6
SELS Selova 4.68 345 ePn Pn 08 15 15.3 +1.0
TIP Timpagrande 4.69 278 ⇑P Pn 08 15 17.4 +2.9
TIP Timpagrande 4.69 278 Pn 08 15 16.3 +1.8
IVA Berane 4.70 333 ePn Pn 08 15 15.0 +0.4
IVA eSn Sn 08 16 10.9 +1.9
KARP Karpathos 4.73 130 eP Pn 08 15 16.6 +1.6
KARP Karpathos 4.73 130 Pn 08 15 16.3 +1.4
MASS Massafra 4.73 296 ePn Pn 08 15 17.8 +2.8
KOME Kolasin 4.82 330 ePn Pn 08 15 17.5 +1.2
KOME eSn Sn 08 16 13.2 +1.3
CEME Cevo 4.82 324 ePn Pn 08 15 17.6 +1.3
CEME eSn Sn 08 16 13.4 +1.4
ELND Elena 4.84 28 ⇓P Pn 08 15 16.8 +0.2
PLVB Pleven 4.89 16 ⇑P Pn 08 15 18.3 +1.1
ARG Arkhangelos 4.95 118 eP Pn 08 15 20.6 +2.7
HCY Herceg Novi 4.95 320 ePn Pn 08 15 19.2 +1.2
HCY Herceg Novi 4.95 320 ePn Pn 08 15 18.9 +0.9
HCY i Sn Sn 08 16 16.6 +1.5
NKME Niksic 4.98 326 ePn Pn 08 15 19.6 +1.1
NKME eSn Sn 08 16 17.1 +1.2
BOVS Bovan 4.99 351 ePn Pn 08 15 19.8 +1.2
BOVS eSn Sn 08 16 16.5 +0.4
SJES Sjenica 5.02 336 ePn Pn 08 15 20.7 +1.7
SJES eSn Sn 08 16 16.8 -0.1
DALY Dalyan (Mula) 5.04 110 eP Pn 08 15 20.3 +1.0
MATE Matera 5.05 295 ⇓P Pn 08 15 22.2 +2.9
ARMT Armutlu 5.08 67 eP Pn 08 15 20.6 +0.9
BAI Bari 5.11 300 ePn Pn 08 15 22.3 +2.1
ZAGS Zajecar 5.12 356 ePn Pn 08 15 21.2 +0.9
SG1 Sgolgore (BA) 5.14 296 ePn Pn 08 15 21.9 +1.3
TREB Trebinje 5.22 322 ePn Pn 08 15 23.4 +1.7
TREB eSn Sn 08 16 22.3 +0.5
TREB Trebinje 5.22 322 ePn Pn 08 15 22.3 +0.6
IVAS Ivanjica 5.25 339 ePn Pn 08 15 23.4 +1.2
BRY Bratogost 5.27 324 ePn Pn 08 15 24.1 +1.5
BRY Bratogost 5.27 324 ePn Pn 08 15 23.7 +1.1
BRY eSn Sn 08 16 23.8 +0.6
PLE Pljevlja 5.28 332 ePn Pn 08 15 23.8 +1.2
PLE eSn Sn 08 16 24.9 +1.6
TVSB Tavsanli 5.28 80 eP Pn 08 15 22.8 +0.2
UPM Unac-Piva 5.36 328 ePn Pn 08 15 26.6 +2.9
UPM Unac-Piva 5.36 328 ePn Pn 08 15 25.7 +2.0
UPM eSn Sn 08 16 26.4 +1.0
CEL Celeste 5.39 267 Pn 08 15 25.9 +1.7
GRUS Gruza 5.40 344 ePn Pn 08 15 25.9 +1.7
FETY Fethiye 5.43 110 eP Pn 08 15 23.1 -1.6
YLV Yalova 5.44 68 eP Pn 08 15 21.7 -3.2
RUDO Rudo 5.53 334 ePn Pn 08 15 27.1 +1.1
RAZG Razgrad 5.63 29 ⇓P Pn 08 15 27.5 +0.2
ACER Acerenza 5.64 294 Pn Pn 08 15 29.1 +1.6
STON Ston 5.66 319 ePn Pn 08 15 26.6 -1.1
COPA Copaceanca 5.74 18 ⇑P Pn 08 15 29.4 +0.7
BBLS Lazići 5.74 335 ePn Pn 08 15 31.1 +2.2
BBLS eSn Sn 08 16 35.3 +0.6
BBLS Lazići 5.74 335 ePn Pn 08 15 30.6 +1.7
DIVS Divibare 5.78 340 ePn Pn 08 15 31.7 +2.3
DIVS eSn Sn 08 16 34.8 -0.8
DIVS Divibare 5.78 340 ePn Pn 08 15 30.1 +0.7
TRUS Trudelj 5.79 343 ePn Pn 08 15 31.3 +1.7
AKAS Kas 5.99 112 eP Pn 08 15 36.0 +3.6
ELL Elmali 6.00 107 Pn 08 15 38.1 +5.5
ELL Elmali 6.00 107 P Pn 08 15 38.1 +5.5
HUMR Humele 6.06 15 ⇓P Pn 08 15 34.1 +0.9
BORA Eskisehir 6.09 76 eP Pn 08 15 23.9 -10
SGRT San Giovanni R 6.17 302 Pn 08 15 35.2 +0.5
ISP Isparta 6.18 96 Pn Pn 08 15 37.9 +2.9
ISP Isparta 6.18 96 P Pn 08 15 37.9 +2.9
TEKS Tekeris 6.32 339 ePn Pn 08 15 38.0 +1.2
TEKS Tekeris 6.32 339 ePn Pn 08 15 34.5 -2.3
SULR 6.52 23 ⇑P Pn 08 15 41.2 +1.6
VAE Valguarnera 6.69 262 Pn Pn 08 15 47.8 +5.9
comp=N,6.1nm,0.3s,baz=180,slow=0.6,SNR=6.1
VAE Sn Sn 08 17 03.8 +5.9
comp=N,24nm,0.3s,baz=60,slow=12,SNR=5.6
GZR Gura Zlata 6.69 0 ⇑P Pn 08 15 43.4 +1.5
ARR Arges 6.81 11 ⇑P Pn 08 15 44.4 +0.8
FRGS Fruska Gora 6.81 342 ePn Pn 08 15 44.4 +0.8
FRGS eSn Sn 08 17 00.1 -0.9
FRGS Fruska Gora 6.81 342 ePn Pn 08 15 44.4 +0.8
VOIR 6.95 14 ⇑P Pn 08 15 46.7 +1.2
BZS Buzias 6.96 353 ⇓P Pn 08 15 46.9 +1.3
ISR Istrita 7.01 23 ⇑P Pn 08 15 48.1 +1.8
YUVA Yuva-Kibriscik 7.11 73 eP Pn 08 15 39.4 -8.4
HARR Harsova 7.13 31 ⇓P Pn 08 15 48.7 +0.8
TIRR Tirgusor 7.15 35 ⇑P Pn 08 15 48.6 +0.4
TIRR Tirgusor 7.15 35 ⇑P Pn 08 15 48.6 +0.4
TIRR Tirgusor 7.15 35 Pn Pn 08 15 48.1 0.0
TIRR Tirgusor 7.15 35 P Pn 08 15 48.1 0.0
WDD Wied Dalam 7.15 249 Pn Pn 08 15 49.7 +1.5
MLR Muntele Rosu 7.19 18 Pn Pn 08 15 50.2 +1.3
comp=N,5.3nm,0.3s,baz=175,slow=12,SNR=53
MLR Muntele Rosu 7.19 18 ⇓P Pn 08 15 50.8 +1.9
BLY Banja Luka 7.33 327 ⇑P Pn 08 15 52.4 +1.6
BLY Banja Luka 7.33 327 ePn Pn 08 15 50.1 -0.6
BLY Banja Luka 7.33 327 Pn 08 15 51.7 +1.0
BISRR Bisoca 7.45 22 ⇑P Pn 08 15 55.8 +3.5
SLUM Salum 7.47 164 P Pn 08 15 53.1 +0.5
baz=168
SLUM AMP 08 17 00.0
baz=168
SLUM S Sn 08 17 13.1 -4.0
baz=168
INTR Introdacqua 7.52 299 Pn 08 15 54.4 +1.1
DOPR Dopca 7.52 14 ⇑P Pn 08 15 54.9 +1.6
CLTB Caltabellotta 7.59 264 Pn 08 15 56.8 +2.4
SIRR Siria 7.61 354 ⇑P Pn 08 15 56.1 +1.7
PLOR Plostina 7.71 21 ⇑P Pn 08 15 57.8 +1.9
VRI Vrincioaia 7.74 21 ⇓P Pn 08 15 58.3 +1.9
AQU L'Aquila 8.00 300 Pn 08 16 02.6 +2.7
AQU L'Aquila 8.00 300 P Pn 08 16 02.6 +2.7
GAZI Gazipasa 8.00 105 eP Pn 08 15 56.5 -3.4
MORH Mrgy, Hungar 8.10 339 ePn Pn 08 16 01.6 +0.4
TESR Tescani 8.32 19 ⇑P Pn 08 16 06.3 +2.1
NRCA Norcia 8.39 303 Pn 08 16 06.4 +1.1
BR131 Keskin Array S 8.52 80 Pn 08 16 09.0 +1.9
BR131 Keskin Array S 8.52 80 Pn 08 16 09.0 +1.9
BRTR Keskin Array B 8.52 80 Pn Pn 08 16 09.2 +2.0
comp=N,0.4nm,0.3s,baz=259,slow=12,SNR=9.1
BRTR LR LR 08 19 13.6
comp=N,212nm,18.5s,baz=252,slow=36
BRTR Keskin Array B 8.52 80 Pn 08 16 08.7 +1.6
BRTR Keskin Array B 8.52 80 i P Pn 08 16 09.1 +2.0
BRTR pmax pmax
comp=Z,2.0nm,0.5s
BIZ Bicaz 8.60 16 ⇑P Pn 08 16 10.2 +2.1
BERE Bereket-Mersin 8.65 103 eP Pn 08 16 06.6 -2.3
CRES Cresnjev 8.94 325 i Pn Pn 08 16 14.0 +1.3
CRES Cresnjev 8.94 325 ePn Pn 08 16 13.2 +0.5
KEBE Keben-Mersin 8.99 101 eP Pn 08 16 18.1 +4.5
BURAR Bucovina Array 9.09 11 ⇑P Pn 08 16 16.0 +1.1
BURAR Bucovina Array 9.09 11 Pn 08 16 15.9 +1.1
BUR08 Bucovina Ar. S 9.12 11 Pn 08 16 15.5 +0.2
CSS Mathiatis 9.27 110 eP Pn 08 16 13.3 -4.0
CEY Cerknica 9.35 321 ePn Pn 08 16 15.7 -2.7
GROS Grobnik 9.41 328 ePn Pn 08 16 19.2 -0.1
TRPA Tarpa 9.43 359 ⇑P Pn 08 16 21.8 +2.4
PSZ Piszkesteto 9.45 348 ⇑P Pn 08 16 23.5 +3.8
PSZ Piszkesteto 9.45 348 Pn 08 16 22.6 +2.9
PSZ Piszkesteto 9.45 348 P Pn 08 16 22.6 +2.9
LJU Ljubljana 9.53 323 ePn Pn 08 16 21.1 +0.3
SWA2 9.70 166 P Pn 08 16 20.4 -2.7
baz=169
SWA2 AMP 08 18 00.0
baz=169
SOKA Soboth 9.78 327 Pn Pn 08 16 23.9 -0.4
comp=Z,25nm,1.2s,SNR=7.7
OBKA Obir 9.87 325 ePn Pn 08 16 26.1 +0.6
comp=Z,9.2nm,0.8s
OBKA eSn Sn 08 18 18.8 +2.7
comp=Z,33nm,1.0s
UZH Uzhgorod 9.93 358 eP Pn 08 16 29.8 +3.5
UZH eS Sn 08 18 24.4 +6.8
UZH MLR MLR
comp=Z,300nm,12.0s
ARSA Arzberg 10.05 331 Pn Pn 08 16 28.2 +0.3
comp=Z,11nm,0.7s,SNR=6.7
VYHS Vyhne 10.19 345 eP Pn 08 16 32.5 +2.6
VYHS Vyhne 10.19 345 ePN Pn 08 16 32.5 +2.6
KOLS Kolonicke sedl 10.24 358 eP Pn 08 16 34.2 +3.7
KOLS Kolonicke sedl 10.24 358 ePN Pn 08 16 34.2 +3.7
CRVS Cervenica-Dubn 10.24 355 eP Pn 08 16 34.4 +3.8
CRVS Cervenica-Dubn 10.24 355 ePN Pn 08 16 34.4 +3.8
SORM Soroca 10.27 22 ⇓P Pn 08 16 29.9 -1.0
MODS Modra-Piesok 10.45 339 eP Pn 08 16 32.7 -0.7
MODS Modra-Piesok 10.45 339 ePN Pn 08 16 32.7 -0.7
CONA Conrad Observa 10.49 334 i Pn Pn 08 16 34.8 +0.7
comp=Z,1.5nm,0.6s
KBA Koelnbreinsper 10.84 324 ePn Pn 08 16 39.1 +0.2
comp=Z,3.3nm,0.8s
KBA eSn Sn 08 18 40.5 +0.4
comp=Z,9.2nm,1.0s
CTI Castel Tesino 11.01 315 Pn 08 16 41.3 +0.2
CTI Castel Tesino 11.01 315 P Pn 08 16 41.3 +0.2
ABTA Abfaltersbach 11.01 320 Pn Pn 08 16 41.1 -0.1
comp=Z,9.9nm,0.9s,SNR=5.5
ABTA eSn Sn 08 18 41.4 -2.7
comp=Z,26nm,1.0s
MOA Molln 11.03 329 ePn Pn 08 16 42.3 +0.9
comp=Z,13nm,0.8s,SNR=7.8
KEST Kesra 11.09 259 Pn 08 16 47.4 +5.1
VRAC Vranov 11.49 339 Pn Pn 08 16 52.8 +5.1
comp=Z,1.4nm,0.3s,baz=220,slow=5.5,SNR=4.1
MMAI Mount Meron Ar 11.73 115 Pn Pn 08 16 50.4 -0.6
comp=Z,0.9nm,0.3s,baz=306,slow=11,SNR=7.4
GLL Jalalah 11.74 138 P Pn 08 16 49.5 -1.7
baz=141
WATA Walderalm 11.88 320 i Pn Pn 08 16 54.0 +1.0
comp=Z,15nm,0.7s
WATA eSn Sn 08 19 04.5 -1.0
comp=Z,4.6nm,0.3s
SQTA Sankt Quirin 11.99 319 ePn Pn 08 16 55.2 +0.6
comp=Z,4.5nm,0.4s
GEC2 GERESS Array S 12.05 330 Pn 08 16 58.6 +3.1
GERES GERESS Array B 12.05 330 Pn Pn 08 16 56.2 +0.8
comp=Z,0.2nm,0.3s,baz=151,slow=11,SNR=16
GERES LR LR 08 22 46.6
comp=Z,624nm,19.6s,baz=155,slow=44
GERES GERESS Array B 12.05 330 Pn 08 16 58.6 +3.1
GERES GERESS Array B 12.05 330 P Pn 08 16 58.6 +3.1
FETA Feichten 12.11 317 i Pn Pn 08 16 57.6 +1.3
comp=Z,6.6nm,0.8s
FETA Sn Sn 08 19 08.6 -2.6
comp=Z,6.2nm,0.8s
MOTA Moosalm 12.12 319 ePn Pn 08 16 56.7 +0.3
comp=Z,8.6nm,0.7s
MOTA eSn Sn 08 19 09.7 -1.8
comp=Z,19nm,0.9s
NBNS Bani Suef 12.31 142 P Pn 08 16 58.5 -0.5
baz=145
KHC Kasperske Hory 12.33 331 ePN Pn 08 16 59.2 0.0
KHC Kasperske Hory 12.33 331 Pn 08 16 59.4 +0.2
KHC Kasperske Hory 12.33 331⇑eP Pn 08 16 59.3 0.0
RETA Reutte 12.39 319 ePn Pn 08 17 02.1 +2.0
comp=Z,1.4nm,0.3s
DAVOX Davos/Dischmat 12.43 315 Pn Pn 08 17 03.2 +2.6
comp=Z,0.7nm,0.3s,baz=118,slow=18,SNR=6.4
DAVOX Sn Sn 08 19 14.4 -4.5
comp=Z,0.4nm,0.3s,baz=302,slow=19,SNR=3.7
DAVOX LR LR 08 23 14.7
comp=Z,684nm,20.1s,baz=68,slow=45
HFRF Wahat Farafira 12.43 156 P Pn 08 16 58.2 -2.4
baz=159
YTIR Yattir 12.50 122 Pn Pn 08 17 03.9 +2.3
ANN Anapa 12.54 56 eP Pn 08 17 00.1 -1.9
ANN eS Sn 08 19 20.4 -1.0
ANN pmax pmax
comp=Z,64nm,1.1s
DSI Dead Sea 12.54 121 Pn Pn 08 17 04.7 +2.6
DSI Sn Sn 08 19 28.7 +7.0
DAVA Damuels 12.73 317 ePn Pn 08 17 07.3 +2.5
comp=Z,1.3nm,0.2s
GHAJ Ghor Haditha 12.83 121 Pn Pn 08 17 08.4 +2.4
AKASG Malin Array Be 12.85 19 Pn Pn 08 17 05.8 -0.4
comp=Z,0.4nm,0.3s,baz=201,slow=12,SNR=6.8
AKASG Malin Array Be 12.85 19 Pn 08 17 04.6 -1.6
AKASG Malin Array Be 12.85 19 i P Pn 08 17 05.8 -0.4
AKASG pmax pmax
comp=Z,5.0nm,0.9s
AKBB Malin Array Si 12.85 19 Pn 08 17 05.1 -1.0
AKBB Malin Array Si 12.85 19 P Pn 08 17 05.1 -1.0
PRNI Paran 13.09 126 Pn Pn 08 17 09.4 -0.2
ASF Jabal al Asfar 13.24 115 Pn Pn 08 17 12.8 +1.1
comp=Z,0.1nm,0.3s,baz=211,slow=5.9,SNR=1.6
HRFI Mount Harif 13.32 127 Pn Pn 08 17 12.3 -0.5
MBRI Mt Berech 13.41 128 Pn Pn 08 17 13.6 -0.5
EIL Elat 13.52 128 Pn Pn 08 17 15.1 -0.4
comp=Z,0.5nm,0.3s,baz=340,slow=12,SNR=4.5
EIL Sn Sn 08 19 41.6 -4.1
comp=Z,0.4nm,0.3s,baz=23,slow=15,SNR=2.4
EIL Elat 13.52 128 Pn Pn 08 17 14.7 -0.8
EIL Sn Sn 08 19 46.6 +1.0
BRG Berggiesshubel 13.67 336 eP P 08 17 24.4 -1.8
comp=Z,9.4nm,1.3s
BRG Berggiesshubel 13.67 336 eP P 08 17 24.4 -1.8
BRG pmax pmax
comp=Z,9.0nm,1.3s
BFO Black Forest 14.19 317 Pn 08 17 24.1 -0.5
BFO Black Forest 14.19 317 P Pn 08 17 24.1 -0.5
CLL Collm 14.35 335 P P 08 17 33.9 +0.1
CLL Collm 14.35 335 eP P 08 17 31.0 -2.7
ECH Echery 14.76 315 P P 08 17 38.5 +0.2
ECH Echery 14.76 315 P P 08 17 38.5 +0.2
SUW Suwalki 15.32 1 P Pn 08 17 41.6 +1.9
SUW Suwalki 15.32 1 P Pn 08 17 41.6 +1.9
SUW pmax pmax
comp=Z,115nm,0.9s
KIV Kislovodsk 15.86 64 P P 08 17 51.0 +0.3
KIV Kislovodsk 15.86 64 eP Pn 08 17 45.1 -1.8
KIV pmax pmax
comp=Z,46nm,1.1s
KIV MLR MLR
comp=Z,267nm,13.0s
KBZ Khabaz 15.96 65 Pn P 08 17 51.4 -0.3
comp=Z,0.1nm,0.3s,baz=288,slow=5.1,SNR=6.0
KBZ Khabaz 15.96 65deP P 08 17 51.2 -0.5
KBZ pmax pmax
comp=Z,19nm,1.3s
GOF Gofitskoye 16.38 61⇑eP P 08 18 03.4 +7.1
NACGM Naroch 16.44 8 e Pn 08 17 53.0 -1.1
ZEI Tsey 16.54 69 eP P 08 17 59.7 +1.4
ZEI pmax pmax
comp=Z,8.0nm,0.4s
MEM Membach 16.79 321 x x 08 18 03.1
MEM x x 08 18 05.7
MEM x x 08 18 13.0
IIGN Ignalina 16.82 7 eP P 08 18 01.9 +0.8
PABE Paberze 16.83 2 eP Pn 08 17 60.0 +0.9
PABE IAmb IAmb 08 18 08.8
comp=Z,75nm,1.1s
VSR Storozhevoye 17.03 37 eP Pn 08 18 01.7 +0.1
VSR pmax pmax
comp=Z,10.0nm,1.3s
ISAL Salakas 17.03 7 eP P 08 18 03.0 -0.5
ISAL IAmb IAmb 08 18 11.4
comp=Z,20nm,1.1s
GNI Garni 17.05 78 LR LR 08 24 38.1
comp=Z,230nm,20.4s,baz=288,slow=37
DOU Dourbes 17.21 317 Pn Pn 08 18 03.2 -0.8
DOU x x 08 18 09.2
DOU x x 08 19 13.3
IZAR Zarasai 17.22 7 eP Pn 08 18 04.4 +0.4
VRH Novokhopyorsk 18.28 41 eP P 08 18 17.4 +0.2
VRH pmax pmax
comp=Z,30nm,1.6s
OBN Obninsk 18.88 25 P P 08 18 23.0 -0.8
comp=Z,1.9nm,0.3s,baz=258,slow=8.7,SNR=5.6
OBN LR LR 08 26 17.8
comp=Z,63nm,19.2s,baz=220,slow=39
OBN Obninsk 18.88 25 IAmb IAmb 08 18 40.4
comp=Z,39nm,0.4s
OBN Obninsk 18.88 25 i P P 08 18 21.3 -2.5
OBN i S Sn 08 21 51.6 -3.8
OBN pmax pmax
comp=Z,42nm,1.0s
OBN MLR MLR
comp=Z,419nm,16.0s
MOS Moscow 19.74 25 eP P 08 18 32.3 -0.9
MOS pmax pmax
comp=Z,109nm,1.2s
VSU Vasula 19.95 6 eP P 08 18 36.0 +0.6
VSU IAmb IAmb 08 18 40.8
comp=Z,607nm,1.1s
VSU Vasula 19.95 6d iP P 08 18 35.9 +0.5
VSU pmax pmax
comp=Z,640nm,1.0s
ESBB Sonseca Array 20.70 281 P P 08 18 45.0 +1.1
ESDC Sonseca Array 20.70 281 P P 08 18 44.8 +0.8
comp=Z,13nm,1.0s,baz=77,slow=11,SNR=20
ESDC Sonseca Array 20.70 281 P P 08 18 42.6 -1.4
PAB San Pablo 21.01 281 P P 08 18 48.5 +1.2
PAB San Pablo 21.01 281 P P 08 18 48.5 +1.2
PAB pmax pmax
comp=Z,36nm,1.2s
TAM Tamanrasset 21.63 228 P P 08 18 55.1 +1.0
TAM Tamanrasset 21.63 228 P P 08 18 55.1 +1.0
TAM pmax pmax
comp=Z,26nm,1.2s
PUL Pulkovo 21.64 10⇓eP P 08 18 54.7 +1.0
HFS Hagfors 22.21 348 P P 08 19 00.2 +0.4
comp=Z,12nm,0.9s,baz=176,slow=5.8,SNR=12
HFS LR LR 08 29 37.7
comp=Z,428nm,19.7s,baz=181,slow=42
PBRG Braganca 22.67 287 eP P 08 19 07.2 +2.2
FINES FINESS Array B 22.86 4 P P 08 19 07.2 +0.4
comp=Z,10nm,0.9s,baz=165,slow=7.9,SNR=7.7
FINES FINESS Array B 22.86 4 i P P 08 19 07.8 +1.0
FINES pmax pmax
comp=Z,10.0nm,0.9s
MDT Midelt 22.92 264 P P 08 19 07.2 -0.5
comp=Z,3.4nm,0.8s,baz=49,slow=9.3,SNR=4.2
MDT LR LR 08 29 12.6
comp=Z,127nm,18.8s,baz=352,slow=40
NC602 NORSAR Array S 23.15 346 P P 08 19 08.2 -1.5
NC602 IAmb IAmb 08 19 15.6
comp=Z,31nm,0.9s
NAO01 NORSAR Array S 23.38 345 P P 08 19 10.8 -1.3
NC405 NORSAR Array S 23.47 347 P P 08 19 12.0 -1.0
NB2 NORSAR Subarra 23.49 346 P P 08 19 11.6 -1.7
comp=Z,51nm,1.7s,baz=150,slow=10
NOA NORSAR Array B 23.49 346 P P 08 19 12.2 -1.1
comp=Z,0.4nm,0.5s,baz=219,slow=14,SNR=9.3
NOA LR LR 08 29 21.2
comp=Z,206nm,18.2s,baz=160,slow=39
NC204 NORSAR Array S 23.80 346 P P 08 19 15.3 -0.9
PVAQ Vaqueiros 23.98 276 eP P 08 19 18.2 +0.1
EKA Eskdalemuir Ar 24.05 322 P P 08 19 18.4 -0.1
comp=Z,21nm,0.8s,baz=121,slow=10,SNR=27
ESK Eskdalemuir 24.06 322 P P 08 19 18.3 -0.4
ESK Eskdalemuir 24.06 322 P P 08 19 18.3 -0.4
ESK pmax pmax
comp=Z,90nm,1.2s
PCAS Casmilo, Conde 24.13 283 eP P 08 19 20.6 +1.1
PBDV Barranco-do-Ve 24.18 276 eP P 08 19 20.1 +0.1
KLMR Klimovskoe 24.53 20 eP P 08 19 21.9 -1.0
KLMR AMP 08 19 25.8
comp=Z,102nm,1.4s
KLMR Klimovskoe 24.53 20 eP P 08 19 21.9 -1.0
KLMR pmax pmax
comp=Z,102nm,1.4s
RAYN Ar Rayn 24.57 121 P P 08 19 25.5 +1.8
RAYN Ar Rayn 24.57 121 P P 08 19 25.5 +1.8
RAYN pmax pmax
comp=Z,16nm,1.4s
KIRV Kirov 26.27 32 P P 08 19 38.2 -0.5
comp=Z,5.9nm,0.5s,baz=236,slow=13,SNR=5.5
PRGR Permogore 26.95 24 eP P 08 19 43.6 -1.2
PRGR pmax pmax
comp=Z,41nm,1.3s
TMCR Tamitsa 27.07 15 eP P 08 19 47.8 +2.0
TMCR pmax pmax
comp=Z,26nm,1.0s
AKTO Aktyubinsk 27.47 53 P P 08 19 51.2 +1.6
comp=Z,1.2nm,0.6s,baz=254,slow=9.9,SNR=5.3
AKTO LR LR 08 32 54.4
comp=Z,207nm,18.9s,baz=280,slow=41
GEYT Alibeck 27.66 80 P P 08 19 53.1 +1.6
comp=Z,1.4nm,0.5s,baz=306,slow=12,SNR=8.6
GEYT Alibeck 27.66 80 P P 08 19 52.2 +0.7
GYA0B ALIBECK ARRAY 27.66 80 P P 08 19 52.3 +0.8
ARU Arti 29.51 41 P P 08 20 07.7 -0.1
comp=Z,0.5nm,0.3s,baz=233,slow=7.1,SNR=5.0
ARU Arti 29.51 41 P P 08 20 07.3 -0.4
ARU Arti 29.51 41d iP P 08 20 07.9 +0.2
ARU 08 21 01.2
ARU S S 08 25 04.9 +3.2
ARU SS SnSn 08 26 33.3 +4.1
ARU pmax pmax
comp=Z,9.0nm,1.3s
APA Apatity 29.53 8⇓iP P 08 20 03.4 -4.3
APA pmax pmax
comp=Z,4.0nm,1.0s
APA MLR MLR
comp=Z,900nm,12.0s
SVE Sverdlovsk 30.73 41 eP P 08 20 18.7 +0.3
SVE pmax pmax
comp=Z,17nm,1.1s
ARCES ARCESS Array B 30.93 2 P P 08 20 19.4 -0.7
comp=Z,2.8nm,0.9s,baz=187,slow=8.6,SNR=5.4
ARCES PcP PcP 08 23 14.6 -1.6
comp=Z,4.9nm,1.1s,baz=150,slow=3.8,SNR=3.8
ARCES LR LR 08 33 01.0
comp=Z,367nm,21.9s,baz=190,slow=37
TORD Torodi Ar. Bea 31.56 222 P P 08 20 26.7 +0.5
comp=Z,13nm,0.9s,baz=30,slow=9.2,SNR=39
TORD LR LR 08 34 36.4
comp=Z,162nm,18.4s,baz=10.0,slow=39
KK31 Karatay Array 35.98 67 P P 08 21 05.6 +1.1
KK31 Karatay Array 35.98 67 P P 08 21 05.6 +1.1
KK31 pmax pmax
comp=Z,10.0nm,1.5s
KKAR Karatay Array 35.98 67 P P 08 21 04.9 +0.5
KKAR Karatay Array 35.98 67 P P 08 21 04.9 +0.5
AAK Ala-Archa 38.95 67 P P 08 21 30.7 +1.0
AAK Ala-Archa 38.95 67⇑eP P 08 21 31.1 +1.4
AAK pmax pmax
comp=Z,6.0nm,1.7s
SPITS Spitsbergen Ar 39.68 358 P P 08 21 36.8 +1.6
comp=Z,2.8nm,0.8s,baz=163,slow=15,SNR=3.5
NRN Naryn 40.31 69 P P 08 21 42.3 +1.0
NRN Naryn 40.31 69 P P 08 21 42.3 +1.0
NRN pmax pmax
comp=Z,6.0nm,1.0s
DBIC Dimbokro 40.48 225 P P 08 21 42.1 -0.4
comp=Z,7.3nm,0.7s,baz=18,slow=8.9,SNR=8.0
DBIC LR LR 08 39 19.4
comp=Z,102nm,21.4s,baz=357,slow=38
DBIC Dimbokro 40.48 225 P P 08 21 42.8 +0.3
DBIC Dimbokro 40.48 225 P P 08 21 42.8 +0.3
DBIC pmax pmax
comp=Z,10.0nm,0.9s
KURBB Kurchatov Arra 40.51 54 P P 08 21 42.5 +0.1
comp=Z,2.3nm,0.8s,baz=282,slow=8.7,SNR=20
KURK Kurchatov 40.56 54 P P 08 21 43.0 +0.1
KURK Kurchatov 40.56 54⇓eP P 08 21 42.9 +0.1
KURK pmax pmax
comp=Z,9.0nm,1.8s
TIC Toumodi 40.59 225 eP P 08 21 44.0 +0.5
NIL Nilore 40.66 81 P P 08 21 45.0 +1.0
NIL Nilore 40.66 81 P P 08 21 45.0 +1.0
NIL pmax pmax
comp=Z,15nm,1.0s
KIC Kosan Boka 40.67 225 eP P 08 21 44.8 +0.7
comp=Z,18nm,0.8s
KSH Kashi 40.80 71 P P 08 21 44.0 -1.1
KSH pP sP 08 21 51.1 0.0
KSH PcS PcS 08 27 36.1 -0.9
KSH S S 08 27 51.5 -4.3
KSH pmax pmax
comp=Z,29nm,1.3s
KSH pmax pmax
comp=Z,480nm,7.6s
KSH LR LR
comp=Z,490nm,9.8s
KSH LR LR
comp=Z,620nm,12.5s
LIC Lamto 40.94 225 eP P 08 21 46.8 +0.5
comp=Z,50nm,0.8s
MK31 Makanchi Array 43.54 59 P P 08 22 07.0 -0.2
MK31 Makanchi Array 43.54 59 P P 08 22 07.0 -0.2
MK31 pmax pmax
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 43.54 59 P P 08 22 07.6 +0.4
comp=Z,2.0nm,0.5s,baz=275,slow=6.8,SNR=23
MKAR LR LR 08 43 34.6
comp=Z,120nm,18.7s,baz=302,slow=41

MKAR **Makanchi Array** 43.54 59 P P 08 22 07.0 -0.2
ZAA0 **Zalesovo Array** 44.04 49 P P 08 22 10.7 -0.4
ZALV **Zalesovo Beam** 44.04 49 P P 08 22 11.0 -0.1
comp=Z,5.3nm,0.6s,baz=275,slow=8.9,SNR=22
ZALV LR LR 08 42 56.2
comp=Z,216nm,21.7s,baz=304,slow=39
ZALV **Zalesovo Beam** 44.04 49 P P 08 22 10.4 -0.7
WMQ **Urumqi** 47.97 62 eP P 08 22 44.3 +1.9
WMQ sP sP 08 22 55.4 +7.0
WMQ pmax pmax
comp=Z,10.0nm,1.3s
WMQ pmax pmax
comp=Z,200nm,3.9s
WMQ LR LR
comp=Z,610nm,22.1s
WMQ LR LR
comp=Z,210nm,28.3s
WMQ LR LR
comp=Z,190nm,22.1s
SFJD **Kangerlussuaq** 48.65 330 LR LR 08 43 56.7
comp=Z,206nm,21.3s,baz=88,slow=37
LSZ **Lusaka** 53.93 173 P P 08 23 28.3 +0.8
comp=Z,2.4nm,0.8s,baz=24,slow=5.2,SNR=4.2
LSZ **Lusaka** 53.93 173 IAmb IAmb 08 23 31.2
comp=Z,7.5nm,1.1s
TLY **Talaya** 55.64 48 LR LR 08 49 09.1
comp=Z,201nm,18.6s,baz=302,slow=38
TLY **Talaya** 55.64 48deP P 08 23 40.3 +0.9
TLY pmax pmax
comp=Z,10.0nm,1.1s
ZAK **Zakamensk** 55.89 50 eP P 08 23 42.2 +0.8
ZAK pmax pmax
comp=Z,4.0nm,1.3s
LSA **Lhasa** 56.11 77 P P 08 23 42.4 -1.3
LSA IAmb IAmb 08 23 54.2
comp=Z,6.1nm,0.7s
LSA **Lhasa** 56.11 77 P P 08 23 42.4 -1.3
LSA pmax pmax
comp=Z,6.0nm,0.7s
FRB **Frobisher Bay** 56.64 328 LR LR 08 47 48.3
comp=Z,244nm,19.5s,baz=52,slow=36
GTA **Gaotai** 58.03 63 P P 08 23 56.6 -0.1
GTA pP sP 08 24 02.8 0.0
GTA sP pP 08 24 07.0 +5.9
GTA pmax pmax
comp=Z,5.0nm,1.4s
GTA pmax pmax
comp=Z,120nm,5.2s
GTA LR LR
comp=Z,130nm,18.1s
GTA LR LR
comp=Z,350nm,18.7s
GTA LR LR
comp=Z,250nm,18.4s
TIXI **Tiksi** 58.55 21 P P 08 23 58.5 -1.1
TIXI **Tiksi** 58.55 21⇑eP P 08 23 58.8 -0.8
TIXI pmax pmax
comp=Z,7.0nm,1.7s
SONM **Songino Array** 58.77 52 P P 08 24 02.1 +0.4
comp=Z,2.4nm,0.9s,baz=285,slow=8.2,SNR=19
SONM **Songino Array** 58.77 52 P P 08 24 01.4 -0.4
BOD **Bodaibo** 58.88 39 eP P 08 24 01.3 -0.9
BOD pmax pmax
comp=Z,10.0nm,1.7s
ULN **Ulaanbaatar** 59.16 51 P P 08 24 03.1 -1.4
ULN IAmb IAmb 08 24 14.3
comp=Z,9.0nm,1.2s
ULN **Ulaanbaatar** 59.16 51⇓eP P 08 24 03.2 -1.3
ULN pmax pmax
comp=Z,8.0nm,1.7s
SCHQ **Schefferville** 59.26 318 P P 08 24 04.5 -0.4
comp=Z,9.5nm,0.8s,baz=84,slow=4.5,SNR=17
SCHQ **Schefferville** 59.26 318 P P 08 24 04.0 -0.8
RES **Resolute Bay** 59.75 344 LR LR 08 51 20.6
comp=Z,185nm,19.1s,baz=32,slow=38
RES **Resolute Bay** 59.75 344 P P 08 24 08.0 +0.1
RES **Resolute Bay** 59.75 344 P P 08 24 08.0 +0.1
RES pmax pmax
comp=Z,8.0nm,1.5s
LZH **Lanzhou** 62.40 65 eP P 08 24 27.1 +0.3
LZH pP sP 08 24 35.7 +2.9
LZH sP pP 08 24 41.3 +10
LZH pmax pmax
comp=Z,14nm,1.0s
LZH pmax pmax
comp=Z,59nm,4.5s
LZH LR LR
comp=Z,250nm,12.5s
LZH LR LR
comp=Z,270nm,13.5s
LZH LR LR
comp=Z,310nm,14.9s
YAK **Yakutsk** 63.79 30 eP P 08 24 36.9 +1.6
YAK pmax pmax
comp=Z,10.0nm,0.9s
CD2 **Chengdu** 64.95 70 P P 08 24 42.1 -1.4
CD2 pmax pmax
comp=Z,20nm,0.5s
HHC **Hu-ho-hao-te** 65.29 57 eP P 08 24 45.7 0.0
HHC pP sP 08 24 52.4 +0.6
HHC PcP PcP 08 25 22.2 +4.3
HHC pmax pmax
comp=Z,6.0nm,0.8s
HHC pmax pmax
comp=Z,36nm,3.8s
HHC LR LR
comp=Z,150nm,11.9s
HHC LR LR
comp=Z,190nm,12.8s
HHC LR LR
comp=Z,110nm,12.8s
BOSA **Boshof** 67.01 178 LR LR 08 55 22.8
comp=Z,123nm,21.6s,baz=6.5,slow=37
XAN **Xi'an** 67.03 64 P P 08 24 56.3 -0.5
XAN PcP PcP 08 25 23.4 -1.7
XAN pmax pmax
comp=Z,11nm,1.3s
XAN pmax pmax
comp=Z,86nm,5.7s
XAN **Xi'an** 67.03 64 P P 08 24 56.3 -0.5
XAN **Xi'an** 67.03 64 P P 08 24 56.3 -0.5
XAN pmax pmax
comp=Z,17nm,1.2s
CMAR **Chiang Mai Arr** 68.09 83 P P 08 25 04.5 +0.8
comp=Z,0.9nm,0.3s,baz=311,slow=8.2,SNR=4.0
VLDQ **Val d'Or** 68.33 315 IAmb IAmb 08 25 08.7
comp=Z,12nm,1.2s
BJI **Beijing** 68.71 55 eP P 08 25 07.1 -0.1
BJI pmax pmax
comp=Z,6.0nm,1.4s
ENH **Enshi** 69.46 67 P P 08 25 10.9 -1.2
ENH IAmb IAmb 08 25 23.5
comp=Z,13nm,1.1s
C36M **Paulatuk** 69.52 348 IAmb IAmb 08 25 12.7
comp=Z,11nm,1.2s
BILL **Bilibino** 70.11 14 iP P 08 25 12.3 -3.1
BILL i 08 25 36.5
BILL pmax pmax
comp=Z,2.0nm,1.0s
SEY **Seymchan** 71.01 22⇑eP P 08 25 23.2 +2.2
SADO **Sadowa** 71.20 313 IAmb IAmb 08 25 27.8
comp=Z,9.8nm,0.8s
N59A **State Game Lan** 71.43 308 IAmb IAmb 08 25 26.3
comp=Z,13nm,1.1s
L56A **Greenwood** 71.81 310 IAmb IAmb 08 25 30.8
comp=Z,15nm,1.1s
INK **Inuvik** 71.84 351 P P 08 25 25.1 -0.8
comp=Z,3.5nm,1.0s,baz=10.6s,baz=8.3,SNR=8.2
INK **Inuvik** 71.84 351 IAmb IAmb 08 25 27.1
comp=Z,9.0nm,1.3s
N58A **Sunbury** 72.06 308 IAmb IAmb 08 25 32.1
comp=Z,15nm,1.1s
KLR **Kul'dur** 72.35 41⇓eP P 08 25 28.8 -0.5
KLR pmax pmax
comp=Z,13nm,1.5s
M56A **Emporium** 72.58 309 IAmb IAmb 08 25 34.9
comp=Z,17nm,1.1s
SSPA **Standing Stone** 72.90 309 P P 08 25 33.6 +0.9
MA2 **Magadan** 73.10 25⇑eP P 08 25 35.6 +2.0
MA2 pmax pmax
comp=Z,25nm,1.5s
YKA **Yellowknife Ar** 73.48 341 P P 08 25 35.1 -0.7
comp=Z,2.3nm,0.8s,baz=35,slow=5.2,SNR=36
YKA LR LR 09 01 48.8
comp=Z,94nm,18.3s,baz=0.0,slow=39
P57A **Homestead Farm** 73.66 308 IAmb IAmb 08 25 39.3
comp=Z,8.4nm,0.9s
BMAR **Burnt Mountain** 73.76 355 P P 08 25 37.0 -0.4
EPYK **Eagle Plains** 74.07 352 IAmb IAmb 08 25 39.4
comp=Z,9.5nm,1.1s
MDJ **Mudanjiang** 74.10 45 P P 08 25 37.9 -1.8
MDJ pmax pmax
comp=Z,10.0nm,1.5s
N53A **Lisbon** 74.58 310 IAmb IAmb 08 25 44.5
comp=Z,15nm,0.9s
FYU **Fort Yukon** 74.66 355 IAmb IAmb 08 25 44.9
comp=Z,18nm,1.3s
NJ2 **Nanjing** 75.04 61 eP P 08 25 44.7 -0.7
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
J47A **Sumner** 75.38 314 IAmb IAmb 08 25 48.8
comp=Z,13nm,1.1s
U59A **Littleton** 75.41 305 IAmb IAmb 08 25 49.4
comp=Z,7.6nm,0.9s
FFC **Flin Flon** 75.60 331 P P 08 25 47.9 -0.4
FFC **Flin Flon** 75.60 331 P P 08 25 47.9 -0.4
FFC pmax pmax
comp=Z,7.0nm,1.3s
IMAR **Indian Mountai** 75.61 359 P P 08 25 48.4 +0.3
USRK **Ussuriysk Ar.** 75.69 44 P P 08 25 48.1 -0.8
comp=Z,1.5nm,0.7s,baz=266,slow=8.8,SNR=4.4
ACSO **Alum Creek Sta** 76.22 311 IAmb IAmb 08 25 53.4
comp=Z,15nm,1.1s
ULM **Lac du Bonnet** 76.30 325 P P 08 25 51.7 -0.6
comp=Z,4.8nm,0.9s,baz=50,slow=5.5,SNR=8.7
ULM LR LR 09 00 40.7
comp=Z,162nm,18.4s,baz=32,slow=37
ULM **Lac du Bonnet** 76.30 325 IAmb IAmb 08 25 55.9
comp=Z,6.8nm,0.9s
N49A **Columbus Grove** 76.49 312 IAmb IAmb 08 25 57.2
comp=Z,9.5nm,0.8s
ILAR **Eielson Array** 76.54 355 P P 08 25 53.7 +0.3
comp=Z,1.1nm,0.9s,baz=8.0,slow=4.2,SNR=10
ILAR LR LR 09 00 03.7
comp=Z,54nm,21.2s,baz=16,slow=36
P51A **Williamsport** 76.74 310 IAmb IAmb 08 25 58.3
comp=Z,8.1nm,1.0s
HDA **Harding Lake** 76.91 355 IAmb IAmb 08 25 56.2
comp=Z,10nm,1.2s
O49A **Covington** 77.05 311 IAmb IAmb 08 25 57.8
comp=Z,15nm,1.1s
Q51A **Peebles** 77.20 310 IAmb IAmb 08 25 58.9
comp=Z,14nm,1.0s
N47A **Urbana** 77.39 313 IAmb IAmb 08 26 02.4
comp=Z,14nm,1.1s
DOT **Dot Lake** 77.45 354 IAmb IAmb 08 26 09.1
comp=Z,17nm,1.5s
KSAR **Wonju Array Be** 77.62 52 P P 08 25 59.1 -0.9
KSAR **Wonju Array Be** 77.62 52 P P 08 25 59.1 -0.9
KSRS **Korea Array** 77.64 52 P P 08 25 59.6 -0.4
comp=Z,3.4nm,0.9s,baz=310,slow=4.5,SNR=7.8
MCK **McKinley** 77.69 356 IAmb IAmb 08 26 00.6
comp=Z,9.3nm,1.2s
BCAR **Beaver Creek A** 77.82 353 P P 08 26 00.8 +0.1
V55A **Taylorsville** 77.89 306 IAmb IAmb 08 26 03.5
comp=Z,13nm,1.1s
P48A **Milroy** 78.16 311 IAmb IAmb 08 26 03.1
comp=Z,14nm,1.2s
BIRD **Birdtown, Kers** 78.17 305 IAmb IAmb 08 26 07.2
comp=Z,14nm,1.1s
S51A **Beattyville** 78.23 309 IAmb IAmb 08 26 04.3
comp=Z,14nm,1.2s
DHY **Denali Highway** 78.26 355 IAmb IAmb 08 26 04.2
comp=Z,7.2nm,1.0s
KMSC **Kings Mountain** 78.42 306 IAmb IAmb 08 26 06.1
comp=Z,8.9nm,0.9s
JFWS **Jewell Farm** 78.59 316 IAmb IAmb 08 26 12.7
comp=Z,6.8nm,0.8s
L42A **Oliver, Polo** 78.89 315 IAmb IAmb 08 26 14.7
comp=Z,12nm,1.0s
BLO **Bloomington** 78.99 312 IAmb IAmb 08 26 08.7
comp=Z,16nm,1.0s
YSS **Yuzh-Sakhalins** 79.31 37 eP P 08 26 08.2 -0.9
YSS pmax pmax
comp=Z,20nm,1.1s
WCI **Wyandotte Cave** 79.47 311 P P 08 26 10.4 +0.2
WCI IAmb IAmb 08 26 14.0
comp=Z,8.9nm,0.9s
WCI **Wyandotte Cave** 79.47 311 P P 08 26 10.4 +0.2
WCI pmax pmax
comp=Z,9.0nm,0.9s
L40A **Anamosa** 79.69 316 IAmb IAmb 08 26 19.4
comp=Z,14nm,1.1s
T49A **Edmonton** 79.76 310 IAmb IAmb 08 26 13.1
comp=Z,11nm,1.1s
PMR **Palmer** 79.84 356 IAmb IAmb 08 26 30.6
comp=Z,9.2nm,0.9s
BALM **Baldy** 79.87 353 IAmb IAmb 08 26 13.5
comp=Z,8.6nm,1.1s
W52A **Murphy** 80.08 307 IAmb IAmb 08 26 28.6
comp=Z,12nm,1.1s
CPCT **Cooper Cave** 80.22 308 IAmb IAmb 08 26 18.6
comp=Z,18nm,1.2s
P43A **Skaggs, Pawnee** 80.40 314 IAmb IAmb 08 26 23.6
comp=Z,8.9nm,0.8s
N41A **Harden Midland** 80.42 315 IAmb IAmb 08 26 23.3
comp=Z,15nm,1.1s
PETK **Petropavlovsk-** 80.59 26 LR LR 09 04 42.2
comp=Z,66nm,19.8s,baz=38
Y52A **Lilburn** 80.96 306 IAmb IAmb 08 26 23.1
comp=Z,15nm,0.9s
V48A **Smith Brothers** 81.44 309 IAmb IAmb 08 26 24.4
comp=Z,10nm,1.1s
S44A **Carbondale** 81.57 312 IAmb IAmb 08 26 29.3
comp=Z,10nm,0.9s
WVT **Waverly** 81.78 310 P P 08 26 22.1 -0.5
WVT IAmb IAmb 08 26 25.6
comp=Z,8.7nm,1.1s
WVT **Waverly** 81.78 310 P P 08 26 22.1 -0.5
WVT pmax pmax
comp=Z,9.0nm,1.2s
152A **Waverly Hall** 82.16 306 IAmb IAmb 08 26 26.2
comp=Z,15nm,1.1s
X48A **Hartselle** 82.43 308 IAmb IAmb 08 26 27.3
comp=Z,13nm,1.1s
CCM **Cathedral Cave** 82.47 313 P P 08 26 25.9 -0.2
CCM IAmb IAmb 08 26 27.2
comp=Z,8.8nm,1.0s
CCM **Cathedral Cave** 82.47 313 P P 08 26 26.0 -0.2
CCM pmax pmax
comp=Z,9.0nm,1.0s
Z50A **Ashland** 82.53 307 IAmb IAmb 08 26 30.5
comp=Z,11nm,1.1s
PLAL **Pickwick Lake** 82.70 309 IAmb IAmb 08 26 30.5
comp=Z,11nm,1.1s
MGMO **Mountain Grove** 83.68 313 IAmb IAmb 08 26 41.6
comp=Z,10nm,1.1s
LCAR **Lake Charles** 83.79 312 IAmb IAmb 08 26 37.4
comp=Z,9.5nm,1.1s
MJAR **Matsushiro Arr** 84.36 47 P P 08 26 35.2 -0.8
comp=Z,2.4nm,0.8s,baz=354,slow=4.5,SNR=6.9
MJAR LR LR 09 07 33.8
comp=Z,59nm,19.0s,baz=10.0,slow=38
MJAR **Matsushiro Arr** 84.36 47 IAmb IAmb 08 26 39.2
comp=Z,2.3nm,1.0s
U40A **Yellville** 84.57 313 IAmb IAmb 08 26 38.4
comp=Z,7.1nm,1.0s
BDFB **Brasilia** 85.32 246 LR LR 09 04 28.4
comp=Z,104nm,19.9s,baz=191,slow=36
X40A **Basin Creek Fa** 85.88 312 IAmb IAmb 08 26 44.8
comp=Z,8.0nm,1.1s
RLMT **Red Lodge** 86.04 328 P P 08 26 45.1 +0.6
NEW **Newport** 86.36 334 IAmb IAmb 08 26 46.9
comp=Z,5.3nm,0.9s
K22A **Casper** 86.85 325 IAmb IAmb 08 26 51.6
comp=Z,5.6nm,0.9s
N23A **Red Feather La** 87.98 324 P P 08 26 54.2 +0.1
N23A IAmb IAmb 08 27 01.4
comp=Z,7.6nm,1.2s
PDAR **Pinedale Array** 88.08 327 P P 08 26 53.5 -0.9
comp=Z,0.8nm,0.8s,baz=73,slow=5.4,SNR=7.5
PDAR LR LR 09 07 10.6
comp=Z,137nm,19.2s,baz=38,slow=36
WMOK **Wichita Mounta** 89.07 315 IAmb IAmb 08 27 00.3
comp=Z,4.8nm,0.9s
O20A **White River Ci** 89.64 325 IAmb IAmb 08 27 04.6
comp=Z,8.2nm,1.1s
ABTX **Abilene, Hawle** 91.12 315 IAmb IAmb 08 27 13.1
comp=Z,6.5nm,0.8s
NVAR **Mina Array Bea** 95.31 330 LR LR 09 10 55.5
comp=Z,165nm,21.1s,baz=8.0,slow=36
TX31 **Lajitas Ar. Si** 95.86 315 IAmb IAmb 08 27 38.7
comp=Z,6.9nm,1.5s
TX32 **Lajitas Array** 95.86 315 IAmb IAmb 08 27 38.7
comp=Z,6.5nm,1.4s
TXAR **Lajitas Array** 95.86 315 P P 08 27 30.9 +0.4
comp=Z,1.2nm,1.0s,baz=108,slow=2.8,SNR=9.4
TXAR **Lajitas Array** 95.86 315 P P 08 27 29.8 -0.8
TXAR **Lajitas Array** 95.86 315 P P 08 27 31.0 +0.4
WRA **Warramunga Arr** 118.82 93 PKP PKiKP 08 32 53.0 +0.6
comp=Z,0.8nm,1.0s,baz=310,slow=1.8,SNR=3.6
ASAR **Alice Springs** 120.50 97 PKP PKPdf 08 32 54.8 -0.7
comp=Z,0.8nm,0.8s,baz=310,slow=1.8,SNR=8.9
QSPA **South Pole Qui** 128.55 180 PKPdf PKiKP 08 33 11.0 +0.8
STKA **Stephens Creek** 130.42 102 PKP PKiKP 08 33 15.5 +0.4
comp=Z,1.2nm,0.7s,baz=307,slow=10,SNR=2.7

*IDC **01** 08:20:27.6±1.4, 38.71N×22.70E, h0km, mb3.6/5, mb1 3.6/7, mb1mx3.4/39, mbtmp3.6/7, ML3.6/2, Error ellipse: s-maj=28.8km s-min=22.3km az=136.0*
*IASPEI **01** 08:20:29.4±0.8, 38.71N±0.02×22.75E±0.02, h16km±6km, mb3.7/5, Error ellipse: s-maj=2.9km s-min=2.5km az=14.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*ATH **01** 08:20:29.2, 38.72N×22.75E, h18km±1km, ML3.5/23, Error ellipse: s-maj=1.8km s-min=0.6km az=301.0*
*THE **01** 08:20:29.5, 38.71N×22.74E, h16km, ML3.4/7, Error ellipse: s-maj=0.8km s-min=0.3km az=267.0*
ISC 01 08:20:29.5±0.8, 38.71N±0.02×22.74E±0.02, h15km±5km, n79, σ0.76/97, mb3.7/5, 4C-2D, Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
AXAR **Agios Charalam** 0.09 311 P Pg 08 20 32.6 0.0
AXAR S Sg 08 20 34.6 0.0
AXAR AML AML 08 20 34.9
AXAR AML AML 08 20 35.3
LKR **Lokris** 0.21 106 P Pg 08 20 34.2 -0.1
LKR S Sb 08 20 37.9 -0.9
LKR AML AML 08 20 38.8
comp=N,42903μm,0.2s
LKR AML AML 08 20 38.9
comp=E,39654μm,0.2s
DLFA **Delphi** 0.30 220 P Pg 08 20 35.6 -0.2
DLFA S Sg 08 20 40.3 +0.2
DLFA AML AML 08 20 41.3
comp=N,41250μm,0.3s
DLFA AML AML 08 20 41.3
comp=E,34978μm,0.2s
AGG **Agios Georgios** 0.45 314 P Pg 08 20 38.4 0.0
AGG S Sb 08 20 45.2 -0.5
comp=E,7μm,0.3s
AGG **Agios Georgios** 0.45 314 P Pg 08 20 38.4 0.0
AGG S Sb 08 20 44.9 -0.8
AGG AML AML 08 20 46.9
comp=E,15719μm,0.3s
AGG AML AML 08 20 48.0
comp=N,11316μm,0.4s
PROD **Prodromos** 0.47 165 P Pg 08 20 38.5 -0.3
PROD S Sb 08 20 46.0 -0.2
PROD **Prodromos** 0.47 165 P Pg 08 20 38.5 -0.3
PROD AML AML 08 20 49.4
comp=N,27360μm,0.2s
PROD AML AML 08 20 49.6
comp=E,27232μm,0.2s
MAKR **Makrakomi, Fth** 0.56 303 P Pb 08 20 40.6 -0.6
MAKR S Sb 08 20 49.0 -0.1
comp=E,8μm,0.4s
MAKR **Makrakomi, Fth** 0.56 303 P Pb 08 20 40.7 -0.4
MAKR S Sb 08 20 48.4 -0.6
MAKR AML AML 08 20 51.5
comp=N,18251μm,0.5s
MAKR AML AML 08 20 52.0
comp=E,12174μm,0.3s
KALE **Kalithea** 0.57 236 P Pg 08 20 40.3 -0.4
KALE S Sb 08 20 49.7 +0.5
comp=E,8μm,0.4s
KALE **Kalithea** 0.57 236 P Pg 08 20 40.5 -0.2
KALE S Sb 08 20 48.6 -0.6
KALE AML AML 08 20 51.1
comp=N,16021μm,0.3s
KALE AML AML 08 20 52.0
comp=E,14698μm,0.5s
SERG **Sergoula** 0.61 241 P Pg 08 20 41.0 -0.6
SERG **Sergoula** 0.61 241 P Pg 08 20 40.8 -0.8
SERG S Sg 08 20 49.8 0.0
SERG AML AML 08 20 52.8
comp=N,14813μm,0.2s
SERG AML AML 08 20 52.9
comp=E,14973μm,0.3s
TRIZ **Trizonia** 0.63 237 P Pg 08 20 41.1 -0.7
TRIZ **Trizonia** 0.63 237 P Pg 08 20 41.2 -0.7
VIL2 **Platees** 0.65 140 P Pb 08 20 42.8 +0.3
VIL2 AML AML 08 20 58.8
comp=N,10962μm,0.5s
VIL2 AML AML 08 21 01.9
comp=E,13572μm,0.7s
ANX **Ano Chora** 0.65 260 P Pg 08 20 41.8 -0.5
ANX S Sb 08 20 52.2 +0.5
comp=E,5μm,0.3s
ANX **Ano Chora** 0.65 260 P Pg 08 20 42.0 -0.4
ANX AML AML 08 20 54.0
comp=E,8916μm,0.3s
ANX AML AML 08 20 58.1
comp=N,13365μm,0.5s
MRKA **Markates** 0.66 90 P Pg 08 20 42.2 -0.2
MRKA **Markates** 0.66 90 P Pb 08 20 42.5 -0.3
MRKA S Sb 08 20 51.4 -0.4
ALIK **Aliki, Aigiali** 0.67 228 P Pg 08 20 42.2 -0.4
NEO **Neokhori** 0.70 32 P Pg 08 20 42.5 -0.8
NEO **Neokhori** 0.70 32 P Pg 08 20 42.5 -0.8
NEO AML AML 08 20 55.1
comp=E,12429μm,0.3s
NEO AML AML 08 20 55.6
comp=N,21128μm,0.2s
VILL **Villia** 0.70 140 P Pg 08 20 42.8 -0.5
VILL S Sb 08 20 53.2 +0.1
comp=N,770nm,0.6s
LTK **Loutraki** 0.71 165 P Pb 08 20 43.1 -0.5
LTK S Sb 08 20 53.1 -0.1
comp=N,5μm,0.5s
LTK **Loutraki** 0.71 165 P Pb 08 20 43.2 -0.5
LTK S Sb 08 20 53.0 -0.1
LTK AML AML 08 20 59.1
comp=E,11062μm,0.4s
LTK AML AML 08 20 59.7
comp=N,9161μm,0.3s
EFP **Efpalio** 0.71 247 P Pg 08 20 42.8 -0.7
EFP **Efpalio** 0.71 247 P Pg 08 20 42.7 -0.7
EFP S Sb 08 20 53.7 +0.4
EFP AML AML 08 20 55.9
comp=N,4473μm,0.2s
EFP AML AML 08 20 56.5
comp=E,7576μm,0.3s
SKIA **Skiathos** 0.72 51 P Pb 08 20 43.4 -0.5
SKIA **Skiathos** 0.72 51 P Pb 08 20 43.5 -0.5
XOR **Xorichti** 0.74 28 P Pg 08 20 43.5 -0.5
XOR **Xorichti** 0.74 28 P Pg 08 20 43.6 -0.4
XOR S Sg 08 20 53.1 -0.7
XOR AML AML 08 20 57.0
comp=N,13781μm,0.2s
XOR AML AML 08 20 57.3
comp=E,8633μm,0.3s
LOUT **Loutraki** 0.74 166 P Pb 08 20 43.7 -0.5
LOUT AML AML 08 20 59.5
comp=N,2519μm,0.5s
LOUT AML AML 08 21 01.0
comp=E,1594μm,0.3s
EVR **Evrytania** 0.76 286 P Pb 08 20 44.3 -0.2
EVR S Sb 08 20 54.6 -0.1
comp=E,1μm,0.6s
EVR **Evrytania** 0.76 286 P Pn 08 20 44.7 -1.1
EVR AML AML 08 21 01.9
comp=E,2436μm,0.4s
EVR AML AML 08 21 03.4
comp=N,1948μm,0.7s
LAKA **Lakka** 0.76 232 P Pb 08 20 44.0 -0.5
LAKA AML AML 08 20 60.0
comp=N,1813μm,0.5s
LAKA AML AML 08 21 01.8
comp=E,1747μm,0.4s
KLV **Kalavryta, Ach** 0.81 215 P Pb 08 20 44.8 -0.6

KLV Kalavryta, Ach 0.81 215 P Pg 08 20 45.5 +0.2
PVO Paravola 0.96 265 P Pb 08 20 47.1 -0.7
PVO Paravola 0.96 265 P Pg 08 20 47.7 -0.3
ALNA Alonissos 0.98 63 P Pn 08 20 48.5 -0.2
AOS Alonnisos 1.00 62 P Pb 08 20 48.1 -0.5
AOS Alonnisos 1.00 62 P Pb 08 20 48.1 -0.5
AOS AML AML 08 21 03.4
comp=N,2275μm,0.5s
AOS AML AML 08 21 14.0
comp=E,1221μm,0.7s
THL Klokotos Trika 1.02 327 P Pn 08 20 48.8 -0.6
THL Klokotos Trika 1.02 327 P Pn 08 20 48.8 -0.6
ATH Athens Observa 1.06 134 P Pg 08 20 49.8 -0.2
ATH AML AML 08 21 08.6
comp=E,8139μm,0.3s
ATH AML AML 08 21 09.0
comp=N,6612μm,0.5s
PTL Penteli 1.10 126 P Pb 08 20 49.7 -0.6
PTL Penteli 1.10 126 P Pn 08 20 50.0 -0.5
PTL AML AML 08 21 09.6
comp=E,2183μm,0.4s
PTL AML AML 08 21 11.9
comp=N,2381μm,0.5s
ATHU Athens Univers 1.11 132 P Pn 08 20 50.0 -0.5
ATHU AML AML 08 21 09.2
comp=N,2214μm,0.5s
ATHU AML AML 08 21 09.7
comp=E,1395μm,0.3s
DRO Drossia 1.11 227 P Pn 08 20 50.4 -0.2
VLY Voula,Athens 1.19 136 P Pb 08 20 51.3 -0.5
VLY Voula,Athens 1.19 136 P Pg 08 20 52.0 -0.4
VLY AML AML 08 21 12.7
comp=E,3988μm,0.3s
VLY AML AML 08 21 12.7
comp=N,3556μm,0.3s
RLS Riolos of Patr 1.20 237 P Pb 08 20 51.8 -0.1
RLS AML AML 08 21 11.6
comp=N,997μm,0.5s
RLS AML AML 08 21 14.2
comp=E,1122μm,0.6s
PDO Prodromos 1.23 265 P Pb 08 20 52.4 0.0
DID Didima 1.26 162 P Pg 08 20 53.2 -0.7
KRND KRANIDI 1.36 166 P Pg 08 20 55.1 -0.7
VLX Vlachokerasia 1.37 192 P Pb 08 20 54.9 0.0
LIT Litokhoron 1.40 352 P Pb 08 20 55.4 -0.1
PAIG Paliouri 1.42 31 P Pb 08 20 54.7 -1.0
PAIG Paliouri 1.42 31 P Pb 08 20 54.9 -0.7
AMT Artemida-Makis 1.43 215 P Pg 08 20 56.6 -0.4
KARY Karystos 1.49 116 P Pb 08 20 56.6 -0.4
PLG Polygyros 1.75 18 P Pn 08 20 59.7 +0.3
VAY Valandovo 2.61 357 *i* Pn Pn 08 21 12.6 +1.4
APE Apeiranthos 2.75 126 ⇑P Pn 08 21 13.8 +0.7
OHR Ohrid 2.83 329 *i* Pn Pb 08 21 18.4 -1.3
STIP Stip 3.01 352 *i* Pn Pn 08 21 18.6 +1.9
ELND Elena 4.84 28 ⇓P Pn 08 21 42.8 +1.0
VOIR 6.94 14 ⇓P Pn 08 22 12.8 +2.1
MLR Muntele Rosu 7.18 18 Pn Pn 08 22 16.1 +2.0
comp=E,1.0nm,0.3s,baz=202,slow=5.4,SNR=7.2
MLR Muntele Rosu 7.18 18 ⇑P Pn 08 22 16.3 +2.2
PLOR Plostina 7.70 21 ⇑P Pn 08 22 23.0 +1.8
VRI Vrincioaia 7.74 21 ⇑P Pn 08 22 14.8 -6.9
BRTR Keskin Array B 8.52 80 Pn Pn 08 22 35.2 +2.7
comp=E,0.1nm,0.3s,baz=269,slow=11,SNR=2.4
HFS Hagfors 22.20 348 P P 08 25 24.0 -1.1
comp=E,2.1nm,0.9s,baz=164,slow=16,SNR=3.1
EKA Eskdalemuir Ar 24.04 322 P P 08 25 44.1 +0.3
comp=E,1.1nm,0.5s,baz=112,slow=9.3,SNR=3.6
TORD Torodi Ar. Bea 31.57 222 P P 08 26 52.1 +0.6
comp=E,0.8nm,0.7s,baz=38,slow=8.3,SNR=5.1
MKAR Makanchi Array 43.53 59 P P 08 28 33.1 +0.6
comp=E,0.2nm,0.4s,baz=274,slow=7.5,SNR=6.7
ZALV Zalesovo Beam 44.03 49 P P 08 28 36.1 -0.3
comp=E,0.7nm,0.6s,baz=268,slow=8.7,SNR=2.4

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*IDC **01** 08:31:16.0±0.6, 38.67N×70.50E, h0km, mb4.1/30, mb1 4.3/39, mb1mx4.1/63, mbtmp4.1/39, ML3.5/7, MS3.5/6, Ms1 3.6/6, ms1mx3.2/43, Error ellipse: s-maj=11.4km s-min=8.3km az=172.0*

*NNC **01** 08:31:16.8±3.5, 38.72N×70.27E, h0km, mb5.0, mpv4.7, Error ellipse: s-maj=33.8km s-min=22.7km az=178.0*

*BJI **01** 08:31:18.6±0.0, 38.99N×70.53E, h23km, mB4.9/30, mb4.6/42, ML4.6/4, Ms4.2/19, Ms7 4.1/15*

*MOS **01** 08:31:23.3±1.1, 38.93N×70.62E, h61km, mb4.7/29, Error ellipse: s-maj=6.6km s-min=4.3km az=80.7*

*NEIC **01** 08:31:23.0±1.8, 38.88N±0.05×70.53E±0.08, h46km±6km, mb4.5/39, Error ellipse: s-maj=9.0km s-min=7.2km az=100.0*

ISC 01 08:31:19.1±0.3, 38.84N±0.03×70.56E±0.04, h17km, n237, σ2.30/243, mb4.4/66, MS3.8/7, 16C-11D, Afghanistan-Tajikistan border region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
BTK Batken 1.24 9 Pn 08 31 41.1 -0.7
BTK Sn Sb 08 31 57.4 -0.5
BTK Batken 1.24 9 P Pn 08 31 41.1 -0.7
TAS Tashkent 2.67 339 Pn Pb 08 32 07.3 +0.8
TAS Tashkent 2.67 339 PN Pb 08 32 07.3 +0.8
ARSB Arslanbob 3.10 36 Pn 08 32 10.0 +2.5
ARSB Arslanbob 3.10 36 PN Pn 08 32 10.0 +2.5
CHM Chimkent 3.56 348 *e*PN Pn 08 32 17.3 +3.7
CHM *e*S Sb 08 33 02.7 -1.8
JBG Jabagly 3.58 360 *e*PN Pn 08 32 17.8 +3.7
JBG *e*S Sb 08 33 03.3 -2.1
AML Almayashu 4.07 35 P Pn 08 32 24.6 +3.6
SNR=102
KSH Kashi 4.26 79 Pn Pn 08 32 22.4 -1.0
KSH Sn Sn 08 33 12.9 +0.1
KSH smax smax
comp=N,4μm,1.1s
KSH smax smax
comp=E,1μm,0.8s
KK31 Karatay Array 4.26 360 ⇑Pn Pn 08 32 26.5 +3.2
11nm,0.3s,baz=171,slow=11,SNR=391
KK31 ⇓Pg Pb 08 32 36.8 +3.1
43nm,0.5s,baz=183,slow=13,SNR=8.2
KK31 ⇓Lg Lg 08 33 31.9
213nm,0.5s,baz=182,slow=30,SNR=7.1
KK31 Karatay Array 4.26 360 Pn 08 32 26.6 +3.3
KK31 Karatay Array 4.26 360 *e*PN Pn 08 32 26.4 +3.2
KK31 *i* 08 33 17.6
KKAR Karatay Array 4.26 360 Pn 08 32 26.7 +3.4
KKAR Karatay Array 4.26 360 Pn 08 32 26.2 +2.9
KKAR Karatay Array 4.26 360 PN Pn 08 32 26.7 +3.4
KBL Kabul 4.46 196 Pn 08 32 31.1 +5.0
KBL Kabul 4.46 196 PN Pn 08 32 31.1 +5.0
UCH Uchtor 4.53 40 P Pn 08 32 31.0 +3.6
SNR=43
EKS2 Erkin-Say 4.54 32 P Pn 08 32 30.9 +3.8
SNR=66
KZA Kyzart 4.83 46 P Pn 08 32 34.8 +3.4
SNR=435
AAK Ala-Archa 4.83 37 Pn Pn 08 32 35.1 +3.9
34nm,0.3s,baz=214,slow=8.8,SNR=179
AAK Sn Sb 08 33 36.1 -5.2
17nm,0.3s,baz=185,slow=19,SNR=6.8
AAK Ala-Archa 4.83 37 P Pn 08 32 35.2 +3.9
SNR=70
AAK Ala-Archa 4.83 37 ⇑Pn Pn 08 32 34.6 +3.4
140nm,0.5s
AAK ⇓Sn Sb 08 33 36.7 -4.7
507nm,0.9s
NRN Naryn 4.91 56 Pn 08 32 34.6 +2.1
NRN Naryn 4.91 56 PN Pn 08 32 34.6 +2.1
FRU1 Bishkek 5.03 37 Pn 08 32 38.4 +4.5
FRU1 Bishkek 5.03 37 PN Pn 08 32 38.4 +4.5
KBK Karagaybulak 5.07 40 P Pn 08 32 38.7 +4.3
SNR=891
CEP Cherat 5.12 167 P Pn 08 32 39.1 +3.9
CEP S Sb 08 33 43.0 -6.6
CHMS Chumysh 5.23 36 P Pn 08 32 40.5 +3.8
SNR=34
USP Ospenovka 5.34 33 P Pn 08 32 41.6 +3.5
SNR=66
BOOM Boomskoye usch 5.48 47 Pn 08 32 42.6 +2.4
BOOM Boomskoye usch 5.48 47 PN Pn 08 32 42.6 +2.4
UHLL Ulahol 5.51 50 P Pn 08 32 43.9 +3.3
SNR=14
CHCP Chirah Chowk 5.61 156 P Pn 08 32 46.3 +4.5
NIL Nilore 5.61 156 Pn 08 32 46.6 +4.7
NIL Nilore 5.61 156 PN Pn 08 32 46.6 +4.7

KDJ Kajisay 6.03 55 Pn 08 32 51.1 +3.5
KDJ Kajisay 6.03 55 PN Pn 08 32 51.1 +3.5
THW Thamme Wali 6.10 171 P Pn 08 32 51.8 +3.2
TNSS Tian-Shan 6.40 47 *e*PN Pn 08 32 56.1 +3.1
AAA Alma-Ata 6.49 46 *e*PN Pn 08 32 59.1 +5.1
MDOK Medeo 6.54 47 ⇓Pn Pn 08 32 57.5 +2.8
102nm,0.7s
MDOK ⇑Lg Lg 08 34 45.7
143nm,0.8s
CHKK Chushkaly 6.96 42 *e*PN Pn 08 33 02.7 +2.3
JMU Jammu 7.05 149 *e*S Sn 08 34 18.5 -2.7
THN Thein Dam 7.64 145 *e*P Pn 08 33 12.3 +2.7
THN *e*S Sn 08 34 37.5 +1.7
HRA Herat 8.03 239 Pn 08 33 15.4 +0.3
DHRM DHARAMSHALA 8.06 143 *e*P Pn 08 33 16.9 +1.2
DHRM *e*S Sn 08 34 46.8 +0.2
DHRM IAML 08 34 52.2
comp=N,174nm,0.3s
DHRM IAML 08 34 53.1
comp=E,283nm,0.5s
PDGK Podgornoye 8.10 54 ⇑Pn Pn 08 33 19.0 +2.9
comp=E,16nm,0.7s
PDGK ⇑Pg Pb 08 33 46.5 +7.4
comp=E,35nm,0.8s
PDGK ⇑Lg Lg 08 35 35.0
comp=E,52nm,1.0s
PDGK Podgornoye 8.10 54 P Pn 08 33 18.9 +2.9
SMLA Simla 9.40 143 *e*P Pn 08 33 35.2 +1.4
SMLA *e*S Sn 08 35 18.0 -1.1
SMLA IAML 08 35 20.3
comp=N,71nm,0.6s
GEYT Alibeck 9.81 269 Pn Pn 08 33 37.1 -2.3
comp=N,0.5nm,0.3s,baz=98,slow=11,SNR=9.3
GEYT Sn Sn 08 35 24.4 -4.8
comp=N,1.7nm,0.3s,baz=131,slow=22,SNR=6.1
GEYT LR LR 08 37 25.4
comp=N,54nm,20.1s,baz=30,slow=38
JOSI Joshimath 11.09 135 *e*P Pn 08 33 57.4 +0.3
JOSI *e*S Sn 08 35 55.5 -5.3
JOSI IAML 08 36 02.3
comp=N,100nm,0.4s
JOSI IAML 08 36 02.6
comp=E,145nm,0.8s
MAKZ Makanchi 11.56 43 Pn 08 34 05.1 +1.8
MAKZ Makanchi 11.56 43 P Pn 08 34 05.1 +1.8
AYAN Aya Nagar 11.68 150 *e*P Pn 08 34 05.8 +0.8
MK31 Makanchi Array 11.71 43 Pn Pn 08 34 07.2 +1.7
comp=E,18nm,0.8s,baz=225,slow=11,SNR=134
MK31 Makanchi Array 11.71 43 Pn 08 34 07.3 +1.9
MK31 Makanchi Array 11.71 43 *i* P Pn 08 34 07.1 +1.7
MKAR Makanchi Array 11.71 43 Pn Pn 08 34 07.2 +1.8
comp=E,0.6nm,0.3s,baz=229,slow=13,SNR=137
MKAR Lg Lg 08 37 32.6
comp=E,0.3nm,0.3s,baz=240,slow=28,SNR=3.8
MKAR Makanchi Array 11.71 43 Pn 08 34 06.3 +0.9
MKAR Makanchi Array 11.71 43 *i* P Pn 08 34 07.3 +1.8
MKAR pmax pmax
comp=Z,13nm,0.7s
KUDL Kundal 11.75 153 *e*P Pn 08 33 58.7 -7.3
KUDL *e*S Sn 08 36 05.9 -11
KUDL IAML 08 36 12.5
AB31 Akbulak array 12.90 327 ⇓Pn Pn 08 34 19.9 -1.8
comp=Z,30nm,0.7s,baz=142,slow=11,SNR=346
AB31 Akbulak array 12.90 327 *i* P Pn 08 34 19.8 -1.8
ABKAR Akbulak array 12.90 327 Pn 08 34 19.9 -1.7
ABKAR Akbulak array 12.90 327 Pn 08 34 19.8 -1.8
KURBB Kurchatov Arra 13.07 23 Pn Pn 08 34 22.4 -1.5
comp=Z,0.1nm,0.3s,baz=214,slow=12,SNR=24
KURBB Lg Lg 08 38 04.0
comp=Z,0.1nm,0.3s,baz=213,slow=34,SNR=4.2
KURBB Kurchatov Arra 13.07 23 ⇑Pn Pn 08 34 21.6 -2.2
comp=Z,10nm,0.7s
KURK Kurchatov 13.18 23 Pn 08 34 24.0 -1.3
KURK Kurchatov 13.18 23 *ce*P Pn 08 34 24.4 -0.9
KURK pmax pmax
comp=Z,5.0nm,1.3s
WMQ Urumqi 13.80 63 *e*P Pn 08 34 36.0 +2.0
WMQ pP P 08 34 43.2 +0.8
WMQ LR LR
comp=Z,500nm,6.7s
WMQ LR LR
comp=Z,470nm,7.5s
WMQ LR LR
comp=Z,220nm,8.3s
WMQ Urumqi 13.80 63 P P 08 34 43.0 +0.6
WMQ Urumqi 13.80 63 P P 08 34 43.0 +0.6
BVAR Borovoye Array 14.19 360 Pn Pn 08 34 38.6 -0.6
comp=Z,0.7nm,0.3s,baz=172,slow=14,SNR=15
BVAR Lg Lg 08 38 33.7
comp=Z,0.2nm,0.3s,baz=159,slow=24,SNR=2.9
BRVK Borovoye 14.23 359 ⇑Pn Pn 08 34 40.0 +0.2
comp=Z,7.6nm,0.7s
BRVK Borovoye 14.23 359 Pn 08 34 39.3 -0.4
BRVK Borovoye 14.23 359 P Pn 08 34 39.9 +0.2
AKTO Aktyubinsk 14.61 327 Pn Pn 08 34 43.7 -1.2
comp=Z,0.9nm,0.3s,baz=132,slow=13,SNR=24
AKTO Sn Sn 08 37 20.3 -6.1
comp=Z,0.4nm,0.3s,baz=61,slow=23,SNR=7.0
AKTO Aktyubinsk 14.61 327 ⇑Pn Pn 08 34 44.0 -1.0
comp=Z,52nm,0.8s
DANN Dangsing 15.16 130 *e*P Pn 08 34 48.4 -4.3
comp=Z,74nm,0.5s
KOLN Koldanda 15.49 132 *e*P Pn 08 34 53.8 -3.2
GKN Gorkha 15.94 128 *e*P Pn 08 35 00.7 -2.1
comp=Z,211nm,0.5s
KKN Kakani 16.49 128 *e*P Pn 08 35 07.2 -2.7
comp=Z,47nm,0.5s
DMN Daman 16.51 128 *e*P Pn 08 35 07.8 -2.4
comp=Z,99nm,0.7s
BHPL Bhopal 16.61 157 *e*P P 08 35 15.1 +1.4
BHPL IAmb IAmb 08 35 17.4
PKIN Phulchoki 16.71 128 *e*P Pn 08 35 09.4 -3.4
comp=Z,40nm,0.6s
PKI Pulchoki 16.73 128 *e*P Pn 08 35 10.1 -2.9
GUN Gumba 16.78 126 *e*P Pn 08 35 10.4 -3.3
comp=Z,64nm,0.4s
JIRN Jiri 17.15 126 *e*P Pn 08 35 15.0 -3.4
comp=Z,102nm,0.5s
RAMN Ramite 17.91 127 *e*P Pn 08 35 24.4 -3.3
comp=Z,122nm,0.6s
ZAA0 Zalesovo Array 17.98 28 P Pn 08 35 26.9 -1.2
ZALV Zalesovo Beam 17.98 28 P Pn 08 35 27.4 -0.6
comp=Z,0.9nm,0.3s,baz=229,slow=12,SNR=52
ZALV Lg Lg 08 40 57.9
baz=218,slow=25,SNR=3.5
ZALV Zalesovo Beam 17.98 28 P Pn 08 35 26.5 -1.6
TAPN Taplejung 18.34 124 *e*P Pn 08 35 29.1 -3.9
comp=Z,36nm,0.4s
ODAN Odare 18.47 125 *e*P P 08 35 32.3 -2.1
comp=Z,59nm,0.5s
SVE Sverdlovsk 19.16 343 *e*P P 08 35 40.8 -0.7
SVE *e*S Sn 08 39 07.4 -9.1
SVE pmax pmax
comp=Z,16nm,0.9s
GROC Groznyy 19.16 291 *e*P Pn 08 35 42.5 -0.1
GROC *e*S S 08 39 19.9 +1.7
GROC pmax pmax
comp=Z,18nm,0.4s
LSA Lhasa 19.27 112 P Pn 08 35 45.0 +0.6
LSA pmax pmax
comp=Z,50nm,1.1s
LSA Lhasa 19.27 112 P Pn 08 35 45.5 +1.1
LSA IAmb IAmb 08 35 48.1
comp=Z,14nm,0.7s
LSA Lhasa 19.27 112 P Pn 08 35 45.5 +1.1
LSA pmax pmax
comp=Z,14nm,0.7s
ARU Arti 19.32 340 P Pn 08 35 43.9 -0.5
comp=Z,0.0nm,0.3s,baz=145,slow=8.0,SNR=10
ARU S Sn 08 39 11.6 -8.8
comp=Z,0.0nm,0.3s,baz=155,slow=21,SNR=3.8
ARU Arti 19.32 340 P Pn 08 35 44.0 -0.3
ARU Arti 19.32 340 ⇑*i*P Pn 08 35 44.1 -0.3
ARU pmax pmax
comp=Z,19nm,1.3s
GNI Garni 19.95 282 P P 08 35 50.0 -0.5
comp=Z,0.4nm,0.3s,baz=30,slow=20,SNR=1.8
GNI LR LR 08 45 13.0
comp=Z,195nm,18.4s,baz=15,slow=42
ZEI Tsey 20.53 290 *e*P Pn 08 36 01.2 +2.2
ZEI pmax pmax
comp=Z,6.0nm,0.5s
NCK Nalchik 20.79 292⇓*e*P Pn 08 36 03.2 +1.4
NCK pmax pmax
comp=Z,36nm,0.6s

AKH Akhalkalaki 20.83 286 P Pn 08 36 02.0 -0.5
AKH IAmb IAmb 08 36 12.6
comp=Z,20nm,1.0s
AKH Akhalkalaki 20.83 286 P Pn 08 36 02.0 -0.5
AKH pmax pmax
comp=Z,20nm,1.0s
KBZ Khabaz 21.31 292 P P 08 36 04.5 -0.4
comp=Z,2.0nm,0.9s,baz=9.5,slow=18,SNR=4.7
KBZ LR LR 08 45 52.1
comp=Z,187nm,18.8s,baz=326,slow=41
KBZ Khabaz 21.31 292⇑*i*P P 08 36 09.7 +4.8
KBZ pmax pmax
comp=Z,11nm,1.0s
GOF Gofitskoye 21.33 296⇑*e*P P 08 36 09.2 +4.0
GOF pmax pmax
comp=Z,55nm,0.9s
NEY Neytrino 21.41 291⇓*e*P P 08 36 11.1 +4.9
NEY pmax pmax
comp=Z,3.0nm,0.9s
KVAR Kislovodsk Arr 21.47 293 P P 08 36 06.8 0.0
comp=Z,4.6nm,0.8s,baz=6.9,slow=18,SNR=2.6
KIV Kislovodsk 21.48 293 P P 08 36 07.4 +0.6
KIV IAmb IAmb 08 36 24.9
comp=Z,13nm,0.8s
KIV Kislovodsk 21.48 293 *e*P P 08 36 12.5 +5.7
KIV *e*S Sn 08 40 09.1 -3.5
KIV pmax pmax
comp=Z,49nm,1.1s
KIV MLR MLR
comp=Z,279nm,14.0s
SHL Shillong 22.31 120 P P 08 36 15.9 -0.1
SHL Shillong 22.31 120 P P 08 36 15.9 -0.1
SHL pmax pmax
comp=Z,57nm,1.5s
GTA Gaotai 22.66 79 ⇑P P 08 36 20.2 +0.5
GTA pP pP 08 36 25.6 +0.2
GTA sP sP 08 36 28.6 +0.4
GTA pmax pmax
comp=Z,8.0nm,1.7s
GTA pmax pmax
comp=Z,240nm,4.8s
GTA LR LR
comp=Z,280nm,13.7s
GTA LR LR
comp=Z,370nm,13.3s
GTA LR LR
comp=Z,240nm,16.5s
VRH Novokhopyorsk 23.67 311 *e*P P 08 36 30.3 +0.7
VRH pmax pmax
comp=Z,50nm,1.3s
KIRV Kirov 24.00 332 P P 08 36 33.3 +0.6
comp=Z,7.3nm,0.6s,baz=136,slow=10,SNR=6.0
MOY Mondy 24.77 49 *e*P P 08 36 41.3 +1.4
MOY pmax pmax
comp=Z,13nm,1.4s
VORD Divnogorie 25.05 309 *e*P P 08 36 45.4 +3.1
VORD pmax pmax
comp=Z,20nm,0.9s
VSR Storozhevoye 25.20 310 *e*P P 08 36 43.8 +0.2
VSR pmax pmax
comp=Z,6.0nm,0.6s
ZAK Zakamensk 25.79 53 *e*P P 08 36 50.2 +1.1
ZAK pmax pmax
comp=Z,11nm,0.9s
RAYN Ar Rayn 26.20 242 P P 08 36 54.7 +1.7
RAYN Ar Rayn 26.20 242 P P 08 36 54.7 +1.7
RAYN pmax pmax
comp=Z,11nm,1.4s
TLY Talaya 26.35 50 P P 08 36 54.4 +0.3
comp=Z,1.4nm,0.4s,baz=268,slow=6.7,SNR=4.3
TLY Talaya 26.35 50 P P 08 36 55.6 +1.5
TLY Talaya 26.35 50 *e*P P 08 36 55.6 +1.5
TLY pmax pmax
comp=Z,10.0nm,1.1s
LZH Lanzhou 26.48 85 *e*P P 08 36 57.4 +1.8
LZH pP sP 08 37 03.6 -0.8
LZH sP pP 08 37 08.3 +6.5
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,63nm,4.5s
SONM Songino Array 27.37 59 P P 08 37 04.0 +0.6
comp=Z,2.2nm,0.8s,baz=260,slow=8.7,SNR=16
SONM Songino Array 27.37 59 P P 08 37 04.1 +0.6
MOS Moscow 27.65 319 *e*P P 08 37 07.0 +1.3
MOS *e* 08 38 05.8
ULN Ulaanbaatar 27.81 59 P P 08 37 07.8 +0.3
ULN IAmb IAmb 08 37 09.1
comp=Z,13nm,1.4s
ULN Ulaanbaatar 27.81 59⇓*i*P P 08 37 08.4 +1.0
ULN pmax pmax
comp=Z,10.0nm,1.5s
OBN Obninsk 27.97 317 *i* P P 08 37 09.3 +0.8
OBN *i* 08 40 26.0
OBN pmax pmax
comp=Z,9.0nm,1.1s
CD2 Chengdu 28.25 96 P P 08 37 11.3 -0.1
CD2 pmax pmax
comp=Z,10.0nm,0.6s
BRTR Keskin Array B 28.47 284 P P 08 37 14.6 +1.2
comp=Z,1.9nm,1.0s,baz=107,slow=7.7,SNR=4.3
BRTR Keskin Array B 28.47 284 P P 08 37 13.1 -0.3
KLMR Klimovskoe 29.29 329 *e*P P 08 37 19.9 -0.3
KLMR AMP 08 37 31.5
comp=Z,30nm,2.0s
KLMR Klimovskoe 29.29 329 *e*P P 08 37 19.8 -0.4
KLMR pmax pmax
comp=Z,30nm,2.0s
XAN Xi'an 31.07 87 P P 08 37 36.8 +0.4
XAN pP sP 08 37 44.6 -0.6
XAN pmax pmax
comp=Z,7.0nm,0.9s
XAN pmax pmax
comp=Z,120nm,6.0s
AKASG Malin Array Be 31.25 306 P P 08 37 37.2 -0.5
comp=Z,0.8nm,0.6s,baz=78,slow=7.1,SNR=4.3
AKASG Malin Array Be 31.25 306 P P 08 37 38.0 +0.3
AKASG Malin Array Be 31.25 306*ce*P P 08 37 43.2 +5.5
AKASG pmax pmax
comp=Z,2.0nm,0.7s
HHC Hu-ho-hao-te 31.35 73 *e*P P 08 37 39.0 +0.2
HHC pmax pmax
comp=Z,2.0nm,1.0s
HHC pmax pmax
comp=Z,91nm,5.8s
HHC LR LR
comp=Z,180nm,13.6s
HHC LR LR
comp=Z,150nm,12.8s
HHC LR LR
comp=Z,160nm,11.9s
CMAR Chiang Mai Arr 31.93 121 P P 08 37 43.8 -0.2
comp=Z,1.4nm,0.7s,baz=314,slow=8.7,SNR=9.1
CMAR LR LR 08 52 59.0
comp=Z,54nm,19.7s,baz=312,slow=41
ENH Enshi 32.98 93 P P 08 37 54.3 +1.2
ENH IAmb IAmb 08 38 03.3
comp=Z,6.9nm,0.8s
MLR Muntele Rosu 33.39 296 P P 08 37 56.3 -0.4
comp=Z,2.7nm,0.9s,baz=1.3,slow=18,SNR=2.3
SLVN Son La 33.47 112 P P 08 37 58.4 +0.9
SLVN IAmb IAmb 08 38 00.5
comp=Z,6.4nm,1.1s
BOD Bodaibo 33.80 41 *e*P P 08 38 00.1 +0.2
BOD pmax pmax
comp=Z,7.0nm,1.8s
PBKT Sadao Pong 34.62 121 P P 08 38 07.9 +0.5
PBKT IAmb IAmb 08 38 09.5
comp=Z,11nm,1.3s
BJI Beijing 34.96 73 *e*P P 08 38 11.4 +1.2
BJI pmax pmax
comp=Z,5.0nm,0.7s
FINES FINESS Array B 35.37 324 P P 08 38 13.7 +0.2
comp=Z,1.8nm,0.5s,baz=108,slow=6.2,SNR=5.8
FINES FINESS Array B 35.37 324 *i* P P 08 38 14.1 +0.7
FINES pmax pmax
comp=Z,2.0nm,0.5s
HIA Hailar 36.27 57⇓*e*P P 08 38 22.1 +0.7
HIA pmax pmax
comp=Z,27nm,1.1s
VYHS Vyhne 37.99 302 *e*P P 08 38 40.2 +4.2
VYHS Vyhne 37.99 302 *e*P P 08 38 40.2 +4.2
UBPT Khong Chiam 38.59 118 P P 08 38 40.8 -0.4
ARCES ARCESS Array B 38.86 337 P P 08 38 42.6 -0.4
comp=Z,2.9nm,0.9s,baz=116,slow=9.7,SNR=7.5

ARCES	ARCESS Array B	38.86	337	P	P	08 38 43.8	+0.7
VRAC	Vranov	39.39	303	P	P	08 38 47.3	-0.4
	comp=Z,1.7nm,0.6s,baz=58,slow=9.5,SNR=3.0						
NJ2	Nanjing	39.55	85	eP	P	08 38 49.7	+0.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
HFS	Hagfors	41.03	320	P	P	08 39 00.8	-0.4
	comp=Z,4.2nm,0.7s,baz=93,slow=11,SNR=14						
GERES	GERESS Array B	41.33	303	P	P	08 39 04.0	+0.1
	comp=Z,0.1nm,0.3s,baz=61,slow=10,SNR=2.2						
GERES	GERESS Array B	41.33	303	P	P	08 39 04.7	+0.8
GERES	GERESS Array B	41.33	303	P	P	08 39 04.0	+0.1
NC303	NORSAR Array S	42.26	322	P	P	08 39 12.0	+0.8
YAK	Yakutsk	42.29	37	eP	P	08 39 11.1	-0.3
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.2s						
NB2	NORSAR Subarra	42.32	322	P	P	08 39 11.2	-0.6
	comp=Z,25nm,1.7s,baz=93,slow=8.6						
NOA	NORSAR Array B	42.32	322	P	P	08 39 11.4	-0.3
	comp=Z,2.5nm,0.8s,baz=94,slow=8.2,SNR=8.0						
NOA				LR	LR	08 58 45.0	
	comp=Z,66nm,20.6s,baz=255,slow=39						
TIXI	Tiksi	43.75	23	P	P	08 39 22.6	-0.6
TIXI				IAmb	IAmb	08 39 24.1	
	comp=Z,7.0nm,0.8s						
TIXI	Tiksi	43.75	23⇑	eP	P	08 39 23.1	0.0
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KLR	Kul'dur	44.08	56	P	P	08 39 26.7	+0.6
	comp=Z,1.8nm,0.6s,baz=297,slow=6.7,SNR=6.8						
KLR	Kul'dur	44.08	56⇓	eP	P	08 39 26.6	+0.5
KLR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
DAVOX	Davos/Dischmat	44.23	301	P	P	08 39 27.2	-0.4
	comp=Z,1.6nm,0.6s,baz=28,slow=15,SNR=2.7						
KSRS	Korea Array	44.49	73	P	P	08 39 29.7	+0.3
	comp=Z,3.1nm,0.8s,baz=288,slow=5.9,SNR=7.2						
SENIN	Lac Senin/Sane	46.06	301	P	P	08 39 44.9	+2.7
SENIN				IAmb	IAmb	08 39 58.9	
	comp=Z,3.9nm,1.1s						
JNU	Nakatsue	48.38	77	P	P	08 40 00.9	+0.7
	comp=Z,9.8nm,0.8s,baz=270,slow=11,SNR=5.8						
JNU	Nakatsue	48.38	77	P	P	08 40 00.5	+0.3
DAG	Danmarks Havn	52.40	343	i P	P	08 40 30.1	+0.2
DAG	Danmarks Havn	52.40	343	i P	P	08 40 30.1	+0.2
MAJO	Matsushiro	52.45	70⇓	eP	P	08 40 30.8	-0.1
MAJO				pmax	pmax		
	comp=Z,16nm,1.8s						
MJAR	Matsushiro Arr	52.45	70	P	P	08 40 30.9	0.0
	comp=Z,4.6nm,0.9s,baz=287,slow=9.3,SNR=11						
MJAR	Matsushiro Arr	52.45	70	P	P	08 40 32.1	+1.2
MJAR	Matsushiro Arr	52.45	70	P	P	08 40 32.1	+1.2
MJAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GLVR	Golovnino	54.75	59	eP	P	08 40 47.9	+0.3
NMR	Nemuro--Hokkai	55.03	59	eP	P	08 40 45.3	-4.3
SHO	Shikotan	55.57	58	eP	P	08 40 58.7	+5.2
SHO				pmax	pmax		
	comp=Z,3.0nm,0.2s						
ESDC	Sonseca Array	56.08	296	P	P	08 40 57.5	+0.1
	comp=Z,0.3nm,0.4s,baz=296,slow=31,SNR=5.1						
ESDC	Sonseca Array	56.08	296	P	P	08 40 56.8	-0.5
SUMG	Summit	58.74	341	i P	P	08 41 16.9	+0.9
SUMG	Summit	58.74	341	i P	P	08 41 16.9	+0.9
TORD	Torodi Ar. Bea	65.45	267	P	P	08 42 00.8	-0.6
	comp=Z,0.8nm,0.5s,baz=39,slow=6.7,SNR=3.9						
TORD	Torodi Ar. Bea	65.45	267	P	P	08 42 00.4	-1.0
RES	Resolute Bay	66.35	356	P	P	08 42 05.8	-0.5
	comp=Z,0.5nm,0.8s,baz=6.1,slow=14,SNR=2.7						
RES	Resolute Bay	66.35	356	P	P	08 42 06.4	+0.2
RES	Resolute Bay	66.35	356	P	P	08 42 06.4	+0.2
RES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TOLK	Toolik Lake Re	68.75	15	P	P	08 42 22.1	+0.4
TOLK				IAmb	IAmb	08 42 22.9	
	comp=Z,4.0nm,0.8s						
IMAR	Indian Mountai	70.06	18	P	P	08 42 29.6	-0.1
C36M	Paulatuk	71.59	5	P	P	08 42 38.3	-0.6
INK	Inuvik	71.66	9	P	P	08 42 39.5	+0.1
	comp=Z,1.5nm,0.6s,baz=354,slow=7.1,SNR=14						
INK	Inuvik	71.66	9	P	P	08 42 40.0	+0.7
INK				IAmb	IAmb	08 42 44.2	
	comp=Z,6.3nm,1.2s						
BPAW	Bear Paw Mtn.	72.28	18	P	P	08 42 42.9	-0.3
BPAW				IAmb	IAmb	08 42 49.7	
	comp=Z,5.2nm,1.3s						
ILAR	Eielson Array	72.63	16	P	P	08 42 44.9	-0.3
	comp=Z,0.7nm,0.8s,baz=326,slow=5.2,SNR=10						
ILAR	Eielson Array	72.63	16	P	P	08 42 45.3	+0.1
ILAR	Eielson Array	72.63	16	P	P	08 42 45.3	+0.1
FRB	Frobisher Bay	72.73	342	P	P	08 42 45.9	+0.1
	comp=Z,1.4nm,0.7s,baz=346,slow=7.9,SNR=4.4						
PPLA	Purkeypile	72.99	19	P	P	08 42 47.8	+0.2
SCRK	Sand Creek	73.94	15	P	P	08 42 53.5	+0.4
SML	Sawmill	74.88	18	P	P	08 42 58.8	+0.3
SML				IAmb	IAmb	08 43 05.4	
	comp=Z,4.8nm,0.6s						
MENT	Mentasta	74.92	15	P	P	08 42 59.0	+0.3
SCM	Sheep Creek Mo	75.09	18	P	P	08 42 60.0	+0.2
SCM				IAmb	IAmb	08 43 00.8	
	comp=Z,5.5nm,1.0s						
SCM	Sheep Creek Mo	75.09	18	P	P	08 43 00.0	+0.2
SCM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BCAR	Beaver Creek A	75.19	15	P	P	08 43 01.2	+0.9
YKA	Yellowknife Ar	78.93	2	P	P	08 43 21.3	+0.1
	comp=Z,1.7nm,0.7s,baz=349,slow=5.7,SNR=38						
WB0	Warramunga Arr	83.43	122	P	P	08 43 45.8	0.0
WRA	Warramunga Arr	83.52	122	P	P	08 43 46.2	0.0
	comp=Z,1.9nm,0.6s,baz=322,slow=4.9,SNR=13						
WRA	Warramunga Arr	83.52	122	P	P	08 43 45.9	-0.4
WRAB	Tennant Creek	83.52	122	P	P	08 43 45.6	-0.6
WRAB	Tennant Creek	83.52	122	P	P	08 43 45.6	-0.6
WRAB				pmax	pmax		
	comp=Z,14nm,1.4s						
WB2	Warramunga Arr	83.53	122	P	P	08 43 46.3	0.0
WB2				IAmb	IAmb	08 43 56.5	
	comp=Z,8.7nm,1.2s						
WR0	Warramunga Arr	83.66	122	P	P	08 43 46.8	-0.1
WR0				IAmb	IAmb	08 44 03.6	
	comp=Z,8.9nm,1.2s						
ASAR	Alice Springs	85.87	125	P	P	08 43 58.0	-0.1
	comp=Z,1.0nm,0.8s,baz=310,slow=4.9,SNR=6.6						
ASAR	Alice Springs	85.87	125	P	P	08 43 58.1	0.0
ASAR	Alice Springs	85.87	125	P	P	08 43 58.0	-0.1
STKA	Stephens Creek	96.45	126	P	P	08 44 47.1	-0.2
	comp=Z,1.5nm,0.4s,baz=307,slow=21,SNR=6.1						
STKA	Stephens Creek	96.45	126	P	P	08 44 46.8	-0.5
STKA	Stephens Creek	96.45	126	P	P	08 44 46.8	-0.5
STKA				pmax	pmax		
	comp=Z,1.0nm,1.3s						
YBH	Yreka Blue Hor	98.91	10	LR	LR	09 36 39.4	
	comp=Z,108nm,18.6s,baz=98,slow=40						
MCQ	Macquarie Isla	119.64	138	PKPdf	PKiKP	08 50 08.3	+1.0
MCQ	Macquarie Isla	119.64	138	PKIKP	PKiKP	08 50 08.3	+1.0
PLCA	Paso Flores	150.22	254	PKPbc	PKPbc	08 51 07.5	-1.5
	comp=Z,2.0nm,0.9s,baz=287,slow=8.2,SNR=3.2						
PLCA	Paso Flores	150.22	254		PKPbc	08 51 07.0	-2.0
PLCA	Paso Flores	150.22	254	PKIKP	PKPbc	08 51 07.0	-2.0

*IDC **01** 08:31:57.7±1.3, 38.37N×20.24E, h0km, mb3.7/6, mb1 3.7/8, mb1mx3.5/52, mbtmp3.7/8, ML3.2/2, Error ellipse: s-maj=27.9km s-min=19.9km az=74.0*

*ATH **01** 08:31:59.7, 38.42N×20.44E, h20km±1km, ML3.5/13, Error ellipse: s-maj=2.2km s-min=0.8km az=267.0*

*THE **01** 08:32:00.8, 38.43N×20.46E, h8km±1km, ML3.7/12, Error ellipse: s-maj=1.4km s-min=0.3km az=131.0*

ISC 01 08:32:00.3±0.7**, 38.42N**±0.02×**20.48E**±0.03**, h13**km±4km**, n66, σ0.69**/90**, mb3.8**/6**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSK1	VASILIKIADES	0.07	100	P	Pg	08 32 02.6	-0.3
VSK1				S	Sg	08 32 04.1	-0.7
	169μm,0.4s						
FSK	Fiskardo	0.08	60	P	Pg	08 32 02.7	-0.3
FSK	Fiskardo	0.08	60	P	Pg	08 32 02.6	-0.3
KEF1	Kardakata, Kep	0.14	182	P	Pg	08 32 03.7	0.0
KEF1				S	Sg	08 32 06.3	+0.1
KEF4	Livadi, Kephal	0.17	194	P	Pg	08 32 04.3	+0.1
KEF4				S	Sg	08 32 07.3	+0.5
LXR1	Lixouri, Cepha	0.22	188	P	Pg	08 32 05.5	+0.5
LXR1				S	Sg	08 32 09.3	+1.0
	145μm,0.2s						
KEF3	Kipouria, Keph	0.24	205	P	Pg	08 32 05.4	+0.1
KEF3				S	Sg	08 32 09.5	+0.7
ARG2	Argostoli	0.24	178	P	Pg	08 32 05.5	+0.1
ARG2				S	Sg	08 32 09.5	+0.7
	76μm,0.2s						
EVGI	Lefkada island	0.24	35	P	Pg	08 32 05.8	+0.3
EVGI				S	Sb	08 32 10.1	-0.7
EVGI	Lefkada island	0.24	35	P	Pg	08 32 05.8	+0.3
CHV1	Chavriata, Kef	0.25	198	P	Pg	08 32 05.6	+0.1
CHV1				S	Sg	08 32 10.1	+1.1
	76μm,0.3s						
KEF2	Argostoli. Kep	0.26	178	P	Pg	08 32 05.7	0.0
KEF2				S	Sb	08 32 10.1	-1.1
VLS	Valsamata	0.26	160	P	Pg	08 32 05.7	0.0
VLS				S	Sg	08 32 09.7	+0.3
	11μm,0.3s						
VLS	Valsamata	0.26	160	P	Pg	08 32 05.8	0.0
VLS				S	Sg	08 32 09.8	+0.5
VLS				AML	AML	08 32 13.7	
	comp=N,25290μm,0.5s						
VLS				AML	AML	08 32 14.2	
	comp=E,23411μm,0.3s						
MGNA	Meganis	0.34	46	P	Pg	08 32 07.4	+0.3
MGNA				S	Sb	08 32 13.2	-0.4
MGNA				AML	AML	08 32 14.2	
	comp=N,19060μm,0.3s						
MGNA				AML	AML	08 32 14.2	
	comp=E,13488μm,0.2s						
LKD2	Lefkada island	0.39	21	P	Pg	08 32 08.2	+0.1
LKD2				S	Sb	08 32 14.4	-0.8
	comp=E,8μm,0.8s						
LKD2	Lefkada island	0.39	21	P	Pg	08 32 08.2	+0.1
LKD2				S	Sb	08 32 15.0	-0.2
LKD2				AML	AML	08 32 15.2	
	comp=E,11322μm,0.7s						
LKD2				AML	AML	08 32 15.5	
	comp=N,18502μm,0.9s						
KFL	Anninata	0.40	142	P	Pg	08 32 08.2	0.0
KFL				S	Sb	08 32 15.1	-0.1
	comp=N,12μm,0.5s						
KFL	Anninata	0.40	142	P	Pg	08 32 08.2	0.0
KFL				S	Sb	08 32 15.4	+0.2
TSLK	Tsoukalades, L	0.43	19	P	Pg	08 32 08.9	+0.2
TSLK				S	Sb	08 32 15.6	-0.5
	comp=N,10μm,0.8s						
TSLK	Tsoukalades, L	0.43	19	P	Pg	08 32 08.9	+0.2
TSLK				S	Sb	08 32 15.6	-0.5
AST1	Astakos	0.49	76	P	Pg	08 32 10.4	+0.4
AST1				S	Sb	08 32 18.4	+0.4
	comp=N,10μm,0.3s						
VLMS	Volimes, Zakyn	0.56	165	P	Pg	08 32 11.2	-0.1
VLMS				S	Sb	08 32 20.4	+0.3
VLMS				AML	AML	08 32 23.0	
	comp=E,21568μm,0.3s						
VLMS				AML	AML	08 32 24.2	
	comp=N,21348μm,0.3s						
PDO	Prodromos	0.58	72	P	Pg	08 32 11.8	+0.2
PDO	Prodromos	0.58	72	P	Pg	08 32 11.9	+0.3
PDO				AML	AML	08 32 26.3	
	comp=E,6341μm,0.5s						
PDO				AML	AML	08 32 32.5	
	comp=N,11196μm,0.4s						
ZAK2	Zakynthos	0.71	152	P	Pb	08 32 14.4	-0.2
ZAK2				S	Sb	08 32 25.4	+1.1
KRI1	kERI	0.80	160	P	Pg	08 32 15.1	-0.7
KRI1				S	Sn	08 32 28.5	-0.7
	comp=N,7μm,0.2s						
PVO	Paravola	0.84	76	P	Pb	08 32 16.9	+0.1
PVO				S	Sb	08 32 29.7	+1.6
	comp=N,3μm,0.9s						
PVO	Paravola	0.84	76	P	Pb	08 32 17.0	+0.1
PVO				AML	AML	08 32 37.4	
	comp=E,7179μm,0.8s						
PVO				AML	AML	08 32 41.1	
	comp=N,6388μm,0.5s						
RLS	Riolos of Patr	0.86	115	P	Pg	08 32 16.9	0.0
RLS	Riolos of Patr	0.86	115	P	Pg	08 32 16.9	0.0
RLS				AML	AML	08 32 39.0	
	comp=N,3441μm,0.7s						
RLS				AML	AML	08 32 41.6	
	comp=E,2711μm,0.5s						
DRO	Drossia	1.08	115	P	Pg	08 32 20.5	-0.6
DRO	Drossia	1.08	115	P	Pg	08 32 20.5	-0.6
DRO				AML	AML	08 32 46.4	
	comp=N,6666μm,0.5s						
DRO				AML	AML	08 32 50.1	
	comp=E,7586μm,0.4s						
EFP	Efpalio	1.12	89	P	Pg	08 32 21.0	-0.9
EFP	Efpalio	1.12	89	P	Pg	08 32 21.2	-0.7
EFP				AML	AML	08 32 47.6	
	comp=E,7726μm,0.8s						
EFP				AML	AML	08 32 48.6	
	comp=N,8843μm,0.6s						
ANX	Ano Chora	1.15	81	P	Pg	08 32 21.6	-0.7
ANX	Ano Chora	1.15	81	P	Pg	08 32 22.0	-0.4
ANX				AML	AML	08 32 49.5	
	comp=N,6851μm,0.6s						
ANX				AML	AML	08 32 50.8	
	comp=E,5361μm,0.6s						
EVR	Evrytania	1.15	64	P	Pg	08 32 21.9	-0.6
EVR	Evrytania	1.15	64	P	Pg	08 32 21.9	-0.6
EVR				AML	AML	08 32 49.5	
	comp=N,2042μm,0.7s						
EVR				AML	AML	08 32 51.4	
	comp=E,1416μm,0.7s						
LAKA	Lakka	1.19	98	P	Pb	08 32 22.8	-0.1
LAKA				AML	AML	08 32 47.5	
	comp=N,2208μm,0.5s						
LAKA				AML	AML	08 32 50.4	
	comp=E,2796μm,0.5s						
SERG	Sergoula	1.24	90	P	Pn	08 32 23.1	-0.3
SERG	Sergoula	1.24	90	P	Pn	08 32 23.4	0.0
SERG				AML	AML	08 32 50.6	
	comp=E,4287μm,0.7s						
SERG				AML	AML	08 32 50.9	
	comp=N,5216μm,0.5s						
TRIZ	Trizonia	1.25	92	P	Pn	08 32 23.4	-0.2
TRIZ	Trizonia	1.25	92	P	Pn	08 32 23.4	-0.2
TRIZ				S	Sn	08 32 42.0	+1.7
JAN	Janina	1.27	13	P	Pg	08 32 25.0	+0.3
KALE	Kalithea	1.31	91	P	Pn	08 32 24.1	-0.2
KALE	Kalithea	1.31	91	P	Pn	08 32 24.2	-0.1
AMT	Artemida-Makis	1.32	132	P	Pg	08 32 25.4	-0.2
KLV	Kalavryta, Ach	1.37	105	P	Pn	08 32 25.2	0.0
KLV	Kalavryta, Ach	1.37	105	P	Pn	08 32 25.3	0.0
MAKR	Makrakomi, Fth	1.42	65	P	Pb	08 32 26.8	+0.1
MAKR	Makrakomi, Fth	1.42	65	P	Pb	08 32 26.8	+0.1
AGG	Agios Georgios	1.57	67	P	Pb	08 32 29.2	0.0
AGG	Agios Georgios	1.57	67	P	Pb	08 32 29.4	+0.2
OHR	Ohrid	2.70	5	ePn	Pb	08 32 48.5	0.0
VAY	Valandovo	3.31	28	ePn	Pb	08 32 57.7	-1.2
STIP	Stip	3.52	21	ePn	Pn	08 32 57.6	+2.8
IDI	Anoyia	4.72	130	Pn	Pn	08 33 12.2	+0.9
	comp=N,0.2nm,0.3s,baz=308,slow=12,SNR=1.5						
IDI				Sn	Sn	08 34 08.0	+2.0
	comp=N,0.9nm,0.3s,baz=65,slow=9.9,SNR=2.2						
MLR	Muntele Rosu	8.15	28	Pn	Pn	08 34 07.8	+9.4
	comp=N,0.2nm,0.3s,baz=255,slow=16,SNR=2.2						
GERES	GERESS Array B	11.51	337	Pn	Pn	08 34 43.0	-1.4
	comp=N,0.1nm,0.3s,baz=148,slow=15,SNR=2.2						
HFS	Hagfors	22.16	351	P	P	08 36 55.8	+0.2
	comp=N,2.3nm,0.8s,baz=172,slow=12,SNR=1.6						
FINES	FINESS Array B	23.31	7	P	P	08 37 08.0	+0.3
	comp=N,2.8nm,0.7s,baz=180,slow=12,SNR=2.4						
NOA	NORSAR Array B	23.37	349	P	P	08 37 08.7	+0.3
	comp=N,1.3nm,1.0s,baz=153,slow=9.0,SNR=1.4						
TORD	Torodi Ar. Bea	30.20	219	P	P	08 38 08.6	-2.0
	comp=N,1.0nm,1.0s,baz=31,slow=8.7,SNR=3.5						
MKAR	Makanchi Array	45.20	59	P	P	08 40 17.5	+0.5
	comp=N,0.8nm,0.7s,baz=283,slow=7.3,SNR=1.0						
ZALV	Zalesovo Beam	45.55	48	P	P	08 40 20.2	+0.6
	comp=N,1.1nm,0.5s,baz=273,slow=8.7,SNR=1.5						

IDC 01 08:49:26.1±10.0**, 19.34N×108.96W, h0**km**, mb3.1**/3**, mb1 3.6**/4**, mb1mx3.4**/35**, mbtmp3.1**/4**, ML2.9**/1**, Error ellipse: s-maj=173.8km s-min=71.8km az=154.0, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	11.05	25	Pn	Pn	08 52 07.7	+2.0
	0.0nm,0.3s,baz=201,slow=12,SNR=3.9						
NVAR	Mina Array Bea	20.68	339	P	P	08 54 08.5	+0.5
	1.0nm,1.0s,baz=162,slow=12,SNR=4.7						
PDAR	Pinedale Array	23.36	359	P	P	08 54 35.7	-0.8
	0.3nm,0.7s,baz=191,slow=10,SNR=3.1						
ILAR	Eielson Array	51.93	340	P	P	08 58 36.5	0.0
	0.4nm,0.8s,baz=145,slow=7.3,SNR=3.5						

*NEIC **01** 09:08:02.7±0.6, 35.95N±0.02×96.91W±0.02, h5km±2km, Error ellipse: s-maj=2.2km s-min=1.7km az=200.0, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr-0.53; Mθθ2.99; Mφφ-2.46; Mrθ1.06; Mrφ1.85; Mθφ0.05; Fault plane solution: Mo3.49000×10^14 NP1:φs27.08000°, δ76.01000°, λ175.02000°. NP2:φs118.29000°, δ85.17000°, λ14.04000°. Principal axes: T 3.7980, Plg13.0000°, Azm343.0000°; N -0.7418, Plg75.0000°, Azm137.0000°; P -3.0562, Plg6.0000°, Azm252.0000°;*

*ANF **01** 09:08:02.9±0.2, 35.94N×96.91W, h5km, ML4.9/16 Error ellipse: s-maj=4.1km s-min=2.8km az=168.0*

*TUL **01** 09:08:02.3±0.8, 35.95N±0.01×96.91W±0.02, h5km±2km, ML3.9, Mwr3.6/38(NEIC), Error ellipse: s-maj=3.0km s-min=2.5km az=205.0*

*IDC **01** 09:08:03.1±1.2, 36.04N×97.09W, h0km, mb3.2/3, mb1 3.7/10, mb1mx3.5/46, mbtmp3.5/10, ML3.5/8, Error ellipse: s-maj=18.7km s-min=15.4km az=113.0*

ISC 01 09:08:02.2±1.2**, 35.95N**±0.04×**96.89W**±0.02**, h6**km±9km**, n146, σ1.17**/169**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK005	Luther M Schoo	0.38	219		Pg	09 08 10.0	+0.3
OK005				Sg	Sg	09 08 15.1	+0.4
ADOK	Arcadia Dam	0.49	232		Pg	09 08 11.9	+0.3
OK001	Jones High Sch	0.51	219	Pg	Pg	09 08 12.3	+0.3
OK009	Oakdale Elemen	0.57	229		Pg	09 08 13.4	+0.2
OK009				Sg	Sg	09 08 20.6	+0.1
OKCFA	Oklahoma City	0.70	220		Pg	09 08 15.5	-0.2
OKCFA				Sg	Sg	09 08 24.7	-0.1
OKCSW	OKLAHOMA CITY	0.70	219		Pg	09 08 15.6	-0.1
OKCSW				Sg	Sg	09 08 25.1	+0.3
W35A	Tecumseh	0.80	179		Pg	09 08 17.2	-0.3
W35A				Sg	Sg	09 08 28.6	+0.7
FNO	Franklin	0.81	211		Pg	09 08 18.1	+0.3
TUL1	Leonard	0.90	92		Pg	09 08 19.6	+0.3
TUL1				Sg	Sg	09 08 32.2	+1.2
TUL1	Leonard	0.90	92	P	Pg	09 08 19.7	+0.3
	baz=272						
TUL1				S	Sg	09 08 31.9	+0.9
	baz=272						
X34A	Smith Ranch, M	1.55	210		Pn	09 08 30.9	+0.4
X34A				Sn	Sn	09 08 51.4	+0.4
U32A	Winter Ranch,	1.76	285		Pn	09 08 33.3	0.0
U32A				Sn	Sn	09 08 58.4	+2.3
WMOK	Wichita Mounta	1.96	232		Pn	09 08 36.7	+0.6
WMOK				Sn	Sn	09 09 01.7	+0.6
WMOK	Wichita Mounta	1.96	232	P	Pn	09 08 36.8	+0.7
	baz=51						
WMOK				Sb	Sn	09 09 03.5	+2.4
	baz=51						
HHAR	Hobbs	2.41	81		Pn	09 08 43.6	+1.3
W39A	Magazine	2.65	106		Pn	09 08 46.4	+1.0
W39A	Magazine	2.65	106	P	Pn	09 08 46.8	+1.3
	baz=287						
W39A				S	Sn	09 09 20.1	+2.2
	baz=287						
MIAR	Mount Ida	3.06	116		Pn	09 08 52.6	+1.4
MIAR				Sn	Sn	09 09 28.5	+0.5
MIAR	Mount Ida	3.06	116	P	Pn	09 08 52.7	+1.6
	baz=298						
MIAR				S	Sn	09 09 29.1	+1.1
	baz=298						
KSU1	Kansas State U	3.15	4	P	Pn	09 08 53.1	+0.7
	baz=184						
U40A	Yellville	3.29	82		Pn	09 08 56.0	+1.6
U40A	Yellville	3.29	82	P	Pn	09 08 55.0	+0.6
	baz=264						
U40A				Sb	Sb	09 09 44.6	+3.1
	baz=264						
X40A	Basin Creek Fa	3.63	113		Pn	09 09 00.7	+1.7
X40A	Basin Creek Fa	3.63	113	P	Pn	09 09 00.9	+1.9
	baz=295						
X40A				S	Sn	09 09 43.6	+1.4
	baz=295						
CBKS	Cedar Bluff	3.64	322		Pn	09 09 00.8	+1.5
CBKS				Sn	Sn	09 09 42.8	+0.2
CBKS	Cedar Bluff	3.64	322	P	Pn	09 08 60.0	+0.7
	baz=141						
CBKS				S	Sn	09 09 44.5	+1.9
	baz=141						
WHAR	Wooly Hollow	3.81	99		Pn	09 09 02.5	+1.0
WHAR				Sn	Sn	09 09 46.0	-0.7
WLAR	White Oak Lake	3.85	125		Pn	09 09 02.8	+0.8
WLAR				Sn	Sn	09 09 47.1	-0.4
W41B	Gary Mavity, V	3.87	100		Pn	09 09 03.0	+0.7
W41B				Sn	Sn	09 09 46.4	-1.7
W41B	Gary Mavity, V	3.87	100	P	Pn	09 09 03.1	+0.9
	baz=283						
W41B				S	Sn	09 09 49.3	+1.3
	baz=283						
UALR	University of	3.90	106		Pn	09 09 02.9	+0.2
UALR				Sn	Sn	09 09 49.0	+0.2
MGMO	Mountain Grove	3.91	71	Sn	Sn	09 09 50.0	+0.8
WHTX	Lake Whitney,	3.98	187	P	Pn	09 09 04.1	+0.3
	baz=6.4						
ABTX	Abilene, Hawle	4.03	215	P	Pn	09 09 05.0	+0.5
	baz=34						
AMTX	Amarillo	4.05	256	P	Pn	09 09 06.5	+1.6
	baz=73						
Z41A	Richland Creek	4.32	127		Pn	09 09 09.2	+0.8
Z41A				Sn	Sn	09 09 59.8	+0.7
Z41A	Richland Creek	4.32	127	P	Pn	09 09 09.0	+0.6
	baz=310						
NATX	Nacogdoches	4.58	155		Pn	09 09 12.1	+0.1
LCAR	Lake Charles	4.65	87		Pn	09 09 13.7	+0.6
CCAR	Cane Creek	4.67	114	Pn	Pn	09 09 14.2	+0.9
CCAR					Sn	09 10 08.7	+0.8
CCM	Cathedral Cave	4.98	63		Pn	09 09 18.3	+0.7
CCM	Cathedral Cave	4.98	63	P	Pn	09 09 18.7	+1.1
	baz=247						
X43A	Marvell	5.13	104	Pn	Pn	09 09 19.0	-0.6
435B	Jarrell	5.19	187		Pn	09 09 20.5	0.0
435B	Jarrell	5.19	187	P	Pn	09 09 20.2	-0.3
	baz=6.1						
MSTX	Muleshoe	5.22	249	P	Pn	09 09 21.2	+0.2
	baz=66						
KSCO	Kaye Shedlock'	5.49	305		Pn	09 09 25.1	+0.5
MET	Memphis--Engin	5.74	96	Pn	Pn	09 09 26.9	-1.0
342A	Flagon Creek P	5.95	139	Pn	Pn	09 09 29.9	-1.0
GLAT	Glass	6.17	85	Pn	Pn	09 09 34.3	+0.5
HICK	Hickman	6.22	82	Pn	Pn	09 09 35.4	+0.8
OXF	Oxford	6.29	101	Sn	Sn	09 10 47.0	-0.8
S44A	Carbondale	6.37	72		Pn	09 09 36.4	-0.2
VBMS	Vicksburg	6.47	123	Pn	Pn	09 09 35.7	-2.3
SCIA	State Center	6.60	25		Pn	09 09 41.0	+1.3
344A	Westbrook Farm	6.82	129	Pn	Pn	09 09 43.4	+0.5
P43A	Skaggs, Pawnee	6.90	56		Pn	09 09 44.2	+0.3
SDCO	Great Sand Dun	7.13	287		Pn	09 09 49.0	+1.6
Q24A	Divide	7.22	297		Pn	09 09 49.7	+1.1
PLAL	Pickwick Lake	7.26	95		Pn	09 09 48.0	-0.9
WVT	Waverly	7.35	86		Pn	09 09 49.4	-0.6
L40A	Anamosa	7.53	34		Pn	09 09 51.8	-0.8
OLIL	Olney	7.53	66		Pn	09 09 52.4	-0.2
HDIL	Hopedale	7.54	50		Pn	09 09 52.8	+0.1
USIN	University of	7.66	72		Pn	09 09 55.1	+0.8
ECSD	EROS Data Cent	7.77	2		Pn	09 09 55.1	-0.9
O44A	Mansfield	7.86	55	Pn	Pn	09 09 57.0	-0.1
ANMO	Albuquerque	7.87	265	Pn	Pn	09 09 58.7	+1.2
	0.1nm,0.3s,baz=75,slow=16,SNR=2.3						
ANMO				Lg	Lg	09 12 09.8	
	3.5nm,0.3s,baz=333,slow=22,SNR=6.0						
ANMO	Albuquerque	7.87	265		Pn	09 09 56.7	-0.7
ISCO	Idaho Springs	7.89	302		Pn	09 09 58.1	+0.3
833A	Chaparral WMA,	7.90	196		Pn	09 09 56.8	-0.9
T47A	Sharon Grove	7.95	80		Pn	09 09 58.2	-0.2
S22A	4UR Ranch, Cre	8.16	286	Pn	Pn	09 10 00.9	-0.6
MNTX	Cornudas Mount	8.24	241		Pn	09 10 02.0	-0.3
L42A	Oliver, Polo	8.25	41		Pn	09 10 01.3	-1.2
Y22D	IRIS PASCAL I	8.44	260		Pn	09 10 04.9	-0.3
P46A	Rosedale	8.50	62		Pn	09 10 06.2	+0.4
CLTN	Cedars of Leba	8.56	86	Pn	Pn	09 10 07.8	+1.1

JFWS	Jewell Farm	8.64	34		Pn	09 10 07.4	-0.4
N23A	Red Feather La	8.64	308	Pn	Pn	09 10 09.3	+1.2
TX31	Lajitas Ar. Si	8.73	223		Pn	09 10 08.4	-0.7
TX32	Lajitas Array	8.73	223		Pn	09 10 08.6	-0.5
TXAR	Lajitas Array	8.73	223	Pn	Pn	09 10 08.1	-1.0
	0.2nm,0.3s,baz=47,slow=11,SNR=22						
TXAR				Lg	Lg	09 12 33.8	
	4.0nm,0.3s,baz=35,slow=26,SNR=4.3						
TXAR	Lajitas Array	8.73	223		Pn	09 10 08.3	-0.8
WCI	Wyandotte Cave	8.77	72		Pn	09 10 10.2	+0.6
M44A	Midewin, Midew	8.79	49		Pn	09 10 10.0	+0.1
BLO	Bloomington	8.84	66		Pn	09 10 11.3	+0.8
Y49A	Blount Mountai	8.86	101	Pn	Pn	09 10 11.2	+0.4
SWET	Sewanee	8.96	92		Pn	09 10 11.7	-0.6
T49A	Edmonton	9.22	79		Pn	09 10 15.9	+0.2
I40A	Norwalk	9.28	29		Pn	09 10 16.4	-0.1
FPAL	Fort Paine	9.34	95		Pn	09 10 17.8	+0.4
L44A	Lake County Fo	9.35	46		Pn	09 10 17.6	+0.2
MVCO	Mesa Verde	9.42	281		Pn	09 10 18.9	+0.1
Z50A	Ashland	9.44	103		Pn	09 10 18.5	-0.3
K43A	Burlington	9.45	42	Pn	Pn	09 10 19.0	+0.1
R49A	Shelbyville	9.65	73	Pn	Pn	09 10 21.6	+0.1
250A	Grady	9.67	111	Pn	Pn	09 10 22.4	+0.4
P48A	Milroy	9.74	66		Pn	09 10 22.0	-0.9
SPMN	Marine on St.	9.77	17		Pn	09 10 21.6	-1.6
RSSD	Black Hills	9.82	328		Pn	09 10 23.9	-0.3
CPCT	Cooper Cave	10.08	89	Pn	Pn	09 10 27.3	-0.2
V51A	Loudon	10.18	87		Pn	09 10 29.5	+0.6
L46A	Eue Claire	10.23	51		Pn	09 10 28.8	-0.7
R50A	Paris	10.30	73	Pn	Pn	09 10 30.2	-0.3
W52A	Murphy	10.60	91	Pn	Pn	09 10 34.4	-0.4
TKL	Tuckaleechee C	10.66	88	Pn	Pn	09 10 35.9	+0.3
	0.2nm,0.3s,baz=260,slow=11,SNR=3.2						
TKL				Lg	Lg	09 13 36.9	
	3.6nm,0.3s,baz=146,slow=18,SNR=9.3						
V52A	Sevierville	10.79	87	Pn	Pn	09 10 37.7	+0.5
TZTN	Tazewell	10.79	83	Pn	Pn	09 10 37.5	+0.2
S51A	Beattyville	10.80	77		Pn	09 10 37.0	-0.3
H43A	Windswept, Lux	10.99	37	Pn	Pn	09 10 39.1	-0.9
N49A	Columbus Grove	11.13	60	Pn	Pn	09 10 40.1	-1.8
Q51A	Peebles	11.19	70	Pn	Pn	09 10 41.8	-1.0
T52A	Hallie	11.25	80	Pn	Pn	09 10 42.6	-1.1
GOGA	Godfrey	11.34	99	Pn	Pn	09 10 45.0	+0.2
V53A	Saluda	11.44	87	Pn	Pn	09 10 46.8	+0.6
I45A	Fountain	11.48	42	Pn	Pn	09 10 45.4	-1.3
COWI	Conover	11.70	28	Pn	Pn	09 10 48.4	-1.3
ACSO	Alum Creek Sta	11.76	65		Pn	09 10 49.4	-1.2
J47A	Sunmer	11.81	48	Pn	Pn	09 10 50.0	-1.1
PDAR	Pinedale Array	11.92	309	Pn	Pn	09 10 53.2	+0.2
	0.1nm,0.3s,baz=124,slow=13,SNR=4.2						
PDAR				Lg	Lg	09 14 17.4	
	0.7nm,0.3s,baz=118,slow=27,SNR=5.9						
PDAR	Pinedale Array	11.92	309		Pn	09 10 52.5	-0.5
R53A	Hurricane	12.16	74	Pn	Pn	09 10 56.1	+0.1
U54A	Nelsons Funny	12.19	83	Pn	Pn	09 10 57.0	+0.5
AGMN	Agassiz Nation	12.36	3	Pn	Pn	09 10 55.7	-3.0
G45A	Suttons Bay	12.46	40	Pn	Pn	09 10 58.1	-2.0
EYMN	Ely	12.63	17	Pn	Pn	09 10 59.9	-2.6
E43A	Lone Tree Farm	12.79	33		Pn	09 11 02.7	-2.0
GLMI	Grayling	12.87	43		Pn	09 11 04.3	-1.4
RLMT	Red Lodge	13.12	318	Pn	Pn	09 11 08.2	-1.0
I49A	Point Hope	13.41	49	Pn	Pn	09 11 10.9	-2.1
N53A	Lisbon	13.49	64	Pn	Pn	09 11 11.6	-2.6
H48A	Harrisville	13.53	46	Pn	Pn	09 11 12.2	-2.5
R55A	Marlinton	13.59	75	Pn	Pn	09 11 14.2	-1.3
N54A	Moraine State	14.15	64	Pn	Pn	09 11 20.3	-2.9
ULM	Lac du Bonnet	14.31	3	Pn	Pn	09 11 20.1	-5.1
	0.7nm,0.3s,baz=184,slow=12,SNR=11						
ULM				Sn	Sn	09 13 51.6	-13
	0.6nm,0.3s,baz=95,slow=19,SNR=5.5						
ULM				Lg	Lg	09 15 25.0	
	0.7nm,0.3s,baz=145,slow=16,SNR=2.4						
Q56A	Snyder Ridge,	14.39	72	Pn	Pn	09 11 22.8	-3.7
M54A	Oil Creek Stat	14.54	62	Pn	Pn	09 11 25.3	-3.2
M56A	Emporium	15.61	64	Pn	Pn	09 11 39.0	-3.7
SSPA	Standing Stone	15.63	67	Pn	Pn	09 11 39.9	-3.2
SADO	Sadowa	16.12	51	Pn	Pn	09 11 50.0	+0.7
	0.2nm,0.3s,baz=270,slow=14,SNR=2.9						
SADO				Sn	Sn	09 14 36.8	-12
	0.6nm,0.3s,baz=267,slow=11,SNR=3.9						
SADO				Lg	Lg	09 16 24.2	
	0.4nm,0.3s,baz=69,slow=7.0,SNR=3.5						
NVAR	Mina Array Bea	17.23	285	P	Pn	09 12 04.2	+0.4
	0.1nm,0.3s,baz=86,slow=13,SNR=2.2						
TEIG	Tepich	17.40	152	P	Pn	09 12 08.2	+2.5
	0.7nm,0.3s,baz=137,slow=2.2,SNR=14						
CMIG	Matias Romero	18.87	174	P	Pn	09 12 26.1	+2.3
	0.3nm,0.3s,baz=339,slow=12,SNR=4.8						
YKA	Yellowknife Ar	28.77	343	P	P	09 14 00.5	+0.1
	0.1nm,0.5s,baz=141,slow=8.1,SNR=4.6						
ILAR	Eielson Array	41.26	330	P	P	09 15 47.8	-0.1
	0.7nm,0.8s,baz=109,slow=7.1,SNR=10						

*IDC **01** 09:15:57.3±1.2, 6.°76S×157.°76E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.8/30, mbtmp4.0/7, ML4.8/1, MS3.0/3, Ms1 3.0/3, ms1mx2.8/41, Error ellipse: s-maj=30.3km s-min=23.8km az=82.0*

ISC 01 09:15:58.9±1.0, 6.°7S±0.°1×157.°7E±0.°2, h10km, n16, σ1§47/9, mb3.9/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.46	141	Pn	Pn	09 16 52.2	-0.7
	82nm,0.3s,baz=230,slow=2.9,SNR=14						
HNR				Sn	Sn	09 17 35.3	+1.4
	50nm,0.3s,baz=37,slow=20,SNR=2.8						
HNR	Honiara	3.46	141	eP	Pn	09 16 52.0	-0.8
KRVT	Keravat (AS076	6.18	293	LR	LR	09 20 18.6	
	comp=Z,94nm,20.4s,baz=235,slow=42						
PMG	Port Moresby	10.81	255	LR	LR	09 22 34.5	
	comp=Z,92nm,18.2s,baz=54,slow=37						
WRA	Warramunga Arr	26.24	238	P	P	09 21 33.0	-1.4
	2.7nm,0.8s,baz=62,slow=9.7,SNR=7.4						
WRA				LR	LR	09 29 34.9	
	comp=Z,52nm,21.0s,baz=50,slow=31						
H11S3	WAKE ISLAND Hy	26.57	19	T	T	09 50 05.6	
	baz=200,slow=76,SNR=170						
H11S2	WAKE ISLAND Hy	26.58	19	T	T	09 50 05.8	
	baz=200,slow=76,SNR=162						
H11S1	WAKE ISLAND Hy	26.59	19	T	T	09 50 06.9	
	baz=200,slow=76,SNR=118						
H11N1	WAKE ISLAND Hy	27.78	19	T	T	09 51 34.8	
	baz=200,slow=76,SNR=84						
H11N3	WAKE ISLAND Hy	27.79	19	T	T	09 51 31.7	
	baz=200,slow=76,SNR=72						
H11N2	WAKE ISLAND Hy	27.80	19	T	T	09 51 32.8	
	baz=200,slow=76,SNR=40						
ASAR	Alice Springs	28.43	231	P	P	09 21 55.7	+1.6
	0.7nm,0.8s,baz=56,slow=9.6,SNR=6.9						
STKA	Stephens Creek	29.21	209	P	P	09 21 59.8	-1.1
	0.7nm,0.3s,baz=4.4,slow=13,SNR=3.0						
SONM	Songino Array	70.62	326	P	P	09 27 14.0	-0.7
	0.7nm,0.8s,baz=118,slow=6.9,SNR=4.6						
MKAR	Makanchi Array	85.02	318	P	P	09 28 36.7	+1.8
	0.6nm,0.9s,baz=90,slow=4.9,SNR=3.7						
YKA	Yellowknife Ar	94.83	28	P	P	09 29 20.2	-0.5
	0.4nm,0.8s,baz=264,slow=4.7,SNR=5.6						

*IDC **01** 09:17:25.6±0.4, 55.°10S×126.°67W, h0km, mb5.0/16, mb1 5.1/16, mb1mx4.8/29, mbtmp4.9/16, MS4.6/12, Ms1 4.5/12, ms1mx4.3/24, Error ellipse: s-maj=19.4km s-min=12.9km az=160.0*

*MOS **01** 09:17:26.0±0.9, 55.°18S×126.°62W, h10km, mb5.6/25, Error ellipse: s-maj=20.9km s-min=10.0km az=77.4*

*NEIC **01** 09:17:27.1±1.7, 55.°2S±0.°1×126.°5W±0.°2, h10km±2km, mb5.3/149, Error ellipse: s-maj=14.8km s-min=13.2km az=164.0*

*BJI **01** 09:17:29.0±0.0, 55.°20S×126.°50W, h33km, mB5.6/5, Ms5.4/10, Ms7 5.4/10*

*GCMT **01** 09:17:31.1±0.1, 55.°33S±0.°01×126.°68W±0.°02, h12km, MW5.2/111, Moment Tensor Solution. s70,c97; s111,c182; Duration: 1.°0 Moment tensor: Scale 10^{17} Nm; Mrr-0.66±.01; Mθθ0.89±.01; Mφφ-0.22±.01; Mrθ0.12±.03; Mθφ-0.07±.01; Mφr-0.28±.04; Best double couple: M0 0.85600×10^{17} NP1: φs70.00000°, δ46.00000°, λ-127.00000°. NP2: φs296.00000°, δ55.00000°, λ-59.00000°. Principal axes: T 0.9060, Plg5.0000°, Azm5.0000°; N -0.1000, Plg25.0000°, Azm97.0000°; P -0.8060, Plg64.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 09:17:26.9±0.2, 55.°12S±0.°06×126.°60W±0.°06, h10km, n507, σ1§17/503, mb5.3/92, MS4.8/21, 8C-9D, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	30.67	31	P	P	09 23 43.9	+2.5
RPN	Rapa Nui	30.67	31	P	P	09 23 43.9	+2.5
RPN				pmax	pmax		
	comp=Z,90nm,1.3s						
PMSA	Palmer Station	31.45	133	P	P	09 23 49.8	+1.8
PMSA				IAmb	IAmb	09 23 50.3	
	comp=Z,50nm,1.2s						
VNDA	Vanda	33.02	202	P	P	09 24 03.8	+2.2
	comp=Z,22nm,1.1s,baz=103,slow=7.2,SNR=9.3						
VNDA				LR	LR	09 34 34.1	
	comp=Z,765nm,18.3s,baz=90,slow=31						
VNDA	Vanda	33.02	202	P	P	09 24 04.9	+3.4
VNDA				IAmb	IAmb	09 24 05.8	
	comp=Z,39nm,1.1s						
QSPA	South Pole Qui	35.06	180	P	P	09 24 21.3	+1.7
	comp=Z,60nm,1.0s,baz=101,slow=3.4,SNR=135						
QSPA	South Pole Qui	35.06	180	P	P	09 24 21.4	+1.7
TBI	Tubuai	36.00	323	eS	S	09 30 06.1	-0.3
TBI				eLQ	LQ	09 32 40.7	
	comp=Z,856nm,26.0s						
TBI				eLR	LR	09 34 04.2	
	comp=Z,2μm,26.0s,baz=164						
TBI	Tubuai	36.00	323	eT	T	10 02 20.3	
	comp=Z,305nm,0.4s						
PLCA	Paso Flores	39.12	92	P	P	09 24 56.2	+2.0
	comp=Z,2.8nm,0.9s,baz=226,slow=8.7,SNR=5.4						
PLCA				LR	LR	09 37 14.4	
	comp=Z,1μm,19.2s,baz=248,slow=30						
PLCA	Paso Flores	39.12	92	P	P	09 24 56.4	+2.2
MSWZ	Moikau Station	39.88	265	P	P	09 25 02.7	+2.2
MQZ	McQueen's Vall	39.90	261	P	P	09 25 02.6	+2.0
ODZ	Otahua Downs	40.20	258	P	P	09 25 05.7	+2.5
ODZ				IAmb	IAmb	09 25 06.3	
	comp=Z,68nm,1.1s						
KHZ	Kahutara	40.21	263	P	P	09 25 05.4	+2.2
BSWZ	Blackbirch Sta	40.47	264	P	P	09 25 08.1	+2.7
MEH	Mehetia	40.64	328	eT	T	10 08 09.4	
	comp=Z,15nm,0.3s						
BKZ	Black Stump Fm	40.65	269	P	P	09 25 09.4	+2.4
RPZ	Rata Peaks	40.80	259	P	P	09 25 09.6	+1.5
	comp=Z,24nm,1.0s,baz=104,slow=5.3,SNR=6.8						
URZ	Urewera	40.91	270	P	P	09 25 10.3	+1.3
	comp=Z,8.7nm,0.9s,baz=59,slow=5.9,SNR=3.2						
THZ	Tophouse	40.99	263	P	P	09 25 12.5	+2.8
THZ				IAmb	IAmb	09 25 13.1	
	comp=Z,92nm,1.0s						
TVO	Taravao	41.10	326	eT	T	10 08 43.6	
	comp=Z,3.4nm,0.3s						
PAE	Paea	41.32	326	eP	P	09 25 11.9	-0.6
	comp=Z,16nm,1.6s						
PAE	Paea	41.32	326	eT	T	10 08 58.5	
	comp=Z,2.5nm,0.2s						
TIAR	Tiarei	41.34	326	eT	T	10 09 01.6	
	comp=Z,2.6nm,0.2s						
PPT2	Papeete2	41.38	326	eP	P	09 25 12.7	-0.5
	comp=Z,55nm,1.4s						
PPT2				eS	S	09 31 27.8	0.0
	comp=Z,284nm,26.5s						
PPT2				eLQ	LQ	09 34 38.3	
	comp=Z,702nm,26.0s						
PPT2				eLR	LR	09 36 36.5	
	comp=Z,2μm,25.8s,baz=163						
PPT2	Papeete2	41.38	326	eT	T	10 09 01.4	
	comp=Z,5.4nm,0.3s						
PPT	Papeete	41.40	326	LR	LR	09 38 30.9	
	comp=Z,810nm,18.1s,baz=160,slow=31						
QRZ	Quartz Range	41.82	264	P	P	09 25 18.3	+1.9
QRZ				IAmb	IAmb	09 25 18.9	
	comp=Z,34nm,0.8s						
RAR	Rarotonga	42.01	310	P	P	09 25 19.5	+1.3
	comp=Z,21nm,0.8s,baz=192,slow=7.4,SNR=5.6						
VAH	Vaihoa	43.00	329	eP	P	09 25 25.8	-0.4
	comp=Z,104nm,1.3s						
VAH	Vaihoa	43.00	329	eT	T	10 11 05.3	
	comp=Z,368nm,0.3s						
PMOR	Pomariorio Ree	43.30	329	eP	P	09 25 28.1	-0.6
	comp=Z,101nm,1.3s						
PMOR	Pomariorio Ree	43.30	329	eT	T	10 11 29.1	
	comp=Z,22nm,0.3s						
OUZ	Omahuta	45.05	271	P	P	09 25 44.1	+1.5
OUZ				IAmb	IAmb	09 25 45.8	
	comp=Z,41nm,0.9s						
VNA3	Neumayer Olymp	46.34	157	P	P	09 25 52.0	-0.4
VNA2	Neumayer--Watz	47.09	157	P	P	09 25 58.1	-0.1
	baz=226,slow=8.8						
VNA1	Neumayer--Stat	47.09	156	P	P	09 25 58.8	+0.6
TAOE	Nuku Hiva Isla	47.39	342	eS	S	09 32 54.0	-1.2
	comp=Z,396nm,24.9s						
TAOE				eLR	LR	09 39 18.5	
	comp=Z,2μm,27.8s						
SNAA	Sanae	47.51	159	P	P	09 26 01.3	-0.2
SNAA	Sanae	47.51	159	P	P	09 26 01.6	0.0
SNAA				IAmb	IAmb	09 26 05.0	
	comp=Z,40nm,1.2s						
SNAA	Sanae	47.51	159⇑	iP	P	09 26 01.6	0.0
TROLL	Troll, Antarti	48.29	161	P	P	09 26 07.8	+0.1
NVL	N'lazarevskaya	50.96	164	eP	P	09 26 28.3	+0.5
NVL				eS	S	09 33 42.0	-2.0
NVL				pmax	pmax		
	comp=Z,33nm,0.9s						
CASY	Casey	51.50	206	P	P	09 26 33.9	+1.9
CASY				IAmb	IAmb	09 26 39.2	
	comp=Z,70nm,1.2s						
PB11	IPOC Station P	55.24	74	P	P	09 27 00.9	+0.7
SYO	Syowa Base	55.77	174⇑	iP	P	09 27 02.2	-0.9
SYO	Syowa Base	55.77	174⇓	iP	sP	09 27 06.0	-0.6
SYO	Syowa Base	55.77	174⇑	ePcP	PcP	09 28 02.0	-0.1
MNMC	Minye Minye	55.78	74	P	P	09 27 05.0	+0.8
MNMC				IAmb	IAmb	09 27 05.6	
	comp=Z,22nm,0.8s						
CPUP	Villa Florida	57.07	90	LR	LR	09 48 30.5	
	comp=Z,1μm,18.4s,baz=222,slow=33						
MAW	Mawson	57.39	184	LR	LR	09 49 28.3	
	comp=Z,631nm,21.1s,slow=34						
MAW	Mawson	57.39	184	P	P	09 27 15.6	+0.9
MAW	Mawson	57.39	184	P	P	09 27 15.6	+0.9
MAW				pmax	pmax		
	comp=Z,11nm,1.2s						
NNA	Nana	57.86	62⇑	eP	P	09 27 18.8	+0.1
NNA				pmax	pmax		
	comp=Z,62nm,1.5s						
CAN	Canberra	58.87	252	P	P	09 27 27.7	+2.1
CAN	Canberra	58.87	252	P	P	09 27 27.7	+2.1
CAN				pmax	pmax		
	comp=Z,26nm,1.5s						
LPAZ	La Paz	58.89	73	P	P	09 27 27.6	+1.1
	comp=Z,7.2nm,0.8s,baz=180,slow=4.3,SNR=15						
LPAZ	La Paz	58.89	73	P	P	09 27 27.7	+1.1
DZM	Mont Dzumac	59.04	276	eLR	LR	09 44 51.0	
	comp=Z,777nm,27.1s						
DZM	Mont Dzumac	59.04	276	P	P	09 27 27.4	+0.3
	comp=Z,18nm,0.9s,baz=83,slow=16,SNR=6.9						
DZM				LR	LR	09 48 04.9	
	comp=Z,392nm,18.8s,baz=206,slow=31						
DZM	Mont Dzumac	59.04	276	P	P	09 27 28.5	+1.5
DZM				IAmb	IAmb	09 27 28.8	
	comp=Z,37nm,1.1s						
TOO	Toolangi	59.09	248	P	P	09 27 28.3	+1.2
TOO				IAmb	IAmb	09 27 29.4	
	comp=Z,23nm,0.9s						
TOO	Toolangi	59.09	248	P	P	09 27 28.3	+1.2
TOO				pmax	pmax		
	comp=Z,23nm,1.0s						
NOUC	Port Laguerre	59.10	275	P	P	09 27 27.7	+0.4
NOUC				IAmb	IAmb	09 27 28.7	
	comp=Z,26nm,0.9s						
ARMA	Armidale	61.09	258	P	P	09 27 42.4	+1.4
ARMA				IAmb	IAmb	09 27 43.0	
	comp=Z,35nm,1.2s						
KNTN	Kanton	63.63	308	P	P	09 27 58.9	+0.9
SPB	Sao Paulo	64.86	96	P	P	09 28 05.6	-0.4
EIDS	Eidsvold	65.28	261	P	P	09 28 09.0	+0.3
EIDS				IAmb	IAmb	09 28 09.5	
	comp=Z,28nm,1.1s						
STKA	Stephens Creek	65.49	249	P	P	09 28 10.5	+0.5
	comp=Z,19nm,1.0s,baz=132,slow=8.0,SNR=24						
STKA				LR	LR	09 50 30.0	
	comp=Z,142nm,21.1s,baz=166,slow=30						
STKA	Stephens Creek	65.49	249	P	P	09 28 11.0	+0.9
STKA	Stephens Creek	65.49	249	P	P	09 28 11.0	+0.9
STKA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SAML	Samuel	67.64	73	P	P	09 28 23.9	0.0
SAML	Samuel	67.64	73	P	P	09 28 23.9	0.0
SAML				pmax	pmax		
	comp=Z,10.0nm,1.2s						
OTAV	Otavalo	67.67	54	P	P	09 28 25.0	+0.4
OTAV				IAmb	IAmb	09 28 26.8	
	comp=Z,30nm,1.2s						
OTAV	Otavalo	67.67	54	P	P	09 28 25.0	+0.4
OTAV				pmax	pmax		
	comp=Z,30nm,1.3s						
BBOO	Buckleboo	67.69	245	P	P	09 28 24.1	0.0
BBOO				IAmb	IAmb	09 28 25.3	
	comp=Z,34nm,1.2s						
FLOC	Florencia	70.17	56	P	P	09 28 38.9	-0.7
BDFB	Brasilia	70.80	90	LR	LR	09 56 47.6	
	comp=Z,1μm,20.2s,baz=205,slow=33						
BDFB	Brasilia	70.80	90	P	P	09 28 43.0	-0.7
BDFB	Brasilia	70.80	90	P	P	09 28 43.0	-0.7
BDFB				pmax	pmax		
	comp=Z,11nm,1.2s						
MACC	Macarena, Meta	71.52	57	eP	P	09 28 48.4	+0.6
YOTC	Yotoco, Valle	71.95	54	eP	P	09 28 50.5	-0.1
CTA	Charters Tower	72.16	260	P	P	09 28 52.1	+0.4
	comp=Z,22nm,1.0s,baz=143,slow=6.7,SNR=12						
PRAC	Prado	72.39	55	eP	P	09 28 52.8	-0.3
ORTC	Ortega, Tolima	72.39	55	eP	P	09 28 53.2	+0.1
RREF	El Recreo	73.22	54	eP	P	09 29 01.0	+2.3
FORT	Forrest	73.38	240	P	P	09 28 57.7	-1.1
FORT				IAmb	IAmb	09 28 59.7	
	comp=Z,33nm,1.1s						
GUY2C	Guyana, Caldas	73.49	54	eP	P	09 29 01.0	+0.8
ROSC	El Rosal	73.64	55	P	P	09 29 03.0	+2.1
	comp=Z,34nm,0.8s,baz=150,slow=1.9,SNR=20						
ROSC	El Rosal	73.64	55	eP	P	09 29 01.6	+0.7
ROSC	El Rosal	73.64	55	P	P	09 29 02.8	+1.9
ROSC				IAmb	IAmb	09 29 04.1	
	comp=Z,41nm,1.1s						
CHIC	Chingaza	73.74	56	eP	P	09 29 03.0	+1.5
CBOC	Ciudad Bolivar	73.76	53	eP	P	09 29 01.3	0.0
JTS	Las Juntas de	73.91	43	P	P	09 29 02.3	+0.3
JTS				IAmb	IAmb	09 29 07.1	
	comp=Z,39nm,1.2s						
JTS	Las Juntas de	73.91	43 *d*	iP	P	09 29 03.0	+1.0
JTS				pmax	pmax		
	comp=Z,48nm,1.4s						
HDC	Heredia	73.98	44	P	P	09 29 02.6	0.0
NORC	Norcasia	74.02	54	eP	P	09 29 02.3	-0.4
HELC	Santa Helena	74.27	53	eP	P	09 29 05.3	+0.8
SPBC	San Pablo de B	74.47	55	eP	P	09 29 04.7	-0.7
DBBC	Dabeiba	74.68	52	eP	P	09 29 07.7	+1.1
TARA	Tarawa	74.71	296	P	P	09 29 06.6	-0.1
PTBC	PUERTO BERRIO,	75.07	54	eP	P	09 29 08.1	-0.7
RUSC	La Rusia	75.15	56	eP	P	09 29 09.4	-0.4
RUSC	La Rusia	75.15	56	P	P	09 29 09.4	-0.4
ACON	Acoyapa	75.36	42	P	P	09 29 10.3	0.0
ACON				IAmb	IAmb	09 29 11.6	
	comp=Z,24nm,1.0s						
SNET	Serv Nac Est T	75.45	38	P	P	09 29 10.0	-0.9
SNET				IAmb	IAmb	09 29 16.4	
	comp=Z,56nm,1.2s						
UREC	San Jos de Ur	75.64	53	eP	P	09 29 11.8	-0.2
BARC	Barichara	75.72	55	eP	P	09 29 11.1	-1.6
ZARC	Zaragoza, Cauc	75.72	53	eP	P	09 29 12.5	0.0
ESTN	Estel	75.94	40	P	P	09 29 13.2	-0.6
ESTN				IAmb	IAmb	09 29 14.8	
	comp=Z,27nm,0.9s						
ASAR	Alice Springs	76.12	249	P	P	09 29 14.2	-0.7
	comp=Z,12nm,0.7s,baz=143,slow=5.8,SNR=99						
ASAR				LR	LR	09 59 35.6	
	comp=Z,134nm,18.0s,baz=140,slow=33						
ASAR	Alice Springs	76.12	249	P	P	09 29 14.0	-0.9
AS31	Alice Springs	76.12	249	P	P	09 29 13.6	-1.3
TLIG	Tlapa	76.22	27	P	P	09 29 16.2	+0.8
TLIG				IAmb	IAmb	09 29 18.1	
	comp=Z,35nm,1.1s						
H01W1	Cape Leeuwin H	76.38	228	T	T	10 54 00.1	
	baz=148,slow=76,SNR=1139						
H01W2	Cape Leeuwin H	76.39	228	T	T	10 54 00.6	
	baz=148,slow=76,SNR=1046						
H01W3	Cape Leeuwin H	76.40	228	T	T	10 54 01.4	
	baz=148,slow=76,SNR=1043						
TGUH	Tegucigalpa,Un	76.49	39	eP	P	09 29 16.9	0.0
TGUH	Tegucigalpa,Un	76.49	39	P	P	09 29 17.2	+0.3
PAMC	Pamplona, Colo	76.60	55	eP	P	09 29 16.9	-1.2
NWAO	Narrogin (SRO)	76.71	231	P	P	09 29 18.2	+0.1
NWAO	Narrogin (SRO)	76.71	231	P	P	09 29 18.2	+0.1
NWAO				pmax	pmax		
	comp=Z,80nm,1.5s						
CCIG	Comitan	76.89	34	P	P	09 29 15.8	-3.4
CCIG				IAmb	IAmb	09 29 23.4	
	comp=Z,30nm,1.2s						
OCAC	Ocana	77.09	54	eP	P	09 29 18.2	-2.2
SMLC	San Martn de	77.23	54	eP	P	09 29 18.9	-2.1
MOIG	Morelia	77.59	24	P	P	09 29 24.4	+1.2
MOIG				IAmb	IAmb	09 29 25.6	
	comp=Z,25nm,0.8s						
SJCC	San Jacinto, C	77.69	52	eP	P	09 29 23.3	-0.4
UNM	Universidad Na	77.75	26	P	P	09 29 25.2	+1.1
UNM	Universidad Na	77.75	26	P	P	09 29 25.2	+1.1
UNM				pmax	pmax		
	comp=Z,62nm,0.8s						
ELOV	Elorza	77.85	59	eP	P	09 29 24.3	-0.2
AIN	Ainahou	78.17	332	P	P	09 29 27.0	+0.7
WR0	Warramunga Arr	78.78	251	P	P	09 29 29.4	-0.3
WR0				IAmb	IAmb	09 29 30.3	
	comp=Z,49nm,1.4s						
WB2	Warramunga Arr	78.90	251	P	P	09 29 30.1	-0.3
WB2				IAmb	IAmb	09 29 30.3	
	comp=Z,21nm,0.9s						
WRA	Warramunga Arr	78.90	251	P	P	09 29 29.6	-0.8
	comp=Z,14nm,0.8s,baz=143,slow=5.0,SNR=47						
WRA				LR	LR	10 01 17.7	
	comp=Z,234nm,19.7s,baz=125,slow=33						
WRA	Warramunga Arr	78.90	251	P	P	09 29 28.6	-1.8
WRA	Warramunga Arr	78.90	251	P	P	09 29 28.6	-1.8
WRA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
WRAB	Tennant Creek	78.91	251	P	P	09 29 30.2	-0.2
WRAB				IAmb	IAmb	09 29 30.3	
	comp=Z,22nm,0.9s						
WRAB	Tennant Creek	78.91	251⇑	iP	P	09 29 29.3	-1.1
WRAB				pmax	pmax		
	comp=Z,25nm,0.9s						
SDV	Santo Domingo	78.93	57	LR	LR	10 00 47.9	
	comp=Z,111nm,18.6s,baz=80,slow=33						
SDV	Santo Domingo	78.93	57	eP	P	09 29 28.7	-2.0
SDV	Santo Domingo	78.93	57	P	P	09 29 29.2	-1.4
WB0	Warramunga Arr	79.02	251	P	P	09 29 30.4	-0.7
PMG	Port Moresby	80.21	268	P	P	09 29 38.0	+0.5
PMG				IAmb	IAmb	09 29 40.1	
	comp=Z,52nm,1.0s						
PMG	Port Moresby	80.21	268 *d*	iP	P	09 29 38.5	+1.0
PMG				pmax	pmax		
	comp=Z,244nm,1.1s						
ZAIG	Zacatecas	80.26	22	P	P	09 29 39.6	+1.8
JOHN	Johnston Islan	80.28	319	P	P	09 29 38.2	+0.6
MORW	Morawa	80.53	232	P	P	09 29 39.4	+0.3
TEIG	Tepich	81.84	36	P	P	09 29 46.2	+0.3
SRIG	Santa Rosalia	83.03	13	P	P	09 29 52.8	+0.9
HPIG		83.68	19	P	P	09 29 56.4	+0.8
HPIG				IAmb	IAmb	09 29 57.7	
	comp=Z,27nm,1.0s						
HSIG		84.87	14	P	P	09 30 02.1	+0.7
HSIG				IAmb	IAmb	09 30 03.5	
	comp=Z,19nm,1.0s						
FITZ	Fitzroy Crossi	85.06	245	P	P	09 30 02.3	-0.5
PSA00	Pilbara Seismi	85.09	239	P	P	09 30 00.5	-2.4
833A	Chaparral WMA,	86.33	24	P	P	09 30 10.0	+1.4
833A	Chaparral WMA,	86.33	24	P	P	09 30 09.4	+0.8
	baz=195						
TX31	Lajitas Ar. Si	86.39	20	P	P	09 30 09.7	+0.7
TX31				IAmb	IAmb	09 30 11.3	
	comp=Z,17nm,1.0s						
TX32	Lajitas Array	86.39	20	P	P	09 30 09.6	+0.5
TX32				IAmb	IAmb	09 30 11.3	
	comp=Z,16nm,0.9s						
TXAR	Lajitas Array	86.39	20	P	P	09 30 10.1	+1.0
	comp=Z,9.3nm,0.8s,baz=190,slow=8.5,SNR=103						
TXAR	Lajitas Array	86.39	20	P	P	09 30 09.8	+0.8

319A Douglas 87.42 15 P P 09 30 14.9 +0.9
214A Organ Pipe Nat 87.53 12 P P 09 30 15.6 +1.1
214A Organ Pipe Nat 87.53 12 P P 09 30 15.9 +1.4
baz=188,SNR=10.0
IKP In-Ko-Pah, Jac 87.88 9 P P 09 30 18.0 +1.9
baz=186,SNR=5.7
109C Camp Elliot, M 88.03 8 P P 09 30 17.2 +0.4
109C Camp Elliot, M 88.03 8 P P 09 30 18.2 +1.5
baz=185
MONP2 Monument Peak 88.09 9 P P 09 30 19.0 +1.7
baz=186,SNR=5.2
TUC Tucson 88.13 13 P P 09 30 18.0 +0.6
TUC Tucson 88.13 13 P P 09 30 18.0 +0.6
TUC pmax pmax
comp=Z,43nm,1.2s
TUC Tucson 88.13 13 P P 09 30 18.7 +1.3
baz=189
SWSC Sam W. Stewart 88.20 9 P P 09 30 19.3 +1.7
baz=186
JCT Junction City 88.31 23 P P 09 30 19.0 +0.8
JCT Junction City 88.31 23 P P 09 30 19.0 +0.8
JCT pmax pmax
comp=Z,46nm,1.1s
JCT Junction City 88.31 23 P P 09 30 18.7 +0.5
baz=195
MNTX Cornudas Mount 88.37 18 P P 09 30 18.4 0.0
MNTX IAmb IAmb 09 30 20.1
comp=Z,33nm,1.4s
MNTX Cornudas Mount 88.37 18 P P 09 30 18.8 +0.4
baz=192
GLA Glamis 88.40 10 P P 09 30 19.7 +1.2
GLA Glamis 88.40 10 P P 09 30 19.7 +1.2
GLA pmax pmax
comp=Z,36nm,1.1s
GLA Glamis 88.40 10 P P 09 30 20.1 +1.5
baz=187,SNR=7.6
MURC Murrieta 88.73 8 P P 09 30 21.8 +1.7
baz=185
HKT Hockley 88.75 26 P P 09 30 21.3 +1.2
HKT IAmb IAmb 09 30 26.5
comp=Z,26nm,1.4s
HKT Hockley 88.75 26 P P 09 30 21.3 +1.2
HKT pmax pmax
comp=Z,26nm,1.5s
121A Cookes Peak, D 88.79 16 P P 09 30 21.5 +0.9
121A IAmb IAmb 09 30 22.9
comp=Z,21nm,1.1s
121A Cookes Peak, D 88.79 16 P P 09 30 21.6 +1.1
baz=190
XPFO Pion Flat 88.80 8 P P 09 30 21.2 +0.7
XPFO IAmb IAmb 09 30 23.2
comp=Z,23nm,1.1s
PFO Pinyon Flats O 88.81 8 P P 09 30 20.5 0.0
PFO IAmb IAmb 09 30 23.2
comp=Z,23nm,1.1s
PFO Pinyon Flats O 88.81 8⇓eP P 09 30 21.2 +0.6
PFO pmax pmax
comp=Z,46nm,1.3s
PFO Pinyon Flats O 88.81 8 P P 09 30 22.0 +1.5
baz=186,SNR=8.1
BC3 Big Chuckawall 88.94 9 P P 09 30 23.1 +1.9
baz=186,SNR=5.9
BLG Laguna Peak, P 89.11 6 P P 09 30 23.3 +1.5
baz=184
435B Jarrell 89.11 25 P P 09 30 22.9 +1.0
435B Jarrell 89.11 25 P P 09 30 23.2 +1.3
baz=196
Y12C Blythe 89.12 10 P P 09 30 23.1 +1.2
Y12C IAmb IAmb 09 30 24.6
comp=Z,40nm,1.4s
Y12C Blythe 89.12 10 P P 09 30 23.0 +1.2
baz=187,SNR=5.7
PASC Pasadena Art C 89.23 7 P P 09 30 23.5 +1.1
PASC IAmb IAmb 09 30 24.1
comp=Z,22nm,1.2s
BELC Belle Mtn. Jos 89.23 9 P P 09 30 24.6 +2.1
baz=186,SNR=6.7
BFSC Mount Baldy Ra 89.33 7 P P 09 30 24.2 +1.1
baz=185,SNR=5.3
BBRC Big Bear Solar 89.41 8 P P 09 30 25.5 +2.0
baz=185
IRM Iron Mountain 89.46 9 P P 09 30 25.4 +1.9
baz=186,SNR=10
Y14A Wickenburg 89.47 11 P P 09 30 24.2 +0.6
Y14A IAmb IAmb 09 30 26.0
comp=Z,24nm,1.3s
OSI Osito Audit: C 89.63 6 P P 09 30 25.5 +1.2
baz=184
PDMCI Parker Dam,Lak 89.71 10 P P 09 30 26.4 +1.8
baz=187,SNR=6.6
PKM Mcpherson Peak 89.84 6 P P 09 30 27.2 +1.7
baz=184
EDW2 Edwards Air Fo 89.95 7 P P 09 30 27.2 +1.4
baz=185,SNR=6.6
RRX Edison Barstow 90.02 8 P P 09 30 27.9 +1.9
baz=185
HEC Hector,Ludlow 90.02 8 P P 09 30 27.6 +1.4
baz=186,SNR=8.8
GMRC Granite Mounta 90.04 9 P P 09 30 28.3 +2.0
baz=186,SNR=8.7
NEE2 Needles Airpor 90.12 10 P P 09 30 28.2 +1.7
baz=187
X16A Lo Mia Camp, P 90.13 12 P P 09 30 27.5 +0.7
X16A IAmb IAmb 09 30 29.2
comp=Z,18nm,1.1s
SMMC Simmler 90.25 5 P P 09 30 28.9 +1.8
baz=184
WHTX Lake Whitney, 90.30 24 P P 09 30 27.7 +0.2
WHTX Lake Whitney, 90.30 24 P P 09 30 27.9 +0.5
baz=196
ABTX Abilene, Hawle 90.41 22 P P 09 30 28.9 +0.9
ABTX IAmb IAmb 09 30 33.8
comp=Z,34nm,1.2s
ABTX Abilene, Hawle 90.41 22 P P 09 30 28.9 +0.9
baz=195
X18A Snowflake 90.43 14 P P 09 30 29.6 +1.4
Y22D IRIS PASSCAL I 90.43 16 P P 09 30 29.7 +1.5
Y22D IRIS PASSCAL I 90.43 16 P P 09 30 29.5 +1.3
baz=191
GSC Goldstone, Bar 90.45 8 P P 09 30 29.2 +1.0
GSC IAmb IAmb 09 30 30.7
comp=Z,23nm,1.1s
GSC Goldstone, Bar 90.45 8 P P 09 30 29.2 +1.0
GSC pmax pmax
comp=Z,23nm,1.2s
GSC Goldstone, Bar 90.45 8 P P 09 30 29.4 +1.2
baz=186,SNR=8.4
W13A Hualapai Mount 90.52 10 P P 09 30 29.9 +1.2
W13A IAmb IAmb 09 30 31.2
comp=Z,18nm,1.2s
LRMC Laurel Mtn Rad 90.56 7 P P 09 30 30.3 +1.6
baz=185,SNR=7.8
PAGB Antelope Grade 90.65 5 P P 09 30 30.7 +1.7
TUQ Turquoise Moun 90.66 9 P P 09 30 31.1 +1.9
baz=186
ISA Isabella, Lake 90.69 7 P P 09 30 30.6 +1.3
ISA IAmb IAmb 09 30 31.8
comp=Z,18nm,1.1s
ISA Isabella, Lake 90.69 7 P P 09 30 30.6 +1.3
ISA pmax pmax
comp=Z,18nm,1.1s
ISA Isabella, Lake 90.69 7 P P 09 30 30.6 +1.3
baz=185,SNR=7.4
NATX Nacogdoches 90.78 27 P P 09 30 31.2 +1.6
baz=198
VES Vestal, Richgr 90.83 6 P P 09 30 30.9 +1.1
baz=184,SNR=7.1
MSTX Muleshoe 91.06 20 P P 09 30 31.0 -0.1
MSTX Muleshoe 91.06 20 P P 09 30 31.1 0.0
baz=193
SHOC Shoshone, Teco 91.09 8 P P 09 30 31.5 +0.5
baz=186
MPMC Manual Prospec 91.15 7 P P 09 30 32.8 +1.3
baz=185,SNR=15
WUAZ Wupatki 91.22 12 P P 09 30 33.0 +1.2
WUAZ Wupatki 91.22 12 P P 09 30 32.9 +1.1
baz=188
ANMO Albuquerque 91.36 16 P P 09 30 32.9 +0.4
ANMO Albuquerque 91.36 16 d iP P 09 30 32.9 +0.4
ANMO pmax pmax
comp=Z,26nm,0.9s
ANMO Albuquerque 91.36 16 P P 09 30 33.4 +0.9
baz=191
CWC Cottonwood Cre 91.49 7 P P 09 30 34.2 +1.1
baz=185
344A Westbrook Farm 91.56 30 P P 09 30 34.7 +1.4
344A IAmb IAmb 09 30 36.0
comp=Z,20nm,0.9s
FURC Furnace Creek, 91.61 8 P P 09 30 34.5 +1.2
baz=186,SNR=12
SHPR Sheep Range 91.79 9 P P 09 30 35.0 +0.5
SHPR IAmb IAmb 09 30 37.2
comp=Z,23nm,1.1s
U15A North Rim 92.01 12 P P 09 30 36.8 +1.2
GRAC Grapevine Rang 92.09 7 P P 09 30 37.0 +1.3
baz=185
TPNV Topopah Spring 92.13 8 P P 09 30 36.6 +0.5
TPNV IAmb IAmb 09 30 38.9
comp=Z,20nm,1.1s
TPNV Topopah Spring 92.13 8 P P 09 30 36.6 +0.5
TPNV pmax pmax
comp=Z,20nm,1.1s
TPNV Topopah Spring 92.13 8 P P 09 30 37.8 +1.7
baz=186,SNR=11
AMTX Amarillo 92.16 20 P P 09 30 36.6 +0.5
AMTX IAmb IAmb 09 30 37.7
comp=Z,14nm,0.9s
AMTX Amarillo 92.16 20 P P 09 30 36.8 +0.6
baz=194
VBMS Vicksburg 92.34 30 P P 09 30 37.8 +0.9
baz=200
H11S2 WAKE ISLAND Hy 92.43 299 T T 11 13 04.4
baz=148,slow=76,SNR=181
H11S3 WAKE ISLAND Hy 92.44 299 T T 11 13 13.5
baz=148,slow=76,SNR=134
H11S1 WAKE ISLAND Hy 92.44 299 T T 11 13 21.3
baz=148,slow=76,SNR=171
LCMT Little Creek M 92.48 11 P P 09 30 38.2 +0.6
KNB Kanab 92.53 11 P P 09 30 38.8 +0.9
KNB Kanab 92.53 11 P P 09 30 38.8 +0.9
KNB pmax pmax
comp=Z,19nm,1.2s
OMMB Old Mammoth Mi 92.60 6 P P 09 30 39.6 +1.2
MLAC Mammoth, Mammo 92.62 6 P P 09 30 41.0 +2.6
baz=184
WMOK Wichita Mounta 92.63 23 P P 09 30 38.5 +0.3
WMOK IAmb IAmb 09 30 39.6
comp=Z,14nm,1.4s
WMOK Wichita Mounta 92.63 23 P P 09 30 38.5 +0.3
WMOK pmax pmax
comp=Z,14nm,1.4s
WMOK Wichita Mounta 92.63 23 P P 09 30 38.8 +0.6
baz=195
Z41A Richland Creek 92.68 28 P P 09 30 39.4 +0.9
Z41A Richland Creek 92.68 28 P P 09 30 40.0 +1.5
baz=198
CCUT Cedar City 93.00 11 P P 09 30 42.1 +1.9
WLAR White Oak Lake 93.01 27 P P 09 30 40.9 +0.9
PKCU Pink Cliffs 93.01 11 P P 09 30 41.0 +0.7
SZCU Shurtz Canyon 93.08 11 P P 09 30 42.3 +1.9
BOSA Boshof 93.17 155 LR LR 10 08 26.8
comp=Z,329nm,20.2s,baz=211,slow=33
MVCO Mesa Verde 93.27 14 P P 09 30 42.3 +0.9
MVCO Mesa Verde 93.27 14 P P 09 30 42.0 +0.6
baz=190
H11N3 WAKE ISLAND Hy 93.36 300 T T 11 14 15.4
baz=149,slow=76,SNR=77
H11N1 WAKE ISLAND Hy 93.37 300 T T 11 14 16.0
baz=149,slow=76,SNR=104
H11N2 WAKE ISLAND Hy 93.38 300 T T 11 14 15.1
baz=149,slow=76,SNR=83
FNO Franklin 93.44 24 P P 09 30 43.5 +1.6
NVAR Mina Array Bea 93.45 7 P P 09 30 43.1 +0.9
comp=Z,4.2nm,0.9s,baz=196,slow=7.0,SNR=24
WAKR Walker 93.46 6 P P 09 30 43.3 +1.2
WAKR IAmb IAmb 09 30 44.9
comp=Z,13nm,1.1s
R11A Troy Canyon, C 93.58 9 P P 09 30 43.5 +0.7
R11A IAmb IAmb 09 30 45.3
comp=Z,20nm,1.4s
R11A Troy Canyon, C 93.58 9 P P 09 30 44.5 +1.8
baz=186
MTPU Mount Pierson 93.61 11 P P 09 30 43.5 +0.4
RYN Ryan 93.64 6 P P 09 30 43.9 +1.0
RYN IAmb IAmb 09 30 45.3
comp=Z,9.7nm,1.0s
MIAR Mount Ida 93.70 27 P P 09 30 44.1 +1.0
baz=198
T25A Trinidad 93.84 18 P P 09 30 44.4 +0.4
T25A IAmb IAmb 09 30 45.8
comp=Z,24nm,1.4s
T25A Trinidad 93.84 18 P P 09 30 45.0 +1.0
baz=192
PSUT Pine Spring 93.92 10 P P 09 30 45.2 +0.9
YERR Yerington 93.95 6 P P 09 30 45.2 +0.8
YERR IAmb IAmb 09 30 46.7
comp=Z,14nm,1.2s
S22A 4UR Ranch, Cre 94.04 16 P P 09 30 45.0 0.0
S22A 4UR Ranch, Cre 94.04 16 P P 09 30 45.7 +0.7
baz=191
MSU Marysvale 94.08 11 P P 09 30 46.9 +1.8
MSU Marysvale 94.08 11 P P 09 30 46.9 +1.8
KVN Kaiserville 94.09 7 P P 09 30 46.6 +1.6
KVN IAmb IAmb 09 30 47.3
comp=Z,15nm,1.0s
KVN Kaiserville 94.09 7 P P 09 30 46.6 +1.6
KVN pmax pmax
comp=Z,15nm,1.0s
U32A Winter Ranch, 94.16 22 P P 09 30 45.8 +0.6
U32A IAmb IAmb 09 30 47.0
comp=Z,13nm,1.1s
SDCO Great Sand Dun 94.25 17 P P 09 30 45.7 -0.2
SDCO Great Sand Dun 94.25 17 P P 09 30 46.8 +0.8
baz=192
W39A Magazine 94.26 26 P P 09 30 46.3 +0.6
W39A IAmb IAmb 09 30 47.7
comp=Z,21nm,1.1s
W39A Magazine 94.26 26 P P 09 30 46.4 +0.8
baz=198
ORV Oroville 94.41 4 P P 09 30 46.9 +0.7
ORV Oroville 94.41 4 P P 09 30 46.9 +0.7
ORV pmax pmax
comp=Z,3.0nm,1.0s
TUL1 Leonard 94.44 25 P P 09 30 47.0 +0.4
TUL1 Leonard 94.44 25 P P 09 30 46.9 +0.4
baz=197
Q16A Castle Valley 94.60 12 P P 09 30 48.4 +1.0
W41B Gary Mavity, V 94.64 28 P P 09 30 47.4 0.0
W41B IAmb IAmb 09 30 49.3
comp=Z,15nm,1.4s
W41B Gary Mavity, V 94.64 28 P P 09 30 48.7 +1.3
baz=199
PAHR Pah Rah Range 94.66 6 P P 09 30 48.2 +0.6
BEKR Beckworth 94.77 5 P P 09 30 49.1 +1.0
OXF Oxford 94.81 30 P P 09 30 51.4 +3.2
baz=200
SRU San Rafael Swe 94.87 12 P P 09 30 49.0 +0.4
SRU San Rafael Swe 94.87 12 P P 09 30 49.0 +0.4
SRU pmax pmax
comp=Z,15nm,1.0s
TMUT Trail Mountain 94.97 12 P P 09 30 49.8 +0.6
P17A Butcher Ranch, 95.20 12 P P 09 30 50.3 +0.2
HHAR Hobbs 95.25 26 P P 09 30 49.9 -0.3
SMCO Snowmass 95.42 15 P P 09 30 52.4 +0.9
NLU North Lily Min 95.52 11 P P 09 30 52.9 +1.3
U40A Yellville 95.60 27 P P 09 30 52.1 +0.3
U40A Yellville 95.60 27 P P 09 30 52.8 +1.0
baz=198
DUG Dugway, Tooele 95.68 11 P P 09 30 53.1 +0.9
DUG IAmb IAmb 09 30 54.2
comp=Z,13nm,1.4s
DUG Dugway, Tooele 95.68 11 P P 09 30 53.1 +0.9
DUG pmax pmax
comp=Z,13nm,1.5s
DUG Dugway, Tooele 95.68 11 P P 09 30 53.2 +1.0
baz=188
O20A White River Ci 96.18 14 P P 09 30 55.2 +0.6
baz=190
JLU Jordanelle 96.23 12 P P 09 30 55.3 +0.4
ISCO Idaho Springs 96.24 16 P P 09 30 55.6 +0.6
ISCO Idaho Springs 96.24 16 P P 09 30 55.6 +0.6
ISCO pmax pmax
comp=Z,6.0nm,1.5s
ISCO Idaho Springs 96.24 16 P P 09 30 55.9 +0.9
baz=192
WVOR Wild Horse Val 97.42 6 P Pdif 09 31 01.1 +1.0
WVOR IAmb IAmb 09 31 02.4
comp=Z,12nm,1.4s
WVOR Wild Horse Val 97.42 6 P Pdif 09 31 01.1 +1.0
WVOR pmax pmax
comp=Z,12nm,1.5s
AHID Auburn Hatcher 98.41 11 P Pdif 09 31 05.0 +0.4
AHID IAmb IAmb 09 31 06.0
comp=Z,14nm,1.4s
PDAR Pinedale Array 98.59 13 P P 09 31 05.2 -0.3
comp=Z,1.1nm,1.0s,baz=180,slow=4.0,SNR=6.7
PDAR Pinedale Array 98.59 13 P P 09 31 04.0 -1.4
TPAW Teton Pass 99.14 11 P Pdif 09 31 07.6 -0.4
FXWY Fox Creek 99.28 11 P Pdif 09 31 08.5 0.0
ECSD EROS Data Cent 101.73 22 Pdiff Pdif 09 31 21.2 +2.1
baz=197
H02S1 DAWSON INLET T 108.07 356 T T 11 32 48.5
SNR=14
H02N1 VAN INLET T-PH 108.12 356 T T 11 32 53.0
SNR=10
YKA Yellowknife Ar 117.65 6 PKP PKPdf 09 36 10.8 -0.7
comp=Z,0.9nm,0.8s,baz=182,slow=2.6,SNR=19
YKA PP PP 09 37 23.7 -1.7
comp=Z,0.8nm,1.0s,baz=187,slow=6.4,SNR=7.7
YKA PKKPbc PKKPab 09 46 34.0 +0.6
comp=Z,0.5nm,0.9s,baz=353,slow=3.4,SNR=6.0
PMR Palmer 117.72 348 PKiKP 09 36 11.8 +0.1
PMR Palmer 117.72 348 PKIKP PKiKP 09 36 11.8 +0.1
SUA Susitna One 117.80 347 PKiKP 09 36 12.2 +0.1
BCAR Beaver Creek A 118.44 352 PKiKP 09 36 13.4 +0.2
DOT Dot Lake 119.21 351 PKPdf 09 36 14.4 -0.2
SCRK Sand Creek 119.53 351 PKiKP 09 36 15.6 +0.2
TRF Thorofare Moun 119.66 348 PKPdf 09 36 15.6 -0.1
KTH Kantishna Hill 119.84 348 PKPdf 09 36 15.6 -0.2
EGAK Eagle 120.09 353 PKPdf 09 36 16.1 -0.1
HDA Harding Lake 120.23 350 PKPdf 09 36 16.4 -0.1
HDA Harding Lake 120.23 350 P PKPdf 09 36 16.2 -0.3
baz=167
BPAW Bear Paw Mtn. 120.37 348 PKPdf 09 36 16.2 -0.6
WRH Wood River Hil 120.41 349 PKPdf 09 36 16.3 -0.5
CCB Clear Creek Bu 120.55 350 PKPdf 09 36 17.1 +0.1
IL31 120.57 350 PKPdf 09 36 17.2 +0.1
ILAR Eielson Array 120.57 350 PKP PKPdf 09 36 16.8 -0.4
comp=Z,8.6nm,0.8s,baz=191,slow=2.1,SNR=65
ILAR Eielson Array 120.57 350 PKPdf 09 36 17.0 -0.1
COLA College 120.77 350 PKPdf 09 36 17.0 -0.5
COLA College 120.77 350 PKIKP PKPdf 09 36 17.0 -0.5
TCOL CIGO, UAF Yank 120.77 350 P PKPdf 09 36 17.4 -0.1
baz=166
POKR Poker Plat Res 120.97 350 P PKPdf 09 36 18.0 +0.1
baz=166
PRP Porcupine Dome 121.17 351 PKPdf 09 36 18.6 +0.1
EPYK Eagle Plains 121.41 355 PKPdf 09 36 18.6 -0.1
EPYK Eagle Plains 121.41 355 P PKPdf 09 36 18.5 -0.3
baz=173
MJAR Matsushiro Arr 121.81 289 PKP PKPdf 09 36 19.6 -0.9
comp=Z,4.2nm,0.9s,baz=165,slow=3.4,SNR=10
MJAR Matsushiro Arr 121.81 289 PKPdf 09 36 19.1 -1.4
MAJO Matsushiro 121.81 289⇑iPKIKP PKPdf 09 36 19.6 -0.9
MAT Matsushiro 121.81 289 PKP PKPdf 09 36 19.3 -1.2
TORD Torodi Ar. Bea 122.13 115 PKP PKPdf 09 36 20.6 -1.1
comp=Z,1.6nm,1.0s,baz=198,slow=1.0,SNR=6.1
TORD PKKPab PKKPab 09 46 17.8 -1.4
comp=Z,1.1nm,0.9s,baz=37,slow=2.0,SNR=6.4
TORD Torodi Ar. Bea 122.13 115 PKPdf 09 36 20.5 -1.2
IMAR Indian Mountai 122.52 347 PKiKP 09 36 21.5 +0.4
BMAR Burnt Mountain 122.97 352 PKiKP 09 36 22.3 +0.4
INK Inuvik 123.22 357 PKP PKPdf 09 36 21.8 -0.3
comp=Z,1.2nm,0.6s,baz=112,slow=1.0,SNR=14
INK Inuvik 123.22 357 PKPdf 09 36 22.0 -0.1
C36M Paulatuk 124.17 1 PKPdf 09 36 22.8 -1.0
C36M Paulatuk 124.17 1 P PKPdf 09 36 22.9 -1.0
baz=182
PETK Petropavlovsk- 124.58 315 PKP PKPdf 09 36 25.2 0.0
comp=Z,8.4nm,0.8s,baz=116,slow=10,SNR=5.5
PETK Petropavlovsk- 124.58 315 PKPdf 09 36 25.0 -0.2
PETK Petropavlovsk- 124.58 315 PKIKP PKPdf 09 36 25.0 -0.2
TOLK Toolik Lake Re 124.60 350 PKiKP 09 36 25.6 +0.4
TOLK Toolik Lake Re 124.60 350 P PKiKP 09 36 25.7 +0.5
baz=164
RDOG Red Dog Mine 125.77 344 PKiKP 09 36 27.7 +0.2
YSS Yuzh-Sakhalins 126.92 301 ePKHKP PKPpre 09 36 13.2
KSRS Korea Array 128.15 283 PKP PKiKP 09 36 33.0 -0.1
comp=Z,2.1nm,1.0s,baz=114,slow=2.9,SNR=5.5
KSRS Korea Array 128.15 283 PKiKP 09 36 33.0 -0.1
KSRS Korea Array 128.15 283 PKIKP PKiKP 09 36 33.0 -0.1
KSAR Wonju Array Be 128.16 283 PKiKP 09 36 32.2 -0.3
KSAR Wonju Array Be 128.16 283 PKIKP PKiKP 09 36 32.2 -0.3
NJ2 Nanjing 129.41 271 ePKP PKiKP 09 36 35.6 -0.2
SLVN Son La 129.54 249 PKiKP 09 36 35.4 -0.4
CMAR Chiang Mai Arr 129.75 242 PKP PKiKP 09 36 36.9 -0.1
comp=Z,4.0nm,0.7s,baz=201,slow=2.3,SNR=29
CHTO Chiang Mai 130.05 242 PKPdf 09 36 36.4 -0.4
CHTO Chiang Mai 130.05 242 PKIKP PKPdf 09 36 36.4 -0.4
USRK Ussuriysk Ar. 130.57 292 PKP PKPdf 09 36 37.2 +0.3
comp=Z,1.8nm,0.8s,baz=126,slow=1.7,SNR=5.9
WHN Wuhan 130.88 266 PKP PKPdf 09 36 38.3 +0.4
RES Resolute Bay 131.24 11 PKP PKPdf 09 36 36.3 -1.0
comp=Z,1.8nm,1.0s,baz=175,slow=8.3,SNR=5.1
RES Resolute Bay 131.24 11 PKPdf 09 36 37.2 0.0
RES Resolute Bay 131.24 11 PKIKP PKPdf 09 36 37.3 0.0
MA2 Magadan 131.84 317 PKP PKPdf 09 36 37.6 -1.2
comp=Z,4.6nm,0.8s,baz=101,slow=7.7,SNR=4.5
MA2 Magadan 131.84 317⇓ePKIKP PKPdf 09 36 37.8 -1.0
BILL Bilibino 132.41 332 i PKIKP PKPdf 09 36 37.3 -2.4
BILL i 09 39 02.8
BILL pmax pmax
comp=Z,4.0nm,1.3s
SEY Seymchan 133.38 322 PKP PKPdf 09 36 41.4 -0.2
comp=Z,2.9nm,0.9s,baz=109,slow=5.5,SNR=6.4
SEY Seymchan 133.38 322⇓ePKIKP PKPdf 09 36 39.2 -2.4
ENH Enshi 133.46 262 PKPdf 09 36 42.7 -0.2
KLR Kul'dur 133.96 297 PKP PKPdf 09 36 43.1 0.0
comp=Z,3.5nm,0.7s,baz=50,slow=3.0,SNR=12
KLR Kul'dur 133.96 297⇓ePKIKP PKPdf 09 36 43.6 +0.4
XAN Xi'an 136.56 265 PKP PKPdf 09 36 49.3 +0.7
XAN PP PP 09 39 30.8 -0.1
XAN AMB AMB
comp=Z,220nm,7.5s
XAN LR LR
comp=Z,170nm,10.7s
XAN LR LR
comp=Z,270nm,9.8s
XAN Xi'an 136.56 265 PKPdf 09 36 48.9 +0.3
XAN Xi'an 136.56 265 PKIKP PKPdf 09 36 48.9 +0.3
BJI Beijing 136.57 277 ePKP PKiKP 09 36 49.4 -0.7
CD2 Chengdu 137.17 257 PKP PKPdf 09 36 50.2 +0.4
ESDC Sonseca Array 139.43 88 PKP PKPdf 09 36 54.5 +0.8
comp=Z,2.0nm,0.8s,baz=289,slow=0.3,SNR=7.1
ESDC Sonseca Array 139.43 88 PKPdf 09 36 54.3 +0.6
HHC Hu-ho-hao-te 139.75 274 ePKP PKiKP 09 36 55.9 -0.8
HHC LR LR
comp=Z,140nm,16.2s
HHC LR LR
comp=Z,120nm,11.9s
HIA Hailar 140.31 290⇑ePKIKP PKPdf 09 36 55.4 +0.5
LZH Lanzhou 140.93 262 ePKP PKPdf 09 36 57.0 +0.3
LZH sPKP 09 37 11.8
LZH LR LR
comp=Z,200nm,16.3s
LZH LR LR
comp=Z,310nm,17.4s
TAPN Taplejung 142.76 236 eP PKPdf 09 36 57.2 -3.2
RAMN Ramite 142.94 234 eP PKPdf 09 36 59.9 -0.8
JIRN Jiri 143.74 234 eP PKPbc 09 36 59.5 -0.3
PKI Pulchoki 144.02 233 eP PKPab 09 36 59.9 -0.2
PKIN Phulchoki 144.03 233 eP PKPab 09 36 59.6 -0.4
GUN Gumba 144.09 234 eP PKPab 09 37 00.6 +0.2
comp=Z,69nm,0.9s
DMN Daman 144.19 233 eP PKPab 09 37 00.5 -0.1
comp=Z,149nm,1.1s
KKN Kakani 144.27 233 eP PKPab 09 37 00.5 -0.3
GKN Gorkha 144.75 233 eP PKPab 09 37 01.9 -0.6
KOLN Koldanda 145.01 231 eP PKPbc 09 37 02.4 -1.2
comp=Z,273nm,1.2s
CIT Chita 145.11 290 ePKIKP PKPdf 09 37 03.4 0.0
CIT e 09 37 10.2
TIXI Tiksi 145.29 327 PKPbc PKPbc 09 37 02.9 0.0
comp=Z,96nm,1.0s,baz=110,slow=3.4,SNR=129
TIXI Tiksi 145.29 327 PKPab 09 37 03.1 +0.1
TIXI Tiksi 145.29 327 d iPKIKP PKPbc 09 37 02.7 -0.2
DANN Dangsing 145.44 232 eP PKPbc 09 37 04.0 -1.0
comp=Z,304nm,1.1s
GTA Gaotai 145.53 262 ⇑PKPbc PKPdf 09 37 04.5 -0.1
GTA pPKP PKiKP 09 37 15.3 +6.7
GTA sPKP 09 37 18.9
GTA PP PP 09 40 28.6 +2.9
GTA AMB AMB
comp=Z,290nm,7.9s
GTA LR LR

	comp=Z,170nm,20.3s						
GTA				LR	LR		
	comp=Z,200nm,18.7s						
ULN	**Ulaanbaatar**	**146.56**	**280**		**PKPbc**	**09 37 07.9**	**+0.2**
ULN	**Ulaanbaatar**	**146.56**	**280**	PKP2	**PKPbc**	**09 37 07.9**	**+0.2**
DAG	**Danmarks Havn**	**146.86**	**24**	*i* P	**PKPdf**	**09 37 06.4**	**+0.8**
	comp=Z,24nm,1.0s						
DAG	**Danmarks Havn**	**146.86**	**24**	*i* PKP2	**PKPdf**	**09 37 06.4**	**+0.8**
DAG				pmax	pmax		
	comp=Z,24nm,1.0s						
SONM	**Songino Array**	**146.91**	**280**	PKPbc	**PKPdf**	**09 37 07.7**	**+1.0**
	comp=Z,14nm,0.8s,baz=127,slow=3.2,SNR=112						
SONM				PP	**PP**	**09 40 36.7**	**+2.8**
	comp=Z,1.2nm,1.0s,baz=144,slow=5.8,SNR=4.6						
SONM	**Songino Array**	**146.91**	**280**		**PKPdf**	**09 37 06.5**	**-0.3**
SONM				PKPbc	**PKPbc**	**09 37 08.6**	**-0.1**
SONM	**Songino Array**	**146.91**	**280**	PKP2	**PKPbc**	**09 37 08.6**	**-0.1**
NOR	**Nord**	**146.97**	**15**	*i* P	**PKPbc**	**09 37 07.2**	**-0.6**
	comp=Z,28nm,1.1s						
NOR	**Nord**	**146.97**	**15**	*i* PKP2	**PKPbc**	**09 37 07.2**	**-0.6**
NOR				pmax	pmax		
	comp=Z,28nm,1.1s						
BOD	**Bodaibo**	**147.39**	**300**	*e*PKHKP	PKPpre	09 37 04.8	
BOD				pmax	pmax		
	comp=Z,36nm,1.2s						
RAYN	**Ar Rayn**	**147.90**	**166**	PKPdf	**PKPdf**	**09 37 08.6**	**-0.4**
RAYN					**PKPbc**	**09 37 12.3**	**+0.3**
RAYN	**Ar Rayn**	**147.90**	**166**	PKP2	**PKPbc**	**09 37 12.3**	**+0.3**
ZAK	**Zakamensk**	**149.97**	**282**	*e*PKP2	**PKPbc**	**09 37 16.4**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,20nm,1.6s						
IRK	**Irkutsk**	**150.28**	**286**	*e*PKIKP	**PKPbc**	**09 37 15.6**	**-1.4**
IRK				pmax	pmax		
	comp=Z,83nm,2.0s						
TLY	**Talaya**	**150.37**	**284**	PKPdf	**PKPdf**	**09 37 11.1**	**-0.9**
TLY					**PKPbc**	**09 37 17.4**	**+0.1**
TLY	**Talaya**	**150.37**	**284**	*i* PKIKP	**PKPdf**	**09 37 11.1**	**-0.9**
TLY				*e*		09 37 17.7	
TLY				pmax	pmax		
	comp=Z,123nm,1.5s						
DOU	**Dourbes**	**150.44**	**79**	PKPbc	**PKiKP**	**09 37 18.1**	**-0.1**
DOU	**Dourbes**	**150.44**	**79**	PKPab	**PKPab**	**09 37 24.0**	**-0.1**
DOU	**Dourbes**	**150.44**	**79**	pPKPab	pPKPab	09 37 27.1	+0.5
ZCCA	**Zocca**	**150.98**	**94**		**PKPbc**	**09 37 18.8**	**-0.2**
MEM	**Membach**	**151.48**	**79**	PKPbc	**PKiKP**	**09 37 20.3**	**-0.1**
MEM				x	x	09 37 23.1	
MEM				x	x	09 37 29.5	
BFO	**Black Forest**	**151.69**	**85**		**PKPbc**	**09 37 20.7**	**+0.2**
BFO	**Black Forest**	**151.69**	**85**	PKIKP	**PKPbc**	**09 37 20.7**	**+0.2**
MOY	**Mondy**	**151.85**	**283**	*e*PKIKP	**PKPbc**	**09 37 20.5**	**-0.4**
MOY				pmax	pmax		
	comp=Z,63nm,2.2s						
FUORN	**Ofenpass-Fuorn**	**151.88**	**89**		**PKiKP**	**09 37 21.7**	**0.0**
TEOL	**Teolo**	**151.97**	**93**		**PKiKP**	**09 37 21.7**	**+0.1**
DAVA	**Damuels**	**152.03**	**88**	*i* PKPbc	**PKiKP**	**09 37 21.9**	**+0.1**
	comp=Z,21nm,1.0s						
CTI	**Castel Tesino**	**152.36**	**92**		**PKiKP**	**09 37 22.4**	**-0.1**
CTI	**Castel Tesino**	**152.36**	**92**	PKIKP	**PKiKP**	**09 37 22.4**	**-0.1**
FETA	**Feichten**	**152.37**	**89**	*e*PKPbc	**PKiKP**	**09 37 22.7**	**+0.1**
	comp=Z,26nm,1.0s,SNR=13						
RETA	**Reutte**	**152.64**	**88**	*e*PKPbc	**PKiKP**	**09 37 23.0**	**0.0**
	comp=Z,14nm,1.1s						
SQTA	**Sankt Quirin**	**152.75**	**89**	*e*PKPbc	**PKiKP**	**09 37 23.3**	**0.0**
	comp=Z,21nm,1.2s						
MOTA	**Moosalm**	**152.76**	**89**	*e*PKPbc	**PKiKP**	**09 37 23.3**	**0.0**
	comp=Z,14nm,0.9s,SNR=4.8						
ABTA	**Abfaltersbach**	**153.24**	**91**	*e*PKPbc	**PKPbc**	**09 37 24.1**	**0.0**
	comp=Z,12nm,1.2s						
KBA	**Koelnbreinsper**	**153.90**	**91**	*e*PKPbc	**PKPbc**	**09 37 25.1**	**-0.5**
	comp=Z,19nm,1.7s						
SOKA	**Soboth**	**154.65**	**93**	*e*PKPbc	**PKPbc**	**09 37 27.1**	**-0.1**
	comp=Z,14nm,1.6s						
GERES	**GERESS Array B**	**155.03**	**88**	PKP	**PKPdf**	**09 37 18.6**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=211,slow=3.4,SNR=5.7						
GERES	**GERESS Array B**	**155.03**	**88**		**PKPdf**	**09 37 17.5**	**-1.6**
WMQ	**Urumqi**	**155.27**	**257**	*e*PKP	**PKPdf**	**09 37 18.7**	**-0.8**
WMQ				LR	LR		
	comp=Z,280nm,29.1s						
WMQ				LR	LR		
	comp=Z,550nm,28.8s						
CLL	**Collm**	**155.76**	**82**	*e*PKPdf	**PKPdf**	**09 37 21.0**	**+1.2**
CLL	**Collm**	**155.76**	**82**	*e*PKIKP	**PKPdf**	**09 37 21.0**	**+1.2**
NB2	**NORSAR Subarra**	**157.25**	**58**	P	**PKPab**	**09 37 52.1**	**-0.7**
	comp=Z,14nm,1.4s,baz=271,slow=4.8						
NB2	**NORSAR Subarra**	**157.25**	**58**	P	**PKPab**	**09 37 52.1**	**-0.7**
	baz=271,slow=4.8						
NOA	**NORSAR Array B**	**157.25**	**58**	PKPab	**PKPab**	**09 37 52.5**	**-0.2**
	comp=Z,3.0nm,1.0s,baz=267,slow=4.5,SNR=4.2						
MORC	**Moravsky Berou**	**157.68**	**89**		**PKPdf**	**09 37 22.9**	**+0.4**
MORC				PKPab	**PKPab**	**09 37 54.6**	**-0.4**
MORC	**Moravsky Berou**	**157.68**	**89**	PKIKP	**PKPdf**	**09 37 22.9**	**+0.4**
MORC						09 37 54.6	
VYHS	**Vyhne**	**157.80**	**93**	*e*PKIKP	**PKPdf**	**09 37 22.9**	**+0.3**
VYHS	**Vyhne**	**157.80**	**93**	*e*PKP	**PKPdf**	**09 37 22.9**	**+0.3**
KSH	**Kashi**	**158.29**	**233**	PKP	**PKPdf**	**09 37 22.9**	**-0.8**
KSH				PKS	**PKSdf**	**09 40 51.0**	**-6.3**
KSH				PP	**PP**	**09 41 39.2**	**+1.0**
KSH				SKS	**SKSdf**	**09 44 25.1**	**-4.1**
KSH				SKKS	**SKKSac**	**09 48 22.5**	**-4.4**
KSH				LR	LR		
	comp=Z,640nm,14.2s						
BRTR	**Keskin Array B**	**159.72**	**131**	PKP	**PKPdf**	**09 37 25.2**	**-0.1**
	comp=Z,2.4nm,1.0s,baz=119,slow=4.4,SNR=7.7						
BRTR				PKPab	**PKPab**	**09 38 03.8**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=214,slow=4.4,SNR=5.7						
BRTR	**Keskin Array B**	**159.72**	**131**		**PKPdf**	**09 37 25.0**	**-0.3**
BRTR					**PKPab**	**09 38 03.3**	**-0.8**
BRTR	**Keskin Array B**	**159.72**	**131**	PKIKP	**PKPdf**	**09 37 25.0**	**-0.3**
BRTR						09 38 03.3	
NRN	**Naryn**	**159.78**	**237**	PKPdf	**PKPdf**	**09 37 25.5**	**-0.1**
NRN					**PKPab**	**09 38 03.5**	**-1.1**
NRN	**Naryn**	**159.78**	**237**	PKP2	**PKPab**	**09 38 03.5**	**-1.1**
NRN						10 37 25.5	
MK31	**Makanchi Array**	**160.10**	**257**	PKPdf	**PKPdf**	**09 37 24.8**	**-0.6**
MK31					**PKPab**	**09 38 04.3**	**-1.2**
MK31	**Makanchi Array**	**160.10**	**257**	PKP2	**PKPab**	**09 38 04.3**	**-1.2**
MK31						10 37 24.8	
MKAR	**Makanchi Array**	**160.10**	**257**	PKP	**PKPdf**	**09 37 22.2**	**-3.2**
	comp=Z,0.5nm,0.9s,baz=60,slow=2.8,SNR=4.4						
MKAR				PKPab	**PKPab**	**09 38 04.8**	**-0.7**
	comp=Z,6.2nm,0.9s,baz=125,slow=4.8,SNR=21						
MKAR				PP	**PP**	**09 41 45.4**	**-2.8**
	comp=Z,3.1nm,1.1s,baz=120,slow=6.3,SNR=9.6						
MKAR	**Makanchi Array**	**160.10**	**257**		**PKPdf**	**09 37 24.9**	**-0.5**
MKAR					**PKPab**	**09 38 04.5**	**-1.1**
MKAR	**Makanchi Array**	**160.10**	**257**	PKP2	**PKPab**	**09 38 04.5**	**-1.1**
MKAR						10 37 24.9	
MAKZ	**Makanchi**	**160.29**	**257**	PKPdf	**PKPdf**	**09 37 24.7**	**-0.9**
MAKZ					**PKPab**	**09 38 05.2**	**-1.1**
MAKZ	**Makanchi**	**160.29**	**257**	PKP2	**PKPab**	**09 38 05.2**	**-1.1**
MAKZ						10 37 24.7	
BURAR	**Bucovina Array**	**160.97**	**102**		**PKPdf**	**09 37 26.7**	**+0.3**
AAK	**Ala-Archa**	**161.43**	**236**		**PKPab**	**09 38 11.3**	**-0.2**
AAK	**Ala-Archa**	**161.43**	**236**	PKP2	**PKPab**	**09 38 11.3**	**-0.2**
ZAA0	**Zalesovo Array**	**161.81**	**279**	PKPdf	**PKPdf**	**09 37 24.6**	**-2.3**
ZAA0					**PKPab**	**09 38 12.3**	**-0.4**
ZALV	**Zalesovo Beam**	**161.81**	**279**	PKPab	**PKPab**	**09 38 12.5**	**-0.2**
	comp=Z,18nm,0.9s,baz=108,slow=4.7,SNR=28						
ZALV	**Zalesovo Beam**	**161.81**	**279**		**PKPdf**	**09 37 25.3**	**-1.6**
ZALV					**PKPab**	**09 38 12.6**	**-0.2**
ZALV	**Zalesovo Beam**	**161.81**	**279**	PKIKP	**PKPdf**	**09 37 25.3**	**-1.6**
ZALV						09 38 12.6	
GEYT	**Alibeck**	**162.51**	**192**	PKPab	**PKPab**	**09 38 15.2**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=220,slow=6.6,SNR=5.2						
GEYT	**Alibeck**	**162.51**	**192**	PKPdf	**PKPdf**	**09 37 27.3**	**-0.9**
GEYT					**PKPab**	**09 38 14.7**	**-1.5**
KURK	**Kurchatov**	**164.20**	**264**		**PKPdf**	**09 37 27.6**	**-1.8**
KURK				PKPab	**PKPab**	**09 38 22.5**	**-0.8**
KURK	**Kurchatov**	**164.20**	**264**	PKP2	**PKPab**	**09 38 22.5**	**-0.8**
KURK						10 37 27.6	
FINES	**FINESS Array B**	**164.38**	**55**	PKPab	**PKPab**	**09 38 22.8**	**-1.0**
	comp=Z,2.6nm,0.8s,baz=183,slow=5.6,SNR=3.4						
AKASG	**Malin Array Be**	**164.79**	**97**	PKP	**PKPdf**	**09 37 28.7**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=318,slow=0.6,SNR=7.2						
KBZ	**Khabaz**	**166.73**	**145**	PKPab	**PKPab**	**09 38 34.0**	**-0.5**
	comp=Z,3.3nm,0.9s,baz=149,slow=11.1,SNR=4.4						
KIV	**Kislovodsk**	**166.86**	**144**	*e*PKIKP	**PKPdf**	**09 37 31.8**	**-0.1**
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
OBN	**Obninsk**	**170.35**	**83**	*i* PKIKP	**PKPdf**	**09 37 31.3**	**-2.3**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ABKAR	**Akbulak array**	**172.88**	**217**		**PKPdf**	**09 37 33.3**	**-1.7**
ABKAR				PKPab	**PKPab**	**09 38 59.8**	**-1.9**
ABKAR	**Akbulak array**	**172.88**	**217**		**PKPdf**	**09 37 33.6**	**-1.5**
ARU	**Arti**	**176.80**	**296**	PKPdf	**PKPdf**	**09 37 34.1**	**-1.9**
ARU					**PKPab**	**09 39 17.9**	**-1.1**
ARU	**Arti**	**176.80**	**296**	PKP2	**PKPab**	**09 39 17.9**	**-1.1**
ARU						10 37 34.1	

RSNC 01 09:26:39.7±0.8,**6.81N**×**73.20W,h136**km±6km**,ML1.2, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.22**	**175**	*e*P	Pn	09 26 58.5	-0.2
BARC				*i*		09 26 58.8	
	comp=Z,6.5nm,0.3s						
BARC				*e*S	Sn	09 27 12.3	-0.6
PAMC	**Pamplona, Colo**	**0.73**	**43**	*e*P	Pn	09 27 01.4	-0.1
PAMC				*e*S	Sn	09 27 17.6	-0.4
PAMC				*i*		09 27 19.7	
	comp=Z,2.8nm,0.2s						
RUSC	**La Rusia**	**0.92**	**173**	*e*P	Pn	09 27 02.9	-0.1
RUSC				*i*		09 27 03.7	
	comp=Z,1.8nm,0.1s						
RUSC				*e*S	Sn	09 27 20.8	+0.2
PTBC	**PUERTO BERRIO,**	**1.27**	**258**	*e*P	Pn	09 27 05.3	-0.5
PTBC				*i*		09 27 06.2	
	comp=Z,2.4nm,0.1s						
PTBC				*e*S	Sn	09 27 25.4	-0.3
CHIC	**Chingaza**	**2.23**	**194**	*e*P	Pn	09 27 16.1	-1.1

*ATH **01** 09:30:58.8, 38.43N×20.46E, h9km±2km, ML2.6/14, Error ellipse: s-maj=2.5km s-min=0.6km az=264.0*
*THE **01** 09:30:58.9, 38.42N×20.44E, h6km±1km, ML2.7/11, Error ellipse: s-maj=1.3km s-min=0.7km az=290.0*
ISC 01 09:30:58.9±1.0,**38.43N**±0.02×**20.47E**±0.03,**h7**km±5km**, n43,**σ**0.59**/71**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.07**	**104**	P	**Pg**	**09 31 00.7**	**-0.1**
VSK1				S	**Sg**	**09 31 02.1**	**0.0**
	19μm,0.1s						
FSK	**Fiskardo**	**0.08**	**65**	P	**Pg**	**09 31 00.9**	**+0.1**
FSK				S	**Sg**	**09 31 02.1**	**-0.1**
	8μm,0.3s						
FSK	**Fiskardo**	**0.08**	**65**	P	**Pg**	**09 31 01.0**	**+0.1**
FSK				S	**Sg**	**09 31 02.6**	**+0.4**
FSK				AML	AML	09 31 02.8	
	comp=N,17174μm,0.4s						
FSK				AML	AML	09 31 02.9	
	comp=E,15844μm,0.2s						
KEF1	**Kardakata, Kep**	**0.15**	**181**	P	**Pg**	**09 31 02.0**	**0.0**
KEF1				S	**Sg**	**09 31 04.7**	**+0.7**
KEF4	**Livadi, Kephal**	**0.17**	**193**	P	**Pg**	**09 31 02.5**	**+0.1**
KEF4				S	**Sg**	**09 31 05.2**	**+0.4**
LXR1	**Lixouri, Cepha**	**0.23**	**187**	P	**Pg**	**09 31 03.8**	**+0.4**
EVGI	**Lefkada island**	**0.24**	**36**	P	**Pg**	**09 31 04.0**	**+0.3**
EVGI				S	**Sg**	**09 31 08.4**	**+1.4**
KEF3	**Kipouria, Keph**	**0.24**	**204**	P	**Pg**	**09 31 03.7**	**0.0**
KEF3				S	**Sg**	**09 31 06.9**	**-0.1**
ARG2	**Argostoli**	**0.25**	**177**	P	**Pg**	**09 31 03.8**	**0.0**
ARG2				S	**Sg**	**09 31 07.4**	**+0.3**
	comp=E,12μm,0.2s						
KEF2	**Argostoli. Kep**	**0.26**	**178**	P	**Pg**	**09 31 03.9**	**-0.1**
KEF2				S	**Sg**	**09 31 08.2**	**+0.7**
VLS	**Valsamata**	**0.27**	**160**	P	**Pg**	**09 31 04.0**	**-0.2**
VLS				S	**Sg**	**09 31 08.7**	**+1.0**
	comp=E,2μm,0.2s						
VLS	**Valsamata**	**0.27**	**160**	P	**Pg**	**09 31 03.9**	**-0.2**
VLS				S	**Sg**	**09 31 08.2**	**+0.5**
VLS				AML	AML	09 31 10.2	
	comp=N,5086μm,0.2s						
VLS				AML	AML	09 31 10.3	
	comp=E,4464μm,0.1s						
MGNA	**Meganis**	**0.34**	**47**	P	**Pg**	**09 31 05.7**	**+0.1**
MGNA				S	**Sg**	**09 31 10.7**	**+0.6**
MGNA				AML	AML	09 31 11.8	
	comp=E,3611μm,0.2s						
MGNA				AML	AML	09 31 11.9	
	comp=N,4289μm,0.2s						
LKD2	**Lefkada island**	**0.39**	**22**	P	**Pg**	**09 31 06.5**	**0.0**
LKD2				S	**Sb**	**09 31 13.3**	**-1.2**
	comp=N,715nm,0.2s						
LKD2	**Lefkada island**	**0.39**	**22**	P	**Pg**	**09 31 06.7**	**+0.2**
LKD2				S	**Sg**	**09 31 12.3**	**+0.6**
LKD2				AML	AML	09 31 14.0	
	comp=N,1631μm,0.4s						
LKD2				AML	AML	09 31 14.0	
	comp=E,1475μm,0.2s						
KFL	**Anninata**	**0.40**	**142**	P	**Pg**	**09 31 06.3**	**-0.4**
TSLK	**Tsoukalades, L**	**0.42**	**20**	P	**Pg**	**09 31 07.4**	**+0.3**
TSLK				S	**Sb**	**09 31 14.6**	**-0.8**
	comp=E,1μm,0.5s						
TSLK	**Tsoukalades, L**	**0.42**	**20**	P	**Pg**	**09 31 07.5**	**+0.3**
TSLK				S	**Sg**	**09 31 13.3**	**+0.6**
TSLK				AML	AML	09 31 16.2	
	comp=E,2244μm,0.3s						
TSLK				AML	AML	09 31 17.8	
	comp=N,2365μm,0.6s						
AST1	**Astakos**	**0.50**	**76**	P	**Pg**	**09 31 09.0**	**+0.5**
AST1				S	**Sb**	**09 31 17.2**	**-0.3**
VLMS	**Volimes, Zakyn**	**0.57**	**165**	P	**Pg**	**09 31 09.5**	**-0.4**
VLMS				S	**Sg**	**09 31 18.0**	**+0.7**
VLMS				AML	AML	09 31 20.4	
	comp=E,4024μm,0.3s						
VLMS				AML	AML	09 31 22.3	
	comp=N,6292μm,0.3s						
PDO	**Prodromos**	**0.58**	**73**	P	**Pg**	**09 31 10.3**	**+0.1**
PDO				S	**Sb**	**09 31 19.7**	**-0.3**
	comp=N,952nm,0.3s						
PDO	**Prodromos**	**0.58**	**73**	P	**Pg**	**09 31 10.3**	**+0.1**
PDO				AML	AML	09 31 25.3	
	comp=N,1302μm,0.3s						
PDO				AML	AML	09 31 28.1	
	comp=E,1400μm,0.4s						
PVO	**Paravola**	**0.85**	**77**	P	**Pg**	**09 31 15.3**	**+0.1**
PVO				S	**Sb**	**09 31 28.9**	**+1.3**
	comp=E,420nm,0.4s						
PVO	**Paravola**	**0.85**	**77**	P	**Pg**	**09 31 15.3**	**+0.1**
PVO				S	**Sb**	**09 31 27.3**	**-0.3**
PVO				AML	AML	09 31 32.7	
	comp=E,927μm,0.3s						
PVO				AML	AML	09 31 35.9	
	comp=N,748μm,0.5s						
RLS	**Riolos of Patr**	**0.86**	**115**	P	**Pg**	**09 31 15.6**	**+0.1**
RLS				S	**Sg**	**09 31 27.6**	**+0.8**
RLS				AML	AML	09 31 33.0	
	comp=N,416μm,0.4s						
RLS				AML	AML	09 31 35.1	
	comp=E,306μm,0.3s						
DRO	**Drossia**	**1.08**	**116**	P	**Pg**	**09 31 19.9**	**+0.2**
EFP	**Efpalio**	**1.12**	**90**	P	**Pg**	**09 31 19.7**	**-0.8**
EFP				S	**Sn**	**09 31 37.5**	**+0.6**
	comp=E,302nm,0.6s						
EFP	**Efpalio**	**1.12**	**90**	P	**Pg**	**09 31 19.9**	**-0.6**
ANX	**Ano Chora**	**1.15**	**81**	P	**Pg**	**09 31 20.0**	**-1.0**
ANX				S	**Sn**	**09 31 38.3**	**+0.7**
	comp=E,305nm,0.5s						
ANX	**Ano Chora**	**1.15**	**81**	P	**Pg**	**09 31 20.9**	**0.0**
ANX				AML	AML	09 31 46.0	
	comp=E,529μm,0.5s						
ANX				AML	AML	09 31 47.5	
	comp=N,728μm,0.5s						
EVR	**Evrytania**	**1.15**	**64**	P	**Pg**	**09 31 20.7**	**-0.4**
EVR				AML	AML	09 31 46.9	
	comp=E,198μm,0.6s						
EVR				AML	AML	09 31 47.0	
	comp=N,229μm,0.5s						
LAKA	**Lakka**	**1.20**	**98**	P	**Pg**	**09 31 21.5**	**-0.5**
SERG	**Sergoula**	**1.24**	**90**	P	**Pb**	**09 31 21.7**	**-1.1**
SERG				S	**Sn**	**09 31 40.9**	**+1.0**
	comp=N,222nm,0.6s						
SERG	**Sergoula**	**1.24**	**90**	P	**Pb**	**09 31 22.2**	**-0.6**
SERG				S	**Sn**	**09 31 39.9**	**+0.1**
SERG				AML	AML	09 31 46.8	
	comp=N,428μm,0.3s						
SERG				AML	AML	09 31 48.5	
	comp=E,394μm,0.7s						
TRIZ	**Trizonia**	**1.26**	**92**	P	**Pn**	**09 31 21.9**	**-1.1**
TRIZ				S	**Sn**	**09 31 41.3**	**+1.2**
TRIZ	**Trizonia**	**1.26**	**92**	P	**Pn**	**09 31 22.1**	**-0.9**
KALE	**Kalithea**	**1.31**	**91**	P	**Pn**	**09 31 22.8**	**-0.9**
KALE	**Kalithea**	**1.31**	**91**	P	**Pn**	**09 31 23.0**	**-0.8**
AMT	**Artemida-Makis**	**1.32**	**132**	P	**Pn**	**09 31 23.9**	**+0.1**
AMT				AML	AML	09 31 54.8	
	comp=E,543μm,0.8s						
AMT				AML	AML	09 31 55.0	
	comp=N,435μm,0.7s						
KLV	**Kalavryta, Ach**	**1.38**	**106**	P	**Pn**	**09 31 24.5**	**-0.2**
KLV				S	**Sg**	**09 31 43.6**	**+0.5**
KLV				AML	AML	09 31 48.9	
	comp=N,222μm,0.4s						
KLV				AML	AML	09 31 49.9	
	comp=E,152μm,0.7s						
AGG	**Agios Georgios**	**1.57**	**67**	P	**Pb**	**09 31 28.1**	**-0.2**
THL	**Klokotos Trika**	**1.65**	**46**	P	**Pb**	**09 31 29.7**	**-0.1**
ITM	**Ithomi**	**1.70**	**137**	P	**Pb**	**09 31 31.0**	**+0.5**

*LJU **01** 09:33:26.9, 45.67N×16.29E, h5km, ML1.5*
VIE 01 09:33:27.4±0.8,**45.72N**×**16.30E, h8**km**, mb1.8**/1**, ml1.7**/2**, Error ellipse: s-maj=5.6km s-min=5.0km az=177.0 25 km ESE of Zagreb, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAG	**Zagreb**	**0.24**	**297**	Sg	Sg	09 33 37.5	+1.9
ZAG	**Zagreb**	**0.24**	**297**	*e*Pg	Pg	09 33 33.2	+0.9
PTJ	**Puntijarka**	**0.30**	**309**	*e*Pg	Pg	09 33 33.3	-0.1
PTJ				Sg	Sg	09 33 38.0	+0.6
KALN	**Kalnik**	**0.43**	**15**	*e*Pg	Pg	09 33 35.1	-0.7
KALN				Sg	Sg	09 33 40.8	-0.6
GCIS	**Gornji Cirnik**	**0.49**	**288**	*i* Pg	Pg	09 33 37.1	+0.2
	comp=Z,10.0nm,0.1s						
OZLJ	**Ozalj**	**0.59**	**260**	*i* Pg	Pg	09 33 38.6	-0.2
OZLJ				Sg	Sg	09 33 47.3	+0.8
CRES	**Cresnjev**	**0.60**	**281**	*e*Pg	Pg	09 33 39.0	0.0
CRES				*i* Sg	Sb	09 33 47.9	-0.9
	comp=Z,14nm,0.2s						
LEGS	**Legarje**	**0.72**	**289**	*i* Pg	Pg	09 33 41.4	+0.1
KOGS	**Kog**	**0.73**	**357**	*i* Pg	Pb	09 33 42.7	+0.3
	comp=Z,18nm,0.2s						
BOJS	**Bojanci**	**0.77**	**254**	*e*Pg	Pg	09 33 41.3	-0.8
	comp=Z,4.0nm,0.1s						
SOKA	**Soboth**	**1.30**	**318**	*i* Pg	Pb	09 33 52.2	0.0
	comp=Z,1.5nm,0.2s						
SOKA				Sg	Sb	09 34 08.4	-0.7
	comp=Z,0.8nm,0.2s						
OBKA	**Obir**	**1.45**	**304**	Pg	Pb	09 33 54.6	-0.1
	comp=Z,0.7nm,0.2s						
OBKA				*e*Sg	Sg	09 34 15.7	+1.6
	comp=Z,3.8nm,0.3s						

IDC 01 09:48:51.1±3.1,**26.09N**×**54.01E,h0**km**,mb3.6**/5**, mb1 3.7**/5**,mb1mx3.4**/36**,mbtmp3.6**/5**,Error ellipse: s-maj=71.9km s-min=30.4km az=158.0,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	**21.79**	**314**	P	P	09 53 45.4	+0.6
	0.7nm,0.7s,baz=138,slow=12,SNR=5.0						
MKAR	**Makanchi Array**	**30.47**	**40**	P	P	09 55 06.2	+0.6
	0.2nm,0.7s,baz=237,slow=10.0,SNR=2.5						
ZALV	**Zalesovo Beam**	**35.97**	**31**	P	P	09 55 53.0	-0.4
	0.8nm,0.5s,baz=251,slow=8.5,SNR=5.5						
ARCES	**ARCESS Array B**	**46.58**	**347**	P	P	09 57 19.6	-0.8
	6.1nm,1.2s,baz=154,slow=6.6,SNR=3.0						
TORD	**Torodi Ar. Bea**	**50.63**	**266**	P	P	09 57 52.2	-0.1
	0.2nm,0.4s,baz=52,slow=7.0,SNR=3.1						

*IDC **01** 10:06:21.1±0.9, 4.68S×105.37W, h0km, mb4.2/18, mb1 4.3/18, mb1mx4.3/36, mbtmp4.2/18, MS4.8/29, Ms1 4.8/29, ms1mx4.8/32, Error ellipse: s-maj=29.0km s-min=15.0km az=59.0*
*NEIC **01** 10:06:22.3±1.6, 4.7S±0.1×105.1W±0.1, h10km±2km, mb4.7/190, Mwc5.4(GCMT), Error ellipse: s-maj=16.6km s-min=15.6km az=88.0*
*NEIC **01** 10:06:26, 4.53S×105.26W, h19km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.10; $M_{\theta\theta}$0.52; $M_{\phi\phi}$-0.41; $M_{r\theta}$0.23; $M_{\theta\phi}$1.38; $M_{\phi r}$-0.04; Fault plane solution: $M_0$1.48000×10^{17} NP1:ϕ_s9.00000°, δ81.00000°, λ-179.00000°. NP2:ϕ_s279.00000°, δ89.00000°, λ-9.00000°. Principal axes: T 1.5249, Plg6.0000°, Azm325.0000°; N -0.1006, Plg81.0000°, Azm93.0000°; P -1.4244, Plg7.0000°, Azm234.0000°;*
*GCMT **01** 10:06:27.3±0.1, 4.49S±0.01×105.26W±0.01, h16km, MW5.3/146, Moment Tensor Solution. s116,c188; s146,c272; Duration: 1.1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.12±.02; $M_{\theta\theta}$0.41±.02; $M_{\phi\phi}$-0.29±.02; $M_{r\theta}$0.03±.04; $M_{\theta\phi}$1.21±.01; $M_{\phi r}$0.04±.04; Best double couple: $M_0$1.26100×10^{17} NP1:ϕ_s98.00000°, δ88.00000°, λ1.00000°. NP2:ϕ_s8.00000°, δ89.00000°, λ178.00000°. Principal axes: T 1.3230, Plg2.0000°, Azm323.0000°; N -0.1240, Plg88.0000°, Azm156.0000°; P -1.1990, Plg0.0000°, Azm53.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 01 10:06:23.7±0.5,**4.55S**±0.08×**105.08W**±0.09,**h13**km**,n416, σ1.17**/396**,mb4.7**/98**,MS4.8**/31**,1C-1D,Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**15.27**	**76**	Pn	**Pn**	**10 09 57.0**	**-2.2**
PAYG				IAmb	IAmb	10 10 06.2	
	comp=Z,56nm,1.4s						
RPN	**Rapa Nui**	**22.82**	**190**	LR	LR	10 17 56.8	
	comp=Z,2μm,19.9s,baz=6.5,slow=31						
RPN	**Rapa Nui**	**22.82**	**190**	P	**P**	**10 11 24.4**	**-2.1**
TLIG	**Tlapa**	**22.89**	**16**	P	**P**	**10 11 23.0**	**-4.5**
CMIG	**Matias Romero**	**23.75**	**25**	P	**P**	**10 11 37.3**	**+1.4**
	comp=Z,4.4nm,1.0s,baz=199,slow=6.6,SNR=6.7						
CMIG				LR	LR	10 17 37.5	
	comp=Z,310nm,20.4s,baz=200,slow=28						
SNET	**Serv Nac Est T**	**24.00**	**41**	P	**P**	**10 11 38.2**	**-0.2**
APG	**El Apazote**	**24.23**	**36**	P	**P**	**10 11 42.4**	**+1.6**
	comp=Z,18nm,1.0s,baz=239,slow=9.8,SNR=9.1						
APG				LR	LR	10 19 13.5	
	comp=Z,3μm,19.4s,baz=202,slow=32						
CCIG	**Comitan**	**24.34**	**31**	P	**P**	**10 11 41.4**	**-0.3**
MOIG	**Morelia**	**24.38**	**9**	P	**P**	**10 11 41.1**	**-0.9**
MOIG				IAmb	IAmb	10 11 52.1	
	comp=Z,28nm,1.0s						
JTS	**Las Juntas de**	**24.89**	**54**	P	**P**	**10 11 48.6**	**+2.1**
	comp=Z,9.0nm,0.9s,baz=345,slow=12,SNR=2.9						
JTS				LR	LR	10 19 01.7	
	comp=Z,5μm,20.6s,baz=302,slow=30						
JTS	**Las Juntas de**	**24.89**	**54**	P	**P**	**10 11 44.8**	**-1.7**
JTS				IAmb	IAmb	10 11 58.6	
	comp=Z,32nm,1.4s						
ESTN	**Estel**	**25.55**	**46**	P	**P**	**10 11 51.3**	**-1.3**
TGUH	**Tegucigalpa,Un**	**25.57**	**43**	P	**P**	**10 11 51.2**	**-1.6**
TGUH				IAmb	IAmb	10 12 02.0	
	comp=Z,26nm,1.2s						
ATAH	**Atahualpa**	**26.67**	**97**	LR	LR	10 20 12.1	
	comp=Z,2μm,19.1s,baz=271,slow=31						
OTAV	**Otavalo**	**27.03**	**81**	P	**P**	**10 12 06.4**	**0.0**
ZAIG	**Zacatecas**	**27.26**	**5**	P	**P**	**10 12 08.3**	**+0.1**
BCIP	**Isla Barro Col**	**28.62**	**62**	P	**P**	**10 12 19.8**	**-0.3**
NNA	**Nana**	**28.89**	**107**	LR	LR	10 20 48.1	
	comp=Z,2μm,21.0s,baz=273,slow=30						
NNA	**Nana**	**28.89**	**107**	P	**P**	**10 12 22.0**	**-0.6**
LPIG	**La Paz**	**28.93**	**350**	LR	LR	10 20 56.6	
	comp=Z,3μm,20.1s,baz=168,slow=30						
TEIG	**Tepich**	**29.64**	**33**	LR	LR	10 22 39.1	
	comp=Z,3μm,20.7s,baz=234,slow=33						
TEIG	**Tepich**	**29.64**	**33**	P	**P**	**10 12 28.9**	**-0.2**
TEIG				IAmb	IAmb	10 12 46.7	
	comp=Z,28nm,1.3s						
FLOC	**Florencia**	**30.03**	**79**	P	**P**	**10 12 32.0**	**-0.8**
HPIG		**31.30**	**359**	P	**P**	**10 12 43.7**	**-0.2**
ROSC	**El Rosal**	**32.11**	**73**	LR	LR	10 23 30.2	
	comp=Z,2μm,19.6s,baz=257,slow=32						
SRIG	**Santa Rosalia**	**32.43**	**348**	P	**P**	**10 12 52.4**	**-1.2**
SRIG				IAmb	IAmb	10 13 09.7	
	comp=Z,15nm,1.1s						
RUSC	**La Rusia**	**33.59**	**72**	P	**P**	**10 13 03.3**	**-1.3**
TX31	**Lajitas Ar. Si**	**33.72**	**2**	P	**P**	**10 13 03.9**	**-1.1**
TX32	**Lajitas Array**	**33.72**	**2**	P	**P**	**10 13 03.6**	**-1.4**
TXAR	**Lajitas Array**	**33.72**	**2**	P	**P**	**10 13 05.9**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=190,slow=9.7,SNR=14						
TXAR				PcP	**PcP**	**10 15 44.6**	**-0.1**

comp=Z,0.6nm,0.9s,baz=182,slow=4.5,SNR=3.2
TXAR LR LR 10 24 27.5
comp=Z,1µm,20.7s,baz=0.0,slow=32
TXAR Lajitas Array 33.72 2 P P 10 13 03.5 -1.5
HSIG 33.85 351 P P 10 13 06.1 +0.1
HSIG IAmb IAmb 10 13 12.1
comp=Z,21nm,1.4s
JCT Junction City 35.19 8 P P 10 13 17.6 -0.1
JCT IAmb IAmb 10 13 30.1
comp=Z,9.0nm,0.9s
JCT Junction City 35.19 8 P P 10 13 19.4 +1.6
baz=189
319A Douglas 35.95 354 P P 10 13 24.3 0.0
319A IAmb IAmb 10 13 36.7
comp=Z,6.7nm,0.9s
MNTX Cornudas Mount 36.05 360 P P 10 13 25.2 +0.3
MNTX Cornudas Mount 36.05 360 P P 10 13 27.1 +2.1
baz=179
SDV Santo Domingo 36.85 69 P P 10 13 34.1 +1.8
comp=Z,6.6nm,0.8s,baz=239,slow=6.2,SNR=5.9
SDV Santo Domingo 36.85 69 P P 10 13 33.7 +1.4
SDV IAmb IAmb 10 13 40.5
comp=Z,8.2nm,0.9s
121A Cookes Peak, D 36.97 356 P P 10 13 34.3 +1.3
121A Cookes Peak, D 36.97 356 P P 10 13 35.0 +2.0
baz=175
WHTX Lake Whitney, 37.05 11 P P 10 13 32.3 -1.2
WHTX IAmb IAmb 10 13 45.8
comp=Z,21nm,1.2s
ABTX Abilene, Hawle 37.33 8 P P 10 13 36.5 +0.6
ABTX IAmb IAmb 10 13 48.6
comp=Z,26nm,1.4s
ABTX Abilene, Hawle 37.33 8 P P 10 13 37.1 +1.2
baz=189
LPAZ La Paz 38.09 111 P P 10 13 47.0 +3.7
comp=Z,2.4nm,0.9s,baz=271,slow=3.5,SNR=4.3
LPAZ LR LR 10 27 12.8
comp=Z,904nm,18.8s,slow=33
MSTX Muleshoe 38.37 3 P P 10 13 45.2 +0.3
MSTX IAmb IAmb 10 13 52.7
comp=Z,16nm,0.9s
MSTX Muleshoe 38.37 3 P P 10 13 46.6 +1.8
baz=183
BAR Barrett 38.62 344 P P 10 13 47.0 +0.1
BAR IAmb IAmb 10 14 01.9
comp=Z,20nm,1.4s
ANMO Albuquerque 39.30 358 LR LR 10 27 22.4
comp=Z,718nm,20.1s,baz=182,slow=32
ANMO Albuquerque 39.30 358 P P 10 13 53.0 +0.3
ANMO Albuquerque 39.30 358 P P 10 13 54.2 +1.4
baz=177
LVC Limon Verde 39.31 121 P P 10 13 55.2 +2.0
comp=Z,10nm,1.1s,baz=291,slow=7.9,SNR=3.9
LVC Limon Verde 39.31 121 P P 10 13 51.6 -1.6
LVC IAmb IAmb 10 14 03.7
comp=Z,17nm,1.2s
AMTX Amarillo 39.35 4 P P 10 13 53.6 +0.6
AMTX Amarillo 39.35 4 P P 10 13 54.4 +1.4
baz=185
Z41A Richland Creek 39.36 16 P P 10 13 53.4 +0.5
Z41A IAmb IAmb 10 14 04.5
comp=Z,16nm,0.9s
XPFO Pion Flat 39.45 345 P P 10 13 53.0 -0.9
PFO Pinyon Flats O 39.45 345 LR LR 10 26 15.1
comp=Z,3µm,21.2s,baz=154,slow=30
PFO Pinyon Flats O 39.45 345 P P 10 13 53.0 -0.9
WMOK Wichita Mounta 39.52 8 P P 10 13 54.3 0.0
WMOK Wichita Mounta 39.52 8 P P 10 13 55.1 +0.7
baz=190
X34A Smith Ranch, M 39.53 9 P P 10 13 52.4 -2.1
WLAR White Oak Lake 39.68 16 P P 10 13 55.8 +0.2
WLAR IAmb IAmb 10 14 07.2
comp=Z,15nm,0.9s
W18A Petrified Fore 39.70 354 P P 10 13 55.2 -0.8
W35A Tecumseh 40.24 10 P P 10 13 59.4 -0.9
FNO Franklin 40.25 10 P P 10 13 59.6 -0.7
WUAZ Wupatki 40.29 352 P P 10 14 01.0 +0.1
WUAZ Wupatki 40.29 352 P P 10 14 02.4 +1.5
baz=170
W13A Hualapai Mount 40.30 349 P P 10 13 59.0 -2.0
MIAR Mount Ida 40.37 15 P P 10 14 01.9 +0.5
MIAR IAmb IAmb 10 14 13.8
comp=Z,11nm,1.0s
MIAR Mount Ida 40.37 15 P P 10 14 02.1 +0.8
baz=198
OKCSW OKLAHOMA CITY 40.39 10 P P 10 14 01.2 -0.3
OKCFA Oklahoma City 40.39 10 P P 10 14 02.1 +0.5
OKCFA IAmb IAmb 10 14 09.2
comp=Z,17nm,0.9s
PASC Pasadena Art C 40.45 343 P P 10 14 01.6 -0.5
PASC IAmb IAmb 10 14 14.4
comp=Z,22nm,1.3s
MWC Mount Wilson 40.46 343 P P 10 14 03.2 +0.8
MWC IAmb IAmb 10 14 19.4
comp=Z,12nm,1.2s
250A Grady 40.50 25 P P 10 14 03.0 +0.5
250A IAmb IAmb 10 14 06.9
comp=Z,24nm,1.2s
W39A Magazine 40.94 14 P P 10 14 06.0 0.0
W39A IAmb IAmb 10 14 18.8
comp=Z,20nm,1.3s
W39A Magazine 40.94 14 P P 10 14 07.4 +1.4
baz=197
U32A Winter Ranch, 41.11 7 P P 10 14 07.2 -0.3
U32A IAmb IAmb 10 14 15.0
comp=Z,21nm,0.8s
GSC Goldstone, Bar 41.14 345 P P 10 14 07.0 -0.9
TUL1 Leonard 41.18 11 P P 10 14 08.9 +0.8
TUL1 IAmb IAmb 10 14 20.0
comp=Z,24nm,1.2s
TUL1 Leonard 41.18 11 P P 10 14 09.2 +1.2
baz=194
TIGA Tifton 41.24 28 P P 10 14 09.5 +1.0
TIGA IAmb IAmb 10 14 11.8
comp=Z,30nm,1.2s
W41B Gary Mavity, V 41.31 16 P P 10 14 07.8 -1.3
W41B Gary Mavity, V 41.31 16 P P 10 14 10.4 +1.3
baz=199
U15A North Rim 41.32 351 P P 10 14 06.8 -2.7
WHAR Wooly Hollow 41.41 16 P P 10 14 10.7 +0.7
WHAR IAmb IAmb 10 14 21.1
comp=Z,18nm,1.3s
456A Hilliard 41.42 31 P P 10 14 10.3 +0.2
T25A Trinidad 41.48 1 P P 10 14 11.2 +0.5
T25A Trinidad 41.48 1 P P 10 14 12.8 +2.1
baz=181
OXF Oxford 41.57 20 P P 10 14 11.6 +0.4
OXF IAmb IAmb 10 14 21.3
comp=Z,37nm,1.4s
OXF Oxford 41.57 20 P P 10 14 14.6 +3.4
baz=204
MVCO Mesa Verde 41.66 356 P P 10 14 12.0 -0.3
MVCO IAmb IAmb 10 14 23.1
comp=Z,19nm,1.4s
MVCO Mesa Verde 41.66 356 P P 10 14 15.5 +3.2
baz=174
Z50A Ashland 41.75 24 P P 10 14 12.9 +0.1
Z50A IAmb IAmb 10 14 25.3
comp=Z,16nm,1.3s
Z50A Ashland 41.75 24 P P 10 14 13.4 +0.7
baz=209
152A Waverly Hall 41.76 26 P P 10 14 10.1 -2.7
152A IAmb IAmb 10 14 27.2
comp=Z,16nm,1.1s
152A Waverly Hall 41.76 26 P P 10 14 14.4 +1.6
baz=211
SAML Samuel 41.82 98 P P 10 14 12.2 -1.5
SAML IAmb IAmb 10 14 17.6
comp=Z,9.0nm,0.9s
SHPR Sheep Range 41.91 348 P P 10 14 14.2 -0.1
HHAR Hobbs 41.94 14 P P 10 14 12.9 -1.4
KNB Kanab 41.98 351 P P 10 14 15.1 +0.3
Y49A Blount Mountai 42.08 23 P P 10 14 15.1 -0.4
Y49A IAmb IAmb 10 14 23.8
comp=Z,26nm,1.5s
SDCO Great Sand Dun 42.08 360 P P 10 14 16.2 +0.5
SDCO Great Sand Dun 42.08 360 P P 10 14 18.7 +3.0
baz=179
S22A 4UR Ranch, Cre 42.11 358 P P 10 14 15.6 -0.4
S22A 4UR Ranch, Cre 42.11 358 P P 10 14 17.6 +1.6
baz=177
DAC Darwin (Calif) 42.27 345 P P 10 14 17.6 +0.4
U40A Yellville 42.27 15 P P 10 14 17.2 +0.2
U40A IAmb IAmb 10 14 29.1
comp=Z,9.4nm,1.0s
U40A Yellville 42.27 15 P P 10 14 17.2 +0.2
baz=198
PKCU Pink Cliffs 42.31 351 P P 10 14 17.6 -0.1
Z52A Williamson 42.33 26 P P 10 14 19.0 +1.5
baz=211
X48A Hartselle 42.36 22 P P 10 14 17.1 -0.5
154A Montrose 42.44 28 P P 10 14 18.0 -0.4
154A Montrose 42.44 28 P P 10 14 20.0 +1.6
baz=214
PLAL Pickwick Lake 42.45 21 P P 10 14 18.4 -0.1
PLAL IAmb IAmb 10 14 30.6
comp=Z,20nm,0.9s
LCAR Lake Charles 42.46 17 P P 10 14 18.2 -0.3
LCAR IAmb IAmb 10 14 26.8
comp=Z,10.0nm,0.8s
CCUT Cedar City 42.59 350 P P 10 14 20.1 +0.3
Y51A Rockmart 42.66 25 P P 10 14 21.1 +0.8
baz=210
155A Kite 42.75 29 P P 10 14 22.5 +1.6
baz=214
MTPU Mount Pierson 42.88 352 P P 10 14 22.3 0.0
FPAL Fort Paine 42.99 24 P P 10 14 22.0 -1.0
FPAL IAmb IAmb 10 14 35.2
comp=Z,13nm,1.0s
MGMO Mountain Grove 43.17 15 P P 10 14 24.0 -0.3
W49A Belvidere 43.24 23 P P 10 14 26.1 +1.2
baz=208
Y53A Monroe 43.27 26 P P 10 14 26.1 +1.0
baz=212
X51A Calhoun 43.33 25 P P 10 14 26.3 +0.7
X51A IAmb IAmb 10 14 39.1
comp=Z,16nm,0.9s
X51A Calhoun 43.33 25 P P 10 14 26.2 +0.6
baz=210
PBMO Poplar Bluff 43.33 17 P P 10 14 26.0 +0.4
MSU Marysvale 43.34 352 P P 10 14 27.3 +1.4
KSCO Kaye Shedlock' 43.40 3 P P 10 14 25.4 -0.9
KSCO IAmb IAmb 10 14 38.1
comp=Z,9.5nm,0.7s
CBKS Cedar Bluff 43.43 6 P P 10 14 26.8 +0.4
CBKS Cedar Bluff 43.43 6 P P 10 14 27.4 +1.1
baz=187
PARMO Parma 43.43 18 P P 10 14 26.5 +0.2
SWET Sewanee 43.46 23 P P 10 14 26.0 -0.7
SWET IAmb IAmb 10 14 36.8
comp=Z,16nm,1.3s
WVT Waverly 43.57 20 P P 10 14 27.4 -0.2
WVT IAmb IAmb 10 14 39.4
comp=Z,19nm,1.0s
WVT Waverly 43.57 20 P P 10 14 28.2 +0.7
baz=205
V48A Smith Brothers 43.59 22 P P 10 14 26.4 -1.3
V48A IAmb IAmb 10 14 39.9
comp=Z,13nm,0.9s
Q16A Castle Valley 43.61 353 P P 10 14 28.2 +0.2
X52A Dahlonega 43.76 26 P P 10 14 30.0 +0.8
baz=211
R11A Troy Canyon, C 43.78 348 P P 10 14 29.3 -0.1
R11A Troy Canyon, C 43.78 348 P P 10 14 31.9 +2.5
baz=164
CFA Coronel Fontan 43.80 132 P P 10 14 29.7 +0.1
comp=Z,4.7nm,0.9s,baz=319,slow=1.4,SNR=4.9
W51A Cleveland 43.88 24 P P 10 14 31.8 +1.8
baz=210
X53A Estanollee 43.94 26 P P 10 14 31.7 +1.2
baz=212
V49A McMinnville 43.95 23 P P 10 14 30.7 +0.1
baz=208
CLTN Cedars of Leba 44.08 22 P P 10 14 33.4 +1.8
Y55A Saluda 44.12 28 P P 10 14 32.8 +0.8
baz=214
ISCO Idaho Springs 44.13 359 P P 10 14 31.2 -1.1
ISCO Idaho Springs 44.13 359 P P 10 14 33.7 +1.4
baz=179
KSU1 Kansas State U 44.13 9 P P 10 14 33.4 +1.4
baz=192
W52A Murphy 44.17 25 P P 10 14 32.1 -0.3
W52A IAmb IAmb 10 14 45.2
comp=Z,13nm,0.9s
W52A Murphy 44.17 25 P P 10 14 33.9 +1.6
baz=211
V50A Pikevile 44.18 24 P P 10 14 33.0 +0.6
baz=209
CPCT Cooper Cave 44.23 24 P P 10 14 33.2 +0.4
CPCT IAmb IAmb 10 14 44.6
comp=Z,14nm,1.2s
CCM Cathedral Cave 44.29 16 P P 10 14 33.6 +0.3
CCM IAmb IAmb 10 14 35.2
comp=Z,13nm,1.1s
CCM Cathedral Cave 44.29 16 P P 10 14 33.8 +0.5
baz=200
X54A Belton 44.39 27 P P 10 14 35.1 +1.0
baz=213
NVAR Mina Array Bea 44.48 345 P P 10 14 36.0 +0.9
comp=Z,0.6nm,0.9s,baz=172,slow=6.9,SNR=3.1
NVAR LR LR 10 29 22.2
comp=Z,2µm,18.4s,baz=172,slow=31
NVAR Mina Array Bea 44.48 345 P P 10 14 34.7 -0.4
S44A Carbondale 44.53 18 P P 10 14 35.9 +0.7
O20A White River Ci 44.56 357 P P 10 14 36.2 +0.6
O20A IAmb IAmb 10 14 52.2
comp=Z,18nm,1.2s
O20A White River Ci 44.56 357 P P 10 14 37.8 +2.2
baz=175
T47A Sharon Grove 44.60 21 P P 10 14 34.7 -1.0
T47A IAmb IAmb 10 14 39.1
comp=Z,9.0nm,0.8s
V51A Loudon 44.60 24 P P 10 14 36.2 +0.5
V51A IAmb IAmb 10 14 43.4
comp=Z,12nm,0.9s
V51A Loudon 44.60 24 P P 10 14 36.6 +0.9
baz=210
U49A Red Boiling Sp 44.66 22 P P 10 14 36.8 +0.6
baz=208,SNR=5.9
X55A Gracelyn & Ava 44.66 28 P P 10 14 37.5 +1.1
baz=214
JSC Jenkinsville 44.69 28 P P 10 14 37.2 +0.7
JSC IAmb IAmb 10 14 38.6
comp=Z,6.4nm,1.0s
TKL Tuckaleechee C 44.72 25 P P 10 14 35.6 -1.1
TKL IAmb IAmb 10 14 54.3
comp=Z,8.7nm,1.1s
RYN Ryan 44.73 345 P P 10 14 37.0 +0.1
W54A Cherokee Point 44.92 27 P P 10 14 39.5 +1.1
baz=213
U50A Jamestown 44.93 23 P P 10 14 39.0 +0.6
baz=209
X56A White Oak 44.97 28 P P 10 14 39.6 +0.8
baz=215
V53A Saluda 45.13 26 P P 10 14 39.8 -0.3
V53A IAmb IAmb 10 14 52.7
comp=Z,12nm,1.1s
V53A Saluda 45.13 26 P P 10 14 41.2 +1.1
baz=212
Y58A Scranton 45.16 30 P P 10 14 40.4 +0.1
N23A Red Feather La 45.23 359 P P 10 14 42.5 +1.4
baz=178
U51A La Follette 45.23 24 P P 10 14 40.7 -0.2
baz=210
YERR Yerington 45.25 344 P P 10 14 38.8 -2.4
YERR IAmb IAmb 10 14 52.0
comp=Z,12nm,1.4s
T49A Edmonton 45.27 22 P P 10 14 40.2 -0.9
T49A Edmonton 45.27 22 P P 10 14 41.8 +0.6
baz=208,SNR=6.2
USIN University of 45.29 19 P P 10 14 40.9 -0.3
BIRD Birdtown, Kers 45.36 29 P P 10 14 40.6 -1.3
PPT Papeete 45.41 250 LR LR 10 28 43.1
comp=Z,969nm,19.0s,baz=78,slow=30
PPT Papeete 45.41 250 P P 10 14 41.3 -1.3
T50A Nancy 45.46 23 P P 10 14 43.1 +0.5
baz=209
U52A Thorn Hill 45.51 25 P P 10 14 43.4 +0.3
baz=211
TZTN Tazewell 45.57 24 P P 10 14 43.4 -0.1
V54A Nebo 45.61 27 P P 10 14 45.0 +1.1
baz=213
Y59A Loris 45.63 31 P P 10 14 45.1 +1.1
baz=218
VCNR Virginia City 45.65 344 P P 10 14 43.9 -0.4
VCNR IAmb IAmb 10 15 01.6
comp=Z,9.8nm,1.4s
W56A Indian Trail 45.70 28 P P 10 14 45.2 +0.7
baz=215
AFDM Forest Hills D 45.71 343 P P 10 14 44.7 +0.2
AFDM IAmb IAmb 10 14 54.9
comp=Z,9.0nm,1.3s
T51A Gray 45.77 24 P P 10 14 45.4 +0.3
baz=210,SNR=6.4
TCUT Toone Canyon 45.81 353 P P 10 14 45.4 -0.2
OLIL Olney 45.85 19 P P 10 14 42.8 -2.8
S49A Springfield 45.96 22 P P 10 14 46.2 -0.4
baz=208
PAHR Pah Rah Range 45.97 345 P P 10 14 47.0 +0.2
WCI Wyandotte Cave 45.99 21 P P 10 14 48.1 +1.3
baz=206
V55A Taylorsville 46.00 27 P P 10 14 46.6 -0.2
V55A IAmb IAmb 10 14 59.3
comp=Z,13nm,1.0s
V55A Taylorsville 46.00 27 P P 10 14 47.5 +0.6
baz=214
ELK Elko 46.02 349 LR LR 10 31 06.6
comp=Z,2µm,18.5s,baz=170,slow=32
ELK Elko 46.02 349 P P 10 14 47.4 +0.1
BGNE Belgrade 46.17 7 P P 10 14 44.6 -3.6
BGNE Belgrade 46.17 7 P P 10 14 49.2 +1.0
baz=189
S50A Richmond 46.21 23 P P 10 14 48.9 +0.4
baz=209,SNR=11
P43A Skaggs, Pawnee 46.25 17 P P 10 14 47.1 -1.7
P43A IAmb IAmb 10 14 51.1
comp=Z,12nm,1.0s
W58A Raeford 46.26 30 P P 10 14 49.9 +0.9
baz=217
T52A Hallie 46.28 25 P P 10 14 48.8 -0.3
T52A Hallie 46.28 25 P P 10 14 50.4 +1.3
baz=211
V56A Mocksville 46.30 28 P P 10 14 49.4 +0.2
baz=215
BEKR Beckworth 46.38 344 P P 10 14 49.0 -1.1
ORV Oroville 46.42 342 P P 10 14 50.5 +0.4
ORV IAmb IAmb 10 15 02.4
comp=Z,9.5nm,1.2s
R49A Shelbyville 46.45 22 P P 10 14 49.9 -0.6
R49A Shelbyville 46.45 22 P P 10 14 50.6 +0.1
baz=208
S51A Beattyville 46.49 24 P P 10 14 50.7 0.0
S51A IAmb IAmb 10 14 53.2
comp=Z,6.7nm,0.8s
S51A Beattyville 46.49 24 P P 10 14 51.8 +1.1
baz=210
V57A Coltrane Farms 46.70 28 P P 10 14 52.6 +0.2
baz=216
S52A Salyersville 46.73 24 P P 10 14 53.4 +0.7
baz=211,SNR=8.4
R50A Paris 46.76 23 P P 10 14 52.3 -0.6
R50A Paris 46.76 23 P P 10 14 52.6 -0.2
baz=209
T54A Tazewell 46.84 26 P P 10 14 53.7 +0.1
baz=213
P46A Rosedale 46.94 19 P P 10 14 53.7 -0.5
K22A Casper 46.99 359 P P 10 14 58.7 +3.9
baz=178
O44A Mansfield 47.03 17 P P 10 14 54.9 -0.1
R51A Hillsboro 47.06 23 P P 10 14 55.4 +0.2
baz=210
S53A Williamson 47.13 25 P P 10 14 56.4 +0.6
baz=212
Q49A Aurora 47.18 22 P P 10 14 56.4 +0.2
baz=208,SNR=7.2
T55A Pulaski 47.24 27 P P 10 14 57.8 +1.2
baz=214
PDAR Pinedale Array 47.27 356 P P 10 14 57.9 +0.9
comp=Z,0.9nm,0.9s,baz=178,slow=5.2,SNR=6.9
PDAR LR LR 10 32 30.7
comp=Z,1µm,18.4s,baz=180,slow=33
PDAR Pinedale Array 47.27 356 P P 10 14 57.1 +0.1
U57A Blanch 47.35 28 P P 10 14 58.1 +0.7
baz=216
V59A Middlesex 47.35 30 P P 10 14 57.5 +0.1
baz=218
P48A Milroy 47.40 21 P P 10 14 56.7 -1.1
P48A IAmb IAmb 10 15 04.7
comp=Z,7.9nm,0.8s
P48A Milroy 47.40 21 P P 10 14 57.2 -0.6
baz=207
AHID Auburn Hatcher 47.41 354 P P 10 14 57.6 -0.4
T56A Rocky Mt 47.51 27 P P 10 14 59.1 +0.4
baz=215
PLCA Paso Flores 47.52 144 P P 10 14 58.0 -0.9
comp=Z,5.9nm,1.2s,baz=328,slow=11,SNR=3.4
PLCA LR LR 10 29 47.4
comp=Z,3µm,22.0s,baz=344,slow=30
PLCA Paso Flores 47.52 144 P P 10 14 55.6 -3.3
S54A Dingess, Beckl 47.58 26 P P 10 14 58.2 -1.1
S54A Dingess, Beckl 47.58 26 P P 10 15 00.2 +0.9
baz=213
P49A Miami Univ. Ec 47.72 21 P P 10 14 60.0 -0.3
baz=208
T57A Hurt 47.84 28 P P 10 15 02.0 +0.7
baz=216
S55A Lewisburg 47.91 26 P P 10 15 02.5 +0.6
baz=214
R54A Victor 48.03 26 P P 10 15 03.3 +0.6
baz=213
SNOW Snow King Moun 48.06 354 P P 10 15 02.4 -0.8
SNOW IAmb IAmb 10 15 21.3
comp=Z,7.2nm,1.4s
TPAW Teton Pass 48.11 354 P P 10 15 02.6 -1.0
P50A Jamestown 48.12 22 P P 10 15 03.0 -0.4
baz=209
T58A Grand View Acr 48.14 29 P P 10 15 04.1 +0.5
baz=217
Q52A Bidwell 48.16 24 P P 10 15 03.6 -0.1
baz=211
O48A Farmland 48.20 20 P P 10 15 03.4 -0.6
baz=207
MOD Modoc Plateau 48.27 345 P P 10 15 03.0 -1.6
MOD IAmb IAmb 10 15 16.5
comp=Z,5.8nm,1.1s
P51A Williamsport 48.29 23 P P 10 15 03.2 -1.5
P51A IAmb IAmb 10 15 06.3
comp=Z,12nm,1.1s
P51A Williamsport 48.29 23 P P 10 15 04.9 +0.2
baz=210
Q53A Leroy 48.38 25 P P 10 15 05.6 +0.2
baz=212
L42A Oliver, Polo 48.41 15 P P 10 15 04.7 -0.9
L42A IAmb IAmb 10 15 06.6
comp=Z,6.6nm,0.9s
RSSD Black Hills 48.45 1 P P 10 15 05.7 -0.5
RSSD Black Hills 48.45 1 P P 10 15 07.3 +1.1
baz=181
IMW Indian Meadow 48.51 354 P P 10 15 07.1 +0.4
IMW IAmb IAmb 10 15 25.6
comp=Z,13nm,1.2s
M02C Callahan 48.52 342 P P 10 15 08.9 +2.4
baz=156
N47A Urbana 48.57 20 P P 10 15 05.9 -0.9
N47A Urbana 48.57 20 P P 10 15 06.1 -0.8
baz=206,SNR=8.1
M04C Macdoel 48.58 343 P P 10 15 10.6 +3.6
baz=157
O50A Cable 48.66 22 P P 10 15 06.7 -0.9
baz=209,SNR=10
ECSD EROS Data Cent 48.66 8 P P 10 15 07.6 +0.1
baz=191
Q54A Coxs Mills 48.77 25 P P 10 15 09.0 +0.6
baz=213
N48A Decatur 48.78 20 P P 10 15 07.4 -1.0
baz=207
YBH Yreka Blue Hor 48.78 342 P P 10 15 09.9 +1.3
comp=Z,1.0nm,0.8s,baz=276,slow=9.2,SNR=3.6
YBH LR LR 10 31 13.3
comp=Z,1µm,21.4s,baz=168,slow=31
P52A Corning 48.79 24 P P 10 15 09.4 +0.9
baz=211
P53A Whipple 48.96 24 P P 10 15 09.7 -0.2
P53A Whipple 48.96 24 P P 10 15 10.0 +0.1
baz=212,SNR=6.4
H17A Grant Village 48.97 355 P P 10 15 10.1 -0.1
O51A Pataskala 49.04 23 P P 10 15 09.9 -0.6
baz=210
L44A Lake County Fo 49.06 17 P P 10 15 10.1 -0.5
SUSD Miller 49.08 6 P P 10 15 11.5 +0.8
JFWS Jewell Farm 49.12 14 P P 10 15 10.5 -0.5
JFWS IAmb IAmb 10 15 21.9
comp=Z,9.1nm,0.9s
JFWS Jewell Farm 49.12 14 P P 10 15 10.8 -0.2
baz=200
N49A Columbus Grove 49.13 21 P P 10 15 10.3 -0.8
N49A IAmb IAmb 10 15 12.2
comp=Z,10nm,1.0s

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time	Res
N49A	Columbus Grove	49.13	21	P	P	10 15 10.6	-0.6
	baz=208,SNR=5.2						
K05A	Summer Lake	49.19	345	P	P	10 15 11.7	-0.2
K05A				IAmb	IAmb	10 15 17.4	
	comp=Z,12nm,1.4s						
R57A	Stanardsville	49.23	28	P	P	10 15 12.5	+0.6
	baz=216						
N50A	Nevada	49.38	22	P	P	10 15 13.0	0.0
	baz=209,SNR=8.0						
YHH	Holmes Hill	49.38	355	P	P	10 15 11.5	-1.9
K43A	Burlington	49.43	16	P	P	10 15 12.6	-0.8
K43A				IAmb	IAmb	10 15 14.9	
	comp=Z,14nm,1.2s						
P54A	Burton	49.44	25	P	P	10 15 13.3	-0.3
	baz=213						
M48A	Edgerton	49.44	20	P	P	10 15 12.6	-1.0
R58A	Rapidan	49.48	28	P	P	10 15 15.0	+1.2
	baz=217						
YHL	Hebgen Lake	49.48	354	P	P	10 15 12.9	-1.2
RLMT	Red Lodge	49.59	356	P	P	10 15 15.1	+0.2
RLMT				IAmb	IAmb	10 15 32.9	
	comp=Z,14nm,1.4s						
RLMT	Red Lodge	49.59	356	P	P	10 15 14.2	-0.6
	baz=174						
O53A	New Philadelph	49.68	24	P	P	10 15 15.6	+0.2
	baz=212						
M49A	Liberty Center	49.69	21	P	P	10 15 14.5	-0.9
	baz=208						
L47A	Sherwood	49.72	19	P	P	10 15 15.6	0.0
	baz=206,SNR=7.0						
MCWV	Mont Chateau	49.76	26	P	P	10 15 16.5	+0.5
	baz=214						
Q57A	Strasburg	49.88	27	P	P	10 15 17.9	+1.0
	baz=216						
L48A	N Adams	49.95	20	P	P	10 15 16.5	-0.9
	baz=207,SNR=5.6						
I40A	Norwalk	49.95	14	P	P	10 15 17.4	+0.1
I40A				IAmb	IAmb	10 15 28.3	
	comp=Z,9.3nm,1.1s						
M50A	Fremont	49.97	22	P	P	10 15 16.7	-0.8
M50A	Fremont	49.97	22	P	P	10 15 16.9	-0.6
	baz=209						
O54A	Avella	49.97	25	P	P	10 15 16.7	-0.9
O54A				IAmb	IAmb	10 15 30.5	
	comp=Z,14nm,1.1s						
O54A	Avella	49.97	25	P	P	10 15 17.4	-0.2
	baz=213						
I07A	Izee	50.12	346	P	P	10 15 17.8	-1.0
Q58A	Fox Den Farm,	50.14	28	P	P	10 15 18.7	-0.2
	baz=217						
N53A	Lisbon	50.30	24	P	P	10 15 18.7	-1.4
N53A	Lisbon	50.30	24	P	P	10 15 20.0	-0.1
	baz=212						
P57A	Homestead Farm	50.42	27	P	P	10 15 22.7	+1.7
	baz=216						
O55A	Ligonier	50.44	26	P	P	10 15 21.4	+0.2
	baz=214						
CPUP	Villa Florida	50.49	121	P	P	10 15 22.9	+1.1
	comp=Z,3.6nm,0.8s,baz=279,slow=9.7,SNR=6.9						
CPUP				LR	LR	10 33 23.7	
	comp=Z,860nm,20.4s,baz=286,slow=32						
L50A	Kingsville	50.61	21	P	P	10 15 21.6	-0.8
	baz=209						
SPMN	Marine on St.	50.75	11	P	P	10 15 23.8	+0.4
	baz=196						
P58A	Pank, Wackersv	50.76	28	P	P	10 15 24.4	+0.9
	baz=217						
N54A	Moraine State	50.78	24	P	P	10 15 24.6	+0.9
N54A	Moraine State	50.78	24	P	P	10 15 24.7	+0.9
	baz=213						
K48A	Perry	50.82	20	P	P	10 15 23.4	-0.6
	baz=207						
N55A	Marion Center	51.05	25	P	P	10 15 27.5	+1.7
	baz=214						
G08A	Pilot Rock	51.14	347	P	P	10 15 26.4	-0.1
J48A	Bridge Port	51.37	20	P	P	10 15 28.1	0.0
	baz=208						
M54A	Oil Creek Stat	51.37	24	P	P	10 15 28.2	0.0
	baz=213						
L53A	Girard	51.51	24	P	P	10 15 29.5	+0.4
	baz=212						
M55A	Ridgway	51.72	25	P	P	10 15 31.4	+0.7
	baz=214						
I47A	Gladwin	51.77	19	P	P	10 15 29.7	-1.3
I47A				IAmb	IAmb	10 15 34.2	
	comp=Z,12nm,0.8s						
I47A	Gladwin	51.77	19	P	P	10 15 31.3	+0.3
	baz=206						
F07A	Phinny Hill Vi	51.93	347	P	P	10 15 31.9	-0.3
M56A	Emporium	51.98	26	P	P	10 15 33.6	+0.9
	baz=215						
H46A	Fife Lake	52.02	18	P	P	10 15 32.8	-0.1
	baz=205						
K52A	Tillsonburg	52.03	23	P	P	10 15 33.1	+0.1
	baz=211						
L54A	Sinclairville	52.12	24	P	P	10 15 33.7	0.0
	baz=213						
I48A	Sherman Twp	52.19	19	P	P	10 15 35.2	+1.0
	baz=207						
M57A	Sunshine Farm,	52.32	26	P	P	10 15 36.7	+1.5
	baz=216						
L55A	Hinsdale	52.44	25	P	P	10 15 36.6	+0.4
	baz=214						
L56A	Greenwood	52.78	26	P	P	10 15 38.8	+0.1
L56A	Greenwood	52.78	26	P	P	10 15 39.1	+0.5
	baz=215						
DGMT	Dagmar	52.80	1	P	P	10 15 37.9	-0.8
DGMT	Dagmar	52.80	1	P	P	10 15 39.3	+0.6
	baz=181						
L57A	Andrews Acres	52.98	26	P	P	10 15 41.3	+1.2
	baz=216						
K55A	Perry	53.05	25	P	P	10 15 41.1	+0.5
	baz=214						
AGMN	Agassiz Nation	53.24	8	P	P	10 15 41.8	-0.1
AGMN				IAmb	IAmb	10 15 53.2	
	comp=Z,7.5nm,0.9s						
C09A	Chrisman Ranch	53.40	349	P	P	10 15 43.3	+0.2
C09A				IAmb	IAmb	10 15 59.3	
	comp=Z,7.4nm,1.4s						
L58A	Harry Jones Me	53.46	27	P	P	10 15 43.9	+0.3
	baz=217						
M60A	Port Jervis	53.46	28	P	P	10 15 43.9	+0.2
	baz=219						
EYMN	Ely	53.62	11	P	P	10 15 43.8	-0.9
EYMN	Ely	53.62	11	P	P	10 15 45.5	+0.8
	baz=197						
NEW	Newport	53.64	350	P	P	10 15 46.5	+1.6
	comp=Z,1.3nm,0.8s,baz=173,slow=11,SNR=3.5						
NEW	Newport	53.64	350	P	P	10 15 44.1	-0.8
NEW	Newport	53.64	350	P	P	10 15 48.3	+3.4
	baz=165						
F48A	Evansville	54.00	19	P	P	10 15 47.9	+0.5
	baz=208						
E47A	Iron Bridge	54.34	18	P	P	10 15 50.2	+0.2
	baz=207						
H53A	Bobcaygeon	54.37	23	P	P	10 15 50.0	-0.2
	baz=213						
K59A	Cooperstown	54.49	27	P	P	10 15 51.3	+0.1
	baz=218						
D46A	Sault St. Mari	54.49	18	P	P	10 15 52.2	+1.1
	baz=206						
E48A	Lockeyer	54.72	19	P	P	10 15 53.1	+0.4
	baz=208,SNR=9.5						
J58A	Remsen	54.76	26	P	P	10 15 53.2	+0.1
	baz=217						
B06A	Marblemount	54.76	347	P	P	10 15 53.5	+0.5
B06A				IAmb	IAmb	10 16 12.2	
	comp=Z,5.8nm,0.7s						
G53A	Haliburton	54.81	23	P	P	10 15 53.1	-0.4
	baz=213						
F51A	Arnstein	55.02	21	P	P	10 15 55.1	+0.2
	baz=211						
ULM	Lac du Bonnet	55.16	7	P	P	10 15 56.0	+0.1
	comp=Z,5.5nm,1.0s,baz=196,slow=9.6,SNR=9.4						
ULM				LR	LR	10 38 16.7	
	comp=Z,2μm,18.6s,baz=188,slow=35						
ULM	Lac du Bonnet	55.16	7	P	P	10 15 55.5	-0.3
ULM				IAmb	IAmb	10 16 07.3	
	comp=Z,13nm,1.1s						
G54A	Lake Saint Pet	55.25	23	P	P	10 15 56.8	+0.2
	baz=213						
H56A	Elgin	55.33	25	P	P	10 15 57.2	+0.1
	baz=216						
D48A	Paudash Townsh	55.45	19	P	P	10 15 58.2	+0.2
	baz=208						
ALGO	Algonquin Park	55.73	23	P	P	10 16 00.0	0.0
	baz=213						
E52A	Mattawa	55.78	22	P	P	10 16 00.3	-0.1
	baz=212						
D51A	Lot 18 Range I	56.20	21	P	P	10 16 03.7	+0.3
	baz=211						
E53A	Dumoine, Ponti	56.23	23	P	P	10 16 03.7	+0.1
	baz=213						
E54A	Lac Daplat, Po	56.46	23	P	P	10 16 05.0	-0.3
	baz=214						
BDFB	Brasilia	57.10	106	LR	LR	10 38 47.8	
	comp=Z,1μm,18.2s,baz=283,slow=34						
D55A	Sainte-Anne-du	57.62	24	P	P	10 16 13.9	+0.4
	baz=216						
D56A	ZEC Mazanza, M	57.93	24	P	P	10 16 17.7	+2.1
	baz=216						
LSQQ	Lebel-sur-Quev	58.73	21	P	P	10 16 21.3	+0.2
	baz=213						
MATQ	Matagami	59.08	20	P	P	10 16 23.8	+0.2
	baz=212						
AFI	Afiamalu	66.31	257	LR	LR	10 38 12.0	
	comp=Z,406nm,21.5s,baz=82,slow=29						
SCHQ	Schefferville	67.13	23	LR	LR	10 45 50.5	
	comp=Z,717nm,20.7s,baz=254,slow=35						
YKA	Yellowknife Ar	67.25	355	P	P	10 17 16.8	-0.8
	comp=Z,2.3nm,1.0s,baz=165,slow=6.4,SNR=26						
YKA				LR	LR	10 45 32.9	
	comp=Z,625nm,18.0s,baz=0.0,slow=35						
GLB	Gilahina Butte	72.26	342	P	P	10 17 48.2	-0.4
GLB				IAmb	IAmb	10 17 55.5	
	comp=Z,8.5nm,1.0s						
BCAR	Beaver Creek A	72.91	343	P	P	10 17 52.2	-0.2
FRB	Frobisher Bay	73.40	16	LR	LR	10 49 40.0	
	comp=Z,519nm,18.7s,baz=215,slow=35						
DOT	Dot Lake	74.02	343	P	P	10 17 58.5	-0.3
DOT				IAmb	IAmb	10 18 05.0	
	comp=Z,5.3nm,0.8s						
EGAK	Eagle	74.09	345	P	P	10 17 59.4	+0.1
EGAK				IAmb	IAmb	10 18 05.8	
	comp=Z,8.0nm,0.9s						
PMR	Palmer	74.13	340	P	P	10 17 59.2	-0.3
RIDG	Independent Ri	74.31	343	P	P	10 18 00.1	-0.5
RIDG				IAmb	IAmb	10 18 07.1	
	comp=Z,10nm,0.8s						
EPYK	Eagle Plains	74.33	347	P	P	10 18 01.1	+0.4
	baz=147						
C36M	Paulatuk	74.88	353	P	P	10 18 03.3	-0.4
	baz=160						
RND	Reindeer	75.31	341	P	P	10 18 06.4	0.0
INK	Inuvik	75.36	349	P	P	10 18 05.8	-0.6
	comp=Z,3.1nm,1.0s,baz=140,slow=6.6,SNR=8.7						
IL31		75.68	343	P	P	10 18 07.3	-1.1
IL31				IAmb	IAmb	10 18 19.7	
	comp=Z,9.0nm,1.1s						
ILAR	Eielson Array	75.68	343	P	P	10 18 07.8	-0.7
	comp=Z,2.8nm,0.9s,baz=159,slow=4.9,SNR=20						
TRF	Thorofare Moun	75.80	341	P	P	10 18 09.0	-0.4
TRF				IAmb	IAmb	10 18 24.3	
	comp=Z,9.2nm,1.1s						
WRH	Wood River Hil	75.82	342	P	P	10 18 09.0	-0.3
PRP	Porcupine Dome	75.84	344	P	P	10 18 09.1	-0.5
KTH	Kantishna Hill	76.08	341	P	P	10 18 10.2	-0.7
SVW2	Sparrevohn	76.16	337	P	P	10 18 10.8	-0.5
SVW2				IAmb	IAmb	10 18 18.1	
	comp=Z,12nm,1.2s						
COLD	Coldfoot	78.39	344	P	P	10 18 23.6	0.0
COLD				IAmb	IAmb	10 18 36.6	
	comp=Z,14nm,1.2s						
IMAR	Indian Mountai	78.60	342	P	P	10 18 23.9	-1.0
TOLK	Toolik Lake Re	79.21	345	P	P	10 18 29.1	+0.9
	baz=134						
RES	Resolute Bay	79.35	3	P	P	10 18 28.0	-0.7
	comp=Z,2.7nm,0.9s,baz=193,slow=9.2,SNR=11						
RES				LR	LR	10 51 30.7	
	comp=Z,422nm,21.0s,baz=177,slow=34						
RES	Resolute Bay	79.35	3	P	P	10 18 27.6	-1.1
VNDA	Vanda	86.26	193	LR	LR	10 49 30.7	
	comp=Z,323nm,19.4s,baz=108,slow=30						
H11N3	WAKE ISLAND Hy	89.64	290	T	T	11 58 25.3	
	baz=96,slow=74,SNR=175						
H11N2	WAKE ISLAND Hy	89.66	290	T	T	11 58 20.7	
	baz=96,slow=74,SNR=134						
H11N1	WAKE ISLAND Hy	89.66	290	T	T	11 58 19.2	
	baz=96,slow=74,SNR=134						
H11S2	WAKE ISLAND Hy	89.73	288	T	T	11 58 27.5	
	baz=93,slow=74,SNR=108						
H11S1	WAKE ISLAND Hy	89.74	288	T	T	11 58 22.7	
	baz=93,slow=74,SNR=252						
H11S3	WAKE ISLAND Hy	89.75	288	T	T	11 58 26.7	
	baz=93,slow=74,SNR=124						
PETK	Petropavlovsk-	97.95	323	LR	LR	10 55 44.1	
	comp=Z,629nm,20.4s,slow=30						
SYO	Syowa Base	102.69	168	⇑eX	Pdif	10 20 26.2	+6.0
SYO	Syowa Base	102.69	168	⇓eX	PKiKP	10 24 46.4	+5.4
BRTR	Keskin Array B	128.90	41	PKP	PKPdf	10 25 30.7	-1.1
	comp=Z,1.1nm,0.9s,baz=329,slow=1.7,SNR=3.8						
SONM	Songino Array	129.12	333	PKP	PKPdf	10 25 31.4	-0.6
	comp=Z,0.9nm,1.1s,baz=174,slow=1.4,SNR=3.3						
NJ2	Nanjing	130.63	309	ePKP	PKiKP	10 25 39.7	+3.7
HHC	Hu-ho-hao-te	131.15	323	ePKP	PKPdf	10 25 34.1	-1.9
HHC				LR	LR		
	comp=Z,200nm,15.3s						
HHC				LR	LR		
	comp=Z,140nm,14.5s						
MKAR	Makanchi Array	137.43	353	PKP	PKPdf	10 25 48.5	+1.0
	comp=Z,0.7nm,0.8s,baz=64,slow=2.8,SNR=5.7						
WMQ	Urumqi	139.29	346	ePKP	PKiKP	10 25 54.6	+1.3
WMQ				LR	LR		
	comp=Z,440nm,28.9s						
WMQ				LR	LR		
	comp=Z,580nm,18.7s						
CD2	Chengdu	142.26	317	PKP	PKiKP	10 25 59.5	-0.3
GEYT	Alibeck	143.41	23	PKP	PKPdf	10 25 59.5	+0.9
	comp=Z,1.1nm,0.7s,baz=239,slow=0.8,SNR=3.1						
KSH	Kashi	145.18	359	PKPbc	PKPdf	10 26 02.1	+0.4
KSH				PKS	PKSdf	10 29 37.9	+0.5
CMAR	Chiang Mai Arr	152.75	302	PKPbc	PKPbc	10 26 20.3	-1.1
	comp=Z,0.6nm,0.4s,baz=326,slow=0.9,SNR=5.2						

IDC 01 10:08:10.5±1.4, 16°.97N×119°.05E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.2/45, mbtmp3.5/4, MS3.0/1, Ms1 3.0/1, ms1mx2.7/21, Error ellipse: s-maj=56.6km s-min=25.4km az=71.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	3.38	147	LR	LR	10 10 27.0	
	comp=Z,205nm,19.6s,baz=143,slow=40						
KSRS	Korea Array	21.86	19	P	P	10 13 04.7	-0.1
	0.5nm,0.6s,baz=203,slow=11,SNR=3.2						
MKAR	Makanchi Array	42.48	322	P	P	10 16 07.6	+0.1
	0.4nm,0.8s,baz=126,slow=6.2,SNR=3.6						
ASAR	Alice Springs	42.91	160	P	P	10 16 11.1	-0.1
	0.3nm,0.4s,baz=339,slow=7.1,SNR=7.4						
KURBB	Kurchatov Arra	46.61	325	P	P	10 16 40.0	-0.4
	1.1nm,0.6s,baz=121,slow=8.6,SNR=7.4						

SOME 01 10:27:07.5, 40°.73N×77°.62E, h10km
KRNET 01 10:27:07.6±0.1, 40°.79N×77°.62E, h13km, mb2.5
NNC 01 10:27:08.4±0.9, 40°.77N×77°.59E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=5.8km s-min=4.1km az=174.0
ISC 01 10:27:09.5±2.2, 40°.83N±0°.09×77°.47E±0°.04, h1km±13km, n37, σ1°.18/60, 20C-6D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.26	299	⇓iP	Pb	10 27 33.7	-0.6
	baz=98						
NRN				⇓iS	Sn	10 27 53.2	+0.8
	baz=98						
KDJ	Kajisay	1.32	351	⇑eP	Pn	10 27 39.3	-1.3
	baz=47						
KDJ				⇑iS	Sn	10 27 52.8	-0.7
	baz=47						
ULHL	Ulahol	1.69	327	⇑iP	Pb	10 27 41.2	-0.3
	baz=25						
ULHL				⇑iS	Sg	10 28 05.4	+1.6
	baz=25						
ANVS	Anan'yevo	1.96	4	⇑iP	Pn	10 27 44.7	+0.7
	baz=1.0						
ANVS				⇑iS	Sg	10 28 11.6	-0.8
	baz=1.0						
BOOM	Boomskoye usch	2.02	326	⇑iP	Pb	10 27 46.0	-1.1
	baz=24						
BOOM				⇑iS	Sg	10 28 14.4	+0.1
	baz=24						
KZA	Kyzart	2.08	307	⇑eP	Pb	10 27 47.6	-0.8
	baz=7.0						
KZA				⇑iS	Sg	10 28 16.8	+0.3
	baz=7.0						
TNSS	Tian-Shan	2.24	350	eP	Pb	10 27 51.4	+0.4
	6.2nm,0.4s						
TNSS				eS	Sg	10 28 23.3	+1.8
	7.8nm,0.3s						
TNSS	Tian-Shan	2.24	350	Pg	Pb	10 27 51.4	+0.4
	6.2nm,0.4s						
TNSS				Lg	Lg	10 28 23.3	
	7.8nm,0.3s						
IZV	Izvestkoviy	2.29	344	eP	Pg	10 27 52.9	-0.7
	2.3nm,0.1s						
IZV				eS	Sg	10 28 25.2	+2.0
	15nm,0.5s						
SATY	Saty	2.33	17	eP	Pb	10 27 52.2	-0.2
	4.5nm,0.3s						
SATY				eS	Sg	10 28 24.6	+0.1
	6.4nm,0.3s						
SATY	Saty	2.33	17	Pg	Pb	10 27 52.3	-0.2
	4.5nm,0.3s						
SATY				Lg	Lg	10 28 24.6	
	6.4nm,0.3s						
MDOK	Medeo	2.35	352	eP	Pb	10 27 52.9	+0.1
	5.2nm,0.5s						
MDOK				eS	Sg	10 28 25.8	+0.7
	10nm,0.5s						
MDOK	Medeo	2.35	352	Pg	Pb	10 27 52.1	-0.7
	3.6nm,0.6s						
MDOK				Lg	Lg	10 28 25.1	
	7.2nm,0.6s						
MDOK	Medeo	2.35	352	Pg	Pb	10 27 52.9	+0.1
	5.2nm,0.5s						
MDOK				Lg	Lg	10 28 25.8	
	10nm,0.5s						
KOTS	Kotyrbulak	2.42	354	eP	Pb	10 27 54.3	+0.4
	5.9nm,0.5s						
KOTS				eS	Sg	10 28 27.8	+0.7
	27nm,0.7s						
KOTS	Kotyrbulak	2.42	354	Pg	Pb	10 27 54.3	+0.4
	5.9nm,0.5s						
KOTS				Lg	Lg	10 28 28.5	
	27nm,0.7s						
KST	Kastek	2.48	334	eP	Pb	10 27 56.1	+1.1
	0.8nm,0.1s						
KST				eS	Sg	10 28 31.1	+1.9
	6.6nm,0.3s						
KST	Kastek	2.48	334	Pg	Pb	10 27 56.1	+1.1
	0.8nm,0.1s						
KST				Lg	Lg	10 28 31.1	
	6.6nm,0.3s						
ARLS	Aral	2.58	295	⇑iP	Pn	10 27 54.2	+1.6
	baz=95						
ARLS				⇑iS	Sb	10 28 28.3	-0.8
	baz=95						
UZB	Uzynbulak	2.59	26	eP	Pb	10 27 56.7	-0.1
	1.2nm,0.1s						
UZB				eS	Sg	10 28 32.2	-0.5
	3.0nm,0.3s						
UZB	Uzynbulak	2.59	26	Pg	Pb	10 27 56.7	-0.1
	1.2nm,0.1s						
UZB				Lg	Lg	10 28 31.9	
	3.0nm,0.3s						
UCH	Uchtor	2.62	303	⇑eP	Pn	10 27 55.1	+1.7
	baz=3.0						
UCH				⇑iS	Sb	10 28 30.0	-0.5
	baz=3.0						
KBK	Karagaybulak	2.62	315	⇓iP	Pb	10 27 55.1	-2.4
	baz=14						
KBK				⇓iS	Sb	10 28 29.1	-1.2
	baz=14						
KURS	Kuram	2.71	11	eP	Pb	10 27 58.4	-0.4
	1.8nm,0.5s						
KURS				eS	Sg	10 28 34.9	-1.5
	3.8nm,0.5s						
KURS	Kuram	2.71	11	Pg	Pb	10 27 58.6	-0.2
	1.8nm,0.5s						
KURS				Lg	Lg	10 28 35.3	
	3.8nm,0.5s						
SHLS	Shalkode	2.76	32	eP	Pg	10 28 01.9	-0.5
	2.7nm,0.3s						
SHLS				eS	Sg	10 28 41.2	+3.1
	7.7nm,0.5s						
SHLS	Shalkode	2.76	32	Pg	Pb	10 28 01.9	-0.5
	3.0nm,0.3s						
SHLS				Lg	Lg	10 28 41.4	
	7.1nm,0.5s						
KPKS	Kokpek	2.78	19	eP	Pb	10 27 59.1	-1.0
	5.3nm,0.2s						
KPKS				eS	Sb	10 28 36.1	+1.4
	8.5nm,0.5s						
AAK	Ala-Archa	2.87	310	⇑eP	Pn	10 27 58.2	+1.7
	baz=9.0						
AAK				⇑iS	Sb	10 28 35.5	-1.7
	baz=9.0						
AAK	Ala-Archa	2.87	310	⇓Pg	Pb	10 28 01.9	+0.3
	0.7nm,0.3s						
AAK				⇑Lg	Lg	10 28 41.9	
	3.4nm,0.7s						
PDGK	Podgornoye	2.91	30	Pg	Pb	10 28 01.1	-1.2
	1.6nm,0.5s						
PDGK				Lg	Lg	10 28 39.8	
	2.3nm,0.6s						
PDGK	Podgornoye	2.91	30	⇓Pg	Pb	10 28 01.7	-0.6
	1.4nm,0.5s						
PDGK				⇑Lg	Lg	10 28 40.4	
	4.0nm,0.5s						
KTBS	Karatobe	2.94	349	eP	Pb	10 28 03.0	+0.3
	1.5nm,0.5s						
KTBS				eS	Sg	10 28 42.9	-1.0
	35nm,0.5s						
KTBS	Karatobe	2.94	349	Pg	Pb	10 28 03.0	+0.3
	1.5nm,0.5s						
KTBS				Lg	Lg	10 28 43.6	
	35nm,0.5s						
AML	Almayashu	3.12	296	⇑iP	Pn	10 28 02.1	+1.9
	baz=96						
AML				⇑iS	Sb	10 28 41.7	-3.0
	baz=96						
KUU	Kurty	3.17	345	eP	Pb	10 28 07.7	+1.0
	0.4nm,0.2s						
KUU				eS	Sg	10 28 50.9	-0.6
	8.4nm,0.6s						
KUU	Kurty	3.17	345	Pg	Pb	10 28 07.7	+1.0
	0.4nm,0.2s						
KUU				Lg	Lg	10 28 50.9	
	8.4nm,0.6s						

IDC 01 10:27:49.9±0.8, 9°.85S×159°.75E, h0km, mb4.1/11, mb1 4.3/12, mb1mx4.1/29, mbtmp4.1/12, ML2.0/1, MS3.9/5, Ms1 3.8/5, ms1mx3.5/22, Error ellipse: s-maj=27.8km s-min=10.5km az=125.0
NEIC 01 10:27:55.0±1.5, 9°.78S±0°.07×159°.65E±0°.07, h31km±6km, mb4.5/15, Error ellipse: s-maj=11.7km s-min=8.4km az=145.0
ISC 01 10:27:54.1±0.5, 9°.82S±0°.06×159°.63E±0°.06, h22km, n38, σ0°.78/43, mb4.2/17, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	0.49	39	Pn	Pb	10 28 04.3	+0.2
	2μm,0.3s,baz=202,slow=8.0,SNR=326						
HNR				Sn	Sb	10 28 11.5	+0.6
	6μm,0.3s,baz=232,slow=19,SNR=120						
HNR	Honiara	0.49	39	iP	Pb	10 28 04.0	-0.1
HNR				iS	Sb	10 28 12.0	+1.1
HNR	Honiara	0.49	39		Pb	10 28 04.5	+0.3
HNR					Sb	10 28 11.3	+0.4
SANVU	Saraoutou	9.27	128		Pn	10 30 06.5	0.0
SANVU					Sn	10 31 50.0	-0.1
PMG	Port Moresby	12.31	271	Pn	Pn	10 30 49.9	+1.8
	0.4nm,0.3s,baz=41,slow=19,SNR=2.0						
PMG				LR	LR	10 35 23.0	
	comp=Z,446nm,18.2s,baz=129,slow=36						
PMG	Port Moresby	12.31	271		Pn	10 30 48.5	+0.3
DZM	Mont Dzumac	13.83	153	Pn	Pn	10 31 10.6	+1.6
	0.2nm,0.3s,baz=22,slow=19,SNR=3.9						
CTA	Charters Tower	16.46	230	Pn	P	10 31 46.4	0.0
	0.2nm,0.3s,baz=71,slow=17,SNR=3.7						
JAY	Jayapura	20.16	290	P	P	10 32 28.2	+1.0
	21nm,0.9s,baz=242,slow=18,SNR=4.3						
WRAB	Tennant Creek	26.39	245	P	P	10 33 28.7	-0.5
WB2	Warramunga Arr	26.39	245	P	P	10 33 28.8	-0.4

WB2				IAmb	IAmb	10 33 41.6	
	comp=Z,20nm,1.4s						
WRA	**Warramunga Arr**	**26.40**	**245**	P	**P**	**10 33 28.7**	**-0.6**
	comp=Z,3.2nm,0.7s,baz=70,slow=10.0,SNR=11						
WRA				PcP	**PcP**	**10 36 54.7**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=76,slow=3.4,SNR=4.2						
CAN	**Canberra**	**27.18**	**199**	P	**P**	**10 33 37.1**	**+0.9**
STKA	**Stephens Creek**	**27.59**	**215**	P	**P**	**10 33 39.2**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=32,slow=14,SNR=4.0						
STKA				LR	LR	10 44 10.8	
	comp=Z,89nm,18.9s,baz=28,slow=36						
STKA	**Stephens Creek**	**27.59**	**215**	P	**P**	**10 33 39.4**	**-0.5**
AS31	**Alice Springs**	**28.16**	**238**	P	**P**	**10 33 44.3**	**-0.8**
ASAR	**Alice Springs**	**28.16**	**238**	P	**P**	**10 33 43.5**	**-1.6**
	comp=Z,0.4nm,0.5s,baz=62,slow=10,SNR=14						
ASAR				PcP	**PcP**	**10 36 58.5**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=80,slow=2.5,SNR=7.7						
ASAR				LR	LR	10 44 14.8	
	comp=Z,36nm,19.3s,baz=63,slow=35						
ASAR	**Alice Springs**	**28.16**	**238**	P	**P**	**10 33 44.1**	**-1.0**
BBOO	**Buckleboo**	**31.57**	**220**	P	**P**	**10 34 14.8**	**-0.3**
FITZ	**Fitzroy Crossi**	**33.95**	**252**	P	**P**	**10 34 36.0**	**-0.2**
CMAR	**Chiang Mai Arr**	**66.13**	**295**	P	**P**	**10 38 40.7**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=114,slow=4.4,SNR=4.6						
VNDA	**Vanda**	**67.69**	**179**	P	**P**	**10 38 48.6**	**-0.7**
	comp=Z,4.4nm,0.8s,baz=321,slow=7.6,SNR=5.5						
VNDA	**Vanda**	**67.69**	**179**	P	**P**	**10 38 50.0**	**+0.8**
UNV	**Unalaska Valle**	**69.61**	**21**	P	**P**	**10 39 00.6**	**-0.9**
SONM	**Songino Array**	**74.20**	**326**	P	**P**	**10 39 29.7**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=141,slow=4.5,SNR=3.9						
SVW2	**Sparrevohn**	**78.94**	**20**	P	**P**	**10 39 56.3**	**+0.5**
SVW2				IAmb	IAmb	10 39 57.0	
	comp=Z,8.2nm,1.1s						
QSPA	**South Pole Qui**	**80.18**	**180**	P	**P**	**10 40 02.9**	**+0.2**
QSPA				IAmb	IAmb	10 40 16.8	
	comp=Z,6.7nm,1.4s						
RC01	**Rabbit Creek A**	**81.04**	**22**	P	**P**	**10 40 07.7**	**+0.6**
RC01				IAmb	IAmb	10 40 15.8	
	comp=Z,4.2nm,1.0s						
IL31		**84.36**	**20**	P	**P**	**10 40 23.8**	**-0.5**
IL31				IAmb	IAmb	10 40 24.2	
	comp=Z,2.0nm,0.8s						
ILAR	**Eielson Array**	**84.36**	**20**	P	**P**	**10 40 22.7**	**-1.6**
	comp=Z,0.8nm,0.5s,baz=242,slow=5.4,SNR=18						
ILAR	**Eielson Array**	**84.36**	**20**	P	**P**	**10 40 23.3**	**-0.9**
DOT	**Dot Lake**	**84.70**	**22**	P	**P**	**10 40 26.0**	**-0.1**
DOT				IAmb	IAmb	10 40 34.7	
	comp=Z,2.5nm,0.8s						
SCRK	**Sand Creek**	**84.91**	**22**	P	**P**	**10 40 27.2**	**0.0**
SCRK				IAmb	IAmb	10 40 39.0	
	comp=Z,5.5nm,1.5s						
MKAR	**Makanchi Array**	**88.55**	**318**	P	**P**	**10 40 44.5**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=104,slow=4.0,SNR=4.0						
MKAR				LR	LR	11 23 54.1	
	comp=Z,118nm,18.7s,baz=337,slow=38						
MKAR	**Makanchi Array**	**88.55**	**318**	P	**P**	**10 40 45.1**	**-0.1**
ZALV	**Zalesovo Beam**	**89.08**	**325**	LR	LR	11 20 13.9	
	comp=Z,345nm,20.7s,baz=344,slow=35						
NVAR	**Mina Array Bea**	**89.88**	**51**	P	**P**	**10 40 52.0**	**0.0**
	comp=Z,1.0nm,0.9s,baz=251,slow=5.4,SNR=5.5						
YKA	**Yellowknife Ar**	**96.67**	**28**	P	**P**	**10 41 21.2**	**-1.2**
	comp=Z,0.2nm,0.8s,baz=259,slow=5.1,SNR=4.0						

*ATH **01** 10:41:28.2, 38.°39N×20.°46E, h16km±1km, ML3.0/17, Error ellipse: s-maj=2.0km s-min=0.7km az=272.0*
*THE **01** 10:41:28.7, 38.°40N×20.°46E, h10km±1km, ML3.6/8, Error ellipse: s-maj=1.2km s-min=0.4km az=285.0*
*BEO **01** 10:41:30.0±1.2, 38.°37N×20.°26E, h15km, ML3.5/4*
ISC 01 10:41:28.4±0.8, **38.°39N**±0.°02×**20.°50E**±0.°04, **h13**km±5km, **n53**, σ0.°58/76, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.06**	**70**	P	**Pg**	**10 41 30.7**	**-0.3**
VSK1				S	**Sg**	**10 41 32.3**	**-0.5**
	52µm,0.2s						
KEF1	**Kardakata, Kep**	**0.11**	**191**	P	**Pg**	**10 41 31.4**	**-0.2**
KEF1				S	**Sg**	**10 41 33.5**	**-0.3**
KEF4	**Livadi, Kephal**	**0.14**	**204**	P	**Pg**	**10 41 31.9**	**-0.1**
KEF4				S	**Sg**	**10 41 34.7**	**+0.2**
LXR1	**Lixouri, Cepha**	**0.20**	**194**	P	**Pg**	**10 41 33.1**	**+0.3**
LXR1				S	**Sg**	**10 41 36.6**	**+0.8**
	77µm,0.3s						
ARG2	**Argostoli**	**0.21**	**182**	P	**Pg**	**10 41 33.0**	**-0.1**
ARG2				S	**Sg**	**10 41 36.8**	**+0.6**
	46µm,0.2s						
KEF3	**Kipouria, Keph**	**0.22**	**212**	P	**Pg**	**10 41 33.0**	**-0.2**
KEF3				S	**Sg**	**10 41 36.9**	**+0.4**
KEF2	**Argostoli. Kep**	**0.23**	**182**	P	**Pg**	**10 41 33.3**	**0.0**
KEF2				S	**Sg**	**10 41 36.6**	**0.0**
VLS	**Valsamata**	**0.23**	**161**	P	**Pg**	**10 41 33.4**	**+0.1**
VLS				S	**Sg**	**10 41 37.3**	**+0.6**
	7µm,0.3s						
VLS	**Valsamata**	**0.23**	**161**	P	**Pg**	**10 41 33.4**	**+0.1**
VLS				S	**Sg**	**10 41 37.2**	**+0.6**
VLS				AML	AML	10 41 39.0	
	comp=E,11459µm,0.2s						
VLS				AML	AML	10 41 40.9	
	comp=N,15055µm,0.4s						
CHV1	**Chavriata, Kef**	**0.23**	**204**	P	**Pg**	**10 41 33.3**	**0.0**
CHV1				S	**Sg**	**10 41 37.1**	**+0.5**
	comp=N,46µm,0.4s						
EVGI	**Lefkada island**	**0.26**	**28**	P	**Pg**	**10 41 34.2**	**+0.2**
EVGI				S	**Sb**	**10 41 38.8**	**-0.6**
EVGI	**Lefkada island**	**0.26**	**28**	P	**Pg**	**10 41 34.2**	**+0.2**
EVGI				S	**Sb**	**10 41 38.8**	**-0.6**
MGNA	**Meganis**	**0.35**	**41**	P	**Pg**	**10 41 35.7**	**+0.1**
MGNA				S	**Sb**	**10 41 41.2**	**-0.8**
MGNA				AML	AML	10 41 42.1	
	comp=N,6017µm,0.2s						
MGNA				AML	AML	10 41 45.4	
	comp=E,4521µm,0.4s						
KFL	**Anninata**	**0.36**	**141**	P	**Pg**	**10 41 36.0**	**+0.2**
KFL	**Anninata**	**0.36**	**141**	P	**Pg**	**10 41 35.9**	**+0.2**
LKD2	**Lefkada island**	**0.42**	**17**	P	**Pg**	**10 41 36.6**	**-0.1**
LKD2				S	**Sg**	**10 41 43.1**	**+0.6**
	comp=E,2µm,0.5s						
LKD2	**Lefkada island**	**0.42**	**17**	P	**Pg**	**10 41 36.7**	**-0.1**
LKD2				S	**Sg**	**10 41 43.0**	**+0.6**
LKD2				AML	AML	10 41 48.8	
	comp=E,3662µm,0.4s						
LKD2				AML	AML	10 41 49.9	
	comp=N,3268µm,0.5s						
TSLK	**Tsoukalades, L**	**0.45**	**16**	P	**Pg**	**10 41 37.3**	**-0.1**
TSLK	**Tsoukalades, L**	**0.45**	**16**	P	**Pg**	**10 41 37.5**	**+0.1**
TSLK				S	**Sb**	**10 41 45.0**	**+0.1**
AST1	**Astakos**	**0.49**	**72**	P	**Pb**	**10 41 38.5**	**-0.3**
AST1				S	**Sb**	**10 41 47.0**	**+1.1**
	comp=N,4µm,0.6s						
VLMS	**Volimes, Zakyn**	**0.53**	**166**	P	**Pg**	**10 41 38.9**	**+0.1**
VLMS				S	**Sb**	**10 41 46.7**	**-0.4**
VLMS				AML	AML	10 41 50.0	
	comp=E,8794µm,0.2s						
VLMS				AML	AML	10 41 50.3	
	comp=N,15025µm,0.5s						
PDO	**Prodromos**	**0.58**	**69**	P	**Pb**	**10 41 40.0**	**-0.3**
PDO	**Prodromos**	**0.58**	**69**	P	**Pb**	**10 41 40.1**	**-0.3**
PDO				AML	AML	10 41 57.4	
	comp=N,4326µm,0.3s						
PDO				AML	AML	10 41 57.4	
	comp=E,3453µm,0.4s						
ZAK2	**Zakynthos**	**0.68**	**152**	P	**Pb**	**10 41 42.2**	**+0.1**
KRI1	**kERI**	**0.77**	**161**	P	**Pg**	**10 41 42.8**	**-0.6**
KRI1				S	**Sn**	**10 41 55.6**	**-0.8**
	comp=E,3µm,0.2s						
RLS	**Riolos of Patr**	**0.83**	**113**	P	**Pb**	**10 41 44.7**	**0.0**
RLS	**Riolos of Patr**	**0.83**	**113**	P	**Pb**	**10 41 44.7**	**0.0**
RLS				AML	AML	10 42 06.7	
	comp=E,787µm,0.5s						
RLS				AML	AML	10 42 06.7	
	comp=N,1159µm,0.7s						
PVO	**Paravola**	**0.84**	**74**	P	**Pb**	**10 41 45.2**	**+0.4**
PVO	**Paravola**	**0.84**	**74**	P	**Pb**	**10 41 45.2**	**+0.4**
PVO				AML	AML	10 42 04.0	
	comp=E,1922µm,0.4s						
PVO				AML	AML	10 42 07.0	
	comp=N,2836µm,0.5s						
DRO	**Drossia**	**1.05**	**114**	P	**Pn**	**10 41 48.7**	**-0.2**
DRO				AML	AML	10 42 13.3	
	comp=E,2255µm,0.5s						
DRO				AML	AML	10 42 16.7	
	comp=N,2829µm,0.5s						
EFP	**Efpalio**	**1.11**	**88**	P	**Pb**	**10 41 49.0**	**-0.4**
EFP	**Efpalio**	**1.11**	**88**	P	**Pb**	**10 41 49.1**	**-0.3**
EFP				AML	AML	10 42 12.5	
	comp=E,2594µm,0.6s						
EFP				AML	AML	10 42 12.8	
	comp=N,1867µm,0.4s						
ANX	**Ano Chora**	**1.14**	**79**	P	**Pn**	**10 41 50.7**	**+0.6**
ANX	**Ano Chora**	**1.14**	**79**	P	**Pn**	**10 41 50.6**	**+0.6**
ANX				AML	AML	10 42 13.8	
	comp=E,2668µm,0.6s						
ANX				AML	AML	10 42 16.8	
	comp=N,1914µm,1.1s						
EVR	**Evrytania**	**1.15**	**62**	P	**Pb**	**10 41 50.2**	**-0.1**
EVR				AML	AML	10 42 16.4	
	comp=N,482µm,1.2s						
EVR				AML	AML	10 42 23.7	
	comp=E,503µm,0.8s						
LAKA	**Lakka**	**1.17**	**97**	P	**Pb**	**10 41 50.4**	**-0.2**
LAKA	**Lakka**	**1.17**	**97**	P	**Pb**	**10 41 50.1**	**-0.5**
LAKA				AML	AML	10 42 19.8	
	comp=N,506µm,0.8s						
LAKA				AML	AML	10 42 22.6	
	comp=E,668µm,0.6s						
SERG	**Sergoula**	**1.23**	**88**	P	**Pb**	**10 41 51.4**	**0.0**
SERG	**Sergoula**	**1.23**	**88**	P	**Pb**	**10 41 51.3**	**-0.1**
SERG				AML	AML	10 42 15.4	
	comp=E,935µm,0.7s						
SERG				AML	AML	10 42 15.6	
	comp=N,1168µm,0.5s						
TRIZ	**Trizonia**	**1.24**	**91**	P	**Pn**	**10 41 51.4**	**0.0**
TRIZ	**Trizonia**	**1.24**	**91**	P	**Pn**	**10 41 51.4**	**0.0**
AMT	**Artemida-Makis**	**1.28**	**131**	P	**Pg**	**10 41 53.7**	**+0.5**
AMT				AML	AML	10 42 20.1	
	comp=N,1137µm,0.7s						
AMT				AML	AML	10 42 25.0	
	comp=E,1190µm,0.7s						
KALE	**Kalithea**	**1.29**	**89**	P	**Pn**	**10 41 52.3**	**+0.1**
KALE				AML	AML	10 42 19.6	
	comp=E,460µm,0.6s						
KALE				AML	AML	10 42 20.4	
	comp=N,1044µm,1.0s						
KLV	**Kalavryta, Ach**	**1.35**	**104**	P	**Pb**	**10 41 53.5**	**-0.1**
KLV				AML	AML	10 42 15.8	
	comp=N,455µm,0.4s						
KLV				AML	AML	10 42 19.9	
	comp=E,358µm,0.5s						
MAKR	**Makrakomi, Fth**	**1.42**	**64**	P	**Pb**	**10 41 54.6**	**-0.2**
MAKR				AML	AML	10 42 23.1	
	comp=E,969µm,0.6s						
MAKR				AML	AML	10 42 26.8	
	comp=N,822µm,0.8s						
ITM	**Ithomi**	**1.66**	**136**	P	**Pb**	**10 41 59.3**	**+0.5**
THL	**Klokotos Trika**	**1.67**	**45**	P	**Pg**	**10 41 59.8**	**-0.6**
PYL	**PYLOS**	**1.79**	**146**	P	**Pb**	**10 42 00.3**	**-0.7**
BARS	**Barje**	**4.53**	**12**	ePn	**Pn**	**10 42 38.6**	**+1.9**
TREB	**Trebinje**	**4.62**	**340**	ePn	**Pn**	**10 42 38.2**	**+0.3**
TREB				eSn	**Sn**	**10 43 30.1**	**-1.3**
SJES	**Sjenica**	**4.88**	**355**	ePn	**Pn**	**10 42 42.3**	**+0.7**
SJES				eSn	**Sn**	**10 43 37.6**	**-0.4**
IVAS	**Ivanjica**	**5.19**	**357**	ePn	**Pn**	**10 42 47.5**	**+1.7**
IVAS				eSn	**Sn**	**10 43 44.8**	**-0.7**
DIVS	**Divibare**	**5.72**	**356**	ePn	**Pn**	**10 42 54.2**	**+1.2**
DIVS				eSn	**Sn**	**10 43 56.9**	**-1.6**

*DRS **01** 10:58:03.8±0.0, 43.°05N×45.°72E, h15km*
*MOS **01** 10:58:04.5±0.0, 42.°98N×45.°92E, h20km, MPVA4.4*
*TIF **01** 10:58:05.8, 43.°17N×45.°88E, h23km±3km*
*NORS **01** 10:58:05.3±0.0, 42.°93N×45.°94E, h7km, MPVA4.4*
ISC 01 10:58:06.5±0.9, **43.°04N**±0.°02×**45.°93E**±0.°01, **h13**km±8km, **n82**, σ1.°37/140, **15C-6D**, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GROC	**Groznyy**	**0.19**	**330**	iP	**Pb**	**10 58 11.2**	**-0.8**
GROC				eSg	**Sg**	**10 58 16.3**	**+2.6**
GROC	**Groznyy**	**0.19**	**330**	ciPG	**Pb**	**10 58 11.1**	**-0.8**
GROC				pmax	pmax		
	comp=Z,638nm,0.2s						
BTLR	**Botlikh**	**0.43**	**150**	ePg	**Pg**	**10 58 13.3**	**-1.7**
BTLR				eSg	**Sg**	**10 58 19.6**	**-1.2**
BTLR	**Botlikh**	**0.43**	**150**	⇑ePG	**Pg**	**10 58 13.2**	**-1.9**
BTLR				e		10 58 19.5	
BTLR				pmax	pmax		
	comp=Z,293nm,0.7s						
BTLR				smax	smax		
	comp=E,3µm,0.5s						
DLMR	**Dylym**	**0.52**	**86**	ePg	**Pg**	**10 58 15.5**	**-1.1**
DLMR				eSg	**Sb**	**10 58 25.0**	**+0.1**
DLMR	**Dylym**	**0.52**	**86**	ePG	**Pg**	**10 58 15.5**	**-1.1**
DLMR				eS	**Sb**	**10 58 25.0**	**+0.1**
DLMR				pmax	pmax		
	comp=Z,749nm,0.2s						
DBC	**Dubki**	**0.66**	**91**	ePg	**Pb**	**10 58 18.9**	**-1.0**
DBC				eSg	**Sb**	**10 58 28.7**	**-0.5**
DBC	**Dubki**	**0.66**	**91**	⇑ePG	**Pb**	**10 58 18.8**	**-1.2**
DBC				e		10 58 28.5	
KRNR	**Karanay**	**0.75**	**106**	iPg	**Pb**	**10 58 20.0**	**-1.5**
KRNR				iSg	**Sb**	**10 58 31.0**	**-0.7**
KRNR	**Karanay**	**0.75**	**106**	⇓iPG	**Pb**	**10 58 20.0**	**-1.5**
KRNR				iS	**Sb**	**10 58 31.0**	**-0.7**
KRNR				pmax	pmax		
	comp=Z,132nm,0.1s						
XNZR	**Khunzakh**	**0.76**	**131**	ePg	**Pb**	**10 58 20.0**	**-1.6**
XNZR				eSg	**Sb**	**10 58 30.6**	**-1.3**
XNZR	**Khunzakh**	**0.76**	**131**	⇑ePG	**Pb**	**10 58 20.0**	**-1.6**
XNZR				e		10 58 30.4	
KMGR	**Komgaron**	**0.78**	**272**	ePg	**Pb**	**10 58 21.5**	**-0.4**
KMGR				eSg	**Sg**	**10 58 33.0**	**+1.2**
KMGR	**Komgaron**	**0.78**	**272**	ePG	**Pb**	**10 58 21.5**	**-0.4**
KMGR				eS	**Sg**	**10 58 33.0**	**+1.2**
BUJR	**Buynaksk**	**0.89**	**103**	ePg	**Pb**	**10 58 23.5**	**-0.4**
BUJR				eSg	**Sg**	**10 58 36.6**	**+1.2**
BUJR	**Buynaksk**	**0.89**	**103**	⇑ePG	**Pb**	**10 58 23.4**	**-0.4**
BUJR				e		10 58 37.4	
ARKR	**Arakani**	**0.90**	**119**	iPg	**Pb**	**10 58 22.5**	**-1.5**
ARKR				eSg	**Sb**	**10 58 35.0**	**-0.9**
ARKR	**Arakani**	**0.90**	**119**	iPG	**Pb**	**10 58 22.5**	**-1.5**
ARKR				eS	**Sb**	**10 58 35.0**	**-0.9**
ARKR				pmax	pmax		
	comp=Z,140nm,0.1s						
VLKR	**Vladikavkaz**	**0.92**	**271**	ePg	**Pb**	**10 58 22.9**	**-1.4**
VLKR				eSg	**Sg**	**10 58 37.5**	**+1.4**
VLKR	**Vladikavkaz**	**0.92**	**271**	dePG	**Pb**	**10 58 24.0**	**-0.3**
GNBR	**Gunib**	**1.00**	**130**	ePg	**Pb**	**10 58 24.5**	**-1.2**
GNBR				eSg	**Sb**	**10 58 38.5**	**-0.4**
GNBR	**Gunib**	**1.00**	**130**	⇓ePG	**Pb**	**10 58 24.5**	**-1.2**
GNBR				eS	**Sg**	**10 58 39.8**	**+0.9**
GNBR				pmax	pmax		
	comp=Z,271nm,0.3s						
GNBR				smax	smax		
	comp=Z,256nm,0.4s						
BTKR	**Batakoyurt**	**1.07**	**289**	ePg	**Pb**	**10 58 26.6**	**-0.2**
BTKR				eSg	**Sg**	**10 58 42.6**	**+1.7**
BTKR	**Batakoyurt**	**1.07**	**289**	ePG	**Pb**	**10 58 27.3**	**+0.5**
BTKR				eS	**Sg**	**10 58 43.5**	**+2.6**
TRKR	**Terskaya**	**1.11**	**309**	ePg	**Pn**	**10 58 27.8**	**0.0**
TRKR				eSg	**Sg**	**10 58 43.8**	**+1.5**
TRKR	**Terskaya**	**1.11**	**309**	cePG	**Pb**	**10 58 28.4**	**+0.9**
KANR	**Karaman**	**1.16**	**82**	ePg	**Pn**	**10 58 28.1**	**-0.2**
KANR				eSg	**Sg**	**10 58 44.6**	**+0.9**
MAK	**Makhachkala**	**1.16**	**93**	⇑iPG	**Pb**	**10 58 29.1**	**+0.7**
MAK				e		10 58 46.4	
MAK				pmax	pmax		
	comp=Z,168nm,0.2s						
MAK				smax	smax		
	comp=E,1µm,0.6s						
MAK				smax	smax		
	comp=E,1µm,0.4s						
GUDG	**Gudauri**	**1.21**	**242**	P	**Pn**	**10 58 26.1**	**-3.3**
GUDG				S	**Sb**	**10 58 40.9**	**-4.2**
GUDG	**Gudauri**	**1.21**	**242**	PG	**Pn**	**10 58 26.1**	**-3.3**
KMKR	**Kumukh**	**1.25**	**136**	iPg	**Pn**	**10 58 29.0**	**-0.9**
KMKR				iSg	**Sb**	**10 58 46.0**	**-0.2**
KMKR	**Kumukh**	**1.25**	**136**	⇑iPG	**Pn**	**10 58 29.0**	**-0.9**
KMKR				iS	**Sb**	**10 58 46.0**	**-0.2**
KMKR				pmax	pmax		
	comp=Z,59nm,0.2s						
KORR	**Kora**	**1.36**	**273**	ePg	**Pn**	**10 58 30.4**	**-0.9**
KORR				eSg	**Sb**	**10 58 49.9**	**+0.7**
KORR	**Kora**	**1.36**	**273**	dePG	**Pn**	**10 58 30.7**	**-0.6**
PRTR	**Priterechnaya**	**1.40**	**301**	ePg	**Pn**	**10 58 32.2**	**+0.5**
PRTR				eSg	**Sg**	**10 58 53.0**	**+1.6**
PRTR	**Priterechnaya**	**1.40**	**301**	ePG	**Pn**	**10 58 32.1**	**+0.5**
PRTR				pmax	pmax		
	comp=Z,362nm,0.3s						
SGKR	**Sergokala**	**1.40**	**114**	ePg	**Pn**	**10 58 32.0**	**+0.2**
SGKR	**Sergokala**	**1.40**	**114**	ePG	**Pn**	**10 58 32.0**	**+0.2**
SGKR				eS	**Sg**	**10 58 53.0**	**+1.4**
STDR	**Stavd-Durt**	**1.40**	**284**	ePg	**Pn**	**10 58 32.1**	**+0.3**
STDR				eSg	**Sg**	**10 58 52.3**	**+0.7**
STDR	**Stavd-Durt**	**1.40**	**284**	ePG	**Pn**	**10 58 32.1**	**+0.3**
STDR				eS	**Sg**	**10 58 52.3**	**+0.7**
ZEI	**Tsey**	**1.51**	**261**	ePg	**Pn**	**10 58 31.8**	**-1.7**
ZEI	**Tsey**	**1.51**	**261**	cePG	**Pn**	**10 58 31.7**	**-1.7**
URKR	**Urkarakh**	**1.53**	**124**	ePg	**Pn**	**10 58 34.2**	**+0.5**
URKR				eSg	**Sg**	**10 58 56.0**	**+0.2**
URKR	**Urkarakh**	**1.53**	**124**	⇑ePG	**Pn**	**10 58 34.2**	**+0.5**
URKR				e		10 58 56.0	
LSNR	**Lesken**	**1.56**	**280**	ePg	**Pn**	**10 58 34.7**	**+0.8**
LSNR				eSg	**Sb**	**10 58 56.2**	**+1.3**
LSNR	**Lesken**	**1.56**	**280**	cePG	**Pn**	**10 58 34.5**	**+0.6**
TBLG	**Delisi**	**1.57**	**214**	P	**Pn**	**10 58 34.0**	**-0.2**
TBLG				S	**Sb**	**10 58 55.3**	**0.0**
TBLG	**Delisi**	**1.57**	**214**	ePg	**Pn**	**10 58 34.0**	**-0.2**
TBLG				eSg	**Sb**	**10 58 55.3**	**0.0**
TBLG	**Delisi**	**1.57**	**214**	PG	**Pn**	**10 58 34.0**	**-0.2**
TBLG				S	**Sb**	**10 58 55.3**	**0.0**
DDFL	**Dedoflistskaro**	**1.60**	**175**	P	**Pb**	**10 58 37.1**	**+1.2**
DDFL				S	**Sg**	**10 59 02.5**	**+4.7**
DDFL	**Dedoflistskaro**	**1.60**	**175**	ePg	**Pb**	**10 58 37.1**	**+1.2**
DDFL				eSg	**Sg**	**10 59 02.5**	**+4.7**
DDFL	**Dedoflistskaro**	**1.60**	**175**	PG	**Pb**	**10 58 37.0**	**+1.2**
DDFL				S	**Sg**	**10 59 02.5**	**+4.7**
DIGR	**Digorskoe uzhe**	**1.73**	**266**	dePN	**Pn**	**10 58 36.0**	**-0.4**
NCK	**Nalchik**	**1.76**	**286**	ePg	**Pn**	**10 58 38.1**	**+1.3**
NCK				eSg	**Sg**	**10 59 03.0**	**-0.2**
NCK	**Nalchik**	**1.76**	**286**	⇑ePN	**Pn**	**10 58 37.9**	**+1.1**
NCK				eS	**Sb**	**10 59 02.3**	**+1.5**
NCK				pmax	pmax		
	comp=Z,161nm,0.2s						
NCK				smax	smax		
	comp=Z,268nm,0.4s						
ONI	**Oni**	**1.87**	**257**	P	**Pn**	**10 58 38.6**	**+0.3**
ONI				S	**Sb**	**10 59 04.0**	**-0.1**
ONI	**Oni**	**1.87**	**257**	ePg	**Pn**	**10 58 38.8**	**+0.5**
ONI				eSg	**Sb**	**10 59 03.7**	**-0.3**
ONI	**Oni**	**1.87**	**257**	PN	**Pn**	**10 58 38.6**	**+0.3**
ONI				S	**Sb**	**10 59 03.9**	**-0.1**
KBTC	**Kuba-Taba**	**1.99**	**294**	ePg	**Pn**	**10 58 40.1**	**+0.1**
KBTC				eSg	**Sb**	**10 59 08.1**	**+0.6**
TRLG	**Trialeti**	**2.02**	**223**	P	**Pn**	**10 58 41.0**	**+0.5**
TRLG				S	**Sb**	**10 59 08.4**	**+0.1**
TRLG	**Trialeti**	**2.02**	**223**	PN	**Pn**	**10 58 40.9**	**+0.5**
DRN	**Derbent**	**2.04**	**119**	ePg	**Pb**	**10 58 42.4**	**-1.0**
DRN	**Derbent**	**2.04**	**119**	ePN	**Pb**	**10 58 43.4**	**0.0**
DRN				eS	**Sb**	**10 59 10.6**	**+1.9**
DRN				pmax	pmax		
	comp=Z,88nm,0.6s						
AKT	**Akhty**	**2.05**	**139**	ePg	**Pn**	**10 58 41.8**	**+0.9**
AKT				eSg	**Sb**	**10 59 08.9**	**-0.2**
AKT	**Akhty**	**2.05**	**139**	⇓ePN	**Pn**	**10 58 41.7**	**+0.9**
AKT				e		10 59 11.0	
AKT				pmax	pmax		
	comp=Z,86nm,0.6s						
AKT				smax	smax		
	comp=N,190nm,0.4s						
TKB	**Tkibuli**	**2.27**	**253**	P	**Pb**	**10 58 46.7**	**-0.6**
TKB				S	**Sg**	**10 59 18.3**	**-1.1**
TKB	**Tkibuli**	**2.27**	**253**	PN	**Pb**	**10 58 46.7**	**-0.6**
TKB				S	**Sg**	**10 59 18.3**	**-1.1**
PYA1	**Pyatigorsk**	**2.30**	**297**	ePN	**Pn**	**10 58 42.7**	**-1.5**
KBZ	**Khabaz**	**2.31**	**288**	⇑ePN	**Pn**	**10 58 42.5**	**-1.8**
NEY	**Neytrino**	**2.35**	**276**	ePn	**Pn**	**10 58 45.4**	**+0.3**
NEY				eSn	**Sb**	**10 59 16.6**	**-1.3**
NEY	**Neytrino**	**2.35**	**276**	ePN	**Pn**	**10 58 45.4**	**+0.3**
NEY				eS	**Sb**	**10 59 16.6**	**-1.3**
AKH	**Akhalkalaki**	**2.43**	**229**	P	**Pn**	**10 58 47.8**	**+1.6**
AKH				S	**Sb**	**10 59 19.1**	**-1.0**
AKH	**Akhalkalaki**	**2.43**	**229**	ePn	**Pn**	**10 58 47.8**	**+1.6**
AKH	**Akhalkalaki**	**2.43**	**229**	PN	**Pn**	**10 58 47.7**	**+1.6**
AKH				S	**Sb**	**10 59 19.1**	**-1.0**
BEYR	**Belyy Ugol+**	**2.46**	**294**	ePn	**Pn**	**10 58 45.0**	**-1.4**
BEYR				eSn	**Sb**	**10 59 19.0**	**-1.9**
BGD	**Bogdanovka**	**2.48**	**225**	P	**Pn**	**10 58 48.4**	**+1.7**
BGD				S	**Sb**	**10 59 20.7**	**-0.8**
BGD	**Bogdanovka**	**2.48**	**225**	PN	**Pn**	**10 58 48.4**	**+1.7**
BGD				S	**Sb**	**10 59 20.6**	**-0.8**
SHA1	**Shidzhatmaz**	**2.48**	**288**	ePn	**Pn**	**10 58 46.1**	**-0.8**
SHA1				eSn	**Sb**	**10 59 20.0**	**-1.7**
SHA1	**Shidzhatmaz**	**2.48**	**288**	ePN	**Pn**	**10 58 45.2**	**-1.7**
SHA1				eS	**Sb**	**10 59 21.0**	**-0.7**
KIV	**Kislovodsk**	**2.53**	**292**	⇑ePN	**Pn**	**10 58 45.9**	**-1.5**
KIV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GOF	**Gofitskoye**	**2.90**	**315**	ePn	**Pn**	**10 58 53.5**	**+1.1**
GOF				eSn	**Sn**	**10 59 28.4**	**+1.3**
GOF	**Gofitskoye**	**2.90**	**315**	⇑ePN	**Pn**	**10 58 53.3**	**+0.9**
GOF				eS	**Sn**	**10 59 28.2**	**+1.1**
GOF				pmax	pmax		
	comp=Z,13nm,0.2s						
GOF				smax	smax		
	comp=E,46nm,0.2s						
GOF				smax	smax		
	comp=N,54nm,0.2s						

*NEIC **01** 11:07:35.6±2.0, 35.°76N±0.°05×141.°29E±0.°09, h42km±10km, mb4.1/8, Error ellipse: s-maj=10.4km s-min=7.5km az=88.0*
*IDC **01** 11:07:36.0±4.6, 35.°85N×141.°14E, h33km±35km, mb3.6/6, mb1 3.7/10, mb1mx3.5/48, mbtmp3.9/10, ML3.2/3, MS3.8/3, Ms1 3.8/3, ms1mx3.1/53, Error ellipse: s-maj=35.6km s-min=15.9km az=71.0*
*JMA **01** 11:07:37.4±0.1, 35.°86N×140.°93E, h38km±1km, M3.1*
ISC 01 11:07:35.7±0.9, **35.°81N**±0.°05×**141.°19E**±0.°06, **h36**km±2km, **n51**, σ1.°50/54, **mb3.8**/11, **MS4.0**/3, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.29**	**248**	P	**Pn**	**11 07 44.0**	**+0.4**
CHOJ				eS	**Sn**	**11 07 48.7**	**-1.2**
JIHU	**Itakohorinouch**	**0.56**	**286**	P	**Pn**	**11 07 46.5**	**-0.7**
JIHU				S	**Sn**	**11 07 53.6**	**-1.6**
JSMT	**Sammumatsuo**	**0.62**	**255**	P	**Pn**	**11 07 47.8**	**-0.3**
JHYU	**Hitachinakayam**	**0.72**	**318**	P	**Pn**	**11 07 49.1**	**-0.2**
JHYU				S	**Sn**	**11 07 57.8**	**-1.3**
JYT	**Yasato**	**0.91**	**298**	P	**Pn**	**11 07 50.5**	**-1.4**
JHO	**Hitachi**	**0.94**	**328**	P	**Pn**	**11 07 52.3**	**-0.1**
BSO4	**Boso 4**	**1.07**	**221**	P	**Pn**	**11 07 56.2**	**+2.1**
BSO3	**Boso 3**	**1.15**	**209**	P	**Pn**	**11 07 56.2**	**+1.2**
BSO1	**Boso 1**	**1.17**	**189**	P	**Pn**	**11 07 57.6**	**+2.7**
JAG	**Ashikaga**	**1.53**	**294**	P	**Pn**	**11 07 59.4**	**-1.1**
MJAR	**Matsushiro Arr**	**2.52**	**288**	Pn	**Pn**	**11 08 14.2**	**+0.1**
	1.2nm,0.3s,baz=85,slow=10,SNR=68						
MJAR				Sn	**Sn**	**11 08 42.5**	**-1.1**
	0.6nm,0.3s,baz=124,slow=30,SNR=6.4						
MJAR	**Matsushiro Arr**	**2.52**	**288**		**Pn**	**11 08 16.0**	**+1.9**
MAJO	**Matsushiro**	**2.52**	**288**		**Pn**	**11 08 14.1**	**0.0**
MAJO				Sn	**Sn**	**11 08 45.5**	**+1.9**
MAT	**Matsushiro**	**2.52**	**288**	P	**Pn**	**11 08 14.5**	**+0.4**
MAT				S	**Sn**	**11 08 39.4**	**-4.2**
MJB9	**Matsu-Tunnel**	**2.52**	**288**		**Pn**	**11 08 14.2**	**0.0**
MJB9				Sn	**Sn**	**11 08 45.9**	**+2.2**
JHJ2	**Mitsune**	**2.92**	**203**	Pn	**Pn**	**11 08 17.9**	**-1.7**
JHJ2				Sn	**Sn**	**11 08 54.3**	**+0.9**
JHJ	**Hachijo jima 2**	**2.92**	**204**	Pn	**Pn**	**11 08 20.6**	**+0.9**
	8.5nm,0.3s,baz=156,slow=23,SNR=18						
JHJ				Sn	**Sn**	**11 08 54.5**	**+1.0**
	31nm,0.3s,baz=81,slow=22,SNR=5.2						
INU	**Inuyama**	**3.43**	**264**		**Pn**	**11 08 28.8**	**+2.2**
INU				Sn	**Sn**	**11 09 07.2**	**+1.2**
ERM	**Erimo**	**6.38**	**13**	Pn	**Pn**	**11 09 08.1**	**+0.9**
ERM				Sn	**Sn**	**11 10 21.1**	**+2.4**
ASAJ	**Asahikawa**	**8.37**	**7**	Pn	**Pn**	**11 09 34.8**	**+0.4**
	0.7nm,0.3s,baz=230,slow=14,SNR=7.0						
JKA	**Kamikawa-asahi**	**8.37**	**7**		**Pn**	**11 09 34.8**	**+0.4**
JCJ	**Chichijima**	**8.73**	**174**	Pn	**Pn**	**11 09 39.1**	**-0.3**
	6.0nm,0.3s,baz=278,slow=22,SNR=19						
JCJ				Sn	**Sn**	**11 11 11.7**	**-4.9**
	2.8nm,0.3s,baz=342,slow=20,SNR=3.4						
JNU	**Nakatsue**	**8.93**	**255**	Pn	**Pn**	**11 09 42.9**	**+0.8**
USRK	**Ussuriysk Ar.**	**10.95**	**323**	Pn	**Pn**	**11 10 11.5**	**+1.8**
BJT	**Baijiatuau**	**20.16**	**290**	P	**P**	**11 12 07.1**	**+0.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	20.84	29	P	P	11 12 12.8	-1.3
SSLB	Suanglung	21.21	241	P	P	11 12 16.4	-1.9
SSLB				IAmb	IAmb	11 12 31.2	
	comp=Z,5.0nm,0.6s						
MA2	Magadan	24.59	12	LR	LR	11 23 34.5	
	comp=Z,68nm,19.8s,baz=12,slow=39						
H11N2	WAKE ISLAND Hy	27.70	118	T	T	11 42 36.3	
	baz=310,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	27.71	119	T	T	11 42 30.9	
	baz=310,slow=75,SNR=17						
H11N3	WAKE ISLAND Hy	27.72	118	T	T	11 42 24.5	
	baz=310,slow=75,SNR=20						
SONM	Songino Array	28.34	306	P	P	11 13 25.7	-0.5
	comp=Z,0.4nm,0.6s,baz=111,slow=10,SNR=3.7						
SONM	Songino Array	28.34	306	P	P	11 13 24.8	-1.4
H11S1	WAKE ISLAND Hy	28.37	121	T	T	11 43 16.4	
	baz=312,slow=75,SNR=28						
H11S3	WAKE ISLAND Hy	28.37	121	T	T	11 43 17.0	
	baz=312,slow=75,SNR=31						
H11S2	WAKE ISLAND Hy	28.39	121	T	T	11 43 24.9	
	baz=312,slow=75,SNR=19						
TLY	Talaya	31.01	313	P	P	11 13 49.8	+0.1
TLY				IAmb	IAmb	11 13 53.6	
	comp=Z,2.2nm,0.7s						
ZALV	Zalesovo Beam	42.61	313	P	P	11 15 28.1	-0.1
	comp=Z,0.5nm,0.4s,baz=64,slow=6.6,SNR=3.1						
ZALV	Zalesovo Beam	42.61	313	P	P	11 15 27.6	-0.6
MK31	Makanchi Array	44.62	303	P	P	11 15 44.4	-0.2
MK31				IAmb	IAmb	11 15 56.0	
	comp=Z,1.8nm,1.2s						
MKAR	Makanchi Array	44.62	303	P	P	11 15 44.7	+0.2
	comp=Z,1.0nm,0.7s,baz=92,slow=10.0,SNR=15						
KURK	Kurchatov	46.55	309	P	P	11 15 59.3	-0.3
KURK				IAmb	IAmb	11 16 08.2	
	comp=Z,2.4nm,0.9s						
KURBB	Kurchatov Arra	46.62	309	P	P	11 16 00.2	0.0
	comp=Z,1.3nm,0.4s,baz=86,slow=7.7,SNR=4.4						
WB2	Warramunga Arr	55.82	188	P	P	11 17 09.3	-0.2
WRA	Warramunga Arr	55.83	188	P	P	11 17 10.0	+0.6
	comp=Z,0.8nm,0.7s,baz=8.0,slow=7.8,SNR=4.9						
ABKAR	Akbulak array	58.59	311	P	P	11 17 29.0	+0.2
ABKAR				IAmb	IAmb	11 17 37.4	
	comp=Z,3.3nm,1.4s						
ABKAR	Akbulak array	58.59	311	P	P	11 17 28.9	+0.2
ASAR	Alice Springs	59.55	188	P	P	11 17 37.2	+1.6
	comp=Z,0.4nm,0.6s,baz=16,slow=11,SNR=4.6						
ASAR	Alice Springs	59.55	188	P	P	11 17 36.0	+0.3
GNI	Garni	72.29	307	LR	LR	11 51 39.4	
	comp=Z,135nm,18.3s,baz=280,slow=37						
NVAR	Mina Array Bea	75.87	53	LR	LR	11 47 22.6	
	comp=Z,87nm,21.4s,baz=353,slow=31						

IDC 01 11:15:23.9±2.2, **24°.90N×93°.81E, h0km, mb3.3**/4, **mb1 3.6**/4, **mb1mx3.3**/44, **mbtmp3.3**/4, **Error ellipse: s-maj=91.6km s-min=24.3km az=71.0, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	23.71	340	P	P	11 20 37.5	-0.1
	0.4nm,0.8s,baz=150,slow=11,SNR=4.4						
SONM	Songino Array	24.97	20	P	P	11 20 49.2	0.0
	0.1nm,0.3s,baz=207,slow=9.1,SNR=2.6						
WRA	Warramunga Arr	59.51	135	P	P	11 25 28.8	-0.4
	1.2nm,1.0s,baz=322,slow=7.5,SNR=8.4						
ASAR	Alice Springs	61.97	138	P	P	11 25 46.3	+0.3
	0.3nm,0.5s,baz=323,slow=6.9,SNR=6.1						

WEL 01 11:18:52.9, 40°.6S±0°.6×**17°.6E**±°, **h29**km±1km, **ML3.6**/14, **MLv3.2**/55, **Error ellipse: s-maj=0.0km s-min=0.0km az=89.3, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRWZ	Pori Road	0.13	50	P	Pn	11 18 58.7	-0.3
PRWZ				S	Sb	11 19 03.1	+1.1
TIWZ	Tintock	0.14	165	P	Pb	11 18 58.8	+0.3
TIWZ				S	Sb	11 19 03.3	+1.0
MRZ	Mangatainoka R	0.20	264	P	Pb	11 18 59.4	+0.4
POWZ	Post Office Ro	0.25	348	P	Pb	11 19 00.0	+0.4
BFZ	Birch Farm	0.31	98	P	Pb	11 19 00.7	+0.2
BFZ				S	Sn	11 19 06.7	-0.4
HOWZ	Holdsworth Sta	0.36	224	P	Pn	11 19 01.7	-0.4
HOWZ				S	Sn	11 19 07.9	-0.3
CPWZ	Castlepoint	0.39	135	P	Pb	11 19 02.8	+0.4
DVHZ	Dannevirke	0.42	36	P	Pb	11 19 02.1	0.0
TMWZ	Te Maipa	0.47	175	P	Pb	11 19 03.4	-0.3
ANWZ	Angora Road	0.52	70	P	Pb	11 19 03.9	+0.4
OGWZ	Otaki Gorge	0.54	251	P	Pn	11 19 04.6	0.0
MTW	Mount Morrison	0.58	206	P	Pn	11 19 04.9	-0.3
TSZ	Takapari Road	0.59	9	P	Pb	11 19 04.9	+0.2
TSZ				S	Sn	11 19 13.4	-0.5
OHWZ	Ohakea	0.59	317	P	Pb	11 19 06.2	+0.9
OHWZ				S	Sn	11 19 15.8	+1.9
PRHZ	Porangahau	0.71	59	P	Pb	11 19 06.6	-0.2
PRHZ				S	Sn	11 19 18.1	+1.1
WPHZ	Waipukurau	0.74	39	P	Pn	11 19 07.6	+0.3
WPHZ				S	Sn	11 19 19.3	+1.8
KIW	Kapiti Island	0.74	252	P	Pn	11 19 07.9	+0.5
CAW	Cannon Point	0.75	231	P	Pn	11 19 07.9	+0.4
TRWZ	Traveller	0.77	189	P	Pb	11 19 07.3	-0.4
PNHZ	Pukenui	0.78	21	P	Pn	11 19 08.0	+0.1
PAWZ	Paruwai Farm	0.80	203	P	Pn	11 19 07.8	-0.4
MSWZ	Moikau Station	0.89	210	P	Pn	11 19 08.9	-0.6
PXZ	Pawanui	0.99	52	P	Pn	11 19 10.4	-0.4
PLWZ	Palliser	1.03	205	P	Pn	11 19 10.6	-0.8
WEL	Wellington	1.03	231	P	Pn	11 19 11.4	0.0
BHW	Baring Head	1.06	223	P	Pn	11 19 11.4	-0.3
KRHZ	Kereru	1.08	22	P	Pn	11 19 12.1	+0.1
WAZ	Wanganui	1.10	323	P	Pb	11 19 14.5	+1.3
KAHZ	Kahuranaki	1.16	44	P	Pn	11 19 13.0	-0.2
BHHZ	Black Hill Sta	1.16	9	P	Pn	11 19 13.8	+0.6
MOVZ	Moawhango	1.23	357	P	Pb	11 19 15.1	-0.5
KWHZ	Kaweka Forest	1.29	20	P	Pb	11 19 15.2	+0.2
TCW	Tory Channel	1.31	244	P	Pn	11 19 15.2	0.0
MCHZ	McNeill Hill	1.36	29	P	Pn	11 19 16.1	+0.1
WHVZ	Whangaehu Hut	1.37	352	P	Pb	11 19 18.0	0.0
TUVZ	Tukino	1.38	354	P	Pb	11 19 18.1	0.0
FWVZ	Far West T-bar	1.40	351	P	Pb	11 19 18.4	-0.1
DUWZ	D'Urville Isla	1.47	263	P	Pn	11 19 18.0	+0.6
WTVZ	West Tongariro	1.54	353	P	Pb	11 19 20.1	-0.7
KRVZ	Karewarewa	1.55	354	P	Pb	11 19 20.1	-0.9
BKZ	Black Stump Fm	1.56	19	P	Pn	11 19 18.5	-0.1
TWVZ	Taurewa	1.60	349	P	Pb	11 19 20.7	-1.1
TUWZ	Tuamarina	1.64	241	P	Pn	11 19 19.0	-0.7
CMWZ	Cape Campbell	1.65	227	P	Pb	11 19 25.3	+2.6
NMHZ	Naumai	1.71	26	P	Pn	11 19 20.9	+0.1
VRZ	Vera Road	1.73	331	P	Pb	11 19 24.5	+0.6
HATZ	Hinemaiaia	1.76	6	P	Pn	11 19 21.9	+0.5
RATZ	Rangitukua	1.77	358	P	Pb	11 19 26.8	+2.1
BSWZ	Blackbirch Sta	1.83	233	P	Pn	11 19 21.7	-0.7
MRHZ	Matea Rd	1.86	14	P	Pn	11 19 22.3	-0.5
MTHZ	Maungataniwha	1.94	24	P	Pn	11 19 23.1	-0.9
NNZ	Nelson	1.95	252	P	Pn	11 19 24.2	+0.3
RAHZ	Arahi	1.97	30	P	Pn	11 19 23.7	-0.7
ALRZ	Allen Road	2.11	11	P	Pb	11 19 31.6	+1.1
PRRZ	Plateau Road	2.18	11	P	Pb	11 19 30.4	-1.2
HIZ	Hauiti	2.26	340	P	Pb	11 19 33.1	+0.2
TLZ	Tolley Road	2.32	354	P	Pn	11 19 31.2	+2.1
KHZ	Kahutara	2.48	223	P	Pn	11 19 29.5	-1.7
THZ	Tophouse	2.48	242	P	Pn	11 19 30.6	-0.8
QRZ	Quartz Range	2.52	265	P	Pn	11 19 32.1	+0.2
MWZ	Matawai	2.65	30	P	Pn	11 19 32.0	-1.6
HAZ	Te Kaha	3.25	28	P	Pn	11 19 40.6	-1.2
LTZ	Lake Taylor	3.42	230	P	Pn	11 19 42.7	-1.6
OKCZ	Okains Bay	3.71	213	P	Pn	11 19 45.7	-2.5
MQZ	McQueen's Vall	3.87	217	P	Pn	11 19 47.3	-3.1
AKCZ	Akaroa Harbour	3.89	213	P	Pn	11 19 47.8	-2.9
ODZ	Otahua Downs	5.83	219	P	Pn	11 20 14.4	-2.8
TUZ	Tuapeka	6.98	218	P	Pn	11 20 30.9	-2.1

IDC 01 11:20:01.6±1.0, 13°.94N×93°.21E, h0km, mb3.8/6, mb1 3.8/7, mb1mx3.5/41, mbtmp3.7/7, ML3.7/1, MS3.0/1, Ms1 3.2/1, ms1mx2.8/61, Error ellipse: s-maj=29.6km s-min=20.8km az=71.0

ISC 01 11:20:06.5±1.1, **14°.0N**±0°.1×**93°.2E**±0°.1, **h32**km, **n7**, σ0°.70/8, **mb3.8**/6, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.11	50	Pn	Pn	11 21 48.3	0.0
	0.3nm,0.3s,baz=243,slow=14,SNR=3.2						
CMAR				Sn	Sn	11 23 08.3	+0.4
	0.3nm,0.3s,baz=238,slow=29,SNR=2.9						
CMAR				LR	LR	11 25 27.5	
	comp=Z,105nm,19.2s,baz=45,slow=46						
MKAR	Makanchi Array	34.00	347	P	P	11 26 46.6	-0.7
	0.2nm,0.5s,baz=165,slow=7.6,SNR=4.6						
KURBB	Kurchatov Arra	38.48	345	P	P	11 27 26.3	+0.9
	0.4nm,0.3s,baz=161,slow=8.1,SNR=3.4						
ZALV	Zalesovo Beam	40.45	352	P	P	11 27 41.0	-0.8
	0.4nm,0.6s,baz=171,slow=9.8,SNR=2.9						
WRA	Warramunga Arr	52.64	129	P	P	11 29 17.9	-0.1
	1.0nm,1.0s,baz=300,slow=9.8,SNR=3.4						
ASAR	Alice Springs	54.59	133	P	P	11 29 31.9	-0.3
	0.6nm,0.5s,baz=305,slow=6.7,SNR=6.6						
BOSA	Boshof	78.09	236	P	P	11 32 03.1	+0.4
	2.3nm,0.6s,baz=69,slow=3.5,SNR=6.4						

SJA 01 11:32:25.8±1.1, **31°.28S×68°.68W, h107**km±3km, **ML3.6, MW3.4, 1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.18	107	iP	Pn	11 32 41.7	+0.8
RTLL				eS	Sn	11 32 53.2	+1.0
ZON	Zonda	0.27	180	iP	Pn	11 32 42.2	+1.0
ZON				IAML		11 32 42.5	
	comp=Z,2μm,0.2s						
ZON				eS	Sn	11 32 52.8	+0.1
AMOG	MOGNA	0.37	26	eP	Pn	11 32 42.7	+1.0
AMOG				eS	Sn	11 32 54.0	+0.5
RTCV	Cerro Valdivia	0.60	169	iP	Pn	11 32 44.2	+1.1
RTCV				⇓eS	Sn	11 32 57.1	+1.0
RTLS	Leoncito	0.74	225	eP	Pn	11 32 45.9	+1.3
RTLS				eS	Sn	11 32 57.6	-1.1
RTLS				IAML		11 33 01.1	
	comp=Z,746nm,0.4s						
ASAL	Salagasta	1.32	186	iP	Pn	11 32 52.2	+1.8
ASAL				eS	Sn	11 33 10.3	+1.2
ARCO	CERRO ARCO	1.58	188	iP	Pn	11 32 55.5	+1.9
ARCO				eS	Sn	11 33 14.8	+0.2
ARCO				IAML		11 33 18.1	
	comp=Z,561nm,0.3s						
ACAN	Cantantal	1.61	129	iP	Pn	11 32 55.9	+2.1
ACAN				eS	Sn	11 33 16.4	+1.2
AAGR	Agrelo	1.81	184	iP	Pn	11 32 58.2	+1.9
AAGR				eS	Sn	11 33 20.5	+0.9
APLL	PUNTA DE LOS L	2.05	65	eP	Pn	11 33 00.7	+1.4
APLL				eS	Sn	11 33 26.1	+1.1
APLL				IAML		11 33 26.5	
	comp=Z,439nm,0.2s						
GO04	Tololo Observa	2.13	300	iP	Pn	11 33 01.4	+0.8
GO04				eS	Sn	11 33 28.3	+1.1
ACLC	CERRO LA CRUZ	2.37	39	iP	Pn	11 33 04.9	+1.2
ACLC				eS	Sn	11 33 33.9	+1.3
PEL	Peldehue	2.52	222	iP	Pn	11 33 07.2	+1.8
VCA	Vinchina	2.56	9	iP	Pn	11 33 07.7	+1.5
VCA				eS	Sn	11 33 37.8	+0.7
VCA				IAML		11 33 44.0	
	comp=Z,388nm,0.4s						
ROC1	El Roble	2.61	229	iP	Pn	11 33 07.6	+0.8
ROC1				eS	Sn	11 33 39.2	+1.0
TCA	Tanti	3.50	92	iP	Pn	11 33 19.5	+1.1
TCA				IAML		11 34 22.9	
	comp=Z,76nm,0.4s						
LAMA	Las Malvinas	3.68	187	iP	Pn	11 33 21.7	+0.9
LAMA				eS	Sn	11 33 57.2	-6.1
CYA	Choya	3.77	42	iP	Pn	11 33 22.3	+0.2
CYA				IAML		11 34 43.6	
	comp=Z,35nm,0.4s						
COIS	El Sosneado	3.90	191	iP	Pn	11 33 23.7	-0.1
GO03	Copiap	3.91	339	iP	Pn	11 33 24.2	+0.2
GO03				eS	Sn	11 34 09.8	+0.8
PUMA	Malargue	4.26	188	iP	Pn	11 33 29.7	+1.1
PUMA				eS	Sn	11 34 09.9	-7.4
EDS3	Malargue	4.52	187	iP	Pn	11 33 33.2	+1.0
GO05	Huala	4.62	215	iP	Pn	11 33 31.6	-1.8
PB14	IPOC Station P	6.80	347	iP	Pn	11 34 01.8	-1.5
PB14				eS	Sn	11 35 23.8	+4.5
PB10	IPOC Station P	7.91	347	iP	Pn	11 34 15.5	-2.6
PB15	IPOC Station P	8.07	355	iP	Pn	11 34 18.9	-1.5
PB05	IPOC Station P	8.50	350	iP	Pn	11 34 22.8	-3.4
PB06	IPOC Station P	8.57	354	iP	Pn	11 34 24.1	-3.2

THE 01 11:33:48.4, 38°.22N×20°.39E, h9km±1km, ML3.0/8, Error ellipse: s-maj=1.2km s-min=0.4km az=224.0
ATH 01 11:33:48.3, 38°.22N×20°.40E, h10km±2km, ML2.8/3, Error ellipse: s-maj=2.5km s-min=1.1km az=235.0
ISC 01 11:33:48.4±1.5, **38°.22N**±0°.03×**20°.41E**±0°.05, **h9**km±7km, **n26**, σ0°.42/46, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.03	127	P	Pg	11 33 50.1	+0.1
LXR1				S	Sg	11 33 51.3	+0.1
	274μm,0.3s						
CHV1	Chavriata, Kef	0.04	209	P	Pg	11 33 50.3	+0.2
CHV1				S	Sg	11 33 51.5	+0.2
	103μm,0.2s						
KEF4	Livadi, Kephal	0.04	20	P	Pg	11 33 50.0	-0.1
KEF4				S	Sg	11 33 50.9	-0.5
KEF3	Kipouria, Keph	0.05	251	P	Pg	11 33 50.4	+0.2
KEF3				S	Sg	11 33 51.7	+0.2
ARG2	Argostoli	0.08	122	P	Pg	11 33 50.7	+0.2
ARG2				S	Sg	11 33 52.1	+0.1
	27μm,0.2s						
KEF1	Kardakata, Kep	0.08	41	P	Pg	11 33 50.5	0.0
KEF1				S	Sg	11 33 51.8	-0.3
KEF2	Argostoli. Kep	0.08	130	P	Pg	11 33 50.8	+0.2
KEF2				S	Sg	11 33 52.3	+0.1
VLS	Valsamata	0.15	106	P	Pg	11 33 51.7	+0.1
VLS				S	Sg	11 33 54.2	+0.3
	9μm,0.2s						
VLS	Valsamata	0.15	106	P	Pg	11 33 51.7	+0.1
VLS				S	Sg	11 33 53.6	-0.3
VLS				AML	AML	11 33 54.3	
	comp=N,20406μm,0.2s						
VLS				AML	AML	11 33 55.0	
	comp=E,13110μm,0.1s						
VSK1	VASILIKIADES	0.23	33	P	Pg	11 33 53.3	+0.3
VSK1				S	Sg	11 33 56.8	+0.7
	comp=E,8μm,0.3s						
FSK	Fiskardo	0.27	27	P	Pg	11 33 54.0	+0.2
FSK				S	Sg	11 33 58.2	+0.8
	comp=E,3μm,0.3s						
FSK	Fiskardo	0.27	27	P	Pg	11 33 53.9	+0.2
FSK				S	Sg	11 33 57.7	+0.3
KFL	Anninata	0.32	110	P	Pg	11 33 54.8	+0.1
KFL				S	Sg	11 34 00.0	+1.0
EVGI	Lefkada island	0.45	26	P	Pg	11 33 57.2	+0.1
EVGI				S	Sb	11 34 04.3	-0.9
EVGI	Lefkada island	0.45	26	P	Pg	11 33 57.2	+0.1
EVGI				S	Sg	11 34 03.8	+0.8
MGNA	Meganis	0.53	35	P	Pg	11 33 58.4	-0.3
MGNA				S	Sg	11 34 06.1	+0.5
MGNA				AML	AML	11 34 07.5	
	comp=E,2321μm,0.1s						
MGNA				AML	AML	11 34 07.7	
	comp=N,2300μm,0.1s						
LKD2	Lefkada island	0.60	19	P	Pg	11 33 59.7	-0.3
LKD2				S	Sg	11 34 08.5	+0.5
	comp=N,335nm,0.4s						
LKD2	Lefkada island	0.60	19	P	Pg	11 33 59.6	-0.4
LKD2				S	Sg	11 34 08.6	+0.7
AST1	Astakos	0.63	59	P	Pg	11 34 00.5	0.0
AST1				S	Sb	11 34 10.6	+0.2
	comp=N,1μm,0.3s						
TSLK	Tsoukalades, L	0.64	18	P	Pg	11 34 00.4	-0.3
TSLK	Tsoukalades, L	0.64	18	P	Pg	11 34 00.3	-0.4
PDO	Prodromos	0.72	58	P	Pg	11 34 02.1	-0.1
PDO	Prodromos	0.72	58	P	Pg	11 34 02.0	-0.3
PDO				S	Sb	11 34 12.7	-0.4
PDO				AML	AML	11 34 17.7	
	comp=E,1567μm,0.3s						
PDO				AML	AML	11 34 18.6	
	comp=N,1714μm,0.3s						
RLS	Riolos of Patr	0.85	101	P	Pg	11 34 04.0	-0.8
PVO	Paravola	0.96	65	P	Pg	11 34 07.0	+0.1
PVO	Paravola	0.96	65	P	Pg	11 34 06.8	-0.1

IDC 01 11:35:07.6±0.5, 6°.10N×116°.62E, h0km, mb4.1/20, mb1 4.2/20, mb1mx4.0/58, mbtmp4.1/20, MS3.4/5, Ms1 3.4/5, ms1mx3.0/40, Error ellipse: s-maj=29.9km s-min=13.4km az=61.0
BJI 01 11:35:08.2±0.0, 6°.02N×116°.53E, h13km, mB4.9/10, mb4.3/31, Ms4.4/8, Ms7 4.1/7
NEIC 01 11:35:10.8±0.9, 6°.16N±0°.06×116°.55E±0°.03, h17km±3km, mb4.6/59, Error ellipse: s-maj=9.5km s-min=2.6km az=161.0
KLM 01 11:35:10.0, 6°.12N×116°.61E, h3km, mb4.4
ISC 01 11:35:10.6±1.5, **6°.11N**±0°.05×**116°.58E**±0°.05, **h16**km±9km, **n132**, σ0°.78/141, **mb4.5**/50, **1C, Borneo**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	0.37	259		Pb	11 35 18.6	-0.4
KKM				Sg	Sg	11 35 23.1	-0.4
SPMM	Sapulut	1.40	185	P	Pg	11 35 38.0	+0.3
SBUM	Sibu	5.67	230		Pn	11 36 34.9	+0.6
SBUM				Sn	Sn	11 37 39.0	-0.2
SBUM	Sibu	5.67	230	P	Pn	11 36 35.0	+0.6
KSM	Kuching	7.77	234		Pn	11 37 03.2	-0.1
KSM	Kuching	7.77	234	P	Pn	11 37 04.0	+0.8
DAV	Davao City (W)	8.99	83	LR	LR	11 40 58.3	
	comp=Z,379nm,20.4s,baz=335,slow=39						
LUWI	Luwuk	9.42	139		Pn	11 37 27.5	+1.7
DLV	T Lat	9.87	306	Pn	Pn	11 37 32.2	-0.1
KAPI	Kappang	11.50	164	LR	LR	11 43 45.2	
	comp=Z,195nm,19.9s,baz=117,slow=45						
KAPI	Kappang	11.50	164	Pn	Pn	11 37 55.8	+1.4
UBPT	Khong Chiam	14.21	311	Pn	Pn	11 38 31.0	-0.5
QIZ	Qiongzhong	14.42	334	P	Pn	11 38 33.8	-0.5
QIZ				S	Sn	11 41 16.5	+2.5
QIZ				LR	LR		
	comp=N,290nm,16.2s						
QIZ				LR	LR		
	comp=E,130nm,19.6s						
QIZ				LR	LR		
	comp=Z,240nm,17.7s						
QIZ	Qiongzhong	14.42	334	Pn	Pn	11 38 33.4	-0.9
IPM	Ipoh	15.57	265		Pn	11 38 50.1	+0.3
LEM	Lembang	15.66	215	LR	LR	11 44 18.4	
	comp=Z,176nm,19.3s,baz=356,slow=35						
KULM	Kulim	15.87	268		Pn	11 38 54.2	+0.5
KULM				IAmb	IAmb	11 39 01.0	
	comp=Z,19nm,1.0s						
BKNI	Bangkinang	16.54	250		P	11 39 03.8	-1.0
SOEI	Soe	17.53	154		P	11 39 15.4	-0.4
SOEI				IAmb	IAmb	11 39 33.0	
	comp=Z,91nm,1.0s						
YULB	Yu-li	17.77	14	P	Pn	11 39 17.4	-0.2
RPSI	Rantau Prapat	17.93	260	P	Pn	11 39 19.0	-0.5
RPSI				IAmb	IAmb	11 39 26.5	
	comp=Z,58nm,1.5s						
FAKI	Fak Fak	18.04	119		P	11 39 22.1	+0.8
FAKI				IAmb	IAmb	11 39 39.1	
	comp=Z,39nm,1.1s						
PBKT	Sadao Pong	18.48	306	P	Pn	11 39 26.5	+0.2
SLVN	Son La	19.48	322	P	P	11 39 37.0	-0.3
GSI	Gunungsitoli	19.55	257	P	Pn	11 39 38.6	-0.7
LHMI	Lhok Sumawe	19.56	268	P	P	11 39 38.5	+0.5
CM31	Chiang Mai Arr	21.13	307	P	P	11 39 55.0	0.0
CMAR	Chiang Mai Arr	21.13	307	P	P	11 39 56.4	+1.4
	comp=Z,4.8nm,1.0s,baz=127,slow=8.2,SNR=21						
CMAR				PcP	PcP	11 44 01.5	+0.3
	comp=Z,1.1nm,0.6s,baz=196,slow=2.1,SNR=7.4						
CHTO	Chiang Mai	21.32	308	P	P	11 39 57.1	-0.1
KMI	Kunming	23.09	326	P	P	11 40 16.3	+0.2
KMI				IAmb	IAmb	11 40 20.9	
	comp=Z,9.6nm,0.8s						
MTN	Manton Dam	23.75	143	P	P	11 40 23.2	+0.7
MTN				IAmb	IAmb	11 40 27.9	
	comp=Z,44nm,1.2s						
ENH	Enshi	24.94	345	P	P	11 40 33.0	-0.5
FITZ	Fitzroy Crossi	25.67	160	P	P	11 40 39.4	-0.6
	comp=Z,4.0nm,0.9s,baz=17,slow=11,SNR=4.2						
FITZ	Fitzroy Crossi	25.67	160	P	P	11 40 40.0	-0.1
FITZ				IAmb	IAmb	11 40 49.2	
	comp=Z,13nm,1.2s						
NJ2	Nanjing	25.89	4	eP	P	11 40 44.2	+2.2
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CD2	Chengdu	27.45	336	P	P	11 40 55.6	-0.5
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
PSA00	Pilbara Seismi	27.70	173	P	P	11 40 58.8	+0.4
PSA00				IAmb	IAmb	11 41 04.6	
	comp=Z,14nm,1.1s						
SHL	Shillong	30.53	312	P	P	11 41 23.5	-0.2
SHL				IAmb	IAmb	11 41 26.4	
	comp=Z,12nm,0.9s						
LZH	Lanzhou	32.04	340	eP	P	11 41 42.6	+5.7
LZH				pP	sP	11 41 46.9	+3.1
LZH				sP	pP	11 41 49.4	+7.6
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
KSRS	Korea Array	32.87	17	LR	LR	11 57 33.6	
	comp=Z,38nm,18.4s,baz=250,slow=41						
LSA	Lhasa	33.54	317	P	P	11 41 49.9	-0.6
LSA				IAmb	IAmb	11 41 55.9	
	comp=Z,4.6nm,0.5s						
BJI	Beijing	33.78	359	eP	P	11 41 53.3	+1.5
BJI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
AS31	Alice Springs	34.09	151	P	P	11 41 55.1	+0.3
ASAR	Alice Springs	34.09	151	P	P	11 41 53.6	-1.2
	comp=Z,0.7nm,0.5s,baz=330,slow=8.7,SNR=15						
ASAR				PcP	PcP	11 44 31.4	-0.9
	comp=Z,5.9nm,0.7s,baz=344,slow=2.4,SNR=27						
ASAR				LR	LR	11 55 49.9	
	comp=Z,71nm,18.6s,baz=281,slow=36						
ASAR	Alice Springs	34.09	151	P	P	11 41 54.1	-0.7
PMG	Port Moresby	34.15	117	P	P	11 41 55.6	+0.2
PMG				IAmb	IAmb	11 41 57.3	
	comp=Z,23nm,1.3s						
ODAN	Odare	34.61	310	eP	P	11 42 00.4	+0.9
	comp=Z,51nm,1.0s						
TAPN	Taplejung	34.62	311	eP	P	11 42 00.1	+0.4
HHC	Hu-ho-hao-te	34.88	353	eP	P	11 42 03.3	+1.8
HHC				pP	sP	11 42 09.8	+1.4
HHC				pmax	pmax		
	comp=Z,2.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,68nm,4.3s						
RAMN	Ramite	35.26	309	eP	P	11 42 06.3	+1.1
JIRN	Jiri	35.94	310	eP	P	11 42 11.8	+0.7
	comp=Z,92nm,1.0s						
MJAR	Matsushiro Arr	36.18	30	P	P	11 42 11.8	-0.9
	comp=Z,0.9nm,0.7s,baz=203,slow=8.0,SNR=4.7						
MJAR	Matsushiro Arr	36.18	30	P	P	11 42 12.0	-0.7
GUN	Gumba	36.30	310	eP	P	11 42 15.0	+0.8
	comp=Z,39nm,0.7s						
GTA	Gaotai	36.44	338	⇑P	P	11 42 22.8	+7.8
GTA				pP	sP	11 42 32.0	+10
GTA				sP	pP	11 42 36.0	+16
GTA				PcP	PcP	11 44 48.3	+9.3
PKI	Pulchoki	36.49	309	eP	P	11 42 16.3	+0.5
	comp=Z,19nm,0.7s						
PKIN	Phulchoki	36.50	309	eP	P	11 42 16.2	+0.4
DMN	Daman	36.74	309	eP	P	11 42 18.7	+0.8
GKN	Gorkha	37.30	309	eP	P	11 42 23.2	+0.7
KOLN	Koldanda	37.98	308	eP	P	11 42 29.1	+0.7
	comp=Z,71nm,0.8s						
DANN	Dangsing	38.14	309	eP	P	11 42 30.0	+0.2
	comp=Z,38nm,0.8s						
FORT	Forrest	38.30	164	P	P	11 42 30.0	-0.6
FORT				IAmb	IAmb	11 42 30.6	
	comp=Z,23nm,1.2s						
NWAO	Narrogin (SRO)	38.83	179	P	P	11 42 35.3	+0.2
NWAO				IAmb	IAmb	11 42 44.0	
	comp=Z,15nm,1.1s						
MDJ	Mudanjiang	40.01	14	P	P	11 42 46.0	+1.2
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.4s						
USRK	Ussuriysk Ar.	40.27	17	P	P	11 42 47.7	+0.7
	comp=Z,1.2nm,0.7s,baz=201,slow=12,SNR=4.0						
USRK	Ussuriysk Ar.	40.27	17	P	P	11 42 47.2	+0.2
ULN	Ulaanbaatar	42.39	350	P	P	11 43 03.9	-0.7
SONM	Songino Array	42.47	350	P	P	11 43 04.4	-0.8
	comp=Z,0.9nm,0.8s,baz=166,slow=8.2,SNR=7.1						
SONM				PcP	PcP	11 44 57.1	-0.8
	comp=Z,1.0nm,0.9s,baz=175,slow=1.5,SNR=3.7						

SONM	Songino Array	42.47	350	P	P	11 43 04.4	-0.8
BBOO	Buckleboo	42.91	156	P	P	11 43 08.2	-0.6
BBOO				IAmb	IAmb	11 43 16.1	
	comp=Z,18nm,1.4s						
STKA	Stephens Creek	44.68	149	P	P	11 43 22.4	-0.6
	comp=Z,7.3nm,0.7s,baz=319,slow=9.8,SNR=13						
STKA	Stephens Creek	44.68	149	P	P	11 43 22.8	-0.3
WMQ	Urumqi	45.31	331	eP	P	11 43 29.7	+1.7
WMQ				sP	sP	11 43 37.2	+1.6
WMQ				LR	LR		
	comp=Z,360nm,29.3s						
WMQ				LR	LR		
	comp=Z,240nm,19.9s						
TLY	Talaya	46.67	349	P	P	11 43 38.0	-0.6
TLY				IAmb	IAmb	11 43 47.8	
	comp=Z,2.2nm,0.8s						
NIL	Nilore	48.57	310	P	P	11 43 53.1	-0.5
KSH	Kashi	49.38	318	P	P	11 44 01.1	+1.2
KSH				pP	sP	11 44 06.3	-1.2
KSH				PcS	PcS	11 49 20.2	+1.3
KSH				S	S	11 51 07.8	+1.4
KSH				pmax	pmax		
	comp=Z,74nm,1.7s						
KSH				LR	LR		
	comp=Z,380nm,11.0s						
KSH				LR	LR		
	comp=Z,380nm,11.8s						
KSH				LR	LR		
	comp=Z,360nm,18.6s						
ARMA	Armidale	49.46	139	P	P	11 44 01.0	+0.5
ARMA				IAmb	IAmb	11 44 05.1	
	comp=Z,14nm,1.1s						
MK31	Makanchi Array	50.11	330	P	P	11 44 04.8	-0.3
MK31					PcP	11 45 24.4	-0.2
MKAR	Makanchi Array	50.11	330	P	P	11 44 04.6	-0.5
	comp=Z,1.5nm,0.5s,baz=130,slow=7.9,SNR=32						
MKAR				PcP	PcP	11 45 24.2	-0.4
	comp=Z,2.5nm,0.6s,baz=147,slow=3.6,SNR=13						
TOO	Toolangi	51.14	150	P	P	11 44 13.1	0.0
TOO				IAmb	IAmb	11 44 16.5	
	comp=Z,9.8nm,1.3s						
CAN	Canberra	51.28	146	P	P	11 44 14.7	+0.5
AAK	Ala-Archa	51.98	321	P	P	11 44 19.3	-0.2
	comp=Z,0.7nm,0.5s,baz=166,slow=6.8,SNR=4.2						
AAK				PcP	PcP	11 45 31.6	-0.2
	comp=Z,2.0nm,0.8s,baz=139,slow=2.7,SNR=4.6						
AAK	Ala-Archa	51.98	321	P	P	11 44 18.6	-0.9
KBL	Kabul	52.13	310	P	P	11 44 20.2	-0.6
KBL				IAmb	IAmb	11 44 24.6	
	comp=Z,8.5nm,1.2s						
ZAA0	Zalesovo Array	54.19	337	P	P	11 44 34.6	-0.7
ZALV	Zalesovo Beam	54.19	337	P	P	11 44 34.6	-0.7
	comp=Z,1.3nm,0.5s,baz=134,slow=8.4,SNR=6.8						
ZALV				PcP	PcP	11 45 38.5	-1.2
	comp=Z,1.0nm,0.5s,baz=104,slow=3.6,SNR=3.8						
ZALV	Zalesovo Beam	54.19	337	P	P	11 44 34.3	-1.0
ZALV					PcP	11 45 38.7	-1.0
KURBB	Kurchatov Arra	54.53	331	P	P	11 44 37.2	-0.7
	comp=Z,1.8nm,0.6s,baz=129,slow=7.3,SNR=9.9						
KURBB				PcP	PcP	11 45 40.6	-0.5
	comp=Z,2.0nm,1.0s,baz=128,slow=3.3,SNR=7.7						
KURK	Kurchatov	54.54	331	P	P	11 44 37.5	-0.5
KURK				IAmb	IAmb	11 44 40.3	
	comp=Z,4.7nm,0.8s						
KURK					PcP	11 45 40.7	-0.4
KKAR	Karatay Array	54.74	320	P	P	11 44 38.8	-0.8
NOUC	Port Laguerre	56.18	122	P	P	11 44 50.2	0.0
YAK	Yakutsk	56.64	7	P	P	11 44 52.3	-0.5
HRA	Herat	57.39	307	P	P	11 44 58.2	-0.7
HRA				IAmb	IAmb	11 45 02.5	
	comp=Z,1.9nm,0.6s						
BVAR	Borovoye Array	59.99	330	P	P	11 45 16.1	-0.4
	comp=Z,0.8nm,0.5s,baz=110,slow=8.4,SNR=7.0						
BVAR				PcP	PcP	11 46 01.7	-0.8
	comp=Z,0.8nm,0.6s,baz=123,slow=5.3,SNR=3.7						
BRVK	Borovoye	60.06	330	P	P	11 45 16.4	-0.5
BRVK				IAmb	IAmb	11 45 18.8	
	comp=Z,5.5nm,1.2s						
GEYT	Alibeck	61.57	310	P	P	11 45 27.7	+0.1
	comp=Z,1.0nm,0.6s,baz=139,slow=9.6,SNR=3.6						
GEYT	Alibeck	61.57	310	P	P	11 45 27.1	-0.5
ABKAR	Akbulak array	64.01	322	P	P	11 45 42.9	-0.6
ABKAR	Akbulak array	64.01	322	P	P	11 45 43.0	-0.5
ABKAR				IAmb	IAmb	11 45 48.6	
	comp=Z,0.9nm,1.0s						
AKTO	Aktyubinsk	65.61	323	P	P	11 45 53.3	-0.6
	comp=Z,1.0nm,0.6s,baz=114,slow=10,SNR=5.2						
TIXI	Tiksi	65.91	4	P	P	11 45 54.2	-1.2
TIXI				IAmb	IAmb	11 45 55.0	
	comp=Z,10nm,1.4s						
WKZ	Wanaka	69.08	143	P	P	11 46 15.7	-0.3
RPZ	Rata Peaks	69.75	141	P	P	11 46 19.9	-0.3
BKZ	Black Stump Fm	71.28	135	P	P	11 46 28.9	-0.7
CASY	Casey	72.34	183	P	P	11 46 35.8	+0.4
CASY				IAmb	IAmb	11 46 36.1	
	comp=Z,9.3nm,1.1s						
KLMR	Klimovskoe	78.39	331	eP	P	11 47 12.4	+2.1
KLMR				AMP		11 47 22.1	
	comp=Z,17nm,1.6s						
BR131	Keskin Array S	80.70	309	P	P	11 47 23.1	-0.5
BR131				IAmb	IAmb	11 47 25.4	
	comp=Z,2.1nm,0.8s						
BRTR	Keskin Array B	80.70	309	P	P	11 47 22.8	-0.8
	comp=Z,1.4nm,0.7s,baz=126,slow=5.6,SNR=8.0						
BRTR	Keskin Array B	80.70	309	P	P	11 47 23.1	-0.5
AKASG	Malin Array Be	83.64	320	P	P	11 47 37.7	-0.9
	comp=Z,1.0nm,0.7s,baz=74,slow=5.2,SNR=5.0						
IMAR	Indian Mountai	84.33	24	P	P	11 47 41.5	-0.2
ARCES	ARCESS Array B	84.69	339	P	P	11 47 43.8	+0.2
	comp=Z,2.5nm,0.7s,baz=71,slow=6.8,SNR=5.2						
ARCES	ARCESS Array B	84.69	339	P	P	11 47 43.5	-0.1
FINES	FINESS Array B	84.92	331	P	P	11 47 44.5	-0.3
	comp=Z,4.1nm,0.9s,baz=60,slow=8.3,SNR=8.8						
FINES	FINESS Array B	84.92	331	P	P	11 47 44.6	-0.2
PPLA	Purkeypile	85.17	27	P	P	11 47 45.2	-1.0
PPLA				IAmb	IAmb	11 47 47.7	
	comp=Z,11nm,1.4s						
MLY	Manley	85.64	25	IAmb	IAmb	11 47 51.4	
	comp=Z,5.0nm,0.9s						
COLD	Coldfoot	85.66	23	P	P	11 47 48.0	-0.5
COLD				IAmb	IAmb	11 48 03.3	
	comp=Z,2.7nm,1.0s						
SUA	Susitna One	85.95	29	P	P	11 47 49.2	-0.9
SUA				IAmb	IAmb	11 47 58.9	
	comp=Z,8.4nm,0.9s						
MLR	Muntele Rosu	86.13	315	P	P	11 47 50.8	-0.6
	comp=Z,6.3nm,0.8s,baz=303,slow=3.9,SNR=6.0						
SPITS	Spitsbergen Ar	86.15	348	P	P	11 47 50.5	-0.2
	comp=Z,6.4nm,0.8s,baz=46,slow=8.3,SNR=4.2						
BURAR	Bucovina Array	86.45	317	P	P	11 47 52.3	-0.6
BUR08	Bucovina Ar. S	86.46	317	P	P	11 47 52.1	-0.8
ILAR	Eielson Array	87.30	25	P	P	11 47 55.8	-0.8
	comp=Z,0.3nm,0.7s,baz=276,slow=4.3,SNR=5.8						
ILAR	Eielson Array	87.30	25	P	P	11 47 55.9	-0.6
BMAR	Burnt Mountain	87.79	22	P	P	11 47 59.8	+0.9
BCAR	Beaver Creek A	89.84	26	P	P	11 48 08.7	+0.1
SKAG	Skagway	93.83	29	P	P	11 48 27.0	-0.1
TXAR	Lajitas Array	127.67	45	PKP	PKPdf	11 54 15.4	-0.8
	comp=Z,0.4nm,0.8s,baz=343,slow=2.8,SNR=4.4						
TXAR	Lajitas Array	127.67	45		PKPdf	11 54 15.9	-0.3
PLCA	Paso Flores	144.94	171	PKP	PKPab	11 54 45.6	-1.3
	comp=Z,4.8nm,0.8s,baz=211,slow=3.1,SNR=13						
PLCA	Paso Flores	144.94	171		PKPab	11 54 46.6	-0.2

IDC 01 11:43:24.4±1.1, 26°.72N×53°.84E, h0km, mb3.8/14, mb1 3.9/15, mb1mx3.7/47, mbtmp3.8/15, ML3.6/1, Error ellipse: s-maj=26.7km s-min=18.6km az=163.0
NEIC 01 11:43:25.6±1.8, 26°.63N±0°.05×53°.84E±0°.06, h10km±1km, Error ellipse: s-maj=10.9km s-min=6.7km az=220.0
TEH 01 11:43:25.2, 26°.58N×53°.90E, h10km, ML3.7
OMAN 01 11:43:33.3±0.9, 26°.43N×53°.91E, h34km±7km, ml3.5/10, Error ellipse: s-maj=6.2km s-min=5.5km az=31.0
ISC 01 11:43:27.5±0.5, 26°.64N±0°.04×53°.88E±0°.04, h24km, n68, σ1s55/76, mb3.9/18, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	Lamerd	0.95	318	Pg	Pb	11 43 44.3	-1.0
LMD1	Lamerd	0.95	318	ePg	Pb	11 43 44.3	-1.0
LMD1				e		11 44 10.1	
LAR1	LAR	1.12	23	ePg	Pn	11 43 47.2	-0.6
LAR1				e		11 44 15.2	
JHRM	Jahrom	1.88	352	Pn	Pb	11 44 00.6	-0.7
JHRM	Jahrom	1.88	352	ePn	Pb	11 44 00.7	-0.6
JHRM				e		11 44 30.9	
GENO	Geno	2.18	69	Pn	Pn	11 44 03.6	+1.1
GENO	Geno	2.18	69	ePn	Pn	11 44 03.6	+1.1
GENO				e		11 44 50.4	
BANOM	Banah	2.29	108	P	Pn	11 44 05.2	+1.4
BANOM				S	Sb	11 44 34.7	-1.2
MDH	Madha	2.55	121	P	Pb	11 44 10.7	-2.0
UOSS	Minazif	2.69	128		Pn	11 44 11.8	+2.5
UOSS				Sn	Sn	11 44 42.1	+1.0
UOSS	Minazif	2.69	128	P	Pb	11 44 12.3	-2.7
HATD	Hatta, Dubai	2.72	131	P	Pb	11 44 13.0	-2.4
	SNR=10.0						
HATD				S	Sn	11 44 43.2	+1.4
NIAN	Nian	2.79	70	Pn	Pn	11 44 11.5	+0.8
NIAN	Nian	2.79	70	ePn	Pn	11 44 11.5	+0.8
NIAN				e		11 45 03.3	
GHB	Gharebagh	2.98	337	e		11 45 12.7	
SOHO	SOHO	3.46	135	P	Pn	11 44 23.0	+3.1
IKAZ	Kazeroun	3.61	331	e		11 45 32.0	
HOQ	Hoqain	4.35	134	P	Pn	11 44 35.6	+3.5
KHGB	Koh Gabri	4.37	31	Pn	Pn	11 44 34.3	+1.6
KHGB	Koh Gabri	4.37	31	ePn	Pn	11 44 34.4	+1.7
KHGB				e		11 45 29.8	
CHMN	Cheshme madani	4.55	44	Pn	Pn	11 44 37.6	+2.3
CHMN	Cheshme madani	4.55	44	ePn	Pn	11 44 37.7	+2.4
CHMN				e		11 44 38.9	
BIDO	Bidbid	4.94	128	P	Pn	11 44 43.9	+3.6
BIDO				S	Sn	11 45 39.2	+2.4
IBAF	Bafgh	5.15	16	Pn	Pn	11 44 44.4	+1.1
IBAF	Bafgh	5.15	16	ePn	Pn	11 44 44.4	+1.1
SMDO	Samad	5.20	132	P	Pn	11 44 47.1	+3.1
	SNR=16						
SMDO				S	Sn	11 45 44.9	+1.7
WSAR	Wadi Sarin	5.48	127	Pn	Pn	11 44 49.6	+1.9
	1.7nm,0.3s,baz=317,slow=11,SNR=11						
WSAR				Sn	Sn	11 45 48.7	-1.3
	2.0nm,0.3s,baz=39,slow=14,SNR=6.2						
WSAR	Wadi Sarin	5.48	127	P	Pn	11 44 50.4	+2.6
JMDO	Jabal Madar	5.73	137	P	Pn	11 44 53.9	+2.8
JMDO				S	Sn	11 45 57.4	+1.2
WBK	Wadi Bani Khal	6.12	130	P	Pn	11 44 58.6	+2.0
	SNR=6.7						
WBK				S	Sn	11 46 07.2	+1.3
DQM	DQM	7.47	153	P	Pn	11 45 17.7	+2.6
RAYN	Ar Rayn	8.20	250		Pn	11 45 25.1	0.0
RAYN				Sn	Sn	11 46 54.8	-2.3
WHFO	Wadi Hawf	8.68	181	P	Pn	11 45 33.5	+1.9
SHAO	Shalim	8.72	169	P	Pn	11 45 34.4	+2.1
SHAO				S	Sn	11 47 08.6	-1.3
DMTO	DMTO	8.93	173	P	Pn	11 45 36.6	+1.5
RBK	Rabkut	9.09	178	P	Pn	11 45 40.7	+3.3
KBL	Kabul	15.24	55	Pn	Pn	11 47 00.8	-0.6
GNI	Garni	15.47	333	Pn	Pn	11 47 03.2	-1.1
TBLG	Delisi	16.83	336	Pn	Pn	11 47 21.3	-0.3
TBLG				IAmb	IAmb	11 47 22.3	
	comp=Z,11nm,0.4s						
GAZ	Gaziantep	17.60	311	Pn	Pn	11 47 30.9	-0.3
GAZ				IAmb	IAmb	11 47 31.9	
	comp=Z,7.0nm,0.8s						
KKAR	Karatay Array	21.29	35	P	P	11 48 12.3	0.0
KKAR	Karatay Array	21.29	35	P	P	11 48 12.1	-0.2
BRTR	Keskin Array B	21.33	313	P	P	11 48 12.8	-0.1
	comp=Z,0.8nm,0.6s,baz=137,slow=14,SNR=2.8						
BRTR	Keskin Array B	21.33	313	P	P	11 48 13.2	+0.3
ARSB	Arslanbob	21.51	42	P	P	11 48 14.5	-0.4
ARSB				IAmb	IAmb	11 48 15.4	
	comp=Z,5.4nm,0.7s						
ABKAR	Akbulak array	23.07	10	P	P	11 48 31.4	+0.3
ABKAR				IAmb	IAmb	11 48 33.2	
	comp=Z,5.1nm,1.4s						
ABKAR	Akbulak array	23.07	10	P	P	11 48 31.6	+0.4
AKTO	Aktyubinsk	23.98	7	P	P	11 48 40.5	+0.5
	comp=Z,1.0nm,0.6s,baz=190,slow=13,SNR=4.0						
BVAR	Borovoye Array	29.10	21	P	P	11 49 26.4	+0.2
	comp=Z,1.0nm,0.9s,baz=224,slow=8.1,SNR=3.6						
MK31	Makanchi Array	30.13	41	P	P	11 49 35.3	-0.1
MKAR	Makanchi Array	30.13	41	P	P	11 49 35.6	+0.2
	comp=Z,0.3nm,0.6s,baz=233,slow=9.4,SNR=5.0						
KURBB	Kurchatov Arra	30.47	32	P	P	11 49 38.6	+0.4
	comp=Z,0.7nm,0.8s,baz=230,slow=8.5,SNR=5.6						
LSA	Lhasa	32.91	76	P	P	11 50 00.2	-0.4
LSA				IAmb	IAmb	11 50 05.2	
	comp=Z,2.8nm,0.6s						
OJC	Ojcow	35.12	321	P	P	11 50 19.0	0.0
ZAA0	Zalesovo Array	35.56	32	P	P	11 50 22.6	-0.1
ZALV	Zalesovo Beam	35.56	32	P	P	11 50 22.8	0.0
	comp=Z,3.4nm,0.5s,baz=240,slow=9.3,SNR=17						
FINES	FINESS Array B	39.51	339	P	P	11 50 55.2	-0.8
	comp=Z,3.1nm,1.0s,baz=158,slow=12,SNR=4.3						
FINES	FINESS Array B	39.51	339	P	P	11 50 55.5	-0.5
HFS	Hagfors	43.26	332	P	P	11 51 26.1	-0.7
	comp=Z,4.8nm,1.0s,baz=151,slow=13,SNR=3.5						
SONM	Songino Array	45.85	48	P	P	11 51 48.0	+0.1
	comp=Z,0.3nm,0.5s,baz=265,slow=7.0,SNR=3.2						
ARCES	ARCESS Array B	46.02	347	P	P	11 51 48.5	-0.2
	comp=Z,6.2nm,1.1s,baz=140,slow=9.6,SNR=11						
ARCES	ARCESS Array B	46.02	347	P	P	11 51 49.0	+0.2
TOA0	Torodi Ar. Sit	50.55	265	P	P	11 52 24.9	+0.4
TOA0				IAmb	IAmb	11 52 25.7	
	comp=Z,5.8nm,1.4s						
TORD	Torodi Ar. Bea	50.55	265	P	P	11 52 24.6	+0.1
	comp=Z,0.7nm,0.5s,baz=56,slow=7.5,SNR=7.3						
TORD	Torodi Ar. Bea	50.55	265	P	P	11 52 24.6	+0.1
DBIC	Dimbokro	59.15	262	P	P	11 53 27.4	+0.7
	comp=Z,1.7nm,0.6s,baz=53,slow=8.8,SNR=5.2						
KSRS	Korea Array	62.23	60	P	P	11 53 46.7	-0.7
	comp=Z,1.0nm,0.9s,baz=293,slow=8.4,SNR=3.3						
YKA	Yellowknife Ar	90.70	355	P	P	11 56 28.2	+0.1
	comp=Z,0.2nm,0.6s,baz=2.3,slow=4.8,SNR=9.7						

THE 01 11:51:25.4, 38°.42N×20°.49E, h9km±1km, ML3.3/12, Error ellipse: s-maj=1.2km s-min=0.5km az=286.0
ATH 01 11:51:25.2, 38°.41N×20°.52E, h12km±1km, ML3.0/14, Error ellipse: s-maj=1.8km s-min=0.6km az=280.0
ISC 01 11:51:25.4±0.9, 38°.41N±0°.02×20°.53E±0°.03, h8km±5km, n52, σ0s65/77, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	VASILIKIADES	0.03	89	P	Pg	11 51 27.0	+0.1
VSK1				S	Sg	11 51 28.2	+0.2
	104µm,0.3s						
FSK	Fiskardo	0.06	25	P	Pg	11 51 27.1	-0.1
FSK				S	Sg	11 51 28.8	+0.3
	17µm,0.3s						
FSK	Fiskardo	0.06	25	P	Pg	11 51 27.2	-0.1
FSK				S	Sg	11 51 28.9	+0.3
FSK				AML	AML	11 51 29.3	
	comp=N,23369µm,0.4s						
FSK				AML	AML	11 51 29.4	
	comp=E,44830µm,0.2s						
KEF1	Kardakata, Kep	0.14	200	P	Pg	11 51 28.5	+0.1
KEF1				S	Sg	11 51 30.8	+0.4
KEF4	Livadi, Kephal	0.17	209	P	Pg	11 51 29.0	+0.1
KEF4				S	Sg	11 51 32.2	+0.9
LXR1	Lixouri, Cepha	0.22	200	P	Pg	11 51 30.0	+0.2
LXR1				S	Sg	11 51 34.1	+1.3
	comp=E,58µm,0.3s						
ARG2	Argostoli	0.23	189	P	Pg	11 51 30.1	+0.1
ARG2				S	Sg	11 51 34.0	+0.8
	comp=E,24µm,0.3s						
EVGI	Lefkada island	0.23	25	P	Pg	11 51 30.3	+0.3
EVGI				S	Sg	11 51 34.6	+1.3
EVGI	Lefkada island	0.23	25	P	Pg	11 51 30.4	+0.3
EVGI				S	Sg	11 51 34.7	+1.5
VLS	Valsamata	0.23	169	P	Pg	11 51 30.3	+0.2
VLS				S	Sg	11 51 34.3	+1.0
	comp=E,10µm,0.3s						
VLS	Valsamata	0.23	169	P	Pg	11 51 30.3	+0.2
VLS				S	Sg	11 51 33.6	+0.3
VLS				AML	AML	11 51 34.8	
	comp=E,21076µm,0.4s						
VLS				AML	AML	11 51 35.0	
	comp=N,18646µm,0.3s						
KEF2	Argostoli. Kep	0.24	188	P	Pg	11 51 30.3	+0.1
KEF2				S	Sg	11 51 34.4	+0.8
KEF3	Kipouria, Keph	0.25	215	P	Pg	11 51 30.2	-0.1
KEF3				S	Sg	11 51 34.3	+0.5
CHV1	Chavriata, Kef	0.25	208	P	Pg	11 51 30.3	-0.1
CHV1				S	Sg	11 51 34.7	+0.9
	comp=N,28µm,0.4s						
MGNA	Meganis	0.32	39	P	Pg	11 51 31.6	-0.1
MGNA				S	Sg	11 51 36.9	+1.0
MGNA				AML	AML	11 51 38.0	
	comp=N,9213µm,0.3s						
MGNA				AML	AML	11 51 38.2	
	comp=E,8959µm,0.3s						
KFL	Anninata	0.36	146	P	Pg	11 51 32.7	+0.3
KFL	Anninata	0.36	146	P	Pg	11 51 32.8	+0.3
LKD2	Lefkada island	0.39	15	P	Pg	11 51 32.8	-0.2
LKD2				S	Sg	11 51 38.9	+0.6
	comp=E,2µm,0.6s						
LKD2	Lefkada island	0.39	15	P	Pg	11 51 32.9	-0.2
LKD2				S	Sg	11 51 39.1	+0.8
LKD2				AML	AML	11 51 40.6	
	comp=N,3895µm,0.5s						
LKD2				AML	AML	11 51 40.8	
	comp=E,3889µm,0.4s						
TSLK	Tsoukalades, L	0.43	13	P	Pg	11 51 33.7	0.0
TSLK				S	Sg	11 51 39.9	+0.6
	comp=E,2µm,0.6s						
TSLK	Tsoukalades, L	0.43	13	P	Pg	11 51 33.8	+0.1
TSLK				S	Sg	11 51 40.2	+0.9
AST1	Astakos	0.46	73	P	Pg	11 51 34.8	+0.5
AST1				S	Sb	11 51 43.1	+0.5
	comp=E,4µm,0.6s						
VLMS	Volimes, Zakyn	0.54	169	P	Pg	11 51 35.9	0.0
VLMS				S	Sg	11 51 43.6	+0.7
VLMS				AML	AML	11 51 46.8	
	comp=N,9033µm,0.2s						
VLMS				AML	AML	11 51 49.6	
	comp=E,10300µm,0.3s						
PDO	Prodromos	0.55	69	P	Pg	11 51 36.4	+0.5
PDO				S	Sb	11 51 45.5	+0.4
	comp=E,3µm,0.6s						
PDO	Prodromos	0.55	69	P	Pg	11 51 36.4	+0.5
PDO				AML	AML	11 51 51.1	
	comp=N,5297µm,0.6s						
PDO				AML	AML	11 51 52.5	
	comp=E,3940µm,0.6s						
KRI1	kERI	0.78	163	P	Pg	11 51 39.8	-0.5
KRI1				S	Sb	11 51 52.5	+0.7
	comp=E,154µm,0.2s						
PVO	Paravola	0.81	75	P	Pg	11 51 41.3	+0.4
PVO				S	Sn	11 51 55.1	-0.1
	comp=E,1µm,0.6s						
PVO	Paravola	0.81	75	P	Pg	11 51 41.5	+0.6
PVO				AML	AML	11 52 02.0	
	comp=N,3101µm,0.7s						
PVO				AML	AML	11 52 03.1	
	comp=E,2402µm,0.4s						
RLS	Riolos of Patr	0.81	115	P	Pg	11 51 41.0	0.0
RLS	Riolos of Patr	0.81	115	P	Pg	11 51 41.1	0.0
DRO	Drossia	1.03	116	P	Pg	11 51 44.9	-0.3
DRO	Drossia	1.03	116	P	Pg	11 51 44.4	-0.9
DRO				AML	AML	11 52 08.2	
	comp=E,2373µm,0.3s						
DRO				AML	AML	11 52 08.5	
	comp=N,2146µm,0.5s						
EFP	Efpalio	1.08	89	P	Pb	11 51 45.4	-0.9
EFP	Efpalio	1.08	89	P	Pb	11 51 45.3	-0.9
EFP				AML	AML	11 52 08.3	
	comp=N,1764µm,0.5s						
EFP				AML	AML	11 52 09.1	
	comp=E,1118µm,0.9s						
ANX	Ano Chora	1.10	80	P	Pb	11 51 46.2	-0.6
ANX				AML	AML	11 52 09.6	
	comp=E,1483µm,0.5s						
ANX				AML	AML	11 52 13.4	
	comp=N,1667µm,0.5s						
EVR	Evrytania	1.12	63	P	Pb	11 51 45.9	-1.1
LAKA	Lakka	1.15	98	P	Pb	11 51 46.7	-0.8
LAKA				AML	AML	11 52 10.7	
	comp=N,501µm,0.8s						
LAKA				AML	AML	11 52 17.9	
	comp=E,586µm,0.6s						
SERG	Sergoula	1.20	89	P	Pn	11 51 47.5	-0.9
SERG	Sergoula	1.20	89	P	Pn	11 51 47.5	-0.9
SERG				AML	AML	11 52 12.1	
	comp=E,1277µm,0.6s						
SERG				AML	AML	11 52 12.4	
	comp=N,1235µm,0.6s						
TRIZ	Trizonia	1.21	92	P	Pn	11 51 47.6	-1.0
TRIZ	Trizonia	1.21	92	P	Pn	11 51 47.6	-1.0
TRIZ				S	Sn	11 52 05.6	+0.5
KALE	Kalithea	1.26	90	P	Pn	11 51 48.2	-1.2
KALE				AML	AML	11 52 14.0	
	comp=E,494µm,0.6s						
KALE				AML	AML	11 52 14.7	
	comp=N,1087µm,0.6s						
AMT	Artemida-Makis	1.28	133	P	Pg	11 51 50.2	+0.4
KLV	Kalavryta, Ach	1.33	105	P	Pn	11 51 49.7	-0.5
KLV	Kalavryta, Ach	1.33	105	P	Pn	11 51 49.6	-0.5
KLV				AML	AML	11 52 14.4	
	comp=N,305µm,0.4s						
KLV				AML	AML	11 52 15.8	
	comp=E,388µm,0.6s						
MAKR	Makrakomi, Fth	1.39	64	P	Pb	11 51 51.5	-0.1
KASA	Kassiopi	1.41	341	P	Pb	11 51 51.5	-0.5
AGG	Agios Georgios	1.54	66	P	Pb	11 51 53.9	-0.2
ITM	Ithomi	1.65	138	P	Pg	11 51 57.1	+0.1
PYL	PYLOS	1.79	147	P	Pb	11 51 57.4	+0.8
VIL2	Platees	2.16	94	P	Pb	11 52 04.1	-0.7
DID	Didima	2.32	112	P	Pb	11 52 06.2	-1.2

IDC 01 12:01:07.9±0.9, 38°.20N×20°.51E, h0km, mb3.9/12, mb1 3.9/18, mb1mx3.8/49, mbtmp3.8/18, ML3.3/6, MS3.6/10, Ms1 3.6/10, ms1mx3.4/41, Error ellipse: s-maj=19.5km s-min=16.2km az=23.0
ATH 01 12:01:07.9, 38°.15N×20°.35E, h11km±1km, ML3.7/15, Error ellipse: s-maj=2.5km s-min=1.2km az=66.0
PDG 01 12:01:08.1±0.6, 38°.27N×20°.29E, h1km±1km, ML3.9/11, Error ellipse: s-maj=1.4km s-min=1.3km az=90.0
THE 01 12:01:08.0, 38°.16N×20°.33E, h0km±1km, ML3.8/15, Error ellipse: s-maj=1.4km s-min=0.6km az=256.0
NEIC 01 12:01:08.4±2.1, 38°.12N±0°.04×20°.34E±0°.04, h10km±1km, Error ellipse: s-maj=7.5km s-min=4.9km az=340.0
BEO 01 12:01:28.6±0.9, 39°.64N×20°.68E, h1km±5km, ML3.2/5
ISC 01 12:01:08.2±0.9, 38°.16N±0°.02×20°.32E±0°.03, h4km±6km, n219, σ1s28/281, mb4.0/17, MS3.7/8, 10C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.05	30	P	Pg	12 01 09.9	+0.4
CHV1	Chavriata, Kef	0.06	65	P	Pg	12 01 09.2	-0.3
CHV1				S	Sg	12 01 09.9	-0.5
	8514µm,0.4s						
LXR1	Lixouri, Cepha	0.11	67	P	Pg	12 01 10.1	-0.2
LXR1				S	Sg	12 01 11.5	-0.3
	1179µm,0.4s						
KEF4	Livadi, Kephal	0.13	41	P	Pg	12 01 10.9	0.0
KEF4				S	Sg	12 01 12.9	+0.3
KEF2	Argostoli. Kep	0.14	87	P	Pg	12 01 10.7	-0.2
KEF2				S	Sg	12 01 12.7	0.0
ARG2	Argostoli	0.14	82	P	Pg	12 01 10.7	-0.2
ARG2				S	Sg	12 01 12.4	+1.5
	382µm,0.3s						
ARG2	Argostoli	0.14	82		Pg	12 01 12.4	+1.5
KEF1	Kardakata, Kep	0.17	46	P	Pg	12 01 11.2	-0.3
KEF1				S	Sg	12 01 13.8	0.0
VLS	Valsamata	0.22	85	P	Pg	12 01 11.9	-0.5
VLS				S	Sg	12 01 15.0	-0.3
	61µm,0.3s						
VLS	Valsamata	0.22	85	P	Pg	12 01 11.9	-0.5
VLS				S	Sg	12 01 15.0	-0.3
VLS				AML	AML	12 01 16.1	
VLS				AML	AML	12 01 16.5	
	comp=E,94479µm,0.1s						
VLS	Valsamata	0.22	85		Pg	12 01 11.9	-0.5
VLS					Sg	12 01 15.0	-0.3
VSK1	VASILIKIADES	0.32	38	P	Pg	12 01 14.0	-0.3
VSK1				S	Sg	12 01 19.0	+0.5
	comp=E,57µm,0.4s						
FSK	Fiskardo	0.36	33	P	Pg	12 01 14.8	-0.3
FSK				S	Sg	12 01 20.6	+0.8
	comp=E,16µm,0.2s						
FSK	Fiskardo	0.36	33	P	Pg	12 01 15.0	-0.1
FSK				S	Sg	12 01 20.0	+0.2
FSK				AML	AML	12 01 21.6	
	comp=E,42413µm,0.1s						
FSK				AML	AML	12 01 26.9	
	comp=N,21357µm,0.5s						
FSK	Fiskardo	0.36	33		Pg	12 01 14.8	-0.3

FSK Sg 12 01 20.6 +0.8
KFL Anninata 0.38 97 P Pg 12 01 15.1 -0.3
KFL S Sg 12 01 20.6 +0.2
KFL Anninata 0.38 97 P Pg 12 01 16.2 +0.7
KFL Anninata 0.38 97 Pg 12 01 15.1 -0.3
KFL Sg 12 01 20.6 +0.2
VLMS Volimes, Zakyn 0.39 136 P Pg 12 01 15.7 0.0
VLMS AML AML 12 01 25.5
comp=E,32537μm,0.3s
VLMS AML AML 12 01 39.5
comp=N,49177μm,0.5s
EVGI Lefkada island 0.53 30 P Pg 12 01 18.1 -0.4
EVGI S Sg 12 01 26.4 +1.0
EVGI Lefkada island 0.53 30 P Pg 12 01 18.2 -0.2
EVGI S Sg 12 01 26.4 +1.0
EVGI Lefkada island 0.53 30 Pg 12 01 18.1 -0.4
EVGI Sg 12 01 26.4 +1.0
MGNA Meganis 0.62 37 P Pg 12 01 19.7 -0.5
MGNA AML AML 12 01 29.7
comp=N,19030μm,0.6s
MGNA AML AML 12 01 29.9
comp=E,18454μm,0.2s
KRI1 kERI 0.64 141 P Pg 12 01 19.9 -0.5
KRI1 S Sb 12 01 30.8 -0.2
comp=E,16μm,0.7s
KRI1 kERI 0.64 141 Pg 12 01 19.9 -0.5
KRI1 Sb 12 01 30.8 -0.2
LKD2 Lefkada island 0.68 23 P Pg 12 01 20.7 -0.6
LKD2 S Sg 12 01 31.1 +0.9
comp=E,4μm,0.6s
LKD2 Lefkada island 0.68 23 P Pg 12 01 20.8 -0.5
LKD2 S Sg 12 01 30.7 +0.5
LKD2 AML AML 12 01 43.6
comp=E,7932μm,0.7s
LKD2 AML AML 12 01 46.2
comp=N,9775μm,1.0s
LKD2 Lefkada island 0.68 23 Pg 12 01 20.7 -0.6
LKD2 Sg 12 01 31.1 +0.9
TSLK Tsoukalades, L 0.72 22 P Pg 12 01 21.4 -0.6
TSLK S Sb 12 01 32.4 -1.0
comp=N,6μm,1.1s
TSLK Tsoukalades, L 0.72 22 P Pg 12 01 21.6 -0.4
TSLK S Sg 12 01 31.8 +0.6
TSLK Tsoukalades, L 0.72 22 Pg 12 01 21.4 -0.6
TSLK Sb 12 01 32.4 -1.0
AST1 Astakos 0.72 58 P Pg 12 01 21.3 -0.7
AST1 S Sb 12 01 32.5 -1.0
comp=N,9μm,0.4s
AST1 Astakos 0.72 58 Pg 12 01 21.3 -0.7
AST1 Sb 12 01 32.5 -1.0
PDO Prodromos 0.81 57 P Pg 12 01 22.8 -1.0
PDO Prodromos 0.81 57 P Pg 12 01 23.0 -0.8
PDO Prodromos 0.81 57 Pg 12 01 22.8 -1.0
RLS Riolos of Patr 0.91 96 P Pg 12 01 24.7 -1.0
RLS S Sg 12 01 38.2 +0.6
comp=N,3μm,1.0s
RLS Riolos of Patr 0.91 96 P Pg 12 01 24.9 -0.8
RLS AML AML 12 01 44.0
comp=E,4808μm,0.7s
RLS AML AML 12 01 47.6
comp=N,6781μm,0.6s
RLS Riolos of Patr 0.91 96 Pg 12 01 24.7 -1.0
RLS Sg 12 01 38.2 +0.6
PVO Paravola 1.06 64 P Pg 12 01 27.6 -0.8
PVO S Sb 12 01 43.1 -0.1
comp=N,5μm,0.7s
PVO Paravola 1.06 64 P Pg 12 01 27.8 -0.6
PVO AML AML 12 01 50.9
comp=N,9543μm,0.3s
PVO AML AML 12 01 51.4
comp=E,11565μm,1.0s
PVO Paravola 1.06 64 Pg 12 01 27.6 -0.8
PVO Sb 12 01 43.1 -0.1
DRO Drossia 1.12 100 P Pg 12 01 28.7 -1.0
DRO Drossia 1.12 100 P Pg 12 01 28.6 -1.0
DRO AML AML 12 01 56.0
comp=E,10473μm,0.9s
DRO AML AML 12 02 03.0
comp=N,12706μm,0.5s
DRO Drossia 1.12 100 Pg 12 01 28.7 -1.0
UPR University Cam 1.17 83 P Pg 12 01 30.3 -0.2
AMT Artemida-Makis 1.27 119 P Pg 12 01 31.8 -0.7
AMT Artemida-Makis 1.27 119 P Pg 12 01 31.7 -0.7
AMT AML AML 12 02 05.3
comp=N,9816μm,1.1s
AMT AML AML 12 02 10.0
comp=E,11279μm,1.0s
AMT Artemida-Makis 1.27 119 Pg 12 01 31.8 -0.7
EFP Efpalio 1.28 77 P Pg 12 01 31.0 -1.7
EFP Efpalio 1.28 77 P Pg 12 01 31.1 -1.7
EFP AML AML 12 01 58.3
comp=N,5341μm,0.8s
EFP AML AML 12 01 59.6
comp=E,5301μm,0.5s
EFP Efpalio 1.28 77 Pg 12 01 31.0 -1.7
LAKA Lakka 1.31 86 P Pn 12 01 31.7 -1.6
LAKA S Sn 12 01 51.4 +0.1
comp=E,2μm,0.6s
LAKA Lakka 1.31 86 P Pn 12 01 31.7 -1.6
LAKA AML AML 12 01 57.3
comp=N,3218μm,0.5s
LAKA AML AML 12 02 01.3
comp=E,2795μm,0.8s
LAKA Lakka 1.31 86 Pn 12 01 31.7 -1.6
LAKA Sn 12 01 51.4 +0.1
ANX Ano Chora 1.33 71 P Pn 12 01 32.3 -1.4
ANX AML AML 12 02 00.6
comp=N,9093μm,0.6s
ANX AML AML 12 02 05.4
comp=E,7230μm,0.8s
SERG Sergoula 1.39 79 P Pn 12 01 33.0 -1.4
SERG Sergoula 1.39 79 P Pn 12 01 33.0 -1.4
SERG AML AML 12 02 02.7
comp=E,4168μm,0.7s
SERG AML AML 12 02 07.5
comp=N,4196μm,0.5s
SERG Sergoula 1.39 79 Pn 12 01 33.0 -1.4
EVR Evrytania 1.40 57 P Pn 12 01 33.4 -1.1
EVR AML AML 12 02 06.1
comp=N,3208μm,0.7s
EVR AML AML 12 02 09.4
comp=E,2967μm,1.1s
TRIZ Trizonia 1.40 81 P Pn 12 01 32.9 -1.5
TRIZ Trizonia 1.40 81 P Pn 12 01 33.0 -1.4
TRIZ Trizonia 1.40 81 Pn 12 01 32.9 -1.5
KLV Kalavryta, Ach 1.45 94 P Pn 12 01 34.2 -1.1
KLV S Sg 12 01 57.4 +2.5
comp=E,2μm,1.1s
KLV Kalavryta, Ach 1.45 94 Pn 12 01 34.2 -1.1
KLV Sg 12 01 57.4 +2.5
KALE Kalithea 1.46 80 P Pn 12 01 33.8 -1.5
KALE Kalithea 1.46 80 P Pn 12 01 34.0 -1.3
KALE AML AML 12 02 08.1
comp=N,4151μm,0.6s
KALE AML AML 12 02 13.0
comp=E,2507μm,0.6s
KALE Kalithea 1.46 80 Pn 12 01 33.8 -1.5
ITM Ithomi 1.61 127 Pn 12 01 35.2 -2.2
AGG Agios Georgios 1.80 61 P Pb 12 01 41.7 0.0
AGG S Sg 12 02 07.8 +1.8
comp=E,1μm,1.1s
AGG Agios Georgios 1.80 61 Pn 12 01 39.2 -0.8
LIT Litokhoron 2.57 40 Pn 12 01 50.5 -0.1
LIT Sn Sn 12 02 23.4 +1.0
FNA Florina 2.75 17 ePn Pn 12 01 53.9 +0.8
FNA eSn Sn 12 02 11.8 -15
FNA Florina 2.75 17 Pn 12 01 53.7 +0.6
FNA Sn Sn 12 02 28.1 +4.4
TIP Timpagrande 2.96 291 ⇓P Pn 12 01 57.5 +1.5
TIP Timpagrande 2.96 291 Pn 12 01 57.4 +1.4
TIP Sn Sn 12 02 30.2 -1.9
OHR Ohrid 2.97 7 ePn Pb 12 01 59.2 -2.5
TIR Tirane 3.20 354 ePn Pn 12 02 00.7 +1.4
TIR Tirane 3.20 354 ⇑P Pn 12 02 01.3 +2.0
TIR Tirane 3.20 354 Pn 12 01 59.9 +0.6
TIR Sn Sn 12 02 36.8 -1.1
CEL Celeste 3.48 273 Pn 12 02 03.5 +0.3
CEL Sn Sn 12 02 44.2 -0.7
MASS Massafra 3.48 316 ePn Pn 12 02 04.3 +1.2
VAY Valandovo 3.60 28 ePn Pn 12 02 06.3 +1.5
VAY Valandovo 3.60 28 ePn Pn 12 02 05.7 +0.9
MATE Matera 3.74 313 ⇓P Pn 12 02 08.2 +1.6
STIP Stip 3.81 22 ePn Pn 12 02 10.2 +2.5
SG1 Sgolgore (BA) 3.88 315 ePn Pn 12 02 10.1 +1.4
ULC Ulcinj 3.89 348 ⇑iPn Pn 12 02 07.8 -0.9
ULC eSn Sn 12 02 55.1 +0.3
SRS Serrai 3.89 40 ePn Pn 12 02 12.7 +4.0
SRS eSn Sn 12 02 43.6 -11
BAI Bari 3.96 319 ePn Pn 12 02 12.1 +2.4
DRME Dracevica, Mon 4.12 348 ePn Pn 12 02 11.9 +0.1
DRME Dracevica, Mon 4.12 348 ePn Pn 12 02 11.6 -0.2
DRME eSn Sn 12 03 00.6 +0.2
BUM Brajici-Budva 4.28 346 ePn Pn 12 02 13.7 -0.4
BUM eSn Sn 12 03 04.2 -0.3
ACER Acerenza 4.28 309 Pn 12 02 15.4 +1.2
ACER Sn Sn 12 03 05.7 +1.2
APE Apeiranthos 4.28 103 ⇑P Pn 12 02 18.8 +4.6
PDG Podgorica 4.34 350 ePn Pn 12 02 15.6 +0.7
PDG eSn Sn 12 02 53.7 -12
PDG Podgorica 4.34 350 ⇑P Pn 12 02 15.5 +0.6
PDG Podgorica 4.34 350 ePn Pn 12 02 13.6 -1.3
PDG Podgorica 4.34 350 Pn Pn 12 02 14.2 -0.7
PDG Sn Sn 12 03 06.0 0.0
TTG Podgorica 4.34 350 ePn Pn 12 02 14.6 -0.3
TTG eSn Sn 12 03 05.7 -0.3
PVY Plav 4.44 357 ePn Pn 12 02 17.3 +0.9
PVY eSn Sn 12 03 08.8 +0.2
HCY Herceg Novi 4.50 343 ePn Pn 12 02 14.8 -2.4
HCY Herceg Novi 4.50 343 ⇑iPn Pn 12 02 15.7 -1.5
HCY iSn Sn 12 03 09.2 -0.8
CEME Cevo 4.51 347 ePn Pn 12 02 16.6 -0.7
CEME eSn Sn 12 03 09.8 -0.4
BOSS Bosilegrad 4.64 20 ePn Pn 12 02 20.3 +1.3
IDI Anoyia 4.66 127 Pn Pn 12 02 18.3 -1.1
comp=E,0.8nm,0.3s,baz=329,slow=12,SNR=6.4
IDI Sn Sn 12 03 12.0 -1.9
comp=E,2.7nm,0.3s,baz=143,slow=20,SNR=4.5
IVA Berane 4.72 356 ePn Pn 12 02 20.4 +0.2
IVA eSn Sn 12 03 15.6 +0.2
NKME Niksic 4.72 348 ePn Pn 12 02 19.8 -0.4
NKME eSn Sn 12 03 15.2 -0.1
VAE Valguarnera 4.72 264 Pn Pn 12 02 23.2 +3.0
comp=E,2.3nm,0.3s,baz=90,slow=9.1,SNR=2.3
VAE Sn Sn 12 03 17.4 +1.9
comp=E,3.2nm,0.3s,baz=196,slow=15,SNR=3.1
KOME Kolasin 4.73 353 ePn Pn 12 02 20.4 +0.1
KOME eSn Sn 12 03 15.5 -0.1
BARS Barje 4.79 13 ePn Pn 12 02 22.8 +1.7
TREB Trebinje 4.79 342 ePn Pn 12 02 22.8 +1.7
TREB eSn Sn 12 03 06.4 -11
TREB Trebinje 4.79 342 ePn Pn 12 02 19.7 -1.4
BRY Bratogost 4.93 345 ePn Pn 12 02 22.5 -0.6
BRY Bratogost 4.93 345 ePn Pn 12 02 22.3 -0.8
BRY eSn Sn 12 03 19.8 -0.8
VTS Vitosha 4.98 26 ePn Pn 12 02 24.7 +0.8
VTS eSn Sn 12 03 06.6 -15
VTS Vitosha 4.98 26 ⇑P Pn 12 02 25.4 +1.5
VTS Vitosha 4.98 26 Pn Pn 12 02 23.7 -0.2
VTS Sn Sn 12 03 21.4 -0.5
SGRT San Giovanni R 5.02 317 Pn Pn 12 02 21.9 -2.4
SGRT Sn Sn 12 03 20.9 -2.0
SELS Selova 5.09 7 ePn Pn 12 02 25.5 +0.2
SELS eSg Sn 12 03 22.2 -2.3
SJES Sjenica 5.10 357 ePn Pn 12 02 27.1 +1.6
STON Ston 5.11 338 ePn Pn 12 02 23.8 -1.7
UPM Unac-Piva 5.15 348 ePn Pn 12 02 25.9 -0.3
UPM eSn Sn 12 03 25.3 -0.9
WDD Wied Dalam 5.18 245 Pn Pn 12 02 25.6 -0.9
WDD Sn Sn 12 03 25.0 -1.7
ALN Alexandroupoli 5.21 57 Pn Pn 12 02 26.1 -0.6
PAOL Paolisi 5.29 305 Pn 12 02 28.4 +0.5
ZAPS Zavoj 5.41 18 ePn Pn 12 02 29.5 -0.1
IVAS Ivanjica 5.41 359 ePn Pn 12 02 30.5 +0.8
RUDO Rudo 5.50 353 ePn Pn 12 02 30.0 -0.9
CORL Corleone 5.54 269 Pn Pn 12 02 31.2 -0.3
CLTB Caltabellotta 5.65 266 Pn Pn 12 02 33.0 0.0
BBLS Lazići 5.74 353 ePn Pn 12 02 34.9 +0.7
BBLS Lazići 5.74 353 ePn Pn 12 02 37.7 +3.5
DIVS Divibare 5.94 358 ePn Pn 12 02 37.5 +0.5
DIVS Divibare 5.94 358 ePn Pn 12 02 37.0 0.0
TRUS Trudelj 6.06 1 ePn Pn 12 02 39.4 +0.9
KARP Karpathos 6.08 113 Pn Pn 12 02 39.1 +0.3
PLVB Pleven 6.16 31 ⇑P Pn 12 02 42.7 +2.8
INTR Introdacqua 6.24 310 Pn 12 02 43.2 +2.1
ELND Elena 6.37 40 ⇓P Pn 12 02 44.8 +2.0
MGRS Mrkonjic Grad 6.71 340 ePn Pn 12 02 46.7 -0.8
AQU L'Aquila 6.75 311 Pn Pn 12 02 48.6 +0.6
BLY Banja Luka 6.99 341 ⇑P Pn 12 02 52.3 +1.0
BLY Banja Luka 6.99 341 ePn Pn 12 02 53.4 +2.1
BLY Banja Luka 6.99 341 Pn Pn 12 02 53.0 +1.7
NRCA Norcia 7.20 313 Pn 12 02 56.5 +2.2
BZS Buzias 7.51 7 ⇑P Pn 12 02 59.9 +1.4
ELL Elmali 7.76 98 Pn Pn 12 03 02.0 0.0
MURB Monte Urbino 7.81 313 Pn Pn 12 03 03.3 +0.7
VOIR 8.09 24 ⇑P Pn 12 03 08.5 +2.1
MORH Mrgy, Hungar 8.15 352 ePn Pn 12 03 06.3 -0.8
MLR Muntele Rosu 8.44 28 Pn Pn 12 03 15.4 +4.0
comp=E,0.1nm,0.3s,baz=135,slow=16,SNR=2.7
MLR Muntele Rosu 8.44 28 ⇓P Pn 12 03 13.2 +1.8
CRES Cresnjev 8.47 336 ePn Pn 12 03 10.4 -1.2
OSSC Osservatorio P 8.71 311 Pn Pn 12 03 14.9 -0.1
CEY Cerknica 8.97 332 ePn Pn 12 03 14.8 -0.7
LJU Ljubljana 8.97 333 ePn Pn 12 03 18.0 -0.5
TRI Trieste 8.98 329 Pn Pn 12 03 18.2 -0.4
KEST Kesra 9.11 258 Pn Pn 12 03 23.4 +2.9
comp=E,0.2nm,0.3s,baz=38,slow=18,SNR=2.8
KEST Sn Sn 12 05 03.0 -0.5
comp=E,0.3nm,0.3s,baz=163,slow=19,SNR=3.2
KEST LR LR 12 08 29.2
comp=E,84nm,18.1s,baz=107,slow=48
KEST Kesra 9.11 258 Pn 12 03 20.2 -0.2
SOKA Soboth 9.36 337 ePn Pn 12 03 23.3 -0.6
comp=E,2.1nm,0.2s
OBKA Obir 9.37 335 ePn Pn 12 03 23.9 -0.1
comp=E,3.7nm,0.5s
OBKA eSn Sn 12 05 08.0 -1.8
comp=E,2.2nm,0.2s
TEOL Teolo 9.66 321 Pn 12 03 27.8 -0.2
CTI Castel Tesino 10.17 324 Pn 12 03 34.4 -0.7
KBA Koelnbreinsper 10.28 332 ePn Pn 12 03 36.1 -0.5
comp=E,0.4nm,0.1s
KBA eSn Sn 12 05 28.5 -3.8
comp=E,2.7nm,0.5s
ABTA Abfaltersbach 10.33 329 ePn Pn 12 03 37.9 +0.7
comp=E,0.4nm,0.1s
ABTA eSn Sn 12 05 32.1 -1.4
comp=E,2.1nm,0.3s
VYHS Vyhne 10.39 355 ePN Pn 12 03 42.4 +4.5
BRTR Keskin Array B 10.50 77 Pn Pn 12 03 41.6 +2.1
comp=E,0.1nm,0.3s,baz=258,slow=8.7,SNR=2.5
BRTR LR LR 12 08 37.2
comp=E,230nm,19.9s,baz=252,slow=44
BRTR Keskin Array B 10.50 77 Pn 12 03 39.7 +0.1
MOA Molln 10.65 337 ePn Pn 12 03 42.0 +0.6
comp=E,1.1nm,0.2s
FUORN Ofenpass-Fuorn 11.25 322 Pn Pn 12 03 49.7 -0.2
SQTA Sankt Quirin 11.26 326 iPn Pn 12 03 52.7 +2.8
comp=E,1.7nm,0.2s
MOTA Moosalm 11.40 327 ePn Pn 12 03 53.8 +1.9
comp=E,1.4nm,0.4s
MOTA eSn Sn 12 06 02.3 +2.7
comp=E,1.7nm,0.3s
DAVOX Davos/Dischmat 11.55 322 Pn Pn 12 03 55.8 +1.8
comp=E,0.2nm,0.3s,baz=155,slow=19,SNR=3.0
DAVOX Sn Sn 12 05 59.5 -4.4
comp=E,0.2nm,0.3s,baz=319,slow=20,SNR=3.2
GEC2 GERESS Array S 11.71 338 Pn Pn 12 03 55.6 -0.4
GERES GERESS Array B 11.71 338 Pn Pn 12 03 55.7 -0.3
comp=E,0.5nm,0.3s,baz=162,slow=13,SNR=7.5
GERES GERESS Array B 11.71 338 Pn 12 03 55.5 -0.5
KHC Kasperske Hory 12.00 338 ePN Pn 12 04 01.6 +1.7
KHC Kasperske Hory 12.00 338 Pn Pn 12 04 00.4 +0.5
SENIN Lac Senin/Sane 12.64 315 Pn Pn 12 04 09.7 +0.8
ECH Echery 13.88 321 Pn Pn 12 04 25.2 -0.3
CLL Collm 14.13 341 ePn 12 04 39.0
SUW Suwalki 15.98 6 esPP Pn 12 04 54.4 +0.8
KBZ Khabaz 17.92 65 P P 12 05 20.3 +1.5
comp=E,0.1nm,0.3s,baz=300,slow=4.9,SNR=7.7
AKH Akhalkalaki 18.10 72 P Pn 12 05 19.9 -0.6
AKH IAmb IAmb 12 05 29.2
comp=Z,17nm,1.4s
HFS Hagfors 22.39 351 P P 12 06 08.4 +1.1
comp=Z,2.0nm,0.4s,baz=159,slow=8.6,SNR=9.3
NC602 NORSAR Array S 23.27 349 P P 12 06 16.7 +0.3
EKA Eskdalemuir Ar 23.35 325 P P 12 06 18.6 +1.2
comp=Z,3.1nm,0.6s,baz=128,slow=9.3,SNR=4.6
FINES FINESS Array B 23.59 7 P P 12 06 19.2 -0.4
comp=Z,5.8nm,1.0s,baz=161,slow=8.8,SNR=5.1
FINES FINESS Array B 23.59 7 P P 12 06 20.4 +0.7
FIA1 FINESS Array S 23.59 7 P P 12 06 20.2 +0.6
NB2 NORSAR Subarra 23.61 349 P P 12 06 20.6 +0.7
comp=Z,0.6nm,0.5s,baz=157,slow=9.3
NOA NORSAR Array B 23.61 349 P P 12 06 19.9 0.0
comp=Z,1.2nm,0.8s,baz=153,slow=10.0,SNR=3.6
NOA LR LR 12 17 14.7
comp=Z,131nm,18.9s,baz=245,slow=41
TOA0 Torodi Ar. Sit 29.91 219 P P 12 07 16.9 -0.3
TOA0 IAmb IAmb 12 07 24.8
comp=Z,3.4nm,1.1s
TORD Torodi Ar. Bea 29.91 219 P P 12 07 18.3 +1.1
comp=Z,2.0nm,1.1s,baz=27,slow=9.9,SNR=4.8
TORD Torodi Ar. Bea 29.91 219 P P 12 07 17.3 +0.1
ABKAR Akbulak array 30.39 56 P P 12 07 20.9 -0.2
ARCES ARCESS Array B 31.56 3 P P 12 07 31.8 +0.5
comp=Z,1.7nm,0.9s,baz=198,slow=11,SNR=3.6
ARCES LR LR 12 22 17.1
comp=Z,154nm,21.1s,baz=288,slow=40
KKAR Karatay Array 37.95 66 P P 12 08 26.7 -0.1
KKAR IAmb IAmb 12 08 36.3
comp=Z,1.5nm,0.7s
KKAR Karatay Array 37.95 66 P P 12 08 27.0 +0.2
DBIC Dimbokro 38.77 222 LR LR 12 24 12.7
comp=Z,134nm,21.5s,baz=352,slow=36
AAK Ala-Archa 40.91 66 P P 12 08 51.4 -0.3
NRN Naryn 42.29 67 P P 12 09 03.0 -0.1
NRN IAmb IAmb 12 09 16.4
comp=Z,2.0nm,0.9s
KURK Kurchatov 42.42 53 P P 12 09 02.9 -0.8
KURK IAmb IAmb 12 09 19.9
comp=Z,3.7nm,1.2s
MK31 Makanchi Array 45.45 58 P P 12 09 27.0 -1.1
MKAR Makanchi Array 45.45 58 P P 12 09 26.9 -1.3
comp=Z,1.2nm,0.4s,baz=274,slow=7.4,SNR=32
MKAR Makanchi Array 45.45 58 P P 12 09 27.0 -1.2
ZAA0 Zalesovo Array 45.83 48 P P 12 09 30.4 -0.5
ZAA0 IAmb IAmb 12 09 33.4
comp=Z,3.9nm,1.1s
ZALV Zalesovo Beam 45.83 48 P P 12 09 29.9 -1.1
comp=Z,2.9nm,0.7s,baz=273,slow=8.7,SNR=12
ZALV Zalesovo Beam 45.83 48 P P 12 09 30.2 -0.8
TLY Talaya 57.42 47 LR LR 12 37 26.5
comp=Z,65nm,19.9s,baz=330,slow=38
SONM Songino Array 60.59 50 P P 12 11 19.7 -0.3
comp=Z,0.5nm,0.8s,baz=270,slow=6.1,SNR=5.0
SONM Songino Array 60.59 50 P P 12 11 19.4 -0.5
YAK Yakutsk 65.21 29 LR LR 12 42 47.4
comp=Z,59nm,21.0s,baz=274,slow=38
CMAR Chiang Mai Arr 70.05 82 P P 12 12 20.4 -1.2
comp=Z,0.6nm,0.8s,baz=299,slow=6.9,SNR=5.2
CMAR LR LR 12 47 20.9
comp=Z,45nm,19.2s,baz=320,slow=40
YKA Yellowknife Ar 73.35 340 P P 12 12 41.4 +0.7
comp=Z,0.3nm,0.9s,baz=41,slow=5.7,SNR=3.8
ILAR Eielson Array 76.91 354 P P 12 13 03.0 +1.8
comp=Z,0.5nm,0.9s,baz=2.5,slow=4.3,SNR=6.2
BBB Bella Bella 85.91 341 LR LR 12 51 51.6
comp=Z,30nm,21.9s,baz=26,slow=35
ELK Elko 91.58 328 LR LR 12 55 35.2
comp=Z,59nm,20.7s,baz=32,slow=36

ATH 01 12:02:03.5, 38°.18N×20°.33E, h7km±2km, ML3.6/2, Error ellipse: s-maj=2.6km s-min=1.7km az=256.0
THE 01 12:02:03.6, 38°.16N×20°.35E, h6km, ML3.7/5, Error ellipse: s-maj=1.0km s-min=0.5km az=89.0
ISC 01 12:02:03.7±2.1, 38°.17N±0°.04×20°.35E±0°.07, h7km±7km, n17, σ0s.33/29, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.03 63 P Pg 12 02 04.8 -0.2
CHV1 S Sg 12 02 05.6 -0.3
KEF3 Kipouria, Keph 0.03 4 P Pg 12 02 05.1 +0.1
KEF3 S Sg 12 02 06.0 0.0
LXR1 Lixouri, Cepha 0.08 67 P Pg 12 02 05.5 -0.1
LXR1 S Sg 12 02 07.0 +0.1
160μm,0.4s
KEF4 Livadi, Kephal 0.11 35 P Pg 12 02 06.0 0.0
KEF4 S Sg 12 02 07.8 +0.2
KEF2 Argostoli. Kep 0.11 92 P Pg 12 02 06.2 +0.1
KEF2 S Sg 12 02 08.1 +0.3
ARG2 Argostoli 0.11 85 P Pg 12 02 06.2 +0.1
ARG2 S Sg 12 02 07.8 0.0
106μm,0.3s
KEF1 Kardakata, Kep 0.15 42 P Pg 12 02 06.6 -0.1
KEF1 S Sg 12 02 08.9 +0.2
VLS Valsamata 0.19 87 P Pg 12 02 07.4 -0.2
VLS S Sg 12 02 10.3 +0.1
43μm,0.2s
VLS Valsamata 0.19 87 P Pg 12 02 07.3 -0.2
VLS S Sg 12 02 10.1 -0.1
VLS AML AML 12 02 10.4
comp=N,89348μm,0.3s
VLS AML AML 12 02 10.5
comp=E,77371μm,0.1s
VSK1 VASILIKIADES 0.29 36 P Pg 12 02 09.2 -0.3
VSK1 S Sg 12 02 13.5 +0.1
comp=E,11μm,0.4s
FSK Fiskardo 0.34 30 P Pg 12 02 10.1 -0.1
FSK S Sg 12 02 15.2 +0.5
comp=E,4μm,0.2s
FSK Fiskardo 0.34 30 P Pg 12 02 10.2 -0.1
VLMS Volimes, Zakyn 0.39 139 P Pg 12 02 11.4 +0.2
EVGI Lefkada island 0.51 28 P Pg 12 02 13.3 -0.3
EVGI S Sg 12 02 21.4 +1.1
EVGI Lefkada island 0.51 28 P Pg 12 02 13.2 -0.3
MGNA Meganis 0.60 36 P Pg 12 02 14.6 -0.6
MGNA AML AML 12 02 24.2
comp=N,8396μm,0.3s
MGNA AML AML 12 02 24.3
comp=E,8941μm,0.3s
KRI1 kERI 0.63 143 P Pg 12 02 15.4 -0.4

NEIC 01 12:03:57.0±0.5, 19°.1N±0°.1×66°.83W±0°.07, h49km±30km, Error ellipse: s-maj=17.5km s-min=8.3km az=157.0
RSPR 01 12:03:56.8, 19°.08N×66°.76W, h77km±6km, MD2.5/6, 6C-1D, Puerto Rico region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AGPR Aguadilla, PR 0.70 209 ⇑eP Pn 12 04 11.5 -0.7
AOPR Arecibo Observ 0.73 180 Pn Pn 12 04 11.2 -1.5
LSP Las Mesas 0.95 199 ⇑eP Pn 12 04 14.2 -1.0
LSP Las Mesas 0.95 199 eS Sn 12 04 28.7 -0.1
GCPR Guaynabo City 1.00 140 Pn Pn 12 04 15.0 -0.8
CELP Cerrillos 1.02 170 ⇑eP Pn 12 04 15.4 -0.5
OBIP Obispado Ponce 1.04 172 ⇑eP Pn 12 04 15.5 -0.8
OBIP Obispado Ponce 1.04 172 eS Sn 12 04 30.1 -0.6
OBIP Obispado Ponce 1.04 172 Pn Pn 12 04 15.4 -0.9
CRPR Cabo Rojo, PR 1.12 197 ⇑eP Pn 12 04 16.5 -0.7
CRPR Cabo Rojo, PR 1.12 197 Pn Pn 12 04 15.9 -1.3
CRPR Sn Sn 12 04 29.6 -2.8
MLPR Magueyes Islan 1.14 194 Pn Pn 12 04 16.1 -1.4
CBYP Canovanas 1.18 133 ⇑eP Pn 12 04 17.2 -0.7
CBYP Canovanas 1.18 133 eS Sn 12 04 33.2 -0.6
MTP Monte Pirata 1.51 130 ⇓eP Pn 12 04 21.9 -0.9
MTP Monte Pirata 1.51 130 eS Sn 12 04 40.6 -0.6
MTP Monte Pirata 1.51 130 Pn Pn 12 04 21.7 -0.5
MTP Sn Sn 12 04 41.4 +0.2

IDC 01 12:03:52.4±1.1, 10°.90N×138°.79E, h0km, mb3.6/7, mb1 3.9/8, mb1mx3.7/39, mbtmp3.7/8, ML4.4/1, MS3.2/5, Ms1 3.2/5, ms1mx2.8/46, Error ellipse: s-maj=34.8km s-min=23.0km az=83.0
ISC 01 12:03:57.0±0.9, 10°.8N±0°.1×138°.8E±0°.2, h31km, n12, σ0s.68/8, mb3.6/7, MS3.0/4, Western Caroline Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JAY Jayapura 13.41 172 Pn Pn 12 07 05.1 -0.3
1.9nm,0.3s,baz=175,slow=20,SNR=5.0
JAY LR LR 12 11 14.4
comp=Z,82nm,22.0s,baz=20,slow=33
PMG Port Moresby 21.78 157 LR LR 12 16 29.0
comp=Z,69nm,20.6s,baz=306,slow=35
JNU Nakatsue 23.33 343 LR LR 12 17 06.7
comp=Z,116nm,20.8s,baz=234,slow=34

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
KAPI	**Kappang**	**24.62**	**231**	LR	LR	12 17 47.8	
	comp=Z,45nm,21.9s,baz=38,slow=34						
KSRS	**Korea Array**	**28.23**	**342**	LR	LR	12 20 35.8	
	comp=Z,28nm,18.7s,baz=295,slow=36						
ASAR	**Alice Springs**	**34.62**	**188**	P	**P**	**12 10 43.9**	**+0.2**
	0.4nm,0.8s,baz=19,slow=12,SNR=11						
CMAR	**Chiang Mai Arr**	**39.19**	**286**	P	**P**	**12 11 22.8**	**+0.2**
	0.8nm,0.6s,baz=91,slow=6.4,SNR=8.1						
SONM	**Songino Array**	**45.80**	**330**	P	**P**	**12 12 16.3**	**+0.2**
	0.6nm,0.9s,baz=132,slow=6.2,SNR=3.7						
MKAR	**Makanchi Array**	**59.43**	**318**	P	**P**	**12 13 56.6**	**-0.2**
	0.6nm,0.7s,baz=102,slow=8.3,SNR=5.7						
ZALV	**Zalesovo Beam**	**60.49**	**327**	P	**P**	**12 14 03.1**	**-0.8**
	0.5nm,0.3s,baz=107,slow=6.2,SNR=3.8						
ILAR	**Eielson Array**	**73.60**	**25**	P	**P**	**12 15 26.4**	**-0.6**
	0.5nm,0.7s,baz=253,slow=5.5,SNR=8.6						
YKA	**Yellowknife Ar**	**88.00**	**26**	P	**P**	**12 16 44.9**	**+1.0**
	0.1nm,0.6s,baz=287,slow=5.2,SNR=4.3						

ATH 01 12:12:45.3,38.42N×20.50E,h11km±1km,ML3.2/13,Error ellipse: s-maj=1.8km s-min=0.6km az=279.0
THE 01 12:12:45.5,38.42N×20.47E,h7km±1km,ML3.4/10,Error ellipse: s-maj=1.9km s-min=0.5km az=103.0
ISC 01 12:12:45.6±0.9,38.41N±0.02×20.53E±0.03,h8km±4km, n47,σ0.56/75,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
VSK1	**VASILIKIADES**	**0.03**	**101**	P	**Pg**	**12 12 47.1**	**0.0**
VSK1				S	**Sg**	**12 12 48.5**	**+0.2**
	86μm,0.3s						
FSK	**Fiskardo**	**0.05**	**28**	P	**Pg**	**12 12 47.3**	**-0.1**
FSK				S	**Sg**	**12 12 48.7**	**+0.1**
	38μm,0.7s						
FSK	**Fiskardo**	**0.05**	**28**	P	**Pg**	**12 12 47.3**	**-0.1**
FSK				S	**Sg**	**12 12 48.8**	**+0.1**
KEF1	**Kardakata, Kep**	**0.14**	**199**	P	**Pg**	**12 12 48.5**	**-0.2**
KEF1				S	**Sg**	**12 12 51.1**	**+0.3**
KEF4	**Livadi, Kephal**	**0.18**	**208**	P	**Pg**	**12 12 49.0**	**-0.2**
KEF4				S	**Sg**	**12 12 52.4**	**+0.6**
LXR1	**Lixouri, Cepha**	**0.23**	**199**	P	**Pg**	**12 12 50.1**	**0.0**
LXR1				S	**Sg**	**12 12 53.7**	**+0.5**
	76μm,0.3s						
EVGI	**Lefkada island**	**0.23**	**25**	P	**Pg**	**12 12 50.4**	**+0.2**
EVGI				S	**Sg**	**12 12 54.6**	**+1.3**
EVGI	**Lefkada island**	**0.23**	**25**	P	**Pg**	**12 12 50.4**	**+0.2**
EVGI				S	**Sg**	**12 12 54.7**	**+1.3**
ARG2	**Argostoli**	**0.24**	**188**	P	**Pg**	**12 12 50.2**	**-0.1**
ARG2				S	**Sg**	**12 12 54.1**	**+0.6**
	38μm,0.4s						
VLS	**Valsamata**	**0.24**	**169**	P	**Pg**	**12 12 50.3**	**-0.1**
VLS				S	**Sg**	**12 12 54.4**	**+0.7**
	10μm,0.5s						
VLS	**Valsamata**	**0.24**	**169**	P	**Pg**	**12 12 50.5**	**+0.1**
VLS				S	**Sg**	**12 12 54.6**	**+0.9**
VLS				AML	AML	12 12 54.7	
	comp=E,21079μm,0.3s						
VLS				AML	AML	12 12 56.6	
	comp=N,18647μm,0.4s						
KEF2	**Argostoli. Kep**	**0.25**	**188**	P	**Pg**	**12 12 50.4**	**-0.2**
KEF2				S	**Sg**	**12 12 54.2**	**+0.3**
KEF3	**Kipouria, Keph**	**0.26**	**214**	P	**Pg**	**12 12 50.2**	**-0.4**
KEF3				S	**Sg**	**12 12 54.7**	**+0.6**
MGNA	**Meganis**	**0.32**	**40**	P	**Pg**	**12 12 51.9**	**+0.1**
MGNA				S	**Sb**	**12 12 57.7**	**-1.0**
LKD2	**Lefkada island**	**0.39**	**15**	P	**Pg**	**12 12 52.9**	**-0.3**
LKD2				S	**Sg**	**12 12 59.2**	**+0.9**
	comp=N,3μm,0.3s						
LKD2	**Lefkada island**	**0.39**	**15**	P	**Pg**	**12 12 52.9**	**-0.3**
LKD2				S	**Sg**	**12 12 59.0**	**+0.8**
LKD2				AML	AML	12 13 00.1	
	comp=N,6581μm,0.4s						
LKD2				AML	AML	12 13 03.3	
	comp=E,5010μm,0.3s						
TSLK	**Tsoukalades, L**	**0.42**	**13**	P	**Pg**	**12 12 53.6**	**-0.2**
TSLK				S	**Sb**	**12 13 00.7**	**-1.1**
	comp=E,4μm,0.6s						
TSLK	**Tsoukalades, L**	**0.42**	**13**	P	**Pg**	**12 12 53.6**	**-0.2**
TSLK				S	**Sg**	**12 13 00.5**	**+1.1**
PDO	**Prodromos**	**0.54**	**70**	P	**Pg**	**12 12 56.4**	**+0.3**
PDO				S	**Sb**	**12 13 05.4**	**+0.1**
	comp=E,5μm,0.5s						
PDO	**Prodromos**	**0.54**	**70**	P	**Pg**	**12 12 56.0**	**0.0**
PDO				S	**Sg**	**12 13 03.6**	**+0.4**
PDO				AML	AML	12 13 11.3	
	comp=N,7634μm,0.6s						
PDO				AML	AML	12 13 12.3	
	comp=E,6061μm,0.5s						
VLMS	**Volimes, Zakyn**	**0.55**	**169**	P	**Pg**	**12 12 55.9**	**-0.2**
VLMS				S	**Sg**	**12 13 03.7**	**+0.4**
VLMS				AML	AML	12 13 09.2	
	comp=N,12130μm,0.3s						
VLMS				AML	AML	12 13 09.5	
	comp=E,13645μm,0.3s						
KRI1	**kERI**	**0.78**	**163**	P	**Pg**	**12 13 00.0**	**-0.6**
KRI1				S	**Sb**	**12 13 12.6**	**+0.5**
	comp=E,7μm,0.2s						
PVO	**Paravola**	**0.81**	**75**	P	**Pb**	**12 13 01.6**	**-0.2**
PVO				S	**Sn**	**12 13 15.4**	**+0.1**
	comp=E,2μm,0.5s						
PVO	**Paravola**	**0.81**	**75**	P	**Pb**	**12 13 01.6**	**-0.2**
PVO				AML	AML	12 13 20.8	
	comp=E,2886μm,0.4s						
PVO				AML	AML	12 13 22.2	
	comp=N,3675μm,0.5s						
RLS	**Riolos of Patr**	**0.82**	**116**	P	**Pg**	**12 13 01.0**	**-0.3**
RLS	**Riolos of Patr**	**0.82**	**116**	P	**Pg**	**12 13 01.3**	**0.0**
RLS				S	**Sb**	**12 13 13.9**	**+0.7**
RLS				AML	AML	12 13 17.7	
	comp=E,870μm,0.4s						
RLS				AML	AML	12 13 29.9	
	comp=N,1309μm,0.5s						
DRO	**Drossia**	**1.04**	**116**	P	**Pg**	**12 13 05.0**	**-0.5**
DRO				AML	AML	12 13 27.8	
	comp=N,4112μm,0.4s						
DRO				AML	AML	12 13 33.6	
	comp=E,3260μm,0.6s						
EFP	**Efpalio**	**1.08**	**89**	P	**Pg**	**12 13 05.6**	**-0.7**
EFP				S	**Sn**	**12 13 22.1**	**+0.1**
EFP				AML	AML	12 13 28.1	
	comp=N,3069μm,0.5s						
EFP				AML	AML	12 13 29.0	
	comp=E,2853μm,0.7s						
ANX	**Ano Chora**	**1.10**	**80**	P	**Pb**	**12 13 07.0**	**+0.1**
ANX				S	**Sb**	**12 13 21.6**	**+0.1**
ANX				AML	AML	12 13 31.1	
	comp=E,2067μm,0.4s						
ANX				AML	AML	12 13 31.4	
	comp=N,2504μm,0.6s						
EVR	**Evrytania**	**1.12**	**63**	P	**Pg**	**12 13 06.5**	**-0.5**
EVR				AML	AML	12 13 33.0	
	comp=E,661μm,0.8s						
EVR				AML	AML	12 13 33.0	
	comp=N,964μm,0.8s						
LAKA	**Lakka**	**1.15**	**98**	P	**Pb**	**12 13 07.0**	**-0.7**
SERG	**Sergoula**	**1.20**	**90**	P	**Pb**	**12 13 07.9**	**-0.5**
SERG	**Sergoula**	**1.20**	**90**	P	**Pb**	**12 13 08.0**	**-0.5**
SERG				S	**Sb**	**12 13 24.6**	**+0.5**
SERG				AML	AML	12 13 31.6	
	comp=N,1924μm,0.4s						
SERG				AML	AML	12 13 32.2	
	comp=E,1968μm,0.6s						
TRIZ	**Trizonia**	**1.21**	**92**	P	**Pb**	**12 13 07.8**	**-0.9**
TRIZ	**Trizonia**	**1.21**	**92**	P	**Pb**	**12 13 07.9**	**-0.9**
TRIZ				S	**Sn**	**12 13 25.4**	**+0.1**
KALE	**Kalithea**	**1.26**	**91**	P	**Pb**	**12 13 08.7**	**-0.8**
JAN	**Janina**	**1.27**	**11**	P	**Pg**	**12 13 10.1**	**+0.2**
AMT	**Artemida-Makis**	**1.28**	**133**	P	**Pg**	**12 13 11.1**	**+1.0**
AMT				AML	AML	12 13 43.1	
	comp=N,1731μm,0.6s						
AMT				AML	AML	12 13 45.6	
	comp=E,1552μm,0.7s						
KLV	**Kalavryta, Ach**	**1.33**	**106**	P	**Pn**	**12 13 09.7**	**-0.7**
MAKR	**Makrakomi, Fth**	**1.39**	**64**	P	**Pb**	**12 13 12.0**	**+0.3**
MAKR				AML	AML	12 13 40.5	
	comp=E,1413μm,0.4s						
MAKR				AML	AML	12 13 41.0	
	comp=N,1335μm,0.5s						
KASA	**Kassiopi**	**1.41**	**341**	P	**Pb**	**12 13 11.9**	**-0.2**
AGG	**Agios Georgios**	**1.53**	**66**	P	**Pb**	**12 13 13.8**	**-0.4**
THL	**Klokotos Trika**	**1.63**	**45**	P	**Pb**	**12 13 16.7**	**-0.1**
ITM	**Ithomi**	**1.66**	**138**	P	**Pg**	**12 13 17.8**	**+0.5**
KPRO	**Kipourio**	**1.67**	**23**	P	**Pg**	**12 13 17.4**	**-0.1**
PYL	**PYLOS**	**1.79**	**147**	P	**Pn**	**12 13 17.7**	**+0.9**
DID	**Didima**	**2.32**	**112**	P	**Pb**	**12 13 26.7**	**-1.0**

JMA 01 12:15:14.8±0.1,43.24N×145.97E,h45km±1km,M2.9
SKHL 01 12:15:14.7±0.7,43.24N×146.11E,h31km±1km,mb4.2/4
ISC 01 12:15:14.1±3.3,43.22N±0.07×146.09E±0.06,h37km±2km, n15,σ0.90/24,Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
NEM2	**Nemuro 2**	**0.29**	**301**	P	**Pn**	**12 15 22.6**	**+0.3**
NEM2				eS	**Sn**	**12 15 28.1**	**-1.4**
NMR	**Nemuro--Hokkai**	**0.30**	**300**	i P	**Pn**	**12 15 22.0**	**-0.3**
NMR				i S	**Sn**	**12 15 28.0**	**-1.4**
GLVR	**Golovnino**	**0.67**	**322**	i P	**Pn**	**12 15 27.0**	**-0.1**
GLVR				AMB	AMB	12 15 27.0	
	230nm,0.3s						
GLVR				i S	**Sn**	**12 15 36.0**	**-0.3**
GLVR				A	A	12 15 37.0	
	1μm,0.6s						
GLVR				A	A	12 15 37.0	
	924nm,0.6s						
JKHN	**Kushirohamanak**	**0.69**	**259**	P	**Pn**	**12 15 27.4**	**0.0**
GRPR	**Tuman**	**0.81**	**344**	i P	**Pn**	**12 15 28.7**	**-0.3**
GRPR				AMB	AMB	12 15 28.8	
	224nm,0.4s						
GRPR				i S	**Sn**	**12 15 38.0**	**-1.8**
GRPR				A	A	12 15 39.0	
	325nm,0.3s						
GRPR				A	A	12 15 39.0	
	607nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.83**	**349**	i P	**Pn**	**12 15 29.0**	**-0.3**
YUK				AMB	AMB	12 15 30.0	
	85nm,0.3s						
YUK				AMB	AMB	12 15 30.0	
	105nm,0.3s						
YUK				AMB	AMB	12 15 30.0	
	232nm,0.3s						
YUK				i S	**Sn**	**12 15 40.0**	**-0.4**
YUK				A	A	12 15 42.0	
	484nm,0.2s						
YUK				A	A	12 15 42.0	
	186nm,0.2s						
SHO	**Shikotan**	**0.85**	**39**	i P	**Pn**	**12 15 29.0**	**-0.5**
SHO				AMB	AMB	12 15 29.0	
	38nm,0.2s						
SHO				i S	**Sn**	**12 15 39.0**	**-1.7**
SHO				A	A	12 15 40.0	
	133nm,0.2s						
SHO				A	A	12 15 40.0	
	550nm,0.2s						
JNSB	**Nemuroshibetsu**	**0.97**	**306**	P	**Pn**	**12 15 30.9**	**-0.2**
JRA	**Rausu**	**1.01**	**316**	P	**Pn**	**12 15 31.8**	**+0.2**
JRA				eS	**Sn**	**12 15 44.2**	**-0.4**
JAK	**Akkeshi**	**1.04**	**258**	P	**Pn**	**12 15 31.6**	**-0.5**
JNK	**Nakash**	**1.06**	**291**	P	**Pn**	**12 15 31.9**	**-0.6**
JNK				eS	**Sn**	**12 15 44.7**	**-1.3**
JOB	**Onbets**	**1.68**	**260**	P	**Pn**	**12 15 40.9**	**0.0**
JAR	**Ashorobuto**	**1.70**	**274**	P	**Pn**	**12 15 41.2**	**+0.1**
JAR				eS	**Sn**	**12 16 01.0**	**-0.6**
JTKR	**Abashiri--Toko**	**1.75**	**296**	P	**Pn**	**12 15 42.6**	**+0.7**
KUR	**Kuril'sk**	**2.39**	**32**	eS	**Sn**	**12 16 20.0**	**+1.4**

IDC 01 12:39:59.4±1.0,72.76N×5.25E,h0km,mb3.3/4,mb1 3.5/9, mb1mx3.3/55,mbtmp3.5/9,ML3.1/5,MS3.7/4,Ms1 3.7/4, ms1mx3.2/31,Error ellipse: s-maj=22.6km s-min=14.2km az=52.0
BER 01 12:40:06.3±2.0,72.74N×5.37E,h19km±35km,ML2.2, Confirmed Earthquake
ISC 01 12:40:00.7±0.9,72.73N±0.08×5.4E±0.1,h10km,n23, σ2.18/24,MS3.6/4,Norwegian Sea

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
LOF	**Lofoten**	**5.37**	**145**	eP	**Pn**	**12 41 22.8**	**+2.1**
LOF				eS	**Sn**	**12 42 20.0**	**-2.5**
LOF				IAML		12 42 27.1	
	comp=Z,6.3nm,0.6s						
TRO	**Tromso**	**5.38**	**119**	eP	**Pn**	**12 41 22.7**	**+1.9**
TRO				IAML		12 42 24.0	
	comp=Z,6.5nm,0.3s						
STEI	**Steigen**	**5.86**	**140**	eP	**Pn**	**12 41 29.9**	**+2.5**
SPITS	**Spitsbergen Ar**	**6.13**	**22**	Pn	**Pn**	**12 41 30.2**	**-0.9**
	baz=203,slow=18,SNR=39						
KIF	**Kilpisjarvi**	**6.29**	**119**	eP	**Pn**	**12 41 35.9**	**+2.5**
HOPEN	**Hopen**	**6.43**	**45**	eP	**Pn**	**12 41 36.9**	**+1.6**
HOPEN				IAML		12 42 51.8	
	comp=Z,3.5nm,0.8s						
KONS	**Konsvik**	**6.81**	**153**	eP	**Pn**	**12 41 42.1**	**+1.6**
KTK1	**Kautokeino**	**6.94**	**114**	eP	**Pn**	**12 41 45.5**	**+3.2**
ARCES	**ARCESS Array B**	**7.25**	**106**	Pn	**Pn**	**12 41 46.4**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=319,slow=13,SNR=33						
ARCES				Sn	**Sn**	**12 43 07.8**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=310,slow=20,SNR=2.8						
MOR8	**Moi Rana**	**7.31**	**150**	eP	**Pn**	**12 41 49.9**	**+2.5**
HEF	**Hetta**	**7.46**	**116**	eP	**Pn**	**12 41 52.1**	**+2.6**
KEV	**Kevo**	**7.56**	**103**	eP	**Pn**	**12 41 52.1**	**+1.3**
NSS	**Namsos**	**8.57**	**160**	eP	**Pn**	**12 42 07.2**	**+2.5**
NOA	**NORSAR Array B**	**11.95**	**166**	Pn	**Pn**	**12 42 52.3**	**+1.4**
	comp=Z,0.0nm,0.3s,baz=311,slow=19,SNR=4.1						
HFS	**Hagfors**	**13.06**	**161**	Pn	**Pn**	**12 43 07.2**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=358,slow=14,SNR=27						
HFS				Sn	**Sn**	**12 45 26.2**	**-4.9**
	comp=Z,0.3nm,0.3s,baz=276,slow=39,SNR=5.1						
FINES	**FINESS Array B**	**13.78**	**134**	Pn	**Pn**	**12 43 17.0**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=325,slow=12,SNR=5.9						
AKASG	**Malin Array Be**	**24.46**	**142**	P	**P**	**12 45 19.2**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=344,slow=9.5,SNR=2.5						
AKASG				LR	LR	12 54 07.4	
	comp=Z,244nm,18.0s,baz=290,slow=35						
RES	**Resolute Bay**	**25.06**	**322**	LR	LR	12 53 52.0	
	comp=Z,99nm,19.8s,baz=30,slow=33						
ARU	**Arti**	**26.76**	**99**	LR	LR	12 55 30.6	
	comp=Z,134nm,18.3s,baz=287,slow=35						
BRTR	**Keskin Array B**	**35.87**	**141**	LR	LR	13 02 19.0	
	comp=Z,133nm,18.6s,baz=306,slow=37						
YKA	**Yellowknife Ar**	**39.11**	**320**	P	**P**	**12 47 25.9**	**-1.5**
	comp=Z,0.1nm,0.8s,baz=14,slow=8.6,SNR=3.0						
YKA				PcP	**PcP**	**12 49 37.1**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=15,slow=3.1,SNR=8.5						
ILAR	**Eielson Array**	**41.50**	**342**	P	**P**	**12 47 46.7**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=22,slow=7.8,SNR=4.4						
TORD	**Torodi Ar. Bea**	**59.59**	**184**	P	**P**	**12 50 05.9**	**+1.6**
	comp=Z,0.9nm,0.9s,baz=0.0,slow=8.6,SNR=2.4						

IDC 01 12:41:47.2±2.9,16.62S×175.50W,h225km±60km, mb3.2/3,mb1 3.5/4,mb1mx3.1/39,mbtmp3.8/4,Error ellipse: s-maj=310.1km s-min=27.2km az=142.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
AFI	**Afiamalu**	**4.49**	**54**	P	Pn	12 42 57.8	+1.7
	3.7nm,0.3s,baz=192,slow=1.8,SNR=7.7						
AFI				S	S	12 43 50.1	-0.3
	12nm,0.3s,baz=49,slow=23,SNR=16						
WRA	**Warramunga Arr**	**47.60**	**258**	P	P	12 50 01.0	-0.1
	0.6nm,0.5s,baz=96,slow=7.1,SNR=6.8						
ASAR	**Alice Springs**	**47.82**	**253**	P	P	12 50 02.4	-0.3
	2.8nm,0.6s,baz=87,slow=9.1,SNR=41						
ILAR	**Eielson Array**	**84.04**	**12**	P	P	12 53 52.2	+0.1
	0.2nm,0.5s,baz=226,slow=6.1,SNR=4.4						

IDC 01 12:42:57.1±9.4,20.92S×173.72W,h0km,mb3.9/4, mb1 4.1/4,mb1mx3.6/36,mbtmp3.8/4,Error ellipse: s-maj=312.2km s-min=98.4km az=141.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
CTA	**Charters Tower**	**37.43**	**264**	P	P	12 50 13.9	+1.5
	3.0nm,0.9s,baz=92,slow=7.0,SNR=3.3						
ASAR	**Alice Springs**	**48.32**	**256**	P	P	12 51 39.0	-1.7
	0.4nm,0.8s,baz=92,slow=7.3,SNR=5.3						
WRA	**Warramunga Arr**	**48.50**	**261**	P	P	12 51 42.1	-0.1
	0.6nm,0.7s,baz=96,slow=7.5,SNR=5.1						
CMAR	**Chiang Mai Arr**	**94.04**	**288**	P	P	12 56 17.9	+0.1
	0.6nm,0.8s,baz=115,slow=4.1,SNR=5.0						

JMA 01 12:48:28.2±0.2,43.36N×146.32E,h47km±1km,M2.9
SKHL 01 12:48:28.5±0.2,43.40N×146.37E,h27km±3km,mb4.4/4
ISC 01 12:48:27.9±1.4,43.40N±0.06×146.36E±0.05,h33km±7km, n15,σ0.81/27,Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
NEM2	**Nemuro 2**	**0.45**	**266**	P	**Pb**	**12 48 38.3**	**+0.6**
NEM2				eS	**Sb**	**12 48 45.5**	**+1.0**
NMR	**Nemuro--Hokkai**	**0.46**	**267**	i P	**Pb**	**12 48 38.0**	**+0.1**
NMR				i S	**Sb**	**12 48 45.0**	**+0.3**
SHO	**Shikotan**	**0.58**	**36**	i P	**Pb**	**12 48 39.0**	**-0.8**
SHO				AMB	AMB	12 48 39.0	
	118nm,0.2s						
SHO				i S	**Sb**	**12 48 47.0**	**-0.9**
SHO				A	A	12 48 48.0	
	1μm,0.3s						
SHO				A	A	12 48 48.0	
	1μm,0.3s						
GLVR	**Golovnino**	**0.70**	**299**	i P	**Pb**	**12 48 42.0**	**+0.3**
GLVR				AMB	AMB	12 48 42.0	
	200nm,0.2s						
GLVR				eS	**Sb**	**12 48 52.0**	**+0.9**
GLVR				A	A	12 48 52.0	
	2μm,0.3s						
GLVR				A	A	12 48 52.0	
	2μm,0.3s						
GRPR	**Tuman**	**0.73**	**324**	i P	**Pb**	**12 48 41.0**	**-1.3**
GRPR				AMB	AMB	12 48 42.0	
	310nm,0.5s						
GRPR				eS	**Sb**	**12 48 51.0**	**-1.0**
GRPR				A	A	12 48 51.0	
	1μm,0.3s						
GRPR				A	A	12 48 51.0	
	1μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.73**	**331**	i P	**Pb**	**12 48 41.7**	**-0.6**
YUK				AMB	AMB	12 48 42.8	
	182nm,0.2s						
YUK				i S	**Sb**	**12 48 52.1**	**+0.1**
YUK				A	A	12 48 54.5	
	688nm,0.3s						
YUK				A	A	12 48 54.5	
	436nm,0.3s						
JKHN	**Kushirohamanak**	**0.93**	**251**	P	**Pn**	**12 48 44.8**	**+0.1**
JKHN				eS	**Sb**	**12 48 56.8**	**-0.9**
JRA	**Rausu**	**1.05**	**301**	P	**Pn**	**12 48 46.7**	**+0.4**
JRA				eS	**Sn**	**12 49 00.2**	**+0.4**
JNSB	**Nemuroshibetsu**	**1.06**	**291**	P	**Pn**	**12 48 46.7**	**+0.3**
JNK	**Nakash**	**1.21**	**279**	P	**Pn**	**12 48 48.4**	**-0.1**
JNK				eS	**Sn**	**12 49 03.1**	**-0.7**
JAK	**Akkeshi**	**1.28**	**252**	P	**Pn**	**12 48 49.2**	**-0.3**
JTKR	**Abashiri--Toko**	**1.87**	**289**	P	**Pn**	**12 48 58.7**	**+1.1**
JAR	**Ashorobuto**	**1.89**	**268**	P	**Pn**	**12 48 58.5**	**+0.6**
JAR				eS	**Sn**	**12 49 21.1**	**+0.4**
JOB	**Onbets**	**1.91**	**256**	P	**Pn**	**12 48 58.3**	**+0.1**
JOB				eS	**Sn**	**12 49 20.1**	**-1.0**
KUR	**Kuril'sk**	**2.13**	**30**	eP	**Pn**	**12 49 03.0**	**+1.8**
KUR				eS	**Sn**	**12 49 26.9**	**+0.4**
KUR				A	A	12 49 33.0	
	16nm,0.2s						
KUR				A	A	12 49 33.0	
	48nm,0.2s						

IDC 01 12:56:58.5±0.9,17.38N×119.75E,h0km,mb3.5/6, mb1 3.6/7,mb1mx3.5/43,mbtmp3.5/7,ML3.9/1,Error ellipse: s-maj=45.1km s-min=18.9km az=64.0
ISC 01 12:57:03.1±1.0,17.3N±0.2×119.7E±0.2,h32km,n7, σ1.29/8,mb3.4/6,Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
CMAR	**Chiang Mai Arr**	**19.74**	**276**	P	**P**	**13 01 29.2**	**-1.2**
	0.2nm,0.3s,baz=95,slow=10,SNR=5.4						
SONM	**Songino Array**	**32.32**	**343**	P	**P**	**13 03 30.4**	**+1.1**
	0.3nm,0.6s,baz=156,slow=7.6,SNR=3.1						
WRA	**Warramunga Arr**	**39.74**	**158**	P	**P**	**13 04 33.7**	**+0.7**
	0.4nm,0.6s,baz=334,slow=9.3,SNR=3.2						
MKAR	**Makanchi Array**	**42.55**	**322**	P	**P**	**13 04 57.0**	**+1.1**
	0.8nm,0.9s,baz=113,slow=9.3,SNR=7.2						
MKAR				PcP	**PcP**	**13 06 48.2**	**+0.2**
	0.3nm,0.7s,baz=64,slow=2.3,SNR=3.1						
ASAR	**Alice Springs**	**43.05**	**161**	P	**P**	**13 05 00.5**	**+0.3**
	0.2nm,0.4s,baz=337,slow=7.0,SNR=6.3						
ZALV	**Zalesovo Beam**	**45.40**	**332**	P	**P**	**13 05 18.7**	**+0.1**
	0.9nm,0.7s,baz=119,slow=8.9,SNR=7.3						
YKA	**Yellowknife Ar**	**89.82**	**22**	P	**P**	**13 09 56.5**	**-1.9**
	0.3nm,0.7s,baz=316,slow=4.4,SNR=2.5						

TAP 01 13:01:58.0,22.99N×120.93E,h7km,ML1.2,C,Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
TWG	**Pinlang**	**0.21**	**142**	eP	Pg	13 02 03.3	+1.0
	baz=142						
TWG				eS	Sg	13 02 06.7	+1.6
	baz=142						
ELDTW	**Lidau**	**0.22**	**22**	i P	Pg	13 02 02.9	+0.5
	baz=23						
ELDTW				eS	Sg	13 02 05.8	+0.4
	baz=23						
TWGBT	**Beinan**	**0.22**	**141**	eP	Pg	13 02 03.2	+0.8
	baz=142						
TWGBT				S	Sg	13 02 06.6	+1.2
	baz=142						
STYT	**Tauyuan**	**0.24**	**318**	i P	Pg	13 02 03.3	+0.5
	baz=317						
STYT				i S	Sg	13 02 06.6	+0.7
	baz=317						
SLGT	**Liugui**	**0.26**	**271**	eP	Pg	13 02 03.5	+0.2
	baz=266						
SSD	**Sandimen**	**0.36**	**229**	eP	Pg	13 02 05.0	-0.2
	baz=228						
WTP	**Ta-pu**	**0.39**	**311**	i P	Pb	13 02 06.7	-0.6
	baz=312						
FULB	**Fuli**	**0.40**	**58**	eP	Pb	13 02 07.0	-0.4
	baz=59						
FULB				eS	Sb	13 02 13.8	+0.1
	baz=59						
TPUB	**Ta-pu**	**0.42**	**318**	eP	Pb	13 02 07.2	-0.6
	baz=317						
TPUB				eS	Sb	13 02 13.6	-0.8
	baz=317						
MASBT	**Mashibuluo**	**0.46**	**216**	eP	Pg	13 02 06.8	-0.2
	baz=216						
TWF1	**Yuli**	**0.49**	**43**	P	Pg	13 02 08.2	+0.6
	baz=53						
TWF1				S	Sg	13 02 14.8	+0.7
	baz=53						
YULB	**Yu-li**	**0.53**	**40**	eP	Pg	13 02 08.4	+0.2
	baz=49						
YULB				S	Sg	13 02 15.7	+0.5
	baz=49						
CHN5	**Tsauling**	**0.65**	**339**	eP	Pb	13 02 11.9	+0.1
	baz=348						
HGSD	**Ruisui**	**0.68**	**42**	eP	Pb	13 02 12.3	+0.1
	baz=35						
HGSD				eS	Sb	13 02 22.4	+0.6
	baz=35						

TAP 01 13:02:06.3,23.88N×121.02E,h15km±1km,ML1.4,A, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
SMLT	**Sun Moon Lake**	**0.11**	**270**	i P	Pg	13 02 09.4	-0.5
	baz=268						
SMLT				eS	Sb	13 02 12.5	-0.3
	baz=268						
SSLB	**Suanglung**	**0.11**	**212**	eP	Pg	13 02 09.0	-0.8
	baz=212						
SSLB				eS	Sg	13 02 11.5	-0.7
	baz=212						
OWD	**Renai**	**0.16**	**64**	eP	Pg	13 02 10.2	-0.4
	baz=63						
OWD				i S	Sg	13 02 13.2	-0.1
	baz=63						
VWDT	**VWDT**	**0.17**	**139**	eP	Pg	13 02 10.4	-0.1
	baz=139						
VWDT				S	Sg	13 02 13.8	+0.5
	baz=139						
DPDB	**Guoxing**	**0.17**	**330**	i P	Pg	13 02 10.3	-0.3
	baz=330						
DPDB				eS	Sg	13 02 13.8	+0.2
	baz=330						
CHGB	**Renai**	**0.23**	**39**	i P	Pg	13 02 11.2	-0.4

baz=38
CHGB S Sg 13 02 14.8 -0.3
baz=38
WJS Zhushan 0.27 257 eP Pg 13 02 12.2 0.0
baz=257
WJS eS Sb 13 02 17.2 -0.2
baz=257
WNT Mingjian 0.31 269 eP Pg 13 02 12.8 +0.1
baz=268
WHF Hehuan Shan 0.34 41 eP Pg 13 02 13.4 -0.2
baz=41
WHF iS Sg 13 02 18.6 -0.1
baz=41
ESL Shilin 0.39 100 eP Pg 13 02 13.2 -0.9
baz=100
ESL eS Sg 13 02 19.6 +0.1
baz=100
WHP Taichung City 0.40 350 eP Pg 13 02 14.6 +0.2
baz=350
WHP eS Sb 13 02 20.9 -0.2
baz=350
CHN5 Tsauling 0.42 228 eP Pg 13 02 14.8 -0.2
baz=227
CHN5 eS Sb 13 02 21.6 -0.2
baz=227
CHN5 Tsauling 0.42 228 eS Sb 13 02 21.6 -0.2
baz=348

NEIC 01 13:02:25.7±2.0, 27°.95S±0°.05×66°.61W±0°.10, h153km±7km, mb4.2/6, Error ellipse: s-maj=13.4km s-min=4.1km az=64.0
SJA 01 13:02:26.0±0.7, 28°.04S×66°.80W, h190km±6km, ML4.1, MW4.0
IDC 01 13:02:27.7±0.7, 27°.88S×66°.56W, h168km±5km, mb3.7/11, mb1 3.8/15, mb1mx3.7/31, mbtmp4.2/15, Error ellipse: s-maj=17.7km s-min=13.7km az=64.0
VAO 01 13:02:28.1±0.6, 27°.90S×66°.83W, h186km±5km, mb4.2
ISC 01 13:02:26.2±0.4, 27°.99S±0°.04×66°.76W±0°.05, h164km, n106, σ1s.77/126, mb4.0/10, Catamarca Province

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
ACLC CERRO LA CRUZ 1.45 187 iP **Pn** **13 02 58.5 +2.0**
AGUA GUANDACOL 2.14 225 iP **Pn** **13 03 05.3 +1.5**
AGUA eS **Sn** **13 03 33.9 +1.0**
AGUA IAML 13 03 36.7
comp=Z,405nm,0.6s
GO03 Copiap 3.11 276 **Pn** **13 03 16.3 +0.8**
GO03 Sn **Sn** **13 03 52.9 -0.9**
AMOG MOGNA 3.31 207 iP **Pn** **13 03 18.7 +0.7**
AMOG eS **Sn** **13 03 58.5 +0.1**
AMOG IAML 13 04 00.2
comp=Z,493nm,0.6s
RTLL Cerro Villicun 3.65 204 iP **Pn** **13 03 23.1 +0.7**
RTLL eS **Sn** **13 04 01.8 -4.4**
RTLL IAML 13 04 09.4
comp=Z,453nm,0.4s
GO02 Mina Guanaco 3.79 317 **Pn** **13 03 26.2 +1.8**
CFA Coronel Fontan 3.83 199 P **Pn** **13 03 25.1 +0.5**
CFA S **Sn** **13 04 09.2 -1.0**
TCA Tanti 3.83 151 iP **Pn** **13 03 25.9 +1.1**
TCA eS **Sn** **13 04 04.6 -5.8**
TCA IAML 13 04 11.0
comp=Z,376nm,0.7s
ZON Zonda 3.92 205 iP **Pn** **13 03 26.5 +0.6**
ZON eS **Sn** **13 04 08.1 -4.3**
ZON IAML 13 04 15.8
comp=Z,163nm,0.3s
GO04 Tololo Observa 4.16 237 **Pn** **13 03 29.2 +0.2**
RTCV Cerro Valdivia 4.16 201 iP **Pn** **13 03 29.4 +0.5**
RTCV eS **Sn** **13 04 18.3 +0.4**
RTCV IAML 13 04 20.4
comp=Z,216nm,0.7s
ACAN Cantantal 4.29 185 iP **Pn** **13 03 31.3 +0.7**
ACAN eS **Sn** **13 04 20.4 -0.5**
ACAN IAML 13 04 24.8
comp=Z,238nm,0.4s
RTLS Leoncito 4.39 210⇑iP **Pn** **13 03 32.6 +0.5**
RTLS eS **Sn** **13 04 16.2 -7.5**
RTLS IAML 13 04 27.9
comp=Z,174nm,0.3s
MRA San Martin 4.51 169⇑iP **Pn** **13 03 33.9 +0.5**
MRA eS **Sn** **13 04 17.8 -8.3**
MRA IAML 13 04 26.8
comp=Z,205nm,0.4s
ASTB Santa Barbara 4.52 28⇑iP **Pn** **13 03 35.7 +1.9**
PB14 IPOC Station P 4.68 315 iP **Pn** **13 03 37.2 +1.2**
PB14 eS **Sn** **13 04 27.8 -2.6**
PB14 IAML 13 04 31.8
comp=Z,50nm,0.9s
ASAL Salagasta 4.93 201 iP **Pn** **13 03 39.3 +0.4**
ASAL IAML 13 05 00.2
comp=Z,151nm,1.0s
ARCO CERRO ARCO 5.19 201 iP **Pn** **13 03 43.0 +0.6**
ARCO IAML 13 05 03.9
comp=Z,151nm,0.6s
PB15 IPOC Station P 5.35 332 iP **Pn** **13 03 46.1 +1.4**
PB15 eS **Sn** **13 04 45.8 -0.3**
AAGR Agrelo 5.39 199 iP **Pn** **13 03 45.5 +0.5**
AAGR IAML 13 04 50.9
comp=Z,127nm,0.3s
PB10 IPOC Station P 5.62 322 **Pn** **13 03 48.7 +0.7**
PB10 IPOC Station P 5.62 322 iP **Pn** **13 03 48.2 +0.2**
PB10 IAML 13 05 03.1
comp=Z,25nm,1.0s
LVC Limon Verde 5.70 340 P **Pn** **13 03 50.4 +1.1**
comp=Z,5.5nm,0.3s,baz=149,slow=11,SNR=17
LVC S **Sn** **13 04 51.7 -2.8**
comp=Z,11nm,0.3s,baz=188,slow=16,SNR=46
LVC Limon Verde 5.70 340 eP **Pn** **13 03 50.6 +1.2**
LVC Limon Verde 5.70 340 **Pn** **13 03 50.8 +1.4**
YJA Yavi 5.89 11⇑iP **Pn** **13 03 54.6 +2.6**
YJA IAML 13 05 38.9
comp=Z,8.9nm,2.0s
PB05 IPOC Station P 5.99 328 iP **Pn** **13 03 53.3 +0.3**
PB05 eS **Sn** **13 04 59.2 -1.8**
PB05 IAML 13 05 08.1
comp=Z,31nm,1.4s
PEL Peldehue 6.16 212 **Pn** **13 03 54.5 -0.6**
PEL Peldehue 6.16 212 iP **Pn** **13 03 54.7 -0.4**
ROC1 El Roble 6.18 215 **Pn** **13 03 54.3 -1.3**
ROC1 El Roble 6.18 215 iP **Pn** **13 03 54.2 -1.5**
ROC1 eS **Sn** **13 05 04.8 -1.0**
PB04 IPOC Station P 6.41 331 **Pn** **13 03 58.4 -0.3**
PB04 IPOC Station P 6.41 331 iP **Pn** **13 03 58.4 -0.3**
PB04 eS **Sn** **13 05 10.8 -0.5**
PB09 IPOC Station P 6.56 339 iP **Pn** **13 04 01.7 +1.1**
PB09 eS **Sn** **13 05 12.9 -1.9**
PB09 IAML 13 05 23.8
comp=Z,26nm,0.4s
PB01 IPOC Station P 7.34 340 **Pn** **13 04 10.9 -0.1**
COIS El Sosneado 7.50 198 iP **Pn** **13 04 11.0 -1.9**
PUMA Malargue 7.83 196 iP **Pn** **13 04 17.0 -0.2**
PUMA eS Sn 13 05 21.7 -23
EDS3 Malargue 8.08 195 iP **Pn** **13 04 20.6 0.0**
GO05 Huala 8.28 211 **Pn** **13 04 19.6 -3.5**
CPUP Villa Florida 8.56 81 P **Pn** **13 04 26.4 -0.5**
comp=Z,0.2nm,0.3s,baz=259,slow=12,SNR=5.8
GO01 Chusmiza 8.57 344 **Pn** **13 04 26.7 -1.0**
PB11 IPOC Station P 8.61 341 Pn **Pn** **13 04 26.2 -1.5**
ITQB Itaqui 9.04 103 eP **Pn** **13 04 35.9 +2.6**
MNMC Minye Minye 9.19 343 **Pn** **13 04 36.0 +0.3**
MNMC **Sn** **13 06 14.0 -4.0**
LPAZ La Paz 11.71 353 P **Pn** **13 05 08.4 -0.5**
comp=Z,1.0nm,0.3s,baz=147,slow=6.5,SNR=13
LPAZ S **Sn** **13 07 13.1 -6.0**
comp=Z,0.1nm,0.3s,baz=292,slow=16,SNR=3.3
LPAZ La Paz 11.71 353 eP **Pn** **13 05 08.2 -0.8**
CPSB Capacava Do Su 11.88 105 eP **P** **13 05 13.8 -3.0**
AQDB Aquidauana 12.55 56 eP **Pn** **13 05 19.5 +0.4**
SIV San Ignacio 13.04 25 P **Pn** **13 05 24.8 -0.7**
comp=Z,0.7nm,0.3s,baz=223,slow=13,SNR=34
PLCA Paso Flores 13.10 193 eP **Pn** **13 05 26.8 +0.8**
PTGB Pitanga 13.57 79 eP **P** **13 05 37.4 +1.8**
TRCB Terra Rica 13.77 71 eP **P** **13 05 38.6 +0.7**
CNLB Canela 14.03 99 eP **P** **13 05 40.2 -0.5**
PP1B Ponte de Pedra 15.05 49 eP **Pn** **13 05 50.8 +0.1**
PCMB Pacaembu 15.43 69 eP **Pn** **13 05 55.6 +0.3**
C2SB Chapadao do Su 15.72 57 eP **Pn** **13 05 58.7 -0.2**
SALV Santo Antonio 15.79 43 eP **Pn** **13 05 59.9 +0.1**
FRTB Fartura 16.17 77 eP **P** **13 06 05.0 +0.6**
ITRB Iturama 17.10 65 eP **Pn** **13 06 15.6 -0.1**
SPB Sao Paulo 17.94 80 eP **Pn** **13 06 24.9 -0.6**
BB19B Bebedouro 17.95 71 eP **P** **13 06 24.2 +0.2**
RCLB Rio Claro- Sao 18.25 77 eP **P** **13 06 27.9 +0.5**
ARAG Araguaiana, MT 18.46 52 eP **P** **13 06 30.3 +0.7**
VAO Valinhos 18.54 79 eP **P** **13 06 31.1 +0.7**
SAML Samuel 19.23 11 eP **P** **13 06 37.6 -0.3**
SAML Samuel 19.23 11 P **P** **13 06 38.2 +0.3**
SAML IAmb IAmb 13 06 40.0
comp=Z,13nm,0.8s
PARB Paraibuna 19.60 81 eP **P** **13 06 41.7 -0.2**
IPMB Ipameri, GO 19.74 64 eP **P** **13 06 43.8 +0.4**
CLDB Colider 19.89 33 eP **P** **13 06 43.9 -1.1**
ESAR Angra dos Reis 20.73 81 eP **P** **13 06 54.7 +0.8**
BSCB Bom Sucesso 21.16 76 eP **P** **13 06 58.7 0.0**
BDFB Brasilia 21.26 59 P **P** **13 06 59.0 -0.9**
comp=Z,4.7nm,0.5s,baz=233,slow=9.6,SNR=6.0
BDFB Brasilia 21.26 59 P **P** **13 06 59.1 -0.7**
BDFB IAmb IAmb 13 07 07.7
comp=Z,9.0nm,0.9s
VAS01 Vassouras-RJ 21.84 80 eP **P** **13 07 05.9 +0.1**
PEXB Peixe 23.40 51 eP **P** **13 07 20.4 0.0**
JANB Januaria 24.47 63 eP **P** **13 07 29.6 -0.7**
SJMB Sao Joao De Ma 25.19 74 eP **P** **13 07 36.8 +0.2**
BSFB Barra de Sao F 25.42 75 eP **P** **13 07 38.5 -0.2**
SMTB Santa Maria do 26.24 47 eP **P** **13 07 46.4 +0.2**
NBIT Itapeh - BA 28.47 69 eP **P** **13 08 06.5 +0.5**
NBPN Ponto Novo - B 30.19 61 eP **P** **13 08 20.1 -1.1**
NBLA Lagarto - SE 31.99 64 eP **P** **13 08 37.5 +0.5**
NBTA Tacaratu-PE 32.90 61 eP **P** **13 08 44.4 -0.6**
NBMA Muriti-CE 33.49 58 eP **P** **13 08 50.4 +0.2**
NBPS Pedro II - PI 33.62 50 eP **P** **13 08 51.0 -0.4**
NBLI Livramento-PB 34.86 60 eP **P** **13 09 02.2 +0.2**
MDP Montagnes des 35.60 25 P **P** **13 09 07.3 -0.9**
comp=Z,8.1nm,0.8s,baz=202,slow=10,SNR=5.8
NBPA Parau_RN 35.78 57 eP **P** **13 09 09.2 -0.5**
RCBR Riachuelo 36.64 59 eP **P** **13 09 17.4 +0.3**
SNAA Sanae 55.54 160 P **P** **13 11 45.4 +1.4**
comp=Z,0.6nm,0.5s,baz=278,slow=9.7,SNR=8.4
SNAA pP **pP** **13 12 23.6 +1.4**
comp=Z,2.4nm,0.9s,baz=278,slow=9.8,SNR=5.4
SNAA Sanae 55.54 160 IAmb IAmb 13 11 49.8
comp=Z,2.6nm,1.3s
TXAR Lajitas Array 67.05 325 P **P** **13 13 03.2 +1.3**
comp=Z,0.5nm,0.6s,baz=150,slow=9.0,SNR=8.8
DBIC Dimbokro 68.91 70 P **P** 13 13 13.0 -0.6
comp=Z,2.5nm,0.7s,baz=215,slow=6.1,SNR=2.8
TORD Torodi Ar. Bea 77.82 68 P **P** **13 14 05.8 +0.1**
comp=Z,2.2nm,0.6s,baz=270,slow=6.3,SNR=12
TORD pP **pP** **13 14 46.7 +0.3**
comp=Z,0.6nm,0.7s,baz=255,slow=5.2,SNR=1.9
BOSA Boshof 78.75 116 P **P** **13 14 11.6 +0.6**
comp=Z,13nm,1.3s,baz=268,slow=4.2,SNR=5.3
BOSA Boshof 78.75 116 IAmb IAmb 13 14 30.0
comp=Z,6.7nm,1.2s
PDAR Pinedale Array 80.68 330 P **P** **13 14 21.6 +0.6**
comp=Z,0.7nm,0.6s,baz=121,slow=7.2,SNR=8.2
NVAR Mina Array Bea 81.78 322 P **P** **13 14 29.2 +2.3**
comp=Z,0.3nm,0.6s,baz=133,slow=6.3,SNR=3.0
ULM Lac du Bonnet 82.06 342 P **P** **13 14 28.6 +0.8**
comp=Z,0.9nm,0.5s,baz=143,slow=3.6,SNR=3.4
ULM Lac du Bonnet 82.06 342 IAmb IAmb 13 14 44.2
comp=Z,6.4nm,1.4s
YKA Yellowknife Ar 97.92 340 P Pdif 13 15 43.6 +0.9
comp=Z,0.2nm,0.6s,baz=136,slow=4.5,SNR=6.6
ASAR Alice Springs 124.92 203 PKP **PKiKP** **13 21 07.7 0.0**
comp=Z,0.7nm,0.4s,baz=137,slow=1.7,SNR=18
ASAR pPKP **pPKPdf** **13 21 52.5 +1.7**
comp=Z,0.2nm,0.6s,baz=131,slow=1.8,SNR=1.3
WRA Warramunga Arr 128.17 206 PKP **PKiKP** **13 21 14.4 +0.2**
comp=Z,0.6nm,0.3s,baz=153,slow=2.0,SNR=9.9
ZALV Zalesovo Beam 146.75 31 PKPbc **PKPbc** **13 21 48.2 -0.1**
comp=Z,1.7nm,0.5s,baz=316,slow=2.8,SNR=8.1
ZALV pPKPbc pPKPab 13 22 31.9 -0.4
comp=Z,2.1nm,0.6s,baz=292,slow=4.8,SNR=5.0
MKAR Makanchi Array 149.34 44 PKPbc **PKiKP** **13 21 56.8 +0.2**
comp=Z,1.2nm,0.7s,baz=295,slow=2.7,SNR=9.8
MKAR pPKPbc **pPKPbc** **13 22 39.0 +0.3**
comp=Z,0.9nm,0.6s,baz=309,slow=2.8,SNR=4.1
MJAR Matsushiro Arr 157.28 298 PKPab **PKPab** **13 22 35.9 +1.3**
comp=Z,0.5nm,0.6s,baz=72,slow=4.9,SNR=5.1

LDG 01 13:03:20.5±0.1, 47°.68N×2°.81W, h3km, Ml1.8/4, Error ellipse: s-maj=3.0km s-min=1.6km az=26.0, France

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
QUIF Quistinic 0.34 315 ePg Pg 13 03 27.0 -0.1
QUIF eSg Sg 13 03 31.0 -0.5
6.8nm,0.1s
SGMF Saint Gilles 0.60 16 ePg Pg 13 03 32.2 +0.1
SGMF eSn Sb 13 03 43.6 +0.9
4.4nm,0.2s
ROSF Rostrenen 0.73 335 ePg Pg 13 03 34.3 -0.2
ROSF Rostrenen 0.73 335 ePn Pb 13 03 36.4 +0.5
ROSF eSg Sg 13 03 43.5 -0.5
3.0nm,0.2s
ROSF Rostrenen 0.73 335 ePg Sg 13 03 43.2 -0.8
GRR Gorron 1.49 61 ePg Pn 13 03 48.5 +0.3
GRR eSg Sn 13 04 07.5 -0.7
2.0nm,0.2s
FLN La Foliniere 1.90 54 ePg Pb 13 03 55.9 +0.1
FLN eSg Sb 13 04 20.2 +0.3
0.4nm,0.1s
LDF La Druitiere 2.02 62 eSg Sb 13 04 23.2 -0.2
1.1nm,0.2s
MFF Saint Martin d 2.11 120 ePg Pb 13 03 59.7 +0.3
MFF eSg Sb 13 04 26.6 +0.6
0.3nm,0.2s

LDG 01 13:03:29.2±0.2, 47°.66N×2°.82W, h3km, Md1.6/3, Ml2.2/4, Error ellipse: s-maj=3.6km s-min=1.9km az=27.0, France

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
QUIF Quistinic 0.34 318 ePg Pg 13 03 35.8 0.0
QUIF eSg Sg 13 03 39.9 -0.4
SGMF Saint Gilles 0.62 17 ePg Pg 13 03 41.0 -0.1
SGMF eSg Sg 13 03 49.0 -0.2
SGMF eSn Sb 13 03 52.4 +0.6
12nm,0.2s
ROSF Rostrenen 0.74 336 ePn Pb 13 03 45.2 +0.4
ROSF eSg Sg 13 03 52.3 -0.7
6.0nm,0.1s
GRR Gorron 1.51 60 ePg Pn 13 03 57.4 +0.3
GRR eSg Sn 13 04 16.4 -0.9
4.3nm,0.2s
FLN La Foliniere 1.92 54 ePg Pb 13 04 04.8 0.0
FLN eSg Sb 13 04 29.0 -0.1
2.4nm,0.2s
LDF La Druitiere 2.04 62 ePg Pb 13 04 07.1 +0.3
LDF eSg Sb 13 04 32.0 -0.6
1.8nm,0.2s
MFF Saint Martin d 2.11 119 ePg Pb 13 04 08.4 +0.3
MFF eSg Sb 13 04 35.4 +0.7
2.4nm,0.2s

ATH 01 13:12:35.6, 38°.16N×20°.35E, h10km±2km, ML2.7/5, Error ellipse: s-maj=2.2km s-min=1.1km az=256.0
THE 01 13:12:36.1, 38°.17N×20°.33E, h3km±3km, ML2.9/7, Error ellipse: s-maj=3.4km s-min=0.8km az=81.0
ISC 01 13:12:36.3±1.4, 38°.16N±0°.03×20°.37E±0°.05, h6km±5km, n28, σ0s.51/50, Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
CHV1 Chavriata, Kef 0.02 27 P **Pg** **13 12 37.2 -0.2**
CHV1 S **Sg** **13 12 37.9 -0.3**
KEF3 Kipouria, Keph 0.04 337 P **Pg** **13 12 37.6 0.0**
KEF3 S **Sg** **13 12 38.4 -0.2**
KEF2 Argostoli. Kep 0.09 89 P **Pg** **13 12 38.5 +0.2**
KEF2 S **Sg** **13 12 39.8 +0.1**
ARG2 Argostoli 0.09 81 P **Pg** **13 12 38.4 +0.1**
ARG2 S **Sg** **13 12 40.1 +0.3**
47μm,0.2s
KEF4 Livadi, Kephal 0.10 25 P **Pg** **13 12 38.6 +0.1**
KEF4 S **Sg** **13 12 40.1 0.0**
KEF1 Kardakata, Kep 0.14 35 P **Pg** **13 12 39.1 -0.1**
KEF1 S **Sg** **13 12 40.8 -0.2**
VLS Valsamata 0.17 86 P **Pg** **13 12 39.6 -0.2**
VLS S **Sg** **13 12 42.4 +0.3**
9μm,0.3s
VLS Valsamata 0.17 86 P **Pg** **13 12 39.6 -0.2**
VLS S **Sg** **13 12 42.0 -0.2**
VLS AML AML 13 12 42.6
comp=N,15211μm,0.2s
VLS AML AML 13 12 42.7
comp=E,11748μm,0.1s
VSK1 VASILIKIADES 0.29 32 P **Pg** **13 12 41.9 0.0**
VSK1 S **Sg** **13 12 46.5 +0.7**
comp=E,4μm,0.2s
FSK Fiskardo 0.33 27 P **Pg** **13 12 42.6 -0.1**
FSK S **Sg** **13 12 48.1 +1.0**
comp=E,2μm,0.2s
FSK Fiskardo 0.33 27 P **Pg** **13 12 42.5 -0.3**
FSK S **Sg** **13 12 47.3 +0.2**
FSK AML AML 13 12 49.4
comp=N,3221μm,0.4s
FSK AML AML 13 12 50.6
comp=E,5469μm,0.2s
KFL Anninata 0.34 99 P **Pg** **13 12 42.7 -0.1**
KFL S **Sg** **13 12 47.8 +0.6**
VLMS Volimes, Zakyn 0.37 141 P **Pg** **13 12 43.2 -0.3**
VLMS S **Sg** **13 12 49.0 +0.7**
EVGI Lefkada island 0.51 26 P **Pg** **13 12 45.8 -0.3**
EVGI S **Sg** **13 12 53.6 +0.9**
EVGI Lefkada island 0.51 26 P **Pg** **13 12 45.9 -0.3**
EVGI S **Sg** **13 12 52.7 0.0**
MGNA Meganis 0.59 34 P **Pg** **13 12 47.0 -0.7**
MGNA S **Sg** **13 12 55.8 +0.4**
MGNA AML AML 13 12 56.6
comp=N,2566μm,0.5s
MGNA AML AML 13 12 56.9
comp=E,3047μm,0.4s
KRI1 kERI 0.61 145 P **Pg** **13 12 47.7 -0.4**
KRI1 S **Sb** **13 12 58.6 +0.3**
comp=E,2μm,0.4s
LKD2 Lefkada island 0.66 20 P **Pg** **13 12 48.2 -0.8**
LKD2 S **Sg** **13 12 58.1 +0.4**
LKD2 AML AML 13 13 00.7
comp=N,854μm,0.3s
LKD2 AML AML 13 13 04.7
comp=E,760μm,0.3s
AST1 Astakos 0.68 56 P **Pg** **13 12 48.9 -0.4**
TSLK Tsoukalades, L 0.70 19 P **Pg** **13 12 49.1 -0.6**
TSLK S **Sg** **13 12 59.3 +0.6**
comp=E,588nm,0.4s
TSLK Tsoukalades, L 0.70 19 P **Pg** **13 12 48.8 -0.9**
TSLK S **Sg** **13 12 59.3 +0.6**
TSLK AML AML 13 13 04.9
comp=E,1081μm,0.4s
TSLK AML AML 13 13 10.0
comp=N,1232μm,0.5s
PDO Prodromos 0.77 56 P **Pg** **13 12 50.6 -0.5**
PDO Prodromos 0.77 56 P **Pg** **13 12 50.0 -1.1**
RLS Riolos of Patr 0.87 97 P **Pg** **13 12 52.2 -0.8**
RLS S **Sb** **13 13 05.4 -0.3**
PVO Paravola 1.01 63 P **Pg** **13 12 55.4 -0.3**
PVO S **Sn** **13 13 12.1 +0.5**
comp=N,592nm,0.8s
PVO Paravola 1.01 63 P **Pg** **13 12 55.1 -0.6**
DRO Drossia 1.08 101 P **Pg** **13 12 56.5 -0.5**
DRO Drossia 1.08 101 P **Pg** **13 12 55.9 -1.1**

ROM 01 13:17:55.1±0.2, 41°.968N±0°.010×15°.329E±0°.007, h4km±1km, ML2.5/2, Error ellipse: s-maj=0.9km s-min=0.7km az=172.0
ISC 01 13:17:54.5±1.8, 41°.98N±0°.03×15°.33E±0°.03, h6km±18km, n18, σ0s.62/25, Southern Italy

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
MELA Melanico ??? S 0.31 209 P **Pb** **13 18 02.1 -0.4**
MELA S **Sb** **13 18 06.9 -1.0**
MELA AML AML
comp=N,1375μm,0.4s
MELA AML AML
comp=E,2345μm,0.2s
MELA AML AML
comp=N,1375μm,0.4s
MELA AML AML
comp=N,1330μm,0.4s
MELA AML AML
comp=E,2255μm,0.2s
MELA AML AML
comp=E,2255μm,0.2s
SGRT San Giovanni R 0.38 126 P **Pb** **13 18 03.5 -0.3**
SGRT S **Sb** **13 18 09.4 -0.5**
CIGN Sant'Elia a Pi 0.46 225 P **Pb** **13 18 04.8 -0.1**
CIGN S **Sb** **13 18 11.8 -0.2**
FRES Fresagrandinar 0.49 269 P **Pb** **13 18 05.7 0.0**
FRES S **Sb** **13 18 13.9 +0.7**
MSAG Monte S. Angel 0.51 122 P **Pb** **13 18 06.1 +0.2**
MSAG S **Sb** **13 18 14.4 +0.8**
GATE Gambatesa 0.56 214 P **Pb** **13 18 07.2 +0.4**
MOCO Biccari - m.te 0.62 192 P **Pb** **13 18 07.6 -0.3**
TRIV Trivento 0.62 250 P **Pb** **13 18 08.1 +0.2**
BSSO Busso 0.70 232 P **Pb** **13 18 09.1 -0.1**
CAFR Castel Frentan 0.78 289 P **Pb** **13 18 10.8 +0.3**
PSB1 Pescosannita 0.85 208 P **Pb** **13 18 11.1 +0.3**
PSB1 S **Sb** **13 18 24.1 +0.6**
T1011 San Potito San 0.93 228 P **Pb** **13 18 13.6 +0.5**
VAGA Valle Agricola 1.00 236 P **Pn** **13 18 15.0 -0.1**
INTR Introdacqua 1.07 272 P **Pg** **13 18 14.6 -0.3**
INTR AML AML
comp=E,154μm,1.5s
INTR AML AML
comp=N,195μm,1.4s
MORI Morici 1.91 8 ePn **Pb** **13 18 29.3 -0.4**
MORI Sn **Sb** **13 18 54.3 +0.6**
KIJV Kijevo 2.17 21 iPn **Pb** **13 18 34.3 0.0**
KIJV Sn **Sb** **13 19 02.5 +1.1**
NVLJ Novalja 2.60 353 Sn **Sb** **13 19 12.3 -1.5**
RESU Resuttano 4.44 193 AML AML
comp=E,638μm,0.4s
RESU AML AML
comp=N,414μm,1.1s

IDC 01 13:54:00.8±5.0, 16°.52S×175°.96W, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.7/35, mbtmp4.3/3, 2C, Error ellipse: s-maj=166.1km s-min=99.0km az=154.0, Tonga Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
STKA Stephens Creek 41.34 240 P P 14 01 49.3 +0.7
2.8nm,0.8s,baz=83,slow=8.7,SNR=7.2
WRA Warramunga Arr 47.20 258 P P 14 02 34.8 -0.9
0.8nm,0.5s,baz=97,slow=6.9,SNR=12
ASAR Alice Springs 47.42 253 P P 14 02 37.2 -0.2
11nm,0.6s,baz=89,slow=7.9,SNR=336
ASAR PcP PcP 14 04 08.0 -0.1
0.2nm,0.4s,baz=101,slow=3.9,SNR=4.7
SYO Syowa Base 91.00 192⇑eP P 14 07 14.0 +7.5
SYO Syowa Base 91.00 192⇑eP P 14 07 17.0 +10

IDC 01 14:20:43.2±1.3, 4°.85S×153°.79E, h100km±10km, mb3.8/14, mb1 4.0/17, mb1mx3.9/32, mbtmp4.2/17, MS3.0/7, Ms1 3.0/7, ms1mx2.9/26, Error ellipse: s-maj=14.0km s-min=11.0km az=59.0
NEIC 01 14:20:43.1±2.0, 4°.84S±0°.10×153°.8E±0°.1, h102km±6km, mb4.4/18, Error ellipse: s-maj=15.9km s-min=12.1km az=50.0
ISC 01 14:20:43.7±0.5, 4°.86S±0°.07×153°.78E±0°.07, h105km, n53, σ0s.79/55, mb4.2/21, New Ireland region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
RABL Rabaul 1.74 292 Pn **Pn** **14 21 13.3 +0.1**
KRVT Keravat (AS076 1.83 287 P **Pn** **14 21 13.9 -0.4**
60nm,0.3s,baz=140,slow=1.4,SNR=96
KRVT S **Sn** **14 21 37.1 -0.5**
158nm,0.3s,baz=237,slow=15,SNR=20
KRVT LR LR 14 22 08.9
comp=Z,503nm,18.2s,baz=102,slow=47
HNR Honiara 7.63 127 P **Pn** **14 22 31.5 -0.7**
6.0nm,0.3s,baz=225,slow=10.0,SNR=2.5
HNR S **Sn** **14 23 57.4 +0.4**
7.7nm,0.3s,baz=128,slow=22,SNR=3.8
HNR LR LR 14 25 46.7
comp=Z,87nm,18.4s,baz=275,slow=40
PMG Port Moresby 7.97 235 P **Pn** **14 22 38.3 +1.4**
20nm,0.3s,baz=58,slow=7.5,SNR=59
PMG S **Sn** **14 24 05.3 -0.1**

5.3nm,0.3s,baz=68,slow=15,SNR=6.7
PMG LR LR 14 25 55.7
comp=Z,79nm,19.9s,baz=90,slow=39
JAY Jayapura 13.25 280 LR LR 14 27 36.2
comp=Z,38nm,22.0s,baz=357,slow=31
CTA Charters Tower 16.82 205 P Pn 14 24 32.7 -0.3
0.1nm,0.3s,baz=39,slow=6.5,SNR=2.6
WB0 Warramunga Arr 24.00 230 P P 14 25 49.8 +0.9
WB0 IAmb IAmb 14 25 51.3
comp=Z,37nm,1.5s
WRAB Tennant Creek 24.13 230 P P 14 25 50.5 +0.4
WRAB IAmb IAmb 14 25 52.4
comp=Z,8.8nm,0.8s
WB2 Warramunga Arr 24.14 230 P P 14 25 51.0 +0.9
WRA Warramunga Arr 24.14 230 P P 14 25 50.3 +0.1
comp=Z,9.9nm,0.9s,baz=56,slow=10.0,SNR=18
WRA LR LR 14 35 58.6
comp=Z,42nm,19.4s,baz=50,slow=38
ARMA Armidale 25.51 184 P 14 26 02.3 -0.2
ARMA IAmb IAmb 14 26 04.2
comp=Z,11nm,1.1s
AS31 Alice Springs 26.77 224 P P 14 26 12.9 -1.1
ASAR Alice Springs 26.77 224 P P 14 26 13.8 -0.2
comp=Z,1.9nm,0.6s,baz=54,slow=8.9,SNR=38
ASAR ScP ScP 14 33 06.3 +0.9
comp=Z,0.2nm,0.8s,baz=47,slow=4.1,SNR=3.0
ASAR LR LR 14 36 47.4
comp=Z,61nm,18.4s,baz=303,slow=36
ASAR Alice Springs 26.77 224 P P 14 26 12.9 -1.1
KNRA Kununurra 26.82 245 P P 14 26 15.0 +0.6
STKA Stephens Creek 29.21 202 P P 14 26 35.2 -0.3
comp=Z,3.1nm,0.6s,baz=40,slow=14,SNR=11
STKA LR LR 14 37 59.3
comp=Z,38nm,21.0s,baz=22,slow=36
STKA Stephens Creek 29.21 202 P P 14 26 35.1 -0.4
FITZ Fitzroy Crossi 30.49 242 P P 14 26 46.5 -0.5
FITZ IAmb IAmb 14 26 47.3
comp=Z,14nm,1.1s
CAN Canberra 30.64 188 P P 14 26 47.3 -0.8
CAN IAmb IAmb 14 26 54.8
comp=Z,12nm,1.4s
BBOO Buckleboo 32.36 209 P P 14 27 02.1 -1.2
TOO Toolangi 33.43 192 P P 14 27 11.4 -1.2
TOO IAmb IAmb 14 27 25.3
comp=Z,12nm,1.4s
FORT Forrest 35.37 220 P P 14 27 29.3 0.0
MORW Morawa 43.07 232 P P 14 28 33.0 -0.5
MJAR Matsushiro Arr 43.68 342 P P 14 28 37.2 -1.0
comp=Z,1.2nm,0.8s,baz=157,slow=7.8,SNR=3.5
KSRS Korea Array 48.49 332 P P 14 29 14.4 -1.5
comp=Z,1.0nm,0.9s,baz=166,slow=7.0,SNR=3.6
KSRS LR LR 14 48 16.0
comp=Z,22nm,18.3s,baz=70,slow=34
PETK Petropavlovsk- 57.84 3 P P 14 30 24.4 +0.2
comp=Z,5.4nm,1.0s,baz=148,slow=7.1,SNR=5.8
CMAR Chiang Mai Arr 58.78 295 P P 14 30 32.1 +0.7
comp=Z,1.3nm,0.8s,baz=116,slow=5.1,SNR=8.3
SONM Songino Array 66.89 327 P P 14 31 25.4 +0.6
comp=Z,1.0nm,0.6s,baz=143,slow=6.1,SNR=11
SONM Songino Array 66.89 327 P P 14 31 25.9 +1.1
TAPN Taplejung 71.27 301 eP P 14 31 53.5 +1.0
comp=Z,23nm,1.0s
ODAN Odare 71.41 300 eP P 14 31 54.3 +1.0
comp=Z,28nm,0.8s
RAMN Ramite 72.11 300 eP P 14 31 58.3 +0.8
JIRN Jiri 72.65 301 eP P 14 32 01.9 +1.0
comp=Z,22nm,0.9s
GUN Gumba 72.98 301 eP P 14 32 03.7 +0.9
comp=Z,31nm,0.8s
PKI Pulchoki 73.30 301 eP P 14 32 05.3 +0.7
KKN Kakani 73.46 301 eP P 14 32 06.2 +0.7
DMN Daman 73.57 300 eP P 14 32 07.1 +1.0
comp=Z,27nm,0.9s
KOLN Koldanda 74.90 300 eP P 14 32 14.3 +0.5
comp=Z,22nm,0.9s
DANN Dangsing 74.90 301 eP P 14 32 14.5 +0.6
comp=Z,12nm,0.8s
IMAR Indian Mountai 80.11 19 P P 14 32 42.0 +0.2
MKAR Makanchi Array 81.01 319 P P 14 32 47.6 +0.6
comp=Z,1.7nm,0.8s,baz=104,slow=6.0,SNR=13
MKAR Makanchi Array 81.01 319 P P 14 32 47.4 +0.4
MAKZ Makanchi 81.22 319 P P 14 32 48.1 0.0
ZALV Zalesovo Beam 81.74 326 P P 14 32 50.4 -0.2
comp=Z,0.7nm,0.4s,baz=113,slow=4.9,SNR=5.2
ZALV Zalesovo Beam 81.74 326 P P 14 32 49.8 -0.9
ILAR Eielson Array 81.85 22 P P 14 32 50.0 -1.0
comp=Z,1.0nm,0.8s,baz=247,slow=4.2,SNR=10
ILAR Eielson Array 81.85 22 P P 14 32 49.7 -1.2
KURK Kurchatov 84.41 322 P P 14 33 04.4 0.0
KURK IAmb IAmb 14 33 05.5
comp=Z,3.4nm,1.1s
MAW Mawson 85.89 203 P P 14 33 11.3 -0.2
comp=Z,4.7nm,0.7s,baz=110,slow=8.5,SNR=7.9
MAW Mawson 85.89 203 IAmb IAmb 14 33 25.9
comp=Z,3.3nm,1.2s
NVAR Mina Array Bea 91.36 52 P P 14 33 40.1 +1.8
comp=Z,0.3nm,0.7s,baz=252,slow=4.4,SNR=2.6
YKA Yellowknife Ar 95.02 28 P P 14 33 54.4 +0.1
comp=Z,0.3nm,0.9s,baz=268,slow=4.8,SNR=5.2
TORD Torodi Ar. Bea 151.25 289 PKPbc PKPbc 14 40 25.7 -0.3
comp=Z,1.1nm,0.4s,baz=98,slow=2.4,SNR=12

IDC 01 14:36:33.0±0.9, 38.48N×20.50E, h0km, mb3.8/10, mb1 3.8/20, mb1mx3.6/52, mbtmp3.7/20, ML3.5/10, MS3.1/3, Ms1 3.1/3, ms1mx2.8/36, Error ellipse: s-maj=17.3km s-min=14.5km az=179.0
THE 01 14:36:34.4, 38.42N×20.46E, h0km±1km, ML3.8/15, Error ellipse: s-maj=1.4km s-min=0.4km az=101.0
BEO 01 14:36:34.1±0.7, 38.32N×20.02E, h10km, ML3.8/7
ATH 01 14:36:34.5, 38.41N×20.51E, h13km±1km, ML3.6/19, Error ellipse: s-maj=1.3km s-min=0.5km az=265.0
ISC 01 14:36:34.3±0.6, 38.42N±0.02×20.47E±0.02, h13km±4km, n131, σ1.67/180, mb3.8/10, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VSK1 VASILIKIADES 0.08 99 P Pg 14 36 35.9 -1.1
VSK1 S Sg 14 36 37.1 -1.9
357μm,0.3s
FSK Fiskardo 0.09 63 P Pg 14 36 36.2 -0.9
KEF1 Kardakata, Kep 0.14 178 P Pg 14 36 37.5 -0.3
KEF1 S Sg 14 36 40.2 -0.1
KEF4 Livadi, Kephal 0.17 191 P Pg 14 36 38.1 -0.1
KEF4 S Sg 14 36 41.4 +0.5
KEF3 Kipouria, Keph 0.24 203 P Pg 14 36 39.5 +0.1
KEF3 S Sb 14 36 43.7 -0.9
ARG2 Argostoli 0.24 176 P Pg 14 36 39.1 -0.4
ARG2 S Sb 14 36 43.3 -1.5
94μm,0.2s
CHV1 Chavriata, Kef 0.25 196 P Pg 14 36 39.0 -0.5
CHV1 S Sb 14 36 43.8 -1.1
72μm,1.5s
EVGI Lefkada island 0.25 37 P Pg 14 36 39.5 -0.1
EVGI S Sg 14 36 43.8 +0.6
EVGI Lefkada island 0.25 37 P Pg 14 36 39.6 0.0
EVGI S Sg 14 36 43.8 +0.6
KEF2 Argostoli. Kep 0.26 176 P Pg 14 36 39.4 -0.3
KEF2 S Sb 14 36 43.6 -1.5
VLS Valsamata 0.26 158 P Pg 14 36 39.3 -0.5
VLS S Sg 14 36 43.4 -0.1
36μm,0.3s
VLS Valsamata 0.26 158 P Pg 14 36 39.4 -0.5
VLS S Sg 14 36 43.0 -0.6
VLS AML AML 14 36 44.1
comp=E,57154μm,0.2s
VLS AML AML 14 36 44.1
comp=N,85273μm,0.4s
MGNA Meganis 0.35 47 P Pg 14 36 41.1 -0.3
MGNA S Sg 14 36 46.2 +0.1
MGNA AML AML 14 36 46.8
comp=E,51282μm,0.4s
MGNA AML AML 14 36 47.0
comp=N,58442μm,0.6s
LKD2 Lefkada island 0.40 22 P Pg 14 36 42.1 -0.2
LKD2 S Sg 14 36 48.3 +0.7
comp=N,12μm,0.8s
LKD2 Lefkada island 0.40 22 P Pg 14 36 42.1 -0.2
LKD2 S Sg 14 36 48.1 +0.4
LKD2 AML AML 14 36 49.5
comp=N,20662μm,0.6s
LKD2 AML AML 14 36 51.8
comp=E,19293μm,0.6s
TSLK Tsoukalades, L 0.43 20 P Pg 14 36 42.8 -0.1
TSLK S Sg 14 36 49.1 +0.5
comp=E,17μm,0.9s
TSLK Tsoukalades, L 0.43 20 P Pg 14 36 43.1 +0.2
TSLK S Sg 14 36 49.6 +1.0
AST1 Astakos 0.50 76 P Pg 14 36 43.8 -0.4
AST1 S Sb 14 36 52.2 -0.1
comp=E,14μm,0.4s
VLMS Volimes, Zakyn 0.57 164 P Pg 14 36 44.9 -0.5
VLMS S Sb 14 36 53.3 -0.8
VLMS AML AML 14 36 59.1
comp=E,28258μm,0.3s
VLMS AML AML 14 37 03.1
comp=N,39634μm,0.6s
PDO Prodromos 0.59 72 P Pg 14 36 45.2 -0.7
PDO S Sb 14 36 54.1 -0.7
comp=N,10μm,0.7s
PDO Prodromos 0.59 72 P Pg 14 36 45.5 -0.3
PDO S Sg 14 36 53.3 -0.4
PDO AML AML 14 37 01.0
comp=E,12702μm,0.5s
PDO AML AML 14 37 05.8
comp=N,13596μm,0.8s
ZAK2 Zakynthos 0.72 151 P Pb 14 36 48.1 -0.6
ZAK2 S Sn 14 36 59.7 -1.4
comp=N,36μm,0.8s
KRI1 kERI 0.81 160 P Pb 14 36 48.6 -1.6
KRI1 S Sn 14 37 01.8 -1.5
comp=N,15μm,0.4s
PVO Paravola 0.85 76 P Pb 14 36 50.3 -0.7
PVO S Sn 14 37 04.4 -0.1
comp=N,5μm,0.9s
PVO Paravola 0.85 76 P Pg 14 36 50.6 -0.3
PVO S Sg 14 37 01.6 -0.4
PVO AML AML 14 37 09.7
comp=E,8910μm,0.8s
PVO AML AML 14 37 15.5
comp=N,9501μm,0.7s
RLS Riolos of Patr 0.87 114 P Pb 14 36 50.4 -0.9
RLS Riolos of Patr 0.87 114 P Pb 14 36 49.9 -1.4
RLS AML AML 14 37 10.6
comp=E,3911μm,1.0s
RLS AML AML 14 37 11.2
comp=N,6098μm,0.7s
DRO Drossia 1.09 115 P Pn 14 36 54.4 -0.9
DRO S Sn 14 37 08.8 -1.5
DRO AML AML 14 37 24.7
comp=N,11194μm,0.5s
DRO AML AML 14 37 26.1
comp=E,7934μm,0.6s
EFP Efpalio 1.13 89 P Pb 14 36 54.4 -1.4
EFP Efpalio 1.13 89 P Pb 14 36 54.3 -1.5
EFP S Sg 14 37 11.4 +0.5
EFP AML AML 14 37 21.0
comp=N,8258μm,0.7s
EFP AML AML 14 37 22.5
comp=E,6094μm,0.6s
ANX Ano Chora 1.16 81 P Pn 14 36 55.1 -1.2
ANX Ano Chora 1.16 81 P Pn 14 36 55.3 -1.0
ANX AML AML 14 37 24.8
comp=E,8076μm,0.6s
ANX AML AML 14 37 26.2
comp=N,7330μm,0.5s
EVR Evrytania 1.16 64 P Pn 14 36 55.5 -0.9
EVR S Sg 14 37 14.8 +2.9
comp=N,2μm,1.1s
EVR Evrytania 1.16 64 P Pn 14 36 55.5 -0.9
EVR AML AML 14 37 24.4
comp=N,4429μm,1.4s
EVR AML AML 14 37 26.0
comp=E,3023μm,0.9s
LAKA Lakka 1.20 98 P Pn 14 36 56.0 -0.9
LAKA S Sg 14 37 15.2 +2.0
comp=E,1μm,0.8s
LAKA Lakka 1.20 98 P Pn 14 36 55.6 -1.4
LAKA S Sg 14 37 13.8 +0.7
LAKA AML AML 14 37 24.0
comp=N,2721μm,0.7s
LAKA AML AML 14 37 27.6
comp=E,2974μm,0.8s
SERG Sergoula 1.25 90 P Pn 14 36 56.5 -1.1
SERG S Sg 14 37 15.8 +1.2
comp=E,3μm,0.8s
SERG Sergoula 1.25 90 P Pn 14 36 56.7 -0.9
SERG S Sg 14 37 15.3 +0.7
SERG AML AML 14 37 21.0
comp=N,5102μm,0.5s
SERG AML AML 14 37 21.8
comp=E,4444μm,0.6s
TRIZ Trizonia 1.26 92 P Pn 14 36 56.7 -1.0
TRIZ Trizonia 1.26 92 P Pn 14 36 56.8 -0.9
JAN Janina 1.27 14 P Pg 14 36 59.2 +0.5
KALE Kalithea 1.32 91 P Pn 14 36 57.6 -0.9
KALE AML AML 14 37 30.9
comp=N,3546μm,0.8s
KALE AML AML 14 37 31.7
comp=E,3387μm,0.7s
AMT Artemida-Makis 1.32 132 P Pg 14 36 59.5 -0.2
AMT Artemida-Makis 1.32 132 P Pg 14 36 59.6 -0.2
AMT AML AML 14 37 31.2
comp=E,7042μm,1.0s
AMT AML AML 14 37 42.1
comp=N,7557μm,0.8s
KLV Kalavryta, Ach 1.38 105 P Pn 14 36 58.7 -0.7
KLV Kalavryta, Ach 1.38 105 P Pn 14 36 58.7 -0.7
KLV AML AML 14 37 32.2
comp=N,2185μm,1.1s
KLV AML AML 14 37 34.2
comp=E,1955μm,0.8s
KASA Kassiopi 1.39 343 P Pg 14 37 01.3 +0.3
MAKR Makrakomi, Fth 1.43 65 P Pb 14 37 00.6 -0.3
AGG Agios Georgios 1.58 67 P Pb 14 37 03.0 -0.4
AGG AML AML 14 37 37.2
comp=E,3098μm,1.0s
AGG AML AML 14 37 42.3
comp=N,2713μm,0.9s
THL Klokotos Trika 1.66 46 P Pb 14 37 04.8 0.0
THL S Sg 14 37 30.0 +2.2
comp=N,2μm,0.8s
THL Klokotos Trika 1.66 46 P Pb 14 37 04.6 -0.1
KPRO Kipourio 1.68 24 P Pb 14 37 06.5 -0.2
ITM Ithomi 1.70 137 P Pb 14 37 04.8 -0.6
ITM AML AML 14 37 34.1
comp=E,2118μm,1.3s
ITM AML AML 14 37 39.6
comp=N,2218μm,0.6s
AXAR Agios Charalam 1.75 78 P Pg 14 37 07.1 -0.9
PYL PYLOS 1.83 146 P Pb 14 37 06.5 -1.1
VLX Vlachokerasia 1.84 124 P Pg 14 37 08.5 -1.2
VLX AML AML 14 37 46.8
comp=E,3493μm,0.8s
VLX AML AML 14 37 52.9
comp=N,3666μm,0.7s
PENT Pentalofos 1.85 16 P Pb 14 37 09.1 +1.0
PROD Prodromos 1.92 94 P Pb 14 37 09.3 +0.1
LKR Lokris 2.00 83 P Pb 14 37 10.4 -0.1
LTK Loutraki 2.01 101 P Pb 14 37 10.5 -0.3
LOUT Loutraki 2.02 102 P Pb 14 37 11.0 0.0
NEST Nestorio 2.04 13 P Pb 14 37 12.0 +0.7
KZN Kozani 2.14 28 P Pb 14 37 13.0 +0.1
VIL2 Platees 2.21 95 P Pb 14 37 12.9 -1.3
LIT Litokhoron 2.30 43 P Pn 14 37 13.5 +1.5
XOR Xorichti 2.33 65 P Pb 14 37 14.5 -1.7
NEO Neokhori 2.33 67 P Pb 14 37 14.1 -2.1
KRND KRANIDI 2.36 115 P Pb 14 37 15.2 -1.6
DID Didima 2.37 112 P Pb 14 37 14.5 -2.5
FNA Florina 2.46 16 ePn Pn 14 37 16.3 +2.0
FNA eSn Sb 14 37 50.8 +2.0
FNA Florina 2.46 16 P Pn 14 37 16.4 +2.1
MRKA Markates 2.46 82 P Pb 14 37 16.4 -2.1
VLI Veliai 2.60 130 P Pb 14 37 18.9 -1.9
VLY Voula,Athens 2.69 101 P Pb 14 37 19.3 -3.0
OHR Ohrid 2.70 5 ePn Pn 14 37 20.1 +2.6
PTL Penteli 2.70 97 P Pb 14 37 19.4 -3.2
TIR Tirane 2.96 351 ePn Pn 14 37 22.4 +1.4
VAY Valandovo 3.32 29 ePn Pb 14 37 29.5 -3.5
VAY eSn Sb 14 38 10.8 -2.5
VAY Valandovo 3.32 29 ePn Pb 14 37 30.7 -2.4
MASS Massafra 3.39 312 ePn Pn 14 37 28.6 +1.7
STIP Stip 3.53 21 ePn Pb 14 37 33.1 -3.5
SRS Serrai 3.61 41 ePn Pb 14 37 34.1 -4.0
SRS eSn Sb 14 38 19.2 -2.6
SG1 Sgolgore (BA) 3.79 311 ePn Pn 14 37 33.0 +0.5
BAI Bari 3.85 315 ePn Pn 14 37 34.4 +1.1
PDG Podgorica 4.11 347 ePn Pn 14 37 37.9 +1.1
PDG eSn Sn 14 38 24.4 -0.4
BOSS Bosilegrad 4.35 20 ePn Pn 14 37 44.0 +3.8
BARS Barje 4.51 13 ePn Pn 14 37 43.1 +1.1
TREB Trebinje 4.58 340 ePn Pn 14 37 43.2 -0.2
TREB eSn Sn 14 38 34.6 -1.9
VTS Vitosha 4.69 26 ePn Pn 14 37 48.2 +3.2
IDI Anoyia 4.73 130 Pn Pn 14 37 46.2 +0.7
comp=N,0.4nm,0.3s,baz=286,slow=15,SNR=4.6
IDI Sn Sn 14 38 45.2 +5.1
comp=N,2.9nm,0.3s,baz=266,slow=7.4,SNR=6.3
IDI LR LR 14 40 08.7
comp=N,109nm,18.1s,baz=344,slow=46
SELS Selova 4.82 6 ePn Pn 14 37 48.1 +1.5
SJES Sjenica 4.85 356 ePn Pn 14 37 49.0 +1.9
SJES eSn Sn 14 38 43.8 +0.6
VAE Valguarnera 4.88 261 Pn Pn 14 37 47.9 +0.5
comp=N,2.2nm,0.3s,baz=130,slow=6.5,SNR=3.3
VAE Sn Sb 14 38 53.0 -5.2
comp=N,2.6nm,0.3s,baz=191,slow=18,SNR=4.0
ZAPS Zavoj 5.12 18 ePn Pn 14 37 53.1 +2.4
IVAS Ivanjica 5.16 357 ePn Pn 14 37 51.8 +0.5
GRUS Gruza 5.47 2 ePn Pn 14 37 55.7 +0.2
BBLS Lazići 5.50 352 ePn Pn 14 37 56.6 +0.6
BBLS eSg Sg 14 39 29.9 -0.9
DIVS Divibare 5.68 357 eSn Sn 14 39 03.6 -0.1
TRUS Trudelj 5.80 360 ePn Pn 14 38 00.7 +0.7
TEKS Tekeris 6.16 354 ePn Pn 14 38 04.4 -0.7
MLR Muntele Rosu 8.16 28 Pn Pn 14 38 34.5 +2.0
comp=N,0.2nm,0.3s,baz=214,slow=15,SNR=2.2
SOKA Soboth 9.17 336 ePn Pn 14 38 44.9 -1.5
comp=N,4.2nm,0.6s
SOKA eSn Sn 14 40 23.1 -6.3
comp=N,4.2nm,0.7s
OBKA Obir 9.19 334 eSn Sn 14 40 25.7 -4.2
comp=N,10nm,0.7s
KEST Kesra 9.28 257 Pn Pn 14 38 49.8 +1.9
comp=N,0.3nm,0.3s,baz=8.1,slow=7.1,SNR=2.8
ARSA Arzberg 9.54 339 ePn Pn 14 38 51.1 -0.3
comp=N,1.4nm,0.5s
KBA Koelnbreinsper 10.11 331 ePn Pn 14 39 00.9 +1.6
comp=N,2.4nm,0.7s
KBA eSn Sn 14 40 49.9 -2.7
comp=N,3.7nm,0.8s
ABTA Abfaltersbach 10.17 327 eSn Sn 14 40 52.4 -1.7
comp=N,16nm,0.7s
BRTR Keskin Array B 10.33 79 Pn Pn 14 39 07.8 +5.5
comp=N,0.1nm,0.3s,baz=262,slow=11,SNR=5.0
MOA Molln 10.45 336 ePn Pn 14 39 04.0 +0.1
comp=N,2.3nm,0.4s
MOA eSn Sn 14 40 58.1 -2.7
comp=N,2.7nm,0.4s
WATA Walderalm 11.03 327 ePn Pn 14 39 12.4 +0.5
comp=N,5.0nm,0.7s
WATA eSn Sn 14 41 13.5 -1.7
comp=N,3.6nm,0.4s
SQTA Sankt Quirin 11.11 325 i Pn Pn 14 39 15.2 +2.3
comp=N,1.9nm,0.3s
SQTA i Sn Sn 14 41 13.7 -3.3
comp=N,2.6nm,0.5s
FETA Feichten 11.18 323 eSn Sn 14 41 20.2 +1.4
comp=N,1.9nm,0.6s
MOTA Moosalm 11.25 325 ePn Pn 14 39 15.4 +0.5
comp=N,2.3nm,0.4s
MOTA eSn Sn 14 41 19.3 -1.2
comp=N,10.0nm,0.8s
DAVOX Davos/Dischmat 11.42 320 Pn Pn 14 39 18.6 +1.3
comp=N,0.3nm,0.3s,baz=151,slow=23,SNR=3.0
DAVOX Sn Sn 14 41 22.0 -2.7
comp=N,0.2nm,0.3s,baz=140,slow=22,SNR=4.0
GERES GERESS Array B 11.51 337 Pn Pn 14 39 18.6 +0.2
comp=N,0.2nm,0.3s,baz=155,slow=14,SNR=3.4
GERES Sn Sn 14 41 23.2 -3.6
comp=N,0.2nm,0.3s,baz=155,slow=24,SNR=3.0
KHC Kasperske Hory 11.80 337 ePN Pn 14 39 19.4 -2.9
MMAI Mount Meron Ar 13.28 109 Pn Pn 14 39 42.7 +0.1
comp=N,0.6nm,0.3s,baz=294,slow=14,SNR=2.6
MMAI Sn Sn 14 42 15.5 +5.4
comp=N,0.6nm,0.3s,baz=315,slow=22,SNR=2.4
AKASG Malin Array Be 13.76 24 Pn Pn 14 39 48.1 -0.9
comp=N,0.3nm,0.3s,baz=210,slow=10,SNR=3.9
AKASG Sn Sn 14 42 19.3 -2.3
comp=N,0.3nm,0.3s,baz=217,slow=18,SNR=2.7
GNI Garni 18.86 77 LR LR 14 48 51.7
comp=N,93nm,18.3s,baz=332,slow=39
ESDC Sonseca Array 19.00 281 P Pn 14 40 57.7 +1.1
comp=N,0.2nm,0.3s,baz=92,slow=12,SNR=3.2
HFS Hagfors 22.15 351 P P 14 41 29.7 0.0
comp=N,3.7nm,0.7s,baz=161,slow=9.4,SNR=9.4
EKA Eskdalemuir Ar 23.20 324 P P 14 41 42.5 +1.7
comp=N,1.1nm,0.6s,baz=118,slow=9.0,SNR=2.9
FINES FINESS Array B 23.31 7 P P 14 41 41.5 -0.3
comp=N,1.2nm,0.4s,baz=179,slow=9.7,SNR=8.5
NB2 NORSAR Subarra 23.37 349 P P 14 41 42.2 -0.2
comp=Z,1.1nm,0.8s,baz=159,slow=11
NOA NORSAR Array B 23.37 349 P P 14 41 42.8 +0.3
comp=Z,1.0nm,0.8s,baz=156,slow=7.4,SNR=3.3
NOA LR LR 14 52 28.0
comp=Z,36nm,20.2s,baz=255,slow=41
GEYT Alibeck 29.47 79 P P 14 42 39.8 +1.8
comp=Z,1.3nm,0.8s,baz=246,slow=13,SNR=4.7
TORD Torodi Ar. Bea 30.19 219 P P 14 42 45.7 +1.2
comp=Z,0.7nm,0.7s,baz=36,slow=12,SNR=3.9
MKAR Makanchi Array 45.21 59 P P 14 44 50.3 -0.7
comp=Z,0.7nm,0.5s,baz=277,slow=7.5,SNR=28
ZALV Zalesovo Beam 45.56 48 P P 14 44 52.7 -1.0
comp=Z,1.4nm,0.3s,baz=272,slow=8.1,SNR=10
SCHQ Schefferville 58.25 317 P P 14 46 27.5 -0.8
comp=Z,1.9nm,0.8s,baz=61,slow=19,SNR=2.8
SONM Songino Array 60.34 51 P P 14 46 42.5 -0.5
comp=Z,0.5nm,1.0s,baz=280,slow=8.9,SNR=3.9

IDC 01 14:57:40.7±5.3, 4.81S×153.76E, h105km±36km, mb3.1/3, mb1 3.5/4, mb1mx3.2/34, mbtmp3.2/4, MS3.7/1, Ms1 3.7/1, ms1mx2.7/10, Error ellipse: s-maj=52.3km s-min=21.1km az=96.0
ISC 01 14:57:40.6±2.1, 4.8S±0.1×153.8E±0.2, h105km, n5, σ0.65/7, mb3.2/3, New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRVT Keravat (AS076 1.81 285 P Pn 14 58 10.8 -0.2
21nm,0.3s,baz=107,slow=2.0,SNR=40
KRVT S Sn 14 58 34.2 0.0
30nm,0.3s,baz=343,slow=24,SNR=15
PMG Port Moresby 8.03 235 P Pn 14 59 34.8 +0.2
6.0nm,0.3s,baz=52,slow=6.7,SNR=27
PMG S Sn 15 01 04.1 +0.4
1.2nm,0.3s,baz=343,slow=20,SNR=3.6
WRA Warramunga Arr 24.21 230 P P 15 02 47.4 -0.3
0.9nm,0.6s,baz=56,slow=10,SNR=5.7
ASAR Alice Springs 26.84 224 P P 15 03 10.5 -1.0
0.4nm,0.8s,baz=55,slow=8.9,SNR=7.8
ASAR LR LR 15 12 21.9
comp=Z,177nm,21.6s,baz=113,slow=33
SONM Songino Array 66.83 327 P P 15 08 21.9 +0.6
0.2nm,0.7s,baz=146,slow=6.1,SNR=2.3

NNC 01 15:08:23.8±2.5, 47.13N×79.78E, h0km, mb2.6, mpv2.2, Error ellipse: s-maj=21.9km s-min=10.9km az=51.0
SOME 01 15:08:24.5, 47.07N×79.53E, h0km
ISC 01 15:08:31.6±1.2, 47.04N±0.06×80.33E±0.05, h6km, n8, σ3.09/13, 4C-2D, Eastern Kazakhstan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MAKZ Makanchi 1.15 101 ⇓P Pg 15 08 52.0 -1.7
0.2nm,0.1s
MAKZ ⇑S Sn 15 09 12.4 +0.2
1.7nm,0.3s
MK31 Makanchi Array 1.37 100 P Pn 15 08 56.3 -0.9
0.4nm,0.2s,baz=275,slow=16,SNR=89
MK31 S Sn 15 09 19.2 +3.6
0.5nm,0.2s,baz=283,slow=28,SNR=11
KAPS Kapalarasan 1.88 201 eP Pn 15 08 57.9 -6.5
2.3nm,0.1s
KAPS eS Sn 15 09 22.3 -6.1
22nm,0.3s
DJR Jarkent 2.73 188 eP Pn 15 09 16.0 -0.1
0.7nm,0.1s
DJR eS Sn 15 09 53.0 +3.5
2.4nm,0.2s
ARXS Arharly 3.33 213 eP Pn 15 09 23.2 -1.0
0.4nm,0.3s
ARXS eS Sn 15 10 05.5 +1.4
5.3nm,0.4s

KURBB Kurchatov Arra 3.78 342 ⇑Pg Pn 15 09 29.3 -1.0
0.4nm,0.3s
KURBB ⇑Lg Lg 15 10 14.0
2.8nm,0.6s
KURK Kurchatov 3.85 344 ⇑Pg Pn 15 09 31.7 +0.4
0.4nm,0.5s
KURK ⇓Lg Lg 15 10 18.2
3.1nm,0.8s
KTBS Karatobe 4.20 219 eP Pn 15 09 37.7 +1.4
1.0nm,0.5s
KTBS eS Sn 15 10 30.1 +4.4
5.6nm,0.6s

IDC 01 15:19:04.4±26.0,5°12S×152°76E,h313km±207km, mb2.9/4,mb1 3.0/4,mb1mx2.8/19,mbtmp3.5/4,Error ellipse: s-maj=226.8km s-min=41.1km az=92.0,New Britain region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
WRA Warramunga Arr 23.20 229 P P 15 23 45.2 +0.7
0.6nm,0.6s,baz=56,slow=10,SNR=4.8
ASAR Alice Springs 25.89 223 P P 15 24 08.1 -0.5
0.3nm,0.5s,baz=54,slow=9.0,SNR=12
SONM Songino Array 66.57 328 P P 15 29 22.0 +0.4
0.1nm,0.5s,baz=120,slow=5.2,SNR=2.3
MKAR Makanchi Array 80.53 319 P P 15 30 41.6 -0.7
0.1nm,0.5s,baz=116,slow=6.6,SNR=4.4
TORD Torodi Ar. Bea 150.36 288 PKPbc PKPbc 15 38 19.8 -0.1
0.4nm,0.6s,baz=64,slow=3.6,SNR=2.9

IDC 01 15:36:22.3±3.0,21°48S×175°18W,h0km,mb4.3/5, mb1 4.5/5,mb1mx3.9/34,mbtmp4.3/5,Error ellipse: s-maj=115.4km s-min=37.6km az=145.0
NEIC 01 15:37:34.3±1.1,20°0S±0°3×178°1W±0°3,h589km±32km, mb4.4/16,Error ellipse: s-maj=49.2km s-min=32.7km az=48.0
ISC 01 15:37:32.4±1.6,20°4S±0°2×178°0W±0°2,h550km,n27, σ1.61/27,mb4.3/13,Fiji Islands region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
MSVF Nonsavu 4.59 304 P 15 38 59.4 +0.4
DZM Mont Dzumac 14.63 261 P P 15 40 41.2 +3.0
OUZ Omahuta 16.54 205 P P 15 40 58.8 +2.0
OUZ IAmb IAmb 15 41 15.9
comp=Z,32nm,1.3s
EIDS Eidsvold 28.90 254 P P 15 42 46.6 -0.8
ARMA Armidale 29.14 244 P P 15 42 49.5 -0.1
ARMA IAmb IAmb 15 43 03.0
comp=Z,17nm,1.5s
CTA Charters Tower 33.53 264 P P 15 43 26.0 -1.0
comp=Z,5.3nm,0.7s,baz=95,slow=11,SNR=10
CTA Charters Tower 33.53 264 P P 15 43 26.0 -1.0
PMG Port Moresby 35.34 283 P P 15 43 41.4 -0.8
PMG IAmb IAmb 15 43 59.9
comp=Z,15nm,1.4s
TOO Toolangi 35.99 234 P P 15 43 47.5 +0.2
TOO IAmb IAmb 15 43 53.2
comp=Z,7.1nm,1.2s
COEN Coen 37.60 273 P P 15 43 54.8 -6.1
BBOO Buckleboo 42.62 243 P P 15 44 39.2 -1.5
WR0 Warramunga Arr 44.45 262 P P 15 44 53.8 -1.4
AS31 Alice Springs 44.57 257 P P 15 44 55.1 -0.9
ASAR Alice Springs 44.57 257 P P 15 44 55.2 -0.9
comp=Z,7.7nm,0.7s,baz=90,slow=7.8,SNR=182
ASAR PcP PcP 15 46 27.4 +0.2
comp=Z,0.8nm,0.6s,baz=102,slow=4.2,SNR=5.5
ASAR Alice Springs 44.57 257 P P 15 44 54.3 -1.8
WB0 Warramunga Arr 44.62 262 P P 15 44 55.6 -0.9
WB0 IAmb IAmb 15 44 55.8
comp=Z,22nm,1.5s
WB2 Warramunga Arr 44.63 262 P P 15 44 55.4 -1.2
WB2 IAmb IAmb 15 45 02.3
comp=Z,14nm,1.3s
WRAB Tennant Creek 44.63 262 P P 15 44 55.4 -1.1
WRAB IAmb IAmb 15 44 56.0
comp=Z,13nm,1.1s
WRA Warramunga Arr 44.64 262 P P 15 44 55.4 -1.3
comp=Z,2.9nm,0.6s,baz=98,slow=7.9,SNR=29
WRA Warramunga Arr 44.64 262 P P 15 44 55.1 -1.6
FORT Forrest 49.36 247 P P 15 45 31.3 -0.7
FORT IAmb IAmb 15 45 31.3
comp=Z,13nm,0.8s
KNRA Kununurra 50.69 266 P P 15 45 38.4 -3.5
FITZ Fitzroy Crossi 53.07 262 P P 15 45 57.6 -1.4
FITZ IAmb IAmb 15 46 04.9
comp=Z,19nm,1.4s
USRK Ussuriysk Ar. 78.88 326 P P 15 48 40.7 +1.9
comp=Z,1.0nm,0.8s,baz=128,slow=2.4,SNR=4.0
CMAR Chiang Mai Arr 90.10 290 P P 15 49 36.0 +1.6
comp=Z,0.7nm,0.9s,baz=145,slow=2.2,SNR=7.7
AKASG Malin Array Be 142.92 331 PKPbc PKPdf 15 56 00.7 -2.8
comp=Z,2.1nm,0.5s,baz=42,slow=4.4,SNR=16
BRTR Keskin Array B 146.78 312 PKPbc PKPbc 15 56 13.3 0.0
comp=Z,0.9nm,0.6s,baz=116,slow=3.8,SNR=4.9

IDC 01 15:49:25.6±0.6,17°09N×119°33E,h0km,mb4.0/17, mb1 4.2/18,mb1mx4.0/43,mbtmp4.0/18,ML3.7/1,MS3.2/2, Ms1 3.3/2,ms1mx2.7/51,Error ellipse: s-maj=20.5km s-min=13.9km az=72.0
MAN 01 15:49:28.6,17°24N×119°28E,h14km,mb4.9,ML3.9, MS3.9
NEIC 01 15:49:29.0±2.4,17°07N±0°1×119°3E±0°1,h26km±6km, mb4.3/16,Error ellipse: s-maj=19.6km s-min=14.1km az=98.0
ISC 01 15:49:30.2±2.1,17°14N±0°04×119°22E±0°06,h30km±16km, n57,σ1.20/65,mb4.1/25,2C,Philippine Islands region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
BOLP Bolinao 1.00 139 eP Pn 15 49 46.8 -1.5
BOLP eS Sn 15 50 03.1 +1.6
SIPP Brgy, Tapao 1.42 56⇑iP Pn 15 49 53.7 -0.2
SIPP eS Sb 15 50 15.6 +1.9
ABRA Dolores 1.51 70 eP Pn 15 49 53.0 -2.3
ABRA eS Sn 15 50 12.6 -1.4
SMPP San Manuel, Pa 1.71 125 eP Pn 15 49 55.6 -2.4
SMPP eS Sb 15 50 20.6 -1.5
APYP Conner 2.06 69 eP Pn 15 50 01.6 -1.3
APYP eS Sn 15 50 26.8 -0.7
PCPH Palayan 2.39 131⇑eP Pn 15 50 07.9 +0.6
CAUP Cauayan 2.50 94 eP Pn 15 50 09.3 +0.5
CAUP eS Sn 15 50 40.3 +2.0
BALP Baler 2.65 121 eP Pn 15 50 11.9 +0.9
BALP eS Sn 15 50 44.4 +2.2
PALP Palanan 3.07 91 eP Pn 15 50 17.2 +0.5
PALP eS Sn 15 50 53.2 +0.8
TPUB Ta-pu 6.27 12 Pn Pn 15 50 58.9 -1.9
YULB Yu-li 6.52 17 Pn 15 51 02.8 -1.4
SSLB Suanglung 6.81 14 Pn 15 51 07.9 -0.3
YHNB Yeheng 7.76 15 Pn Pn 15 51 21.1 -0.2
PBKT Sadao Pong 17.48 271 P P 15 53 34.5 +1.7
CM31 Chiang Mai Arr 19.35 277 P P 15 53 52.1 -1.4
CM31 IAmb IAmb 15 54 01.5
comp=Z,12nm,1.1s
CMAR Chiang Mai Arr 19.35 277 P Pn 15 53 55.3 +0.5
comp=Z,0.1nm,0.3s,baz=102,slow=11,SNR=24
CMAR LR LR 16 01 25.6
comp=Z,35nm,18.7s,baz=95,slow=37
CHTO Chiang Mai 19.36 278 P P 15 53 52.7 -0.9
KSRS Korea Array 21.64 19 P P 15 54 17.7 -0.4
comp=Z,4.8nm,0.9s,baz=201,slow=12,SNR=16
BJT Baijiatuau 22.95 354 P P 15 54 33.6 +1.6
BJT IAmb IAmb 15 54 42.6
comp=Z,11nm,1.4s
INU Inuyama 24.09 38 P P 15 54 41.8 -1.4
PSI Prapat 24.50 237 P P 15 54 47.6 +0.3
comp=Z,2.1nm,0.4s,baz=45,slow=6.5,SNR=5.8
RPSI Rantau Prapat 24.57 236 P P 15 54 47.6 -0.1
MJAR Matsushiro Arr 25.61 37 P P 15 54 56.6 -0.4
comp=Z,0.9nm,0.9s,baz=213,slow=6.5,SNR=3.4
LSA Lhasa 28.55 301 P P 15 55 24.4 +0.3
LSA IAmb IAmb 15 55 27.7
comp=Z,5.3nm,1.2s
SONM Songino Array 32.38 344 P P 15 55 57.6 +0.4
comp=Z,0.9nm,0.6s,baz=165,slow=10,SNR=9.0
SONM Songino Array 32.38 344 P P 15 55 56.4 -0.9
KLR Kul'dur 33.59 15 P P 15 56 08.4 +0.8
comp=Z,3.1nm,0.9s,baz=205,slow=6.6,SNR=8.0
KLR LR LR 16 08 53.0
comp=Z,63nm,19.3s,baz=308,slow=35
WRA Warramunga Arr 39.73 157 P P 15 56 59.0 -1.3
comp=Z,3.6nm,1.0s,baz=341,slow=9.1,SNR=5.8
WRA Warramunga Arr 39.73 157 P P 15 56 56.9 -3.4
MK31 Makanchi Array 42.44 322 P P 15 57 21.7 -0.7
MK31 IAmb IAmb 15 57 24.9
comp=Z,4.7nm,1.1s
MKAR Makanchi Array 42.44 322 P P 15 57 23.7 +1.3
comp=Z,2.8nm,0.9s,baz=115,slow=8.6,SNR=21
MKAR Makanchi Array 42.44 322 P P 15 57 22.3 -0.1
MAKZ Makanchi 42.63 322 P P 15 57 24.6 +0.7
MAKZ IAmb IAmb 15 57 26.4
comp=Z,9.4nm,1.4s
ASAR Alice Springs 43.02 160 P P 15 57 26.6 -0.7
comp=Z,1.5nm,0.5s,baz=339,slow=6.8,SNR=34
ASAR Alice Springs 43.02 160 P P 15 57 26.2 -1.1
ZALV Zalesovo Beam 45.37 332 P P 15 57 46.2 +0.5
comp=Z,3.4nm,0.8s,baz=118,slow=5.4,SNR=14
ZALV Zalesovo Beam 45.37 332 P P 15 57 46.0 +0.3
AAK Ala-Archa 45.66 313 P P 15 57 49.1 +0.6
comp=Z,1.6nm,1.0s,baz=104,slow=6.7,SNR=3.4
KURK Kurchatov 46.56 325 P P 15 57 56.1 +1.0
KURBB Kurchatov Arra 46.56 325 P P 15 57 56.2 +1.1
comp=Z,11nm,1.0s,baz=121,slow=8.5,SNR=34
KK31 Karatay Array 48.58 313 P P 15 58 12.2 +1.2
KK31 IAmb IAmb 15 58 12.9
comp=Z,4.6nm,1.0s
KKAR Karatay Array 48.58 313 P P 15 58 12.0 +0.9
KKAR Karatay Array 48.58 313 P P 15 58 12.2 +1.2
KKAR IAmb IAmb 15 58 12.9
comp=Z,4.6nm,1.0s
BRVK Borovoye 52.22 325 P P 15 58 39.7 +1.3
STKA Stephens Creek 53.25 156 P P 15 58 45.9 -0.3
comp=Z,3.2nm,0.6s,baz=337,slow=8.0,SNR=12
STKA Stephens Creek 53.25 156 P P 15 58 46.1 -0.1
GEYT Alibeck 57.00 304 P P 15 59 14.4 +1.0
comp=Z,3.6nm,1.0s,baz=120,slow=8.8,SNR=11
ABKAR Akbulak array 57.23 318 P P 15 59 15.3 +0.6
ABKAR Akbulak array 57.23 318 P P 15 59 14.7 0.0
ABKAR IAmb IAmb 15 59 15.7
comp=Z,2.3nm,0.8s
ILAR Eielson Array 76.30 26 P P 16 01 15.4 -0.6
comp=Z,0.4nm,0.8s,baz=280,slow=5.1,SNR=5.4
FINES FINESS Array B 76.61 330 P P 16 01 17.2 -0.5
comp=Z,36nm,1.5s,baz=46,slow=5.5,SNR=7.3
BMAR Burnt Mountain 76.68 23 P P 16 01 16.6 -1.6
AKASG Malin Array Be 76.93 319 P P 16 01 18.8 -1.1
comp=Z,0.7nm,0.7s,baz=65,slow=4.6,SNR=3.8
BCAR Beaver Creek A 78.89 27 P P 16 01 31.5 +0.9
NB2 NORSAR Subarra 83.57 332 P P 16 01 55.5 +0.1
comp=Z,2.5nm,0.8s,baz=65,slow=4.8
NOA NORSAR Array B 83.57 332 P P 16 01 55.5 +0.1
comp=Z,0.9nm,0.7s,baz=69,slow=5.0,SNR=4.8
YKA Yellowknife Ar 90.15 22 P P 16 02 27.5 +0.1
comp=Z,0.6nm,0.8s,baz=313,slow=4.6,SNR=9.1

WEL 01 15:49:57.2,37°S±8°×17°8E±°,h194km±9km,M3.7/84, MLv3.7/84,Error ellipse: s-maj=0.0km s-min=0.0km az=179.5,Off east coast of North Island

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
MXZ Matakaoa Point 1.12 147 P Pn 15 50 27.8 +0.6
HAZ Te Kaha 1.15 170 P Pn 15 50 26.7 -0.7
HAZ S Sn 15 50 48.9 -2.0
WHRZ Whale Island 1.31 200 P Pn 15 50 30.1 +1.3
PKGZ Pakihiroa 1.33 161 P Pn 15 50 29.0 0.0
RUGZ Raukumara Rang 1.34 175 P Pn 15 50 28.9 -0.3
WMGZ Waiomatatini S 1.39 150 P Pn 15 50 29.6 +0.3
WMGZ S Sn 15 50 53.5 -0.9
KUZ Kuaotunu 1.46 265 P Pn 15 50 29.8 -0.3
MARZ Manawahe 1.52 207 P Pn 15 50 31.8 +1.2
PUZ Puketiti 1.56 159 P Pn 15 50 31.2 +0.3
PUZ S Sn 15 50 55.3 -1.9
TWGZ Tauwhareparae 1.59 167 P Pn 15 50 31.6 +0.4
TWGZ S Sn 15 50 57.7 -0.2
EDRZ Edgecumbe 1.61 203 P Pn 15 50 32.9 +1.4
URZ Urewera 1.67 192 P Pn 15 50 31.8 -0.1
MWZ Matawai 1.71 180 P Pn 15 50 32.1 -0.3
KARZ Kaharoa 1.73 216 P Pn 15 50 33.2 +0.6
OMRZ Omania 1.75 212 P Pn 15 50 33.8 +1.1
KMRZ Kaimai 1.76 226 P Pn 15 50 33.6 +0.7
TKGZ Te Karaka 1.83 172 P Pn 15 50 33.3 -0.2
HLRZ Highlands Stat 1.88 210 P Pn 15 50 35.8 +1.7
RRRZ Republican Roa 1.90 205 P Pn 15 50 31.0 -3.2
CNGZ Carnagh Statio 1.93 164 P Pn 15 50 35.1 +0.6
WIAZ Waiheke Island 1.94 264 P Pn 15 50 34.9 +0.2
MUGZ Murupara 1.95 198 P Pn 15 50 34.6 -0.1
MKAZ Moumakai 1.96 255 P Pn 15 50 35.3 +0.5
TOZ Tahuroa Road 1.96 235 P Pn 15 50 35.1 +0.3
HSRZ Hossack Road 1.97 211 P Pn 15 50 37.0 +2.0
RTZ Ruatahuna 2.04 192 P Pn 15 50 36.2 +0.4
GRRZ Galatos Road 2.06 213 P Pn 15 50 37.7 +1.7
PRRZ Plateau Road 2.08 206 P Pn 15 50 37.2 +1.1
RIGZ Rimuhau 2.09 175 P Pn 15 50 36.2 0.0
ETAZ East Tamaki Re 2.12 260 P Pn 15 50 37.4 +0.8
MBAZ Motutapu North 2.12 265 P Pn 15 50 37.0 +0.4
ALRZ Allen Road 2.15 206 P Pn 15 50 38.0 +1.1
SNGZ Shannon Statio 2.16 184 P Pn 15 50 37.3 +0.4
MTHZ Maungataniwha 2.29 194 P Pn 15 50 38.9 +0.4
RAHZ Arahi 2.32 189 P Pn 15 50 38.9 +0.2
TLZ Tolley Road 2.33 222 P Pn 15 50 40.1 +1.3
KNZ Kokohu 2.40 177 P Pn 15 50 39.1 -0.4
WHHZ Waihua 2.46 185 P Pn 15 50 40.6 +0.3
WATZ Wairara 2.53 214 P Pn 15 50 42.5 +1.5
HATZ Hinemaiaia 2.54 206 P Pn 15 50 41.6 +0.4
NMHZ Naumai 2.54 193 P Pn 15 50 41.6 +0.4
MHGZ Mahia Peninsul 2.54 173 P Pn 15 50 41.1 -0.1
RATZ Rangitukua 2.64 211 P Pn 15 50 44.1 +1.8
WCZ Waipu Caves 2.67 284 P Pn 15 50 42.5 -0.1
BKZ Black Stump Fm 2.67 198 P Pn 15 50 42.0 -0.7
ARHZ Aropaoanui 2.67 189 P Pn 15 50 42.7 +0.1
RITZ Rihia Road 2.70 209 P Pn 15 50 44.6 +1.6
HIZ Hauiti 2.84 228 P Pn 15 50 46.1 +1.4
MCHZ McNeill Hill 2.89 193 P Pn 15 50 45.4 +0.2
WTVZ West Tongariro 2.93 211 P Pn 15 50 46.5 +0.7
KWHZ Kaweka Forest 2.93 197 P Pn 15 50 45.2 -0.5
TWVZ Taurewa 2.96 214 P Pn 15 50 47.2 +1.1
TUVZ Tukino 3.03 209 P Pn 15 50 48.5 +1.5
FWVZ Far West T-bar 3.06 210 P Pn 15 50 48.1 +0.7
WHVZ Whangaehu Hut 3.07 209 P Pn 15 50 47.9 +0.4
BHHZ Black Hill Sta 3.09 202 P Pn 15 50 46.8 -0.9
MOVZ Moawhango 3.12 206 P Pn 15 50 47.2 -0.8
KRHZ Kereru 3.15 197 P Pn 15 50 47.3 -1.1
KAHZ Kahuranaki 3.21 189 P Pn 15 50 48.3 -0.7
PXZ Pawanui 3.44 189 P Pn 15 50 50.6 -1.2
PNHZ Pukenui 3.45 197 P Pn 15 50 50.5 -1.4
WPHZ Waipukurau 3.54 194 P Pn 15 50 52.5 -0.5
TSZ Takapari Road 3.65 199 P Pn 15 50 52.9 -1.4
PRHZ Porangahau 3.71 191 P Pn 15 50 53.7 -1.4
WAZ Wanganui 3.72 212 P Pn 15 50 55.6 +0.4
LREZ Lake Rotokare 3.76 220 P Pn 15 50 57.6 +1.9
PKE Pukeiti 3.80 226 P Pn 15 50 58.9 +2.6
DVHZ Dannevirke 3.83 196 P Pn 15 50 54.8 -1.8
ANWZ Angora Road 3.92 192 P Pn 15 50 56.4 -1.3
POWZ Post Office Ro 4.01 200 P Pn 15 50 57.2 -1.6
PRWZ Pori Road 4.11 197 P Pn 15 50 58.7 -1.4
BFZ Birch Farm 4.18 194 P Pn 15 50 58.9 -2.0
MRZ Mangatainoka R 4.31 200 P Pn 15 51 00.3 -2.3
TIWZ Tintock 4.34 197 P Pn 15 51 01.0 -2.1
HOWZ Holdsworth Sta 4.55 200 P Pn 15 51 03.0 -2.7
OGWZ Otaki Gorge 4.58 203 P Pn 15 51 01.8 -4.2
TMWZ Te Maipa 4.66 195 P Pn 15 51 04.6 -2.5
KIW Kapiti Island 4.70 205 P Pn 15 51 05.3 -2.3
MTW Mount Morrison 4.80 199 P Pn 15 51 05.8 -3.0
CAW Cannon Point 4.88 203 P Pn 15 51 06.9 -2.9
TRWZ Traveller 4.98 196 P Pn 15 51 08.6 -2.6
PAWZ Paruwai Farm 5.03 198 P Pn 15 51 09.3 -2.5
DUWZ D'Urville Isla 5.04 213 P Pn 15 51 10.1 -1.9
MSWZ Moikau Station 5.11 200 P Pn 15 51 09.9 -2.8
WEL Wellington 5.13 204 P Pn 15 51 10.2 -2.9
BHW Baring Head 5.21 203 P Pn 15 51 10.9 -3.1
TCW Tory Channel 5.24 208 P Pn 15 51 11.8 -2.6
PLWZ Palliser 5.25 199 P Pn 15 51 11.5 -3.1
TUWZ Tuamarina 5.55 209 P Pn 15 51 15.9 -2.6
NNZ Nelson 5.62 214 P Pn 15 51 16.6 -2.7
QRZ Quartz Range 5.74 221 P Pn 15 51 18.3 -2.7
BSWZ Blackbirch Sta 5.83 208 P Pn 15 51 19.7 -2.3
THZ Tophouse 6.27 214 P Pn 15 51 25.3 -2.6
KHZ Kahutara 6.56 207 P Pn 15 51 28.3 -3.3
DSZ Denniston Nort 6.78 219 P Pn 15 51 31.5 -3.0
LTZ Lake Taylor 7.37 212 P Pn 15 51 38.9 -3.3
AMCZ Amberley 7.54 208 P Pn 15 51 41.0 -3.4
INZ Inchbonnie 7.69 216 P Pn 15 51 44.3 -2.1
OKCZ Okains Bay 7.88 204 P Pn 15 51 45.2 -3.5
OXZ Oxford 7.91 211 P Pn 15 51 45.2 -4.0
MQZ McQueen's Vall 8.00 206 P Pn 15 51 45.4 -4.9
AKCZ Akaroa Harbour 8.06 205 P Pn 15 51 47.7 -3.4
RIZ Raoul Island 8.28 29 P Pn 15 51 39.1 -15
RPZ Rata Peaks 8.64 213 P Pn 15 51 55.4 -3.4
ODZ Otahua Downs 9.90 210 P Pn 15 52 12.1 -3.0

WEL 01 15:58:48.3,37°S±9°×17°7E±1°1,h269km±10km,M3.1/23, MLv3.1/23,Error ellipse: s-maj=0.0km s-min=0.0km az=125.4,North Island

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
OPRZ Ohinepanea 0.83 200 P Pn 15 59 24.2 -0.2
RUGZ Raukumara Rang 1.09 146 P Pn 15 59 25.2 -0.6
RUGZ S S 15 59 52.4 -3.2
URZ Urewera 1.21 173 P Pn 15 59 25.7 -0.7
PKGZ Pakihiroa 1.24 132 P Pn 15 59 26.6 -0.1
TOZ Tahuroa Road 1.31 239 P Pn 15 59 27.3 +0.2
MWZ Matawai 1.36 159 P Pn 15 59 27.5 +0.1
MWZ S S 15 59 57.0 -1.5
TWGZ Tauwhareparae 1.40 143 P Pn 15 59 28.2 +0.5
WMGZ Waiomatatini S 1.42 123 P Pn 15 59 26.9 -0.9
WMGZ S S 15 59 57.2 -1.7
HRRZ Handcock Road 1.42 200 P Pn 15 59 21.0 -6.8
MUGZ Murupara 1.42 185 P Pn 15 59 27.5 -0.3
MUGZ S S 15 59 56.9 -2.2
PUZ Puketiti 1.47 134 P Pn 15 59 27.9 -0.2
PUZ S S 15 59 58.3 -1.5
TKGZ Te Karaka 1.56 152 P Pn 15 59 29.0 +0.3
CNGZ Carnagh Statio 1.75 145 P Pn 15 59 30.9 +0.7
SNGZ Shannon Statio 1.75 169 P Pn 15 59 30.8 +0.6
RIGZ Rimuhau 1.77 158 P Pn 15 59 31.1 +0.6
NMHZ Naumai 2.04 182 P Pn 15 59 33.5 +0.9
BKZ Black Stump Fm 2.13 189 P Pn 15 59 33.2 -0.3
HIZ Hauiti 2.18 228 P Pn 15 59 35.8 +1.9
MCHZ McNeill Hill 2.39 184 P S 16 00 14.4 +0.9
KWHZ Kaweka Forest 2.39 189 P Pn 15 59 36.1 +0.3
KWHZ Kaweka Forest 2.39 189 P S 16 00 13.9 +0.2
BHHZ Black Hill Sta 2.52 195 P Pn 15 59 37.0 0.0
KRHZ Kereru 2.62 189 P Pn 15 59 37.9 -0.1
VRZ Vera Road 2.67 219 P Pn 15 59 39.8 +1.3
KAHZ Kahuranaki 2.73 181 P Pn 15 59 39.6 +0.4
PNHZ Pukenui 2.90 191 P Pn 15 59 40.6 -0.3
PNHZ Pukenui 2.90 191 P S 16 00 21.6 -1.2
PXZ Pawanui 2.97 181 P S 16 00 22.7 -1.1
TSZ Takapari Road 3.09 194 P Pn 15 59 42.5 -0.2
TSZ Takapari Road 3.09 194 P S 16 00 25.5 -0.7
PKE Pukeiti 3.14 226 P Pn 15 59 45.2 +1.9
OUZ Omahuta 3.25 303 P Pn 15 59 43.0 -1.7
DVHZ Dannevirke 3.29 190 P S 16 00 28.0 -2.0
ANWZ Angora Road 3.41 186 P S 16 00 32.2 -0.2
PRWZ Pori Road 3.57 192 P S 16 00 34.1 -1.4
BFZ Birch Farm 3.65 188 P S 16 00 36.4 -0.9
MRZ Mangatainoka R 3.74 196 P Pn 15 59 48.8 -1.1
TIWZ Tintock 3.80 192 P S 16 00 38.3 -2.0
HOWZ Holdsworth Sta 3.98 195 P Pn 15 59 51.9 -0.8
HOWZ Holdsworth Sta 3.98 195 P S 16 00 40.9 -3.2
OGWZ Otaki Gorge 3.99 199 P Pn 15 59 51.9 -0.8
KIW Kapiti Island 4.11 202 P Pn 15 59 52.8 -1.2
CAW Cannon Point 4.29 199 P Pn 15 59 55.0 -1.2
TCW Tory Channel 4.62 206 P Pn 15 59 58.8 -1.3
TUWZ Tuamarina 4.94 207 P Pn 16 00 02.6 -1.2
NNZ Nelson 4.98 212 P Pn 16 00 02.7 -1.5
QRZ Quartz Range 5.08 221 P Pn 16 00 03.5 -2.0
THZ Tophouse 5.53 212 P Pn 16 00 10.8 -1.4
KHZ Kahutara 5.95 205 P Pn 16 00 14.9 -1.1
DSZ Denniston Nort 6.13 219 P Pn 16 00 16.9 -1.4
LTZ Lake Taylor 6.74 211 P Pn 16 00 23.9 -1.9
MQZ McQueen's Vall 7.39 205 P Pn 16 00 31.7 -2.1

IDC 01 15:59:44.3±0.9,17°09N×119°29E,h0km,mb3.5/9, mb1 3.6/10,mb1mx3.5/45,mbtmp3.5/10,ML3.3/1,Error ellipse: s-maj=31.3km s-min=17.4km az=72.0
MAN 01 15:59:47.9,17°10N×119°41E,h19km,mb5.0,ML3.9, MS3.9
ISC 01 15:59:46.5±3.8,17°10N±0°07×119°35E±0°07,h15km±25km, n16,σ0.88/20,mb3.5/9,1C,Philippine Islands region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
BOLP Bolinao 0.90 143 eP Pb 16 00 04.0 +0.2
BOLP eS Sn 16 00 17.8 +0.4
ABRA Dolores 1.41 67 eP Pn 16 00 11.2 -0.5
ABRA eS Sn 16 00 30.5 +0.4
APYP Conner 1.96 67 eP Pn 16 00 19.6 +0.4
APYP eS Sn 16 00 43.7 +0.1
CAUP Cauayan 2.38 93 eP Pn 16 00 26.2 +1.3
CAUP eS Sn 16 00 54.4 +0.6
BALP Baler 2.53 122 eP Pn 16 00 27.4 +0.3
BALP eS Sb 16 01 00.6 -2.0
LQP Lukban 3.65 144⇑eP Pg 16 01 03.8 +7.4
CMAR Chiang Mai Arr 19.48 277 P P 16 04 13.7 +0.6
0.0nm,0.3s,baz=96,slow=8.3,SNR=11
KSRS Korea Array 21.64 19 P P 16 04 37.0 +0.8
1.7nm,0.8s,baz=197,slow=10,SNR=3.6
MJAR Matsushiro Arr 25.57 37 P P 16 05 16.1 +1.1
0.8nm,0.9s,baz=224,slow=10,SNR=3.5
SONM Songino Array 32.44 344 P P 16 06 15.5 -0.7
0.2nm,0.6s,baz=170,slow=8.8,SNR=2.6
WRA Warramunga Arr 39.65 158 P P 16 07 16.9 -1.1
2.6nm,1.2s,baz=352,slow=7.8,SNR=3.5
MKAR Makanchi Array 42.55 322 P P 16 07 40.9 -0.7
0.5nm,0.9s,baz=126,slow=6.4,SNR=4.6
ASAR Alice Springs 42.94 160 P P 16 07 45.9 +0.8
0.4nm,0.5s,baz=337,slow=6.9,SNR=14
ZALV Zalesovo Beam 45.46 332 P P 16 08 04.3 -0.6
1.0nm,0.7s,baz=126,slow=7.3,SNR=3.8
STKA Stephens Creek 53.17 156 P P 16 09 04.0 0.0
0.8nm,0.5s,baz=312,slow=7.0,SNR=3.4
YKA Yellowknife Ar 90.14 22 P P 16 12 46.1 +0.2
0.1nm,0.3s,baz=314,slow=4.3,SNR=2.6

UCR 01 16:00:37.1±1.5,8°33N×82°80W,h2km±6km,MW3.6
UPA 01 16:00:38.7±0.8,8°36N×82°78W,h15km±2km,MW3.9
ISC 01 16:00:36.9±1.5,8°30N±0°06×82°80W±0°03,h6km±11km, n24,σ0.66/39,1C-8D,Panama-Costa Rica border region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
BAGA3 Bagala, Chiriq 0.32 57⇓iP Pb 16 00 45.8 +0.8
DVD David 0.37 68⇑iP Pb 16 00 46.2 +0.3
DVD eS Sb 16 00 52.8 +0.9
PEDE3 Pedregal, Chir 0.38 77⇓iP Pb 16 00 46.3 +0.2
LOCO3 Loma Colorada, 0.39 73⇓iP Pb 16 00 46.7 +0.4
LOCO3 eS Sb 16 00 52.1 -0.5
LOMA3 Las Lomas, Chi 0.42 71⇓iP Pb 16 00 47.0 +0.2
LOMA3 eS Sb 16 00 53.1 -0.3
CHIR3 Chiriqui UPA, 0.47 78⇓iP Pb 16 00 47.7 +0.1
CHIR3 eS Sg 16 00 53.2 +1.0
PTAR3 Potrerillos Ar 0.49 37 eP Pb 16 00 48.3 +0.2
BCO2 Palmira 0.50 32⇓iP Pb 16 00 48.3 +0.1
BCO2 eS Sb 16 00 55.3 -0.4
BRU2 Volcan 0.51 12⇓iP Pb 16 00 48.2 -0.1
BRU2 eS Sb 16 00 55.8 -0.2
CHGR2 Aguacate 0.91 45⇓iP Pg 16 00 54.0 -0.3
CHGR2 eS Sg 16 01 06.3 +0.2
EDPN Palmar Norte 0.93 315 eP Pg 16 00 54.5 -0.3
EDPN eS Sg 16 01 07.3 +0.5
EDBA Buenos Aires 0.98 331 eP Pg 16 00 55.0 -0.8
EDBA eS Sb 16 01 09.9 +0.2
CNI2 El Empalme, Bo 1.17 16 eP Pg 16 00 58.5 -0.8
CNI2 eS Sn 16 01 15.9 -0.1
EDDO Dominical 1.42 312 eP Pn 16 01 02.3 -1.0
EDDO eS Sb 16 01 21.7 -0.5
MESA3 La Mesa, Verag 1.60 95 eP Pn 16 01 05.5 -0.2
MESA3 eS Sn 16 01 25.9 -0.9
GMAL Guarumal, Vera 1.64 109 eP Pn 16 01 04.2 -2.0
LCR2 La Lucha 2 1.87 320 eP Pn 16 01 10.1 +0.5
CVTR Volcan Turrial 1.96 331 iP Pn 16 01 10.7 -0.3
HDC Heredia 2.14 323 eP Pn 16 01 14.2 +1.0
HDC eS Sn 16 01 40.9 +0.7
CACAO El Cacao, Vera 2.14 116 eP Pn 16 01 13.2 +0.1

CACAO				eS	Sb	16 01 43.0	+0.1
AZU	Azuero	2.55	101	eP	Pn	16 01 19.7	+0.9
AZU				eS	Sb	16 01 55.5	+0.8
AZU	Azuero	2.55	101	eP	Pn	16 01 19.1	+0.3
ARE1	Arenal 1	2.87	319	eP	Pn	16 01 23.9	+0.7
JTS	Las Juntas de	2.91	313	eP	Pn	16 01 24.1	+0.3

*IDC **01** 16:11:55.9±26.0, 23°.40S×172°.81W, h0km, mb4.5/4, mb1 4.7/4, mb1mx3.9/37, mbtmp4.5/4, Error ellipse: s-maj=487.9km s-min=144.5km az=78.0*
*NEIC **01** 16:11:59.5±1.4, 24°.6S±0°.2×172°.8W±0°.2, h14km±6km, mb4.7/16, Error ellipse: s-maj=29.2km s-min=16.7km az=144.0*
ISC 01 16:11:59.5±1.2**, 24°.5S**±0°.2×**172°.8W**±0°.2**, h10**km**, n23, σ0s.97**/21**, mb4.7**/13**, 1C, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	6.05	27	Pn	Pn	16 13 29.1	+0.1
AFI	Afiamalu	10.61	5	Pn	Pn	16 14 31.2	-0.4
NOUC	Port Laguerre	19.34	273		P	16 16 25.6	+0.5
ARMA	Armidale	32.01	251	P	P	16 18 24.6	-1.7
ARMA				IAmb	IAmb	16 18 28.1	
	comp=Z,13nm,1.4s						
EIDS	Eidsvold	32.69	261	P	P	16 18 30.0	-2.2
CAN	Canberra	34.62	243	P	P	16 18 49.3	+0.3
CAN				IAmb	IAmb	16 18 55.7	
	comp=Z,10nm,1.3s						
TAOE	Nuku Hiva Isla	34.82	69	P	P	16 18 50.8	-0.1
CTA	Charters Tower	38.03	268	P	P	16 19 17.9	-0.3
	comp=Z,5.0nm,0.4s,baz=103,slow=11,SNR=11						
STKA	Stephens Creek	40.61	249	P	P	16 19 39.3	-0.4
	comp=Z,1.8nm,0.4s,baz=102,slow=12,SNR=11						
STKA	Stephens Creek	40.61	249	P	P	16 19 38.4	-1.3
COEN	Coen	42.71	276	P	P	16 19 58.6	+1.6
BBOO	Buckleboo	45.26	247	P	P	16 20 16.2	-1.2
BBOO				IAmb	IAmb	16 20 17.5	
	comp=Z,7.7nm,1.1s						
AS31	Alice Springs	48.40	259	P	P	16 20 41.6	-0.5
AS31				IAmb	IAmb	16 20 42.8	
	comp=Z,2.2nm,0.5s						
ASAR	Alice Springs	48.40	259	P	P	16 20 41.4	-0.7
	comp=Z,3.2nm,0.4s,baz=91,slow=7.8,SNR=225						
WR0	Warramunga Arr	48.71	264	P	P	16 20 44.0	-0.5
WR0				IAmb	IAmb	16 20 45.3	
	comp=Z,7.5nm,1.1s						
WB2	Warramunga Arr	48.89	264	P	P	16 20 45.6	-0.2
WB2				IAmb	IAmb	16 20 46.7	
	comp=Z,8.7nm,1.0s						
WRAB	Tennant Creek	48.89	264	P	P	16 20 45.3	-0.6
WRAB				IAmb	IAmb	16 21 01.5	
	comp=Z,20nm,1.5s						
WB0	Warramunga Arr	48.90	265	P	P	16 20 45.4	-0.6
WB0				IAmb	IAmb	16 20 46.6	
	comp=Z,4.9nm,0.8s						
WRA	Warramunga Arr	48.90	264	P	P	16 20 45.4	-0.6
	comp=Z,3.2nm,0.5s,baz=93,slow=8.3,SNR=22						
WRA	Warramunga Arr	48.90	264	P	P	16 20 45.0	-0.9
FORT	Forrest	52.24	249	P	P	16 21 10.8	-0.2
FORT				IAmb	IAmb	16 21 25.6	
	comp=Z,18nm,1.1s						
KNRA	Kununurra	55.24	267	P	P	16 21 35.4	+2.3
SYO	Syowa Base	83.80	191	⇑eP	P	16 24 24.6	-4.0

*IDC **01** 16:22:26.1±1.3, 38°.49N×20°.32E, h0km, mb3.8/6, mb1 3.7/9, mb1mx3.5/39, mbtmp3.6/9, ML3.7/2, Error ellipse: s-maj=23.5km s-min=21.8km az=103.0*
*PDG **01** 16:22:27.3±0.8, 38°.55N×20°.20E, h0km±11km, ML3.8/12, Error ellipse: s-maj=1.4km s-min=1.7km az=0.0*
*ATH **01** 16:22:28.2, 38°.40N×20°.49E, h13km±1km, ML3.7/14, Error ellipse: s-maj=1.3km s-min=0.5km az=267.0*
*THE **01** 16:22:28.1, 38°.42N×20°.42E, h0km±1km, ML3.8/19, Error ellipse: s-maj=1.6km s-min=0.3km az=284.0*
ISC 01 16:22:27.7±0.7**, 38°.43N**±0°.02×**20°.42E**±0°.02**, h12**km±4km**, n104, σ1s.43**/158**, mb3.8**/6**, 3C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	VASILIKIADES	0.11	99	P	Pg	16 22 30.3	-0.4
VSK1				S	Sg	16 22 32.0	-0.8
	149μm,0.3s						
FSK	Fiskardo	0.11	73	P	Pg	16 22 30.4	-0.3
FSK				S	Sg	16 22 31.8	-1.1
	76μm,0.4s						
FSK	Fiskardo	0.11	73	P	Pg	16 22 30.5	-0.2
FSK				S	Sg	16 22 32.7	-0.1
FSK				AML	AML	16 22 32.9	
FSK				AML	AML	16 22 35.9	
KEF1	Kardakata, Kep	0.15	166	P	Pg	16 22 31.3	+0.1
KEF1				S	Sg	16 22 33.9	+0.2
KEF4	Livadi, Kephal	0.17	180	P	Pg	16 22 31.7	+0.2
KEF4				S	Sg	16 22 34.3	+0.1
KEF3	Kipouria, Keph	0.23	195	P	Pb	16 22 32.9	-1.0
KEF3				S	Sb	16 22 37.1	+1.2
CHV1	Chavriata, Kef	0.24	188	P	Pg	16 22 33.0	+0.2
CHV1				S	Sb	16 22 37.3	+1.0
	132μm,0.3s						
ARG2	Argostoli	0.25	169	P	Pg	16 22 33.0	0.0
ARG2				S	Sg	16 22 36.9	+0.4
	173μm,0.4s						
EVGI	Lefkada island	0.27	43	P	Pg	16 22 33.4	+0.2
EVGI				S	Sg	16 22 37.8	+0.9
EVGI	Lefkada island	0.27	43	P	Pg	16 22 33.6	+0.4
EVGI				S	Sg	16 22 37.8	+0.9
KEF2	Argostoli. Kep	0.27	169	P	Pg	16 22 33.2	0.0
KEF2				S	Sg	16 22 36.2	-0.7
VLS	Valsamata	0.28	152	P	Pg	16 22 33.2	-0.3
VLS				S	Sg	16 22 37.5	+0.1
	26μm,0.5s						
VLS	Valsamata	0.28	152	P	Pg	16 22 33.3	-0.3
VLS				S	Sg	16 22 37.5	+0.1
VLS				AML	AML	16 22 37.8	
	comp=E,52533μm,0.3s						
VLS				AML	AML	16 22 41.1	
	comp=N,36465μm,0.4s						
MGNA	Meganis	0.37	51	P	Pg	16 22 35.1	0.0
MGNA				S	Sg	16 22 40.6	+0.6
MGNA				AML	AML	16 22 41.8	
	comp=E,32250μm,0.2s						
MGNA				AML	AML	16 22 42.0	
	comp=N,21639μm,0.2s						
LKD2	Lefkada island	0.41	27	P	Pg	16 22 35.7	-0.1
LKD2				S	Sb	16 22 42.2	-0.9
	comp=N,12μm,0.5s						
LKD2	Lefkada island	0.41	27	P	Pg	16 22 36.1	+0.3
LKD2				S	Sb	16 22 42.6	-0.4
LKD2				AML	AML	16 22 43.3	
	comp=N,26753μm,0.6s						
LKD2				AML	AML	16 22 43.6	
	comp=E,20511μm,0.4s						
TSLK	Tsoukalades, L	0.44	24	P	Pg	16 22 36.6	+0.2
TSLK				S	Sb	16 22 43.2	-0.8
	comp=E,15μm,0.9s						
TSLK	Tsoukalades, L	0.44	24	P	Pb	16 22 36.8	-0.6
TSLK				S	Sb	16 22 43.6	-0.3
AST1	Astakos	0.54	77	P	Pg	16 22 38.1	-0.1
AST1				S	Sb	16 22 46.5	-0.2
	comp=E,25μm,0.5s						
VLMS	Volimes, Zakyn	0.58	161	P	Pg	16 22 38.8	-0.3
VLMS				S	Sg	16 22 46.0	-0.8
VLMS				AML	AML	16 22 48.4	
	comp=N,81101μm,0.4s						
VLMS				AML	AML	16 22 49.0	
	comp=E,35209μm,0.3s						
PDO	Prodromos	0.62	74	P	Pg	16 22 39.5	-0.3
PDO				S	Sg	16 22 49.0	-0.2
	comp=E,13μm,0.4s						
PDO	Prodromos	0.62	74	P	Pg	16 22 39.5	-0.3
PDO				AML	AML	16 22 56.3	
	comp=E,16971μm,0.4s						
PDO				AML	AML	16 22 57.5	
	comp=N,18522μm,0.6s						
KRI1	kERI	0.82	158	P	Pg	16 22 42.6	-1.0
KRI1				S	Sb	16 22 55.5	+0.4
	comp=N,14μm,0.4s						
PVO	Paravola	0.89	77	P	Pg	16 22 44.7	-0.1
PVO				S	Sn	16 22 58.7	-0.1
	comp=N,5μm,0.5s						
PVO	Paravola	0.89	77	P	Pb	16 22 44.8	-0.2
PVO				S	Sg	16 22 56.2	-0.1
PVO				AML	AML	16 23 05.3	
	comp=E,10240μm,0.4s						
PVO				AML	AML	16 23 05.9	
	comp=N,10992μm,0.6s						
RLS	Riolos of Patr	0.90	114	P	Pg	16 22 44.1	-1.0
RLS	Riolos of Patr	0.90	114	P	Pg	16 22 44.1	-1.0
DRO	Drossia	1.12	115	P	Pb	16 22 48.0	-1.1
DRO				S	Sn	16 23 06.7	+2.1
	comp=N,5μm,0.6s						
DRO	Drossia	1.12	115	P	Pb	16 22 48.0	-1.1
DRO				S	Sb	16 23 03.1	-0.5
DRO				AML	AML	16 23 11.7	
	comp=E,12698μm,0.4s						
DRO				AML	AML	16 23 13.2	
	comp=N,8622μm,0.8s						
EFP	Efpalio	1.16	90	P	Pn	16 22 48.7	-1.2
EFP				S	Sn	16 23 08.6	+2.9
	comp=N,5μm,0.7s						
EFP	Efpalio	1.16	90	P	Pn	16 22 48.6	-1.2
EFP				AML	AML	16 23 16.3	
	comp=E,9579μm,0.8s						
EFP				AML	AML	16 23 16.5	
	comp=N,9933μm,0.7s						
ANX	Ano Chora	1.19	81	P	Pn	16 22 49.5	-0.8
ANX				S	Sn	16 23 10.1	+3.7
	comp=N,4μm,0.5s						
ANX	Ano Chora	1.19	81	P	Pn	16 22 49.5	-0.8
ANX				S	Sn	16 23 06.5	+0.1
ANX				AML	AML	16 23 17.3	
	comp=N,9048μm,0.6s						
ANX				AML	AML	16 23 18.6	
	comp=E,7567μm,0.5s						
EVR	Evrytania	1.19	65	P	Pn	16 22 49.4	-0.9
EVR	Evrytania	1.19	65	P	Pn	16 22 49.8	-0.5
EVR				AML	AML	16 23 17.9	
	comp=E,2838μm,1.0s						
EVR				AML	AML	16 23 24.1	
	comp=N,2392μm,0.8s						
LAKA	Lakka	1.24	98	P	Pn	16 22 49.8	-1.1
LAKA				S	Sg	16 23 09.8	+2.2
	comp=N,2μm,0.7s						
LAKA	Lakka	1.24	98	P	Pn	16 22 49.8	-1.1
JAN	Janina	1.27	15	P	Pg	16 22 52.5	+0.3
JAN				S	Sg	16 23 11.8	+3.1
	comp=N,2μm,0.5s						
JAN	Janina	1.27	15	P	Pg	16 22 52.6	+0.4
SERG	Sergoula	1.28	90	P	Pn	16 22 50.7	-0.8
SERG				S	Sg	16 23 11.5	+2.5
	comp=N,3μm,0.8s						
SERG	Sergoula	1.28	90	P	Pn	16 22 51.0	-0.5
SERG				AML	AML	16 23 15.0	
	comp=E,6188μm,0.6s						
SERG				AML	AML	16 23 15.3	
	comp=N,7214μm,0.6s						
TRIZ	Trizonia	1.30	92	P	Pn	16 22 51.0	-0.7
TRIZ	Trizonia	1.30	92	P	Pn	16 22 50.9	-0.7
KALE	Kalithea	1.35	91	P	Pn	16 22 51.8	-0.7
KALE				S	Sg	16 23 15.3	+4.1
	comp=N,2μm,0.6s						
KALE	Kalithea	1.35	91	P	Pn	16 22 52.1	-0.4
KALE				S	Sb	16 23 09.6	-0.6
KALE				AML	AML	16 23 20.0	
	comp=N,6159μm,0.8s						
KALE				AML	AML	16 23 20.6	
	comp=E,3632μm,0.5s						
AMT	Artemida-Makis	1.35	131	P	Pb	16 22 52.5	-0.5
KASA	Kassiopi	1.37	344	P	Pg	16 22 54.4	+0.4
KLV	Kalavryta, Ach	1.41	105	P	Pn	16 22 52.7	-0.6
KLV				S	Sg	16 23 14.3	+1.1
	comp=E,952nm,1.1s						
KLV	Kalavryta, Ach	1.41	105	P	Pn	16 22 53.0	-0.4
KLV				AML	AML	16 23 23.7	
	comp=E,2246μm,0.7s						
KLV				AML	AML	16 23 27.8	
	comp=N,1535μm,1.4s						
MAKR	Makrakomi, Fth	1.46	66	P	Pb	16 22 54.9	0.0
SRN	Sarande	1.49	347	P	Pb	16 22 55.5	+0.2
AGG	Agios Georgios	1.60	68	P	Pb	16 22 56.8	-0.5
AGG	Agios Georgios	1.60	68	P	Pb	16 22 57.2	-0.1
THL	Klokotos Trika	1.68	47	P	Pb	16 22 58.5	-0.1
KPRO	Kipourio	1.69	25	P	Pg	16 23 00.0	-0.2
ITM	Ithomi	1.72	136	P	Pg	16 22 59.9	-0.9
PENT	Pentalofos	1.85	17	P	Pg	16 23 02.9	-0.4
PYL	PYLOS	1.85	145	P	Pb	16 23 00.2	-1.3
LKR	Lokris	2.03	83	P	Pb	16 23 04.1	-0.5
LTK	Loutraki	2.04	101	P	Pb	16 23 03.9	-0.9
NEST	Nestorio	2.04	14	P	Pb	16 23 05.5	+0.7
VIL2	Platees	2.25	95	P	Pb	16 23 07.4	-0.8
LIT	Litokhoron	2.32	43	P	Pb	16 23 08.7	-0.8
DID	Didima	2.41	112	P	Pb	16 23 08.9	-2.1
MRKA	Markates	2.50	83	P	Pn	16 23 10.0	+1.8
OHR	Ohrid	2.70	6	ePn	Pb	16 23 14.2	-1.8
VLY	Voula,Athens	2.72	101	P	Pn	16 23 12.9	+1.7
VAY	Valandovo	3.33	29	ePn	Pb	16 23 23.4	-3.3
MASS	Massafra	3.36	312	ePn	Pn	16 23 22.0	+1.9
STIP	Stip	3.53	22	ePn	Pb	16 23 26.5	-3.7
ULC	Ulcinj	3.65	346	⇑iPn	Pn	16 23 23.9	-0.1
ULC				i Sn	Sn	16 24 07.3	+0.3
SG1	Sgolgore (BA)	3.76	311	ePn	Pn	16 23 27.3	+1.6
BAI	Bari	3.82	316	ePn	Pn	16 23 29.5	+3.1
DRME	Dracevica, Mon	3.87	346	⇑iPn	Pn	16 23 27.1	0.0
DRME				eSn	Sn	16 24 13.1	+0.5
BUM	Brajici-Budva	4.04	344	ePn	Pn	16 23 29.1	-0.4
BUM				eSn	Sn	16 24 16.7	-0.1
TTG	Podgorica	4.10	348	ePn	Pn	16 23 29.9	-0.3
TTG				eSn	Sn	16 24 17.8	-0.2
PVY	Plav	4.18	355	⇑iPn	Pn	16 23 31.9	+0.5
PVY				i Sn	Sn	16 24 20.9	+0.6
CEME	Cevo	4.27	345	ePn	Pn	16 23 32.1	-0.6
CEME				eSn	Sn	16 24 22.5	0.0
HCY	Herceg Novi	4.28	340	ePn	Pn	16 23 32.2	-0.5
HCY				i Sn	Sn	16 24 22.6	+0.1
IVA	Berane	4.46	355	ePn	Pn	16 23 36.1	+0.8
IVA				eSn	Sn	16 24 27.5	+0.4
KOME	Kolasin	4.47	351	ePn	Pn	16 23 35.3	-0.1
KOME				eSn	Sn	16 24 28.0	+0.5
NKME	Niksic	4.48	346	ePn	Pn	16 23 35.1	-0.4
NKME				eSn	Sn	16 24 27.5	0.0
BRY	Bratogost	4.69	343	ePn	Pn	16 23 38.1	-0.4
BRY				eSn	Sn	16 24 32.8	-0.2
UPM	Unac-Piva	4.91	347	ePn	Pn	16 23 40.7	-0.8
UPM				eSn	Sn	16 24 38.2	-0.1
PLE	Pljevlja	4.96	351	⇓iPn	Pn	16 23 42.6	+0.4
PLE				eSn	Sn	16 24 39.6	+0.1
SOKA	Soboth	9.15	336	i Pn	Pn	16 24 39.0	-0.7
	comp=N,7.5nm,0.7s						
SOKA				eSn	Sn	16 26 17.6	-5.0
	comp=N,4.9nm,0.7s						
OBKA	Obir	9.17	334	i Pn	Pn	16 24 41.2	+1.3
	comp=N,5.0nm,0.7s						
OBKA				eSn	Sn	16 26 18.4	-4.6
	comp=N,6.9nm,0.7s						
KBA	Koelnbreinsper	10.09	331	ePn	Pn	16 24 53.3	+0.8
	comp=N,1.1nm,0.5s						
KBA				Sn	Sn	16 26 40.9	-4.8
	comp=N,3.1nm,0.7s						
VYHS	Vyhne	10.13	354	eSN	Sn	16 26 40.7	-5.8
ABTA	Abfaltersbach	10.15	328	ePn	Pn	16 24 53.3	0.0
	comp=N,3.0nm,0.7s						
ABTA				i Sn	Sn	16 26 42.4	-4.8
	comp=N,3.6nm,0.7s						
BRTR	Keskin Array B	10.36	79	Pn	Pn	16 25 01.5	+5.3
	baz=269,slow=12,SNR=2.4						
MOA	Molln	10.43	336	i Pn	Pn	16 24 57.3	+0.2
	comp=N,2.1nm,0.3s						
WATA	Walderalm	11.01	327	ePn	Pn	16 25 05.8	+0.6
	comp=N,3.2nm,0.5s						
WATA				eSn	Sn	16 27 05.5	-2.7
	comp=N,5.4nm,0.5s						
MOTA	Moosalm	11.22	326	i Pn	Pn	16 25 09.4	+1.3
	comp=N,1.5nm,0.3s						
MOTA				eSn	Sn	16 27 11.1	-2.4
	comp=N,1.3nm,0.4s						
RETA	Reutte	11.48	325	ePn	Pn	16 25 13.6	+2.1
	comp=N,1.0nm,0.4s						
RETA				eSn	Sn	16 27 18.7	-1.0
	comp=N,3.0nm,0.6s						
GERES	GERESS Array B	11.49	337	Pn	Pn	16 25 10.8	-0.9
	comp=N,0.3nm,0.3s,baz=170,slow=16,SNR=4.7						
AKASG	Malin Array Be	13.77	24	Pn	Pn	16 25 42.4	-0.3
	comp=N,0.2nm,0.3s,baz=211,slow=12,SNR=2.4						
FINES	FINESS Array B	23.31	7	P	P	16 27 35.0	-0.3
	comp=N,3.1nm,0.9s,baz=182,slow=9.2,SNR=11						
NB2	NORSAR Subarra	23.36	349	P	P	16 27 38.1	+2.2
	comp=Z,0.5nm,0.5s,baz=157,slow=9.3						
NOA	NORSAR Array B	23.36	349	P	P	16 27 36.2	+0.4
	comp=Z,0.7nm,0.8s,baz=162,slow=10.0,SNR=4.4						
GEYT	Alibeck	29.50	79	P	P	16 28 32.5	+0.7
	comp=Z,0.5nm,0.5s,baz=277,slow=5.7,SNR=3.4						
TORD	Torodi Ar. Bea	30.18	218	P	P	16 28 38.3	+0.4
	comp=Z,1.3nm,0.8s,baz=35,slow=9.3,SNR=7.1						
MKAR	Makanchi Array	45.24	59	P	P	16 30 44.7	-0.1
	comp=Z,0.3nm,0.3s,baz=278,slow=7.6,SNR=12						
ZALV	Zalesovo Beam	45.58	48	P	P	16 30 47.3	-0.1
	comp=Z,1.5nm,0.6s,baz=270,slow=9.4,SNR=7.8						

*IDC **01** 16:25:00.2±0.7, 17°.12N×119°.40E, h0km, mb3.8/11, mb1 3.9/12, mb1mx3.8/51, mbtmp3.8/12, ML3.6/1, Error ellipse: s-maj=30.2km s-min=15.6km az=70.0*
*MAN **01** 16:25:02.0, 17°.26N×119°.31E, h5km, mb4.7, ML3.6, MS3.5*
ISC 01 16:25:02.1±0.7**, 17°.18N**±0°.06×**119°.28E**±0°.06**, h10**km**, n18, σ1s.21**/23**, mb3.6**/11**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	Bolinao	1.00	142	eP	Pg	16 25 21.8	+0.3
ABRA	Dolores	1.45	71	eP	Pn	16 25 27.6	-0.7
ABRA				eS	Sb	16 25 46.5	-1.2
SMPP	San Manuel, Pa	1.69	127	eP	Pn	16 25 31.9	+0.1
SMPP				eS	Sb	16 25 55.7	+1.0
APYP	Conner	2.00	70	eP	Pn	16 25 36.1	+0.1
APYP				eS	Sn	16 26 01.6	+0.6
CAUP	Cauayan	2.45	95	eP	Pn	16 25 45.2	+3.0
CAUP				eS	Sb	16 26 17.8	+1.3
LQP	Lukban	3.75	144	⇑eP	Pb	16 26 07.7	-0.9
CMAR	Chiang Mai Arr	19.40	277	P	P	16 29 30.4	+1.9
	0.1nm,0.3s,baz=88,slow=8.9,SNR=8.3						
KSRS	Korea Array	21.59	19	P	P	16 29 51.0	-1.1
	1.9nm,0.8s,baz=203,slow=11,SNR=7.3						
SONM	Songino Array	32.35	344	P	P	16 31 32.2	+0.4
	0.5nm,0.6s,baz=162,slow=9.6,SNR=5.6						
WRA	Warramunga Arr	39.75	158	P	P	16 32 33.3	-1.9
	1.5nm,1.0s,baz=331,slow=10,SNR=3.5						
MKAR	Makanchi Array	42.44	322	P	P	16 32 58.5	+1.4
	1.1nm,0.9s,baz=116,slow=6.9,SNR=8.2						
MKAR				PcP	PcP	16 34 50.0	-0.1
	0.3nm,0.8s,baz=108,slow=4.7,SNR=2.9						
ASAR	Alice Springs	43.04	160	P	P	16 33 01.8	-0.4
	0.5nm,0.6s,baz=340,slow=6.9,SNR=15						
ZALV	Zalesovo Beam	45.35	332	P	P	16 33 20.4	0.0
	1.2nm,0.7s,baz=125,slow=7.8,SNR=6.7						
PETK	Petropavlovsk-	46.71	31	P	P	16 33 32.0	+0.9
	5.2nm,0.9s,baz=242,slow=17,SNR=2.6						
STKA	Stephens Creek	53.27	156	P	P	16 34 19.8	-1.4
	1.0nm,0.5s,baz=352,slow=7.1,SNR=4.2						
FINES	FINESS Array B	76.59	330	P	P	16 36 52.9	+0.3
	4.5nm,1.1s,baz=70,slow=9.1,SNR=3.4						
NOA	NORSAR Array B	83.56	332	P	P	16 37 29.9	-0.5
	0.7nm,0.7s,baz=73,slow=4.6,SNR=2.7						
YKA	Yellowknife Ar	90.09	22	P	P	16 38 01.3	-0.8
	0.2nm,0.6s,baz=305,slow=4.5,SNR=4.8						

IDC 01 16:26:47.1±2.5**, 9°.80S**×**106°.92E, h0**km**, mb3.3**/3**, mb1 3.5**/4**, mb1mx3.3**/45**, mbtmp3.3**/4**, ML3.5**/1**, MS2.5**/1**, Ms1 2.5**/1**, ms1mx2.3**/23**, Error ellipse: s-maj=83.5km s-min=28.5km az=59.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	Lembang	3.04	13	Pn	Pn	16 27 38.5	+1.9
	5.5nm,0.3s,baz=23,slow=12,SNR=3.6						
LEM				Sn	Sn	16 28 07.4	-6.4
	8.6nm,0.3s,baz=296,slow=21,SNR=5.6						
LEM				LR	LR	16 28 46.8	
	comp=Z,79nm,20.3s,baz=138,slow=39						
ASAR	Alice Springs	29.21	122	P	P	16 32 51.0	+0.2
	0.7nm,0.9s,baz=304,slow=9.1,SNR=8.2						
SONM	Songino Array	57.38	360	P	P	16 36 35.3	-2.0
	0.1nm,0.4s,baz=196,slow=6.3,SNR=3.0						
MKAR	Makanchi Array	60.48	341	P	P	16 36 59.6	+0.7
	0.1nm,0.3s,baz=150,slow=6.9,SNR=5.2						

*BJI **01** 16:33:37.0±0.0, 38°.12N×20°.37E, h9km, mB5.1/22, mb4.8/59, Ms5.0/23, Ms7 4.7/25*
*PDG **01** 16:33:37.9±0.4, 38°.17N×20°.30E, h10km, ML4.6/14, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*IDC **01** 16:33:38.6±0.5, 38°.16N×20°.44E, h0km, mb4.6/30, mb1 4.6/40, mb1mx4.5/54, mbtmp4.5/40, ML4.2/9, MS4.3/41, Ms1 4.3/41, ms1mx4.2/53, Error ellipse: s-maj=11.0km s-min=10.4km az=140.0*
*ATH **01** 16:33:38.5, 38°.17N×20°.37E, h11km, ML4.5/21, Error ellipse: s-maj=1.9km s-min=0.8km az=72.0*
*THE **01** 16:33:38.4, 38°.18N×20°.30E, h3km±4km, ML4.5/15, Error ellipse: s-maj=5.0km s-min=0.7km az=86.0*
*NEIC **01** 16:33:39.9±2.8, 38°.14N±0°.06×20°.28E±0°.06, h10km±1km, Error ellipse: s-maj=8.6km s-min=6.4km az=187.0*
*BEO **01** 16:33:39.7±0.8, 38°.03N×20°.19E, h20km, ML4.2/5*
*MED_RC **01** 16:33:40.0±0.3, 38°.11N×20°.42E, h20km±1km, MW5.0/26, Moment Tensor Solution. Body waves: s4,c4;Mantle waves: s26,c37; Duration: 1s.2 Moment tensor: Scale 10^{16}Nm; M_{rr}0.94±.17; $M_{\theta\theta}$1.56±.17; $M_{\phi\phi}$-2.50±.17; $M_{r\theta}$-0.31±.23; $M_{\theta\phi}$2.74±.10; $M_{\phi r}$-0.14±.22; Best double couple: $M_0$3.44000×10^{16} NP1:ϕ_s198.00000°,δ83.00000°, λ173.00000°. NP2:ϕ_s289.00000°,δ83.00000°,λ7.00000°. Principal axes: T 3.0000, Plg9.0000°, Azm153.0000°; N 0.8900, Plg81.0000°, Azm332.0000°; P -3.8800, Plg0.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*
*MOS **01** 16:33:40.4±1.2, 38°.26N×20°.28E, h21km, mb5.1/28, MS4.5/10 Error ellipse: s-maj=5.5km s-min=3.3km az=72.8*
*GCMT **01** 16:33:40.5±0.2, 38°.05N±0°.02×20°.37E±0°.01, h17km±1km, MW4.9/107, Moment Tensor Solution. s30,c36; s107,c158; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.88±.10; $M_{\theta\theta}$1.26±.09; $M_{\phi\phi}$-2.13±.09; $M_{r\theta}$0.20±.23; $M_{\theta\phi}$2.12±.07; $M_{\phi r}$1.08±.22; Best double couple: $M_0$2.94500×10^{16} NP1:ϕ_s17.00000°,δ83.00000°, λ155.00000°. NP2:ϕ_s110.00000°,δ65.00000°,λ8.00000°. Principal axes: T 2.5490, Plg23.0000°, Azm331.0000°; N 0.7960, Plg64.0000°, Azm182.0000°; P -3.3400, Plg12.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **01** 16:33:40.2±0.8, 38°.16N×20°.66E, h15km Error ellipse: s-maj=28.9km s-min=10.0km az=58.0*
*HLW **01** 16:33:41.6, 38°.18N×21°.46E, h10km±11km, Md4.6*
*GII **01** 16:33:46.8±3.9, 37°.07N×21°.25E, h2km, mb4.6/1, MD4.5/1*
ISC 01 16:33:39.5±0.5**, 38°.19N**±0°.02×**20°.38E**±0°.02**, h7**km±3km**, n693, σ1s.87**/779**, mb4.9**/84**, MS4.4**/37**, 22C-25D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.01	173	P	Pg	16 33 39.5	-1.1
CHV1				S	Sg	16 33 40.9	-0.5
KEF3	Kipouria, Keph	0.03	300	P	Pg	16 33 40.0	-0.8
KEF4	Livadi, Kephal	0.08	26	P	Pg	16 33 41.0	-0.4
KEF4				S	Sg	16 33 42.9	+0.2
ARG2	Argostoli	0.09	97	P	Pg	16 33 40.9	-0.6
KEF2	Argostoli. Kep	0.09	105	P	Pg	16 33 41.0	-0.5
KEF2				S	Sg	16 33 42.6	-0.3
KEF1	Kardakata, Kep	0.11	38	P	Pg	16 33 41.5	-0.5
KEF1				S	Sg	16 33 44.3	+0.6
VLS	Valsamata	0.17	94	P	Pg	16 33 42.1	-0.8
VLS				S	Sg	16 33 45.1	-0.1
VLS	Valsamata	0.17	94	P	Pg	16 33 42.3	-0.6
VLS				S	Sg	16 33 45.0	-0.1
VLS				AML	AML	16 33 46.1	
VLS				AML	AML	16 33 46.1	
VSK1	VASILIKIADES	0.26	33	P	Pg	16 33 44.2	-0.5
VSK1				S	Sg	16 33 49.4	+1.2
	183μm,0.3s						
FSK	Fiskardo	0.31	28	P	Pg	16 33 45.0	-0.5
FSK				S	Sg	16 33 50.7	+1.1
	80μm,0.2s						
FSK	Fiskardo	0.31	28	P	Pg	16 33 45.4	-0.1
FSK				S	Sg	16 33 49.5	-0.1
FSK				AML	AML	16 33 55.3	
FSK				AML	AML	16 33 55.5	
VLMS	Volimes, Zakyn	0.38	144	P	Pg	16 33 46.0	-0.9

VLMS S Sg 16 33 52.1 +0.2
VLMS AML AML 16 34 00.7
VLMS AML AML 16 34 04.9
EVGI Lefkada island 0.48 26 P Pg 16 33 48.1 -0.7
EVGI Lefkada island 0.48 26 P Pg 16 33 48.2 -0.7
EVGI S Sg 16 33 55.8 +0.7
MGNA Meganis 0.57 34 P Pg 16 33 49.9 -0.5
MGNA S Sg 16 33 57.7 -0.2
MGNA AML AML 16 34 00.6
MGNA AML AML 16 34 00.7
ZAK2 Zakynthos 0.57 134 P Pg 16 33 49.9 -0.6
ZAK2 S Sb 16 34 00.7 +0.5
286µm,0.7s
KRI1 kERI 0.63 147 P Pg 16 33 50.1 -1.5
KRI1 S Sb 16 34 00.9 -1.0
118µm,0.7s
LKD2 Lefkada island 0.64 20 P Pg 16 33 50.7 -1.1
LKD2 S Sb 16 34 01.6 -0.6
20µm,0.5s
LKD2 Lefkada island 0.64 20 P Pg 16 33 51.1 -0.7
LKD2 S Sg 16 34 00.3 +0.2
AST1 Astakos 0.66 57 P Pg 16 33 51.5 -0.7
AST1 S Sb 16 34 02.9 +0.1
57µm,0.6s
TSLK Tsoukalades, L 0.67 19 P Pg 16 33 51.5 -0.9
TSLK S Sb 16 34 02.4 -0.7
23µm,0.7s
TSLK Tsoukalades, L 0.67 19 P Pg 16 33 51.7 -0.8
TSLK S Sg 16 34 00.7 -0.5
TSLK AML AML 16 34 10.5
comp=N,41026µm,0.4s
TSLK AML AML 16 34 11.6
comp=E,48683µm,0.7s
PDO Prodromos 0.75 57 P Pg 16 33 53.0 -1.0
PDO S Sg 16 34 04.4 +0.7
comp=E,68µm,0.6s
PDO Prodromos 0.75 57 P Pg 16 33 53.6 -0.4
PDO AML AML 16 34 13.8
PDO AML AML 16 34 16.7
comp=E,77206µm,0.7s
RLS Riolos of Patr 0.87 98 P Pg 16 33 55.3 -0.8
RLS S Sb 16 34 08.1 -0.6
comp=E,20µm,0.7s
RLS Riolos of Patr 0.87 98 P Pg 16 33 55.3 -0.8
RLS AML AML 16 34 17.8
comp=N,36399µm,0.8s
RLS AML AML 16 34 20.7
comp=E,41426µm,0.6s
PVO Paravola 1.00 64 P Pg 16 33 57.8 -0.8
PVO S Sn 16 34 15.1 +0.8
comp=E,50µm,0.7s
PVO Paravola 1.00 64 P Pg 16 33 57.9 -0.7
PVO AML AML 16 34 24.1
comp=E,95918µm,0.6s
PVO AML AML 16 34 24.3
DRO Drossia 1.07 102 P Pg 16 33 59.0 -1.1
DRO S Sb 16 34 14.9 +0.1
comp=E,40µm,0.9s
DRO Drossia 1.07 102 P Pg 16 33 59.4 -0.8
DRO S Sg 16 34 14.0 -0.1
DRO AML AML 16 34 29.2
comp=N,68732µm,0.5s
DRO AML AML 16 34 30.7
comp=E,86488µm,0.8s
UPR University Cam 1.11 85 P Pg 16 34 00.4 -0.4
UPR University Cam 1.11 85 P Pg 16 34 00.4 -0.4
EFP Efpalio 1.22 78 P Pg 16 34 01.3 -1.6
EFP Efpalio 1.22 78 P Pg 16 34 01.3 -1.6
EFP AML AML 16 34 29.2
comp=N,36877µm,0.6s
EFP AML AML 16 34 32.4
comp=E,51621µm,0.6s
AMT Artemida-Makis 1.24 122 P Pg 16 34 01.8 -1.5
AMT Artemida-Makis 1.24 122 P Pg 16 34 02.9 -0.4
AMT AML AML 16 34 30.4
comp=N,56650µm,0.7s
AMT AML AML 16 34 32.5
comp=E,67205µm,0.7s
LAKA Lakka 1.26 87 P Pn 16 34 01.9 -1.7
LAKA Lakka 1.26 87 P Pn 16 34 02.3 -1.3
LAKA AML AML 16 34 26.9
comp=E,28828µm,0.7s
LAKA AML AML 16 34 32.3
comp=N,25028µm,0.7s
ANX Ano Chora 1.28 71 P Pn 16 34 02.3 -1.6
ANX Ano Chora 1.28 71 P Pn 16 34 03.7 -0.2
ANX AML AML 16 34 29.7
comp=N,80406µm,0.6s
ANX AML AML 16 34 35.7
comp=E,55581µm,0.6s
EVR Evrytania 1.33 57 P Pn 16 34 03.4 -1.3
EVR S Sn 16 34 28.7 +5.9
comp=E,13µm,1.5s
EVR Evrytania 1.33 57 P Pn 16 34 03.5 -1.3
EVR AML AML 16 34 33.0
comp=E,16804µm,0.9s
EVR AML AML 16 34 34.1
comp=N,26655µm,0.8s
SERG Sergoula 1.34 80 P Pn 16 34 02.8 -1.9
SERG S Sn 16 34 25.2 +2.4
comp=N,17µm,0.9s
SERG Sergoula 1.34 80 P Pn 16 34 03.6 -1.1
SERG AML AML 16 34 33.1
comp=E,39029µm,1.0s
SERG AML AML 16 34 36.9
comp=N,26941µm,0.7s
TRIZ Trizonia 1.34 82 P Pn 16 34 03.0 -1.7
TRIZ Trizonia 1.34 82 P Pn 16 34 03.3 -1.5
ALIK Aliki, Aigiali 1.36 86 P Pn 16 34 03.9 -1.1
KALE Kalithea 1.40 81 P Pn 16 34 04.1 -1.5
KALE Kalithea 1.40 81 P Pn 16 34 04.4 -1.2
KALE AML AML 16 34 36.4
comp=E,27282µm,1.0s
KALE AML AML 16 34 38.5
comp=N,26433µm,0.8s
KLV Kalavryta, Ach 1.40 95 P Pn 16 34 04.4 -1.2
KLV S Sg 16 34 25.3 +0.7
comp=N,12µm,0.8s
KLV Kalavryta, Ach 1.40 95 P Pn 16 34 05.3 -0.4
KLV AML AML 16 34 40.6
comp=N,23444µm,0.9s
KLV AML AML 16 34 40.8
comp=E,26665µm,0.8s
JAN Janina 1.51 14 P Pb 16 34 07.8 -0.1
JAN Janina 1.51 14 P Pb 16 34 08.1 +0.2
ITM Ithomi 1.59 129 P Pn 16 34 06.6 -1.5
ITM Ithomi 1.59 129 P Pn 16 34 07.8 -0.3
ITM AML AML 16 34 43.7
comp=N,22939µm,0.7s
ITM AML AML 16 34 53.9
comp=E,20180µm,1.1s
ITM Ithomi 1.59 129 Pn 16 34 08.5 +0.4
KASA Kassiopi 1.59 348 P Pn 16 34 08.1 -0.1
MAKR Makrakomi, Fth 1.60 58 P Pn 16 34 08.3 0.0
MAKR Makrakomi, Fth 1.60 58 P Pn 16 34 08.5 +0.2
PYL PYLOS 1.68 140 P Pn 16 34 08.7 -0.7
PYL PYLOS 1.68 140 P Pn 16 34 08.7 -0.7
DLFA Delphi 1.69 79 P Pb 16 34 10.3 -0.6
SRN Sarande 1.71 350 P Pn 16 34 09.7 -0.1
AGG Agios Georgios 1.74 61 P Pb 16 34 11.7 -0.1
AGG S Sg 16 34 36.8 +1.4
comp=E,8µm,1.3s
AGG Agios Georgios 1.74 61 P Pn 16 34 10.9 +0.7
AGG Agios Georgios 1.74 61 Pb 16 34 12.3 +0.5
AGG Agios Georgios 1.74 61 P Pb 16 34 12.3 +0.5
VLX Vlachokerasia 1.78 117 P Pb 16 34 12.3 -0.3
VLX Vlachokerasia 1.78 117 P Pb 16 34 12.4 -0.3
VLX AML AML 16 34 54.0
comp=E,33199µm,1.2s
VLX AML AML 16 34 54.9
comp=N,23609µm,0.6s
THL Klokotos Trika 1.88 42 P Pb 16 34 13.2 -0.9
THL Klokotos Trika 1.88 42 P Pn 16 34 13.1 +1.0
AXAR Agios Charalam 1.88 71 P Pb 16 34 13.5 -0.7
AXAR AML AML 16 34 53.0
comp=N,38459µm,0.7s
AXAR AML AML 16 34 53.2
comp=E,34801µm,1.1s
KPRO Kipourio 1.92 23 P Pb 16 34 14.3 -0.7
KPRO Kipourio 1.92 23 P Pb 16 34 14.6 -0.4
LTK Loutraki 2.05 94 P Pn 16 34 15.2 +0.8
LOUT Loutraki 2.06 95 P Pn 16 34 15.6 +1.1
PENT Pentalofos 2.09 16 P Pb 16 34 17.3 -0.5
LKR Lokris 2.11 77 P Pn 16 34 16.5 +1.2

LKR Lokris 2.11 77 P Pb 16 34 16.7 -1.4
VIL2 Platees 2.27 89 P Pb 16 34 18.5 +1.0
NEST Nestorio 2.28 13 P Pb 16 34 19.9 -1.2
NEST Nestorio 2.28 13 P Pb 16 34 19.7 -1.5
KRND KRANIDI 2.34 109 P Pn 16 34 18.6 +0.3
KRND KRANIDI 2.34 109 P Pn 16 34 18.7 +0.3
DID Didima 2.36 106 P Pn 16 34 18.9 +0.1
KZN Kozani 2.38 27 P Pn 16 34 20.7 +1.7
SCTE Santa Cesarea 2.40 322 Pn 16 34 18.6 -0.7
NEO Neokhori 2.49 62 P Pn 16 34 21.4 +0.9
XOR Xorichti 2.49 61 P Pn 16 34 21.0 +0.4
VLI Veliai 2.51 125 P Pn 16 34 21.3 +0.6
LIT Litokhoron 2.52 40 P Pn 16 34 21.6 +0.7
LIT Litokhoron 2.52 40 Pb 16 34 23.5 -1.6
LIT Litokhoron 2.52 40 P Pb 16 34 23.5 -1.6
MRKA Markates 2.57 77 P Pn 16 34 22.6 +0.9
SKIA Skiathos 2.60 67 P Pn 16 34 23.3 +1.2
ATH Athens Observa 2.64 94 P Pn 16 34 23.0 +0.4
ATH AML AML 16 35 22.1
comp=E,6268µm,1.2s
ATH AML AML 16 35 32.5
comp=N,6596µm,1.3s
ATHU Athens Univers 2.69 94 P Pn 16 34 24.1 +0.7
FNA Florina 2.70 16 ePn Pn 16 34 24.8 +1.2
FNA eSn Sb 16 34 59.9 -1.8
FNA Florina 2.70 16 P Pn 16 34 24.3 +0.8
FNA Florina 2.70 16 Pn 16 34 24.6 +1.2
FNA Florina 2.70 16 P Pn 16 34 24.7 +1.2
VLY Voula,Athens 2.72 96 P Pn 16 34 24.0 +0.4
PTL Penteli 2.75 92 P Pn 16 34 24.9 +0.8
EREA Eretria 2.80 84 P Pn 16 34 25.6 +0.8
KTHA Kythira Island 2.88 131 P Pn 16 34 27.4 +1.5
AOS Alonnisos 2.91 69 P Pn 16 34 26.7 +0.4
OHR Ohrid 2.94 6 ePn Pb 16 34 29.6 -2.7
TIP Timpagrande 3.00 290 ⇓P Pn 16 34 27.3 -0.3
TIP ⇓S Sn 16 35 04.0 +0.1
TIP Timpagrande 3.00 290 Pn 16 34 26.7 -0.9
TIR Tirane 3.18 353 ePn Pn 16 34 31.9 +1.9
TIR Tirane 3.18 353 ⇑P Pn 16 34 30.8 +0.8
TIR ⇓S Sb 16 35 12.0 -3.3
TIR Tirane 3.18 353 Pn 16 34 31.2 +1.2
TIR Tirane 3.18 353 P Pn 16 34 31.2 +1.2
KARY Karystos 3.20 92 P Pn 16 34 31.0 +0.6
CGL1 Ceglie Messapi 3.34 319 ePn Pn 16 34 32.3 +0.2
CGL1 (Sn) Sg 16 35 40.0 +13
TAR1 Taranto 3.35 315 ePn Pn 16 34 33.5 +1.2
TAR1 (Sn) Sg 16 35 39.6 +13
MASS Massafra 3.50 315 ePn Pn 16 34 35.1 +0.7
MASS (Sn) Sg 16 35 44.2 +12
CEL Celeste 3.53 273 Pn 16 34 34.2 -0.7
VAY Valandovo 3.56 28 ePn Pn 16 34 36.2 +1.1
VAY Valandovo 3.56 28 P Pn 16 34 37.2 +2.1
VAY Valandovo 3.56 28 ePn Pn 16 34 35.9 +0.7
MATE Matera 3.76 312 ⇑P Pn 16 34 39.0 +1.1
STIP Stip 3.77 21 ePn Pn 16 34 40.0 +1.9
SRS Serrai 3.83 39 ePn Pn 16 34 40.2 +1.2
SRS eSn Sn 16 35 25.6 +1.2
SKO Skopje 3.87 12 ePn Pn 16 34 40.4 +1.0
SKO eSn Sn 16 35 27.3 +2.2
SKO Skopje 3.87 12 ePn Pn 16 34 40.7 +1.2
ULC Ulcinj 3.87 347 ePn Pn 16 34 38.6 -0.9
ULC eSn Sn 16 35 24.9 -0.4
SG1 Sgolgore (BA) 3.90 314 ePn Pn 16 34 40.6 +0.7
BAI Bari 3.98 318 ePn Pn 16 34 41.8 +0.9
DRME Dracevica, Mon 4.10 347 ePn Pn 16 34 42.2 -0.4
DRME Dracevica, Mon 4.10 347 ePn Pn 16 34 42.0 -0.6
DRME eSn Sn 16 35 31.2 +0.4
KKB Krupnik 4.22 29 P Pn 16 34 47.6 +3.3
APE Apeiranthos 4.24 104 ⇓P Pn 16 34 48.3 +3.7
APE Apeiranthos 4.24 104 ⇑eP Pn 16 34 48.7 +4.1
BUM Brajici-Budva 4.26 345 ⇑iPn Pn 16 34 44.1 -0.8
BUM eSn Sn 16 35 34.3 -0.7
MMB Musomiste 4.26 36 P Pn 16 34 45.0 +0.1
ACER Acerenza 4.30 308 Pn 16 34 47.4 +1.9
PDG Podgorica 4.32 349 ePn Pn 16 34 46.7 +1.0
PDG Podgorica 4.32 349 ⇑P Pn 16 34 46.0 +0.4
PDG Podgorica 4.32 349 ePn Pn 16 34 45.2 -0.5
PDG Podgorica 4.32 349 Pn 16 34 45.7 0.0
TTG Podgorica 4.32 349 ePn Pn 16 34 45.1 -0.6
TTG eSn Sn 16 35 36.2 -0.2
PVY Plav 4.41 356 ePn Pn 16 34 46.3 -0.8
PVY eSn Sn 16 35 39.1 +0.3
HCY Herceg Novi 4.49 342 ePn Pn 16 34 46.6 -1.4
HCY Herceg Novi 4.49 342 ePn Pn 16 34 46.9 -1.1
HCY eSn Sn 16 35 39.9 -0.7
CEME Cevo 4.50 346 ePn Pn 16 34 46.7 -1.4
CEME eSn Sn 16 35 38.7 -2.0
BOSS Bosilegrad 4.59 20 ePn Pn 16 34 49.8 +0.4
BOSS Bosilegrad 4.59 20 ePn Pn 16 34 51.7 +2.3
IDI Anoyia 4.64 127 Pn Pn 16 34 49.7 -0.4
comp=N,4.4nm,0.3s,baz=303,slow=12,SNR=21
IDI Sn Sn 16 35 45.8 +1.6
comp=N,31nm,0.3s,baz=280,slow=23,SNR=14
IDI LR LR 16 37 08.7
comp=N,5µm,19.5s,baz=309,slow=46
IVA Berane 4.69 356 ePn Pn 16 34 50.7 -0.2
IVA eSn Sn 16 35 45.7 +0.1
NKME Niksic 4.70 347 ePn Pn 16 34 50.3 -0.7
NKME eSn Sn 16 35 45.7 -0.1
KOME Kolasin 4.70 352 ePn Pn 16 34 50.8 -0.2
KOME eSn Sn 16 35 45.9 0.0
NKY Niksic 4.74 348 ePn Pn 16 34 50.7 -0.8
NKY eSn Sn 16 35 46.6 -0.2
BARS Barje 4.75 13 ePn Pn 16 34 51.6 0.0
TREB Trebinje 4.78 342 ePn Pn 16 34 50.9 -1.1
TREB Trebinje 4.78 342 ePn Pn 16 34 50.7 -1.3
RZN Rozhen 4.83 42 P Pn 16 34 55.7 +2.9
BRY Bratogost 4.91 344 ePn Pn 16 34 52.8 -1.1
BRY Bratogost 4.91 344 ePn Pn 16 34 53.4 -0.5
BRY eSn Sn 16 35 50.6 -0.5
VTS Vitosha 4.93 25 ePn Pn 16 34 55.6 +1.4
VTS eSn Sn 16 35 51.0 -0.6
VTS Vitosha 4.93 25 ⇑P Pn 16 34 56.1 +1.9
VTS Vitosha 4.93 25 P Pn 16 34 55.4 +1.2
VTS Vitosha 4.93 25 Pn 16 34 55.1 +0.9
VTS Vitosha 4.93 25 P Pn 16 34 55.1 +0.9
SGRT San Giovanni R 5.04 316 Pn 16 34 55.6 0.0
SELS Selova 5.06 6 ePn Pn 16 34 56.0 +0.2
SELS eSn Sn 16 35 53.6 -0.9
SJES Sjenica 5.08 357 ePn Pn 16 34 57.3 +1.1
STON Ston 5.10 337 ePn Pn 16 34 55.2 -1.2
PLD Plovdiv 5.12 39 ePn Pn 16 34 58.7 +2.0
UPM Unac-Piva 5.13 348 ePn Pn 16 34 57.5 +0.5
UPM Unac-Piva 5.13 348 ePn Pn 16 34 56.3 -0.7
UPM eSn Sn 16 35 55.5 -1.1
ALN Alexandroupoli 5.15 57 P Pn 16 34 57.9 +0.9
ALN Alexandroupoli 5.15 57 P Pn 16 34 57.9 +0.9
KDZ Kurdzhali 5.19 47 P Pn 16 34 57.9 +0.3
PLE Pljevlja 5.19 352 ePn Pn 16 34 57.1 -0.7
PLE eSn Sn 16 35 57.6 -0.4
PGB Panagyurishte 5.23 32 P Pn 16 35 00.0 +1.8
WDD Wied Dalam 5.24 245 Pn 16 34 56.6 -1.7
WDD Sn 16 35 55.3 -3.7
PAOL Paolisi 5.31 304 Pn 16 35 01.1 +1.8
ZAPS Zavoj 5.36 18 ePn Pn 16 35 01.9 +1.9
IVAS Ivanjica 5.39 358 ePn Pn 16 35 00.4 0.0
RUDO Rudo 5.48 352 ePn Pn 16 35 01.3 -0.3
BOVS Bovan 5.53 10 ePn Pn 16 35 02.2 -0.1
CORL Corleone 5.59 269 Pn 16 35 05.0 +1.8
GRUS Gruza 5.70 2 ePn Pn 16 35 05.5 +0.9
CLTB Caltabellotta 5.70 266 Pn 16 35 07.3 +2.5
BBLS Lazići 5.72 353 ePn Pn 16 35 05.0 0.0
BBLS Lazići 5.72 353 ePn Pn 16 35 05.8 +0.8
DIVS Divibare 5.91 357 ePn Pn 16 35 07.5 -0.1
DIVS Divibare 5.91 357 ePn Pn 16 35 06.5 -1.1
TRUS Trudelj 6.03 0 ePn Pn 16 35 08.9 -0.3
KARP Karpathos 6.04 114 Pn 16 35 11.0 +1.6
PLVB Pleven 6.11 30 ⇓P Pn 16 35 12.5 +2.3
INTR Introdacqua 6.26 310 Pn 16 35 14.2 +1.8
PVL Pavlikeni 6.28 35 P Pn 16 35 13.3 +0.8
ELND Elena 6.32 40 ⇑P Pn 16 35 14.9 +1.8
TEKS Tekeris 6.39 355 ePn Pn 16 35 13.8 -0.3
TEKS Tekeris 6.39 355 ePn Pn 16 35 13.2 -0.9
MGRS Mrkonjic Grad 6.70 339 ePn Pn 16 35 19.1 +0.7
AQU L'Aquila 6.77 310 ePn Pn 16 35 22.1 +2.8
AQU L'Aquila 6.77 310 Pn 16 35 20.3 +1.0
AQU L'Aquila 6.77 310 P Pn 16 35 20.3 +1.0
FRGS Fruska Gora 6.98 357 ePn Pn 16 35 21.5 -0.7
FRGS Fruska Gora 6.98 357 ePn Pn 16 35 20.4 -1.8
BLY Banja Luka 6.98 341 ⇓P Pn 16 35 23.4 +1.2

BLY Banja Luka 6.98 341 ePn Pn 16 35 22.7 +0.5
BLY Banja Luka 6.98 341 Pn 16 35 23.0 +0.8
NRCA Norcia 7.22 312 Pn 16 35 27.0 +1.4
GZR Gura Zlata 7.42 13 ⇑P Pn 16 35 29.6 +1.4
BZS Buzias 7.48 7 ⇑P Pn 16 35 31.0 +1.9
ELL Elmali 7.71 98 Pn 16 35 37.4 +5.0
SLUM Salum 7.77 148 P Pn 16 35 29.0 -4.0
baz=154
SLUM S Sn 16 36 47.7 -14
baz=154
MURB Monte Urbino 7.83 313 Pn 16 35 36.8 +2.9
ARR Arges 7.84 23 ⇑P Pn 16 35 35.7 +1.6
VOIR 8.04 24 ⇑P Pn 16 35 39.5 +2.7
MORH Mrgy, Hungar 8.12 351 ePn Pn 16 35 36.0 -1.9
MLR Muntele Rosu 8.39 28 Pn Pn 16 35 43.6 +1.9
comp=N,0.7nm,0.3s,baz=258,slow=6.9,SNR=16
MLR LR LR 16 39 21.1
comp=N,2µm,18.3s,baz=214,slow=41
MLR Muntele Rosu 8.39 28 ⇑P Pn 16 35 45.2 +3.5
GBRS Gornja Briga 8.43 332 iPn Pn 16 35 41.5 -0.7
GBRS eSn Sn 16 37 13.9 -3.7
CRES Cresnjev 8.46 336 ePn Pn 16 35 41.2 -1.4
MDUB Mudurnu 8.69 71 Pn 16 35 49.6 +3.9
BEHE Becsehely 8.70 343 ePn Pn 16 35 44.8 -0.9
OSSC Osservatorio P 8.73 310 Pn 16 35 45.9 -0.4
CEY Cerknica 8.75 331 ePn Pn 16 35 45.5 -1.0
PLOR Plostina 8.96 29 ⇑P Pn 16 35 52.4 +3.0
LJU Ljubljana 8.97 333 ePn Pn 16 35 48.6 -0.9
TRI Trieste 8.98 329 Pn 16 35 49.1 -0.5
TRI Trieste 8.98 329 P Pn 16 35 49.1 -0.5
VRI Vrincioaia 9.01 30 ⇑P Pn 16 35 53.0 +3.0
KEST Kesra 9.17 258 Pn Pn 16 35 52.3 +0.1
comp=N,1.8nm,0.3s,baz=43,slow=7.2,SNR=16
KEST Sn Sn 16 37 35.7 -0.1
comp=N,0.6nm,0.3s,baz=71,slow=22,SNR=4.5
KEST LR LR 16 40 11.3
comp=N,1µm,19.2s,baz=18,slow=43
KEST Kesra 9.17 258 Pn 16 35 52.2 0.0
SOKA Soboth 9.36 337 iPn Pn 16 35 53.1 -1.8
comp=N,32nm,0.6s,SNR=18
SOKA eSn Sn 16 37 34.6 -5.8
comp=N,10nm,0.5s
OBKA Obir 9.37 334 ePn Pn 16 35 54.6 -0.4
OBKA eSn Sn 16 37 36.2 -4.4
OBKA Obir 9.37 334 ePn Pn 16 35 54.6 -0.4
comp=N,16nm,0.2s
OBKA eSn Sn 16 37 36.0 -4.7
comp=N,52nm,0.8s
TEOL Teolo 9.67 321 Pn 16 35 58.1 -1.0
BIZ Bicaz 9.71 24 ⇑P Pn 16 36 02.4 +2.8
PSZ Piszkesteto 9.73 358 Pn 16 36 00.8 +0.8
PSZ Piszkesteto 9.73 358 P Pn 16 36 00.8 +0.8
ARSA Arzberg 9.73 340 ePn Pn 16 35 59.0 -1.0
ARSA Arzberg 9.73 340 iPn Pn 16 35 58.9 -1.0
comp=N,8.6nm,0.5s,SNR=7.0
MYKA Terra Mystica 9.79 332 ePn Pn 16 36 01.5 +0.7
comp=N,28nm,0.8s
MYKA eSn Sn 16 37 47.7 -3.4
comp=N,7.5nm,0.5s
SWA2 9.87 153 P Pn 16 35 59.4 -2.4
baz=158
BURAR Bucovina Array 10.06 19 ⇓P Pn 16 36 07.5 +2.9
BURAR Bucovina Array 10.06 19 Pn 16 36 05.4 +0.8
BUR08 Bucovina Ar. S 10.09 19 Pn 16 36 09.4 +4.5
MSSA Maissana 10.21 310 Pn Pn 16 36 09.3 +2.8
CONA Conrad Observa 10.28 343 ePn Pn 16 36 07.8 +0.3
comp=N,2.4nm,0.4s
KBA Koelnbreinsper 10.28 332 ePn Pn 16 36 07.2 -0.5
KBA eSn Sn 16 37 59.4 -3.8
KBA Koelnbreinsper 10.28 332 iPn Pn 16 36 07.9 +0.3
comp=N,5.1nm,0.3s,SNR=8.3
KBA eSn Sn 16 37 57.9 -5.3
comp=N,16nm,0.8s
ABTA Abfaltersbach 10.34 328 iPn Pn 16 36 07.8 -0.5
comp=N,5.2nm,0.4s,SNR=7.7
ABTA eSn Sn 16 37 59.7 -4.7
comp=N,15nm,0.6s
VYHS Vyhne 10.36 354 eP Pn 16 36 09.4 +0.8
VYHS e 16 37 59.3
VYHS Vyhne 10.36 354 ePN Pn 16 36 09.4 +0.8
VYHS eSN Sn 16 37 59.3 -5.6
MODS Modra-Piesok 10.43 348 eP Pn 16 36 09.7 +0.2
MODS e 16 37 58.8
MODS Modra-Piesok 10.43 348 ePN Pn 16 36 09.7 +0.2
MODS eSN Sn 16 37 58.8 -7.8
BR131 Keskin Array S 10.44 77 Pn 16 36 12.5 +2.7
BR131 Keskin Array S 10.44 77 P Pn 16 36 12.5 +2.7
BRTR Keskin Array B 10.44 77 Pn Pn 16 36 13.7 +3.9
comp=N,0.6nm,0.3s,baz=259,slow=12,SNR=12
BRTR LR LR 16 41 08.9
comp=N,2µm,20.8s,baz=246,slow=43
BRTR Keskin Array B 10.44 77 Pn 16 36 13.4 +3.6
UZH Uzhgorod 10.53 7 eP Pn 16 36 11.3 +0.5
UZH eS Sn 16 38 09.4 +0.4
UZH MLR MLR
comp=Z,400nm,11.0s
MOA Molln 10.64 337 ePn Pn 16 36 10.7 -1.6
MOA eSn Sn 16 38 07.8 -3.9
MOA Molln 10.64 337 iPn Pn 16 36 12.9 +0.5
comp=Z,18nm,0.5s,SNR=16
MOA eSn Sn 16 38 08.7 -3.0
comp=Z,9.8nm,0.5s
KIS Kishinev 10.77 33 eP Pn 16 36 18.0 +3.9
KIS iLi 16 39 22.0
KIS iLQ LQ 16 40 30.0
KIS LRM MLR 16 41 00.0
comp=Z,2µm,12.0s
KIS Kishinev 10.77 33 eP Pn 16 36 18.0 +3.9
KIS e 16 38 20.0
KIS MLR MLR
comp=Z,2µm,12.0s
KIS MLR MLR
comp=N,5µm,13.0s
JAVC Velka Javorina 10.85 350 ePN Pn 16 36 15.8 +0.6
RJOB Jochberg 11.04 332 ePn Pn 16 36 18.7 +0.9
RJOB eSn Sn 16 38 18.5 -3.1
WATA Walderalm 11.19 328 ePn Pn 16 36 20.1 0.0
comp=N,17nm,0.5s,SNR=15
WATA eSn Sn 16 38 22.5 -3.0
comp=N,10nm,0.5s
NIE Niedzica 11.23 360 eP Pn 16 36 22.3 +1.9
NIE Niedzica 11.23 360 eP Pn 16 36 22.3 +1.9
KRUC Moravsky 11.24 346 ePN Pn 16 36 21.2 +0.6
FUORN Ofenpass-Fuorn 11.26 322 Pn 16 36 23.1 +2.0
SQTA Sankt Quirin 11.26 326 ePn Pn 16 36 22.2 +1.2
comp=N,12nm,0.6s
SQTA eSn Sn 16 38 23.4 -3.8
comp=N,14nm,0.5s
FETA Feichten 11.33 324 ePn Pn 16 36 22.0 +0.1
comp=N,16nm,0.9s
FETA Sn Sn 16 38 24.6 -4.2
comp=N,8.9nm,0.7s
MOTA Moosalm 11.40 326 iPn Pn 16 36 23.7 +0.8
comp=N,15nm,0.7s,SNR=6.9
MOTA eSn Sn 16 38 27.1 -3.6
comp=N,11nm,0.5s
VRAC Vranov 11.45 347 ePN Pn 16 36 24.2 +0.8
VRAC Vranov 11.45 347 Pn Pn 16 36 24.0 +0.6
comp=N,0.4nm,0.3s,baz=217,slow=14,SNR=5.5
VRAC LR LR 16 41 41.1
comp=N,2µm,21.2s,baz=165,slow=42
VRAC Vranov 11.45 347 P Pn 16 36 24.0 +0.6
DAVOX Davos/Dischmat 11.56 321 Pn Pn 16 36 26.5 +1.3
comp=N,0.5nm,0.3s,baz=147,slow=16,SNR=14
DAVOX Sn Sn 16 38 32.2 -2.4
comp=N,1.2nm,0.3s,baz=146,slow=23,SNR=4.2
DAVOX LR LR 16 42 23.0
comp=N,1µm,21.6s,baz=122,slow=45
TREC Trest 11.65 344 AMS AMS 16 42 00.0
comp=N,3µm,8.9s
RETA Reutte 11.66 326 ePn Pn 16 36 29.3 +2.9
comp=N,8.4nm,0.5s
RETA eSn Sn 16 38 35.0 -1.8
comp=N,6.6nm,0.5s
GEC2 GERESS Array S 11.70 338 ePn Pn 16 36 26.1 -0.8
GEC2 eSn Sn 16 38 31.1 -6.7
GEC2 GERESS Array S 11.70 338 Pn 16 36 26.1 -0.8
GERES GERESS Array B 11.70 338 Pn Pn 16 36 25.9 -1.0
comp=N,1.0nm,0.3s,baz=157,slow=14,SNR=16
GERES Sn Sn 16 38 34.0 -3.7
comp=N,1.2nm,0.3s,baz=152,slow=23,SNR=5.2
GERES LR LR 16 42 29.1
comp=N,1µm,20.7s,baz=162,slow=45
GERES GERESS Array B 11.70 338 Pn 16 36 26.5 -0.4

OKC Ostrava-Krasne 11.76 353 ePN Pn 16 36 28.1 +0.5
OKC AMS AMS 16 41 50.0
comp=N,3µm,11.9s
OKC Ostrava-Krasne 11.76 353 eP Pn 16 36 28.1 +0.5
OKC MLR MLR
comp=Z,3µm,11.9s
MORC Moravsky Berou 11.76 351 ePN Pn 16 36 28.7 +0.9
DAVA Damuels 11.92 323 ePn Pn 16 36 30.5 +0.5
DAVA eSn Sn 16 38 37.5 -5.7
DAVA Damuels 11.92 323 ePn Pn 16 36 30.8 +0.8
comp=Z,4.4nm,0.6s
DAVA eSn Sn 16 38 38.6 -4.7
comp=Z,15nm,0.4s
LVV L'vov 11.92 12 eP Pn 16 36 47.0 +7.2
KHC Kasperske Hory 11.99 338 ePN Pn 16 36 30.3 -0.5
KHC ex x 16 36 42.0
KHC eSN Sn 16 38 38.8 -6.0
KHC AMS AMS 16 42 00.0
comp=Z,7µm,11.4s
KHC Kasperske Hory 11.99 338 Pn 16 36 30.2 -0.7
KHC Kasperske Hory 11.99 338 eP Pn 16 36 30.3 -0.5
KHC e 16 38 38.8
KHC MLR MLR
comp=Z,7µm,11.4s
OJC Ojcow 12.04 358 eP Pn 16 36 32.2 +0.8
OJC Ojcow 12.04 358 eP Pn 16 36 32.2 +0.8
UBR Ueberruh 12.10 325 eSn Sn 16 38 43.2 -4.4
WET Wettzell 12.22 336 ePn Pn 16 36 32.7 -1.3
SIM Simferopol' 12.30 52 P Pn 16 36 32.4 -2.6
SIM MLR MLR
comp=Z,1µm,15.0s
GOPC GO Pecny, Ondr 12.39 343 ePN Pn 16 36 36.9 +0.6
GOPC AMS AMS 16 42 40.0
comp=Z,3µm,8.9s
GOPC GO Pecny, Ondr 12.39 343 eP Pn 16 36 36.9 +0.6
GOPC MLR MLR
comp=Z,3µm,8.9s
DPC Dobruska-Polom 12.50 348 AMS AMS 16 42 20.0
comp=Z,5µm,10.8s
PRU Pruhonice 12.52 342 ePN Pn 16 36 37.9 -0.1
PRU AMS AMS 16 42 30.0
comp=Z,4µm,9.4s
PRU Pruhonice 12.52 342 eP Pn 16 36 37.9 -0.1
PRU MLR MLR
comp=Z,4µm,9.4s
PRA Prague 12.62 342 AMS AMS 16 42 30.0
comp=Z,4µm,10.0s
SENIN Lac Senin/Sane 12.66 314 Pn 16 36 41.1 +0.9
SENIN Sn 16 38 58.2 -3.3
UPC Upice 12.70 347 AMS AMS 16 42 40.0
comp=Z,5µm,11.2s
OSTC Ostas 12.72 348 AMS AMS 16 42 30.0
comp=Z,4µm,14.8s
GLL Jalalah 12.73 129 P Pn 16 36 35.9 -5.1
baz=132
CHVC Chvalec 12.77 347 AMS AMS 16 42 40.0
comp=Z,4µm,13.1s
ROTZ Rotzenmuhle 12.97 336 ePn Pn 16 36 43.9 -0.4
ROTZ eSn Sn 16 39 02.7 -6.1
HNTI Hanita 13.06 108 Pn Pn 16 36 43.9 -1.7
MANZ Manzenberg 13.20 336 ePn Pn 16 36 47.3 0.0
MMA0B Mount Meron ar 13.27 108 Pn Pn 16 36 46.7 -1.7
MMAI Mount Meron Ar 13.27 108 Pn Pn 16 36 46.3 -2.0
comp=Z,2.9nm,0.3s,baz=299,slow=12,SNR=12
MMAI Sn Sn 16 39 08.4 -7.8
comp=Z,3.4nm,0.3s,baz=289,slow=32,SNR=6.7
NKC Novy Kostel 13.31 337 AMS AMS 16 42 50.0
comp=Z,8µm,10.1s
SLTI Sal'it 13.37 112 Pn Pn 16 36 47.6 -2.1
KSDI Kefar Szold 13.38 107 Pn Pn 16 36 47.0 -2.8
BFO Black Forest 13.39 323 ePn Pn 16 36 50.6 +0.5
BFO eSn Sn 16 39 11.6 -7.6
BFO Black Forest 13.39 323 Pn 16 36 49.5 -0.5
BFO Black Forest 13.39 323 P Pn 16 36 49.5 -0.5
NATI Neve Ativ 13.41 107 Pn Pn 16 36 48.6 -1.6
BRG Berggiesshubel 13.48 342 eP Pn 16 36 50.6 -0.6
comp=Z,6.8nm,1.1s
BRG Berggiesshubel 13.48 342 eP Pn 16 36 50.6 -0.6
BRG pmax pmax
comp=Z,7.0nm,1.1s
KZIT Kziot 13.64 118 Pn Pn 16 36 49.9 -3.5
KZIT Sn Sn 16 39 12.6 -13
BEL Belsk 13.65 1 eP Pn 16 36 57.7 +4.3
BEL Belsk 13.65 1 eP Pn 16 36 57.7 +4.3
HMDT Nahal Hemdat 13.72 111 Pn Pn 16 36 52.3 -2.2
YTIR Yattir 13.88 115 Pn Pn 16 36 54.1 -2.8
ECH Echery 13.89 320 Pn 16 36 57.0 +0.3
ECH Echery 13.89 320 P Pn 16 36 57.0 +0.3
MOX Moxa 13.93 336 ePn Pn 16 36 56.6 -0.7
DSI Dead Sea 13.96 114 Pn Pn 16 36 54.9 -2.9
AKASG Malin Array Be 14.00 24 Pn Pn 16 36 57.5 -0.7
comp=Z,1.0nm,0.3s,baz=212,slow=12,SNR=18
AKASG LR LR 16 43 35.3
comp=Z,811nm,19.9s,baz=200,slow=43
AKASG Malin Array Be 14.00 24 Pn 16 36 55.5 -2.7
AKASG Malin Array Be 14.00 24 i P Pn 16 36 59.0 +0.8
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKBB Malin Array Si 14.00 24 Pn 16 36 57.4 -0.8
AKBB Malin Array Si 14.00 24 P Pn 16 36 57.4 -0.8
CLL Collm 14.12 341⇑isPP 16 37 10.7
comp=Z,50nm,1.3s
CLL i 16 37 14.2
CLL i 16 37 19.1
CLL e(S) Sn 16 39 30.0 -6.6
CLL Collm 14.12 341⇑iP P 16 37 10.7 +3.1
CLL pmax pmax
comp=Z,50nm,1.3s
GHAJ Ghor Haditha 14.24 114 Pn Pn 16 36 58.8 -2.8
ANN Anapa 14.37 57 eP Pn 16 36 59.6 -3.8
ANN eS Sn 16 39 38.1 -4.9
ANN pmax pmax
comp=Z,28nm,1.0s
PRNI Paran 14.39 119 Pn Pn 16 37 00.2 -3.5
ZFRI Zfri 14.39 118 Pn Pn 16 37 00.1 -3.5
HRFI Mount Harif 14.60 119 Pn Pn 16 37 02.7 -3.9
HRFI Sn Sn 16 39 36.7 -12
MBRI Mt Berech 14.66 121 Pn Pn 16 37 03.8 -3.7
TNS Taunus Mts 14.74 329 ePn Pn 16 37 08.7 +0.3
EIL Elat 14.77 121 Pn Pn 16 37 05.6 -3.3
comp=Z,0.5nm,0.3s,baz=346,slow=4.3,SNR=12
EIL Sn Sn 16 39 41.3 -11
comp=Z,2.1nm,0.3s,baz=311,slow=20,SNR=5.4
EIL LR LR 16 45 21.7
comp=Z,582nm,19.7s,baz=304,slow=48
EIL Elat 14.77 121 Pn Pn 16 37 04.7 -4.2
ASF Jabal al Asfar 14.77 109 Pn Pn 16 37 10.8 +1.8
comp=Z,0.3nm,0.3s,baz=247,slow=9.3,SNR=5.0
ASF Sn Sn 16 39 54.4 +1.4
comp=Z,0.5nm,0.3s,baz=146,slow=12,SNR=3.2
RUE Ruedersdorf 15.02 344 eP P 16 37 19.7 +2.2
HHRG Al Ghardaqah 15.56 131 P Pn 16 37 17.9 -1.6
baz=134
SOC Sochi 15.57 64 eP P 16 37 22.7 -1.1
SOC e 16 40 17.0
SOC pmax pmax
comp=Z,105nm,1.2s
SOC MLR MLR
comp=Z,625nm,12.0s
SUW Suwalki 15.94 6 eP Pn 16 37 24.5 +0.3
SUW Suwalki 15.94 6 eP Pn 16 37 24.5 +0.3
MEM Membach 16.08 325 PnPn P 16 37 33.8 +4.4
BSTI Sart Tilman 16.26 324 PnPn P 16 37 35.4 +4.0
BCLA Clavier 16.27 324 PnPn P 16 37 35.5 +4.0
DOU Dourbes 16.39 322 sP sP 16 37 36.2 +0.7
DOU PnPn PnPn 16 37 38.6 -0.3
MICGM Minsk 17.10 15 eP Pn 16 37 36.0 -2.9
MICGM eS Sn 16 40 42.0 -7.2
MICGM eLR LR 16 43 36.0
MNK Minsk 17.10 15 eP Pn 16 37 36.0 -2.9
MNK eS Sn 16 40 42.0 -7.2
NACGM Naroch 17.28 13 e Pn 16 37 41.0 -0.1
PABE Paberze 17.49 7 eP Pn 16 37 43.1 -0.7
PABE IAmb IAmb 16 37 45.2
comp=Z,106nm,1.0s
IIGN Ignalina 17.62 11 eP Pn 16 37 44.6 -0.7
IIGN IAmb IAmb 16 37 48.6
comp=Z,24nm,1.0s
NEY Neytrino 17.66 66⇓eP P 16 37 49.9 +2.8
KIV Kislovodsk 17.76 64 i P P 16 37 48.6 +0.5
SNR=13
KIV Kislovodsk 17.76 64 eP P 16 37 48.9 +0.8
KIV eS Sn 16 41 08.9 +3.6
KIV pmax pmax
comp=Z,191nm,1.1s
KIV MLR MLR
comp=Z,795nm,14.0s
KVAR Kislovodsk Arr 17.76 64 P P 16 37 51.4 +3.1
baz=252,slow=20,SNR=11
ISAL Salakas 17.82 11 eP Pn 16 37 46.2 -1.6
KBZ Khabaz 17.86 65 P P 16 37 50.8 +1.6
comp=Z,0.4nm,0.3s,baz=279,slow=7.6,SNR=26
KBZ LR LR 16 45 46.8
comp=Z,503nm,19.6s,baz=240,slow=41
KBZ Khabaz 17.86 65d iP P 16 37 52.1 +2.9
IZAR Zarasai 18.01 11 eP Pn 16 37 47.5 -2.6
IZAR IAmb IAmb 16 37 55.5
comp=Z,25nm,1.1s
GOF Gofitskoye 18.25 61⇑eP P 16 37 56.0 +2.6
GOF pmax pmax
comp=Z,63nm,1.0s
NCK Nalchik 18.32 66⇓eP P 16 37 57.3 +3.0
ZEI Tsey 18.45 68 eP Pn 16 37 57.5 +1.6
ZEI pmax pmax
comp=Z,43nm,0.9s
VSR Storozhevoye 18.58 39 eP P 16 37 56.3 -0.7
VSR pmax pmax
comp=Z,20nm,0.6s
VORR Voronezh 18.88 38 P Pn 16 38 01.0 +0.1
VORR pmax pmax
comp=Z,250nm,1.0s
GNI Garni 18.98 76 P Pn 16 38 03.1 +0.8
comp=Z,1.6nm,0.3s,baz=234,slow=2.6,SNR=9.6
GNI LR LR 16 46 14.6
comp=Z,1µm,20.3s,baz=274,slow=40
GNI Garni 18.98 76 P Pn 16 38 04.3 +2.0
GNI IAmb IAmb 16 38 06.6
comp=Z,262nm,1.4s
GNI Garni 18.98 76 P Pn 16 38 04.3 +2.0
GNI pmax pmax
comp=Z,262nm,1.5s
TBLG Delisi 18.99 72 Pn 16 38 03.0 +0.7
TBLG IAmb IAmb 16 38 12.6
comp=Z,52nm,1.1s
TBLG Delisi 18.99 72 P Pn 16 38 03.0 +0.7
TBLG pmax pmax
comp=Z,52nm,1.1s
ESDC Sonseca Array 18.99 282 P Pn 16 38 02.1 -0.2
comp=Z,0.5nm,0.3s,baz=79,slow=11,SNR=9.0
ESDC LR LR 16 45 16.5
comp=Z,634nm,19.3s,baz=70,slow=37
MUD Monsted U'grnd 19.74 341 i P Pn 16 38 17.0 +5.8
MUD Monsted U'grnd 19.74 341 i P Pn 16 38 17.0 +5.8
GROC Groznyy 19.88 67 eP P 16 38 11.5 +0.2
GROC eS Sn 16 41 57.5 +1.0
GROC pmax pmax
comp=Z,49nm,0.7s
VRH Novokhopyorsk 19.89 42 eP Pn 16 38 12.6 -0.4
VRH pmax pmax
comp=Z,100nm,1.4s
OBN Obninsk 20.16 28 P P 16 38 14.7 +0.4
comp=Z,4.1nm,0.4s,baz=239,slow=1.8,SNR=10
OBN LR LR 16 47 17.4
comp=Z,101nm,20.0s,baz=212,slow=41
OBN Obninsk 20.16 28⇓iP P 16 38 14.4 +0.1
OBN i 16 38 22.5
OBN i 16 38 31.8
OBN i S S 16 41 52.9 -7.9
OBN pmax pmax
comp=Z,36nm,1.0s
OBN MLR MLR
comp=Z,416nm,17.0s
VSU Vasula 20.70 9 eP P 16 38 20.2 +0.1
VSU Vasula 20.70 9⇑eP P 16 38 20.4 +0.3
MDT Midelt 21.01 263 P P 16 38 24.2 +0.4
comp=Z,6.5nm,0.8s,baz=95,slow=14,SNR=6.4
MDT LR LR 16 48 19.0
comp=Z,389nm,19.4s,baz=80,slow=42
MOS Moscow 21.03 28 eP P 16 38 21.8 -1.9
MOS eS S 16 42 18.8 +0.8
MOS pmax pmax
comp=Z,110nm,1.1s
MAK Makhachkala 21.11 68d iP P 16 38 27.3 +2.7
MAK eS Sn 16 42 25.1 -0.9
MAK pmax pmax
comp=Z,534nm,1.1s
AKT Akhty 21.22 72 eP P 16 38 27.3 +1.2
AKT e 16 38 47.6
AKT eS Sn 16 42 26.8 -2.3
AKT pmax pmax
comp=Z,210nm,1.2s
PMRV Marv??o 21.65 282 eP P 16 38 30.6 +0.1
PBEJ Beja 22.20 278 eP P 16 38 41.6 +5.2
PMTG Montargil 22.33 281 eP P 16 38 42.1 +4.3
HFS Hagfors 22.37 351 P P 16 38 38.7 +0.6
comp=Z,41nm,1.0s,baz=162,slow=15,SNR=27
HFS LR LR 16 47 44.5
comp=Z,793nm,20.5s,baz=169,slow=38
PCAS Casmilo, Conde 22.44 284 eP P 16 38 41.4 +2.3
PUL Pulkovo 22.52 13⇓eP P 16 38 39.1 -0.5
NC602 NORSAR Array S 23.25 349 P P 16 38 49.6 +2.4
EKA Eskdalemuir Ar 23.36 325 P P 16 38 49.5 +1.1
comp=Z,56nm,1.0s,baz=125,slow=10,SNR=20
NAO01 NORSAR Array S 23.45 348 P P 16 38 50.0 +0.7
NAO01 IAmb IAmb 16 38 51.6
comp=Z,89nm,1.0s
FINES FINESS Array B 23.55 7 P P 16 38 48.9 -1.4
comp=Z,23nm,0.8s,baz=175,slow=8.2,SNR=29
FINES LR LR 16 49 20.8
comp=Z,798nm,20.2s,baz=190,slow=40
FINES FINESS Array B 23.55 7 P P 16 38 49.9 -0.3
FINES FINESS Array B 23.55 7 i P P 16 38 49.7 -0.5
FINES pmax pmax
comp=Z,23nm,0.8s
FIA1 FINESS Array S 23.55 7 P P 16 38 49.9 -0.4
FIA1 IAmb IAmb 16 39 04.6
comp=Z,53nm,1.1s
NC405 NORSAR Array S 23.58 349 P P 16 38 50.4 -0.2
NB201 NORSAR Array S 23.58 349 P P 16 38 50.6 0.0
NB2 NORSAR Subarra 23.59 349 P P 16 38 51.3 +0.6
comp=Z,32nm,1.2s,baz=162,slow=9.3
NOA NORSAR Array B 23.59 349 P P 16 38 50.4 -0.3
comp=Z,17nm,1.0s,baz=161,slow=9.7,SNR=18
NOA LR LR 16 49 37.4
comp=Z,542nm,18.1s,baz=165,slow=41
NBO00 NORSAR Array S 23.65 348 P P 16 38 49.8 -1.5
NC303 NORSAR Array S 23.74 349 P P 16 38 50.5 -1.7
NC204 NORSAR Array S 23.88 348 P P 16 38 53.9 +0.3
KLMR Klimovskoe 25.67 22 eP P 16 39 08.0 -1.8
KLMR AMP 16 39 12.6
KLMR LR LR 16 48 24.8
KLMR AMP 16 50 13.9
comp=Z,933nm,7.9s
KLMR Klimovskoe 25.67 22 eP P 16 39 08.0 -1.8
KLMR pmax pmax
comp=Z,73nm,1.3s
KLMR MLR MLR
comp=Z,933nm,8.0s
RAYN Ar Rayn 25.95 117 i P P 16 39 12.0 -0.7
SNR=9.4
RAYN Ar Rayn 25.95 117 P P 16 39 12.6 -0.1
RAYN Ar Rayn 25.95 117 P P 16 39 12.6 -0.1
RAYN pmax pmax
comp=Z,17nm,1.2s
KIRV Kirov 27.71 33 P P 16 39 28.2 +0.1
comp=Z,20nm,0.8s,baz=230,slow=16,SNR=8.6
TMCR Tamitsa 28.06 16 eP P 16 39 31.2 -0.1
TMCR eS S 16 44 18.5 +2.5
TMCR pmax pmax
comp=Z,13nm,0.9s
PRGR Permogore 28.20 26 eP P 16 39 29.3 -3.2
PRGR eS S 16 44 16.5 -1.7
PRGR pmax pmax
comp=Z,50nm,1.0s
AKTO Aktyubinsk 29.26 53 P P 16 39 41.6 -0.5
comp=Z,1.8nm,0.3s,baz=264,slow=11,SNR=10
AKTO LR LR 16 53 34.4
comp=Z,401nm,21.7s,baz=282,slow=41
AKTO Aktyubinsk 29.26 53 P P 16 39 40.8 -1.3
GEYT Alibeck 29.58 79 P P 16 39 45.0 -0.2
comp=Z,2.6nm,0.5s,baz=278,slow=10,SNR=14
GEYT LR LR 16 54 47.5
comp=Z,322nm,19.3s,baz=250,slow=43
GEYT Alibeck 29.58 79 P P 16 39 44.6 -0.6
GYA0B ALIBECK ARRAY 29.58 79 P P 16 39 45.9 +0.8
GYA0B IAmb IAmb 16 39 52.8
comp=Z,9.5nm,0.7s
TOA0 Torodi Ar. Sit 29.97 219 P P 16 39 48.5 -0.2
TORD Torodi Ar. Bea 29.97 219 P P 16 39 48.1 -0.6
comp=Z,9.8nm,0.9s,baz=32,slow=7.9,SNR=27
TORD LR LR 16 52 28.3
comp=Z,429nm,21.2s,baz=15,slow=38
TORD Torodi Ar. Bea 29.97 219 P P 16 39 47.7 -1.0
APA Apatity 30.33 10⇓iP P 16 39 52.5 +1.2
APA pmax pmax
comp=Z,5.0nm,1.2s
APA MLR MLR
comp=Z,1µm,15.0s
AB31 Akbulak array 30.33 56 i P P 16 39 50.9 -0.7
ABKAR Akbulak array 30.33 56 P P 16 39 50.8 -0.8
ABKAR Akbulak array 30.33 56 P P 16 39 51.2 -0.4
ARU Arti 31.12 42 P P 16 39 57.0 -1.5
ARU IAmb IAmb 16 39 59.7
comp=Z,20nm,1.1s
ARU Arti 31.12 42deP P 16 39 58.7 +0.2
ARU pmax pmax
comp=Z,30nm,1.3s
ARCES ARCESS Array B 31.53 3 P P 16 40 01.2 -0.8
comp=Z,5.2nm,0.9s,baz=189,slow=10,SNR=22
ARCES LR LR 16 55 01.9
comp=Z,656nm,18.4s,baz=184,slow=41
SVE Sverdlovsk 32.34 42⇑eP P 16 40 10.0 +0.8
SVE pmax pmax
comp=Z,39nm,0.9s
SHME Shamm 32.42 101 P P 16 40 10.7 +0.4
MDH Madha 32.93 102 P P 16 40 15.2 +0.5
UOSS Minazif 33.05 103 P P 16 40 13.6 -2.2
HATD Hatta, Dubai 33.05 103 P P 16 40 15.1 -0.7
ALNE Al Ain 33.18 105 i P P 16 40 17.0 +0.1
SNR=5.7
BRVK Borovoye 37.13 50 P P 16 40 50.8 +0.1
BRVK IAmb IAmb 16 40 52.8
comp=Z,25nm,1.3s
BRVK Borovoye 37.13 50 P P 16 40 50.8 +0.1
BRVK pmax pmax
comp=Z,25nm,1.3s
KK31 Karatay Array 37.89 66 P P 16 40 57.4 +0.1
KK31 IAmb IAmb 16 41 01.1
comp=Z,16nm,0.9s
KK31 Karatay Array 37.89 66 P P 16 40 57.4 +0.1
KK31 pmax pmax
comp=Z,16nm,1.0s
KKAR Karatay Array 37.89 66 P P 16 40 56.1 -1.2
KKAR Karatay Array 37.89 66 P P 16 40 56.9 -0.4
KKAR IAmb IAmb 16 41 01.1
comp=Z,16nm,0.9s
KKAR Karatay Array 37.89 66 P P 16 40 56.9 -0.4
KKAR pmax pmax
comp=Z,16nm,1.0s
BTK Batken 38.75 71 P P 16 41 04.5 -0.1
BTK Batken 38.75 71 P P 16 41 04.5 -0.1
BTK pmax pmax
comp=Z,13nm,1.0s
DBIC Dimbokro 38.83 222 P P 16 41 05.0 -0.3
comp=Z,8.2nm,0.6s,baz=12,slow=10,SNR=20
DBIC LR LR 16 58 17.4
comp=Z,719nm,18.2s,baz=17,slow=38
DBIC Dimbokro 38.83 222 P P 16 41 04.9 -0.3
DBIC IAmb IAmb 16 41 07.7
comp=Z,36nm,1.4s
DBIC Dimbokro 38.83 222 P P 16 41 04.9 -0.3
DBIC pmax pmax
comp=Z,36nm,1.5s
TIC Toumodi 38.93 223 eP P 16 41 06.9 +0.7
comp=Z,8.0nm,0.3s
KIC Kosan Boka 39.02 222 eP P 16 41 06.6 -0.4
comp=Z,23nm,0.6s
LIC Lamto 39.29 222 eP P 16 41 08.9 -0.3
comp=Z,56nm,0.7s
EKS2 Erkin-Say 40.33 66 P P 16 41 18.9 +1.1
SNR=20
AAK Ala-Archa 40.85 66 P P 16 41 23.2 +1.0
SNR=8.4
AAK Ala-Archa 40.85 66 i P P 16 41 23.6 +1.4
SNR=13
AAK Ala-Archa 40.85 66 P P 16 41 23.1 +1.0
AAK Ala-Archa 40.85 66⇓iP P 16 41 23.0 +0.8
AAK pmax pmax
comp=Z,8.0nm,1.0s
FRU1 Bishkek 40.91 66 P P 16 41 23.6 +1.0
FRU1 IAmb IAmb 16 41 25.4
comp=Z,49nm,1.4s
FRU1 Bishkek 40.91 66 P P 16 41 23.6 +1.0
FRU1 pmax pmax
comp=Z,49nm,1.4s
UCH Uchtor 40.96 67 P P 16 41 24.8 +1.4
SNR=8.8
CHMS Chumysh 40.96 65 P P 16 41 24.0 +1.1
SNR=8.2
KBK Karagaybulak 41.18 66 P P 16 41 26.3 +1.4
SNR=9.1
KMBO Kilima Mbogo 42.11 154 P P 16 41 31.6 -1.1
comp=Z,0.6nm,0.4s,baz=45,slow=18,SNR=2.2
NRN Naryn 42.23 67 P P 16 41 33.9 +0.2
NRN Naryn 42.23 67 P P 16 41 33.9 +0.2
NRN pmax pmax
comp=Z,10.0nm,1.0s
DAG Danmarks Havn 42.26 348 i P P 16 41 32.4 -0.6
DAG Danmarks Havn 42.26 348 i P P 16 41 32.4 -0.6
KURK Kurchatov 42.36 53 P P 16 41 33.3 -0.9
KURK IAmb IAmb 16 41 39.2
comp=Z,17nm,1.1s
KURK Kurchatov 42.36 53deP P 16 41 34.3 +0.1
KURK pmax pmax
comp=Z,14nm,1.1s
NIL Nilore 42.58 79 P P 16 41 36.4 +0.2
NIL IAmb IAmb 16 41 38.9
comp=Z,17nm,1.0s
NIL Nilore 42.58 79 P P 16 41 36.4 +0.2
NIL pmax pmax
comp=Z,17nm,1.0s
KSH Kashi 42.72 70 P P 16 41 37.9 +0.4
KSH ScP ScP 16 47 21.6 +1.2
KSH S S 16 48 00.1 -1.4
KSH pmax pmax
comp=Z,44nm,1.3s
KSH LR LR
comp=Z,660nm,10.7s
KSH LR LR
comp=Z,490nm,13.2s
PDGK Podgornoye 44.26 64 P P 16 41 49.6 -0.2
SUMG Summit 44.77 339 i P P 16 41 55.0 +1.2
comp=Z,43nm,1.0s
SUMG Summit 44.77 339 i P P 16 41 55.0 +1.2
SUMG pmax pmax
comp=Z,43nm,1.0s
MAKZ Makanchi 45.18 58 P P 16 41 57.5 +0.6
MAKZ Makanchi 45.18 58 P P 16 41 57.5 +0.6
MK31 Makanchi Array 45.39 58 P P 16 41 57.2 -1.4
MK31 IAmb IAmb 16 41 59.9
comp=Z,19nm,1.2s
MK31 Makanchi Array 45.39 58 P P 16 41 57.2 -1.4
MK31 pmax pmax
comp=Z,19nm,1.2s
MKAR Makanchi Array 45.39 58 P P 16 41 57.0 -1.6
comp=Z,6.2nm,0.4s,baz=274,slow=7.0,SNR=80
MKAR PcP PcP 16 43 39.7 +1.8
comp=Z,2.6nm,0.9s,baz=271,slow=3.6,SNR=3.2
MKAR LR LR 17 04 56.1
comp=Z,276nm,20.1s,baz=288,slow=41
MKAR Makanchi Array 45.39 58 P P 16 41 57.3 -1.4
NOR Nord 45.46 353 i P P 16 41 58.5 -0.2
NOR Nord 45.46 353 i P P 16 41 58.5 -0.2
ZAA0 Zalesovo Array 45.77 48 P P 16 42 01.1 -0.4
ZAA0 IAmb IAmb 16 42 02.8
comp=Z,29nm,0.7s
ZALV Zalesovo Beam 45.77 48 P P 16 42 00.0 -1.4
comp=Z,26nm,0.6s,baz=273,slow=5.6,SNR=91
ZALV PP PP 16 43 49.1 +0.7
comp=Z,2.2nm,0.6s,baz=274,slow=10.0,SNR=4.1
ZALV LR LR 17 03 34.4
comp=Z,516nm,18.5s,baz=39
ZALV Zalesovo Beam 45.77 48 P P 16 42 00.2 -1.3
ZALV Zalesovo Beam 45.77 48 P P 16 42 00.2 -1.3
WMQ Urumqi 49.85 61 eP P 16 42 33.5 +0.1
WMQ pP sP 16 42 37.7 +1.5
WMQ sP pP 16 42 44.1 +8.7
WMQ pmax pmax
comp=Z,15nm,1.1s
WMQ pmax pmax
comp=Z,200nm,5.1s
WMQ LR LR
comp=Z,500nm,7.3s

WMQ LR LR
comp=Z,500nm,8.1s
WMQ LR LR
comp=Z,390nm,8.7s
DANN Dangsing 52.98 81 eP P 16 42 56.1 -1.2
comp=Z,64nm,0.9s
KOLN Koldanda 53.13 81 eP P 16 42 56.5 -1.8
GKN Gorkha 53.83 81 eP P 16 43 01.6 -1.8
DMN Daman 54.38 81 eP P 16 43 06.7 -0.9
HYB Hyderabad 54.56 95 iP P 16 43 07.0 -1.6
PKI Pulchoki 54.63 81 eP P 16 43 07.5 -2.0
GUN Gumba 54.84 80 eP P 16 43 09.1 -1.9
JIRN Jiri 55.20 80 eP P 16 43 12.3 -1.3
MOY Mondy 55.82 48 eP P 16 43 18.9 +1.4
MOY pmax pmax
comp=Z,26nm,1.7s
RAMN Ramite 55.86 81 eP P 16 43 16.7 -1.6
comp=Z,28nm,1.0s
ODAN Odare 56.52 80 eP P 16 43 22.3 -0.6
TAPN Taplejung 56.53 80 eP P 16 43 22.1 -1.0
TLY Talaya 57.36 47 P P 16 43 26.1 -2.2
comp=Z,3.9nm,0.5s,baz=309,slow=3.1,SNR=6.8
TLY Talaya 57.36 47deP P 16 43 28.2 -0.1
TLY pmax pmax
comp=Z,5.0nm,0.7s
IRK Irkutsk 57.51 46 eP P 16 43 28.8 -0.5
IRK pmax pmax
comp=Z,36nm,2.0s
ZAK Zakamensk 57.63 49 eP P 16 43 30.3 0.0
ZAK pmax pmax
comp=Z,8.0nm,1.1s
LSA Lhasa 58.04 76 P P 16 43 32.5 -1.4
LSA pmax pmax
comp=Z,4.0nm,0.4s
LSA Lhasa 58.04 76 P P 16 43 32.6 -1.4
LSA Lhasa 58.04 76 P P 16 43 32.9 -1.0
LSA Lhasa 58.04 76 P P 16 43 32.9 -1.0
LSA pmax pmax
comp=Z,4.0nm,0.7s
SCHQ Schefferville 58.38 317 P P 16 43 35.1 -0.3
comp=Z,2.1nm,0.5s,baz=39,slow=7.4,SNR=6.3
TIXI Tiksi 59.68 20⇓eP P 16 43 45.6 +1.5
TIXI pmax pmax
comp=Z,13nm,1.4s
GTA Gaotai 59.92 62 P P 16 43 45.6 -0.8
GTA pP sP 16 43 55.6 +6.3
GTA sP pP 16 44 00.2 +12
GTA PP PP 16 45 58.7 +0.4
GTA pmax pmax
comp=Z,11nm,1.1s
GTA pmax pmax
comp=Z,100nm,5.4s
GTA LR LR
comp=Z,300nm,19.7s
GTA LR LR
comp=Z,310nm,21.3s
GTA LR LR
comp=Z,290nm,21.9s
BOD Bodaibo 60.43 38 eP P 16 43 48.8 -0.7
BOD pmax pmax
comp=Z,13nm,2.0s
SONM Songino Array 60.54 51 P P 16 43 49.5 -1.1
comp=Z,9.1nm,1.0s,baz=282,slow=5.5,SNR=50
SONM LR LR 17 12 48.8
comp=Z,480nm,18.4s,baz=300,slow=39
SONM Songino Array 60.54 51 P P 16 43 49.9 -0.6
SONM Songino Array 60.54 51 P P 16 43 49.9 -0.6
SONM pmax pmax
comp=Z,13nm,1.2s
ULN Ulaanbaatar 60.92 50⇓eP P 16 43 54.1 +0.9
ULN pmax pmax
comp=Z,12nm,1.0s
D62A Allapoint, All 62.95 310 P P 16 44 08.7 +2.1
baz=62
LZH Lanzhou 64.30 63 eP P 16 44 16.0 +0.1
LZH pP sP 16 44 21.0 +2.2
LZH sP pP 16 44 24.1 +6.1
LZH pmax pmax
comp=Z,21nm,1.2s
LZH pmax pmax
comp=Z,170nm,5.4s
LZH LR LR
comp=Z,300nm,15.7s
LZH LR LR
comp=Z,410nm,16.3s
LZH LR LR
comp=Z,440nm,17.9s
YAK Yakutsk 65.15 29 P P 16 44 21.1 +0.3
comp=Z,14nm,0.6s,baz=99,slow=0.7,SNR=23
YAK Yakutsk 65.15 29 P P 16 44 20.1 -0.7
YAK Yakutsk 65.15 29 eP P 16 44 21.1 +0.3
YAK pmax pmax
comp=Z,21nm,0.7s
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK pmax pmax
comp=E,14nm,1.4s
F60A Warwick 65.24 310 P P 16 44 23.6 +1.9
baz=60
H62A Milan 65.45 308 P P 16 44 25.4 +2.3
baz=60
I62A Tamworth 65.91 308 P P 16 44 27.4 +1.3
baz=60
H61A Lyndonville 65.94 309 P P 16 44 27.2 +0.9
baz=60
E57A Chemin Saint G 66.33 311 P P 16 44 29.9 +1.1
baz=59
D56A ZEC Mazanza, M 66.36 312 P P 16 44 31.6 +2.7
baz=59
L64A Middleborough 66.58 306 P P 16 44 31.0 +0.6
baz=59
MATQ Matagami 66.59 316 P P 16 44 31.5 +1.2
baz=58
LSQQ Lebel-sur-Quev 66.59 315 P P 16 44 30.0 -0.4
baz=58
BOSA Boshof 66.61 175 P P 16 44 31.0 +0.3
comp=E,1.2nm,0.4s,baz=5.5,slow=4.6,SNR=4.5
BOSA LR LR 17 15 29.0
comp=E,495nm,19.3s,baz=357,slow=38
BOSA Boshof 66.61 175 P P 16 44 31.0 +0.3
E56A St. Veronique 66.79 312 P P 16 44 33.6 +1.9
baz=59
D55A Sainte-Anne-du 66.80 312 P P 16 44 33.6 +1.9
baz=58
CD2 Chengdu 66.87 68 P P 16 44 31.6 -0.9
CD2 pmax pmax
comp=E,10.0nm,0.5s
H59A Cadyville 66.97 309 P P 16 44 35.9 +3.1
baz=59
K62A Royalston 67.09 307 P P 16 44 37.7 +4.0
baz=59
HHC Hu-ho-hao-te 67.12 55 eP P 16 44 34.2 +0.2
HHC sP sP 16 44 40.3 +3.4
HHC PcP PcP 16 45 03.0 +0.8
HHC eS S 16 53 25.9 -2.7
HHC pmax pmax
comp=E,7.0nm,0.9s
HHC LR LR
comp=E,150nm,14.5s
HHC LR LR
comp=E,79nm,11.9s
HHC LR LR
comp=E,170nm,13.6s
H58A Gabriels 67.39 309 P P 16 44 37.3 +1.8
baz=58
D54A Lac Fusel, La 67.41 313 P P 16 44 36.2 +0.6
baz=58
L61B Northampton 67.49 307 P P 16 44 38.0 +1.8
baz=58
I59A Olmsteadville 67.53 309 P P 16 44 39.3 +2.9
baz=58
E54A Lac Daplat, Po 68.11 312 P P 16 44 40.9 +0.9
baz=57
E53A Dumoine, Ponti 68.41 313 P P 16 44 43.6 +1.7
baz=57
J58A Remsen 68.62 309 P P 16 44 45.0 +1.6
baz=57
L60A Shokan 68.70 307 P P 16 44 44.4 +0.5
baz=57
ALGO Algonquin Park 68.87 312 P P 16 44 45.5 +0.8
baz=57
ZEA Zeya 68.94 38 eP P 16 44 46.7 +1.7
ZEA pmax pmax
comp=Z,36nm,1.2s
ZEA MLR MLR
comp=Z,500nm,14.0s
ZEA MLR MLR
comp=E,500nm,15.0s
D51A Lot 18 Range I 69.00 314 P P 16 44 46.3 +0.8
baz=56
E52A Mattawa 69.04 313 P P 16 44 46.6 +0.8
baz=56
L59A Walton 69.11 308 P P 16 44 46.1 -0.3
baz=57
H55A Tweed 69.13 311 P P 16 44 47.5 +1.1
baz=57
K58A Earlville 69.17 308 P P 16 44 48.9 +2.2
baz=57
G54A Lake Saint Pet 69.20 312 P P 16 44 48.7 +1.8
baz=56
C36M Paulatuk 69.62 347 P P 16 44 49.9 +0.9
baz=29
G53A Haliburton 69.67 312 P P 16 44 52.1 +2.4
baz=56
BINY Binghamton 69.69 308 P P 16 44 51.4 +1.4
baz=57
L58A Harry Jones Me 69.69 308 P P 16 44 52.7 +2.7
baz=57
N60A Cedar Hill Far 69.86 306 P P 16 44 52.0 +0.9
baz=57
H53A Bobcaygeon 69.95 311 P P 16 44 50.9 -0.5
baz=56
F51A Arnstein 69.96 313 P P 16 44 54.1 +2.6
baz=56
CMAR Chiang Mai Arr 70.00 82 P P 16 44 51.1 -1.1
comp=E,1.6nm,0.7s,baz=306,slow=7.3,SNR=13
CMAR LR LR 17 23 04.0
comp=E,95nm,18.7s,baz=304,slow=42
CMAR Chiang Mai Arr 70.00 82 iP P 16 44 52.7 +0.5
CMAR pmax pmax
comp=Z,3.0nm,0.7s
D49A Beulah Townshi 70.02 315 P P 16 44 54.6 +2.8
baz=55
J55A Hilton 70.22 310 P P 16 44 56.1 +3.0
baz=56
K56A Middlesex 70.24 309 P P 16 44 56.2 +2.9
baz=56
N59A State Game Lan 70.26 307 P P 16 44 56.2 +2.7
baz=56
D48A Paudash Townsh 70.33 315 P P 16 44 57.1 +3.3
baz=55
L57A Andrews Acres 70.33 308 P P 16 44 55.2 +1.3
baz=56
O60A Telford 70.36 306 P P 16 44 56.9 +2.8
baz=56
BJI Beijing 70.52 54 eP P 16 44 55.3 +0.3
BJI pmax pmax
comp=Z,6.0nm,1.3s
BJI LR LR
comp=Z,360nm,6.6s
BJI LR LR
comp=Z,260nm,10.3s
BJI LR LR
comp=Z,290nm,36.0s
L56A Greenwood 70.70 309 P P 16 44 57.9 +1.8
baz=56
M57A Sunshine Farm, 70.88 308 P P 16 44 59.3 +2.0
baz=56
N58A Sunbury 70.90 307 P P 16 44 59.2 +1.9
baz=56
E48A Lockeyer 70.93 314 P P 16 44 59.5 +2.0
baz=54
BILL Bilibino 71.03 13 iP P 16 44 57.1 -0.6
BILL i 16 45 10.2
BILL i 16 45 23.7
BILL pmax pmax
comp=Z,9.0nm,1.1s
K54A Basiliko Farm, 71.12 310 P P 16 45 00.9 +2.2
baz=55
F49A Sandfield 71.28 314 P P 16 45 01.0 +1.5
baz=54
M56A Emporium 71.45 308 P P 16 45 03.3 +2.5
baz=55
F48A Evansville 71.57 314 P P 16 45 02.8 +1.5
baz=54
E47A Iron Bridge 71.57 315 P P 16 45 02.8 +1.5
baz=54
L54A Sinclairville 71.72 310 P P 16 45 02.5 +0.2
baz=55
D46A Sault St. Mari 71.73 316 P P 16 45 03.4 +1.1
baz=54
SSPA Standing Stone 71.75 308 P P 16 45 04.4 +1.8
baz=55
M55A Ridgway 71.82 309 P P 16 45 03.8 +0.9
baz=55
J52A Paris 71.83 311 P P 16 45 04.2 +1.3
baz=54
O57A Amberson 71.83 307 P P 16 45 04.3 +1.3
baz=55
N56A West Decatur 71.84 308 P P 16 45 04.7 +1.6
baz=55
P58A Pank, Wackersv 72.03 306 P P 16 45 05.1 +0.9
baz=55
SEY Seymchan 72.17 21⇓eP P 16 45 05.4 +0.8
M54A Oil Creek Stat 72.35 309 P P 16 45 07.3 +1.1
baz=54
N55A Marion Center 72.35 308 P P 16 45 07.5 +1.3
baz=55
O56A Blue Knob Stat 72.39 308 P P 16 45 07.8 +1.5
baz=55
L53A Girard 72.45 310 P P 16 45 08.2 +1.5
baz=54
P57A Homestead Farm 72.49 307 P P 16 45 08.5 +1.5
baz=55
Q58A Fox Den Farm, 72.59 306 P P 16 45 09.6 +2.1
baz=55
H48A Harrisville 72.64 313 P P 16 45 11.3 +3.6
baz=53
G47A Hillman 72.65 314 P P 16 45 10.8 +2.9
baz=53
N54A Moraine State 72.86 309 P P 16 45 11.7 +2.5
baz=54
O55A Ligonier 72.88 308 P P 16 45 12.5 +3.2
baz=54
P56A Dayton Farm, R 73.00 307 P P 16 45 10.3 +0.3
baz=54
Q57A Strasburg 73.00 306 P P 16 45 12.9 +2.9
baz=54
M53A WI Miller and 73.00 310 P P 16 45 11.2 +1.2
baz=54
I48A Sherman Twp 73.16 313 P P 16 45 11.9 +1.0
baz=53
TOLK Toolik Lake Re 73.22 356 P P 16 45 12.7 +1.8
baz=8.3
F45A CMU Biological 73.28 315 P P 16 45 13.0 +1.6
baz=52
YKA Yellowknife Ar 73.34 340 P P 16 45 12.1 +0.5
comp=Z,3.2nm,1.1s,baz=37,slow=5.7,SNR=21
YKA LR LR 17 20 23.4
comp=Z,126nm,18.8s,baz=0.0,slow=38
M52A Chesterland 73.36 310 P P 16 45 13.8 +1.7
baz=54
Q56A Snyder Ridge, 73.49 307 P P 16 45 13.2 +0.3
baz=54
O54A Avella 73.56 308 P P 16 45 15.5 +2.2
baz=54
J48A Bridge Port 73.74 312 P P 16 45 15.8 +1.6
baz=53
G45A Suttons Bay 73.75 315 P P 16 45 16.5 +2.2
baz=52
H46A Fife Lake 73.80 314 P P 16 45 16.7 +2.1
baz=52
KLR Kul'dur 73.94 39 P P 16 45 16.4 +1.1
comp=Z,19nm,0.9s,baz=307,slow=6.4,SNR=38
KLR Kul'dur 73.94 39c iP P 16 45 15.9 +0.6
KLR pmax pmax
comp=Z,33nm,1.1s
P54A Burton 73.97 308 P P 16 45 16.7 +1.0
baz=54
O53A New Philadelph 74.04 309 P P 16 45 16.9 +0.8
baz=53
Q55A Buckhannon 74.08 307 P P 16 45 18.2 +1.8
baz=54
BMAR Burnt Mountain 74.09 354 P P 16 45 18.0 +2.1
K48A Perry 74.24 312 P P 16 45 17.7 +0.5
baz=52
EPYK Eagle Plains 74.28 351 P P 16 45 18.0 +0.9
baz=19
MA2 Magadan 74.33 24⇓eP P 16 45 18.4 +1.0
MA2 pmax pmax
comp=Z,34nm,1.3s
Q54A Coxs Mills 74.56 308 P P 16 45 19.8 +0.7
baz=53
P53A Whipple 74.60 308 P P 16 45 20.6 +1.2
baz=53
O51A Pataskala 74.95 309 P P 16 45 23.3 +1.9
baz=53
EYMN Ely 75.03 320 P P 16 45 22.9 +1.2
baz=49
Q53A Leroy 75.06 308 P P 16 45 23.1 +1.0
baz=53
GRNR Gornyy 75.17 36⇓iP P 16 45 23.9 +1.4
GRNR eS S 16 55 07.3 +5.9
GRNR pmax pmax
comp=Z,20nm,1.1s
GRNR smax smax
comp=N,1.0nm,1.3s
GRNR MLR MLR
comp=Z,230nm,15.0s
ULM Lac du Bonnet 75.62 324 P P 16 45 26.6 +1.5
comp=Z,7.0nm,0.9s,baz=45,slow=5.1,SNR=13
ULM LR LR 17 18 21.8
comp=Z,198nm,20.6s,baz=17,slow=36
MDJ Mudanjiang 75.77 44 P P 16 45 27.0 +1.0
MDJ pmax pmax
comp=Z,9.0nm,1.3s
IMAR Indian Mountai 76.06 358 P P 16 45 28.6 +1.3
POKR Poker Flat Res 76.59 355 P P 16 45 31.2 +0.9
baz=9.9
ILAR Eielson Array 76.89 354 P P 16 45 34.0 +2.0
comp=Z,3.0nm,1.0s,baz=356,slow=4.4,SNR=19
ILAR LR LR 17 22 26.1
comp=Z,91nm,18.1s,baz=358,slow=38
NJ2 Nanjing 76.91 60 eP P 16 45 32.9 +0.2
NJ2 pmax pmax
comp=Z,15nm,1.0s
HDA Harding Lake 77.25 354 P P 16 45 33.8 -0.2
HDA IAmb IAmb 16 45 36.8
comp=Z,11nm,1.0s
HDA Harding Lake 77.25 354 P P 16 45 35.3 +1.3
baz=10
WRH Wood River Hil 77.27 355 P P 16 45 34.0 -0.1
WRH IAmb IAmb 16 45 37.1
comp=Z,8.3nm,1.0s
USRK Ussuriysk Ar. 77.35 43 P P 16 45 36.0 +1.1
comp=Z,9.9nm,0.9s,baz=286,slow=4.7,SNR=16
USRK PP PP 16 48 31.3 +2.7
comp=Z,3.0nm,1.0s,baz=312,slow=9.5,SNR=4.5
USRK LR LR 17 22 04.3
comp=Z,249nm,18.3s,baz=315,slow=38
VLA Vladivostok 78.00 44⇓eP P 16 45 39.3 +0.7
VLA pmax pmax
comp=Z,19nm,1.0s
BCAR Beaver Creek A 78.08 352 P P 16 45 40.3 +1.5
U49A Red Boiling Sp 79.16 308 P P 16 45 46.5 +1.4
baz=50
PSI Prapat 79.27 95 P P 16 45 46.9 +0.7
comp=Z,6.0nm,0.9s,baz=272,slow=3.6,SNR=5.4
V50A Pikevile 79.27 307 P P 16 45 47.7 +1.9
baz=50
RPSI Rantau Prapat 79.33 95 P P 16 45 46.9 +0.5
KSAR Wonju Array Be 79.39 51 P P 16 45 46.0 -0.4
KSAR Wonju Array Be 79.39 51 P P 16 45 46.0 -0.4
KSRS Korea Array 79.41 51 P P 16 45 47.4 +0.9
comp=Z,6.4nm,1.0s,baz=311,slow=5.6,SNR=15
KSRS LR LR 17 24 57.0
comp=Z,164nm,21.1s,baz=321,slow=39
W49A Belvidere 80.35 307 P P 16 45 53.6 +1.9
baz=50
Y51A Rockmart 80.37 306 P P 16 45 52.8 +1.0
baz=50
ECSD EROS Data Cent 80.51 319 P P 16 45 52.8 +0.5
baz=45
WVT Waverly 80.67 309 P P 16 45 53.0 -0.3
baz=49
YSS Yuzh-Sakhalins 80.82 36⇑eP P 16 45 55.6 +1.7
YSS e 16 46 08.3
YSS pmax pmax
comp=Z,60nm,0.8s
152A Waverly Hall 80.93 304 P P 16 45 54.5 -0.3
baz=50
CCM Cathedral Cave 81.45 312 P P 16 45 57.1 -0.4
baz=48
PETK Petropavlovsk- 81.84 24 LR LR 17 27 02.4
comp=Z,281nm,19.0s,baz=39
ASAJ Asahikawa 82.85 38 P P 16 46 04.5 -0.1
comp=Z,17nm,1.0s,baz=336,slow=8.8,SNR=6.9
ASAJ LR LR 17 25 44.8
comp=Z,158nm,18.6s,baz=328,slow=38
JKA Kamikawa-asahi 82.85 38 P P 16 46 04.5 -0.1
EGMT Eagleton 83.38 329 P P 16 46 07.8 +0.4
baz=37
BDFB Brasilia 83.42 244 LR LR 17 25 19.4
comp=Z,200nm,18.0s,baz=1.3,slow=37
U40A Yellville 83.54 312 P P 16 46 08.7 +0.3
baz=47
RSSD Black Hills 83.89 323 P P 16 46 11.8 +1.4
baz=41
W41B Gary Mavity, V 83.99 311 P P 16 46 11.7 +1.0
baz=47
X40A Basin Creek Fa 84.81 310 P P 16 46 15.7 +0.9
baz=47
W39A Magazine 84.89 311 P P 16 46 16.5 +1.2
baz=46
MIAR Mount Ida 85.22 311 P P 16 46 17.3 +0.3
baz=46
RLMT Red Lodge 85.48 327 P P 16 46 20.6 +2.3
baz=38
TUL1 Leonard 85.56 313 P P 16 46 20.5 +1.9
baz=45
NEW Newport 86.00 333 P P 16 46 21.7 +1.1
baz=32
MSO Missoula 86.01 330 P P 16 46 22.0 +1.2
baz=34
MAJO Matsushiro 86.06 46⇓eP P 16 46 22.8 +1.7
MAJO pmax pmax
comp=Z,19nm,1.5s
MJAR Matsushiro Arr 86.06 46 P P 16 46 21.7 +0.6
comp=Z,6.9nm,1.0s,baz=330,slow=4.6,SNR=12
MJAR LR LR 17 27 19.7
comp=Z,184nm,18.9s,baz=335,slow=37
MJAR Matsushiro Arr 86.06 46 P P 16 46 21.7 +0.6
H17A Grant Village 86.62 327 P P 16 46 27.6 +3.6
baz=37
N23A Red Feather La 87.27 322 P P 16 46 27.7 +0.5
baz=39
PDAR Pinedale Array 87.48 326 P P 16 46 28.5 +0.3
comp=Z,0.3nm,0.8s,baz=19,slow=3.1,SNR=3.4
PDAR LR LR 17 27 58.5
comp=Z,250nm,18.1s,baz=36,slow=37
WMOK Wichita Mounta 88.11 314 P P 16 46 33.5 +2.4
baz=44
D03D Eldon 88.64 336 P P 16 46 35.9 +2.6
baz=28
T25A Trinidad 89.38 319 P P 16 46 37.5 +0.2
baz=40
SDCO Great Sand Dun 89.47 320 P P 16 46 38.6 +0.8
baz=40
ABTX Abilene, Hawle 90.14 313 P P 16 46 42.3 +1.6
baz=43
S22A 4UR Ranch, Cre 90.14 321 P P 16 46 41.0 +0.1
baz=39
DUG Dugway, Tooele 90.99 326 P P 16 46 45.6 +0.9
baz=35
MNTX Cornudas Mount 94.05 316 P P 16 46 58.6 -0.1
baz=40
NVAR Mina Array Bea 94.80 329 LR LR 17 33 14.1
comp=Z,244nm,19.0s,baz=13,slow=38
TXAR Lajitas Array 94.89 313 P P 16 47 03.6 +0.8
comp=Z,0.3nm,0.7s,baz=83,slow=2.9,SNR=3.7
TXAR LR LR 17 31 20.4
comp=Z,62nm,18.2s,baz=0.0,slow=36
CPUP Villa Florida 96.95 242 LR LR 17 33 50.7
comp=Z,413nm,18.1s,baz=47,slow=37
LPAZ La Paz 98.74 256 LR LR 17 33 33.6
comp=Z,53nm,19.8s,baz=46,slow=36
WRA Warramunga Arr 120.65 92 PKP PKiKP 16 52 33.4 +0.8
comp=Z,0.6nm,0.7s,baz=316,slow=2.2,SNR=4.6
ASAR Alice Springs 122.28 96 PKP PKPdf 16 52 35.2 -0.4
comp=Z,0.9nm,0.8s,baz=310,slow=1.6,SNR=19

*IDC **01** 16:39:41.8±0.7, 17°.18N×119°.39E, $h0^{km}$, mb3.9/16, mb1 4.0/17, mb1mx3.9/41, mbtmp3.9/17, ML3.8/1, Error ellipse: s-maj=22.9km s-min=15.0km az=75.0*
*MAN **01** 16:39:42.6, 17°.26N×119°.31E, $h2^{km}$, mb4.7, ML3.5, MS3.4*
*NEIC **01** 16:39:46.1±1.0, 17°.21N±0°.09×119°.4E±0°.1, $h28^{km}\pm7^{km}$, mb4.2/12, Error ellipse: s-maj=17.5km s-min=8.8km az=129.0*
ISC 01 16:39:42.9±1.8, **17°.20N**±0°.04×**119°.40E**±0°.06, **$h6^{km}\pm11^{km}$**,

n45,σ1°11/51,mb4.1/22,2C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	Bolinao	0.95	149	eP	Pn	16 40 03.1	+0.3
ABRA	Dolores	1.33	70	eP	Pn	16 40 07.9	-0.1
ABRA				eS	Sn	16 40 27.8	+1.7
SMPP	San Manuel, Pa	1.61	130	eP	Pb	16 40 13.0	-0.1
SMPP				eS	Sg	16 40 36.5	+1.7
APYP	Conner	1.88	69	eP	Pb	16 40 17.1	-0.6
APYP				eS	Sg	16 40 42.9	-0.6
PCPH	Palayan	2.31	135⇑	eP	Pb	16 40 23.9	-1.0
CAUP	Cauayan	2.34	96	eP	Pb	16 40 26.3	+0.9
CAUP				eS	Sn	16 40 47.9	-3.0
BALP	Baler	2.55	124	eP	Pb	16 40 28.5	-0.5
BALP				eS	Sb	16 41 00.7	+0.1
POLP	Polilio Island	3.47	135	eP	Pb	16 40 45.0	+0.3
POLP				eS	Sn	16 41 21.0	+2.2
LQP	Lukban	3.70	146⇑	eP	Pg	16 40 53.3	-0.6
TPUB	Ta-pu	6.18	11	Pn	Pn	16 41 13.3	-1.4
YULB	Yu-li	6.41	16	Pn	Pn	16 41 17.8	-0.1
YHNB	Yeheng	7.66	14	Pn	Pn	16 41 38.8	+3.7
CMAR	Chiang Mai Arr	19.51	277	P	P	16 44 11.6	+0.5
	0.1nm,0.3s,baz=98,slow=9.7,SNR=12						
KSRS	Korea Array	21.53	19	P	P	16 44 32.7	-0.1
	3.6nm,0.8s,baz=201,slow=12,SNR=8.9						
PSI	Prapat	24.68	237	P	P	16 45 05.3	+0.4
	3.6nm,0.7s,baz=34,slow=4.9,SNR=4.3						
RPSI	Rantau Prapat	24.74	237	P	P	16 45 05.3	0.0
SONM	Songino Array	32.36	344	P	P	16 46 13.3	+0.1
	0.8nm,0.6s,baz=169,slow=9.3,SNR=7.4						
SONM	Songino Array	32.36	344	IAmb	IAmb	16 46 16.2	
	comp=Z,0.8nm,0.9s						
WRA	Warramunga Arr	39.72	158	P	P	16 47 15.0	-1.4
	comp=Z,2.3nm,0.9s,baz=338,slow=9.0,SNR=5.5						
WRA	Warramunga Arr	39.72	158	P	P	16 47 16.8	+0.5
WR0	Warramunga Arr	39.81	157	P	P	16 47 14.5	-2.5
WR0				IAmb	IAmb	16 47 31.2	
	comp=Z,16nm,1.4s						
MK31	Makanchi Array	42.50	322	P	P	16 47 40.6	+1.6
MK31				IAmb	IAmb	16 47 41.3	
	comp=Z,1.8nm,0.9s						
MKAR	Makanchi Array	42.50	322	P	P	16 47 39.1	+0.1
	comp=Z,1.8nm,0.9s,baz=126,slow=6.3,SNR=8.4						
MKAR				PcP	PcP	16 49 31.3	-0.4
	comp=Z,0.6nm,0.8s,baz=120,slow=4.5,SNR=4.0						
AS31	Alice Springs	43.02	160	P	P	16 47 43.9	+0.5
ASAR	Alice Springs	43.02	160	P	P	16 47 43.3	-0.1
	comp=Z,0.6nm,0.6s,baz=339,slow=7.1,SNR=22						
YAK	Yakutsk	45.37	7	P	P	16 48 01.6	-0.1
	comp=Z,4.0nm,0.6s,baz=49,slow=0.9,SNR=3.8						
ZAA0	Zalesovo Array	45.39	332	P	P	16 48 01.3	-0.8
ZAA0				IAmb	IAmb	16 48 02.7	
	comp=Z,4.0nm,1.0s						
ZALV	Zalesovo Beam	45.39	332	P	P	16 48 02.0	0.0
	comp=Z,2.4nm,0.8s,baz=125,slow=7.5,SNR=11						
ZALV	Zalesovo Beam	45.39	332	P	P	16 48 01.3	-0.8
KURK	Kurchatov	46.60	325	P	P	16 48 12.0	+0.3
PETK	Petropavlovsk-	46.63	31	P	P	16 48 12.8	+0.9
	comp=Z,2.6nm,0.8s,baz=251,slow=9.0,SNR=2.5						
KK31	Karatay Array	48.66	313	P	P	16 48 26.7	-1.2
KK31				IAmb	IAmb	16 48 28.7	
	comp=Z,2.2nm,0.8s						
KKAR	Karatay Array	48.66	313	P	P	16 48 27.8	-0.1
KKAR				IAmb	IAmb	16 48 28.7	
	comp=Z,2.2nm,0.8s						
BBOO	Buckleboo	52.22	162	P	P	16 48 54.5	-0.2
STKA	Stephens Creek	53.24	156	P	P	16 49 02.6	+0.3
	comp=Z,2.3nm,0.9s,baz=339,slow=8.3,SNR=4.0						
STKA	Stephens Creek	53.24	156	P	P	16 49 02.4	0.0
GEYT	Alibeck	57.10	304	P	P	16 49 30.9	+0.6
	comp=Z,2.7nm,0.9s,baz=90,slow=5.9,SNR=7.9						
ABKAR	Akbulak array	57.29	318	P	P	16 49 31.1	-0.3
ABKAR	Akbulak array	57.29	318	P	P	16 49 31.4	0.0
ABKAR				IAmb	IAmb	16 49 33.0	
	comp=Z,2.4nm,1.2s						
ILAR	Eielson Array	76.17	26	P	P	16 51 31.7	0.0
	comp=Z,0.2nm,0.5s,baz=272,slow=6.2,SNR=3.7						
BMAR	Burnt Mountain	76.56	23	P	P	16 51 35.0	+1.2
FINES	FINESS Array B	76.63	330	P	P	16 51 33.6	-0.6
	comp=Z,1.1nm,0.6s,baz=132,slow=2.8,SNR=9.4						
AKASG	Malin Array Be	77.00	319	P	P	16 51 35.6	-0.9
	comp=Z,0.1nm,0.3s,baz=79,slow=4.8,SNR=3.5						
NOA	NORSAR Array B	83.59	332	P	P	16 52 11.1	-0.9
	comp=Z,0.8nm,0.7s,baz=66,slow=4.6,SNR=3.3						
YKA	Yellowknife Ar	90.03	22	P	P	16 52 43.5	+0.3
	comp=Z,0.4nm,0.7s,baz=311,slow=4.6,SNR=8.0						

IDC 01 16:40:27.2±1.1,17°.07N×119°.14E,h0km,mb3.6/6, mb1 3.7/6,mb1mx3.5/40,mbtmp3.6/6,MS3.6/3,Ms1 3.6/3, ms1mx2.8/42,Error ellipse: s-maj=51.7km s-min=19.7km az=71.0,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	11.76	147	LR	LR	16 48 46.8	
	comp=Z,156nm,18.5s,baz=332,slow=42						
CMAR	Chiang Mai Arr	19.29	277	LR	LR	16 51 19.7	
	comp=Z,56nm,20.3s,baz=20,slow=34						
KSRS	Korea Array	21.73	19	P	P	16 45 20.5	+0.4
	1.9nm,0.8s,baz=201,slow=10,SNR=3.2						
SONM	Songino Array	32.42	344	P	P	16 46 58.4	-0.6
	0.3nm,0.6s,baz=171,slow=9.9,SNR=2.5						
WRA	Warramunga Arr	39.69	157	P	P	16 48 01.1	-0.3
	0.5nm,0.8s,baz=344,slow=8.7,SNR=2.3						
ASAR	Alice Springs	42.98	160	P	P	16 48 28.4	-0.1
	0.5nm,0.6s,baz=339,slow=7.5,SNR=4.4						
ZALV	Zalesovo Beam	45.39	332	P	P	16 48 47.0	-0.5
	1.1nm,0.7s,baz=120,slow=8.8,SNR=4.1						
GEYT	Alibeck	56.98	304	P	P	16 50 15.4	+0.6
	1.2nm,0.8s,baz=218,slow=9.4,SNR=4.0						
AFI	Afiamalu	74.81	110	LR	LR	17 24 19.8	
	comp=Z,154nm,18.9s,baz=212,slow=35						

ATH 01 16:46:48.5,38°.14N×20°.28E,h10km±3km,ML2.9/4,Error ellipse: s-maj=3.4km s-min=1.7km az=61.0
THE 01 16:46:49.0,38°.14N×20°.32E,h2km±16km,ML3.0/5,Error ellipse: s-maj=16.6km s-min=0.7km az=79.0
ISC 01 16:46:48.2±1.9,38°.12N±0°.04×20°.28E±0°.09,h6km±11km, n21,σ0°37/35,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.10	36	P	Pg	16 46 50.9	+0.6
KEF3				S	Sg	16 46 51.8	0.0
CHV1	Chavriata, Kef	0.10	55	P	Pg	16 46 50.3	-0.1
CHV1				S	Sg	16 46 51.0	-0.9
KEF2	Argostoli. Kep	0.17	76	P	Pg	16 46 52.2	+0.6
KEF2				S	Sg	16 46 53.7	-0.2
ARG2	Argostoli	0.18	72	P	Pg	16 46 52.1	+0.4
ARG2				S	Sg	16 46 54.0	-0.1
	45μm,0.5s						
KEF4	Livadi, Kephal	0.18	41	P	Pg	16 46 52.1	+0.3
KEF4				S	Sg	16 46 54.2	+0.1
KEF1	Kardakata, Kep	0.22	45	P	Pg	16 46 52.6	+0.1
KEF1				S	Sg	16 46 55.2	-0.2
VLS	Valsamata	0.25	78	P	Pg	16 46 53.4	+0.2
VLS				S	Sg	16 46 56.5	0.0
	6μm,0.8s						
VLS	Valsamata	0.25	78	P	Pg	16 46 53.3	+0.2
VLS				S	Sg	16 46 56.6	0.0
VLS				AML	AML	16 47 03.4	
	comp=E,10670μm,0.5s						
VLS				AML	AML	16 47 04.6	
	comp=N,9432μm,0.4s						
VSK1	VASILIKIADES	0.36	38	P	Pg	16 46 55.4	+0.1
VSK1				S	Sg	16 47 00.4	+0.3
	comp=N,3μm,0.3s						
VLMS	Volimes, Zakyn	0.39	129	P	Pb	16 46 57.2	-0.3
VLMS				S	Sg	16 47 01.2	+0.3
VLMS				AML	AML	16 47 14.9	
	comp=N,8836μm,0.4s						
VLMS				AML	AML	16 47 18.0	
	comp=E,7197μm,0.4s						
FSK	Fiskardo	0.40	34	P	Pg	16 46 56.2	+0.2
FSK				S	Sg	16 47 01.7	+0.4
	comp=E,2μm,0.7s						
FSK	Fiskardo	0.40	34	P	Pg	16 46 55.9	-0.1
FSK				S	Sg	16 47 01.8	+0.4
FSK				AML	AML	16 47 04.2	
	comp=N,2400μm,0.5s						
FSK				AML	AML	16 47 05.8	
	comp=E,3800μm,0.6s						
EVGI	Lefkada island	0.58	31	P	Pg	16 46 59.4	+0.1
EVGI				S	Sg	16 47 07.8	+0.9
	comp=E,645nm,0.3s						
EVGI	Lefkada island	0.58	31	P	Pg	16 46 59.5	+0.2
EVGI				S	Sg	16 47 07.5	+0.6
KRI1	kERI	0.63	137	P	Pg	16 47 00.5	+0.2
MGNA	Meganis	0.67	37	P	Pg	16 47 00.7	-0.3
MGNA				AML	AML	16 47 10.8	
	comp=E,1852μm,0.5s						
MGNA				AML	AML	16 47 11.8	
	comp=N,1246μm,0.5s						
LKD2	Lefkada island	0.73	24	P	Pg	16 47 02.0	-0.2
LKD2	Lefkada island	0.73	24	P	Pg	16 47 01.9	-0.3
TSLK	Tsoukalades, L	0.76	23	P	Pg	16 47 02.7	-0.1
PDO	Prodromos	0.86	56	P	Pg	16 47 04.7	+0.1
PVO	Paravola	1.10	63	P	Pg	16 47 09.1	-0.2

IDC 01 16:55:39.4±1.2,3°.57S×144°.68E,h0km,mb4.0/6, mb1 4.2/9,mb1mx3.9/31,mbtmp4.0/9,ML4.3/1,MS3.2/4, Ms1 3.2/4,ms1mx2.9/46,Error ellipse: s-maj=27.5km s-min=18.9km az=77.0
NEIC 01 16:55:43.2±1.2,3°.55S±0°.09×144°.68E±0°.04,h30km±7km, mb4.2/12,Error ellipse: s-maj=13.2km s-min=4.7km az=194.0
ISC 01 16:55:43.0±0.8,3°.58S±0°.07×144°.67E±0°.08,h26km,n25, σ0°.53/26,mb4.0/8,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	Manus Island	3.09	60	P	Pn	16 56 29.7	-0.5
JAY	Jayapura	4.10	285	Pn	Pn	16 56 43.4	-0.7
	0.7nm,0.3s,baz=19,slow=9.9,SNR=2.8						
JAY				Sn	Sn	16 57 32.0	+0.7
	0.2nm,0.3s,baz=243,slow=6.4,SNR=2.2						
JAY				LR	LR	16 58 11.8	
	comp=Z,127nm,21.5s,baz=336,slow=37						
PMG	Port Moresby	6.29	157	Pn	Pn	16 57 13.7	-0.5
	3.2nm,0.3s,baz=18,slow=6.2,SNR=18						
PMG				Sn	Sn	16 58 25.8	+0.6
	1.2nm,0.3s,baz=110,slow=23,SNR=4.2						
PMG				LR	LR	17 00 06.5	
	comp=Z,290nm,20.3s,baz=340,slow=42						
PMG	Port Moresby	6.29	157		Pn	16 57 14.0	-0.2
FAKI	Fak Fak	12.42	273	Pn	Pn	16 58 37.8	-0.5
WB0	Warramunga Arr	18.96	211	P	P	17 00 02.3	-0.2
WB0				IAmb	IAmb	17 00 20.5	
	comp=Z,8.6nm,1.2s						
WR0	Warramunga Arr	19.04	210	P	Pn	17 00 04.5	+0.2
WR0				IAmb	IAmb	17 00 10.7	
	comp=Z,14nm,1.3s						
WRAB	Tennant Creek	19.12	211	P	Pn	17 00 04.9	-0.3
WRAB				IAmb	IAmb	17 00 06.8	
	comp=Z,6.4nm,0.7s						
WB2	Warramunga Arr	19.13	211	P	P	17 00 04.4	+0.1
WB2				IAmb	IAmb	17 00 20.4	
	comp=Z,18nm,1.3s						
WRA	Warramunga Arr	19.13	211	P	Pn	17 00 04.8	-0.5
	comp=Z,1.0nm,0.3s,baz=32,slow=11,SNR=27						
WRA				LR	LR	17 08 01.2	
	comp=Z,114nm,21.4s,baz=55,slow=39						
WRA	Warramunga Arr	19.13	211	P	Pn	17 00 04.9	-0.5
KNRA	Kununurra	19.74	231	P	Pn	17 00 10.9	0.0
KNRA				IAmb	IAmb	17 00 14.5	
	comp=Z,16nm,1.1s						
AS31	Alice Springs	22.52	207	P	P	17 00 41.5	+0.5
ASAR	Alice Springs	22.52	207	P	P	17 00 41.5	+0.5
	comp=Z,5.4nm,0.6s,baz=32,slow=10.0,SNR=108						
ASAR	Alice Springs	22.52	207	P	P	17 00 41.2	+0.2
FITZ	Fitzroy Crossi	23.57	231	P	P	17 00 51.8	0.0
	comp=Z,18nm,0.5s,baz=44,slow=9.1,SNR=57						
FITZ				LR	LR	17 10 50.5	
	comp=Z,57nm,19.4s,baz=55,slow=39						
FITZ	Fitzroy Crossi	23.57	231	P	P	17 00 51.2	-0.6
STKA	Stephens Creek	28.30	186	P	P	17 01 34.6	+0.1
	comp=Z,0.9nm,0.5s,baz=321,slow=12,SNR=3.9						
STKA	Stephens Creek	28.30	186	IAmb	IAmb	17 01 34.7	
	comp=Z,1.3nm,1.2s						
PSA00	Pilbara Seismi	30.02	231	P	P	17 01 49.5	-0.5
BBOO	Buckleboo	30.18	195	P	P	17 01 51.0	-0.3
BBOO				IAmb	IAmb	17 01 57.0	
	comp=Z,6.9nm,0.9s						
FORT	Forrest	31.27	208	P	P	17 02 00.9	0.0
FORT				IAmb	IAmb	17 02 08.5	
	comp=Z,11nm,1.0s						
CMAR	Chiang Mai Arr	50.08	298	P	P	17 04 37.2	+1.1
	comp=Z,0.4nm,0.6s,baz=111,slow=6.8,SNR=3.8						
MKAR	Makanchi Array	74.17	321	P	P	17 07 16.7	-0.8
	comp=Z,0.6nm,1.0s,baz=116,slow=8.2,SNR=3.7						
ILAR	Eielson Array	84.20	24	P	P	17 08 12.8	+0.9
	comp=Z,0.4nm,0.8s,baz=260,slow=5.4,SNR=3.9						

IDC 01 17:08:47.5±1.8,26°.60S×177°.95W,h207km±19km, mb3.8/15,mb1 4.0/15,mb1mx3.8/33,mbtmp4.3/15,Error ellipse: s-maj=25.4km s-min=18.6km az=168.0
NEIC 01 17:08:48.3±1.8,26°.72S±0°.05×178°.1W±0°.2,h221km±6km, mb4.7/25,Error ellipse: s-maj=21.7km s-min=6.8km az=83.0
ISC 01 17:08:44.9±0.5,27°.11S±0°.05×177°.9W±0°.1,h202km,n125, σ2°.30/125,mb4.2/23,1C,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	Raoul Island	2.13	181	P	Pn	17 09 33.5	+8.7
RAO	Raoul Island	2.13	181	P	Pn	17 09 33.1	+8.3
	588nm,0.3s,baz=62,slow=19,SNR=10						
RAO				S	S	17 10 09.8	+14
	433nm,0.3s,baz=42,slow=22,SNR=4.0						
RAO	Raoul Island	2.13	181		Pn	17 09 34.0	+9.1
RAO					S	17 10 09.3	+14
GLKZ	Green Lake	2.15	181	S	S	17 10 01.2	+5.3
MSVF	Nonsavu	10.06	337		Pn	17 11 02.4	-2.7
NIUE	Niue	10.83	44		Pn	17 11 07.3	-7.6
OUZ	Omahuta	10.89	220	Pn	Pn	17 11 14.0	-1.5
OUZ	Omahuta	10.89	220	S	S	17 13 46.3	+29
PKGZ	Pakihiroa	11.28	197	P	Pn	17 11 09.6	-11
PKGZ				S	S	17 13 26.3	+0.2
MWZ	Matawai	11.84	198	P	Pn	17 11 26.0	-1.6
MWZ				S	S	17 13 32.3	-7.2
URZ	Urewera	11.89	200	P	P	17 11 32.5	-0.5
	1.9nm,0.3s,baz=274,slow=2.8,SNR=12						
URZ				S	S	17 13 42.8	+2.2
	6.1nm,0.3s,baz=359,slow=22,SNR=13						
URZ	Urewera	11.89	200	P	Pn	17 11 30.0	+1.8
URZ				S	S	17 13 42.1	+1.5
HIZ	Hauiti	12.90	206	Pn	Pn	17 11 42.4	+1.4
HIZ	Hauiti	12.90	206	P	Pn	17 11 48.6	+4.4
BKZ	Black Stump Fm	12.91	200		Pn	17 11 39.0	-2.1
BKZ	Black Stump Fm	12.91	200	P	P	17 11 43.7	-0.7
BKZ				S	S	17 14 01.3	-3.6
KWHZ	Kaweka Forest	13.17	200	P	P	17 11 46.9	-0.4
KWHZ				S	S	17 14 12.3	+1.3
BHHZ	Black Hill Sta	13.34	201	P	P	17 11 49.1	-0.1
BHHZ				S	S	17 14 14.5	-0.5
KAHZ	Kahuranaki	13.38	198	P	P	17 11 50.5	+0.9
KAHZ				S	S	17 14 11.5	-4.4
KRHZ	Kereru	13.39	200	P	P	17 11 49.2	-0.5
KRHZ				S	S	17 14 14.5	-1.5
VRZ	Vera Road	13.47	205	P	P	17 11 53.6	+3.0
PXZ	Pawanui	13.61	197	P	P	17 11 52.6	+0.6
PXZ				S	S	17 14 18.0	-3.1
PNHZ	Pukenui	13.69	200	P	P	17 11 52.4	-0.6
DVHZ	Dannevirke	14.05	199	P	P	17 11 57.5	+0.5
DVHZ				S	S	17 14 27.2	-4.3
DVHZ	Dannevirke	14.05	199	P	S	17 14 30.5	-0.9
POWZ	Post Office Ro	14.26	200	P	S	17 14 34.4	-1.8
AFI	Afiamalu	14.32	25	P	Pn	17 11 48.2	-11
	3.4nm,0.3s,baz=200,slow=5.8,SNR=6.4						
AFI				S	S	17 14 07.0	-31
	2.2nm,0.3s,baz=60,slow=20,SNR=2.9						
AFI	Afiamalu	14.32	25		Pn	17 11 48.3	-10
AFI					S	17 14 07.8	-30
PRWZ	Pori Road	14.35	199	P	S	17 14 34.6	-3.6
BFZ	Birch Farm	14.38	198	Pn	Pn	17 11 58.6	-0.7
BFZ	Birch Farm	14.38	198	P	P	17 12 00.5	-0.2
BFZ				S	S	17 14 30.2	-8.9
BFZ	Birch Farm	14.38	198	P	S	17 14 36.3	-2.8
MRZ	Mangatainoka R	14.56	200	P	Pn	17 12 01.4	-0.1
MRZ	Mangatainoka R	14.56	200	P	S	17 14 35.3	-7.9
TIWZ	Tintock	14.57	199	P	S	17 14 37.3	-6.3
HOWZ	Holdsworth Sta	14.80	200	P	S	17 14 43.8	-4.8
OGWZ	Otaki Gorge	14.83	201	P	Pn	17 12 04.8	0.0
OGWZ	Otaki Gorge	14.83	201	P	S	17 14 46.4	-2.9
TMWZ	Te Maipa	14.88	199	P	S	17 14 46.0	-4.5
KIW	Kapiti Island	14.96	202	P	S	17 14 48.1	-4.2
MTW	Mount Morrison	15.04	200	P	S	17 14 46.5	-7.7
DZM	Mont Dzumac	15.12	286	P	P	17 12 11.5	+2.4
	0.4nm,0.3s,baz=95,slow=18,SNR=8.5						
DZM	Mont Dzumac	15.12	286	P	Pn	17 12 07.9	-0.7
CAW	Cannon Point	15.13	201	P	Pn	17 12 08.1	-0.3
NOUC	Port Laguerre	15.23	286	P	Pn	17 12 09.9	+0.1
DUWZ	D'Urville Isla	15.25	204	P	S	17 14 57.4	-1.6
PAWZ	Paruwai Farm	15.27	199	P	S	17 14 55.0	-4.5
MSWZ	Moikau Station	15.35	200	P	Pn	17 12 11.3	+0.1
MSWZ	Moikau Station	15.35	200	P	P	17 12 12.9	+1.5
MSWZ	Moikau Station	15.35	200	P	S	17 14 56.1	-5.4
WEL	Wellington	15.38	201	P	S	17 14 58.2	-3.9
SNZO	South Karori	15.43	201	P	P	17 12 12.7	+0.6
TCW	Tory Channel	15.48	203	P	S	17 15 00.2	-4.2
PLWZ	Palliser	15.49	200	P	S	17 15 00.3	-4.4
TUWZ	Tuamarina	15.79	203	P	P	17 12 16.0	-0.2
TUWZ	Tuamarina	15.79	203	P	Pn	17 12 17.6	+1.2
TUWZ	Tuamarina	15.79	203	P	S	17 15 07.1	-4.3
NNZ	Nelson	15.81	205	P	Pn	17 12 18.0	+1.4
NNZ				IAmb	IAmb	17 12 21.3	
	comp=Z,32nm,1.1s						
QRZ	Quartz Range	15.81	208	P	Pn	17 12 18.0	+1.3
QRZ				IAmb	IAmb	17 12 25.1	
	comp=Z,113nm,1.5s						
QRZ	Quartz Range	15.81	208	P	Pn	17 12 18.5	+1.8
KHZ	Kahutara	16.80	202	P	P	17 12 28.0	+0.6
KHZ				IAmb	IAmb	17 12 46.4	
	comp=Z,32nm,1.2s						
LTZ	Lake Taylor	17.58	205	P	Pn	17 12 39.4	+1.7
LTZ				IAmb	IAmb	17 12 46.3	
	comp=Z,54nm,1.8s						
KNTN	Kanton	24.91	15	P	P	17 13 46.7	-2.8
ASAR	Alice Springs	43.49	263	P	P	17 16 30.4	+1.8
	comp=Z,1.2nm,0.8s,baz=97,slow=6.6,SNR=20						
ASAR	Alice Springs	43.49	263	P	P	17 16 28.2	-0.4
WB2	Warramunga Arr	44.17	269	P	P	17 16 33.9	-0.1
WRA	Warramunga Arr	44.18	269	P	P	17 16 35.3	+1.2
	comp=Z,1.1nm,0.7s,baz=102,slow=8.5,SNR=5.6						
WRA	Warramunga Arr	44.18	269	P	P	17 16 34.1	+0.1
WB0	Warramunga Arr	44.19	269	P	P	17 16 35.8	+1.7
KNRA	Kununurra	50.65	272	P	P	17 17 23.4	-0.4
KNRA				IAmb	IAmb	17 17 39.9	
	comp=Z,102nm,1.6s						
VNDA	Vanda	51.37	186	P	P	17 17 34.9	+6.6
	comp=Z,4.6nm,1.1s,baz=79,slow=10,SNR=3.0						
NWAO	Narrogin (SRO)	55.71	247	P	P	17 18 00.1	-0.4
NWAO				IAmb	IAmb	17 18 15.4	
	comp=Z,49nm,1.6s						
NWAO	Narrogin (SRO)	55.71	247	P	P	17 18 00.1	-0.4
MJAR	Matsushiro Arr	75.62	325	P	P	17 20 06.5	-1.1
	comp=Z,4.6nm,0.7s,baz=154,slow=5.7,SNR=18						
MJAR	Matsushiro Arr	75.62	325	P	P	17 20 05.9	-1.6
MAJO	Matsushiro	75.62	325	P	P	17 20 07.1	-0.4
MAJO				IAmb	IAmb	17 20 07.3	
	comp=Z,6.5nm,0.8s						
MJB9	Matsu-Tunnel	75.62	325	P	P	17 20 07.2	-0.3
MJB9				IAmb	IAmb	17 20 07.3	
	comp=Z,6.5nm,0.8s						
JNU	Nakatsue	77.19	318	P	P	17 20 17.2	+0.8
	comp=Z,15nm,1.0s,baz=150,slow=8.1,SNR=3.5						
JNU	Nakatsue	77.19	318	P	P	17 20 16.3	-0.1
JNU				IAmb	IAmb	17 20 18.6	
	comp=Z,20nm,1.0s						
ADK	Adak	78.66	1	P	P	17 20 23.1	-0.9
SYO	Syowa Base	80.33	193⇑	epP	pP	17 21 29.0	+7.9
KSRS	Korea Array	81.93	319	P	P	17 20 42.1	+0.4
	comp=Z,2.7nm,0.7s,baz=133,slow=6.2,SNR=17						
KSAR	Wonju Array Be	81.94	319	P	P	17 20 42.9	+1.0
PETK	Petropavlovsk-	82.67	345	P	P	17 20 44.6	-0.6
	comp=Z,3.8nm,0.8s,baz=162,slow=6.1,SNR=4.6						
PETK	Petropavlovsk-	82.67	345	P	P	17 20 44.3	-1.0
USRK	Ussuriysk Ar.	84.49	326	P	P	17 20 56.0	+1.2
	comp=Z,2.5nm,0.8s,baz=138,slow=4.9,SNR=5.6						
NVAR	Mina Array Bea	85.76	43	P	P	17 21 02.6	+1.1
	comp=Z,1.7nm,0.8s,baz=220,slow=7.5,SNR=14						
NVAR	Mina Array Bea	85.76	43	P	P	17 21 02.2	+0.7
NV11	Mina Array Sit	85.85	43	P	P	17 21 02.9	+1.0
KLR	Kul'dur	88.26	330	P	P	17 21 13.8	+0.9
	comp=Z,0.5nm,0.3s,baz=123,slow=4.6,SNR=8.4						
G08A	Pilot Rock	89.78	37	P	P	17 21 20.9	+0.5
ENH	Enshi	89.84	304	P	P	17 21 21.2	+0.4
ENH				IAmb	IAmb	17 21 22.9	
	comp=Z,5.7nm,0.9s						
TXAR	Lajitas Array	90.52	57	P	P	17 21 25.0	+0.8
	comp=Z,0.7nm,0.9s,baz=238,slow=7.0,SNR=5.5						
TXAR	Lajitas Array	90.52	57	P	P	17 21 25.1	+0.9
TMUT	Trail Mountain	90.69	45	P	P	17 21 26.4	+1.4
D08A	Wollman Farm,	90.94	36	P	P	17 21 26.1	+0.5
SUA	Susitna One	90.95	13	P	P	17 21 24.6	-0.8
SUA				IAmb	IAmb	17 21 25.3	
	comp=Z,31nm,1.8s						
F10A	Beach Ranch, E	91.15	37	P	P	17 21 26.9	+0.2
F10A				IAmb	IAmb	17 21 28.0	
	comp=Z,5.6nm,0.9s						
CMAR	Chiang Mai Arr	92.42	289	P	P	17 21 35.2	+2.1
	comp=Z,0.4nm,0.6s,baz=153,slow=2.7,SNR=5.1						
CHTO	Chiang Mai	92.58	290		pP	17 22 23.6	+0.7
SEY	Seymchan	92.81	347	P	P	17 21 33.7	-0.1
	comp=Z,2.7nm,0.6s,baz=141,slow=5.1,SNR=11						
TRF	Thorofare Moun	92.86	12	P	P	17 21 33.3	-0.9
TRF				IAmb	IAmb	17 21 34.8	
	comp=Z,5.3nm,0.8s						
REDW	Red Top Meadow	93.23	42		pwP	17 22 35.2	+7.2
PDAR	Pinedale Array	93.68	43	P	P	17 21 39.0	+0.4
	comp=Z,0.8nm,0.8s,baz=222,slow=2.0,SNR=7.4						
PDAR	Pinedale Array	93.68	43	P	P	17 21 38.4	-0.2
FLWY	Flagg Ranch	93.73	42		pP	17 22 33.7	+5.5
YPP	Pitchstone Pla	93.78	42		pP	17 22 34.5	+6.1
H17A	Grant Village	93.98	42		pP	17 22 31.8	+2.4
ILAR	Eielson Array	94.71	13	P	P	17 21 41.5	-0.9
	comp=Z,0.7nm,0.8s,baz=210,slow=5.3,SNR=6.2						
ILAR	Eielson Array	94.71	13	P	P	17 21 41.2	-1.3
MKAR	Makanchi Array	115.72	311	PKP	PKiKP	17 27 03.1	+0.1
	comp=Z,0.4nm,0.8s,baz=58,slow=3.6,SNR=3.6						
MKAR	Makanchi Array	115.72	311		PKPdf	17 27 02.6	-0.3
KURK	Kurchatov	118.83	315		PKPdf	17 27 08.6	-0.1
KURBB	Kurchatov Arra	118.87	315	PKP	PKiKP	17 27 08.9	0.0
	comp=Z,0.5nm,0.3s,baz=91,slow=1.4,SNR=4.3						
ARCES	ARCESS Array B	135.40	349	PKP	PKPdf	17 27 40.0	+0.2
	comp=Z,2.8nm,0.8s,baz=31,slow=2.8,SNR=2.7						
ARCES	ARCESS Array B	135.40	349		PKPdf	17 27 39.8	0.0
FINES	FINESS Array B	142.09	341	PKhKP	PKPpre	17 27 47.8	
	comp=Z,2.3nm,0.7s,baz=30,slow=2.1,SNR=14						
FINES				PKP	PKPdf	17 27 52.4	+0.2
	comp=Z,3.3nm,1.0s,baz=116,slow=6.3,SNR=4.0						
FINES	FINESS Array B	142.09	341		PKPpre	17 27 47.2	
FINES					PKPdf	17 27 52.4	+0.2
NC303	NORSAR Array S	145.32	352		PKPdf	17 27 57.9	0.0
NB2	NORSAR Subarra	145.52	352	PKP	PKPdf	17 27 58.5	+0.2
	comp=Z,1.7nm,0.6s,baz=11,slow=3.1						
NOA	NORSAR Array B	145.72	352	PKPbc	PKPdf	17 27 58.6	+0.2
	comp=Z,4.1nm,0.8s,baz=17,slow=2.5,SNR=11						
AKASG	Malin Array Be	148.70	326	PKPbc	PKPbc	17 28 07.9	+0.1
	comp=Z,3.7nm,0.7s,baz=44,slow=4.1,SNR=19						
AKASG				PKPab	PKPab	17 28 11.9	-0.2
	comp=Z,2.0nm,0.5s,baz=44,slow=4.1,SNR=12						
AKASG	Malin Array Be	148.70	326		PKPbc	17 28 08.2	+0.4
BRTR	Keskin Array B	151.00	304	PKPbc	PKiKP	17 28 14.4	0.0
	comp=Z,1.0nm,0.6s,baz=116,slow=3.4,SNR=5.2						
BRTR				PKPab	PKPab	17 28 22.9	+0.7
	comp=Z,1.4nm,0.8s,baz=106,slow=4.0,SNR=5.1						
BRTR	Keskin Array B	151.00	304	PKPdf	PKPdf	17 28 08.7	+0.7
BRTR					PKiKP	17 28 14.6	+0.1
BRTR					PKPab	17 28 23.3	+1.0

WEL 01 17:20:33.3,40°.6S±1°.0×17°.5E±°,h40km±3km,M2.3/18, ML2.6/19,MLv2.3/18,Error ellipse: s-maj=0.0km s-min=0.0km az=98.9,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRZ	Mangatainoka R	0.26	117	P	Pn	17 20 41.2	0.0
OGWZ	Otaki Gorge	0.28	197	P	Pn	17 20 41.7	+0.3
OHWZ	Ohakea	0.34	5	P	Pn	17 20 42.8	+0.8
HOWZ	Holdsworth Sta	0.40	153	P	Pn	17 20 42.9	+0.2
POWZ	Post Office Ro	0.40	68	P	Pn	17 20 42.9	0.0
KIW	Kapiti Island	0.42	221	P	Pn	17 20 43.3	+0.3
TIWZ	Tintock	0.52	117	P	Pn	17 20 44.7	+0.4
PRWZ	Pori Road	0.53	91	P	Pn	17 20 45.0	+0.5

CAW Cannon Point 0.58 196 P Pn 17 20 45.6 +0.4
MTW Mount Morrison 0.64 165 P Pn 17 20 46.2 +0.3
TSZ Takapari Road 0.71 47 P Pn 17 20 47.7 +0.7
DVHZ Dannevirke 0.72 70 P Pn 17 20 47.3 +0.2
TMWZ Te Maipa 0.73 141 P Pn 17 20 47.8 +0.6
BFZ Birch Farm 0.75 101 P Pn 17 20 47.5 +0.1
WAZ Wanganui 0.82 344 P Pn 17 20 50.3 +1.9
MSWZ Moikau Station 0.87 181 P Pn 17 20 49.9 +0.8
PNHZ Pukenui 0.95 48 P Pn 17 20 50.6 +0.4
PNHZ P 17 20 50.7
TCW Tory Channel 1.01 228 P Pn 17 20 51.6 +0.6
DUWZ D'Urville Isla 1.06 256 P Pn 17 20 52.4 +0.7
MOVZ Moawhango 1.20 18 P Pn 17 20 54.8 +1.1
BHHZ Black Hill Sta 1.22 30 P Pn 17 20 54.8 +0.9
KRHZ Kereru 1.23 43 P Pn 17 20 54.3 +0.2
TRVZ Turoa 1.26 10 P Pn 17 20 54.8 +0.1
TUWZ Tuamarina 1.34 228 P Pn 17 20 55.7 +0.2
NNZ Nelson 1.59 244 P Pn 17 20 59.6 +0.6
BKZ Black Stump Fm 1.67 35 P Pn 17 20 60.0 -0.1
PKE Pukeiti 1.68 323 P Pn 17 21 02.9 +2.7
QRZ Quartz Range 2.11 261 P Pn 17 21 06.2 +0.1
AKCZ Akaroa Harbour 3.76 207 P Pn 17 21 35.2 +6.4

*IDC **01** 17:21:09.0±1.2, 45.°87S×167.°35E, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.9/31, mbtmp3.9/6, ML3.7/1, MS3.5/2, Ms1 3.5/2, ms1mx3.1/16, Error ellipse: s-maj=29.1km s-min=15.9km az=154.0*
*WEL **01** 17:21:09.8, 46°S±2°×16°7E±°, h30km±8km, ML4.7/5, MLv4.5/25, Error ellipse: s-maj=0.0km s-min=0.0km az=102.6*
*NEIC **01** 17:21:11.1±2.8, 46.°00S±0.°09×167.°2E±0.°1, h18km±5km, Error ellipse: s-maj=13.5km s-min=10.7km az=137.0, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr1.00; Mθθ0.07; Mφφ-1.06; Mrθ-0.07; Mrφ-0.48; Mθφ-0.68; Fault plane solution: Mo1.33000×10^15 NP1:φs31.49000°, δ30.58000°, λ107.61000°. NP2:φs191.25000°, δ60.99000°, λ79.86000°. Principal axes: T 1.2065, Plg72.0000°, Azm77.0000°; N 0.2200, Plg9.0000°, Azm196.0000°; P -1.4265, Plg15.0000°, Azm289.0000°;*
ISC 01 17:21:10.3±1.1, 46.°01S±0.°03×167.°21E±0.°03, h10km±8km, n67, σ1§23/78, mb3.8/5, Off west coast of South Island

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
PYZ Puysegur Point 0.40 247 Pg 17 21 18.5 +0.3
PYZ Sg Sg 17 21 23.6 +0.1
PYZ Puysegur Point 0.40 247 P Pg 17 21 18.5 +0.3
PYZ S Sg 17 21 23.6 +0.1
WHZ Wether Hill Ro 0.53 77 Pb 17 21 22.3 +0.7
WHZ Sg Sb 17 21 30.3 +1.0
WHZ Wether Hill Ro 0.53 77 P Pb 17 21 22.3 +0.7
WHZ S Sb 17 21 30.3 +1.0
DCZ Deep Cove 0.55 356 Pg 17 21 21.5 +0.7
DCZ Sg Sb 17 21 29.6 -0.2
DCZ Deep Cove 0.55 356 P Pg 17 21 21.6 +0.7
DCZ S Sb 17 21 29.6 -0.2
MLZ Mavora Lakes 0.90 45 Pb 17 21 28.8 +0.8
MLZ Mavora Lakes 0.90 45 P Pb 17 21 28.7 +0.7
MLZ S Sn 17 21 42.6 +0.4
APZ The Paps 0.98 147 P Pg 17 21 28.6 -0.6
APZ S Sb 17 21 42.3 +0.3
MSZ Milford Sound 1.43 21 P Pn 17 21 36.3 +0.1
SYZ Scrubby Hill 1.44 112 P Pn 17 21 36.3 0.0
SYZ S Sn 17 21 55.3 0.0
EAZ Earnscleugh 1.67 63 P Pn 17 21 40.6 +1.1
TUZ Tuapeka 1.69 89 P Pn 17 21 40.7 +0.9
TUZ S Sb 17 22 03.6 +0.9
WKZ Wanaka 1.74 48 Pb 17 21 42.1 -0.2
WKZ Wanaka 1.74 48 P Pb 17 21 42.0 -0.2
JCZ Jackson Bay 2.23 31 P Pn 17 21 49.0 +1.6
HHSZ Highcliff Hill 2.37 88 P Pn 17 21 49.8 +0.7
ODZ Otahua Downs 2.60 69 Pn 17 21 52.0 -0.3
ODZ Otahua Downs 2.60 69 P Pn 17 21 52.0 -0.3
LBZ Lake Benmore 2.66 53 Pn 17 21 52.8 -0.3
LBZ Lake Benmore 2.66 53 P Pn 17 21 52.8 -0.3
FOZ Fox Glacier 3.10 38 Pn 17 21 59.6 +0.5
FOZ Fox Glacier 3.10 38 P Pn 17 21 59.8 +0.7
RPZ Rata Peaks 3.57 51 Pn Pn 17 22 03.6 -2.0
6.9nm,0.3s,baz=225,slow=4.3,SNR=91
RPZ Pg Pb 17 22 10.4 -3.0
11nm,0.3s,baz=225,slow=4.0,SNR=16
RPZ Sn Sn 17 22 44.6 -3.2
16nm,0.3s,baz=290,slow=4.0,SNR=5.2
RPZ Lg Lg 17 22 58.1
16nm,0.3s,baz=326,slow=14,SNR=3.8
RPZ Rata Peaks 3.57 51 Pn 17 22 04.3 -1.4
RPZ Rata Peaks 3.57 51 P Pn 17 22 04.3 -1.4
WVZ Waitaha Valley 3.87 42 P Pn 17 22 09.9 +0.2
OXZ Oxford 4.37 54 Pn 17 22 15.4 -1.2
OXZ Oxford 4.37 54 P Pn 17 22 16.8 +0.2
INZ Inchbonnie 4.47 44 P Pn 17 22 17.4 -0.6
MQZ McQueen's Vall 4.50 61 Pn 17 22 17.1 -1.3
MQZ McQueen's Vall 4.50 61 P Pn 17 22 17.3 -1.1
AKCZ Akaroa Harbour 4.58 64 P Pn 17 22 18.8 -0.7
OKCZ Okains Bay 4.74 63 P Pn 17 22 21.3 -0.5
LTZ Lake Taylor 4.85 50 Pn 17 22 21.8 -1.6
LTZ Lake Taylor 4.85 50 P Pn 17 22 21.9 -1.5
DSZ Denniston Nort 5.40 40 P Pn 17 22 30.2 -0.7
KHZ Kahutara 5.79 54 Pn Pn 17 22 34.2 -2.0
THZ Tophouse 5.91 46 Pn 17 22 36.4 -1.4
THZ Tophouse 5.91 46 P Pn 17 22 37.7 -0.2
BSWZ Blackbirch Sta 6.45 51 Pn Pn 17 22 43.9 -1.3
QRZ Quartz Range 6.47 39 P Pn 17 22 43.7 -1.8
QRZ Quartz Range 6.47 39 P Pn 17 22 45.5 0.0
NNZ Nelson 6.55 45 Pn Pn 17 22 46.7 0.0
TUWZ Tuamarina 6.69 49 Pn Pn 17 22 48.7 +0.2
SNZO South Karori 7.18 52 Pn Pn 17 22 55.5 +0.3
MSWZ Moikau Station 7.41 55 Pn Pn 17 22 58.0 -0.4
PKE Pukeiti 8.44 39 P Pn 17 23 14.3 +1.7
BFZ Birch Farm 8.46 54 Pn Pn 17 23 11.2 -1.7
HIZ Hauiti 9.39 40 Pn Pn 17 23 25.3 -0.2
BKZ Black Stump Fm 9.67 48 Pn Pn 17 23 28.0 -1.4
URZ Urewera 10.67 47 LR LR 17 28 30.9
comp=Z,244nm,19.7s,baz=212,slow=42
OUZ Omahuta 11.81 26 Pn Pn 17 24 01.1 +2.4
TAU Tasmania Unive 14.54 275 Pn Pn 17 24 32.8 -3.1
CAN Canberra 17.42 301 P Pn 17 25 13.5 +0.2
CAN IAmb IAmb 17 25 22.5
comp=Z,39nm,1.6s
TOO Toolangi 18.22 290 P Pn 17 25 21.4 -1.8
TOO IAmb IAmb 17 25 36.5
comp=Z,30nm,1.6s
STKA Stephens Creek 24.28 297 P P 17 26 29.0 +1.4
comp=Z,1.8nm,0.7s,baz=133,slow=9.3,SNR=5.2
STKA Stephens Creek 24.28 297 P P 17 26 27.9 +0.2
ASAR Alice Springs 34.89 298 P P 17 28 02.1 +0.2
comp=Z,2.2nm,1.0s,baz=133,slow=8.2,SNR=22
ASAR Alice Springs 34.89 298 P P 17 28 00.7 -1.2
WRA Warramunga Arr 37.45 303 P P 17 28 23.8 -0.1
comp=Z,2.0nm,0.8s,baz=139,slow=7.7,SNR=7.5
WRA LR LR 17 43 04.6
comp=Z,65nm,19.4s,baz=35,slow=35
QSPA South Pole Qui 44.12 180 P P 17 29 20.0 +1.5
comp=Z,1.1nm,0.8s,baz=0.0,slow=2.0,SNR=4.3
QSPA South Pole Qui 44.12 180 P P 17 29 19.3 +0.8
CMAR Chiang Mai Arr 88.90 298 P P 17 34 06.0 +1.2
comp=Z,0.3nm,0.6s,baz=167,slow=2.8,SNR=4.3
HHC Hu-ho-hao-te 99.72 321 eP Pdif 17 34 57.9 +3.9
BRTR Keskin Array B 145.79 276 PKPbc PKPdf 17 40 48.6 -0.2
comp=Z,0.7nm,0.6s,baz=92,slow=4.6,SNR=4.4
BRTR Keskin Array B 145.79 276 PKPdf 17 40 48.0 -0.8

*IDC **01** 17:26:25.6±2.5, 4.°82S×68.°78E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/49, mbtmp3.7/6, MS3.7/10, Ms1 3.7/10, ms1mx3.4/40, Error ellipse: s-maj=73.5km s-min=30.3km az=66.0*
ISC 01 17:26:27.6±2.5, 4.°9S±0.°3×69.°1E±0.°4, h10km, n20, σ1§74/14, mb3.8/6, MS3.7/10, Chagos Archipelago region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
H08N2 Diego Garcia H 2.39 126 Pn Pn 17 27 04.0 -2.6
H08N2 T T 17 29 51.2
baz=297,slow=74,SNR=238
H08N3 Diego Garcia H 2.40 126 Pn Pn 17 27 04.0 -2.6
H08N3 T T 17 29 53.5
baz=297,slow=74,SNR=218
H08N1 Diego Carcia H 2.42 126 Pn Pn 17 27 04.3 -2.6
H08N1 T T 17 29 55.5
baz=297,slow=74,SNR=252
H08S3 Diego Garcia H 4.35 128 Pn Pn 17 27 34.1 +0.6
baz=326,slow=18,SNR=19
H08S3 T T 17 32 17.0
baz=312,slow=75,SNR=0.1
H08S1 Diego Carcia H 4.35 129 Pn Pn 17 27 34.6 +1.0
baz=326,slow=18,SNR=4.1
H08S1 T T 17 32 21.4
baz=312,slow=75,SNR=16
H08S2 Diego Garcia H 4.37 129 Pn Pn 17 27 34.4 +0.6
baz=326,slow=18,SNR=10
H08S2 T T 17 32 20.6
baz=312,slow=75,SNR=2.0
WSAR Wadi Sarin 29.77 340 LR LR 17 41 38.4
comp=Z,150nm,21.2s,baz=168,slow=31
PSI Prapat 30.81 76 LR LR 17 43 17.4
comp=Z,194nm,18.4s,baz=206,slow=33
CMAR Chiang Mai Arr 37.52 51 P P 17 33 43.8 +1.8
0.5nm,0.8s,baz=239,slow=7.9,SNR=6.0
CMAR PcP PcP 17 36 00.2 -0.1
0.4nm,0.8s,baz=224,slow=3.8,SNR=3.7
CMAR LR LR 17 48 40.7
comp=Z,70nm,18.9s,baz=300,slow=35
EIL Elat 47.45 319 LR LR 17 53 33.5
comp=Z,44nm,18.5s,baz=290,slow=34
BOSA Boshof 47.71 235 LR LR 17 51 17.4
comp=Z,154nm,21.0s,baz=8.5,slow=31
MKAR Makanchi Array 52.80 11 P P 17 35 41.9 -1.2
0.4nm,0.7s,baz=185,slow=6.8,SNR=5.0
ZALV Zalesovo Beam 60.12 11 P P 17 36 33.2 -1.8
0.5nm,0.6s,baz=184,slow=9.5,SNR=3.3
SONM Songino Array 61.91 28 P P 17 36 47.4 -0.1
2.2nm,1.2s,baz=214,slow=6.3,SNR=8.2
SONM LR LR 18 03 29.3
comp=Z,139nm,18.0s,baz=347,slow=36
MAW Mawson 62.73 183 LR LR 17 57 22.8
comp=Z,70nm,21.3s,baz=52,slow=30
ASAR Alice Springs 65.03 114 P P 17 37 10.2 +1.6
0.6nm,0.9s,baz=286,slow=5.3,SNR=4.5
WRA Warramunga Arr 65.12 110 P P 17 37 10.0 +0.8
1.1nm,0.8s,baz=283,slow=6.5,SNR=5.1
WRA LR LR 18 02 57.0
comp=Z,18nm,20.3s,baz=285,slow=34
KSRS Korea Array 69.00 47 LR LR 18 09 12.4
comp=Z,62nm,18.7s,baz=318,slow=37
PETK Petropavlovsk- 93.08 37 LR LR 18 24 55.6
comp=Z,17nm,19.1s,baz=57,slow=38
NVAR Mina Array Bea 145.97 10 PKPbc PKPbc 17 46 08.8 +0.5
0.7nm,0.7s,baz=305,slow=3.2,SNR=4.6

*IDC **01** 17:30:06.9±1.3, 61.°96N×151.°66W, h0km, mb3.6/1, mb1 3.4/5, mb1mx3.2/59, mbtmp3.0/4, MS3.2/1, Ms1 3.2/1, ms1mx2.6/45, Error ellipse: s-maj=29.4km s-min=12.4km az=120.0*
*NEIC **01** 17:30:10.2±1.2, 61.°81N±0.°03×150.°67W±0.°06, h69km±8km, Error ellipse: s-maj=4.8km s-min=4.0km az=152.0*
*AEIC **01** 17:30:11.3±1.4, 61.°81N±0.°03×150.°66W±0.°06, h61km±6km, ML3.2/117, Error ellipse: s-maj=4.6km s-min=4.0km az=159.0*
ISC 01 17:30:11.3±0.9, 61.°81N±0.°03×150.°66W±0.°03, h65km±8km, n127, σ1§42/140, Southern Alaska

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
SUA Susitna One 0.35 187 Pn 17 30 21.6 -0.9
SUA Susitna One 0.35 187 Sn 17 30 30.2 -0.4
SKT Skwentna 0.45 293 Pn 17 30 22.1 -1.2
SKT Sn 17 30 31.0 -1.0
FIS Fire Island 0.70 162 Pn 17 30 26.0 +0.2
PMR Palmer 0.76 106 Pn 17 30 25.2 -1.3
PMR Palmer 0.76 106 Sn 17 30 36.8 -1.0
GHO Glory Hole Cre 0.82 92 Pn 17 30 26.6 -0.9
GHO Sn Sn 17 30 39.6 +0.3
SPCG Spurr Capps Gl 0.83 232 Pn 17 30 26.7 -0.9
SPCG Sn 17 30 38.9 -0.7
RC01 Rabbit Creek A 0.85 148 Pn 17 30 27.1 -0.5
RC01 Sn Sn 17 30 39.6 -0.1
CRP Crater Peak 0.90 233 Pn 17 30 27.8 -0.6
CRP Sn 17 30 40.5 -0.7
SPCR Spurr Chakacha 0.96 231 Pn 17 30 28.3 -0.9
SPCR Sn 17 30 41.6 -0.8
SPBG Spurr Blockage 0.99 237 Pn 17 30 28.9 -0.6
CKL Chakachamna La 1.01 233 Pn 17 30 29.0 -0.8
CKL Sn 17 30 43.7 +0.1
CAPN Captain Cook N 1.07 193 Pn 17 30 31.2 +0.8
SML Sawmill 1.10 89 Pn Pn 17 30 29.9 -1.1
KNK Knik Glacier 1.12 110 Pn 17 30 30.2 -0.9
KNK Knik Glacier 1.12 110 Sn 17 30 45.8 -0.1
HUR Hurricane 1.27 22 Pn 17 30 32.5 -0.5
PPLA Purkeypile 1.30 327 Pn 17 30 32.6 -1.1
PPLA Purkeypile 1.30 327 Sn 17 30 49.3 -1.1
SLKM Skilak Lake 1.32 171 Pn 17 30 32.2 -1.6
WAT1 Susitna Watana 1.42 43 Pn 17 30 34.5 -0.6
WAT1 Sn 17 30 53.1 +0.2
PWL Port Wells 1.47 129 Pn 17 30 34.3 -1.4
WAT2 Susitna Watana 1.51 39 Pn 17 30 35.7 -0.6
WAT2 Sn 17 30 55.3 +0.2
DFR Drift River 1.57 220 Pn 17 30 36.5 -0.6
DFR Sn 17 30 56.5 0.0
WAT6 Susitna Watana 1.57 59 Pn 17 30 36.4 -0.8
SCM Sheep Creek Mo 1.58 88 Pn 17 30 36.2 -1.0
RDJH Redoubt Jeurge 1.60 221 Pn 17 30 37.0 -0.6
RDN Redoubt North 1.65 219 Pn 17 30 37.6 -0.6
TRF Thorofare Moun 1.66 6 Pn 17 30 37.3 -1.0
RSO Redoubt South 1.69 218 Pn 17 30 38.3 -0.5
RDWB Redoubt West 1.70 220 Pn 17 30 38.2 -0.7
RED Redoubt Volcan 1.73 217 Pn 17 30 38.7 -0.6
CAST Castle Rocks 1.75 338 Pn 17 30 38.8 -0.7
KTH Kantishna Hill 1.75 356 Pn 17 30 38.8 -0.7
RND Reindeer 1.81 27 Pn 17 30 39.5 -0.8
SEW Seward 1.81 160 Pn 17 30 38.8 -1.4
GLI Glacier Island 1.95 117 Pn 17 30 40.3 -1.9
DHY Denali Highway 1.99 49 Pn 17 30 42.1 -0.7
BRLK Bradley Lake 2.06 183 Pn 17 30 41.9 -1.7
ILIM Iliamna 2.07 214 Pn 17 30 43.0 -0.8
BRSE Bradley Lake S 2.08 181 Pn 17 30 43.5 -0.3
MCK McKinley 2.09 22 Pn 17 30 43.6 -0.6
ILW Iliamna West 2.13 216 Pn 17 30 44.6 -0.2
IVE Iliamna Volcan 2.14 214 Pn 17 30 44.8 +0.1
HOM Homer 2.21 193 Pn 17 30 45.3 -0.3
CHUM Lake Minchumin 2.22 341 Pn 17 30 45.1 -0.6
FID Port Fidalgo 2.28 116 Pn 17 30 44.2 -2.4
BPAW Bear Paw Mtn. 2.30 356 Pn 17 30 45.5 -1.4
CNPM China Poot 2.31 187 Pn 17 30 45.2 -1.8
BWN Browne 2.43 12 Pn 17 30 48.2 -0.5
HIN Hinchinbrook I 2.47 123 Pn 17 30 47.1 -2.0
PS11 TAPS Pump St11 2.47 81 Pn 17 30 49.0 -0.1
SVW2 Sparrevohn 2.47 255 Pn 17 30 48.0 -1.2
PS12 TAPS Pump St12 2.65 95 Pn 17 30 50.4 -1.3
PAX Paxson 2.68 62 Pn 17 30 51.8 -0.4
EYAK Cordova Ski Ar 2.69 116 Pn 17 30 50.6 -1.6
PS10 TAPS Pump St10 2.78 52 Pn 17 30 54.4 +0.9
AU22 Augustine Moun 2.79 210 Pn 17 30 53.0 -0.4
AUL Augustine Lava 2.79 211 Pn 17 30 53.1 -0.5
AUQ Augustine Qik' 2.81 210 Pn 17 30 53.6 -0.2
NEA Nenana 2.87 14 Pn 17 30 53.6 -1.0
WRH Wood River Hil 2.92 22 Pn 17 30 54.0 -1.2
HDA Harding Lake 3.11 31 Pn 17 30 57.0 -0.9
GOAT Goat Mountain 3.12 111 Pn 17 30 56.3 -1.8
CCB Clear Creek Bu 3.13 23 Pn 17 30 56.7 -1.4
MID Middleton Isla 3.20 136 Pn Pn 17 30 58.0 -1.1
MLY Manley 3.23 359 Pn 17 30 58.4 -1.3
RAGM Ragged Mountai 3.24 114 Pn 17 30 59.0 -0.6
PS08 TAPS Pump Stn8 3.25 31 Pn 17 30 59.1 -0.6
GLB Gilahina Butte 3.29 93 Pn 17 30 58.7 -1.7
RIDG Independent Ri 3.30 52 Pn 17 31 00.4 -0.1
TCOL CIGO, UAF Yank 3.32 21 Pn 17 31 00.1 -0.6
COLA College 3.33 21 Pn 17 30 59.9 -0.9
MDM Murphy Dome 3.34 18 Pn 17 31 00.1 -1.0
MENT Mentasta 3.42 68 Pn 17 31 01.0 -1.2
IL31 3.43 28 Pn 17 31 01.2 -1.0
ILAR Eielson Array 3.43 28 Pn Pn 17 31 01.3 -0.9
2.2nm,0.3s,baz=215,slow=14,SNR=102
ILAR Sn Sn 17 31 40.1 -1.4
4.9nm,0.3s,baz=216,slow=22,SNR=11
ILAR Lg Lg 17 31 58.8
8.8nm,0.3s,baz=210,slow=27,SNR=12
ILAR Eielson Array 3.43 28 Pn 17 31 00.9 -1.3
HMT Hamilton 3.44 113 Pn 17 30 59.6 -2.8
VRDI Verde Repeater 3.50 96 Pn 17 31 01.4 -2.0
DOT Dot Lake 3.55 56 Pn 17 31 03.3 -0.7
NICHA Nichawak Mount 3.62 113 Pn 17 31 04.1 -0.8
POKR Poker Plat Res 3.62 22 Pn 17 31 04.1 -0.8
MCARA McCarthy VSAT 3.67 93 Pn 17 31 04.6 -0.9
SCRK Sand Creek 3.75 52 Pn 17 31 06.0 -0.7
CRQM Cirque 3.78 103 Pn 17 31 06.0 -1.2
TGL Tana Glacier 3.92 102 Pn 17 31 07.7 -1.4
PTPK Patty Peak 3.98 95 Pn 17 31 08.7 -1.2
WAX Waxell Ridge 4.02 106 Pn 17 31 08.9 -1.6
BALM Baldy 4.07 97 Pn 17 31 09.6 -1.5
KDAK Kodiak Island 4.16 194 Pn Pn 17 31 10.1 -2.1
0.6nm,0.3s,baz=41,slow=16,SNR=17
KDAK Sn Sn 17 31 53.6 -5.7
2.3nm,0.3s,baz=330,slow=14,SNR=3.8
KDAK LR LR 17 32 45.8
comp=Z,266nm,20.2s,baz=318,slow=38
KULT Kultieth River 4.17 109 Pn 17 31 10.3 -2.1
BC03 4.31 69 Pn 17 31 13.4 -0.8
BCAR Beaver Creek A 4.31 69 Pn 17 31 12.8 -1.6
PRP Porcupine Dome 4.37 29 Pn 17 31 14.5 -0.7
BARN Barnard Glacie 4.39 96 Pn 17 31 14.3 -1.1
IM03 4.41 343 Pn 17 31 14.4 -1.1
IMAR Indian Mountai 4.41 343 Pn 17 31 14.2 -1.3
GRNC Granite Creek 4.43 100 Pn 17 31 14.6 -1.6
MESA MESA 4.54 107 Pn 17 31 15.9 -1.7
CTGM Chitina Glacie 4.56 97 Pn 17 31 16.5 -1.4
YUK2 White River 4.66 86 Pn 17 31 17.9 -1.2
OHAK Old Harbor 4.79 197 Pn Pn 17 31 18.2 -2.7
YUK3 Moose Creek 4.84 86 Pn 17 31 20.6 -1.2
EGAK Eagle 5.22 51 Pn 17 31 25.9 -0.7
FYU Fort Yukon 5.33 24 Pn 17 31 27.8 -0.3
PCA Pinnacle 5.35 104 Pn 17 31 27.4 -1.2
COLD Coldfoot 5.44 2 Pn 17 31 29.6 -0.2
SII Sitkinak Islan 5.57 201 Pn Pn 17 31 31.1 -0.4
DAWY Dawson 5.62 61 Pn 17 31 31.5 -0.7
YUK4 Talbot Arm 5.76 89 Pn 17 31 33.3 -1.0
PNL Peninsula 5.92 106 Pn 17 31 34.9 -1.5
BM03 Burnt Mountain 6.20 22 Pn 17 31 39.2 -1.0
BMAR Burnt Mountain 6.21 22 Pn 17 31 39.0 -1.3
HYT Haines Junctio 6.41 93 Pn 17 31 41.5 -1.6
DHAK Deception Hill 6.73 108 Pn Pn 17 31 46.1 -1.3
TOLK Toolik Lake Re 6.88 3 Pn 17 31 50.0 +0.7
ANM Nome 7.20 299 Pn 17 31 53.7 -0.1
WHY Whitehorse 7.70 92 Pn Pn 17 31 57.5 -3.2
SKAG Skagway 7.89 101 Pn Pn 17 32 01.5 -1.7
RDOG Red Dog Mine 8.13 326 Pn Pn 17 32 07.4 +1.0
JIS Juneau Island 8.87 106 Pn Pn 17 32 14.0 -2.6
INK Inuvik 9.71 41 Pn Pn 17 32 29.2 +1.4
0.1nm,0.3s,baz=236,slow=14,SNR=6.3
INK Sn Sn 17 34 11.8 -3.2
0.1nm,0.3s,baz=228,slow=14,SNR=2.0
INK Inuvik 9.71 41 Pn Pn 17 32 25.2 -2.7
YKA Yellowknife Ar 16.72 72 P P 17 34 08.7 +6.5
0.1nm,0.3s,baz=284,slow=10,SNR=2.2
SONM Songino Array 54.65 306 P P 17 39 32.5 -0.6
0.3nm,0.9s,baz=33,slow=5.7,SNR=5.3

*THE **01** 17:31:55.2, 38.°41N×20.°48E, h1km±2km, ML3.5/10, Error ellipse: s-maj=2.1km s-min=0.4km az=283.0*
*IDC **01** 17:31:55.8±10.0, 38.°69N×20.°92E, h0km, mb3.6/5, mb1 3.6/5, mb1mx3.3/47, mbtmp3.6/5, Error ellipse: s-maj=188.7km s-min=37.0km az=37.0*
*ATH **01** 17:31:55.2, 38.°41N×20.°51E, h8km±2km, ML3.2/13, Error ellipse: s-maj=2.4km s-min=0.6km az=251.0*
ISC 01 17:31:54.9±0.8, 38.°41N±0.°02×20.°53E±0.°03, h8km±4km, n50, σ0§75/76, mb3.6/5, Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
VSK1 VASILIKIADES 0.03 90 P Pg 17 31 56.4 0.0
VSK1 S Sg 17 31 57.3 -0.2
211μm,0.2s
FSK Fiskardo 0.06 28 P Pg 17 31 56.7 +0.1
FSK S Sg 17 31 58.0 0.0
FSK Fiskardo 0.06 28 P Pg 17 31 56.8 +0.1
FSK S Sg 17 31 58.0 0.0
FSK AML AML 17 31 58.3
comp=N,79380μm,0.2s
FSK AML AML 17 31 58.4
KEF1 Kardakata, Kep 0.14 199 P Pg 17 31 58.0 +0.1
KEF4 Livadi, Kephal 0.17 208 P Pg 17 31 58.5 +0.1
KEF4 S Sg 17 32 01.8 +1.0
ARG2 Argostoli 0.23 188 P Pg 17 31 59.6 +0.1
ARG2 S Sg 17 32 03.5 +0.9
comp=N,38μm,0.3s
EVGI Lefkada island 0.23 25 P Pg 17 32 00.0 +0.5
EVGI S Sg 17 32 04.3 +1.5
EVGI Lefkada island 0.23 25 P Pg 17 32 00.1 +0.5
EVGI S Sg 17 32 04.2 +1.5
VLS Valsamata 0.24 168 P Pg 17 31 59.8 +0.2
VLS S Sg 17 32 03.9 +1.1
VLS Valsamata 0.24 168 P Pg 17 31 59.8 +0.2
VLS S Sg 17 32 03.8 +1.1
VLS AML AML 17 32 04.1
comp=E,34711μm,0.2s
VLS AML AML 17 32 04.3
comp=N,51503μm,0.3s
KEF2 Argostoli. Kep 0.24 188 P Pg 17 31 59.8 +0.1
KEF2 S Sg 17 32 04.0 +0.9
KEF3 Kipouria, Keph 0.25 215 P Pg 17 31 59.8 0.0
KEF3 S Sg 17 32 04.1 +0.9
CHV1 Chavriata, Kef 0.25 207 P Pg 17 31 59.9 0.0
CHV1 S Sg 17 32 04.2 +0.9
comp=N,35μm,0.3s
MGNA Meganis 0.32 40 P Pg 17 32 01.5 +0.3
MGNA S Sg 17 32 06.0 +0.5
MGNA AML AML 17 32 07.2
comp=E,35104μm,0.4s
MGNA AML AML 17 32 07.4
comp=N,31877μm,0.4s
KFL Anninata 0.36 146 P Pg 17 32 02.1 +0.1
KFL S Sg 17 32 08.4 +1.7
LKD2 Lefkada island 0.39 15 P Pg 17 32 02.5 0.0
LKD2 S Sg 17 32 08.7 +0.9
comp=N,3μm,0.6s
LKD2 Lefkada island 0.39 15 P Pg 17 32 02.6 0.0
LKD2 S Sb 17 32 09.9 -0.5
LKD2 AML AML 17 32 12.2
comp=E,7150μm,0.6s
LKD2 AML AML 17 32 15.7
comp=N,5449μm,0.5s
TSLK Tsoukalades, L 0.43 13 P Pg 17 32 03.3 +0.1
TSLK S Sb 17 32 10.5 -0.8
comp=N,6μm,0.4s
TSLK Tsoukalades, L 0.43 13 P Pg 17 32 03.5 +0.3
TSLK S Sg 17 32 10.0 +1.2
AST1 Astakos 0.46 73 P Pg 17 32 04.1 +0.3
AST1 S Sb 17 32 12.5 +0.3
comp=N,8μm,0.2s
VLMS Volimes, Zakyn 0.54 169 P Pg 17 32 05.2 -0.1
VLMS S Sg 17 32 13.4 +0.9
VLMS AML AML 17 32 19.0
comp=E,9380μm,0.4s
VLMS AML AML 17 32 23.0
comp=N,15446μm,0.4s
PDO Prodromos 0.55 70 P Pg 17 32 05.8 +0.3
PDO S Sb 17 32 14.3 -0.4
comp=N,4μm,0.4s
PDO Prodromos 0.55 70 P Pg 17 32 05.8 +0.3
PDO S Sb 17 32 14.5 -0.3
PDO AML AML 17 32 17.2
comp=N,5764μm,0.4s
PDO AML AML 17 32 18.5
comp=E,6323μm,0.4s
KRI1 kERI 0.78 163 P Pg 17 32 09.3 -0.6
KRI1 S Sb 17 32 21.8 +0.4
comp=E,5μm,0.2s
PVO Paravola 0.81 75 P Pg 17 32 10.9 +0.5
PVO S Sn 17 32 24.2 -0.6
comp=E,2μm,0.6s
PVO Paravola 0.81 75 P Pg 17 32 11.0 +0.5
PVO S Sb 17 32 22.9 +0.6
PVO AML AML 17 32 27.1
comp=E,2982μm,0.3s
PVO AML AML 17 32 29.8
comp=N,2452μm,0.4s
RLS Riolos of Patr 0.82 115 P Pg 17 32 10.8 +0.2
RLS Riolos of Patr 0.82 115 P Pg 17 32 10.7 +0.1
DRO Drossia 1.04 116 P Pg 17 32 14.5 -0.2
DRO S Sn 17 32 31.8 +1.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=N,1µm,0.5s						
DRO	Drossia	1.04	116	P	Pg	17 32 14.6	-0.2
DRO				AML	AML	17 32 38.1	
	comp=E,3086µm,0.4s						
DRO				AML	AML	17 32 38.6	
	comp=N,2409µm,0.5s						
EFP	Efpalio	1.08	89	P	Pg	17 32 14.9	-0.8
EFP				AML	AML	17 32 37.6	
	comp=N,2299µm,0.6s						
EFP				AML	AML	17 32 37.6	
	comp=E,1808µm,0.6s						
EVR	Evrytania	1.12	63	P	Pg	17 32 15.8	-0.6
EVR				AML	AML	17 32 39.4	
	comp=E,986µm,1.0s						
EVR				AML	AML	17 32 42.6	
	comp=N,791µm,0.4s						
SERG	Sergoula	1.20	89	P	Pb	17 32 17.1	-0.7
SERG				AML	AML	17 32 43.3	
	comp=E,1429µm,0.6s						
SERG				AML	AML	17 32 43.8	
	comp=N,1573µm,0.3s						
JAN	Janina	1.27	11	P	Pg	17 32 19.8	+0.5
AMT	Artemida-Makis	1.28	133	P	Pg	17 32 19.8	+0.4
AMT				AML	AML	17 32 49.1	
	comp=E,1560µm,0.6s						
AMT				AML	AML	17 32 50.3	
	comp=N,1766µm,0.9s						
KLV	Kalavryta, Ach	1.33	105	P	Pn	17 32 19.2	-0.5
KLV				AML	AML	17 32 45.9	
	comp=E,541µm,0.7s						
KLV				AML	AML	17 32 49.8	
	comp=N,494µm,0.5s						
KASA	Kassiopi	1.41	341	P	Pb	17 32 21.5	0.0
AGG	Agios Georgios	1.54	66	P	Pg	17 32 24.4	0.0
THL	Klokotos Trika	1.64	45	P	Pb	17 32 26.0	+0.7
ITM	Ithomi	1.65	137	P	Pb	17 32 27.1	+0.6
KPRO	Kipourio	1.68	23	P	Pb	17 32 26.6	+0.6
NEST	Nestorio	2.04	11	P	Pb	17 32 31.8	-0.5
OHR	Ohrid	2.71	4	ePn	Pb	17 32 38.2	-0.6
VAY	Valandovo	3.31	28	ePn	Pb	17 32 53.1	-0.7
STIP	Stip	3.52	21	ePn	Pb	17 32 52.7	+2.8
HFS	Hagfors	22.17	351	P	P	17 36 51.2	+0.2
	comp=N,1.3nm,0.5s,baz=165,slow=12,SNR=6.9						
FINES	FINESS Array B	23.32	7	P	P	17 37 02.2	-0.9
	comp=N,4.0nm,1.0s,baz=184,slow=11,SNR=6.0						
NOA	NORSAR Array B	23.39	349	P	P	17 37 03.3	-0.6
	comp=N,0.7nm,0.8s,baz=166,slow=11,SNR=2.3						
MKAR	Makanchi Array	45.18	59	P	P	17 40 10.7	-1.4
	comp=N,0.2nm,0.4s,baz=272,slow=7.3,SNR=12						
ZALV	Zalesovo Beam	45.53	48	P	P	17 40 13.6	-1.2
	comp=N,0.4nm,0.4s,baz=279,slow=7.7,SNR=3.9						

*UCR **01** 17:39:07.6±1.1, 13.87N×91.42W, h0km±33km, ML3.6*
*MEX **01** 17:39:07.1±0.7, 13.98N×91.73W, h73km±41km, MD4.0*
*SNET **01** 17:39:07.4±1.0, 13.85N×91.44W, h1km±30km, ML3.8*
ISC 01 17:39:01.2±1.6, **13.9N**±0.1×**91.64W**±0.07, **h10km, n19**, σ1.75/31, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		1.16	328	eP	Pn	17 39 25.3	+1.8
THIG				eS	Sn	17 39 30.9	-0.4
FAME	Alcaldia de Sa	1.58	92	eP	Pn	17 39 28.5	-0.8
FAME				eS	Sn	17 39 48.0	-1.8
FAME	Alcaldia de Sa	1.58	92	eP	Pn	17 39 28.5	-0.8
FAME				eS	Sn	17 39 48.0	-1.8
CEVE	Cerro Verde	1.96	92	eP	Pg	17 39 39.3	+0.5
CEVE				eS	Sg	17 40 04.7	+0.5
CEVE					IAML	17 40 13.3	
	comp=Z,2µm,0.5s						
CEVE	Cerro Verde	1.96	92	eP	Pg	17 39 39.3	+0.5
CEVE				eS	Sg	17 40 04.7	+0.5
CEVE					IAML	17 40 13.3	
	comp=Z,2µm,0.5s						
SBLS	San Blas	1.96	92	eP	Pg	17 39 39.3	+0.5
SBLS				eS	Sg	17 40 04.5	+0.2
SBLS	San Blas	1.96	92	eP	Pg	17 39 39.3	+0.5
SBLS				eS	Sg	17 40 04.5	+0.2
SNJE	San Jose	1.97	91	eP	Pg	17 39 39.8	+0.7
SNJE	San Jose	1.97	91	eP	Pg	17 39 39.8	+0.7
MTO3	Montecristo	2.26	77	eP	Pb	17 39 43.4	+1.1
MTO3				eS	Sg	17 40 13.2	-0.8
MTO3	Montecristo	2.26	77	eP	Pb	17 39 43.4	+1.1
MTO3				eS	Sg	17 40 13.2	-0.8
BOQS	Boqueron	2.30	94	eP	Pb	17 39 44.3	+1.4
PCIG		2.34	319	eP	Pn	17 39 41.2	+1.3
PCIG				eS	Sn	17 40 06.9	-1.9
CCIG	Comitan	2.40	348	eP	Pn	17 39 43.7	-0.9
LFRS	El Faro	2.52	96	eP	Pb	17 39 47.5	+0.8
COEG	Centro de Oper	2.69	96	eP	Pb	17 39 49.7	+0.1
COEG					IAML	17 40 32.2	
	comp=Z,218nm,0.3s						
COEG	Centro de Oper	2.69	96	eP	Pb	17 39 49.7	+0.1
COEG					IAML	17 40 32.2	
	comp=Z,218nm,0.3s						
TGIG		3.19	333	i P	Pb	17 39 58.3	+0.3
TGIG				i S	Sb	17 40 31.4	+1.8
CMIG	Matias Romero	4.45	316	eP	Pn	17 40 14.4	+1.7
CMIG				i S	Sn	17 40 53.3	-7.3

*IDC **01** 17:53:19.1±2.7, 58.51N×156.12W, h120km±33km, mb2.9/2, mb1 3.0/4, mb1mx2.7/46, mbtmp3.2/4, Error ellipse: s-maj=34.3km s-min=24.0km az=90.0*
*NEIC **01** 17:53:20.0±2.1, 58.20N±0.05×155.91W±0.09, h155km±4km, Error ellipse: s-maj=9.6km s-min=2.2km az=139.0*
*AEIC **01** 17:53:21.1±1.8, 58.20N±0.05×156.0W±0.1, h151km±3km, ML2.9/83, Error ellipse: s-maj=9.6km s-min=6.8km az=127.0*
ISC 01 17:53:20.1±0.9, **58.27N**±0.05×**155.92W**±0.06, **h153km**±7km, **n113**, σ1.31/128, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KELA	Mount Kelaz	0.19	30		Pn	17 53 40.6	-0.3
ANCK	Angle Creek	0.24	108		Pn	17 53 41.0	0.0
ANCK					Sn	17 53 56.2	-0.6
KABU	Katmai Buttres	0.34	90		Pn	17 53 41.3	+0.1
KABU					Sn	17 53 57.2	-0.2
KCG	Knife Ck. Glac	0.43	85		Pn	17 53 41.6	0.0
KCG					Sn	17 53 57.4	-0.5
PLK2	Peulik 2	0.55	203		Pn	17 53 41.9	-0.2
PLK5	Peulik 5	0.58	242		Pn	17 53 42.1	-0.1
PLK1	Peulik 1	0.60	218		Pn	17 53 41.9	-0.4
KAHC	Katmai Hardscr	0.61	52		Pn	17 53 42.5	0.0
PLK3	Peulik 3	0.61	198		Pn	17 53 42.4	-0.1
PLK3					Sn	17 53 59.1	-0.4
PLBL	Peulik Blue Cr	0.75	220		Pn	17 53 43.0	-0.2
KAHG	Katmai Hook Gl	0.76	72		Pn	17 53 43.9	+0.5
KAHG					Sn	17 54 01.8	+0.5
AUW	Augustine West	1.69	48		Pn	17 53 52.8	+0.1
AUJK	Augustine Jueg	1.70	49		Pn	17 53 52.7	+0.8
AUQ	Augustine Qik'	1.70	49		Pn	17 53 52.8	+0.7
AUL	Augustine Lava	1.71	48		Pn	17 53 52.9	+0.8
AU22	Augustine Moun	1.73	49		Pn	17 53 53.2	+0.9
OHAK	Old Harbor	1.76	126		Pn	17 53 52.4	-0.3
OHAK					Sn	17 54 16.2	-1.5
KDAK	Kodiak Island	1.84	104	P	Pn	17 53 53.5	-0.1
	2.2nm,0.3s,baz=323,slow=7.1,SNR=92						
KDAK				S	Sn	17 54 18.5	-0.8
	12nm,0.3s,baz=311,slow=19,SNR=57						
SII	Sitkinak Islan	1.96	151		Pn	17 53 54.6	-0.4
SII					Sn	17 54 20.5	-1.2
IVS	Iliamna South	2.28	39		Pn	17 53 59.5	+0.6
ILW	Iliamna West	2.30	38		Pn	17 53 59.6	+0.6
CHIR	Chirikof Islan	2.46	176		Pn	17 53 60.0	-0.9
CHIR					Sn	17 54 30.1	-2.2
HOM	Homer	2.62	56		Sn	17 54 34.8	-0.8
HOM	Homer	2.62	56	Pn	Pn	17 54 03.6	+0.9
RED	Redoubt Volcan	2.69	36		Pn	17 54 04.4	+0.7
RDWB	Redoubt West	2.73	34		Pn	17 54 04.8	+0.6
RSO	Redoubt South	2.73	35	Pn	Pn	17 54 04.9	+0.6
RSO					Sn	17 54 40.8	+2.2
CNPM	China Poot	2.74	61		Pn	17 54 05.1	+0.9
CNPM					Sn	17 54 37.4	-1.1
SVW2	Sparrevohn	2.84	3		Pn	17 54 06.1	+0.6
DFR	Drift River	2.85	34		Pn	17 54 06.7	+0.9
DFR					Sn	17 54 41.5	+0.4
BRLK	Bradley Lake	3.00	58		Sn	17 54 41.4	-3.0
BRLK	Bradley Lake	3.00	58		Pn	17 54 08.1	+0.5
BRSE	Bradley Lake S	3.06	59		Pn	17 54 09.2	+0.9
SLKM	Skilak Lake	3.68	50		Pn	17 54 17.1	+0.9
SEW	Seward	3.80	58		Pn	17 54 18.7	+1.0
SDPT	Sand Point	3.85	222		Sn	17 55 00.3	-3.5
SDPT	Sand Point	3.85	222	Pn	Pn	17 54 18.4	-0.1
CNBA	Chernabura Isl	4.01	212	Pn	Pn	17 54 18.0	-2.5
SUA	Susitna One	4.13	37		Pn	17 54 23.0	+0.9
SUA	Susitna One	4.13	37		Sn	17 55 09.0	-1.4
RC01	Rabbit Creek A	4.22	45		Sn	17 55 10.7	-1.7
RC01	Rabbit Creek A	4.22	45		Pn	17 54 24.5	+1.3
PWL	Port Wells	4.65	53		Pn	17 54 28.9	0.0
TT01	Tatalina	4.65	359		Pn	17 54 29.6	+0.8
TTA	Tatalina	4.67	360		Pn	17 54 30.2	+1.0
PMR	Palmer	4.77	43	Pn	Pn	17 54 29.1	-1.2
PMR					Sn	17 55 23.0	-2.2
KNK	Knik Glacier	4.91	47		Pn	17 54 32.0	-0.2
GHO	Glory Hole Cre	4.96	42		Sn	17 55 27.0	-2.9
GHO	Glory Hole Cre	4.96	42		Pn	17 54 32.7	-0.3
PPLA	Purkeypile	4.99	20	Pn	Pn	17 54 36.1	+2.7
MID	Middleton Isla	5.11	73	Pn	Pn	17 54 36.3	+1.4
GLI	Glacier Island	5.19	56		Pn	17 54 35.6	-0.4
SML	Sawmill	5.20	44	Pn	Pn	17 54 35.2	-0.9
HIN	Hinchinbrook I	5.27	62		Pn	17 54 37.7	+0.6
FID	Port Fidalgo	5.41	59		Pn	17 54 38.5	-0.4
SCM	Sheep Creek Mo	5.59	47		Sn	17 55 42.9	-2.0
SCM	Sheep Creek Mo	5.59	47		Pn	17 54 41.1	-0.3
EYAK	Cordova Ski Ar	5.67	62	Pn	Pn	17 54 42.6	+0.3
KTH	Kantishna Hill	5.83	23	Pn	Pn	17 54 44.7	+0.2
WAT1	Susitna Watana	5.84	35		Pn	17 54 44.1	-0.5
TRF	Thorofare Moun	5.88	26	Pn	Pn	17 54 45.2	0.0
WAT6	Susitna Watana	5.92	40		Pn	17 54 45.1	-0.7
WAT2	Susitna Watana	5.93	34		Pn	17 54 45.2	-0.7
RAGM	Ragged Mountai	6.13	65	Pn	Pn	17 54 49.4	+0.9
GOAT	Goat Mountain	6.16	63		Pn	17 54 49.7	+0.8
RND	Reindeer	6.20	31	Pn	Pn	17 54 49.1	-0.3
HMT	Hamilton	6.32	66		Pn	17 54 52.0	+1.0
DHY	Denali Highway	6.39	37		Sn	17 56 03.4	-0.5
DHY	Denali Highway	6.39	37		Pn	17 54 51.1	-0.9
SUCK	Suckling Hills	6.50	69	Pn	Pn	17 54 54.1	+0.8
BWN	Browne	6.69	25	Pn	Pn	17 54 55.1	-0.7
GLB	Gilahina Butte	6.88	57		Pn	17 54 59.1	+0.7
GLB	Gilahina Butte	6.88	57		Sn	17 56 13.0	-2.5
AKUT	Akutan	6.88	237	Pn	Pn	17 54 58.7	+0.3
VRDI	Verde Repeater	6.96	60		Pn	17 55 00.5	+0.8
CRQM	Cirque	6.96	64		Pn	17 55 00.0	+0.3
PAX	Paxson	6.97	43	Pn	Pn	17 55 00.5	+0.9
PAX					Sn	17 56 16.9	-0.9
WAX	Waxell Ridge	7.03	66	Pn	Pn	17 55 01.4	+1.0
TGL	Tana Glacier	7.11	64	Pn	Pn	17 55 01.9	+0.3
NEA	Nenana	7.12	25	Pn	Pn	17 55 00.9	-0.7
MCARA	McCarthy VSAT	7.21	59	Pn	Pn	17 55 02.6	-0.2
MLY	Manley	7.21	18	Pn	Pn	17 55 02.2	-0.7
WRH	Wood River Hil	7.26	28	Pn	Pn	17 55 01.8	-1.6
KIAG	Kiagna River	7.38	63		Pn	17 55 05.6	+0.4
UNV	Unalaska Valle	7.40	238	Pn	Pn	17 55 04.1	-1.2
PTPK	Patty Peak	7.40	61		Pn	17 55 06.3	+0.8
BALM	Baldy	7.41	62		Pn	17 55 05.8	+0.2
MESA	MESA	7.42	69	Pn	Pn	17 55 07.3	+1.6
CCB	Clear Creek Bu	7.48	28		Pn	17 55 05.7	-0.7
MSW	Makushin Switc	7.48	239		Pn	17 55 05.5	-0.9
HDA	Harding Lake	7.51	31		Pn	17 55 05.8	-1.0
PS08	TAPS Pump Stn8	7.65	31		Pn	17 55 07.8	-0.9
RIDG	Independent Ri	7.68	40	Pn	Pn	17 55 09.7	+0.7
BARN	Barnard Glacie	7.74	63		Pn	17 55 10.4	+0.3
ANM	Nome	7.76	328	Pn	Pn	17 55 12.8	+2.7
IMAR	Indian Mountai	7.80	7	Pn	Pn	17 55 12.0	+1.3
IL31		7.81	30	Pn	Pn	17 55 10.1	-0.6
ILAR	Eielson Array	7.81	30	P	Pn	17 55 09.4	-1.3
	0.2nm,0.3s,baz=220,slow=13,SNR=13						
ILAR				S	Sn	17 56 31.4	-6.4
	0.4nm,0.3s,baz=214,slow=27,SNR=9.5						
ILAR	Eielson Array	7.81	30		Pn	17 55 09.7	-1.1
ILAR					Sn	17 56 31.8	-6.0
CHX	Chaix Hills	7.82	70		Pn	17 55 12.5	+1.5
CTGM	Chitina Glacie	7.87	64		Pn	17 55 12.4	+0.6
SCRK	Sand Creek	8.12	40	Pn	Pn	17 55 13.7	-1.3
PCA	Pinnacle	8.25	71		Pn	17 55 17.6	+0.9
YUK2	White River	8.33	59		Pn	17 55 19.2	+1.5
BC03		8.43	49		Pn	17 55 20.0	+1.0
BCAR	Beaver Creek A	8.43	49	Pn	Pn	17 55 19.6	+0.5
YUK3	Moose Creek	8.50	59		Pn	17 55 21.6	+1.5
PNL	Peninsula	8.65	74		Pn	17 55 23.2	+1.2
DHAK	Deception Hill	9.26	77		Pn	17 55 31.6	+1.5
BESE	Bessie Mountai	11.04	79	Pn	Pn	17 55 57.0	+3.4
JIS	Juneau Island	11.33	81	Pn	Pn	17 56 00.4	+3.1
YKA	Yellowknife Ar	20.58	61	P	P	17 57 48.7	+2.1
	0.5nm,0.5s,baz=278,slow=10,SNR=10.0						
SONM	Songino Array	54.56	305	P	P	18 02 32.2	+0.1
	0.4nm,0.9s,baz=45,slow=4.3,SNR=3.6						

*IDC **01** 17:53:54.6±1.0, 27.41N×131.03E, h0km, mb3.5/8, mb1 3.7/11, mb1mx3.5/40, mbtmp3.5/11, ML3.2/3, Error ellipse: s-maj=26.0km s-min=18.5km az=87.0*
*JMA **01** 17:53:56.5±0.1, 27.38N×130.99E, h69km±4km, M3.6*
ISC 01 17:53:55.5±2.0, **27.41N**±0.04×**130.99E**±0.05, **h11**km±13km, **n33**, σ2.59/34, **mb3.6**/8, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JZK	Kikaishima	1.28	315	P	Pg	17 54 19.3	-0.8
JKDJ	Kitadaitoujima	1.48	169	P	Pn	17 54 21.3	-0.8
JKDJ				S	Sb	17 54 38.4	-3.4
JAM	Amami Oshima	1.58	310	P	Pn	17 54 23.6	0.0
JAM				eS	Sn	17 54 42.6	-1.4
JMZ	Minamidaito 2	1.59	172	P	Pn	17 54 22.5	-1.2
JMZ				eS	Sn	17 54 41.3	-3.0
JAMN	Amaminishikomi	1.81	298	P	Pn	17 54 26.4	-0.3
JAMN				eS	Sn	17 54 47.7	-1.9
JTK	Tokunoshima	1.85	282	P	Pn	17 54 27.1	-0.1
JTK				S	Sn	17 54 49.1	-1.5
JOKE	Okinoerabujima	2.15	269	P	Pn	17 54 31.0	-0.4
JOKE				eS	Sn	17 54 55.5	-2.6
JYRO	Yoronjima	2.29	261	P	Pn	17 54 32.8	-0.5
JYRO				S	Sn	17 54 58.8	-2.7
JTAJ	Takarajima	2.35	318	P	Pn	17 54 33.6	-0.5
JTAJ				S	Sn	17 54 59.8	-3.1
JOW	Kunigami	2.48	257	P	Pn	17 54 35.5	-0.5
JOW				S	Sn	17 55 04.1	-2.3
JOW	Kunigami	2.48	257	Pn	Pn	17 54 35.6	-0.4
	14nm,0.3s,baz=101,slow=17,SNR=298						
JOW				Sn	Sn	17 55 03.9	-2.5
	8.2nm,0.3s,baz=69,slow=27,SNR=10.0						
JNN	Nakanoshima	2.62	338	P	Pn	17 54 37.3	-0.5
JNN				eS	Sn	17 55 07.8	-1.8
JIH	Iheya	2.71	263	P	Pn	17 54 38.9	-0.3
JIH				eS	Sn	17 55 08.8	-3.2
JNTH	Nagotoyohara	2.79	252	P	Pn	17 54 39.4	-0.8
JNTH				eS	Sn	17 55 10.4	-3.5
JYAK	Yakushimahirau	2.85	352	P	Pn	17 54 41.0	-0.1
JYAK				S	Sn	17 55 11.7	-3.7
JMTN	Minamitane	2.98	359	P	Pn	17 54 42.6	-0.2
JMTN				eS	Sn	17 55 15.6	-3.0
JJT3	Tamagusuku3	3.13	247	P	Pn	17 54 44.4	-0.4
JJT3				eS	Sn	17 55 20.2	-2.0
JTN	Tanegashima 3	3.24	360	P	Pn	17 54 45.5	-0.9
JTN				S	Sn	17 55 21.5	-3.4
JAGN	Aguni-jima	3.44	257	P	Pn	17 54 48.6	-0.5
JAGN				eS	Sn	17 55 26.9	-3.0
JTSR	Tashiro 2	3.75	359	P	Pn	17 54 53.7	+0.3
JTSR				S	Sn	17 55 34.8	-2.8
JKE	Kume jima 2	3.90	255	P	Pn	17 54 55.0	-0.5
JKE				eS	Sn	17 55 39.0	-2.4
JSU	Suzuyama	4.11	354	eS	Sn	17 55 41.8	-4.7
JNAR	Kushima--Naru	4.11	3	P	Pn	17 54 58.3	-0.1
JNAR				S	Sn	17 55 43.0	-3.5
JNU	Nakatsue	5.70	359	Pn	Pn	17 55 20.2	0.0
	1.2nm,0.3s,baz=192,slow=14,SNR=12						
JNU				Sn	Sn	17 56 19.5	-6.1
	1.3nm,0.3s,baz=162,slow=20,SNR=7.7						
MJAR	Matsushiro Arr	10.97	32	Pn	Pn	17 56 34.3	+1.7
	0.0nm,0.3s,baz=180,slow=4.9,SNR=3.4						
SONM	Songino Array	28.00	323	P	P	17 59 48.2	+1.6
	0.2nm,0.7s,baz=124,slow=7.7,SNR=2.6						
CMAR	Chiang Mai Arr	30.75	260	P	P	18 00 13.8	+2.6
	0.6nm,0.7s,baz=58,slow=8.2,SNR=6.4						
MKAR	Makanchi Array	42.62	310	P	P	18 01 51.9	0.0
	0.2nm,0.7s,baz=102,slow=9.1,SNR=3.2						
ZALV	Zalesovo Beam	42.84	321	P	P	18 01 54.2	+0.7
	0.6nm,0.5s,baz=108,slow=4.8,SNR=4.0						
WRA	Warramunga Arr	47.18	176	P	P	18 02 28.8	+0.4
	0.4nm,0.4s,baz=354,slow=8.3,SNR=7.0						
ASAR	Alice Springs	50.85	177	P	P	18 02 57.2	+0.7
	0.3nm,0.5s,baz=6.7,slow=15,SNR=15						
AKASG	Malin Array Be	76.22	320	P	P	18 05 44.6	+0.6
	0.4nm,0.6s,baz=47,slow=5.7,SNR=3.7						
YKA	Yellowknife Ar	76.41	26	P	P	18 05 45.2	+0.4
	0.3nm,0.6s,baz=296,slow=5.8,SNR=5.3						

*IDC **01** 18:02:27.3±2.6, 7.47S×129.07E, h113km±36km, mb3.3/2, mb1 3.8/6, mb1mx3.4/29, mbtmp4.0/6, Error ellipse: s-maj=49.8km s-min=16.4km az=94.0*
ISC 01 18:02:27.5±0.9, **7.58S**±0.06×**129.1E**±0.1, **h131km, n6**, σ3.02/9, **Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	Sorong	7.02	18	P	Pn	18 04 06.6	-1.2
	1.8nm,0.3s,baz=205,slow=23,SNR=16						
SIJI				S	Sn	18 05 23.4	-2.9
	0.5nm,0.3s,baz=190,slow=19,SNR=4.1						
FITZ	Fitzroy Crossi	10.97	197	P	Pn	18 05 00.7	-0.2
	1.7nm,0.3s,baz=32,slow=11,SNR=33						
FITZ				S	Sn	18 06 58.5	-3.4
	0.5nm,0.3s,baz=74,slow=19,SNR=2.9						
WRA	Warramunga Arr	13.31	158	P	Pn	18 05 33.7	+2.2
	1.6nm,0.3s,baz=342,slow=13,SNR=47						
WRA				S	Sn	18 07 53.1	-5.3
	1.7nm,0.3s,baz=329,slow=23,SNR=11						
ASAR	Alice Springs	16.66	164	P	P	18 06 16.8	+3.3
	0.6nm,0.3s,baz=336,slow=11,SNR=54						
ASAR				S	Sn	18 09 15.2	-3.7
	0.2nm,0.3s,baz=353,slow=28,SNR=4.4						
CMAR	Chiang Mai Arr	39.40	311	P	P	18 09 46.6	+1.8
	0.5nm,1.1s,baz=133,slow=6.3,SNR=3.8						
MKAR	Makanchi Array	68.20	327	P	P	18 13 14.5	+0.6
	0.8nm,0.5s,baz=119,slow=7.9,SNR=32						

IDC 01 18:11:26.3±13.0, **57.25S×100.24E, h0km, Error ellipse: s-maj=33.0km s-min=13.7km az=164.0, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	24.25	29	H	H	18 41 50.0	
	baz=199,slow=76,SNR=19						
H01W1	Cape Leeuwin H	24.26	29	H	H	18 41 50.8	
	baz=199,slow=76,SNR=17						
H01W3	Cape Leeuwin H	24.26	29	H	H	18 41 51.4	
	baz=199,slow=76,SNR=20						
H08S2	Diego Garcia H	54.00	325	H	H	19 18 56.4	
	baz=161,slow=76,SNR=18						
H08S1	Diego Garcia H	54.00	325	H	H	19 18 56.9	
	baz=161,slow=76,SNR=9.2						
H08S3	Diego Garcia H	54.02	325	H	H	19 18 57.4	
	baz=161,slow=76,SNR=17						
H10S2	ASCENSION HYDR	95.51	244	H	H	20 11 51.3	
	baz=74,slow=74,SNR=6.8						
H10S3	ASCENSION HYDR	95.53	244	H	H	20 11 49.9	
	baz=146,slow=74,SNR=7.2						

*IDC **01** 18:35:32.0±2.1, 4.95S×153.89E, h86km±17km, mb4.0/20, mb1 4.1/20, mb1mx3.9/40, mbtmp4.3/20, MS3.2/7, Ms1 3.2/7, ms1mx3.0/29, Error ellipse: s-maj=18.6km s-min=11.2km az=85.0*
*NEIC **01** 18:35:34.4±1.5, 4.88S±0.08×153.78E±0.08, h105km±6km, mb4.7/56, Error ellipse: s-maj=11.6km s-min=10.5km az=213.0*
*BJI **01** 18:35:35.0±0.0, 4.63S×153.87E, h115km, mB5.1/29, mb4.6/36*
ISC 01 18:35:34.5±0.4, **4.89S**±0.05×**153.81E**±0.05, **h105km, n126**, σ**0.92**/127, **mb4.6**/49, **1C, New Ireland region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.78	293	Pn	Pn	18 36 04.0	-0.6
KRVT	Keravat (AS076	1.87	288	P	Pn	18 36 05.0	-0.7
	205nm,0.3s,baz=120,slow=1.0,SNR=175						
KRVT				S	Sn	18 36 27.9	-1.4
	354nm,0.3s,baz=180,slow=21,SNR=24						
HNR	Honiara	7.58	127	P	Pn	18 37 23.3	+0.9
	2.6nm,0.3s,baz=342,slow=20,SNR=3.4						
HNR				S	Sn	18 38 47.3	+0.6
	5.7nm,0.3s,baz=323,slow=20,SNR=4.6						
HNR	Honiara	7.58	127	P	Pn	18 37 30.0	+7.7
HNR	Honiara	7.58	127		Pn	18 37 22.7	+0.4
PMG	Port Moresby	7.98	235	P	Pn	18 37 28.7	+1.0
	44nm,0.3s,baz=49,slow=5.4,SNR=166						
PMG				S	Sn	18 38 58.1	+1.7
	baz=350,slow=17,SNR=1.6						
PMG				LR	LR	18 40 45.7	
	comp=Z,103nm,19.3s,baz=76,slow=39						
PMG	Port Moresby	7.98	235		Pn	18 37 28.8	+1.0
PMG				Sn	Sn	18 38 57.0	+0.6
PATS	Pohnpei	12.49	21	Pn	Pn	18 38 28.8	+0.2
JAY	Jayapura	13.29	280	P	Pn	18 38 41.9	+2.8
	baz=96,slow=8.0						
JAY				LR	LR	18 42 37.1	
	comp=Z,83nm,21.6s,baz=142,slow=32						
COEN	Coen	13.82	229	Pn	Pn	18 38 46.8	+0.7
CTA	Charters Tower	16.80	205	P	P	18 39 24.8	+0.9
	0.2nm,0.3s,baz=27,slow=15,SNR=4.3						
GUMO	Guam	20.39	334	P	P	18 40 03.9	+0.7
EIDS	Eidsvold	20.53	187	P	P	18 40 04.4	-0.2
EIDS				IAmb	IAmb	18 40 37.7	
	comp=Z,26nm,1.2s						
NOUC	Port Laguerre	20.96	146	P	P	18 40 08.9	-0.3
NOUC				IAmb	IAmb	18 40 34.4	
	comp=Z,48nm,1.7s						
DZM	Mont Dzumac	21.01	146	P	P	18 40 07.5	-2.4
	comp=Z,2.9nm,0.6s,baz=300,slow=20,SNR=4.4						
DZM	Mont Dzumac	21.01	146	P	P	18 40 10.0	+0.1
DZM				IAmb	IAmb	18 40 46.4	
	comp=Z,26nm,1.1s						
SIJI	Sorong	22.86	279	P	P	18 40 29.8	+0.5
	comp=Z,8.7nm,0.7s,baz=101,slow=15,SNR=4.8						
MTN	Manton Dam	23.74	249		P	18 40 36.3	-1.0
MTN				IAmb	IAmb	18 41 26.5	
	comp=Z,76nm,1.4s						
WRAB	Tennant Creek	24.13	230	P	P	18 40 41.0	+0.1
WRAB				IAmb	IAmb	18 40 42.5	
	comp=Z,19nm,0.8s						
WRA	Warramunga Arr	24.15	230	P	P	18 40 40.2	-0.8
	comp=Z,13nm,0.7s,baz=54,slow=9.8,SNR=60						
WRA				LR	LR	18 50 57.5	
	comp=Z,44nm,19.1s,baz=80,slow=38						
ARMA	Armidale	25.48	184	P	P	18 40 52.9	-0.2
H11S3	WAKE ISLAND Hy	26.48	28	T	T	19 09 37.3	
	baz=207,slow=74,SNR=5.0						
H11S2	WAKE ISLAND Hy	26.48	28	T	T	19 09 39.4	
	baz=207,slow=74,SNR=3.9						
H11S1	WAKE ISLAND Hy	26.50	28	T	T	19 09 34.8	
	baz=207						
AS31	Alice Springs	26.77	224	P	P	18 41 04.6	-0.2
ASAR	Alice Springs	26.77	224	P	P	18 41 04.5	-0.3
	comp=Z,5.3nm,0.9s,baz=54,slow=8.4,SNR=29						
KNRA	Kununurra	26.84	245	P	P	18 41 04.4	-1.0
KNRA				IAmb	IAmb	18 41 36.8	
	comp=Z,29nm,0.7s						
STKA	Stephens Creek	29.19	202	P	P	18 41 25.6	-0.6
	comp=Z,8.2nm,0.7s,baz=34,slow=14,SNR=24						
STKA				LR	LR	18 52 26.2	
	comp=Z,35nm,20.9s,slow=35						
STKA	Stephens Creek	29.19	202	P	P	18 41 25.8	-0.3
FITZ	Fitzroy Crossi	30.50	242	P	P	18 41 37.3	-0.6
	comp=Z,7.5nm,0.6s,baz=55,slow=7.1,SNR=22						
FITZ				LR	LR	18 55 20.3	
	comp=Z,47nm,18.2s,baz=72,slow=39						
FITZ	Fitzroy Crossi	30.50	242	P	P	18 41 37.3	-0.6
FITZ				IAmb	IAmb	18 41 38.3	
	comp=Z,42nm,1.5s						
CAN	Canberra	30.61	188	P	P	18 41 40.1	+1.4
CAN				IAmb	IAmb	18 41 57.2	
	comp=Z,47nm,1.8s						
BBOO	Buckleboo	32.35	209	P	P	18 41 53.7	-0.3
BBOO				IAmb	IAmb	18 41 54.3	
	comp=Z,13nm,0.9s						
TOO	Toolangi	33.41	192	P	P	18 42 03.7	+0.5
TOO				IAmb	IAmb	18 42 28.1	
	comp=Z,9.8nm,1.2s						
FORT	Forrest	35.36	220	P	P	18 42 19.9	-0.2
PSA00	Pilbara Seismi	36.85	240	P	P	18 42 32.5	-0.5
PSA00				IAmb	IAmb	18 42 33.2	

	comp=Z,17nm,0.9s						
TAU	Tasmania Unive	38.30	188	P	P	18 42 46.1	+1.3
KKM	Kota Kinabalu	39.08	286	P	P	18 42 51.2	-0.6
KKM				IAmb	IAmb	18 43 20.9	
	comp=Z,21nm,1.0s						
JAGI	Jajag, Banyuwa	39.53	263	P	P	18 42 54.4	-1.1
RPZ	Rata Peaks	41.55	161	P	P	18 43 10.6	-1.2
	comp=Z,9.4nm,0.8s,baz=233,slow=5.1,SNR=6.1						
RPZ	Rata Peaks	41.55	161	P	P	18 43 11.5	-0.3
RPZ				IAmb	IAmb	18 43 26.7	
	comp=Z,30nm,1.3s						
MLZ	Mavora Lakes	42.21	165	P	P	18 43 17.0	-0.1
MLZ				IAmb	IAmb	18 43 17.6	
	comp=Z,16nm,0.9s						
MORW	Morawa	43.08	232	P	P	18 43 23.6	-0.7
YHNB	Yeheng	43.12	314	P	P	18 43 24.9	+0.2
YHNB				IAmb	IAmb	18 44 16.9	
	comp=Z,35nm,1.6s						
JNU	Nakatsue	43.61	332	P	P	18 43 28.6	0.0
	comp=Z,7.2nm,0.8s,baz=186,slow=6.8,SNR=4.2						
JNU				LR	LR	18 59 16.3	
	comp=Z,34nm,18.2s,baz=350,slow=33						
JNU	Nakatsue	43.61	332	P	P	18 43 28.8	+0.3
KSM	Kuching	43.91	277	P	P	18 43 31.5	+0.2
KSM				IAmb	IAmb	18 45 04.1	
	comp=Z,35nm,1.4s						
NWAO	Narrogin (SRO)	44.05	226	P	P	18 43 31.4	-0.6
NWAO	Narrogin (SRO)	44.05	226	P	P	18 43 31.6	-0.5
NWAO				IAmb	IAmb	18 43 45.0	
	comp=Z,49nm,1.4s						
CISI	Cisompet, Garu	45.78	264	P	P	18 43 45.2	-1.0
DLV	T Lat	48.07	291	P	P	18 44 03.3	-0.8
KSRS	Korea Array	48.54	332	P	P	18 44 07.5	+0.5
	comp=Z,1.1nm,0.8s,baz=128,slow=8.1,SNR=5.2						
NJ2	Nanjing	49.55	320	eP	P	18 44 16.2	+1.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.9s						
USRK	Ussuriysk Ar.	52.66	340	P	P	18 44 38.4	+0.4
	comp=Z,1.7nm,0.8s,baz=144,slow=5.2,SNR=4.6						
USRK	Ussuriysk Ar.	52.66	340	P	P	18 44 38.0	0.0
KULM	Kulim	54.04	280	P	P	18 44 48.3	-0.3
KULM				IAmb	IAmb	18 44 49.2	
	comp=Z,7.2nm,0.8s						
ENH	Enshi	54.95	312	P	P	18 44 54.7	-0.3
ENH				IAmb	IAmb	18 44 56.4	
	comp=Z,14nm,0.9s						
PBKT	Sadao Pong	56.41	293	P	P	18 45 06.7	+1.1
PBKT				IAmb	IAmb	18 46 28.3	
	comp=Z,10nm,1.7s						
GSI	Gunungsitoli	56.51	275	P	P	18 45 04.3	-2.1
GSI				IAmb	IAmb	18 45 07.3	
	comp=Z,8.9nm,0.7s						
KLR	Kul'dur	57.22	343	P	P	18 45 11.1	+0.3
	comp=Z,0.4nm,0.3s,baz=141,slow=2.0,SNR=5.1						
XAN	Xi'an	57.38	316	P	P	18 45 12.1	-0.1
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN	Xi'an	57.38	316	P	P	18 45 12.2	-0.1
XAN				IAmb	IAmb	18 45 13.1	
	comp=Z,6.5nm,0.8s						
PETK	Petropavlovsk-	57.87	3	P	P	18 45 15.3	+0.1
	comp=Z,4.3nm,0.8s,baz=177,slow=7.8,SNR=4.6						
PETK	Petropavlovsk-	57.87	3	P	P	18 45 15.6	+0.3
CMAR	Chiang Mai Arr	58.83	295	P	P	18 45 23.6	+1.0
	comp=Z,1.6nm,0.8s,baz=116,slow=5.2,SNR=15						
CD2	Chengdu	59.56	310	P	P	18 45 26.7	-0.7
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
HHC	Hu-ho-hao-te	59.71	324	eP	P	18 45 30.6	+2.3
HHC				pmax	pmax		
	comp=Z,3.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,46nm,6.6s						
HHC				LR	LR		
	comp=Z,250nm,17.9s						
HHC				LR	LR		
	comp=Z,180nm,13.6s						
HHC				LR	LR		
	comp=Z,140nm,14.5s						
LZH	Lanzhou	62.00	315	eP	P	18 45 45.6	+1.6
LZH				pP	sP	18 46 18.3	-1.2
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				pmax	pmax		
	comp=Z,69nm,4.3s						
MA2	Magadan	64.31	358	P	P	18 45 58.8	+0.2
	comp=Z,6.4nm,0.8s,baz=165,slow=6.0,SNR=11						
MA2	Magadan	64.31	358	P	P	18 45 59.5	+1.0
MA2				IAmb	IAmb	18 46 00.3	
	comp=Z,6.5nm,0.8s						
GTA	Gaotai	66.41	317	⇑P	P	18 46 13.8	+1.1
GTA				pP	PcP	18 46 42.4	+0.7
GTA				sP	sP	18 46 54.8	+6.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,100nm,5.4s						
GTA				LR	LR		
	comp=Z,140nm,20.9s						
GTA				LR	LR		
	comp=Z,100nm,20.9s						
GTA				LR	LR		
	comp=Z,120nm,21.3s						
ULN	Ulaanbaatar	66.61	328	P	P	18 46 14.2	+0.3
SONM	Songino Array	66.94	327	P	P	18 46 16.6	+0.6
	comp=Z,1.4nm,0.7s,baz=146,slow=5.1,SNR=14						
SONM	Songino Array	66.94	327	P	P	18 46 16.3	+0.4
SHL	Shillong	67.22	300	P	P	18 46 17.6	-0.6
LSA	Lhasa	69.12	304	P	P	18 46 30.6	+0.2
YAK	Yakutsk	69.27	348	P	P	18 46 30.7	+0.8
YAK				IAmb	IAmb	18 46 36.9	
	comp=Z,7.8nm,0.4s						
TAPN	Taplejung	71.31	301	eP	P	18 46 44.5	+0.9
	comp=Z,22nm,0.8s						
ODAN	Odare	71.45	300	eP	P	18 46 45.1	+0.7
	comp=Z,43nm,0.8s						
RAMN	Ramite	72.16	300	eP	P	18 46 49.3	+0.7
JIRN	Jiri	72.70	301	eP	P	18 46 52.4	+0.5
	comp=Z,19nm,0.7s						
GUN	Gumba	73.03	301	eP	P	18 46 54.6	+0.7
	comp=Z,37nm,0.7s						
BILL	Bilibino	73.29	5	P	P	18 46 54.8	+0.7
PKI	Pulchoki	73.34	301	eP	P	18 46 55.9	+0.2
PKIN	Phulchoki	73.36	301	eP	P	18 46 55.9	+0.2
KKN	Kakani	73.51	301	eP	P	18 46 57.1	+0.6
	comp=Z,15nm,0.7s						
DMN	Daman	73.61	300	eP	P	18 46 57.9	+0.7
GKN	Gorkha	74.11	301	eP	P	18 47 00.5	+0.5
KOLN	Koldanda	74.95	300	eP	P	18 47 05.2	+0.3
	comp=Z,30nm,0.9s						
DANN	Dangsing	74.95	301	eP	P	18 47 05.0	0.0
	comp=Z,20nm,0.8s						
WMQ	Urumqi	76.49	317	eP	P	18 47 14.7	+1.5
WMQ				LR	LR		
	comp=Z,240nm,17.9s						
WMQ				LR	LR		
	comp=Z,1μm,19.5s						
WMQ				LR	LR		
	comp=Z,160nm,11.7s						
SVW2	Sparrevohn	76.52	23	P	P	18 47 14.5	+1.6
SVW2				IAmb	IAmb	18 47 45.0	
	comp=Z,23nm,1.8s						
CNPM	China Poot	77.36	25	P	P	18 47 18.3	+0.7
IMAR	Indian Mountai	80.14	19	P	P	18 47 33.4	+0.7
MCK	McKinley	80.56	22	P	P	18 47 34.8	-0.3
MCK				IAmb	IAmb	18 47 35.7	
	comp=Z,8.6nm,1.1s						
MLY	Manley	80.61	21	P	P	18 47 35.5	+0.2
KAAM	Kaadhehdhoo	80.89	271	P	P	18 47 35.8	-2.0
MK31	Makanchi Array	81.05	319	P	P	18 47 38.0	-0.1
MKAR	Makanchi Array	81.05	319	P	P	18 47 38.3	+0.2
	comp=Z,1.7nm,0.8s,baz=101,slow=6.4,SNR=12						
MKAR	Makanchi Array	81.05	319	P	P	18 47 38.0	-0.1
MAKZ	Makanchi	81.26	319	P	P	18 47 39.3	+0.2
GLB	Gilahina Butte	81.51	25	P	P	18 47 40.6	+0.5
GLB				IAmb	IAmb	18 48 04.9	
	comp=Z,15nm,1.6s						
ZAA0	Zalesovo Array	81.78	326	P	P	18 47 40.1	-1.6
ZALV	Zalesovo Beam	81.78	326	P	P	18 47 40.8	-0.9
	comp=Z,1.4nm,0.8s,baz=109,slow=5.6,SNR=6.6						
ZALV	Zalesovo Beam	81.78	326	P	P	18 47 39.8	-1.9
ILAR	Eielson Array	81.87	22	P	P	18 47 40.8	-1.1
	comp=Z,1.2nm,0.9s,baz=253,slow=5.7,SNR=10						
ILAR	Eielson Array	81.87	22	P	P	18 47 40.0	-1.9
KSH	Kashi	83.76	310	P	P	18 47 55.0	+2.6
KSH				SKS	S	18 58 04.9	-2.2
KSH				S	SKKSac	18 58 10.9	-0.2
KSH				pmax	pmax		
	comp=Z,19nm,0.8s						
KSH				pmax	pmax		
	comp=Z,530nm,6.7s						
KSH				LR	LR		
	comp=Z,400nm,11.3s						
KSH				LR	LR		
	comp=Z,760nm,14.6s						
KSH				LR	LR		
	comp=Z,420nm,15.0s						
KURK	Kurchatov	84.46	322	P	P	18 47 55.0	-0.5
NIL	Nilore	84.86	304	P	P	18 47 58.0	+0.1
NIL				IAmb	IAmb	18 48 29.0	
	comp=Z,9.7nm,0.8s						
QSPA	South Pole Qui	85.07	180	P	P	18 47 58.3	-0.2
MAW	Mawson	85.87	203	P	P	18 48 02.1	-0.1
	comp=Z,10nm,0.2s,baz=76,slow=6.4,SNR=12						
MAW	Mawson	85.87	203	P	P	18 48 01.4	-0.8
INK	Inuvik	88.18	21	P	P	18 48 13.2	-0.1
	comp=Z,0.9nm,0.8s,baz=217,slow=9.6,SNR=3.2						
INK	Inuvik	88.18	21	P	P	18 48 12.6	-0.7
INK				IAmb	IAmb	18 48 13.6	
	comp=Z,6.9nm,1.4s						
KKAR	Karatay Array	88.42	313	P	P	18 48 14.3	-0.7
BRVK	Borovoye	89.98	323	P	P	18 48 21.0	-1.2
BRVK				IAmb	IAmb	18 48 22.5	
	comp=Z,3.4nm,0.8s						
YKA	Yellowknife Ar	95.04	28	P	P	18 48 45.0	-0.3
	comp=Z,0.2nm,0.6s,baz=266,slow=5.0,SNR=4.5						
PDAR	Pinedale Array	98.17	48	LR	LR	19 34 02.6	
	comp=Z,48nm,18.3s,baz=42,slow=36						
BDFB	Brasilia	150.28	134	PKPbc	PKPbc	18 55 13.1	-1.6
	comp=Z,1.5nm,0.5s,baz=297,slow=1.3,SNR=3.2						
TORD	Torodi Ar. Bea	151.29	288	PKPbc	PKPbc	18 55 15.6	-1.3
	comp=Z,3.2nm,0.7s,baz=46,slow=4.2,SNR=13						
KIC	Kosan Boka	158.60	275	ePKP2	PKPab	18 55 56.5	-0.1
	comp=Z,8.5nm,0.9s						
DBIC	Dimbokro	158.70	276	PKPab	PKPab	18 55 56.5	-0.5
	comp=Z,1.9nm,0.6s,baz=31,slow=9.1,SNR=4.9						
DBIC	Dimbokro	158.70	276		PKPab	18 55 57.1	+0.1
TIC	Toumodi	158.86	276	ePKP2	PKPab	18 55 57.5	-0.2
LIC	Lamto	158.89	275	ePKP2	PKPab	18 55 57.6	-0.2
	comp=Z,2.4nm,0.3s						

*NEIC **01** 18:37:01.6±1.0, 17°.2S±0°.2×179°.0W±0°.2, h516km±7km, mb4.3/9, Error ellipse: s-maj=28.6km s-min=17.5km az=150.0*

*IDC **01** 18:37:01.4±2.1, 17°.09S×179°.10W, h497km±29km, mb3.2/9, mb1 3.5/10, mb1mx3.1/45, mbtmp4.0/10, Error ellipse: s-maj=74.6km s-min=13.1km az=153.0*

ISC 01 18:37:01.1±0.6, **17°.2S**±0°.2×**179°.0W**±0°.1, **h500**km, **n30**, σ**0s76**/27, **mb4.0**/14, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.85	258	P	P	18 38 18.4	+7.1
AFI	Afiamalu	7.70	66	P	P	18 38 54.6	0.0
	2.2nm,0.3s,baz=270,slow=10,SNR=3.3						
NIUE	Niue	8.85	104	P	P	18 39 05.7	-0.7
ARMA	Armidale	29.82	238	P	P	18 42 26.8	-0.3
ARMA				IAmb	IAmb	18 42 32.0	
	comp=Z,6.0nm,1.1s						
CTA	Charters Tower	33.00	259	P	P	18 42 55.3	+0.9
	comp=Z,2.7nm,0.7s,baz=96,slow=9.2,SNR=3.7						
TOO	Toolangi	37.19	230	P	P	18 43 28.1	-1.2
TOO				IAmb	IAmb	18 43 30.2	
	comp=Z,6.1nm,0.9s						
STKA	Stephens Creek	38.48	240	P	P	18 43 39.9	0.0
	comp=Z,2.3nm,0.5s,baz=86,slow=8.3,SNR=8.2						
STKA	Stephens Creek	38.48	240	P	P	18 43 39.8	0.0
BBOO	Buckleboo	43.26	240	P	P	18 44 17.3	-0.6
WB2	Warramunga Arr	44.19	259	P	P	18 44 24.9	-0.4
WB2				IAmb	IAmb	18 44 42.5	
	comp=Z,14nm,1.4s						
WRAB	Tennant Creek	44.19	259	P	P	18 44 24.9	-0.5
WRAB				IAmb	IAmb	18 44 30.9	
	comp=Z,21nm,1.5s						
WRA	Warramunga Arr	44.20	259	P	P	18 44 24.9	-0.5
	comp=Z,0.8nm,0.6s,baz=90,slow=6.7,SNR=5.0						
AS31	Alice Springs	44.43	254	P	P	18 44 27.2	-0.1
ASAR	Alice Springs	44.44	254	P	P	18 44 27.1	-0.1
	comp=Z,7.4nm,0.5s,baz=89,slow=8.2,SNR=71						
ASAR	Alice Springs	44.44	254	P	P	18 44 26.6	-0.7
SBA	Scott Base	61.12	183	P	P	18 46 26.9	+1.2
VNDA	Vanda	61.13	185		P	18 46 42.0	+16
VNDA				IAmb	IAmb	18 46 59.1	
	comp=Z,23nm,1.4s						
NVAR	Mina Array Bea	79.30	44	P	P	18 48 15.9	+1.1
	comp=Z,0.6nm,0.7s,baz=219,slow=7.4,SNR=5.5						
NVAR	Mina Array Bea	79.30	44	P	P	18 48 14.0	-0.8
ILAR	Eielson Array	85.30	13	P	P	18 48 44.5	+0.2
	comp=Z,0.4nm,0.3s,baz=223,slow=5.4,SNR=9.8						
ILAR	Eielson Array	85.30	13	P	P	18 48 44.3	0.0
TXAR	Lajitas Array	86.10	58	P	P	18 48 50.3	+1.2
	comp=Z,0.5nm,0.7s,baz=212,slow=8.1,SNR=7.0						
TXAR	Lajitas Array	86.10	58	P	P	18 48 49.0	-0.1
PDAR	Pinedale Array	87.22	44	P	P	18 48 54.4	+0.1
	comp=Z,0.4nm,0.5s,baz=176,slow=2.7,SNR=6.1						
PDAR	Pinedale Array	87.22	44	P	P	18 48 53.3	-0.9
YKA	Yellowknife Ar	93.91	25	P	P	18 49 24.8	+0.5
	comp=Z,0.3nm,0.8s,baz=256,slow=4.6,SNR=3.1						
BRTR	Keskin Array B	143.85	315	PKP	PKPdf	18 55 38.9	-0.7
	comp=Z,0.4nm,0.5s,baz=59,slow=5.6,SNR=3.8						
BRTR	Keskin Array B	143.85	315		PKPab	18 55 37.8	-0.7
GERES	GERESS Array B	146.75	345	PKPbc	PKPbc	18 55 45.5	-1.3
	comp=Z,0.5nm,0.5s,baz=23,slow=4.8,SNR=3.6						
GERES	GERESS Array B	146.75	345		PKPbc	18 55 45.6	-1.1

IDC 01 18:40:40.8±1.7, **6°.83S**×**128°.84E**, **h0**km, **mb3.3**/2, **mb1 3.6**/5, **mb1mx3.4**/37, **mbtmp3.5**/5, **ML3.4**/3, **Error ellipse: s-maj=82.4km s-min=25.5km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.63	195	Pn	Pn	18 43 27.1	-1.0
	0.4nm,0.3s,baz=18,slow=9.6,SNR=9.8						
FITZ				Sn	Sn	18 45 22.3	-16
	0.3nm,0.3s,baz=82,slow=8.2,SNR=3.8						
WRA	Warramunga Arr	14.09	158	Pn	Pn	18 44 03.1	+1.3
	0.1nm,0.3s,baz=339,slow=12,SNR=4.0						
WRA				Sn	Sn	18 46 26.7	-12
	0.3nm,0.3s,baz=342,slow=23,SNR=7.0						
ASAR	Alice Springs	17.43	164	P	Pn	18 44 45.7	+0.1
	0.2nm,0.3s,baz=340,slow=12,SNR=3.9						
ASAR				S	Sn	18 47 44.0	-16
	0.1nm,0.3s,baz=348,slow=26,SNR=3.5						
SONM	Songino Array	57.92	342	P	P	18 50 35.9	+1.0
	0.2nm,0.6s,baz=142,slow=7.2,SNR=2.8						
MKAR	Makanchi Array	67.46	327	P	P	18 51 37.9	-0.6
	0.1nm,0.3s,baz=117,slow=8.0,SNR=9.1						

*ATH **01** 18:46:38.0, 38°.17N×20°.37E, h11km±1km, ML2.7/8, Error ellipse: s-maj=2.6km s-min=1.3km az=256.0*

*THE **01** 18:46:38.2, 38°.17N×20°.36E, h7km±1km, ML2.9/8, Error ellipse: s-maj=1.2km s-min=0.6km az=81.0*

ISC 01 18:46:38.0±1.2, **38°.17N**±0°.03×**20°.38E**±0°.05, **h9**km±5km, **n31**, σ**0s44**/45, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.01	356	P	Pg	18 46 39.7	0.0
CHV1				S	Sg	18 46 40.5	-0.4
	162μm,0.2s						
KEF3	Kipouria, Keph	0.04	320	P	Pg	18 46 40.1	+0.2
KEF3				S	Sg	18 46 41.2	-0.1
KEF2	Argostoli. Kep	0.08	93	P	Pg	18 46 40.5	+0.2
ARG2	Argostoli	0.08	84	P	Pg	18 46 40.5	+0.2
ARG2				S	Sg	18 46 42.0	0.0
	56μm,0.2s						
KEF4	Livadi, Kephal	0.09	20	P	Pg	18 46 40.7	+0.2
KEF4				S	Sg	18 46 42.7	+0.5
KEF1	Kardakata, Kep	0.13	33	P	Pg	18 46 41.3	+0.3
KEF1				S	Sg	18 46 43.2	+0.1
VLS	Valsamata	0.16	88	P	Pg	18 46 41.6	0.0
VLS				S	Sg	18 46 44.2	+0.2
	9μm,0.1s						
VLS	Valsamata	0.16	88	P	Pg	18 46 41.6	0.0
VLS				S	Sg	18 46 44.1	+0.1
VLS				AML	AML	18 46 44.4	
	comp=E,20119μm,0.1s						
VLS				AML	AML	18 46 44.5	
	comp=N,14423μm,0.2s						
VSK1	VASILIKIADES	0.28	31	P	Pg	18 46 43.8	+0.1
VSK1				S	Sg	18 46 48.5	+1.1
	comp=N,2μm,0.2s						
FSK	Fiskardo	0.32	26	P	Pg	18 46 44.6	+0.1
FSK				S	Sg	18 46 49.6	+0.8
	comp=N,1μm,0.2s						
FSK	Fiskardo	0.32	26	AML	AML	18 46 51.5	
	comp=E,2806μm,0.1s						
FSK				AML	AML	18 46 52.8	
	comp=N,1405μm,0.3s						
KFL	Anninata	0.33	101	P	Pg	18 46 44.5	0.0
VLMS	Volimes, Zakyn	0.37	143	P	Pg	18 46 45.8	+0.5
VLMS				S	Sg	18 46 51.2	+1.1
VLMS				AML	AML	18 46 53.0	
	comp=E,4927μm,0.2s						
VLMS				AML	AML	18 46 54.1	
	comp=N,4594μm,0.3s						
EVGI	Lefkada island	0.50	25	P	Pg	18 46 47.8	+0.1
EVGI				S	Sb	18 46 55.8	-0.5
	comp=N,495nm,0.2s						
EVGI	Lefkada island	0.50	25	P	Pg	18 46 47.9	+0.1
EVGI				S	Sb	18 46 55.8	-0.5
MGNA	Meganis	0.58	33	P	Pg	18 46 49.2	-0.2
MGNA				AML	AML	18 46 58.6	
	comp=E,2199μm,0.2s						
MGNA				AML	AML	18 46 58.8	
	comp=N,1967μm,0.2s						
KRI1	kERI	0.61	146	P	Pg	18 46 49.6	-0.3
KRI1				S	Sb	18 46 59.5	-0.1
	comp=N,1μm,0.3s						
LKD2	Lefkada island	0.65	19	P	Pg	18 46 50.5	-0.2
LKD2	Lefkada island	0.65	19	P	Pg	18 46 50.6	-0.1
TSLK	Tsoukalades, L	0.69	18	P	Pg	18 46 51.2	-0.1
TSLK				S	Sg	18 47 01.1	+0.7
TSLK	Tsoukalades, L	0.69	18	P	Pg	18 46 51.3	-0.1
PDO	Prodromos	0.76	56	P	Pg	18 46 52.6	-0.1
PDO	Prodromos	0.76	56	P	Pg	18 46 52.3	-0.5
PDO				AML	AML	18 47 11.8	
	comp=E,934μm,0.4s						
PDO				AML	AML	18 47 11.8	
	comp=N,1453μm,0.3s						
RLS	Riolos of Patr	0.86	97	P	Pg	18 46 54.5	-0.2
PVO	Paravola	1.00	63	P	Pg	18 46 57.3	-0.1
PVO				S	Sn	18 47 13.3	+0.8
	comp=N,342nm,0.5s						
PVO	Paravola	1.00	63	P	Pg	18 46 57.2	-0.1
PVO				AML	AML	18 47 18.3	
	comp=N,538μm,0.4s						
PVO				AML	AML	18 47 19.9	
	comp=E,830μm,0.4s						
DRO	Drossia	1.07	101	P	Pg	18 46 58.3	-0.3
DRO				AML	AML	18 47 22.6	
	comp=E,589μm,0.3s						
DRO				AML	AML	18 47 22.7	
	comp=N,651μm,0.5s						
EFP	Efpalio	1.23	77	P	Pn	18 47 00.3	-1.0
ANX	Ano Chora	1.28	70	P	Pn	18 47 02.0	-0.1
ANX				AML	AML	18 47 27.2	
	comp=N,730μm,0.5s						
ANX				AML	AML	18 47 27.4	
	comp=E,438μm,0.5s						
SERG	Sergoula	1.34	79	P	Pn	18 47 02.3	-0.6
KLV	Kalavryta, Ach	1.40	95	P	Pn	18 47 03.9	+0.1

*KRSC **01** 19:22:12.8±1.7, 51°.55N×160°.77E, h83km±30km, ML3.8*

*IDC **01** 19:22:18.6±5.6, 51°.65N×160°.60E, h58km±42km, mb3.3/7, mb1 3.6/8, mb1mx3.2/41, mbtmp3.5/8, ML2.3/1, Error ellipse: s-maj=67.1km s-min=27.1km az=14.0*

ISC 01 19:22:12.6±2.1, **51°.66N**±0°.06×**160°.63E**±0°.06, **h8**km±12km, **n40**, σ**1s38**/53, **mb3.6**/7, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.49	346	eP	Pb	19 22 40.6	+0.1
SPN				eS	Sg	19 22 59.8	-0.7
RUS	Russkaya	1.52	302	eP	Pg	19 22 41.9	+0.2
RUS				eS	Sg	19 23 02.4	+1.0
KDTR	Khodutka, Kamc	1.59	277	eP	Pn	19 22 42.1	+1.1
KDTR				eS	Sb	19 23 02.9	+0.5
NLC	Nalytchevo	1.71	333	eP	Pg	19 22 45.1	-0.2
NLC				eS	Sg	19 23 07.8	+0.4
MTVR	Mutnovka	1.72	300	eP	Pb	19 22 45.0	+0.5
DALK	Dalny	1.79	321	eP	Pb	19 22 46.2	+0.6
DALK				eS	Sg	19 23 09.9	-0.3
GRL	Gorelyy	1.81	301	eP	Pb	19 22 46.9	+0.9
GRL				eS	Sg	19 23 10.9	+0.1
ASAK	Asacha	1.83	294	eP	Pb	19 22 46.9	+0.5
ASAK				eS	Sg	19 23 11.3	-0.2
UGLR	Uglovaya	1.91	325	eP	Pb	19 22 48.2	+0.6
UGLR				eS	Sg	19 23 13.4	-0.4
KRMR	Karymshinskiy	1.93	308	eP	Pb	19 22 47.4	-0.6
KRMR				eS	Sg	19 23 12.6	-2.0
SDLR	Sedlovina	1.94	327	eP	Pb	19 22 47.0	-1.3
SMAR	Somma	1.96	326	eP	Pb	19 22 47.4	-1.2
AVH	Avacha	1.98	325	eP	Pb	19 22 49.6	+0.7
KRER	Koryakskii	2.01	326	eS	Sg	19 23 14.7	-2.4
KOK	Koryaka	2.04	324	eP	Pb	19 22 50.7	+0.8
KRX	Arik	2.09	325	eP	Pb	19 22 50.8	0.0
PETK	Petropavlovsk-	2.31	310	P	Pb	19 22 54.1	-0.3
	3.6nm,0.3s,baz=110,slow=18,SNR=135						
PETK				S	Sb	19 23 21.9	-1.1
	5.1nm,0.3s,baz=109,slow=21,SNR=13						
PAU	Pauzhetka	2.39	267	eP	Pn	19 22 54.0	+2.1
APC	Apacha	2.48	302	eP	Pn	19 22 54.7	+1.5
APC				eS	Sb	19 23 25.1	-2.9
MKZ	Mys Kozlova	2.98	12	eP	Pn	19 22 59.9	-0.2
MKZ				eS	Sn	19 23 34.6	-1.3
SKR	Severo-Kuril's	3.00	253	eP	Pn	19 23 00.9	+0.6
SKR				eS	Sn	19 23 35.4	-1.0
KZV	Kizimen	3.47	357	eP	Pn	19 23 09.0	+2.1
KZV				eS	Sn	19 23 49.0	+0.7
TUMR	Tumrok	3.65	356	eP	Pn	19 23 11.9	+2.6
KMNR	Kamenistaya	4.12	357	eP	Pn	19 23 18.6	+2.8
KRSR	Krestovskiy	4.57	360	eP	Pn	19 23 24.4	+2.4
KRSR				eS	Sn	19 24 17.1	+1.8
KLY	Klyuchi	4.67	0	eP	Pn	19 23 23.9	+0.7
SRDR	Sredinnyy	4.70	354	eP	Pn	19 23 26.6	+2.8
KBTR	Krutoberegovo	4.74	15	eP	Pn	19 23 24.8	+0.5
KBTR				eS	Sn	19 24 18.5	-0.9
BDR	Baidarnaya	4.93	4	eP	Pn	19 23 30.3	+3.3
SRKR	Sorokina	5.02	3	eP	Pn	19 23 30.1	+2.0
ILAR	Eielson Array	29.62	43	P	P	19 28 17.9	+0.1
	0.3nm,0.8s,baz=250,slow=7.2,SNR=3.6						
H11N2	WAKE ISLAND Hy	32.24	169	T	T	20 02 28.8	
	baz=345						
H11N3	WAKE ISLAND Hy	32.25	169	T	T	20 02 28.8	
	baz=345						
H11N1	WAKE ISLAND Hy	32.26	169	T	T	20 02 30.6	
	baz=345,SNR=2.8						
INK	Inuvik	34.82	36	P	P	19 29 03.4	+0.1
	0.8nm,0.5s,baz=304,slow=6.0,SNR=3.7						
YKA	Yellowknife Ar	44.01	42	P	P	19 30 20.1	+0.1
	0.3nm,0.7s,baz=292,slow=7.7,SNR=5.0						
NVAR	Mina Array Bea	55.93	69	P	P	19 31 51.1	0.0
	0.2nm,0.6s,baz=309,slow=5.7,SNR=3.8						
PDAR	Pinedale Array	57.95	60	P	P	19 32 05.1	-0.3
	0.4nm,0.6s,baz=298,slow=3.8,SNR=3.2						
AKASG	Malin Array Be	70.02	329	P	P	19 33 23.8	-0.5
	0.3nm,0.4s,baz=33,slow=6.5,SNR=6.1						
TXAR	Lajitas Array	70.90	67	P	P	19 33 29.8	-0.4
	0.5nm,0.5s,baz=296,slow=4.6,SNR=9.6						

*ATH **01** 19:45:19.8, 38°.18N×20°.40E, h7km±2km, ML2.8/3, Error ellipse: s-maj=3.1km s-min=1.0km az=266.0*

*THE **01** 19:45:19.5, 38°.15N×20°.38E, h6km, ML2.9/3, Error ellipse: s-maj=0.9km s-min=0.5km az=236.0*

ISC 01 19:45:18.7±1.5, **38°.15N**±0°.05×**20°.37E**±0°.06, **h11**km±6km, **n15**, σ**0s31**/26, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	21	P	Pg	19 45 20.9	+0.1
CHV1				S	Sg	19 45 21.8	-0.4
KEF3	Kipouria, Keph	0.05	344	P	Pg	19 45 21.3	+0.4
KEF3				S	Sg	19 45 22.5	-0.1
KEF2	Argostoli. Kep	0.10	82	P	Pg	19 45 21.7	+0.3

KEF2 S Sg 19 45 23.3 0.0
ARG2 Argostoli 0.10 75 P Pg 19 45 21.7 +0.3
ARG2 S Sg 19 45 23.2 -0.2
33µm,0.1s
KEF4 Livadi, Kephal 0.12 23 P Pg 19 45 21.9 +0.3
KEF4 S Sg 19 45 23.7 0.0
KEF1 Kardakata, Kep 0.15 33 P Pg 19 45 22.3 +0.1
KEF1 S Sg 19 45 24.1 -0.4
VLS Valsamata 0.18 82 P Pg 19 45 22.9 +0.3
VLS S Sg 19 45 25.5 +0.2
4µm,0.2s
VLS Valsamata 0.18 82 P Pg 19 45 22.8 +0.1
VLS S Sg 19 45 25.2 -0.1
VLS AML AML 19 45 25.6
comp=E,8062µm,0.1s
VLS AML AML 19 45 26.2
comp=N,5252µm,0.2s
VSK1 VASILIKIADES 0.30 31 P Pg 19 45 25.1 +0.3
VSK1 S Sg 19 45 29.6 +0.7
comp=N,2µm,0.3s
KFL Anninata 0.34 97 P Pg 19 45 25.9 +0.5
VLMS Volimes, Zakyn 0.36 140 P Pb 19 45 26.9 -0.2
VLMS S Sb 19 45 32.8 0.0
VLMS AML AML 19 45 35.1
comp=N,5302µm,0.3s
VLMS AML AML 19 45 37.8
comp=E,3241µm,0.3s
EVGI Lefkada island 0.52 26 P Pg 19 45 29.1 +0.3
EVGI S Sb 19 45 37.1 -0.3
EVGI Lefkada island 0.52 26 P Pg 19 45 29.2 +0.3
PVO Paravola 1.02 63 P Pg 19 45 38.5 +0.1
PVO Paravola 1.02 63 P Pg 19 45 38.3 -0.1

IDC 01 19:55:03.5±1.2,17°.33N×119°.86E,h0km,mb3.6/6, mb1 3.6/7,mb1mx3.4/66,mbtmp3.5/7,MS3.1/1,Ms1 3.1/1, ms1mx2.6/55,Error ellipse: s-maj=59.4km s-min=19.6km az=62.0,Philippine Islands region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
DAV Davao City (W) 11.63 151 LR LR 20 03 57.7
comp=Z,88nm,18.2s,baz=338,slow=46
CMAR Chiang Mai Arr 19.93 276 P P 19 59 37.1 0.0
baz=88,slow=7.8,SNR=4.6
SONM Songino Array 32.37 343 P P 20 01 35.2 +0.4
0.2nm,0.6s,baz=161,slow=11,SNR=2.8
MKAR Makanchi Array 42.67 322 P P 20 03 02.0 0.0
0.5nm,0.9s,baz=115,slow=8.2,SNR=4.2
ASAR Alice Springs 42.99 161 P P 20 03 05.5 +0.7
0.6nm,0.8s,baz=339,slow=6.7,SNR=8.5
ZALV Zalesovo Beam 45.48 332 P P 20 03 23.9 -0.5
0.7nm,0.7s,baz=124,slow=7.7,SNR=2.7
KURBB Kurchatov Arra 46.75 325 P P 20 03 34.2 -0.2
1.4nm,0.8s,baz=122,slow=8.4,SNR=12
STKA Stephens Creek 53.19 157 P P 20 04 22.4 -1.2
0.6nm,0.5s,baz=328,slow=6.9,SNR=3.6

TEH 01 19:57:55.5,31°.75N×51°.12E,h5km,ML3.9
IDC 01 19:57:56.5±0.9,31°.87N×50°.99E,h0km,mb3.7/12, mb1 3.8/18,mb1mx3.6/63,mbtmp3.7/18,ML3.6/6,MS3.0/3, Ms1 3.0/3,ms1mx2.7/56,Error ellipse: s-maj=21.6km s-min=15.7km az=158.0
THR 01 19:57:58.3±1.3,31°.81N×51°.13E,h14km±13km,ML3.7
ISC 01 19:57:56.4±1.2,31°.77N±0°.03×51°.10E±0°.03,h9km±8km, n69,σ2°41/71,mb3.7/12,Northern and central Iran

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
IBRJ Brojen 0.19 45 ePg Pg 19 58 00.0 -0.6
ROKH ROKH 0.58 354 e 19 58 18.6
ROKH ePg Pg 19 58 06.6 -1.1
JHBN Jahan bin 0.59 321 e 19 58 25.3
JHBN ePg Pg 19 58 07.5 -0.4
KLNJ Kolanjah 0.87 151 ePg Pb 19 58 12.7 -1.2
KLNJ e 19 58 36.6
IPIR Pirpir 0.93 349 ePg Pg 19 58 12.7 -1.6
IPIR e 19 58 31.0
IRAM Ramesheh 1.09 88 ePg Pg 19 58 14.9 -2.5
IRAM e 19 58 34.3
IZEF Zefreh 1.53 42 ePg Pn 19 58 22.7 -1.5
IKLH Kolahrood 1.60 15 ePn Pn 19 58 24.6 -0.5
IKLH e 19 58 51.0
SHGR Shooshtar-Gavs 1.98 280 ePg Pg 19 58 34.0 -0.5
SHGR eSg Sg 19 59 02.0 +1.8
SHGR IAML 19 59 19.7
comp=N,713nm,0.5s
SHGR IAML 19 59 20.3
comp=E,647nm,0.7s
QAM Ghamsar 2.00 8 ePn Pb 19 58 32.2 -1.0
IKAZ Kazeroun 2.08 162 ePn Pb 19 58 34.3 -0.3
KHMZ Khomeyn 2.19 334 ePg Pb 19 58 37.2 -1.2
KHMZ IAML 19 59 14.1
comp=E,336nm,0.5s
KHMZ Khomeyn 2.19 334 ePn Pg 19 58 37.2 -1.2
ISAD Sadrabad 2.20 86 ePn Pb 19 58 35.8 -0.8
ISAD e 19 58 42.4
KRSH Karshahi 2.36 21 ePn Pb 19 58 39.2 0.0
KRSH e 19 59 14.2
SHI Shiraz 2.45 150 ePn Pb 19 58 39.9 -0.8
ANAR Anarak 2.63 57 ePn Pb 19 58 42.2 -1.7
ANAR e 19 59 25.9
GHB Gharebagh 2.69 152 ePn Pb 19 58 42.9 -2.0
GHVR GHOM 2.71 3 ePn Pb 19 58 43.2 -1.9
GHVR GHOM 2.71 3 ePn Pb 19 58 43.2 -1.9
ICHK Chekchek 2.85 80 ePn Pb 19 58 44.8 -2.8
ICHK e 19 59 29.0
BDRS Dareh Seyedi 2.87 320 ePn Pb 19 58 45.2 -2.8
BDRS e 19 59 38.0
IKMR Kamar-syah 2.88 308 ePn Pb 19 58 45.6 -2.4
IKMR e 19 59 36.6
ASAO Ashtian 2.91 342 ePn Pb 19 58 46.3 -2.4
ASAO Ashtian 2.91 342 ePn Pb 19 58 46.3 -2.4
IMEH Mehriz 3.02 96 ePn Pb 19 58 47.7 -2.8
IMEH e 19 59 51.4
YZKH Yazd 3.03 77 ePn Pb 19 58 47.7 -2.8
YZKH Yazd 3.03 77 ePn Pb 19 58 47.7 -2.8
IQOM Qom 3.06 360 ePn Pn 19 58 47.5 +2.2
IDOB Doab 3.18 310 ePn Pn 19 58 49.2 +2.4
IDOB e 20 00 00.1
HSAM Samen 3.21 320 ePn Pn 19 58 50.0 +2.6
IKFM Kafar-mosalman 3.25 303 ePn Pn 19 58 50.2 +2.6
IVRN Varamin 3.26 9 ePn Pn 19 58 49.9 +2.1
HAGD Aghdareh 3.46 332 ePn Pn 19 58 53.5 +2.8
HAGD e 20 00 01.7
IHSB Hasanabad 3.66 2 ePn Pn 19 58 56.0 +2.6
IRAZ Razeghan 3.75 345 ePn Pn 19 58 57.0 +2.3
IBAF Bafgh 3.81 92 ePn Pn 19 58 58.4 +2.9
IBAF e 20 00 13.7
IBZA Bozab 3.83 316 ePn Pn 19 58 58.3 +2.5
IDMV Damavand 3.88 11 ePn Pn 19 58 58.2 +1.7
IALM Almabolaq 3.94 322 ePn Pn 19 58 58.6 +1.2
IFIR Firoozkooh 4.10 19 ePn Pn 19 59 03.2 +3.7
QABG Abgarm-Qazvin 4.13 343 ePn Pn 19 59 02.5 +2.6
HSRG Sareghieh 4.19 327 ePn Pn 19 59 02.6 +1.8
IALA Alasht 4.53 18 ePn Pn 19 59 08.5 +3.0
SNGE Sanandaj 4.56 318 ePn Pn 19 59 08.4 +2.5
SNGE Sanandaj 4.56 318 ePn Pn 19 59 08.4 +2.5
KHGB Koh Gabri 4.82 105 ePn Pn 19 59 12.1 +2.7
TPRV Parvadeh(Tabas 4.89 74 ePn Pn 19 59 12.7 +2.5
IDHR Dehrash 4.91 308 ePn Pn 19 59 12.9 +2.2
TKDS Koohdasht(Taba 5.40 69 ePn Pn 19 59 20.2 +2.9
GEYT Alibeck 8.42 41 Pn Pn 20 00 00.5 +1.7
comp=E,0.2nm,0.3s,baz=231,slow=9.1,SNR=5.5
WSAR Wadi Sarin 10.81 140 Pn Pn 20 00 32.2 +0.8
comp=E,1.0nm,0.3s,baz=3.7,slow=7.3,SNR=12
WSAR Sn Sn 20 02 26.6 -5.9
comp=E,0.3nm,0.3s,baz=320,slow=17,SNR=4.0
WSAR LR LR 20 05 09.2
comp=E,51nm,21.2s,baz=336,slow=40
ASF Jabal al Asfar 12.07 276 Pn Pn 20 00 46.6 -2.2
comp=E,0.4nm,0.3s,baz=107,slow=12,SNR=2.8
ASF Sn Sn 20 02 55.0 -8.6
comp=E,0.1nm,0.3s,baz=60,slow=20,SNR=1.6
ASF LR LR 20 06 33.6
comp=E,149nm,21.3s,baz=242,slow=43
MMAI Mount Meron Ar 13.33 280 Pn Pn 20 01 04.8 -1.0
comp=E,0.5nm,0.3s,baz=92,slow=18,SNR=1.4
EIL Elat 14.05 266 LR LR 20 08 20.1
comp=E,52nm,18.1s,baz=296,slow=45
BRTR Keskin Array B 16.23 304 Pn P 20 01 46.9 -1.1
comp=E,0.1nm,0.3s,baz=131,slow=13,SNR=6.1
AKTO Aktyubinsk 19.34 13 P Pn 20 02 24.4 +1.3
comp=E,0.2nm,0.3s,baz=194,slow=12,SNR=2.5
AAK Ala-Archa 21.49 53 P P 20 02 48.9 +3.3
comp=E,0.7nm,0.7s,baz=141,slow=10,SNR=1.7
MLR Muntele Rosu 23.83 312 P P 20 03 11.9 +1.9
comp=E,3.5nm,0.8s,baz=196,slow=11,SNR=4.3
AKASG Malin Array Be 24.91 326 P P 20 03 19.3 -0.3
comp=E,1.0nm,0.4s,baz=119,slow=7.7,SNR=12
BVAR Borovoye Array 25.42 28 P P 20 03 24.8 +0.6
comp=E,0.4nm,0.6s,baz=216,slow=8.9,SNR=3.3
MKAR Makanchi Array 28.20 49 P P 20 03 50.5 +1.2
comp=E,0.3nm,0.5s,baz=234,slow=11,SNR=7.0
ZALV Zalesovo Beam 32.71 37 P P 20 04 30.4 +1.4
comp=E,0.3nm,0.4s,baz=77,slow=26,SNR=2.0
FINES FINESS Array B 33.86 339 P P 20 04 38.6 -0.4
comp=E,7.9nm,1.2s,baz=188,slow=7.7,SNR=2.6
SONM Songino Array 44.44 52 P P 20 06 09.6 +1.7
comp=E,0.4nm,0.8s,baz=271,slow=7.8,SNR=1.3
TORD Torodi Ar. Bea 48.83 259 P P 20 06 42.4 0.0
comp=E,1.5nm,0.5s,baz=59,slow=7.6,SNR=9.4
KSRS Korea Array 61.85 62 P P 20 08 16.0 0.0
comp=E,0.5nm,0.6s,baz=288,slow=7.1,SNR=1.9
BOSA Boshof 64.89 205 P P 20 08 39.8 +3.6
comp=E,1.8nm,0.6s,baz=359,slow=6.7,SNR=5.7
YKA Yellowknife Ar 85.36 353 P P 20 10 33.6 -0.1
comp=E,0.1nm,0.7s,baz=53,slow=9.1,SNR=3.8

IDC 01 19:59:54.7±0.3,11°.38S×166°.31E,h0km,mb5.1/35, mb1 5.1/36,mb1mx5.0/46,mbtmp5.0/36,ML4.5/1,MS5.0/32, Ms1 5.0/32,ms1mx4.9/40,Error ellipse: s-maj=12.7km s-min=10.8km az=90.0
MOS 01 19:59:59.7±0.9,11°.37S×166°.22E,h40km,mb5.4/25, MS5.3/20,Error ellipse: s-maj=7.4km s-min=6.2km az=124.5
BJI 01 20:00:01.0±0.0,11°.50S×166°.40E,h60km,mB5.6/68, mb5.3/78,Ms5.5/74,Ms7 5.3/70
NEIC 01 20:00:01.3±1.4,11°.47S±0°.06×166°.28E±0°.06,h46km±3km, mb5.4/208,Ms_20 5.5/504,Mwb5.7/51,Mww5.7, Mwc5.8(GCMT),Error ellipse: s-maj=9.4km s-min=7.9km az=57.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr3.99; Mθθ-0.08; Mφφ-3.92; Mrθ0.42; Mrφ1.00; Mθφ0.78; Fault plane solution: M0 4.18000×10^{17} NP1: φs157.83000°,δ41.02000°,λ77.14000°. NP2: φs354.66000°,δ50.22000°,λ100.96000°. Principal axes: T 4.1360, Plg80.0000°, Azm318.0000°; N 0.0803, Plg8.0000°, Azm168.0000°; P -4.2163, Plg5.0000°, Azm77.0000°;
GCMT 01 20:00:04.3±0.1,11°.46S±0°.01×165°.99E±0°.01,h47km, MW5.8/161,Moment Tensor Solution. s161,c308; s149,c286; Duration: 1s8 Moment tensor: Scale 10^{17} Nm; Mrr5.30±.05; Mθθ-0.25±.04; Mφφ-5.04±.04; Mrθ-0.05±.04; Mrφ1.26±.03; Mθφ0.63±.04; Best double couple: M0 5.36300×10^{17} NP1:φs165.00000°,δ42.00000°, λ88.00000°. NP2:φs347.00000°,δ48.00000°,λ92.00000°. Principal axes: T 5.3380, Plg86.0000°, Azm275.0000°; N 0.0560, Plg1.0000°, Azm166.0000°; P -5.3880, Plg3.0000°, Azm76.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC 01 20:00:04,11°.31S×166°.06E,h50km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr3.74; Mθθ-0.17; Mφφ-3.57; Mrθ1.05; Mrφ0.80; Mθφ-1.84; Fault plane solution: M0 4.30000×10^{17} NP1:φs355.00000°, δ31.00000°,λ104.00000°. NP2:φs159.00000°,δ60.00000°, λ82.00000°. Principal axes: T 4.3337, Plg74.0000°, Azm47.0000°; N -0.0670, Plg7.0000°, Azm163.0000°; P -4.2667, Plg14.0000°, Azm255.0000°;
NEIC 01 20:00:04,11°.48S×166°.03E,h48km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr5.43; Mθθ-0.20; Mφφ-5.23; Mrθ-0.15; Mrφ1.40; Mθφ0.60; Fault plane solution: M0 5.55000×10^{17} NP1:φs165.00000°, δ42.00000°,λ90.00000°. NP2:φs345.00000°,δ48.00000°, λ90.00000°. Principal axes: T 5.4649, Plg87.0000°, Azm256.0000°; N 0.1622, Plg0.0000°, Azm165.0000°; P -5.6271, Plg3.0000°, Azm75.0000°;
KLM 01 20:00:06.0,11°.41S×166°.36E,h85km,mb5.7
ISC 01 20:00:02.0±0.4,11°.50S±0°.03×166°.28E±0°.04,h49km±3km, h50km:pP-P,n864,σ1°55/669,mb5.3/176,MS5.5/308, 17C-14D,Santa Cruz Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
SANVU Saraoutou 4.02 167 Pn 20 01 00.7 -0.4
SANVU Sn Sn 20 01 50.0 +3.0
HNR Honiara 6.56 288 Pn Pn 20 01 37.1 +1.1
85nm,0.3s,baz=135,slow=4.3,SNR=160
HNR Sn Sn 20 02 48.9 -0.5
68nm,0.3s,baz=334,slow=15,SNR=1.2
HNR Honiara 6.56 288 Pn Pn 20 01 36.9 +0.9
HNR Sn Sn 20 02 49.0 -0.4
HNR Honiara 6.56 288 P Pn 20 01 36.9 +0.9
HNR 20 02 49.0
DZM Mont Dzumac 10.51 179 ePn Pn 20 02 29.6 -0.6
373nm,1.1s
DZM eSn Sn 20 04 21.0 -5.6
645nm,1.1s
DZM eLR LR 20 05 00.3
comp=Z,31µm,24.2s
DZM Mont Dzumac 10.51 179 Pn Pn 20 02 29.8 -0.4
3.3nm,0.3s,baz=340,slow=6.3,SNR=86
DZM Sn Sn 20 04 24.3 -2.3
2.4nm,0.3s,baz=125,slow=23,SNR=1.5
DZM LR LR 20 05 21.5
comp=Z,2µm,21.2s,baz=18,slow=31
DZM Mont Dzumac 10.51 179 Pn 20 02 29.4 -0.8
DZM Sn Sn 20 04 25.4 -1.2
NOUC Port Laguerre 10.54 180 Pn 20 02 30.2 -0.3
NOUC Sn Sn 20 04 26.4 -0.8
MSVF Nonsavu 12.96 120 Pn 20 03 07.7 +4.0
MSVF Nonsavu 12.96 120 eP Pn 20 03 09.6 -3.4
FUNA Funafuti 13.06 78 Pn 20 03 04.4 -0.7
TARA Tarawa 14.38 28 Pn 20 03 22.6 -0.4
TARA Sn Sn 20 05 58.2 -2.9
RABL Rabaul 15.75 296 Pn Pn 20 03 39.5 -1.2
RABL IAmb IAmb 20 03 54.6
comp=Z,314nm,1.1s
KRVT Keravat (AS076 15.82 296 Pn P 20 03 43.2 -1.4
comp=Z,3.9nm,0.3s,baz=165,slow=23,SNR=1.6
PMG Port Moresby 18.92 275 P Pn 20 04 21.1 +1.1
comp=Z,0.8nm,0.3s,baz=76,slow=7.7,SNR=13
PMG LR LR 20 10 57.9
comp=Z,13µm,21.8s,baz=124,slow=35
PMG Port Moresby 18.92 275 P Pn 20 04 19.7 -0.2
PMG IAmb IAmb 20 04 30.2
comp=Z,427nm,1.6s
PMG Port Moresby 18.92 275 deP Pn 20 04 20.0 +0.1
PMG pmax pmax
comp=Z,226nm,1.0s
PATS Pohnpei 19.87 336 P Pn 20 04 30.9 -0.4
baz=20,SNR=28
PATS Pohnpei 19.87 336 P P 20 04 28.8 -0.5
EIDS Eidsvold 19.92 224 P P 20 04 28.5 -1.3
baz=20,SNR=7.2
EIDS Eidsvold 19.92 224 P P 20 04 28.6 -1.2
EIDS IAmb IAmb 20 04 44.1
comp=Z,103nm,0.8s
KWAJ Kwajalein Atol 20.22 4 P 20 04 33.1 0.0
KWAJ Kwajalein Atol 20.22 4 P P 20 04 33.1 0.0
KWAJ pmax pmax
comp=Z,2µm,2.0s
MANU Manus Island 20.98 295 P P 20 04 41.8 +0.4
LHI Lord Howe Isla 21.01 197 P P 20 04 41.2 -0.3
LHI IAmb IAmb 20 04 55.4
comp=Z,102nm,0.8s
CTA Charters Tower 21.05 244 P P 20 04 43.9 +1.7
comp=Z,3.3nm,0.8s,baz=68,slow=12,SNR=18
CTA LR LR 20 11 52.6
comp=Z,9µm,20.0s,baz=80,slow=34
AFI Afiamalu 21.54 99 P P 20 04 50.6 +3.2
comp=Z,63nm,0.8s,baz=99,slow=2.0,SNR=9.4
AFI LR LR 20 11 31.2
comp=Z,6µm,21.2s,baz=254,slow=32
AFI Afiamalu 21.54 99 P P 20 04 46.7 -0.8
AFI Afiamalu 21.54 99 P P 20 04 46.7 -0.8
AFI pmax pmax
comp=Z,851nm,1.6s
MTSU Mount Surprise 22.22 250 P P 20 04 56.6 +1.9
baz=22,SNR=64
RMQ Roma 22.24 225 P P 20 04 56.9 +2.1
baz=22,SNR=21
COEN Coen 22.66 261 P P 20 05 01.3 +1.9
baz=23,SNR=7.3
COEN Coen 22.66 261 P P 20 04 58.8 -0.7
COEN IAmb IAmb 20 05 16.3
comp=Z,147nm,1.1s
ARMA Armidale 23.22 214 P P 20 05 06.4 +1.3
baz=23,SNR=41
ARMA Armidale 23.22 214 P P 20 05 04.6 -0.5
ARMA IAmb IAmb 20 05 18.3
comp=Z,190nm,1.1s
KNTN Kanton 23.47 70 P P 20 05 08.7 +1.2
NIUE Niue 24.14 111 P P 20 05 13.6 0.0
OUZ Omahuta 24.53 165 P P 20 05 18.4 +1.3
OUZ Omahuta 24.53 165 P P 20 05 18.9 +1.9
WCZ Waipu Caves 25.40 165 P P 20 05 26.5 +1.6
QLP Quilpie 25.61 231 P P 20 05 28.3 +1.4
baz=26,SNR=12
MGCD Mangrove Creek 25.69 210 P P 20 05 29.8 +2.2
baz=26,SNR=6.4
RIV Riverview 26.17 209 P P 20 05 33.7 +1.8
baz=26,SNR=4.7
JAY Jayapura 26.88 287 LR LR 20 17 43.4
comp=Z,5µm,18.1s,slow=40
QIS Mount Isa 27.13 247 P P 20 05 41.4 +0.6
baz=27,SNR=7.9
CMSA Cobar Meteorol 27.55 220 P P 20 05 45.1 +0.8
baz=28,SNR=33
YNG Young 27.94 213 P P 20 05 49.5 +1.6
baz=28,SNR=7.9
HIZ Hauiti 27.97 166 P P 20 05 49.9 +1.9
CNB Canberra Magne 28.24 210 P P 20 05 52.0 +1.4
baz=28,SNR=9.7
URZ Urewera 28.35 162 P P 20 05 52.2 +0.7
comp=Z,12nm,0.5s,baz=255,slow=9.6,SNR=16
URZ LR LR 20 15 18.5
comp=Z,7µm,21.9s,baz=348,slow=32
URZ Urewera 28.35 162 IAmb IAmb 20 06 45.7
comp=Z,140nm,1.7s
CAN Canberra 28.43 211 P P 20 05 52.6 +0.4
CAN Canberra 28.43 211 P P 20 05 52.6 +0.4
CAN pmax pmax
comp=Z,37nm,1.2s
CAN MLR MLR
comp=Z,4µm,22.0s
MWZ Matawai 28.55 161 P P 20 05 54.0 +0.8
TWVZ Taurewa 28.64 165 P P 20 05 55.6 +1.5
KRVZ Karewarewa 28.71 165 P P 20 05 56.7 +1.9
WTVZ West Tongariro 28.72 165 P P 20 05 57.0 +2.2
FWVZ Far West T-bar 28.84 165 P P 20 06 00.3 +4.2
BKZ Black Stump Fm 29.01 163 P P 20 05 57.4 0.0
BKZ IAmb IAmb 20 06 00.6
comp=Z,77nm,1.2s
BKZ Black Stump Fm 29.01 163 P P 20 05 57.4 0.0
MOVZ Moawhango 29.04 165 P P 20 05 58.6 +1.0
WAZ Wanganui 29.18 166 P P 20 06 01.1 +2.3
BHHZ Black Hill Sta 29.20 164 P P 20 05 59.7 +0.7
KWHZ Kaweka Forest 29.23 164 P P 20 06 00.1 +0.8
KRHZ Kereru 29.42 164 P P 20 06 01.1 +0.1
PNHZ Pukenui 29.63 164 P P 20 06 03.3 +0.4
TSZ Takapari Road 29.70 165 P P 20 06 03.2 -0.3
QRZ Quartz Range 29.72 170 P P 20 06 05.3 +1.7
MILA Mila 29.74 208 P P 20 06 05.3 +1.4
baz=30,SNR=6.0
PXZ Pawanui 29.92 164 P P 20 06 05.3 0.0
DUWZ D'Urville Isla 29.95 168 P P 20 06 07.2 +1.5
POWZ Post Office Ro 29.97 165 P P 20 06 06.3 +0.5
DVHZ Dannevirke 29.98 165 P P 20 06 05.7 -0.2
PRWZ Pori Road 30.17 165 P P 20 06 07.6 0.0
MRZ Mangatainoka R 30.18 166 P P 20 06 07.0 -0.6
KIW Kapiti Island 30.21 167 P P 20 06 07.6 -0.3
OGWZ Otaki Gorge 30.23 167 P P 20 06 07.7 -0.4
NNZ Nelson 30.25 169 P P 20 06 10.2 +2.0
BFZ Birch Farm 30.36 165 P P 20 06 08.5 -0.8
BFZ IAmb IAmb 20 06 38.0
comp=Z,57nm,0.8s
BFZ IAMs_20 IAMs_20 20 17 01.6
comp=Z,10µm,22.0s
BFZ Birch Farm 30.36 165 P P 20 06 08.6 -0.7
HOWZ Holdsworth Sta 30.39 166 P P 20 06 08.7 -0.8
TCW Tory Channel 30.41 168 P P 20 06 10.5 +0.8
STKA Stephens Creek 30.48 224 P P 20 06 11.6 +1.1
baz=31,SNR=72
STKA Stephens Creek 30.48 224 P P 20 06 11.4 +1.1
comp=Z,25nm,0.7s,baz=42,slow=8.9,SNR=70
STKA PcP PcP 20 09 08.3 -0.5
comp=Z,15nm,0.8s,baz=22,slow=4.3,SNR=4.7
STKA ScP ScP 20 12 54.8 +7.3
comp=Z,2.5nm,0.8s,baz=22,slow=4.6,SNR=4.0
STKA LR LR 20 17 33.1
comp=Z,8µm,21.2s,baz=48,slow=35
STKA Stephens Creek 30.48 224 P P 20 06 11.0 +0.6
CAW Cannon Point 30.48 167 P P 20 06 09.9 -0.5
TUWZ Tuamarina 30.56 169 P P 20 06 10.8 -0.2
TUWZ Tuamarina 30.56 169 P P 20 06 11.2 +0.3
TMWZ Te Maipa 30.68 166 P P 20 06 11.4 -0.6
THZ Tophouse 30.70 170 P P 20 06 12.4 +0.2
THZ IAmb IAmb 20 06 15.7
comp=Z,76nm,0.8s
BHW Baring Head 30.73 167 P P 20 06 12.0 -0.5
MSWZ Moikau Station 30.82 167 P P 20 06 12.3 -1.0
MSWZ Moikau Station 30.82 167 P P 20 06 12.5 -0.8
BSWZ Blackbirch Sta 30.82 169 P P 20 06 14.5 +1.2
TRWZ Traveller 30.90 166 P P 20 06 14.2 +0.2
PLWZ Palliser 30.97 167 P P 20 06 13.7 -1.0
PLWZ Palliser 30.97 167 P P 20 06 13.7 -1.0
KHZ Kahutara 31.44 170 P P 20 06 17.8 -0.9
KHZ IAmb IAmb 20 06 20.9
comp=Z,119nm,1.3s
LTZ Lake Taylor 31.59 172 P P 20 06 20.5 +0.3
LTZ IAmb IAmb 20 06 22.5
comp=Z,95nm,1.0s
WR0 Warramunga Arr 31.64 251 P P 20 06 20.2 -0.6
WR0 IAmb IAmb 20 06 22.6
comp=Z,72nm,1.1s
WRAB Tennant Creek 31.81 251 P P 20 06 21.8 -0.5
WRAB IAmb IAmb 20 06 24.8
comp=Z,143nm,1.4s
WRAB Tennant Creek 31.81 251 ceP P 20 06 21.9 -0.4
WRAB pmax pmax
comp=Z,94nm,1.3s
WB2 Warramunga Arr 31.81 251 P P 20 06 21.7 -0.6
WB2 IAmb IAmb 20 06 24.2
comp=Z,81nm,1.1s
WRA Warramunga Arr 31.82 251 P P 20 06 22.2 -0.2
comp=Z,45nm,0.9s,baz=81,slow=9.3,SNR=62
WRA PcP PcP 20 09 12.6 -0.1
comp=Z,12nm,0.8s,baz=81,slow=3.2,SNR=8.5
WRA ScP ScP 20 12 59.2 +7.0
comp=Z,5.8nm,1.0s,baz=83,slow=3.4,SNR=5.1
WRA LR LR 20 17 55.2
comp=Z,4µm,21.2s,baz=75,slow=34
WRA Warramunga Arr 31.82 251 P P 20 06 21.7 -0.7
WRA PcP 20 09 12.5 -0.1
TOO Toolangi 31.96 212 P P 20 06 24.8 +1.4
baz=32,SNR=27
TOO Toolangi 31.96 212 P P 20 06 24.2 +0.8
TOO IAmb IAmb 20 06 40.1
comp=Z,33nm,0.9s
TOO IAMs_20 IAMs_20 20 16 59.6
comp=Z,8µm,22.0s
TOO Toolangi 31.96 212 P P 20 06 24.2 +0.8
TOO pmax pmax
comp=Z,33nm,0.9s
TOO MLR MLR
comp=Z,8µm,22.0s
FOZ Fox Glacier 32.06 175 P P 20 06 24.7 +0.6
RPZ Rata Peaks 32.36 174 P P 20 06 28.1 +1.2
comp=Z,49nm,0.5s,baz=306,slow=3.2,SNR=98
RPZ Rata Peaks 32.36 174 P P 20 06 27.3 +0.5
RPZ IAmb IAmb 20 06 53.8
comp=Z,79nm,1.0s
MQZ McQueen's Vall 32.56 171 P P 20 06 28.3 -0.2
GUMO Guam 32.75 319 LR LR 20 20 33.6
comp=Z,2µm,18.3s,baz=136,slow=38
LBZ Lake Benmore 32.94 175 P P 20 06 31.9 0.0
LBZ IAmb IAmb 20 07 14.4
comp=Z,56nm,1.2s
AS31 Alice Springs 33.06 244 P P 20 06 32.4 -0.9
ASAR Alice Springs 33.06 244 P P 20 06 32.5 -0.7
comp=Z,32nm,0.8s,baz=72,slow=9.1,SNR=187
ASAR PcP PcP 20 09 15.9 -0.2

comp=Z,18nm,0.7s,baz=70,slow=2.6,SNR=17
ASAR ScP ScP 20 13 04.8 +8.4
comp=Z,4.2nm,0.9s,baz=57,slow=2.6,SNR=5.3
ASAR LR LR 20 19 09.6
comp=Z,6μm,20.1s,baz=70,slow=35
ASAR Alice Springs 33.06 244 P P 20 06 32.2 -1.0
ASAR PcP 20 09 15.8 -0.3
KDU Kakadu 33.06 264 P P 20 06 32.8 -0.5
baz=33,SNR=12
HTT Hallett 33.21 225 P P 20 06 35.4 +0.9
baz=33,SNR=38
WKZ Wanaka 33.29 176 P P 20 06 35.5 +0.5
WKZ IAMs_20 IAMs_20 20 18 45.1
comp=Z,7μm,21.0s
ODZ Otahua Downs 33.63 174 P P 20 06 37.4 -0.5
ODZ IAmb IAmb 20 07 04.9
comp=Z,82nm,1.4s
MLZ Mavora Lakes 33.78 178 P P 20 06 38.8 -0.4
MLZ IAmb IAmb 20 06 47.0
comp=Z,107nm,1.6s
MTN Manton Dam 34.36 264 P P 20 06 45.2 +0.6
baz=34,SNR=3.9
MTN Manton Dam 34.36 264 P P 20 06 42.8 -1.8
MTN IAmb IAmb 20 06 46.8
comp=Z,85nm,1.1s
BBOO Buckleboo 34.90 228 P P 20 06 49.6 +0.5
baz=35,SNR=7.3
BBOO Buckleboo 34.90 228 P P 20 06 49.6 +0.5
BBOO IAmb IAmb 20 07 06.4
comp=Z,57nm,1.0s
BBOO PcP PcP 20 09 21.3 +0.2
MOO Moorlands 35.03 205 P P 20 06 51.2 +1.2
baz=35,SNR=6.0
TAU Tasmania Unive 35.36 204 P P 20 06 53.8 +0.9
TAU Tasmania Unive 35.36 204 P P 20 06 53.8 +0.9
TAU pmax pmax
comp=Z,143nm,1.6s
SIJI Sorong 36.32 284 P P 20 07 01.8 +0.2
comp=Z,47nm,0.9s,baz=84,slow=7.4,SNR=8.3
KNRA Kununurra 36.67 259 P P 20 07 04.6 +0.2
baz=37,SNR=7.7
KNRA Kununurra 36.67 259 P P 20 07 04.5 +0.2
WRKA Warakurna 38.35 244 P P 20 07 18.3 -0.4
baz=38,SNR=34
FITZ Fitzroy Crossi 39.77 256 P P 20 07 30.7 +0.3
baz=40,SNR=20
FITZ Fitzroy Crossi 39.77 256 P P 20 07 30.3 -0.2
FITZ IAmb IAmb 20 08 06.0
comp=Z,131nm,1.6s
FITZ IAMs_20 IAMs_20 20 23 13.6
comp=Z,6μm,20.0s
FORT Forrest 40.21 236 P P 20 07 34.8 +0.8
baz=40,SNR=10.0
FORT Forrest 40.21 236 P P 20 07 34.3 +0.3
FORT IAmb IAmb 20 07 50.0
comp=Z,80nm,0.8s
TNTI Ternate 40.54 285 P P 20 07 35.2 -1.7
TNTI IAmb IAmb 20 07 56.9
comp=Z,64nm,1.1s
SOEI Soe 41.30 268 P P 20 07 43.3 -0.1
PAE Paea 43.08 104 eP P 20 07 59.9 +2.3
comp=Z,11nm,1.3s
PPT Papeete 43.08 103 P P 20 07 58.6 +0.9
comp=Z,17nm,0.6s,baz=57,slow=23,SNR=5.0
PPT LR LR 20 22 48.8
comp=Z,2μm,19.5s,baz=266,slow=32
PPT Papeete 43.08 103 P P 20 07 58.0 +0.4
PPT2 Papeete2 43.08 103 eP P 20 08 00.6 +2.8
comp=Z,52nm,1.5s
PPT2 eS S 20 14 24.2 +3.5
comp=Z,2μm,27.2s
PPT2 eLQ LQ 20 18 12.9
comp=Z,8μm,32.0s
PPT2 eLR LR 20 20 04.4
comp=Z,10μm,28.8s,baz=277
TIAR Tiarei 43.30 103 eP P 20 08 02.3 +2.8
comp=Z,16nm,1.1s
TVO Taravao 43.40 104 eP P 20 08 02.8 +2.5
comp=Z,14nm,1.0s
TBI Tubuai 43.68 112 eS S 20 14 32.6 +3.5
comp=Z,1μm,27.8s
TBI eLQ LQ 20 18 28.6
comp=Z,6μm,31.0s
TBI eLR LR 20 20 20.6
comp=Z,11μm,28.5s,baz=292
DDMP Don Marcelino, 43.99 291 eP P 20 08 03.4 -1.6
LUWI Luwuk 44.41 280 P P 20 08 08.9 +0.5
DAV Davao City (W) 44.49 293 LR LR 20 26 58.8
comp=Z,981nm,19.5s,baz=96,slow=36
MEH Mehetia 44.53 104 eP P 20 08 12.1 +2.8
comp=Z,40nm,1.4s
PMOR Pomariorio Ree 44.69 100 eP P 20 08 13.5 +2.9
comp=Z,186nm,1.4s
KCP Kidapawan 44.91 292⇓iP P 20 08 12.4 -0.1
VAH Vaihoa 44.94 100 eP P 20 08 15.5 +2.9
comp=Z,140nm,1.4s
SKMP Bagumbayan, Su 45.22 291 eP P 20 08 14.0 -0.8
KMBL Kambalda 45.43 237 P P 20 08 17.1 +0.7
baz=46,SNR=8.7
PSA00 Pilbara Seismi 45.47 251 P P 20 08 16.0 -0.7
PSA00 Pilbara Seismi 45.47 251 IAmb IAmb 20 08 19.5
comp=Z,204nm,1.5s
CGP Cagayan de Oro 45.86 294 eP P 20 08 22.5 +2.6
MSLP Maasin 46.44 296 eP P 20 08 24.9 +0.4
KAPI Kappang 46.45 274 P P 20 08 25.1 +0.6
comp=Z,17nm,0.8s,baz=150,slow=22,SNR=4.2
KAPI LR LR 20 31 14.9
comp=Z,508nm,19.3s,baz=299,slow=40
KAPI Kappang 46.45 274 P P 20 08 24.1 -0.4
KAPI Kappang 46.45 274 P P 20 08 24.1 -0.4
KAPI pmax pmax
comp=Z,191nm,1.2s
PAGZ Pagadian 46.80 292 eP P 20 08 29.7 +2.4
MEEK Meekatharra 47.22 244 P P 20 08 31.3 +0.8
baz=47,SNR=68
OPA Opana 48.13 47 P P 20 08 38.3 +0.8
OPA Opana 48.13 47 P P 20 08 38.3 +0.8
OPA pmax pmax
comp=Z,181nm,0.8s
GUIM Jordan 48.66 295 eP P 20 08 41.5 -0.1
HPAH Hawaii Prepara 48.81 50 IAMs_20 IAMs_20 20 22 41.8
comp=Z,4μm,21.0s
KLBR Kellerberrin 48.91 238 P P 20 08 43.5 +0.1
baz=49,SNR=19
BLDU Ballidu 49.58 240 P P 20 08 48.6 +0.1
baz=50,SNR=11
NWAO Narrogin (SRO) 49.64 236 P P 20 08 49.4 +0.4
baz=50,SNR=20
NWAO Narrogin (SRO) 49.64 236 LR LR 20 29 28.9
comp=Z,7μm,21.3s,baz=82,slow=36
NWAO Narrogin (SRO) 49.64 236 P P 20 08 49.3 +0.3
NWAO Narrogin (SRO) 49.64 236 P P 20 08 49.1 +0.1
NWAO IAmb IAmb 20 08 51.1
comp=Z,354nm,1.9s
NWAO IAMs_20 IAMs_20 20 29 47.0
comp=Z,7μm,20.0s
NWAO Narrogin (SRO) 49.64 236 P P 20 08 49.3 +0.3
NWAO pmax pmax
comp=Z,409nm,1.9s
MORW Morawa 49.86 242 P P 20 08 51.2 +0.5
baz=50,SNR=17
MORW Morawa 49.86 242 P P 20 08 50.9 +0.2
MORW IAMs_20 IAMs_20 20 29 56.8
comp=Z,5μm,19.0s
OTRP Odiongan 49.92 297 eP P 20 08 52.4 +1.1
RKGY Rocky Gully 50.27 234 P P 20 08 55.3 +1.6
baz=50,SNR=5.1
MUN Mundaring 50.27 238 P P 20 08 54.6 +0.8
baz=50,SNR=9.2
JHJ Hachijo jima 2 51.07 331 LR LR 20 29 27.5
comp=Z,692nm,18.6s,baz=140,slow=35
TGY Tagaytay City 51.65 298 P P 20 09 05.7 +1.3
comp=Z,686nm,1.2s
SPMM Sapulut 52.10 285 P P 20 09 08.0 +0.2
TAOE Nuku Hiva Isla 52.74 92 eS S 20 16 39.6 +2.0
comp=Z,1μm,26.3s
TAOE eLR LR 20 24 32.6
comp=Z,4μm,27.2s,baz=267
SMPP San Manuel, Pa 52.82 300 eP P 20 09 05.0 -7.9
JOW Kunigami 53.05 316 P P 20 09 14.4 0.0
JOW IAmb IAmb 20 09 32.4
comp=Z,44nm,1.0s
INU Inuyama 54.20 330 P P 20 09 22.1 -0.7
INU IAmb IAmb 20 09 24.1
comp=Z,34nm,1.0s
MJAR Matsushiro Arr 54.62 332 P P 20 09 24.0 -1.9
comp=Z,19nm,0.8s,baz=159,slow=8.3,SNR=56
MJAR LR LR 20 30 30.3
comp=Z,995nm,21.5s,baz=150,slow=34
MJAR Matsushiro Arr 54.62 332 P P 20 09 23.9 -1.9
MJAR Matsushiro Arr 54.62 332 P P 20 09 23.9 -1.9
MJAR pmax pmax
comp=Z,11nm,0.8s
MAJO Matsushiro 54.62 332 P P 20 09 24.3 -1.5
MAJO IAmb IAmb 20 09 26.4
comp=Z,37nm,0.9s
MAJO Matsushiro 54.62 332⇓eP P 20 09 23.8 -2.0
MAJO pmax pmax
comp=Z,40nm,0.9s
MAT Matsushiro 54.62 332 P P 20 09 24.2 -1.6
MAT S S 20 17 03.8 +1.7
MJB9 Matsu-Tunnel 54.62 332 IAmb IAmb 20 09 26.4
comp=Z,38nm,0.9s
YOJ Yonaguni jima 55.33 311 P P 20 09 30.8 -0.4
YOJ Yonaguni jima 55.33 311 P P 20 09 30.8 -0.4
YOJ pmax pmax
comp=Z,225nm,1.4s
YOJ MLR MLR
comp=Z,2μm,22.0s
SBUM Sibu 55.50 281 P P 20 09 32.3 -0.3
SBUM IAmb IAmb 20 09 35.6
comp=Z,56nm,1.2s
SBUM Sibu 55.50 281 P P 20 09 34.0 +1.4
JNU Nakatsue 55.76 324 P P 20 09 33.0 -1.2
comp=Z,49nm,1.0s,baz=106,slow=4.1,SNR=12
JNU LR LR 20 31 19.7
comp=Z,863nm,20.9s,baz=163,slow=34
JNU Nakatsue 55.76 324 IAmb IAmb 20 09 35.6
comp=Z,61nm,1.0s
YULB Yu-li 56.03 308 P P 20 09 35.0 -1.2
YULB IAmb IAmb 20 09 38.3
comp=Z,39nm,1.1s
NACB Ninganchiao 56.23 309 P P 20 09 36.4 -1.2
NACB IAmb IAmb 20 09 42.4
comp=Z,44nm,0.9s
TPUB Ta-pu 56.49 308 P P 20 09 39.0 -0.5
SSLB Suanglung 56.51 309 P P 20 09 38.5 -1.1
SSLB IAmb IAmb 20 09 44.5
comp=Z,17nm,0.6s
TATO Taipei 56.76 310 P P 20 09 40.6 -0.8
TATO IAmb IAmb 20 09 42.7
comp=Z,54nm,1.1s
KSM Kuching 57.09 279 P P 20 09 43.5 -0.4
KSM Kuching 57.09 279 P P 20 09 44.0 0.0
ERM Erimo 57.34 340 IAMs_20 IAMs_20 20 28 45.9
comp=Z,3μm,21.0s
CISI Cisompet, Garu 57.71 268 P P 20 09 47.6 -0.8
LEM Lembang 58.02 269 P P 20 09 50.4 -0.3
comp=Z,45nm,0.9s,baz=36,slow=11,SNR=8.0
LEM LR LR 20 36 55.8
comp=Z,976nm,18.2s,baz=104,slow=38
YUK Yuzh-Kuril'sk 58.31 343 eP P 20 09 45.7 -6.2
YUK e 20 11 58.2
YUK eS S 20 17 45.9 -4.8
QZH Quanzhou 58.94 308⇑iP P 20 09 56.4 -0.3
QZH sP sP 20 10 15.3 +0.2
QZH S S 20 18 00.3 +0.7
QZH pmax pmax
comp=Z,30nm,1.1s
QZH pmax pmax
comp=Z,690nm,4.5s
QZH LR LR
comp=Z,600nm,18.0s
QZH LR LR
comp=Z,640nm,17.1s
QZH LR LR
comp=Z,940nm,19.9s
ASAJ Asahikawa 59.40 340 LR LR 20 30 58.3
comp=Z,2μm,21.8s,baz=164,slow=31
TJN Taejon 60.10 324⇓eP P 20 10 04.7 +0.3
SSE Sheshan 60.54 316 P P 20 10 06.9 -0.7
SSE S S 20 18 19.5 -0.5
SSE pmax pmax
comp=Z,10.0nm,0.6s
SSE pmax pmax
comp=Z,320nm,4.2s
SSE LR LR
comp=Z,310nm,19.7s
SSE LR LR
comp=Z,400nm,19.8s
SSE Sheshan 60.54 316 P P 20 10 06.8 -0.7
SSE IAmb IAmb 20 10 08.9
comp=Z,38nm,0.8s
KSRS Korea Array 60.55 325 P P 20 10 07.0 -0.5
comp=Z,7.6nm,0.9s,baz=139,slow=6.9,SNR=25
KSRS PcP PcP 20 10 52.5 +1.0
comp=Z,3.8nm,0.8s,baz=138,slow=5.3,SNR=5.7
KSRS LR LR 20 34 39.8
comp=Z,493nm,20.0s,baz=136,slow=34
KSAR Wonju Array Be 60.56 325 P P 20 10 07.0 -0.6
KSAR Wonju Array Be 60.56 325 P P 20 10 07.0 -0.6
KS19 Wonju Array Si 60.61 325 P P 20 10 06.7 -1.2
YSS Yuzh-Sakhalins 61.88 342 P P 20 10 16.3 0.0
YSS IAMs_20 IAMs_20 20 33 33.3
comp=Z,2μm,20.0s
YSS Yuzh-Sakhalins 61.88 342⇓eP P 20 10 17.6 +1.3
YSS eS S 20 18 36.6 +0.2
YSS e 20 19 10.7
YSS pmax pmax
comp=Z,60nm,1.0s
DLV T Lat 61.93 290 P P 20 10 16.6 -0.9
TEY Ternei 62.35 337⇓eP P 20 10 18.0 -1.4
TEY pmax pmax
comp=Z,10.0nm,1.1s
NJ2 Nanjing 62.71 315 eP P 20 10 22.0 -0.1
NJ2 S S 20 18 46.5 -0.9
NJ2 pmax pmax
comp=Z,60nm,1.0s
NJ2 pmax pmax
comp=Z,430nm,4.4s
NJ2 LR LR
comp=Z,1μm,22.7s
NJ2 LR LR
comp=Z,890nm,20.4s
NJ2 LR LR
comp=Z,2μm,20.8s
VLA Vladivostok 62.79 332⇓eP P 20 10 20.5 -1.9
VLA pmax pmax
comp=Z,19nm,1.0s
QIZ Qiongzhong 63.35 298 P P 20 10 28.4 +1.7
QIZ PP PP 20 12 48.0 +1.4
QIZ S S 20 19 00.2 +4.2
QIZ pmax pmax
comp=Z,41nm,1.5s
QIZ pmax pmax
comp=Z,290nm,4.1s
QIZ LR LR
comp=Z,710nm,23.3s
QIZ LR LR
comp=Z,1μm,23.5s
QIZ LR LR
comp=Z,2μm,22.6s
QIZ Qiongzhong 63.35 298 P P 20 10 26.7 0.0
MYKOM Kota Tinggi 63.43 278 P P 20 10 27.0 -0.3
USA0B Ussuriysk Arra 63.59 333 P P 20 10 27.2 -0.5
USA0B Ussuriysk Arra 63.59 333 P P 20 10 27.2 -0.5
USA0B pmax pmax
comp=Z,69nm,1.1s
USRK Ussuriysk Ar. 63.59 333 P P 20 10 27.6 -0.2
comp=Z,56nm,1.1s,baz=142,slow=6.6,SNR=44
USRK LR LR 20 35 27.1
comp=Z,402nm,20.7s,baz=138,slow=34
USRK Ussuriysk Ar. 63.59 333 P P 20 10 27.4 -0.4
PET Petropavlovsk 64.60 355 IAMs_20 IAMs_20 20 33 28.7
comp=Z,2μm,20.0s
PET Petropavlovsk 64.60 355 eP P 20 10 33.8 -0.3
PET eS S 20 19 09.5 -0.6
PET pmax pmax
comp=Z,400nm,11.9s
PEA0B Petropavlovsk- 64.77 354 P P 20 10 35.0 -0.2
PEA0B Petropavlovsk- 64.77 354 P P 20 10 35.1 -0.2
PEA0B pmax pmax
comp=Z,94nm,1.4s
PETK Petropavlovsk- 64.77 354 P P 20 10 34.6 -0.7
comp=Z,8.7nm,0.8s,baz=164,slow=7.1,SNR=14
PETK LR LR 20 34 58.5
comp=Z,1μm,20.2s,baz=166,slow=32
PETK Petropavlovsk- 64.77 354 P P 20 10 34.7 -0.6
PETK Petropavlovsk- 64.77 354 P P 20 10 34.7 -0.6
MDJ Mudanjiang 65.00 332 P P 20 10 37.3 +0.4
MDJ S S 20 19 19.3 +3.9
MDJ pmax pmax
comp=Z,37nm,1.1s
MDJ pmax pmax
comp=Z,850nm,4.6s
MDJ LR LR
comp=Z,960nm,15.9s
MDJ LR LR
comp=Z,700nm,22.6s
MDJ LR LR
comp=Z,2μm,23.1s
MDJ Mudanjiang 65.00 332 IAmb IAmb 20 10 39.0
comp=Z,50nm,1.1s
WHN Wuhan 65.08 312 P P 20 10 36.2 -1.6
WHN S S 20 19 20.4 +3.4
WHN LR LR
comp=Z,6μm,27.1s
WHN LR LR
comp=Z,2μm,18.5s
WHN LR LR
comp=Z,7μm,27.7s
DL2 Dalian 65.16 323 P P 20 10 34.4 -3.7
DL2 S S 20 19 13.2 -4.3
DL2 pmax pmax
comp=Z,49nm,1.1s
DL2 pmax pmax
comp=Z,620nm,4.5s
DL2 LR LR
comp=Z,810nm,20.1s
DL2 LR LR
comp=Z,1μm,17.9s
DL2 LR LR
comp=Z,2μm,21.4s
JRMM Jerantut 65.27 280 P P 20 10 40.0 +0.7
TYV Tymovskoe 65.43 344 eP P 20 10 40.0 +0.4
TYV pmax pmax
comp=Z,16nm,1.4s
UBPT Khong Chiam 65.83 293 P P 20 10 43.1 +0.2
UBPT IAmb IAmb 20 10 45.8
comp=Z,68nm,1.2s
BKNI Bangkinang 65.83 276 P P 20 10 42.9 -0.1
SNY Shenyang 66.00 326 ⇑P P 20 10 40.0 -3.5
SNY PP PP 20 13 13.2 +3.8
SNY S S 20 19 31.6 +3.9
SNY ScS SKSac 20 20 31.6 -3.8
SNY pmax pmax
comp=Z,22nm,1.4s
SNY pmax pmax
comp=Z,840nm,5.3s
SNY LR LR
comp=Z,810nm,17.1s
SNY LR LR
comp=Z,810nm,19.8s
SNY LR LR
comp=Z,2μm,19.1s
VNDA Vanda 66.05 181 P P 20 10 44.1 +0.8
comp=Z,30nm,1.0s,baz=347,slow=9.3,SNR=21
VNDA LR LR 20 35 29.5
comp=Z,1μm,21.3s,baz=2.0,slow=32
VNDA Vanda 66.05 181 P P 20 10 43.4 +0.1
VNDA IAmb IAmb 20 10 44.4
comp=Z,80nm,1.5s
CASY Casey 66.14 201 P P 20 10 44.1 0.0
SBA Scott Base 66.34 180 P P 20 10 46.1 +0.9
SBA Scott Base 66.34 180 P P 20 10 46.1 +0.9
SBA pmax pmax
comp=Z,114nm,1.4s
IPM Ipoh 66.81 280 P P 20 10 49.2 -0.1
IPM Ipoh 66.81 280 P P 20 10 50.0 +0.7
GRNR Gornyy 67.25 340⇑iP P 20 10 51.3 0.0
GRNR eS S 20 19 45.1 +2.6
GRNR eSS SS 20 24 01.8 -1.4
GRNR pmax pmax
comp=Z,20nm,1.3s
GRNR smax smax
comp=N,3.0nm,1.0s
KULM Kulim 67.38 281 P P 20 10 53.0 +0.1
KLR Kul'dur 67.68 336 LR LR 20 36 28.9
comp=N,1μm,21.7s,baz=150,slow=32
KLR Kul'dur 67.68 336⇑eP P 20 10 53.7 -0.3
KLR pmax pmax
comp=Z,41nm,1.3s
NKL Nikolayevsk 68.02 344 eP P 20 10 51.9 -4.1
NKL pmax pmax
comp=E,4.0nm,1.1s
NKL pmax pmax
comp=Z,36nm,1.1s
NKL pmax pmax
comp=N,7.0nm,0.8s
NKL pmax pmax
comp=Z,57nm,4.6s
RPSI Rantau Prapat 68.42 278 P P 20 10 58.8 -0.7
PSI Prapat 68.45 278 P P 20 10 59.0 -0.8
comp=Z,37nm,1.0s,baz=108,slow=4.9,SNR=26
ENH Enshi 68.59 309 P P 20 10 59.1 -1.1
UNV Unalaska Valle 69.09 17 P P 20 11 01.1 -1.6
UNV IAmb IAmb 20 11 18.6
comp=Z,49nm,1.2s
BJT Baijiatuau 69.16 321 P P 20 11 02.6 -0.8
BJT IAmb IAmb 20 11 05.4
comp=Z,48nm,1.2s
BJT Baijiatuau 69.16 321 P P 20 11 02.7 -0.8
BJT pmax pmax
comp=Z,48nm,1.2s
BJT MLR MLR
comp=Z,1μm,21.0s
BJI Beijing 69.16 321⇑iP P 20 11 03.1 -0.4
BJI PP PP 20 13 36.4 -0.6
BJI S S 20 20 04.9 -0.8
BJI SS SS 20 24 34.6 +1.5
BJI pmax pmax
comp=Z,34nm,1.1s
BJI pmax pmax
comp=Z,490nm,4.8s
BJI LR LR
comp=Z,760nm,23.3s
BJI LR LR
comp=Z,660nm,22.6s
BJI LR LR
comp=Z,2μm,28.4s
SLVN Son La 69.38 298 IAmb IAmb 20 11 08.5
comp=Z,98nm,1.5s
GSI Gunungsitoli 69.42 276 P P 20 11 05.4 -0.3
PBKT Sadao Pong 70.33 292 IAmb IAmb 20 11 14.3
comp=Z,71nm,1.2s
XAN Xi'an 70.81 312 P P 20 11 13.7 -0.1
XAN pP PcP 20 11 33.0 -1.3
XAN PcP sP 20 11 37.0 +4.7
XAN PP PP 20 13 51.4 0.0
XAN ScS SKiKP 20 21 04.9 +12
XAN pmax pmax
comp=Z,66nm,1.1s
XAN pmax pmax
comp=Z,790nm,6.4s
XAN LR LR
comp=Z,660nm,19.8s
XAN LR LR
comp=Z,1μm,22.0s
XAN LR LR
comp=Z,2μm,23.5s
XAN Xi'an 70.81 312 P P 20 11 13.3 -0.5
XAN IAmb IAmb 20 11 15.8
comp=Z,77nm,1.1s
XAN Xi'an 70.81 312 P P 20 11 13.3 -0.5
XAN pmax pmax
comp=Z,77nm,1.1s
XAN MLR MLR
comp=Z,2μm,21.0s
KMI Kunming 71.80 301 P P 20 11 20.5 +0.3
KMI Kunming 71.80 301 P P 20 11 20.5 +0.3
KMI pmax pmax
comp=Z,129nm,1.4s
KMI MLR MLR
comp=Z,1μm,21.0s
MA2 Magadan 71.93 352 P P 20 11 18.8 -1.1
comp=Z,2.6nm,0.5s,baz=151,slow=6.6,SNR=4.7
MA2 Magadan 71.93 352 P P 20 11 19.9 -0.1
MA2 Magadan 71.93 352 IAMs_20 IAMs_20 20 37 18.0
comp=Z,2μm,21.0s
MA2 Magadan 71.93 352⇓eP P 20 11 19.5 -0.5
MA2 pmax pmax
comp=Z,14nm,1.1s
HHC Hu-ho-hao-te 72.52 320 eP P 20 11 24.2 +0.2
HHC pP pP 20 11 36.2 -1.1
HHC sP sP 20 11 42.1 -0.4
HHC eS S 20 20 42.9 -2.0
HHC eSS SS 20 25 29.6 +4.7

HHC pmax pmax
comp=Z,15nm,1.1s
HHC pmax pmax
comp=Z,220nm,4.8s
HHC LR LR
comp=Z,730nm,16.4s
HHC LR LR
comp=Z,950nm,21.3s
HHC LR LR
comp=Z,2µm,23.5s
CM31 Chiang Mai Arr 72.77 294 P P 20 11 26.2 +0.4
CMAR Chiang Mai Arr 72.77 294 P P 20 11 25.8 -0.1
comp=Z,33nm,1.0s,baz=116,slow=4.0,SNR=100
CMAR Chiang Mai Arr 72.77 294 i P P 20 11 26.7 +0.8
CMAR pmax pmax
comp=Z,34nm,1.0s
CHTO Chiang Mai 72.89 294 P P 20 11 26.7 +0.2
CHTO IAmb IAmb 20 11 29.4
comp=Z,92nm,1.2s
CHTO Chiang Mai 72.89 294 P P 20 11 26.7 +0.2
CHTO pmax pmax
comp=Z,92nm,1.3s
CHTO MLR MLR
comp=Z,1µm,21.0s
ZEA Zeya 72.97 337 eP P 20 11 26.6 +0.4
ZEA eS S 20 20 51.0 +1.8
ZEA pmax pmax
comp=N,72nm,1.2s
ZEA pmax pmax
comp=E,22nm,1.2s
ZEA pmax pmax
comp=Z,78nm,1.2s
ZEA pmax pmax
comp=Z,600nm,7.0s
ZEA smax smax
comp=N,400nm,6.0s
HIA Hailar 73.02 330 P P 20 11 26.2 -0.5
HIA IAmb IAmb 20 11 28.6
comp=Z,45nm,1.2s
HIA Hailar 73.02 330 P P 20 11 26.2 -0.5
HIA pmax pmax
comp=Z,45nm,1.2s
HIA MLR MLR
comp=Z,1µm,21.0s
CD2 Chengdu 73.29 307⇑iP P 20 11 28.9 +0.1
CD2 pP pP 20 11 42.5 +0.4
CD2 PP PP 20 14 12.2 -0.5
CD2 S S 20 20 54.5 +0.5
CD2 sS sS 20 21 20.7 +4.5
CD2 pmax pmax
comp=Z,40nm,0.9s
CD2 pmax pmax
comp=Z,1µm,4.9s
CD2 LR LR
comp=Z,2µm,23.0s
CD2 LR LR
comp=Z,4µm,23.5s
CD2 LR LR
comp=Z,4µm,26.3s
BTO Baotou 73.38 319 eP P 20 11 28.8 -0.3
SEY Seymchan 74.98 353 P P 20 11 36.8 -1.0
comp=Z,2.6nm,0.5s,baz=172,slow=8.7,SNR=23
SEY Seymchan 74.98 353⇓eP P 20 11 37.3 -0.5
LZH Lanzhou 75.45 312 eP P 20 11 42.3 +1.0
LZH pP pP 20 11 54.0 -0.7
LZH S S 20 21 20.4 +2.2
LZH sS SKSac 20 21 46.4 -1.0
LZH SS SS 20 26 10.2 +0.3
LZH pmax pmax
comp=Z,96nm,1.3s
LZH pmax pmax
comp=Z,990nm,4.3s
LZH LR LR
comp=Z,840nm,13.8s
LZH LR LR
comp=Z,1µm,13.6s
LZH LR LR
comp=Z,2µm,14.6s
OHAK Old Harbor 76.14 21 P P 20 11 42.5 -2.0
KDAK Kodiak Island 76.81 21 P P 20 11 48.7 +0.3
comp=Z,9.6nm,0.7s,baz=231,slow=1.7,SNR=8.1
KDAK Kodiak Island 76.81 21 P P 20 11 47.8 -0.6
KDAK Kodiak Island 76.81 21 P P 20 11 47.8 -0.6
KDAK pmax pmax
comp=Z,150nm,2.0s
GAMB Gambell 76.93 10 IAmb IAmb 20 11 52.0
comp=Z,23nm,0.6s
CIT Chita 77.82 330 eP P 20 11 54.2 0.0
CIT e 20 12 01.4
CIT pmax pmax
comp=Z,189nm,1.2s
SVW2 Sparrevohn 78.39 18 IAmb IAmb 20 12 51.7
comp=Z,60nm,1.8s
QSPA South Pole Qui 78.50 180 P P 20 11 57.5 -0.4
YAK Yakutsk 78.68 343 P P 20 11 57.4 -1.2
comp=Z,12nm,0.5s,baz=317,slow=1.9,SNR=24
YAK Yakutsk 78.68 343 P P 20 11 57.5 -1.1
YAK IAmb IAmb 20 11 59.9
comp=Z,33nm,0.8s
YAK Yakutsk 78.68 343 eP P 20 11 58.0 -0.6
YAK e 20 12 06.3
YAK e*PP pP 20 12 12.9 +0.6
YAK e 20 14 56.5
YAK eS S 20 21 50.1 -1.8
YAK e*SS ScS 20 22 50.6 +35
YAK eSS SS 20 27 02.8 +5.6
YAK eSSS SSS 20 30 14.8
YAK pmax pmax
comp=Z,40nm,1.0s
YAK pmax pmax
comp=E,9.0nm,1.3s
YAK pmax pmax
comp=N,13nm,1.0s
YAK pmax pmax
comp=Z,35nm,2.2s
YAK pmax pmax
comp=E,31nm,1.8s
YAK pmax pmax
comp=N,57nm,2.2s
YAK smax smax
comp=E,101nm,15.3s
RSO Redoubt South 78.78 19 P P 20 11 57.9 -1.6
ANM Nome 78.83 12 P P 20 11 58.7 -0.7
ANM Nome 78.83 12 P P 20 11 58.7 -0.7
ANM pmax pmax
comp=Z,24nm,1.4s
ANM MLR MLR
comp=Z,2µm,20.0s
BRLK Bradley Lake 78.88 21 IAmb IAmb 20 12 03.6
comp=Z,28nm,0.7s
ULN Ulaanbaatar 78.98 324 P P 20 12 00.2 -0.6
ULN IAmb IAmb 20 12 03.1
comp=Z,66nm,1.1s
ULN Ulaanbaatar 78.98 324 P P 20 12 00.2 -0.6
BILL Bilibino 79.33 360 P P 20 12 01.4 -0.8
BILL IAmb IAmb 20 12 18.8
comp=Z,57nm,1.4s
BILL Bilibino 79.33 360c iP P 20 12 01.1 -1.0
BILL i 20 12 09.8
BILL i 20 12 17.3
BILL i 20 14 57.4
BILL pmax pmax
comp=Z,8.0nm,0.8s
BILL MLR MLR
comp=Z,675nm,18.0s
SONM Songino Array 79.34 324 P P 20 12 02.5 -0.3
comp=Z,8.5nm,0.5s,baz=142,slow=5.3,SNR=70
SONM PKPPKP P'P'df 20 39 03.4 +8.5
comp=Z,0.9nm,1.1s,baz=227,slow=5.7,SNR=4.7
SONM LR LR 20 47 19.7
comp=Z,465nm,18.9s,baz=122,slow=36
SONM Songino Array 79.34 324 P P 20 12 02.3 -0.5
SONM Songino Array 79.34 324 P P 20 12 02.3 -0.5
SONM pmax pmax
comp=Z,28nm,1.1s
SEW Seward 79.62 21 P P 20 12 02.9 -0.9
GTA Gaotai 79.75 314 ⇑P P 20 12 05.9 +0.7
GTA pP pP 20 12 18.4 -0.2
GTA sP sP 20 12 25.3 +1.5
GTA S S 20 22 08.8 +4.3
GTA SKS SKSac 20 22 15.3 -3.1
GTA sS sS 20 22 29.1 +2.4
GTA pmax pmax
comp=Z,18nm,1.0s
GTA pmax pmax
comp=Z,690nm,6.4s
GTA LR LR
comp=Z,680nm,23.5s
GTA LR LR
comp=Z,1µm,21.6s
GTA LR LR
comp=Z,2µm,20.0s
SUA Susitna One 80.18 19 IAMs_20 IAMs_20 20 40 16.0
comp=Z,2µm,22.0s
RC01 Rabbit Creek A 80.24 20 IAmb IAmb 20 12 32.1
comp=Z,46nm,1.6s
SKT Skwentna 80.31 19 IAMs_20 IAMs_20 20 41 12.5
comp=Z,2µm,21.0s
PPLA Purkeypile 80.80 18 P P 20 12 08.6 -1.7
KNK Knik Glacier 80.90 20 IAMs_20 IAMs_20 20 42 35.2
comp=Z,3µm,21.0s
GLI Glacier Island 81.00 21 IAmb IAmb 20 12 14.8
comp=Z,27nm,0.8s
GLI IAMs_20 IAMs_20 20 41 36.8
comp=Z,3µm,21.0s
BOD Bodaibo 81.17 335 eP P 20 12 08.2 -4.0
BOD pmax pmax
comp=Z,26nm,1.6s
SHL Shillong 81.19 298 P P 20 12 12.7 -0.6
SHL Shillong 81.19 298 P P 20 12 12.7 -0.6
SHL pmax pmax
comp=Z,195nm,1.6s
SML Sawmill 81.23 20 IAMs_20 IAMs_20 20 41 36.7
comp=Z,3µm,21.0s
SCM Sheep Creek Mo 81.58 20 IAmb IAmb 20 12 18.4
comp=Z,24nm,0.7s
SCM IAMs_20 IAMs_20 20 42 35.2
comp=Z,2µm,21.0s
TRF Thorofare Moun 81.79 18 IAMs_20 IAMs_20 20 42 30.5
comp=Z,3µm,21.0s
CRQM Cirque 82.36 23 IAmb IAmb 20 12 52.5
comp=Z,26nm,1.0s
CRQM IAMs_20 IAMs_20 20 43 23.1
comp=Z,2µm,19.0s
RDOG Red Dog Mine 82.37 11 IAmb IAmb 20 12 21.9
comp=Z,17nm,0.6s
ZAK Zakamensk 82.37 325 eP P 20 12 17.9 -1.0
ZAK pmax pmax
comp=Z,26nm,1.2s
MCK McKinley 82.41 18 IAmb IAmb 20 13 15.8
comp=Z,51nm,1.5s
MCK IAMs_20 IAMs_20 20 39 03.9
comp=Z,2µm,21.0s
MCCM Marconi Confer 82.43 49 IAMs_20 IAMs_20 20 40 41.5
comp=Z,2µm,20.0s
TGL Tana Glacier 82.47 23 IAMs_20 IAMs_20 20 43 15.8
comp=Z,2µm,20.0s
VRDI Verde Repeater 82.55 22 IAMs_20 IAMs_20 20 41 12.7
comp=Z,2µm,22.0s
GLB Gilahina Butte 82.56 22 IAmb IAmb 20 12 45.7
comp=Z,30nm,1.2s
BWN Browne 82.57 18 IAMs_20 IAMs_20 20 43 17.3
comp=Z,2µm,20.0s
IMAR Indian Mountai 82.72 15 P P 20 12 19.4 -0.8
IRK Irkutsk 82.72 327 eP P 20 12 17.8 -2.7
IRK pmax pmax
comp=Z,75nm,2.1s
TLY Talaya 82.79 326 P P 20 12 20.1 -0.8
TLY IAmb IAmb 20 12 22.6
comp=Z,66nm,1.5s
TLY Talaya 82.79 326 eP P 20 12 19.5 -1.4
TLY eS S 20 22 37.5 +2.1
TLY pmax pmax
comp=Z,85nm,1.2s
TLY MLR MLR
comp=Z,1µm,17.0s
MCARA McCarthy VSAT 82.81 22 IAMs_20 IAMs_20 20 41 31.6
comp=Z,2µm,22.0s
KHMM Horse Mountain 82.81 46 P P 20 12 21.5 +0.1
KHMM IAmb IAmb 20 12 53.9
comp=Z,26nm,1.1s
BALM Baldy 82.84 23 IAMs_20 IAMs_20 20 43 07.3
comp=Z,2µm,21.0s
NEA Nenana 82.98 18 IAMs_20 IAMs_20 20 43 51.2
comp=Z,2µm,20.0s
PAX Paxson 83.00 20 P P 20 12 21.3 -0.5
PAX IAmb IAmb 20 12 37.3
comp=Z,46nm,1.8s
PAX Paxson 83.00 20 P P 20 12 21.3 -0.5
PAX pmax pmax
comp=Z,46nm,1.8s
PAX MLR MLR
comp=Z,2µm,22.0s
LSA Lhasa 83.04 302 P P 20 12 24.0 +0.7
LSA S S 20 22 42.7 +3.0
LSA sS sS 20 23 06.9 +5.1
LSA pmax pmax
comp=Z,110nm,1.7s
LSA pmax pmax
comp=Z,3µm,3.1s
LSA LR LR
comp=Z,4µm,20.6s
LSA LR LR
comp=Z,2µm,21.4s
LSA LR LR
comp=Z,7µm,25.6s
LSA Lhasa 83.04 302 P P 20 12 22.5 -0.8
LSA IAmb IAmb 20 12 26.4
comp=Z,77nm,1.6s
LSA Lhasa 83.04 302 P P 20 12 22.5 -0.8
LSA pmax pmax
comp=Z,77nm,1.6s
BARN Barnard Glacie 83.11 23 IAmb IAmb 20 12 49.6
comp=Z,34nm,1.0s
CTGM Chitina Glacie 83.17 23 IAmb IAmb 20 13 04.4
comp=Z,35nm,1.0s
CTGM IAMs_20 IAMs_20 20 43 25.3
comp=Z,2µm,20.0s
O02D Mt. Diablo Mer 83.22 47 P P 20 12 24.1 +0.6
baz=249,SNR=17
L02E Cave Junction 83.38 45 P P 20 12 24.1 -0.1
baz=248
MDM Murphy Dome 83.50 18 IAmb IAmb 20 12 27.4
comp=Z,16nm,0.6s
HDA Harding Lake 83.51 19 IAMs_20 IAMs_20 20 42 35.0
comp=Z,2µm,22.0s
HDA Harding Lake 83.51 19 P P 20 12 23.4 -0.9
baz=226,SNR=53
J01E Myrtle Point 83.53 44 P P 20 12 26.0 +1.1
baz=248
K02D Willamette Mer 83.54 44 P P 20 12 25.8 +0.8
baz=248
TCOL CIGO, UAF Yank 83.56 18 P P 20 12 23.9 -0.6
baz=225,SNR=6.7
COLA College 83.56 18 IAMs_20 IAMs_20 20 43 54.2
comp=Z,2µm,20.0s
N02D Trinity Center 83.57 46 P P 20 12 26.5 +1.2
baz=249,SNR=13
MENT Mentasta 83.57 21 IAmb IAmb 20 12 59.5
comp=Z,26nm,1.0s
MENT IAMs_20 IAMs_20 20 42 03.8
comp=Z,2µm,22.0s
M02C Callahan 83.62 46 P P 20 12 26.8 +1.3
baz=249,SNR=11
RIDG Independent Ri 83.72 20 IAmb IAmb 20 12 54.1
comp=Z,59nm,1.2s
RIDG IAMs_20 IAMs_20 20 42 09.8
comp=Z,3µm,22.0s
IL31 83.78 18 P P 20 12 24.2 -1.4
ILAR Eielson Array 83.78 18 P P 20 12 24.2 -1.5
comp=Z,10.0nm,0.6s,baz=250,slow=4.8,SNR=89
ILAR Eielson Array 83.78 18 P P 20 12 24.4 -1.3
ILAR Eielson Array 83.78 18 P P 20 12 24.4 -1.3
YBH Yreka Blue Hor 83.84 45 LR LR 20 41 33.4
comp=Z,730nm,21.7s,baz=252,slow=30
POKR Poker Flat Res 83.86 18 P P 20 12 24.6 -1.5
baz=225,SNR=11
DOT Dot Lake 83.93 20 IAmb IAmb 20 13 01.1
comp=Z,34nm,1.0s
ORV Oroville 83.93 48 IAmb IAmb 20 12 41.3
comp=Z,42nm,1.7s
O03E Paynes Creek 83.97 47 P P 20 12 28.7 +1.4
baz=250,SNR=10
HUMO Hull Mountain 83.99 45 IAmb IAmb 20 12 53.9
comp=Z,35nm,1.4s
HUMO IAMs_20 IAMs_20 20 40 45.3
comp=Z,2µm,21.0s
AFDM Forest Hills D 84.11 48 IAMs_20 IAMs_20 20 40 27.0
comp=Z,2µm,21.0s
SCRK Sand Creek 84.17 20 IAmb IAmb 20 13 00.5
comp=Z,29nm,0.9s
SCRK IAMs_20 IAMs_20 20 42 44.4
comp=Z,2µm,21.0s
MOY Mondy 84.25 325 eP P 20 12 28.2 -0.3
MOY pmax pmax
comp=Z,87nm,2.7s
L04D Klamath Falls 84.30 45 P P 20 12 30.0 +1.0
baz=249,SNR=5.3
BCAR Beaver Creek A 84.33 21 P P 20 12 28.0 -0.6
OSI Osito Audit: C 84.42 53 P P 20 12 28.8 -1.0
BESE Bessie Mountai 84.45 27 IAMs_20 IAMs_20 20 42 02.2
comp=Z,2µm,20.0s
M04C Macdoel 84.47 46 P P 20 12 31.3 +1.4
baz=249,SNR=8.2
WRAK Wrangell Islan 84.48 29 IAMs_20 IAMs_20 20 43 49.2
comp=Z,2µm,20.0s
MAW Mawson 84.49 202 P P 20 12 30.7 +1.3
baz=84,SNR=5.6
MAW Mawson 84.49 202 P P 20 12 28.2 -1.2
comp=Z,9.7nm,0.9s,baz=116,slow=2.8,SNR=9.2
MAW Mawson 84.49 202 P P 20 12 29.6 +0.2
MAW Mawson 84.49 202 P P 20 12 29.6 +0.2
MAW pmax pmax
comp=Z,22nm,1.9s
MAW MLR MLR
comp=Z,200nm,21.0s
JIS Juneau Island 84.50 27 IAMs_20 IAMs_20 20 41 52.5
comp=Z,2µm,21.0s
VES Vestal, Richgr 84.52 52 P P 20 12 31.7 +1.6
baz=252
BBB Bella Bella 84.66 34 IAMs_20 IAMs_20 20 42 46.2
comp=Z,2µm,19.0s
PASC Pasadena Art C 84.71 54 IAMs_20 IAMs_20 20 40 41.3
comp=Z,2µm,21.0s
SKAG Skagway 84.72 26 IAmb IAmb 20 12 57.6
comp=Z,20nm,1.0s
SKAG IAMs_20 IAMs_20 20 43 04.4
comp=Z,2µm,21.0s
RUBR Rubicon Trail 84.75 49 IAMs_20 IAMs_20 20 42 12.8
comp=Z,2µm,21.0s
I04A Tendick Farm, 84.79 44 P P 20 12 32.0 +0.6
baz=249
J04D Umpqua Nationa 84.80 44 P P 20 12 32.7 +1.1
baz=249,SNR=6.5
F03A Seaside 84.82 41 IAMs_20 IAMs_20 20 41 40.1
comp=Z,2µm,22.0s
MWC Mount Wilson 84.83 54 IAMs_20 IAMs_20 20 41 31.4
comp=Z,2µm,20.0s
H04D Lebanon 84.84 43 P P 20 12 34.5 +3.0
baz=248
BEKR Beckworth 84.87 48 IAMs_20 IAMs_20 20 41 25.9
comp=Z,2µm,22.0s
ISA Isabella, Lake 84.94 52 P P 20 12 32.8 +0.5
ISA IAmb IAmb 20 12 46.8
comp=Z,77nm,1.9s
ISA IAMs_20 IAMs_20 20 42 09.2
comp=Z,2µm,21.0s
ISA Isabella, Lake 84.94 52 P P 20 12 32.8 +0.5
ISA pmax pmax
comp=Z,77nm,2.0s
ISA MLR MLR
comp=Z,2µm,21.0s
ISA Isabella, Lake 84.94 52 P P 20 12 33.9 +1.5
baz=252,SNR=5.8
E03A Lebam 85.05 41 IAMs_20 IAMs_20 20 41 26.1
comp=Z,2µm,21.0s
EDW2 Edwards Air Fo 85.08 53 P P 20 12 34.3 +1.3
baz=252,SNR=7.4
BFSC Mount Baldy Ra 85.15 54 P P 20 12 33.6 +0.1
baz=253
PNTR Pine Nut 85.17 49 IAMs_20 IAMs_20 20 43 09.9
comp=Z,2µm,21.0s
BWNR Bhubaneshwar 85.18 292 ex P 20 12 31.0 -2.7
109C Camp Elliot, M 85.19 55 IAMs_20 IAMs_20 20 41 06.2
comp=Z,2µm,22.0s
VCNR Virginia City 85.20 48 IAMs_20 IAMs_20 20 42 17.7
comp=Z,2µm,21.0s
TAPN Taplejung 85.28 299 eP P 20 12 34.6 +0.1
comp=Z,244nm,1.4s
YERR Yerington 85.40 49 P P 20 12 34.1 -0.6
YERR IAmb IAmb 20 12 49.0
comp=Z,71nm,2.0s
YERR IAMs_20 IAMs_20 20 42 52.1
comp=Z,2µm,21.0s
J05D Fort Rock, OR 85.41 44 P P 20 12 35.6 +1.0
baz=250,SNR=15
ODAN Odare 85.43 298 eP P 20 12 35.3 +0.1
CWC Cottonwood Cre 85.48 52 P P 20 12 36.0 +0.9
baz=252
BAR Barrett 85.48 56 IAMs_20 IAMs_20 20 41 15.9
comp=Z,3µm,22.0s
FYU Fort Yukon 85.52 17 IAMs_20 IAMs_20 20 45 04.0
comp=Z,2µm,21.0s
PAHR Pah Rah Range 85.53 48 IAmb IAmb 20 13 06.6
comp=Z,33nm,1.4s
PAHR IAMs_20 IAMs_20 20 42 31.3
comp=Z,2µm,20.0s
WHY Whitehorse 85.57 25 IAMs_20 IAMs_20 20 42 52.6
comp=Z,3µm,21.0s
EGAK Eagle 85.63 20 IAmb IAmb 20 13 02.3
comp=Z,31nm,0.8s
I05D Terrebonne, OR 85.71 43 P P 20 12 36.2 +0.3
baz=250
D03D Eldon 85.73 40 P P 20 12 36.7 +0.9
baz=248
MONP2 Monument Peak 85.75 55 P P 20 12 37.5 +0.9
baz=254
PINE Pine Mountain 85.79 44 IAmb IAmb 20 13 03.0
comp=Z,27nm,1.1s
PINE IAMs_20 IAMs_20 20 42 04.9
comp=Z,2µm,22.0s
TOLK Toolik Lake Re 85.80 15 IAmb IAmb 20 13 37.0
comp=Z,53nm,1.8s
TOLK IAMs_20 IAMs_20 20 44 28.4
comp=Z,2µm,21.0s
TOLK Toolik Lake Re 85.80 15 P P 20 12 36.6 +0.8
baz=223
DAC Darwin (Calif) 85.81 52 IAMs_20 IAMs_20 20 41 34.1
comp=Z,2µm,21.0s
MPMC Manual Prospec 85.82 52 P P 20 12 37.8 +0.9
baz=253,SNR=8.5
PFO Pinyon Flats O 85.92 55 LR LR 20 42 02.1
comp=Z,2µm,21.3s,baz=282,slow=29
PFO Pinyon Flats O 85.92 55 P P 20 12 36.7 -0.6
PFO IAmb IAmb 20 12 39.4
comp=Z,57nm,1.9s
PFO Pinyon Flats O 85.92 55 P P 20 12 36.7 -0.6
PFO pmax pmax
comp=Z,57nm,2.0s
PFO MLR MLR
comp=Z,3µm,22.0s
PFO Pinyon Flats O 85.92 55 P P 20 12 39.6 +2.3
baz=253
NVAR Mina Array Bea 85.92 50 P P 20 12 37.1 -0.2
comp=Z,6.9nm,0.7s,baz=233,slow=8.4,SNR=31
NVAR LR LR 20 42 48.2
comp=Z,3µm,21.6s,baz=260,slow=30
NVAR Mina Array Bea 85.92 50 P P 20 12 36.8 -0.6
XPFO Pion Flat 85.92 55 P P 20 12 36.8 -0.6
XPFO IAmb IAmb 20 12 39.4
comp=Z,57nm,1.9s
NV11 Mina Array Sit 86.03 50 IAmb IAmb 20 12 52.1
comp=Z,31nm,1.4s
G05D Wamic, OR 86.04 42 P P 20 12 40.3 +2.8
baz=249
GSC Goldstone, Bar 86.13 53 IAMs_20 IAMs_20 20 47 36.8
comp=Z,2µm,18.0s
GSC Goldstone, Bar 86.13 53 P P 20 12 40.6 +2.3
baz=253
RAMN Ramite 86.13 298 eP P 20 12 38.6 -0.1
comp=Z,148nm,1.3s
LON Longmire 86.25 41 IAMs_20 IAMs_20 20 44 18.9
comp=Z,1µm,20.0s
KVN Kaiserville 86.26 49 IAmb IAmb 20 13 17.2
comp=Z,35nm,1.6s
KVN IAMs_20 IAMs_20 20 42 52.9
comp=Z,2µm,20.0s
BMAR Burnt Mountain 86.29 17 P P 20 12 38.1 -0.2
HEC Hector,Ludlow 86.36 54 P P 20 12 40.4 +1.0
baz=253
BELC Belle Mtn. Jos 86.40 54 P P 20 12 41.5 +1.8
baz=254
FURC Furnace Creek, 86.42 52 P P 20 12 42.0 +2.4
baz=253
B05A Bryant 86.62 39 P P 20 12 43.0 +2.8
baz=249
TIXI Tiksi 86.64 349 P P 20 12 39.3 -0.5
comp=Z,1.7nm,0.4s,baz=132,slow=6.7,SNR=9.0
TIXI Tiksi 86.64 349 P P 20 12 39.2 -0.5
TIXI IAmb IAmb 20 12 56.0

comp=Z,19nm,1.1s
TIXI Tiksi 86.64 349⇑eP P 20 12 38.1 -1.7
TIXI pmax pmax
comp=Z,19nm,1.7s
JIRN Jiri 86.67 299 eP P 20 12 41.4 0.0
BC3 Big Chuckawall 86.74 55 P P 20 12 43.1 +1.8
baz=254
TUQ Turquoise Moun 86.86 53 P P 20 12 44.3 +2.4
baz=254
I07A Izee 86.86 44 IAmb IAmb 20 12 56.2
comp=Z,17nm,1.1s
I07A IAMs_20 IAMs_20 20 42 38.3
comp=Z,2µm,22.0s
GMRC Granite Mounta 86.89 54 P P 20 12 43.3 +1.2
baz=254
GUN Gumba 87.00 299 eP P 20 12 42.8 -0.2
TPNV Topopah Spring 87.04 52 IAmb IAmb 20 12 57.3
comp=Z,73nm,2.0s
TPNV Topopah Spring 87.04 52 P P 20 12 45.1 +2.3
baz=253,SNR=6.3
GLA Glamis 87.08 56 P P 20 12 43.1 +0.2
GLA IAmb IAmb 20 13 11.1
comp=Z,34nm,1.2s
GLA IAMs_20 IAMs_20 20 42 48.5
comp=Z,2µm,21.0s
GLA Glamis 87.08 56 P P 20 12 43.1 +0.2
GLA pmax pmax
comp=Z,34nm,1.2s
GLA MLR MLR
comp=Z,2µm,21.0s
GLA Glamis 87.08 56 P P 20 12 45.5 +2.5
baz=254
IRM Iron Mountain 87.12 54 P P 20 12 45.9 +2.8
baz=254
PALK Pallekele 87.13 278⇓eP P 20 12 44.1 +0.5
PALK pmax pmax
comp=Z,69nm,1.8s
PKI Pulchoki 87.31 299 eP P 20 12 43.9 -0.6
PKIN Phulchoki 87.33 299 eP P 20 12 43.7 -0.8
J08A Circle Bar Ran 87.34 45 IAmb IAmb 20 13 10.8
comp=Z,23nm,1.2s
KKN Kakani 87.48 299 eP P 20 12 44.8 -0.4
Y12C Blythe 87.51 55 IAMs_20 IAMs_20 20 43 32.5
comp=Z,2µm,21.0s
Y12C Blythe 87.51 55 P P 20 12 47.8 +2.9
baz=254
DMN Daman 87.58 299 eP P 20 12 45.3 -0.5
comp=Z,232nm,1.3s
HAWA Hanford 87.60 42 IAmb IAmb 20 13 11.9
comp=Z,15nm,1.0s
SHPR Sheep Range 87.75 52 IAMs_20 IAMs_20 20 43 48.7
comp=Z,2µm,20.0s
SRIG Santa Rosalia 87.78 62 IAMs_20 IAMs_20 20 43 04.5
comp=Z,2µm,20.0s
R11A Troy Canyon, C 87.94 50 P P 20 12 49.2 +2.1
baz=254,SNR=5.6
PDMCI Parker Dam,Lak 87.96 55 P P 20 12 48.6 +1.5
baz=255
EPYK Eagle Plains 88.06 20 IAmb IAmb 20 12 51.3
comp=Z,18nm,1.1s
EPYK IAMs_20 IAMs_20 20 46 42.4
comp=Z,1µm,21.0s
EPYK Eagle Plains 88.06 20 P P 20 12 47.0 +0.1
baz=235,SNR=6.0
GKN Gorkha 88.08 299 eP P 20 12 47.0 -1.0
W13A Hualapai Mount 88.37 54 IAMs_20 IAMs_20 20 43 20.4
comp=Z,2µm,20.0s
B08A Colville Reser 88.38 40 IAmb IAmb 20 13 40.9
comp=Z,28nm,1.6s
214A Organ Pipe Nat 88.44 57 P P 20 12 50.9 +1.5
baz=256
BMO Blue Mountains 88.60 44 IAmb IAmb 20 13 05.2
comp=Z,41nm,1.8s
BMO IAMs_20 IAMs_20 20 43 44.2
comp=Z,2µm,21.0s
Y14A Wickenburg 88.78 55 IAMs_20 IAMs_20 20 43 49.5
comp=Z,2µm,21.0s
ELK Elko 88.86 48 IAmb IAmb 20 13 05.9
comp=Z,23nm,1.5s
ELK IAMs_20 IAMs_20 20 45 16.7
comp=Z,1µm,20.0s
DANN Dangsing 88.92 299 eP P 20 12 51.0 -1.1
comp=Z,108nm,0.9s
KOLN Koldanda 88.92 298 eP P 20 12 51.0 -1.0
HSIG 89.29 60 P P 20 12 53.0 -0.4
HSIG IAmb IAmb 20 13 08.9
comp=Z,38nm,1.5s
HSIG IAMs_20 IAMs_20 20 43 33.4
comp=Z,2µm,21.0s
NEW Newport 89.75 41 P P 20 12 55.6 +0.4
comp=Z,4.7nm,0.7s,baz=229,slow=4.6,SNR=12
NEW Newport 89.75 41 P P 20 12 55.7 +0.5
baz=252,SNR=6.0
WMQ Urumqi 89.79 315 eP P 20 12 55.0 -0.5
WMQ pmax pmax
comp=Z,28nm,0.9s
WMQ pmax pmax
comp=Z,570nm,5.7s
WMQ LR LR
comp=Z,1µm,22.9s
WMQ LR LR
comp=Z,990nm,29.1s
WMQ LR LR
comp=Z,2µm,24.9s
WMQ Urumqi 89.79 315 P P 20 12 55.1 -0.5
WMQ Urumqi 89.79 315 P P 20 12 55.1 -0.5
WMQ pmax pmax
comp=Z,36nm,1.0s
U15A North Rim 89.96 53 IAmb IAmb 20 13 01.4
comp=Z,20nm,0.8s
U15A IAMs_20 IAMs_20 20 53 07.3
comp=Z,1µm,18.0s
X16A Lo Mia Camp, P 90.15 55 IAmb IAmb 20 13 34.0
comp=Z,12nm,1.1s
X16A IAMs_20 IAMs_20 20 44 11.9
comp=Z,2µm,22.0s
INK Inuvik 90.16 19 P P 20 12 57.1 +0.5
comp=Z,0.7nm,0.5s,baz=268,slow=5.6,SNR=8.8
TUC Tucson 90.19 57 P P 20 12 57.7 0.0
TUC Tucson 90.19 57 P P 20 12 57.7 0.0
TUC pmax pmax
comp=Z,11nm,1.2s
TUC MLR MLR
comp=Z,3µm,20.0s
TUC Tucson 90.19 57 P P 20 12 58.6 +0.9
baz=257
WUAZ Wupatki 90.47 54 P P 20 13 00.7 +1.7
baz=256
DUG Dugway, Tooele 90.50 49 IAMs_20 IAMs_20 20 44 24.2
comp=Z,2µm,22.0s
DUG Dugway, Tooele 90.50 49 P P 20 12 59.9 +0.9
baz=255,SNR=8.4
TRD Trivandrum 91.01 278 ex P 20 13 00.3 -1.5
TRD i x x 20 21 00.1
HYB Hyderabad 91.25 287 i P P 20 13 02.0 -0.9
HYB epP pP 20 13 15.0 -1.6
HYB eS S 20 23 56.0 -2.3
X18A Snowflake 91.38 55 IAMs_20 IAMs_20 20 44 48.0
comp=Z,2µm,22.0s
MSO Missoula 91.41 43 P P 20 13 05.7 +2.6
baz=255
SYO Syowa Base 91.50 197⇓iP P 20 13 01.6 -1.3
SYO Syowa Base 91.50 197⇑ePcP PcP 20 13 03.4 -0.4
SYO Syowa Base 91.50 197⇑esP sP 20 13 20.2 -1.5
W18A Petrified Fore 91.68 55 IAMs_20 IAMs_20 20 45 53.9
comp=Z,2µm,21.0s
DLMT Dillon 91.94 44 IAmb IAmb 20 13 35.2
comp=Z,16nm,1.1s
DLMT IAMs_20 IAMs_20 20 46 16.8
comp=Z,1µm,21.0s
QLMT Earthquake Lak 92.62 45 P P 20 13 08.6 -0.3
121A Cookes Peak, D 92.72 58 P P 20 13 11.0 +1.4
baz=258
MOOW Moose Ponds 92.85 46 IAmb IAmb 20 13 54.9
comp=Z,25nm,2.0s
MVCO Mesa Verde 93.11 53 P P 20 13 12.5 +1.2
baz=258
H17A Grant Village 93.11 45 P P 20 13 15.7 +4.5
baz=257
PDAR Pinedale Array 93.48 47 P P 20 13 13.3 +0.4
comp=Z,2.1nm,0.9s,baz=242,slow=3.3,SNR=14
PDAR PKKP PKKPdf 20 30 18.4 -0.9
comp=Z,1.6nm,0.7s,baz=96,slow=5.0,SNR=15
PDAR LR LR 20 48 38.5
comp=Z,618nm,20.9s,baz=263,slow=31
PDAR Pinedale Array 93.48 47 P P 20 13 12.8 -0.2
C36M Paulatuk 93.69 19 IAMs_20 IAMs_20 20 50 29.1
comp=Z,1µm,20.0s
Y22D IRIS PASSCAL I 93.73 56 IAMs_20 IAMs_20 20 46 02.4
comp=Z,2µm,22.0s
O20A White River Ci 93.90 50 P P 20 13 16.3 +1.5
baz=258
MK31 Makanchi Array 94.21 317 P P 20 13 15.2 -0.7
MK31 Makanchi Array 94.21 317 P P 20 13 15.2 -0.7
MK31 pmax pmax
comp=Z,76nm,1.5s
MKAR Makanchi Array 94.21 317 P P 20 13 15.3 -0.5
comp=Z,17nm,0.5s,baz=88,slow=5.9,SNR=511
MKAR PKKP PKKPdf 20 30 17.5 -0.4
comp=Z,0.5nm,0.5s,baz=257,slow=3.0,SNR=13
MKAR LR LR 20 57 41.6
comp=Z,141nm,18.0s,baz=102,slow=37
MKAR Makanchi Array 94.21 317 P P 20 13 14.7 -1.2
MKAR Makanchi Array 94.21 317 P P 20 13 14.7 -1.2
ZAA0 Zalesovo Array 94.23 324 P P 20 13 14.2 -1.5
ZAA0 IAmb IAmb 20 13 16.9
comp=Z,17nm,0.9s
ZALV Zalesovo Beam 94.23 324 P P 20 13 14.2 -1.5
comp=Z,10nm,0.7s,baz=108,slow=4.8,SNR=36
ZALV Zalesovo Beam 94.23 324 P P 20 13 13.9 -1.9
ANMO Albuquerque 94.28 55 P P 20 13 16.8 0.0
ANMO Albuquerque 94.28 55 IAMs_20 IAMs_20 20 47 14.7
comp=Z,1µm,21.0s
ANMO Albuquerque 94.28 55⇑eP P 20 13 17.7 +1.0
ANMO pmax pmax
comp=Z,2.0nm,0.8s
ANMO Albuquerque 94.28 55 P P 20 13 17.5 +0.8
baz=259
MAKZ Makanchi 94.42 317 P P 20 13 16.0 -0.9
MAKZ Makanchi 94.42 317 P P 20 13 16.0 -0.9
MAKZ pmax pmax
comp=Z,57nm,1.3s
EGMT Eagleton 94.46 42 P P 20 13 17.1 +0.1
EGMT IAmb IAmb 20 13 45.6
comp=Z,11nm,0.9s
EGMT Eagleton 94.46 42 P P 20 13 18.4 +1.3
baz=258,SNR=6.3
S22A 4UR Ranch, Cre 94.51 53 P P 20 13 20.3 +2.4
baz=259
MNTX Cornudas Mount 94.56 59 IAMs_20 IAMs_20 20 46 32.4
comp=Z,2µm,21.0s
SMCO Snowmass 94.67 51 IAMs_20 IAMs_20 20 47 58.8
comp=Z,2µm,21.0s
RWWY Rawlins 94.97 49 IAMs_20 IAMs_20 20 47 34.4
comp=Z,1µm,22.0s
YKA Yellowknife Ar 95.14 27 P P 20 13 17.5 -2.2
comp=Z,2.4nm,0.6s,baz=257,slow=4.7,SNR=39
YKA PKKP PKKPbc 20 30 10.6 -6.0
comp=Z,0.3nm,0.7s,baz=56,slow=2.4,SNR=3.9
YKA LR LR 20 48 58.2
comp=Z,814nm,21.8s,baz=0.0,slow=31
SDCO Great Sand Dun 95.55 53 IAMs_20 IAMs_20 20 48 50.1
comp=Z,2µm,22.0s
TX32 Lajitas Array 95.59 61 P P 20 13 22.4 -0.3
TXAR Lajitas Array 95.59 61 P P 20 13 23.0 +0.3
comp=Z,1.9nm,0.7s,baz=226,slow=5.0,SNR=25
TXAR PP PP 20 17 24.1 +10
comp=Z,0.6nm,0.9s,baz=245,slow=2.6,SNR=4.5
TXAR PKKP PKKPdf 20 30 15.4 +0.5
comp=Z,0.4nm,0.6s,baz=107,slow=4.2,SNR=6.9
TXAR LR LR 20 48 37.2
comp=Z,944nm,20.8s,baz=0.0,slow=31
TXAR Lajitas Array 95.59 61 P P 20 13 22.3 -0.4
N23A Red Feather La 95.76 50 IAMs_20 IAMs_20 20 47 49.5
comp=Z,2µm,22.0s
N23A Red Feather La 95.76 50 P P 20 13 26.5 +3.0
baz=260
ISCO Idaho Springs 95.82 51 P P 20 13 25.6 +1.8
baz=260
POO Poona 95.85 288 ex P 20 13 21.5 -2.5
POO ex x 20 18 40.7
POO i x x 20 25 20.9
TROLL Troll, Antarti 95.97 185 P P 20 13 22.9 -0.8
Q24A Divide 96.03 52 IAMs_20 IAMs_20 20 48 31.8
comp=Z,1µm,22.0s
T25A Trinidad 96.30 54 IAMs_20 IAMs_20 20 50 50.1
comp=Z,1µm,20.0s
LAO LASA Array 96.56 44 IAMs_20 IAMs_20 20 48 13.0
comp=Z,2µm,22.0s
SNAA Sanae 96.69 183 P P 20 13 26.7 -0.2
SNAA Sanae 96.69 183 P P 20 13 25.6 -1.2
SNAA Sanae 96.69 183⇓eP P 20 13 26.0 -0.9
MSTX Muleshoe 97.11 57 IAMs_20 IAMs_20 20 50 23.1
comp=Z,2µm,20.0s
KURK Kurchatov 97.32 320 P P 20 13 28.2 -1.7
KURK IAmb IAmb 20 13 31.5
comp=Z,29nm,1.7s
KURK Kurchatov 97.32 320 IAMs_20 IAMs_20 20 55 42.3
comp=Z,1µm,21.0s
KURK Kurchatov 97.32 320⇑eP P 20 13 29.8 -0.1
KURK pmax pmax
comp=Z,17nm,1.6s
KURBB Kurchatov Arra 97.37 320 P P 20 13 28.2 -1.8
comp=Z,1.4nm,0.5s,baz=96,slow=4.6,SNR=30
VNA3 Neumayer Olymp 97.40 181 P P 20 13 28.9 -1.0
KSH Kashi 97.45 309 P Pdif 20 13 32.0 +1.0
KSH pP pP 20 13 43.3 -1.6
KSH PP PP 20 17 28.8 +0.1
KSH SKS SKSac 20 24 05.3 +0.7
KSH S S 20 24 50.4 -1.6
KSH SS SS 20 31 38.4 +6.5
KSH pmax pmax
comp=Z,19nm,0.8s
KSH LR LR
comp=Z,450nm,8.3s
KSH LR LR
comp=Z,700nm,9.1s
KSH LR LR
comp=Z,560nm,8.9s
VNA2 Neumayer--Watz 97.65 182 P P 20 13 30.8 -0.3
baz=175,slow=3.6
AMTX Amarillo 98.14 56 IAMs_20 IAMs_20 20 48 52.0
comp=Z,2µm,22.0s
AAK Ala-Archa 98.99 312 P P 20 13 36.5 -1.4
comp=Z,2.3nm,0.8s,baz=159,slow=5.9,SNR=7.0
AAK Ala-Archa 98.99 312 P P 20 13 36.8 -1.0
AAK Ala-Archa 98.99 312⇑eP P 20 13 37.8 0.0
AAK pmax pmax
comp=Z,4.0nm,1.3s
JCT Junction City 99.08 61 IAMs_20 IAMs_20 20 51 09.7
comp=Z,2µm,20.0s
ABTX Abilene, Hawle 99.51 59 IAMs_20 IAMs_20 20 51 25.5
comp=Z,2µm,20.0s
WMOK Wichita Mounta 100.48 57 IAMs_20 IAMs_20 20 50 38.5
comp=Z,2µm,22.0s
U32A Winter Ranch, 100.49 55 IAMs_20 IAMs_20 20 51 19.3
comp=Z,2µm,20.0s
435B Jarrell 101.02 61 IAMs_20 IAMs_20 20 52 07.9
comp=Z,2µm,20.0s
WHTX Lake Whitney, 101.27 59 IAMs_20 IAMs_20 20 51 29.3
comp=Z,1µm,20.0s
OKCFA Oklahoma City 101.64 56 IAMs_20 IAMs_20 20 52 41.8
comp=Z,2µm,20.0s
BGNE Belgrade 101.66 50 IAMs_20 IAMs_20 20 53 43.9
comp=Z,2µm,20.0s
KK31 Karatay Array 101.95 312 Pdif 20 13 49.5 -1.3
KK31 Karatay Array 101.95 312 P Pdif 20 13 49.5 -1.3
HKT Hockley 102.43 62 IAMs_20 IAMs_20 20 52 42.3
comp=Z,1µm,20.0s
BVAR Borovoye Array 102.63 322 P Pdif 20 13 51.3 -2.3
comp=Z,0.7nm,0.6s,baz=93,slow=7.6,SNR=7.5
KSU1 Kansas State U 102.64 52 IAMs_20 IAMs_20 20 53 42.9
comp=Z,1µm,21.0s
BRVK Borovoye 102.69 322 IAMs_20 IAMs_20 20 58 38.2
comp=Z,2µm,20.0s
D32A Dogwood Acres, 102.88 44 IAMs_20 IAMs_20 20 52 00.2
comp=Z,1µm,22.0s
TUL1 Leonard 103.03 56 IAMs_20 IAMs_20 20 52 23.6
comp=Z,2µm,22.0s
RES Resolute Bay 103.36 16 IAMs_20 IAMs_20 20 55 15.3
comp=Z,2µm,21.0s
NATX Nacogdoches 103.61 60 IAMs_20 IAMs_20 20 52 18.5
comp=Z,2µm,21.0s
HHAR Hobbs 104.56 55 IAMs_20 IAMs_20 20 54 21.8
comp=Z,2µm,20.0s
W39A Magazine 104.61 56 IAMs_20 IAMs_20 20 53 52.4
comp=Z,1µm,19.0s
WLAR White Oak Lake 105.06 58 IAMs_20 IAMs_20 20 54 42.6
comp=Z,1µm,20.0s
Z41A Richland Creek 105.29 59 IAMs_20 IAMs_20 20 54 17.7
comp=Z,2µm,20.0s
X40A Basin Creek Fa 105.34 57 IAMs_20 IAMs_20 20 55 41.0
comp=Z,2µm,20.0s
SCIA State Center 105.38 50 IAMs_20 IAMs_20 20 54 41.1
comp=Z,2µm,20.0s
342A Flagon Creek P 105.57 61 IAMs_20 IAMs_20 20 56 03.4
comp=Z,1µm,21.0s
SPMN Marine on St. 105.75 46 IAMs_20 IAMs_20 20 55 30.3
comp=Z,1µm,21.0s
MGMO Mountain Grove 105.94 55 IAMs_20 IAMs_20 20 55 28.5
comp=Z,2µm,20.0s
CCAR Cane Creek 106.19 58 IAMs_20 IAMs_20 20 55 15.5
comp=Z,1µm,21.0s
SNET Serv Nac Est T 106.56 79 IAMs_20 IAMs_20 20 50 53.8
comp=Z,2µm,22.0s
CCM Cathedral Cave 106.79 54 IAMs_20 IAMs_20 20 54 42.7
comp=Z,2µm,21.0s
LCAR Lake Charles 106.80 56 IAMs_20 IAMs_20 21 00 36.2
comp=Z,941nm,18.0s
L40A Anamosa 106.87 49 IAMs_20 IAMs_20 21 00 13.5
comp=Z,2µm,18.0s
344A Westbrook Farm 106.93 61 IAMs_20 IAMs_20 20 56 25.5
comp=Z,1µm,20.0s
X43A Marvell 106.96 57 IAMs_20 IAMs_20 20 54 49.7
comp=Z,1µm,20.0s
VBMS Vicksburg 107.15 60 IAMs_20 IAMs_20 20 55 54.1
comp=Z,1µm,19.0s
JFWS Jewell Farm 107.59 49 IAMs_20 IAMs_20 21 03 07.9
comp=Z,1µm,19.0s
GNAR Gosnell 107.71 56 IAMs_20 IAMs_20 20 55 17.5
comp=Z,2µm,21.0s
PEBM Pemiscott Bayo 107.84 56 IAMs_20 IAMs_20 20 55 42.9
comp=Z,2µm,20.0s
PARMO Parma 107.94 55 IAMs_20 IAMs_20 20 58 50.5
comp=Z,1µm,19.0s
PVMO Portageville 107.98 55 IAMs_20 IAMs_20 20 54 54.5
comp=Z,1µm,22.0s
P43A Skaggs, Pawnee 108.16 52 IAMs_20 IAMs_20 20 58 13.7
comp=Z,2µm,20.0s
HENM Henderson Moun 108.17 55 IAMs_20 IAMs_20 21 01 49.5
comp=Z,1µm,20.0s
OXF Oxford 108.17 57 IAMs_20 IAMs_20 20 57 01.1
comp=Z,1µm,20.0s
HALT Halls 108.26 56 IAMs_20 IAMs_20 20 56 25.0
comp=Z,2µm,20.0s
HICK Hickman 108.36 55 IAMs_20 IAMs_20 20 54 54.6
comp=Z,1µm,22.0s
TGUH Tegucigalpa,Un 108.49 79 IAMs_20 IAMs_20 20 52 48.0
comp=Z,1µm,20.0s
D41A Chasee 108.65 44 IAMs_20 IAMs_20 20 57 01.9
comp=Z,2µm,21.0s
K43A Burlington 109.01 49 IAMs_20 IAMs_20 21 02 07.8
comp=Z,2µm,19.0s
F42A Maple Grove Fa 109.02 46 IAMs_20 IAMs_20 20 58 59.8
comp=Z,1µm,20.0s
M44A Midewin, Midew 109.26 50 IAMs_20 IAMs_20 20 56 47.7
comp=Z,2µm,22.0s
OLIL Olney 109.27 53 IAMs_20 IAMs_20 20 57 05.2
comp=Z,2µm,20.0s
PLAL Pickwick Lake 109.28 57 IAMs_20 IAMs_20 20 55 15.1
comp=Z,2µm,22.0s
H43A Windswept, Lux 109.34 47 IAMs_20 IAMs_20 20 58 23.5
comp=Z,1µm,20.0s
WVT Waverly 109.49 56 IAMs_20 IAMs_20 20 56 51.5
comp=Z,2µm,21.0s
E43A Lone Tree Farm 109.77 45 IAMs_20 IAMs_20 20 57 09.6
comp=Z,1µm,20.0s
P46A Rosedale 109.94 52 IAMs_20 IAMs_20 20 58 50.0
comp=Z,2µm,20.0s
BRAL Brewton 110.07 61 IAMs_20 IAMs_20 20 57 46.6
comp=Z,1µm,21.0s
T47A Sharon Grove 110.07 55 IAMs_20 IAMs_20 21 03 03.7
comp=Z,1µm,20.0s
X48A Hartselle 110.12 57 IAMs_20 IAMs_20 20 58 59.5
comp=Z,1µm,20.0s
V48A Smith Brothers 110.31 56 IAMs_20 IAMs_20 20 56 53.2
comp=Z,2µm,21.0s
I45A Fountain 110.47 47 IAMs_20 IAMs_20 21 01 09.3
comp=Z,907nm,19.0s
L46A Eue Claire 110.54 49 IAMs_20 IAMs_20 20 58 20.6
comp=Z,2µm,20.0s
250A Grady 110.75 60 IAMs_20 IAMs_20 20 57 35.6
comp=Z,1µm,22.0s
G45A Suttons Bay 110.81 46 IAMs_20 IAMs_20 20 57 23.2
comp=Z,2µm,22.0s
Z50A Ashland 111.05 59 IAMs_20 IAMs_20 20 57 57.3
comp=Z,2µm,21.0s
451A Vernon 111.17 62 IAMs_20 IAMs_20 21 00 34.6
comp=Z,1µm,19.0s
GEYT Alibeck 111.28 306 PP PP 20 19 04.2 -7.1
comp=Z,1.0nm,0.7s,baz=172,slow=5.4,SNR=3.7
P48A Milroy 111.33 52 IAMs_20 IAMs_20 21 00 18.6
comp=Z,1µm,19.0s
T49A Edmonton 111.33 55 IAMs_20 IAMs_20 20 58 55.9
comp=Z,1µm,20.0s
J47A Sunmer 111.55 48 IAMs_20 IAMs_20 21 06 20.0
comp=Z,1µm,20.0s
GLMI Grayling 111.56 46 IAMs_20 IAMs_20 20 58 06.1
comp=Z,2µm,22.0s
E46A Sault Ste Mari 111.63 45 IAMs_20 IAMs_20 21 01 01.7
comp=Z,1µm,19.0s
I47A Gladwin 111.71 47 IAMs_20 IAMs_20 20 57 43.2
comp=Z,1µm,22.0s
X51A Calhoun 111.93 57 IAMs_20 IAMs_20 20 57 45.3
comp=Z,2µm,21.0s
O49A Covington 112.12 51 IAMs_20 IAMs_20 21 03 45.7
comp=Z,1µm,18.0s
CPCT Cooper Cave 112.19 56 IAMs_20 IAMs_20 21 00 24.0
comp=Z,1µm,20.0s
J48A Bridge Port 112.30 48 IAMs_20 IAMs_20 21 03 50.8
comp=Z,946nm,20.0s
V51A Loudon 112.31 56 IAMs_20 IAMs_20 20 58 59.3
comp=Z,1µm,20.0s
H48A Harrisville 112.49 46 IAMs_20 IAMs_20 20 59 36.7
comp=Z,1µm,21.0s
Y52A Lilburn 112.60 58 IAMs_20 IAMs_20 20 59 40.2
comp=Z,2µm,21.0s
W52A Murphy 112.68 57 IAMs_20 IAMs_20 20 58 29.2
comp=Z,1µm,20.0s
TKL Tuckaleechee C 112.79 56 IAMs_20 IAMs_20 20 57 49.9
comp=Z,2µm,22.0s
V52A Sevierville 112.93 56 IAMs_20 IAMs_20 21 04 26.5
comp=Z,1µm,20.0s
I49A Point Hope 112.93 47 IAMs_20 IAMs_20 20 58 27.8
comp=Z,1µm,22.0s
TZTN Tazewell 112.94 55 IAMs_20 IAMs_20 20 58 49.7
comp=Z,1µm,21.0s
E48A Lockeyer 113.09 44 PKiKP PKiKP 20 18 35.5 +1.4
baz=278
GOGA Godfrey 113.11 59 IAMs_20 IAMs_20 20 59 13.6
comp=Z,1µm,21.0s
P51A Williamsport 113.15 52 IAMs_20 IAMs_20 21 00 20.0
comp=Z,2µm,22.0s
ACSO Alum Creek Sta 113.16 51 IAMs_20 IAMs_20 21 00 44.0
comp=Z,1µm,20.0s
K50A Casco 113.20 48 IAMs_20 IAMs_20 21 05 12.7
comp=Z,1µm,18.0s
D48A Paudash Townsh 113.23 44 PKiKP PKiKP 20 18 35.1 +0.7
baz=278
154A Montrose 113.43 59 IAMs_20 IAMs_20 20 59 41.2
comp=Z,2µm,22.0s
BG3 Lake Jocassee 113.50 57 IAMs_20 IAMs_20 20 59 05.9
comp=Z,1µm,22.0s
V53A Saluda 113.57 56 IAMs_20 IAMs_20 20 58 57.6
comp=Z,1µm,20.0s
255A Hazlehurst 113.97 60 IAMs_20 IAMs_20 21 01 51.8
comp=Z,1µm,20.0s
HODGE Hodges 114.09 58 IAMs_20 IAMs_20 20 58 39.5
comp=Z,2µm,22.0s
U54A Nelsons Funny 114.33 55 IAMs_20 IAMs_20 21 00 36.5
comp=Z,2µm,21.0s
GO02 Mina Guanaco 114.50 124 IAMs_20 IAMs_20 20 58 40.9
comp=Z,776nm,18.0s
N53A Lisbon 114.73 50 IAMs_20 IAMs_20 20 59 34.5
comp=Z,2µm,22.0s
KMSC Kings Mountain 114.81 57 IAMs_20 IAMs_20 21 00 28.3
comp=Z,2µm,21.0s
V55A Taylorsville 114.86 56 IAMs_20 IAMs_20 21 06 20.7
comp=Z,1µm,19.0s
Z56A Williston 114.86 59 IAMs_20 IAMs_20 21 00 26.2
comp=Z,1µm,21.0s
JSC Jenkinsville 114.91 58 IAMs_20 IAMs_20 21 01 29.3
comp=Z,1µm,20.0s
257A Skidaway Islan 115.20 60 IAMs_20 IAMs_20 21 00 46.6
comp=Z,1µm,20.0s
FRB Frobisher Bay 115.38 24 PKP PKiKP 20 18 36.9 -1.0
comp=Z,1.1nm,0.3s,baz=220,slow=2.9,SNR=6.8
SADO Sadowa 115.44 46 IAMs_20 IAMs_20 21 02 46.6
comp=Z,1µm,20.0s
BIRD Birdtown, Kers 115.55 57 IAMs_20 IAMs_20 20 59 47.8
comp=Z,2µm,22.0s
NHSC New Hope 115.87 59 IAMs_20 IAMs_20 21 01 27.9
comp=Z,2µm,22.0s

W57A Gilead 115.90 57 IAMs_20 IAMs_20 21 01 31.3
comp=Z,1µm,19.0s
VLDQ Val d'Or 115.96 42 IAMs_20 IAMs_20 21 04 34.5
comp=Z,1µm,19.0s
J54A Appleton 116.03 47 IAMs_20 IAMs_20 21 01 26.5
comp=Z,1µm,20.0s
APA Apatity 116.03 342⇑ *i*PKIKP PKPdf 20 18 45.5 +6.4
APA pmax pmax
comp=Z,3.0nm,1.0s
APA MLR MLR
comp=Z,2µm,22.0s
MEDO Medina 116.18 48 IAMs_20 IAMs_20 21 02 24.8
comp=Z,1µm,20.0s
WVNY West Valley, N 116.19 48 IAMs_20 IAMs_20 21 03 50.8
comp=Z,1µm,20.0s
LVC Limon Verde 116.19 122 IAMs_20 IAMs_20 20 58 17.1
comp=Z,930nm,20.0s
PB01 IPOC Station P 116.38 120 IAMs_20 IAMs_20 20 59 18.4
comp=Z,880nm,19.0s
V58A Windy Hill, Pi 116.56 56 IAMs_20 IAMs_20 21 01 44.8
comp=Z,2µm,21.0s
J55A Hilton 116.62 47 IAMs_20 IAMs_20 21 02 45.2
comp=Z,2µm,21.0s
MMNY Mt. Morris Dam 116.65 48 IAMs_20 IAMs_20 21 03 29.9
comp=Z,939nm,20.0s
ARCES ARCESS Array B 116.91 346 PKP PKPdf 20 18 39.4 -1.4
comp=Z,8.1nm,0.7s,baz=50,slow=1.9,SNR=43
ARCES ARCESS Array B 116.91 346 PKPdf 20 18 39.1 -1.7
MNMC Minye Minye 117.09 118 IAMs_20 IAMs_20 20 57 11.0
comp=Z,997nm,22.0s
J56A Wolcott 117.31 47 IAMs_20 IAMs_20 21 03 28.4
comp=Z,1µm,20.0s
D55A Sainte-Anne-du 117.51 43 P PKiKP 20 18 43.3 +0.8
baz=283
U59A Littleton 117.58 55 IAMs_20 IAMs_20 21 01 45.5
comp=Z,1µm,21.0s
CNNC Cliffs of the 117.61 56 IAMs_20 IAMs_20 21 02 14.5
comp=Z,2µm,21.0s
T59A Double "B" Far 117.70 54 IAMs_20 IAMs_20 21 03 09.8
comp=Z,1µm,20.0s
SDMD Soldier's Deli 117.95 51 IAMs_20 IAMs_20 21 04 24.8
comp=Z,786nm,19.0s
D56A ZEC Mazanza, M 117.98 43 P PKiKP 20 18 44.3 +0.8
baz=284
V60A Jim Taylor Roa 118.07 56 IAMs_20 IAMs_20 21 02 39.6
BINY Binghamton 118.14 48 IAMs_20 IAMs_20 21 02 59.6
comp=Z,1µm,20.0s
MVL Millersville 118.23 51 IAMs_20 IAMs_20 21 01 42.3
comp=Z,1µm,22.0s
K58A Earlville 118.28 48 IAMs_20 IAMs_20 21 02 37.3
comp=Z,1µm,21.0s
T60A Surry 118.33 54 IAMs_20 IAMs_20 21 01 54.5
comp=Z,2µm,21.0s
E57A Chemin Saint G 118.54 43 P PKiKP 20 18 45.1 +0.4
baz=284
V61A Roper 118.62 56 IAMs_20 IAMs_20 21 01 55.2
comp=Z,1µm,21.0s
LONY Lake Ozonia 118.66 45 IAMs_20 IAMs_20 21 03 09.0
comp=Z,1µm,22.0s
U61A Possum Corner 118.66 55 IAMs_20 IAMs_20 21 03 27.2
comp=Z,2µm,21.0s
Q60A Greensboro 118.77 52 IAMs_20 IAMs_20 21 04 40.0
comp=Z,1µm,20.0s
P60A Greenville 118.81 51 IAMs_20 IAMs_20 21 01 59.7
comp=Z,1µm,22.0s
L59A Walton 118.83 48 IAMs_20 IAMs_20 21 03 51.9
comp=Z,1µm,20.0s
PSUB Penn St. - Bra 118.93 51 IAMs_20 IAMs_20 21 02 03.9
comp=Z,1µm,22.0s
J59A Piesco 118.96 47 IAMs_20 IAMs_20 21 03 45.2
comp=Z,2µm,20.0s
J59A Piesco 118.96 47 P PKiKP 20 18 46.5 +0.9
baz=282
H58A Gabriels 118.98 45 P PKiKP 20 18 46.9 +1.3
baz=283
V62A Hyde County Ai 119.15 56 IAMs_20 IAMs_20 21 02 10.2
comp=Z,1µm,20.0s
D58A Chemin du LacG 119.21 42 P PKiKP 20 18 46.6 +0.7
baz=285
P61A Hammonton 119.47 51 IAMs_20 IAMs_20 21 02 31.3
comp=Z,1µm,22.0s
LPAZ La Paz 119.51 116 PKP PKPdf 20 18 47.7 -0.4
comp=Z,1.7nm,0.4s,baz=176,slow=7.2,SNR=6.2
LPAZ SKP SKPdf 20 22 24.2 +4.5
comp=Z,1.1nm,0.7s,baz=348,slow=1.7,SNR=3.7
LPAZ La Paz 119.51 116 PKPdf 20 18 47.2 -0.9
ROSC El Rosal 119.74 91 PKP PKPdf 20 18 46.7 -1.6
comp=Z,7.6nm,0.4s,baz=360,slow=22,SNR=3.1
ROSC El Rosal 119.74 91 PKPdf 20 18 46.9 -1.5
VT1 Waterbury 120.00 45 IAMs_20 IAMs_20 21 04 49.6
comp=Z,1µm,20.0s
KSCT Kent School, K 120.06 48 IAMs_20 IAMs_20 21 07 52.5
comp=Z,1µm,20.0s
F60A Warwick 120.13 43 P PKiKP 20 18 48.9 +1.2
baz=286
SCHQ Schefferville 120.13 32 PKP PKPdf 20 18 46.8 -0.6
comp=Z,1.9nm,0.7s,baz=86,slow=2.0,SNR=5.1
SCHQ Schefferville 120.13 32 PKPdf 20 18 46.6 -0.8
WSPT Westport, CT 120.29 49 IAMs_20 IAMs_20 21 02 46.0
comp=Z,1µm,22.0s
E60A Ste Agathe de 120.36 43 P PKiKP 20 18 49.1 +1.0
baz=286
J62A Henniker 120.93 46 P PKiKP 20 18 51.1 +1.7
baz=284
E61A Lac Etchemin 120.97 42 P PKiKP 20 18 51.0 +1.6
baz=287
FFD Franklin Falls 120.98 46 IAMs_20 IAMs_20 21 05 54.5
comp=Z,1µm,19.0s
I62A Tamworth 121.10 45 IAMs_20 IAMs_20 21 08 14.7
comp=Z,968nm,19.0s
RUSC La Rusia 121.14 90 PKiKP 20 18 51.4 +0.1
G62A West of Eustis 121.29 44 IAMs_20 IAMs_20 21 04 35.5
comp=Z,845nm,21.0s
G62A West of Eustis 121.29 44 P PKiKP 20 18 51.3 +1.2
baz=286
BRYW Bryant College 121.44 48 IAMs_20 IAMs_20 21 04 09.9
comp=Z,1µm,21.0s
OBN Obninsk 121.46 329 *i* PKIKP PKPdf 20 18 49.8 -0.1
OBN *i* 20 19 02.1
OBN pmax pmax
comp=Z,4.0nm,0.8s
I63A Otisfield 121.58 45 IAMs_20 IAMs_20 21 05 21.3
comp=Z,1µm,20.0s
D62A Allapoint, All 121.72 41 IAMs_20 IAMs_20 21 07 58.4
comp=Z,1µm,21.0s
D62A Allapoint, All 121.72 41 P PKiKP 20 18 51.8 +1.1
baz=289
KBZ Khabaz 121.83 315⇑ *i*PKIKP PKPdf 20 18 50.9 0.0
KIV Kislovodsk 121.92 315 *i* PKIKP PKPdf 20 18 50.3 -1.0
KIV pmax pmax
comp=Z,13nm,1.1s
KIV MLR MLR
comp=Z,2µm,22.0s
NEY Neytrino 122.08 314⇓ *i*PKIKP PKiKP 20 18 52.0 +0.1
F63A Nahmakanta, Br 122.11 43 IAMs_20 IAMs_20 21 04 21.1
comp=Z,1µm,21.0s
I64A Boothbay 122.27 45 P PKiKP 20 18 53.4 +1.4
baz=286
E63A Oxbow 122.34 42 P PKiKP 20 18 53.0 +0.9
baz=289
D63A Stockholm 122.34 41 P PKiKP 20 18 52.7 +0.7
baz=290
H64A Troy 122.35 44 P PKiKP 20 18 53.1 +1.0
baz=287
FINES FINESS Array B 122.39 339 PKP PKPdf 20 18 50.2 -1.3
comp=Z,3.0nm,0.6s,baz=23,slow=3.0,SNR=20
PQI Presque Isle 122.52 42 IAMs_20 IAMs_20 21 04 15.6
comp=Z,1µm,22.0s
F64A Sherman 122.56 43 IAMs_20 IAMs_20 21 11 43.0
comp=Z,1µm,21.0s
F64A Sherman 122.56 43 P PKiKP 20 18 53.6 +1.1
baz=289
RAYN Ar Rayn 122.61 291 PKPdf 20 18 52.4 -0.8
RAYN Ar Rayn 122.61 291 PKIKP PKPdf 20 18 52.4 -0.8
E64A Bridgewater 122.73 42 P PKiKP 20 18 53.6 +0.8
baz=289
G65A Princeton 123.30 43 IAMs_20 IAMs_20 21 06 01.5
comp=Z,1µm,21.0s
G65A Princeton 123.30 43 P PKiKP 20 18 55.1 +1.1
baz=289
CPUP Villa Florida 123.33 132 PKP PKPdf 20 18 53.4 -1.0
comp=Z,1.5nm,0.6s,baz=254,slow=4.6,SNR=3.9
CPUP PKP2ab 20 35 22.9
comp=Z,1.2nm,0.3s,baz=269,slow=2.1,SNR=4.7
EMMW East Machias 123.53 44 IAMs_20 IAMs_20 21 07 53.7
comp=Z,1µm,20.0s
SDV Santo Domingo 124.00 87 PKP PKPdf 20 18 54.9 -1.4
comp=Z,4.8nm,0.3s,baz=4.6,slow=3.6,SNR=12
SDV Santo Domingo 124.00 87 PKPdf 20 18 55.7 -0.5
VSU Vasula 124.10 336⇓ *i*PKIKP PKiKP 20 18 55.5 +0.4
SDDR Presa de Saban 124.16 75 IAMs_20 IAMs_20 21 03 08.0
comp=Z,938nm,21.0s
LMN Caledonia Moun 124.89 42 IAMs_20 IAMs_20 21 08 07.5
comp=Z,1µm,22.0s
BOSA Boshof 125.14 223 PKP PKPdf 20 18 57.1 -0.9
comp=Z,8.9nm,0.7s,baz=137,slow=3.0,SNR=19
BOSA Boshof 125.14 223 PKPdf 20 18 57.8 -0.2
SAML Samuel 126.78 110 PKPdf 20 19 01.0 -0.3
SAML Samuel 126.78 110 PKIKP PKPdf 20 19 01.0 -0.3
SAML MLR MLR
comp=Z,500nm,20.0s
LBTB Lobatse 127.20 226 PKPdf 20 19 01.8 -0.2
LBTB Lobatse 127.20 226 PKIKP PKPdf 20 19 01.8 -0.2
NB2 NORSAR Subarra 127.28 345 PKPdf PKPdf 20 19 00.2 -0.7
comp=Z,9.3nm,1.1s,baz=31,slow=1.9
NB2 NORSAR Subarra 127.28 345 PKPdf PKPdf 20 19 00.2 -0.7
baz=31,slow=1.9
NOA NORSAR Array B 127.28 345 PKP PKPdf 20 18 59.6 -1.4
comp=Z,2.5nm,0.7s,baz=33,slow=2.0,SNR=10
AKASG Malin Array Be 127.53 327 PKP PKPdf 20 19 00.6 -1.1
comp=Z,1.5nm,0.7s,baz=48,slow=3.3,SNR=9.1
AKASG Malin Array Be 127.53 327 PKPdf 20 19 00.1 -1.5
AKASG Malin Array Be 127.53 327 PKIKP PKPdf 20 19 00.2 -1.5
MATP Matopo 127.74 233 PKP PKPdf 20 19 02.5 -0.7
comp=Z,3.2nm,0.7s,baz=129,slow=2.0,SNR=7.8
KMBO Kilima Mbogo 127.82 260 PKP PKPdf 20 19 03.0 -0.7
comp=Z,1.4nm,0.6s,baz=30,slow=4.5,SNR=4.9
KMBO Kilima Mbogo 127.82 260 PKPdf 20 19 03.1 -0.6
KMBO Kilima Mbogo 127.82 260 PKIKP PKPdf 20 19 03.0 -0.7
FURI Furi 128.42 272 IAMs_20 IAMs_20 21 13 25.2
comp=Z,813nm,21.0s
BRTR Keskin Array B 129.66 313 PKP PKPdf 20 19 05.3 -0.9
comp=Z,1.0nm,0.9s,baz=147,slow=3.3,SNR=5.0
BRTR PP PP 20 21 14.9 -2.2
comp=Z,2.7nm,1.1s,baz=107,slow=6.8,SNR=5.8
BRTR Keskin Array B 129.66 313 PKPdf 20 19 05.7 -0.6
LSZ Lusaka 130.70 238 PKP PKPdf 20 19 08.9 +0.1
comp=Z,7.7nm,0.7s,baz=115,slow=1.5,SNR=24
EIL Elat 131.37 299 PKP PKPdf 20 19 10.0 +0.4
comp=Z,7.2nm,0.7s,baz=246,slow=1.5,SNR=7.6
BURAR Bucovina Array 131.43 325 PKiKP 20 19 09.9 -0.4
SABA Saba 131.79 77 IAMs_20 IAMs_20 21 07 36.4
comp=Z,1µm,19.0s
KOLS Kolonicke sedl 132.22 328 *e*PKIKP PKiKP 20 19 11.7 0.0
KOLS Kolonicke sedl 132.22 328 *e*PKP PKiKP 20 19 11.7 0.0
SKI Saint Kitts 132.28 77 IAMs_20 IAMs_20 21 07 55.2
comp=Z,871nm,20.0s
UZH Uzhgorod 132.39 328 *e*PKHKP PKPpre 20 18 55.3
UZH *e* 20 19 11.4
OSTC Ostas 133.98 334 *e*PKPDF PKiKP 20 19 16.0 +0.7
CHVC Chvalec 134.03 334 *e*PKPDF PKiKP 20 19 17.2 +1.8
DPC Dobruska-Polom 134.08 333 *e*PKPDF PKiKP 20 19 15.6 +0.1
DPC AMS AMS 21 17 20.0
comp=Z,2µm,23.4s
DPC Dobruska-Polom 134.08 333 *e*PKIKP PKiKP 20 19 15.6 +0.1
DPC MLR MLR
comp=Z,2µm,23.4s
MBAR Mbarara 134.22 258 PKP PKPdf 20 19 16.2 +0.6
comp=Z,1.3nm,0.4s,baz=173,slow=8.0,SNR=3.8
MBAR Mbarara 134.22 258 PKPdf 20 19 15.7 0.0
MBAR IAMs_20 IAMs_20 21 14 28.7
comp=Z,840nm,20.0s
VYHS Vyhne 134.23 330 *e*PKIKP PKPdf 20 19 14.2 -0.3
VYHS Vyhne 134.23 330 *e*PKP PKPdf 20 19 14.2 -0.3
CLL Collm 134.73 337 *e*PKPpre PKPpre 20 19 10.0
CLL *e*PKIKP PKPdf 20 19 15.0 -0.3
CLL *e* 20 19 39.0
CLL *e*PP PP 20 21 47.0 -1.6
CLL *e*sPP 20 22 06.0
CLL *e*PKSbc PKSbc 20 22 47.0 +0.4
CLL *e*Sdif Sdif 20 30 00.0 -2.5
CLL *e*PPS PPS 20 33 48.0
CLL *e*SKSSKSac S'S'ac 20 41 42.0 +1.5
CLL *e* 20 45 54.0
CLL Collm 134.73 337 *e*PKIKP PKPdf 20 19 10.0 -5.3
MODS Modra-Piesok 135.06 331 *e*PKIKP PKPdf 20 19 15.3 -0.7
MODS Modra-Piesok 135.06 331 *e*PKP PKPdf 20 19 15.3 -0.7
GOPC GO Pecny, Ondr 135.07 334 *e*PKPDF PKiKP 20 19 18.0 +0.5
GOPC GO Pecny, Ondr 135.07 334 *e*PKIKP PKiKP 20 19 18.0 +0.5
PRU Pruhonice 135.12 334 *e*PKPDF PKPdf 20 19 16.0 -0.1
PRU Pruhonice 135.12 334 *e*PKIKP PKPdf 20 19 16.0 -0.1
CONA Conrad Observa 136.05 331 *e*PKiKP PKPdf 20 19 18.4 +0.4
comp=Z,6.8nm,1.1s
KHC Kasperske Hory 136.18 334 *e*PKPDF PKPdf 20 19 18.9 +0.8
KHC Kasperske Hory 136.18 334 *e*PKIKP PKPdf 20 19 18.9 +0.8
GERES GERESS Array B 136.34 334 PKP PKPdf 20 19 18.3 -0.2
comp=Z,1.6nm,0.6s,baz=48,slow=2.0,SNR=14
GERES SKP SKiKP 20 22 55.4 +2.9
comp=Z,0.8nm,0.7s,baz=318,slow=1.8,SNR=2.8
GERES GERESS Array B 136.34 334 PKPdf 20 19 18.5 0.0
BDFB Brasilia 136.64 128 PKP PKPdf 20 19 19.8 -0.2
comp=Z,2.7nm,0.6s,baz=287,slow=2.5,SNR=4.8
BDFB SKPbc SKiKP 20 22 52.1 -1.9
comp=Z,8.0nm,1.1s,baz=317,slow=4.3,SNR=5.4
BDFB Brasilia 136.64 128 IAMs_20 IAMs_20 21 15 19.4
comp=Z,790nm,21.0s
MOA Molln 136.84 332 *e*PKiKP PKiKP 20 19 20.5 -0.6
comp=Z,1.7nm,0.5s
SOKA Soboth 137.34 331 PKiKP PKPdf 20 19 20.5 +0.1
comp=Z,4.1nm,1.1s
FNA Florina 137.55 320 IAMs_20 IAMs_20 21 16 43.6
comp=Z,1µm,19.0s
OBKA Obir 137.69 331 PKiKP PKiKP 20 19 22.4 -0.6
comp=Z,18nm,1.7s
KBA Koelnbreinsper 137.83 332 *e*PKiKP PKPdf 20 19 22.4 +0.9
comp=Z,3.6nm,0.7s
ABTA Abfaltersbach 138.46 333 *e*PKPdf PKPdf 20 19 21.9 -0.6
comp=Z,9.0nm,1.1s
MOTA Moosalm 138.61 334 *e*PKiKP PKPdf 20 19 22.5 -0.3
comp=Z,2.5nm,0.7s
FETA Feichten 139.02 334 *e*PKiKP PKPdf 20 19 24.0 +0.4
comp=Z,1.9nm,0.6s
ZCCA Zocca 140.98 332 PKPdf 20 19 25.8 -1.3
MDP Montagnes des 141.00 96 PKP PKPdf 20 19 28.3 +0.4
comp=Z,14nm,0.9s,baz=356,slow=4.4,SNR=5.7
KEST Kesra 148.09 323 PKPbc PKPbc 20 19 42.4 -0.6
comp=Z,16nm,0.6s,baz=281,slow=1.3,SNR=19
KEST Kesra 148.09 323 PKPbc 20 19 42.5 -0.4
CMAH Djebel Manchou 148.56 326 P PKPbc 20 19 43.2 -0.9
CKFL Kef-Lekhel 149.10 327 P PKiKP 20 19 46.7 -0.1
PBRG Braganca 149.20 350 *e*PKPbc PKPbc 20 19 45.9 +0.4
CASM Ain Smara 149.33 327 P PKiKP 20 19 48.0 +0.8
DFRA Djebel Bou Aff 149.44 328 P PKPbc 20 19 46.7 +0.3
CTEI Djebel Teioual 149.52 327 P PKiKP 20 19 47.2 -0.5
POLO Lamas de Olo 149.79 351 *e*PKPbc PKPbc 20 19 47.4 +0.3
MVO Moncorvo 149.87 350 *e*PKPbc PKPbc 20 19 48.9 +0.7
PVRL Vila Real 149.88 351 *e*PKPdf PKPdf 20 19 41.6 -0.8
PVRL Vila Real 149.88 351 *e*PKPbc PKPbc 20 19 47.1 -0.1
SET Setif 149.95 328 P PKPbc 20 19 47.0 -0.6
PVIS Viseu 150.45 351 *e*PKPbc PKPbc 20 19 49.5 +0.1
ESDC Sonseca Array 150.64 345 PKPbc PKPbc 20 19 48.0 -1.1
comp=Z,5.3nm,0.8s,baz=12,slow=2.9,SNR=14
ESDC PKPab PKPab 20 19 55.8 -0.1
comp=Z,2.0nm,0.5s,baz=9.9,slow=4.4,SNR=13
ESDC Sonseca Array 150.64 345 PKPbc 20 19 44.0 +0.4
ESDC PKPbc PKPbc 20 19 48.4 -0.7
MTE Manteigas 150.71 350 *e*PKPdf PKPdf 20 19 42.0 -1.7
MTE Manteigas 150.71 350 *e*PKPbc PKiKP 20 19 50.4 +0.5
PCBR Castelo Branco 151.24 350 *e*PKPbc PKPbc 20 19 50.2 -0.2
PTOM Tomar 151.61 351 *e*PKPbc PKPbc 20 19 50.6 -0.7
PMRV Marv??o 151.63 350 *e*PKPdf PKPdf 20 19 44.3 -0.8
PMRV Marv??o 151.63 350 *e*PKPbc PKPbc 20 19 50.5 -0.9
RCBR Riachuelo 152.01 127 PKPbc PKPbc 20 19 51.3 -1.7
comp=Z,7.3nm,0.7s,baz=274,slow=7.5,SNR=4.4
RCBR Riachuelo 152.01 127 PKPbc 20 19 51.6 -1.4
RCBR Riachuelo 152.01 127 IAMs_20 IAMs_20 21 20 37.7
comp=Z,830nm,19.0s
PMTG Montargil 152.12 351 *e*PKPdf PKPdf 20 19 44.9 -0.9
EVO Evora 152.60 350 *e*PKPbc PKPbc 20 19 52.8 -0.8
LIJA Lijar 153.62 345 *e*PKP PKPbc 20 19 56.0 0.0
MORF Marmelete 153.91 351 *e*PKPbc PKPbc 20 19 56.5 0.0
TORD Torodi Ar. Bea 164.85 278 PKP PKPdf 20 20 00.1 -1.5
comp=Z,1.8nm,0.8s,baz=2.0,slow=2.2,SNR=7.6
TORD PKPab PKPab 20 20 56.6 -1.3
comp=Z,3.8nm,0.7s,baz=77,slow=4.5,SNR=11
KIC Kosan Boka 169.76 241 *e*PKIKP PKPdf 20 20 05.0 -0.3
comp=Z,22nm,1.2s
KIC Kosan Boka 169.76 241 *e*PKP1 PKPab 20 21 19.7 +0.1
comp=Z,57nm,1.0s
LIC Lamto 169.94 239 *e*PKIKP PKPdf 20 20 05.1 -0.3
comp=Z,5.3nm,0.3s
LIC Lamto 169.94 239 *e*PKP1 PKPab 20 21 20.1 -0.2
comp=Z,92nm,1.2s
DBIC Dimbokro 170.01 242 PKPab PKPab 20 21 20.3 -0.4
comp=Z,8.4nm,0.7s,baz=87,slow=4.1,SNR=11
DBIC Dimbokro 170.01 242 PKPdf PKPdf 20 20 03.9 -1.5
DBIC PKPab 20 21 20.7 0.0
DBIC Dimbokro 170.01 242 PKIKP PKPdf 20 20 03.9 -1.5
DBIC 20 21 20.7
TIC Toumodi 170.14 241 *e*PKIKP PKPdf 20 20 04.6 -1.0
comp=Z,3.1nm,0.3s
TIC Toumodi 170.14 241 *e*PKP1 PKPab 20 21 20.9 -0.4
comp=Z,3.9nm,0.2s

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*IDC **01** 20:08:28.6±1.7, 41.°26S×173.°84E, h0km, mb3.5/2, mb1 3.7/4, mb1mx3.6/31, mbtmp3.5/4, ML3.2/2, Error ellipse: s-maj=44.0km s-min=21.4km az=130.0*
*WEL **01** 20:08:35.0, 41°S±1°×17°4E±°, h46km±1km, ML4.1/14, MLv4.0/94, Error ellipse: s-maj=0.0km s-min=0.0km az=129.7*
ISC 01 20:08:34.7±0.9**, 41.°54S**±0.°03×**173.°99E**±0.°03**, h54**km±6km**, n114,** σ1.§47/124**, South Island**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
TUWZ Tuamarina 0.11 343 P Pn 20 08 42.4 -0.7
TUWZ S Sn 20 08 47.3 -1.8
BSWZ Blackbirch Sta 0.20 205 P Pn 20 08 43.7 +0.2
BSWZ S Sn 20 08 49.9 +0.1
CMWZ Cape Campbell 0.27 141 P Pn 20 08 45.8 +1.8
CMWZ S Sn 20 08 54.7 +4.0
TCW Tory Channel 0.39 34 P Pn 20 08 44.9 -0.2
TCW S Sn 20 08 51.4 -1.1
NNZ Nelson 0.56 305 P Pn 20 08 45.7 -1.2
NNZ S Sn 20 08 53.7 -2.0
BHW Baring Head 0.68 79 P Pn 20 08 49.5 +1.2
BHW S Sn 20 08 60.0 +1.7
DUWZ D'Urville Isla 0.74 356 P Pn 20 08 48.2 -0.9
THZ Tophouse 0.84 254 P Pn 20 08 50.2 -0.3
CAW Cannon Point 0.92 63 P Pn 20 08 52.4 +0.9
CAW S Sn 20 09 05.6 +1.7
KHZ Kahutara 0.94 201 P Pn 20 08 53.3 +1.6
PLWZ Palliser 0.95 92 P Pn 20 08 52.9 +0.9
MSWZ Moikau Station 0.96 83 P Pn 20 08 52.9 +0.9
MSWZ S Sn 20 09 06.4 +1.7
KIW Kapiti Island 0.97 46 P Pn 20 08 53.2 +1.0
PAWZ Paruwai Farm 1.09 82 P Pn 20 08 54.4 +0.6
PAWZ S Sn 20 09 09.2 +1.2
OGWZ Otaki Gorge 1.15 52 P Pn 20 08 55.3 +0.8
MTW Mount Morrison 1.20 72 P Pn 20 08 55.7 +0.4
TRWZ Traveller 1.29 84 P Pn 20 08 56.9 +0.5
QRZ Quartz Range 1.31 302 P Pn 20 08 57.0 +0.3
HOWZ Holdsworth Sta 1.32 62 P Pn 20 08 57.1 +0.3
MRZ Mangatainoka R 1.49 54 P Pn 20 08 59.4 +0.3
TMWZ Te Maipa 1.50 74 P Pn 20 08 59.3 +0.1
TIWZ Tintock 1.62 63 P Pn 20 09 01.0 0.0
DSZ Denniston Nort 1.65 262 P Pn 20 09 02.1 +0.8
OHWZ Ohakea 1.67 38 P Pn 20 09 02.9 +1.3
POWZ Post Office Ro 1.77 50 P Pn 20 09 02.9 -0.1
LTZ Lake Taylor 1.78 225 P Pn 20 09 04.0 +0.9
CPWZ Castlepoint 1.78 70 P Pn 20 09 03.3 +0.1
PRWZ Pori Road 1.79 57 P Pn 20 09 03.3 0.0
BFZ Birch Farm 1.91 64 P Pn 20 09 04.4 -0.5
AMCZ Amberley 1.91 211 P Pn 20 09 05.4 +0.5
WAZ Wanganui 1.94 23 P Pn 20 09 07.0 +1.8
DVHZ Dannevirke 2.06 54 P Pn 20 09 06.3 -0.7
LREZ Lake Rotokare 2.10 9 P Pn 20 09 10.2 +2.8
TSZ Takapari Road 2.10 46 P Pn 20 09 07.4 -0.2
NMEZ Namu Road 2.12 358 P Pn 20 09 09.6 +1.8
ANWZ Angora Road 2.17 61 P Pn 20 09 07.7 -0.7
PREZ Palmer Road 2.20 3 P Pn 20 09 11.4 +2.5
INZ Inchbonnie 2.23 237 P Pn 20 09 10.2 +0.9
KHEZ Kahui Hut 2.24 1 P Pn 20 09 11.4 +1.9
NBEZ Newall Road No 2.27 358 P Pn 20 09 11.5 +1.7
OKCZ Okains Bay 2.29 197 P Pn 20 09 10.1 0.0
OXZ Oxford 2.30 218 P Pn 20 09 09.8 -0.3
PNHZ Pukenui 2.34 47 P Pn 20 09 10.2 -0.6
PKE Pukeiti 2.34 0 P Pn 20 09 12.3 +1.5
DREZ Durham Road 2.35 4 P Pn 20 09 13.3 +2.4
WPHZ Waipukurau 2.37 53 P Pn 20 09 10.7 -0.5
PRHZ Porangahau 2.38 59 P Pn 20 09 10.2 -1.0
MQZ McQueen's Vall 2.38 204 P Pn 20 09 10.4 -0.8
AKCZ Akaroa Harbour 2.46 198 P Pn 20 09 12.2 -0.3
MHEZ Mangahewa 2.47 6 P Pn 20 09 14.7 +2.2
PKVZ Pokaka 2.47 25 P Pn 20 09 12.7 +0.1
VRZ Vera Road 2.48 14 P Pn 20 09 14.6 +2.0
MOVZ Moawhango 2.52 33 P Pn 20 09 13.3 0.0
TRVZ Turoa 2.53 29 P Pn 20 09 14.8 +1.2
DRZ Dome Shelter 2.56 29 P Pn 20 09 15.5 +1.4
WHVZ Whangaehu Hut 2.56 29 P Pn 20 09 14.9 +0.9
FWVZ Far West T-bar 2.57 28 P Pn 20 09 15.0 +0.8
BHHZ Black Hill Sta 2.59 38 P Pn 20 09 14.1 0.0
TUVZ Tukino 2.60 30 P Pn 20 09 15.2 +0.8
KRHZ Kereru 2.62 45 P Pn 20 09 13.9 -0.7
PXZ Pawanui 2.65 56 P Pn 20 09 13.7 -1.2
NGZ Ngauruhoe 2.66 28 P Pn 20 09 16.6 +1.3
TWVZ Taurewa 2.70 25 P Pn 20 09 16.7 +1.0
WTVZ West Tongariro 2.71 27 P Pn 20 09 16.7 +0.8
KRVZ Karewarewa 2.75 28 P Pn 20 09 17.5 +1.1
KAHZ Kahuranaki 2.80 53 P Pn 20 09 16.0 -1.1
KWHZ Kaweka Forest 2.81 42 P Pn 20 09 16.7 -0.6
WVZ Waitaha Valley 2.86 236 P Pn 20 09 20.2 +2.4
KATZ Kakaramea 2.87 28 P Pn 20 09 19.7 +1.5
MCHZ McNeill Hill 2.94 46 P Pn 20 09 18.3 -0.7
RATZ Rangitukua 3.00 28 P Pn 20 09 23.1 +3.3
BKZ Black Stump Fm 3.04 40 P Pn 20 09 19.5 -1.0
RPZ Rata Peaks 3.07 224 Pn Pn 20 09 21.3 +0.6
1.6nm,0.3s,baz=272,slow=1.9,SNR=18
RPZ Pg 20 09 27.8
27nm,0.3s,baz=320,slow=2.7,SNR=29
RPZ Sn Sn 20 09 54.4 -1.8
9.1nm,0.3s,baz=331,slow=2.5,SNR=4.8
RPZ Lg Lg 20 09 59.4
13nm,0.3s,baz=155,slow=22,SNR=7.2
RPZ Rata Peaks 3.07 224 P Pn 20 09 21.5 +0.8
HIZ Hauiti 3.09 13 P Pn 20 09 22.7 +1.6
WATZ Wairara 3.13 26 P Pn 20 09 24.7 +3.1
ARHZ Aropaoanui 3.23 46 P Pn 20 09 22.0 -0.9
NMHZ Naumai 3.25 42 P Pn 20 09 22.5 -0.9
TLZ Tolley Road 3.42 21 P Pn 20 09 26.3 +0.7
ALRZ Allen Road 3.48 32 P Pn 20 09 25.3 -1.0
RAHZ Arahi 3.53 43 P Pn 20 09 26.1 -1.0
FOZ Fox Glacier 3.67 236 P Pn 20 09 30.5 +1.6
MUGZ Murupara 3.73 36 P Pn 20 09 27.9 -1.9
SNGZ Shannon Statio 3.77 44 P Pn 20 09 28.4 -1.9
KNZ Kokohu 3.78 50 P Pn 20 09 28.1 -2.3
MHGZ Mahia Peninsul 3.83 53 P Pn 20 09 29.1 -2.0
TOZ Tahuroa Road 3.98 18 P Pn 20 09 33.7 +0.6
LBZ Lake Benmore 3.99 223 P Pn 20 09 34.4 +1.1
RIGZ Rimuhau 4.05 47 P Pn 20 09 32.1 -2.1
URZ Urewera 4.06 37 Pn Pn 20 09 32.0 -2.3
2.7nm,0.3s,baz=258,slow=4.1,SNR=34
URZ Sn Sn 20 10 17.4 -3.1
12nm,0.3s,baz=86,slow=13,SNR=6.7
URZ Lg Lg 20 10 29.1
14nm,0.3s,baz=71,slow=19,SNR=6.7
MWZ Matawai 4.20 42 P Pn 20 09 33.9 -2.4
ODZ Otahua Downs 4.27 214 P Pn 20 09 36.1 -1.0
TKGZ Te Karaka 4.29 45 P Pn 20 09 35.5 -1.9
KBAZ Karaka Road Bo 4.49 9 P Pn 20 09 42.0 +1.8
AWAZ Awhitu Peninsu 4.50 7 P Pn 20 09 41.8 +1.6
MKAZ Moumakai 4.52 12 P Pn 20 09 41.3 +0.7
TWGZ Tauwhareparae 4.55 44 P Pn 20 09 39.2 -1.9
JCZ Jackson Bay 4.59 235 P Pn 20 09 41.9 +0.3
WTAZ Waiatarua 4.62 6 P Pn 20 09 44.3 +2.3
ETAZ East Tamaki Re 4.63 9 P Pn 20 09 44.3 +2.2
MBAZ Motutapu North 4.81 9 P Pn 20 09 46.1 +1.5
PKGZ Pakihiroa 4.82 42 P Pn 20 09 42.7 -2.1
WIAZ Waiheke Island 4.82 11 P Pn 20 09 46.5 +1.8
WKZ Wanaka 4.90 226 P Pn 20 09 46.0 +0.2
KUZ Kuaotunu 4.97 16 P Pn 20 09 48.0 +1.3
ABAZ Army Bay 4.97 8 P Pn 20 09 48.5 +1.7
WMGZ Waiomatatini S 5.04 44 P Pn 20 09 45.6 -2.2
MSZ Milford Sound 5.43 233 P Pn 20 09 55.9 +2.9
WCZ Waipu Caves 5.60 3 P Pn 20 09 56.9 +1.6
MLZ Mavora Lakes 5.74 226 P Pn 20 10 02.4 +5.2
OUZ Omahuta 6.31 357 P Pn 20 10 06.8 +1.6
ASAR Alice Springs 37.78 286 P P 20 15 45.0 -0.8
0.2nm,0.5s,baz=124,slow=7.2,SNR=5.8
WRA Warramunga Arr 39.84 290 P P 20 16 02.0 -1.0

0.8nm,0.7s,baz=127,slow=8.4,SNR=2.0
TORD Torodi Ar. Bea 150.93 196 PKPbc PKiKP 20 28 22.6 +0.3
0.5nm,0.8s,baz=184,slow=0.3,SNR=1.9

IDC **01** *20:13:23.4±0.9, 17.17N×119.54E, h0km, mb3.6/8, mb1 3.7/9, mb1mx3.5/9, mbtmp3.6/9, ML3.2/1, Error ellipse: s-maj=37.0km s-min=18.9km az=66.0*
ISC 01 20:13:27.7±0.8, 17.2N±0.1×119.6E±0.2, h30km, n10, σ0.46/10, mb3.5/8, 1C, Philippine Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PCPH Palayan 2.17 137⇑eP Pb 20 14 05.9 -0.3
CMAR Chiang Mai Arr 19.67 277 P P 20 17 53.9 -0.6
0.0nm,0.3s,baz=107,slow=7.4,SNR=2.6
KSRS Korea Array 21.52 18 P P 20 18 14.5 +0.2
0.8nm,0.7s,baz=205,slow=11,SNR=4.1
SONM Songino Array 32.45 343 P P 20 19 55.5 +0.1
0.5nm,0.8s,baz=166,slow=9.8,SNR=4.3
MKAR Makanchi Array 42.63 322 P P 20 21 21.8 +0.4
1.0nm,0.9s,baz=120,slow=8.0,SNR=5.2
ASAR Alice Springs 42.92 161 P P 20 21 24.6 +0.7
0.4nm,0.4s,baz=339,slow=6.9,SNR=15
ZALV Zalesovo Beam 45.50 332 P P 20 21 43.9 -0.4
STKA Stephens Creek 53.14 156 P P 20 22 42.7 -0.1
0.9nm,0.6s,baz=2.8,slow=6.9,SNR=4.2
GEYT Alibeck 57.26 304 P P 20 23 12.8 +0.2
1.5nm,0.8s,baz=141,slow=5.0,SNR=4.3
YKA Yellowknife Ar 90.01 22 P P 20 26 23.8 -0.4
0.1nm,0.5s,baz=186,slow=24,SNR=1.2

MOS **01** *20:13:31.0±1.2, 5.07S×68.54E, h10km, mb5.0/18, Error ellipse: s-maj=8.6km s-min=6.2km az=73.7*
IDC **01** *20:13:31.1±0.8, 5.09S×68.50E, h0km, mb4.0/18, mb1 4.1/18, mb1mx4.0/48, mbtmp4.0/18, MS4.6/2, Ms1 4.6/2, ms1mx3.6/44, Error ellipse: s-maj=27.4km s-min=15.9km az=41.0*
NEIC **01** *20:13:33.0±1.8, 5.13S±0.08×68.59E±0.07, h13km±3km, mb5.0/73, Error ellipse: s-maj=12.0km s-min=10.4km az=196.0*
BJI **01** *20:13:36.1±0.0, 5.13S×68.23E, h49km, mB5.3/29, mb4.5/43, Ms5.0/23, Ms7 4.8/21*
GCMT **01** *20:13:39.0±0.3, 5.21S±0.02×68.65E±0.02, h22km, MW5.2/98, Moment Tensor Solution. s30,c36; s98,c150; Duration: 1.0 Moment tensor: Scale 10^{17}Nm; Mrr-0.79±.05; Mθθ0.47±.03; Mφφ0.31±.03; Mrθ-0.02±.04; Mrφ-0.36±.02; Mθφ-0.34±.04; Best double couple: M0 0.83900×10^{17} NP1:φs113.00000°, δ40.00000°, λ-116.00000°. NP2:φs326.00000°, δ55.00000°, λ-70.00000°. Principal axes: T 0.7850, Plg8.0000°, Azm41.0000°; N 0.1070, Plg16.0000°, Azm134.0000°; P -0.8920, Plg72.0000°, Azm287.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 01 20:13:33.2±0.3, 5.12S±0.06×68.59E±0.05, h13km, n237, σ1.22/226, mb4.8/81, MS4.9/11, 8C-5D, Chagos Archipelago region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
H08N2 Diego Garcia H 2.69 117 T T 20 17 07.4
baz=297,slow=74,SNR=377
H08N3 Diego Garcia H 2.69 117 T T 20 17 02.0
baz=297,slow=74,SNR=430
H08N1 Diego Carcia H 2.71 117 T T 20 17 02.0
baz=297,slow=74,SNR=331
DGAR Diego Garcia 4.47 121 Pn 20 14 40.6 -0.1
DGAR Sn Sn 20 15 30.2 -2.4
DGAR Diego Garcia 4.47 121 P Pn 20 14 40.6 -0.1
DGAR 20 15 30.3
H08S3 Diego Garcia H 4.61 123 T T 20 19 22.1
baz=312,slow=75,SNR=82
H08S1 Diego Carcia H 4.61 123 T T 20 19 22.7
baz=312,slow=75,SNR=47
H08S2 Diego Garcia H 4.62 123 T T 20 19 23.5
baz=312,slow=75,SNR=79
KAAM Kaadhehdhoo 7.10 38 Pn Pn 20 15 15.8 -1.1
MSEY Mahe Island 13.07 271 Pn Pn 20 16 40.5 +1.7
MSEY Mahe Island 13.07 271 P Pn 20 16 40.5 +1.7
PALK Pallekele 17.25 45 P P 20 17 36.3 +0.7
PALK Pallekele 17.25 45 P P 20 17 36.3 +0.7
PALK pmax pmax
comp=Z,111nm,1.9s
GOA Goa 21.12 14 ex P 20 18 22.6 +4.7
SOCY Socotra 22.50 320 P P 20 18 35.5 +2.7
HYB Hyderabad 24.46 24 ex P 20 18 50.4 -1.8
HYB I I 20 18 59.6
comp=Z,8.1nm,0.5s
ABPO Ambohimpanom 24.99 235 P P 20 18 55.7 -1.5
ABPO IAmb IAmb 20 19 00.5
comp=Z,41nm,1.6s
ABPO Ambohimpanom 24.99 235 P P 20 18 55.7 -1.5
ABPO pmax pmax
comp=Z,41nm,1.7s
RPSI Rantau Prapat 31.29 76 P P 20 19 53.3 0.0
PSI Prapat 31.31 76 P P 20 19 53.3 -0.4
PSI pmax pmax
comp=Z,5.0nm,0.9s
RAYN Ar Rayn 36.30 323 P P 20 20 34.7 -2.2
RAYN IAmb IAmb 20 20 44.8
comp=Z,28nm,1.9s
RAYN Ar Rayn 36.30 323 P P 20 20 34.7 -2.2
RAYN pmax pmax
comp=Z,28nm,1.9s
DHRM DHARAMSHALA 37.88 11 ex P 20 20 51.5 +1.1
DHRM I I 20 20 58.5
comp=Z,84nm,1.4s
SHL Shillong 37.98 35 P P 20 20 51.8 +0.6
SHL IAmb IAmb 20 20 58.9
comp=Z,40nm,1.5s
SHL Shillong 37.98 35 P P 20 20 51.8 +0.6
SHL pmax pmax
comp=Z,40nm,1.5s
CM31 Chiang Mai Arr 38.01 51 P P 20 20 52.5 +1.1
CMAR Chiang Mai Arr 38.01 51 P P 20 20 51.7 +0.3
comp=Z,0.7nm,0.8s,baz=243,slow=9.2,SNR=8.0
MBAR Mbarara 38.05 276 P P 20 20 51.7 -0.4
MBAR Mbarara 38.05 276 P P 20 20 51.7 -0.4
MBAR pmax pmax
comp=Z,28nm,2.0s
CHTO Chiang Mai 38.21 51 P P 20 20 53.3 +0.2
CHTO Chiang Mai 38.21 51 P P 20 20 53.3 +0.2
CHTO pmax pmax
comp=Z,17nm,1.4s
PBKT Sadao Pong 38.60 55 P P 20 20 56.6 +0.3
NIL Nilore 38.81 6 P P 20 20 57.6 -0.3
NIL IAmb IAmb 20 21 05.9
comp=Z,92nm,1.9s
NIL Nilore 38.81 6 P P 20 20 57.6 -0.3
NIL pmax pmax
comp=Z,92nm,1.9s
KBL Kabul 39.45 1 P P 20 21 03.6 +0.1
KBL IAmb IAmb 20 21 12.8
comp=Z,54nm,1.9s
KBL Kabul 39.45 1 P P 20 21 03.6 +0.1
KBL pmax pmax
comp=Z,54nm,2.0s
HRA Herat 39.74 352 P P 20 21 05.0 -1.0
LSA Lhasa 40.83 31 P P 20 21 16.0 +0.6
LSA IAmb IAmb 20 21 24.1
comp=Z,39nm,1.7s
LSA Lhasa 40.83 31 P P 20 21 16.0 +0.6
LSA pmax pmax
comp=Z,39nm,1.7s
LSZ Lusaka 40.95 253 P P 20 21 15.4 -0.8
LSZ Lusaka 40.95 253 P P 20 21 15.4 -0.8
LSZ pmax pmax
comp=Z,20nm,1.4s
DLV T Lat 43.15 67 P P 20 21 35.0 +0.8
DLV IAmb IAmb 20 21 42.2
comp=Z,35nm,1.5s
SLVN Son La 43.48 52 P P 20 21 38.5 +1.9
GEYT Alibeck 43.92 348 P P 20 21 40.0 +0.1
comp=Z,0.8nm,0.9s,baz=208,slow=8.1,SNR=2.9
GYA0B ALIBECK ARRAY 43.92 348 P P 20 21 40.1 +0.2
SBUM Sibu 44.23 81 P P 20 21 44.1 +1.3
KMI Kunming 44.78 46 P P 20 21 53.6 +6.4
KMI LR LR
comp=Z,6μm,19.9s
KMI Kunming 44.78 46 P P 20 21 48.7 +1.5
KMI Kunming 44.78 46 P P 20 21 48.7 +1.5
KMI pmax pmax
comp=Z,17nm,1.7s
KSH Kashi 44.93 8 P P 20 21 45.9 -2.2
KSH PcP PP 20 23 31.5 -1.7
KSH S S 20 28 16.9 -9.1
KSH pmax pmax
comp=Z,9.0nm,0.9s
KSH pmax pmax
comp=Z,180nm,4.5s
KSH LR LR
comp=Z,500nm,10.0s
KSH LR LR
comp=Z,280nm,7.1s
KSH LR LR
comp=Z,350nm,9.5s
BTK Batken 45.00 2 P P 20 21 48.3 -0.2
BTK IAmb IAmb 20 21 55.9
comp=Z,16nm,1.1s
BTK Batken 45.00 2 P P 20 21 48.3 -0.2
BTK pmax pmax
comp=Z,16nm,1.2s
TAS Tashkent 46.22 1 P P 20 21 57.3 -0.8
TAS Tashkent 46.22 1 P P 20 21 57.3 -0.8
TAS pmax pmax
comp=Z,43nm,1.2s
NRN Naryn 46.82 8 P P 20 22 02.0 -1.1
NRN IAmb IAmb 20 22 10.5
comp=Z,34nm,1.9s
NRN Naryn 46.82 8 P P 20 22 02.1 -1.1
NRN pmax pmax
comp=Z,34nm,1.9s
QIZ Qiongzhong 47.18 58 P P 20 22 07.0 +1.1
QIZ IAmb IAmb 20 23 48.9
comp=Z,38nm,1.7s
BOSA Boshof 47.21 235 LR LR 20 38 46.2
comp=Z,778nm,21.8s,baz=45,slow=32
AAK Ala-Archa 47.83 6 P P 20 22 11.0 +0.1
comp=Z,3.0nm,1.0s,baz=180,slow=10,SNR=5.7
AAK Ala-Archa 47.83 6 P P 20 22 11.6 +0.7
AAK Ala-Archa 47.83 6⇓eP P 20 22 12.2 +1.4
AAK pmax pmax
comp=Z,10.0nm,1.3s
FRU1 Bishkek 48.02 6 P P 20 22 12.0 -0.2
FRU1 Bishkek 48.02 6 P P 20 22 12.0 -0.2
FRU1 pmax pmax
comp=Z,64nm,1.8s
KK31 Karatay Array 48.03 2 P P 20 22 10.2 -1.9
KK31 IAmb IAmb 20 22 19.6
comp=Z,21nm,1.8s
KK31 Karatay Array 48.03 2 P P 20 22 10.2 -1.9
KK31 pmax pmax
comp=Z,21nm,1.8s
KKAR Karatay Array 48.03 2 P P 20 22 10.2 -1.9
KKAR Karatay Array 48.03 2 P P 20 22 10.4 -1.8
KKAR IAmb IAmb 20 22 19.6
comp=Z,21nm,1.8s
KKAR Karatay Array 48.03 2 P P 20 22 10.4 -1.8
KKAR pmax pmax
comp=Z,21nm,1.8s
CD2 Chengdu 49.12 41⇑iP P 20 22 22.6 +1.8
CD2 S S 20 29 23.7 -2.2
CD2 pmax pmax
comp=Z,10.0nm,0.9s
CD2 pmax pmax
comp=Z,490nm,8.5s
CD2 LR LR
comp=Z,2μm,23.3s
CD2 LR LR
comp=Z,2μm,20.2s
CD2 LR LR
comp=Z,2μm,17.9s
H01W3 Cape Leeuwin H 51.40 131 T T 21 17 51.3
baz=296,slow=75,SNR=18
H01W2 Cape Leeuwin H 51.40 131 T T 21 17 59.4
baz=296,slow=75,SNR=17
H01W1 Cape Leeuwin H 51.42 131 T T 21 18 00.3
baz=296,slow=75,SNR=17
WMQ Urumqi 51.68 18 eP P 20 22 41.5 +1.5
WMQ pmax pmax
comp=Z,10.0nm,1.9s
WMQ pmax pmax
comp=Z,240nm,5.5s
WMQ LR LR
comp=Z,1μm,22.9s
WMQ LR LR
comp=Z,2μm,29.2s
WMQ LR LR
comp=Z,2μm,28.1s
WMQ Urumqi 51.68 18 P P 20 22 40.5 +0.5
WMQ Urumqi 51.68 18 P P 20 22 40.5 +0.5
WMQ pmax pmax
comp=Z,91nm,1.8s
CSS Mathiatis 51.87 323 P P 20 22 41.7 +0.2
CSS IAmb IAmb 20 22 57.8
comp=Z,30nm,1.1s
HKPS Hong Kong Po S 52.22 57 P P 20 22 44.8 +0.5
ENH Enshi 52.64 45 P P 20 22 47.5 +0.2
ENH IAmb IAmb 20 22 53.8
comp=Z,29nm,1.3s
LZH Lanzhou 52.64 36 eP P 20 22 50.0 +2.6
LZH pmax pmax
comp=Z,18nm,1.2s
GTA Gaotai 52.86 30 ⇑P P 20 22 50.7 +1.8
GTA PP PP 20 24 56.9 +8.3
GTA pmax pmax
comp=Z,4.0nm,1.7s
GTA pmax pmax
comp=Z,200nm,5.1s
GTA LR LR
comp=Z,680nm,21.3s
GTA LR LR
comp=Z,1μm,20.9s
GTA LR LR
comp=Z,2μm,19.7s
MAKZ Makanchi 53.05 11 P P 20 22 49.1 -0.9
MAKZ IAmb IAmb 20 22 55.5
comp=Z,21nm,1.6s
MAKZ Makanchi 53.05 11 P P 20 22 49.1 -0.9
MAKZ pmax pmax
comp=Z,21nm,1.7s
MK31 Makanchi Array 53.09 12 P P 20 22 49.2 -1.2
MK31 Makanchi Array 53.09 12 P P 20 22 49.2 -1.2
MK31 pmax pmax
comp=Z,8.0nm,1.2s
MKAR Makanchi Array 53.09 12 P P 20 22 49.7 -0.7
comp=Z,1.0nm,0.7s,baz=197,slow=8.5,SNR=14
MKAR Makanchi Array 53.09 12 P P 20 22 49.1 -1.3
MKAR Makanchi Array 53.09 12 P P 20 22 49.1 -1.3
KBZ Khabaz 53.87 337 P P 20 22 55.2 -0.9
comp=Z,1.8nm,0.8s,baz=198,slow=13,SNR=3.0
XAN Xi'an 54.47 41 P P 20 23 05.6 +4.8
XAN pmax pmax
comp=Z,14nm,1.6s
XAN pmax pmax
comp=Z,220nm,5.7s
XAN Xi'an 54.47 41 P P 20 22 59.2 -1.6
XAN IAmb IAmb 20 23 07.1
comp=Z,25nm,1.3s
XAN Xi'an 54.47 41 P P 20 22 59.2 -1.6
XAN pmax pmax
comp=Z,25nm,1.3s
ABKAR Akbulak array 54.67 353 P P 20 23 01.5 -0.4
ABKAR IAmb IAmb 20 23 08.4
comp=Z,31nm,1.8s
ABKAR Akbulak array 54.67 353 P P 20 23 01.0 -0.9
BR131 Keskin Array S 55.02 327 P P 20 23 04.3 -0.5
BR131 Keskin Array S 55.02 327 P P 20 23 04.3 -0.5
BR131 pmax pmax
comp=Z,9.0nm,1.4s
BRTR Keskin Array B 55.02 327 P P 20 23 05.9 +1.1
comp=Z,1.5nm,1.1s,baz=145,slow=3.5,SNR=3.4
BRTR Keskin Array B 55.02 327 P P 20 23 04.2 -0.6
BRTR Keskin Array B 55.02 327 P P 20 23 04.2 -0.6
SOEI Soe 55.36 98 P P 20 23 07.3 -0.3
KARP Karpathos 56.10 319 P P 20 23 12.4 0.0
KURK Kurchatov 56.28 8 P P 20 23 12.8 -0.6
KURK IAmb IAmb 20 23 24.9
comp=Z,31nm,1.9s
KURK Kurchatov 56.28 8deP P 20 23 13.6 +0.2
KURK pmax pmax
comp=Z,18nm,2.1s
MANT Manisa 57.07 323 P P 20 23 20.1 +0.6
SANT Santorini 57.70 319 P P 20 23 24.5 +0.7
BRVK Borovoye 57.98 1 P P 20 23 25.0 -0.4
BRVK IAmb IAmb 20 23 32.2
comp=Z,25nm,1.8s
BRVK Borovoye 57.98 1 eP P 20 23 24.0 -1.4
DAV Davao City (W) 58.15 78 P P 20 23 26.4 -1.0
SSLB Suanglung 58.56 58 P P 20 23 29.9 -0.2
SSLB IAmb IAmb 20 23 39.7
comp=Z,42nm,2.0s
TNTI Ternate 59.00 86 P P 20 23 32.1 -1.2
HHC Hu-ho-hao-te 60.33 37 eP P 20 23 44.6 +2.5
HHC PcP PcP 20 24 30.5 +3.3
HHC pmax pmax
comp=Z,4.0nm,1.0s
HHC pmax pmax
comp=Z,140nm,6.3s
HHC LR LR
comp=Z,230nm,14.5s
HHC LR LR
comp=Z,240nm,14.5s
HHC LR LR
comp=Z,340nm,14.5s
NJ2 Nanjing 60.41 49 eP P 20 23 43.6 +1.0
NJ2 pmax pmax
comp=Z,5.0nm,1.0s
ZAA0 Zalesovo Array 60.41 11 P P 20 23 41.7 -0.5
ZAA0 IAmb IAmb 20 23 48.4
comp=Z,13nm,1.2s
ZALV Zalesovo Beam 60.41 11 P P 20 23 41.4 -0.8
comp=Z,2.0nm,0.6s,baz=196,slow=7.5,SNR=11
ZALV Zalesovo Beam 60.41 11 P P 20 23 41.3 -0.9
ZALV Zalesovo Beam 60.41 11 P P 20 23 41.3 -0.9
SSE Sheshan 61.74 51 P P 20 23 51.3 -0.4
ARU Arti 61.89 354 P P 20 23 52.2 +0.1
ARU IAmb IAmb 20 23 58.5
comp=Z,26nm,1.4s
ARU Arti 61.89 354c iP P 20 23 52.0 -0.2
ARU 20 26 06.9
ARU PPP PPP 20 27 34.2
ARU S S 20 32 15.5 0.0
ARU SS SS 20 36 13.4 -4.6
ARU pmax pmax
comp=Z,19nm,1.5s
ARU MLR MLR
comp=Z,1μm,26.0s
MTN Manton Dam 62.13 102 P P 20 23 54.3 -0.4
SONM Songino Array 62.31 28 P P 20 23 55.9 +0.5
comp=Z,2.9nm,1.0s,baz=225,slow=6.0,SNR=16
SONM Songino Array 62.31 28 P P 20 23 55.9 +0.5
SONM Songino Array 62.31 28 P P 20 23 55.9 +0.5
SONM pmax pmax
comp=Z,19nm,1.4s
ULN Ulaanbaatar 62.64 28 P P 20 23 58.1 +0.5
ULN IAmb IAmb 20 24 05.3
comp=Z,33nm,1.7s
ULN Ulaanbaatar 62.64 28ceP P 20 23 58.1 +0.5
ULN pmax pmax
comp=Z,11nm,1.8s
BJT Baijiatuau 62.66 40 P P 20 23 57.5 -0.2
BJT IAmb IAmb 20 24 05.5
comp=Z,15nm,1.5s
BJT Baijiatuau 62.66 40 P P 20 23 57.5 -0.2
BJT pmax pmax
comp=Z,15nm,1.5s
BJI Beijing 62.68 40 eP P 20 24 00.0 +2.2
BJI pmax pmax
comp=Z,4.0nm,0.9s
BJI LR LR
comp=Z,520nm,16.7s
BJI LR LR
comp=Z,370nm,14.5s
TLY Talaya 64.00 23 P P 20 24 06.4 -0.1
TLY IAmb IAmb 20 24 14.8
comp=Z,18nm,1.6s
TLY Talaya 64.00 23 eP P 20 24 08.9 +2.5
TLY pmax pmax
comp=Z,37nm,2.0s
IRK Irkutsk 64.69 23 eP P 20 24 15.1 +4.2
IRK pmax pmax
comp=Z,40nm,2.5s
AKASG Malin Array Be 65.08 334 P P 20 24 11.2 -2.3
comp=Z,0.4nm,0.6s,baz=126,slow=4.8,SNR=7.5
AKASG Malin Array Be 65.08 334 P P 20 24 12.1 -1.3
AKASG Malin Array Be 65.08 334 i P P 20 24 12.8 -0.6
AKBB Malin Array Si 65.08 334 P P 20 24 12.8 -0.5
AKBB IAmb IAmb 20 24 55.1
comp=Z,18nm,1.6s
AKBB Malin Array Si 65.08 334 P P 20 24 12.9 -0.5
AKBB pmax pmax
comp=Z,18nm,1.6s
ASAR Alice Springs 65.37 114 P P 20 24 16.6 +0.6
comp=Z,1.1nm,0.7s,baz=280,slow=6.3,SNR=12
ASAR Alice Springs 65.37 114 P P 20 24 16.0 0.0
ASAR Alice Springs 65.37 114 P P 20 24 16.0 0.0
AS31 Alice Springs 65.37 114 P P 20 24 15.6 -0.4
WRA Warramunga Arr 65.49 109 P P 20 24 16.8 0.0
comp=Z,2.5nm,0.7s,baz=284,slow=6.3,SNR=10
WRA Warramunga Arr 65.49 109 P P 20 24 17.3 +0.5
WRA Warramunga Arr 65.49 109 P P 20 24 17.3 +0.5
WRA pmax pmax
comp=Z,1.0nm,1.0s
WRAB Tennant Creek 65.50 109 P P 20 24 17.0 +0.2
WRAB Tennant Creek 65.50 109 P P 20 24 17.0 +0.2
WRAB pmax pmax
comp=Z,77nm,2.0s
WB2 Warramunga Arr 65.50 109 P P 20 24 17.1 +0.2
WB0 Warramunga Arr 65.53 109 P P 20 24 17.2 +0.2
OBN Obninsk 65.62 340 i P P 20 24 16.1 -0.7
OBN pmax pmax
comp=Z,17nm,1.4s
WR0 Warramunga Arr 65.68 109 P P 20 24 17.4 -0.6
WR0 IAmb IAmb 20 24 26.0
comp=Z,9.4nm,0.9s
MOS Moscow 65.80 341 eP P 20 24 13.8 -4.1
SYO Syowa Base 66.64 191⇑epP pP 20 24 29.0 +2.6
STHS Stebnicka Huta 68.06 329 eP P 20 24 35.2 +2.7
STHS pmax pmax
comp=Z,9.0nm,1.0s
STHS Stebnicka Huta 68.06 329 eP P 20 24 35.2 +2.7
VYHS Vyhne 68.78 327 eP P 20 24 37.9 +0.8
VYHS Vyhne 68.78 327 eP P 20 24 37.9 +0.8
TOA0 Torodi Ar. Sit 68.85 286 P P 20 24 36.5 -1.6
TORD Torodi Ar. Bea 68.85 286 P P 20 24 38.1 0.0
comp=Z,2.7nm,1.0s,baz=127,slow=9.0,SNR=3.9
KSAR Wonju Array Be 69.44 47 P P 20 24 41.2 -0.2
KSAR Wonju Array Be 69.44 47 P P 20 24 41.2 -0.2
KLMR Klimovskoe 69.58 345 eP P 20 24 40.8 -1.0
KLMR AMP 20 24 59.5
comp=Z,45nm,1.8s
KLMR Klimovskoe 69.58 345 eP P 20 24 40.7 -1.0
KLMR pmax pmax
comp=Z,45nm,1.8s
HIA Hailar 69.98 33 P P 20 24 44.8 +0.3
HIA IAmb IAmb 20 24 53.3
comp=Z,13nm,1.3s
HIA Hailar 69.98 33⇑eP P 20 24 47.0 +2.5
HIA pmax pmax
comp=Z,70nm,1.9s
TMCR Tamitsa 72.77 347 eP P 20 24 58.7 -2.3
TMCR pmax pmax
comp=Z,13nm,1.5s
STKA Stephens Creek 72.89 122 P P 20 25 02.6 0.0
comp=Z,0.6nm,0.5s,baz=304,slow=11,SNR=2.4
STKA Stephens Creek 72.89 122 P P 20 25 02.5 0.0
STKA Stephens Creek 72.89 122 P P 20 25 02.5 0.0
STKA pmax pmax
comp=Z,6.0nm,1.8s
MDJ Mudanjiang 73.57 41 P P 20 25 07.2 +1.0
MDJ pmax pmax
comp=Z,3.0nm,0.8s
MDJ pmax pmax
comp=Z,540nm,6.2s
MDJ Mudanjiang 73.57 41 P P 20 25 05.0 -1.2
MDJ IAmb IAmb 20 25 14.0
comp=Z,28nm,1.3s
FINES FINESS Array B 74.03 340 P P 20 25 06.8 -1.6
comp=Z,3.1nm,0.9s,baz=151,slow=4.4,SNR=3.7
FINES FINESS Array B 74.03 340 P P 20 25 08.2 -0.3
FINES FINESS Array B 74.03 340 i P P 20 25 10.8 +2.3
FINES pmax pmax
comp=Z,2.0nm,0.7s
DBIC Dimbokro 74.23 278 P P 20 25 10.4 -0.3
DBIC IAmb IAmb 20 25 29.3
comp=Z,40nm,1.6s
DBIC Dimbokro 74.23 278 P P 20 25 10.4 -0.3
DBIC pmax pmax

comp=Z,40nm,1.6s
USRK Ussuriysk Ar. 74.98 42 P **P 20 25 14.1 -0.3**
USRK Ussuriysk Ar. 74.98 42 P **P 20 25 14.1 -0.3**
ZEA Zeya 76.32 31 *e*P **P 20 25 23.2 +1.3**
ZEA pmax pmax
comp=E,37nm,1.6s
ZEA pmax pmax
comp=N,37nm,1.4s
ZEA pmax pmax
comp=Z,48nm,1.8s
APA Apatity 76.67 347 ⇓*i*P **P 20 25 22.9 -0.6**
APA pmax pmax
comp=Z,6.0nm,1.1s
KLR Kul'dur 76.83 37 *de*P **P 20 25 25.3 +0.5**
KLR pmax pmax
comp=Z,12nm,2.0s
MJAR Matsushiro Arr 76.89 51 P **P 20 25 26.3 +0.8**
comp=Z,0.6nm,0.8s,baz=245,slow=5.4,SNR=3.3
MJAR Matsushiro Arr 76.89 51 P **P 20 25 25.2 -0.3**
MJAR Matsushiro Arr 76.89 51 P **P 20 25 25.2 -0.3**
MJAR pmax pmax
comp=Z,10.0nm,1.4s
TROLL Troll, Antarti 77.89 197 P **P 20 25 32.5 +2.0**
SNAA Sanae 79.37 198 P **P 20 25 38.0 -0.7**
SNAA IAmb IAmb 20 25 53.4
comp=Z,18nm,1.7s
SNAA Sanae 79.37 198 P **P 20 25 38.0 -0.7**
SNAA pmax pmax
comp=Z,18nm,1.7s
ESDC Sonseca Array 79.97 312 P **P 20 25 41.8 -0.7**
comp=Z,0.5nm,0.5s,baz=104,slow=5.7,SNR=3.1
ESDC Sonseca Array 79.97 312 P **P 20 25 41.5 -1.0**
ARCES ARCESS Array B 80.04 346 P **P 20 25 40.8 -1.3**
comp=Z,2.7nm,0.9s,baz=188,slow=3.7,SNR=4.8
GRNR Gornyy 80.20 37 ⇓*i*P **P 20 25 42.8 -0.7**
GRNR pmax pmax
comp=Z,6.0nm,1.4s
GRNR MLR MLR
comp=Z,230nm,16.0s
VNA2 Neumayer--Watz 80.62 199 P **P 20 25 47.2 +1.9**
baz=67,slow=4.6
VNA3 Neumayer Olymp 81.41 199 P **P 20 25 51.3 +1.7**
YAK Yakutsk 81.44 25 P **P 20 25 50.1 +0.4**
YAK IAmb IAmb 20 25 51.1
comp=Z,7.2nm,0.7s
YAK Yakutsk 81.44 25 P **P 20 25 50.1 +0.4**
YAK pmax pmax
comp=Z,7.0nm,0.7s
YSS Yuzh-Sakhalins 83.02 42 *e*P P 20 26 03.6 +5.2
YSS pmax pmax
comp=Z,20nm,1.1s
QSPA South Pole Qui 84.90 180 P **P 20 26 07.5 -0.3**
QSPA IAmb IAmb 20 26 16.6
comp=Z,29nm,1.6s
VNDA Vanda 85.75 167 LR LR 20 59 57.6
comp=Z,298nm,18.1s,baz=316,slow=32
TIXI Tiksi 85.85 16 P **P 20 26 10.9 -1.3**
TIXI IAmb IAmb 20 26 19.0
comp=Z,20nm,1.4s
TIXI Tiksi 85.85 16 ⇑*e*P **P 20 26 11.8 -0.4**
TIXI pmax pmax
comp=Z,12nm,1.7s
MA2 Magadan 90.42 30 ⇑*e*P **P 20 26 34.8 +0.5**
MA2 pmax pmax
comp=Z,8.0nm,1.3s
SEY Seymchan 91.69 27 P **P 20 26 41.0 +0.8**
comp=Z,0.7nm,0.6s,baz=242,slow=5.4,SNR=3.9
BILL Bilibino 97.60 22 *i* P Pdif 20 27 14.3 +7.2
BILL pmax pmax
comp=Z,4.0nm,1.3s
YKA Yellowknife Ar 122.70 2 PKP **PKiKP 20 32 28.7 0.0**
comp=Z,0.3nm,0.6s,baz=322,slow=1.9,SNR=3.4
PDAR Pinedale Array 142.47 358 PKP **PKPdf 20 33 08.1 +1.5**
comp=Z,0.3nm,0.6s,baz=90,slow=3.0,SNR=2.7
PDAR Pinedale Array 142.47 358 **PKPdf 20 33 05.1 -1.4**
MGMO Mountain Grove 143.62 334 **PKPdf 20 33 07.4 -1.0**
TCUT Toone Canyon 144.16 360 PKPbc 20 33 08.0 +0.4
BGU Big Grassy Mou 144.32 2 PKPbc 20 33 07.9 -0.1
ELK Elko 144.36 5 **PKPab 20 33 08.0 +0.1**
ELK Elko 144.36 5 PKIKP **PKPab 20 33 08.0 +0.1**
U40A Yellville 144.54 334 **PKPab 20 33 07.8 -0.6**
RDMU Red Mountain 144.66 358 **PKPab 20 33 08.9 -0.1**
PAHR Pah Rah Range 144.82 11 PKPbc 20 33 09.8 +0.1
DUG Dugway, Tooele 145.06 2 **PKPdf 20 33 11.0 -0.1**
DUG Dugway, Tooele 145.06 2 PKIKP **PKPdf 20 33 11.0 -0.1**
NLU North Lily Min 145.31 1 **PKPbc 20 33 10.6 -0.7**
PNTR Pine Nut 145.38 11 **PKPbc 20 33 10.6 -1.0**
YERR Yerington 145.55 11 **PKPbc 20 33 10.8 -1.2**
KVN Kaiserville 145.68 9 **PKPdf 20 33 11.6 -0.6**
KVN Kaiserville 145.68 9 PKIKP **PKPdf 20 33 11.6 -0.6**
P17A Butcher Ranch, 145.79 359 **PKPbc 20 33 12.7 0.0**
Q24A Divide 145.83 351 **PKPdf 20 33 11.6 -1.1**
SMCO Snowmass 145.86 354 **PKPdf 20 33 13.0 +0.2**
TMUT Trail Mountain 145.97 360 **PKPdf 20 33 13.1 +0.2**
X40A Basin Creek Fa 146.08 332 **PKPdf 20 33 12.8 0.0**
TUL1 Leonard 146.15 337 **PKPdf 20 33 12.1 -0.8**
SRU San Rafael Swe 146.15 359 **PKPdf 20 33 13.1 +0.1**
SRU San Rafael Swe 146.15 359 PKP2 **PKPdf 20 33 13.1 +0.1**
NVAR Mina Array Bea 146.25 10 PKPbc **PKPab 20 33 15.2 +0.2**
comp=Z,1.7nm,0.8s,baz=8.1,slow=3.5,SNR=14
NVAR Mina Array Bea 146.25 10 **PKPdf 20 33 13.2 -0.1**
NV11 Mina Array Sit 146.28 10 **PKPbc 20 33 13.9 -0.4**
Q16A Castle Valley 146.35 360 **PKPdf 20 33 12.5 -0.9**
PSUT Pine Spring 146.66 3 **PKPdf 20 33 14.0 0.0**
LCMT Little Creek M 148.21 3 **PKPbc 20 33 20.3 +0.6**
GSC Goldstone, Bar 149.55 9 **PKPbc 20 33 22.8 -0.3**
GSC Goldstone, Bar 149.55 9 PKP2 **PKPbc 20 33 22.8 -0.3**
ANMO Albuquerque 149.97 352 **PKPdf 20 33 19.0 -0.4**
TXAR Lajitas Array 154.82 344 PKPbc **PKPbc 20 33 35.3 0.0**
comp=Z,0.5nm,0.7s,baz=32,slow=3.3,SNR=4.0
TXAR PKPab **PKPab 20 33 51.0 +0.9**
comp=Z,1.0nm,0.8s,baz=33,slow=3.0,SNR=4.3
TXAR Lajitas Array 154.82 344 **PKPbc 20 33 35.3 0.0**
TXAR **PKPab 20 33 50.6 +0.5**

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*IDC **01** 20:15:32.6±0.8, 5.°05S×68.°49E, h0km, mb3.9/15, mb1 4.1/15, mb1mx3.9/54, mbtmp3.9/15, MS4.7/1, Ms1 4.7/1, ms1mx3.7/38, Error ellipse: s-maj=23.4km s-min=20.1km az=4.0*
*NEIC **01** 20:15:33.1±1.1, 5.°15S±0.°08×68.°38E±0.°05, h10km±1km, mb4.7/36, Error ellipse: s-maj=15.2km s-min=3.8km az=209.0*
ISC 01 20:15:33.8±0.5**, 5.°13S**±0.°09×**68.°39E**±0.°07**, h13**km**, n80, σ0.s77**/72**, mb4.6**/31**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N2	**Diego Garcia H**	**2.86**	**115**	T	T	20 19 16.6	
	baz=343,slow=74,SNR=10						
H08N3	**Diego Garcia H**	**2.86**	**115**	T	T	20 19 09.7	
H08N1	**Diego Carcia H**	**2.88**	**115**	T	T	20 19 20.7	
	baz=297,slow=74,SNR=7.7						
DGAR	**Diego Garcia**	**4.63**	**120**	Pn	**Pn**	**20 16 42.9**	**-0.7**
H08S3	**Diego Garcia H**	**4.77**	**122**	T	T	20 21 31.2	
H08S1	**Diego Carcia H**	**4.77**	**122**	T	T	20 21 31.2	
H08S2	**Diego Garcia H**	**4.79**	**122**	T	T	20 21 31.2	
KAAM	**Kaadhehdhoo**	**7.23**	**40**	Pn	**Pn**	**20 17 18.1**	**-1.3**
MSEY	**Mahe Island**	**12.87**	**271**	Pn	**Pn**	**20 18 35.1**	**-1.6**
GOA	**Goa**	**21.18**	**15**	*i* x	S	20 24 09.8	
HYB	**Hyderabad**	**24.55**	**24**	*i* x	S	20 25 56.8	
IPM	**Ipoh**	**33.97**	**74**	P	**P**	**20 22 17.7**	**+0.2**
IPM				IAmb	IAmb	20 22 22.3	
	comp=Z,9.6nm,1.2s						
RAYN	**Ar Rayn**	**36.19**	**323**	P	**P**	**20 22 36.7**	**+0.2**
MBAR	**Mbarara**	**37.86**	**276**	P	**P**	**20 22 50.1**	**-1.0**
MBAR				IAmb	IAmb	20 22 56.1	
	comp=Z,32nm,1.6s						
DHRM	**DHARAMSHALA**	**37.92**	**11**	*i* x	S	20 22 53.4	
SHL	**Shillong**	**38.10**	**36**	P	**P**	**20 22 51.7**	**-1.1**
SHL				IAmb	IAmb	20 22 59.7	
	comp=Z,13nm,1.3s						
CM31	**Chiang Mai Arr**	**38.16**	**51**	P	**P**	**20 22 52.0**	**-1.3**
CMAR	**Chiang Mai Arr**	**38.16**	**51**	P	**P**	**20 22 51.2**	**-2.1**
	comp=Z,1.5nm,0.9s,baz=241,slow=9.9,SNR=6.3						
CMAR				PcP	**PcP**	**20 25 09.7**	**+1.6**
	comp=Z,0.6nm,0.8s,baz=231,slow=5.2,SNR=4.3						
CHTO	**Chiang Mai**	**38.37**	**51**	P	**P**	**20 22 54.9**	**-0.1**
PBKT	**Sadao Pong**	**38.76**	**56**	P	**P**	**20 22 58.0**	**-0.3**
NIL	**Nilore**	**38.84**	**6**	P	**P**	**20 22 58.6**	**-0.2**
NIL				IAmb	IAmb	20 23 07.8	
	comp=Z,16nm,1.1s						
KBL	**Kabul**	**39.46**	**1**	P	**P**	**20 23 04.0**	**-0.1**
LSZ	**Lusaka**	**40.76**	**253**	LR	LR	20 37 38.6	
	comp=Z,947nm,18.4s,baz=132,slow=32						
LSA	**Lhasa**	**40.94**	**31**	P	**P**	**20 23 16.2**	**-0.7**
GEYT	**Alibeck**	**43.89**	**348**	P	**P**	**20 23 40.8**	**+0.6**
BTK	**Batken**	**45.02**	**3**	P	**P**	**20 23 49.1**	**-0.1**
BTK				IAmb	IAmb	20 23 58.5	
	comp=Z,10nm,1.1s						
BOSA	**Boshof**	**47.05**	**235**	P	**P**	**20 24 07.2**	**+1.6**
	comp=Z,5.5nm,0.9s,baz=64,slow=7.9,SNR=5.8						
BOSA	**Boshof**	**47.05**	**235**	P	**P**	**20 24 05.2**	**-0.3**
AAK	**Ala-Archa**	**47.86**	**6**	P	**P**	**20 24 11.8**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=176,slow=13,SNR=2.4						
AAK	**Ala-Archa**	**47.86**	**6**	P	**P**	**20 24 11.5**	**-0.1**
KKAR	**Karatay Array**	**48.04**	**2**	P	**P**	**20 24 13.7**	**+0.8**
FRU1	**Bishkek**	**48.05**	**6**	P	**P**	**20 24 12.9**	**0.0**
H01W3	**Cape Leeuwin H**	**51.54**	**131**	T	T	21 19 57.8	
H01W2	**Cape Leeuwin H**	**51.55**	**131**	T	T	21 19 57.8	
H01W1	**Cape Leeuwin H**	**51.56**	**131**	T	T	21 19 57.8	
WMQ	**Urumqi**	**51.74**	**18**	P	**P**	**20 24 41.9**	**+0.8**
ENH	**Enshi**	**52.78**	**46**	P	**P**	**20 24 48.9**	**-0.1**
ENH				IAmb	IAmb	20 24 56.5	
	comp=Z,10nm,1.1s						
MK31	**Makanchi Array**	**53.14**	**12**	P	**P**	**20 24 51.6**	**+0.2**
MKAR	**Makanchi Array**	**53.14**	**12**	P	**P**	**20 24 52.6**	**+1.2**
	comp=Z,0.7nm,0.8s,baz=178,slow=7.1,SNR=2.5						
MKAR				PcP	**PcP**	**20 25 59.5**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=197,slow=4.5,SNR=1.8						
MKAR	**Makanchi Array**	**53.14**	**12**	P	**P**	**20 24 51.4**	**0.0**
KBZ	**Khabaz**	**53.80**	**337**	P	**P**	**20 24 57.6**	**+1.5**
	comp=Z,2.5nm,0.9s,baz=195,slow=8.6,SNR=3.2						
XAN	**Xi'an**	**54.61**	**41**	P	**P**	**20 25 02.1**	**-0.3**
XAN				IAmb	IAmb	20 25 09.1	
	comp=Z,9.5nm,1.0s						
ABKAR	**Akbulak array**	**54.66**	**353**	P	**P**	**20 25 02.6**	**+0.3**
ABKAR	**Akbulak array**	**54.66**	**353**	P	**P**	**20 25 02.8**	**+0.4**
ABKAR				IAmb	IAmb	20 25 10.3	
	comp=Z,8.9nm,1.2s						
BRTR	**Keskin Array B**	**54.92**	**328**	P	**P**	**20 25 05.5**	**+0.9**
	comp=Z,0.9nm,0.9s,baz=116,slow=3.4,SNR=2.3						
BRTR	**Keskin Array B**	**54.92**	**328**	P	**P**	**20 25 04.5**	**-0.2**
KURK	**Kurchatov**	**56.31**	**8**	P	**P**	**20 25 15.1**	**+0.9**
KURK				IAmb	IAmb	20 25 22.0	
	comp=Z,7.5nm,1.2s						
BRVK	**Borovoye**	**57.99**	**1**	P	**P**	**20 25 26.4**	**+0.4**
BRVK				IAmb	IAmb	20 25 34.1	
	comp=Z,14nm,1.3s						
ZAA0	**Zalesovo Array**	**60.45**	**11**	P	**P**	**20 25 42.9**	**-0.1**
ZAA0				IAmb	IAmb	20 25 50.2	
	comp=Z,12nm,1.4s						
ZALV	**Zalesovo Beam**	**60.45**	**11**	P	**P**	**20 25 42.8**	**-0.3**
	comp=Z,2.1nm,0.9s,baz=243,slow=6.5,SNR=4.3						
ZALV	**Zalesovo Beam**	**60.45**	**11**	P	**P**	**20 25 42.6**	**-0.5**
ARU	**Arti**	**61.87**	**354**	P	**P**	**20 25 52.8**	**+0.1**
SSE	**Sheshan**	**61.90**	**51**	P	**P**	**20 25 53.0**	**-0.4**
SONM	**Songino Array**	**62.41**	**28**	P	**P**	**20 25 57.3**	**+0.7**
	comp=Z,3.5nm,1.1s,baz=217,slow=4.8,SNR=4.6						
SONM	**Songino Array**	**62.41**	**28**	P	**P**	**20 25 57.1**	**+0.5**
ULN	**Ulaanbaatar**	**62.74**	**28**	P	**P**	**20 25 59.0**	**+0.2**
ULN				IAmb	IAmb	20 26 07.2	
	comp=Z,12nm,1.5s						
BJT	**Baijiatuau**	**62.79**	**40**	P	**P**	**20 26 00.1**	**+0.8**
BJT				IAmb	IAmb	20 26 07.4	
	comp=Z,6.7nm,1.2s						
TLY	**Talaya**	**64.09**	**24**	P	**P**	**20 26 08.4**	**+0.8**
TLY				IAmb	IAmb	20 26 16.6	
	comp=Z,13nm,1.6s						
AKASG	**Malin Array Be**	**65.00**	**334**	P	**P**	**20 26 13.4**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=142,slow=4.6,SNR=2.5						
ASAR	**Alice Springs**	**65.55**	**114**	P	**P**	**20 26 18.2**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=278,slow=5.6,SNR=4.6						
ASAR	**Alice Springs**	**65.55**	**114**	P	**P**	**20 26 17.6**	**-0.1**
WRA	**Warramunga Arr**	**65.67**	**109**	P	**P**	**20 26 19.6**	**+1.1**
	comp=Z,4.2nm,0.9s,baz=284,slow=6.5,SNR=5.0						
WRA	**Warramunga Arr**	**65.67**	**109**	P	**P**	**20 26 18.6**	**0.0**
KSRS	**Korea Array**	**69.62**	**47**	P	**P**	**20 26 43.0**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=172,slow=27,SNR=1.2						
HIA	**Hailar**	**70.10**	**33**	P	**P**	**20 26 46.1**	**+0.2**
HIA				IAmb	IAmb	20 26 54.3	
	comp=Z,8.3nm,1.1s						
MDJ	**Mudanjiang**	**73.71**	**41**	P	**P**	**20 27 06.8**	**-0.8**
MDJ				IAmb	IAmb	20 27 16.1	
	comp=Z,5.4nm,0.9s						
DBIC	**Dimbokro**	**74.04**	**278**	P	**P**	**20 27 11.1**	**+1.0**
	comp=Z,2.8nm,0.7s,baz=86,slow=8.2,SNR=4.8						
DBIC	**Dimbokro**	**74.04**	**278**	P	**P**	**20 27 09.4**	**-0.7**
DBIC				IAmb	IAmb	20 27 12.7	
	comp=Z,7.3nm,0.9s						
MJAR	**Matsushiro Arr**	**77.05**	**51**	P	**P**	**20 27 27.2**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=231,slow=4.1,SNR=1.4						
MJAR	**Matsushiro Arr**	**77.05**	**51**	P	**P**	**20 27 26.4**	**-0.7**
ESDC	**Sonseca Array**	**79.83**	**312**	P	**P**	**20 27 43.0**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=103,slow=5.8,SNR=3.0						
ESDC	**Sonseca Array**	**79.83**	**312**	P	**P**	**20 27 41.9**	**-0.5**
TIXI	**Tiksi**	**85.91**	**16**	P	**P**	**20 28 13.3**	**+0.2**
YKA	**Yellowknife Ar**	**122.71**	**2**	PKP	**PKPdf**	**20 34 28.8**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=347,slow=2.2,SNR=5.7						
YKA				PP	PP	20 36 14.9	+8.8
	comp=Z,2.5nm,1.3s,baz=356,slow=7.2,SNR=6.0						
PDAR	**Pinedale Array**	**142.47**	**358**	PKP	**PKPdf**	**20 35 08.0**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=64,slow=3.4,SNR=3.5						
PDAR	**Pinedale Array**	**142.47**	**358**		**PKPdf**	**20 35 06.1**	**-1.1**
NVAR	**Mina Array Bea**	**146.29**	**9**	PKPbc	**PKPab**	**20 35 16.4**	**+0.6**
	comp=Z,1.8nm,0.9s,baz=13,slow=2.1,SNR=5.9						
NVAR	**Mina Array Bea**	**146.29**	**9**		**PKPbc**	**20 35 14.4**	**-0.6**
TXAR	**Lajitas Array**	**154.78**	**344**	PKPbc	**PKiKP**	**20 35 36.8**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=20,slow=4.0,SNR=4.0						
TXAR				PKPab	**PKPab**	**20 35 51.6**	**+1.0**
	comp=Z,2.5nm,1.0s,baz=39,slow=3.5,SNR=7.4						
TXAR	**Lajitas Array**	**154.78**	**344**	PKPdf	**PKPdf**	**20 35 25.8**	**-1.4**
TXAR					**PKiKP**	**20 35 36.0**	**+0.2**
TXAR					**PKPab**	**20 35 51.3**	**+0.8**

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*ATH **01** 20:16:25.8, 38.°26N×20.°35E, h16km±1km, ML2.8/7, Error ellipse: s-maj=2.3km s-min=1.1km az=248.0*
*THE **01** 20:16:26.3, 38.°27N×20.°38E, h13km±1km, ML3.5/3, Error ellipse: s-maj=1.1km s-min=0.4km az=236.0*
*BEO **01** 20:16:29.6±1.1, 38.°37N×20.°05E, h15km, ML3.6/5*
ISC 01 20:16:25.7±0.9**, 38.°26N**±0.°03×**20.°36E**±0.°04**, h16**km±5km**, n37, σ0.s91**/53**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.05**	**95**	P	**Pg**	**20 16 28.6**	**-0.1**
KEF4				S	**Sg**	**20 16 30.5**	**-0.1**
KEF3	**Kipouria, Keph**	**0.06**	**186**	P	**Pg**	**20 16 28.7**	**-0.1**
KEF3				S	**Sg**	**20 16 30.8**	**+0.1**
CHV1	**Chavriata, Kef**	**0.08**	**166**	P	**Pg**	**20 16 29.0**	**+0.1**
CHV1				S	**Sg**	**20 16 31.2**	**+0.2**
	70μm,0.4s						
KEF1	**Kardakata, Kep**	**0.09**	**81**	P	**Pg**	**20 16 28.9**	**-0.1**
KEF1				S	**Sg**	**20 16 31.0**	**-0.2**
ARG2	**Argostoli**	**0.13**	**129**	P	**Pg**	**20 16 29.6**	**+0.1**
ARG2				S	**Sg**	**20 16 32.0**	**0.0**
	24μm,0.3s						
KEF2	**Argostoli. Kep**	**0.14**	**133**	P	**Pg**	**20 16 29.7**	**+0.1**
KEF2				S	**Sg**	**20 16 32.4**	**+0.1**
VLS	**Valsamata**	**0.20**	**115**	P	**Pg**	**20 16 30.4**	**-0.1**
VLS	**Valsamata**	**0.20**	**115**	P	**Pg**	**20 16 30.5**	**-0.1**
VLS				S	**Sg**	**20 16 33.6**	**-0.2**
VLS				AML	AML	20 16 33.8	
	comp=N,19791μm,0.2s						
VLS				AML	AML	20 16 34.9	
	comp=E,10419μm,0.2s						
VSK1	**VASILIKIADES**	**0.22**	**48**	P	**Pg**	**20 16 30.9**	**+0.1**
KFL	**Anninata**	**0.37**	**114**	P	**Pg**	**20 16 33.4**	**0.0**
KFL				S	**Sg**	**20 16 38.9**	**+0.3**
	comp=E,9μm,0.4s						
KFL	**Anninata**	**0.37**	**114**	P	**Pg**	**20 16 33.4**	**0.0**
KFL				S	**Sg**	**20 16 38.9**	**+0.3**
EVGI	**Lefkada island**	**0.43**	**33**	P	**Pg**	**20 16 34.4**	**0.0**
EVGI				S	**Sg**	**20 16 41.0**	**+0.7**
EVGI	**Lefkada island**	**0.43**	**33**	P	**Pg**	**20 16 34.4**	**0.0**
EVGI				S	**Sg**	**20 16 40.8**	**+0.5**
VLMS	**Volimes, Zakyn**	**0.46**	**148**	P	**Pg**	**20 16 34.9**	**0.0**
VLMS				S	**Sg**	**20 16 41.2**	**+0.2**
VLMS				AML	AML	20 16 45.6	
	comp=N,4773μm,0.4s						
VLMS				AML	AML	20 16 47.4	
	comp=E,3694μm,0.4s						
MGNA	**Meganis**	**0.52**	**41**	P	**Pg**	**20 16 35.9**	**-0.1**
MGNA				AML	AML	20 16 45.2	
	comp=E,1266μm,0.2s						
MGNA				AML	AML	20 16 45.3	
	comp=N,1124μm,0.2s						
LKD2	**Lefkada island**	**0.58**	**24**	P	**Pg**	**20 16 36.9**	**-0.2**
LKD2	**Lefkada island**	**0.58**	**24**	P	**Pg**	**20 16 36.9**	**-0.2**
TSLK	**Tsoukalades, L**	**0.61**	**23**	P	**Pg**	**20 16 37.6**	**-0.1**
TSLK	**Tsoukalades, L**	**0.61**	**23**	P	**Pg**	**20 16 37.7**	**-0.1**
KRI1	**kERI**	**0.70**	**149**	P	**Pb**	**20 16 39.7**	**+0.1**
PDO	**Prodromos**	**0.73**	**62**	P	**Pg**	**20 16 39.9**	**-0.1**
PDO	**Prodromos**	**0.73**	**62**	P	**Pb**	**20 16 40.4**	**+0.3**
PDO				AML	AML	20 16 58.8	
	comp=E,1278μm,0.3s						
PDO				AML	AML	20 17 00.6	
	comp=N,1935μm,0.3s						
RLS	**Riolos of Patr**	**0.90**	**103**	P	**Pn**	**20 16 43.7**	**0.0**
RLS				AML	AML	20 17 03.8	
	comp=E,518μm,0.5s						
RLS				AML	AML	20 17 08.7	
	comp=N,528μm,0.3s						
PVO	**Paravola**	**0.98**	**69**	P	**Pg**	**20 16 44.9**	**+0.1**
PVO				AML	AML	20 17 05.2	
	comp=E,1307μm,0.4s						
PVO				AML	AML	20 17 07.8	
	comp=N,1166μm,0.3s						
DRO	**Drossia**	**1.11**	**106**	P	**Pb**	**20 16 46.3**	**-0.3**
EFP	**Efpalio**	**1.23**	**82**	P	**Pn**	**20 16 48.2**	**-0.1**
ANX	**Ano Chora**	**1.27**	**74**	P	**Pn**	**20 16 49.3**	**+0.3**
ANX				AML	AML	20 17 14.0	
	comp=E,750μm,0.7s						
ANX				AML	AML	20 17 16.2	
	comp=N,713μm,0.7s						
EVR	**Evrytania**	**1.31**	**60**	P	**Pg**	**20 16 51.7**	**+0.6**
SERG	**Sergoula**	**1.34**	**83**	P	**Pb**	**20 16 51.0**	**+0.4**
KLV	**Kalavryta, Ach**	**1.43**	**98**	P	**Pn**	**20 16 51.7**	**+0.6**
FNA	**Florina**	**2.64**	**17**	*e*Pn	**Pb**	**20 17 10.8**	**-1.9**
PDG	**Podgorica**	**4.25**	**349**	*e*Pn	**Pn**	**20 17 32.1**	**+2.4**
PDG				*e*Sn	**Sn**	**20 18 18.2**	**-0.7**
TREB	**Trebinje**	**4.71**	**342**	*e*Pn	**Pn**	**20 17 36.9**	**+0.9**
TREB				*e*Sn	**Sn**	**20 18 28.5**	**-1.8**
SJES	**Sjenica**	**5.00**	**357**	*e*Pn	**Pn**	**20 17 43.0**	**+2.8**
SJES				*e*Sn	**Sn**	**20 18 37.4**	**-0.3**
STON	**Ston**	**5.03**	**337**	*e*Pn	**Pn**	**20 17 41.5**	**+1.1**
STON				*e*Sn	**Sn**	**20 18 35.5**	**-2.7**
DIVS	**Divibare**	**5.84**	**357**	*e*Sn	**Sn**	**20 18 56.6**	**-1.7**
TRUS	**Trudelj**	**5.96**	**0**	*e*Pn	**Pn**	**20 17 55.6**	**+2.4**

IDC 01 20:30:06.2±8.2**, 8.°58S×130.°49E, h98**km±90km**, mb3.3**/1**, mb1 3.3**/4**, mb1mx2.9**/54**, mbtmp3.5**/4**, ML3.4**/3**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx3.2**/20**, Error ellipse: s-maj=58.2km s-min=43.0km az=22.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.57**	**206**	P	Pn	20 32 35.0	+0.2
	0.2nm,0.3s,baz=30,slow=11,SNR=9.1						
FITZ				S	Sn	20 34 31.0	-0.3
	0.4nm,0.3s,baz=216,slow=17,SNR=5.8						
WRA	**Warramunga Arr**	**11.90**	**162**	P	Pn	20 32 51.8	-0.9
	0.3nm,0.3s,baz=346,slow=13,SNR=8.0						
WRA				S	Sn	20 35 05.8	+2.2
	0.3nm,0.3s,baz=341,slow=21,SNR=1.9						
WRA				LR	LR	20 37 28.3	
	comp=Z,431nm,21.7s,baz=25,slow=37						
ASAR	**Alice Springs**	**15.36**	**168**	P	Pn	20 33 38.0	+0.3
	0.2nm,0.3s,baz=340,slow=8.3,SNR=21						
ASAR				S	Sn	20 36 28.8	+1.4
	0.1nm,0.3s,baz=348,slow=25,SNR=4.3						
MKAR	**Makanchi Array**	**69.80**	**327**	P	P	20 41 06.2	+0.1
	0.3nm,0.4s,baz=124,slow=6.8,SNR=14						

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*IDC **01** 20:34:56.5±1.8, 5.°25S×68.°27E, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.5/62, mbtmp3.6/8, MS4.3/3, Ms1 4.3/3, ms1mx3.6/37, Error ellipse: s-maj=53.5km s-min=29.0km az=55.0*
*NEIC **01** 20:34:57.5±0.8, 5.°33S±0.°06×68.°3E±0.°1, h10km±1km, mb4.5/23, Error ellipse: s-maj=18.6km s-min=8.4km az=296.0*
ISC 01 20:34:57.9±0.8**, 5.°4S**±0.°1×**68.°3E**±0.°1**, h13**km**, n51, σ0.s64**/41**, mb4.3**/19**, MS4.4**/3**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N2	**Diego Garcia H**	**2.85**	**110**	T	T	20 38 27.0	
	baz=297,slow=74,SNR=204						
H08N3	**Diego Garcia H**	**2.85**	**111**	T	T	20 38 27.3	
	baz=297,slow=74,SNR=280						
H08N1	**Diego Carcia H**	**2.87**	**110**	T	T	20 38 28.0	
	baz=297,slow=74,SNR=271						
DGAR	**Diego Garcia**	**4.60**	**117**	Pn	**Pn**	**20 36 06.8**	**-0.4**
H08S1	**Diego Carcia H**	**4.73**	**119**	T	T	20 40 55.7	
	baz=312,slow=75,SNR=14						
H08S3	**Diego Garcia H**	**4.73**	**119**	T	T	20 40 56.2	
	baz=312,slow=75,SNR=16						
H08S2	**Diego Garcia H**	**4.75**	**119**	T	T	20 40 59.2	
	baz=312,slow=75,SNR=20						
SHL	**Shillong**	**38.32**	**36**	P	**P**	**20 42 18.9**	**+0.1**
SHL				IAmb	IAmb	20 42 24.8	
	comp=Z,6.2nm,1.1s						
CM31	**Chiang Mai Arr**	**38.36**	**51**	P	**P**	**20 42 20.0**	**+0.9**
CMAR	**Chiang Mai Arr**	**38.36**	**51**	P	**P**	**20 42 19.6**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=195,slow=21,SNR=2.7						
CMAR				LR	LR	20 55 04.9	
	comp=Z,272nm,21.1s,baz=191,slow=32						
CHTO	**Chiang Mai**	**38.57**	**51**	P	**P**	**20 42 20.7**	**-0.1**
NIL	**Nilore**	**39.06**	**7**	P	**P**	**20 42 24.5**	**-0.3**
NIL				IAmb	IAmb	20 42 28.3	
	comp=Z,6.2nm,1.1s						
KBL	**Kabul**	**39.68**	**1**	P	**P**	**20 42 29.0**	**-1.1**
KBL				IAmb	IAmb	20 42 33.5	
	comp=Z,16nm,1.9s						
HRA	**Herat**	**39.93**	**352**	P	**P**	**20 42 32.1**	**0.0**
LSZ	**Lusaka**	**40.62**	**253**	P	**P**	**20 42 38.1**	**0.0**
LSA	**Lhasa**	**41.17**	**31**	P	**P**	**20 42 41.8**	**-1.0**
SMRI	**Semarang**	**41.91**	**95**	P	**P**	**20 42 48.2**	**-0.4**
UBPT	**Khong Chiam**	**42.13**	**60**	P	**P**	**20 42 50.6**	**+0.3**
UBPT				IAmb	IAmb	20 42 55.4	
	comp=Z,24nm,1.6s						
BTK	**Batken**	**45.24**	**3**	P	**P**	**20 43 15.1**	**0.0**
BTK				IAmb	IAmb	20 43 28.3	
	comp=Z,11nm,1.6s						
AAK	**Ala-Archa**	**48.09**	**6**	P	**P**	**20 43 36.2**	**-1.3**
	comp=Z,0.7nm,0.9s,baz=163,slow=14,SNR=2.6						
AAK	**Ala-Archa**	**48.09**	**6**	P	**P**	**20 43 37.3**	**-0.2**
KKM	**Kota Kinabalu**	**49.15**	**77**	P	**P**	**20 43 45.6**	**-0.5**
H01W3	**Cape Leeuwin H**	**51.46**	**131**	T	T	21 39 23.7	
	baz=296,slow=75,SNR=6.0						
H01W2	**Cape Leeuwin H**	**51.46**	**131**	T	T	21 39 24.1	
	baz=296,slow=75,SNR=6.3						
H01W1	**Cape Leeuwin H**	**51.48**	**131**	T	T	21 39 25.0	
	baz=296,slow=75,SNR=5.6						
WMQ	**Urumqi**	**51.98**	**18**	P	**P**	**20 44 07.3**	**+0.5**
MK31	**Makanchi Array**	**53.37**	**12**	P	**P**	**20 44 17.4**	**+0.3**
MK31				IAmb	IAmb	20 44 23.8	
	comp=Z,8.0nm,1.9s						
MKAR	**Makanchi Array**	**53.37**	**12**	P	**P**	**20 44 17.1**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=183,slow=8.7,SNR=1.1						
MKAR	**Makanchi Array**	**53.37**	**12**	P	**P**	**20 44 16.9**	**-0.2**
XAN	**Xi'an**	**54.82**	**41**	P	**P**	**20 44 28.0**	**0.0**
XAN				IAmb	IAmb	20 44 34.3	
	comp=Z,8.3nm,1.3s						
ABKAR	**Akbulak array**	**54.86**	**353**	P	**P**	**20 44 27.8**	**-0.1**
ABKAR	**Akbulak array**	**54.86**	**353**	P	**P**	**20 44 28.0**	**+0.1**
ABKAR				IAmb	IAmb	20 44 35.2	
	comp=Z,15nm,2.0s						
ZAA0	**Zalesovo Array**	**60.68**	**11**	P	**P**	**20 45 09.0**	**+0.2**
ZAA0				IAmb	IAmb	20 45 15.2	
	comp=Z,8.0nm,1.4s						
ZALV	**Zalesovo Beam**	**60.68**	**11**	P	**P**	**20 45 08.4**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=204,slow=3.2,SNR=1.7						
ZALV	**Zalesovo Beam**	**60.68**	**11**	P	**P**	**20 45 08.6**	**-0.1**
SONM	**Songino Array**	**62.64**	**28**	P	**P**	**20 45 23.2**	**+1.0**
	comp=Z,1.8nm,1.2s,baz=221,slow=8.8,SNR=7.7						
SONM	**Songino Array**	**62.64**	**28**	P	**P**	**20 45 22.8**	**+0.6**
ULN	**Ulaanbaatar**	**62.97**	**28**	P	**P**	**20 45 25.0**	**+0.6**
ULN				IAmb	IAmb	20 45 36.5	
	comp=Z,5.9nm,1.6s						
AKASG	**Malin Array Be**	**65.16**	**334**	P	**P**	**20 45 38.8**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=134,slow=5.3,SNR=1.1						
AKASG				LR	LR	21 18 12.7	
	comp=Z,286nm,18.6s,baz=60,slow=40						
ASAR	**Alice Springs**	**65.53**	**113**	P	**P**	**20 45 44.1**	**+2.4**
	comp=Z,1.1nm,1.1s,baz=321,slow=37,SNR=2.0						
ASAR	**Alice Springs**	**65.53**	**113**	P	**P**	**20 45 42.1**	**+0.4**

WRA Warramunga Arr 65.67 109 P P 20 45 42.2 -0.4
comp=Z,1.2nm,1.0s,baz=283,slow=6.1,SNR=2.6
WRA Warramunga Arr 65.67 109 P P 20 45 43.0 +0.4
WRAB Tennant Creek 65.68 109 P P 20 45 43.1 +0.4
TIXI Tiksi 86.14 16 LR LR 21 26 46.8
comp=Z,128nm,18.1s,baz=335,slow=36
TIXI Tiksi 86.14 16 P P 20 47 38.6 +0.3
TIXI IAmb IAmb 20 47 45.6
comp=Z,4.7nm,1.2s
KVN Kaiserville 145.95 9 PKPdf 20 54 37.5 +0.1
NVAR Mina Array Bea 146.52 9 PKPbc PKPab 20 54 40.7 0.0
comp=Z,1.2nm,0.9s,baz=18,slow=2.3,SNR=6.2
NVAR Mina Array Bea 146.52 9 PKiKP PKiKP 20 54 41.7 -1.0
TXAR Lajitas Array 154.96 343 PKPbc PKiKP 20 55 00.3 +0.1
comp=Z,0.3nm,0.8s,baz=58,slow=12,SNR=2.3
TXAR Lajitas Array 154.96 343 PKPbc 20 54 59.6 -0.6

IDC 01 20:35:33.3±0.6, 17.17N×119.37E, h0km, mb4.1/19, mb1 4.2/21, mb1mx4.0/66, mbtmp4.1/21, ML4.1/2, Error ellipse: s-maj=24.4km s-min=12.9km az=69.0
MAN 01 20:35:35.4, 17.25N×119.31E, h9km, mb4.5, ML3.3, MS3.2
NEIC 01 20:35:37.3±1.3, 17.26N±0.05×119.26E±0.06, h22km±5km, mb4.3/37, Error ellipse: s-maj=8.5km s-min=6.7km az=130.0
ISC 01 20:35:34.2±1.6, 17.25N±0.04×119.24E±0.04, h4km±10km, n87, σ1.54/98, mb4.2/36, 3C, Philippine Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BOLP Bolinao 1.08 143 eP Pg 20 35 53.7 -1.1
BOLP eS Sn 20 36 10.9 -0.6
SZP Santa 1.20 75 Pb 20 35 56.9 -0.6
SIPP Brgy, Tapao 1.34 60⇑iP Pn 20 35 58.4 -1.4
SIPP eS Sn 20 36 18.9 +0.9
ABRA Dolores 1.46 74 eP Pn 20 36 00.4 -1.0
ABRA eS Sg 20 36 20.4 -0.7
SMPP San Manuel, Pa 1.76 128 eP Pn 20 36 03.2 -2.3
SMPP eS Sn 20 36 26.8 -1.7
APYP Conner 2.00 72 eP Pn 20 36 08.4 -0.4
APYP eS Sb 20 36 34.3 -2.3
PCPH Palayan 2.44 133⇑eP Pn 20 36 15.2 +0.3
CAUP Cauayan 2.49 97 eP Pb 20 36 17.4 -2.1
BALP Baler 2.69 123 eP Pn 20 36 19.7 +1.4
BALP eS Sn 20 36 36.2 -15
SGCP Mt. Cagua 2.85 69 eP Pn 20 36 21.1 +0.6
SGCP eS Sn 20 36 55.2 -0.1
PALP Palanan 3.05 93 eP Pn 20 36 24.2 +1.0
PALP eS Sg 20 37 13.0 +0.8
TGY Tagaytay City 3.53 152 Pn Pn 20 36 30.0 +0.1
59nm,0.3s,baz=214,slow=10,SNR=3.4
LQP Lukban 3.82 144⇑eP Pn 20 36 35.7 +1.6
TWG Pinlang 5.80 17 Pn Pn 20 37 01.2 +0.1
TPUB Ta-pu 6.16 12 Pn Pn 20 37 05.5 -0.6
TPUB Sn Sn 20 38 12.3 -4.8
HKPS Hong Kong Po S 6.93 317 Pn Pn 20 37 16.7 0.0
HKPS Sn Sn 20 38 29.4 -6.8
YHNB Yeheng 7.65 15 Pn 20 37 27.2 +0.6
YHNB Sn Sn 20 38 51.1 -2.7
QIZ Qiongzhong 9.11 283 Pn Pn 20 37 45.7 -0.9
QIZ Sn Sn 20 39 23.1 -6.6
KKM Kota Kinabalu 11.52 195 Pn Pn 20 38 20.8 +1.0
DLV T Lat 11.67 245 Pn Pn 20 38 23.4 +1.6
SLVN Son La 15.04 288 Pn Pn 20 39 09.2 +1.5
ENH Enshi 15.73 327 Pn Pn 20 39 17.5 +0.7
ENH IAmb IAmb 20 39 29.9
comp=Z,11nm,1.3s
KMI Kunming 17.26 300 Pn 20 39 38.3 +1.8
PBKT Sadao Pong 17.50 270 P 20 39 41.3 +0.8
CM31 Chiang Mai Arr 19.36 277 P Pn 20 40 01.6 +0.6
CMAR Chiang Mai Arr 19.36 277 P Pn 20 40 03.6 +1.5
comp=Z,0.1nm,0.3s,baz=86,slow=9.3,SNR=12
CHTO Chiang Mai 19.37 278 P P 20 40 02.1 +1.0
KSAR Wonju Array Be 21.51 19 P P 20 40 25.0 +0.8
KSRS Korea Array 21.53 19 P P 20 40 25.2 +0.8
comp=Z,3.7nm,0.8s,baz=202,slow=11,SNR=13
KS19 Wonju Array Si 21.56 19 P P 20 40 24.9 +0.1
KS19 IAmb IAmb 20 40 30.5
comp=Z,15nm,1.4s
KULM Kulim 21.73 239 P P 20 40 25.8 -1.0
KULM IAmb IAmb 20 40 43.2
comp=Z,17nm,1.3s
BJT Baijiatuau 22.85 354 P P 20 40 39.8 +1.3
PSI Prapat 24.58 236 P P 20 40 56.9 +1.1
comp=Z,5.4nm,0.8s,baz=42,slow=5.7,SNR=5.7
RPSI Rantau Prapat 24.64 236 P P 20 40 56.9 +0.7
RPSI Rantau Prapat 24.64 236 P P 20 40 56.4 +0.2
RPSI IAmb IAmb 20 40 57.8
comp=Z,4.9nm,0.8s
SHL Shillong 26.74 293 P P 20 41 15.8 +0.5
SHL IAmb IAmb 20 41 17.7
comp=Z,10nm,1.0s
SONM Songino Array 32.28 344 P P 20 42 05.3 +1.1
comp=Z,1.2nm,0.6s,baz=165,slow=10.0,SNR=13
SONM Songino Array 32.28 344 P P 20 42 05.4 +1.3
KLR Kul'dur 33.48 15 P P 20 42 15.1 +0.6
comp=Z,0.5nm,0.3s,baz=245,slow=5.1,SNR=4.5
WB0 Warramunga Arr 39.68 157 P P 20 43 05.7 -2.0
WB0 IAmb IAmb 20 43 17.9
comp=Z,12nm,1.1s
WRA Warramunga Arr 39.82 158 P P 20 43 06.2 -2.7
comp=Z,1.6nm,0.7s,baz=342,slow=9.0,SNR=6.4
WB2 Warramunga Arr 39.83 157 P P 20 43 06.8 -2.1
WB2 IAmb IAmb 20 43 11.5
comp=Z,9.6nm,1.1s
MK31 Makanchi Array 42.37 322 P P 20 43 31.2 +1.5
MK31 IAmb IAmb 20 43 32.7
comp=Z,3.5nm,1.0s
MKAR Makanchi Array 42.37 322 P P 20 43 31.1 +1.5
comp=Z,2.5nm,0.8s,baz=123,slow=8.0,SNR=23
MAKZ Makanchi 42.56 322 P P 20 43 32.7 +1.5
MAKZ IAmb IAmb 20 43 34.2
comp=Z,2.7nm,0.9s
AS31 Alice Springs 43.11 160 P P 20 43 34.5 -1.4
ASAR Alice Springs 43.11 160 P P 20 43 34.7 -1.2
comp=Z,1.3nm,0.4s,baz=338,slow=7.0,SNR=48
ASAR Alice Springs 43.11 160 P P 20 43 33.7 -2.2
NRN Naryn 44.13 312 P P 20 43 45.4 +1.1
NRN IAmb IAmb 20 43 47.5
comp=Z,6.7nm,1.0s
NIL Nilore 44.25 301 P P 20 43 45.4 +0.4
ZAA0 Zalesovo Array 45.28 332 P P 20 43 53.6 +0.7
ZAA0 IAmb IAmb 20 43 54.9
comp=Z,4.2nm,0.8s
ZALV Zalesovo Beam 45.28 332 P P 20 43 53.9 +1.0
comp=Z,3.5nm,0.8s,baz=129,slow=7.1,SNR=16
ZALV Zalesovo Beam 45.28 332 P P 20 43 53.7 +0.8
KURK Kurchatov 46.48 325 P P 20 44 04.0 +1.5
KBL Kabul 47.83 301 P P 20 44 14.3 +0.7
KBL IAmb IAmb 20 44 15.6
comp=Z,3.1nm,1.1s
KK31 Karatay Array 48.52 313 P P 20 44 19.7 +1.1
KK31 IAmb IAmb 20 44 20.8
comp=Z,4.3nm,0.8s
KKAR Karatay Array 48.52 313 P P 20 44 19.7 +1.2
BRVK Borovoye 52.14 325 P P 20 44 46.4 +0.7
BRVK IAmb IAmb 20 44 48.2
comp=Z,9.2nm,1.4s
BBOO Buckleboo 52.31 162 P P 20 44 46.0 -1.2
STKA Stephens Creek 53.34 156 P P 20 44 54.1 -0.7
comp=Z,2.8nm,0.7s,baz=331,slow=8.4,SNR=12
STKA Stephens Creek 53.34 156 P P 20 44 53.9 -0.9
TIXI Tiksi 54.69 4 P P 20 45 03.2 -0.9
TIXI IAmb IAmb 20 45 14.1
comp=Z,1.7nm,0.8s
GEYT Alibeck 56.95 304 P P 20 45 22.1 +1.1
comp=Z,3.5nm,0.8s,baz=129,slow=4.0,SNR=15
GEYT Alibeck 56.95 304 P P 20 45 21.9 +0.8
GYA0B ALIBECK ARRAY 56.95 304 P P 20 45 21.5 +0.4
ABKAR Akbulak array 57.16 318 P P 20 45 22.8 +0.6
ABKAR Akbulak array 57.16 318 P P 20 45 22.5 +0.3
ABKAR IAmb IAmb 20 45 23.7
comp=Z,1.6nm,0.7s
AKTO Aktyubinsk 58.62 319 P P 20 45 32.9 +0.4
comp=Z,1.2nm,0.6s,baz=142,slow=5.2,SNR=4.0
ARU Arti 59.67 326 P P 20 45 39.8 +0.2
comp=Z,0.9nm,0.5s,baz=126,slow=5.9,SNR=5.0
ARU Arti 59.67 326 P P 20 45 39.7 +0.2
ARU IAmb IAmb 20 45 40.6
comp=Z,2.7nm,0.7s
RAYN Ar Rayn 68.74 289 P P 20 46 40.1 +0.2
IMAR Indian Mountai 73.18 25 P P 20 47 06.6 +0.6
MLY Manley 74.53 26 P P 20 47 14.4 +0.4
MLY IAmb IAmb 20 47 23.7
comp=Z,3.3nm,1.0s
BPAW Bear Paw Mtn. 74.55 27 P P 20 47 14.3 +0.2
TRF Thorofare Moun 74.94 28 P P 20 47 17.3 +0.7
TRF IAmb IAmb 20 47 27.1
comp=Z,2.7nm,1.0s
ARCES ARCESS Array B 75.29 339 P P 20 47 18.2 0.0
comp=Z,2.0nm,0.9s,baz=69,slow=6.6,SNR=3.5
FIA1 FINESS Array S 76.52 330 P P 20 47 25.3 -0.1
FINES FINESS Array B 76.52 330 P P 20 47 25.3 -0.1
comp=Z,1.8nm,0.8s,baz=70,slow=7.0,SNR=11
FINES FINESS Array B 76.52 330 P P 20 47 25.6 +0.3
BMAR Burnt Mountain 76.58 23 P P 20 47 26.8 +1.1
AKASG Malin Array Be 76.86 319 P P 20 47 27.0 -0.5
comp=Z,0.9nm,0.6s,baz=68,slow=5.3,SNR=4.2
BURAR Bucovina Array 80.12 317 P P 20 47 45.7 0.0
BUR08 Bucovina Ar. S 80.12 317 P P 20 47 46.0 +0.2
HFS Hagfors 82.71 331 P P 20 47 58.8 -0.2
comp=Z,2.7nm,0.8s,baz=77,slow=3.3,SNR=4.4
NOA NORSAR Array B 83.48 332 P P 20 48 02.1 -1.0
comp=Z,1.3nm,0.9s,baz=65,slow=5.2,SNR=3.6
YKA Yellowknife Ar 90.04 22 P P 20 48 34.9 -0.1
comp=Z,0.4nm,0.7s,baz=316,slow=4.0,SNR=6.3
EKA Eskdalemuir Ar 92.91 331 P P 20 48 48.7 +0.2
comp=Z,4.9nm,0.9s,baz=85,slow=28,SNR=3.4

NEIC 01 20:39:13.8±1.3, 5.25S±0.08×68.4E±0.1, h10km±2km, mb4.4/8, Error ellipse: s-maj=25.2km s-min=13.0km az=275.0
IDC 01 20:39:13.8±3.0, 5.09S×68.38E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.4/53, mbtmp3.8/5, MS4.2/3, Ms1 4.2/3, ms1mx3.5/37, Error ellipse: s-maj=82.5km s-min=43.2km az=63.0
ISC 01 20:39:14.5±1.6, 5.2S±0.2×68.4E±0.2, h13km, n28, σ0.78/19, mb4.1/9, MS4.2/3, Chagos Archipelago region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
H08N2 Diego Garcia H 2.84 113 T T 20 42 44.2
baz=297,slow=74,SNR=34
H08N3 Diego Garcia H 2.84 113 T T 20 42 47.7
baz=297,slow=74,SNR=46
H08N1 Diego Carcia H 2.86 113 T T 20 42 48.2
baz=297,slow=74,SNR=45
DGAR Diego Garcia 4.61 118 Pn Pn 20 40 23.1 -0.8
H08S3 Diego Garcia H 4.74 120 T T 20 45 11.8
H08S1 Diego Carcia H 4.74 121 T T 20 45 11.8
H08S2 Diego Garcia H 4.75 121 T T 20 45 11.8
MNCI Minicoy 14.21 19 Pn Pn 20 42 35.6 0.0
GSI Gunungsitoli 29.89 78 P P 20 45 21.6 -0.6
CMAR Chiang Mai Arr 38.24 51 P P 20 46 36.0 +1.3
0.5nm,1.0s,baz=238,slow=9.4,SNR=2.1
KBL Kabul 39.56 1 P P 20 46 45.5 -0.2
GEYT Alibeck 43.98 348 LR LR 21 06 04.7
comp=Z,114nm,18.7s,baz=40,slow=37
BOSA Boshof 46.98 235 LR LR 21 06 19.1
comp=Z,644nm,20.0s,baz=122,slow=34
MK31 Makanchi Array 53.24 12 P P 20 48 32.0 -0.8
MK31 IAmb IAmb 20 49 39.9
comp=Z,5.4nm,1.8s
MKAR Makanchi Array 53.24 12 P P 20 48 32.6 -0.2
comp=Z,0.4nm,0.9s,baz=204,slow=8.4,SNR=2.6
MKAR Makanchi Array 53.24 12 P P 20 48 32.1 -0.7
ABKAR Akbulak array 54.75 353 P P 20 48 43.0 -0.7
ABKAR Akbulak array 54.75 353 P P 20 48 43.9 +0.2
ABKAR IAmb IAmb 20 48 50.7
comp=Z,3.8nm,1.4s
KURK Kurchatov 56.41 8 P P 20 48 54.4 -1.3
KURK IAmb IAmb 20 50 54.7
comp=Z,11nm,1.9s
ZAA0 Zalesovo Array 60.55 11 P P 20 49 24.4 -0.1
ZAA0 IAmb IAmb 20 49 53.8
comp=Z,8.5nm,1.8s
ZALV Zalesovo Beam 60.55 11 P P 20 49 23.8 -0.6
comp=Z,0.5nm,0.5s,baz=183,slow=7.2,SNR=2.6
ZALV Zalesovo Beam 60.55 11 P P 20 49 23.2 -1.3
SONM Songino Array 62.50 28 P P 20 49 38.4 +0.5
comp=Z,1.5nm,1.1s,baz=221,slow=5.9,SNR=7.7
SONM Songino Array 62.50 28 P P 20 49 38.3 +0.3
WRA Warramunga Arr 65.66 109 P P 20 50 00.1 +0.9
comp=Z,0.8nm,0.8s,baz=279,slow=5.4,SNR=2.4
SPITS Spitsbergen Ar 87.83 351 LR LR 21 32 43.6
comp=Z,100nm,18.8s,baz=185,slow=37
NVAR Mina Array Bea 146.40 9 PKPbc PKPab 20 58 57.5 +0.6
comp=Z,0.6nm,0.9s,baz=347,slow=3.2,SNR=5.2
NVAR Mina Array Bea 146.40 9 PKPdf 20 58 55.0 +0.3

THE 01 20:43:59.8, 38.21N×20.35E, h13km±1km, ML2.9/5, Error ellipse: s-maj=2.2km s-min=0.9km az=89.0
ATH 01 20:43:59.7, 38.21N×20.38E, h16km±1km, ML2.8/3, Error ellipse: s-maj=2.4km s-min=1.3km az=264.0
ISC 01 20:43:59.6±1.2, 38.21N±0.03×20.37E±0.07, h16km±5km, n27, σ0.44/42, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF3 Kipouria, Keph 0.02 237 P Pg 20 44 02.4 +0.1
KEF3 S Sg 20 44 04.1 -0.1
CHV1 Chavriata, Kef 0.03 162 P Pg 20 44 02.4 0.0
CHV1 S Sg 20 44 03.8 -0.4
11μm,0.2s
KEF4 Livadi, Kephal 0.06 45 P Pg 20 44 02.6 0.0
KEF4 S Sg 20 44 04.5 -0.1
ARG2 Argostoli 0.10 111 P Pg 20 44 03.0 +0.1
ARG2 S Sg 20 44 04.9 -0.2
13μm,0.1s
KEF1 Kardakata, Kep 0.10 51 P Pg 20 44 03.0 0.0
KEF1 S Sg 20 44 05.0 -0.2
KEF2 Argostoli. Kep 0.10 118 P Pg 20 44 03.0 0.0
KEF2 S Sg 20 44 05.0 -0.2
VLS Valsamata 0.18 102 P Pg 20 44 04.0 0.0
VLS S Sg 20 44 06.8 -0.1
2μm,0.1s
VLS Valsamata 0.18 102 P Pg 20 44 03.8 -0.1
VLS S Sg 20 44 06.8 -0.1
VLS AML AML 20 44 07.9
comp=E,5061μm,0.1s
VLS AML AML 20 44 08.2
comp=N,4100μm,0.1s
VSK1 VASILIKIADES 0.25 38 P Pg 20 44 05.4 +0.3
VSK1 S Sb 20 44 09.5 -0.3
comp=Z,5μm,0.2s
FSK Fiskardo 0.29 32 P Pg 20 44 06.1 +0.4
FSK S Sb 20 44 10.9 -0.1
FSK Fiskardo 0.29 32 P Pg 20 44 06.2 +0.4
FSK S Sg 20 44 10.3 +0.3
FSK AML AML 20 44 11.1
comp=E,6664μm,0.1s
FSK AML AML 20 44 11.2
comp=N,2868μm,0.2s
VLMS Volimes, Zakyn 0.41 145 P Pg 20 44 08.1 +0.2
VLMS S Sb 20 44 14.4 -0.1
VLMS AML AML 20 44 15.3
comp=N,5630μm,0.3s
VLMS AML AML 20 44 15.6
comp=E,5439μm,0.1s
EVGI Lefkada island 0.46 29 P Pg 20 44 09.2 +0.3
EVGI S Sb 20 44 16.6 +0.5
EVGI Lefkada island 0.46 29 P Pg 20 44 09.2 +0.3
EVGI S Sb 20 44 16.3 +0.3
MGNA Meganis 0.55 37 P Pg 20 44 10.7 +0.3
TSLK Tsoukalades, L 0.65 20 P Pg 20 44 10.8 -1.5
KRI1 kERI 0.66 147 P Pg 20 44 12.3 -0.1
KRI1 S Sb 20 44 22.4 +0.9
comp=E,1μm,0.1s
PDO Prodromos 0.75 59 P Pb 20 44 14.3 +0.1
PDO Prodromos 0.75 59 P Pg 20 44 13.4 -0.7
RLS Riolos of Patr 0.88 100 P Pb 20 44 15.2 -1.2
PVO Paravola 0.99 66 P Pg 20 44 18.8 0.0
DRO Drossia 1.09 103 P Pn 20 44 20.4 +0.2
LAKA Lakka 1.27 88 P Pn 20 44 23.0 +0.3
ANX Ano Chora 1.28 72 P Pn 20 44 22.9 +0.1
SERG Sergoula 1.34 81 P Pn 20 44 24.1 +0.4
KALE Kalithea 1.40 82 P Pb 20 44 25.4 -0.1
KLV Kalavryta, Ach 1.42 96 P Pb 20 44 25.8 +0.2

KLM 01 20:56:57.0, 3.02S×103.83E, h380km, mb4.3
IDC 01 20:56:58.6±2.5, 3.10S×103.56E, h356km±27km, mb3.3/12, mb1 3.5/13, mb1mx3.3/32, mbtmp4.1/13, Error ellipse: s-maj=33.3km s-min=11.9km az=57.0
ISC 01 20:56:58.9±0.8, 2.9S±0.1×104.0E±0.1, h350km, n32, σ1.19/33, mb3.5/12, Southern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MYKOM Kota Tinggi 4.64 359 P Pn 20 58 16.0 +1.4
LEM Lembang 5.35 137 P Pn 20 58 24.0 +1.4
5.3nm,0.3s,baz=176,slow=23,SNR=5.4
JRMM Jerantut 6.88 347 P Pn 20 58 41.0 +1.0
IPM Ipoh 7.88 338 P Pn 20 58 53.0 +1.3
KULM Kulim 8.76 338 P Pn 20 59 02.0 -0.2
SBUM Sibu 9.80 57 P Pn 20 59 14.0 -0.6
SPMM Sapulut 14.58 59 P Pn 21 00 07.0 -2.2
CMAR Chiang Mai Arr 21.77 347 P P 21 01 23.6 +0.4
2.9nm,0.5s,baz=183,slow=9.0,SNR=49
ODAN Odare 33.62 333 eP P 21 03 07.9 -0.2
14nm,0.5s
TAPN Taplejung 33.90 333 eP P 21 03 10.6 +0.1
11nm,0.5s
RAMN Ramite 34.07 332 eP P 21 03 12.0 +0.1
5.5nm,0.3s
WRA Warramunga Arr 34.15 122 P P 21 03 13.3 +0.8
0.7nm,0.6s,baz=297,slow=12,SNR=4.7
JIRN Jiri 34.86 332 eP P 21 03 18.7 -0.1
15nm,0.4s
PKI Pulchoki 35.16 331 eP P 21 03 20.5 -0.8
3.5nm,0.3s
PKIN Phulchoki 35.17 331 eP P 21 03 20.5 -0.8
3.2nm,0.4s
GUN Gumba 35.22 332 eP P 21 03 21.6 -0.2
15nm,0.4s
DMN Daman 35.34 330 eP P 21 03 22.2 -0.6
2.1nm,0.2s
KKN Kakani 35.41 331 eP P 21 03 22.5 -0.8
7.5nm,0.4s
ASAR Alice Springs 35.56 128 P P 21 03 25.0 +0.6
0.8nm,0.4s,baz=301,slow=7.8,SNR=47
ASAR S S 21 08 30.8 -3.3
0.3nm,0.6s,baz=295,slow=17,SNR=4.3
GKN Gorkha 35.90 330 eP P 21 03 26.8 -0.6
17nm,0.3s
KOLN Koldanda 36.24 329 eP P 21 03 29.6 -0.7
8.5nm,0.4s
DANN Dangsing 36.63 329 eP P 21 03 32.8 -0.8
22nm,0.5s
STKA Stephens Creek 45.64 133 P P 21 04 47.0 +1.1
0.6nm,0.4s,baz=309,slow=9.0,SNR=4.3
KSRS Korea Array 45.88 27 P P 21 04 49.5 +1.9
0.3nm,0.5s,baz=213,slow=8.7,SNR=3.2
KSH Kashi 49.42 331 P P 21 05 13.6 -1.1
KSH pP pP 21 06 27.3 +0.7
SONM Songino Array 50.55 2 P P 21 05 24.6 +1.7
2.0nm,0.7s,baz=187,slow=9.5,SNR=18
MKAR Makanchi Array 53.03 341 P P 21 05 40.7 -0.3
1.4nm,0.5s,baz=156,slow=8.8,SNR=44
USRK Ussuriysk Ar. 53.17 25 P P 21 05 43.0 +1.1
1.1nm,0.6s,baz=227,slow=10,SNR=4.7
GEYT Alibeck 58.70 318 P P 21 06 19.4 -1.6
0.8nm,0.5s,baz=141,slow=5.0,SNR=7.0
ZALV Zalesovo Beam 58.84 347 P P 21 06 21.1 -0.5
1.7nm,0.3s,baz=154,slow=5.9,SNR=13
FINES FINESS Array B 86.74 332 P P 21 09 02.7 -1.1
2.8nm,0.9s,baz=146,slow=14,SNR=3.6
ARCES ARCESS Array B 88.65 340 P P 21 09 12.0 -0.7
2.2nm,0.9s,baz=103,slow=7.8,SNR=2.8

NEIC 01 21:03:10.9±1.2, 43.74N±0.05×105.27W±0.04, h0km±2km, ML3.2/67, Error ellipse: s-maj=9.0km s-min=5.3km az=192.0
IDC 01 21:03:10.4±1.9, 43.66N×105.63W, h0km, mb1 3.2/4, mb1mx3.1/40, mbtmp3.0/4, ML2.6/3, Error ellipse: s-maj=48.9km s-min=9.9km az=151.0
ISC 01 21:03:11.0±0.8, 43.68N±0.04×105.31W±0.05, h0km, n67, σ1.02/69, Wyoming

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RSSD Black Hills 1.02 64 Pg 21 03 29.6 -1.1
K22A Casper 1.35 221 Pg 21 03 36.2 -0.8
K22A IAML 21 04 02.6
comp=N,453nm,0.3s
PHWY Pilot Hill 2.38 183 Pn 21 03 52.8 +1.3
RWWY Rawlins 2.43 216 Pn 21 03 53.8 +1.6
RWWY IAML 21 04 28.0
comp=N,188nm,0.9s
RWWY IAML 21 04 28.6
comp=N,194nm,0.7s
N23A Red Feather La 2.82 190 Pn 21 03 58.8 +1.2
N23A IAML 21 04 49.1
comp=E,89nm,0.8s
LAO LASA Array 3.08 348 Pn 21 04 00.5 -0.5
LAO IAML 21 04 52.7
comp=E,110nm,0.6s
LAO IAML 21 05 03.5
comp=E,124nm,0.8s
RLMT Red Lodge 3.18 298 Pn 21 04 01.9 -0.6
RLMT IAML 21 04 51.5
comp=E,50nm,0.3s
PD31 Pinedale Array 3.23 255 Pn 21 04 03.7 +0.4
PDAR Pinedale Array 3.23 255 Pn Pn 21 04 03.4 +0.1
comp=E,3.1nm,0.3s,baz=71,slow=16,SNR=47
PDAR Lg Lg 21 04 43.2
comp=E,3.1nm,0.3s,baz=76,slow=31,SNR=8.8
PDAR Pinedale Array 3.23 255 Pn Pn 21 04 03.7 +0.4
YNE Yellowstone No 3.62 293 Pn 21 04 08.0 -0.7
YMP Mirror Lake Pl 3.64 289 Pn 21 04 09.1 +0.1
OGNE Ogallala 3.65 137 Pn 21 04 09.5 +0.6
GCMT Greycliff 3.76 306 Pn 21 04 10.4 +0.1
LKWY Lake 3.77 285 Pn 21 04 10.8 +0.2
LKWY IAML 21 05 11.7
comp=E,31nm,1.5s
H17A Grant Village 3.86 283 Pg Pg 21 04 23.3 -1.8
H17A IAML 21 04 59.2
comp=N,23nm,0.1s
H17A IAML 21 05 15.3
comp=E,24nm,1.1s
ISCO Idaho Springs 3.88 183 Pn 21 04 12.9 +0.7
ISCO IAML 21 05 17.8
comp=E,23nm,1.8s
FLWY Flagg Ranch 3.92 278 Pn 21 04 13.2 +0.6
FLWY IAML 21 05 22.8
comp=E,42nm,1.8s
FLWY IAML 21 06 07.0
comp=E,38nm,1.9s
MOOW Moose Ponds 3.94 273 Pn 21 04 13.7 +0.8
SNOW Snow King Moun 3.96 269 Pn 21 04 13.4 +0.1
SNOW IAML 21 05 29.1
comp=E,36nm,0.9s
SNOW IAML 21 05 30.2
comp=E,36nm,1.5s
YNR Norris Junctio 4.00 287 Pn 21 04 14.9 +1.1
YPP Pitchstone Pla 4.01 280 Pn 21 04 14.3 +0.3
REDW Red Top Meadow 4.04 267 Pn 21 04 15.1 +0.7
REDW IAML 21 05 20.3
comp=E,45nm,1.5s
REDW IAML 21 05 47.9
comp=E,36nm,1.6s
IMW Indian Meadow 4.08 275 Pn 21 04 14.1 -0.8
IMW IAML 21 05 47.7
comp=E,24nm,0.7s
TPAW Teton Pass 4.10 269 Pn 21 04 15.0 -0.2
TPAW IAML 21 05 20.8
comp=E,26nm,0.9s
YHH Holmes Hill 4.13 288 Pn 21 04 15.9 +0.2
O20A White River Ci 4.16 213 Pn 21 04 12.7 -3.2
O20A IAML 21 05 35.3
comp=N,42nm,2.4s
YMR Madison River 4.19 286 Pn Pn 21 04 16.1 -0.2
AHID Auburn Hatcher 4.33 260 Pn Pn 21 04 18.3 0.0
AHID IAML 21 05 34.3
comp=N,28nm,0.9s
AHID IAML 21 05 36.4
comp=E,32nm,1.3s
YHL Hebgen Lake 4.38 288 Pn 21 04 18.6 -0.5
RDMU Red Mountain 4.43 227 Pn Pn 21 04 20.4 +0.6
SMCO Snowmass 4.66 196 Pn Pn 21 04 24.3 +1.2
SMCO IAML 21 05 42.7
comp=E,22nm,0.4s
SMCO IAML 21 05 50.5
comp=E,20nm,0.4s
Q24A Divide 4.71 178 Pn Pn 21 04 24.3 +0.7
Q24A IAML 21 05 42.9
comp=N,19nm,0.4s
DGMT Dagmar 4.86 9 Pn Pn 21 04 24.3 -1.1

DGMT Pb 21 04 39.5 +2.5
KSCO Kaye Shedlock' 5.08 156 Pn 21 04 29.1 +0.6
TCUT Toone Canyon 5.19 243 Pn Pn 21 04 30.7 +0.6
EGMT Eagleton 5.34 326 Pn 21 04 31.4 -0.7
LRM Limekiln Ridge 5.52 295 Pn Pn 21 04 41.2 +6.5
MCMT McKenzie Canyo 5.54 285 Pn Pn 21 04 33.4 -1.5
CTU Camp Tracy 5.64 240 Pn Pn 21 04 36.5 +0.2
SPUT South Promonto 5.78 248 Pn Pn 21 04 38.9 +0.7
P17A Butcher Ranch, 5.85 226 Pn 21 04 40.3 +1.2
SDCO Great Sand Dun 5.92 181 Pn Pn 21 04 41.9 +1.6
SDCO Pg 21 05 03.1 -1.5
SRU San Rafael Swe 6.01 222 Pn 21 04 42.5 +1.1
S22A 4UR Ranch, Cre 6.03 192 Pn Pn 21 04 42.8 +1.0
NLU North Lily Min 6.27 236 Pn Pn 21 04 45.5 +0.5
ECSD EROS Data Cent 6.30 86 Pn 21 04 45.0 -0.2
BGU Big Grassy Mou 6.35 247 Pn 21 04 47.2 +1.2
CBKS Cedar Bluff 6.42 137 Pn Pn 21 04 48.5 +1.7
T25A Trinidad 6.56 174 Pn Pn 21 04 49.9 +0.9
MSO Missoula 6.86 300 Pn Pn 21 04 52.1 -0.8
MVCO Mesa Verde 6.90 202 Pn Pn 21 04 55.4 +1.8
MSU Marysvale 7.31 227 Pn Pn 21 05 00.1 +0.8
MSU Pg Pg 21 05 30.8 -0.3
TCRU Three Creeks R 7.39 229 Pn Pn 21 04 59.0 -1.3
JTMT Jette 7.48 306 Pn Pn 21 05 00.9 -0.6
MTPU Mount Pierson 7.67 225 Pn Pn 21 05 04.4 +0.1
ELK Elko 7.93 252 Pn Pn 21 05 06.8 -0.9
comp=N,0.1nm,0.3s,baz=62,slow=16,SNR=1.8
PKCU Pink Cliffs 8.19 223 Pn Pn 21 05 11.9 +0.4
PSUT Pine Spring 8.24 234 Pn Pn 21 05 13.0 +1.0
SZCU Shurtz Canyon 8.47 227 Pn Pn 21 05 15.6 +0.4
U15A North Rim 9.00 219 Pn Pn 21 05 22.7 +0.2
SPMN Marine on St. 9.08 76 Pn Pn 21 05 22.0 -1.3
ULM Lac du Bonnet 9.21 41 Pn Pn 21 05 23.8 -1.2
comp=N,0.7nm,0.3s,baz=228,slow=10,SNR=6.0
AMTX Amarillo 9.22 161 Pn Pn 21 05 25.4 +0.1
WUAZ Wupatki 9.39 212 Pn Pn 21 05 28.8 +1.0
R11A Troy Canyon, C 9.41 239 Pn Pn 21 05 28.4 +0.4
YKA Yellowknife Ar 19.62 347 P P 21 07 40.9 +0.2
comp=N,0.0nm,0.3s,baz=157,slow=12,SNR=2.7

IDC 01 21:09:58.8±4.9, 38.70N×20.61E, h0km, mb3.7/3, mb1 3.6/5, mb1mx3.3/44, mbtmp3.5/5, ML3.4/2, Error ellipse: s-maj=80.6km s-min=32.1km az=36.0
ATH 01 21:09:59.1, 38.41N×20.51E, h15km±2km, ML3.4/8, Error ellipse: s-maj=2.5km s-min=0.7km az=265.0
THE 01 21:09:59.5, 38.42N×20.47E, h0km±1km, ML3.4/14, Error ellipse: s-maj=1.4km s-min=0.5km az=66.0
ISC 01 21:09:58.3±0.7, 38.42N±0.02×20.47E±0.03, h14km±4km, n62, σ1§23/98, mb3.8/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.07**	**97**	P	**Pg**	**21 10 00.8**	**-0.3**
VSK1				S	**Sg**	**21 10 01.8**	**-1.2**
	139μm,0.1s						
FSK	**Fiskardo**	**0.08**	**61**	P	**Pg**	**21 10 01.1**	**-0.1**
KEF1	**Kardakata, Kep**	**0.14**	**179**	P	**Pb**	**21 10 02.3**	**-0.4**
KEF1				S	**Sg**	**21 10 05.2**	**+0.9**
KEF4	**Livadi, Kephal**	**0.16**	**192**	P	**Pb**	**21 10 03.0**	**-0.1**
KEF4				S	**Sg**	**21 10 06.4**	**+1.6**
KEF3	**Kipouria, Keph**	**0.23**	**204**	P	**Pb**	**21 10 04.4**	**0.0**
KEF3				S	**Sg**	**21 10 08.5**	**+1.7**
ARG2	**Argostoli**	**0.24**	**177**	P	**Pb**	**21 10 04.0**	**-0.4**
ARG2				S	**Sg**	**21 10 08.2**	**+1.3**
	30μm,0.3s						
CHV1	**Chavriata, Kef**	**0.24**	**196**	P	**Pb**	**21 10 04.5**	**0.0**
CHV1				S	**Sb**	**21 10 09.0**	**+0.4**
	43μm,0.4s						
EVGI	**Lefkada island**	**0.25**	**36**	P	**Pb**	**21 10 04.5**	**-0.1**
EVGI				S	**Sg**	**21 10 08.7**	**+1.4**
EVGI	**Lefkada island**	**0.25**	**36**	P	**Pb**	**21 10 04.5**	**-0.1**
EVGI				S	**Sg**	**21 10 08.2**	**+1.0**
KEF2	**Argostoli. Kep**	**0.25**	**177**	P	**Pg**	**21 10 04.1**	**+0.5**
KEF2				S	**Sg**	**21 10 08.2**	**+0.9**
VLS	**Valsamata**	**0.26**	**158**	P	**Pg**	**21 10 04.1**	**+0.4**
VLS				S	**Sg**	**21 10 08.2**	**+0.7**
	13μm,0.4s						
VLS	**Valsamata**	**0.26**	**158**	P	**Pg**	**21 10 04.2**	**+0.4**
VLS				S	**Sg**	**21 10 07.5**	**0.0**
VLS				AML	AML	21 10 08.7	
	comp=E,18970μm,0.3s						
VLS				AML	AML	21 10 11.5	
	comp=N,24621μm,0.5s						
MGNA	**Meganis**	**0.35**	**47**	P	**Pb**	**21 10 05.9**	**-0.4**
MGNA				S	**Sb**	**21 10 11.0**	**-0.7**
MGNA				AML	AML	21 10 11.9	
	comp=N,33341μm,0.4s						
MGNA				AML	AML	21 10 12.1	
	comp=E,28511μm,0.3s						
KFL	**Anninata**	**0.40**	**141**	P	**Pg**	**21 10 06.5**	**+0.3**
KFL				S	**Sb**	**21 10 13.3**	**+0.2**
KFL	**Anninata**	**0.40**	**141**	P	**Pg**	**21 10 06.5**	**+0.3**
LKD2	**Lefkada island**	**0.40**	**22**	P	**Pb**	**21 10 07.0**	**-0.2**
LKD2				S	**Sb**	**21 10 13.4**	**+0.2**
	comp=E,6μm,0.5s						
LKD2	**Lefkada island**	**0.40**	**22**	P	**Pb**	**21 10 07.0**	**-0.2**
LKD2				S	**Sb**	**21 10 13.0**	**-0.2**
LKD2				AML	AML	21 10 15.0	
	comp=N,9482μm,0.5s						
LKD2				AML	AML	21 10 16.6	
	comp=E,12329μm,0.6s						
TSLK	**Tsoukalades, L**	**0.43**	**20**	P	**Pb**	**21 10 07.7**	**0.0**
TSLK				S	**Sb**	**21 10 14.9**	**+0.8**
	comp=E,9μm,0.8s						
TSLK	**Tsoukalades, L**	**0.43**	**20**	P	**Pb**	**21 10 07.9**	**+0.1**
TSLK				S	**Sb**	**21 10 14.0**	**-0.1**
AST1	**Astakos**	**0.50**	**76**	P	**Pb**	**21 10 08.8**	**-0.1**
AST1				S	**Sb**	**21 10 17.0**	**+0.9**
	comp=E,7μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.56**	**164**	P	**Pg**	**21 10 09.2**	**-0.1**
VLMS				S	**Sb**	**21 10 17.7**	**-0.1**
VLMS				AML	AML	21 10 23.0	
	comp=N,12026μm,0.3s						
VLMS				AML	AML	21 10 24.6	
	comp=E,6966μm,0.5s						
PDO	**Prodromos**	**0.59**	**72**	P	**Pb**	**21 10 10.2**	**-0.2**
PDO				S	**Sb**	**21 10 18.9**	**+0.3**
	comp=E,5μm,0.7s						
PDO	**Prodromos**	**0.59**	**72**	P	**Pb**	**21 10 10.2**	**-0.2**
PDO				S	**Sb**	**21 10 18.4**	**-0.2**
KRI1	**kERI**	**0.80**	**160**	P	**Pb**	**21 10 13.4**	**-0.4**
KRI1				S	**Sn**	**21 10 26.7**	**-0.3**
	comp=E,3μm,0.4s						
PVO	**Paravola**	**0.85**	**76**	P	**Pb**	**21 10 15.4**	**+0.5**
PVO				S	**Sn**	**21 10 29.1**	**+0.9**
	comp=E,2μm,0.6s						
PVO	**Paravola**	**0.85**	**76**	P	**Pb**	**21 10 15.0**	**+0.1**
PVO				S	**Sb**	**21 10 26.3**	**+0.1**
PVO				AML	AML	21 10 31.5	
	comp=N,3319μm,0.6s						
PVO				AML	AML	21 10 34.6	
	comp=E,3814μm,0.9s						
RLS	**Riolos of Patr**	**0.86**	**114**	P	**Pb**	**21 10 15.2**	**+0.1**
RLS				S	**Sn**	**21 10 29.2**	**+0.7**
	comp=E,715nm,0.7s						
RLS	**Riolos of Patr**	**0.86**	**114**	P	**Pb**	**21 10 15.1**	**0.0**
DRO	**Drossia**	**1.08**	**115**	P	**Pb**	**21 10 19.0**	**-0.2**
DRO				S	**Sn**	**21 10 36.4**	**+2.5**
	comp=E,1μm,0.6s						
DRO	**Drossia**	**1.08**	**115**	P	**Pn**	**21 10 19.2**	**+0.1**
DRO				S	**Sg**	**21 10 33.5**	**+0.2**
EFP	**Efpalio**	**1.13**	**89**	P	**Pb**	**21 10 19.3**	**-0.3**
EFP	**Efpalio**	**1.13**	**89**	P	**Pb**	**21 10 19.4**	**-0.3**
ANX	**Ano Chora**	**1.15**	**81**	P	**Pb**	**21 10 20.4**	**-0.1**
ANX				S	**Sn**	**21 10 39.2**	**+3.4**
	comp=E,1μm,0.7s						
ANX	**Ano Chora**	**1.15**	**81**	P	**Pb**	**21 10 19.9**	**-0.2**
ANX				S	**Sn**	**21 10 35.9**	**+0.1**
ANX				AML	AML	21 10 44.2	
	comp=E,1928μm,0.4s						
ANX				AML	AML	21 10 44.9	
	comp=N,3138μm,0.6s						
EVR	**Evrytania**	**1.16**	**64**	P	**Pg**	**21 10 20.5**	**-0.2**
EVR	**Evrytania**	**1.16**	**64**	P	**Pg**	**21 10 20.4**	**-0.2**
LAKA	**Lakka**	**1.20**	**98**	P	**Pn**	**21 10 20.5**	**-0.2**
SERG	**Sergoula**	**1.25**	**90**	P	**Pn**	**21 10 21.4**	**+0.1**
SERG	**Sergoula**	**1.25**	**90**	P	**Pn**	**21 10 21.5**	**+0.1**
TRIZ	**Trizonia**	**1.26**	**92**	P	**Pn**	**21 10 21.4**	**-0.1**
JAN	**Janina**	**1.27**	**13**	P	**Pg**	**21 10 23.7**	**+0.9**
JAN				S	**Sg**	**21 10 44.1**	**+4.8**
	comp=N,2μm,0.5s						
JAN	**Janina**	**1.27**	**13**	P	**Pg**	**21 10 24.3**	**+1.5**
KALE	**Kalithea**	**1.31**	**91**	P	**Pb**	**21 10 22.8**	**0.0**
AMT	**Artemida-Makis**	**1.32**	**132**	P	**Pg**	**21 10 24.1**	**+0.5**
AMT				S	**Sg**	**21 10 42.1**	**+1.3**
AMT				AML	AML	21 10 54.8	
	comp=N,2429μm,0.7s						
AMT				AML	AML	21 10 56.1	
	comp=E,1676μm,1.1s						
KLV	**Kalavryta, Ach**	**1.38**	**105**	P	**Pb**	**21 10 23.8**	**0.0**
KLV	**Kalavryta, Ach**	**1.38**	**105**	P	**Pn**	**21 10 23.3**	**+0.2**
THL	**Klokotos Trika**	**1.66**	**46**	P	**Pg**	**21 10 30.3**	**+0.1**
ITM	**Ithomi**	**1.69**	**137**	P	**Pg**	**21 10 30.4**	**-0.3**
OHR	**Ohrid**	**2.70**	**5**	*e*Pn	**Pb**	**21 10 45.5**	**-1.0**
VAY	**Valandovo**	**3.32**	**28**	*e*Pn	**Pb**	**21 10 55.7**	**-1.2**
STIP	**Stip**	**3.53**	**21**	*e*Pn	**Pb**	**21 10 58.3**	**-2.2**
SOKA	**Soboth**	**9.18**	**336**	*e*Pn	**Pn**	**21 12 10.7**	**+0.4**
	comp=E,1.8nm,0.4s						
SOKA				*e*Sn	**Sn**	**21 13 49.0**	**-4.3**
	comp=E,5.1nm,0.7s						
OBKA	**Obir**	**9.19**	**334**	*e*Pn	**Pn**	**21 12 13.1**	**+2.6**
	comp=E,0.6nm,0.2s						
OBKA				*e*Sn	**Sn**	**21 13 51.1**	**-2.6**
	comp=E,8.2nm,0.7s						
KBA	**Koelnbreinsper**	**10.11**	**331**	Pn	**Pn**	**21 12 22.3**	**-0.9**
	comp=E,0.5nm,0.3s						
KBA				Sn	**Sn**	**21 14 14.1**	**-2.4**
	comp=E,1.5nm,0.5s						
MOA	**Molln**	**10.46**	**336**	*e*Pn	**Pn**	**21 12 29.5**	**+1.8**
	comp=E,0.8nm,0.3s						
MOA				Sn	**Sn**	**21 14 21.5**	**-3.2**
	comp=E,1.9nm,0.4s						
WATA	**Walderalm**	**11.04**	**327**	Sn	**Sn**	**21 14 38.8**	**-0.3**
	comp=E,1.1nm,0.4s						
MOTA	**Moosalm**	**11.25**	**325**	Pn	**Pn**	**21 12 41.1**	**+2.3**
	comp=E,1.5nm,0.5s						
MOTA				Sn	**Sn**	**21 14 44.4**	**0.0**
	comp=E,3.2nm,0.6s						
GERES	**GERESS Array B**	**11.51**	**337**	Pn	**Pn**	**21 12 42.2**	**-0.1**
	comp=E,0.1nm,0.3s,baz=158,slow=13,SNR=2.8						
AKASG	**Malin Array Be**	**13.76**	**24**	Pn	**Pn**	**21 13 09.8**	**-3.1**
	comp=E,0.3nm,0.3s,baz=212,slow=10,SNR=2.3						
FINES	**FINESS Array B**	**23.31**	**7**	P	**P**	**21 15 06.6**	**+1.0**
	comp=E,2.2nm,0.7s,baz=173,slow=12,SNR=5.8						
MKAR	**Makanchi Array**	**45.21**	**59**	P	**P**	**21 18 15.3**	**+0.5**
	comp=E,0.3nm,0.4s,baz=278,slow=7.2,SNR=9.0						
ZALV	**Zalesovo Beam**	**45.56**	**48**	P	**P**	**21 18 17.8**	**+0.3**
	comp=E,1.1nm,0.7s,baz=282,slow=8.5,SNR=4.4						

NEIC 01 21:10:55.9±3.8, 16.94N±0.09×95.26W±0.05, h98km±9km, Error ellipse: s-maj=13.8km s-min=5.4km az=164.0
MEX 01 21:10:57.2±1.0, 16.93N×95.22W, h108km±10km, MD4.0
ISC 01 21:10:55.3±1.2, 16.88N±0.07×95.25W±0.04, h110km±11km, n17, σ1§39/29, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.41**	**59**		**Pn**	**21 11 11.9**	**+0.3**
CMIG					**Sn**	**21 11 23.2**	**-0.8**
CMIG	**Matias Romero**	**0.41**	**59**	*e*P	**Pn**	**21 11 11.9**	**+0.3**
CMIG				*e*S	**Sn**	**21 11 23.2**	**-0.8**
HUIG	**Huatulco**	**1.38**	**217**		**Pn**	**21 11 21.2**	**+0.5**
HUIG					**Sn**	**21 11 41.4**	**+1.4**
HUIG	**Huatulco**	**1.38**	**217**	*e*P	**Pn**	**21 11 21.2**	**+0.5**
HUIG				*e*S	**Sn**	**21 11 41.4**	**+1.4**
VHO	**Vista Hermosa**	**1.43**	**278**	*e*P	**Pn**	**21 11 23.4**	**+1.9**
VHO				*e*S	**Sn**	**21 11 41.6**	**+0.2**
PEIG	**Puerto Escondi**	**2.02**	**244**	*i* P	**Pn**	**21 11 28.6**	**0.0**
PEIG				*e*S	**Sn**	**21 11 54.7**	**+0.7**
TGIG		**2.04**	**93**	*e*P	**Pn**	**21 11 30.3**	**+1.4**
TGIG				*i* S	**Sn**	**21 11 54.6**	**0.0**
YOIG	**Yosondua**	**2.19**	**270**	*e*P	**Pn**	**21 11 32.9**	**+1.8**
YOIG				*e*S	**Sn**	**21 11 58.9**	**+0.4**
HLIG	**Huajuapan de L**	**2.61**	**292**	*e*P	**Pn**	**21 11 38.5**	**+2.0**
HLIG				*e*S	**Sn**	**21 12 07.4**	**-0.6**
PNIG	**Pinotepa**	**2.80**	**260**		**Pn**	**21 11 39.0**	**+0.3**
PNIG					**Sn**	**21 12 09.0**	**-3.1**
PNIG	**Pinotepa**	**2.80**	**260**	*e*P	**Pn**	**21 11 39.0**	**+0.3**
PNIG				*e*S	**Sn**	**21 12 09.0**	**-3.1**
FTIG	**Fresnillo de T**	**2.93**	**291**	*e*P	**Pn**	**21 11 41.9**	**+1.3**
FTIG				*i* S	**Sn**	**21 12 14.9**	**-0.5**
CCIG	**Comitan**	**3.05**	**101**	Pn	**Pn**	**21 11 42.6**	**+0.5**
TLIG	**Tlapa**	**3.24**	**283**	Pn	**Pn**	**21 11 47.0**	**+2.3**
MOIG	**Morelia**	**6.29**	**297**	Pn	**Pn**	**21 12 24.8**	**-1.1**
TEIG	**Tepich**	**7.41**	**62**	Pn	**Pn**	**21 12 41.0**	**+0.3**
ACON	**Acoyapa**	**10.92**	**115**	Pn	**Pn**	**21 13 28.3**	**-0.1**

CRAAG 01 21:18:36.2, 35.82N×0.37W, Ml3.1
MDD 01 21:18:39.4±1.2, 36.04N×0.54W, h0km, mbLg2.7/22, Error ellipse: s-maj=12.2km s-min=5.5km az=149.0, PRXIMO
INMG 01 21:18:39.4±1.2, 35.89N×0.44W, h29km±20km, ML2.3, Error ellipse: s-maj=10.3km s-min=4.6km az=141.0
CNRM 01 21:18:41.9±2.0, 36.44N×0.68W, h224km±22km, Error ellipse: s-maj=19.0km s-min=7.5km az=77.0
ISC 01 21:18:36.2±1.2, 35.78N±0.06×0.34W±0.04, h31km±11km, n54, σ2§04/81, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.18**	**255**	P	**Pb**	**21 18 41.6**	**-0.6**
EANR	**'Ain N'Sour**	**1.18**	**81**	P	**Pn**	**21 18 58.6**	**+1.9**
ETRT	**Tiaret**	**1.39**	**106**	P	**Pn**	**21 19 04.0**	**+4.4**
ECHA	**Ech Chlef**	**1.43**	**75**	P	**Pn**	**21 19 01.0**	**+1.0**
EBNR	**Beni Rached**	**1.60**	**71**	P	**Pn**	**21 19 02.0**	**-0.4**
ENIJ	**Nijar**	**1.92**	**309**	P	**Pn**	**21 19 07.1**	**+0.3**
	5.2nm,0.2s,SNR=7.9						
ENIJ				S	**Sn**	**21 19 27.8**	**-2.1**
	164nm,0.3s,SNR=7.9						
TLOR	**Lorca, Murcia**	**2.16**	**330**	P	**Pn**	**21 19 10.8**	**+0.6**
	37nm,0.4s,SNR=7.9						
TLOR				S	**Sn**	**21 19 33.5**	**-2.4**
	282nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**2.18**	**341**	P	**Pn**	**21 19 11.2**	**+0.8**
	2.8nm,0.2s,SNR=27						
EMUR				S	**Sn**	**21 19 33.6**	**-2.8**
	32nm,0.3s						
ETRV	**Los Montesinos**	**2.26**	**351**	P	**Pn**	**21 19 12.8**	**+1.4**
	6.9nm,0.2s,SNR=7.9						
ETRV				S	**Sn**	**21 19 36.5**	**-1.8**
	12nm,0.3s,SNR=7.9						
EBER	**Berja**	**2.34**	**299**	P	**Pn**	**21 19 13.6**	**+0.8**
	5.1nm,0.1s,SNR=39						
EBER				S	**Sn**	**21 19 39.1**	**-1.5**
	57nm,0.4s,SNR=5.7						
GORA	**Gorafe**	**2.76**	**309**	P	**Pn**	**21 19 20.5**	**+2.1**
	23nm,0.2s,SNR=4.0						
GORA				S	**Sn**	**21 19 48.9**	**-1.8**
	33nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**2.88**	**301**	P	**Pn**	**21 19 22.2**	**+2.2**
	1.5nm,0.5s,SNR=7.9						
EQUE				S	**Sn**	**21 19 53.9**	**+0.3**
	5.6nm,0.3s,SNR=7.9						
EBEN2	**Beniarda presa**	**2.89**	**2**	P	**Pn**	**21 19 21.9**	**+1.7**
	4.7nm,0.2s,SNR=7.9						
EBEN2				S	**Sn**	**21 19 52.5**	**-1.4**
	30nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**2.93**	**324**	P	**Pn**	**21 19 23.3**	**+2.5**
	23nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**21 19 54.9**	**-0.1**
	42nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**2.93**	**324**	P	**Pn**	**21 19 24.1**	**+3.3**
SESP				S	**Sn**	**21 19 58.0**	**+3.0**
EQES	**Quesada**	**2.98**	**313**	P	**Pn**	**21 19 24.3**	**+2.8**
	2.9nm,0.2s,SNR=42						
EQES				S	**Sn**	**21 19 57.7**	**+1.5**
	50nm,0.3s,SNR=6.6						
ETOB	**Tobarra**	**3.02**	**342**	P	**Pn**	**21 19 23.8**	**+1.9**
	3.4nm,0.2s,SNR=40						
ETOB				S	**Sn**	**21 19 57.4**	**+0.4**
	9.7nm,0.2s,SNR=9.0						
TDRA	**Tendrara**	**3.07**	**208**	P	Pb	21 19 40.5	+10
TDRA				S	Sb	21 20 28.7	+21
EGOR	**Sierra Gorda,**	**3.32**	**295**	P	**Pn**	**21 19 28.1**	**+2.0**
	1.3nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**21 20 06.8**	**+2.2**
	12nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**3.51**	**22**	P	**Pn**	**21 19 30.9**	**+2.4**
	3.3nm,0.2s,SNR=8.8						
EIBI				S	**Sn**	**21 20 07.1**	**-2.0**
	9.1nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**3.67**	**284**	P	**Pn**	**21 19 30.5**	**-0.4**
	1.2nm,0.2s,SNR=5.5						
EMIJ				S	**Sn**	**21 20 10.3**	**-2.8**
	4.0nm,0.2s,SNR=4.5						
FIGM	**Figuig**	**3.72**	**192**	P	Pb	21 19 49.4	+8.1
FIGM				S	Sb	21 20 43.7	+18
EADA	**Adamuz**	**4.15**	**306**	P	**Pn**	**21 19 39.1**	**+1.7**
	0.3nm,0.3s,SNR=7.9						
EADA				S	**Sn**	**21 20 23.7**	**-1.1**
	3.3nm,0.3s,SNR=7.9						
HORN	**Hornachuelos**	**4.45**	**299**	P	**Pn**	**21 19 44.2**	**+2.6**
HORN				S	**Sn**	**21 20 35.1**	**+2.7**
EMOS	**Mosqueruela**	**4.58**	**359**	P	**Pn**	**21 19 46.3**	**+2.9**
	1.1nm,0.2s,SNR=9.7						
EMOS				S	**Sn**	**21 20 34.1**	**-1.5**
	3.8nm,0.3s,SNR=7.9						
MDT	**Midelt**	**4.61**	**231**	P	Pb	21 19 54.4	-2.0
MDT				S	**Sb**	**21 20 51.7**	**+0.2**
ECAB	**El Cabril**	**4.67**	**301**	P	**Pn**	**21 19 45.6**	**+1.0**
	1.4nm,0.2s,SNR=22						
ECAB				S	**Sn**	**21 20 35.0**	**-2.8**
	2.9nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**4.83**	**325**	P	**Pn**	**21 19 48.8**	**+2.0**
	2.2nm,0.3s,baz=142,slow=13,SNR=43						
ESDC				S	**Sn**	**21 20 39.6**	**-2.2**
	1.1nm,0.2s,baz=142,slow=23,SNR=9.6						
PAB	**San Pablo**	**4.92**	**321**	P	**Pn**	**21 19 50.2**	**+2.1**
	1.9nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**21 20 40.6**	**-3.5**
	1.1nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**5.19**	**6**	P	**Pn**	**21 19 54.0**	**+2.2**
	1.4nm,0.2s,SNR=7.9						
ERTA				S	**Sn**	**21 20 49.6**	**-1.1**
	0.6nm,0.3s,SNR=7.9						
ETOR	**Torete**	**5.21**	**345**	P	**Pn**	**21 19 53.6**	**+1.5**
	0.9nm,0.1s,SNR=7.9						
ETOR				S	**Sn**	**21 20 49.0**	**-2.1**
	2.9nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.46**	**293**	P	**Pn**	**21 19 55.5**	**+0.2**
	0.7nm,0.3s,SNR=7.9						
EMIN				S	**Sn**	**21 20 55.3**	**-1.8**
	0.8nm,0.3s,SNR=7.9						
EPOB	**Poblet**	**5.67**	**11**	P	**Pn**	**21 20 00.3**	**+1.9**
	0.4nm,0.1s,SNR=7.9						
EPOB				S	**Sn**	**21 20 58.7**	**-3.9**
	4.3nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**6.09**	**301**	P	**Pn**	**21 20 05.4**	**+1.3**
	0.9nm,0.3s,SNR=9.5						
EBAD				S	**Sn**	**21 21 09.0**	**-3.8**
	3.7nm,0.2s,SNR=7.9						
PVAQ	**Vaqueiros**	**6.15**	**287**	*e*Pn	**Pn**	**21 20 06.1**	**+1.2**
PVAQ	**Vaqueiros**	**6.15**	**287**	P	**Pn**	**21 20 06.1**	**+1.2**
EPLA	**Plasencia**	**6.23**	**315**	P	**Pn**	**21 20 07.6**	**+1.5**
	0.6nm,0.2s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**6.29**	**286**	*e*Pn	**Pn**	**21 20 08.8**	**+2.0**
PBDV	**Barranco-do-Ve**	**6.29**	**286**	P	**Pn**	**21 20 08.8**	**+2.0**
EMIR	**Miracle**	**6.29**	**13**	P	**Pn**	**21 20 09.9**	**+3.0**
	0.3nm,0.1s,SNR=7.9						
EMIR				S	**Sn**	**21 21 15.1**	**-2.7**
	4.4nm,0.3s,SNR=7.9						
CFON	**Fontmartina**	**6.35**	**19**	P	**Pn**	**21 20 09.6**	**+1.8**
	3.0nm,0.3s,SNR=7.9						
PESTR	**Estremoz**	**6.55**	**300**	*e*Pn	**Pn**	**21 20 11.8**	**+1.4**
PMRV	**Marv??o**	**6.68**	**305**	*e*Pn	**Pn**	**21 20 13.9**	**+1.7**
PMRV	**Marv??o**	**6.68**	**305**	P	**Pn**	**21 20 13.9**	**+1.7**
EVO	**Evora**	**6.71**	**296**	*e*Pn	**Pn**	**21 20 13.7**	**+1.0**
EVO	**Evora**	**6.71**	**296**	P	**Pn**	**21 20 13.7**	**+1.0**
PCBR	**Castelo Branco**	**6.95**	**308**	*e*Pn	**Pn**	**21 20 17.8**	**+1.9**
PCBR				*e*Sn	**Sn**	**21 21 31.8**	**-2.1**
PCBR	**Castelo Branco**	**6.95**	**308**	P	**Pn**	**21 20 17.8**	**+1.9**
PCBR				S	**Sn**	**21 21 31.8**	**-2.1**
PNCL	**Nicolau / Gran**	**6.96**	**292**	*e*Pn	**Pn**	**21 20 17.1**	**+1.1**
PNCL	**Nicolau / Gran**	**6.96**	**292**	P	**Pn**	**21 20 17.1**	**+1.1**
PMTG	**Montargil**	**7.08**	**300**	*e*Pn	**Pn**	**21 20 18.9**	**+1.2**
PMTG	**Montargil**	**7.08**	**300**	P	**Pn**	**21 20 18.9**	**+1.2**
PCAS	**Casmilo, Conde**	**7.73**	**306**	*e*Pn	**Pn**	**21 20 28.6**	**+2.0**
PCAS	**Casmilo, Conde**	**7.73**	**306**	P	**Pn**	**21 20 28.6**	**+2.0**

IDC 01 21:19:23.6±52.0, 21.31S×172.44W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.7/50, mbtmp4.2/3, Error ellipse: s-maj=1008.0km s-min=192.3km az=86.0
NEIC 01 21:19:33.6±3.1, 19.25S±0.2×173.6W±0.3, h29km±8km, mb4.5/16, Error ellipse: s-maj=39.4km s-min=17.8km az=112.0
ISC 01 21:19:33.6±1.2, 19.2S±0.2×173.7W±0.2, h28km, n21, σ1§71/19, mb4.5/11, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**20.61**	**201**	P	Pn	21 24 12.6	-0.4
URZ				IAmb	IAmb	21 24 31.7	
	comp=Z,23nm,1.1s						
BKZ	**Black Stump Fm**	**21.64**	**201**	P	**P**	**21 24 22.4**	**+0.7**
NNZ	**Nelson**	**24.57**	**204**	P	**P**	**21 24 50.1**	**-1.0**
QRZ	**Quartz Range**	**24.57**	**206**	P	**P**	**21 24 49.8**	**-1.4**
QRZ				IAmb	IAmb	21 25 07.1	
	comp=Z,17nm,1.1s						
THZ	**Tophouse**	**25.22**	**204**	P	**P**	**21 24 56.7**	**-0.4**
KHZ	**Kahutara**	**25.55**	**202**	P	**P**	**21 24 59.3**	**-0.6**
KHZ				IAmb	IAmb	21 25 06.3	
	comp=Z,13nm,1.0s						
LTZ	**Lake Taylor**	**26.33**	**204**	P	**P**	**21 25 08.2**	**+1.1**
LTZ				IAmb	IAmb	21 25 11.2	
	comp=Z,9.2nm,0.9s						
EIDS	**Eidsvold**	**33.07**	**253**	P	**P**	**21 26 05.0**	**-2.1**
EIDS				IAmb	IAmb	21 26 06.5	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**41.97**	**243**	P	P	21 27 16.8	-5.6
	comp=Z,0.7nm,0.4s,baz=125,slow=12,SNR=3.6						
KHLU	**Kahalu`u**	**42.32**	**25**	P	**P**	**21 27 24.9**	**-0.5**
WR0	**Warramunga Arr**	**48.59**	**260**	P	**P**	**21 28 15.8**	**+0.8**
WR0				IAmb	IAmb	21 28 24.5	
	comp=Z,6.0nm,1.1s						
AS31	**Alice Springs**	**48.74**	**255**	P	**P**	**21 28 15.4**	**-0.8**
ASAR	**Alice Springs**	**48.74**	**255**	P	**P**	**21 28 15.7**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=95,slow=7.3,SNR=49						
ASAR	**Alice Springs**	**48.74**	**255**	P	**P**	**21 28 15.7**	**-0.5**
WB0	**Warramunga Arr**	**48.75**	**260**	P	**P**	**21 28 17.8**	**+1.5**
WB0				IAmb	IAmb	21 28 18.4	
	comp=Z,4.1nm,0.6s						
WRAB	**Tennant Creek**	**48.77**	**260**	P	**P**	**21 28 17.8**	**+1.4**
WRAB				IAmb	IAmb	21 28 18.3	
	comp=Z,3.1nm,0.8s						
WRA	**Warramunga Arr**	**48.78**	**260**	P	**P**	**21 28 17.7**	**+1.2**
	comp=Z,2.0nm,0.3s,baz=97,slow=6.9,SNR=30						
WRA	**Warramunga Arr**	**48.78**	**260**	P	**P**	**21 28 17.1**	**+0.5**
KNRA	**Kununurra**	**54.78**	**264**	P	**P**	**21 29 05.5**	**+4.2**
FITZ	**Fitzroy Crossi**	**57.20**	**260**	P	**P**	**21 29 22.0**	**+3.4**
FITZ				IAmb	IAmb	21 29 36.4	
	comp=Z,8.1nm,1.1s						
SYO	**Syowa Base**	**88.84**	**191⇑**	*e*PcP	**P**	**21 32 25.4**	**+0.6**

IDC 01 21:21:18.3±0.9, 17.15N×119.37E, h0km, mb3.8/11, mb1 3.9/12, mb1mx3.7/53, mbtmp3.7/12, ML3.3/1, Error ellipse: s-maj=30.6km s-min=18.7km az=70.0
MAN 01 21:21:19.6, 17.14N×119.23E, h26km, mb4.6, ML3.5, MS3.3
NEIC 01 21:21:23.1±1.8, 17.25N±0.06×119.32E±0.07, h35km±5km, mb4.2/16, Error ellipse: s-maj=9.3km s-min=9.2km az=140.0
ISC 01 21:21:20.3±1.4, 17.18N±0.03×119.33E±0.05, h16km±9km, n52, σ1§64/57, mb4.0/18, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.97**	**145**	*e*P	**Pn**	**21 21 43.1**	**+4.0**
BOLP				*e*S	**Sg**	**21 21 51.4**	**-0.4**
SZP	**Santa**	**1.13**	**71**	Pn	**Pn**	**21 21 41.5**	**-0.8**
SIPP	**Brgy, Tapao**	**1.30**	**55⇓**	*e*P	**Pn**	**21 21 42.4**	**-1.4**
SIPP				*e*S	**Sg**	**21 22 07.4**	**+4.9**
ABRA	**Dolores**	**1.40**	**70**	*e*P	**Pn**	**21 21 44.8**	**-0.3**
ABRA				*e*S	**Sg**	**21 22 04.2**	**-1.3**
SMPP	**San Manuel, Pa**	**1.65**	**128**	*e*P	**Pn**	**21 21 47.2**	**-1.3**
SMPP				*e*S	**Sn**	**21 22 04.6**	**-4.8**
APYP	**Conner**	**1.94**	**69**	*e*P	**Pn**	**21 21 53.4**	**-1.9**
APYP				*e*S	**Sg**	**21 22 18.4**	**-1.0**
CAUP	**Cauayan**	**2.39**	**95**	*e*P	**Pb**	**21 22 01.4**	**-1.5**
CAUP				*e*S	**Sg**	**21 22 40.3**	**+3.0**
BALP	**Baler**	**2.58**	**123**	*e*P	**Pb**	**21 22 03.8**	**-2.5**
SGCP	**Mt. Cagua**	**2.79**	**67**	*e*P	**Pn**	**21 22 05.5**	**+1.2**
SGCP				*e*S	**Sn**	**21 22 38.2**	**+0.5**
TGY	**Tagaytay City**	**3.43**	**153**	Pn	**Pb**	**21 22 17.5**	**-3.2**
	7.7nm,0.3s,baz=149,slow=22,SNR=1.1						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LQP	**Lukban**	**3.72**	**145⇑**	eP	**Pg**	**21 22 33.1**	**+1.5**
TPUB	**Ta-pu**	**6.21**	**11**	Pn	**Pn**	**21 22 51.3**	**-0.1**
YULB	**Yu-li**	**6.45**	**16**	Pn	**Pn**	**21 22 54.7**	**+0.1**
SSLB	**Suanglung**	**6.75**	**13**	Pn	**Pn**	**21 22 58.7**	**-0.1**
KNMB	**Chin-men Tao**	**7.30**	**353**	Pn	**Pn**	**21 23 06.1**	**-0.2**
YHNB	**Yeheng**	**7.69**	**14**	Pn	**Pn**	**21 23 11.7**	**0.0**
TATO	**Taipei**	**8.01**	**14**	Pn	**Pn**	**21 23 15.3**	**-0.7**
QIZ	**Qiongzhong**	**9.21**	**283**	Pn	**Pn**	**21 23 30.3**	**-2.2**
CMAR	**Chiang Mai Arr**	**19.46**	**277**	P	**Pn**	**21 25 47.6**	**0.0**
	0.0nm,0.3s,baz=100,slow=9.4,SNR=3.7						
KSAR	**Wonju Array Be**	**21.55**	**19**	P	**P**	**21 26 08.3**	**-0.5**
KSRS	**Korea Array**	**21.57**	**19**	P	**P**	**21 26 08.5**	**-0.6**
	1.6nm,0.8s,baz=201,slow=12,SNR=6.7						
IPM	**Ipoh**	**21.94**	**237**	P	**P**	**21 26 13.7**	**+0.4**
JAGI	**Jajag, Banyuwa**	**26.00**	**192**	P	**P**	**21 26 54.8**	**+2.3**
SONM	**Songino Array**	**32.37**	**344**	P	**P**	**21 27 49.2**	**+0.1**
	0.4nm,0.7s,baz=160,slow=8.9,SNR=4.6						
SONM	**Songino Array**	**32.37**	**344**	IAmb	IAmb	21 27 57.0	
	comp=Z,0.8nm,1.1s						
KLR	**Kul'dur**	**33.52**	**15**	P	**P**	**21 28 00.0**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=310,slow=2.6,SNR=4.1						
PALK	**Pallekele**	**38.95**	**260**	P	**P**	**21 28 45.4**	**-0.5**
PALK				IAmb	IAmb	21 28 48.0	
	comp=Z,9.5nm,1.1s						
MKAR	**Makanchi Array**	**42.48**	**322**	P	**P**	**21 29 15.9**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=118,slow=9.7,SNR=5.5						
ASAR	**Alice Springs**	**43.02**	**160**	P	**P**	**21 29 19.2**	**0.0**
	comp=Z,0.4nm,0.5s,baz=339,slow=6.5,SNR=10						
ASAR	**Alice Springs**	**43.02**	**160**	P	**P**	**21 29 19.5**	**+0.2**
KDJ	**Kajisay**	**43.67**	**314**	P	**P**	**21 29 21.8**	**-2.8**
NIL	**Nilore**	**44.36**	**301**	P	**P**	**21 29 29.8**	**-0.3**
NIL				IAmb	IAmb	21 29 33.7	
	comp=Z,2.9nm,0.7s						
ZALV	**Zalesovo Beam**	**45.38**	**332**	P	**P**	**21 29 38.1**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=128,slow=6.1,SNR=6.6						
ZALV	**Zalesovo Beam**	**45.38**	**332**	P	**P**	**21 29 38.3**	**+0.4**
KURK	**Kurchatov**	**46.59**	**325**	P	**P**	**21 29 47.5**	**+0.1**
KKAR	**Karatay Array**	**48.64**	**313**	P	**P**	**21 30 02.9**	**-0.5**
BBOO	**Buckleboo**	**52.22**	**162**	P	**P**	**21 30 30.8**	**+0.2**
BBOO				IAmb	IAmb	21 30 34.1	
	comp=Z,4.8nm,0.9s						
STKA	**Stephens Creek**	**53.24**	**156**	P	**P**	**21 30 38.0**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=14,slow=7.2,SNR=3.4						
STKA	**Stephens Creek**	**53.24**	**156**	P	**P**	**21 30 39.0**	**+0.8**
GEYT	**Alibeck**	**57.07**	**304**	P	**P**	**21 31 07.0**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=64,slow=6.8,SNR=4.3						
GEYT	**Alibeck**	**57.07**	**304**	IAmb	IAmb	21 31 07.7	
	comp=Z,1.0nm,0.9s						
GYA0B	**ALIBECK ARRAY**	**57.07**	**304**	P	**P**	**21 31 07.0**	**+1.1**
GYA0B				IAmb	IAmb	21 31 07.7	
	comp=Z,2.3nm,0.9s						
ABKAR	**Akbulak array**	**57.27**	**318**	P	**P**	**21 31 07.2**	**+0.2**
ABKAR	**Akbulak array**	**57.27**	**318**	P	**P**	**21 31 07.8**	**+0.7**
ABKAR				IAmb	IAmb	21 31 20.1	
	comp=Z,1.3nm,1.1s						
TOO	**Toolangi**	**59.77**	**156**	P	**P**	**21 31 25.6**	**+1.0**
TOO				IAmb	IAmb	21 31 30.6	
	comp=Z,2.2nm,0.9s						
ARU	**Arti**	**59.77**	**326**	P	**P**	**21 31 23.6**	**-0.8**
ARU				IAmb	IAmb	21 31 39.7	
	comp=Z,2.1nm,1.1s						
RAYN	**Ar Rayn**	**68.85**	**289**	P	**P**	**21 32 24.7**	**+0.1**
RAYN				IAmb	IAmb	21 32 28.9	
	comp=Z,1.5nm,0.9s						
FINES	**FINESS Array B**	**76.62**	**330**	P	**P**	**21 33 10.3**	**+0.4**
	comp=Z,3.3nm,1.0s,baz=354,slow=4.2,SNR=1.3						
TUWZ	**Tuamarina**	**77.13**	**141**	P	**P**	**21 33 12.0**	**-1.0**
INK	**Inuvik**	**80.34**	**21**	P	**P**	**21 33 32.6**	**+2.3**
	comp=Z,0.9nm,0.9s,baz=0.0,slow=1.0,SNR=1.6						
INK	**Inuvik**	**80.34**	**21**	P	**P**	**21 33 31.9**	**+1.5**
INK				IAmb	IAmb	21 33 38.2	
	comp=Z,1.9nm,1.1s						
YKA	**Yellowknife Ar**	**90.07**	**22**	P	**P**	**21 34 20.2**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=315,slow=4.5,SNR=4.3						

IDC 01 21:29:15.9±8.6, 21.85S×176.61W, h105km±73km, mb3.7/9, mb1 3.9/10, mb1mx3.6/47, mbtmp4.1/10, ML4.3/1, Error ellipse: s-maj=32.3km s-min=26.7km az=20.0
NEIC 01 21:29:24.5±1.5, 21.4S±0.1×176.35W±0.08, h364km±9km, mb4.3/21, Error ellipse: s-maj=18.8km s-min=10.4km az=171.0
ISC 01 21:29:24.4±0.6, 22.5S±0.1×176.5W±0.1, h200km, n48, σ2§72/39, mb4.2/15, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.00**	**312**	Pn	Pn	21 31 01.0	-3.8
NIUE	**Niue**	**7.00**	**62**	Pn	**Pn**	**21 31 01.1**	**-3.7**
NIUE					Sn	21 32 12.9	-11
AFI	**Afiamalu**	**9.64**	**28**	Pn	Pn	21 31 26.2	-13
OUZ	**Omahuta**	**15.36**	**212**		**Pn**	**21 32 50.0**	**-1.0**
DZM	**Mont Dzumac**	**15.82**	**268**	P	**P**	**21 32 50.9**	**-5.7**
DZM				IAmb	IAmb	21 32 55.7	
	comp=Z,11nm,1.1s						
NOUC	**Port Laguerre**	**15.95**	**268**		P	21 32 50.8	-7.0
URZ	**Urewera**	**16.65**	**198**	P	**Pn**	**21 33 09.3**	**+2.9**
	comp=Z,1.0nm,0.3s,baz=269,slow=5.0,SNR=16						
URZ				S	**S**	**21 36 05.0**	**-4.0**
	comp=Z,1.1nm,0.3s,baz=185,slow=23,SNR=9.6						
URZ	**Urewera**	**16.65**	**198**	P	**Pn**	**21 33 08.9**	**+2.5**
URZ				IAmb	IAmb	21 33 25.0	
	comp=Z,17nm,1.1s						
HIZ	**Hauiti**	**17.61**	**203**	P	**Pn**	**21 33 17.6**	**-0.1**
HIZ				IAmb	IAmb	21 33 35.6	
	comp=Z,19nm,1.0s						
BKZ	**Black Stump Fm**	**17.66**	**198**	P	**Pn**	**21 33 17.9**	**-0.6**
MSWZ	**Moikau Station**	**20.11**	**198**	P	**P**	**21 33 42.3**	**-0.6**
KNTN	**Kanton**	**20.14**	**14**	P	P	21 33 21.5	-22
KNTN				IAmb	IAmb	21 33 37.1	
	comp=Z,27nm,1.1s						
SNZO	**South Karori**	**20.17**	**200**	P	**P**	**21 33 41.9**	**-1.7**
BHW	**Baring Head**	**20.21**	**199**	P	**P**	**21 33 43.8**	**-0.2**
TUWZ	**Tuamarina**	**20.52**	**201**	P	**P**	**21 33 48.5**	**+1.2**
NNZ	**Nelson**	**20.53**	**202**	P	**P**	**21 33 44.4**	**-3.0**
NNZ				IAmb	IAmb	21 33 46.7	
	comp=Z,20nm,1.1s						
LHI	**Lord Howe Isla**	**23.54**	**242**	P	P	21 34 07.5	-9.1
RPZ	**Rata Peaks**	**23.54**	**203**	P	**P**	**21 34 21.3**	**+4.7**
	comp=Z,4.1nm,0.6s,baz=25,slow=6.5,SNR=5.2						
LBZ	**Lake Benmore**	**24.44**	**204**		**P**	**21 34 28.8**	**+4.0**
ODZ	**Otahua Downs**	**24.84**	**202**	P	**P**	**21 34 24.9**	**-3.5**
MLZ	**Mavora Lakes**	**26.06**	**205**	P	**P**	**21 34 35.9**	**-3.4**
MLZ				IAmb	IAmb	21 34 44.5	
	comp=Z,12nm,1.2s						
HNR	**Honiara**	**26.08**	**296**	P	P	21 34 22.8	-17
DCZ	**Deep Cove**	**26.52**	**206**	P	**P**	**21 34 38.4**	**-5.1**
DCZ				IAmb	IAmb	21 34 47.7	
	comp=Z,16nm,1.1s						
WHZ	**Wether Hill Ro**	**26.56**	**205**	P	**P**	**21 34 39.4**	**-4.4**
PYZ	**Puysegur Point**	**27.29**	**206**	P	**P**	**21 34 45.8**	**-4.5**
CTA	**Charters Tower**	**34.76**	**267**	P	**P**	**21 35 57.2**	**+1.2**
	comp=Z,3.0nm,0.4s,baz=96,slow=12,SNR=7.9						
STKA	**Stephens Creek**	**38.26**	**247**	P	**P**	**21 36 26.5**	**+1.1**
	comp=Z,3.0nm,0.6s,baz=83,slow=9.0,SNR=11						
BBOO	**Buckleboo**	**42.98**	**246**		**P**	**21 37 04.6**	**+0.6**
ASAR	**Alice Springs**	**45.48**	**258**	P	**P**	**21 37 24.4**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=98,slow=7.8,SNR=18						
ASAR				PcP	**PcP**	**21 39 01.4**	**+1.8**
	comp=Z,0.7nm,0.7s,baz=111,slow=4.1,SNR=5.1						
WRA	**Warramunga Arr**	**45.77**	**264**	P	**P**	**21 37 26.2**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=98,slow=5.5,SNR=11						
WRA				PcP	**PcP**	**21 39 03.1**	**+2.5**
	comp=Z,0.8nm,1.0s,baz=104,slow=3.4,SNR=4.4						
KNRA	**Kununurra**	**51.97**	**267**	P	**P**	**21 38 13.7**	**+0.3**
KNRA				IAmb	IAmb	21 38 17.7	
	comp=Z,22nm,1.1s						
SAO	**San Andreas Ge**	**78.53**	**42**	P	P	21 40 41.7	-22
SAO				IAmb	IAmb	21 40 47.0	
	comp=Z,8.1nm,0.9s						
MAW	**Mawson**	**80.17**	**200**	P	P	21 41 17.7	+5.7
	comp=Z,4.2nm,0.8s,baz=139,slow=9.4,SNR=3.5						
HKPS	**Hong Kong Po S**	**80.90**	**299**	P	P	21 40 57.2	-19
BEKR	**Beckworth**	**81.15**	**40**	P	P	21 40 54.9	-23
BEKR				IAmb	IAmb	21 40 55.0	
	comp=Z,2.2nm,0.6s						
QIZ	**Qiongzhong**	**82.97**	**294**	P	P	21 41 05.9	-22
QIZ				IAmb	IAmb	21 41 20.4	
	comp=Z,5.2nm,1.0s						
RSO	**Redoubt South**	**84.89**	**12**	P	**P**	**21 41 35.4**	**-1.1**
TXAR	**Lajitas Array**	**86.95**	**57**	P	**P**	**21 41 48.6**	**+1.4**
	comp=Z,0.8nm,1.0s,baz=194,slow=4.8,SNR=5.2						
IMW	**Indian Meadow**	**89.20**	**41**		pP	21 42 59.0	+12
ILAR	**Eielson Array**	**89.95**	**12**	P	**P**	**21 41 59.9**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=227,slow=5.7,SNR=6.7						
CMAR	**Chiang Mai Arr**	**92.12**	**289**	P	**P**	**21 42 12.5**	**+0.9**
	comp=Z,0.3nm,0.8s,baz=115,slow=6.4,SNR=2.6						
MKAR	**Makanchi Array**	**113.60**	**313**	PKiKP	**PKiKP**	**21 47 39.3**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=58,slow=2.2,SNR=4.3						
ARCES	**ARCESS Array B**	**131.13**	**350**	PKP	**PKiKP**	**21 48 13.2**	**+0.5**
	comp=Z,3.3nm,0.9s,baz=0.1,slow=1.3,SNR=8.3						
FINES	**FINESS Array B**	**138.08**	**344**	PKP	**PKiKP**	**21 48 27.1**	**+0.1**
	comp=Z,2.6nm,0.9s,baz=108,slow=6.2,SNR=4.7						
AKASG	**Malin Array Be**	**145.44**	**331**	PKP	**PKPbc**	**21 48 39.2**	**+0.5**
	comp=Z,1.6nm,0.5s,baz=45,slow=4.2,SNR=8.2						
BRTR	**Keskin Array B**	**149.23**	**311**	PKPbc	**PKPbc**	**21 48 50.5**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=138,slow=4.4,SNR=7.6						
GERES	**GERESS Array B**	**152.50**	**345**	PKiKP	**PKiKP**	**21 48 57.7**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=41,slow=3.1,SNR=3.4						
TORD	**Torodi Ar. Bea**	**170.53**	**169**	PKPab	**PKPab**	**21 50 32.6**	**+5.3**
	comp=Z,1.1nm,0.8s,baz=189,slow=3.7,SNR=4.4						

IDC 01 21:37:19.7±1.1, 33.98S×72.15W, h0km, mb3.8/5, mb1 4.1/9, mb1mx4.0/25, mbtmp3.9/9, ML4.0/4, MS3.9/2, Ms1 3.9/2, ms1mx3.3/33, Error ellipse: s-maj=32.1km s-min=28.5km az=107.0
GUC 01 21:37:22.4±0.7, 34.02S×72.09W, h26km±5km, ML3.9
NEIC 01 21:37:22.6±1.8, 33.99S±0.03×72.2W±0.1, h24km±5km, Error ellipse: s-maj=14.7km s-min=2.6km az=102.0
ISC 01 21:37:22.9±1.7, 33.99S±0.04×72.15W±0.08, h24km±12km, n46, σ0§94/51, mb4.1/7, 1C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MT01	**Popeta**	**0.75**	**81⇓**	iP	**Pb**	**21 37 31.7**	**-0.3**
MT01				iS	**Sb**	**21 37 47.0**	**-0.2**
MT01				IAML		21 37 47.8	
	comp=N,7μm,0.2s						
GO05	**Huala**	**1.03**	**170**	eP	**Pb**	**21 37 41.6**	**-0.5**
GO05				iS	**Sn**	**21 37 55.2**	**-0.5**
GO05				IAML		21 37 59.3	
	comp=E,3μm,0.5s						
GO05	**Huala**	**1.03**	**170**		**Pb**	**21 37 41.7**	**-0.5**
GO05					**Sn**	**21 37 55.1**	**-0.7**
VA01	**Torpederas**	**1.05**	**24**	eP	**Pb**	**21 37 42.4**	**0.0**
VA01				iS	**Sn**	**21 37 56.6**	**+0.6**
VA01				IAML		21 37 59.1	
	comp=N,3μm,0.1s						
MT05	**Renca**	**1.32**	**63**	eP	**Pb**	**21 37 46.1**	**-0.9**
MT05				IAML		21 38 11.6	
	comp=E,5μm,0.4s						
ROC1	**El Roble**	**1.38**	**43**		**Pb**	**21 37 47.4**	**-0.9**
ROCH	**El Roble**	**1.39**	**43**	eP	**Pb**	**21 37 47.3**	**-1.0**
ROCH				IAML		21 38 13.3	
	comp=N,3μm,0.4s						
FSR	**Penalolen**	**1.44**	**70**	eP	**Pb**	**21 37 48.9**	**-0.2**
MT03	**Universidad Ad**	**1.45**	**71⇓**	iP	**Pn**	**21 37 48.0**	**+0.3**
MT03				iS	**Sb**	**21 38 07.8**	**+0.5**
MT03				IAML		21 38 13.4	
	comp=N,5μm,0.2s						
PEL	**Peldehue**	**1.48**	**56⇓**	iP	**Pb**	**21 37 49.0**	**-0.9**
PEL				iS	**Sb**	**21 38 09.0**	**+0.8**
PEL				IAML		21 38 14.2	
	comp=E,3μm,0.3s						
PEL	**Peldehue**	**1.48**	**56**		**Pb**	**21 37 48.9**	**-0.9**
FCH	**Farellones**	**1.68**	**67**	eP	**Pn**	**21 37 51.8**	**+0.7**
FCH				iS	**Sb**	**21 38 14.9**	**+0.7**
FCH				IAML		21 38 17.7	
	comp=E,2μm,0.3s						
VA03	**San Esteban**	**1.81**	**48⇑**	iP	**Pb**	**21 37 54.0**	**-1.4**
VA03				iS	**Sb**	**21 38 18.5**	**+0.8**
GO04	**Tololo Observa**	**3.97**	**17**		**Pn**	**21 38 23.0**	**+0.4**
CFA	**Coronel Fontan**	**4.06**	**55**	Pn	**Pn**	**21 38 24.9**	**+1.3**
	comp=E,3.9nm,0.3s,baz=237,slow=13,SNR=44						
CFA				Lg	Lg	21 39 20.7	
	comp=E,16nm,0.3s,baz=39,slow=13,SNR=6.3						
GO03	**Copiap**	**6.58**	**15**		**Pn**	**21 38 58.0**	**-0.3**
PLCA	**Paso Flores**	**6.85**	**170**	Pn	**Pn**	**21 39 03.5**	**+1.6**
	comp=E,0.8nm,0.3s,baz=358,slow=11,SNR=23						
PLCA				Lg	Lg	21 40 47.6	
	baz=51,slow=14,SNR=2.3						
PLCA	**Paso Flores**	**6.85**	**170**		**Pn**	**21 39 02.5**	**+0.6**
GO02	**Mina Guanaco**	**9.07**	**15**	Pn	**Pn**	**21 39 29.9**	**-2.8**
TRQA	**Tornquist**	**9.18**	**119**	Pn	**Pn**	**21 39 33.0**	**-0.9**
PB10	**IPOC Station P**	**10.53**	**8**	Pn	Pn	21 39 45.9	-6.5
GO01	**Chusmiza**	**14.50**	**11**	P	**Pn**	**21 40 48.5**	**+1.3**
CPUP	**Villa Florida**	**14.91**	**63**	Pn	**Pn**	**21 40 52.6**	**+0.5**
	comp=E,0.3nm,0.3s,baz=277,slow=3.8,SNR=3.7						
MNMC	**Minye Minye**	**14.97**	**9**	Pn	**Pn**	**21 40 53.8**	**+0.5**
LPAZ	**La Paz**	**17.99**	**13**	P	**P**	**21 41 33.6**	**+1.1**
	comp=E,0.3nm,0.3s,baz=178,slow=9.3,SNR=8.8						
LPAZ	**La Paz**	**17.99**	**13**	P	**P**	**21 41 32.1**	**-0.4**
SIV	**San Ignacio**	**20.51**	**32**	P	**P**	**21 41 58.8**	**-0.7**
	comp=E,1.7nm,0.6s,baz=223,slow=13,SNR=8.5						
SAML	**Samuel**	**26.25**	**20**	P	**P**	**21 42 56.4**	**+0.1**
SAML				IAmb	IAmb	21 43 00.3	
	comp=Z,3.1nm,0.9s						
RUSC	**La Rusia**	**39.67**	**359**	P	**P**	**21 44 53.2**	**-0.5**
SDV	**Santo Domingo**	**42.66**	**2**	LR	LR	22 03 42.9	
	comp=Z,211nm,18.9s,baz=90,slow=37						
RCBR	**Riachuelo**	**43.71**	**58**	LR	LR	22 03 52.9	
	comp=Z,114nm,19.0s,baz=86,slow=36						
SNAA	**Sanae**	**51.63**	**158**	P	**P**	**21 46 27.9**	**+0.7**
SNAA				IAmb	IAmb	21 46 29.4	
	comp=Z,2.3nm,1.0s						
CDVI	**St. Croix**	**51.93**	**9**	P	**P**	**21 46 28.9**	**-0.9**
TXAR	**Lajitas Array**	**69.68**	**331**	P	**P**	**21 48 32.4**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=160,slow=8.0,SNR=3.8						
TXAR	**Lajitas Array**	**69.68**	**331**	P	**P**	**21 48 28.8**	**-1.9**
WVT	**Waverly**	**71.28**	**347**	P	**P**	**21 48 41.2**	**+1.1**
WVT				IAmb	IAmb	21 48 41.7	
	comp=Z,6.8nm,0.8s						
NVAR	**Mina Array Bea**	**83.82**	**325**	P	**P**	**21 49 51.2**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=128,slow=6.6,SNR=5.0						
TORD	**Torodi Ar. Bea**	**84.29**	**70**	P	**P**	**21 49 53.2**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=279,slow=7.0,SNR=4.0						
YHH	**Holmes Hill**	**85.93**	**333**	P	**P**	**21 49 59.7**	**-1.3**
ULM	**Lac du Bonnet**	**86.46**	**345**	P	**P**	**21 50 03.2**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=56,slow=3.6,SNR=3.3						
MCMT	**McKenzie Canyo**	**86.72**	**332**	P	**P**	**21 50 03.8**	**-1.1**
YKA	**Yellowknife Ar**	**102.02**	**341**	P	**Pdif**	**21 51 13.6**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=135,slow=4.3,SNR=2.8						
ARCES	**ARCESS Array B**	**124.04**	**25**	PKP	**PKiKP**	**21 56 18.7**	**+0.2**
	comp=Z,3.4nm,1.0s,baz=241,slow=3.7,SNR=1.7						
ZALV	**Zalesovo Beam**	**154.26**	**32**	PKPbc	**PKiKP**	**21 57 20.6**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=300,slow=2.5,SNR=8.1						
ZALV	**Zalesovo Beam**	**154.26**	**32**		**PKiKP**	**21 57 20.8**	**+0.3**
MKAR	**Makanchi Array**	**156.82**	**49**	PKPab	**PKPab**	**21 57 45.0**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=276,slow=5.0,SNR=5.3						

IDC 01 21:41:11.9±0.5, 13.88N×120.91E, h200km±5km, mb3.4/7, mb1 3.6/7, mb1mx3.2/45, mbtmp4.0/7, Error ellipse: s-maj=35.7km s-min=11.5km az=61.0
NEIC 01 21:41:12.1±0.8, 13.89N±0.07×120.88E±0.10, h205km±4km, mb4.2/15, Error ellipse: s-maj=14.4km s-min=8.6km az=111.0
ISC 01 21:41:12.0±0.6, 13.91N±0.04×120.70E±0.06, h200km±5km, n54, σ1§39/64, mb4.1/13, 4C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.30**	**51**	P	**Pn**	**21 41 39.2**	**+0.6**
	765nm,0.3s,baz=209,slow=0.5,SNR=88						
TGY				S	**S**	**21 41 59.8**	**+0.4**
	213nm,0.3s,baz=4.2,slow=22,SNR=6.6						
TGY	**Tagaytay City**	**0.30**	**51⇑**	iP	**Pn**	**21 41 39.2**	**+0.6**
LUBP	**Lubang**	**0.47**	**248**	eP	**Pn**	**21 41 38.1**	**-0.9**
LUBP				eS	**S**	**21 41 56.9**	**-3.1**
LQP	**Lukban**	**0.84**	**76⇑**	iP	**Pn**	**21 41 42.1**	**+1.1**
LQP				iS	**S**	**21 42 04.5**	**+1.1**
BOAC	**Boac**	**1.20**	**112**	eP	**Pn**	**21 41 43.7**	**+0.4**
BOAC				eS	**S**	**21 42 07.6**	**+0.4**
POLP	**Polilio Island**	**1.45**	**56**	eP	**Pn**	**21 41 46.6**	**+1.3**
PCPH	**Palayan**	**1.69**	**13⇓**	iP	**Pn**	**21 41 47.6**	**+0.2**
GQP	**Guinayangan**	**1.70**	**90⇑**	iP	**Pn**	**21 41 48.5**	**+1.0**
GQP				iS	**S**	**21 42 15.7**	**+1.1**
BUSP	**Coron**	**1.96**	**194**	eP	**Pn**	**21 41 49.4**	**-0.8**
BUSP				eS	**S**	**21 42 16.8**	**-2.5**
SCZP	**Santa Cruz**	**2.00**	**338**	eP	**Pn**	**21 41 50.2**	**-0.4**
SCZP				eS	**S**	**21 42 17.7**	**-2.5**
BALP	**Baler**	**2.01**	**25**	eP	**Pn**	**21 41 51.6**	**+0.9**
OTRP	**Odiongan**	**2.01**	**140**	eP	**Pn**	**21 41 49.9**	**-0.8**
SMPP	**San Manuel, Pa**	**2.23**	**360**	eP	**Pn**	**21 41 52.3**	**-0.6**
SMPP				eS	**S**	**21 42 22.0**	**-2.4**
BOLP	**Bolinao**	**2.57**	**343**	eP	**Pn**	**21 41 56.7**	**0.0**
BOLP				eS	**S**	**21 42 30.2**	**-0.6**
ENPP	**El Nido**	**2.96**	**205**	eP	**Pn**	**21 42 01.5**	**+0.2**
CUYO	**Cuyo Island**	**3.06**	**174**	eP	**Pn**	**21 42 02.2**	**-0.3**
RCP	**Roxas**	**3.08**	**139⇑**	eP	**Pn**	**21 42 03.9**	**+1.2**
SZP	**Santa**	**3.63**	**356**	Pn	**Pn**	**21 42 09.8**	**+0.5**
ABRA	**Dolores**	**3.72**	**0**	eP	**Pn**	**21 42 07.6**	**-2.7**
ABRA				eS	**S**	**21 42 53.8**	**-1.8**
APYP	**Conner**	**3.96**	**8**	eP	**Pn**	**21 42 13.3**	**-0.1**
APYP				eS	**S**	**21 42 58.2**	**-2.9**
KKM	**Kota Kinabalu**	**8.98**	**210**	Pn	**Pn**	**21 43 19.5**	**+1.3**
TPUB	**Ta-pu**	**9.34**	**360**	Pn	**Pn**	**21 43 23.1**	**+0.3**
YULB	**Yu-li**	**9.45**	**3**	Pn	**Pn**	**21 43 22.1**	**-2.1**
SSLB	**Suanglung**	**9.83**	**1**	Pn	**Pn**	**21 43 29.4**	**+0.3**
HKPS	**Hong Kong Po S**	**10.39**	**324**	Pn	**Pn**	**21 43 37.8**	**+1.4**
YOJ	**Yonaguni jima**	**10.72**	**11**	Pn	**Pn**	**21 43 41.3**	**+0.7**
KNMB	**Chin-men Tao**	**10.72**	**349**	Pn	**Pn**	**21 43 40.5**	**-0.1**
YHNB	**Yeheng**	**10.72**	**3**	Pn	**Pn**	**21 43 41.1**	**+0.4**
QIZ	**Qiongzhong**	**11.59**	**298**	Pn	**Pn**	**21 43 53.8**	**+2.0**
DLV	**T Lat**	**12.06**	**262**	Pn	**Pn**	**21 44 00.3**	**+2.3**
SBUM	**Sibu**	**14.14**	**217**	P	**P**	**21 44 25.7**	**+0.2**
PBKT	**Sadao Pong**	**19.21**	**280**	P	**P**	**21 45 22.6**	**+1.5**
KMI	**Kunming**	**20.24**	**306**	P	**P**	**21 45 33.2**	**+0.8**
KMI				IAmb	IAmb	21 45 36.9	
	comp=Z,3.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**21.37**	**285**	P	**P**	**21 45 45.9**	**+1.8**
	comp=Z,1.3nm,0.7s,baz=94,slow=8.5,SNR=7.7						
XAN	**Xi'an**	**22.71**	**334**	P	**P**	**21 45 57.3**	**+0.5**
XAN				IAmb	IAmb	21 45 58.9	
	comp=Z,4.3nm,0.6s						
SONM	**Songino Array**	**35.85**	**343**	P	**P**	**21 47 53.1**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=162,slow=10,SNR=13						
SONM	**Songino Array**	**35.85**	**343**	IAmb	IAmb	21 47 54.5	
	comp=Z,0.7nm,0.7s						
WRA	**Warramunga Arr**	**36.22**	**158**	P	**P**	**21 47 54.5**	**-1.6**
	comp=Z,1.9nm,0.3s,baz=334,slow=10.0,SNR=14						
AS31	**Alice Springs**	**39.52**	**161**	P	**P**	**21 48 22.9**	**-0.7**
AS31				IAmb	IAmb	21 48 23.3	
	comp=Z,3.5nm,0.4s						
ASAR	**Alice Springs**	**39.52**	**161**	P	**P**	**21 48 22.6**	**-0.9**
	comp=Z,5.0nm,0.4s,baz=334,slow=7.3,SNR=150						
ASAR	**Alice Springs**	**39.52**	**161**	P	**P**	**21 48 22.9**	**-0.7**
MK31	**Makanchi Array**	**45.86**	**324**	P	**P**	**21 49 15.9**	**+1.5**
MKAR	**Makanchi Array**	**45.86**	**324**	P	**P**	**21 49 15.7**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=110,slow=8.6,SNR=11						
ZALV	**Zalesovo Beam**	**48.87**	**333**	P	**P**	**21 49 37.6**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=120,slow=7.5,SNR=4.4						
ARSB	**Arslanbob**	**49.52**	**313**	P	**P**	**21 49 42.3**	**-0.4**
ARSB				IAmb	IAmb	21 50 35.0	
	comp=Z,31nm,2.0s						
STKA	**Stephens Creek**	**49.74**	**157**	P	**P**	**21 49 43.6**	**-0.6**
	comp=Z,1.2nm,0.4s,baz=13,slow=7.1,SNR=3.0						
KK31	**Karatay Array**	**51.83**	**314**	P	**P**	**21 50 00.3**	**+0.6**
KK31				IAmb	IAmb	21 50 48.9	
	comp=Z,9.1nm,1.7s						
KKAR	**Karatay Array**	**51.83**	**314**	P	**P**	**21 50 00.0**	**+0.3**
KKAR	**Karatay Array**	**51.83**	**314**	P	**P**	**21 50 00.3**	**+0.6**
KKAR				IAmb	IAmb	21 50 48.9	
	comp=Z,9.1nm,1.7s						
TOO	**Toolangi**	**56.26**	**156**	P	**P**	**21 50 31.0**	**-0.8**
TOO				IAmb	IAmb	21 52 04.8	
	comp=Z,17nm,1.5s						
ABKAR	**Akbulak array**	**60.57**	**319**	P	**P**	**21 51 02.1**	**+0.7**
MLZ	**Mavora Lakes**	**72.92**	**147**	P	**P**	**21 52 16.2**	**-3.2**
BKZ	**Black Stump Fm**	**74.09**	**138**	P	**P**	**21 52 25.1**	**-1.3**
KHZ	**Kahutara**	**74.11**	**142**	P	**P**	**21 52 23.6**	**-2.7**

THE 01 21:46:56.0, 38.14N×20.39E, h7km±1km, ML2.7/7, Error ellipse: s-maj=1.5km s-min=0.8km az=224.0
ATH 01 21:46:56.3, 38.19N×20.42E, h10km±2km, ML2.6/3, Error ellipse: s-maj=2.7km s-min=1.0km az=249.0
ISC 01 21:46:56.4±1.3, 38.18N±0.03×20.42E±0.04, h8km±6km, n24, σ0§45/41, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.03**	**284**	P	**Pg**	**21 46 57.8**	**-0.1**
CHV1				S	**Sg**	**21 46 58.7**	**-0.3**
	66μm,0.3s						
ARG2	**Argostoli**	**0.06**	**88**	P	**Pg**	**21 46 58.2**	**0.0**
ARG2				S	**Sg**	**21 46 59.4**	**-0.1**
	17μm,0.1s						
KEF2	**Argostoli. Kep**	**0.06**	**101**	P	**Pg**	**21 46 58.1**	**-0.1**
KEF2				S	**Sg**	**21 46 59.2**	**-0.3**
KEF3	**Kipouria, Keph**	**0.06**	**296**	P	**Pg**	**21 46 58.3**	**0.0**
KEF3				S	**Sg**	**21 46 59.5**	**0.0**
KEF4	**Livadi, Kephal**	**0.08**	**5**	P	**Pg**	**21 46 58.8**	**+0.2**
KEF4				S	**Sg**	**21 47 00.6**	**+0.5**
VLS	**Valsamata**	**0.14**	**90**	P	**Pg**	**21 46 59.4**	**0.0**
VLS				S	**Sg**	**21 47 01.9**	**+0.4**
	4μm,0.1s						
VLS	**Valsamata**	**0.14**	**90**	P	**Pg**	**21 46 59.4**	**0.0**
VLS				S	**Sg**	**21 47 01.3**	**-0.2**
VLS				AML	AML	21 47 02.4	
	comp=E,9673μm,0.1s						
VLS				AML	AML	21 47 02.8	
	comp=N,4860μm,0.2s						
VSK1	**VASILIKIADES**	**0.26**	**27**	P	**Pg**	**21 47 01.9**	**+0.3**
VSK1				S	**Sg**	**21 47 06.2**	**+1.1**
	comp=N,2μm,0.2s						
KFL	**Anninata**	**0.30**	**103**	P	**Pg**	**21 47 02.4**	**0.0**
KFL				S	**Sg**	**21 47 06.6**	**+0.2**
	comp=N,2μm,0.3s						
KFL	**Anninata**	**0.30**	**103**	P	**Pg**	**21 47 02.2**	**-0.2**
VLMS	**Volimes, Zakyn**	**0.36**	**147**	P	**Pg**	**21 47 03.4**	**0.0**
VLMS				S	**Sg**	**21 47 08.9**	**+0.7**
VLMS				AML	AML	21 47 11.5	
	comp=E,1387μm,0.2s						
VLMS				AML	AML	21 47 14.9	
	comp=N,1588μm,0.3s						
EVGI	**Lefkada island**	**0.48**	**23**	P	**Pg**	**21 47 05.9**	**+0.1**
EVGI				S	**Sb**	**21 47 13.8**	**-0.7**
EVGI	**Lefkada island**	**0.48**	**23**	P	**Pg**	**21 47 05.3**	**-0.5**
EVGI				S	**Sg**	**21 47 12.9**	**+0.8**
MGNA	**Meganis**	**0.56**	**32**	P	**Pg**	**21 47 07.0**	**-0.4**
MGNA				S	**Sg**	**21 47 14.4**	**-0.3**
LKD2	**Lefkada island**	**0.64**	**17**	P	**Pg**	**21 47 08.6**	**-0.2**
LKD2	**Lefkada island**	**0.64**	**17**	P	**Pg**	**21 47 08.2**	**-0.6**
LKD2				S	**Sg**	**21 47 17.7**	**+0.5**
TSLK	**Tsoukalades, L**	**0.67**	**16**	P	**Pg**	**21 47 09.1**	**-0.3**
TSLK	**Tsoukalades, L**	**0.67**	**16**	P	**Pg**	**21 47 08.9**	**-0.6**
TSLK				S	**Sg**	**21 47 17.7**	**-0.6**
PDO	**Prodromos**	**0.74**	**55**	P	**Pg**	**21 47 10.3**	**-0.3**
PDO				S	**Sb**	**21 47 21.7**	**0.0**
	comp=N,355nm,0.3s						
PDO	**Prodromos**	**0.74**	**55**	P	**Pg**	**21 47 09.8**	**-0.8**
RLS	**Riolos of Patr**	**0.84**	**98**	P	**Pg**	**21 47 11.9**	**-0.6**
PVO	**Paravola**	**0.98**	**63**	P	**Pg**	**21 47 15.3**	**+0.1**
PVO				S	**Sn**	**21 47 31.2**	**+0.7**
	comp=N,240nm,0.5s						
PVO	**Paravola**	**0.98**	**63**	P	**Pg**	**21 47 15.3**	**+0.1**
DRO	**Drossia**	**1.05**	**102**	P	**Pg**	**21 47 16.1**	**-0.5**

IDC 01 21:55:56.4±0.8, 17.24N×119.53E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.7/45, mbtmp3.8/11, MS3.0/2, Ms1 3.1/2, ms1mx2.6/57, Error ellipse: s-maj=33.4km s-min=15.7km az=66.0
NEIC 01 21:56:01.2±1.4, 17.19N±0.07×119.38E±0.08, h35km±7km, mb4.2/14, Error ellipse: s-maj=11.9km s-min=10.6km az=102.0
ISC 01 21:56:00.3±0.5, 17.21N±0.05×119.46E±0.08, h30km, n45, σ1§18/46, mb4.0/17, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SZP	**Santa**	**1.00**	**70**		**Pb**	**21 56 19.6**	**+0.4**
PCPH	**Palayan**	**2.27**	**136⇓**	eP	**Pn**	**21 56 38.3**	**-2.3**
TGY	**Tagaytay City**	**3.40**	**155**	Pn	**Pb**	**21 57 01.8**	**+1.8**
	10nm,0.3s,baz=194,slow=6.3,SNR=5.3						
TWG	**Pinlang**	**5.78**	**15**	Pn	**Pn**	**21 57 24.8**	**+0.7**
TPUB	**Ta-pu**	**6.16**	**10**	Pn	**Pn**	**21 57 28.8**	**-0.5**
TPUB					**Sn**	**21 58 35.0**	**-3.7**
YULB	**Yu-li**	**6.38**	**15**	Pn	**Pn**	**21 57 33.4**	**+1.0**
YULB					**Sn**	**21 58 42.4**	**-1.9**
SSLB	**Suanglung**	**6.69**	**12**	Pn	**Pn**	**21 57 37.7**	**+1.1**
KNMB	**Chin-men Tao**	**7.29**	**352**	Pn	**Pn**	**21 57 45.7**	**+1.0**
YHNB	**Yeheng**	**7.63**	**13**	Pn	**Pn**	**21 57 50.4**	**+0.7**
KKM	**Kota Kinabalu**	**11.55**	**196**	Pn	**Pn**	**21 58 40.6**	**-2.8**
DAV	**Davao City (W)**	**11.72**	**149**	LR	LR	22 03 50.2	
	comp=Z,95nm,19.3s,baz=5.5,slow=40						
CMAR	**Chiang Mai Arr**	**19.58**	**277**	P	**Pn**	**22 00 26.6**	**-0.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=98,slow=11,SNR=7.6						
CMAR				LR	LR	22 07 14.5	
	comp=Z,38nm,21.7s,baz=270,slow=34						
KSRS	Korea Array	21.50	19	P	P	22 00 45.9	-0.8
	2.7nm,0.8s,baz=201,slow=12,SNR=12						
SONM	Songino Array	32.37	343	P	P	22 02 27.5	+0.2
	0.6nm,0.6s,baz=166,slow=10,SNR=8.9						
SONM	Songino Array	32.37	343	IAmb	IAmb	22 02 30.5	
	comp=Z,0.7nm,0.9s						
WRA	Warramunga Arr	39.71	158	P	P	22 03 30.3	+0.1
	comp=Z,0.4nm,0.3s,baz=339,slow=8.8,SNR=4.0						
MK31	Makanchi Array	42.53	322	P	P	22 03 54.2	+1.0
MKAR	Makanchi Array	42.53	322	P	P	22 03 54.6	+1.4
	comp=Z,1.3nm,0.9s,baz=116,slow=8.4,SNR=11						
MKAR				PcP	PcP	22 05 45.9	+0.5
	comp=Z,0.5nm,0.8s,baz=97,slow=3.8,SNR=4.1						
MKAR	Makanchi Array	42.53	322	P	P	22 03 54.0	+0.9
MAKZ	Makanchi	42.72	322	P	P	22 03 56.0	+1.3
ASAR	Alice Springs	43.01	160	P	P	22 03 57.9	+0.6
	comp=Z,0.4nm,0.4s,baz=340,slow=7.0,SNR=11						
ASAR	Alice Springs	43.01	160	P	P	22 03 57.4	+0.1
ZAA0	Zalesovo Array	45.41	332	P	P	22 04 16.0	-0.2
ZAA0				IAmb	IAmb	22 04 17.5	
	comp=Z,3.5nm,0.9s						
ZALV	Zalesovo Beam	45.41	332	P	P	22 04 16.4	+0.3
	comp=Z,2.0nm,0.8s,baz=121,slow=7.9,SNR=12						
KURK	Kurchatov	46.63	325	P	P	22 04 26.9	+1.1
KK31	Karatay Array	48.70	313	P	P	22 04 41.8	-0.3
KK31				IAmb	IAmb	22 04 43.5	
	comp=Z,1.6nm,0.8s						
KKAR	Karatay Array	48.70	313	P	P	22 04 42.9	+0.8
KKAR				IAmb	IAmb	22 04 43.5	
	comp=Z,1.6nm,0.8s						
KKAR	Karatay Array	48.70	313	P	P	22 04 42.2	+0.1
BBOO	Buckleboo	52.21	162	P	P	22 05 09.2	+0.6
BBOO				IAmb	IAmb	22 05 10.0	
	comp=Z,5.8nm,1.1s						
STKA	Stephens Creek	53.23	156	P	P	22 05 16.8	+0.7
	comp=Z,0.7nm,0.4s,baz=339,slow=7.3,SNR=3.4						
HRA	Herat	53.61	300	P	P	22 05 17.9	-1.4
HRA				IAmb	IAmb	22 05 28.6	
	comp=Z,1.2nm,0.6s						
GEYT	Alibeck	57.15	304	P	P	22 05 45.7	+1.2
	comp=Z,1.5nm,0.9s,baz=147,slow=3.5,SNR=7.8						
ABKAR	Akbulak array	57.33	318	P	P	22 05 45.5	-0.1
ARU	Arti	59.82	326	P	P	22 06 02.2	-0.5
ARU				IAmb	IAmb	22 06 12.7	
	comp=Z,2.5nm,1.0s						
ARCES	ARCESS Array B	75.40	339	P	P	22 07 41.4	+0.6
ARE0	ARCESS Array S	75.40	339	P	P	22 07 41.5	+0.7
DCZ	Deep Cove	75.89	148	P	P	22 07 45.6	+1.7
BMAR	Burnt Mountain	76.53	23	P	P	22 07 47.6	+0.2
WHZ	Wether Hill Ro	76.59	147	P	P	22 07 47.3	-0.6
FINES	FINESS Array B	76.66	330	P	P	22 07 48.1	0.0
	comp=Z,2.7nm,1.0s,baz=54,slow=9.7,SNR=7.0						
BCAR	Beaver Creek A	78.72	27	P	P	22 08 00.8	+1.1
BURAR	Bucovina Array	80.29	317	P	P	22 08 07.8	-0.8
C36M	Paulatuk	82.89	19	P	P	22 08 22.5	+0.7
C36M				IAmb	IAmb	22 08 23.6	
	comp=Z,0.8nm,0.8s						
NC204	NORSAR Array S	83.72	333	P	P	22 08 26.0	-0.3
YKA	Yellowknife Ar	90.00	22	P	P	22 08 57.9	+1.2
	comp=Z,0.3nm,0.8s,baz=314,slow=4.8,SNR=6.5						

THE 01 22:03:28.7, 38.°28N×20.°41E, h11km±1km, ML2.6/8, Error ellipse: s-maj=1.9km s-min=0.5km az=224.0
ATH 01 22:03:28.6, 38.°30N×20.°40E, h8km±2km, ML2.7/3, Error ellipse: s-maj=2.4km s-min=0.9km az=218.0
ISC 01 22:03:29.0±1.4, 38.°29N±0.°02×20.°42E±0.°04, h8km±6km, n26, σ0.s45/42, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.03	178	P	Pg	22 03 30.3	-0.2
KEF4				S	Sg	22 03 31.7	+0.1
KEF1	Kardakata, Kep	0.04	107	P	Pg	22 03 30.4	-0.2
KEF1				S	Sg	22 03 31.8	0.0
KEF3	Kipouria, Keph	0.10	214	P	Pg	22 03 31.2	-0.2
KEF3				S	Sg	22 03 33.3	+0.2
CHV1	Chavriata, Kef	0.11	197	P	Pg	22 03 31.4	-0.1
CHV1				S	Sg	22 03 33.6	+0.3
	7µm,0.1s						
ARG2	Argostoli	0.12	155	P	Pg	22 03 31.6	-0.1
ARG2				S	Sg	22 03 33.7	+0.1
	8µm,0.1s						
KEF2	Argostoli. Kep	0.13	158	P	Pg	22 03 31.7	-0.2
KEF2				S	Sg	22 03 34.2	+0.3
VSK1	VASILIKIADES	0.16	43	P	Pg	22 03 32.4	0.0
VSK1				S	Sg	22 03 35.3	+0.5
	4µm,0.1s						
VLS	Valsamata	0.17	130	P	Pg	22 03 32.4	-0.2
VLS				S	Sg	22 03 35.3	+0.3
	4µm,0.1s						
VLS	Valsamata	0.17	130	P	Pg	22 03 32.3	-0.2
VLS				S	Sg	22 03 35.3	+0.3
VLS				AML	AML	22 03 35.5	
	comp=N,7702µm,0.1s						
VLS				AML	AML	22 03 35.7	
	comp=E,6637µm,0.0s						
FSK	Fiskardo	0.20	33	P	Pg	22 03 33.1	0.0
FSK				S	Sg	22 03 36.5	+0.6
	comp=E,2µm,0.2s						
KFL	Anninata	0.34	122	P	Pg	22 03 35.3	-0.4
KFL				S	Sg	22 03 40.8	+0.6
	comp=E,1µm,0.5s						
EVGI	Lefkada island	0.38	29	P	Pg	22 03 36.2	-0.3
EVGI				S	Sg	22 03 42.5	+1.1
EVGI	Lefkada island	0.38	29	P	Pg	22 03 36.1	-0.3
VLMS	Volimes, Zakyn	0.45	155	P	Pg	22 03 37.6	-0.2
VLMS				S	Sg	22 03 44.9	+1.2
VLMS				AML	AML	22 03 45.7	
	comp=N,4968µm,0.4s						
VLMS				AML	AML	22 03 46.6	
	comp=E,5208µm,0.3s						
MGNA	Meganis	0.47	38	P	Pg	22 03 37.6	-0.4
MGNA				S	Sg	22 03 44.6	+0.4
LKD2	Lefkada island	0.53	20	P	Pg	22 03 38.8	-0.5
LKD2	Lefkada island	0.53	20	P	Pg	22 03 38.6	-0.7
TSLK	Tsoukalades, L	0.56	19	P	Pg	22 03 39.5	-0.4
TSLK	Tsoukalades, L	0.56	19	P	Pg	22 03 39.6	-0.4
PDO	Prodromos	0.67	62	P	Pg	22 03 41.4	-0.6
PDO				S	Sg	22 03 51.2	+0.4
	comp=E,480nm,0.3s						
PDO	Prodromos	0.67	62	P	Pg	22 03 41.4	-0.6
PDO				AML	AML	22 03 54.4	
	comp=N,658µm,0.5s						
PDO				AML	AML	22 03 54.4	
	comp=E,682µm,0.2s						
RLS	Riolos of Patr	0.85	105	P	Pg	22 03 44.9	-0.5
RLS	Riolos of Patr	0.85	105	P	Pg	22 03 45.1	-0.4
PVO	Paravola	0.93	69	P	Pg	22 03 46.5	-0.3
PVO				S	Sn	22 04 01.6	-0.1
	comp=E,190nm,0.3s						
PVO	Paravola	0.93	69	P	Pg	22 03 46.7	-0.1
DRO	Drossia	1.07	108	P	Pg	22 03 48.9	-0.7

JMA 01 22:04:50.2±0.1, 24.°31N×121.°73E, h54km±1km, M2.4
TAP 01 22:04:50.2, 24.°30N×121.°69E, h59km, ML2.8, B
ISC 01 22:04:50.8±1.2, 24.°32N±0.°02×121.°73E±0.°02, h56km±5km, n102, σ0.s90/192, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	Nanau	0.11	6	iP	Pn	22 04 59.4	-0.1
	baz=21						
ENA				eS	Sn	22 05 06.3	+0.7
	baz=21						
NACB	Ninganchiao	0.19	220	P	Pn	22 04 59.2	-0.5
	baz=215						
NACB				S	Sn	22 05 05.7	-0.5
	baz=215						
ETLH	Xiulin Townshi	0.25	244	iP	Pn	22 04 60.0	-0.3
	baz=243						
ETLH				S	Sn	22 05 06.4	-0.6
	baz=243						
TWD	Chiawan	0.27	207	iP	Pn	22 04 59.6	-0.7
	baz=211						
TWD				iS	Sn	22 05 06.3	-0.7
	baz=211						
TWC	Suao	0.31	21	iP	Pn	22 05 01.2	+0.6
	baz=22						
TWC				S	Sn	22 05 09.7	+2.0
	baz=22						
NNSB	Datong	0.33	289	P	Pn	22 05 00.7	-0.3
	baz=294						
NNSB				S	Sn	22 05 08.0	-0.3
	baz=294						
NNSH	Datong	0.33	289	P	Pn	22 05 00.4	-0.6
	baz=294						
NNSH				S	Sn	22 05 08.1	-0.2
	baz=294						
NDT	Datong Townshi	0.34	325	iP	Pn	22 05 00.9	-0.1
	baz=324						
NDT				S	Sn	22 05 08.4	+0.2
	baz=324						
NNS	Nan Shan	0.35	290	iP	Pn	22 05 00.8	-0.3
	baz=295						
NNS				iS	Sn	22 05 08.3	-0.1
	baz=295						
ENTT	Nioudou	0.35	335	iP	Pn	22 05 00.9	-0.1
	baz=346						
ENTT				S	Sn	22 05 08.8	+0.4
	baz=346						
TWE	Neicheng	0.41	352	iP	Pn	22 05 01.4	-0.1
	baz=355						
TWE				S	Sn	22 05 10.5	+1.4
	baz=355						
ENLB	Shoufeng	0.43	196	eS	Sn	22 05 10.7	+1.1
	baz=201						
EOS1	EOS1	0.43	58	P	Pn	22 05 03.0	+1.3
	baz=70						
EOS1				S	Sn	22 05 12.3	+2.8
	baz=70						
SLBB	Yuanshan	0.44	349	iP	Pn	22 05 02.0	+0.1
	baz=353						
SLBB				S	Sn	22 05 10.8	+0.9
	baz=353						
WHF	Hehuan Shan	0.46	248	iP	Pn	22 05 02.0	-0.5
	baz=248						
WHF				iS	Sn	22 05 10.3	-0.6
	baz=248						
YHNB	Yeheng	0.47	317	P	Pn	22 05 02.3	0.0
	baz=321						
YHNB				S	Sn	22 05 10.2	-0.4
	baz=321						
NSK	Sanguang	0.49	317	iP	Pn	22 05 02.2	-0.3
	baz=321						
NSK				S	Sn	22 05 10.6	-0.3
	baz=321						
NWLT	Wulai	0.50	336	P	Pn	22 05 02.7	+0.1
	baz=340						
NWLT				S	Sn	22 05 10.8	-0.2
	baz=340						
TDCB	Techi	0.53	263	P	Pn	22 05 03.0	+0.1
	baz=261						
TDCB				S	Sn	22 05 11.4	-0.3
	baz=261						
NTC	Toucheng	0.54	10	P	Pn	22 05 03.7	+0.8
	baz=3.0						
NTC				S	Sn	22 05 13.4	+1.6
	baz=3.0						
CHGB	Renai	0.57	243	P	Pn	22 05 03.3	-0.2
	baz=238						
CHGB				S	Sn	22 05 13.1	+0.4
	baz=238						
ESL	Shilin	0.57	208	iP	Pn	22 05 01.7	-1.6
	baz=206						
ESL				S	Sn	22 05 10.5	-1.9
	baz=206						
OWD	Renai	0.62	234	P	Pn	22 05 03.7	-0.3
	baz=232						
OWD				S	Sn	22 05 12.8	-0.8
	baz=232						
TIPB	Shuangxi	0.66	8	P	Pn	22 05 04.6	+0.3
	baz=359						
TIPB				S	Sn	22 05 14.9	+0.7
	baz=359						
NHDH	Xindian Distri	0.67	344	P	Pn	22 05 04.1	-0.3
	baz=347						
NHDH				S	Sn	22 05 14.3	-0.1
	baz=347						
TWA	Mucha	0.67	349	P	Pn	22 05 04.2	-0.3
	baz=341						
TWA				S	Sn	22 05 14.5	0.0
	baz=341						
WLTB	Daxi	0.69	321	P	Pn	22 05 04.5	-0.2
	baz=329						
WLTB				S	Sn	22 05 15.7	+0.9
	baz=329						
EGFH	Guangfu	0.70	203	eP	Pn	22 05 04.1	-0.8
	baz=206						
EGFH				S	Sn	22 05 13.6	-1.6
	baz=206						
WHP	Taichung City	0.72	267	iP	Pn	22 05 05.8	+0.7
	baz=268						
WHP				S	Sn	22 05 16.3	+0.7
	baz=268						
TWB1	Santiao Chiao	0.73	19	P	Pn	22 05 06.0	+0.8
	baz=21						
TWB1				S	Sn	22 05 16.8	+1.2
	baz=21						
LIOB	Emei	0.73	297	P	Pn	22 05 05.1	-0.1
	baz=299						
LIOB				S	Sn	22 05 16.5	+0.8
	baz=299						
NSTT	Nanjuang	0.73	295	P	Pn	22 05 05.4	+0.2
	baz=298						
NSTT				S	Sn	22 05 15.8	0.0
	baz=298						
NWF	Wu-fen Shan	0.75	4	eS	Sn	22 05 16.9	+0.6
	baz=353						
WFSB	Wu-fen Shan	0.75	4	eP	Pn	22 05 05.2	-0.3
	baz=353						
WFSB				S	Sn	22 05 16.8	+0.6
	baz=353						
VWDT	VWDT	0.78	224	P	Pn	22 05 05.5	-0.3
	baz=218						
VWDT				S	Sn	22 05 16.7	-0.1
	baz=218						
DPDB	Guoxing	0.79	249	P	Pn	22 05 06.4	+0.4
	baz=249						
DPDB				S	Sn	22 05 17.7	+0.6
	baz=249						
NCUH	Zhongli	0.81	323	eP	Pn	22 05 05.8	-0.4
	baz=325						
NCUH				eS	Sn	22 05 18.2	+0.6
	baz=325						
NCU	National Centr	0.81	323	S	Sn	22 05 18.0	+0.3
	baz=325						
SBCB	Hsinchu	0.82	305	eS	Sn	22 05 18.4	+0.6
	baz=317						
TWS1	Kuangyinshan	0.83	340	iP	Pn	22 05 06.2	-0.3
	baz=350						
TWS1				iS	Sn	22 05 17.9	-0.1
	baz=350						
YM01	YM01	0.84	350	P	Pn	22 05 05.9	-0.7
	baz=343						
YM01				eS	Sn	22 05 17.7	-0.6
	baz=343						
HSN	Hsinchu	0.84	305	eS	Sn	22 05 18.3	0.0
	baz=310						
YM10	YM10	0.85	350	P	Pn	22 05 06.4	-0.4
	baz=343						
YM10				S	Sn	22 05 17.5	-1.0
	baz=343						
YM11	YM11	0.85	351	eP	Pn	22 05 06.6	-0.3
	baz=343						
YM11				S	Sn	22 05 17.8	-0.9
	baz=343						
HGSD	Ruisui	0.87	199	P	Pn	22 05 06.5	-0.5
	baz=207						
HGSD				eS	Sn	22 05 18.7	-0.2
	baz=207						
TWQ1	Liyutan	0.87	272	P	Pn	22 05 06.9	-0.1
	baz=273						
TWQ1				eS	Sn	22 05 18.9	-0.1
	baz=273						
SMLT	Sun Moon Lake	0.87	240	iP	Pn	22 05 08.0	+0.8
	baz=235						
SMLT				iS	Sn	22 05 20.4	+1.2
	baz=235						
YM03	YM03	0.87	349	P	Pn	22 05 06.7	-0.5
	baz=350						
YM03				eS	Sn	22 05 19.0	-0.2
	baz=350						
YM08	YM08	0.88	352	P	Pn	22 05 06.3	-0.8
	baz=344						
YM08				eS	Sn	22 05 18.3	-0.8
	baz=344						
NMLH	Miaoli	0.88	284	P	Pn	22 05 07.0	-0.2
	baz=286						
NMLH				S	Sn	22 05 19.6	+0.4
	baz=286						
SSLB	Suanglung	0.88	233	P	Pn	22 05 07.7	+0.5
	baz=229						
SSLB				S	Sn	22 05 19.5	+0.2
	baz=229						
NSY	Sanyi	0.89	276	eP	Pn	22 05 07.7	+0.5
	baz=278						
NSY				eS	Sn	22 05 19.5	+0.1
	baz=278						
TYC	Yuchr	0.90	243	iP	Pn	22 05 08.0	+0.6
	baz=239						
TYC				S	Sn	22 05 20.7	+1.2
	baz=239						
PTSB	Yuanli	0.94	278	eS	Sn	22 05 20.7	+0.1
	baz=279						
TWY	Chenhua	0.96	353	eP	Pn	22 05 07.9	-0.3
	baz=345						
TWY				eS	Sn	22 05 20.6	-0.3
	baz=345						
TCU	Taichung	0.98	260	eP	Pn	22 05 08.1	-0.3
	baz=271						
TCU				eS	Sn	22 05 21.9	+0.6
	baz=271						
WDJ	Dajia District	0.99	272	eP	Pn	22 05 07.9	-0.7
	baz=273						
WDJ				eS	Sn	22 05 21.8	0.0
	baz=273						
YULB	Yu-li	1.00	203	P	Pn	22 05 07.1	-1.6
	baz=202						
YULB				eS	Sn	22 05 19.7	-2.3
	baz=202						
WHYT	Xinyi Township	1.01	232	P	Pn	22 05 09.8	+0.9
	baz=227						
WHYT				S	Sn	22 05 23.8	+1.5
	baz=227						
TWF1	Yuli	1.04	202	P	Pn	22 05 08.6	-0.6
	baz=207						
WJS	Zhushan	1.04	242	P	Pn	22 05 10.1	+0.8
	baz=254						
WJS				S	Sn	22 05 24.8	+1.9
	baz=254						
WNT	Mingjian	1.05	246	eP	Pn	22 05 10.1	+0.7
	baz=258						
WNT				S	Sn	22 05 24.7	+1.6
	baz=258						
WCHH	Zhanghua	1.09	258	eP	Pn	22 05 10.1	+0.2
	baz=270						
WCHH				S	Sn	22 05 24.6	+0.4
	baz=270						
JYNG	Yonagunijimaku	1.12	83	P	Pn	22 05 10.2	0.0
JYNG				eS	Sn	22 05 24.8	+0.1
ALS	Alishan	1.17	227	P	Pn	22 05 12.0	+0.8
	baz=219						
ALS				S	Sn	22 05 27.9	+1.5
	baz=219						
YOJ	Yonaguni jima	1.18	83	P	Pn	22 05 10.8	-0.2
YOJ				eS	Sn	22 05 26.3	+0.2
FULB	Fuli	1.18	200	P	Pn	22 05 10.7	-0.5
	baz=206						
FULB				eS	Sn	22 05 26.7	+0.3
	baz=206						
CHN5	Tsauling	1.20	233	P	Pn	22 05 12.0	+0.6
	baz=244						
CHN5				S	Sn	22 05 28.6	+1.7
	baz=244						
WGK	Gukeng	1.24	240	P	Pn	22 05 12.5	+0.6
	baz=252						
WGK				S	Sn	22 05 29.2	+1.6
	baz=252						
WDLH	Douliu	1.26	240	eP	Pn	22 05 12.1	0.0
	baz=253						
WDLH				S	Sn	22 05 30.0	+1.9
	baz=253						
ELDTW	Lidau	1.30	210	P	Pn	22 05 12.5	-0.3
	baz=203						
ELDTW				eS	Sn	22 05 28.8	-0.5
	baz=203						
RLNB	Erlin	1.32	251	eP	Pn	22 05 13.1	+0.1
	baz=263						
RLNB				S	Sn	22 05 30.4	+0.8
	baz=263						
CHN2	Minshiung	1.39	236	eS	Sn	22 05 33.4	+2.2
	baz=248						
WTCT	Ta-ch'eng	1.40	251	eP	Pn	22 05 13.6	-0.4
	baz=252						
WTCT				eS	Sn	22 05 31.8	+0.4
	baz=252						
CHN4	Tsaushan	1.42	227	iP	Pn	22 05 15.7	+1.4
	baz=228						
CHN4				S	Sn	22 05 34.2	+2.3
	baz=228						
TPUB	Ta-pu	1.43	225	P	Pn	22 05 15.1	+0.7
	baz=218						
TPUB				S	Sn	22 05 34.1	+1.8
	baz=218						
CHY	Chiayi	1.45	236	eP	Pn	22 05 14.2	-0.5
	baz=248						
CHY				S	Sn	22 05 33.9	+1.3
	baz=248						
STYT	Tauyuan	1.46	218	eP	Pn	22 05 15.5	+0.6
	baz=210						
STYT				eS	Sn	22 05 33.8	+0.9
	baz=210						
WTP	Ta-pu	1.48	224	P	Pn	22 05 15.8	+0.7
	baz=224						
WTP				eS	Sn	22 05 35.0	+1.5
	baz=224						
WSF	Szhu	1.54	244	S	Sn	22 05 35.2	+0.4
	baz=255						
TWK	Hsinying	1.54	228	P	Pn	22 05 16.5	+0.4
	baz=228						
TWK				S	Sn	22 05 36.7	+1.6
	baz=228						
SNST	Tainan City	1.57	226	P	Pn	22 05 17.5	+1.2
	baz=227						
SNST				S	Sn	22 05 37.8	+2.2
	baz=227						
CHN1	Nanshi	1.58	225	P	Pn	22 05 17.2	+0.7
	baz=225						
CHN1				S	Sn	22 05 37.9	+2.0
	baz=225						
TWG	Pinlang	1.61	202	eP	Pn	22 05 16.6	-0.3
	baz=197						
TWG				eS	Sn	22 05 35.5	-1.1
	baz=197						
TWGBT	Beinan	1.61	202	eP	Pn	22 05 16.1	-0.8
	baz=197						
TWGBT				eS	Sn	22 05 35.9	-0.7
	baz=197						
SGST	Jiashian	1.62	221	P	Pn	22 05 17.3	+0.2
	baz=221						
SGST				S	Sn	22 05 38.6	+1.7
	baz=221						
SLGT	Liugui	1.65	217	P	Pn	22 05 18.3	+0.8
	baz=218						
SLGT				eS	Sn	22 05 39.4	+1.7
	baz=218						
IRIF	Iriomote-Funau	1.83	89	P	Pn	22 05 19.4	-0.4
IRIF				eS	Sn	22 05 41.2	-0.6
ECL	Taimali	1.86	203	eP	Pn	22 05 19.5	-0.8
	baz=198						
SSD	Sandimen	1.86	213	P	Pn	22 05 21.7	+1.3
	baz=214						
SSD				eS	Sn	22 05 44.4	+1.6
	baz=214						
MASBT	Mashibuluo	1.98	211	P	Pn	22 05 23.0	+1.1
	baz=212						
MASBT				eS	Sn	22 05 46.8	+1.3
	baz=212						
JKRS	Kuro-shima	2.08	92	P	Pn	22 05 23.6	+0.3
JKRS				S	Sn	22 05 48.7	+0.6
EAST	Anshuo	2.09	203	eP	Pn	22 05 23.7	+0.2
	baz=198						
EAST				eS	Sn	22 05 48.0	-0.4
	baz=198						
PNG	Penghu	2.12	250	eP	Pn	22 05 22.8	-1.1
	baz=251						
PNG				eS	Sn	22 05 48.1	-1.0
	baz=251						
WDGT	Dungji	2.17	241	P	Pn	22 05 24.0	-0.5
	baz=242						
WDGT				S	Sn	22 05 49.8	-0.4
	baz=242						
SCZT	Fangliau	2.19	208	eS	Sn	22 05 52.3	+1.5
	baz=220						
JIJ	Ishigaki jima	2.20	88	P	Pn	22 05 24.4	-0.6
JIJ				eS	Sn	22 05 50.5	-0.6

JISG Ishigakijimahi 2.37 83 P Pn 22 05 26.8 -0.4
JISG eS Sn 22 05 54.5 -0.6
JTJ Tarama 2.73 83 eS Sn 22 06 03.7 -0.2
KNMB Chin-men Tao 3.05 273 eP Pn 22 05 35.8 -0.7
baz=275
KNMB eS Sn 22 06 11.0 -0.9
baz=275
AXDP Jialang 3.47 280 eP Pn 22 05 42.1 -0.2
baz=282
AXDP eS Sn 22 06 21.3 -0.9
baz=282
ZPLA Ao Xicun 3.66 265 eP Pn 22 05 44.2 -0.7
baz=267
ZPLA eS Sn 22 06 25.2 -1.6
baz=267

SJA 01 22:10:14.4±0.7, 22.66S×66.24W, h262km±7km, ML3.7, MW3.4
IDC 01 22:10:14.3±1.4, 22.69S×66.12W, h239km±17km, mb3.3/2, mb1 3.4/6, mb1mx3.1/39, mbtmp3.8/6, Error ellipse: s-maj=28.3km s-min=17.6km az=107.0
GUC 01 22:10:16.5±0.4, 22.60S×66.85W, h288km±10km, ML3.6
ISC 01 22:10:14.1±0.8, 22.76S±0.05×66.26W±0.05, h250km, n44, σ1.84/77, 4C-6D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
HJA	Humahuaca	0.90	120	iP	Pn	22 10 51.6	+2.6
HJA					IAML	22 10 51.8	
	comp=Z,141nm,0.6s						
YJA	Yavi	0.90	50	iP	Pn	22 10 51.1	+1.9
YJA				iS	S	22 11 17.3	+0.6
AZAP	Zapla	1.82	143	iP	Pn	22 10 57.3	+2.0
AZAP					IAML	22 10 57.5	
	comp=Z,32nm,0.3s						
ASTB	Santa Barbara	2.04	126	iP	Pn	22 10 59.1	+2.0
LVC	Limon Verde	2.45	273	P	Pn	22 11 03.4	+2.1
	comp=Z,3.4nm,0.3s,baz=83,slow=5.6,SNR=25						
LVC				S	S	22 11 39.4	+0.9
	comp=Z,12nm,0.3s,baz=244,slow=19,SNR=35						
PB09	IPOC Station P	2.93	289	⇓iP	Pn	22 11 08.1	+2.2
PB09				eS	S	22 11 47.0	0.0
PB09					IAML	22 11 49.5	
	comp=N,88nm,0.5s						
PB09	IPOC Station P	2.93	289	iP	Pn	22 11 08.2	+2.2
PB09				iS	S	22 11 48.0	+1.0
PB09					IAML	22 11 50.6	
	comp=Z,122nm,0.7s						
PB15	IPOC Station P	2.99	261	⇓iP	Pn	22 11 09.3	+2.5
PB15				iS	S	22 11 49.2	+0.9
PB15	IPOC Station P	2.99	261	iP	Pn	22 11 09.6	+2.9
PB15				iS	S	22 11 49.4	+1.1
PB06	IPOC Station P	3.06	270	eP	Pn	22 11 09.3	+1.9
PB06				iS	S	22 11 49.1	-0.4
PB06	IPOC Station P	3.06	270	iP	Pn	22 11 09.9	+2.5
PB06				iS	S	22 11 49.9	+0.4
PB06					IAML	22 11 52.8	
	comp=Z,105nm,0.4s						
PB03	IPOC Station P	3.31	282	⇑iP	Pn	22 11 11.7	+1.5
PB03				iS	S	22 11 53.6	-1.0
PB03	IPOC Station P	3.31	282	iP	Pn	22 11 11.7	+1.5
PB03				iS	S	22 11 53.5	-1.0
PB01	IPOC Station P	3.45	299	eP	Pn	22 11 12.7	+1.0
PB01				iS	S	22 11 56.1	-1.3
PB01	IPOC Station P	3.45	299	iP	Pn	22 11 13.0	+1.2
PB01				iS	S	22 11 56.4	-0.9
PB07	IPOC Station P	3.52	286	⇓iP	Pn	22 11 13.8	+1.4
PB07				iS	S	22 11 57.4	-1.3
PB07	IPOC Station P	3.52	286	iP	Pn	22 11 13.9	+1.4
PB07				iS	S	22 11 57.2	-1.5
PB04	IPOC Station P	3.62	276	⇑iP	Pn	22 11 15.2	+1.5
PB04				eS	S	22 11 59.6	-1.3
PB04	IPOC Station P	3.62	276	iP	Pn	22 11 15.3	+1.5
PB04				iS	S	22 12 00.4	-0.5
PB04					IAML	22 12 01.6	
	comp=Z,161nm,0.2s						
PB05	IPOC Station P	3.64	268	eP	Pn	22 11 15.2	+1.4
PB05				iS	S	22 12 00.4	-0.8
PB05	IPOC Station P	3.64	268	iP	Pn	22 11 15.5	+1.7
PB05				iS	S	22 12 00.4	-0.8
PB02	IPOC Station P	3.67	292	⇓iP	Pn	22 11 15.1	+0.9
PB02				iS	S	22 12 00.3	-1.5
PB08	IPOC Station P	3.75	314	⇓iP	Pn	22 11 17.1	+1.6
PB08				iS	S	22 12 03.3	-0.7
GO02	Mina Guanaco	3.87	231	⇑iP	Pn	22 11 18.9	+2.2
GO02				iS	S	22 12 07.8	+1.4
PB10	IPOC Station P	4.02	258	⇓iP	Pn	22 11 19.1	+1.0
PB10				iS	S	22 12 07.3	-1.8
PB10	IPOC Station P	4.02	258	iP	Pn	22 11 19.4	+1.2
PB10				iS	S	22 12 07.8	-1.3
PB10					IAML	22 12 11.1	
	comp=Z,78nm,0.2s						
PATCX	Punta Patache	4.10	297	⇑iP	Pn	22 11 19.7	+0.5
PATCX				iS	S	22 12 08.3	-2.6
PB14	IPOC Station P	4.23	243	iP	Pn	22 11 22.4	+1.5
PB14				iS	S	22 12 13.6	-0.3
PB14					IAML	22 12 15.6	
	comp=Z,155nm,0.3s						
CYA	Choya	5.67	176	iP	Pn	22 11 41.6	+3.5
CYA					IAML	22 11 41.7	
	comp=Z,5.6nm,0.5s						
VCA	Vinchina	6.20	196	iP	Pn	22 11 47.8	+3.0
VCA					IAML	22 11 48.1	
	comp=Z,20nm,0.3s						
VCA				iS	S	22 13 00.2	+2.7
ACLC	CERRO LA CRUZ	6.67	185	iP	Pn	22 11 52.1	+1.5
ACLC				iS	S	22 13 09.0	+0.9
LPAZ	La Paz	6.68	344	P	Pn	22 11 52.2	+0.8
	comp=Z,0.6nm,0.3s,baz=163,slow=11,SNR=7.3						
LPAZ				S	S	22 13 07.2	-2.1
	comp=Z,0.1nm,0.3s,baz=316,slow=16,SNR=5.1						
APLL	PUNTA DE LOS L	7.61	182	iP	Pn	22 12 03.0	+0.6
APLL				iS	S	22 13 26.3	-3.2
APLL					IAML	22 13 30.8	
	comp=Z,7.0nm,0.4s						
SIV	San Ignacio	8.32	37	P	Pn	22 12 10.8	-0.8
	comp=Z,1.1nm,0.3s,baz=234,slow=14,SNR=37						
AMOG	MOGNA	8.38	193	iP	Pn	22 12 12.6	+0.3
AMOG				iS	S	22 13 44.5	-3.1
TCA	Tanti	8.67	171	iP	Pn	22 12 16.9	+1.0
TCA					IAML	22 12 17.1	
	comp=Z,3.5nm,0.4s						
RTLL	Cerro Villicun	8.76	193	iP	Pn	22 12 17.5	+0.5
RTLL				iS	S	22 13 53.6	-2.6
RTLL					IAML	22 13 54.8	
	comp=Z,4.8nm,0.3s						
CFA	Coronel Fontan	8.98	191	P	Pn	22 12 20.5	+0.7
	baz=7.8,slow=12						
CFA				S	S	22 13 57.3	-4.1
	comp=Z,2.0nm,0.3s,baz=126,slow=24,SNR=15						
ACAN	Cantantal	9.51	185	iP	Pn	22 12 26.6	+0.1
MRA	San Martin	9.63	177	iP	Pn	22 12 28.3	+0.2
MRA					IAML	22 12 28.6	
	comp=Z,3.8nm,0.3s						
MRA				iS	S	22 14 10.6	-6.0
ARCO	CERRO ARCO	10.31	193	iP	Pn	22 12 38.6	+1.9
ARCO					IAML	22 13 49.9	
	comp=Z,3.1nm,0.5s						
TORD	Torodi Ar. Bea	75.49	69	P	P	22 21 31.1	-0.3
	comp=Z,0.3nm,0.4s,baz=260,slow=5.1,SNR=7.3						
YKA	Yellowknife Ar	93.20	340	P	P	22 23 00.4	+0.9
	comp=Z,0.2nm,0.5s,baz=129,slow=4.4,SNR=5.4						
MKAR	Makanchi Array	145.14	39	PKPbc	PKPab	22 29 23.4	+1.3
	comp=Z,0.6nm,0.7s,baz=305,slow=3.0,SNR=6.8						

IDC 01 22:13:25.8±0.6, 28.28N×141.89E, h0km, mb3.9/22, mb1 4.0/24, mb1mx3.9/62, mbtmp3.9/24, ML2.8/2, Error ellipse: s-maj=20.3km s-min=13.6km az=77.0
JMA 01 22:13:26.5±0.1, 28.38N×142.51E, h14km±1km, M4.4
NEIC 01 22:13:31.0±1.9, 28.23N±0.05×141.9E±0.1, h42km±6km, mb4.6/52, Error ellipse: s-maj=15.0km s-min=6.3km az=74.0
ISC 01 22:13:30.3±0.4, 28.25N±0.04×141.91E±0.08, h36km, n111, σ1.20/108, mb4.3/45, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.17	168	P	Pn	22 13 50.3	+0.2
JCJ	Chichijima	1.17	168	Pn	Pn	22 13 50.4	+0.2
	108nm,0.3s,baz=73,slow=23,SNR=61						
JCJ				Sn	Sn	22 14 04.0	-0.8
	387nm,0.3s,baz=323,slow=20,SNR=20						
JHH2	Haha-jima-NKT2	1.62	171	P	Pn	22 13 57.3	+0.9
JHH2				eS	Sn	22 14 19.6	+3.6
JHJ2	Mitsune	5.17	340	Pn	Pn	22 14 45.7	+0.5
JHJ	Hachijo jima 2	5.19	340	Pn	Pn	22 14 45.3	-0.1
	2.6nm,0.3s,baz=66,slow=19,SNR=2.1						
JHJ				Sn	Sn	22 15 42.9	-1.2
	8.1nm,0.3s,baz=241,slow=19,SNR=2.6						
BSO1	Boso 1	6.44	353	P	Pn	22 15 02.9	+0.9
BSO1				S	Sn	22 16 12.9	-1.1
BSO3	Boso 3	6.64	350	P	Pn	22 15 06.5	+1.4
JOD2	Odawara 2	7.40	342	P	Pn	22 15 17.9	+2.2
JHU	Hanno	7.90	344	P	Pn	22 15 24.2	+1.6
JHU				eS	Sn	22 16 50.0	-0.8
JRY	Ryogami san	8.16	343	P	Pn	22 15 28.4	+2.3
INU	Inuyama	8.21	331	Pn	Pn	22 15 27.6	+0.7
JAG	Ashikaga	8.42	346	P	Pn	22 15 30.2	+0.5
JHO	Hitachi	8.42	353	P	Pn	22 15 29.9	+0.2
MJAR	Matsushiro Arr	8.84	340	Pn	Pn	22 15 37.0	+1.5
	0.2nm,0.3s,baz=166,slow=11,SNR=13						
MJAR				Sn	Sn	22 17 10.2	-3.7
	0.0nm,0.3s,baz=111,slow=13,SNR=2.4						
MJAR	Matsushiro Arr	8.84	340		Pn	22 15 35.5	0.0
MAJO	Matsushiro	8.84	340	Pn	Pn	22 15 36.2	+0.7
MJB9	Matsu-Tunnel	8.85	340	Pn	Pn	22 15 36.4	+0.8
ERM	Erimo	13.78	4	Pn	Pn	22 16 42.5	-0.5
GUMO	Guam	14.84	169	Pn	Pn	22 16 57.1	-0.4
KSAR	Wonju Array Be	14.92	311	Pn	Pn	22 16 59.0	+0.5
USA0B	Ussuriysk Arra	17.80	336		Pn	22 17 34.8	-0.3
USRK	Ussuriysk Ar.	17.80	336	P	Pn	22 17 34.6	-0.4
	baz=149,slow=18,SNR=2.8						
YHNB	Yeheng	18.72	264	P	Pn	22 17 46.5	-0.1
MDJ	Mudanjiang	19.07	332	P	P	22 17 49.9	+0.3
YULB	Yu-li	19.17	260	P	P	22 17 50.5	-0.2
KLR	Kul'dur	22.36	342	P	P	22 18 25.4	+0.3
	1.7nm,0.5s,baz=153,slow=5.4,SNR=6.8						
H11N2	WAKE ISLAND Hy	24.32	105	T	T	22 43 40.1	
	baz=294,slow=74						
H11N1	WAKE ISLAND Hy	24.32	105	T	T	22 43 44.6	
	baz=294						
H11N3	WAKE ISLAND Hy	24.34	105	T	T	22 43 46.0	
	baz=294,slow=74						
H11S3	WAKE ISLAND Hy	24.69	108	T	T	22 44 19.6	
	baz=297,slow=75,SNR=25						
H11S1	WAKE ISLAND Hy	24.69	108	T	T	22 44 26.8	
	baz=297,slow=75,SNR=15						
H11S2	WAKE ISLAND Hy	24.71	108	T	T	22 44 17.7	
	baz=297,slow=75,SNR=12						
SONM	Songino Array	33.72	315	P	P	22 20 08.3	0.0
	0.4nm,0.7s,baz=143,slow=3.6,SNR=2.4						
SONM	Songino Array	33.72	315	P	P	22 20 08.9	+0.7
RABL	Rabaul	33.73	161	P	P	22 20 08.4	-0.1
SEY	Seymchan	35.36	8	P	P	22 20 23.0	+1.0
	1.1nm,0.6s,baz=213,slow=10,SNR=5.9						
ATKA	Atka Island	40.33	41	P	P	22 21 01.6	-2.5
COEN	Coen	41.97	178	P	P	22 21 13.5	-4.4
COEN				IAmb	IAmb	22 21 20.9	
	comp=Z,10nm,1.1s						
NIKH	Nikolski High	43.67	42	P	P	22 21 31.8	+0.4
KULM	Kulim	45.28	248	P	P	22 21 43.6	-1.1
KULM				IAmb	IAmb	22 21 49.8	
	comp=Z,9.1nm,1.1s						
KNRA	Kununurra	45.48	198	P	P	22 21 44.8	-1.3
WB0	Warramunga Arr	48.28	189	P	P	22 22 08.8	+0.9
WB0				IAmb	IAmb	22 22 13.0	
	comp=Z,12nm,1.1s						
WR0	Warramunga Arr	48.45	189	P	P	22 22 09.9	+0.6
WR0				IAmb	IAmb	22 22 20.0	
	comp=Z,8.2nm,1.1s						
WRAB	Tennant Creek	48.45	190	P	P	22 22 10.4	+1.2
WRAB				IAmb	IAmb	22 22 11.3	
	comp=Z,8.2nm,1.0s						
WRA	Warramunga Arr	48.46	190	P	P	22 22 10.2	+0.8
	comp=Z,3.2nm,0.6s,baz=12,slow=8.6,SNR=18						
WRA	Warramunga Arr	48.46	190	P	P	22 22 10.1	+0.8
ZALV	Zalesovo Beam	48.46	318	P	P	22 22 10.6	+1.5
	comp=Z,0.4nm,0.3s,baz=108,slow=6.5,SNR=3.5						
ZALV	Zalesovo Beam	48.46	318	P	P	22 22 08.9	-0.1
MKAR	Makanchi Array	49.56	309	P	P	22 22 17.8	+0.1
	comp=Z,0.1nm,0.3s,baz=82,slow=10,SNR=10						
MAKZ	Makanchi	49.77	309	P	P	22 22 18.8	-0.5
CHIR	Chirikof Islan	51.77	40	P	P	22 22 35.2	+1.0
KURK	Kurchatov	52.01	314	P	P	22 22 34.7	-1.3
KURBB	Kurchatov Arra	52.07	314	P	P	22 22 36.7	+0.3
	comp=Z,0.7nm,0.5s,baz=91,slow=8.3,SNR=6.6						
ASAR	Alice Springs	52.18	189	P	P	22 22 39.0	+1.5
	comp=Z,0.4nm,0.6s,baz=8.8,slow=6.7,SNR=3.7						
ASAR	Alice Springs	52.18	189	P	P	22 22 38.0	+0.5
SVW2	Sparrevohn	52.46	33	P	P	22 22 40.6	+1.4
SVW2				IAmb	IAmb	22 22 53.3	
	comp=Z,4.1nm,1.1s						
OHAK	Old Harbor	53.18	38	P	P	22 22 44.5	0.0
OHAK				IAmb	IAmb	22 22 57.8	
	comp=Z,2.8nm,0.8s						
KDAK	Kodiak Island	53.60	37	P	P	22 22 48.4	+0.8
	comp=Z,3.0nm,0.7s,baz=305,slow=5.0,SNR=4.2						
KDAK	Kodiak Island	53.60	37	P	P	22 22 48.2	+0.7
KDAK				IAmb	IAmb	22 22 52.1	
	comp=Z,6.6nm,1.1s						
PSA00	Pilbara Seismi	53.91	206	P	P	22 22 49.8	-0.5
IMAR	Indian Mountai	54.13	27	P	P	22 22 52.7	+1.3
PPLA	Purkeypile	54.30	31	P	P	22 22 54.1	+1.2
PPLA				IAmb	IAmb	22 23 12.4	
	comp=Z,5.5nm,1.2s						
BOOM	Boomskoye usch	54.37	304	P	P	22 22 54.9	+1.2
CNPM	China Poot	54.42	35	P	P	22 22 53.7	+0.1
CNPM				IAmb	IAmb	22 23 06.7	
	comp=Z,7.2nm,1.1s						
BRLK	Bradley Lake	54.62	35	P	P	22 22 55.2	+0.1
BRLK				IAmb	IAmb	22 23 00.9	
	comp=Z,8.9nm,1.1s						
MLY	Manley	55.22	28	P	P	22 22 59.9	+0.5
NOUC	Port Laguerre	55.32	152	P	P	22 23 01.1	+0.7
NOUC				IAmb	IAmb	22 23 17.1	
	comp=Z,9.2nm,0.9s						
DZM	Mont Dzumac	55.35	152	P	P	22 23 01.6	+0.9
DZM				IAmb	IAmb	22 23 15.4	
	comp=Z,7.8nm,1.1s						
NEA	Nenana	55.87	29	P	P	22 23 04.4	+0.4
KNK	Knik Glacier	55.92	33	P	PcP	22 24 05.3	+2.7
CCB	Clear Creek Bu	56.42	29	P	P	22 23 08.6	+0.7
ILAR	Eielson Array	56.83	29	P	P	22 23 11.3	+0.6
	comp=Z,0.5nm,0.7s,baz=263,slow=5.8,SNR=5.8						
HIN	Hinchinbrook I	56.84	34	P	P	22 23 12.0	+1.1
BVAR	Borovoye Array	57.03	317	P	P	22 23 13.2	+0.8
	comp=Z,1.1nm,0.4s,baz=87,slow=7.2,SNR=16						
HMH	Humu'ula Sheep	57.34	84	P	P	22 23 14.1	-1.4
KHU	Kahuku	57.36	84	P	P	22 23 12.7	-2.8
PRP	Porcupine Dome	57.45	28	P	P	22 23 14.3	-1.0
PRP				IAmb	IAmb	22 23 15.3	
	comp=Z,2.0nm,0.8s						
SBLHI	Steaming Bluff	57.59	84	P	P	22 23 16.1	-0.9
SCRK	Sand Creek	58.06	30	P	P	22 23 20.7	+1.0
SCRK				IAmb	IAmb	22 23 23.1	
	comp=Z,3.0nm,1.2s						
KKAR	Karatay Array	58.22	305	P	P	22 23 21.1	+0.2
BTK	Batken	58.58	302	IAmb	IAmb	22 23 26.5	
	comp=Z,4.0nm,0.6s						
BALM	Baldy	58.87	33	P	P	22 23 26.3	+1.0
BBOO	Buckleboo	60.97	186	P	P	22 23 40.0	+0.2
BBOO				IAmb	IAmb	22 23 41.7	
	comp=Z,3.8nm,1.0s						
INK	Inuvik	62.09	25	P	P	22 23 47.8	+0.8
	comp=Z,0.5nm,0.5s,baz=265,slow=2.4,SNR=4.2						
ARU	Arti	63.37	322	P	P	22 23 56.6	+0.9
	comp=Z,1.2nm,0.5s,baz=34,slow=4.1,SNR=8.1						
ARU	Arti	63.37	322	IAmb	IAmb	22 23 57.4	
	comp=Z,4.2nm,0.6s						
ABKAR	Akbulak array	64.12	314	P	P	22 24 01.1	+0.3
ABKAR	Akbulak array	64.12	314	P	P	22 24 01.6	+0.8
ABKAR				IAmb	IAmb	22 24 02.5	
	comp=Z,2.2nm,1.1s						
AKTO	Aktyubinsk	65.04	315	P	P	22 24 07.3	+0.5
	comp=Z,1.7nm,0.6s,baz=105,slow=9.6,SNR=6.1						
C36M	Paulatuk	65.28	23	P	P	22 24 09.0	+1.0
DIB	Dawson Inlet,	65.38	41	P	P	22 24 08.6	-0.3
DIB				IAmb	IAmb	22 24 25.9	
	comp=Z,9.3nm,1.0s						
BBB	Bella Bella	68.21	42	P	P	22 24 27.9	+0.9
	comp=Z,8.6nm,1.0s,baz=106,slow=7.3,SNR=2.3						
BBB	Bella Bella	68.21	42	IAmb	IAmb	22 24 31.9	
	comp=Z,15nm,1.1s						
YKA	Yellowknife Ar	71.25	28	P	P	22 24 46.1	+0.6
	comp=Z,0.5nm,0.5s,baz=295,slow=6.4,SNR=7.8						
ARCES	ARCESS Array B	72.38	341	P	P	22 24 53.5	+1.3
	comp=Z,2.7nm,0.9s,baz=60,slow=5.3,SNR=3.8						
ARCES	ARCESS Array B	72.38	341	P	P	22 24 52.3	+0.1
COR	Corvallis	73.94	48	P	P	22 25 01.4	-0.4
COR				IAmb	IAmb	22 25 07.0	
	comp=Z,7.9nm,0.9s						
QRZ	Quartz Range	74.36	156	P	P	22 25 03.4	-0.7
QRZ				IAmb	IAmb	22 25 22.0	
	comp=Z,6.4nm,1.0s						
BKZ	Black Stump Fm	74.42	153	P	P	22 25 04.5	-0.1
KRMB	Red Mountain	74.78	51	P	P	22 25 05.1	-1.9
KRMB				IAmb	IAmb	22 25 23.6	
	comp=Z,4.3nm,1.1s						
NNZ	Nelson	75.01	156	P	P	22 25 07.9	+0.1
THZ	Tophouse	75.32	157	P	P	22 25 07.5	-2.2
THZ				IAmb	IAmb	22 25 09.1	
	comp=Z,8.6nm,1.1s						
LBZ	Lake Benmore	76.77	160	P	P	22 25 15.7	-2.1
LBZ				IAmb	IAmb	22 25 17.8	
	comp=Z,8.0nm,1.2s						
FIA1	FINESS Array S	76.81	334	P	P	22 25 18.4	+0.4
FIA1				IAmb	IAmb	22 25 21.2	
	comp=Z,1.4nm,0.6s						
FINES	FINESS Array B	76.81	334	P	P	22 25 18.9	+0.9
	comp=Z,0.9nm,0.4s,baz=80,slow=4.6,SNR=22						
AKASG	Malin Array Be	81.55	324	P	P	22 25 44.4	+0.3
	comp=Z,0.4nm,0.3s,baz=52,slow=6.2,SNR=5.0						
NB2	NORSAR Subarra	82.45	338	P	P	22 25 48.6	-0.1
	comp=Z,0.9nm,0.7s,baz=42,slow=5.3						
NOA	NORSAR Array B	82.45	338	P	P	22 25 49.2	+0.5
	comp=Z,0.2nm,0.4s,baz=48,slow=4.7,SNR=3.1						
PDAR	Pinedale Array	83.57	45	P	P	22 25 56.4	+1.3
	comp=Z,0.1nm,0.5s,baz=305,slow=3.2,SNR=2.1						
TXAR	Lajitas Array	95.11	53	P	P	22 26 50.8	+0.6
	comp=Z,0.3nm,0.7s,baz=310,slow=3.7,SNR=5.1						
TORD	Torodi Ar. Bea	123.64	312	PKP	PKiKP	22 32 25.6	+0.6
	comp=Z,0.2nm,0.4s,baz=59,slow=1.1,SNR=5.3						

JMA 01 22:22:19.7±0.1, 24.02N×122.28E, h25km±3km, M3.2
TAP 01 22:22:20.3, 24.10N×122.24E, h24km, ML3.6, D
ISC 01 22:22:19.2±1.1, 24.04N±0.02×122.27E±0.02, h19km±2km, n107, σ0.63/189, 5C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.53	346	⇑iP	Pb	22 22 29.7	-0.1
	baz=345						
EOS1				iS	Sb	22 22 37.0	0.0
	baz=345						
HWA	Hwalien	0.61	264	eP	Pn	22 22 32.5	-0.3
	baz=243						
TWD	Chiawan	0.61	274	P	Pg	22 22 32.0	+0.5
	baz=254						
TWD				S	Sn	22 22 41.5	-0.9
	baz=254						
ENA	Nanau	0.62	309	iP	Pb	22 22 31.3	-0.1
	baz=313						
ENA				eS	Sb	22 22 39.6	-0.1
	baz=313						
ENLB	Shoufeng	0.62	258	eP	Pg	22 22 32.0	+0.3
	baz=240						
ENLB				eS	Sg	22 22 41.3	+1.3
	baz=240						
NACB	Ninganchiao	0.63	283	P	Pg	22 22 32.4	+0.6
	baz=262						
NACB				S	Sb	22 22 39.9	-0.1
	baz=262						
TWC	Suao	0.69	326	⇑iP	Pb	22 22 31.9	-0.7
	baz=329						
TWC				eS	Sb	22 22 39.9	-1.8
	baz=329						
ETLH	Xiulin Townshi	0.74	283	P	Pg	22 22 34.0	+0.3
	baz=266						
JYNG	Yonagunijimaku	0.74	56	P	Pb	22 22 33.7	+0.1
JYNG				S	Sb	22 22 43.0	-0.4
ESL	Shilin	0.80	254	P	Pb	22 22 34.4	-0.1
	baz=241						
ESL				eS	Sb	22 22 44.9	0.0
	baz=241						
YOJ	Yonaguni jima	0.80	58	eP	Pb	22 22 34.3	-0.3
	baz=61						
YOJ				eS	Sg	22 22 45.8	+0.3
	baz=61						
YOJ	Yonaguni jima	0.80	58	P	Pb	22 22 34.5	0.0
YOJ				eS	Sb	22 22 45.1	+0.1
EGFH	Guangfu	0.85	245	eP	Pb	22 22 35.4	0.0
	baz=230						
EGFH				eS	Sb	22 22 46.6	+0.1
	baz=230						
ILA	Ilan	0.87	327	eP	Pb	22 22 35.7	+0.1
	baz=325						
ILA				eS	Sb	22 22 46.1	-0.8
	baz=325						
TWE	Neicheng	0.87	321	P	Pb	22 22 35.6	-0.2
	baz=326						
TWE				eS	Sb	22 22 46.5	-0.6
	baz=326						
ENTT	Nioudou	0.88	313	P	Pb	22 22 36.1	+0.2
	baz=322						
ENTT				eS	Sb	22 22 47.5	+0.3
	baz=322						
NDT	Datong Townshi	0.89	309	eP	Pb	22 22 36.5	+0.4
	baz=317						
NDT				eS	Sb	22 22 46.5	-1.1
	baz=317						
NNSB	Datong	0.90	296	⇑iP	Pb	22 22 36.7	+0.4
	baz=292						
NNSB				eS	Sb	22 22 47.9	0.0
	baz=292						
NNSH	Datong	0.90	296	eP	Pb	22 22 36.7	+0.4
	baz=292						
NNSH				eS	Sg	22 22 48.6	-0.1
	baz=292						
NTC	Toucheng	0.91	334	eP	Pb	22 22 36.1	-0.3
	baz=344						
NTC				eS	Sb	22 22 47.3	-0.7
	baz=344						
NNS	Nan Shan	0.91	296	eP	Pb	22 22 36.8	+0.3
	baz=293						
NNS				eS	Sg	22 22 49.4	+0.3
	baz=293						
SLBB	Yuanshan	0.92	321	P	Pb	22 22 36.7	+0.1
	baz=325						
SLBB				eS	Sb	22 22 48.7	+0.2
	baz=325						
WHF	Hehuan Shan	0.92	277	eP	Pb	22 22 37.2	+0.3
	baz=262						
WHF				eS	Sb	22 22 49.0	+0.1
	baz=262						
HGSD	Ruisui	0.94	235	eP	Pb	22 22 36.9	-0.1
	baz=232						
HGSD				eS	Sg	22 22 50.0	-0.1
	baz=232						
TWB1	Santiao Chiao	1.00	345	eP	Pb	22 22 37.5	-0.5
	baz=332						
TWB1				eS	Sb	22 22 50.1	-0.7
	baz=332						
CHGB	Renai	1.00	272	⇓iP	Pb	22 22 38.3	+0.2
	baz=256						
CHGB				eS	Sb	22 22 51.2	+0.2
	baz=256						
OWD	Renai	1.00	265	eP	Pb	22 22 38.2	+0.2
	baz=262						
OWD				eS	Sb	22 22 50.2	-0.7
	baz=262						
NWLT	Wulai	1.01	317	eP	Pb	22 22 38.4	+0.2
	baz=323						
NWLT				eS	Sb	22 22 50.9	-0.4
	baz=323						
TIPB	Shuangxi	1.01	337	⇑iP	Pb	22 22 38.0	-0.2
	baz=335						
TIPB				eS	Sb	22 22 50.0	-1.2
	baz=335						
EHY	Hungye	1.01	239	eP	Pb	22 22 38.1	-0.2
	baz=227						
EHY				eS	Sb	22 22 51.5	+0.3
	baz=227						
TWT	Tachien	1.02	282	eP	Pg	22 22 40.2	+1.1
	baz=266						
YHNB	Yeheng	1.03	308	P	Pb	22 22 38.6	+0.1
	baz=292						
YHNB				eS	Sb	22 22 51.9	+0.2
	baz=292						
TDCB	Techi	1.04	282	iP	Pn	22 22 39.3	+0.4
	baz=266						
NSK	Sanguang	1.04	308	⇓iP	Pb	22 22 38.9	+0.1
	baz=305						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NSK				eS	Sb	22 22 51.8	-0.3
	baz=305						
VWDT	VWDT	1.07	255	P	Pn	22 22 39.5	+0.3
	baz=240						
VWDT				eS	Sn	22 22 53.7	+0.2
	baz=240						
YULB	Yu-li	1.10	234	eP	Pn	22 22 39.0	-0.7
	baz=248						
YULB				eS	Sb	22 22 53.6	0.0
	baz=248						
NWF	Wu-fen Shan	1.12	337	eP	Pn	22 22 39.6	-0.5
	baz=334						
NWF				eS	Sb	22 22 54.5	+0.1
	baz=334						
WFSB	Wu-fen Shan	1.12	337	P	Pn	22 22 39.8	-0.1
	baz=335						
WFSB				eS	Sb	22 22 54.1	-0.2
	baz=335						
TWF1	Yuli	1.12	233	P	Pn	22 22 39.7	-0.2
	baz=247						
TWF1				eS	Sn	22 22 55.1	+0.2
	baz=247						
TWA	Mucha	1.13	327	eP	Pb	22 22 40.6	+0.4
	baz=324						
TWA				eS	Sb	22 22 54.8	+0.3
	baz=324						
NHDH	Xindian Distri	1.14	324	i P	Pg	22 22 41.1	-0.3
	baz=321						
NHDH				eS	Sg	22 22 56.3	-0.1
	baz=321						
TAP	Taipei	1.22	325	eP	Pg	22 22 42.7	-0.1
	baz=323						
TAP				eS	Sg	22 22 58.2	-0.5
	baz=323						
FULB	Fuli	1.22	227	P	Pn	22 22 40.8	-0.5
	baz=212						
FULB				eS	Sb	22 22 56.6	-0.6
	baz=212						
DPDB	Guoxing	1.23	270	P	Pb	22 22 42.3	+0.4
	baz=259						
DPDB				eS	Sg	22 22 58.5	-0.5
	baz=259						
SSLB	Suanglung	1.23	259	P	Pn	22 22 41.5	0.0
	baz=246						
SSLB				eS	Sb	22 22 57.0	-0.4
	baz=246						
WHP	Taichung City	1.23	281	P	Pg	22 22 43.9	+0.8
	baz=267						
WHP				eS	Sb	22 22 57.5	0.0
	baz=267						
WLTB	Daxi	1.23	311	eP	Pb	22 22 42.6	+0.7
	baz=309						
WLTB				eS	Sg	22 22 58.8	-0.4
	baz=309						
CHKT	Chengkung	1.25	222	eP	Pn	22 22 41.0	-0.7
	baz=209						
CHKT				eS	Sb	22 22 55.9	-2.0
	baz=209						
SMLT	Sun Moon Lake	1.26	263	eP	Pb	22 22 42.4	-0.1
	baz=261						
SMLT				eS	Sb	22 22 58.4	0.0
	baz=261						
YM01	YM01	1.27	330	eP	Pb	22 22 42.8	+0.1
	baz=344						
YM01				eS	Sn	22 22 59.4	+0.7
	baz=344						
YM10	YM10	1.29	330	eP	Pn	22 22 42.1	-0.2
	baz=343						
YM10				eS	Sn	22 22 59.0	-0.1
	baz=343						
YM11	YM11	1.29	331	eP	Pn	22 22 42.6	+0.3
	baz=343						
YM11				eS	Sb	22 22 59.8	+0.6
	baz=343						
YM05	YM05	1.29	330	eP	Pb	22 22 42.9	-0.1
	baz=343						
YM05				eS	Sb	22 22 59.3	+0.5
	baz=343						
LIOB	Emei	1.29	298	P	Pb	22 22 43.5	+0.5
	baz=296						
YM04	YM04	1.29	329	eP	Pn	22 22 42.4	0.0
	baz=342						
YM04				eS	Sb	22 22 59.7	+0.4
	baz=342						
NSTT	Nanjuang	1.30	297	P	Pb	22 22 43.6	+0.6
	baz=295						
NSTT				eS	Sb	22 22 59.6	+0.3
	baz=295						
TYC	Yuchr	1.30	264	eP	Pn	22 22 42.8	+0.5
	baz=262						
TYC				eS	Sn	22 22 59.4	+0.2
	baz=262						
YM08	YM08	1.30	332	eP	Pn	22 22 42.7	+0.2
	baz=346						
TWS1	Kuangyinshan	1.31	324	P	Pb	22 22 43.2	0.0
	baz=333						
TWS1				eS	Sb	22 23 00.8	+1.0
	baz=333						
YM03	YM03	1.32	330	eP	Pn	22 22 43.0	+0.3
	baz=328						
YUS	Yu-Shan	1.32	246	eP	Pn	22 22 43.4	+0.2
	baz=244						
YUS				eS	Sn	22 22 59.4	-1.1
	baz=244						
ANP	Anpu	1.33	329	eP	Pn	22 22 43.2	+0.3
	baz=328						
WHYT	Xinyi Township	1.34	256	P	Pb	22 22 44.0	+0.2
	baz=245						
WHYT				eS	Sb	22 23 01.4	+0.8
	baz=245						
NCU	National Centr	1.35	314	P	Pn	22 22 43.3	+0.1
	baz=311						
NCU				eS	Sb	22 23 01.8	+0.8
	baz=311						
NCUH	Zhongli	1.35	313	eP	Pb	22 22 43.9	-0.1
	baz=311						
NCUH				eS	Sg	22 23 02.5	-0.6
	baz=311						
IRIF	Iriomote-Funau	1.37	77	P	Pn	22 22 43.8	+0.5
TWY	Chenhua	1.37	334	eP	Pb	22 22 44.8	+0.5
	baz=332						
TWY				eS	Sn	22 23 00.7	-0.4
	baz=332						
SBCB	Hsinchu	1.39	303	eP	Pn	22 22 43.3	-0.3
	baz=301						
TWQ1	Liyutan	1.40	283	P	Pb	22 22 45.6	+0.8
	baz=268						
TWQ1				eS	Sb	22 23 03.4	+1.1
	baz=268						
HATJ	Hateruma jima	1.41	89	P	Pb	22 22 45.1	+0.2
HSN	Hsinchu	1.41	303	eP	Pb	22 22 44.9	0.0
	baz=302						
ELDTW	Lidau	1.42	234	eP	Pn	22 22 44.2	-0.1
	baz=219						
WJS	Zhushan	1.43	262	eP	Pb	22 22 45.9	+0.7
	baz=259						
NSY	Sanyi	1.43	286	eP	Pb	22 22 46.1	+0.9
	baz=283						
NSY				eS	Sg	22 23 04.5	-0.9
	baz=283						
NMLH	Miaoli	1.44	291	eP	Pb	22 22 46.1	+0.7
	baz=288						
NMLH				S	Sg	22 23 05.4	-0.3
	baz=288						
ALS	Alishan	1.44	249	⇑iP	Pb	22 22 45.7	+0.1
	baz=247						
ALS				eS	Sg	22 23 03.6	+0.5
	baz=247						
WNT	Mingjian	1.46	264	P	Pb	22 22 46.6	+0.8
	baz=262						
WNT				eS	Sg	22 23 05.5	-0.9
	baz=262						
TCU	Taichung	1.46	275	eP	Pg	22 22 47.3	-0.1
	baz=273						
TCU				eS	Sg	22 23 06.2	-0.2
	baz=273						
PTSB	Yuanli	1.48	286	eS	Sg	22 23 06.2	-1.0
	baz=284						
TWH	Lutao	1.51	209	P	Pn	22 22 44.9	-0.4
	baz=208						
TWH				eS	Sn	22 23 03.0	-1.4
	baz=208						
WDJ	Dajia District	1.52	282	eP	Pb	22 22 47.3	+0.5
	baz=280						
CHN5	Tsauling	1.52	254	P	Pb	22 22 47.2	+0.3
	baz=241						
CHN5				eS	Sg	22 23 07.9	-0.5
	baz=241						
WCHH	Zhanghua	1.56	272	eP	Pb	22 22 47.8	+0.2
	baz=270						
WCHH				eS	Sb	22 23 08.0	+1.1
	baz=270						
PCYT	Pengchaiyu	1.59	354	eP	Pn	22 22 45.8	-0.7
	baz=352						
WGK	Gukeng	1.60	258	eS	Sb	22 23 09.6	+1.5
	baz=256						
JKRS	Kuro-shima	1.60	83	P	Pb	22 22 48.0	-0.3
WDLH	Douliu	1.62	258	eP	Pb	22 22 48.4	-0.2
	baz=244						
WDLH				eS	Sb	22 23 09.1	+0.4
	baz=244						
TWGBT	Beinan	1.63	222	eP	Pn	22 22 46.4	-0.6
	baz=221						
TWG	Pinlang	1.64	222	eP	Pn	22 22 46.3	-0.7
	baz=221						
STYT	Tauyuan	1.64	238	eP	Pb	22 22 48.3	-0.6
	baz=225						
TPUB	Ta-pu	1.67	244	P	Pb	22 22 49.0	-0.5
	baz=243						
TPUB				eS	Sb	22 23 11.9	+1.7
	baz=243						
CHN4	Tsaushan	1.68	246	P	Pb	22 22 49.8	+0.3
	baz=235						
CHN4				eS	Sg	22 23 12.2	-1.3
	baz=235						
WTP	Ta-pu	1.71	243	P	Pb	22 22 49.7	-0.4
	baz=241						
WTP				eS	Sb	22 23 13.0	+1.8
	baz=241						
CHN2	Minshiung	1.72	253	eP	Pb	22 22 50.7	+0.5
	baz=252						
CHN2				eS	Sg	22 23 13.4	-1.3
	baz=252						
JIJ	Ishigaki jima	1.74	79	P	Pn	22 22 48.6	+0.1
JIJ				eS	Sn	22 23 10.3	+0.1
RLNB	Erlin	1.75	266	eS	Sb	22 23 13.2	+0.8
	baz=264						
CHY	Chiayi	1.77	253	eP	Pb	22 22 51.0	-0.2
	baz=251						
CHY				eS	Sb	22 23 13.1	+0.1
	baz=251						
TWK	Hsinying	1.80	245	P	Pb	22 22 51.5	-0.2
	baz=244						
TWK				eS	Sb	22 23 15.3	+1.3
	baz=244						
CHN1	Nanshi	1.81	242	P	Pb	22 22 51.2	-0.5
	baz=241						
CHN1				eS	Sb	22 23 15.3	+1.3
	baz=241						
SGST	Jiashian	1.81	239	eP	Pb	22 22 51.0	-0.9
	baz=238						
SGST				eS	Sb	22 23 14.7	+0.4
	baz=238						
SLGT	Liugui	1.81	235	eP	Pb	22 22 51.0	-0.9
	baz=224						
SLGT				eS	Sb	22 23 15.9	+1.6
	baz=224						
SNST	Tainan City	1.82	244	P	Pb	22 22 51.6	-0.3
	baz=242						
SNST				eS	Sb	22 23 15.7	+1.4
	baz=242						
ECL	Taimali	1.87	220	eP	Pn	22 22 49.5	-0.8
	baz=230						
WLGB	Puzi	1.89	253	eS	Sb	22 23 17.2	+0.9
	baz=252						
JISG	Ishigakijimahi	1.94	73	P	Pn	22 22 51.5	+0.3
JISG				eS	Sn	22 23 14.8	-0.3
JTJ	Tarama	2.30	74	P	Pn	22 22 57.3	+1.1
JTJ				eS	Sn	22 23 24.2	+0.2
JIRB	Irabujima	2.76	73	P	Pn	22 23 03.7	+1.2
JIRB				S	Sn	22 23 35.8	+0.4

IDC ***01*** *22:48:49.0±2.1, 59°.63N×153°.36W, h92km±33km, mb3.2/2, mb1 3.2/4, mb1mx2.8/82, mbtmp3.4/4, Error ellipse: s-maj=37.3km s-min=20.3km az=108.0*
NEIC ***01*** *22:48:50.1±1.6, 59°.67N±0°.04×153°.23W±0°.09, h111km±2km, Error ellipse: s-maj=7.5km s-min=5.7km az=126.0*
AEIC ***01*** *22:48:51.4±2.1, 59°.64N±0°.05×153°.15W±0°.10, h104km±4km, ML2.8/115, Error ellipse: s-maj=8.2km s-min=6.6km az=146.0*
ISC 01 22:48:50.1±0.9, **59°.63N**±0°.04×**153°.12W**±0°.04, **h115**km±5km, **n134**, **σ1º13/152**, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AU22	Augustine Moun	0.29	205		Pn	22 49 05.8	-0.5
AU22					Sn	22 49 17.5	-0.9
AUL	Augustine Lava	0.29	213		Pn	22 49 06.0	-0.3
AUL					Sn	22 49 17.7	-0.9
AUP	Augustine Pinn	0.31	210		Pn	22 49 06.1	-0.4
AUH	Augustine H	0.31	212		Pn	22 49 06.1	-0.4
AUQ	Augustine Qik'	0.31	209		Pn	22 49 06.0	-0.5
AUQ					Sn	22 49 18.1	-0.7
AUW	Augustine West	0.32	215		Pn	22 49 06.1	-0.3
ILS	Iliamna Low So	0.33	5		Pn	22 49 05.8	-0.9
IVE	Iliamna Volcan	0.39	8		Pn	22 49 06.3	-0.7
ILW	Iliamna West	0.43	359		Pn	22 49 06.5	-0.8
HOM	Homer	0.75	87		Pn	22 49 09.8	+0.6
HOM					Sn	22 49 24.3	+0.6
RED	Redoubt Volcan	0.81	12		Pn	22 49 09.4	-0.6
RED					Sn	22 49 23.3	-1.6
RSO	Redoubt South	0.86	12		Pn	22 49 10.0	-0.4
RSO	Redoubt South	0.86	12	Sn	Sn	22 49 24.1	-1.7
RDWB	Redoubt West	0.87	9		Pn	22 49 10.0	-0.6
RDWB					Sn	22 49 24.5	-1.5
CNPM	China Poot	0.97	95		Pn	22 49 11.2	-0.1
CNPM					Sn	22 49 26.8	-0.6
RDJH	Redoubt Jeurge	0.98	9		Pn	22 49 11.1	-0.5
RDJH					Sn	22 49 26.6	-1.2
DFR	Drift River	0.99	13		Pn	22 49 11.3	-0.4
DFR					Sn	22 49 26.9	-1.1
BRLK	Bradley Lake	1.14	82		Pn	22 49 12.7	-0.4
BRSE	Bradley Lake S	1.21	84		Pn	22 49 13.7	-0.2
KAHC	Katmai Hardscr	1.38	225		Pn	22 49 15.6	-0.3
KARR	Katmai Rainbow	1.40	216		Pn	22 49 16.0	0.0
CAPN	Captain Cook N	1.51	40		Pn	22 49 18.8	+1.7
KAWH	Katmai	1.52	216		Pn	22 49 17.2	-0.2
CKL	Chakachamna La	1.62	14		Pn	22 49 18.6	-0.1
SPCR	Spurr Chakacha	1.64	16		Pn	22 49 18.7	-0.1
SPBG	Spurr Blockage	1.68	13		Pn	22 49 19.6	+0.2
SPBG					Sn	22 49 41.6	0.0
KCG	Knife Ck. Glac	1.68	219		Pn	22 49 19.1	-0.2
SLKM	Skilak Lake	1.70	58		Pn	22 49 19.9	+0.3
SLKM					Sn	22 49 41.5	-0.5
SPCG	Spurr Capps Gl	1.76	18		Pn	22 49 20.4	0.0
KELA	Mount Kelaz	1.80	230		Pn	22 49 20.6	-0.3
KDAK	Kodiak Island	1.87	171	P	Pn	22 49 20.8	-0.9
	6.8nm,0.3s,baz=23,slow=8.1,SNR=113						
KDAK				S	Sn	22 49 43.5	-2.1
	12nm,0.3s,baz=136,slow=23,SNR=40						
KDAK	Kodiak Island	1.87	171		Pn	22 49 20.8	-0.9
KDAK					Sn	22 49 44.5	-1.2
ANCK	Angle Creek	1.89	222		Pn	22 49 21.9	0.0
SEW	Seward	1.91	74		Pn	22 49 22.1	0.0
SEW	Seward	1.91	74		Sn	22 49 45.2	-1.3
SEW	Seward	1.91	74		Sn	22 49 44.7	-1.8
SVW2	Sparrevohn	1.91	321		Pn	22 49 21.4	-0.8
SVW2	Sparrevohn	1.91	321	Sn	Sn	22 49 44.9	-1.7
FIS	Fire Island	2.10	42		Pn	22 49 25.7	+1.3
SUA	Susitna One	2.18	32		Pn	22 49 25.9	+0.3
SUA	Susitna One	2.18	32	Sn	Sn	22 49 53.1	+0.3
RC01	Rabbit Creek A	2.23	47		Pn	22 49 27.0	+0.9
RC01	Rabbit Creek A	2.23	47	Sn	Sn	22 49 53.4	-0.4
OHAK	Old Harbor	2.42	182		Pn	22 49 27.2	-1.3
SKT	Skwentna	2.48	18		Pn	22 49 29.2	-0.2
SKT	Skwentna	2.48	18	Sn	Sn	22 50 01.0	+1.4
PLK3	Peulik 3	2.55	222		Pn	22 49 30.6	+0.3
PWL	Port Wells	2.69	61		Pn	22 49 31.5	-0.6
PMR	Palmer	2.78	43		Pn	22 49 32.6	-0.7
KNK	Knik Glacier	2.92	50		Pn	22 49 34.5	-0.6
KNK	Knik Glacier	2.92	50	Sn	Sn	22 50 07.0	-2.8
GHO	Glory Hole Cre	2.98	42		Pn	22 49 35.5	-0.4
GHO	Glory Hole Cre	2.98	42	Sn	Sn	22 50 09.8	-1.5
SII	Sitkinak Islan	3.13	191		Pn	22 49 36.6	-1.3
SML	Sawmill	3.21	45		Pn	22 49 38.3	-0.6
GLI	Glacier Island	3.25	65		Pn	22 49 38.6	-0.9
PPLA	Purkeypile	3.31	7		Pn	22 49 41.1	+0.7
HIN	Hinchinbrook I	3.41	74		Pn	22 49 41.4	-0.2
FID	Port Fidalgo	3.50	68		Pn	22 49 42.0	-0.8
TT01	Tatalina	3.57	338		Pn	22 49 43.0	-0.7
TTA	Tatalina	3.59	338		Pn	22 49 43.2	-0.8
SCM	Sheep Creek Mo	3.60	50		Pn	22 49 43.8	-0.4
HUR	Hurricane	3.76	25		Pn	22 49 46.6	+0.4
EYAK	Cordova Ski Ar	3.81	73		Pn	22 49 47.3	+0.5
WAT1	Susitna Watana	3.90	33		Pn	22 49 47.5	-0.5
WAT6	Susitna Watana	3.95	39		Pn	22 49 48.1	-0.7
WAT2	Susitna Watana	4.00	31		Pn	22 49 49.2	-0.3
CHIR	Chirikof Islan	4.05	200		Pn	22 49 48.6	-1.5
TRF	Thorofare Moun	4.07	18		Pn	22 49 50.5	0.0
KTH	Kantishna Hill	4.08	14		Pn	22 49 50.5	0.0
RND	Reindeer	4.31	27		Pn	22 49 53.4	-0.2
GOAT	Goat Mountain	4.31	74		Pn	22 49 53.8	+0.2
DHY	Denali Highway	4.43	36		Pn	22 49 54.9	-0.4
HMT	Hamilton	4.51	77	Pn	Pn	22 49 57.2	+1.0
MCK	McKinley	4.58	24		Pn	22 49 57.1	0.0
BPAW	Bear Paw Mtn.	4.60	12		Pn	22 49 57.5	0.0
SUCK	Suckling Hills	4.73	81	Pn	Pn	22 50 01.1	+1.8
GLB	Gilahina Butte	4.95	64		Pn	22 50 02.5	+0.4
GLB	Gilahina Butte	4.95	64	Sn	Sn	22 50 56.1	-2.1
PAX	Paxson	4.98	44		Pn	22 50 03.7	+1.0
PAX				Sn	Sn	22 50 58.5	-0.7
VRDI	Verde Repeater	5.05	67		Pn	22 50 04.3	+0.6
CRQM	Cirque	5.11	73		Pn	22 50 04.8	+0.4
CRQM				Sn	Sn	22 50 59.8	-2.6
WAX	Waxell Ridge	5.21	76	Sn	Sn	22 51 01.3	-3.4
TGL	Tana Glacier	5.26	73		Pn	22 50 06.6	+0.2
KULT	Kultieth River	5.27	79		Pn	22 50 06.7	+0.2
MCARA	McCarthy VSAT	5.29	66	Pn	Pn	22 50 08.2	+1.4
NEA	Nenana	5.32	19	Pn	Pn	22 50 06.1	-1.0
WRH	Wood River Hil	5.40	24		Pn	22 50 07.5	-0.7
PTPK	Patty Peak	5.51	69		Pn	22 50 10.2	+0.3
KIAG	Kiagna River	5.51	72		Pn	22 50 10.1	+0.2
MLY	Manley	5.53	11		Pn	22 50 09.7	-0.4
BALM	Baldy	5.54	71		Pn	22 50 10.5	+0.3
HDA	Harding Lake	5.61	29		Pn	22 50 10.4	-0.6
MENT	Mentasta	5.62	50		Pn	22 50 12.3	+1.2
CCB	Clear Creek Bu	5.62	24		Pn	22 50 10.0	-1.1
MESA	MESA	5.65	80	Pn	Pn	22 50 13.4	+1.6
RIDG	Independent Ri	5.70	40		Pn	22 50 12.3	0.0
PS08	TAPS Pump Stn8	5.75	28		Pn	22 50 12.3	-0.6
GRNC	Granite Creek	5.78	74		Pn	22 50 13.7	+0.1
COLA	College	5.81	23		Pn	22 50 13.0	-0.7
COLA	College	5.81	23		Pn	22 50 13.3	-0.3
MDM	Murphy Dome	5.81	21		Pn	22 50 13.2	-0.6
BARN	Barnard Glacie	5.87	71		Pn	22 50 16.0	+1.3
DOT	Dot Lake	5.91	43		Pn	22 50 15.3	+0.3
IL31		5.93	27		Pn	22 50 14.2	-1.0
ILAR	Eielson Array	5.93	27	P	Pn	22 50 14.2	-1.0
	1.5nm,0.3s,baz=216,slow=14,SNR=87						
ILAR				S	Sn	22 51 16.6	-5.1
	0.7nm,0.3s,baz=44,slow=4.8,SNR=9.0						
ILAR	Eielson Array	5.93	27		Pn	22 50 14.8	-0.5
ILAR					Sn	22 51 18.4	-3.4
RKAV	Rock Avalanche	5.95	78		Pn	22 50 17.1	+1.2
CTGM	Chitina Glacie	6.01	72		Pn	22 50 17.8	+1.2
POKR	Poker Plat Res	6.11	23		Pn	22 50 17.5	-0.2
SCRK	Sand Creek	6.14	41		Pn	22 50 17.9	-0.5
IM03		6.39	358		Pn	22 50 21.6	+0.2
IMAR	Indian Mountai	6.39	358		Pn	22 50 21.0	-0.4
BC03		6.45	53		Pn	22 50 22.2	-0.1
BCAR	Beaver Creek A	6.45	53		Pn	22 50 23.0	+0.6
PCA	Pinnacle	6.50	80		Pn	22 50 24.5	+1.4
PCA				Sn	Sn	22 51 34.3	-1.5
YUK3	Moose Creek	6.58	65		Pn	22 50 25.6	+1.3
YUK1	Sand Pete Hill	6.64	62		Pn	22 50 26.7	+1.5
PRP	Porcupine Dome	6.87	27		Pn	22 50 28.0	-0.2
PNL	Peninsula	6.96	84		Pn	22 50 29.4	+0.1
EGAK	Eagle	7.60	42	Pn	Pn	22 50 38.1	+0.2
DHAK	Deception Hill	7.64	88		Pn	22 50 40.5	+2.0
COLD	Coldfoot	7.74	8		Pn	22 50 40.9	+1.1
COLD	Coldfoot	7.74	8		Pn	22 50 39.3	-0.5
BM03	Burnt Mountain	8.69	22		Pn	22 50 51.4	-1.2
BMAR	Burnt Mountain	8.70	22	Pn	Pn	22 50 52.0	-0.8
WHY	Whitehorse	9.15	76	Pn	Pn	22 51 01.1	+2.0
TOLK	Toolik Lake Re	9.18	8	Pn	Pn	22 50 59.8	+0.5
BESE	Bessie Mountai	9.46	88	Pn	Pn	22 51 04.8	+1.7
JIS	Juneau Island	9.77	90	Pn	Pn	22 51 09.9	+2.6
CRAG	Craig	11.51	102	Pn	Pn	22 51 32.5	+1.9
YKA	Yellowknife Ar	18.66	65	P	P	22 53 00.3	+1.6
	0.1nm,0.3s,baz=276,slow=10.0,SNR=8.8						
SONM	Songino Array	54.96	306	P	P	22 58 09.0	+0.1
	0.2nm,0.5s,baz=42,slow=5.8,SNR=4.3						
ZALV	Zalesovo Beam	57.64	324	P	P	22 58 28.6	+0.9
	0.3nm,0.4s,baz=35,slow=5.3,SNR=2.4						

BJI ***01*** *22:54:00.4±0.0, 25°.63N×125°.32E, h159km, mB4.8/37, mb4.6/59*
JMA ***01*** *22:54:08.2±0.2, 26°.05N×124°.66E, h154km, M4.6*
NEIC ***01*** *22:54:08.3±1.5, 25°.95N±0°.07×124°.78E±0°.06, h172km±5km, mb4.5/246, Error ellipse: s-maj=10.3km s-min=7.3km az=147.0*
IDC ***01*** *22:54:09.3±0.5, 26°.08N×124°.72E, h177km±4km, mb4.1/51, mb1 4.1/54, mb1mx4.1/74, mbtmp4.5/54, MS3.8/4, Ms1 3.8/4, ms1mx3.1/48, Error ellipse: s-maj=9.0km s-min=7.7km az=51.0*
ISC 01 22:54:08.2±0.4, **25°.96N**±0°.03×**124°.75E**±0°.03, **h173**km±3km, **n418**, **σ1º19/446**, **mb4.5/161**, **10C-3D**, **Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JIKM	Ikemajima	1.12	156	P	Pn	22 54 36.2	-0.1
JIKM				S	Sn	22 54 56.6	-1.2
JIRB	Irabujima	1.19	161	P	Pn	22 54 36.4	-0.4
JIRB				S	Sn	22 54 56.7	-2.1
JTJ	Tarama	1.31	182	P	Pn	22 54 37.5	-0.4
JTJ				S	Sn	22 54 58.7	-2.1
JMJ2	Miyako jima3	1.32	157	P	Pn	22 54 38.1	+0.1
JMJ2				S	Sn	22 54 59.8	-1.1
JOGS	Gusukube	1.33	153	P	Pn	22 54 38.4	+0.3
JOGS				S	Sn	22 55 00.3	-0.8
JISG	Ishigakijimahi	1.42	196	P	Pn	22 54 38.2	-0.7
JISG				S	Sn	22 55 00.3	-2.3
JIJ	Ishigaki jima	1.68	199	P	Pn	22 54 40.3	-1.2
JIJ				S	Sn	22 55 03.7	-3.5
JKRS	Kuro-shima	1.84	202	P	Pn	22 54 42.3	-0.8
JKRS				S	Sn	22 55 07.4	-2.7
IRIF	Iriomote-Funau	1.86	210	P	Pn	22 54 42.3	-1.1
IRIF				S	Sn	22 55 08.1	-2.4
JKE	Kume jima 2	1.86	78	P	Pn	22 54 43.1	-0.2
JKE				eS	Sn	22 55 10.0	-0.5
HATJ	Hateruma jima	2.08	205	P	Pn	22 54 45.0	-0.7
HATJ				S	Sn	22 55 12.2	-2.6
YOJ	Yonaguni jima	2.17	227	P	Pn	22 54 46.2	-0.5
YOJ				S	Sn	22 55 15.9	-0.7
YOJ	Yonaguni jima	2.17	227		Pn	22 54 46.3	-0.4
YOJ				Sn	Sn	22 55 16.2	-0.3
JYNG	Yonagunijimaku	2.22	228	P	Pn	22 54 46.9	-0.4
JYNG				eS	Sn	22 55 17.3	-0.3
JAGN	Aguni-jima	2.32	74	P	Pn	22 54 48.0	-0.4
JAGN				eS	Sn	22 55 17.9	-1.7
JJT3	Tamagusuku3	2.73	85	P	Pn	22 54 53.5	+0.2
JJT3				eS	Sn	22 55 27.3	-1.0
JNTH	Nagotoyohara	2.99	79	P	Pn	22 54 55.9	-0.5
JNTH				S	Sn	22 55 31.1	-2.8
JIH	Iheya	3.07	69	P	Pn	22 54 56.9	-0.5
TATO	Taipei	3.11	252		Pn	22 54 58.3	+0.4
JOW	Kunigami	3.28	74	P	Pn	22 54 59.1	-0.9
JOW	Kunigami	3.28	74	P	Pn	22 54 59.6	-0.4
	26nm,0.3s,baz=151,slow=12,SNR=939						
JOW				S	Sn	22 55 36.8	-3.5
	136nm,0.3s,baz=118,slow=14,SNR=54						
YHNB	Yeheng	3.31	248		Pn	22 55 01.8	+1.3
NACB	Ninganchiao	3.37	239		Pn	22 54 59.8	-1.4
YULB	Yu-li	4.05	232		Pn	22 55 07.6	-2.2
SSLB	Suanglung	4.07	239		Pn	22 55 09.3	-0.8
TWG	Pinlang	4.58	228		Pn	22 55 14.2	-2.5
TPUB	Ta-pu	4.59	236		Pn	22 55 16.3	-0.5
QZH	Quanzhou	5.66	261	i P	Pn	22 55 30.9	+0.2
QZH				S	Sn	22 56 34.0	-1.4
QZH				smax	smax		
	comp=N,36nm,1.2s						
QZH				smax	smax		
	comp=E,26nm,0.6s						
KNMB	Chin-men Tao	5.95	257		Pn	22 55 34.3	-0.2
SSE	Sheshan	6.00	329		Pn	22 55 36.2	+1.0

NJ2 Nanjing 7.97 321 eP Pn 22 56 02.6 +1.5
NJ2 pmax pmax
comp=Z,46nm,0.9s
JNU Nakatsue 8.91 35 P Pn 22 56 15.5 +2.0
0.5nm,0.3s,baz=248,slow=5.4,SNR=6.0
JNU Nakatsue 8.91 35 Pn Pn 22 56 13.7 +0.1
WHN Wuhan 10.24 299 P Pn 22 56 31.6 +0.5
WHN sP P 22 57 08.2 +28
WHN LR LR
comp=N,770nm,8.4s
WHN LR LR
comp=E,500nm,9.5s
HKPS Hong Kong Po S 10.36 252 Pn Pn 22 56 32.6 0.0
INCN Inchon 11.60 7 Pn Pn 22 56 48.8 +0.2
KSAR Wonju Array Be 11.75 12 Pn Pn 22 56 50.7 +0.1
KSRS Korea Array 11.77 12 P P 22 56 53.0 -4.0
1.1nm,0.3s,baz=195,slow=11,SNR=32
KSRS LR LR 23 01 28.8
comp=Z,68nm,18.3s,baz=245,slow=38
KS19 Wonju Array Si 11.81 12 Pn Pn 22 56 52.0 +0.7
TIA Tai'an 12.13 329 P P 22 56 57.8 -3.1
TIA pmax pmax
comp=Z,9.0nm,0.7s
DL2 Dalian 13.18 349 P P 22 57 10.6 -1.9
DL2 pmax pmax
comp=Z,41nm,1.0s
INU Inuyama 14.10 45 Pn Pn 22 57 19.9 -0.4
ENH Enshi 14.14 291 Pn 22 57 20.3 -0.7
JHJ2 Mitsune 14.92 58 Pn Pn 22 57 27.1 -3.4
QIZ Qiongzhong 15.40 246 P Pn 22 57 36.5 -0.1
QIZ IAmb IAmb 22 57 40.2
comp=Z,20nm,1.0s
MAJO Matsushiro 15.59 44 P 22 57 39.4 0.0
MAT Matsushiro 15.59 44 P P 22 57 41.4 +2.0
MJAR Matsushiro Arr 15.59 44 P P 22 57 40.9 +1.5
comp=Z,0.1nm,0.3s,baz=233,slow=10,SNR=9.4
MJAR Matsushiro Arr 15.59 44 P P 22 57 39.7 +0.2
MJB9 Matsu-Tunnel 15.59 44 P 22 57 40.1 +0.7
BJT Baijiatuau 15.75 335 P P 22 57 41.1 +0.1
BJI Beijing 15.77 335 eP P 22 57 43.4 +2.2
BJI pmax pmax
comp=Z,4.0nm,0.8s
XAN Xi'an 15.89 304 P P 22 57 43.7 +0.9
XAN S S 23 00 31.2 -8.0
XAN pmax pmax
comp=Z,12nm,1.3s
XAN pmax pmax
comp=Z,250nm,5.9s
XAN Xi'an 15.89 304 P P 22 57 43.9 +1.1
HHC Hu-ho-hao-te 18.45 327 eP Pn 22 58 12.4 -0.7
HHC sP sP 22 59 03.3 +1.3
HHC eS S 23 01 27.1 -5.3
HHC pmax pmax
comp=Z,8.0nm,0.7s
HHC pmax pmax
comp=Z,72nm,5.3s
MDJ Mudanjiang 19.02 11 P P 22 58 16.9 0.0
BTO Baotou 19.07 324 eP Pn 22 58 18.9 -1.3
CD2 Chengdu 19.10 290 ⇓iP P 22 58 18.5 +0.6
USA0B Ussuriysk Arra 19.12 16 P P 22 58 18.2 +0.3
USRK Ussuriysk Ar. 19.12 16 P P 22 58 17.4 -0.5
baz=185,slow=8.9,SNR=5.5
USRK Ussuriysk Ar. 19.12 16 P P 22 58 17.6 -0.3
SLVN Son La 19.64 261 P P 22 58 24.5 +0.7
SLVN IAmb IAmb 22 58 26.5
comp=Z,17nm,1.1s
KMI Kunming 19.88 272 P P 22 58 27.5 +1.0
KMI IAmb IAmb 22 58 29.0
comp=Z,20nm,1.0s
LZH Lanzhou 20.53 304 eP P 22 58 33.8 +0.5
LZH sP sP 22 59 19.9 -5.0
LZH pmax pmax
comp=Z,21nm,1.2s
LZH pmax pmax
comp=Z,96nm,4.7s
DLV T Lat 20.73 231 P P 22 58 34.8 -0.8
DLV IAmb IAmb 22 58 38.8
comp=Z,18nm,0.9s
UBPT Khong Chiam 20.91 243 P P 22 58 38.6 +1.3
UBPT IAmb IAmb 22 58 41.4
comp=Z,23nm,1.1s
KKM Kota Kinabalu 21.42 204 P P 22 58 40.6 -2.3
ERM Erimo 22.05 39 P P 22 58 45.6 -3.4
ERM IAmb IAmb 22 58 46.3
comp=Z,26nm,0.9s
GUMO Guam 22.54 119 P P 22 58 53.7 -0.1
HIA Hailar 23.59 352 P P 22 59 02.8 -0.4
KLR Kul'dur 23.86 11 P P 22 59 05.0 -0.6
comp=Z,1.9nm,0.6s,baz=219,slow=6.9,SNR=12
KLR PcP PcP 23 02 44.6 +1.0
comp=Z,1.5nm,1.0s,baz=258,slow=1.6,SNR=4.4
PBKT Sadao Pong 24.02 252 IAmb IAmb 22 59 09.1
comp=Z,11nm,0.8s
GTA Gaotai 24.81 309 ⇓P P 22 59 14.0 -0.5
GTA pP pP 22 59 50.9 +1.5
GTA PcP PcP 23 02 47.7 +1.6
GTA pmax pmax
comp=Z,17nm,0.8s
GTA pmax pmax
comp=Z,150nm,4.9s
GTA LR LR
comp=Z,190nm,16.8s
GTA LR LR
comp=Z,190nm,15.9s
GTA LR LR
comp=Z,120nm,16.5s
CHTO Chiang Mai 24.87 259 P P 22 59 15.5 +0.4
CHTO IAmb IAmb 22 59 16.5
comp=Z,14nm,0.9s
CMAR Chiang Mai Arr 25.00 258 P P 22 59 16.9 +0.7
comp=Z,4.1nm,0.7s,baz=57,slow=7.8,SNR=28
CMAR PcP PcP 23 02 48.4 +1.7
comp=Z,1.6nm,0.7s,baz=12,slow=0.5,SNR=8.6
ULN Ulaanbaatar 25.93 332 P P 22 59 24.6 +0.1
ULN IAmb IAmb 22 59 28.4
comp=Z,14nm,1.1s
ULN PcP PcP 23 02 49.8 +1.3
SONM Songino Array 26.18 331 P P 22 59 26.4 -0.4
comp=Z,5.0nm,0.6s,baz=150,slow=9.5,SNR=58
SONM pP pP 23 00 03.8 +1.6
comp=Z,4.3nm,0.8s,baz=142,slow=11,SNR=3.9
SONM PcP PcP 23 02 49.6 +0.6
comp=Z,2.2nm,0.6s,baz=159,slow=4.5,SNR=14
SONM ScP ScP 23 06 12.6 +0.1
comp=Z,0.9nm,1.0s,baz=143,slow=3.1,SNR=4.7
SONM Songino Array 26.18 331 P P 22 59 26.8 0.0
SBUM Sibu 26.30 209 P P 22 59 28.2 +0.3
LUWI Luwuk 26.91 184 P P 22 59 33.0 -0.3
KSM Kuching 28.04 212 P P 22 59 44.1 +0.7
KSM IAmb IAmb 22 59 50.9
comp=Z,8.5nm,1.0s
BKB Balikpapan 28.11 197 P P 22 59 42.4 -1.6
SHL Shillong 29.56 277 IAmb IAmb 23 00 01.4
comp=Z,5.3nm,0.7s
FAKI Fak Fak 29.61 165 P P 22 59 54.3 -3.1
LSA Lhasa 29.89 285 P P 23 00 01.3 +1.0
LSA pmax pmax
comp=Z,76nm,0.9s
LSA Lhasa 29.89 285 IAmb IAmb 23 00 02.2
comp=Z,14nm,0.7s
TLY Talaya 30.28 334 P P 23 00 01.1 -1.8
comp=Z,3.3nm,0.7s,baz=153,slow=8.2,SNR=5.7
TLY PcP PcP 23 03 00.6 +1.6
comp=Z,1.5nm,0.7s,baz=290,slow=12,SNR=3.1
TLY Talaya 30.28 334 P P 23 00 02.9 -0.1
KULM Kulim 30.89 232 P P 23 00 09.7 +1.1
KULM IAmb IAmb 23 00 10.4
comp=Z,9.6nm,0.7s
TAPN Taplejung 33.06 281 eP P 23 00 28.2 +0.3
comp=Z,30nm,0.9s
ODAN Odare 33.40 280 eP P 23 00 30.9 +0.1
comp=Z,64nm,0.9s
RPSI Rantau Prapat 33.92 231 P P 23 00 34.7 -0.4
RPSI IAmb IAmb 23 00 36.6
comp=Z,22nm,1.1s
RAMN Ramite 34.09 280 eP P 23 00 36.8 +0.1
comp=Z,21nm,0.9s
JIRN Jiri 34.37 282 eP P 23 00 39.3 0.0
comp=Z,18nm,0.3s
GUN Gumba 34.62 282 eP P 23 00 41.6 +0.2
comp=Z,60nm,1.0s
WMQ Urumqi 34.88 310 eP P 23 00 43.4 +0.3
WMQ pP pP 23 01 21.3 +1.8
WMQ PP PnPn 23 02 09.0 +2.9
WMQ pmax pmax
comp=Z,6.0nm,0.9s
WMQ pmax pmax
comp=Z,120nm,5.3s
WMQ LR LR
comp=Z,330nm,23.7s
WMQ LR LR
comp=Z,1µm,27.9s
WMQ LR LR
comp=Z,160nm,13.9s
WMQ Urumqi 34.88 310 P P 23 00 43.0 -0.1
WMQ IAmb IAmb 23 00 45.1
comp=Z,13nm,0.9s
PKI Pulchoki 35.07 282 eP P 23 00 45.0 -0.2
comp=Z,22nm,0.4s
PKIN Phulchoki 35.08 282 eP P 23 00 45.1 -0.1
comp=Z,21nm,0.4s
KKN Kakani 35.16 282 eP P 23 00 45.8 0.0
comp=Z,65nm,0.8s
DMN Daman 35.33 282 eP P 23 00 47.6 +0.2
comp=Z,44nm,0.9s
GKN Gorkha 35.70 282 eP P 23 00 50.3 -0.1
comp=Z,21nm,0.4s
GSI Gunungsitoli 35.85 231 P P 23 00 51.6 0.0
GSI IAmb IAmb 23 00 51.9
comp=Z,7.0nm,0.6s
UGM Wanagama 36.40 204 P P 23 00 57.5 +1.2
DANN Dangsing 36.43 283 eP P 23 00 57.1 +0.3
comp=Z,60nm,0.6s
PEA0B Petropavlovsk- 36.60 33 P P 23 00 57.5 0.0
PETK Petropavlovsk- 36.60 33 P P 23 00 58.5 +0.9
comp=Z,1.9nm,0.5s,baz=202,slow=2.9,SNR=5.4
PETK Petropavlovsk- 36.60 33 P P 23 00 57.6 +0.1
KOLN Koldanda 36.64 282 eP P 23 00 58.6 +0.2
comp=Z,68nm,1.0s
CISI Cisompet, Garu 37.16 209 P P 23 01 01.4 -1.3
PATS Pohnpei 37.21 115 P P 23 01 02.9 -0.2
MA2 Magadan 38.14 21 P P 23 01 09.2 -1.1
comp=Z,1.5nm,0.3s,baz=330,slow=20,SNR=3.6
MTN Manton Dam 39.06 170 P P 23 01 18.8 +0.2
H11S3 WAKE ISLAND Hy 39.39 92 T T 23 42 29.9
baz=287
H11S1 WAKE ISLAND Hy 39.40 92 T T 23 42 35.5
baz=287
MK31 Makanchi Array 39.41 313 IAmb IAmb 23 01 22.7
comp=Z,6.5nm,0.7s
MKAR Makanchi Array 39.41 313 P P 23 01 20.7 -0.5
comp=Z,7.8nm,0.4s,baz=99,slow=10,SNR=297
MKAR pP pP 23 01 59.8 +1.4
comp=Z,2.5nm,0.7s,baz=95,slow=11,SNR=2.9
MKAR PP PP 23 02 53.4 -1.8
comp=Z,1.4nm,0.8s,baz=101,slow=12,SNR=3.7
MKAR PcP PcP 23 03 26.2 +0.4
comp=Z,3.4nm,0.9s,baz=85,slow=5.6,SNR=7.5
MKAR ScP ScP 23 06 58.7 +0.7
comp=Z,1.1nm,0.8s,baz=102,slow=5.3,SNR=7.6
MKAR Makanchi Array 39.41 313 P P 23 01 20.9 -0.2
MKAR Makanchi Array 39.41 313 ScP 23 07 00.1 +2.1
H11S2 WAKE ISLAND Hy 39.41 92 T T 23 42 40.2
baz=287
MAKZ Makanchi 39.62 313 P P 23 01 22.6 -0.2
MAKZ IAmb IAmb 23 01 24.6
comp=Z,13nm,0.7s
ZALV Zalesovo Beam 40.61 324 P P 23 01 29.9 -1.0
comp=Z,25nm,0.4s,baz=114,slow=8.5,SNR=144
ZALV ScP ScP 23 07 02.2 -0.3
comp=Z,4.1nm,0.8s,baz=128,slow=3.1,SNR=14
ZALV Zalesovo Beam 40.61 324 P P 23 01 29.8 -1.0
ZALV ScP 23 07 01.3 -1.2
SEY Seymchan 41.24 19 P P 23 01 35.3 -0.6
comp=Z,1.1nm,0.5s,baz=0.8,slow=24,SNR=10
SEY PcP PcP 23 03 32.1 +0.9
comp=Z,1.9nm,0.5s,baz=171,slow=6.1,SNR=5.2
KNRA Kununurra 41.57 174 P P 23 01 39.4 +0.4
KNRA IAmb IAmb 23 01 50.0
comp=Z,17nm,1.1s
KDJ Kajisay 42.03 305 P P 23 01 43.8 +0.9
KSH Kashi 42.71 301 P P 23 01 52.0 +3.7
KSH pP pP 23 02 27.8 +1.8
KSH PcS PcS 23 07 32.0 +2.7
KSH S S 23 08 04.5 +5.6
KSH sS sS 23 09 05.0 +1.0
KSH pmax pmax
comp=Z,19nm,0.9s
KSH pmax pmax
comp=Z,410nm,6.6s
KSH LR LR
comp=Z,200nm,7.6s
KSH LR LR
comp=Z,190nm,9.4s
KSH LR LR
comp=Z,200nm,7.8s
ULHL Ulahol 42.74 305 P P 23 01 50.1 +1.4
SNR=14
KURK Kurchatov 42.89 318 P P 23 01 49.1 -0.3
KURK Kurchatov 42.89 318 ScP 23 07 11.9 +0.3
KURBB Kurchatov Arra 42.92 318 P P 23 01 48.2 -1.5
comp=Z,4.5nm,0.7s,baz=105,slow=8.2,SNR=32
KURBB pP pP 23 02 28.4 +1.1
comp=Z,1.4nm,0.7s,baz=112,slow=8.7,SNR=2.2
KURBB PP PP 23 03 32.5 -0.3
comp=Z,0.6nm,0.3s,baz=110,slow=11,SNR=3.2
KURBB ScP ScP 23 07 11.9 +0.2
comp=Z,0.5nm,0.2s,baz=106,slow=3.5,SNR=4.2
KZA Kyzart 43.46 305 P P 23 01 56.2 +1.6
SNR=8.4
COEN Coen 43.54 154 P P 23 01 55.1 +0.1
KBK Karagaybulak 43.74 305 P P 23 01 57.0 +0.4
SNR=12
FITZ Fitzroy Crossi 43.80 179 P P 23 01 57.7 +0.7
comp=Z,5.0nm,0.6s,baz=355,slow=7.4,SNR=8.8
FITZ Fitzroy Crossi 43.80 179 P P 23 01 57.6 +0.6
FITZ IAmb IAmb 23 01 58.5
comp=Z,5.7nm,0.7s
CHMS Chumysh 43.91 306 P P 23 01 58.3 +0.4
SNR=16
FRU1 Bishkek 43.98 306 P P 23 01 58.7 +0.3
FRU1 IAmb IAmb 23 02 00.1
comp=Z,12nm,0.6s
UCH Uchtor 44.02 305 P P 23 02 00.5 +1.4
SNR=25
AAK Ala-Archa 44.07 305 P P 23 01 59.7 +0.5
comp=Z,3.9nm,0.5s,baz=104,slow=5.7,SNR=27
AAK PcP PcP 23 03 42.5 +1.1
comp=Z,2.2nm,0.8s,baz=233,slow=2.7,SNR=4.1
AAK Ala-Archa 44.07 305 P P 23 01 59.8 +0.6
USP Ospenovka 44.13 306 P P 23 01 59.8 +0.3
SNR=5.9
AML Almayashu 44.61 305 P P 23 02 05.5 +1.7
SNR=6.2
NIL Nilore 44.96 293 P P 23 02 06.4 +0.2
ARSB Arslanbob 45.09 303 IAmb IAmb 23 02 08.9
comp=Z,9.9nm,0.6s
TIXI Tiksi 45.78 2 P P 23 02 11.1 -0.9
TIXI PcP PcP 23 03 46.1 -0.5
PALK Pallekele 45.84 254 P P 23 02 12.9 -0.4
PALK PcP PcP 23 03 47.5 -0.4
WB0 Warramunga Arr 46.41 167 P P 23 02 17.9 +0.3
WRA Warramunga Arr 46.57 168 P P 23 02 20.0 +1.2
comp=Z,2.3nm,0.6s,baz=350,slow=8.5,SNR=6.3
WB2 Warramunga Arr 46.57 168 P P 23 02 20.4 +1.6
WR0 Warramunga Arr 46.62 167 P P 23 02 20.4 +1.2
KK31 Karatay Array 47.02 306 PcP 23 03 52.3 +0.8
KKAR Karatay Array 47.02 306 P P 23 02 22.5 +0.3
KKAR PcP 23 03 52.0 +0.5
KKAR Karatay Array 47.02 306 IAmb IAmb 23 02 23.9
comp=Z,5.4nm,0.7s
KKAR PcP 23 03 52.3 +0.8
PSA00 Pilbara Seismi 47.49 186 P P 23 02 26.2 +0.3
PSA00 IAmb IAmb 23 02 33.5
comp=Z,20nm,1.1s
KBL Kabul 48.36 294 P P 23 02 33.8 +0.9
BVAR Borovoye Array 48.41 319 P P 23 02 32.4 -0.3
comp=Z,1.9nm,0.3s,baz=106,slow=9.4,SNR=32
BVAR PcP PcP 23 03 56.5 +0.2
comp=Z,2.1nm,0.4s,baz=102,slow=3.5,SNR=9.3
BRVK Borovoye 48.48 319 P P 23 02 33.1 -0.1
GIRL Giralia 49.38 193 P P 23 02 41.1 +0.8
AS31 Alice Springs 50.12 169 P P 23 02 47.4 +1.5
ASAR Alice Springs 50.12 169 P P 23 02 47.6 +1.7
comp=Z,2.5nm,0.5s,baz=355,slow=14,SNR=51
ASAR pP pP 23 03 27.0 +2.5
comp=Z,0.9nm,0.6s,baz=354,slow=14,SNR=3.0
ASAR Alice Springs 50.12 169 P P 23 02 47.4 +1.4
HRA Herat 53.95 295 P P 23 03 15.1 +0.6
HRA IAmb IAmb 23 03 15.6
comp=Z,6.4nm,0.8s
ABKAR Akbulak array 54.55 313 P P 23 03 18.4 +0.1
ABKAR Akbulak array 54.55 313 P P 23 03 18.5 +0.2
ABKAR IAmb IAmb 23 03 19.2
comp=Z,11nm,0.6s
MORW Morawa 55.35 189 P P 23 03 25.2 +1.0
MORW IAmb IAmb 23 03 29.3
comp=Z,16nm,1.1s
ARU Arti 55.67 322 P P 23 03 25.9 -0.4
comp=Z,11nm,0.7s,baz=97,slow=2.9,SNR=60
ARU Arti 55.67 322 P P 23 03 25.9 -0.4
AKTO Aktyubinsk 55.80 315 P P 23 03 27.2 0.0
comp=Z,2.9nm,0.7s,baz=355,slow=1.1,SNR=7.9
ASHT Ashkhabad 56.50 300 P P 23 03 33.1 +0.7
FORT Forrest 56.51 177 P P 23 03 33.0 +0.7
GEYT Alibeck 56.72 300 P P 23 03 35.1 +1.1
comp=Z,26nm,0.6s,baz=48,slow=2.2,SNR=90
GEYT Alibeck 56.72 300 P P 23 03 35.1 +1.1
ANM Nome 58.24 28 P P 23 03 43.8 -0.3
NWAO Narrogin (SRO) 58.99 187 P P 23 03 51.7 +2.1
NWAO IAmb IAmb 23 04 01.5
comp=Z,7.4nm,0.9s
NWAO Narrogin (SRO) 58.99 187 P P 23 03 51.1 +1.5
NWAO IAmb IAmb 23 03 58.6
comp=Z,14nm,1.1s
BBOO Buckleboo 59.43 169 P P 23 03 53.2 +0.6
BBOO IAmb IAmb 23 03 57.7
comp=Z,9.2nm,1.1s
WSAR Wadi Sarin 59.60 283 P P 23 03 55.0 +0.8
comp=Z,5.1nm,0.8s,baz=222,slow=9.8,SNR=4.4
STKA Stephens Creek 59.72 163 P P 23 03 54.8 +0.1
comp=Z,1.3nm,0.6s,baz=51,slow=8.3,SNR=3.9
STKA ScP ScP 23 08 24.4 +0.3
comp=Z,1.2nm,0.3s,baz=68,slow=8.8,SNR=8.8
KIRV Kirov 60.65 324 P P 23 04 00.6 -0.1
comp=Z,36nm,0.7s,baz=60,slow=1.9,SNR=15
CNBA Chernabura Isl 61.05 40 P P 23 04 03.9 +0.5
UOSS Minazif 61.22 285 P P 23 04 04.5 -0.6
UOSS IAmb IAmb 23 04 08.2
comp=Z,9.4nm,0.9s
DZM Mont Dzumac 62.55 136 P P 23 04 15.3 +1.2
comp=Z,4.7nm,0.9s,baz=234,slow=16,SNR=3.2
DZM Mont Dzumac 62.55 136 P P 23 04 13.6 -0.4
DZM IAmb IAmb 23 04 28.3
comp=Z,12nm,1.1s
SVW2 Sparrevohn 62.68 33 P P 23 04 14.8 +0.5
SVW2 IAmb IAmb 23 04 16.4
comp=Z,5.9nm,0.8s
IMAR Indian Mountai 63.15 27 P P 23 04 18.4 +1.1
IMAR pP PcP 23 04 54.7 +1.5
CHIR Chirikof Islan 63.20 38 P P 23 04 18.5 +0.8
SII Sitkinak Islan 63.90 38 P P 23 04 23.2 +0.9
PPLA Purkeypile 64.10 30 P P 23 04 24.6 +0.9
PPLA IAmb IAmb 23 04 30.2
comp=Z,5.0nm,0.9s
RSO Redoubt South 64.12 33 P P 23 04 25.0 +1.0
OHAK Old Harbor 64.29 37 P P 23 04 25.1 +0.3
OHAK IAmb IAmb 23 04 34.3
comp=Z,11nm,1.0s
BPAW Bear Paw Mtn. 64.49 29 IAmb IAmb 23 04 28.3
comp=Z,3.8nm,0.6s
SKT Skwentna 64.52 31 P P 23 04 26.7 +0.5
SKT IAmb IAmb 23 04 28.2
comp=Z,5.3nm,1.1s
TOLK Toolik Lake Re 64.54 24 P P 23 04 26.5 +0.2
TOLK IAmb IAmb 23 04 45.2
comp=Z,2.6nm,0.6s
KDAK Kodiak Island 64.58 36 P P 23 04 27.1 +0.4
KTH Kantishna Hill 64.59 30 P P 23 04 27.3 +0.5
KTH IAmb IAmb 23 04 28.4
comp=Z,4.9nm,1.2s
TRF Thorofare Moun 64.88 30 P P 23 04 29.7 +0.9
CNPM China Poot 65.01 34 P P 23 04 30.2 +0.6
CNPM IAmb IAmb 23 04 32.0
comp=Z,10nm,0.9s
BWN Browne 65.14 29 P P 23 04 32.0 +1.7
BWN IAmb IAmb 23 04 36.1
comp=Z,5.7nm,0.6s
NEA Nenana 65.25 28 P P 23 04 32.1 +1.1
NEA IAmb IAmb 23 04 38.8
comp=Z,8.6nm,0.9s
KLMR Klimovskoe 65.40 328 eP P 23 04 29.6 -2.4
KLMR AMP 23 04 32.8
comp=Z,28nm,1.2s
MCK McKinley 65.44 29 P P 23 04 31.7 -0.6
MCK IAmb IAmb 23 04 34.2
comp=Z,4.4nm,0.6s
RC01 Rabbit Creek A 65.50 32 P P 23 04 33.8 +1.2
MDM Murphy Dome 65.55 28 P P 23 04 34.0 +1.1
MDM IAmb IAmb 23 04 35.4
comp=Z,8.4nm,0.9s
WRH Wood River Hil 65.69 28 P P 23 04 34.4 +0.6
GHO Glory Hole Cre 65.77 31 P P 23 04 34.7 +0.3
GHO IAmb IAmb 23 04 35.5
comp=Z,6.7nm,1.0s
CCB Clear Creek Bu 65.78 28 P P 23 04 34.3 -0.1
SEW Seward 65.81 33 IAmb IAmb 23 04 35.5
comp=Z,13nm,1.0s
SML Sawmill 66.04 31 P P 23 04 36.5 +0.4
SML IAmb IAmb 23 04 37.3
comp=Z,8.7nm,0.9s
KNK Knik Glacier 66.05 32 IAmb IAmb 23 04 37.4
comp=Z,9.1nm,0.8s
TOO Toolangi 66.13 162 P P 23 04 37.6 +0.7
ILAR Eielson Array 66.15 28 P P 23 04 36.1 -0.6
comp=Z,0.9nm,0.6s,baz=255,slow=5.0,SNR=21
ILAR PcP PcP 23 05 04.9 -0.7
comp=Z,0.7nm,0.8s,baz=292,slow=4.6,SNR=5.3
ILAR Eielson Array 66.15 28 P P 23 04 36.6 -0.1
HDA Harding Lake 66.19 28 P P 23 04 37.1 +0.2
HDA IAmb IAmb 23 04 37.6
comp=Z,5.0nm,1.0s
DHY Denali Highway 66.24 30 P P 23 04 38.3 +0.8
DHY PcP PcP 23 05 07.7 +1.4
FYU Fort Yukon 66.49 26 P P 23 04 37.5 -1.2
SCM Sheep Creek Mo 66.50 31 IAmb IAmb 23 04 40.5
comp=Z,10nm,0.8s
BMAR Burnt Mountain 66.58 25 P P 23 04 40.8 +1.4
KBZ Khabaz 66.90 309 P P 23 04 42.3 +0.5
comp=Z,9.7nm,1.0s,baz=130,slow=3.0,SNR=15
KIV Kislovodsk 66.99 309 P P 23 04 42.9 +0.3
AKH Akhalkalaki 67.06 306 ⇑P P 23 04 43.9 +0.8
AKH Akhalkalaki 67.06 306 IAmb IAmb 23 04 45.4
comp=Z,10nm,1.0s
FID Port Fidalgo 67.12 32 P P 23 04 43.6 +0.6
FID IAmb IAmb 23 04 44.2
comp=Z,8.1nm,0.7s
HIN Hinchinbrook I 67.19 33 P P 23 04 44.2 +0.8
HIN IAmb IAmb 23 04 50.0
comp=Z,8.2nm,1.2s
RIDG Independent Ri 67.23 29 IAmb IAmb 23 04 45.6
comp=Z,4.1nm,0.6s
EYAK Cordova Ski Ar 67.52 32 P P 23 04 46.1 +0.7
EYAK IAmb IAmb 23 04 47.1
comp=Z,7.6nm,1.2s
SOCY Socotra 67.59 273 P P 23 04 45.8 -0.9
DOT Dot Lake 67.59 29 P P 23 04 46.1 +0.3
MENT Mentasta 67.90 30 P P 23 04 48.7 +0.8
OBN Obninsk 68.12 322 P P 23 04 48.6 -0.6
comp=Z,1.8nm,0.3s,baz=244,slow=23,SNR=4.7
OBN Obninsk 68.12 322 IAmb IAmb 23 04 49.4
comp=Z,12nm,0.7s
GLB Gilahina Butte 68.23 31 IAmb IAmb 23 04 51.6
comp=Z,7.5nm,1.1s
HMT Hamilton 68.29 32 P P 23 04 50.3 +0.1
HMT IAmb IAmb 23 04 51.5
comp=Z,8.3nm,0.8s
SPA0 Spitsbergen Ar 68.44 348 P P 23 04 49.1 -1.8
VRDI Verde Repeater 68.45 31 P P 23 04 52.2 +0.8
KEV Kevo 68.54 338 P P 23 04 50.9 -0.6
KEV IAmb IAmb 23 04 57.9
comp=Z,12nm,1.1s
SUCK Suckling Hills 68.59 33 P P 23 04 52.6 +0.5
MCARA McCarthy VSAT 68.61 31 P P 23 04 53.3 +1.1
MCARA IAmb IAmb 23 04 54.8
comp=Z,6.1nm,0.9s
CRQM Cirque 68.72 32 IAmb IAmb 23 04 55.2
comp=Z,11nm,1.1s
BCAR Beaver Creek A 68.73 29 P P 23 04 53.8 +0.9
TGL Tana Glacier 68.86 32 IAmb IAmb 23 04 55.3
comp=Z,5.0nm,0.7s
WAX Waxell Ridge 68.93 32 P P 23 04 55.0 +0.7
WAX IAmb IAmb 23 04 56.0
comp=Z,4.8nm,0.6s
BALM Baldy 69.02 31 P P 23 04 55.2 +0.4
ARCES ARCESS Array B 69.11 338 P P 23 04 54.9 -0.3

comp=Z,1.3nm,0.6s,baz=54,slow=6.3,SNR=5.0
ARCES LR LR 23 40 58.4
comp=Z,179nm,20.9s,baz=220,slow=41
BARN Barnard Glacie 69.33 31 P P 23 04 57.8 +0.9
BARN IAmb IAmb 23 04 58.7
comp=Z,4.4nm,0.6s
CTGM Chitina Glacie 69.51 31 IAmb IAmb 23 04 59.9
comp=Z,6.3nm,0.7s
EPYK Eagle Plains 69.84 25 IAmb IAmb 23 05 00.9
comp=Z,6.3nm,0.8s
HON Honolulu 69.96 75 P P 23 05 01.3 +0.1
PCA Pinnacle 70.28 32 P P 23 05 03.7 +1.1
PCA IAmb IAmb 23 05 04.7
comp=Z,12nm,0.8s
INK Inuvik 70.36 23 P P 23 05 03.0 +0.2
comp=Z,3.2nm,0.9s,baz=302,slow=6.2,SNR=12
NOR Nord 70.91 354 *i* P P 23 05 04.8 -1.1
RAYN Ar Rayn 70.92 287 P P 23 05 07.1 0.0
RAYN IAmb IAmb 23 05 08.4
comp=Z,12nm,1.1s
FIA1 FINESS Array S 71.55 330 P P 23 05 10.1 +0.1
FIA1 IAmb IAmb 23 05 10.7
comp=Z,16nm,1.1s
FINES FINESS Array B 71.55 330 P P 23 05 09.7 -0.4
comp=Z,4.2nm,0.4s,baz=63,slow=5.6,SNR=57
FINES pP **pP 23 05 52.8 +1.3**
comp=Z,2.9nm,0.8s,baz=57,slow=5.3,SNR=2.1
FINES FINESS Array B 71.55 330 P P 23 05 10.0 -0.1
HMH Humu'ula Sheep 72.78 76 P P 23 05 17.9 -0.6
KHU Kahuku 72.80 77 P P 23 05 18.0 -0.5
SKAG Skagway 72.84 32 IAmb IAmb 23 05 20.9
comp=Z,15nm,1.1s
C36M Paulatuk 73.04 20 IAmb IAmb 23 05 19.2
comp=Z,5.4nm,0.9s
HATHI Halema'uma'u T 73.04 76 P P 23 05 16.9 -3.0
NACGM Naroch 73.54 323 *e* P 23 05 21.0 -1.0
AKASG Malin Array Be 73.69 319 P P 23 05 22.2 -0.7
comp=Z,4.5nm,0.6s,baz=57,slow=6.3,SNR=24
AKASG pP **pP 23 06 05.6 +1.0**
comp=Z,0.4nm,0.4s,baz=62,slow=6.4,SNR=1.7
AKASG Malin Array Be 73.69 319 P P 23 05 23.0 +0.1
AKBB Malin Array Si 73.69 319 IAmb IAmb 23 05 22.9
comp=Z,7.6nm,0.8s
JIS Juneau Island 73.74 33 P P 23 05 24.4 +1.4
JIS IAmb IAmb 23 05 26.3
comp=Z,16nm,1.0s
BR131 Keskin Array S 74.71 307 IAmb IAmb 23 05 30.0
comp=Z,4.1nm,0.7s
BRTR Keskin Array B 74.72 307 P P 23 05 29.1 -0.2
comp=Z,3.7nm,0.6s,baz=98,slow=2.6,SNR=28
ASF Jabal al Asfar 74.97 299 P P 23 05 31.9 +1.1
comp=Z,4.3nm,0.8s,baz=6.5,slow=1.7,SNR=6.4
DAG Danmarks Havn 75.10 352 *i* P P 23 05 29.0 -1.6
comp=Z,5.7nm,0.8s
CRAG Craig 75.51 35 P P 23 05 34.2 +1.0
CRAG IAmb IAmb 23 05 47.0
comp=Z,14nm,1.2s
MMAI Mount Meron Ar 75.84 300 P P 23 05 34.4 -1.3
comp=Z,4.4nm,1.0s,baz=60,slow=12,SNR=2.8
RES Resolute Bay 76.38 10 P P 23 05 36.9 -1.0
comp=Z,2.6nm,0.7s,baz=312,slow=6.8,SNR=12
OUZ Omahuta 76.40 141 P P 23 05 37.7 -0.8
CSS Mathiatis 76.70 302 P P 23 05 39.8 -0.7
CSS IAmb IAmb 23 05 41.1
comp=Z,15nm,0.8s
HARR Harsova 76.77 313 ⇑P P 23 05 40.9 +0.3
DIB Dawson Inlet, 76.82 37 P P 23 05 40.8 +0.1
DIB IAmb IAmb 23 05 45.9
comp=Z,10nm,1.1s
BIZ Bicaz 77.04 316 ⇓P P 23 05 42.2 +0.1
VRI Vrincioaia 77.08 315 ⇑P P 23 05 43.1 +0.8
BURAR Bucovina Array 77.31 317 ⇑P P 23 05 44.0 +0.3
BURAR Bucovina Array 77.31 317 P P 23 05 43.5 -0.3
HFS Hagfors 77.58 331 P P 23 05 44.4 -0.5
comp=Z,2.0nm,0.4s,baz=95,slow=4.2,SNR=15
RAO Raoul Island 77.70 131 LR LR 23 35 52.9
comp=Z,97nm,20.8s,baz=270,slow=32
MLR Muntele Rosu 77.73 315 P P 23 05 46.5 +0.4
comp=Z,2.0nm,0.5s,baz=330,slow=18,SNR=8.1
MLR Muntele Rosu 77.73 315 ⇑P P 23 05 47.1 +1.0
ATD Arta Tunnel 77.84 277 P P 23 05 46.2 -1.0
ATD IAmb IAmb 23 05 56.9
comp=Z,14nm,1.0s
NC405 NORSAR Array S 77.91 333 P P 23 05 46.2 -0.4
NC303 NORSAR Array S 77.99 333 P P 23 05 46.7 -0.4
ARCR ARCALIA 78.07 317 ⇑P P 23 05 47.8 0.0
NB201 NORSAR Array S 78.11 333 P P 23 05 47.3 -0.6
XMAS Kiritimati 78.14 94 P P 23 05 47.3 -1.5
NB2 NORSAR Subarra 78.15 333 P P 23 05 46.6 -1.4
comp=Z,1.0nm,0.6s,baz=55,slow=5.6
NOA NORSAR Array B 78.15 333 P P 23 05 47.1 -1.0
comp=Z,1.7nm,0.6s,baz=53,slow=5.8,SNR=6.2
NOA pP **pP 23 06 30.7 +0.5**
comp=Z,2.3nm,0.9s,baz=59,slow=5.8,SNR=3.2
NC602 NORSAR Array S 78.18 333 P P 23 05 47.4 -0.8
NC602 IAmb IAmb 23 05 59.4
comp=Z,14nm,1.1s
NC204 NORSAR Array S 78.21 333 P P 23 05 47.5 -0.9
NBO00 NORSAR Array S 78.33 333 P P 23 05 48.9 -0.1
NAO01 NORSAR Array S 78.39 333 P P 23 05 49.2 -0.1
KOLS Kolonicke sedl 78.52 319 *e*P P 23 05 50.1 -0.2
TRPA Tarpa 78.72 318 ⇑P P 23 05 51.8 +0.5
CRVS Cervenica-Dubn 79.02 319 *e*P P 23 05 53.8 +0.8
BBB Bella Bella 79.64 37 P P 23 05 56.0 -0.3
BBB IAmb IAmb 23 06 13.6
comp=Z,8.8nm,0.9s
QRZ Quartz Range 79.89 145 P P 23 05 58.7 +1.1
YKA Yellowknife Ar 80.06 24 P P 23 05 58.4 +0.1
comp=Z,2.8nm,0.6s,baz=303,slow=5.4,SNR=56
YKA pP **pP 23 06 41.5 +0.9**
comp=Z,0.8nm,0.6s,baz=303,slow=5.4,SNR=3.4
YKA PKKPbc **PKKPbc 23 24 39.8 -2.7**
comp=Z,0.4nm,0.4s,baz=134,slow=2.1,SNR=13
OKC Ostrava-Krasne 80.49 321 *e*P P 23 06 01.1 +0.2
NNZ Nelson 80.61 145 P P 23 06 01.8 +0.3
NNZ IAmb IAmb 23 06 11.0
comp=Z,20nm,1.1s
VTS Vitosha 80.73 313 ⇑P P 23 06 03.0 +0.5
VTS Vitosha 80.73 313 IAmb IAmb 23 06 03.8
comp=Z,5.7nm,0.7s
VYHS Vyhne 80.75 320 *e*P P 23 06 02.9 +0.6
THZ Tophouse 80.77 146 P P 23 06 02.2 -0.2
MORC Moravsky Berou 80.86 321 ⇑P P 23 06 03.6 +0.6
SUMG Summit 81.06 355 *i* P P 23 06 03.4 -0.5
SUMG Summit 81.06 355 P P 23 06 04.0 0.0
SUMG IAmb IAmb 23 06 04.4
comp=Z,5.3nm,0.7s
TUWZ Tuamarina 81.06 145 P P 23 06 04.3 +0.6
KARP Karpathos 81.08 305 P P 23 06 02.8 -1.6
MLZ Mavora Lakes 81.22 151 P P 23 06 03.3 -1.3
MLZ IAmb IAmb 23 06 07.7
comp=Z,12nm,1.2s
DPC Dobruska-Polom 81.26 322 *e*P P 23 06 05.8 +0.8
RPZ Rata Peaks 81.30 148 P P 23 06 05.4 +0.3
comp=Z,13nm,0.8s,baz=256,slow=1.8,SNR=5.6
RPZ Rata Peaks 81.30 148 P P 23 06 04.8 -0.3
CMWZ Cape Campbell 81.43 145 P P 23 06 05.0 -0.7
WHZ Wether Hill Ro 81.56 151 P P 23 06 05.5 -0.9
KHZ Kahutara 81.57 146 P P 23 06 03.9 -2.6
VRAC Vranov 81.63 321 P P 23 06 07.8 +0.9
comp=Z,7.0nm,0.8s,baz=87,slow=7.1,SNR=11
VRAC Vranov 81.63 321 ⇑P P 23 06 07.8 +0.9
RER Riviere de l'E 81.67 242 P P 23 06 08.3 +0.7
MSWZ Moikau Station 81.73 144 P P 23 06 06.5 -0.9
LIT Litokhoron 82.38 311 P P 23 06 09.8 -1.2
LIT IAmb IAmb 23 06 13.5
comp=Z,19nm,1.1s
PRU Pruhonice 82.43 322 *e*P P 23 06 12.9 +1.9
CLL Collm 82.56 324 *e*P P 23 06 12.0 +0.3
comp=Z,11nm,1.1s
CLL Collm 82.56 324 IAmb IAmb 23 06 13.5
comp=Z,10nm,1.0s
FNA Florina 82.81 312 P P 23 06 12.6 -0.7
FNA IAmb IAmb 23 06 12.7
comp=Z,7.2nm,1.1s
IDI Anoyia 82.86 306 P P 23 06 12.6 -1.1
comp=Z,8.7nm,0.9s,baz=36,slow=16,SNR=5.2
AGG Agios Georgios 82.98 310 P P 23 06 11.3 -2.9
AGG IAmb IAmb 23 06 17.7
comp=Z,6.1nm,0.9s
KHC Kasperske Hory 83.42 322 *e*P P 23 06 16.3 +0.1
GERES GERESS Array B 83.50 322 P P 23 06 16.6 -0.1
comp=Z,2.0nm,0.8s,baz=57,slow=4.9,SNR=12
GERES GERESS Array B 83.50 322 P P 23 06 16.4 -0.3
LLLB Lillooet 83.80 36 P P 23 06 19.5 +1.3
LLLB IAmb IAmb 23 06 20.5
comp=Z,8.5nm,1.0s
PGC Sidney 84.02 38 P P 23 06 19.2 0.0
PGC IAmb IAmb 23 06 29.5
comp=Z,8.8nm,1.1s
ITM Ithomi 84.13 308 P P 23 06 18.7 -1.4
E03A Lebam 85.10 40 P P 23 06 25.6 +0.9
E03A IAmb IAmb 23 06 32.4
comp=Z,12nm,1.1s
TRI Trieste 85.14 319 P P 23 06 25.5 +0.6
BORG Borgarnes 85.83 346 P P 23 06 28.1 +0.2
F04A Amboy 86.10 40 P P 23 06 30.2 +0.6
F04A IAmb IAmb 23 06 32.1
comp=Z,7.3nm,0.7s
LTY Liberty 86.35 38 P P 23 06 32.0 +1.1
LTY IAmb IAmb 23 06 33.0
comp=Z,5.4nm,1.0s
B08A Colville Reser 86.45 37 IAmb IAmb 23 06 33.7
comp=Z,9.3nm,1.1s
FUORN Ofenpass-Fuorn 86.66 321 P P 23 06 33.4 +0.6
FUORN IAmb IAmb 23 06 34.0
comp=Z,5.7nm,0.9s
DAVOX Davos/Dischmat 86.79 321 P P 23 06 33.2 0.0
comp=Z,6.1nm,0.8s,baz=85,slow=3.9,SNR=10
RAR Rarotonga 86.90 115 P P 23 06 34.9 +1.1
comp=Z,6.3nm,0.4s,baz=142,slow=18,SNR=2.9
RAR LR LR 23 39 58.6
comp=Z,60nm,20.7s,baz=296,slow=32
RAR Rarotonga 86.90 115 P P 23 06 33.5 -0.3
E07A Sunnyside 87.21 39 P P 23 06 36.3 +1.2
SFJD Kangerlussuaq 87.27 358 P P 23 06 34.9 +0.1
SFJD IAmb IAmb 23 06 38.3
comp=Z,3.7nm,0.8s
C09A Chrisman Ranch 87.35 37 P P 23 06 35.0 -0.7
C09A IAmb IAmb 23 06 37.7
comp=Z,4.4nm,0.7s
D08A Wollman Farm, 87.44 38 P P 23 06 36.2 +0.1
D08A IAmb IAmb 23 06 38.6
comp=Z,8.1nm,0.9s
HAWA Hanford 87.49 39 P P 23 06 36.6 +0.3
HAWA IAmb IAmb 23 06 39.1
comp=Z,6.5nm,0.9s
G06A Carlson Farm, 87.53 40 P P 23 06 37.6 +1.0
ABPO Ambohimpanom 87.54 248 P P 23 06 37.0 -0.2
ABPO IAmb IAmb 23 06 46.2
comp=Z,5.2nm,1.0s
HUMO Hull Mountain 87.62 43 P P 23 06 38.6 +1.5
KRMB Red Mountain 87.62 44 P P 23 06 38.3 +1.1
KRMB IAmb IAmb 23 06 54.1
comp=Z,7.1nm,1.1s
NEW Newport 87.69 36 P P 23 06 38.9 +1.6
comp=Z,10nm,0.8s,baz=306,slow=4.0,SNR=23
NEW Newport 87.69 36 P P 23 06 37.7 +0.4
E08A Dider Farm, El 87.69 38 P P 23 06 38.6 +1.3
E08A IAmb IAmb 23 06 40.0
comp=Z,8.1nm,0.9s
KHMM Horse Mountain 88.08 45 P P 23 06 39.5 +0.1
KHMM IAmb IAmb 23 06 50.4
comp=Z,7.8nm,1.2s
PINE Pine Mountain 88.17 41 P P 23 06 40.2 +0.4
PINE IAmb IAmb 23 06 43.1
comp=Z,5.0nm,0.9s
E09A Wood Farm, Sta 88.19 38 P P 23 06 41.0 +1.4
E09A IAmb IAmb 23 06 43.0
comp=Z,10nm,1.0s
KMBO Kilima Mbogo 88.24 268 P P 23 06 41.3 +0.5
comp=Z,1.4nm,0.8s,baz=68,slow=12,SNR=4.6
YBH Yreka Blue Hor 88.26 44 P P 23 06 41.3 +1.1
comp=Z,1.0nm,0.7s,baz=239,slow=5.9,SNR=3.5
YBH Yreka Blue Hor 88.26 44 P P 23 06 40.4 +0.2
G08A Pilot Rock 88.46 39 P P 23 06 41.5 +0.4
F10A Beach Ranch, E 89.02 38 P P 23 06 44.6 +0.9
F10A IAmb IAmb 23 06 47.1
comp=Z,2.9nm,0.8s
JTMT Jette 89.50 35 P P 23 06 46.5 +0.6
MOD Modoc Plateau 89.64 43 P P 23 06 46.6 -0.1
MOD IAmb IAmb 23 06 50.2
comp=Z,3.5nm,0.9s
FCC Fort Churchill 89.65 19 P P 23 06 46.0 -0.2
FCC IAmb IAmb 23 06 47.2
comp=Z,4.8nm,1.1s
BMO Blue Mountains 89.66 39 P P 23 06 47.4 +0.7
BMO IAmb IAmb 23 06 49.3
comp=Z,6.3nm,0.9s
J08A Circle Bar Ran 89.88 41 P P 23 06 48.3 +0.5
J08A IAmb IAmb 23 06 51.0
comp=Z,5.2nm,0.8s
FFC Flin Flon 90.19 25 P P 23 06 49.0 +0.2
FFC IAmb IAmb 23 06 49.7
comp=Z,6.1nm,1.1s
MSO Missoula 90.27 36 P P 23 06 49.7 +0.2
WVOR Wild Horse Val 90.34 41 P P 23 06 50.8 +0.9
WVOR IAmb IAmb 23 06 52.9
comp=Z,4.2nm,1.0s
BEKR Beckworth 90.78 44 P P 23 06 52.7 +0.6
MFID Camas Ranch 91.38 39 P P 23 06 55.1 +0.3
RUBR Rubicon Trail 91.38 45 P P 23 06 53.8 -1.2
PAHR Pah Rah Range 91.49 44 P P 23 06 55.4 0.0
PAHR IAmb IAmb 23 06 58.7
comp=Z,3.1nm,1.2s
EGMT Eagleton 91.62 33 P P 23 06 56.2 +0.5
CMB Columbia Colle 91.82 46 P P 23 06 57.2 +0.4
DLMT Dillon 91.93 36 P P 23 06 58.2 +0.9
YERR Yerington 92.00 44 P P 23 06 57.4 -0.4
MCMT McKenzie Canyo 92.14 37 P P 23 06 59.3 +0.9
KVN Kaiserville 92.68 44 P P 23 07 01.2 +0.3
KVN IAmb IAmb 23 07 03.5
comp=Z,2.7nm,0.7s
QLMT Earthquake Lak 92.90 36 P P 23 07 02.8 +0.9
NVAR Mina Array Bea 92.92 45 P P 23 07 04.1 +2.0
comp=Z,1.7nm,0.7s,baz=302,slow=5.3,SNR=20
NVAR Mina Array Bea 92.92 45 P P 23 07 02.9 +0.8
NV11 Mina Array Sit 93.01 44 P P 23 07 03.7 +1.3
YHL Hebgen Lake 93.02 36 P P 23 07 03.4 +0.8
YHB Horse Butte 93.08 36 P P 23 07 03.9 +1.2
GCMT Greycliff 93.18 35 P P 23 07 03.6 +0.6
PAGB Antelope Grade 93.23 48 P P 23 07 04.0 +0.7
YHH Holmes Hill 93.24 36 P P 23 07 04.2 +0.7
YMR Madison River 93.26 36 P P 23 07 03.5 -0.1
YNR Norris Junctio 93.38 36 P P 23 07 04.2 0.0
ELK Elko 93.39 41 P P 23 07 06.0 +1.8
comp=Z,1.8nm,0.8s,baz=321,slow=2.6,SNR=6.5
ELK Elko 93.39 41 P P 23 07 04.2 0.0
LKWY Lake 93.63 36 P P 23 07 06.2 +1.0
YMP Mirror Lake Pl 93.64 36 P P 23 07 05.6 +0.3
H17A Grant Village 93.65 36 P P 23 07 06.0 +0.6
H17A IAmb IAmb 23 07 09.7
comp=Z,5.0nm,1.0s
IMW Indian Meadow 93.79 37 P P 23 07 05.8 -0.3
IMW IAmb IAmb 23 07 09.8
comp=Z,4.8nm,1.1s
FLWY Flagg Ranch 93.79 37 P P 23 07 07.0 +1.1
RLMT Red Lodge 93.84 35 P P 23 07 06.6 +0.4
RLMT IAmb IAmb 23 07 08.3
comp=Z,2.6nm,0.8s
MBAR Mbarara 93.87 271 P P 23 07 07.5 +0.7
MBAR IAmb IAmb 23 07 08.7
comp=Z,2.6nm,0.8s
FXWY Fox Creek 93.91 37 P P 23 07 06.7 +0.2
DGMT Dagmar 93.93 30 P P 23 07 06.4 +0.1
HVU Hansel Valley 94.16 39 P P 23 07 06.8 -0.9
R11A Troy Canyon, C 94.66 43 IAmb IAmb 23 07 12.1
comp=Z,2.1nm,1.0s
PDAR Pinedale Array 95.29 37 P P 23 07 12.8 -0.1
comp=Z,0.4nm,0.5s,baz=65,slow=1.4,SNR=7.3
ULM Lac du Bonnet 96.02 25 P P 23 07 15.4 -0.3
comp=Z,0.5nm,0.3s,baz=333,slow=2.3,SNR=2.8
PFO Pinyon Flats O 97.00 47 P P 23 07 21.3 +0.6
comp=Z,1.9nm,0.8s,baz=297,slow=4.5,SNR=2.5
PFO Pinyon Flats O 97.00 47 IAmb IAmb 23 07 40.6
comp=Z,2.4nm,0.9s
TXAR Lajitas Array 108.03 43 PKiKP PKiKP 23 12 16.0 +0.1
comp=Z,0.1nm,0.4s,baz=343,slow=1.2,SNR=3.6
TORD Torodi Ar. Bea 112.33 298 PKiKP PKiKP 23 12 23.9 -0.4
comp=Z,0.9nm,0.5s,baz=54,slow=1.2,SNR=8.5
TORD PP **PP 23 13 12.7 +0.9**
comp=Z,1.1nm,0.9s,baz=29,slow=6.8,SNR=3.8
DBIC Dimbokro 121.33 296 PKP PKPdf 23 12 41.8 +0.2
comp=Z,3.5nm,0.5s,baz=20,slow=1.8,SNR=10
CMIG Matias Romero 122.41 46 PKP PKiKP 23 12 44.1 +0.4
comp=Z,1.3nm,0.5s,baz=330,slow=5.1,SNR=4.4
LPAZ La Paz 164.62 54 PKPab PKPab 23 14 48.8 -0.1
comp=Z,1.3nm,0.7s,baz=265,slow=1.7,SNR=4.0

DDA 01 22:55:34.0, 35.24N×27.77E, h8km±5km, ML1.8
ISK 01 22:55:35.0, 35.19N×27.65E, h14km, ML2.5/9
THE 01 22:55:37.2, 35.95N×26.93E, h0km±3km, ML2.2/2, Error ellipse: s-maj=5.7km s-min=2.0km az=287.0
ATH 01 22:55:39.1, 35.88N×27.07E, h22km±7km, ML2.2/2, Error ellipse: s-maj=9.8km s-min=2.9km az=145.0
ISC 01 22:55:35.9±1.1, 35.50N±0.08×27.71E±0.04, h18km, n27, σ1§40/29, Dodecanese Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KARP Karpathos 0.45 277 P Pb 22 55 45.8 +0.5
KARP S **Sn 22 55 54.2 -0.9**
482nm,0.2s
KARP Karpathos 0.45 277 P Pb 22 55 45.8 +0.5
KARP S **Sb 22 55 52.9 +1.2**
KARP AML AML 22 55 55.3
comp=N,839μm,0.2s
KARP AML AML 22 55 56.4
comp=E,1048μm,0.2s
KARP Karpathos 0.45 277 PG Pb 22 55 45.8 +0.5
KARP SG **Sn 22 55 54.3 -0.9**
ARG Arkhangelos 0.80 25 P Pn 22 55 56.6 +4.4
ARG S Sn 22 56 12.1 +8.5
comp=E,135nm,0.4s
ARG Arkhangelos 0.80 25 P Pn 22 55 56.8 +4.6
ARG AML AML 22 56 16.1
comp=E,296μm,0.3s
ARG AML AML 22 56 18.2
comp=N,246μm,0.6s
ARG Arkhangelos 0.80 25 PN Pn 22 55 56.8 +4.6
DAT Datca 1.23 355 PN Pg 22 56 02.5 +2.7
DAT Datca 1.23 355 *i* P Pg 22 56 02.6 +2.7
DAT *i* S Sg 22 56 22.1 +6.1
DAT IAML 22 56 33.0
comp=N,16nm,0.5s
DAT IAML 22 56 36.0
comp=E,16nm,1.0s
ZKR Zakros 1.28 253 P Pn 22 55 57.5 -1.3
ZKR Zakros 1.28 253 P Pn 22 55 57.8 -1.1
ZKR Zakros 1.28 253 PN Pn 22 55 57.8 -1.1
DALY Dalyan (Mula) 1.52 30 PN Pg 22 56 06.5 +1.3
DALY Dalyan (Mula) 1.52 30 *i* P Pg 22 56 06.5 +1.3
DALY *i* S Sg 22 56 36.0 +11
DALY IAML 22 56 40.0
comp=E,12nm,0.5s
DALY IAML 22 56 44.0
comp=N,21nm,1.1s
TURN Turunc 1.55 28 PN Pg 22 56 04.5 -1.3
TURN Turunc 1.55 28 *i* P Pg 22 56 04.5 -1.3
TURN *i* S **Sg 22 56 26.7 +0.7**
TURN IAML 22 56 36.0
comp=N,18nm,0.5s
TURN IAML 22 56 37.0
comp=E,23nm,0.5s
FETY Fethiye 1.59 44 PN Pg 22 56 07.5 +0.9
FETY Fethiye 1.59 44 *i* P Pg 22 56 07.1 +0.5
FETY IAML 22 56 46.0
comp=N,6.8nm,0.8s
FETY IAML 22 56 50.0
comp=E,6.7nm,0.7s
YER Yerkesik 1.70 16 PN Pg 22 56 09.5 +0.9
AKAS Kas 1.71 64 PN Pb 22 56 08.0 +1.2
AKAS Kas 1.71 64 *i* P Pb 22 56 08.1 +1.3
AKAS *i* S **Sg 22 56 31.4 +0.3**
AKAS IAML 22 56 36.0
comp=N,12nm,0.4s
AKAS IAML 22 56 37.0
comp=E,8.8nm,0.5s
NPS Neapolis 1.73 263 P Pn 22 56 05.5 +0.4
LAST Lasithi 1.85 260 P Pn 22 56 07.1 +0.3
AYDN Tasoluk 2.16 4 *i* P Pg 22 56 15.1 -2.4
AYDN IAML 22 56 59.0
comp=E,13nm,1.5s
TAVA DENIZLI_Tavas 2.19 26 *i* P Pg 22 56 15.9 -2.1
TAVA IAML 22 57 04.0
comp=N,10nm,1.2s
TAVA IAML 22 57 05.0
comp=E,4.5nm,0.6s
GCAM G?zelcaml? 2.23 350 *i* P Pb 22 56 14.7 -1.0
GOLH Golhisar 2.29 40 *i* P Pg 22 56 18.1 -1.8
IDI Anoyia 2.31 266 P Pn 22 56 11.8 -1.4

ATH 01 22:57:41.5, 38.38N×20.51E, h13km±1km, ML3.1/11, Error ellipse: s-maj=1.9km s-min=0.7km az=281.0
THE 01 22:57:41.5, 38.41N×20.42E, h6km±2km, ML3.5/15, Error ellipse: s-maj=2.8km s-min=0.4km az=109.0
IDC 01 22:57:44.1±3.6, 38.90N×20.92E, h0km, mb3.6/3, mb1 3.6/5, mb1mx3.3/58, mbtmp3.5/5, ML3.0/2, Error ellipse: s-maj=76.1km s-min=25.2km az=49.0
ISC 01 22:57:41.8±0.8, 38.39N±0.02×20.51E±0.03, h10km±4km, n59, σ0§96/96, mb3.7/3, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VSK1 VASILIKIADES 0.04 68 P Pg 22 57 43.7 -0.1
VSK1 S **Sg 22 57 45.3 +0.1**
86μm,0.1s
FSK Fiskardo 0.08 30 P Pg 22 57 44.0 -0.1
FSK Fiskardo 0.08 30 P Pg 22 57 44.1 -0.1
FSK S **Sg 22 57 45.9 +0.1**
KEF1 Kardakata, Kep 0.12 196 P Pg 22 57 44.4 -0.2
KEF1 S **Sg 22 57 46.2 -0.4**
KEF4 Livadi, Kephal 0.15 207 P Pg 22 57 44.7 -0.5
KEF4 S **Sg 22 57 46.8 -0.6**
ARG2 Argostoli 0.21 185 P Pg 22 57 46.1 -0.1
ARG2 S **Sg 22 57 49.7 +0.5**
86μm,0.3s
VLS Valsamata 0.22 164 P Pg 22 57 46.4 0.0
VLS S **Sg 22 57 50.1 +0.6**
11μm,0.2s
VLS Valsamata 0.22 164 P Pg 22 57 46.4 0.0
VLS S **Sg 22 57 49.3 -0.2**
VLS AML AML 22 57 50.6
comp=E,24654μm,0.2s
VLS AML AML 22 57 50.6
comp=N,17351μm,0.2s
KEF2 Argostoli. Kep 0.23 185 P Pg 22 57 46.2 -0.3
KEF2 S **Sg 22 57 49.6 0.0**
KEF3 Kipouria, Keph 0.23 214 P Pg 22 57 45.9 -0.6
KEF3 S **Sg 22 57 49.4 -0.3**
CHV1 Chavriata, Kef 0.23 206 P Pg 22 57 46.3 -0.3
CHV1 S **Sg 22 57 50.2 +0.4**
comp=N,51μm,0.4s
EVGI Lefkada island 0.25 26 P Pg 22 57 47.1 +0.1
EVGI S **Sg 22 57 51.8 +1.3**
EVGI Lefkada island 0.25 26 P Pg 22 57 47.2 +0.1
EVGI S **Sg 22 57 51.2 +0.7**
MGNA Meganis 0.34 40 P Pg 22 57 48.7 +0.1
MGNA S **Sb 22 57 54.1 -1.5**
MGNA AML AML 22 57 55.1
comp=N,9784μm,0.2s
MGNA AML AML 22 57 55.2
comp=E,6694μm,0.1s
KFL Anninata 0.36 142 P Pg 22 57 49.0 +0.1
KFL S **Sb 22 57 55.7 -0.2**
LKD2 Lefkada island 0.41 16 P Pg 22 57 49.6 -0.4
LKD2 S **Sg 22 57 55.9 +0.5**
comp=E,3μm,0.6s
LKD2 Lefkada island 0.41 16 P Pg 22 57 49.5 -0.4
LKD2 S **Sg 22 57 56.0 +0.5**
LKD2 AML AML 22 58 01.9
comp=E,5071μm,0.4s
LKD2 AML AML 22 58 03.5
comp=N,4882μm,0.7s
TSLK Tsoukalades, L 0.45 14 P Pg 22 57 50.4 -0.2
TSLK Tsoukalades, L 0.45 14 P Pg 22 57 50.4 -0.2
TSLK S **Sb 22 57 57.4 -1.2**
TSLK AML AML 22 58 01.7
comp=E,5689μm,0.6s
TSLK AML AML 22 58 03.9
comp=N,5160μm,0.9s
AST1 Astakos 0.48 72 P Pb 22 57 51.6 -0.7
AST1 S **Sb 22 58 00.0 +0.6**
comp=N,7μm,0.3s
VLMS Volimes, Zakyn 0.53 167 P Pg 22 57 51.8 -0.3
VLMS S **Sg 22 57 58.6 -0.4**
VLMS AML AML 22 58 01.6
comp=N,24335μm,0.2s
VLMS AML AML 22 58 03.7
comp=E,20464μm,0.2s

PDO Prodromos 0.56 68 P Pg 22 57 53.0 +0.2
PDO Prodromos 0.56 68 P Pg 22 57 53.0 +0.2
PDO S Sb 22 58 01.5 -0.5
PDO AML AML 22 58 09.4
comp=E,5286μm,0.4s
PDO AML AML 22 58 10.7
comp=N,5134μm,0.4s
ZAK2 Zakynthos 0.68 153 P Pg 22 57 55.1 +0.2
ZAK2 S Sb 22 58 06.5 +1.4
comp=N,9μm,0.3s
KRI1 kERI 0.77 162 P Pg 22 57 55.7 -0.9
KRI1 S Sb 22 58 08.7 +0.9
comp=N,5μm,0.2s
RLS Riolos of Patr 0.82 114 P Pg 22 57 57.6 -0.1
RLS Riolos of Patr 0.82 114 P Pg 22 57 57.6 -0.1
RLS S Sg 22 58 07.4 -1.0
RLS AML AML 22 58 18.3
comp=E,1437μm,0.5s
RLS AML AML 22 58 19.5
comp=N,1733μm,0.4s
PVO Paravola 0.83 74 P Pg 22 57 57.7 0.0
PVO S Sn 22 58 12.5 +0.7
comp=N,2μm,0.5s
PVO Paravola 0.83 74 P Pb 22 57 58.1 -0.2
PVO S Sg 22 58 08.3 -0.2
PVO AML AML 22 58 17.8
comp=E,2761μm,0.5s
PVO AML AML 22 58 20.0
comp=N,4491μm,0.6s
DRO Drossia 1.04 115 P Pg 22 58 01.3 -0.5
DRO S Sn 22 58 18.7 +1.5
comp=N,2μm,0.4s
DRO Drossia 1.04 115 P Pg 22 58 01.3 -0.5
DRO S Sb 22 58 16.1 +0.4
DRO AML AML 22 58 25.5
comp=N,3425μm,0.5s
DRO AML AML 22 58 26.2
comp=E,3898μm,0.5s
EFP Efpalio 1.09 88 P Pg 22 58 02.1 -0.8
EFP S Sn 22 58 20.4 +2.0
comp=E,2μm,0.5s
EFP Efpalio 1.09 88 P Pg 22 58 02.1 -0.8
EFP S Sg 22 58 16.4 -0.7
EFP AML AML 22 58 25.8
comp=N,3404μm,0.4s
EFP AML AML 22 58 26.1
comp=E,4468μm,0.6s
ANX Ano Chora 1.12 79 P Pg 22 58 03.0 -0.4
ANX S Sn 22 58 22.6 +3.3
comp=E,2μm,0.6s
ANX Ano Chora 1.12 79 P Pg 22 58 03.0 -0.4
ANX S Sn 22 58 19.4 +0.2
EVR Evrytania 1.14 62 P Pg 22 58 02.8 -1.0
LAKA Lakka 1.16 97 P Pg 22 58 03.4 -0.7
LAKA Lakka 1.16 97 P Pg 22 58 03.5 -0.7
LAKA S Sg 22 58 19.1 -0.2
LAKA AML AML 22 58 28.2
comp=N,772μm,0.5s
LAKA AML AML 22 58 30.1
comp=E,845μm,0.5s
SERG Sergoula 1.21 89 P Pg 22 58 04.3 -0.8
SERG S Sn 22 58 23.5 +2.1
comp=E,1μm,0.6s
SERG Sergoula 1.21 89 P Pg 22 58 04.3 -0.8
SERG S Sb 22 58 20.8 +0.1
TRIZ Trizonia 1.23 91 P Pg 22 58 04.4 -1.0
TRIZ S Sn 22 58 23.7 +2.0
comp=E,925nm,0.4s
TRIZ Trizonia 1.23 91 P Pg 22 58 04.4 -1.0
TRIZ S Sn 22 58 21.8 +0.1
AMT Artemida-Makis 1.28 132 P Pn 22 58 04.9 -0.9
KALE Kalithea 1.28 90 P Pn 22 58 05.2 -0.7
KALE Kalithea 1.28 90 P Pn 22 58 05.2 -0.7
JAN Janina 1.29 12 P Pb 22 58 07.0 +0.8
JAN Janina 1.29 12 P Pb 22 58 07.3 +1.0
KLV Kalavryta, Ach 1.34 105 P Pn 22 58 06.2 -0.4
KLV S Sn 22 58 27.7 +3.2
comp=E,332nm,0.5s
KLV Kalavryta, Ach 1.34 105 P Pn 22 58 06.2 -0.4
MAKR Makrakomi, Fth 1.41 63 P Pn 22 58 07.9 +0.3
MAKR Makrakomi, Fth 1.41 63 P Pb 22 58 08.0 -0.2
AGG Agios Georgios 1.56 66 P Pn 22 58 10.1 +0.5
ITM Ithomi 1.65 137 P Pb 22 58 12.6 +0.3
PYL PYLOS 1.79 146 P Pn 22 58 13.1 +0.3
IDI Anoyia 4.68 130 Pn Pn 22 58 58.3 +5.7
comp=E,0.2nm,0.3s,baz=335,slow=12,SNR=2.7
IDI Sn Sn 22 59 51.3 +4.3
comp=E,1.1nm,0.3s,baz=341,slow=23,SNR=6.2
GERES GERESS Array B 11.55 337 Pn Pn 23 00 26.4 -0.4
comp=E,0.1nm,0.3s,baz=161,slow=12,SNR=1.3
FINES FINESS Array B 23.34 7 P P 23 02 49.4 -0.6
comp=E,6.3nm,1.1s,baz=178,slow=14,SNR=6.4
MKAR Makanchi Array 45.20 59 P P 23 05 57.6 -1.3
comp=E,0.2nm,0.4s,baz=267,slow=7.2,SNR=1.6
ZALV Zalesovo Beam 45.55 48 P P 23 06 00.6 -0.9
comp=E,0.4nm,0.4s,baz=275,slow=9.1,SNR=2.7

IDC 01 23:00:46.8±3.8, 22.67S×175.05W, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.7/40, mbtmp4.3/3, MS3.9/2, Ms1 3.9/2, ms1mx3.0/34, Error ellipse: s-maj=185.0km s-min=52.8km az=154.0
NEIC 01 23:00:53.1±1.7, 22.83S±0.08×175.11W±0.09, h47km±5km, mb4.5/19, Error ellipse: s-maj=13.6km s-min=10.1km az=128.0
ISC 01 23:00:51.4±0.6, 22.85S±0.09×175.16W±0.08, h30km, n34, σ1.28/31, mb4.5/11, 1C, Tonga Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NIUE Niue 6.17 53 Pn Pn 23 02 20.7 +0.2
RAO Raoul Island 6.84 201 Pn Pn 23 02 31.4 +1.7
MSVF Nonsavu 8.15 307 Pn Pn 23 02 49.0 +1.1
RAR Rarotonga 14.37 86 Pn Pn 23 04 13.1 +0.2
MXZ Matakaoa Point 15.71 200 Pn Pn 23 04 31.9 +1.4
MXZ IAmb IAmb 23 04 34.7
comp=Z,65nm,1.0s
DZM Mont Dzumac 17.02 269 Pn Pn 23 04 47.0 -0.5
NOUC Port Laguerre 17.15 269 Pn Pn 23 04 47.7 -1.3
HIZ Hauiti 17.80 206 P Pn 23 04 52.8 -4.1
HIZ IAmb IAmb 23 05 07.2
comp=Z,26nm,1.1s
BFZ Birch Farm 19.20 200 P P 23 05 12.1 -0.7
BFZ IAmb IAmb 23 05 30.8
comp=Z,48nm,1.1s
SNZO South Karori 20.28 202 P Pn 23 05 26.1 -0.6
BHW Baring Head 20.31 202 P P 23 05 25.9 +0.9
PLWZ Palliser 20.32 201 P P 23 05 25.3 +0.2
THZ Tophouse 21.35 205 P P 23 05 37.5 +1.4
KHZ Kahutara 21.67 203 P P 23 05 40.4 +0.8
KHZ IAmb IAmb 23 05 42.0
comp=Z,11nm,0.9s
MQZ McQueen's Vall 23.11 203 P P 23 05 56.6 +1.7
MQZ IAmb IAmb 23 06 12.8
comp=Z,12nm,1.2s
PPT Papeete 24.56 82 P P 23 06 09.6 +0.7
PPTF Pamatai, Papee 24.57 82 P P 23 06 08.9 0.0
PPTF IAmb IAmb 23 06 26.8
comp=Z,14nm,1.0s
LBZ Lake Benmore 24.63 206 P P 23 06 09.2 -0.1
LBZ IAmb IAmb 23 06 10.2
comp=Z,9.2nm,1.1s
CTA Charters Tower 35.94 267 P P 23 07 50.3 +0.7
comp=Z,4.8nm,0.9s,baz=85,slow=14,SNR=1.5
KRVT Keravat (AS076 36.68 295 LR LR 23 24 13.3
comp=Z,48nm,18.0s,baz=225,slow=38
AS31 Alice Springs 46.59 258 P P 23 09 17.6 +0.5
ASAR Alice Springs 46.59 258 P P 23 09 18.9 +1.8
comp=Z,3.9nm,0.6s,baz=96,slow=8.1,SNR=67
ASAR PcP PcP 23 10 50.8 -0.1
comp=Z,0.3nm,0.6s,baz=115,slow=4.1,SNR=4.3
WRA Warramunga Arr 46.93 264 P P 23 09 19.4 -0.3
comp=Z,0.9nm,0.3s,baz=96,slow=7.6,SNR=5.8
KDAK Kodiak Island 82.52 12 P P 23 13 08.9 -1.9
KDAK IAmb IAmb 23 13 25.2
comp=Z,6.0nm,1.0s
SYO Syowa Base 85.00 192 ⇑ePcP PcP 23 13 26.0 -0.8
P17A Butcher Ranch, 86.34 44 pP 23 13 43.6 +4.4
SUCK Suckling Hills 86.51 15 P P 23 13 30.2 -0.8
RAGM Ragged Mountai 86.58 15 P P 23 13 32.7 +1.3
KNK Knik Glacier 86.68 13 P P 23 13 32.0 +0.1
KULM Kulim 86.69 277 P P 23 13 32.3 -0.7
KULM IAmb IAmb 23 13 43.8
comp=Z,5.8nm,1.0s
SML Sawmill 87.07 12 P P 23 13 33.0 -0.7
SML IAmb IAmb 23 13 46.1
comp=Z,2.8nm,0.6s
PCA Pinnacle 87.42 17 P P 23 13 34.4 -1.2
PCA IAmb IAmb 23 13 48.9
comp=Z,4.8nm,1.2s
INK Inuvik 95.86 14 LR LR 23 48 18.3
comp=Z,225nm,21.7s,baz=210,slow=30
AKASG Malin Array Be 146.33 332 PKPbc PKPbc 23 20 28.4 -0.6
comp=Z,0.9nm,0.5s,baz=48,slow=4.2,SNR=6.5

NEIC 01 23:23:03.9±2.2, 14.76S±0.07×167.3E±0.1, h140km±6km, mb4.1/21, Error ellipse: s-maj=17.3km s-min=9.5km az=83.0
IDC 01 23:23:07.3±5.7, 14.99S×167.39E, h170km±58km, mb3.4/6, mb1 3.5/7, mb1mx3.3/34, mbtmp3.9/7, Error ellipse: s-maj=50.7km s-min=27.5km az=157.0
ISC 01 23:23:02.9±0.6, 14.76S±0.08×167.4E±0.1, h129km, n35, σ1.10/32, mb4.0/13, Vanuatu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res
SANVU Saraoutou 0.70 192 Pn Pn 23 23 25.1 +1.9
SANVU Sn 23 23 40.5 +1.9
DZM Mont Dzumac 7.33 187 P Pn 23 24 49.8 +2.4
1.4nm,0.3s,baz=103,slow=13,SNR=27
DZM S Sn 23 26 08.2 -1.0
baz=323,slow=20,SNR=2.4
DZM Mont Dzumac 7.33 187 Pn 23 24 46.9 -0.5
NOUC Port Laguerre 7.37 188 Pn Pn 23 24 48.3 +0.3
FUNA Funafuti 13.14 63 Pn Pn 23 26 04.5 -0.3
EIDS Eidsvold 18.56 233 P P 23 27 09.1 -0.8
EIDS IAmb IAmb 23 27 20.2
comp=Z,11nm,1.1s
PMG Port Moresby 20.45 283 P P 23 27 30.1 -0.4
PMG IAmb IAmb 23 27 33.7
comp=Z,9.4nm,0.9s
CTA Charters Tower 20.82 252 P P 23 27 35.7 +1.4
comp=Z,4.7nm,0.9s,baz=70,slow=15,SNR=3.7
LTZ Lake Taylor 28.25 172 P P 23 28 43.9 0.0
LTZ IAmb IAmb 23 28 46.5
comp=Z,6.9nm,1.2s
STKA Stephens Creek 29.04 230 P P 23 28 51.2 +0.2
comp=Z,0.7nm,0.3s,baz=63,slow=4.5,SNR=3.1
STKA Stephens Creek 29.04 230 IAmb IAmb 23 28 60.0
comp=Z,0.1nm,0.6s
LBZ Lake Benmore 29.63 176 P P 23 28 56.1 0.0
DCZ Deep Cove 30.61 180 P P 23 29 05.3 +0.6
DCZ IAmb IAmb 23 29 10.9
comp=Z,4.3nm,0.8s
WB0 Warramunga Arr 31.84 256 P P 23 29 15.3 -0.6
WB0 IAmb IAmb 23 29 31.7
comp=Z,3.6nm,1.1s
WRA Warramunga Arr 31.90 256 P P 23 29 16.4 -0.1
ASAR Alice Springs 32.74 249 P P 23 29 22.3 -1.5
comp=Z,0.8nm,0.5s,baz=76,slow=9.0,SNR=13
BBOO Buckleboo 33.63 232 P P 23 29 30.0 -1.3
KNRA Kununurra 37.22 263 P P 23 29 58.1 -4.1
FITZ Fitzroy Crossi 40.09 259 P P 23 30 24.1 -2.0
FITZ IAmb IAmb 23 30 25.2
comp=Z,7.2nm,1.1s
QSPA South Pole Qui 75.27 180 P P 23 34 31.7 +0.1
CNPM China Poot 81.25 20 P P 23 35 05.8 +1.4
ULN Ulaanbaatar 82.21 324 P P 23 35 10.6 +0.8
SONM Songino Array 82.57 324 P P 23 35 12.8 +1.2
comp=Z,0.2nm,0.5s,baz=112,slow=5.3,SNR=4.5
SONM Songino Array 82.57 324 IAmb IAmb 23 35 14.6
comp=Z,0.3nm,0.7s
RAGM Ragged Mountai 84.14 22 P P 23 35 17.4 -1.9
KTH Kantishna Hill 84.43 17 P P 23 35 20.2 -0.5
KTH IAmb IAmb 23 35 21.5
comp=Z,3.4nm,1.1s
TRF Thorofare Moun 84.54 18 P P 23 35 21.3 -0.1
TRF IAmb IAmb 23 35 22.8
comp=Z,1.3nm,1.0s
BPAW Bear Paw Mtn. 84.83 17 P P 23 35 22.5 -0.2
BPAW IAmb IAmb 23 35 32.4
comp=Z,2.6nm,1.2s
IMAR Indian Mountai 85.57 15 P P 23 35 27.0 +0.7
WRH Wood River Hil 85.95 18 P P 23 35 28.3 +0.2
WRH IAmb IAmb 23 35 38.3
comp=Z,1.3nm,1.1s
ILAR Eielson Array 86.53 18 P P 23 35 30.6 -0.3
comp=Z,0.4nm,0.8s,baz=246,slow=5.0,SNR=6.6
XPFO Pion Flat 86.94 54 P P 23 35 32.9 -1.1
XPFO IAmb IAmb 23 35 38.6
comp=Z,3.6nm,0.9s
MKAR Makanchi Array 97.28 316 P Pdif 23 36 22.5 +1.1
comp=Z,0.3nm,0.7s,baz=87,slow=7.1,SNR=4.5
MKAR Makanchi Array 97.28 316 P Pdif 23 36 22.3 +0.9
ARCES ARCESS Array B 120.30 345 PKP PKPdf 23 41 38.3 0.0
comp=Z,2.6nm,0.8s,baz=29,slow=2.1,SNR=8.2

IDC 01 23:37:02.5±406.0, 1.87S×79.87W, h0km, Error ellipse: s-maj=310.6km s-min=160.5km az=123.0, Ecuador

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
I08BO LAS PENAS INFR 18.16 142 i 01 27 30.0
baz=322,slow=326,SNR=1.4
I51GB BERMUDA INFRAS 36.95 22 i 03 23 40.0
baz=211,slow=316,SNR=1.3
I13CL EASTER ISLAND 37.82 226 i 03 28 50.0
baz=52,slow=317,SNR=3.1
I24FR TAHITI-TARAVAO 69.85 252 i 07 00 00.0
baz=88,slow=317,SNR=1.3

LDG 01 23:48:21.7±0.2, 51.56N×16.21E, h1km, Ml3.5/6, Error ellipse: s-maj=4.4km s-min=2.7km az=22.0, Suspected Mining induced.
DNK 01 23:48:23.7±3.2, 51.34N×15.44E, h28km±99km, ML2.3, Hypocentre not reviewed by the ISC
IDC 01 23:48:24.0±0.5, 51.53N×16.04E, h0km, mb3.4/7, mb1 3.5/15, mb1mx3.4/72, mbtmp3.4/15, ML2.9/8, Error ellipse: s-maj=10.1km s-min=5.9km az=110.0
BGR 01 23:48:24.5±0.3, 51.45N×16.12E, h1km, ML3.4/16, Error ellipse: s-maj=3.3km s-min=2.2km az=13.0
PRU 01 23:48:24.5±0.0, 51.45N×16.09E, h0km
UPP 01 23:48:24.8±3.1, 51.55N×15.39E, h0km, ML2.0, Suspected explosion
IPEC 01 23:48:24.2±0.3, 51.46N×16.37E, h0km, ML2.7/4, Error ellipse: s-maj=3.1km s-min=1.2km az=51.0
VIE 01 23:48:26.3±1.3, 51.31N×15.89E, h0km, mb2.7/8, ml3.1/9, Error ellipse: s-maj=14.0km s-min=5.6km az=38.0 80 km NE of Liberec Suspected Mining induced.
ISC 01 23:48:22.3±0.5, 51.53N±0.03×16.10E±0.02, h0km, n92, σ1.60/172, mb3.4/7, Poland

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSP Ksiaz 0.70 170 ePg Pg 23 48 36.4 +0.7
KSP eSg Sg 23 48 44.8 +0.1
KSP Ksiaz 0.70 170 i Pg Pg 23 48 36.4 +0.7
KSP i Sg Sg 23 48 45.0 +0.3
CHVC Chvalec 0.95 182 ePG Pb 23 48 41.2 -0.3
CHVC eSG Sg 23 48 53.1 +0.5
OSTC Ostas 0.98 176 ePG Pb 23 48 41.8 -0.3
OSTC eSG Sg 23 48 53.9 +0.2
comp=Z,165nm,0.5s
UPC Upice 1.03 183 ePG Pg 23 48 42.5 +0.6
UPC eSG Sg 23 48 55.3 +0.1
comp=Z,178nm,0.4s
DPC Dobruska-Polom 1.19 173 ePG Pg 23 48 45.1 0.0
DPC eSG Sg 23 48 59.7 -0.8
comp=Z,154nm,0.8s
DPC Dobruska-Polom 1.19 173 ePg Pg 23 48 45.2 0.0
DPC eSg Sg 23 48 59.9 -0.6
PVCC Panska Ves 1.39 224 ePG Pb 23 48 49.4 +0.3
PVCC eSG Sn 23 49 08.1 +0.1
comp=Z,372nm,0.4s
BRG Berggiesshubel 1.51 245 PN Pn 23 48 50.6 +0.1
BRG PG Pg 23 48 52.5 +1.4
BRG SG Sn 23 49 12.2 +1.3
186nm,0.4s
BRG Berggiesshubel 1.51 245 ePn Pg 23 48 51.7 +0.6
BRG eSg Sn 23 49 12.4 +1.6
KRLC Kraliky 1.52 163 ePG Pn 23 48 51.2 +0.4
KRLC eSG Sg 23 49 09.9 -1.2
comp=Z,206nm,0.8s
PRA Prague 1.81 216 ePN Pn 23 48 54.9 +0.3
PRA ePG Pg 23 48 57.2 +0.4
GOPC GO Pecny, Ondr 1.82 208 ePN Pn 23 48 55.0 +0.1
GOPC ePG Pb 23 48 56.8 +0.3
GOPC eSG Sb 23 49 20.1 +0.3
FBE Freiberg 1.83 252 ePg Pg 23 48 58.0 +0.7
FBE eSg Sg 23 49 22.5 +1.4
PRU Pruhonice 1.83 213 ePN Pn 23 48 55.1 +0.1
PRU ePG Pb 23 48 57.1 +0.4
PRU eSG Sb 23 49 20.2 0.0
comp=Z,107nm,0.6s
CLL Collm 1.95 265 ePn Pn 23 48 57.0 +0.4
CLL ePg Pg 23 49 00.0 +0.4
CLL i 23 49 03.0
CLL e 23 49 15.0
CLL i Sg Sg 23 49 25.7 +0.8
comp=Z,74nm,0.6s
CLL i 23 49 35.4
CLL Collm 1.95 265 ePn Pn 23 48 56.9 +0.4
MORC Moravsky Berou 1.98 152 ePN Pn 23 48 57.1 0.0
MORC eSG Sn 23 49 21.9 -0.8
MORC Moravsky Berou 1.98 152 ePn Pn 23 48 57.2 0.0
MORC eSg Sb 23 49 24.5 0.0
MORC Moravsky Berou 1.98 152 ePn Pn 23 48 57.0 0.0
baz=336
MORC eSg Sn 23 49 21.9 -0.8
comp=Z,58nm,0.5s,baz=336
OKC Ostrava-Krasne 2.14 142 ePG Pg 23 49 02.9 -0.4
OKC eSG Sb 23 49 28.6 -0.3
comp=Z,168nm,0.8s
OKC Ostrava-Krasne 2.14 142 ePn Pn 23 48 59.1 -0.1
OKC ePg Pg 23 49 02.8 -0.4
OKC eSg Sb 23 49 30.5 -0.5
VRAC Vranov 2.25 172 ePN Pn 23 49 01.6 +0.9
VRAC eSG Sb 23 49 31.9 -0.2
VRAC Vranov 2.25 172 Pn Pn 23 49 02.2 +1.5
comp=Z,2.2nm,0.3s,baz=337,slow=14,SNR=13
VRAC Sn Sb 23 49 32.3 +0.2
comp=Z,10nm,0.3s,baz=253,slow=19,SNR=10.0
VRAC Vranov 2.25 172 ePn Pn 23 49 01.6 +0.9
baz=356
VRAC eSg Sb 23 49 31.8 -0.3
comp=Z,35nm,0.4s,baz=356
TREC Trest 2.27 190 ePN Pn 23 49 02.3 +1.2
TREC ePG Pg 23 49 05.5 -0.3
TREC eSG Sg 23 49 34.2 -1.1
comp=Z,79nm,0.7s
PBCC Pribram 2.28 217 ePN Pn 23 49 01.1 -0.1
PBCC ePG Pg 23 49 05.5 -0.5
KRUC Moravsky 2.48 175 ePN Pn 23 49 04.8 +0.8
KRUC eSG Sb 23 49 39.4 +0.6
KRUC Moravsky 2.48 175 ePn Pn 23 49 04.7 +0.8
baz=360
KRUC eSg Sb 23 49 39.3 +0.5
comp=Z,28nm,0.5s,baz=360
TANN Tannenbergstha 2.56 245 ePn Pn 23 49 06.0 +1.0
TANN ePg Pg 23 49 11.8 +0.5
TANN eSg Sg 23 49 43.6 -0.7
NKC Novy Kostel 2.65 242 ePN Pn 23 49 07.4 +1.1
NKC ePG Pg 23 49 13.6 +0.5
NKC eSG Sg 23 49 48.4 +1.0
comp=Z,188nm,1.0s
OJC Ojcow 2.69 118 ePn Pn 23 49 07.0 +0.3
OJC ePg Pg 23 49 13.9 +0.1
OJC eSn Sn 23 49 37.1 -2.9
OJC eSg Sg 23 49 48.0 -0.6
OJC Ojcow 2.69 118 ePg Pg 23 49 14.5 +0.8
OJC eSg Sg 23 49 50.0 +1.4
JAVC Velka Javorina 2.86 159 eSG Sb 23 49 49.9 +0.1
JAVC Velka Javorina 2.86 159 eSg Sb 23 49 49.9 +0.1
comp=Z,30nm,0.5s,baz=343
KHC Kasperske Hory 2.90 215 ePN Pn 23 49 10.0 +0.4
KHC ePG Pb 23 49 16.3 +1.5
KHC eSN Sn 23 49 44.6 -0.6
KHC eSG Sg 23 49 54.0 -1.2
comp=Z,57nm,0.6s
MOX Moxa 2.96 254 ePn Pn 23 49 11.3 +0.7
MOX ePg Pg 23 49 19.2 +0.2
MOX eSg Sg 23 49 59.7 +2.3
MANZ Manzenberg 2.97 240 ePn Pn 23 49 12.1 +1.4
MANZ ePg Pg 23 49 20.2 +1.1
MANZ eSg Sg 23 49 57.7 +0.1
ROTZ Rotzenmuhle 3.04 236 ePn Pn 23 49 12.3 +0.7
ROTZ ePg Pg 23 49 20.9 +0.3
ROTZ eSg Sg 23 49 58.4 -1.5
GEC2 GERESS Array S 3.10 211 ePn Pn 23 49 12.7 +0.2
GEC2 ePg Pg 23 49 20.8 -0.8
GEC2 eSg Sg 23 50 01.2 -0.6
GERES GERESS Array B 3.10 211 Pn Pn 23 49 13.8 +1.3
comp=Z,2.1nm,0.3s,baz=30,slow=12,SNR=62
GERES Pg Pb 23 49 19.8 +1.5
comp=Z,5.9nm,0.3s,baz=27,slow=17,SNR=44
GERES Sn Sn 23 49 50.7 +0.4
comp=Z,3.7nm,0.3s,baz=32,slow=21,SNR=5.2
GERES Lg Lg 23 49 59.1
comp=Z,9.2nm,0.3s,baz=32,slow=28,SNR=13
SMOL Smolenice 3.14 164 eSG Sg 23 50 04.1 +1.0
SMOL eLG Lg 23 50 09.5
WET Wettzell 3.16 222 ePn Pn 23 49 13.9 +0.7
WET eSg Sg 23 50 02.8 -0.9
MODS Modra-Piesok 3.25 166 ePN Pn 23 49 16.0 +1.5
MODS ePG Pg 23 49 23.9 -0.7
MODS eSG Sg 23 50 05.6 -1.1
MODS eLG Lg 23 50 10.5
ZST Bratislava 3.40 169 ePG Pb 23 49 25.3 +1.9
ZST eSG Sg 23 50 12.3 +0.8
VYHS Vyhne 3.52 149 ePN Pn 23 49 17.9 -0.3
VYHS ePG Pg 23 49 29.3 -0.3
VYHS eSG Sg 23 50 20.2 +5.0
CLZ Clausthal 3.58 277 ePn Pn 23 49 21.2 +2.3
CLZ ePg Pg 23 49 31.0 +0.3
CLZ eSg Sg 23 50 19.8 +2.7
GRF Grafenberg Arr 3.61 241 ePn Pn 23 49 20.6 +1.2
GRF ePg Pg 23 49 32.9 +1.5
GRF eSg Sg 23 50 18.0 -0.2
CONA Conrad Observa 3.61 183 ePn Pn 23 49 20.6 +1.1
comp=Z,2.1nm,0.4s,SNR=6.5
CONA Sg Sg 23 50 16.3 -1.9
comp=Z,25nm,0.4s
BSD Bornholm Skovb 3.66 349 i P Pn 23 49 20.4 +0.4
BSD i S Sn 23 50 01.7 -2.1
BSD Bornholm Skovb 3.66 349 e 23 49 20.0
baz=193,slow=14
BSD i P 23 49 20.5
BSD i S 23 50 01.7
BSD IAML 23 50 05.3
comp=Z,3.1nm,0.4s
MOA Molln 3.87 199 ePn Pn 23 49 23.8 +0.7
comp=Z,3.3nm,0.3s,SNR=11
MOA Sg Sg 23 50 26.0 -0.6
comp=Z,33nm,0.5s
STHS Stebnicka Huta 3.91 121 ePG Pg 23 49 39.3 +2.1
STHS eSG Sg 23 50 31.9 +4.1
STHS eLG Lg 23 50 37.5
KECS Kecovo 4.16 135 ePG Pg 23 49 45.0 +3.0
KECS eSG Sg 23 50 37.0 +1.1
ARSA Arzberg 4.30 185 ePn Pn 23 49 30.5 +1.5
comp=Z,2.0nm,0.3s
ARSA Sg Sg 23 50 38.3 -2.1
comp=Z,19nm,0.5s
CRVS Cervenica-Dubn 4.33 125 ePG Pg 23 49 51.7 +6.4
CRVS eSG Sg 23 50 43.5 +2.0
LUNU Lund 4.40 340 S Sn 23 50 20.1 -2.1
KOLS Kolonicke sedl 4.74 121 ePN Pn 23 49 35.0 0.0
KOLS ePG Pg 23 49 56.5 +3.4
KBA Koelnbreinsper 4.81 203 ePn Pn 23 49 37.1 +1.1
comp=Z,3.5nm,0.5s,SNR=7.4
BJUU Bjuv 4.90 339 P Pn 23 49 36.5 -0.7
BJUU S Sn 23 50 30.7 -3.8
RETA Reutte 5.33 223 i Pn Pn 23 49 43.6 +0.4
SNR=5.4
SQTA Sankt Quirin 5.37 218 Pn Pn 23 49 45.6 +1.9
SNR=7.7
VXJU Vaexsjoe 5.44 353 P Pn 23 49 45.4 +0.8
VXJU Vaexsjoe 5.44 353 P 23 49 45.4
OSKU Oskarshamn 5.67 0 P Pn 23 49 48.5 +0.8
OSKU Oskarshamn 5.67 0 P 23 49 48.5
ASPU Aespoe 5.91 3 P Pn 23 49 52.2 +1.3
ASPU Aespoe 5.91 3 P 23 49 52.2
GNOU Gnosjoe 5.93 348 P Pn 23 49 51.4 +0.2
GNOU Gnosjoe 5.93 348 P 23 49 51.4
VSTU Vaestervik 6.15 2 P Pn 23 49 55.1 +1.0

VSTU Vaestervik 6.15 2 P 23 49 55.1
DAVOX Davos/Dischmat 6.26 223 Pn Pn 23 49 56.3 +0.2
comp=Z,0.4nm,0.3s,baz=47,slow=16,SNR=5.2
DAVOX Sn Sn 23 51 06.9 -1.5
comp=Z,0.4nm,0.3s,baz=317,slow=19,SNR=2.3
DAVOX Lg Lg 23 51 43.1
comp=Z,0.4nm,0.3s,baz=345,slow=20,SNR=3.8
CDF Champ du Feu 6.49 245 ePn Pn 23 49 57.9 -1.2
CDF Champ du Feu 6.49 245 ePg Pg 23 50 23.8 -2.7
CDF eSg Sg 23 51 48.1 -2.5
comp=Z,2.0nm,0.3s
LNKU Linkoeping 6.71 357 P Pn 23 50 02.3 +0.3
LNKU Linkoeping 6.71 357 P 23 50 02.3
HINF Hinteralfeld 7.06 242 ePn Pn 23 50 05.1 -1.7
HINF Hinteralfeld 7.06 242 ePg Pg 23 50 37.2 -0.2
HINF eSg Sg 23 52 04.3 -4.4
comp=Z,7.3nm,0.6s
HAU Haudompre 7.23 245 ePn Pn 23 50 06.4 -2.8
HAU Haudompre 7.23 245 ePg Pg 23 50 35.8 -4.9
HAU eSg Sg 23 52 10.5 -3.9
comp=Z,19nm,0.7s
PAGF Fort de Pagny 7.31 250 ePn Pn 23 50 07.6 -2.7
PAGF Fort de Pagny 7.31 250 ePg Pg 23 50 37.9 -4.4
PAGF eSg Sg 23 52 13.5 -3.5
comp=Z,20nm,0.6s
MEZF Maizieres J'vi 7.73 251 ePn Pn 23 50 14.5 -1.5
MEZF eSg Sg 23 52 25.4 -5.1
comp=Z,1.6nm,0.4s
CABF La Chapelle 8.21 237 ePn Pn 23 50 21.4 -1.2
CABF La Chapelle 8.21 237 ePg Pg 23 50 57.8 -1.6
CABF eSg Sg 23 52 41.0 -4.7
comp=Z,62nm,1.2s
AKASG Malin Array Be 8.30 91 Pn Pn 23 50 22.7 -1.1
comp=Z,1.1nm,0.3s,baz=280,slow=12,SNR=8.1
AKASG Sn Sn 23 51 52.8 -5.4
comp=Z,0.8nm,0.3s,baz=268,slow=23,SNR=3.5
AKASG Lg Lg 23 52 47.4
comp=Z,0.3nm,0.3s,baz=276,slow=26,SNR=3.1
HFS Hagfors 8.73 352 Pn Pn 23 50 29.1 -0.5
comp=Z,0.2nm,0.3s,baz=162,slow=12,SNR=4.4
HFS Sn Sn 23 52 03.7 -4.8
comp=Z,0.1nm,0.3s,baz=212,slow=14,SNR=2.6
NOA NORSAR Array B 9.91 346 Pn Pn 23 50 44.9 -0.9
comp=Z,0.0nm,0.3s,baz=175,slow=14,SNR=3.1
NOA Sn Sn 23 52 29.1 -8.5
comp=Z,0.0nm,0.3s,baz=202,slow=5.1,SNR=2.8
FINES FINESS Array B 11.35 25 Pn Pn 23 51 04.3 -1.1
comp=Z,0.1nm,0.3s,baz=216,slow=9.4,SNR=6.2
FINES Sn Sn 23 53 02.9 -10
comp=Z,0.2nm,0.3s,baz=203,slow=18,SNR=3.7
EKA Eskdalemuir Ar 12.09 296 Pn Pn 23 51 14.1 -1.5
baz=105,slow=14,SNR=2.6
ARCES ARCESS Array B 18.60 10 Pn P 23 52 37.9 -2.8
comp=Z,0.3nm,0.3s,baz=195,slow=14,SNR=11
ARU Arti 25.14 62 P P 23 53 49.2 +0.6
comp=Z,0.3nm,0.3s,baz=220,slow=13,SNR=4.5
AKTO Aktyubinsk 26.16 76 P P 23 53 58.7 +0.7
comp=Z,0.5nm,0.4s,baz=279,slow=15,SNR=3.1
TORD Torodi Ar. Bea 40.02 202 P P 23 56 00.1 +1.3
comp=Z,0.2nm,0.7s,baz=3.6,slow=6.3,SNR=2.8
MKAR Makanchi Array 42.21 69 P P 23 56 18.4 +1.7
comp=Z,0.2nm,0.7s,baz=329,slow=5.4,SNR=2.7
YKA Yellowknife Ar 59.83 336 P P 23 58 29.4 +0.5
comp=Z,0.3nm,0.8s,baz=29,slow=6.7,SNR=8.0
PDAR Pinedale Array 74.92 322 P P 00 00 07.0 +1.9
comp=Z,0.2nm,0.5s,baz=61,slow=7.4,SNR=3.4
NVAR Mina Array Bea 81.94 325 P P 00 00 47.5 +3.5
comp=Z,0.2nm,0.6s,baz=80,slow=2.0,SNR=2.6

IDC 01 23:53:12.3±0.9, 8.96S×122.94E, h0km, mb4.1/6, mb1 4.2/9, mb1mx3.8/43, mbtmp4.1/9, ML4.2/3, Error ellipse: s-maj=47.0km s-min=18.6km az=77.0
NEIC 01 23:53:26.4±2.6, 9.31S±0.08×123.5E±0.1, h150km±6km, mb4.0/13, Error ellipse: s-maj=17.5km s-min=8.8km az=57.0
ISC 01 23:53:26.1±0.7, 9.30S±0.08×123.6E±0.1, h150km, n35, σ1§82/26, mb4.0/10, Timor region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SOEI Soe 0.77 126 Pn 23 53 49.8 +0.6
KNRA Kununurra 8.08 142 Pn 23 55 23.1 +2.6
KNRA Sn 23 56 52.7 +2.2
MTN Manton Dam 8.16 116 Pn Pn 23 55 25.6 +4.0
LUWI Luwuk 8.25 354 Pn Pn 23 55 19.3 -3.6
FITZ Fitzroy Crossi 8.96 168 Pn Pn 23 55 32.1 -0.2
1.4nm,0.3s,baz=344,slow=7.6,SNR=39
FITZ Sn Sn 23 57 09.3 -2.6
8.6nm,0.3s,baz=314,slow=20,SNR=17
FITZ Fitzroy Crossi 8.96 168 Sn 23 57 09.5 -2.3
JAGI Jajag, Banyuwa 9.41 274 Pn Pn 23 55 36.6 -1.7
BKB Balikpapan 10.43 320 Pn Pn 23 55 50.2 -1.6
WB0 Warramunga Arr 14.71 136 Pn P 23 56 48.7 -0.5
WRA Warramunga Arr 14.80 137 Pn P 23 56 51.0 +0.8
1.0nm,0.3s,baz=306,slow=14,SNR=6.5
WRA Sn Sn 23 59 30.3 -2.2
1.5nm,0.3s,baz=318,slow=24,SNR=6.1
WRA Warramunga Arr 14.80 137 Sn 23 59 30.6 -1.9
WRAB Tennant Creek 14.80 137 Pn P 23 56 49.2 -0.9
WR0 Warramunga Arr 14.95 136 P 23 56 52.3 +0.5
KKM Kota Kinabalu 16.94 334 P Pn 23 57 15.4 +0.9
KKM IAmb IAmb 23 57 30.4
comp=Z,7.5nm,0.9s
AS31 Alice Springs 17.34 147 P Pn 23 57 25.8 +6.7
AS31 IAmb IAmb 23 57 28.2
comp=Z,2.4nm,0.3s
ASAR Alice Springs 17.34 147 P Pn 23 57 24.3 +5.2
comp=Z,0.9nm,0.3s,baz=322,slow=12,SNR=43
ASAR S S 00 00 29.2 -2.0
comp=Z,0.6nm,0.3s,baz=321,slow=24,SNR=7.9
NWAO Narrogin (SRO) 24.25 193 P P 23 58 32.4 +3.2
comp=Z,4.9nm,0.7s,baz=8.1,slow=7.1,SNR=3.4
NWAO Narrogin (SRO) 24.25 193 P P 23 58 29.1 -0.1
BBOO Buckleboo 26.06 156 P P 23 58 47.0 +1.3
SANVU Saraoutou 42.93 103 P P 00 01 11.2 +0.8
DZM Mont Dzumac 42.97 112 P P 00 01 12.2 +1.4
DZM IAmb IAmb 00 01 13.6
comp=Z,1.0nm,0.3s
MJAR Matsushiro Arr 47.61 16 P P 00 01 48.7 +1.8
comp=Z,0.9nm,0.5s,baz=191,slow=8.3,SNR=5.3
USRK Ussuriysk Ar. 53.78 7 P P 00 02 34.9 +1.9
comp=Z,1.0nm,0.4s,baz=206,slow=8.1,SNR=5.8
ULN Ulaanbaatar 58.78 347 P P 00 03 08.5 0.0
ULN IAmb IAmb 00 03 10.9
comp=Z,1.2nm,0.7s
SONM Songino Array 58.90 347 P P 00 03 10.5 +1.2
comp=Z,1.0nm,0.6s,baz=164,slow=8.3,SNR=13
SONM Songino Array 58.90 347 IAmb IAmb 00 03 12.0
comp=Z,0.9nm,0.7s
MK31 Makanchi Array 66.89 330 P P 00 04 03.4 +1.3
MK31 IAmb IAmb 00 04 03.9
comp=Z,2.2nm,0.8s
MKAR Makanchi Array 66.89 330 P P 00 04 03.1 +1.0
comp=Z,1.8nm,0.6s,baz=137,slow=7.7,SNR=41
MKAR Makanchi Array 66.89 330 P P 00 04 02.3 +0.2
MAKZ Makanchi 67.05 330 P P 00 04 02.9 -0.2
ZAA0 Zalesovo Array 71.03 337 P P 00 04 27.4 0.0
ZAA0 IAmb IAmb 00 04 28.5
comp=Z,2.0nm,0.8s
ZALV Zalesovo Beam 71.03 337 P P 00 04 27.0 -0.5
comp=Z,3.6nm,1.1s,baz=116,slow=3.4,SNR=7.6
ZALV Zalesovo Beam 71.03 337 P P 00 04 27.9 +0.5
KURK Kurchatov 71.36 332 P P 00 04 30.3 +0.8
TORD Torodi Ar. Bea 123.02 280 PKP PKiKP 00 12 09.5 +3.6
comp=Z,0.4nm,0.8s,baz=95,slow=0.8,SNR=3.8

IDC 02 00:03:16.2±0.6, 3.98N×126.56E, h0km, mb4.2/17, mb1 4.3/18, mb1mx4.1/43, mbtmp4.3/18, ML4.0/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/40, Error ellipse: s-maj=29.0km s-min=11.9km az=76.0
NEIC 02 00:03:20.9±1.8, 3.91N±0.07×126.59E±0.08, h35km±3km, mb4.4/80, Error ellipse: s-maj=12.3km s-min=8.8km az=55.0
MAN 02 00:03:21.7, 3.61N×126.28E, h92km, mb4.9, ML3.8, MS3.8
ISC 02 00:03:22.0±0.3, 3.85N±0.04×126.49E±0.06, h45km, n144, σ1§69/145, mb4.4/49, 1C, Talaud Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DDMP Don Marcelino, 2.37 341 eP Pn 00 04 01.3 +2.9
DDMP eS Sn 00 04 32.6 +6.3
MATI Mati 3.09 356 eP Pn 00 04 12.4 +4.1
MATI eS Sn 00 04 51.0 +7.0
TNTI Ternate 3.18 164 Pn Pn 00 04 10.5 +1.0
SKMP Bagumbayan, Su 3.29 324 eP Pn 00 04 13.0 +2.0
SKMP eS Sn 00 04 52.1 +3.2
KCP Kidapawan 3.44 336 eP Pn 00 04 17.0 +3.9
CTBH Cotabato--PC H 4.03 326 eP Pn 00 04 27.2 +6.0
CTBH iS Sn 00 05 03.2 -4.0
BUKP Musuan 4.25 341 eP Pn 00 04 27.5 +3.2
BUKP eS Sn 00 05 24.6 +12
PAGZ Pagadian 5.03 322 eP Pn 00 04 37.6 +2.6
PAGZ eS Sn 00 05 31.3 -0.6
BUTP Butuan 5.16 350 eP Pn 00 04 40.9 +4.1
LUWI Luwuk 6.11 217 Pn 00 04 51.6 +1.7
SIJI Sorong 6.69 134 Pn Pn 00 04 57.6 -0.2
3.0nm,0.3s,baz=323,slow=18,SNR=4.2
SIJI Sn Sn 00 06 10.7 -2.1
2.1nm,0.3s,baz=201,slow=23,SNR=6.1
FAKI Fak Fak 8.85 139 Pn Pn 00 05 27.8 +0.4
KKM Kota Kinabalu 10.46 282 Pn Pn 00 05 52.5 +2.9
KAPI Kappang 11.08 217 LR LR 00 10 52.5
comp=Z,132nm,19.4s,baz=52,slow=41
TGY Tagaytay City 11.57 332 LR LR 00 10 39.2
comp=Z,139nm,18.8s,baz=323,slow=39
SBUM Sibu 14.31 265 Pn Pn 00 06 42.5 +0.4
SZP Santa 14.85 337 Pn Pn 00 06 49.3 +0.2
KSM Kuching 16.33 262 Pn Pn 00 07 08.6 +0.3
MTN Manton Dam 17.21 165 Pn Pn 00 07 18.1 -1.2
MTN IAmb IAmb 00 07 32.2
comp=Z,37nm,1.1s
JAGI Jajag, Banyuwa 17.35 225 Pn Pn 00 07 18.9 -2.2
JAGI IAmb IAmb 00 07 23.6
comp=Z,19nm,0.9s
KNRA Kununurra 19.53 173 P P 00 07 46.2 +0.4
KNRA IAmb IAmb 00 07 50.6
comp=Z,21nm,0.9s
TWG Pinlang 19.58 345 P 00 07 43.5 -2.9
UGM Wanagama 19.75 234 P 00 07 49.4 +1.1
YULB Yu-li 20.07 346 P P 00 07 48.0 -3.7
TPUB Ta-pu 20.15 344 P P 00 07 50.9 -1.7
TPUB IAmb IAmb 00 08 00.0
comp=Z,12nm,0.6s
SSLB Suanglung 20.53 345 P P 00 07 56.1 -0.7
NACB Ninganchiao 20.75 347 P P 00 07 58.3 -0.8
NACB IAmb IAmb 00 08 06.7
comp=Z,16nm,1.1s
YHNB Yeheng 21.28 347 P P 00 08 04.1 -0.7
YHNB IAmb IAmb 00 08 06.8
comp=Z,8.0nm,0.6s
TATO Taipei 21.55 348 P P 00 08 06.7 -0.9
CISI Cisompet, Garu 21.80 239 P P 00 08 11.6 +1.0
FITZ Fitzroy Crossi 21.82 182 P P 00 08 12.0 +1.4
comp=Z,1.8nm,0.3s,baz=6.3,slow=10,SNR=8.2
KNMB Chin-men Tao 21.93 340 P P 00 08 11.3 -0.4
QIZ Qiongzhong 22.18 314 P P 00 08 15.8 +1.2
PMBI Palembang 22.72 253 P P 00 08 21.0 +0.7
UBPT Khong Chiam 23.60 300 P P 00 08 29.6 +0.6
UBPT IAmb IAmb 00 08 31.0
comp=Z,17nm,1.1s
WB0 Warramunga Arr 24.72 162 P P 00 08 39.6 +0.3
WB0 IAmb IAmb 00 08 58.1
comp=Z,18nm,1.1s
WRAB Tennant Creek 24.86 162 P P 00 08 41.6 +1.1
WRAB IAmb IAmb 00 08 42.3
comp=Z,17nm,0.9s
WRA Warramunga Arr 24.87 162 P P 00 08 40.6 0.0
comp=Z,7.1nm,0.7s,baz=344,slow=11,SNR=20
WRA Warramunga Arr 24.87 162 P P 00 08 42.2 +1.6
WR0 Warramunga Arr 24.95 162 P P 00 08 42.0 +0.7
WR0 IAmb IAmb 00 08 51.9
comp=Z,7.9nm,0.7s
KULM Kulim 25.79 274 P P 00 08 48.8 -0.3
PSA00 Pilbara Seismi 26.09 194 P P 00 08 52.7 +1.1
PSA00 IAmb IAmb 00 08 54.6
comp=Z,14nm,0.8s
PSA00 Pilbara Seismi 26.09 194 P P 00 08 52.4 +0.8
PSA00 IAmb IAmb 00 08 55.2
comp=Z,7.7nm,0.9s
KRVT Keravat (AS076 26.77 107 LR LR 00 17 11.6
comp=Z,44nm,20.9s,baz=9.1,slow=31
AS31 Alice Springs 28.29 166 P P 00 09 12.3 +1.0
ASAR Alice Springs 28.29 166 P P 00 09 12.3 +0.9
comp=Z,0.6nm,0.4s,baz=341,slow=7.2,SNR=10
ASAR Alice Springs 28.29 166 P P 00 09 10.4 -0.9
CMAR Chiang Mai Arr 30.60 300 P P 00 09 33.9 +1.9
comp=Z,1.3nm,0.5s,baz=112,slow=7.5,SNR=10
CHTO Chiang Mai 30.75 301 P P 00 09 34.4 +1.0
ENH Enshi 30.81 330 P P 00 09 33.0 -0.7
ENH IAmb IAmb 00 09 34.7
comp=Z,6.7nm,0.7s
KSAR Wonju Array Be 33.46 2 P P 00 09 55.8 -1.1
KSRS Korea Array 33.47 2 P P 00 09 56.8 -0.1
comp=Z,0.8nm,0.6s,baz=178,slow=9.4,SNR=5.8
XAN Xi'an 34.20 334 P P 00 10 02.5 -0.9
XAN pP pP 00 10 09.8 -4.6
XAN Xi'an 34.20 334 P P 00 10 02.9 -0.6
FORT Forrest 34.46 178 P P 00 10 07.1 +1.6
BJT Baijiatuau 37.20 347 P P 00 10 28.6 -0.3
BJT IAmb IAmb 00 10 40.8
comp=Z,4.2nm,0.9s
BBOO Buckleboo 37.57 167 P P 00 10 33.1 +0.9
EIDS Eidsvold 37.59 142 P P 00 10 31.6 -0.9
EIDS IAmb IAmb 00 10 42.3
comp=Z,5.9nm,1.0s
NWAO Narrogin (SRO) 37.61 193 P P 00 10 34.7 +2.3
comp=Z,17nm,1.0s,baz=31,slow=6.9,SNR=8.9
NWAO Narrogin (SRO) 37.61 193 P P 00 10 33.8 +1.3
NWAO Narrogin (SRO) 37.61 193 P P 00 10 34.8 +2.3
NWAO IAmb IAmb 00 10 41.1
comp=Z,14nm,1.1s
STKA Stephens Creek 38.32 159 P P 00 10 40.3 +1.7
comp=Z,4.2nm,0.5s,baz=329,slow=9.2,SNR=11
STKA Stephens Creek 38.32 159 P P 00 10 38.9 +0.4
SHL Shillong 39.61 306 P P 00 10 50.3 +0.6
USA0B Ussuriysk Arra 40.48 6 P P 00 10 55.0 -1.3
USA0B IAmb IAmb 00 10 57.8
comp=Z,4.4nm,0.8s
USRK Ussuriysk Ar. 40.48 6 P P 00 10 55.5 -0.9
ARMA Armidale 41.70 147 P P 00 11 07.3 +0.6
ARMA IAmb IAmb 00 11 12.6
comp=Z,5.8nm,1.1s
LSA Lhasa 42.18 311 P P 00 11 12.1 +1.0
LSA IAmb IAmb 00 11 14.5
comp=Z,6.5nm,0.7s
GTA Gaotai 42.87 329 eP P 00 11 16.4 +0.2
GTA pP pP 00 11 21.0 -6.5
GTA sP pwP 00 11 23.6 -8.4
TAPN Taplejung 43.75 306 eP P 00 11 24.2 +0.5
comp=Z,9.8nm,0.6s
ODAN Odare 43.80 306 eP P 00 11 24.7 +0.7
comp=Z,12nm,0.6s
RAMN Ramite 44.48 305 eP P 00 11 31.0 +1.5
comp=Z,4.1nm,0.5s
TOO Toolangi 44.84 158 P P 00 11 31.3 -0.6
TOO IAmb IAmb 00 11 34.9
comp=Z,4.5nm,0.9s
JIRN Jiri 45.11 306 eP P 00 11 34.6 0.0
comp=Z,13nm,0.7s
KLR Kul'dur 45.44 5 P P 00 11 36.5 +0.1
comp=Z,1.1nm,0.4s,baz=188,slow=7.4,SNR=7.3
GUN Gumba 45.46 306 eP P 00 11 38.4 +1.0
comp=Z,7.7nm,0.4s
GKN Gorkha 46.50 306 eP P 00 11 46.4 +1.0
ULN Ulaanbaatar 46.93 342 P P 00 11 49.1 +0.7
SONM Songino Array 47.11 342 P P 00 11 49.6 -0.2
comp=Z,1.5nm,0.9s,baz=155,slow=11,SNR=14
SONM PcP PcP 00 13 22.2 +1.2
comp=Z,0.8nm,0.6s,baz=177,slow=4.5,SNR=4.8
SONM Songino Array 47.11 342 P P 00 11 49.0 -0.8
KOLN Koldanda 47.26 305 eP P 00 11 51.9 +0.6
comp=Z,9.4nm,0.5s
DANN Dangsing 47.35 306 eP P 00 11 52.6 +0.5
comp=Z,18nm,0.6s
WMQ Urumqi 52.49 325 eP P 00 12 31.8 +1.2
PETK Petropavlovsk- 55.41 22 P P 00 12 51.8 +0.1
comp=Z,1.6nm,0.5s,baz=194,slow=3.9,SNR=6.0
PETK Petropavlovsk- 55.41 22 P P 00 12 51.3 -0.4
MK31 Makanchi Array 57.32 325 P P 00 13 05.5 0.0
MK31 IAmb IAmb 00 13 06.9
comp=Z,2.4nm,0.7s
MKAR Makanchi Array 57.32 325 P P 00 13 05.5 0.0
comp=Z,2.6nm,0.4s,baz=118,slow=7.6,SNR=127
MKAR PcP PcP 00 13 60.0 +0.8
comp=Z,1.7nm,0.7s,baz=114,slow=5.2,SNR=5.8
MKAR ScP ScP 00 18 00.7 +5.1
comp=Z,0.5nm,0.9s,baz=104,slow=4.6,SNR=3.2
MKAR Makanchi Array 57.32 325 P P 00 13 05.3 -0.2
MAKZ Makanchi 57.51 325 P P 00 13 06.6 -0.2
MAKZ IAmb IAmb 00 13 08.7
comp=Z,7.0nm,1.1s
KSH Kashi 57.79 315 P P 00 13 12.4 +3.4
KSH sP pP 00 13 24.0 +3.3
KSH PP PP 00 15 26.6 +9.1
KSH S S 00 21 05.9 +0.6
KSH ScS ScS 00 22 50.1 -5.1
KDJ Kajisay 58.10 318 P P 00 13 11.5 +0.3
MA2 Magadan 58.65 14 pwP 00 13 26.6 -0.3
ZAA0 Zalesovo Array 60.38 333 P P 00 13 25.6 -0.8
ZALV Zalesovo Beam 60.38 333 P P 00 13 25.6 -0.9
comp=Z,1.8nm,0.3s,baz=130,slow=6.0,SNR=12
KBL Kabul 61.26 307 P P 00 13 33.9 +0.8
KBL IAmb IAmb 00 13 34.6
comp=Z,3.9nm,0.9s
KURK Kurchatov 61.51 328 P P 00 13 34.4 +0.2
LBZ Lake Bemerode 61.91 146 P P 00 13 37.5 +0.4
THZ Tophouse 61.94 142 P P 00 13 37.3 -0.1
KK31 Karatay Array 62.98 317 IAmb IAmb 00 13 46.6
comp=Z,2.8nm,0.8s
KKAR Karatay Array 62.98 317 P P 00 13 43.9 -0.4
KKAR Karatay Array 62.98 317 IAmb IAmb 00 13 46.6
comp=Z,2.8nm,0.8s
PLWZ Palliser 63.29 141 P P 00 13 44.1 -2.2
HRA Herat 66.67 306 P P 00 14 09.0 +0.3
BRVK Borovoye 67.16 327 P P 00 14 11.4 +0.2
BRVK IAmb IAmb 00 14 12.8
comp=Z,2.7nm,0.7s
GEYT Alibeck 70.63 309 P P 00 14 33.4 +0.2
GYA0B ALIBECK ARRAY 70.63 309 P P 00 14 32.2 -1.0
GYA0B IAmb IAmb 00 14 35.2
comp=Z,2.5nm,0.8s
MSEY Mahe Island 71.44 264 P P 00 14 38.4 -0.1
ABKAR Akbulak array 71.91 321 P P 00 14 40.5 -0.1
ABKAR Akbulak array 71.91 321 IAmb IAmb 00 14 42.9
comp=Z,1.7nm,0.9s
SOCY Socotra 72.10 281 P P 00 14 42.0 -0.5
ARU Arti 74.71 328 P P 00 14 56.6 -0.3
ARU IAmb IAmb 00 14 57.9
comp=Z,3.8nm,0.6s
RAYN Ar Rayn 80.21 293 P P 00 15 28.3 -0.2
IMAR Indian Mountai 82.34 24 P P 00 15 39.5 +0.7
SKT Skwentna 82.85 28 P P 00 15 41.1 -0.4
SKT IAmb IAmb 00 15 46.2
comp=Z,5.9nm,1.2s
BRLK Bradley Lake 82.98 30 P P 00 15 41.4 -0.9
SUA Susitna One 83.18 29 P P 00 15 42.9 -0.4
SUA IAmb IAmb 00 15 50.0
comp=Z,3.1nm,0.8s
KTH Kantishna Hill 83.27 27 P P 00 15 42.9 -0.9
KTH IAmb IAmb 00 15 55.3
comp=Z,2.9nm,1.0s
BPAW Bear Paw Mtn. 83.29 26 P P 00 15 43.4 -0.4
BPAW IAmb IAmb 00 15 45.4
comp=Z,4.3nm,1.0s
MLY Manley 83.48 25 P P 00 15 44.4 -0.4
MLY IAmb IAmb 00 15 46.9
comp=Z,4.4nm,1.0s
TRF Thorofare Moun 83.55 27 P P 00 15 44.0 -1.3
TRF IAmb IAmb 00 15 48.2
comp=Z,6.6nm,1.2s
VNDA Vanda 83.57 173 P P 00 15 45.8 +0.9
RC01 Rabbit Creek A 83.64 29 P P 00 15 45.0 -0.6
RC01 IAmb IAmb 00 15 54.5
comp=Z,4.7nm,0.8s
NEA Nenana 84.15 26 P P 00 15 46.6 -1.5
RND Reindeer 84.19 27 P P 00 15 47.3 -1.2
RND IAmb IAmb 00 15 54.9
comp=Z,2.1nm,0.9s
KNK Knik Glacier 84.27 29 P P 00 15 47.7 -1.1
SML Sawmill 84.35 28 P P 00 15 48.0 -1.3
SML IAmb IAmb 00 15 50.6
comp=Z,5.1nm,0.9s
CCB Clear Creek Bu 84.70 26 P P 00 15 49.0 -1.9
CCB IAmb IAmb 00 15 58.7
comp=Z,2.8nm,1.1s
ILAR Eielson Array 85.10 25 P P 00 15 52.6 -0.3
comp=Z,0.6nm,0.9s,baz=252,slow=5.5,SNR=7.0
RIDG Independent Ri 85.99 26 P P 00 15 55.6 -1.8
BR131 Keskin Array S 89.76 310 P P 00 16 14.7 -1.5
BR131 IAmb IAmb 00 16 18.8
comp=Z,1.7nm,0.9s
BRTR Keskin Array B 89.76 310 P P 00 16 16.2 +0.1
comp=Z,1.2nm,0.9s,baz=130,slow=3.7,SNR=6.5
BRTR Keskin Array B 89.76 310 P P 00 16 15.6 -0.5
INK Inuvik 90.14 21 P P 00 16 13.9 -3.2
ARCES ARCESS Array B 90.26 340 P P 00 16 17.5 -0.2
comp=Z,1.4nm,0.6s,baz=84,slow=6.3,SNR=16
ARCES ARCESS Array B 90.26 340 P P 00 16 13.4 -4.2
ARE0 ARCESS Array S 90.26 340 P P 00 16 12.2 -5.4
FIA1 FINESS Array S 91.61 332 P P 00 16 23.7 -0.4
FINES FINESS Array B 91.62 332 P P 00 16 24.4 +0.4
comp=Z,3.5nm,0.9s,baz=148,slow=1.8,SNR=11
FINES FINESS Array B 91.62 332 P P 00 16 23.0 -1.1
AKASG Malin Array Be 91.65 321 P P 00 16 24.1 -0.3
comp=Z,1.6nm,0.7s,baz=68,slow=4.7,SNR=8.0
BURAR Bucovina Array 94.75 318 P P 00 16 39.8 +0.8
BUR08 Bucovina Ar. S 94.76 318 P P 00 16 39.0 0.0
BUR08 IAmb IAmb 00 16 40.1
comp=Z,2.2nm,0.8s
GERES GERESS Array B 101.84 322 P Pdif 00 17 11.7 +0.8
comp=Z,0.9nm,0.9s,baz=35,slow=4.9,SNR=4.6
TORD Torodi Ar. Bea 122.65 288 PKP PKPdf 00 22 14.6 +0.7
comp=Z,0.2nm,0.4s,baz=63,slow=1.7,SNR=6.4

IDC 02 00:14:10.9±0.9, 52.12N×169.48W, h0km, mb3.9/18, mb1 4.1/20, mb1mx3.9/48, mbtmp3.9/20, ML3.7/2, MS3.0/1, Ms1 3.0/1, ms1mx2.6/44, Error ellipse: s-maj=25.5km s-min=14.6km az=176.0
AEIC 02 00:14:16.0±3.5, 53.1N±0.1×170.14W±0.09, h0km±4km, ML3.3/21, mb3.7/50(NEIC), Error ellipse: s-maj=18.2km s-min=5.2km az=159.0
NEIC 02 00:14:17.2±2.9, 52.3N±0.1×169.7W±0.1, h37km±7km, Error ellipse: s-maj=16.9km s-min=6.9km az=155.0
ISC 02 00:14:17.5±0.6, 52.25N±0.10×169.55W±0.06, h40km, n129, σ1§78/123, mb3.9/23, Fox Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NIKH Nikolski High 0.84 30 Pg Pn 00 14 32.1 -0.8
NIKH Nikolski High 0.84 30 Sn 00 14 47.0 +3.1
OKSP Okmok Steeple 1.26 37 Pn 00 14 38.4 -0.3
OKTU Okmok Mt. Tuli 1.46 38 Pn 00 14 41.7 +0.3
OKFG Magazine Ridge 1.53 40 Pn 00 14 42.5 +0.2
OKFG Sn 00 15 03.1 +2.2
MREP Makushin Rep't 2.31 46 Pn 00 14 53.6 +0.6
MSW Makushin Switc 2.36 44 Pn 00 14 54.1 +0.4
UNV Unalaska Valle 2.44 48 Pn 00 14 55.9 +1.2
UNV Unalaska Valle 2.44 48 Lg 00 15 25.0
MTBL Makushin Table 2.44 44 Pn 00 14 55.9 +1.0
KOFP Korovin Flat P 2.79 272 Pn 00 15 00.1 +0.4
AKRB Akutan Reef Bi 2.82 47 Pn 00 15 01.4 +1.4
ATKA Atka Island 2.86 271 Pn 00 14 59.5 -1.0
KOWE Korovin West 2.89 274 Pn 00 15 00.4 -0.6
AKLV Akutan Long Va 2.89 47 Pn 00 15 02.2 +1.2
AKUT Akutan 2.96 49 Pn 00 15 02.8 +0.9
GSTR Great Sitkin T 4.01 270 Pn Pn 00 15 16.2 -0.2
GSMY Great Sitkin M 4.01 270 Pn 00 15 15.8 -0.7
GSTD Great Sitkin T 4.07 270 Pn 00 15 16.9 -0.3
ADK Adak 4.42 268 Pn Pn 00 15 21.4 -0.5
KIWB Kanaga Island 4.71 268 Pn Pn 00 15 25.8 -0.2
KIMD Kanaga Island 4.77 267 Pn 00 15 26.0 -0.8
TASE Tanaga Southea 5.25 269 Pn 00 15 34.4 +0.9
SDPT Sand Point 6.21 56 Pn Pn 00 15 48.1 +1.7
CNBA Chernabura Isl 6.47 63 Pn Pn 00 15 50.3 +0.2
CHIR Chirikof Islan 8.94 61 Pn Pn 00 16 25.5 +1.5
OHAK Old Harbor 10.63 56 Pn Pn 00 16 45.8 -1.3
KDAK Kodiak Island 11.19 54 Pn Pn 00 16 52.8 -1.9
0.3nm,0.3s,baz=213,slow=4.8,SNR=8.1
KDAK Kodiak Island 11.19 54 Pn Pn 00 16 54.1 -0.6
SVW2 Sparrevohn 11.71 35 Pn Pn 00 16 59.0 -2.7
CNPM China Poot 12.57 47 Pn Pn 00 17 13.6 0.0
BRLK Bradley Lake 12.84 47 Pn Pn 00 17 17.6 +0.4
SEW Seward 13.63 47 Pn Pn 00 17 27.1 -1.0
SKT Skwentna 13.76 38 Pn Pn 00 17 29.1 -0.7
SUA Susitna One 13.77 41 Pn Pn 00 17 30.5 +0.5
RC01 Rabbit Creek A 13.98 43 Pn Pn 00 17 32.5 -0.3
GHO Glory Hole Cre 14.67 41 Pn Pn 00 17 41.8 -0.3

KNK	Knik Glacier	14.68	43	Pn	Pn	00 17 41.5	-0.7
SML	Sawmill	14.93	42	Pn	Pn	00 17 45.8	+0.3
KTH	Kantishna Hill	14.97	34	Pn	Pn	00 17 46.1	+0.1
GLI	Glacier Island	15.02	46	Pn	Pn	00 17 48.0	+1.2
HIN	Hinchinbrook I	15.10	48	Pn	Pn	00 17 46.1	-1.6
TRF	Thorofare Moun	15.12	35	Pn	Pn	00 17 47.4	-0.8
FID	Port Fidalgo	15.24	47	Pn	Pn	00 17 47.0	-2.6
BPAW	Bear Paw Mtn.	15.31	32		Pn	00 17 49.8	-0.7
SCM	Sheep Creek Mo	15.36	43		Pn	00 17 49.5	-1.6
EYAK	Cordova Ski Ar	15.50	48	Pn	Pn	00 17 51.5	-1.4
EYAK				IAmb	IAmb	00 17 58.6	
	comp=Z,3.2nm,0.8s						
RND	Reindeer	15.61	36		Pn	00 17 55.1	+0.7
RND				IAmb	IAmb	00 18 07.1	
	comp=Z,2.7nm,1.1s						
MCK	McKinley	15.77	35	Pn	Pn	00 17 53.5	-3.0
MCK				IAmb	IAmb	00 18 10.3	
	comp=Z,1.7nm,1.0s						
BWN	Browne	15.86	33	Pn	Pn	00 17 54.0	-3.6
BWN				IAmb	IAmb	00 18 10.7	
	comp=Z,6.4nm,1.2s						
IMAR	Indian Mountai	15.90	24	Pn	Pn	00 17 52.5	-5.6
RAGM	Ragged Mountai	15.94	50	Pn	Pn	00 17 56.6	-2.0
DHY	Denali Highway	15.97	39	Pn	Pn	00 17 55.5	-3.6
MLY	Manley	16.03	30		Pn	00 17 56.3	-3.5
MLY				IAmb	IAmb	00 18 13.1	
	comp=Z,5.1nm,1.1s						
HMT	Hamilton	16.12	50	Pn	Pn	00 17 59.2	-1.7
HMT				IAmb	IAmb	00 18 08.9	
	comp=Z,7.5nm,0.8s						
NEA	Nenana	16.25	33	Pn	Pn	00 17 56.1	-6.4
NEA				IAmb	IAmb	00 17 59.0	
	comp=Z,8.2nm,1.0s						
SUCK	Suckling Hills	16.26	51	Pn	Pn	00 18 01.3	-1.4
SUCK				IAmb	IAmb	00 18 08.6	
	comp=Z,13nm,1.1s						
WRH	Wood River Hil	16.52	34	Pn	Pn	00 18 02.1	-3.8
GLB	Gilahina Butte	16.71	47	Pn	Pn	00 18 06.4	-2.0
GLB				IAmb	IAmb	00 18 25.7	
	comp=Z,4.8nm,1.1s						
CCB	Clear Creek Bu	16.72	34	Pn	Pn	00 18 04.2	-4.3
VRDI	Verde Repeater	16.79	47	Pn	Pn	00 18 08.3	-1.3
VRDI				IAmb	IAmb	00 18 23.9	
	comp=Z,4.4nm,1.0s						
WAX	Waxell Ridge	16.82	50		Pn	00 18 09.4	-0.4
WAX				IAmb	IAmb	00 18 19.4	
	comp=Z,11nm,1.1s						
HDA	Harding Lake	16.88	35	Pn	Pn	00 18 08.1	-2.4
TGL	Tana Glacier	16.92	49	Pn	Pn	00 18 10.8	-0.3
TGL				IAmb	IAmb	00 18 23.6	
	comp=Z,3.6nm,0.8s						
MCARA	McCarthy VSAT	17.04	47	Pn	Pn	00 18 12.2	-0.3
MCARA				IAmb	IAmb	00 18 19.4	
	comp=Z,3.9nm,0.8s						
IL31		17.11	34	Pn	Pn	00 18 10.9	-2.4
ILAR	Eielson Array	17.11	34	P	Pn	00 18 10.7	-2.6
	comp=Z,0.1nm,0.3s,baz=230,slow=10,SNR=5.1						
ILAR	Eielson Array	17.11	34		Pn	00 18 11.5	-1.9
BALM	Baldy	17.23	49	Pn	Pn	00 18 13.4	-1.6
RIDG	Independent Ri	17.29	39	Pn	Pn	00 18 13.3	-2.3
MENT	Mentasta	17.36	42	Pn	Pn	00 18 12.2	-4.2
DOT	Dot Lake	17.55	40		Pn	00 18 17.8	-1.0
BARN	Barnard Glacie	17.56	49	Pn	Pn	00 18 18.4	-0.7
BARN				IAmb	IAmb	00 18 34.0	
	comp=Z,3.3nm,0.6s						
CTGM	Chitina Glacie	17.68	49	Pn	Pn	00 18 20.2	-0.4
CTGM				IAmb	IAmb	00 18 37.5	
	comp=Z,3.7nm,0.8s						
SCRK	Sand Creek	17.74	39		Pn	00 18 19.8	-1.5
PCA	Pinnacle	17.97	53		Pn	00 18 21.8	-2.3
PCA				IAmb	IAmb	00 18 39.8	
	comp=Z,11nm,0.9s						
FYU	Fort Yukon	18.75	31	P	P	00 18 31.1	-1.5
DHAK	Deception Hill	18.82	56	P	P	00 18 32.5	-1.1
TOLK	Toolik Lake Re	19.00	23		P	00 18 33.1	-2.3
EGAK	Eagle	19.20	38	P	Pn	00 18 38.3	-0.5
EGAK				IAmb	IAmb	00 18 52.6	
	comp=Z,2.3nm,0.8s						
PET	Petropavlovsk	19.23	285		P	00 18 33.5	-4.6
BMAR	Burnt Mountain	19.49	29	P	P	00 18 40.8	0.0
PEA0B	Petropavlovsk-	19.79	286	P	P	00 18 43.8	-0.3
PETK	Petropavlovsk-	19.79	286	P	P	00 18 44.1	0.0
	comp=Z,3.7nm,0.3s,baz=90,slow=13,SNR=72						
PETK				LR	LR	00 25 49.3	
	comp=Z,48nm,20.6s,baz=59,slow=35						
PETK	Petropavlovsk-	19.79	286	P	P	00 18 43.8	-0.3
SKAG	Skagway	20.33	56	P	Pn	00 18 52.3	+0.1
BESE	Bessie Mountai	20.51	58	P	Pn	00 18 53.3	-1.1
WHY	Whitehorse	20.70	52	P	Pn	00 18 55.5	-1.2
WHY				IAmb	IAmb	00 19 11.8	
	comp=Z,6.6nm,0.8s						
JIS	Juneau Island	20.75	59	P	P	00 18 54.1	-0.3
EPYK	Eagle Plains	21.56	36	P	P	00 19 03.6	+0.4
EPYK				IAmb	IAmb	00 19 16.4	
	comp=Z,7.7nm,0.9s						
SEY	Seymchan	22.67	313	P	P	00 19 14.8	-0.2
	comp=Z,2.7nm,0.9s,baz=72,slow=12,SNR=7.3						
MA2	Magadan	23.11	304	P	P	00 19 21.1	+1.5
	comp=Z,3.3nm,0.8s,baz=73,slow=14,SNR=5.4						
INK	Inuvik	23.51	33	P	P	00 19 22.2	-1.1
	comp=Z,1.4nm,0.5s,baz=246,slow=6.2,SNR=18						
INK	Inuvik	23.51	33	P	P	00 19 22.5	-0.8
INK				IAmb	IAmb	00 19 37.3	
	comp=Z,2.5nm,1.1s						
BBB	Bella Bella	25.14	74	P	P	00 19 40.2	+1.7
C36M	Paulatuk	27.09	34	P	P	00 19 57.3	+1.4
C36M				IAmb	IAmb	00 20 14.7	
	comp=Z,1.9nm,1.1s						
YKA	Yellowknife Ar	30.40	49	P	P	00 20 26.1	+0.6
	comp=Z,0.6nm,0.6s,baz=271,slow=8.2,SNR=11						
TIXI	Tiksi	32.78	329	P	P	00 20 46.8	+0.6
	comp=Z,0.7nm,0.5s,baz=116,slow=12,SNR=3.5						
JTMT	Jette	35.08	75	P	P	00 21 06.4	-0.3
JTMT				IAmb	IAmb	00 21 24.2	
	comp=Z,0.6nm,0.6s						
WVOR	Wild Horse Val	35.20	86	P	P	00 21 09.6	+1.8
WVOR				IAmb	IAmb	00 21 11.0	
	comp=Z,1.6nm,0.9s						
H11S1	WAKE ISLAND Hy	38.48	218	T	T	01 02 48.8	
	baz=23,slow=76,SNR=15						
H11S2	WAKE ISLAND Hy	38.49	218	T	T	01 02 50.0	
	baz=23,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	38.50	218	T	T	01 02 50.9	
	baz=23,slow=76,SNR=6.7						
PD31	Pinedale Array	40.54	79	P	P	00 21 52.8	-0.1
PD31				IAmb	IAmb	00 22 08.7	
	comp=Z,0.8nm,0.8s						
PDAR	Pinedale Array	40.54	79	P	P	00 21 52.4	-0.5
	comp=Z,0.3nm,0.6s,baz=287,slow=4.6,SNR=3.1						
PDAR	Pinedale Array	40.54	79	P	P	00 21 52.6	-0.2
FCC	Fort Churchill	41.10	50	P	P	00 21 57.9	+0.9
KSRS	Korea Array	45.31	277	P	P	00 22 31.1	-0.1
	comp=Z,2.1nm,0.7s,baz=53,slow=7.3,SNR=12						
DAG	Danmarks Havn	49.92	8	*i* P	P	00 23 06.5	0.0
	comp=Z,1.3nm,0.4s						
SUMG	Summit	50.93	17	*i* P	P	00 23 15.7	+1.1
SONM	Songino Array	51.26	301	P	P	00 23 17.7	+0.5
	comp=Z,1.4nm,1.0s,baz=64,slow=6.1,SNR=10.0						
SONM	Songino Array	51.26	301	P	P	00 23 17.3	+0.1
TX31	Lajitas Ar. Si	52.86	89	P	P	00 23 35.3	+6.0
TX32	Lajitas Array	52.86	89	P	P	00 23 34.9	+5.6
TXAR	Lajitas Array	52.86	89	P	P	00 23 28.4	-0.9
	comp=Z,0.8nm,0.8s,baz=300,slow=6.4,SNR=9.5						
TXAR	Lajitas Array	52.86	89	P	P	00 23 28.6	-0.6
ZALV	Zalesovo Beam	57.44	318	P	P	00 24 01.6	-0.1
	comp=Z,0.7nm,0.5s,baz=38,slow=4.9,SNR=5.2						
ARCES	ARCESS Array B	58.03	354	P	P	00 24 05.9	+0.2
	comp=Z,2.4nm,0.8s,baz=14,slow=5.4,SNR=3.7						
XAN	Xi'an	59.02	287	P	P	00 24 13.0	-0.2
XAN				pP	pP	00 24 18.7	-5.5
WMQ	Urumqi	63.52	308	*e*P	P	00 24 45.4	+1.9
MKAR	Makanchi Array	63.80	313	P	P	00 24 44.5	-0.8
	comp=Z,0.4nm,0.4s,baz=52,slow=6.7,SNR=23						
FINES	FINESS Array B	65.97	352	P	P	00 24 59.1	+0.1
	comp=Z,2.5nm,0.7s,baz=17,slow=8.8,SNR=16						
NOA	NORSAR Array B	67.06	360	P	P	00 25 06.4	+0.3
	comp=Z,0.7nm,0.7s,baz=358,slow=5.6,SNR=3.4						
KSH	Kashi	72.37	312	P	P	00 25 43.1	+3.9
KSH				PP	PP	00 28 24.0	+4.2
AKASG	Malin Array Be	76.20	348	P	P	00 26 00.6	-0.6
	comp=Z,0.6nm,0.5s,baz=18,slow=5.8,SNR=3.7						
CMAR	Chiang Mai Arr	76.53	283	P	P	00 26 03.6	+0.1
	comp=Z,0.6nm,0.4s,baz=24,slow=6.9,SNR=4.1						
GERES	GERESS Array B	79.24	358	P	P	00 26 18.1	-0.2
	comp=Z,0.4nm,0.6s,baz=32,slow=10,SNR=3.7						
ASAR	Alice Springs	90.23	230	P	P	00 27 12.0	-1.7
	comp=Z,2.4nm,0.8s,baz=27,slow=4.8,SNR=22						
ASAR				pP	pP	00 27 23.6	-1.5
	comp=Z,2.1nm,0.7s,baz=35,slow=5.0,SNR=9.9						
ASAR	Alice Springs	90.23	230	P	P	00 27 12.0	-1.7

*NEIC **02** 00:17:57.5±1.9, 4°.89S±0°.09×154°.01E±0°.03, h109^{km}±8^{km}, mb4.3/29, Error ellipse: s-maj=13.4km s-min=4.4km az=190.0*
*IDC **02** 00:17:59.1±5.0, 4°.84S×153°.75E, h106^{km}±33^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.4/31, mbtmp3.9/7, Error ellipse: s-maj=49.8km s-min=17.9km az=94.0*
ISC 02 00:17:57.3±0.6, **4°.87S**±0°.07×**153°.95E**±0°.07, **h105**^{km}, **n43**, σ0^{s}97/43, **mb4.1**/17, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.90	291	Pn	Pn	00 18 30.3	+1.4
KRVT	Keravat (AS076	2.00	286	P	Pn	00 18 29.2	-0.8
	18nm,0.3s,baz=180,slow=6.2,SNR=4.7						
KRVT				S	Sn	00 18 52.5	-2.6
	32nm,0.3s,baz=352,slow=23,SNR=9.8						
HNR	Honiara	7.48	128	Pn	Pn	00 19 43.5	-0.2
PMG	Port Moresby	8.10	236	P	Pn	00 19 53.6	+1.4
	5.5nm,0.3s,baz=46,slow=7.1,SNR=15						
PMG				S	Sn	00 21 22.9	+0.7
	1.1nm,0.3s,baz=56,slow=21,SNR=2.8						
PMG	Port Moresby	8.10	236		Pn	00 19 53.7	+1.5
PATS	Pohnpei	12.42	21	Pn	Pn	00 20 50.9	+0.3
SANVU	Saraoutou	16.74	130		P	00 21 46.6	+0.6
SANVU				IAmb	IAmb	00 21 47.6	
	comp=Z,7.8nm,0.9s						
CTAO	Charters Tower	16.88	206		P	00 21 48.2	+0.6
CTAO				IAmb	IAmb	00 21 49.5	
	comp=Z,15nm,0.8s						
NOUC	Port Laguerre	20.89	146	P	P	00 22 29.7	-1.6
NOUC				IAmb	IAmb	00 22 46.5	
	comp=Z,7.6nm,0.9s						
DZM	Mont Dzumac	20.95	146	P	P	00 22 31.4	-0.6
FAKI	Fak Fak	21.73	274	P	P	00 22 39.7	-0.7
FAKI				IAmb	IAmb	00 22 54.1	
	comp=Z,7.0nm,0.9s						
WR0	Warramunga Arr	24.12	230	P	P	00 23 04.2	+0.7
WB0	Warramunga Arr	24.12	230	P	P	00 23 03.8	+0.2
WB0				IAmb	IAmb	00 23 05.3	
	comp=Z,6.3nm,0.9s						
WRAB	Tennant Creek	24.25	230	P	P	00 23 05.2	+0.5
WRA	Warramunga Arr	24.27	230	P	P	00 23 05.8	+1.0
	comp=Z,2.2nm,0.7s,baz=54,slow=9.7,SNR=5.9						
ARMA	Armidale	25.50	185	P	P	00 23 15.2	-0.9
ASAR	Alice Springs	26.88	224	P	P	00 23 28.8	+0.3
	comp=Z,0.5nm,0.4s,baz=54,slow=8.9,SNR=14						
LHI	Lord Howe Isla	26.94	170	P	P	00 23 26.4	-2.5
KNRA	Kununurra	26.97	245	P	P	00 23 28.7	-0.6
STKA	Stephens Creek	29.25	202	P	P	00 23 50.3	+0.8
	comp=Z,1.3nm,0.5s,baz=34,slow=13,SNR=3.7						
STKA	Stephens Creek	29.25	202	P	P	00 23 49.5	-0.1
FITZ	Fitzroy Crossi	30.63	242	P	P	00 24 01.5	-0.4
	comp=Z,2.3nm,0.7s,baz=50,slow=6.4,SNR=5.7						
FITZ	Fitzroy Crossi	30.63	242	IAmb	IAmb	00 24 09.2	
	comp=Z,5.0nm,1.1s						
BBOO	Buckleboo	32.43	209	P	P	00 24 16.5	-0.9
BBOO				IAmb	IAmb	00 24 29.9	
	comp=Z,4.0nm,1.0s						
TOO	Toolangi	33.45	192	P	P	00 24 26.1	-0.2
TOO				IAmb	IAmb	00 24 43.8	
	comp=Z,2.8nm,1.1s						
FORT	Forrest	35.46	220	P	P	00 24 43.8	0.0
FORT				IAmb	IAmb	00 25 00.7	
	comp=Z,14nm,1.1s						
PSAC2	Pilbara Seismi	36.93	240	P	P	00 24 56.1	-0.3
PSA00	Pilbara Seismi	36.98	240	P	P	00 24 56.1	-0.7
PSA00				IAmb	IAmb	00 24 57.2	
	comp=Z,14nm,1.1s						
PSAB3	Pilbara Seismi	36.98	240	P	P	00 24 57.6	+0.7
KHZ	Kahutara	41.25	158	P	P	00 25 32.2	+0.2
DCZ	Deep Cove	42.04	166	P	P	00 25 39.1	+0.7
DCZ				IAmb	IAmb	00 25 42.1	
	comp=Z,13nm,1.2s						
MQZ	McQueen's Vall	42.05	160	P	P	00 25 37.7	-0.8
MQZ				IAmb	IAmb	00 25 44.9	
	comp=Z,19nm,1.2s						
MLZ	Mavora Lakes	42.19	165	P	P	00 25 40.0	+0.3
MLZ				IAmb	IAmb	00 25 49.1	
	comp=Z,5.0nm,1.0s						
ODZ	Otahua Downs	42.60	162	P	P	00 25 42.3	-0.7
MORW	Morawa	43.19	232	P	P	00 25 47.7	-0.4
NWAO	Narrogin (SRO)	44.16	226	P	P	00 25 55.0	-0.7
NWAO				IAmb	IAmb	00 26 09.1	
	comp=Z,6.8nm,1.0s						
USRK	Ussuriysk Ar.	52.69	340	P	P	00 27 00.8	-0.2
USA0B	Ussuriysk Arra	52.70	340	P	P	00 27 00.5	-0.5
USA0B				IAmb	IAmb	00 27 01.2	
	comp=Z,4.4nm,0.8s						
SONM	Songino Array	67.00	327	P	P	00 28 40.6	+1.5
	comp=Z,0.5nm,0.7s,baz=142,slow=5.8,SNR=3.6						
SONM	Songino Array	67.00	327	IAmb	IAmb	00 28 43.1	
	comp=Z,0.5nm,0.8s						
MKAR	Makanchi Array	81.13	319	P	P	00 30 02.5	+1.3
	comp=Z,0.2nm,0.4s,baz=96,slow=8.0,SNR=8.6						
SAO	San Andreas Ge	88.57	53	P	P	00 30 38.8	+0.1
TORD	Torodi Ar. Bea	151.41	289	PKPbc	PKPbc	00 37 40.6	+0.6
	comp=Z,0.4nm,0.5s,baz=28,slow=2.8,SNR=6.5						

*HEL **02** 00:27:20.2, 67°.87N×20°.34E, h0^{km}, ML1.7, Explosion*
UPP 02 00:27:18.6±0.0, **67°.83N**×**20°.20E**, **h0**^{km}, **ML2.2**, **Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	23	P	Pg	00 27 21.4	+0.2
KUA				S	Sg	00 27 23.4	+0.5
KUA	Kurravaara	0.14	23	*i* P	Pg	00 27 21.4	+0.2
KUA				*i* S	Sg	00 27 23.4	+0.5
RATU	Laukkuluspa	0.23	269	P	Pg	00 27 23.2	+0.3
RATU	Laukkuluspa	0.23	269	*i* P	Pg	00 27 23.2	+0.3
LANU	Lannavaara	0.71	71	P	Pg	00 27 32.0	-0.2
LANU	Lannavaara	0.71	71	*e*P	Pg	00 27 31.9	-0.3
DUNU	Dundret	0.72	168	P	Pg	00 27 32.2	-0.3
DUNU	Dundret	0.72	168	*i* P	Pg	00 27 32.2	-0.3
MASU	Masugnsbyn	0.78	118	P	Pg	00 27 33.5	-0.1
MASU	Masugnsbyn	0.78	118	*i* P	Pg	00 27 33.5	-0.1
KIF	Kilpisjarvi	1.20	10	*e*P	Pg	00 27 41.6	0.0
KIF	Kilpisjarvi	1.20	10	*e*P	Pn	00 27 42.9	+0.3
PAJU	Pajala	1.39	124	P	Pg	00 27 43.9	-1.2
PAJU	Pajala	1.39	124	*e*P	Pg	00 27 43.9	-1.2
HEF	Hetta	1.42	64	*e*P	Pn	00 27 44.4	-1.2
HEF	Hetta	1.42	64	*e*P	Pn	00 27 44.6	-1.0
ERTU	Ertsjaerv	1.50	148	P	Pn	00 27 46.2	-0.4
ERTU	Ertsjaerv	1.50	148	*e*P	Pn	00 27 46.2	-0.4
HARU	Harads	1.70	169	P	Pn	00 27 49.6	+0.1
HARU	Harads	1.70	169	*e*P	Pn	00 27 49.6	+0.1
KALU	Kalix	2.34	146	*e*P	Pn	00 27 58.9	+0.7
TOF	Tornio	2.39	135	*e*P	Pn	00 28 00.2	+1.3
TOF				*e*SG	Sb	00 28 33.4	+0.9
TOF				MSG		00 28 36.0	
	comp=Z,3.8nm,0.2s						
SGF	Sodankyl	2.45	96	*e*P	Pn	00 28 00.8	+1.1
SGF				*e*		00 28 39.9	
RNF	Rovaniemi	2.57	116	*e*P	Pn	00 28 02.9	+1.4
KEV	Kevo	3.14	49	*e*PB	Pb	00 28 12.9	-2.3
KEV				MSG		00 28 47.9	
	comp=Z,1.2nm,0.2s						

UPP 02 00:27:24.2±0.0, **67°.84N**×**20°.19E**, **h0**^{km}, **ML2.0**, **Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	25	P	Pg	00 27 26.9	+0.2
KUA				S	Sg	00 27 28.8	+0.4
RATU	Laukkuluspa	0.23	267	P	Pg	00 27 28.7	+0.2
DUNU	Dundret	0.73	168	P	Pg	00 27 38.0	-0.2
MASU	Masugnsbyn	0.79	118	P	Pg	00 27 39.0	-0.3
PAJU	Pajala	1.39	124	P	Pg	00 27 49.4	-1.4
ERTU	Ertsjaerv	1.51	148	P	Pn	00 27 52.0	-0.4
HARU	Harads	1.71	169	P	Pn	00 27 55.4	+0.2

*IDC **02** 00:28:18.3±1.3, 60°.46S×50°.98W, h0^{km}, mb4.1/4, mb1 4.1/4, mb1mx3.8/23, mbtmp4.1/4, MS3.4/4, Ms1 3.4/4, ms1mx3.1/26, Error ellipse: s-maj=56.4km s-min=30.8km az=92.0*
*NEIC **02** 00:28:19.9±1.7, 60°.68S±0°.09×50°.8W±0°.2, h10^{km}±1^{km}, mb4.4/22, Error ellipse: s-maj=18.0km s-min=14.0km az=313.0*
ISC 02 00:28:19.7±0.5, **60°.67S**±0°.08×**50°.92W**±0°.08, **h10**^{km}, **n38**, σ1^{s}24/33, **mb4.4**/13, **MS3.1**/3, **Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	Palmer Station	7.30	230	Pn	Pn	00 30 02.9	-3.2
HOPE	Hope Point	10.05	57	Pn	Pn	00 30 42.6	-1.4
USHA	Ushuaia	11.01	294	LR	LR	00 34 29.1	
	comp=Z,178nm,20.8s,baz=157,slow=34						
GO10	Punta Arenas	13.28	296	Pn	Pn	00 31 27.8	-0.3
GO09	Cerro Castillo	15.17	299	Pn	Pn	00 31 55.4	+1.6
GO09				IAmb	IAmb	00 32 13.8	
	comp=Z,13nm,1.1s						
SNAA	Sanae	21.60	140	P	P	00 33 11.1	+1.7
	comp=Z,4.5nm,0.9s,baz=287,slow=6.6,SNR=10						
SNAA				LR	LR	00 40 44.4	
	comp=Z,74nm,18.8s,baz=208,slow=34						
SNAA	Sanae	21.60	140	P	P	00 33 08.4	-0.9
PLCA	Paso Flores	23.34	320	LR	LR	00 41 32.1	
	comp=Z,69nm,19.6s,baz=161,slow=34						
PLCA	Paso Flores	23.34	320	P	P	00 33 28.5	+0.6
QSPA	South Pole Qui	29.57	180	P	P	00 34 27.2	+2.9
	comp=Z,4.7nm,0.7s,baz=178,slow=2.6,SNR=16						
QSPA	South Pole Qui	29.57	180	P	P	00 34 26.0	+1.7
QSPA				IAmb	IAmb	00 34 28.0	
	comp=Z,7.5nm,0.8s						
PB10	IPOC Station P	39.56	331	P	P	00 35 51.1	+0.4
PB10				IAmb	IAmb	00 35 59.1	
	comp=Z,19nm,0.9s						
GO01	Chusmiza	42.96	334	P	P	00 36 18.5	-0.8
MAW	Mawson	43.29	149	LR	LR	00 53 14.0	
	comp=Z,110nm,19.6s,baz=239,slow=34						
MNMC	Minye Minye	43.57	334	P	P	00 36 24.9	+1.0
MNMC				IAmb	IAmb	00 36 33.1	
	comp=Z,5.5nm,0.8s						
BDFB	Brasilia	45.01	4	P	P	00 36 35.5	+0.2
BDFB				IAmb	IAmb	00 36 47.0	
	comp=Z,4.3nm,1.2s						
SAML	Samuel	52.42	345	P	P	00 37 32.8	+0.6
SAML				IAmb	IAmb	00 37 38.2	
	comp=Z,3.2nm,1.1s						
LBTB	Lobatse	61.96	91		P	00 38 39.3	-0.4
LBTB				IAmb	IAmb	00 38 52.7	
	comp=Z,3.2nm,0.9s						
TSUM	Tsumeb	62.93	81		P	00 38 45.8	-0.4
TSUM				IAmb	IAmb	00 38 59.7	
	comp=Z,2.8nm,1.0s						
WKZ	Wanaka	69.95	209	P	P	00 39 31.6	+0.9
MQZ	McQueen's Vall	70.08	212	P	P	00 39 31.9	+0.4
LTZ	Lake Taylor	71.05	212	P	P	00 39 38.3	+0.8
LSZ	Lusaka	71.48	88	P	P	00 39 40.4	-0.2
BHW	Baring Head	71.62	215	P	P	00 39 40.9	0.0
THZ	Tophouse	71.83	213	P	P	00 39 44.4	+2.1
THZ				IAmb	IAmb	00 39 46.1	
	comp=Z,3.4nm,0.9s						
QRZ	Quartz Range	72.81	213	P	P	00 39 48.7	+0.7
BKZ	Black Stump Fm	73.23	217	P	P	00 39 52.6	+2.0
DBIC	Dimbokro	76.18	47	P	P	00 40 07.7	-0.1
DBIC				IAmb	IAmb	00 40 14.8	
	comp=Z,2.6nm,1.0s						
TOO	Toolangi	81.19	193	P	P	00 40 34.7	-0.6
TOO				IAmb	IAmb	00 40 38.5	
	comp=Z,3.4nm,0.9s						
TOA0	Torodi Ar. Sit	84.58	51	P	P	00 40 53.2	+0.3
TORD	Torodi Ar. Bea	84.58	51	P	P	00 40 53.4	+0.5
	comp=Z,1.0nm,0.7s,baz=210,slow=4.3,SNR=8.0						
TORD	Torodi Ar. Bea	84.58	51	IAmb	IAmb	00 40 53.9	
	comp=Z,1.3nm,0.9s						
ASAR	Alice Springs	95.88	184	P	P	00 41 46.6	+0.1
	comp=Z,0.2nm,0.6s,baz=162,slow=4.1,SNR=2.9						
YKA	Yellowknife Ar	132.03	326	PKP	PKPdf	00 47 32.0	+0.3
	comp=Z,0.3nm,0.6s,baz=149,slow=2.0,SNR=4.5						
CMAR	Chiang Mai Arr	132.69	140	PKP	PKPdf	00 47 34.4	0.0
	comp=Z,0.8nm,0.3s,baz=168,slow=1.8,SNR=3.2						
ILAR	Eielson Array	143.93	314	PKP	PKPdf	00 47 52.5	-1.1
	comp=Z,0.7nm,0.7s,baz=130,slow=1.3,SNR=10						
ILAR	Eielson Array	143.93	314		PKPbc	00 47 52.1	+0.7
MKAR	Makanchi Array	149.77	96	PKPbc	PKPbc	00 48 07.7	-1.0
	comp=Z,0.6nm,0.7s,baz=228,slow=3.8,SNR=7.9						

*AEIC **02** 00:33:41.6±2.2, 53°.0N±0°.1×170°.13W±0°.05, h1^{km}±7^{km}, ML3.0/15, Error ellipse: s-maj=14.9km s-min=4.3km az=171.0*
*NEIC **02** 00:33:42.1±1.8, 53°.21N±0°.09×170°.23W±0°.05, h1^{km}±5^{km}, Error ellipse: s-maj=12.5km s-min=4.3km az=174.0*
*IDC **02** 00:33:44.1±4.7, 52°.10N×169°.50W, h61^{km}±42^{km}, mb3.3/10, mb1 3.6/13, mb1mx3.4/35, mbtmp3.7/13, ML3.5/3, Error ellipse: s-maj=33.1km s-min=15.1km az=0.0*
ISC 02 00:33:39.5±1.0, **52°.7N**±0°.2×**170°.30W**±0°.06, **h10**^{km}, **n56**, σ1^{s}95/47, **mb3.5**/10, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.93	69		Pg	00 33 57.9	+0.4
NIKH					Sg	00 34 10.7	+1.1
OKSP	Okmok Steeple	1.36	63		Pn	00 34 04.1	-0.5
OKFG	Magazine Ridge	1.63	61		Pn	00 34 07.9	-0.4
OKFG					Sn	00 34 28.1	-1.2
KOFP	Korovin Flat P	2.36	262		Pg	00 34 24.8	+0.2
KOKL	Mount Kliuchef	2.41	264		Pg	00 34 25.3	-0.4
ATKA	Atka Island	2.43	261		Pg	00 34 24.8	-1.2
ATKA	Atka Island	2.43	261		Sg	00 34 58.1	+0.6
MREP	Makushin Rep't	2.43	60		Pn	00 34 19.1	-0.2
MSW	Makushin Switc	2.46	58		Pn	00 34 19.6	-0.1
MTBL	Makushin Table	2.54	57		Pn	00 34 20.6	-0.3
UNV	Unalaska Valle	2.57	61		Pn	00 34 20.3	-1.0
UNV					Sn	00 34 51.2	-1.4
AKUT	Akutan	3.09	59	Pn	Pn	00 34 29.0	+0.7
GSTR	Great Sitkin T	3.58	263	Pn	Pb	00 34 40.6	-2.2
GSTD	Great Sitkin T	3.64	263		Pb	00 34 42.2	-1.7
ADK	Adak	4.00	261	Pn	Pb	00 34 46.2	-3.8
KIWB	Kanaga Island	4.29	262	Pn	Pb	00 34 49.1	-5.8
SDPT	Sand Point	6.39	61	Pn	Pn	00 35 13.1	-0.5
CNBA	Chernabura Isl	6.71	67	Pn	Pn	00 35 17.6	-0.5
CHIR	Chirikof Islan	9.16	64	Pn	Pn	00 35 51.2	-0.4
SMY	Shemya	9.48	277	Pn	Pn	00 36 00.2	+4.2
SII	Sitkinak Islan	10.13	61	Pn	Pn	00 36 04.3	-0.6
OHAK	Old Harbor	10.79	58	Pn	Pn	00 36 11.1	-2.8
GAMB	Gambell	11.18	357	Pn	Pn	00 36 14.4	-4.8
KDAK	Kodiak Island	11.33	56	P	Pn	00 36 23.1	+1.8
	0.3nm,0.3s,baz=250,slow=12,SNR=4.4						
KDAK	Kodiak Island	11.33	56		Pn	00 36 19.0	-2.3
SVW2	Sparrevohn	11.65	38	Pn	Pn	00 36 22.5	-3.2
ANM	Nome	12.22	10	Pn	Pn	00 36 29.4	-4.0
RSO	Redoubt South	12.41	44	Pn	Pn	00 36 32.7	-3.6
CNPM	China Poot	12.64	49	Pn	Pn	00 36 38.4	-0.8
BRLK	Bradley Lake	12.91	49	Pn	Pn	00 36 41.9	-0.9
SEW	Seward	13.71	49	Pn	Pn	00 36 51.0	-2.7
SKT	Skwentna	13.74	40	Pn	Pn	00 36 53.1	-1.0
SUA	Susitna One	13.77	42	Pn	Pn	00 36 52.9	-1.8
RC01	Rabbit Creek A	14.01	45	Pn	Pn	00 36 57.0	-0.8
PPLA	Purkeypile	14.04	36	Pn	Pn	00 36 55.9	-2.5
CAST	Castle Rocks	14.41	34	Pn	Pn	00 37 00.2	-3.1
PMR	Palmer	14.51	44	Pn	Pn	00 37 01.0	-3.6
GHO	Glory Hole Cre	14.68	43	Pn	Pn	00 37 05.4	-1.7
KNK	Knik Glacier	14.71	45	Pn	Pn	00 37 05.4	-2.0
HIN	Hinchinbrook I	15.18	50	Pn	Pn	00 37 12.3	-1.5
FID	Port Fidalgo	15.31	49	Pn	Pn	00 37 14.5	-1.0
ILAR	Eielson Array	17.05	36	P	Pn	00 37 39.3	+1.6
	0.1nm,0.3s,baz=215,slow=9.7,SNR=6.9						
PETK	Petropavlovsk-	19.24	284	P	Pn	00 38 09.6	+4.9
	2.1nm,0.3s,baz=91,slow=13,SNR=40						
SEY	Seymchan	22.06	312	P	P	00 38 40.4	+6.3
	0.9nm,0.7s,baz=91,slow=12,SNR=4.7						
INK	Inuvik	23.43	34	P	P	00 38 48.4	0.0
	0.9nm,0.5s,baz=219,slow=4.9,SNR=7.0						
YKA	Yellowknife Ar	30.48	49	P	P	00 39 51.9	-0.2
	0.2nm,0.5s,baz=270,slow=8.0,SNR=5.6						
H11S1	WAKE ISLAND Hy	38.52	217	T	T	01 22 12.0	
	baz=23,slow=76,SNR=8.1						
H11S2	WAKE ISLAND Hy	38.54	217	T	T	01 22 14.2	
	baz=23,slow=76,SNR=4.1						
H11S3	WAKE ISLAND Hy	38.54	217	T	T	01 22 12.4	
	baz=23,slow=76,SNR=2.9						

PDAR	Pinedale Array	40.91	79	P	P	00 41 17.3	-4.6
	0.1nm,0.4s,baz=308,slow=3.0,SNR=2.6						
KSRS	Korea Array	44.81	276	P	P	00 41 56.5	+3.1
	1.3nm,0.8s,baz=54,slow=7.5,SNR=5.5						
SONM	Songino Array	50.67	300	P	P	00 42 42.6	+3.7
	0.4nm,0.7s,baz=47,slow=7.6,SNR=4.2						
TXAR	Lajitas Array	53.31	88	P	P	00 42 52.3	-6.4
	0.2nm,0.7s,baz=297,slow=6.0,SNR=3.3						
MKAR	Makanchi Array	63.20	313	P	P	00 44 10.1	+2.5
	0.2nm,0.4s,baz=51,slow=7.0,SNR=12						
FINES	FINESS Array B	65.51	351	P	P	00 44 24.5	+2.1
	5.9nm,1.1s,baz=353,slow=7.7,SNR=8.4						
ASAR	Alice Springs	90.14	229	P	P	00 46 37.6	-2.1
	1.2nm,0.8s,baz=26,slow=5.0,SNR=12						

THE 02 00:49:35.8, 38°.15N×20°.36E, h5km±1km, ML2.7/3, Error ellipse: s-maj=1.2km s-min=0.6km az=27.0
ATH 02 00:49:36.1, 38°.17N×20°.38E, h6km±3km, ML2.8/3, Error ellipse: s-maj=3.3km s-min=1.4km az=260.0
ISC 02 00:49:36.2±2.1, 38°.16N±0°.04×20°.38E±0°.06, h5km±8km, n17, σ0§44/30, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	12	P	Pg	00 49 37.0	-0.2
CHV1				S	Sg	00 49 37.7	-0.3
KEF3	Kipouria, Keph	0.05	332	P	Pg	00 49 37.5	0.0
KEF3				S	Sg	00 49 38.5	0.0
KEF2	Argostoli. Kep	0.09	87	P	Pg	00 49 38.2	0.0
KEF2				S	Sg	00 49 39.7	+0.3
ARG2	Argostoli	0.09	79	P	Pg	00 49 38.2	+0.1
ARG2				S	Sg	00 49 40.1	+0.6
KEF4	Livadi, Kephal	0.10	22	P	Pg	00 49 38.5	+0.1
KEF4				S	Sg	00 49 40.2	+0.3
KEF1	Kardakata, Kep	0.14	33	P	Pg	00 49 38.8	-0.2
KEF1				S	Sg	00 49 40.7	-0.2
VLS	Valsamata	0.17	85	P	Pg	00 49 39.4	-0.2
VLS				S	Sg	00 49 42.0	+0.2
	6μm,0.3s						
VLS	Valsamata	0.17	85	P	Pg	00 49 39.2	-0.4
VLS				S	Sg	00 49 41.6	-0.2
VLS				AML	AML	00 49 42.4	
	comp=N,15285μm,0.3s						
VLS				AML	AML	00 49 42.4	
	comp=E,8246μm,0.2s						
VSK1	VASILIKIADES	0.29	31	P	Pg	00 49 41.7	-0.1
VSK1				S	Sg	00 49 46.3	+0.7
KFL	Anninata	0.33	99	P	Pg	00 49 42.6	0.0
KFL				S	Sg	00 49 47.6	+0.7
	comp=E,4μm,0.4s						
FSK	Fiskardo	0.33	26	P	Pg	00 49 42.6	0.0
FSK				S	Sg	00 49 47.5	+0.5
	comp=E,850nm,0.3s						
FSK	Fiskardo	0.33	26	P	Pg	00 49 42.7	0.0
FSK				S	Sg	00 49 47.1	0.0
FSK				AML	AML	00 49 48.7	
	comp=N,1517μm,0.3s						
FSK				AML	AML	00 49 49.4	
	comp=E,1851μm,0.3s						
VLMS	Volimes, Zakyn	0.36	141	P	Pg	00 49 43.3	+0.1
EVGI	Lefkada island	0.51	26	P	Pg	00 49 45.7	-0.3
EVGI				S	Sg	00 49 53.7	+1.1
EVGI	Lefkada island	0.51	26	P	Pg	00 49 45.5	-0.5
MGNA	Meganis	0.59	33	P	Pg	00 49 46.8	-0.7
RLS	Riolos of Patr	0.87	97	P	Pg	00 49 51.9	-0.9

NEIC 02 00:56:12.4±1.8, 11°.42S±0°.07×117°.31E±0°.07, h34km±5km, mb4.5/39, Error ellipse: s-maj=10.9km s-min=8.2km az=225.0
IDC 02 00:56:13.1±0.7, 11°.19S×117°.31E, h28km±3km, mb4.1/14, mb1 4.2/16, mb1mx3.9/47, mbtmp4.3/16, ML4.0/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/32, Error ellipse: s-maj=25.6km s-min=15.1km az=63.0
ISC 02 00:56:12.5±0.4, 11°.38S±0°.05×117°.35E±0°.06, h34km, n88, σ1§27/90, mb4.4/26, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	4.27	312		Pn	00 57 14.8	-0.4
KAPI	Kappang	6.75	21	Pn	Pn	00 57 52.2	+2.9
	16nm,0.3s,baz=205,slow=6.6,SNR=52						
KAPI				Sn	Sn	00 59 03.2	-1.9
	8.1nm,0.3s,baz=352,slow=19.9,SNR=12						
KAPI				LR	LR	01 01 03.7	
	comp=Z,125nm,19.1s,baz=295,slow=44						
KAPI	Kappang	6.75	21		Pn	00 57 51.8	+2.5
SOEI	Soe	6.99	77		Pn	00 57 52.8	+0.1
UGM	Wanagama	7.55	296	Pn	Pn	00 58 00.1	-0.2
CISI	Cisompet, Garu	10.14	291	Pn	Pn	00 58 35.3	-0.6
PSA00	Pilbara Seismi	10.42	167	Pn	Pn	00 58 36.7	-2.9
FITZ	Fitzroy Crossi	10.44	131	Pn	Pn	00 58 39.9	0.0
	1.0nm,0.3s,baz=322,slow=10.0,SNR=22						
FITZ				Sn	Sn	01 00 28.2	-7.5
	1.3nm,0.3s,baz=45,slow=21,SNR=5.6						
GIRL	Giralia	11.59	194	Pn	Pn	00 58 53.0	-2.6
KNRA	Kununurra	11.89	112	Pn	Pn	00 58 59.7	-0.2
MTN	Manton Dam	13.56	98	Pn	Pn	00 59 22.1	-0.5
SBUM	Sibu	14.65	339	P	Pn	00 59 38.8	+1.3
MNAI	Manna	15.86	295	Pn	Pn	00 59 51.5	-1.9
FAKI	Fak Fak	17.00	61	Pn	Pn	01 00 04.6	-3.2
FAKI				IAmb	IAmb	01 00 10.3	
	comp=Z,32nm,1.0s						
SIJI	Sorong	17.32	54	P	Pn	01 00 10.4	-1.4
	comp=Z,1.6nm,0.3s,baz=201,slow=5.2,SNR=4.3						
KKM	Kota Kinabalu	17.34	356	Pn	Pn	01 00 11.6	-0.6
MORW	Morawa	17.64	184	P	Pn	01 00 13.1	-2.7
MORW				IAmb	IAmb	01 00 15.8	
	comp=Z,18nm,0.6s						
WB0	Warramunga Arr	18.41	119	P	P	01 00 25.4	+0.4
WRA	Warramunga Arr	18.43	120	P	P	01 00 26.4	+1.2
	comp=Z,0.4nm,0.3s,baz=282,slow=12,SNR=5.7						
WR0	Warramunga Arr	18.61	119	P		01 00 27.6	+0.4
AS31	Alice Springs	19.94	130	P	P	01 00 42.6	+0.8
ASAR	Alice Springs	19.94	130	P	P	01 00 43.4	+1.6
	comp=Z,2.5nm,0.8s,baz=301,slow=9.8,SNR=29						
NWAO	Narrogin (SRO)	21.45	180	P	P	01 01 01.3	+3.3
	comp=Z,8.6nm,0.5s,baz=14,slow=13,SNR=11						
NWAO	Narrogin (SRO)	21.45	180	P	P	01 00 58.9	+0.9
NWAO				IAmb	IAmb	01 01 09.0	
	comp=Z,14nm,0.8s						
NWAO	Narrogin (SRO)	21.45	180	P	P	01 00 58.8	+0.8
NWAO				IAmb	IAmb	01 01 09.0	
	comp=Z,18nm,0.8s						
FORT	Forrest	21.71	154	P	P	01 01 01.2	+0.4
FORT				IAmb	IAmb	01 01 19.8	
	comp=Z,18nm,0.8s						
IPM	Ipoh	22.62	313	P	P	01 01 10.8	0.0
IPM				IAmb	IAmb	01 01 14.2	
	comp=Z,6.9nm,0.6s						
RPSI	Rantau Prapat	23.05	306	P	P	01 01 17.9	+2.8
PSI	Prapat	23.11	306	P	P	01 01 17.9	+2.0
	comp=Z,5.3nm,0.3s,baz=101,slow=9.5,SNR=5.2						
GSI	Gunungsitoli	23.34	301	P	P	01 01 17.9	-0.1
GSI				IAmb	IAmb	01 01 26.6	
	comp=Z,7.5nm,0.6s						
KULM	Kulim	23.45	314	P	P	01 01 16.2	-3.0
COEN	Coen	25.33	99	P	P	01 01 37.0	+0.5
COEN				IAmb	IAmb	01 01 42.0	
	comp=Z,13nm,1.1s						
LHMI	Lhok Sumawe	26.16	308	P	P	01 01 43.8	-0.2
BBOO	Buckleboo	27.40	144	P	P	01 01 55.6	+0.6
CMAR	Chiang Mai Arr	34.76	328	P	P	01 02 59.9	-0.1
	comp=Z,1.3nm,0.7s,baz=159,slow=6.8,SNR=8.1						
CMAR				pP	pP	01 03 08.0	+0.1
	comp=Z,1.9nm,0.8s,baz=160,slow=7.2,SNR=4.6						
HNR	Honiara	41.92	91	P	P	01 04 00.4	+0.1
SHL	Shillong	44.31	326	P	P	01 04 18.7	-0.9
ODAN	Odare	47.86	323	eP	P	01 04 47.5	-0.2
	comp=Z,23nm,0.7s						
LSA	Lhasa	48.01	329	P	P	01 04 49.9	+0.8
LSA				IAmb	IAmb	01 04 50.5	
	comp=Z,6.0nm,0.7s						
TAPN	Taplejung	48.04	324	eP	P	01 04 49.3	+0.2
	comp=Z,26nm,0.7s						
RAMN	Ramite	48.40	322	eP	P	01 04 52.1	+0.3
	comp=Z,21nm,0.5s						
JIRN	Jiri	49.17	323	eP	P	01 04 57.8	-0.1
	comp=Z,87nm,0.6s						
GUN	Gumba	49.54	323	eP	P	01 05 00.7	0.0
	comp=Z,56nm,0.6s						
KSAR	Wonju Array Be	49.56	11	P	P	01 04 57.7	-2.5
PKI	Pulchoki	49.57	322	eP	P	01 05 00.1	-0.8
	comp=Z,17nm,0.7s						
PKIN	Phulchoki	49.58	322	eP	P	01 05 00.1	-0.8
	comp=Z,10nm,0.5s						
DMN	Daman	49.78	322	eP	P	01 05 02.2	-0.2
	comp=Z,23nm,0.7s						
KKN	Kakani	49.81	322	eP	P	01 05 02.5	-0.1
	comp=Z,19nm,0.7s						
GKN	Gorkha	50.35	322	eP	P	01 05 06.2	-0.4
	comp=Z,18nm,0.4s						
KOLN	Koldanda	50.83	321	eP	P	01 05 09.9	-0.4
	comp=Z,22nm,0.7s						
DANN	Dangsing	51.14	321	eP	P	01 05 12.2	-0.5
	comp=Z,54nm,0.6s						
GTA	Gaotai	53.10	343	eP	P	01 05 27.1	+0.2
GTA				pP	pP	01 05 31.5	-3.6
GTA				sP	sP	01 05 34.1	-4.5
USRK	Ussuriysk Ar.	56.89	13	P	P	01 05 54.3	+0.3
	comp=Z,1.1nm,0.6s,baz=178,slow=4.3,SNR=4.4						
SONM	Songino Array	59.75	351	P	P	01 06 13.7	-0.4
	comp=Z,0.9nm,0.5s,baz=167,slow=7.8,SNR=12						
SONM				pP	pP	01 06 22.7	+0.2
	comp=Z,1.6nm,0.7s,baz=168,slow=8.1,SNR=9.3						
SONM	Songino Array	59.75	351	P	P	01 06 14.0	-0.1
KSH	Kashi	63.58	325	P	P	01 06 46.0	+5.9
KSH				pP	PP	01 08 33.9	-26
KSH				S	S	01 14 15.0	-57
KSH				sS	sS	01 15 25.9	-0.1
KBL	Kabul	64.67	317	P	P	01 06 46.8	-0.7
KBL				IAmb	IAmb	01 07 03.6	
	comp=Z,4.9nm,0.8s						
MK31	Makanchi Array	65.85	334	P	P	01 06 54.5	-0.1
MK31				IAmb	IAmb	01 07 10.9	
	comp=Z,4.9nm,0.9s						
MKAR	Makanchi Array	65.85	334	P	P	01 06 54.6	-0.1
	comp=Z,5.6nm,0.5s,baz=150,slow=5.4,SNR=130						
MKAR				pP	pP	01 07 04.0	+0.9
	comp=Z,1.8nm,0.4s,baz=146,slow=7.7,SNR=9.4						
MAKZ	Makanchi	65.99	334	P	P	01 06 56.0	+0.4
MAKZ				IAmb	IAmb	01 07 11.7	
	comp=Z,1.9nm,0.7s						
ARSB	Arslanbob	66.48	325	IAmb	IAmb	01 07 06.5	
	comp=Z,4.5nm,0.8s						
AAK	Ala-Archa	66.53	327	P	P	01 06 59.8	+0.5
	comp=Z,1.5nm,0.7s,baz=145,slow=7.6,SNR=5.8						
AAK	Ala-Archa	66.53	327	IAmb	IAmb	01 07 08.3	
	comp=Z,2.8nm,0.8s						
BTK	Batken	66.91	323	P	P	01 07 02.1	+0.5
BTK				IAmb	IAmb	01 07 20.0	
	comp=Z,2.9nm,0.5s						
SOCY	Socotra	67.12	288	P	P	01 07 02.0	-1.4
KURBB	Kurchatov Arra	70.39	335	P	P	01 07 22.8	-0.2
	comp=Z,2.8nm,0.6s,baz=146,slow=5.6,SNR=29						
KURBB				pP	pP	01 07 32.3	+0.8
	comp=Z,1.2nm,0.5s,baz=143,slow=5.3,SNR=5.2						
KURK	Kurchatov	70.42	335	P	P	01 07 22.8	-0.4
KURK	Kurchatov	70.42	335	IAmb	IAmb	01 07 40.1	
	comp=Z,2.9nm,0.8s						
ZALV	Zalesovo Beam	70.69	340	P	P	01 07 23.8	-1.0
	comp=Z,6.9nm,0.6s,baz=151,slow=5.0,SNR=39						
ZALV				pP	pP	01 07 33.1	-0.2
	comp=Z,3.6nm,0.6s,baz=150,slow=5.2,SNR=6.8						
ZALV	Zalesovo Beam	70.69	340	P	P	01 07 24.1	-0.6
KNTN	Kanton	70.77	89	P	P	01 07 25.3	-0.8
SBA	Scott Base	70.93	170	P	P	01 07 25.2	-0.8
PEA0B	Petropavlovsk-	72.89	24	P	P	01 07 39.2	+1.2
PETK	Petropavlovsk-	72.89	24	P	P	01 07 39.8	+1.7
	comp=Z,2.1nm,0.6s,baz=218,slow=3.2,SNR=7.5						
PETK				pP	sP	01 07 48.6	-1.5
	comp=Z,4.0nm,0.6s,baz=216,slow=4.4,SNR=3.7						
PETK	Petropavlovsk-	72.89	24	P	P	01 07 39.5	+1.4
GEYT	Alibeck	73.93	315	P	P	01 07 45.2	+0.7
	comp=Z,0.6nm,0.5s,baz=160,slow=4.7,SNR=5.0						
GYA0B	ALIBECK ARRAY	73.93	315	P	P	01 07 44.6	0.0
RAYN	Ar Rayn	78.30	297	P	P	01 08 09.6	-0.2
ABKAR	Akbulak array	78.58	326	P	P	01 08 10.6	0.0
ABKAR	Akbulak array	78.58	326	IAmb	IAmb	01 08 27.6	
	comp=Z,3.1nm,0.9s						
QSPA	South Pole Qui	78.63	180	P	P	01 08 11.8	+0.9
SEY	Seymchan	78.87	16	P	P	01 08 12.0	+0.1
	comp=Z,0.7nm,0.4s,baz=354,slow=22,SNR=6.3						
AKTO	Aktyubinsk	80.26	326	P	P	01 08 20.3	+0.5
	comp=Z,1.4nm,0.6s,baz=107,slow=6.9,SNR=5.5						
SNAA	Sanae	88.28	196	P	P	01 09 02.1	+1.8
	comp=Z,2.4nm,0.5s,baz=150,slow=3.7						
SNAA	Sanae	88.28	196	P	P	01 09 00.7	+0.4
SNAA				IAmb	IAmb	01 09 03.8	
	comp=Z,2.8nm,0.7s						
YKA	Yellowknife Ar	117.01	24	PKP	PKiKP	01 14 54.3	+0.8
	comp=Z,0.5nm,0.6s,baz=307,slow=2.1,SNR=10						
NVAR	Mina Array Bea	123.77	51	PKP	PKiKP	01 15 10.0	+2.2
	comp=Z,0.6nm,0.7s,baz=255,slow=1.4,SNR=5.9						
LPAZ	La Paz	151.99	169	PKPbc	PKiKP	01 16 08.5	+2.2
	comp=Z,2.0nm,0.6s,baz=8.5,slow=2.8,SNR=4.0						

IDC 02 00:56:23.9±4.8, 11°.25S×117°.17E, h0km, mb4.3/8, mb1 4.3/8, mb1mx3.9/47, mbtmp4.3/8, Error ellipse: s-maj=120.7km s-min=46.1km az=3.0
ISC 02 00:56:30.7±4.5, 11°.1S±0°.8×117°.2E±0°.3, h41km, n8, σ0§69/8, mb4.3/8, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	34.45	328	P	P	01 03 15.1	+0.4
	2.1nm,0.6s,baz=156,slow=6.9,SNR=7.8						
SONM	Songino Array	59.46	352	P	P	01 06 29.1	-0.4
	2.1nm,0.8s,baz=169,slow=8.6,SNR=7.9						
MKAR	Makanchi Array	65.54	334	P	P	01 07 10.1	+0.1
	5.3nm,0.7s,baz=144,slow=7.9,SNR=17						
ZALV	Zalesovo Beam	70.39	340	P	P	01 07 39.6	-0.6
	4.3nm,0.5s,baz=149,slow=4.3,SNR=5.8						
PETK	Petropavlovsk-	72.72	24	P	P	01 07 55.0	+0.7
	5.8nm,0.6s,baz=213,slow=3.8,SNR=11						
GEYT	Alibeck	73.63	315	P	P	01 08 00.8	+0.6
	1.4nm,0.9s,baz=190,slow=6.9,SNR=4.0						
SEY	Seymchan	78.66	16	P	P	01 08 28.1	-0.1
	1.5nm,0.8s,baz=237,slow=5.7,SNR=7.2						
ARU	Arti	82.83	331	P	P	01 08 49.7	-0.8
	0.5nm,0.7s,baz=326,slow=7.6,SNR=4.2						

IDC 02 00:58:33.0±13.0, 38°.48N×20°.62E, h0km, mb4.0/4, mb1 3.9/5, mb1mx3.4/54, mbtmp3.8/5, ML3.3/1, Error ellipse: s-maj=256.1km s-min=31.6km az=35.0
ATH 02 00:58:33.0, 38°.21N×20°.39E, h13km±1km, ML3.2/7, Error ellipse: s-maj=2.3km s-min=1.0km az=256.0
BEO 02 00:58:32.4±1.0, 38°.09N×20°.28E, h10km, ML3.4/4
THE 02 00:58:33.2, 38°.20N×20°.40E, h12km, ML3.3/5, Error ellipse: s-maj=0.9km s-min=0.4km az=234.0
NEIC 02 00:58:33.2±2.1, 38°.18N±0°.06×20°.15E±0°.07, h10km±2km, Error ellipse: s-maj=10.8km s-min=7.9km az=209.0
ISC 02 00:58:32.6±0.8, 38°.19N±0°.03×20°.35E±0°.04, h14km±4km, n88, σ1§24/114, mb4.0/7, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.02	354	P	Pg	00 58 35.4	+0.4
KEF3				S	Sg	00 58 36.7	-0.1
CHV1	Chavriata, Kef	0.03	93	P	Pg	00 58 35.3	+0.3
CHV1				S	Sg	00 58 37.0	+0.3
KEF4	Livadi, Kephal	0.09	38	P	Pg	00 58 35.7	0.0
KEF4				S	Sg	00 58 37.2	-0.5
ARG2	Argostoli	0.11	93	P	Pg	00 58 35.7	-0.1
ARG2				S	Sg	00 58 37.6	-0.3
KEF2	Argostoli. Kep	0.11	100	P	Pg	00 58 35.9	+0.1
KEF2				S	Sg	00 58 37.3	-0.7
KEF1	Kardakata, Kep	0.13	45	P	Pg	00 58 35.9	-0.2
KEF1				S	Sg	00 58 37.5	-1.0
VLS	Valsamata	0.19	92	P	Pg	00 58 36.7	-0.2
VLS				S	Sg	00 58 38.9	-1.0
	20μm,0.3s						
VLS	Valsamata	0.19	92	P	Pg	00 58 36.7	-0.2
VLS				S	Sg	00 58 39.1	-0.9
VLS				AML	AML	00 58 39.6	
	comp=N,45654μm,0.3s						
VLS				AML	AML	00 58 39.6	
	comp=E,16316μm,0.2s						
VSK1	VASILIKIADES	0.28	37	P	Pg	00 58 38.4	-0.1
VSK1				S	Sg	00 58 42.5	0.0
FSK	Fiskardo	0.32	31	P	Pg	00 58 39.4	+0.2
KFL	Anninata	0.35	102	P	Pg	00 58 39.6	-0.1
KFL				S	Sg	00 58 44.5	-0.1
	comp=E,7μm,0.4s						
KFL	Anninata	0.35	102	P	Pg	00 58 39.6	-0.1
KFL				S	Sg	00 58 44.3	-0.3
KFL				AML	AML	00 58 45.1	
	comp=N,12645μm,0.5s						
KFL				AML	AML	00 58 46.0	
	comp=E,14266μm,0.3s						
VLMS	Volimes, Zakyn	0.39	141	P	Pg	00 58 40.8	+0.3
VLMS				S	Sb	00 58 46.9	-0.3
VLMS				AML	AML	00 58 53.6	
	comp=E,7067μm,0.6s						
VLMS				AML	AML	00 58 58.3	
	comp=N,9778μm,0.7s						
EVGI	Lefkada island	0.50	29	P	Pg	00 58 42.2	-0.2
EVGI				S	Sg	00 58 49.5	+0.4
EVGI	Lefkada island	0.50	29	P	Pg	00 58 42.2	-0.2
EVGI				S	Sg	00 58 48.3	-0.8
MGNA	Meganis	0.58	36	P	Pg	00 58 43.6	-0.5
MGNA				S	Sg	00 58 51.7	-0.1
MGNA				AML	AML	00 58 54.3	
	comp=N,4002μm,0.2s						
MGNA				AML	AML	00 58 55.2	
	comp=E,4133μm,0.4s						
LKD2	Lefkada island	0.65	22	P	Pg	00 58 44.9	-0.3
LKD2	Lefkada island	0.65	22	P	Pg	00 58 45.0	-0.3
LKD2				S	Sg	00 58 52.6	-1.3
LKD2				AML	AML	00 59 02.5	
	comp=E,3322μm,0.4s						
LKD2				AML	AML	00 59 03.7	
	comp=N,2914μm,0.4s						
AST1	Astakos	0.68	58	P	Pg	00 58 45.5	-0.4
AST1				S	Sb	00 58 55.4	-0.1
TSLK	Tsoukalades, L	0.68	20	P	Pg	00 58 45.6	-0.3
TSLK				S	Sg	00 58 55.0	+0.1
	comp=N,2μm,0.5s						
TSLK	Tsoukalades, L	0.68	20	P	Pg	00 58 45.6	-0.3
TSLK				S	Sg	00 58 54.8	-0.2
TSLK				AML	AML	00 59 02.1	
	comp=E,5684μm,0.5s						
TSLK				AML	AML	00 59 02.6	
	comp=N,4210μm,0.5s						
PDO	Prodromos	0.77	57	P	Pg	00 58 47.1	-0.5
PDO				S	Sb	00 58 57.9	-0.3
	comp=N,3μm,0.4s						
PDO	Prodromos	0.77	57	P	Pg	00 58 46.6	-1.0
PDO				S	Sb	00 58 57.8	-0.5
RLS	Riolos of Patr	0.89	98	P	Pg	00 58 49.2	-0.6
RLS	Riolos of Patr	0.89	98	P	Pg	00 58 49.1	-0.7
PVO	Paravola	1.02	65	P	Pg	00 58 51.7	-0.5
PVO				S	Sb	00 59 05.5	+0.2
	comp=N,2μm,0.6s						
PVO	Paravola	1.02	65	P	Pg	00 58 51.8	-0.5
DRO	Drossia	1.10	102	P	Pg	00 58 53.0	-0.7
DRO	Drossia	1.10	102	P	Pg	00 58 53.1	-0.7
EFP	Efpalio	1.25	78	P	Pn	00 58 54.7	-0.9
EFP	Efpalio	1.25	78	P	Pn	00 58 56.6	0.0
AMT	Artemida-Makis	1.26	121	P	Pn	00 58 56.3	+0.5
LAKA	Lakka	1.28	87	P	Pn	00 58 55.7	-0.4
ANX	Ano Chora	1.30	71	P	Pn	00 58 56.6	+0.2
ANX	Ano Chora	1.30	71	P	Pn	00 58 56.4	0.0
ITM	Ithomi	1.60	128		Pg	00 59 04.0	+0.6
AGG	Agios Georgios	1.76	61		Pg	00 59 06.3	-0.1
SCTE	Santa Cesarea	2.39	323	Pn	Pn	00 59 11.8	+0.5
LIT	Litokhoron	2.54	40	Pn	Pb	00 59 16.9	-1.0
FNA	Florina	2.71	17	ePn	Pn	00 59 18.2	+2.3
FNA	Florina	2.71	17	Pn	Pn	00 59 18.2	+2.3
TIP	Timpagrande	2.98	291	Pn	Pn	00 59 18.0	-1.5
TIR	Tirane	3.18	353	ePn	Pn	00 59 24.3	+2.1
TIR				eSn	Sn	01 00 02.9	+3.0
TIR	Tirane	3.18	353	Pn	Pn	00 59 23.7	+1.5
CEL	Celeste	3.51	273	Pn	Pn	00 59 26.0	-0.8
SRS	Serrai	3.85	39	ePn	Pn	00 59 32.0	+0.6
ACER	Acerenza	4.29	309	Pn	Pn	00 59 37.3	-0.2
PDG	Podgorica	4.32	349	ePn	Pn	00 59 39.3	+1.4
PDG				eSn	Sn	01 00 28.5	+0.5
PDG	Podgorica	4.32	349	Pn	Pn	00 59 39.0	+1.2
SANT	Santorini	4.46	112	Pn	Pn	00 59 42.3	+2.5
BOSS	Bosilegrad	4.60	20	ePn	Pn	00 59 43.2	+1.4
IDI	Anoyia	4.65	127	Pn	Pn	00 59 47.8	+5.3
	comp=N,0.2nm,0.3s,baz=326,slow=18,SNR=3.7						
IDI				Sn	Sn	01 00 38.8	+2.5
	comp=N,0.7nm,0.3s,baz=152,slow=22,SNR=8.6						
BARS	Barje	4.76	13	ePn	Pn	00 59 45.0	+1.1
TREB	Trebinje	4.78	342	ePn	Pn	00 59 44.5	+0.4
TREB				eSn	Sn	01 00 39.5	+0.2
VTS	Vitosha	4.95	26	ePn	Pn	00 59 48.3	+1.7
VTS				eSn	Sn	01 00 43.6	0.0
VTS	Vitosha	4.95	26	Pn	Pn	00 59 48.1	+1.6
SGRT	San Giovanni R	5.02	317	Pn	Pn	00 59 46.7	-0.9
SJES	Sjenica	5.08	357	ePn	Pn	00 59 50.2	+1.8
ALN	Alexandroupoli	5.17	57	Pn	Pn	00 59 51.9	+2.4
PAOL	Paolisi	5.29	304	Pn	Pn	00 59 53.3	+2.0
IVAS	Ivanjica	5.39	358	ePn	Pn	00 59 52.8	+0.2
CORL	Corleone	5.57	269	Pn	Pn	00 59 53.1	-2.0
CLTB	Caltabellotta	5.68	266	Pn	Pn	00 59 55.8	-0.8
DIVS	Divibare	5.91	357	ePn	Pn	01 00 00.0	+0.2
INTR	Introdacqua	6.25	310		Pn	01 00 07.7	+3.3
AQU	L'Aquila	6.75	310	Pn	Pn	01 00 08.6	-2.7
BLY	Banja Luka	6.98	341	Pn	Pn	01 00 14.7	+0.4
NRCA	Norcia	7.21	312	Pn	Pn	01 00 20.2	+2.7
MURB	Monte Urbino	7.81	313	Pn	Pn	01 00 28.9	+3.1
TIRR	Tirgusor	8.72	41	Pn	Pn	01 00 40.9	+2.7
TRI	Trieste	8.97	329	Pn	Pn	01 00 42.6	+0.9
SOKA	Soboth	9.35	337	ePn	Pn	01 00 46.8	-0.2
	comp=N,3.7nm,0.5s						
OBKA	Obir	9.36	335	ePn	Pn	01 00 49.6	+2.5
	comp=N,1.5nm,0.3s						
MSSA	Maissana	10.20	310	Pn	Pn	01 00 58.3	-0.3
MOA	Molln	10.63	337	ePn	Pn	01 01 05.6	+1.1
	comp=N,0.9nm,0.3s						
GERES	GERESS Array B	11.69	338	Pn	Pn	01 01 19.3	+0.3
	comp=N,0.1nm,0.3s,baz=157,slow=13,SNR=3.4						
GERES	GERESS Array B	11.69	338	Pn	Pn	01 01 19.2	+0.2
KHC	Kasperske Hory	11.98	338	Pn	Pn	01 01 22.3	-0.7
SENIN	Lac Senin/Sane	12.64	314	Pn	Pn	01 01 31.7	-0.5
FINES	FINESS Array B	23.56	7	P	P	01 03 41.6	-0.7
	comp=N,5.2nm,1.1s,baz=193,slow=7.4,SNR=4.4						
NC405	NORSAR Array S	23.58	350	P	P	01 03 43.0	+0.5
NC405				IAmb	IAmb	01 03 45.2	
	comp=Z,6.2nm,0.8s						
NB201	NORSAR Array S	23.58	349	P	P	01 03 37.7	-4.9
NB201				IAmb		01 03 40.7	
	comp=Z,9.2nm,0.9s						
ARCES	ARCESS Array B	31.53	3	P	P	01 04 54.4	+0.5
	comp=Z,1.6nm,0.9s,baz=185,slow=12,SNR=5.4						
KK31	Karatay Array	37.92	66	P	P	01 05 50.2	+0.8
KKAR	Karatay Array	37.92	66	P	P	01 05 50.6	+1.3
KKAR				IAmb	IAmb	01 05 59.2	
	comp=Z,1.1nm,0.9s						
KBS	Kingsbay	41.00	358	P	P	01 06 13.8	-0.8
MKAR	Makanchi Array	45.41	58	P	P	01 06 50.2	-0.5
	comp=Z,2.5nm,0.4s,baz=281,slow=7.4,SNR=47						
ZALV	Zalesovo Beam	45.79	48	P	P	01 06 53.2	-0.3
	comp=Z,0.6nm,0.4s,baz=284,slow=9.0,SNR=6.1						

ATH 02 01:04:53.5, 38°.20N×20°.40E, h12km±1km, ML2.8/7, Error ellipse: s-maj=2.0km s-min=0.9km az=252.0
THE 02 01:04:54.1, 38°.22N×20°.42E, h8km±1km, ML2.8/7, Error ellipse: s-maj=1.3km s-min=0.4km az=243.0
ISC 02 01:04:53.7±1.0, 38°.20N±0°.02×20°.41E±0°.04, h12km±5km, n33, σ0§40/55, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	232	P	Pg	01 04 55.7	0.0
CHV1				S	Sg	01 04 57.0	-0.2
KEF3	Kipouria, Keph	0.05	273	P	Pg	01 04 55.7	-0.2
KEF3				S	Sg	01 04 57.6	+0.1
KEF4	Livadi, Kephal	0.06	11	P	Pg	01 04 56.1	+0.1
KEF4				S	Sg	01 04 58.0	+0.3
ARG2	Argostoli	0.07	110	P	Pg	01 04 56.0	0.0
ARG2				S	Sg	01 04 57.7	0.0
KEF2	Argostoli. Kep	0.07	120	P	Pg	01 04 56.1	0.0
KEF2				S	Sg	01 04 57.7	-0.2
KEF1	Kardakata, Kep	0.09	32	P	Pg	01 04 56.2	-0.1
KEF1				S	Sg	01 04 58.1	-0.2
VLS	Valsamata	0.14	99	P	Pg	01 04 56.9	-0.2
VLS				S	Sg	01 04 59.2	-0.3
	9μm,0.2s						
VLS	Valsamata	0.14	99	P	Pg	01 04 56.9	-0.2
VLS				S	Sg	01 04 59.5	0.0
VLS				AML	AML	01 04 59.7	

comp=N,24803μm,0.3s
VLS AML AML 01 04 59.8
comp=E,11431μm,0.1s
VSK1 VASILIKIADES 0.24 30 P **Pg 01 04 58.7 0.0**
VSK1 S **Sg 01 05 01.8 -0.3**
FSK Fiskardo 0.28 25 P **Pg 01 04 59.4 -0.1**
FSK S **Sg 01 05 04.2 +0.8**
comp=E,6μm,0.3s
FSK Fiskardo 0.28 25 P **Pg 01 04 59.6 +0.1**
FSK S **Sg 01 05 04.3 +0.8**
KFL Anninata 0.31 107 P **Pg 01 04 59.9 -0.1**
KFL S **Sg 01 05 04.9 +0.7**
comp=E,4μm,0.4s
KFL Anninata 0.31 107 P **Pg 01 04 59.9 -0.1**
KFL S **Sg 01 05 04.8 +0.6**
VLMS Volimes, Zakyn 0.38 148 P **Pg 01 05 01.1 -0.1**
VLMS S **Sg 01 05 07.3 +1.0**
VLMS AML AML 01 05 08.5
comp=E,5203μm,0.1s
VLMS AML AML 01 05 18.5
comp=N,6044μm,0.6s
EVGI Lefkada island 0.46 25 P **Pg 01 05 02.6 -0.2**
EVGI S **Sg 01 05 09.8 +0.8**
EVGI Lefkada island 0.46 25 P **Pg 01 05 02.6 -0.2**
EVGI S **Sg 01 05 09.7 +0.8**
MGNA Meganis 0.55 33 P **Pg 01 05 04.0 -0.3**
MGNA AML AML 01 05 12.8
comp=N,1678μm,0.2s
MGNA AML AML 01 05 13.0
comp=E,1338μm,0.1s
LKD2 Lefkada island 0.62 18 P **Pg 01 05 05.2 -0.5**
LKD2 S **Sg 01 05 14.0 +0.1**
comp=E,460nm,0.7s
LKD2 Lefkada island 0.62 18 P **Pg 01 05 05.2 -0.5**
KRI1 kERI 0.63 149 P **Pb 01 05 06.6 0.0**
KRI1 S **Sb 01 05 15.6 +0.3**
TSLK Tsoukalades, L 0.65 17 P **Pg 01 05 06.0 -0.3**
TSLK S **Sg 01 05 14.9 -0.1**
TSLK Tsoukalades, L 0.65 17 P **Pg 01 05 06.1 -0.3**
PDO Prodromos 0.73 57 P **Pg 01 05 07.4 -0.3**
PDO S **Sb 01 05 18.2 0.0**
comp=E,1μm,0.6s
PDO Prodromos 0.73 57 P **Pg 01 05 07.6 -0.1**
PDO AML AML 01 05 19.4
comp=E,1567μm,0.4s
PDO AML AML 01 05 24.3
comp=N,1581μm,0.8s
RLS Riolos of Patr 0.85 99 P **Pg 01 05 09.7 -0.3**
RLS S **Sg 01 05 21.5 +0.5**
comp=N,238nm,0.4s
RLS Riolos of Patr 0.85 99 P **Pg 01 05 09.4 -0.6**
PVO Paravola 0.97 64 P **Pg 01 05 12.1 -0.2**
PVO S **Sn 01 05 26.3 -0.6**
comp=N,870nm,0.8s
PVO Paravola 0.97 64 P **Pg 01 05 12.2 -0.2**
DRO Drossia 1.06 103 P **Pg 01 05 13.3 -0.7**
DRO AML AML 01 05 39.5
comp=E,821μm,0.4s
DRO AML AML 01 05 45.3
comp=N,877μm,0.5s
EFP Efpalio 1.20 79 P **Pb 01 05 16.5 +0.1**
EFP AML AML 01 05 44.7
comp=N,570μm,1.1s
EFP AML AML 01 05 45.2
comp=E,535μm,0.8s
ANX Ano Chora 1.25 71 P **Pb 01 05 17.5 +0.2**
ANX AML AML 01 05 44.3
comp=N,950μm,0.5s
ANX AML AML 01 05 46.8
comp=E,802μm,0.6s
SERG Sergoula 1.31 80 P **Pb 01 05 18.6 +0.2**
KLV Kalavryta, Ach 1.38 96 P **Pn 01 05 18.9 0.0**

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*VAO **02** 01:05:43.1±0.8, 37°.50S×72°.21W, h10km, mb5.0*
*SJA **02** 01:05:44.7±0.9, 37°.80S×72°.71W, h93km±10km, ML4.1, MW4.0*
*GUC **02** 01:05:47.1±0.6, 37°.86S×72°.62W, h60km, ML4.7*
*NEIC **02** 01:05:47.6±1.3, 37°.73S±0°.06×72°.4W±0°.2, h74km±3km, mb4.6/34, ML4.7(GUC), Error ellipse: s-maj=19.7km s-min=8.4km az=88.0*
*IDC **02** 01:05:47.4±0.8, 37°.74S×72°.39W, h71km±6km, mb4.2/11, mb1 4.3/16, mb1mx4.1/36, mbtmp4.5/16, MS3.2/6, Ms1 3.2/6, ms1mx3.1/25, Error ellipse: s-maj=21.2km s-min=11.8km az=96.0*
ISC 02 01:05:47.0±0.6, **37°.74S**±0°.04×**72°.65W**±0°.05, **h75**km±5km, **n119**, σ**1s.16**/129, **mb4.6**/25, **4C-6D, Central Chile**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BI03 Tigo 0.94 341 ⇓iP **Pn 01 06 05.8 +0.7**
BI03 eS **Sn 01 06 19.7 +1.2**
BI03 IAML 01 06 21.4
comp=N,59μm,0.2s
CCSP San Pedro de C 0.97 337 ⇓eP **Pn 01 06 06.3 +0.9**
CCSP eS **Sn 01 06 20.2 +1.3**
CCSP IAML 01 06 22.4
comp=E,20μm,0.4s
BI04 Isla Mocha 1.19 235 ⇑iP **Pn 01 06 06.3 -1.7**
BI04 eS **Sn 01 06 21.9 -1.9**
BI04 IAML 01 06 25.7
comp=E,22μm,0.2s
CCHI Chillan 1.22 22 eP **Pn 01 06 09.5 +1.0**
CCHI eS **Sn 01 06 26.2 +1.6**
CCHI Chillan 1.22 22 iP **Pn 01 06 09.6 +1.0**
CCHI ⇓eS **Sn 01 06 26.7 +2.1**
CANA Caviahue 1.26 97 iP **Pn 01 06 09.7 +0.4**
CANA ⇓eS **Sn 01 06 27.5 +1.6**
CANA IAML 01 06 30.2
comp=Z,3μm,0.6s
GO05 Huala 2.79 12 ⇑iP **Pn 01 06 29.7 +0.3**
GO05 iS **Sn 01 07 01.8 -0.2**
GO05 IAML 01 07 04.2
comp=E,3μm,0.3s
GO05 Huala 2.79 12 **Pn 01 06 29.8 +0.3**
EDS3 Malargue 3.27 54 iP **Pn 01 06 38.3 +2.2**
BO02 Sierra Bellavi 3.31 28 ⇑iP **Pn 01 06 37.2 +0.7**
BO02 iS **Sn 01 07 14.9 +0.2**
PLCA Paso Flores 3.40 152 ⇓iP **Pn 01 06 36.6 -1.2**
PLCA Paso Flores 3.40 152 P **Pn 01 06 37.2 -0.6**
comp=E,16nm,0.3s,baz=354,slow=11,SNR=568
PLCA Paso Flores 3.40 152 eP **Pn 01 06 37.5 -0.3**
PLCA Paso Flores 3.40 152 **Pn 01 06 36.8 -1.0**
PUMA Malargue 3.41 50 iP **Pn 01 06 40.3 +2.4**
COIS El Sosneado 3.60 44 ⇑iP **Pn 01 06 40.8 +0.3**
MT01 Popeta 4.03 17 ⇑iP **Pn 01 06 45.8 -0.5**
MT01 eS **Sn 01 07 30.7 -1.7**
FCH Farellones 4.80 24 eP **Pn 01 06 56.8 -0.3**
FCH eS **Sn 01 07 50.8 -0.9**
PEL Peldehue 4.86 20 **Pn 01 06 56.6 -1.0**
PEL Peldehue 4.86 20 iP **Pn 01 06 57.0 -0.7**
PEL eS **Sn 01 07 52.7 +0.1**
ROC1 El Roble 4.94 16 **Pn 01 06 58.2 -0.7**
ROC1 Sn **Sn 01 07 52.4 -2.4**
ROC1 El Roble 4.94 16 iP **Pn 01 06 58.2 -0.7**
ROC1 ⇓eS **Sn 01 07 52.8 -2.0**
AAGR Agrelo 5.59 35 iP **Pn 01 07 08.3 +0.6**
AAGR IAML 01 09 14.3
comp=Z,79nm,1.8s
ARCO CERRO ARCO 5.75 33 iP **Pn 01 07 10.2 +0.2**
ARCO IAML 01 08 49.5
comp=Z,64nm,0.5s
ASAL Salagasta 6.01 32 iP **Pn 01 07 13.6 +0.2**
RTLS Leoncito 6.54 26 iP **Pn 01 07 20.9 0.0**
RTCV Cerro Valdivia 6.77 31 iP **Pn 01 07 22.7 -1.0**
ZON Zonda 6.99 29 iP **Pn 01 07 26.5 -0.3**
ACAN Cantantal 7.05 41 iP **Pn 01 07 27.5 -0.1**
CFA Coronel Fontan 7.12 32 P **Pn 01 07 27.0 -1.5**
baz=212,slow=14
CFA S **Sn 01 08 45.9 -2.0**
comp=Z,16nm,0.3s,baz=106,slow=17,SNR=7.9
CFA LR LR 01 10 46.4
comp=Z,297nm,19.3s,baz=183,slow=43
RTLL Cerro Villicun 7.26 30 iP **Pn 01 07 29.1 -1.4**
AMOG MOGNA 7.60 28 iP **Pn 01 07 33.8 -1.4**
GO04 Tololo Observa 7.70 12 **Pn 01 07 35.2 -1.5**
MRA San Martin 7.77 49 iP **Pn 01 07 37.6 +0.1**
APLL PUNTA DE LOS L 8.91 36 iP **Pn 01 07 49.6 -3.4**
TCA Tanti 9.21 48 iP **Pn 01 07 56.7 -0.4**
ACLC CERRO LA CRUZ 9.55 31 iP **Pn 01 07 58.1 -3.8**
VCA Vinchina 9.72 24 iP **Pn 01 08 03.6 -0.5**
GO03 Copiap 10.32 12 Pn **Pn 01 08 10.3 -2.0**
CYA Choya 10.90 34 iP Pn 01 08 15.2 -5.0
GO02 Mina Guanaco 12.81 13 **Pn 01 08 46.6 +0.3**
LVC Limon Verde 15.42 13 P **Pn 01 09 19.6 -0.9**
comp=Z,1.1nm,0.3s,baz=192,slow=7.7,SNR=6.9
LVC Limon Verde 15.42 13 eP **Pn 01 09 17.4 -3.2**
LVC Limon Verde 15.42 13 P **Pn 01 09 19.9 -0.6**
PB01 IPOC Station P 16.86 10 Pn **Pn 01 09 37.6 -0.7**
PB01 IAmb IAmb 01 10 07.8
comp=Z,23nm,0.7s
CPUP Villa Florida 17.24 53 P **Pn 01 09 41.7 -1.2**
comp=Z,0.7nm,0.3s,baz=217,slow=9.7,SNR=18
CPUP LR LR 01 17 28.7
comp=Z,29nm,19.9s,baz=210,slow=41
CPUP Villa Florida 17.24 53 **Pn 01 09 40.6 -2.2**
CPUP IAmb IAmb 01 09 47.4
comp=Z,54nm,1.9s
USHA Ushuaia 17.34 172 P **Pn 01 09 43.9 0.0**
comp=Z,0.7nm,0.3s,baz=354,slow=9.2,SNR=8.7
USHA LR LR 01 17 05.0
comp=Z,80nm,21.7s,baz=10.0,slow=39
PB11 IPOC Station P 18.10 9 P **Pn 01 09 53.7 +0.1**
PB11 IAmb IAmb 01 09 58.0
comp=Z,24nm,0.8s
GO01 Chusmiza 18.26 10 P **Pn 01 09 56.0 +0.2**
MNMC Minye Minye 18.73 9 P **Pn 01 10 01.6 +0.3**
MNMC IAmb IAmb 01 10 05.7
comp=Z,25nm,0.8s
ITAB Concordia 20.19 65 eP **P 01 10 13.3 -2.3**
LPAZ La Paz 21.74 12 P **P 01 10 34.4 +1.5**
comp=Z,5.9nm,0.6s,baz=164,slow=5.8,SNR=12
LPAZ La Paz 21.74 12 eP **P 01 10 32.8 -0.2**
LPAZ La Paz 21.74 12 P **P 01 10 34.2 +1.3**
LPAZ IAmb IAmb 01 10 41.0
comp=Z,21nm,0.8s
PTGB Pitanga 21.81 59 eP **P 01 10 31.3 -1.8**
AQDB Aquidauana 22.63 45 eP **P 01 10 40.2 -1.7**
SIV San Ignacio 23.95 28 P **P 01 10 54.1 -0.3**
comp=Z,10nm,0.6s,baz=213,slow=8.2,SNR=68
FRTB Fartura 24.43 61 eP **P 01 10 57.9 -0.9**
PCMB Pacaembu 24.48 55 eP **P 01 10 58.0 -1.1**
PP1B Ponte de Pedra 25.41 43 eP **P 01 11 07.2 -0.4**
SPB Sao Paulo 25.77 64 eP **P 01 11 10.8 0.0**
SPB Sao Paulo 25.77 64 P **P 01 11 10.3 -0.6**
SPB IAmb IAmb 01 11 13.0
comp=Z,27nm,0.8s
NNA Nana 25.92 351 LR LR 01 20 05.7
comp=Z,32nm,18.9s,baz=149,slow=33
SALV Santo Antonio 26.41 39 eP **P 01 11 16.5 -0.2**
RCLB Rio Claro- Sao 26.45 62 eP **P 01 11 16.0 -1.1**
VAO Valinhos 26.47 64 eP **P 01 11 17.1 -0.2**
BB19B Bebedouro 26.67 58 eP **P 01 11 18.3 -0.8**
PARB Paraibuna 27.23 66 eP **P 01 11 24.2 +0.1**
ARAG Araguaiana, MT 28.65 46 eP **P 01 11 35.1 -1.5**
IPMB Ipameri, GO 29.07 54 eP **P 01 11 41.0 +0.4**
BSCB Bom Sucesso 29.31 63 eP **P 01 11 42.2 -0.5**
VAS01 Vassouras-RJ 29.46 67 eP **P 01 11 43.6 -0.3**
SAML Samuel 29.91 19 eP **P 01 11 48.1 +0.2**
SAML Samuel 29.91 19 P **P 01 11 47.5 -0.4**
SAML IAmb IAmb 01 11 48.9
comp=Z,13nm,1.2s
CLDB Colider 30.73 34 eP **P 01 11 53.7 -1.5**
BDFB Brasilia 30.95 51 P **P 01 11 55.7 -1.6**
comp=Z,12nm,0.6s,baz=227,slow=9.9,SNR=19
BDFB LR LR 01 25 37.3
comp=Z,64nm,18.2s,baz=204,slow=39
BDFB Brasilia 30.95 51 P **P 01 11 55.5 -1.7**
BDFB IAmb IAmb 01 12 02.7
comp=Z,17nm,0.7s
RPN Rapa Nui 32.54 278 LR LR 01 21 58.3
comp=Z,54nm,18.8s,baz=93,slow=30
SJMB Sao Joao De Ma 33.36 64 eP **P 01 12 17.3 -0.9**
BSFB Barra de Sao F 33.52 65 eP **P 01 12 19.5 0.0**
RUSC La Rusia 43.41 359 P **P 01 13 43.8 +0.9**
VNA3 Neumayer Olymp 46.11 156 P **P 01 14 03.4 +0.1**
SDV Santo Domingo 46.42 3 P **P 01 14 06.3 -0.2**
SDV IAmb IAmb 01 14 07.4
comp=Z,7.3nm,0.9s
VNA2 Neumayer--Watz 46.79 156 P **P 01 14 08.8 +0.2**
baz=270,slow=8.9
SNAA Sanae 48.34 157 P **P 01 14 20.7 0.0**
SNAA Sanae 48.34 157 P **P 01 14 20.6 0.0**
comp=Z,14nm,0.6s,baz=277,slow=8.4,SNR=118
SNAA Sanae 48.34 157 P **P 01 14 20.6 0.0**
QSPA South Pole Qui 52.50 180 P **P 01 14 52.9 +0.7**
comp=Z,8.0nm,0.5s,baz=139,slow=2.6,SNR=86
QSPA South Pole Qui 52.50 180 P **P 01 14 52.9 +0.7**
ZAIG Zacatecas 66.44 330 P **P 01 16 30.5 +1.7**
ZAIG IAmb IAmb 01 16 34.2
comp=Z,4.8nm,0.5s
MAW Mawson 69.74 163 P **P 01 16 48.9 +0.4**
comp=Z,7.5nm,0.8s,baz=219,slow=8.6,SNR=6.2
MAW Mawson 69.74 163 IAmb IAmb 01 16 49.5
comp=Z,2.1nm,0.9s
JCT Junction City 72.46 336 P **P 01 17 06.9 +1.5**
JCT IAmb IAmb 01 17 26.3
comp=Z,7.4nm,0.9s
TX31 Lajitas Ar. Si 72.77 332 P **P 01 17 08.5 +1.2**
TX31 pP **pP 01 17 27.1 0.0**
TX32 Lajitas Array 72.77 332 P **P 01 17 08.8 +1.5**
TXAR Lajitas Array 72.77 332 P **P 01 17 08.7 +1.4**
comp=Z,1.3nm,0.6s,baz=152,slow=8.7,SNR=21
TXAR pP **pP 01 17 27.4 +0.2**
comp=Z,2.2nm,0.7s,baz=149,slow=8.6,SNR=13
WVT Waverly 74.83 347 P **P 01 17 19.2 +0.1**
WVT IAmb IAmb 01 17 39.6
comp=Z,6.9nm,0.8s
LCAR Lake Charles 75.42 345 IAmb IAmb 01 17 42.4
comp=Z,5.2nm,0.8s
CASY Casey 76.28 181 P **P 01 17 27.0 -0.1**
LIC Lamto 76.44 71 eP **P 01 17 28.8 -0.1**
comp=Z,9.0nm,0.4s
TIC Toumodi 76.72 71 eP **P 01 17 30.4 -0.1**
comp=Z,1.8nm,0.2s
KIC Kosan Boka 76.74 71 eP **P 01 17 30.7 +0.1**
comp=Z,7.9nm,0.4s
DBIC Dimbokro 76.86 71 P **P 01 17 31.5 +0.3**
comp=Z,3.9nm,0.5s,baz=201,slow=4.9,SNR=13
DBIC Dimbokro 76.86 71 IAmb IAmb 01 17 59.9
comp=Z,29nm,1.9s
CCM Cathedral Cave 77.35 345 P **P 01 17 34.2 +0.9**
CCM IAmb IAmb 01 17 53.7
comp=Z,7.5nm,0.7s
BOSA Boshof 78.78 117 P **P 01 17 41.5 -0.5**
comp=Z,3.3nm,0.8s,baz=220,slow=4.0,SNR=6.3
ANMO Albuquerque 78.84 332 P **P 01 17 43.3 +1.4**
SMCO Snowmass 82.80 334 P **P 01 18 04.0 +0.8**
SMCO IAmb IAmb 01 18 26.0
comp=Z,5.8nm,1.1s
TRQ Mont Tremblant 83.60 359 P **P 01 18 07.2 +0.4**
TORD Torodi Ar. Bea 85.95 70 P **P 01 18 18.9 -0.3**
comp=Z,0.4nm,0.6s,baz=202,slow=4.8,SNR=4.2
TORD pP **pP 01 18 39.4 -0.1**
comp=Z,0.7nm,0.9s,baz=248,slow=4.2,SNR=1.9
NVAR Mina Array Bea 86.68 326 pP pP 01 18 44.1 +1.2
comp=Z,1.0nm,0.7s,baz=145,slow=6.5,SNR=1.1
PDAR Pinedale Array 86.88 334 P **P 01 18 24.6 +1.2**
comp=Z,0.2nm,0.6s,baz=154,slow=7.0,SNR=2.8
PDAR pP **pP 01 18 43.6 -0.2**
comp=Z,0.9nm,1.0s,baz=140,slow=5.6,SNR=4.3
ULM Lac du Bonnet 89.98 345 pP pP 01 18 57.5 -0.6
comp=Z,2.1nm,0.8s,baz=210,slow=2.2,SNR=4.7
VYHS Vyhne 117.95 49 ePKP **PKiKP 01 24 25.2 +0.7**
RPSI Rantau Prapat 144.28 165 **PKPab 01 25 12.9 -0.1**
KURK Kurchatov 155.84 48 **PKPdf 01 25 32.9 +1.1**
CD2 Chengdu 172.57 155 PKP **PKPdf 01 25 46.8 -0.7**
CD2 Chengdu 172.57 155 PKP **PKPdf 01 25 46.8 -0.7**

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*AEIC **02** 01:06:35.8±2.0, 51°.96N±0°.08×169°.4W±0°.1, h25km±6km, ML3.0/15, Error ellipse: s-maj=12.1km s-min=7.7km az=149.0*
*IDC **02** 01:06:39.0±7.1, 52°.20N×169°.57W, h41km±63km, mb3.5/7, mb1 3.6/9, mb1mx3.3/66, mbtmp3.7/9, ML3.2/2, Error ellipse: s-maj=50.4km s-min=23.1km az=0.0*
*NEIC **02** 01:06:38.6±1.3, 52°.16N±0°.09×169°.5W±0°.1, h41km±10km, Error ellipse: s-maj=15.7km s-min=7.8km az=143.0*
ISC 02 01:06:37.2±1.1, **52°.1N**±0°.1×**169°.48W**±0°.08, **h30**km, **n24**, σ**0s.85**/27, **mb3.4**/7, **Fox Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NIKH Nikolski High 0.96 23 **Pb 01 06 54.5 -0.9**
NIKH **Sb 01 07 09.8 +2.0**
OKSP Okmok Steeple 1.37 31 **Pn 01 07 00.1 -0.3**
OKTU Okmok Mt. Tuli 1.57 33 **Pn 01 07 03.3 +0.3**
OKFG Magazine Ridge 1.63 35 **Pn 01 07 04.2 +0.3**
OKFG **Sb 01 07 25.8 -1.0**
MREP Makushin Rep't 2.39 43 **Pn 01 07 15.1 +0.8**
MSW Makushin Switc 2.45 41 **Pn 01 07 15.8 +0.6**
UNV Unalaska Valle 2.52 44 **Pn 01 07 16.9 +0.9**
UNV **Sn 01 07 47.1 +1.4**
MTBL Makushin Table 2.53 41 **Pn 01 07 17.4 +1.1**
KOFP Korovin Flat P 2.85 276 **Pn 01 07 21.6 +1.0**
ATKA Atka Island 2.91 274 **Pn 01 07 21.3 -0.1**
KOWE Korovin West 2.95 277 **Pn 01 07 22.4 +0.5**
AKUT Akutan 3.03 46 Pn **Pn 01 07 22.2 -0.9**
GSTD Great Sitkin T 4.11 272 **Pn 01 07 38.6 +0.5**
ADK Adak 4.46 270 Pn **Pn 01 07 42.7 0.0**
KIWB Kanaga Island 4.75 270 Pn **Pn 01 07 47.5 +0.8**
ILAR Eielson Array 17.22 34 P **Pn 01 10 34.6 -0.7**
0.0nm,0.3s,baz=230,slow=11,SNR=3.2
PETK Petropavlovsk- 19.87 286 P **P 01 11 05.7 0.0**
1.1nm,0.3s,baz=90,slow=13,SNR=17
INK Inuvik 23.62 33 P **P 01 11 44.6 -0.6**
0.5nm,0.6s,baz=240,slow=7.8,SNR=4.0
YKA Yellowknife Ar 30.48 48 P **P 01 12 48.1 +1.1**
0.1nm,0.4s,baz=273,slow=8.1,SNR=6.7
TXAR Lajitas Array 52.82 89 P **P 01 15 50.3 +0.4**
0.2nm,0.7s,baz=308,slow=4.4,SNR=4.2
ARCES ARCESS Array B 58.20 354 P **P 01 16 27.8 0.0**
4.1nm,1.1s,baz=7.8,slow=7.3,SNR=2.6
MKAR Makanchi Array 63.95 313 P **P 01 17 06.5 -0.6**
0.1nm,0.3s,baz=50,slow=7.4,SNR=6.1
FINES FINESS Array B 66.14 352 P **P 01 17 20.3 -0.8**
2.8nm,0.9s,baz=20,slow=6.1,SNR=4.5
HFS Hagfors 68.10 358 P **P 01 17 33.0 -0.6**
3.3nm,0.9s,baz=17,slow=2.0,SNR=6.0

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*IDC **02** 01:07:59.5±1.2, 20°.75S×178°.27W, h552km±12km, mb4.0/24, mb1 4.1/27, mb1mx4.0/43, mbtmp4.8/27, Error ellipse: s-maj=10.5km s-min=9.9km az=125.0*
*NEIC **02** 01:08:00.2±1.4, 20°.8S±0°.1×178°.3W±0°.1, h564km±6km, mb4.6/74, Error ellipse: s-maj=15.6km s-min=14.6km az=166.0*
*BGR **02** 01:08:04.4±0.0, 20°.62S×177°.90W, h600km*
ISC 02 01:08:00.2±0.6, **20°.88S**±0°.05×**178°.27W**±0°.06, **h566**km±6km, **n304**, σ**1s.12**/323, **mb4.6**/57, **36C-14D, Fiji Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSVF Nonsavu 4.67 311 P **P 01 09 29.8 +1.3**
NIUE Niue 8.05 79 P **P 01 09 59.3 +0.3**
RAO Raoul Island 8.34 178 P **P 01 10 02.3 +0.7**
128nm,0.3s,baz=78,slow=20,SNR=4.5
RAO S **S 01 11 40.5 -0.8**
90nm,0.3s,baz=83,slow=22,SNR=4.3
GLKZ Green Lake 8.35 178 P **P 01 10 01.5 -0.3**
GLKZ S **S 01 11 40.7 -0.8**
AFI Afiamalu 9.30 43 P **P 01 10 09.0 -2.5**
30nm,0.3s,baz=38,slow=1.1,SNR=53
AFI S S 01 11 50.1 -9.1
30nm,0.3s,baz=33,slow=21,SNR=14
AFI Afiamalu 9.30 43 P **P 01 10 09.1 -2.4**
DZM Mont Dzumac 14.28 262 P **P 01 11 02.5 +0.2**
1.0nm,0.3s,baz=87,slow=21,SNR=12
DZM Mont Dzumac 14.28 262 P **P 01 11 02.3 0.0**
SANVU Saraoutou 14.82 289 P **P 01 11 07.5 -0.2**
OUZ Omahuta 15.98 205 P **P 01 11 20.8 +2.0**
OUZ Omahuta 15.98 205 P **P 01 11 16.4 -2.4**
KUZ Kuaotunu 16.65 197 P **P 01 11 27.4 +2.5**
WIAZ Waiheke Island 16.87 199 P **P 01 11 29.7 +2.8**
MXZ Matakaoa Point 16.89 189 P **P 01 11 27.3 +0.2**
ETAZ East Tamaki Re 17.08 199 P **P 01 11 32.1 +3.3**
WMGZ Waiomatatini S 17.12 189 P **P 01 11 31.0 +1.9**
HAZ Te Kaha 17.16 191 P **P 01 11 30.6 +1.1**
HAZ S **S 01 14 14.0 -6.0**
KBAZ Karaka Road Bo 17.22 199 P **P 01 11 33.4 +3.4**
PKGZ Pakihiroa 17.24 190 P **P 01 11 33.1 +2.7**
AWAZ Awhitu Peninsu 17.27 199 P **P 01 11 33.3 +2.9**
RUGZ Raukumara Rang 17.38 191 P **P 01 11 33.2 +1.6**
PUZ Puketiti 17.39 189 P **P 01 11 34.0 +2.3**
TWGZ Tauwhareparae 17.54 190 P **P 01 11 33.8 +0.7**
TWGZ S **S 01 14 25.7 -0.6**
TOZ Tahuroa Road 17.64 196 P **P 01 11 37.2 +3.4**
URZ Urewera 17.77 192 P **P 01 11 34.4 -0.7**
3.2nm,0.3s,baz=22,slow=3.9,SNR=30
URZ Urewera 17.77 192 P **P 01 11 34.6 -0.4**
URZ S **S 01 14 24.0 -5.9**
CNGZ Carnagh Statio 17.81 189 P **P 01 11 37.3 +1.9**
BKZ Black Stump Fm 18.77 193 P **P 01 11 44.8 +0.5**
BKZ IAmb IAmb 01 11 55.2
comp=Z,16nm,0.6s
TUWZ Tuamarina 21.52 196 P **P 01 12 09.2 +0.2**
OXZ Oxford 23.80 198 P **P 01 12 29.1 -0.2**
RPZ Rata Peaks 24.45 199 P **P 01 12 36.5 +1.4**
comp=Z,8.9nm,0.6s,baz=338,slow=4.1,SNR=12
PPT Papeete 27.28 88 P **P 01 13 01.0 +0.7**
comp=Z,13nm,0.7s,baz=51,slow=12,SNR=4.5
PPTF Pamatai, Papee 27.29 88 P **P 01 13 02.3 +1.8**
PPTF IAmb IAmb 01 13 04.3
comp=Z,24nm,0.8s
CTA Charters Tower 33.20 265 P **P 01 13 52.0 +0.7**
comp=Z,13nm,0.3s,baz=91,slow=11,SNR=41
PMG Port Moresby 35.18 284 P **P 01 14 07.9 +0.1**
comp=Z,91nm,0.7s,baz=82,slow=5.3,SNR=31
PMG Port Moresby 35.18 284 P **P 01 14 07.2 -0.6**
COEN Coen 37.35 274 P **P 01 14 26.1 +0.4**
STKA Stephens Creek 37.39 245 P **P 01 14 26.9 +1.0**
comp=Z,9.6nm,0.8s,baz=91,slow=9.5,SNR=17
STKA PcP **PcP 01 16 30.5 +1.0**
comp=Z,2.9nm,0.5s,baz=100,slow=3.9,SNR=4.5
STKA Stephens Creek 37.39 245 P **P 01 14 26.5 +0.7**
MANU Manus Island 38.37 295 P **P 01 14 33.8 -0.2**
BBOO Buckleboo 42.15 244 P **P 01 15 03.6 -0.3**
BBOO IAmb IAmb 01 15 05.0
comp=Z,15nm,0.7s
WR0 Warramunga Arr 44.10 263 P **P 01 15 18.8 -0.5**
AS31 Alice Springs 44.18 257 P **P 01 15 19.6 -0.3**
AS31 IAmb IAmb 01 15 20.8
comp=Z,10nm,0.7s
AS31 PcP **PcP 01 16 52.0 -0.2**
ASAR Alice Springs 44.18 257 P **P 01 15 19.8 -0.1**
comp=Z,39nm,0.6s,baz=93,slow=7.9,SNR=475
ASAR PcP **PcP 01 16 52.4 +0.1**
comp=Z,6.1nm,0.6s,baz=105,slow=3.8,SNR=11
ASAR S **S 01 21 10.4 -2.2**
comp=Z,9.0nm,0.9s,baz=94,slow=16,SNR=26
ASAR Alice Springs 44.18 257 P **P 01 15 19.1 -0.7**
ASAR **PcP 01 16 52.0 -0.2**
WRAB Tennant Creek 44.29 262 P **P 01 15 19.8 -0.9**
WRAB IAmb IAmb 01 15 21.0
comp=Z,44nm,1.1s
WRA Warramunga Arr 44.30 262 P **P 01 15 20.3 -0.5**
comp=Z,26nm,0.7s,baz=98,slow=8.3,SNR=44
WRA Warramunga Arr 44.30 262 P **P 01 15 19.6 -1.1**
FORT Forrest 48.91 247 P **P 01 15 55.1 -0.3**
KNRA Kununurra 50.38 267 P **P 01 16 06.2 -0.1**
FITZ Fitzroy Crossi 52.72 263 P **P 01 16 23.0 -0.2**
FITZ IAmb IAmb 01 16 23.9
comp=Z,14nm,0.7s
SIJI Sorong 53.09 285 P **P 01 16 25.8 -0.1**
comp=Z,103nm,0.8s,baz=83,slow=5.4,SNR=16
TNTI Ternate 57.31 285 P **P 01 16 54.6 -0.6**
TNTI IAmb IAmb 01 16 55.9
comp=Z,74nm,1.0s
QSPA South Pole Qui 69.19 180 P **P 01 18 12.4 +2.0**
comp=Z,10nm,0.8s,baz=324,slow=0.6,SNR=25
QSPA PcP **PcP 01 18 30.1 +0.4**
comp=Z,3.3nm,0.6s,baz=334,slow=2.7,SNR=7.1
QSPA South Pole Qui 69.19 180 P **P 01 18 12.5 +2.0**
QSPA IAmb IAmb 01 18 13.4
comp=Z,11nm,0.9s
MJAR Matsushiro Arr 70.36 324 P **P 01 18 16.9 -0.8**
comp=Z,8.7nm,0.6s,baz=140,slow=6.2,SNR=34
MJAR Matsushiro Arr 70.36 324 P **P 01 18 16.7 -1.0**
MAT Matsushiro 70.36 324 P **P 01 18 16.9 -0.9**
MJB9 Matsu-Tunnel 70.37 324 P **P 01 18 17.2 -0.6**
MJB9 IAmb IAmb 01 18 17.6
comp=Z,9.1nm,0.7s
SBUM Sibu 71.82 280 P **P 01 18 27.0 +0.2**
JNU Nakatsue 72.38 317 P **P 01 18 29.3 -0.3**
JNU IAmb IAmb 01 18 30.8
comp=Z,22nm,0.9s
KSM Kuching 73.21 278 P **P 01 18 34.9 +0.1**
KSM IAmb IAmb 01 18 36.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,33nm,0.8s						
KSM	Kuching	73.21	278	P	P	01 18 35.0	+0.2
NACB	Ninganchiao	73.68	304	IAmb	IAmb	01 18 36.7	
	comp=Z,24nm,0.8s						
TPUB	Ta-pu	73.97	303	P	P	01 18 37.3	-1.6
YHNB	Yeheng	74.11	305	IAmb	IAmb	01 18 40.4	
	comp=Z,26nm,1.0s						
PETK	Petropavlovsk-	76.57	345	P	P	01 18 52.4	-0.2
	comp=Z,7.4nm,0.6s,baz=143,slow=8.2,SNR=8.0						
KSRS	Korea Array	77.00	319	P	P	01 18 55.8	+0.5
	comp=Z,4.8nm,0.7s,baz=128,slow=5.8,SNR=25						
KSAR	Wonju Array Be	77.02	319	P	P	01 18 55.6	+0.2
DLV	T Lat	78.99	287	IAmb	IAmb	01 19 08.5	
	comp=Z,16nm,0.8s						
USA0B	Ussuriysk Arra	79.13	326	IAmb	IAmb	01 19 08.3	
	comp=Z,17nm,0.9s						
USRK	Ussuriysk Ar.	79.13	326	P	P	01 19 07.6	+1.0
	comp=Z,11nm,0.8s,baz=121,slow=3.6,SNR=17						
USRK	Ussuriysk Ar.	79.13	326	P	P	01 19 07.0	+0.3
MYKOM	Kota Tinggi	79.32	276	P	P	01 19 09.0	+0.7
ISA	Isabella, Lake	79.78	46	P	P	01 19 11.1	+0.7
NJ2	Nanjing	79.92	310	eP	P	01 19 11.5	+0.4
MDJ	Mudanjiang	80.68	325	P	P	01 19 14.9	+0.2
MDJ				IAmb	IAmb	01 19 16.4	
	comp=Z,14nm,0.9s						
JRMM	Jerantut	81.36	277	P	P	01 19 19.0	0.0
NVAR	Mina Array Bea	81.47	43	P	P	01 19 20.2	+0.9
	comp=Z,1.2nm,0.7s,baz=226,slow=7.5,SNR=4.8						
K05A	Summer Lake	82.42	39	P	P	01 19 24.9	+0.9
IPM	Ipoh	82.92	278	P	P	01 19 27.7	+0.8
IPM				IAmb	IAmb	01 19 28.3	
	comp=Z,24nm,0.8s						
PINE	Pine Mountain	83.04	38	P	P	01 19 27.8	+0.8
TIA	Tai'an	83.34	313	P	P	01 19 28.9	+0.5
BRLK	Bradley Lake	83.42	14	P	P	01 19 27.5	-0.7
BRLK				IAmb	IAmb	01 19 28.8	
	comp=Z,16nm,1.0s						
KULM	Kulim	83.57	278	P	P	01 19 30.0	-0.1
MA2	Magadan	84.08	345	P	P	01 19 30.9	-0.6
	comp=Z,4.0nm,0.7s,baz=109,slow=6.8,SNR=4.8						
MA2	Magadan	84.08	345	IAmb	IAmb	01 19 31.1	
	comp=Z,3.5nm,0.6s						
RPSI	Rantau Prapat	84.23	275	P	P	01 19 33.2	-0.1
RPSI				IAmb	IAmb	01 19 33.9	
	comp=Z,15nm,0.8s						
G08A	Pilot Rock	85.07	38	P	P	01 19 37.5	+0.6
BJI	Beijing	85.98	316	P	P	01 19 41.2	+0.1
ENH	Enshi	86.04	304	P	P	01 19 41.3	-0.4
SYO	Syowa Base	86.30	193	⇑eP	P	01 19 40.6	-1.6
SYO	Syowa Base	86.30	193	⇑ePcP	PcP	01 19 43.2	-0.7
F10A	Beach Ranch, E	86.46	38	IAmb	IAmb	01 19 44.8	
	comp=Z,8.5nm,0.9s						
SEY	Seymchan	86.69	347	P	P	01 19 43.6	-0.3
	comp=Z,10nm,0.8s,baz=145,slow=5.3,SNR=34						
SLVN	Son La	86.80	294	P	P	01 19 46.1	+0.6
BARN	Barnard Glacie	86.82	17	IAmb	IAmb	01 19 46.0	
	comp=Z,5.9nm,0.8s						
TRF	Thorofare Moun	86.87	12	P	P	01 19 43.7	-1.3
TRF				IAmb	IAmb	01 19 45.6	
	comp=Z,11nm,0.8s						
RND	Reindeer	87.12	13	IAmb	IAmb	01 19 46.5	
	comp=Z,15nm,0.8s						
MCK	McKinley	87.40	13	IAmb	IAmb	01 19 48.4	
	comp=Z,7.3nm,0.8s						
TXAR	Lajitas Array	87.48	57	P	P	01 19 50.4	+1.8
	comp=Z,1.4nm,0.9s,baz=224,slow=5.2,SNR=8.7						
TXAR				PKKPbc	PKKPbc	01 37 35.6	+0.9
	comp=Z,0.5nm,0.8s,baz=72,slow=4.1,SNR=4.9						
TXAR	Lajitas Array	87.48	57	P	P	01 19 49.5	+0.8
PBKT	Sadao Pong	87.50	289	P	P	01 19 49.5	+0.8
PBKT				IAmb	IAmb	01 19 51.3	
	comp=Z,14nm,1.1s						
SNAA	Sanae	87.64	179	P	P	01 19 48.7	+0.1
SNAA	Sanae	87.64	179	P	P	01 19 48.7	+0.1
	comp=Z,1.1nm,0.7s,baz=207,slow=9.4,SNR=7.5						
SNAA	Sanae	87.64	179	IAmb	IAmb	01 19 57.5	
	comp=Z,2.4nm,1.1s						
VNA3	Neumayer Olymp	87.78	176	P	P	01 19 49.7	+0.5
XAN	Xi'an	88.16	307	P	P	01 19 52.0	+0.4
XAN				pP	pP	01 21 51.3	-2.2
XAN				PP	PP	01 23 29.8	+0.3
XAN	Xi'an	88.16	307	S	S	01 29 57.4	+8.5
XAN	Xi'an	88.16	307	P	P	01 19 51.7	+0.1
XAN				IAmb	IAmb	01 19 53.2	
	comp=Z,16nm,0.8s						
MLY	Manley	88.22	11	IAmb	IAmb	01 19 50.4	
	comp=Z,3.5nm,0.6s						
VNA2	Neumayer--Watz	88.22	177	P	P	01 19 51.8	+0.6
	baz=193,slow=3.1						
WRH	Wood River Hil	88.23	13	IAmb	IAmb	01 19 51.2	
	comp=Z,12nm,0.9s						
HDA	Harding Lake	88.41	13	IAmb	IAmb	01 19 52.1	
	comp=Z,7.7nm,0.7s						
CCB	Clear Creek Bu	88.44	13	IAmb	IAmb	01 19 51.9	
	comp=Z,9.0nm,0.7s						
VNA1	Neumayer--Stat	88.45	177	P	P	01 19 53.0	+0.7
IMAR	Indian Mountai	88.57	10	P	P	01 19 51.8	-0.9
ILAR	Eielson Array	88.74	13	P	P	01 19 52.4	-1.1
	comp=Z,1.8nm,0.4s,baz=225,slow=5.8,SNR=7.1						
ILAR	Eielson Array	88.74	13	P	P	01 19 52.0	-1.5
HIA	Hailar	88.85	325	P	P	01 19 53.6	-0.8
HIA				IAmb	IAmb	01 19 55.0	
	comp=Z,5.8nm,0.9s						
KMI	Kunming	89.29	297	IAmb	IAmb	01 19 59.5	
	comp=Z,13nm,0.8s						
BILL	Bilibino	89.39	354	P	P	01 19 56.4	-0.1
BILL				IAmb	IAmb	01 19 57.6	
	comp=Z,2.6nm,0.7s						
PDAR	Pinedale Array	89.41	43	P	P	01 19 57.8	+0.3
	comp=Z,1.7nm,0.6s,baz=207,slow=3.3,SNR=16						
PDAR	Pinedale Array	89.41	43	P	P	01 19 57.5	+0.1
HHC	Hu-ho-hao-te	89.43	314	eP	P	01 19 57.6	+0.1
YHL	Hebgen Lake	89.43	41	P	P	01 19 58.7	+1.1
CM31	Chiang Mai Arr	90.00	290	P	P	01 20 01.9	+1.5
CM31				IAmb	IAmb	01 20 02.9	
	comp=Z,15nm,0.9s						
CMAR	Chiang Mai Arr	90.00	290	P	P	01 20 01.9	+1.5
	comp=Z,10nm,0.9s,baz=125,slow=3.0,SNR=50						
EGAK	Eagle	90.04	15	P	P	01 19 59.3	-0.2
EGAK				IAmb	IAmb	01 20 00.3	
	comp=Z,4.7nm,0.9s						
CHTO	Chiang Mai	90.13	290	P	P	01 20 01.7	+0.6
CD2	Chengdu	90.78	303	P	P	01 20 03.8	0.0
BMAR	Burnt Mountain	91.52	12	P	P	01 20 06.0	-0.4
YAK	Yakutsk	92.37	338	P	P	01 20 08.9	-1.4
INK	Inuvik	94.70	15	P	P	01 20 20.2	-0.6
	comp=Z,1.0nm,0.7s,baz=218,slow=9.1,SNR=4.3						
INK	Inuvik	94.70	15	IAmb	IAmb	01 20 22.1	
	comp=Z,3.1nm,1.1s						
SONM	Songino Array	95.87	319	P	P	01 20 26.5	-0.3
	comp=Z,0.8nm,0.8s,baz=132,slow=3.5,SNR=4.3						
SONM	Songino Array	95.87	319	IAmb	IAmb	01 20 28.4	
	comp=Z,0.6nm,0.8s						
YKA	Yellowknife Ar	96.96	25	P	P	01 20 30.8	-0.3
	comp=Z,1.3nm,1.2s,baz=249,slow=4.4,SNR=6.5						
GTA	Gaotai	97.01	309	eP	Pdif	01 20 33.3	+1.2
ZALV	Zalesovo Beam	110.63	321	PKiKP	PKiKP	01 25 27.2	-1.5
	comp=Z,1.9nm,0.5s,baz=204,slow=0.6,SNR=13						
MKAR	Makanchi Array	111.27	313	PKiKP	PKiKP	01 25 29.0	-1.2
	comp=Z,1.4nm,0.5s,baz=155,slow=0.6,SNR=40						
MKAR				PKKPbc	PKKPbc	01 36 28.3	-0.2
	comp=Z,0.6nm,0.7s,baz=257,slow=5.4,SNR=6.8						
BDFB	Brasilia	119.16	123	PKKPab	PKKPab	01 36 05.9	-0.5
	comp=Z,1.3nm,0.4s,baz=141,slow=5.6,SNR=3.0						
BVAR	Borovoye Array	119.20	320	PKP	PKPdf	01 25 44.3	-0.9
	comp=Z,6.2nm,0.4s,baz=117,slow=2.1,SNR=47						
BRVK	Borovoye	119.26	320		PKPdf	01 25 44.6	-0.7
KK31	Karatay Array	119.28	308		PKPdf	01 25 44.8	-1.0
KKAR	Karatay Array	119.28	308		PKPdf	01 25 44.6	-1.1
KBL	Kabul	119.84	299		PKiKP	01 25 47.3	-0.1
SPITS	Spitsbergen Ar	122.23	356	PKP	PKPdf	01 25 49.8	-0.6
	comp=Z,6.6nm,0.7s,baz=129,slow=7.6,SNR=8.7						
ARU	Arti	125.37	325	PKP	PKPdf	01 25 56.5	-0.4
	comp=Z,3.8nm,0.5s,baz=89,slow=2.1,SNR=21						
ARU	Arti	125.37	325		PKPdf	01 25 56.3	-0.6
BOSA	Boshof	125.80	206	PKP	PKiKP	01 25 59.1	-0.2
	comp=Z,1.4nm,0.7s,baz=146,slow=1.2,SNR=3.8						
AKTO	Aktyubinsk	127.18	318	PKP	PKPdf	01 26 00.7	+0.1
	comp=Z,3.9nm,0.7s,baz=107,slow=1.5,SNR=8.6						
GEYT	Alibeck	128.77	302	PKP	PKPdf	01 26 03.7	-0.4
	comp=Z,2.6nm,0.6s,baz=343,slow=1.5,SNR=5.0						
KIRV	Kirov	129.16	330	PKP	PKPdf	01 26 03.7	-0.4
	comp=Z,11nm,0.7s,baz=24,slow=2.3,SNR=4.2						
ARCES	ARCESS Array B	129.25	349	PKP	PKPdf	01 26 03.3	-0.7
	comp=Z,4.4nm,0.5s,baz=24,slow=1.1,SNR=26						
FINES	FINESS Array B	136.06	343	SKPbc	SKPbc	01 28 56.6	+0.4
	comp=Z,2.2nm,0.9s,baz=343,slow=2.0,SNR=5.0						
KMBO	Kilima Mbogo	138.94	242	PKP	PKPdf	01 26 24.8	+0.8
	comp=Z,1.8nm,0.7s,baz=60,slow=3.4,SNR=5.8						
NB2	NORSAR Subarra	139.32	353	PKP	PKPdf	01 26 14.1	-8.9
	comp=Z,0.4nm,0.5s,baz=16,slow=3.2						
NOA	NORSAR Array B	139.32	353	PKP	PKiKP	01 26 24.7	-0.8
	comp=Z,1.1nm,0.5s,baz=14,slow=4.0,SNR=4.1						
SHEL	Horse Pasture	142.66	168		PKPdf	01 26 29.7	-0.7
SUW	Suwalki	143.10	339	ePKP	PKPab	01 26 27.3	-0.4
SUW	Suwalki	143.10	339		PKPab	01 26 27.7	0.0
AKASG	Malin Array Be	143.22	331	PKhKP	PKPpre	01 26 27.2	
	comp=Z,22nm,0.5s,baz=43,slow=4.3,SNR=169						
AKASG	Malin Array Be	143.22	331	PKPdf	PKPab	01 26 27.0	-1.3
MBAR	Mbarara	144.49	237		PKPab	01 26 34.5	0.0
GAZ	Gaziantep	145.22	306		PKPbc	01 26 35.3	0.0
SORM	Soroca	145.39	328	⇑P	PKPdf	01 26 34.2	+0.2
EKA	Eskdalemuir Ar	145.40	5	PKPbc	PKPdf	01 26 34.1	+0.3
	comp=Z,7.5nm,0.8s,baz=343,slow=2.2,SNR=9.3						
GKP	Gorka Klasztor	145.54	344	ePKP	PKPbc	01 26 35.7	+0.1
BEL	Belsk	145.72	339	ePKP	PKPbc	01 26 36.6	+0.4
MILM	Milestii Mici	145.96	326	⇑P	PKPbc	01 26 36.4	-0.6
BSEG	Bad Segeberg	146.35	351	ePKPbc	PKPbc	01 26 38.1	+0.3
	baz=14,slow=4.2						
VASR	Vaslui	146.68	327	⇑P	PKPbc	01 26 38.6	-0.3
ASF	Jabal al Asfar	146.72	297	PKPbc	PKPbc	01 26 39.8	+0.1
	comp=Z,9.4nm,0.7s,baz=67,slow=3.6,SNR=16						
KWP	Kalwaria Pacla	146.82	335	ePKP	PKPbc	01 26 39.0	-0.3
KWP	Kalwaria Pacla	146.82	335		PKPbc	01 26 39.1	-0.1
BR131	Keskin Array S	146.90	312		PKPdf	01 26 36.4	-0.6
BR131				PKPbc	PKPbc	01 26 39.4	-0.6
BRTR	Keskin Array B	146.90	312	PKPbc	PKPbc	01 26 39.4	-0.6
	comp=Z,8.1nm,0.7s,baz=142,slow=5.3,SNR=46						
BIR	Birlad	147.01	326	⇑P	PKPbc	01 26 40.4	+0.5
RUE	Ruedersdorf	147.10	346	ePKPbc	PKPbc	01 26 40.2	+0.3
	baz=14,slow=4.2						
VARL	Varlezi	147.13	325	⇑P	PKPdf	01 26 32.6	-4.4
BUR08	Bucovina Ar. S	147.25	330		PKPbc	01 26 41.1	+0.5
GHRR		147.26	326	⇓P	PKiKP	01 26 41.4	-0.9
BURAR	Bucovina Array	147.26	330	⇑P	PKPbc	01 26 41.2	+0.5
BURAR	Bucovina Array	147.26	330		PKPbc	01 26 40.8	+0.2
BIZ	Bicaz	147.32	328	⇓P	PKiKP	01 26 41.6	-0.7
TESR	Tescani	147.34	327	⇓P	PKPbc	01 26 40.1	-0.7
OJC	Ojcow	147.42	338	ePKP	PKPbc	01 26 40.5	-0.3
OJC	Ojcow	147.42	338		PKPbc	01 26 40.3	-0.5
ANTO	Ankara	147.43	312	⇑P	PKPbc	01 26 41.7	+0.4
ANTO	Ankara	147.43	312		PKPbc	01 26 41.3	0.0
TOPG	Topolog	147.50	324	⇓P	PKPbc	01 26 41.0	-0.2
KOLS	Kolonicke sedl	147.54	334	ePKP	PKPbc	01 26 41.5	+0.3
KOLS				e		01 26 45.1	
STHS	Stebnicka Huta	147.56	336	ePKP	PKPbc	01 26 40.8	-0.5
VRI	Vrincioaia	147.74	326	⇑P	PKPbc	01 26 41.8	0.0
MMAI	Mount Meron Ar	147.78	299	PKPbc	PKPbc	01 26 42.7	+0.3
	comp=Z,12nm,0.5s,baz=76,slow=7.0,SNR=78						
MMAI				PKPab	PKPab	01 26 47.6	+0.7
	comp=Z,14nm,0.6s,baz=86,slow=5.9,SNR=10						
NRDL	Niedersach Rie	147.78	350	ePKPbc	PKPbc	01 26 41.8	+0.2
	baz=14,slow=4.2						
PLOR	Plostina	147.79	326	⇓P	PKPab	01 26 45.8	-0.7
HARR	Harsova	147.86	324	⇑P	PKPbc	01 26 42.2	+0.1
CRVS	Cervenica-Dubn	147.89	335	ePKP	PKPbc	01 26 42.2	+0.1
CRVS				e		01 26 47.0	
NIE	Niedzica	147.91	337	ePKP	PKPbc	01 26 42.7	+0.6
BISRR	Bisoca	147.96	326	⇓P	PKPbc	01 26 42.9	+0.5
KSP	Ksiaz	147.97	342	ePKP	PKPbc	01 26 42.4	+0.2
ASSE	Asse, Remlinge	148.04	350	ePKPbc	PKPbc	01 26 42.6	+0.3
	baz=14,slow=4.2						
TRPA	Tarpa	148.06	333	⇓P	PKPbc	01 26 42.4	-0.1
MDUB	Mudurnu	148.23	315		PKPbc	01 26 43.2	-0.1
OSTC	Ostas	148.25	342	⇑ePKP	PKPbc	01 26 42.3	-0.7
OKC	Ostrava-Krasne	148.30	340	⇑ePKP	PKPbc	01 26 42.5	-0.6
OKC				ePKPAB	PKPab	01 26 48.5	+0.1
DOPR	Dopca	148.35	328	⇑P	PKiKP	01 26 44.0	-0.5
UPC	Upice	148.35	343	⇑ePKP	PKPbc	01 26 43.4	+0.2
UPC				ePKPAB	PKPab	01 26 48.5	-0.1
CLZ	Clausthal	148.37	350	ePKPbc	PKPbc	01 26 43.7	+0.5
	baz=14,slow=4.2						
CLL	Collm	148.37	346	ePKPbc	PKPbc	01 26 43.4	+0.2
	baz=14,slow=4.2						
CLL				ePKPab	PKPab	01 26 48.5	-0.1
	baz=14,slow=4.2						
CLL	Collm	148.37	346	⇓iPKPbc	PKPbc	01 26 43.0	-0.2
	comp=Z,28nm,0.8s						
CLL				ePKPab	PKPab	01 26 48.0	-0.6
	comp=Z,12nm,0.7s						
CLL				epPKPab	pPKPab	01 28 56.0	+1.4
CLL				eSKPbc	SKiKP	01 29 28.0	+0.8
CLL	Collm	148.37	346		PKPbc	01 26 42.9	-0.2
MLR	Muntele Rosu	148.40	327	PKPbc	PKPbc	01 26 43.1	-0.5
	comp=Z,8.7nm,0.6s,baz=328,slow=7.7,SNR=28						
MLR	Muntele Rosu	148.40	327	⇑P	PKPbc	01 26 43.4	-0.2
DPC	Dobruska-Polom	148.41	342	⇑ePKP	PKPbc	01 26 43.2	-0.2
DPC				ePKPAB	PKPab	01 26 49.3	+0.4
KRLC	Kraliky	148.52	341	⇑ePKP	PKPbc	01 26 43.6	-0.1
MORC	Moravsky Berou	148.55	340	ePKP	PKPbc	01 26 43.9	+0.1
MORC	Moravsky Berou	148.55	340	⇑P	PKPbc	01 26 43.5	-0.2
BRG	Berggiesshubel	148.56	345	ePKP	PKPbc	01 26 43.4	-0.3
	comp=Z,11nm,0.7s						
BRG	Berggiesshubel	148.56	345	i PKP	PKPab	01 26 49.0	-0.4
	comp=Z,5.8nm,0.8s						
BRG				ePKS	PKSdf	01 30 11.0	-3.0
	comp=Z,17nm,1.8s						
BRG	Berggiesshubel	148.56	345	ePKPbc	PKPbc	01 26 44.0	+0.3
	baz=14,slow=4.2						
KECS	Kecovo	148.61	336	ePKP	PKiKP	01 26 44.5	-0.4
KECS				e		01 26 50.1	
FBE	Freiberg	148.65	346	ePKPbc	PKiKP	01 26 44.5	-0.4
	baz=14,slow=4.2						
FBE				ePKPab	PKPab	01 26 49.9	+0.2
	baz=14,slow=4.2						
CJR	Cluj-Napoca	148.68	330	⇓P	PKPbc	01 26 44.1	-0.1
NEUB	Neuenburg	148.72	348	ePKPbc	PKPbc	01 26 44.3	+0.3
	baz=14,slow=4.2						
PVCC	Panska Ves	148.72	344	⇑ePKP	PKPbc	01 26 44.2	+0.1
PVCC				ePKPAB	PKPab	01 26 50.3	+0.2
EIL	Elat	148.79	293	PKPbc	PKPbc	01 26 44.9	0.0
	comp=Z,11nm,0.7s,baz=308,slow=3.2,SNR=12						
VOIR		148.89	327	⇑P	PKPbc	01 26 44.7	-0.1
ARR	Arges	149.15	328	⇑P	PKiKP	01 26 46.2	0.0
PRA	Prague	149.18	344	⇑ePKP	PKPbc	01 26 45.3	+0.1
VYHS	Vyhne	149.21	338	ePKP	PKPbc	01 26 45.3	-0.1
VYHS				e		01 26 52.5	
PRU	Pruhonice	149.22	344	⇑ePKP	PKPbc	01 26 44.7	-0.6
PRU				ePKPAB	PKPab	01 26 51.4	-0.8
GOPC	GO Pecny, Ondr	149.23	343	⇑ePKP	PKPbc	01 26 45.0	-0.4
VRAC	Vranov	149.25	341	ePKP	PKPbc	01 26 45.4	0.0
VRAC	Vranov	149.25	341	PKPbc	PKPbc	01 26 45.6	+0.2
	comp=Z,4.5nm,0.8s,baz=285,slow=0.8,SNR=8.6						
VRAC				PKPab	PKPab	01 26 52.5	+0.2
	comp=Z,5.5nm,0.9s,baz=22,slow=5.3,SNR=6.7						
VRAC	Vranov	149.25	341	⇑P	PKiKP	01 26 45.9	-0.4
MOX	Moxa	149.29	348	ePKPbc	PKPbc	01 26 45.6	+0.2
	baz=14,slow=4.2						
PSZ	Piszkesteto	149.30	336		PKPbc	01 26 45.3	-0.3
JAVC	Velka Javorina	149.30	339	ePKP	PKiKP	01 26 46.8	+0.4
TANN	Tannenbergstha	149.33	346	ePKPbc	PKPbc	01 26 46.0	+0.4
	baz=14,slow=4.2						
RAZG	Razgrad	149.37	323	⇑P	PKPbc	01 26 45.7	-0.2
UBBA	Unterbreizbach	149.42	350	ePKPbc	PKPbc	01 26 45.7	+0.1
	baz=14,slow=4.2						
WERN	Wernitzgruen	149.47	347	ePKPbc	PKiKP	01 26 46.5	-0.2
	baz=14,slow=4.2						
WERN				ePKPab	PKPab	01 26 53.3	+0.1
	baz=14,slow=4.2						
NKC	Novy Kostel	149.50	346	⇑ePKP	PKPbc	01 26 46.2	+0.2
NKC				ePKPAB	PKPab	01 26 52.8	-0.6
KRUC	Moravsky	149.53	341	ePKP	PKPbc	01 26 45.9	-0.2
HUMR	Humele	149.56	326	⇓P	PKPbc	01 26 44.7	-1.6
TREC	Trest	149.59	342	⇑ePKP	PKPbc	01 26 46.2	-0.1
PBCC	Pribram	149.64	344	⇑ePKP	PKPbc	01 26 46.0	-0.4
MANZ	Manzenberg	149.81	347	ePKPbc	PKiKP	01 26 47.1	-0.3
	baz=14,slow=4.2						
MODS	Modra-Piesok	149.85	339	ePKP	PKPbc	01 26 46.3	-0.6
MODS				e		01 26 55.0	
SIRR	Siria	149.89	332	⇓P	PKPbc	01 26 47.1	0.0
ROTZ	Rotzenmuhle	149.99	346	ePKPbc	PKiKP	01 26 47.5	-0.3
	baz=14,slow=4.2						
ROTZ				ePKPab	PKPab	01 26 55.4	0.0
	baz=14,slow=4.2						
GZR	Gura Zlata	150.04	330	⇓P	PKPbc	01 26 46.8	-0.7
MEM	Membach	150.14	355	PKPbc	PKPbc	01 26 47.2	-0.2
VLAD	Vladila	150.22	326	⇑P	PKiKP	01 26 48.2	-0.2
TNS	Taunus Mts	150.24	351	ePKPbc	PKiKP	01 26 48.0	-0.3
	baz=14,slow=4.2						
TNS				ePKPab	PKPab	01 26 56.0	-0.5
	baz=14,slow=4.2						
KHC	Kasperske Hory	150.26	344	⇑ePKP	PKPbc	01 26 47.4	-0.5
KHC				ePKPAB	PKPab	01 26 56.4	-0.2
KHC	Kasperske Hory	150.26	344		PKPbc	01 26 47.7	-0.2
GRF	Grafenberg Arr	150.27	348	ePKPbc	PKiKP	01 26 48.2	-0.2
	baz=14,slow=4.2						
SRE	Strehaia	150.37	328	⇑P	PKiKP	01 26 48.6	-0.1
BZS	Buzias	150.41	331	⇓P	PKPbc	01 26 47.8	-0.5
WET	Wettzell	150.42	345	ePKPbc	PKPbc	01 26 48.4	+0.2
	baz=14,slow=4.2						
WET				ePKPab	PKPab	01 26 57.3	+0.1
	baz=14,slow=4.2						
GEC2	GERESS Array S	150.49	344	ePKPbc	PKPbc	01 26 48.5	+0.1
	baz=14,slow=4.2						
GERES	GERESS Array B	150.49	344	PKP	PKPdf	01 26 42.4	-0.1
	comp=Z,0.3nm,0.6s,baz=64,slow=3.1,SNR=3.7						
GERES				PKPbc	PKPbc	01 26 48.2	-0.3
	comp=Z,6.6nm,0.7s,baz=26,slow=2.6,SNR=50						
GERES				PKPab	PKPab	01 26 57.5	-0.1
	comp=Z,2.4nm,0.8s,baz=18,slow=5.6,SNR=7.7						
GERES	GERESS Array B	150.49	344		PKPbc	01 26 48.0	-0.5
PLVB	Pleven	150.52	325	⇑P	PKiKP	01 26 48.8	-0.3
BMRD	Maredsous	150.54	356	PKPbc	PKPbc	01 26 48.4	0.0
CONA	Conrad Observa	150.70	340	ePKiKP	PKPbc	01 26 49.0	0.0
	comp=Z,7.7nm,0.6s,SNR=13						
DOU	Dourbes	150.76	356	PKPbc	PKPbc	01 26 48.5	-0.4
DOU				PKiKP	PKiKP	01 26 49.1	-0.2
PUNG	Punghina	150.78	328	⇑P	PKPbc	01 26 48.9	-0.2
MANT	Manisa	150.98	313		PKPbc	01 26 49.9	-0.2
MDVR	Moldovita	151.00	330	⇓P	PKPbc	01 26 48.2	-1.5
MOA	Molln	151.25	342	i PKPbc	PKPbc	01 26 49.7	-0.4
	comp=Z,3.0nm,0.5s						
ARSA	Arzberg	151.41	340	i PKPbc	PKPbc	01 26 49.8	-0.8
	comp=Z,1.0nm,0.5s						
STU	Stuttgart	151.53	350	ePKPbc	PKiKP	01 26 50.9	-0.1
	baz=14,slow=4.2						
FUR	Furstenfeldbru	151.71	346	ePKPbc	PKPbc	01 26 51.2	0.0
	baz=14,slow=4.2						
RJOB	Jochberg	151.75	344	ePKPbc	PKPbc	01 26 51.0	-0.3
	baz=14,slow=4.2						
RJOB				ePKPab	PKPab	01 27 03.3	+0.4
	baz=14,slow=4.2						
VTS	Vitosha	151.79	325	⇑P	PKPbc	01 26 51.7	0.0
VTS	Vitosha	151.79	325		PKPbc	01 26 50.8	-0.9
SOKA	Soboth	152.07	340	ePKPbc	PKPbc	01 26 51.3	-0.7
	comp=Z,2.2nm,0.5s						
BFO	Black Forest	152.10	351	ePKPbc	PKPbc	01 26 52.0	0.0
	baz=14,slow=4.2						
KBA	Koelnbreinsper	152.21	343	i PKiKP	PKPbc	01 26 52.2	-0.3
	comp=Z,1.2nm,0.2s						
OBKA	Obir	152.37	341	i PKiKP	PKiKP	01 26 53.5	+0.6
	comp=Z,1.4nm,0.4s						
UBR	Ueberruh	152.41	348	ePKPbc	PKPbc	01 26 52.3	-0.5
	baz=14,slow=4.2						
WATA	Walderalm	152.42	345	i PKiKP	PKPbc	01 26 52.4	-0.6
	comp=Z,3.9nm,0.5s,SNR=5.8						
RETA	Reutte	152.46	347	i PKiKP	PKPbc	01 26 52.6	-0.3
	comp=Z,1.2nm,0.4s						
MOTA	Moosalm	152.52	346	ePKiKP	PKPbc	01 26 52.6	-0.5
	comp=Z,3.4nm,0.5s,SNR=5.4						
MYKA	Terra Mystica	152.53	342	i PKPbc	PKPbc	01 26 52.0	-1.0
	comp=Z,3.4nm,0.4s,SNR=4.2						
SQTA	Sankt Quirin	152.62	346	ePKiKP	PKPbc	01 26 52.9	-0.4
	comp=Z,4.9nm,0.6s,SNR=6.3						
ABTA	Abfaltersbach	152.74	344	ePKPbc	PKPbc	01 26 52.6	-0.9
	comp=Z,6.7nm,0.5s,SNR=7.8						
FETA	Feichten	152.91	346	ePKiKP	PKPbc	01 26 53.8	-0.2
	comp=Z,3.3nm,0.5s,SNR=4.3						
DAVOX	Davos/Dischmat	153.32	347	PKPbc	PKPbc	01 26 54.8	-0.2
	comp=Z,10nm,0.6s,baz=236,slow=2.6,SNR=31						
FUORN	Ofenpass-Fuorn	153.40	347		PKPbc	01 26 55.0	-0.2
FUORN					PKPab	01 27 10.4	+0.2
LIC	Lamto	164.03	155	ePKIKP	PKPdf	01 26 59.6	-0.4
	comp=Z,11nm,0.6s						
LIC	Lamto	164.03	155	ePKP2	PKPab	01 27 58.3	+1.4
KIC	Kosan Boka	164.26	156	ePKIKP	PKPdf	01 26 59.8	-0.4
	comp=Z,22nm,1.1s						
KIC	Kosan Boka	164.26	156	ePKP2	PKPab	01 27 59.4	+1.4
	comp=Z,12nm,0.8s						
TIC	Toumodi	164.41	154	ePKIKP	PKPdf	01 26 59.9	-0.5
	comp=Z,2.6nm,0.3s						
TIC	Toumodi	164.41	154	ePKP2	PKPab	01 27 59.9	+1.2
DBIC	Dimbokro	164.50	155	PKP	PKPdf	01 27 00.1	-0.3
	comp=Z,4.4nm,0.9s,baz=272,slow=20,SNR=4.8						
DBIC				PKPab	PKPab	01 28 00.5	+1.5
	comp=Z,1.6nm,0.3s,baz=204,slow=7.2,SNR=4.4						
TORD	Torodi Ar. Bea	172.31	180	PKP	PKPdf	01 27 04.5	-1.0
	comp=Z,2.5nm,0.8s,baz=13,slow=0.3,SNR=12						
TORD				PKPab	PKPab	01 28 34.6	+1.2
	comp=Z,1.8nm,0.8s,baz=179,slow=3.8,SNR=6.5						
TORD				SKP	SKPdf	01 29 46.4	+2.9
	comp=Z,1.6nm,1.1s,baz=259,slow=2.9,SNR=3.7						
TORD	Torodi Ar. Bea	172.31	180		PKPdf	01 27 04.2	-1.2
TORD					PKPab	01 28 34.0	+0.5

NEIC **02** *01:08:24.2±1.0, 52.°2N±0.°2×169.°9W±0.°2, h18km±10km, Error ellipse: s-maj=27.8km s-min=12.0km az=157.0*

AEIC **02** *01:08:26.0±2.0, 52.°21N±0.°08×169.°6W±0.°1, h16km±6km, ML2.7/11, Error ellipse: s-maj=15.0km s-min=4.3km az=135.0*

IDC **02** *01:08:27.3±7.5, 52.°02N×169.°66W, h43km±69km, mb3.1/4, mb1 3.4/6, mb1mx3.1/66, mbtmp3.4/6, ML3.2/2, Error ellipse: s-maj=68.1km s-min=23.0km az=0.0*

ISC 02 01:08:26.8±1.3**, 52.°2N**±0.°2×**169.°58W**±0.°09**, h30**km**, n15, σ1.°10**/18**, mb3.2**/4**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.93	28		Pn	01 08 42.5	-1.3
NIKH					Sn	01 08 56.7	+0.8
OKSP	Okmok Steeple	1.34	35		Pn	01 08 48.9	-0.6
OKTU	Okmok Mt. Tuli	1.54	37		Pn	01 08 51.6	-0.6
OKFG	Magazine Ridge	1.61	38		Pn	01 08 52.9	-0.3
OKFG					Sn	01 09 14.9	+2.0
MREP	Makushin Rep't	2.38	45		Pn	01 09 03.4	-0.4
MSW	Makushin Switc	2.44	43		Pn	01 09 04.2	-0.3
UNV	Unalaska Valle	2.51	47		Pn	01 09 05.5	+0.1
UNV					Sn	01 09 36.5	+1.5
KOFP	Korovin Flat P	2.78	274		Pn	01 09 09.9	+0.7
AKUT	Akutan	3.03	48	Pn	Pn	01 09 13.0	+0.4
ILAR	Eielson Array	17.20	34	P	Pn	01 12 24.1	-0.4
	0.0nm,0.3s,baz=234,slow=7.7,SNR=3.8						
PETK	Petropavlovsk-	19.79	286	P	P	01 12 54.5	+0.1
	1.0nm,0.3s,baz=91,slow=13,SNR=14						
YKA	Yellowknife Ar	30.48	49	P	P	01 14 38.6	+2.1
	0.1nm,0.5s,baz=270,slow=8.0,SNR=4.3						
PDAR	Pinedale Array	40.57	79	P	P	01 16 02.4	-1.2
	0.2nm,0.5s,baz=282,slow=6.3,SNR=1.7						
MKAR	Makanchi Array	63.85	313	P	P	01 18 54.9	-1.2
	0.1nm,0.4s,baz=59,slow=7.7,SNR=4.5						
FINES	FINESS Array B	66.06	352	P	P	01 19 09.4	-0.7
	0.8nm,0.7s,baz=356,slow=8.4,SNR=4.8						

NIED **02** *01:12:00, 25.°30N×125.°70E, h5km, Mw3.9 Best double couple: $M_0$6.75000×10^14 NP1:ϕ_s158.00000°, δ56.00000°, λ-110.00000°. NP2:ϕ_s11.00000°, δ39.00000°, λ-63.00000°.*

IDC **02** *01:12:25.2±0.9, 25.°33N×125.°53E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.5/64, mbtmp3.7/7, MS2.6/1, Ms1 2.8/1, ms1mx2.3/35, Error ellipse: s-maj=45.6km s-min=20.1km az=71.0*

JMA **02** *01:12:27.4±0.1, 25.°30N×125.°67E, h30km±3km, M4.0*

NEIC **02** *01:12:30.8±2.4, 25.°2N±0.°1×125.°67E±0.°06, h53km±10km, mb4.2/6, Error ellipse: s-maj=16.5km s-min=4.5km az=156.0*

ISC 02 01:12:28.5±1.2**, 25.°24N**±0.°07×**125.°68E**±0.°05**, h24**km±10km**, n37, σ1.°15**/47**, mb3.9**/9**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	Ikemajima	0.50	231	P	Pb	01 12 38.1	-0.5
JIKM				eS	Sb	01 12 46.1	+0.6
JOGS	Gusukube	0.54	208	P	Pb	01 12 38.9	-0.4
JOGS				S	Sb	01 12 47.2	+0.6
JMJ2	Miyako jima3	0.59	213	P	Pb	01 12 39.7	-0.4
JMJ2				S	Sb	01 12 48.6	+0.5
JIRB	Irabujima	0.61	229	P	Pb	01 12 39.6	-1.0
JIRB				S	Sb	01 12 48.7	-0.1
JTJ	Tarama	1.07	236	P	Pn	01 12 46.8	-1.1

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JTJ				S	Sb	01 13 01.7	-0.1
JISG	Ishigakijimahi	1.40	243	P	Pn	01 12 52.1	-0.4
JISG				S	Sb	01 13 11.1	-0.3
JKE	Kume jima 2	1.47	42	P	Pn	01 12 52.4	-1.1
JKE				eS	Sn	01 13 11.0	-1.1
JIJ	Ishigaki jima	1.65	238	P	Pn	01 12 55.5	-0.4
JIJ				eS	Sn	01 13 16.2	-0.1
JKRS	Kuro-shima	1.81	237	P	Pn	01 12 58.3	+0.1
JKRS				eS	Sn	01 13 21.2	+0.7
JAGN	Aguni-jima	1.95	46	P	Pn	01 12 59.7	-0.3
JAGN				eS	Sn	01 13 22.5	-1.2
IRIF	Iriomote-Funau	1.99	244	P	Pn	01 13 00.5	-0.1
IRIF				eS	Sn	01 13 25.6	+0.9
HATJ	Hateruma jima	2.07	236	P	Pn	01 13 02.7	+1.0
JJT3	Tamagusuku3	2.10	64	eS	Sn	01 13 29.1	+1.5
JNTH	Nagotoyohara	2.47	58	P	Pn	01 13 08.3	+1.1
YOJ	Yonaguni jima	2.54	253		Pn	01 13 08.6	+0.4
JOW	Kunigami	2.82	55		Pn	01 13 13.8	+1.7
TATO	Taipei	3.81	267		Pn	01 13 27.3	+1.7
NACB	Ninganchiao	3.86	255		Pn	01 13 27.5	+1.1
YHNB	Yeheng	3.95	263		Pn	01 13 29.6	+2.0
YULB	Yu-li	4.40	246		Pn	01 13 33.4	-0.4
SSLB	Suanglung	4.54	252		Pn	01 13 37.0	+1.2
TWG	Pinlang	4.85	241		Pn	01 13 38.6	-1.4
TPUB	Ta-pu	4.99	248		Pn	01 13 43.6	+1.6
KSAR	Wonju Array Be	12.31	8	Pn	Pn	01 15 23.5	+1.3
CHTO	Chiang Mai	25.57	261	P	P	01 17 55.7	-0.1
CMAR	Chiang Mai Arr	25.69	260	LR	LR	01 28 37.7	
	comp=Z,12nm,19.5s,baz=80,slow=38						
SONM	Songino Array	27.22	331	P	P	01 18 09.3	-1.3
	0.5nm,0.9s,baz=151,slow=11,SNR=4.2						
MKAR	Makanchi Array	40.51	313	P	P	01 20 05.1	-0.4
	0.2nm,0.4s,baz=95,slow=11,SNR=4.4						
ZAA0	Zalesovo Array	41.68	324	P	P	01 20 13.0	-1.9
ZAA0				IAmb	IAmb	01 21 00.6	
	comp=Z,4.6nm,1.6s						
ZALV	Zalesovo Beam	41.68	324	P	P	01 20 13.2	-1.8
	comp=Z,0.8nm,0.6s,baz=108,slow=9.2,SNR=4.5						
AS31	Alice Springs	49.26	170	P	P	01 21 13.2	-2.2
AS31				IAmb	IAmb	01 21 16.1	
	comp=Z,1.8nm,0.8s						
ASAR	Alice Springs	49.26	170	P	P	01 21 17.2	+1.8
	comp=Z,0.9nm,0.8s,baz=355,slow=9.3,SNR=9.1						
ASAR				PcP	PcP	01 22 39.2	+1.1
	comp=Z,0.2nm,0.4s,baz=352,slow=3.9,SNR=4.4						
ASAR	Alice Springs	49.26	170	P	P	01 21 13.2	-2.2
STKA	Stephens Creek	58.79	164	P	P	01 22 25.1	+0.3
	comp=Z,2.3nm,0.9s,baz=348,slow=9.3,SNR=3.7						
STKA	Stephens Creek	58.79	164	IAmb	IAmb	01 23 40.0	
	comp=Z,5.0nm,1.9s						
INK	Inuvik	70.70	23	P	P	01 23 42.9	+0.9
	comp=Z,0.9nm,0.7s,baz=302,slow=7.8,SNR=3.5						
YKA	Yellowknife Ar	80.38	24	P	P	01 24 37.9	+0.3
	comp=Z,0.6nm,0.7s,baz=301,slow=5.6,SNR=13						

*IDC **02** 01:20:51.0±2.0, 35.06N×60.41E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.2/45, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=26.5km s-min=16.7km az=161.0*
*TEH **02** 01:20:53.4, 35.54N×60.90E, h8km, ML3.8*
*THR **02** 01:20:55.1±0.3, 35.38N×61.00E, h16km±6km, ML3.6*
ISC 02 01:20:56.7±0.9, 35.50N±0.05×60.84E±0.08, h14km, n30, σ1s11/30, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JRKH	Jarkhoshk	0.57	316	ePg	Pg	01 21 05.3	-2.6
IMOG	Moghan	1.36	297	ePg	Pn	01 21 19.9	-1.7
IMOG				e		01 21 40.6	
SHRT	Shahrakht	1.91	194	ePg	Pn	01 21 28.4	-0.5
SHRT				eSg	Sn	01 21 52.7	0.0
SHRT	Shahrakht	1.91	194	ePn	Pn	01 21 28.4	-0.5
IAKL	Akhelmad	2.01	304	ePn	Pn	01 21 30.9	+0.4
IAKL				e		01 22 03.5	
IKRD	Kardeh	2.27	305	ePg	Pn	01 21 25.5	-8.5
IKRD				e		01 21 54.9	
IMON	Monand	2.50	203	ePn	Pn	01 21 37.7	+0.5
IMON				e		01 21 45.8	
AFRZ	Afriz	2.56	217	ePn	Pn	01 21 38.3	+0.4
AFRZ				e		01 22 27.4	
IEMG	Emamgholi	2.60	318	e	Sg	01 22 23.6	+3.3
ISFR	Sfrayin	2.77	305	e	Sg	01 22 35.7	+10
ITEG	Tejag	3.12	214	ePn	Pn	01 21 45.8	+0.1
ITEG				e		01 21 57.5	
GEYT	Alibeck	3.26	319	Pn	Pn	01 21 48.4	+0.9
	0.7nm,0.3s,baz=158,slow=13,SNR=14						
GEYT				Pg	Pb	01 21 53.6	-0.9
	3.2nm,0.3s,baz=145,slow=18,SNR=20						
GEYT				Lg	Lg	01 22 39.2	
	6.3nm,0.3s,baz=147,slow=39,SNR=6.4						
IKOO	Kooshah	3.43	207	ePn	Pn	01 21 50.1	+0.1
IKOO				e		01 22 11.7	
TABS	Tabas	3.58	240	ePn	Pn	01 21 53.0	+1.0
TABS				IAML		01 22 59.3	
	comp=N,87nm,0.4s						
TABS	Tabas	3.58	240	ePn	Pn	01 21 53.0	+1.0
TKDS	Koohdasht(Taba	3.60	240	ePn	Pn	01 21 52.8	+0.6
TKDS				e		01 23 00.7	
BSRN	Basiran	3.80	202	ePn	Pn	01 21 54.4	-0.7
BSRN	Basiran	3.80	202	ePn	Pn	01 21 54.4	-0.7
TNSJ	Nastanj	3.81	247	ePn	Pn	01 21 54.9	-0.1
NHDN	Nehbandan	4.15	189	ePn	Pn	01 22 00.2	+0.4
TPRV	Parvadeh(Tabas	4.23	236	ePn	Pn	01 22 01.6	+0.7
TPRV				e		01 23 14.4	
IMND	Minoodasht	4.72	293	ePn	Pn	01 22 07.4	-0.1
YZKH	Yazd	6.05	241	ePn	Pn	01 22 26.9	+1.1
YZKH	Yazd	6.05	241	ePn	Pn	01 22 26.9	+1.1
KHGB	Koh Gabri	6.29	217	ePn	Pn	01 22 29.8	+0.5
ANAR	Anarak	6.32	251	ePn	Pn	01 22 29.4	-0.1
BVAR	Borovoye Array	18.78	18	P	Pn	01 25 16.8	+0.9
	comp=N,0.3nm,0.3s,baz=193,slow=10,SNR=10						
MKAR	Makanchi Array	19.64	48	P	Pn	01 25 26.1	-0.2
	comp=N,0.9nm,0.5s,baz=252,slow=12,SNR=24						
ZALV	Zalesovo Beam	24.91	35	P	P	01 26 20.6	+1.6
	comp=N,0.5nm,0.3s,baz=232,slow=7.1,SNR=4.2						
YKA	Yellowknife Ar	82.28	358	P	P	01 33 17.1	-0.2
	comp=N,0.2nm,0.8s,baz=355,slow=6.4,SNR=5.2						

*IDC **02** 01:21:03.9±2.5, 10.27S×161.41E, h96km±19km, mb3.4/6, mb1 3.7/7, mb1mx3.5/28, mbtmp3.8/7, MS3.2/1, Ms1 3.2/1, ms1mx2.6/15, Error ellipse: s-maj=27.7km s-min=22.3km az=79.0*
ISC 02 01:21:02.8±0.9, 10.2S±0.1×161.5E±0.1, h85km, n18, σ1s13/15, mb3.6/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
HNR	Honiara	1.71	296	P	Pn	01 21 31.4	+0.2
	157nm,0.3s,baz=149,slow=7.7,SNR=26						
HNR				S	Sn	01 21 53.5	+0.8
	512nm,0.3s,baz=208,slow=23,SNR=24						
HNR				LR	LR	01 21 53.6	
	comp=Z,106nm,18.8s,baz=135,slow=30						
HNR	Honiara	1.71	296	eP	Pn	01 21 31.0	-0.2
HNR				iS	Sn	01 21 54.0	+1.3
KRVT	Keravat (AS076	11.07	301	LR	LR	01 27 34.3	
	comp=Z,113nm,19.9s,baz=101,slow=35						
DZM	Mont Dzumac	12.73	159	P	Pn	01 24 02.1	+1.3
	2.6nm,0.3s,baz=24,slow=8.1,SNR=33						
CTA	Charters Tower	17.71	234	P	Pn	01 25 05.5	+1.5
	0.7nm,0.3s,baz=60,slow=11,SNR=12						
WRA	Warramunga Arr	27.94	246	P	P	01 26 44.4	-1.1
	0.9nm,0.6s,baz=75,slow=9.6,SNR=13						
WRA				pP	pwP	01 27 06.1	-1.1
	2.1nm,0.8s,baz=75,slow=9.4,SNR=4.8						
H11S2	WAKE ISLAND Hy	28.95	10	T	T	01 55 52.5	
	baz=186,slow=74,SNR=2.6						
H11S3	WAKE ISLAND Hy	28.95	10	T	T	01 55 50.2	
	baz=186,slow=74,SNR=9.9						
H11S1	WAKE ISLAND Hy	28.96	10	T	T	01 55 56.7	
	baz=186						
ASAR	Alice Springs	29.55	240	P	P	01 26 57.9	-1.9
	0.8nm,0.8s,baz=68,slow=9.3,SNR=6.0						
ASAR				pP	pwP	01 27 21.3	-1.6
	0.6nm,0.8s,baz=65,slow=11,SNR=2.6						
H11N1	WAKE ISLAND Hy	30.17	10	T	T	01 57 50.0	
	baz=192,slow=76,SNR=6.9						
H11N3	WAKE ISLAND Hy	30.18	10	T	T	01 57 43.5	
	baz=192,slow=76,SNR=4.3						
H11N2	WAKE ISLAND Hy	30.19	10	T	T	01 57 27.2	
	baz=192,slow=76,SNR=7.8						
CMAR	Chiang Mai Arr	67.97	295	pP	pP	01 32 17.5	+2.9
	0.9nm,0.3s,baz=123,slow=5.4,SNR=1.6						
SONM	Songino Array	75.55	325	P	P	01 32 38.9	+0.5
	0.4nm,0.6s,baz=145,slow=4.2,SNR=3.6						
SONM				pP	pP	01 32 59.4	-0.6
	1.3nm,0.8s,baz=145,slow=5.0,SNR=8.3						
ILAR	Eielson Array	84.06	20	P	P	01 33 23.8	0.0
	0.5nm,0.9s,baz=241,slow=5.0,SNR=4.5						
MKAR	Makanchi Array	90.06	318	P	P	01 33 53.6	+0.3
	0.3nm,0.7s,baz=111,slow=5.7,SNR=5.4						
YKA	Yellowknife Ar	96.13	28	P	P	01 34 20.4	-0.4
	0.3nm,0.7s,baz=259,slow=5.1,SNR=5.0						

*IDC **02** 01:28:35.8±5.5, 4.69S×153.60E, h118km±35km, mb3.0/3, mb1 3.3/4, mb1mx3.1/24, mbtmp3.5/4, Error ellipse: s-maj=61.8km s-min=21.2km az=101.0*
ISC 02 01:28:35.3±1.8, 4.7S±0.1×153.7E±0.2, h100km, n6, σ1s97/8, mb2.9/3, New Ireland region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.68	284	P	Pn	01 29 03.6	-0.1
	18nm,0.3s,baz=81,slow=4.6,SNR=4.1						
KRVT				S	Sn	01 29 26.3	+0.9
	25nm,0.3s,baz=106,slow=20,SNR=8.4						
PMG	Port Moresby	7.96	234	P	Pn	01 30 29.2	+1.0
	3.1nm,0.3s,baz=41,slow=9.3,SNR=6.6						
PMG				S	Sn	01 31 56.5	-0.2
	1.6nm,0.3s,baz=171,slow=11,SNR=2.6						
WRA	Warramunga Arr	24.15	230	P	P	01 33 40.9	-1.4
	0.9nm,0.7s,baz=52,slow=9.9,SNR=6.2						
ASAR	Alice Springs	26.80	223	P	P	01 34 04.4	-1.8
	0.3nm,0.7s,baz=49,slow=11,SNR=3.1						
MKAR	Makanchi Array	80.82	319	P	P	01 40 36.8	-1.3
	0.1nm,0.5s,baz=105,slow=6.6,SNR=3.7						
TORD	Torodi Ar. Bea	151.09	289	PKPbc	PKPdf	01 48 15.2	+3.3
	0.4nm,0.9s,baz=56,slow=2.9,SNR=2.9						

*ATH **02** 01:44:12.7, 38.20N×20.39E, h12km±1km, ML2.8/5, Error ellipse: s-maj=2.1km s-min=1.1km az=260.0*
*THE **02** 01:44:13.2, 38.20N×20.40E, h10km±1km, ML2.7/6, Error ellipse: s-maj=1.2km s-min=0.5km az=245.0*
ISC 02 01:44:12.8±1.4, 38.20N±0.03×20.41E±0.04, h12km±5km, n25, σ0s44/41, Greece

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	222	P	Pg	01 44 15.0	+0.1
CHV1				S	Sg	01 44 16.3	-0.1
KEF3	Kipouria, Keph	0.05	268	P	Pg	01 44 15.0	0.0
KEF3				S	Sg	01 44 16.6	-0.1
KEF4	Livadi, Kephal	0.06	15	P	Pg	01 44 15.2	0.0
KEF4				S	Sg	01 44 16.9	+0.1
ARG2	Argostoli	0.07	112	P	Pg	01 44 15.3	+0.1
ARG2				S	Sg	01 44 17.2	+0.2
	14μm,0.1s						
KEF2	Argostoli. Kep	0.07	121	P	Pg	01 44 15.4	+0.1
KEF2				S	Sg	01 44 17.0	-0.1
KEF1	Kardakata, Kep	0.09	35	P	Pg	01 44 15.6	+0.1
KEF1				S	Sg	01 44 17.3	-0.1
VLS	Valsamata	0.15	101	P	Pg	01 44 16.3	0.0
VLS				S	Sg	01 44 18.3	-0.5
	5μm,0.1s						
VLS	Valsamata	0.15	101	P	Pg	01 44 16.3	0.0
VLS				S	Sg	01 44 18.4	-0.4
VLS				AML	AML	01 44 19.1	
	comp=E,11232μm,0.1s						
VLS				AML	AML	01 44 19.2	
	comp=N,6412μm,0.1s						
FSK	Fiskardo	0.28	26	P	Pg	01 44 18.8	+0.2
FSK				S	Sg	01 44 23.5	+0.9
	comp=N,1μm,0.2s						
FSK	Fiskardo	0.28	26	P	Pg	01 44 18.8	+0.2
FSK				S	Sg	01 44 23.5	+0.9
FSK				AML	AML	01 44 23.7	
	comp=N,2673μm,0.3s						
FSK				AML	AML	01 44 24.2	
	comp=E,1805μm,0.1s						
KFL	Anninata	0.32	107	P	Pg	01 44 19.3	+0.1
KFL				S	Sg	01 44 24.8	+1.3
	comp=E,3μm,0.3s						
KFL	Anninata	0.32	107	P	Pg	01 44 19.0	-0.2
KFL				S	Sg	01 44 23.4	-0.1
KFL				AML	AML	01 44 25.1	
	comp=E,6959μm,0.4s						
KFL				AML	AML	01 44 25.6	
	comp=N,3566μm,0.5s						
VLMS	Volimes, Zakyn	0.39	148	P	Pg	01 44 20.4	-0.1
VLMS				S	Sg	01 44 26.2	+0.6
VLMS				AML	AML	01 44 27.6	
	comp=E,3937μm,0.1s						
VLMS				AML	AML	01 44 27.7	
	comp=N,5994μm,0.2s						
EVGI	Lefkada island	0.46	25	P	Pg	01 44 21.8	-0.1
EVGI				S	Sb	01 44 29.3	-0.5
	comp=N,232nm,0.3s						
EVGI	Lefkada island	0.46	25	P	Pg	01 44 21.7	-0.1
EVGI				S	Sg	01 44 28.8	+0.8
MGNA	Meganis	0.54	34	P	Pg	01 44 23.3	-0.2
LKD2	Lefkada island	0.62	19	P	Pg	01 44 25.2	+0.3
LKD2	Lefkada island	0.62	19	P	Pg	01 44 24.0	-0.9
KRI1	kERI	0.63	149	P	Pg	01 44 25.1	0.0
KRI1				S	Sb	01 44 34.7	+0.1
	comp=N,1μm,0.2s						
TSLK	Tsoukalades, L	0.65	17	P	Pg	01 44 25.3	-0.2
TSLK	Tsoukalades, L	0.65	17	P	Pg	01 44 24.8	-0.7
PDO	Prodromos	0.73	57	P	Pg	01 44 26.7	-0.3
PDO	Prodromos	0.73	57	P	Pg	01 44 26.6	-0.3
PVO	Paravola	0.97	65	P	Pg	01 44 31.4	-0.2
PVO	Paravola	0.97	65	P	Pg	01 44 31.0	-0.6

*ATH **02** 01:44:52.9, 38.21N×20.39E, h12km±2km, ML3.0/4, Error ellipse: s-maj=2.5km s-min=1.2km az=256.0*
*THE **02** 01:44:52.9, 38.20N×20.36E, h10km±1km, ML3.0/9, Error ellipse: s-maj=1.5km s-min=0.8km az=246.0*
ISC 02 01:44:52.6±1.0, 38.22N±0.03×20.40E±0.05, h13km±5km, n24, σ0s50/43, Greece

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.04	26	P	Pg	01 44 55.2	+0.3
KEF4				S	Sg	01 44 56.9	+0.2
CHV1	Chavriata, Kef	0.04	203	P	Pg	01 44 55.1	+0.1
CHV1				S	Sg	01 44 56.4	-0.2
	93μm,0.4s						
KEF3	Kipouria, Keph	0.05	246	P	Pg	01 44 55.2	+0.2
KEF3				S	Sg	01 44 56.6	-0.2
KEF1	Kardakata, Kep	0.08	44	P	Pg	01 44 55.5	+0.2
KEF1				S	Sg	01 44 57.4	+0.2
ARG2	Argostoli	0.08	123	P	Pg	01 44 55.5	+0.2
ARG2				S	Sg	01 44 57.5	+0.3
	28μm,0.1s						
KEF2	Argostoli. Kep	0.09	130	P	Pg	01 44 55.5	+0.1
KEF2				S	Sg	01 44 57.2	-0.2
VLS	Valsamata	0.15	107	P	Pg	01 44 56.4	+0.1
VLS				S	Sg	01 44 59.2	+0.3
	7μm,0.1s						
VLS	Valsamata	0.15	107	P	Pg	01 44 56.4	+0.1
VLS				S	Sg	01 44 58.8	-0.2
VLS				AML	AML	01 44 59.4	
	comp=E,17880μm,0.1s						
VLS				AML	AML	01 44 59.6	
	comp=N,9986μm,0.2s						
VSK1	VASILIKIADES	0.23	34	P	Pb	01 44 58.1	-0.5
VSK1				S	Sb	01 45 01.9	-0.7
FSK	Fiskardo	0.27	28	P	Pb	01 44 58.9	-0.4
FSK				S	Sb	01 45 03.5	-0.3
	comp=N,2μm,0.3s						
FSK	Fiskardo	0.27	28	P	Pb	01 44 58.9	-0.4
FSK				S	Sg	01 45 02.2	+0.2
FSK				AML	AML	01 45 03.8	
	comp=N,3740μm,0.4s						
FSK				AML	AML	01 45 04.4	
	comp=E,2960μm,0.1s						
KFL	Anninata	0.32	110	P	Pg	01 44 59.4	+0.2
KFL				S	Sb	01 45 04.7	-0.7
	comp=E,4μm,0.4s						
KFL	Anninata	0.32	110	P	Pg	01 44 59.3	+0.1
KFL				S	Sb	01 45 04.2	-1.2
KFL				AML	AML	01 45 05.3	
	comp=E,8755μm,0.5s						
KFL				AML	AML	01 45 07.7	
	comp=N,5733μm,0.3s						
VLMS	Volimes, Zakyn	0.40	149	P	Pg	01 45 00.6	0.0
EVGI	Lefkada island	0.45	27	P	Pb	01 45 02.2	-0.1
EVGI				S	Sb	01 45 09.5	+0.6
	comp=N,342nm,0.1s						
EVGI	Lefkada island	0.45	27	P	Pb	01 45 01.9	-0.4
EVGI				S	Sb	01 45 08.4	-0.5
MGNA	Meganis	0.53	35	P	Pb	01 45 03.3	-0.5
MGNA				S	Sb	01 45 10.8	-0.5
LKD2	Lefkada island	0.60	19	P	Pb	01 45 05.3	+0.3
AST1	Astakos	0.63	59	P	Pb	01 45 05.2	-0.2
TSLK	Tsoukalades, L	0.63	18	P	Pg	01 45 04.7	-0.3
KRI1	kERI	0.65	149	P	Pb	01 45 05.5	+0.3
KRI1				S	Sg	01 45 14.6	+0.8
	comp=N,2μm,0.1s						
PDO	Prodromos	0.72	58	P	Pb	01 45 06.9	-0.1
PDO				S	Sn	01 45 19.7	+0.3
	comp=N,845nm,0.5s						
RLS	Riolos of Patr	0.85	101	P	Pn	01 45 10.1	-0.2
PVO	Paravola	0.97	66	P	Pn	01 45 11.7	-0.2
PVO				S	Sn	01 45 27.4	+1.9
	comp=N,632nm,0.6s						

*JMA **02** 01:45:22.3±0.1, 23.71N×121.51E, h0km, M3.1*
*TAP **02** 01:45:23.3, 23.74N×121.42E, h21km, ML3.5, B*
ISC 02 01:45:23.5±0.9, 23.73N±0.01×121.44E±0.02, h20km±1km, n124, σ0s69/211, 15C-18D, Taiwan

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
EGFH	Guangfu	0.06	193	⇓P	Pb	01 45 27.3	+0.1
	baz=171						
EGFH				S	Sb	01 45 29.8	+0.1
	baz=171						
ESL	Shilin	0.09	355	⇓iP	Pb	01 45 27.3	-0.1
	baz=18						
ESL				iS	Sb	01 45 29.8	-0.3
	baz=18						
ENLB	Shoufeng	0.23	39	eP	Pb	01 45 28.6	-0.7
	baz=40						
ENLB				eS	Sb	01 45 33.3	-0.1
	baz=40						
HGSD	Ruisui	0.23	184	⇓P	Pb	01 45 29.6	+0.2
	baz=184						
HGSD				S	Sb	01 45 34.1	+0.8
	baz=184						
EHY	Hungye	0.24	207	⇓P	Pb	01 45 28.9	-0.5
	baz=193						
EHY				eS	Sb	01 45 33.1	-0.5
	baz=193						
VWDT	VWDT	0.28	276	⇑P	Pb	01 45 29.8	-0.1
	baz=268						
VWDT				S	Sb	01 45 33.4	-0.7
	baz=268						
HWA	Hwalien	0.29	31	eP	Pb	01 45 30.5	+0.4
	baz=32						
HWA				eS	Sb	01 45 35.5	+0.9
	baz=32						
OWD	Renai	0.33	313	⇓P	Pb	01 45 30.4	-0.4
	baz=314						
OWD				S	Sb	01 45 34.5	-1.3
	baz=314						
YULB	Yu-li	0.36	202	⇓P	Pb	01 45 30.4	-0.7
	baz=190						
YULB				S	Sb	01 45 36.2	+0.1
	baz=190						
TWD	Chiawan	0.38	22	eP	Pb	01 45 31.3	-0.2
	baz=22						
TWD				S	Sb	01 45 36.9	+0.1
	baz=22						
TWF1	Yuli	0.39	200	⇓eP	Pb	01 45 31.0	-0.7
	baz=195						
TWF1				eS	Sb	01 45 37.3	+0.1
	baz=195						
CHGB	Renai	0.41	324	⇓P	Pb	01 45 31.9	-0.2
	baz=331						
CHGB				S	Sb	01 45 37.0	-1.0
	baz=331						
WHF	Hehuan Shan	0.45	339	⇓P	Pb	01 45 32.3	-0.6
	baz=341						
WHF				eS	Sb	01 45 37.8	-1.6
	baz=341						
SSLB	Suanglung	0.45	278	⇑P	Pb	01 45 32.1	-0.6
	baz=284						
SSLB				S	Sb	01 45 37.4	-1.6
	baz=284						
NACB	Ninganchiao	0.47	17	⇑P	Pb	01 45 32.2	-0.8
	baz=20						
NACB				eS	Sb	01 45 38.5	-1.0
	baz=20						
ETLH	Xiulin Townshi	0.48	4	eP	Pb	01 45 32.8	-0.5
	baz=12						
ETLH				S	Sb	01 45 39.5	-0.4
	baz=12						
YUS	Yu-Shan	0.51	243	⇑iP	Pb	01 45 33.9	-0.1
	baz=240						
YUS				S	Sb	01 45 40.7	-0.4
	baz=240						
SMLT	Sun Moon Lake	0.52	288	⇓iP	Pb	01 45 33.5	-0.5
	baz=291						
SMLT				S	Sb	01 45 40.1	-1.1
	baz=291						
WHYT	Xinyi Township	0.54	267	eP	Pb	01 45 34.2	-0.1
	baz=267						
WHYT				eS	Sb	01 45 40.9	-0.9
	baz=267						
FULB	Fuli	0.54	195	eP	Pb	01 45 34.0	-0.4
	baz=200						
FULB				eS	Sn	01 45 43.3	-1.2
	baz=200						
DPDB	Guoxing	0.56	303	⇓iP	Pb	01 45 34.3	-0.4
	baz=308						
DPDB				S	Sb	01 45 41.9	-0.6
	baz=308						
TWT	Tachien	0.58	335	P	Pb	01 45 35.0	-0.2
	baz=329						
TWT				S	Sb	01 45 41.8	-1.3
	baz=329						
TDCB	Techi	0.59	334	⇓P	Pb	01 45 35.0	-0.2
	baz=329						
TDCB				S	Sb	01 45 41.8	-1.4
	baz=329						
ALS	Alishan	0.62	250	⇑P	Pb	01 45 35.9	-0.1
	baz=248						
ALS				S	Sb	01 45 43.7	-0.7
	baz=248						
CHKT	Chengkung	0.63	186	eP	Pb	01 45 35.8	0.0
	baz=173						
CHKT				eS	Sn	01 45 45.4	-1.1
	baz=173						
ELDTW	Lidau	0.66	216	eP	Pb	01 45 35.4	-1.0
	baz=207						
ELDTW				eS	Sb	01 45 45.0	-0.3
	baz=207						
WJS	Zhushan	0.66	279	eP	Pb	01 45 36.8	+0.4
	baz=278						
WJS				S	Sn	01 45 46.9	-0.6
	baz=278						
NNSB	Datong	0.70	356	⇑P	Pb	01 45 36.8	-0.4
	baz=7.0						
NNSB				eS	Sb	01 45 45.8	-0.6
	baz=7.0						
NNSH	Datong	0.70	356	⇑P	Pb	01 45 36.7	-0.4
	baz=5.0						
NNSH				S	Sb	01 45 45.8	-0.6
	baz=5.0						
WNT	Mingjian	0.71	283	P	Pb	01 45 37.9	+0.7
	baz=282						
WNT				eS	Sn	01 45 47.9	-0.8
	baz=282						
CHN5	Tsauling	0.71	260	⇑P	Pb	01 45 37.7	+0.4
	baz=253						
CHN5				S	Sb	01 45 47.6	+0.9
	baz=253						
WHP	Taichung City	0.71	321	eP	Pb	01 45 37.0	-0.3
	baz=325						
WHP				eS	Sb	01 45 46.6	-0.1
	baz=325						
NNS	Nan Shan	0.71	355	⇑P	Pb	01 45 37.0	-0.3
	baz=7.0						
NNS				eS	Sb	01 45 46.4	-0.4
	baz=7.0						
ENA	Nanau	0.75	21	⇑P	Pb	01 45 36.8	-1.1
	baz=25						
WGK	Gukeng	0.81	267	P	Pn	01 45 39.4	-0.2
	baz=267						
WGK				S	Sn	01 45 50.8	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
	baz=267						
TCU	Taichung	0.82	301	⇓eP	Pn	01 45 39.8	-0.1
	baz=301						
TCU				eS	Sn	01 45 50.9	-0.5
	baz=301						
WDLH	Douliu	0.83	268	eP	Pn	01 45 39.9	-0.1
	baz=267						
WDLH				S	Sn	01 45 51.8	+0.2
	baz=267						
STYT	Tauyuan	0.84	229	⇑P	Pb	01 45 39.8	+0.3
	baz=227						
STYT				S	Sb	01 45 51.0	+0.7
	baz=227						
TPUB	Ta-pu	0.86	241	⇑P	Pb	01 45 40.1	+0.5
	baz=240						
TPUB				S	Sb	01 45 51.6	+0.9
	baz=240						
CHN4	Tsaushan	0.86	245	⇑P	Pn	01 45 40.5	+0.1
	baz=235						
CHN4				S	Sn	01 45 52.0	-0.5
	baz=235						
TWQ1	Liyutan	0.87	316	⇓iP	Pn	01 45 40.7	+0.1
	baz=315						
TWQ1				S	Sb	01 45 51.7	+0.6
	baz=315						
NDT	Datong Townshi	0.88	4	eP	Pb	01 45 40.0	0.0
	baz=12						
NDT				eS	Sb	01 45 51.4	+0.1
	baz=12						
WCHH	Zhanghua	0.88	294	eP	Pn	01 45 40.6	-0.1
	baz=294						
WCHH				eS	Sn	01 45 52.5	-0.4
	baz=294						
WTP	Ta-pu	0.90	238	⇑iP	Pn	01 45 40.9	-0.1
	baz=237						
WTP				eS	Sn	01 45 52.9	-0.5
	baz=237						
CHN2	Minshiung	0.91	258	eP	Pn	01 45 41.3	+0.3
	baz=258						
CHN2				eS	Sn	01 45 53.5	-0.1
	baz=258						
ENTT	Nioudou	0.92	7	eP	Pb	01 45 40.0	-0.7
	baz=8.0						
ENTT				eS	Sb	01 45 52.7	+0.2
	baz=8.0						
NSY	Sanyi	0.93	318	⇓iP	Pn	01 45 42.0	+0.7
	baz=318						
NSY				eS	Sn	01 45 53.8	-0.3
	baz=318						
YHNB	Yeheng	0.94	356	⇑eP	Pb	01 45 40.8	-0.4
	baz=357						
YHNB				eS	Sb	01 45 52.4	-0.9
	baz=357						
NSK	Sanguang	0.95	355	eP	Pb	01 45 41.3	0.0
	baz=356						
NSK				S	Sb	01 45 53.0	-0.5
	baz=356						
TWC	Suao	0.96	23	eP	Pb	01 45 40.8	-0.6
	baz=17						
TWC				eS	Sn	01 45 54.5	-0.2
	baz=17						
WDJ	Dajia District	0.96	310	⇓P	Pn	01 45 42.5	+0.7
	baz=321						
WDJ				eS	Sn	01 45 56.0	+1.1
	baz=321						
CHY	Chiayi	0.96	257	eP	Pn	01 45 41.8	+0.1
	baz=256						
CHY				eS	Sn	01 45 55.5	+0.6
	baz=256						
TWG	Pinlang	0.96	201	eP	Pb	01 45 41.1	-0.3
	baz=187						
TWG				eS	Sn	01 45 55.0	+0.1
	baz=187						
TWGBT	Beinan	0.96	200	eP	Pb	01 45 41.1	-0.4
	baz=187						
TWGBT				eS	Sn	01 45 54.9	0.0
	baz=187						
PTSB	Yuanli	0.98	317	eP	Pn	01 45 42.5	+0.4
	baz=320						
NSTT	Nanjuang	0.99	336	eP	Pn	01 45 42.3	+0.1
	baz=344						
NSTT				S	Sb	01 45 54.5	0.0
	baz=344						
LIOB	Emei	1.00	337	⇓P	Pn	01 45 42.7	+0.3
	baz=345						
LIOB				S	Sb	01 45 54.8	0.0
	baz=345						
CHN1	Nanshi	1.00	238	eP	Pn	01 45 42.9	+0.5
	baz=237						
CHN1				eS	Sn	01 45 56.3	+0.6
	baz=237						
SNST	Tainan City	1.00	240	eP	Pn	01 45 43.1	+0.8
	baz=239						
SNST				eS	Sn	01 45 56.0	+0.1
	baz=239						
NMLH	Miaoli	1.00	324	eP	Pn	01 45 43.2	+0.8
	baz=324						
NMLH				eS	Sn	01 45 55.7	-0.2
	baz=324						
RLNB	Erlin	1.00	280	P	Pn	01 45 42.5	+0.1
	baz=280						
RLNB				S	Sn	01 45 56.0	0.0
	baz=280						
TWH	Lutao	1.01	178	eP	Pb	01 45 41.5	-0.8
	baz=177						
TWH				eS	Sb	01 45 55.1	0.0
	baz=177						
TWE	Neicheng	1.01	12	eP	Pb	01 45 41.4	-0.9
	baz=25						
TWE				eS	Sb	01 45 55.4	+0.2
	baz=25						
SGST	Jiashian	1.02	231	eP	Pb	01 45 42.2	-0.2
	baz=238						
SGST				eS	Sn	01 45 56.8	+0.5
	baz=238						
SLGT	Liugui	1.03	225	eP	Pn	01 45 43.6	+0.8
	baz=220						
EOS1	EOS1	1.03	37	eP	Pn	01 45 42.9	+0.2
	baz=38						
EOS1				eS	Sn	01 45 58.4	+1.8
	baz=38						
NWLT	Wulai	1.05	3	eP	Pn	01 45 43.1	+0.1
	baz=13						
NWLT				eS	Sb	01 45 56.4	+0.1
	baz=13						
WTCT	Ta-ch'eng	1.07	278	eP	Pb	01 45 43.5	+0.1
	baz=276						
ILA	Ilan	1.07	15	eP	Pb	01 45 43.6	+0.2
	baz=19						
WSF	Szhu	1.12	266	eP	Pb	01 45 44.6	+0.4
	baz=266						
WSF				eS	Sn	01 45 59.1	+0.3
	baz=266						
WLTB	Daxi	1.14	351	eP	Pb	01 45 45.5	+1.1
	baz=358						
WLTB				eS	Sn	01 45 59.5	+0.3
	baz=358						
SBCB	Hsinchu	1.14	339	eP	Pb	01 45 45.5	+0.9
	baz=339						
SBCB				eS	Sn	01 45 59.7	+0.3
	baz=339						
HSN	Hsinchu	1.16	338	eP	Pb	01 45 45.7	+1.0
	baz=325						
HSN				eS	Sn	01 46 00.7	+1.0
	baz=325						
NTC	Toucheng	1.18	17	eP	Pn	01 45 44.4	-0.4
	baz=22						
EGS		1.20	22	eP	Pb	01 45 45.6	0.0
	baz=27						
ECL	Taimali	1.21	202	eP	Pn	01 45 45.4	+0.1
	baz=184						
SSD	Sandimen	1.23	218	eP	Pb	01 45 46.1	+0.1
	baz=211						
NHDH	Xindian Distri	1.23	3	eP	Pn	01 45 45.7	+0.1
	baz=16						
TATO	Taipei	1.25	2	P	Pn	01 45 45.8	+0.1
	baz=16						
TATO				eS	Sb	01 46 02.8	+0.9
	baz=16						
TWA	Mucha	1.26	6	eP	Pn	01 45 45.9	0.0
	baz=20						
TWA				eS	Sb	01 46 03.2	+1.0
	baz=20						
NCUH	Zhongli	1.26	349	eP	Pb	01 45 47.3	+0.7
	baz=356						
NCU	National Centr	1.26	349	eP	Pb	01 45 47.0	+0.5
	baz=356						
SCLT	Jiali	1.27	245	eP	Pb	01 45 46.9	+0.2
	baz=244						
SCLT				eS	Sb	01 46 04.2	+1.7
	baz=244						
TIPB	Shuangxi	1.29	16	eP	Pn	01 45 45.6	-0.7
	baz=20						
TWM1	Shoushan	1.30	226	eP	Pb	01 45 49.2	+2.1
	baz=235						
TAP	Taipei	1.31	3	eP	Pb	01 45 47.1	-0.3
	baz=20						
MASBT	Mashibuluo	1.33	214	eP	Pn	01 45 46.9	0.0
	baz=207						
TWS1	Kuangyinshan	1.37	359	eP	Pb	01 45 48.2	-0.2
	baz=12						
TWS1				eS	Sb	01 46 07.7	+2.2
	baz=12						
TWB1	Santiao Chiao	1.37	21	eP	Pn	01 45 47.6	+0.2
	baz=26						
WFSB	Wu-fen Shan	1.38	13	eP	Pn	01 45 47.5	0.0
	baz=27						
YM01	YM01	1.42	5	eP	Pn	01 45 48.3	+0.2
	baz=29						
YM10	YM10	1.43	4	eP	Pb	01 45 49.1	-0.4
	baz=29						
EAST	Anshuo	1.44	202	eP	Pb	01 45 50.0	+0.3
	baz=186						
YM03	YM03	1.45	4	eP	Pn	01 45 49.0	+0.4
	baz=28						
ANP	Anpu	1.46	3	eP	Pb	01 45 50.0	+0.1
	baz=28						
SSPT	Xinbi	1.47	213	eP	Pb	01 45 50.3	+0.1
	baz=191						
SCZT	Fangliau	1.54	210	eP	Pb	01 45 51.3	-0.1
	baz=202						
TWY	Chenhua	1.55	5	eP	Pb	01 45 51.2	-0.3
	baz=28						
JYNG	Yonagunijimaku	1.55	62	P	Pn	01 45 50.1	+0.2
JYNG				S	Sb	01 46 10.4	-0.3
YOJ	Yonaguni jima	1.61	63	eP	Pn	01 45 50.9	+0.1
	baz=67						
YOJ	Yonaguni jima	1.61	63	P	Pn	01 45 51.2	+0.5
YOJ				eS	Sb	01 46 11.5	-0.9
LAY	Lan-yu	1.68	177	eP	Pn	01 45 49.8	-1.9
	baz=171						
WDGT	Dungji	1.70	255	eP	Pn	01 45 52.0	+0.1
	baz=249						
PHUB	P'eng-hu	1.73	263	P	Pn	01 45 52.7	+0.4
	baz=247						
PHUB				eS	Sn	01 46 14.0	+0.2
	baz=247						
PNG	Penghu	1.74	265	eP	Pn	01 45 52.6	+0.1
	baz=249						
PNG				eS	Sb	01 46 15.3	-0.7
	baz=249						
TWKBT	Hengchun	1.87	198	eP	Pb	01 45 56.4	-0.5
	baz=184						
VCHM	Qimei	1.92	255	eP	Pn	01 45 55.0	+0.1
	baz=254						
VCHM				eS	Sn	01 46 19.3	+0.8
	baz=254						
IRIF	Iriomote-Funau	2.18	73	P	Pn	01 45 58.9	+0.4
IRIF				eS	Sn	01 46 26.3	+1.4
HATJ	Hateruma jima	2.19	81	P	Pn	01 45 58.8	+0.1
HATJ				eS	Sn	01 46 25.2	0.0
VWUC	VWUC	2.21	305	eP	Pn	01 45 58.4	-0.6
	baz=306						
VWUC				eS	Sn	01 46 24.4	-1.3
	baz=306						
PTTC	Pingtan	2.33	320	eP	Pn	01 46 00.4	-0.3
	baz=321						
PTTC				eS	Sn	01 46 26.8	-1.9
	baz=321						
JKRS	Kuro-shima	2.40	77	P	Pn	01 46 02.4	+0.8
JKRS				S	Sn	01 46 31.6	+1.1
PTMZ	Houxiangcun	2.49	302	eP	Pn	01 46 02.6	-0.3
	baz=304						
PTMZ				eS	Sn	01 46 31.1	-1.5
	baz=304						
JIJ	Ishigaki jima	2.55	75	P	Pn	01 46 03.6	-0.1
JIJ				S	Sn	01 46 33.7	-0.4
JISG	Ishigakijimahi	2.76	71	P	Pn	01 46 06.4	-0.1
JISG				eS	Sn	01 46 39.2	0.0
KNM	Kinmen	2.83	285	eP	Pn	01 46 09.3	+1.8
	baz=284						
KNM				eS	Sn	01 46 43.8	+2.7
	baz=284						
KNMB	Chin-men Tao	2.89	285	eP	Pn	01 46 07.8	-0.5
	baz=271						
JTJ	Tarama	3.11	72	P	Pn	01 46 11.6	+0.2
JTJ				eS	Sn	01 46 48.4	+0.4
LYJJ	Jianjiangzhen	3.20	332	eP	Pn	01 46 12.3	-0.3
	baz=341						
MHZQ	Yeshan	3.22	318	eP	Pn	01 46 13.0	+0.1
	baz=321						
AXDP	Jialang	3.38	291	⇓eP	Pn	01 46 15.0	0.0
	baz=288						
XPSS	Dashiqiu	3.39	341	eP	Pn	01 46 15.0	-0.2
	baz=337						
ZPLA	Ao Xicun	3.39	274	eP	Pn	01 46 15.5	+0.3
	baz=272						
ZZJH	Jiuhuzhen	3.56	283	eP	Pn	01 46 17.5	0.0
	baz=269						

IDC 02 01:47:56.2±2.2, 4.50S×142.73E, h105km±21km, mb3.5/5, mb1 3.6/7, mb1mx3.4/32, mbtmp3.9/7, Error ellipse: s-maj=35.7km s-min=21.0km az=68.0

ISC 02 01:47:56.0±0.9, 4.6S±0.1×142.6E±0.2, h105km, n9, σ0.96/9, mb3.8/4, New Guinea

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
JAY	Jayapura	2.79	317	P	Pn	01 48 39.5	+0.3
PMG	Port Moresby	6.59	137	P	Pn	01 49 30.9	+0.5
	3.1nm,0.3s,baz=294,slow=9.9,SNR=16						
WRA	Warramunga Arr	17.28	207	P	P	01 51 49.2	-1.6
	baz=29,slow=13,SNR=1.9						
ASAR	Alice Springs	20.77	203	P	P	01 52 29.5	+0.8
	0.7nm,0.7s,baz=31,slow=11,SNR=7.7						
USRK	Ussuriysk Ar.	49.47	350	P	P	01 56 35.6	0.0
	1.5nm,0.8s,baz=158,slow=9.6,SNR=5.2						
MKAR	Makanchi Array	73.64	322	P	P	01 59 19.1	+0.9
	0.8nm,0.7s,baz=109,slow=7.6,SNR=9.8						
ZALV	Zalesovo Beam	75.51	329	P	P	01 59 28.4	-0.3
	0.7nm,0.6s,baz=107,slow=3.9,SNR=4.1						
ILAR	Eielson Array	85.91	24	P	P	02 00 23.0	-1.0
	1.3nm,0.5s,baz=258,slow=4.5,SNR=34						
GERES	GERESS Array B	118.23	324	PKP	PKiKP	02 06 31.6	+0.4
	0.3nm,0.5s,baz=22,slow=3.2,SNR=3.3						

IDC 02 01:51:27.9±4.2, 4.80S×153.77E, h103km±30km, mb3.4/6, mb1 3.7/7, mb1mx3.4/34, mbtmp3.8/7, MS2.9/1, Ms1 2.9/1, ms1mx2.5/14, Error ellipse: s-maj=42.2km s-min=17.4km az=98.0

ISC 02 01:51:28.1±1.1, 4.8S±0.1×153.8E±0.1, h105km, n10, σ0.76/11, mb3.5/6, New Ireland region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
KRVT	Keravat (AS076	1.81	284	P	Pn	01 51 58.4	-0.1
	30nm,0.3s,baz=161,slow=1.6,SNR=11						
KRVT				S	Sn	01 52 21.1	-0.5
	29nm,0.3s,baz=300,slow=1.9,SNR=5.1						
KRVT				LR	LR	01 52 53.3	
	comp=Z,104nm,18.4s,baz=104,slow=47						
PMG	Port Moresby	8.04	235	P	Pn	01 53 23.4	+1.3
	4.2nm,0.3s,baz=36,slow=8.6,SNR=12						
PMG				S	Sn	01 54 51.2	-0.2
	1.7nm,0.3s,baz=24,slow=22,SNR=3.7						
WRA	Warramunga Arr	24.22	230	P	P	01 56 35.2	0.0
	3.3nm,0.7s,baz=54,slow=9.9,SNR=2.2						
ASAR	Alice Springs	26.85	224	P	P	01 56 58.4	-0.7
	0.8nm,0.6s,baz=53,slow=8.9,SNR=8.9						
STKA	Stephens Creek	29.30	202	P	P	01 57 19.7	-1.1
	1.3nm,0.5s,baz=33,slow=15,SNR=4.9						
JCJ	Chichijima	33.59	341	LR	LR	02 12 09.0	
	comp=Z,18nm,18.5s,baz=152,slow=37						
SONM	Songino Array	66.81	327	P	P	02 02 09.3	+0.5
	0.3nm,0.5s,baz=154,slow=6.3,SNR=3.8						
MKAR	Makanchi Array	80.94	319	P	P	02 03 31.8	+0.7
	0.2nm,0.5s,baz=100,slow=6.9,SNR=6.6						
ILAR	Eielson Array	81.75	22	P	P	02 03 34.8	-0.1
	0.2nm,0.5s,baz=242,slow=4.8,SNR=4.5						
TORD	Torodi Ar. Bea	151.22	289	PKPbc	PKPbc	02 11 09.9	-0.4
	0.7nm,0.6s,baz=71,slow=1.9,SNR=10.0						

UUSS 02 01:52:29.7±2.0, 37.05N±0.03×113.00W±0.04, h18km±5km, ML2.5/6, Error ellipse: s-maj=5.0km s-min=3.4km az=59.0

NEIC 02 01:52:29.7±2.2, 37.10N±0.04×113.07W±0.03, h6km±4km, Error ellipse: s-maj=5.7km s-min=3.0km az=206.0, Utah

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
LCMT	Little Creek M	0.17	236		Pg	01 52 34.9	+1.8
LCMT				Sg	Sg	01 52 38.0	+2.7
KNB	Kanab	0.22	114		Pg	01 52 33.6	-0.4
SZCU	Shurtz Canyon	0.49	358	Pg	Pg	01 52 39.8	+0.6
SZCU				Sg	Sb	01 52 47.8	-0.7
CCUT	Cedar City	0.50	333		Pb	01 52 41.2	+0.1
PKCU	Pink Cliffs	0.69	61		Pg	01 52 42.5	-0.6
U15A	North Rim	0.92	137	Pg	Pg	01 52 45.1	-2.3
MTPU	Mount Pierson	1.17	37		Pg	01 52 51.6	-0.6
PSUT	Pine Spring	1.56	337		Pn	01 52 58.4	+0.2
MSU	Marysvale	1.57	26		Pn	01 52 58.5	0.0
TCRU	Three Creeks R	1.58	18	Pn	Pn	01 52 58.7	+0.1
SHPR	Sheep Range	1.78	251		Pn	01 53 00.8	-0.3
WUAZ	Wupatki	2.10	139	Pn	Pn	01 53 05.1	-0.4
W13A	Hualapai Mount	2.11	198	Pn	Pn	01 53 05.0	-0.7
R11A	Troy Canyon, C	2.35	303	Pg	Pb	01 53 13.3	+0.8
Q16A	Castle Valley	2.35	39	Pn	Pn	01 53 08.6	-0.5
TPNV	Topopah Spring	2.55	267		Pn	01 53 11.1	-0.7
TMUT	Trail Mountain	2.64	33	Pn	Pn	01 53 13.1	0.0
SRU	San Rafael Swe	2.84	44	Pn	Pn	01 53 15.2	-0.6
X16A	Lo Mia Camp, P	2.99	153		Pb	01 53 22.4	-1.0
Y14A	Wickenburg	3.16	179	Pn	Pn	01 53 17.6	-2.4
X18A	Snowflake	3.61	134		Pn	01 53 34.7	+0.6
X18A				Sg	Sb	01 54 20.0	+1.8
MVCO	Mesa Verde	3.65	87		Pb	01 53 36.8	+1.9
KVN	Kaiserville	4.42	298		Pg	01 53 52.6	-1.7

THE 02 01:54:02.8, 38.29N×20.39E, h8km±1km, ML2.8/12, Error ellipse: s-maj=1.5km s-min=0.3km az=223.0

ATH 02 01:54:02.8, 38.30N×20.42E, h8km±2km, ML2.8/5, Error ellipse: s-maj=2.6km s-min=0.8km az=254.0

ISC 02 01:54:03.0±1.1, 38.30N±0.02×20.42E±0.04, h7km±6km, n25, σ0.58/47, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
KEF4	Livadi, Kephal	0.04	178	P	Pg	01 54 04.5	+0.1
KEF4				S	Sg	01 54 05.6	+0.2
KEF1	Kardakata, Kep	0.04	117	P	Pg	01 54 04.5	+0.1
KEF1				S	Sg	01 54 05.5	0.0
KEF3	Kipouria, Keph	0.11	212	P	Pg	01 54 05.6	+0.1
KEF3				S	Sg	01 54 06.9	-0.1
CHV1	Chavriata, Kef	0.12	196	P	Pg	01 54 05.7	+0.2
CHV1				S	Sg	01 54 07.4	+0.1
	16μm,0.2s						
ARG2	Argostoli	0.13	157	P	Pg	01 54 05.9	+0.2
ARG2				S	Sg	01 54 08.2	+0.6
	14μm,0.1s						
KEF2	Argostoli. Kep	0.14	159	P	Pg	01 54 05.8	-0.1
KEF2				S	Sg	01 54 08.2	+0.3
VSK1	VASILIKIADES	0.16	45	P	Pg	01 54 06.5	+0.2
VSK1				S	Sg	01 54 09.1	+0.6
	7μm,0.1s						
VLS	Valsamata	0.18	132	P	Pg	01 54 06.5	-0.1
VLS				S	Sg	01 54 09.5	+0.5
	3μm,0.1s						
VLS	Valsamata	0.18	132	P	Pg	01 54 06.4	-0.1
VLS				S	Sg	01 54 09.0	0.0
VLS				AML	AML	01 54 09.7	
	comp=N,7138μm,0.2s						
VLS				AML	AML	01 54 10.0	
	comp=E,4721μm,0.1s						
FSK	Fiskardo	0.20	34	P	Pg	01 54 07.1	+0.1
FSK				S	Sg	01 54 10.5	+0.9
	comp=E,2μm,0.2s						
FSK	Fiskardo	0.20	34	P	Pg	01 54 07.0	+0.1
FSK				S	Sg	01 54 09.6	0.0
FSK				AML	AML	01 54 10.8	
	comp=N,2191μm,0.3s						
FSK				AML	AML	01 54 11.4	
	comp=E,5318μm,0.1s						
KFL	Anninata	0.34	123	P	Pg	01 54 09.6	-0.1
KFL				S	Sg	01 54 15.4	+1.2
	comp=E,3μm,0.4s						
KFL	Anninata	0.34	123	P	Pg	01 54 09.2	-0.5
KFL				S	Sg	01 54 14.5	+0.2
KFL				AML	AML	01 54 15.6	
	comp=N,3659μm,0.5s						
KFL				AML	AML	01 54 15.8	
	comp=E,6962μm,0.3s						
EVGI	Lefkada island	0.37	29	P	Pg	01 54 10.2	0.0
EVGI				S	Sg	01 54 16.5	+1.3
	comp=E,1μm,0.2s						
EVGI	Lefkada island	0.37	29	P	Pg	01 54 10.3	0.0
EVGI				S	Sg	01 54 15.9	+0.7
VLMS	Volimes, Zakyn	0.46	156	P	Pg	01 54 11.7	-0.2
VLMS				S	Sg	01 54 19.1	+1.2
VLMS				AML	AML	01 54 20.1	
	comp=N,6679μm,0.4s						
VLMS				AML	AML	01 54 21.0	
	comp=E,6632μm,0.2s						
MGNA	Meganis	0.46	39	P	Pg	01 54 11.6	-0.4
MGNA				S	Sg	01 54 17.4	-0.5
LKD2	Lefkada island	0.53	20	P	Pg	01 54 12.8	-0.3
LKD2				S	Sg	01 54 20.9	+0.9
	comp=E,178nm,0.3s						
TSLK	Tsoukalades, L	0.56	19	P	Pg	01 54 13.5	-0.3
AST1	Astakos	0.58	65	P	Pg	01 54 14.2	+0.1
AST1				S	Sb	01 54 23.4	-0.5
	comp=E,2μm,0.3s						
PDO	Prodromos	0.67	63	P	Pg	01 54 15.9	0.0
PDO				S	Sb	01 54 25.8	-0.7
	comp=E,1μm,0.3s						
RLS	Riolos of Patr	0.86	106	P	Pg	01 54 19.3	-0.1
RLS				S	Sb	01 54 32.7	+0.8
	comp=E,158nm,0.5s						
PVO	Paravola	0.92	69	P	Pg	01 54 20.6	-0.1
DRO	Drossia	1.07	108	P	Pg	01 54 23.0	-0.6
DRO				S	Sn	01 54 41.1	+1.5
	comp=E,310nm,0.3s						
EFP	Efpalio	1.17	83	P	Pb	01 54 24.4	-1.2

TAP 02 02:44:43.4, 22.45N×121.37E, h11km, ML3.7, C

JMA 02 02:44:43.7±0.1, 22.53N×121.43E, h27km, M3.4

ISC 02 02:44:43.8±0.9, 22.45N±0.02×121.44E±0.02, h26km, n99, σ1.07/177, 3C-6D, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
TWH	Lutao	0.26	8	⇑iP	Pb	02 44 49.9	-0.4
	baz=24						
TWH				iS	Sb	02 44 54.0	-0.7
	baz=24						
TTN	Taitung	0.40	318	iP	Pb	02 44 52.3	-0.1
	baz=326						
TTN				iS	Sb	02 44 57.2	-1.1
	baz=326						
LAY	Lan-yu	0.43	166	⇓iP	Pb	02 44 53.5	+0.7
	baz=157						
LAY				iS	Sb	02 44 59.5	+0.5
	baz=157						
ECL	Taimali	0.47	288	⇓iP	Pb	02 44 52.6	-0.9
	baz=291						
ECL				iS	Sb	02 44 58.5	-1.7
	baz=291						
TWGBT	Beinan	0.49	318	⇓P	Pb	02 44 53.2	-0.7
	baz=323						
TWGBT				S	Sb	02 45 00.3	-0.4
	baz=323						
TWG	Pinlang	0.50	317	⇓iP	Pb	02 44 53.2	-0.8
	baz=323						
TWG				iS	Sb	02 45 00.3	-0.7
	baz=323						
TAW	Tawu	0.51	259	iP	Pb	02 44 53.5	-0.7
	baz=258						
TAW				iS	Sb	02 44 59.9	-1.4
	baz=258						
EAST	Anshuo	0.55	263	⇓iP	Pb	02 44 54.1	-0.8
	baz=262						
EAST				iS	Sb	02 45 00.9	-1.6
	baz=262						
CHKT	Chengkung	0.65	354	iP	Pb	02 44 55.8	-0.7
	baz=359						
CHKT				S	Sb	02 45 04.6	-0.5
	baz=359						

TSEB Hengchuen, Pin 0.74 222 *i* P Pb 02 44 57.8 -0.3
baz=221
TSEB *i* S Sn 02 45 09.1 0.0
baz=221
FULB Fuli 0.75 350 P Pb 02 44 57.4 -0.9
baz=354
FULB S Sn 02 45 09.6 +0.2
baz=354
MASBT Mashibuluo 0.76 282 ⇓P Pb 02 44 57.3 -1.1
baz=283
SCZT Fangliau 0.76 264 *i* P Pb 02 44 57.5 -1.0
baz=263
TWKBT Hengchun 0.77 229 ⇑P Pb 02 44 58.2 -0.4
baz=225
TWKBT S Sb 02 45 07.8 -0.9
baz=225
TWK1 Hengchun 0.78 229⇑*i*P Pb 02 44 58.2 -0.5
baz=225
TWK1 *i* S Sb 02 45 08.2 -0.6
baz=225
HEN Hengchun 0.79 236 *e*P Pb 02 44 58.6 -0.3
baz=232
HEN *i* S Sb 02 45 08.9 -0.2
baz=232
SSD Sandimen 0.80 291 P Pb 02 44 57.7 -1.4
baz=293
SSD S Sn 02 45 09.8 -0.7
baz=293
SSPT Xinbi 0.81 272 *i* P Pb 02 44 58.7 -0.4
baz=272
ELDTW Lidau 0.83 332 *i* P Pb 02 44 57.8 -1.9
baz=336
ELDTW S Sb 02 45 11.4 0.0
baz=336
TWF1 Yuli 0.90 352 P Pb 02 44 60.0 -0.9
baz=356
TWF1 S Sn 02 45 12.6 -0.5
baz=356
SLGT Liugui 0.91 306 *e*P Pb 02 45 00.1 -0.8
baz=309
SLGT *e*S Sn 02 45 12.9 -0.3
baz=309
SGLT Jiouru 0.92 287 *e*P Pb 02 44 59.9 -1.1
baz=288
SGLT *e*S Sn 02 45 13.3 0.0
baz=288
SGST Jiashian 1.01 308 *i* P Pn 02 45 01.5 -0.8
baz=311
SGST *i* S Sn 02 45 16.4 +0.8
baz=311
TWM1 Shoushan 1.01 292 *i* P Pb 02 45 03.0 +0.4
baz=293
TWM1 S Sn 02 45 17.4 +1.8
baz=293
HGSD Ruisui 1.03 359 P Pn 02 45 02.5 -0.1
baz=2.0
HGSD S Sn 02 45 18.8 +2.6
baz=2.0
EHY Hungye 1.05 354 P Pb 02 45 03.9 +0.5
baz=357
EHY S Sn 02 45 17.8 +1.1
baz=357
SNJT Kaohsiung City 1.06 286 *e*P Pb 02 45 03.5 0.0
baz=287
SNJT *e*S Sn 02 45 17.7 +0.8
baz=287
WTP Ta-pu 1.10 316 *i* P Pn 02 45 03.4 -0.1
baz=318
WTP S Sn 02 45 19.7 +1.9
baz=318
CHN1 Nanshi 1.11 311 P Pb 02 45 04.3 0.0
baz=313
CHN1 S Sb 02 45 20.4 +2.0
baz=313
YUS Yu-Shan 1.12 337 P Pn 02 45 03.9 -0.4
baz=339
YUS S Sn 02 45 18.7 -0.4
baz=339
TPUB Ta-pu 1.13 319 P Pb 02 45 04.0 -0.6
baz=321
TPUB S Sb 02 45 20.4 +1.6
baz=321
SNST Tainan City 1.16 311 P Pb 02 45 05.0 -0.1
baz=313
SNST S Sb 02 45 22.1 +2.4
baz=313
CHN3 Shinhua 1.17 302 *e*S Sb 02 45 21.8 +1.7
baz=303
CHN4 Tsaushan 1.19 319 P Pb 02 45 05.3 -0.3
baz=321
CHN4 S Sb 02 45 22.7 +2.2
baz=321
TWK Hsinying 1.19 313 P Pb 02 45 05.4 -0.4
baz=315
TWK S Sb 02 45 21.0 +0.2
baz=315
ALS Alishan 1.20 331 P Pn 02 45 05.0 -0.3
baz=334
EGFH Guangfu 1.21 359 *e*P Pb 02 45 06.1 +0.1
baz=2.0
EGFH *e*S Sb 02 45 23.7 +2.4
baz=2.0
TAI1 Yung-k'ang 1.26 298 S Sb 02 45 24.3 +1.6
baz=299
VWDT VWDT 1.32 348 P Pn 02 45 06.4 -0.1
baz=350
VWDT *e*S Sb 02 45 25.6 +1.1
baz=350
CHN5 Tsauling 1.34 328 P Pb 02 45 07.5 -0.7
baz=330
CHN5 S Sb 02 45 26.6 +1.6
baz=330
WHYT Xinyi Township 1.35 337 P Pb 02 45 08.2 -0.2
baz=338
WHYT *e*S Sb 02 45 25.6 +0.3
baz=338
ESL Shilin 1.35 360 P Pn 02 45 07.5 +0.5
baz=2.0
ESL S Sb 02 45 26.8 +1.4
baz=2.0
SCLT Jiali 1.35 302 P Pb 02 45 08.4 -0.1
baz=303
SCLT *e*S Sb 02 45 26.1 +0.7
baz=303
CHN2 Minshiung 1.39 321 P Pb 02 45 09.2 +0.1
baz=322
CHN2 S Sb 02 45 27.7 +1.2
baz=322
CHY Chiayi 1.40 318 *e*P Pb 02 45 08.5 -0.7
baz=320
CHY *e*S Sb 02 45 27.3 +0.7
baz=320
SSLB Suanglung 1.40 341 P Pn 02 45 08.2 +0.5
baz=343
SSLB S Sb 02 45 27.7 +0.9
baz=343
WLGB Puzi 1.46 314 *e*S Sb 02 45 29.6 +1.1
baz=316
WGK Gukeng 1.47 327 P Pb 02 45 10.4 0.0
baz=329
WGK S Sb 02 45 29.4 +0.7
baz=329
WDLH Douliu 1.48 326 *e*P Pb 02 45 09.9 -0.8
baz=328
WDLH *e*S Sb 02 45 29.1 0.0
baz=328
SMLT Sun Moon Lake 1.51 341 P Pb 02 45 10.5 -0.6
baz=343
SMLT *e*S Sb 02 45 30.6 +0.7
baz=343
WJS Zhushan 1.51 334 P Pb 02 45 11.1 0.0
baz=336
WJS *e*S Sb 02 45 31.4 +1.5
baz=336
OWD Renai 1.51 351 *e*P Pb 02 45 10.4 -0.9
baz=353
TYC Yuchr 1.54 340 P Pb 02 45 11.2 -0.4
baz=342
TYC *e*S Sb 02 45 31.7 +1.0
baz=342
WNT Mingjian 1.58 334 P Pb 02 45 12.3 0.0
baz=336
WNT S Sb 02 45 32.1 +0.2
baz=336
CHGB Renai 1.62 351 *e*P Pn 02 45 11.5 +0.6
baz=353
CHGB *e*S Sb 02 45 33.4 +0.2
baz=353

TWD Chiawan 1.62 5 P Pn 02 45 11.2 +0.5
baz=7.0
TWD S Sb 02 45 32.6 -0.5
baz=7.0
WSF Szhu 1.63 317 P Pn 02 45 10.4 -0.3
baz=318
WSF S Sb 02 45 32.9 -0.3
baz=318
DPDB Guoxing 1.64 343 P Pn 02 45 12.0 +1.0
baz=345
DPDB S Sb 02 45 34.0 +0.3
baz=345
WHF Hehuan Shan 1.69 355 P Pb 02 45 13.5 -1.0
baz=356
WHF S Sb 02 45 35.1 -0.4
baz=356
RLNB Erlin 1.74 325 *e*P Pn 02 45 13.4 +1.1
baz=327
RLNB *e*S Sb 02 45 34.8 -1.7
baz=327
WTCT Ta-ch'eng 1.76 323 *e*S Sb 02 45 36.1 -1.0
baz=324
TWT Tachien 1.81 352 P Pn 02 45 14.6 +1.2
baz=353
TWT *e*S Sb 02 45 37.1 -1.5
baz=353
TDCB Techi 1.81 352 *e*P Pn 02 45 14.7 +1.3
baz=353
TDCB *e*S Sb 02 45 39.4 +0.8
baz=353
WCHH Zhanghua 1.81 334 P Pb 02 45 15.0 -1.2
baz=335
WCHH S Sb 02 45 37.8 -0.7
baz=335
TCU Taichung 1.83 338 *e*P Pb 02 45 15.3 -1.2
baz=339
TCU *e*S Sb 02 45 38.6 -0.4
baz=339
WDGT Dungji 1.83 296 P Pn 02 45 13.4 -0.1
baz=297
WHP Taichung City 1.87 346 P Pb 02 45 16.6 -0.8
baz=347
WHP S Sb 02 45 40.2 -0.1
baz=347
NNSB Datong 1.97 358 P Pn 02 45 17.2 +1.6
NNSB *e*S Sb 02 45 42.9 -0.2
NNSH Datong 1.97 358 *e*P Pn 02 45 17.2 +1.6
NNSH *e*S Sb 02 45 42.1 -1.0
NNS Nan Shan 1.98 358 *e*S Sb 02 45 43.5 0.0
TWQ1 Liyutan 1.98 342 P Pn 02 45 17.2 +1.5
baz=343
TWQ1 S Sb 02 45 41.8 -1.6
baz=343
ENA Nanau 1.98 8 *e*P Pn 02 45 16.6 +1.0
baz=9.0
VCHM Qimei 2.00 292 *e*P Pn 02 45 15.8 -0.1
baz=292
WDJ Dajia District 2.02 339 P Pb 02 45 18.8 -1.1
baz=340
WDJ *e*S Sb 02 45 42.9 -1.7
baz=340
NSY Sanyi 2.05 342 P Pb 02 45 19.1 -1.3
baz=344
NSY S Sb 02 45 45.4 -0.1
baz=344
PNG Penghu 2.06 303 P Pn 02 45 16.6 -0.1
baz=303
PTSB Yuanli 2.10 341 *e*S Sb 02 45 46.2 -0.5
baz=342
NDT Datong Townshi 2.14 2 *e*P Pb 02 45 21.8 -0.1
baz=3.0
NDT *e*S Sb 02 45 47.3 -0.7
baz=3.0
NMLH Miaoli 2.16 344 *e*P Pb 02 45 20.2 -2.0
baz=345
NMLH *e*S Sb 02 45 46.7 -1.8
baz=345
ENTT Nioudou 2.18 3 *e*P Pb 02 45 21.0 -1.6
baz=4.0
ENTT *e*S Sn 02 45 46.2 +1.6
baz=4.0
EOS1 EOS1 2.18 17 *e*P Pn 02 45 19.6 +1.3
baz=18
NSTT Nanjuang 2.20 350 P Pb 02 45 21.0 -2.0
baz=351
NSTT S Sb 02 45 48.3 -1.5
baz=351
YHNB Yeheng 2.21 358 *e*P Pn 02 45 19.6 +0.8
YHNB *e*S Sb 02 45 48.6 -1.4
NSK Sanguang 2.21 358 *e*P Pn 02 45 20.7 +1.8
baz=359
LIOB Emei 2.22 350 *e*P Pn 02 45 20.7 +1.8
baz=351
NWLT Wulai 2.31 1 *e*P Pn 02 45 21.5 +1.3
baz=2.0
JYNG Yonagunijimaku 2.42 35 P Pn 02 45 23.1 +1.4
JYNG *e*S Sn 02 45 50.6 +0.1
YOJ Yonaguni jima 2.46 36 *e*P Pb 02 45 25.3 -2.1
baz=36
YOJ Yonaguni jima 2.46 36 P Pn 02 45 22.7 +0.4
YOJ *e*S Sn 02 45 51.9 +0.3
TIPB Shuangxi 2.53 8 *e*P Pn 02 45 24.8 +1.5
baz=9.0
TIPB *e*S Sb 02 45 56.8 -2.5
baz=9.0
HATJ Hateruma jima 2.70 53 P Pn 02 45 26.5 +1.0
HATJ *e*S Sn 02 45 56.4 -0.9
IRIF Iriomote-Funau 2.82 48 P Pn 02 45 28.4 +1.3
IRIF *e*S Sn 02 46 00.7 +0.5
JKRS Kuro-shima 2.95 53 P Pn 02 45 30.2 +1.2
JKRS *e*S Sn 02 46 03.0 -0.6
IJJ Ishigaki jima 3.13 52 P Pn 02 45 32.2 +0.8
IJJ *e*S Sn 02 46 06.7 -1.2
JISG Ishigakijimahi 3.38 51 P Pn 02 45 35.6 +0.7
JISG S Sn 02 46 12.7 -1.5
JTJ Tarama 3.70 53 P Pn 02 45 40.7 +1.4
JTJ *e*S Sn 02 46 21.6 -0.5
JIRB Irabujima 4.16 55 P Pn 02 45 46.4 +0.8
JIRB S Sn 02 46 32.1 -1.3
JMJ2 Miyako jima3 4.23 57 P Pn 02 45 48.1 +1.5
JMJ2 *e*S Sn 02 46 36.3 +1.2
JIKM Ikemajima 4.27 54 P Pn 02 45 48.6 +1.5

NEIC **02** *02:45:39.0±1.5, 32.39N±0.01×116.27W±0.02, h21km±6km, Error ellipse: s-maj=2.9km s-min=1.9km az=62.0*
ANF **02** *02:45:39.1±0.6, 32.44N×116.26W, h26km±2km, ML2.6/12, Error ellipse: s-maj=4.3km s-min=2.2km az=2.0*
ECX **02** *02:45:40.5±0.6, 32.43N×116.26W, h16km±3km, MD2.8, ML3.1, Fault plane solution: NP1:φs106.00000°, δ83.00000°, λ-172.00000°.*
MEX **02** *02:45:40.8±0.8, 32.52N×116.29W, h10km, MD3.7*
SCEDC **02** *02:45:40.1, 32.43N×116.26W, h20km*
ISC 02 02:45:39.3±0.9, 32.43N±0.02×116.26W±0.01, h18km±5km, n90, σ0.56/144, 10C-11D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERMX	Rumorosa	0.23	56	⇑*e*P	Pb	02 45 45.3	+0.4
ERMX				*e*S	Sg	02 45 49.1	+0.4
ERMX				IAML		02 45 49.5	
	comp=N,4μm,0.1s						
ERMX				⇑*e*		02 45 49.5	
RMX	La Rumorosa	0.23	40		Pb	02 45 45.4	+0.4
RMX					Sg	02 45 49.1	+0.4
IKP	In-Ko-Pah, Jac	0.26	29	⇑*e*P	Pb	02 45 45.6	+0.3
IKP				*e*S	Sb	02 45 49.6	+0.1
IKP	In-Ko-Pah, Jac	0.26	29		Pb	02 45 45.7	+0.3
IKP					Sb	02 45 49.5	+0.1
IKP	In-Ko-Pah, Jac	0.26	29	P	Pg	02 45 45.5	+0.2
	baz=210,SNR=279						
IKP				S	Sb	02 45 49.5	+0.1
	baz=210						
TKX	Tecate	0.33	296	⇓*e*P	Pb	02 45 46.9	+0.2
TKX				*e*S	Sb	02 45 51.8	+0.1
TKX	Tecate	0.33	296		Pb	02 45 46.9	+0.2
TKX					Sb	02 45 51.8	+0.1
TJIG	Tijuana	0.35	271	⇑*e*P	Pb	02 45 47.2	+0.1
TJIG				*e*S	Sb	02 45 52.4	0.0
TJIG	Tijuana	0.35	271	*e*P	Pb	02 45 47.2	+0.1
TJIG				*i* S	Sb	02 45 52.5	+0.1
CBX	Cerro Bola	0.36	252	⇑*i*P	Pb	02 45 47.7	+0.3
CBX				*e*S	Sb	02 45 53.2	+0.5
CBX				⇑*e*		02 45 53.7	
CBX				IAML		02 45 53.7	
	comp=N,1μm,0.1s						
CBX				IAML		02 45 53.7	
	comp=E,2μm,0.1s						
CBX				⇓*e*		02 45 53.7	
CBX	Cerro Bola	0.36	252		Pb	02 45 47.7	+0.3
CBX					Sb	02 45 53.4	+0.7
CBX	Cerro Bola	0.36	252	*e*P	Pg	02 45 47.3	+0.3
CBX				*i* S	Sb	02 45 53.3	+0.5
BAR	Barrett	0.43	306	⇓*e*P	Pg	02 45 48.4	+0.2
BAR				*e*S	Sg	02 45 54.6	+0.3
BAR	Barrett	0.43	306		Pg	02 45 48.4	+0.2
BAR	Barrett	0.43	306		Sg	02 45 54.5	+0.3
CBKC	Canebrake	0.47	0		Pb	02 45 49.5	+0.3
MONP2	Monument Peak	0.49	343	⇓*i*P	Pg	02 45 49.5	+0.2
MONP2				*e*S	Sg	02 45 56.0	0.0
MONP2	Monument Peak	0.49	343		Pg	02 45 49.5	+0.2
MONP2					Sg	02 45 56.2	+0.2
MONP2	Monument Peak	0.49	343	P	Pg	02 45 49.1	-0.1
	baz=164,SNR=61						
MONP2				S	Sg	02 45 56.2	+0.2
	baz=164						
ESJX	Sierra Juarez	0.49	148	⇓*e*P	Pg	02 45 49.6	+0.2
ESJX				*e*S	Sg	02 45 56.4	+0.3
ESJX	Sierra Juarez	0.49	148		Pg	02 45 49.6	+0.2
ESJX					Sg	02 45 56.5	+0.3
CRR	Carrizo Plain	0.52	28		Pb	02 45 50.2	+0.3
WESC	Westside Schoo	0.55	53	⇑*e*P	Pb	02 45 50.9	+0.4
WESC	Westside Schoo	0.55	53		Pb	02 45 50.9	+0.4
WESC					Sb	02 45 59.1	+1.1
OLP	Otay Lakes Par	0.60	288	⇑*e*P	Pb	02 45 51.1	-0.1
OLP				*e*S	Sg	02 45 59.3	+0.1
OLP	Otay Lakes Par	0.60	288		Pb	02 45 51.1	-0.1
OLP					Sg	02 45 59.3	+0.1
COK2	Cook Ranch 2	0.61	46		Pb	02 45 52.1	+0.6
COK2					Sg	02 46 01.3	+1.5
SWSC	Sam W. Stewart	0.65	36	⇑*e*P	Pg	02 45 52.3	+0.2
SWSC				*e*S	Sg	02 46 01.1	+0.3
SWSC	Sam W. Stewart	0.65	36		Pg	02 45 52.3	+0.2
SWSC					Sg	02 46 01.0	+0.2
SWSC	Sam W. Stewart	0.65	36	P	Pg	02 45 52.3	+0.2
	baz=217,SNR=57						
SWSC				S	Sg	02 46 01.1	+0.3
	baz=217						
CCX	Cicese	0.65	212	*e*P	Pb	02 45 52.1	0.0
CCX				*e*S	Sb	02 46 01.6	+0.6
CCX	Cicese	0.65	212		Pb	02 45 52.0	-0.2
SDRC	San Diego Road	0.66	298	*e*P	Pb	02 45 52.0	-0.2
SDRC				*e*S	Sb	02 46 00.8	-0.3
SDRC	San Diego Road	0.66	298		Pb	02 45 52.0	-0.2
SDRC					Sb	02 46 00.7	-0.3
TJX	Tijuana	0.68	277		Sb	02 46 01.7	0.0
EML	El Monte Cty P	0.68	313	⇓*e*P	Pb	02 45 52.3	-0.3
EML				*e*S	Sb	02 46 01.2	-0.5
EML	El Monte Cty P	0.68	313		Pb	02 45 52.3	-0.3
EML					Sb	02 46 01.2	-0.5
ERRC	Elmore Ranch	0.78	28		Pg	02 45 54.6	0.0
ERRC					Sn	02 46 06.6	0.0
DREC	Desert Rsrch C	0.78	61		Pb	02 45 55.0	+0.4
CPBX	Cerro Prieto	0.81	90	⇓*e*P	Pb	02 45 55.0	+0.2
CPBX				*e*S	Sg	02 46 05.9	+0.2
DPP	Dos Picos Cty	0.81	315		Pb	02 45 54.5	-0.4
DPP					Sb	02 46 05.2	-0.4
SNR	Schaffner Ranc	0.82	58		Pb	02 45 55.0	0.0
HWB	Hans Werner Br	0.84	316		Pb	02 45 55.0	-0.4
HWB					Sb	02 46 05.9	-0.6
109C	Camp Elliot, M	0.85	303	Pg	Pb	02 45 55.0	-0.5
109C				Sg	Sb	02 46 06.1	-0.6
109C	Camp Elliot, M	0.85	303	P	Pb	02 45 55.1	-0.5
	baz=123,SNR=6.8						
109C				S	Sb	02 46 06.3	-0.4
	baz=123						
BORC	Borrego Spring	0.85	351		Pb	02 45 55.6	0.0
BORC					Sb	02 46 06.5	-0.2
SALN	Salton City	0.88	15		Pb	02 45 55.8	-0.3
MBIG	Mexicali	0.90	91	*e*P	Pg	02 45 57.0	+0.2
MBIG				*i* S	Sb	02 46 07.5	-0.4
SALX	Saltillo	0.95	90	⇑*e*P	Pb	02 45 55.8	-1.5
PLM	Palomar	1.06	331		Pb	02 45 58.8	-0.5
GORC	Green Oak Ranc	1.09	312		Pb	02 45 58.9	-0.8
GORC					Sb	02 46 13.3	-0.3
FRD	Ford Ranch, An	1.11	345		Pb	02 45 59.6	-0.4
FRD					Sb	02 46 14.2	+0.1
FRD	Ford Ranch, An	1.11	345		Pb	02 45 59.8	-0.2
FRD					Sg	02 46 15.2	-0.1
VTX	Valle De La Tr	1.11	159	⇓*e*P	Pb	02 45 58.8	-1.2
VTX				*e*S	Sb	02 46 13.9	-0.2
BZNA	Buzz No.'s Pla	1.12	342		Pb	02 45 60.0	-0.2
BZNA					Sn	02 46 15.0	-0.2
SNDA	J Saunders Pla	1.16	345		Pn	02 46 00.9	+0.1
SNDA					Sg	02 46 17.6	+0.4
DNR	Dunn Ranch,Anz	1.18	345		Pn	02 46 01.1	+0.1
XPFO	Pion Flat	1.19	352		Pn	02 46 01.2	-0.1
XPFO	Pion Flat	1.19	352		Pn	02 46 00.6	-0.7
PFO	Pinyon Flats O	1.20	352		Pn	02 46 00.6	-0.6
PFO					Sn	02 46 17.5	+0.4
PFO	Pinyon Flats O	1.20	352	Pn	Pn	02 46 00.6	-0.6
PFO	Pinyon Flats O	1.20	352	P	Pn	02 46 00.5	-0.8
	baz=172,SNR=8.2						
PFO				Sb	Sn	02 46 17.1	0.0
	baz=172						
CRY	Cary Ranch	1.21	341		Pn	02 46 01.3	-0.1
CRY					Sg	02 46 18.1	-0.5
BACC	Bachelor Mtn.	1.35	331		Pb	02 46 03.9	-0.3
BACC					Sn	02 46 20.9	0.0
GLA	Glamis	1.36	62		Pn	02 46 02.5	-1.0
GLA	Glamis	1.36	62	P	Pn	02 46 02.4	-1.0
	baz=243						
GLA				S	Sn	02 46 19.2	-1.8
	baz=243						
DGR	Domenigoni Val	1.38	333		Pn	02 46 03.9	+0.2
DGR					Sb	02 46 22.2	+0.4
POB	Polly Butte	1.38	336		Pn	02 46 04.0	+0.2
ECBX	El Chinero	1.40	133	⇓*e*P	Pn	02 46 03.0	-0.9
ECBX				*e*S	Sn	02 46 22.2	+0.4
BC3	Big Chuckawall	1.40	29	Sb	Sg	02 46 24.2	-0.5
	baz=209						
MURC	Murrieta	1.41	326	Pb	Pn	02 46 04.5	+0.3
	baz=146,SNR=9.6						
MURC				Sb	Sb	02 46 23.1	+0.2
	baz=146						
HMTC	Hemet	1.43	334		Pn	02 46 04.9	+0.5
SPIG	San Pedro Mart	1.53	154	*e*P	Pn	02 46 06.8	+0.8
SPIG	San Pedro Mart	1.53	154	*e*P	Pn	02 46 06.4	+0.3
SPIG				*e*S	Sb	02 46 26.8	+0.2
SPX	San Pedro Mart	1.54	154	⇓*e*P	Pn	02 46 06.5	+0.3
SPX	San Pedro Mart	1.54	154		Pb	02 46 07.8	+0.3
BELC	Belle Mtn. Jos	1.59	8	S	Sn	02 46 24.8	-2.0
	baz=188						
SME	Santa Rosa Min	1.67	327		Pb	02 46 08.8	-0.7
TPC	Twentynine Pal	1.69	6		Pn	02 46 07.7	-0.2
SQX	San Quintin	1.87	170	⇓*e*P	Pn	02 46 10.0	-0.4
BBRC	Big Bear Solar	1.92	343	Sb	Sb	02 46 39.2	+1.6
	baz=163						
Y12C	Blythe	1.96	47	Pn	Pn	02 46 11.9	+0.2
CIS	Catalina Islan	2.06	299	S	Sn	02 46 37.5	-0.8
	baz=118						
SS2	San Sevaine	2.06	330		Pb	02 46 15.8	-0.3
MWC	Mount Wilson	2.34	320	Pn	Pn	02 46 18.1	+1.0
MWC					Sb	02 46 51.0	+1.2
DECC	Green Verdugo	2.52	317	Sb	Sb	02 46 56.2	+1.5
	baz=136						
EDW2	Edwards Air Fo	2.85	330	Sb	Sb	02 47 06.2	+2.0
	baz=149						
GSC	Goldstone, Bar	2.91	351	Pn	Pn	02 46 24.8	0.0
214A	Organ Pipe Nat	2.96	98	Pn	Pn	02 46 25.5	0.0
Y14A	Wickenburg	3.12	60	Pn	Pn	02 46 28.2	+0.6

IDC **02** *02:59:18.1±0.4, 1.28S×126.26E, h0km, mb4.7/30, mb1 4.8/31, mb1mx4.7/43, mbtmp4.7/31, ML4.2/1, MS4.2/21, Ms1 4.2/21, ms1mx4.0/52, Error ellipse: s-maj=16.7km s-min=9.5km az=64.0*
BJI **02** *02:59:21.5±0.0, 1.50S×126.55E, h59km, mB5.3/41, mb5.0/66, Ms4.8/36, Ms7 4.5/33*
MOS **02** *02:59:22.0±1.0, 1.20S×126.27E, h35km, mb5.3/50, MS4.4/4, Error ellipse: s-maj=10.7km s-min=5.7km az=115.9*
NEIC **02** *02:59:24.0±1.6, 1.32S±0.06×126.28E±0.05, h42km±5km,*

mb5.1/133, Error ellipse: s-maj=8.9km s-min=7.6km az=169.0
GCMT **02** *02:59:24.0±0.2, 1°25S±0°01×126°26E±0°01, h18km, MW5.1/102, Moment Tensor Solution. s91,c109; s102,c139; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-4.41±.13; Mθθ-0.02±.09; Mφφ4.43±.10; Mrθ-1.01±.22; Mrφ-1.04±.07; Mθφ2.75±.21; Best double couple: M0 5.40000×10^16 NP1: φs352.00000°, δ29.00000°, λ-82.00000°. NP2: φs163.00000°, δ61.00000°, λ-94.00000°. Principal axes: T 5.5130, Plg16.0000°, Azm256.0000°; N -0.2230, Plg4.0000°, Azm165.0000°; P -5.2880, Plg73.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
KLM **02** *02:59:25.0, 1°20S×126°40E, h44km, mb5.1*
ISC 02 02:59:24.3±0.5, 1°32S±0°04×126°29E±0°04, h45km±3km, h46km:pP-P, n511, σ1°02/496, mb5.1/135, MS4.3/28, 8C-18D, Southern Molucca Sea

Code Station Name Δ° AZ° Phase ID (Op ISC) Time h m s Res ISC
TNTI Ternate 2.34 27 Pn 03 00 00.6 +0.3
LUWI Luwuk 3.53 274 Pn 03 00 15.1 -1.6
SIJI Sorong 4.99 85 Pn **Pn 03 00 37.7 +0.9**
18nm,0.3s,baz=190,slow=21,SNR=26
SIJI Sn **Sn 03 01 35.0 +1.7**
6.6nm,0.3s,baz=71,slow=19,SNR=3.8
SIJI LR LR 03 03 09.6
comp=Z,5µm,21.1s,baz=302,slow=46
FAKI Fak Fak 6.16 105 Pn 03 00 51.2 -1.6
KAPI Kappang 7.49 241 Pn **Pn 03 01 12.5 +1.5**
29nm,0.3s,baz=78,slow=6.0,SNR=33
KAPI Sn **Sn 03 02 33.0 -1.7**
28nm,0.3s,baz=42,slow=20,SNR=9.5
KAPI LR LR 03 04 21.1
comp=Z,3µm,19.8s,baz=299,slow=40
KAPI Kappang 7.49 241 Pn 03 01 11.7 +0.6
KAPI Kappang 7.49 241 P **Pn 03 01 11.7 +0.6**
KAPI 03 02 33.0
SAUI Saumlaki 8.29 143 Pn **Pn 03 01 20.3 -1.7**
KCP Kidapawan 8.36 352⇓eP **Pn 03 01 24.4 +1.4**
SOEI Soe 8.62 193 Pn **Pn 03 01 27.8 +1.1**
BKB Balikpapan 9.39 270 Pn 03 01 37.8 +0.6
MTN Manton Dam 12.41 157 P **Pn 03 02 19.3 +0.8**
baz=12,SNR=10
MTN Manton Dam 12.41 157 Pn 03 02 19.2 +0.7
KKM Kota Kinabalu 12.44 306 Pn **Pn 03 02 19.6 +0.6**
KDU Kakadu 12.85 152 P **Pn 03 02 23.6 -0.8**
baz=13,SNR=16
JAGI Jajag, Banyuwa 14.02 239 Pn **Pn 03 02 40.5 +0.1**
JAY Jayapura 14.45 95 LR LR 03 09 06.8
comp=Z,1µm,19.1s,baz=302,slow=41
KNRA Kununurra 14.47 170 P **Pn 03 02 47.4 +1.0**
baz=14,SNR=4.7
KNRA Kununurra 14.47 170 Pn 03 02 46.5 0.0
SBUM Sibu 14.56 285 Pn **Pn 03 02 47.6 0.0**
SBUM Sibu 14.56 285 P **Pn 03 02 49.0 +1.4**
KSM Kuching 16.22 280 P 03 03 11.0 -0.7
KSM Kuching 16.22 280 P **P 03 03 13.0 +1.3**
FITZ Fitzroy Crossi 16.69 182 P **Pn 03 03 15.7 +0.7**
baz=17,SNR=4.4
FITZ Fitzroy Crossi 16.69 182 Pn **Pn 03 03 14.3 -0.8**
0.7nm,0.3s,baz=11,slow=8.4,SNR=14
FITZ LR LR 03 09 54.1
comp=Z,552nm,19.1s,baz=2.5,slow=38
FITZ Fitzroy Crossi 16.69 182 P 03 03 16.1 -0.7
LEM Lembang 19.41 253 LR LR 03 12 30.7
comp=Z,2µm,18.8s,baz=54,slow=41
CISI Cisompet, Garu 19.43 251 P **P 03 03 44.9 -2.3**
CISI IAmb IAmb 03 04 02.9
comp=Z,110nm,1.0s
WB0 Warramunga Arr 19.98 157 P **P 03 03 51.4 -1.6**
WB0 IAmb IAmb 03 04 05.3
comp=Z,121nm,1.3s
WRAB Tennant Creek 20.11 157 P **P 03 03 53.4 -1.1**
WRAB IAmb IAmb 03 04 06.2
comp=Z,83nm,1.1s
WRAB Tennant Creek 20.11 157d iP **P 03 03 53.1 -1.4**
WRAB pmax pmax
comp=Z,83nm,1.3s
WRA Warramunga Arr 20.11 157 P **P 03 03 53.1 -1.4**
comp=Z,30nm,0.9s,baz=340,slow=12,SNR=85
WRA Warramunga Arr 20.11 157 P **P 03 03 52.7 -1.8**
WRA Warramunga Arr 20.11 157 P **P 03 03 52.7 -1.8**
WRA pmax pmax
comp=Z,3.0nm,1.2s
WB2 Warramunga Arr 20.12 157 P **P 03 03 53.3 -1.3**
WB2 IAmb IAmb 03 04 06.3
comp=Z,71nm,1.0s
WR0 Warramunga Arr 20.21 157 P **P 03 03 54.8 -0.8**
COEN Coen 20.89 128 P **P 03 04 03.0 +0.3**
baz=21,SNR=143
COEN Coen 20.89 128 P **P 03 04 03.0 0.0**
COEN IAmb IAmb 03 04 20.5
comp=Z,120nm,1.1s
DLV T Lat 22.06 307 P **P 03 04 15.6 -0.1**
PMG Port Moresby 22.26 112 P **P 03 04 17.0 -0.7**
comp=Z,18nm,0.6s,baz=339,slow=4.0,SNR=7.6
PMG Port Moresby 22.26 112 P **P 03 04 18.2 +0.5**
PMG Port Moresby 22.26 112d iP **P 03 04 19.2 +1.5**
PMG pmax pmax
comp=Z,363nm,2.5s
MYKOM Kota Tinggi 22.65 278 P **P 03 04 22.9 +1.0**
QIS Mount Isa 23.12 147 P **P 03 04 25.6 -1.1**
baz=23,SNR=26
AS31 Alice Springs 23.41 162 P **P 03 04 29.1 -0.3**
ASAR Alice Springs 23.41 162 P **P 03 04 28.2 -1.2**
comp=Z,49nm,0.9s,baz=341,slow=11,SNR=325
ASAR Alice Springs 23.41 162 P **P 03 04 28.5 -0.9**
ASAR Alice Springs 23.41 162 P **P 03 04 28.5 -0.9**
WRKA Warakurna 23.66 175 P **P 03 04 31.6 -0.2**
baz=24,SNR=34
GIRL Giralia 24.22 208 P **P 03 04 37.9 +1.0**
baz=24,SNR=3.8
MTSU Mount Surprise 24.34 134 P **P 03 04 37.6 -0.6**
baz=24,SNR=11
JRMM Jerantut 24.36 282 P **P 03 04 40.4 +1.7**
TPUB Ta-pu 25.09 348 P **P 03 04 44.2 -0.6**
TPUB IAmb IAmb 03 05 16.7
comp=Z,44nm,0.9s
SSLB Suanglung 25.49 349 P **P 03 04 47.7 -0.8**
KRVT Keravat (AS076 25.87 97 P **P 03 04 52.6 +0.5**
comp=Z,98nm,0.6s,baz=112,slow=9.2,SNR=5.2
QIZ Qiongzhong 25.89 322 P **P 03 04 52.4 +0.2**
QIZ pP **pP 03 05 03.1 -0.4**
QIZ sP **sP 03 05 09.6 +0.9**
QIZ S **S 03 09 21.9 +2.7**
QIZ pmax pmax
comp=Z,12nm,1.0s
QIZ LR LR
comp=Z,200nm,14.8s
QIZ LR LR
comp=Z,320nm,16.4s
IPM Ipoh 25.89 283 P **P 03 04 51.1 -1.2**
IPM IAmb IAmb 03 05 20.5
comp=Z,55nm,1.2s
IPM Ipoh 25.89 283 P **P 03 04 55.0 +2.7**
MEEK Meekatharra 26.23 196 P **P 03 04 54.6 -0.7**
baz=26,SNR=3.0
YHNB Yeheng 26.27 350 IAmb IAmb 03 05 25.4
comp=Z,35nm,0.9s
KULM Kulim 26.44 285 P **P 03 04 57.3 +0.1**
KULM IAmb IAmb 03 05 12.9
comp=Z,50nm,1.3s
KNMB Chin-men Tao 26.75 344 P **P 03 04 59.6 -0.3**
QZH Quanzhou 27.15 345 eP **P 03 05 03.4 -0.1**
QZH S **S 03 09 38.1 -0.9**
QZH LR LR
comp=Z,350nm,16.6s
RPSI Rantau Prapat 27.65 278 P **P 03 05 08.1 0.0**
PSI Prapat 27.66 279 P **P 03 05 08.0 -0.4**
comp=Z,12nm,1.0s,baz=104,slow=8.2,SNR=7.2
PSI LR LR 03 17 50.4
comp=Z,889nm,20.2s,baz=76,slow=40
PSI Prapat 27.66 279 P **P 03 05 08.1 -0.3**
PSI pmax pmax
comp=Z,18nm,0.9s
JOW Kunigami 28.05 4 P **P 03 05 11.8 +0.3**
JOW IAmb IAmb 03 05 29.7
comp=Z,31nm,0.9s
GSI Gunungsitoli 28.83 275 P **P 03 05 18.7 +0.1**
GSI IAmb IAmb 03 05 33.0
comp=Z,54nm,1.2s
PBKT Sadao Pong 30.67 306 P **P 03 05 34.6 -0.2**
MUN Mundaring 31.95 196 P **P 03 05 45.4 -0.6**
baz=32,SNR=3.6
NWAO Narrogin (SRO) 32.58 194 LR LR 03 20 21.5
comp=Z,469nm,18.7s,baz=2.0,slow=39
BBOO Buckleboo 32.65 165 P **P 03 05 52.1 +0.1**
baz=33,SNR=10
BBOO Buckleboo 32.65 165 P **P 03 05 52.0 -0.1**
RMQ Roma 33.05 141 P **P 03 05 57.6 +1.8**
baz=33,SNR=6.2
CM31 Chiang Mai Arr 33.31 307 P **P 03 05 57.3 -0.8**
CMAR Chiang Mai Arr 33.31 307 P **P 03 05 57.5 -0.6**
comp=Z,0.8nm,0.3s,baz=138,slow=7.4,SNR=11
CMAR LR LR 03 19 51.3
comp=Z,271nm,20.8s,baz=130,slow=37
CMAR Chiang Mai Arr 33.31 307ceP **P 03 05 59.0 +0.9**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CHTO Chiang Mai 33.51 308 P **P 03 05 59.1 -0.7**
CHTO Chiang Mai 33.51 308 P **P 03 05 59.1 -0.7**
CHTO pmax pmax
comp=Z,22nm,1.5s
STKA Stephens Creek 33.65 156 P **P 03 06 01.6 +0.8**
baz=34,SNR=16
STKA Stephens Creek 33.65 156 P **P 03 06 01.1 +0.2**
comp=Z,9.0nm,0.5s,baz=331,slow=8.1,SNR=56
STKA Stephens Creek 33.65 156 P **P 03 06 00.7 -0.2**
STKA Stephens Creek 33.65 156 P **P 03 06 00.7 -0.2**
STKA pmax pmax
comp=Z,3.0nm,0.9s
WHN Wuhan 33.67 341 P **P 03 06 04.8 +3.8**
WHN S **S 03 11 22.3 +1.4**
WHN LR LR
comp=Z,880nm,16.8s
NJ2 Nanjing 33.93 349 eP **P 03 06 04.2 +1.0**
NJ2 pmax pmax
comp=Z,31nm,1.0s
HTT Hallett 34.07 161 P **P 03 06 05.4 +0.8**
baz=34,SNR=5.0
CMSA Cobar Meteorol 35.21 151 P **P 03 06 15.7 +1.4**
baz=35,SNR=22
ARMA Armidale 37.62 143 P **P 03 06 36.5 +1.4**
baz=38,SNR=9.0
ARMA Armidale 37.62 143 P **P 03 06 35.2 +0.2**
ARMA IAmb IAmb 03 06 37.3
comp=Z,21nm,0.8s
INU Inuyama 37.83 14 IAmb IAmb 03 06 37.5
comp=Z,28nm,0.9s
TIA Tai'an 38.30 348 P **P 03 06 40.4 -0.2**
TIA pmax pmax
comp=Z,12nm,0.8s
CD2 Chengdu 38.56 328⇓iP **P 03 06 43.0 +0.1**
CD2 S **S 03 12 42.2 +6.3**
CD2 pmax pmax
comp=Z,10.0nm,0.9s
CD2 pmax pmax
comp=Z,460nm,7.3s
CD2 LR LR
comp=Z,1µm,24.5s
CD2 LR LR
comp=Z,2µm,20.4s
CD2 LR LR
comp=Z,1µm,19.3s
KSAR Wonju Array Be 38.59 2 P **P 03 06 42.9 -0.1**
KSAR **PcP 03 08 55.9 +1.0**
KSAR Wonju Array Be 38.59 2 P **P 03 06 42.9 -0.1**
KSAR 03 08 55.8
KSRS Korea Array 38.61 2 P **P 03 06 42.8 -0.3**
comp=Z,3.8nm,0.8s,baz=177,slow=9.5,SNR=19
KSRS PcP **PcP 03 08 55.9 +1.1**
comp=Z,3.0nm,0.6s,baz=185,slow=2.9,SNR=12
YNG Young 38.77 150 P **P 03 06 46.5 +1.9**
baz=39,SNR=26
XAN Xi'an 38.78 337 IAmb IAmb 03 07 20.9
comp=Z,59nm,1.8s
MAJO Matsushiro 39.27 15 P **P 03 06 47.6 -1.1**
MAJO IAmb IAmb 03 06 48.4
comp=Z,69nm,1.7s
MAJO Matsushiro 39.27 15deP **P 03 06 46.7 -2.0**
MAJO pmax pmax
comp=Z,42nm,1.7s
MAT Matsushiro 39.27 15 P **P 03 06 46.7 -2.0**
MAT eS S 03 13 21.4 +35
MJAR Matsushiro Arr 39.27 15 P **P 03 06 46.7 -2.0**
comp=Z,9.1nm,0.7s,baz=184,slow=8.8,SNR=15
MJAR PcP **PcP 03 08 58.1 +1.1**
comp=Z,3.7nm,0.8s,baz=162,slow=3.4,SNR=5.1
MJAR LR LR 03 23 35.9
comp=Z,405nm,18.4s,baz=200,slow=37
MJAR Matsushiro Arr 39.27 15 P **P 03 06 47.7 -1.0**
MJB9 Matsu-Tunnel 39.27 15 IAmb IAmb 03 06 48.4
comp=Z,72nm,1.7s
MGCD Mangrove Creek 39.36 146 P **P 03 06 51.9 +2.5**
baz=40,SNR=6.3
CAN Canberra 39.88 151 P **P 03 06 55.6 +1.7**
CAN Canberra 39.88 151 P **P 03 06 55.6 +1.7**
CAN pmax pmax
comp=Z,137nm,1.4s
CNB Canberra Magne 40.06 150 P **P 03 06 57.6 +2.2**
baz=40,SNR=8.1
TOO Toolangi 40.18 156 P **P 03 06 58.6 +2.3**
baz=40,SNR=5.1
TOO Toolangi 40.18 156 P **P 03 06 57.8 +1.5**
TOO IAmb IAmb 03 07 00.9
comp=Z,53nm,1.4s
TOO Toolangi 40.18 156 P **P 03 06 57.8 +1.5**
TOO pmax pmax
comp=Z,53nm,1.4s
BJT Baijiatuan 42.17 348 IAmb IAmb 03 07 14.0
comp=Z,22nm,0.7s
BJI Beijing 42.19 348⇓iP **P 03 07 12.6 -0.1**
BJI pP **pP 03 07 23.4 -1.0**
BJI pmax pmax
comp=Z,30nm,0.7s
SHL Shillong 42.68 311 P **P 03 07 16.4 -0.7**
SHL Shillong 42.68 311 P **P 03 07 16.5 -0.7**
SHL pmax pmax
comp=Z,15nm,0.8s
LZH Lanzhou 42.69 333 eP **P 03 07 18.0 +0.9**
LZH pP pP 03 07 30.1 +1.3
LZH sP sP 03 07 35.7 +1.8
LZH sS sS 03 14 03.2 +6.1
LZH SS **SS 03 16 46.6 -2.8**
LZH pmax pmax
comp=Z,19nm,1.0s
LZH pmax pmax
comp=Z,160nm,4.8s
LZH LR LR
comp=Z,300nm,13.8s
LZH LR LR
comp=Z,410nm,14.6s
LZH LR LR
comp=Z,540nm,14.6s
SANVU Saraoutou 42.72 111 P **P 03 07 18.2 +0.7**
SANVU IAmb IAmb 03 07 29.5
comp=Z,58nm,1.1s
SNY Shenyang 43.02 357⇑P **P 03 07 16.2 -3.2**
SNY pmax pmax
comp=Z,24nm,0.8s
HHC Hu-ho-hao-te 44.06 344 eP **P 03 07 28.6 +0.6**
HHC pP pwP 03 07 42.4 -0.1
HHC pmax pmax
comp=Z,16nm,1.0s
HHC pmax pmax
comp=Z,200nm,5.2s
DZM Mont Dzumac 44.16 121 P **P 03 07 30.1 +1.1**
comp=Z,23nm,1.2s,baz=296,slow=13,SNR=6.9
DZM Mont Dzumac 44.16 121 IAmb IAmb 03 08 27.4
comp=Z,43nm,1.5s
BTO Baotou 44.29 342 eP **P 03 07 25.5 -4.3**
TAU Tasmania Unive 45.48 158 P **P 03 07 38.4 -0.7**
TAU IAmb IAmb 03 07 50.2
comp=Z,38nm,1.4s
TAU Tasmania Unive 45.48 158 P **P 03 07 38.4 -0.7**
TAU pmax pmax
comp=Z,38nm,1.4s
LSA Lhasa 45.57 315 P **P 03 07 40.9 +0.3**
LSA Lhasa 45.57 315 P **P 03 07 41.0 +0.3**
LSA Lhasa 45.57 315 P **P 03 07 41.0 +0.3**
LSA pmax pmax
comp=Z,11nm,0.7s
USRK Ussuriysk Ar. 45.60 6 P **P 03 07 39.5 -0.6**
comp=Z,8.1nm,0.7s,baz=195,slow=8.4,SNR=20
USRK Ussuriysk Ar. 45.60 6 P **P 03 07 39.6 -0.4**
USRK Ussuriysk Ar. 45.60 6 P **P 03 07 39.6 -0.4**
USA0B Ussuriysk Arra 45.60 6 P **P 03 07 40.0 0.0**
USA0B IAmb IAmb 03 07 54.8
comp=Z,29nm,1.4s
USA0B Ussuriysk Arra 45.60 6 P **P 03 07 40.0 0.0**
USA0B pmax pmax
comp=Z,29nm,1.4s
MDJ Mudanjiang 45.83 3 P **P 03 07 41.5 -0.3**
MDJ PcS **PcS 03 13 13.3 +0.5**
MDJ S **S 03 14 22.8 +0.2**
MDJ pmax pmax
comp=Z,19nm,0.9s
MDJ pmax pmax
comp=Z,240nm,6.1s
MDJ LR LR
comp=Z,420nm,16.5s
MDJ LR LR
comp=Z,390nm,9.4s
MDJ LR LR
comp=Z,400nm,9.7s
MDJ Mudanjiang 45.83 3 IAmb IAmb 03 07 43.3
comp=Z,24nm,0.9s
ODAN Odare 46.78 310 eP **P 03 07 49.6 -0.3**
TAPN Taplejung 46.79 310 eP **P 03 07 49.0 -1.0**
comp=Z,15nm,0.7s
TEY Ternei 47.06 10⇓eP **P 03 07 51.1 -0.3**
TEY e 03 08 00.7
TEY pmax pmax
comp=N,20nm,0.8s
TEY pmax pmax
comp=Z,30nm,0.8s
GTA Gaotai 47.25 332 P **P 03 07 54.2 +1.0**
GTA pP pP 03 08 03.2 -1.9
GTA PP **PP 03 09 46.4 +1.7**
GTA pmax pmax
comp=Z,19nm,1.0s
GTA pmax pmax
comp=Z,130nm,4.4s
GTA LR LR
comp=Z,280nm,20.0s
GTA LR LR
comp=Z,280nm,18.4s
GTA LR LR
comp=Z,330nm,19.4s
RAMN Ramite 47.44 309 eP **P 03 07 54.5 -0.6**
comp=Z,34nm,0.6s
ASAJ Asahikawa 47.53 16 P **P 03 07 55.2 +0.1**
comp=Z,23nm,0.7s,baz=222,slow=12,SNR=20
JIRN Jiri 48.11 310 eP **P 03 07 59.7 -0.7**
comp=Z,29nm,0.7s
GUN Gumba 48.47 310 eP **P 03 08 02.4 -0.8**
comp=Z,30nm,0.7s
DMN Daman 48.92 309 eP **P 03 08 06.0 -0.5**
GKN Gorkha 49.47 309 eP **P 03 08 09.7 -0.9**
KOLN Koldanda 50.17 309 eP **P 03 08 15.5 -0.5**
comp=Z,38nm,0.7s
YSS Yuzh-Sakhalins 50.20 15 P **P 03 08 15.5 0.0**
YSS IAmb IAmb 03 08 20.7
comp=Z,20nm,0.8s
YSS Yuzh-Sakhalins 50.20 15 eP **P 03 08 15.6 0.0**
YSS e*PP **pP 03 08 25.6 -1.8**
YSS eS **S 03 15 24.2 -0.2**
YSS eSSS SSS 03 20 20.5
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,300nm,20.0s
DANN Dangsing 50.32 309 eP **P 03 08 16.4 -0.8**
comp=Z,48nm,0.6s
KLR Kul'dur 50.57 5 P **P 03 08 17.5 -0.8**
comp=Z,4.9nm,0.8s,baz=213,slow=3.7,SNR=14
KLR Kul'dur 50.57 5⇓iP **P 03 08 17.1 -1.2**
KLR pmax pmax
comp=Z,8.0nm,1.0s
HYB Hyderabad 50.57 294 iP **P 03 08 18.0 -1.0**
ULN Ulaanbaatar 51.78 344 P **P 03 08 27.7 +0.1**
ULN IAmb IAmb 03 08 30.0
comp=Z,30nm,1.1s
ULN Ulaanbaatar 51.78 344⇓iP **P 03 08 28.2 +0.6**
ULN pmax pmax
comp=Z,49nm,1.7s
SONM Songino Array 51.94 343 P **P 03 08 29.3 +0.5**
comp=Z,8.4nm,0.7s,baz=155,slow=8.4,SNR=77
SONM Songino Array 51.94 343 P **P 03 08 28.6 -0.2**
SONM Songino Array 51.94 343 P **P 03 08 28.6 -0.2**
SONM pmax pmax
comp=Z,15nm,1.2s
GRNR Gornyy 52.61 8 eP P 03 08 28.1 -5.4
GRNR e 03 08 43.3
GRNR eS **S 03 15 51.1 -6.4**
GRNR pmax pmax
comp=Z,10.0nm,1.2s
GRNR smax smax
comp=N,3.0nm,0.9s
GRNR MLR MLR
comp=Z,170nm,14.0s
TYV Tymovskoe 53.83 13 eP **P 03 08 42.9 +0.4**
TYV pmax pmax
comp=Z,7.0nm,0.8s
ZAK Zakamensk 55.14 342 eP **P 03 08 52.2 0.0**
ZAK pmax pmax
comp=Z,9.0nm,0.8s
TLY Talaya 56.18 343 P **P 03 09 00.1 +0.6**
comp=Z,3.9nm,0.6s,baz=180,slow=6.7,SNR=18
TLY Talaya 56.18 343 P **P 03 08 59.7 +0.2**
TLY Talaya 56.18 343⇓eP **P 03 08 59.8 +0.2**
TLY pmax pmax
comp=Z,12nm,1.0s
IRK Irkutsk 56.51 344 eP **P 03 09 01.3 -0.5**
IRK pmax pmax
comp=Z,34nm,2.3s
WMQ Urumqi 56.65 327 eP **P 03 09 04.6 +1.5**
WMQ pP pP 03 09 13.5 -1.7
WMQ sP sP 03 09 28.2 +8.1
WMQ PcP **PcP 03 10 00.8 +1.9**
WMQ pmax pmax
comp=Z,41nm,0.9s
WMQ pmax pmax
comp=Z,280nm,4.7s
WMQ LR LR
comp=Z,550nm,29.0s
WMQ LR LR
comp=Z,1µm,29.0s
WMQ LR LR
comp=Z,350nm,21.9s
MOY Mondy 56.97 341 eP **P 03 09 06.0 +0.7**
MOY pmax pmax
comp=Z,62nm,2.2s
RPZ Rata Peaks 57.96 143 P **P 03 09 13.4 +1.1**
comp=Z,11nm,0.8s,baz=230,slow=6.4,SNR=5.5
RPZ Rata Peaks 57.96 143 P **P 03 09 13.1 +0.8**
URZ Urewera 59.25 135 P **P 03 09 21.7 +0.4**
comp=Z,8.0nm,0.6s,baz=13,slow=6.7,SNR=3.2
URZ Urewera 59.25 135 IAmb IAmb 03 09 25.8
comp=Z,95nm,1.7s
BOD Bodaibo 59.77 352 eP **P 03 09 24.0 -0.5**
BOD pmax pmax
comp=Z,26nm,1.4s
PETK Petropavlovsk- 60.25 21 P **P 03 09 28.4 +0.5**
comp=Z,20nm,0.7s,baz=184,slow=6.6,SNR=26
PETK PcP **PcP 03 10 13.3 +0.4**
comp=Z,7.7nm,0.6s,baz=204,slow=5.6,SNR=4.1
PETK LR LR 03 36 37.3
comp=Z,82nm,19.5s,baz=240,slow=37
PETK Petropavlovsk- 60.25 21 P **P 03 09 28.1 +0.1**
NIL Nilore 60.74 310 P **P 03 09 32.0 +0.3**
NIL Nilore 60.74 310 P **P 03 09 32.0 +0.3**
NIL pmax pmax
comp=Z,77nm,1.7s
PDGK Podgornoye 61.07 323 P **P 03 09 34.3 +0.4**
KSH Kashi 61.36 317 P **P 03 09 37.9 +2.0**
KSH PP **PP 03 11 54.4 +2.9**
KSH PcS **PcS 03 14 17.3 -3.5**
KSH S **S 03 17 54.0 +0.4**
KSH ScS **SKKSac 03 19 22.8 -1.0**
KSH pmax pmax
comp=Z,21nm,0.7s
KSH pmax pmax
comp=Z,310nm,5.7s
KSH LR LR
comp=Z,360nm,7.8s
KSH LR LR
comp=Z,350nm,7.2s
KSH LR LR
comp=Z,540nm,8.1s
MK31 Makanchi Array 61.48 327 P **P 03 09 36.6 +0.2**
MK31 Makanchi Array 61.48 327 P **P 03 09 36.6 +0.2**
MK31 pmax pmax

comp=Z,30nm,1.0s
MKAR Makanchi Array 61.48 327 P P 03 09 37.0 +0.6
comp=Z,15nm,0.5s,baz=128,slow=7.6,SNR=211
MKAR Makanchi Array 61.48 327 P P 03 09 36.2 -0.3
MAKZ Makanchi 61.66 327 P P 03 09 38.1 +0.5
MAKZ Makanchi 61.66 327 P P 03 09 38.1 +0.5
MAKZ pmax pmax
comp=Z,49nm,1.2s
NRN Naryn 62.28 319 IAmb IAmb 03 09 44.8
comp=Z,19nm,1.0s
YAK Yakutsk 63.23 2 P P 03 09 47.7 -0.1
comp=Z,23nm,0.6s,baz=348,slow=0.6,SNR=16
YAK Yakutsk 63.23 2 P P 03 09 47.6 -0.2
YAK Yakutsk 63.23 2 eP P 03 09 47.7 -0.1
YAK eS S 03 18 15.2 -0.8
YAK e*SS sS 03 18 38.3 +1.9
YAK pmax pmax
comp=Z,29nm,0.7s
YAK pmax pmax
comp=N,7.0nm,0.8s
YAK smax smax
comp=N,75nm,3.1s
YAK smax smax
comp=E,62nm,3.5s
KBK Karagaybulak 63.56 320 P P 03 09 52.0 +1.4
SNR=14
UCH Uchtor 63.63 319 P P 03 09 53.1 +1.7
SNR=21
MA2 Magadan 63.68 14 LR LR 03 36 37.7
comp=E,84nm,20.5s,baz=186,slow=35
MA2 Magadan 63.68 14 P P 03 09 51.4 +0.6
MA2 Magadan 63.68 14 d iP P 03 09 51.8 +1.0
MA2 pmax pmax
comp=Z,107nm,2.5s
FRU1 Bishkek 63.84 320 P P 03 09 53.0 +0.7
FRU1 Bishkek 63.84 320 P P 03 09 53.0 +0.7
FRU1 pmax pmax
comp=Z,74nm,1.6s
AAK Ala-Archa 63.84 320 P P 03 09 53.7 +1.2
SNR=14
AAK Ala-Archa 63.84 320 P P 03 09 53.2 +0.7
AAK IAmb IAmb 03 09 55.6
comp=Z,28nm,1.0s
AAK Ala-Archa 63.84 320 deP P 03 09 53.7 +1.2
AAK pmax pmax
comp=Z,81nm,2.5s
CHMS Chumysh 63.85 320 P P 03 09 53.1 +0.8
SNR=7.1
AML Almayashu 64.12 319 P P 03 09 56.0 +1.4
SNR=13
USP Ospenovka 64.15 320 P P 03 09 55.2 +0.9
SNR=21
ARSB Arslanbob 64.22 318 P P 03 09 55.4 +0.5
ARSB Arslanbob 64.22 318 P P 03 09 55.4 +0.5
ARSB pmax pmax
comp=Z,59nm,1.1s
KBL Kabul 64.31 310 P P 03 09 55.5 -0.2
KBL Kabul 64.31 310 P P 03 09 55.5 -0.2
KBL pmax pmax
comp=Z,29nm,0.8s
EKS2 Erkin-Say 64.32 319 P P 03 09 57.0 +1.5
SNR=13
ZAA0 Zalesovo Array 64.89 334 P P 03 09 58.2 -0.6
ZAA0 IAmb IAmb 03 09 59.9
comp=Z,13nm,0.8s
ZALV Zalesovo Beam 64.89 334 P P 03 09 58.1 -0.8
comp=Z,12nm,0.8s,baz=121,slow=5.0,SNR=40
ZALV LR LR 03 39 31.3
comp=Z,87nm,19.2s,baz=103,slow=37
ZALV Zalesovo Beam 64.89 334 i P P 03 09 58.2 -0.6
ZALV pmax pmax
comp=Z,12nm,0.8s
BTK Batken 65.15 316 P P 03 10 01.2 +0.3
BTK IAmb IAmb 03 10 04.4
comp=Z,34nm,1.1s
BTK Batken 65.15 316 P P 03 10 01.2 +0.3
BTK pmax pmax
comp=Z,34nm,1.1s
KURBB Kurchatov Arra 65.77 329 P P 03 10 04.8 +0.2
comp=Z,18nm,0.8s,baz=129,slow=5.8,SNR=174
KURK Kurchatov 65.78 329 P P 03 10 04.8 +0.2
KURK Kurchatov 65.78 329 deP P 03 10 04.9 +0.3
KURK pmax pmax
comp=Z,42nm,0.8s
KK31 Karatay Array 66.66 319 P P 03 10 10.9 +0.4
KK31 IAmb IAmb 03 10 13.5
comp=Z,34nm,1.2s
KK31 Karatay Array 66.66 319 P P 03 10 10.9 +0.4
KK31 pmax pmax
comp=Z,34nm,1.2s
KKAR Karatay Array 66.66 319 P P 03 10 10.2 -0.2
KKAR Karatay Array 66.66 319 P P 03 10 10.3 -0.2
TAS Tashkent 66.73 317 P P 03 10 11.1 +0.1
TAS Tashkent 66.73 317 P P 03 10 11.1 +0.1
TAS pmax pmax
comp=Z,80nm,1.1s
SEY Seymchan 67.02 13⇓iP P 03 10 13.4 +1.1
HRA Herat 69.58 307 IAmb IAmb 03 10 31.4
comp=Z,50nm,1.8s
WSAR Wadi Sarin 70.09 295 LR LR 03 46 21.3
comp=Z,104nm,18.1s,baz=118,slow=40
BVAR Borovoye Array 71.32 328 P P 03 10 39.2 0.0
comp=Z,5.9nm,0.8s,baz=124,slow=7.9,SNR=36
BRVK Borovoye 71.39 328 P P 03 10 39.7 +0.1
BRVK IAmb IAmb 03 11 11.5
comp=Z,26nm,1.2s
BRVK Borovoye 71.39 328 P P 03 10 39.7 +0.1
BRVK pmax pmax
comp=Z,26nm,1.3s
TIXI Tiksi 72.86 1 P P 03 10 47.2 -0.8
TIXI Tiksi 72.86 1⇓eP P 03 10 47.2 -0.8
TIXI pmax pmax
comp=Z,26nm,0.7s
SOCY Socotra 73.00 283 P P 03 10 49.7 -0.5
SOCY IAmb IAmb 03 11 04.5
comp=Z,31nm,0.9s
GEYT Alibeck 73.75 310 P P 03 10 55.0 +0.9
comp=Z,7.2nm,1.0s,baz=126,slow=4.0,SNR=17
GEYT Alibeck 73.75 310 P P 03 10 53.8 -0.2
GYA0B ALIBECK ARRAY 73.75 310 IAmb IAmb 03 11 17.2
comp=Z,20nm,1.1s
BILL Bilibino 74.52 15 P P 03 10 56.8 -1.1
BILL Bilibino 74.52 15 i P P 03 10 56.2 -1.6
BILL i 03 11 14.7
BILL pmax pmax
comp=Z,2.0nm,0.9s
BILL MLR MLR
comp=Z,206nm,18.0s
AB31 Akbulak array 75.79 322 i P P 03 11 04.8 -0.7
ABKAR Akbulak array 75.79 322 P P 03 11 04.7 -0.9
AKTO Aktyubinsk 77.35 322 LR LR 03 48 29.1
comp=Z,145nm,20.3s,baz=115,slow=38
AKTO Aktyubinsk 77.35 322 P P 03 11 14.1 -0.2
SVE Sverdlovsk 78.03 329⇓eP P 03 11 18.1 +0.1
SVE pmax pmax
comp=Z,20nm,1.4s
VNDA Vanda 78.51 173 P P 03 11 21.2 +0.9
comp=Z,4.5nm,0.8s,baz=308,slow=7.1,SNR=6.1
VNDA LR LR 03 45 54.8
comp=Z,168nm,18.9s,baz=346,slow=36
ARU Arti 78.96 328 LR LR 03 48 46.2
comp=Z,121nm,19.2s,baz=252,slow=38
ARU Arti 78.96 328 P P 03 11 22.4 -0.7
ARU IAmb IAmb 03 11 24.7
comp=Z,45nm,1.8s
ARU Arti 78.96 328 c iP P 03 11 23.5 +0.4
ARU S S 03 21 19.9 +1.5
ARU SS SS 03 26 22.1 -2.4
ARU pmax pmax
comp=Z,24nm,1.7s
GAMB Gambell 79.16 24 P P 03 11 24.3 +0.2
GAMB IAmb IAmb 03 11 39.0
comp=Z,30nm,1.2s
UWE Uwekahuna 79.52 70 P P 03 11 26.1 -1.0
RAYN Ar Rayn 82.08 294 P P 03 11 40.5 -0.1
RAYN Ar Rayn 82.08 294 P P 03 11 40.6 -0.1
RAYN pmax pmax
comp=Z,12nm,1.0s
GROC Groznyy 83.97 314 eP P 03 11 50.8 +0.9
GROC e 03 15 03.7
GROC pmax pmax
comp=Z,7.0nm,0.7s
PPT Papeete 84.01 107 LR LR 03 47 41.6
comp=Z,47nm,20.1s,baz=296,slow=34
RDOG Red Dog Mine 84.12 21 IAmb IAmb 03 11 53.0
comp=Z,23nm,1.0s
GNI Garni 84.38 310 LR LR 03 57 32.7
comp=Z,86nm,18.3s,baz=65,slow=41
TBLG Delisi 84.56 312 P P 03 11 53.8 +0.8
TBLG IAmb IAmb 03 11 54.8
comp=Z,12nm,0.7s
TBLG Delisi 84.56 312 P P 03 11 53.8 +0.8
TBLG pmax pmax
comp=Z,12nm,0.7s
ZEI Tsey 85.30 313 eP P 03 11 56.5 -0.4
ZEI pmax pmax
comp=Z,16nm,1.0s
SVW2 Sparrevohn 85.42 28 IAmb IAmb 03 11 59.6
comp=Z,14nm,0.8s
AKH Akhalkalaki 85.46 312 P P 03 11 58.4 +0.7
AKH IAmb IAmb 03 12 01.4
comp=Z,27nm,1.4s
AKH Akhalkalaki 85.46 312 P P 03 11 58.4 +0.7
AKH pmax pmax
comp=Z,27nm,1.4s
NCK Nalchik 85.59 314⇓eP P 03 11 58.5 +0.3
NCK pmax pmax
comp=Z,11nm,0.4s
KBZ Khabaz 86.12 314 P P 03 12 01.0 +0.3
comp=Z,5.1nm,0.8s,baz=118,slow=8.2,SNR=8.7
GOF Gofitskoye 86.15 315⇑eP P 03 12 01.6 +0.8
GOF pmax pmax
comp=Z,45nm,1.7s
NEY Neytrino 86.20 313⇑eP P 03 12 02.4 +1.0
NEY pmax pmax
comp=Z,7.0nm,2.0s
KIV Kislovodsk 86.30 314 P P 03 12 00.8 -0.9
KIV Kislovodsk 86.30 314 eP P 03 12 00.3 -1.4
KIV pmax pmax
comp=Z,14nm,0.9s
KIV MLR MLR
comp=Z,357nm,20.0s
PRGR Permogore 86.71 332 eP P 03 12 00.7 -2.5
PRGR pmax pmax
comp=Z,6.0nm,0.4s
IMAR Indian Mountai 87.11 24 P P 03 12 04.9 -0.1
SYO Syowa Base 87.59 201⇓iP P 03 12 06.6 -0.7
SYO Syowa Base 87.59 201⇑ePcP PcP 03 12 09.4 +0.2
VRH Novokhopyorsk 87.61 321 eP P 03 12 06.7 -1.0
VRH pmax pmax
comp=Z,20nm,0.6s
BPAW Bear Paw Mtn. 87.99 26 P P 03 12 09.1 -0.3
MLY Manley 88.21 25 IAmb IAmb 03 12 13.4
comp=Z,15nm,1.3s
TRF Thorofare Moun 88.22 27 IAmb IAmb 03 12 23.1
comp=Z,14nm,1.4s
RC01 Rabbit Creek A 88.22 29 IAmb IAmb 03 12 12.2
comp=Z,14nm,0.8s
SEW Seward 88.26 30 IAmb IAmb 03 12 12.0
comp=Z,16nm,0.8s
QSPA South Pole Qui 88.62 180 P P 03 12 13.3 +0.9
comp=Z,5.6nm,0.6s,baz=294,slow=0.8,SNR=47
QSPA South Pole Qui 88.62 180 P P 03 12 13.3 +0.9
QSPA IAmb IAmb 03 12 52.5
comp=Z,19nm,1.2s
GHO Glory Hole Cre 88.68 28 IAmb IAmb 03 12 24.5
comp=Z,8.2nm,0.9s
COLD Coldfoot 88.69 23 P P 03 12 13.1 +0.5
MCK McKinley 88.85 26 IAmb IAmb 03 12 14.6
comp=Z,16nm,1.1s
RND Reindeer 88.86 27 IAmb IAmb 03 12 14.0
comp=Z,10nm,0.7s
KMBO Kilima Mbogo 89.02 269 P P 03 12 16.6 +1.0
comp=Z,0.6nm,0.2s,baz=78,slow=5.5,SNR=5.5
KMBO Kilima Mbogo 89.02 269 P P 03 12 15.4 -0.2
KMBO Kilima Mbogo 89.02 269 P P 03 12 15.4 -0.2
KMBO pmax pmax
comp=Z,9.0nm,1.4s
TOLK Toolik Lake Re 89.08 21 IAmb IAmb 03 12 16.5
comp=Z,11nm,0.8s
TOLK Toolik Lake Re 89.08 21 P P 03 12 14.7 +0.3
baz=264
VORD Divnogorie 89.12 321 eP P 03 12 13.3 -1.6
VORD pmax pmax
comp=Z,9.0nm,0.7s
VSR Storozhevoye 89.21 321 eP P 03 12 13.1 -2.2
VSR pmax pmax
comp=Z,9.0nm,1.2s
WRH Wood River Hil 89.28 26 IAmb IAmb 03 12 16.0
comp=Z,7.5nm,0.7s
TCOL CIGO, UAF Yank 89.41 25 P P 03 12 15.5 -0.5
baz=266
COLA College 89.42 25 P P 03 12 15.5 -0.5
COLA College 89.42 25 P P 03 12 15.5 -0.5
COLA pmax pmax
comp=Z,20nm,0.3s
CCB Clear Creek Bu 89.42 25 IAmb IAmb 03 12 16.8
comp=Z,17nm,1.3s
GLI Glacier Island 89.49 29 P P 03 12 16.6 +0.1
DHY Denali Highway 89.50 27 IAmb IAmb 03 12 17.9
comp=Z,7.7nm,0.6s
KLMR Klimovskoe 89.56 331 eP P 03 12 10.9 -5.9
KLMR AMP 03 12 16.7
comp=Z,30nm,1.6s
KLMR Klimovskoe 89.56 331 eP P 03 12 10.8 -6.0
KLMR pmax pmax
comp=Z,30nm,1.6s
POKR Poker Flat Res 89.61 25 P P 03 12 16.5 -0.4
baz=266
HDA Harding Lake 89.77 26 IAmb IAmb 03 12 18.3
comp=Z,9.4nm,0.8s
HDA Harding Lake 89.77 26 P P 03 12 16.4 -1.3
baz=266
ILAR Eielson Array 89.82 25 P P 03 12 16.0 -1.9
comp=Z,4.0nm,0.6s,baz=240,slow=5.1,SNR=88
ILAR LR LR 03 50 12.7
comp=Z,76nm,19.2s,baz=304,slow=34
ILAR Eielson Array 89.82 25 P P 03 12 16.4 -1.5
ILAR Eielson Array 89.82 25 P P 03 12 16.4 -1.5
MOS Moscow 90.33 326 eP P 03 12 18.6 -1.8
PAX Paxson 90.36 27 IAmb IAmb 03 12 22.7
comp=Z,10.0nm,1.0s
BMAR Burnt Mountain 90.87 23 P P 03 12 23.0 +0.2
OBN Obninsk 90.91 325 i P P 03 12 20.2 -3.0
OBN pmax pmax
comp=Z,5.0nm,0.8s
SCRK Sand Creek 91.05 26 IAmb IAmb 03 12 25.2
comp=Z,6.1nm,0.7s
GLB Gilahina Butte 91.10 29 IAmb IAmb 03 12 38.1
comp=Z,9.9nm,1.1s
CRQM Cirque 91.42 29 IAmb IAmb 03 12 39.2
comp=Z,8.1nm,0.8s
MCARA McCarthy VSAT 91.48 29 IAmb IAmb 03 12 49.7
comp=Z,7.6nm,0.8s
TGL Tana Glacier 91.57 29 IAmb IAmb 03 12 28.2
comp=Z,9.5nm,0.8s
BALM Baldy 91.81 29 IAmb IAmb 03 12 29.3
comp=Z,9.0nm,0.8s
BCAR Beaver Creek A 92.04 27 P P 03 12 28.5 +0.1
EGAK Eagle 92.28 25 IAmb IAmb 03 12 45.9
comp=Z,5.4nm,0.8s
BRTR Keskin Array B 92.88 310 P P 03 12 31.4 -1.5
comp=Z,1.2nm,0.8s,baz=125,slow=4.4,SNR=7.0
BRTR Keskin Array B 92.88 310 ceP P 03 12 31.1 -1.8
BRTR pmax pmax
comp=Z,1.0nm,0.8s
EPYK Eagle Plains 94.01 24 P P 03 12 37.0 -0.4
baz=276
INK Inuvik 94.99 22 IAmb IAmb 03 12 55.3
comp=Z,18nm,1.4s
ARCES ARCESS Array B 95.00 340 P P 03 12 40.8 -1.0
comp=Z,1.9nm,0.6s,baz=56,slow=3.1,SNR=6.8
AKASG Malin Array Be 95.50 321 P P 03 12 43.1 -1.4
comp=Z,0.2nm,0.4s,baz=75,slow=4.3,SNR=4.5
AKASG LR LR 04 00 45.1
comp=Z,67nm,18.0s,baz=290,slow=39
AKASG Malin Array Be 95.50 321 IAmb IAmb 03 12 51.3
comp=Z,0.8nm,0.8s
AKASG Malin Array Be 95.50 321 ceP P 03 12 43.0 -1.4
AKASG pmax pmax
comp=Z,1.0nm,0.6s
C36M Paulatuk 98.08 20 P P 03 12 55.4 -0.3
baz=288
BURAR Bucovina Array 98.44 318 P P 03 12 57.6 -0.3
BUR08 Bucovina Ar. S 98.45 318 IAmb IAmb 03 13 00.3
comp=Z,5.1nm,0.9s
BOSA Boshof 99.05 241 LR LR 03 55 11.7
comp=Z,140nm,18.6s,baz=126,slow=34
KOLS Kolonicke sedl 100.19 319 eP Pdif 03 13 07.5 +1.9
KOLS Kolonicke sedl 100.19 319 ePDIFF Pdif 03 13 07.5 +1.9
CRVS Cervenica-Dubn 100.72 320 eP Pdif 03 13 08.5 +0.5
CRVS Cervenica-Dubn 100.72 320 ePDIFF Pdif 03 13 08.4 +0.5
YKA Yellowknife Ar 104.24 25 Pdiff Pdif 03 13 23.6 +0.3
comp=Z,0.4nm,0.6s,baz=297,slow=4.7,SNR=12
YKA PKiKP PKiKP 03 17 40.0 +0.2
comp=Z,0.6nm,0.6s,baz=300,slow=1.7,SNR=12
GERES GERESS Array B 105.72 321 PKiKP PKiKP 03 17 43.6 +0.5
comp=Z,0.3nm,0.5s,baz=54,slow=2.3,SNR=4.4
NVAR Mina Array Bea 110.55 49 PKiKP PKiKP 03 17 54.1 +1.4
comp=Z,0.3nm,0.5s,baz=288,slow=0.8,SNR=4.5
PDAR Pinedale Array 115.39 42 PKP PKPdf 03 18 01.8 0.0
comp=Z,0.6nm,0.6s,baz=112,slow=1.6,SNR=6.2
PDAR PKKP PKKPdf 03 28 58.4 -3.0
comp=Z,0.3nm,0.8s,baz=94,slow=3.6,SNR=2.8
PDAR Pinedale Array 115.39 42 PKiKP 03 18 00.8 -0.9
WUAZ Wupatki 116.71 50 P PKiKP 03 18 05.7 +1.3
baz=289
O20A White River Ci 117.35 45 P PKiKP 03 18 06.8 +1.2
baz=294
TUC Tucson 118.18 54 P PKiKP 03 18 08.4 +1.2
baz=288
MVCO Mesa Verde 118.29 48 P PKiKP 03 18 09.1 +1.6
baz=292
RSSD Black Hills 118.39 39 P PKiKP 03 18 07.6 +0.1
baz=299
N23A Red Feather La 118.62 43 P PKiKP 03 18 08.4 +0.3
baz=296
S22A 4UR Ranch, Cre 119.31 47 P PKiKP 03 18 10.9 +1.3
baz=294
ISCO Idaho Springs 119.33 44 P PKiKP 03 18 10.7 +1.1
baz=296
ULM Lac du Bonnet 119.55 30 PKP PKPdf 03 18 09.1 -0.2
comp=Z,2.6nm,0.6s,baz=338,slow=1.8,SNR=8.1
ULM Lac du Bonnet 119.55 30 PKPdf 03 18 09.2 0.0
ULM Lac du Bonnet 119.55 30 PKIKP PKPdf 03 18 09.2 0.0
SDCO Great Sand Dun 120.27 46 P PKiKP 03 18 12.3 +0.8
baz=295
ANMO Albuquerque 120.67 49 PKiKP 03 18 13.0 +0.8
ANMO Albuquerque 120.67 49 PKIKP PKiKP 03 18 13.0 +0.8
ANMO Albuquerque 120.67 49 P PKiKP 03 18 13.4 +1.2
baz=292
T25A Trinidad 121.31 46 P PKiKP 03 18 14.5 +1.1
baz=295
MNTX Cornudas Mount 122.71 53 P PKiKP 03 18 17.1 +1.0
baz=291
ECSD EROS Data Cent 123.13 36 P PKiKP 03 18 16.5 -0.1
baz=306
EYMN Ely 123.24 30 P PKiKP 03 18 17.9 +1.3
baz=313
MSTX Muleshoe 123.86 49 P PKiKP 03 18 18.6 +0.2
baz=295
TOA0 Torodi Ar. Sit 123.93 285 PKPdf 03 18 18.4 -0.1
TORD Torodi Ar. Bea 123.93 285 PKP PKiKP 03 18 19.1 +0.2
comp=Z,3.6nm,0.7s,baz=32,slow=2.2,SNR=27
TORD PKKPab PKKPab 03 28 05.3 +0.7
comp=Z,0.8nm,0.7s,baz=280,slow=4.6,SNR=3.6
AMTX Amarillo 124.28 48 P PKiKP 03 18 19.6 +0.4
baz=296
TXAR Lajitas Array 124.94 55 PKP PKiKP 03 18 21.3 +0.6
comp=Z,0.7nm,0.6s,baz=236,slow=0.7,SNR=13
TXAR Lajitas Array 124.94 55 PKiKP 03 18 21.0 +0.3
TXAR Lajitas Array 124.94 55 PKIKP PKiKP 03 18 21.0 +0.3
SCHQ Schefferville 125.59 9 PKP PKiKP 03 18 21.6 +0.6
comp=Z,2.8nm,0.6s,baz=301,slow=1.4,SNR=14
WMOK Wichita Mounta 126.47 46 P PKiKP 03 18 23.9 +0.5
baz=298
E44A Grand Marais A 126.84 27 P PKiKP 03 18 24.4 +0.6
baz=318
JFWS Jewell Farm 127.27 33 PKPdf 03 18 24.4 +0.1
JFWS Jewell Farm 127.27 33 PKIKP PKPdf 03 18 24.4 +0.1
JFWS Jewell Farm 127.27 33 P PKiKP 03 18 24.6 -0.2
baz=312
D46A Sault St. Mari 127.48 26 P PKiKP 03 18 25.1 0.0
baz=321
JCT Junction City 127.59 52 P PKiKP 03 18 26.3 +0.5
baz=295
F45A CMU Biological 127.73 28 P PKiKP 03 18 25.9 +0.4
baz=318
D47A Chapleau 127.75 25 P PKiKP 03 18 25.7 +0.1
baz=322
TUL1 Leonard 128.00 44 P PKiKP 03 18 26.5 +0.1
baz=302
G45A Suttons Bay 128.14 28 P PKiKP 03 18 26.7 +0.3
baz=318
E47A Iron Bridge 128.15 26 P PKiKP 03 18 26.3 -0.1
baz=321
D48A Paudash Township 128.20 24 P PKiKP 03 18 26.4 -0.1
baz=323
LSQQ Lebel-sur-Quev 128.41 19 P PKiKP 03 18 26.8 -0.1
baz=330
E48A Lockeyer 128.60 25 P PKiKP 03 18 27.3 0.0
baz=322
G47A Hillman 128.88 27 P PKiKP 03 18 28.4 +0.4
baz=320
F48A Evansville 128.92 26 P PKiKP 03 18 27.7 -0.3
baz=322
F49A Sandfield 129.22 25 P PKiKP 03 18 28.6 0.0
baz=322
H48A Harrisville 129.48 27 P PKiKP 03 18 30.1 +1.0
baz=320
U40A Yellville 129.75 42 P PKPdf 03 18 29.4 +0.2
baz=305
W39A Magazine 129.77 43 P PKPdf 03 18 30.0 0.0
baz=303
CCM Cathedral Cave 129.78 39 PKPdf 03 18 29.4 +0.2
CCM Cathedral Cave 129.78 39 PKIKP PKPdf 03 18 29.4 +0.2
CCM Cathedral Cave 129.78 39 P PKiKP 03 18 29.9 -0.1
baz=308
J47A Sunmer 129.88 29 P PKiKP 03 18 30.3 +0.3
baz=318
F51A Arnstein 129.97 24 P PKiKP 03 18 30.3 +0.2
baz=325
D54A Lac Fusel, La 130.17 20 P PKPdf 03 18 29.6 -0.1
baz=329
K47A Vermontville 130.21 30 P PKPdf 03 18 30.2 +0.4
baz=317
MIAR Mount Ida 130.26 44 P PKiKP 03 18 32.1 +1.1
baz=303
J48A Bridge Port 130.33 29 P PKiKP 03 18 30.7 -0.2
baz=319
E53A Dumoine, Ponti 130.47 22 P PKPdf 03 18 30.6 +0.3
baz=328
K48A Perry 130.54 29 P PKiKP 03 18 31.4 0.0
baz=318
E54A Lac Daplat, Po 130.59 21 P PKiKP 03 18 31.2 -0.2
baz=328
L47A Sherwood 130.61 31 P PKPdf 03 18 31.0 +0.4
baz=317
ALGO Algonquin Park 130.68 22 P PKiKP 03 18 31.6 +0.1
baz=327
D55A Sainte-Anne-du 130.69 20 P PKiKP 03 18 31.2 -0.3
baz=331
D56A ZEC Mazanza, M 130.90 19 P PKPdf 03 18 31.4 +0.3
baz=332
E55A Montcerf-Lytto 130.98 20 P PKiKP 03 18 32.0 -0.1
baz=330
DBIC Dimbokro 131.00 278 PKP PKiKP 03 18 33.7 +0.7
comp=Z,1.2nm,0.5s,baz=66,slow=4.8,SNR=5.2
DBIC SKPbc SKPab 03 21 56.3 +3.0
comp=Z,2.3nm,0.8s,baz=26,slow=2.1,SNR=4.4
LCAR Lake Charles 131.03 41 PKPdf 03 18 32.0 +0.4
G54A Lake Saint Pet 131.13 23 P PKiKP 03 18 32.2 -0.3
baz=327
N47A Urbana 131.14 32 P PKPdf 03 18 32.1 +0.5
baz=315
G53A Haliburton 131.15 23 P PKiKP 03 18 32.9 +0.4
baz=326
LATQ La Tuque 131.21 17 P PKPdf 03 18 31.9 +0.3
baz=334
I51A Listowel 131.22 26 P PKiKP 03 18 33.0 +0.3
baz=322
L49A Milan 131.23 30 P PKiKP 03 18 32.8 +0.1
baz=318
E56A St. Veronique 131.25 20 P PKPdf 03 18 32.1 +0.4
baz=331
D58A Chemin du LacG 131.44 17 P PKiKP 03 18 33.4 +0.4
baz=334
Z41A Richland Creek 131.50 45 P PKPdf 03 18 33.0 +0.5
baz=303
N48A Decatur 131.51 32 P PKiKP 03 18 33.3 0.0
baz=316
M49A Liberty Center 131.60 30 P PKiKP 03 18 33.5 0.0
baz=318
H53A Bobcaygeon 131.62 24 P PKiKP 03 18 33.6 +0.2
baz=326
E57A Chemin Saint G 131.66 19 P PKiKP 03 18 33.0 -0.5
baz=332
L50A Kingsville 131.75 29 P PKiKP 03 18 33.8 0.0
baz=319

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
O48A	Farmland	131.87	32	P	PKiKP	03 18 34.3	+0.2
	baz=316						
N49A	Columbus Grove	131.90	31	P	PKiKP	03 18 34.1	-0.1
	baz=317						
J52A	Paris	131.91	26	P	PKiKP	03 18 34.2	+0.1
	baz=323						
E58A	La Victoria	131.97	18	P	PKiKP	03 18 34.3	+0.2
	baz=333						
D61A	St Aubert, Com	132.10	15	P	PKiKP	03 18 34.4	0.0
	baz=338						
M50A	Fremont	132.12	30	P	PKiKP	03 18 34.5	-0.1
	baz=319						
D60A	Saint Jean D'O	132.17	16	P	PKiKP	03 18 34.1	-0.3
	baz=337						
O49A	Covington	132.35	32	P	PKiKP	03 18 35.1	0.0
	baz=317						
Q48A	North Vernon	132.49	34	P	PKiKP	03 18 36.1	+0.7
	baz=314						
G57A	Newington	132.52	20	P	PKiKP	03 18 35.1	-0.2
	baz=331						
N50A	Nevada	132.54	30	P	PKiKP	03 18 35.9	+0.5
	baz=318						
WCI	Wyandotte Cave	132.65	35	P	PKiKP	03 18 36.1	+0.4
	baz=313						
E61A	Lac Etchemin	132.73	16	P	PKiKP	03 18 36.1	+0.4
	baz=337						
F60A	Warwick	132.74	17	P	PKiKP	03 18 36.1	+0.4
	baz=335						
O50A	Cable	132.76	31	P	PKiKP	03 18 36.2	+0.3
	baz=317						
ACSO	Alum Creek Sta	133.03	31	P	PKiKP	03 18 36.4	0.0
	baz=318						
P50A	Jamestown	133.06	32	P	PKiKP	03 18 36.6	+0.1
	baz=317						
WVT	Waverly	133.11	38		PKPdf	03 18 35.9	+0.3
WVT	Waverly	133.11	38	PKIKP	PKPdf	03 18 35.9	+0.3
WVT	Waverly	133.11	38	P	PKPdf	03 18 36.8	0.0
	baz=310						
K54A	Basiliko Farm,	133.19	25	P	PKiKP	03 18 36.7	0.0
	baz=325						
L54A	Sinclairville	133.22	26	P	PKPdf	03 18 36.0	+0.4
	baz=324						
M53A	WI Miller and	133.24	28	P	PKiKP	03 18 37.1	+0.2
	baz=322						
N52A	McGinn's Farm,	133.24	29	P	PKiKP	03 18 37.2	+0.3
	baz=320						
E63A	Oxbow	133.27	14	P	PKiKP	03 18 37.1	+0.3
	baz=340						
O51A	Pataskala	133.28	31	P	PKiKP	03 18 36.8	-0.2
	baz=319						
I57A	Carthage	133.29	22	P	PKiKP	03 18 37.5	+0.7
	baz=329						
K55A	Perry	133.36	25	P	PKPdf	03 18 36.1	+0.3
	baz=326						
H58A	Gabriels	133.40	20	P	PKPdf	03 18 36.3	+0.4
	baz=331						
S49A	Springfield	133.53	35	P	PKiKP	03 18 37.0	-0.5
	baz=314						
P51A	Williamsport	133.54	32	P	PKiKP	03 18 37.0	-0.5
	baz=318						
L55A	Hinsdale	133.65	25	P	PKPdf	03 18 36.9	+0.5
	baz=325						
M54A	Oil Creek Stat	133.65	27	P	PKPdf	03 18 36.7	+0.2
	baz=323						
N53A	Lisbon	133.65	29	P	PKPdf	03 18 36.6	+0.1
	baz=321						
O53A	New Philadelph	133.90	29	P	PKPdf	03 18 37.3	+0.4
	baz=320						
P52A	Corning	133.91	31	P	PKPdf	03 18 36.5	-0.4
	baz=319						
J58A	Remsen	133.92	22	P	PKPdf	03 18 37.4	+0.5
	baz=329						
N54A	Moraine State	133.93	28	P	PKiKP	03 18 38.2	-0.1
	baz=322						
I59A	Olmsteadville	134.05	20	P	PKiKP	03 18 38.2	-0.3
	baz=331						
L56A	Greenwood	134.06	25	P	PKiKP	03 18 38.1	-0.5
	baz=326						
M55A	Ridgway	134.08	26	P	PKiKP	03 18 38.4	-0.2
	baz=324						
J59A	Piseco	134.12	21	P	PKiKP	03 18 38.9	+0.3
	baz=330						
I60A	Shoreham	134.21	20	P	PKiKP	03 18 38.5	-0.2
	baz=332						
LBNH	Lisbon	134.30	18	P	PKiKP	03 18 39.0	+0.1
	baz=334						
T50A	Nancy	134.32	35	P	PKiKP	03 18 39.2	+0.1
	baz=314						
M56A	Emporium	134.33	26	P	PKiKP	03 18 39.2	+0.1
	baz=325						
P53A	Whipple	134.39	30	P	PKiKP	03 18 39.1	-0.1
	baz=320						
L57A	Andrews Acres	134.46	24	P	PKiKP	03 18 39.5	+0.1
	baz=327						
V49A	McMinnville	134.53	37	P	PKiKP	03 18 39.0	-0.6
	baz=312						
BINY	Binghamton	134.65	23	P	PKiKP	03 18 39.0	-0.7
	baz=328						
U50A	Jamestown	134.73	36	P	PKiKP	03 18 39.8	-0.3
	baz=313						
N56A	West Decatur	134.74	26	P	PKiKP	03 18 39.3	-0.6
	baz=324						
W49A	Belvidere	134.74	38	P	PKiKP	03 18 40.0	0.0
	baz=311						
P54A	Burton	134.76	29	P	PKiKP	03 18 40.3	+0.3
	baz=321						
Q53A	Leroy	134.80	31	P	PKiKP	03 18 40.2	+0.2
	baz=319						
L58A	Harry Jones Me	134.83	23	P	PKiKP	03 18 39.5	-0.6
	baz=328						
O55A	Ligonier	134.85	28	P	PKiKP	03 18 40.1	-0.1
	baz=323						
M57A	Sunshine Farm,	134.90	25	P	PKiKP	03 18 40.5	+0.3
	baz=326						
Q54A	Coxs Mills	135.06	30	P	PKiKP	03 18 40.7	+0.1
	baz=320						
SSPA	Standing Stone	135.15	26	P	PKiKP	03 18 40.7	0.0
	baz=325						
M58A	Price's Panora	135.15	24	P	PKiKP	03 18 41.0	+0.2
	baz=327						
P55A	Reedsville	135.15	29	P	PKiKP	03 18 40.7	-0.1
	baz=322						
N57A	Milroy	135.20	26	P	PKiKP	03 18 40.6	-0.3
	baz=325						
M59A	Waymart	135.42	23	P	PKiKP	03 18 41.2	-0.1
	baz=328						
Q55A	Buckhannon	135.42	30	P	PKiKP	03 18 41.3	-0.1
	baz=321						
N58A	Sunbury	135.49	25	P	PKPdf	03 18 40.5	+0.6
	baz=326						
T53A	Wise	135.65	34	P	PKiKP	03 18 41.8	-0.1
	baz=316						
S54A	Dingess, Beckl	135.71	32	P	PKiKP	03 18 41.8	-0.2
	baz=319						
Q56A	Snyder Ridge,	135.82	29	P	PKiKP	03 18 42.0	-0.2
	baz=322						
O58A	Lewisberry	135.99	26	P	PKiKP	03 18 42.5	+0.1
	baz=326						
P57A	Homestead Farm	136.02	27	P	PKiKP	03 18 42.9	+0.3
	baz=324						
U53A	Fall Branch	136.07	34	P	PKiKP	03 18 42.6	-0.2
	baz=316						
T54A	Tazewell	136.11	33	P	PKiKP	03 18 42.3	-0.6
	baz=318						
N60A	Cedar Hill Far	136.12	24	P	PKiKP	03 18 42.7	0.0
	baz=328						
Z50A	Ashland	136.16	40	P	PKPdf	03 18 41.8	+0.4
	baz=310						
Q57A	Strasburg	136.20	28	P	PKPdf	03 18 41.9	+0.7
	baz=323						
M61A	Granite Spring	136.26	22	P	PKiKP	03 18 42.3	-0.7
	baz=330						
Y51A	Rockmart	136.28	39	P	PKPdf	03 18 41.4	-0.2
	baz=311						
P58A	Pank, Wackersv	136.34	27	P	PKPdf	03 18 42.3	+0.8
	baz=325						
X52A	Dahlonega	136.53	37	P	PKiKP	03 18 43.2	-0.6
	baz=313						
W53A	Cullowhee	136.58	36	P	PKiKP	03 18 43.6	-0.4
	baz=314						
Q58A	Fox Den Farm,	136.61	27	P	PKiKP	03 18 43.6	-0.2
	baz=324						
P59A	Jarrettsville	136.62	26	P	PKiKP	03 18 43.7	0.0
	baz=326						
Y52A	Lilburn	136.93	38	P	PKiKP	03 18 45.0	+0.4
	baz=312						
V57A	Coltrane Farms	137.95	32	P	PKiKP	03 18 46.0	-0.5
	baz=319						
X55A	Gracelyn & Ava	137.96	35	P	PKiKP	03 18 46.7	+0.1
	baz=316						
T59A	Double "B" Far	138.25	29	P	PKiKP	03 18 47.1	0.0
	baz=323						
X56A	White Oak	138.29	35	P	PKiKP	03 18 46.9	-0.4
	baz=316						
JTS	Las Juntas de	147.70	73		PKPbc	03 19 05.7	+0.5
JTS	Las Juntas de	147.70	73	PKP2	PKPbc	03 19 05.7	+0.5
GO02	Mina Guanaco	149.51	151		PKiKP	03 19 10.5	-0.5
LVC	Limon Verde	151.97	149		PKiKP	03 19 17.0	+0.8
LVC	Limon Verde	151.97	149	PKIKP	PKiKP	03 19 17.0	+0.8
CPUP	Villa Florida	152.29	173	PKPbc	PKiKP	03 19 17.2	+0.9
	comp=Z,5.1nm,0.6s,baz=169,slow=2.1,SNR=16						
CPUP	Villa Florida	152.29	173		PKPdf	03 19 09.5	+0.2
CPUP					PKiKP	03 19 16.5	+0.2
CPUP	Villa Florida	152.29	173	PKIKP	PKPdf	03 19 09.5	+0.2
CPUP						03 19 16.5	
LPAZ	La Paz	157.44	141		PKPdf	03 19 16.1	-1.3
LPAZ	La Paz	157.44	141	PKIKP	PKPdf	03 19 16.1	-1.3
RUSC	La Rusia	160.14	76		PKPdf	03 19 19.9	-0.6

NEIC **02** *03:04:15.7±1.7, 1°.30S±0°.09×126°.29E±0°.07, h36km±5km, mb4.6/24, Error ellipse: s-maj=13.4km s-min=9.8km az=153.0*
BJI **02** *03:04:15.9±0.0, 1°.21S×126°.25E, h47km, mB5.2/18, mb4.6/32, Ms5.0/6, Ms7 4.8/2*
IDC **02** *03:04:18.8±4.6, 1°.36S×126°.40E, h71km±48km, mb3.8/7, mb1 4.0/8, mb1mx3.6/38, mbtmp4.1/8, ML4.1/1, MS3.9/2, Ms1 3.9/2, ms1mx3.3/53, Error ellipse: s-maj=42.4km s-min=22.0km az=70.0*
ISC 02 03:04:16.1±0.6, 1°.26S±0°.09×126°.22E±0°.07, h35km, n50, $\sigma 1^{s}06$/49, mb4.6/20, 1C, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.32	30		Pn	03 04 51.8	-0.1
LUWI	Luwuk	3.46	274	Pn	Pn	03 05 07.4	-0.1
SIJI	Sorong	5.06	86	P	Pn	03 05 29.8	+0.3
	7.0nm,0.3s,baz=357,slow=23,SNR=8.3						
KAPI	Kappang	7.46	240	Pn	Pn	03 06 04.6	+2.2
WRA	Warramunga Arr	20.20	157	P	P	03 08 46.0	-2.0
	5.1nm,0.8s,baz=340,slow=12,SNR=3.0						
WRA	Warramunga Arr	20.20	157	P	P	03 08 46.0	-2.0
WRA	Warramunga Arr	20.20	157	IAmb	IAmb	03 08 50.5	
	comp=Z,0.5nm,0.9s						
ASAR	Alice Springs	23.49	162	P	P	03 09 21.4	-1.4
	comp=Z,6.0nm,0.9s,baz=337,slow=11,SNR=4.4						
JCJ	Chichijima	32.11	27	LR	LR	03 22 07.6	
	comp=Z,103nm,19.2s,baz=146,slow=33						
CM31	Chiang Mai Arr	33.22	307	P	P	03 10 51.1	+1.1
CMAR	Chiang Mai Arr	33.22	307	P	P	03 10 50.7	+0.6
	comp=Z,0.7nm,0.3s,baz=134,slow=6.4,SNR=3.6						
CHTO	Chiang Mai	33.42	308	P	P	03 10 51.6	-0.2
CHTO				IAmb	IAmb	03 10 53.0	
	comp=Z,12nm,1.5s						
NJ2	Nanjing	33.86	349	eP	P	03 10 55.2	-0.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2	Chengdu	38.47	328	P	P	03 11 34.7	-0.2
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
BJT	Baijiatuau	42.10	348	P	P	03 12 04.0	-0.8
BJT				IAmb	IAmb	03 12 06.1	
	comp=Z,5.3nm,0.6s						
BJI	Beijing	42.12	348	⇑eP	P	03 12 05.0	+0.1
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LZH	Lanzhou	42.61	333	eP	P	03 12 11.6	+2.4
LZH				pP	pwP	03 12 20.5	-1.0
LZH				sP	sP	03 12 25.5	+2.6
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC	Hu-ho-hao-te	43.99	344	eP	P	03 12 20.2	0.0
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,77nm,5.6s						
LSA	Lhasa	45.48	315	P	P	03 12 32.5	-0.2
LSA				IAmb	IAmb	03 12 33.8	
	comp=Z,5.9nm,0.6s						
GTA	Gaotai	47.16	332	P	P	03 12 46.9	+1.5
GTA				pP	sP	03 12 59.4	+0.3
GTA				sP	pwP	03 13 05.0	+7.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,240nm,5.2s						
GTA				LR	LR		
	comp=Z,270nm,18.4s						
GTA				LR	LR		
	comp=Z,280nm,17.5s						
ULN	Ulaanbaatar	51.70	344	P	P	03 13 20.0	+0.1
SONM	Songino Array	51.87	343	P	P	03 13 21.5	+0.4
	comp=Z,1.3nm,0.6s,baz=155,slow=7.5,SNR=11						
SONM	Songino Array	51.87	343	P	P	03 13 21.0	-0.1
WMQ	Urumqi	56.56	327	eP	P	03 13 56.9	+1.6
WMQ				pP	pP	03 14 05.5	+0.2
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,100nm,8.9s						
WMQ				LR	LR		
	comp=Z,570nm,28.8s						
WMQ				LR	LR		
	comp=Z,1μm,29.0s						
WMQ	Urumqi	56.56	327	P	P	03 13 56.4	+1.1
NIL	Nilore	60.65	310	P	P	03 14 23.9	0.0
KSH	Kashi	61.27	317	P	P	03 14 29.9	+1.7
KSH				sP	sP	03 14 49.2	+7.1
KSH				PcP	PcP	03 15 11.5	+1.0
KSH				S	S	03 22 44.5	-1.7
KSH				sS	sS	03 23 04.9	+2.1
KSH				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KSH				pmax	pmax		
	comp=Z,470nm,5.9s						
MK31	Makanchi Array	61.39	327	P	P	03 14 29.4	+0.7
MKAR	Makanchi Array	61.39	327	P	P	03 14 29.3	+0.5
	comp=Z,2.6nm,0.4s,baz=118,slow=8.0,SNR=38						
MKAR	Makanchi Array	61.39	327	P	P	03 14 29.1	+0.4
MAKZ	Makanchi	61.57	327	P	P	03 14 30.5	+0.6
AAK	Ala-Archa	63.76	320	P	P	03 14 46.1	+1.4
AAK				IAmb	IAmb	03 14 47.2	
	comp=Z,8.4nm,1.1s						
ARSB	Arslanbob	64.13	318	P	P	03 14 47.4	+0.2
KBL	Kabul	64.21	310	P	P	03 14 47.9	-0.1
ZAA0	Zalesovo Array	64.81	334	P	P	03 14 50.2	-1.0
ZALV	Zalesovo Beam	64.81	334	P	P	03 14 50.5	-0.7
	comp=Z,1.2nm,0.5s,baz=141,slow=7.1,SNR=6.7						
ZALV	Zalesovo Beam	64.81	334	P	P	03 14 49.9	-1.3
BTK	Batken	65.06	316	P	P	03 14 53.5	+0.2
KURK	Kurchatov	65.69	329	P	P	03 14 56.8	-0.2
KK31	Karatay Array	66.57	319	P	P	03 15 03.4	+0.6
KKAR	Karatay Array	66.57	319	P	P	03 15 03.1	+0.3
HRA	Herat	69.48	307	P	P	03 15 21.4	-0.2
HRA				IAmb	IAmb	03 15 23.2	
	comp=Z,12nm,1.6s						
BRVK	Borovoye	71.30	328	P	P	03 15 31.6	-0.4
BRVK				IAmb	IAmb	03 15 34.3	
	comp=Z,7.6nm,1.2s						
TIXI	Tiksi	72.81	1	P	P	03 15 38.9	-1.8
GEYT	Alibeck	73.65	310	LR	LR	03 53 40.8	
	comp=Z,135nm,19.4s,baz=25,slow=40						
ABKAR	Akbulak array	75.70	322	P	P	03 15 57.6	-0.3
RAYN	Ar Rayn	81.99	294	P	P	03 16 32.5	-0.6
KNK	Knik Glacier	88.85	29	P	P	03 17 07.4	+0.9
SCM	Sheep Creek Mo	89.42	28	P	P	03 17 10.1	+0.9
ILAR	Eielson Array	89.80	25	P	P	03 17 09.0	-1.8
	comp=Z,0.3nm,0.8s,baz=232,slow=4.7,SNR=5.8						

IDC **02** *03:14:55.1±6.7, 9°.44S×118°.57E, h65km±60km, mb3.0/3, mb1 3.5/5, mb1mx3.2/39, mbtmp3.6/5, ML3.8/2, Error ellipse: s-maj=125.9km s-min=23.2km az=69.0*
ISC 02 03:14:53.4±1.4, 9°.45S±0°.10×118°.8E±0°.2, h46km, n6, $\sigma 2^{s}86$/7, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	4.50	12	P	Pn	03 16 01.8	+2.7
	4.8nm,0.3s,baz=188,slow=2.9,SNR=7.2						
KAPI				S	Sn	03 16 48.2	-2.1
	6.8nm,0.3s,baz=41,slow=21,SNR=4.6						
FITZ	Fitzroy Crossi	10.87	143	P	Pn	03 17 29.1	+2.7
	0.5nm,0.3s,baz=327,slow=11,SNR=16						
FITZ				S	Sn	03 19 23.3	-3.4
ASAR	Alice Springs	20.21	136	P	Pn	03 19 27.1	+0.2
	0.4nm,0.3s,baz=313,slow=9.2,SNR=8.3						
MAT	Matsushiro	49.25	21	P	P	03 23 37.3	-0.3
SONM	Songino Array	58.08	350	P	P	03 24 40.9	-1.2
	0.4nm,0.5s,baz=167,slow=8.4,SNR=5.7						
MKAR	Makanchi Array	64.76	333	P	P	03 25 26.3	-0.9
	0.2nm,0.6s,baz=152,slow=6.8,SNR=4.7						

IDC 02 03:24:30.7±81.0, 20°.82S×179°.88W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/32, mbtmp3.8/3, Error ellipse: s-maj=1462.0km s-min=168.5km az=83.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.07	244	P	P	03 31 33.7	-0.5
	1.0nm,0.5s,baz=94,slow=12,SNR=4.2						
ASAR	Alice Springs	42.73	257	P	P	03 32 29.9	-0.2
	0.4nm,0.6s,baz=99,slow=8.3,SNR=6.7						
WRA	Warramunga Arr	42.81	263	P	P	03 32 30.9	+0.2
	0.9nm,0.8s,baz=96,slow=7.7,SNR=8.0						

SOME **02** *03:30:57.1, 40°.28N×77°.43E, h5km*
KRNET **02** *03:30:57.4±0.1, 40°.26N×77°.42E, mb3.2*
NNC **02** *03:31:00.3±2.1, 40°.39N×77°.49E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=14.0km s-min=10.5km az=166.0*
ISC 02 03:30:53.8±2.4, 40°.14N±0°.09×77°.37E±0°.04, h1km±17km, n55, $\sigma 1^{s}74$/83, 26C-8D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn	1.66	322	⇑iP	Pb	03 31 27.2	+1.8
	baz=17						
NRN				⇑iS	Sg	03 31 49.2	+2.0
	baz=17						
KDJ	Kajisay	2.00	356	⇑iP	Pb	03 31 32.3	+1.3
	baz=55						
KDJ				⇑iS	Sg	03 31 58.3	+0.3
	baz=55						
ULHL	Ulahol	2.27	338	⇑iP	Pb	03 31 37.1	+1.3
	baz=36						
ULHL				⇑iS	Sg	03 32 06.4	-0.4
	baz=36						
PRZ	Przheval'sk	2.47	18	⇑iP	Pb	03 31 39.4	+0.3
	baz=18						
PRZ				⇑iS	Sb	03 32 09.6	-0.5
	baz=18						
KZA	Kyzart	2.52	321	⇓iP	Pb	03 31 41.3	+1.3
	baz=19						
KZA				⇓iS	Sb	03 32 12.9	+1.2
	baz=19						
BOOM	Boomskoye usch	2.59	336	⇑iP	Pb	03 31 41.2	+0.1
	baz=34						
BOOM				⇑iS	Sb	03 32 13.5	0.0
	baz=34						
ANVS	Anan'yevo	2.65	5	⇓iP	Pb	03 31 42.0	-0.2
	baz=4.0						
ANVS				⇓iS	Sb	03 32 14.3	-1.1
	baz=4.0						
ARLS	Aral	2.88	308	⇑eP	Pb	03 31 46.3	+0.2
	baz=5.0						
ARLS				⇑iS	Sb	03 32 21.5	-0.4
	baz=5.0						
TNSS	Tian-Shan	2.92	354	eP	Pg	03 31 49.6	0.0
	29nm,0.1s						
TNSS				eS	Sg	03 32 27.4	-0.1
	42nm,0.4s						
TNSS	Tian-Shan	2.92	354	Pg	Pg	03 31 49.4	-0.2
	38nm,0.5s						
TNSS				Lg	Lg	03 32 27.1	
	42nm,0.4s						
IZV	Izvestkoviy	2.95	349	eP	Pg	03 31 50.6	+0.2
	8.8nm,0.2s						
IZV				eS	Sg	03 32 29.2	+0.5
	73nm,0.3s						
IZV	Izvestkoviy	2.95	349	Pg	Pg	03 31 50.6	+0.2
	16nm,0.4s						
IZV				Lg	Lg	03 32 28.5	
	74nm,0.3s						
SATY	Saty	3.02	15	eP	Pg	03 31 51.4	-0.2
	14nm,0.2s						
SATY				eS	Sg	03 32 30.6	-0.3
	17nm,0.2s						
SATY	Saty	3.02	15	Pg	Pb	03 31 50.8	+2.3
	20nm,0.6s						
SATY				Lg	Lg	03 32 28.9	
	17nm,0.2s						
MDOK	Medeo	3.03	355	eP	Pg	03 31 52.0	0.0
	17nm,0.1s						
MDOK				eS	Sg	03 32 31.3	+0.1
	44nm,0.3s						
MDOK	Medeo	3.03	355	Pg	Pb	03 31 50.4	+1.7
	8.3nm,0.4s						
MDOK				Lg	Lg	03 32 29.9	
	32nm,0.5s						
MDOK	Medeo	3.03	355	Pg	Pg	03 31 51.8	-0.2
	17nm,0.2s						
MDOK				Lg	Lg	03 32 30.6	
	43nm,0.5s						
MTBS	Maitube	3.07	347	eP	Pg	03 31 52.8	+0.1
	9.0nm,0.1s						
MTBS				eS	Sg	03 32 32.8	+0.2
	35nm,0.2s						
MTBS	Maitube	3.07	347	Pg	Pg	03 31 52.4	-0.2
	11nm,0.3s						
MTBS				Lg	Lg	03 32 31.7	
	35nm,0.3s						
AAA	Alma-Ata	3.09	354	eP	Pg	03 31 53.7	+0.7
	9.7nm,0.0s						
AAA				eS	Sg	03 32 34.1	+1.1
	32nm,0.0s						
KST	Kastek	3.09	340	eP	Pg	03 31 53.4	+0.4
	5.9nm,0.2s						
KST				eS	Sg	03 32 33.9	+0.8
	20nm,0.2s						
KST	Kastek	3.09	340	Pg	Pg	03 31 53.4	+0.4
	6.6nm,0.3s						
KST				Lg	Lg	03 32 33.5	
	20nm,0.3s						
KNDC	Almaty	3.09	354	⇑Pg	Pb	03 31 51.7	+2.1
	12nm,0.7s						
KNDC				⇓Lg	Lg	03 32 32.2	
	62nm,0.5s						
KOTS	Kotyrbulak	3.10	356	eP	Pg	03 31 53.6	+0.4
	64nm,0.2s						
KOTS				eS	Sg	03 32 34.1	+0.7
	143nm,0.2s						
KOTS	Kotyrbulak	3.10	356	Pg	Pb	03 31 52.1	+2.2
	79nm,0.3s						
KOTS				Lg	Lg	03 32 31.3	
	143nm,0.4s						
KBK	Karagaybulak	3.11	325	⇑eP	Pb	03 31 48.7	-1.3
	baz=23						
KBK				⇑iS	Sb	03 32 26.9	-1.6
	baz=23						
ZHN	Zhinishke	3.13	14	eP	Pg	03 31 53.3	-0.5
	6.1nm,0.1s						
ZHN				eS	Sg	03 32 33.7	-0.7
	11nm,0.2s						
ZHN	Zhinishke	3.13	14	Pg	Pb	03 31 52.3	+2.0
	8.2nm,0.2s						
ZHN				Lg	Lg	03 32 31.4	
	38nm,0.4s						
UZB	Uzynbulak	3.25	22	eP	Pg	03 31 54.3	+1.9
	4.0nm,0.2s						
UZB				eS	Sg	03 32 35.4	-2.8
	11nm,0.4s						
UZB	Uzynbulak	3.25	22	Pg	Pb	03 31 54.3	+1.9
	6.1nm,0.4s						
UZB				Lg	Lg	03 32 34.8	
	15nm,0.7s						
AAK	Ala-Archa	3.31	320	⇑eP	Pb	03 31 51.8	-1.6
	baz=18						
AAK				⇑iS	Sb	03 32 31.1	-3.1
	baz=18						
AAK	Ala-Archa	3.31	320	⇑Pg	Pb	03 31 56.2	+2.8
	6.8nm,0.4s						
AAK				⇓Lg	Lg	03 32 40.9	
	9.7nm,0.5s						
SHLS	Shalkode	3.40	27	eP	Pg	03 32 00.4	+1.5
	7.7nm,0.2s						

SHLS eS Sg 03 32 46.0 +3.0
32nm,0.4s
SHLS Shalkode 3.40 27 Pg Pg 03 31 59.6 +0.7
13nm,0.5s
SHLS Lg Lg 03 32 43.8
24nm,0.6s
KPKS Kokpek 3.47 16 eP Pb 03 31 59.0 +2.9
12nm,0.1s
KPKS eS Sg 03 32 43.2 -2.0
31nm,0.3s
ARSB Arslanbob 3.54 291⇑eP Pn 03 31 56.2 +6.1
baz=89
ARSB ⇑eS Sb 03 32 38.8 -2.1
baz=89
PDGK Podgornoye 3.56 26 Pg Pb 03 32 00.2 +2.5
5.0nm,0.4s
PDGK Lg Lg 03 32 45.0
11nm,0.8s
PDGK Podgornoye 3.56 26 ⇓Pg Pb 03 31 58.7 +1.0
4.6nm,0.4s
PDGK ⇑Lg Lg 03 32 44.8
18nm,0.6s
KTBS Karatobe 3.61 352 eP Pg 03 32 02.1 -0.8
6.0nm,0.2s
KTBS eS Sg 03 32 48.9 -0.9
71nm,0.3s
KTBS Karatobe 3.61 352 Pg Pb 03 32 01.8 +3.3
10nm,0.4s
KTBS Lg Lg 03 32 48.6
71nm,0.4s
CHKK Chushkaly 3.73 356 eP Pg 03 32 04.2 -1.0
8.7nm,0.2s
CHKK eS Sg 03 32 52.2 -1.2
37nm,0.2s
CHKK Chushkaly 3.73 356 Pg Pg 03 32 03.9 -1.3
13nm,0.4s
CHKK Lg Lg 03 32 51.9
36nm,0.4s
KUU Kurty 3.83 349 eP Pb 03 32 05.8 +3.5
1.9nm,0.2s
KUU eS Sg 03 32 55.0 -1.9
20nm,0.4s
KUU Kurty 3.83 349 Pg Pb 03 32 05.1 +2.9
3.8nm,0.6s
KUU Lg Lg 03 32 54.0
20nm,0.5s
MRKS Merke 4.06 311 eP Pg 03 32 11.9 +0.2
1.2nm,0.1s
MRKS eS Sg 03 33 05.3 +1.0
12nm,0.3s
MRKS Merke 4.06 311 Pg Pg 03 32 11.7 +0.1
3.8nm,0.7s
MRKS Lg Lg 03 33 04.8
12nm,0.5s
ARXS Arharly 4.09 5 eP Pb 03 32 10.2 +3.5
3.4nm,0.2s
ARXS eS Sg 03 33 02.5 -2.6
19nm,0.2s
ARXS Arharly 4.09 5 Pg Pb 03 32 10.1 +3.5
7.1nm,0.5s
ARXS Lg Lg 03 33 02.0
19nm,0.3s
DJR Jarkent 4.56 22 eP Pg 03 32 18.9 -2.2
0.4nm,0.1s
DJR eS Sg 03 33 17.4 -2.9
6.7nm,0.3s
DJR Jarkent 4.56 22 Pg Pb 03 32 18.7 +4.0
0.7nm,0.3s
DJR Lg Lg 03 33 16.7
7.0nm,0.4s
KAPS Kapalarasan 5.35 15 eP Pg 03 32 34.4 -1.8
1.6nm,0.2s
KAPS eS Sg 03 33 44.5 -1.0
4.0nm,0.3s
KAPS Kapalarasan 5.35 15 Pg Pg 03 32 33.1 -3.1
2.6nm,0.5s
KAPS Lg Lg 03 33 42.2
3.1nm,0.6s
KK31 Karatay Array 5.94 302 ⇑Pg Pg 03 32 46.4 -1.1
0.4nm,0.4s,baz=96,slow=15,SNR=3.7
KK31 ⇑Lg Lg 03 34 03.5
1.6nm,0.6s,baz=107,slow=27,SNR=5.5
MAKZ Makanchi 7.46 25 ⇑Pg Pg 03 33 14.6 -2.1
1.1nm,1.0s
MAKZ ⇑Lg Lg 03 34 47.1
1.7nm,1.1s
MK31 Makanchi Array 7.55 27 ⇓Pn Pn 03 32 51.5 +6.5
0.9nm,0.9s
MK31 ⇑Lg Lg 03 34 48.3
1.0nm,0.6s

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*MDD **02** 03:40:22.4±1.4, 34.°92N×4.°21W, h8km±4km, mbLg2.1/12, Error ellipse: s-maj=10.4km s-min=8.0km az=1.0, PRXIMO*
*SFS **02** 03:40:22.0, 34.°77N×4.°25W, h85km, ML2.7, TAHAR SOUK (MARRUECOS)*
*CNRM **02** 03:40:23.2±1.0, 35.°06N×4.°18W, h24km±13km, Error ellipse: s-maj=12.9km s-min=6.3km az=72.0*
*INMG **02** 03:40:24.3±1.4, 35.°17N×4.°23W, h0km±8km, ML2.2, Error ellipse: s-maj=8.9km s-min=4.7km az=7.0*
ISC 02 03:40:22.7±1.0, 35.°03N±0.°03×4.°21W±0.°03, h17km±3km, n48, σ1.§27/85, Strait of Gibraltar

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

PVLZ Peæn de 0.16 333 P Pg 03 40 27.4 +0.5
PVLZ S Sb 03 40 31.4 +1.0
PVLZ Peæn de 0.16 333 iP Pg 03 40 27.4 +0.5
PVLZ eS Sb 03 40 31.4 +1.0
PALE Palemas 0.29 50 P Pg 03 40 29.0 0.0
PALE S Sg 03 40 34.3 +1.0
SMIR Smir Dam 1.16 305 P Pb 03 40 42.6 -1.6
SMIR S Sb 03 40 57.0 -2.0
CEU Ceuta 1.29 313 eP Pn 03 40 43.6 -2.3
CEU eS Sb 03 40 59.8 -2.9
RSA Sarsar 1.33 264 P Pg 03 40 49.0 +0.7
RSA S Sg 03 41 08.5 +2.8
EMIJ Mijas 1.60 344 P Pn 03 40 48.1 -2.1
21nm,0.7s,SNR=12
EMIJ S Sn 03 41 08.6 -1.9
9.4nm,0.2s,SNR=7.9
IFR Ifrane 1.69 207 eP Pn 03 40 51.7 +0.2
IFR Ifrane 1.69 207 iPg Pn 03 40 52.9 +1.4
IFR eS Sn 03 41 12.4 -0.5
EMAL Malaga-Limoner 1.74 354 eP Pn 03 40 52.4 +0.3
EMAL S Sn 03 41 11.9 -2.1
EGOR Sierra Gorda, 2.08 2 P Pn 03 40 56.9 -0.1
0.4nm,0.0s,SNR=4.0
EGOR S Sb 03 41 25.4 -0.3
5.4nm,0.2s,SNR=7.9
EBER Berja 2.15 30 P Pn 03 40 58.7 +0.7
0.8nm,0.1s,SNR=7.9
EBER S Sn 03 41 24.4 -0.1
11nm,0.3s,SNR=7.9
MDT Midelt 2.23 189 P Pn 03 40 59.6 +0.6
MDT S Sn 03 41 26.4 +0.1
ESPR Espera 2.27 324 P Pn 03 41 00.9 +1.5
1.2nm,0.2s,SNR=7.9
ESPR S Sn 03 41 28.0 +1.0
1.8nm,0.2s,SNR=7.9
ENIJ Nijar 2.53 39 P Pn 03 41 02.9 -0.1
0.2nm,0.1s,SNR=7.9
ENIJ S Sn 03 41 31.2 -2.4
16nm,0.5s,SNR=7.9
TDRA Tendrara 2.69 137 P Pn 03 41 05.3 -0.1
EQES Quesada 2.92 18 P Pn 03 41 10.7 +2.2
1.5nm,0.3s,SNR=15
EQES S Sn 03 41 45.2 +2.0
1.5nm,0.3s,SNR=7.9
HORN Hornachuelos 2.94 344 P Pn 03 41 08.2 -0.4
HORN S Sn 03 41 44.6 +1.1
EADA Adamuz 3.15 355 P Pn 03 41 12.9 +1.4
0.6nm,0.1s,SNR=7.9
EADA S Sn 03 41 51.1 +2.3
1.8nm,0.2s,SNR=7.9
ECAB El Cabril 3.19 343 P Pn 03 41 12.6 +0.4
7.6nm,0.5s,SNR=7.9
ECAB S Sn 03 41 48.9 -1.0
1.7nm,0.2s,SNR=6.0
SESP Santiago Espad 3.37 23 P Pn 03 41 16.4 +1.7
1.2nm,0.2s,SNR=4.0
SESP S Sn 03 41 57.4 +3.1
2.7nm,0.2s,SNR=7.9
EMIN Mina Concepcio 3.38 325 P Pn 03 41 14.4 -0.3
0.9nm,0.1s,SNR=116
EMIN S Sn 03 41 53.6 -0.9
0.8nm,0.2s,SNR=7.9
ARF Arif 3.58 180 P Pn 03 41 19.1 +1.5
EGRO El Granado 3.64 314 P Pn 03 41 19.8 +1.5
0.7nm,0.1s,SNR=7.9
EGRO S Sn 03 41 59.8 -1.0
2.8nm,0.3s,SNR=7.9
EMUR La Murta 3.69 40 S Sn 03 42 00.3 -1.9
1.3nm,0.3s,SNR=7.9
PVAQ Vaqueiros 3.69 311 ePn Pn 03 41 19.7 +0.7
PVAQ eSn Sn 03 42 01.9 -0.3
PVAQ A A 03 42 05.4
3.7nm,0.7s
PVAQ Vaqueiros 3.69 311 Pn Pn 03 41 19.7 +0.7
PVAQ Sn Sn 03 42 01.9 -0.3
3.7nm,0.7s
PVAQ Vaqueiros 3.69 311 P Pn 03 41 19.2 +0.1
PVAQ S Sn 03 42 01.1 -1.1
PBDV Barranco-do-Ve 3.73 307 ePn Pn 03 41 20.3 +0.7
PBDV eSn Sn 03 42 03.9 +0.7
PBDV Barranco-do-Ve 3.73 307 Pn Pn 03 41 20.3 +0.7
PBDV Sn Sn 03 42 03.9 +0.7
FIGM Figuig 3.79 139 P Pn 03 41 20.0 -0.5
PCVE Castro Verde 4.04 311 ePn Pn 03 41 25.3 +1.6
PCVE eSn Sn 03 42 10.4 -0.3
PCVE A A 03 42 12.2
2.8nm,0.4s
PCVE Castro Verde 4.04 311 Pn Pn 03 41 25.3 +1.6
PCVE Sn Sn 03 42 10.4 -0.3
2.8nm,0.4s
ETOB Tobarra 4.20 30 P Pn 03 41 26.6 +0.6
0.1nm,0.1s,SNR=15
ETOB S Sn 03 42 15.2 +0.6
0.3nm,0.2s,SNR=7.9
EBAD Badajoz 4.35 330 P Pn 03 41 28.8 +0.8
0.2nm,0.1s,SNR=7.9
EBAD S Sn 03 42 17.4 -0.8
4.0nm,0.3s,SNR=7.9
PAB San Pablo 4.51 359 P Pn 03 41 32.0 +1.7
0.3nm,0.1s,SNR=7.9
PAB S Sn 03 42 22.6 +0.1
0.4nm,0.2s,SNR=7.9
EVO Evora 4.64 320 ePn Pn 03 41 33.1 +1.1
EVO eSn Sn 03 42 26.4 +0.9
EVO Evora 4.64 320 Pn Pn 03 41 33.1 +1.1
EVO Sn Sn 03 42 26.4 +0.9
PNCL Nicolau / Gran 4.64 313 ePn Pn 03 41 33.3 +1.3
PNCL Nicolau / Gran 4.64 313 Pn Pn 03 41 33.3 +1.3
ESDC Sonseca Array 4.64 2 P Pn 03 41 33.8 +1.7
0.2nm,0.1s,baz=174,slow=12,SNR=7.9
ESDC S Sn 03 42 25.3 -0.4
0.3nm,0.2s,baz=184,slow=22,SNR=7.9
PESTR Estremoz 4.69 326 ePn Pn 03 41 34.1 +1.4
PESTR eSn Sn 03 42 26.7 -0.1
PESTR A A 03 42 27.3
8.0nm,0.8s
OUK Oukaimeden 4.89 220 P Pn 03 41 35.6 -0.2
OUK S Sn 03 42 31.7 -0.5
PMRV Marv??o 5.07 331 ePn Pn 03 41 38.7 +0.7
PMRV Marv??o 5.07 331 Pn Pn 03 41 38.7 +0.7
EPLA Plasencia 5.24 344 P Pn 03 41 40.5 +0.2
0.4nm,0.2s,SNR=7.9
EPLA S Sn 03 42 38.4 -2.0
0.5nm,0.2s,SNR=7.9
ETOR Torete 6.03 16 P Pn 03 41 52.5 +1.3
1.1nm,0.2s,SNR=7.9
MVO Moncorvo 6.52 341 P Pn 03 41 58.8 +1.0
1.7nm,0.1s,SNR=7.9

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*IDC **02** 03:51:57.5±1.1, 38.°57N×20.°49E, h0km, mb3.7/5, mb1 3.7/8, mb1mx3.4/45, mbtmp3.6/8, ML3.6/3, Error ellipse: s-maj=22.8km s-min=18.9km az=64.0*
*ATH **02** 03:51:57.3, 38.°36N×20.°45E, h16km±1km, ML3.4/6, Error ellipse: s-maj=2.3km s-min=0.8km az=261.0*
*THE **02** 03:51:58.0, 38.°38N×20.°43E, h0km±1km, ML3.4/16, Error ellipse: s-maj=1.9km s-min=0.4km az=282.0*
ISC 02 03:51:58.3±0.9, 38.°38N±0.°02×20.°48E±0.°03, h5km±6km, n73, σ1.§15/102, mb3.9/5, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

VSK1 VASILIKIADES 0.07 67 P Pg 03 51 59.9 -0.1
VSK1 S Sg 03 52 01.8 +0.7
44μm,0.2s
FSK Fiskardo 0.10 40 P Pg 03 52 00.4 -0.1
KEF1 Kardakata, Kep 0.10 183 P Pg 03 52 00.2 -0.2
KEF1 S Sg 03 52 02.3 +0.4
KEF4 Livadi, Kephal 0.13 199 P Pg 03 52 00.6 -0.3
KEF4 S Sg 03 52 02.8 +0.2
ARG2 Argostoli 0.20 178 P Pg 03 52 00.2 -0.3
ARG2 S Sg 03 52 05.4 +0.5
50μm,0.3s
KEF3 Kipouria, Keph 0.20 210 P Pg 03 52 01.8 -0.6
KEF3 S Sg 03 52 04.4 -0.6
CHV1 Chavriata, Kef 0.21 201 P Pg 03 52 02.0 -0.4
CHV1 S Sg 03 52 05.9 +0.7
53μm,0.6s
KEF2 Argostoli. Kep 0.21 178 P Pg 03 52 02.2 -0.3
KEF2 S Sg 03 52 05.2 -0.1
VLS Valsamata 0.22 157 P Pg 03 52 02.3 -0.3
VLS S Sg 03 52 06.2 +0.7
12μm,0.5s
VLS Valsamata 0.22 157 P Pg 03 52 02.3 -0.3
VLS S Sg 03 52 06.0 +0.5
VLS AML AML 03 52 09.7
comp=N,26273μm,0.5s
VLS AML AML 03 52 12.7
comp=E,19894μm,0.6s
EVGI Lefkada island 0.28 30 P Pg 03 52 03.8 +0.1
EVGI S Sg 03 52 08.2 +0.8
EVGI Lefkada island 0.28 30 P Pg 03 52 03.8 +0.1
EVGI S Sg 03 52 08.7 +1.3
KFL Anninata 0.36 138 P Pg 03 52 05.0 -0.4
KFL S Sg 03 52 10.9 +0.7
comp=E,8μm,0.4s
KFL Anninata 0.36 138 P Pg 03 52 04.9 -0.4
KFL S Sg 03 52 10.8 +0.7
KFL AML AML 03 52 12.4
comp=E,18783μm,0.3s
KFL AML AML 03 52 14.6
comp=N,15207μm,0.5s
MGNA Meganis 0.37 42 P Pg 03 52 05.3 -0.1
MGNA S Sg 03 52 10.9 +0.6
MGNA AML AML 03 52 12.3
comp=N,18781μm,0.4s
MGNA AML AML 03 52 12.6
comp=E,14016μm,0.4s
LKD2 Lefkada island 0.43 19 P Pg 03 52 06.3 -0.4
LKD2 S Sg 03 52 13.3 +0.9
comp=E,4μm,0.6s
LKD2 Lefkada island 0.43 19 P Pg 03 52 06.4 -0.2
LKD2 S Sg 03 52 13.2 +0.9
LKD2 AML AML 03 52 16.1
comp=E,7955μm,0.7s
LKD2 AML AML 03 52 19.8
comp=N,6554μm,0.5s
TSLK Tsoukalades, L 0.47 17 P Pg 03 52 07.2 -0.1
TSLK S Sb 03 52 14.9 -1.3
comp=N,6μm,0.7s
TSLK Tsoukalades, L 0.47 17 P Pg 03 52 07.2 -0.1
TSLK S Sb 03 52 15.0 -1.3
TSLK AML AML 03 52 17.1
comp=E,11185μm,0.7s
TSLK AML AML 03 52 20.5
comp=N,11804μm,0.6s
AST1 Astakos 0.51 71 P Pg 03 52 08.2 +0.2
AST1 S Sb 03 52 17.2 -0.2
comp=N,5μm,0.5s
VLMS Volimes, Zakyn 0.52 164 P Pg 03 52 07.8 -0.6
PDO Prodromos 0.59 68 P Pg 03 52 09.5 -0.2
PDO S Sg 03 52 18.6 +1.1
comp=N,4μm,0.6s
PDO Prodromos 0.59 68 P Pg 03 52 09.3 -0.5
KRI1 kERI 0.77 159 P Pg 03 52 12.1 -0.9
KRI1 S Sb 03 52 25.1 +0.3
comp=N,7μm,0.8s
RLS Riolos of Patr 0.84 112 P Pg 03 52 14.0 -0.5
RLS Riolos of Patr 0.84 112 P Pg 03 52 14.1 -0.3
PVO Paravola 0.85 74 P Pg 03 52 14.6 -0.2
PVO S Sn 03 52 29.4 -0.5
comp=N,2μm,0.6s
PVO Paravola 0.85 74 P Pg 03 52 14.5 -0.2
DRO Drossia 1.06 113 P Pg 03 52 18.1 -0.6
DRO Drossia 1.06 113 P Pg 03 52 17.8 -0.9
EFP Efpalio 1.12 87 P Pg 03 52 18.8 -1.0
EFP S Sn 03 52 37.5 +1.0
comp=N,2μm,0.7s
EFP Efpalio 1.12 87 P Pg 03 52 19.0 -0.9
ANX Ano Chora 1.15 79 P Pg 03 52 19.6 -0.8
ANX Ano Chora 1.15 79 P Pg 03 52 19.5 -0.9
EVR Evrytania 1.17 62 P Pg 03 52 19.8 -1.0
EVR S Sn 03 52 39.1 +1.2
comp=N,992nm,0.7s
LAKA Lakka 1.19 96 P Pg 03 52 20.2 -0.9
SERG Sergoula 1.24 88 P Pg 03 52 21.1 -1.0
SERG S Sn 03 52 42.7 +3.2
comp=N,1μm,0.8s
SERG Sergoula 1.24 88 P Pg 03 52 20.9 -1.2
TRIZ Trizonia 1.25 90 P Pg 03 52 20.6 -1.7
TRIZ Trizonia 1.25 90 P Pg 03 52 20.8 -1.5
AMT Artemida-Makis 1.29 131 P Pn 03 52 25.1 +2.1
KALE Kalithea 1.30 89 P Pg 03 52 21.6 -1.7
KALE Kalithea 1.30 89 P Pg 03 52 21.8 -1.6
JAN Janina 1.31 13 P Pn 03 52 23.8 +0.5
JAN S Sn 03 52 43.7 +2.5
comp=N,1μm,0.5s
KLV Kalavryta, Ach 1.36 104 P Pg 03 52 22.9 -1.5
KLV S Sn 03 52 44.7 +2.2
comp=N,558nm,0.9s
KLV Kalavryta, Ach 1.36 104 P Pg 03 52 22.7 -1.7
MAKR Makrakomi, Fth 1.44 63 P Pn 03 52 24.7 -0.5
SRN Sarande 1.54 346 P Pn 03 52 26.2 -0.3
AGG Agios Georgios 1.58 66 P Pn 03 52 27.1 0.0
AGG Agios Georgios 1.58 66 P Pn 03 52 27.2 +0.1
THL Klokotos Trika 1.68 45 P Pb 03 52 29.3 -0.5
KPRO Kipourio 1.72 23 P Pb 03 52 30.1 -0.3
LRSO Larissa Observ 1.97 49 P Pb 03 52 34.9 +0.2
KZN Kozani 2.17 27 P Pb 03 52 36.9 -1.2
LIT Litokhoron 2.32 42 P Pb 03 52 39.4 -1.3
OHR Ohrid 2.74 5 ePn Pn 03 52 44.2 +1.2
OHR ePn Pg 03 52 52.5 +1.7
STIP Stip 3.56 21 ePn Pb 03 53 00.4 -1.4
IDI Anoyia 4.70 130 Pn Pn 03 53 12.8 +2.9
comp=N,0.3nm,0.3s,baz=295,slow=23,SNR=2.8
IDI Sn Sn 03 54 09.3 +4.5
comp=N,0.7nm,0.3s,baz=156,slow=22,SNR=6.4
SOKA Soboth 9.21 336 ePn Pn 03 54 10.3 -1.6
comp=N,4.3nm,0.5s
OBKA Obir 9.23 334 ePn Pn 03 54 13.6 +1.5
comp=N,3.5nm,0.6s
ABTA Abfaltersbach 10.21 327 ePn Pn 03 54 24.5 -1.1
comp=N,2.2nm,0.6s
MOA Molln 10.49 336 Pn Pn 03 54 28.8 -0.6
comp=N,3.0nm,0.6s
WATA Walderalm 11.07 327 Pn Pn 03 54 37.3 -0.2
comp=N,1.7nm,0.4s
SQTA Sankt Quirin 11.15 325 Pn Pn 03 54 38.3 -0.2
comp=N,0.6nm,0.3s
MOTA Moosalm 11.29 326 Pn Pn 03 54 40.8 +0.4
comp=N,2.0nm,0.5s
RETA Reutte 11.55 325 Pn Pn 03 54 45.5 +1.7
comp=N,0.7nm,0.4s
GERES GERESS Array B 11.55 337 Pn Pn 03 54 41.6 -2.3
comp=N,0.1nm,0.3s,baz=156,slow=13,SNR=7.6
ESDC Sonseca Array 19.02 282 P Pn 03 56 21.7 -0.1
comp=N,0.2nm,0.3s,baz=70,slow=10,SNR=4.8
HFS Hagfors 22.20 351 P P 03 56 55.0 -0.2
comp=N,3.0nm,0.6s,baz=167,slow=13,SNR=6.4
FINES FINESS Array B 23.35 7 P P 03 57 06.0 -1.3
comp=N,3.9nm,0.9s,baz=192,slow=13,SNR=4.9
TORD Torodi Ar. Bea 30.17 219 P P 03 58 10.2 +0.7
comp=N,0.3nm,0.8s,baz=22,slow=10.0,SNR=2.8
MKAR Makanchi Array 45.22 59 P P 04 00 14.9 -1.5
comp=N,0.4nm,0.4s,baz=278,slow=7.0,SNR=13
ZALV Zalesovo Beam 45.58 48 P P 04 00 17.2 -1.9
comp=N,0.7nm,0.3s,baz=273,slow=8.7,SNR=5.0

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*IDC **02** 03:54:25.0±0.9, 10.°27S×161.°52E, h83km±6km, mb3.6/8, mb1 3.9/8, mb1mx3.6/32, mbtmp3.9/8, Error ellipse: s-maj=18.9km s-min=12.0km az=19.0*
ISC 02 03:54:22.4±0.7, 10.°31S±0.°09×161.°68E±0.°10, h61km, n19, σ2.§00/19, mb3.9/8, 1D, Bougainville-Solomon Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

HNR Honiara 1.91 297 P Pn 03 54 54.4 +1.7
110nm,0.3s,baz=178,slow=6.7,SNR=12
HNR S Sn 03 55 16.2 +0.4
440nm,0.3s,baz=190,slow=22,SNR=6.3
HNR Honiara 1.91 297 eP Pn 03 54 54.0 +1.2
HNR eS Sn 03 55 47.0 +31
DZM Mont Dzumac 12.56 159 P P 03 57 25.0 -3.0
3.8nm,0.3s,baz=324,slow=12,SNR=50
DZM S Sn 03 59 40.2 +3.5
0.6nm,0.3s,baz=316,slow=18,SNR=6.5
CTA Charters Tower 17.76 235 P P 03 58 28.6 +2.9
0.7nm,0.3s,baz=61,slow=16,SNR=7.3
WRA Warramunga Arr 28.03 247 P P 04 00 07.0 -1.2
2.9nm,0.8s,baz=76,slow=9.1,SNR=10.0
WRA pP sP 04 00 28.4 -1.2
3.1nm,0.7s,baz=75,slow=9.3,SNR=5.8
H11S2 WAKE ISLAND Hy 29.04 10 T T 04 29 11.6
baz=195
H11S3 WAKE ISLAND Hy 29.05 10 T T 04 29 11.7
baz=195
H11S1 WAKE ISLAND Hy 29.06 10 T T 04 29 10.7
baz=195
ASAR Alice Springs 29.62 240 P P 04 00 20.6 -1.6
1.1nm,0.9s,baz=62,slow=9.8,SNR=8.0
ASAR pP sP 04 00 42.5 -1.8
0.5nm,0.4s,baz=67,slow=11,SNR=3.9
H11N1 WAKE ISLAND Hy 30.27 10 T T 04 31 05.3
baz=193,slow=76,SNR=4.5
H11N3 WAKE ISLAND Hy 30.28 10 T T 04 30 48.0
baz=193,slow=76,SNR=2.5
H11N2 WAKE ISLAND Hy 30.29 10 T T 04 30 59.0
baz=193,slow=76,SNR=3.4
FITZ Fitzroy Crossi 35.73 253 P P 04 01 14.5 -1.1
2.4nm,0.6s,baz=66,slow=9.3,SNR=6.0
PCPH Palayan 47.70 302⇓eP P 04 02 59.9 +6.5
SONM Songino Array 75.75 325 P P 04 06 01.3 -0.5
0.7nm,0.7s,baz=143,slow=5.8,SNR=6.1
SONM pP sP 04 06 22.3 -2.5
1.7nm,0.8s,baz=137,slow=6.0,SNR=10
ILAR Eielson Array 84.13 20 P P 04 06 46.4 -0.1
0.8nm,1.0s,baz=247,slow=4.6,SNR=5.5
NVAR Mina Array Bea 88.63 51 P P 04 07 11.8 +2.3
0.6nm,0.9s,baz=256,slow=4.4,SNR=3.8
MKAR Makanchi Array 90.27 318 P P 04 07 15.7 -0.9
0.1nm,0.5s,baz=116,slow=5.5,SNR=3.9
MKAR pP pP 04 07 36.5 +2.7
0.8nm,0.8s,baz=96,slow=6.4,SNR=5.4
YKA Yellowknife Ar 96.17 28 P P 04 07 43.4 0.0
0.1nm,0.6s,baz=256,slow=4.4,SNR=4.9
YKA pP sP 04 08 05.9 -0.5
0.1nm,0.3s,baz=90,slow=18,SNR=3.0

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*SJA **02** 04:12:42.9±0.9, 33.°18S×70.°94W, h126km±13km, ML2.0, MW2.5*
*GUC **02** 04:12:44.7±0.4, 33.°21S×70.°89W, h78km±2km, ML2.9*
ISC 02 04:12:44.5±1.4, 33.°27S±0.°05×70.°99W±0.°04, h73km±7km, n21, σ0.§97/35, 5C-4D, Chile-Argentina border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

MT05 Renca 0.24 120⇓iP Pn 04 12 55.8 0.0
MT05 iS Sn 04 13 04.4 +0.3
MT05 IAML 04 13 05.4
comp=N,2μm,0.4s
PEL Peldehue 0.28 63⇑iP Pn 04 12 55.7 -0.3
PEL iS Sn 04 13 04.3 -0.2
PEL IAML 04 13 05.1
comp=E,537nm,0.5s
ROCH El Roble 0.30 356⇑iP Pn 04 12 56.2 -0.2
ROCH iS Sn 04 13 05.3 +0.2
CLCH Cerro Calan 0.40 108 eP Pn 04 12 56.6 -0.3
CLCH eS Sn 04 13 05.8 -0.2
CLCH IAML 04 13 06.9
comp=E,498nm,0.4s
ANTU Antumapu 0.42 135 eP Pn 04 12 58.0 +0.9
MT03 Universidad Ad 0.46 119⇑iP Pn 04 12 57.3 -0.1
MT03 iS Sn 04 13 07.0 +0.2
FCH Farellones 0.58 95⇑iP Pn 04 12 58.1 -0.7
FCH iS Sn 04 13 08.8 -0.6
FCH IAML 04 13 09.6
comp=N,835nm,0.1s

VA01	Torpederas	0.61	294	⇓iP	Pn	04 12 59.5	+0.8
VA01				eS	Sn	04 13 10.9	+1.7
VA01					IAML	04 13 13.6	
	comp=N,686nm,0.1s						
VA03	San Esteban	0.63	36	⇑iP	Pn	04 12 58.1	-1.0
VA03				iS	Sn	04 13 08.7	-1.0
VA03					IAML	04 13 10.4	
	comp=E,1µm,0.1s						
LMEL	Las Melosas	0.87	131	⇓iP	Pn	04 13 02.0	+0.2
LMEL				iS	Sn	04 13 15.4	+0.8
LMEL					IAML	04 13 16.6	
	comp=N,1µm,0.1s						
ARCO	CERRO ARCO	1.78	77	iP	Pn	04 13 14.9	+1.4
ARCO				eS	Sn	04 13 37.5	+2.1
ARCO					IAML	04 13 39.9	
	comp=Z,10nm,0.5s						
AAGR	Agrelo	1.82	85	iP	Pn	04 13 14.8	+0.9
GO05	Huala	1.90	204	eP	Pn	04 13 14.9	-0.1
GO05				eS	Sn	04 13 36.8	-1.3
ASAL	Salagasta	1.93	70	iP	Pn	04 13 16.5	+1.1
ASAL				eS	Sn	04 13 40.3	+1.3
RTLS	Leoncito	2.05	45	⇓iP	Pn	04 13 18.1	+0.9
RTLS				eS	Sn	04 13 43.5	+1.5
RTLS					IAML	04 13 53.3	
	comp=Z,9.0nm,0.6s						
RTCV	Cerro Valdivia	2.50	56	iP	Pn	04 13 23.5	+0.5
RTCV				eS	Sn	04 13 51.9	-0.7
GO04	Tololo Observa	3.10	3	iP	Pn	04 13 30.2	-1.1
ACAN	Cantantal	3.35	74	iP	Pn	04 13 34.3	-0.3
ACAN				eS	Sn	04 14 12.3	-0.9
MRA	San Martin	4.52	81	iP	Pn	04 13 49.5	-1.1
MRA					IAML	04 14 39.0	
	comp=Z,1.7nm,0.8s						
TCA	Tanti	5.75	72	iP	Pn	04 14 06.1	-1.2
PIL	Pilar	6.21	77	iP	Pn	04 14 21.7	+8.1

*IDC **02** 04:13:57.7±1.3, 38˚.47N×20˚.31E, h0km, mb3.6/4, mb1 3.6/6, mb1mx3.3/47, mbtmp3.5/6, ML3.1/2, Error ellipse: s-maj=26.5km s-min=20.6km az=74.0*
*ATH **02** 04:13:59.0, 38˚.42N×20˚.47E, h11km±2km, ML3.4/8, Error ellipse: s-maj=3.0km s-min=0.7km az=270.0*
*THE **02** 04:13:59.0, 38˚.42N×20˚.42E, h5km±2km, ML3.4/14, Error ellipse: s-maj=2.8km s-min=0.4km az=114.0*
ISC 02 04:13:59.1±0.9, **38˚.42N**±0˚.02×**20˚.45E**±0˚.03, **h6**km±6km, **n51**, σ**1˚.00**/81, **mb3.7**/4, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	VASILIKIADES	0.09	99	P	Pg	04 14 01.2	0.0
VSK1				S	Sg	04 14 02.9	+0.3
FSK	Fiskardo	0.09	67	P	Pg	04 14 01.3	+0.1
FSK				S	Sg	04 14 02.5	-0.1
FSK				AML	AML	04 14 03.4	
	comp=N,41268µm,0.3s						
FSK				AML	AML	04 14 03.7	
	comp=E,63897µm,0.2s						
KEF1	Kardakata, Kep	0.15	174	P	Pg	04 14 02.2	+0.1
KEF1				S	Sg	04 14 04.2	+0.1
KEF4	Livadi, Kephal	0.17	188	P	Pg	04 14 02.7	+0.2
KEF4				S	Sg	04 14 05.6	+0.8
KEF3	Kipouria, Keph	0.23	201	P	Pg	04 14 03.8	+0.1
KEF3				S	Sg	04 14 07.5	+0.7
ARG2	Argostoli	0.25	174	P	Pg	04 14 04.0	+0.1
ARG2				S	Sg	04 14 07.4	+0.2
	comp=E,115µm,0.2s						
CHV1	Chavriata, Kef	0.25	193	P	Pg	04 14 04.0	+0.1
CHV1				S	Sg	04 14 08.4	+1.2
	comp=E,85µm,0.2s						
EVGI	Lefkada island	0.25	39	P	Pg	04 14 04.3	+0.2
EVGI				S	Sg	04 14 08.4	+0.9
EVGI	Lefkada island	0.25	39	P	Pg	04 14 04.3	+0.2
EVGI				S	Sg	04 14 08.6	+1.1
KEF2	Argostoli. Kep	0.26	174	P	Pg	04 14 04.1	-0.1
KEF2				S	Sg	04 14 07.2	-0.4
VLS	Valsamata	0.27	156	P	Pg	04 14 04.2	-0.1
VLS				S	Sg	04 14 08.0	+0.1
	comp=E,15µm,0.2s						
VLS	Valsamata	0.27	156	P	Pg	04 14 04.2	-0.1
VLS				S	Sg	04 14 07.8	-0.1
VLS				AML	AML	04 14 08.9	
	comp=E,35454µm,0.3s						
VLS				AML	AML	04 14 11.3	
	comp=N,22482µm,0.2s						
MGNA	Meganis	0.35	49	P	Pg	04 14 05.8	-0.2
MGNA				S	Sg	04 14 11.0	+0.3
MGNA				AML	AML	04 14 12.4	
	comp=N,10653µm,0.2s						
MGNA				AML	AML	04 14 12.6	
	comp=E,11650µm,0.2s						
LKD2	Lefkada island	0.40	24	P	Pg	04 14 06.8	-0.1
LKD2				S	Sg	04 14 12.9	+0.8
	comp=E,4µm,0.6s						
LKD2	Lefkada island	0.40	24	P	Pg	04 14 06.8	-0.1
LKD2				S	Sg	04 14 13.0	+0.8
LKD2				AML	AML	04 14 14.0	
	comp=N,8987µm,0.7s						
LKD2				AML	AML	04 14 14.3	
	comp=E,6649µm,0.6s						
KFL	Anninata	0.41	140	P	Pg	04 14 06.8	-0.2
KFL				S	Sg	04 14 13.6	+1.2
	comp=E,12µm,0.4s						
KFL	Anninata	0.41	140	P	Pg	04 14 06.9	-0.2
KFL				S	Sg	04 14 12.8	+0.4
KFL				AML	AML	04 14 14.2	
	comp=N,21609µm,0.4s						
KFL				AML	AML	04 14 14.3	
	comp=E,27991µm,0.3s						
TSLK	Tsoukalades, L	0.43	22	P	Pg	04 14 07.4	0.0
TSLK				S	Sg	04 14 13.8	+0.7
	comp=E,5µm,0.4s						
TSLK	Tsoukalades, L	0.43	22	P	Pg	04 14 07.5	0.0
TSLK				S	Sg	04 14 13.4	+0.3
TSLK				AML	AML	04 14 15.9	
	comp=E,9962µm,0.3s						
TSLK				AML	AML	04 14 22.3	
	comp=N,10344µm,0.5s						
AST1	Astakos	0.51	77	P	Pg	04 14 09.0	0.0
AST1				S	Sg	04 14 17.3	+1.6
	comp=N,8µm,0.3s						
VLMS	Volimes, Zakyn	0.57	163	P	Pg	04 14 09.5	-0.6
VLMS				S	Sg	04 14 18.5	+1.0
VLMS				AML	AML	04 14 19.4	
	comp=N,31830µm,0.3s						
VLMS				AML	AML	04 14 20.0	
	comp=E,16700µm,0.3s						
PDO	Prodromos	0.60	73	P	Pg	04 14 10.4	-0.3
PDO	Prodromos	0.60	73	P	Pg	04 14 10.2	-0.4
KRI1	kERI	0.81	159	P	Pg	04 14 13.6	-1.1
KRI1				S	Sb	04 14 26.5	-0.3
	comp=E,7µm,0.3s						
PVO	Paravola	0.86	77	P	Pg	04 14 15.7	0.0
PVO				S	Sb	04 14 29.8	+1.5
	comp=E,2µm,0.6s						
PVO	Paravola	0.86	77	P	Pg	04 14 15.6	0.0
PVO				S	Sg	04 14 27.2	+0.3
RLS	Riolos of Patr	0.88	114	P	Pg	04 14 15.3	-0.7
RLS	Riolos of Patr	0.88	114	P	Pg	04 14 15.1	-0.9
DRO	Drossia	1.10	115	P	Pg	04 14 19.0	-1.1
DRO	Drossia	1.10	115	P	Pg	04 14 19.1	-1.1
EFP	Efpalio	1.14	89	P	Pg	04 14 19.6	-1.4
EFP				S	Sn	04 14 38.9	+1.4
	comp=E,1µm,0.8s						
EFP	Efpalio	1.14	89	P	Pg	04 14 19.6	-1.4
ANX	Ano Chora	1.16	81	P	Pg	04 14 20.6	-0.8
ANX				S	Sn	04 14 40.4	+2.2
	comp=E,1µm,0.5s						
EVR	Evrytania	1.17	65	P	Pg	04 14 20.7	-0.9
LAKA	Lakka	1.21	98	P	Pn	04 14 21.4	-1.0
SERG	Sergoula	1.26	90	P	Pn	04 14 22.0	-1.2
SERG				S	Sn	04 14 41.0	+0.5
	comp=E,1µm,0.7s						
JAN	Janina	1.27	14	P	Pb	04 14 23.7	+0.3
JAN				S	Sn	04 14 43.2	+2.4
	comp=E,618nm,0.6s						
TRIZ	Trizonia	1.27	92	P	Pn	04 14 21.9	-1.5
KALE	Kalithea	1.33	91	P	Pn	04 14 23.1	-1.1
AMT	Artemida-Makis	1.33	131	P	Pn	04 14 24.5	+0.3
KLV	Kalavryta, Ach	1.39	105	P	Pn	04 14 24.0	-1.0
KLV				S	Sg	04 14 45.3	+1.5
	comp=E,292nm,0.5s						
MAKR	Makrakomi, Fth	1.44	65	P	Pn	04 14 25.6	-0.1
THL	Klokotos Trika	1.67	46	P	Pb	04 14 30.6	+0.4
ITM	Ithomi	1.70	136	P	Pn	04 14 29.9	+0.6
STIP	Stip	3.53	22	eP	Pb	04 14 58.5	-3.4
IDI	Anoyia	4.74	130	Pn	Pn	04 15 13.1	+2.0
	comp=E,0.2nm,0.3s,baz=312,slow=15,SNR=3.5						
IDI				Sn	Sn	04 16 09.4	+3.0
	comp=E,1.2nm,0.3s,baz=130,slow=23,SNR=7.3						
GERES	GERESS Array B	11.50	337	Pn	Pn	04 16 42.6	-1.2
	comp=E,0.1nm,0.3s,baz=157,slow=13,SNR=5.0						
FINES	FINESS Array B	23.31	7	P	P	04 19 08.4	+0.9
	comp=E,3.3nm,0.9s,baz=203,slow=10,SNR=5.5						
TORD	Torodi Ar. Bea	30.19	219	P	P	04 20 09.5	-0.7
	comp=E,0.6nm,0.7s,baz=34,slow=9.1,SNR=3.8						
MKAR	Makanchi Array	45.22	59	P	P	04 22 16.4	-0.5
	comp=E,0.2nm,0.4s,baz=272,slow=7.5,SNR=7.2						
ZALV	Zalesovo Beam	45.57	48	P	P	04 22 19.2	-0.3
	comp=E,0.5nm,0.4s,baz=273,slow=8.7,SNR=3.1						

MAN 02 04:34:48.6, 16˚.26N×122˚.47E, h22km, mb4.3, ML3.2, MS2.9, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.80	357	eP	Pb	04 35 03.8	-0.1
PALP				eS	Sn	04 35 16.0	+0.1
CAUP	Cauayan	0.92	318	eP	Pb	04 35 04.8	-1.2
CAUP				eS	Sb	04 35 18.2	+0.5
BALP	Baler	1.00	239	eP	Pb	04 35 06.4	-0.8
BALP				eS	Sn	04 35 20.8	+0.1
PCPH	Palayan	1.49	243	⇓eP	Pb	04 35 14.9	-0.6
SMPP	San Manuel, Pa	1.72	267	eP	Pn	04 35 17.1	-0.2
SMPP				eS	Sb	04 35 39.7	-1.1
APYP	Conner	1.98	324	eP	Pn	04 35 21.9	+1.1
APYP				eS	Sn	04 35 46.2	+1.2
ABRA	Dolores	2.18	310	eP	Pn	04 35 24.0	+0.5
ABRA				eS	Sn	04 35 50.8	+1.0

*IDC **02** 04:40:10.9±3.3, 32˚.80S×73˚.01W, h0km, mb4.1/1, mb1 4.2/6, mb1mx3.8/22, mbtmp4.1/6, ML4.2/5, Error ellipse: s-maj=53.9km s-min=31.9km az=101.0*
*SJA **02** 04:40:12.4±0.8, 32˚.51S×73˚.07W, h33km, ML3.9, MW3.5*
*NEIC **02** 04:40:12.2±2.2, 32˚.80S±0˚.07×72˚.9W±0˚.2, h16km±7km, Error ellipse: s-maj=18.3km s-min=9.6km az=98.0*
*GUC **02** 04:40:16.3±0.9, 32˚.91S×72˚.61W, h39km±5km, ML4.2*
ISC 02 04:40:11.3±2.2, **32˚.89S**±0˚.04×**73˚.01W**±0˚.08, **h10**km±13km, **n47**, σ**2˚.42**/50, **6C-6D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA01	Torpederas	1.15	97	⇑iP	Pg	04 40 31.9	-1.4
ROC1	El Roble	1.68	94		Pn	04 40 39.6	-1.3
ROC1	El Roble	1.68	94	eP	Pn	04 40 39.9	-1.0
ROC1				eS	Sn	04 40 59.3	-3.2
ROCH	El Roble	1.68	93	⇓eP	Pn	04 40 39.9	-1.0
ROCH				eS	Sn	04 40 58.0	-4.5
ROCH					IAML	04 41 03.4	
	comp=N,3µm,0.6s						
MT01	Popeta	1.76	124	⇑iP	Pn	04 40 41.5	-0.3
MT01				eS	Sn	04 41 00.9	-3.4
MT01					IAML	04 41 03.1	
	comp=N,4µm,0.3s						
PEL	Peldehue	1.97	98	⇑iP	Pn	04 40 44.1	-0.5
PEL				eS	Sn	04 41 05.3	-4.1
PEL					IAML	04 41 09.1	
	comp=N,4µm,0.3s						
PEL	Peldehue	1.97	98		Pn	04 40 44.5	-0.2
PEL	Peldehue	1.97	98	eP	Pn	04 40 44.8	+0.1
PEL				eS	Sn	04 41 07.6	-1.8
MT05	Renca	1.97	105	⇑iP	Pn	04 40 44.5	-0.2
MT05				eS	Sn	04 41 06.0	-3.5
VA03	San Esteban	2.07	87	⇓eP	Pn	04 40 45.4	-0.8
VA03				eS	Sn	04 41 08.0	-4.0
VA03					IAML	04 41 09.3	
	comp=N,7µm,0.3s						
MT03	Universidad Ad	2.18	107	⇑iP	Pn	04 40 47.2	-0.4
MT03				eS	Sn	04 41 11.0	-3.7
GO05	Huala	2.30	157		Pn	04 40 49.4	+0.1
GO05	Huala	2.30	157	eP	Pn	04 40 49.9	+0.7
GO05				eS	Sn	04 41 15.5	-2.0
FCH	Farellones	2.32	102	⇓eP	Pn	04 40 50.4	+0.6
FCH				eS	Sn	04 41 15.7	-2.9
FCH					IAML	04 41 17.8	
	comp=N,4µm,0.2s						
CO02	Combarbal	2.39	46	⇓eP	Pn	04 40 48.9	-1.7
CO02				eS	Sn	04 41 15.0	-5.0
BO02	Sierra Bellavi	2.65	136	⇑iP	Pn	04 40 55.1	+0.9
BO02				eS	Sn	04 41 24.9	-1.4
BO02					IAML	04 41 26.6	
	comp=E,2µm,0.2s						
GO04	Tololo Observa	3.30	35		Pn	04 41 01.3	-1.9
GO04	Tololo Observa	3.30	35	eP	Pn	04 41 01.1	-2.0
GO04				eS	Sn	04 41 36.6	-5.9
GO04					IAML	04 41 42.1	
RTLS	Leoncito	3.32	72	eP	Pn	04 41 05.4	+1.9
RTLS					IAML	04 41 06.2	
	comp=Z,295nm,0.3s						
ARCO	CERRO ARCO	3.43	90	eP	Pn	04 41 07.7	+2.8
ARCO				eS	Sn	04 41 50.3	+4.7
ARCO					IAML	04 41 52.0	
	comp=Z,270nm,0.6s						
AAGR	Agrelo	3.52	94	eP	Pn	04 41 08.9	+2.8
ASAL	Salagasta	3.53	86	eP	Pn	04 41 08.8	+2.7
ASAL				eS	Sn	04 41 50.6	+2.7
ZON	Zonda	3.90	71	eP	Pn	04 41 13.0	+1.7
ZON				eS	Sn	04 41 56.6	-0.6
ZON					IAML	04 41 59.8	
	comp=Z,69nm,0.3s						
CFA	Coronel Fontan	4.24	74	Pn	Pn	04 41 16.8	+0.9
	comp=Z,16nm,0.3s,baz=254,slow=14,SNR=337						
CFA				Sn	Sn	04 42 06.8	+1.3
	comp=Z,11nm,0.3s,baz=168,slow=23,SNR=3.9						
CFA	Coronel Fontan	4.24	74	eP	Pn	04 41 17.0	+1.1
AMOG	MOGNA	4.30	64	eP	Pn	04 41 17.9	+1.1
ACAN	Cantantal	4.95	84	⇓eP	Pn	04 41 26.6	+1.0
AGUA	GUANDACOL	5.14	50	eP	Pn	04 41 30.0	+1.6
GO03	Copiap	5.79	25		Pn	04 41 34.7	-2.6
VCA	Vinchina	5.84	46	eP	Pn	04 41 38.7	+0.6
VCA					IAML	04 41 40.8	
	comp=Z,111nm,0.3s						
VCA				eS	Sn	04 42 45.4	+0.2
APLL	PUNTA DE LOS L	6.06	67	eP	Pn	04 41 40.7	-0.2
APLL					IAML	04 41 42.4	
	comp=Z,22nm,0.2s						
ACLC	CERRO LA CRUZ	6.23	58	⇓eP	Pn	04 41 43.1	-0.3
TCA	Tanti	7.30	80	eP	Pn	04 41 56.6	-1.4
TCA					IAML	04 41 58.1	
	comp=Z,23nm,0.5s						
PLCA	Paso Flores	8.07	167	Pn	Pn	04 42 10.8	+2.2
	comp=Z,1.7nm,0.3s,baz=353,slow=14,SNR=64						
PLCA				Sn	Sn	04 43 54.2	+14
	comp=Z,0.2nm,0.3s,baz=295,slow=20,SNR=3.4						
PLCA	Paso Flores	8.07	167		Pn	04 42 10.3	+1.7
GO02	Mina Guanaco	8.26	22	Pn	Pn	04 42 07.6	-3.8
LVC	Limon Verde	10.86	21	Pn	Pn	04 42 42.4	-4.7
	comp=Z,0.8nm,0.3s,baz=41,slow=13,SNR=8.2						
LVC				Sn	Sn	04 44 39.6	-9.2
	comp=Z,0.4nm,0.3s,baz=83,slow=23,SNR=4.3						
PB01	IPOC Station P	12.21	16	Pn	Pn	04 43 01.0	-4.2
CPUP	Villa Florida	15.11	68	Pn	Pn	04 43 47.4	+2.6
	comp=Z,0.2nm,0.3s,baz=242,slow=14,SNR=4.7						
LPAZ	La Paz	17.11	16	P	Pn	04 44 11.7	+0.6
	comp=Z,0.2nm,0.3s,baz=215,slow=12,SNR=7.7						
LPAZ	La Paz	17.11	16	P	Pn	04 44 12.1	+1.0
LPAZ				IAmb	IAmb	04 44 12.3	
	comp=Z,3.4nm,0.9s						
SIV	San Ignacio	20.00	36	P	P	04 44 44.4	+0.3
	comp=Z,0.8nm,0.3s,baz=222,slow=11,SNR=24						
BDFB	Brasilia	28.41	59	P	P	04 46 06.2	-0.1
	comp=Z,1.5nm,0.6s,baz=218,slow=12,SNR=3.1						
BDFB	Brasilia	28.41	59	IAmb	IAmb	04 46 09.3	
	comp=Z,8.1nm,1.4s						
H11S2	WAKE ISLAND Hy	24.97	270	T	T	07 18 34.8	
	baz=118,slow=75,SNR=6.1						
H11S1	WAKE ISLAND Hy	24.98	270	T	T	07 18 24.7	
	baz=118,slow=75,SNR=5.4						
H11S3	WAKE ISLAND Hy	24.98	270	T	T	07 18 34.8	
	baz=118,slow=75,SNR=3.9						

*IDC **02** 05:00:55.8±0.7, 17˚.19N×119˚.48E, h0km, mb3.9/14, mb1 4.0/15, mb1mx3.8/45, mbtmp3.9/15, ML4.5/1, MS2.6/1, Ms1 2.8/1, ms1mx2.4/34, Error ellipse: s-maj=28.5km s-min=15.0km az=69.0*
*MAN **02** 05:00:59.6, 17˚.36N×119˚.29E, h43km, mb4.6, ML3.5, MS3.3*
*NEIC **02** 05:00:59.6±1.7, 17˚.22N±0˚.06×119˚.4E±0˚.1, h23km±5km, mb4.2/15, Error ellipse: s-maj=17.9km s-min=8.2km az=82.0*
ISC 02 05:01:00.2±1.6, **17˚.24N**±0˚.04×**119˚.50E**±0˚.07, **h28**km±12km, **n55**, σ**1˚.23**/65, **mb4.1**/22, **1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	Bolinao	0.95	155	eP	Pn	05 01 17.7	0.0
SIPP	Brgy, Tapao	1.14	54	⇓eP	Pn	05 01 20.2	-0.1
SIPP				eS	Sb	05 01 32.8	-2.9
ABRA	Dolores	1.23	71	eP	Pb	05 01 22.3	-0.5
ABRA				eS	Sb	05 01 41.5	+3.2
SCZP	Santa Cruz	1.51	165	eP	Pb	05 01 28.0	+0.3
SMPP	San Manuel, Pa	1.57	134	eP	Pb	05 01 28.0	-0.6
SMPP				eS	Sb	05 01 50.2	+2.1
APYP	Conner	1.78	70	eP	Pb	05 01 31.5	-0.7
APYP				eS	Sb	05 01 56.7	+2.7
CAUP	Cauayan	2.25	97	eP	Pb	05 01 38.6	-1.6
CAUP				eS	Sb	05 02 07.7	+0.2
BALP	Baler	2.49	127	eP	Pb	05 01 42.3	-2.0
BALP				eS	Sb	05 02 13.8	-0.9
TGY	Tagaytay City	3.42	156	Pn	Pn	05 01 54.6	+2.8
	28nm,0.3s,baz=273,slow=16,SNR=3.3						
TGY				Sn	Sn	05 02 29.0	-2.4
	38nm,0.3s,baz=117,slow=8.5,SNR=5.2						
TPUB	Ta-pu	6.12	10	Pn	Pn	05 02 28.6	-0.2
YULB	Yu-li	6.35	15	Pn	Pn	05 02 32.1	+0.2
YULB				Sn	Sn	05 03 41.0	-2.6
SSLB	Suanglung	6.65	12	Pn	Pn	05 02 36.9	+0.7
SSLB				Sn	Sn	05 03 52.0	+0.9
YHNB	Yeheng	7.59	13	Pn	Pn	05 02 50.0	+0.8
YHNB				Sn	Sn	05 04 15.3	+0.9
CMAR	Chiang Mai Arr	19.60	277	P	P	05 05 26.4	-0.1
	0.6nm,0.3s,baz=89,slow=8.5,SNR=5.1						
CMAR				LR	LR	05 12 34.6	
	comp=Z,19nm,20.5s,baz=80,slow=36						
KSRS	Korea Array	21.46	19	P	P	05 05 46.1	-0.2
	3.0nm,0.9s,baz=205,slow=12,SNR=8.9						
INU	Inuyama	23.84	38		S	05 10 25.3	-0.1
SONM	Songino Array	32.35	343	P	P	05 07 27.4	+0.1
	0.6nm,0.6s,baz=165,slow=11,SNR=7.4						
SONM	Songino Array	32.35	343	P	P	05 07 27.4	+0.1
KLR	Kul'dur	33.42	15	P	P	05 07 37.5	+1.0
	0.9nm,0.7s,baz=259,slow=12,SNR=3.9						
WB0	Warramunga Arr	39.59	158	P	P	05 08 28.2	-1.1
WB0				IAmb	IAmb	05 08 40.2	
	comp=Z,5.9nm,1.0s						
WRA	Warramunga Arr	39.73	158	P	P	05 08 29.1	-1.4
	comp=Z,1.0nm,0.7s,baz=343,slow=9.1,SNR=3.4						
MK31	Makanchi Array	42.52	322	P	P	05 08 53.1	-0.2
MKAR	Makanchi Array	42.52	322	P	P	05 08 54.0	+0.7
	comp=Z,1.6nm,0.9s,baz=120,slow=8.7,SNR=14						
MKAR	Makanchi Array	42.52	322	P	P	05 08 52.1	-1.2
MAKZ	Makanchi	42.71	322	P	P	05 08 54.4	-0.5
MAKZ				IAmb	IAmb	05 09 09.4	
	comp=Z,3.9nm,1.4s						
AS31	Alice Springs	43.03	160	P	P	05 08 57.0	-0.7
ASAR	Alice Springs	43.03	160	P	P	05 08 57.3	-0.3
	comp=Z,0.9nm,0.5s,baz=339,slow=7.4,SNR=20						
ASAR	Alice Springs	43.03	160	P	P	05 08 56.5	-1.1
ZAA0	Zalesovo Array	45.40	332	P	P	05 09 15.8	-0.4
ZAA0				IAmb	IAmb	05 09 16.8	
	comp=Z,3.9nm,1.0s						
ZALV	Zalesovo Beam	45.40	332	P	P	05 09 16.0	-0.2
	comp=Z,2.5nm,0.8s,baz=125,slow=6.7,SNR=13						
ZALV	Zalesovo Beam	45.40	332	P	P	05 09 15.8	-0.4
KURK	Kurchatov	46.62	325	P	P	05 09 26.4	+0.4
KK31	Karatay Array	48.71	313	P	P	05 09 41.6	-0.6
KK31				IAmb	IAmb	05 09 42.4	
	comp=Z,5.5nm,1.2s						
KKAR	Karatay Array	48.71	313	P	P	05 09 41.8	-0.5
BRVK	Borovoye	52.29	325	P	P	05 10 08.9	-0.2
BRVK				IAmb	IAmb	05 10 10.2	
	comp=Z,5.3nm,1.4s						
STKA	Stephens Creek	53.24	156	P	P	05 10 16.4	0.0
	comp=Z,2.1nm,0.6s,baz=318,slow=9.5,SNR=4.4						
STKA	Stephens Creek	53.24	156	P	P	05 10 16.8	+0.4
GEYT	Alibeck	57.16	304	P	P	05 10 44.7	0.0
	comp=Z,1.7nm,0.8s,baz=147,slow=3.5,SNR=5.8						
ABKAR	Akbulak array	57.33	318	P	P	05 10 45.0	-0.7
ABKAR				IAmb	IAmb	05 10 45.5	
	comp=Z,1.1nm,0.7s						
ABKAR	Akbulak array	57.33	318	P	P	05 10 45.6	-0.1
IMAR	Indian Mountai	73.08	25	P	P	05 12 29.1	+1.5
PPLA	Purkeypile	74.05	28	P	P	05 12 35.1	+1.6
MLY	Manley	74.43	26	P	P	05 12 37.5	+2.0
MLY				IAmb	IAmb	05 12 37.8	
	comp=Z,2.3nm,0.8s						
BPAW	Bear Paw Mtn.	74.44	27	P	P	05 12 36.8	+1.2
BPAW				IAmb	IAmb	05 12 40.6	
	comp=Z,5.4nm,1.3s						
BMAR	Burnt Mountain	76.48	23	P	P	05 12 49.2	+1.9
FINES	FINESS Array B	76.64	330	P	P	05 12 47.6	-0.6
	comp=Z,3.1nm,1.0s,baz=55,slow=6.2,SNR=11						
BCAR	Beaver Creek A	78.68	27	P	P	05 13 01.6	+1.9
INK	Inuvik	80.23	21	P	P	05 13 08.4	+0.6
	comp=Z,0.7nm,0.8s,baz=283,slow=3.3,SNR=3.7						
INK	Inuvik	80.23	21	P	P	05 13 08.9	+1.0
BURAR	Bucovina Array	80.29	317	P	P	05 13 08.6	-0.2
NB2	NORSAR Subarra	83.60	332	P	P	05 13 24.7	-1.1
	comp=Z,3.4nm,1.1s,baz=66,slow=4.6						
NOA	NORSAR Array B	83.60	332	P	P	05 13 25.4	-0.5
	comp=Z,0.8nm,0.7s,baz=66,slow=4.9,SNR=4.1						
RES	Resolute Bay	85.73	9	P	P	05 13 36.6	+0.3
	comp=Z,1.6nm,1.1s,baz=320,slow=5.2,SNR=4.6						
RES	Resolute Bay	85.73	9	P	P	05 13 36.9	+0.7
YKA	Yellowknife Ar	89.95	22	P	P	05 13 56.9	+0.1
	comp=Z,0.4nm,0.7s,baz=315,slow=4.7,SNR=7.8						

MEX 02 05:16:37.2±1.4, **17˚.22N×100˚.06W, h41**km±21km, **MD3.9, 1D, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.26	229	⇓eP	Pn	05 16 43.4	-1.8
	baz=47,slow=12						
CAIG				eS	Sn	05 16 49.2	-1.6
ACP2	Acapulco	0.38	154	eP	Pn	05 16 43.5	-3.0
ACP2				eS	Sn	05 16 49.7	-3.4
MEIG	Mezcala	0.82	31	eP	Pn	05 16 50.3	-2.1
MEIG				eS	Sn	05 17 01.1	-2.3
ARIG	Puente Sto Nin	1.09	346	eP	Pn	05 16 55.2	-0.8
ARIG				iS	Sn	05 17 08.5	-1.4
PLIG	Platanillo	1.28	25	eP	Pn	05 16 57.6	-1.1
PLIG				iS	Sn	05 17 12.8	-1.9
ZIIG	Zihuatanejo	1.39	286	eP	Pn	05 17 00.7	+0.6
TLIG	Tlapa	1.47	76	eP	Pn	05 16 58.7	-2.6
TLIG				eS	Sn	05 17 15.4	-4.0
MAVM	Malinalco, Edo	1.81	17	iP	Pn	05 17 06.5	+0.4
FTIG	Fresnillo de T	1.96	69	eP	Pn	05 17 05.9	-2.2
FTIG				eS	Sn	05 17 30.9	-0.7
PNIG	Pinotepa	2.03	114	eP	Pn	05 17 05.7	-3.2
PNIG				eS	Sn	05 17 35.7	+2.6
HLIG	Huajuapan de L	2.24	74	eP	Pn	05 17 09.4	-2.6
YOIG	Yosondua	2.44	98	eP	Pn	05 17 15.2	+0.4

*IDC **02** 05:35:49.0±1.1, 28˚.99S×177˚.16W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.9/38, mbtmp4.1/4, Error ellipse: s-maj=37.4km s-min=18.1km az=154.0*
ISC 02 05:35:53.9±1.1, **28˚.9S**±0˚.2×**177˚.2W**±0˚.2, **h36**km, **n9**, σ**0˚.90**/11, **mb4.0**/4, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.74	245	Pn	Pn	05 36 07.2	-0.6
	2µm,0.3s,baz=53,slow=22,SNR=42						
RAO				Sn	Sn	05 36 17.6	-0.2
	5µm,0.3s,baz=283,slow=23,SNR=40						
STKA	Stephens Creek	35.55	255	P	P	05 42 49.7	+2.0
	0.7nm,0.4s,baz=88,slow=10,SNR=4.8						
ASAR	Alice Springs	43.95	265	P	P	05 43 56.9	-0.8
	0.5nm,0.4s,baz=108,slow=7.2,SNR=14						
WRA	Warramunga Arr	44.81	270	P	P	05 44 04.1	-0.4
	3.1nm,0.3s,baz=108,slow=7.8,SNR=2.5						
QSPA	South Pole Qui	61.16	180	P	P	05 46 04.4	-0.1
	1.4nm,0.8s,baz=6.7,slow=7.2,SNR=6.5						
FINES	FINESS Array B	144.03	341	PKP	PKPdf	05 55 24.0	-0.8
	1.1nm,0.5s,baz=63,slow=2.8,SNR=12						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NOA	NORSAR Array B	147.42	352	PKPbc	PKPab	05 55 35.1	-0.1
	0.9nm,0.9s,baz=10,slow=3.2,SNR=3.0						
AKASG	Malin Array Be	150.57	325	PKPbc	PKiKP	05 55 42.5	+0.3
	1.0nm,0.5s,baz=46,slow=3.5,SNR=9.4						
AKASG				PKPab	PKPab	05 55 48.0	-0.3
	0.6nm,0.5s,baz=45,slow=3.3,SNR=6.4						
BRTR	Keskin Array B	152.52	301	PKPbc	PKiKP	05 55 47.2	+0.4
	0.4nm,0.4s,baz=128,slow=4.4,SNR=5.8						

BGR **02** *05:41:01.3±0.0,25°.56S×177°.16W,h17km±2km*

BJI **02** *05:41:12.7±0.0,24°.86S×176°.86W,h113km,mB5.4/33, mb5.1/49*

MOS **02** *05:41:15.5±0.9,25°.12S×177°.54W,h125km,mb5.0/49, Error ellipse: s-maj=9.0km s-min=7.2km az=77.9*

NEIC **02** *05:41:18.0±1.4,25°.21S±0°.07×177°.5W±0°.1,h138km±4km, mb5.0/256,Error ellipse: s-maj=13.9km s-min=8.9km az=108.0*

IDC **02** *05:41:18.3±1.0,25°.15S×177°.53W,h140km±8km,mb4.6/27, mb1 4.7/29,mb1mx4.7/40,mbtmp5.0/29,MS3.5/6, Ms1 3.5/6,ms1mx3.2/41,Error ellipse: s-maj=10.2km s-min=9.1km az=125.0*

KLM **02** *05:41:19.0,25°.10S×177°.04W,h189km,mb5.0*

GCMT **02** *05:41:20.0±0.3,25°.37S±0°.02×177°.37W±0°.03, h169km±4km,MW5.0/100,Moment Tensor Solution. s21,c21; s100,c128; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.16±.18; $M_{\theta\theta}$1.44±.23; $M_{\phi\phi}$-0.28±.21; $M_{r\theta}$-3.63±.15; $M_{\theta\phi}$-1.43±.17; $M_{r\phi}$-1.45±.12; Best double couple: $M_0$4.33500×10^{16} NP1:ϕ_s330.00000°,δ24.00000°, λ-18.00000°. NP2:ϕ_s76.00000°,δ83.00000°, λ-113.00000°. Principal axes: T 4.0250, Plg34.0000°, Azm186.0000°; N 0.6160, Plg23.0000°, Azm79.0000°; P -4.6440, Plg47.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 05:41:19.9±0.2,25°.34S±0°.04×177°.43W±0°.06,h160km, n891,σ1§40/931,mb4.9/172,47C-28D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	3.91	186	P	Pn	05 42 17.2	-2.0
RIZ				S	Sn	05 43 04.9	-0.7
RAO	Raoul Island	3.92	186	P	Pn	05 42 18.1	-1.2
	204nm,0.3s,baz=96,slow=13,SNR=7.1						
RAO				S	Sn	05 43 07.7	+2.1
	674nm,0.3s,baz=77,slow=22,SNR=17						
GLKZ	Green Lake	3.93	186	P	Pn	05 42 19.6	+0.2
GLKZ				S	Sn	05 43 04.7	-1.2
MSVF	Nonsavu	8.66	330	P	Pn	05 43 23.6	+1.5
MSVF	Nonsavu	8.66	330	d iP	P	05 43 22.9	+0.8
NIUE	Niue	9.34	50	P	Pn	05 43 20.1	-11
	baz=8.8,SNR=29						
NIUE	Niue	9.34	50		Pn	05 43 25.6	-5.4
NIUE				Sn	Sn	05 45 01.5	-13
OUZ	Omahuta	12.53	216		P	05 44 16.2	-1.6
OUZ	Omahuta	12.53	216	P	P	05 44 15.4	-2.4
AFI	Afiamalu	12.55	26	P	Pn	05 44 05.1	-8.1
	30nm,0.3s,baz=71,slow=1.2,SNR=34						
AFI				S	Sn	05 46 15.4	-17
	21nm,0.3s,baz=47,slow=23,SNR=12						
AFI				LR	LR	05 48 10.0	
	comp=Z,59nm,20.5s,baz=180,slow=33						
AFI	Afiamalu	12.55	26		Pn	05 44 05.4	-7.7
AFI	Afiamalu	12.55	26	P	Pn	05 44 05.4	-7.8
MXZ	Matakaoa Point	12.71	196	S	Sn	05 46 22.5	-13
KUZ	Kuatoutu	12.79	206	P	P	05 44 20.1	-0.6
PKGZ	Pakihiroa	13.08	196	S	Sn	05 46 33.6	-11
MWZ	Matawai	13.64	197	P	Pn	05 44 16.6	-10
MWZ				S	Sn	05 46 40.5	-18
TKGZ	Te Karaka	13.66	196	P	P	05 44 29.4	-0.9
TKGZ				S	Sn	05 46 42.9	-15
URZ	Urewera	13.69	198	P	Pn	05 44 28.6	+1.3
	17nm,0.3s,baz=347,slow=2.4,SNR=21						
URZ				S	Sn	05 46 47.3	-12
	6.0nm,0.3s,baz=2.8,slow=23,SNR=11						
RAGZ	Rawiri	13.82	197	P	P	05 44 32.8	+0.5
TARZ	Mount Tarawera	13.85	200	P	P	05 44 32.2	-0.4
MUGZ	Murupara	13.99	199	P	Pn	05 44 32.4	+1.3
MUGZ				S	Sn	05 46 53.6	-13
PRGZ	Paritu Road	14.11	195	P	P	05 44 35.2	-0.2
PRGZ				S	Sn	05 46 56.4	-13
KNZ	Kokohu	14.25	196	P	Pn	05 44 34.1	-0.2
KNZ				S	Sn	05 46 56.2	-16
TLZ	Tolley Road	14.25	203	P	P	05 44 37.1	0.0
MHGZ	Mahia Peninsul	14.32	195	P	Pn	05 44 35.7	+0.4
MHGZ				S	Sn	05 47 02.1	-12
NMHZ	Naumai	14.55	198	P	Pn	05 44 36.4	-1.8
NMHZ				S	Sn	05 47 02.8	-17
HIZ	Hauiti	14.66	205	P	Pn	05 44 38.8	-0.8
BKZ	Black Stump Fm	14.71	199	P	Pn	05 44 37.3	-2.9
BKZ				S	Sn	05 47 03.7	-20
RITZ	Rihia Road	14.73	201	P	Pn	05 44 40.5	+0.1
KATZ	Kakaramea	14.78	201	P	Pn	05 44 41.5	+0.3
MCHZ	McNeill Hill	14.90	198	P	Pn	05 44 42.2	-0.3
MCHZ				S	Sn	05 47 15.6	-13
WTVZ	West Tongariro	14.94	202	P	Pn	05 44 40.5	-2.7
TWVZ	Taurewa	14.95	202	P	Pn	05 44 41.6	-1.7
KWHZ	Kaweka Forest	14.96	199	P	Pn	05 44 40.5	-2.8
KWHZ				S	Sn	05 47 13.9	-16
NGZ	Ngauruhoe	14.99	201	P	Pn	05 44 42.6	-1.1
TUVZ	Tukino	15.06	201	P	Pn	05 44 43.6	-1.0
FWVZ	Far West T-bar	15.08	201	P	Pn	05 44 41.1	-3.9
TRVZ	Turoa	15.12	201	P	Pn	05 44 42.1	-3.3
DZM	Mont Dzumac	15.12	279	eP	P	05 44 50.4	+3.5
	252nm,1.4s						
DZM	Mont Dzumac	15.12	279	P	P	05 44 48.2	+1.3
	1.6nm,0.3s,baz=90,slow=17,SNR=16						
DZM				LR	LR	05 48 41.9	
	comp=Z,182nm,19.0s,baz=62,slow=30						
DZM	Mont Dzumac	15.12	279	P	P	05 44 48.4	+1.5
DZM				IAmb	IAmb	05 44 55.4	
	comp=Z,66nm,0.9s						
BHHZ	Black Hill Sta	15.13	200	P	Pn	05 44 38.7	-6.7
BHHZ				S	Sn	05 47 18.2	-16
MOVZ	Moawhango	15.15	201	P	Pn	05 44 42.0	-3.7
MOVZ				S	Sn	05 47 20.6	-14
PKVZ	Pokaka	15.18	202	P	Pn	05 44 44.9	-1.1
KRHZ	Kereru	15.18	199	P	Pn	05 44 40.8	-5.2
KRHZ				S	Sn	05 47 19.4	-16
KAHZ	Kahuranaki	15.18	197	P	Pn	05 44 43.3	-2.8
KAHZ				S	Sn	05 47 20.1	-15
VRZ	Vera Road	15.24	204	P	Pn	05 44 46.9	+0.2
NOUC	Port Laguerre	15.24	279	P	P	05 44 49.9	+1.8
NOUC				IAmb	IAmb	05 44 53.8	
	comp=Z,74nm,1.1s						
PXZ	Pawanui	15.41	197	P	Pn	05 44 47.1	-1.6
PXZ				S	Sn	05 47 22.2	-18
PNHZ	Pukenui	15.48	199	P	Pn	05 44 43.3	-6.4
PNHZ				S	Sn	05 47 24.5	-18
PKE	Pukeiti	15.59	206	P	Pn	05 44 50.7	-0.4
PRHZ	Porangahau	15.69	197	P	Pn	05 44 50.9	-1.3
PRHZ				S	Sn	05 47 31.2	-16
DVHZ	Dannevirke	15.85	198	P	Pn	05 44 50.7	-3.5
DVHZ				S	S	05 47 31.0	-20
POWZ	Post Office Ro	16.05	199	P	Pn	05 44 53.7	-2.9
POWZ				S	S	05 47 40.0	-15
PRWZ	Pori Road	16.14	198	P	Pn	05 44 57.2	-0.6
BFZ	Birch Farm	16.18	197	IAmb	IAmb	05 45 08.5	
	comp=Z,107nm,1.2s						
BFZ	Birch Farm	16.18	197	P	Pn	05 44 54.9	-3.3
BFZ				S	S	05 47 41.3	-16
MRZ	Mangatainoka R	16.35	199	P	P	05 44 54.0	-6.3
MRZ				S	S	05 47 45.5	-16
HOWZ	Holdsworth Sta	16.59	199	P	P	05 44 58.8	-4.1
HOWZ				S	S	05 47 50.3	-17
OGWZ	Otaki Gorge	16.62	200	P	P	05 44 56.6	-6.6
OGWZ				S	S	05 47 52.4	-15
RAR	Rarotonga	16.73	79	P	P	05 45 03.9	-0.7
	comp=Z,0.6nm,0.3s,baz=264,slow=9.2,SNR=2.3						
RAR				S	S	05 47 58.0	-13
	comp=Z,3.2nm,0.3s,baz=88,slow=21,SNR=4.1						
KHZ	Kahutara	18.59	201	P	P	05 45 21.1	-3.6
KHZ				IAmb	IAmb	05 45 23.8	
	comp=Z,64nm,0.6s						
LTZ	Lake Taylor	19.35	203	P	P	05 45 30.8	-2.2
LTZ				IAmb	IAmb	05 45 39.0	
	comp=Z,22nm,0.5s						
OXZ	Oxford	19.91	203	P	P	05 45 35.4	-3.5
OXZ				IAmb	IAmb	05 45 45.3	
	comp=Z,41nm,0.9s						
RPZ	Rata Peaks	20.60	204	P	P	05 45 43.2	-3.2
	comp=Z,6.4nm,0.4s,baz=312,slow=2.0,SNR=9.0						
RPZ				S	S	05 49 19.9	-7.9
	comp=Z,4.4nm,0.4s,baz=124,slow=22,SNR=4.1						
RPZ	Rata Peaks	20.60	204	P	P	05 45 43.7	-2.7
FOZ	Fox Glacier	20.93	207	P	P	05 45 51.4	+1.5
LBZ	Lake Benmore	21.50	205	P	P	05 45 56.3	+0.3
ODZ	Otahua Downs	21.89	203	P	P	05 46 01.3	+1.3
KNTN	Kanton	23.10	15	P	P	05 46 10.6	-1.1
MLZ	Mavora Lakes	23.13	207	P	P	05 46 11.7	0.0
MLZ				IAmb	IAmb	05 46 13.1	
	comp=Z,45nm,1.3s						
DCZ	Deep Cove	23.61	208	P	P	05 46 16.4	+0.3
WHZ	Wether Hill Ro	23.63	206	P	P	05 46 15.6	-0.7
WHZ				IAmb	IAmb	05 46 19.8	
	comp=Z,46nm,0.6s						
HNR	Honiara	26.70	302	LR	LR	05 55 46.4	
	comp=Z,102nm,19.4s,baz=324,slow=33						
PAE	Paea	26.98	79	eT	T	06 14 08.4	
	comp=Z,31nm,0.3s						
PPT2	Papeete2	27.01	79	eLQ	LQ	05 52 19.7	
	comp=Z,554nm,26.0s						
PPT2				eLR	LR	05 53 46.5	
	comp=Z,78nm,22.0s						
PPT2	Papeete2	27.01	79	eT	T	06 14 11.8	
	comp=Z,31nm,0.4s						
PPT	Papeete	27.01	79	LR	LR	05 55 35.6	
	comp=Z,80nm,18.6s,baz=250,slow=32						
TIAR	Tiarei	27.22	79	eT	T	06 14 21.5	
	comp=Z,3.9nm,0.3s						
TVO	Taravao	27.23	80	eT	T	06 14 28.3	
	comp=Z,5.2nm,0.3s						
ARMA	Armidale	27.76	252	P	P	05 46 56.8	+3.0
	baz=28						
ARMA	Armidale	27.76	252	P	P	05 46 52.8	-1.0
MEH	Mehetia	28.25	81	eT	T	06 15 44.0	
	comp=Z,77nm,0.3s						
EIDS	Eidsvold	28.42	263	P	P	05 47 01.9	+2.3
	baz=29						
EIDS	Eidsvold	28.42	263	P	P	05 46 59.0	-0.7
EIDS				IAmb	IAmb	05 47 02.4	
	comp=Z,20nm,0.7s						
MGCD	Mangrove Creek	28.46	247	P	P	05 47 03.0	+3.1
	baz=29						
VAH	Vaihoa	29.64	76	eT	T	06 17 28.6	
	comp=Z,12nm,0.2s						
RMQ	Roma	30.39	260	P	P	05 47 19.9	+2.9
	baz=31						
CAN	Canberra	30.51	243	P	P	05 47 21.5	+3.5
CAN	Canberra	30.51	243	P	P	05 47 21.5	+3.5
CAN				pmax	pmax		
	comp=Z,24nm,1.4s						
TOO	Toolangi	33.69	240	P	P	05 47 46.5	+0.8
	baz=34						
TOO	Toolangi	33.69	240	P	P	05 47 46.9	+1.2
TOO				IAmb	IAmb	05 47 47.5	
	comp=Z,15nm,0.8s						
TOO	Toolangi	33.69	240	P	P	05 47 46.9	+1.2
TOO				pmax	pmax		
	comp=Z,15nm,0.8s						
CTA	Charters Tower	33.84	271	P	P	05 47 48.2	+1.0
	baz=34						
MTSU	Mount Surprise	36.16	274	P	P	05 48 08.4	+1.3
	baz=37						
STKA	Stephens Creek	36.40	250	P	P	05 48 10.1	+1.1
	comp=Z,3.4nm,0.5s,baz=98,slow=11,SNR=17						
STKA				PcP	PcP	05 50 31.3	+1.5
	comp=Z,0.9nm,0.4s,baz=67,slow=6.0,SNR=3.8						
STKA				ScP	ScP	05 54 03.8	+2.5
	comp=Z,3.2nm,0.9s,baz=91,slow=4.2,SNR=4.9						
STKA	Stephens Creek	36.40	250	P	P	05 48 09.8	+0.9
STKA	Stephens Creek	36.40	250	P	P	05 48 09.8	+0.9
STKA				pmax	pmax		
	comp=Z,3.0nm,1.5s						
PMG	Port Moresby	37.17	289	P	P	05 48 14.9	-0.7
	comp=Z,106nm,0.8s,baz=100,slow=5.1,SNR=34						
PMG	Port Moresby	37.17	289	P	P	05 48 15.9	+0.3
PMG	Port Moresby	37.17	289	ceP	P	05 48 14.7	-1.0
PMG				pmax	pmax		
	comp=Z,336nm,0.9s						
COEN	Coen	38.66	279	P	P	05 48 29.4	+1.3
	baz=39						
COEN	Coen	38.66	279	P	P	05 48 29.0	+0.9
BBOO	Buckleboo	41.06	248	P	P	05 48 47.5	-0.3
AS17	Alice Springs	44.04	261	P	P	05 49 12.2	+0.2
	baz=45						
AS31	Alice Springs	44.12	261	P	P	05 49 12.4	-0.2
ASAR	Alice Springs	44.12	261	P	P	05 49 11.9	-0.7
	comp=Z,5.1nm,0.4s,baz=88,slow=7.4,SNR=70						
ASAR				ScP	ScP	05 54 31.7	-0.1
	comp=Z,2.2nm,0.8s,baz=105,slow=4.6,SNR=5.6						
ASAR				S	S	05 55 33.2	-0.4
	comp=Z,2.0nm,0.7s,baz=98,slow=16,SNR=7.0						
ASAR	Alice Springs	44.12	261	P	P	05 49 11.6	-1.0
WR0	Warramunga Arr	44.47	267	P	P	05 49 14.9	-0.5
WB2	Warramunga Arr	44.64	267	P	P	05 49 16.4	-0.3
WB2				IAmb	IAmb	05 49 18.5	
	comp=Z,15nm,0.7s						
WRAB	Tennant Creek	44.65	267	P	P	05 49 16.4	-0.4
WRAB				IAmb	IAmb	05 49 18.0	
	comp=Z,17nm,0.8s						
WRAB	Tennant Creek	44.65	267	ceP	P	05 49 16.0	-0.8
WRAB				pmax	pmax		
	comp=Z,18nm,0.9s						
WB0	Warramunga Arr	44.65	267	P	P	05 49 16.5	-0.3
WB0				IAmb	IAmb	05 49 18.5	
	comp=Z,18nm,0.8s						
WRA	Warramunga Arr	44.65	267	P	P	05 49 16.2	-0.6
	comp=Z,12nm,0.7s,baz=104,slow=7.9,SNR=26						
WRA				ScP	ScP	05 54 37.6	+3.6
	comp=Z,4.8nm,1.0s,baz=105,slow=4.0,SNR=4.8						
WRA				S	S	05 55 43.1	+1.9
	comp=Z,0.4nm,0.3s,baz=125,slow=14,SNR=3.1						
WRA	Warramunga Arr	44.65	267	P	P	05 49 16.5	-0.3
WRA	Warramunga Arr	44.65	267	P	P	05 49 16.5	-0.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
JAY	Jayapura	46.23	293	P	P	05 49 27.9	-1.3
	comp=Z,27nm,0.5s						
JAY	Jayapura	46.23	293	P	P	05 49 28.0	-1.3
FORT	Forrest	48.02	251	P	P	05 49 42.3	-0.6
WRKA	Warakurna	48.82	258	P	P	05 49 48.0	-1.2
	baz=50						
MTN	Manton Dam	49.90	274	P	P	05 49 57.5	+0.1
MTN				IAmb	IAmb	05 49 58.2	
	comp=Z,35nm,1.1s						
KEKH	Kekaha	50.09	22	P	P	05 49 58.6	0.0
KIP	Kipapa	50.16	24	P	P	05 50 00.0	+0.8
KIP	Kipapa	50.16	24	P	P	05 50 00.0	+0.8
KIP				pmax	pmax		
	comp=Z,81nm,1.2s						
KNRA	Kununurra	51.02	270	P	P	05 50 04.8	-1.0
	baz=52						
KNRA	Kununurra	51.02	270	P	P	05 50 05.1	-0.7
FITZ	Fitzroy Crossi	53.05	266	P	P	05 50 21.2	+0.4
FITZ				IAmb	IAmb	05 50 22.7	
	comp=Z,11nm,0.8s						
SBA	Scott Base	53.10	184	P	P	05 50 24.3	+4.0
SBA	Scott Base	53.10	184	P	P	05 50 24.3	+4.0
SBA				pmax	pmax		
	comp=Z,69nm,1.1s						
VNDA	Vanda	53.16	186	P	P	05 50 23.5	+2.7
	comp=Z,8.0nm,0.6s,baz=10,slow=6.4,SNR=21						
VNDA	Vanda	53.16	186	P	P	05 50 23.7	+3.0
VNDA				IAmb	IAmb	05 50 39.6	
	comp=Z,31nm,1.3s						
VNDA	Vanda	53.16	186	P	P	05 50 23.7	+3.0
VNDA				pmax	pmax		
	comp=Z,31nm,1.3s						
FAKI	Fak Fak	53.23	286	P	P	05 50 21.9	-0.3
FAKI				IAmb	IAmb	05 50 35.5	
	comp=Z,31nm,1.0s						
GUMO	Guam	53.36	312	P	P	05 50 22.1	-0.8
GUMO	Guam	53.36	312	P	P	05 50 22.2	-0.8
GUMO				pmax	pmax		
	comp=Z,416nm,1.5s						
SIJI	Sorong	55.11	288	P	P	05 50 35.3	-0.4
	comp=Z,52nm,0.7s,baz=78,slow=7.9,SNR=11						
PSAC2	Pilbara Seismi	57.16	260	P	P	05 50 49.2	-1.0
PSAC2				IAmb	IAmb	05 50 49.9	
	comp=Z,23nm,1.4s						
MORW	Morawa	58.59	250	P	P	05 50 59.3	-0.8
MORW				IAmb	IAmb	05 51 17.3	
	comp=Z,28nm,1.3s						
CASY	Casey	59.85	206	P	P	05 51 08.7	+0.5
RPN	Rapa Nui	60.40	108	LR	LR	06 13 38.9	
	comp=Z,29nm,18.1s,baz=248,slow=32						
GIRL	Giralia	61.87	257	P	P	05 51 23.2	+0.7
KAPI	Kappang	63.34	277	P	P	05 51 32.8	+0.4
KAPI				IAmb	IAmb	05 51 33.0	
	comp=Z,26nm,0.9s						
KAPI	Kappang	63.34	277	P	P	05 51 32.8	+0.4
KAPI				pmax	pmax		
	comp=Z,26nm,1.0s						
QSPA	South Pole Qui	64.75	180	P	P	05 51 42.9	+2.0
SPMM	Sapulut	70.69	285	P	P	05 52 16.0	-2.8
KKM	Kota Kinabalu	71.56	286	P	P	05 52 24.3	+0.2
SBUM	Sibu	73.39	281	P	P	05 52 35.5	+0.7
SBUM	Sibu	73.39	281	P	P	05 52 32.0	-2.8
JOW	Kunigami	73.69	311	P	P	05 52 36.1	-0.1
JOW				IAmb	IAmb	05 52 38.6	
	comp=Z,31nm,1.0s						
INU	Inuyama	74.17	323	P	P	05 52 39.0	+0.2
MJAR	Matsushiro Arr	74.42	324	P	P	05 52 38.4	-1.8
	comp=Z,5.7nm,0.6s,baz=136,slow=6.2,SNR=23						
MJAR	Matsushiro Arr	74.42	324	P	P	05 52 38.9	-1.4
MJAR	Matsushiro Arr	74.42	324	P	P	05 52 38.9	-1.4
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAJO	Matsushiro	74.42	324	P	P	05 52 39.6	-0.7
MAJO	Matsushiro	74.42	324	P	P	05 52 39.6	-0.7
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MAT	Matsushiro	74.42	324	P	P	05 52 39.0	-1.3
MJB9	Matsu-Tunnel	74.42	324	P	P	05 52 39.6	-0.7
KSM	Kuching	74.65	279	P	P	05 52 42.9	+0.7
KSM	Kuching	74.65	279	P	P	05 52 39.0	-3.1
YOJ	Yonaguni jima	75.97	306	P	P	05 52 48.2	-1.2
YOJ	Yonaguni jima	75.97	306	P	P	05 52 48.2	-1.2
YOJ				pmax	pmax		
	comp=Z,74nm,1.0s						
JNU	Nakatsue	76.16	317	P	P	05 52 50.5	+0.2
	comp=Z,9.4nm,0.7s,baz=92,slow=2.9,SNR=5.4						
JNU	Nakatsue	76.16	317	P	P	05 52 47.7	-2.6
NACB	Ninganchiao	76.84	305	P	P	05 52 53.2	-1.1
NACB				IAmb	IAmb	05 52 55.2	
	comp=Z,36nm,0.8s						
ADK	Adak	76.89	0	P	P	05 52 54.0	+0.1
ADK	Adak	76.89	0	P	P	05 52 54.0	+0.1
ADK				pmax	pmax		
	comp=Z,172nm,1.3s						
TPUB	Ta-pu	77.06	304	P	P	05 52 53.8	-1.8
TPUB				IAmb	IAmb	05 52 55.7	
	comp=Z,25nm,0.8s						
MAW	Mawson	77.21	200	P	P	05 52 57.3	+1.6
	comp=Z,29nm,0.5s,baz=134,slow=5.5,SNR=142						
MAW	Mawson	77.21	200	P	P	05 52 57.6	+1.9
MAW	Mawson	77.21	200	P	P	05 52 57.6	+1.9
MAW				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ATKA	Atka Island	77.26	2	P	P	05 52 55.5	-0.4
H06S1	SOCORRO T	78.09	63	T	T	07 18 15.8	
	SNR=18						
H06E1	SOCORRO T-PHAS	78.14	63	T	T	07 18 16.7	
	SNR=20						
JKA	Kamikawa-asahi	78.22	332	P	P	05 53 01.9	+0.4
ASAJ	Asahikawa	78.22	332	P	P	05 53 01.9	+0.4
	comp=Z,6.8nm,0.5s,baz=226,slow=5.5,SNR=15						
NIKH	Nikolski High	78.34	5	P	P	05 53 02.0	0.0
UNV	Unalaska Valle	79.42	7	P	P	05 53 07.5	-0.3
QZH	Quanzhou	79.52	304	⇑iP	P	05 53 09.9	+0.9
QZH				pmax	pmax		
	comp=Z,11nm,0.7s						
AKUT	Akutan	79.79	7	P	P	05 53 09.5	-0.3
USHA	Ushuaia	79.82	146	P	P	05 53 12.0	+1.8
	comp=Z,10nm,1.0s,baz=286,slow=6.2,SNR=5.5						
YSS	Yuzh-Sakhalins	80.44	334	P	P	05 53 14.2	+0.7
YSS				IAmb	IAmb	05 53 15.3	
	comp=Z,48nm,1.2s						
YSS	Yuzh-Sakhalins	80.44	334	eP	P	05 53 13.8	+0.3
YSS				e*PP	pP	05 53 50.1	-2.4
YSS				e		05 56 16.7	
YSS				ePPP	PPP	05 58 04.8	
YSS				eS	S	06 03 07.6	+1.4
YSS				ePS	PnS	06 04 00.0	-14
YSS				eSS	SS	06 08 20.0	-2.5
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
PET	Petropavlovsk	80.77	346	P	P	05 53 14.8	-0.3
PET	Petropavlovsk	80.77	346	eP	P	05 53 13.9	-1.1
PET				pmax	pmax		
	comp=Z,69nm,1.1s						
KSRS	Korea Array	80.86	319	P	P	05 53 15.4	-0.5
	comp=Z,5.3nm,0.6s,baz=131,slow=5.7,SNR=14						
KSAR	Wonju Array Be	80.87	319	P	P	05 53 16.1	+0.1
KSAR	Wonju Array Be	80.87	319	P	P	05 53 16.1	+0.1
PEA0B	Petropavlovsk-	81.06	345	P	P	05 53 16.7	+0.1
PEA0B	Petropavlovsk-	81.06	345	P	P	05 53 16.7	+0.1
PEA0B				pmax	pmax		
	comp=Z,90nm,0.7s						
PETK	Petropavlovsk-	81.06	345	P	P	05 53 16.5	-0.2
	comp=Z,77nm,0.6s,baz=134,slow=5.6,SNR=107						
PETK	Petropavlovsk-	81.06	345	P	P	05 53 16.6	-0.1
PETK	Petropavlovsk-	81.06	345	P	P	05 53 16.6	-0.1
DLV	T Lat	81.06	288	P	P	05 53 18.9	+1.1
DLV				IAmb	IAmb	05 53 20.5	
	comp=Z,34nm,0.8s						
SMMC	Simmler	81.18	44	P	P	05 53 19.3	+1.6
	baz=230						
CNBA	Chernabura Isl	81.30	10	P	P	05 53 18.2	+0.4
SDPT	Sand Point	81.67	10	P	P	05 53 20.2	+0.5
MWC	Mount Wilson	81.74	46	P	P	05 53 21.8	+0.9
MWC	Mount Wilson	81.74	46	P	P	05 53 21.8	+0.9
MWC				pmax	pmax		
	comp=Z,17nm,1.2s						
MURC	Murrieta	81.92	47	P	P	05 53 23.0	+1.3
	baz=232						
BFSC	Mount Baldy Ra	82.01	46	P	P	05 53 23.4	+1.1
	baz=232						
MONP2	Monument Peak	82.01	48	P	P	05 53 23.8	+1.4
	baz=233						
IKP	In-Ko-Pah, Jac	82.08	48	P	P	05 53 24.1	+1.5
	baz=233						
VES	Vestal, Richgr	82.08	44	P	P	05 53 23.7	+1.3
	baz=231,SNR=7.2						
SYO	Syowa Base	82.14	193	⇓iP	P	05 53 21.0	-1.2
SYO	Syowa Base	82.14	193	⇑iPcP	PcP	05 53 26.2	-1.0
KMRM	Mail Ridge	82.17	39	IAmb	IAmb	05 53 25.6	
	comp=Z,40nm,1.0s						
KMRM				P	P	05 53 25.8	+2.9
EDW2	Edwards Air Fo	82.19	46	P	P	05 53 24.5	+1.5
	baz=232,SNR=11						
ISA	Isabella, Lake	82.36	45	P	P	05 53 25.2	+1.2
ISA				IAmb	IAmb	05 53 26.5	
	comp=Z,20nm,1.1s						
ISA	Isabella, Lake	82.36	45	P	P	05 53 25.2	+1.2
ISA				pmax	pmax		
	comp=Z,20nm,1.2s						
ISA	Isabella, Lake	82.36	45	P	P	05 53 25.6	+1.6
	baz=232,SNR=10.0						
PFO	Pinyon Flats O	82.42	47	P	P	05 53 24.0	-0.3
	comp=Z,6.6nm,0.9s,baz=256,slow=5.3,SNR=5.8						
PFO	Pinyon Flats O	82.42	47	P	P	05 53 24.5	+0.1
PFO	Pinyon Flats O	82.42	47	P	P	05 53 24.5	+0.1
PFO				pmax	pmax		
	comp=Z,18nm,1.3s						
PFO	Pinyon Flats O	82.42	47	P	P	05 53 25.8	+1.4
	baz=233						
TPFO	Pinon Flats	82.42	47	P	P	05 53 25.6	+1.2
	baz=233						
XPFO	Pion Flat	82.42	47	P	P	05 53 24.7	+0.3
SWSC	Sam W. Stewart	82.46	48	P	P	05 53 26.1	+1.7
	baz=234						
O02D	Mt. Diablo Mer	82.67	39	P	P	05 53 27.5	+2.0
	baz=228,SNR=12						
CMB	Columbia Colle	82.67	42	P	P	05 53 26.1	+0.6
CMB	Columbia Colle	82.67	42	P	P	05 53 26.1	+0.6
CMB				pmax	pmax		
	comp=Z,13nm,1.1s						
JRMM	Jerantut	82.72	278	P	P	05 53 23.0	-3.3
LRMC	Laurel Mtn Rad	82.75	45	P	P	05 53 27.5	+1.4
	baz=232,SNR=6.9						
AFDM	Forest Hills D	82.91	41	P	P	05 53 26.9	+0.2
BELC	Belle Mtn. Jos	82.96	47	P	P	05 53 28.9	+1.7
	baz=233,SNR=9.4						
ORV	Oroville	83.00	40	P	P	05 53 27.7	+0.6
ORV	Oroville	83.00	40	P	P	05 53 27.7	+0.6
ORV				pmax	pmax		

comp=Z,11nm,1.0s
WDC Whiskeytown Da 83.07 39 P P 05 53 27.8 +0.4
WDC IAmb IAmb 05 53 29.8
comp=Z,22nm,1.1s
WDC Whiskeytown Da 83.07 39 P P 05 53 27.8 +0.4
WDC pmax pmax
comp=Z,22nm,1.1s
CWC Cottonwood Cre 83.09 44 P P 05 53 29.2 +1.3
baz=232
BC3 Big Chuckawall 83.12 48 P P 05 53 29.9 +1.9
baz=234,SNR=7.4
SNAA Sanae 83.18 178 P P 05 53 28.5 +0.8
SNAA Sanae 83.18 178 P P 05 53 28.2 +0.5
SNAA IAmb IAmb 05 53 29.4
comp=Z,26nm,0.9s
SNAA Sanae 83.18 178 P P 05 53 28.2 +0.5
SNAA pmax pmax
comp=Z,26nm,0.9s
GLA Glamis 83.19 49 P P 05 53 28.1 -0.1
GLA IAmb IAmb 05 53 31.2
comp=Z,38nm,1.4s
GLA Glamis 83.19 49 P P 05 53 28.2 -0.1
GLA pmax pmax
comp=Z,38nm,1.4s
GLA Glamis 83.19 49 P P 05 53 30.4 +2.1
baz=234,SNR=5.3
GSC Goldstone, Bar 83.21 46 P P 05 53 28.8 +0.4
GSC IAmb IAmb 05 53 30.8
comp=Z,26nm,1.4s
GSC Goldstone, Bar 83.21 46 P P 05 53 28.8 +0.4
GSC pmax pmax
comp=Z,26nm,1.4s
GSC Goldstone, Bar 83.21 46 P P 05 53 29.9 +1.5
baz=233,SNR=9.6
MPMC Manual Prospec 83.23 45 P P 05 53 30.0 +1.4
baz=232,SNR=8.5
HEC Hector,Ludlow 83.23 46 P P 05 53 30.0 +1.5
baz=233,SNR=8.1
N02D Trinity Center 83.24 38 P P 05 53 30.2 +1.8
baz=228,SNR=9.3
OMMB Old Mammoth Mi 83.25 43 P P 05 53 29.1 +0.2
USA0B Ussuriysk Arra 83.25 326 P P 05 53 28.1 -0.1
USA0B IAmb IAmb 05 53 30.0
comp=Z,20nm,1.1s
USA0B Ussuriysk Arra 83.25 326 P P 05 53 28.1 -0.1
USA0B pmax pmax
comp=Z,20nm,1.1s
USRK Ussuriysk Ar. 83.25 326 P P 05 53 28.0 -0.2
comp=Z,7.3nm,0.5s,baz=162,slow=3.9,SNR=21
USRK Ussuriysk Ar. 83.25 326 P P 05 53 28.3 +0.1
VNA3 Neumayer Olymp 83.30 176 P P 05 53 29.1 +0.8
O03E Paynes Creek 83.31 39 P P 05 53 29.8 +1.1
baz=229,SNR=16
NJ2 Nanjing 83.37 310 eP P 05 53 31.2 +2.1
NJ2 pmax pmax
comp=Z,23nm,0.8s
TIN Tinemaha, Big 83.38 44 P P 05 53 30.8 +1.6
baz=232
M02C Callahan 83.44 38 P P 05 53 31.1 +1.7
baz=228,SNR=9.6
WAKR Walker 83.55 42 P P 05 53 31.0 +0.8
WAKR IAmb IAmb 05 53 32.5
comp=Z,19nm,1.2s
IRM Iron Mountain 83.62 48 P P 05 53 32.2 +1.7
baz=234,SNR=17
HSIG 83.64 54 P P 05 53 31.1 +0.5
HSIG IAmb IAmb 05 53 32.4
comp=Z,10nm,0.8s
GMRC Granite Mounta 83.65 47 P P 05 53 32.1 +1.4
baz=233,SNR=5.5
TYV Tymovskoe 83.65 336 eP P 05 53 30.5 +0.4
TYV pmax pmax
comp=Z,47nm,0.9s
TYV pmax pmax
comp=Z,200nm,3.1s
VNA2 Neumayer--Watz 83.74 177 P P 05 53 31.7 +1.2
baz=195,slow=3.8
YBH Yreka Blue Hor 83.75 38 P P 05 53 31.7 +0.7
YBH IAmb IAmb 05 53 33.3
comp=Z,18nm,1.0s
YBH Yreka Blue Hor 83.75 38 P P 05 53 31.7 +0.7
YBH pmax pmax
comp=Z,18nm,1.0s
Y12C Blythe 83.80 48 P P 05 53 32.4 +1.1
Y12C IAmb IAmb 05 53 34.0
comp=Z,20nm,1.2s
Y12C Blythe 83.80 48 P P 05 53 33.1 +1.8
baz=234,SNR=6.1
PNTR Pine Nut 83.82 41 P P 05 53 32.6 +1.1
PNTR IAmb IAmb 05 53 33.7
comp=Z,30nm,0.8s
BEKR Beckworth 83.87 41 P P 05 53 31.9 +0.2
BEKR IAmb IAmb 05 53 33.7
comp=Z,26nm,1.5s
TUQ Turquoise Moun 83.87 46 P P 05 53 33.4 +1.6
baz=233,SNR=9.3
K02D Willamette Mer 83.87 37 P P 05 53 33.1 +1.6
baz=227
FURC Furnace Creek, 83.88 45 P P 05 53 32.9 +1.3
baz=232
GRAC Grapevine Rang 83.89 44 P P 05 53 33.4 +1.7
baz=232,SNR=8.0
SHOC Shoshone, Teco 83.92 46 P P 05 53 33.3 +1.5
baz=233,SNR=6.2
VCNR Virginia City 83.92 41 P P 05 53 32.1 0.0
VCNR IAmb IAmb 05 53 34.1
comp=Z,12nm,0.9s
NVL N'lazarevskaya 83.94 183 eP P 05 53 31.5 +0.1
NVL pmax pmax
comp=Z,13nm,1.0s
214A Organ Pipe Nat 83.94 51 P P 05 53 32.1 -0.1
214A Organ Pipe Nat 83.94 51 P P 05 53 33.7 +1.6
baz=235
VNA1 Neumayer--Stat 83.97 176 P P 05 53 32.8 +1.2
YERR Yerington 83.97 42 P P 05 53 32.8 +0.4
YERR IAmb IAmb 05 53 34.2
comp=Z,13nm,0.8s
J01E Myrtle Point 84.05 36 P P 05 53 34.5 +2.2
baz=227
RYN Ryan 84.18 42 P P 05 53 33.8 +0.5
NVAR Mina Array Bea 84.19 43 P P 05 53 34.4 +1.0
comp=Z,10nm,0.8s,baz=223,slow=8.4,SNR=81
NVAR Mina Array Bea 84.19 43 P P 05 53 33.9 +0.4
HUMO Hull Mountain 84.20 37 P P 05 53 34.0 +0.9
HUMO IAmb IAmb 05 53 35.8
comp=Z,25nm,1.4s
M04C Macdoel 84.27 38 P P 05 53 35.0 +1.3
baz=229,SNR=7.8
IPM Ipoh 84.28 278 P P 05 53 34.5 +0.3
IPM IAmb IAmb 05 53 36.3
comp=Z,21nm,1.0s
IPM Ipoh 84.28 278 P P 05 53 31.0 -3.3
NV11 Mina Array Sit 84.28 43 P P 05 53 34.3 +0.5
NV11 IAmb IAmb 05 53 35.8
comp=Z,18nm,1.1s
L04D Klamath Falls 84.30 38 P P 05 53 35.1 +1.3
baz=228,SNR=8.9
PAHR Pah Rah Range 84.34 41 P P 05 53 34.7 +0.6
PAHR IAmb IAmb 05 53 36.0
comp=Z,21nm,1.1s
PDMCI Parker Dam,Lak 84.38 48 P P 05 53 36.2 +2.0
baz=234,SNR=5.1
TPNV Topopah Spring 84.57 45 P P 05 53 36.2 +0.9
TPNV Topopah Spring 84.57 45 P P 05 53 36.2 +0.9
TPNV pmax pmax
comp=Z,11nm,0.9s
TPNV Topopah Spring 84.57 45 P P 05 53 36.6 +1.3
baz=233,SNR=18
KVN Kaiserville 84.70 42 P P 05 53 36.4 +0.4
KVN IAmb IAmb 05 53 37.7
comp=Z,14nm,0.9s
KVN Kaiserville 84.70 42 P P 05 53 36.4 +0.4
KVN pmax pmax
comp=Z,14nm,0.9s
I03D Drain, OR 84.72 36 P P 05 53 37.1 +1.5
baz=227
OHAK Old Harbor 84.72 13 P P 05 53 35.9 +0.5
OHAK IAmb IAmb 05 53 36.3
comp=Z,33nm,1.0s
MDJ Mudanjiang 84.77 325 P P 05 53 36.9 +1.0
MDJ S S 06 03 56.1 +5.8
MDJ SS SS 06 09 24.7 -2.0
MDJ pmax pmax
comp=Z,18nm,1.0s
MDJ pmax pmax
comp=Z,140nm,3.6s
MDJ LR LR
comp=Z,290nm,7.0s
MDJ LR LR
comp=Z,280nm,6.3s
MDJ LR LR
comp=Z,220nm,6.4s
MDJ Mudanjiang 84.77 325 P P 05 53 36.0 0.0
MDJ IAmb IAmb 05 53 40.2
comp=Z,16nm,0.8s
Y14A Wickenburg 84.94 49 P P 05 53 37.9 +0.8
Y14A IAmb IAmb 05 53 39.7
comp=Z,18nm,1.2s
KULM Kulim 84.97 278 P P 05 53 35.0 -2.7
SHPR Sheep Range 85.00 46 P P 05 53 38.3 +0.8
W13A Hualapai Mount 85.02 47 P P 05 53 37.0 -0.7
W13A IAmb IAmb 05 53 40.2
comp=Z,20nm,1.4s
J04D Umpqua Nationa 85.08 37 P P 05 53 39.2 +1.4
baz=228,SNR=5.4
UBPT Khong Chiam 85.21 289 P P 05 53 38.9 +0.1
MOD Modoc Plateau 85.22 39 P P 05 53 38.9 +0.5
MOD IAmb IAmb 05 53 40.3
comp=Z,15nm,0.9s
I04A Tendick Farm, 85.29 37 P P 05 53 39.5 +0.9
baz=228
KDAK Kodiak Island 85.39 13 P P 05 53 38.4 -0.2
comp=Z,16nm,1.1s,baz=208,slow=4.3,SNR=7.1
KDAK Kodiak Island 85.39 13 P P 05 53 38.9 +0.3
KDAK IAmb IAmb 05 53 42.8
comp=Z,31nm,1.2s
KDAK Kodiak Island 85.39 13 P P 05 53 38.9 +0.3
KDAK pmax pmax
comp=Z,31nm,1.2s
TUC Tucson 85.56 51 P P 05 53 41.0 +0.7
TUC IAmb IAmb 05 53 43.3
comp=Z,20nm,1.1s
TUC Tucson 85.56 51 P P 05 53 41.0 +0.7
TUC pmax pmax
comp=Z,20nm,1.1s
TUC Tucson 85.56 51 P P 05 53 42.5 +2.2
baz=236
PLCA Paso Flores 85.58 133 P P 05 53 41.9 +1.5
comp=Z,3.3nm,0.9s,baz=284,slow=6.1,SNR=5.5
PLCA LR LR 06 27 35.0
comp=Z,64nm,18.8s,baz=54,slow=32
PLCA Paso Flores 85.58 133 IAmb IAmb 05 53 43.3
comp=Z,9.8nm,1.2s
J05D Fort Rock, OR 85.59 37 P P 05 53 41.7 +1.4
baz=229,SNR=15
H04D Lebanon 85.60 36 P P 05 53 41.4 +1.4
baz=228
WHN Wuhan 85.73 307 ⇑P P 05 53 43.2 +2.2
WHN pmax pmax
comp=Z,46nm,0.8s
G03D McMinnville, O 85.79 35 P P 05 53 42.3 +1.3
baz=227
R11A Troy Canyon, C 85.83 44 P P 05 53 42.2 +0.6
R11A Troy Canyon, C 85.83 44 P P 05 53 42.3 +0.8
baz=233,SNR=5.8
H04A Detroit Lake 86.00 36 P P 05 53 42.5 +0.4
GRNR Gornyy 86.03 333 ⇓iP P 05 53 42.8 +0.8
GRNR eS S 06 04 04.2 +1.8
GRNR pmax pmax
comp=Z,40nm,0.9s
GRNR smax smax
comp=E,3.0nm,0.9s
GRNR MLR MLR
comp=Z,150nm,15.0s
PINE Pine Mountain 86.09 37 P P 05 53 44.3 +1.6
PINE IAmb IAmb 05 53 45.2
comp=Z,20nm,1.2s
319A Douglas 86.13 53 P P 05 53 45.5 +2.3
319A IAmb IAmb 05 53 46.1
comp=Z,25nm,1.1s
I05D Terrebonne, OR 86.23 37 P P 05 53 44.4 +1.2
baz=229
X16A Lo Mia Camp, P 86.28 49 P P 05 53 45.3 +1.4
X16A IAmb IAmb 05 53 46.7
comp=Z,12nm,0.8s
WVOR Wild Horse Val 86.51 39 P P 05 53 45.6 +0.8
WVOR Wild Horse Val 86.51 39 P P 05 53 45.6 +0.8
WVOR pmax pmax
comp=Z,13nm,1.3s
F04D Rainier, OR 86.51 35 P P 05 53 46.4 +1.9
baz=228
E03A Lebam 86.55 34 P P 05 53 46.2 +1.6
E03A IAmb IAmb 05 53 46.9
comp=Z,34nm,1.2s
LCMT Little Creek M 86.55 46 P P 05 53 46.3 +1.2
F04A Amboy 86.72 35 P P 05 53 45.5 +0.1
F04A IAmb IAmb 05 53 47.3
comp=Z,39nm,1.5s
CCUT Cedar City 86.78 46 P P 05 53 47.1 +0.8
KNB Kanab 86.82 46 P P 05 53 46.7 +0.2
KNB Kanab 86.82 46 P P 05 53 46.7 +0.2
KNB pmax pmax
comp=Z,17nm,1.3s
U15A North Rim 86.84 47 P P 05 53 46.8 +0.1
U15A IAmb IAmb 05 53 49.3
comp=Z,13nm,0.8s
ZAIG Zacatecas 86.89 63 P P 05 53 48.0 +0.8
TIA Tai'an 86.92 313 P P 05 53 46.9 +0.2
TIA pmax pmax
comp=Z,13nm,0.7s
WUAZ Wupatki 86.94 48 P P 05 53 47.4 +0.4
WUAZ Wupatki 86.94 48 P P 05 53 48.7 +1.7
baz=236
KLR Kul'dur 86.94 329 d iP P 05 53 46.9 +0.4
KLR pmax pmax
comp=Z,31nm,0.9s
SZCU Shurtz Canyon 86.98 46 P P 05 53 47.9 +0.6
PSUT Pine Spring 87.03 45 P P 05 53 47.7 +0.2
E04D Cinebar 87.06 34 P P 05 53 48.6 +1.5
baz=228
I07A Izee 87.07 38 P P 05 53 48.1 +0.7
J08A Circle Bar Ran 87.18 39 P P 05 53 48.1 +0.2
G06A Carlson Farm, 87.20 36 P P 05 53 47.9 0.0
CNPM China Poot 87.27 13 P P 05 53 48.1 +0.3
X18A Snowflake 87.37 50 P P 05 53 50.3 +1.2
X18A IAmb IAmb 05 53 51.7
comp=Z,11nm,0.8s
PKCU Pink Cliffs 87.40 46 P P 05 53 51.1 +1.7
D03D Eldon 87.45 33 P P 05 53 51.0 +2.0
baz=227
ELK Elko 87.48 42 P P 05 53 49.1 -0.5
ELK Elko 87.48 42 P P 05 53 49.1 -0.5
ELK pmax pmax
comp=Z,10.0nm,1.4s
BRLK Bradley Lake 87.56 13 P P 05 53 49.5 +0.2
LON Longmire 87.58 35 P P 05 53 49.4 -0.3
LON Longmire 87.58 35 P P 05 53 49.4 -0.3
LON pmax pmax
comp=Z,7.0nm,1.1s
TLIG Tlapa 87.76 70 P P 05 53 51.3 0.0
TLIG IAmb IAmb 05 53 53.5
comp=Z,8.7nm,0.9s
D05A Enumclaw 87.78 34 P P 05 53 51.2 +0.7
121A Cookes Peak, D 87.82 52 P P 05 53 52.0 +0.6
121A IAmb IAmb 05 53 54.4
comp=Z,22nm,1.5s
121A Cookes Peak, D 87.82 52 P P 05 53 53.2 +1.9
baz=238
MTPU Mount Pierson 87.83 46 P P 05 53 52.6 +1.1
RSO Redoubt South 87.84 12 P P 05 53 50.0 -0.8
SVW2 Sparrevohn 87.94 10 P P 05 53 51.0 0.0
SVW2 IAmb IAmb 05 53 51.4
comp=Z,8.2nm,0.8s
F07A Phinny Hill Vi 88.00 36 P P 05 53 52.8 +1.2
F07A IAmb IAmb 05 53 53.7
comp=Z,9.9nm,1.0s
PGC Sidney 88.03 32 P P 05 53 50.6 -1.1
PGC IAmb IAmb 05 53 53.8
comp=Z,21nm,1.1s
MSU Marysvale 88.10 45 P P 05 53 54.1 +1.5
MSU Marysvale 88.10 45 P P 05 53 54.1 +1.5
G08A Pilot Rock 88.14 37 P P 05 53 53.2 +0.7
G08A IAmb IAmb 05 53 54.4
comp=Z,24nm,1.2s
SEW Seward 88.17 14 P P 05 53 51.7 -0.3
SEW IAmb IAmb 05 53 56.4
comp=Z,15nm,0.9s
BBB Bella Bella 88.41 28 P P 05 53 54.0 +0.6
BBB IAmb IAmb 05 53 55.1
comp=Z,14nm,1.1s
B05A Bryant 88.44 33 P P 05 53 54.8 +1.2
baz=228
E07A Sunnyside 88.47 36 P P 05 53 54.4 +0.5
LTY Liberty 88.50 35 P P 05 53 54.5 +0.5
LTY IAmb IAmb 05 53 55.7
comp=Z,16nm,1.1s
HAWA Hanford 88.53 36 P P 05 53 54.4 +0.3
HAWA IAmb IAmb 05 53 56.3
comp=Z,28nm,1.2s
MA2 Magadan 88.57 344 P P 05 53 53.8 -0.1
comp=Z,42nm,0.8s,baz=145,slow=4.7,SNR=63
MA2 Magadan 88.57 344 P P 05 53 53.6 -0.3
MA2 Magadan 88.57 344 deP P 05 53 53.6 -0.3
MA2 pmax pmax
comp=Z,68nm,0.9s
DUG Dugway, Tooele 88.66 44 P P 05 53 54.8 -0.2
DUG Dugway, Tooele 88.66 44 P P 05 53 54.8 -0.2
DUG pmax pmax
comp=Z,3.0nm,1.0s
DUG Dugway, Tooele 88.66 44 P P 05 53 55.7 +0.7
baz=235
MFID Camas Ranch 88.73 40 P P 05 53 54.6 -0.7
BMO Blue Mountains 88.77 38 P P 05 53 55.6 +0.2
BMO Blue Mountains 88.77 38 P P 05 53 55.6 +0.2
BMO pmax pmax
comp=Z,4.0nm,1.0s
C06D Leavenworth 88.82 34 P P 05 53 56.3 +0.9
baz=229
E08A Dider Farm, El 88.85 36 P P 05 53 56.4 +0.8
E08A IAmb IAmb 05 53 57.6
comp=Z,19nm,1.2s
B06A Marblemount 88.91 33 P P 05 53 56.3 +0.5
B06A IAmb IAmb 05 53 57.4
comp=Z,23nm,1.1s
GAMB Gambell 88.93 3 P P 05 53 56.3 +0.8
GAMB IAmb IAmb 05 53 58.8
comp=Z,12nm,0.8s
BGU Big Grassy Mou 88.94 43 P P 05 53 56.4 0.0
Q16A Castle Valley 88.97 46 P P 05 53 57.6 +0.9
NLU North Lily Min 88.98 44 P P 05 53 56.8 +0.1
RC01 Rabbit Creek A 89.01 13 P P 05 53 56.7 +0.7
MNTX Cornudas Mount 89.13 54 P P 05 53 57.9 +0.6
MNTX Cornudas Mount 89.13 54 P P 05 53 58.6 +1.2
baz=240
SUA Susitna One 89.15 12 P P 05 53 56.0 -0.8
TMUT Trail Mountain 89.16 45 P P 05 53 58.7 +1.1
ENH Enshi 89.18 304 P P 05 53 57.6 0.0
TX31 Lajitas Ar. Si 89.23 57 P P 05 53 58.5 +0.6
TX32 Lajitas Array 89.23 57 P P 05 53 59.0 +1.0
TXAR Lajitas Array 89.23 57 P P 05 53 58.7 +0.8
comp=Z,2.8nm,0.8s,baz=213,slow=7.3,SNR=23
TXAR Lajitas Array 89.23 57 P P 05 53 58.4 +0.5
D08A Wollman Farm, 89.28 36 P P 05 53 58.6 +1.0
SLVN Son La 89.32 294 P P 05 53 58.6 +0.1
E09A Wood Farm, Sta 89.35 36 P P 05 53 58.5 +0.6
GLI Glacier Island 89.38 14 P P 05 53 58.0 +0.2
EYAK Cordova Ski Ar 89.40 15 P P 05 53 58.2 +0.4
FID Port Fidalgo 89.41 15 P P 05 53 57.3 -0.6
SKT Skwentna 89.47 12 P P 05 53 56.3 -1.9
SKT IAmb IAmb 05 53 58.3
comp=Z,16nm,1.1s
SRU San Rafael Swe 89.50 46 P P 05 53 59.6 +0.5
SRU San Rafael Swe 89.50 46 P P 05 53 59.6 +0.5
SRU pmax pmax
comp=Z,10.0nm,0.8s
F10A Beach Ranch, E 89.51 37 P P 05 53 58.9 0.0
SPUT South Promonto 89.52 43 P P 05 53 59.4 +0.3
KNK Knik Glacier 89.57 13 P P 05 53 58.7 +0.1
PMR Palmer 89.59 13 P P 05 53 58.6 0.0
PMR Palmer 89.59 13 P P 05 53 58.6 0.0
PMR pmax pmax
comp=Z,44nm,1.5s
HVU Hansel Valley 89.59 43 P P 05 54 00.4 +1.0
HVU Hansel Valley 89.59 43 P P 05 54 00.4 +1.0
HVU pmax pmax
comp=Z,28nm,1.5s
CTU Camp Tracy 89.60 44 P P 05 54 00.2 +0.7
BJT Baijiatuau 89.68 315 P P 05 53 59.9 +0.3
BJT IAmb IAmb 05 54 03.0
comp=Z,10nm,0.9s
BJT Baijiatuau 89.68 315 P P 05 53 59.9 +0.3
BJT pmax pmax
comp=Z,10.0nm,0.9s
BJI Beijing 89.69 315 P P 05 54 00.0 +0.3
BJI pmax pmax
comp=Z,12nm,0.9s
JLU Jordanelle 89.74 44 P P 05 54 00.9 +0.6
GHO Glory Hole Cre 89.80 13 P P 05 54 00.0 +0.2
MVCO Mesa Verde 89.81 48 P P 05 54 02.3 +1.7
baz=238
B08A Colville Reser 89.90 34 P P 05 54 00.6 +0.1
B08A IAmb IAmb 05 54 01.8
comp=Z,13nm,0.9s
WRAK Wrangell Islan 89.93 23 P P 05 54 01.2 +0.8
WRAK IAmb IAmb 05 54 02.7
comp=Z,15nm,0.8s
ANMO Albuquerque 90.02 51 P P 05 54 02.3 +0.6
ANMO Albuquerque 90.02 51 deP P 05 54 02.7 +1.1
ANMO pmax pmax
comp=Z,10.0nm,1.2s
ANMO Albuquerque 90.02 51 P P 05 54 02.7 +1.1
baz=239
WAX Waxell Ridge 90.02 16 P P 05 54 01.5 +0.7
TCUT Toone Canyon 90.06 44 P P 05 54 02.6 +0.9
C09A Chrisman Ranch 90.09 35 P P 05 54 01.6 +0.2
C09A IAmb IAmb 05 54 03.1
comp=Z,15nm,0.8s
ANM Nome 90.10 5 P P 05 54 01.1 +0.1
ANM Nome 90.10 5 P P 05 54 01.1 +0.1
ANM pmax pmax
comp=Z,5.0nm,0.8s
LLLB Lillooet 90.11 32 P P 05 54 01.0 -0.5
LLLB IAmb IAmb 05 54 03.2
comp=Z,14nm,1.0s
PPLA Purkeypile 90.20 11 P P 05 54 00.8 -0.9
PPLA IAmb IAmb 05 54 03.2
comp=Z,16nm,1.2s
CRQM Cirque 90.21 16 P P 05 54 02.0 +0.1
TGL Tana Glacier 90.29 16 P P 05 54 02.3 +0.2
PCA Pinnacle 90.41 18 P P 05 54 03.0 +0.3
PCA IAmb IAmb 05 54 03.8
comp=Z,9.6nm,0.9s
VRDI Verde Repeater 90.54 16 P P 05 54 03.8 +0.4
VRDI IAmb IAmb 05 54 05.1
comp=Z,23nm,1.2s
GLB Gilahina Butte 90.64 15 P P 05 54 03.5 -0.2
GLB IAmb IAmb 05 54 05.3
comp=Z,19nm,1.1s
BALM Baldy 90.65 16 P P 05 54 03.8 0.0
CMIG Matias Romero 90.69 72 P P 05 54 05.7 +0.8
comp=Z,2.5nm,0.9s,baz=257,slow=8.6,SNR=5.1
MCARA McCarthy VSAT 90.78 16 P P 05 54 05.2 +1.0
BARN Barnard Glacie 90.85 17 P P 05 54 05.1 +0.3
CTGM Chitina Glacie 90.85 17 P P 05 54 04.5 -0.3
CTGM IAmb IAmb 05 54 06.4
comp=Z,13nm,0.9s
NEW Newport 90.98 35 P P 05 54 04.9 -0.7
NEW Newport 90.98 35 P P 05 54 04.9 -0.7
NEW pmax pmax
comp=Z,6.0nm,1.0s
NEW Newport 90.98 35 P P 05 54 05.9 +0.4
baz=232
KTH Kantishna Hill 91.03 12 P P 05 54 04.8 -0.6
KTH IAmb IAmb 05 54 08.7
comp=Z,17nm,1.0s
TRF Thorofare Moun 91.06 12 P P 05 54 05.4 -0.3
AHID Auburn Hatcher 91.17 42 P P 05 54 06.8 0.0
AHID IAmb IAmb 05 54 08.8
comp=Z,12nm,0.9s
SEY Seymchan 91.19 347 iP P 05 54 06.6 +0.5
S22A 4UR Ranch, Cre 91.22 48 P P 05 54 08.3 +1.1
S22A IAmb IAmb 05 54 09.4
comp=Z,8.4nm,1.0s
S22A 4UR Ranch, Cre 91.22 48 P P 05 54 08.3 +1.1
baz=239
DHY Denali Highway 91.29 13 P P 05 54 07.1 +0.4
DHY IAmb IAmb 05 54 08.0
comp=Z,26nm,1.5s
RND Reindeer 91.29 12 P P 05 54 06.2 -0.5
RND Reindeer 91.29 12 P P 05 54 06.2 -0.5
RND pmax pmax
comp=Z,39nm,1.2s
MCMT McKenzie Canyo 91.30 40 P P 05 54 08.4 +1.0
SKAG Skagway 91.33 20 P P 05 54 07.9 +1.2
SKAG IAmb IAmb 05 54 09.4

comp=Z,16nm,1.4s
XAN Xi'an 91.47 307 P P 05 54 08.6 +0.4
XAN pmax pmax
comp=Z,29nm,0.7s
XAN pmax pmax
comp=Z,140nm,5.9s
XAN Xi'an 91.47 307 P P 05 54 08.2 0.0
XAN Xi'an 91.47 307 P P 05 54 08.2 0.0
XAN pmax pmax
comp=Z,23nm,0.8s
O20A White River Ci 91.54 46 P P 05 54 09.0 +0.4
baz=238
MCK McKinley 91.57 12 P P 05 54 08.0 +0.1
MCK IAmb IAmb 05 54 12.5
comp=Z,12nm,1.0s
MCK McKinley 91.57 12 P P 05 54 08.0 +0.1
MCK pmax pmax
comp=Z,12nm,1.0s
PAX Paxson 91.60 14 P P 05 54 08.0 -0.1
PAX Paxson 91.60 14 P P 05 54 08.0 -0.1
PAX pmax pmax
comp=Z,5.0nm,1.0s
REDW Red Top Meadow 91.66 42 P P 05 54 09.1 0.0
REDW IAmb IAmb 05 54 11.0
comp=Z,18nm,1.1s
TPAW Teton Pass 91.67 42 P P 05 54 09.0 -0.2
TPAW IAmb IAmb 05 54 10.2
comp=Z,18nm,1.4s
FXWY Fox Creek 91.70 42 P P 05 54 08.7 -0.6
FXWY IAmb IAmb 05 54 11.4
comp=Z,7.7nm,1.1s
DLMT Dillon 91.75 40 P P 05 54 09.9 +0.5
DLMT IAmb IAmb 05 54 11.3
comp=Z,12nm,1.1s
SNOW Snow King Moun 91.77 42 P P 05 54 10.3 +0.6
SNOW IAmb IAmb 05 54 11.6
comp=Z,15nm,0.9s
MSO Missoula 91.84 38 P P 05 54 08.2 -1.5
MSO Missoula 91.84 38 P P 05 54 09.4 -0.3
baz=234
SMCO Snowmass 91.86 47 P P 05 54 10.7 +0.3
SMCO IAmb IAmb 05 54 12.1
comp=Z,7.4nm,1.0s
BWN Browne 91.87 12 P P 05 54 08.4 -0.8
IMW Indian Meadow 91.90 42 P P 05 54 10.5 +0.2
IMW IAmb IAmb 05 54 12.3
comp=Z,13nm,1.1s
MENT Mentasta 91.96 15 P P 05 54 10.0 +0.3
MENT IAmb IAmb 05 54 10.9
comp=Z,7.6nm,0.6s
KMI Kunming 92.00 297 P P 05 54 11.0 -0.1
KMI IAmb IAmb 05 54 14.5
comp=Z,7.6nm,0.8s
KMI Kunming 92.00 297 P P 05 54 11.0 -0.1
KMI pmax pmax
comp=Z,8.0nm,0.8s
ZEA Zeya 92.09 331 eP P 05 54 10.2 -0.3
ZEA pmax pmax
comp=N,33nm,0.9s
ZEA pmax pmax
comp=Z,49nm,0.9s
SDCO Great Sand Dun 92.12 49 P P 05 54 11.8 +0.5
SDCO Great Sand Dun 92.12 49 P P 05 54 11.9 +0.5
baz=240
PD31 Pinedale Array 92.12 43 P P 05 54 11.2 -0.1
PD31 IAmb IAmb 05 54 12.4
comp=Z,7.1nm,0.8s
PDAR Pinedale Array 92.12 43 P P 05 54 11.3 +0.1
comp=Z,8.9nm,0.9s,baz=206,slow=3.2,SNR=54
PDAR Pinedale Array 92.12 43 P P 05 54 11.2 -0.1
QLMT Earthquake Lak 92.13 41 P P 05 54 12.9 +1.7
FLWY Flagg Ranch 92.15 41 P P 05 54 11.9 +0.6
FLWY IAmb IAmb 05 54 13.6
comp=Z,14nm,0.8s
MSTX Muleshoe 92.16 53 P P 05 54 11.3 -0.2
MSTX IAmb IAmb 05 54 14.1
comp=Z,11nm,1.0s
MSTX Muleshoe 92.16 53 P P 05 54 12.1 +0.6
baz=241
YPP Pitchstone Pla 92.19 41 P P 05 54 12.6 +1.0
CMAR Chiang Mai Arr 92.21 289 P P 05 54 13.3 +1.3
comp=Z,11nm,0.9s,baz=132,slow=2.9,SNR=4.9
YHB Horse Butte 92.23 41 P P 05 54 12.8 +1.1
YHL Hebgen Lake 92.29 41 P P 05 54 13.3 +1.3
YMR Madison River 92.32 41 P P 05 54 13.3 +1.2
CHTO Chiang Mai 92.37 290 P P 05 54 13.2 +0.6
CHTO Chiang Mai 92.37 290 P P 05 54 13.2 +0.6
CHTO pmax pmax
comp=Z,18nm,0.9s
H17A Grant Village 92.39 41 P P 05 54 14.7 +2.2
H17A IAmb IAmb 05 54 15.5
comp=Z,8.1nm,0.8s
H17A Grant Village 92.39 41 P P 05 54 14.8 +2.3
baz=236
WRH Wood River Hil 92.40 12 P P 05 54 11.7 +0.1
RIDG Independent Ri 92.41 14 P P 05 54 12.2 +0.4
RIDG IAmb IAmb 05 54 13.1
comp=Z,11nm,1.0s
MLY Manley 92.42 11 P P 05 54 11.0 -0.9
YHH Holmes Hill 92.45 41 P P 05 54 14.1 +1.3
DOT Dot Lake 92.50 14 P P 05 54 12.3 +0.1
DOT IAmb IAmb 05 54 13.5
comp=Z,9.3nm,0.8s
BCAR Beaver Creek A 92.53 15 P P 05 54 12.5 +0.1
T25A Trinidad 92.56 50 P P 05 54 13.9 +0.5
HDA Harding Lake 92.56 13 P P 05 54 11.5 -0.9
HDA IAmb IAmb 05 54 13.2
comp=Z,7.1nm,0.7s
HDA Harding Lake 92.56 13 P P 05 54 12.3 -0.2
baz=207
LKWY Lake 92.59 41 P P 05 54 10.6 -2.8
LKWY IAmb IAmb 05 54 16.6
comp=Z,8.6nm,0.9s
LKWY Lake 92.59 41 P P 05 54 10.6 -2.8
LKWY pmax pmax
comp=Z,9.0nm,0.9s
CCB Clear Creek Bu 92.61 12 P P 05 54 12.1 -0.5
CCB IAmb IAmb 05 54 13.8
comp=Z,19nm,1.3s
TCOL CIGO, UAF Yank 92.80 12 P P 05 54 13.2 -0.2
baz=207
COLA College 92.81 12 P P 05 54 13.0 -0.5
COLA IAmb IAmb 05 54 18.1
comp=Z,13nm,0.8s
COLA College 92.81 12 P P 05 54 13.0 -0.5
COLA pmax pmax
comp=Z,13nm,0.9s
SCRK Sand Creek 92.81 14 P P 05 54 13.5 -0.3
SCRK IAmb IAmb 05 54 16.3
comp=Z,6.1nm,1.0s
IMAR Indian Mountai 92.82 9 P P 05 54 13.5 -0.1
IL31 92.90 13 P P 05 54 13.6 -0.3
IL31 IAmb IAmb 05 54 15.9
comp=Z,12nm,1.4s
ILAR Eielson Array 92.90 13 P P 05 54 13.4 -0.5
comp=Z,3.4nm,0.6s,baz=215,slow=5.0,SNR=26
ILAR PP PP 05 57 55.4 -3.7
comp=Z,2.8nm,1.1s,baz=223,slow=7.5,SNR=4.8
ILAR Eielson Array 92.90 13 P P 05 54 13.3 -0.6
YNE Yellowstone No 93.07 41 P P 05 54 16.7 +1.1
ISCO Idaho Springs 93.09 47 P P 05 54 16.6 +0.7
baz=240
HHC Hu-ho-hao-te 93.09 314 eP P 05 54 16.6 +1.0
HHC pmax pmax
comp=Z,9.0nm,1.3s
HHC pmax pmax
comp=Z,46nm,7.0s
N23A Red Feather La 93.43 46 P P 05 54 18.4 +1.0
baz=239
RLMT Red Lodge 93.57 41 P P 05 54 18.0 +0.2
RLMT Red Lodge 93.57 41 P P 05 54 19.2 +1.3
baz=237
RDOG Red Dog Mine 93.74 5 P P 05 54 17.9 +0.2
RDOG IAmb IAmb 05 54 19.2
comp=Z,12nm,0.9s
CD2 Chengdu 93.82 302⇑iP P 05 54 20.0 +0.9
CD2 pmax pmax
comp=Z,20nm,1.1s
PRP Porcupine Dome 93.83 13 P P 05 54 18.3 -0.1
PRP IAmb IAmb 05 54 19.4
comp=Z,11nm,1.2s
ABTX Abilene, Hawle 93.83 56 P P 05 54 18.8 -0.4
ABTX IAmb IAmb 05 54 20.5
comp=Z,10nm,1.0s
ABTX Abilene, Hawle 93.83 56 P P 05 54 19.7 +0.6

baz=242
BILL Bilibino 93.88 354 P P 05 54 18.6 +0.2
BILL Bilibino 93.88 354d iP P 05 54 18.7 +0.3
BILL pmax pmax
comp=Z,18nm,0.8s
K22A Casper 93.95 44 P P 05 54 20.3 +0.7
baz=239
EGAK Eagle 94.13 15 P P 05 54 19.9 +0.2
EGAK IAmb IAmb 05 54 21.0
comp=Z,5.1nm,0.9s
BMAR Burnt Mountain 95.69 12 P P 05 54 27.2 +0.4
TOLK Toolik Lake Re 95.91 10 P P 05 54 28.3 +0.6
baz=205
LAO LASA Array 96.20 41 P P 05 54 31.0 +1.3
baz=240
RSSD Black Hills 96.26 44 P P 05 54 29.5 -0.6
RSSD IAmb IAmb 05 54 31.3
comp=Z,7.2nm,0.9s
RSSD Black Hills 96.26 44 P P 05 54 29.5 -0.6
RSSD pmax pmax
comp=Z,7.0nm,1.0s
RSSD Black Hills 96.26 44 P P 05 54 30.5 +0.4
baz=241
EPYK Eagle Plains 96.49 15 P P 05 54 30.7 +0.3
baz=216
YAK Yakutsk 96.78 338 P P 05 54 30.7 -1.0
YAK Yakutsk 96.78 338 eP P 05 54 31.1 -0.6
YAK pmax pmax
comp=Z,45nm,0.7s
YAK pmax pmax
comp=N,7.0nm,0.9s
YAK pmax pmax
comp=E,5.0nm,0.9s
INK Inuvik 98.79 15 P P 05 54 40.1 -0.4
comp=E,0.8nm,0.6s,baz=240,slow=3.5,SNR=7.5
INK PP PP 05 58 44.8 +0.4
comp=E,3.1nm,1.1s,baz=202,slow=7.0,SNR=5.5
INK Inuvik 98.79 15 P Pdif 05 54 40.7 +0.1
INK IAmb IAmb 05 54 51.7
comp=Z,6.8nm,1.4s
INK Inuvik 98.79 15 P Pdif 05 54 40.7 +0.1
INK pmax pmax
comp=Z,7.0nm,1.5s
SONM Songino Array 99.72 318 P Pdif 05 54 46.9 +1.4
comp=Z,0.8nm,0.5s,baz=128,slow=3.3,SNR=6.1
GTA Gaotai 100.42 309 eP Pdif 05 54 51.3 +2.5
GTA pmax pmax
comp=Z,3.0nm,1.1s
YKA Yellowknife Ar 100.67 25 P Pdif 05 54 49.1 0.0
comp=Z,0.9nm,0.8s,baz=237,slow=4.6,SNR=16
YKA PP PP 05 58 56.0 -2.8
comp=Z,0.5nm,0.8s,baz=239,slow=7.2,SNR=4.1
TLY Talaya 103.00 321 iP Pdif 05 54 59.9 +0.1
TLY pmax pmax
comp=Z,1.0nm,0.9s
TIXI Tiksi 103.54 345 iP Pdif 05 55 00.9 -0.8
TIXI pmax pmax
comp=Z,2.0nm,1.0s
WMQ Urumqi 110.45 310 ePKP PKiKP 05 59 33.6 +0.5
WMQ LR LR
comp=Z,660nm,29.2s
WMQ LR LR
comp=Z,1µm,28.8s
WMQ LR LR
comp=Z,63nm,29.2s
ZALV Zalesovo Beam 114.55 320 PKiKP PKPdf 05 59 39.6 -0.9
comp=Z,3.2nm,0.6s,baz=171,slow=1.2,SNR=17
ZALV Zalesovo Beam 114.55 320 PKPdf 05 59 39.3 -1.2
MKAR Makanchi Array 114.85 312 PKP PKPdf 05 59 40.5 -0.8
comp=Z,2.6nm,0.5s,baz=211,slow=1.0,SNR=74
MKAR SKP 06 03 02.9
comp=Z,1.0nm,0.9s,baz=67,slow=3.7,SNR=5.0
MKAR Makanchi Array 114.85 312 PKPdf 05 59 40.4 -1.0
KURK Kurchatov 117.86 316 PKPdf 05 59 46.0 -0.9
KURK Kurchatov 117.86 316c iPKIKP PKPdf 05 59 46.7 -0.2
KURK pmax pmax
comp=Z,6.0nm,1.0s
KSH Kashi 118.02 303 PKP PKiKP 05 59 51.5 +3.6
KSH sPKP 06 00 30.3
KSH PP PP 06 01 12.2 +7.2
KSH AMB AMB
comp=Z,280nm,4.9s
BOSA Boshof 122.09 204 PKP PKiKP 05 59 56.6 +0.3
comp=Z,3.1nm,0.9s,baz=110,slow=4.0,SNR=4.0
KBL Kabul 122.58 296 PKPdf 05 59 56.5 -0.4
KBL Kabul 122.58 296 PKIKP PKPdf 05 59 56.5 -0.4
KK31 Karatay Array 122.60 306 PKPdf 05 59 56.2 -0.1
KK31 Karatay Array 122.60 306 PKIKP PKPdf 05 59 56.3 -0.1
KKAR Karatay Array 122.60 306 PKPdf 05 59 56.0 -0.4
KKAR Karatay Array 122.60 306 PKPdf 05 59 56.1 -0.3
KKAR Karatay Array 122.60 306 PKIKP PKPdf 05 59 56.1 -0.3
NOR Nord 123.14 3 iP PKPdf 05 59 55.2 -1.1
NOR Nord 123.14 3 iPKIKP PKPdf 05 59 55.2 -1.1
KBS Kingsbay 126.17 358 ePKPdf PKiKP 06 00 02.5 -0.1
DAG Danmarks Havn 127.48 6 iP PKPdf 06 00 03.7 -1.0
DAG Danmarks Havn 127.48 6 iPKIKP PKPdf 06 00 03.7 -1.0
ARU Arti 129.43 323 PKPdf 06 00 08.9 -0.1
ARU Arti 129.43 323 iPKIKP PKPdf 06 00 09.2 +0.2
ARU 06 02 21.5
ARU SS SS 06 19 23.0 -6.6
ABKAR Akbulak array 129.88 314 PKPdf 06 00 08.7 -1.4
ABKAR Akbulak array 129.88 314 PKPdf PKPdf 06 00 09.9 -0.2
GEYT Alibeck 131.71 299 PKhKP PKPpre 06 00 04.7
comp=Z,1.0nm,0.7s,baz=224,slow=4.1,SNR=4.7
GEYT PKP PKPdf 06 00 14.2 +0.3
comp=Z,4.4nm,0.8s,baz=72,slow=0.5,SNR=12
GEYT SKPbc SKPab 06 03 27.6 +1.9
comp=Z,9.2nm,1.1s,baz=207,slow=1.7,SNR=16
GEYT Alibeck 131.71 299 PKPdf 06 00 13.9 0.0
HAMF Hammerfest 133.06 351 ePKPdf PKPdf 06 00 14.8 -0.7
PRGR Permogore 133.61 333 ePKIKP PKPdf 06 00 15.5 -1.2
PRGR pmax pmax
comp=Z,6.0nm,0.6s
ARCES ARCESS Array B 133.75 349 PKhKP PKPpre 06 00 06.2
comp=Z,2.6nm,0.8s,baz=3.9,slow=5.3,SNR=3.6
ARCES PKP PKPdf 06 00 16.8 0.0
comp=Z,9.4nm,0.5s,baz=0.5,slow=0.8,SNR=33
ARCES ARCESS Array B 133.75 349 PKPdf 06 00 16.7 -0.1
ARE0 ARCESS Array S 133.75 349 ePKPdf PKPdf 06 00 16.8 0.0
KTK1 Kautokeino 134.60 350 ePKPdf PKPdf 06 00 18.0 -0.4
TRO Tromso 134.65 352 ePKPdf PKPdf 06 00 18.7 +0.3
KLMR Klimovskoe 136.49 335 ePKIKP PKPdf 06 00 17.1 -5.0
KLMR AMP 06 00 23.8
comp=Z,23nm,1.2s
KLMR Klimovskoe 136.49 335 ePKIKP PKPdf 06 00 17.0 -5.0
KLMR pmax pmax
comp=Z,23nm,1.2s
KMBO Kilima Mbogo 137.36 237 PKP PKPdf 06 00 25.6 0.0
comp=Z,1.4nm,0.2s,baz=277,slow=2.3,SNR=4.6
KMBO SKPbc SKiKP 06 03 46.7 -1.9
comp=Z,2.6nm,0.9s,baz=67,slow=4.8,SNR=4.6
KMBO Kilima Mbogo 137.36 237 PKPdf 06 00 24.5 -1.0
KMBO Kilima Mbogo 137.36 237c iPKIKP PKiKP 06 00 28.7 +1.2
KMBO pmax pmax
comp=Z,1.0nm,0.2s
FINES FINESS Array B 140.54 342 PKhKP PKPpre 06 00 21.5
comp=Z,4.4nm,0.5s,baz=49,slow=3.8,SNR=38
VRH Novokhopyorsk 140.56 321 ePKIKP PKPdf 06 00 26.7 -3.2
VRH pmax pmax
comp=Z,10.0nm,0.6s
OBN Obninsk 141.21 329 iPKIKP PKPdf 06 00 30.5 -0.4
OBN pmax pmax
comp=Z,6.0nm,0.7s
VSR Storozhevoye 141.99 322 ePKHKP PKPpre 06 00 28.1
VSR pmax pmax
comp=Z,10.0nm,1.2s
VORD Divnogorie 142.04 322 ePKIKP PKPdf 06 00 29.3 -3.2
VORD pmax pmax
comp=Z,10.0nm,0.9s
KBZ Khabaz 142.50 310 PKhKP PKPpre 06 00 28.8
comp=Z,3.1nm,0.8s,baz=104,slow=4.4,SNR=5.7
KBZ PKP PKiKP 06 00 36.1 -0.6
comp=Z,2.2nm,0.7s,baz=35,slow=12,SNR=4.8
KIV Kislovodsk 142.58 310 ePKIKP PKPdf 06 00 31.6 -2.3
KIV pmax pmax
comp=Z,19nm,1.0s
AKH Akhalkalaki 142.63 306 ⇓P PKPdf 06 00 31.8 -2.4
AKH Akhalkalaki 142.63 306 PKPdf 06 00 31.8 -2.4
AKH Akhalkalaki 142.63 306 PKIKP PKPdf 06 00 31.8 -2.4
VSU Vasula 142.76 339 eP PKPdf 06 00 29.5 -4.1
VSU Vasula 142.76 339c iPKIKP PKPdf 06 00 30.5 -3.0
VSU pmax pmax
comp=Z,148nm,2.5s
DOMB Dombas 143.05 355 ePKPdf PKPdf 06 00 33.1 -0.9
AKN Aaknes 143.05 357 ePKPdf PKPdf 06 00 33.5 -0.5

FOO Floro 143.72 358 ePKPdf PKPbc 06 00 33.1 0.0
NB2 NORSAR Subarra 143.83 353 PKP PKPab 06 00 32.9 0.0
comp=Z,11nm,0.6s,baz=12,slow=3.4
NB2 NORSAR Subarra 143.83 353 PKPab PKPab 06 00 32.9 0.0
baz=12,slow=3.4
NOA NORSAR Array B 143.83 353 PKP PKPbc 06 00 33.4 -0.2
comp=Z,4.7nm,0.5s,baz=40,slow=1.2,SNR=71
NAO01 NORSAR Array S 144.06 353 PKPab 06 00 33.7 0.0
NC602 NORSAR Array S 144.09 352 ePKPdf PKPab 06 00 33.9 0.0
NC602 NORSAR Array S 144.09 352 PKPab 06 00 33.8 0.0
HYA Hoyanger 144.10 357 ePKPdf PKPbc 06 00 34.9 +0.6
SUE Sulen 144.27 358 ePKPdf PKPbc 06 00 35.0 +0.2
SKAR Skarslia 144.46 355 ePKPab PKPab 06 00 34.6 -0.7
SOC Sochi 144.74 311 ePKIKP PKPab 06 00 35.9 -0.9
SOC e 06 03 51.7
SOC ePPP PPP 06 07 18.7
SOC eSS SS 06 22 32.2 +0.4
SOC pmax pmax
comp=Z,70nm,0.7s
SLIT Slitere, Latvi 144.79 342 eP PKPab 06 00 34.9 -1.6
ASK Askoy 144.83 358 ePKPbc PKPbc 06 00 35.7 -0.9
BER Bergen 144.92 358 ePKPab PKPbc 06 00 36.2 -0.6
OSL Oslo 144.96 353 ePKPdf PKPbc 06 00 37.0 0.0
IZAR Zarasai 145.05 337 eP PKPdf 06 00 37.6 0.0
ISAL Salakas 145.23 337 eP PKPab 06 00 38.2 -0.1
ISAL IAmb IAmb 06 00 39.6
comp=Z,89nm,1.0s
ODD1 Odda 145.33 356 ePKPbc PKPdf 06 00 37.2 -0.9
KONO Kongsberg 145.36 354 ePKPbc PKPdf 06 00 37.5 -0.6
KONO Kongsberg 145.36 354 PKPab 06 00 38.6 0.0
KONO Kongsberg 145.36 354 PKIKP PKPab 06 00 38.6 0.0
IIGN Ignalina 145.37 336 eP PKPab 06 00 38.9 +0.1
IIGN IAmb IAmb 06 00 39.9
comp=Z,110nm,0.5s
MICGM Minsk 145.37 334⇓eP PKPdf 06 00 37.0 -1.2
MICGM PM 06 00 38.0
comp=Z,0.8nm,1.0s
MNK Minsk 145.37 334 ePKP2 PKPdf 06 00 37.0 -1.2
MNK pmax pmax
comp=Z,750nm,1.0s
NACGM Naroch 145.50 335 eP PKPdf 06 00 38.0 -0.4
NACGM PM 06 00 40.0
comp=Z,1.8nm,1.0s
BLS5 Blasjo 145.83 356 ePKPbc PKPdf 06 00 38.8 -0.1
ANN Anapa 145.84 314 ePKP2 PKPbc 06 00 40.1 -0.1
ANN pmax pmax
comp=Z,96nm,0.8s
ANN pmax pmax
comp=Z,157nm,1.6s
PABE Paberze 146.04 338 eP PKPbc 06 00 40.5 +0.1
KMY Karmoy 146.10 358 ePKPdf PKPdf 06 00 38.9 -0.4
PBUR Paburge 146.26 340 eP PKPdf 06 00 40.7 -0.4
PBUR IAmb IAmb 06 00 42.1
comp=Z,194nm,0.7s
LEWI Lewis, Hebride 146.54 9 eP PKPbc 06 00 42.1 +0.2
HOMB Homborsund 146.83 354 ePKPab PKPbc 06 00 43.1 +0.5
SNART Snartemo 146.86 356 ePKPbc PKPbc 06 00 42.8 +0.1
KAC Achnashellach 147.38 8 eP PKPbc 06 00 44.3 +0.1
AKASG Malin Array Be 147.44 328 PKPbc PKPbc 06 00 44.0 -0.6
comp=Z,30nm,0.6s,baz=44,slow=4.1,SNR=156
AKASG Malin Array Be 147.44 328 PKPdf 06 00 40.9 -0.9
AKASG PKPbc PKPbc 06 00 44.3 -0.3
AKASG PKPab PKPab 06 00 47.3 +0.4
AKASG Malin Array Be 147.44 328c iPKP2 PKPbc 06 00 44.0 -0.6
AKASG pmax pmax
comp=Z,30nm,0.6s
AKBB Malin Array Si 147.44 328 PKPbc 06 00 44.5 -0.1
AKBB PKPab PKPab 06 00 47.1 +0.1
AKBB Malin Array Si 147.44 328 PKP2 PKPab 06 00 47.1 +0.1
KPL Plockton 147.49 8 eP PKPbc 06 00 44.4 -0.1
SUW Suwalki 147.51 337 ePKP PKPbc 06 00 44.7 +0.1
SUW Suwalki 147.51 337 PKPbc 06 00 45.0 +0.3
SUW Suwalki 147.51 337 PKP2 PKPbc 06 00 45.0 +0.3
MCD Coleburn Disti 147.51 6 eP PKPbc 06 00 44.4 -0.2
MDO Dochfour 147.54 7 eP PKPbc 06 00 44.8 +0.1
SIM Simferopol' 147.92 316dePKP2 PKPbc 06 00 46.8 +0.7
SIM pmax pmax
comp=Z,41nm,0.7s
GOET G??ttrup 147.97 353 iP PKPbc 06 00 44.9 -0.9
comp=Z,243nm,1.1s
DRUM Mains of Drumt 148.25 5 eP PKPbc 06 00 46.3 -0.2
GAZ Gaziantep 148.29 300 PKiKP 06 00 48.5 -0.4
SEVA Sevastopol 148.39 315 ⇓P PKPab 06 00 51.5 +0.5
MUD Monsted U'grnd 148.55 353 iP PKPbc 06 00 47.6 +0.3
comp=Z,29nm,0.7s
MUD Monsted U'grnd 148.55 353 iPKP2 PKPbc 06 00 47.6 +0.3
MUD pmax pmax
comp=Z,29nm,0.7s
EDU Dundee 148.56 6 eP PKPbc 06 00 47.3 -0.1
INVG Invergeldie, C 148.57 7 eP PKPbc 06 00 47.1 -0.3
BSD Bornholm Skovb 148.90 346 iP PKPbc 06 00 48.0 -0.2
comp=Z,45nm,0.9s
BSD Bornholm Skovb 148.90 346 iPKP2 PKPbc 06 00 48.0 -0.2
BSD pmax pmax
comp=Z,45nm,0.9s
PGBU Glenifferbraes 149.13 8 eP PKPbc 06 00 48.8 +0.1
EBL Broad Law 149.32 6 eP PKPbc 06 00 48.9 -0.4
SORM Soroca 149.53 325 ⇓P PKPbc 06 00 49.9 -0.1
SORM Soroca 149.53 325 ⇓PKP2 PKPbc 06 00 49.9 -0.1
ILGA Ilgaz 149.79 309 PKiKP 06 00 51.9 -0.3
GKP Gorka Klasztor 150.01 342 ePKPdf PKiKP 06 00 51.6 -0.2
GKP ePKPbc PKPab 06 00 57.6 +0.3
GKP Gorka Klasztor 150.01 342 ePKP2 PKiKP 06 00 51.6 -0.2
GAL1 Galloway 150.02 8 eP PKPbc 06 00 51.0 +0.1
MILM Milestii Mici 150.03 323 ⇓P PKPbc 06 00 51.3 0.0
BEL Belsk 150.13 337 ePKPdf PKiKP 06 00 52.3 +0.1
BEL ePKPbc PKPab 06 00 58.2 +0.4
BEL ePKPab PKPbc 06 01 03.0 +12
BEL Belsk 150.13 337 ePKP2 PKiKP 06 00 52.3 +0.1
BR131 Keskin Array S 150.31 307 PKiKP 06 00 52.0 -0.4
BR131 PKPab PKPab 06 01 00.5 +1.2
BRTR Keskin Array B 150.31 307 PKPbc PKPbc 06 00 52.2 -0.2
comp=Z,12nm,0.7s,baz=141,slow=4.5,SNR=52
BRTR PKPab PKPab 06 00 59.0 -0.2
comp=Z,12nm,0.9s,baz=66,slow=3.2,SNR=14
BRTR Keskin Array B 150.31 307 PKPbc 06 00 52.3 -0.2
BRTR PKPab 06 00 58.4 -0.8
EDMD Edmundbyers 150.35 5 eP PKPbc 06 00 51.8 0.0
LVV L'vov 150.43 331 ePKIKP PKPbc 06 00 52.3 +0.1
IOMK Kirk Michael 150.63 9 eP PKPbc 06 00 52.5 +0.1
BSEG Bad Segeberg 150.86 351 ePKPbc PKiKP 06 00 53.7 +0.2
baz=15,slow=4.4
ANTO Ankara 150.87 307 ⇑P PKiKP 06 00 54.6 +0.4
ANTO Ankara 150.87 307 PKiKP 06 00 54.1 -0.1
ANTO Ankara 150.87 307 PKIKP PKiKP 06 00 54.1 -0.1
BR231 Keskin MP Arra 150.90 307 PKiKP 06 00 54.3 0.0
TLCR 151.03 320 ⇑P PKiKP 06 00 54.3 +0.1
TLCR 151.03 320 ⇑PKIKP PKiKP 06 00 54.3 +0.1
PRAR RASCA 151.12 326 ⇓P PKiKP 06 00 54.7 +0.3
KWP Kalwaria Pacla 151.14 332 ePKPdf PKiKP 06 00 54.5 +0.1
KWP ePKPbc PKPab 06 01 02.9 +0.7
KWP Kalwaria Pacla 151.14 332 PKiKP 06 00 54.6 +0.3
KWP PKPab PKPab 06 01 02.7 +0.5
KWP Kalwaria Pacla 151.14 332 ePKIKP PKiKP 06 00 54.5 +0.1
JURR Jurilovca 151.23 319 ⇓P PKiKP 06 00 54.4 -0.2
BUR08 Bucovina Ar. S 151.45 327 PKiKP 06 00 55.8 +0.6
BUR08 PKPab PKPab 06 01 04.3 +0.6
BURAR Bucovina Array 151.46 327 ⇑P PKiKP 06 00 56.8 +1.6
BURAR Bucovina Array 151.46 327 PKPdf 06 00 48.1 -0.4
BURAR PKPbc PKiKP 06 00 56.0 +0.8
BURAR PKPab PKPab 06 01 04.4 +0.7
BURAR Bucovina Array 151.46 327 ⇑PKIKP PKiKP 06 00 56.8 +1.6
BIZ Bicaz 151.46 325 ⇓P PKiKP 06 00 55.7 +0.7
RUE Ruedersdorf 151.60 346 ePKPbc PKiKP 06 00 55.5 +0.3
baz=15,slow=4.4
RUE Ruedersdorf 151.60 346 eP PKPbc 06 00 54.9 +0.2
PETR Petresti 151.62 322 ⇓P PKPab 06 01 06.3 +2.0
ODBI Odobesti 151.70 322 ⇓P PKPab 06 01 06.2 +1.6
MDUB Mudurnu 151.78 309 PKPdf PKPdf 06 00 49.2 0.0
MDUB PKPbc 06 00 55.8 0.0
VRI Vrincioaia 151.81 323 ⇓P PKiKP 06 00 55.4 -0.1
VRI Vrincioaia 151.81 323 ⇓PKIKP PKiKP 06 00 55.4 -0.1
OJC Ojcow 151.81 336 ePKPdf PKiKP 06 00 55.9 +0.2
OJC ePKPbc PKPab 06 01 05.4 +0.5
OJC Ojcow 151.81 336 PKiKP 06 00 55.7 -0.1
OJC PKPab PKPab 06 01 05.5 +0.5
OJC Ojcow 151.81 336 ePKIKP PKiKP 06 00 55.9 +0.2
MFTR Murfatlar 151.83 318 ⇓P PKiKP 06 00 56.1 +0.2
HARR Harsova 151.83 320 ⇓P PKiKP 06 00 56.6 +0.7
HARR Harsova 151.83 320 ⇓PKIKP PKiKP 06 00 56.6 +0.7
KOLS Kolonicke sedl 151.86 332 ePKIKP PKiKP 06 00 56.5 +0.6
KOLS Kolonicke sedl 151.86 332 ePKP PKiKP 06 00 56.5 +0.6

KOLS e 06 01 05.6
STHS Stebnicka Huta 151.91 334 ePKIKP PKiKP 06 00 56.0 0.0
STHS Stebnicka Huta 151.91 334 ePKP PKiKP 06 00 56.0 0.0
STHS e 06 01 05.7
UZH Uzhgorod 152.08 331 ePKIKP PKPdf 06 00 51.2 +2.0
UZH i 06 01 02.8
UZH e 06 01 27.4
FOEL Foel Wylfa 152.15 7 eP PKPbc 06 00 56.1 +0.1
RETH Rethem/Aller, 152.16 351 ePKPbc PKiKP 06 00 56.6 +0.3
baz=15,slow=4.4
CRVS Cervenica-Dubn 152.22 333 ePKIKP PKiKP 06 00 57.1 +0.5
CRVS Cervenica-Dubn 152.22 333 ePKP PKiKP 06 00 57.1 +0.5
CRVS e 06 01 07.2
ARCR ARCALIA 152.25 327 ⇓P PKPab 06 01 08.3 +1.5
NIE Niedzica 152.28 335 ePKPdf PKiKP 06 00 57.6 +0.9
NIE ePKPbc PKPab 06 01 07.5 +0.5
NIE Niedzica 152.28 335 ePKIKP PKiKP 06 00 57.6 +0.9
NRDL Niedersach Rie 152.29 350 ePKPbc PKiKP 06 00 56.8 +0.3
baz=15,slow=4.4
TRPA Tarpa 152.35 330 eP PKPdf 06 00 00.0 -50
TRPA Tarpa 152.35 330 ⇑P PKiKP 06 00 57.1 +0.2
KSP Ksiaz 152.44 341 ePKPdf PKiKP 06 00 57.6 +0.6
KSP ePKPbc PKPab 06 01 08.3 +0.7
KSP Ksiaz 152.44 341 ePKIKP PKiKP 06 00 57.6 +0.6
DOPR Dopca 152.47 324 ⇑P PKiKP 06 00 58.1 +0.8
MLR Muntele Rosu 152.48 323 ⇑P PKPbc 06 00 57.2 0.0
HLM1 Long Mynd 152.55 7 eP PKPbc 06 00 56.6 -0.3
ASSE Asse, Remlinge 152.55 349 ePKPbc PKiKP 06 00 57.4 +0.4
baz=15,slow=4.4
OSTC Ostas 152.71 341 ePKPDF PKPdf 06 00 51.5 +1.3
OSTC ⇑ePKP PKiKP 06 00 58.2 +0.6
OSTC ex x 06 01 10.2
OKC Ostrava-Krasne 152.72 338⇑ePKP PKiKP 06 00 57.8 +0.2
OKC ePKPAB PKPab 06 01 09.2 +0.5
OKC ex x 06 01 13.5
OKC Ostrava-Krasne 152.72 338 ePKIKP PKiKP 06 00 57.8 +0.2
CHVC Chvalec 152.73 341 ePKPDF PKPdf 06 00 50.6 +0.4
CHVC ⇑ePKP PKiKP 06 00 58.1 +0.5
CHVC ex x 06 01 08.9
IBBN Ibbenburen 152.79 353 ePKPab PKiKP 06 01 09.1 +0.2
baz=15,slow=4.4
UPC Upice 152.82 341⇑ePKP PKiKP 06 00 58.1 +0.3
UPC ePKPAB PKPab 06 01 09.8 +0.7
UPC Upice 152.82 341 ePKIKP PKiKP 06 00 58.1 +0.3
DPC Dobruska-Polom 152.86 340⇑ePKP PKiKP 06 00 58.3 +0.4
DPC ex x 06 01 10.4
DPC Dobruska-Polom 152.86 340 ePKIKP PKiKP 06 00 58.3 +0.4
CLL Collm 152.87 346 ePKPbc PKiKP 06 00 58.1 +0.3
baz=15,slow=4.4
CLL ePKPab PKPab 06 01 09.4 +0.1
baz=15,slow=4.4
CLL epPKPab PKPbc 06 01 14.3 +17
CLL Collm 152.87 346 ePKPdf PKPdf 06 00 51.0 +0.7
comp=Z,17nm,1.8s
CLL e PKPdf 06 00 01.0 -49
CLL ⇓iPKPbc PKiKP 06 00 57.8 0.0
comp=Z,32nm,0.7s
CLL i PKPab PKPab 06 01 08.9 -0.4
comp=Z,28nm,0.7s
CLL epPKPab pPKPbc 06 01 43.0 +3.7
CLL eSKPdf SKPdf 06 04 13.0 +4.5
CLL Collm 152.87 346⇓i(P) PKPab 06 01 14.0 +4.7
comp=Z,35nm,0.9s
CLL Collm 152.87 346 PKPdf PKPdf 06 00 50.8 +0.5
CLL PKiKP 06 00 57.9 +0.1
CLL PKPab PKPab 06 01 09.1 -0.2
CLL Collm 152.87 346⇓ePKIKP PKPdf 06 00 51.0 +0.7
CLL i 06 01 08.9
CLL pmax pmax
comp=Z,17nm,1.8s
CLL pmax pmax
comp=Z,32nm,0.7s
CLL pmax pmax
comp=Z,28nm,0.7s
CLZ Clausthal 152.88 349 ePKPbc PKiKP 06 00 58.5 +0.6
baz=15,slow=4.4
CJR Cluj-Napoca 152.88 327 ⇑P PKiKP 06 00 58.6 +0.5
CJR Cluj-Napoca 152.88 327 ⇑PKIKP PKiKP 06 00 58.6 +0.5
KECS Kecovo 152.95 333 ePKP PKPab 06 01 10.0 +0.2
KRLC Kraliky 152.96 340⇑ePKP PKiKP 06 00 58.3 +0.1
KRLC ePKPAB PKPab 06 01 10.6 +0.8
KRLC ex x 06 01 14.9
KRLC Kraliky 152.96 340 ePKIKP PKiKP 06 00 58.3 +0.1
MORC Moravsky Berou 152.98 338 ePKP PKiKP 06 00 58.4 +0.2
MORC e 06 01 10.3
MORC Moravsky Berou 152.98 338 PKiKP 06 00 58.8 +0.6
MORC PKPab 06 01 10.2 +0.3
MORC Moravsky Berou 152.98 338 PKIKP PKiKP 06 00 58.8 +0.6
VOIR 153.00 324 ⇑P PKiKP 06 00 58.5 +0.1
VOIR 153.00 324 ⇑PKIKP PKiKP 06 00 58.5 +0.1
MCH1 Michaelchurch 153.05 8 eP PKPbc 06 00 57.8 -0.3
BRG Berggiesshubel 153.05 344 ePKP PKPdf 06 00 50.7 +0.1
comp=Z,6.1nm,1.1s
BRG Berggiesshubel 153.05 344 i PKP PKiKP 06 00 58.5 +0.3
comp=Z,25nm,0.7s
BRG Berggiesshubel 153.05 344 i PKP PKPab 06 01 19.2 +9.1
comp=Z,25nm,0.8s
BRG esPKP 06 01 51.1
comp=Z,20nm,0.9s
BRG Berggiesshubel 153.05 344 ePKPbc PKiKP 06 00 58.7 +0.5
baz=15,slow=4.4
BRG ePKPab PKPab 06 01 10.5 +0.4
baz=15,slow=4.4
BRG epPKPab PKPbc 06 01 15.3 +17
BRG Berggiesshubel 153.05 344 ePKIKP PKPdf 06 00 50.7 +0.1
BRG pmax pmax
comp=Z,6.0nm,1.1s
BRG pmax pmax
comp=Z,25nm,0.7s
BRG pmax pmax
comp=Z,25nm,0.8s
FBE Freiberg 153.15 345 ePKPbc PKiKP 06 00 59.2 +0.8
baz=15,slow=4.4
FBE ePKPab PKPab 06 01 10.9 +0.5
baz=15,slow=4.4
FBE epPKPab pPKPdf 06 01 15.9 -17
PVCC Panska Ves 153.20 343⇑ePKP PKiKP 06 00 59.1 +0.5
PVCC ex x 06 01 05.3
PVCC ePKPAB PKPab 06 01 11.2 +0.5
PVCC ex x 06 01 15.5
PVCC Panska Ves 153.20 343 ePKIKP PKiKP 06 00 59.1 +0.5
MONM Monmouth 153.22 7 eP PKPbc 06 00 58.3 -0.1
NEUB Neuenburg 153.22 347 ePKPbc PKiKP 06 00 58.9 +0.4
baz=15,slow=4.4
NEUB epPKPab PKPab 06 01 16.1 +5.3
ARR Arges 153.26 324 ⇑P PKiKP 06 01 00.3 +1.4
VYHS Vyhne 153.59 335 ePKIKP PKiKP 06 00 59.7 +0.2
VYHS Vyhne 153.59 335 ePKP PKiKP 06 00 59.7 +0.2
VYHS e 06 01 13.2
PSZ Piszkesteto 153.64 333 ⇓P PKPab 06 01 13.6 +0.7
PSZ Piszkesteto 153.64 333 PKiKP 06 00 60.0 +0.3
PSZ PKPab PKPab 06 01 13.1 +0.3
PSZ Piszkesteto 153.64 333 PKIKP PKiKP 06 01 00.0 +0.3
PRA Prague 153.66 343⇑ePKP PKiKP 06 00 59.9 +0.4
PRA ex x 06 01 07.6
PRA ex x 06 01 13.1
PRA Prague 153.66 343 ePKIKP PKiKP 06 00 59.9 +0.4
VRAC Vranov 153.69 339 ePKP PKiKP 06 01 00.0 +0.4
VRAC e 06 01 13.4
VRAC Vranov 153.69 339 ⇑P PKPab 06 01 13.8 +0.9
VRAC Vranov 153.69 339 ⇑PKP2 PKPab 06 01 13.8 +0.9
GOPC GO Pecny, Ondr 153.70 342 ePKP PKiKP 06 01 00.0 +0.4
GOPC ex x 06 01 04.6
GOPC ePKPAB PKPab 06 01 13.5 +0.6
GOPC GO Pecny, Ondr 153.70 342 ePKIKP PKiKP 06 01 00.0 +0.4
PRU Pruhonice 153.70 342⇑ePKP PKiKP 06 00 59.7 +0.1
PRU ePKPAB PKPab 06 01 13.1 +0.2
PRU ex x 06 01 18.1
PRU Pruhonice 153.70 342 ePKIKP PKiKP 06 00 59.7 +0.1
JAVC Velka Javorina 153.72 337 ePKP PKiKP 06 01 00.8 +1.0
JAVC e 06 01 14.5
MOX Moxa 153.79 347 ePKPbc PKiKP 06 01 00.1 +0.3
baz=15,slow=4.4
MOX ePKPab PKPab 06 01 13.2 -0.1
baz=15,slow=4.4
MOX epPKPab pPKPdf 06 01 18.2 -15
TANN Tannenbergstha 153.83 346 ePKPbc PKiKP 06 01 00.4 +0.4
baz=15,slow=4.4
TANN ePKPab PKPab 06 01 13.6 +0.1
baz=15,slow=4.4
PLN Plauen 153.83 346 ePKPbc PKiKP 06 01 00.3 +0.4
baz=15,slow=4.4
PLN epPKPbc PKPbc 06 01 05.5 +5.7
PLN ePKPab PKPab 06 01 13.6 +0.1
baz=15,slow=4.4
PLN epPKPab pPKPdf 06 01 18.6 -15
GUNZ Gunzen 153.90 346 ePKPbc PKiKP 06 01 00.6 +0.6
baz=15,slow=4.4
GUNZ ePKPab PKPab 06 01 13.9 +0.1
baz=15,slow=4.4
GUNZ epPKPab pPKPdf 06 01 19.2 -15
WERN Wernitzgruen 153.97 346 ePKPab PKPab 06 01 14.5 +0.4
baz=15,slow=4.4
WERN epPKPab pPKPdf 06 01 19.5 -14
KRUC Moravsky 153.97 339 ePKP PKiKP 06 01 00.5 +0.3
KRUC e 06 01 14.5
NKC Novy Kostel 154.00 345⇑ePKP PKiKP 06 01 00.6 +0.3
NKC ePKPAB PKPab 06 01 14.5 +0.3
NKC ex x 06 01 19.0
NKC Novy Kostel 154.00 345 ePKIKP PKiKP 06 01 00.6 +0.3
ELND Elena 154.06 318 ⇑P PKPab 06 01 15.5 +0.8
SMOL Smolenice 154.09 337 ePKP2 PKPab 06 01 15.9 +1.3
SMOL Smolenice 154.09 337 ePKP PKPab 06 01 15.9 +1.3
SIRR Siria 154.13 329 ⇑P PKiKP 06 01 01.2 +0.6
MODS Modra-Piesok 154.26 337 ePKIKP PKPbc 06 01 00.8 0.0
MODS e 06 01 15.4
MODS Modra-Piesok 154.26 337 ePKP PKPbc 06 01 00.8 0.0
MODS e 06 01 15.4
VLAD Vladila 154.27 322 ⇑P PKPab 06 01 15.6 0.0
MANZ Manzenberg 154.31 346 ePKPbc PKiKP 06 01 01.4 +0.5
baz=15,slow=4.4
BEBN Eben Emael 154.47 355 PKPab PKPab 06 01 15.9 -0.2
ZST Bratislava 154.48 337 ePKIKP PKPdf 06 00 53.3 +0.6
ZST e 06 01 16.0
ZST Bratislava 154.48 337 ePKP PKPdf 06 00 53.3 +0.6
ZST e 06 01 16.0
ROTZ Rotzenmuhle 154.49 345 ePKPab PKPab 06 01 16.6 +0.3
baz=15,slow=4.4
BZS Buzias 154.63 328 ⇑P PKPab 06 01 16.8 -0.2
BZS Buzias 154.63 328 ⇑PKP2 PKPab 06 01 16.8 -0.2
KHC Kasperske Hory 154.74 343 ePKPDF PKPdf 06 00 52.9 -0.2
KHC ⇑ePKP PKPbc 06 01 01.6 -0.2
KHC ePKPAB PKPab 06 01 17.9 +0.5
KHC Kasperske Hory 154.74 343 PKPdf 06 00 52.9 -0.2
KHC PKPbc PKiKP 06 01 02.2 +0.4
KHC PKPab PKPab 06 01 18.2 +0.8
KHC Kasperske Hory 154.74 343 PKP2 PKPab 06 01 18.2 +0.8
KHC 07 00 52.9
TNS Taunus Mts 154.75 351 ePKPbc PKiKP 06 01 02.2 +0.3
baz=15,slow=4.4
TNS ePKPab PKPab 06 01 17.7 +0.3
baz=15,slow=4.4
TNS epPKPab pPKPdf 06 01 22.2 -13
GRA1 Grafenberg Arr 154.78 347 PKPab 06 01 18.0 +0.5
GRF Grafenberg Arr 154.78 347 ePKPab PKPab 06 01 17.9 +0.4
baz=15,slow=4.4
GRF epPKPab pPKPdf 06 01 23.2 -12
GRF Grafenberg Arr 154.78 347 PKP2 PKPab 06 01 18.0 +0.5
BCLA Clavier 154.87 356 PKPab PKPab 06 01 17.7 -0.2
WET Wettzell 154.91 344 ePKPab PKPab 06 01 18.5 +0.4
baz=15,slow=4.4
BGES Gesves 154.92 356 PKPab PKPab 06 01 17.8 -0.2
GEC2 GERESS Array S 154.97 342 PKiKP 06 01 02.7 +0.3
GEC2 PKPab PKPab 06 01 18.9 +0.5
GERES GERESS Array B 154.97 342 PKP PKPdf 06 00 53.0 -0.5
comp=Z,1.3nm,0.7s,baz=29,slow=3.0,SNR=10
GERES PKPbc PKiKP 06 01 02.7 +0.3
comp=Z,2.0nm,0.7s,baz=48,slow=2.0,SNR=14
GERES PKPab PKPab 06 01 18.6 +0.2
comp=Z,4.2nm,0.7s,baz=27,slow=4.2,SNR=13
GERES GERESS Array B 154.97 342 PKPdf 06 00 53.2 -0.3
GERES PKPbc 06 01 02.3 -0.1
GERES PKPab 06 01 19.1 +0.6
BMRD Maredsous 155.02 357 PKPab PKPab 06 01 18.4 0.0
CONA Conrad Observa 155.13 338 ePKPab PKPab 06 01 20.3 +1.1
comp=Z,19nm,0.8s,SNR=6.8
DOU Dourbes 155.24 357 PKPab PKPab 06 01 19.3 -0.1
MORH Mrgy, Hungar 155.52 332 eP PKPab 06 01 20.2 -0.5
WLF Walferdange 155.56 354 ePKPab PKPab 06 01 21.2 +0.4
baz=15,slow=4.4
WLF Walferdange 155.56 354 PKPab PKPab 06 01 20.9 +0.1
MOA Molln 155.71 341 ePKPab PKPab 06 01 22.3 +0.8
comp=Z,14nm,1.1s
VTS Vitosha 155.80 321 ⇑P PKPab 06 01 23.5 +1.1
VTS Vitosha 155.80 321 PKPab 06 01 23.1 +0.7
VTS Vitosha 155.80 321 ⇑PKP2 PKPab 06 01 23.5 +1.1
FRGS Fruska Gora 155.82 329 eP PKPab 06 01 21.1 -1.1
ARSA Arzberg 155.84 338 ePKPab PKPab 06 01 22.7 +0.5
comp=Z,11nm,0.8s
RJOB Jochberg 156.23 343 ePKPab PKPab 06 01 24.9 +1.0
baz=15,slow=4.4
KOGS Kog 156.27 336 i PKPab PKPab 06 01 23.9 0.0
SOKA Soboth 156.50 338 ePKPab PKPab 06 01 25.3 +0.2
comp=Z,9.8nm,0.7s
DIVS Divibare 156.53 327 eP PKPab 06 01 25.1 -0.2
BFO Black Forest 156.61 350 ePKPab PKPab 06 01 24.9 -0.5
baz=15,slow=4.4
BFO epPKPab pPKPdf 06 01 30.5 -7.1
BFO Black Forest 156.61 350 PKPab 06 01 25.0 -0.4
BFO Black Forest 156.61 350 PKP2 PKPab 06 01 25.0 -0.4
KBA Koelnbreinsper 156.68 341 ePKPab PKPab 06 01 27.0 +1.1
comp=Z,16nm,0.8s
OBKA Obir 156.81 339 ePKPab PKPab 06 01 26.6 +0.2
comp=Z,12nm,0.8s
WATA Walderalm 156.91 344 ePKPab PKPab 06 01 27.3 +0.4
comp=Z,14nm,0.6s,SNR=5.8
RETA Reutte 156.96 346 ePKPab PKPab 06 01 27.2 +0.2
comp=Z,9.9nm,0.8s
BBLS Lazići 156.98 328 eP PKPab 06 01 27.1 -0.2
STIP Stip 156.99 320 eP PKPab 06 01 26.6 -0.7
MYKA Terra Mystica 156.99 340 ePKPab PKPab 06 01 26.7 -0.5
comp=Z,18nm,0.8s
VAY Valandovo 156.99 319 eP PKPab 06 01 27.6 +0.3
MOTA Moosalm 157.02 345 ePKPab PKPab 06 01 27.7 +0.3
comp=Z,11nm,0.7s
HAPS Han Pijesak,BI 157.03 329 eP PKPab 06 01 26.4 -1.1
CRES Cresnjev 157.09 336 eP PKPab 06 01 27.2 -0.3
SQTA Sankt Quirin 157.11 345 ePKPab PKPab 06 01 28.0 +0.3
comp=Z,27nm,1.3s
RUDO Rudo 157.18 327 eP PKPab 06 01 27.1 -0.9
ABTA Abfaltersbach 157.21 342 ePKPab PKPab 06 01 27.9 -0.2
comp=Z,24nm,0.8s,SNR=5.5
LJU Ljubljana 157.22 338 ePKPab PKPab 06 01 27.7 -0.4
LJU Ljubljana 157.22 338 eP PKPab 06 01 26.9 -1.2
SKO Skopje 157.24 321 eP PKPab 06 01 28.9 +0.6
BLY Banja Luka 157.31 332 eP PKPab 06 01 28.4 -0.1
BLY Banja Luka 157.31 332 PKPab 06 01 28.3 -0.1
VISS Visnje 157.33 337 ePKPab PKPab 06 01 28.4 -0.2
DAVA Damuels 157.34 347 ePKPab PKPab 06 01 28.9 +0.2
comp=Z,9.7nm,0.8s
FETA Feichten 157.41 345 ePKPab PKPab 06 01 29.4 +0.4
comp=Z,13nm,1.3s
MGRS Mrkonjic Grad 157.62 332⇑iP PKPab 06 01 30.3 +0.4
UPM Unac-Piva 157.72 327 eP PKPab 06 01 28.4 -2.2
FUORN Ofenpass-Fuorn 157.89 346 PKPab 06 01 31.7 +0.4
FNA Florina 158.03 319 PKPab 06 01 31.6 -0.3
FNA Florina 158.03 319 PKP2 PKPab 06 01 31.6 -0.3
CTI Castel Tesino 158.09 343 PKPab 06 01 31.5 -0.5
CTI Castel Tesino 158.09 343 PKP2 PKPab 06 01 31.5 -0.5
PDG Podgorica 158.10 325 ⇑P PKPab 06 01 31.8 -0.2
PDG Podgorica 158.10 325⇑iP PKPab 06 01 31.8 -0.2
PDG Podgorica 158.10 325 PKPab 06 01 31.8 -0.2
BRY Bratogost 158.12 327 eP PKPab 06 01 31.3 -1.0
OHR Ohrid 158.16 321 eP PKPab 06 01 32.3 -0.1
DRME Dracevica, Mon 158.32 325 eP PKPab 06 01 32.1 -0.9
TREB Trebinje 158.35 327 eP PKPab 06 01 32.1 -1.0
SENIN Lac Senin/Sane 158.68 351 PKPab 06 01 34.4 -0.3
TEOL Teolo 158.72 342 PKPab 06 01 34.9 +0.3
LIC Lamto 159.65 158 ePKP2 PKPab 06 01 40.1 +0.7
comp=Z,29nm,1.2s
ZCCA Zocca 159.84 342 PKPab 06 01 40.8 +1.3
KIC Kosan Boka 159.87 158 ePKP2 PKPab 06 01 41.0 +0.7
comp=Z,20nm,0.8s
TIC Toumodi 160.04 157 ePKP2 PKPab 06 01 41.6 +0.5
DBIC Dimbokro 160.12 158 PKPab PKPab 06 01 42.9 +1.4
comp=Z,5.5nm,0.9s,baz=178,slow=6.9,SNR=7.2
DBIC Dimbokro 160.12 158 PKPab 06 01 42.5 +1.1
DBIC Dimbokro 160.12 158 PKP2 PKPab 06 01 42.5 +1.1
VLC Villacollemand 160.18 343 PKPab 06 01 41.0 +0.1
MURB Monte Urbino 160.35 338 PKPab 06 01 43.2 +1.3
NRCA Norcia 160.52 336 PKPab 06 01 42.5 -0.1
OSSC Osservatorio P 160.52 341 PKPab 06 01 41.8 -0.7
AQU L'Aquila 160.82 335 eP PKPab 06 01 43.5 -0.4
INTR Introdacqua 160.91 333 PKPab 06 01 43.5 -0.9
ACER Acerenza 160.99 327 PKPab 06 01 43.7 -1.0
ESDC Sonseca Array 164.69 19 PKPab PKPab 06 02 01.6 +0.7
comp=Z,1.9nm,0.7s,baz=326,slow=3.3,SNR=8.5
ESDC Sonseca Array 164.69 19 PKPdf PKPdf 06 01 04.4 -0.3
ESDC PKPab 06 02 00.9 0.0
TOA0 Torodi Ar. Sit 167.84 176 PKPdf 06 01 07.2 -0.6
TOA0 PKPab 06 02 15.3 +0.1
TORD Torodi Ar. Bea 167.84 176 PKP PKPdf 06 01 07.8 0.0
comp=Z,2.3nm,0.6s,baz=272,slow=0.3,SNR=14
TORD PKPab PKPab 06 02 16.0 +0.7
comp=Z,3.9nm,0.9s,baz=177,slow=4.6,SNR=10
TORD Torodi Ar. Bea 167.84 176 PKPdf 06 01 07.2 -0.6
TORD PKPab 06 02 15.5 +0.2
KEST Kesra 168.12 332 PKPab PKPab 06 02 16.6 +0.3
comp=Z,14nm,0.8s,baz=310,slow=1.7,SNR=10
KEST Kesra 168.12 332 PKPab 06 02 15.9 -0.3

TIF 02 05:53:55.4, 43°.38N×44°.27E, h3km±3km
NORS 02 05:53:56.8±0.0, 43°.29N×44°.20E, h11km, MPVA3.8
MOS 02 05:53:57.0±0.0, 43°.32N×44°.17E, h19km, MPVA3.7
ISC 02 05:53:57.6±0.9, 43°.31N±0°.02×44°.20E±0°.02, h15km±7km, n27, σ0°.91/50, Western Caucasus

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
STDR Stavd-Durt 0.12 302 i Pg Pg 05 54 00.8 -0.3
STDR eSg Sb 05 54 04.6 +0.4
LSNR Lesken 0.27 264 ePg Pb 05 54 04.3 0.0
LSNR eSg Sb 05 54 10.4 +1.7
VLKR Vladikavkaz 0.44 127 ePg Pb 05 54 07.3 +0.2
VLKR eSg Sb 05 54 14.9 +1.4
PRTR Priterechnaya 0.45 8 ePg Pb 05 54 06.9 -0.3
PRTR eSg Sb 05 54 15.3 +1.6
NCK Nalchik 0.48 293 ePg Pb 05 54 07.5 -0.2
NCK eSg Sn 05 54 16.4 -1.7
KMGR Komgaron 0.55 117 ePg Pg 05 54 08.0 -0.5
ZEI Tsey 0.56 203 ePg Pb 05 54 09.4 0.0
ZEI eSg Sb 05 54 17.6 +0.3
TRKR Terskaya 0.57 43 ePg Pb 05 54 09.6 +0.6
TRKR eSg Sn 05 54 20.1 -0.3
DIGR Digorskoe uzhe 0.61 228 ePg Pb 05 54 10.4 +0.2
DIGR eSg Sb 05 54 19.8 +1.2
KBTC Kuba-Taba 0.77 312 ePg Pb 05 54 12.9 +0.2
KBTC eSg Sn 05 54 25.4 +0.1
GUDG Gudauri 0.87 166 P Pg 05 54 13.8 -0.7
GUDG S Sn 05 54 28.2 +0.2
GUDG Gudauri 0.87 166 ePg Pg 05 54 13.8 -0.7
GUDG eSg Sn 05 54 28.2 +0.2
ONI Oni 0.90 218 P Pn 05 54 15.7 -0.2
ONI S Sn 05 54 29.5 +0.8
ONI Oni 0.90 218 ePg Pn 05 54 15.7 -0.2
ONI eSg Sn 05 54 29.5 +0.8
NEY Neytrino 1.08 267 i Pg Pb 05 54 17.9 -0.2
NEY eSg Sn 05 54 33.0 -0.2
PYA1 Pyatigorsk 1.10 314 ePg Pb 05 54 18.2 -0.1
PYA1 eSg Sn 05 54 33.9 +0.4
GROC Groznyy 1.17 95 ePg Pb 05 54 20.3 +0.1
GROC eSg Sn 05 54 38.8 +3.3
SHA1 Shidzhatmaz 1.20 291 ePg Pb 05 54 20.1 -0.1
SHA1 eSg Sn 05 54 37.4 +1.0
BEYR Belyy Ugol+ 1.22 306 ePg Pb 05 54 20.3 -0.2
BEYR eSg Sn 05 54 37.4 +0.2
KIV0 Kislovodsk Arr 1.27 301 ePg Pb 05 54 21.0 -0.3
KIV0 eSg Sg 05 54 39.2 +0.6
BTLR Botlikh 1.62 113 i Pg Pb 05 54 26.8 -0.4
BTLR eSg Sg 05 54 48.6 -1.2
TBLG Delisi 1.63 166 P Pb 05 54 27.7 +0.3
TBLG Delisi 1.63 166 ePg Pb 05 54 27.7 +0.3
DBC Dubki 1.95 98 ePg Pb 05 54 31.7 -1.2
DBC eSg Sg 05 54 58.7 -1.6
AKH Akhalkalaki 1.97 196 ePg Pb 05 54 32.9 -0.3
ARXR Arkhyz 2.14 278 ePg Pb 05 54 35.2 -1.0
ARXR eSg Sb 05 55 01.2 -1.5
GNBR Gunib 2.23 113 ePn Pb 05 54 36.9 -0.9
GNBR eSn Sb 05 55 05.2 0.0

THE 02 06:04:41.7, 37°.82N×21°.17E, h14km±1km, ML2.5/9, Error ellipse: s-maj=1.0km s-min=0.6km az=196.0
ATH 02 06:04:41.0, 37°.82N×21°.16E, h24km±3km, ML2.7/8, Error ellipse: s-maj=3.0km s-min=1.0km az=200.0
ISC 02 06:04:41.6±1.0, 37°.82N±0°.03×21°.17E±0°.02, h18km±6km, n40, σ0°.56/62, Southern Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KRI1 kERI 0.32 241 P Pg 06 04 48.1 -0.3
KRI1 S Sb 06 04 53.9 +0.3
RLS Riolos of Patr 0.34 45 P Pg 06 04 48.2 -0.5
RLS S Sg 06 04 53.6 +0.1
2μm,0.2s
RLS Riolos of Patr 0.34 45 P Pg 06 04 48.2 -0.5
RLS S Sg 06 04 53.7 +0.2
RLS AML AML 06 04 54.0
comp=N,4282μm,0.2s
RLS AML AML 06 04 55.0
comp=E,1871μm,0.2s
VLMS Volimes, Zakyn 0.40 278 P Pg 06 04 49.8 0.0
VLMS S Sb 06 04 56.4 +0.3
VLMS AML AML 06 04 57.3
comp=E,7965μm,0.1s
VLMS AML AML 06 04 59.9
comp=N,6808μm,0.1s
DRO Drossia 0.45 73 P Pg 06 04 50.3 -0.4
DRO S Sb 06 04 57.7 +0.3
comp=N,2μm,0.4s
DRO Drossia 0.45 73 P Pg 06 04 50.3 -0.4
DRO S Sb 06 04 58.2 +0.8
DRO AML AML 06 05 00.0
comp=N,5053μm,0.4s
DRO AML AML 06 05 00.9
comp=E,4331μm,0.3s
AMT Artemida-Makis 0.52 124 P Pg 06 04 51.9 0.0
AMT Artemida-Makis 0.52 124 P Pg 06 04 51.9 0.0
AMT S Sb 06 05 00.4 +1.2
AMT AML AML 06 05 03.4
comp=E,1193μm,0.3s
AMT AML AML 06 05 06.8
comp=N,1060μm,0.5s
VLS Valsamata 0.58 308 P Pb 06 04 52.4 -0.8
VLS S Sg 06 05 01.8 +0.9
comp=N,488nm,0.1s
VLS Valsamata 0.58 308 P Pb 06 04 52.4 -0.8
VLS S Sg 06 05 01.8 +0.9
KEF2 Argostoli. Kep 0.64 303 P Pb 06 04 53.4 -0.8
KEF2 S Sg 06 05 03.6 +0.9
AST1 Astakos 0.72 355 P Pb 06 04 55.7 -0.1
AST1 S Sn 06 05 06.5 -1.1
LAKA Lakka 0.77 56 P Pb 06 04 56.1 -0.3
LAKA S Sn 06 05 08.0 -0.7
LAKA AML AML 06 05 10.7
comp=E,544μm,0.7s
LAKA AML AML 06 05 12.2
comp=N,350μm,0.5s
PDO Prodromos 0.78 1 P Pg 06 04 56.6 -0.2
PDO S Sn 06 05 08.5 -0.4
PDO Prodromos 0.78 1 P Pg 06 04 56.8 0.0
PDO AML AML 06 05 11.5
comp=E,1336μm,0.3s
PDO AML AML 06 05 14.7
comp=N,2078μm,0.3s
KLV Kalavryta, Ach 0.81 74 P Pb 06 04 56.4 -0.7
KLV Kalavryta, Ach 0.81 74 P Pb 06 04 56.2 -0.9
EFP Efpalio 0.84 44 P Pb 06 04 57.4 -0.2
EFP S Sn 06 05 10.1 -0.4
comp=N,300nm,0.3s
EFP Efpalio 0.84 44 P Pb 06 04 57.3 -0.4
PVO Paravola 0.84 19 P Pg 06 04 58.1 +0.1
PVO S Sn 06 05 10.9 +0.3
comp=N,435nm,0.2s
PVO Paravola 0.84 19 P Pg 06 04 58.1 +0.1
PVO AML AML 06 05 13.3
comp=E,784μm,0.3s
PVO AML AML 06 05 13.7
comp=N,912μm,0.2s
ITM Ithomi 0.88 136 P Pb 06 04 58.2 -0.1
ITM S Sn 06 05 11.2 -0.2
ITM Ithomi 0.88 136 P Pg 06 04 58.4 -0.2
MGNA Meganis 0.89 341 P Pb 06 04 57.6 -0.8
EVGI Lefkada island 0.90 333 P Pb 06 04 58.1 -0.6
EVGI S Sn 06 05 12.5 +0.6
EVGI Lefkada island 0.90 333 P Pb 06 04 58.0 -0.7
TRIZ Trizonia 0.90 52 P Pb 06 04 58.2 -0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TRIZ				S	Sn	06 05 12.4	+0.5
	comp=N,380nm,0.3s						
TRIZ	Trizonia	0.90	52	P	Pb	06 04 58.2	-0.4
SERG	Sergoula	0.92	49	P	Pb	06 04 58.6	-0.4
SERG				S	Sn	06 05 12.9	+0.5
	comp=N,282nm,0.3s						
SERG	Sergoula	0.92	49	P	Pb	06 04 58.6	-0.4
KALE	Kalithea	0.96	53	P	Pb	06 04 59.1	-0.5
KALE				AML	AML	06 05 18.5	
	comp=E,403µm,0.3s						
KALE				AML	AML	06 05 19.9	
	comp=N,588µm,0.4s						
ANX	Ano Chora	0.97	37	P	Pb	06 04 59.8	-0.2
ANX				S	Sn	06 05 14.2	+0.3
	comp=N,262nm,0.4s						
ANX	Ano Chora	0.97	37	P	Pb	06 04 59.7	-0.2
PYL	PYLOS	1.03	153	P	Pb	06 05 00.3	-0.6
LKD2	Lefkada island	1.05	338	P	Pb	06 05 00.7	-0.5
LKD2				S	Sg	06 05 16.7	+1.0
	comp=N,292nm,0.2s						
LKD2	Lefkada island	1.05	338	P	Pb	06 05 00.7	-0.5
TSLK	Tsoukalades, L	1.08	338	P	Pb	06 05 01.4	-0.4
TSLK				S	Sg	06 05 17.6	+0.9
TSLK	Tsoukalades, L	1.08	338	P	Pn	06 05 01.5	-0.3
MAKR	Makrakomi, Fth	1.41	32	P	Pb	06 05 07.9	+0.4
AGG	Agios Georgios	1.51	37	P	Pg	06 05 09.9	-0.8

NIED **02** *06:05:00, 28°.00N×128°.90E, h53km, Mw4.8 Best double couple: M0 1.50000×10^16 NP1: φs 49.00000°, δ74.00000°, λ91.00000°. NP2: φs 224.00000°, δ16.00000°, λ86.00000°.*
KLM **02** *06:05:38.0, 27°.44N×129°.48E, h153km, mb5.1*
MOS **02** *06:05:39.7±0.9, 27°.90N×128°.82E, h65km, mb5.2/57, Error ellipse: s-maj=6.5km s-min=4.2km az=98.3*
JMA **02** *06:05:39.3±0.1, 27°.93N×128°.89E, h46km±1km, M4.5*
JMA Felt IV J1.
IDC **02** *06:05:40.9±0.8, 27°.85N×128°.85E, h68km±7km, mb4.6/37, mb1 4.7/43, mb1mx4.5/64, mbtmp4.9/43, MS3.7/16, Ms1 3.7/16, ms1mx3.5/43, Error ellipse: s-maj=11.4km s-min=7.4km az=105.0*
NEIC **02** *06:05:41.3±2.0, 27°.77N±0°.05×128°.86E±0°.08, h69km±6km, mb4.9/215, Error ellipse: s-maj=11.1km s-min=6.7km az=119.0*
BGR **02** *06:05:44.6±0.0, 29°.14N×128°.75E, h33km, mb5.0*
ISC 02 06:05:39.5±0.5, **27°.83N**±0°.03×**128°.92E**±0°.03, **h55**km±4km, **n579**, σ**1.27**/621, **mb4.9**/220, **MS3.9**/16, **27C-19D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	Tokunoshima	0.05	154	P	Pn	06 05 46.8	-1.1
JTK				eS	Sn	06 05 52.0	-1.8
JAMN	Amaminishikomi	0.46	29	P	Pn	06 05 49.1	-1.6
JAMN				eS	Sn	06 05 55.8	-3.0
JOKE	Okinoerabujima	0.56	214	P	Pn	06 05 52.1	+0.2
JOKE				eS	Sn	06 06 00.9	+0.1
JAM	Amami Oshima	0.83	46	P	Pn	06 05 54.0	-1.2
JAM				eS	Sn	06 06 04.3	-2.4
JYRO	Yoronjima	0.91	208	P	Pn	06 05 56.8	+0.6
JYRO				eS	Sn	06 06 09.5	+1.1
JZK	Kikaishima	1.04	62	P	Pn	06 05 58.7	+0.7
JZK				eS	Sn	06 06 13.6	+2.0
JOW	Kunigami	1.15	210	P	Pn	06 05 59.9	+0.4
JOW				eS	Sn	06 06 14.8	+0.5
JOW	Kunigami	1.15	210	P	Pn	06 06 00.7	+1.3
	251nm,0.3s,baz=84,slow=21,SNR=978						
JOW				S	Sn	06 06 16.0	+1.8
	514nm,0.3s,baz=234,slow=27,SNR=26						
JOW	Kunigami	1.15	210		Pn	06 06 00.4	+0.9
JOW				Sn	Sn	06 06 15.2	+0.9
JIH	Iheya	1.17	227	P	Pn	06 05 59.8	+0.2
JIH				eS	Sn	06 06 14.8	+0.3
JTAJ	Takarajima	1.34	11	P	Pn	06 06 00.3	-1.6
JTAJ				eS	Sn	06 06 16.2	-2.5
JNTH	Nagotoyohara	1.54	212	P	Pn	06 06 05.7	+1.1
JNTH				eS	Sn	06 06 25.3	+1.8
JAGN	Aguni-jima	1.94	231	P	Pn	06 06 10.7	+0.5
JAGN				S	Sn	06 06 34.1	+0.7
JNN	Nakanoshima	2.17	22	P	Pn	06 06 11.9	-1.3
JNN				eS	Sn	06 06 37.2	-1.7
JKE	Kume jima 2	2.43	232	P	Pn	06 06 17.5	+0.7
JKE				eS	Sn	06 06 46.4	+1.1
JYAK	Yakushimahirau	2.77	30	P	Pn	06 06 20.2	-1.3
JYAK				S	Sn	06 06 50.5	-3.2
JKDJ	Kitadaitoujima	2.83	131	P	Pn	06 06 20.9	-1.4
JKDJ				eS	Sn	06 06 51.8	-3.4
JKC	Kuchinoerabu	2.84	23	P	Pn	06 06 21.6	-0.9
JMZ	Minamidaito 2	2.87	134	P	Pn	06 06 21.6	-1.2
JMZ				S	Sn	06 06 52.3	-3.9
JMTN	Minamitane	3.08	34	P	Pn	06 06 25.2	-0.6
JTN	Tanegashima 3	3.34	32	P	Pn	06 06 28.6	-0.6
JNU	Nakatsue	5.53	17	P	Pn	06 07 01.5	+2.1
	44nm,0.3s,baz=279,slow=1.9,SNR=294						
JNU				S	Sn	06 08 06.6	+4.9
	baz=183,slow=21,SNR=2.0						
JNU				LR	LR	06 09 21.3	
	comp=Z,489nm,21.2s,baz=162,slow=40						
JNU	Nakatsue	5.53	17		Pn	06 07 01.5	+2.1
JNU				Sn	Sn	06 08 07.0	+5.3
YOJ	Yonaguni jima	6.29	239		Pn	06 07 10.1	+0.5
YOJ	Yonaguni jima	6.29	239	P	Pn	06 07 10.1	+0.5
TATO	Taipei	7.25	249		Pn	06 07 23.1	+0.3
YHNB	Yeheng	7.47	247		Pn	06 07 26.6	+0.6
SSE	Sheshan	7.49	298	P	Pn	06 07 26.9	+0.8
SSE				pmax	pmax		
	comp=Z,11nm,0.7s						
SSE				pmax	pmax		
	comp=Z,130nm,8.3s						
SSE	Sheshan	7.49	298		Pn	06 07 26.8	+0.7
NACB	Ninganchiao	7.53	243		Pn	06 07 26.3	-0.5
YULB	Yu-li	8.18	239		Pn	06 07 33.1	-2.6
YULB				Sn	Sn	06 09 02.3	-4.4
SSLB	Suanglung	8.23	242		Pn	06 07 34.5	-1.9
SSLB				Sn	Sn	06 09 05.5	-2.6
TJN	Taejon	8.62	352	ceP	Pn	06 07 44.6	+3.0
TWG	Pinlang	8.68	237		Pn	06 07 39.6	-2.9
TPUB	Ta-pu	8.74	241		Pn	06 07 42.1	-1.2
TPUB				Sn	Sn	06 09 19.8	-0.7
KSAR	Wonju Array Be	9.62	355		Pn	06 07 58.5	+3.2
KSAR	Wonju Array Be	9.62	355	P	Pn	06 07 58.5	+3.2
KSRS	Korea Array	9.63	355	P	Pn	06 07 57.5	+2.1
	2.0nm,0.3s,baz=174,slow=14,SNR=89						
KSRS				LR	LR	06 11 46.3	
	comp=Z,482nm,19.7s,baz=178,slow=38						
KS19	Wonju Array Si	9.68	355		Pn	06 07 58.6	+2.5
NJ2	Nanjing	9.69	298	eP	Pn	06 07 57.4	+1.1
NJ2				pmax	pmax		
	comp=Z,48nm,0.7s						
QZH	Quanzhou	9.70	255	P	Pn	06 07 59.7	+3.3
QZH				S	Sn	06 09 49.1	+5.2
QZH				LR	LR		
	comp=N,420nm,16.1s						
QZH				LR	LR		
	comp=E,200nm,6.2s						
INCN	Inchon	9.81	349		Pn	06 07 59.3	+1.3
INCN	Inchon	9.81	349	P	Pn	06 07 59.3	+1.3
KNMB	Chin-men Tao	10.04	253		Pn	06 08 01.2	+0.1
INU	Inuyama	10.18	41		Pn	06 08 05.0	+2.1
INU					Sn	06 09 57.8	+2.1
MAJO	Matsushiro	11.71	40		Pn	06 08 26.7	+2.9
MAJO	Matsushiro	11.71	40	i P	Pn	06 08 26.2	+2.4
MAT	Matsushiro	11.71	40	P	Pn	06 08 26.0	+2.2
MJAR	Matsushiro Arr	11.71	40	P	Pn	06 08 26.3	+2.4
	0.3nm,0.3s,baz=245,slow=13,SNR=19						
MJAR				LR	LR	06 13 04.0	
	comp=Z,143nm,20.5s,baz=190,slow=38						
MJB9	Matsu-Tunnel	11.71	40		Pn	06 08 26.7	+2.8
JCJ	Chichijima	11.80	91	P	Pn	06 08 25.4	+0.3
	11nm,0.3s,baz=296,slow=22,SNR=13						
JCJ				LR	LR	06 12 30.8	
	comp=Z,215nm,22.0s,baz=298,slow=35						
WHN	Wuhan	13.02	285	P	Pn	06 08 43.8	+2.1
WHN				pP	P	06 08 51.4	+0.9
TIA	Tai'an	13.03	313	P	Pn	06 08 42.9	+1.0
TIA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJT	Baijiatuau	16.09	322	P	P	06 09 24.5	-0.1
BJT	Baijiatuau	16.09	322	P	P	06 09 24.5	-0.1
BJT				pmax	pmax		
	comp=Z,35nm,1.1s						
BJI	Beijing	16.11	322	P	P	06 09 25.9	+1.2
BJI				pP	pP	06 09 37.8	+1.3
BJI				sP	sP	06 09 45.2	+1.8
BJI				S	Sn	06 12 17.5	-2.4
BJI				pmax	pmax		
	comp=Z,30nm,1.0s						
USA0B	Ussuriysk Arra	16.52	8	Pn	P	06 09 28.8	-0.4
USA0B	Ussuriysk Arra	16.52	8	P	P	06 09 28.8	-0.4
USA0B				pmax	pmax		
	comp=Z,5.0nm,0.8s						
USRK	Ussuriysk Ar.	16.52	8	P	Pn	06 09 27.2	-0.2
	baz=188,slow=9.7,SNR=16						
USRK				LR	LR	06 15 12.3	
	comp=Z,187nm,21.1s,baz=167,slow=35						
USRK	Ussuriysk Ar.	16.52	8	P	P	06 09 28.7	-0.5
USRK	Ussuriysk Ar.	16.52	8	P	P	06 09 28.7	-0.5
MDJ	Mudanjiang	16.76	2	P	Pn	06 09 30.2	-0.2
MDJ				pP	pP	06 09 38.6	-5.2
MDJ				S	Sn	06 12 33.4	-2.2
MDJ				SS	SnSn	06 12 51.3	+1.6
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,92nm,3.5s						
MDJ				LR	LR		
	comp=Z,320nm,6.3s						
MDJ				LR	LR		
	comp=Z,280nm,5.8s						
MDJ				LR	LR		
	comp=Z,440nm,11.3s						
MDJ	Mudanjiang	16.76	2	P	P	06 09 31.5	-0.4
ENH	Enshi	17.17	283	P	P	06 09 36.6	0.0
XAN	Xi'an	18.23	295	P	Pn	06 09 49.2	+0.5
XAN				pP	pP	06 10 02.5	+2.3
XAN				PP	sP	06 10 08.1	+1.1
XAN				S	Sn	06 13 04.2	-7.2
XAN				pmax	pmax		
	comp=Z,42nm,0.5s						
XAN				LR	LR		
	comp=Z,380nm,8.8s						
XAN				LR	LR		
	comp=Z,280nm,8.4s						
XAN				LR	LR		
	comp=Z,370nm,13.9s						
XAN	Xi'an	18.23	295	P	Pn	06 09 49.0	+0.3
XAN				IAmb	IAmb	06 09 52.4	
	comp=Z,54nm,0.6s						
XAN	Xi'an	18.23	295	P	Pn	06 09 49.0	+0.3
XAN				pmax	pmax		
	comp=Z,54nm,0.6s						
ERM	Erimo	18.30	36	P	P	06 09 47.2	-1.8
ERM				IAmb	IAmb	06 09 57.9	
	comp=Z,80nm,1.2s						
ERM	Erimo	18.30	36	P	P	06 09 47.2	-1.8
ERM				pmax	pmax		
	comp=Z,80nm,1.3s						
HHC	Hu-ho-hao-te	19.29	317	eP	P	06 10 00.4	+0.4
HHC				pP	sP	06 10 15.8	-2.9
HHC				sP	pP	06 10 21.5	+10
HHC				pmax	pmax		
	comp=Z,150nm,4.2s						
QIZ	Qiongzhong	19.56	247	P	P	06 10 02.4	-0.5
QIZ				S	S	06 13 38.8	-2.2
QIZ				LR	LR		
	comp=Z,200nm,16.3s						
QIZ				LR	LR		
	comp=Z,120nm,11.6s						
QIZ				LR	LR		
	comp=Z,160nm,12.5s						
ASAJ	Asahikawa	19.61	30	P	P	06 10 03.4	+0.1
	comp=Z,2.0nm,0.3s,baz=202,slow=9.0,SNR=16						
JKA	Kamikawa-asahi	19.61	30	P	P	06 10 03.4	+0.1
BTO	Baotou	20.11	314	eP	P	06 10 08.7	-0.2
KLR	Kul'dur	21.48	5	P	P	06 10 19.9	-3.4
	comp=Z,4.5nm,0.6s,baz=193,slow=9.8,SNR=28						
KLR	Kul'dur	21.48	5	i P	P	06 10 23.1	-0.2
KLR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YSS	Yuzh-Sakhalins	21.96	26	P	P	06 10 28.8	+0.3
YSS				IAmb	IAmb	06 10 30.6	
	comp=Z,62nm,1.2s						
YSS	Yuzh-Sakhalins	21.96	26	eP	P	06 10 28.6	0.0
YSS				e		06 11 03.0	
YSS				eS	S	06 14 21.7	-6.1
YSS				eSS	SnSn	06 14 59.2	+2.1
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
CD2	Chengdu	22.13	284	⇓iP	P	06 10 30.7	+0.1
CD2				S	S	06 14 30.3	-1.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2				pmax	pmax		
	comp=Z,200nm,5.4s						
CD2				LR	LR		
	comp=Z,540nm,10.3s						
CD2				LR	LR		
	comp=Z,340nm,9.4s						
CD2				LR	LR		
	comp=Z,360nm,6.6s						
LZH	Lanzhou	22.77	297	eP	P	06 10 37.2	-0.3
LZH				pP	pP	06 10 48.4	-1.3
LZH				sP	sP	06 10 56.1	-0.4
LZH				pmax	pmax		
	comp=Z,44nm,1.1s						
LZH				pmax	pmax		
	comp=Z,140nm,4.9s						
LZH				LR	LR		
	comp=Z,340nm,13.2s						
LZH				LR	LR		
	comp=Z,410nm,14.6s						
LZH				LR	LR		
	comp=Z,460nm,14.1s						
KMI	Kunming	23.58	269	P	P	06 10 45.7	+0.1
KMI	Kunming	23.58	269	P	P	06 10 45.7	+0.1
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SLVN	Son La	23.63	260	P	P	06 10 46.1	+0.2
TYV	Tymovskoe	25.25	21	eP	P	06 11 01.6	+1.3
TYV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TYV				MLR	MLR		
	comp=Z,800nm,23.0s						
SPMM	Sapulut	25.88	210	P	P	06 10 55.0	-11
ULN	Ulaanbaatar	26.26	325	P	P	06 11 09.5	-0.2
ULN	Ulaanbaatar	26.26	325	ceP	P	06 11 09.0	-0.7
ULN				pmax	pmax		
	comp=Z,18nm,1.7s						
SONM	Songino Array	26.57	325	P	P	06 11 12.1	-0.4
	comp=Z,4.4nm,0.4s,baz=143,slow=9.7,SNR=25						
SONM				PcP	PcP	06 14 36.1	+0.5
	comp=Z,0.7nm,0.5s,baz=154,slow=3.4,SNR=5.1						
SONM				LR	LR	06 22 35.0	
	comp=Z,174nm,18.3s,baz=91,slow=38						
SONM	Songino Array	26.57	325	P	P	06 11 12.1	-0.4
GTA	Gaotai	26.73	303	⇑P	P	06 11 12.5	-1.6
GTA				PcP	PcP	06 14 38.8	+2.6
GTA				SS	SS	06 16 57.0	-43
GTA				PcS	PcS	06 18 17.3	-0.3
GTA				pmax	pmax		
	comp=Z,56nm,1.0s						
GTA				pmax	pmax		
	comp=Z,200nm,4.3s						
GTA				LR	LR		
	comp=Z,170nm,19.7s						
GTA				LR	LR		
	comp=Z,280nm,20.6s						
GTA				LR	LR		
	comp=Z,270nm,20.0s						
PBKT	Sadao Pong	28.14	252	P	P	06 11 26.7	+0.1
CHTO	Chiang Mai	28.89	258	P	P	06 11 33.3	-0.1
CHTO	Chiang Mai	28.89	258	P	P	06 11 33.3	-0.1
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CMAR	Chiang Mai Arr	29.04	258	P	P	06 11 35.8	+1.1
	comp=Z,2.1nm,0.4s,baz=53,slow=7.2,SNR=5.6						
CMAR				PcP	PcP	06 14 43.2	+1.2
	comp=Z,1.1nm,0.4s,baz=77,slow=0.7,SNR=5.0						
CMAR				LR	LR	06 24 32.2	
	comp=Z,108nm,18.5s,baz=75,slow=39						
TLY	Talaya	30.45	328	P	P	06 11 47.0	+0.2
TLY	Talaya	30.45	328	i P	P	06 11 46.9	0.0
TLY				pmax	pmax		
	comp=Z,9.0nm,1.7s						
FAKI	Fak Fak	30.74	173	P	P	06 11 50.9	+1.2
FAKI				IAmb	IAmb	06 12 01.2	
	comp=Z,49nm,1.2s						
BKB	Balikpapan	31.15	204	P	P	06 11 50.3	-3.0
JAY	Jayapura	32.23	158	LR	LR	06 22 15.2	
	comp=Z,124nm,21.7s,baz=224,slow=31						
PEA0B	Petropavlovsk-	33.01	32	P	P	06 12 09.0	-0.3
PEA0B				IAmb	IAmb	06 12 09.4	
	comp=Z,49nm,1.4s						
PEA0B	Petropavlovsk-	33.01	32	P	P	06 12 09.0	-0.3
PEA0B				pmax	pmax		
	comp=Z,49nm,1.4s						
PETK	Petropavlovsk-	33.01	32	P	P	06 12 08.6	-0.7
	comp=Z,5.6nm,0.6s,baz=207,slow=5.4,SNR=12						
PETK				LR	LR	06 25 41.6	
	comp=Z,84nm,21.2s,baz=240,slow=36						
PETK	Petropavlovsk-	33.01	32	P	P	06 12 08.3	-1.0
LSA	Lhasa	33.07	282	P	P	06 12 10.9	+0.3
LSA	Lhasa	33.07	282	P	P	06 12 10.9	+0.3
LSA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SHL	Shillong	33.09	275	P	P	06 12 10.2	-0.3
SHL	Shillong	33.09	275	P	P	06 12 10.2	-0.3
SHL				pmax	pmax		
	comp=Z,20nm,0.3s						
PET	Petropavlovsk	33.42	33	P	P	06 12 13.2	+0.4
PET	Petropavlovsk	33.42	33	P	P	06 12 13.2	+0.4
PET				pmax	pmax		
	comp=Z,52nm,1.4s						
KULM	Kulim	34.99	235	P	P	06 12 29.3	+2.4
MA2	Magadan	35.10	19	ceP	P	06 12 25.4	-1.9
MA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
H11N2	WAKE ISLAND Hy	35.56	95	T	T	06 50 06.5	
	baz=290,slow=74,SNR=122						
H11N1	WAKE ISLAND Hy	35.56	95	T	T	06 50 06.6	
	baz=290,slow=74,SNR=112						
H11N3	WAKE ISLAND Hy	35.58	95	T	T	06 50 07.7	
	baz=290,slow=74,SNR=121						
H11S3	WAKE ISLAND Hy	35.82	97	T	T	06 50 34.0	
	baz=292,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	35.83	97	T	T	06 50 31.9	
	baz=292,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	35.84	97	T	T	06 50 30.8	
	baz=292,slow=75,SNR=9.8						
TAPN	Taplejung	36.41	279	eP	P	06 12 40.3	+1.0
	comp=Z,10nm,0.5s						
WMQ	Urumqi	36.62	307	eP	P	06 12 40.6	0.0
WMQ				sP	sP	06 13 06.5	+5.7
WMQ				PcP	PcP	06 15 03.1	+0.4
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,290nm,5.7s						
WMQ				LR	LR		
	comp=Z,710nm,29.0s						
WMQ				LR	LR		
	comp=Z,1µm,29.1s						
WMQ				LR	LR		
	comp=Z,260nm,19.9s						
ODAN	Odare	36.78	278	eP	P	06 12 42.4	0.0
	comp=Z,44nm,0.4s						
RAMN	Ramite	37.45	279	eP	P	06 12 48.1	0.0
	comp=Z,14nm,0.5s						
JIRN	Jiri	37.68	280	eP	P	06 12 50.2	+0.1
	comp=Z,24nm,0.3s						
GUN	Gumba	37.90	281	eP	P	06 12 53.1	+1.1
	comp=Z,41nm,0.3s						
SEY	Seymchan	38.31	17	i P	P	06 12 53.9	-0.6
PKI	Pulchoki	38.38	280	eP	P	06 12 55.3	-0.7
	comp=Z,38nm,0.4s						
PKIN	Phulchoki	38.39	280	eP	P	06 12 55.5	-0.5
	comp=Z,39nm,0.4s						
KKN	Kakani	38.45	280	eP	P	06 12 56.6	+0.2
	comp=Z,36nm,0.5s						
GKN	Gorkha	38.97	281	eP	P	06 13 01.0	+0.3
	comp=Z,33nm,0.3s						
DANN	Dangsing	39.67	282	eP	P	06 13 07.2	+0.5
	comp=Z,67nm,0.5s						
KOLN	Koldanda	39.91	281	eP	P	06 13 08.9	+0.2
	comp=Z,11nm,0.3s						
MTN	Manton Dam	40.49	177	P	P	06 13 13.4	+0.3
MK31	Makanchi Array	40.95	310	P	P	06 13 16.9	+0.1
MK31	Makanchi Array	40.95	310	P	P	06 13 16.9	+0.1
MK31				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MKAR	Makanchi Array	40.95	310	P	P	06 13 15.6	-1.2
	comp=Z,6.5nm,0.4s,baz=90,slow=10,SNR=232						
MKAR				PcP	PcP	06 15 16.4	+0.2
	comp=Z,1.7nm,0.5s,baz=80,slow=3.4,SNR=5.7						
MKAR	Makanchi Array	40.95	310	P	P	06 13 16.9	+0.1
PMG	Port Moresby	41.01	152	P	P	06 13 19.1	+1.6
PMG				IAmb	IAmb	06 13 32.8	
	comp=Z,17nm,1.0s						
PMG	Port Moresby	41.01	152	P	P	06 13 19.1	+1.6
PMG				pmax	pmax		
	comp=Z,17nm,1.0s						
MAKZ	Makanchi	41.16	310	P	P	06 13 18.8	+0.3
MAKZ	Makanchi	41.16	310	P	P	06 13 18.8	+0.3
MAKZ				pmax	pmax		
	comp=Z,13nm,1.2s						
ZAA0	Zalesovo Array	41.36	321	P	P	06 13 19.6	-0.4
ZAA0				IAmb	IAmb	06 13 20.1	
	comp=Z,13nm,0.5s						
ZALV	Zalesovo Beam	41.36	321	P	P	06 13 19.0	-1.0
	comp=Z,16nm,0.4s,baz=112,slow=8.2,SNR=88						
ZALV				PcP	PcP	06 15 16.9	-0.4
	comp=Z,1.9nm,0.4s,baz=110,slow=3.5,SNR=6.2						
ZALV	Zalesovo Beam	41.36	321	P	P	06 13 19.6	-0.4
PDGK	Podgornoye	42.45	305	P	P	06 13 29.0	-0.2
KNRA	Kununurra	43.25	180	P	P	06 13 37.0	+1.3
COEN	Coen	43.78	160	P	P	06 13 41.4	+1.5
COEN				IAmb	IAmb	06 13 57.9	
	comp=Z,32nm,1.5s						
TIXI	Tiksi	43.86	360	P	P	06 13 39.9	0.0
TIXI	Tiksi	43.86	360	i P	P	06 13 40.7	+0.7
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURK	Kurchatov	44.10	315	P	P	06 13 42.4	+0.2
KURK				IAmb	IAmb	06 13 43.0	
	comp=Z,17nm,1.0s						
KURK	Kurchatov	44.10	315	ceP	P	06 13 41.9	-0.3
KURK				pmax	pmax		
	comp=Z,27nm,1.7s						
KURBB	Kurchatov Arra	44.14	315	P	P	06 13 42.2	-0.3
	comp=Z,15nm,0.5s,baz=100,slow=9.1,SNR=54						
ULHL	Ulahol	44.78	303	P	P	06 13 48.8	+0.7
	SNR=10						
NRN	Naryn	44.96	302	P	P	06 13 50.5	+0.9
NRN				IAmb	IAmb	06 13 51.0	
	comp=Z,14nm,1.0s						
NRN	Naryn	44.96	302	P	P	06 13 50.5	+0.9
NRN				pmax	pmax		
	comp=Z,14nm,1.0s						
KSH	Kashi	45.00	299	P	P	06 13 53.6	+3.9
KSH				PP	PP	06 15 41.0	+5.4
KSH				S	S	06 20 24.4	-0.1
KSH				ScS	ScS	06 23 39.1	-3.0
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,510nm,6.3s						
KSH				LR	LR		
	comp=Z,290nm,4.9s						
KSH				LR	LR		
	comp=Z,330nm,6.4s						
KSH				LR	LR		
	comp=Z,530nm,9.2s						
BOOM	Boomskoye usch	45.01	303	P	P	06 13 49.5	-0.4
BOOM	Boomskoye usch	45.01	303	P	P	06 13 49.5	-0.4
BOOM				pmax	pmax		
	comp=Z,57nm,1.5s						
KBK	Karagaybulak	45.75	304	P	P	06 13 56.5	+0.8
	SNR=9.5						
FITZ	Fitzroy Crossi	45.77	184	P	P	06 13 56.7	+0.9
	comp=Z,9.2nm,0.7s,baz=9.7,slow=7.6,SNR=15						
FITZ	Fitzroy Crossi	45.77	184	P	P	06 13 56.8	+1.1
FITZ				IAmb	IAmb	06 14 06.1	
	comp=Z,35nm,1.5s						
CHMS	Chumysh	45.90	304	P	P	06 13 57.5	+0.8
	SNR=18						
BILL	Bilibino	45.96	19	P	P	06 13 56.3	-0.4
BILL	Bilibino	45.96	19	ceP	P	06 13 56.1	-0.6
BILL				pmax	pmax		
	comp=Z,18nm,2.1s						
UCH	Uchtor	46.07	303	P	P	06 13 60.0	+1.4
	SNR=6.0						
AAK	Ala-Archa	46.08	304	P	P	06 13 58.3	0.0

comp=Z,6.3nm,0.5s,baz=104,slow=6.2,SNR=25
AAK PcP PcP 06 15 34.0 +0.2
comp=Z,1.9nm,0.6s,baz=84,slow=3.8,SNR=4.4
AAK Ala-Archa 46.08 304 P P 06 13 59.1 +0.8
SNR=8.2
AAK Ala-Archa 46.08 304 P P 06 13 59.2 +1.0
AAK IAmb IAmb 06 13 59.4
comp=Z,7.6nm,0.6s
AAK Ala-Archa 46.08 304 P P 06 13 59.3 +1.0
AAK pmax pmax
comp=Z,8.0nm,0.6s
USP Ospenovka 46.09 304 P P 06 13 58.4 +0.3
SNR=6.6
WB0 Warramunga Arr 47.62 173 P P 06 14 10.8 +0.6
WB0 IAmb IAmb 06 14 11.4
comp=Z,14nm,0.6s
HNR Honiara 47.69 137 P P 06 14 07.6 -3.2
comp=Z,129nm,0.4s,baz=301,slow=12,SNR=4.6
HNR Honiara 47.69 137 P P 06 14 07.6 -3.2
HNR pmax pmax
comp=Z,214nm,0.8s
NIL Nilore 47.72 291 P P 06 14 11.9 +0.8
NIL IAmb IAmb 06 14 12.1
comp=Z,15nm,0.8s
NIL Nilore 47.72 291 P P 06 14 11.9 +0.8
NIL pmax pmax
comp=Z,15nm,0.8s
WRAB Tennant Creek 47.77 173 P P 06 14 12.2 +0.8
WRAB IAmb IAmb 06 14 12.8
comp=Z,11nm,0.7s
WRAB Tennant Creek 47.77 173 ceP P 06 14 12.9 +1.5
WRAB pmax pmax
comp=Z,13nm,1.3s
WRA Warramunga Arr 47.78 173 P P 06 14 10.4 -1.0
comp=Z,10nm,0.6s,baz=354,slow=8.4,SNR=29
WRA LR LR 06 33 52.4
comp=Z,51nm,20.9s,baz=265,slow=35
WRA Warramunga Arr 47.78 173 P P 06 14 12.1 +0.6
WRA Warramunga Arr 47.78 173 P P 06 14 12.1 +0.6
WRA pmax pmax
comp=Z,1.0nm,0.6s
WR0 Warramunga Arr 47.82 173 P P 06 14 12.5 +0.7
WR0 IAmb IAmb 06 14 13.1
comp=Z,18nm,1.1s
KK31 Karatay Array 49.01 304 P P 06 14 21.1 +0.3
KK31 Karatay Array 49.01 304 P P 06 14 21.1 +0.3
KK31 pmax pmax
comp=Z,23nm,0.5s
KKAR Karatay Array 49.01 304 P P 06 14 21.0 +0.2
KKAR Karatay Array 49.01 304 P P 06 14 21.2 +0.5
KKAR Karatay Array 49.01 304 P P 06 14 21.0 +0.2
KKAR pmax pmax
comp=Z,23nm,0.5s
BVAR Borovoye Array 49.51 317 P P 06 14 23.2 -1.3
comp=Z,10nm,0.4s,baz=92,slow=8.4,SNR=90
BVAR PcP PcP 06 15 45.7 0.0
comp=Z,6.5nm,0.3s,baz=118,slow=3.1,SNR=16
BRVK Borovoye 49.57 317 P P 06 14 24.7 -0.2
BRVK Borovoye 49.57 317 P P 06 14 24.7 -0.2
BRVK pmax pmax
comp=Z,17nm,0.5s
PSAC1 Pilbara Seismi 49.86 191 P P 06 14 28.2 +0.9
PSAC1 IAmb IAmb 06 14 45.3
comp=Z,14nm,1.0s
PSAC2 Pilbara Seismi 49.88 191 P P 06 14 28.6 +1.1
PSAC2 IAmb IAmb 06 14 45.9
comp=Z,22nm,1.0s
PSAA2 Pilbara Seismi 49.88 191 P P 06 14 28.3 +0.7
PSAA2 IAmb IAmb 06 14 45.8
comp=Z,10nm,0.9s
PSA00 Pilbara Seismi 49.89 191 P P 06 14 28.2 +0.6
PSA00 IAmb IAmb 06 14 44.7
comp=Z,15nm,1.1s
PSAB1 Pilbara Seismi 49.90 191 P P 06 14 28.2 +0.6
PSAB1 IAmb IAmb 06 14 32.0
comp=Z,36nm,1.5s
PSAA3 Pilbara Seismi 49.90 191 P P 06 14 28.9 +1.3
PSAA1 Pilbara Seismi 49.90 191 P P 06 14 28.5 +0.9
PSAA1 IAmb IAmb 06 14 44.8
comp=Z,18nm,1.1s
PSAB3 Pilbara Seismi 49.91 191 P P 06 14 28.6 +0.9
PSAB3 IAmb IAmb 06 14 46.2
comp=Z,23nm,1.1s
PSAC3 Pilbara Seismi 49.95 191 P P 06 14 28.7 +0.7
PSAC3 IAmb IAmb 06 14 45.9
comp=Z,16nm,0.9s
PSAD3 Pilbara Seismi 49.98 191 P P 06 14 29.1 +0.9
PSAD3 IAmb IAmb 06 14 35.1
comp=Z,19nm,1.1s
KBL Kabul 51.02 293 P P 06 14 36.9 +0.5
KBL IAmb IAmb 06 14 38.6
comp=Z,13nm,0.8s
KBL Kabul 51.02 293 P P 06 14 36.9 +0.5
KBL pmax pmax
comp=Z,13nm,0.8s
AS31 Alice Springs 51.42 174 P P 06 14 40.2 +1.0
ASAR Alice Springs 51.42 174 P P 06 14 40.0 +0.8
comp=Z,3.8nm,0.5s,baz=357,slow=9.2,SNR=57
ASAR Alice Springs 51.42 174 P P 06 14 40.4 +1.2
ASAR Alice Springs 51.42 174 P P 06 14 40.4 +1.2
ANM Nome 54.81 29 P P 06 15 04.8 +1.2
ANM Nome 54.81 29 P P 06 15 04.8 +1.2
ANM pmax pmax
comp=Z,19nm,0.6s
AB31 Akbulak array 56.01 312 eP P 06 15 11.7 -0.8
ABKAR Akbulak array 56.01 312 P P 06 15 12.4 -0.1
ABKAR Akbulak array 56.01 312 P P 06 15 12.8 +0.3
ARU Arti 56.53 321 P P 06 15 15.6 -0.5
ARU IAmb IAmb 06 15 17.0
comp=Z,16nm,1.1s
ARU Arti 56.53 321 d iP P 06 15 15.2 -0.8
ARU 06 16 11.4
ARU S S 06 23 02.7 -0.6
ARU SS SS 06 26 45.1 -5.8
ARU pmax pmax
comp=Z,13nm,1.1s
GEYT Alibeck 59.03 299 P P 06 15 34.3 +0.3
comp=Z,2.4nm,0.4s,baz=67,slow=3.3,SNR=19
GEYT Alibeck 59.03 299 P P 06 15 34.5 +0.5
SVW2 Sparrevohn 59.09 33 P P 06 15 35.1 +1.2
SVW2 IAmb IAmb 06 15 35.5
comp=Z,13nm,1.2s
IMAR Indian Mountai 59.78 28 P P 06 15 39.2 +0.6
RSO Redoubt South 60.51 34 P P 06 15 44.5 +0.5
OHAK Old Harbor 60.55 38 P P 06 15 44.3 +0.3
OHAK IAmb IAmb 06 16 01.8
comp=Z,9.5nm,0.7s
PPLA Purkeypile 60.59 31 P P 06 15 45.6 +1.3
STKA Stephens Creek 60.59 168 P P 06 15 43.5 -1.0
comp=Z,1.7nm,0.5s,baz=0.8,slow=8.6,SNR=6.0
STKA LR LR 06 41 09.2
comp=Z,48nm,21.8s,baz=358,slow=35
STKA Stephens Creek 60.59 168 P P 06 15 45.4 +0.9
STKA Stephens Creek 60.59 168 P P 06 15 45.4 +0.9
STKA pmax pmax
comp=Z,1.0nm,1.2s
KDAK Kodiak Island 60.87 37 P P 06 15 46.7 +0.6
KDAK IAmb IAmb 06 16 01.9
comp=Z,15nm,0.8s
KDAK Kodiak Island 60.87 37 P P 06 15 46.7 +0.6
KDAK pmax pmax
comp=Z,15nm,0.9s
SKT Skwentna 60.97 32 P P 06 15 47.1 +0.3
SKT IAmb IAmb 06 15 47.8
comp=Z,12nm,1.2s
BPAW Bear Paw Mtn. 61.04 30 P P 06 15 48.3 +1.0
MLY Manley 61.08 29 P P 06 15 48.5 +1.0
KTH Kantishna Hill 61.11 30 P P 06 15 48.2 +0.4
KTH IAmb IAmb 06 15 49.5
comp=Z,18nm,1.4s
TOLK Toolik Lake Re 61.31 24 P P 06 15 49.8 +0.8
SUA Susitna One 61.39 33 P P 06 15 49.8 0.0
TRF Thorofare Moun 61.40 30 P P 06 15 50.7 +0.8
TRF IAmb IAmb 06 16 07.7
comp=Z,9.3nm,1.2s
DZM Mont Dzumac 61.44 140 LR LR 06 39 09.8
comp=Z,101nm,19.1s,baz=23,slow=33
BRLK Bradley Lake 61.51 35 P P 06 15 50.3 -0.2
BRLK IAmb IAmb 06 16 09.1
comp=Z,18nm,1.0s
BWN Browne 61.70 29 P P 06 15 53.3 +1.6
NEA Nenana 61.83 29 P P 06 15 53.1 +0.5
RC01 Rabbit Creek A 61.92 33 P P 06 15 54.2 +1.0
MCK McKinley 61.98 30 P P 06 15 54.0 +0.4
MCK IAmb IAmb 06 15 55.3
comp=Z,14nm,0.8s
MCK McKinley 61.98 30 P P 06 15 54.0 +0.4
MCK pmax pmax
comp=Z,14nm,0.8s
RND Reindeer 62.05 30 P P 06 15 54.1 -0.1
RND Reindeer 62.05 30 P P 06 15 54.1 -0.1
PMR Palmer 62.14 32 P P 06 15 54.7 0.0
PMR IAmb IAmb 06 15 55.5
comp=Z,15nm,1.2s
PMR Palmer 62.14 32 P P 06 15 54.7 0.0
PMR pmax pmax
comp=Z,15nm,1.2s
MDM Murphy Dome 62.15 29 P P 06 15 55.6 +0.9
SEW Seward 62.19 34 P P 06 15 54.7 -0.3
SEW IAmb IAmb 06 16 00.8
comp=Z,16nm,0.8s
GHO Glory Hole Cre 62.22 32 P P 06 15 55.3 0.0
GHO IAmb IAmb 06 16 00.2
comp=Z,16nm,1.2s
WRH Wood River Hil 62.26 29 P P 06 15 55.5 +0.1
WRH IAmb IAmb 06 16 03.4
comp=Z,6.6nm,0.7s
COLA College 62.32 29 P P 06 15 56.6 +0.8
COLA IAmb IAmb 06 15 57.5
comp=Z,12nm,0.6s
COLA College 62.32 29 P P 06 15 56.6 +0.8
COLA pmax pmax
comp=Z,12nm,0.6s
CCB Clear Creek Bu 62.36 29 P P 06 15 56.7 +0.6
CCB IAmb IAmb 06 16 01.9
comp=Z,5.7nm,0.5s
KNK Knik Glacier 62.49 33 P P 06 15 57.5 +0.5
KNK IAmb IAmb 06 16 16.5
comp=Z,16nm,0.8s
IL31 62.74 29 P P 06 15 58.8 +0.2
IL31 IAmb IAmb 06 16 03.7
comp=Z,5.4nm,0.6s
ILAR Eielson Array 62.74 29 P P 06 15 57.8 -0.9
comp=Z,1.5nm,0.5s,baz=273,slow=5.1,SNR=62
ILAR Eielson Array 62.74 29 P P 06 15 58.1 -0.5
ILAR Eielson Array 62.74 29 P P 06 15 58.1 -0.5
DHY Denali Highway 62.76 31 P P 06 15 59.2 +0.2
DHY IAmb IAmb 06 16 05.7
comp=Z,8.6nm,0.7s
HDA Harding Lake 62.76 29 P P 06 15 58.6 -0.1
HDA IAmb IAmb 06 15 59.1
comp=Z,14nm,0.8s
SCM Sheep Creek Mo 62.96 32 P P 06 16 00.7 +0.4
SCM IAmb IAmb 06 16 06.4
comp=Z,14nm,0.8s
SCM Sheep Creek Mo 62.96 32 P P 06 16 00.7 +0.4
SCM pmax pmax
comp=Z,14nm,0.8s
FYU Fort Yukon 63.17 27 P P 06 16 02.8 +1.4
FYU IAmb IAmb 06 16 04.0
comp=Z,24nm,1.3s
PRP Porcupine Dome 63.20 28 P P 06 16 01.9 0.0
PRP IAmb IAmb 06 16 03.3
comp=Z,13nm,1.2s
GLI Glacier Island 63.22 33 P P 06 16 01.6 -0.3
GLI IAmb IAmb 06 16 20.0
comp=Z,12nm,0.9s
BMAR Burnt Mountain 63.30 26 P P 06 16 04.0 +1.6
FID Port Fidalgo 63.54 33 P P 06 16 03.9 -0.1
HIN Hinchinbrook I 63.59 33 P P 06 16 05.2 +0.9
PAX Paxson 63.63 31 P P 06 16 05.9 +1.2
PAX IAmb IAmb 06 16 11.5
comp=Z,6.8nm,0.6s
PAX Paxson 63.63 31 P P 06 16 05.9 +1.2
PAX pmax pmax
comp=Z,7.0nm,0.6s
RIDG Independent Ri 63.78 30 P P 06 16 05.2 -0.4
RIDG IAmb IAmb 06 16 07.2
comp=Z,17nm,1.2s
EYAK Cordova Ski Ar 63.93 33 P P 06 16 07.5 +0.9
EYAK IAmb IAmb 06 16 20.1
comp=Z,13nm,1.2s
SCRK Sand Creek 64.11 29 P P 06 16 07.7 -0.2
SCRK IAmb IAmb 06 16 27.1
comp=Z,8.4nm,0.8s
DOT Dot Lake 64.14 30 P P 06 16 07.8 -0.1
DOT IAmb IAmb 06 16 11.7
comp=Z,9.4nm,0.7s
MENT Mentasta 64.42 30 IAmb IAmb 06 16 11.1
comp=Z,9.6nm,0.7s
MENT P P 06 16 11.2 +1.4
GLB Gilahina Butte 64.68 32 P P 06 16 12.2 +0.7
GLB IAmb IAmb 06 16 12.6
comp=Z,8.4nm,0.6s
VRDI Verde Repeater 64.90 32 P P 06 16 13.6 +0.5
VRDI IAmb IAmb 06 16 14.3
comp=Z,24nm,1.3s
MCARA McCarthy VSAT 65.07 32 P P 06 16 14.9 +0.9
MCARA IAmb IAmb 06 16 16.9
comp=Z,16nm,1.0s
CRQM Cirque 65.15 33 P P 06 16 15.4 +0.7
CRQM IAmb IAmb 06 16 29.0
comp=Z,12nm,0.8s
EGAK Eagle 65.15 28 P P 06 16 15.0 +0.5
TGL Tana Glacier 65.30 33 P P 06 16 16.2 +0.6
TGL IAmb IAmb 06 16 16.8
comp=Z,18nm,1.1s
BALM Baldy 65.46 32 P P 06 16 17.2 +0.5
TMCR Tamitsa 65.70 331 eP P 06 16 17.0 -1.0
TMCR pmax pmax
comp=Z,27nm,0.6s
BARN Barnard Glacie 65.78 32 P P 06 16 19.5 +0.6
BARN IAmb IAmb 06 16 20.3
comp=Z,18nm,1.4s
KLMR Klimovskoe 65.83 328 eP P 06 16 16.5 -2.4
KLMR AMP 06 16 20.7
comp=Z,25nm,1.7s
KLMR Klimovskoe 65.83 328 eP P 06 16 16.4 -2.4
KLMR pmax pmax
comp=Z,25nm,1.7s
CTGM Chitina Glacie 65.96 32 P P 06 16 20.8 +0.8
CTGM IAmb IAmb 06 16 21.6
comp=Z,15nm,1.2s
EPYK Eagle Plains 66.55 26 P P 06 16 24.3 +0.8
PCA Pinnacle 66.70 33 P P 06 16 25.8 +1.2
VRH Novokhopyorsk 67.16 317 eP P 06 16 25.9 -1.6
VRH pmax pmax
comp=Z,20nm,0.5s
INK Inuvik 67.18 24 P P 06 16 27.6 +0.2
comp=Z,10.0nm,0.4s,baz=291,slow=6.2,SNR=28
INK Inuvik 67.18 24 P P 06 16 27.8 +0.5
INK IAmb IAmb 06 16 28.8
comp=Z,11nm,0.6s
INK Inuvik 67.18 24 P P 06 16 27.8 +0.5
INK pmax pmax
comp=Z,11nm,0.6s
SPITS Spitsbergen Ar 67.39 348 P P 06 16 27.6 -1.1
comp=Z,4.7nm,0.4s,baz=123,slow=10,SNR=52
GOF Gofitskoye 68.11 310 ⇑eP P 06 16 34.0 +0.3
ZEI Tsey 68.23 308 eP P 06 16 33.6 -1.1
ZEI pmax pmax
comp=Z,21nm,0.6s
KBZ Khabaz 68.63 309 P P 06 16 37.5 +0.6
comp=Z,32nm,0.8s,baz=94,slow=1.3,SNR=93
KBZ Khabaz 68.63 309 d iP P 06 16 37.4 +0.6
KBZ pmax pmax
comp=Z,41nm,1.0s
VSR Storozhevoye 68.69 318 eP P 06 16 35.3 -1.8
VSR pmax pmax
comp=Z,10.0nm,0.5s
VORD Divnogorie 68.69 317 eP P 06 16 35.5 -1.6
VORD pmax pmax
comp=Z,6.0nm,0.4s
KIV Kislovodsk 68.70 309 ⇓P P 06 16 37.7 +0.2
KIV Kislovodsk 68.70 309 P P 06 16 38.6 +1.0
KIV Kislovodsk 68.70 309 eP P 06 16 37.9 +0.4
KIV pmax pmax
comp=Z,81nm,1.0s
ARCES ARCESS Array B 68.75 338 P P 06 16 36.1 -1.1
comp=Z,3.8nm,0.4s,baz=75,slow=8.4,SNR=49
ARCES PcP PcP 06 17 01.7 +0.1
comp=Z,1.0nm,0.3s,baz=71,slow=5.2,SNR=6.6
ARE0 ARCESS Array S 68.75 338 P P 06 16 36.6 -0.6
SHA1 Shidzhatmaz 68.79 309 iP P 06 16 38.3 +0.1
OBN Obninsk 68.95 322 iP P 06 16 40.1 +1.5
OBN i 06 17 09.7
OBN pmax pmax
comp=Z,10.0nm,1.2s
AKH Akhalkalaki 68.95 307 ⇓P P 06 16 39.9 +0.6
WHY Whitehorse 69.08 32 P P 06 16 41.0 +1.4
WHY IAmb IAmb 06 16 41.1
comp=Z,7.3nm,0.6s
SKAG Skagway 69.27 33 P P 06 16 42.1 +1.6
C36M Paulatuk 69.98 21 P P 06 16 45.3 +0.5
JIS Juneau Island 70.14 34 P P 06 16 46.9 +1.0
JIS IAmb IAmb 06 16 48.2
comp=Z,18nm,1.3s
SOCY Socotra 71.19 274 P P 06 16 52.3 -0.9
FIA1 FINESS Array S 71.78 330 P P 06 16 55.3 -0.5
FIA1 IAmb IAmb 06 16 55.6
comp=Z,18nm,0.6s
FINES FINESS Array B 71.78 330 P P 06 16 54.9 -0.9
comp=Z,14nm,0.4s,baz=67,slow=5.8,SNR=240
FINES FINESS Array B 71.78 330 P P 06 16 55.3 -0.5
VSU Vasula 72.73 327 ceP P 06 17 01.3 -0.3
VSU pmax pmax
comp=Z,94nm,0.6s
DAG Danmarks Havn 73.75 353 iP P 06 17 06.0 -1.3
comp=Z,3.0nm,0.4s
DAG Danmarks Havn 73.75 353 iP P 06 17 06.0 -1.3
DAG pmax pmax
comp=Z,3.0nm,0.4s
RES Resolute Bay 73.86 11 P P 06 17 07.8 -0.1
comp=Z,22nm,0.5s,baz=309,slow=5.4,SNR=259
RES Resolute Bay 73.86 11 P P 06 17 08.0 0.0
RES Resolute Bay 73.86 11 P P 06 17 08.0 0.0
RES pmax pmax
comp=Z,24nm,0.6s
RAYN Ar Rayn 73.89 288 P P 06 17 09.3 +0.2
RAYN IAmb IAmb 06 17 10.3
comp=Z,21nm,1.2s
RAYN Ar Rayn 73.89 288 P P 06 17 09.3 +0.2
RAYN pmax pmax
comp=Z,21nm,1.2s
AKASG Malin Array Be 74.72 319 P P 06 17 12.6 -0.8
comp=Z,5.8nm,0.4s,baz=61,slow=6.4,SNR=30
AKASG LR LR 06 52 57.4
comp=Z,160nm,18.0s,baz=220,slow=38
AKASG Malin Array Be 74.72 319 P P 06 17 13.0 -0.4
AKBB Malin Array Si 74.72 319 P P 06 17 12.4 -1.0
AKBB IAmb IAmb 06 17 13.1
comp=Z,10.0nm,0.5s
AKBB Malin Array Si 74.72 319 P P 06 17 12.4 -1.0
AKBB pmax pmax
comp=Z,10.0nm,0.5s
TULEG Thule 75.29 4 P P 06 17 15.9 -0.4
SORM Soroca 76.35 317 ⇓P P 06 17 22.4 -0.3
BR131 Keskin Array S 76.54 308 P P 06 17 24.3 +0.1
BR131 IAmb IAmb 06 17 24.9
comp=Z,12nm,1.1s
BR131 Keskin Array S 76.54 308 P P 06 17 24.3 +0.1
BR131 pmax pmax
comp=Z,12nm,1.2s
BRTR Keskin Array B 76.54 308 P P 06 17 23.9 -0.3
comp=Z,6.8nm,0.6s,baz=120,slow=3.6,SNR=53
BRTR Keskin Array B 76.54 308 P P 06 17 24.3 0.0
BRTR Keskin Array B 76.54 308 iP P 06 17 24.0 -0.3
BRTR pmax pmax
comp=Z,7.0nm,0.6s
YKA Yellowknife Ar 76.82 25 P P 06 17 25.6 +0.4
comp=Z,5.8nm,0.5s,baz=301,slow=5.9,SNR=142
YKA LR LR 06 54 18.2
comp=Z,54nm,18.9s,baz=0.0,slow=38
TLCR 77.38 314 ⇓P P 06 17 28.8 +0.2
BIR Birlad 77.63 316 ⇑P P 06 17 30.7 +0.7
HFS Hagfors 77.69 332 P P 06 17 29.0 -1.1
comp=Z,4.6nm,0.5s,baz=83,slow=4.7,SNR=40
HFS Hagfors 77.69 332 P P 06 17 29.0 -1.1
KULLO Kullorsuaq 77.76 2 iP P 06 17 28.8 -1.4
comp=Z,11nm,0.7s
KULLO Kullorsuaq 77.76 2 iP P 06 17 28.8 -1.4
KULLO pmax pmax
comp=Z,11nm,0.7s
TOPG Topolog 77.80 314 ⇓P P 06 17 30.9 -0.1
NC405 NORSAR Array S 77.91 334 P P 06 17 30.5 -0.9
TESR Tescani 78.12 316 ⇑P P 06 17 32.6 -0.1
NB2 NORSAR Subarra 78.15 334 P P 06 17 30.9 -1.8
comp=Z,3.7nm,0.5s,baz=50,slow=5.6
NOA NORSAR Array B 78.15 334 P P 06 17 31.4 -1.3
comp=Z,4.8nm,0.5s,baz=51,slow=5.6,SNR=28
HARR Harsova 78.17 314 ⇑P P 06 17 33.6 +0.6
NC204 NORSAR Array S 78.18 334 P P 06 17 32.1 -0.8
ODBI Odobesti 78.22 316 ⇓P P 06 17 33.4 +0.1
BIZ Bicaz 78.25 317 ⇑P P 06 17 33.6 +0.2
VRI Vrincioaia 78.37 316 ⇑P P 06 17 34.8 +0.6
PLOR Plostina 78.43 316 ⇑P P 06 17 34.9 +0.4
BUR08 Bucovina Ar. S 78.46 318 P P 06 17 35.5 +0.8
BURAR Bucovina Array 78.46 318 ⇓P P 06 17 34.9 +0.2
BURAR Bucovina Array 78.46 318 P P 06 17 35.2 +0.5
ICOR Ion Corvin 78.51 314 ⇓P P 06 17 35.7 +0.8
OZUR 78.84 316 ⇑P P 06 17 37.3 +0.5
KWP Kalwaria Pacla 78.93 320 P P 06 17 38.1 +0.9
KWP Kalwaria Pacla 78.93 320 P P 06 17 38.1 +0.9
KWP pmax pmax
comp=Z,220nm,0.7s
MLR Muntele Rosu 79.03 316 P P 06 17 36.3 -1.7
comp=Z,3.3nm,0.4s,baz=354,slow=9.7,SNR=14
MLR Muntele Rosu 79.03 316 ⇑P P 06 17 37.9 -0.1
DOPR Dopca 79.15 316 ⇓P P 06 17 39.2 +0.8
BMR Baia Mare 79.45 318 ⇓P P 06 17 40.5 +0.5
SUMG Summit 79.48 356 iP P 06 17 40.4 +0.2
comp=Z,46nm,0.5s
SUMG Summit 79.48 356 P P 06 17 40.7 +0.4
SUMG Summit 79.48 356 P P 06 17 40.7 +0.4
SUMG pmax pmax
comp=Z,4.0nm,0.5s
KOLS Kolonicke sedl 79.52 320 eP P 06 17 40.5 +0.1
KOLS Kolonicke sedl 79.52 320 eP P 06 17 40.5 +0.1
VOIR 79.61 316 ⇑P P 06 17 41.5 +0.4
URZ Urewera 79.72 143 P P 06 17 42.3 +0.9
comp=Z,8.0nm,0.8s,baz=297,slow=4.5,SNR=2.7
TRPA Tarpa 79.78 319 ⇑P P 06 17 42.2 +0.5
ARR Arges 79.90 316 ⇓P P 06 17 43.3 +0.7
LLLB Lillooet 80.07 38 P P 06 17 44.5 +1.2
HUMR Humele 80.10 315 ⇓P P 06 17 43.6 0.0
OJC Ojcow 80.24 322 P P 06 17 44.8 +0.6
OJC Ojcow 80.24 322 P P 06 17 44.8 +0.6
OJC pmax pmax
comp=Z,44nm,1.1s
DRGR 80.35 318 ⇓P P 06 17 45.4 +0.4
ELL Elmali 80.49 306 P P 06 17 46.3 +0.3
ELL Elmali 80.49 306 P P 06 17 46.3 +0.3
ELL pmax pmax
comp=Z,72nm,0.6s
PLVB Pleven 80.89 314 ⇑P P 06 17 47.8 0.0
GZR Gura Zlata 81.02 317 ⇑P P 06 17 49.1 +0.5
SIRR Siria 81.25 318 ⇑P P 06 17 49.9 +0.2
E03A Lebam 81.25 42 P P 06 17 51.1 +1.5
E03A IAmb IAmb 06 17 51.9
comp=Z,29nm,1.2s
OKC Ostrava-Krasne 81.34 322 eP P 06 17 50.2 +0.1
OKC Ostrava-Krasne 81.34 322 eP P 06 17 50.2 +0.1
PUNG Punghina 81.50 316 ⇓P P 06 17 51.3 +0.3
F03A Seaside 81.57 42 P P 06 17 53.1 +1.7
F03A IAmb IAmb 06 18 02.3
comp=Z,36nm,1.4s
BZS Buzias 81.61 317 ⇓P P 06 17 51.4 -0.2
VYHS Vyhne 81.69 321 eP P 06 17 52.7 +0.7
VYHS pmax pmax
comp=Z,27nm,1.2s
VYHS Vyhne 81.69 321 eP P 06 17 52.7 +0.7
MORC Moravsky Berou 81.70 322 eP P 06 17 52.2 +0.1
MORC Moravsky Berou 81.70 322 ⇓P P 06 17 52.7 +0.6
MORC Moravsky Berou 81.70 322 P P 06 17 52.2 +0.1
MORC IAmb IAmb 06 17 53.9
comp=Z,13nm,1.1s
MORC Moravsky Berou 81.70 322 P P 06 17 52.2 +0.1
MORC pmax pmax
comp=Z,13nm,1.1s
KRLC Kraliky 81.94 323 eP P 06 17 53.0 -0.4
KRLC Kraliky 81.94 323 eP P 06 17 53.0 -0.4
OSTC Ostas 81.97 324 eP P 06 17 53.8 +0.3
DPC Dobruska-Polom 82.03 323 eP P 06 17 54.4 +0.6
DPC Dobruska-Polom 82.03 323 eP P 06 17 54.4 +0.6
CHVC Chvalec 82.04 324 eP P 06 17 54.1 +0.3
RUE Ruedersdorf 82.11 326 eP P 06 17 54.9 +0.9
comp=Z,16nm,0.9s,baz=51,slow=5.1
UPC Upice 82.11 324 eP P 06 17 54.5 +0.3
UPC Upice 82.11 324 eP P 06 17 54.5 +0.3
JAVC Velka Javorina 82.14 322 eP P 06 17 55.8 +1.4
VTS Vitosha 82.15 314 ⇑P P 06 17 55.4 +0.7
VTS Vitosha 82.15 314 P P 06 17 55.4 +0.7
VTS IAmb IAmb 06 17 57.3
comp=Z,15nm,1.2s

VTS Vitosha 82.15 314 P P 06 17 55.4 +0.7
VTS pmax pmax
comp=Z,15nm,1.2s
LON Longmire 82.17 41 P P 06 17 55.5 +0.9
LON Longmire 82.17 41 P P 06 17 55.5 +0.9
LON pmax pmax
comp=Z,3.0nm,1.0s
F04A Amboy 82.25 42 P P 06 17 56.2 +1.3
F04A IAmb IAmb 06 17 56.8
comp=Z,9.5nm,0.8s
SMOL Smolenice 82.47 321 eP P 06 17 57.5 +1.4
SMOL pmax pmax
comp=Z,14nm,0.9s
SMOL Smolenice 82.47 321 eP P 06 17 57.5 +1.4
VRAC Vranov 82.48 322 eP P 06 17 56.6 +0.5
VRAC Vranov 82.48 322 P P 06 17 56.9 +0.7
comp=Z,19nm,1.0s,baz=53,slow=5.4,SNR=14
VRAC Vranov 82.48 322 ⇑P P 06 17 56.8 +0.7
LTY Liberty 82.55 40 P P 06 17 57.3 +0.6
MODS Modra-Piesok 82.63 321 eP P 06 17 57.0 +0.1
MODS pmax pmax
comp=Z,25nm,1.1s
MODS Modra-Piesok 82.63 321 eP P 06 17 57.0 +0.1
B08A Colville Reser 82.69 39 P P 06 17 58.1 +0.8
KRUC Moravsky 82.72 322 eP P 06 17 57.6 +0.2
ZST Bratislava 82.82 321 eP P 06 17 57.6 -0.3
ZST Bratislava 82.82 321 eP P 06 17 57.6 -0.3
PVCC Panska Ves 82.85 324 eP P 06 17 58.4 +0.4
PVCC Panska Ves 82.85 324 eP P 06 17 58.4 +0.4
BSEG Bad Segeberg 82.89 328 eP P 06 17 58.6 +0.5
baz=51,slow=5.1
BRG Berggiesshubel 82.97 325 eP P 06 17 58.8 +0.2
comp=Z,5.4nm,0.7s
BRG Berggiesshubel 82.97 325 eP P 06 17 58.6 0.0
comp=Z,4.1nm,0.6s,baz=51,slow=5.1
BRG Berggiesshubel 82.97 325 eP P 06 17 58.8 +0.2
BRG pmax pmax
comp=Z,5.0nm,0.7s
KARP Karpathos 83.02 306 P P 06 17 59.6 +0.4
H04A Detroit Lake 83.05 43 P P 06 18 00.3 +1.0
TREC Trest 83.08 323 eP P 06 17 53.3 -6.0
TREC Trest 83.08 323 eP P 06 17 53.3 -6.0
GOPC GO Pecny, Ondr 83.09 324 eP P 06 17 59.6 +0.3
GOPC GO Pecny, Ondr 83.09 324 eP P 06 17 59.6 +0.3
PRU Pruhonice 83.18 324 eP P 06 17 59.9 +0.2
PRU Pruhonice 83.18 324 eP P 06 17 59.9 +0.2
CLL Collm 83.19 325 eP P 06 18 00.1 +0.3
baz=51,slow=5.1
CLL Collm 83.19 325 ⇑iP P 06 17 59.7 0.0
comp=Z,24nm,0.7s
CLL Collm 83.19 325 P P 06 18 00.2 +0.5
CLL Collm 83.19 325 ⇑iP P 06 17 59.7 0.0
CLL e*PP pP 06 18 13.0 -2.2
CLL pmax pmax
comp=Z,24nm,0.7s
FBE Freiberg 83.24 325 eP P 06 18 00.9 +0.8
comp=Z,9.6nm,0.7s,baz=51,slow=5.1
D08A Wollman Farm, 83.65 40 P P 06 18 03.5 +1.2
D08A IAmb IAmb 06 18 04.0
comp=Z,9.5nm,1.0s
KRMB Red Mountain 83.66 46 P P 06 18 04.4 +1.8
KRMB IAmb IAmb 06 18 23.5
comp=Z,18nm,1.1s
CONA Conrad Observa 83.66 321 ePcP P 06 18 03.3 +0.9
comp=Z,9.6nm,0.6s,SNR=5.2
HAWA Hanford 83.68 40 P P 06 18 03.8 +1.4
G06A Carlson Farm, 83.68 42 P P 06 18 03.8 +1.3
HUMO Hull Mountain 83.69 45 P P 06 18 04.4 +1.8
F07A Phinny Hill Vi 83.73 41 P P 06 18 04.3 +1.7
F07A IAmb IAmb 06 18 04.4
comp=Z,6.1nm,0.6s
SANT Santorini 83.81 308 P P 06 18 03.0 -0.3
ASSE Asse, Remlinge 83.84 327 eP P 06 18 03.6 +0.6
comp=Z,6.5nm,0.9s,baz=51,slow=5.1
NEUB Neuenburg 83.86 326 eP P 06 18 03.8 +0.6
comp=Z,21nm,0.7s,baz=51,slow=5.1
NRDL Niedersach Rie 83.88 327 eP P 06 18 03.9 +0.7
comp=Z,5.4nm,0.9s,baz=51,slow=5.1
NEW Newport 83.95 38 P P 06 18 05.0 +1.2
NEW IAmb IAmb 06 18 05.1
comp=Z,5.8nm,0.6s
NEW Newport 83.95 38 P P 06 18 05.0 +1.2
NEW pmax pmax
comp=Z,6.0nm,0.6s
TANN Tannenbergstha 84.00 325 eP P 06 18 04.2 +0.2
comp=Z,9.4nm,0.9s,baz=51,slow=5.1
GUNZ Gunzen 84.10 325 eP P 06 18 05.1 +0.6
comp=Z,11nm,0.8s,baz=51,slow=5.1
NKC Novy Kostel 84.12 325 eP P 06 18 04.9 +0.3
NKC Novy Kostel 84.12 325 eP P 06 18 04.9 +0.3
WERN Wernitzgruen 84.12 325 eP P 06 18 05.4 +0.7
comp=Z,11nm,0.9s,baz=51,slow=5.1
CLZ Clausthal 84.16 327 eP P 06 18 05.7 +0.9
comp=Z,24nm,1.0s,baz=51,slow=5.1
KHC Kasperske Hory 84.19 323 eP P 06 18 05.1 +0.1
KHC ePCP PcP 06 18 10.3 +1.6
KHC Kasperske Hory 84.19 323 P P 06 18 05.4 +0.4
KHC Kasperske Hory 84.19 323 eP P 06 18 05.1 +0.1
ARSA Arzberg 84.24 321 eP P 06 18 05.6 +0.3
comp=Z,12nm,1.8s
PINE Pine Mountain 84.29 43 P P 06 18 07.4 +1.6
PINE IAmb IAmb 06 18 08.4
comp=Z,18nm,1.1s
MOX Moxa 84.29 325 eP P 06 18 05.8 +0.4
comp=Z,5.0nm,0.8s,baz=51,slow=5.1
GEC2 GERESS Array S 84.30 323 eP P 06 18 05.9 +0.3
comp=Z,8.7nm,0.8s,baz=51,slow=5.1
GEC2 GERESS Array S 84.30 323 P P 06 18 05.8 +0.2
GEC2 IAmb IAmb 06 18 06.5
comp=Z,11nm,0.8s
GERES GERESS Array B 84.30 323 eP P 06 18 05.6 0.0
comp=Z,6.6nm,0.6s,baz=47,slow=5.2,SNR=60
GERES GERESS Array B 84.30 323 P P 06 18 06.0 +0.3
YBH Yreka Blue Hor 84.31 46 P P 06 18 07.4 +1.6
YBH Yreka Blue Hor 84.31 46 P P 06 18 07.4 +1.6
YBH pmax pmax
comp=Z,5.0nm,1.1s
E09A Wood Farm, Sta 84.40 40 P P 06 18 06.2 +0.2
MANZ Manzenberg 84.44 325 eP P 06 18 06.9 +0.7
comp=Z,5.0nm,0.8s,baz=51,slow=5.1
ROTZ Rotzenmuhle 84.53 324 eP P 06 18 07.5 +0.9
comp=Z,12nm,0.9s,baz=51,slow=5.1
GTTG Gottingen 84.55 327 eP P 06 18 07.5 +0.8
comp=Z,19nm,1.1s,baz=51,slow=5.1
WET Wettzell 84.55 324 eP P 06 18 07.5 +0.7
comp=Z,4.2nm,0.9s,baz=51,slow=5.1
MOA Molln 84.58 322 ePcP P 06 18 07.5 +0.6
comp=Z,17nm,1.1s
PDG Podgorica 84.75 316 ⇑P P 06 18 08.2 +0.3
PDG Podgorica 84.75 316 P P 06 18 08.4 +0.6
SOKA Soboth 84.84 321 eP P 06 18 08.5 +0.1
comp=Z,5.3nm,0.9s
K05A Summer Lake 84.90 44 P P 06 18 10.8 +1.9
K05A IAmb IAmb 06 18 10.9
comp=Z,11nm,1.1s
UBBA Unterbreizbach 84.99 326 eP P 06 18 09.5 +0.7
comp=Z,2.7nm,0.8s,baz=51,slow=5.1
I07A Izee 84.99 42 P P 06 18 10.8 +1.6
WDC Whiskeytown Da 85.03 46 P P 06 18 10.2 +0.9
WDC Whiskeytown Da 85.03 46 P P 06 18 10.2 +0.9
WDC pmax pmax
comp=Z,8.0nm,1.2s
GRF Grafenberg Arr 85.08 325 eP P 06 18 10.4 +1.0
comp=Z,30nm,1.2s,baz=51,slow=5.1
IBBN Ibbenburen 85.11 328 eP P 06 18 09.9 +0.4
comp=Z,17nm,0.6s,baz=51,slow=5.1
OBKA Obir 85.21 321 eP P 06 18 10.1 -0.2
comp=Z,10nm,0.8s
F10A Beach Ranch, E 85.23 40 P P 06 18 12.5 +2.1
RJOB Jochberg 85.44 323 eP P 06 18 12.4 +1.0
comp=Z,17nm,0.8s,baz=51,slow=5.1
SFJD Kangerlussuaq 85.47 360 P P 06 18 10.3 -0.6
comp=Z,17nm,0.4s,baz=6.7,slow=3.4,SNR=17
SFJD Kangerlussuaq 85.47 360 iP P 06 18 10.0 -0.9
SFJD Kangerlussuaq 85.47 360 P P 06 18 10.8 -0.2
SFJD Kangerlussuaq 85.47 360 P P 06 18 10.8 -0.2
SFJD pmax pmax
comp=Z,20nm,0.6s
KBA Koelnbreinsper 85.54 322 ePcP P 06 18 12.2 +0.2
comp=Z,5.5nm,0.8s
MYKA Terra Mystica 85.65 321 eP P 06 18 12.1 -0.2
comp=Z,5.1nm,0.6s
MOD Modoc Plateau 85.72 44 P P 06 18 14.3 +1.3
MOD IAmb IAmb 06 18 15.2
comp=Z,8.5nm,0.9s

JTMT Jette 85.80 37 P P 06 18 13.4 +0.2
JTMT IAmb IAmb 06 18 15.2
comp=Z,9.6nm,1.2s
ITM Ithomi 85.83 310 P P 06 18 12.9 -0.5
BMO Blue Mountains 85.84 41 P P 06 18 14.1 +0.7
BMO Blue Mountains 85.84 41 P P 06 18 14.1 +0.7
BMO pmax pmax
comp=Z,3.0nm,0.8s
FUR Furstenfeldbru 85.99 324 eP P 06 18 15.2 +1.2
comp=Z,16nm,0.8s,baz=51,slow=5.1
J08A Circle Bar Ran 86.02 42 P P 06 18 15.8 +1.5
J08A IAmb IAmb 06 18 16.2
comp=Z,4.8nm,0.6s
ABTA Abfaltersbach 86.20 322 ePcP P 06 18 15.0 -0.2
comp=Z,14nm,0.7s,SNR=5.3
ORV Oroville 86.26 47 P P 06 18 16.1 +0.6
ORV Oroville 86.26 47 P P 06 18 16.1 +0.6
ORV pmax pmax
comp=Z,7.0nm,1.0s
WATA Walderalm 86.34 323 ePcP P 06 18 15.9 0.0
comp=Z,8.4nm,0.5s
WVOR Wild Horse Val 86.45 43 P P 06 18 18.4 +1.9
WVOR Wild Horse Val 86.45 43 P P 06 18 18.4 +1.9
WVOR pmax pmax
comp=Z,4.0nm,0.9s
MOTA Moosalm 86.59 323 eP P 06 18 16.6 -0.6
comp=Z,9.8nm,0.5s,SNR=5.5
SQTA Sankt Quirin 86.61 323 ePcP P 06 18 17.2 0.0
comp=Z,9.4nm,0.6s
FCC Fort Churchill 86.62 21 P P 06 18 17.1 +0.3
FCC Fort Churchill 86.62 21 P P 06 18 17.1 +0.3
FCC pmax pmax
comp=Z,28nm,1.4s
RETA Reutte 86.68 323 ePcP P 06 18 17.6 +0.1
comp=Z,4.6nm,0.7s
STU Stuttgart 86.69 325 eP P 06 18 17.3 0.0
comp=Z,4.5nm,0.9s,baz=51,slow=5.1
BEKR Beckworth 86.82 46 P P 06 18 19.7 +1.2
BEKR IAmb IAmb 06 18 20.2
comp=Z,11nm,1.0s
FFC Flin Flon 86.89 27 P P 06 18 18.8 +0.6
FFC Flin Flon 86.89 27 P P 06 18 18.8 +0.6
FFC pmax pmax
comp=Z,20nm,1.1s
UBR Ueberruh 86.91 324 eP P 06 18 19.4 +0.8
comp=Z,6.2nm,0.8s,baz=51,slow=5.1
AFDM Forest Hills D 86.94 47 P P 06 18 20.0 +1.1
AFDM IAmb IAmb 06 18 20.5
comp=Z,7.9nm,1.2s
FETA Feichten 86.99 323 ePcP P 06 18 19.2 +0.1
comp=Z,6.6nm,0.6s
CTI Castel Tesino 87.10 322 P P 06 18 19.3 -0.3
CTI IAmb IAmb 06 18 19.9
comp=Z,14nm,1.0s
CTI Castel Tesino 87.10 322 P P 06 18 19.3 -0.3
CTI pmax pmax
comp=Z,14nm,1.0s
DAVA Damuels 87.28 323 ePcP P 06 18 19.9 -0.6
comp=Z,9.2nm,0.5s
FUORN Ofenpass-Fuorn 87.49 323 P P 06 18 21.6 0.0
TEOL Teolo 87.51 321 P P 06 18 21.2 -0.2
PAHR Pah Rah Range 87.53 46 P P 06 18 22.1 +0.3
PAHR IAmb IAmb 06 18 23.8
comp=Z,10nm,1.0s
MFID Camas Ranch 87.55 41 P P 06 18 23.0 +1.2
EKA Eskdalemuir Ar 87.59 335 P P 06 18 20.6 -1.0
comp=Z,3.6nm,0.4s,baz=44,slow=4.7,SNR=34
DAVOX Davos/Dischmat 87.60 323 P P 06 18 21.5 -0.6
comp=Z,17nm,0.5s,baz=174,slow=1.2,SNR=48
ESK Eskdalemuir 87.62 335 P P 06 18 21.2 -0.5
ESK Eskdalemuir 87.62 335 P P 06 18 21.2 -0.5
ESK pmax pmax
comp=Z,29nm,1.0s
FRB Frobisher Bay 87.69 8 P P 06 18 21.1 -0.8
comp=Z,12nm,0.5s,baz=359,slow=5.2,SNR=68
PNTR Pine Nut 87.75 46 P P 06 18 25.1 +2.1
PNTR IAmb IAmb 06 18 25.2
comp=Z,7.7nm,0.9s
CMB Columbia Colle 87.83 48 P P 06 18 24.8 +1.6
CMB IAmb IAmb 06 18 25.0
comp=Z,5.3nm,0.7s
CMB Columbia Colle 87.83 48 P P 06 18 24.8 +1.6
CMB pmax pmax
comp=Z,5.0nm,0.7s
EGMT Eagleton 87.98 35 P P 06 18 25.1 +1.3
YERR Yerington 88.03 46 P P 06 18 26.0 +1.7
WAKR Walker 88.18 47 P P 06 18 27.0 +1.9
WAKR IAmb IAmb 06 18 27.3
comp=Z,6.1nm,0.9s
DLMT Dillon 88.19 38 P P 06 18 26.3 +1.4
DLMT IAmb IAmb 06 18 26.9
comp=Z,11nm,0.8s
MCMT McKenzie Canyo 88.38 39 P P 06 18 27.6 +1.7
KVN Kaiserville 88.72 46 P P 06 18 29.8 +2.2
KVN IAmb IAmb 06 18 30.4
comp=Z,7.5nm,1.1s
KVN Kaiserville 88.72 46 P P 06 18 29.8 +2.2
KVN pmax pmax
comp=Z,8.0nm,1.1s
NVAR Mina Array Bea 88.95 46 P P 06 18 29.8 +1.1
comp=Z,1.6nm,0.7s,baz=291,slow=5.6,SNR=18
NVAR Mina Array Bea 88.95 46 P P 06 18 30.6 +1.9
SENIN Lac Senin/Sane 89.23 324 P P 06 18 31.4 +1.6
SENIN IAmb IAmb 06 18 34.8
comp=Z,6.4nm,1.1s
YHL Hebgen Lake 89.28 38 P P 06 18 32.3 +2.1
YHB Horse Butte 89.34 38 P P 06 18 32.4 +2.0
ELK Elko 89.50 43 P P 06 18 32.9 +1.7
ELK Elko 89.50 43 P P 06 18 32.9 +1.7
ELK pmax pmax
comp=Z,6.0nm,1.4s
YHH Holmes Hill 89.50 38 P P 06 18 33.0 +1.8
YMR Madison River 89.52 38 P P 06 18 32.7 +1.5
FLWY Flagg Ranch 90.04 38 P P 06 18 36.3 +2.6
FLWY IAmb IAmb 06 18 36.9
comp=Z,6.0nm,0.9s
RLMT Red Lodge 90.14 37 P P 06 18 36.0 +1.8
RLMT IAmb IAmb 06 18 36.0
comp=Z,5.3nm,0.9s
FXWY Fox Creek 90.15 39 P P 06 18 36.1 +1.9
TPAW Teton Pass 90.28 39 P P 06 18 35.9 +1.0
LAO LASA Array 90.66 34 P P 06 18 37.0 +0.7
LAO IAmb IAmb 06 18 38.1
comp=Z,9.0nm,0.9s
R11A Troy Canyon, C 90.73 45 P P 06 18 38.7 +1.8
PPT Papeete 90.83 109 LR LR 06 51 06.1
comp=Z,31nm,21.0s,baz=322,slow=30
TPNV Topopah Spring 91.14 47 P P 06 18 40.2 +1.3
TPNV IAmb IAmb 06 18 41.1
comp=Z,5.6nm,1.0s
TPNV Topopah Spring 91.14 47 P P 06 18 40.2 +1.3
TPNV pmax pmax
comp=Z,6.0nm,1.0s
DUG Dugway, Tooele 91.30 42 P P 06 18 40.4 +0.9
DUG IAmb IAmb 06 18 41.6
comp=Z,2.9nm,0.7s
DUG Dugway, Tooele 91.30 42 P P 06 18 40.4 +0.9
DUG pmax pmax
comp=Z,3.0nm,0.7s
PD31 Pinedale Array 91.53 39 P P 06 18 40.9 +0.2
PDAR Pinedale Array 91.53 39 P P 06 18 41.4 +0.7
comp=Z,2.2nm,0.8s,baz=316,slow=0.8,SNR=21
PDAR Pinedale Array 91.53 39 P P 06 18 41.0 +0.4
PSUT Pine Spring 91.69 44 P P 06 18 42.5 +1.0
NLU North Lily Min 91.89 42 P P 06 18 43.8 +1.5
SHPR Sheep Range 92.11 46 P P 06 18 44.4 +1.1
SHPR IAmb IAmb 06 18 45.9
comp=Z,4.8nm,1.0s
ULM Lac du Bonnet 92.71 27 P P 06 18 45.7 +0.1
comp=Z,8.8nm,0.8s,baz=322,slow=4.8,SNR=25
ULM Lac du Bonnet 92.71 27 P P 06 18 45.5 -0.1
MSU Marysvale 92.74 43 P P 06 18 47.2 +0.9
MSU Marysvale 92.74 43 P P 06 18 47.2 +0.9
P17A Butcher Ranch, 92.99 42 P P 06 18 47.4 0.0
LCMT Little Creek M 93.01 45 P P 06 18 49.3 +1.8
RSSD Black Hills 93.55 35 P P 06 18 49.8 -0.1
RSSD Black Hills 93.55 35 P P 06 18 49.8 -0.1
RSSD pmax pmax
comp=Z,5.0nm,0.5s
W13A Hualapai Mount 93.78 47 P P 06 18 51.5 +0.3
Y12C Blythe 94.19 48 P P 06 18 53.0 +0.3
Y12C IAmb IAmb 06 18 55.2
comp=Z,7.3nm,1.0s
SCHQ Schefferville 96.56 9 P P 06 19 02.2 -0.9
comp=Z,2.2nm,0.7s,baz=12,slow=6.6,SNR=6.7

SCHQ LR LR 07 07 02.1
comp=Z,87nm,19.2s,baz=3.5,slow=38
SCHQ Schefferville 96.56 9 P P 06 19 02.3 -0.9
SCHQ IAmb IAmb 06 19 05.7
comp=Z,5.4nm,1.1s
TORD Torodi Ar. Bea 114.64 301 PKP PKiKP 06 24 14.4 -0.1
comp=Z,0.4nm,0.4s,baz=5.7,slow=4.0,SNR=7.6
SDV Santo Domingo 138.88 30 PKPdf PKPdf 06 24 58.0 -2.7

IDC **02** *06:13:09.9±0.7, 53°.69N×35°.29W, h0km, mb3.8/11, mb1 3.9/13, mb1mx3.7/49, mbtmp3.8/13, ML2.7/2, MS3.8/12, Ms1 3.8/12, ms1mx3.5/46, Error ellipse: s-maj=24.5km s-min=15.8km az=32.0*
NEIC **02** *06:13:10.8±1.1, 53°.73N±0°.08×35°.0W±0°.1, h10km±1km, mb4.5/34, Error ellipse: s-maj=15.6km s-min=7.1km az=148.0*
ISC 02 06:13:11.4±0.5, **53°.8N**±0°.1×**35°.10W**±0°.08, **h12km, n61,** σ0s92/58, **mb4.3**/26, **MS3.7**/10, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRS	Narsarsuaq	9.27	327	Pn	Pn	06 15 24.8	+0.1
NRS					Sn	06 16 52.7	-16
SCHQ	Schefferville	18.48	286	P	P	06 17 25.4	-1.6
	0.1nm,0.3s,baz=81,slow=3.5,SNR=4.5						
SCHQ				LR	LR	06 22 56.9	
	comp=Z,217nm,21.2s,baz=80,slow=32						
SCHQ	Schefferville	18.48	286	P	P	06 17 25.4	-1.6
FRB	Frobisher Bay	19.79	314	P	P	06 17 40.6	-0.5
	0.1nm,0.3s,baz=86,slow=14,SNR=2.2						
FRB				LR	LR	06 23 45.2	
	comp=Z,158nm,18.2s,baz=16,slow=32						
E63A	Oxbow	22.44	265	P	P	06 18 10.3	+0.4
E63A				IAmb	IAmb	06 18 23.1	
	comp=Z,44nm,1.5s						
D62A	Allapoint, All	22.48	267	P	P	06 18 10.8	+0.5
D62A				IAmb	IAmb	06 18 19.6	
	comp=Z,13nm,1.1s						
ESDC	Sonseca Array	25.32	111	P	P	06 18 37.4	-0.4
	comp=Z,1.3nm,0.7s,baz=318,slow=8.9,SNR=5.4						
ESDC	Sonseca Array	25.32	111	P	P	06 18 37.3	-0.5
NOA	NORSAR Array B	25.52	55	LR	LR	06 26 47.4	
	comp=Z,92nm,19.4s,baz=275,slow=32						
HFS	Hagfors	26.83	57	LR	LR	06 27 29.1	
	comp=Z,127nm,18.5s,baz=26,slow=32						
SADO	Sadowa	29.68	271	LR	LR	06 30 12.9	
	comp=Z,186nm,18.4s,baz=72,slow=35						
N59A	State Game Lan	29.97	261	P	P	06 19 18.8	-0.7
N59A				IAmb	IAmb	06 19 25.8	
	comp=Z,5.6nm,1.1s						
RES	Resolute Bay	31.24	334	P	P	06 19 30.9	+0.5
	comp=Z,2.6nm,1.0s,baz=104,slow=10.0,SNR=4.1						
RES	Resolute Bay	31.24	334	P	P	06 19 30.6	+0.3
MORC	Moravsky Berou	32.20	75	P	P	06 19 37.8	-1.2
H48A	Harrisville	32.20	274	P	P	06 19 38.9	-0.2
FCC	Fort Churchill	32.21	303	P	P	06 19 38.8	-0.2
FCC				IAmb	IAmb	06 19 40.6	
	comp=Z,9.6nm,1.4s						
ULM	Lac du Bonnet	36.58	290	LR	LR	06 32 54.6	
	comp=Z,117nm,19.5s,baz=48,slow=32						
YKA	Yellowknife Ar	40.29	315	P	P	06 20 47.2	-0.7
	comp=Z,1.1nm,1.1s,baz=61,slow=8.5,SNR=4.9						
YKA				PcP	PcP	06 22 50.3	-0.9
	comp=Z,0.3nm,0.8s,baz=61,slow=3.4,SNR=4.1						
W35A	Tecumseh	46.27	272	P	P	06 21 36.3	-0.3
ANTO	Ankara	46.71	78	P	P	06 21 39.3	-0.7
K22A	Casper	46.95	287	P	P	06 21 41.8	-0.2
K22A				IAmb	IAmb	06 21 46.5	
	comp=Z,6.1nm,1.1s						
YNE	Yellowstone No	47.41	292	P	P	06 21 45.2	-0.4
WMOK	Wichita Mounta	47.69	273	P	P	06 21 47.2	-0.5
WMOK				IAmb	IAmb	06 22 03.8	
	comp=Z,3.3nm,0.6s						
N23A	Red Feather La	47.75	285	P	P	06 21 48.6	+0.2
ISCO	Idaho Springs	48.27	283	P	P	06 21 51.0	-1.5
ISCO				IAmb	IAmb	06 21 57.5	
	comp=Z,3.8nm,1.2s						
PD31	Pinedale Array	48.59	289	P	P	06 21 53.3	-1.5
PDAR	Pinedale Array	48.59	289	P	P	06 21 53.2	-1.5
	comp=Z,0.6nm,0.5s,baz=60,slow=7.6,SNR=7.7						
PDAR				LR	LR	06 41 09.9	
	comp=Z,73nm,18.8s,baz=46,slow=35						
PDAR	Pinedale Array	48.59	289	P	P	06 21 53.4	-1.4
FXWY	Fox Creek	48.85	291	P	P	06 21 55.8	-1.0
FXWY				IAmb	IAmb	06 21 58.1	
	comp=Z,3.7nm,1.2s						
ARU	Arti	49.62	47	LR	LR	06 41 42.3	
	comp=Z,218nm,20.3s,baz=342,slow=34						
TORD	Torodi Ar. Bea	49.82	130	P	P	06 22 03.3	-0.9
	comp=Z,1.6nm,0.8s,baz=331,slow=7.5,SNR=7.5						
TORD				LR	LR	06 41 40.9	
	comp=Z,106nm,18.7s,baz=350,slow=34						
TORD	Torodi Ar. Bea	49.82	130	P	P	06 22 03.3	-0.9
MSTX	Muleshoe	50.58	276	P	P	06 22 10.3	+0.4
MSTX				IAmb	IAmb	06 22 14.7	
	comp=Z,11nm,1.4s						
ILAR	Eielson Array	50.77	329	P	P	06 22 11.5	+0.7
	comp=Z,0.2nm,0.6s,baz=51,slow=7.1,SNR=3.2						
ILAR				PcP	PcP	06 23 27.6	+0.1
	comp=Z,0.5nm,0.9s,baz=12,slow=5.0,SNR=4.2						
ILAR				LR	LR	06 42 40.2	
	comp=Z,62nm,18.6s,baz=348,slow=35						
SPUT	South Promonto	51.17	289	P	P	06 22 13.8	-0.5
IMAR	Indian Mountai	51.87	333	P	P	06 22 19.5	+0.5
MSU	Marysvale	52.91	287	P	P	06 22 27.6	+0.2
DBIC	Dimbokro	52.95	141	P	P	06 22 29.9	+2.4
	comp=Z,2.1nm,0.8s,baz=327,slow=10,SNR=3.4						
DBIC				LR	LR	06 43 33.5	
	comp=Z,108nm,18.6s,baz=340,slow=34						
ELK	Elko	53.11	291	P	P	06 22 28.8	-0.1
PINE	Pine Mountain	54.13	297	P	P	06 22 37.3	+1.0
PINE				IAmb	IAmb	06 22 42.0	
	comp=Z,6.8nm,1.1s						
TXAR	Lajitas Array	54.44	272	P	P	06 22 38.2	-0.3
	comp=Z,0.9nm,1.1s,baz=77,slow=2.7,SNR=4.5						
TXAR				PcP	PcP	06 23 41.6	-0.5
	comp=Z,0.4nm,0.8s,baz=72,slow=4.1,SNR=3.4						
WUAZ	Wupatki	54.53	283	P	P	06 22 39.4	+0.2
WUAZ				IAmb	IAmb	06 22 45.0	
	comp=Z,3.2nm,1.1s						
R11A	Troy Canyon, C	54.95	289	P	P	06 22 42.4	+0.1
KVN	Kaiserville	55.87	291	P	P	06 22 49.5	+0.7
KVN				IAmb	IAmb	06 22 54.0	
	comp=Z,8.5nm,1.5s						
PAHR	Pah Rah Range	56.12	292	P	P	06 22 50.3	-0.3
PAHR				IAmb	IAmb	06 22 52.9	
	comp=Z,8.6nm,1.3s						
VCNR	Virginia City	56.55	292	P	P	06 22 54.0	+0.3
PNTR	Pine Nut	56.67	292	P	P	06 22 55.8	+1.2
PNTR				IAmb	IAmb	06 23 00.3	
	comp=Z,5.6nm,1.0s						
Y12C	Blythe	57.61	284	P	P	06 23 01.2	+0.1
GSC	Goldstone, Bar	57.80	287	P	P	06 23 03.7	+1.2
GSC				IAmb	IAmb	06 23 07.9	
	comp=Z,6.7nm,1.3s						
ROSC	El Rosal	58.27	228	P	P	06 23 07.5	+1.2
	comp=Z,4.0nm,0.7s,baz=80,slow=8.2,SNR=4.1						
ROSC	El Rosal	58.27	228	P	P	06 23 06.4	+0.1
CHIR	Chirikof Islan	60.40	326	P	P	06 23 21.2	+1.1
MKAR	Makanchi Array	66.62	42	P	P	06 24 03.9	+2.5
	comp=Z,0.4nm,0.8s,baz=26,slow=6.9,SNR=3.0						
MKAR	Makanchi Array	66.62	42	P	P	06 24 01.8	+0.4
ATD	Arta Tunnel	73.66	93	P	P	06 24 44.3	-0.7
SONM	Songino Array	73.66	26	P	P	06 24 46.2	+1.5
	comp=Z,1.0nm,1.0s,baz=329,slow=10,SNR=5.0						
SONM	Songino Array	73.66	26	P	P	06 24 43.8	-0.8
BOSA	Boshof	97.18	130	LR	LR	07 10 57.4	
	comp=Z,76nm,18.6s,baz=328,slow=36						
ASAR	Alice Springs	148.84	20	PKPbc	PKPbc	06 32 58.0	-0.7
	comp=Z,0.7nm,0.7s,baz=354,slow=2.4,SNR=4.8						
ASAR	Alice Springs	148.84	20		PKPbc	06 32 58.5	-0.2

IDC **02** *06:23:09.0±1.6, 4°.87S×154°.94E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.5/33, mbtmp3.6/4, ML4.0/1, Error ellipse: s-maj=52.2km s-min=27.4km az=127.0*
ISC 02 06:23:14.5±1.5, **4°.8S**±0°.3×**154°.8E**±0°.2, **h35km, n6,** σ1s17/6, **mb3.4**/4, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.85	280	Pn	Pn	06 23 57.0	-0.4
	20nm,0.3s,baz=87,slow=1.9,SNR=4.1						

KRVT				Sn	Sn	06 24 22.0	-8.5
	25nm,0.3s,baz=14,slow=23,SNR=10.0						
WRA	**Warramunga Arr**	**24.97**	**231**	P	**P**	**06 28 35.2**	**+0.2**
	17nm,0.4s,baz=29,slow=26,SNR=8.4						
ASAR	**Alice Springs**	**27.52**	**225**	P	**P**	**06 28 57.4**	**-0.7**
	0.3nm,0.4s,baz=54,slow=9.1,SNR=15						
ILAR	**Eielson Array**	**81.44**	**22**	P	**P**	**06 35 26.6**	**-1.0**
	0.4nm,0.8s,baz=242,slow=5.5,SNR=4.2						
MKAR	**Makanchi Array**	**81.69**	**319**	P	**P**	**06 35 30.3**	**+0.9**
	0.1nm,0.5s,baz=107,slow=5.0,SNR=3.4						
TORD	**Torodi Ar. Bea**	**152.24**	**289**	PKPbc	**PKiKP**	**06 43 09.2**	**+1.3**
	0.6nm,0.7s,baz=70,slow=1.7,SNR=3.5						

*IDC **02** 06:42:35.5±0.8, 1°.31S×126°.31E, h0km, mb4.0/8, mb1 4.2/10, mb1mx3.9/36, mbtmp4.1/10, ML4.1/2, MS2.5/2, Ms1 2.5/2, ms1mx2.4/42, Error ellipse: s-maj=22.9km s-min=18.2km az=67.0*

*NEIC **02** 06:42:41.5±1.4, 1°.39S±0°.08×126°.28E±0°.06, h46km±8km, mb4.2/13, Error ellipse: s-maj=11.7km s-min=8.0km az=179.0*

ISC 02 06:42:40.0±0.5, **1°.35S**±0°.07×**126°.28E**±0°.05, **h29**km, **n38**, σ**0.88**/42, **mb4.2**/10, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.37**	**27**	Pn	**Pn**	**06 43 18.4**	**+1.4**
LUWI	**Luwuk**	**3.52**	**275**	Pn	**Pn**	**06 43 33.1**	**+0.2**
LUWI				Sn	**Sn**	**06 44 13.7**	**+0.1**
SIJI	**Sorong**	**5.01**	**85**	Pn	**Pn**	**06 43 52.5**	**-0.8**
	3.4nm,0.3s,baz=240,slow=22,SNR=4.0						
SIJI				Sn	**Sn**	**06 44 52.5**	**+2.3**
	2.4nm,0.3s,baz=338,slow=23,SNR=2.5						
FAKI	**Fak Fak**	**6.16**	**105**	Pn	**Pn**	**06 44 09.3**	**+0.1**
FAKI				Sn	**Sn**	**06 45 18.1**	**-0.6**
KAPI	**Kappang**	**7.46**	**241**	Pn	**Pn**	**06 44 27.9**	**+0.8**
	7.1nm,0.3s,baz=184,slow=18,SNR=7.3						
KAPI				Sn	**Sn**	**06 45 51.4**	**+0.6**
	0.8nm,0.3s,baz=136,slow=23,SNR=2.8						
KAPI				LR	LR	06 46 59.4	
	comp=Z,36nm,20.0s,baz=315,slow=35						
KAPI	**Kappang**	**7.46**	**241**		**Pn**	**06 44 27.7**	**+0.6**
MTN	**Manton Dam**	**12.39**	**157**	Pn	**Pn**	**06 45 34.1**	**-0.5**
JAY	**Jayapura**	**14.46**	**95**	LR	LR	06 52 30.6	
	comp=Z,24nm,21.5s,baz=119,slow=41						
CISI	**Cisompet, Garu**	**19.41**	**251**		**PcP**	**06 51 24.7**	**-0.7**
WB0	**Warramunga Arr**	**19.95**	**157**	P	**P**	**06 47 09.4**	**-0.5**
WB0				IAmb	IAmb	06 47 14.6	
	comp=Z,12nm,1.2s						
WRAB	**Tennant Creek**	**20.08**	**157**	P	**P**	**06 47 10.9**	**-0.5**
WRAB				IAmb	IAmb	06 47 12.8	
	comp=Z,6.0nm,0.8s						
WRA	**Warramunga Arr**	**20.09**	**157**	P	**P**	**06 47 11.0**	**-0.5**
	comp=Z,4.1nm,0.7s,baz=339,slow=12,SNR=17						
WRA	**Warramunga Arr**	**20.09**	**157**	P	**P**	**06 47 10.9**	**-0.5**
WB2	**Warramunga Arr**	**20.09**	**157**	P	**P**	**06 47 11.3**	**-0.2**
WB2				IAmb	IAmb	06 47 29.2	
	comp=Z,20nm,1.5s						
WB2					**PcP**	**06 51 26.4**	**-0.1**
COEN	**Coen**	**20.88**	**128**	P	**P**	**06 47 20.7**	**+0.6**
COEN				IAmb	IAmb	06 47 21.7	
	comp=Z,8.7nm,0.5s						
AS31	**Alice Springs**	**23.38**	**162**	P	**P**	**06 47 46.1**	**-0.5**
ASAR	**Alice Springs**	**23.38**	**162**	P	**P**	**06 47 46.4**	**-0.2**
	comp=Z,4.7nm,0.7s,baz=341,slow=11,SNR=60						
ASAR	**Alice Springs**	**23.38**	**162**	P	**P**	**06 47 46.5**	**0.0**
ARMA	**Armidale**	**37.60**	**143**	P	**P**	**06 49 54.5**	**+2.1**
SONM	**Songino Array**	**51.97**	**343**	P	**P**	**06 51 47.0**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=156,slow=8.2,SNR=8.3						
SONM	**Songino Array**	**51.97**	**343**	P	**P**	**06 51 47.1**	**+0.4**
PETK	**Petropavlovsk-**	**60.29**	**21**	P	**P**	**06 52 46.0**	**+0.1**
	comp=Z,3.3nm,1.0s,baz=211,slow=0.8,SNR=4.5						
PETK	**Petropavlovsk-**	**60.29**	**21**	P	**P**	**06 52 46.7**	**+0.8**
MK31	**Makanchi Array**	**61.50**	**327**	P	**P**	**06 52 54.0**	**-0.3**
MK31				IAmb	IAmb	06 52 55.4	
	comp=Z,2.1nm,1.1s						
MKAR	**Makanchi Array**	**61.50**	**327**	P	**P**	**06 52 54.6**	**+0.3**
	comp=Z,1.1nm,0.4s,baz=118,slow=7.9,SNR=31						
MKAR	**Makanchi Array**	**61.50**	**327**	P	**P**	**06 52 54.1**	**-0.2**
MAKZ	**Makanchi**	**61.68**	**327**	P	**P**	**06 52 55.9**	**+0.4**
MAKZ				IAmb	IAmb	06 52 57.2	
	comp=Z,3.0nm,1.1s						
ZALV	**Zalesovo Beam**	**64.92**	**334**	P	**P**	**06 53 16.1**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=103,slow=4.7,SNR=4.0						
ZALV	**Zalesovo Beam**	**64.92**	**334**	P	**P**	**06 53 15.8**	**-0.9**
KURK	**Kurchatov**	**65.80**	**329**	P	**P**	**06 53 22.3**	**-0.2**
TIXI	**Tiksi**	**72.90**	**1**	P	**P**	**06 54 04.4**	**-1.6**
ABKAR	**Akbulak array**	**75.81**	**322**	P	**P**	**06 54 22.9**	**-0.5**
ABKAR	**Akbulak array**	**75.81**	**322**	P	**P**	**06 54 22.5**	**-0.9**
ABKAR				IAmb	IAmb	06 54 23.4	
	comp=Z,2.4nm,1.2s						
AKTO	**Aktyubinsk**	**77.37**	**322**	P	**P**	**06 54 31.6**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=93,slow=6.6,SNR=4.3						
ILAR	**Eielson Array**	**89.86**	**25**	P	**P**	**06 55 34.0**	**-1.9**
	comp=Z,0.4nm,0.5s,baz=244,slow=5.0,SNR=13						
ILAR	**Eielson Array**	**89.86**	**25**	P	**P**	**06 55 34.1**	**-1.8**
BCAR	**Beaver Creek A**	**92.08**	**27**	P	**P**	**06 55 46.2**	**-0.1**
CPUP	**Villa Florida**	**152.26**	**173**	PKPbc	**PKPbc**	**07 02 34.5**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=116,slow=4.9,SNR=3.7						

*RSPR **02** 06:48:31.4, 19°.68N×64°.18W, h37km±18km, MD3.6/10*

ISC 02 06:48:31.8±3.2, **19°.5N**±0°.1×**64°.2W**±0°.1, **h34**km, **n43**, σ**1.21**/52, **16C-1D**, **Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.17**	**199**	⇑*e*P	**Pn**	**06 48 51.9**	**+0.1**
TBVI	**Tortola**	**1.17**	**199**	*e*S	**Sn**	**06 49 08.6**	**+2.0**
TBVI	**Tortola**	**1.17**	**199**		**Pn**	**06 48 51.9**	**+0.1**
TBVI					**Sn**	**06 49 08.6**	**+2.0**
CDVI	**St. Croix**	**1.85**	**197**	⇑*e*P	**Pn**	**06 49 02.0**	**+1.0**
CDVI	**St. Croix**	**1.85**	**197**	⇑*e*P	**Pn**	**06 49 02.5**	**+1.4**
CDVI	**St. Croix**	**1.85**	**197**	Pn	**Pn**	**06 49 02.4**	**+1.3**
CDVI					**Pb**	**06 49 02.6**	**-2.3**
MTP	**Monte Pirata**	**1.91**	**222**	⇑*e*P	**Pn**	**06 49 02.1**	**+0.2**
MTP	**Monte Pirata**	**1.91**	**222**	*e*S	**Sn**	**06 49 26.3**	**+1.5**
MTP	**Monte Pirata**	**1.91**	**222**	Pn	**Pn**	**06 49 02.7**	**+0.8**
MTP					**Pb**	**06 49 02.9**	**-3.1**
HUMP	**Col San Antoni**	**2.08**	**228**	⇑*e*P	**Pn**	**06 49 04.7**	**+0.4**
HUMP				*e*S	**Sn**	**06 49 30.7**	**+1.8**
HUMP	**Col San Antoni**	**2.08**	**228**	⇑*e*P	**Pn**	**06 49 04.1**	**-0.1**
HUMP	**Col San Antoni**	**2.08**	**228**	Pn	**Pn**	**06 49 04.1**	**-0.1**
HUMP					Pb	06 49 04.2	-4.6
HUMP					Pn	06 49 04.6	+0.4
GCPR	**Guaynabo City**	**2.15**	**236**	*e*S	**Sn**	**06 49 32.0**	**+1.3**
GCPR	**Guaynabo City**	**2.15**	**236**	⇑*e*P	**Pn**	**06 49 05.2**	**0.0**
GCPR	**Guaynabo City**	**2.15**	**236**		**Pn**	**06 49 04.7**	**-0.5**
GCPR					Pb	06 49 05.5	-4.6
SJG	**San Juan**	**2.31**	**233**		**Pn**	**06 49 08.0**	**+0.5**
IGPR	**InterUniversit**	**2.38**	**229**	⇑*e*P	**Pn**	**06 49 09.0**	**+0.7**
IGPR	**InterUniversit**	**2.38**	**229**	⇑*e*P	**Pn**	**06 49 08.6**	**+0.3**
IGPR	**InterUniversit**	**2.38**	**229**	Pn	**Pn**	**06 49 09.2**	**+0.8**
IGPR					Pb	06 49 09.3	-4.6
EMPR	**Esperanza - Ma**	**2.43**	**245**	⇑*e*P	**Pn**	**06 49 09.4**	**+0.3**
CELP	**Cerrillos**	**2.67**	**237**	⇓*e*P	**Pn**	**06 49 12.6**	**+0.2**
CELP				*e*S	**Sn**	**06 49 44.4**	**+0.8**
CELP	**Cerrillos**	**2.67**	**237**		**Pn**	**06 49 12.6**	**+0.2**
CELP					**Sn**	**06 49 44.4**	**+0.8**
AOPR	**Arecibo Observ**	**2.68**	**244**		**Pn**	**06 49 12.8**	**+0.3**
OBIP	**Obispado Ponce**	**2.71**	**237**	⇑*e*P	**Pn**	**06 49 12.2**	**-0.7**
OBIP	**Obispado Ponce**	**2.71**	**237**	*e*S	**Sn**	**06 49 45.9**	**+1.4**
OBIP	**Obispado Ponce**	**2.71**	**237**	Pn	**Pn**	**06 49 12.2**	**-0.7**
OBIP					**Sn**	**06 49 47.0**	**+2.5**
ICMP	**Isla Caja de M**	**2.74**	**234**	Pn	**Pn**	**06 49 13.4**	**+0.2**
AGPR	**Aguadilla, PR**	**2.94**	**249**	⇑*e*P	**Pn**	**06 49 16.1**	**0.0**
AGPR	**Aguadilla, PR**	**2.94**	**249**		**Pn**	**06 49 15.4**	**-0.7**
GBPR	**Guanica, Bosqu**	**2.96**	**239**	⇑*e*P	**Pn**	**06 49 17.2**	**+0.8**
GBPR	**Guanica, Bosqu**	**2.96**	**239**		**Pn**	**06 49 17.2**	**+0.8**
LSP	**Las Mesas**	**3.04**	**244**	⇑*e*P	**Pn**	**06 49 17.4**	**0.0**
LSP	**Las Mesas**	**3.04**	**244**	*e*S	**Sn**	**06 49 54.0**	**+1.4**
LSP	**Las Mesas**	**3.04**	**244**		**Pn**	**06 49 17.4**	**0.0**
LSP					**Sn**	**06 49 54.0**	**+1.4**
MPR	**Mayaguez**	**3.07**	**245**	Pn	**Pn**	**06 49 17.7**	**-0.1**
MLPR	**Magueyes Islan**	**3.10**	**240**	⇑*e*P	**Pn**	**06 49 18.5**	**+0.2**
MLPR	**Magueyes Islan**	**3.10**	**240**		**Pn**	**06 49 18.1**	**-0.1**
CRPR	**Cabo Rojo, PR**	**3.13**	**242**	⇑*e*P	**Pn**	**06 49 19.5**	**+0.7**
CRPR	**Cabo Rojo, PR**	**3.13**	**242**	*e*S	**Sn**	**06 49 56.2**	**+1.2**
CRPR	**Cabo Rojo, PR**	**3.13**	**242**		**Pn**	**06 49 19.3**	**+0.5**
CRPR					Pb	06 49 20.2	-6.6
CRPR					**Sn**	**06 49 57.7**	**+2.7**
DR12	**Loma Pena Alta**	**4.94**	**262**	Pn	**Pn**	**06 49 43.3**	**-0.4**
SC01	**Santiago de lo**	**6.14**	**270**	Pn	**Pn**	**06 50 02.7**	**+2.5**
SDDR	**Presa de Saban**	**6.70**	**266**	Pn	**Pn**	**06 50 08.9**	**+1.0**

*IDC **02** 06:50:49.8±1.0, 30°.86N×41°.66W, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.8/40, mbtmp3.9/9, MS3.6/7, Ms1 3.7/7, ms1mx3.3/35, Error ellipse: s-maj=29.2km s-min=22.5km az=14.0*

*NEIC **02** 06:50:50.4±1.9, 30°.8N±0°.1×41°.6W±0°.1, h10km±1km, mb4.3/15, Error ellipse: s-maj=23.2km s-min=19.2km az=176.0*

ISC 02 06:50:51.4±0.7, **30°.9N**±0°.1×**41°.60W**±0°.09, **h13**km, **n41**, σ**0.98**/32, **mb4.0**/11, **MS3.8**/7, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSR	**BB Station**	**19.73**	**280**	P	**P**	**06 55 19.9**	**-0.8**
BBSR				IAmb	IAmb	06 55 27.8	
	comp=Z,22nm,1.4s						
SJG	**San Juan**	**25.63**	**246**	LR	LR	07 04 06.1	
	comp=Z,26nm,21.7s,baz=72,slow=31						
BRYW	**Bryant College**	**26.38**	**303**	P	**P**	**06 56 26.1**	**-1.3**
MLPR	**Magueyes Islan**	**26.42**	**247**	P	**P**	**06 56 26.8**	**-1.1**
CRPR	**Cabo Rojo, PR**	**26.45**	**247**	P	**P**	**06 56 26.7**	**-1.5**
D62A	**Allapoint, All**	**26.60**	**315**	P	**P**	**06 56 29.3**	**0.0**
D62A				IAmb	IAmb	06 56 44.4	
	comp=Z,10nm,1.5s						
BANI	**BANI**	**28.85**	**251**	P	**P**	**06 56 49.1**	**-0.8**
BANI					**S**	**07 01 42.7**	**+2.8**
SDV	**Santo Domingo**	**34.79**	**237**	P	**P**	**06 57 42.0**	**-0.2**
HALT	**Halls**	**39.87**	**290**	P	**P**	**06 58 24.7**	**-0.2**
DBIC	**Dimbokro**	**41.98**	**117**	LR	LR	07 15 58.2	
	comp=Z,71nm,18.0s,baz=330,slow=36						
TORD	**Torodi Ar. Bea**	**43.52**	**104**	P	**P**	**06 58 55.4**	**+0.4**
	comp=Z,1.8nm,1.1s,baz=300,slow=4.6,SNR=3.7						
TORD	**Torodi Ar. Bea**	**43.52**	**104**	P	**P**	**06 58 54.6**	**-0.4**
ULM	**Lac du Bonnet**	**44.46**	**312**	P	**P**	**06 59 01.5**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=104,slow=6.9,SNR=5.5						
ULM				LR	LR	07 18 01.9	
	comp=Z,67nm,18.7s,baz=2.0,slow=37						
ULM	**Lac du Bonnet**	**44.46**	**312**	P	**P**	**06 59 01.4**	**-0.7**
H10N2	**ASCENSION HYDR**	**46.42**	**141**	T	T	07 48 46.6	
	baz=327,slow=75,SNR=139						
H10N3	**ASCENSION HYDR**	**46.43**	**141**	T	T	07 48 52.6	
	baz=327,slow=75,SNR=136						
H10N1	**ASCENSION HYDR**	**46.44**	**141**	T	T	07 48 53.7	
	baz=327,slow=75,SNR=117						
H10S3	**ASCENSION HYDR**	**47.28**	**142**	T	T	07 49 54.0	
	baz=254,slow=74,SNR=36						
H10S2	**ASCENSION HYDR**	**47.29**	**142**	T	T	07 49 52.5	
	baz=326,slow=74,SNR=28						
FFC	**Flin Flon**	**48.52**	**318**	P	**P**	**06 59 34.4**	**+0.5**
LPAZ	**La Paz**	**53.38**	**212**	P	**P**	**07 00 11.7**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=18,slow=6.8,SNR=6.7						
LPAZ	**La Paz**	**53.38**	**212**	P	**P**	**07 00 11.3**	**-0.3**
LPAZ				IAmb	IAmb	07 00 14.5	
	comp=Z,2.7nm,0.8s						
LPAZ	**La Paz**	**53.38**	**212**		**P**	**07 00 12.1**	**+0.6**
PD31	**Pinedale Array**	**54.34**	**303**	P	**P**	**07 00 16.2**	**-1.8**
PD31				IAmb	IAmb	07 00 20.1	
	comp=Z,2.4nm,0.8s						
PDAR	**Pinedale Array**	**54.34**	**303**	P	**P**	**07 00 18.3**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=85,slow=9.1,SNR=14						
PDAR				LR	LR	07 22 24.4	
	comp=Z,91nm,19.5s,baz=54,slow=35						
PDAR	**Pinedale Array**	**54.34**	**303**	P	**P**	**07 00 16.8**	**-1.2**
AKASG	**Malin Array Be**	**55.00**	**47**	P	**P**	**07 00 22.8**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=274,slow=6.4,SNR=3.7						
AKASG	**Malin Array Be**	**55.00**	**47**	P	**P**	**07 00 21.1**	**-1.2**
YKA	**Yellowknife Ar**	**55.33**	**327**	P	**P**	**07 00 24.1**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=88,slow=7.4,SNR=7.8						
KARP	**Karpathos**	**56.66**	**65**		**S**	**07 08 26.5**	**-0.2**
J08A	**Circle Bar Ran**	**60.55**	**305**	P	**P**	**07 01 02.5**	**+0.8**
NVAR	**Mina Array Bea**	**61.88**	**300**	P	**P**	**07 01 11.2**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=70,slow=6.6,SNR=8.9						
NVAR				LR	LR	07 27 31.4	
	comp=Z,119nm,18.7s,baz=1.0,slow=36						
NVAR	**Mina Array Bea**	**61.88**	**300**	P	**P**	**07 01 10.8**	**-0.1**
INK	**Inuvik**	**62.41**	**335**	P	**P**	**07 01 14.0**	**+0.4**
INK				IAmb	IAmb	07 01 15.9	
	comp=Z,2.2nm,0.9s						
NLWA	**Neilton Lookou**	**63.06**	**311**		**S**	**07 09 49.9**	**+1.2**
ILAR	**Eielson Array**	**68.65**	**334**	P	**P**	**07 01 55.0**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=52,slow=3.8,SNR=9.8						
ILAR				LR	LR	07 31 54.8	
	comp=Z,70nm,18.5s,baz=66,slow=36						
ILAR	**Eielson Array**	**68.65**	**334**	P	**P**	**07 01 54.6**	**+0.6**
H09N1	**TRISTAN DA CUN**	**72.93**	**156**	T	T	08 21 38.9	
	SNR=23						
H09W1	**TRISTAN DA CUN**	**72.95**	**156**	T	T	08 22 02.7	
KMBO	**Kilima Mbogo**	**81.01**	**97**	LR	LR	07 38 49.3	
	comp=Z,43nm,18.1s,baz=88,slow=36						
ZALV	**Zalesovo Beam**	**83.68**	**29**	P	**P**	**07 03 20.8**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=285,slow=5.7,SNR=2.7						

*IDC **02** 07:10:20.6±1.1, 17°.23N×145°.55E, h352km±13km, mb3.5/17, mb1 3.6/18, mb1mx3.4/47, mbtmp4.2/18, Error ellipse: s-maj=17.9km s-min=13.1km az=86.0*

*NEIC **02** 07:10:22.1±1.1, 17°.2N±0°.1×145°.4E±0°.2, h364km±5km, mb4.0/33, Error ellipse: s-maj=26.7km s-min=14.1km az=100.0*

ISC 02 07:10:21.2±0.6, **17°.26N**±0°.07×**145°.4E**±0°.1, **h350**km, **n66**, σ**0.92**/70, **mb3.9**/30, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	**Sarigan**	**0.68**	**145**	Pn	**Pn**	**07 11 08.1**	**+2.1**
SARN				S	**S**	**07 11 44.9**	**+3.0**
GUMO	**Guam**	**3.68**	**188**	P	**Pn**	**07 11 27.8**	**+0.7**
	35nm,0.3s,baz=333,slow=5.2,SNR=8.3						
GUMO				S	**S**	**07 12 19.4**	**-0.8**
	26nm,0.3s,baz=186,slow=21,SNR=9.2						
GUMO	**Guam**	**3.68**	**188**		**Pn**	**07 11 28.4**	**+1.3**
GUMO					**S**	**07 12 21.4**	**+1.3**
JNU	**Nakatsue**	**20.49**	**323**	P	**P**	**07 14 34.3**	**+0.6**
	6.4nm,0.7s,baz=136,slow=4.5,SNR=7.3						
JNU	**Nakatsue**	**20.49**	**323**	P	**P**	**07 14 34.5**	**+0.8**
JNU				IAmb	IAmb	07 14 42.0	
	comp=Z,12nm,1.1s						
KSRS	**Korea Array**	**25.31**	**326**	P	**P**	**07 15 16.6**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=144,slow=8.8,SNR=12						
KS19	**Wonju Array Si**	**25.37**	**326**	P	**P**	**07 15 17.6**	**-0.1**
ASAJ	**Asahikawa**	**26.87**	**356**	P	**P**	**07 15 31.7**	**+0.7**
	comp=Z,3.6nm,0.7s,baz=168,slow=9.0,SNR=5.3						
JKA	**Kamikawa-asahi**	**26.87**	**356**	P	**P**	**07 15 31.7**	**+0.7**
USRK	**Ussuriysk Ar.**	**29.13**	**340**	P	**P**	**07 15 51.1**	**+0.2**
WB0	**Warramunga Arr**	**38.34**	**197**	P	**P**	**07 17 09.3**	**-0.5**
WB0				IAmb	IAmb	07 17 27.6	
	comp=Z,15nm,1.4s						
WRAB	**Tennant Creek**	**38.51**	**197**	P	**P**	**07 17 11.0**	**-0.3**
WRAB				IAmb	IAmb	07 17 15.0	
	comp=Z,22nm,1.4s						
WB2	**Warramunga Arr**	**38.52**	**197**	P	**P**	**07 17 10.4**	**-0.9**
WB2				IAmb	IAmb	07 17 24.5	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	**38.53**	**197**	P	**P**	**07 17 10.5**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=7.3,slow=7.9,SNR=6.1						
WRA	**Warramunga Arr**	**38.53**	**197**	P	**P**	**07 17 10.0**	**-1.3**
AS31	**Alice Springs**	**42.19**	**196**	P	**P**	**07 17 42.3**	**+1.2**
ASAR	**Alice Springs**	**42.19**	**196**	P	**P**	**07 17 41.0**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=20,slow=12,SNR=5.3						
ASAR	**Alice Springs**	**42.19**	**196**	P	**P**	**07 17 41.0**	**-0.1**
MA2	**Magadan**	**42.44**	**4**	P	**P**	**07 17 42.8**	**+0.3**
	comp=Z,4.3nm,0.7s,baz=178,slow=6.0,SNR=7.7						
MA2	**Magadan**	**42.44**	**4**	P	**P**	**07 17 43.0**	**+0.5**
ULN	**Ulaanbaatar**	**43.71**	**323**	P	**P**	**07 17 53.7**	**+0.6**
SONM	**Songino Array**	**44.08**	**322**	P	**P**	**07 17 56.4**	**+0.5**
	comp=Z,2.1nm,0.7s,baz=132,slow=7.0,SNR=18						
SONM	**Songino Array**	**44.08**	**322**	P	**P**	**07 17 56.7**	**+0.8**
BILL	**Bilibino**	**52.48**	**10**	P	**P**	**07 18 59.2**	**+0.2**
ZAA0	**Zalesovo Array**	**58.97**	**323**	P	**P**	**07 19 44.7**	**-0.1**
ZALV	**Zalesovo Beam**	**58.97**	**323**	P	**P**	**07 19 44.4**	**-0.4**
	comp=Z,2.4nm,0.6s,baz=110,slow=5.8,SNR=13						
ZALV	**Zalesovo Beam**	**58.97**	**323**	P	**P**	**07 19 44.8**	**0.0**
MK31	**Makanchi Array**	**59.23**	**315**	P	**P**	**07 19 47.6**	**+0.8**
MKAR	**Makanchi Array**	**59.23**	**315**	P	**P**	**07 19 47.3**	**+0.4**
	comp=Z,1.2nm,0.5s,baz=94,slow=7.7,SNR=28						
MKAR				PcP	**PcP**	**07 20 29.9**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=91,slow=7.3,SNR=6.3						
MAKZ	**Makanchi**	**59.45**	**315**	P	**P**	**07 19 49.2**	**+0.9**
MAKZ				IAmb	IAmb	07 19 49.2	
	comp=Z,2.5nm,0.6s						
KURK	**Kurchatov**	**62.13**	**319**	P	**P**	**07 20 06.5**	**+0.5**
IMAR	**Indian Mountai**	**62.65**	**24**	P	**P**	**07 20 09.1**	**-0.2**
BPAW	**Bear Paw Mtn.**	**63.18**	**26**	P	**P**	**07 20 12.6**	**-0.1**
BPAW				IAmb	IAmb	07 20 12.8	
	comp=Z,2.1nm,0.8s						
TRF	**Thorofare Moun**	**63.30**	**27**	P	**P**	**07 20 12.7**	**-1.0**
TRF				IAmb	IAmb	07 20 16.8	
	comp=Z,3.9nm,1.3s						
BOOM	**Boomskoye usch**	**63.46**	**309**	P	**P**	**07 20 16.2**	**+1.0**
MLY	**Manley**	**63.54**	**25**	P	**P**	**07 20 15.4**	**+0.3**
FID	**Port Fidalgo**	**64.44**	**30**	P	**P**	**07 20 20.5**	**-0.3**
WRH	**Wood River Hil**	**64.49**	**26**	P	**P**	**07 20 20.1**	**-1.0**
WRH				IAmb	IAmb	07 20 34.0	
	comp=Z,4.6nm,1.5s						
CCB	**Clear Creek Bu**	**64.66**	**26**	P	**P**	**07 20 21.6**	**-0.6**
CCB				IAmb	IAmb	07 20 39.1	
	comp=Z,3.9nm,1.3s						
IL31		**65.07**	**26**	P	**P**	**07 20 23.1**	**-1.7**
IL31				IAmb	IAmb	07 20 36.4	
	comp=Z,6.3nm,1.4s						
ILAR	**Eielson Array**	**65.07**	**26**	P	**P**	**07 20 22.9**	**-2.0**
	comp=Z,1.3nm,0.6s,baz=247,slow=5.9,SNR=30						
ILAR	**Eielson Array**	**65.07**	**26**	P	**P**	**07 20 23.1**	**-1.7**
VRDI	**Verde Repeater**	**65.97**	**30**	P	**P**	**07 20 30.8**	**0.0**
VRDI				IAmb	IAmb	07 20 43.9	
	comp=Z,2.3nm,0.8s						
FYU	**Fort Yukon**	**66.12**	**24**	P	**P**	**07 20 32.1**	**+0.7**
FYU				IAmb	IAmb	07 20 46.4	
	comp=Z,4.8nm,1.2s						
SCRK	**Sand Creek**	**66.15**	**27**	P	**P**	**07 20 31.7**	**-0.2**
SCRK				IAmb	IAmb	07 20 41.1	
	comp=Z,3.0nm,1.4s						
BMAR	**Burnt Mountain**	**66.55**	**23**	P	**P**	**07 20 34.8**	**+0.6**
BCAR	**Beaver Creek A**	**66.99**	**28**	P	**P**	**07 20 37.0**	**-0.1**
KK31	**Karatay Array**	**67.44**	**310**	P	**P**	**07 20 40.3**	**+0.1**
KK31				IAmb	IAmb	07 20 41.5	
	comp=Z,2.6nm,0.8s						
KKAR	**Karatay Array**	**67.44**	**310**	P	**P**	**07 20 40.7**	**+0.5**
KKAR	**Karatay Array**	**67.44**	**310**	P	**P**	**07 20 40.5**	**+0.2**
KKAR				IAmb	IAmb	07 20 41.5	
	comp=Z,2.6nm,0.8s						
BRVK	**Borovoye**	**67.45**	**321**	P	**P**	**07 20 40.6**	**+0.6**
INK	**Inuvik**	**70.81**	**23**	P	**P**	**07 20 58.7**	**-1.5**
	comp=Z,1.8nm,0.8s,baz=265,slow=7.1,SNR=9.1						
INK	**Inuvik**	**70.81**	**23**	P	**P**	**07 20 59.9**	**-0.3**
INK				IAmb	IAmb	07 21 00.2	
	comp=Z,2.9nm,0.9s						
ARU	**Arti**	**74.05**	**325**	P	**P**	**07 21 19.3**	**-0.1**
ABKAR	**Akbulak array**	**74.17**	**317**	P	**P**	**07 21 19.8**	**-0.5**
ABKAR	**Akbulak array**	**74.17**	**317**	P	**P**	**07 21 19.6**	**-0.6**
ABKAR				IAmb	IAmb	07 21 20.2	
	comp=Z,4.3nm,0.7s						
C36M	**Paulatuk**	**74.19**	**22**	P	**P**	**07 21 19.2**	**-0.8**
GEYT	**Alibeck**	**77.48**	**306**	P	**P**	**07 21 39.6**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=108,slow=8.2,SNR=3.8						
GEYT	**Alibeck**	**77.48**	**306**	P	**P**	**07 21 38.6**	**-0.5**
YKA	**Yellowknife Ar**	**79.40**	**28**	P	**P**	**07 21 47.9**	**-1.0**
	comp=Z,1.6nm,0.7s,baz=288,slow=5.4,SNR=24						
RES	**Resolute Bay**	**80.89**	**14**	P	**P**	**07 21 55.8**	**-0.8**
ARCES	**ARCESS Array B**	**83.76**	**342**	P	**P**	**07 22 12.0**	**+0.6**
	comp=Z,3.2nm,0.8s,baz=51,slow=8.6,SNR=3.6						
NVAR	**Mina Array Bea**	**84.27**	**52**	P	**P**	**07 22 14.6**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=259,slow=6.3,SNR=6.6						
NVAR	**Mina Array Bea**	**84.27**	**52**	P	**P**	**07 22 13.9**	**-1.0**
KBZ	**Khabaz**	**86.93**	**315**	P	**P**	**07 22 26.7**	**-0.7**
	comp=Z,3.2nm,1.0s,baz=85,slow=21,SNR=4.2						
FINES	**FINESS Array B**	**88.05**	**335**	P	**P**	**07 22 30.3**	**-2.0**
	comp=Z,6.0nm,1.2s,baz=57,slow=7.0,SNR=4.7						

*ATH **02** 07:50:17.8, 38°.25N×20°.39E, h12km±2km, ML3.0/1, Error ellipse: s-maj=3.0km s-min=1.6km az=209.0*

*THE **02** 07:50:17.7, 38°.25N×20°.40E, h13km±1km, ML2.7/4, Error ellipse: s-maj=1.3km s-min=0.3km az=185.0*

ISC 02 07:50:17.8±2.3, **38°.25N**±0°.04×**20°.40E**±0°.06, **h12**km±10km, **n12**, σ**0.26**/21, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.02**	**73**	P	**Pg**	**07 50 19.8**	**-0.1**
KEF4				S	**Sg**	**07 50 21.6**	**+0.2**
KEF3	**Kipouria, Keph**	**0.06**	**219**	P	**Pg**	**07 50 20.1**	**-0.1**
KEF3				S	**Sg**	**07 50 21.9**	**-0.1**
KEF1	**Kardakata, Kep**	**0.06**	**66**	P	**Pg**	**07 50 20.1**	**-0.2**
KEF1				S	**Sg**	**07 50 21.8**	**-0.2**
CHV1	**Chavriata, Kef**	**0.07**	**191**	P	**Pg**	**07 50 20.2**	**-0.1**
CHV1				S	**Sg**	**07 50 22.3**	**+0.2**
ARG2	**Argostoli**	**0.10**	**136**	P	**Pg**	**07 50 20.8**	**+0.1**
ARG2				S	**Sg**	**07 50 22.8**	**+0.1**
	11µm,0.2s						
VLS	**Valsamata**	**0.17**	**116**	P	**Pg**	**07 50 21.4**	**-0.2**
VLS				S	**Sg**	**07 50 24.6**	**+0.2**
	5µm,0.1s						
VLS	**Valsamata**	**0.17**	**116**	P	**Pg**	**07 50 21.4**	**-0.2**
VLS				S	**Sg**	**07 50 24.3**	**0.0**
VLS				AML	AML	07 50 24.6	
	comp=N,14843µm,0.3s						
VLS				AML	AML	07 50 24.8	
	comp=E,11534µm,0.1s						
VSK1	**VASILIKIADES**	**0.20**	**40**	P	**Pg**	**07 50 22.1**	**-0.2**
FSK	**Fiskardo**	**0.24**	**32**	P	**Pg**	**07 50 22.7**	**-0.3**
FSK				S	**Sg**	**07 50 26.7**	**+0.3**
	comp=E,1µm,0.2s						
EVGI	**Lefkada island**	**0.42**	**29**	P	**Pg**	**07 50 25.9**	**-0.3**
EVGI				S	**Sg**	**07 50 32.4**	**+0.6**
	comp=E,315nm,0.1s						
EVGI	**Lefkada island**	**0.42**	**29**	P	**Pg**	**07 50 25.8**	**-0.3**
MGNA	**Meganis**	**0.51**	**37**	P	**Pg**	**07 50 28.0**	**+0.1**

*BJI **02** 07:55:28.3±0.0, 31°.10N×101°.36E, h14km, ML3.7/10, Ms3.5/7, Ms7 3.4/4*

*IDC **02** 07:55:31.0±1.1, 31°.32N×101°.11E, h0km, mb3.6/7, mb1 3.8/9, mb1mx3.5/42, mbtmp3.6/9, ML3.9/2, MS2.9/1, Ms1 3.1/1, ms1mx2.6/38, Error ellipse: s-maj=39.2km s-min=20.2km az=63.0*

ISC 02 07:55:32.2±0.8, **31°.27N**±0°.06×**101°.55E**±0°.06, **h10**km, **n14**, σ**2.79**/17, **mb3.6**/7, **1D**, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.93**	**100**	⇓*i*Pg	**Pn**	**07 56 05.8**	**+0.7**
CD2				Sg	**Sb**	**07 56 33.1**	**+1.5**
CD2				smax	smax		
	comp=N,1µm,0.7s						
CD2				smax	smax		
	comp=E,1µm,0.8s						
LZH	**Lanzhou**	**5.17**	**21**	*e*Pg	**Pg**	**07 57 11.5**	**+0.2**
LZH				Sg	**Sg**	**07 58 24.9**	**+6.5**
XAN	**Xi'an**	**6.80**	**64**	Pg	**Pg**	**07 57 39.6**	**-2.9**
XAN				Sg	**Sg**	**07 59 07.8**	**-2.8**
GTA	**Gaotai**	**8.25**	**351**	*e*P	**Pn**	**07 57 31.3**	**-0.8**
GTA				pP	Pb	07 57 35.8	-19
GTA				sP	Pg	07 57 38.6	-32
GTA				LR	LR		
	comp=N,130nm,13.6s						
GTA				LR	LR		
	comp=E,230nm,11.1s						
GTA				LR	LR		
	comp=Z,280nm,10.8s						
CMAR	**Chiang Mai Arr**	**12.97**	**191**	Pn	**Pn**	**07 58 38.6**	**+1.9**
	0.8nm,0.3s,baz=2.4,slow=10,SNR=4.3						
CMAR				LR	LR	08 03 39.6	
	comp=Z,51nm,20.1s,baz=337,slow=38						
WMQ	**Urumqi**	**16.64**	**323**	*e*P	**Pn**	**07 59 22.0**	**-3.6**
SONM	**Songino Array**	**16.96**	**11**	Pn	**P**	**07 59 30.8**	**-0.8**
	0.1nm,0.3s,baz=196,slow=13,SNR=7.2						
MKAR	**Makanchi Array**	**21.46**	**322**	P	**P**	**08 00 18.3**	**-2.5**
	0.8nm,0.7s,baz=140,slow=12,SNR=12						
AAK	**Ala-Archa**	**24.32**	**305**	P	**P**	**08 00 48.3**	**-1.9**
	0.9nm,0.6s,baz=30,slow=21,SNR=3.5						
ZALV	**Zalesovo Beam**	**25.67**	**337**	P	**P**	**08 01 00.1**	**-2.0**
	2.9nm,0.7s,baz=142,slow=9.1,SNR=11						
KURBB	**Kurchatov Arra**	**25.82**	**325**	P	**P**	**08 01 00.3**	**-3.2**
	0.8nm,0.6s,baz=133,slow=9.7,SNR=10.0						
ASAR	**Alice Springs**	**62.80**	**147**	P	**P**	**08 05 59.5**	**+1.4**
	0.5nm,0.9s,baz=328,slow=6.8,SNR=3.8						
ILAR	**Eielson Array**	**70.62**	**25**	P	**P**	**08 06 49.4**	**+1.9**
	0.7nm,1.1s,baz=277,slow=4.7,SNR=4.2						
YKA	**Yellowknife Ar**	**82.16**	**16**	P	**P**	**08 07 53.9**	**+0.9**
	0.3nm,0.7s,baz=332,slow=5.2,SNR=5.3						

IDC **02** *07:57:27.9±1.2, 43.92N×138.42E, h246km±14km, mb3.1/11, mb1 3.2/15, mb1mx3.0/37, mbtmp3.6/15, Error ellipse: s-maj=26.6km s-min=13.0km az=2.0*
JMA **02** *07:57:28.3±0.5, 43.77N×138.49E, h259km±5km, M3.2*
ISC 02 07:57:27.6±0.7**, 43.78N**±0.08**×138.49E**±0.06**, h250km, n30, σ1§66/38, mb3.4/11, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	Shakotan	1.50	106	P	Pn	07 58 07.6	+1.7
JSH	Shimam	1.60	134	P	Pn	07 58 08.2	+1.5
JOSM	Okushiri--Mats	1.84	157	P	Pn	07 58 10.6	+1.9
JKB	Kayabe	2.66	134	P	Pn	07 58 17.7	+1.3
JWK2	Keihoku	2.88	57	P	Pn	07 58 20.7	+2.0
ASAJ	Asahikawa	2.98	82	P	Pn	07 58 19.6	-0.2
	2.6nm,0.3s,baz=20,slow=1.2,SNR=18						
JFR	Furan	3.05	100	P	Pn	07 58 22.5	+1.9
JFR				eS	S	07 59 04.8	+2.3
JKK2	Kamakawa 2	3.08	87	P	Pn	07 58 22.5	+1.6
JKK2				eS	S	07 59 05.6	+2.5
JSE	Soyaes	3.16	67	P	Pn	07 58 23.4	+1.7
JNBK	Urakawa-nobuka	3.46	114	P	Pn	07 58 27.6	+2.4
JNBK				eS	S	07 59 12.2	+1.4
JCH	Churui	3.74	106	P	Pn	07 58 28.3	-0.1
JCH				eS	S	07 59 13.9	-2.7
JAR	Ashorobuto	3.87	95	P	Pn	07 58 30.8	+1.0
JAR				eS	S	07 59 20.4	+1.3
JTKR	Abashiri--Toko	3.92	85	P	Pn	07 58 31.5	+1.1
JANG	Nango	4.08	146	P	Pn	07 58 32.9	+0.6
JANG				eS	S	07 59 21.2	-2.5
JAK	Akkeshi	4.59	98	P	Pn	07 58 37.6	-0.7
JAK				eS	S	07 59 31.6	-3.0
USRK	Ussuriysk Ar.	4.71	277	P	Pn	07 58 39.9	+0.1
	baz=92,slow=13,SNR=9.0						
NEM2	Nemuro 2	5.28	92	P	Pn	07 58 46.7	-0.1
NEM2				eS	S	07 59 46.0	-3.9
KLR	Kul'dur	7.17	322	P	Pn	07 59 09.6	-0.7
	0.1nm,0.3s,baz=125,slow=12,SNR=5.7						
MJAR	Matsushiro Arr	7.23	182	P	Pn	07 59 13.3	+2.1
	0.1nm,0.3s,baz=359,slow=13,SNR=6.2						
ZALV	Zalesovo Beam	35.93	306	P	P	08 04 02.7	-1.4
	0.5nm,0.4s,baz=99,slow=8.9,SNR=2.9						
MKAR	Makanchi Array	38.94	295	P	P	08 04 28.8	-0.6
	0.2nm,0.5s,baz=83,slow=12,SNR=4.0						
KURBB	Kurchatov Arra	40.32	302	P	P	08 04 40.4	-0.2
	1.9nm,0.6s,baz=78,slow=8.8,SNR=12						
ILAR	Eielson Array	45.15	36	P	P	08 05 18.3	-0.8
	0.1nm,0.4s,baz=273,slow=5.2,SNR=5.3						
YKA	Yellowknife Ar	59.15	31	P	P	08 07 01.9	+0.3
	0.4nm,0.4s,baz=308,slow=6.6,SNR=16						
FINES	FINESS Array B	61.84	330	P	P	08 07 19.1	-0.8
	1.4nm,0.8s,baz=80,slow=4.5,SNR=5.5						
AKASG	Malin Array Be	67.66	320	P	P	08 07 57.4	-0.1
	1.0nm,0.6s,baz=46,slow=5.5,SNR=5.5						
NVAR	Mina Array Bea	72.73	53	P	P	08 08 29.8	+1.1
	0.2nm,0.4s,baz=305,slow=5.2,SNR=4.3						
PDAR	Pinedale Array	74.51	45	P	P	08 08 39.6	+0.6
	0.5nm,0.6s,baz=230,slow=0.8,SNR=6.7						
ULM	Lac du Bonnet	75.07	33	P	P	08 08 41.6	-0.1
	1.3nm,0.6s,baz=299,slow=10.0,SNR=3.0						
GERES	GERESS Array B	75.84	326	P	P	08 08 46.4	+0.1
	0.2nm,0.4s,baz=21,slow=4.2,SNR=2.6						

ROM 02 08:04:54.3±0.0**, 43.392N**±0.002**×12.496E**±0.003**, h8km, ML2.0/22, 11C-1D, Error ellipse: s-maj=0.2km s-min=0.1km az=217.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	Monte Foce - G	0.06	115	⇑P	Pg	08 04 56.4	+0.1
ATFO				S	Sg	08 04 57.8	+0.1
ATFO				AML	AML		
	comp=N,2445μm,0.6s						
ATFO				AML	AML		
	comp=E,3030μm,0.4s						
ATVO	AVT- Monte Val	0.07	261	⇑P	Pg	08 04 56.5	+0.2
ATVO				S	Sg	08 04 57.8	0.0
ATVO				AML	AML		
	comp=E,1790μm,0.1s						
ATVO				AML	AML		
	comp=N,2425μm,0.5s						
ATPI	Pietralunga -	0.09	311	P	Pg	08 04 57.0	+0.3
ATPI				S	Sg	08 04 58.8	+0.5
ATPI				AML	AML		
	comp=E,1500μm,0.4s						
ATPI				AML	AML		
	comp=N,2295μm,0.1s						
MURB	Monte Urbino	0.13	171	⇓P	Pg	08 04 57.9	+0.7
MURB				S	Sg	08 05 00.6	+1.3
MURB				AML	AML		
	comp=E,4960μm,0.2s						
MURB				AML	AML		
	comp=N,3840μm,0.3s						
MURB				AML	AML		
	comp=N,3640μm,0.3s						
MURB				AML	AML		
	comp=E,5620μm,0.2s						
MURB				AML	AML		
	comp=E,4965μm,0.2s						
MURB				AML	AML		
	comp=N,3840μm,0.3s						
PIEI	Pieia	0.15	11	⇑P	Pg	08 04 58.1	+0.6
PIEI				S	Sg	08 05 01.0	+1.3
PIEI				AML	AML		
	comp=E,2015μm,0.2s						
PIEI				AML	AML		
	comp=N,781μm,0.2s						
CDCA	Citt' di Caste	0.20	289	P	Pg	08 04 59.2	+0.7
FRON	Frontone	0.21	53	⇑P	Pg	08 04 59.2	+0.6
FRON				S	Sg	08 05 03.0	+1.4
FRON				AML	AML		
	comp=N,593μm,0.1s						
FRON				AML	AML		
	comp=E,402μm,0.4s						
SSFR	Montelago di S	0.21	78	P	Pg	08 04 59.3	+0.6
SSFR				S	Sg	08 05 03.1	+1.5
SSFR				AML	AML		
	comp=E,2270μm,0.8s						
SSFR				AML	AML		
	comp=N,2585μm,0.7s						
SSFR				AML	AML		
	comp=E,2275μm,0.8s						
SSFR				AML	AML		
	comp=E,2495μm,0.8s						
SSFR				AML	AML		
	comp=N,2590μm,0.7s						
SSFR				AML	AML		
	comp=N,2430μm,0.7s						
BADI	Badiali	0.22	303	⇑P	Pg	08 04 59.5	+0.7
BADI				S	Sg	08 05 03.5	+1.8
BADI				AML	AML		
	comp=E,950μm,0.2s						
BADI				AML	AML		
	comp=N,1375μm,0.2s						
BADI				AML	AML		
	comp=E,950μm,0.2s						
FOSV	Fossato di Vic	0.22	117	P	Pg	08 04 59.4	+0.6
FOSV				S	Sg	08 05 03.5	+1.8
FOSV				AML	AML		
	comp=E,237μm,0.3s						
FOSV				AML	AML		
	comp=N,327μm,0.3s						
ATTE	AVT- Monte Tez	0.22	208	P	Pg	08 04 59.3	+0.5
ATTE				S	Sg	08 05 03.2	+1.4
ATTE				AML	AML		
	comp=E,356μm,0.3s						
ATTE				AML	AML		
	comp=N,234μm,0.4s						
NARO	Abbazia di Nar	0.23	16	⇑P	Pg	08 04 59.5	+0.5
NARO				S	Sg	08 05 03.4	+1.3
NARO				AML	AML		
	comp=N,242μm,1.6s						
NARO				AML	AML		
	comp=E,380μm,0.2s						
NARO				AML	AML		
	comp=N,242μm,1.6s						
ATCC	AVT- Casa Cast	0.23	153	P	Pg	08 04 59.8	+0.8
ATCC				S	Sg	08 05 04.4	+2.2
ATCC				AML	AML		
	comp=N,1675μm,0.2s						
ATCC				AML	AML		
	comp=E,844μm,1.2s						
PE3	Peglio	0.30	0	P	Pg	08 05 01.2	+0.8
PE3				S	Sb	08 05 06.9	-0.3
PE3				AML	AML		
	comp=E,364μm,1.6s						
PE3				AML	AML		
	comp=N,389μm,0.4s						
MPAG	Monte Paganucc	0.30	39	⇑P	Pg	08 05 01.0	+0.6
MPAG				S	Sb	08 05 06.3	-1.0
SSP9	Sansepolcro	0.32	305	P	Pb	08 05 01.6	-0.7
ARVD	Arcevia	0.34	72	⇑P	Pg	08 05 01.7	+0.6
ARVD				S	Sb	08 05 07.6	-0.7
ARVD				AML	AML		
	comp=N,145μm,0.5s						
ARVD				AML	AML		
	comp=E,190μm,1.1s						
SNTG	Esanatoglia	0.35	113	P	Pg	08 05 01.9	+0.6
SNTG				S	Sb	08 05 08.0	-0.6
SNTG				AML	AML		
	comp=E,245μm,0.2s						
SNTG				AML	AML		
	comp=N,525μm,1.3s						
FSSB	Fossombrone	0.36	34	⇑P	Pg	08 05 02.1	+0.6
FSSB				S	Sb	08 05 08.5	-0.4
FSSB				AML	AML		
	comp=N,319μm,0.4s						
FSSB				AML	AML		
	comp=E,296μm,1.1s						
ASSB	Assisi San Ben	0.37	161	P	Pg	08 05 02.1	+0.5
ASSB				S	Sb	08 05 08.4	-0.7
ASSB				AML	AML		
	comp=N,260μm,0.8s						
ASSB				AML	AML		
	comp=E,266μm,0.4s						
MMUR	Monte Murano	0.37	82	P	Pb	08 05 02.4	-0.8
MMUR				S	Sb	08 05 08.3	-0.8
CAFI	Castiglion Fio	0.39	261	P	Pg	08 05 02.5	+0.5
CAFI				S	Sb	08 05 09.0	-0.7
CAFI				AML	AML		
	comp=N,81μm,0.5s						
CAFI				AML	AML		
	comp=E,124μm,0.2s						
CPGN	Carpegna, Ital	0.43	343	⇑P	Pb	08 05 04.0	-0.3
CPGN				AML	AML		
	comp=N,184μm,1.6s						
CPGN				AML	AML		
	comp=E,195μm,1.3s						
EL6	Elcito	0.45	98	P	Pg	08 05 03.6	+0.6
EL6				S	Sb	08 05 11.1	-0.3
CRE	Caprese Michel	0.46	300	P	Pg	08 05 03.8	+0.6
CRE				S	Sb	08 05 11.2	-0.5
CESI	CESI - Serrava	0.49	142	P	Pg	08 05 04.2	+0.4
CESI				AML	AML		
	comp=N,52μm,1.4s						
CESI				AML	AML		
	comp=E,22μm,0.4s						
CING	Cingoli	0.51	92	P	Pg	08 05 04.8	+0.6
MGAB	Montegabbione	0.56	210	P	Pg	08 05 05.6	+0.5
MGAB				AML	AML		
	comp=N,239μm,0.8s						
MGAB				AML	AML		
	comp=E,284μm,0.5s						
MGAB				AML	AML		
	comp=N,238μm,0.4s						
MGAB				AML	AML		
	comp=E,272μm,0.5s						
FDMO	Fiordimonte	0.56	129	⇑P	Pg	08 05 05.6	+0.4
FDMO				AML	AML		
	comp=N,72μm,0.4s						
FDMO				AML	AML		
	comp=E,60μm,1.1s						
MOMA	Monte Martano	0.59	175	P	Pb	08 05 06.5	-0.5
SACS	San Casciano d	0.69	219	P	Pg	08 05 08.1	+0.4

ROM 02 08:05:50.7±0.0**, 43.394N**±0.002**×12.494E**±0.003**, h9km, ML1.7/8, 6C-1D, Error ellipse: s-maj=0.2km s-min=0.2km az=20.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	Monte Foce - G	0.06	116	⇑P	Pg	08 05 52.8	0.0
ATFO				S	Sg	08 05 54.3	0.0
ATFO				AML	AML		
	comp=N,1185μm,0.5s						
ATFO				AML	AML		
	comp=E,1112μm,0.2s						
ATVO	AVT- Monte Val	0.07	260	⇑P	Pg	08 05 52.9	+0.1
ATVO				S	Sg	08 05 54.2	-0.1
ATVO				AML	AML		
	comp=N,728μm,0.5s						
ATVO				AML	AML		
	comp=E,470μm,0.7s						
ATPI	Pietralunga -	0.09	310	⇑P	Pg	08 05 53.4	+0.3
ATPI				S	Sg	08 05 55.2	+0.4
ATPI				AML	AML		
	comp=N,266μm,0.1s						
ATPI				AML	AML		
	comp=E,243μm,0.4s						
MURB	Monte Urbino	0.13	170	⇑P	Pg	08 05 54.3	+0.6
MURB				S	Sg	08 05 57.0	+1.2
MURB				AML	AML		
	comp=E,1220μm,0.2s						
MURB				AML	AML		
	comp=N,1215μm,0.2s						
MURB				AML	AML		
	comp=E,1455μm,1.4s						
MURB				AML	AML		
	comp=N,1196μm,0.2s						
PIEI	Pieia	0.14	12	P	Pg	08 05 54.6	+0.7
PIEI				S	Sg	08 05 57.5	+1.3
CDCA	Citt' di Caste	0.20	289	⇑P	Pg	08 05 55.9	+1.1
FRON	Frontone	0.21	54	⇑P	Pg	08 05 55.6	+0.6
FRON				S	Sg	08 05 59.4	+1.5
SSFR	Montelago di S	0.21	78	P	Pg	08 05 55.7	+0.6
SSFR				S	Sg	08 05 59.5	+1.4
BADI	Badiali	0.22	303	P	Pg	08 05 55.9	+0.8
BADI				S	Sg	08 05 59.9	+1.8
BADI				AML	AML		
	comp=E,559μm,0.2s						
BADI				AML	AML		
	comp=N,548μm,0.4s						
FOSV	Fossato di Vic	0.22	117	P	Pg	08 05 55.8	+0.6
FOSV				S	Sg	08 05 59.4	+1.2
ATTE	AVT- Monte Tez	0.22	208	P	Pg	08 05 55.8	+0.6
ATTE				S	Sg	08 05 59.6	+1.4
ATTE				AML	AML		
	comp=E,110μm,1.5s						
ATTE				AML	AML		
	comp=N,97μm,0.5s						
NARO	Abbazia di Nar	0.23	16	P	Pg	08 05 55.9	+0.6
NARO				S	Sg	08 05 59.8	+1.4
ATCC	AVT- Casa Cast	0.23	153	P	Pg	08 05 56.4	+0.9
ATCC				S	Sg	08 06 00.8	+2.2
ATCC				AML	AML		
	comp=E,315μm,1.1s						
ATCC				AML	AML		
	comp=N,629μm,0.2s						
ATCC				AML	AML		
	comp=E,316μm,1.1s						
ATCC				AML	AML		
	comp=N,628μm,0.2s						
MPAG	Monte Paganucc	0.30	39	P	Pg	08 05 57.5	+0.7
MPAG				S	Sb	08 06 02.7	-0.9
ARVD	Arcevia	0.34	72	P	Pg	08 05 58.1	+0.6
ARVD				S	Sb	08 06 04.0	-0.6
SNTG	Esanatoglia	0.35	113	P	Pg	08 05 58.2	+0.5
SNTG				S	Sb	08 06 04.3	-0.6
FSSB	Fossombrone	0.36	35	P	Pg	08 05 58.5	+0.6
ASSB	Assisi San Ben	0.37	161	P	Pg	08 05 58.6	+0.6
ASSB				S	Sb	08 06 04.6	-0.8
ASSB				AML	AML		
	comp=E,84μm,0.6s						
ASSB				AML	AML		
	comp=N,126μm,1.5s						
CAFI	Castiglion Fio	0.39	261	⇓P	Pb	08 05 59.2	-0.6
CAFI				S	Sb	08 06 05.3	-0.7
CAFI				AML	AML		
	comp=E,43μm,1.6s						
CAFI				AML	AML		
	comp=N,42μm,1.6s						
EL6	Elcito	0.45	98	P	Pg	08 05 60.0	+0.5
FDMO	Fiordimonte	0.56	129	P	Pg	08 06 02.0	+0.4

NIED **02** *08:13:00, 39.60N×142.10E, h56km, Mw3.9 Best double couple: M0 8.52000×10^14 NP1:φs17.00000°, δ66.00000°, λ90.00000°. NP2:φs197.00000°, δ24.00000°, λ89.00000°.*
JMA **02** *08:13:25.4, 39.64N×142.11E, h49km±1km, M3.9*
JMA Felt II J1.
NEIC **02** *08:13:28.6±1.0, 39.73N±0.08×141.9E±0.1, h72km±7km, mb4.1/18, Error ellipse: s-maj=16.5km s-min=6.8km az=131.0*
IDC **02** *08:13:30.1±2.5, 39.62N×141.99E, h92km±23km, mb3.5/16, mb1 3.6/19, mb1mx3.5/41, mbtmp3.8/19, MS2.7/4, Ms1 2.7/4, ms1mx2.5/31, Error ellipse: s-maj=18.6km s-min=15.4km az=125.0*
ISC 02 08:13:25.4±0.7**, 39.62N**±0.03**×142.02E**±0.06**, h47km±5km, n76, σ1§38/77, mb3.9/22, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.16	253	P	Pn	08 13 33.8	+0.7
MIYJ				S	Sn	08 13 39.6	+1.0
JTH	Tanohata	0.34	339	P	Pn	08 13 34.9	+0.3
JTH				S	Sn	08 13 41.5	+0.4
JOM	Ohasama	0.58	255	P	Pn	08 13 38.6	+1.1
JOM				S	Sn	08 13 48.1	+2.0
OFUJ	Ofunato	0.61	207	P	Pn	08 13 38.2	+0.4
OFUJ				S	Sn	08 13 47.3	+0.6
JKZ	Kuzumaki	0.64	304	P	Pn	08 13 39.2	+0.9
JKZ				S	Sn	08 13 48.8	+1.2
JANG	Nango	0.84	333	P	Pn	08 13 41.0	+0.1
JANG				S	Sn	08 13 52.4	+0.1
JMK	Ichinoseki	0.91	223	P	Pn	08 13 42.7	+0.8
JMK				S	Sn	08 13 55.0	+1.1
JKMT	Kesennumamotoy	0.92	208	P	Pn	08 13 42.4	+0.5
JKMT				S	Sn	08 13 54.6	+0.7
JRG	Rokugo	1.09	258	P	Pn	08 13 45.4	+1.1
JAH	Hinai	1.20	298	P	Pn	08 13 46.9	+1.1
JIO	Ouri	1.28	204	P	Pn	08 13 47.2	+0.4
JTM	Tenmabayashi	1.37	328	P	Pn	08 13 48.5	+0.4
JTM				S	Sn	08 14 06.1	+1.0
ERM	Erimo	2.54	20		Pn	08 14 05.3	+1.2
ERM				Sn	Sn	08 14 33.6	-0.2
MAJO	Matsushiro	4.30	226		Pn	08 14 32.0	+3.7
MAT	Matsushiro	4.30	226	P	Pn	08 14 31.1	+2.8
MAT				eS	Sn	08 15 16.9	-0.3
MJAR	Matsushiro Arr	4.30	226	P	Pn	08 14 32.5	+4.2
	0.6nm,0.3s,baz=36,slow=14,SNR=60						
MJAR	Matsushiro Arr	4.30	226		Pn	08 14 32.0	+3.7
MJB9	Matsu-Tunnel	4.30	226		Pn	08 14 31.8	+3.5
ASAJ	Asahikawa	4.51	5	P	Pn	08 14 31.6	+0.4
	1.8nm,0.3s,baz=197,slow=5.0,SNR=10						
ASAJ				S	Sn	08 15 27.1	+4.8
	0.5nm,0.3s,baz=108,slow=20,SNR=4.0						
ASAJ				LR	LR	08 16 32.5	
	comp=Z,89nm,19.4s,baz=324,slow=40						
JKA	Kamikawa-asahi	4.51	5		Pn	08 14 31.6	+0.4
JKA					Sn	08 15 27.1	+4.8
INU	Inuyama	5.83	225	Pn	Pn	08 14 53.9	+4.6
USRK	Ussuriysk Ar.	8.76	305	P	Pn	08 15 33.7	+4.3
	baz=113,slow=14,SNR=12						
USRK	Ussuriysk Ar.	8.76	305		Pn	08 15 25.6	-3.8
JNU	Nakatsue	11.07	238	LR	LR	08 20 12.2	
	comp=Z,63nm,19.6s,baz=356,slow=36						
KSRS	Korea Array	11.25	263	P	Pn	08 16 09.4	+5.9
	0.7nm,0.3s,baz=71,slow=14,SNR=14						
KSRS				LR	LR	08 20 18.1	
	comp=Z,44nm,21.8s,baz=340,slow=36						
KS19	Wonju Array Si	11.28	264	Pn	Pn	08 16 09.6	+5.7
KSAR	Wonju Array Be	11.29	263	Pn	Pn	08 16 09.2	+5.3
KLR	Kul'dur	12.08	326	LR	LR	08 21 23.9	
	comp=Z,28nm,20.0s,baz=274,slow=39						
BJT	Baijiatuan	19.84	279	P	P	08 17 51.7	-0.6
MA2	Magadan	20.73	13	P	P	08 18 02.1	+0.4
	2.0nm,0.5s,baz=184,slow=16,SNR=5.1						
MA2	Magadan	20.73	13	P	P	08 18 02.0	+0.4
MA2				IAmb	IAmb	08 18 03.6	
	comp=Z,3.5nm,0.8s						
YAK	Yakutsk	23.67	345	P	P	08 18 31.1	-1.2
SEY	Seymchan	24.16	12	P	P	08 18 37.5	+0.6
	comp=Z,3.1nm,0.8s,baz=193,slow=8.0,SNR=14						
ULN	Ulaanbaatar	26.39	300	P	P	08 18 56.8	-0.6
SONM	Songino Array	26.83	300	P	P	08 19 01.9	+0.5
	comp=Z,0.6nm,0.6s,baz=75,slow=8.4,SNR=5.4						
SONM	Songino Array	26.83	300	P	P	08 19 00.4	-0.9
ENH	Enshi	28.12	261	P	P	08 19 12.4	-0.6
ENH				IAmb	IAmb	08 19 14.2	
	comp=Z,13nm,1.5s						
H11N2	WAKE ISLAND Hy	29.16	126	T	T	08 49 53.2	
	baz=318,slow=75,SNR=699						
H11N1	WAKE ISLAND Hy	29.18	126	T	T	08 49 56.2	
	baz=318,slow=75,SNR=640						
H11N3	WAKE ISLAND Hy	29.18	126	T	T	08 50 03.1	
	baz=318,slow=75,SNR=612						
H11S1	WAKE ISLAND Hy	29.96	127	T	T	08 50 57.7	
	baz=320,slow=76,SNR=50						
H11S3	WAKE ISLAND Hy	29.96	128	T	T	08 50 59.5	
	baz=320,slow=76,SNR=51						
H11S2	WAKE ISLAND Hy	29.98	128	T	T	08 51 08.1	
	baz=320,slow=76,SNR=46						
ZAA0	Zalesovo Array	40.57	310	P	P	08 20 59.7	-0.3
ZAA0				IAmb	IAmb	08 21 00.6	
	comp=Z,3.2nm,1.0s						
ZALV	Zalesovo Beam	40.57	310	P	P	08 21 00.2	+0.2
	comp=Z,2.1nm,0.4s,baz=94,slow=7.7,SNR=12						
ZALV	Zalesovo Beam	40.57	310	P	P	08 20 60.0	0.0
MK31	Makanchi Array	43.20	300	P	P	08 21 21.6	0.0
MK31				IAmb	IAmb	08 21 22.3	
	comp=Z,1.7nm,0.7s						
MKAR	Makanchi Array	43.20	300	P	P	08 21 21.8	+0.1
	comp=Z,1.5nm,0.6s,baz=84,slow=9.5,SNR=19						
MAKZ	Makanchi	43.40	300	P	P	08 21 23.1	-0.1
MAKZ				IAmb	IAmb	08 21 24.1	
	comp=Z,1.6nm,0.8s						
KURK	Kurchatov	44.75	306	P	P	08 21 33.9	-0.1
KURK				pP	sP	08 21 51.4	-0.9
KURK				IAmb	IAmb	08 21 52.4	
	comp=Z,4.7nm,1.0s						
KDAK	Kodiak Island	44.88	44	P	P	08 21 35.6	+0.8
	comp=Z,6.3nm,1.0s,baz=220,slow=7.9,SNR=4.9						
ILAR	Eielson Array	47.07	34	P	P	08 21 51.4	-0.6
	comp=Z,0.6nm,0.8s,baz=268,slow=6.0,SNR=9.6						
ILAR	Eielson Array	47.07	34	P	P	08 21 52.1	+0.1
SCRK	Sand Creek	48.40	35	P	P	08 22 02.7	+0.2
INK	Inuvik	51.87	28	P	P	08 22 29.3	+0.7
	comp=Z,1.3nm,0.9s,baz=291,slow=6.9,SNR=8.2						
INK	Inuvik	51.87	28	P	P	08 22 29.3	+0.7
INK				IAmb	IAmb	08 22 40.9	
	comp=Z,4.4nm,1.4s						
KKAR	Karatay Array	52.27	299	P	P	08 22 31.2	-0.8
ARU	Arti	54.76	317	P	P	08 22 49.4	-0.5
C36M	Paulatuk	54.89	26	P	P	08 22 51.3	+0.7
C36M				IAmb	IAmb	08 22 52.1	
	comp=Z,3.1nm,1.2s						
ABKAR	Akbulak array	56.66	309	P	P	08 23 03.2	-0.4
WRA	Warramunga Arr	59.69	188	P	P	08 23 24.3	-0.7
	comp=Z,1.6nm,0.9s,baz=8.6,slow=7.4,SNR=3.8						
RES	Resolute Bay	59.98	15	P	P	08 23 26.2	-0.2
RES				IAmb	IAmb	08 23 26.4	
	comp=Z,0.9nm,0.7s						
YKA	Yellowknife Ar	61.34	31	P	P	08 23 35.8	0.0
	comp=Z,0.1nm,0.6s,baz=304,slow=5.8,SNR=3.4						
ASAR	Alice Springs	63.41	188	P	P	08 23 49.7	-0.5
	comp=Z,0.3nm,0.8s,baz=2.1,slow=7.4,SNR=3.8						
ASAR	Alice Springs	63.41	188	P	P	08 23 50.9	+0.7
FIA1	FINESS Array S	66.75	332	P	P	08 24 11.4	+0.1
FINES	FINESS Array B	66.75	332	P	P	08 24 11.0	-0.3
	comp=Z,1.5nm,0.6s,baz=35,slow=10,SNR=8.9						
FINES	FINESS Array B	66.75	332	P	P	08 24 11.2	-0.2
NC405	NORSAR Array S	71.78	337	P	P	08 24 42.5	0.0
NB2	NORSAR Subarra	71.99	337	P	P	08 24 43.3	-0.5
	comp=Z,0.5nm,0.5s,baz=38,slow=5.9						
NOA	NORSAR Array B	71.99	337	P	P	08 24 43.0	-0.8
	comp=Z,0.9nm,0.8s,baz=54,slow=7.0,SNR=3.8						
AKASG	Malin Array Be	72.55	322	P	P	08 24 46.3	-0.9
	comp=Z,0.8nm,0.5s,baz=44,slow=6.3,SNR=7.0						
PDAR	Pinedale Array	75.52	46	P	P	08 25 05.1	+0.1
	comp=Z,0.2nm,0.5s,baz=253,slow=2.7,SNR=2.8						
BURAR	Bucovina Array	76.58	322	P	P	08 25 11.3	+0.5
GERES	GERESS Array B	80.76	328	P	P	08 25 33.8	-0.1
	comp=Z,0.2nm,0.4s,baz=18,slow=6.3,SNR=3.6						
SIV	San Ignacio	149.01	47	PKPbc	PKPbc	08 33 07.9	-0.8
	comp=Z,1.1nm,0.8s,baz=327,slow=4.0,SNR=6.4						
SIV				PKPab	PKPab	08 33 12.7	-0.2
	comp=Z,1.1nm,0.8s,baz=293,slow=7.7,SNR=6.3						

*NNC **02** 08:13:36.8±1.0,39.82N×75.76E,h0km,mb3.8,mpv3.4, Error ellipse: s-maj=7.3km s-min=5.3km az=168.0*
*SOME **02** 08:13:41.0,40.02N×75.78E,h5km*
*KRNET **02** 08:13:42.5±0.1,40.01N×75.93E,mb3.2*
ISC 02 08:13:40.3±2.1,**39.98N**±0.09×**75.78E**±0.03,**h2**km±13km, **n58**,σ**1.44**/87,**20C-12D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.47	7	⇑iP	Pg	08 14 09.3	+0.9
	baz=1.0						
NRN				⇑iS	Sn	08 14 28.9	+0.9
	baz=1.0						
KZA	Kyzart	2.14	349	⇑iP	Pg	08 14 21.8	+0.5
	baz=46						
KZA				⇑iS	Sg	08 14 50.5	+1.5
	baz=46						
KZA	Kyzart	2.14	349	P	Pg	08 14 21.7	+0.5
	SNR=26						
ARLS	Aral	2.18	330	⇓iP	Pg	08 14 22.6	+0.5
	baz=27						
ARLS				⇓iS	Sg	08 14 51.9	+1.5
	baz=27						
ULHL	Ulahol	2.29	9	⇓iP	Pg	08 14 23.6	-0.7
	baz=6.0						
ULHL				⇓iS	Sg	08 14 53.0	-1.0
	baz=6.0						
ULHL	Ulahol	2.29	9	P	Pg	08 14 24.6	+0.3
	SNR=35						
KDJ	Kajisay	2.40	26	⇓iP	Pb	08 14 24.2	-0.1
	baz=24						
KDJ				⇓iS	Sb	08 14 54.9	+0.5
	baz=24						
UCH	Uchtor	2.44	337	⇑iP	Pg	08 14 26.6	-0.6
	baz=35						
UCH				⇑iS	Sg	08 14 58.5	-0.3
	baz=35						
UCH	Uchtor	2.44	337	P	Pg	08 14 27.4	+0.3
	SNR=49						
ARSB	Arslanbob	2.52	303	⇑iP	Pg	08 14 28.0	-0.5
	baz=1.0						
ARSB				⇑iS	Sg	08 15 01.4	+0.2
	baz=1.0						
AML	Almayashu	2.67	324	⇑iP	Pb	08 14 29.9	+0.9
	baz=22						
AML				⇑iS	Sg	08 15 04.5	-1.5
	baz=22						
AML	Almayashu	2.67	324	P	Pg	08 14 31.9	+0.4
	SNR=28						
KBK	Karagaybulak	2.75	347	⇑iP	Pb	08 14 30.3	0.0
	baz=45						
KBK				⇑iS	Sb	08 15 04.9	+0.4
	baz=45						
KBK	Karagaybulak	2.75	347	P	Pg	08 14 33.4	+0.3
	SNR=21						
AAK	Ala-Archa	2.83	340	⇑iP	Pb	08 14 31.3	-0.3
	baz=38						
AAK				⇑iS	Sb	08 15 06.8	0.0
	baz=38						
AAK	Ala-Archa	2.83	340	P	Pb	08 14 32.8	+1.1
	SNR=6.5						
AAK	Ala-Archa	2.83	340	⇑Pg	Pb	08 14 31.8	+0.2
	6.0nm,0.5s						
AAK				⇑Lg	Lg	08 15 11.3	
	34nm,0.8s						
KST	Kastek	3.07	3	eP	Pg	08 14 38.8	-0.3
	9.7nm,0.3s						
KST				eS	Sg	08 15 19.9	+1.1
	36nm,0.3s						
KST	Kastek	3.07	3	Pg	Pb	08 14 35.9	+0.3
	9.4nm,0.6s						
KST				Lg	Lg	08 15 20.9	
	24nm,0.5s						
EKS2	Erkin-Say	3.08	331	⇓eP	Pb	08 14 35.0	-0.8
	baz=29						
EKS2				⇓iS	Sb	08 15 13.2	-0.7
	baz=29						
CHMS	Chumysh	3.12	346	P	Sg	08 15 21.9	+1.5
	SNR=5.4						
IZV	Izvestkoviy	3.12	11	eP	Pg	08 14 39.7	-0.4
	10nm,0.3s						
IZV				eS	Sg	08 15 21.6	+1.0
	33nm,0.4s						
IZV	Izvestkoviy	3.12	11	Pg	Pb	08 14 36.8	+0.2
	14nm,0.6s						
IZV				Lg	Lg	08 15 22.1	
	33nm,0.5s						
ANVS	Anan'yevo	3.15	26	⇑eP	Pb	08 14 34.3	-2.7
	baz=25						
ANVS				⇑eS	Sb	08 15 12.4	-3.5
	baz=25						
TNSS	Tian-Shan	3.18	16	eP	Pg	08 14 40.6	-0.7
	7.4nm,0.4s						
TNSS				eS	Sg	08 15 23.1	+0.6
	23nm,0.4s						
TNSS	Tian-Shan	3.18	16	Pg	Pb	08 14 37.5	-0.3
	8.8nm,0.6s						
TNSS				Lg	Lg	08 15 23.2	
	18nm,0.6s						
MTBS	Maitube	3.19	9	eP	Pg	08 14 40.7	-0.7
	4.8nm,0.1s						
MTBS				eS	Sg	08 15 23.2	+0.4
	25nm,0.2s						
MTBS	Maitube	3.19	9	Pg	Pb	08 14 37.5	-0.2
	9.1nm,0.3s						
MTBS				Lg	Lg	08 15 23.1	
	22nm,0.4s						
MDOK	Medeo	3.33	16	eP	Pg	08 14 43.1	-0.9
	6.7nm,0.2s						
MDOK				eS	Sg	08 15 27.7	+0.6
	34nm,0.5s						
MDOK	Medeo	3.33	16	Pg	Pb	08 14 39.0	-1.1
	12nm,1.0s						
MDOK				Lg	Lg	08 15 27.1	
	47nm,0.8s						
MDOK	Medeo	3.33	16	Pg	Pb	08 14 40.2	+0.1
	5.1nm,1.3s						
MDOK				Lg	Lg	08 15 27.8	
	34nm,0.7s						
KNDC	Almaty	3.36	15	⇓Pg	Pb	08 14 41.7	+1.1
	11nm,0.5s						
KNDC				⇓Lg	Lg	08 15 29.1	
	40nm,0.5s						
MRKS	Merke	3.37	326	eP	Pg	08 14 44.0	-0.8
	5.2nm,0.1s						
MRKS				eS	Sg	08 15 29.3	+0.8
	16nm,0.2s						
MRKS	Merke	3.37	326	Pg	Pb	08 14 41.0	+0.2
	8.2nm,0.5s						
MRKS				Lg	Lg	08 15 29.1	
	18nm,0.3s						
KOTS	Kotyrbulak	3.41	17	eP	Pg	08 14 44.9	-0.7
	9.0nm,0.2s						
KOTS				eS	Sg	08 15 30.6	+0.9
	180nm,0.4s						
KOTS	Kotyrbulak	3.41	17	Pg	Pb	08 14 42.8	+1.3
	9.3nm,0.5s						
KOTS				Lg	Lg	08 15 31.2	
	181nm,0.5s						
SATY	Saty	3.66	32	eP	Pg	08 14 48.9	-1.5
	2.1nm,0.1s						
SATY				eS	Sg	08 15 37.2	-0.7
	15nm,0.4s						
SATY	Saty	3.66	32	Pg	Pb	08 14 46.0	+0.2
	6.2nm,0.5s						
SATY				Lg	Lg	08 15 37.2	
	23nm,0.7s						
KRBS	Karabastau	3.72	359	eP	Pg	08 14 50.4	-1.1
	1.8nm,0.2s						
KRBS				eS	Sg	08 15 39.7	-0.1
	11nm,0.4s						
ZHN	Zhinishke	3.76	31	eP	Pg	08 14 51.4	-1.0
	6.0nm,0.1s						
ZHN				eS	Sg	08 15 41.4	+0.2
	13nm,0.1s						
ZHN	Zhinishke	3.76	31	Pg	Pb	08 14 48.7	+1.3
	2.1nm,0.1s						
ZHN				Lg	Lg	08 15 41.9	
	5.0nm,0.2s						
KTBS	Karatobe	3.79	10	eP	Pg	08 14 51.7	-1.3
	10nm,0.3s						
KTBS				eS	Sg	08 15 42.3	+0.1
	30nm,0.4s						
KTBS	Karatobe	3.79	10	Pg	Pb	08 14 47.8	-0.2
	10nm,0.6s						
KTBS				Lg	Lg	08 15 40.9	
	20nm,0.5s						
KUU	Kurty	3.94	6	eP	Pg	08 14 54.2	-1.5
	2.8nm,0.3s						
KUU				eS	Sg	08 15 46.6	-0.1
	25nm,0.6s						
KUU	Kurty	3.94	6	Pg	Pb	08 14 50.8	+0.4
	2.7nm,0.4s						
KUU				Lg	Lg	08 15 46.0	
	32nm,0.8s						
CHKK	Chushkaly	3.98	13	eP	Pg	08 14 55.1	-1.4
	0.9nm,0.1s						
CHKK				eS	Sg	08 15 48.1	0.0
	22nm,0.4s						
CHKK	Chushkaly	3.98	13	Pg	Pb	08 14 51.5	+0.4
	3.3nm,0.4s						
CHKK				Lg	Lg	08 15 47.3	
	23nm,0.5s						
UZB	Uzynbulak	4.00	36	eP	Pg	08 14 55.1	-1.8
	1.1nm,0.1s						
UZB				eS	Sg	08 15 48.0	-0.7
	13nm,0.5s						
UZB	Uzynbulak	4.00	36	Pg	Pb	08 14 52.0	+0.5
	2.3nm,0.4s						
UZB				Lg	Lg	08 15 47.4	
	13nm,0.8s						
KPKS	Kokpek	4.11	31	eP	Pg	08 14 56.7	-2.4
	2.4nm,0.1s						
KPKS				eS	Sg	08 15 50.9	-1.4
	32nm,0.4s						
SHLS	Shalkode	4.21	40	eP	Pg	08 15 03.9	+2.9
	3.9nm,0.1s						
SHLS				eS	Sg	08 16 03.5	+7.9
	20nm,0.5s						
SHLS	Shalkode	4.21	40	Pg	Pb	08 14 59.8	-1.2
	7.9nm,0.5s						
SHLS				Lg	Lg	08 16 01.5	
	20nm,0.6s						
PDGK	Podgornoye	4.36	38	Pg	Pb	08 14 58.1	+0.5
	0.9nm,0.6s						
PDGK				Lg	Lg	08 15 58.0	
	13nm,0.7s						
PDGK	Podgornoye	4.36	38	⇓Pg	Pg	08 15 01.9	-1.8
	4.7nm,1.0s						
PDGK				⇑Lg	Lg	08 15 58.4	
	24nm,1.2s						
ARXS	Arharly	4.50	19	eP	Pb	08 15 02.9	+2.9
	0.7nm,0.2s						
ARXS				eS	Sg	08 16 01.8	-3.1
	8.6nm,0.3s						
ARXS	Arharly	4.50	19	Pg	Pb	08 15 01.1	+1.1
	1.9nm,0.3s						
ARXS				Lg	Lg	08 16 03.7	
	10nm,0.6s						
KK31	Karatay Array	5.04	310	⇑Pg	Pb	08 15 08.4	-0.8
	4.6nm,0.7s,baz=358,slow=32,SNR=7.6						
KK31				⇓Lg	Lg	08 16 19.9	
	2.9nm,0.6s,baz=127,slow=28,SNR=6.2						
DJR	Jarkent	5.28	33	Pg	Pb	08 15 15.0	+1.7
	0.4nm,0.2s						
DJR				Lg	Lg	08 16 27.0	
	1.8nm,0.4s						

*MEX **02** 08:20:49.4±0.7,16.98N×94.86W,h127km±6km,MD4.0*
ISC 02 08:20:49.8±1.2,**16.88N**±0.07×**94.87W**±0.03,**h114**km±8km, **n18**,σ**1.37**/32,**Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.21	356		Pn	08 21 05.6	-0.1
CMIG					Sn	08 21 17.0	-0.7
CMIG	Matias Romero	0.21	356	iP	Pn	08 21 05.6	-0.1
CMIG				iS	Sn	08 21 17.7	0.0
HUIG	Huatulco	1.62	227		Pn	08 21 17.9	-0.5
HUIG					Sn	08 21 41.4	+1.3
HUIG	Huatulco	1.62	227	eP	Pn	08 21 17.9	-0.5
HUIG				eS	Sn	08 21 41.4	+1.3
TGIG		1.68	93		Pn	08 21 17.9	-1.1
TGIG		1.68	93	eP	Pn	08 21 17.9	-1.1
VHO	Vista Hermosa	1.79	276	eP	Pn	08 21 22.0	+1.4
VHO				iS	Sn	08 21 46.8	+2.8
PCIG		1.97	126		Pn	08 21 22.8	+0.3
PCIG					Sn	08 21 47.7	+0.1
PCIG		1.97	126	eP	Pn	08 21 22.8	+0.3
PCIG				eS	Sn	08 21 47.7	+0.1
PEIG	Puerto Escondi	2.36	248	eP	Pn	08 21 26.4	-1.1
PEIG				eS	Sn	08 21 56.8	+0.3
YOIG	Yosondua	2.56	270	eP	Pn	08 21 30.9	+0.4
YOIG				eS	Sn	08 22 01.0	-0.6
CCIG	Comitan	2.69	102		Pn	08 21 31.7	-0.3
CCIG				Sn	Sn	08 22 04.5	+0.2
HLIG	Huajuapan de L	2.96	289	eP	Pn	08 21 36.2	+0.6
PNIG	Pinotepa	3.16	262		Pn	08 21 37.3	-0.8
PNIG					Sn	08 22 13.0	-2.3
PNIG	Pinotepa	3.16	262	eP	Pn	08 21 37.3	-0.8
PNIG				eS	Sn	08 22 13.0	-2.3
FTIG	Fresnillo de T	3.28	289	eP	Pn	08 21 40.9	+1.2
FTIG				eS	Sn	08 22 14.8	-3.5
TLIG	Tlapa	3.60	281	Pn	Pn	08 21 45.1	+1.1
TLIG				Sn	Sn	08 22 23.8	-2.1
CBKS	Cedar Bluff	22.26	350		S	08 29 36.6	+1.7

*MOS **02** 08:57:08.1±1.3,15.75S×74.03W,h41km,mb5.1/53,Error ellipse: s-maj=10.9km s-min=5.4km az=113.3*
*NEIC **02** 08:57:09.3±1.9,15.91S±0.06×74.02W±0.08,h44km±4km, mb5.1/307,ML5.0(ARE),Error ellipse: s-maj=11.6km s-min=7.1km az=60.0*
*IDC **02** 08:57:09.7±0.4,15.81S×74.06W,h45km±3km,mb4.6/27, mb1 4.7/31,mb1mx4.6/42,mbtmp4.8/31,MS4.3/10, Ms1 4.3/10,ms1mx4.2/39,Error ellipse: s-maj=11.4km s-min=6.8km az=54.0*
*BJI **02** 08:57:09.0±0.0,15.80S×73.90W,h40km,mB5.5/15, Ms7 5.2/1*
*GCMT **02** 08:57:12.3±0.3,16.10S±0.02×74.53W±0.02,h54km±1km, MW5.2/72,Moment Tensor Solution. s72,c90; s66,c103; Duration: 1.0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.67±.03; $M_{\theta\theta}$0.02±.02; $M_{\phi\phi}$-0.69±.02; $M_{r\theta}$-0.04±.02; $M_{\theta\phi}$0.46±.01; $M_{\phi r}$-0.36±.02; Best double couple: $M_0$0.88600×10^{17} NP1:ϕ_s314.00000°,δ38.00000°, λ59.00000°. NP2:ϕ_s171.00000°,δ58.00000°,λ112.00000°. Principal axes: T 0.7960, Plg68.0000°, Azm127.0000°; N 0.1800, Plg18.0000°, Azm339.0000°; P -0.9760, Plg11.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*VAO **02** 08:57:12.7±0.5,15.85S×73.88W,h65km,mb5.1*
ISC 02 08:57:09.4±0.4,**15.93S**±0.04×**74.13W**±0.05,**h45**km±3km, **h45**km**:pP-P,n966,**σ**1.21**/976,**mb5.1**/200,**17C-1D,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	4.36	124	⇑iP	Pn	08 58 15.7	+2.6
AP01				IAmb	IAmb	08 58 18.9	
	comp=E,398nm,0.3s						
AP01				eS	Sn	08 59 11.7	+8.9
NNA	Nana	4.72	326	P	Pn	08 58 17.8	-0.3
	comp=E,41nm,0.3s,baz=136,slow=12,SNR=62						
NNA				S	Sn	08 59 12.2	+0.6
	comp=E,198nm,0.3s,baz=101,slow=10,SNR=4.3						
NNA	Nana	4.72	326		Pn	08 58 18.3	+0.2
NNA	Nana	4.72	326	P	Pn	08 58 18.3	+0.2
NNA						08 59 12.2	
PB16	IPOC Station P	5.03	119	⇑iP	Pn	08 58 26.0	+3.1
PB16				eS	Sn	08 59 31.6	+12
PSGC	Pisagua	5.28	134	⇑iP	Pn	08 58 25.7	-0.2
PSGC				eS	Sn	08 59 29.7	+4.1
MNMC	Minye Minye	5.38	127	⇑iP	Pn	08 58 28.8	+1.5
MNMC				eS	Sn	08 59 35.9	+7.7
MNMC	Minye Minye	5.38	127		Pn	08 58 28.0	+0.7
PB11	IPOC Station P	5.72	132		Pn	08 58 31.9	-0.1
LPAZ	La Paz	5.78	94	P	Pn	08 58 37.7	+4.5
	comp=E,23nm,0.3s,baz=269,slow=9.5,SNR=229						
LPAZ				S	Sn	08 59 43.4	+4.8
	comp=E,3.3nm,0.3s,baz=231,slow=13,SNR=1.8						
LPAZ				LR	LR	09 01 05.3	
	comp=E,5μm,21.4s,baz=272,slow=41						
LPAZ	La Paz	5.78	94		Pn	08 58 37.6	+4.4
TA01	Diego Aracena	5.95	141	⇑iP	Pn	08 58 33.7	-1.2
TA01				eS	Sn	08 59 40.8	-1.0
GO01	Chusmiza	6.00	129	⇑iP	Pn	08 58 37.6	+1.5
GO01				eS	Sn	08 59 49.9	+6.2
GO01	Chusmiza	6.00	129		Pn	08 58 36.8	+0.8
PATCX	Punta Patache	6.16	143	⇑iP	Pn	08 58 35.6	-2.3
PATCX				eS	Sn	08 59 45.5	-1.7
PB08	IPOC Station P	6.33	132	eP	Pn	08 58 41.2	+0.8
PB08				eS	Sn	08 59 56.4	+4.8
PB01	IPOC Station P	6.73	140		Pn	08 58 45.4	-0.3
PB04	IPOC Station P	7.40	150		Pn	08 58 54.1	-0.9
PB10	IPOC Station P	8.27	157		Pn	08 59 05.5	-1.2
LVC	Limon Verde	8.28	144	P	Pn	08 59 08.3	+1.1
	comp=E,18nm,0.3s,baz=326,slow=12,SNR=149						
LVC				S	Sn	09 00 36.3	-3.3
	comp=E,9.5nm,0.3s,baz=108,slow=19,SNR=2.9						
LVC				LR	LR	09 02 17.9	
	comp=E,2μm,19.7s,baz=307,slow=37						
LVC	Limon Verde	8.28	144	eP	Pn	08 59 08.5	+1.3
LVC	Limon Verde	8.28	144		Pn	08 59 08.0	+0.8
ATAH	Atahualpa	9.68	334	P	Pn	08 59 30.8	+4.2
	comp=E,4.1nm,0.3s,baz=137,slow=6.9,SNR=17						
ATAH				S	Sn	09 01 17.5	+3.3
	comp=E,4.7nm,0.3s,baz=127,slow=15,SNR=1.8						
ATAH				LR	LR	09 03 09.3	
	comp=E,2μm,18.8s,baz=158,slow=37						
GO02	Mina Guanaco	10.12	156		Pn	08 59 32.5	0.0
GO03	Copiap	12.16	163		Pn	08 59 59.9	-0.2
SIV	San Ignacio	12.56	92	P	Pn	09 00 04.5	-1.1
	comp=E,2.5nm,0.3s,baz=286,slow=10,SNR=96						
SIV				S	Sn	09 02 24.6	+0.3
	comp=E,0.8nm,0.3s,baz=150,slow=11,SNR=3.8						
SAML	Samuel	12.74	58		Pn	09 00 05.7	-2.3
SAML	Samuel	12.74	58	P	Pn	09 00 05.7	-2.3
GO04	Tololo Observa	14.51	168		Pn	09 00 34.4	+2.2
PTLC	Puerto Leguiza	16.01	358	eP	Pn	09 00 45.9	-5.7
ROC1	El Roble	17.21	171	P	Pn	09 01 05.4	-1.4
PEL	Peldehue	17.42	170	P	P	09 01 10.4	+0.4
PEL	Peldehue	17.42	170	P	P	09 01 10.4	+0.4
PEL				pmax	pmax		
	comp=Z,28nm,0.9s						
SALV	Santo Antonio	17.74	92	eP	Pn	09 01 11.2	-2.0
AQDB	Aquidauana	18.08	107	eP	P	09 01 16.4	-1.0
GUVC	San Jose del G	18.41	5	eP	Pn	09 01 24.4	+2.9
PP1B	Ponte de Pedra	18.51	98	eP	P	09 01 21.1	-1.0
CLDB	Colider	18.53	77	eP	P	09 01 20.5	-1.8
BETC	Betania	18.54	356	eP	Pn	09 01 25.7	+2.8
CPUP	Villa Florida	18.76	126	P	P	09 01 25.1	+0.3
	comp=Z,0.2nm,0.3s,baz=299,slow=9.2,SNR=29						
CPUP				S	S	09 04 57.4	+1.3
	comp=Z,0.2nm,0.3s,baz=22,slow=19,SNR=1.8						
CPUP				LR	LR	09 10 10.0	
	comp=Z,984nm,19.4s,baz=304,slow=42						
CPUP	Villa Florida	18.76	126	eP	P	09 01 24.0	-0.8
CPUP	Villa Florida	18.76	126	P	P	09 01 23.9	-0.9
CPUP	Villa Florida	18.76	126	P	P	09 01 23.9	-0.9
CPUP				pmax	pmax		
	comp=Z,17nm,0.9s						
GO05	Huala	19.11	174	P	P	09 01 28.0	-0.5
PRAC	Prado	19.53	358	eP	Pn	09 01 36.4	+1.5
ORTC	Ortega, Tolima	19.74	357	eP	Pn	09 01 41.7	+4.3
YOTC	Yotoco, Valle	19.90	354	eP	Pn	09 01 39.0	-0.4
VILC	Villavicencio,	19.91	1	eP	Pn	09 01 40.3	+0.8
PTGC	Puerto Gaitan,	20.09	6	eP	P	09 01 40.3	+0.9
CHIC	Chingaza	20.43	1	eP	Pn	09 01 47.0	+1.1
C2SB	Chapadao do Su	20.52	101	eP	P	09 01 44.7	+0.7
ROSC	El Rosal	20.64	359	P	Pn	09 01 50.5	+2.2
	comp=Z,28nm,0.7s,baz=156,slow=5.3,SNR=16						
ROSC				S	S	09 05 33.6	-0.6
	comp=Z,6.7nm,0.8s,baz=52,slow=19,SNR=1.7						
ROSC				LR	LR	09 10 28.2	
	comp=Z,1μm,21.8s,baz=213,slow=39						
ROSC	El Rosal	20.64	359	eP	Pn	09 01 49.0	+0.7
ROSC	El Rosal	20.64	359		Pn	09 01 50.8	+2.5
PLMC	San Jos del P	20.81	354	⇑eP	P	09 01 47.0	-0.2
GUY2C	Guyana, Caldas	21.05	357	⇑eP	P	09 01 53.0	+2.7
ITQB	Itaqui	21.12	133	eP	P	09 01 51.6	+1.2
NORC	Norcasia	21.36	358	eP	P	09 01 55.0	+1.8
TRCB	Terra Rica	21.39	112	eP	P	09 01 53.3	-0.2
SPBC	San Pablo de B	21.44	0	eP	P	09 01 54.3	+0.3
ARAG	Araguaiana, MT	21.48	92	eP	P	09 01 53.5	-0.9
RUSC	La Rusia	21.70	3	eP	P	09 01 56.9	-0.3
RUSC	La Rusia	21.70	3	P	P	09 01 58.5	+1.2
CBOC	Ciudad Bolivar	21.73	355	eP	P	09 01 58.3	+1.1
HELC	Santa Helena	22.02	356	eP	P	09 02 03.6	+3.1
SOLC	Bahia Solano	22.25	351	eP	P	09 02 04.2	+1.7
PTBC	PUERTO BERRIO,	22.32	359	eP	P	09 02 01.6	-1.8
TAMC	Tame, Arauca	22.34	6	eP	P	09 01 59.6	-4.0
PCMB	Pacaembu	22.37	108	eP	P	09 02 02.6	-1.3
BARC	Barichara	22.39	2	eP	P	09 02 02.9	-1.5
PTGB	Pitanga	22.44	116	eP	P	09 02 04.0	-0.7
DBBC	Dabeiba	22.89	355	eP	P	09 02 11.6	+2.1
ITRB	Iturama	22.94	103	eP	P	09 02 08.9	-1.0
PAMC	Pamplona, Colo	23.16	4	eP	P	09 02 12.9	+0.3
ELOV	Elorza	23.24	12	eP	P	09 02 11.6	-1.4
ITAB	Concordia	23.31	123	eP	P	09 02 12.9	-0.6
UREC	San Jos de Ur	23.57	357	eP	P	09 02 16.2	+0.2
CPSB	Cacapava Do Su	23.81	131	eP	P	09 02 17.9	-0.3
LPA	La Plata	23.84	145	d iP	P	09 02 04.4	-14
LPA				pP	pP	09 02 21.8	-8.3
LPA				sP	sP	09 02 32.6	-3.0
LPA				PP	PnPn	09 02 43.0	-5.0
LPA				PPP	PPP	09 02 49.8	
LPA				PCP	PcP	09 05 58.2	-2.6
LPA				S	S	09 06 33.3	+2.0
LPA				sS	sS	09 06 51.4	+0.4
LPA				SS	SnSn	09 07 06.9	-6.6
LPA				SSS	SSS	09 07 29.9	
LPA				SCS	ScS	09 13 24.6	+2.1
LPA				SKIKS		09 20 40.7	
OCAC	Ocana	24.02	2	⇑eP	P	09 02 18.9	-1.6
FRTB	Fartura	24.27	112	eP	P	09 02 23.0	+0.5
SOCV	Socops	24.27	8	eP	P	09 02 22.2	-0.4
PLTB	Pedras Altas	24.45	134	eP	P	09 02 24.0	-0.1
TRQA	Tornquist	24.51	156	eP	P	09 02 25.0	+0.4
SMLC	San Martn de	24.57	0	eP	P	09 02 24.2	-1.1
UPD2	Meteti	24.62	351	eP	P	09 02 27.5	+1.8
BB19B	Bebedouro	24.80	106	eP	P	09 02 27.5	0.0
IPMB	Ipameri, GO	24.87	98	eP	P	09 02 28.0	-0.1
SDV	Santo Domingo	24.90	8	P	P	09 02 28.0	-0.4
	comp=Z,34nm,0.8s,baz=194,slow=11,SNR=14						
SDV				S	S	09 06 49.0	0.0
	comp=Z,3.4nm,0.8s,baz=222,slow=12,SNR=2.5						
SDV				LR	LR	09 13 05.5	
	comp=Z,848nm,20.8s,baz=210,slow=39						
SDV	Santo Domingo	24.90	8	eP	P	09 02 28.5	0.0
SDV	Santo Domingo	24.90	8	P	P	09 02 28.6	+0.2
SDV				IAmb	IAmb	09 02 45.3	
	comp=Z,48nm,0.8s						
PLCA	Paso Flores	24.91	174	P	P	09 02 29.7	+1.4
	comp=Z,16nm,0.8s,baz=8.2,slow=9.2,SNR=33						
PLCA				S	S	09 06 50.8	+2.2
	comp=Z,1.6nm,0.8s,baz=326,slow=20,SNR=1.4						
PLCA				LR	LR	09 10 37.5	
	comp=Z,413nm,21.4s,baz=32,slow=32						
PLCA	Paso Flores	24.91	174	eP	P	09 02 29.8	+1.5
PLCA	Paso Flores	24.91	174	P	P	09 02 29.0	+0.7
BDFB	Brasilia	25.13	93	P	P	09 02 30.5	-0.1
	comp=Z,33nm,0.9s,baz=262,slow=10,SNR=39						
BDFB				S	S	09 06 51.9	-0.8
	comp=Z,3.1nm,0.7s,baz=204,slow=20,SNR=1.7						
BDFB				LR	LR	09 14 00.9	
	comp=Z,730nm,18.8s,baz=267,slow=40						
BDFB	Brasilia	25.13	93	P	P	09 02 30.7	+0.1
BDFB	Brasilia	25.13	93	P	P	09 02 30.7	+0.1
BDFB				pmax	pmax		
	comp=Z,32nm,0.9s						
CNLB	Canela	25.22	126	eP	P	09 02 31.6	+0.4
PEXB	Peixe	25.34	85	eP	P	09 02 31.9	-0.5
ARGC	Ariguani, Magd	25.62	360	eP	P	09 02 33.5	-1.3
SJCC	San Jacinto, C	25.68	358	eP	P	09 02 39.5	+4.1
CODC	Agustn Codazz	25.70	2	eP	P	09 02 34.1	-1.4
RCLB	Rio Claro- Sao	25.92	109	eP	P	09 02 37.5	-0.1
SPB	Sao Paulo	26.23	111	eP	P	09 02 40.0	-0.3
SPB	Sao Paulo	26.23	111	P	P	09 02 39.9	-0.4
SPB				IAmb	IAmb	09 02 53.4	
	comp=Z,41nm,0.8s						
VAO	Valinhos	26.54	110	eP	P	09 02 44.1	+0.9
PCRV	Puerto La Cruz	27.59	21	P	P	09 02 52.1	-0.5
	comp=Z,6.0nm,0.4s,baz=331,slow=3.7,SNR=9.5						
PCRV				LR	LR	09 14 55.2	
	comp=Z,1μm,18.9s,slow=39						
PLCV	Puerto La Cruz	27.59	21	P	P	09 02 52.1	-0.5
PARB	Paraibuna	27.81	110	eP	P	09 02 53.9	-0.8
JTS	Las Juntas de	28.17	337	LR	LR	09 14 12.4	
	comp=Z,492nm,19.6s,baz=223,slow=36						
JTS	Las Juntas de	28.17	337	iP	P	09 02 58.6	+0.9

JTS pmax pmax
comp=Z,14nm,1.7s
BSCB Bom Sucesso 28.28 105 eP P 09 02 58.9 +0.1
VAS01 Vassouras-RJ 29.64 107 eP P 09 03 10.9 0.0
SJMB Sao Joao De Ma 31.55 100 eP P 09 03 26.8 -0.9
BSFB Barra de Sao F 31.87 100 eP P 09 03 30.2 -0.3
TGUH Tegucigalpa,Un 32.50 336 P P 09 03 36.3 +0.1
TGUH IAmb IAmb 09 03 40.8
comp=Z,19nm,0.9s
RPN Rapa Nui 34.48 245 P P 09 03 54.7 +1.5
comp=Z,71nm,0.8s,baz=22,slow=4.8,SNR=3.7
RPN Rapa Nui 34.48 245 IAmb IAmb 09 03 55.5
comp=Z,82nm,0.8s
APG El Apazote 34.71 331 P P 09 03 56.0 +0.5
comp=Z,4.5nm,0.8s,baz=217,slow=10,SNR=5.2
CDVI St. Croix 34.72 16 P P 09 03 54.0 -1.3
SJG San Juan 34.73 13 P P 09 03 54.3 -1.0
SJG IAmb IAmb 09 03 54.5
comp=Z,28nm,0.9s
SJG San Juan 34.73 13 P P 09 03 54.3 -1.0
SJG pmax pmax
comp=Z,28nm,1.0s
GCPR Guaynabo City 34.93 13 P P 09 03 55.7 -1.4
GCPR IAmb IAmb 09 04 14.1
comp=Z,21nm,0.8s
CBYP Canovanas 34.95 14 P P 09 03 55.7 -1.6
SC01 Santiago de lo 35.29 6 P P 09 04 00.8 +0.6
NBMO Morrinhos-CE 35.80 73 eP P 09 04 03.9 -0.8
CCIG Comitan 36.60 330 P P 09 04 11.7 +0.1
EFI East Falkland 37.90 164 *i* P P 09 04 22.8 +0.7
EFI pmax pmax
comp=Z,46nm,1.0s
CMIG Matias Romero 38.67 327 P P 09 04 29.4 +0.5
comp=Z,4.9nm,0.7s,baz=131,slow=7.2,SNR=11
CMIG pP pP 09 04 41.2 -0.2
comp=Z,10.0nm,0.7s,baz=130,slow=7.0,SNR=11
RCBR Riachuelo 38.80 79 P P 09 04 29.9 -0.2
comp=Z,24nm,1.0s,baz=250,slow=8.6,SNR=10.0
RCBR Riachuelo 38.80 79 eP P 09 04 30.0 -0.2
RCBR Riachuelo 38.80 79 IAmb IAmb 09 04 32.8
comp=Z,28nm,1.0s
USHA Ushuaia 39.08 175 P P 09 04 33.5 +1.7
comp=Z,17nm,0.8s,baz=313,slow=8.1,SNR=9.8
553A Crawfordville 46.91 348 P P 09 05 35.5 0.0
ZAIG Zacatecas 47.47 323 P P 09 05 41.8 +1.4
352A Blakely 48.26 348 P P 09 05 45.5 -0.5
baz=166,SNR=5.7
254A Abbeville 48.40 350 P P 09 05 46.5 -0.6
baz=168
BRAL Brewton 48.44 345 P P 09 05 47.3 -0.1
baz=164
155A Kite 48.93 351 P P 09 05 51.0 -0.1
baz=170
154A Montrose 49.02 350 P P 09 05 51.6 -0.2
baz=169,SNR=11
250A Grady 49.03 346 P P 09 05 51.4 -0.5
250A IAmb IAmb 09 06 04.0
comp=Z,38nm,1.1s
NHSC New Hope 49.10 353 P P 09 05 52.9 +0.5
NHSC New Hope 49.10 353 P P 09 05 52.8 +0.5
baz=172
PMSA Palmer Station 49.28 174 P P 09 05 55.0 +1.6
comp=Z,16nm,0.8s,baz=9.9,slow=6.4,SNR=5.7
PMSA Palmer Station 49.28 174 IAmb IAmb 09 06 03.8
comp=Z,64nm,1.4s
Z58A St. Stephen 49.28 354 P P 09 05 54.0 +0.2
baz=173
152A Waverly Hall 49.37 348 P P 09 05 53.8 -0.7
baz=167,SNR=10
Z56A Williston 49.46 352 P P 09 05 54.6 -0.5
baz=171
Z55A Blythe 49.47 351 P P 09 05 54.8 -0.4
baz=170
Z54A Sparta 49.59 350 P P 09 05 55.4 -0.8
baz=169,SNR=6.9
344A Westbrook Farm 49.73 341 P P 09 05 57.2 0.0
344A IAmb IAmb 09 05 58.2
comp=Z,17nm,0.8s
Z53A Monticello 49.75 350 P P 09 05 56.6 -0.8
baz=168
Y60A Bolivia 49.80 356 P P 09 05 57.7 0.0
baz=175
Z52A Williamson 49.82 349 P P 09 05 57.1 -0.8
baz=167,SNR=12
Y58A Scranton 49.83 354 P P 09 05 58.3 +0.3
Y58A Scranton 49.83 354 P P 09 05 58.2 +0.2
baz=173,SNR=5.1
GOGA Godfrey 49.86 350 P P 09 05 56.4 -1.8
GOGA IAmb IAmb 09 06 10.3
comp=Z,24nm,1.1s
GOGA Godfrey 49.86 350 P P 09 05 56.4 -1.8
GOGA pmax pmax
comp=Z,24nm,1.1s
GOGA Godfrey 49.86 350 P P 09 05 57.1 -1.2
baz=168
441A DeRidder 49.90 338 P P 09 06 00.6 +2.0
Y57A Sumter 50.02 353 P P 09 05 59.2 -0.2
Y57A Sumter 50.02 353 P P 09 05 59.5 +0.1
baz=172,SNR=7.0
Z51A Franklin 50.09 348 P P 09 05 59.4 -0.5
Z51A IAmb IAmb 09 06 00.1
comp=Z,14nm,0.8s
Y55A Saluda 50.13 352 P P 09 05 59.9 -0.4
baz=170,SNR=6.6
342A Flagon Creek P 50.17 340 P P 09 06 01.2 +0.6
Y54A Tignall 50.18 351 P P 09 05 59.8 -0.8
baz=169,SNR=5.6
HKT Hockley 50.18 335 P P 09 06 01.3 +0.7
HKT IAmb IAmb 09 06 14.2
comp=Z,53nm,1.5s
HKT Hockley 50.18 335 P P 09 06 01.3 +0.7
HKT pmax pmax
comp=Z,53nm,1.5s
Z50A Ashland 50.18 347 P P 09 05 59.6 -1.1
Z50A IAmb IAmb 09 06 12.7
comp=Z,36nm,1.2s
Z50A Ashland 50.18 347 P P 09 05 59.9 -0.8
baz=165,SNR=10.0
Y53A Monroe 50.32 350 P P 09 06 01.0 -0.7
baz=168
833A Chaparral WMA, 50.33 331 P P 09 06 02.4 +0.5
833A IAmb IAmb 09 06 03.1
comp=Z,26nm,0.8s
833A Chaparral WMA, 50.33 331 P P 09 06 02.5 +0.7
baz=148,SNR=9.6
JSC Jenkinsville 50.39 352 P P 09 06 02.1 -0.1
JSC Jenkinsville 50.39 352 P P 09 06 02.1 -0.1
JSC pmax pmax
comp=Z,9.0nm,0.8s
Y52A Lilburn 50.41 349 P P 09 06 01.7 -0.7
Y52A IAmb IAmb 09 06 14.4
comp=Z,18nm,1.1s
Y52A Lilburn 50.41 349 P P 09 06 01.6 -0.8
baz=168
X58A Rowland 50.45 354 P P 09 06 02.7 +0.1
X58A IAmb IAmb 09 06 03.4
comp=Z,18nm,0.8s
X58A Rowland 50.45 354 P P 09 06 02.6 +0.1
baz=174,SNR=5.1
HODGE Hodges 50.48 351 P P 09 06 02.5 -0.3
HODGE IAmb IAmb 09 06 15.2
comp=Z,14nm,0.7s
X56A White Oak 50.57 353 P P 09 06 03.1 -0.4
baz=172,SNR=6.4
X55A Gracelyn & Ava 50.62 352 P P 09 06 03.5 -0.5
baz=171
Y51A Rockmart 50.63 348 P P 09 06 03.1 -1.0
baz=167,SNR=20
X54A Belton 50.80 351 P P 09 06 04.9 -0.5
baz=170
W60A Pink Hill 50.81 356 P P 09 06 05.8 +0.5
baz=176
Y49A Blount Mountai 50.87 347 P P 09 06 05.2 -0.7
W61A Ground Anchor 50.90 357 P P 09 06 06.8 +0.9
baz=177
W58A Raeford 50.90 355 P P 09 06 05.9 -0.1
baz=174,SNR=7.2
X53A Estanollee 50.90 350 P P 09 06 05.2 -0.8
baz=169
W59A Clinton 50.98 355 P P 09 06 06.8 +0.2
baz=175
PAULI Pauline 50.99 352 P P 09 06 06.3 -0.5
PAULI IAmb IAmb 09 06 19.4
comp=Z,24nm,0.7s
X52A Dahlonega 51.10 350 P P 09 06 06.8 -0.8
baz=168

W57A Gilead 51.10 354 P P 09 06 07.5 -0.1
W57A IAmb IAmb 09 06 08.6
comp=Z,31nm,0.9s
W57A Gilead 51.10 354 P P 09 06 07.5 -0.1
baz=173,SNR=9.9
W56A Indian Trail 51.15 353 P P 09 06 07.3 -0.6
baz=172
X51A Calhoun 51.24 349 P P 09 06 07.7 -0.9
X51A IAmb IAmb 09 06 22.2
comp=Z,21nm,0.9s
X51A Calhoun 51.24 349 P P 09 06 08.1 -0.5
baz=167,SNR=6.1
KMSC Kings Mountain 51.24 352 P P 09 06 08.2 -0.3
KMSC IAmb IAmb 09 06 21.4
comp=Z,26nm,0.8s
KMSC Kings Mountain 51.24 352 P P 09 06 08.3 -0.3
baz=171,SNR=5.4
W54A Cherokee Point 51.30 352 P P 09 06 09.0 -0.1
baz=170
NATX Nacogdoches 51.34 338 P P 09 06 10.2 +0.8
NATX IAmb IAmb 09 06 10.9
comp=Z,19nm,0.8s
NATX Nacogdoches 51.34 338 P P 09 06 10.2 +0.8
baz=155
FPAL Fort Paine 51.36 348 P P 09 06 08.6 -1.0
V61A Roper 51.49 357 P P 09 06 10.6 +0.2
baz=177
V60A Jim Taylor Roa 51.49 357 P P 09 06 10.8 +0.4
baz=176
W53A Cullowhee 51.53 351 P P 09 06 10.4 -0.5
baz=169,SNR=9.8
V59A Middlesex 51.56 356 P P 09 06 11.1 +0.2
baz=175,SNR=5.3
X48A Hartselle 51.58 346 P P 09 06 10.1 -1.1
W52A Murphy 51.59 350 P P 09 06 10.7 -0.5
W52A IAmb IAmb 09 06 23.5
comp=Z,20nm,0.9s
W52A Murphy 51.59 350 P P 09 06 10.7 -0.5
baz=168
435B Jarrell 51.63 334 P P 09 06 11.7 +0.1
435B IAmb IAmb 09 06 12.4
comp=Z,26nm,0.8s
435B Jarrell 51.63 334 P P 09 06 11.9 +0.3
baz=151,SNR=9.8
V58A Windy Hill, Pi 51.65 355 P P 09 06 11.5 -0.2
V58A IAmb IAmb 09 06 12.2
comp=Z,25nm,0.9s
V58A Windy Hill, Pi 51.65 355 P P 09 06 11.4 -0.2
baz=174,SNR=5.4
W51A Cleveland 51.80 349 P P 09 06 12.2 -0.6
baz=167
V56A Mocksville 51.80 353 P P 09 06 12.6 -0.2
baz=172,SNR=6.6
V57A Coltrane Farms 51.81 354 P P 09 06 12.5 -0.3
baz=173,SNR=5.6
V55A Taylorsville 51.93 353 P P 09 06 13.9 +0.1
baz=172
W50A Signal Mountai 51.94 348 P P 09 06 13.0 -0.8
baz=166,SNR=12
V54A Nebo 51.95 352 P P 09 06 13.6 -0.3
baz=171,SNR=5.2
V53A Saluda 51.97 351 P P 09 06 13.5 -0.6
V53A Saluda 51.97 351 P P 09 06 13.3 -0.8
baz=170
U61A Possum Corner 52.02 358 P P 09 06 14.9 +0.6
baz=177
CPCT Cooper Cave 52.04 349 P P 09 06 13.9 -0.7
CPCT IAmb IAmb 09 06 26.7
comp=Z,14nm,0.9s
Z41A Richland Creek 52.06 340 P P 09 06 15.2 +0.5
Z41A Richland Creek 52.06 340 P P 09 06 15.0 +0.2
baz=157,SNR=7.0
SWET Sewanee 52.08 348 P P 09 06 13.9 -1.0
SWET IAmb IAmb 09 06 15.3
comp=Z,19nm,0.8s
U59A Littleton 52.11 356 P P 09 06 15.3 +0.3
U59A IAmb IAmb 09 06 16.0
comp=Z,19nm,0.9s
U59A Littleton 52.11 356 P P 09 06 15.3 +0.3
baz=176,SNR=5.6
U60A Pendleton 52.19 357 P P 09 06 15.7 +0.1
baz=176
U58A Oxford 52.20 355 P P 09 06 15.6 -0.2
baz=175
OXF Oxford 52.22 344 P P 09 06 15.1 -0.8
OXF IAmb IAmb 09 06 15.7
comp=Z,23nm,0.8s
OXF Oxford 52.22 344 P P 09 06 15.1 -0.8
OXF pmax pmax
comp=Z,23nm,0.9s
OXF Oxford 52.22 344 P P 09 06 15.1 -0.8
baz=162
V52A Sevierville 52.26 350 P P 09 06 15.2 -1.0
V52A IAmb IAmb 09 06 28.3
comp=Z,26nm,0.8s
V52A Sevierville 52.26 350 P P 09 06 15.2 -1.0
baz=169,SNR=6.3
U57A Blanch 52.31 355 P P 09 06 16.1 -0.4
baz=174,SNR=10
U56A King 52.33 354 P P 09 06 16.7 0.0
U56A IAmb IAmb 09 06 17.7
comp=Z,33nm,0.9s
U56A King 52.33 354 P P 09 06 16.9 +0.2
baz=173,SNR=7.5
PLAL Pickwick Lake 52.33 346 P P 09 06 15.7 -1.0
JCT Junction City 52.34 332 P P 09 06 16.6 -0.3
JCT Junction City 52.34 332 P P 09 06 16.7 -0.3
JCT pmax pmax
comp=Z,12nm,0.9s
JCT Junction City 52.34 332 P P 09 06 16.6 -0.3
baz=148,SNR=8.3
V51A Loudon 52.35 350 P P 09 06 16.1 -0.8
V51A IAmb IAmb 09 06 28.9
comp=Z,17nm,0.8s
V51A Loudon 52.35 350 P P 09 06 15.8 -1.1
baz=168
V50A Pikevile 52.36 349 P P 09 06 16.1 -0.8
baz=167,SNR=7.8
HPIG 52.47 324 P P 09 06 16.2 -1.9
HPIG IAmb IAmb 09 06 32.6
comp=Z,25nm,1.4s
U55A TA2, Sparta 52.55 353 P P 09 06 18.1 -0.4
baz=172
WLAR White Oak Lake 52.55 340 P P 09 06 19.4 +1.0
V49A McMinnville 52.61 348 P P 09 06 17.4 -1.4
baz=166,SNR=5.8
U53A Fall Branch 52.62 351 P P 09 06 18.0 -0.9
baz=170
WHTX Lake Whitney, 52.63 335 P P 09 06 19.3 +0.3
WHTX Lake Whitney, 52.63 335 P P 09 06 19.2 +0.2
baz=152,SNR=5.6
U54A Nelsons Funny 52.67 352 P P 09 06 18.9 -0.4
U54A IAmb IAmb 09 06 31.8
comp=Z,22nm,1.0s
U54A Nelsons Funny 52.67 352 P P 09 06 18.4 -0.9
baz=171
T59A Double "B" Far 52.71 357 P P 09 06 19.6 +0.1
T59A Double "B" Far 52.71 357 P P 09 06 19.7 +0.1
baz=176,SNR=13
T58A Grand View Acr 52.75 356 P P 09 06 19.8 0.0
baz=175,SNR=13
U52A Thorn Hill 52.76 351 P P 09 06 18.5 -1.5
baz=169
V48A Smith Brothers 52.77 347 P P 09 06 18.6 -1.4
V48A IAmb IAmb 09 06 32.5
comp=Z,16nm,0.7s
T60A Surry 52.84 357 P P 09 06 21.0 +0.6
T60A Surry 52.84 357 P P 09 06 20.7 +0.3
baz=177,SNR=5.7
U51A La Follette 52.85 350 P P 09 06 19.5 -1.1
baz=168
T57A Hurt 52.86 355 P P 09 06 20.2 -0.4
T57A Hurt 52.86 355 P P 09 06 20.6 0.0
baz=174,SNR=17
TZTN Tazewell 52.94 350 P P 09 06 20.5 -0.7
TZTN IAmb IAmb 09 06 33.4
comp=Z,17nm,0.8s
T56A Rocky Mt 52.96 354 P P 09 06 21.6 +0.2
baz=173
CLTN Cedars of Leba 53.01 348 P P 09 06 21.0 -0.7
U50A Jamestown 53.03 349 P P 09 06 21.0 -1.0
baz=167,SNR=11
T55A Pulaski 53.13 353 P P 09 06 22.5 -0.1
baz=172,SNR=8.5
T54A Tazewell 53.17 353 P P 09 06 22.3 -0.6
baz=171
BLA Blacksburg 53.18 354 P P 09 06 22.7 -0.3

BLA IAmb IAmb 09 06 23.8
comp=Z,18nm,0.8s
BLA Blacksburg 53.18 354 P P 09 06 22.7 -0.3
BLA pmax pmax
comp=Z,18nm,0.9s
BLA Blacksburg 53.18 354 P P 09 06 23.0 0.0
baz=173
T53A Wise 53.22 352 P P 09 06 22.6 -0.8
baz=170
TX32 Lajitas Array 53.27 328 P P 09 06 23.8 -0.1
TXAR Lajitas Array 53.27 328 P P 09 06 23.8 -0.1
comp=Z,7.0nm,0.7s,baz=149,slow=8.5,SNR=54
TXAR pP pP 09 06 36.2 -0.5
comp=Z,8.2nm,0.5s,baz=150,slow=9.0,SNR=20
TX31 Lajitas Ar. Si 53.27 328 P P 09 06 23.9 -0.1
U49A Red Boiling Sp 53.30 348 P P 09 06 22.6 -1.3
baz=166
UALR University of 53.31 341 P P 09 06 23.7 -0.3
UALR IAmb IAmb 09 06 36.2
comp=Z,26nm,1.3s
WVT Waverly 53.37 346 P P 09 06 22.6 -1.8
WVT Waverly 53.37 346 P P 09 06 22.6 -1.8
WVT pmax pmax
comp=Z,9.0nm,0.9s
WVT Waverly 53.37 346 P P 09 06 23.0 -1.4
baz=164
S58A Poland Farm, P 53.38 356 P P 09 06 24.3 -0.1
S58A IAmb IAmb 09 06 25.3
comp=Z,21nm,0.8s
S58A Poland Farm, P 53.38 356 P P 09 06 24.6 +0.2
baz=175,SNR=10
S60A Water View 53.40 358 P P 09 06 24.9 +0.4
baz=177
T52A Hallie 53.41 351 P P 09 06 23.6 -1.1
T52A IAmb IAmb 09 06 36.8
comp=Z,17nm,0.9s
T52A Hallie 53.41 351 P P 09 06 23.8 -0.9
baz=170
T51A Gray 53.41 350 P P 09 06 23.9 -0.8
baz=168,SNR=9.8
S59A Mechanicsville 53.48 357 P P 09 06 25.5 +0.4
baz=176,SNR=6.4
MIAR Mount Ida 53.49 340 P P 09 06 24.8 -0.5
MIAR IAmb IAmb 09 06 25.8
comp=Z,14nm,0.9s
MIAR Mount Ida 53.49 340 P P 09 06 24.8 -0.5
MIAR pmax pmax
comp=Z,14nm,0.9s
MIAR Mount Ida 53.49 340 P P 09 06 25.0 -0.3
baz=157,SNR=7.1
S56A Natural Bridge 53.56 355 P P 09 06 25.8 0.0
baz=174
S57A Dark Hollow, R 53.59 355 P P 09 06 25.8 -0.2
S57A IAmb IAmb 09 06 26.7
comp=Z,23nm,0.8s
S57A Dark Hollow, R 53.59 355 P P 09 06 25.9 -0.1
baz=174,SNR=9.1
T50A Nancy 53.62 349 P P 09 06 25.0 -1.2
baz=167,SNR=5.4
W41B Gary Mavity, V 53.65 342 P P 09 06 26.1 -0.4
W41B Gary Mavity, V 53.65 342 P P 09 06 26.0 -0.4
baz=158,SNR=6.4
R58B Mineral 53.72 356 P P 09 06 27.2 +0.3
R58B IAmb IAmb 09 06 28.2
comp=Z,28nm,0.8s
R58B Mineral 53.72 356 P P 09 06 27.2 +0.3
baz=176,SNR=14
S55A Lewisburg 53.75 354 P P 09 06 27.2 0.0
baz=173,SNR=6.1
WHAR Wooly Hollow 53.77 342 P P 09 06 26.9 -0.4
T49A Edmonton 53.83 349 P P 09 06 26.5 -1.2
T49A IAmb IAmb 09 06 39.6
comp=Z,24nm,0.7s
T49A Edmonton 53.83 349 P P 09 06 26.6 -1.2
baz=167,SNR=13
S53A Williamson 53.85 352 P P 09 06 26.8 -1.1
baz=171
S54A Dingess, Beckl 53.86 353 P P 09 06 27.6 -0.5
S54A IAmb IAmb 09 06 42.2
comp=Z,24nm,1.1s
S54A Dingess, Beckl 53.86 353 P P 09 06 27.5 -0.5
baz=172,SNR=5.3
R59A King George, V 53.91 357 P P 09 06 29.0 +0.7
baz=177,SNR=12
CBN Corbin Frederi 53.93 357 P P 09 06 28.7 +0.3
CBN Corbin Frederi 53.93 357 P P 09 06 28.8 +0.3
baz=176,SNR=5.7
R60A Leonardtown, M 53.96 358 P P 09 06 29.5 +0.9
baz=177,SNR=7.1
S52A Salyersville 53.98 351 P P 09 06 27.8 -1.0
baz=170
T47A Sharon Grove 54.03 347 P P 09 06 28.4 -0.9
R58A Rapidan 54.06 356 P P 09 06 29.8 +0.5
baz=176,SNR=5.8
R57A Stanardsville 54.09 356 P P 09 06 30.0 +0.4
baz=175,SNR=8.9
ABTX Abilene, Hawle 54.10 333 P P 09 06 29.8 -0.1
ABTX Abilene, Hawle 54.10 333 P P 09 06 29.7 -0.1
baz=150,SNR=18
W39A Magazine 54.16 340 P P 09 06 29.6 -0.5
W39A IAmb IAmb 09 06 31.4
comp=Z,16nm,1.1s
W39A Magazine 54.16 340 P P 09 06 30.3 +0.1
baz=157,SNR=12
LCAR Lake Charles 54.16 343 P P 09 06 29.8 -0.4
S50A Richmond 54.19 350 P P 09 06 29.6 -0.7
baz=168,SNR=8.1
R54A Victor 54.20 353 P P 09 06 29.8 -0.7
baz=172
R55A Marlinton 54.21 354 P P 09 06 30.8 +0.2
baz=173
S49A Springfield 54.45 349 P P 09 06 31.0 -1.2
baz=167,SNR=5.9
Q59A Harwood 54.55 358 P P 09 06 33.3 +0.3
baz=177,SNR=6.1
PBMO Poplar Bluff 54.63 344 P P 09 06 32.7 -0.9
PBMO IAmb IAmb 09 06 33.3
comp=Z,13nm,0.8s
Q60A Greensboro 54.66 358 P P 09 06 34.7 +1.0
Q60A Greensboro 54.66 358 P P 09 06 34.7 +1.0
baz=178
R51A Hillsboro 54.66 351 P P 09 06 32.9 -0.9
baz=169
Q58A Fox Den Farm, 54.68 357 P P 09 06 34.1 +0.3
baz=176,SNR=13
R50A Paris 54.76 350 P P 09 06 33.6 -1.0
R50A IAmb IAmb 09 06 46.6
comp=Z,32nm,1.2s
R50A Paris 54.76 350 P P 09 06 33.5 -1.0
baz=168
Q57A Strasburg 54.82 356 P P 09 06 35.5 +0.6
baz=175,SNR=15
Q56A Snyder Ridge, 54.88 355 P P 09 06 36.0 +0.7
Q56A Snyder Ridge, 54.88 355 P P 09 06 35.9 +0.6
baz=174,SNR=11
Q55A Buckhannon 54.92 354 P P 09 06 35.9 +0.2
baz=173
R49A Shelbyville 54.92 349 P P 09 06 34.5 -1.1
baz=167
U40A Yellville 54.93 342 P P 09 06 35.2 -0.6
U40A IAmb IAmb 09 06 48.9
comp=Z,15nm,0.7s
U40A Yellville 54.93 342 P P 09 06 35.2 -0.6
baz=158,SNR=10.0
Q53A Leroy 54.94 353 P P 09 06 35.1 -0.6
baz=172,SNR=5.5
Q54A Coxs Mills 54.98 354 P P 09 06 35.4 -0.7
Q54A IAmb IAmb 09 06 36.0
comp=Z,14nm,0.8s
Q54A Coxs Mills 54.98 354 P P 09 06 35.3 -0.7
baz=172
WCI Wyandotte Cave 55.06 348 P P 09 06 35.3 -1.3
WCI Wyandotte Cave 55.06 348 P P 09 06 35.3 -1.3
WCI pmax pmax
comp=Z,45nm,0.8s
WCI Wyandotte Cave 55.06 348 P P 09 06 35.4 -1.3
baz=166
X34A Smith Ranch, M 55.07 336 P P 09 06 36.9 +0.1
USIN University of 55.09 347 P P 09 06 35.8 -1.1
SDMD Soldier's Deli 55.11 357 P P 09 06 37.5 +0.5
SDMD IAmb IAmb 09 06 38.5
comp=Z,20nm,0.8s
W35A Tecumseh 55.20 337 P P 09 06 36.6 -1.1
S44A Carbondale 55.20 345 P P 09 06 36.7 -1.0
S44A IAmb IAmb 09 06 38.3
comp=Z,24nm,0.8s

HHAR Hobbs 55.20 341 P P 09 06 37.3 -0.4
HHAR IAmb IAmb 09 06 38.2
comp=Z,29nm,1.4s
P58A Pank, Wackersv 55.21 357 P P 09 06 38.2 +0.6
baz=176,SNR=11
P57A Homestead Farm 55.24 356 P P 09 06 38.7 +0.8
P57A Homestead Farm 55.24 356 P P 09 06 38.7 +0.8
baz=176
P59A Jarrettsville 55.29 358 P P 09 06 39.0 +0.7
baz=177,SNR=10
P56A Dayton Farm, R 55.32 356 P P 09 06 39.1 +0.6
baz=175,SNR=7.9
P55A Reedsville 55.40 355 P P 09 06 39.0 -0.1
baz=174
P60A Greenville 55.47 359 P P 09 06 39.9 +0.4
baz=178
TUL1 Leonard 55.48 339 P P 09 06 39.2 -0.6
TUL1 Leonard 55.48 339 P P 09 06 39.4 -0.3
baz=155,SNR=25
FNO Franklin 55.49 337 P P 09 06 39.9 +0.1
P53A Whipple 55.54 353 P P 09 06 39.5 -0.5
P53A IAmb IAmb 09 06 40.3
comp=Z,15nm,0.9s
P53A Whipple 55.54 353 P P 09 06 39.5 -0.5
baz=172,SNR=5.6
MCWV Mont Chateau 55.55 355 P P 09 06 40.2 0.0
MCWV Mont Chateau 55.55 355 P P 09 06 40.4 +0.2
baz=174
P54A Burton 55.56 354 P P 09 06 39.6 -0.7
baz=173,SNR=7.6
Q49A Aurora 55.56 350 P P 09 06 39.2 -1.1
baz=168
WMOK Wichita Mounta 55.57 335 P P 09 06 39.6 -0.8
WMOK IAmb IAmb 09 06 53.4
comp=Z,36nm,1.5s
WMOK Wichita Mounta 55.57 335 P P 09 06 39.6 -0.8
WMOK pmax pmax
comp=Z,36nm,1.5s
WMOK Wichita Mounta 55.57 335 P P 09 06 39.5 -0.8
baz=151,SNR=8.3
PSUB Penn St. - Bra 55.58 359 P P 09 06 40.6 +0.3
Q48A North Vernon 55.64 349 P P 09 06 39.4 -1.3
baz=167
OKCFA Oklahoma City 55.65 337 P P 09 06 40.7 -0.2
MVL Millersville 55.67 358 P P 09 06 41.8 +0.8
O61A Allentown 55.73 360 P P 09 06 41.6 +0.2
baz=180
P52A Corning 55.77 353 P P 09 06 41.0 -0.8
baz=171
O58A Lewisberry 55.82 357 P P 09 06 42.8 +0.7
baz=177,SNR=11
PAGS Pennsylvania G 55.92 358 P P 09 06 43.2 +0.5
PAGS IAmb IAmb 09 06 44.0
comp=Z,17nm,0.9s
OLIL Olney 55.92 347 P P 09 06 41.7 -1.2
O57A Amberson 55.94 357 P P 09 06 43.4 +0.5
baz=176,SNR=16
O60A Telford 55.97 359 P P 09 06 43.6 +0.5
baz=179
P50A Jamestown 55.98 351 P P 09 06 41.8 -1.5
baz=169
O59A Robesonia 55.98 358 P P 09 06 43.6 +0.3
baz=178,SNR=6.1
BLO Bloomington 56.02 348 P P 09 06 42.3 -1.3
BLO IAmb IAmb 09 06 55.2
comp=Z,19nm,0.7s
BLO Bloomington 56.02 348 P P 09 06 42.3 -1.3
BLO pmax pmax
comp=Z,19nm,0.7s
MNTX Cornudas Mount 56.05 328 P P 09 06 43.4 -0.6
MNTX Cornudas Mount 56.05 328 P P 09 06 43.3 -0.6
baz=143,SNR=16
CCM Cathedral Cave 56.05 344 P P 09 06 42.8 -1.0
CCM Cathedral Cave 56.05 344 P P 09 06 42.8 -1.0
CCM pmax pmax
comp=Z,7.0nm,0.8s
CCM Cathedral Cave 56.05 344 P P 09 06 43.0 -0.7
baz=160
P49A Miami Univ. Ec 56.05 350 P P 09 06 41.9 -1.8
baz=168
O55A Ligonier 56.05 355 P P 09 06 43.6 -0.2
baz=174,SNR=5.8
O56A Blue Knob Stat 56.06 356 P P 09 06 44.0 +0.1
O56A IAmb IAmb 09 06 45.0
comp=Z,24nm,0.8s
O56A Blue Knob Stat 56.06 356 P P 09 06 44.2 +0.3
baz=175,SNR=9.3
P48A Milroy 56.10 349 P P 09 06 42.4 -1.7
P48A IAmb IAmb 09 06 55.3
comp=Z,11nm,0.7s
P48A Milroy 56.10 349 P P 09 06 42.3 -1.8
baz=167
O54A Avella 56.12 354 P P 09 06 43.6 -0.7
O54A Avella 56.12 354 P P 09 06 43.4 -0.8
baz=173
O53A New Philadelph 56.27 353 P P 09 06 44.4 -1.0
baz=172
O51A Pataskala 56.34 352 P P 09 06 44.7 -1.1
baz=170,SNR=5.3
SSPA Standing Stone 56.38 357 P P 09 06 46.2 +0.2
SSPA IAmb IAmb 09 06 47.1
comp=Z,20nm,0.8s
SSPA Standing Stone 56.38 357 P P 09 06 46.2 +0.2
baz=176
ACSO Alum Creek Sta 56.47 352 P P 09 06 45.5 -1.2
ACSO IAmb IAmb 09 06 46.5
comp=Z,18nm,0.8s
ACSO Alum Creek Sta 56.47 352 P P 09 06 45.6 -1.2
baz=170,SNR=9.8
O50A Cable 56.48 351 P P 09 06 45.6 -1.2
baz=169,SNR=6.0
N57A Milroy 56.48 357 P P 09 06 47.0 +0.2
baz=176,SNR=8.7
N58A Sunbury 56.53 358 P P 09 06 47.5 +0.3
N58A Sunbury 56.53 358 P P 09 06 47.4 +0.3
baz=177,SNR=16
N59A State Game Lan 56.57 359 P P 09 06 48.2 +0.7
N59A IAmb IAmb 09 06 48.9
comp=Z,13nm,0.9s
N59A State Game Lan 56.57 359 P P 09 06 48.1 +0.6
baz=178,SNR=6.4
P46A Rosedale 56.59 348 P P 09 06 46.0 -1.5
P46A IAmb IAmb 09 07 00.6
comp=Z,16nm,0.8s
N55A Marion Center 56.60 356 P P 09 06 47.7 0.0
baz=174,SNR=14
O49A Covington 56.63 351 P P 09 06 46.5 -1.4
O49A IAmb IAmb 09 06 59.6
comp=Z,28nm,1.4s
O49A Covington 56.63 351 P P 09 06 46.4 -1.4
baz=168
MSTX Muleshoe 56.63 332 P P 09 06 47.4 -0.7
MSTX IAmb IAmb 09 06 51.1
comp=Z,17nm,0.9s
MSTX Muleshoe 56.63 332 P P 09 06 47.4 -0.7
baz=147,SNR=10
N56A West Decatur 56.69 356 P P 09 06 48.4 +0.1
baz=175,SNR=16
N53A Lisbon 56.78 354 P P 09 06 48.2 -0.8
baz=172
O48A Farmland 56.83 350 P P 09 06 47.5 -1.8
baz=168,SNR=5.9
N54A Moraine State 56.86 355 P P 09 06 49.0 -0.5
N54A IAmb IAmb 09 06 50.0
comp=Z,17nm,0.8s
N54A Moraine State 56.86 355 P P 09 06 49.1 -0.4
baz=173,SNR=5.6
N52A McGinn's Farm, 56.88 353 P P 09 06 48.6 -1.0
baz=172
AMTX Amarillo 56.91 333 P P 09 06 49.4 -0.6
AMTX IAmb IAmb 09 07 02.4
comp=Z,26nm,1.4s
AMTX Amarillo 56.91 333 P P 09 06 49.2 -0.9
baz=148
N50A Nevada 57.03 352 P P 09 06 49.2 -1.5
baz=170,SNR=5.4
M57A Sunshine Farm, 57.04 357 P P 09 06 51.2 +0.5
M57A Sunshine Farm, 57.04 357 P P 09 06 51.3 +0.5
baz=177,SNR=16
M58A Price's Panora 57.05 358 P P 09 06 51.4 +0.6
baz=177,SNR=14
N51A Ashland 57.07 353 P P 09 06 49.8 -1.2
N51A Ashland 57.07 353 P P 09 06 49.7 -1.2
baz=171
M62A Hamden 57.09 1 P P 09 06 51.4 +0.3
baz=182
P43A Skaggs, Pawnee 57.11 346 P P 09 06 50.1 -1.2
P43A IAmb IAmb 09 07 04.6
comp=Z,27nm,0.8s
M59A Waymart 57.19 359 P P 09 06 52.4 +0.5
baz=179,SNR=9.8
M56A Emporium 57.24 356 P P 09 06 52.0 -0.3
M56A Emporium 57.24 356 P P 09 06 52.1 -0.1
baz=176,SNR=9.4
M55A Ridgway 57.27 356 P P 09 06 51.9 -0.5
M55A Ridgway 57.27 356 P P 09 06 52.1 -0.3
baz=175,SNR=16
SFIN Lafayette 57.30 348 P P 09 06 50.6 -2.0
SFIN Lafayette 57.30 348 P P 09 06 50.4 -2.2
baz=165
N49A Columbus Grove 57.32 351 P P 09 06 51.4 -1.4
N49A IAmb IAmb 09 06 53.3
comp=Z,14nm,0.8s
N49A Columbus Grove 57.32 351 P P 09 06 51.2 -1.5
baz=169,SNR=8.7
M54A Oil Creek Stat 57.37 355 P P 09 06 52.4 -0.8
M54A Oil Creek Stat 57.37 355 P P 09 06 52.3 -0.8
baz=174,SNR=12
N48A Decatur 57.39 350 P P 09 06 51.5 -1.7
baz=168
M53A WI Miller and 57.40 354 P P 09 06 52.1 -1.2
baz=173,SNR=5.7
N47A Urbana 57.53 350 P P 09 06 52.5 -1.7
N47A IAmb IAmb 09 07 05.5
comp=Z,15nm,0.9s
N47A Urbana 57.53 350 P P 09 06 52.4 -1.7
baz=167
ALLY Allegheny Colle 57.55 355 P P 09 06 53.6 -0.8
M52A Chesterland 57.57 354 P P 09 06 53.5 -0.9
M52A IAmb IAmb 09 06 54.2
comp=Z,16nm,0.7s
M52A Chesterland 57.57 354 P P 09 06 53.5 -0.9
baz=172,SNR=5.0
L60A Shokan 57.62 360 P P 09 06 55.1 +0.3
baz=180
M50A Fremont 57.63 352 P P 09 06 53.8 -1.1
M50A IAmb IAmb 09 06 54.5
comp=Z,22nm,0.9s
M50A Fremont 57.63 352 P P 09 06 53.7 -1.3
baz=170
L57A Andrews Acres 57.69 358 P P 09 06 55.5 +0.1
baz=177,SNR=12
L58A Harry Jones Me 57.70 358 P P 09 06 55.9 +0.4
baz=178,SNR=21
L59A Walton 57.83 359 P P 09 06 56.6 +0.3
L59A Walton 57.83 359 P P 09 06 56.8 +0.4
baz=179,SNR=10
L61A Hillsdale 1, H 57.83 1 P P 09 06 56.7 +0.4
baz=181
M49A Liberty Center 57.83 351 P P 09 06 54.8 -1.5
baz=169,SNR=5.8
L56A Greenwood 57.86 357 P P 09 06 56.5 -0.1
L56A Greenwood 57.86 357 P P 09 06 56.5 -0.1
baz=176,SNR=13
BINY Binghamton 57.86 358 P P 09 06 56.8 +0.3
BINY Binghamton 57.86 358 P P 09 06 57.0 +0.4
baz=178,SNR=16
L53A Girard 57.87 355 P P 09 06 55.7 -0.9
baz=173,SNR=10
319A Douglas 57.89 324 P P 09 06 57.8 +0.7
319A IAmb IAmb 09 06 59.5
comp=Z,22nm,0.8s
L55A Hinsdale 57.95 356 P P 09 06 57.1 -0.1
baz=175,SNR=16
121A Cookes Peak, D 57.96 326 P P 09 06 58.3 +0.7
121A IAmb IAmb 09 06 59.3
comp=Z,21nm,0.9s
121A Cookes Peak, D 57.96 326 P P 09 06 58.3 +0.7
baz=141,SNR=14
ERPA Erie 58.01 355 P P 09 06 57.0 -0.6
ERPA Erie 58.01 355 P P 09 06 56.9 -0.6
baz=174
L54A Sinclairville 58.07 355 P P 09 06 57.6 -0.3
baz=174,SNR=25
WVNY West Valley, N 58.19 356 P P 09 06 58.6 -0.2
L48A N Adams 58.36 351 P P 09 06 58.4 -1.6
baz=168,SNR=6.9
TRY Troy 58.37 0 P P 09 07 00.6 +0.6
TRY IAmb IAmb 09 07 02.2
comp=Z,19nm,1.0s
K54A Basiliko Farm, 58.40 356 P P 09 07 00.1 -0.2
baz=175,SNR=11
K56A Middlesex 58.41 357 P P 09 07 00.1 -0.3
baz=176,SNR=6.4
K57A Scipio Center 58.41 358 P P 09 07 00.0 -0.3
baz=177,SNR=8.2
K59A Cooperstown 58.41 359 P P 09 07 00.8 +0.4
baz=179,SNR=6.6
K58A Earlville 58.41 359 P P 09 07 00.6 +0.2
K58A Earlville 58.41 359 P P 09 07 00.6 +0.2
baz=178,SNR=10
L49A Milan 58.42 352 P P 09 06 59.3 -1.1
baz=169,SNR=5.6
N41A Harden Midland 58.45 345 P P 09 06 59.2 -1.5
N41A IAmb IAmb 09 07 12.1
comp=Z,21nm,1.0s
K55A Perry 58.48 357 P P 09 07 00.5 -0.3
baz=176,SNR=9.3
L47A Sherwood 58.51 350 P P 09 06 59.5 -1.6
baz=168,SNR=5.9
K52A Tillsonburg 58.73 354 P P 09 07 01.6 -0.9
baz=173,SNR=5.2
L46A Eue Claire 58.73 349 P P 09 07 00.7 -1.9
baz=166
J56A Wolcott 58.96 358 P P 09 07 03.8 -0.4
J56A Wolcott 58.96 358 P P 09 07 04.0 -0.1
baz=177,SNR=9.7
J55A Hilton 59.00 357 P P 09 07 04.4 0.0
J55A Hilton 59.00 357 P P 09 07 04.0 -0.4
baz=176
J58A Remsen 59.00 359 P P 09 07 04.4 0.0
baz=179
J59A Piesco 59.10 360 P P 09 07 05.4 +0.2
J59A IAmb IAmb 09 07 06.2
comp=Z,22nm,1.1s
J59A Piesco 59.10 360 P P 09 07 05.4 +0.2
baz=180,SNR=5.2
K48A Perry 59.16 351 P P 09 07 03.8 -1.7
baz=169,SNR=11
K47A Vermontville 59.16 351 P P 09 07 03.8 -1.8
baz=168,SNR=5.1
J52A Paris 59.16 355 P P 09 07 04.6 -1.0
baz=173,SNR=14
ANMO Albuquerque 59.18 329 P P 09 07 06.0 -0.1
ANMO IAmb IAmb 09 07 18.7
comp=Z,12nm,0.9s
ANMO Albuquerque 59.18 329c iP P 09 07 05.8 -0.3
ANMO pmax pmax
comp=Z,11nm,0.9s
ANMO Albuquerque 59.18 329 P P 09 07 06.3 +0.2
baz=144
K46A Dorr 59.30 350 P P 09 07 04.5 -2.0
baz=167
I58A Old Forge 59.33 359 P P 09 07 06.7 -0.1
baz=179,SNR=5.7
I59A Olmsteadville 59.43 0 P P 09 07 07.8 +0.4
baz=180
TUC Tucson 59.43 324 P P 09 07 08.3 +0.5
TUC Tucson 59.43 324 P P 09 07 08.3 +0.5
TUC pmax pmax
comp=Z,13nm,1.2s
TUC Tucson 59.43 324 P P 09 07 08.1 +0.3
baz=138
CBKS Cedar Bluff 59.50 337 P P 09 07 07.5 -0.5
CBKS Cedar Bluff 59.50 337 P P 09 07 07.6 -0.5
CBKS pmax pmax
comp=Z,26nm,0.9s
CBKS Cedar Bluff 59.50 337 P P 09 07 07.4 -0.6
baz=151,SNR=7.8
J49A Marlette 59.57 352 P P 09 07 06.7 -1.7
baz=170
I57A Carthage 59.59 359 P P 09 07 07.8 -0.7
baz=178
I61A Oroboro, Fairl 59.59 2 P P 09 07 09.0 +0.5
baz=182
J48A Bridge Port 59.59 352 P P 09 07 07.2 -1.3
J48A Bridge Port 59.59 352 P P 09 07 07.0 -1.5
baz=169,SNR=9.8
J47A Sunmer 59.69 351 P P 09 07 07.5 -1.6
J47A Sunmer 59.69 351 P P 09 07 07.5 -1.6
baz=168,SNR=13
I51A Listowel 59.77 354 P P 09 07 08.7 -1.0
baz=172,SNR=8.1
L40A Anamosa 59.82 345 P P 09 07 08.2 -1.9
L40A IAmb IAmb 09 07 23.3
comp=Z,12nm,0.8s
I55A Frankford 59.94 357 P P 09 07 10.5 -0.4
baz=176,SNR=5.9
I52A Shelburne 59.96 355 P P 09 07 10.2 -0.9
baz=173,SNR=11
T25A Trinidad 60.00 332 P P 09 07 11.8 +0.1
T25A Trinidad 60.00 332 P P 09 07 11.9 +0.1
baz=146,SNR=17
H58A Gabriels 60.05 360 P P 09 07 11.5 -0.2
baz=180
I49A Point Hope 60.10 353 P P 09 07 10.6 -1.4
I49A Point Hope 60.10 353 P P 09 07 10.4 -1.6
baz=170,SNR=5.6
H57A Richville 60.11 359 P P 09 07 11.9 -0.1
baz=179,SNR=10
H55A Tweed 60.25 357 P P 09 07 12.7 -0.3
baz=177,SNR=8.6
LONY Lake Ozonia 60.26 360 P P 09 07 13.2 +0.1
LONY IAmb IAmb 09 07 18.9
comp=Z,15nm,0.9s
H56A Elgin 60.26 358 P P 09 07 13.0 -0.1
baz=178,SNR=9.9
H59A Cadyville 60.28 0 P P 09 07 13.4 +0.2
baz=181
214A Organ Pipe Nat 60.34 322 P P 09 07 15.0 +1.0
214A IAmb IAmb 09 07 28.0
comp=Z,33nm,1.4s
214A Organ Pipe Nat 60.34 322 P P 09 07 15.0 +1.0
baz=136
H53A Bobcaygeon 60.34 356 P P 09 07 12.9 -0.7
baz=175,SNR=8.0
I47A Gladwin 60.40 351 P P 09 07 12.7 -1.4
I47A IAmb IAmb 09 07 13.3
comp=Z,22nm,0.9s
I47A Gladwin 60.40 351 P P 09 07 12.6 -1.4
baz=169
I48A Sherman Twp 60.46 352 P P 09 07 13.1 -1.3
baz=170,SNR=14
I46A Reed City 60.47 351 P P 09 07 12.7 -1.9
baz=168
FRNY Flat Rock 60.47 0 P P 09 07 14.4 -0.1
FRNY IAmb IAmb 09 07 16.4
comp=Z,13nm,0.9s
H52A Wyevale 60.50 355 P P 09 07 13.6 -1.1
baz=174,SNR=5.5
SADO Sadowa 60.58 356 P P 09 07 14.1 -1.1
X18A Snowflake 60.65 326 P P 09 07 17.1 +0.9
X18A IAmb IAmb 09 07 30.1
comp=Z,36nm,1.5s
G57A Newington 60.74 359 P P 09 07 16.5 +0.2
baz=179
G58A Ormstown 60.78 0 P P 09 07 16.9 +0.3
baz=180
KSCO Kaye Shedlock' 60.80 335 P P 09 07 17.4 +0.3
KSCO Kaye Shedlock' 60.80 335 P P 09 07 17.5 +0.4
baz=148
G53A Haliburton 60.89 356 P P 09 07 16.8 -0.6
baz=175,SNR=11
H48A Harrisville 60.91 353 P P 09 07 16.3 -1.3
H48A Harrisville 60.91 353 P P 09 07 16.2 -1.3
baz=170,SNR=6.5
G55A Calabogie 60.93 358 P P 09 07 17.4 -0.3
baz=177,SNR=18
G62A West of Eustis 60.94 3 P P 09 07 18.6 +0.8
G62A IAmb IAmb 09 07 19.8
comp=Z,18nm,0.9s
G62A West of Eustis 60.94 3 P P 09 07 18.5 +0.8
baz=184
G61A St-Isidore-de- 60.96 2 P P 09 07 18.7 +0.8
baz=183,SNR=6.2
W18A Petrified Fore 60.98 327 P P 09 07 19.3 +0.8
W18A Petrified Fore 60.98 327 P P 09 07 19.3 +0.8
baz=140,SNR=5.8
SDCO Great Sand Dun 60.99 332 P P 09 07 18.7 +0.1
SDCO Great Sand Dun 60.99 332 P P 09 07 18.8 +0.1
baz=145,SNR=50
H46A Fife Lake 61.02 351 P P 09 07 16.7 -1.6
baz=168,SNR=12
G54A Lake Saint Pet 61.14 357 P P 09 07 18.5 -0.5
baz=176,SNR=9.6
X16A Lo Mia Camp, P 61.37 325 P P 09 07 21.9 +0.8
X16A IAmb IAmb 09 07 22.9
comp=Z,14nm,0.8s
I40A Norwalk 61.41 346 P P 09 07 20.0 -0.9
I40A IAmb IAmb 09 07 34.0
comp=Z,33nm,1.4s
G47A Hillman 61.45 352 P P 09 07 19.5 -1.6
baz=170
F55A Otter Lake 61.50 358 P P 09 07 21.5 0.0
baz=178
S22A 4UR Ranch, Cre 61.60 331 P P 09 07 23.1 +0.4
S22A IAmb IAmb 09 07 37.1
comp=Z,28nm,1.4s
S22A 4UR Ranch, Cre 61.60 331 P P 09 07 23.0 +0.2
baz=144,SNR=15
ALGO Algonquin Park 61.69 357 P P 09 07 22.3 -0.5
baz=176,SNR=20
F64A Sherman 61.72 5 P P 09 07 23.6 +0.6
F64A IAmb IAmb 09 07 42.6
comp=Z,13nm,0.8s
F64A Sherman 61.72 5 P P 09 07 23.4 +0.5
baz=186
F51A Arnstein 61.78 355 P P 09 07 22.3 -1.1
baz=174
F49A Sandfield 61.81 354 P P 09 07 22.1 -1.5
baz=172,SNR=6.8
Q24A Divide 61.84 333 P P 09 07 24.6 +0.3
Q24A IAmb IAmb 09 07 37.5
comp=Z,28nm,1.1s
Q24A Divide 61.84 333 P P 09 07 24.6 +0.3
baz=146,SNR=8.2
TRQ Mont Tremblant 61.86 360 P P 09 07 23.7 -0.2
Y14A Wickenburg 61.89 324 P P 09 07 25.2 +0.7
Y14A IAmb IAmb 09 07 26.0
comp=Z,12nm,0.8s
F48A Evansville 61.94 353 P P 09 07 23.1 -1.3
baz=171
MVCO Mesa Verde 61.98 329 P P 09 07 25.6 +0.4
MVCO IAmb IAmb 09 07 40.7
comp=Z,11nm,0.9s
MVCO Mesa Verde 61.98 329 P P 09 07 25.5 +0.4
baz=142,SNR=8.0
E58A La Victoria 62.01 1 P P 09 07 24.9 0.0
baz=181
E57A Chemin Saint G 62.05 360 P P 09 07 25.8 +0.6
baz=180,SNR=5.9
E52A Mattawa 62.05 356 P P 09 07 24.3 -0.9
baz=175,SNR=7.4
E53A Dumoine, Ponti 62.09 357 P P 09 07 24.9 -0.5
baz=176
E55A Montcerf-Lytto 62.11 358 P P 09 07 25.4 -0.1
baz=178
E54A Lac Daplat, Po 62.13 358 P P 09 07 25.3 -0.4
baz=177
WUAZ Wupatki 62.15 326 P P 09 07 27.4 +1.1
WUAZ Wupatki 62.15 326 P P 09 07 27.4 +1.1
baz=139,SNR=12
F45A CMU Biological 62.18 351 P P 09 07 24.7 -1.3
baz=168,SNR=5.6
E56A St. Veronique 62.18 359 P P 09 07 25.7 -0.4
baz=179,SNR=14
E64A Bridgewater 62.31 5 P P 09 07 27.1 +0.2
baz=187
E48A Lockeyer 62.54 354 P P 09 07 27.2 -1.2
baz=171,SNR=11
Y12C Blythe 62.63 323 P P 09 07 30.1 +0.8
Y12C IAmb IAmb 09 07 43.6
comp=Z,24nm,1.3s
Y12C Blythe 62.63 323 P P 09 07 30.3 +1.0
baz=136
E47A Iron Bridge 62.63 353 P P 09 07 27.5 -1.5
baz=170,SNR=13
D57A Chemin Vers le 62.65 0 P P 09 07 29.2 0.0
baz=180,SNR=8.2
D55A Sainte-Anne-du 62.66 359 P P 09 07 28.9 -0.4
baz=179,SNR=9.1
E46A Sault Ste Mari 62.68 352 P P 09 07 28.1 -1.3
D56A ZEC Mazanza, M 62.69 360 P P 09 07 28.9 -0.5
baz=179,SNR=7.7
ISCO Idaho Springs 62.73 333 P P 09 07 30.5 +0.2
ISCO Idaho Springs 62.73 333 P P 09 07 30.5 +0.2
ISCO pmax pmax
comp=Z,10.0nm,1.0s
ISCO Idaho Springs 62.73 333 P P 09 07 30.4 +0.2
baz=146,SNR=5.8
D58A Chemin du LacG 62.74 1 P P 09 07 29.7 -0.1

baz=181,SNR=12
SMCO Snowmass 62.83 332 P P 09 07 31.0 0.0
SMCO IAmb IAmb 09 07 48.7
comp=Z,24nm,1.2s
D54A Lac Fusel, La 62.83 358 P P 09 07 29.6 -0.8
baz=177,SNR=16
ECSD EROS Data Cent 62.84 342 P P 09 07 29.4 -1.2
ECSD IAmb IAmb 09 07 42.9
comp=Z,22nm,1.0s
ECSD EROS Data Cent 62.84 342 P P 09 07 29.6 -0.9
baz=156,SNR=7.7
D62A Allapoint, All 62.88 4 P P 09 07 31.1 +0.4
D62A IAmb IAmb 09 07 31.9
comp=Z,14nm,0.8s
D62A Allapoint, All 62.88 4 P P 09 07 31.1 +0.4
baz=186,SNR=8.1
D63A Stockholm 62.91 5 P P 09 07 31.4 +0.5
baz=187
D61A St Aubert, Com 62.94 3 P P 09 07 31.2 +0.1
baz=184
LATQ La Tuque 63.03 1 P P 09 07 31.8 +0.1
LATQ La Tuque 63.03 1 P P 09 07 31.6 -0.1
baz=182
E43A Lone Tree Farm 63.09 350 P P 09 07 30.7 -1.4
E43A IAmb IAmb 09 07 31.5
comp=Z,14nm,0.9s
BC3 Big Chuckawall 63.11 322 P P 09 07 33.6 +0.9
baz=135
D46A Sault St. Mari 63.16 352 P P 09 07 30.9 -1.6
baz=170
SPMN Marine on St. 63.18 345 P P 09 07 31.7 -1.0
SPMN IAmb IAmb 09 07 32.7
comp=Z,18nm,0.8s
SPMN Marine on St. 63.18 345 P P 09 07 31.8 -0.9
baz=160,SNR=12
D48A Paudash Townsh 63.19 354 P P 09 07 31.1 -1.6
baz=172
D47A Chapleau 63.21 353 P P 09 07 31.4 -1.5
baz=170
W13A Hualapai Mount 63.23 324 P P 09 07 34.4 +0.8
D49A Beulah Townshi 63.24 354 P P 09 07 31.7 -1.4
baz=172
IRM Iron Mountain 63.28 322 P P 09 07 34.5 +0.8
baz=135,SNR=9.4
U15A North Rim 63.33 326 P P 09 07 35.0 +0.7
XPFO Pion Flat 63.68 321 P P 09 07 37.8 +1.4
XPFO IAmb IAmb 09 07 51.6
comp=Z,18nm,1.1s
PFO Pinyon Flats O 63.68 321 P P 09 07 37.8 +1.3
PFO IAmb IAmb 09 07 51.6
comp=Z,16nm,1.1s
PFO Pinyon Flats O 63.68 321 i P P 09 07 36.8 +0.3
PFO pmax pmax
comp=Z,14nm,0.9s
PFO Pinyon Flats O 63.68 321 P P 09 07 37.7 +1.3
baz=134
N23A Red Feather La 63.77 334 P P 09 07 39.2 +2.1
N23A Red Feather La 63.77 334 P P 09 07 37.6 +0.5
baz=146
D41A Chassel 64.03 349 P P 09 07 37.6 -0.7
D41A IAmb IAmb 09 07 38.4
comp=Z,25nm,0.8s
GMRC Granite Mounta 64.03 323 P P 09 07 39.4 +0.7
baz=135
KNB Kanab 64.05 326 P P 09 07 40.0 +1.1
KNB Kanab 64.05 326 P P 09 07 40.0 +1.1
KNB pmax pmax
comp=Z,63nm,1.5s
PKCU Pink Cliffs 64.10 327 P P 09 07 40.6 +1.2
O20A White River Ci 64.18 331 P P 09 07 39.9 +0.2
O20A IAmb IAmb 09 07 53.2
comp=Z,33nm,1.2s
O20A White River Ci 64.18 331 P P 09 07 39.9 +0.2
baz=143,SNR=6.0
E38A The Farm, Brul 64.19 347 P P 09 07 38.0 -1.3
E38A IAmb IAmb 09 07 39.3
comp=Z,11nm,0.8s
LCMT Little Creek M 64.27 326 P P 09 07 41.0 +0.7
SRU San Rafael Swe 64.46 329 P P 09 07 42.0 +0.5
SRU San Rafael Swe 64.46 329 P P 09 07 42.0 +0.5
SRU pmax pmax
comp=Z,31nm,1.2s
MTPU Mount Pierson 64.48 327 P P 09 07 42.8 +0.8
SZCU Shurtz Canyon 64.62 326 P P 09 07 43.9 +1.2
Q16A Castle Valley 64.63 329 P P 09 07 43.5 +0.8
TUQ Turquoise Moun 64.64 323 P P 09 07 43.4 +0.7
baz=135,SNR=5.1
CCUT Cedar City 64.73 326 P P 09 07 44.7 +1.3
LSQQ Lebel-sur-Quev 64.74 358 P P 09 07 42.4 -0.5
baz=177
MSU Marysvale 64.83 328 P P 09 07 44.7 +0.6
MSU Marysvale 64.83 328 P P 09 07 44.7 +0.6
P17A Butcher Ranch, 64.84 329 P P 09 07 44.3 +0.3
TMUT Trail Mountain 64.94 329 P P 09 07 45.4 +0.6
SHPR Sheep Range 64.96 324 P P 09 07 45.7 +0.9
GSC Goldstone, Bar 65.06 322 P P 09 07 46.6 +1.2
GSC Goldstone, Bar 65.06 322 P P 09 07 46.6 +1.2
GSC pmax pmax
comp=Z,8.0nm,0.9s
GSC Goldstone, Bar 65.06 322 P P 09 07 46.6 +1.2
baz=134,SNR=6.3
RDMU Red Mountain 65.14 331 P P 09 07 46.4 +0.4
SHOC Shoshone, Teco 65.17 323 P P 09 07 47.5 +1.5
baz=135
DECC Green Verdugo 65.26 321 P P 09 07 47.7 +1.0
baz=133
EYMN Ely 65.45 347 P P 09 07 46.7 -0.9
EYMN IAmb IAmb 09 07 47.4
comp=Z,12nm,0.8s
EYMN Ely 65.45 347 P P 09 07 46.6 -1.0
baz=162,SNR=12
K22A Casper 65.46 334 P P 09 07 48.1 +0.1
K22A IAmb IAmb 09 08 02.2
comp=Z,15nm,0.8s
K22A Casper 65.46 334 P P 09 07 48.1 +0.1
baz=146
MATQ Matagami 65.47 358 P P 09 07 46.9 -0.7
baz=176,SNR=25
EDW2 Edwards Air Fo 65.48 321 P P 09 07 48.8 +0.7
baz=133,SNR=5.3
LRMC Laurel Mtn Rad 65.70 322 P P 09 07 50.8 +1.2
baz=134
RSSD Black Hills 65.70 337 P P 09 07 49.7 +0.1
RSSD IAmb IAmb 09 08 03.8
comp=Z,41nm,1.5s
RSSD Black Hills 65.70 337 P P 09 07 49.7 +0.1
RSSD pmax pmax
comp=Z,41nm,1.5s
RSSD Black Hills 65.70 337 P P 09 07 49.7 +0.1
baz=148
PSUT Pine Spring 65.72 327 P P 09 07 50.7 +0.9
NLU North Lily Min 65.87 329 P P 09 07 51.7 +1.0
TPNV Topopah Spring 65.89 324 P P 09 07 52.0 +1.2
TPNV Topopah Spring 65.89 324 P P 09 07 52.1 +1.2
TPNV pmax pmax
comp=Z,12nm,1.0s
TPNV Topopah Spring 65.89 324 P P 09 07 52.1 +1.2
baz=135,SNR=17
FURC Furnace Creek, 65.90 323 P P 09 07 52.1 +1.4
baz=135,SNR=11
MPMC Manual Prospec 65.98 322 P P 09 07 52.1 +0.6
baz=134,SNR=6.9
D32A Dogwood Acres, 66.05 343 P P 09 07 51.0 -0.5
JLU Jordanelle 66.06 330 P P 09 07 52.8 +0.9
DAC Darwin (Calif) 66.19 323 P P 09 07 56.2 +3.4
DAC IAmb IAmb 09 08 09.7
comp=Z,21nm,1.4s
DAC Darwin (Calif) 66.19 323 P P 09 07 56.2 +3.4
DAC pmax pmax
comp=Z,21nm,1.4s
CTU Camp Tracy 66.28 330 P P 09 07 54.1 +0.9
ISA Isabella, Lake 66.30 322 P P 09 07 54.7 +1.3
ISA IAmb IAmb 09 08 07.7
comp=Z,18nm,1.4s
ISA Isabella, Lake 66.30 322 P P 09 07 54.7 +1.3
ISA pmax pmax
comp=Z,18nm,1.4s
ISA Isabella, Lake 66.30 322 P P 09 07 54.4 +1.0
baz=133,SNR=6.0
DUG Dugway, Tooele 66.42 329 P P 09 07 55.0 +0.8
DUG Dugway, Tooele 66.42 329 P P 09 07 55.0 +0.8
DUG pmax pmax
comp=Z,63nm,1.4s
DUG Dugway, Tooele 66.42 329 P P 09 07 55.2 +1.1
baz=139,SNR=17
TCUT Toone Canyon 66.44 330 P P 09 07 55.1 +0.7

R11A Troy Canyon, C 66.52 325 P P 09 07 56.0 +1.1
R11A Troy Canyon, C 66.52 325 P P 09 07 56.0 +1.1
baz=136,SNR=14
DRLN Deer Lake 66.55 12 P P 09 07 54.6 0.0
DRLN IAmb IAmb 09 07 55.2
comp=Z,21nm,0.8s
CWC Cottonwood Cre 66.59 322 P P 09 07 56.2 +0.9
baz=134
PKM Mcpherson Peak 66.59 320 P P 09 07 56.3 +0.9
baz=132
VES Vestal, Richgr 66.78 321 P P 09 07 57.6 +1.2
baz=133
PD31 Pinedale Array 66.87 332 P P 09 07 56.6 -0.4
PD31 IAmb IAmb 09 08 10.1
comp=Z,19nm,1.4s
PDAR Pinedale Array 66.87 332 P P 09 07 56.5 -0.6
comp=Z,1.1nm,0.9s,baz=156,slow=7.6,SNR=7.7
PDAR pP pP 09 08 09.1 -1.1
comp=Z,4.6nm,1.1s,baz=149,slow=6.9,SNR=8.5
PDAR PKP2bc 09 36 29.0
comp=Z,0.4nm,0.8s,baz=225,slow=1.9,SNR=4.4
PDAR Pinedale Array 66.87 332 P P 09 07 56.1 -0.9
VNA3 Neumayer Olymp 66.91 161 P P 09 07 58.0 +1.3
SMMC Simmler 66.98 320 P P 09 07 59.1 +1.3
baz=132
BGU Big Grassy Mou 67.08 329 P P 09 07 58.8 +0.4
SPUT South Promonto 67.09 330 P P 09 07 58.9 +0.5
TIN Tinemaha, Big 67.10 323 P P 09 07 59.8 +1.3
baz=134
VNA1 Neumayer--Stat 67.16 161 P P 09 07 59.9 +1.6
MDND Maddock 67.45 342 P P 09 08 00.5 +0.1
MDND Maddock 67.45 342 P P 09 08 00.7 +0.3
baz=154,SNR=7.8
VNA2 Neumayer--Watz 67.51 161 P P 09 08 01.7 +1.2
baz=291,slow=7.2
AHID Auburn Hatcher 67.57 331 P P 09 08 01.6 +0.1
AHID IAmb IAmb 09 08 14.7
comp=Z,17nm,1.1s
MLAC Mammoth, Mammo 67.84 323 P P 09 08 04.8 +1.5
baz=133
REDW Red Top Meadow 67.92 332 P P 09 08 03.5 -0.2
REDW IAmb IAmb 09 08 17.4
comp=Z,41nm,1.5s
OMMB Old Mammoth Mi 67.93 323 P P 09 08 04.9 +0.9
OMMB IAmb IAmb 09 08 18.2
comp=Z,32nm,1.3s
SNOW Snow King Moun 67.96 332 P P 09 08 04.0 +0.1
NV11 Mina Array Sit 68.01 324 P P 09 08 05.4 +1.2
ELK Elko 68.07 327 P P 09 08 05.4 +0.7
ELK Elko 68.07 327 P P 09 08 05.4 +0.7
ELK pmax pmax
comp=Z,19nm,1.5s
NVAR Mina Array Bea 68.09 324 P P 09 08 05.5 +0.7
comp=Z,2.5nm,0.8s,baz=149,slow=7.3,SNR=25
NVAR pP pP 09 08 18.1 +0.1
comp=Z,4.3nm,1.0s,baz=146,slow=11,SNR=7.6
FXWY Fox Creek 68.22 332 P P 09 08 05.3 -0.3
FXWY IAmb IAmb 09 08 19.0
comp=Z,24nm,1.4s
RYN Ryan 68.35 324 P P 09 08 07.4 +1.0
IMW Indian Meadow 68.38 332 P P 09 08 06.7 0.0
IMW IAmb IAmb 09 08 21.1
comp=Z,22nm,1.2s
KVN Kaiserville 68.40 324 P P 09 08 07.6 +0.8
KVN Kaiserville 68.40 324 P P 09 08 07.6 +0.8
KVN pmax pmax
comp=Z,19nm,1.5s
FLWY Flagg Ranch 68.42 333 P P 09 08 07.3 +0.5
FLWY IAmb IAmb 09 08 20.8
comp=Z,33nm,1.1s
H17A Grant Village 68.61 333 pP 09 08 24.1 +2.9
ULM Lac du Bonnet 68.62 345 P P 09 08 06.7 -0.9
comp=Z,15nm,0.9s,baz=158,slow=6.4,SNR=34
ULM pP pP 09 08 19.6 -1.1
comp=Z,4.9nm,0.6s,baz=161,slow=6.4,SNR=5.2
ULM Lac du Bonnet 68.62 345 P P 09 08 06.5 -1.1
ULM IAmb IAmb 09 08 07.0
comp=Z,13nm,0.8s
ULM Lac du Bonnet 68.62 345 P P 09 08 06.5 -1.1
ULM pmax pmax
comp=Z,13nm,0.8s
RLMT Red Lodge 68.63 334 P P 09 08 08.4 +0.3
RLMT Red Lodge 68.63 334 P P 09 08 08.3 +0.3
baz=144,SNR=6.9
LKWY Lake 68.67 333 P P 09 08 09.6 +1.2
LKWY IAmb IAmb 09 08 22.4
comp=Z,24nm,1.5s
LKWY Lake 68.67 333 P P 09 08 09.6 +1.2
LKWY pmax pmax
comp=Z,24nm,1.5s
LAO LASA Array 68.70 337 P P 09 08 08.3 0.0
LAO IAmb IAmb 09 08 21.8
comp=Z,34nm,1.4s
LAO LASA Array 68.70 337 P P 09 08 08.2 0.0
baz=147
WAKR Walker 68.79 323 P P 09 08 10.8 +1.6
WAKR IAmb IAmb 09 08 24.1
comp=Z,26nm,1.5s
YNE Yellowstone No 68.85 334 P P 09 08 09.7 +0.2
YMR Madison River 69.00 333 P P 09 08 11.6 +1.2
YERR Yerington 69.00 324 P P 09 08 11.9 +1.4
YERR IAmb IAmb 09 08 25.1
comp=Z,19nm,1.1s
CMB Columbia Colle 69.02 322 P P 09 08 11.2 +0.7
CMB Columbia Colle 69.02 322 P P 09 08 11.2 +0.7
CMB pmax pmax
comp=Z,15nm,1.4s
YHH Holmes Hill 69.04 333 P P 09 08 11.8 +1.0
SNAA Sanae 69.12 161 P P 09 08 11.9 +1.2
SNAA Sanae 69.12 161 P P 09 08 11.8 +1.2
SNAA Sanae 69.12 161 P P 09 08 11.8 +1.2
SNAA pmax pmax
comp=Z,35nm,0.8s
YHL Hebgen Lake 69.24 333 P P 09 08 13.3 +1.3
PNTR Pine Nut 69.28 324 P P 09 08 13.9 +1.6
PNTR IAmb IAmb 09 08 26.9
comp=Z,27nm,1.2s
GCMT Greycliff 69.33 334 P P 09 08 12.7 +0.3
VCNR Virginia City 69.45 324 P P 09 08 14.8 +1.5
VCNR IAmb IAmb 09 08 27.9
comp=Z,26nm,1.3s
DGMT Dagmar 69.48 339 P P 09 08 13.7 +0.7
DGMT IAmb IAmb 09 08 28.9
comp=Z,35nm,1.4s
DGMT Dagmar 69.48 339 P P 09 08 13.4 +0.3
baz=149
PAHR Pah Rah Range 69.58 324 P P 09 08 15.3 +1.3
MCMT McKenzie Canyo 69.97 332 P P 09 08 17.3 +0.9
AFDM Forest Hills D 69.97 323 P P 09 08 17.1 +0.8
BEKR Beckworth 70.24 324 P P 09 08 19.1 +1.0
DLMT Dillon 70.26 332 P P 09 08 21.2 +3.1
DLMT IAmb IAmb 09 08 32.1
comp=Z,25nm,1.4s
MFID Camas Ranch 70.32 329 P P 09 08 19.1 +0.7
MFID IAmb IAmb 09 08 33.7
comp=Z,48nm,1.3s
ORV Oroville 70.68 323 P P 09 08 21.8 +1.2
ORV Oroville 70.68 323 P P 09 08 21.8 +1.2
ORV pmax pmax
comp=Z,71nm,1.4s
SCHQ Schefferville 70.75 4 P P 09 08 20.0 -0.6
comp=Z,13nm,0.8s,baz=185,slow=5.2,SNR=21
SCHQ Schefferville 70.75 4 P P 09 08 20.2 -0.5
SCHQ IAmb IAmb 09 08 21.1
comp=Z,14nm,0.8s
WVOR Wild Horse Val 71.06 327 P P 09 08 23.5 +0.5
WVOR Wild Horse Val 71.06 327 P P 09 08 23.5 +0.5
WVOR pmax pmax
comp=Z,7.0nm,1.2s
EGMT Eagleton 71.16 336 P P 09 08 23.6 +0.1
EGMT Eagleton 71.16 336 P P 09 08 23.6 +0.1
baz=144
MOD Modoc Plateau 71.58 325 P P 09 08 26.8 +0.6
MOD IAmb IAmb 09 08 40.4
comp=Z,24nm,1.3s
LIC Lamto 71.83 78 eP P 09 08 27.0 -1.1
comp=Z,59nm,0.9s
WDC Whiskeytown Da 71.96 323 P P 09 08 27.6 -0.7
WDC Whiskeytown Da 71.96 323 P P 09 08 27.6 -0.7
WDC pmax pmax
comp=Z,5.0nm,0.7s
TIC Toumodi 71.98 77 eP P 09 08 27.9 -1.1
MSO Missoula 71.99 332 P P 09 08 29.3 +0.9
MSO IAmb IAmb 09 08 43.7
comp=Z,37nm,1.5s

MSO Missoula 71.99 332 P P 09 08 29.0 +0.5
baz=140,SNR=7.1
BMO Blue Mountains 72.10 329 P P 09 08 29.1 0.0
BMO Blue Mountains 72.10 329 P P 09 08 29.2 0.0
BMO pmax pmax
comp=Z,11nm,1.2s
DBIC Dimbokro 72.14 77 P P 09 08 29.2 -0.7
comp=Z,24nm,0.7s,baz=235,slow=6.1,SNR=44
DBIC Dimbokro 72.14 77 P P 09 08 29.1 -0.7
DBIC IAmb IAmb 09 08 29.7
comp=Z,20nm,0.7s
KIC Kosan Boka 72.15 78 eP P 09 08 29.2 -0.8
comp=Z,65nm,0.7s
N02D Trinity Center 72.31 323 P P 09 08 30.5 0.0
baz=131
I07A Izee 72.66 328 P P 09 08 33.7 +1.2
M02C Callahan 72.67 324 P P 09 08 32.8 +0.2
baz=131
YBH Yreka Blue Hor 72.81 324 P P 09 08 33.0 -0.5
comp=Z,3.6nm,0.9s,baz=107,slow=6.6,SNR=6.7
YBH Yreka Blue Hor 72.81 324 P P 09 08 33.1 -0.3
YBH Yreka Blue Hor 72.81 324 P P 09 08 33.1 -0.3
YBH pmax pmax
comp=Z,13nm,1.3s
JTMT Jette 72.84 333 P P 09 08 34.5 +1.0
JTMT IAmb IAmb 09 08 48.7
comp=Z,28nm,1.5s
F10A Beach Ranch, E 72.87 330 P P 09 08 34.5 +0.8
J05D Fort Rock, OR 73.03 326 P P 09 08 35.3 +0.5
baz=133,SNR=5.8
PINE Pine Mountain 73.21 327 P P 09 08 37.0 +1.0
G08A Pilot Rock 73.23 329 P P 09 08 36.7 +0.8
E09A Wood Farm, Sta 73.70 330 P P 09 08 39.0 +0.5
NVL N'lazarevskaya 73.76 160 eP P 09 08 39.5 +1.0
NVL pmax pmax
comp=Z,23nm,0.9s
I05D Terrebonne, OR 73.80 327 P P 09 08 40.4 +1.3
baz=133,SNR=6.1
E08A Dider Farm, El 74.13 330 P P 09 08 41.9 +0.9
QSPA South Pole Qui 74.23 180 P P 09 08 43.1 +1.6
QSPA IAmb IAmb 09 08 43.7
comp=Z,18nm,0.8s
FFC Flin Flon 74.26 344 P P 09 08 40.1 -1.4
FFC Flin Flon 74.26 344 P P 09 08 40.1 -1.4
FFC pmax pmax
comp=Z,9.0nm,1.2s
HAWA Hanford 74.29 329 P P 09 08 43.0 +1.0
G05D Wamic, OR 74.40 327 P P 09 08 44.2 +1.6
baz=133
H04A Detroit Lake 74.48 327 P P 09 08 43.6 +0.5
NEW Newport 74.49 332 P P 09 08 42.4 -0.7
comp=Z,1.7nm,0.9s,baz=104,slow=8.3,SNR=3.4
NEW pP pP 09 08 56.9 +0.5
comp=Z,1.5nm,0.6s,baz=107,slow=6.2,SNR=2.6
E07A Sunnyside 74.57 329 P P 09 08 45.0 +1.4
E07A IAmb IAmb 09 08 59.2
comp=Z,22nm,1.3s
F04A Amboy 75.44 327 P P 09 08 49.4 +0.9
F04A IAmb IAmb 09 09 02.6
comp=Z,24nm,1.0s
LTY Liberty 75.46 329 P P 09 08 49.6 +0.9
LTY IAmb IAmb 09 09 03.2
comp=Z,28nm,1.5s
B08A Colville Reser 75.58 331 P P 09 08 49.6 +0.2
D05A Enumclaw 76.06 329 P P 09 08 53.0 +0.9
D05A IAmb IAmb 09 08 54.0
comp=Z,15nm,0.9s
FCC Fort Churchill 76.20 349 P P 09 08 51.9 -0.6
FCC Fort Churchill 76.20 349 P P 09 08 51.9 -0.6
FCC pmax pmax
comp=Z,8.0nm,1.0s
B05A Bryant 76.85 329 P P 09 08 57.6 +1.1
baz=133
D03D Eldon 76.85 328 P P 09 08 57.7 +1.1
baz=132
NLWA Neilton Lookou 77.15 328 P P 09 08 55.7 -2.6
TOA0 Torodi Ar. Sit 80.34 73 P P 09 09 16.3 -0.2
TORD Torodi Ar. Bea 80.34 73 P P 09 09 16.2 -0.3
comp=Z,43nm,0.7s,baz=257,slow=5.2,SNR=182
TORD pP pP 09 09 28.8 -1.5
comp=Z,9.1nm,0.7s,baz=259,slow=5.1,SNR=5.1
TORD Torodi Ar. Bea 80.34 73 P P 09 09 15.3 -1.2
MORF Marmelete 81.16 47 eP P 09 09 21.0 +0.5
MORF AMb AMB 09 09 28.5
comp=Z,57nm,2.3s
MORF Marmelete 81.16 47 eP P 09 09 22.0 +1.6
MORF Marmelete 81.16 47 eP P 09 09 21.0 +0.5
PNCL Nicolau / Gran 81.61 47 eP P 09 09 24.0 +1.2
comp=Z,52nm,2.1s
PBDV Barranco-do-Ve 81.64 48 eP P 09 09 24.5 +1.5
comp=Z,75nm,1.8s
PCVE Castro Verde 81.74 47 eP P 09 09 24.8 +1.4
comp=Z,64nm,1.2s
PVAQ Vaqueiros 81.86 47 eP P 09 09 25.5 +1.4
comp=Z,56nm,2.1s
PBEJ Beja 82.04 47 eP P 09 09 26.7 +1.7
comp=Z,44nm,1.8s
BBB Bella Bella 82.33 330 P P 09 09 26.4 +0.2
comp=Z,6.8nm,0.7s,baz=78,slow=5.9,SNR=5.6
BBB Bella Bella 82.33 330 IAmb IAmb 09 09 29.1
comp=Z,14nm,1.1s
PTOM Tomar 82.40 45 eP P 09 09 28.6 +1.8
comp=Z,112nm,2.0s
PMRV Marv??o 83.01 46 eP P 09 09 31.1 +1.0
comp=Z,48nm,1.8s
PCBR Castelo Branco 83.14 45 eP P 09 09 31.8 +1.1
comp=Z,57nm,1.8s
PVIS Viseu 83.25 44 eP P 09 09 32.4 +1.0
comp=Z,115nm,1.8s
MTE Manteigas 83.35 45 eP P 09 09 33.5 +1.6
comp=Z,88nm,1.5s
SYO Syowa Base 83.40 161 ⇑ i X P 09 09 24.6 -7.0
POLO Lamas de Olo 83.63 44 eP P 09 09 34.0 +0.7
comp=Z,52nm,1.7s
PVRL Vila Real 83.63 44 eP P 09 09 34.2 +0.9
comp=Z,114nm,1.6s
MVO Moncorvo 84.04 44 eP P 09 09 36.2 +0.8
comp=Z,68nm,1.9s
YKA Yellowknife Ar 84.36 342 P P 09 09 35.9 -0.5
comp=Z,10nm,0.8s,baz=139,slow=5.2,SNR=126
YKA pP pP 09 09 48.8 -1.1
comp=Z,3.2nm,0.6s,baz=140,slow=5.4,SNR=8.2
PAB San Pablo 85.17 47 P P 09 09 42.3 +1.1
PAB San Pablo 85.17 47 P P 09 09 42.3 +1.1
PAB pmax pmax
comp=Z,26nm,0.9s
ESDC Sonseca Array 85.50 47 P P 09 09 43.1 +0.4
comp=Z,11nm,0.9s,baz=253,slow=5.6,SNR=25
ESDC pP pP 09 09 56.6 +0.3
comp=Z,3.1nm,0.8s,baz=253,slow=5.6,SNR=5.2
ESDC Sonseca Array 85.50 47 P P 09 09 43.3 +0.6
TSUM Tsumeb 86.45 109 P P 09 09 48.9 +0.8
TSUM IAmb IAmb 09 09 50.4
comp=Z,16nm,0.8s
TAM Tamanrasset 86.88 65 P P 09 09 51.8 +1.7
TAM IAmb IAmb 09 09 52.8
comp=Z,12nm,0.9s
TAM Tamanrasset 86.88 65 P P 09 09 51.8 +1.7
TAM pmax pmax
comp=Z,12nm,0.9s
DLBC Dease Lake 87.03 334 P P 09 09 50.2 +0.4
comp=Z,12nm,0.7s,baz=141,slow=6.5,SNR=5.5
DLBC Dease Lake 87.03 334 IAmb IAmb 09 09 51.3
comp=Z,15nm,0.8s
BOSA Boshof 90.46 120 P P 09 10 06.8 -0.2
comp=Z,9.9nm,0.9s,baz=222,slow=4.8,SNR=12
BOSA Boshof 90.46 120 P P 09 10 07.0 0.0
BOSA IAmb IAmb 09 10 08.2
comp=Z,10nm,0.9s
BOSA Boshof 90.46 120 P P 09 10 07.0 0.0
BOSA pmax pmax
comp=Z,10.0nm,0.9s
MAW Mawson 91.02 165 P P 09 10 09.3 +0.8
comp=Z,5.1nm,0.7s,baz=216,slow=7.3,SNR=7.6
MAW Mawson 91.02 165 IAmb IAmb 09 10 14.2
comp=Z,1.4nm,0.8s
SUMG Summit 91.41 10 i P P 09 10 10.8 +0.2
comp=Z,59nm,0.7s
SUMG i 09 10 24.4
SUMG Summit 91.41 10 P P 09 10 10.8 +0.2
SUMG Summit 91.41 10 i P P 09 10 10.8 +0.2
SUMG i 09 10 24.4
SUMG pmax pmax
comp=Z,59nm,0.7s
INK Inuvik 94.07 341 P P 09 10 21.8 -0.7
comp=Z,3.6nm,0.8s,baz=106,slow=6.4,SNR=9.4

INK Inuvik 94.07 341 P P 09 10 22.1 -0.4
INK IAmb IAmb 09 10 35.8
comp=Z,9.5nm,1.4s
INK Inuvik 94.07 341 P P 09 10 22.1 -0.4
INK pmax pmax
comp=Z,10.0nm,1.4s
BCAR Beaver Creek A 94.37 335 P P 09 10 23.3 -0.7
DOU Dourbes 95.02 39 P P 09 10 26.8 -0.4
DOU PcP PcP 09 10 27.5 0.0
DOU pP pP 09 10 40.4 -0.5
BMRD Maredsous 95.19 39 P P 09 10 28.0 0.0
BMRD PcP PcP 09 10 28.4 +0.2
WLF Walferdange 95.84 40 P P 09 10 31.1 +0.1
WLF PcP PcP 09 10 31.5 +0.3
ILAR Eielson Array 97.13 336 P P 09 10 35.2 -1.3
comp=Z,0.7nm,0.8s,baz=140,slow=2.0,SNR=4.6
ILAR PP PP 09 14 27.0 -6.2
comp=Z,0.9nm,0.9s,baz=110,slow=7.1,SNR=8.0
ILAR Eielson Array 97.13 336 eP Pdif 09 10 36.6 0.0
ILAR pmax pmax
comp=Z,1.0nm,0.8s
DAG Danmarks Havn 98.04 11 i P P 09 10 40.1 -0.2
DAG Danmarks Havn 98.04 11 i P P 09 10 40.1 -0.2
MOTA Moosalm 98.37 43 ePdiff Pdif 09 10 42.8 +0.1
comp=Z,6.1nm,0.8s
WATA Walderalm 98.68 43 ePdiff P 09 10 44.1 0.0
comp=Z,3.6nm,0.9s
KBA Koelnbreinsper 99.80 44 Pdiff Pdif 09 10 48.7 -0.4
comp=Z,1.6nm,0.6s
GERES GERESS Array B 100.41 42 P Pdif 09 10 51.5 -0.2
comp=Z,1.4nm,0.8s,baz=247,slow=2.8,SNR=11
CLL Collm 100.49 40 ePdif Pdif 09 10 51.0 -0.8
CLL Collm 100.49 40 eP Pdif 09 10 51.0 -0.8
MOA Molln 100.57 43 ePdiff Pdif 09 10 52.3 -0.1
comp=Z,3.8nm,0.8s
FINES FINESS Array B 108.73 30 PKKPbc PKKPbc 09 26 42.4 -1.9
comp=Z,2.7nm,0.9s,baz=120,slow=3.1,SNR=6.7
AKASG Malin Array Be 110.60 41 i PKIKP PKiKP 09 15 34.4 -2.6
AKASG pmax pmax
comp=Z,1.0nm,0.6s
OBN Obninsk 114.75 36 i PKIKP PKPdf 09 15 45.8 +1.1
OBN pmax pmax
comp=Z,6.0nm,0.7s
BILL Bilibino 115.56 339 i PKIKP PKPdf 09 15 46.6 +0.7
BILL pmax pmax
comp=Z,1.0nm,1.1s
KIV Kislovodsk 120.14 48 i PKIKP PKiKP 09 15 57.3 +1.6
KIV pmax pmax
comp=Z,14nm,1.0s
KIV MLR MLR
comp=Z,4μm,22.0s
KBZ Khabaz 120.32 48 PKP PKiKP 09 15 56.1 +0.3
comp=Z,5.2nm,0.8s,baz=282,slow=1.2,SNR=11
KBZ Khabaz 120.32 48 ePKIKP PKPdf 09 15 55.4 -0.4
KBZ pmax pmax
comp=Z,5.0nm,0.8s
STKA Stephens Creek 121.41 216 PKP PKPdf 09 15 58.4 0.0
comp=Z,1.9nm,0.7s,baz=183,slow=5.0,SNR=4.9
STKA pPKP pPKPdf 09 16 13.4 +1.1
comp=Z,1.1nm,0.6s,baz=69,slow=7.6,SNR=1.9
STKA Stephens Creek 121.41 216 ePKIKP PKiKP 09 15 59.4 +0.9
STKA pmax pmax
comp=Z,1.0nm,0.7s
H11N3 WAKE ISLAND Hy122.03 284 T T 11 29 48.4
baz=97,slow=75,SNR=101
H11N2 WAKE ISLAND Hy122.04 284 T T 11 29 49.7
baz=97,slow=75,SNR=205
H11N1 WAKE ISLAND Hy122.04 284 T T 11 29 48.6
baz=97,slow=75,SNR=101
H11S2 WAKE ISLAND Hy122.06 282 T T 11 29 43.3
baz=99,slow=75,SNR=188
H11S1 WAKE ISLAND Hy122.07 282 T T 11 29 48.4
baz=99,slow=75,SNR=103
H11S3 WAKE ISLAND Hy122.08 282 T T 11 29 44.8
baz=99,slow=75,SNR=192
TIXI Tiksi 122.63 352 PKP PKPdf 09 15 59.0 -0.5
baz=283,slow=19
TIXI Tiksi 122.63 352c i PKIKP PKPdf 09 15 59.0 -0.5
TIXI pmax pmax
comp=Z,9.0nm,2.5s
PETK Petropavlovsk- 125.17 325 PKP PKiKP 09 16 05.3 0.0
comp=Z,6.2nm,1.1s,baz=82,slow=2.2,SNR=5.9
PETK pPKP pPKPdf 09 16 20.2 +1.3
comp=Z,1.2nm,0.5s,baz=192,slow=1.3,SNR=1.5
ARU Arti 126.10 30 PKPdf 09 16 06.6 +0.1
ARU Arti 126.10 30c i PKIKP PKiKP 09 16 07.6 +0.7
ARU pmax pmax
comp=Z,13nm,2.5s
CTA Charters Tower 126.56 229 PKP PKiKP 09 16 08.9 -0.1
comp=Z,3.7nm,0.7s,baz=267,slow=3.0,SNR=3.5
ABKAR Akbulak array 130.13 38 PKiKP 09 16 15.1 -0.1
ABKAR Akbulak array 130.13 38 PKiKP 09 16 15.6 +0.4
YAK Yakutsk 130.96 345 PKP PKPdf 09 16 15.0 -0.6
comp=Z,6.5nm,0.4s,baz=95,slow=2.1,SNR=3.9
YAK Yakutsk 130.96 345 PKPdf 09 16 15.0 -0.6
YAK Yakutsk 130.96 345 PKIKP PKPdf 09 16 15.0 -0.6
ASAR Alice Springs 132.05 215 PKhKP PKPpre 09 16 08.9
comp=Z,0.5nm,0.6s,baz=108,slow=1.4,SNR=6.5
ASAR PKP PKPdf 09 16 18.8 -0.2
comp=Z,2.4nm,0.8s,baz=139,slow=2.3,SNR=16
ASAR pPKP pPKPdf 09 16 34.1 +1.3
comp=Z,1.7nm,0.6s,baz=128,slow=1.8,SNR=5.1
ASAR Alice Springs 132.05 215 PKPdf 09 16 18.6 -0.3
GEYT Alibeck 132.72 53 PKhKP PKPpre 09 16 16.6
comp=Z,0.9nm,0.7s,baz=258,slow=6.8,SNR=2.4
WRA Warramunga Arr 134.68 219 PKP PKPdf 09 16 24.1 +0.2
comp=Z,8.6nm,0.7s,baz=144,slow=1.8,SNR=30
WRA pPKP pPKPdf 09 16 39.4 +1.5
comp=Z,2.4nm,0.6s,baz=140,slow=1.9,SNR=4.3
WRAB Tennant Creek 134.68 219 PKPdf 09 16 24.4 +0.4
WRAB Tennant Creek 134.68 219 PKIKP PKPdf 09 16 24.4 +0.4
ZAA0 Zalesovo Array 138.65 19 PKPdf 09 16 29.4 -0.9
ZALV Zalesovo Beam 138.65 19 PKhKP PKPpre 09 16 21.2
comp=Z,0.5nm,0.4s,baz=357,slow=2.9,SNR=3.0
ZALV PKP PKPdf 09 16 29.4 -0.8
comp=Z,14nm,0.8s,baz=278,slow=2.0,SNR=12
ZALV pPKP pPKPdf 09 16 44.5 +0.2
comp=Z,3.8nm,0.6s,baz=309,slow=2.8,SNR=3.7
ZALV Zalesovo Beam 138.65 19 ePKIKP PKPdf 09 16 27.5 -2.7
ZALV pmax pmax
comp=Z,14nm,0.8s
KURK Kurchatov 138.96 26 PKPdf 09 16 31.1 +0.2
KURK Kurchatov 138.96 26c i PKIKP PKiKP 09 16 32.3 -0.8
KURK pmax pmax
comp=Z,8.0nm,1.3s
KKAR Karatay Array 139.50 41 PKPdf 09 16 30.7 -1.5
KKAR Karatay Array 139.50 41 PKIKP PKPdf 09 16 30.7 -1.5
FITZ Fitzroy Crossi 140.98 211 PKhKP PKPpre 09 16 28.0
comp=Z,5.5nm,0.8s,baz=177,slow=7.6,SNR=7.1
AAK Ala-Archa 142.21 39 PKPdf 09 16 34.7 -2.6
AAK Ala-Archa 142.21 39c i PKIKP PKPdf 09 16 38.5 +1.2
AAK pmax pmax
comp=Z,5.0nm,0.7s
MAKZ Makanchi 143.36 28 PKPpre 09 16 35.6
MAKZ Makanchi 143.36 28 PKIKP PKPab 09 16 35.6 +0.5
MK31 Makanchi Array 143.51 28 PKPbc 09 16 36.8 +0.1
MK31 Makanchi Array 143.51 28 PKIKP PKPbc 09 16 36.8 +0.2
MKAR Makanchi Array 143.51 28 PKP PKPbc 09 16 36.7 +0.1
comp=Z,6.9nm,0.7s,baz=322,slow=3.1,SNR=46
MKAR Makanchi Array 143.51 28 PKPpre 09 16 36.2
MKAR Makanchi Array 143.51 28 PKIKP PKPbc 09 16 36.2 -0.4
NRN Naryn 143.82 39 PKPdf 09 16 39.4 -1.0
NRN Naryn 143.82 39 PKIKP PKPdf 09 16 39.4 -1.0
MOY Mondy 144.13 5 ePKIKP PKPbc 09 16 39.1 +0.7
MOY pmax pmax
comp=Z,30nm,2.4s
USRK Ussuriysk Ar. 144.17 327 PKP PKPbc 09 16 38.7 +0.1
comp=Z,7.8nm,0.8s,baz=63,slow=2.7,SNR=26
USRK pPKP pPKPdf 09 16 53.9 -0.6
comp=Z,6.5nm,1.1s,baz=129,slow=2.7,SNR=3.3
TLY Talaya 144.29 2 PKPbc 09 16 39.4 +0.6
TLY Talaya 144.29 2 i PKIKP PKPbc 09 16 39.0 +0.2
TLY pmax pmax
comp=Z,8.0nm,0.9s
PRZ Przheval'sk 144.59 36 PKPdf 09 16 42.5 +1.0
PRZ Przheval'sk 144.59 36 PKIKP PKPdf 09 16 42.5 +1.0
MJA0 Matsu Arr-Jizo 144.69 312 ePKIKP PKPab 09 16 38.5 -1.9
MJA0 pmax pmax
comp=Z,10.0nm,0.8s
MJAR Matsushiro Arr 144.71 312 PKP PKPab 09 16 39.8 -0.7
comp=Z,8.2nm,0.8s,baz=129,slow=3.2,SNR=24
MJAR Matsushiro Arr 144.71 312 PKPab 09 16 40.0 -0.5
MJAR Matsushiro Arr 144.71 312 PKIKP PKPab 09 16 40.0 -0.5
MAJO Matsushiro 144.72 312 PKPab 09 16 40.4 -0.1
MAJO Matsushiro 144.72 312 PKIKP PKPab 09 16 40.4 -0.1
MAT Matsushiro 144.72 312 PKP PKPab 09 16 39.4 -1.1
MJB9 Matsu-Tunnel 144.72 312 PKPab 09 16 40.4 -0.1
KSH Kashi 144.89 42 PKP PKPdf 09 16 42.2 +0.2
KSH pPKP pPKPdf 09 16 53.7 -2.4
KSH SKS SKSdf 09 23 42.2 -5.8
KSH SKKS SKKSac 09 26 47.4 -1.6
KSH AMB AMB
comp=Z,290nm,7.1s
MDJ Mudanjiang 145.08 330 PKPbc 09 16 41.1 -0.4
ZAK Zakamensk 145.57 3 ePKIKP PKPab 09 16 43.2 -0.1
ZAK pmax pmax
comp=Z,16nm,0.9s
NIL Nilore 145.73 53 PKPab 09 16 44.3 -0.1
NIL Nilore 145.73 53 PKIKP PKPab 09 16 44.3 -0.1
ULN Ulaanbaatar 148.14 358 PKPdf 09 16 48.4 +1.1
ULN Ulaanbaatar 148.14 358c i PKIKP PKPdf 09 16 48.0 +0.7
ULN pmax pmax
comp=Z,13nm,1.0s
SONM Songino Array 148.18 359 PKPbc PKPdf 09 16 48.5 +1.2
comp=Z,16nm,0.8s,baz=325,slow=1.6,SNR=66
SONM pPKPbc pPKPbc 09 17 03.3 -1.2
comp=Z,5.6nm,0.7s,baz=305,slow=1.0,SNR=7.2
SONM PP PP 09 20 17.7 -0.3
comp=Z,0.8nm,0.8s,baz=337,slow=5.3,SNR=3.2
SONM Songino Array 148.18 359 PKPdf 09 16 48.0 +0.7
WMQ Urumqi 148.19 25 ePKPbc PKPdf 09 16 48.8 +1.4
WMQ AMB AMB
comp=Z,320nm,7.7s
WMQ Urumqi 148.19 25 PKiKP 09 16 51.7 -0.7
WMQ Urumqi 148.19 25 PKP2 PKiKP 09 16 51.7 -0.7
POO Poona 149.33 80 ex x 09 16 48.0
KSRS Korea Array 151.02 322 PKP PKPdf 09 16 52.3 +0.3
comp=Z,2.6nm,0.8s,baz=37,slow=1.5,SNR=11
KSRS PKPbc PKiKP 09 16 58.2 -0.1
comp=Z,10nm,0.8s,baz=347,slow=1.8,SNR=27
KS19 Wonju Array Si 151.02 322 PKiKP 09 16 58.8 +0.5
KSAR Wonju Array Be 151.05 322 PKPdf 09 16 52.5 +0.5
KSAR Wonju Array Be 151.05 322 PKIKP PKPdf 09 16 52.5 +0.5
JNU Nakatsue 151.64 312 PKPbc PKPbc 09 16 59.0 -0.4
comp=Z,18nm,0.8s,baz=50,slow=5.4,SNR=13
JNU pPKPbc sPKPdf 09 17 12.5 +0.3
comp=Z,8.3nm,0.8s,baz=90,slow=5.1,SNR=3.5
JNU Nakatsue 151.64 312 PKPbc 09 16 59.1 -0.3
BJT Baijiatuau 154.37 341 PKiKP 09 17 05.4 +0.2
BJT Baijiatuau 154.37 341 PKIKP PKiKP 09 17 05.4 +0.2
HHC Hu-ho-hao-te 154.68 350 ePKPbc PKPdf 09 16 55.5 -1.9
GTA Gaotai 156.01 12 PKP PKPdf 09 17 00.0 +0.7
GTA pPKP pPKPdf 09 17 09.0 -4.3
GTA sPKP 09 17 13.3
GTA PP PP 09 21 08.1 +5.4
GTA SS SS 09 40 52.2 +4.9
GTA AMB AMB
comp=Z,150nm,6.7s
DANN Dangsing 156.13 55 eP PKPab 09 17 27.7 0.0
comp=Z,66nm,0.8s
KOLN Koldanda 156.25 56 eP PKPab 09 17 27.5 -0.6
GKN Gorkha 156.98 55 eP PKPab 09 17 30.6 -0.5
DMN Daman 157.53 55 eP PKPab 09 17 32.2 -1.4
KKN Kakani 157.58 55 eP PKPab 09 17 33.6 -0.2
comp=Z,42nm,0.7s
PKIN Phulchoki 157.77 55 eP PKPab 09 17 34.1 -0.6
comp=Z,11nm,0.8s
PKI Pulchoki 157.78 55 eP PKPab 09 17 34.2 -0.6
comp=Z,12nm,0.8s
GUN Gumba 157.99 54 eP PKPab 09 17 35.8 0.0
comp=Z,45nm,0.8s
JIRN Jiri 158.35 54 eP PKPab 09 17 37.0 -0.4
comp=Z,23nm,0.8s
RAMN Ramite 159.01 55 eP PKPab 09 17 39.4 -0.7
LZH Lanzhou 159.84 5 ePKP PKPdf 09 17 04.7 +0.6
LZH pPKP pPKPdf 09 17 14.3 -3.9
NJ2 Nanjing 160.07 326 ePKP PKPdf 09 17 02.5 -1.7
XAN Xi'an 161.76 352 PKP PKPdf 09 17 06.2 +0.1
XAN Xi'an 161.76 352 PKPdf 09 17 07.1 +1.0
XAN Xi'an 161.76 352 PKIKP PKPdf 09 17 07.1 +1.0
SHL Shillong 163.79 51 PKPab 09 18 00.9 0.0
SHL Shillong 163.79 51 PKP2 PKPab 09 18 00.9 0.0
CD2 Chengdu 164.96 7 PKP PKPdf 09 17 07.7 -1.5
ENH Enshi 165.34 348 PKPdf 09 17 10.3 +0.7
ENH PKPab 09 18 06.1 -1.1
CMAR Chiang Mai Arr 172.92 68 PKP PKPdf 09 17 14.3 -0.2
comp=Z,0.8nm,0.3s,baz=244,slow=2.4,SNR=7.8
CMAR PKPab PKPab 09 18 40.9 -0.4
comp=Z,1.3nm,0.3s,baz=288,slow=5.4,SNR=9.3

*IDC **02** 09:00:41.2±1.4, 4.21N×127.51E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.6/46, mbtmp3.9/6, MS2.5/1, Ms1 2.5/1, ms1mx2.2/56, Error ellipse: s-maj=104.8km s-min=18.6km az=70.0*

*NEIC **02** 09:00:48.2±1.2, 4.0N±0.1×127.4E±0.2, h41km±9km, mb4.4/18, Error ellipse: s-maj=26.6km s-min=15.0km az=69.0*

ISC 02 09:00:47.1±0.7,**4.1N**±0.1×**127.3E**±0.2,**h35**km,**n33**, σ1s40/29,**mb4.1**/11,**2C,Talaud Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

MATI Mati 3.02 341 eP Pn 09 01 40.3 +7.9
MATI eS Sn 09 02 15.5 +8.1
KCP Kidapawan 3.63 323‖eP Pn 09 01 46.2 +5.3
KCP i S Sn 09 02 41.7 +19
SKMP Bagumbayan, Su 3.63 312 eP Pn 09 01 41.3 +0.4
SKMP eS Sn 09 02 19.2 -3.4
KAPI Kappang 11.75 220 LR LR 09 08 14.7
comp=Z,23nm,20.8s,baz=15,slow=38
SOEI Soe 14.07 192 P P 09 04 12.5 +1.1
SIPP Brgy, Tapao 15.29 335‖eP Pn 09 04 12.3 -8.1
MTN Manton Dam 17.25 167 Pn 09 04 43.2 -2.2
MTN IAmb IAmb 09 04 46.9
comp=Z,60nm,1.2s
KNRA Kununurra 19.69 176 P P 09 05 13.2 -0.2
YULB Yu-li 20.05 344 P Pn 09 05 18.9 -0.4
YULB IAmb IAmb 09 05 20.7
comp=Z,15nm,1.3s
TPUB Ta-pu 20.15 342 P Pn 09 05 21.2 +0.7
TPUB IAmb IAmb 09 05 38.4
comp=Z,18nm,1.3s
FITZ Fitzroy Crossi 22.10 184 P P 09 05 39.6 +0.1
comp=Z,3.9nm,0.9s,baz=12,slow=12,SNR=4.9
FITZ Fitzroy Crossi 22.10 184 P P 09 05 39.7 +0.2
FITZ IAmb IAmb 09 05 44.5
comp=Z,17nm,1.2s
WB0 Warramunga Arr 24.71 164 P P 09 06 05.2 -0.1
WB0 IAmb IAmb 09 06 06.5
comp=Z,27nm,1.4s
WRAB Tennant Creek 24.86 164 P P 09 06 06.3 -0.3
WRA Warramunga Arr 24.87 164 P P 09 06 06.8 +0.2
comp=Z,2.6nm,0.7s,baz=343,slow=10.0,SNR=14
WRA Warramunga Arr 24.87 164 P P 09 06 06.6 0.0
WB2 Warramunga Arr 24.87 164 P P 09 06 06.6 0.0
WB2 IAmb IAmb 09 06 18.9
comp=Z,17nm,1.2s
WR0 Warramunga Arr 24.94 164 P P 09 06 07.2 0.0
WR0 IAmb IAmb 09 06 12.2
comp=Z,6.1nm,0.8s
AS31 Alice Springs 28.33 167 P P 09 06 39.5 +1.7
ASAR Alice Springs 28.33 167 P P 09 06 38.5 +0.7
comp=Z,0.3nm,0.4s,baz=345,slow=7.1,SNR=8.7
KMI Kunming 31.52 314 P 09 07 05.4 -0.9
KMI IAmb IAmb 09 07 10.1
comp=Z,4.7nm,0.5s
SIMRM Sittwe 37.09 298 P 09 07 53.6 -0.7
BBOO Buckleboo 37.63 168 P P 09 07 58.1 -0.6
STKA Stephens Creek 38.27 160 P P 09 08 02.3 -1.9
comp=Z,1.1nm,0.4s,baz=336,slow=9.2,SNR=6.1
STKA Stephens Creek 38.27 160 P P 09 08 02.5 -1.7
MK31 Makanchi Array 57.58 325 P P 09 10 34.5 +1.1
MKAR Makanchi Array 57.58 325 P P 09 10 33.8 +0.3
comp=Z,0.5nm,0.4s,baz=117,slow=8.1,SNR=22
MKAR Makanchi Array 57.58 325 P P 09 10 35.3 +1.9
ZALV Zalesovo Beam 60.52 333 P P 09 10 52.0 -1.7
comp=Z,0.3nm,0.4s,baz=144,slow=8.2,SNR=2.2
KURK Kurchatov 61.73 327 P P 09 11 03.0 +1.1
KURK IAmb IAmb 09 11 15.7
comp=Z,1.6nm,0.8s
KKAR Karatay Array 63.34 317 P P 09 11 14.8 +1.9
ABKAR Akbulak array 72.22 321 P P 09 12 11.6 +2.9
HPAH Hawaii Prepara 76.44 70 P P 09 12 33.2 -0.7

*IDC **02** 09:04:50.5±1.3, 59.91N×152.92W, h110km±17km, mb3.7/6, mb1 3.7/11, mb1mx3.4/54, mbtmp4.0/11, Error ellipse: s-maj=19.9km s-min=13.0km az=121.0*

*NEIC **02** 09:04:50.4±1.3, 59.96N±0.02×153.00W±0.08, h116km±3km, Error ellipse: s-maj=5.7km s-min=2.6km az=100.0*

*AEIC **02** 09:04:51.8±1.7, 59.95N±0.03×152.98W±0.08, h113km±3km, ML3.5/152, mb4.1/9(NEIC), Error ellipse: s-maj=5.7km s-min=4.8km az=114.0*

ISC 02 09:04:51.2±0.6,**59.95N**±0.03×**152.95W**±0.04, **h120**km±4km,**n172**,σ1s20/196,**mb4.0**/9,**Southern Alaska**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

ILS Iliamna Low So 0.06 278 Pn 09 05 06.5 -1.2
ILS Sn 09 05 18.7 -1.4
IVE Iliamna Volcan 0.08 333 Pn 09 05 06.5 -1.2
IVE Sn 09 05 18.7 -1.5
ILW Iliamna West 0.15 320 Pn 09 05 06.8 -1.0
ILW Sn 09 05 19.2 -1.3
RED Redoubt Volcan 0.48 10 Pn 09 05 08.1 -1.0
RED Sn 09 05 20.9 -1.8
RSO Redoubt South 0.52 11 Pn 09 05 08.5 -1.0
RDWB Redoubt West 0.54 6 Pn 09 05 08.4 -1.1
RDWB Sn 09 05 21.5 -2.0
AU22 Augustine Moun 0.62 200 Pn 09 05 09.2 -0.7
AU22 Sn 09 05 23.4 -0.6
AUL Augustine Lava 0.62 204 Pn 09 05 09.2 -0.7
AUL Sn 09 05 23.0 -1.0
AU2 Augustine Isla 0.62 201 Pn 09 05 09.1 -0.8
AUP Augustine Pinn 0.64 202 Pn 09 05 09.4 -0.7
AUH Augustine H 0.64 203 Pn 09 05 09.4 -0.7
AUW Augustine West 0.64 205 Pn 09 05 09.4 -0.6
AUQ Augustine Qik' 0.64 202 Pn 09 05 09.4 -0.7
AUQ Sn 09 05 23.7 -0.7
RDJH Redoubt Jeurge 0.65 6 Pn 09 05 09.4 -0.9
DFR Drift River 0.66 11 Pn 09 05 09.5 -0.8
DFR Sn 09 05 23.8 -0.9
HOM Homer 0.72 113 Pn 09 05 10.2 -0.4
HOM Sn 09 05 24.8 -0.6
CNPM China Poot 0.96 115 Pn 09 05 12.2 -0.7
BRLK Bradley Lake 1.06 99 Pn 09 05 13.1 -0.6
BRLK Sn 09 05 29.7 -1.1
BRSE Bradley Lake S 1.13 100 Pn 09 05 14.0 -0.5
BRSE Sn 09 05 31.4 -0.8
CAPN Captain Cook N 1.21 47 Pn 09 05 16.4 +1.2
CKL Chakachamna La 1.29 13 Pn 09 05 15.7 -0.5
SPCR Spurr Chakacha 1.31 16 Pn 09 05 15.8 -0.6
CKT Bend 1.31 16 Pn 09 05 15.8 -0.7
BGL Barrier Glacie 1.35 12 Pn 09 05 16.6 -0.3
SPCG Spurr Capps Gl 1.42 18 Pn 09 05 37.9 -0.1
CGLM Capps Glacier 1.44 18 Pn 09 05 17.4 -0.5
SLKM Skilak Lake 1.47 66 Pn 09 05 17.2 -1.0
SLKM Sn 09 05 37.2 -1.6
KAHG Katmai Hook Gl 1.68 210 Pn 09 05 20.3 -0.4
KAHC Katmai Hardscr 1.68 220 Pn 09 05 20.0 -0.7
KARR Katmai Rainbow 1.71 213 Pn 09 05 20.8 -0.3
SVW2 Sparrevohn 1.74 313 Pn 09 05 20.2 -1.2
SVW2 Sn 09 05 42.3 -2.2
SEW Seward 1.76 83 Pn 09 05 21.2 -0.4
SEW Seward 1.76 83 Sn 09 05 43.0 -1.9
FIS Fire Island 1.80 47 Pn 09 05 22.6 +0.5
FIS Sn 09 05 46.2 +0.5
SUA Susitna One 1.86 34 Pn 09 05 22.7 -0.3
RC01 Rabbit Creek A 1.96 53 Pn 09 05 23.9 -0.1
RC01 Sn 09 05 48.6 -0.5
KCG Knife Ck. Glac 1.99 215 Pn 09 05 24.1 -0.4
KCG Sn 09 05 48.8 -1.2
KELA Mount Kelaz 2.09 225 Pn 09 05 25.1 -0.6
SKT Skwentna 2.15 18 Pn 09 05 25.8 -0.6
KDAK Kodiak Island 2.18 175 P Pn 09 05 25.4 -1.5
14nm,0.3s,baz=26,slow=8.4,SNR=156
KDAK S Sn 09 05 52.1 -2.0
94nm,0.3s,baz=288,slow=21,SNR=54
KDAK Kodiak Island 2.18 175 Pn 09 05 25.3 -1.5
KDAK Sn 09 05 51.6 -2.5
ANCK Angle Creek 2.19 218 Pn 09 05 26.6 -0.5
PWL Port Wells 2.46 66 Pn 09 05 28.9 -1.5
PMR Palmer 2.50 47 Pn 09 05 29.1 -1.6
KNK Knik Glacier 2.65 54 Pn 09 05 31.4 -1.4
GHO Glory Hole Cre 2.69 45 Pn 09 05 31.9 -1.4
OHAK Old Harbor 2.74 184 Pn 09 05 32.2 -1.8
PLK2 Peulik 2 2.81 220 Pn 09 05 35.1 +0.2
PLK3 Peulik 3 2.85 219 Pn 09 05 35.6 +0.1
PLK1 Peulik 1 2.87 223 Pn 09 05 35.8 +0.1
SML Sawmill 2.93 48 Pn Pn 09 05 35.0 -1.5
PPLA Purkeypile 2.98 7 Pn 09 05 36.7 -0.5
GLI Glacier Island 3.05 70 Pn 09 05 37.3 -0.7
HIN Hinchinbrook I 3.25 79 Pn 09 05 39.4 -1.3
FID Port Fidalgo 3.31 73 Pn 09 05 38.7 -2.8
TT01 Tatalina 3.31 335 Pn 09 05 40.4 -1.1
JPK Jack Peak 3.33 68 Pn 09 05 41.4 -0.4
SCM Sheep Creek Mo 3.33 53 Pn 09 05 40.5 -1.4
TTA Tatalina 3.33 335 Pn 09 05 40.0 -1.8
MID Middleton Isla 3.39 96 Pn Pn 09 05 41.8 -0.7
HUR Hurricane 3.43 26 Pn 09 05 42.9 -0.1
SII Sitkinak Islan 3.46 191 Pn 09 05 40.9 -2.6
SII Sn 09 06 19.7 -4.3
WAT1 Susitna Watana 3.58 34 Pn 09 05 44.0 -1.0
EYAK Cordova Ski Ar 3.64 77 Pn 09 05 44.6 -1.2
WAT6 Susitna Watana 3.65 41 Pn 09 05 44.8 -1.3
WAT2 Susitna Watana 3.68 33 Pn 09 05 45.5 -0.9
TRF Thorofare Moun 3.73 19 Pn 09 05 45.6 -1.6
KTH Kantishna Hill 3.74 14 Pn 09 05 46.4 -0.8
CHUM Lake Minchumin 3.96 4 Pn 09 05 49.4 -0.6
RND Reindeer 3.98 28 Pn 09 05 48.7 -1.7
DHY Denali Highway 4.12 38 Pn 09 05 51.0 -1.3
GOAT Goat Mountain 4.14 78 Pn 09 05 51.5 -1.1
RAGM Ragged Mountai 4.16 80 Pn 09 05 52.0 -0.7
PS11 TAPS Pump St11 4.22 56 Pn 09 05 52.6 -0.9
MCK McKinley 4.25 25 Pn 09 05 53.1 -0.7
BPAW Bear Paw Mtn. 4.27 12 Pn 09 05 52.7 -1.4
HMT Hamilton 4.36 81 Pn 09 05 55.0 -0.4
CHIR Chirikof Islan 4.38 200 Pn 09 05 54.1 -1.6
NICHA Nichawak Mount 4.51 82 Pn 09 05 57.4 0.0
BWN Browne 4.54 20 Pn 09 05 57.0 -0.8
SUCK Suckling Hills 4.60 84 Pn 09 05 58.4 -0.3
BERG Berg Lake 4.64 81 Pn 09 05 58.1 -1.0
PAX Paxson 4.69 47 Pn 09 05 59.0 -0.9
GLB Gilahina Butte 4.73 68 Pn 09 05 59.2 -1.3
GRIN Grindle Hills 4.83 82 Pn 09 06 00.4 -1.3
VRDI Verde Repeater 4.85 71 Pn 09 06 00.9 -1.3
KHIT Khitrov Hills 4.87 80 Pn 09 06 01.1 -1.1
CRQM Cirque 4.94 76 Pn 09 06 02.7 -0.6
NEA Nenana 4.98 20 Pn 09 06 02.1 -1.7
WAX Waxell Ridge 5.06 80 Pn 09 06 04.3 -0.6
WRH Wood River Hil 5.08 25 Pn 09 06 03.6 -1.3
MCARA McCarthy VSAT 5.09 69 Pn 09 06 04.7 -0.5
TGL Tana Glacier 5.09 76 Pn 09 06 04.8 -0.5
KULT Kultieth River 5.13 82 Pn 09 06 05.5 -0.2
MLY Manley 5.20 10 Pn 09 06 05.2 -1.5
HDA Harding Lake 5.28 30 Pn 09 06 06.5 -1.2
CCB Clear Creek Bu 5.29 25 Pn 09 06 06.1 -1.7
PTPK Patty Peak 5.32 72 Pn 09 06 08.2 -0.3
KIAG Kiagna River 5.33 75 Pn 09 06 08.5 -0.1
MENT Mentasta 5.35 52 Pn 09 06 07.6 -1.1
BALM Baldy 5.35 74 Pn 09 06 08.5 -0.3
RIDG Independent Ri 5.40 42 Pn 09 06 08.7 -0.7
PS08 TAPS Pump Stn8 5.42 29 Pn 09 06 08.4 -1.2
TCOL CIGO, UAF Yank 5.48 23 Pn 09 06 09.6 -0.7
COLA College 5.48 23 Pn 09 06 09.1 -1.3
MDM Murphy Dome 5.48 21 Pn 09 06 09.6 -0.9
MESA MESA 5.51 83 Pn 09 06 10.9 -0.1
IL31 5.60 28 Pn 09 06 10.6 -1.4
ILAR Eielson Array 5.60 28 P Pn 09 06 10.7 -1.4
2.3nm,0.3s,baz=218,slow=14,SNR=137
ILAR S Sn 09 07 09.0 -6.1
2.6nm,0.3s,baz=212,slow=22,SNR=11
ILAR Eielson Array 5.60 28 Pn 09 06 10.2 -1.9
DOT Dot Lake 5.61 45 Pn 09 06 11.3 -0.9
GRNC Granite Creek 5.62 77 Pn 09 06 12.5 0.0
BARN Barnard Glacie 5.69 74 Pn 09 06 13.7 +0.3
POKR Poker Flat Res 5.78 24 Pn 09 06 13.8 -0.7
RKAV Rock Avalanche 5.81 82 Pn 09 06 15.6 +0.5
CTGM Chitina Glacie 5.84 75 Pn 09 06 15.7 +0.3
SCRK Sand Creek 5.84 42 Pn 09 06 13.6 -1.9
IM03 6.07 357 Pn 09 06 17.7 -0.6
IMAR Indian Mountai 6.07 357 Pn 09 06 17.6 -0.8
BC03 6.19 55 Pn 09 06 19.1 -0.8
BCAR Beaver Creek A 6.19 55 Pn 09 06 18.8 -1.2

YUK2	White River	6.19	67		Pn	09 06 19.6	-0.5
PCA	Pinnacle	6.36	83		Pn	09 06 22.7	+0.2
YUK3	Moose Creek	6.37	68		Pn	09 06 22.6	0.0
YUK1	Sand Pete Hill	6.42	65		Pn	09 06 22.8	-0.4
PRP	Porcupine Dome	6.54	28		Pn	09 06 23.7	-1.2
PNL	Peninsula	6.84	86		Pn	09 06 28.5	-0.3
YUK4	Talbot Arm	7.17	73		Pn	09 06 33.8	+0.4
YUK6	Outpost Mounta	7.28	76		Pn	09 06 34.0	-1.0
EGAK	Eagle	7.31	43		Pn	09 06 33.4	-1.6
YUK7	Dusty Glacier	7.39	79		Pn	09 06 36.0	-0.4
COLD	Coldfoot	7.41	8		Pn	09 06 35.6	-0.8
ANM	Nome	7.41	314		Pn	09 06 37.0	+0.5
FYU	Fort Yukon	7.49	24		Pn	09 06 36.8	-0.7
YUK5	Granite Creek	7.53	74		Pn	09 06 38.1	-0.1
DHAK	Deception Hill	7.54	90		Pn	09 06 37.9	-0.4
DHAK					Sn	09 08 00.8	-1.4
DAWY	Dawson	7.59	51		Pn	09 06 38.1	-0.8
HYT	Haines Junctio	7.70	77		Pn	09 06 40.4	-0.1
BM03	Burnt Mountain	8.35	23		Pn	09 06 48.0	-1.3
BMAR	Burnt Mountain	8.37	23		Pn	09 06 47.5	-1.8
TOLK	Toolik Lake Re	8.85	8		Pn	09 06 56.0	+0.1
SKAG	Skagway	8.92	86		Pn	09 06 57.8	+1.0
WHY	Whitehorse	8.99	78		Pn	09 06 57.5	-0.5
SIT	Sitka	9.66	100	Pn	Pn	09 07 06.7	-0.1
JIS	Juneau Island	9.69	92		Pn	09 07 09.4	+2.3
WRAK	Wrangell Islan	11.42	99	Pn	Pn	09 07 30.3	-0.1
CRAG	Craig	11.49	104	Pn	Pn	09 07 31.4	0.0
DLBC	Dease Lake	11.83	87	P	Pn	09 07 36.3	+0.3
	0.8nm,0.3s,baz=177,slow=1.3,SNR=5.2						
DLBC				S	Sn	09 09 46.0	-0.1
	0.4nm,0.3s,baz=138,slow=11,SNR=2.8						
DLBC	Dease Lake	11.83	87	P	Sn	09 09 46.0	-0.1
DLBC	Dease Lake	11.83	87	P	Pn	09 07 35.6	-0.3
INK	Inuvik	11.86	37	P	Pn	09 07 36.1	0.0
	0.1nm,0.3s,baz=243,slow=17,SNR=8.7						
INK	Inuvik	11.86	37	Pn	Pn	09 07 35.8	-0.3
YKA	Yellowknife Ar	18.45	66	P	P	09 08 57.8	+0.7
	0.4nm,0.3s,baz=277,slow=9.9,SNR=23						
YKA				ScP	ScP	09 16 46.0	+0.3
	0.0nm,0.3s,baz=280,slow=2.7,SNR=4.5						
LLLB	Lillooet	19.83	104	P	Pn	09 09 16.1	+1.1
PGC	Sidney	20.40	110	P	P	09 09 15.2	-3.1
PGC				IAmb	IAmb	09 09 32.5	
	comp=Z,8.3nm,0.9s						
RES	Resolute Bay	25.33	32	P	P	09 10 07.3	+1.1
	comp=Z,0.6nm,0.5s,baz=202,slow=7.8,SNR=2.8						
RES	Resolute Bay	25.33	32	P	P	09 10 08.6	+2.5
MA2	Magadan	27.62	294	P	P	09 10 28.1	+1.3
	comp=Z,1.0nm,0.4s,baz=95,slow=9.9,SNR=3.7						
JCT	Junction City	45.84	106	P	P	09 13 02.8	+1.8
JCT				IAmb	IAmb	09 13 08.2	
	comp=Z,2.5nm,0.7s						
KSRS	Korea Array	53.22	283	P	P	09 13 57.9	+1.1
	comp=Z,0.8nm,0.5s,baz=37,slow=7.3,SNR=6.0						
SONM	Songino Array	54.84	306	P	P	09 14 09.8	+1.3
	comp=Z,1.8nm,0.7s,baz=44,slow=7.0,SNR=14						
SONM	Songino Array	54.84	306	P	P	09 14 09.0	+0.5
ZAA0	Zalesovo Array	57.43	324	P	P	09 14 26.5	-0.2
ZALV	Zalesovo Beam	57.43	324	P	P	09 14 27.1	+0.4
	comp=Z,3.1nm,0.5s,baz=35,slow=6.9,SNR=13						
ZALV	Zalesovo Beam	57.43	324	P	P	09 14 26.1	-0.6
KURK	Kurchatov	62.09	326	P	P	09 14 58.3	-0.2
BRVK	Borovoye	62.12	332	P	P	09 14 58.2	-0.6
BRVK				IAmb	IAmb	09 14 58.9	
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	64.49	321	P	P	09 15 14.3	-0.3
	comp=Z,0.5nm,0.6s,baz=45,slow=5.7,SNR=5.9						
MKAR	Makanchi Array	64.49	321	P	P	09 15 14.5	0.0
ABKAR	Akbulak array	67.92	337	P	P	09 15 35.3	-1.0
ABKAR	Akbulak array	67.92	337	P	P	09 15 35.6	-0.7
ABKAR				IAmb	IAmb	09 15 36.7	
	comp=Z,1.2nm,0.6s						
KKAR	Karatay Array	71.29	328	P	P	09 15 56.3	-0.9

ROM 02 09:08:55.3±0.0,43.164N±0.002×12.804E±0.003, h9km,ML1.5/7,2C,Error ellipse: s-maj=0.2km s-min=0.2km az=83.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATCC	AVT- Casa Cast	0.12	280	⇑P	Pg	09 08 58.6	+0.4
ATCC				S	Sg	09 09 00.9	+0.7
ATCC				AML	AML		
	comp=N,356µm,0.3s						
ATCC				AML	AML		
	comp=E,334µm,0.1s						
FOSV	Fossato di Vic	0.13	346	P	Pg	09 08 58.8	+0.4
FOSV				S	Sg	09 09 01.4	+0.8
FOSV				AML	AML		
	comp=E,646µm,0.2s						
FOSV				AML	AML		
	comp=N,504µm,0.9s						
SNTG	Esanatoglia	0.14	48	⇑P	Pg	09 08 58.9	+0.5
SNTG				S	Sg	09 09 01.6	+1.0
SNTG				AML	AML		
	comp=E,179µm,0.2s						
SNTG				AML	AML		
	comp=N,156µm,0.1s						
ASSB	Assisi San Ben	0.16	221	P	Pg	09 08 59.3	+0.5
ASSB				S	Sg	09 09 02.3	+1.0
ASSB				AML	AML		
	comp=N,302µm,0.2s						
ASSB				AML	AML		
	comp=E,334µm,0.4s						
CESI	CESI - Serrava	0.17	155	P	Pg	09 08 59.6	+0.6
CESI				S	Sg	09 09 03.2	+1.6
MURB	Monte Urbino	0.23	296	P	Pg	09 09 00.6	+0.6
MURB				S	Sg	09 09 04.9	+1.7
MURB				AML	AML		
	comp=E,360µm,0.6s						
MURB				AML	AML		
	comp=N,334µm,0.2s						
MURB				AML	AML		
	comp=E,360µm,0.6s						
FDMO	Fiordimonte	0.24	122	P	Pg	09 09 00.9	+0.7
FDMO				S	Sg	09 09 05.2	+1.6
FDMO				AML	AML		
	comp=N,102µm,0.4s						
FDMO				AML	AML		
	comp=E,88µm,1.5s						
FDMO				AML	AML		
	comp=N,102µm,0.4s						
ATFO	Monte Foce - G	0.26	320	P	Pb	09 09 01.6	-0.7
ATFO				S	Sb	09 09 06.0	-0.9
SSFR	Montelago di S	0.27	357	P	Pg	09 09 01.2	+0.4
SSFR				S	Sb	09 09 06.0	-1.2
EL6	Elcito	0.27	53	P	Pg	09 09 01.5	+0.7
EL6				S	Sb	09 09 06.5	-0.7
ATTE	AVT- Monte Tez	0.33	276	P	Pg	09 09 02.3	+0.4
ATTE				S	Sb	09 09 08.1	-0.8
ARVD	Arcevia	0.35	17	P	Pg	09 09 02.7	+0.5
ARVD				S	Sb	09 09 08.6	-0.7
ATVO	AVT- Monte Val	0.36	307	P	Pg	09 09 02.9	+0.4
ATVO				S	Sb	09 09 09.0	-0.8
MOMA	Monte Martano	0.40	206	P	Pg	09 09 03.7	+0.5
MOMA				S	Sb	09 09 10.2	-0.6
MOMA				AML	AML		
	comp=E,57µm,0.2s						
MOMA				AML	AML		
	comp=N,35µm,0.3s						
ATPI	Pietralunga -	0.41	314	P	Pb	09 09 04.5	-0.3
ATPI				S	Sb	09 09 10.6	-0.5
PIEI	Pieia	0.42	332	P	Pg	09 09 04.0	+0.4
PIEI				S	Sb	09 09 10.8	-0.6

*NEIC **02** 09:23:01.3±2.2,69.23N±0.04×144.5W±0.1,h6km±5km, Error ellipse: s-maj=6.9km s-min=4.6km az=217.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; Mrr-0.32; Mθθ-5.47; Mφφ5.79; Mrθ-0.81; Mθφ-3.09; Mφr-0.06; Fault plane solution: M0 6.48000×10^{14} NP1: φs30.38000°,δ83.85000°,λ-4.47000°. NP2:φs120.86000°, δ85.56000°,λ-173.83000°. Principal axes: T 6.5839, Plg1.0000°, Azm256.0000°; N -0.2198, Plg82.0000°, Azm156.0000°; P -6.3641, Plg8.0000°, Azm346.0000°;*

*AEIC **02** 09:23:02.4±2.1,69.16N±0.02×144.4W±0.1,h14km±5km, ML4.0/76,mb3.8/4(NEIC),Mwr3.8/32(NEIC) Error ellipse: s-maj=6.0km s-min=3.3km az=98.0*

*IDC **02** 09:23:03.3±0.7,69.22N×144.66W,h0km,mb3.8/12, mb1 4.0/15,mb1mx3.8/42,mbtmp3.9/15,ML3.8/3,MS2.8/1, Ms1 3.0/1,ms1mx2.6/62,Error ellipse: s-maj=17.4km s-min=11.1km az=33.0*

ISC 02 09:23:02.5±0.5,69.18N±0.04×144.37W±0.04,h10km, n114,σ2.00/129,mb3.9/13,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMAR	Burnt Mountain	1.76	183		Pn	09 23 32.0	-1.1
BMAR				Sn	Sn	09 23 55.8	+0.2
BM03	Burnt Mountain	1.77	183		Pn	09 23 32.7	-0.5
BM03					Sb	09 23 57.0	-0.4
PS01	TAPS Pump Stn	1.83	308		Pn	09 23 33.1	-0.9
PS01					Sn	09 23 56.3	-0.8
TOLK	Toolik Lake Re	1.96	256		Pn	09 23 35.5	-0.3
TOLK					Sb	09 24 01.2	-1.6
FYU	Fort Yukon	2.65	188		Pn	09 23 44.2	-0.9
COLD	Coldfoot	2.93	231		Pn	09 23 48.2	-0.9
PS05	TAPS Pump Stn5	3.36	228		Pn	09 23 54.0	-1.0
PRP	Porcupine Dome	3.71	187		Pn	09 23 59.1	-0.8
PRP					Sn	09 24 42.3	-1.4
PS06	TAPS Pump Stn6	3.93	214		Pn	09 24 02.1	-0.7
INK	Inuvik	4.04	97	Pn	Pn	09 24 06.2	+1.9
	2.9nm,0.3s,baz=284,slow=13,SNR=118						
INK				Pg	Pg	09 24 17.7	-2.1
	4.4nm,0.3s,baz=282,slow=12,SNR=13						
INK				Sn	Sn	09 24 55.6	+4.0
	18nm,0.3s,baz=29,slow=31,SNR=13						
INK				Lg	Lg	09 25 13.3	
	15nm,0.3s,baz=306,slow=20,SNR=11						
INK	Inuvik	4.04	97		Pn	09 24 06.5	+2.2
EPYK	Eagle Plains	4.05	131		Pn	09 24 05.2	+0.7
EPYK					Sn	09 24 52.4	+0.5
PS07	TAPS Pump Stn7	4.17	203		Pn	09 24 05.8	-0.3
POKR	Poker Plat Res	4.25	198		Pn	09 24 06.4	-0.8
POKR					Sn	09 24 56.6	-0.3
MDM	Murphy Dome	4.50	201		Pn	09 24 09.7	-1.0
MDM					Sn	09 25 02.0	-1.0
COLA	College	4.54	199		Pn	09 24 10.2	-1.0
TCOL	CIGO, UAF Yank	4.54	199		Pn	09 24 10.2	-0.9
IL31		4.54	194		Pn	09 24 10.6	-0.6
ILAR	Eielson Array	4.54	194	Pn	Pn	09 24 11.2	+0.1
	3.3nm,0.3s,baz=4.6,slow=13,SNR=39						
ILAR				Sn	Sn	09 25 03.2	-0.6
	6.7nm,0.3s,baz=12,slow=18,SNR=7.2						
ILAR				Lg	Lg	09 25 20.1	
	18nm,0.3s,baz=7.4,slow=31,SNR=11						
ILAR				LR	LR	09 26 03.8	
	comp=Z,113nm,18.5s,baz=92,slow=40						
ILAR	Eielson Array	4.54	194		Pn	09 24 10.9	-0.3
ILAR					Sn	09 25 03.3	-0.6
EGAK	Eagle	4.60	163		Pn	09 24 11.9	-0.1
CCB	Clear Creek Bu	4.75	198		Pn	09 24 13.2	-0.9
PS08	TAPS Pump Stn8	4.76	193		Pn	09 24 13.4	-0.8
IM03		4.82	233		Pn	09 24 12.9	-2.0
IMAR	Indian Mountai	4.82	233		Pn	09 24 13.3	-1.7
MLY	Manley	4.85	214		Pn	09 24 14.5	-1.1
HDA	Harding Lake	4.90	193		Pn	09 24 15.4	-0.8
WRH	Wood River Hil	4.95	199		Pn	09 24 16.1	-0.7
NEA	Nenana	4.98	204		Pn	09 24 15.5	-1.8
SCRK	Sand Creek	5.23	178		Pn	09 24 20.8	0.0
BWN	Browne	5.42	204		Pn	09 24 22.2	-1.1
RIDG	Independent Ri	5.47	182		Pn	09 24 23.9	-0.1
DAWY	Dawson	5.51	157		Pn	09 24 24.8	+0.3
DOT	Dot Lake	5.56	179		Pn	09 24 25.1	-0.1
BPAW	Bear Paw Mtn.	5.74	210		Pn	09 24 25.7	-2.0
MCK	McKinley	5.77	201		Pn	09 24 27.1	-0.9
MCK				Sn	Sn	09 25 31.6	-2.6
RND	Reindeer	6.08	199		Pn	09 24 31.5	-0.8
TRF	Thorofare Moun	6.23	205		Pn	09 24 33.6	-0.9
BC03		6.23	169		Pn	09 24 34.5	+0.1
BCAR	Beaver Creek A	6.23	169		Pn	09 24 33.6	-0.8
KTH	Kantishna Hill	6.23	208		Pn	09 24 33.5	-1.0
DHY	Denali Highway	6.25	193		Pn	09 24 34.9	+0.1
PAX	Paxson	6.26	185		Pn	09 24 34.8	-0.1
MENT	Mentasta	6.28	177		Pn	09 24 35.0	-0.1
MENT				Sn	Sn	09 25 46.4	-0.3
WAT2	Susitna Watana	6.48	197		Pn	09 24 37.7	-0.1
WAT1	Susitna Watana	6.60	197		Pn	09 24 38.9	-0.6
WAT6	Susitna Watana	6.77	193		Pn	09 24 41.5	-0.5
RDOG	Red Dog Mine	6.87	269		Pn	09 24 40.2	-2.9
BVCY	Beaver Creek	6.95	166		Pn	09 24 44.5	+0.2
PPLA	Purkeypile	7.06	210		Pn	09 24 43.7	-2.2
C36M	Paulatuk	7.20	79		Pn	09 24 46.8	-0.8
YUK1	Sand Pete Hill	7.23	166		Pn	09 24 48.2	-0.1
SCM	Sheep Creek Mo	7.48	191		Pn	09 24 52.7	+1.1
YUK2	White River	7.57	167		Pn	09 24 53.4	+0.6
SML	Sawmill	7.59	194	Pn	Pn	09 24 53.3	+0.3
YUK3	Moose Creek	7.61	166		Pn	09 24 53.6	+0.1
GHO	Glory Hole Cre	7.68	196		Pn	09 24 54.8	+0.5
GLB	Gilahina Butte	7.78	178		Pn	09 24 56.6	+0.9
SKT	Skwentna	7.81	206		Pn	09 24 55.0	-1.1
TTA	Tatalina	7.85	223		Pn	09 24 55.0	-1.6
MCARA	McCarthy VSAT	7.85	175		Pn	09 24 58.0	+1.4
TT01	Tatalina	7.87	222		Pn	09 24 56.1	-0.8
PMR	Palmer	7.87	197	Pn	Pn	09 24 59.0	+2.1
KNK	Knik Glacier	7.99	194		Pn	09 25 00.5	+2.0
VRDI	Verde Repeater	8.00	177	Pn	Pn	09 24 59.9	+1.1
PTPK	Patty Peak	8.07	173		Pn	09 25 00.1	+0.3
SUA	Susitna One	8.19	202		Pn	09 25 02.5	+1.1
YUK4	Talbot Arm	8.22	160		Pn	09 25 01.3	-0.6
BALM	Baldy	8.22	173		Pn	09 25 03.4	+1.5
BARN	Barnard Glacie	8.23	171		Pn	09 25 03.6	+1.6
KIAG	Kiagna River	8.34	173		Pn	09 25 04.2	+0.8
CTGM	Chitina Glacie	8.35	170		Pn	09 25 04.8	+1.2
RC01	Rabbit Creek A	8.43	198		Pn	09 25 06.2	+1.7
CRQM	Cirque	8.48	176		Pn	09 25 07.2	+1.8
TGL	Tana Glacier	8.49	175		Pn	09 25 06.4	+1.0
PWL	Port Wells	8.52	193		Pn	09 25 06.4	+0.6
YUK5	Granite Creek	8.53	158		Pn	09 25 06.5	+0.5
GRNC	Granite Creek	8.56	171		Pn	09 25 07.2	+0.7
YUK6	Outpost Mounta	8.65	160		Pn	09 25 08.5	+0.7
KHIT	Khitrov Hills	8.79	176		Pn	09 25 09.8	+0.2
WAX	Waxell Ridge	8.79	175	Pn	Pn	09 25 13.1	+3.5
HYT	Haines Junctio	8.87	158		Pn	09 25 11.2	+0.4
HMT	Hamilton	8.88	180	Pn	Pn	09 25 14.4	+3.6
MESA	MESA	9.10	172	Pn	Pn	09 25 17.4	+3.5
PCA	Pinnacle	9.29	167	Pn	Pn	09 25 18.6	+2.2
SVW2	Sparrevohn	9.37	215		Pn	09 25 16.2	-1.2
ANM	Nome	9.44	251		Pn	09 25 17.5	-0.8
WHY	Whitehorse	9.44	150		Pn	09 25 17.9	-0.6
SKAG	Skagway	10.50	154		Pn	09 25 34.6	+1.8
YKA	Yellowknife Ar	13.78	105	Pn	Pn	09 26 15.9	-1.6
	0.9nm,0.3s,baz=308,slow=13,SNR=36						
YKA				Sn	Sn	09 28 41.8	-8.5
	0.8nm,0.3s,baz=312,slow=22,SNR=6.2						
RES	Resolute Bay	15.83	48	Pn	Pn	09 26 43.5	-1.5
	0.5nm,0.3s,baz=259,slow=9.3,SNR=12						
RES				Sn	Sn	09 29 29.4	-11
	0.8nm,0.3s,baz=135,slow=6.6,SNR=6.3						
RES	Resolute Bay	15.83	48		Pn	09 26 43.7	-1.3
RES				IAmb	IAmb	09 26 57.2	
	comp=Z,3.0nm,0.5s						
BILL	Bilibino	17.65	290	P	Pn	09 27 06.2	-1.9
LTY	Liberty	24.94	140	P	P	09 28 22.4	-3.3
LTY				IAmb	IAmb	09 28 31.4	
	comp=Z,1.8nm,0.9s						
SEY	Seymchan	25.30	287	P	P	09 28 28.2	-0.4
	comp=Z,3.6nm,0.7s,baz=84,slow=4.8,SNR=12						
TIXI	Tiksi	26.85	316	P	P	09 28 45.2	+2.7
	comp=Z,1.2nm,0.5s,baz=351,slow=2.4,SNR=4.9						
I07A	Izee	28.21	140	P	P	09 28 58.0	+2.8
PDAR	Pinedale Array	32.01	128	P	P	09 29 32.7	+3.8
	comp=Z,0.4nm,0.7s,baz=0.0,slow=4.4,SNR=4.6						
PDAR	Pinedale Array	32.01	128	P	P	09 29 32.3	+3.4
NVAR	Mina Array Bea	33.87	142	P	P	09 29 49.0	+3.8
	comp=Z,1.4nm,0.9s,baz=328,slow=7.8,SNR=9.1						
NVAR	Mina Array Bea	33.87	142	P	P	09 29 50.3	+5.2
SCHQ	Schefferville	36.26	73	P	P	09 30 09.3	+4.0
	comp=Z,4.3nm,0.8s,baz=352,slow=6.7,SNR=7.1						
ARCES	ARCESS Array B	41.37	5	P	P	09 30 50.3	+2.3
	comp=Z,4.0nm,0.9s,baz=7.4,slow=8.5,SNR=3.6						
TXAR	Lajitas Array	46.22	128	P	P	09 31 30.8	+3.2
	comp=Z,0.2nm,0.6s,baz=350,slow=4.8,SNR=3.1						
FINES	FINESS Array B	49.48	6	P	P	09 31 52.5	+0.3
	comp=Z,1.4nm,0.5s,baz=9.5,slow=8.7,SNR=13						
FINES	FINESS Array B	49.48	6	P	P	09 31 50.6	-1.7
ZALV	Zalesovo Beam	52.03	325	P	P	09 32 14.5	+2.9
	comp=Z,0.7nm,0.5s,baz=18,slow=10,SNR=3.8						
SONM	Songino Array	52.35	307	P	P	09 32 16.2	+2.0
	comp=Z,0.4nm,0.7s,baz=46,slow=4.2,SNR=3.5						
HHC	Hu-ho-hao-te	57.14	299	eP	P	09 32 47.7	-1.3
MKAR	Makanchi Array	59.34	324	P	P	09 33 05.8	+1.7
	comp=Z,0.3nm,0.6s,baz=35,slow=6.9,SNR=3.6						
MKAR	Makanchi Array	59.34	324	P	P	09 33 02.5	-1.6
AKASG	Malin Array Be	60.34	5	P	P	09 33 13.3	+2.4
	comp=Z,0.7nm,0.5s,baz=357,slow=6.7,SNR=6.6						
WMQ	Urumqi	60.97	319	eP	P	09 33 15.6	+0.2
KSH	Kashi	67.60	327	P	P	09 34 00.9	+1.9

*IDC **02** 09:26:31.7±0.2,33.03S×177.95W,h0km,mb5.9/32, mb1 5.9/36,mb1mx5.9/36,mbtmp5.9/36,ML5.7/3,MS6.0/23, Ms1 6.0/23,ms1mx5.9/30,Error ellipse: s-maj=10.0km s-min=8.4km az=15.0*

*KLM **02** 09:26:35.0,32.91S×177.82W,h10km,mb6.0*

*MOS **02** 09:26:35.7±1.0,32.94S×177.90W,h33km,mb6.3/37, MS6.1/42,Error ellipse: s-maj=10.0km s-min=7.2km az=105.1*

*BJI **02** 09:26:36.7±0.0,32.89S×177.83W,h30km,mB6.4/71, mb5.8/63,Ms6.3/88,Ms7 6.2/78*

*BGR **02** 09:26:37.3±0.0,33.92S×178.51W,h45km±2km*

*WEL **02** 09:26:37.5±0.5,33°S±3°×17°8W±°,h33km,M6.5/13, mB6.5/11,ML6.9/13,MLv6.7/13,Mw(mB)6.3/11*

*NEIC **02** 09:26:37.8±2.6,32.91S±0.06×177.9W±0.1,h44km±3km, mb6.2/350,Ms_20 6.3/677,Mwc6.5/82,Mww6.5, Mwc6.5(GCMT),Error ellipse: s-maj=12.7km s-min=7.5km az=109.0*

*GCMT **02** 09:26:40.8±0.0,32.97S×177.69W,h51km,MW6.4/175, Moment Tensor Solution. s175,c456; s168,c721; Duration: 4.0s Moment tensor: Scale 10^{18}Nm; Mrr4.99±.02; Mθθ-2.08±.02; Mφφ-2.91±.02; Mrθ-1.40±.02; Mθφ-2.87±.01; Mφr-0.66±.02; Best double couple: M0 5.42200×10^{18} NP1:φs33.00000°,δ38.00000°, λ78.00000°. NP2:φs228.00000°,δ53.00000°,λ99.00000°. Principal axes: T 5.2590, Plg80.0000°, Azm175.0000°; N 0.3270, Plg7.0000°, Azm43.0000°; P -5.5860, Plg8.0000°, Azm312.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **02** 09:26:41,33.00S×177.68W,h51km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; Mrr4.90; Mθθ-1.93; Mφφ-2.97; Mrθ-1.49; Mθφ-2.92; Mφr-0.64; Fault plane solution: M0 5.43000×10^{18} NP1:φs31.00000°, δ38.00000°,λ76.00000°. NP2:φs229.00000°,δ53.00000°, λ101.00000°. Principal axes: T 5.2110, Plg78.0000°, Azm179.0000°; N 0.4056, Plg9.0000°, Azm42.0000°; P -5.6166, Plg8.0000°, Azm311.0000°;*

*NEIC **02** 09:26:45,32.90S×177.70W,h50km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; Mrr5.84; Mθθ-2.73; Mφφ-3.10; Mrθ-1.23; Mθφ-3.49; Mφr-0.60; Fault plane solution: M0 6.30000×10^{18} NP1:φs38.00000°, δ39.00000°,λ82.00000°. NP2:φs228.00000°,δ51.00000°, λ96.00000°. Principal axes: T 6.0124, Plg82.0000°, Azm174.0000°; N 0.5331, Plg5.0000°, Azm44.0000°; P -6.5455, Plg6.0000°, Azm314.0000°;*

*NEIC **02** 09:26:59.6,32.50S×177.48W,h55km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; Mrr6.59; Mθθ-3.03; Mφφ-3.56; Mrθ-2.48; Mθφ-3.10; Mφr-0.59; Fault plane solution: M0 6.97000×10^{18} NP1:φs233.60000°, δ55.02000°,λ102.69000°. NP2:φs32.16000°,δ36.94000°, λ72.57000°. Principal axes: T 7.1901, Plg76.0000°, Azm184.0000°; N -0.4464, Plg10.0000°, Azm46.0000°; P -6.7437, Plg9.0000°, Azm315.0000°;*

ISC 02 09:26:36.6±0.3,32.96S±0.03×177.92W±0.03,h33km±1km, h32km:pP-P,n1963,σ1.83/2066,mb6.1/216,MS6.3/402, 80C-30D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.69	0	P	Pn	09 27 31.2	-0.1
GLKZ				S	Sn	09 28 11.3	-2.4
RAO	Raoul Island	3.70	0	Pn	Pn	09 27 30.0	-1.5
	677nm,0.3s,baz=81,slow=10.0,SNR=25						
RAO				Sn	Sn	09 28 13.7	-0.2
	16µm,0.3s,baz=322,slow=23,SNR=14						
RAO	Raoul Island	3.70	0	Pn	Pn	09 27 29.6	-1.9
RAO				Sn	Sn	09 28 12.2	-1.7
RAO	Raoul Island	3.70	0	P	Pn	09 27 29.6	-1.9
RAO						09 28 12.2	
RIZ	Raoul Island	3.70	360	P	Pn	09 27 31.4	-0.1
RIZ				S	Sn	09 28 13.1	-1.0
MXZ	Matakaoa Point	5.53	213		Pn	09 27 57.2	+0.5
MXZ				Sn	Sn	09 29 01.9	+2.8
MXZ	Matakaoa Point	5.53	213	P	Pn	09 28 00.3	+3.7
MXZ				S	Sn	09 29 01.8	+2.6
WMGZ	Waiomatatini S	5.70	211	P	Pn	09 28 01.4	+2.4
WMGZ				S	Sn	09 29 06.6	+3.3
HAZ	Te Kaha	5.94	215	P	Pn	09 28 05.9	+3.7
HAZ				S	Sn	09 29 13.6	+4.5
PUZ	Puketiti	5.98	210	P	Pn	09 28 04.1	+1.3
PUZ				S	Sn	09 29 11.5	+1.3
WIZ	White Island	6.06	220	P	Pn	09 28 08.4	+4.4
WIZ				S	Sn	09 29 13.5	+1.3
KUZ	Kuaotunu	6.45	232	P	Pn	09 28 14.5	+5.2
URZ	Urewera	6.66	216	Pn	Pn	09 28 14.5	+2.4
	45nm,0.3s,baz=276,slow=4.6,SNR=164						
URZ				Sn	Sn	09 29 28.5	+1.6
	2µm,0.3s,baz=259,slow=19,SNR=18						
URZ	Urewera	6.66	216		Pn	09 28 13.0	+0.9
URZ				Sn	Sn	09 29 28.6	+1.8
WCZ	Waipu Caves	7.05	243	P	Pn	09 28 22.2	+4.8
HRRZ	Handcock Road	7.18	219	P	Pn	09 28 24.3	+4.9
KBAZ	Karaka Road Bo	7.20	233	P	Pn	09 28 28.2	+8.6
PRRZ	Plateau Road	7.21	218	P	Pn	09 28 22.1	+2.4
PRRZ				S	Sn	09 29 42.8	+2.4
MTHZ	Maungataniwha	7.25	214	P	Pn	09 28 22.7	+2.4
MTHZ				S	Sn	09 29 43.2	+1.6
ALRZ	Allen Road	7.28	218	P	Pn	09 28 25.1	+4.4
ALRZ				S	Sn	09 29 43.0	+0.8
OUZ	Omahuta	7.39	250	P	Pn	09 28 30.4	+8.2
OUZ				S	Sn	09 29 50.1	+5.2
BKZ	Black Stump Fm	7.67	215		Pn	09 28 27.7	+1.6
BKZ				Sn	Sn	09 29 52.7	+0.9
HIZ	Hauiti	8.07	225		Pn	09 28 35.4	+3.8
MHEZ	Mangahewa	8.76	224	P	Pn	09 28 49.6	+8.7
BFZ	Birch Farm	9.01	210		Pn	09 28 42.9	-1.6
MSWZ	Moikau Station	10.04	211		Pn	09 28 56.5	-2.1
PLWZ	Palliser	10.17	210		Pn	09 28 59.7	-0.6
DUWZ	D'Urville Isla	10.19	218	P	Pn	09 28 59.1	-1.5
DUWZ				S	Sn	09 30 51.4	-2.4
SNZO	South Karori	10.20	213		Pn	09 28 59.0	-1.7
BHW	Baring Head	10.20	212		Pn	09 29 00.1	-0.6
TUWZ	Tuamarina	10.65	215		Pn	09 29 04.3	-2.6
TUWZ	Tuamarina	10.65	215	P	Pn	09 29 03.9	-3.0
TUWZ				S	Sn	09 30 59.0	-5.9
CMWZ	Cape Campbell	10.77	213		Pn	09 29 09.9	+1.3
CMWZ	Cape Campbell	10.77	213	P	Pn	09 29 09.8	+1.3
CMWZ				S	Sn	09 31 04.3	-3.6
NNZ	Nelson	10.77	218		Pn	09 29 07.7	-0.9
NNZ	Nelson	10.77	218	P	Pn	09 29 06.7	-1.8
NNZ				S	Sn	09 31 03.7	-4.3
BSWZ	Blackbirch Sta	10.90	214		Pn	09 29 09.6	-0.8
BSWZ	Blackbirch Sta	10.90	214	P	Pn	09 29 08.1	-2.2
BSWZ				S	Sn	09 31 06.1	-5.0
QRZ	Quartz Range	10.95	222		Pn	09 29 10.0	-1.0
QRZ	Quartz Range	10.95	222	P	Pn	09 29 08.3	-2.7
QRZ				S	Sn	09 31 07.3	-5.1
THZ	Tophouse	11.42	217		Pn	09 29 16.1	-1.3
THZ	Tophouse	11.42	217	P	Pn	09 29 14.1	-3.4
THZ				S	Sn	09 31 18.3	-5.5
KHZ	Kahutara	11.61	213		Pn	09 29 19.5	-0.4
KHZ	Kahutara	11.61	213	P	Pn	09 29 16.9	-3.0
KHZ				S	Sn	09 31 20.5	-7.8
DSZ	Denniston Nort	11.98	220	P	Pn	09 29 22.1	-3.0
DSZ				S	Sn	09 31 30.6	-7.0
LTZ	Lake Taylor	12.49	215		Pn	09 29 29.4	-2.6
LTZ	Lake Taylor	12.49	215	P	Pn	09 29 27.5	-4.5
AMCZ	Amberley	12.61	213	P	Pn	09 29 33.0	-0.6
NFK	Norfolk Island	12.74	284	P	Pn	09 29 37.3	+1.7
	baz=13,SNR=28						
OKCZ	Okains Bay	12.86	211	P	Pn	09 29 33.6	-3.5
INZ	Inchbonnie	12.86	218	P	Pn	09 29 34.0	-3.0
OXZ	Oxford	13.01	214		Pn	09 29 37.3	-1.9
OXZ	Oxford	13.01	214	P	Pn	09 29 35.5	-3.6
OXZ				S	Sn	09 31 51.4	-11
MQZ	McQueen's Vall	13.02	212		Pn	09 29 36.2	-3.1

MQZ McQueen's Vall 13.02 212 P Pn 09 29 35.3 -4.0
MQZ S Sn 09 31 51.4 -11
AKCZ Akaroa Harbour 13.04 211 P Pn 09 29 36.5 -3.1
AKCZ S Sn 09 31 53.8 -10
WVZ Waitaha Valley 13.47 218 P Pn 09 29 45.9 +0.5
RPZ Rata Peaks 13.78 216 Pn Pn 09 29 47.3 -2.3
36nm,0.3s,baz=48,slow=2.3,SNR=89
RPZ Sn Sn 09 32 12.0 -9.3
114nm,0.3s,baz=135,slow=23,SNR=16
RPZ Rata Peaks 13.78 216 Pn 09 29 46.6 -3.0
RPZ Rata Peaks 13.78 216 P Pn 09 29 50.1 +0.5
RPZ S Sn 09 32 10.2 -11
FOZ Fox Glacier 14.28 219 Pn 09 29 55.3 -1.1
LBZ Lake Benmore 14.69 216 Pn 09 30 00.6 -1.5
ODZ Otahua Downs 14.97 213 Pn 09 30 05.5 -0.2
ODZ IAmb IAmb 09 30 19.6
comp=Z,2µm,1.0s
NIUE Niue 15.57 29 P Pn 09 30 09.3 -4.5
baz=16,SNR=19
NIUE Niue 15.57 29 Pn 09 30 08.4 -5.4
MSVF Nonsavu 15.59 346 P Pn 09 30 14.4 +0.2
MSVF IAmb IAmb 09 30 16.8
comp=Z,2µm,1.2s
MSVF Nonsavu 15.59 346 *i* P Pn 09 30 13.6 -0.5
MSVF pmax pmax
comp=Z,2µm,1.3s
MSVF MLR MLR
comp=Z,131µm,16.0s
WKZ Wanaka 15.59 217 Pn 09 30 12.7 -1.2
MLZ Mavora Lakes 16.42 217 P Pn 09 30 23.0 -1.6
WHZ Wether Hill Ro 16.88 216 P Pn 09 30 28.9 -1.4
DCZ Deep Cove 16.99 218 P Pn 09 30 29.7 -1.9
DZM Mont Dzumac 17.58 304 P P 09 30 43.9 +3.7
comp=Z,7.8nm,0.3s,baz=111,slow=14,SNR=121
DZM LR LR 09 36 12.4
comp=Z,191µm,21.3s,baz=148,slow=33
DZM Mont Dzumac 17.58 304 P P 09 30 43.3 +3.2
DZM IAmb IAmb 09 31 16.0
comp=Z,1µm,1.1s
NOUC Port Laguerre 17.66 304 P P 09 30 44.2 +3.3
NOUC IAmb IAmb 09 30 48.7
comp=Z,4µm,1.8s
PYZ Puysegur Point 17.70 217 P Pn 09 30 40.2 -0.3
LHI Lord Howe Isla 19.52 268 P Pn 09 31 02.8 +0.1
baz=20,SNR=16
LHI Lord Howe Isla 19.52 268 P Pn 09 31 03.8 +1.1
AFI Afiamalu 19.77 18 P P 09 31 04.3 +0.1
comp=Z,17nm,0.3s,baz=31,slow=6.7,SNR=22
AFI S S 09 34 28.6 -17
comp=Z,29nm,0.3s,baz=43,slow=23,SNR=6.4
AFI Afiamalu 19.77 18 P P 09 31 02.4 -1.8
AFI IAmb IAmb 09 31 08.6
comp=Z,2µm,1.0s
AFI Afiamalu 19.77 18 P P 09 31 02.4 -1.8
AFI pmax pmax
comp=Z,2µm,1.0s
RAR Rarotonga 19.91 59 P P 09 31 06.0 +0.4
comp=Z,3.6nm,0.3s,baz=222,slow=6.3,SNR=28
RAR S S 09 34 24.2 -24
comp=Z,9.0nm,0.3s,baz=66,slow=19,SNR=8.8
RAR LR LR 09 38 14.0
comp=Z,58µm,19.4s,baz=272,slow=35
RAR Rarotonga 19.91 59 P P 09 31 03.0 -2.6
RAR Rarotonga 19.91 59 P P 09 31 03.0 -2.6
RAR pmax pmax
comp=Z,471nm,1.1s
SANVU Saraoutou 22.05 319 P P 09 31 29.6 +0.9
SANVU IAmb IAmb 09 31 55.6
comp=Z,683nm,0.8s
FUNA Funafuti 24.46 353 P P 09 31 52.9 +0.3
FUNA IAmb IAmb 09 32 37.9
comp=Z,1µm,1.9s
MGCD Mangrove Creek 25.91 261 P P 09 32 06.9 +1.2
baz=26,SNR=9.4
ARMA Armidale 25.99 267 P P 09 32 07.9 +1.2
baz=26,SNR=20
ARMA Armidale 25.99 267 P P 09 32 10.4 +3.7
MCQ Macquarie Isla 27.02 210 P P 09 32 19.8 +4.3
MCQ IAmb IAmb 09 32 22.8
comp=Z,422nm,1.3s
MCQ Macquarie Isla 27.02 210 P P 09 32 19.8 +4.3
MCQ pmax pmax
comp=Z,422nm,1.3s
MCQ MLR MLR
comp=Z,31µm,18.0s
CNB Canberra Magne 27.12 256 P P 09 32 19.6 +2.9
baz=27,SNR=71
MILA Mila 27.20 252 P P 09 32 20.1 +2.7
baz=27,SNR=26
CAN Canberra 27.41 256 IAMs_20 IAMs_20 09 42 43.4
comp=Z,65µm,19.0s
YNG Young 28.01 258 P P 09 32 27.4 +2.7
baz=28,SNR=63
EIDS Eidsvold 28.03 278 P P 09 32 27.4 +2.5
baz=28,SNR=50
TAU Tasmania Unive 28.98 240 P P 09 32 34.0 +0.8
TAU Tasmania Unive 28.98 240 P P 09 32 34.0 +0.8
TAU pmax pmax
comp=Z,157nm,0.8s
TAU MLR MLR
comp=Z,46µm,18.0s
MOO Moorlands 29.01 241 P P 09 32 35.4 +1.9
baz=29,SNR=37
RMQ Roma 29.57 274 P P 09 32 41.0 +2.4
baz=30,SNR=20
PPTF Pamatai, Papee 29.74 66 P P 09 32 37.7 -2.4
PPTF IAmb IAmb 09 32 43.2
comp=Z,442nm,1.0s
PPT Papeete 29.74 66 P P 09 32 40.9 +0.8
comp=Z,316nm,1.0s,baz=268,slow=1.2,SNR=31
PPT LR LR 09 42 59.6
comp=Z,52µm,19.4s,baz=239,slow=33
PPT Papeete 29.74 66 P P 09 32 38.6 -1.6
TOO Toolangi 30.10 251 P P 09 32 45.6 +2.4
baz=30,SNR=38
TOO Toolangi 30.10 251 P P 09 32 45.2 +2.0
TOO Toolangi 30.10 251 P P 09 32 45.2 +2.0
TOO pmax pmax
comp=Z,201nm,1.1s
TOO MLR MLR
comp=Z,37µm,20.0s
KNTN Kanton 30.59 12 P P 09 32 46.3 -1.3
KNTN IAmb IAmb 09 33 10.6
comp=Z,225nm,0.9s
CMSA Cobar Meteorol 30.71 263 P P 09 32 50.6 +2.0
baz=31,SNR=216
HNR Honiara 31.07 314 P P 09 32 53.8 +1.9
comp=Z,184nm,0.8s,baz=174,slow=2.2,SNR=4.8
HNR S S 09 37 43.0 -12
comp=Z,59nm,0.6s,baz=205,slow=17,SNR=1.8
HNR Honiara 31.07 314 *e*P P 09 32 54.0 +2.1
HNR Honiara 31.07 314 P P 09 32 52.9 +1.0
HNR IAmb IAmb 09 33 21.5
comp=Z,809nm,1.1s
HNR Honiara 31.07 314 P P 09 32 52.9 +1.0
HNR pmax pmax
comp=Z,809nm,1.1s
HNR MLR MLR
comp=Z,25µm,21.0s
QLP Quilpie 33.33 271 P P 09 33 13.7 +2.0
baz=34,SNR=12
STKA Stephens Creek 34.05 261 P P 09 33 19.2 +1.4
baz=34,SNR=38
STKA Stephens Creek 34.05 261 P P 09 33 18.7 +0.9
comp=Z,103nm,1.0s,baz=103,slow=9.8,SNR=31
STKA PcP PcP 09 35 55.5 +0.4
comp=Z,77nm,1.1s,baz=62,slow=2.7,SNR=3.1
STKA S S 09 38 41.6 +0.2
comp=Z,4.9nm,0.7s,baz=36,slow=17,SNR=1.7
STKA ScP ScP 09 39 39.2 +1.6
comp=Z,11nm,1.1s,baz=100,slow=9.4,SNR=3.8
STKA LR LR 09 47 13.3
comp=Z,57µm,18.6s,baz=94,slow=36
STKA Stephens Creek 34.05 261 P P 09 33 18.8 +0.9
STKA Stephens Creek 34.05 261 P P 09 33 18.8 +0.9
STKA pmax pmax
comp=Z,28nm,1.1s
STKA MLR MLR
comp=Z,12µm,19.0s
CTA Charters Tower 34.35 283 P P 09 33 22.0 +1.4
comp=Z,176nm,0.7s,baz=118,slow=10,SNR=97
CTA S S 09 38 46.2 0.0
comp=Z,31nm,1.1s,baz=344,slow=20,SNR=4.8
CTA ScP ScP 09 39 44.1 +5.3
comp=Z,52nm,1.2s,baz=243,slow=2.7,SNR=4.3
CTA LR LR 09 45 37.0

comp=Z,9µm,20.1s,baz=124,slow=33
TARA Tarawa 35.21 344 P P 09 33 29.6 +1.6
TARA IAmb IAmb 09 33 30.6
comp=Z,495nm,1.1s
HTT Hallett 35.93 257 P P 09 33 35.1 +1.0
baz=36,SNR=81
MTSU Mount Surprise 36.91 284 P P 09 33 44.3 +1.7
baz=37,SNR=66
BBOO Buckleboo 38.41 257 P P 09 33 54.7 -0.4
baz=39,SNR=51
BBOO Buckleboo 38.41 257 P P 09 33 54.4 -0.7
BBOO IAmb IAmb 09 33 59.6
comp=Z,160nm,0.9s
BBOO IAMs_20 IAMs_20 09 49 33.4
comp=Z,38µm,20.0s
QIS Mount Isa 39.64 277 P P 09 34 06.0 +0.5
baz=40,SNR=60
PMG Port Moresby 39.81 298 P P 09 34 08.4 +1.3
comp=Z,51nm,0.8s,baz=119,slow=6.3,SNR=5.0
PMG PcP PcP 09 36 14.8 +2.1
comp=Z,99nm,1.0s,baz=194,slow=2.3,SNR=4.4
PMG ScP S 09 40 04.5 -4.9
comp=Z,30nm,1.0s,baz=74,slow=2.9,SNR=4.9
PMG LR LR 09 48 39.3
comp=Z,24µm,20.3s,baz=146,slow=33
PMG Port Moresby 39.81 298 P P 09 34 08.3 +1.3
PMG PcP 09 36 14.6 +1.9
PMG Port Moresby 39.81 298*ce*P P 09 34 08.7 +1.7
PMG pmax pmax
comp=Z,291nm,1.0s
PMG MLR MLR
comp=Z,90µm,16.0s
XMAS Kiritimati 39.83 33 P P 09 34 05.9 -1.2
XMAS IAmb IAmb 09 34 11.4
comp=Z,488nm,1.4s
KRVT Keravat (AS076 40.00 309 P P 09 34 09.2 +0.6
comp=Z,2µm,1.0s,baz=14,slow=3.4,SNR=21
KRVT S S 09 40 04.6 -7.5
comp=Z,143nm,0.9s,baz=246,slow=20,SNR=2.7
COEN Coen 40.10 289 P P 09 34 10.4 +1.1
baz=40,SNR=49
COEN Coen 40.10 289 P P 09 34 09.8 +0.4
COEN IAmb IAmb 09 34 35.2
comp=Z,168nm,0.8s
COEN IAMs_20 IAMs_20 09 50 08.9
comp=Z,55µm,19.0s
PTCN Pitcairn Islan 42.26 92 IAMs_20 IAMs_20 09 48 41.5
comp=Z,38µm,20.0s
TAOE Nuku Hiva Isla 42.31 64 P P 09 34 28.2 +0.6
TAOE IAmb IAmb 09 34 31.2
comp=Z,865nm,1.5s
ASAR Alice Springs 43.10 270 P P 09 34 34.1 +0.2
comp=Z,315nm,0.9s,baz=107,slow=7.5,SNR=267
ASAR ScP ScP 09 40 15.3 +3.0
comp=Z,12nm,0.9s,baz=110,slow=5.5,SNR=4.5
ASAR S S 09 40 55.4 -2.8
comp=Z,17nm,1.0s,baz=109,slow=16,SNR=6.0
ASAR LR LR 09 51 09.1
comp=Z,16µm,21.3s,baz=139,slow=34
ASAR PKPPKP P'P'df 10 06 02.8 -29
comp=Z,3.5nm,1.1s,baz=259,slow=1.7,SNR=5.1
ASAR P4KPbc 10 12 31.6
comp=Z,1.1nm,1.0s,baz=115,slow=4.3,SNR=6.8
ASAR Alice Springs 43.10 270 P P 09 34 32.7 -1.3
WR0 Warramunga Arr 44.14 275 IAmb IAmb 09 34 46.6
comp=Z,366nm,1.0s
WB2 Warramunga Arr 44.31 275 IAmb IAmb 09 34 47.9
comp=Z,430nm,1.0s
WRAB Tennant Creek 44.31 275 P P 09 34 42.9 -0.9
WRAB IAmb IAmb 09 34 48.0
comp=Z,394nm,1.0s
WRAB Tennant Creek 44.31 275*ce*P P 09 34 43.5 -0.2
WRAB pmax pmax
comp=Z,495nm,1.3s
WRA Warramunga Arr 44.32 275 P P 09 34 43.6 -0.1
comp=Z,294nm,0.7s,baz=114,slow=7.7,SNR=125
WRA ScP ScP 09 40 19.9 +2.6
comp=Z,62nm,1.2s,baz=120,slow=3.7,SNR=11
WRA S S 09 41 11.4 -4.5
comp=Z,21nm,0.9s,baz=113,slow=14,SNR=7.0
WRA LR LR 09 51 53.9
comp=Z,34µm,21.7s,baz=120,slow=34
WRA P4KPbc 10 12 36.4
comp=Z,4.5nm,0.9s,baz=120,slow=4.3,SNR=2.8
WRA Warramunga Arr 44.32 275 P P 09 34 42.4 -1.4
WRA ScP 09 40 18.1 +0.9
WB0 Warramunga Arr 44.35 275 IAmb IAmb 09 34 48.2
comp=Z,413nm,0.9s
MANU Manus Island 44.78 306 IAmb IAmb 09 35 30.0
comp=Z,609nm,1.9s
SBA Scott Base 45.50 185 P P 09 34 55.0 +2.6
SBA IAmb IAmb 09 34 57.6
comp=Z,553nm,1.4s
SBA Scott Base 45.50 185 P P 09 34 55.0 +2.6
SBA pmax pmax
comp=Z,553nm,1.5s
FORT Forrest 45.51 258 P P 09 34 53.1 0.0
baz=46,SNR=29
FORT Forrest 45.51 258 IAmb IAmb 09 35 16.6
comp=Z,459nm,0.8s
FORT IAMs_20 IAMs_20 09 53 54.5
comp=Z,31µm,19.0s
VNDA Vanda 45.56 186 P P 09 34 54.6 +1.7
comp=Z,26nm,0.7s,baz=19,slow=7.3,SNR=20
VNDA LR LR 09 49 29.3
comp=Z,14µm,21.7s,baz=22,slow=30
VNDA Vanda 45.56 186 P P 09 34 54.8 +1.9
VNDA Vanda 45.56 186 P P 09 34 54.8 +1.9
VNDA pmax pmax
comp=Z,141nm,1.3s
PATS Pohnpei 45.57 326 IAMs_20 IAMs_20 09 51 22.9
comp=Z,37µm,20.0s
WRKA Warakurna 47.27 265 P P 09 35 05.8 -1.3
baz=48,SNR=230
KDU Kakadu 49.47 282 P P 09 35 23.5 -0.5
baz=50,SNR=17
KMBL Kambalda 50.37 255 P P 09 35 30.0 -0.7
baz=50,SNR=33
MTN Manton Dam 50.49 281 P P 09 35 32.6 +0.8
baz=51,SNR=23
MTN Manton Dam 50.49 281 P P 09 35 31.3 -0.5
MTN IAmb IAmb 09 36 03.4
comp=Z,607nm,1.6s
MTN IAMs_20 IAMs_20 09 54 31.5
comp=Z,36µm,22.0s
KNRA Kununurra 51.01 276 P P 09 35 35.8 +0.1
baz=51,SNR=35
KNRA Kununurra 51.01 276 IAmb IAmb 09 36 00.1
comp=Z,204nm,0.8s
KNRA IAMs_20 IAMs_20 09 55 02.3
comp=Z,25µm,22.0s
FITZ Fitzroy Crossi 52.47 272 P P 09 35 46.6 +0.1
baz=53,SNR=33
FITZ Fitzroy Crossi 52.47 272 P P 09 35 46.6 +0.1
comp=Z,84nm,1.0s,baz=140,slow=4.4,SNR=28
FITZ S S 09 43 03.5 -7.4
comp=Z,2.6nm,0.8s,baz=284,slow=19,SNR=1.4
FITZ Fitzroy Crossi 52.47 272 IAmb IAmb 09 36 10.9
comp=Z,156nm,1.0s
FITZ IAMs_20 IAMs_20 09 56 46.8
comp=Z,26µm,20.0s
CASY Casey 52.92 209 P P 09 35 49.0 -0.2
CASY IAmb IAmb 09 36 18.0
comp=Z,247nm,0.8s
NWAO Narrogin (SRO) 53.60 251 P P 09 35 54.9 +0.1
baz=54,SNR=5.7
NWAO Narrogin (SRO) 53.60 251 P P 09 35 54.5 -0.2
comp=Z,52nm,1.0s,baz=118,slow=7.8,SNR=9.2
NWAO S S 09 43 19.6 -6.4
comp=Z,5.4nm,0.7s,baz=351,slow=14,SNR=2.3
NWAO LR LR 09 57 45.3
comp=Z,16µm,19.4s,baz=111,slow=35
NWAO Narrogin (SRO) 53.60 251 P P 09 35 54.2 -0.5
NWAO IAmb IAmb 09 35 56.6
comp=Z,231nm,1.4s
NWAO Narrogin (SRO) 53.60 251 IAmb IAmb 09 35 56.6
comp=Z,188nm,1.4s
NWAO Narrogin (SRO) 53.60 251 IAMs_20 IAMs_20 09 59 31.5
comp=Z,21µm,19.0s
KLBR Kellerberrin 53.62 253 P P 09 35 54.2 -0.8
baz=54,SNR=41
WAKE Wake Island 54.00 342 IAMs_20 IAMs_20 09 55 43.7
comp=Z,22µm,21.0s
MEEK Meekatharra 54.72 259 P P 09 36 01.7 -1.3
baz=55,SNR=27
MUN Mundaring 54.73 252 P P 09 36 03.4 +0.4
baz=55,SNR=9.2

BLDU Ballidu 54.80 254 P P 09 36 04.8 +1.3
baz=55,SNR=4.7
FAKI Fak Fak 55.32 292 P P 09 36 06.5 -0.9
FAKI IAmb IAmb 09 36 11.2
comp=Z,171nm,0.9s
PSAD2 Pilbara Seismi 55.65 265 IAMs_20 IAMs_20 09 58 18.3
comp=Z,30µm,22.0s
PSAC2 Pilbara Seismi 55.73 265 IAMs_20 IAMs_20 09 58 42.3
comp=Z,26µm,22.0s
PSAB3 Pilbara Seismi 55.76 265 P P 09 36 10.3 -0.2
PSAB3 IAmb IAmb 09 37 11.9
comp=Z,174nm,1.1s
PSAB3 IAMs_20 IAMs_20 09 58 21.0
comp=Z,30µm,22.0s
PSAA3 Pilbara Seismi 55.76 265 IAMs_20 IAMs_20 09 58 21.2
comp=Z,30µm,22.0s
PSAC3 Pilbara Seismi 55.77 265 IAMs_20 IAMs_20 09 58 44.3
comp=Z,24µm,22.0s
PSAB2 Pilbara Seismi 55.77 265 IAMs_20 IAMs_20 09 58 44.3
comp=Z,26µm,21.0s
PSA00 Pilbara Seismi 55.77 265 P P 09 36 08.1 -2.6
PSA00 Pilbara Seismi 55.77 265 IAmb IAmb 09 37 12.0
comp=Z,120nm,0.9s
PSA00 IAMs_20 IAMs_20 09 58 21.4
comp=Z,29µm,22.0s
PSAA2 Pilbara Seismi 55.77 265 IAMs_20 IAMs_20 09 58 43.5
comp=Z,25µm,21.0s
PSAA1 Pilbara Seismi 55.78 265 IAMs_20 IAMs_20 09 58 44.6
comp=Z,27µm,22.0s
PSAB1 Pilbara Seismi 55.79 265 IAMs_20 IAMs_20 09 58 11.0
comp=Z,31µm,22.0s
PSAD3 Pilbara Seismi 55.80 265 IAMs_20 IAMs_20 09 58 21.1
comp=Z,33µm,22.0s
PSAC1 Pilbara Seismi 55.82 265 IAMs_20 IAMs_20 09 58 45.7
comp=Z,26µm,22.0s
PSAD1 Pilbara Seismi 55.84 265 IAMs_20 IAMs_20 09 58 46.1
comp=Z,25µm,21.0s
MORW Morawa 55.90 255 P P 09 36 10.6 -0.9
baz=56,SNR=12
MORW Morawa 55.90 255 IAmb IAmb 09 36 34.2
comp=Z,106nm,0.9s
MORW IAMs_20 IAMs_20 10 00 04.7
comp=Z,29µm,20.0s
MBWA Marble Bar 56.05 265 IAMs_20 IAMs_20 09 58 17.7
comp=Z,28µm,22.0s
KHU Kahuku 56.12 26 IAmb IAmb 09 36 17.3
comp=Z,434nm,1.5s
HLP Hilina Pali 56.28 26 P P 09 36 13.1 -1.1
AIN Ainahou 56.29 26 P P 09 36 14.6 +0.2
AIN IAmb IAmb 09 36 27.2
comp=Z,305nm,1.3s
KHLU Kahalu`u 56.34 25 P P 09 36 14.0 -0.6
MWH Moku'aweowe 56.35 25 P P 09 36 15.0 -0.2
MWH IAmb IAmb 09 36 43.5
comp=Z,222nm,1.1s
SDHHI Sand Hill 56.37 26 IAmb IAmb 09 36 19.0
comp=Z,470nm,1.2s
RIM Rim 56.38 26 IAmb IAmb 09 36 19.1
comp=Z,464nm,1.1s
WRMHI West Rim 56.38 26 IAmb IAmb 09 36 19.0
comp=Z,401nm,1.2s
PUH Pauahi 56.38 26 IAmb IAmb 09 36 40.8
comp=Z,431nm,1.1s
KKO Keanakako`i 56.39 26 IAmb IAmb 09 36 19.1
comp=Z,508nm,1.1s
NPH North Pit 56.39 26 IAmb IAmb 09 36 48.5
comp=Z,263nm,1.2s
OBL Observatory Le 56.40 26 P P 09 36 15.1 0.0
OBL IAmb IAmb 09 36 27.6
comp=Z,303nm,1.0s
UWE Uwekahuna 56.40 26 P P 09 36 15.0 -0.1
UWE IAmb IAmb 09 36 19.2
comp=Z,553nm,1.3s
MLOA Mauna Loa Obse 56.40 25 P P 09 36 17.1 +1.6
MLOA IAmb IAmb 09 36 41.1
comp=Z,289nm,1.1s
BYL Byron's Ledge 56.40 26 IAmb IAmb 09 36 19.2
comp=Z,547nm,1.3s
UWB Uwekahuna B 56.41 26 IAmb IAmb 09 36 19.2
comp=Z,482nm,1.3s
SBLHI Steaming Bluff 56.41 26 IAmb IAmb 09 36 19.2
comp=Z,607nm,1.4s
MLH Mauna Loa 56.43 26 IAmb IAmb 09 36 46.5
comp=Z,330nm,1.0s
HUH Hualalai 56.44 25 IAmb IAmb 09 36 19.8
comp=Z,597nm,1.4s
HMH Humu'ula Sheep 56.49 26 P P 09 36 16.1 +0.1
HPAH Hawaii Prepara 56.81 25 IAmb IAmb 09 36 43.1
comp=Z,441nm,1.0s
QSPA South Pole Qui 57.16 180 P P 09 36 21.2 +1.1
comp=Z,114nm,0.8s,baz=40,slow=2.3,SNR=246
QSPA S S 09 44 14.7 +1.7
comp=Z,4.5nm,1.1s,baz=323,slow=10,SNR=2.0
QSPA South Pole Qui 57.16 180 P P 09 36 20.6 +0.5
QSPA IAmb IAmb 09 36 55.4
comp=Z,346nm,0.8s
QSPA South Pole Qui 57.16 180 IAMs_20 IAMs_20 09 58 11.5
comp=Z,23µm,20.0s
KIP Kipapa 57.32 22 P P 09 36 21.5 +0.1
KIP Kipapa 57.32 22 P P 09 36 21.5 +0.1
KIP pmax pmax
comp=Z,1µm,1.8s
KHLH Kahului Airpor 57.36 24 P P 09 36 23.6 +1.9
SIJI Sorong 57.36 293 S S 09 44 10.8 -6.0
comp=Z,19nm,0.9s,baz=75,slow=20,SNR=2.8
OPA Opana 57.57 22 P P 09 36 26.2 +3.0
OPA Opana 57.57 22 P P 09 36 26.2 +3.0
OPA pmax pmax
comp=Z,928nm,1.6s
GUMO Guam 58.36 316 S S 09 44 25.1 -4.4
comp=Z,90nm,0.9s,baz=192,slow=20,SNR=2.2
RPN Rapa Nui 58.73 104 P P 09 36 32.2 +0.8
comp=Z,112nm,1.0s,baz=314,slow=3.0,SNR=6.9
RPN S S 09 44 36.5 +2.2
comp=Z,33nm,0.8s,baz=180,slow=4.0,SNR=2.0
RPN LR LR 09 56 54.3
comp=Z,26µm,20.0s,baz=216,slow=31
RPN Rapa Nui 58.73 104 P P 09 36 32.7 +1.3
GIRL Giralia 59.99 261 P P 09 36 40.4 +0.2
baz=60,SNR=8.3
GIRL Giralia 59.99 261 P P 09 36 41.9 +1.7
GIRL IAmb IAmb 09 36 45.2
comp=Z,405nm,1.1s
LUWI Luwuk 63.97 287 P P 09 37 06.8 -0.3
LUWI IAmb IAmb 09 37 39.5
comp=Z,418nm,1.1s
DAV Davao City (W) 66.78 296 S S 09 46 20.2 +4.7
comp=Z,99nm,0.4s,baz=262,slow=15,SNR=2.5
DAV Davao City (W) 66.78 296⇑*e*P P 09 37 22.3 -2.8
JAGI Jajag, Banyuwa 66.94 275 P P 09 37 24.8 -1.4
JAGI IAmb IAmb 09 37 57.8
comp=Z,109nm,0.9s
KCP Kidapawan 67.11 295⇓*e*P P 09 37 27.5 +0.1
SKMP Bagumbayan, Su 67.21 295 *e*P P 09 37 26.2 -1.7
BUKP Musuan 67.69 296 *e*P P 09 37 30.8 -0.2
BUTP Butuan 67.97 297 *e*P P 09 37 33.3 +0.6
PAGZ Pagadian 68.94 295 *e*P P 09 37 40.5 +1.6
MSLP Maasin 69.30 298 *e*P P 09 37 42.7 +1.7
PMSA Palmer Station 69.91 155 P P 09 37 43.7 -0.3
comp=Z,34nm,0.5s,baz=216,slow=3.2,SNR=13
PMSA S S 09 46 55.3 +3.9
comp=Z,12nm,1.0s,baz=156,slow=20,SNR=2.3
PMSA LR LR 10 03 45.7
comp=Z,10µm,19.0s,baz=240,slow=32
PMSA Palmer Station 69.91 155 *e*P P 09 37 43.9 -0.2
PMSA *e*pP pwP 09 37 57.8 -3.9
PMSA Palmer Station 69.91 155 P P 09 37 42.8 -1.3
PMSA IAmb IAmb 09 37 48.1
comp=Z,663nm,1.6s
MAW Mawson 69.94 201 P P 09 37 44.8 +0.6
baz=70,SNR=32
MAW Mawson 69.94 201 P P 09 37 44.7 +0.5
comp=Z,159nm,1.3s,baz=111,slow=8.0,SNR=35
MAW S S 09 46 53.8 +2.1
comp=Z,3.9nm,1.0s,baz=56,slow=7.3,SNR=1.8
MAW LR LR 10 06 53.6
comp=Z,14µm,21.5s,baz=116,slow=35
MAW Mawson 69.94 201 P P 09 37 44.3 +0.1
MAW Mawson 69.94 201 P P 09 37 44.3 +0.1
MAW pmax pmax
comp=Z,116nm,1.7s
JCJ Chichijima 70.75 323 P P 09 37 51.3 +1.7
comp=Z,138nm,0.9s,baz=166,slow=4.7,SNR=2.3
JCJ S S 09 47 02.5 +0.4
comp=Z,41nm,0.7s,baz=162,slow=20,SNR=2.1
SPMM Sapulut 72.43 288 P P 09 38 02.0 +1.8

CISI Cisompet, Garu 72.74 272 P P 09 38 02.3 +0.3
CISI IAmb IAmb 09 38 43.9
comp=Z,114nm,0.7s
CISI IAMs_20 IAMs_20 10 12 33.4
comp=Z,14µm,19.0s
GO10 Punta Arenas 73.42 143 P P 09 38 05.5 +0.1
GO10 IAMs_20 IAMs_20 10 04 29.0
comp=Z,13µm,20.0s
KKM Kota Kinabalu 73.43 289 P P 09 38 04.4 -1.7
KKM IAmb IAmb 09 38 38.3
comp=Z,399nm,1.9s
GO09 Cerro Castillo 73.77 141 IAMs_20 IAMs_20 10 04 10.4
comp=Z,14µm,19.0s
USHA Ushuaia 73.78 145 P P 09 38 07.1 -0.3
comp=Z,106nm,1.2s,baz=226,slow=10.0,SNR=14
SBUM Sibu 74.56 283 P P 09 38 13.0 +0.4
SYO Syowa Base 74.64 193⇓iP P 09 38 10.4 -1.8
SYO Syowa Base 74.64 193⇓ipP pP 09 38 20.2 +0.1
TGY Tagaytay City 74.78 298 S S 09 47 46.1 -2.4
comp=Z,92nm,0.3s,baz=79,slow=18,SNR=2.0
LUBP Lubang 75.05 298 eP P 09 38 14.5 -0.8
KSM Kuching 75.58 281 P P 09 38 20.0 +1.5
SNAA Sanae 75.60 178 P P 09 38 17.6 -0.2
SNAA Sanae 75.60 178 P P 09 38 17.1 -0.7
SNAA IAmb IAmb 09 38 47.1
comp=Z,338nm,1.3s
SNAA IAMs_20 IAMs_20 10 07 22.7
comp=Z,19µm,21.0s
SNAA Sanae 75.60 178 P P 09 38 17.1 -0.7
SNAA pmax pmax
comp=Z,339nm,1.3s
VNA3 Neumayer Olymp 75.75 176 P P 09 38 17.9 -0.8
VNA2 Neumayer--Watz 76.19 177 P P 09 38 20.7 -0.4
baz=176,slow=4.5
SMPP San Manuel, Pa 76.29 300 eP P 09 38 22.4 0.0
NVL N'lazarevskaya 76.33 183 eP P 09 38 20.6 -1.3
NVL e 09 38 34.2
NVL e 09 41 11.5
NVL ePPP PPP 09 42 58.0
NVL eS S 09 47 59.7 -4.4
NVL e 09 48 32.0
NVL pmax pmax
comp=Z,202nm,1.5s
NVL MLR MLR
comp=Z,8µm,19.0s
VNA1 Neumayer--Stat 76.42 176 P P 09 38 22.3 -0.1
JHJ Hachijo jima 2 76.86 325 S S 09 48 08.3 -2.3
comp=Z,74nm,0.7s,baz=258,slow=20,SNR=1.8
PMBI Palembang 77.76 274 IAMs_20 IAMs_20 10 16 01.7
comp=Z,18µm,19.0s
MNAI Manna 78.52 272 IAMs_20 IAMs_20 10 15 42.7
comp=Z,15µm,21.0s
COCO West Island 79.53 262 IAMs_20 IAMs_20 10 13 45.3
comp=Z,11µm,20.0s
INU Inuyama 80.00 324 P P 09 38 42.3 -0.3
TWG Pinlang 80.38 305 IAmb IAmb 09 39 25.9
comp=Z,199nm,1.1s
MJAR Matsushiro Arr 80.38 326 P P 09 38 43.8 -0.8
comp=Z,40nm,1.1s,baz=164,slow=5.1,SNR=19
MJAR S S 09 48 39.9 -8.4
comp=Z,0.8nm,0.7s,baz=118,slow=5.9,SNR=3.1
MJAR PKKPbc PKKPbc 09 57 27.6 -0.1
comp=Z,1.0nm,0.7s,baz=320,slow=1.1,SNR=4.4
MJAR PKPPKP P'P'df 10 05 29.6 +3.2
comp=Z,6.2nm,1.3s,baz=349,slow=1.2,SNR=5.4
MJAR LR LR 10 11 13.0
comp=Z,3µm,19.9s,baz=140,slow=33
MJAR Matsushiro Arr 80.38 326 P P 09 38 43.0 -1.7
MJAR Matsushiro Arr 80.38 326 P P 09 38 43.0 -1.7
MJAR pmax pmax
comp=Z,25nm,1.1s
MAJO Matsushiro 80.38 326 P P 09 38 44.7 0.0
MAJO Matsushiro 80.38 326 i P P 09 38 44.5 -0.2
MAJO pmax pmax
comp=Z,96nm,1.3s
MAJO MLR MLR
comp=Z,8µm,20.0s
MAT Matsushiro 80.38 326 P P 09 38 43.3 -1.4
MAT S S 09 48 46.6 -1.7
EFI East Falkland 80.61 147 P P 09 38 44.6 -1.2
EFI East Falkland 80.61 147 IAMs_20 IAMs_20 10 05 44.2
comp=Z,14µm,22.0s
EFI East Falkland 80.61 147 i P P 09 38 45.3 -0.5
EFI pmax pmax
comp=Z,2µm,1.6s
PLCA Paso Flores 80.72 133 P P 09 38 46.8 0.0
comp=Z,369nm,1.3s,baz=256,slow=5.7,SNR=29
PLCA LR LR 10 06 55.1
comp=Z,18µm,20.3s,baz=266,slow=30
PLCA Paso Flores 80.72 133 eP P 09 38 46.8 0.0
PLCA epP pwP 09 39 01.9 -2.5
LC01 Cunco 80.95 131⇑eP P 09 38 46.9 -1.0
LC01 IAmb IAmb 09 38 52.2
comp=Z,704nm,1.5s
MYKOM Kota Tinggi 81.11 278 P P 09 38 51.0 +1.9
JNU Nakatsue 81.51 319 S S 09 48 57.4 -2.9
comp=Z,6.5nm,1.2s,baz=148,slow=9.5,SNR=2.2
TATO Taipei 81.53 307 P P 09 38 51.4 +0.4
TATO IAmb IAmb 09 38 55.4
comp=Z,276nm,1.6s
CCHI Chillan 82.14 129 eP P 09 38 53.5 -0.7
CCHI IAmb IAmb 09 38 58.2
comp=Z,419nm,1.4s
BKNI Bangkinang 82.65 275 IAmb IAmb 09 38 59.6
comp=Z,114nm,0.7s
ERM Erimo 82.74 332 P P 09 38 57.0 +0.1
ERM IAmb IAmb 09 39 04.1
comp=Z,808nm,1.9s
ERM Erimo 82.74 332 IAMs_20 IAMs_20 10 08 15.1
comp=Z,16µm,22.0s
ERM Erimo 82.74 332ceP P 09 38 58.3 +1.4
ERM pmax pmax
comp=Z,244nm,1.3s
GO05 Huala 83.16 127⇑eP P 09 38 58.2 -1.4
GO05 IAmb IAmb 09 39 03.8
comp=Z,1µm,1.6s
KNMB Chin-men Tao 83.31 305 IAmb IAmb 09 39 05.8
comp=Z,278nm,2.0s
JRMM Jerantut 83.40 279 P P 09 39 00.0 -1.1
YUK Yuzh-Kuril'sk 83.45 335 eP P 09 38 59.0 -1.5
YUK eS S 09 49 18.5 -0.9
YUK SSS SSS 09 58 14.8
QZH Quanzhou 83.48 305⇑iP P 09 39 01.2 0.0
QZH pP pwP 09 39 14.2 -2.8
QZH S S 09 49 18.6 -2.0
QZH pmax pmax
comp=Z,67nm,2.1s
QZH pmax pmax
comp=Z,4µm,11.8s
QZH LR LR
comp=Z,4µm,21.8s
QZH LR LR
comp=Z,3µm,27.9s
QZH LR LR
comp=Z,7µm,27.5s
KUR Kuril'sk 83.79 336 eP P 09 39 02.8 +0.5
KUR e 09 42 14.6
KUR eS S 09 49 21.8 -1.1
KUR pmax pmax
comp=Z,323nm,1.4s
KUR pmax pmax
comp=Z,4µm,11.2s
BO02 Sierra Bellavi 84.05 128⇑eP P 09 39 03.1 -1.2
BO02 IAmb IAmb 09 39 08.5
comp=Z,2µm,1.7s
MT01 Popeta 84.28 127 eP P 09 39 03.7 -1.6
ADK Adak 84.49 1 P P 09 39 07.2 +1.6
ADK IAmb IAmb 09 39 39.7
comp=Z,246nm,1.1s
ADK Adak 84.49 1 P P 09 39 07.2 +1.6
ADK pmax pmax
comp=Z,246nm,1.1s
VA01 Torpederas 84.50 126 eP P 09 39 06.3 -0.2
JKA Kamikawa-asahi 84.73 333 S 09 49 30.5 -1.9
ASAJ Asahikawa 84.74 333 S S 09 49 30.5 -1.9
comp=Z,5.9nm,1.0s,baz=151,slow=19,SNR=2.8
ATKA Atka Island 84.86 2 IAMs_20 IAMs_20 10 09 14.2
comp=Z,15µm,21.0s
MT05 Renca 84.90 127⇑eP P 09 39 07.7 -0.9
HKC Hong Kong Obse 84.92 301 ⇑P P 09 39 11.0 +2.4
IPM Ipoh 84.93 279 IAmb IAmb 09 39 12.0
comp=Z,78nm,0.9s
IPM IAMs_20 IAMs_20 10 22 17.7
comp=Z,10µm,20.0s
IPM Ipoh 84.93 279 P P 09 39 11.0 +2.1

ROCH El Roble 84.97 126 eP P 09 39 05.5 -3.6
LMEL Las Melosas 84.99 127⇑eP P 09 39 08.3 -0.9
MT03 Universidad Ad 85.00 127⇑eP P 09 39 07.8 -1.3
CLCH Cerro Calan 85.04 127 IAmb IAmb 09 39 13.6
comp=Z,2µm,1.8s
PEL Peldehue 85.09 126⇓eP P 09 39 02.1 -7.4
FCH Farellones 85.24 127 eP P 09 39 09.7 -0.9
VA03 San Esteban 85.40 126 eP P 09 39 08.7 -2.5
VA03 IAmb IAmb 09 39 15.7
comp=Z,2µm,1.9s
SMY Shemya 85.61 355 IAMs_20 IAMs_20 10 12 44.3
comp=Z,16µm,22.0s
KULM Kulim 85.69 279 IAmb IAmb 09 39 16.0
comp=Z,77nm,0.9s
KULM Kulim 85.69 279 P P 09 39 14.0 +1.3
RPSI Rantau Prapat 85.71 276 SKSac 09 49 32.5 -3.8
RPSI Rantau Prapat 85.71 276 IAmb IAmb 09 39 15.2
comp=Z,95nm,1.2s
RPSI IAMs_20 IAMs_20 10 16 57.3
comp=Z,14µm,22.0s
PSI Prapat 85.77 276 S S 09 49 32.5 -12
comp=Z,4.2nm,0.7s,baz=30,slow=20,SNR=3.9
SNCC San Nicolas Is 85.77 46 IAMs_20 IAMs_20 10 10 42.3
comp=Z,11µm,20.0s
SNCC San Nicolas Is 85.77 46 P P 09 39 14.0 +1.4
baz=226
LPIG La Paz 85.83 58 P P 09 39 14.3 +1.2
comp=Z,136nm,1.1s,baz=297,slow=0.9,SNR=16
SSE Sheshan 85.84 311 P P 09 39 13.1 +0.2
SSE S S 09 49 36.9 -7.0
SSE pmax pmax
comp=Z,1µm,6.3s
SSE LR LR
comp=Z,2µm,24.3s
SSE LR LR
comp=Z,3µm,24.9s
TJN Taejon 85.86 319ceP P 09 39 13.4 +0.5
NIKH Nikolski High 85.94 5 IAmb IAmb 09 39 38.9
comp=Z,249nm,1.0s
GZH Guangzhou 86.01 301 P P 09 39 16.2 +2.2
GZH sP pwP 09 39 28.9 -0.9
GZH PP PP 09 42 36.7 +2.1
GZH SKS SKSac 09 49 38.6 +1.0
GZH S S 09 49 48.4 +2.6
GZH pmax pmax
comp=Z,3µm,6.0s
GZH LR LR
comp=Z,3µm,19.2s
GZH LR LR
comp=Z,4µm,18.9s
CO02 Combarbal 86.02 125 eP P 09 39 13.0 -1.3
CO02 IAmb IAmb 09 39 18.2
comp=Z,1µm,1.4s
GSI Gunungsitoli 86.09 274 IAMs_20 IAMs_20 10 19 11.3
comp=Z,15µm,22.0s
QIZ Qiongzhong 86.15 295 P P 09 39 14.8 0.0
QIZ PP PP 09 42 35.2 -0.6
QIZ S S 09 49 39.1 -8.3
QIZ SS SS 09 55 28.9 +1.9
QIZ pmax pmax
comp=Z,2µm,7.7s
QIZ LR LR
comp=Z,2µm,23.7s
QIZ LR LR
comp=Z,2µm,24.3s
QIZ LR LR
comp=Z,8µm,32.9s
SCI2 San Clemente I 86.18 46 P P 09 39 15.5 +0.9
baz=226
SCZ2 Santa Cruz Isl 86.22 45 P P 09 39 16.0 +1.2
baz=226
KSRS Korea Array 86.34 320 P P 09 39 16.0 +0.8
comp=Z,39nm,0.9s,baz=140,slow=5.6,SNR=27
KSRS S S 09 49 41.0 -7.5
comp=Z,0.7nm,1.0s,baz=120,slow=17,SNR=3.6
KSRS PKPPKP P'P'df 10 05 19.2 +3.2
comp=Z,3.0nm,1.1s,baz=320,slow=3.3,SNR=5.5
KSRS LR LR 10 15 44.2
comp=Z,5µm,19.3s,baz=140,slow=34
KSAR Wonju Array Be 86.35 320 P P 09 39 15.4 +0.1
KSAR Wonju Array Be 86.35 320 P P 09 39 15.4 +0.1
SKR Severo-Kuril's 86.38 344 eP P 09 39 05.2 -10
SKR eS SKSac 09 49 31.0 -7.6
SKR e 09 50 40.0
SKR eSS SS 09 55 24.7 -4.7
SKR pmax pmax
comp=Z,3µm,5.1s
SKR pmax pmax
comp=Z,1µm,6.5s
SKR pmax pmax
comp=Z,155nm,1.0s
SKR MLR MLR
comp=Z,3µm,17.0s
SKR MLR MLR
comp=Z,3µm,18.0s
SBC Santa Barbara 86.49 45 P P 09 39 17.5 +1.5
baz=226
SRIG Santa Rosalia 86.51 54 IAMs_20 IAMs_20 10 10 10.0
comp=Z,15µm,20.0s
CIS Catalina Islan 86.55 46 P P 09 39 17.3 +0.8
baz=226
BLG Laguna Peak, P 86.64 45 P P 09 39 17.9 +1.0
baz=226
PKM Mcpherson Peak 86.74 44 P P 09 39 19.0 +1.4
baz=226,SNR=62
GO04 Tololo Observa 86.76 124 eP P 09 39 15.1 -3.0
GO04 IAmb IAmb 09 39 22.0
comp=Z,2µm,2.4s
FMP Fort Macarthur 86.84 46 P P 09 39 18.9 +1.1
baz=226
SMMC Simmler 86.93 44 P P 09 39 19.9 +1.6
baz=225,SNR=39
HOPE Hope Point 86.95 159 P P 09 39 17.8 -0.4
HOPE Hope Point 86.95 159 IAMs_20 IAMs_20 10 14 35.6
comp=Z,15µm,19.0s
HOPE Hope Point 86.95 159 P P 09 39 17.8 -0.4
HOPE pmax pmax
comp=Z,2µm,1.6s
109C Camp Elliot, M 87.00 47 IAmb IAmb 09 39 22.9
comp=Z,179nm,1.4s
109C IAMs_20 IAMs_20 10 11 08.9
comp=Z,11µm,20.0s
109C Camp Elliot, M 87.00 47 P P 09 39 19.6 +1.0
baz=227
INCN Inchon 87.06 319 P P 09 39 19.9 +1.0
INCN IAmb IAmb 09 39 25.1
comp=Z,91nm,1.2s
INCN Inchon 87.06 319 P P 09 39 19.9 +1.0
INCN pmax pmax
comp=Z,91nm,1.2s
YSS Yuzh-Sakhalins 87.07 334 P P 09 39 19.7 +1.1
YSS IAmb IAmb 09 39 24.8
comp=Z,191nm,0.9s
YSS IAMs_20 IAMs_20 10 11 44.7
comp=Z,15µm,22.0s
YSS Yuzh-Sakhalins 87.07 334⇑eP P 09 39 19.7 +1.1
YSS e 09 39 25.5
YSS e*SP pwP 09 39 32.9 -2.2
YSS i 09 49 43.1
YSS eS S 09 50 01.6 +6.5
YSS pmax pmax
comp=Z,5µm,4.0s
YSS pmax pmax
comp=N,1µm,3.6s
YSS pmax pmax
comp=E,400nm,3.3s
YSS pmax pmax
comp=Z,220nm,1.0s
YSS MLR MLR
comp=N,6µm,19.0s
YSS MLR MLR
comp=Z,8µm,19.0s
YSS MLR MLR
comp=E,2µm,20.0s
PMPB Monarch Peak 87.10 43 P P 09 39 18.9 -0.3
SAO San Andreas Ge 87.12 42 P P 09 39 19.0 -0.1
SAO IAmb IAmb 09 39 22.9
comp=Z,198nm,1.1s
SAO IAMs_20 IAMs_20 10 10 35.0
comp=Z,11µm,20.0s
SAO San Andreas Ge 87.12 42 P P 09 39 19.0 -0.1
SAO pmax pmax
comp=Z,198nm,1.2s
BAR Barrett 87.13 48 P P 09 39 19.2 -0.1
BAR IAmb IAmb 09 39 23.7
comp=Z,350nm,1.6s

BAR IAMs_20 IAMs_20 10 11 23.3
comp=Z,13µm,20.0s
DECC Green Verdugo 87.18 46 P P 09 39 20.6 +1.1
baz=226
OSI Osito Audit: C 87.20 45 IAMs_20 IAMs_20 10 11 56.0
comp=Z,10µm,20.0s
OSI Osito Audit: C 87.20 45 P P 09 39 20.5 +0.9
baz=226
PASC Pasadena Art C 87.22 46 IAmb IAmb 09 39 23.8
comp=Z,292nm,1.3s
PASC Pasadena Art C 87.22 46 IAMs_20 IAMs_20 10 11 54.5
comp=Z,10µm,20.0s
MCCM Marconi Confer 87.32 40 IAMs_20 IAMs_20 10 11 21.2
comp=Z,15µm,21.0s
MWC Mount Wilson 87.33 46 IAmb IAmb 09 39 24.7
comp=Z,397nm,1.4s
MWC IAMs_20 IAMs_20 10 11 38.4
comp=Z,10µm,20.0s
MONP2 Monument Peak 87.43 48 P P 09 39 21.1 +0.1
baz=228,SNR=63
MURC Murrieta 87.43 47 P P 09 39 20.7 0.0
baz=227,SNR=79
IKP In-Ko-Pah, Jac 87.46 48 P P 09 39 21.1 +0.1
baz=228,SNR=41
ARVC Arvin 87.49 45 P P 09 39 20.7 -0.2
baz=226,SNR=82
BFSC Mount Baldy Ra 87.58 46 P P 09 39 21.2 -0.4
baz=227,SNR=112
PAYG Puerto Ayora 87.65 89 P P 09 39 23.5 +1.2
PAYG Puerto Ayora 87.65 89 IAMs_20 IAMs_20 10 10 23.2
comp=Z,13µm,20.0s
EDW2 Edwards Air Fo 87.82 45 P P 09 39 22.5 -0.1
baz=227,SNR=170
HOPS Hopland Field 87.83 40 IAMs_20 IAMs_20 10 11 57.9
comp=Z,16µm,20.0s
VES Vestal, Richgr 87.83 44 P P 09 39 22.1 -0.4
baz=226,SNR=69
GDXM Geysers 87.84 40 IAmb IAmb 09 39 27.5
comp=Z,260nm,1.2s
SWSC Sam W. Stewart 87.85 48 P P 09 39 22.7 0.0
baz=228,SNR=25
PFO Pinyon Flats O 87.89 47 P P 09 39 23.3 +0.2
comp=Z,118nm,1.0s,baz=253,slow=3.4,SNR=45
PFO Pinyon Flats O 87.89 47 P P 09 39 22.6 -0.5
PFO Pinyon Flats O 87.89 47 IAMs_20 IAMs_20 10 11 45.4
comp=Z,15µm,20.0s
PFO Pinyon Flats O 87.89 47c iP P 09 39 23.0 0.0
PFO pmax pmax
comp=Z,480nm,1.3s
PFO MLR MLR
comp=Z,9µm,17.0s
PFO Pinyon Flats O 87.89 47 P P 09 39 23.1 0.0
baz=228,SNR=65
XPFO Pion Flat 87.89 47 P P 09 39 22.6 -0.5
XPFO IAmb IAmb 09 39 27.7
comp=Z,388nm,1.4s
XPFO Pion Flat 87.89 47 IAMs_20 IAMs_20 10 11 44.4
comp=Z,15µm,20.0s
TEY Ternei 87.93 330⇑eP P 09 39 23.3 +0.6
TEY e 09 49 47.9
TEY pmax pmax
comp=Z,30nm,1.3s
TEY pmax pmax
comp=E,10.0nm,1.0s
TEY pmax pmax
comp=N,10.0nm,1.3s
TEY pmax pmax
comp=E,800nm,5.0s
TEY pmax pmax
comp=N,700nm,3.7s
TEY pmax pmax
comp=Z,3µm,4.3s
TEY pmax pmax
comp=N,6µm,7.4s
TEY MLR MLR
comp=E,5µm,18.0s
TEY MLR MLR
comp=N,4µm,22.0s
TEY MLR MLR
comp=Z,6µm,21.0s
NJ2 Nanjing 87.96 311 eP P 09 39 24.4 +1.2
NJ2 sP pwP 09 39 43.2 +3.4
NJ2 SKS SKSac 09 49 49.7 +0.5
NJ2 S S 09 50 03.2 -1.1
NJ2 sS sS 09 50 26.6 +9.0
NJ2 pmax pmax
comp=Z,91nm,1.2s
NJ2 pmax pmax
comp=Z,3µm,7.6s
NJ2 LR LR
comp=Z,5µm,21.3s
NJ2 LR LR
comp=Z,5µm,20.8s
NJ2 LR LR
comp=Z,9µm,22.3s
VOG Valley Oaks Go 87.99 44 P P 09 39 24.2 +0.9
baz=226,SNR=13
PET Petropavlovsk 88.03 346 P P 09 39 23.5 +0.5
PET IAmb IAmb 09 39 49.1
comp=Z,340nm,1.8s
PET IAMs_20 IAMs_20 10 10 35.9
comp=Z,13µm,22.0s
PET Petropavlovsk 88.03 346c iP P 09 39 24.8 +1.8
PET e 09 42 58.0
PET e 09 49 46.6
PET eS S 09 50 06.2 +2.3
PET eSP SP 09 51 08.4 +1.5
PET eSPP SPP 09 51 29.4
PET eSS SS 09 55 56.6 +3.2
PET eSSS SSS 09 59 28.8
PET pmax pmax
comp=Z,86nm,2.0s
PET pmax pmax
comp=Z,3µm,13.1s
BBRC Big Bear Solar 88.04 46 P P 09 39 24.0 0.0
baz=227,SNR=28
KCPM Cahto Peak 88.06 39 IAMs_20 IAMs_20 10 12 14.1
comp=Z,12µm,20.0s
ISA Isabella, Lake 88.07 45 P P 09 39 23.9 +0.1
baz=226,SNR=280
PEA0B Petropavlovsk- 88.30 346c iP P 09 39 25.5 +1.1
PETK Petropavlovsk- 88.30 346 P P 09 39 25.3 +1.0
comp=Z,21nm,0.7s,baz=116,slow=5.6,SNR=36
PETK S S 09 49 54.2 -12
comp=Z,2.7nm,1.0s,baz=281,slow=18,SNR=2.4
PETK LR LR 10 11 07.5
comp=Z,7µm,20.9s,baz=154,slow=30
PETK Petropavlovsk- 88.30 346 P P 09 39 24.0 -0.4
FALS False Pass 88.35 8 IAMs_20 IAMs_20 10 18 07.3
comp=Z,11µm,20.0s
KMRM Mail Ridge 88.39 38 IAMs_20 IAMs_20 10 12 22.0
comp=Z,11µm,20.0s
LRMC Laurel Mtn Rad 88.41 45 P P 09 39 25.5 0.0
baz=227,SNR=164
RRX Edison Barstow 88.41 46 P P 09 39 25.3 -0.1
baz=227,SNR=30
BELC Belle Mtn. Jos 88.43 47 P P 09 39 25.7 +0.1
baz=228,SNR=143
HSIG 88.47 54 IAmb IAmb 09 39 29.8
comp=Z,261nm,1.2s
HSIG IAMs_20 IAMs_20 10 10 58.8
comp=Z,10µm,20.0s
MSHR Mys Shultsa 88.49 325 i P P 09 39 27.2 +1.7
GLA Glamis 88.53 49 IAMs_20 IAMs_20 10 11 47.4
comp=Z,13µm,20.0s
GLA Glamis 88.53 49 P P 09 39 26.4 +0.4
baz=228,SNR=38
BC3 Big Chuckawall 88.54 48 P P 09 39 26.5 +0.3
baz=228,SNR=206
VLA Vladivostok 88.55 326 i P P 09 39 27.2 +1.5
VLA pmax pmax
comp=Z,300nm,2.4s
VLA MLR MLR
comp=Z,4µm,15.0s
CMB Columbia Colle 88.62 42 IAMs_20 IAMs_20 10 11 21.6
comp=Z,10µm,21.0s
JCC Jacoby Creek, 88.66 38 IAmb IAmb 09 39 30.9
comp=Z,232nm,1.3s
JCC IAMs_20 IAMs_20 10 14 14.5
comp=Z,11µm,19.0s
GO03 Copiap 88.69 122 eP P 09 39 25.5 -1.6
GO03 IAmb IAmb 09 39 31.8
comp=Z,1µm,2.2s
GO03 Copiap 88.69 122 IAmb IAmb 09 39 30.3
comp=Z,256nm,1.3s
HEC Hector,Ludlow 88.78 46 P P 09 39 27.1 -0.1
baz=228,SNR=95

GSC Goldstone, Bar 88.81 46 IAMs_20 IAMs_20 10 12 25.9
comp=Z,10µm,20.0s
GSC Goldstone, Bar 88.81 46 P **P** **09 39 27.4 0.0**
baz=227,SNR=183
CWC Cottonwood Cre 88.83 44 P **P** **09 39 27.2 -0.3**
baz=226
O02D Mt. Diablo Mer 88.84 39 P **P** **09 39 27.8 +0.5**
baz=224,SNR=96
CNBA Chernabura Isl 88.84 10 IAMs_20 IAMs_20 10 15 28.5
comp=Z,11µm,22.0s
KHMM Horse Mountain 88.85 38 IAMs_20 IAMs_20 10 12 46.7
comp=Z,12µm,20.0s
MPMC Manual Prospec 88.92 45 P **P** **09 39 28.0 0.0**
baz=227,SNR=200
AFDM Forest Hills D 88.94 41 IAMs_20 IAMs_20 10 12 11.0
comp=Z,15µm,21.0s
DAC Darwin (Calif) 89.01 45 IAmb IAmb 09 39 34.8
comp=Z,115nm,1.1s
DAC IAMs_20 IAMs_20 10 13 17.9
comp=Z,10µm,20.0s
IRM Iron Mountain 89.06 48 P **P** **09 39 28.9 +0.4**
baz=228,SNR=337
ORV Oroville 89.08 40 IAMs_20 IAMs_20 10 12 26.8
comp=Z,11µm,21.0s
214A Organ Pipe Nat 89.11 50 IAmb IAmb 09 39 32.8
comp=Z,169nm,1.1s
214A IAMs_20 IAMs_20 10 11 34.7
comp=Z,11µm,21.0s
214A Organ Pipe Nat 89.11 50 P **P** **09 39 28.7 0.0**
baz=230
OMMB Old Mammoth Mi 89.11 43 IAMs_20 IAMs_20 10 09 32.6
comp=Z,11µm,22.0s
GMRC Granite Mounta 89.16 47 P **P** **09 39 29.2 +0.2**
baz=228,SNR=118
TIN Tinemaha, Big 89.17 44 P **P** **09 39 28.9 -0.1**
baz=226,SNR=23
Y12C Blythe 89.18 48 IAMs_20 IAMs_20 10 12 26.7
comp=Z,11µm,20.0s
Y12C Blythe 89.18 48 P **P** **09 39 29.2 +0.2**
baz=229,SNR=93
MLAC Mammoth, Mammo 89.21 43 P **P** **09 39 29.3 0.0**
baz=226,SNR=68
KRMB Red Mountain 89.23 37 IAmb IAmb 09 39 34.1
comp=Z,284nm,1.4s
KRMB IAMs_20 IAMs_20 10 12 48.8
comp=Z,11µm,20.0s
WDC Whiskeytown Da 89.26 39 IAMs_20 IAMs_20 10 09 36.5
comp=Z,13µm,22.0s
USA0B Ussuriysk Arra 89.33 327 IAmb IAmb 09 39 57.4
comp=Z,235nm,1.1s
USA0B Ussuriysk Arra 89.33 327 *c i*P **P** **09 39 30.0 +0.6**
USRK Ussuriysk Ar. 89.33 327 P **P** **09 39 30.4 +1.0**
comp=Z,106nm,0.9s,baz=145,slow=4.0,SNR=47
USRK S **SKSac** **09 49 57.1 +0.3**
comp=Z,3.7nm,1.2s,baz=204,slow=21,SNR=2.2
USRK PKPPKP **P'P'df** **10 05 15.3 +5.4**
comp=Z,4.9nm,1.1s,baz=0.0,slow=1.6,SNR=4.1
USRK LR LR 10 15 22.5
comp=Z,5µm,20.2s,baz=135,slow=33
USRK Ussuriysk Ar. 89.33 327 P **P** **09 39 29.4 0.0**
TUQ Turquoise Moun 89.44 46 P **P** **09 39 30.4 +0.1**
baz=228,SNR=183
O03E Paynes Creek 89.45 39 P **P** **09 39 29.4 -0.8**
baz=224
N02D Trinity Center 89.46 38 P **P** **09 39 30.3 +0.1**
baz=224,SNR=88
RUBR Rubicon Trail 89.46 41 IAMs_20 IAMs_20 10 12 07.9
comp=Z,14µm,20.0s
WAKR Walker 89.48 42 IAMs_20 IAMs_20 10 11 49.4
comp=Z,13µm,21.0s
SHOC Shoshone, Teco 89.54 46 P **P** **09 39 30.5 -0.2**
baz=228,SNR=162
FURC Furnace Creek, 89.57 45 P **P** **09 39 30.5 -0.2**
baz=227,SNR=85
GRAC Grapevine Rang 89.63 44 P **P** **09 39 31.2 +0.1**
baz=227,SNR=68
M02C Callahan 89.68 38 P **P** **09 39 31.7 +0.4**
baz=223,SNR=79
PDMCI Parker Dam,Lak 89.79 48 P **P** **09 39 32.2 +0.4**
baz=229,SNR=97
NEE2 Needles Airpor 89.79 47 P **P** **09 39 32.2 +0.4**
baz=229,SNR=77
PNTR Pine Nut 89.80 41 IAMs_20 IAMs_20 10 12 18.7
comp=Z,14µm,21.0s
L02E Cave Junction 89.86 37 P **P** **09 39 32.7 +0.8**
baz=223
VCNR Virginia City 89.91 41 IAmb IAmb 09 39 36.7
comp=Z,374nm,1.5s
VCNR IAMs_20 IAMs_20 10 14 28.8
comp=Z,15µm,19.0s
BEKR Beckworth 89.92 41 IAmb IAmb 09 39 36.5
comp=Z,336nm,1.6s
BEKR IAMs_20 IAMs_20 10 12 52.1
comp=Z,13µm,21.0s
YERR Yerington 89.92 42 IAmb IAmb 09 39 36.6
comp=Z,230nm,1.2s
YERR IAMs_20 IAMs_20 10 12 23.5
comp=Z,12µm,20.0s
WHN Wuhan 89.94 307 ⇑P **P** **09 39 33.2 +0.6**
WHN pP **pwP** **09 39 46.8 -2.4**
WHN sP sP 09 39 52.4 +8.7
WHN PP **PP** **09 43 04.6 -1.5**
WHN SKS **SKSac** **09 50 01.2 +0.2**
WHN S **S** **09 50 22.5 -0.5**
WHN pmax pmax
comp=Z,4µm,3.2s
WHN pmax pmax
comp=Z,4µm,8.5s
WHN LR LR
comp=Z,7µm,19.9s
WHN LR LR
comp=Z,11µm,22.1s
WHN LR LR
comp=Z,21µm,27.1s
YBH Yreka Blue Hor 90.00 38 P **P** **09 39 33.8 +1.0**
comp=Z,100nm,1.1s,baz=192,slow=1.3,SNR=34
YBH Yreka Blue Hor 90.00 38 P **P** **09 39 32.5 -0.3**
YBH IAmb IAmb 09 39 37.2
comp=Z,233nm,1.2s
YBH IAMs_20 IAMs_20 10 09 57.2
comp=Z,10µm,22.0s
YBH Yreka Blue Hor 90.00 38 P **P** **09 39 32.5 -0.3**
YBH pmax pmax
comp=Z,233nm,1.3s
KEBM Edson Butte 90.01 36 IAMs_20 IAMs_20 10 13 40.4
comp=Z,10µm,20.0s
NVAR Mina Array Bea 90.07 43 P **P** **09 39 33.1 -0.2**
comp=Z,93nm,0.9s,baz=218,slow=7.4,SNR=84
NVAR S **SKSac** **09 49 58.7 -3.2**
comp=Z,0.5nm,0.8s,baz=194,slow=3.3,SNR=2.7
NVAR PKKP **PKKPdf** **09 56 58.3 -3.1**
comp=Z,0.8nm,0.8s,baz=146,slow=1.1,SNR=3.6
NVAR PKKPbc **PKKPbc** **09 57 04.8 +0.1**
comp=Z,1.0nm,0.7s,baz=46,slow=3.9,SNR=5.0
NVAR PKPPKP PKPPKPdf10 05 02.5
comp=Z,0.8nm,0.9s,baz=88,slow=2.8,SNR=5.0
NVAR Mina Array Bea 90.07 43 P **P** **09 39 32.3 -1.0**
RYN Ryan 90.08 42 IAmb IAmb 09 39 37.5
comp=Z,277nm,1.4s
NV11 Mina Array Sit 90.16 43 IAmb IAmb 09 39 37.0
comp=Z,142nm,1.1s
NV11 IAMs_20 IAMs_20 10 12 00.3
comp=Z,10µm,21.0s
K02D Willamette Mer 90.22 37 P **P** **09 39 34.3 +0.6**
baz=223,SNR=32
TPNV Topopah Spring 90.26 45 IAmb IAmb 09 39 38.1
comp=Z,197nm,1.1s
TPNV Topopah Spring 90.26 45 P **P** **09 39 34.2 +0.1**
baz=228,SNR=219
Y14A Wickenburg 90.26 49 IAMs_20 IAMs_20 10 12 50.3
comp=Z,15µm,20.0s
PAHR Pah Rah Range 90.34 41 IAmb IAmb 09 39 38.5
comp=Z,281nm,1.4s
TYV Tymovskoe 90.42 336 *e*P **P** **09 39 35.1 +0.8**
TYV *e* 09 50 27.6
TYV pmax pmax
comp=Z,107nm,1.5s
TYV pmax pmax
comp=Z,2µm,2.2s
TYV MLR MLR
comp=Z,8µm,19.0s
J01E Myrtle Point 90.42 36 P **P** **09 39 35.7 +1.2**
baz=223,SNR=14
CHIR Chirikof Islan 90.46 12 IAMs_20 IAMs_20 10 21 11.8
comp=Z,13µm,20.0s
W13A Hualapai Mount 90.47 47 IAMs_20 IAMs_20 10 13 16.6
comp=Z,11µm,20.0s
M04C Macdoel 90.49 38 P **P** **09 39 34.7 -0.4**
baz=224,SNR=57
HUMO Hull Mountain 90.51 37 IAMs_20 IAMs_20 10 13 38.6
comp=Z,9µm,20.0s
L04D Klamath Falls 90.56 38 P **P** **09 39 35.0 -0.4**
baz=224,SNR=48
GO02 Mina Guanaco 90.61 121 IAMs_20 IAMs_20 10 11 15.7
comp=Z,14µm,21.0s
KVN Kaiserville 90.61 42 IAmb IAmb 09 39 39.7
comp=Z,216nm,1.3s
KVN IAMs_20 IAMs_20 10 12 36.3
comp=Z,10µm,21.0s
TUC Tucson 90.65 51 P **P** **09 39 36.0 0.0**
TUC Tucson 90.65 51 P **P** **09 39 36.0 0.0**
TUC pmax pmax
comp=Z,448nm,1.4s
TUC Tucson 90.65 51 P **P** **09 39 36.4 +0.4**
baz=231
MDJ Mudanjiang 90.77 325 P **P** **09 39 37.3 +1.2**
MDJ SKS **SKSac** **09 50 06.2 +1.1**
MDJ S **ScS** **09 50 32.8 -0.5**
MDJ sS sS 09 50 48.2 +4.2
MDJ SS **SS** **09 56 38.2 +4.6**
MDJ pmax pmax
comp=Z,67nm,1.3s
MDJ pmax pmax
comp=Z,3µm,4.4s
MDJ LR LR
comp=Z,8µm,23.3s
MDJ LR LR
comp=Z,5µm,21.9s
MDJ LR LR
comp=Z,17µm,23.4s
MDJ Mudanjiang 90.77 325 IAmb IAmb 09 39 40.8
comp=Z,182nm,1.1s
MDJ IAMs_20 IAMs_20 10 20 20.0
comp=Z,9µm,20.0s
DL2 Dalian 90.87 317⇑*i*P **P** **09 39 37.2 +0.5**
DL2 sP **sP** **09 39 50.3 +2.5**
DL2 SKS **SKSac** **09 50 05.5 -0.5**
DL2 S **S** **09 50 32.5 +1.3**
DL2 pmax pmax
comp=Z,170nm,1.1s
DL2 pmax pmax
comp=Z,2µm,5.2s
DL2 LR LR
comp=Z,4µm,28.9s
DL2 LR LR
comp=Z,5µm,29.6s
DL2 LR LR
comp=Z,11µm,27.7s
PB10 IPOC Station P 90.89 119 P **P** **09 39 39.0 +1.6**
PB10 IAMs_20 IAMs_20 10 11 51.2
comp=Z,15µm,21.0s
319A Douglas 91.07 53 IAmb IAmb 09 39 42.8
comp=Z,227nm,1.1s
319A IAMs_20 IAMs_20 10 12 48.6
comp=Z,9µm,20.0s
I03D Drain, OR 91.11 36 P **P** **09 39 38.1 +0.4**
baz=223,SNR=48
K04D Chiloquin, OR 91.14 38 P **P** **09 39 38.9 +0.8**
baz=224,SNR=5.6
I02D Swisshome 91.16 36 P **P** **09 39 39.8 +1.9**
baz=223,SNR=5.2
MOD Modoc Plateau 91.38 39 IAmb IAmb 09 39 43.2
comp=Z,234nm,1.2s
MOD IAMs_20 IAMs_20 10 14 24.8
comp=Z,14µm,20.0s
J04D Umpqua Nationa 91.40 37 P **P** **09 39 39.1 -0.2**
baz=224,SNR=38
SII Sitkinak Islan 91.42 13 IAMs_20 IAMs_20 10 17 01.2
comp=Z,12µm,21.0s
X16A Lo Mia Camp, P 91.56 49 IAMs_20 IAMs_20 10 13 31.7
comp=Z,14µm,20.0s
R11A Troy Canyon, C 91.58 44 IAMs_20 IAMs_20 10 15 08.2
comp=Z,9µm,20.0s
R11A Troy Canyon, C 91.58 44 P **P** **09 39 40.2 -0.1**
baz=228,SNR=53
I04A Tendick Farm, 91.64 37 P **P** **09 39 39.6 -0.7**
baz=224,SNR=50
PBKT Sadao Pong 91.65 289 IAmb IAmb 09 39 47.0
comp=Z,56nm,1.2s
K05A Summer Lake 91.66 38 IAMs_20 IAMs_20 10 14 21.9
comp=Z,9µm,20.0s
TIA Tai'an 91.76 313 P **P** **09 39 41.6 +0.7**
TIA pmax pmax
comp=Z,54nm,1.4s
TIA pmax pmax
comp=Z,3µm,9.6s
TIA LR LR
comp=Z,2µm,19.6s
TIA LR LR
comp=Z,5µm,22.5s
TIA LR LR
comp=Z,10µm,24.9s
COR Corvallis 91.77 36 P **P** **09 39 40.9 +0.1**
COR Corvallis 91.77 36 IAMs_20 IAMs_20 10 12 33.0
comp=Z,11µm,22.0s
COR Corvallis 91.77 36 P **P** **09 39 40.9 +0.1**
COR pmax pmax
comp=Z,384nm,1.3s
SNY Shenyang 91.80 320 ⇑P **P** **09 39 38.2 -2.8**
SNY pP **pP** **09 39 47.4 -1.9**
SNY sP **sP** **09 39 50.5 -1.6**
SNY PP PP 09 43 42.2 +22
SNY Shenyang 91.80 320 S **SKSac** **09 50 08.0 -3.1**
SNY Shenyang 91.80 320 sS **S** **09 50 40.8 +1.3**
J05D Fort Rock, OR 91.88 38 P **P** **09 39 41.3 -0.3**
baz=225,SNR=81
H04D Lebanon 92.01 36 P **P** **09 39 41.7 -0.1**
baz=224,SNR=56
SLVN Son La 92.02 294 IAmb IAmb 09 39 48.0
comp=Z,110nm,2.0s
LPA La Plata 92.11 135*c i*P P 09 39 35.8 -7.0
LPA pP sP 09 39 55.7 +2.1
LPA sP pwP 09 40 09.0 +8.3
LPA PP **PP** **09 43 19.0 -3.3**
LPA pPP 09 43 31.8
LPA PKIKP **PKiKP** **09 44 33.6 +0.9**
LPA PPP PPP 09 45 14.5
LPA SKIKP SKIKP 09 47 59.9
LPA SKS **SKSac** **09 50 10.1 -3.7**
LPA SCS **S** **09 50 43.3 +0.2**
LPA PS PnS 09 51 57.4 -0.2
LPA PSP PSP 09 52 27.3
LPA SSS SSS 10 00 26.4
LPA PPP PPP 10 05 11.2
OHAK Old Harbor 92.22 13 IAmb IAmb 09 40 12.9
comp=Z,92nm,1.0s
G03D McMinnville, O 92.25 35 P **P** **09 39 42.9 -0.1**
baz=223,SNR=22
WUAZ Wupatki 92.30 49 IAMs_20 IAMs_20 10 14 16.3
comp=Z,11µm,20.0s
WUAZ Wupatki 92.30 49 P **P** **09 39 43.7 0.0**
baz=230
PINE Pine Mountain 92.39 37 IAMs_20 IAMs_20 10 15 02.2
comp=Z,9µm,20.0s
H04A Detroit Lake 92.39 36 IAMs_20 IAMs_20 10 15 07.5
comp=Z,9µm,21.0s
I05D Terrebonne, OR 92.57 37 P **P** **09 39 44.2 -0.4**
baz=224,SNR=64
GRNR Gornyy 92.59 333⇓*i*P **P** **09 39 45.5 +1.1**
GRNR *e*S **S** **09 50 49.9 +3.7**
GRNR *e*SS **SP** **09 51 57.9 +0.2**
GRNR pmax pmax
comp=Z,50nm,1.6s
GRNR MLR MLR
comp=Z,4µm,19.0s
X18A Snowflake 92.59 50 IAmb IAmb 09 39 49.9
comp=Z,215nm,1.3s
X18A IAMs_20 IAMs_20 10 13 52.9
comp=Z,12µm,21.0s
LVC Limon Verde 92.64 119 S **SKSac** **09 50 18.8 +0.9**
comp=Z,1.2nm,0.6s,baz=60,slow=20,SNR=2.4
LVC Limon Verde 92.64 119 *e*P **P** **09 39 46.6 +0.6**
LVC *e*pP **pwP** **09 40 01.1 -2.3**
LVC Limon Verde 92.64 119 P **P** **09 39 45.8 -0.2**
LVC Limon Verde 92.64 119 IAMs_20 IAMs_20 10 12 55.5
comp=Z,11µm,20.0s
LVC Limon Verde 92.64 119 P **P** **09 39 45.8 -0.2**
LVC pmax pmax
comp=Z,515nm,1.4s
WVOR Wild Horse Val 92.64 40 IAmb IAmb 09 39 49.1
comp=Z,214nm,1.2s
WVOR IAMs_20 IAMs_20 10 15 15.1
comp=Z,15µm,20.0s
NNA Nana 92.66 106 PP PP 09 43 27.2 -0.3
comp=Z,3.6nm,0.4s,baz=164,slow=7.1,SNR=6.5
NNA S **SKSac** **09 50 20.5 +3.0**
comp=Z,1.3nm,0.3s,baz=250,slow=18,SNR=1.7
NNA Nana 92.66 106 P **P** **09 39 43.9 -1.9**
NNA Nana 92.66 106*c i*P **P** **09 39 44.3 -1.5**
NNA pmax pmax
comp=Z,358nm,1.4s
121A Cookes Peak, D 92.78 53 IAmb IAmb 09 39 50.8
comp=Z,341nm,1.9s
121A IAMs_20 IAMs_20 10 14 42.0
comp=Z,12µm,20.0s
121A Cookes Peak, D 92.78 53 P **P** **09 39 46.5 +0.5**
baz=232
GYA Guiyang 92.88 300⇓*i*P **P** **09 39 46.9 +0.4**
GYA SKS **SKSac** **09 50 17.4 -0.8**
GYA S **S** **09 50 50.9 +0.8**
GYA SS **SS** **09 57 09.1 +4.3**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,1µm,10.6s
GYA LR LR
comp=Z,2µm,21.7s
GYA LR LR
comp=Z,3µm,24.6s
GYA LR LR
comp=Z,7µm,22.5s
KDAK Kodiak Island 92.88 13 P **P** **09 39 48.6 +3.2**
KDAK IAmb IAmb 09 40 12.0
comp=Z,104nm,1.4s
KDAK Kodiak Island 92.88 13 IAMs_20 IAMs_20 10 17 46.0
comp=Z,10µm,22.0s
KDAK Kodiak Island 92.88 13 P **P** **09 39 48.7 +3.2**
KDAK pmax pmax
comp=Z,104nm,1.4s
F04D Rainier, OR 93.00 35 P **P** **09 39 47.4 +1.0**
baz=223,SNR=12
NKL Nikolayevsk 93.00 336 *e*P **P** **09 39 46.0 -0.2**
NKL *e*S **SKSac** **09 50 15.3 -1.9**
NKL pmax pmax
comp=Z,29nm,1.6s
NKL pmax pmax
comp=N,7.0nm,0.7s
NKL pmax pmax
comp=E,2.0nm,0.8s
NKL smax smax
comp=E,30nm,6.1s
NKL smax smax
comp=N,12nm,3.7s
W18A Petrified Fore 93.09 50 IAMs_20 IAMs_20 10 14 08.6
comp=Z,12µm,20.0s
W18A Petrified Fore 93.09 50 P **P** **09 39 47.3 -0.1**
baz=231
ENH Enshi 93.10 304 IAmb IAmb 09 40 23.7
comp=Z,194nm,1.4s
PB01 IPOC Station P 93.15 117 IAMs_20 IAMs_20 10 12 40.2
comp=Z,11µm,21.0s
EPT El Paso 93.18 54 IAMs_20 IAMs_20 10 14 56.6
comp=Z,8µm,20.0s
G05D Wamic, OR 93.23 36 P **P** **09 39 48.4 +0.8**
baz=225,SNR=46
KLR Kul'dur 93.27 330 S **SKSac** **09 50 20.2 +1.2**
comp=Z,0.2nm,0.3s,baz=354,slow=20,SNR=10.0
KLR PKKPbc PKKPbc 09 56 55.6 -1.1
comp=Z,4.9nm,1.0s,baz=275,slow=4.8,SNR=7.6
KLR Kul'dur 93.27 330*c i*P **P** **09 39 48.6 +1.0**
KLR pmax pmax
comp=Z,80nm,1.5s
KLR MLR MLR
comp=Z,10µm,19.0s
I07A Izee 93.33 38 IAmb IAmb 09 39 52.3
comp=Z,171nm,1.2s
I07A IAMs_20 IAMs_20 10 17 29.2
comp=Z,8µm,20.0s
J08A Circle Bar Ran 93.37 39 IAmb IAmb 09 39 52.3
comp=Z,214nm,1.1s
ELK Elko 93.38 43 IAmb IAmb 09 39 51.7
comp=Z,58nm,1.1s
ELK IAMs_20 IAMs_20 10 16 32.6
comp=Z,11µm,20.0s
CMIG Matias Romero 93.48 72 S **SKSac** **09 50 28.4 +6.8**
comp=Z,1.3nm,0.7s,baz=241,slow=19,SNR=2.3
CMIG PKKPbc PKKPbc 09 56 52.1 -2.6
comp=Z,2.3nm,1.1s,baz=63,slow=9.0,SNR=2.0
E04D Cinebar 93.56 35 P **P** **09 39 50.3 +1.3**
baz=224,SNR=29
F05D White Salmon 93.61 36 P **P** **09 39 50.1 +0.9**
baz=224,SNR=14
TX31 Lajitas Ar. Si 93.71 57 IAmb IAmb 09 39 54.5
comp=Z,203nm,1.4s
TX32 Lajitas Array 93.71 57 IAmb IAmb 09 39 54.5
comp=Z,205nm,1.4s
TXAR Lajitas Array 93.71 57 P **P** **09 39 49.8 -0.4**
comp=Z,45nm,1.1s,baz=206,slow=4.7,SNR=46
TXAR S **SKSac** **09 50 23.0 +0.4**
comp=Z,0.8nm,1.1s,baz=151,slow=2.1,SNR=2.5
TXAR PKKPbc **PKKPdf** **09 56 54.1 -0.1**
comp=Z,2.7nm,0.9s,baz=88,slow=2.4,SNR=7.9
TXAR PKPPKP PKPPKPdf10 05 02.5
comp=Z,1.0nm,1.1s,baz=132,slow=1.9,SNR=3.9
TXAR LR LR 10 14 52.7
comp=Z,13µm,19.8s,baz=0.0,slow=31
TXAR Lajitas Array 93.71 57 P **P** **09 39 49.3 -1.0**
TXAR Lajitas Array 93.71 57 P **P** **09 39 49.3 -1.0**
PB11 IPOC Station P 93.79 116 P **P** **09 39 49.7 -1.3**
PB11 IAMs_20 IAMs_20 10 13 04.3
comp=Z,12µm,21.0s
MNTX Cornudas Mount 93.91 55 IAmb IAmb 09 39 54.9
comp=Z,230nm,1.9s
MNTX IAMs_20 IAMs_20 10 14 52.8
comp=Z,9µm,20.0s
MNTX Cornudas Mount 93.91 55 P **P** **09 39 51.5 +0.5**
baz=233,SNR=65
D04E Lakebay 93.91 34 P **P** **09 39 52.4 +1.9**
baz=224,SNR=12
D03D Eldon 94.02 34 P **P** **09 39 52.4 +1.3**
baz=223,SNR=16
LON Longmire 94.06 35 IAmb IAmb 09 40 41.1
comp=Z,98nm,1.6s
ATAH Atahualpa 94.09 101 PP PP 09 43 36.9 -2.3
comp=Z,12nm,1.0s,baz=236,slow=8.7,SNR=1.9
ATAH S **SKSac** **09 50 29.3 +3.1**
comp=Z,1.1nm,0.3s,baz=54,slow=19,SNR=1.8
GO01 Chusmiza 94.20 117 IAMs_20 IAMs_20 10 13 25.9
comp=Z,12µm,20.0s
MNMC Minye Minye 94.22 116 IAMs_20 IAMs_20 10 13 06.4
comp=Z,14µm,22.0s
D05A Enumclaw 94.29 35 IAmb IAmb 09 39 56.9
comp=Z,249nm,1.3s
Y22D IRIS PASSCAL I 94.29 52 IAMs_20 IAMs_20 10 16 17.9
comp=Z,11µm,20.0s
Y22D IRIS PASSCAL I 94.29 52 P **P** **09 39 54.3 +1.4**
baz=233
CMAR Chiang Mai Arr 94.30 289 P **P** **09 39 53.7 +0.6**
comp=Z,4.9nm,0.9s,baz=136,slow=2.7,SNR=20
CMAR PP **PP** **09 43 38.9 -1.8**
comp=Z,4.8nm,0.9s,baz=149,slow=5.8,SNR=7.1
CMAR S **SKSac** **09 50 26.3 +0.2**
comp=Z,0.5nm,0.3s,baz=141,slow=4.4,SNR=2.2
CMAR PKKPbc **PKKPbc** **09 56 53.2 +0.7**
comp=Z,15nm,1.1s,baz=294,slow=3.9,SNR=30
CMAR PKPPKP PKPPKPdf10 05 00.0
comp=Z,0.4nm,0.4s,baz=270,slow=3.6,SNR=4.9
CMAR LR LR 10 25 35.3
comp=Z,3µm,18.6s,baz=154,slow=38
F07A Phinny Hill Vi 94.38 36 IAmb IAmb 09 39 56.9
comp=Z,160nm,1.5s
DUG Dugway, Tooele 94.42 44 P **P** **09 39 54.0 +0.7**
baz=230
G08A Pilot Rock 94.45 37 IAmb IAmb 09 39 57.2
comp=Z,202nm,1.2s
G08A IAMs_20 IAMs_20 10 16 16.8
comp=Z,9µm,21.0s
CHTO Chiang Mai 94.50 289 P **P** **09 39 54.1 +0.1**
CHTO Chiang Mai 94.50 289 P **P** **09 39 54.1 +0.1**
CHTO pmax pmax
comp=Z,23nm,1.2s
CHTO MLR MLR
comp=Z,5µm,22.0s
PGC Sidney 94.66 33 IAmb IAmb 09 39 58.0
comp=Z,79nm,1.2s
CNPM China Poot 94.76 13 IAmb IAmb 09 39 58.2
comp=Z,87nm,1.2s
CNPM IAMs_20 IAMs_20 10 19 08.8
comp=Z,10µm,21.0s
BJT Baijiatuau 94.78 315 IAmb IAmb 09 39 59.7
comp=Z,43nm,0.9s
BJI Beijing 94.79 315⇑*i*P **P** **09 39 55.0 +0.2**

BJI PP PP 09 43 44.3 +0.2
BJI SKS SKSac 09 50 25.5 -2.1
BJI S ScS 09 51 07.6 +0.6
BJI SS SS 09 57 37.4 +6.0
BJI pmax pmax
comp=Z,49nm,1.0s
BJI LR LR
comp=Z,16µm,26.5s
BJI LR LR
comp=Z,16µm,26.0s
BJI LR LR
comp=Z,17µm,28.4s
HOM Homer 94.81 13 IAMs_20 IAMs_20 10 19 11.0
comp=Z,10µm,22.0s
MFID Camas Ranch 94.82 40 IAmb IAmb 09 39 58.8
comp=Z,112nm,1.1s
E07A Sunnyside 94.88 36 IAmb IAmb 09 39 59.3
comp=Z,226nm,1.3s
E07A IAMs_20 IAMs_20 10 23 20.2
comp=Z,9µm,19.0s
HAWA Hanford 94.92 36 IAmb IAmb 09 39 59.4
comp=Z,178nm,1.4s
LTY Liberty 94.97 35 IAmb IAmb 09 39 59.4
comp=Z,137nm,1.5s
BMO Blue Mountains 95.00 38 P P 09 39 54.1 -1.7
BMO IAmb IAmb 09 39 59.4
comp=Z,229nm,1.8s
BMO IAMs_20 IAMs_20 10 16 22.5
comp=Z,12µm,20.0s
BMO Blue Mountains 95.00 38 P P 09 39 54.1 -1.7
BMO pmax pmax
comp=Z,229nm,1.8s
B05A Bryant 95.01 34 P P 09 39 56.5 +0.9
baz=224,SNR=26
BRLK Bradley Lake 95.05 13 IAmb IAmb 09 39 59.4
comp=Z,72nm,1.2s
A04D Lummi Island 95.05 33 P P 09 39 56.8 +1.1
baz=224,SNR=9.8
ANMO Albuquerque 95.12 51 P P 09 39 55.6 -1.1
ANMO IAmb IAmb 09 40 00.6
comp=Z,78nm,1.4s
ANMO Albuquerque 95.12 51 IAMs_20 IAMs_20 10 15 29.8
comp=Z,13µm,20.0s
ANMO Albuquerque 95.12 51 ceP P 09 39 55.8 -0.9
ANMO pmax pmax
comp=Z,69nm,1.4s
ANMO MLR MLR
comp=Z,4µm,18.0s
ANMO Albuquerque 95.12 51 P P 09 39 57.3 +0.6
baz=233
MVCO Mesa Verde 95.17 49 IAMs_20 IAMs_20 10 15 57.2
comp=Z,12µm,20.0s
MVCO Mesa Verde 95.17 49 P P 09 39 55.8 -1.1
baz=232
E08A Dider Farm, El 95.23 36 IAmb IAmb 09 39 59.8
comp=Z,56nm,1.2s
E08A IAMs_20 IAMs_20 10 23 21.4
comp=Z,8µm,20.0s
CCIG Comitan 95.25 74 IAMs_20 IAMs_20 10 14 21.8
comp=Z,13µm,20.0s
C06D Leavenworth 95.33 35 P P 09 39 57.5 +0.4
baz=225,SNR=5.7
E09A Wood Farm, Sta 95.70 37 IAmb IAmb 09 40 02.4
comp=Z,147nm,1.3s
XAN Xi'an 95.71 307 P P 09 40 02.0 +2.8
XAN sP pwP 09 40 18.3 +2.5
XAN SKS SKSac 09 50 31.5 -1.5
XAN S S 09 51 14.6 +0.2
XAN SS SS 09 57 48.1 +3.3
XAN pmax pmax
comp=Z,1µm,7.4s
XAN LR LR
comp=Z,3µm,23.5s
XAN LR LR
comp=Z,3µm,23.1s
XAN LR LR
comp=Z,8µm,26.3s
XAN Xi'an 95.71 307 IAmb IAmb 09 40 29.5
comp=Z,102nm,1.8s
MA2 Magadan 95.77 345 P P 09 39 58.0 -0.8
MA2 Magadan 95.77 345 IAMs_20 IAMs_20 10 18 10.2
comp=Z,10µm,22.0s
MA2 Magadan 95.77 345 ceP P 09 39 58.6 -0.2
MA2 pmax pmax
comp=Z,30nm,1.4s
F10A Beach Ranch, E 95.80 38 IAmb IAmb 09 40 02.5
comp=Z,117nm,1.1s
F10A IAMs_20 IAMs_20 10 17 10.6
comp=Z,9µm,20.0s
APG El Apazote 95.93 76 S SKSac 09 50 37.5 +2.2
comp=Z,2.1nm,0.9s,baz=108,slow=20,SNR=2.2
APG PKKPbc PKKPbc 09 56 49.4 +1.0
comp=Z,7.8nm,1.0s,baz=346,slow=3.1,SNR=6.4
833A Chaparral WMA, 96.21 60 IAmb IAmb 09 40 05.2
comp=Z,96nm,1.4s
833A IAMs_20 IAMs_20 10 16 01.9
comp=Z,10µm,20.0s
833A Chaparral WMA, 96.21 60 P P 09 40 01.9 +0.3
baz=236
RC01 Rabbit Creek A 96.50 13 IAmb IAmb 09 40 06.5
comp=Z,59nm,1.3s
C09A Chrisman Ranch 96.52 36 IAMs_20 IAMs_20 10 22 44.5
comp=Z,9µm,20.0s
HIN Hinchinbrook I 96.53 15 IAMs_20 IAMs_20 10 16 00.7
comp=Z,11µm,22.0s
S22A 4UR Ranch, Cre 96.55 49 IAmb IAmb 09 40 07.6
comp=Z,113nm,1.6s
S22A IAMs_20 IAMs_20 10 16 42.8
comp=Z,12µm,20.0s
S22A 4UR Ranch, Cre 96.55 49 P P 09 40 04.3 +1.0
baz=233,SNR=47
SUA Susitna One 96.65 13 IAMs_20 IAMs_20 10 20 33.8
comp=Z,10µm,21.0s
EYAK Cordova Ski Ar 96.84 15 IAMs_20 IAMs_20 10 16 44.4
comp=Z,11µm,22.0s
GLI Glacier Island 96.84 15 IAmb IAmb 09 40 38.3
comp=Z,52nm,0.9s
GLI IAMs_20 IAMs_20 10 16 45.8
comp=Z,10µm,22.0s
FID Port Fidalgo 96.86 15 IAmb IAmb 09 40 07.3
comp=Z,45nm,1.2s
FID IAMs_20 IAMs_20 10 16 33.0
comp=Z,12µm,22.0s
SUCK Suckling Hills 96.87 16 IAMs_20 IAMs_20 10 22 30.5
comp=Z,9µm,19.0s
KVTX Kingsville 96.88 62 IAMs_20 IAMs_20 10 16 52.8
comp=Z,11µm,20.0s
PLTB Pedras Altas 96.90 135 eP P 09 40 04.6 -0.3
RAGM Ragged Mountai 96.94 16 IAMs_20 IAMs_20 10 16 34.3
comp=Z,10µm,22.0s
SKT Skwentna 96.99 12 IAMs_20 IAMs_20 10 25 01.3
comp=Z,9µm,21.0s
HMT Hamilton 96.99 16 IAMs_20 IAMs_20 10 16 24.3
comp=Z,9µm,21.0s
MSTX Muleshoe 97.01 54 IAmb IAmb 09 40 07.7
comp=Z,58nm,1.1s
MSTX Muleshoe 97.01 54 P P 09 40 05.2 0.0
baz=235
LPAZ La Paz 97.03 114 P P 09 40 06.5 0.0
comp=Z,26nm,1.0s,baz=224,slow=4.3,SNR=27
LPAZ S SKSac 09 50 40.5 -1.7
comp=Z,1.0nm,0.8s,baz=263,slow=8.1,SNR=1.7
LPAZ LR LR 10 15 22.8
comp=Z,3µm,20.2s,baz=232,slow=30
LPAZ La Paz 97.03 114 eP P 09 40 05.9 -0.5
LPAZ epP pwP 09 40 21.1 -2.8
LPAZ La Paz 97.03 114 P P 09 40 05.7 -0.8
LPAZ La Paz 97.03 114 P P 09 40 05.7 -0.8
LPAZ pmax pmax
comp=Z,265nm,1.7s
AHID Auburn Hatcher 97.04 43 IAmb IAmb 09 40 08.4
comp=Z,54nm,1.1s
WRAK Wrangell Islan 97.07 24 IAmb IAmb 09 40 09.5
comp=Z,91nm,1.5s
O20A White River Ci 97.11 46 IAmb IAmb 09 40 09.2
comp=Z,74nm,1.6s
O20A White River Ci 97.11 46 P Pdif 09 40 06.0 +0.2
baz=232,SNR=7.6
JCT Junction City 97.11 58 IAmb IAmb 09 40 07.9
comp=Z,40nm,1.1s
JCT Junction City 97.11 58 P P 09 40 05.4 -0.3
baz=236
GHO Glory Hole Cre 97.28 13 IAmb IAmb 09 40 36.1
comp=Z,39nm,0.9s
SMCO Snowmass 97.32 48 IAmb IAmb 09 40 10.7
comp=Z,47nm,1.2s
SMCO IAMs_20 IAMs_20 10 17 39.0
comp=Z,9µm,20.0s
SDCO Great Sand Dun 97.40 50 IAmb IAmb 09 40 11.0
comp=Z,61nm,1.6s
SDCO IAMs_20 IAMs_20 10 17 00.2
comp=Z,9µm,21.0s
SDCO Great Sand Dun 97.40 50 P Pdif 09 40 07.6 +0.4
baz=234,SNR=27
NEW Newport 97.40 36 P Pdif 09 40 07.2 +0.6
comp=Z,8.8nm,0.9s,baz=248,slow=4.1,SNR=15
NEW Newport 97.40 36 IAMs_20 IAMs_20 10 24 45.8
comp=Z,8µm,20.0s
NEW Newport 97.40 36 P P 09 40 06.4 -0.1
baz=228,SNR=12
MESA MESA 97.41 17 IAmb IAmb 09 40 50.5
comp=Z,62nm,1.1s
MESA IAMs_20 IAMs_20 10 16 47.8
comp=Z,9µm,20.0s
WAX Waxell Ridge 97.42 17 IAMs_20 IAMs_20 10 16 58.1
comp=Z,11µm,21.0s
CD2 Chengdu 97.50 302⇓iP Pdif 09 40 08.5 +1.0
CD2 PP PP 09 44 10.8 +5.4
CD2 SKS SKSac 09 50 41.2 -1.3
CD2 S ScS 09 51 31.6 +1.4
CD2 SS SS 09 58 10.7 +0.4
CD2 pmax pmax
comp=Z,20nm,2.1s
CD2 pmax pmax
comp=Z,2µm,7.7s
CD2 LR LR
comp=Z,7µm,36.3s
CD2 LR LR
comp=Z,7µm,25.5s
CD2 LR LR
comp=Z,8µm,25.7s
REDW Red Top Meadow 97.56 43 IAmb IAmb 09 40 11.4
comp=Z,91nm,1.4s
CRQM Cirque 97.62 16 IAMs_20 IAMs_20 10 22 54.7
comp=Z,9µm,20.0s
FXWY Fox Creek 97.63 42 IAMs_20 IAMs_20 10 17 12.2
comp=Z,8µm,21.0s
SCM Sheep Creek Mo 97.66 14 IAmb IAmb 09 40 42.6
comp=Z,37nm,0.9s
SNOW Snow King Moun 97.68 43 IAmb IAmb 09 40 12.0
comp=Z,52nm,0.8s
TGL Tana Glacier 97.70 17 IAMs_20 IAMs_20 10 17 07.4
comp=Z,9µm,21.0s
PPLA Purkeypile 97.73 12 IAMs_20 IAMs_20 10 26 19.2
comp=Z,9µm,21.0s
T25A Trinidad 97.75 51 IAmb IAmb 09 40 12.2
comp=Z,80nm,1.5s
T25A IAMs_20 IAMs_20 10 16 55.5
comp=Z,8µm,20.0s
T25A Trinidad 97.75 51 P Pdif 09 40 08.8 +0.1
baz=234,SNR=19
IMW Indian Meadow 97.84 42 IAMs_20 IAMs_20 10 17 39.8
comp=Z,9µm,20.0s
DLMT Dillon 97.85 40 IAmb IAmb 09 40 12.8
comp=Z,76nm,1.3s
MOOW Moose Ponds 97.86 42 IAMs_20 IAMs_20 10 17 29.2
comp=Z,8µm,21.0s
PDAR Pinedale Array 97.94 44 P P 09 40 08.6 -0.8
comp=Z,13nm,0.9s,baz=204,slow=3.3,SNR=52
PDAR PP PP 09 44 08.8 +0.1
comp=Z,4.1nm,1.2s,baz=234,slow=7.1,SNR=4.2
PDAR S SKSac 09 50 48.2 +3.6
comp=Z,0.5nm,0.9s,baz=163,slow=3.7,SNR=2.3
PDAR PKKPbc PKKPbc 09 56 43.4 -0.6
comp=Z,2.7nm,0.9s,baz=101,slow=4.7,SNR=8.0
PDAR PKPPKP P'P'df 10 04 54.2 -1.1
comp=Z,0.7nm,1.0s,baz=60,slow=3.6,SNR=4.7
PDAR LR LR 10 17 46.7
comp=Z,7µm,20.2s,baz=234,slow=31
PDAR Pinedale Array 97.94 44 P P 09 40 07.3 -2.0
VRDI Verde Repeater 97.96 16 IAmb IAmb 09 40 13.0
comp=Z,70nm,1.6s
JTS Las Juntas de 97.99 83 S SKSac 09 50 49.0 +3.3
comp=Z,0.6nm,0.3s,baz=22,slow=19,SNR=1.7
JTS Las Juntas de 97.99 83 P Pdif 09 40 10.2 +0.1
JTS IAmb IAmb 09 40 14.8
comp=Z,245nm,1.7s
JTS Las Juntas de 97.99 83 IAMs_20 IAMs_20 10 15 48.3
comp=Z,11µm,20.0s
JTS Las Juntas de 97.99 83 P Pdif 09 40 10.2 +0.2
JTS pmax pmax
comp=Z,245nm,1.7s
TGUH Tegucigalpa,Un 98.04 79 IAMs_20 IAMs_20 10 15 19.8
comp=Z,12µm,20.0s
HHC Hu-ho-hao-te 98.05 314 eP Pdif 09 40 10.6 +0.8
HHC PP PP 09 44 14.5 +5.0
HHC SKS SKSac 09 50 46.3 +1.3
HHC S ScS 09 51 36.1 +1.6
HHC pmax pmax
comp=Z,10.0nm,1.4s
HHC pmax pmax
comp=Z,540nm,6.3s
HHC LR LR
comp=Z,2µm,19.1s
HHC LR LR
comp=Z,5µm,19.7s
HHC LR LR
comp=Z,9µm,18.7s
GLB Gilahina Butte 98.07 16 IAmb IAmb 09 40 13.2
comp=Z,93nm,1.9s
MSO Missoula 98.07 39 P Pdif 09 40 09.7 0.0
baz=230
OTAV Otavalo 98.08 95 eP Pdif 09 40 12.4 +1.4
OTAV epP sP 09 40 24.1 +2.2
OTAV Otavalo 98.08 95 P Pdif 09 40 11.7 +0.7
OTAV IAmb IAmb 09 40 15.8
comp=Z,157nm,1.9s
OTAV Otavalo 98.08 95 P Pdif 09 40 11.7 +0.6
OTAV pmax pmax
comp=Z,157nm,2.0s
FLWY Flagg Ranch 98.09 42 IAmb IAmb 09 40 13.6
comp=Z,63nm,1.1s
FLWY IAMs_20 IAMs_20 10 19 24.4
comp=Z,8µm,20.0s
CTGM Chitina Glacie 98.24 17 IAMs_20 IAMs_20 10 17 36.8
comp=Z,9µm,22.0s
AMTX Amarillo 98.27 54 IAmb IAmb 09 40 14.1
comp=Z,50nm,1.4s
AMTX IAMs_20 IAMs_20 10 17 32.4
comp=Z,9µm,20.0s
AMTX Amarillo 98.27 54 Pdiff P 09 40 10.6 -0.3
baz=236
Q24A Divide 98.34 49 IAmb IAmb 09 40 16.4
comp=Z,54nm,1.5s
Q24A Divide 98.34 49 Pdiff Pdif 09 40 11.7 +0.3
baz=234
CPUP Villa Florida 98.34 129 P P 09 40 11.2 -0.2
comp=Z,19nm,1.2s,baz=253,slow=4.7,SNR=14
CPUP S SKSac 09 50 50.2 +3.0
comp=Z,0.4nm,0.4s,baz=151,slow=13,SNR=1.6
CPUP PKKPbc PKKPbc 09 56 41.1 -0.2
comp=Z,2.7nm,0.8s,baz=2.6,slow=1.6,SNR=5.9
CPUP PKPPKP PKPPKPdf10 04 56.9
comp=Z,1.8nm,1.0s,baz=90,slow=4.0,SNR=3.0
CPUP LR LR 10 17 54.5
comp=Z,13µm,20.2s,baz=229,slow=31
CPUP Villa Florida 98.34 129 eP P 09 40 11.1 -0.4
CPUP Villa Florida 98.34 129 P P 09 40 11.0 -0.4
CPUP IAmb IAmb 09 40 14.7
comp=Z,88nm,1.6s
CPUP Villa Florida 98.34 129 P P 09 40 11.0 -0.4
CPUP pmax pmax
comp=Z,87nm,1.6s
H17A Grant Village 98.36 42 IAMs_20 IAMs_20 10 19 33.4
comp=Z,11µm,20.0s
H17A Grant Village 98.36 42 Pdiff Pdif 09 40 11.4 +0.1
baz=232
ABTX Abilene, Hawle 98.42 57 IAmb IAmb 09 40 14.7
comp=Z,131nm,1.6s
ABTX Abilene, Hawle 98.42 57 Pdiff P 09 40 11.3 -0.2
baz=236
SEY Seymchan 98.48 347 P Pdif 09 40 11.2 +0.3
comp=Z,7.7nm,0.3s,baz=84,slow=0.1,SNR=63
SEY S SKSac 09 50 46.5 +0.7
comp=Z,1.3nm,0.7s,baz=352,slow=20,SNR=6.0
ZEA Zeya 98.50 331 eP Pdif 09 40 11.7 +0.4
ZEA e 09 44 19.0
ZEA eS SKSac 09 50 48.0 +1.7
ZEA e 09 53 00.5
ZEA pmax pmax
comp=N,64nm,1.8s
ZEA pmax pmax
comp=Z,80nm,1.8s
ZEA pmax pmax
comp=Z,2µm,14.0s
ZEA pmax pmax
comp=E,400nm,15.0s
ZEA smax smax
comp=Z,2µm,10.0s
ZEA smax smax
comp=E,6µm,9.0s
ZEA smax smax
comp=N,7µm,8.0s
ISCO Idaho Springs 98.53 48 IAMs_20 IAMs_20 10 18 21.2
comp=Z,10µm,20.0s
ISCO Idaho Springs 98.53 48 Pdiff Pdif 09 40 12.3 +0.1
baz=234
HDC Heredia 98.53 84 IAMs_20 IAMs_20 10 16 01.9
comp=Z,9µm,20.0s
KTH Kantishna Hill 98.55 12 IAMs_20 IAMs_20 10 19 29.1
comp=Z,9µm,21.0s
SKAG Skagway 98.60 20 IAmb IAmb 09 40 16.6
comp=Z,64nm,1.5s
RWWY Rawlins 98.67 46 IAmb IAmb 09 40 16.1
comp=Z,73nm,1.6s
RWWY IAMs_20 IAMs_20 10 18 18.8
comp=Z,9µm,20.0s
RND Reindeer 98.79 13 IAMs_20 IAMs_20 10 23 19.3
comp=Z,9µm,20.0s
BTO Baotou 98.85 313 eP Pdif 09 40 16.3 +2.9
435B Jarrell 98.88 59 Pdiff Pdif 09 40 13.9 +0.4
baz=237
N23A Red Feather La 98.97 47 IAMs_20 IAMs_20 10 18 23.6
comp=Z,9µm,21.0s
N23A Red Feather La 98.97 47 Pdiff P 09 40 14.1 0.0
baz=234
PAX Paxson 99.06 14 IAMs_20 IAMs_20 10 19 04.6
comp=Z,8µm,21.0s
MCK McKinley 99.07 13 IAMs_20 IAMs_20 10 23 39.8
comp=Z,8µm,20.0s
RLMT Red Lodge 99.54 42 IAMs_20 IAMs_20 10 18 34.7
comp=Z,8µm,20.0s
RLMT Red Lodge 99.54 42 Pdiff Pdif 09 40 18.3 +1.8
baz=232
WHTX Lake Whitney, 99.62 58 Pdiff Pdif 09 40 16.2 -0.7
baz=237
K22A Casper 99.65 45 IAMs_20 IAMs_20 10 19 11.7
comp=Z,10µm,20.0s
K22A Casper 99.65 45 Pdiff Pdif 09 40 16.6 -0.4
baz=234
HKT Hockley 99.70 61 Pdif 09 40 19.1 +1.9
HKT Hockley 99.70 61 IAMs_20 IAMs_20 10 18 04.5
comp=Z,10µm,20.0s
HKT Hockley 99.70 61 P Pdif 09 40 19.1 +1.9
HKT pmax pmax
comp=Z,51nm,1.7s
NEA Nenana 99.82 12 IAMs_20 IAMs_20 10 22 13.0
comp=Z,13µm,22.0s
RIDG Independent Ri 99.88 14 IAMs_20 IAMs_20 10 19 42.1
comp=Z,9µm,21.0s
WRH Wood River Hil 99.90 13 IAMs_20 IAMs_20 10 23 55.7
comp=Z,8µm,20.0s
MLY Manley 99.95 11 IAMs_20 IAMs_20 10 29 56.0
comp=Z,7µm,19.0s
KSCO Kaye Shedlock' 99.97 50 Pdiff Pdif 09 40 19.0 +0.6
baz=236
BBAC Balboa, Cauca 100.06 94 eP PP 09 44 19.1 -6.1
HDA Harding Lake 100.06 13 Pdiff Pdif 09 40 18.3 +0.3
baz=206
CCB Clear Creek Bu 100.11 13 IAMs_20 IAMs_20 10 18 39.3
comp=Z,10µm,22.0s
WMOK Wichita Mounta 100.18 55 IAMs_20 IAMs_20 10 18 25.8
comp=Z,10µm,20.0s
WMOK Wichita Mounta 100.18 55 Pdiff Pdif 09 40 19.0 -0.3
baz=237
LZH Lanzhou 100.29 306 eP Pdif 09 40 23.4 +3.4
LZH pP sP 09 40 31.3 +0.2
LZH sP pwP 09 40 37.4 +0.8
LZH SKS 09 50 55.3
LZH pmax pmax
comp=Z,29nm,1.2s
LZH pmax pmax
comp=Z,970nm,7.1s
LZH LR LR
comp=Z,3µm,14.6s
LZH LR LR
comp=Z,7µm,17.3s
LZH LR LR
comp=Z,6µm,18.4s
CNLB Canela 100.30 135 eP Pdif 09 40 21.0 +0.8
TCOL CIGO, UAF Yank 100.31 13 Pdiff Pdif 09 40 19.5 +0.5
baz=205
COLA College 100.31 13 IAMs_20 IAMs_20 10 22 15.5
comp=Z,9µm,21.0s
MDM Murphy Dome 100.32 12 IAMs_20 IAMs_20 10 18 45.8
comp=Z,9µm,22.0s
IMAR Indian Mountai 100.38 10 Pdif 09 40 17.7 -1.7
ILAR Eielson Array 100.40 13 P Pdif 09 40 19.6 +0.1
comp=Z,2.5nm,1.0s,baz=223,slow=3.5,SNR=19
ILAR PP PP 09 44 24.7 -2.0
comp=Z,5.1nm,1.1s,baz=220,slow=7.8,SNR=4.5
ILAR S SKSac 09 50 47.7 -7.6
comp=Z,0.4nm,1.0s,baz=248,slow=2.2,SNR=2.5
ILAR PKKPbc PKKPbc 09 56 29.8 -7.7
comp=Z,0.7nm,0.7s,baz=344,slow=2.7,SNR=8.1
ILAR PKPPKP P'P'df 10 04 54.0 +5.9
comp=Z,0.9nm,1.1s,baz=308,slow=2.7,SNR=4.5
ILAR Eielson Array 100.40 13 Pdif 09 40 17.5 -2.0
TEIG Tepich 100.44 73 IAMs_20 IAMs_20 10 18 16.2
comp=Z,9µm,20.0s
AZU Azuero 100.59 88 eP PP 09 44 24.7 -4.2
POKR Poker Plat Res 100.61 13 Pdiff Pdif 09 40 20.4 0.0
baz=206
U32A Winter Ranch, 100.92 54 IAMs_20 IAMs_20 10 25 21.4
comp=Z,7µm,19.0s
ITAB Concordia 101.03 133 eP Pdif 09 40 24.1 +0.8
EGMT Eagleton 101.04 39 Pdiff Pdif 09 40 23.4 +0.6
baz=233
PTLC Puerto Leguiza 101.10 97 eP PP 09 44 24.7 -8.0
FLOC Florencia 101.15 95 eP PKiKP 09 44 47.7 -1.7
RDOG Red Dog Mine 101.33 6 IAMs_20 IAMs_20 10 24 31.6
comp=Z,9µm,22.0s
BILL Bilibino 101.39 354 IAMs_20 IAMs_20 10 23 50.1
comp=Z,10µm,22.0s
BILL Bilibino 101.39 354 iP Pdif 09 40 23.7 -0.1
BILL i 09 44 40.6
BILL iSS SS 09 59 02.0 -1.1
BILL pmax pmax
comp=Z,12nm,1.2s
BILL MLR MLR
comp=Z,7µm,21.0s
OGNE Ogallala 101.43 49 Pdiff Pdif 09 40 24.6 -0.2
baz=236
OKCFA Oklahoma City 101.46 55 IAMs_20 IAMs_20 10 19 17.9
comp=Z,11µm,20.0s
NATX Nacogdoches 101.51 60 IAMs_20 IAMs_20 10 19 49.4
comp=Z,11µm,20.0s
NATX Nacogdoches 101.51 60 Pdiff Pdif 09 40 24.8 -0.5
baz=238
PIZC Pizarro, Choco 101.54 92 eP PP 09 44 24.7 -11
EGAK Eagle 101.58 15 IAMs_20 IAMs_20 10 19 26.0
comp=Z,8µm,22.0s
CBKS Cedar Bluff 101.74 51 IAMs_20 IAMs_20 10 19 31.2
comp=Z,12µm,21.0s
CBKS Cedar Bluff 101.74 51 Pdiff Pdif 09 40 26.2 0.0
baz=237
YOTC Yotoco, Valle 101.87 93 eP PP 09 44 24.7 -14
RSSD Black Hills 101.98 45 IAMs_20 IAMs_20 10 21 16.3
comp=Z,12µm,20.0s
RSSD Black Hills 101.98 45 Pdiff Pdif 09 40 27.7 +0.3
baz=236
441A DeRidder 102.06 61 IAMs_20 IAMs_20 10 19 54.1
comp=Z,8µm,22.0s
DGAR Diego Garcia 102.16 253 IAMs_20 IAMs_20 10 24 22.7
comp=Z,9µm,20.0s
LAO LASA Array 102.18 42 Pdiff Pdif 09 40 29.3 +1.4
baz=235
PLMC San Jos del P 102.41 92 eP PKiKP 09 44 41.8 -10
SIV San Ignacio 102.53 118 PP PKiKP 09 44 48.2 -3.4
comp=Z,5.7nm,1.1s,baz=241,slow=8.1,SNR=4.4
SIV PKKPbc PKKPbc 09 56 29.1 -0.3
comp=Z,1.9nm,0.7s,baz=60,slow=8.7,SNR=6.2
ORTC Ortega, Tolima 102.75 94 eP PKiKP 09 44 41.8 -10
PTGB Pitanga 102.87 131 eP Pdif 09 40 33.1 +1.4
TUL1 Leonard 102.87 56 IAMs_20 IAMs_20 10 20 01.2
comp=Z,12µm,20.0s
TUL1 Leonard 102.87 56 Pdiff Pdif 09 40 30.9 -0.3
baz=239
PRAC Prado 102.95 94 eP PP 09 44 24.7 -22
MACC Macarena, Meta 102.97 96 eP PKiKP 09 44 41.8 -11
342A Flagon Creek P 103.02 61 IAMs_20 IAMs_20 10 20 33.4

comp=Z,8µm,22.0s
CBOC Ciudad Bolivar 103.15 92 eP PP 09 44 36.1 -12
GUY2C Guyana, Caldas 103.36 92 eP PKiKP 09 44 53.1 -0.6
AQDB Aquidauana 103.41 125 eP Pdif 09 40 35.8 +1.7
PALK Pallekele 103.45 270 IAMs_20 IAMs_20 10 28 20.5
comp=Z,9µm,20.0s
TOLK Toolik Lake Re 103.46 10 Pdiff Pdif 09 40 35.4 +2.3
baz=204
Z41A Richland Creek 103.63 59 IAMs_20 IAMs_20 10 20 54.4
comp=Z,9µm,20.0s
Z41A Richland Creek 103.63 59 Pdiff Pdif 09 40 35.9 +1.3
baz=239
YAK Yakutsk 103.63 337 PKKPbc PKKPbc 09 56 26.8 -1.0
comp=Z,2.1nm,0.3s,baz=219,slow=3.0,SNR=5.0
YAK Yakutsk 103.63 337 IAMs_20 IAMs_20 10 27 03.3
comp=Z,7µm,19.0s
YAK Yakutsk 103.63 337 eP Pdif 09 40 34.1 +0.2
YAK e 09 44 47.8
YAK ePPP PPP 09 47 08.1
YAK eS SKSac 09 51 07.1 -3.6
YAK eSP SP 09 53 55.1 -1.5
YAK pmax pmax
comp=Z,377µm,4.3s
YAK pmax pmax
comp=N,15µm,1.3s
YAK pmax pmax
comp=E,123µm,3.6s
YAK pmax pmax
comp=Z,355nm,5.6s
YAK pmax pmax
comp=N,149nm,6.2s
YAK pmax pmax
comp=E,215nm,6.2s
YAK smax smax
comp=N,2µm,6.2s
YAK smax smax
comp=E,2µm,6.2s
MIAR Mount Ida 103.72 58 IAMs_20 IAMs_20 10 21 07.9
comp=Z,8µm,21.0s
MIAR Mount Ida 103.72 58 Pdiff Pdif 09 40 35.3 +0.3
baz=239
HELC Santa Helena 103.73 92 eP PKiKP 09 44 58.8 +4.6
TRCB Terra Rica 103.86 129 eP Pdif 09 40 37.2 +1.0
W39A Magazine 103.91 57 Pdiff Pdif 09 40 37.1 +1.3
baz=239
EPYK Eagle Plains 103.92 16 Pdiff Pdif 09 40 36.6 +1.4
baz=215
NORC Norcasia 103.95 92 eP PKiKP 09 44 53.1 -1.1
KSU1 Kansas State U 103.96 52 IAMs_20 IAMs_20 10 20 51.0
comp=Z,8µm,21.0s
KSU1 Kansas State U 103.96 52 Pdiff Pdif 09 40 37.1 +1.2
baz=239
ROSC El Rosal 104.03 93 Pdiff Pdif 09 40 39.0 +1.6
comp=Z,2.7nm,0.4s,baz=130,slow=8.0,SNR=4.8
ROSC PKKPbc PKKPbc 09 56 27.1 +1.7
comp=Z,6.5nm,0.4s,baz=66,slow=20,SNR=2.9
ROSC El Rosal 104.03 93 eP PKiKP 09 44 41.8 -13
ROSC El Rosal 104.03 93 IAMs_20 IAMs_20 10 20 46.9
comp=Z,12µm,20.0s
BGNE Belgrade 104.15 50 IAMs_20 IAMs_20 10 21 30.9
comp=Z,8µm,20.0s
BGNE Belgrade 104.15 50 Pdiff Pdif 09 40 37.5 +0.7
baz=238
X40A Basin Creek Fa 104.22 58 Pdiff Pdif 09 40 36.9 -0.4
baz=240
344A Westbrook Farm 104.24 62 IAMs_20 IAMs_20 10 21 37.6
comp=Z,9µm,22.0s
DGMT Dagmar 104.32 41 Pdiff Pdif 09 40 37.2 -0.2
baz=236
HHAR Hobbs 104.35 56 IAMs_20 IAMs_20 10 21 37.3
comp=Z,8µm,20.0s
CHIC Chingaza 104.41 94 eP PKiKP 09 44 47.4 -8.1
UREC San Jos de Ur 104.55 90 eP PKiKP 09 44 53.1 -2.2
SPBC San Pablo de B 104.67 93 eP PKiKP 09 44 47.4 -8.2
UALR University of 104.72 58 IAMs_20 IAMs_20 10 21 45.2
comp=Z,10µm,20.0s
VBMS Vicksburg 104.77 61 Pdiff Pdif 09 40 41.4 +1.7
baz=240
PTBC PUERTO BERRIO 104.82 92 eP PKiKP 09 44 53.1 -2.7
W41B Gary Mavity, V 104.98 58 IAMs_20 IAMs_20 10 22 22.3
comp=Z,11µm,20.0s
W41B Gary Mavity, V 104.98 58 PP PKiKP 09 45 01.1 +5.7
baz=240
SONM Songino Array 105.07 317 Pdiff Pdif 09 40 41.3 +0.4
comp=Z,5.6nm,1.0s,baz=123,slow=2.9,SNR=16
SONM PP PKiKP 09 44 53.0 -2.3
comp=Z,2.6nm,1.0s,baz=144,slow=4.2,SNR=4.2
SONM PKKPbc PKKPbc 09 56 22.3 -0.8
comp=Z,10nm,1.0s,baz=272,slow=2.4,SNR=21
SONM PKKPab PKKPdf 09 56 35.3 +1.3
comp=Z,5.2nm,0.9s,baz=278,slow=2.7,SNR=8.4
SONM PKPPKP PKPPKPdf10 04 42.4
comp=Z,3.0nm,1.1s,baz=294,slow=1.4,SNR=6.6
SONM Songino Array 105.07 317 Pdif 09 40 40.0 -0.9
SONM Songino Array 105.07 317 P Pdif 09 40 40.0 -0.9
U40A Yellville 105.14 56 PP PKiKP 09 45 02.0 +6.3
baz=240
SUSD Miller 105.22 47 PP PKiKP 09 45 02.1 +6.5
baz=239
SAML Samuel 105.30 112 eP Pdif 09 40 44.2 +1.6
SAML Samuel 105.30 112 IAMs_20 IAMs_20 10 22 18.4
comp=Z,12µm,20.0s
FRTB Fartura 105.44 132 eP Pdif 09 40 43.9 +0.8
PTGC Puerto Gaitan, 105.52 95 eP PP 09 45 15.8 +10
PCMB Pacaembu 105.60 129 eP Pdif 09 40 44.8 +1.0
RUSC La Rusia 105.63 93 eP PKiKP 09 44 41.8 -16
X43A Marvell 105.64 59 PP PP 09 45 07.1 +0.4
baz=241
PP1B Ponte de Pedra 105.93 124 eP Pdif 09 40 47.5 +2.2
SJCC San Jacinto, C 105.97 88 eP PP 09 45 15.8 +6.5
LSA Lhasa 106.19 295 SS SS 09 59 46.0 -26
INK Inuvik 106.22 16 IAMs_20 IAMs_20 10 22 33.7
comp=Z,8µm,22.0s
HBAR Harrisburg 106.30 58 IAMs_20 IAMs_20 10 24 54.2
comp=Z,9µm,20.0s
ECSD EROS Data Cent 106.31 48 IAMs_20 IAMs_20 10 23 06.1
comp=Z,9µm,20.0s
ECSD EROS Data Cent 106.31 48 PP PP 09 45 10.7 -0.7
baz=240
SMLC San Martn de 106.33 90 eP PP 09 45 15.8 +3.9
CHLP Challavanipeta 106.39 282 ePdif Pdif 09 40 48.9 +1.7
CHLP eSKSac SKSac 09 51 22.9 -2.3
SALV Santo Antonio 106.50 122 eP Pdif 09 40 49.0 +1.1
SPB Sao Paulo 106.58 133 eP Pdif 09 40 48.5 +0.4
SPB Sao Paulo 106.58 133 IAMs_20 IAMs_20 10 21 59.0
comp=Z,12µm,21.0s
LPAR Lepanto 106.58 58 IAMs_20 IAMs_20 10 25 13.6
comp=Z,8µm,20.0s
MDND Maddock 106.59 43 IAMs_20 IAMs_20 10 24 57.3
comp=Z,8µm,20.0s
MDND Maddock 106.59 43 PP PP 09 45 12.8 -0.6
baz=239
OCAC Ocana 106.67 91 eP PKiKP 09 44 53.1 -6.2
OXF Oxford 106.70 60 PP PP 09 45 14.1 -0.4
baz=241
PAMC Pamplona, Colo 106.72 92 eP PKiKP 09 45 04.4 +4.6
BRAL Brewton 106.85 64 PP PP 09 45 15.7 +0.2
baz=241
GNAR Gosnell 106.96 58 IAMs_20 IAMs_20 10 23 21.5
comp=Z,11µm,20.0s
TAMC Tame, Arauca 107.00 93 eP PKiKP 09 44 58.8 -1.1
CCM Cathedral Cave 107.09 56 IAMs_20 IAMs_20 10 22 41.0
comp=Z,8µm,20.0s
CCM Cathedral Cave 107.09 56 PP PP 09 45 16.3 -1.0
baz=241
LNXT Lenox 107.40 58 IAMs_20 IAMs_20 10 24 05.1
comp=Z,10µm,20.0s
SMRC Santa Marta, M 107.43 88 eP PKiKP 09 45 04.4 +3.9
CODC Agustn Codazz 107.45 89 eP PP 09 45 15.8 -4.3
SCIA State Center 107.60 51 IAMs_20 IAMs_20 10 23 05.3
comp=Z,10µm,22.0s
SCIA State Center 107.60 51 PP PP 09 45 20.4 -0.6
baz=241
SKHT Srikalahasti 107.63 275 ePdif Pdif 09 40 54.4 +1.5
SKHT ePP PP 09 45 20.4 -1.0
SKHT eSKSac SKSac 09 51 29.4 -1.4
YKA Yellowknife Ar 107.71 26 Pdiff Pdif 09 40 53.0 +1.0
comp=Z,1.2nm,0.8s,baz=231,slow=4.4,SNR=16
YKA PKiKP PKiKP 09 45 00.3 +0.7
comp=Z,2.3nm,0.6s,baz=259,slow=1.6,SNR=20
YKA PKKPbc PKKPbc 09 56 11.4 -3.7
comp=Z,2.8nm,0.8s,baz=37,slow=3.1,SNR=18
YKA PKPPKP PKPPKPdf10 04 36.5
comp=Z,2.1nm,1.3s,baz=35,slow=2.3,SNR=3.9
D32A Dogwood Acres, 107.75 45 IAMs_20 IAMs_20 10 24 15.1
comp=Z,9µm,20.0s

PVM Polavaram 107.78 279 ePdif Pdif 09 40 53.7 +0.3
PVM ePP PP 09 45 23.9 +1.3
PVM eSKSac SKSac 09 51 29.8 -1.5
SLM Saint Louis 108.06 55 IAMs_20 IAMs_20 10 24 20.7
comp=Z,8µm,20.0s
ZAK Zakamensk 108.14 319 eP Pdif 09 40 54.5 +0.1
ZAK pmax pmax
comp=Z,4.0nm,1.4s
MYLAV Mylavaram 108.36 278 ePdif Pdif 09 40 57.8 +1.8
MYLAV ePKiKP PKiKP 09 45 04.1 +2.0
MYLAV eSKSac SKSac 09 51 31.9 -1.9
ADKI Addanki 108.46 277 ePdif Pdif 09 40 57.8 +1.3
ADKI eSKSac SKSac 09 51 33.4 -0.9
Y49A Blount Mountai 108.58 61 IAMs_20 IAMs_20 10 24 05.7
comp=Z,8µm,20.0s
TLY Talaya 108.59 320 PKiKP PKiKP 09 45 02.7 +1.1
comp=Z,1.5nm,0.5s,baz=117,slow=2.3,SNR=2.8
TLY PP PP 09 45 31.7 +3.8
comp=Z,4.4nm,0.7s,baz=280,slow=1.4,SNR=6.0
352A Blakely 108.59 64 PP PP 09 45 29.0 +0.6
baz=242
WVT Waverly 108.60 59 IAMs_20 IAMs_20 10 25 06.0
comp=Z,9µm,20.0s
WVT Waverly 108.60 59 PKiKP PKiKP 09 45 01.3 -0.8
baz=242
WVT PP PP 09 45 27.7 -0.7
baz=242
Z50A Ashland 108.67 62 IAMs_20 IAMs_20 10 24 25.9
comp=Z,9µm,21.0s
Z50A Ashland 108.67 62 PP PP 09 45 28.0 -0.9
baz=242
SOCV Socops 108.76 92 eP PP 09 45 21.4 -8.3
L40A Anamosa 108.99 52 IAMs_20 IAMs_20 10 23 58.0
comp=Z,10µm,20.0s
061Z Ochoppi 109.11 71 PP PP 09 45 32.4 +0.2
baz=242
GGR Gangavaram 109.24 279 ePdif Pdif 09 41 00.7 +0.7
GGR eSKSac SKSac 09 51 36.8 -0.9
Z51A Franklin 109.25 62 IAMs_20 IAMs_20 10 24 54.5
comp=Z,9µm,21.0s
SDV Santo Domingo 109.27 92 PKKPbc PKKPbc 09 56 09.0 0.0
comp=Z,1.6nm,0.5s,baz=72,slow=10,SNR=2.3
SDV PKKPab PKKPab 09 56 21.3 -0.7
comp=Z,19nm,1.0s,baz=57,slow=3.7,SNR=12
SDV Santo Domingo 109.27 92 eP PP 09 45 21.4 -12
W49A Belvidere 109.27 60 PP PP 09 45 33.2 0.0
baz=243
C36M Paulatuk 109.29 18 PKiKP PKiKP 09 45 03.4 +1.1
baz=226
C36M PP PP 09 45 31.4 -1.1
baz=226
152A Waverly Hall 109.30 63 PP PP 09 45 32.8 -0.7
baz=243
NJS Nagarjunasagar 109.37 278 ePdif Pdif 09 41 00.1 -0.4
NJS eSKSac SKSac 09 51 36.3 -1.8
SPMN Marine on St. 109.42 48 IAMs_20 IAMs_20 10 24 14.3
comp=Z,8µm,20.0s
SPMN Marine on St. 109.42 48 PP PP 09 45 32.8 -1.4
baz=243
SRLM Srisailam 109.49 277 ePdif Pdif 09 41 02.9 +1.7
SRLM ePKiKP PKiKP 09 45 05.1 +0.8
SRLM ePP PP 09 45 35.1 0.0
SRLM eSKSac SKSac 09 51 37.3 -1.4
URIC Uribia, Colomb 109.58 89 eP PP 09 45 32.8 -2.9
TIGA Tifton 109.59 65 PP PP 09 45 34.7 -1.0
baz=243
Y51A Rockmart 109.60 62 PP PP 09 45 34.4 -1.3
baz=243
DWPF Disney Wildern 109.74 69 PP PP 09 45 35.4 -1.4
baz=242
Z52A Williamson 109.76 63 PP PP 09 45 35.2 -1.6
baz=243
V49A McMinnville 109.83 60 PP PP 09 45 35.6 -1.7
baz=243
ULM Lac du Bonnet 109.91 43 Pdiff Pdif 09 41 03.9 +1.8
comp=Z,0.6nm,0.5s,baz=251,slow=6.2,SNR=2.9
ULM PKiKP PKiKP 09 45 03.7 -0.3
comp=Z,4.2nm,0.9s,baz=231,slow=2.8,SNR=6.4
ULM PP PP 09 45 37.9 +0.4
comp=Z,4.6nm,0.8s,baz=243,slow=6.4,SNR=5.4
ULM PKKPbc PKKPbc 09 56 07.0 -0.7
comp=Z,0.7nm,0.5s,baz=135,slow=1.4,SNR=2.7
ULM PKKPab PKKPab 09 56 16.6 +0.6
comp=Z,5.2nm,1.0s,baz=83,slow=3.4,SNR=5.7
ULM Lac du Bonnet 109.91 43 IAMs_20 IAMs_20 10 26 23.9
comp=Z,11µm,20.0s
O44A Mansfield 109.98 55 IAMs_20 IAMs_20 10 24 29.3
comp=Z,11µm,21.0s
L42A Oliver, Polo 109.99 52 IAMs_20 IAMs_20 10 32 08.6
comp=Z,7µm,19.0s
W50A Signal Mountai 110.00 61 PP PP 09 45 38.2 -0.4
baz=243
JFWS Jewell Farm 110.02 51 IAMs_20 IAMs_20 10 24 40.2
comp=Z,8µm,20.0s
JFWS Jewell Farm 110.02 51 PKiKP PKiKP 09 45 03.9 -0.7
baz=243
JFWS PP PP 09 45 36.8 -1.7
baz=243
MOY Mondy 110.03 319 ePKiKP PKiKP 09 45 02.3 -2.1
254A Abbeville 110.05 64 PP PP 09 45 37.7 -1.3
baz=243
X51A Calhoun 110.05 61 PP PP 09 45 37.7 -1.2
baz=243
I40A Norwalk 110.21 50 IAMs_20 IAMs_20 10 24 47.3
comp=Z,9µm,21.0s
U49A Red Boiling Sp 110.25 59 PP PP 09 45 39.5 -0.8
baz=244
URV Uravakonda 110.28 275 ePdif Pdif 09 41 05.9 +1.2
URV ePKiKP PKiKP 09 45 07.7 +1.9
URV ePP PP 09 45 41.4 +0.5
URV eSKSac SKSac 09 51 40.7 -1.4
Y52A Lilburn 110.33 62 IAMs_20 IAMs_20 10 25 25.9
comp=Z,11µm,21.0s
Y52A Lilburn 110.33 62 PP PP 09 45 39.8 -1.1
baz=243
V50A Pikevile 110.37 60 PP PP 09 45 40.3 -0.9
baz=244
W51A Cleveland 110.39 61 PP PP 09 45 41.2 -0.2
baz=244
MNCI Minicoy 110.41 267 IAMs_20 IAMs_20 10 30 49.7
comp=Z,11µm,22.0s
HYB Hyderabad 110.42 278 i Pdif Pdif 09 41 04.0 -1.2
HYB ePP PP 09 45 40.0 -1.8
HYB e 09 48 16.0
HYB eSKS SKSac 09 51 40.0 -2.6
HYB eSKKS SKKSac 09 52 40.0 -2.4
HYB e 09 55 04.0
HYB e 09 56 10.0
HYBB Hyderabad (bro 110.42 278 ePdif Pdif 09 41 05.2 0.0
HYBB ePKiKP PKiKP 09 45 07.2 +1.1
HYBB ePP PP 09 45 41.9 +0.1
HYBB eSKSac SKSac 09 51 39.4 -3.2
Z53A Monticello 110.43 63 PP PP 09 45 40.5 -1.2
baz=243
154A Montrose 110.49 64 PP PP 09 45 41.9 -0.2
baz=243
RPR Rampur 110.50 280 ePdif Pdif 09 41 06.2 +0.7
RPR ePKiKP PKiKP 09 45 05.9 -0.2
RPR ePP PP 09 45 39.8 -2.5
RPR eSKSac SKSac 09 51 41.0 -1.8
GOGA Godfrey 110.57 63 PP PP 09 45 42.7 0.0
baz=244
WCI Wyandotte Cave 110.64 57 PKiKP PKiKP 09 45 06.0 +0.1
baz=244
WCI PP PP 09 45 42.8 -0.3
baz=244
255A Hazlehurst 110.66 65 PP PP 09 45 43.2 -0.1
baz=243
Y53A Monroe 110.68 62 PP PP 09 45 42.5 -1.0
baz=244
T49A Edmonton 110.69 59 IAMs_20 IAMs_20 10 26 07.3
comp=Z,7µm,22.0s
T49A Edmonton 110.69 59 PP PP 09 45 42.7 -0.8
baz=244
TIXI Tiksi 110.74 344 Pdiff Pdif 09 41 08.4 +3.0
comp=Z,0.9nm,0.3s,baz=80,slow=4.7,SNR=3.4
TIXI PKiKP PKiKP 09 45 05.9 +0.9
comp=Z,7.0nm,0.9s,baz=70,slow=2.5,SNR=3.2
TIXI PKKPbc PKKPbc 09 56 03.5 -2.1
comp=Z,2.6nm,0.7s,baz=327,slow=5.4,SNR=5.7
TIXI PKKPab PKKPab 09 56 12.5 +1.1
comp=Z,3.4nm,0.8s,baz=304,slow=3.1,SNR=7.6
TIXI Tiksi 110.74 344 IAMs_20 IAMs_20 10 28 38.6
comp=Z,8µm,20.0s
TIXI Tiksi 110.74 344 i PKiKP PKiKP 09 45 06.2 +1.2
TIXI pmax pmax

comp=Z,8.0nm,1.0s
X52A Dahlonega 110.78 62 PP PP 09 45 43.2 -1.1
baz=244
E38A The Farm, Brul 110.82 47 IAMs_20 IAMs_20 10 25 15.4
comp=Z,9µm,21.0s
U50A Jamestown 110.88 60 PP PP 09 45 43.6 -1.3
baz=244
Z54A Sparta 110.96 63 PP PP 09 45 45.1 -0.4
baz=244
W52A Murphy 110.97 61 IAMs_20 IAMs_20 10 25 51.9
comp=Z,10µm,20.0s
W52A Murphy 110.97 61 PP PP 09 45 44.5 -1.1
baz=244
V51A Loudon 110.97 60 PP PP 09 45 44.3 -1.2
baz=244
155A Kite 110.97 64 PP PP 09 45 44.9 -0.7
baz=244
SFIN Lafayette 111.02 55 IAMs_20 IAMs_20 10 26 00.9
comp=Z,8µm,20.0s
SFIN Lafayette 111.02 55 PP PP 09 45 45.0 -0.8
baz=244
G40A Rib Lake 111.09 49 IAMs_20 IAMs_20 10 26 05.4
comp=Z,9µm,20.0s
T50A Nancy 111.15 59 PP PP 09 45 45.5 -1.3
baz=244
S49A Springfield 111.16 58 PKiKP PKiKP 09 45 07.1 +0.2
baz=244
S49A PP PP 09 45 45.5 -1.3
baz=244
X53A Estanollee 111.18 62 PP PP 09 45 46.1 -0.9
baz=244
K43A Burlington 111.19 52 IAMs_20 IAMs_20 10 25 14.3
comp=Z,8µm,20.0s
L44A Lake County Fo 111.24 53 IAMs_20 IAMs_20 10 31 32.1
comp=Z,6µm,19.0s
L44A Lake County Fo 111.24 53 PP PP 09 45 46.0 -1.3
baz=244
I42A Draeger Farm, 111.32 51 IAMs_20 IAMs_20 10 25 20.7
comp=Z,8µm,21.0s
SRSP Sriramsagar 111.32 279 ePdif Pdif 09 41 09.6 +0.4
SRSP ePKiKP PKiKP 09 45 08.6 +0.9
SRSP ePP PP 09 45 47.9 -0.3
SRSP eSKSac SKSac 09 51 44.2 -2.0
Q48A North Vernon 111.34 57 PKiKP PKiKP 09 45 07.9 +0.8
baz=244
Q48A PP PP 09 45 47.3 -0.8
baz=244
Y54A Tignall 111.35 63 PKiKP PKiKP 09 45 08.1 +0.7
baz=244
Y54A PP PP 09 45 47.0 -1.3
baz=244
EYMN Ely 111.44 46 IAMs_20 IAMs_20 10 26 07.8
comp=Z,9µm,21.0s
EYMN Ely 111.44 46 PKiKP PKiKP 09 45 07.0 -0.1
baz=244
EYMN PP PP 09 45 46.5 -2.2
baz=244
R49A Shelbyville 111.46 58 PKiKP PKiKP 09 45 08.5 +1.1
baz=244
R49A PP PP 09 45 48.3 -0.7
baz=244
U51A La Follette 111.47 60 PP PP 09 45 47.7 -1.4
baz=244
Z55A Blythe 111.49 64 PP PP 09 45 47.7 -1.6
baz=244
V52A Sevierville 111.54 61 PKiKP PKiKP 09 45 08.3 +0.6
baz=244
V52A PP PP 09 45 48.4 -1.3
baz=244
W53A Cullowhee 111.57 61 PKiKP PKiKP 09 45 09.8 +1.9
baz=244
W53A PP PP 09 45 48.9 -1.1
baz=244
156A Sylvania 111.72 64 PP PP 09 45 50.3 -0.7
baz=244
S50A Richmond 111.75 58 PKiKP PKiKP 09 45 09.3 +1.3
baz=244
S50A PP PP 09 45 49.8 -1.3
baz=244
T51A Gray 111.77 59 PKiKP PKiKP 09 45 09.4 +1.4
baz=244
T51A PP PP 09 45 49.9 -1.3
baz=244
P48A Milroy 111.78 56 PKiKP PKiKP 09 45 09.2 +1.2
baz=245
P48A PP PP 09 45 51.3 0.0
baz=245
257A Skidaway Islan 111.78 65 IAMs_20 IAMs_20 10 28 10.6
comp=Z,7µm,20.0s
HODGE Hodges 111.83 63 IAMs_20 IAMs_20 10 26 21.8
comp=Z,9µm,20.0s
TZTN Tazewell 111.88 60 PP PP 09 45 50.6 -1.4
baz=244
X54A Belton 111.88 62 PKiKP PKiKP 09 45 10.0 +1.7
baz=244
X54A PP PP 09 45 51.1 -1.0
baz=244
U52A Thorn Hill 111.94 60 PKiKP PKiKP 09 45 10.5 +2.1
baz=245
U52A PP PP 09 45 51.2 -1.4
baz=245
Q49A Aurora 111.96 57 PKiKP PKiKP 09 45 10.1 +1.7
baz=245
Q49A PP PP 09 45 51.4 -1.1
baz=245
BDFB Brasilia 112.00 127 PKiKP PKiKP 09 45 09.8 +0.5
comp=Z,13nm,1.0s,baz=26,slow=2.1,SNR=8.4
BDFB PKKPbc PKKPbc 09 56 00.7 +0.5
comp=Z,1.4nm,0.5s,baz=84,slow=10,SNR=2.8
BDFB PKKPab PKKPab 09 56 11.0 -0.8
comp=Z,10nm,0.9s,baz=97,slow=7.2,SNR=10
Y55A Saluda 112.01 63 PP PP 09 45 51.7 -1.3
baz=244
V53A Saluda 112.04 61 PP PP 09 45 53.0 -0.3
baz=244
R50A Paris 112.06 58 PKiKP PKiKP 09 45 09.9 +1.4
baz=245
R50A PP PP 09 45 52.4 -0.8
baz=245
Z56A Williston 112.11 64 PP PP 09 45 52.4 -1.3
baz=244
N47A Urbana 112.20 55 IAMs_20 IAMs_20 10 27 17.1
comp=Z,8µm,20.0s
N47A Urbana 112.20 55 PP PP 09 45 52.5 -1.7
baz=245
W54A Cherokee Point 112.25 62 PP PP 09 45 54.2 -0.6
baz=245
L46A Eue Claire 112.26 54 IAMs_20 IAMs_20 10 26 01.7
comp=Z,8µm,20.0s
L46A Eue Claire 112.26 54 PP PP 09 45 53.4 -1.2
baz=245
O48A Farmland 112.31 56 PKiKP PKiKP 09 45 10.0 +1.1
baz=245
O48A PP PP 09 45 53.6 -1.5
baz=245
H43A Windswept, Lux 112.31 51 IAMs_20 IAMs_20 10 26 12.9
comp=Z,9µm,22.0s
P49A Miami Univ. Ec 112.31 57 PKiKP PKiKP 09 45 10.0 +1.0
baz=245
P49A PP PP 09 45 53.6 -1.4
baz=245
S51A Beattyville 112.31 59 IAMs_20 IAMs_20 10 26 49.3
comp=Z,8µm,20.0s
S51A Beattyville 112.31 59 PKiKP PKiKP 09 45 09.7 +0.6
baz=245
S51A PP PP 09 45 54.1 -1.0
baz=245
KLRI Killari 112.36 278 ePdif Pdif 09 41 13.4 -0.4
KLRI ePP PP 09 45 56.1 +0.3
KLRI eSKSac SKSac 09 51 48.7 -1.8
Y56A Pelion 112.36 63 PP PP 09 45 54.6 -0.9
baz=244
X55A Gracelyn & Ava 112.40 63 PP PP 09 45 54.5 -1.4
baz=245
PAULI Pauline 112.42 62 IAMs_20 IAMs_20 10 27 25.2
comp=Z,7µm,20.0s
M47A Cromwell 112.45 54 PP PP 09 45 54.9 -1.1
baz=245
U53A Fall Branch 112.51 60 PKiKP PKiKP 09 45 11.2 +1.7
baz=245
U53A PP PP 09 45 55.1 -1.5
baz=245
T52A Hallie 112.53 60 IAMs_20 IAMs_20 10 26 17.0
comp=Z,9µm,21.0s
T52A Hallie 112.53 60 PKiKP PKiKP 09 45 12.0 +2.5
baz=245
T52A PP PP 09 45 55.0 -1.7
baz=245

Q50A Georgetown 112.54 58 PKiKP PKiKP 09 45 10.9 +1.5
baz=245
Q50A PP PP 09 45 55.8 -0.9
baz=245
R51A Hillsboro 112.60 58 PP PP 09 45 55.8 -1.3
baz=245
Z57A Bowman 112.60 64 PP PP 09 45 56.1 -1.1
baz=244
F42A Maple Grove Fa 112.61 49 IAMs_20 IAMs_20 10 26 23.6
comp=Z,8μm,20.0s
N48A Decatur 112.65 55 PKiKP PKiKP 09 45 10.8 +1.3
baz=245
N48A PP PP 09 45 55.8 -1.6
baz=245
SUR Sutherland 112.65 197 PKiKP PKiKP 09 45 10.8 +0.5
comp=Z,17nm,0.8s,baz=118,slow=4.5,SNR=12
SUR PKKPbc PKKPbc 09 55 58.0 -0.5
comp=Z,6.5nm,0.8s,baz=264,slow=9.2,SNR=3.7
SUR PKKPab PKKPab 09 56 09.6 -0.4
comp=Z,18nm,1.0s,baz=307,slow=1.6,SNR=4.6
SUR Sutherland 112.65 197 IAMs_20 IAMs_20 10 29 28.2
comp=Z,9μm,20.0s
S52A Salyersville 112.70 59 PP PP 09 45 56.3 -1.6
baz=245
V54A Nebo 112.72 61 PKiKP PKiKP 09 45 11.7 +1.8
baz=245
V54A PP PP 09 45 56.9 -1.2
baz=245
T53A Wise 112.80 60 PKiKP PKiKP 09 45 11.9 +1.8
baz=245
T53A PP PP 09 45 57.3 -1.4
baz=245
O49A Covington 112.85 56 PKiKP PKiKP 09 45 10.5 +0.5
baz=246
O49A PP PP 09 45 57.4 -1.5
baz=246
X56A White Oak 112.86 63 PKiKP PKiKP 09 45 11.7 +1.6
baz=245
X56A PP PP 09 45 58.8 -0.3
baz=245
D41A Chassel 112.87 48 IAMs_20 IAMs_20 10 26 51.6
comp=Z,10μm,20.0s
K46A Dorr 112.89 53 PKiKP PKiKP 09 45 11.1 +1.2
baz=246
K46A PP PP 09 45 57.2 -1.9
baz=246
KMSC Kings Mountain 112.91 62 IAMs_20 IAMs_20 10 27 29.3
comp=Z,10μm,20.0s
KMSC Kings Mountain 112.91 62 PKiKP PKiKP 09 45 10.7 +0.5
baz=245
KMSC PP PP 09 45 58.5 -0.9
baz=245
NHSC New Hope 112.92 65 IAMs_20 IAMs_20 10 29 56.6
comp=Z,6μm,20.0s
P50A Jamestown 112.99 57 PKiKP PKiKP 09 45 11.5 +1.2
baz=246
P50A PP PP 09 45 58.3 -1.5
baz=246
L47A Sherwood 112.99 54 PKiKP PKiKP 09 45 11.1 +1.0
baz=246
L47A PP PP 09 45 58.4 -1.5
baz=246
OPO Ambohidratompo 113.04 227 PKKPbc PKKPbc 09 55 57.0 +0.2
comp=Z,4.2nm,0.9s,baz=346,slow=6.2,SNR=4.7
Q51A Peebles 113.07 58 PKiKP PKiKP 09 45 12.5 +2.0
baz=246
Q51A PP PP 09 45 59.7 -0.8
baz=246
M48A Edgerton 113.12 55 IAMs_20 IAMs_20 10 27 55.5
comp=Z,7μm,21.0s
M48A Edgerton 113.12 55 PKiKP PKiKP 09 45 12.1 +1.7
baz=246
M48A PP PP 09 46 00.1 -0.7
baz=246
U54A Nelsons Funny 113.13 61 PP PP 09 46 00.9 -0.2
baz=245
I45A Fountain 113.14 52 IAMs_20 IAMs_20 10 26 13.8
comp=Z,8μm,21.0s
I45A Fountain 113.14 52 PP PP 09 46 00.4 -0.4
baz=246
Y57A Sumter 113.14 64 IAMs_20 IAMs_20 10 27 26.5
comp=Z,10μm,20.0s
Y57A Sumter 113.14 64 PP PP 09 45 59.6 -1.5
baz=245
J46A Howard City 113.25 52 PKiKP PKiKP 09 45 12.2 +1.6
baz=246
J46A PP PP 09 46 00.3 -1.4
baz=246
N49A Columbus Grove 113.26 55 IAMs_20 IAMs_20 10 26 45.2
comp=Z,9μm,20.0s
N49A Columbus Grove 113.26 55 PKiKP PKiKP 09 45 12.2 +1.4
baz=246
N49A PP PP 09 46 00.7 -1.0
baz=246
R52A Catlettsburg 113.28 58 PP PP 09 46 00.9 -1.1
baz=246
Z58A St. Stephen 113.29 64 PP PP 09 46 00.9 -1.2
baz=245
V55A Taylorsville 113.30 61 PKiKP PKiKP 09 45 12.3 +1.4
baz=245
V55A PP PP 09 46 01.0 -1.2
baz=245
O50A Cable 113.33 56 PKiKP PKiKP 09 45 11.8 +0.9
baz=246
O50A PP PP 09 46 00.9 -1.4
baz=246
S53A Williamson 113.39 59 PKiKP PKiKP 09 45 12.8 +1.6
baz=246
S53A PP PP 09 46 01.4 -1.4
baz=246
K47A Vermontville 113.41 53 PKiKP PKiKP 09 45 12.1 +1.1
baz=246
K47A PP PP 09 46 01.2 -1.6
baz=246
P51A Williamsport 113.45 57 PKiKP PKiKP 09 45 12.4 +1.2
baz=246
P51A PP PP 09 46 02.2 -1.0
baz=246
W56A Indian Trail 113.47 62 PP PP 09 46 02.3 -1.1
baz=245
H45A Beulah 113.50 51 PP PP 09 46 02.1 -1.3
baz=246
L48A N Adams 113.50 54 PKiKP PKiKP 09 45 13.0 +1.8
baz=246
L48A PP PP 09 46 02.8 -0.7
baz=246
T54A Tazewell 113.53 60 PP PP 09 46 02.1 -1.8
baz=246
X57A Johnson Farm, 113.55 63 PKiKP PKiKP 09 45 12.9 +1.4
baz=245
X57A PP PP 09 46 02.8 -1.2
baz=245
I46A Reed City 113.62 52 PP PP 09 46 01.7 -2.6
baz=246
M49A Liberty Center 113.62 55 P PKiKP 09 45 12.7 +1.3
baz=246
M49A PP PP 09 46 03.4 -1.0
baz=246
Y58A Scranton 113.64 64 IAMs_20 IAMs_20 10 28 14.7
comp=Z,8μm,20.0s
Y58A Scranton 113.64 64 PP PP 09 46 03.4 -1.2
baz=245
Z59A Georgetown, SC 113.66 65 PP PP 09 46 03.2 -1.5
baz=245
U55A TA2, Sparta 113.69 61 P PKiKP 09 45 12.5 +0.7
baz=246
U55A PP PP 09 46 03.9 -1.1
baz=246
SDDR Presa de Saban 113.75 82 IAMs_20 IAMs_20 10 26 36.1
comp=Z,7μm,20.0s
J47A Sunmer 113.75 53 P PKiKP 09 45 13.1 +1.5
baz=246
J47A PP PP 09 46 05.0 -0.3
baz=246
R53A Hurricane 113.78 59 IAMs_20 IAMs_20 10 29 04.1
comp=Z,9μm,20.0s
R53A Hurricane 113.78 59 P PKiKP 09 45 13.3 +1.5
baz=246
R53A PP PP 09 46 04.4 -1.2
baz=246
Q52A Bidwell 113.81 58 P PKiKP 09 45 12.9 +1.0
baz=246
Q52A PP PP 09 46 04.4 -1.3
baz=246
V56A Mocksville 113.81 62 P PKiKP 09 45 13.8 +1.8
baz=246
V56A PP PP 09 46 04.6 -1.2
baz=246

ACSO Alum Creek Sta 113.81 56 P PKiKP 09 45 12.7 +0.9
baz=246
ACSO PP PP 09 46 05.0 -0.8
baz=246
N50A Nevada 113.91 56 P PKiKP 09 45 13.4 +1.4
baz=246
N50A PP PP 09 46 05.6 -0.8
baz=246
W57A Gilead 113.92 63 IAMs_20 IAMs_20 10 28 13.9
comp=Z,7μm,20.0s
W57A Gilead 113.92 63 P PKiKP 09 45 13.5 +1.4
baz=246
W57A PP PP 09 46 04.8 -1.7
baz=246
G45A Suttons Bay 113.92 51 IAMs_20 IAMs_20 10 26 59.4
comp=Z,8μm,20.0s
G45A Suttons Bay 113.92 51 P PKiKP 09 45 13.3 +1.5
baz=247
G45A PP PP 09 46 04.9 -1.5
baz=247
H46A Fife Lake 114.02 51 P PKiKP 09 45 13.4 +1.4
baz=247
H46A PP PP 09 46 05.2 -1.9
baz=247
L49A Milan 114.02 54 P PKiKP 09 45 14.5 +2.3
baz=247
L49A PP PP 09 46 06.5 -0.7
baz=247
S54A Dingess, Beckl 114.02 59 IAMs_20 IAMs_20 10 28 16.7
comp=Z,7μm,20.0s
S54A Dingess, Beckl 114.02 59 PP PP 09 46 05.9 -1.5
baz=246
O51A Pataskala 114.04 57 P PKiKP 09 45 12.6 +0.3
baz=246
O51A PP PP 09 46 06.2 -1.2
baz=246
K48A Perry 114.05 54 P PKiKP 09 45 12.2 +0.1
baz=247
K48A PP PP 09 46 06.0 -1.4
baz=247
SJMB Sao Joao De Ma 114.06 135 eP Pdif 09 41 22.3 +0.8
U56A King 114.11 61 P PKiKP 09 45 12.7 +0.2
baz=246
U56A PP PP 09 46 06.5 -1.5
baz=246
T55A Pulaski 114.13 60 P PKiKP 09 45 12.6 0.0
baz=246
T55A PP PP 09 46 06.4 -1.7
baz=246
X58A Rowland 114.16 63 IAMs_20 IAMs_20 10 27 54.4
comp=Z,7μm,20.0s
X58A Rowland 114.16 63 P PKiKP 09 45 12.8 +0.2
baz=246
X58A PP PP 09 46 07.3 -1.0
baz=246
P52A Corning 114.17 57 P PKPdf 09 45 12.2 -0.3
baz=246
P52A PP PP 09 46 06.9 -1.4
baz=246
M50A Fremont 114.24 55 IAMs_20 IAMs_20 10 27 35.1
comp=Z,10μm,20.0s
M50A Fremont 114.24 55 P PKiKP 09 45 14.5 +1.9
baz=247
M50A PP PP 09 46 08.1 -0.6
baz=247
F45A CMU Biological 114.26 50 P PKiKP 09 45 13.9 +1.4
baz=247
F45A PP PP 09 46 07.7 -1.1
baz=247
I47A Gladwin 114.27 52 IAMs_20 IAMs_20 10 27 46.8
comp=Z,7μm,20.0s
I47A Gladwin 114.27 52 PP PP 09 46 07.1 -1.8
baz=247
Y59A Loris 114.28 64 IAMs_20 IAMs_20 10 28 15.5
comp=Z,10μm,20.0s
Y59A Loris 114.28 64 PP PP 09 46 07.8 -1.4
baz=246
Q53A Leroy 114.30 58 PP PP 09 46 08.1 -1.1
baz=246
E44A Grand Marais A 114.36 49 IAMs_20 IAMs_20 10 27 37.1
comp=Z,10μm,20.0s
E44A Grand Marais A 114.36 49 PP PP 09 46 09.6 +0.1
baz=247
V57A Coltrane Farms 114.38 62 P PKiKP 09 45 14.6 +1.5
baz=246
V57A PP PP 09 46 07.9 -1.9
baz=246
R54A Victor 114.41 59 PP PP 09 46 08.8 -1.3
baz=246
W58A Raeford 114.43 63 PP PP 09 46 08.6 -1.6
baz=246
BLA Blacksburg 114.44 60 P PKPdf 09 45 12.6 -0.6
baz=246
BLA PP PP 09 46 09.2 -1.0
baz=246
J48A Bridge Port 114.47 53 IAMs_20 IAMs_20 10 29 05.3
comp=Z,7μm,20.0s
J48A Bridge Port 114.47 53 P PKPdf 09 45 12.6 -0.4
baz=247
J48A PP PP 09 46 09.3 -1.1
baz=247
K49A Clarkson 114.50 54 P PKiKP 09 45 13.8 +0.7
baz=247
K49A PP PP 09 46 09.9 -0.7
baz=247
N51A Ashland 114.51 56 P PKiKP 09 45 14.1 +1.0
baz=247
N51A PP PP 09 46 10.0 -0.6
baz=247
GLMI Grayling 114.51 51 IAMs_20 IAMs_20 10 27 28.2
comp=Z,9μm,20.0s
GLMI Grayling 114.51 51 PP PP 09 46 09.0 -1.5
baz=247
S55A Lewisburg 114.60 60 PP PP 09 46 10.2 -1.3
baz=246
P53A Whipple 114.64 58 P PKiKP 09 45 14.9 +1.4
baz=247
P53A PP PP 09 46 10.2 -1.4
baz=247
T56A Rocky Mt 114.65 61 P PKiKP 09 45 15.3 +1.8
baz=246
T56A PP PP 09 46 10.7 -1.1
baz=246
L50A Kingsville 114.65 55 P PKiKP 09 45 15.3 +1.9
baz=247
L50A PP PP 09 46 11.1 -0.5
baz=247
H47A Mio 114.70 52 PP PP 09 46 11.3 -0.6
baz=247
X59A McDuffie Farm, 114.72 64 PP PP 09 46 10.7 -1.6
baz=246
Y60A Bolivia 114.78 64 PP PP 09 46 11.3 -1.4
baz=246
M51A Elyria 114.81 56 P PKPdf 09 45 13.2 -0.5
baz=247
M51A PP PP 09 46 11.6 -1.1
baz=247
V58A Windy Hill, Pi 114.83 62 IAMs_20 IAMs_20 10 28 15.1
comp=Z,10μm,21.0s
V58A Windy Hill, Pi 114.83 62 P PKiKP 09 45 15.3 +1.4
baz=246
V58A PP PP 09 46 12.4 -0.6
baz=246
Q54A Coxs Mills 114.84 58 P PKPdf 09 45 12.3 -1.6
baz=247
Q54A PP PP 09 46 11.9 -1.1
baz=247
WMQ Urumqi 114.84 307 ePKP PKiKP 09 45 16.0 +2.2
WMQ PP PP 09 46 17.5 +4.5
WMQ SKKS 09 53 08.2
WMQ AMB AMB
comp=Z,1μm,11.3s
WMQ LR LR
comp=Z,2μm,25.1s
WMQ LR LR
comp=Z,3μm,28.5s
WMQ LR LR
comp=Z,9μm,29.1s
I48A Sherman Twp 114.87 52 P PKiKP 09 45 14.2 +0.5
baz=248
I48A PP PP 09 46 12.7 -0.4
baz=248
U57A Blanch 114.92 62 P PKiKP 09 45 16.0 +2.0
baz=246
U57A PP PP 09 46 12.5 -1.2
baz=246
BOSA Boshof 114.93 202 PKP PKiKP 09 45 14.6 -0.1
comp=Z,23nm,0.9s,baz=150,slow=1.4,SNR=15

BOSA PKKPbc PKKPbc 09 55 50.6 0.0
comp=Z,2.2nm,0.8s,baz=310,slow=5.0,SNR=3.8
BOSA PKKPab PKKPab 09 55 58.4 -1.4
comp=Z,19nm,1.1s,baz=346,slow=3.5,SNR=11
J49A Marlette 114.93 53 P PKiKP 09 45 15.1 +1.2
baz=247
J49A PP PP 09 46 12.5 -1.1
baz=247
N52A McGinn's Farm, 114.95 56 P PKiKP 09 45 14.0 0.0
baz=247
N52A PP PP 09 46 13.0 -0.7
baz=247
O53A New Philadelph 115.06 57 P PKiKP 09 45 14.3 +0.1
baz=247
O53A PP PP 09 46 13.7 -0.9
baz=247
R55A Marlinton 115.08 59 IAMs_20 IAMs_20 10 31 39.6
comp=Z,7μm,20.0s
R55A Marlinton 115.08 59 P PKiKP 09 45 15.8 +1.4
baz=247
R55A PP PP 09 46 13.9 -0.9
baz=247
W59A Clinton 115.08 63 P PKiKP 09 45 16.1 +1.7
baz=246
W59A PP PP 09 46 13.1 -1.7
baz=246
G47A Hillman 115.14 51 P PKiKP 09 45 14.8 +0.6
baz=248
G47A PP PP 09 46 13.4 -1.6
baz=248
X60A Albert Glenn T 115.19 64 PP PP 09 46 14.3 -1.3
baz=246
T57A Hurt 115.21 61 P PKiKP 09 45 15.3 +0.7
baz=247
T57A PP PP 09 46 14.5 -1.2
baz=247
S56A Natural Bridge 115.24 60 P PKiKP 09 45 15.9 +1.2
baz=247
S56A PP PP 09 46 15.1 -0.9
baz=247
E46A Sault Ste Mari 115.30 50 IAMs_20 IAMs_20 10 28 05.9
comp=Z,9μm,21.0s
H48A Harrisville 115.32 52 IAMs_20 IAMs_20 10 28 39.5
comp=Z,8μm,20.0s
H48A Harrisville 115.32 52 P PKiKP 09 45 15.5 +1.0
baz=248
H48A PP PP 09 46 14.8 -1.5
baz=248
P54A Burton 115.33 58 P PKPdf 09 45 14.5 -0.3
baz=247
P54A PP PP 09 46 15.4 -1.1
baz=247
I49A Point Hope 115.36 53 PP PP 09 46 15.3 -1.3
baz=248
Q55A Buckhannon 115.39 59 P PKPdf 09 45 14.4 -0.5
baz=247
Q55A PP PP 09 46 16.2 -0.8
baz=247
M52A Chesterland 115.46 56 P PKiKP 09 45 15.3 +0.4
baz=248
M52A PP PP 09 46 16.7 -0.7
baz=248
V59A Middlesex 115.47 63 P PKiKP 09 45 16.6 +1.5
baz=247
V59A PP PP 09 46 16.1 -1.4
baz=247
U58A Oxford 115.49 62 PP PP 09 46 16.0 -1.6
baz=247
CNNC Cliffs of the 115.52 63 IAMs_20 IAMs_20 10 31 04.5
comp=Z,7μm,20.0s
CNNC Cliffs of the 115.52 63 PP PP 09 46 16.1 -1.8
baz=246
N53A Lisbon 115.54 57 P PKPdf 09 45 14.9 -0.2
baz=248
N53A PP PP 09 46 17.3 -0.7
baz=248
W60A Pink Hill 115.58 64 PP PP 09 46 16.3 -2.0
baz=246
O54A Avella 115.63 57 P PKiKP 09 45 15.6 +0.2
baz=248
O54A PP PP 09 46 18.7 +0.1
baz=248
R56A Bull Pasture M 115.65 60 P PKiKP 09 45 16.5 +1.0
baz=247
R56A PP PP 09 46 19.0 +0.2
baz=247
D46A Sault St. Mari 115.67 49 P PKPdf 09 45 15.0 -0.1
baz=248
D46A PP PP 09 46 15.4 -3.3
baz=248
T58A Grand View Acr 115.72 61 P PKiKP 09 45 15.9 +0.4
baz=247
T58A PP PP 09 46 17.6 -1.6
baz=247
S57A Dark Hollow, R 115.72 60 PKiKP 09 45 16.3 +0.7
S57A Dark Hollow, R 115.72 60 P PKiKP 09 45 15.9 +0.3
baz=247
S57A PP PP 09 46 18.0 -1.3
baz=247
P55A Reedsville 115.76 58 P PKPdf 09 45 15.3 -0.3
baz=248
P55A PP PP 09 46 18.4 -1.2
baz=248
K51A Iona Station 115.80 54 P PKiKP 09 45 15.5 0.0
baz=248
K51A PP PP 09 46 18.0 -1.7
baz=248
MCWV Mont Chateau 115.81 58 IAMs_20 IAMs_20 10 28 25.8
comp=Z,6μm,20.0s
MCWV Mont Chateau 115.81 58 PP PP 09 46 18.8 -1.1
baz=248
M53A WI Miller and 115.89 56 P PKiKP 09 45 17.2 +1.4
baz=248
M53A PP PP 09 46 19.7 -0.7
baz=248
E47A Iron Bridge 115.99 50 P PKPdf 09 45 15.5 -0.3
baz=249
E47A PP PP 09 46 19.3 -1.6
baz=249
U59A Littleton 116.03 62 PP PP 09 46 20.0 -1.5
baz=247
Q56A Snyder Ridge, 116.05 59 IAMs_20 IAMs_20 10 28 55.1
comp=Z,8μm,21.0s
Q56A Snyder Ridge, 116.05 59 P PKiKP 09 45 17.6 +1.4
baz=248
Q56A PP PP 09 46 20.7 -0.9
baz=248
F48A Evansville 116.19 51 P PKPdf 09 45 16.0 -0.2
baz=249
F48A PP PP 09 46 22.2 -0.2
baz=249
N54A Moraine State 116.20 57 P PKPdf 09 45 16.1 -0.3
baz=248
N54A PP PP 09 46 21.5 -1.0
baz=248
V60A Jim Taylor Roa 116.20 63 IAMs_20 IAMs_20 10 29 30.4
comp=Z,7μm,21.0s
V60A Jim Taylor Roa 116.20 63 PP PP 09 46 21.2 -1.4
baz=247
R57A Stanardsville 116.24 60 P PKiKP 09 45 17.9 +1.3
baz=248
R57A PP PP 09 46 22.8 -0.2
baz=248
D47A Chapleau 116.32 49 P PKPdf 09 45 15.0 -1.5
baz=249
D47A PP PP 09 46 22.5 -0.8
baz=249
S58A Poland Farm, P 116.33 61 IAMs_20 IAMs_20 10 29 17.7
comp=Z,10μm,20.0s
S58A Poland Farm, P 116.33 61 P PKiKP 09 45 16.8 +0.1
baz=248
S58A PP PP 09 46 22.5 -1.0
baz=248
K52A Tillsonburg 116.36 55 P PKPdf 09 45 16.4 -0.2
baz=248
K52A PP PP 09 46 23.4 -0.3
baz=248
L53A Girard 116.38 56 P PKiKP 09 45 17.2 +0.4
baz=248
L53A PP PP 09 46 23.0 -0.7
baz=248
O55A Ligonier 116.40 58 P PKiKP 09 45 17.5 +0.7
baz=248
O55A PP PP 09 46 23.2 -0.8
baz=248
T59A Double "B" Far 116.45 62 P PKPdf 09 45 16.9 -0.1
baz=247
T59A PP PP 09 46 24.1 -0.2

	baz=247						
P56A	Dayton Farm, R	116.47	59	P	PKPdf	09 45 16.5	-0.4
	baz=248						
P56A				PP	PP	09 46 23.9	-0.6
	baz=248						
I51A	Listowel	116.53	53	PP	PP	09 46 24.1	-0.6
	baz=249						
F49A	Sandfield	116.55	51	P	PKPdf	09 45 16.4	-0.4
	baz=249						
F49A				PP	PP	09 46 24.7	-0.2
	baz=249						
U60A	Pendleton	116.55	62	PP	PP	09 46 24.0	-1.1
	baz=247						
R58B	Mineral	116.59	60	IAMs_20	IAMs_20	10 29 04.6	
	comp=Z,10µm,20.0s						
R58B	Mineral	116.59	60	P	PKiKP	09 45 18.5	+1.3
	baz=248						
R58B				PP	PP	09 46 25.5	+0.2
	baz=248						
Q57A	Strasburg	116.60	59	P	PKPdf	09 45 17.2	-0.1
	baz=248						
Q57A				PP	PP	09 46 25.2	-0.2
	baz=248						
ERPA	Erie	116.62	56	P	PKiKP	09 45 19.1	+1.9
	baz=249						
ERPA				PP	PP	09 46 24.7	-0.8
	baz=249						
R58A	Rapidan	116.62	60	P	PKiKP	09 45 17.8	+0.6
	baz=248						
R58A				PP	PP	09 46 25.0	-0.6
	baz=248						
M54A	Oil Creek Stat	116.63	56	P	PKiKP	09 45 17.5	+0.3
	baz=248						
M54A				PP	PP	09 46 24.3	-1.2
	baz=248						
J52A	Paris	116.69	54	P	PKiKP	09 45 17.6	+0.4
	baz=249						
J52A				PP	PP	09 46 26.5	+0.6
	baz=249						
E48A	Lockeyer	116.72	50	P	PKPdf	09 45 16.9	-0.3
	baz=249						
E48A				PP	PP	09 46 25.6	-0.4
	baz=249						
V61A	Roper	116.72	63	IAMs_20	IAMs_20	10 29 48.3	
	comp=Z,9µm,20.0s						
N55A	Marion Center	116.84	57	P	PKiKP	09 45 17.9	+0.2
	baz=248						
N55A				PP	PP	09 46 26.4	-0.6
	baz=248						
S59A	Mechanicsville	116.94	61	P	PKiKP	09 45 19.5	+1.6
	baz=248						
S59A				PP	PP	09 46 27.0	-0.8
	baz=248						
O56A	Blue Knob Stat	116.95	58	P	PKiKP	09 45 18.7	+0.8
	baz=248						
O56A				PP	PP	09 46 28.2	+0.3
	baz=248						
CBN	Corbin Frederi	117.05	60	IAMs_20	IAMs_20	10 29 26.7	
	comp=Z,9µm,21.0s						
CBN	Corbin Frederi	117.05	60	P	PKiKP	09 45 19.4	+1.3
	baz=248						
CBN				PP	PP	09 46 28.9	+0.3
	baz=248						
P57A	Homestead Farm	117.06	59	IAMs_20	IAMs_20	10 29 45.9	
	comp=Z,8µm,20.0s						
P57A	Homestead Farm	117.06	59	P	PKPdf	09 45 17.8	-0.2
	baz=248						
P57A				PP	PP	09 46 28.2	-0.4
	baz=248						
Q58A	Fox Den Farm,	117.10	60	P	PKiKP	09 45 19.3	+1.1
	baz=248						
Q58A				PP	PP	09 46 28.6	-0.3
	baz=248						
V62A	Hyde County Ai	117.10	64	IAMs_20	IAMs_20	10 33 05.3	
	comp=Z,6µm,19.0s						
MSEY	Mahe Island	117.12	244	IAMs_20	IAMs_20	10 31 46.5	
	comp=Z,7µm,20.0s						
T60A	Surry	117.12	62	P	PKiKP	09 45 19.8	+1.5
	baz=248						
T60A				PP	PP	09 46 27.9	-1.2
	baz=248						
L54A	Sinclairville	117.13	56	P	PKPdf	09 45 18.1	0.0
	baz=249						
L54A				PP	PP	09 46 28.5	-0.5
	baz=249						
I52A	Shelburne	117.19	53	P	PKiKP	09 45 18.4	+0.1
	baz=249						
I52A				PP	PP	09 46 30.1	+0.7
	baz=249						
D48A	Paudash Townsh	117.19	50	P	PKPdf	09 45 17.3	-0.8
	baz=250						
D48A				PP	PP	09 46 28.5	-0.8
	baz=250						
R59A	King George, V	117.23	61	P	PKiKP	09 45 19.1	+0.6
	baz=248						
R59A				PP	PP	09 46 29.3	-0.5
	baz=248						
M55A	Ridgway	117.24	57	P	PKiKP	09 45 18.9	+0.5
	baz=249						
M55A				PP	PP	09 46 29.0	-0.9
	baz=249						
N56A	West Decatur	117.38	57	P	PKiKP	09 45 19.2	+0.5
	baz=249						
N56A				PP	PP	09 46 30.1	-0.8
	baz=249						
S60A	Water View	117.39	61	P	PKiKP	09 45 20.2	+1.4
	baz=248						
S60A				PP	PP	09 46 29.9	-1.0
	baz=248						
I53A	Kortright Cn E	117.50	54	P	PKiKP	09 45 19.4	+0.6
	baz=250						
I53A				PP	PP	09 46 32.1	+0.6
	baz=250						
D49A	Beulah Townshi	117.52	50	P	PKiKP	09 45 18.8	+0.1
	baz=250						
D49A				PP	PP	09 46 31.0	-0.6
	baz=250						
SSPA	Standing Stone	117.56	58		PKPdf	09 45 18.9	-0.2
SSPA	Standing Stone	117.56	58	P	PKiKP	09 45 19.4	+0.3
	baz=249						
SSPA				PP	PP	09 46 31.7	-0.3
	baz=249						
P58A	Pank, Wackersv	117.57	59	P	PKiKP	09 45 19.0	0.0
	baz=249						
P58A				PP	PP	09 46 31.8	-0.4
	baz=249						
H52A	Wyevale	117.58	53	P	PKPdf	09 45 18.3	-0.6
	baz=250						
H52A				PP	PP	09 46 32.1	0.0
	baz=250						
O57A	Amberson	117.59	58	P	PKiKP	09 45 19.4	+0.3
	baz=249						
O57A				PP	PP	09 46 32.1	-0.2
	baz=249						
SJG	San Juan	117.64	86		PKiKP	09 45 20.4	+0.6
SJG	San Juan	117.64	86	PKIKP	PKiKP	09 45 20.4	+0.6
R60A	Leonardtown, M	117.65	61	PP	PP	09 46 32.9	+0.2
	baz=248						
M56A	Emporium	117.66	57	P	PKiKP	09 45 19.2	0.0
	baz=249						
M56A				PP	PP	09 46 31.7	-1.0
	baz=249						
K54A	Basiliko Farm,	117.70	55	P	PKPdf	09 45 18.8	-0.5
	baz=250						
K54A				PP	PP	09 46 32.4	-0.6
	baz=250						
L55A	Hinsdale	117.72	56	P	PKiKP	09 45 19.5	+0.1
	baz=250						
L55A				PP	PP	09 46 32.7	-0.5
	baz=250						
Q59A	Harwood	117.81	60	P	PKiKP	09 45 21.0	+1.5
	baz=249						
Q59A				PP	PP	09 46 33.2	-0.7
	baz=249						
N57A	Milroy	117.84	58	P	PKiKP	09 45 19.9	+0.3
	baz=249						
N57A				PP	PP	09 46 33.1	-0.9
	baz=249						
J54A	Appleton	117.96	55	P	PKiKP	09 45 19.8	+0.1
	baz=250						
J54A				PP	PP	09 46 34.2	-0.5
	baz=250						
ZSN	Zaisan	117.99	310	ePKP	PKiKP	09 45 20.4	+0.7
ZSN				iSKS	SKSdf	09 52 12.5	-17
ZSN	Zaisan	117.99	310	ePKIKP	PKiKP	09 45 20.3	+0.7
ZSN				i		09 52 12.4	
F51A	Arnstein	118.00	52	P	PKiKP	09 45 19.7	0.0
	baz=250						
F51A				PP	PP	09 46 33.2	-1.8
	baz=250						
MEDO	Medina	118.05	55	IAMs_20	IAMs_20	10 29 24.0	
	comp=Z,7µm,21.0s						
O58A	Lewisberry	118.07	59	P	PKiKP	09 45 20.4	+0.3
	baz=249						
O58A				PP	PP	09 46 35.2	-0.5
	baz=249						
SADO	Sadowa	118.13	53	IAMs_20	IAMs_20	10 29 58.9	
	comp=Z,8µm,20.0s						
LBTB	Lobatse	118.15	204	PKP	PKPdf	09 45 20.6	-0.3
	comp=Z,18nm,1.1s,baz=184,slow=2.6,SNR=12						
K55A	Perry	118.17	55	P	PKiKP	09 45 20.9	+0.8
	baz=250						
K55A				PP	PP	09 46 35.6	-0.7
	baz=250						
P59A	Jarrettsville	118.24	59	P	PKiKP	09 45 21.2	+0.8
	baz=249						
P59A				PP	PP	09 46 36.5	-0.3
	baz=249						
PAGS	Pennsylvania G	118.25	58	IAMs_20	IAMs_20	10 30 11.5	
	comp=Z,10µm,20.0s						
L56A	Greenwood	118.32	56	P	PKiKP	09 45 20.9	+0.4
	baz=250						
L56A				PP	PP	09 46 36.5	-0.8
	baz=250						
M57A	Sunshine Farm,	118.35	57	P	PKiKP	09 45 20.6	0.0
	baz=250						
M57A				PP	PP	09 46 36.6	-0.9
	baz=250						
MVL	Millersville	118.44	59	IAMs_20	IAMs_20	10 30 19.4	
	comp=Z,8µm,20.0s						
H53A	Bobcaygeon	118.44	53	P	PKiKP	09 45 20.6	0.0
	baz=251						
H53A				PP	PP	09 46 37.1	-0.9
	baz=251						
Q60A	Greensboro	118.45	60	P	PKiKP	09 45 21.6	+0.8
	baz=249						
Q60A				PP	PP	09 46 38.0	-0.2
	baz=249						
N58A	Sunbury	118.47	58	P	PKiKP	09 45 20.9	+0.1
	baz=250						
N58A				PP	PP	09 46 37.7	-0.6
	baz=250						
GRGR	Grenville	118.48	94	IAMs_20	IAMs_20	10 28 45.4	
	comp=Z,7µm,21.0s						
J55A	Hilton	118.52	55	IAMs_20	IAMs_20	10 29 48.5	
	comp=Z,8µm,21.0s						
J55A	Hilton	118.52	55	P	PKiKP	09 45 20.9	+0.1
	baz=250						
J55A				PP	PP	09 46 38.0	-0.7
	baz=250						
R61A	Willards	118.58	61	IAMs_20	IAMs_20	10 32 44.4	
	comp=Z,9µm,20.0s						
G53A	Haliburton	118.59	53	P	PKPdf	09 45 20.2	-0.7
	baz=251						
G53A				PP	PP	09 46 38.1	-1.0
	baz=251						
O59A	Robesonia	118.66	59	P	PKiKP	09 45 21.6	+0.4
	baz=250						
O59A				PP	PP	09 46 39.8	0.0
	baz=250						
K56A	Middlesex	118.67	56	P	PKiKP	09 45 21.2	0.0
	baz=250						
K56A				PP	PP	09 46 39.3	-0.5
	baz=250						
D51A	Lot 18 Range I	118.73	50	P	PKPdf	09 45 20.2	-0.9
	baz=251						
D51A				PP	PP	09 46 38.4	-1.6
	baz=251						
L57A	Andrews Acres	118.77	57	P	PKPdf	09 45 20.8	-0.5
	baz=250						
L57A				PP	PP	09 46 39.8	-0.7
	baz=250						
M58A	Price's Panora	118.83	57	P	PKPdf	09 45 21.3	-0.2
	baz=250						
M58A				PP	PP	09 46 40.7	-0.2
	baz=250						
P60A	Greenville	118.89	59	IAMs_20	IAMs_20	10 32 24.4	
	comp=Z,7µm,20.0s						
P60A	Greenville	118.89	59	P	PKPdf	09 45 20.9	-0.7
	baz=250						
P60A				PP	PP	09 46 41.0	-0.2
	baz=250						
I55A	Frankford	118.93	54	P	PKPdf	09 45 20.4	-1.1
	baz=251						
I55A				PP	PP	09 46 40.8	-0.7
	baz=251						
E52A	Mattawa	118.94	51	P	PKPdf	09 45 20.9	-0.6
	baz=251						
E52A				PP	PP	09 46 41.0	-0.5
	baz=251						
G54A	Lake Saint Pet	119.04	53	P	PKPdf	09 45 21.3	-0.4
	baz=251						
G54A				PP	PP	09 46 42.3	+0.1
	baz=251						
PSUB	Penn St. - Bra	119.06	59	IAMs_20	IAMs_20	10 32 30.0	
	comp=Z,7µm,20.0s						
N59A	State Game Lan	119.17	58	P	PKiKP	09 45 23.6	+1.4
	baz=250						
N59A				PP	PP	09 46 42.9	-0.3
	baz=250						
J56A	Wolcott	119.19	55	IAMs_20	IAMs_20	10 30 19.1	
	comp=Z,9µm,20.0s						
J56A	Wolcott	119.19	55	P	PKPdf	09 45 21.2	-0.8
	baz=251						
J56A				PP	PP	09 46 43.4	+0.2
	baz=251						
O60A	Telford	119.23	59	P	PKPdf	09 45 21.9	-0.3
	baz=250						
O60A				PP	PP	09 46 43.4	-0.2
	baz=250						
ALGO	Algonquin Park	119.24	52	P	PKPdf	09 45 21.6	-0.4
	baz=252						
ALGO				PP	PP	09 46 43.2	-0.4
	baz=252						
K57A	Scipio Center	119.25	56	P	PKPdf	09 45 22.1	-0.1
	baz=251						
K57A				PP	PP	09 46 44.2	+0.4
	baz=251						
H55A	Tweed	119.38	54	P	PKPdf	09 45 21.5	-0.8
	baz=251						
H55A				PP	PP	09 46 43.8	-0.7
	baz=251						
BINY	Binghamton	119.44	57	P	PKiKP	09 45 23.0	+0.3
	baz=251						
BINY				PP	PP	09 46 44.8	-0.3
	baz=251						
MK31	Makanchi Array	119.45	309	iPKIKP	PKPdf	09 45 20.7	-1.8
MKAR	Makanchi Array	119.45	309	Pdiff	Pdif	09 41 47.7	+3.0
	comp=Z,0.4nm,0.8s,baz=113,slow=6.3,SNR=3.9						
MKAR				PKP	PKPdf	09 45 21.6	-0.9
	comp=Z,26nm,1.1s,baz=153,slow=0.5,SNR=28						
MKAR				PKKPbc	PKKPab	09 55 34.1	-0.5
	comp=Z,6.2nm,0.9s,baz=274,slow=3.5,SNR=16						
MKAR				SKKPbc	SKKPbc	09 59 17.6	-3.9
	comp=Z,2.6nm,1.1s,baz=251,slow=4.4,SNR=3.6						
MKAR	Makanchi Array	119.45	309		Pdif	09 41 48.2	+3.5
MKAR					PKPdf	09 45 20.5	-2.0
MKAR	Makanchi Array	119.45	309	PKIKP	PKPdf	09 45 20.5	-2.0
P61A	Hammonton	119.45	60	IAMs_20	IAMs_20	10 34 10.3	
	comp=Z,6µm,19.0s						
P61A	Hammonton	119.45	60	P	PKiKP	09 45 23.3	+0.6
	baz=250						
P61A				PP	PP	09 46 44.9	-0.2
	baz=250						
L58A	Harry Jones Me	119.49	57	P	PKiKP	09 45 23.1	+0.3
	baz=251						
L58A				PP	PP	09 46 45.2	-0.2
	baz=251						
M59A	Waymart	119.62	57	P	PKiKP	09 45 23.7	+0.6
	baz=251						
M59A				PP	PP	09 46 45.9	-0.4
	baz=251						
E53A	Dumoine, Ponti	119.63	52	P	PKPdf	09 45 22.3	-0.5
	baz=252						
E53A				PP	PP	09 46 46.4	+0.2
	baz=252						
N60A	Cedar Hill Far	119.63	58	P	PKPdf	09 45 22.2	-0.8
	baz=250						
N60A				PP	PP	09 46 45.7	-0.7
	baz=250						
MAKZ	Makanchi	119.66	309		PKPdf	09 45 20.7	-2.2
MAKZ	Makanchi	119.66	309	PKIKP	PKPdf	09 45 20.9	-2.0
RES	Resolute Bay	119.66	18	PKKPbc	PKKPbc	09 55 33.4	-1.0
	comp=Z,1.4nm,0.8s,baz=77,slow=5.3,SNR=3.1						
RES	Resolute Bay	119.66	18	IAMs_20	IAMs_20	10 32 45.9	
	comp=Z,7µm,22.0s						
O61A	Allentown	119.77	59	P	PKPdf	09 45 23.1	-0.2
	baz=250						
O61A				PP	PP	09 46 46.7	-0.6
	baz=250						
SABA	Saba	119.84	88	IAMs_20	IAMs_20	10 29 32.5	
	comp=Z,9µm,21.0s						
K58A	Earlville	119.86	56	P	PKPdf	09 45 22.5	-0.9
	baz=251						
K58A				PP	PP	09 46 47.4	-0.5
	baz=251						
G55A	Calabogie	119.91	53	P	PKPdf	09 45 22.8	-0.6
	baz=252						
G55A				PP	PP	09 46 47.9	-0.3
	baz=252						
E54A	Lac Daplat, Po	119.96	52	P	PKPdf	09 45 22.6	-0.8
	baz=252						
E54A				PP	PP	09 46 47.4	-1.0
	baz=252						
ZALV	Zalesovo Beam	119.97	317	PKP	PKPdf	09 45 22.0	-1.2
	comp=Z,3.7nm,0.6s,baz=151,slow=1.4,SNR=17						
ZALV				PKKPbc	PKKPbc	09 55 32.5	-0.4
	comp=Z,3.1nm,0.8s,baz=291,slow=4.2,SNR=7.3						
ZALV				SKKPbc	SKKPbc	09 59 14.1	-6.2
	comp=Z,4.7nm,1.0s,baz=289,slow=4.4,SNR=4.2						
ZALV	Zalesovo Beam	119.97	317		PKPdf	09 45 21.1	-2.1
ZALV	Zalesovo Beam	119.97	317	PKIKP	PKPdf	09 45 22.0	-1.2
H56A	Elgin	120.02	54	P	PKPdf	09 45 22.8	-0.7
	baz=252						
H56A				PP	PP	09 46 48.7	-0.3
	baz=252						
L59A	Walton	120.10	57	P	PKPdf	09 45 23.8	-0.1
	baz=251						
L59A				PP	PP	09 46 49.1	-0.6
	baz=251						
M60A	Port Jervis	120.12	58	P	PKiKP	09 45 24.6	+0.5
	baz=251						
M60A				PP	PP	09 46 49.2	-0.5
	baz=251						
N61A	South Mountain	120.17	59	P	PKPdf	09 45 23.7	-0.3
	baz=251						
N61A				PP	PP	09 46 49.2	-0.9
	baz=251						
SMRT	St. Maarten	120.19	87	IAMs_20	IAMs_20	10 30 39.3	
	comp=Z,7µm,20.0s						
FDF	Fort de France	120.21	92	IAMs_20	IAMs_20	10 34 48.4	
	comp=Z,6µm,20.0s						
I57A	Carthage	120.22	55	P	PKPdf	09 45 23.0	-1.0
	baz=252						
I57A				PP	PP	09 46 49.5	-0.9
	baz=252						
SHLS	Shalkode	120.23	304	ePKP	PKPdf	09 45 23.4	-0.9
SHLS				eSKS	SKSac	09 52 21.0	+2.0
SHLS	Shalkode	120.23	304	ePKIKP	PKPdf	09 45 23.3	-0.9
SHLS				e		09 52 20.9	
PDGK	Podgornoye	120.26	304	PKIKP	PKPdf	09 45 22.4	-1.9
J58A	Remsen	120.30	56	P	PKPdf	09 45 23.8	-0.4
	baz=252						
J58A				PP	PP	09 46 50.7	-0.3
	baz=252						
F55A	Otter Lake	120.33	53	P	PKPdf	09 45 23.2	-1.0
	baz=253						
F55A				PP	PP	09 46 50.9	-0.2
	baz=253						
K59A	Cooperstown	120.42	56	P	PKPdf	09 45 24.1	-0.4
	baz=252						
K59A				PP	PP	09 46 52.2	+0.4
	baz=252						
D54A	Lac Fusel, La	120.52	51	P	PKPdf	09 45 23.5	-1.0
	baz=253						
D54A				PP	PP	09 46 51.8	-0.5
	baz=253						
PAL	Palisades	120.53	58	P	PKiKP	09 45 24.8	0.0
	baz=251						
PAL				PP	PP	09 46 51.5	-1.0
	baz=251						
UZB	Uzynbulak	120.53	304	eSKS	SKSac	09 52 21.2	+1.2
H57A	Richville	120.57	54	P	PKPdf	09 45 24.0	-0.7
	baz=252						
H57A				PP	PP	09 46 52.6	-0.1
	baz=252						
L60A	Shokan	120.62	57	P	PKPdf	09 45 24.8	-0.1
	baz=252						
L60A				PP	PP	09 46 52.6	-0.5
	baz=252						
I58A	Old Forge	120.62	55	P	PKPdf	09 45 24.6	-0.3
	baz=252						
I58A				PP	PP	09 46 52.9	-0.3
	baz=252						
MATQ	Matagami	120.63	48	P	PKPdf	09 45 23.6	-1.0
	baz=254						
MATQ				PP	PP	09 46 52.1	-0.9
	baz=254						
E55A	Montcerf-Lytto	120.71	52	P	PKPdf	09 45 24.3	-0.6
	baz=253						
E55A				PP	PP	09 46 52.4	-1.2
	baz=253						
M61A	Granite Spring	120.73	58	P	PKPdf	09 45 24.9	-0.2
	baz=251						
M61A				PP	PP	09 46 53.7	-0.2
	baz=251						
N62A	Caumsett State	120.82	59	P	PKPdf	09 45 24.3	-0.9
	baz=251						
N62A				PP	PP	09 46 53.8	-0.7
	baz=251						
LSQQ	Lebel-sur-Quev	120.85	49	P	PKPdf	09 45 24.4	-0.6
	baz=254						
LSQQ				PP	PP	09 46 54.0	-0.6
	baz=254						
KPKS	Kokpek	120.86	304	ePKP	PKPdf	09 45 24.2	-1.3
KPKS				eSKS	SKSac	09 52 15.3	-5.8
KPKS	Kokpek	120.86	304	ePKIKP	PKPdf	09 45 24.1	-1.3
KPKS				e		09 52 15.2	
J59A	Piesco	120.88	56	P	PKPdf	09 45 24.9	-0.4
	baz=252						
J59A				PP	PP	09 46 54.0	-0.9
	baz=252						
SATY	Saty	120.93	304	ePKP	PKPdf	09 45 24.8	-0.9
SATY	Saty	120.93	304	ePKIKP	PKPdf	09 45 24.7	-0.9
ZHN	Zhinishke	120.94	304	ePKIKP	PKPdf	09 45 25.2	-0.4
G57A	Newington	121.03	54	P	PKiKP	09 45 26.1	+0.5
	baz=253						
G57A				PP	PP	09 46 55.6	-0.3
	baz=253						
K60A	Five Rivers En	121.05	57	PP	PP	09 46 56.1	+0.1
	baz=252						
L61A	Hillsdale 1, H	121.15	57	P	PKPdf	09 45 25.6	-0.3
	baz=252						
L61A				PP	PP	09 46 56.2	-0.6
	baz=252						
LONY	Lake Ozonia	121.17	54	IAMs_20	IAMs_20	10 35 41.4	
	comp=Z,6µm,19.0s						
LONY	Lake Ozonia	121.17	54	P	PKPdf	09 45 25.3	-0.5
	baz=253						
LONY				PP	PP	09 46 56.4	-0.4
	baz=253						
MATP	Matopo	121.22	209	PKP	PKPdf	09 45 26.1	-0.9
	comp=Z,39nm,1.0s,baz=160,slow=2.5,SNR=24						
MATP				PKKPbc	PKKPbc	09 55 28.1	0.0
	comp=Z,10.0nm,1.0s,baz=329,slow=4.7,SNR=8.9						
NCB	Newcomb	121.22	55	IAMs_20	IAMs_20	10 31 40.0	
	comp=Z,9µm,20.0s						
D55A	Sainte-Anne-du	121.26	51	P	PKPdf	09 45 25.4	-0.5
	baz=254						
D55A				PP	PP	09 46 57.1	-0.3
	baz=254						
H58A	Gabriels	121.38	55	P	PKPdf	09 45 25.9	-0.4
	baz=253						
H58A				PP	PP	09 46 57.8	-0.5
	baz=253						
M62A	Hamden	121.39	58	P	PKPdf	09 45 25.8	-0.5
	baz=252						
M62A				PP	PP	09 46 57.8	-0.6
	baz=252						
I59A	Olmsteadville	121.41	55	P	PKPdf	09 45 25.4	-1.0
	baz=253						
I59A				PP	PP	09 46 57.9	-0.7
	baz=253						
E56A	St. Veronique	121.41	52	P	PKPdf	09 45 25.5	-0.7
	baz=254						
E56A				PP	PP	09 46 57.3	-1.2
	baz=254						
K61A	Williamstown	121.50	57	P	PKPdf	09 45 26.0	-0.5
	baz=252						
K61A				PP	PP	09 47 00.2	+1.0
	baz=252						
TDK	Taldyqorghan	121.51	306	ePKP	PKPdf	09 45 25.0	-1.5
TDK				eSKS	SKSac	09 52 21.2	-1.8

TDK Taldyqorghan 121.51 306 ePKIKP PKPdf 09 45 25.0 -1.5
TDK e 09 52 21.2
J60A Lant Hill Farm 121.56 56 P PKPdf 09 45 26.5 -0.1
baz=253
J60A PP PP 09 46 59.4 -0.2
baz=253
KSH Kashi 121.57 299 PKP PKiKP 09 45 27.2 +0.1
KSH sPKP 09 45 40.4
KSH PP PP 09 47 03.1 +3.2
KSH PKS PKSdf 09 49 01.8 -1.9
KSH SKKS SKKSac 09 53 54.4 -2.0
KSH SS SS 10 03 35.5 +1.7
KSH AMB AMB
comp=Z,1μm,5.8s
KSH LR LR
comp=Z,2μm,12.0s
KSH LR LR
comp=Z,5μm,17.3s
KSH LR LR
comp=Z,6μm,26.0s
NIL Nilore 121.67 292 PKPdf 09 45 25.9 -1.3
NIL Nilore 121.67 292 PKIKP PKPdf 09 45 25.9 -1.3
G58A Ormstown 121.68 54 P PKPdf 09 45 26.2 -0.5
baz=254
G58A PP PP 09 46 59.8 -0.5
baz=254
D56A ZEC Mazanza, M 121.74 52 P PKPdf 09 45 26.3 -0.5
baz=254
D56A PP PP 09 47 00.3 -0.4
baz=254
L62A Suffield 121.74 58 P PKiKP 09 45 28.3 +1.2
baz=252
L62A PP PP 09 47 00.2 -0.6
baz=252
SEM Semipalatinsk 121.76 313 ePKP PKPdf 09 45 23.7 -3.4
SEM eSKS SKSac 09 52 20.0 -4.1
SEM Semipalatinsk 121.76 313 ePKIKP PKPdf 09 45 23.7 -3.4
SEM e 09 52 19.9
H59A Cadyville 121.78 54 P PKPdf 09 45 26.4 -0.6
baz=253
H59A PP PP 09 47 00.9 -0.2
baz=253
I60A Shoreham 121.83 55 P PKPdf 09 45 27.1 0.0
baz=253
L61B Northampton 121.85 57 P PKPdf 09 45 27.1 -0.1
baz=253
L61B PP PP 09 47 02.0 +0.5
baz=253
FRNY Flat Rock 121.91 54 IAMs_20 IAMs_20 10 35 03.0
comp=Z,6μm,21.0s
MDOK Medeo 121.91 304 ePKP PKPdf 09 45 26.2 -1.3
MDOK eSKS SKSac 09 52 23.7 -1.1
MDOK Medeo 121.91 304 ePKIKP PKPdf 09 45 26.1 -1.4
MDOK e 09 47 00.5
MDOK eSS SS 10 03 31.4 -6.6
TNSS Tian-Shan 121.95 303 ePKIKP PKiKP 09 45 29.5 +1.4
E57A Chemin Saint G 121.97 52 P PKPdf 09 45 26.7 -0.7
baz=254
E57A PP PP 09 47 01.2 -1.1
baz=254
M63A Gales Ferry 121.99 59 P PKPdf 09 45 27.5 0.0
baz=252
M63A PP PP 09 47 01.9 -0.6
baz=252
AAA Alma-Ata 122.02 304 ePKP PKPdf 09 45 26.9 -0.8
AAA Alma-Ata 122.02 304 ePKIKP PKPdf 09 45 26.8 -0.8
F58A St-Lin Laurent 122.04 53 P PKPdf 09 45 27.2 -0.2
baz=254
F58A PP PP 09 47 01.6 -1.1
baz=254
CHKK Chushkaly 122.15 304 ePKIKP PKPdf 09 45 26.0 -1.8
J61A Chester 122.20 56 P PKiKP 09 45 27.9 -0.1
baz=253
J61A PP PP 09 47 04.1 +0.2
baz=253
K62A Royalston 122.23 57 P PKiKP 09 45 28.5 +0.4
baz=253
K62A PP PP 09 47 04.1 0.0
baz=253
G59A Clarenceville 122.25 54 P PKiKP 09 45 29.0 +0.9
baz=254
G59A PP PP 09 47 04.5 +0.3
baz=254
D57A Chemin Vers le 122.30 52 P PKPdf 09 45 27.6 -0.4
baz=255
D57A PP PP 09 47 04.3 -0.2
baz=255
MTBS Maitube 122.34 303 ePKIKP PKPdf 09 45 27.0 -1.3
VT1 Waterbury 122.34 55 IAMs_20 IAMs_20 10 32 22.5
comp=Z,8μm,20.0s
L63A North Scituate 122.44 58 P PKPdf 09 45 28.0 -0.3
baz=253
L63A PP PP 09 47 05.8 +0.3
baz=253
H60A Morristown 122.44 55 P PKPdf 09 45 28.0 -0.3
baz=254
H60A PP PP 09 47 05.6 +0.1
baz=254
E58A La Victoria 122.54 53 P PKPdf 09 45 28.0 -0.4
baz=255
E58A PP PP 09 47 04.9 -1.2
baz=255
I61A Oroboro, Fairl 122.61 56 P PKiKP 09 45 28.9 +0.1
baz=254
I61A PP PP 09 47 06.8 +0.2
baz=254
KUU Kurty 122.61 304 ePKP PKPdf 09 45 27.1 -1.6
KUU eSKS SKSac 09 52 22.5 -4.2
KUU Kurty 122.61 304 ePKIKP PKPdf 09 45 27.1 -1.6
KUU e 09 52 22.5
M64A Tiverton 122.63 59 P PKPdf 09 45 28.6 -0.1
baz=253
M64A PP PP 09 47 07.3 +0.4
baz=253
HRV Adam Dziewonsk 122.66 57 P PKiKP 09 45 30.4 +1.4
baz=253
HRV PP PP 09 47 06.9 -0.2
baz=253
J62A Henniker 122.69 57 P PKiKP 09 45 29.1 +0.2
baz=254
J62A PP PP 09 47 07.5 +0.4
baz=254
F59A Saint Guilaume 122.73 53 P PKPdf 09 45 28.7 -0.1
baz=255
F59A PP PP 09 47 06.1 -1.2
baz=255
K63A Dunstable 122.73 57 P PKiKP 09 45 29.8 +0.8
baz=254
K63A PP PP 09 47 07.7 +0.2
baz=254
G60A Masonville 122.84 54 P PKiKP 09 45 30.4 +1.2
baz=254
G60A PP PP 09 47 07.8 -0.4
baz=254
KURK Kurchatov 122.84 313 PKPdf 09 45 26.8 -2.0
KURK Kurchatov 122.84 313 IAMs_20 IAMs_20 10 39 49.8
comp=Z,5μm,19.0s
KURK Kurchatov 122.84 313c iPKIKP PKPdf 09 45 27.4 -1.4
KURK pmax pmax
comp=Z,139nm,1.7s
KZA Kyzart 122.87 302 P PKPdf 09 45 29.5 -0.2
SNR=20
KURBB Kurchatov Arra 122.88 312 PKP PKPdf 09 45 27.8 -1.1
comp=Z,19nm,0.7s,baz=109,slow=1.7,SNR=45
KURBB PKKPbc PKKPbc 09 55 20.9 -0.8
comp=Z,5.8nm,1.0s,baz=274,slow=4.5,SNR=14
KURBB PKKP PKKPdf 09 56 00.5 +0.6
comp=Z,4.6nm,1.1s,baz=292,slow=2.5,SNR=5.3
KURBB SKKPbc SKKPbc 09 58 57.2 -13
comp=Z,3.9nm,1.1s,baz=265,slow=3.7,SNR=5.4
LBNH Lisbon 122.89 55 IAMs_20 IAMs_20 10 35 07.0
comp=Z,8μm,20.0s
LBNH Lisbon 122.89 55 P PKiKP 09 45 29.3 -0.1
baz=254
LBNH PP PP 09 47 08.9 +0.4
baz=254
H61A Lyndonville 122.96 55 P PKiKP 09 45 29.4 -0.1
baz=254
H61A PP PP 09 47 09.2 +0.2
baz=254
D58A Chemin du LacG 122.98 52 P PKPdf 09 45 28.5 -0.7
baz=255
D58A PP PP 09 47 08.6 -0.5
baz=255
L64A Middleborough 123.01 58 P PKPdf 09 45 29.4 0.0
baz=253
L64A PP PP 09 47 09.5 +0.1
baz=253
M65A Busby, Falmout 123.04 59 P PKPdf 09 45 29.4 -0.1
baz=253
M65A PP PP 09 47 09.1 -0.5
baz=253
E59A St. Maurice 123.08 53 P PKPdf 09 45 29.0 -0.4
baz=255
E59A PP PP 09 47 09.1 -0.5
baz=255
I62A Tamworth 123.20 56 P PKPdf 09 45 29.7 0.0
baz=254
I62A PP PP 09 47 10.9 +0.3
baz=254
J63A Strafford 123.22 57 P PKiKP 09 45 30.3 +0.3
baz=254
J63A PP PP 09 47 11.1 +0.4
baz=254
KBK Karagaybulak 123.25 303 P PKPdf 09 45 29.8 -0.4
SNR=20
F60A Warwick 123.32 53 P PKPdf 09 45 29.6 -0.3
baz=255
F60A PP PP 09 47 11.1 -0.3
baz=255
G61A St-Isidore-de- 123.44 54 P PKPdf 09 45 29.9 -0.3
baz=255
G61A PP PP 09 47 12.0 -0.2
baz=255
UCH Uchtor 123.44 302 P PKiKP 09 45 31.0 -0.1
SNR=23
CHMS Chumysh 123.48 303 P PKPdf 09 45 29.9 -0.5
SNR=21
H62A Milan 123.51 55 IAMs_20 IAMs_20 10 34 06.4
comp=Z,8μm,20.0s
H62A Milan 123.51 55 P PKiKP 09 45 30.6 0.0
baz=255
H62A PP PP 09 47 12.8 +0.1
baz=255
AAK Ala-Archa 123.56 302 PKP PKPdf 09 45 30.2 -0.5
comp=Z,30nm,1.0s,baz=143,slow=4.9,SNR=12
AAK PKKPbc PKKPbc 09 55 19.3 +0.2
comp=Z,22nm,1.1s,baz=264,slow=3.3,SNR=19
AAK SKKPbc SKKPbc 09 59 00.5 -7.3
comp=Z,2.3nm,0.9s,baz=243,slow=7.1,SNR=2.4
AAK Ala-Archa 123.56 302 P PKPdf 09 45 30.0 -0.7
SNR=21
AAK Ala-Archa 123.56 302 PKPdf 09 45 29.4 -1.3
AAK Ala-Archa 123.56 302 i PKIKP PKPdf 09 45 30.4 -0.3
D59A Saint-Raymond 123.66 52 P PKPdf 09 45 30.4 -0.2
baz=256
D59A PP PP 09 47 12.9 -0.7
baz=256
SGDS Sogindy 123.69 303 ePKP PKPdf 09 45 29.6 -1.2
SGDS eSKS SKSdf 09 52 31.6 -8.7
USP Ospenovka 123.73 303 P PKPdf 09 45 30.4 -0.5
SNR=20
E60A Ste Agathe de 123.76 53 P PKPdf 09 45 30.5 -0.2
baz=256
E60A PP PP 09 47 13.8 -0.5
baz=256
I63A Otisfield 123.77 56 P PKiKP 09 45 31.2 +0.2
baz=255
I63A PP PP 09 47 15.0 +0.5
baz=255
F61A St Evariste 123.97 54 P PKiKP 09 45 31.3 -0.2
baz=256
F61A PP PP 09 47 15.7 -0.1
baz=256
AML Almayashu 124.00 302 P PKPdf 09 45 31.8 -0.1
SNR=24
EKS2 Erkin-Say 124.08 302 P PKPdf 09 45 31.6 0.0
SNR=17
G62A West of Eustis 124.10 55 IAMs_20 IAMs_20 10 35 37.1
comp=Z,7μm,19.0s
G62A West of Eustis 124.10 55 P PKPdf 09 45 31.4 0.0
baz=256
G62A PP PP 09 47 16.6 -0.1
baz=256
D60A Saint Jean D'O 124.24 52 P PKPdf 09 45 31.2 -0.4
baz=256
D60A PP PP 09 47 17.0 -0.6
baz=256
H63A New Sharon 124.30 55 P PKPdf 09 45 31.8 0.0
baz=256
H63A PP PP 09 47 18.3 +0.3
baz=256
I64A Boothbay 124.39 56 P PKiKP 09 45 32.2 -0.1
baz=255
I64A PP PP 09 47 18.9 +0.3
baz=255
E61A Lac Etchemin 124.42 53 P PKiKP 09 45 32.4 +0.1
baz=256
E61A PP PP 09 47 18.6 -0.2
baz=256
BTLS Baital 124.50 305 ePKP PKPdf 09 45 31.9 -0.4
BTLS eSKS SKSdf 09 52 32.8 -8.8
BTLS Baital 124.50 305 ePKIKP PKPdf 09 45 31.8 -0.4
BTLS e 09 52 32.7
WVL Waterville 124.54 55 IAMs_20 IAMs_20 10 34 02.7
comp=Z,8μm,19.0s
G63A Kingsbury 124.70 55 P PKPdf 09 45 32.7 +0.1
baz=256
G63A PP PP 09 47 20.2 -0.5
baz=256
D61A St Aubert, Com 124.80 52 P PKPdf 09 45 32.4 -0.3
baz=257
D61A PP PP 09 47 20.9 -0.4
baz=257
H64A Troy 124.86 55 P PKPdf 09 45 32.8 -0.1
baz=256
H64A PP PP 09 47 21.3 -0.5
baz=256
PKME Peaks-Kenny Pk 124.96 55 IAMs_20 IAMs_20 10 36 20.9
comp=Z,6μm,20.0s
PKME Peaks-Kenny Pk 124.96 55 P PKiKP 09 45 33.4 0.0
baz=256
PKME PP PP 09 47 22.4 0.0
F63A Nahmakanta, Br 125.19 54 IAMs_20 IAMs_20 10 36 25.9
comp=Z,7μm,19.0s
F63A Nahmakanta, Br 125.19 54 P PKPdf 09 45 33.6 +0.1
baz=257
F63A PP PP 09 47 22.4 -1.5
baz=257
KBL Kabul 125.25 292 PKPdf 09 45 33.3 -1.0
KBL Kabul 125.25 292 PKIKP PKPdf 09 45 33.3 -1.0
KBL MLR MLR
comp=Z,5μm,22.0s
G64A Maxfield 125.33 55 P PKiKP 09 45 34.0 -0.1
baz=257
G64A PP PP 09 47 24.8 0.0
baz=257
D62A Allapoint, All 125.53 53 P PKPdf 09 45 33.8 -0.3
baz=258
D62A PP PP 09 47 25.6 -0.6
baz=258
H65A Eastbrook 125.55 56 P PKPdf 09 45 34.3 +0.1
baz=257
H65A PP PP 09 47 26.0 -0.3
baz=257
F64A Sherman 125.74 54 IAMs_20 IAMs_20 10 35 33.5
comp=Z,5μm,20.0s
F64A Sherman 125.74 54 P PKPdf 09 45 34.5 0.0
baz=257
F64A PP PP 09 47 27.7 +0.1
baz=257
E63A Oxbow 125.81 54 IAMs_20 IAMs_20 10 33 51.3
comp=Z,7μm,22.0s
E63A Oxbow 125.81 54 P PKPdf 09 45 34.4 -0.3
baz=258
E63A PP PP 09 47 27.9 -0.2
baz=258
LSZ Lusaka 125.93 212 PKP PKPdf 09 45 35.8 -0.3
comp=Z,36nm,0.9s,baz=252,slow=0.5,SNR=27
LSZ PKKPbc PKKPbc 09 55 09.1 -0.6
comp=Z,3.8nm,1.0s,baz=351,slow=6.0,SNR=4.3
LSZ Lusaka 125.93 212 PKPdf 09 45 34.7 -1.4
LSZ Lusaka 125.93 212 IAMs_20 IAMs_20 10 39 25.2
comp=Z,5μm,20.0s
LSZ Lusaka 125.93 212 PKIKP PKPdf 09 45 34.7 -1.4
LSZ MLR MLR
comp=Z,5μm,20.0s
TSUM Tsumeb 126.06 198 PKP PKPdf 09 45 36.0 -0.3
comp=Z,28nm,0.8s,baz=145,slow=2.2,SNR=34
TSUM Tsumeb 126.06 198 PKPdf 09 45 35.8 -0.4
G65A Princeton 126.14 55 IAMs_20 IAMs_20 10 34 51.0
comp=Z,8μm,20.0s
G65A Princeton 126.14 55 P PKPdf 09 45 35.2 -0.1
baz=257
G65A PP PP 09 47 30.4 +0.2
baz=257
PQI Presque Isle 126.14 53 IAMs_20 IAMs_20 10 34 10.9
comp=Z,7μm,21.0s
D63A Stockholm 126.15 53 P PKPdf 09 45 33.7 -1.6
baz=258,SNR=25
D63A PP PP 09 47 30.4 +0.1
baz=258
E64A Bridgewater 126.21 54 P PKPdf 09 45 34.9 -0.5
baz=258,SNR=20
E64A PP PP 09 47 31.7 +0.9
baz=258
TULEG Thule 126.22 16 IAMs_20 IAMs_20 10 45 34.1
comp=Z,7μm,20.0s
H66A Whiting 126.22 56 P PKPdf 09 45 35.5 0.0
baz=257
H66A PP PP 09 47 30.3 -0.5
baz=257
JBG Jabagly 126.33 301 ePKIKP PKiKP 09 45 36.3 -0.1
BRZS Berezniki 126.43 311 ePKP PKPdf 09 45 34.3 -1.4
BRZS Berezniki 126.43 311 ePKIKP PKPdf 09 45 34.3 -1.4
ITZ Itezhi-Tezhi 126.44 209 i P PKPdf 09 45 33.7 -3.3
ITZ i PKPdf 09 45 34.7 -2.3
baz=38,slow=11
ITZ i S PP 09 47 34.5 +3.2
ITZ Itezhi-Tezhi 126.44 209 i S PP 09 47 34.5 +3.2
ITZ Itezhi-Tezhi 126.44 209 i PKPdf 09 45 34.7 -2.3
baz=38,slow=11
ITZ Itezhi-Tezhi 126.44 209 i P PKPdf 09 45 33.7 -3.3
KK31 Karatay Array 126.51 302 i PKIKP PKPdf 09 45 35.2 -1.0
KKAR Karatay Array 126.51 302 PKPpre 09 45 22.2
KKAR PKPdf 09 45 35.1 -1.1
KKAR Karatay Array 126.51 302 PKIKP PKPdf 09 45 35.1 -1.1
IUG Iuzhnay 126.63 301 ePKP PKPdf 09 45 36.4 -0.2
IUG Iuzhnay 126.63 301 ePKIKP PKPdf 09 45 36.3 -0.2
RCBR Riachuelo 127.20 130 eP PKiKP 09 45 39.7 +0.7
RCBR Riachuelo 127.20 130 PKPdf 09 45 37.3 -1.1
RCBR Riachuelo 127.20 130 PKIKP PKPdf 09 45 37.3 -1.1
SCHQ Schefferville 128.07 43 PKP PKPdf 09 45 38.0 -0.8
comp=Z,68nm,1.1s,baz=291,slow=2.6,SNR=21
SCHQ Schefferville 128.07 43 IAMs_20 IAMs_20 10 36 49.4
comp=Z,9μm,20.0s
BVAR Borovoye Array 128.26 314 PKP PKPdf 09 45 38.7 -0.4
comp=Z,12nm,0.6s,baz=112,slow=1.6,SNR=33
BRVK Borovoye 128.33 314 PKPpre 09 45 30.4
BRVK PKPdf PKPdf 09 45 38.2 -1.1
BRVK Borovoye 128.33 314 IAMs_20 IAMs_20 10 44 18.5
comp=Z,6μm,20.0s
BRVK Borovoye 128.33 314 PKPdf 09 45 38.2 -1.1
BRVK MLR MLR
comp=Z,6μm,20.0s
WBK Wadi Bani Khal 129.15 274 PKiKP PKiKP 09 45 41.5 -0.3
SNR=14
DQM DQM 129.19 270 PKiKP PKiKP 09 45 42.5 -0.1
SNR=19
KULLO Kullorsuaq 129.54 17 i P PKiKP 09 45 41.9 +0.2
KULLO Kullorsuaq 129.54 17 i PKIKP PKiKP 09 45 41.9 +0.2
KULLO MLR MLR
comp=Z,8μm,20.0s
WSAR Wadi Sarin 129.69 274 PKP PKiKP 09 45 43.2 -0.4
comp=Z,13nm,0.8s,baz=170,slow=1.1,SNR=16
WSAR Wadi Sarin 129.69 274 PKiKP PKiKP 09 45 43.7 +0.1
SNR=18
JMDO Jabal Madar 129.78 273 PKiKP PKiKP 09 45 44.0 +0.2
SNR=29
SHAO Shalim 129.93 266 PKiKP PKiKP 09 45 46.0 +1.8
SNR=10
SMDO Samad 130.11 274 PKiKP PKiKP 09 45 45.0 +0.4
SNR=43
BIDO Bidbid 130.23 274 PKiKP PKiKP 09 45 45.0 +0.3
SNR=27
DMTO DMTO 130.35 266 PKiKP PKiKP 09 45 46.0 +1.0
SNR=23
HRA Herat 130.57 289 IAMs_20 IAMs_20 10 47 23.4
comp=Z,6μm,21.0s
NOR Nord 130.74 4 i P PKPdf 09 45 42.4 -0.7
NOR Nord 130.74 4 i PKIKP PKPdf 09 45 42.4 -0.7
NOR MLR MLR
comp=Z,9μm,25.0s
RBK Rabkut 130.88 265 PKiKP PKiKP 09 45 47.0 +0.8
SNR=48
HOQ Hoqain 130.94 274 PKiKP PKiKP 09 45 47.0 +0.9
SNR=33
WHFO Wadi Hawf 131.44 265 PKiKP PKiKP 09 45 48.0 +0.7
SNR=36
UOSS Minazif 132.41 275 PKiKP 09 45 48.9 -0.1
HATD Hatta, Dubai 132.42 275 PKiKP PKiKP 09 45 49.3 +0.3
SNR=15
MDH Madha 132.46 276 PKiKP PKiKP 09 45 49.3 +0.2
SNR=7.6
KMBO Kilima Mbogo 132.57 231 PKP PKPdf 09 45 49.4 +0.5
comp=Z,18nm,0.9s,baz=48,slow=2.4,SNR=20
KMBO SKPbc SKPab 09 49 16.4 +1.6
comp=Z,17nm,0.9s,baz=116,slow=5.0,SNR=7.8
KMBO Kilima Mbogo 132.57 231 PKiKP 09 45 49.8 -0.2
KMBO Kilima Mbogo 132.57 231 IAMs_20 IAMs_20 10 40 56.0
comp=Z,5μm,20.0s
NAZ Nazwa, Dubai 132.88 275 PKiKP PKiKP 09 45 50.4 +0.5
SNR=7.4
DRLN Deer Lake 133.47 51 IAMs_20 IAMs_20 10 40 15.7
comp=Z,8μm,21.0s
KBS Kingsbay 133.74 357 ePKPdf PKPdf 09 45 49.0 +0.1
KBS eSKPdf SKPab 09 49 19.3 +1.7
KBS eSS SS 10 06 05.0 +2.7
KBS IVMs_BB IVMs_BB 10 38 05.8
comp=Z,3μm,20.2s
KBS Kingsbay 133.74 357 IAMs_20 IAMs_20 10 37 32.8
comp=Z,7μm,21.0s
SVE Sverdlovsk 133.90 319 i PKIKP PKPdf 09 45 42.3 -7.4
SVE pmax pmax
comp=Z,88nm,1.7s
SVE MLR MLR
comp=Z,7μm,23.0s
MZR Muzera 133.92 271 PKiKP PKiKP 09 45 55.2 +3.1
SNR=6.9
SPA0 Spitsbergen Ar 134.25 356 PKiKP 09 45 51.9 +0.7
SPITS Spitsbergen Ar 134.25 356 PKP PKPdf 09 45 49.0 -0.8
comp=Z,81nm,1.1s,baz=143,slow=15,SNR=10
SFJD Kangerlussuaq 134.28 26 i P PKPdf 09 45 49.7 -0.4
SFJD Kangerlussuaq 134.28 26 PKPdf 09 45 49.6 -0.5
SFJD Kangerlussuaq 134.28 26 i PKIKP PKPdf 09 45 49.7 -0.4
AB31 Akbulak array 134.59 309 i PKHKP PKPpre 09 45 39.6
ABKAR Akbulak array 134.59 309 PKPpre 09 45 40.2
ABKAR Akbulak array 134.59 309 PKPpre 09 45 39.3
GEYT Alibeck 134.66 293 PKhKP PKPpre 09 45 41.0
comp=Z,4.0nm,0.9s,baz=205,slow=3.1,SNR=8.3
GEYT PKP PKiKP 09 45 52.8 -0.4
comp=Z,28nm,0.9s,baz=247,slow=1.1,SNR=14
GEYT SKPbc SKPab 09 49 23.7 +0.7
comp=Z,110nm,1.2s,baz=180,slow=0.6,SNR=23
GEYT Alibeck 134.66 293 PKPpre 09 45 40.7
GEYT PKiKP 09 45 55.5 +2.3
GYA0B ALIBECK ARRAY 134.66 293 IAMs_20 IAMs_20 10 50 30.4
comp=Z,6μm,20.0s
DAG Danmarks Havn 135.07 7 i P PKPdf 09 45 47.9 -3.5
DAG i 09 58 08.8
DAG Danmarks Havn 135.07 7 i PKIKP PKPdf 09 45 47.9 -3.5
DAG MLR MLR
comp=Z,7μm,21.0s
HOPEN Hopen 135.08 353 ePKPdf PKPdf 09 45 51.4 0.0
HOPEN ePP PP 09 48 25.7 -1.3
HOPEN eSKPdf SKiKP 09 49 25.9 -0.5
HOPEN eSS SS 10 06 22.1 +3.6
HOPEN IVMs_BB IVMs_BB 10 33 30.7
comp=Z,4μm,37.3s
ARU Arti 135.08 319 PKhKP PKPpre 09 45 44.8
comp=Z,2.0nm,0.6s,baz=125,slow=0.1,SNR=8.2
ARU PKP PKPdf 09 45 52.2 +0.3
comp=Z,5.7nm,0.6s,baz=62,slow=2.2,SNR=11
ARU SKPbc SKPab 09 49 24.4 +0.3
comp=Z,8.2nm,0.9s,baz=68,slow=19,SNR=8.3
ARU Arti 135.08 319 PKPpre 09 45 42.5
ARU PKPdf 09 45 50.7 -1.2
ARU IAMs_20 IAMs_20 10 50 09.6
comp=Z,6μm,20.0s
ARU Arti 135.08 319 i PKIKP PKPdf 09 45 51.1 -0.8
ARU 09 48 25.8
SUMG Summit 135.14 16 i P PKiKP 09 45 53.0 -0.6
SUMG i 09 58 03.9
SUMG Summit 135.14 16 i PKIKP PKiKP 09 45 53.0 -0.6
SUMG MLR MLR
comp=Z,27μm,19.0s
H10S2 ASCENSION HYDR 135.37 156 T T 12 16 23.6
baz=204,slow=74,SNR=4.8
H10S3 ASCENSION HYDR 135.37 156 T T 12 16 35.9

	baz=16,slow=74,SNR=3.8					
HSPB	Hornsund (broa	135.44 356	ePKPdf	PKPdf	09 45 52.5	+0.4
HSPB			eSKPdf	SKiKP	09 49 27.0	-0.2
HSPB			eSS	SS	10 06 26.4	+3.7
HSPB			IVMs_BB	IVMs_BB	10 37 51.1	
	comp=Z,3µm,25.1s					
AKTO	Aktyubinsk	135.84 310	PKhKP	PKPpre	09 45 45.4	
	comp=Z,6.5nm,0.9s,baz=69,slow=2.8,SNR=13					
AKTO			PKP	PKPdf	09 45 54.2	+0.7
	comp=Z,8.3nm,0.8s,baz=76,slow=1.7,SNR=9.0					
AKTO			SKPbc	SKPab	09 49 27.3	-0.4
	comp=Z,43nm,1.2s,baz=66,slow=2.5,SNR=10					
H10N3	ASCENSION HYDR	136.46 156	T	T	12 17 42.3	
	baz=204,slow=75,SNR=4.3					
H10N1	ASCENSION HYDR	136.47 156	T	T	12 17 56.6	
	baz=204,slow=75,SNR=4.7					
H10N2	ASCENSION HYDR	136.48 156	T	T	12 17 56.7	
	baz=204,slow=75,SNR=5.1					
ATD	Arta Tunnel	137.02 250	PKP	PKiKP	09 45 58.9	+0.2
	comp=Z,27nm,1.0s,baz=45,slow=4.4,SNR=4.3					
MBAR	Mbarara	137.06 225	PKP	PKPdf	09 45 57.6	+0.4
	comp=Z,7.5nm,0.2s,baz=91,slow=3.9,SNR=9.0					
MBAR			SKPbc	SKiKP	09 49 31.4	-1.3
	comp=Z,8.7nm,0.8s,baz=130,slow=4.5,SNR=1.9					
MBAR	Mbarara	137.06 225		PKiKP	09 45 58.2	-0.8
MBAR			IAMs_20	IAMs_20	10 40 07.7	
	comp=Z,6µm,21.0s					
DAMY	Dhamar	137.50 255	IAMs_20	IAMs_20	10 43 49.5	
	comp=Z,6µm,20.0s					
BJO1	Bjornoya	137.54 353	ePKPdf	PKPdf	09 45 51.9	-4.1
BJO1			ePP	PP	09 48 42.1	-0.3
BJO1			eSKPdf	SKiKP	09 49 31.0	-0.5
BJO1			eSS	SS	10 06 45.5	-2.2
BJO1			IVMs_BB	IVMs_BB	10 36 05.0	
	comp=Z,3µm,3.8s					
NRS	Narsarsuaq	138.50 33	i P	PKPdf	09 45 50.0	-8.1
NRS	Narsarsuaq	138.50 33	i PKHKP	PKPpre	09 45 50.0	
FURI	Furi	138.60 243	IAMs_20	IAMs_20	10 47 48.8	
	comp=Z,6µm,20.0s					
KIRV	Kirov	139.44 324	PKP	PKPdf	09 45 59.1	-0.7
	comp=Z,36nm,0.9s,baz=112,slow=1.1,SNR=11					
PRGR	Permogore	140.06 329	ePKIKP	PKPdf	09 45 55.8	-5.1
PRGR			pmax	pmax		
	comp=Z,42nm,1.0s					
HAMF	Hammerfest	140.46 349	ePKPdf	PKPdf	09 46 01.6	+0.2
HAMF			ePP	PP	09 49 02.6	+2.2
HAMF			eSKSdf	SKSdf	09 53 12.1	+3.4
HAMF			eSS	SS	10 07 24.6	+2.5
HAMF			IVMs_BB	IVMs_BB	10 36 47.9	
	comp=Z,4µm,29.8s					
KEV	Kevo	140.62 347	IAMs_20	IAMs_20	10 44 52.8	
	comp=Z,6µm,22.0s					
RAYN	Ar Rayn	140.84 268		PKPpre	09 45 57.3	
RAYN	Ar Rayn	140.84 268	PKHKP	PKPpre	09 45 57.3	
APA	Apatity	140.86 342	⇓i PKIKP	PKiKP	09 46 03.8	-1.1
APA			i		09 46 11.2	
APA			i		09 49 02.0	
APA			i		09 53 07.0	
APA			pmax	pmax		
	comp=Z,13nm,1.2s					
APA			pmax	pmax		
	comp=Z,22nm,1.0s					
ARCES	ARCESS Array B	141.09 347	PKhKP	PKPpre	09 45 59.0	
	comp=Z,8.0nm,0.8s,baz=23,slow=2.2,SNR=25					
ARCES			SKPbc	SKiKP	09 49 41.8	+2.8
	comp=Z,7.6nm,0.9s,baz=0.0,slow=1.8,SNR=2.7					
ARCES	ARCESS Array B	141.09 347		PKPdf	09 46 00.4	-2.2
ARCES	ARCESS Array B	141.09 347	PKIKP	PKPdf	09 46 00.4	-2.2
ARE0	ARCESS Array S	141.09 347	ePKPdf	PKPdf	09 46 02.7	+0.1
ARE0			ePP	PP	09 49 04.9	+0.4
ARE0			eSKPdf	SKPbc	09 49 37.9	+0.9
ARE0			eSS	SS	10 07 33.4	+3.7
ARE0			IVMs_BB	IVMs_BB	10 44 15.6	
	comp=Z,4µm,22.2s					
TMCR	Tamitsa	141.71 335	ePKIKP	PKPdf	09 46 03.4	-0.4
TMCR			pmax	pmax		
	comp=Z,81nm,1.3s					
KTK1	Kautokeino	141.96 348	ePKPdf	PKPdf	09 46 04.5	+0.3
TRO	Tromso	142.08 350	ePKPdf	PKPdf	09 46 05.1	+0.7
TRO			IVmB_BB		09 46 06.1	
	comp=Z,2µm,3.1s					
TRO			eSKPdf	SKPbc	09 49 38.0	-1.4
TRO			eSS	SS	10 07 45.8	+4.8
TRO			IVMsBB		10 35 51.2	
	comp=Z,3µm,45.2s					
AKT	Akhty	143.02 297	ePKIKP	PKPbc	09 46 04.6	+0.6
AKT			e		09 49 18.6	
AKT			pmax	pmax		
	comp=Z,102nm,1.2s					
KLMR	Klimovskoe	143.03 330	ePKPdf	PKPab	09 46 00.7	-0.9
KLMR			AMP		09 46 12.7	
	comp=Z,231nm,1.5s					
KLMR			PP	PP	09 49 13.8	-2.7
KLMR			SKKSac	SKKSac	09 56 06.7	+0.3
KLMR			SKKSac	SKKSac	09 56 06.7	+0.3
KLMR			x	x	10 01 52.1	
KLMR			SS	SS	10 07 47.2	-5.5
KLMR			SS	SS	10 07 47.2	-5.5
KLMR			LR	LR	10 39 23.7	
KLMR			AMP		10 45 58.6	
	comp=Z,11µm,25.0s					
KLMR	Klimovskoe	143.03 330	ePKHKP	PKPpre	09 46 00.7	
KLMR					09 49 13.7	
KLMR			SS	SS	10 07 47.2	-5.5
KLMR			pmax	pmax		
	comp=Z,231nm,1.5s					
MAK	Makhachkala	143.21 299	ePKIKP	PKPbc	09 46 04.7	+0.5
MAK			e		09 49 14.7	
MAK			pmax	pmax		
	comp=Z,305nm,1.2s					
MAK			MLR	MLR		
	comp=Z,3µm,19.0s					
STEI	Steigen	144.16 352	ePKPdf	PKPdf	09 46 08.1	+0.1
STEI			eSKPdf	SKPbc	09 49 42.9	-1.6
STEI			eSS	SS	10 08 09.5	+4.5
STEI			IVMs_BB	IVMs_BB	10 40 23.9	
	comp=Z,3µm,32.2s					
LOF	Lofoten	144.17 353	ePKPdf	PKPbc	09 46 06.7	+0.5
LOF			IVmB_BB		09 46 08.2	
	comp=Z,4µm,2.8s					
LOF			eSKSdf	PKSdf	09 49 44.4	+1.2
LOF			IVMs_BB	IVMs_BB	10 36 45.8	
	comp=Z,2µm,13.2s					
GROC	Groznyy	144.46 300	ePKIKP	PKPab	09 46 07.4	-0.3
GROC			e		09 49 24.1	
GROC			pmax	pmax		
	comp=Z,139nm,1.1s					
BORG	Borgarnes	145.09 17		PKPbc	09 46 08.8	-0.5
BORG	Borgarnes	145.09 17	PKIKP	PKPdf	09 46 08.8	-0.5
GNI	Garni	145.25 294	PKPbc	PKPdf	09 46 11.6	+0.5
	comp=Z,524nm,1.2s,baz=183,slow=4.3,SNR=30					
GNI	Garni	145.25 294		PKPdf	09 46 11.2	+0.1
GNI	Garni	145.25 294	PKIKP	PKPdf	09 46 11.2	+0.1
TASB	TASBURUN-IGDIR	145.63 294	P	PKPab	09 46 12.5	+0.2
KONS	Konsvik	145.78 352	ePKPdf	PKPdf	09 46 10.8	0.0
KONS			eSKPdf	SKPdf	09 49 43.8	+1.2
CLDR	Caldiran	145.84 292	P	PKPab	09 46 13.4	+0.1
ZEI	Tsey	145.86 299	i PKHKP	PKPpre	09 46 08.7	
ZEI			pmax	pmax		
	comp=Z,607nm,1.3s					
VRH	Novokhopyorsk	145.91 314	ePKP2	PKPdf	09 46 11.8	+0.2
VRH			pmax	pmax		
	comp=Z,750nm,1.4s					
MOR8	Moi Rana	145.94 351	ePKPdf	PKPdf	09 46 10.1	-1.1
MOR8			IVmB_BB		09 46 13.5	
	comp=Z,8µm,2.6s					
MOR8			epPKPdf	PKiKP	09 46 14.2	-1.1
MOR8			ePP	PP	09 49 32.7	-0.8
MOR8			eSKSdf	SKSdf	09 53 22.7	+5.3
MOR8			eSS	SS	10 08 21.3	-4.1
MOR8			IVMs_BB	IVMs_BB	10 38 28.4	
	comp=Z,3µm,33.2s					
STOK	Stokkvaagen	145.96 352	ePKPbc	PKPbc	09 46 11.9	0.0
STOK			ePKSdf	PKSdf	09 49 46.9	+0.7
AKH	Akhalkalaki	146.21 297	⇑P	PKPbc	09 46 14.1	+0.3
AKH	Akhalkalaki	146.21 297	IAMs_20	IAMs_20	10 55 40.4	
	comp=Z,5µm,22.0s					
VANB	Van	146.23 291	P	PKPbc	09 46 13.8	-0.1
GOF	Gofitskoye	146.30 303	⇑i PKP2	PKPbc	09 46 13.6	-0.1
GOF			pmax	pmax		
	comp=Z,2µm,1.8s					
MOS	Moscow	146.45 323	ePKIKP	PKPdf	09 46 11.4	-0.9
MOS			e		09 49 35.6	
MOS			eSS	SS	10 08 38.1	+5.9
MOS			pmax	pmax		
	comp=Z,1µm,2.0s					
AKDM	Akdamar-Van	146.53 291	P	PKPbc	09 46 14.6	-0.2
KBZ	Khabaz	146.53 301	PKPbc	PKPab	09 46 15.4	-0.1
	comp=Z,53nm,0.8s,baz=56,slow=3.0,SNR=52					
KBZ	Khabaz	146.53 301	i PKIKP	PKPdf	09 46 12.8	-0.1
AGRB	Hanur-Agry	146.58 293	P	PKPbc	09 46 14.8	-0.2
KVAR	Kislovodsk Arr	146.66 301	PKPbc	PKPab	09 46 15.8	-0.3
	comp=Z,101nm,1.1s,baz=90,slow=20,SNR=42					
KIV	Kislovodsk	146.67 301	⇑P	PKiKP	09 46 18.7	+1.0
KIV	Kislovodsk	146.67 301		PKPdf	09 46 12.7	-0.5
KIV			IAMs_20	IAMs_20	10 54 24.4	
	comp=Z,4µm,22.0s					
KIV	Kislovodsk	146.67 301	ePKHKP	PKPpre	09 46 08.8	
KIV			i		09 46 13.6	
KIV			e		09 49 35.1	
KIV			e		09 53 14.4	
KIV			eSS	SS	10 08 30.5	-5.6
KIV			eSSS	SSS	10 14 03.9	
KIV			pmax	pmax		
	comp=Z,770nm,1.0s					
KIV			MLR	MLR		
	comp=Z,13µm,24.0s					
SHA1	Shidzhatmaz	146.71 301	i PKP2	PKPdf	09 46 13.7	+0.2
SIRT	Sirnak	146.90 289	P	PKPdf	09 46 13.5	-0.4
MLAZ	Malazgirt-MUS	146.91 292	P	PKPbc	09 46 15.7	-0.2
SENK	Senkaya-Erzuru	147.08 295	P	PKPdf	09 46 15.0	+0.8
VORR	Voronezh	147.25 316	ePKIKP	PKPdf	09 46 12.0	-1.8
VORR			pmax	pmax		
	comp=Z,2µm,1.6s					
OBN	Obninsk	147.28 323	PKPbc	PKPbc	09 46 14.9	-1.1
	comp=Z,21nm,0.8s,baz=63,slow=5.2,SNR=13					
OBN	Obninsk	147.28 323	⇓P	PKPbc	09 46 15.0	-1.1
OBN	Obninsk	147.28 323		PKPdf	09 46 13.9	+0.1
OBN			PKPbc	PKiKP	09 46 18.6	+0.3
OBN			IAMs_20	IAMs_20	10 57 17.6	
	comp=Z,5µm,20.0s					
OBN	Obninsk	147.28 323c	i PKIKP	PKPdf	09 46 14.0	+0.3
OBN			i		09 46 29.8	
OBN			pmax	pmax		
	comp=Z,981nm,1.8s					
GURO	Guroymak-BITLI	147.29 291	P	PKPdf	09 46 15.5	+1.0
PUL	Pulkovo	147.33 334c	i PKIKP	PKPdf	09 46 14.1	+0.4
PUL			pmax	pmax		
	comp=Z,531nm,1.7s					
VSR	Storozhevoye	147.43 315	ePKP2	PKPbc	09 46 15.8	-0.9
VSR			pmax	pmax		
	comp=Z,440nm,1.3s					
VSR			MLR	MLR		
	comp=Z,9µm,23.0s					
VORD	Divnogorie	147.44 315	ePKIKP	PKPdf	09 46 14.9	+0.7
VORD			pmax	pmax		
	comp=Z,200nm,0.9s					
KOPR	Koprukoy-ERZUR	147.46 294	P	PKPbc	09 46 16.7	-0.7
FINES	FINESS Array B	147.56 339	PKPbc	PKPbc	09 46 15.9	-0.7
	comp=Z,79nm,0.7s,baz=62,slow=2.1,SNR=78					
FINES	FINESS Array B	147.56 339		PKPdf	09 46 13.9	-0.1
FINES	FINESS Array B	147.56 339	PKIKP	PKPdf	09 46 13.9	-0.1
NSS	Namsos	147.82 352	ePKPbc	PKPbc	09 46 17.3	0.0
NSS			eSS	SS	10 08 50.3	+3.8
SVAN	Silvan-Diyarba	147.92 291	P	PKPdf	09 46 16.8	+1.3
KARO	Karliova-Bingo	148.08 293	P	PKPbc	09 46 18.2	-0.9
BNGB	Bingl	148.36 292	P	PKPdf	09 46 17.8	+1.5
YEDI	Yedisu-Bingol	148.47 293	P	PKPbc	09 46 19.9	-0.2
MAZI	Mazidag	148.48 289	P	PKPdf	09 46 16.5	0.0
DYBB	Diyarbakir	148.75 290	P	PKPdf	09 46 18.3	+1.4
BAYT	Aydıntepe-Bayb	148.77 295	P	PKPbc	09 46 20.7	-0.1
SOC	Sochi	148.84 301c	i PKIKP	PKPdf	09 46 16.2	-0.5
SOC			i		09 46 22.3	
SOC			e		09 49 49.9	
SOC			ePPP	PPP	09 53 10.6	
SOC			eSS	SS	10 08 51.3	-9.1
SOC			pmax	pmax		
	comp=Z,64nm,1.0s					
SOC			pmax	pmax		
	comp=Z,436nm,1.5s					
ERZN	Erzincan	149.10 293	P	PKPbc	09 46 20.1	-1.6
TBLU	Trondheim	149.25 353	ePKPbc	PKPbc	09 46 20.7	-0.4
TBLU			eSS	SS	10 09 04.3	+1.8
SVRC	Sivrice-ELAZID	149.42 291	P	PKPdf	09 46 19.9	+1.8
VSU	Vasula	149.57 334	eP	PKPbc	09 46 21.2	-0.7
VSU	Vasula	149.57 334c	i PKHKP	PKPpre	09 46 17.9	
VSU			pmax	pmax		
	comp=Z,2µm,1.7s					
URFA	Urfa	149.77 289	P	PKPdf	09 46 19.7	+1.2
MOL	Molde	150.17 355	ePKPbc	PKiKP	09 46 23.8	-0.3
MOL			ePKSdf	PKSdf	09 49 50.7	-2.0
MOL			eSKSdf	SKSdf	09 53 26.4	+3.2
MOL			eSS	SS	10 09 20.4	+7.7
ANN	Anapa	150.28 304	ePKIKP	PKPdf	09 46 20.0	+1.1
ANN			i		09 46 26.0	
ANN			e		09 53 21.8	
ANN			pmax	pmax		
	comp=Z,276nm,1.4s					
ANN			pmax	pmax		
	comp=Z,638nm,1.6s					
DOMB	Dombas	150.56 353	ePKPbc	PKPbc	09 46 24.5	+0.2
DOMB			IVmB_BB		09 46 26.9	
	comp=Z,6µm,2.2s					
DOMB			eSKPdf	SKPdf	09 49 52.4	+2.5
DOMB			IVMs_BB	IVMs_BB	09 50 52.4	
	comp=Z,3µm,5.9s					
DOMB			eSKSdf	SKSdf	09 53 20.9	-3.0
DOMB			eSS	SS	10 09 20.0	+2.7
AKN	Aaknes	150.59 355	ePKPbc	PKPbc	09 46 24.6	+0.3
AKN			eSKPdf	SKPdf	09 49 50.7	+0.7
AKN			IVMs_BB	IVMs_BB	09 51 52.5	
	comp=Z,3µm,4.5s					
AKN			eSS	SS	10 09 22.5	+4.9
SACV	Santiago Islan	150.60 121		PKPdf	09 46 20.7	+0.3
ASF	Jabal al Asfar	150.72 278	PKPbc	PKPbc	09 46 26.0	+0.2
	comp=Z,44nm,0.8s,baz=121,slow=1.3,SNR=31					
ASF	Jabal al Asfar	150.72 278	PKIKP	PKPbc	09 46 26.0	+0.2
DARE	Darende-Malaty	150.85 291	P	PKPdf	09 46 21.3	+1.1
RSDY	Resadiye-TOKAT	150.92 295	P	PKPdf	09 46 21.1	+0.9
GAZ	Gaziantep	151.04 288	P	PKPdf	09 46 23.2	+2.7
GAZ	Gaziantep	151.04 288	IAMs_20	IAMs_20	10 56 52.6	
	comp=Z,6µm,20.0s					
SVSK	Karacayir	151.19 294	P	PKPdf	09 46 21.7	+1.2
NB2	NORSAR Subarra	151.28 351	PKP	PKPbc	09 46 25.0	-1.1
	comp=Z,2µm,2.5s,baz=14,slow=4.1					
NB2	NORSAR Subarra	151.28 351	PKPdf	PKPbc	09 46 25.0	-1.1
	baz=14,slow=4.1					
NOA	NORSAR Array B	151.28 351	PKP	PKPdf	09 46 19.9	-0.1
	comp=Z,25nm,1.2s,baz=24,slow=1.7,SNR=9.3					
NOA			PKPbc	PKPbc	09 46 25.2	-0.9
	comp=Z,18nm,0.9s,baz=49,slow=1.8,SNR=29					
FOO	Floro	151.28 357	ePKPbc	PKPbc	09 46 25.5	-0.5
FOO			ePP	PP	09 50 05.9	+1.4
FOO			IVMs_BB	IVMs_BB	09 51 21.4	
	comp=Z,4µm,3.9s					
FOO			eSS	SS	10 09 30.7	+5.6
KMRS	Kahramanmaras	151.30 289	P	PKPdf	09 46 21.5	+0.6
TOKT	Tokat	151.52 295	P	PKPdf	09 46 21.7	+0.6
NC602	NORSAR Array S	151.53 350	epPKPdf	PKPbc	09 46 24.3	-2.3
NC602			eSKPdf	SKPdf	09 49 53.9	+2.6
NC602			eSS	SS	10 09 27.8	-0.2
NC602			eSS	SS	10 09 32.9	+5.0
HYA	Hoyanger	151.65 356	ePKPbc	PKiKP	09 46 27.2	0.0
IZAR	Zarasai	151.68 331	eP	PKiKP	09 46 27.3	-0.1
SARI	SarD1z-Kayseri	151.69 291	P	PKPdf	09 46 21.9	+0.3
SLIT	Slitere, Latvi	151.75 337	e	PKPab	09 46 32.0	-4.1
EIL	Elat	151.79 272	PKP	PKPdf	09 46 22.5	+0.7
	comp=Z,13nm,1.0s,baz=56,slow=1.2,SNR=18					
EIL			PKPbc	PKPbc	09 46 28.3	+0.1
	comp=Z,236nm,0.8s,baz=125,slow=1.3,SNR=50					
MICGM	Minsk	151.80 328	⇑i PKP	PKPdf	09 46 23.0	+2.0
MICGM			PKPM		09 46 24.0	
	comp=Z,0.4nm,2.0s					
MICGM			ePP	PP	09 50 20.0	+12
MICGM			ePPP	PPP	09 53 32.0	
MICGM			eSKKS		09 56 40.0	
MICGM			ePS		10 00 20.0	
MICGM			eSS	SS	10 10 20.0	+48
MNK	Minsk	151.80 328	⇑i PKIKP	PKPdf	09 46 23.0	+2.0
MNK			eSS	SS	10 10 20.0	+48
MNK			pmax	pmax		
	comp=Z,380nm,2.0s					
TAHT	Tahtakopru-Hat	151.83 287	P	PKPdf	09 46 22.8	+1.2
KVT	Kavak	151.83 297	P	PKPdf	09 46 23.2	+1.6
SUE	Sulen	151.84 357	ePKPbc	PKiKP	09 46 27.7	+0.1
SUE			eSS	SS	10 09 32.6	+1.5
HWQ	Hawqa	151.84 282	eP	PKPdf	09 46 22.1	+0.2
ISAL	Salakas	151.85 331	eP	PKPbc	09 46 26.3	-1.2
ISAL			IAmb	IAmb	09 46 34.8	
	comp=Z,54nm,1.0s					
SHBL	Chebaa	151.88 280	eP	PKPdf	09 46 22.5	+0.5
IIGN	Ignalina	151.96 330	eP	PKPbc	09 46 25.6	-2.1
SKAR	Skarslia	151.97 353	ePKPdf	PKPdf	09 46 21.4	+0.2
SKAR			eSS	SS	10 09 33.5	+0.6
NACGM	Naroch	152.03 329	ePKP	PKPdf	09 46 22.0	+0.7
NACGM			PKPM		09 46 33.0	
	comp=Z,1.6nm,1.0s					
NACGM			eSKKS	SKKSac	09 56 54.0	-3.0
NACGM			eSKSP		10 00 58.0	
NACGM			eSS	SS	10 09 26.0	-8.1
NACGM			eSSS	SSS	10 13 46.0	
NACGM			eLQ	LQ	10 37 22.0	
NACGM			eLR	LR	10 44 00.0	
NACGM			LRM	MLR	10 48 34.0	
	comp=Z,13nm,22.0s					
BHL	Bhannes	152.03 281	eP	PKPdf	09 46 22.7	+0.5
MMAI	Mount Meron Ar	152.11 279	PKPbc	PKiKP	09 46 29.5	+0.3
	comp=Z,109nm,0.7s,baz=67,slow=2.2,SNR=31					
BNN	Bunyan	152.13 292	P	PKPdf	09 46 23.1	+0.9
KOZT	Kozan	152.15 289	P	PKPdf	09 46 20.3	-1.8
BEYL	Beirut	152.16 281	eP	PKPdf	09 46 22.4	+0.2
CEYT	Ceyhan	152.21 288	P	PKPbc	09 46 25.5	-3.4
DIKM	Dikmen	152.36 298	P	PKPdf	09 46 24.2	+1.9
ASK	Askoy	152.39 357	ePKPbc	PKiKP	09 46 29.4	+0.6
OSL	Oslo	152.41 351	ePKPbc	PKiKP	09 46 28.7	-0.1
OSL			IVMs_BB	IVMs_BB	09 49 42.1	
	comp=Z,3µm,5.1s					
OSL			eSS	SS	10 09 44.7	+7.1
BER	Bergen	152.48 357	ePKPbc	PKiKP	09 46 29.4	+0.4
YOZ	Yozgat	152.50 294	P	PKPdf	09 46 22.2	-0.5
SIM	Simferopol'	152.54 305d	ePKIKP	PKPdf	09 46 25.4	+3.0
SIM			pmax	pmax		
	comp=Z,95nm,0.9s					
LIC	Lamto	152.59 165	ePKIKP	PKPdf	09 46 22.6	-0.9
	comp=Z,4µm,2.1s					
PABE	Paberze	152.76 332	eP	PKiKP	09 46 30.3	+0.6
KIC	Kosan Boka	152.78 165	ePKIKP	PKPdf	09 46 22.8	-1.0
	comp=Z,1µm,1.0s					
KONO	Kongsberg	152.84 352	ePKPbc	PKPbc	09 46 29.5	0.0
KONO			ePP	PP	09 50 13.9	+0.5
KONO			eSKSdf	SKSdf	09 53 29.5	+2.7
KONO			eSS	SS	10 09 47.8	+5.5
KONO	Kongsberg	152.84 352		PKPbc	09 46 28.5	-1.1
KONO	Kongsberg	152.84 352	IAMs_20	IAMs_20	10 52 34.5	
	comp=Z,7µm,22.0s					
KONO	Kongsberg	152.84 352	PKIKP	PKPbc	09 46 28.5	-1.1
ODD1	Odda	152.87 355	ePKPbc	PKiKP	09 46 30.4	+0.5
ODD1			eSKPdf	SKPdf	09 49 55.5	+2.3
SEVA	Sevastopol	152.95 305	⇓P	PKPbc	09 46 29.8	-0.5
CORM	Corum	152.99 295	P	PKPdf	09 46 24.3	+0.9
TIC	Toumodi	153.00 164	ePKIKP	PKPdf	09 46 23.1	-1.0
	comp=Z,1µm,1.1s					
DBIC	Dimbokro	153.06 165	PKP	PKPdf	09 46 23.8	-0.3
	comp=Z,88nm,1.1s,baz=180,slow=2.5,SNR=24					
DBIC			PKPbc	pPKPdf	09 46 32.0	-0.2
	comp=Z,308nm,1.0s,baz=163,slow=3.4,SNR=41					
DBIC	Dimbokro	153.06 165		PKPdf	09 46 23.6	-0.5
DBIC				sPKPdf	09 46 33.6	-2.0
PBUR	Paburge	153.13 335	eP	PKiKP	09 46 33.1	+2.6
PBUR			IAmb	IAmb	09 46 36.4	
	comp=Z,222nm,1.0s					
MERS	Mersin	153.18 288	P	PKPdf	09 46 23.7	0.0
BZK	Bozkurt	153.24 299	P	PKPdf	09 46 21.8	-1.7
AKASG	Malin Array Be	153.33 320	PKP	PKPdf	09 46 23.3	-0.1
	comp=Z,1.7nm,0.7s,baz=35,slow=1.2,SNR=24					
AKASG			PKPbc	pPKPdf	09 46 31.7	-0.1
	comp=Z,41nm,0.9s,baz=48,slow=1.7,SNR=25					
AKASG			PKPab	PKPab	09 46 44.5	+1.5
	comp=Z,81nm,0.8s,baz=47,slow=3.3,SNR=29					
AKASG	Malin Array Be	153.33 320		PKPdf	09 46 21.4	-2.0
AKASG			PKPbc	PKPbc	09 46 30.0	-0.9
AKASG				PKPab	09 46 45.0	+1.9
BLS5	Blasjo	153.37 355	ePKPdf	PKPdf	09 46 22.5	-0.7
BLS5			eSKPdf	SKPdf	09 49 55.7	+1.8
BLS5			IVMs_BB	IVMs_BB	09 50 13.6	
	comp=Z,5µm,5.1s					
BLS5			eSKSdf	SKSdf	09 53 30.2	+2.8
EREN	Erenkoy	153.41 285	P	PKPdf	09 46 23.5	-0.5
KIZK	Mersin	153.48 287	P	PKPdf	09 46 24.5	+0.4
KMY	Karmoy	153.66 356	ePKPab	PKPab	09 46 44.0	0.0
YAYX	Yaylak	153.71 292	P	PKPdf	09 46 25.0	+0.5
CANT	Cankiri	153.71 296	P	PKPdf	09 46 23.2	-1.2
BRTR	Keskin Array B	153.79 294	PKP	PKPdf	09 46 25.0	+0.3
	comp=Z,8.9nm,1.2s,baz=75,slow=1.4,SNR=14					
BRTR			PKPbc	pPKPdf	09 46 33.8	+0.7
	comp=Z,38nm,0.9s,baz=126,slow=2.5,SNR=34					
BRTR			PKPab	PKPab	09 46 47.0	+1.4
	comp=Z,78nm,0.9s,baz=139,slow=3.4,SNR=18					
BRTR	Keskin Array B	153.79 294		PKPdf	09 46 22.4	-2.2
BRTR			PKPbc	pPKPdf	09 46 32.7	-0.4
BRTR			PKPab	PKPab	09 46 47.0	+1.4
BRTR	Keskin Array B	153.79 294	PKIKP	PKPdf	09 46 22.4	-2.2
BRTR					09 46 32.7	
BRTR					09 46 47.1	
YESY	Yesilyurt	153.81 290	P	PKPdf	09 46 23.3	-1.4
KEBE	Keben-Mersin	153.82 287	P	PKPdf	09 46 23.2	-1.5
IKL	Isikli	153.84 286	P	PKPdf	09 46 24.5	-0.1
SERE	Sereflikochisa	153.90 292	P	PKPdf	09 46 24.2	-0.6
SULT	Sultanhani-AKS	153.98 291	P	PKPdf	09 46 22.9	-1.9
TEVE	Tevekalti-Mers	154.04 286	P	PKPdf	09 46 24.0	-1.0
SUW	Suwalki	154.16 331	ePKP	PKPdf	09 46 25.6	+1.2
SUW	Suwalki	154.16 331	IAMs_20	IAMs_20	10 54 21.5	
	comp=Z,6µm,21.0s					
SUW	Suwalki	154.16 331	ePKIKP	PKPdf	09 46 25.6	+1.2
BERE	Bereket-Mersin	154.22 286	P	PKPdf	09 46 24.3	-1.0
AFSR	Afar-Bala (An	154.25 293	P	PKPdf	09 46 25.8	+0.6
TEKE	Tekeli-Mersin	154.30 286	P	PKPdf	09 46 23.5	-1.7
HOMB	Homborsund	154.31 352	ePKPbc	PKiKP	09 46 34.0	+1.2
HOMB			eSS	SS	10 10 05.0	+6.7
KULU	Kulu	154.33 292	P	PKPdf	09 46 24.3	-1.0
SNART	Snartemo	154.38 354	ePKPbc	PKiKP	09 46 33.5	+0.5
SNART			eSS	SS	10 10 04.6	+5.5
ANTO	Ankara	154.42 294	⇓P	PKPdf	09 46 25.9	+0.5
ANTO	Ankara	154.42 294		PKPdf	09 46 24.9	-0.5
ANTO	Ankara	154.42 294	IAMs_20	IAMs_20	11 00 34.6	
	comp=Z,5µm,21.0s					
ANTO	Ankara	154.42 294	PKIKP	PKPdf	09 46 24.9	-0.5
LEF	Lefka	154.43 283	⇓P	PKiKP	09 46 34.8	+0.9
LOD	Lodumlu	154.44 294	P	PKPdf	09 46 23.8	-1.6
LADK	Ladik-KONYA	154.88 291	P	PKPdf	09 46 25.6	-0.5
KONT	Konya--Tatoy	154.90 290	P	PKPdf	09 46 24.5	-1.6
GAZI	Gazipasa	154.94 286	P	PKPdf	09 46 25.4	-0.8
PGRA	Graciosa	155.00 67	ePKP	PKPdf	09 46 27.2	+1.1
SORM	Soroca	155.10 315	⇑P	PKPdf	09 46 27.3	+1.4
SORM	Soroca	155.10 315	⇑PKIKP	PKPdf	09 46 27.3	+1.4
KIZT	Kizilcal	155.22 292	P	PKPdf	09 46 24.0	-2.6
KIS	Kishinev	155.32 312	ePKP	PKPdf	09 46 25.0	-1.3
KIS	Kishinev	155.32 312	ePP	PP	09 50 36.0	+7.7
KIS			eSKS	SKSdf	09 53 22.0	-8.2
KIS	Kishinev	155.32 312	eSKSP		10 00 40.0	
KIS	Kishinev	155.32 312	ePKIKP	PKPdf	09 46 25.0	-1.3
KIS			i		09 46 38.0	
KIS			e		09 50 36.0	
KIS			e		09 53 22.0	
KIS			ePPS	PPS	10 03 40.0	
KIS	Kishinev	155.32 312	ePKKP		09 54 48.0	
KIS	Kishinev	155.32 312	eSKKS		09 57 16.0	
MILM	Milestii Mici	155.36 312	⇑P	PKPdf	09 46 36.6	+10
SVRH	Sivrihisar-ESK	155.44 294	P	PKPdf	09 46 24.6	-2.2
MDUB	Mudurnu	155.56 296	P	PKPdf	09 46 26.8	-0.2
CIFT	Cifteler, Eski	155.81 294	P	PKPdf	09 46 26.2	-1.1
LEOM	Leova	155.90 312	⇑P	PKPab	09 46 41.5	-13
MUD	Monsted U'grnd	156.00 350	i P	PKPdf	09 46 25.7	-1.1
MUD			e		09 46 54.0	
MUD	Monsted U'grnd	156.00 350	i PKIKP	PKPdf	09 46 25.7	-1.1
MUD			e		09 46 54.0	
MUD			MLR	MLR		
	comp=Z,9µm,25.0s					
TLCR		156.04 308	⇓P	PKPab	09 46 42.2	-13
SRCK	Saricakaya, Es	156.06 295	P	PKPdf	09 46 26.9	-0.6
GULT	Gulveren	156.08 296	P	PKPdf	09 46 26.9	-0.7
BSD	Bornholm Skovb	156.08 342	i P	PKPdf	09 46 26.0	-1.0
BSD	Bornholm Skovb	156.08 342	i PKIKP	PKPdf	09 46 26.0	-1.0
BSD			MLR	MLR		
	comp=Z,13µm,24.0s					
VASR	Vaslui	156.11 312	⇑P	PKPab	09 46 43.7	-11
COP	Copenhagen	156.15 345	i P	PKPdf	09 46 28.0	+0.9
COP	Copenhagen	156.15 345	i PKIKP	PKPdf	09 46 28.0	+0.9
COP			MLR	MLR		

	comp=Z,8μm,29.0s				
SAUV	Serdivan-Sakar	156.17 297	P	PKPdf	09 46 24.9 -2.7
SHUT	Suhut-Afyon	156.28 292	P	PKPdf	09 46 28.6 +0.6
BCK	Bucak	156.32 289	P	PKPdf	09 46 24.3 -3.7
TOPG	Topolog	156.44 308	⇑P	PKPdf	09 46 37.9 +10
KORT	Korkueli	156.53 288	P	PKPdf	09 46 17.9 -11
LVV	L'vov	156.58 322	i PKIKP	PKPdf	09 46 26.9 -1.0
LVV			e		09 46 53.6
LVV			e		09 50 37.7
LVV			eSS	SS	10 10 17.3 -6.8
BEL	Belsk	156.74 330	ePKP	PKPdf	09 46 30.3 +2.3
BEL	Belsk	156.74 330	ePKIKP	PKPdf	09 46 30.3 +2.3
HARR	Harsova	156.80 308	⇓P	PKPdf	09 46 33.2 +4.9
HARR	Harsova	156.80 308	⇓PKIKP	PKPdf	09 46 33.2 +4.9
PETR	Petresti	156.85 311	⇑P	PKPab	09 46 53.6 -4.6
TESR	Tescani	156.88 313	⇑P	PKPdf	09 46 30.9 +2.6
ELL	Elmali	156.89 287	P	PKPdf	09 46 23.8 -5.1
GKP	Gorka Klasztor	156.97 336	ePKP	PKPdf	09 46 30.6 +2.4
GKP	Gorka Klasztor	156.97 336	ePKIKP	PKPdf	09 46 30.6 +2.4
BIZ	Bicaz	157.01 314	⇑P	PKPdf	09 46 28.6 +0.1
CMLA	Cha da Macela	157.02 70	ePKP	PKPdf	09 46 30.8 +2.0
VRI	Vrincioaia	157.11 311	⇓P	PKPdf	09 46 43.5 +15
PLOR	Plostina	157.17 311	⇓P	PKPab	09 46 49.3 -10
BURAR	Bucovina Array	157.19 317	⇑P	PKPdf	09 46 30.2 +1.4
BURAR	Bucovina Array	157.19 317		PKPdf	09 46 27.8 -1.1
BURAR			PKPab	PKPab	09 47 02.6 +2.8
BURAR	Bucovina Array	157.19 317	⇑PKIKP	PKPdf	09 46 30.2 +1.4
BISRR	Bisoca	157.26 311	⇓P	PKPab	09 46 50.8 -9.3
BART	Pico Bartolome	157.30 70	ePKP	PKPdf	09 46 31.3 +2.0
KWP	Kalwaria Pacla	157.37 323	ePKP	PKPdf	09 46 30.6 +1.7
KWP	Kalwaria Pacla	157.37 323	ePKIKP	PKPdf	09 46 30.6 +1.7
PSMA	Santa Maria	157.38 72	ePKP	PKPdf	09 46 31.3 +2.0
CTKS	Kestanelik-??a	157.42 299	P	PKPdf	09 46 27.9 -1.3
PSMN	Pico do Norte,	157.43 72	ePKP	PKPdf	09 46 30.0 +0.6
SIMA	Simav-Kutahya	157.44 293	P	PKPdf	09 46 24.3 -5.1
CTYL	Yalikoy Yolu	157.53 300	P	PKPdf	09 46 27.4 -1.9
MLR	Muntele Rosu	157.77 311	PKP	PKPdf	09 46 30.1 +0.4
	comp=Z,10nm,1.1s,baz=59,slow=2.4,SNR=8.3				
MLR			PKPab	PKPab	09 47 02.6 +0.2
	comp=Z,91nm,1.1s,baz=21,slow=3.7,SNR=7.6				
MLR	Muntele Rosu	157.77 311	⇑P	PKPdf	09 46 32.9 +3.2
DOPR	Dopca	157.90 313	⇑P	PKPdf	09 46 32.4 +2.7
TURN	Turunc	157.93 288	P	PKPdf	09 46 28.7 -1.3
ARCR	ARCALIA	157.97 316	⇓P	PKPdf	09 46 30.6 +0.9
KOLS	Kolonicke sedl	158.03 323	ePKIKP	PKPdf	09 46 29.1 -0.6
KOLS	Kolonicke sedl	158.03 323	ePKP	PKPdf	09 46 29.1 -0.6
EDC	Edincik	158.09 297	P	PKPdf	09 46 29.5 -0.6
BMR	Baia Mare	158.13 319	⇑P	PKPdf	09 46 38.9 +9.0
BMR	Baia Mare	158.13 319	⇑PKIKP	PKPdf	09 46 38.9 +9.0
YER	Yerkesik	158.17 288	P	PKPdf	09 46 29.2 -1.2
UZH	Uzhgorod	158.21 322	⇑/PKIKP	PKPdf	09 46 29.5 -0.4
UZH			i		09 47 04.8
UZH			e		09 53 22.1
UZH			eSS	SS	10 10 37.2 -4.3
BSEG	Bad Segeberg	158.23 347	ePKPdf	PKPdf	09 46 32.0 +2.3
	baz=28,slow=1.0				
STHS	Stebnicka Huta	158.23 325	ePKP2	PKPab	09 47 05.4 +1.3
STHS	Stebnicka Huta	158.23 325	ePKPab	PKPab	09 47 05.4 +1.3
OJC	Ojcow	158.34 328	ePKP	PKPdf	09 46 30.3 +0.2
OJC	Ojcow	158.34 328	ePKIKP	PKPdf	09 46 30.3 +0.2
VOIR		158.36 312	⇑P	PKPdf	09 46 32.4 +2.0
VOIR		158.36 312	⇑PKIKP	PKPdf	09 46 32.4 +2.0
AYDB	Zeytinkoy-Aydi	158.42 291	P	PKPdf	09 46 29.2 -1.5
MTUR	Matau	158.45 311	⇓P	PKPdf	09 46 38.7 +8.2
MTUR	Matau	158.45 311	⇓PKIKP	PKPdf	09 46 38.7 +8.2
CRVS	Cervenica-Dubn	158.46 323	ePKIKP	PKPdf	09 46 29.9 -0.4
CRVS	Cervenica-Dubn	158.46 323	ePKP	PKPdf	09 46 29.9 -0.4
ARR	Arges	158.65 312	⇑P	PKPdf	09 46 30.2 -0.5
NIE	Niedzica	158.68 326	ePKP	PKPdf	09 46 31.2 +0.7
NIE	Niedzica	158.68 326	ePKIKP	PKPdf	09 46 31.2 +0.7
RUE	Ruedersdorf	158.73 340	ePKPdf	PKPdf	09 46 32.5 +2.1
	baz=28,slow=1.0				
RUE	Ruedersdorf	158.73 340	eP	PKPdf	09 46 30.3 -0.1
BLCB	Balcova	159.04 292	P	PKPdf	09 46 27.4 -3.9
GELI	Tayfur-Gelibol	159.12 298	P	PKPdf	09 46 30.0 -1.3
LOT	Lotru	159.15 313	⇑P	PKPdf	09 46 43.1 +12
KSP	Ksiaz	159.30 334	ePKP	PKPdf	09 46 33.6 +2.4
KSP	Ksiaz	159.30 334	ePKIKP	PKPdf	09 46 33.6 +2.4
ALN	Alexandroupoli	159.31 299	IAMs_20	IAMs_20	11 05 02.4
	comp=Z,4μm,22.0s				
OKC	Ostrava-Krasne	159.35 329	ePKPDF	PKPdf	09 46 31.0 -0.2
OKC			ex	x	09 47 01.3
OKC			AMS	AMS	10 49 10.0
	comp=Z,9μm,28.2s				
OKC	Ostrava-Krasne	159.35 329	ePKIKP	PKPdf	09 46 31.0 -0.2
OKC			MLR	MLR	
	comp=Z,9μm,28.2s				
PLVB	Pleven	159.51 307	⇓P	PKPdf	09 46 33.5 +1.8
RETH	Rethem/Aller,	159.54 347	ePKPdf	PKPdf	09 46 33.6 +2.2
	baz=28,slow=1.0				
OSTC	Ostas	159.56 334	ePKP	PKPdf	09 46 31.4 -0.1
OSTC			ex	x	09 47 12.7
OSTC			AMS	AMS	10 53 10.0
	comp=Z,11μm,26.6s				
CHVC	Chvalec	159.59 334	ePKPDF	PKPdf	09 46 30.8 -0.8
CHVC			ePKPAB	PKPab	09 47 12.9 +2.9
CHVC			AMS	AMS	10 53 00.0
	comp=Z,12μm,26.3s				
NRDL	Niedersach Rie	159.63 346	ePKPdf	PKPdf	09 46 33.5 +2.2
	baz=28,slow=1.0				
MORC	Moravsky Berou	159.65 330	ePKP	PKPdf	09 46 31.4 -0.3
MORC	Moravsky Berou	159.65 330	⇑P	PKPdf	09 46 31.4 -0.3
MORC	Moravsky Berou	159.65 330	⇑PKIKP	PKPdf	09 46 31.4 -0.3
UPC	Upice	159.68 334	ePKPDF	PKPdf	09 46 34.2 +2.6
UPC			ex	x	09 47 10.2
UPC			AMS	AMS	10 53 20.0
	comp=Z,14μm,26.7s				
UPC	Upice	159.68 334	ePKIKP	PKPdf	09 46 34.2 +2.6
UPC			e		09 47 10.2
UPC			MLR	MLR	
	comp=Z,14μm,26.7s				
DPC	Dobruska-Polom	159.69 333	ePKPDF	PKPdf	09 46 31.5 -0.2
DPC			ePKPAB	PKPab	09 47 12.1 +1.7
DPC			ex	x	10 10 42.4
DPC			AMS	AMS	10 49 00.0
	comp=Z,9μm,27.7s				
DPC	Dobruska-Polom	159.69 333	ePKIKP	PKPdf	09 46 31.5 -0.2
DPC			e		09 47 12.1
DPC			MLR	MLR	
	comp=Z,9μm,27.7s				
KRLC	Kraliky	159.73 332	AMS	AMS	11 01 40.0
	comp=Z,7μm,22.5s				
GZR	Gura Zlata	159.78 314	⇓P	PKPdf	09 46 32.3 +0.3
GZR	Gura Zlata	159.78 314	⇓PKIKP	PKPdf	09 46 32.3 +0.3
ASSE	Asse, Remlinge	159.85 344	ePKPdf	PKPdf	09 46 33.8 +2.2
	baz=28,slow=1.0				
ASSE			ePKPab	PKPab	09 47 14.3 +3.5
	baz=28,slow=1.0				
PSZ	Piszkesteto	159.90 323	⇓P	PKPdf	09 46 32.5 +0.4
PSZ	Piszkesteto	159.90 323	⇓PKIKP	PKPdf	09 46 32.5 +0.4
SIRR	Siria	159.97 317	⇑P	PKPdf	09 46 32.7 +0.6
CLL	Collm	160.00 340	ePKPdf	PKPdf	09 46 33.6 +1.6
	baz=28,slow=1.0				
CLL			ePKPab	PKPab	09 47 14.6 +2.9
	baz=28,slow=1.0				
CLL	Collm	160.00 340	ePKPdf	PKPdf	09 46 32.0 +0.1
	comp=Z,826nm,3.3s				
CLL			ePKPab	PKPab	09 47 11.0 -0.6
	comp=Z,192nm,1.7s				
CLL			i pPKPab	sPKPab	09 47 25.6 +2.9
	comp=Z,71nm,1.0s				
CLL			eSKPdf	SKPdf	09 50 02.0 +0.3
CLL			ePP	PP	09 50 51.0 -2.2
CLL			e		09 54 12.0
CLL			e		09 55 22.0
CLL			e		09 56 42.0
CLL			eSKSac	SKSac	09 57 43.0 +3.5
CLL			e		09 58 35.0
CLL			ePSKS		10 01 17.0
CLL			ePPS	PPS	10 04 23.0
CLL			e		10 06 06.0
CLL			eSS	SS	10 10 54.0 -5.5
CLL			eSSS	SSS	10 17 12.0
CLL			ePSPSrev		10 20 36.0
CLL			Lm	MLR	11 06 00.0
	comp=Z,6μm,20.2s				
CLL	Collm	160.00 340	ePKIKP	PKPdf	09 46 32.0 +0.1
CLL			e		09 47 11.0
CLL			pmax	pmax	
	comp=Z,826nm,3.3s				
CLL			pmax	pmax	
	comp=Z,192nm,1.7s				
CLL			MLR	MLR	
	comp=Z,6μm,20.2s				
VYHS	Vyhne	160.02 326	ePKIKP	PKPdf	09 46 31.3 -0.8
VYHS			e		09 47 12.0
VYHS	Vyhne	160.02 326	ePKP	PKPdf	09 46 31.3 -0.8
VYHS			e		09 47 12.0
BRG	Berggiesshubel	160.09 338	ePKP	PKPdf	09 46 31.5 -0.6
	comp=Z,316nm,2.2s				
BRG	Berggiesshubel	160.09 338	i PKP	PKPab	09 47 11.6 -0.4
	comp=Z,403nm,2.1s				
BRG			PP	PP	09 50 53.0 -0.8
BRG			SKS	SKKSac	09 57 42.0 +1.9
BRG			SS	SS	10 10 59.0 -1.6
BRG	Berggiesshubel	160.09 338	ePKPdf	PKPdf	09 46 34.0 +1.9
	baz=28,slow=1.0				
BRG			ePKPab	PKPab	09 47 15.1 +3.1
	baz=28,slow=1.0				
BRG	Berggiesshubel	160.09 338	ePKIKP	PKPdf	09 46 31.5 -0.6
BRG			i		09 47 11.6
BRG					09 50 53.0
BRG			SS	SS	10 10 59.0 -1.6
BRG			pmax	pmax	
	comp=Z,316nm,2.2s				
BRG			pmax	pmax	
	comp=Z,403nm,2.1s				
BRG			MLR	MLR	
	comp=N,6μm,24.4s				
BRG			MLR	MLR	
	comp=E,4μm,23.9s				
BRG			MLR	MLR	
	comp=Z,9μm,24.6s				
MPEP	Malo Peshtene	160.11 308	P	PKPdf	09 46 31.1 -1.3
PGB	Panagyurishte	160.13 305	P	PKPdf	09 46 33.4 +0.9
PVCC	Panska Ves	160.17 336	ePKPDF	PKPdf	09 46 34.8 +2.6
PVCC			ePKPAB	PKPab	09 47 12.7 +0.3
PVCC			AMS	AMS	10 58 40.0
	comp=Z,11μm,22.4s				
PVCC	Panska Ves	160.17 336	ePKIKP	PKPdf	09 46 34.8 +2.6
PVCC			e		09 47 12.7
PVCC			MLR	MLR	
	comp=Z,11μm,22.4s				
CLZ	Clausthal	160.19 345	ePKPdf	PKPdf	09 46 34.4 +2.2
	baz=28,slow=1.0				
CLZ			ePKPab	PKPab	09 47 15.6 +3.1
	baz=28,slow=1.0				
IBBN	Ibbenburen	160.23 350	ePKPdf	PKPdf	09 46 34.3 +2.1
	baz=28,slow=1.0				
FBE	Freiberg	160.23 339	ePKPdf	PKPdf	09 46 34.3 +2.1
	baz=28,slow=1.0				
FBE			ePKPab	PKPab	09 47 16.0 +3.3
	baz=28,slow=1.0				
TORD	Torodi Ar. Bea	160.28 179	PKP	PKPdf	09 46 32.8 -0.5
	comp=Z,30nm,0.9s,baz=229,slow=0.2,SNR=49				
TORD			PKPab	PKPab	09 47 12.6 -1.1
	comp=Z,177nm,1.3s,baz=185,slow=3.5,SNR=19				
TORD	Torodi Ar. Bea	160.28 179		PKPdf	09 46 31.5 -1.9
TORD			PKPab	PKPab	09 47 12.2 -1.5
JAVC	Velka Javorina	160.29 328	ePKP	PKPdf	09 46 33.0 +0.6
BZS	Buzias	160.35 316	⇑P	PKPdf	09 46 31.7 -0.9
BZS	Buzias	160.35 316	⇑PKIKP	PKPdf	09 46 31.7 -0.9
VRAC	Vranov	160.40 331	ePKP	PKPdf	09 46 30.9 -1.6
VRAC			e		09 47 13.0
VRAC	Vranov	160.40 331	PKP	PKPdf	09 46 32.3 -0.2
	comp=Z,1.6nm,0.3s,baz=32,slow=0.8,SNR=13				
VRAC			PKPab	PKPab	09 47 12.6 -0.9
	comp=Z,14nm,0.7s,baz=58,slow=3.9,SNR=9.4				
VRAC	Vranov	160.40 331	⇓P	PKPdf	09 46 31.1 -1.4
VRAC	Vranov	160.40 331	⇓PKIKP	PKPdf	09 46 31.1 -1.4
NEUB	Neuenburg	160.43 342	ePKPdf	PKPdf	09 46 34.3 +1.9
	baz=28,slow=1.0				
GTTG	Gottingen	160.55 345	ePKPdf	PKPdf	09 46 34.6 +2.0
	baz=28,slow=1.0				
PRA	Prague	160.61 335	AMS	AMS	10 54 00.0
	comp=Z,11μm,25.8s				
GOPC	GO Pecny, Ondr	160.61 335	ePKPDF	PKPdf	09 46 32.4 -0.3
GOPC			ePKPAB	PKPab	09 47 14.4 0.0
GOPC			eSS	SS	10 11 09.3 +3.0
GOPC			AMS	AMS	10 52 40.0
	comp=Z,13μm,24.6s				
GOPC	GO Pecny, Ondr	160.61 335	ePKIKP	PKPdf	09 46 32.4 -0.3
GOPC			e		09 47 14.4
GOPC			eSS	SS	10 11 09.3 +3.0
GOPC			MLR	MLR	
	comp=Z,13μm,24.6s				
PRU	Pruhonice	160.64 335	ePKPDF	PKPdf	09 46 32.1 -0.6
PRU			AMS	AMS	10 58 50.0
	comp=Z,13μm,24.5s				
PRU	Pruhonice	160.64 335	ePKIKP	PKPdf	09 46 32.1 -0.6
PRU			MLR	MLR	
	comp=Z,13μm,24.5s				
SMOL	Smolenice	160.65 328	ePKP2	PKPab	09 47 17.0 +2.4
SMOL	Smolenice	160.65 328	ePKP	PKPab	09 47 17.0 +2.4
KRUC	Moravsky	160.68 331	ePKP	PKPdf	09 46 31.0 -1.8
VTS	Vitosha	160.74 306	⇑P	PKPdf	09 46 32.5 -0.8
VTS	Vitosha	160.74 306	P	PKPdf	09 46 29.5 -3.8
VTS	Vitosha	160.74 306	⇑PKIKP	PKPdf	09 46 32.5 -0.8
BANR	Banloc	160.77 316	⇑P	PKPdf	09 46 47.9 +15
MMB	Musomiste	160.78 303	P	PKPdf	09 46 30.5 -2.7
MODS	Modra-Piesok	160.82 328	ePKIKP	PKPdf	09 46 32.5 -0.5
MODS	Modra-Piesok	160.82 328	ePKP	PKPdf	09 46 32.5 -0.5
MODS			e		09 47 18.8
TREC	Trest	160.86 332	AMS	AMS	10 49 50.0
	comp=Z,13μm,29.3s				
TANN	Tannenbergstha	160.95 339	ePKPdf	PKPdf	09 46 34.9 +1.7
	baz=28,slow=1.0				
TANN			ePKPab	PKPab	09 47 19.4 +3.5
	baz=28,slow=1.0				
TANN			epPKPab	sPKPab	09 47 32.1 +5.1
PLN	Plauen	160.97 340	ePKPdf	PKPdf	09 46 34.8 +1.8
	baz=28,slow=1.0				
PLN			ePKPab	PKPab	09 47 19.1 +3.2
	baz=28,slow=1.0				
PLN			epPKPab	sPKPab	09 47 32.4 +5.3
IDI	Anoyia	160.98 283	PKP	PKPdf	09 46 33.9 +0.2
	comp=Z,42nm,1.1s,baz=117,slow=2.4,SNR=15				
IDI				PKPab	09 47 17.1 +0.4
	comp=Z,42nm,0.8s,baz=77,slow=7.9,SNR=16				
MOX	Moxa	160.98 341	ePKPdf	PKPdf	09 46 34.9 +1.8
	baz=28,slow=1.0				
MOX			ePKPab	PKPab	09 47 19.1 +3.1
	baz=28,slow=1.0				
MOX			epPKPab	sPKPab	09 47 32.9 +5.8
GUNZ	Gunzen	161.03 339	ePKPdf	PKPdf	09 46 35.0 +1.8
	baz=28,slow=1.0				
GUNZ			ePKPab	PKPab	09 47 19.7 +3.5
	baz=28,slow=1.0				
ZST	Bratislava	161.03 328	ePKIKP	PKPdf	09 46 31.9 -1.3
ZST			e		09 47 16.7
ZST	Bratislava	161.03 328	ePKP	PKPdf	09 46 31.9 -1.3
ZST			e		09 47 16.7
WERN	Wernitzgruen	161.09 339	ePKPdf	PKPdf	09 46 35.2 +1.9
	baz=28,slow=1.0				
WERN			ePKPab	PKPab	09 47 19.8 +3.4
	baz=28,slow=1.0				
NKC	Novy Kostel	161.11 339	ePKPDF	PKPdf	09 46 34.2 +0.9
NKC			epPKP	sPKPab	09 47 29.9 +2.2
NKC			AMS	AMS	11 03 10.0
	comp=Z,8μm,22.1s				
NKC	Novy Kostel	161.11 339	ePKIKP	PKPdf	09 46 34.2 +0.9
NKC			MLR	MLR	
	comp=Z,8μm,22.1s				
KKB	Krupnik	161.13 304	P	PKPdf	09 46 24.1 -9.4
BUG	Bochum--Univer	161.15 350	ePKPdf	PKPdf	09 46 35.0 +1.8
	baz=28,slow=1.0				
UBBA	Unterbreizbach	161.23 344	ePKPdf	PKPdf	09 46 35.1 +1.9
	baz=28,slow=1.0				
MANZ	Manzenberg	161.43 339	ePKPdf	PKPdf	09 46 35.2 +1.6
	baz=28,slow=1.0				
MANZ			ePKPab	PKPab	09 47 21.5 +3.5
	baz=28,slow=1.0				
ROTZ	Rotzenmuhle	161.60 339	ePKPdf	PKPdf	09 46 35.3 +1.6
	baz=28,slow=1.0				
ROTZ			ePKPab	PKPab	09 47 22.3 +3.6
	baz=28,slow=1.0				
ROTZ			epPKPab	sPKPab	09 47 35.4 +5.6
MORH	Mrgy, Hungar	161.66 321	⇑/P	PKPdf	09 46 29.5 -4.4
FRGS	Fruska Gora	161.66 317	⇑/P	PKPdf	09 46 32.3 -1.7
VAY	Valandovo	161.69 303	i P	PKPdf	09 46 33.2 -0.9
KHC	Kasperske Hory	161.70 335	ePKPDF	PKPdf	09 46 33.0 -0.9
KHC			ex	x	09 46 51.0
KHC			ePKPAB	PKPab	09 47 21.2 +2.0
KHC			eSS	SS	10 11 17.1 -0.6
KHC			AMS	AMS	10 54 20.0
	comp=Z,12μm,25.5s				
KHC	Kasperske Hory	161.70 335	ePKIKP	PKPdf	09 46 33.0 -0.9
KHC			eSS	SS	10 11 17.1 -0.6
KHC			MLR	MLR	
	comp=Z,12μm,25.5s				
CONA	Conrad Observa	161.78 329	PKPdf	PKPdf	09 46 33.3 -0.9
	comp=Z,56nm,2.0s,SNR=10				
STIP	Stip	161.82 304	i P	PKPdf	09 46 35.8 +1.6
GEC2	GERESS Array S	161.90 335	ePKPdf	PKPdf	09 46 35.8 +1.6
	baz=28,slow=1.0				
GEC2			ePKPab	PKPab	09 47 23.6 +3.4
	baz=28,slow=1.0				
GERES	GERESS Array B	161.90 335	PKP	PKPdf	09 46 34.2 0.0
	comp=Z,4.7nm,1.0s,baz=117,slow=1.5,SNR=14				
GERES			PKPab	PKPab	09 47 19.5 -0.6
	comp=Z,16nm,0.8s,baz=34,slow=1.9,SNR=10				
GERES	GERESS Array B	161.90 335		PKPdf	09 46 32.1 -2.1
GERES				PKPab	09 47 23.7 +3.5
WET	Wettzell	161.93 337	ePKPdf	PKPdf	09 46 36.0 +1.8
	baz=28,slow=1.0				
WET			ePKPab	PKPab	09 47 23.8 +3.6
	baz=28,slow=1.0				
WET			epPKPab	sPKPab	09 47 36.7 +5.4
GRF	Grafenberg Arr	161.95 341	ePKPdf	PKPdf	09 46 35.8 +1.6
	baz=28,slow=1.0				
GRF			ePKPab	PKPab	09 47 23.8 +3.5
	baz=28,slow=1.0				
AHRW	Bad Neuenahr-A	162.05 350	ePKPdf	PKPdf	09 46 36.3 +2.1
	baz=28,slow=1.0				
TNS	Taunus Mts	162.12 347	ePKPdf	PKPdf	09 46 36.3 +1.9
	baz=28,slow=1.0				
DIVS	Divibare	162.15 314	⇑/P	PKPdf	09 46 34.0 -0.6
TEKS	Tekeris	162.18 316	eP	PKPdf	09 46 32.7 -1.8
SKO	Skopje	162.22 306	i P	PKPdf	09 46 33.9 -0.7
ARSA	Arzberg	162.45 328	ePKPdf	PKPdf	09 46 33.9 -0.9
	comp=Z,37nm,1.6s,SNR=8.9				
MOA	Molln	162.50 332	ePKPdf	PKPdf	09 46 33.8 -1.0
	comp=Z,31nm,1.6s,SNR=6.4				
BBLS	Lazići	162.63 314	⇑/P	PKPdf	09 46 33.2 -1.9
OHR	Ohrid	163.00 304	i P	PKPdf	09 46 34.6 -0.9
WLF	Walferdange	163.04 351	ePKPdf	PKPdf	09 46 38.0 +2.9
	baz=28,slow=1.0				
WLF			ePKPab	PKPab	09 47 28.0 +3.0
	baz=28,slow=1.0				
PERS	Pernice	163.09 328	ePKPdf	PKPdf	09 46 34.2 -1.2
PERS			i pPKPdf	pPKPdf	09 46 37.0 -6.9
PERS			e		09 46 44.5
PERS			i PKPab	PKPab	09 47 24.1 -1.4
SOKA	Soboth	163.10 328	PKPdf	PKPdf	09 46 34.5 -0.9
	comp=Z,45nm,1.8s,SNR=6.8				
RJOB	Jochberg	163.16 334	ePKPdf	PKPdf	09 46 36.8 +1.4
	baz=28,slow=1.0				
ZAG	Zagreb	163.28 324	⇑/P	PKPdf	09 46 35.0 -0.5
UPM	Unac-Piva	163.29 313	eP	PKPdf	09 46 36.0 +0.1
FUR	Furstenfeldbru	163.30 338	ePKPdf	PKPdf	09 46 37.4 +1.8
	baz=28,slow=1.0				
FUR			ePKPab	PKPab	09 47 29.8 +3.5
	baz=28,slow=1.0				
STU	Stuttgart	163.32 343	ePKPdf	PKPdf	09 46 37.2 +1.7
	baz=28,slow=1.0				
BLY	Banja Luka	163.39 319	⇑P	PKPdf	09 46 38.0 +2.4
BLY	Banja Luka	163.39 319	⇑/P	PKPdf	09 46 35.5 -0.2
OBKA	Obir	163.44 328	ePKPdf	PKPdf	09 46 36.3 +0.5
	comp=Z,26nm,1.4s				
PDG	Podgorica	163.47 310	⇓P	PKPdf	09 46 37.7 +1.9
PDG	Podgorica	163.47 310	⇑/P	PKPdf	09 46 35.5 -0.3
KBA	Koelnbreinsper	163.49 332	ePKPdf	PKPdf	09 46 34.6 -1.4
	comp=Z,45nm,1.6s,SNR=6.6				
CRES	Cresnjev	163.54 325	⇑/P	PKPdf	09 46 35.4 -0.4
DRME	Dracevica, Mon	163.63 309	⇑/P	PKPdf	09 46 34.5 -1.5
BRY	Bratogost	163.68 312	eP	PKPdf	09 46 36.3 +0.1
MYKA	Terra Mystica	163.74 330	PKPdf	PKPdf	09 46 35.0 -1.1
	comp=Z,53nm,1.7s				
PMOZ	Porto Moniz, M	163.80 85	ePKPdf	PKPdf	09 46 40.3 +3.7
PMOZ	Porto Moniz, M	163.80 85	ePKPab	PKPab	09 47 27.3 -1.9
LJU	Ljubljana	163.81 327	ePKPdf	PKPdf	09 46 34.3 -1.7
LJU			epPKPdf	pPKPdf	09 46 38.0 -6.5
LJU			e		09 46 45.7
LJU	Ljubljana	163.81 327	⇑/P	PKPdf	09 46 35.3 -0.7
WATA	Walderalm	163.93 336	PKPdf	PKPdf	09 46 36.5 +0.2
	comp=Z,56nm,1.5s,SNR=9.1				
BFO	Black Forest	163.94 345		PKPdf	09 46 36.1 +0.1
BFO	Black Forest	163.94 345	PKIKP	PKPdf	09 46 36.2 +0.1
PMAR	Madeira	164.03 86	ePKPdf	PKPdf	09 46 40.4 +3.5
FUL	Funchal	164.04 86	ePKPdf	PKPdf	09 46 40.0 +3.3
RETA	Reutte	164.06 338	PKPdf	PKPdf	09 46 36.4 0.0
	comp=Z,32nm,1.9s,SNR=6.9				
MOTA	Moosalm	164.08 337	ePKPdf	PKPdf	09 46 36.8 +0.4
	comp=Z,30nm,1.6s,SNR=6.4				
UBR	Ueberruh	164.09 340	ePKPdf	PKPdf	09 46 37.7 +1.4
	baz=28,slow=1.0				
UBR			ePKPab	PKPab	09 47 33.0 +3.3
	baz=28,slow=1.0				
ABTA	Abfaltersbach	164.09 333	PKPdf	PKPdf	09 46 34.9 -1.5
	comp=Z,64nm,1.8s,SNR=7.2				
JAVS	Javornik	164.13 328	ePKPdf	PKPdf	09 46 36.2 -0.3
JAVS			ePKPab	PKPab	09 47 29.6 -0.4
SQTA	Sankt Quirin	164.15 337	ePKPdf	PKPdf	09 46 35.7 -0.7
	comp=Z,31nm,1.6s,SNR=6.9				
STON	Ston	164.22 313	⇑/P	PKPdf	09 46 36.0 -0.5
FETA	Feichten	164.49 337	PKPdf	PKPdf	09 46 36.1 -0.7
	comp=Z,50nm,1.4s,SNR=8.5				
DAVA	Damuels	164.51 340	ePKPdf	PKPdf	09 46 36.1 -0.7
	comp=Z,36nm,2.0s				
PMPS	Porto Santo	164.55 85	ePKPdf	PKPdf	09 46 38.7 +1.6
PMPS	Porto Santo	164.55 85	ePKPab	PKPab	09 47 33.1 +0.8
PMPS	Porto Santo	164.55 85	ePP	PP	09 51 22.0 +3.0
PMPST	Porto Santo, M	164.55 85	ePKPdf	PKPdf	09 46 40.5 +3.4
PMPST	Porto Santo, M	164.55 85	ePKPab	PKPab	09 47 32.2 -0.1
PMPST	Porto Santo, M	164.55 85	ePP	PP	09 51 19.7 +0.6
DAVOX	Davos/Dischmat	164.97 339	PKP	PKPdf	09 46 38.3 +1.0
	comp=Z,8.7nm,0.9s,baz=104,slow=4.5,SNR=14				
DAVOX			PKPab	PKPab	09 47 34.1 +0.3
	comp=Z,22nm,0.9s,baz=316,slow=4.4,SNR=5.9				
DAVOX			PP	PP	09 51 19.8 -0.1
	comp=Z,4.2nm,0.9s,baz=89,slow=8.2,SNR=3.8				
AQU	L'Aquila	167.03 320	⇑/P	PKPdf	09 46 38.6 -0.3
PCAB	Cabril	168.13 40	ePKPdf	PKPdf	09 46 42.4 +2.7
PCAB	Cabril	168.13 40	ePKPab	PKPab	09 47 49.3 +1.5
POLO	Lamas de Olo	168.49 40	ePKPdf	PKPdf	09 46 42.7 +2.7
POLO	Lamas de Olo	168.49 40	ePKPab	PKPab	09 47 50.7 +1.2
PVRL	Vila Real	168.60 40	ePKPdf	PKPdf	09 46 43.4 +3.4
PVIS	Viseu	168.88 43	ePKPdf	PKPdf	09 46 43.0 +2.8
COI	Coimbra	168.89 46	ePKPdf	PKPdf	09 46 43.2 +3.0
PCAS	Casmilo, Conde	168.94 47	ePKPdf	PKPdf	09 46 43.5 +3.3
PMAFR	Mafra	169.02 54	ePKPdf	PKPdf	09 46 43.8 +3.5
PMAFR	Mafra	169.02 54	ePP	PP	09 51 43.4 +1.9
MVO	Moncorvo	169.05 39	ePKPdf	PKPdf	09 46 42.5 +2.1
LIS	Lisbon	169.23 55	ePKPdf	PKPdf	09 46 40.1 -0.3
LIS			AMS	AMS	10 50 42.4
	comp=E,10μm,18.2s				
LIS	Lisbon	169.23 55	ePKIKP	PKPdf	09 46 40.1 -0.3
PTOM	Tomar	169.24 49	ePKPdf	PKPdf	09 46 43.9 +3.5
PTOM	Tomar	169.24 49	ePKPab	PKPab	09 47 53.7 +0.9
MTE	Manteigas	169.29 43	ePKPdf	PKPdf	09 46 41.8 +1.3
ALMR	Almeirim	169.39 51	ePKPdf	PKPdf	09 46 42.1 +1.6
ALMR	Almeirim	169.39 51	ePKPab	PKPab	09 47 54.4 +1.0
ALMR	Almeirim	169.39 51	ePP	PP	09 51 43.4 +0.1
PMTG	Montargil	169.67 51	ePKPdf	PKPdf	09 46 43.9 +3.2
PMTG	Montargil	169.67 51	ePKPab	PKPab	09 47 55.6 +0.9
PCBR	Castelo Branco	169.69 46	ePKPdf	PKPdf	09 46 44.1 +3.4
PCBR	Castelo Branco	169.69 46	ePKPab	PKPab	09 47 55.5 +0.8
PNCL	Nicolau / Gran	169.94 56	ePKPdf	PKPdf	09 46 42.6 +1.7
PNCL	Nicolau / Gran	169.94 56	ePKPab	PKPab	09 47 57.3 +1.4
PNCL	Nicolau / Gran	169.94 56	ePP	PP	09 51 47.1 +0.9
PMRV	Marv??o	169.99 47	ePKPdf	PKPdf	09 46 44.4 +3.5
PMRV	Marv??o	169.99 47	ePKPab	PKPab	09 47 56.9 +0.8
PTEO	Sao Teotonio	170.05 60	ePKPdf	PKPdf	09 46 43.6 +2.6
PTEO	Sao Teotonio	170.05 60	ePKPab	PKPab	09 47 57.0 +0.6
PTEO	Sao Teotonio	170.05 60	ePP	PP	09 51 48.5 +1.7
EVO	Evora	170.09 53	ePKPdf	PKPdf	09 46 43.7 +2.7
EVO	Evora	170.09 53	ePKPab	PKPab	09 47 57.9 +1.3
PFVI	Vila Bisbo	170.14 62	ePKPdf	PKPdf	09 46 44.8 +3.8
PFVI	Vila Bisbo	170.14 62	ePKPab	PKPab	09 47 57.9 +1.0
PESTR	Estremoz	170.19 50	P	PKPdf	09 46 42.2 +1.2
	SNR=10				
MORF	Marmelete	170.20 61	ePKPdf	PKPdf	09 46 40.7 -0.4
MORF			AMS	AMS	11 03 04.2
	comp=Z,7μm,20.2s				
MORF	Marmelete	170.20 61	ePKPdf	PKPdf	09 46 43.1 +2.0
MORF	Marmelete	170.20 61	ePKPab	PKPab	09 47 58.2 +1.0
MORF	Marmelete	170.20 61	ePKIKP	PKPdf	09 46 40.7 -0.4
PBEJ	Beja	170.45 55	ePKPdf	PKPdf	09 46 44.8 +3.6
PCVE	Castro Verde	170.51 58	ePKPdf	PKPdf	09 46 45.0 +3.8
PCVE	Castro Verde	170.51 58	ePKPab	PKPab	09 47 56.7 -1.8

PCVE	Castro Verde	170.51	58	ePP	PP	09 51 49.6	+0.5
TTIG	Tnine Tigouga,	170.72	102	P	PKPdf	09 46 44.0	+2.2
	SNR=13						
PBDV	Barranco-do-Ve	170.75	60	ePKPdf	PKPdf	09 46 43.4	+2.0
PBDV	Barranco-do-Ve	170.75	60	ePKPab	PKPab	09 48 04.8	+5.2
PVAQ	Vaqueiros	170.84	58	ePKPdf	PKPdf	09 46 44.7	+3.3
PVAQ	Vaqueiros	170.84	58	ePKPab	PKPab	09 48 00.5	+0.6
PVAQ	Vaqueiros	170.84	58	ePP	PP	09 51 51.8	+1.1
PVAQ	Vaqueiros	170.84	58	P	PKPdf	09 46 43.9	+2.5
	SNR=12						
PVAQ	Vaqueiros	170.84	58		PKPdf	09 46 42.9	+1.5
PVAQ					PKPab	09 48 00.1	+0.1
OUK	Oukaimeden	171.38	99	P	PKPdf	09 46 44.0	+1.6
	SNR=32						
PAB	San Pablo	171.63	36		PKPdf	09 46 43.0	+1.1
PAB	San Pablo	171.63	36	PKIKP	PKPdf	09 46 43.0	+1.1
ESDC	Sonseca Array	171.72	34	PKP	PKPdf	09 46 42.2	+0.4
	comp=Z,7.9nm,0.9s,baz=328,slow=1.1,SNR=17						
ESDC				PKPab	PKPab	09 48 04.2	+0.5
	comp=Z,13nm,1.0s,baz=315,slow=4.1,SNR=6.6						
ESDC				PP	PP	09 51 54.2	-0.1
	comp=Z,10nm,1.1s,baz=318,slow=5.2,SNR=8.4						
ESDC	Sonseca Array	171.72	34		PKPdf	09 46 41.3	-0.6
ESDC				PKPab	PKPab	09 48 04.2	+0.5
AVE	Averroes	172.03	85	P	PKPdf	09 46 44.1	+2.0
	SNR=7.1						
AVE	Averroes	172.03	85	PKP	PKPdf	09 46 41.6	-0.6
AVE	Averroes	172.03	85	PP	PP	09 51 57.2	0.0
OUZM	OUZ	172.21	103	P	PKPdf	09 46 44.0	+1.5
	SNR=33						
SFS	San Fernando	172.34	61	PKP	PKPdf	09 46 43.8	+1.7
SFS	San Fernando	172.34	61	PP	PP	09 52 09.7	+12
LIJA	Lijar	172.70	55	PKP	PKPdf	09 46 44.0	+1.6
MAHO	Mahon	172.86	346	PKP	PKPdf	09 46 48.6	+6.3
MAHO	Mahon	172.86	346	PP	PP	09 52 11.8	+12
TZRR	Tazzarine	173.14	106	P	PKPdf	09 46 44.0	+1.1
	SNR=47						
CEU	Ceuta	173.18	62	PKP	PKPdf	09 46 40.9	-1.6
CEU	Ceuta	173.18	62	PP	PP	09 52 03.8	+1.4
KEST	Kesra	173.38	297	PKP	PKPdf	09 46 44.9	+2.1
	comp=Z,17nm,1.0s,baz=260,slow=2.5,SNR=8.4						
KEST				PKPab	PKPab	09 48 12.5	+1.0
	comp=Z,22nm,1.0s,baz=24,slow=18,SNR=2.1						
EMAL	Malaga-Limoner	173.44	53	PKP	PKPdf	09 46 43.4	+0.8
EMAL	Malaga-Limoner	173.44	53	PP	PP	09 52 04.8	+1.4
SESP	Santiago Espad	173.62	35	P	PKPdf	09 46 45.5	+2.7
	SNR=16						
IFR	Ifrane	173.94	83	PKP	PKPdf	09 46 41.7	-1.4
IFR	Ifrane	173.94	83	PP	PP	09 52 06.3	-0.5
LCRM	LCR	174.15	81	P	PKPdf	09 46 46.0	+2.8
	SNR=20						
PVLZ	Peæn de	174.26	66	PKP	PKPdf	09 46 40.0	-2.9
PVLZ	Peæn de	174.26	66	PP	PP	09 52 07.6	-0.2
MDT	Midelt	174.37	90	P	PKPdf	09 46 44.4	+1.2
	SNR=44						
CART	Cartagena	174.74	28	PKP	PKPdf	09 46 41.8	-1.2
CART	Cartagena	174.74	28	PP	PP	09 52 08.3	-0.6
MELI	Melilla	175.23	59	PKP	PKPdf	09 46 40.7	-2.5
MELI	Melilla	175.23	59	PP	PP	09 52 10.6	-1.7
OTSS	Djebel Tessala	176.68	45	P	PKPdf	09 46 47.0	+3.3
OKGL	Djebel Kef Gue	176.71	21	P	PKPdf	09 46 44.0	+0.4
ODJA	Bouhanifia	177.00	37	P	PKPdf	09 46 45.0	+1.3
OJBR	Djebel Berber	177.01	28	P	PKPdf	09 46 46.0	+2.3
FIGM	Figuig	177.06	105	P	PKPdf	09 46 46.0	+2.0
	SNR=48						
OJGS	Djebel Guires	177.23	23	P	PKPdf	09 46 44.0	+0.2

IDC 02 09:31:36.3±4.3, 9.92N×57.92E, h0km, mb3.6/5, mb1 3.6/5, mb1mx3.4/42, mbtmp3.6/5, Error ellipse: s-maj=95.0km s-min=35.2km az=158.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
H08N2	Diego Garcia H	20.74	141	T	T	09 58 34.9	
	baz=320,slow=76,SNR=5.9						
H08N3	Diego Garcia H	20.75	141	T	T	09 58 51.4	
	baz=320,slow=76,SNR=6.2						
H08N1	Diego Garcia H	20.76	141	T	T	09 58 38.5	
	baz=320,slow=76,SNR=6.5						
BRTR	Keskin Array B	36.72	328	P	P	09 38 44.4	-1.1
	0.2nm,0.5s,baz=130,slow=9.5,SNR=2.8						
MKAR	Makanchi Array	42.19	25	P	P	09 39 31.2	+0.3
	1.1nm,0.6s,baz=212,slow=8.7,SNR=14						
AKASG	Malin Array Be	47.03	335	P	P	09 40 10.5	+1.1
	0.1nm,0.3s,baz=138,slow=7.1,SNR=2.9						
ZALV	Zalesovo Beam	48.90	21	P	P	09 40 22.9	-0.9
	1.3nm,0.6s,baz=220,slow=8.6,SNR=6.2						
TORD	Torodi Ar. Bea	55.10	279	P	P	09 41 10.6	-0.1
	0.2nm,0.6s,baz=99,slow=8.9,SNR=2.5						

MAN 02 09:45:54.5, 18.33N×120.89E, h70km, mb3.9, ML2.7, MS2.3, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
SIPP	Brgy, Tapao	0.57	225	⇑iP	Pn	09 46 11.3	+3.2
SIPP				eS	Sn	09 46 23.8	+5.8
APYP	Conner	0.57	144	eP	Pn	09 46 10.5	+2.4
APYP				eS	Sn	09 46 21.2	+3.2
ABRA	Dolores	0.69	194	eP	Pn	09 46 11.3	+1.9
ABRA				eS	Sn	09 46 22.9	+2.5
CAUP	Cauayan	1.64	147	eP	Pn	09 46 24.7	+3.3
CAUP				eS	Sn	09 46 44.5	+2.8
BOLP	Bolinao	2.15	206	eP	Pn	09 46 29.9	+1.7
BOLP				eS	Sn	09 46 54.2	+0.4
SMPP	San Manuel, Pa	2.17	185	eP	Pn	09 46 29.2	+0.6
SMPP				eS	Sn	09 46 54.2	-0.4
BBP	Basco	2.34	26	eP	Pn	09 46 32.5	+1.8
BBP				eS	Sn	09 46 58.9	+0.4
TBP	Tagbilaran	9.06	161	⇓eP	Pn	09 48 06.2	+3.6

THE 02 09:46:29.3, 38.22N×20.36E, h9km±1km, ML2.9/8, Error ellipse: s-maj=1.2km s-min=0.4km az=232.0
ATH 02 09:46:29.7, 38.23N×20.40E, h7km±1km, ML2.9/3, Error ellipse: s-maj=2.4km s-min=1.0km az=262.0
ISC 02 09:46:29.4±1.1, 38.23N±0.02×20.38E±0.04, h9km±5km, n34, σ0.43/55, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
KEF3	Kipouria, Keph	0.03	228	P	Pg	09 46 31.2	+0.1
KEF3				S	Sg	09 46 32.3	+0.1
CHV1	Chavriata, Kef	0.04	178	P	Pg	09 46 31.2	+0.1
CHV1				S	Sg	09 46 32.5	+0.2
	102µm,0.2s						
KEF4	Livadi, Kephal	0.05	47	P	Pg	09 46 31.1	-0.1
KEF4				S	Sg	09 46 32.2	-0.3
KEF1	Kardakata, Kep	0.09	54	P	Pg	09 46 31.6	-0.1
KEF1				S	Sg	09 46 33.0	-0.2
ARG2	Argostoli	0.10	119	P	Pg	09 46 31.9	+0.1
ARG2				S	Sg	09 46 33.5	+0.1
	31µm,0.1s						
KEF2	Argostoli. Kep	0.10	126	P	Pg	09 46 32.1	+0.2
KEF2				S	Sg	09 46 33.6	0.0
VLS	Valsamata	0.17	106	P	Pg	09 46 33.1	+0.1
VLS				S	Sg	09 46 35.7	+0.2
	10µm,0.1s						
VLS	Valsamata	0.17	106	P	Pg	09 46 33.0	-0.1
VLS				S	Sg	09 46 35.4	-0.1
VLS				AML	AML	09 46 35.8	
	comp=N,22130µm,0.2s						
VLS				AML	AML	09 46 36.3	
	comp=E,15708µm,0.1s						
VSK1	VASILIKIADES	0.23	38	P	Pg	09 46 34.3	+0.2
VSK1				S	Sg	09 46 38.0	+0.7
	comp=E,7µm,0.2s						
KFL	Anninata	0.34	110	P	Pg	09 46 36.0	-0.2
KFL				S	Sg	09 46 41.5	+0.8
VLMS	Volimes, Zakyn	0.41	147	P	Pg	09 46 37.7	+0.2
VLMS				S	Sg	09 46 43.6	+0.7
VLMS				AML	AML	09 46 47.3	
	comp=N,4145µm,0.2s						
VLMS				AML	AML	09 46 49.2	
	comp=E,3409µm,0.2s						
EVGI	Lefkada island	0.45	29	P	Pg	09 46 38.2	0.0
EVGI				S	Sg	09 46 45.4	+1.3
EVGI	Lefkada island	0.45	29	P	Pg	09 46 38.2	0.0
EVGI				S	Sg	09 46 44.6	+0.4
MGNA	Meganis	0.54	37	P	Pg	09 46 39.6	-0.2
MGNA				S	Sg	09 46 46.9	0.0
MGNA				AML	AML	09 46 48.4	
	comp=N,3431µm,0.3s						
MGNA				AML	AML	09 46 48.5	
	comp=E,2699µm,0.2s						
LKD2	Lefkada island	0.60	21	P	Pg	09 46 40.6	-0.5
LKD2				S	Sb	09 46 50.3	-0.6
	comp=E,258nm,0.3s						
LKD2	Lefkada island	0.60	21	P	Pg	09 46 40.7	-0.4
TSLK	Tsoukalades, L	0.64	20	P	Pg	09 46 41.5	-0.2
TSLK				S	Sg	09 46 50.8	+0.8
	comp=E,288nm,0.5s						
TSLK	Tsoukalades, L	0.64	20	P	Pg	09 46 41.5	-0.2
TSLK				S	Sg	09 46 50.5	+0.4
AST1	Astakos	0.64	60	P	Pg	09 46 41.5	-0.3
AST1				S	Sb	09 46 51.9	0.0
	comp=E,1µm,0.4s						
KRI1	kERI	0.66	148	P	Pg	09 46 41.7	-0.5
KRI1				S	Sb	09 46 52.1	-0.3
	comp=E,920nm,0.2s						
PDO	Prodromos	0.73	59	P	Pg	09 46 43.2	-0.3
PDO				S	Sb	09 46 54.7	+0.2
PDO	Prodromos	0.73	59	P	Pg	09 46 43.2	-0.3
RLS	Riolos of Patr	0.87	101	P	Pg	09 46 45.8	-0.4
RLS				S	Sb	09 46 59.3	+0.7
RLS	Riolos of Patr	0.87	101	P	Pg	09 46 45.9	-0.4
PVO	Paravola	0.98	66	P	Pg	09 46 48.1	-0.2
DRO	Drossia	1.08	104	P	Pg	09 46 49.5	-0.7
LAKA	Lakka	1.26	89	P	Pn	09 46 52.5	-0.8
ANX	Ano Chora	1.27	73	P	Pg	09 46 54.0	+0.3
TRIZ	Trizonia	1.34	84	P	Pn	09 46 53.6	-0.7
KALE	Kalithea	1.39	83	P	Pb	09 46 55.8	+0.1
KLV	Kalavryta, Ach	1.41	97	P	Pn	09 46 55.1	-0.3
MAKR	Makrakomi, Fth	1.58	60	P	Pb	09 46 59.3	+0.4
ITM	Ithomi	1.61	130	P	Pg	09 47 00.6	+0.3
AGG	Agios Georgios	1.72	62	P	Pb	09 47 01.9	+0.6

JMA 02 09:48:04.6±0.2, 30.50N×142.41E, h62km, M3.5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
CBIJ	Chichi jima	3.40	183	eS	Sn	09 49 35.6	+1.3
BSO1	Boso 1	4.31	344	P	Pn	09 49 09.4	+2.2
BSO1				eS	Sn	09 49 58.6	+2.7
JHU	Hanno	5.95	335	eS	Sn	09 50 38.7	+1.9
JRY	Ryogami san	6.24	333	P	Pn	09 49 36.4	+2.4
JRY				eS	Sn	09 50 45.7	+1.8

IDC 02 10:29:04.1±0.7, 27.09N×52.78E, h0km, mb4.3/25, mb1 4.4/30, mb1mx4.2/51, mbtmp4.3/30, ML4.0/5, Error ellipse: s-maj=17.1km s-min=12.5km az=175.0
MOS 02 10:29:04.0±1.1, 27.09N×52.83E, h10km, mb4.7/28, Error ellipse: s-maj=7.4km s-min=4.6km az=103.8
DSN 02 10:29:04.7±1.8, 27.59N×52.77E, h14km, ML4.7/7, Error ellipse: s-maj=31.9km s-min=4.3km az=5.0
TEH 02 10:29:05.9, 27.22N×52.79E, h10km, ML4.6
THR 02 10:29:05.1±0.9, 27.11N×52.73E, h15km, ML5.0
NEIC 02 10:29:06.8±2.3, 27.21N±0.05×52.78E±0.04, h10km±1km, Error ellipse: s-maj=8.7km s-min=6.4km az=170.0
OMAN 02 10:29:13.6±2.9, 26.88N×52.86E, h122km±40km, ml4.3/12, Error ellipse: s-maj=39.9km s-min=10.4km az=28.0
ISC 02 10:29:05.3±1.1, 27.10N±0.03×52.77E±0.03, h6km±7km, n355, σ1.53/380, mb4.5/74, 17C-3D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
LMD1	Lamerd	0.43	55	Pg	Pg	10 29 13.1	-0.5
LMD1				Sg	Sg	10 29 18.2	-1.0
LMD1	Lamerd	0.43	55	ePg	Pg	10 29 12.8	-0.8
LMD1				eSg	Sg	10 29 18.4	-0.8
LAR1	LAR	1.54	68	ePg	Pb	10 29 34.6	+0.3
LAR1				eSg	Sg	10 29 56.0	+1.2
JHRM	Jahrom	1.58	27	Pn	Pb	10 29 34.3	-0.7
JHRM	Jahrom	1.58	27	ePn	Pb	10 29 34.3	-0.7
JHRM				e		10 30 04.2	
JRN	Qarnain Island	2.15	178	ePn	Pg	10 29 46.8	+0.4
AHBU	AHRAM	2.19	324	ePn	Pn	10 29 43.1	+0.8
SHI	Shiraz	2.55	355	Pn	Pn	10 29 47.5	+0.1
SHI	Shiraz	2.55	355	P	Pn	10 29 47.5	+0.1
SHI	Shiraz	2.55	355	ePn	Pn	10 29 47.6	+0.2
SHI				e		10 30 45.6	
IKAZ	Kazeroun	2.80	343	Pn	Pn	10 29 52.5	+1.6
IKAZ	Kazeroun	2.80	343	ePn	Pn	10 29 52.2	+1.2
IKAZ				e		10 30 45.8	
UMQ	Umm Al-Quwin	3.03	120	P	Pn	10 29 56.3	+2.4
UMQ	Umm Al-Quwin	3.03	120	P	Pb	10 29 58.0	-1.8
UMQ	Umm Al-Quwin	3.03	120	ePn	Pn	10 29 56.4	+2.5
GENO	Geno	3.05	84	Pn	Pn	10 29 54.5	+0.3
GENO	Geno	3.05	84	ePn	Pn	10 29 54.4	+0.1
GENO				e		10 31 11.2	
GHWR	Ruwais	3.12	178	ePn	Pn	10 29 58.8	+3.7
SLWR	Sila	3.17	198	ePn	Pb	10 30 00.1	-1.9
SHME	Shamm	3.19	108	iP	Pn	10 29 57.4	+1.2
	SNR=11						
SHME				S	Sn	10 30 36.8	+2.1
SHME	Shamm	3.19	108	Pn	Pn	10 29 57.6	+1.4
SHME	Shamm	3.19	108	ePn	Pn	10 29 56.9	+0.7
NAZ	Nazwa, Dubai	3.34	128	iP	Pn	10 30 01.5	+3.3
	SNR=19						
NAZ	Nazwa, Dubai	3.34	128	P	Pn	10 30 01.7	+3.5
NAZ				S	Sn	10 30 41.9	+3.6
	SNR=7.1						
ASUD	Al Ashush, Dub	3.37	136	iP	Pb	10 30 03.0	-2.5
	SNR=9.8						
ASUD	Al Ashush, Dub	3.37	136	Pn	Pb	10 30 03.0	-2.5
ASUD	Al Ashush, Dub	3.37	136	P	Pb	10 30 02.6	-2.9
	SNR=9.7						
ASUD	Al Ashush, Dub	3.37	136	ePn	Pb	10 30 02.6	-2.9
FAQ	Al Faqa, Dubai	3.46	132	Pn	Pn	10 30 03.0	+3.3
FAQ	Al Faqa, Dubai	3.46	132	P	Pb	10 30 06.0	-1.0
FAQ	Al Faqa, Dubai	3.46	132	ePn	Pn	10 30 02.7	+3.0
MSFE	Esma-Masafi	3.50	119	iP	Pn	10 30 02.5	+2.1
	SNR=27						
MSFE	Esma-Masafi	3.50	119	Pn	Pn	10 30 03.0	+2.6
MSFE	Esma-Masafi	3.50	119	ePn	Pn	10 30 02.5	+2.1
MDH	Madha	3.64	119	iP	Pn	10 30 04.1	+1.8
	SNR=22						
MDH	Madha	3.64	119	P	Pn	10 30 04.5	+2.2
MDH				S	Sn	10 30 46.1	+0.5
MDH	Madha	3.64	119	ePn	Pn	10 30 04.6	+2.3
NIAN	Nian	3.65	82	Pn	Pn	10 30 04.0	+1.7
NIAN	Nian	3.65	82	ePn	Pn	10 30 03.6	+1.2
NIAN				e		10 31 17.9	
UOSS	Minazif	3.76	124	iP	Pn	10 30 06.0	+2.0
	SNR=21						
UOSS	Minazif	3.76	124		Pn	10 30 05.9	+2.0
UOSS	Minazif	3.76	124	ePn	Pn	10 30 06.0	+2.0
HATD	Hatta, Dubai	3.78	126	iP	Pn	10 30 06.7	+2.6
	SNR=16						
HATD	Hatta, Dubai	3.78	126	Pn	Pn	10 30 07.1	+2.9
HATD	Hatta, Dubai	3.78	126	P	Pn	10 30 07.0	+2.9
	SNR=16						
HATD				S	Sn	10 30 52.2	+3.2
HATD	Hatta, Dubai	3.78	126	ePn	Pn	10 30 07.1	+2.9
KLNJ	Kolanjah	4.03	345	Pn	Pn	10 30 08.1	+0.1
KLNJ	Kolanjah	4.03	345	ePn	Pn	10 30 07.7	-0.3
ALNE	Al Ain	4.05	138	iP	Pn	10 30 12.2	+4.2
	SNR=8.8						
ALNE	Al Ain	4.05	138	Pn	Pn	10 30 12.1	+4.2
ALNE	Al Ain	4.05	138	ePn	Pn	10 30 11.8	+3.9
MZR	Muzera	4.13	171	P	Pn	10 30 13.7	+4.7
KRBR	Kerman	4.54	50	ePn	Pn	10 30 16.3	+1.4
KRBR	Kerman	4.54	50	Pn	Pn	10 30 16.2	+1.3
KRBR	Kerman	4.54	50	ePn	Pn	10 30 16.3	+1.4
TVBK	TV Kerman	4.54	50	Pn	Pn	10 30 16.2	+1.2
TVBK	TV Kerman	4.54	50	ePn	Pn	10 30 16.2	+1.2
TVBK				e		10 30 21.6	
IMEH	Mehriz	4.57	20	Pn	Pn	10 30 16.2	+0.8
IMEH	Mehriz	4.57	20	ePn	Pn	10 30 16.5	+1.2
KHGB	Koh Gabri	4.61	44	Pn	Pn	10 30 16.2	+0.3
KHGB	Koh Gabri	4.61	44	ePn	Pn	10 30 16.5	+0.6
IRAM	Ramesheh	4.71	356	Pn	Pn	10 30 17.2	0.0
IRAM	Ramesheh	4.71	356	ePn	Pn	10 30 17.4	+0.2
ISAD	Sadrabad	4.87	9	Pn	Pn	10 30 21.2	+1.8
ISAD	Sadrabad	4.87	9	ePn	Pn	10 30 21.0	+1.6
UMZA	Um Al Zommool	4.87	153	ePn	Pn	10 30 22.7	+3.5
IBRJ	Brojen	4.97	345	Pn	Pn	10 30 20.2	-0.6
IBRJ	Brojen	4.97	345	ePn	Pn	10 30 20.2	-0.6
CHMN	Cheshme madani	5.02	56	Pn	Pn	10 30 23.2	+1.6
CHMN	Cheshme madani	5.02	56	ePn	Pn	10 30 22.9	+1.3
CHMN				e		10 30 27.7	
IBAF	Bafgh	5.10	28	Pn	Pn	10 30 23.2	+0.7
IBAF	Bafgh	5.10	28	ePn	Pn	10 30 22.6	+0.1
ICHK	Chekchek	5.33	15	Pn	Pn	10 30 26.3	+0.6
ICHK	Chekchek	5.33	15	ePn	Pn	10 30 25.8	+0.2
HOQ	Hoqain	5.40	129	P	Pn	10 30 28.3	+1.9
HOQ				S	Sn	10 31 30.9	+2.0
JHBN	Jahan bin	5.43	341	Pn	Pn	10 30 27.3	0.0
JHBN	Jahan bin	5.43	341	ePn	Pn	10 30 27.5	+0.3
YZKH	Yazd	5.51	16	ePn	Pn	10 30 28.6	+0.6
YZKH	Yazd	5.51	16	Pn	Pn	10 30 29.3	+1.2
YZKH	Yazd	5.51	16	ePn	Pn	10 30 28.6	+0.6
IZEF	Zefreh	5.79	356	Pn	Pn	10 30 31.3	-0.8
IZEF	Zefreh	5.79	356	ePn	Pn	10 30 31.1	-1.0
IPIR	Pirpir	5.80	344	Pn	Pn	10 30 32.3	+0.1
IPIR	Pirpir	5.80	344	ePn	Pn	10 30 31.9	-0.4
BIDO	Bidbid	6.01	125	Pn	Pn	10 30 36.4	+1.5
BIDO	Bidbid	6.01	125	P	Pn	10 30 37.1	+2.1
	SNR=8.4						
BIDO				S	Sn	10 31 44.0	-0.2
BIDO	Bidbid	6.01	125	ePn	Pn	10 30 36.4	+1.5
SHGR	Shooshtar-Gavs	6.07	326	ePn	Pn	10 30 35.5	-0.2
SHGR					IAML	10 31 47.2	
	comp=E,370nm,0.6s						
SHGR					IAML	10 31 48.5	
	comp=N,251nm,0.5s						
SHGR	Shooshtar-Gavs	6.07	326	Pn	Pn	10 30 35.4	-0.3
SHGR	Shooshtar-Gavs	6.07	326	ePn	Pn	10 30 35.5	-0.2
ANAR	Anarak	6.13	8	Pn	Pn	10 30 37.4	+0.8
ANAR	Anarak	6.13	8	ePn	Pn	10 30 37.0	+0.4
SMDO	Samad	6.25	129	P	Pn	10 30 40.7	+2.4
	SNR=30						
SMDO				S	Sn	10 31 51.1	+1.0
IKLH	Kolahrood	6.29	351	Pn	Pn	10 30 39.4	+0.5
IKLH	Kolahrood	6.29	351	ePn	Pn	10 30 38.7	-0.2
WSAR	Wadi Sarin	6.55	125	Pn	Pn	10 30 43.8	+1.5
	comp=N,8.8nm,0.3s,baz=310,slow=10,SNR=71						
WSAR				Sn	Sn	10 31 56.0	-1.5
	comp=N,1.9nm,0.3s,baz=289,slow=23,SNR=8.1						
WSAR	Wadi Sarin	6.55	125	P	Pn	10 30 44.1	+1.8
	SNR=31						
WSAR				S	Sn	10 31 56.4	-1.1
QAM	Ghamsar	6.74	351	Pn	Pn	10 30 44.4	-0.7
QAM	Ghamsar	6.74	351	ePn	Pn	10 30 44.4	-0.7
JMDO	Jabal Madar	6.76	133	P	Pn	10 30 46.6	+1.4
TPRV	Parvadeh(Tabas	6.82	29	Pn	Pn	10 30 46.5	+0.4
TPRV	Parvadeh(Tabas	6.82	29	ePn	Pn	10 30 46.2	+0.2
KRSH	Karshahi	6.87	356	Pn	Pn	10 30 46.5	-0.4
KRSH	Karshahi	6.87	356	ePn	Pn	10 30 45.8	-1.0
KHMZ	Khomeyn	7.05	341	ePn	Pn	10 30 49.3	0.0
KHMZ	Khomeyn	7.05	341	Pn	Pn	10 30 49.5	+0.1
KHMZ	Khomeyn	7.05	341	ePn	Pn	10 30 49.3	0.0
CHBR	Chabahar	7.08	100	ePn	Pn	10 30 50.5	+0.9
CHBR	Chabahar	7.08	100	Pn	Pn	10 30 50.5	+0.9
CHBR	Chabahar	7.08	100	ePn	Pn	10 30 50.5	+0.9
WBK	Wadi Bani Khal	7.19	127	P	Pn	10 30 52.5	+1.4
	SNR=22						
WBK				S	Sn	10 32 13.9	+0.8
BMDN	Meydan	7.38	334	Pn	Pn	10 30 52.5	-1.4
BMDN	Meydan	7.38	334	ePn	Pn	10 30 52.4	-1.5
RAYN	Ar Rayn	7.47	243	P	Pn	10 30 56.1	+1.0
RAYN	Ar Rayn	7.47	243		Pn	10 30 56.6	+1.6
RAYN	Ar Rayn	7.47	243	P	Pn	10 30 56.6	+1.6
ZHSF	Zahedan	7.49	69	ePn	Pn	10 30 57.3	+2.0
ZHSF	Zahedan	7.49	69	Pn	Pn	10 30 57.6	+2.3
ZHSF	Zahedan	7.49	69	ePn	Pn	10 30 57.3	+2.0
TKDS	Koohdasht(Taba	7.50	29	Pn	Pn	10 30 54.5	-0.9
TKDS	Koohdasht(Taba	7.50	29	ePn	Pn	10 30 54.6	-0.9
BDRS	Dareh Seyedi	7.61	335	Pn	Pn	10 30 56.6	-0.5
BDRS	Dareh Seyedi	7.61	335	ePn	Pn	10 30 56.6	-0.5
IKFM	Kafar-mosalman	7.69	328	Pn	Pn	10 30 58.6	+0.7
IKFM	Kafar-mosalman	7.69	328	ePn	Pn	10 30 58.2	+0.3
MHTO	MHTO	7.72	141	P	Pn	10 31 00.3	+2.0
MHTO				S	Sn	10 32 24.0	-2.1
IDOB	Doab	7.76	330	Pn	Pn	10 31 00.0	+1.0
IDOB	Doab	7.76	330	ePn	Pn	10 31 00.2	+1.2
IQOM	Qom	7.86	350	Pn	Pn	10 30 58.6	-1.9
IQOM	Qom	7.86	350	ePn	Pn	10 30 57.9	-2.6
IVRN	Varamin	7.92	354	Pn	Pn	10 31 00.0	-1.2
IVRN	Varamin	7.92	354	ePn	Pn	10 30 59.9	-1.2
HSAM	Samen	7.95	334	Pn	Pn	10 31 01.0	-0.7
HSAM	Samen	7.95	334	ePn	Pn	10 31 01.0	-0.7
AFRZ	Afriz	8.30	39	ePn	Pn	10 31 06.9	+0.4
HAGD	Aghdareh	8.31	339	Pn	Pn	10 31 06.1	-0.5
HAGD	Aghdareh	8.31	339	ePn	Pn	10 31 05.8	-0.8
DQM	DQM	8.37	147	P	Pn	10 31 08.6	+1.4
IMON	Monand	8.52	43	Pn	Pn	10 31 12.1	+2.6
IMON	Monand	8.52	43	ePn	Pn	10 31 12.1	+2.6
IGHG	Ghaleghazi	8.97	325	Pn	Pn	10 31 15.2	-0.5
IGHG	Ghaleghazi	8.97	325	ePn	Pn	10 31 15.5	-0.2
HSRG	Sareghieh	8.98	336	Pn	Pn	10 31 15.2	-0.8
HSRG	Sareghieh	8.98	336	ePn	Pn	10 31 15.1	-0.8
QABG	Abgarm-Qazvin	9.01	343	Pn	Pn	10 31 15.2	-1.0
QABG	Abgarm-Qazvin	9.01	343	ePn	Pn	10 31 14.9	-1.3
WHFO	Wadi Hawf	9.18	174	P	Pn	10 31 19.7	+1.2
	SNR=20						
WHFO				S	Sn	10 32 58.0	-4.2
SHAO	Shalim	9.41	163	P	Pn	10 31 21.8	+0.3
	SNR=17						
SHAO				S	Sn	10 33 07.3	-0.4
QALM	Alamut, Qazvin	9.48	350	Pn	Pn	10 31 23.2	+0.5
QALM	Alamut, Qazvin	9.48	350	ePn	Pn	10 31 22.5	-0.2
DMTO	DMTO	9.55	167	P	Pn	10 31 24.4	+1.0
	SNR=6.4						
DMTO				S	Sn	10 33 03.8	-7.4
RBK	Rabkut	9.64	172	P	Pn	10 31 26.1	+1.3
HRA	Herat	10.92	46		Pn	10 31 45.1	+2.8
GEYT	Alibeck	11.70	21	Pn	Pn	10 31 53.8	+0.8
	comp=N,0.2nm,0.3s,baz=198,slow=9.2,SNR=7.9						
GEYT	Alibeck	11.70	21		Pn	10 31 53.5	+0.6
GNI	Garni	14.62	335	Pn	P	10 32 37.4	-2.1
	comp=N,0.3nm,0.3s,baz=135,slow=11,SNR=2.2						
ASF	Jabal al Asfar	14.70	294	Pn	Pn	10 32 36.7	+2.7
	comp=N,0.3nm,0.3s,baz=37,slow=10,SNR=3.4						
ASF				Sn	Sn	10 35 06.3	-11
	comp=N,0.1nm,0.3s,baz=68,slow=19,SNR=3.1						
SOCY	Socotra	14.88	175	Pn	Pn	10 32 35.1	-1.4
KBL	Kabul	15.82	58	P	P	10 32 50.9	-2.0
KBL	Kabul	15.82	58	P	P	10 32 50.9	-2.0
KBL				pmax	pmax		
	comp=Z,13nm,1.1s						
EIL	Elat	15.89	283	Pn	Pn	10 32 51.0	+1.3
	comp=Z,0.3nm,0.3s,baz=80,slow=11,SNR=3.1						
EIL				Sn	Sn	10 35 47.5	+1.4
	comp=Z,0.5nm,0.3s,baz=114,slow=19,SNR=2.5						
TBLG	Delisi	16.02	338	P	Pn	10 32 51.8	+0.5
TBLG	Delisi	16.02	338	P	Pn	10 32 51.8	+0.5
TBLG				pmax	pmax		
	comp=Z,13nm,0.9s						
MMAI	Mount Meron Ar	16.14	296	Pn	Pn	10 32 52.6	-0.4
	comp=Z,2.6nm,0.3s,baz=101,slow=14,SNR=3.1						
GAZ	Gaziantep	16.55	311	P	P	10 33 01.2	+0.4
ZEI	Tsey	17.24	337	eP	Pn	10 33 07.4	+0.4
ZEI				pmax	pmax		
	comp=Z,26nm,0.7s						
THW	Thamme Wali	17.39	66	P	Pn	10 33 08.7	0.0
CEP	Cherat	17.80	63	⇓P	P	10 33 14.4	-0.3
KBZ	Khabaz	18.42	337	P	Pn	10 33 22.6	+1.4
	comp=Z,0.4nm,0.3s,baz=151,slow=10,SNR=13						
KBZ	Khabaz	18.42	337	iP	Pn	10 33 22.3	+1.0
KBZ				pmax	pmax		
	comp=Z,12nm,0.9s						
SHA1	Shidzhatmaz	18.51	336	iP	Pn	10 33 24.4	+1.7
KVAR	Kislovodsk Arr	18.69	337	P	Pn	10 33 26.1	+1.4
	baz=159,slow=9.0,SNR=2.9						
KIV	Kislovodsk	18.69	337	P	Pn	10 33 26.0	+1.3
KIV	Kislovodsk	18.69	337	eP	Pn	10 33 25.4	+0.7
KIV				pmax	pmax		
	comp=Z,52nm,1.0s						
NIL	Nilore	18.83	65	P	P	10 33 25.5	-0.4
NIL				IAmb	IAmb	10 33 28.5	
	comp=Z,23nm,0.6s						
NIL	Nilore	18.83	65	P	P	10 33 25.5	-0.4
NIL				pmax	pmax		
	comp=Z,23nm,0.6s						
CHCP	Chirah Chowk	18.84	65	P	P	10 33 25.5	-0.6
SOC	Sochi	19.55	331	eP	P	10 33 33.2	-0.6
SOC				e		10 37 14.4	
SOC				pmax	pmax		
	comp=Z,44nm,1.1s						
BTK	Batken	19.78	45	P	P	10 33 36.1	-0.3
BTK				IAmb	IAmb	10 33 39.0	

comp=Z,25nm,0.6s
BTK Batken 19.78 45 P P 10 33 36.1 -0.3
BTK pmax pmax
comp=Z,25nm,0.6s
BR131 Keskin Array S 20.29 313 P P 10 33 41.9 0.0
BR131 IAmb IAmb 10 33 45.3
comp=Z,10nm,0.6s
BR131 Keskin Array S 20.29 313 P P 10 33 42.3 +0.3
SNR=8.9
BR131 Keskin Array S 20.29 313 P P 10 33 41.9 0.0
BR131 pmax pmax
comp=Z,10.0nm,0.6s
BRTR Keskin Array B 20.29 313 P P 10 33 42.2 +0.3
comp=Z,12nm,0.6s,baz=134,slow=13,SNR=61
BRTR Keskin Array B 20.29 313 P P 10 33 41.8 -0.2
BR231 Keskin MP Arra 20.91 312 P P 10 33 49.8 +1.1
BR231 IAmb IAmb 10 33 52.6
comp=Z,29nm,0.9s
ANTO Ankara 20.91 313 P P 10 33 49.6 +0.9
ANTO IAmb IAmb 10 33 52.6
comp=Z,22nm,0.7s
ANTO Ankara 20.91 313 P P 10 33 49.6 +0.9
ANTO pmax pmax
comp=Z,22nm,0.7s
KK31 Karatay Array 21.51 37 P P 10 33 55.3 +0.3
KK31 Karatay Array 21.51 37 P P 10 33 55.3 +0.3
KK31 pmax pmax
comp=Z,4.0nm,0.7s
KKAR Karatay Array 21.51 37 P P 10 33 55.4 +0.4
KKAR Karatay Array 21.51 37 P P 10 33 54.2 -0.8
KKAR Karatay Array 21.51 37 P P 10 33 55.4 +0.4
KKAR pmax pmax
comp=Z,4.0nm,0.7s
ISP Isparta 21.55 305 P P 10 33 56.3 +0.7
ISP IAmb IAmb 10 34 02.1
comp=Z,19nm,1.0s
ISP Isparta 21.55 305 P P 10 33 56.3 +0.7
ISP pmax pmax
comp=Z,19nm,1.0s
ELL Elmali 21.61 302 P P 10 33 57.2 +0.9
ELL Elmali 21.61 302 P P 10 33 57.2 +0.9
ELL pmax pmax
comp=Z,69nm,0.8s
AB31 Akbulak array 22.81 12 P P 10 34 08.4 -0.4
ABKAR Akbulak array 22.81 12 P P 10 34 08.4 -0.4
ABKAR Akbulak array 22.81 12 P P 10 34 08.1 -0.7
ABKAR IAmb IAmb 10 34 15.1
comp=Z,5.7nm,0.6s
KSH Kashi 22.94 51 P P 10 34 03.6 -6.8
KSH pP pP 10 34 07.9 -4.1
KSH PcP PcP 10 37 58.9 -1.9
KSH S S 10 38 03.9 -17
KSH SS SnSn 10 38 45.0 -7.2
AAK Ala-Archa 23.53 43 P P 10 34 17.6 +1.2
comp=Z,3.5nm,0.6s,baz=232,slow=8.2,SNR=12
AAK Ala-Archa 23.53 43 P P 10 34 17.2 +0.8
AAK Ala-Archa 23.53 43ceP P 10 34 15.9 -0.5
AAK pmax pmax
comp=Z,6.0nm,0.8s
AKTO Aktyubinsk 23.65 8 P P 10 34 17.9 +0.5
comp=Z,2.5nm,0.4s,baz=174,slow=7.6,SNR=12
AKTO Aktyubinsk 23.65 8 P P 10 34 18.0 +0.6
SANT Santorini 24.93 299 P P 10 34 30.0 +0.5
VRH Novokhopyorsk 25.50 344 eP P 10 34 35.5 +1.2
VRH pmax pmax
comp=Z,100nm,0.6s
ALN Alexandroupoli 25.96 309 P P 10 34 39.5 +0.8
ALN IAmb IAmb 10 34 46.6
comp=Z,29nm,1.3s
ALN Alexandroupoli 25.96 309 P P 10 34 39.5 +0.8
ALN pmax pmax
comp=Z,29nm,1.3s
VSR Storozhevoye 26.21 340 eP P 10 34 39.2 -1.6
VSR pmax pmax
comp=Z,10.0nm,0.5s
TLCR 26.30 320 ⇓P P 10 34 42.7 +1.0
TOPG Topolog 26.38 319 ⇑P P 10 34 43.9 +1.5
PDGK Podgornoye 27.02 46 P P 10 34 46.1 -2.3
VRI Vrincioaia 27.90 319 ⇑P P 10 34 57.0 +0.9
PLOR Plostina 27.93 319 ⇑P P 10 34 57.5 +1.0
AGG Agios Georgios 28.02 303 P P 10 34 57.1 -0.2
AGG Agios Georgios 28.02 303 P P 10 34 57.1 -0.2
AGG pmax pmax
comp=Z,36nm,1.3s
MLR Muntele Rosu 28.16 318 ⇓P P 10 34 59.9 +1.3
LIT Litokhoron 28.21 305 P P 10 34 58.4 -0.6
LIT Litokhoron 28.21 305 P P 10 34 58.4 -0.6
LIT pmax pmax
comp=Z,40nm,1.2s
TESR Tescani 28.30 320 ⇑P P 10 34 59.9 +0.3
VOIR 28.67 317 ⇑P P 10 35 04.4 +1.3
BIZ Bicaz 28.85 320 ⇑P P 10 35 04.8 +0.2
BRVK Borovoye 29.03 22 P P 10 35 06.8 +0.8
BRVK IAmb IAmb 10 35 08.2
comp=Z,5.1nm,0.5s
BRVK Borovoye 29.03 22 P P 10 35 06.8 +0.8
BRVK pmax pmax
comp=Z,5.0nm,0.5s
BVAR Borovoye Array 29.04 22 P P 10 35 05.8 -0.3
comp=Z,4.6nm,0.5s,baz=213,slow=7.3,SNR=30
BVAR PcP PcP 10 38 14.2 -0.2
comp=Z,1.0nm,0.5s,baz=288,slow=0.8,SNR=4.7
FNA Florina 29.23 306 P P 10 35 08.5 +0.4
FNA Florina 29.23 306 P P 10 35 08.5 +0.4
FNA pmax pmax
comp=Z,11nm,0.5s
ARU Arti 29.61 7 P P 10 35 11.3 +0.2
ARU 10 36 03.1
ARU S S 10 40 07.1 +0.5
ARU SS SnSn 10 41 34.1 -0.5
AKASG Malin Array Be 29.61 329 P P 10 35 10.0 -1.2
comp=Z,2.4nm,0.4s,baz=118,slow=6.9,SNR=18
AKASG Malin Array Be 29.61 329 P P 10 35 10.3 -0.9
AKBB Malin Array Si 29.61 329 P P 10 35 10.1 -1.2
AKBB Malin Array Si 29.61 329 P P 10 35 10.1 -1.2
BURAR Bucovina Array 29.73 321 ⇑P P 10 35 13.0 +0.6
BURAR Bucovina Array 29.73 321 P P 10 35 12.4 0.0
BUR08 Bucovina Ar. S 29.75 321 P P 10 35 12.6 -0.1
GZR Gura Zlata 30.06 315 ⇑P P 10 35 17.1 +1.8
MAKZ Makanchi 30.26 42 P P 10 35 17.4 +0.3
MAKZ IAmb IAmb 10 35 19.6
comp=Z,6.1nm,0.7s
MAKZ Makanchi 30.26 42 P P 10 35 17.4 +0.3
MAKZ pmax pmax
comp=Z,6.0nm,0.7s
OBN Obninsk 30.38 342 i P P 10 35 17.3 -0.7
OBN i 10 36 16.6
OBN pmax pmax
comp=Z,9.0nm,1.2s
OBN MLR MLR
comp=Z,7μm,23.0s
MK31 Makanchi Array 30.44 42 P P 10 35 18.3 -0.4
MK31 IAmb IAmb 10 35 20.9
comp=Z,8.5nm,1.3s
MK31 Makanchi Array 30.44 42 P P 10 35 18.3 -0.4
MK31 pmax pmax
comp=Z,9.0nm,1.3s
MKAR Makanchi Array 30.44 42 P P 10 35 18.3 -0.4
comp=Z,2.8nm,0.5s,baz=231,slow=9.6,SNR=57
MKAR PcP PcP 10 38 17.2 -0.9
comp=Z,0.4nm,0.7s,baz=240,slow=3.3,SNR=4.3
MKAR Makanchi Array 30.44 42 P P 10 35 17.9 -0.8
MKAR Makanchi Array 30.44 42ceP P 10 35 18.1 -0.6
MKAR pmax pmax
comp=Z,3.0nm,0.4s
KURBB Kurchatov Arra 30.61 33 P P 10 35 20.1 0.0
comp=Z,1.0nm,0.4s,baz=233,slow=9.0,SNR=12
KURK Kurchatov 30.71 33 P P 10 35 20.1 -0.9
KURK Kurchatov 30.71 33 IAmb IAmb 10 35 23.0
comp=Z,2.4nm,0.8s
KURK Kurchatov 30.71 33ceP P 10 35 21.8 +0.8
KURK pmax pmax
comp=Z,2.0nm,0.7s
BZS Buzias 30.89 315 ⇑P P 10 35 24.8 +2.2
SIRR Siria 31.15 316 ⇑P P 10 35 26.8 +1.8
KIRV Kirov 31.56 357 P P 10 35 28.3 0.0
comp=Z,10nm,0.4s,baz=164,slow=12,SNR=5.2
KMBO Kilima Mbogo 31.79 211ceP P 10 35 34.9 +3.8
KOLS Kolonicke sedl 32.10 321 eP P 10 35 35.9 +2.7
KOLS Kolonicke sedl 32.10 321 eP P 10 35 35.9 +2.7
KWP Kalwaria Pacla 32.23 322 P P 10 35 34.2 -0.2
KWP Kalwaria Pacla 32.23 322 P P 10 35 34.2 -0.2
KWP pmax pmax
comp=Z,43nm,0.7s

CRVS Cervenica-Dubn 32.54 320 eP P 10 35 39.3 +2.2
CRVS Cervenica-Dubn 32.54 320 eP P 10 35 39.3 +2.2
WMQ Urumqi 32.69 50 eP P 10 35 40.3 +1.8
PSZ Piszkesteto 32.98 318 P P 10 35 42.9 +1.8
PSZ IAmb IAmb 10 35 51.2
comp=Z,4.3nm,0.9s
PSZ Piszkesteto 32.98 318 P P 10 35 42.9 +1.8
PSZ pmax pmax
comp=Z,4.0nm,0.9s
VYHS Vyhne 33.87 318 eP P 10 35 51.2 +2.5
VYHS Vyhne 33.87 318 eP P 10 35 51.2 +2.5
OJC Ojcow 34.14 321 P P 10 35 50.6 -0.5
OJC IAmb IAmb 10 35 53.1
comp=Z,7.5nm,1.0s
OJC Ojcow 34.14 321 P P 10 35 50.6 -0.5
OJC pmax pmax
comp=Z,7.0nm,1.0s
INTR Introdacqua 34.98 305 P P 10 35 59.4 +0.9
INTR IAmb IAmb 10 36 01.9
comp=Z,11nm,0.8s
ZAA0 Zalesovo Array 35.70 33 P P 10 36 03.7 -0.8
ZAA0 IAmb IAmb 10 36 06.1
comp=Z,7.3nm,0.6s
ZALV Zalesovo Beam 35.70 33 P P 10 36 03.6 -0.8
comp=Z,7.5nm,0.5s,baz=239,slow=9.0,SNR=36
ZALV Zalesovo Beam 35.70 33 P P 10 36 03.8 -0.6
ZALV Zalesovo Beam 35.70 33 P P 10 36 03.8 -0.6
NRCA Norcia 35.73 306 P P 10 36 05.6 +0.6
NRCA IAmb IAmb 10 36 08.2
comp=Z,13nm,0.8s
VSU Vasula 36.25 337 i P P 10 36 08.2 -0.8
VSU pmax pmax
comp=Z,31nm,1.1s
MOA Molln 36.41 315 pP P 10 36 10.8 +0.2
comp=Z,5.5nm,1.3s
CHVC Chvalec 36.43 320 eP P 10 36 12.1 +1.3
KBA Koelnbreinsper 36.74 313 epP P 10 36 13.0 -0.6
comp=Z,2.5nm,0.8s
GEC2 GERESS Array S 37.12 316 P P 10 36 18.6 +1.8
GERES GERESS Array B 37.12 316 P P 10 36 16.0 -0.8
comp=Z,0.4nm,0.5s,baz=99,slow=8.4,SNR=5.3
GERES PcP PcP 10 38 36.3 -0.7
comp=Z,0.4nm,0.6s,baz=123,slow=3.6,SNR=3.6
ABTA Abfaltersbach 37.18 313 epP P 10 36 17.5 +0.2
comp=Z,6.7nm,1.0s
KHC Kasperske Hory 37.30 317 eP P 10 36 19.5 +1.3
KHC Kasperske Hory 37.30 317 P P 10 36 19.9 +1.7
KHC Kasperske Hory 37.30 317 eP P 10 36 19.5 +1.3
WATA Walderalm 37.96 313 eP P 10 36 23.2 -0.8
comp=Z,9.3nm,1.0s
SQTA Sankt Quirin 38.17 313 eP P 10 36 24.9 -0.8
comp=Z,5.1nm,0.5s,SNR=9.7
MOTA Moosalm 38.27 313 P P 10 36 25.4 -1.2
comp=Z,8.8nm,1.0s,SNR=7.3
FETA Feichten 38.43 313 pP P 10 36 27.2 -0.7
comp=Z,6.4nm,0.7s
RETA Reutte 38.54 313 epP P 10 36 29.3 +0.6
comp=Z,3.1nm,0.5s
FIA1 FINESS Array S 38.74 340 P P 10 36 29.0 -1.1
FINES FINESS Array B 38.74 340 P P 10 36 29.1 -0.9
comp=Z,6.3nm,0.5s,baz=142,slow=9.1,SNR=40
FINES FINESS Array B 38.74 340 P P 10 36 29.0 -1.1
DAVA Damuels 39.06 313 P P 10 36 32.2 -1.0
comp=Z,24nm,0.5s,SNR=10
SENIN Lac Senin/Sane 40.55 311 P P 10 36 44.6 -1.1
BNI Bardonecchia 40.73 308 P P 10 36 46.5 -0.6
BNI IAmb IAmb 10 36 59.3
comp=Z,9.3nm,1.2s
BNI Bardonecchia 40.73 308 P P 10 36 46.5 -0.6
BNI pmax pmax
comp=Z,9.0nm,1.2s
GTA Gaotai 40.79 60 ⇑P P 10 36 47.5 -0.2
GTA pP sP 10 36 52.3 +2.2
GTA sP pP 10 36 54.8 +5.4
LVZ Lovozero 42.27 350 P P 10 36 59.5 +0.2
LVZ IAmb IAmb 10 37 15.3
comp=Z,31nm,1.5s
LVZ Lovozero 42.27 350 P P 10 36 59.5 +0.2
LVZ pmax pmax
comp=Z,31nm,1.5s
HFS Hagfors 42.39 332 P P 10 36 59.3 -1.0
comp=Z,9.1nm,0.5s,baz=119,slow=9.2,SNR=35
NC405 NORSAR Array S 43.74 333 P P 10 37 10.2 -1.1
NB2 NORSAR Subarra 43.91 332 P P 10 37 10.9 -1.8
comp=Z,3.4nm,0.5s,baz=121,slow=8.6
NOA NORSAR Array B 43.91 332 P P 10 37 11.2 -1.5
comp=Z,0.7nm,0.5s,baz=119,slow=7.6,SNR=15
LZH Lanzhou 44.00 65 eP P 10 37 16.0 +2.1
LZH pP sP 10 37 23.6 +7.3
LZH sP pP 10 37 28.3 +13
CD2 Chengdu 44.45 72 P P 10 37 16.3 -1.1
KEV Kevo 45.24 348 P P 10 37 23.6 +0.5
KEV Kevo 45.24 348 P P 10 37 23.6 +0.5
KEV pmax pmax
comp=Z,22nm,1.1s
ARCES ARCESS Array B 45.35 347 P P 10 37 23.8 -0.2
comp=Z,2.5nm,0.8s,baz=138,slow=9.2,SNR=11
ARCES PP PP 10 39 07.6 -2.3
comp=Z,3.8nm,0.9s,baz=156,slow=10,SNR=5.4
PBKT Sadao Pong 45.72 93 P P 10 37 28.5 +0.9
PBKT IAmb IAmb 10 37 30.1
comp=Z,5.9nm,1.3s
SONM Songino Array 46.29 49 P P 10 37 31.6 -0.3
comp=Z,0.8nm,0.5s,baz=267,slow=8.1,SNR=9.7
SONM Songino Array 46.29 49 P P 10 37 33.5 +1.6
SONM Songino Array 46.29 49 P P 10 37 33.5 +1.6
SONM pmax pmax
comp=Z,2.0nm,1.2s
ULN Ulaanbaatar 46.73 49ceP P 10 37 34.7 -0.8
ULN pmax pmax
comp=Z,6.0nm,2.5s
ESDC Sonseca Array 48.28 300 P P 10 37 47.2 -0.3
comp=Z,2.6nm,0.7s,baz=62,slow=8.1,SNR=14
ESDC Sonseca Array 48.28 300 P P 10 37 47.1 -0.3
PAB San Pablo 48.58 300 P P 10 37 49.9 +0.1
PAB San Pablo 48.58 300 P P 10 37 49.9 +0.1
PAB pmax pmax
comp=Z,11nm,0.9s
TOA0 Torodi Ar. Sit 49.61 264 P P 10 37 58.0 +0.1
TOA0 IAmb IAmb 10 37 58.6
comp=Z,3.9nm,0.7s
TORD Torodi Ar. Bea 49.61 264 P P 10 37 57.9 0.0
comp=Z,3.4nm,0.6s,baz=60,slow=7.3,SNR=26
TORD Torodi Ar. Bea 49.61 264 P P 10 37 57.7 -0.1
HHC Hu-ho-hao-te 49.79 58 eP P 10 37 59.1 0.0
MVO Moncorvo 50.53 302 eP P 10 38 05.2 +0.5
comp=Z,61nm,1.9s
PVRL Vila Real 51.04 302 eP P 10 38 09.4 +0.9
PVIS Viseu 51.22 302 eP P 10 38 12.4 +2.6
comp=Z,101nm,2.0s
SPITS Spitsbergen Ar 53.75 351 P P 10 38 27.5 -0.5
comp=Z,6.7nm,0.8s,baz=165,slow=17,SNR=5.7
JMIC Jan Mayen 55.36 340 P P 10 38 40.6 +0.8
comp=Z,142nm,0.5s,baz=197,slow=4.8,SNR=4.0
NJ2 Nanjing 56.90 68 eP P 10 38 50.9 -0.4
LBTB Lobatse 58.06 209 P P 10 39 02.0 +2.4
LBTB IAmb IAmb 10 39 04.3
comp=Z,6.7nm,0.9s
LBTB Lobatse 58.06 209 P P 10 39 02.0 +2.4
LBTB pmax pmax
comp=Z,7.0nm,1.0s
DBIC Dimbokro 58.23 261 P P 10 39 01.2 +0.3
comp=Z,6.5nm,0.6s,baz=40,slow=7.1,SNR=19
DBIC PcP PcP 10 39 51.9 -0.4
comp=Z,3.0nm,0.6s,baz=37,slow=4.8,SNR=4.3
DBIC Dimbokro 58.23 261 P P 10 39 01.4 +0.4
KIC Kosan Boka 58.28 260 eP P 10 39 01.4 +0.1
comp=Z,7.9nm,0.7s
TIC Toumodi 58.39 261 eP P 10 39 02.3 +0.2
LIC Lamto 58.59 260 eP P 10 39 03.3 -0.2
comp=Z,32nm,0.6s
TIXI Tiksi 60.16 21 P P 10 39 13.6 +0.1
comp=Z,1.9nm,0.5s,baz=311,slow=6.5,SNR=6.0
TIXI Tiksi 60.16 21 P P 10 39 13.8 +0.3
TIXI IAmb IAmb 10 39 16.1
comp=Z,2.1nm,0.5s
TIXI Tiksi 60.16 21 i P P 10 39 13.2 -0.3
TIXI pmax pmax
comp=Z,2.0nm,1.4s
KSRS Korea Array 62.86 60 P P 10 39 30.8 -1.5
comp=Z,1.0nm,0.5s,baz=280,slow=6.8,SNR=7.8
KLR Kul'dur 63.01 46 i P P 10 39 31.9 -1.2
KLR pmax pmax
comp=Z,3.0nm,1.1s
SUMG Summit 64.77 341 P P 10 39 45.7 +0.9

SUMG Summit 64.77 341 P P 10 39 45.7 +0.9
ANGG Ammassalik, Gr 65.82 333 P P 10 39 50.6 -0.6
SEY Seymchan 70.44 29 i P P 10 40 20.8 +0.5
MA2 Magadan 70.92 32ceP P 10 40 22.9 -0.4
MA2 pmax pmax
comp=Z,6.0nm,1.7s
BILL Bilibino 73.38 21 i P P 10 40 38.2 +0.4
BILL i 10 40 55.1
BILL pmax pmax
comp=Z,3.0nm,1.3s
SCHQ Schefferville 83.41 330 P P 10 41 32.6 -0.9
comp=Z,2.9nm,0.8s,baz=53,slow=7.1,SNR=9.3
SCHQ Schefferville 83.41 330 IAmb IAmb 10 41 37.4
comp=Z,3.2nm,0.8s
C36M Paulatuk 83.81 359 P P 10 41 33.8 -1.4
C36M IAmb IAmb 10 41 36.7
comp=Z,3.1nm,0.8s
INK Inuvik 84.77 2 P P 10 41 38.7 -1.4
INK IAmb IAmb 10 41 46.1
comp=Z,4.8nm,1.4s
INK Inuvik 84.77 2 P P 10 41 38.7 -1.4
INK pmax pmax
comp=Z,5.0nm,1.4s
BMAR Burnt Mountain 84.87 7 P P 10 41 41.1 +0.3
IMAR Indian Mountai 85.02 11 P P 10 41 40.5 -0.9
ILAR Eielson Array 87.16 8 P P 10 41 50.7 -1.4
comp=Z,0.5nm,0.6s,baz=322,slow=4.4,SNR=9.5
YKA Yellowknife Ar 90.15 354 P P 10 42 05.8 -0.4
comp=Z,1.7nm,0.5s,baz=5.7,slow=5.1,SNR=32
ASAR Alice Springs 93.15 115 P P 10 42 19.9 -0.9
comp=Z,0.4nm,0.6s,baz=295,slow=4.6,SNR=6.7
NVAR Mina Array Bea 114.28 352 PKP PKiKP 10 47 46.6 +0.1
comp=Z,0.4nm,0.7s,baz=22,slow=1.6,SNR=4.9

IDC 02 10:37:07.4±2.3,**8°.75S**×**120°.15E**,**h0km**,**mb3.3**/2, **mb1 3.5**/4,**mb1mx3.3**/27,**mbtmp3.3**/4,**ML3.5**/2,**Error ellipse: s-maj=160.3km s-min=25.1km az=55.0,Flores region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 17.67 131 P Pn 10 41 14.9 -0.3
0.2nm,0.3s,baz=300,slow=13,SNR=4.3
ASAR Alice Springs 19.84 140 P P 10 41 40.4 +0.3
0.1nm,0.3s,baz=319,slow=13,SNR=9.5
SONM Songino Array 57.64 349 P P 10 46 59.2 -0.3
0.1nm,0.5s,baz=157,slow=7.0,SNR=2.4
MKAR Makanchi Array 64.76 332 P P 10 47 47.9 +0.2
0.3nm,0.2s,baz=152,slow=6.5,SNR=23

WEL 02 10:47:43.1,**39°S**±2°×**17°4E**±°,**h234**km±7km,**M2.8**/51, **MLv2.8**/51,**Error ellipse: s-maj=0.0km s-min=0.0km az=83.9,North Island**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KHEZ Kahui Hut 0.22 294 P Pn 10 48 13.8 +0.1
PKE Pukeiti 0.30 310 P Pn 10 48 13.9 +0.2
VRZ Vera Road 0.46 55 P Pn 10 48 13.4 -0.7
WAZ Wanganui 0.66 124 P Pn 10 48 15.0 +0.3
PKVZ Pokaka 0.83 84 P Pn 10 48 15.3 -0.3
MTVZ Mangateitei 0.93 90 P Pn 10 48 16.1 0.0
TWVZ Taurewa 0.95 71 P Pn 10 48 16.0 -0.4
HIZ Hauiti 0.98 28 PKPdf Pn 10 48 16.2 -0.2
HIZ Hauiti 0.98 28 P Pn 10 48 16.2 -0.2
TRVZ Turoa 0.99 85 P Pn 10 48 16.8 +0.1
FWVZ Far West T-bar 1.00 83 P Pn 10 48 16.6 -0.2
NGZ Ngauruhoe 1.05 79 P Pn 10 48 17.1 +0.1
WTVZ West Tongariro 1.05 76 P Pn 10 48 16.9 0.0
TUVZ Tukino 1.07 84 P Pn 10 48 17.5 +0.4
MOVZ Moawhango 1.14 92 P Pn 10 48 17.3 -0.2
KATZ Kakaramea 1.18 70 P Pn 10 48 18.0 +0.2
BHHZ Black Hill Sta 1.39 95 P Pn 10 48 18.9 -0.2
DUWZ D'Urville Isla 1.44 191 P Pn 10 48 19.5 +0.1
TLZ Tolley Road 1.44 43 P Pn 10 48 19.6 0.0
TSZ Takapari Road 1.46 118 P Pn 10 48 17.8 -1.8
HATZ Hinemaiaia 1.50 71 P Pn 10 48 19.8 -0.1
KIW Kapiti Island 1.55 162 P Pn 10 48 20.4 +0.1
PNHZ Pukenui 1.57 110 P Pn 10 48 21.1 +0.5
OGWZ Otaki Gorge 1.58 155 P Pn 10 48 20.8 +0.3
MRZ Mangatainoka R 1.62 142 P Pn 10 48 20.8 0.0
KRHZ Kereru 1.64 100 P Pn 10 48 21.6 +0.5
KWHZ Kaweka Forest 1.66 92 P Pn 10 48 22.0 +0.6
BKZ Black Stump Fm 1.73 83 PKPdf Pn 10 48 22.1 +0.1
BKZ Black Stump Fm 1.73 83 P Pn 10 48 22.0 +0.1
PRWZ Pori Road 1.75 132 P Pn 10 48 22.4 +0.5
MRHZ Matea Rd 1.75 72 P Pn 10 48 21.9 -0.2
HOWZ Holdsworth Sta 1.78 148 P Pn 10 48 22.2 -0.1
CAW Cannon Point 1.82 161 P Pn 10 48 22.7 +0.1
TCW Tory Channel 1.82 180 P Pn 10 48 23.2 +0.7
TIWZ Tintock 1.86 139 P Pn 10 48 23.1 +0.2
MCHZ McNeill Hill 1.88 93 P Pn 10 48 24.3 +1.2
TOZ Tahuroa Road 1.91 31 P Pn 10 48 22.7 -0.8
WEL Wellington 1.93 169 P Pn 10 48 23.7 +0.1
NNZ Nelson 1.95 200 P Pn 10 48 24.0 +0.3
QRZ Quartz Range 1.97 222 P Pn 10 48 24.1 +0.2
NMHZ Naumai 1.98 82 P Pn 10 48 25.5 +1.2
BFZ Birch Farm 1.99 131 P Pn 10 48 24.4 +0.3
ANWZ Angora Road 2.00 123 P Pn 10 48 24.9 +0.7
MTW Mount Morrison 2.00 152 P Pn 10 48 24.2 -0.1
KAHZ Kahuranaki 2.05 102 P Pn 10 48 25.7 +1.0
TUWZ Tuamarina 2.06 187 P Pn 10 48 25.4 +0.6
MTHZ Maungataniwha 2.06 76 P Pn 10 48 24.9 -0.1
TMWZ Te Maipa 2.12 145 P Pn 10 48 25.5 +0.1
MUGZ Murupara 2.15 66 P Pn 10 48 25.6 -0.1
MSWZ Moikau Station 2.16 160 P Pn 10 48 25.6 -0.2
PAWZ Paruwai Farm 2.18 157 P Pn 10 48 25.9 0.0
RTZ Ruatahuna 2.24 71 P Pn 10 48 26.9 +0.2
TRWZ Traveller 2.28 152 P Pn 10 48 27.1 +0.1
PLWZ Palliser 2.31 161 P Pn 10 48 27.0 -0.3
BSWZ Blackbirch Sta 2.35 187 P Pn 10 48 28.5 +0.9
SNGZ Shannon Statio 2.46 77 P Pn 10 48 29.3 +0.5
URZ Urewera 2.48 64 P Pn 10 48 29.1 0.0
THZ Tophouse 2.59 203 P Pn 10 48 31.3 +1.1
MWZ Matawai 2.75 69 P Pn 10 48 32.1 +0.2
RIGZ Rimuhau 2.80 77 P Pn 10 48 33.2 +0.7
MHGZ Mahia Peninsul 2.83 86 P Pn 10 48 34.1 +1.4
TKGZ Te Karaka 2.94 72 P Pn 10 48 35.1 +1.2
RUGZ Raukumara Rang 3.02 63 P Pn 10 48 34.5 -0.5
KHZ Kahutara 3.08 190 P Pn 10 48 35.9 +0.5
TWGZ Tauwhareparae 3.14 69 P Pn 10 48 37.3 +1.1
HAZ Te Kaha 3.19 60 P Pn 10 48 36.4 -0.3
CNGZ Carnagh Statio 3.19 75 P Pn 10 48 38.1 +1.3
PKGZ Pakihiroa 3.33 65 P Pn 10 48 38.7 +0.3
PUZ Puketiti 3.38 68 P Pn 10 48 39.2 +0.3
WMGZ Waiomatatini S 3.60 66 P Pn 10 48 41.5 0.0

*JMA **02** 11:08:58.4, 32°.79N×131°.03E, h6km±1km, M3.1 Broadband fault plane solution: P waves. NP1: ϕs222.00000°, δ66.00000°, λ155.00000°. NP2: ϕs323.00000°, δ68.00000°, λ26.00000°. Principal axes: T Plg34.0000°, Azm183.0000°; N Plg56.0000°, Azm1.0000°; P Plg1.0000°, Azm92.0000°;*
JMA Felt III J1.
*IDC **02** 11:08:59.7±2.3, 32°.80N×130°.90E, h0km, mb3.0/1, mb1 3.1/3, mb1mx3.0/45, mbtmp3.0/3, ML2.3/2 Error ellipse: s-maj=26.9km s-min=14.5km az=92.0*
ISC 02 11:09:00.9±1.1,**32°.76N**±0°.04×**130°.94E**±0°.07,**h12**km,**n7**, σ**1s.59**/10,**2C-1D,Kyushu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JIU3 Izumi3 0.23 206 ⇑P Pg 11 09 04.4 -1.4
JIU3 eS Sg 11 09 08.9 -0.3
JNU Nakatsue 0.37 352 Pg Pg 11 09 05.8 -2.5
142nm,0.3s,baz=179,slow=15,SNR=1739
JNU Lg Lg 11 09 10.6
baz=240,slow=20
JTA Tamana 0.40 301 ⇓P Pg 11 09 07.3 -1.5
JTA S Sg 11 09 14.0 -0.1
JTZ Takazaki 0.86 171 ⇑P Pg 11 09 16.0 -1.6
KSRS Korea Array 5.30 333 Pn Pn 11 10 19.8 0.0
0.1nm,0.3s,baz=154,slow=14,SNR=3.0
KSRS Pg Pb 11 10 35.3 +2.0
0.2nm,0.3s,baz=153,slow=17,SNR=3.3
KSRS Lg Lg 11 11 46.4
0.4nm,0.3s,baz=151,slow=29,SNR=6.6
MJAR Matsushiro Arr 7.08 56 Pn Pn 11 10 45.1 +0.7
0.1nm,0.3s,baz=242,slow=13,SNR=5.8

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SONM	Songino Array	23.88	316	P	P	11 14 14.9	+0.5
	0.3nm,0.7s,baz=123,slow=10,SNR=3.1						

NEIC 02 11:12:36.4±1.3,8.07S±0.07×109.27E±0.04,h87km±3km, mb4.5/25,Error ellipse: s-maj=10.6km s-min=5.8km az=189.0
IDC 02 11:12:37.8±1.3,7.90S×109.36E,h101km±13km,mb3.9/18, mb1 4.0/20,mb1mx3.9/42,mbtmp4.2/20,Error ellipse: s-maj=22.8km s-min=10.3km az=47.0
ISC 02 11:12:36.3±0.9,8.07S±0.07×109.24E±0.04,h90km±8km, n102,σ1.20/108,mb4.3/27,Jawa

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
UGM	Wanagama	1.28	83		Pn	11 12 57.2	-2.1
UGM				Sn	Sn	11 13 13.6	-3.1
CISI	Cisompet, Garu	1.50	290		Pn	11 13 00.1	-2.1
CISI				Sn	Sn	11 13 18.6	-3.1
SMRI	Semarang	1.56	49		Pn	11 13 03.6	+0.7
SMRI				Sn	Sn	11 13 26.8	+3.8
LEM	Lembang	2.03	307	P	Pn	11 13 11.0	+1.9
	17nm,0.3s,baz=116,slow=17,SNR=14						
LEM				S	Sn	11 13 37.0	+2.8
	63nm,0.3s,baz=320,slow=23,SNR=14						
JAGI	Jajag, Banyuwa	4.88	95		Pn	11 13 46.8	-0.5
JAGI				Sn	Sn	11 14 40.8	-1.7
KSM	Kuching	9.54	6	Pn	Pn	11 14 53.6	+2.6
SOEI	Soe	14.94	98	P	P	11 16 08.9	+2.6
GIRL	Giralia	15.26	162	P	Pn	11 16 00.8	-6.0
KKM	Kota Kinabalu	15.65	27	P	P	11 16 16.3	+2.1
FITZ	Fitzroy Crossi	18.81	124	P	P	11 16 49.4	+0.5
	0.5nm,0.3s,baz=291,slow=9.4,SNR=8.1						
FITZ	Fitzroy Crossi	18.81	124	P	P	11 16 49.3	+0.5
FITZ				IAmb	IAmb	11 17 00.5	
	comp=Z,34nm,1.5s						
KNRA	Kununurra	20.53	113	P	P	11 17 07.8	+0.2
KNRA				IAmb	IAmb	11 17 24.6	
	comp=Z,75nm,1.4s						
MTN	Manton Dam	22.04	104	P	P	11 17 23.6	-0.2
FAKI	Fak Fak	23.46	79	P	P	11 17 35.7	-2.4
FAKI				IAmb	IAmb	11 17 36.7	
	comp=Z,66nm,1.2s						
WB0	Warramunga Arr	26.99	118	P	P	11 18 10.0	+0.1
WB0				IAmb	IAmb	11 18 11.2	
	comp=Z,13nm,1.3s						
WRA	Warramunga Arr	27.01	119	P	P	11 18 10.2	0.0
	comp=Z,3.4nm,0.8s,baz=289,slow=12,SNR=20						
WRA				PcP	PcP	11 21 29.7	0.0
	comp=Z,1.0nm,1.0s,baz=317,slow=1.7,SNR=4.7						
WRA	Warramunga Arr	27.01	119	P	P	11 18 10.2	0.0
WRAB	Tennant Creek	27.02	118	P	P	11 18 10.3	+0.1
WRAB				PcP	PcP	11 21 29.6	-0.1
WB2	Warramunga Arr	27.02	119	P	P	11 18 10.3	0.0
WB2				IAmb	IAmb	11 18 11.4	
	comp=Z,25nm,1.4s						
WB2				PcP	PcP	11 21 29.8	+0.1
WR0	Warramunga Arr	27.19	118	P	P	11 18 12.1	+0.4
WR0				IAmb	IAmb	11 18 15.4	
	comp=Z,18nm,1.3s						
CMAR	Chiang Mai Arr	28.25	339	P	P	11 18 20.6	-0.5
	comp=Z,0.4nm,0.5s,baz=177,slow=7.9,SNR=4.2						
AS31	Alice Springs	28.26	126	P	P	11 18 21.1	-0.2
AS31				PcP	PcP	11 21 33.2	+0.5
ASAR	Alice Springs	28.26	126	P	P	11 18 21.1	-0.1
	comp=Z,3.6nm,0.7s,baz=304,slow=9.3,SNR=76						
ASAR				PcP	PcP	11 21 32.8	+0.1
	comp=Z,0.9nm,0.5s,baz=302,slow=2.1,SNR=10.0						
ASAR	Alice Springs	28.26	126	P	P	11 18 21.3	0.0
ASAR					PcP	11 21 33.3	+0.6
COEN	Coen	33.79	103	P	P	11 19 10.4	+0.4
COEN				IAmb	IAmb	11 19 17.2	
	comp=Z,12nm,1.1s						
BBOO	Buckleboo	34.97	138	P	P	11 19 19.6	-0.4
H08S2	Diego Garcia H	36.40	268	T	T	11 57 47.9	
	baz=92,slow=74,SNR=4.3						
H08S3	Diego Garcia H	36.41	268	T	T	11 57 34.7	
	baz=92,slow=74,SNR=48						
H08S1	Diego Garcia H	36.42	268	T	T	11 58 03.4	
	baz=92						
CTA	Charters Tower	37.74	112	P	P	11 19 43.9	+0.2
	comp=Z,3.4nm,0.8s,baz=306,slow=4.3,SNR=1.7						
STKA	Stephens Creek	38.28	133	P	P	11 19 48.7	+0.6
	comp=Z,3.9nm,0.5s,baz=296,slow=9.6,SNR=7.4						
STKA	Stephens Creek	38.28	133	P	P	11 19 48.7	+0.6
ARMA	Armidale	45.41	125	P	P	11 20 48.7	+2.4
ARMA				IAmb	IAmb	11 20 56.1	
	comp=Z,10nm,1.2s						
MJAR	Matsushiro Arr	52.05	30	P	P	11 21 35.3	-1.6
	comp=Z,1.5nm,0.6s,baz=202,slow=6.3,SNR=5.6						
SONM	Songino Array	55.72	358	P	P	11 22 03.2	-0.4
	comp=Z,0.4nm,0.5s,baz=179,slow=9.4,SNR=7.4						
SONM				PcP	PcP	11 23 02.0	+0.1
	comp=Z,0.3nm,0.3s,baz=178,slow=4.4,SNR=8.2						
SONM	Songino Array	55.72	358	P	P	11 22 02.9	-0.7
SONM					PcP	11 23 02.3	+0.4
USRK	Ussuriysk Ar.	55.95	20	P	P	11 22 04.1	-1.0
	comp=Z,1.9nm,0.7s,baz=173,slow=5.8,SNR=3.1						
USRK	Ussuriysk Ar.	55.95	20	P	P	11 22 03.8	-1.3
CASY	Casey	58.12	179	P	P	11 22 22.9	+2.8
MK31	Makanchi Array	59.66	339	P	P	11 22 29.9	-1.2
MK31				IAmb	IAmb	11 22 31.4	
	comp=Z,3.8nm,1.4s						
MKAR	Makanchi Array	59.66	339	P	P	11 22 29.9	-1.3
	comp=Z,0.6nm,0.3s,baz=153,slow=7.1,SNR=20						
KLR	Kul'dur	60.38	17	P	P	11 22 34.7	-1.2
	comp=Z,1.8nm,0.6s,baz=193,slow=5.9,SNR=10						
KURK	Kurchatov	64.28	339	P	P	11 23 02.4	+0.5
ZALV	Zalesovo Beam	65.14	344	P	P	11 23 06.2	-1.3
	comp=Z,1.0nm,0.3s,baz=145,slow=5.4,SNR=4.0						
ZALV	Zalesovo Beam	65.14	344	P	P	11 23 06.3	-1.2
GEYT	Alibeck	66.04	318	P	P	11 23 13.2	-0.5
	comp=Z,1.0nm,0.4s,baz=130,slow=6.0,SNR=5.1						
GEYT	Alibeck	66.04	318	P	P	11 23 13.3	-0.4
BKZ	Black Stump Fm	67.33	129	P	P	11 23 22.6	+0.7
ABKAR	Akbulak array	71.48	328	P	P	11 23 46.2	-1.0
PETK	Petropavlovsk-	73.47	28	P	P	11 23 58.2	-0.7
	comp=Z,1.8nm,0.6s,baz=191,slow=4.1,SNR=7.8						
PETK	Petropavlovsk-	73.47	28	P	P	11 23 58.6	-0.2
MA2	Magadan	75.10	20	P	P	11 24 07.9	-0.3
	comp=Z,0.8nm,0.4s,baz=162,slow=2.1,SNR=3.9						
QSPA	South Pole Qui	81.92	180	P	P	11 24 46.6	+0.7
QSPA				IAmb	IAmb	11 24 48.3	
	comp=Z,9.9nm,1.5s						
BRTR	Keskin Array B	84.20	311	P	P	11 24 58.1	0.0
	comp=Z,4.4nm,1.0s,baz=146,slow=6.6,SNR=13						
BR131	Keskin Array S	84.20	311	P	P	11 24 58.7	+0.6
BR131				IAmb	IAmb	11 24 59.0	
	comp=Z,3.7nm,0.9s						
SNAA	Sanae	89.16	197	P	P	11 25 23.0	+1.4
	baz=94,slow=17						
SNAA	Sanae	89.16	197	P	P	11 25 22.8	+1.2
SNAA				IAmb	IAmb	11 25 41.7	
	comp=Z,5.7nm,1.5s						
AKASG	Malin Array Be	89.92	321	P	P	11 25 24.6	-0.8
	comp=Z,0.4nm,0.3s,baz=86,slow=4.9,SNR=4.7						
FINES	FINESS Array B	93.77	331	P	P	11 25 42.8	-0.1
	comp=Z,2.3nm,0.8s,baz=116,slow=9.7,SNR=3.4						
ARCES	ARCESS Array B	95.31	339	P	P	11 25 49.6	-0.3
	comp=Z,4.1nm,1.0s,baz=93,slow=3.2,SNR=2.9						
YKA	Yellowknife Ar	117.07	21	PKP	PKPdf	11 31 10.3	-0.2
	comp=Z,0.3nm,0.5s,baz=315,slow=0.8,SNR=9.0						
TX31	Lajitas Ar. Si	142.55	51	PKPdf	PKPdf	11 31 57.3	-2.3
TXAR	Lajitas Array	142.55	51	PKP	PKPdf	11 31 56.4	-3.2
	comp=Z,0.4nm,0.5s,baz=188,slow=1.9,SNR=4.6						
TXAR	Lajitas Array	142.55	51	PKPdf	PKPdf	11 31 57.2	-2.5
NCB	Newcomb	144.11	4	PKPdf	PKPbc	11 32 00.3	+0.3
P43A	Skaggs, Pawnee	144.35	25		PKPbc	11 32 01.3	+0.4
SFIN	Lafayette	144.68	22	PKPdf	PKPbc	11 32 02.2	+0.3
N47A	Urbana	144.73	20	PKPdf	PKPdf	11 32 02.6	-0.4
HHAR	Hobbs	144.86	34		PKPbc	11 32 02.9	+0.3
JCT	Junction City	144.86	47		PKPdf	11 32 04.2	+0.5
CCM	Cathedral Cave	144.88	29		PKPbc	11 32 02.9	+0.3
MMNY	Mt. Morris Dam	144.91	9		PKPdf	11 32 03.0	-0.3
WVNY	West Valley, N	145.11	10		PKPdf	11 32 03.6	0.0
N49A	Columbus Grove	145.18	18		PKPdf	11 32 04.2	+0.4
P46A	Rosedale	145.30	23		PKPdf	11 32 04.8	+0.8
K62A	Royalston	145.52	2	PKPdf	PKPab	11 32 04.9	+0.1
BINY	Binghamton	145.70	7	PKPdf	PKPab	11 32 05.5	0.0
L59A	Walton	145.81	6		PKPab	11 32 05.7	-0.3
M55A	Ridgway	145.99	11		PKPab	11 32 06.5	-0.1
P48A	Milroy	146.09	21		PKPbc	11 32 06.1	-0.3
PBMO	Poplar Bluff	146.28	29		PKPbc	11 32 07.4	-0.5
LCAR	Lake Charles	146.49	31		PKPbc	11 32 07.7	+0.1
WHAR	Wooly Hollow	146.49	33	PKPbc	PKPbc	11 32 07.7	0.0
WCI	Wyandotte Cave	146.86	23		PKPbc	11 32 09.1	+0.5
N58A	Sunbury	146.94	8		PKPbc	11 32 09.4	+0.6
N59A	State Game Lan	146.99	7		PKPbc	11 32 09.7	+0.7
O56A	Blue Knob Stat	147.19	11	PKPbc	PKPbc	11 32 10.1	+0.5
BRNJ	Basking Ridge	147.35	5	PKPbc	PKPbc	11 32 10.8	+0.9
MCWV	Mont Chateau	147.51	13	PKPdf	PKPdf	11 32 06.5	-1.3
MCWV				PKPbc	PKPbc	11 32 09.7	-0.7
MCWV				PKPab	PKiKP	11 32 13.0	+0.5
MVL	Millersville	147.82	8	PKPbc	PKPbc	11 32 11.8	+0.6
Q54A	Coxs Mills	147.92	15	PKPbc	PKPbc	11 32 12.2	+0.7
P57A	Homestead Farm	148.06	11	PKPbc	PKPbc	11 32 12.2	+0.3
CLTN	Cedars of Leba	148.70	25		PKiKP	11 32 14.5	-0.6
TZTN	Tazewell	149.36	20	PKPbc	PKiKP	11 32 16.2	-0.3
R58B	Mineral	149.55	11	PKPbc	PKiKP	11 32 16.3	-0.4
V51A	Loudon	149.73	22	PKPbc	PKiKP	11 32 16.9	-0.4
S58A	Poland Farm, P	149.86	12	PKPbc	PKiKP	11 32 17.1	-0.3
TKL	Tuckaleechee C	150.07	22	PKPbc	PKiKP	11 32 17.8	-0.1
V55A	Taylorsville	150.74	18	PKPbc	PKiKP	11 32 19.2	-0.1
Y52A	Lilburn	151.55	24	PKPbc	PKiKP	11 32 21.7	+0.6
V61A	Roper	151.90	10	PKPbc	PKiKP	11 32 22.1	+0.5
BRAL	Brewton	152.44	31	PKPbc	PKiKP	11 32 24.1	+1.2

NEIC 02 11:17:36.4±1.6,7.3S±0.1×111.79E±0.07,h234km±7km, mb4.3/12,Error ellipse: s-maj=22.3km s-min=8.6km az=197.0
IDC 02 11:17:39.0±3.2,7.50S×111.50E,h269km±55km,mb3.2/6, mb1 3.4/8,mb1mx3.2/38,mbtmp3.9/8,Error ellipse: s-maj=108.9km s-min=12.2km az=47.0
ISC 02 11:17:36.6±0.6,7.5S±0.1×111.70E±0.07,h250km,n34, σ1.68/37,mb3.7/11,Jawa

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
UGM	Wanagama	1.24	250	Pn	Pn	11 18 12.4	-0.7
UGM					S	11 18 39.5	-2.3
SMRI	Semarang	1.33	289	Pn	Pn	11 18 11.4	-2.3
JAGI	Jajag, Banyuwa	2.61	112		Pn	11 18 22.8	-2.3
JAGI					S	11 18 59.2	-4.0
CISI	Cisompet, Garu	3.85	269	Pn	Pn	11 18 38.3	-0.5
CISI					S	11 19 24.6	-3.4
LEM	Lembang	4.11	279	P	Pn	11 18 42.2	+0.4
	6.6nm,0.3s,baz=68,slow=13,SNR=4.1						
MNAI	Manna	9.24	289	Pn	Pn	11 19 46.1	+0.5
SBUM	Sibu	9.89	3		Pn	11 19 53.8	-0.1
SOEI	Soe	12.63	101		Pn	11 20 27.2	-1.0
FITZ	Fitzroy Crossi	17.19	129	P	Pn	11 21 23.5	+0.8
	0.4nm,0.3s,baz=301,slow=9.3,SNR=4.8						
FITZ	Fitzroy Crossi	17.19	129	P	Pn	11 21 23.6	+0.8
FITZ				IAmb	IAmb	11 21 30.6	
	comp=Z,31nm,1.5s						
KNRA	Kununurra	18.57	117	P	P	11 21 37.1	+1.6
MTN	Manton Dam	19.84	107	P	P	11 21 50.4	+1.3
WB0	Warramunga Arr	25.16	121	P	P	11 22 41.8	+2.3
WB0				IAmb	IAmb	11 22 55.4	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	25.19	122	P	P	11 22 42.0	+2.2
	comp=Z,0.8nm,0.5s,baz=295,slow=11,SNR=7.1						
WRA	Warramunga Arr	25.19	122	P	P	11 22 41.9	+2.1
WRAB	Tennant Creek	25.20	122	P	P	11 22 42.3	+2.6
WRAB				IAmb	IAmb	11 22 48.1	
	comp=Z,9.9nm,1.1s						
WB2	Warramunga Arr	25.20	122	P	P	11 22 41.9	+2.1
WB2				IAmb	IAmb	11 22 48.5	
	comp=Z,10nm,1.2s						
WR0	Warramunga Arr	25.37	122	P	P	11 22 43.2	+1.9
WR0				IAmb	IAmb	11 22 52.8	
	comp=Z,6.3nm,1.1s						
AS31	Alice Springs	26.69	130	P	P	11 22 55.1	+1.9
ASAR	Alice Springs	26.69	130	P	P	11 22 55.5	+2.4
	comp=Z,0.7nm,0.4s,baz=304,slow=8.0,SNR=16						
CMAR	Chiang Mai Arr	28.70	334	P	P	11 23 12.3	+1.4
	comp=Z,1.2nm,0.7s,baz=167,slow=8.2,SNR=8.8						
COEN	Coen	31.56	104	P	P	11 23 37.3	+1.2
COEN				IAmb	IAmb	11 23 45.7	
	comp=Z,10.0nm,1.1s						
SONM	Songino Array	55.29	356	P	P	11 26 44.2	-0.1
	comp=Z,0.6nm,0.6s,baz=172,slow=8.3,SNR=5.6						
SONM	Songino Array	55.29	356	P	P	11 26 44.3	0.0
MK31	Makanchi Array	60.04	337	P	P	11 27 16.9	-0.4
MKAR	Makanchi Array	60.04	337	P	P	11 27 17.2	-0.1
	comp=Z,0.5nm,0.4s,baz=150,slow=7.1,SNR=13						
MKAR	Makanchi Array	60.04	337	P	P	11 27 17.1	-0.2
ZALV	Zalesovo Beam	65.27	343	P	P	11 27 51.0	-0.5
	comp=Z,0.7nm,0.4s,baz=154,slow=7.5,SNR=3.7						
ZALV	Zalesovo Beam	65.27	343	P	P	11 27 51.3	-0.3
ABKAR	Akbulak array	72.29	327	P	P	11 28 34.8	0.0
RCBR	Riachuelo	145.07	249	PKPdf	PKPbc	11 36 44.1	-1.2
WVT	Waverly	146.37	29	PKPbc	PKPbc	11 36 49.1	+0.6
V52A	Sevierville	148.50	24	PKPbc	PKiKP	11 36 55.3	-0.4
V53A	Saluda	148.96	23	PKPbc	PKiKP	11 36 56.5	-0.2

NEIC 02 11:23:54.5±2.4,6.13S±0.09×147.6E±0.1,h37km±5km, mb4.4/14,Error ellipse: s-maj=22.5km s-min=8.2km az=119.0
IDC 02 11:23:55.2±2.5,6.12S×147.66E,h43km±28km,mb3.8/9, mb1 4.0/12,mb1mx3.8/29,mbtmp4.0/12,ML4.2/2,MS3.4/2, Ms1 3.4/2,ms1mx3.3/26,Error ellipse: s-maj=33.2km s-min=14.5km az=115.0
ISC 02 11:23:57.6±0.6,6.24S±0.07×147.7E±0.1,h77km,n39, σ1.52/40,mb4.0/9,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.19	190	P	Pn	11 24 44.2	-1.3
	9.8nm,0.3s,baz=14,slow=14,SNR=26						
PMG				S	Sn	11 25 22.8	+0.2
	19nm,0.3s,baz=249,slow=23,SNR=12						
PMG	Port Moresby	3.19	190		Pn	11 24 43.9	-1.7
PMG				Sn	Sn	11 25 21.9	-0.6
KRVT	Keravat (AS076	4.71	66	P	Pn	11 25 04.2	-2.0
	9.5nm,0.3s,baz=208,slow=18,SNR=4.7						
KRVT				LR	LR	11 27 15.1	
	comp=Z,239nm,20.2s,baz=237,slow=42						
RABL	Rabaul	4.88	66	Pn	Pn	11 25 06.4	-2.2
COEN	Coen	8.87	210		Pn	11 26 02.0	-1.1
COEN					Sn	11 27 38.8	-2.7
CTA	Charters Tower	13.84	186	LR	LR	11 32 50.7	
	comp=Z,286nm,18.3s,baz=60,slow=38						
WB0	Warramunga Arr	18.66	223	P	P	11 28 10.2	+0.6
WB0				IAmb	IAmb	11 28 15.2	
	comp=Z,17nm,1.1s						
WR0	Warramunga Arr	18.70	222	P	P	11 28 10.4	+0.4
WR0				IAmb	IAmb	11 28 23.0	
	comp=Z,28nm,1.4s						
WRAB	Tennant Creek	18.81	222	P	P	11 28 09.9	-1.4
WRAB				IAmb	IAmb	11 28 28.1	
	comp=Z,20nm,1.3s						
WB2	Warramunga Arr	18.81	222	P	P	11 28 11.1	-0.2
WB2				IAmb	IAmb	11 28 25.5	
	comp=Z,21nm,1.4s						
WRA	Warramunga Arr	18.82	222	P	P	11 28 11.6	+0.2
	comp=Z,0.8nm,0.3s,baz=61,slow=10,SNR=23						
WRA				S	S	11 31 37.3	-4.0
	comp=Z,0.1nm,0.3s,baz=46,slow=22,SNR=2.7						
WRA	Warramunga Arr	18.82	222	P	P	11 28 10.3	-1.0
KNRA	Kununurra	20.81	242	P	P	11 28 31.7	-1.3
KNRA				IAmb	IAmb	11 28 49.2	
	comp=Z,67nm,1.3s						
AS31	Alice Springs	21.83	216	P	P	11 28 44.4	+0.6
ASAR	Alice Springs	21.83	216	P	P	11 28 44.6	+0.7
	comp=Z,5.0nm,0.8s,baz=50,slow=8.9,SNR=96						
ASAR				S	S	11 32 40.6	-0.4
	comp=Z,1.2nm,0.9s,baz=34,slow=20,SNR=3.6						
ASAR	Alice Springs	21.83	216	P	P	11 28 44.2	+0.3
ANA2	Anatahan	22.52	355	P	P	11 28 49.4	-1.9
FITZ	Fitzroy Crossi	24.54	239	P	P	11 29 11.6	+1.2
	comp=Z,6.7nm,0.4s,baz=81,slow=7.6,SNR=16						
FITZ	Fitzroy Crossi	24.54	239	P	P	11 29 11.8	+1.5
FITZ				IAmb	IAmb	11 29 16.9	
	comp=Z,46nm,1.5s						
STKA	Stephens Creek	26.14	192	P	P	11 29 27.3	+2.6
	comp=Z,7.1nm,1.0s,baz=335,slow=12,SNR=5.3						
STKA	Stephens Creek	26.14	192	P	P	11 29 27.0	+2.4
FORT	Forrest	30.59	215	P	P	11 30 05.0	+0.6
H11S3	WAKE ISLAND Hy	30.90	37	T	T	12 02 53.9	
	baz=213,slow=74,SNR=4.2						
H11S2	WAKE ISLAND Hy	30.90	37	T	T	12 02 55.0	
	baz=213						
H11S1	WAKE ISLAND Hy	30.91	37	T	T	12 02 56.3	
	baz=213,slow=74,SNR=3.7						
MJAR	Matsushiro Arr	43.48	349	P	P	11 31 53.0	-0.4
	comp=Z,2.1nm,0.9s,baz=165,slow=8.0,SNR=4.9						
MJAR	Matsushiro Arr	43.48	349	P	P	11 31 51.5	-1.9
PETK	Petropavlovsk-	59.73	7	P	P	11 33 54.6	+0.4
	comp=Z,2.4nm,0.9s,baz=154,slow=6.6,SNR=7.7						
PETK	Petropavlovsk-	59.73	7	P	P	11 33 55.9	+1.7
SONM	Songino Array	64.96	331	P	P	11 34 30.1	+0.7
	comp=Z,0.3nm,0.6s,baz=142,slow=5.6,SNR=4.8						
SONM	Songino Array	64.96	331	P	P	11 34 31.7	+2.3
MKAR	Makanchi Array	78.13	320	P	P	11 35 48.6	+0.1
	comp=Z,0.1nm,0.3s,baz=105,slow=7.7,SNR=4.6						
QSPA	South Pole Qui	83.73	180	P	P	11 36 19.1	+1.0
QSPA				IAmb	IAmb	11 36 31.9	
	comp=Z,4.6nm,0.8s						
ILAR	Eielson Array	85.43	23	P	P	11 36 26.5	+0.1
	comp=Z,0.1nm,0.4s,baz=236,slow=4.4,SNR=4.4						
YKA	Yellowknife Ar	99.06	28	P	Pdif	11 37 32.0	+2.3
	comp=Z,0.2nm,1.0s,baz=282,slow=5.6,SNR=3.6						
TORD	Torodi Ar. Bea	145.83	284	PKPbc	PKPab	11 43 30.1	+0.3
	comp=Z,1.4nm,0.7s,baz=105,slow=3.0,SNR=5.9						
TORD	Torodi Ar. Bea	145.83	284		PKPab	11 43 29.8	+0.1
BDFB	Brasilia	153.26	145	PKPbc	PKiKP	11 43 49.1	+1.0
	comp=Z,2.6nm,0.7s,baz=214,slow=5.2,SNR=4.3						
BDFB	Brasilia	153.26	145		PKiKP	11 43 48.7	+0.6

IDC 02 12:09:22.6±1.9,4.48S×155.53E,h0km,mb3.6/4, mb1 4.0/6,mb1mx3.7/26,mbtmp3.8/6,ML3.3/2,MS4.1/2, Ms1 4.1/2,ms1mx3.5/29,Error ellipse: s-maj=58.6km s-min=27.4km az=131.0
ISC 02 12:09:24.3±1.6,4.5S±0.2×155.5E±0.2,h10km,n8,σ0.95/6, mb3.5/4,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.50	273	Pn	Pn	12 10 18.8	-0.1
	14nm,0.3s,baz=195,slow=0.6,SNR=13						
KRVT				Sn	Sn	12 10 47.9	-13
	37nm,0.3s,baz=132,slow=22,SNR=14						
PMG	Port Moresby	9.65	239	Pn	Pn	12 11 43.6	+0.3
	3.8nm,0.3s,baz=80,slow=5.8,SNR=12						
WRA	Warramunga Arr	25.74	232	P	P	12 14 53.9	-1.4
	1.4nm,0.7s,baz=56,slow=10.0,SNR=5.7						
ASAR	Alice Springs	28.27	226	P	P	12 15 18.2	+0.1
	0.9nm,0.9s,baz=54,slow=9.0,SNR=7.9						
STKA	Stephens Creek	30.23	204	LR	LR	12 27 05.5	
	comp=Z,786nm,20.6s,baz=242,slow=35						
MA2	Magadan	63.97	357	LR	LR	12 44 44.5	
	comp=Z,82nm,19.9s,baz=75,slow=33						
ILAR	Eielson Array	80.85	21	P	P	12 21 37.8	-0.4
	0.5nm,0.9s,baz=219,slow=7.0,SNR=2.7						
MKAR	Makanchi Array	81.89	318	P	P	12 21 44.9	+0.8
	0.2nm,0.8s,baz=92,slow=8.3,SNR=2.1						

NEIC 02 12:36:10.2±2.0,76.67N±0.06×7.3E±0.1,h10km±1km, mb4.4/3,Error ellipse: s-maj=11.4km s-min=3.0km az=18.0
BER 02 12:36:11.5±2.2,76.75N×7.29E,h10km,ML2.1, ML2.7(DNK),Confirmed Earthquake
DNK 02 12:36:14.4±1.1,76.88N×6.92E,h39km±16km,ML2.7, Hypocentre not reviewed by the ISC
IDC 02 12:36:17.7±1.5,76.62N×10.64E,h0km,mb3.4/2, mb1 3.8/6,mb1mx3.3/64,mbtmp3.7/6,ML3.0/4,Error ellipse: s-maj=24.5km s-min=10.4km az=87.0
IEPN 02 12:36:19.0,77.23N×8.60E,h15km
ISC 02 12:36:12.6±1.4,76.84N±0.06×8.34E±0.10,h10km,n30, σ2.18/27,mb4.3/5,1C,Svalbard region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	1.65	81	eP	Pn	12 36 42.1	+0.6
HSPB				eS	Sb	12 37 03.0	-0.7
HSPB				IAML		12 37 05.9	
	comp=Z,25nm,0.2s						
HSPB	Hornsund (broa	1.65	81	⇑iP	Pn	12 36 41.9	+0.4
HSPB				iS	Sn	12 37 01.7	-1.0
SPA0	Spitsbergen Ar	2.20	49		Pn	12 36 51.3	+2.2
SPA0				Sn	Sb	12 37 20.8	+1.1
SPITS	Spitsbergen Ar	2.20	49	Pn	Pn	12 36 51.3	+2.2
	baz=210,slow=17,SNR=641						
SPITS				Sn	Sn	12 37 18.6	+2.3
	baz=218,slow=23,SNR=4.0						
KBS	Kingsbay	2.23	18	eP	Pn	12 36 49.9	+0.5
KBS				eS	Sn	12 37 16.4	-0.6
KBS				IAML		12 37 19.3	
	comp=Z,19nm,0.2s						
KBS	Kingsbay	2.23	18	eP	Pn	12 36 50.0	+0.5
KBS				eS	Sn	12 37 12.4	-4.6
KBS	Kingsbay	2.23	18	Pn	Pn	12 36 50.1	+0.6
KBS	Kingsbay	2.23	18	iP		12 36 50.0	
KBS				iS		12 37 16.2	
KBS				IAML		12 37 19.9	
	comp=Z,32nm,0.3s						
BJO1	Bjornoya	3.54	126	eP	Pn	12 37 07.0	-0.5
HOPEN	Hopen	3.87	87	eP	Pn	12 37 13.3	+1.3
HOPEN				eS	Sn	12 37 57.5	+0.1
HOPEN				IAML		12 37 59.6	
	comp=Z,21nm,0.3s						
DAG	Danmarks Havn	6.14	282	iP	Pn	12 37 38.0	-5.2
DAG				iS	Sn	12 38 38.6	-15
DAG	Danmarks Havn	6.14	282	iP	Pn	12 37 37.0	-6.2
DAG				iP	Pn	12 37 38.0	-5.2
DAG				iS	Sn	12 38 38.6	-15
DAG				IAML		12 38 44.3	
	comp=Z,4.0nm,0.3s						
DAG	Danmarks Havn	6.15	282	iP		12 37 37.0	
DAG				iP		12 37 38.0	
DAG				iS		12 38 38.6	
DAG				IAML		12 38 44.3	
	comp=Z,4.0nm,0.3s						
NOR	Nord	6.61	327	iP	Pn	12 37 47.0	-2.6
NOR				i		12 38 59.2	
NOR	Nord	6.61	327	iP	Pn	12 37 46.0	-3.6
NOR				iP	Pn	12 37 47.0	-2.6
NOR				i		12 38 59.2	
NOR	Nord	6.61	327	iP		12 37 46.0	
NOR				iP		12 37 47.0	
NOR				i		12 38 59.2	
DBG	Daneborg	7.51	265	iP	Pn	12 37 56.1	-5.8
DBG				iS	Sn	12 39 09.8	-17
DBG				IAML		12 39 17.9	
	comp=Z,1.2nm,0.4s						
DBG	Daneborg	7.51	265	iP		12 37 56.1	
DBG				iS		12 39 09.8	
DBG				IAML		12 39 17.9	
	comp=Z,1.2nm,0.4s						
ZFI2	Zemlya Franca-	8.41	44	eP	Pn	12 38 16.0	+1.7
ZFI2				eS	Sn	12 39 43.8	-5.3
	comp=Z,4.4nm,0.6s						
ARCES	ARCESS Array B	8.81	137	Pn	Pn	12 38 17.2	-2.6
	comp=Z,0.6nm,0.3s,baz=330,slow=12,SNR=17						
ARCES				Sn	Sn	12 39 48.7	-10
	comp=Z,0.5nm,0.3s,baz=5.2,slow=19,SNR=1.4						
ARCES	ARCESS Array B	8.81	137		Pn	12 38 17.4	-2.4
ARCES					Sn	12 39 47.6	-11
ARE0	ARCESS Array S	8.81	137	Pn	Pn	12 38 17.8	-2.0
KEV	Kevo	8.86	134	Pn	Pn	12 38 19.4	-1.0
SCO	Scoresbysund	10.50	249	Pn	Pn	12 38 36.1	-6.7
LVZ	Lovozero	11.84	125	Pn	Pn	12 38 59.0	-2.3
SUMG	Summit	12.73	275		Pn	12 39 09.0	-4.6
FINES	FINESS Array B	16.56	149	Pn	Pn	12 40 00.8	-3.7
	comp=Z,0.1nm,0.3s,baz=165,slow=9.8,SNR=4.2						
FINES	FINESS Array B	16.56	149		Pn	12 40 01.8	-2.8
HFS	Hagfors	16.89	171	Pn	Pn	12 40 11.7	+3.1
	comp=Z,0.0nm,0.3s,baz=356,slow=12,SNR=3.2						
NRS	Narsarsuaq	23.51	259	P	P	12 41 17.0	-5.1
NRS				IAmb	IAmb	12 41 25.3	
	comp=Z,11nm,1.0s						
BFO	Black Forest	28.62	180	P	P	12 42 06.5	-2.2
BFO				IAmb	IAmb	12 42 13.6	
	comp=Z,6.5nm,1.3s						
KIV	Kislovodsk	35.92	136	P	P	12 43 11.4	-1.3
KIV				IAmb	IAmb	12 43 28.4	
	comp=Z,11nm,1.3s						
ILAR	Eielson Array	37.78	343	P	P	12 43 37.2	+9.0
	comp=Z,0.5nm,0.7s,baz=2.5,slow=7.5,SNR=6.4						
MKAR	Makanchi Array	41.34	92	P	P	12 44 00.8	+2.8
	comp=Z,0.4nm,0.7s,baz=354,slow=7.2,SNR=4.5						

IDC 02 12:36:51.9±1.2,44.37N×129.89W,h0km,mb3.8/14, *mb1 3.9/19, mb1mx3.7/65, mbtmp3.7/19, ML2.9/4, MS3.6/5, Ms1 3.6/5, ms1mx3.2/48, Error ellipse: s-maj=29.8km s-min=13.2km az=43.0*

ANF 02 12:36:55.8±1.7, 44.30N×129.56W, h10km, ML3.5/3, Error ellipse: s-maj=19.8km s-min=9.9km az=30.0

NEIC 02 12:36:56.2±3.0, 44.49N±0.08×129.6W±0.1, h10km±1km, mb4.0/30, Error ellipse: s-maj=16.0km s-min=12.7km az=235.0

ISC 02 12:36:54.7±0.6, 44.42N±0.07×129.74W±0.07, h10km, n127, σ1.60/118, mb3.9/20, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	Edson Butte	4.21	110	Pn	Pn	12 37 56.9	-2.1
KEBM				Sn	Sn	12 38 47.3	-1.0
I02D	Swisshome	4.24	92	S	Sn	12 38 46.5	-2.3
	baz=277						
COR	Corvallis	4.60	86		Pn	12 38 03.0	-1.3
COR				Sn	Sn	12 38 56.5	-1.2
F03A	Seaside	4.62	69		Pn	12 38 04.1	-0.4
I03D	Drain, OR	4.66	97	P	Pn	12 38 03.9	-1.2
	baz=282						
G03D	McMinnville, O	4.67	78	P	Pn	12 38 04.5	-0.8
	baz=263,SNR=10						
E03A	Lebam	4.83	62		Pn	12 38 06.2	-1.2
H04D	Lebanon	5.01	86	P	Pn	12 38 09.8	-0.1
	baz=272,SNR=7.5						
HUMO	Hull Mountain	5.25	108	Pn	Pn	12 38 13.6	+0.3
F04A	Amboy	5.39	71		Pn	12 38 14.7	-0.4
H04A	Detroit Lake	5.40	85		Pn	12 38 14.7	-0.6
E04D	Cinebar	5.47	64	P	Pn	12 38 16.2	0.0
	baz=250,SNR=13						
D03D	Eldon	5.58	54	P	Pn	12 38 17.7	-0.1
	baz=239,SNR=19						
D04E	Lakebay	5.60	58	P	Pn	12 38 18.5	+0.6
	baz=243,SNR=11						
YBH	Yreka Blue Hor	5.80	115	Pn	Pn	12 38 23.2	+2.3
	0.1nm,0.3s,baz=140,slow=19,SNR=2.5						
YBH				LR	LR	12 40 24.5	
	comp=Z,191nm,18.5s,baz=330,slow=36						
YBH	Yreka Blue Hor	5.80	115	Pn	Pn	12 38 23.9	+3.1
I05D	Terrebonne, OR	6.02	88	P	Pn	12 38 24.9	+1.1
	baz=274						
LON	Longmire	6.03	64		Pn	12 38 23.5	-0.4
F05D	White Salmon	6.03	73	P	Pn	12 38 25.0	+1.1
	baz=259,SNR=21						
F05D				S	Sn	12 39 32.8	-0.2
	baz=259						
G05D	Wamic, OR	6.04	79	P	Pn	12 38 24.4	+0.3
	baz=266						
G05D				S	Sn	12 39 35.2	+1.9
	baz=266						
D05A	Enumclaw	6.08	60		Pn	12 38 25.3	+0.7
PINE	Pine Mountain	6.36	93		Pn	12 38 28.6	0.0
G06A	Carlson Farm,	6.52	80	Pn	Pn	12 38 30.1	-0.6
B05A	Bryant	6.54	51	P	Pn	12 38 31.4	+0.5
	baz=237,SNR=14						
K05A	Summer Lake	6.64	102	Pn	Pn	12 38 35.6	+3.2
LTY	Liberty	6.94	63		Pn	12 38 36.5	+0.1
B06A	Marblemount	7.02	51		Pn	12 38 37.8	+0.4
C06D	Leavenworth	7.07	57	P	Pn	12 38 39.7	+1.5
	baz=244,SNR=14						
I07A	Izee	7.36	89		Pn	12 38 42.8	+0.6
HAWA	Hanford	7.45	71		Pn	12 38 44.0	+0.7
G08A	Pilot Rock	7.71	80		Pn	12 38 46.5	-0.5
E08A	Dider Farm, El	7.79	71	Pn	Pn	12 38 48.6	+0.6
ORV	Oroville	7.82	126		Pn	12 38 48.7	+0.2
BBB	Bella Bella	7.85	7	LR	LR	12 41 14.6	
	comp=Z,332nm,18.9s,baz=288,slow=33						
LLLB	Lillooet	8.16	38		Pn	12 38 52.4	-0.7
B08A	Colville Reser	8.20	58		Pn	12 38 53.1	-0.5
J08A	Circle Bar Ran	8.20	93		Pn	12 38 55.8	+2.0
C09A	Chrisman Ranch	8.65	63		Pn	12 38 59.6	-0.3
BMO	Blue Mountains	8.88	83	Pn	Pn	12 39 02.4	-0.7
F10A	Beach Ranch, E	8.97	76	Pn	Pn	12 39 04.1	-0.2
CMB	Columbia Colle	9.50	129		Pn	12 39 13.2	+1.7
NEW	Newport	9.53	62	Pn	Pn	12 39 10.9	-1.0
	0.1nm,0.3s,baz=249,slow=12,SNR=3.9						
NEW				LR	LR	12 42 43.5	
	comp=Z,320nm,20.8s,baz=278,slow=36						
NEW	Newport	9.53	62		Pn	12 39 10.7	-1.2
NEW	Newport	9.53	62	P	Pn	12 39 11.3	-0.6
	baz=251						
WAKR	Walker	9.72	124		Pn	12 39 17.8	+3.0
NVAR	Mina Array Bea	10.46	121	Pn	Pn	12 39 26.3	+1.4
	0.1nm,0.3s,baz=19,slow=38,SNR=2.8						
NVAR	Mina Array Bea	10.46	121		Pn	12 39 28.7	+3.8
JTMT	Jette	11.24	67		Pn	12 39 37.2	+1.9
ELK	Elko	11.30	104	Pn	Pn	12 39 38.8	+2.4
	0.1nm,0.3s,baz=284,slow=9.0,SNR=3.5						
MSO	Missoula	11.32	72		Pn	12 39 39.1	+2.6
MCMT	McKenzie Canyo	12.04	82		Pn	12 39 48.7	+4.2
TPNV	Topopah Spring	12.65	121		Pn	12 40 00.7	+5.8
QLMT	Earthquake Lak	13.05	82	Pn	Pn	12 40 03.9	+3.7
YHL	Hebgen Lake	13.22	82		Pn	12 40 05.1	+2.4
GSC	Goldstone, Bar	13.46	128		Pn	12 40 09.2	+3.5
IMW	Indian Meadow	13.51	86		Pn	12 40 09.7	+3.1
TPAW	Teton Pass	13.57	87		Pn	12 40 09.5	+2.1
CCUT	Cedar City	14.13	113		Pn	12 40 18.8	+3.8
TCRU	Three Creeks R	14.18	108	P	P	12 40 20.7	-2.6
GCMT	Greycliff	14.24	77	P	P	12 40 23.3	-0.5
SZCU	Shurtz Canyon	14.29	113	P	P	12 40 24.0	-0.5
EGMT	Eagleton	14.29	68	P	P	12 40 24.4	+0.1
MSU	Marysvale	14.42	108	P	P	12 40 26.1	+0.1
MTPU	Mount Pierson	14.65	110	P	P	12 40 30.9	+2.2
PDAR	Pinedale Array	14.71	89	Pn	P	12 40 28.4	-0.9
	baz=242,slow=13,SNR=2.3						
PDAR	Pinedale Array	14.71	89		P	12 40 27.0	-2.2
KNB	Kanab	14.79	114	P	Pn	12 40 26.9	+3.0
PKCU	Pink Cliffs	14.88	112	P	P	12 40 32.2	+1.0
SRU	San Rafael Swe	15.28	104	P	P	12 40 37.5	+2.1
W13A	Hualapai Mount	15.31	122	P	P	12 40 38.1	+2.2
W13A				IAmb	IAmb	12 40 40.8	
	comp=Z,8.4nm,1.1s						
U15A	North Rim	15.48	115	P	P	12 40 37.8	0.0
U15A				IAmb	IAmb	12 40 49.7	
	comp=Z,6.8nm,1.1s						
Y12C	Blythe	15.88	127	P	P	12 40 43.1	+1.2
Y12C				IAmb	IAmb	12 40 46.4	
	comp=Z,12nm,1.4s						
O20A	White River Ci	16.46	98	P	P	12 40 50.4	+1.8
Y14A	Wickenburg	16.64	123	P	P	12 40 52.3	+2.0
X16A	Lo Mia Camp, P	17.27	119	P	P	12 40 59.7	+2.1
TUC	Tucson	19.10	123	P	Pn	12 41 19.1	+0.7
YKA	Yellowknife Ar	20.13	21	P	P	12 41 29.2	+0.8
	comp=Z,0.9nm,0.8s,baz=211,slow=11,SNR=11						
ANMO	Albuquerque	20.20	110	P	Pn	12 41 32.2	+0.5
	comp=Z,0.5nm,0.4s,baz=326,slow=12,SNR=5.2						
ANMO	Albuquerque	20.20	110	P	Pn	12 41 31.8	+0.2
T25A	Trinidad	20.46	102	P	Pn	12 41 34.6	0.0
FFC	Flin Flon	20.61	50	P	P	12 41 34.5	+0.7
319A	Douglas	20.67	122	P	P	12 41 35.9	+1.2
319A				IAmb	IAmb	12 41 44.4	
	comp=Z,7.1nm,0.9s						
GHO	Glory Hole Cre	20.71	334	P	Pn	12 41 36.5	-0.7
GHO				IAmb	IAmb	12 41 39.9	
	comp=Z,14nm,1.4s						
121A	Cookes Peak, D	20.81	117	P	P	12 41 38.0	+1.7
121A				IAmb	IAmb	12 41 41.5	
	comp=Z,9.5nm,1.1s						
SUA	Susitna One	21.09	331	P	P	12 41 41.5	+2.5
SUA				IAmb	IAmb	12 41 51.8	
	comp=Z,7.5nm,1.3s						
EPYK	Eagle Plains	22.33	353	P	P	12 41 54.5	+2.2
EPYK				IAmb	IAmb	12 41 56.2	
	comp=Z,6.5nm,1.2s						
ILAR	Eielson Array	22.54	341	P	P	12 41 54.0	-0.4
	comp=Z,0.9nm,1.0s,baz=145,slow=7.8,SNR=6.8						
ILAR	Eielson Array	22.54	341	P	P	12 41 55.7	+1.3
WRH	Wood River Hil	22.58	339	P	P	12 41 56.8	+1.8
WRH				IAmb	IAmb	12 41 58.3	
	comp=Z,8.0nm,1.3s						
ULM	Lac du Bonnet	23.54	64	P	P	12 42 05.4	+0.6
	comp=Z,1.3nm,0.6s,baz=275,slow=11,SNR=5.1						
ULM				LR	LR	12 51 10.3	
	comp=Z,145nm,20.2s,baz=250,slow=36						
ULM	Lac du Bonnet	23.54	64	P	P	12 42 05.3	+0.4
ULM				IAmb	IAmb	12 42 10.7	
	comp=Z,4.3nm,1.1s						
INK	Inuvik	24.03	357	P	P	12 42 08.0	-1.4
	comp=Z,1.1nm,0.8s,baz=159,slow=11,SNR=6.5						
INK	Inuvik	24.03	357	P	P	12 42 10.2	+0.8
IMAR	Indian Mountai	25.27	337	P	P	12 42 21.6	+0.9
TX31	Lajitas Ar. Si	25.57	117	P	P	12 42 24.1	+0.2
TX31				IAmb	IAmb	12 42 31.0	
	comp=Z,3.4nm,1.4s						
TX32	Lajitas Array	25.57	117	P	P	12 42 24.2	+0.3
TX32				IAmb	IAmb	12 42 31.0	
	comp=Z,3.8nm,1.4s						
TXAR	Lajitas Array	25.57	117	P	P	12 42 22.9	-1.1
	comp=Z,1.6nm,0.9s,baz=285,slow=5.9,SNR=5.3						
TXAR	Lajitas Array	25.57	117	P	P	12 42 23.7	-0.3
TOLK	Toolik Lake Re	26.37	344	P	P	12 42 33.0	+2.2
TOLK				IAmb	IAmb	12 42 37.1	
	comp=Z,6.1nm,1.4s						
EYMN	Ely	26.53	69	P	P	12 42 33.4	+1.1
WLAR	White Oak Lake	30.16	98	P	P	12 43 04.6	-0.2
RES	Resolute Bay	34.03	16	P	P	12 43 37.8	-0.5
	comp=Z,1.8nm,0.8s,baz=227,slow=4.6,SNR=6.6						
RES	Resolute Bay	34.03	16	P	P	12 43 39.6	+1.3
CMIG	Matias Romero	39.99	122	P	P	12 44 28.8	-0.7
	comp=Z,4.6nm,0.9s,baz=336,slow=6.6,SNR=6.9						
Y60A	Bolivia	40.65	87	P	P	12 44 34.4	-0.5
SCHQ	Schefferville	40.73	52	LR	LR	13 00 50.1	
	comp=Z,204nm,19.2s,baz=358,slow=35						
SCHQ	Schefferville	40.73	52	P	P	12 44 36.4	+1.0
SCHQ				IAmb	IAmb	12 44 46.6	
	comp=Z,5.3nm,1.3s						
SEY	Seymchan	46.45	322	P	P	12 45 19.8	-1.4
	comp=Z,0.8nm,0.7s,baz=75,slow=12,SNR=4.0						
H11N3	WAKE ISLAND Hy	57.54	266	T	T	13 48 52.1	
	baz=49,slow=75,SNR=654						
H11N2	WAKE ISLAND Hy	57.54	266	T	T	13 48 52.3	
	baz=49,slow=75,SNR=358						
H11N1	WAKE ISLAND Hy	57.56	266	T	T	13 48 53.5	
	baz=49,slow=75,SNR=398						
H11S1	WAKE ISLAND Hy	58.48	265	T	T	13 50 05.9	
	baz=48,slow=75,SNR=92						
H11S2	WAKE ISLAND Hy	58.49	265	T	T	13 50 09.7	
	baz=48,slow=75,SNR=53						
H11S3	WAKE ISLAND Hy	58.50	265	T	T	13 50 01.4	
	baz=48,slow=75,SNR=46						
FINES	FINESS Array B	72.69	12	P	P	12 48 21.9	-0.3
	comp=Z,4.6nm,0.9s,baz=263,slow=9.0,SNR=4.2						
ZALV	Zalesovo Beam	77.66	340	P	P	12 48 49.9	-1.0
	comp=Z,0.4nm,0.4s,baz=43,slow=6.7,SNR=3.6						
ZALV	Zalesovo Beam	77.66	340	P	P	12 48 50.1	-0.9
HHC	Hu-ho-hao-te	78.85	317	*e*P	P	12 48 58.1	+0.1
ARU	Arti	79.28	355	P	P	12 48 59.1	-0.8
	comp=Z,0.4nm,0.3s,baz=23,slow=6.5,SNR=4.8						
ARU	Arti	79.28	355	P	P	12 48 58.8	-1.1
GERES	GERESS Array B	81.75	23	P	P	12 49 12.7	-0.8
	comp=Z,0.8nm,0.8s,baz=7.4,slow=3.1,SNR=4.8						
GERES	GERESS Array B	81.75	23	P	P	12 49 13.4	-0.1
LPAZ	La Paz	82.36	122	P	P	12 49 16.1	-1.4
	comp=Z,2.6nm,0.8s,baz=303,slow=6.3,SNR=4.6						
LPAZ	La Paz	82.36	122	P	P	12 49 16.2	-1.4
AKASG	Malin Array Be	83.51	13	P	P	12 49 20.9	-1.5
	comp=Z,0.5nm,0.5s,baz=342,slow=4.9,SNR=4.5						
AKASG	Malin Array Be	83.51	13	P	P	12 49 19.8	-2.6
WMQ	Urumqi	86.02	334	*e*P	P	12 49 38.9	+3.6

IDC 02 12:39:29.7±6.6, 52.00N×168.77W, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.2/69, mbtmp3.5/4, ML2.3/1, Error ellipse: s-maj=176.5km s-min=29.8km az=167.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	Eielson Array	17.05	33	P	P	12 43 30.2	-0.9
	0.0nm,0.3s,baz=226,slow=9.9,SNR=6.0						
PETK	Petropavlovsk-	20.32	286	P	P	12 44 06.0	-1.0
	5.9nm,1.1s,baz=69,slow=17,SNR=4.1						
YKA	Yellowknife Ar	30.21	48	P	P	12 45 40.8	-0.6
	0.2nm,0.9s,baz=295,slow=12,SNR=3.9						
H11N2	WAKE ISLAND Hy	37.40	220	T	T	13 26 24.1	
	baz=22						
H11N3	WAKE ISLAND Hy	37.41	220	T	T	13 26 26.1	
	baz=22						
H11N1	WAKE ISLAND Hy	37.42	220	T	T	13 26 19.5	
	baz=22						
SONM	Songino Array	51.80	301	P	P	12 48 39.6	+0.5
	1.0nm,0.8s,baz=36,slow=4.3,SNR=8.8						

NEIC 02 12:45:27.6±2.3, 6.54N±0.04×144.8E±0.1, h10km±1km, mb4.6/14, Error ellipse: s-maj=22.5km s-min=6.9km az=90.0

IDC 02 12:45:28.2±1.0, 7.04N×144.88E, h0km, mb3.7/9, mb1 4.0/10, mb1mx3.8/33, mbtmp3.8/10, ML4.6/1, Error ellipse: s-maj=32.5km s-min=19.7km az=101.0

ISC 02 12:45:31.2±0.6, 6.65N±0.07×144.8E±0.1, h35km, n38, σ2.01/34, mb3.9/15, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	6.89	1	Pn	Pn	12 47 07.4	-2.5
	13nm,0.3s,baz=161,slow=22,SNR=6.5						
GUMO				Sn	Sn	12 48 20.9	-6.2
	12nm,0.3s,baz=64,slow=21,SNR=1.4						
GUMO	Guam	6.89	1		Pn	12 47 07.8	-2.1
MANU	Manus Island	9.02	163		Pn	12 47 36.3	-2.8
ANA2	Anatahan	9.67	5	Pn	Pn	12 47 51.3	+3.2
FAKI	Fak Fak	15.70	233	Pn	Pn	12 49 08.2	-1.6
H11S3	WAKE ISLAND Hy	24.39	59	T	T	13 14 50.7	
	baz=246,slow=74,SNR=4.5						
H11S2	WAKE ISLAND Hy	24.40	59	T	T	13 14 52.7	
	baz=246,slow=74,SNR=4.2						
H11S1	WAKE ISLAND Hy	24.41	59	T	T	13 14 51.9	
	baz=246,slow=74,SNR=2.9						
YULB	Yu-li	28.03	309	P	P	12 51 17.2	-2.2
YULB				IAmb	IAmb	12 51 28.0	
	comp=Z,14nm,1.3s						
WB0	Warramunga Arr	28.17	201	P	P	12 51 21.6	+1.0
WRAB	Tennant Creek	28.34	201	P	P	12 51 21.4	-0.6
WRAB				IAmb	IAmb	12 51 33.2	
	comp=Z,19nm,1.4s						
WB2	Warramunga Arr	28.34	201	P	P	12 51 21.8	-0.3
WB2				IAmb	IAmb	12 51 36.6	
	comp=Z,22nm,1.5s						
WRA	Warramunga Arr	28.35	201	P	P	12 51 26.8	+4.7
	comp=Z,1.3nm,0.8s,baz=22,slow=10.0,SNR=4.9						
WRA	Warramunga Arr	28.35	201	P	P	12 51 21.8	-0.4
AS31	Alice Springs	31.94	199	P	P	12 51 51.0	-3.0
ASAR	Alice Springs	31.95	199	P	P	12 52 00.5	+6.5
	comp=Z,0.2nm,0.6s,baz=31,slow=7.8,SNR=5.1						
JAGI	Jajag, Banyuwa	34.01	244	P	P	12 52 13.3	+1.2
RPSI	Rantau Prapat	45.83	267	P	P	12 53 50.5	+0.1
RPSI				IAmb	IAmb	12 53 59.5	
	comp=Z,7.9nm,1.0s						
CMAR	Chiang Mai Arr	46.10	289	P	P	12 53 54.7	+2.3
	comp=Z,0.9nm,0.7s,baz=95,slow=6.4,SNR=11						
SONM	Songino Array	52.42	328	P	P	12 54 41.2	+0.8
	comp=Z,0.5nm,0.7s,baz=141,slow=8.0,SNR=4.6						
SONM	Songino Array	52.42	328	P	P	12 54 42.1	+1.7
MK31	Makanchi Array	66.48	318	P	P	12 56 17.9	+0.6
MKAR	Makanchi Array	66.48	318	P	P	12 56 17.9	+0.6
	comp=Z,0.7nm,0.7s,baz=95,slow=7.2,SNR=8.6						
MKAR	Makanchi Array	66.48	318	P	P	12 56 18.7	+1.4
ZALV	Zalesovo Beam	67.23	326	P	P	12 56 22.4	+0.4
	comp=Z,0.8nm,0.6s,baz=90,slow=5.6,SNR=4.9						
ZALV	Zalesovo Beam	67.23	326	P	P	12 56 22.2	+0.2
IMAR	Indian Mountai	72.60	22	P	P	12 56 57.9	+3.1
WRH	Wood River Hil	74.28	25	P	P	12 57 06.1	+1.4
WRH				IAmb	IAmb	12 57 24.9	
	comp=Z,4.5nm,1.2s						
HDA	Harding Lake	74.74	25	P	P	12 57 07.1	-0.2
ILAR	Eielson Array	74.87	24	P	P	12 57 07.5	-0.6
	comp=Z,0.9nm,0.7s,baz=252,slow=4.7,SNR=15						
ILAR	Eielson Array	74.87	24	P	P	12 57 08.2	+0.1
CTGM	Chitina Glacie	76.42	29	P	P	12 57 19.0	+1.8
CTGM				IAmb	IAmb	12 57 23.6	
	comp=Z,5.9nm,1.2s						
BMAR	Burnt Mountain	76.52	22	P	P	12 57 19.6	+2.0
ABKAR	Akbulak array	81.62	319	P	P	12 57 46.0	+0.3
YKA	Yellowknife Ar	89.04	27	P	P	12 58 22.9	+0.5
	comp=Z,0.2nm,0.7s,baz=283,slow=5.2,SNR=3.2						
NVAR	Mina Array Bea	91.32	51	P	P	12 58 36.4	+2.4
	comp=Z,0.2nm,0.5s,baz=300,slow=3.6,SNR=2.1						
PB11	IPOC Station P	144.15	115	PKPdf	PKPdf	13 05 03.6	-0.9
MNMC	Minye Minye	144.38	114	PKPdf	PKPdf	13 05 04.6	-0.5

IDC 02 13:06:06.9±2.0, 10.86S×161.37E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.9/28, mbtmp3.9/6, Error ellipse: s-maj=49.3km s-min=26.7km az=112.0

NEIC 02 13:06:12.4±1.4, 10.8S±0.1×161.2E±0.1, h34km±4km, mb4.6/11, Error ellipse: s-maj=23.4km s-min=8.9km az=220.0

ISC 02 13:06:12.9±0.8, 10.8S±0.1×161.2E±0.1, h35km, n22, σ1.34/21, mb3.9/11, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.79	317	Pn	Pn	13 06 42.8	+1.5
	20nm,0.3s,baz=280,slow=1.1,SNR=3.1						
HNR				Sn	Sn	13 07 02.4	-0.4
	87nm,0.3s,baz=175,slow=22,SNR=8.3						
HNR	Honiara	1.79	317		Pn	13 06 40.5	-0.8
SANVU	Saraoutou	7.49	129	Pn	Pn	13 07 59.5	-0.3
WR0	Warramunga Arr	27.24	247	P	P	13 11 53.3	-0.7
WB0	Warramunga Arr	27.33	248	P	P	13 11 53.7	-1.1
WB0				IAmb	IAmb	13 12 01.3	
	comp=Z,14nm,1.2s						
WRAB	Tennant Creek	27.41	247	P	P	13 11 54.9	-0.6
WRAB				IAmb	IAmb	13 12 49.9	
	comp=Z,60nm,2.0s						
WB2	Warramunga Arr	27.41	247	P	P	13 11 52.2	-3.3
WB2				IAmb	IAmb	13 12 32.7	
	comp=Z,46nm,1.8s						
WRA	Warramunga Arr	27.42	247	P	P	13 11 55.4	-0.2
	comp=Z,1.8nm,0.6s,baz=74,slow=10,SNR=9.2						
WRA	Warramunga Arr	27.42	247	IAmb	IAmb	13 12 04.0	
	comp=Z,1.4nm,2.0s						
STKA	Stephens Creek	27.75	218	P	P	13 11 59.2	+0.8
	comp=Z,1.0nm,0.7s,baz=38,slow=13,SNR=3.5						
STKA	Stephens Creek	27.75	218	P	P	13 11 59.0	+0.6
AS31	Alice Springs	28.99	240	P	P	13 12 09.2	-0.4
AS31				IAmb	IAmb	13 12 53.3	
	comp=Z,2.4nm,1.2s						
ASAR	Alice Springs	28.99	240	P	P	13 12 08.2	-1.4
	comp=Z,1.1nm,0.8s,baz=62,slow=10,SNR=7.4						
TOO	Toolangi	30.21	205	P	P	13 12 21.8	+1.6
TOO				IAmb	IAmb	13 12 29.1	
	comp=Z,21nm,1.5s						
KNRA	Kununurra	31.92	258	P	P	13 12 32.7	-2.8
NNZ	Nelson	32.19	163	P	P	13 12 37.1	-0.5
CMWZ	Cape Campbell	32.93	162	P	P	13 12 43.3	-0.7
PLWZ	Palliser	33.10	160	P	P	13 12 46.0	+0.5
CMAR	Chiang Mai Arr	67.91	295	P	P	13 17 09.4	+0.8
	comp=Z,0.4nm,0.3s,baz=132,slow=4.7,SNR=4.2						
SONM	Songino Array	75.83	325	P	P	13 17 56.2	+0.5
	comp=Z,0.7nm,0.6s,baz=149,slow=5.6,SNR=6.3						
SONM	Songino Array	75.83	325	IAmb	IAmb	13 17 57.1	
	comp=Z,0.8nm,0.7s						
ILAR	Eielson Array	84.70	20	P	P	13 18 42.4	-0.5
	comp=Z,0.8nm,1.1s,baz=234,slow=4.1,SNR=2.9						

OSPL 02 13:06:34.4±0.8, 19.28N×66.90W, h20km±5km, ML2.9

NEIC 02 13:06:36.1±1.6, 19.21N±0.07×67.08W±0.04, h35km±41km, Error ellipse: s-maj=10.0km s-min=5.4km az=172.0

RSPR 02 13:06:36.1, 19.29N×67.17W, h26km±9km, MD2.9/9

ISC 02 13:06:36.2±1.6, 19.15N±0.08×67.08W±0.04, h29km, n39, σ0.58/48, 6C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.68	183	*i* P	Pb	13 06 49.2	-0.4
AGPR				*e*S	Sn	13 07 00.1	+0.5
AGPR				IAML		13 07 00.5	
	comp=Z,464nm,0.2s						
AGPR	Aguadilla, PR	0.68	183	⇓*e*P	Pb	13 06 49.2	-0.4
AGPR	Aguadilla, PR	0.68	183		Pb	13 06 49.2	-0.4
AGPR					Sn	13 07 00.0	+0.5
IDE	Isla Desecheo	0.85	206	⇑*e*P	Pn	13 06 51.4	-0.9
IDE	Isla Desecheo	0.85	206	*e*S	Sb	13 07 03.5	0.0
IDE	Isla Desecheo	0.85	206		Pn	13 06 51.4	-0.9
IDE					Sb	13 07 03.5	0.0
EMPR	Esperanza - Ma	0.85	142	⇑*e*P	Pb	13 06 52.1	-0.3
EMPR	Esperanza - Ma	0.85	142	*e*S	Sn	13 07 04.8	+1.1
EMPR	Esperanza - Ma	0.85	142		Pb	13 06 52.1	-0.3
EMPR					Pn	13 07 04.8	+13
AOPR	Arecibo Observ	0.86	159	⇓*e*P	Pb	13 06 52.5	-0.1
AOPR	Arecibo Observ	0.86	159	*e*S	Sn	13 07 05.1	+1.1
AOPR	Arecibo Observ	0.86	159		Pb	13 06 52.5	-0.1
AOPR					Sn	13 07 05.1	+1.1
MPR	Mayaguez	0.94	184	*i* P	Pn	13 06 52.8	-0.6
MPR				*e*S	Sb	13 07 06.7	+0.8
MPR				IAML		13 07 09.4	
	comp=Z,118nm,0.6s						
MPR	Mayaguez	0.94	184		Pn	13 06 53.0	-0.4
LSP	Las Mesas	0.97	180	⇓*e*P	Pn	13 06 53.9	-0.1
LSP	Las Mesas	0.97	180		Pn	13 06 53.9	-0.1
CRPR	Cabo Rojo, PR	1.14	181	⇓*e*P	Pn	13 06 56.1	-0.1
CRPR	Cabo Rojo, PR	1.14	181	*e*S	Sb	13 07 11.9	+0.2
CRPR	Cabo Rojo, PR	1.14	181		Pn	13 06 56.1	-0.1
CRPR					Sb	13 07 11.9	+0.2
CELP	Cerrillos	1.17	156	⇑*e*P	Pn	13 06 56.8	+0.1
CELP	Cerrillos	1.17	156		Pn	13 06 56.8	+0.1
MLPR	Magueyes Islan	1.18	178	⇑*e*P	Pn	13 06 55.9	-0.8
MLPR	Magueyes Islan	1.18	178	*e*S	Sb	13 07 12.7	-0.1
MLPR	Magueyes Islan	1.18	178		Pn	13 06 55.9	-0.8
MLPR					Sb	13 07 12.7	-0.1
OBIP	Obispado Ponce	1.19	158		Pn	13 06 57.1	+0.2
GCPR	Guaynabo City	1.26	131	⇓*e*P	Pb	13 06 58.2	-1.2
GCPR	Guaynabo City	1.26	131	*e*S	Sb	13 07 15.3	+0.1
GCPR	Guaynabo City	1.26	131		Pb	13 06 58.2	-1.2
GCPR					Sb	13 07 15.3	+0.1
SJG	San Juan	1.36	139	Pn	Pb	13 06 59.9	-1.1
PCDR	Punta Cana, DR	1.39	243	*i* P	Pn	13 06 59.4	-0.2
PCDR				*e*S	Sb	13 07 19.0	+0.2
PCDR				IAML		13 07 24.9	
	comp=Z,184nm,0.8s						
PCDR	Punta Cana, DR	1.39	243	Pn	Pn	13 06 59.2	-0.4
IGPR	InterUniversit	1.50	142	⇑*e*P	Pn	13 07 01.3	+0.2
IGPR	InterUniversit	1.50	142	*e*S	Sb	13 07 21.2	-0.8
IGPR	InterUniversit	1.50	142		Sb	13 07 21.2	-0.8
HUMP	Col San Antoni	1.54	130	⇑*e*P	Pn	13 07 02.0	+0.2
HUMP	Col San Antoni	1.54	130		Pn	13 07 02.0	+0.2
MTP	Monte Pirata	1.79	126	⇓*e*P	Pn	13 07 05.5	+0.3
MTP	Monte Pirata	1.79	126		Pn	13 07 05.5	+0.3
SDDR	Presa de Saban	3.98	268	*i* P	Pn	13 07 35.9	+0.4
SDDR				IAML		13 08 45.2	
	comp=Z,16nm,0.6s						

IDC 02 13:27:12.1±2.7, 4.85S×153.81E, h94km±21km, mb3.8/12, mb1 4.0/13, mb1mx3.8/31, mbtmp4.2/13, MS3.5/4, Ms1 3.5/4, ms1mx3.1/39, Error ellipse: s-maj=26.1km s-min=13.1km az=91.0

NEIC 02 13:27:12.3±1.5, 4.92S±0.09×153.88E±0.09, h97km±7km, mb4.7/30, Error ellipse: s-maj=13.8km s-min=12.3km az=195.0

ISC 02 13:27:12.9±0.5, 4.88S±0.06×153.86E±0.08, h105km, n67, σ0.93/61, mb4.3/21, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.82	292	Pn	Pn	13 27 42.3	-1.2
RABL				Sn	Sn	13 28 08.5	+1.8
KRVT	Keravat (AS076	1.91	287	P	Pn	13 27 43.4	-1.1
	42nm,0.3s,baz=274,slow=0.4,SNR=40						
KRVT				S	Sn	13 28 05.8	-3.0
	61nm,0.3s,baz=198,slow=24,SNR=12						
KRVT				LR	LR	13 28 38.9	
	comp=Z,317nm,19.3s,baz=77,slow=47						
PMG	Port Moresby	8.02	236	P	Pn	13 29 07.0	+0.3
	13nm,0.3s,baz=47,slow=12,SNR=52						
PMG				S	Sn	13 30 36.7	+0.9
	4.6nm,0.3s,baz=21,slow=21,SNR=6.9						
PMG				LR	LR	13 32 22.9	
	comp=Z,94nm,20.6s,baz=50,slow=39						
PMG	Port Moresby	8.02	236		Pn	13 29 06.7	0.0
PATS	Pohnpei	12.46	21	Pn	Pn	13 30 05.8	-0.8
COEN	Coen	13.86	229	P	P	13 30 29.6	-0.1
EIDS	Eidsvold	20.54	187	P	P	13 31 42.4	-0.7
EIDS				IAmb	IAmb	13 31 47.9	
	comp=Z,57nm,1.8s						
MTN	Manton Dam	23.79	249	P	P	13 32 16.5	+0.4
WR0	Warramunga Arr	24.05	230	P	P	13 32 19.8	+1.4
WR0				IAmb	IAmb	13 32 59.8	
	comp=Z,36nm,1.5s						
WB0	Warramunga Arr	24.05	230	P	P	13 32 19.1	+0.6
WB0				IAmb	IAmb	13 32 36.3	
	comp=Z,24nm,1.4s						
WRAB	Tennant Creek	24.18	230	P	P	13 32 19.6	0.0

WB2 Warramunga Arr 24.18 230 P P 13 32 20.3 +0.6
WB2 IAmb IAmb 13 32 21.4
comp=Z,10nm,0.8s
WRA Warramunga Arr 24.19 230 P P 13 32 20.1 +0.4
comp=Z,5.8nm,0.7s,baz=54,slow=9.8,SNR=29
WRA Warramunga Arr 24.19 230 P P 13 32 19.9 +0.1
FUNA Funafuti 25.42 100 P P 13 32 30.2 -0.6
ARMA Armidale 25.49 184 P P 13 32 29.5 -2.1
ARMA IAmb IAmb 13 33 25.1
comp=Z,38nm,1.6s
H11S3 WAKE ISLAND Hy 26.45 28 T T 14 01 21.2
H11S2 WAKE ISLAND Hy 26.45 28 T T 14 01 29.5
baz=123,slow=74,SNR=3.5
H11S1 WAKE ISLAND Hy 26.47 28 T T 14 01 26.8
baz=206,slow=74,SNR=4.3
AS31 Alice Springs 26.81 224 P P 13 32 42.7 -0.8
ASAR Alice Springs 26.81 224 P P 13 32 43.5 +0.1
comp=Z,1.2nm,0.7s,baz=54,slow=8.9,SNR=31
ASAR Alice Springs 26.81 224 P P 13 32 43.2 -0.2
KNRA Kununurra 26.88 245 P P 13 32 44.0 -0.1
STKA Stephens Creek 29.21 202 P P 13 33 04.8 +0.1
comp=Z,4.1nm,0.6s,baz=42,slow=14,SNR=11
STKA Stephens Creek 29.21 202 IAmb IAmb 13 33 07.4
comp=Z,2.4nm,1.4s
FITZ Fitzroy Crossi 30.55 242 P P 13 33 16.0 -0.7
BBOO Buckleboo 32.38 209 P P 13 33 32.2 -0.3
BBOO IAmb IAmb 13 34 12.0
comp=Z,39nm,1.4s
FORT Forrest 35.40 220 P P 13 33 58.9 +0.1
PSA00 Pilbara Seismi 36.90 240 P P 13 34 11.1 -0.6
CMWZ Cape Campbell 40.96 157 P P 13 34 46.6 -0.7
LTZ Lake Taylor 41.13 159 P P 13 34 47.0 +0.4
RPZ Rata Peaks 41.54 161 P P 13 34 50.8 +0.8
comp=Z,3.5nm,0.6s,baz=205,slow=0.2,SNR=5.4
RPZ Rata Peaks 41.54 161 IAmb IAmb 13 35 54.6
comp=Z,44nm,1.8s
WKZ Wanaka 41.95 164 P P 13 34 53.5 +0.2
MLZ Mavora Lakes 42.20 165 P P 13 34 55.3 -0.1
MORW Morawa 43.12 232 P P 13 35 02.2 -0.8
CISI Cisompet, Garu 45.83 264 P P 13 35 23.9 -1.0
USRK Ussuriysk Ar. 52.67 340 LR LR 13 55 37.7
comp=Z,126nm,21.9s,baz=347,slow=32
KULM Kulim 54.09 280 P P 13 36 28.6 +1.3
ENH Enshi 54.99 312 P P 13 36 34.3 +0.7
ENH IAmb IAmb 13 36 35.2
comp=Z,8.0nm,1.0s
KLR Kul'dur 57.23 343 LR LR 14 00 48.0
comp=Z,96nm,20.1s,baz=300,slow=35
XAN Xi'an 57.41 316 P P 13 36 51.3 +0.6
XAN IAmb IAmb 13 36 53.5
comp=Z,18nm,1.9s
PETK Petropavlovsk- 57.87 3 P P 13 36 54.8 +1.3
comp=Z,0.7nm,0.5s,baz=160,slow=8.2,SNR=5.3
CMAR Chiang Mai Arr 58.87 295 P P 13 37 02.0 +0.8
comp=Z,1.0nm,0.4s,baz=113,slow=5.8,SNR=5.0
SONM Songino Array 66.96 327 P P 13 37 55.0 +0.6
comp=Z,0.6nm,0.5s,baz=138,slow=6.0,SNR=9.5
SONM Songino Array 66.96 327 IAmb IAmb 13 37 57.3
comp=Z,0.7nm,0.6s
TLY Talaya 70.68 330 LR LR 14 09 33.4
comp=Z,28nm,18.8s,baz=346,slow=36
ODAN Odare 71.49 300 eP P 13 38 25.0 +2.0
comp=Z,16nm,0.7s
JIRN Jiri 72.74 301 eP P 13 38 31.5 +1.0
GUN Gumba 73.07 301 eP P 13 38 33.5 +1.1
comp=Z,14nm,0.8s
DMN Daman 73.65 300 eP P 13 38 36.8 +1.0
KOLN Koldanda 74.99 300 eP P 13 38 44.1 +0.6
comp=Z,10nm,0.9s
DANN Dangsing 74.99 301 eP P 13 38 43.8 +0.2
comp=Z,8.2nm,0.8s
PPLA Purkeypile 78.85 22 P P 13 39 05.5 +1.2
PPLA IAmb IAmb 13 40 13.7
comp=Z,29nm,1.8s
MK31 Makanchi Array 81.08 319 P P 13 39 17.0 +0.5
MKAR Makanchi Array 81.08 319 P P 13 39 17.1 +0.6
comp=Z,0.5nm,0.5s,baz=97,slow=7.8,SNR=13
MKAR Makanchi Array 81.08 319 P P 13 39 16.8 +0.3
ZALV Zalesovo Beam 81.81 326 P P 13 39 19.7 -0.4
comp=Z,0.7nm,0.5s,baz=124,slow=5.6,SNR=3.7
ZALV Zalesovo Beam 81.81 326 P P 13 39 18.1 -2.0
ILAR Eielson Array 81.84 22 P P 13 39 19.9 -0.3
comp=Z,0.3nm,0.6s,baz=229,slow=4.6,SNR=5.9
ILAR Eielson Array 81.84 22 P P 13 39 20.7 +0.6
NIL Nilore 84.89 304 P P 13 39 35.6 -0.8
NIL IAmb IAmb 13 39 37.8
comp=Z,6.7nm,0.7s
MAW Mawson 85.90 203 P P 13 39 40.2 -0.5
comp=Z,3.2nm,0.6s,baz=94,slow=6.3,SNR=7.7
MAW Mawson 85.90 203 P P 13 39 40.5 -0.2
YKA Yellowknife Ar 95.01 28 P P 13 40 23.5 +0.1
comp=Z,0.2nm,0.8s,baz=264,slow=5.1,SNR=4.0
TORD Torodi Ar. Bea 151.33 289 PKPbc PKPbc 13 46 54.9 -0.5
comp=Z,0.9nm,0.4s,baz=67,slow=2.2,SNR=12
TORD Torodi Ar. Bea 151.33 289 PKPbc 13 46 54.6 -0.7

IDC 02 13:28:58.0±3.0, 19°.35N×38°.96E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.2/27, mbtmp3.6/3, Error ellipse: s-maj=76.7km s-min=33.5km az=149.0, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MABD	Mabed	7.17	301	AMP		13 31 00.5	
	baz=213						
NGWR	NGWR	7.17	308	AMP		13 31 00.5	
	baz=29						
HMSM	Jabal Masmas	7.48	299	AMP		13 31 00.5	
	baz=233						
BRTR	Keskin Array B	20.82	348	P	P	13 33 41.2	0.0
	1.0nm,0.8s,baz=172,slow=9.6,SNR=4.5						
TORD	Torodi Ar. Bea	36.25	266	P	P	13 36 03.2	-0.1
	1.6nm,0.9s,baz=80,slow=7.9,SNR=5.2						
MKAR	Makanchi Array	44.67	42	P	P	13 37 12.4	-0.1
	0.5nm,0.9s,baz=255,slow=8.8,SNR=4.0						

NIED 02 13:48:00, 30°.00N×139°.10E, h440km, Mw5.0 Best double couple: M0 3.58000×10^16 NP1:φs10.00000°, δ67.00000°, λ-153.00000°. NP2:φs268.00000°, δ65.00000°, λ-26.00000°.
JMA 02 13:48:47.6±0.2, 29°.99N×139°.10E, h491km±3km, M5.1
MOS 02 13:48:48.9±0.8, 29°.92N×138°.55E, h460km, mb4.5/41, Error ellipse: s-maj=7.1km s-min=4.4km az=104.3
BJI 02 13:48:48.5±0.0, 29°.90N×138°.65E, h466km, mB4.8/44, mb4.8/66
IDC 02 13:48:49.4±0.4, 29°.94N×138°.61E, h451km±4km, mb3.9/37, mb1 4.1/45, mb1mx4.0/62, mbtmp4.8/45, Error ellipse: s-maj=7.6km s-min=5.5km az=86.0
KLM 02 13:48:50.0, 29°.88N×138°.92E, h463km, mb5.0
NEIC 02 13:48:50.2±1.2, 29°.93N±0°.06×138°.57E±0°.10, h461km±4km, mb4.5/164, Error ellipse: s-maj=12.3km s-min=7.9km az=104.0

ISC 02 13:48:49.9±0.4, 29°.93N±0°.04×138°.69E±0°.04, h461km±3km, h461km:pP-P, n489, σ1$35/564, mb4.5/144, 57C-13D, Southeast of Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JHCJ Hachijojimakas 3.28 17 P P 13 49 59.5 -0.2
JHCJ eS S 13 50 55.8 -0.8
JHJ Hachijo jima 2 3.32 16 P P 13 49 59.7 -0.4
678nm,0.3s,baz=58,slow=3.2,SNR=239
JHJ S S 13 50 53.8 -3.4
211nm,0.3s,baz=43,slow=17,SNR=11
JHJ2 Mitsune 3.32 17 P P 13 49 59.7 -0.3
JHJ2 eS S 13 50 56.1 -1.1
JHJ2 Mitsune 3.32 17 P P 13 49 59.4 -0.6
TTO1 TONANKAI O.B.S 4.02 337 ⇑P P 13 50 07.3 +1.8
CBIJ Chichi jima 4.18 132 P P 13 50 05.3 -2.1
CBIJ eS S 13 51 06.3 -4.0
JCJ Chichijima 4.18 132 P P 13 50 05.3 -2.0
259nm,0.3s,baz=2.3,slow=16,SNR=78
JCJ S S 13 51 05.0 -5.3
360nm,0.3s,baz=107,slow=23,SNR=15
JMMH Miemihama 4.49 330 ⇑P P 13 50 11.2 +1.2
JTNC Tanabenakahech 4.68 327 ⇑P P 13 50 13.1 +1.4
JTNC eS S 13 51 20.2 +1.7
JIE Ise 4.76 340 ⇑P P 13 50 13.9 +1.5
JIE eS S 13 51 21.8 +2.1
JKN2 Miekihoku 4.76 335 ⇑P P 13 50 13.7 +1.3
JKN2 eS S 13 51 21.7 +1.9
JWM Minabe 4.83 325 ⇑P P 13 50 14.5 +1.4
JAA Atsumi 4.87 345 ⇑P P 13 50 14.9 +1.5
JHMK Hamakita 4.94 351 P P 13 50 14.7 +0.7
HMMJ Hamamatsu 2 4.98 351 P P 13 50 14.7 +0.2
HMMJ eS S 13 51 22.8 -0.8
JWY Kouya 5.02 329 ⇑P P 13 50 16.6 +1.6
JHTM Izuhatsuma 5.02 3 P P 13 50 14.6 -0.3
BSO1 Boso 1 5.10 22 P P 13 50 14.6 -0.4
BSO1 eS S 13 51 23.0 -1.6
BSO3 Boso 3 5.10 17 P P 13 50 14.4 -0.9
BSO4 Boso 4 5.24 15 P P 13 50 16.1 -0.8
JOD2 Odawara 2 5.33 4 P P 13 50 16.8 -0.2
JAO Obara 5.46 348 ⇑P P 13 50 20.0 +0.8
JAO eS S 13 51 32.1 0.0
JNY Yasuok 5.46 353 ⇑P P 13 50 19.7 +0.5
JEG Eigenji 5.54 340 ⇑P P 13 50 21.6 +1.6
JEG eS S 13 51 35.0 +1.4
JYN Shimob 5.55 359 ⇑P P 13 50 19.9 -0.3
INU Inuyama 5.58 346 P P 13 50 20.8 +0.4
JSGW Sagamiharawaka 5.67 4 ⇑P P 13 50 19.8 -1.5
JTO Tosashimizu 5.82 302 ⇑P P 13 50 24.4 +1.7
JTO eS S 13 51 40.2 +1.6
JHU Hanno 5.93 5 ⇑P P 13 50 22.3 -1.5
JHU eS S 13 51 33.9 -6.7
JJS Sakaide 5.99 319 ⇑P P 13 50 25.9 +1.4
JKS Kasai 5.99 328 ⇑P P 13 50 25.2 +0.7
JRY Ryogami san 6.08 2 ⇑P P 13 50 24.8 -0.5
JRY eS S 13 51 40.6 -2.7
JAD Aida 6.29 324 ⇑P P 13 50 28.7 +1.2
JGN Niukaw 6.38 350 ⇑P P 13 50 28.3 -0.2
JNA Nagahama 6.41 306 P P 13 50 30.5 +1.8
JYT Yasato 6.41 11 P P 13 50 26.3 -2.3
JYT eS S 13 51 43.9 -5.6
JSKE Saikikamae 6.47 298 ⇑P P 13 50 31.4 +2.1
JNG Nsakai 6.48 356 ⇑P P 13 50 28.8 -0.7
JAG Ashikaga 6.51 5 ⇑P P 13 50 27.8 -1.9
JAG eS S 13 51 44.2 -7.2
MJAR Matsushiro Arr 6.61 357 P P 13 50 29.5 -1.2
8.9nm,0.3s,baz=169,slow=11,SNR=637
MJAR S S 13 51 47.5 -5.8
0.4nm,0.3s,baz=150,slow=12,SNR=3.1
MJAR ScP ScP 13 59 15.8 +0.2
0.0nm,0.3s,baz=208,slow=2.4,SNR=4.1
MJAR Matsushiro Arr 6.61 357 P P 13 50 32.1 +1.4
MAJO Matsushiro 6.61 357 P P 13 50 29.6 -1.0
MAJO Matsushiro 6.61 357c iP P 13 50 29.7 -1.0
MAT Matsushiro 6.61 357 P P 13 50 29.7 -1.0
MAT Matsushiro 6.61 357 P P 13 50 29.7 -1.0
MAT S S 13 51 49.7 -3.6
MJB9 Matsu-Tunnel 6.61 357 P P 13 50 29.6 -1.1
JHO Hitachi 6.85 13 P P 13 50 31.6 -1.6
JHO eS S 13 51 53.0 -4.8
JHS Saijyo 6.91 319 ⇑P P 13 50 35.3 +1.5
JHS eS S 13 52 01.5 +2.5
JHT Toyohira 7.10 313 ⇑P P 13 50 36.8 +0.9
JKD Kudamatsu 7.10 307 ⇑P P 13 50 37.6 +1.8
JZO Okuchi 7.28 290 ⇑P P 13 50 39.5 +1.7
JHK Hiroka 7.31 2 P P 13 50 36.3 -1.7
JGT2 ShimaneMisato 7.31 316 ⇑P P 13 50 39.1 +1.1
JFFD Fukushimafurud 7.31 12 P P 13 50 36.7 -1.4
JHIK Hikimi 7.33 310 ⇑P P 13 50 39.5 +1.2
JNU Nakatsue 7.38 298 ⇑P P 13 50 40.6 +1.7
JNU Nakatsue 7.38 298 P P 13 50 39.8 +0.9
9.9nm,0.3s,baz=108,slow=4.1,SNR=76
JNU Nakatsue 7.38 298 P P 13 50 40.4 +1.5
JFK Kawauchi 7.64 13 P P 13 50 40.9 -0.6
JNN Nakanoshima 7.65 272 P P 13 50 43.2 +1.4
JFA Akaike 7.70 301 P P 13 50 43.6 +1.4
JHD Hondo 7.75 291 P P 13 50 44.4 +1.7
JSD Sado 8.10 358 P P 13 50 45.0 -1.3
JIO Ouri 8.79 14 P P 13 50 54.1 +0.4
JOW Kunigami 9.67 254 P P 13 51 05.2 +1.6
JOW Kunigami 9.67 254 P P 13 51 04.8 +1.2
2.7nm,0.3s,baz=119,slow=15,SNR=51
JOM Ohasama 9.76 12 P P 13 51 04.8 +0.5
JIH Iheya 9.86 256 P P 13 51 07.0 +1.4
JOG3 Oga3 9.97 2 P P 13 51 08.0 +1.4
JAH Hinai 10.36 8 P P 13 51 11.8 +1.0
JNTW Noshirotokiwa 10.39 6 P P 13 51 12.6 +1.5
TJN Taejon 11.46 307ceP P 13 51 22.8 +0.1
KSRS Korea Array 11.68 313 P P 13 51 25.4 +0.2
5.7nm,0.3s,baz=124,slow=10,SNR=158
KSRS PP 13 52 29.7
1.8nm,0.3s,baz=153,slow=9.1,SNR=8.1
KSRS ScP ScP 13 59 21.8 +0.5
0.1nm,0.3s,baz=229,slow=0.7,SNR=10.0
KSAR Wonju Array Be 11.70 313 P P 13 51 24.8 -0.5
KSAR Wonju Array Be 11.70 313 P P 13 51 24.8 -0.5
KS19 Wonju Array Si 11.75 313 P P 13 51 25.1 -0.8
INCN Inchon 12.54 310 P P 13 51 33.5 -0.9
INCN Inchon 12.54 310 P P 13 51 33.6 -0.9
ERM Erimo 12.59 15 P P 13 51 36.3 +1.4
ERM Erimo 12.59 15ceP P 13 51 36.7 +1.9
ERM pmax pmax
comp=Z,134nm,1.3s
JIJ Ishigaki jima 14.08 250 P P 13 51 50.3 -0.8
VLA Vladivostok 14.25 339c iP P 13 51 52.7 +0.1
ASAJ Asahikawa 14.50 11 P P 13 51 56.5 +1.2
comp=Z,6.7nm,0.3s,baz=234,slow=11,SNR=82
ASAJ S S 13 54 29.9 +1.5
comp=Z,0.6nm,0.3s,baz=235,slow=34,SNR=2.7
JKA Kamikawa-asahi 14.50 11 P P 13 51 56.5 +1.2
JKA S S 13 54 29.9 +1.5
NMR Nemuro--Hokkai 14.55 21 eP P 13 51 58.0 +2.2
SARN Sarigan 14.68 152 P P 13 51 58.1 +0.4
GLVR Golovnino 14.82 20 eP P 13 52 05.1 +6.4
YOJ Yonaguni jima 14.97 252 P P 13 51 59.6 -0.9
YOJ Yonaguni jima 14.97 252 P P 13 51 59.6 -0.9
SSE Sheshan 15.13 279 P P 13 51 59.1 -3.1
SSE IAmb IAmb 13 52 00.9
comp=Z,29nm,1.4s
TEY Ternei 15.17 354⇑eP P 13 52 02.5 +0.1
TEY pmax pmax
comp=N,30nm,1.1s
TEY pmax pmax
comp=Z,30nm,0.7s
USA0B Ussuriysk Arra 15.21 341 P P 13 52 02.9 0.0
USA0B Ussuriysk Arra 15.21 341c iP P 13 52 02.8 0.0
USRK Ussuriysk Ar. 15.21 341 P P 13 52 03.0 +0.2
baz=144,slow=11,SNR=534
USRK Ussuriysk Ar. 15.21 341 P P 13 52 02.6 -0.2
USRK Ussuriysk Ar. 15.21 341 P P 13 52 02.6 -0.2
SHO Shikotan 15.35 23 eP P 13 52 05.8 +1.5
TATO Taipei 16.04 256 P P 13 52 10.6 -1.3
YHNB Yeheng 16.25 255 P P 13 52 12.2 -2.1
YHNB IAmb IAmb 13 52 15.1
comp=Z,24nm,0.6s
NACB Ninganchiao 16.26 253 P P 13 52 11.1 -3.2
MDJ Mudanjiang 16.33 336 P P 13 52 14.5 -0.2
MDJ S S 13 55 08.4 +4.5
MDJ pmax pmax
comp=Z,42nm,1.3s
MDJ pmax pmax
comp=Z,340nm,3.8s
MDJ Mudanjiang 16.33 336 P P 13 52 15.0 +0.3
DL2 Dalian 16.66 307 P P 13 52 16.6 -1.7
DL2 sP sP 13 54 05.3 -10
DL2 S S 13 55 08.6 -1.7
DL2 pmax pmax
comp=Z,49nm,0.8s
YULB Yu-li 16.84 251 P P 13 52 18.3 -2.1
SSLB Suanglung 16.95 253 P P 13 52 20.1 -1.5
NJ2 Nanjing 17.14 282 eP P 13 52 21.3 -2.1
NJ2 pmax pmax
comp=Z,16nm,0.6s
GUMO Guam 17.24 159 P P 13 52 25.4 +0.8
comp=Z,28nm,0.3s,baz=0.7,slow=3.4,SNR=11
GUMO Guam 17.24 159 IAmb IAmb 13 52 27.5
comp=Z,1μm,1.6s
TWG Pinlang 17.29 250 P P 13 52 23.9 -1.1
YSS Yuzh-Sakhalins 17.29 9 P P 13 52 24.8 0.0
YSS Yuzh-Sakhalins 17.29 9⇑eP P 13 52 24.9 +0.2
YSS eS S 13 55 21.9 +0.3
YSS pmax pmax
comp=Z,40nm,0.5s
YSS smax smax
comp=E,700nm,6.8s
YSS smax smax
comp=N,500nm,5.7s
TPUB Ta-pu 17.43 252 P P 13 52 25.0 -1.6
QZH Quanzhou 18.51 259⇓iP P 13 52 35.4 -1.7
QZH S S 13 55 38.3 -4.5
QZH pmax pmax
comp=N,31nm,0.6s
KNMB Chin-men Tao 18.85 258 P P 13 52 38.6 -1.6
TIA Tai'an 19.11 295 P P 13 52 41.5 -1.0
TIA pmax pmax
comp=N,46nm,0.6s
KLR Kul'dur 19.99 347 P P 13 52 50.7 +0.4
comp=N,2.1nm,0.3s,baz=160,slow=7.1,SNR=62
KLR Kul'dur 19.99 347c iP P 13 52 50.7 +0.4
KLR pmax pmax
comp=Z,34nm,0.9s
GRNR Gornyy 20.89 356⇓iP P 13 52 59.6 +1.1
GRNR eS S 13 56 22.4 +1.8
GRNR pmax pmax
comp=Z,30nm,0.6s
GRNR smax smax
comp=N,1.0nm,0.9s
GRNR MLR MLR
comp=Z,70nm,12.0s
BJT Baijiatuau 20.97 305 P P 13 52 58.3 -1.1
BJT IAmb IAmb 13 53 01.3
comp=Z,22nm,0.8s
BJT Baijiatuau 20.97 305 P P 13 52 58.3 -1.1
BJT pmax pmax
comp=Z,22nm,0.8s
BJI Beijing 20.97 305 P P 13 52 59.0 -0.4
BJI sP sP 13 55 02.8 -0.1
BJI S S 13 56 19.1 -3.1
BJI pmax pmax
comp=Z,30nm,0.8s
WHN Wuhan 21.03 278 ⇑P P 13 53 00.4 +0.3
WHN sP sP 13 55 04.9 +1.3
WHN S S 13 56 29.9 +6.5
TYV Tymovskoe 21.12 7 eP P 13 53 01.5 +0.9
TYV pmax pmax
comp=Z,31nm,1.0s
TGY Tagaytay City 22.73 230 P P 13 53 15.6 -0.1
comp=Z,106nm,0.4s,baz=183,slow=8.5,SNR=4.5
HIA Hailar 24.09 329 P P 13 53 26.8 -0.6
HIA IAmb IAmb 13 53 29.2
comp=Z,11nm,0.7s
HIA Hailar 24.09 329 P P 13 53 26.8 -0.6
HIA pmax pmax
comp=Z,11nm,0.7s
HHC Hu-ho-hao-te 24.55 304 eP P 13 53 31.5 -0.3
HHC pmax pmax
comp=Z,7.0nm,0.9s
HHC pmax pmax
comp=Z,110nm,4.8s
ZEA Zeya 25.21 344 eP P 13 53 37.8 +0.6
ZEA pmax pmax
comp=N,35nm,0.7s
ZEA pmax pmax
comp=Z,49nm,0.6s
ENH Enshi 25.24 278 P P 13 53 37.2 -0.7
XAN Xi'an 25.53 287 P P 13 53 40.2 -0.3
XAN sP sP 13 55 50.8 -1.1
XAN PcP PcP 13 56 52.6 -4.4
XAN S S 13 57 30.9 -3.6
XAN pmax pmax
comp=Z,62nm,0.7s
XAN Xi'an 25.53 287 P P 13 53 39.9 -0.6
XAN Xi'an 25.53 287 P P 13 53 39.9 -0.6
XAN pmax pmax
comp=Z,50nm,0.5s
PEA0B Petropavlovsk- 27.02 26 P P 13 53 55.0 +1.7
PEA0B Petropavlovsk- 27.02 26 P P 13 53 55.0 +1.7
PEA0B pmax pmax
comp=Z,127nm,2.0s
PETK Petropavlovsk- 27.02 26 P P 13 53 55.0 +1.7
comp=Z,3.4nm,0.8s,baz=166,slow=3.3,SNR=9.7
PETK Petropavlovsk- 27.02 26 P P 13 53 55.0 +1.7
QIZ Qiongzhong 28.33 254 P P 13 54 05.8 +0.6
QIZ IAmb IAmb 13 54 08.8
comp=Z,36nm,1.5s
GYA Guiyang 28.38 271⇓iP P 13 54 05.5 -0.3
GYA sP sP 13 56 18.4 +0.5
GYA PcP PcP 13 56 59.5 -4.7
GYA S S 13 58 17.0 -2.5
GYA ScP ScP 14 00 00.1 -1.0
GYA pmax pmax
comp=Z,50nm,0.9s
GYA pmax pmax
comp=Z,180nm,5.5s
LZH Lanzhou 29.75 291 eP P 13 54 17.3 -0.4
LZH pP PP 13 55 41.2 -0.2
LZH pmax pmax
comp=Z,22nm,0.9s
LZH pmax pmax
comp=Z,96nm,4.3s
CD2 Chengdu 30.06 281 P P 13 54 18.6 -1.7
CD2 pmax pmax
comp=Z,10.0nm,0.5s
ULN Ulaanbaatar 30.15 315 P P 13 54 20.9 -0.1
ULN IAmb IAmb 13 54 23.1
comp=Z,10nm,0.9s
ULN Ulaanbaatar 30.15 315ceP P 13 54 21.1 +0.1
ULN pmax pmax
comp=Z,12nm,1.0s
SONM Songino Array 30.54 315 P P 13 54 24.3 -0.1
comp=Z,4.8nm,0.5s,baz=125,slow=8.6,SNR=60
SONM PcP PcP 13 57 09.6 +0.2
comp=Z,1.1nm,0.4s,baz=128,slow=2.3,SNR=6.6
SONM ScP ScP 14 00 07.3 -0.5
comp=Z,3.3nm,0.6s,baz=140,slow=3.1,SNR=18
SONM Songino Array 30.54 315 P P 13 54 23.9 -0.4
SONM Songino Array 30.54 315 ScP 14 00 06.9 -0.9
MA2 Magadan 30.76 12 P P 13 54 26.2 +0.4
comp=Z,29nm,0.8s,baz=198,slow=8.2,SNR=47
MA2 Magadan 30.76 12 P P 13 54 26.3 +0.4
MA2 IAmb IAmb 13 54 28.2
comp=Z,35nm,0.9s
MA2 Magadan 30.76 12ceP P 13 54 26.3 +0.4
MA2 pmax pmax
comp=Z,33nm,0.9s
TNTI Ternate 30.93 202 P P 13 54 27.5 -0.4
KKM Kota Kinabalu 31.82 226 P P 13 54 36.0 +0.4
KKM IAmb IAmb 13 54 52.5
comp=Z,28nm,0.9s
KMI Kunming 32.15 270 P P 13 54 38.5 -0.1
KMI IAmb IAmb 13 54 43.0
comp=Z,26nm,1.0s
KMI Kunming 32.15 270 P P 13 54 38.5 -0.1
KMI pmax pmax
comp=Z,26nm,1.0s
SLVN Son La 32.41 263 P P 13 54 40.6 0.0
SLVN IAmb IAmb 13 54 41.7
comp=Z,21nm,0.6s
YAK Yakutsk 32.65 352 P P 13 54 41.4 -0.6
comp=Z,12nm,0.4s,baz=28,slow=0.4,SNR=19
YAK Yakutsk 32.65 352 P P 13 54 41.1 -0.9
YAK IAmb IAmb 13 54 43.1
comp=Z,32nm,0.7s
YAK Yakutsk 32.65 352 eP P 13 54 41.4 -0.6
YAK e 13 56 15.1
YAK e 13 57 14.3
YAK eS S 13 59 22.3 -1.8
YAK pmax pmax
comp=Z,33nm,0.9s
YAK pmax pmax
comp=N,9.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=Z,8.0nm,1.2s
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.3s
YAK smax smax
comp=E,59nm,1.6s
YAK smax smax
comp=N,180nm,1.7s
BOD Bodaibo 32.70 336 eP P 13 54 41.7 -0.9
BOD pmax pmax
comp=Z,15nm,1.1s
MANU Manus Island 32.86 164 P P 13 54 45.0 +0.6
MANU IAmb IAmb 13 54 46.4
comp=Z,24nm,0.8s
GTA Gaotai 33.12 297 P P 13 54 46.4 -0.2
GTA pP pwP 13 56 15.1 +1.8
GTA PP PP 13 56 18.1 +1.1
GTA sP sP 13 57 00.8 +1.2
GTA PcP PcP 13 57 18.3 +1.6
GTA S S 13 59 29.4 -2.9
GTA ScP ScP 14 00 17.4 +0.6

GTA pmax pmax
comp=Z,19nm,0.5s
GTA pmax pmax
comp=Z,90nm,4.1s
FAKI Fak Fak 33.24 192 P P 13 54 47.5 -0.2
DLV T Lat 33.25 244 P P 13 54 47.9 -0.1
DLV IAmb IAmb 13 54 50.9
comp=Z,49nm,1.3s
MRSI Marisa 33.35 212 P P 13 54 49.4 +0.8
ZAK Zakamensk 33.45 318 eP P 13 54 49.1 -0.1
ZAK pmax pmax
comp=Z,12nm,1.1s
TLY Talaya 33.80 320 P P 13 54 52.8 +0.8
comp=Z,10.0nm,0.6s,baz=151,slow=3.8,SNR=30
TLY Talaya 33.80 320 P P 13 54 52.2 +0.1
TLY IAmb IAmb 13 54 53.3
comp=Z,9.9nm,0.6s
TLY Talaya 33.80 320 iP P 13 54 52.5 +0.4
TLY pmax pmax
comp=Z,10.0nm,0.7s
UBPT Khong Chiam 33.81 252 P P 13 54 52.7 +0.2
SANI Sanana 34.03 203 P P 13 54 53.2 -1.2
SEY Seymchan 34.18 11 P P 13 54 55.4 +0.4
comp=Z,5.8nm,0.8s,baz=198,slow=5.0,SNR=22
SEY ScP ScP 14 00 19.3 -0.5
comp=Z,0.5nm,0.4s,baz=134,slow=3.8,SNR=5.5
LUWI Luwuk 34.34 209 P P 13 54 55.0 -2.0
APSI Ampana 34.71 211 P P 13 54 59.6 -0.5
AAI Ambon 34.90 199 P P 13 55 02.3 +0.6
MOY Mondy 35.29 319 eP P 13 55 04.6 -0.1
MOY pmax pmax
comp=Z,15nm,1.6s
PBKT Sadao Pong 36.94 257 P P 13 55 18.7 0.0
PBKT IAmb IAmb 13 55 21.4
comp=Z,37nm,0.8s
KDI Kendari 37.04 207 P P 13 55 21.8 +2.3
SBUM Sibu 37.11 228 P P 13 55 19.5 -0.7
SBUM IAmb IAmb 13 55 22.9
comp=Z,14nm,0.9s
SBUM Sibu 37.11 228 P P 13 55 21.0 +0.9
CHTO Chiang Mai 37.68 262 P P 13 55 24.4 -0.4
CHTO Chiang Mai 37.68 262 P P 13 55 24.5 -0.4
CHTO pmax pmax
comp=Z,38nm,0.6s
CMAR Chiang Mai Arr 37.83 262 P P 13 55 26.2 +0.2
comp=Z,12nm,0.5s,baz=49,slow=8.6,SNR=88
CMAR PcP PcP 13 57 32.1 +1.1
comp=Z,1.1nm,0.4s,baz=58,slow=1.1,SNR=5.6
CMAR ScP ScP 14 00 35.5 +1.2
comp=Z,1.3nm,0.8s,baz=30,slow=4.3,SNR=6.1
BNSI Bone 38.50 211 P P 13 55 31.9 +0.4
KSM Kuching 39.08 229 P P 13 55 37.0 +0.7
KSM Kuching 39.08 229 P P 13 55 38.0 +1.7
KAPI Kappang 39.20 211 P P 13 55 36.5 -0.7
KAPI IAmb IAmb 13 55 54.3
comp=Z,84nm,1.6s
KAPI Kappang 39.20 211 P P 13 55 36.5 -0.7
KAPI pmax pmax
comp=Z,84nm,1.6s
PMG Port Moresby 39.95 167 P P 13 55 42.8 -0.5
PMG IAmb IAmb 13 55 50.4
comp=Z,28nm,0.8s
PMG Port Moresby 39.95 167 ceP P 13 55 43.4 +0.2
PMG pmax pmax
comp=Z,143nm,0.9s
ATKA Atka Island 40.99 43 P P 13 55 52.1 +0.9
LSA Lhasa 41.01 282 P P 13 55 51.6 -0.7
LSA IAmb IAmb 13 55 56.3
comp=Z,5.8nm,0.5s
LSA Lhasa 41.01 282 P P 13 55 51.6 -0.7
LSA pmax pmax
comp=Z,6.0nm,0.5s
SHL Shillong 41.43 276 P P 13 55 54.4 -0.9
SHL Shillong 41.43 276 P P 13 55 54.4 -0.9
SHL pmax pmax
comp=Z,30nm,0.4s
BILL Bilibino 41.47 15 P P 13 55 55.6 +0.8
BILL IAmb IAmb 13 55 57.2
comp=Z,15nm,1.0s
BILL Bilibino 41.47 15 iP P 13 55 55.1 +0.4
BILL pmax pmax
comp=Z,17nm,1.1s
SOEI Soe 41.82 202 P P 13 55 57.7 -0.7
TIXI Tiksi 42.12 355 P P 13 55 59.5 -0.4
comp=Z,11nm,0.6s,baz=140,slow=6.5,SNR=48
TIXI ScP ScP 14 00 49.4 -0.7
comp=Z,1.9nm,0.7s,baz=170,slow=0.5,SNR=4.9
TIXI Tiksi 42.12 355 P P 13 55 59.2 -0.7
TIXI IAmb IAmb 13 56 00.3
comp=Z,11nm,0.7s
TIXI Tiksi 42.12 355 ceP P 13 55 59.3 -0.5
TIXI pmax pmax
comp=Z,10.0nm,0.9s
WMQ Urumqi 42.44 304 ⇑iP P 13 56 03.8 +0.9
WMQ PcP PcP 13 57 46.2 +0.5
WMQ PP PP 13 57 51.4 -1.3
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ pmax pmax
comp=Z,96nm,4.7s
WMQ Urumqi 42.44 304 P P 13 56 02.6 -0.3
WMQ IAmb IAmb 13 56 06.0
comp=Z,25nm,1.3s
WMQ Urumqi 42.44 304 P P 13 56 02.7 -0.3
WMQ pmax pmax
comp=Z,25nm,1.3s
JRMM Jerantut 42.92 240 P P 13 56 08.0 +1.0
MTN Manton Dam 43.14 191 P P 13 56 08.6 0.0
MYKOM Kota Tinggi 43.31 236 P P 13 56 10.5 +0.4
MYKOM IAmb IAmb 13 56 13.1
comp=Z,29nm,0.7s
MYKOM Kota Tinggi 43.31 236 P P 13 56 12.0 +1.9
KULM Kulim 43.42 243 P P 13 56 10.7 -0.2
KULM IAmb IAmb 13 56 13.7
comp=Z,32nm,0.8s
KULM Kulim 43.42 243 P P 13 56 12.0 +1.1
IPM Ipoh 43.64 242 P P 13 56 12.0 -0.7
IPM Ipoh 43.64 242 P P 13 56 13.0 +0.3
COEN Coen 43.84 174 P P 13 56 14.7 +0.6
COEN IAmb IAmb 13 57 01.6
comp=Z,29nm,1.4s
NIKH Nikolski High 44.34 43 P P 13 56 18.2 +0.6
TAPN Taplejung 44.52 280 eP P 13 56 19.9 +0.2
comp=Z,58nm,0.3s
JAGI Jajag, Banyuwa 44.88 216 P P 13 56 21.9 -0.4
ODAN Odare 44.93 279 eP P 13 56 22.8 0.0
comp=Z,51nm,0.3s
ZAA0 Zalesovo Array 45.33 318 P P 13 56 24.3 -0.9
ZAA0 IAmb IAmb 13 56 25.5
comp=Z,5.3nm,0.7s
ZALV Zalesovo Beam 45.33 318 P P 13 56 24.8 -0.4
comp=Z,4.7nm,0.3s,baz=100,slow=7.9,SNR=34
ZALV PcP PcP 13 57 55.1 -0.3
comp=Z,4.0nm,0.4s,baz=110,slow=3.5,SNR=13
ZALV ScP ScP 14 01 02.3 -1.3
comp=Z,2.8nm,0.7s,baz=121,slow=4.1,SNR=9.5
ZALV Zalesovo Beam 45.33 318 P P 13 56 24.3 -1.0
ZALV PcP 13 57 54.9 -0.6
ZALV ScP 14 01 02.0 -1.6
RAMN Ramite 45.58 280 eP P 13 56 28.0 +0.1
comp=Z,118nm,0.4s
JIRN Jiri 45.73 281 eP P 13 56 29.7 +0.5
comp=Z,199nm,0.4s
GUN Gumba 45.93 281 eP P 13 56 31.0 +0.3
comp=Z,54nm,0.3s
GAMB Gambell 46.00 28 P P 13 56 31.2 +1.0
GAMB IAmb IAmb 13 58 07.6
comp=Z,18nm,1.6s
PBA Port Blair 46.29 257 P P 13 56 32.3 -0.8
MK31 Makanchi Array 46.31 308 P P 13 56 32.4 -0.5
MK31 Makanchi Array 46.31 308 eP P 13 56 32.4 -0.5
MKAR Makanchi Array 46.31 308 P P 13 56 32.5 -0.3
comp=Z,3.9nm,0.3s,baz=86,slow=10,SNR=267
MKAR PcP PcP 13 57 58.4 -0.7
comp=Z,3.9nm,0.7s,baz=90,slow=4.9,SNR=11
MKAR ScP ScP 14 01 07.0 -1.0
comp=Z,3.7nm,1.0s,baz=86,slow=5.2,SNR=9.4
MKAR Makanchi Array 46.31 308 P P 13 56 32.2 -0.6
MKAR Makanchi Array 46.31 308 ScP 14 01 06.8 -1.1
PSI Prapat 46.32 242 P P 13 56 33.4 -0.2
comp=Z,21nm,0.8s,baz=39,slow=9.5,SNR=14
PSI PcP PcP 13 57 59.3 -0.5
comp=Z,7.3nm,0.7s,baz=359,slow=6.1,SNR=4.2
PSI Prapat 46.32 242 P P 13 56 32.6 -0.9
PSI pmax pmax
comp=Z,28nm,0.9s
KNRA Kununurra 46.34 193 P P 13 56 33.4 0.0
RPSI Rantau Prapat 46.39 242 P P 13 56 32.6 -1.3
RPSI IAmb IAmb 13 56 35.8
comp=Z,28nm,0.9s
RPSI Rantau Prapat 46.39 242 P P 13 56 33.4 -0.5
RPSI PcP 13 57 59.3 -0.5
PKI Pulchoki 46.42 281 eP P 13 56 34.1 -0.3
comp=Z,14nm,0.3s
PKIN Phulchoki 46.43 281 eP P 13 56 34.2 -0.2
comp=Z,18nm,0.4s
KKN Kakani 46.47 281 eP P 13 56 34.6 -0.1
MAKZ Makanchi 46.52 308 P P 13 56 34.2 -0.3
MAKZ IAmb IAmb 13 56 35.8
comp=Z,12nm,0.3s
MAKZ Makanchi 46.52 308 P P 13 56 34.2 -0.3
DMN Daman 46.67 281 eP P 13 56 36.1 -0.1
comp=Z,41nm,0.7s
GKN Gorkha 46.96 282 eP P 13 56 38.4 +0.1
comp=Z,40nm,0.4s
LEM Lembang 47.17 224 P P 13 56 40.6 +0.6
comp=Z,86nm,0.8s,baz=17,slow=11,SNR=15
DANN Dangsing 47.61 282 eP P 13 56 43.8 +0.4
comp=Z,103nm,0.4s
CISI Cisompet, Garu 47.63 224 P P 13 56 41.9 -1.4
KOLN Koldanda 47.91 282 eP P 13 56 45.6 +0.1
comp=Z,60nm,0.5s
MNAI Manna 48.30 231 P P 13 56 47.8 -0.6
GSI Gunungsitoli 48.31 242 P P 13 56 47.9 -0.5
PDGK Podgornoye 48.41 303 P P 13 56 48.5 -0.5
KURK Kurchatov 48.81 313 P P 13 56 50.9 -0.7
KURK IAmb IAmb 13 56 52.5
comp=Z,12nm,0.5s
KURK Kurchatov 48.81 313 pP 13 58 21.0 +1.4
KURK ScP 14 01 16.6 -1.8
KURK Kurchatov 48.81 313 ceP P 13 56 51.1 -0.5
KURK pmax pmax
comp=Z,6.0nm,0.5s
KURBB Kurchatov Arra 48.86 313 P P 13 56 51.5 -0.6
comp=Z,8.6nm,0.4s,baz=105,slow=4.0,SNR=263
KURBB pP pP 13 58 21.0 +1.0
comp=Z,1.1nm,0.4s,baz=93,slow=7.7,SNR=1.9
KURBB ScP ScP 14 01 16.6 -2.1
comp=Z,0.9nm,0.6s,baz=96,slow=4.4,SNR=4.4
KURBB S S 14 03 17.4 -2.9
comp=Z,1.2nm,0.9s,baz=88,slow=11,SNR=6.5
ANM Nome 48.88 28 P P 13 56 53.1 +1.2
ANM Nome 48.88 28 P P 13 56 53.1 +1.2
ANM pmax pmax
comp=Z,5.0nm,0.8s
PRZ Przheval'sk 49.28 302 P P 13 56 56.5 +0.9
PRZ Przheval'sk 49.28 302 P P 13 56 56.5 +0.9
PRZ pmax pmax
comp=Z,37nm,0.5s
FITZ Fitzroy Crossi 49.38 196 P P 13 56 56.7 +0.5
FITZ IAmb IAmb 13 58 29.8
comp=Z,98nm,1.9s
WB0 Warramunga Arr 49.58 185 P P 13 56 57.5 -0.2
WB0 IAmb IAmb 13 56 58.4
comp=Z,18nm,0.7s
WRAB Tennant Creek 49.75 185 P P 13 56 58.8 -0.2
WRAB IAmb IAmb 13 56 59.7
comp=Z,15nm,0.7s
WRAB Tennant Creek 49.75 185 P P 13 56 58.8 -0.2
WRAB pmax pmax
comp=Z,15nm,0.7s
WB2 Warramunga Arr 49.76 185 P P 13 56 58.7 -0.3
WB2 IAmb IAmb 13 56 59.8
comp=Z,16nm,0.7s
WRA Warramunga Arr 49.76 185 P P 13 56 58.8 -0.2
comp=Z,12nm,0.5s,baz=2.4,slow=7.8,SNR=162
WRA PcP PcP 13 58 12.2 +0.3
comp=Z,2.6nm,0.6s,baz=358,slow=4.1,SNR=5.9
WRA ScP ScP 14 01 23.4 +0.6
comp=Z,1.3nm,0.7s,baz=0.5,slow=4.9,SNR=5.3
WRA Warramunga Arr 49.76 185 P P 13 56 57.8 -1.3
WR0 Warramunga Arr 49.76 185 P P 13 56 58.9 -0.1
WR0 IAmb IAmb 13 56 59.5
comp=Z,15nm,0.6s
KDJ Kajisay 50.22 302 P P 13 57 02.8 +0.3
KDJ IAmb IAmb 13 58 17.5
comp=Z,34nm,1.5s
KDJ Kajisay 50.22 302 P P 13 57 02.8 +0.3
KDJ pmax pmax
comp=Z,34nm,1.5s
KSH Kashi 51.50 299 P P 13 57 15.4 +3.5
KSH sP sP 13 59 35.6 +4.2
KSH PcS PcS 14 02 15.9 -1.3
KSH S S 14 04 01.5 +4.6
KSH sS sS 14 06 44.6 +6.0
KSH pmax pmax
comp=Z,7.0nm,0.7s
KSH pmax pmax
comp=Z,320nm,8.3s
KBK Karagaybulak 51.79 303 P P 13 57 14.5 +0.5
SNR=15
USP Ospenovka 52.04 303 P P 13 57 15.7 +0.1
SNR=5.8
AAK Ala-Archa 52.13 303 P P 13 57 16.5 +0.1
comp=Z,4.0nm,0.4s,baz=112,slow=6.0,SNR=21
AAK Ala-Archa 52.13 303 P P 13 57 16.5 +0.1
SNR=5.7
AAK Ala-Archa 52.13 303 P P 13 57 15.9 -0.4
AAK Ala-Archa 52.13 303 ceP P 13 57 16.3 -0.1
AAK pmax pmax
comp=Z,7.0nm,0.9s
UCH Uchtor 52.17 302 P P 13 57 18.0 +1.0
SNR=9.0
TTA Tatalina 52.60 32 P P 13 57 20.2 +0.9
TTA Tatalina 52.60 32 P P 13 57 20.2 +0.9
SVW2 Sparrevohn 52.61 34 P P 13 57 20.6 +1.3
SVW2 IAmb IAmb 13 58 45.8
comp=Z,21nm,1.7s
AML Almayashu 52.79 302 P P 13 57 21.9 +0.5
SNR=16
SANVU Saraoutou 52.83 145 P P 13 57 22.1 +0.7
SANVU IAmb IAmb 13 57 24.1
comp=Z,32nm,0.9s
SII Sitkinak Islan 53.12 40 P P 13 57 24.5 +1.4
ARSB Arslanbob 53.45 301 P P 13 57 26.0 +0.2
ARSB Arslanbob 53.45 301 P P 13 57 26.0 +0.2
AS31 Alice Springs 53.48 185 P P 13 57 25.9 -0.2
ASAR Alice Springs 53.48 185 P P 13 57 26.0 -0.1
comp=Z,7.9nm,0.5s,baz=3.7,slow=6.6,SNR=297
ASAR PcP PcP 13 58 26.5 +0.6
comp=Z,0.7nm,0.5s,baz=27,slow=5.8,SNR=4.2
ASAR ScP ScP 14 01 39.8 +0.8
comp=Z,0.9nm,0.9s,baz=0.7,slow=4.8,SNR=3.7
ASAR S S 14 04 23.6 +0.2
comp=Z,0.6nm,0.6s,baz=16,slow=22,SNR=7.2
ASAR Alice Springs 53.48 185 P P 13 57 25.7 -0.4
OHAK Old Harbor 53.62 39 P P 13 57 27.7 +1.1
OHAK IAmb IAmb 13 57 33.6
comp=Z,95nm,1.8s
BVAR Borovoye Array 53.88 316 P P 13 57 28.4 -0.1
comp=Z,17nm,0.4s,baz=100,slow=7.3,SNR=169
BVAR PcP PcP 13 58 26.6 -0.4
comp=Z,3.4nm,0.4s,baz=107,slow=3.9,SNR=7.2
BVAR ScP ScP 14 01 39.1 -1.2
comp=Z,2.6nm,0.6s,baz=100,slow=4.4,SNR=9.2
BVAR S S 14 04 25.0 -2.9
comp=Z,0.7nm,0.6s,baz=92,slow=14,SNR=4.7
BRVK Borovoye 53.94 316 P P 13 57 28.6 -0.4
BRVK IAmb IAmb 13 57 29.4
comp=Z,10nm,0.7s
BRVK Borovoye 53.94 316 P P 13 57 28.6 -0.4
IMAR Indian Mountai 53.95 28 P P 13 57 29.4 +0.6
RSO Redoubt South 53.96 35 P P 13 57 30.2 +1.0
KDAK Kodiak Island 54.00 38 P P 13 57 30.5 +1.3
comp=Z,2.0nm,0.4s,baz=252,slow=2.0,SNR=11
KDAK Kodiak Island 54.00 38 IAmb IAmb 13 57 36.0
comp=Z,80nm,1.9s
PSA00 Pilbara Seismi 54.32 202 P P 13 57 31.6 -0.4
PSA00 IAmb IAmb 13 58 29.2
comp=Z,39nm,1.4s
PPLA Purkeypile 54.34 32 P P 13 57 32.8 +1.0
PPLA IAmb IAmb 13 58 02.1
comp=Z,20nm,1.5s
SKT Skwentna 54.60 33 P P 13 57 34.5 +1.0
CNPM China Poot 54.70 36 P P 13 57 34.8 +0.5
CNPM IAmb IAmb 13 59 39.0
comp=Z,50nm,1.7s
BRLK Bradley Lake 54.88 36 P P 13 57 36.2 +0.7
BRLK IAmb IAmb 13 58 43.9
comp=Z,15nm,1.2s
NIL Nilore 54.91 292 P P 13 57 36.3 +0.1
NIL IAmb IAmb 13 57 38.1
comp=Z,39nm,1.2s
NIL Nilore 54.91 292 P P 13 57 36.3 +0.1
NIL pmax pmax
comp=Z,39nm,1.3s
KK31 Karatay Array 54.94 304 P P 13 57 36.1 -0.2
KK31 IAmb IAmb 13 57 36.8
comp=Z,13nm,0.5s
KK31 Karatay Array 54.94 304 eP P 13 57 36.1 -0.2
KKAR Karatay Array 54.94 304 P P 13 57 36.1 -0.2
KKAR Karatay Array 54.94 304 P P 13 57 36.1 -0.2
KKAR IAmb IAmb 13 57 36.8
comp=Z,13nm,0.5s
KKAR Karatay Array 54.94 304 P P 13 57 36.1 -0.2
KKAR pmax pmax
comp=Z,13nm,0.5s
BPAW Bear Paw Mtn. 54.95 30 P P 13 57 37.5 +1.5
SUA Susitna One 54.96 34 P P 13 57 36.8 +0.6
SUA IAmb IAmb 13 57 43.4
comp=Z,23nm,1.7s
MLY Manley 55.11 29 P P 13 57 38.1 +1.0
TRF Thorofare Moun 55.23 31 P P 13 57 39.0 +0.9
TRF IAmb IAmb 13 57 46.8
comp=Z,33nm,2.0s
SEW Seward 55.60 35 P P 13 57 40.7 +0.2
SEW IAmb IAmb 13 59 15.1
comp=Z,22nm,1.4s
BWN Browne 55.62 30 P P 13 57 42.0 +1.4
BWN IAmb IAmb 13 58 28.5
comp=Z,40nm,1.7s
PMR Palmer 55.74 33 P P 13 57 41.9 +0.5
PMR Palmer 55.74 33 P P 13 57 41.9 +0.5
PMR pmax pmax
comp=Z,8.0nm,1.1s
NEA Nenana 55.80 30 P P 13 57 42.7 +0.8
GHO Glory Hole Cre 55.84 33 P P 13 57 43.0 +0.8
GHO IAmb IAmb 13 59 43.3
comp=Z,43nm,2.0s
TOLK Toolik Lake Re 55.84 25 P P 13 57 43.1 +1.0
MCK McKinley 55.84 31 P P 13 57 42.9 +0.7
MCK McKinley 55.84 31 P P 13 57 42.9 +0.7
RND Reindeer 55.87 31 P P 13 57 42.6 +0.1
RND Reindeer 55.87 31 P P 13 57 42.6 +0.1
RND pmax pmax
comp=Z,6.0nm,0.8s
KNK Knik Glacier 56.06 34 P P 13 57 44.0 +0.2
KNK IAmb IAmb 13 57 46.5
comp=Z,35nm,1.8s
MDM Murphy Dome 56.17 29 P P 13 57 44.7 +0.2
WRH Wood River Hil 56.23 30 P P 13 57 45.2 +0.4
COLA College 56.33 29 P P 13 57 45.4 -0.1
COLA College 56.33 29 P P 13 57 45.4 -0.1
COLA pmax pmax
comp=Z,6.0nm,0.8s
CCB Clear Creek Bu 56.35 30 P P 13 57 46.4 +0.7
DHY Denali Highway 56.54 32 P P 13 57 48.6 +1.4
SCM Sheep Creek Mo 56.59 33 P P 13 57 48.4 +0.9
SCM IAmb IAmb 13 57 50.2
comp=Z,13nm,1.1s
SCM Sheep Creek Mo 56.59 33 P P 13 57 48.4 +0.9
SCM pmax pmax
comp=Z,13nm,1.1s
HDA Harding Lake 56.72 30 P P 13 57 47.8 -0.4
GLI Glacier Island 56.74 34 P P 13 57 48.1 -0.3
GLI IAmb IAmb 13 58 07.6
comp=Z,25nm,1.1s
IL31 56.74 30 P P 13 57 47.7 -0.7
ILAR Eielson Array 56.74 30 P P 13 57 48.1 -0.3
comp=Z,1.3nm,0.5s,baz=261,slow=5.2,SNR=23
ILAR PcP PcP 13 58 38.0 0.0
comp=Z,0.6nm,0.5s,baz=280,slow=3.7,SNR=5.4
ILAR pP pP 13 59 19.9 -0.7
comp=Z,0.9nm,0.9s,baz=279,slow=6.8,SNR=4.4
ILAR Eielson Array 56.74 30 P P 13 57 47.9 -0.5
FID Port Fidalgo 57.05 34 P P 13 57 51.2 +0.6
FID IAmb IAmb 13 59 51.2
comp=Z,41nm,1.6s
KIP Kipapa 57.07 83 P P 13 57 52.1 +0.8
KIP Kipapa 57.07 83 P P 13 57 52.1 +0.8
KIP pmax pmax
comp=Z,649nm,2.0s
PRP Porcupine Dome 57.31 29 P P 13 57 53.3 +0.8
PAX Paxson 57.41 32 P P 13 57 53.6 +0.4
PAX Paxson 57.41 32 P P 13 57 53.6 +0.4
PAX pmax pmax
comp=Z,10.0nm,1.5s
EYAK Cordova Ski Ar 57.42 35 P P 13 57 54.1 +1.0
EYAK IAmb IAmb 13 58 50.0
comp=Z,54nm,1.8s
FYU Fort Yukon 57.42 27 P P 13 57 54.2 +1.2
FYU IAmb IAmb 13 59 56.3
comp=Z,18nm,1.6s
RIDG Independent Ri 57.66 31 P P 13 57 54.9 +0.1
BMAR Burnt Mountain 57.67 26 P P 13 57 56.3 +1.5
DOT Dot Lake 58.02 31 P P 13 57 57.3 +0.1
SCRK Sand Creek 58.03 30 P P 13 57 57.7 +0.3
KBL Kabul 58.03 294 P P 13 57 57.4 -0.6
KBL IAmb IAmb 13 58 00.0
comp=Z,8.6nm,0.5s
KBL Kabul 58.03 294 P P 13 57 57.4 -0.6
KBL pmax pmax
comp=Z,9.0nm,0.5s
NOUC Port Laguerre 58.15 150 P P 13 58 00.1 +1.6
NOUC IAmb IAmb 14 00 06.5
comp=Z,41nm,1.3s
HMT Hamilton 58.17 35 P P 13 57 59.0 +0.7
HMT IAmb IAmb 13 58 11.5
comp=Z,67nm,2.0s
DZM Mont Dzumac 58.19 149 P P 13 58 00.7 +1.7
DZM IAmb IAmb 13 58 01.3
comp=Z,91nm,1.9s
MENT Mentasta 58.22 32 P P 13 57 59.2 +0.6
GLB Gilahina Butte 58.29 33 P P 13 58 00.0 +0.9
SUCK Suckling Hills 58.44 35 P P 13 58 00.4 +0.3
SUCK IAmb IAmb 13 59 00.1
comp=Z,24nm,1.1s
VRDI Verde Repeater 58.48 34 P P 13 58 00.8 +0.2
MCARA McCarthy VSAT 58.67 33 P P 13 58 03.0 +1.3
CRQM Cirque 58.68 34 P P 13 58 00.6 -1.4
CRQM IAmb IAmb 13 59 19.7
comp=Z,9.5nm,1.2s
PALK Pallekele 58.73 260 P P 13 58 02.6 -0.3
PALK IAmb IAmb 13 59 39.6
comp=Z,37nm,1.4s
PALK Pallekele 58.73 260 P P 13 58 02.6 -0.3
PALK pmax pmax
comp=Z,37nm,1.4s
BALM Baldy 59.04 34 P P 13 58 04.2 -0.1
BALM IAmb IAmb 13 59 32.6
comp=Z,16nm,1.7s
BCAR Beaver Creek A 59.09 31 P P 13 58 05.3 +0.8
EGAK Eagle 59.20 29 P P 13 58 05.3 +0.2
EGAK IAmb IAmb 13 58 30.3
comp=Z,15nm,1.8s
MESA MESA 59.34 35 P P 13 58 06.9 +0.6
MESA IAmb IAmb 13 59 46.1
comp=Z,12nm,0.7s
BARN Barnard Glacie 59.37 34 P P 13 58 07.2 +0.6
CTGM Chitina Glacie 59.54 34 P P 13 58 08.4 +0.8
ARU Arti 60.30 321 P P 13 58 12.0 -0.6
ARU Arti 60.30 321 d iP P 13 58 12.3 -0.3
ARU 13 58 51.6
ARU 14 00 30.1
ARU S S 14 05 51.1 +0.7
ARU SS SS 14 10 03.6 +6.5
ARU pmax pmax
comp=Z,9.0nm,0.4s
EPYK Eagle Plains 60.84 27 P P 13 58 16.9 +0.7
EPYK IAmb IAmb 13 58 19.0
comp=Z,11nm,0.6s
AB31 Akbulak array 60.92 313 eP P 13 58 16.3 -0.6
ABKAR Akbulak array 60.92 313 P P 13 58 16.3 -0.6
ABKAR IAmb IAmb 13 58 18.0
comp=Z,10.0nm,0.5s
FORT Forrest 61.21 190 P P 13 58 19.3 +0.4
STKA Stephens Creek 61.53 177 P P 13 58 21.1 +0.1
comp=Z,5.6nm,0.5s,baz=346,slow=7.4,SNR=30
STKA PcP PcP 13 58 58.8 +1.2
comp=Z,1.3nm,0.4s,baz=304,slow=14,SNR=3.5
STKA Stephens Creek 61.53 177 P P 13 58 21.3 +0.3
INK Inuvik 61.75 25 P P 13 58 22.6 +0.6
comp=Z,1.0nm,0.3s,baz=273,slow=5.4,SNR=17
INK Inuvik 61.75 25 IAmb IAmb 13 58 23.3

comp=Z,2.7nm,0.9s
HRA Herat 63.42 296 P P 13 58 33.8 0.0
HRA IAmb IAmb 13 58 35.5
comp=Z,7.8nm,0.8s
C36M Paulatuk 64.83 23 P P 13 58 42.1 +0.3
GEYT Alibeck 65.39 301 P P 13 58 45.9 -0.2
comp=Z,2.0nm,0.5s,baz=330,slow=2.1,SNR=12
GEYT Alibeck 65.39 301 P P 13 58 45.3 -0.8
PRGR Permogore 65.54 328 eP P 13 58 45.0 -1.4
PRGR pmax pmax
comp=Z,6.0nm,0.4s
NWAO Narrogin (SRO) 65.73 200 P P 13 58 48.2 +0.2
NWAO Narrogin (SRO) 65.73 200 P P 13 58 48.2 +0.2
NWAO pmax pmax
comp=Z,60nm,1.3s
HSPB Hornsund (broa 67.91 348 eP P 13 59 01.6 +0.7
ARCES ARCESS Array B 69.85 340 P P 13 59 13.2 +0.4
comp=Z,5.1nm,0.4s,baz=73,slow=8.9,SNR=80
ARE0 ARCESS Array S 69.85 340 eP P 13 59 12.7 -0.1
RES Resolute Bay 70.03 13 P P 13 59 14.4 +0.7
comp=Z,2.3nm,0.7s,baz=315,slow=6.1,SNR=13
RES Resolute Bay 70.03 13 P P 13 59 14.5 +0.7
WSAR Wadi Sarin 70.57 286 P P 13 59 18.3 +0.4
comp=Z,4.1nm,0.7s,baz=126,slow=8.9,SNR=6.0
KTK1 Kautokeino 70.81 340 eP P 13 59 18.2 -0.3
YKA Yellowknife Ar 71.11 28 P P 13 59 20.8 +0.4
comp=Z,1.5nm,0.8s,baz=293,slow=5.8,SNR=22
YKA pP pP 14 00 58.9 +0.6
comp=Z,0.5nm,0.8s,baz=291,slow=5.9,SNR=3.7
VRH Novokhopyorsk 71.36 319 eP P 13 59 21.6 -0.5
VRH pmax pmax
comp=Z,10.0nm,0.5s
AKT Akhty 71.54 308 eP P 13 59 23.2 -0.3
AKT e 13 59 39.7
AKT pmax pmax
comp=Z,10.0nm,0.5s
TRO Tromso 71.69 341 eP P 13 59 23.6 0.0
OBN Obninsk 72.45 324 i P P 13 59 29.1 +0.8
OBN pmax pmax
comp=Z,6.0nm,1.1s
VSR Storozhevoye 72.80 320 eP P 13 59 29.6 -0.9
VSR pmax pmax
comp=Z,10.0nm,0.4s
VORD Divnogorie 72.84 319 eP P 13 59 30.0 -0.7
VORD pmax pmax
comp=Z,20nm,1.1s
STEI Steigen 73.81 341 eP P 13 59 35.5 -0.4
KBZ Khabaz 73.83 311 P P 13 59 36.9 +0.3
comp=Z,9.2nm,0.8s,baz=77,slow=4.4,SNR=16
KBZ Khabaz 73.83 311 i P P 13 59 36.8 +0.3
KBZ pmax pmax
comp=Z,11nm,0.8s
KIV Kislovodsk 73.87 312 eP P 13 59 37.5 +0.6
KIV pmax pmax
comp=Z,25nm,1.0s
FINES FINESS Array B 74.04 333 P P 13 59 37.1 -0.2
comp=Z,7.0nm,0.3s,baz=70,slow=4.6,SNR=150
AKH Akhalkalaki 74.45 309 ⇑P P 13 59 43.1 +2.7
MOR8 Moi Rana 75.22 340 eP P 13 59 42.9 -1.1
B08A Colville Reser 75.54 42 P P 13 59 47.5 +1.3
PINE Pine Mountain 76.75 47 P P 13 59 55.0 +1.7
PINE IAmb IAmb 13 59 56.9
comp=Z,9.5nm,0.8s
NEW Newport 76.87 42 P P 13 59 54.5 +0.9
comp=Z,2.7nm,0.8s,baz=304,slow=0.9,SNR=7.4
NEW Newport 76.87 42 P P 13 59 54.5 +0.9
NSS Namsos 77.11 339 eP P 13 59 53.3 -1.2
AKASG Malin Array Be 78.51 322 P P 14 00 01.8 -0.5
comp=Z,2.5nm,0.3s,baz=56,slow=5.2,SNR=32
AKBB Malin Array Si 78.51 322 P P 14 00 01.6 -0.7
AKBB Malin Array Si 78.51 322 P P 14 00 01.6 -0.7
J08A Circle Bar Ran 78.53 47 P P 14 00 03.7 +0.9
NC405 NORSAR Array S 79.60 337 P P 14 00 07.8 -0.2
DOMB Dombas 79.81 338 eP P 14 00 09.1 +0.1
NB2 NORSAR Subarra 79.83 337 P P 14 00 08.6 -0.6
comp=Z,5.6nm,0.5s,baz=43,slow=5.3
NB2 NORSAR Subarra 79.83 337 P P 14 00 08.6 -0.6
baz=43,slow=5.3
NOA NORSAR Array B 79.83 337 P P 14 00 08.7 -0.5
comp=Z,3.1nm,0.4s,baz=60,slow=6.2,SNR=60
NC602 NORSAR Array S 79.93 337 eP P 14 00 09.0 -0.7
SORM Soroca 80.42 320 ⇑P P 14 00 12.0 -0.4
NVAR Mina Array Bea 81.16 51 P P 14 00 18.0 +1.1
comp=Z,1.1nm,0.6s,baz=302,slow=5.7,SNR=12
NVAR pP pP 14 01 58.5 +0.8
comp=Z,0.2nm,0.4s,baz=297,slow=6.5,SNR=2.6
RAYN Ar Rayn 81.21 292 P P 14 00 16.8 -0.4
RAYN IAmb IAmb 14 00 19.6
comp=Z,60nm,1.9s
RAYN Ar Rayn 81.21 292 P P 14 00 16.8 -0.4
RAYN pmax pmax
comp=Z,60nm,1.9s
KONO Kongsberg 81.39 337 eP P 14 00 16.5 -0.8
TLCR 81.82 318 ⇓P P 14 00 20.9 +1.1
BR131 Keskin Array S 81.83 311 P P 14 00 19.9 -0.3
BR131 IAmb IAmb 14 00 22.2
comp=Z,8.7nm,0.9s
BR131 Keskin Array S 81.83 311 P P 14 00 19.9 -0.3
BR131 pmax pmax
comp=Z,9.0nm,0.9s
BRTR Keskin Array B 81.83 311 P P 14 00 20.1 -0.1
comp=Z,9.9nm,0.9s,baz=94,slow=3.7,SNR=28
BRTR Keskin Array B 81.83 311 P P 14 00 19.9 -0.3
BIR Birlad 81.89 319 ⇓P P 14 00 20.2 +0.1
PRAR RASCA 82.03 321 ⇑P P 14 00 21.0 +0.1
BER Bergen 82.25 339 eP P 14 00 21.2 -0.5
TESR Tescani 82.30 320 ⇓P P 14 00 22.4 +0.2
BIZ Bicaz 82.35 320 ⇑P P 14 00 23.1 +0.5
PETR Petresti 82.42 319 ⇑P P 14 00 24.4 +1.5
BUR08 Bucovina Ar. S 82.43 321 P P 14 00 23.1 0.0
BUR08 IAmb IAmb 14 00 25.1
comp=Z,7.3nm,0.6s
BURAR Bucovina Array 82.44 321 ⇓P P 14 00 23.1 0.0
BURAR Bucovina Array 82.44 321 P P 14 00 22.9 -0.1
ODBI Odobesti 82.50 319 ⇑P P 14 00 24.7 +1.4
BLS5 Blasjo 82.63 338 eP P 14 00 22.9 -0.8
VRI Vrincioaia 82.63 319 ⇓P P 14 00 25.2 +1.2
PLOR Plostina 82.68 319 ⇑P P 14 00 24.8 +0.6
LKWY Lake 82.78 42 P P 14 00 28.4 +3.3
LKWY IAmb IAmb 14 00 29.4
comp=Z,4.0nm,0.8s
LKWY Lake 82.78 42 P P 14 00 28.4 +3.3
LKWY pmax pmax
comp=Z,4.0nm,0.8s
OZUR 83.02 320 ⇑P P 14 00 27.1 +1.1
RLMT Red Lodge 83.12 41 P P 14 00 28.6 +1.8
RLMT IAmb IAmb 14 00 29.4
comp=Z,4.9nm,1.1s
MLR Muntele Rosu 83.29 319 ⇑P P 14 00 28.4 +0.9
TPNV Topopah Spring 83.32 51 P P 14 00 28.7 +0.9
TPNV IAmb IAmb 14 00 30.1
comp=Z,4.3nm,0.8s
TPNV Topopah Spring 83.32 51 P P 14 00 28.7 +0.9
TPNV pmax pmax
comp=Z,4.0nm,0.9s
DOPR Dopca 83.32 320 ⇓P P 14 00 28.4 +0.9
UZH Uzhgorod 83.37 323 eP P 14 00 26.0 -1.6
UZH i 14 02 13.0
TRPA Tarpa 83.55 323 ⇓P P 14 00 28.7 +0.2
DUG Dugway, Tooele 83.79 47 P P 14 00 31.2 +1.1
DUG Dugway, Tooele 83.79 47 P P 14 00 31.2 +1.1
DUG pmax pmax
comp=Z,4.0nm,1.2s
VOIR 83.83 320 ⇓P P 14 00 30.4 +0.3
PSUT Pine Spring 84.05 49 P P 14 00 31.4 -0.1
TCUT Toone Canyon 84.15 46 P P 14 00 32.4 +0.4
DRGR 84.29 322 ⇓P P 14 00 33.2 +0.9
SHPR Sheep Range 84.30 51 P P 14 00 33.5 +0.8
PDAR Pinedale Array 84.33 43 P P 14 00 33.6 +0.8
comp=Z,1.2nm,0.8s,baz=264,slow=1.5,SNR=8.8
PDAR Pinedale Array 84.33 43 P P 14 00 33.2 +0.4
PFO Pinyon Flats O 84.97 54 P P 14 00 37.0 +1.1
comp=Z,4.0nm,0.6s,baz=284,slow=3.7,SNR=9.4
PFO Pinyon Flats O 84.97 54 IAmb IAmb 14 00 38.2
comp=Z,5.5nm,0.8s
PFO Pinyon Flats O 84.97 54 P P 14 00 37.1 +1.1
PFO pmax pmax
comp=Z,6.0nm,0.8s
VYHS Vyhne 85.22 325 eP P 14 00 37.9 +1.1
VYHS Vyhne 85.22 325 eP P 14 00 37.9 +1.1
BZS Buzias 85.62 321 ⇑P P 14 00 38.0 -0.7
CLL Collm 86.07 329 eP P 14 00 41.0 +0.2
CLL Collm 86.07 329 eP P 14 00 41.0 +0.2
KHC Kasperske Hory 87.34 327 eP P 14 00 46.2 -0.7
KHC Kasperske Hory 87.34 327 eP P 14 00 46.2 -0.7
GERES GERESS Array B 87.48 327 P P 14 00 46.6 -1.0
comp=Z,0.9nm,0.4s,baz=40,slow=6.4,SNR=23
MOA Molln 87.91 326 ePcP PcP 14 00 50.6 -0.4
comp=Z,0.1nm,0.2s
ABTA Abfaltersbach 89.54 326 i P P 14 00 55.8 -1.5
comp=Z,1.1nm,0.4s
WATA Walderalm 89.56 327 ePcP P 14 00 57.1 -0.4
comp=Z,1.2nm,0.4s
MOTA Moosalm 89.78 327 i PcP P 14 00 57.3 -1.2
comp=Z,0.8nm,0.4s
SQTA Sankt Quirin 89.82 327 ePcP P 14 00 58.4 -0.3
comp=Z,0.6nm,0.2s
FUORN Ofenpass-Fuorn 90.70 327 P P 14 01 02.2 -0.7
FUORN IAmb IAmb 14 01 04.3
comp=Z,22nm,1.4s
ANMO Albuquerque 90.96 48ceP P 14 01 06.3 +2.0
ANMO pmax pmax
comp=Z,2.0nm,0.9s
TXAR Lajitas Array 96.30 51 P P 14 01 29.2 +0.5
comp=Z,1.3nm,0.9s,baz=293,slow=6.4,SNR=3.9
QSPA South Pole Qui 119.69 180 PKPdf 14 06 45.6 -0.3
TORD Torodi Ar. Bea 120.41 310 PKP PKPdf 14 06 48.0 -0.9
comp=Z,0.9nm,0.5s,baz=20,slow=1.4,SNR=18
TORD PKKPbc PKKPbc 14 16 58.4 +2.2
comp=Z,0.3nm,0.5s,baz=201,slow=3.7,SNR=4.2
TORD Torodi Ar. Bea 120.41 310 PKPdf 14 06 47.6 -1.2
DBIC Dimbokro 129.51 310 PKP PKPdf 14 07 06.2 -0.2
comp=Z,1.4nm,0.5s,baz=41,slow=5.7,SNR=4.2
SDV Santo Domingo 132.20 41 PKP PKPdf 14 07 11.6 0.0
comp=Z,2.7nm,0.5s,baz=266,slow=3.8,SNR=4.4
NNA Nana 142.53 69 PKhKP PKPpre 14 07 27.6
comp=Z,3.7nm,0.3s,baz=307,slow=4.2,SNR=4.7
USHA Ushuaia 148.42 150 PKPbc PKiKP 14 07 44.2 -0.2
comp=Z,7.6nm,0.8s,baz=133,slow=5.3,SNR=6.2
SAML Samuel 150.77 49 PKPbc 14 07 49.9 -0.2
SAML Samuel 150.77 49 PKIKP PKPbc 14 07 49.9 -0.2
LPAZ La Paz 151.93 67 PKPbc PKiKP 14 07 54.2 +0.6
comp=Z,1.9nm,0.5s,baz=68,slow=2.9,SNR=9.6
LPAZ La Paz 151.93 67 PKPbc 14 07 52.7 -0.7
LPAZ La Paz 151.93 67 PKIKP PKPbc 14 07 52.7 -0.7

ATH 02 14:16:08.3, 38°.20N×20°.38E, h14km±1km, ML2.5/2, Error ellipse: s-maj=1.9km s-min=1.2km az=259.0
THE 02 14:16:08.3, 38°.18N×20°.41E, h15km, ML2.8/3, Error ellipse: s-maj=1.1km s-min=0.5km az=179.0
ISC 02 14:16:08.4±1.3, 38°.20N±0°.03×20°.40E±0°.06, h15km±6km, n23, σ0§39/35, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	229	P	Pg	14 16 10.9	-0.1
CHV1				S	Sg	14 16 12.7	0.0
	14µm,0.2s						
KEF3	Kipouria, Keph	0.04	278	P	Pg	14 16 11.0	-0.1
KEF3				S	Sg	14 16 12.9	0.0
KEF4	Livadi, Kephal	0.06	16	P	Pg	14 16 11.2	0.0
KEF4				S	Sg	14 16 13.4	+0.2
ARG2	Argostoli	0.07	105	P	Pg	14 16 11.2	-0.1
ARG2				S	Sg	14 16 13.2	0.0
	6µm,0.1s						
KEF2	Argostoli. Kep	0.07	115	P	Pg	14 16 11.2	-0.1
KEF2				S	Sg	14 16 13.3	0.0
KEF1	Kardakata, Kep	0.10	34	P	Pg	14 16 11.5	-0.1
KEF1				S	Sg	14 16 13.0	-0.7
VLS	Valsamata	0.15	98	P	Pg	14 16 12.0	-0.2
VLS				S	Sg	14 16 14.8	-0.1
	3µm,0.1s						
VLS	Valsamata	0.15	98	P	Pg	14 16 12.1	-0.2
VLS				S	Sg	14 16 14.8	-0.1
VLS				AML	AML	14 16 14.9	
	comp=E,4724µm,0.1s						
VLS				AML	AML	14 16 15.0	
	comp=N,4991µm,0.1s						
VSK1	VASILIKIADES	0.25	31	P	Pg	14 16 13.7	-0.1
VSK1				S	Sg	14 16 18.3	+0.8
VLMS	Volimes, Zakyn	0.38	147	P	Pg	14 16 16.0	-0.1
VLMS				S	Sb	14 16 22.3	-0.3
VLMS				AML	AML	14 16 22.6	
	comp=N,2385µm,0.3s						
VLMS				AML	AML	14 16 24.8	
	comp=E,1002µm,0.3s						
EVGI	Lefkada island	0.47	25	P	Pg	14 16 17.4	-0.4
EVGI				S	Sb	14 16 25.0	-0.2
EVGI	Lefkada island	0.47	25	P	Pg	14 16 17.3	-0.4
EVGI				S	Sg	14 16 24.7	+0.7
MGNA	Meganis	0.55	34	P	Pg	14 16 18.6	-0.6
LKD2	Lefkada island	0.62	19	P	Pg	14 16 20.5	-0.2
LKD2	Lefkada island	0.62	19	P	Pg	14 16 19.8	-0.8
TSLK	Tsoukalades, L	0.66	18	P	Pg	14 16 20.9	-0.3
PDO	Prodromos	0.73	57	P	Pg	14 16 22.2	-0.5
PVO	Paravola	0.98	64	P	Pb	14 16 27.0	-0.1
DRO	Drossia	1.06	103	P	Pb	14 16 28.4	-0.1
ANX	Ano Chora	1.26	71	P	Pg	14 16 32.9	+0.3
KALE	Kalithea	1.38	81	P	Pb	14 16 34.5	+0.5
KLV	Kalavryta, Ach	1.39	96	P	Pb	14 16 34.5	+0.4
AGG	Agios Georgios	1.72	61	P	Pb	14 16 40.4	+0.6

NEIC 02 14:24:46.7±1.6, 4°.89S±0°.09×153°.8E±0°.1, h100km±8km, mb4.8/23, Error ellipse: s-maj=15.3km s-min=13.2km az=69.0
IDC 02 14:24:48.2±3.5, 4°.87S×153°.72E, h109km±26km, mb3.8/9, mb1 4.0/10, mb1mx3.7/45, mbtmp4.2/10, MS3.2/3, Ms1 3.1/3, ms1mx2.8/32, Error ellipse: s-maj=37.0km s-min=14.3km az=104.0
ISC 02 14:24:47.2±0.7, 4°.86S±0°.07×153°.82E±0°.09, h105km, n43, σ0§91/39, mb4.6/17, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.78	292	Pn	Pn	14 25 17.0	-0.2
KRVT	Keravat (AS076	1.87	287	P	Pn	14 25 18.2	-0.1
	65nm,0.3s,baz=180,slow=0.7,SNR=78						
KRVT				S	Sn	14 25 41.6	-0.4
	190nm,0.3s,baz=350,slow=23,SNR=5.6						
KRVT				LR	LR	14 25 52.5	
	comp=Z,100nm,21.4s,baz=124,slow=36						
HNR	Honiara	7.59	127	LR	LR	14 29 24.2	
	comp=Z,190nm,21.1s,baz=300,slow=36						
PMG	Port Moresby	8.00	235	P	Pn	14 26 42.1	+1.4
	20nm,0.3s,baz=42,slow=5.8,SNR=61						
PMG				S	Sn	14 28 10.2	+0.5
	4.3nm,0.3s,baz=150,slow=21,SNR=2.5						
PMG				LR	LR	14 29 49.6	
	comp=Z,155nm,20.5s,baz=76,slow=38						
PMG	Port Moresby	8.00	235	Pn	Pn	14 26 41.8	+1.0
PATS	Pohnpei	12.45	21	Pn	Pn	14 27 40.9	0.0
DZM	Mont Dzumac	21.03	146	P	P	14 29 21.4	-1.4
DZM				IAmb	IAmb	14 29 35.9	
	comp=Z,49nm,1.6s						
SARN	Sarigan	22.85	340	P	P	14 29 41.1	-0.7
SARN				IAmb	IAmb	14 30 09.9	
	comp=Z,93nm,1.2s						
MTN	Manton Dam	23.76	249	P	P	14 29 48.2	-2.1
WR0	Warramunga Arr	24.03	230	P	P	14 29 53.7	+1.0
WR0				IAmb	IAmb	14 30 43.9	
	comp=Z,76nm,1.9s						
WB0	Warramunga Arr	24.03	230	P	P	14 29 53.3	+0.6
WB0				IAmb	IAmb	14 30 36.7	
	comp=Z,42nm,1.7s						
WRAB	Tennant Creek	24.16	230	P	P	14 29 51.6	-2.2
WB2	Warramunga Arr	24.16	230	P	P	14 29 54.9	+1.1
WB2				IAmb	IAmb	14 30 23.3	
	comp=Z,66nm,1.7s						
WRA	Warramunga Arr	24.17	230	P	P	14 29 54.4	+0.4
	comp=Z,5.5nm,0.7s,baz=55,slow=9.9,SNR=18						
WRA	Warramunga Arr	24.17	230	IAmb	IAmb	14 29 55.8	
	comp=Z,0.4nm,0.8s						
H11S3	WAKE ISLAND Hy	26.45	28	T	T	14 58 50.9	
	baz=204						
H11S2	WAKE ISLAND Hy	26.45	28	T	T	14 58 57.0	
	baz=204						
H11S1	WAKE ISLAND Hy	26.47	28	T	T	14 58 52.1	
	baz=204						
AS31	Alice Springs	26.80	224	P	P	14 30 16.4	-1.3
ASAR	Alice Springs	26.80	224	P	P	14 30 18.0	+0.3
	comp=Z,1.9nm,0.7s,baz=53,slow=8.9,SNR=23						
ASAR	Alice Springs	26.80	224	P	P	14 30 16.8	-0.9
KNRA	Kununurra	26.86	245	P	P	14 30 18.4	+0.1
TNTI	Ternate	27.01	281	P	P	14 30 19.4	-0.2
STKA	Stephens Creek	29.22	202	P	P	14 30 39.1	0.0
	comp=Z,2.9nm,0.8s,baz=34,slow=15,SNR=5.8						
STKA				LR	LR	14 42 58.3	
	comp=Z,37nm,19.6s,baz=28,slow=37						
FITZ	Fitzroy Crossi	30.52	242	P	P	14 30 50.4	-0.4
FITZ				IAmb	IAmb	14 31 27.4	
	comp=Z,49nm,1.5s						
BBOO	Buckleboo	32.38	209	P	P	14 31 06.5	-0.5
BBOO				IAmb	IAmb	14 31 41.6	
	comp=Z,58nm,1.6s						
FORT	Forrest	35.39	220	P	P	14 31 32.7	-0.3
MORW	Morawa	43.10	232	P	P	14 32 37.2	0.0
JNU	Nakatsue	43.59	332	P	P	14 32 42.0	+0.9
	comp=Z,3.6nm,0.8s,baz=129,slow=7.3,SNR=4.4						
JNU	Nakatsue	43.59	332	IAmb	IAmb	14 33 46.9	
	comp=Z,54nm,1.7s						
MJAR	Matsushiro Arr	43.70	342	P	P	14 32 41.6	-0.3
CISI	Cisompet, Garu	45.80	264	P	P	14 32 58.3	-0.7
ENH	Enshi	54.94	312	P	P	14 34 08.4	+0.8
XAN	Xi'an	57.37	316	P	P	14 34 24.9	+0.1
XAN				pP	pP	14 34 30.8	-18
PETK	Petropavlovsk-	57.84	3	P	P	14 34 29.5	+1.8
	comp=Z,2.7nm,0.8s,baz=182,slow=8.7,SNR=4.2						
MA2	Magadan	64.28	358	P	P	14 35 11.7	+0.6
MA2				IAmb	IAmb	14 35 14.1	
	comp=Z,5.4nm,0.7s						
MKAR	Makanchi Array	81.04	319	P	P	14 36 51.5	+0.9
	comp=Z,1.3nm,0.8s,baz=120,slow=6.2,SNR=3.8						
ILAR	Eielson Array	81.83	22	P	P	14 36 54.2	-0.2
	comp=Z,0.8nm,0.9s,baz=247,slow=5.1,SNR=5.8						
ILAR	Eielson Array	81.83	22	P	P	14 36 54.4	0.0
DHAK	Deception Hill	83.06	29	P	P	14 37 00.8	-0.1
BVAR	Borovoye Array	89.90	323	P	P	14 37 34.0	-0.4
	comp=Z,2.1nm,0.7s,baz=76,slow=6.1,SNR=3.9						
YKA	Yellowknife Ar	95.01	28	P	P	14 37 58.4	+0.7
	comp=Z,0.1nm,0.5s,baz=270,slow=4.8,SNR=4.2						
TORD	Torodi Ar. Bea	151.29	289	PKPbc	PKPbc	14 44 28.2	-1.4
	comp=Z,2.1nm,0.7s,baz=72,slow=2.8,SNR=7.9						

THR 02 14:26:44.5±0.2, 26°.79N×57°.82E, h15km, mb5.3
IDC 02 14:26:45.2±0.4, 26°.70N×57°.77E, h0km, mb4.8/37, mb1 4.9/40, mb1mx4.9/54, mbtmp4.9/40, ML4.7/2, MS4.8/41, Ms1 4.8/41, ms1mx4.7/54, Error ellipse: s-maj=10.6km s-min=9.6km az=2.0
GCMT 02 14:26:45.5±0.1, 26°.51N±0°.01×57°.60E±0°.01, h16km, MW5.3/137, Moment Tensor Solution. s87,c128; s137,c264; Duration: 1§1 Moment tensor: Scale 10^17 Nm; Mrr-0.12±.02; Mθθ-0.29±.02; Mφφ0.40±.02; Mrθ0.26±.05; Mrφ1.15±.02; Mθφ-0.11±.05; Best double couple: M0 1.23900×10^17 NP1:φs352.00000°, δ78.00000°, λ-172.00000°. NP2:φs261.00000°, δ82.00000°, λ-12.00000°. Principal axes: T 1.2640, Plg3.0000°, Azm307.0000°; N -0.0520, Plg76.0000°, Azm48.0000°; P -1.2130, Plg14.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC 02 14:26:45.5±1.5, 26°.59N±0°.04×57°.74E±0°.08, h10km±1km, mb5.3/162, mb_Lg5.4(TEH) Error ellipse: s-maj=11.8km s-min=6.6km az=94.0
TEH 02 14:26:45.5, 26°.71N×57°.79E, h5km, ML5.4
DSN 02 14:26:45.7±2.8, 26°.58N×57°.95E, h10km, ML5.6/12, Error ellipse: s-maj=41.0km s-min=17.5km az=179.0
MOS 02 14:26:46.0±0.9, 26°.71N×57°.78E, h20km, mb5.4/90, MS4.9/25, Error ellipse: s-maj=4.5km s-min=3.1km az=101.4
BJI 02 14:26:47.5±0.0, 26°.96N×57°.67E, h24km, mB5.2/52, mb4.8/65, Ms5.3/74, Ms7 5.1/64
OMAN 02 14:26:48.2±2.7, 26°.44N×57°.76E, h9km, mb5.6/2, ml5.1/21, ms5.0/1, Mwp5.5/10, Error ellipse: s-maj=29.8km s-min=11.7km az=13.0
BGR 02 14:26:51.1±6.0, 26°.46N×57°.09E, h15km, mb5.1, Error ellipse: s-maj=120.1km s-min=72.3km az=140.0
ISC 02 14:26:47.7±0.5, 26°.62N±0°.03×57°.78E±0°.03, h19km±1km, h20km:pP-P, n949, σ1§55/1023, mb5.3/248, MS5.0/85, 42C-26D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	Jask	0.98	181	ePg	Pn	14 27 06.9	+0.4
NIAN	Nian	1.26	318	ePg	Pn	14 27 10.2	-0.1
NIAN				e		14 27 36.7	
KHNJ	Kahnooj	1.32	357	eSg	Sn	14 27 27.4	-0.9
KHNJ				ePg	Pn	14 27 09.3	-1.9
BANOM	Banah	1.50	243	eP	Pn	14 27 13.1	-0.5
	SNR=3627						
BANOM				S	Sg	14 27 36.2	-0.1
BANOM	Banah	1.50	243	P	Pn	14 27 13.1	-0.5
	SNR=3624						
BANOM				S	Sg	14 27 36.7	+0.3
BANOM	Banah	1.50	243	ePn	Pn	14 27 13.3	-0.4
SHME	Shamm	1.58	249	eP	Pn	14 27 15.5	+0.8
	SNR=1374						
SHME	Shamm	1.58	249	ePn	Pn	14 27 15.1	+0.4
GENO	Geno	1.63	299	ePn	Pn	14 27 16.2	+0.6
GENO				e		14 27 18.7	
MDH	Madha	1.88	226	eP	Pn	14 27 17.2	-1.5
	SNR=227						
MDH	Madha	1.88	226	P	Pn	14 27 17.2	-1.5
	SNR=226						
MDH				P	Pn	14 27 17.2	-1.5
	SNR=226						
MDH				S	Sn	14 27 41.5	-0.4
MDH				S	Sn	14 27 41.5	-0.4
MDH	Madha	1.88	226	ePn	Pn	14 27 17.3	-1.5
MSFE	Esma-Masafi	1.93	230	eP	Pn	14 27 18.4	-1.1
	SNR=102						
MSFE	Esma-Masafi	1.93	230	ePn	Pn	14 27 17.7	-1.8
UOSS	Minazif	2.19	221	eP	Pn	14 27 21.2	-2.0
	SNR=83						
UOSS	Minazif	2.19	221		Pn	14 27 21.1	-2.0
UOSS	Minazif	2.19	221	P	Pn	14 27 21.5	-1.7
UOSS				S	Sn	14 27 49.0	-0.8
UOSS	Minazif	2.19	221	ePn	Pn	14 27 21.0	-2.2
UMQ	Umm Al-Quwin	2.20	241	eP	Pb	14 27 25.5	-1.3
	SNR=95						
UMQ	Umm Al-Quwin	2.20	241	P	Pb	14 27 26.0	-0.8
	SNR=11						
UMQ				P	Pb	14 27 26.0	-0.8
	SNR=11						
UMQ	Umm Al-Quwin	2.20	241	ePn	Pb	14 27 25.8	-1.0
HATD	Hatta, Dubai	2.33	220	eP	Pn	14 27 23.8	-1.2
	SNR=20						
HATD	Hatta, Dubai	2.33	220	P	Pn	14 27 22.9	-2.1
	SNR=20						
HATD				P	Pn	14 27 22.9	-2.1
	SNR=20						
HATD	Hatta, Dubai	2.33	220	ePn	Pn	14 27 22.9	-2.1
ASHO	Ashiyiah	2.48	219	eP	Pn	14 27 28.0	+0.8
	SNR=291						
ASHO	Ashiyiah	2.48	219	P	Pn	14 27 26.0	-1.1
	SNR=119						
ASHO				P	Pn	14 27 26.0	-1.1
	SNR=119						
ASHO	Ashiyiah	2.48	219	ePn	Pn	14 27 25.6	-1.5
NAZ	Nazwa, Dubai	2.51	230	P	Pb	14 27 30.0	-2.2
	SNR=248						
NAZ	Nazwa, Dubai	2.51	230	P	Pn	14 27 29.1	+1.6
	SNR=19						
NAZ				P	Pn	14 27 29.1	+1.6
	SNR=19						
NAZ	Nazwa, Dubai	2.51	230	ePn	Pn	14 27 27.9	+0.4
CHBR	Chabahar	2.64	112	ePn	Pn	14 27 28.9	-0.4
CHBR	Chabahar	2.64	112	ePn	Pn	14 27 30.7	+1.5
FAQ	Al Faqa, Dubai	2.72	227	eP	Pn	14 27 32.4	+2.0
	SNR=98						
FAQ	Al Faqa, Dubai	2.72	227	ePn	Pn	14 27 32.0	+1.6
SOHO	SOHO	2.72	205	P	Pn	14 27 28.4	-2.0
SOHO				P	Pn	14 27 28.4	-2.0
ASUD	Al Ashush, Dub	2.98	229	i P	Pn	14 27 35.9	+2.1
	SNR=83						
ASUD	Al Ashush, Dub	2.98	229	P	Pn	14 27 36.0	+2.1
	SNR=84						
ASUD	Al Ashush, Dub	2.98	229	ePn	Pn	14 27 35.8	+1.9
HOQ	Hoqain	3.06	188	P	Pn	14 27 33.6	-1.5
	SNR=168						
HOQ				P	Pn	14 27 33.6	-1.5
	SNR=168						
BIDO	Bidbid	3.10	174	P	Pn	14 27 34.5	-1.2
	SNR=85						
BIDO				S	Sn	14 28 09.3	-3.0
BIDO	Bidbid	3.10	174	ePn	Pn	14 27 34.6	-1.1

ALNE Al Ain 3.15 216 iP Pn 14 27 37.3 +1.0
SNR=218
ALNE Al Ain 3.15 216 ePn Pn 14 27 37.5 +1.2
NGRK Negar Kerman 3.15 343 ePn Pn 14 27 37.7 +1.1
NGRK e 14 28 31.0
LAR1 LAR 3.21 290 ePn Pn 14 27 36.9 -0.3
CHMN Cheshme madani 3.23 356 ePn Pn 14 27 39.2 +1.4
CHMN e 14 28 49.1
AJN Ajban 3.25 231 iP Pn 14 27 39.1 +1.5
SNR=19
AJN Ajban 3.25 231 P Pn 14 27 39.0 +1.3
SNR=20
WSAR Wadi Sarin 3.46 167 Pn Pn 14 27 40.2 -0.3
107nm,0.3s,baz=348,slow=5.9,SNR=873
WSAR Sn Sn 14 28 17.5 -3.5
267nm,0.3s,baz=104,slow=20,SNR=9.1
WSAR Wadi Sarin 3.46 167 P Pn 14 27 40.3 -0.3
ARQ Araqi 3.47 199 P Pn 14 27 42.1 +1.4
SNR=293
ARQ P Pn 14 27 42.1 +1.4
SNR=293
ARQ S Sn 14 28 25.4 +4.1
ARQ S Sn 14 28 25.4 +4.1
TVBK TV Kerman 3.47 345 ePn Pn 14 27 42.2 +1.2
TVBK e 14 28 44.9
SMDO Samad 3.56 176 P Pn 14 27 42.0 0.0
SNR=168
SMDO S Sn 14 28 24.3 +0.7
BSY Bisya 3.90 188 P Pn 14 27 48.1 +1.4
SNR=72
KHGB Koh Gabri 3.91 343 ePn Pn 14 27 48.7 +1.7
KHGB e 14 28 59.8
SZD1 Zahaedan-tmp 3.94 43 ePn Pn 14 27 49.0 +1.6
WBK Wadi Bani Khal 4.14 165 P Pn 14 27 49.3 -0.7
SNR=407
JHRM Jahrom 4.17 298 ePn Pn 14 27 50.7 +0.2
JMDO Jabal Madar 4.25 176 P Pn 14 27 51.9 +0.5
SNR=121
UMZA Um Al Zommool 4.56 212 ePn Pn 14 27 55.3 -0.4
JRN Qarnain Island 4.75 250 ePn Pn 14 27 57.3 -1.0
ISRV Sarvestan 4.96 305 ePn Pn 14 28 01.4 0.0
NHDN Nehbandan 5.15 22 ePn Pn 14 28 05.0 +1.1
GHWR Ruwais 5.17 240 ePn Pn 14 28 03.1 -1.0
IBAF Bafgh 5.31 339 ePn Pn 14 28 06.7 +0.5
MZR Muzera 5.32 228 iP Pn 14 28 06.7 +0.6
SNR=7.9
MZR Muzera 5.32 228 P Pn 14 28 05.8 -0.3
SNR=8.0
MZR Muzera 5.32 228 ePn Pn 14 28 05.9 -0.2
GHB Gharebagh 5.39 302 ePn Pn 14 28 06.3 -1.1
BSRN Basiran 5.45 12 ePn Pn 14 28 05.1 -3.0
BSRN Basiran 5.45 12 ePn Pn 14 28 08.6 +0.5
IMEH Mehriz 5.50 330 ePn Pn 14 28 09.4 +0.6
SHI Shiraz 5.54 304 ePn Pn 14 28 08.3 -1.0
IKOO Kooshah 5.88 10 ePn Pn 14 28 14.7 +0.7
SLWR Sila 6.07 247 ePn Pn 14 28 14.8 -1.6
IKAZ Kazeroun 6.11 302 ePn Pn 14 28 16.2 -1.1
AHBU AHRAM 6.16 293 ePn Pn 14 28 15.7 -2.0
ICHK Chekchek 6.33 333 ePn Pn 14 28 20.2 0.0
IDAH Dahanechah 6.36 16 ePn Pn 14 28 21.8 +1.2
ISAD Sadrabad 6.37 327 ePn Pn 14 28 21.6 +0.8
TPRV Parvadeh(Tabas 6.45 352 ePn Pn 14 28 23.0 +1.2
IMON Monand 6.75 14 ePn Pn 14 28 27.2 +1.2
AFRZ Afriz 6.86 9 ePn Pn 14 28 28.2 +0.7
KLNJ Kolanjah 6.97 310 ePn Pn 14 28 26.5 -2.6
TKDS Koohdasht(Taba 6.99 355 ePn Pn 14 28 29.9 +0.7
IRAM Ramesheh 7.00 319 ePn Pn 14 28 28.5 -0.9
TNSJ Nastanj 7.38 352 ePn Pn 14 28 35.6 +1.0
ANAR Anarak 7.43 333 ePn Pn 14 28 35.2 0.0
IBRJ Brojen 7.75 314 ePn Pn 14 28 40.1 +0.3
IZEF Zefreh 7.84 324 ePn Pn 14 28 39.7 -1.3
ROKH ROKH 8.19 316 ePn Pn 14 28 44.7 -1.0
JHBN Jahan bin 8.35 314 ePn Pn 14 28 46.6 -1.4
IPIR Pirpir 8.51 317 ePn Pn 14 28 48.5 -1.7
IKLH Kolahrood 8.57 323 ePn Pn 14 28 50.0 -1.0
HRA Herat 8.64 25 Pn 14 28 52.7 +0.8
KRSH Karshahi 8.80 328 ePn Pn 14 28 53.8 -0.2
QAM Ghamsar 8.98 324 ePn Pn 14 28 57.6 +1.0
IANJ Anjilo 9.42 340 ePn Pn 14 29 03.2 +0.6
JRKH Jarkhoshk 9.51 13 ePn Pn 14 29 06.6 +2.8
SHGR Shooshtar-Gavs 9.55 307 ePn Pn 14 29 03.1 -1.1
SHGR Shooshtar-Gavs 9.55 307 ePn Pn 14 29 03.1 -1.1
GHVR GHOM 9.62 326 ePn Pn 14 29 04.0 -1.2
GHVR GHOM 9.62 326 ePn Pn 14 29 04.0 -1.2
IVRN Varamin 9.83 330 ePn Pn 14 29 09.0 +0.9
IPAY Payeh 9.85 6 ePn Pn 14 29 10.7 +2.2
IMYA Miami 9.89 11 ePn Pn 14 29 10.5 +1.5
ISHM Shahmirzad 9.93 338 ePn Pn 14 29 10.7 +1.1
IFIR Firoozkooh 9.96 336 ePn Pn 14 29 11.1 +1.0
IAKL Akhelmad 9.98 5 ePn Pn 14 29 12.9 +2.5
IQOM Qom 10.02 326 ePn Pn 14 29 10.6 -0.2
IKRD Kardeh 10.14 3 ePn Pn 14 29 15.9 +3.4
IDMV Damavand 10.19 333 ePn Pn 14 29 12.8 -0.5
IALA Alasht 10.34 337 ePn Pn 14 29 16.9 +1.6
ASAO Ashtian 10.34 322 ePn Pn 14 29 13.9 -1.4
ASAO Ashtian 10.34 322 ePn Pn 14 29 13.8 -1.4
ISFR Sfrayin 10.40 1 ePn Pn 14 29 17.2 +1.1
IHSB Hasanabad 10.40 329 ePn Pn 14 29 17.0 +1.0
IGLO Ghaloghah 10.41 342 ePn Pn 14 29 18.4 +2.3
BMDN Meydan 10.46 314 ePn Pn 14 29 13.4 -3.4
BDRS Dareh Seyedi 10.60 316 ePn Pn 14 29 16.4 -2.5
TEH Tehran 10.61 330 ePn Pn 14 29 19.7 +0.9
IKMR Kamar-syah 10.65 312 ePn Pn 14 29 16.6 -2.6
IPRN Peran 10.65 335 ePn Pn 14 29 20.4 +1.0
IMND Minoodasht 10.79 350 ePn Pn 14 29 22.8 +1.6
CHTH Charan 10.86 330 ePn Pn 14 29 20.6 -1.8
CHTH Charan 10.86 330 ePn Pn 14 29 22.0 -0.4
IMHD Mahdasht 10.89 328 ePn Pn 14 29 24.3 +1.6
HSAM Samen 10.95 316 ePn Pn 14 29 21.0 -2.6
IDOB Doab 10.95 313 ePn Pn 14 29 20.0 -3.5
IKFM Kafar-mosalman 11.01 311 ePn Pn 14 29 21.0 -3.2
IRAZ Razeghan 11.04 324 ePn Pn 14 29 24.6 -0.2
HAGD Aghdareh 11.04 320 ePn Pn 14 29 24.2 -0.7
GEYT Alibeck 11.28 1 Pn Pn 14 29 29.2 +1.3
1.0nm,0.3s,baz=172,slow=12,SNR=23
GEYT Lg Lg 14 32 43.3
0.2nm,0.3s,baz=99,slow=9.5,SNR=1.9
GYA0B ALIBECK ARRAY 11.28 1 Pn 14 29 29.2 +1.3
BHUJ Bhuj 11.28 105 eP Pn 14 29 26.8 -1.1
BHUJ ex x 14 33 38.6
QABG Abgarm-Qazvin 11.45 324 ePn Pn 14 29 31.2 +0.7
QALM Alamut, Qazvin 11.51 330 ePn Pn 14 29 33.8 +2.5
RAYN Ar Rayn 11.55 257 Pn 14 29 27.5 -4.2
RAYN Ar Rayn 11.55 257 P Pn 14 29 27.5 -4.2
IBZA Bozab 11.58 315 ePn Pn 14 29 26.8 -5.5
IKOM Komasi 11.62 313 ePn Pn 14 29 29.9 -2.8
IGZV Ghazvin 11.67 328 ePn Pn 14 29 34.6 +1.2
HSRG Sareghieh 11.84 319 ePn Pn 14 29 34.1 -1.7
IGHG Ghaleghazi 12.34 311 ePn Pn 14 29 40.3 -2.3
ILIN Lien 12.44 314 ePn Pn 14 29 40.7 -3.2
KBL Kabul 12.50 48 Pn 14 29 46.4 +1.6
KBL Kabul 12.50 48 P Pn 14 29 47.2 +2.5
SNR=63
KBL Kabul 12.50 48 P Pn 14 29 46.4 +1.6
ZNJK Zanjan 12.65 325 ePn Pn 14 29 45.5 -1.4
ZNJK Zanjan 12.65 325 ePn Pn 14 29 46.7 -0.2
IDHR Dehrash 12.68 312 ePn Pn 14 29 42.1 -5.1
THW Thamme Wali 13.60 60 P Pn 14 29 58.4 -1.2
SARP Sargodha 14.03 64 P Pn 14 30 07.5 +2.1
ISRB Sarab 14.06 325 ePn Pn 14 30 05.6 -0.5
CEP Cherat 14.16 56 P Pn 14 30 07.7 +0.3
MAHB Mahabad 14.40 318 ePn Pn 14 30 07.8 -2.9
GRMI Germi 14.71 328 ePn Pn 14 30 14.0 -0.9
GRMI Germi 14.71 328 ePn Pn 14 30 14.5 -0.4
IHRS Heris 14.75 325 ePn Pn 14 30 15.2 -0.4
SOCY Socotra 14.80 195 Pn 14 30 09.2 -6.9
TVRZ Varzaqan 15.09 324 ePn Pn 14 30 20.7 +0.7
NIL Nilore 15.10 59 Pn 14 30 18.7 -1.3
NIL Nilore 15.10 59 P Pn 14 30 18.7 -1.3
NIL pmax pmax
comp=Z,383nm,1.0s
CHCP Chirah Chowk 15.11 59 P Pn 14 30 19.2 -1.0
IMRD Marand 15.75 323 ePn Pn 14 30 29.5 +0.8
BOM Bombay 15.85 116 ex Pn 14 30 20.2 -10
BOM AMP 14 30 29.4
comp=Z,610nm,1.5s
BOM ex x 14 33 28.6
THN Thein Dam 16.64 65 eP P 14 30 45.0 +2.8
THN ex x 14 33 41.0
MAKU Maku 16.77 322 IAmb IAmb 14 30 52.5
comp=E,464nm,2.0s

POO Poona 16.87 115 eP Pn 14 30 42.0 -1.0
POO eP P 14 30 43.9 -1.1
SIRT Sirnak 16.91 314 P Pn 14 30 38.8 -4.6
AKT Akhty 16.98 333 eP Pn 14 30 43.5 -0.7
AKT eS Sn 14 33 51.1 -1.3
AKT pmax pmax
comp=Z,75nm,0.6s
AKT smax smax
comp=N,16nm,1.7s
AKT smax smax
comp=E,19nm,1.3s
VANB Van 16.99 318 P Pn 14 30 44.4 0.0
CLDR Caldiran 17.05 321 P Pn 14 30 45.9 +0.7
AKDM Akdamar-Van 17.07 317 P Pn 14 30 46.1 +0.7
DHRM DHARAMSHALA 17.07 66 eP P 14 30 48.9 +1.7
BTK Batken 17.24 36 Pn 14 30 45.7 -1.8
BTK IAmb IAmb 14 31 12.2
comp=Z,325nm,1.4s
BTK Batken 17.24 36 P Pn 14 30 45.7 -1.8
BTK pmax pmax
comp=Z,325nm,1.5s
GNI Garni 17.31 324 Pn Pn 14 30 49.1 +0.7
comp=Z,3.0nm,0.3s,baz=127,slow=2.5,SNR=15
GNI LR LR 14 39 00.4
comp=Z,2μm,18.3s,baz=116,slow=43
GNI Garni 17.31 324 Pn Pn 14 30 46.9 -1.5
GNI IAmb IAmb 14 31 15.6
comp=Z,382nm,1.3s
GNI Garni 17.31 324 P Pn 14 30 46.9 -1.5
GNI pmax pmax
comp=Z,382nm,1.3s
DAMY Dhamar 17.33 229 Pn 14 30 45.1 -3.8
DAMY IAmb IAmb 14 31 02.9
comp=Z,399nm,1.1s
NDI New Delhi 17.34 79 ex P 14 30 55.0 +4.9
SMLA Simla 17.56 71 eP P 14 30 52.6 +0.2
SMLA IAmb IAmb 14 31 05.6
comp=Z,144nm,0.9s
GURO Guroymak-BITLI 17.79 316 P Pn 14 30 55.0 +0.6
MLAZ Malazgirt-MUS 17.84 318 P Pn 14 30 55.4 +0.4
AGRB Hanur-Agry 17.86 320 P P 14 30 56.1 +0.1
GNBR Gunib 18.05 333 iP P 14 30 58.1 +0.3
SVAN Silvan-Diyarba 18.09 314 P Pn 14 30 53.4 -4.5
BHPL Bhopal 18.13 96 eP Pn 14 30 57.2 -1.3
BHPL eP P 14 30 57.5 -1.3
BHPL ex x 14 34 22.4
DDI Dehra Dun 18.20 74 eP P 14 31 03.2 +3.6
MAZI Mazidag 18.21 311 P Pn 14 30 56.8 -2.7
MAK Makhachkala 18.33 335 eP Pn 14 30 59.2 -1.6
MAK eS Sn 14 34 22.0 -2.9
MAK pmax pmax
comp=Z,351nm,1.2s
MAK MLR MLR
comp=Z,2μm,13.0s
CHM Chimkent 18.41 29 eP P 14 30 58.0 -3.7
CHM eS Sn 14 34 25.1 -1.9
CHM eLR LR 14 39 59.3
CHM Chimkent 18.41 29 eP P 14 30 58.0 -3.7
CHM eS Sn 14 34 25.1 -1.9
IUG Iuzhnay 18.46 30 eP P 14 31 00.8 -1.6
IUG eS Sn 14 34 23.9 -4.5
IUG Iuzhnay 18.46 30 eP P 14 31 00.8 -1.6
IUG eS Sn 14 34 23.8 -4.5
TBLG Delisi 18.50 328 P P 14 30 59.1 -3.6
TBLG Delisi 18.50 328 P P 14 30 59.1 -3.6
TBLG pmax pmax
comp=Z,59nm,1.0s
GOA Goa 18.60 123 eP Pn 14 31 06.0 +1.7
GOA IAmb IAmb 14 31 11.3
comp=Z,262nm,2.0s
DYBB Diyarbakir 18.68 312 P P 14 31 02.8 -1.9
KOPR Koprukoy-ERZUR 18.80 319 P Pn 14 31 07.9 +1.1
KARO Karliova-Bingo 18.86 316 P Pn 14 31 07.9 +0.4
AKH Akhalkalaki 18.88 325 P P 14 31 06.7 -0.4
AKH Akhalkalaki 18.88 325 P P 14 31 06.7 -0.4
AKH pmax pmax
comp=Z,112nm,1.1s
SENK Senkaya-Erzuru 18.89 321 P Pn 14 31 08.7 +0.8
BNGB Bingl 18.90 315 P P 14 31 07.9 +0.6
JBG Jabagly 18.91 30 eP P 14 31 05.3 -2.1
JBG eS Sn 14 34 35.6 -3.7
JBG pmax pmax
comp=Z,169nm,3.5s
ASF Jabal al Asfar 19.01 292 Pn P 14 31 08.0 -0.5
comp=Z,1.6nm,0.3s,baz=63,slow=8.7,SNR=14
ASF LR LR 14 40 53.9
comp=Z,3μm,19.5s,baz=64,slow=45
ASF Jabal al Asfar 19.01 292 P P 14 31 08.0 -0.5
BRLS Borolday 19.09 28 eS Sn 14 34 35.1 -8.4
GROC Groznyy 19.20 333 iP Pn 14 31 11.6 +0.2
YEDI Yedisu-Bingol 19.25 316 P Pn 14 31 12.3 +0.1
URFA Urfa 19.32 309 P Pn 14 31 13.0 0.0
KK31 Karatay Array 19.44 29 P P 14 31 11.2 -1.8
KK31 IAmb IAmb 14 31 21.1
comp=Z,332nm,1.3s
KK31 Karatay Array 19.44 29 P P 14 31 11.2 -1.8
KK31 pmax pmax
comp=Z,332nm,1.3s
KKAR Karatay Array 19.44 29 P P 14 31 11.1 -1.9
KKAR Karatay Array 19.44 29 P P 14 31 11.5 -1.5
KKAR IAmb IAmb 14 31 21.1
comp=Z,332nm,1.3s
KKAR Karatay Array 19.44 29 P P 14 31 11.5 -1.5
KKAR pmax pmax
comp=Z,332nm,1.3s
SVRC Sivrice-ELAZID 19.46 312 P P 14 31 14.2 +0.8
DZA Taraz 19.64 31 eP P 14 31 12.4 -2.9
DZA Taraz 19.64 31 eP P 14 31 12.3 -2.9
ZEI Tsey 19.71 328 eP P 14 31 16.2 0.0
ZEI pmax pmax
comp=Z,96nm,0.9s
KSH Kashi 19.90 45 P P 14 31 11.0 -7.2
KSH pmax pmax
comp=Z,28nm,1.0s
KSH pmax pmax
comp=Z,870nm,7.9s
KSH LR LR
comp=Z,3μm,6.4s
KSH LR LR
comp=Z,8μm,11.3s
KSH LR LR
comp=Z,6μm,11.7s
CHOM Cayeli-Rize 20.15 320 P P 14 31 21.9 +1.1
NGP Nagpur 20.19 101 eP Pn 14 31 23.2 -0.1
NGP eS S 14 35 06.4 -0.9
SHBL Chebaa 20.21 295 eP P 14 31 21.9 +0.2
AML Almayashu 20.24 36 P P 14 31 21.1 -1.1
SNR=27
GAZ Gaziantep 20.34 306 P P 14 31 24.2 +1.2
GAZ Gaziantep 20.34 306 P P 14 31 22.4 -0.6
EIL Elat 20.35 284 P P 14 31 23.1 +0.1
comp=Z,202nm,1.1s,baz=93,slow=3.6,SNR=23
EIL S Sn 14 35 19.2 +5.2
comp=Z,38nm,0.9s,baz=119,slow=14,SNR=2.8
EIL LR LR 14 41 11.2
comp=Z,5μm,18.2s,baz=100,slow=43
NCK Nalchik 20.40 329 iP Pn 14 31 25.3 -0.3
NCK pmax pmax
comp=Z,73nm,0.9s
MMAI Mount Meron Ar 20.41 294 P P 14 31 25.1 +1.2
comp=Z,43nm,0.8s,baz=100,slow=14,SNR=24
MMAI LR LR 14 41 17.3
comp=Z,2μm,19.1s,baz=80,slow=43
BHL Bhannes 20.42 296 eP P 14 31 24.7 +0.8
JBP Jabalpur 20.43 95⇑eP Pn 14 31 25.7 -0.4
JBP AMB AMB 14 31 36.2
comp=Z,86nm,1.0s
JBP eS S 14 35 10.5 -1.5
JBP AMS AMS 14 41 06.0
comp=Z,6μm,14.2s
ATD Arta Tunnel 20.57 226 P P 14 31 26.6 +0.9
comp=Z,142nm,1.0s,baz=50,slow=6.5,SNR=22
ATD LR LR 14 40 01.3
comp=Z,3μm,21.2s,baz=48,slow=39
ATD Arta Tunnel 20.57 226 eP P 14 31 26.5 +0.9
ATD eS Sn 14 35 21.9 +2.4
ATD Arta Tunnel 20.57 226 P P 14 31 22.9 -2.7
ATD IAmb IAmb 14 31 30.3
comp=Z,177nm,1.0s
ATD Arta Tunnel 20.57 226 P P 14 31 26.5 +0.9
ATD Arta Tunnel 20.57 226 eP P 14 31 26.5 +0.9
ATD eS Sn 14 35 21.9 +2.4
EKS2 Erkin-Say 20.66 35 P P 14 31 25.7 -0.7
SNR=77

KMRS Kahramanmaras 20.71 307 P P 14 31 28.0 +1.1
UCH Uchtor 20.75 37 P P 14 31 27.2 -0.6
SNR=42
TAHT Tahtakopru-Hat 20.78 303 P P 14 31 28.8 +1.1
DARE Darende-Malaty 20.79 310 P P 14 31 27.5 -0.4
KBZ Khabaz 20.90 329 P Pn 14 31 30.8 -0.6
comp=Z,39nm,0.9s,baz=115,slow=6.7,SNR=18
KBZ Khabaz 20.90 329 iP Pn 14 31 30.9 -0.5
KBZ pmax pmax
comp=Z,57nm,1.0s
AAK Ala-Archa 21.02 36 P P 14 31 30.1 -0.2
comp=Z,50nm,0.8s,baz=205,slow=8.0,SNR=58
AAK LR LR 14 39 56.4
comp=Z,2μm,19.3s,baz=216,slow=38
AAK Ala-Archa 21.02 36 P P 14 31 30.1 -0.2
SNR=24
AAK Ala-Archa 21.02 36 P P 14 31 29.4 -0.9
AAK IAmb IAmb 14 31 43.4
comp=Z,160nm,1.1s
AAK Ala-Archa 21.02 36 P P 14 31 29.4 -0.9
AAK pmax pmax
comp=Z,160nm,1.1s
SHA1 Shidzhatmaz 21.02 328 iP P 14 31 31.3 +0.9
NRN Naryn 21.06 41 P P 14 31 29.3 -1.7
NRN Naryn 21.06 41 P P 14 31 29.3 -1.7
NRN pmax pmax
comp=Z,66nm,0.8s
KIV Kislovodsk 21.17 329 ⇓P P 14 31 34.1 +2.2
KIV Kislovodsk 21.17 329 P P 14 31 32.3 +0.3
KIV IAmb IAmb 14 32 08.7
comp=Z,122nm,1.0s
KIV Kislovodsk 21.17 329 P P 14 31 34.7 +2.8
KIV P P 14 31 34.7 +2.8
KIV Kislovodsk 21.17 329 eP P 14 31 33.0 +1.1
KIV eS S 14 35 28.0 +1.4
KIV pmax pmax
comp=Z,396nm,1.1s
KIV pmax pmax
comp=Z,193nm,4.7s
FRU1 Bishkek 21.21 36 P P 14 31 31.1 -1.2
FRU1 IAmb IAmb 14 31 50.2
comp=Z,120nm,0.9s
FRU1 Bishkek 21.21 36 P P 14 31 31.1 -1.2
FRU1 pmax pmax
comp=Z,120nm,0.9s
KBK Karagaybulak 21.27 37 P P 14 31 33.0 -0.1
SNR=36
HYB Hyderabad 21.30 111 iP P 14 31 34.0 +0.6
comp=Z,130nm,1.0s
HYB eS S 14 35 32.0 +2.6
HYB Hyderabad 21.30 111 eP P 14 31 33.8 +0.3
HYB IAmb IAmb 14 31 36.1
comp=Z,58nm,0.8s
CEYT Ceyhan 21.35 304 P P 14 31 35.7 +2.0
CHMS Chumysh 21.41 36 P P 14 31 33.6 -0.8
SNR=15
SARI SarD1z-Kayseri 21.45 309 P P 14 31 36.0 +0.9
USP Ospenovka 21.46 35 P P 14 31 33.5 -1.5
SNR=10
KOZT Kozan 21.48 306 P P 14 31 36.4 +1.2
SGDS Sogindy 21.66 35 eP P 14 31 36.5 -0.7
comp=Z,77nm,3.0s
SGDS eS S 14 35 33.1 -3.1
SGDS eLR LR 14 40 50.7
ULHL Ulahol 21.72 39 P P 14 31 38.2 +0.3
SNR=17
SVSK Karacayir 21.79 313 P P 14 31 39.5 +1.1
RSDY Resadiye-TOKAT 21.83 314 P P 14 31 33.8 -5.1
GOF Gofitskoye 21.87 331⇑eP P 14 31 40.1 +0.8
GOF eS S 14 35 45.6 +5.5
GOF pmax pmax
comp=Z,118nm,1.0s
BNN Bunyan 22.05 309 P P 14 31 42.4 +0.9
KDJ Kajisay 22.18 41 P P 14 31 41.2 -1.7
KDJ Kajisay 22.18 41 P P 14 31 41.2 -1.7
KDJ pmax pmax
comp=Z,245nm,1.0s
MERS Mersin 22.21 303 P P 14 31 44.6 +1.5
TOKT Tokat 22.30 313 P P 14 31 43.1 -0.9
SOC Sochi 22.39 324 eP P 14 31 43.3 -1.5
SOC e 14 32 06.5
SOC eS S 14 35 49.8 -0.1
SOC eSSS SSS 14 36 32.0
SOC pmax pmax
comp=Z,89nm,1.0s
SOC MLR MLR
comp=Z,4μm,15.0s
MTBS Maitube 22.40 38 eP P 14 31 45.4 +0.3
MTBS Maitube 22.40 38 eP P 14 31 45.4 +0.3
BTLS Baital 22.54 31 eP P 14 31 45.8 -0.8
BTLS Baital 22.54 31 eP P 14 31 45.7 -0.8
CSS Mathiatis 22.55 298 P P 14 31 44.4 -2.3
CSS IAmb IAmb 14 32 04.4
comp=Z,226nm,1.1s
TNSS Tian-Shan 22.62 39 eP P 14 31 47.6 -0.3
comp=Z,42nm,0.8s
TNSS Tian-Shan 22.62 39 eP P 14 31 47.5 -0.3
TNSS pmax pmax
comp=Z,42nm,0.8s
AB31 Akbulak array 22.66 4 iP P 14 31 46.5 -1.2
ABKAR Akbulak array 22.66 4 P P 14 31 46.0 -1.7
ABKAR Akbulak array 22.66 4 P P 14 31 46.6 -1.1
ABKAR IAmb IAmb 14 31 55.0
comp=Z,162nm,0.9s
KEBE Keben-Mersin 22.68 301 P P 14 31 48.8 +0.7
AAA Alma-Ata 22.72 38 eP P 14 31 47.3 -1.2
AAA eS S 14 35 52.8 -3.3
AAA eLR LR 14 40 22.9
AAA Alma-Ata 22.72 38 eP P 14 31 47.2 -1.2
AAA eS S 14 35 52.7 -3.3
MDOK Medeo 22.76 39 iP P 14 31 48.3 -0.7
MDOK eS S 14 35 54.5 -2.5
MDOK eLR LR 14 42 30.9
MDOK Medeo 22.76 39 iP P 14 31 48.3 -0.7
MDOK eS S 14 35 54.5 -2.5
KUU Kurty 22.86 36 eP P 14 31 48.6 -1.3
comp=Z,153nm,2.2s
KUU eS S 14 35 58.2 -0.3
KUU eLR LR 14 44 04.7
KUU Kurty 22.86 36 eP P 14 31 48.6 -1.3
KUU eS S 14 35 58.1 -0.3
KUU pmax pmax
comp=Z,153nm,2.2s
TEVE Tevekalti-Mers 22.88 301 P P 14 31 47.6 -2.7
LEF Lefka 22.94 298 ⇑P P 14 31 51.3 +0.5
LEF Lefka 22.94 298 P P 14 31 52.3 +1.6
KOLN Koldanda 22.98 81 eP P 14 31 52.1 +0.5
comp=Z,390nm,1.3s
KVT Kavak 23.02 314 P P 14 31 53.6 +2.0
BERE Bereket-Mersin 23.02 301 P P 14 31 46.8 -5.0
TEKE Tekeli-Mersin 23.04 300 P P 14 31 49.8 -2.0
DANN Dangsing 23.10 80 eP P 14 31 53.7 +0.9
comp=Z,934nm,1.0s
YESY Yesilyurt 23.12 305 P P 14 31 53.1 +0.4
PRZ Przheval'sk 23.12 42 P P 14 31 52.7 -0.1
PRZ IAmb IAmb 14 32 00.9
comp=Z,149nm,1.1s
PRZ Przheval'sk 23.12 42 P P 14 31 52.7 -0.1
PRZ pmax pmax
comp=Z,149nm,1.2s
CHKK Chushkaly 23.18 37 eP P 14 31 52.9 -0.3
CHKK Chushkaly 23.18 37 eP P 14 31 52.9 -0.3
SATY Saty 23.47 40 eP P 14 31 54.5 -1.8
comp=Z,28nm,1.1s
SATY eS S 14 36 09.2 +0.2
SATY Saty 23.47 40 eP P 14 31 54.4 -1.8
SATY eS S 14 36 09.1 +0.2
SATY pmax pmax
comp=Z,29nm,1.1s
CORM Corum 23.50 311 P P 14 31 52.6 -3.9
YAYX Yaylak 23.52 307 P P 14 31 57.1 +0.4
ZHN Zhinishke 23.55 40 eP P 14 31 55.0 -2.0
ZHN eLR LR 14 41 47.7
ZHN Zhinishke 23.55 40 eP P 14 31 55.0 -2.0
GAZI Gazipasa 23.69 300 P P 14 31 59.9 +1.6
SERE Sereflikochisa 23.70 307 P P 14 31 59.3 +0.8
AKTO Aktyubinsk 23.78 0 P P 14 31 58.7 -0.3
comp=Z,60nm,0.9s,baz=173,slow=9.4,SNR=106
AKTO LR LR 14 41 51.4
comp=Z,4μm,21.5s,baz=171,slow=38
HDMB Hadim 23.78 302 P P 14 32 01.2 +1.8
KPKS Kokpek 23.88 40 eP P 14 31 59.1 -1.1
comp=Z,247nm,3.4s
KPKS eS S 14 36 13.3 -2.1

KPKS				eLR	LR	14 42 14.9	
KPKS	**Kokpek**	**23.88**	**40**	eP	**P**	**14 31 59.0**	**-1.1**
KPKS				eS	**S**	**14 36 13.3**	**-2.1**
KPKS				pmax	pmax		
	comp=Z,247nm,3.4s						
UZB	**Uzynbulak**	**23.88**	**41**	eP	**P**	**14 31 59.0**	**-1.2**
	comp=Z,182nm,3.5s						
UZB				eS	**S**	**14 36 13.5**	**-2.1**
UZB				eLR	LR	14 42 08.5	
UZB	**Uzynbulak**	**23.88**	**41**	eP	**P**	**14 31 59.0**	**-1.2**
UZB				eS	**S**	**14 36 13.4**	**-2.1**
UZB				pmax	pmax		
	comp=Z,182nm,3.5s						
GKN	**Gorkha**	**23.89**	**81**	eP	**P**	**14 32 01.5**	**+1.1**
BR131	**Keskin Array S**	**23.97**	**309**	P	**P**	**14 32 00.6**	**-0.5**
BR131				IAmb	IAmb	14 32 06.7	
	comp=Z,107nm,0.9s						
BR131	**Keskin Array S**	**23.97**	**309**	P	**P**	**14 32 01.1**	**-0.1**
BR131	**Keskin Array S**	**23.97**	**309**	P	**P**	**14 32 00.6**	**-0.5**
BR131				pmax	pmax		
	comp=Z,107nm,1.0s						
BRTR	**Keskin Array B**	**23.97**	**309**	P	**P**	**14 32 01.0**	**-0.1**
	comp=Z,79nm,0.8s,baz=119,slow=14,SNR=162						
BRTR				LR	LR	14 43 20.8	
	comp=Z,5µm,18.0s,baz=87,slow=42						
BRTR	**Keskin Array B**	**23.97**	**309**	P	**P**	**14 32 00.6**	**-0.6**
CHBY	**Cihanbeyli**	**24.04**	**306**	P	**P**	**14 32 01.6**	**-0.1**
SHLS	**Shalkode**	**24.15**	**41**	eP	**P**	**14 32 03.3**	**+0.6**
	comp=Z,117nm,2.3s						
SHLS				eS	**S**	**14 36 22.2**	**+2.4**
SHLS				eLR	LR	14 42 37.5	
SHLS	**Shalkode**	**24.15**	**41**	eP	**P**	**14 32 03.3**	**+0.6**
SHLS				eS	**S**	**14 36 22.1**	**+2.4**
SHLS				pmax	pmax		
	comp=Z,117nm,2.3s						
KONT	**Konya--Tatoy**	**24.20**	**304**	P	**P**	**14 31 59.9**	**-3.2**
AFSR	**Afar-Bala (An**	**24.25**	**308**	P	**P**	**14 32 03.3**	**-0.4**
PDGK	**Podgornoye**	**24.27**	**41**	P	**P**	**14 32 03.2**	**-0.6**
LADK	**Ladik-KONYA**	**24.28**	**305**	P	**P**	**14 32 02.1**	**-1.9**
DMN	**Daman**	**24.33**	**81**	eP	**P**	**14 32 05.0**	**+0.4**
	comp=Z,176nm,1.1s						
ANN	**Anapa**	**24.42**	**323**	eP	**P**	**14 32 04.9**	**-0.1**
ANN				e		14 32 34.6	
ANN				eS	**S**	**14 36 25.5**	**+1.8**
ANN				eSS	**SnSn**	**14 37 10.1**	**+2.1**
ANN				pmax	pmax		
	comp=Z,338nm,1.4s						
ANN				MLR	MLR		
	comp=Z,5µm,21.0s						
KKN	**Kakani**	**24.47**	**81**	eP	**P**	**14 32 06.6**	**+0.7**
ILGA	**Ilgaz**	**24.52**	**312**	P	**P**	**14 32 05.7**	**-0.6**
PKIN	**Phulchoki**	**24.59**	**81**	eP	**P**	**14 32 07.5**	**+0.5**
PKI	**Pulchoki**	**24.60**	**81**	eP	**P**	**14 32 07.5**	**+0.3**
	comp=Z,143nm,1.1s						
ANTO	**Ankara**	**24.62**	**309**	⇑P	**P**	**14 32 07.5**	**+0.5**
ANTO	**Ankara**	**24.62**	**309**	P	**P**	**14 32 06.4**	**-0.6**
ANTO	**Ankara**	**24.62**	**309**	P	**P**	**14 32 06.4**	**-0.6**
ANTO				pmax	pmax		
	comp=Z,143nm,1.0s						
BR231	**Keskin MP Arra**	**24.62**	**309**	P	**P**	**14 32 07.2**	**+0.1**
LOD	**Lodumlu**	**24.65**	**309**	P	**P**	**14 32 09.1**	**+1.8**
TDK	**Taldyqorghan**	**24.70**	**37**	eP	**P**	**14 32 06.7**	**-1.0**
	comp=Z,129nm,2.0s						
TDK				eS	**S**	**14 36 26.8**	**-1.7**
TDK				eLR	LR	14 43 59.7	
TDK	**Taldyqorghan**	**24.70**	**37**	eP	**P**	**14 32 06.6**	**-1.0**
TDK				eS	**S**	**14 36 26.7**	**-1.7**
TDK				pmax	pmax		
	comp=Z,129nm,2.0s						
KIZT	**Kizilcal**	**24.89**	**306**	P	**P**	**14 32 10.2**	**+0.8**
GUN	**Gumba**	**24.99**	**81**	eP	**P**	**14 32 11.4**	**+0.6**
MDRS	**Chennai**	**25.01**	**118**	eP	**P**	**14 32 11.2**	**+0.6**
AAE	**Adis Abeba**	**25.11**	**229**	eP	**P**	**14 32 14.6**	**+2.7**
AAE				eS	**S**	**14 36 41.9**	**+5.9**
AAE	**Adis Abeba**	**25.11**	**229**	eP	**P**	**14 32 14.6**	**+2.7**
AAE				eS	**S**	**14 36 41.9**	**+5.9**
FURI	**Furi**	**25.27**	**229**	eP	**P**	**14 32 16.2**	**+2.9**
FURI				eS	S	14 36 51.0	+12
FURI	**Furi**	**25.27**	**229**	eP	**P**	**14 32 16.2**	**+2.9**
FURI				eS	S	14 36 51.0	+12
JIRN	**Jiri**	**25.28**	**81**	eP	**P**	**14 32 13.7**	**+0.3**
SVRH	**Sivrihisar-ESK**	**25.35**	**307**	P	**P**	**14 32 14.5**	**+0.9**
ISP	**Isparta**	**25.53**	**303**	P	**P**	**14 32 14.2**	**-1.1**
ISP				IAmb	IAmb	14 32 19.9	
	comp=Z,128nm,1.1s						
ISP	**Isparta**	**25.53**	**303**	P	**P**	**14 32 14.2**	**-1.1**
ISP				pmax	pmax		
	comp=Z,128nm,1.1s						
BOK	**Bokaro**	**25.57**	**90**	eP	**P**	**14 32 16.6**	**+1.0**
BOK				ex	x	14 36 54.5	
CIFT	**Cifteler, Eski**	**25.65**	**306**	P	**P**	**14 32 17.0**	**+0.7**
ELL	**Elmali**	**25.70**	**300**	P	**P**	**14 32 16.6**	**-0.2**
ELL	**Elmali**	**25.70**	**300**	P	**P**	**14 32 16.6**	**-0.2**
ELL				pmax	pmax		
	comp=Z,780nm,1.3s						
RAMN	**Ramite**	**25.71**	**83**	eP	**P**	**14 32 17.0**	**-0.2**
SHUT	**Suhut-Afyon**	**25.74**	**304**	P	**P**	**14 32 13.2**	**-4.0**
MDUB	**Mudurnu**	**25.99**	**309**	P	**P**	**14 32 21.8**	**+2.4**
MDUB	**Mudurnu**	**25.99**	**309**	P	**P**	**14 32 19.5**	**+0.1**
BRZS	**Berezniki**	**25.99**	**22**	eP	**P**	**14 32 18.8**	**-0.5**
	comp=Z,31nm,1.0s						
BRZS				eS	**S**	**14 36 48.6**	**-0.2**
BRZS				eLR	LR	14 43 34.4	
BRZS	**Berezniki**	**25.99**	**22**	eP	**P**	**14 32 18.7**	**-0.5**
BRZS				eS	**S**	**14 36 48.6**	**-0.2**
BRZS				pmax	pmax		
	comp=Z,31nm,1.0s						
SIM	**Simferopol'**	**26.36**	**320**	d iP	**P**	**14 32 23.4**	**+0.9**
SIM				S	**S**	**14 36 53.5**	**-1.2**
SIM				pmax	pmax		
	comp=Z,162nm,1.1s						
SEVA	**Sevastopol**	**26.37**	**319**	⇓P	**P**	**14 32 23.2**	**+0.6**
ODAN	**Odare**	**26.42**	**83**	eP	**P**	**14 32 24.1**	**+0.5**
BWNR	**Bhubaneshwar**	**26.44**	**98**	eP	**P**	**14 32 28.3**	**+4.9**
BWNR				IVmB_BB		14 32 34.4	
	comp=Z,421nm,2.9s						
TAPN	**Taplejung**	**26.65**	**82**	eP	**P**	**14 32 25.5**	**-0.3**
MANT	**Manisa**	**27.21**	**303**	P	**P**	**14 32 30.5**	**-0.1**
VRH	**Novokhopyorsk**	**27.42**	**338**	eP	**P**	**14 32 32.3**	**+0.3**
VRH				pmax	pmax		
	comp=Z,60nm,0.7s						
VRH				MLR	MLR		
	comp=Z,800nm,9.0s						
KARP	**Karpathos**	**27.60**	**296**	P	**P**	**14 32 34.0**	**+0.1**
MAKZ	**Makanchi**	**27.77**	**37**	P	**P**	**14 32 33.8**	**-1.5**
MAKZ				IAmb	IAmb	14 32 43.3	
	comp=Z,49nm,1.1s						
MAKZ	**Makanchi**	**27.77**	**37**	P	**P**	**14 32 33.8**	**-1.5**
MAKZ				pmax	pmax		
	comp=Z,49nm,1.1s						
MK31	**Makanchi Array**	**27.93**	**37**	P	**P**	**14 32 34.6**	**-2.2**
MK31	**Makanchi Array**	**27.93**	**37**	P	**P**	**14 32 34.6**	**-2.2**
MK31				pmax	pmax		
	comp=Z,31nm,1.2s						
MKAR	**Makanchi Array**	**27.93**	**37**	P	**P**	**14 32 35.9**	**-0.9**
	comp=Z,3.6nm,0.8s,baz=224,slow=6.8,SNR=21						
MKAR	**Makanchi Array**	**27.93**	**37**	P	**P**	**14 32 35.2**	**-1.5**
BVAR	**Borovoye Array**	**28.00**	**16**	P	**P**	**14 32 36.6**	**-0.7**
	comp=Z,19nm,0.9s,baz=202,slow=7.7,SNR=92						
BVAR				PcP	**PcP**	**14 35 53.8**	**+2.0**
	comp=Z,4.1nm,0.7s,baz=197,slow=1.5,SNR=4.3						
BRVK	**Borovoye**	**28.01**	**16**	P	**P**	**14 32 35.7**	**-1.6**
BRVK	**Borovoye**	**28.01**	**16**	P	**P**	**14 32 35.7**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,32nm,1.1s						
VSR	**Storozhevoye**	**28.35**	**335**	eP	**P**	**14 32 39.5**	**-0.8**
VSR				pmax	pmax		
	comp=Z,60nm,0.6s						
VSR				MLR	MLR		
	comp=Z,2µm,20.0s						
VORR	**Voronezh**	**28.70**	**336**	eP	**P**	**14 32 44.0**	**+0.6**
VORR				pmax	pmax		
	comp=Z,350nm,1.4s						
KURBB	**Kurchatov Arra**	**28.74**	**28**	P	**P**	**14 32 43.4**	**-0.4**
	comp=Z,7.7nm,0.9s,baz=228,slow=8.5,SNR=75						
KURK	**Kurchatov**	**28.85**	**28**	P	**P**	**14 32 42.0**	**-2.7**
KURK	**Kurchatov**	**28.85**	**28**	c eP	**P**	**14 32 44.4**	**-0.4**
KURK				pmax	pmax		
	comp=Z,20nm,1.7s						
SANT	**Santorini**	**29.11**	**297**	⇑P	**P**	**14 32 47.7**	**+0.4**
SANT	**Santorini**	**29.11**	**297**	P	**P**	**14 32 47.2**	**-0.1**
APE	**Apeiranthos**	**29.18**	**299**	⇑P	**P**	**14 32 47.9**	**-0.1**
SEM	**Semipalatinsk**	**29.33**	**30**	eP	**P**	**14 32 48.2**	**-1.2**
SEM				eLR	LR	14 45 29.7	
SEM	**Semipalatinsk**	**29.33**	**30**	eP	**P**	**14 32 48.1**	**-1.2**
IDI	**Anoyia**	**29.39**	**295**	P	**P**	**14 32 50.2**	**+0.3**
	comp=Z,40nm,0.7s,baz=82,slow=19,SNR=20						
IDI				LR	LR	14 47 53.0	
	comp=Z,1µm,20.5s,baz=80,slow=43						
LSA	**Lhasa**	**29.52**	**76**	P	**P**	**14 32 54.1**	**+2.5**
LSA				S	**S**	**14 37 46.9**	**+1.1**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LSA				LR	LR		
	comp=Z,10µm,22.8s						
LSA				LR	LR		
	comp=Z,11µm,22.8s						
LSA				LR	LR		
	comp=Z,20µm,24.2s						
LSA	**Lhasa**	**29.52**	**76**	P	**P**	**14 32 50.9**	**-0.7**
LSA	**Lhasa**	**29.52**	**76**	P	**P**	**14 32 50.9**	**-0.7**
LSA				pmax	pmax		
	comp=Z,38nm,1.3s						
WMQ	**Urumqi**	**29.64**	**47**	eP	**P**	**14 32 52.2**	**+0.3**
WMQ				pP	sP	14 33 00.8	-0.1
WMQ				sP	pP	14 33 03.7	+5.4
WMQ				PP	**PnPn**	**14 33 52.0**	**+4.9**
WMQ				ScS	ScS	14 43 30.7	-1.3
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.9s						
WMQ				LR	LR		
	comp=Z,2µm,21.9s						
WMQ				LR	LR		
	comp=Z,1µm,17.7s						
WMQ				LR	LR		
	comp=Z,2µm,16.3s						
WMQ	**Urumqi**	**29.64**	**47**	P	**P**	**14 32 52.3**	**+0.3**
WMQ				IAmb	IAmb	14 33 05.5	
	comp=Z,41nm,0.9s						
WMQ	**Urumqi**	**29.64**	**47**	P	**P**	**14 32 52.3**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,41nm,0.9s						
ZSN	**Zaisan**	**29.74**	**39**	eP	**P**	**14 32 51.2**	**-1.6**
ZSN				eS	**S**	**14 37 47.5**	**-0.6**
ZSN				eLR	LR	14 45 48.1	
ZSN	**Zaisan**	**29.74**	**39**	eP	**P**	**14 32 51.2**	**-1.6**
ZSN				eS	**S**	**14 37 47.4**	**-0.6**
TOPG	**Topolog**	**29.78**	**315**	⇓P	**P**	**14 32 53.5**	**+0.3**
ARU	**Arti**	**29.79**	**1**	P	**P**	**14 32 54.0**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=179,slow=9.1,SNR=6.9						
ARU				LR	LR	14 47 22.9	
	comp=Z,1µm,21.5s,baz=182,slow=42						
ARU	**Arti**	**29.79**	**1**	P	**P**	**14 32 50.9**	**-2.1**
ARU	**Arti**	**29.79**	**1**	c iP	**P**	**14 32 53.5**	**+0.5**
ARU						14 33 48.7	
ARU				PPP	PPP	14 33 58.6	
ARU						14 35 54.3	
ARU				S	**S**	**14 37 50.4**	**+2.0**
ARU				SS	**SnSn**	**14 39 24.8**	**+6.0**
ARU				SSS	SSS	14 39 38.0	
ARU				pmax	pmax		
	comp=Z,14nm,1.2s						
ARU				MLR	MLR		
	comp=Z,1µm,14.0s						
SVE	**Sverdlovsk**	**30.25**	**3**	eP	**P**	**14 32 56.0**	**-1.1**
SVE				pmax	pmax		
	comp=Z,25nm,1.3s						
SVE				MLR	MLR		
	comp=Z,2µm,12.0s						
RAZG	**Razgrad**	**30.43**	**312**	⇑P	**P**	**14 32 59.1**	**+0.2**
MILM	**Milestii Mici**	**30.53**	**319**	⇓P	**P**	**14 32 59.2**	**-0.5**
KIS	**Kishinev**	**30.57**	**319**	eP	**P**	**14 33 00.0**	**0.0**
KIS	**Kishinev**	**30.57**	**319**	ePcP	PcP	14 35 48.0	-10
KIS				eS	**S**	**14 38 00.0**	**-0.8**
KIS	**Kishinev**	**30.57**	**319**	ePcS	PcS	14 39 36.0	-6.0
KIS				eSS	SS	14 39 50.0	-21
KIS				eSSS	SSS	14 40 12.0	
KIS				eL	L	14 42 24.0	
KIS				LRM	MLR	14 49 26.0	
	comp=Z,1µm,16.0s						
KIS	**Kishinev**	**30.57**	**319**	eP	**P**	**14 33 00.0**	**0.0**
KIS				i		14 33 03.0	
KIS				e		14 33 55.0	
KIS				e		14 34 14.0	
KIS				eS	**S**	**14 38 00.0**	**-0.8**
KIS				e		14 39 36.0	
KIS				MLR	MLR		
	comp=Z,1µm,16.0s						
SHL	**Shillong**	**30.59**	**84**	eP	**P**	**14 33 00.1**	**-0.6**
SHL				IAmb	IAmb	14 33 08.9	
	comp=Z,8.7nm,0.7s						
BIR	**Birlad**	**30.91**	**317**	⇑P	**P**	**14 33 03.9**	**+0.8**
GHRR		**30.94**	**317**	⇓P	**P**	**14 33 04.5**	**+1.1**
VRI	**Vrincioaia**	**31.27**	**316**	⇓P	**P**	**14 33 06.5**	**+0.2**
PLOR	**Plostina**	**31.31**	**316**	⇑P	**P**	**14 33 07.5**	**+0.8**
IAS	**Iasi**	**31.40**	**319**	⇓P	**P**	**14 33 07.3**	**-0.1**
SORM	**Soroca**	**31.44**	**321**	⇑P	**P**	**14 33 06.6**	**-1.1**
COPA	**Copaceanca**	**31.51**	**312**	⇑P	**P**	**14 33 09.7**	**+1.3**
MLR	**Muntele Rosu**	**31.59**	**315**	⇓P	**P**	**14 33 10.7**	**+1.3**
TESR	**Tescani**	**31.62**	**317**	⇓P	**P**	**14 33 09.7**	**+0.3**
HUMR	**Humele**	**31.82**	**313**	⇑P	**P**	**14 33 11.8**	**+0.6**
GOLR		**31.96**	**313**	⇑P	**P**	**14 33 12.7**	**+0.4**
OZUR		**31.96**	**316**	⇑P	**P**	**14 33 12.7**	**+0.3**
ITM	**Ithomi**	**32.04**	**298**	P	**P**	**14 33 12.1**	**-1.1**
MTUR	**Matau**	**32.05**	**314**	⇓P	**P**	**14 33 14.3**	**+1.1**
AGG	**Agios Georgios**	**32.05**	**302**	P	**P**	**14 33 12.3**	**-1.0**
AGG				IAmb	IAmb	14 33 42.0	
	comp=Z,50nm,1.2s						
AGG	**Agios Georgios**	**32.05**	**302**	P	**P**	**14 33 12.3**	**-1.0**
AGG				pmax	pmax		
	comp=Z,50nm,1.2s						
VOIR		**32.14**	**314**	⇑P	**P**	**14 33 14.6**	**+0.6**
BIZ	**Bicaz**	**32.15**	**317**	⇑P	**P**	**14 33 14.4**	**+0.4**
DOPR	**Dopca**	**32.15**	**315**	⇑P	**P**	**14 33 14.3**	**+0.2**
LIT	**Litokhoron**	**32.17**	**304**	P	**P**	**14 33 13.6**	**-0.7**
LIT				IAmb	IAmb	14 33 18.1	
	comp=Z,28nm,0.8s						
LIT	**Litokhoron**	**32.17**	**304**	P	**P**	**14 33 13.6**	**-0.7**
LIT				pmax	pmax		
	comp=Z,28nm,0.8s						
PRAR	**RASCA**	**32.28**	**318**	⇑P	**P**	**14 33 14.8**	**-0.4**
VTS	**Vitosha**	**32.33**	**308**	⇓P	**P**	**14 33 16.2**	**+0.3**
VTS	**Vitosha**	**32.33**	**308**	P	**P**	**14 33 15.1**	**-0.8**
VTS	**Vitosha**	**32.33**	**308**	P	**P**	**14 33 15.1**	**-0.8**
VTS				pmax	pmax		
	comp=Z,21nm,1.0s						
ARR	**Arges**	**32.38**	**314**	⇑P	**P**	**14 33 16.7**	**+0.5**
OBN	**Obninsk**	**32.41**	**337**	⇑P	**P**	**14 33 17.0**	**+0.9**
OBN	**Obninsk**	**32.41**	**337**	P	**P**	**14 33 14.2**	**-1.8**
OBN	**Obninsk**	**32.41**	**337**	c iP	**P**	**14 33 16.6**	**+0.5**
OBN				i		14 33 22.9	
OBN				i S	**S**	**14 38 34.7**	**+5.4**
OBN				pmax	pmax		
	comp=Z,139nm,1.3s						
OBN				MLR	MLR		
	comp=Z,2µm,19.0s						
AKASG	**Malin Array Be**	**32.44**	**325**	P	**P**	**14 33 15.5**	**-0.9**
	comp=Z,54nm,0.7s,baz=127,slow=8.2,SNR=72						
AKASG				S	**S**	**14 38 31.4**	**+1.5**
	comp=Z,3.5nm,1.0s,baz=125,slow=16,SNR=6.5						
AKASG				LR	LR	14 49 14.4	
	comp=Z,3µm,21.3s,baz=115,slow=42						
AKASG	**Malin Array Be**	**32.44**	**325**	P	**P**	**14 33 14.4**	**-2.0**
AKBB	**Malin Array Si**	**32.44**	**325**	P	**P**	**14 33 14.7**	**-1.7**
AKBB	**Malin Array Si**	**32.44**	**325**	P	**P**	**14 33 14.7**	**-1.7**
AKBB				pmax	pmax		
	comp=Z,109nm,0.8s						
KIRV	**Kirov**	**32.48**	**352**	LR	LR	14 48 44.8	
	comp=Z,2µm,21.2s,baz=221,slow=41						
KOHI	**KOHIMA**	**32.55**	**83**	ex	**P**	**14 33 18.2**	**+0.3**
KOHI				IAmb	IAmb	14 33 28.1	
	comp=Z,37nm,1.2s						
MOS	**Moscow**	**32.56**	**339**	eP	**P**	**14 33 16.8**	**-0.6**
MOS				e		14 33 26.0	
MOS				pmax	pmax		
	comp=Z,56nm,1.2s						
MOS				MLR	MLR		
	comp=Z,1µm,17.0s						
STIP	**Stip**	**32.80**	**306**	i P	**P**	**14 33 18.4**	**-1.4**
LOT	**Lotru**	**32.97**	**314**	⇓P	**P**	**14 33 21.4**	**0.0**
BURAR	**Bucovina Array**	**33.00**	**318**	⇑P	**P**	**14 33 21.8**	**+0.3**
BURAR	**Bucovina Array**	**33.00**	**318**	P	**P**	**14 33 20.6**	**-0.9**
BUR08	**Bucovina Ar. S**	**33.02**	**318**	P	**P**	**14 33 20.8**	**-1.0**
SRE	**Strehaia**	**33.05**	**312**	⇓P	**P**	**14 33 23.1**	**+1.2**
FNA	**Florina**	**33.16**	**305**	P	**P**	**14 33 22.2**	**-0.8**
FNA	**Florina**	**33.16**	**305**	P	**P**	**14 33 22.2**	**-0.8**
FNA				pmax	pmax		
	comp=Z,82nm,0.9s						
ARCR	**ARCALIA**	**33.28**	**317**	⇓P	**P**	**14 33 25.0**	**+1.1**
SKO	**Skopje**	**33.42**	**307**	i P	**P**	**14 33 25.0**	**-0.2**
CJR	**Cluj-Napoca**	**33.59**	**316**	⇓P	**P**	**14 33 27.5**	**+0.8**
GZR	**Gura Zlata**	**33.60**	**313**	⇑P	**P**	**14 33 26.9**	**+0.1**
OHR	**Ohrid**	**33.66**	**305**	i P	**P**	**14 33 27.2**	**-0.2**
DEV	**Deva**	**33.70**	**314**	⇑P	**P**	**14 33 27.6**	**+0.1**
ZAA0	**Zalesovo Array**	**33.82**	**29**	P	**P**	**14 33 26.6**	**-1.9**
ZAA0				IAmb	IAmb	14 33 38.1	
	comp=Z,32nm,0.8s						
ZALV	**Zalesovo Beam**	**33.82**	**29**	P	**P**	**14 33 27.9**	**-0.5**
	comp=Z,12nm,0.4s,baz=242,slow=9.4,SNR=61						
ZALV				LR	LR	14 46 54.7	
	comp=Z,515nm,18.6s,baz=230,slow=36						
ZALV	**Zalesovo Beam**	**33.82**	**29**	P	**P**	**14 33 27.1**	**-1.4**
KMBO	**Kilima Mbogo**	**33.96**	**219**	P	**P**	**14 33 31.2**	**+0.9**
	comp=Z,12nm,1.0s,baz=22,slow=9.8,SNR=22						
KMBO	**Kilima Mbogo**	**33.96**	**219**	P	**P**	**14 33 29.6**	**-0.8**
KMBO				IAmb	IAmb	14 33 37.6	
	comp=Z,35nm,1.1s						
KMBO	**Kilima Mbogo**	**33.96**	**219**	i P	**P**	**14 33 32.5**	**+2.1**
KMBO				pmax	pmax		
	comp=Z,24nm,1.0s						
DRGR		**34.18**	**315**	⇓P	**P**	**14 33 32.6**	**+0.7**
TIR	**Tirane**	**34.41**	**305**	⇓P	**P**	**14 33 34.0**	**+0.3**
TIR	**Tirane**	**34.41**	**305**	P	**P**	**14 33 33.4**	**-0.4**
TIR	**Tirane**	**34.41**	**305**	P	**P**	**14 33 33.4**	**-0.4**
TIR				pmax	pmax		
	comp=Z,72nm,0.9s						
BZS	**Buzias**	**34.44**	**313**	⇓P	**P**	**14 33 34.5**	**+0.5**
SIRR	**Siria**	**34.65**	**314**	⇑P	**P**	**14 33 37.0**	**+1.1**
LVV	**L'vov**	**34.74**	**321**	eP	**P**	**14 33 36.5**	**-0.1**
LVV				e		14 34 47.4	
LVV				ePPP	PPP	14 35 08.4	
LVV				eS	**S**	**14 39 04.2**	**-1.6**
LVV				MLR	MLR		
	comp=N,700nm,18.0s						
LVV				MLR	MLR		
	comp=E,600nm,18.0s						
LVV				MLR	MLR		
	comp=Z,900nm,18.0s						
TRPA	**Tarpa**	**34.84**	**317**	⇓P	**P**	**14 33 37.5**	**0.0**
UZH	**Uzhgorod**	**35.21**	**318**	⇓iP	**P**	**14 33 40.8**	**+0.2**
UZH				e		14 33 46.5	
UZH				eS	**S**	**14 39 10.6**	**-2.3**
UZH				MLR	MLR		
	comp=Z,200nm,18.0s						
KOLS	**Kolonicke sedl**	**35.35**	**319**	eP	**P**	**14 33 43.2**	**+1.4**
KOLS				pmax	pmax		
	comp=Z,130nm,0.9s						
KOLS	**Kolonicke sedl**	**35.35**	**319**	eP	**P**	**14 33 43.2**	**+1.4**
KWP	**Kalwaria Pacla**	**35.41**	**320**	eP	**P**	**14 33 42.6**	**+0.2**
KWP	**Kalwaria Pacla**	**35.41**	**320**	P	**P**	**14 33 41.6**	**-0.7**
KWP	**Kalwaria Pacla**	**35.41**	**320**	eP	**P**	**14 33 42.6**	**+0.2**
MICGM	**Minsk**	**35.44**	**330**	⇓eP	**P**	**14 33 42.0**	**-0.5**
MICGM				PM		14 33 43.0	
	comp=Z,0.2nm,1.0s						
MICGM				eLR	LR	14 48 08.0	
MNK	**Minsk**	**35.44**	**330**	eP	**P**	**14 33 42.0**	**-0.5**
MNK				pmax	pmax		
	comp=Z,150nm,1.0s						
CRVS	**Cervenica-Dubn**	**35.82**	**318**	eP	**P**	**14 33 46.6**	**+0.7**
CRVS				pmax	pmax		
	comp=Z,59nm,0.9s						
CRVS	**Cervenica-Dubn**	**35.82**	**318**	eP	**P**	**14 33 46.6**	**+0.7**
PRGR	**Permogore**	**35.95**	**350**	eP	**P**	**14 33 46.2**	**-0.6**
PRGR				pmax	pmax		
	comp=Z,48nm,1.2s						
NACGM	**Naroch**	**36.19**	**330**	eP	**P**	**14 33 48.0**	**-0.9**
NACGM				eLQ	LQ	14 46 44.0	
NACGM				eLR	LR	14 49 12.0	
KECS	**Kecovo**	**36.24**	**317**	eP	**P**	**14 33 49.9**	**+0.5**
KECS				pmax	pmax		
	comp=Z,21nm,1.0s						
KECS	**Kecovo**	**36.24**	**317**	eP	**P**	**14 33 49.9**	**+0.5**
TIP	**Timpagrande**	**36.35**	**301**	P	**P**	**14 33 50.0**	**-0.6**
PSZ	**Piszkesteto**	**36.38**	**316**	⇓P	**P**	**14 33 50.9**	**+0.1**
PSZ	**Piszkesteto**	**36.38**	**316**	P	**P**	**14 33 50.0**	**-0.7**
PSZ				IAmb	IAmb	14 34 00.7	
	comp=Z,33nm,0.9s						
PSZ	**Piszkesteto**	**36.38**	**316**	P	**P**	**14 33 50.1**	**-0.7**
PSZ				pmax	pmax		
	comp=Z,33nm,0.9s						
KLMR	**Klimovskoe**	**36.41**	**345**	eP	**P**	**14 33 48.2**	**-2.5**
KLMR				AMP		14 33 53.2	
	comp=Z,94nm,1.2s						
KLMR				LQ	LQ	14 47 39.7	
KLMR				LQ	LQ	14 47 39.7	
KLMR				LR	LR	14 48 42.2	
KLMR				AMP		14 53 50.9	
	comp=Z,2µm,15.2s						
KLMR	**Klimovskoe**	**36.41**	**345**	eP	**P**	**14 33 48.2**	**-2.5**
KLMR				pmax	pmax		
	comp=Z,94nm,1.2s						
IIGN	**Ignalina**	**36.72**	**330**	eP	**P**	**14 33 54.5**	**+1.0**
IIGN				IAmb	IAmb	14 33 57.5	
	comp=Z,35nm,0.8s						
NIE	**Niedzica**	**36.73**	**318**	eP	**P**	**14 33 54.1**	**+0.4**
NIE	**Niedzica**	**36.73**	**318**	eP	**P**	**14 33 54.1**	**+0.4**
ISAL	**Salakas**	**36.90**	**330**	eP	**P**	**14 33 56.0**	**+1.0**
ISAL				IAmb	IAmb	14 33 58.9	
	comp=Z,24nm,0.8s						
CEL	**Celeste**	**36.92**	**299**	P	**P**	**14 33 53.1**	**-2.3**
CEL				IAmb	IAmb	14 34 41.2	
	comp=Z,51nm,1.0s						
IZAR	**Zarasai**	**36.96**	**331**	eP	**P**	**14 33 57.0**	**+1.5**
GTA	**Gaotai**	**37.16**	**59**	⇓P	**P**	**14 33 59.1**	**+1.5**
GTA				pP	sP	14 34 05.6	-0.9
GTA				sP	pP	14 34 09.5	+5.5
GTA				S	**S**	**14 39 44.2**	**+0.8**
GTA				sS	sS	14 39 56.6	+3.3
GTA				pmax	pmax		
	comp=Z,11nm,1.3s						
GTA				pmax	pmax		
	comp=Z,180nm,5.6s						
GTA				LR	LR		
	comp=Z,3µm,21.9s						
GTA				LR	LR		
	comp=Z,2µm,23.8s						
GTA				LR	LR		
	comp=Z,2µm,21.9s						
VYHS	**Vyhne**	**37.26**	**316**	eP	**P**	**14 33 58.5**	**+0.4**
VYHS				pmax	pmax		
	comp=Z,41nm,0.9s						
VYHS	**Vyhne**	**37.26**	**316**	eP	**P**	**14 33 58.5**	**+0.4**
SRO	**Srobarova**	**37.34**	**315**	eP	**P**	**14 33 59.3**	**+0.5**
SRO				pmax	pmax		
	comp=Z,84nm,0.8s						
SRO	**Srobarova**	**37.34**	**315**	eP	**P**	**14 33 59.3**	**+0.5**
OJC	**Ojcow**	**37.36**	**319**	eP	**P**	**14 33 59.0**	**+0.1**
OJC	**Ojcow**	**37.36**	**319**	P	**P**	**14 33 58.3**	**-0.6**
OJC	**Ojcow**	**37.36**	**319**	eP	**P**	**14 33 59.0**	**+0.1**
SUW	**Suwalki**	**37.37**	**326**	eP	**P**	**14 33 58.4**	**-0.6**
SUW	**Suwalki**	**37.37**	**326**	P	**P**	**14 33 58.1**	**-0.9**
SUW	**Suwalki**	**37.37**	**326**	eP	**P**	**14 33 58.4**	**-0.6**
BEL	**Belsk**	**37.52**	**322**	eP	**P**	**14 33 59.9**	**-0.3**
BEL	**Belsk**	**37.52**	**322**	eP	**P**	**14 33 59.9**	**-0.3**
MBAR	**Mbarara**	**37.57**	**228**	P	**P**	**14 33 59.7**	**-1.6**
MBAR	**Mbarara**	**37.57**	**228**	i P	**P**	**14 34 01.6**	**+0.3**
PABE	**Paberze**	**37.84**	**329**	eP	**P**	**14 34 03.7**	**+0.8**
PABE				IAmb	IAmb	14 34 05.8	
	comp=Z,127nm,0.6s						
JAVC	**Velka Javorina**	**38.11**	**316**	eP	**P**	**14 34 06.4**	**+1.0**
SMOL	**Smolenice**	**38.14**	**316**	eP	**P**	**14 34 05.9**	**+0.3**
SMOL				pmax	pmax		
	comp=Z,22nm,1.1s						
SMOL	**Smolenice**	**38.14**	**316**	eP	**P**	**14 34 05.9**	**+0.3**
PUL	**Pulkovo**	**38.15**	**338**	c eP	**P**	**14 34 06.4**	**+0.9**
PUL				pmax	pmax		
	comp=Z,118nm,0.6s						
OKC	**Ostrava-Krasne**	**38.18**	**318**	eP	**P**	**14 34 05.9**	**0.0**
	baz=106,slow=8.2						
OKC	**Ostrava-Krasne**	**38.18**	**318**	eP	**P**	**14 34 05.5**	**-0.4**
OKC				epP	**pP**	**14 34 07.5**	**-4.8**
OKC				ex	x	14 34 13.6	
OKC				AMS	AMS	14 53 40.0	
	comp=Z,2µm,22.8s						
OKC	**Ostrava-Krasne**	**38.18**	**318**	eP	**P**	**14 34 05.5**	**-0.4**
OKC				e		14 34 07.5	
OKC				e		14 34 13.6	

OKC MLR MLR
comp=Z,2µm,22.8s
MODS Modra-Piesok 38.18 316 eP P 14 34 05.4 -0.6
MODS pmax pmax
comp=Z,254nm,2.0s
MODS Modra-Piesok 38.18 316 eP P 14 34 05.4 -0.6
ZST Bratislava 38.23 315 eP P 14 34 05.8 -0.6
ZST Bratislava 38.23 315 eP P 14 34 05.8 -0.6
KOGS Kog 38.24 312 iP P 14 34 06.7 +0.2
PAOL Paolisi 38.27 303 P P 14 34 06.2 -0.7
PAOL IAmb IAmb 14 34 33.7
comp=Z,65nm,1.1s
MORC Moravsky Berou 38.52 318 eP P 14 34 08.6 -0.3
baz=106,slow=8.2
MORC Moravsky Berou 38.52 318 eP P 14 34 08.3 -0.5
MORC Moravsky Berou 38.52 318 ⇑P P 14 34 08.6 -0.3
MORC Moravsky Berou 38.52 318 P P 14 34 07.7 -1.2
MORC Moravsky Berou 38.52 318 P P 14 34 07.7 -1.2
MORC pmax pmax
comp=Z,39nm,1.1s
VSU Vasula 38.53 334 eP P 14 34 08.7 0.0
VSU Vasula 38.53 334 ceP P 14 34 09.2 +0.5
VSU pmax pmax
comp=Z,213nm,1.0s
GOLS Golise 38.54 311 iP P 14 34 09.1 0.0
CHTO Chiang Mai 38.63 93 P P 14 34 09.2 -0.8
CHTO Chiang Mai 38.63 93 P P 14 34 09.3 -0.8
CHTO pmax pmax
comp=Z,16nm,1.3s
CESS Cesta pri Krsk 38.64 311 iP P 14 34 10.2 +0.4
CMAR Chiang Mai Arr 38.74 93 P P 14 34 10.8 -0.2
comp=Z,1.9nm,0.7s,baz=281,slow=10.0,SNR=13
CMAR LR LR 14 52 15.6
comp=Z,2µm,21.9s,baz=274,slow=40
INTR Introdacqua 38.91 305 P P 14 34 11.0 -1.2
INTR IAmb IAmb 14 34 21.0
comp=Z,90nm,1.3s
VRAC Vranov 38.93 317 eP P 14 34 12.3 +0.1
VRAC Vranov 38.93 317 LR LR 14 52 32.8
comp=Z,1µm,20.1s,baz=116,slow=40
VRAC Vranov 38.93 317 ⇑P P 14 34 12.5 +0.2
CONA Conrad Observa 38.94 314 epP P 14 34 12.3 -0.1
comp=Z,70nm,1.7s,SNR=20
ARSA Arzberg 38.95 313 eP P 14 34 13.0 +0.5
baz=106,slow=8.2
ARSA Arzberg 38.95 313 epP P 14 34 12.7 +0.2
comp=Z,28nm,1.0s,SNR=21
KRUC Moravsky 38.97 316 eP P 14 34 12.5 0.0
PBUR Paburge 39.09 329 eP P 14 34 12.9 -0.5
KRLC Kraliky 39.09 318 eP P 14 34 12.9 -0.7
KRLC Kraliky 39.09 318 eP P 14 34 12.9 -0.7
SOKA Soboth 39.12 312 epP P 14 34 13.8 -0.1
comp=Z,16nm,1.1s
LJU Ljubljana 39.29 311 eP P 14 34 15.7 +0.4
AQU L'Aquila 39.34 305 P P 14 34 14.7 -1.1
AQU IAmb IAmb 14 34 36.1
comp=Z,79nm,1.0s
AQU L'Aquila 39.34 305 P P 14 34 14.7 -1.1
AQU pmax pmax
comp=Z,79nm,1.0s
OBKA Obir 39.39 312 eP P 14 34 16.8 +0.5
baz=106,slow=8.2
OBKA Obir 39.39 312 epP P 14 34 16.4 +0.1
comp=Z,39nm,1.5s
DPC Dobruska-Polom 39.46 318 eP P 14 34 16.9 +0.1
baz=106,slow=8.2
DPC Dobruska-Polom 39.46 318 eP P 14 34 16.1 -0.6
DPC ex x 14 34 31.5
DPC Dobruska-Polom 39.46 318 eP P 14 34 16.1 -0.6
OSTC Ostas 39.60 318 eP P 14 34 17.2 -0.6
OSTC ex x 14 34 19.5
OSTC AMS AMS 14 52 20.0
comp=Z,2µm,23.0s
TREC Trest 39.61 316 eP P 14 34 17.4 -0.5
TREC epP pP 14 34 20.2 -4.2
TREC Trest 39.61 316 eP P 14 34 17.4 -0.5
TREC e 14 34 20.2
NRCA Norcia 39.62 306 P P 14 34 18.1 -0.1
KSP Ksiaz 39.66 319 eP P 14 34 16.5 -1.8
KSP Ksiaz 39.66 319 eP P 14 34 16.5 -1.8
TMCR Tamitsa 39.66 347 eP P 14 34 16.2 -1.9
TMCR pmax pmax
comp=Z,51nm,1.2s
UPC Upice 39.70 318 eP P 14 34 18.3 -0.4
UPC Upice 39.70 318 eP P 14 34 18.3 -0.4
CHVC Chvalec 39.71 318 eP P 14 34 18.1 -0.6
CHVC ex x 14 34 20.6
MOA Molln 39.94 314 eP P 14 34 20.8 0.0
baz=106,slow=8.2
MOA Molln 39.94 314 epP P 14 34 20.7 0.0
comp=Z,75nm,0.8s,SNR=30
MYKA Terra Mystica 40.03 312 eP P 14 34 20.5 -1.1
comp=Z,23nm,1.0s
GKP Gorka Klasztor 40.10 323 eP P 14 34 21.1 -0.7
GKP Gorka Klasztor 40.10 323 eP P 14 34 21.1 -0.7
MURB Monte Urbino 40.12 306 P P 14 34 21.5 -0.8
MURB IAmb IAmb 14 34 44.3
comp=Z,78nm,1.0s
LZH Lanzhou 40.14 65 eP P 14 34 24.6 +1.9
LZH pP sP 14 34 30.7 -1.0
LZH S S 14 40 35.7 +7.3
LZH sS sS 14 40 46.9 +8.5
LZH pmax pmax
comp=Z,37nm,1.1s
LZH pmax pmax
comp=Z,220nm,5.4s
LZH LR LR
comp=Z,2µm,13.8s
LZH LR LR
comp=Z,3µm,14.6s
LZH LR LR
comp=Z,3µm,14.5s
GOPC GO Pecny, Ondr 40.24 317 eP P 14 34 22.5 -0.7
GOPC GO Pecny, Ondr 40.24 317 eP P 14 34 22.5 -0.7
CD2 Chengdu 40.31 73 ⇑iP P 14 34 24.3 +0.2
CD2 S S 14 40 27.3 -3.6
CD2 sS sS 14 40 40.7 -0.3
CD2 ScS ScS 14 44 28.4 -1.4
CD2 pmax pmax
comp=Z,10.0nm,0.9s
CD2 pmax pmax
comp=Z,170nm,6.1s
CD2 LR LR
comp=Z,7µm,23.3s
CD2 LR LR
comp=Z,3µm,17.3s
CD2 LR LR
comp=Z,4µm,14.5s
KMI Kunming 40.33 82 P P 14 34 24.1 -0.3
KMI Kunming 40.33 82 P P 14 34 24.1 -0.3
KMI pmax pmax
comp=Z,45nm,1.3s
KBA Koelnbreinsper 40.34 312 eP P 14 34 24.5 +0.3
baz=106,slow=8.2
KBA Koelnbreinsper 40.34 312 epP P 14 34 24.1 -0.1
comp=Z,31nm,0.9s,SNR=21
PRU Pruhonice 40.41 317 eP P 14 34 24.2 -0.3
baz=106,slow=8.2
PRU Pruhonice 40.41 317 eP P 14 34 23.7 -0.9
PRU AMS AMS 14 54 40.0
comp=Z,2µm,24.9s
PRU Pruhonice 40.41 317 eP P 14 34 23.7 -0.9
PRU MLR MLR
comp=Z,2µm,24.9s
PRA Prague 40.51 317 AMS AMS 14 55 00.0
comp=Z,2µm,20.2s
LATE Laterza 40.54 305 P P 14 34 24.3 -1.5
STAL STALIGIAL 40.57 311 P P 14 34 24.5 -1.4
STAL IAmb IAmb 14 34 29.9
comp=Z,58nm,1.0s
PVCC Panska Ves 40.58 318 eP P 14 34 25.3 -0.6
PVCC AMS AMS 14 55 10.0
comp=Z,2µm,16.2s
PVCC Panska Ves 40.58 318 eP P 14 34 25.3 -0.6
PVCC MLR MLR
comp=Z,2µm,16.2s
GEC2 GERESS Array S 40.59 315 eP P 14 34 26.0 -0.1
comp=Z,31nm,0.8s,baz=106,slow=8.2
GEC2 GERESS Array S 40.59 315 P P 14 34 25.4 -0.7
GEC2 IAmb IAmb 14 34 30.2
comp=Z,76nm,1.1s
GERES GERESS Array B 40.59 315 P P 14 34 25.8 -0.3
comp=Z,29nm,0.7s,baz=108,slow=8.6,SNR=96
GERES ScP ScP 14 40 21.9 +5.3
comp=Z,0.9nm,0.9s,baz=84,slow=4.0,SNR=3.5

GERES LR LR 14 55 06.7
comp=Z,1µm,19.8s,baz=118,slow=42
GERES GERESS Array B 40.59 315 P P 14 34 25.4 -0.7
PBCC Pribram 40.65 316 eP P 14 34 28.3 +1.7
KHC Kasperske Hory 40.75 315 eP P 14 34 27.6 +0.2
baz=106,slow=8.2
KHC Kasperske Hory 40.75 315 eP P 14 34 26.6 -0.7
KHC ex x 14 34 35.1
KHC AMS AMS 14 54 40.0
comp=Z,2µm,15.0s
KHC Kasperske Hory 40.75 315 P P 14 34 26.7 -0.7
KHC Kasperske Hory 40.75 315 iP P 14 34 27.4 0.0
KHC pmax pmax
comp=Z,516nm,1.9s
FIA1 FINESS Array S 40.81 337 P P 14 34 27.2 -0.5
FIA1 IAmb IAmb 14 34 30.1
comp=Z,39nm,0.8s
ABTA Abfaltersbach 40.81 312 epP P 14 34 27.8 -0.2
comp=Z,47nm,0.9s,SNR=26
FINES FINESS Array B 40.81 337 P P 14 34 27.2 -0.4
comp=Z,24nm,0.5s,baz=134,slow=8.2,SNR=53
FINES LR LR 14 53 05.6
comp=Z,1µm,19.7s,baz=134,slow=39
FINES FINESS Array B 40.81 337 P P 14 34 27.1 -0.5
RJOB Jochberg 40.87 313 eP P 14 34 28.4 -0.1
comp=Z,98nm,0.8s,baz=106,slow=8.2
MOY Mondy 40.97 41 eP P 14 34 30.0 +0.7
MOY pmax pmax
comp=Z,38nm,2.7s
BRG Berggiesshubel 41.07 318 eP P 14 34 30.1 +0.2
comp=Z,11nm,1.0s
BRG Berggiesshubel 41.07 318 eP P 14 34 30.1 +0.2
BRG pmax pmax
comp=Z,11nm,1.0s
BRG MLR MLR
comp=N,3µm,23.7s
BRG MLR MLR
comp=E,2µm,26.2s
BRG MLR MLR
comp=Z,1µm,20.0s
TEOL Teolo 41.09 309 P P 14 34 28.6 -1.6
TEOL IAmb IAmb 14 35 00.2
comp=Z,50nm,0.8s
WET Wettzell 41.19 315 eP P 14 34 29.7 -1.3
comp=Z,18nm,0.7s,baz=106,slow=8.2
PBKT Sadao Pong 41.22 95 P P 14 34 31.1 -0.5
CTI Castel Tesino 41.24 310 P P 14 34 29.1 -2.5
CTI Castel Tesino 41.24 310 P P 14 34 29.1 -2.5
CTI pmax pmax
comp=Z,35nm,0.9s
CASP Castiglione de 41.25 305 P P 14 34 30.9 -0.6
ZCCA Zocca 41.40 308 P P 14 34 32.2 -0.6
FBE Freiberg 41.43 318 eP P 14 34 35.4 +2.4
baz=106,slow=8.2
WATA Walderalm 41.57 312 eP P 14 34 33.5 -0.8
comp=Z,89nm,1.0s,SNR=27
RUE Ruedersdorf 41.71 320 eP P 14 34 35.4 +0.2
comp=Z,39nm,0.8s,baz=106,slow=8.2
RUE Ruedersdorf 41.71 320 eP P 14 34 35.0 -0.1
CLL Collm 41.77 318 eP P 14 34 36.1 +0.4
baz=106,slow=8.2
CLL Collm 41.77 318 ⇑iP P 14 34 35.7 0.0
comp=Z,79nm,1.2s
CLL e 14 34 41.0
CLL ePP PP 14 36 12.0 -0.3
CLL ePPPP 14 36 48.0
CLL eS S 14 40 50.0 -1.9
CLL eSS SS 14 44 00.0 +2.2
CLL LmH 14 53 00.0
comp=Z,1µm,21.9s
CLL LmV 14 57 00.0
comp=Z,1µm,18.4s
CLL Collm 41.77 318 ePKPdf PKiKP 14 43 34.0 -4.2
CLL Collm 41.77 318 P P 14 34 35.0 -0.7
CLL IAmb IAmb 14 34 38.6
comp=Z,58nm,1.1s
CLL Collm 41.77 318 ⇑iP P 14 34 35.7 0.0
CLL eS S 14 40 50.0 -1.9
CLL pmax pmax
comp=Z,79nm,1.2s
CLL MLR MLR
comp=Z,1µm,18.4s
NKC Novy Kostel 41.77 317 eP P 14 34 35.4 -0.4
NKC Novy Kostel 41.77 317 eP P 14 34 35.4 -0.4
ROTZ Rotzenmuhle 41.79 316 eP P 14 34 36.3 +0.4
baz=106,slow=8.2
SQTA Sankt Quirin 41.79 312 eP P 14 34 35.2 -0.9
comp=Z,94nm,0.9s,SNR=42
VLC Villacollemand 41.79 307 P P 14 34 35.5 -0.5
WERN Wernitzgruen 41.83 317 eP P 14 34 36.6 +0.4
comp=Z,11nm,0.9s,baz=106,slow=8.2
MOTA Moosalm 41.89 312 P P 14 34 35.8 -1.1
comp=Z,136nm,1.1s,SNR=30
MANZ Manzenberg 41.91 316 eP P 14 34 37.1 +0.2
comp=Z,15nm,0.9s,baz=106,slow=8.2
ZAK Zakamensk 41.92 43 eP P 14 34 36.8 -0.3
ZAK pmax pmax
comp=Z,8.0nm,1.2s
FETA Feichten 42.07 312 epP P 14 34 37.8 -0.6
comp=Z,46nm,0.7s,SNR=39
KEST Kesra 42.07 295 P P 14 34 39.4 +1.0
comp=Z,28nm,0.8s,baz=180,slow=0.3,SNR=15
KEST LR LR 14 55 28.1
comp=Z,2µm,19.4s,baz=20,slow=41
BSD Bornholm Skovb 42.12 324 iP P 14 34 37.5 -0.9
comp=Z,187nm,0.7s
BSD Bornholm Skovb 42.12 324 iP P 14 34 37.5 -0.9
BSD pmax pmax
comp=Z,190nm,0.7s
RETA Reutte 42.14 312 eP P 14 34 37.9 -1.1
comp=Z,24nm,0.7s,SNR=17
FUORN Ofenpass-Fuorn 42.30 311 P P 14 34 39.8 -0.6
FUORN IAmb IAmb 14 34 58.3
comp=Z,39nm,0.8s
SLVN Son La 42.30 87 P P 14 34 39.9 -0.5
GRA1 Grafenberg Arr 42.38 316 P P 14 34 39.7 -1.0
GRF Grafenberg Arr 42.38 316 eP P 14 34 41.3 +0.5
comp=Z,85nm,0.8s,baz=106,slow=8.2
GRF Grafenberg Arr 42.38 316 P P 14 34 39.7 -1.0
GRF pmax pmax
comp=Z,117nm,0.9s
MOX Moxa 42.40 317 eP P 14 34 40.9 0.0
comp=Z,8.4nm,0.8s,baz=106,slow=8.2
MSSA Maissana 42.43 307 P P 14 34 39.5 -1.8
TLY Talaya 42.53 41 eP P 14 34 44.2 +2.3
TLY e 14 36 25.0
TLY eS S 14 41 00.8 -2.5
TLY eSSS SSS 14 44 35.0
TLY pmax pmax
comp=Z,40nm,2.2s
TLY MLR MLR
comp=Z,4µm,16.0s
UBR Ueberruh 42.62 312 eP P 14 34 42.2 -0.6
comp=Z,68nm,0.8s,baz=106,slow=8.2
DAVA Damuels 42.69 312 eP P 14 34 42.9 -0.5
comp=Z,80nm,0.8s,baz=106,slow=8.2
DAVA Damuels 42.69 312 eP P 14 34 42.7 -0.8
comp=Z,114nm,1.1s,SNR=31
RGN Rugen 42.73 323 eP P 14 34 44.9 +1.4
RGN Rugen 42.73 323 P P 14 34 42.0 -1.4
PLONS Plons/SG 42.98 311 eP P 14 34 45.0 -0.7
comp=Z,62nm,0.8s,baz=106,slow=8.2
IRK Irkutsk 43.08 41 eP P 14 34 41.7 -4.6
IRK pmax pmax
comp=Z,49nm,3.0s
MLSI Meulaboh, Aceh 43.08 114 P P 14 34 47.3 +0.5
comp=Z,47nm,1.1s
SONM Songino Array 43.27 48 P P 14 34 49.1 +1.0
comp=Z,5.9nm,0.8s,baz=256,slow=9.2,SNR=57
SONM LR LR 14 55 14.9
comp=Z,2µm,18.8s,baz=252,slow=40
SONM Songino Array 43.27 48 P P 14 34 48.0 -0.1
SONM Songino Array 43.27 48 P P 14 34 48.0 -0.1
SONM pmax pmax
comp=Z,8.0nm,1.0s
WILA Wila 43.36 312 eP P 14 34 48.4 -0.4
comp=Z,162nm,0.8s,baz=106,slow=8.2
UBBA Unterbreizbach 43.44 317 eP P 14 34 49.5 +0.4
comp=Z,8.9nm,0.8s,baz=106,slow=8.2
STU Stuttgart 43.45 314 eP P 14 34 48.8 -0.5
comp=Z,24nm,1.0s,baz=106,slow=8.2
STU Stuttgart 43.45 314 P P 14 34 48.0 -1.4
STU Stuttgart 43.45 314 P P 14 34 48.0 -1.4
STU pmax pmax
comp=Z,30nm,0.9s
CLZ Clausthal 43.49 318 eP P 14 34 50.5 +0.8

comp=Z,45nm,0.8s,baz=106,slow=8.2
GYA Guiyang 43.51 79 ⇓iP P 14 34 49.0 -1.4
GYA S S 14 41 15.9 -2.6
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.5s
GYA LR LR
comp=Z,2µm,16.0s
GYA LR LR
comp=Z,620nm,13.5s
GYA LR LR
comp=Z,1µm,16.6s
APA Apatity 43.57 347 ⇑iP P 14 34 50.9 +0.8
APA pmax pmax
comp=Z,32nm,1.0s
APA MLR MLR
comp=Z,2µm,17.0s
GTTG Gottingen 43.65 318 eP P 14 34 51.2 +0.2
comp=Z,12nm,0.8s,baz=106,slow=8.2
SLE Schleitheim 43.70 312 eP P 14 34 50.8 -0.7
comp=Z,31nm,0.8s,baz=106,slow=8.2
ULN Ulaanbaatar 43.71 48 P P 14 34 51.9 +0.2
ULN Ulaanbaatar 43.71 48 ceP P 14 34 52.4 +0.7
ULN pmax pmax
comp=Z,18nm,1.7s
NRDL Niedersach Rie 43.84 319 eP P 14 34 53.1 +0.7
comp=Z,37nm,0.9s,baz=106,slow=8.2
BFO Black Forest 43.92 313 eP P 14 34 53.9 +0.7
comp=Z,11nm,0.9s,baz=106,slow=8.2
BFO Black Forest 43.92 313 P P 14 34 53.2 0.0
BFO Black Forest 43.92 313 P P 14 34 53.2 0.0
BFO pmax pmax
comp=Z,26nm,1.0s
BALST Balsthal 44.16 312 eP P 14 34 54.9 -0.3
comp=Z,108nm,0.9s,baz=106,slow=8.2
BSEG Bad Segeberg 44.17 321 eP P 14 34 55.8 +0.8
comp=Z,24nm,0.9s,baz=106,slow=8.2
TNS Taunus Mts 44.25 316 eP P 14 34 56.5 +0.7
comp=Z,42nm,0.9s,baz=106,slow=8.2
SENIN Lac Senin/Sane 44.27 310 P P 14 34 56.0 -0.4
SENIN IAmb IAmb 14 34 59.7
comp=Z,119nm,1.8s
XAN Xi'an 44.38 68 P P 14 34 57.9 +0.8
XAN pmax pmax
comp=Z,6.0nm,1.1s
XAN pmax pmax
comp=Z,130nm,4.5s
XAN LR LR
comp=Z,710nm,20.4s
XAN LR LR
comp=Z,3µm,18.7s
XAN LR LR
comp=Z,3µm,18.4s
XAN Xi'an 44.38 68 P P 14 34 57.1 0.0
XAN IAmb IAmb 14 35 06.5
comp=Z,45nm,1.2s
XAN Xi'an 44.38 68 P P 14 34 57.1 0.0
XAN pmax pmax
comp=Z,45nm,1.2s
BNI Bardonecchia 44.53 308 P P 14 34 57.1 -1.2
BNI IAmb IAmb 14 35 16.7
comp=Z,53nm,1.2s
BNI Bardonecchia 44.53 308 P P 14 34 57.1 -1.2
BNI pmax pmax
comp=Z,53nm,1.2s
ECH Echery 44.67 313 P P 14 34 58.3 -0.9
ECH IAmb IAmb 14 35 01.8
comp=Z,65nm,0.9s
ECH Echery 44.67 313 P P 14 34 58.3 -0.9
ECH pmax pmax
comp=Z,65nm,0.9s
HFS Hagfors 44.95 330 LR LR 14 56 14.3
comp=Z,2µm,20.7s,baz=130,slow=39
BTO Baotou 45.06 58 eP P 14 35 03.0 +0.4
AHRW Bad Neuenahr-A 45.17 316 eP P 14 35 04.2 +1.1
comp=Z,18nm,0.8s,baz=106,slow=8.2
IBBN Ibbenburen 45.17 318 eP P 14 35 03.8 +0.7
comp=Z,34nm,0.9s,baz=106,slow=8.2
BUG Bochum--Univer 45.26 317 eP P 14 35 04.4 +0.6
comp=Z,38nm,0.8s,baz=106,slow=8.2
ENH Enshi 45.29 73 P P 14 35 03.7 -0.7
ENH IAmb IAmb 14 35 18.4
comp=Z,83nm,1.4s
WLF Walferdange 45.58 315 eP P 14 35 06.8 +0.4
comp=Z,53nm,0.8s,baz=106,slow=8.2
WLF Walferdange 45.58 315 P P 14 35 06.3 -0.1
comp=Z,55nm,0.9s
WLF Walferdange 45.58 315 x x 14 35 08.2
WLF Walferdange 45.58 315 P P 14 35 04.6 -1.8
WLF Walferdange 45.58 315 P P 14 35 04.6 -1.8
WLF pmax pmax
comp=Z,66nm,0.8s
MUD Monsted U'grnd 45.63 324 iP P 14 35 07.7 +1.1
comp=Z,51nm,0.8s
MUD Monsted U'grnd 45.63 324 iP P 14 35 07.7 +1.1
MUD pmax pmax
comp=Z,51nm,0.8s
UBPT Khong Chiam 45.71 94 P P 14 35 07.6 -0.2
UBPT IAmb IAmb 14 35 19.9
comp=Z,46nm,1.6s
GSI Gunungsitoli 45.76 117 P P 14 35 06.4 -1.8
BHOU Houvegnez 45.81 315 P P 14 35 08.5 +0.3
BHOU x x 14 35 10.9
BHOU PcP PcP 14 36 44.9 -0.6
BHOU PP PP 14 36 56.1 +0.6
MEM Membach 45.86 316 P P 14 35 09.2 +0.7
comp=Z,61nm,1.0s
PSI Prapat 45.98 114 P P 14 35 11.9 +1.9
comp=Z,5.5nm,0.8s,baz=319,slow=10,SNR=6.5
PSI Prapat 45.98 114 P P 14 35 12.0 +1.9
RPSI Rantau Prapat 46.04 114 P P 14 35 09.2 -1.2
RPSI IAmb IAmb 14 35 57.8
comp=Z,37nm,1.5s
RPSI Rantau Prapat 46.04 114 P P 14 35 11.9 +1.5
SSB Saint Sauveur 46.06 308 P P 14 35 08.6 -1.7
SSB IAmb IAmb 14 35 13.4
comp=Z,34nm,0.8s
SSB Saint Sauveur 46.06 308 P P 14 35 08.6 -1.7
SSB pmax pmax
comp=Z,34nm,0.8s
OPO Ambohidratompo 46.09 194 P P 14 35 13.3 +2.5
comp=Z,4.3nm,0.8s,baz=0.4,slow=11,SNR=4.0
BEBN Eben Emael 46.10 316 P P 14 35 13.8 +3.4
BSTI Sart Tilman 46.13 316 P P 14 35 13.4 +2.7
BSTI PcP PcP 14 36 46.9 +0.3
NC602 NORSAR Array S 46.18 331 eP P 14 35 11.2 +0.2
NC602 NORSAR Array S 46.18 331 P P 14 35 10.6 -0.4
OSL Oslo 46.20 329 eP P 14 35 11.7 +0.7
HHC Hu-ho-hao-te 46.24 58 eP P 14 35 13.8 +1.9
HHC pP sP 14 35 20.2 -0.7
HHC sP pP 14 35 24.5 +6.2
HHC S S 14 41 59.4 +1.7
HHC pmax pmax
comp=Z,5.0nm,1.1s
HHC pmax pmax
comp=Z,67nm,5.8s
HHC LR LR
comp=Z,880nm,16.4s
HHC LR LR
comp=Z,460nm,16.0s
HHC LR LR
comp=Z,670nm,15.4s
BCLA Clavier 46.26 315 ⇓P P 14 35 12.8 +1.1
BCLA pP pP 14 35 18.6 +0.4
BCLA sP sP 14 35 22.5 +1.9
NC405 NORSAR Array S 46.27 331 P P 14 35 11.0 -0.7
NC405 IAmb IAmb 14 35 13.6
comp=Z,44nm,0.8s
BGES Gesves 46.39 315 x x 14 35 08.0
BGES Gesves 46.39 315 P P 14 35 12.8 +0.1
BGES x x 14 35 28.3
NB201 NORSAR Array S 46.42 331 P P 14 35 11.7 -1.2
NB2 NORSAR Subarra 46.46 331 P P 14 35 13.1 -0.1
comp=Z,6.8nm,0.6s,baz=114,slow=7.9
NB2 NORSAR Subarra 46.46 331 P P 14 35 13.1 -0.1
baz=114,slow=7.9
NOA NORSAR Array B 46.46 331 P P 14 35 12.8 -0.4
comp=Z,13nm,0.7s,baz=116,slow=7.9,SNR=31
NOA LR LR 14 57 01.0
comp=Z,2µm,22.0s,baz=130,slow=39
NC303 NORSAR Array S 46.47 331 P P 14 35 12.8 -0.4
NAO01 NORSAR Array S 46.51 330 P P 14 35 13.4 -0.2
BMRD Maredsous 46.58 315 P P 14 35 15.2 +1.0
comp=Z,74nm,1.2s

BMRD x x 14 35 16.9
BMRD PcP PcP 14 36 47.7 -0.5
KONO Kongsberg 46.60 329 eP P 14 35 15.2 +0.9
KONO Kongsberg 46.60 329 P P 14 35 13.6 -0.7
KONO Kongsberg 46.60 329ceP P 14 35 14.8 +0.5
KONO pmax pmax
comp=Z,60nm,1.7s
NBO00 NORSAR Array S 46.64 331 P P 14 35 14.3 -0.3
DOU Dourbes 46.65 315 P P 14 35 13.9 -0.9
comp=Z,66nm,0.9s
DOU x x 14 35 17.7
KEV Kevo 46.72 346 P P 14 35 14.8 -0.2
KEV Kevo 46.72 346 P P 14 35 14.8 -0.2
KEV pmax pmax
comp=Z,186nm,1.8s
NC204 NORSAR Array S 46.76 331 P P 14 35 14.2 -1.4
IPM Ipoh 46.79 110 P P 14 35 14.8 -1.6
ARE0 ARCESS Array S 46.89 345 eP P 14 35 17.2 +0.8
ARE0 ARCESS Array S 46.89 345 P P 14 35 15.4 -0.9
ARCES ARCESS Array B 46.89 345 P P 14 35 17.4 +1.1
comp=Z,12nm,0.8s,baz=139,slow=5.8,SNR=17
ARCES LR LR 14 57 48.9
comp=Z,2μm,18.6s,baz=136,slow=40
ARCES ARCESS Array B 46.89 345 P P 14 35 15.8 -0.6
UCC Uccle 46.92 316 P P 14 35 15.9 -1.0
UCC IAmb IAmb 14 35 20.0
comp=Z,29nm,0.9s
UCC Uccle 46.92 316 P P 14 35 15.9 -1.0
UCC pmax pmax
comp=Z,29nm,0.9s
KTK1 Kautokeino 47.04 344 eP P 14 35 18.5 +0.9
SKAR Skarslia 47.60 330 eP P 14 35 22.1 0.0
MOR8 Moi Rana 47.79 338 eP P 14 35 23.2 -0.3
DOMB Dombas 47.82 331 eP P 14 35 23.9 +0.1
BLS5 Blasjo 48.01 328 eP P 14 35 26.0 +0.7
ODD1 Odda 48.09 328 eP P 14 35 26.6 +0.7
HAMF Hammerfest 48.13 345 eP P 14 35 26.0 0.0
QIZ Qiongzhong 48.31 88 P P 14 35 27.0 -1.1
QIZ PP PP 14 37 19.5 -1.2
QIZ S S 14 42 26.0 -1.4
QIZ pmax pmax
comp=Z,9.0nm,1.9s
QIZ LR LR
comp=Z,2μm,18.3s
QIZ LR LR
comp=Z,610nm,16.4s
QIZ LR LR
comp=Z,970nm,18.0s
QIZ Qiongzhong 48.31 88 P P 14 35 27.7 -0.4
KONS Konsvik 48.42 338 eP P 14 35 28.7 +0.4
STEI Steigen 48.55 340 eP P 14 35 30.0 +0.7
TRO Tromso 48.58 343 eP P 14 35 29.9 +0.5
WHN Wuhan 49.39 72 P P 14 35 38.3 +2.0
WHN sP sP 14 35 45.9 +0.5
WHN S S 14 42 47.7 +5.3
WHN LR LR
comp=Z,3μm,16.0s
WHN LR LR
comp=Z,3μm,14.3s
WHN LR LR
comp=Z,4μm,18.8s
DLV T Lat 49.73 97 P P 14 35 38.1 -1.1
DLV IAmb IAmb 14 35 47.8
comp=Z,36nm,1.4s
BJI Beijing 49.78 59 P P 14 35 43.8 +4.7
BJI S S 14 42 51.0 +3.5
BJI pmax pmax
comp=Z,13nm,1.2s
BJI LR LR
comp=Z,1μm,22.1s
BJI LR LR
comp=Z,650nm,27.5s
BOD Bodaibo 49.99 36 eP P 14 35 39.7 -0.8
BOD eS S 14 42 49.7 -0.4
BOD pmax pmax
comp=Z,78nm,1.0s
WOL Wolverton 50.48 316 eP P 14 35 45.0 +0.7
TIA Tai'an 50.85 64 P P 14 35 50.0 +2.7
TIA pmax pmax
comp=Z,33nm,0.9s
TIA LR LR
comp=Z,1μm,20.4s
TIA LR LR
comp=Z,2μm,16.5s
TIA LR LR
comp=Z,2μm,18.9s
KRJI Kerinci 50.89 117 P P 14 35 46.8 -1.2
JSA Saint Aubin 50.91 313 eP P 14 35 47.9 +0.4
JSA IAmb IAmb 14 35 50.9
comp=Z,104nm,0.9s
LBWR Ladybower, Pea 51.02 318 eP P 14 35 48.8 +0.5
STRD Stroud 51.11 316 eP P 14 35 49.3 +0.3
STRD IAmb IAmb 14 35 52.8
comp=Z,113nm,1.0s
HKPS Hong Kong Po S 51.15 82 P P 14 35 48.8 -0.9
FIGM Figuig 51.20 291 P P 14 35 52.2 +2.0
SNR=9.8
EDMD Edmundbyers 51.35 320 eP P 14 35 50.9 +0.1
MONM Monmouth 51.51 316 eP P 14 35 52.4 +0.4
MONM IAmb IAmb 14 35 54.6
comp=Z,70nm,0.9s
HLM1 Long Mynd 51.62 317 eP P 14 35 53.7 +0.8
HLM1 IAmb IAmb 14 35 57.4
comp=Z,36nm,1.0s
MCH1 Michaelchurch 51.65 317 eP P 14 35 53.2 +0.2
MCH1 IAmb IAmb 14 35 55.7
comp=Z,82nm,1.0s
ESY Stoneypath 51.88 322 eP P 14 35 55.2 +0.5
ESK Eskdalemuir 52.13 321 P P 14 35 55.2 -1.3
ESK Eskdalemuir 52.13 321 P P 14 35 55.3 -1.3
ESK pmax pmax
comp=Z,166nm,1.8s
HIA Hailar 52.23 47 P P 14 35 56.6 -0.9
HIA Hailar 52.23 47 P P 14 35 56.6 -0.9
HIA pmax pmax
comp=Z,17nm,1.1s
ESBB Sonseca Array 52.37 301 P P 14 35 57.1 -1.6
ESBB IAmb IAmb 14 36 03.7
comp=Z,31nm,1.1s
ESDC Sonseca Array 52.37 301 P P 14 35 58.5 -0.2
comp=Z,16nm,0.8s,baz=67,slow=6.9,SNR=18
ESDC LR LR 15 02 57.4
comp=Z,317nm,18.3s,baz=105,slow=42
ESDC Sonseca Array 52.37 301 P P 14 35 57.6 -1.1
MLA1 Latheron 52.65 324 eP P 14 36 01.7 +1.3
PAB San Pablo 52.68 301 P P 14 36 00.4 -0.6
PAB IAmb IAmb 14 36 06.5
comp=Z,55nm,1.0s
PAB San Pablo 52.68 301 P P 14 36 00.4 -0.6
PAB pmax pmax
comp=Z,55nm,1.0s
INVG Invergeldie, C 52.74 322 eP P 14 36 01.4 +0.3
INVG IAmb IAmb 14 36 03.6
comp=Z,86nm,1.1s
NJ2 Nanjing 52.91 69 eP P 14 36 03.8 +1.1
NJ2 pmax pmax
comp=Z,21nm,0.9s
NJ2 LR LR
comp=Z,2μm,17.1s
NJ2 LR LR
comp=Z,2μm,21.3s
NJ2 LR LR
comp=Z,2μm,18.0s
KAC Achnashellach 53.56 323 eP P 14 36 08.0 +0.9
HORN Hornachuelos 53.59 299 P P 14 36 10.1 +2.5
SNR=5.6
KPL Plockton 53.73 323 eP P 14 36 08.5 +0.2
MDT Midelt 53.86 292 P P 14 36 12.6 +2.8
SNR=8.1
TOA0 Torodi Ar. Sit 54.03 267 P P 14 36 09.9 -1.3
TOA0 IAmb IAmb 14 36 14.2
comp=Z,48nm,0.9s
TORD Torodi Ar. Bea 54.03 267 P P 14 36 10.8 -0.3
comp=Z,38nm,0.8s,baz=60,slow=7.2,SNR=89
TORD LR LR 15 03 20.5
comp=Z,1μm,18.4s,baz=40,slow=41
TORD Torodi Ar. Bea 54.03 267 P P 14 36 09.9 -1.3
PBRG Braganca 54.27 304 eP P 14 36 14.5 +1.8
comp=Z,72nm,1.8s
QZH Quanzhou 54.32 77 eP P 14 36 13.8 +0.6
QZH S S 14 43 54.1 +3.8
QZH LR LR
comp=Z,2μm,17.5s
QZH LR LR
comp=Z,890nm,18.0s
QZH LR LR
comp=Z,2μm,17.5s
MVO Moncorvo 54.55 303 eP P 14 36 15.5 +0.8
comp=Z,84nm,1.7s
MTE Manteigas 55.03 302 P P 14 36 16.6 -1.6
PMRV Marv??o 55.03 301 eP P 14 36 20.7 +2.5
comp=Z,71nm,1.3s
PCBR Castelo Branco 55.05 301 eP P 14 36 21.0 +2.8
comp=Z,113nm,1.1s
SSE Sheshan 55.05 69 P P 14 36 17.3 -1.1
SSE pmax pmax
comp=Z,4.0nm,1.4s
SSE pmax pmax
comp=Z,65nm,3.3s
SSE LR LR
comp=Z,710nm,24.4s
SSE LR LR
comp=Z,710nm,17.1s
PVRL Vila Real 55.06 303 eP P 14 36 18.9 +0.6
comp=Z,116nm,1.6s
TZRR Tazzarine 55.07 290 P P 14 36 22.0 +3.3
SNR=11
POLO Lamas de Olo 55.10 303 eP P 14 36 21.0 +2.3
comp=Z,67nm,1.6s
PVIS Viseu 55.26 303 eP P 14 36 20.3 +0.5
ZGR Zagora 55.26 289 P P 14 36 24.0 +3.9
SNR=7.7
PESTR Estremoz 55.26 300 P P 14 36 18.5 -1.3
PVAQ Vaqueiros 55.58 299 eP P 14 36 25.8 +3.7
PBEJ Beja 55.60 299 eP P 14 36 26.3 +4.0
EVO Evora 55.64 300 eP P 14 36 24.7 +2.2
comp=Z,68nm,1.6s
COI Coimbra 55.71 302 eP P 14 36 26.3 +3.3
PMTG Montargil 55.73 301 eP P 14 36 26.6 +3.5
comp=Z,48nm,1.3s
PBDV Barranco-do-Ve 55.77 298 eP P 14 36 27.4 +3.9
PTOM Tomar 55.79 301 eP P 14 36 27.0 +3.4
comp=Z,146nm,1.7s
PCVE Castro Verde 55.80 299 eP P 14 36 25.8 +2.1
comp=Z,83nm,1.7s
PCAS Casmilo, Conde 55.80 302 eP P 14 36 26.3 +2.7
comp=Z,184nm,1.6s
KBS Kingsbay 56.09 350 P P 14 36 25.3 +0.2
KBS IAmb IAmb 14 36 46.5
comp=Z,35nm,1.1s
KBS Kingsbay 56.09 350 P P 14 36 25.3 +0.2
KBS pmax pmax
comp=Z,35nm,1.1s
PNCL Nicolau / Gran 56.10 300 eP P 14 36 25.4 -0.4
comp=Z,76nm,1.2s
ZEA Zeya 56.97 42 eP P 14 36 32.6 +0.8
ZEA pmax pmax
comp=Z,23nm,1.0s
ZEA MLR MLR
comp=E,1μm,12.0s
ZEA MLR MLR
comp=Z,1μm,12.0s
YAK Yakutsk 58.39 32 P P 14 36 39.8 -1.7
YAK IAmb IAmb 14 36 45.0
comp=Z,46nm,0.9s
YAK Yakutsk 58.39 32 eP P 14 36 40.4 -1.1
YAK eS S 14 44 41.3 -1.8
YAK e*SS sS 14 44 56.9 +3.1
YAK pmax pmax
comp=Z,39nm,0.8s
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK pmax pmax
comp=E,29nm,1.0s
YAK smax smax
comp=E,69nm,2.5s
YAK smax smax
comp=N,103nm,2.8s
YAK MLR MLR
comp=Z,1μm,18.0s
YAK MLR MLR
comp=E,832nm,19.0s
TIXI Tiksi 59.02 20 P P 14 36 44.2 -1.6
TIXI IAmb IAmb 14 37 13.0
comp=Z,21nm,1.1s
TIXI Tiksi 59.02 20ceP P 14 36 45.0 -0.8
TIXI pmax pmax
comp=Z,26nm,1.7s
TIXI MLR MLR
comp=Z,1μm,17.0s
KSAR Wonju Array Be 59.18 61 P P 14 36 47.9 +0.4
KSAR Wonju Array Be 59.18 61 P P 14 36 47.9 +0.4
KSRS Korea Array 59.21 61 P P 14 36 47.9 +0.2
comp=Z,12nm,0.9s,baz=276,slow=6.7,SNR=17
KSRS LR LR 15 06 17.6
comp=Z,1μm,21.5s,baz=278,slow=40
TSUM Tsumeb 59.97 225 P P 14 36 52.0 -1.3
TSUM IAmb IAmb 14 37 12.8
comp=Z,23nm,1.1s
LBTB Lobatse 60.00 214 P P 14 36 52.7 -0.6
LBTB IAmb IAmb 14 37 09.6
comp=Z,23nm,1.1s
LBTB Lobatse 60.00 214 P P 14 36 52.7 -0.6
LBTB pmax pmax
comp=Z,23nm,1.1s
KLR Kul'dur 60.09 47 iP P 14 36 53.4 -0.2
KLR pmax pmax
comp=Z,13nm,1.1s
KLR MLR MLR
comp=Z,1μm,16.0s
USRK Ussuriysk Ar. 60.99 52 P P 14 36 59.7 -0.1
comp=Z,2.7nm,0.6s,baz=280,slow=6.7,SNR=7.8
USRK LR LR 15 06 09.1
comp=Z,1μm,18.6s,baz=269,slow=39
DAG Danmarks Havn 61.18 345 iP P 14 37 00.6 +0.1
comp=Z,18nm,1.0s
DAG Danmarks Havn 61.18 345 iP P 14 37 00.6 +0.1
DAG pmax pmax
comp=Z,18nm,1.0s
NOR Nord 61.57 351 iP P 14 37 05.0 +1.9
comp=Z,16nm,1.1s
NOR Nord 61.57 351 iP P 14 37 05.0 +1.9
NOR pmax pmax
comp=Z,16nm,1.1s
DBIC Dimbokro 62.60 264 P P 14 37 10.7 -0.4
comp=Z,26nm,0.9s,baz=44,slow=9.2,SNR=21
DBIC LR LR 15 04 21.2
comp=Z,605nm,19.0s,baz=39,slow=36
DBIC Dimbokro 62.60 264 P P 14 37 09.7 -1.4
DBIC IAmb IAmb 14 37 15.4
comp=Z,31nm,1.0s
DBIC Dimbokro 62.60 264 P P 14 37 09.7 -1.4
DBIC pmax pmax
comp=Z,31nm,1.0s
KIC Kosan Boka 62.64 263 eP P 14 37 11.2 -0.2
comp=Z,171nm,1.5s
TIC Toumodi 62.76 264 eP P 14 37 12.2 0.0
comp=Z,86nm,1.2s
GRNR Gornyy 62.85 44⇑iP P 14 37 12.5 +0.2
GRNR eS S 14 45 43.6 +2.9
GRNR pmax pmax
comp=Z,5.0nm,1.0s
GRNR smax smax
comp=E,2.0nm,1.0s
GRNR MLR MLR
comp=Z,450nm,15.0s
LIC Lamto 62.95 263 eP P 14 37 13.1 -0.4
comp=Z,99nm,1.3s
BOSA Boshof 63.18 212 P P 14 37 15.6 +0.9
comp=Z,3.1nm,0.6s,baz=30,slow=8.4,SNR=11
BOSA LR LR 15 05 23.5
comp=Z,578nm,21.8s,baz=27,slow=37
BOSA Boshof 63.18 212 P P 14 37 13.8 -0.9
BOSA IAmb IAmb 14 37 36.6
comp=Z,32nm,1.2s
BOSA Boshof 63.18 212 P P 14 37 13.8 -0.9
BOSA pmax pmax
comp=Z,32nm,1.3s
SUMG Summit 66.69 341 iP P 14 37 38.5 +1.1
SUMG Summit 66.69 341 P P 14 37 37.4 +0.1
SUMG Summit 66.69 341 iP P 14 37 38.5 +1.1
TYV Tymovskoe 66.70 43 eP P 14 37 37.3 0.0
TYV eS S 14 46 29.2 +1.1
TYV pmax pmax
comp=Z,11nm,1.9s
TYV smax smax
comp=E,4.0nm,0.7s
INU Inuyama 66.83 61 P P 14 37 36.7 -1.7
INU IAmb IAmb 14 37 50.7
comp=Z,35nm,1.2s
MJAR Matsushiro Arr 67.41 59 P P 14 37 43.4 +1.3
comp=Z,3.3nm,0.8s,baz=285,slow=7.0,SNR=8.5
MJAR LR LR 15 10 39.1
comp=Z,879nm,20.6s,baz=255,slow=39
MJAR Matsushiro Arr 67.41 59 P P 14 37 43.5 +1.3
MJAR pmax pmax
comp=Z,4.0nm,1.1s
YSS Yuzh-Sakhalins 67.76 47 P P 14 37 42.6 -1.5
YSS IAmb IAmb 14 37 53.8
comp=Z,36nm,0.9s
YSS Yuzh-Sakhalins 67.76 47 eP P 14 37 44.2 +0.1
YSS e 14 37 47.3
YSS pmax pmax
comp=Z,30nm,0.6s
YSS MLR MLR
comp=N,900nm,13.0s
YSS MLR MLR
comp=Z,1μm,13.0s
ASAJ Asahikawa 68.44 50 LR LR 15 11 33.8
comp=Z,840nm,18.5s,baz=310,slow=39
SEY Seymchan 68.69 29 iP P 14 37 49.7 +0.1
MA2 Magadan 68.90 33 P P 14 37 49.6 -1.4
MA2 IAmb IAmb 14 38 02.5
comp=Z,17nm,1.0s
MA2 Magadan 68.90 33ceP P 14 37 51.3 +0.3
MA2 pmax pmax
comp=Z,17nm,1.0s
YUK Yuzh-Kuril'sk 70.71 50 eP P 14 37 56.9 -5.5
YUK e 14 38 21.1
YUK e 14 40 33.5
YUK eS S 14 47 08.9 -6.9
YUK e 14 47 55.2
YUK eSSS SSS 14 54 56.6
YUK pmax pmax
comp=Z,372nm,0.9s
YUK pmax pmax
comp=E,336nm,1.0s
YUK pmax pmax
comp=N,509nm,1.1s
YUK pmax pmax
comp=Z,691nm,2.4s
YUK MLR MLR
comp=Z,901nm,17.0s
YUK MLR MLR
comp=N,473nm,13.0s
YUK MLR MLR
comp=E,1μm,15.0s
KULLO Kullorsuaq 70.84 345 iP P 14 38 03.8 +1.1
KULLO Kullorsuaq 70.84 345 iP P 14 38 03.8 +1.1
TULEG Thule 72.05 349 P P 14 38 09.4 -0.6
TULEG IAmb IAmb 14 38 20.6
comp=Z,36nm,0.9s
BILL Bilibino 72.17 22 P P 14 38 10.7 -0.1
BILL Bilibino 72.17 22 iP P 14 38 11.1 +0.3
BILL i 14 38 28.0
BILL i 14 40 52.0
BILL pmax pmax
comp=Z,18nm,0.9s
BILL MLR MLR
comp=Z,1μm,17.0s
PETK Petropavlovsk- 74.77 38 P P 14 38 27.2 +0.8
comp=Z,4.5nm,0.8s,baz=357,slow=2.9,SNR=5.1
PETK LR LR 15 14 39.5
comp=Z,830nm,20.0s,baz=276,slow=38
PET Petropavlovsk 75.33 38 eP P 14 38 29.3 -0.3
PET eS S 14 48 04.7 -3.4
PET pmax pmax
comp=Z,8.0nm,0.8s
RES Resolute Bay 77.39 353 P P 14 38 40.6 -0.3
RES Resolute Bay 77.39 353 P P 14 38 40.6 -0.3
RES pmax pmax
comp=Z,6.0nm,1.1s
GUMO Guam 81.47 79 LR LR 15 18 44.6
comp=Z,170nm,20.8s,baz=298,slow=38
TOLK Toolik Lake Re 82.91 10 P P 14 39 10.0 -0.8
TOLK IAmb IAmb 14 39 16.2
comp=Z,29nm,1.0s
TOLK Toolik Lake Re 82.91 10 P P 14 39 10.8 -0.1
baz=336
ANM Nome 83.11 17 P P 14 39 12.2 +0.3
ANM IAmb IAmb 14 39 28.7
comp=Z,28nm,1.3s
ANM Nome 83.11 17 P P 14 39 12.2 +0.3
ANM pmax pmax
comp=Z,28nm,1.3s
COLD Coldfoot 84.10 11 P P 14 39 16.6 -0.3
C36M Paulatuk 84.30 1 P P 14 39 16.9 -1.0
C36M IAmb IAmb 14 39 21.9
comp=Z,18nm,0.8s
C36M Paulatuk 84.30 1 P P 14 39 17.5 -0.3
baz=358
IMAR Indian Mountai 84.58 12 P P 14 39 18.3 -1.1
BMAR Burnt Mountain 84.74 8 P P 14 39 20.6 +0.3
INK Inuvik 84.98 4 P P 14 39 21.6 +0.2
comp=Z,7.8nm,0.9s,baz=356,slow=8.0,SNR=21
INK Inuvik 84.98 4 P P 14 39 21.4 +0.1
INK IAmb IAmb 14 39 39.5
comp=Z,41nm,1.6s
INK Inuvik 84.98 4 P P 14 39 21.4 +0.1
INK pmax pmax
comp=Z,41nm,1.6s
FYU Fort Yukon 85.47 9 P P 14 39 23.8 0.0
MLY Manley 86.00 12 P P 14 39 26.4 -0.2
MLY IAmb IAmb 14 39 46.0
comp=Z,32nm,1.3s
SCHQ Schefferville 86.02 331 P P 14 39 27.3 +0.5
comp=Z,1.6nm,0.4s,baz=52,slow=7.4,SNR=3.8
SCHQ LR LR 15 19 01.9
comp=Z,302nm,18.3s,baz=22,slow=36
PRP Porcupine Dome 86.41 10 P P 14 39 28.6 -0.1
PRP IAmb IAmb 14 39 33.5
comp=Z,34nm,1.5s
POKR Poker Flat Res 86.49 10 P P 14 39 28.5 -0.4
baz=338
MDM Murphy Dome 86.51 11 P P 14 39 28.6 -0.4
MDM IAmb IAmb 14 39 40.5
comp=Z,25nm,1.0s
EPYK Eagle Plains 86.64 6 P P 14 39 28.9 -0.9
EPYK IAmb IAmb 14 39 42.6
comp=Z,23nm,1.1s
EPYK Eagle Plains 86.64 6 P P 14 39 29.1 -0.6
baz=347
NEA Nenana 86.71 11 P P 14 39 29.0 -1.0
NEA IAmb IAmb 14 39 40.9
comp=Z,18nm,1.1s
TTA Tatalina 86.79 15 P P 14 39 30.9 +0.4
TTA Tatalina 86.79 15 P P 14 39 30.9 +0.4
BPAW Bear Paw Mtn. 86.80 12 P P 14 39 30.4 -0.1
IL31 86.90 10 P P 14 39 30.8 -0.1
ILAR Eielson Array 86.90 10 P P 14 39 31.2 +0.3
comp=Z,2.6nm,0.7s,baz=321,slow=4.2,SNR=35
ILAR LR LR 15 23 21.3
comp=Z,548nm,20.1s,baz=330,slow=39
ILAR Eielson Array 86.90 10 P P 14 39 29.8 -1.2
WRH Wood River Hil 86.98 11 P P 14 39 31.2 -0.1
HDA Harding Lake 87.23 10 P P 14 39 32.3 -0.3
HDA Harding Lake 87.23 10 P P 14 39 32.5 -0.1
baz=338
KTH Kantishna Hill 87.31 12 P P 14 39 32.6 -0.5
KTH IAmb IAmb 14 40 12.3
comp=Z,21nm,1.1s
WRA Warramunga Arr 87.44 114 P P 14 39 34.3 0.0
comp=Z,3.7nm,0.8s,baz=309,slow=4.0,SNR=13
WRA LR LR 15 22 48.5
comp=Z,159nm,18.1s,baz=290,slow=38
WRA Warramunga Arr 87.44 114 P P 14 39 33.4 -0.9
WRA Warramunga Arr 87.44 114 iP P 14 39 34.7 +0.4
WRA pmax pmax
comp=Z,4.0nm,0.8s
WRAB Tennant Creek 87.45 114ceP P 14 39 36.1 +1.8
WRAB pmax pmax
comp=Z,62nm,2.5s
WB2 Warramunga Arr 87.45 114 P P 14 39 32.9 -1.5
MCK McKinley 87.51 12 P P 14 39 33.1 -0.9
MCK IAmb IAmb 14 39 44.9
comp=Z,31nm,1.0s
MCK McKinley 87.51 12 P P 14 39 33.1 -0.9
MCK pmax pmax
comp=Z,31nm,1.0s
PPLA Purkeypile 87.65 13 P P 14 39 34.2 -0.5
PPLA IAmb IAmb 14 40 20.4
comp=Z,36nm,1.4s
EGAK Eagle 87.71 8 P P 14 39 34.6 -0.2
EGAK IAmb IAmb 14 39 48.2
comp=Z,27nm,1.1s
RND Reindeer 87.83 12 P P 14 39 35.5 -0.1

RND IAmb IAmb 14 39 53.7
comp=Z,29nm,1.4s
RND Reindeer 87.83 12 P P 14 39 35.5 -0.1
RND pmax pmax
comp=Z,29nm,1.4s
SCRK Sand Creek 88.09 9 P P 14 39 36.0 -0.8
SCRK IAmb IAmb 14 39 48.6
comp=Z,22nm,1.0s
RIDG Independent Ri 88.19 10 P P 14 39 35.9 -1.4
RIDG IAmb IAmb 14 39 58.9
comp=Z,23nm,1.4s
DOT Dot Lake 88.39 10 P P 14 39 38.9 +0.8
DOT IAmb IAmb 14 39 57.8
comp=Z,11nm,1.0s
DHY Denali Highway 88.40 11 P P 14 39 37.5 -0.9
DHY IAmb IAmb 14 40 02.7
comp=Z,29nm,1.6s
ASAR Alice Springs 88.92 117 P P 14 39 41.8 +0.5
comp=Z,4.1nm,1.0s,baz=304,slow=4.7,SNR=15
ASAR LR LR 15 25 20.1
comp=Z,129nm,18.2s,baz=290,slow=40
ASAR Alice Springs 88.92 117 P P 14 39 40.8 -0.5
SUA Susitna One 89.24 13 P P 14 39 42.5 +0.2
BCAR Beaver Creek A 89.27 9 P P 14 39 42.1 -0.2
YKA Yellowknife Ar 90.98 356 P P 14 39 50.5 +0.3
comp=Z,2.6nm,0.7s,baz=359,slow=5.0,SNR=22
YKA LR LR 15 28 20.7
comp=Z,361nm,18.0s,baz=0.0,slow=41
FCC Fort Churchill 91.78 346 P P 14 39 53.9 -0.1
FCC IAmb IAmb 14 39 57.8
comp=Z,14nm,1.1s
FCC Fort Churchill 91.78 346 P P 14 39 53.9 -0.1
FCC pmax pmax
comp=Z,14nm,1.1s
D63A Stockholm 91.93 326 P P 14 39 55.3 +0.3
baz=46
KDAK Kodiak Island 92.14 16 LR LR 15 25 57.7
comp=Z,450nm,21.6s,baz=353,slow=39
PMG Port Moresby 93.60 99 P P 14 40 04.1 +0.9
comp=Z,5.5nm,0.7s,baz=346,slow=4.2,SNR=3.3
PMG Port Moresby 93.60 99 IAmb IAmb 14 42 39.4
comp=Z,10.0nm,0.9s
MAW Mawson 94.02 178 LR LR 15 16 51.8
comp=Z,270nm,19.6s,baz=32,slow=32
MATQ Matagami 94.25 333 P P 14 40 05.8 +0.2
baz=39
LSQQ Lebel-sur-Quev 94.53 332 P P 14 40 06.9 0.0
baz=40
D57A Chemin Vers le 94.71 329 P P 14 40 06.8 -0.9
baz=42
D56A ZEC Mazanza, M 95.08 330 P P 14 40 11.5 +2.0
baz=41
D55A Sainte-Anne-du 95.43 330 P P 14 40 13.4 +2.3
baz=41
SYO Syowa Base 96.28 186 ⇑eX P 14 40 12.6 -1.5
LONY Lake Ozonia 96.82 328 P P 14 40 17.4 -0.1
baz=42
FFC Flin Flon 97.13 348 P P 14 40 17.5 -1.1
FFC IAmb IAmb 14 40 31.5
comp=Z,11nm,1.4s
FFC Flin Flon 97.13 348 P P 14 40 17.5 -1.1
FFC pmax pmax
comp=Z,11nm,1.4s
I57A Carthage 97.84 328 P P 14 40 20.8 -1.3
baz=41
STKA Stephens Creek 98.75 121 LR LR 15 22 28.2
comp=Z,695nm,21.9s,baz=289,slow=34
ULM Lac du Bonnet 99.98 343 LR LR 15 28 54.9
comp=Z,417nm,19.1s,baz=26,slow=37
NVAR Mina Array Bea 115.18 357 PKP PKPdf 14 45 29.7 +1.4
comp=Z,0.6nm,0.9s,baz=48,slow=1.3,SNR=2.8
DZM Mont Dzumac 115.61 103 eLR LR 15 20 18.7
comp=Z,617nm,38.9s
TXAR Lajitas Array 121.59 341 PKP PKPdf 14 45 41.0 +0.3
comp=Z,1.1nm,0.9s,baz=190,slow=6.0,SNR=4.2
TXAR Lajitas Array 121.59 341 PKIKP PKPdf 14 45 41.0 +0.3
PPT2 Papeete2 153.15 76 eLR LR 15 37 49.6
comp=Z,627nm,24.0s
TAOE Nuku Hiva Isla 155.48 47 eLR LR 15 38 40.9
comp=Z,757nm,22.6s

IDC 02 14:37:11.7±2.9, 3.88S×135.56E, h0km, mb3.4/1, mb1 3.9/4, mb1mx3.5/42, mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=88.4km s-min=28.6km az=71.0
NEIC 02 14:37:16.3±1.6, 4.04S±0.09×135.2E±0.1, h24km±6km, mb4.3/4, Error ellipse: s-maj=20.6km s-min=12.2km az=72.0
ISC 02 14:37:16.4±1.2, 4.04S±0.09×135.1E±0.1, h23km, n14, σ1.37/14, Irian Jaya region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FAKI Fak Fak 3.09 291 Pn Pn 14 38 03.9 +0.1
SIJI Sorong 4.99 309 Pn Pn 14 38 29.4 -0.5
1.6nm,0.3s,baz=224,slow=22,SNR=11
SIJI Sn Sn 14 39 25.8 -1.1
1.3nm,0.3s,baz=328,slow=24,SNR=1.7
SAUI Saumlaki 5.47 224 Pn Pn 14 38 39.3 +2.8
MTN Manton Dam 9.60 204 Pn Pn 14 39 33.3 0.0
KNRA Kununurra 13.15 208 Pn Pn 14 40 19.4 -2.6
WB2 Warramunga Arr 15.82 183 Pn Pn 14 40 59.5 +1.6
WB2 IAmb IAmb 14 41 13.9
comp=Z,76nm,1.9s
WRA Warramunga Arr 15.82 183 Pn P 14 41 00.4 -1.2
comp=Z,0.3nm,0.3s,baz=5.4,slow=12,SNR=9.0
WRA Warramunga Arr 15.82 183 IAmb IAmb 14 41 09.2
comp=Z,0.3nm,0.8s
AS31 Alice Springs 19.55 183 P P 14 41 42.2 -0.4
AS31 IAmb IAmb 14 41 51.5
comp=Z,2.1nm,0.8s
ASAR Alice Springs 19.55 183 P P 14 41 42.2 -0.5
comp=Z,0.3nm,0.3s,baz=6.1,slow=12,SNR=16
ASAR Alice Springs 19.55 183 P P 14 41 42.4 -0.2
KSM Kuching 25.41 282 P P 14 42 42.8 +0.2
KSM IAmb IAmb 14 43 01.3
comp=Z,13nm,1.2s
MKAR Makanchi Array 68.71 324 P P 14 48 18.8 +0.5
comp=Z,0.2nm,0.6s,baz=103,slow=10,SNR=2.5
GSTR Great Sitkin T 69.50 30 P P 14 48 22.8 -0.3

IDC 02 14:42:42.9±3.8, 4.86S×153.74E, h104km±26km, mb3.7/10, mb1 3.9/11, mb1mx3.6/40, mbtmp4.1/11, Error ellipse: s-maj=37.7km s-min=15.1km az=98.0
NEIC 02 14:42:42.2±1.9, 4.85±0.1×153.8E±0.1, h100km±7km, mb4.6/19, Error ellipse: s-maj=15.8km s-min=13.3km az=139.0
ISC 02 14:42:42.5±0.6, 4.84S±0.07×153.85E±0.09, h105km, n51, σ0.93/53, mb4.0/15, New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RABL Rabaul 1.80 291 Pn Pn 14 43 12.6 -0.2
KRVT Keravat (AS076 1.90 286 P Pn 14 43 13.7 -0.2
80nm,0.3s,baz=115,slow=0.8,SNR=82
KRVT S Sn 14 43 35.9 -2.1
53nm,0.3s,baz=118,slow=22,SNR=6.6
PMG Port Moresby 8.05 235 P Pn 14 44 37.0 +0.3
19nm,0.3s,baz=34,slow=5.4,SNR=59
PMG S Sn 14 46 05.3 -0.7
3.7nm,0.3s,baz=189,slow=15,SNR=1.8
PMG Port Moresby 8.05 235 Pn Pn 14 44 37.2 +0.6
PATS Pohnpei 12.42 21 Pn Pn 14 45 35.7 0.0
COEN Coen 13.89 229 P Pn 14 45 56.7 +1.8
KWAJ Kwajalein Atol 19.28 45 P P 14 46 56.3 -2.9
MTN Manton Dam 23.80 249 P P 14 47 46.9 +1.0
WR0 Warramunga Arr 24.07 230 P P 14 47 49.0 +0.7
WR0 IAmb IAmb 14 47 52.7
comp=Z,58nm,1.6s
WB0 Warramunga Arr 24.07 230 P P 14 47 49.1 +0.8
WB0 IAmb IAmb 14 48 45.0
comp=Z,47nm,1.8s
WB2 Warramunga Arr 24.21 230 P P 14 47 50.3 +0.8
WRA Warramunga Arr 24.22 230 P P 14 47 49.0 -0.6
comp=Z,4.2nm,0.6s,baz=54,slow=10.0,SNR=19
WRA Warramunga Arr 24.22 230 P P 14 47 49.7 +0.1
ARMA Armidale 25.53 184 P P 14 48 02.2 +0.7
ARMA IAmb IAmb 14 48 02.6
comp=Z,34nm,1.7s
AS31 Alice Springs 26.84 224 P P 14 48 13.3 -0.1
ASAR Alice Springs 26.84 224 P P 14 48 13.2 -0.2
comp=Z,1.7nm,0.7s,baz=56,slow=9.0,SNR=7.8
ASAR Alice Springs 26.84 224 P P 14 48 13.6 +0.2
LHI Lord Howe Isla 26.99 170 P P 14 48 14.2 -0.4
STKA Stephens Creek 29.25 202 P P 14 48 34.4 -0.4
comp=Z,2.3nm,0.7s,baz=36,slow=14,SNR=6.8
FITZ Fitzroy Crossi 30.57 242 P P 14 48 45.9 -0.6
comp=Z,4.6nm,0.6s,baz=80,slow=7.4,SNR=7.1
FORT Forrest 35.43 220 P P 14 49 28.1 -0.5
PSA00 Pilbara Seismi 36.92 240 P P 14 49 40.8 -0.7
CISI Cisompet, Garu 45.83 264 P P 14 50 53.2 -1.4
ENH Enshi 54.95 312 P P 14 52 03.6 +0.7
ENH IAmb IAmb 14 52 04.5
comp=Z,4.3nm,0.9s
GTA Gaotai 66.40 317 eP P 14 53 19.9 -0.7
GTA pP pP 14 53 31.2 -14
GTA sP PcP 14 53 35.3 -14
SONM Songino Array 66.92 327 P P 14 53 25.8 +2.1
comp=Z,0.5nm,0.5s,baz=142,slow=6.5,SNR=5.7
SONM Songino Array 66.92 327 P P 14 53 24.0 +0.2
YAK Yakutsk 69.22 348 P P 14 53 39.0 +1.3
TAPN Taplejung 71.32 301 eP P 14 53 52.4 +0.8
ODAN Odare 71.47 300 eP P 14 53 53.4 +1.0
comp=Z,14nm,0.7s
RAMN Ramite 72.17 300 eP P 14 53 57.5 +0.8
comp=Z,3.6nm,0.5s
JIRN Jiri 72.71 301 eP P 14 54 00.9 +0.9
GUN Gumba 73.04 301 eP P 14 54 02.9 +1.0
PKIN Phulchoki 73.37 300 eP P 14 54 04.1 +0.3
comp=Z,3.5nm,0.5s
KKN Kakani 73.52 301 eP P 14 54 05.3 +0.7
DMN Daman 73.62 300 eP P 14 54 06.2 +0.9
GKN Gorkha 74.12 301 eP P 14 54 09.3 +1.3
KOLN Koldanda 74.96 300 eP P 14 54 13.4 +0.5
DANN Dangsing 74.96 301 eP P 14 54 13.2 +0.2
comp=Z,5.7nm,0.6s
MKAR Makanchi Array 81.04 319 P P 14 54 46.5 +0.5
comp=Z,0.4nm,0.6s,baz=94,slow=7.4,SNR=11
MKAR Makanchi Array 81.04 319 P P 14 54 46.1 +0.2
ILAR Eielson Array 81.80 22 P P 14 54 49.9 +0.3
comp=Z,0.3nm,0.6s,baz=250,slow=5.2,SNR=5.3
ILAR Eielson Array 81.80 22 P P 14 54 50.6 +1.1
KURK Kurchatov 84.44 322 P P 14 55 03.4 0.0
KURK Kurchatov 84.44 322 IAmb IAmb 14 55 42.9
comp=Z,12nm,2.0s
KURBB Kurchatov Arra 84.47 322 P P 14 55 03.4 -0.2
comp=Z,0.6nm,0.8s,baz=108,slow=4.2,SNR=4.9
MAW Mawson 85.94 203 P P 14 55 10.2 -0.4
comp=Z,4.4nm,1.1s,baz=71,slow=5.5,SNR=3.7
MAW Mawson 85.94 203 P P 14 55 10.3 -0.3
MAW IAmb IAmb 14 56 15.9
comp=Z,9.8nm,1.9s
BVAR Borovoye Array 89.90 323 P P 14 55 29.1 -0.7
comp=Z,1.0nm,0.8s,baz=102,slow=4.9,SNR=7.4
TORD Torodi Ar. Bea 151.31 289 PKPbc PKPbc 15 02 24.2 -0.7
comp=Z,1.2nm,0.7s,baz=92,slow=1.8,SNR=6.4
TORD pPKPbc pPKPbc 15 02 53.4 +1.2
comp=Z,1.4nm,0.7s,baz=54,slow=2.2,SNR=4.5
TORD Torodi Ar. Bea 151.31 289 PKPbc 15 02 24.0 -1.0

DSN 02 14:46:09.7±2.1, 26.53N×58.04E, h10km, ML3.9/6, Error ellipse: s-maj=31.6km s-min=12.7km az=0.0
IDC 02 14:46:10.3±1.4, 26.68N×57.65E, h0km, mb3.5/11, mb1 3.6/12, mb1mx3.4/53, mbtmp3.6/12, ML4.1/1, Error ellipse: s-maj=27.2km s-min=22.3km az=144.0
NEIC 02 14:46:11.3±1.4, 26.59N±0.09×57.5E±0.1, h10km±2km, mb4.0/8, mb_Lg3.9(TEH), Error ellipse: s-maj=15.4km s-min=14.5km az=95.0
THR 02 14:46:11.0±0.3, 26.67N×57.58E, h14km±4km, ML3.6
TEH 02 14:46:12.5, 26.72N×57.78E, h10km, ML3.9
OMAN 02 14:46:18.5±0.1, 26.28N×57.61E, h65km±3km, ml3.6/13, Error ellipse: s-maj=7.1km s-min=2.8km az=34.0
ISC 02 14:46:11.2±0.5, 26.55N±0.03×57.72E±0.04, h10km, n89, σ1.73/99, mb3.6/12, Southern Iran

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JSK1 Jask 0.91 177 ePg Pn 14 46 32.4 +2.4
NIAN Nian 1.28 322 ePg Pg 14 46 35.9 +0.2
NIAN e 14 47 26.5
KHNJ Kahnooj 1.39 360 ePg Pn 14 46 35.1 -1.7
KHNJ eSg Sb 14 46 53.5 -1.7
BANOM Banah 1.42 244 eP Pg 14 46 38.5 +0.1
SNR=92
BANOM S Sg 14 47 01.6 +4.8
BANOM Banah 1.42 244 P Pg 14 46 39.0 +0.6
SNR=226
BANOM Banah 1.42 244 ePn Pg 14 46 38.6 +0.2
SHME Shamm 1.50 251 eP Pg 14 46 40.7 +0.7
SNR=75
SHME Shamm 1.50 251 ePn Pn 14 46 40.9 +0.9
GENO Geno 1.62 302 ePn Pg 14 46 42.3 0.0
GENO e 14 47 11.6
BNDS Bandar-Abbas 1.62 302 ePg Pn 14 46 37.7 -2.2
BNDS IAML 14 47 12.3
comp=N,946nm,0.5s
BNDS IAML 14 47 12.7
comp=E,900nm,0.4s
MDH Madha 1.78 226 eP Pn 14 46 42.7 +0.6
SNR=18
MDH Madha 1.78 226 P Pn 14 46 42.8 +0.7
SNR=18
MDH S Sb 14 47 06.8 +0.4
MDH Madha 1.78 226 ePn Pn 14 46 42.7 +0.6
UOSS Minazif 2.10 221 eP Pn 14 46 46.8 +0.4
SNR=18
UOSS Minazif 2.10 221 Pn 14 46 46.0 -0.4
UOSS Minazif 2.10 221 ePn Pn 14 46 46.4 0.0
UMQ Umm Al-Quwin 2.11 242 ePn Pb 14 46 50.3 +0.8
HATD Hatta, Dubai 2.23 220 eP Pn 14 46 48.9 +0.6
SNR=17
HATD Hatta, Dubai 2.23 220 ePn Pn 14 46 49.0 +0.7
ASHO Ashiyiah 2.38 219 eP Pn 14 46 52.1 +1.7
SNR=18
ASHO Ashiyiah 2.38 219 P Pb 14 46 54.0 -0.3
SNR=17
ASHO Ashiyiah 2.38 219 ePn Pn 14 46 51.3 +0.9
NAZ Nazwa, Dubai 2.42 230 eP Pb 14 46 54.3 -0.5
SNR=12
NAZ Nazwa, Dubai 2.42 230 ePn Pb 14 46 54.9 +0.1
FAQ Al Faqa, Dubai 2.63 227 ePn Pb 14 46 58.1 -0.3
CHBR Chabahar 2.66 110 ePn Pb 14 46 57.6 -1.4
ASUD Al Ashush, Dub 2.88 229 ePn Pb 14 47 00.5 -2.2
HOQ Hoqain 2.98 187 P Pn 14 46 59.3 +0.7
SNR=26
HOQ S Sn 14 47 31.8 -2.5
BIDO Bidbid 3.04 173 P Pn 14 47 00.3 +0.9
SNR=21
BIDO S Sn 14 47 32.3 -3.5
BIDO Bidbid 3.04 173 ePn Pn 14 47 00.1 +0.8
ALNE Al Ain 3.05 216 ePn Pb 14 47 03.1 -2.6
NGRK Negar Kerman 3.20 344 ePn Pn 14 47 03.5 +1.5
NGRK e 14 48 02.7
CHMN Cheshme madani 3.30 357 ePn Pn 14 47 06.0 +2.7
ARQ Araqi 3.38 199 P Pb 14 47 07.8 -3.4
SNR=25
ARQ S Sn 14 47 44.7 +0.5
WSAR Wadi Sarin 3.40 166 Pn Pn 14 47 06.1 +1.7
comp=E,17nm,0.3s,baz=328,slow=4.1,SNR=187
WSAR Sn Sn 14 47 44.4 -0.4
comp=E,27nm,0.3s,baz=246,slow=19,SNR=13
WSAR Wadi Sarin 3.40 166 P Pn 14 47 06.0 +1.7
SNR=34
WSAR S Sn 14 47 38.7 -6.1
SMDO Samad 3.49 175 P Pn 14 47 07.5 +1.9
SNR=28
KRBR Kerman 3.52 346 ePn Pn 14 47 05.5 -0.7
KRBR eSg Sb 14 47 56.2 -0.6
KRBR IAML 14 47 59.4
comp=E,106nm,0.6s
KRBR IAML 14 48 38.6
comp=N,121nm,0.5s
TVBK TV Kerman 3.53 346 ePn Pn 14 47 09.5 +3.1
TVBK e 14 48 38.7
BSY Bisya 3.82 187 P Pn 14 47 13.6 +3.5
SNR=17
KHGB Koh Gabri 3.96 344 e Sn 14 47 55.8 -3.2
SZD1 Zahaedan-tmp 4.04 43 ePn Pn 14 47 15.6 +2.4
WBK Wadi Bani Khal 4.08 164 P Pn 14 47 15.0 +1.3
SNR=59
WBK S Sn 14 48 00.7 -1.0
JMDO Jabal Madar 4.18 175 P Pn 14 47 18.3 +3.3
SNR=12
UMZA Um Al Zommool 4.47 212 ePn Pn 14 47 20.9 +1.9
ISRV Sarvestan 4.95 306 ePn Pn 14 47 26.8 +0.8
NHDN Nehbandan 5.24 22 ePn Pn 14 47 31.4 +1.6
IBAF Bafgh 5.36 340 ePn Pn 14 47 32.7 +1.2
BSRN Basiran 5.54 13 ePn Pn 14 47 34.1 +0.3
MHTO MHTO 5.54 178 P Pn 14 47 36.7 +2.9
SNR=7.8
MHTO S Sn 14 48 39.9 +2.3
IKOO Kooshah 5.96 11 ePn Pn 14 47 40.7 +0.9
ITEG Tejag 6.39 8 ePn Pn 14 47 46.9 +1.3
YZKH Yazd 6.43 336 ePn Pn 14 47 45.5 -0.5
IMON Monand 6.83 14 ePn Pn 14 47 53.1 +1.4
KLNJ Kolanjah 6.97 311 ePn Pn 14 47 54.7 +1.0
IRAM Ramesheh 7.01 320 ePn Pn 14 47 55.5 +1.3
TABS Tabas 7.09 356 ePn Pn 14 47 55.0 -0.2
SHRT Shahrakht 7.42 17 ePn Pn 14 48 00.2 +0.6
WHFO Wadi Hawf 9.33 204 P Pn 14 48 26.3 +0.4
WHFO S Sn 14 50 08.1 -2.9
SNR=8.7
RBK Rabkut 9.57 201 P Pn 14 48 30.9 +1.7
RBK S Sn 14 50 12.8 -4.1
SNR=7.2
RAYN Ar Rayn 11.47 257 Pn 14 48 52.9 -2.4
NIL Nilore 15.19 59 Pn Pn 14 49 48.2 +2.4
NIL IAmb IAmb 14 50 38.1
comp=Z,6.2nm,0.9s
BTK Batken 17.33 36 P Pn 14 50 15.4 +0.6
KK31 Karatay Array 19.53 29 P Pn 14 50 39.6 -0.5
KKAR Karatay Array 19.53 29 P Pn 14 50 40.4 +0.3
KKAR Karatay Array 19.53 29 P P 14 50 39.5 +0.6
KKAR IAmb IAmb 14 50 48.0
comp=Z,7.8nm,1.5s
AAK Ala-Archa 21.11 36 P P 14 50 57.1 +0.9
comp=Z,0.4nm,0.5s,baz=190,slow=11,SNR=1.7
AAK Ala-Archa 21.11 36 IAmb IAmb 14 51 41.5
comp=Z,6.9nm,1.4s
ABKAR Akbulak array 22.73 4 P P 14 51 13.7 +0.4
AKTO Aktyubinsk 23.85 0 P P 14 51 23.4 -1.2
comp=Z,1.8nm,0.6s,baz=203,slow=5.3,SNR=6.5
BRTR Keskin Array B 23.98 309 P P 14 51 26.1 +0.1
comp=Z,1.4nm,0.8s,baz=117,slow=13,SNR=7.5
BRTR Keskin Array B 23.98 309 P P 14 51 25.6 -0.4
MKAR Makanchi Array 28.03 37 P P 14 52 03.3 +0.8
comp=Z,0.1nm,0.5s,baz=228,slow=8.4,SNR=1.4
BVAR Borovoye Array 28.09 16 P P 14 52 02.7 -0.2
comp=Z,0.4nm,0.6s,baz=49,slow=45,SNR=4.4
KURBB Kurchatov Arra 28.83 28 P P 14 52 08.3 -1.2
comp=Z,0.2nm,0.6s,baz=227,slow=8.8,SNR=2.0
KURK Kurchatov 28.94 28 P P 14 52 08.3 -2.1
KURK Kurchatov 28.94 28 IAmb IAmb 14 52 10.3
comp=Z,10nm,1.8s
AKASG Malin Array Be 32.46 326 P P 14 52 40.1 -1.4
comp=Z,0.3nm,0.4s,baz=132,slow=8.3,SNR=2.8
AKASG Malin Array Be 32.46 326 IAmb IAmb 14 53 21.7
comp=Z,1.2nm,1.1s
ZALV Zalesovo Beam 33.91 29 P P 14 52 53.8 -0.3
comp=Z,0.4nm,0.3s,baz=240,slow=11,SNR=3.5
ZALV Zalesovo Beam 33.91 29 P P 14 52 53.5 -0.7
VYHS Vyhne 37.27 316 eP P 14 53 23.8 +0.6
GERES GERESS Array B 40.60 315 P P 14 53 50.6 -0.5
comp=Z,0.3nm,0.6s,baz=99,slow=8.2,SNR=5.2
GERES GERESS Array B 40.60 315 P P 14 53 51.1 0.0
KHC Kasperske Hory 40.76 316 eP P 14 53 52.7 +0.3
FINES FINESS Array B 40.86 337 P P 14 53 52.1 -0.8
comp=Z,2.6nm,0.9s,baz=125,slow=9.6,SNR=5.3
FINES FINESS Array B 40.86 337 P P 14 53 53.5 +0.5
TORD Torodi Ar. Bea 53.98 267 P P 14 55 36.1 +0.4
comp=Z,0.3nm,0.4s,baz=66,slow=7.5,SNR=4.3
TORD Torodi Ar. Bea 53.98 267 P P 14 55 34.9 -0.8

IDC 02 14:46:40.7±1.4, 26.59N×57.43E, h0km, mb3.7/10, mb1 3.8/11, mb1mx3.6/52, mbtmp3.7/11, ML4.2/1, Error ellipse: s-maj=27.2km s-min=23.5km az=153.0
NEIC 02 14:46:41.8±2.2, 26.45N±0.03×57.39E±0.08, h10km±1km, mb4.0/5, Error ellipse: s-maj=13.2km s-min=4.0km az=248.0
ISC 02 14:46:41.9±0.7, 26.45N±0.07×57.3E±0.1, h10km, n17, σ1.57/16, mb3.8/12, Southern Iran

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
UOSS Minazif 1.80 214 Pn Pb 14 47 14.3 -0.7
WSAR Wadi Sarin 3.41 159 Pn Pn 14 47 36.9 +1.8
23nm,0.3s,baz=0.4,slow=12,SNR=9.8
WSAR Sn Sn 14 48 14.2 -1.5
4.0nm,0.3s,baz=52,slow=22,SNR=1.1
HRA Herat 8.98 27 Pn Pn 14 48 53.5 +1.7
AAK Ala-Archa 21.40 37 P P 14 51 29.5 -0.5
2.2nm,0.8s,baz=180,slow=9.1,SNR=3.5
BRTR Keskin Array B 23.77 310 P P 14 51 56.3 +1.6
1.4nm,0.7s,baz=128,slow=10,SNR=5.0
AKTO Aktyubinsk 23.96 1 P P 14 51 55.6 -0.5
2.5nm,0.6s,baz=190,slow=6.4,SNR=5.3
MKAR Makanchi Array 28.32 38 P P 14 52 35.7 -0.1
0.3nm,0.8s,baz=219,slow=6.7,SNR=2.1
KURBB Kurchatov Arra 29.09 28 P P 14 52 40.7 -1.8
0.1nm,0.5s,baz=208,slow=10.0,SNR=1.6
KURK Kurchatov 29.20 28 P P 14 52 40.7 -2.7
KURK Kurchatov 29.20 28 IAmb IAmb 14 53 22.7
comp=Z,4.7nm,1.6s
AKASG Malin Array Be 32.35 326 P P 14 53 10.5 -0.7
comp=Z,0.9nm,0.6s,baz=129,slow=8.3,SNR=5.6
ZALV Zalesovo Beam 34.17 29 P P 14 53 24.3 -2.8
comp=Z,0.5nm,0.3s,baz=230,slow=11,SNR=2.9
GERES GERESS Array B 40.42 315 P P 14 54 19.9 -0.4
comp=Z,0.8nm,0.7s,baz=119,slow=8.4,SNR=5.7
KHC Kasperske Hory 40.58 316 P P 14 54 22.1 +0.5
KHC IAmb IAmb 14 54 26.4
comp=Z,8.7nm,1.8s
FINES FINESS Array B 40.81 338 P P 14 54 22.8 -0.4
comp=Z,1.5nm,0.7s,baz=120,slow=11,SNR=4.8
TORD Torodi Ar. Bea 53.61 267 P P 14 56 04.7 +0.9
comp=Z,0.9nm,0.6s,baz=62,slow=7.0,SNR=3.6
TORD Torodi Ar. Bea 53.61 267 IAmb IAmb 14 56 09.9
comp=Z,4.5nm,1.4s

THE 02 14:47:33.9, 38.38N×20.41E, h6km±3km, ML3.2/12, Error ellipse: s-maj=3.4km s-min=0.5km az=105.0
ATH 02 14:47:33.7, 38.38N×20.46E, h13km±2km, ML3.1/11, Error ellipse: s-maj=2.2km s-min=0.6km az=252.0
ISC 02 14:47:34.0±0.9, 38.38N±0.02×20.47E±0.03, h9km±6km, n47, σ0.66/76, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VSK1 VASILIKIADES 0.08 71 P Pg 14 47 36.1 -0.1
VSK1 S Sg 14 47 37.7 -0.2
43μm,0.1s
KEF1 Kardakata, Kep 0.10 177 P Pg 14 47 36.6 +0.1
KEF1 S Sg 14 47 38.5 +0.2
KEF4 Livadi, Kephal 0.13 195 P Pg 14 47 37.0 +0.1
KEF4 S Sg 14 47 39.3 +0.4
KEF3 Kipouria, Keph 0.20 207 P Pg 14 47 38.2 +0.1
KEF3 S Sg 14 47 41.5 +0.6
ARG2 Argostoli 0.20 175 P Pg 14 47 38.2 0.0
ARG2 S Sg 14 47 41.6 +0.6
42μm,0.2s
KEF2 Argostoli. Kep 0.22 175 P Pg 14 47 38.4 -0.1
KEF2 S Sg 14 47 41.9 +0.5
VLS Valsamata 0.23 154 P Pg 14 47 38.5 -0.1
VLS S Sg 14 47 42.6 +0.9
6μm,0.2s
VLS Valsamata 0.23 154 P Pg 14 47 38.5 -0.1
VLS S Sg 14 47 42.0 +0.3
VLS AML AML 14 47 44.2
comp=N,13082μm,0.3s
VLS AML AML 14 47 45.7
comp=E,11592μm,0.1s
EVGI Lefkada island 0.28 32 P Pg 14 47 39.7 +0.1
EVGI S Sg 14 47 44.5 +1.1
EVGI Lefkada island 0.28 32 P Pg 14 47 39.7 +0.1
EVGI S Sg 14 47 44.4 +0.9
MGNA Meganis 0.38 43 P Pg 14 47 41.1 -0.2
MGNA S Sg 14 47 47.1 +0.8
MGNA AML AML 14 47 48.0
comp=E,6685μm,0.2s
MGNA AML AML 14 47 48.4
comp=N,8051μm,0.2s
LKD2 Lefkada island 0.43 20 P Pg 14 47 42.2 -0.3
LKD2 S Sb 14 47 49.8 -0.7
comp=N,2μm,0.3s
LKD2 Lefkada island 0.43 20 P Pg 14 47 42.2 -0.3
LKD2 S Sg 14 47 48.5 +0.2
LKD2 AML AML 14 47 50.1
comp=N,3163μm,0.2s

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKD2				AML	AML	14 47 53.6	
	comp=E,3814µm,0.3s						
TSLK	**Tsoukalades, L**	**0.47**	**19**	P	**Pg**	**14 47 43.0**	**-0.1**
TSLK				S	**Sb**	**14 47 50.8**	**-0.6**
	comp=E,2µm,0.3s						
TSLK	**Tsoukalades, L**	**0.47**	**19**	P	**Pg**	**14 47 42.9**	**-0.1**
TSLK				S	**Sg**	**14 47 49.9**	**+0.7**
TSLK				AML	AML	14 47 52.1	
	comp=E,4550µm,0.4s						
TSLK				AML	AML	14 47 55.0	
	comp=N,5097µm,0.3s						
AST1	**Astakos**	**0.52**	**72**	P	**Pg**	**14 47 43.9**	**-0.1**
AST1				S	**Sb**	**14 47 52.9**	**+0.1**
	comp=N,5µm,0.1s						
VLMS	**Volimes, Zakyn**	**0.53**	**163**	P	**Pg**	**14 47 44.0**	**-0.2**
VLMS				S	**Sg**	**14 47 51.9**	**+0.7**
VLMS				AML	AML	14 47 55.8	
	comp=E,10434µm,0.3s						
VLMS				AML	AML	14 47 56.1	
	comp=N,12244µm,0.3s						
PDO	**Prodromos**	**0.60**	**69**	P	**Pg**	**14 47 45.5**	**-0.2**
PDO				S	**Sb**	**14 47 55.4**	**0.0**
	comp=N,3µm,0.5s						
PDO	**Prodromos**	**0.60**	**69**	P	**Pg**	**14 47 45.5**	**-0.2**
PDO				S	**Sg**	**14 47 54.4**	**+0.8**
PDO				AML	AML	14 48 04.8	
	comp=N,4063µm,0.3s						
PDO				AML	AML	14 48 07.3	
	comp=E,3454µm,0.7s						
KRI1	**kERI**	**0.77**	**159**	P	**Pg**	**14 47 48.0**	**-0.8**
KRI1				S	**Sb**	**14 48 00.7**	**+0.6**
	comp=E,3µm,0.4s						
RLS	**Riolos of Patr**	**0.85**	**112**	P	**Pg**	**14 47 49.9**	**-0.5**
RLS	**Riolos of Patr**	**0.85**	**112**	P	**Pg**	**14 47 49.9**	**-0.5**
RLS				S	**Sg**	**14 48 01.8**	**+0.3**
RLS				AML	AML	14 48 11.8	
	comp=N,1181µm,0.8s						
RLS				AML	AML	14 48 13.3	
	comp=E,952µm,0.6s						
PVO	**Paravola**	**0.86**	**74**	P	**Pg**	**14 47 50.6**	**-0.1**
PVO				S	**Sn**	**14 48 05.2**	**+0.1**
	comp=E,1µm,0.6s						
PVO	**Paravola**	**0.86**	**74**	P	**Pg**	**14 47 50.6**	**-0.1**
PVO				S	**Sg**	**14 48 02.2**	**+0.3**
PVO				AML	AML	14 48 08.9	
	comp=E,2068µm,0.4s						
PVO				AML	AML	14 48 12.5	
	comp=N,3220µm,0.8s						
DRO	**Drossia**	**1.07**	**113**	P	**Pg**	**14 47 53.6**	**-1.0**
DRO				S	**Sg**	**14 48 08.9**	**+0.4**
	comp=N,1µm,0.3s						
DRO	**Drossia**	**1.07**	**113**	P	**Pg**	**14 47 54.0**	**-0.6**
DRO				S	**Sb**	**14 48 09.2**	**+0.4**
DRO				AML	AML	14 48 17.8	
	comp=N,2067µm,0.5s						
DRO				AML	AML	14 48 18.7	
	comp=E,2952µm,0.3s						
ANX	**Ano Chora**	**1.16**	**79**	P	**Pb**	**14 47 55.6**	**-0.7**
ANX	**Ano Chora**	**1.16**	**79**	P	**Pb**	**14 47 55.6**	**-0.7**
ANX				S	**Sg**	**14 48 12.1**	**+0.7**
ANX				AML	AML	14 48 19.0	
	comp=N,2344µm,0.7s						
ANX				AML	AML	14 48 19.9	
	comp=E,2305µm,0.7s						
EVR	**Evrytania**	**1.18**	**63**	P	**Pb**	**14 47 55.8**	**-0.8**
LAKA	**Lakka**	**1.20**	**96**	P	**Pn**	**14 47 56.0**	**-1.0**
SERG	**Sergoula**	**1.25**	**88**	P	**Pn**	**14 47 56.8**	**-0.9**
SERG	**Sergoula**	**1.25**	**88**	P	**Pn**	**14 47 57.1**	**-0.6**
SERG				S	**Sb**	**14 48 14.5**	**+0.4**
SERG				AML	AML	14 48 20.7	
	comp=E,1065µm,0.7s						
SERG				AML	AML	14 48 21.0	
	comp=N,1291µm,0.4s						
TRIZ	**Trizonia**	**1.26**	**90**	P	**Pn**	**14 47 56.8**	**-1.0**
TRIZ				S	**Sg**	**14 48 16.2**	**+1.6**
	comp=N,512nm,0.4s						
TRIZ	**Trizonia**	**1.26**	**90**	P	**Pn**	**14 47 57.0**	**-0.8**
AMT	**Artemida-Makis**	**1.30**	**130**	P	**Pg**	**14 48 00.4**	**+1.5**
AMT	**Artemida-Makis**	**1.30**	**130**	P	**Pb**	**14 47 58.8**	**+0.2**
ALIK	**Aliki, Aigiali**	**1.30**	**95**	P	**Pn**	**14 47 57.6**	**-0.7**
JAN	**Janina**	**1.31**	**13**	P	**Pg**	**14 48 00.1**	**+1.0**
JAN	**Janina**	**1.31**	**13**	P	**Pg**	**14 48 00.2**	**+1.0**
KALE	**Kalithea**	**1.32**	**89**	P	**Pn**	**14 47 57.7**	**-0.9**
KALE	**Kalithea**	**1.32**	**89**	P	**Pn**	**14 47 57.8**	**-0.8**
KLV	**Kalavryta, Ach**	**1.37**	**104**	P	**Pb**	**14 47 58.8**	**-0.6**
KLV				S	**Sg**	**14 48 20.1**	**+2.0**
	comp=N,225nm,0.6s						
KLV	**Kalavryta, Ach**	**1.37**	**104**	P	**Pn**	**14 47 58.9**	**-0.4**
KASA	**Kassiopi**	**1.42**	**343**	P	**Pn**	**14 48 00.9**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.45**	**64**	P	**Pn**	**14 48 00.6**	**+0.2**
ITM	**Ithomi**	**1.67**	**136**	P	**Pb**	**14 48 05.0**	**+0.1**
THL	**Klokotos Trika**	**1.69**	**45**	P	**Pb**	**14 48 05.7**	**+0.5**

IDC 02 14:49:54.7±2.7, 3°.36S×103°.64W, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.8/21, mbtmp3.8/4, Error ellipse: s-maj=247.1km s-min=29.7km az=66.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVAR	**Mina Array Bea**	**43.74**	**343**	P	P	14 58 02.0	-0.1
	0.2nm,0.6s,baz=165,slow=8.4,SNR=2.1						
PLCA	**Paso Flores**	**47.67**	**146**	P	P	14 58 33.0	-0.1
	3.2nm,0.9s,baz=282,slow=19,SNR=4.0						
YKA	**Yellowknife Ar**	**66.20**	**354**	P	P	15 00 44.9	+0.8
	1.0nm,0.8s,baz=165,slow=6.5,SNR=14						
ILAR	**Eielson Array**	**74.98**	**342**	P	P	15 01 36.6	-1.1
	0.6nm,1.0s,baz=156,slow=5.4,SNR=5.5						
H11N3	**WAKE ISLAND Hy**	**90.61**	**290**	T	T	16 41 32.3	
	baz=96,slow=75,SNR=34						
H11N2	**WAKE ISLAND Hy**	**90.62**	**290**	T	T	16 41 31.8	
	baz=96,slow=75,SNR=36						
H11N1	**WAKE ISLAND Hy**	**90.62**	**290**	T	T	16 41 32.1	
	baz=96,slow=75,SNR=17						
H11S2	**WAKE ISLAND Hy**	**90.73**	**288**	T	T	16 41 43.1	
	baz=94,slow=75,SNR=25						
H11S1	**WAKE ISLAND Hy**	**90.73**	**288**	T	T	16 41 38.8	
	baz=94,slow=75,SNR=17						
H11S3	**WAKE ISLAND Hy**	**90.75**	**288**	T	T	16 41 43.9	
	baz=94,slow=75,SNR=14						

IDC 02 14:56:25.4±3.5, 38°.48N×73°.04E, h45km±27km, mb3.4/5, mb1 3.5/10, mb1mx3.3/47, mbtmp3.6/10, ML3.0/5, Error ellipse: s-maj=34.4km s-min=17.0km az=152.0
NNC 02 14:56:28.7±4.3, 39°.07N×73°.11E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=34.6km s-min=22.5km az=172.0
ISC 02 14:56:21.7±1.2, 38°.5N±0°.1×73°.03E±0°.06, h10km, n27, σ2s.16/26, mb3.6/5, 1C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRKS	**Merke**	**4.22**	**2**	Pg	**Pn**	**14 57 30.4**	**+4.2**
	8.3nm,0.8s						
MRKS				Lg	Lg	14 58 25.6	
	9.9nm,0.4s						
AAK	**Ala-Archa**	**4.26**	**15**	P	**Pn**	**14 57 28.2**	**+1.3**
	0.7nm,0.3s,baz=166,slow=6.8,SNR=27						
AAK				S	**Sn**	**14 58 17.4**	**+0.7**
	1.9nm,0.3s,baz=53,slow=20,SNR=2.2						
AAK	**Ala-Archa**	**4.26**	**15**	⇓Pn	**Pn**	**14 57 30.1**	**+3.3**
	20nm,0.7s						
AAK				⇓Lg	Lg	14 58 28.7	
	19nm,0.6s						
JBG	**Jabagly**	**4.33**	**335**	Pg	**Pb**	**14 57 36.1**	**-1.9**
	24nm,0.8s						
JBG				Lg	Lg	14 58 35.0	
	16nm,0.5s						
KK31	**Karatay Array**	**4.96**	**338**	⇓Pn	**Pn**	**14 57 38.5**	**+2.2**
	16nm,0.8s,baz=146,slow=13,SNR=108						
KK31				Lg	Lg	14 58 51.6	
	11nm,0.6s,baz=147,slow=25,SNR=3.8						
KST	**Kastek**	**5.04**	**25**	Pg	**Pb**	**14 57 48.8**	**-1.2**
	7.4nm,1.2s						
KST				Lg	Lg	14 58 58.5	
	19nm,0.8s						
TNSS	**Tian-Shan**	**5.40**	**32**	Pg	**Pb**	**14 57 51.8**	**-4.7**
	5.2nm,0.6s						
TNSS				Lg	Lg	14 59 02.0	
	7.6nm,1.2s						
MDOK	**Medeo**	**5.55**	**32**	Pg	**Pb**	**14 58 02.0**	**+3.2**
	7.9nm,0.8s						
MDOK				Lg	Lg	14 59 10.6	
	15nm,0.8s						
MDOK	**Medeo**	**5.55**	**32**	Pg	Pb	14 57 52.1	-6.7
	2.1nm,0.9s						
MDOK				Lg	Lg	14 59 02.8	
	4.0nm,1.6s						
KNDC	**Almaty**	**5.56**	**31**	⇓Pg	**Pg**	**14 58 06.3**	**-1.9**
	12nm,0.4s						
KNDC				⇓Lg	Lg	14 59 10.6	
	36nm,0.8s						
KUU	**Kurty**	**5.92**	**24**	Pg	**Pb**	**14 58 04.1**	**-0.9**
	1.9nm,0.1s						
KUU				Lg	Lg	14 59 23.6	
	12nm,1.9s						
SATY	**Saty**	**6.10**	**40**	Pg	**Pb**	**14 58 09.4**	**+1.2**
	5.0nm,0.4s						
SATY				Lg	Lg	14 59 32.2	
	12nm,1.0s						
UZB	**Uzynbulak**	**6.48**	**43**	Pg	Pb	14 58 06.9	-7.8
	1.6nm,1.1s						
UZB				Lg	Lg	14 59 27.7	
	1.4nm,0.9s						
PDGK	**Podgornoye**	**6.86**	**43**	Pg	Pb	14 58 14.2	-6.8
	0.8nm,0.6s						
PDGK				Lg	Lg	14 59 40.6	
	1.5nm,0.6s						
PDGK	**Podgornoye**	**6.86**	**43**	⇑Pn	**Pn**	**14 58 03.8**	**+1.4**
	4.0nm,0.9s						
PDGK				⇓Lg	Lg	14 59 53.0	
	14nm,0.9s						
DJR	**Jarkent**	**7.71**	**39**	Pg	**Pb**	**14 58 37.7**	**+2.1**
	0.3nm,0.5s						
DJR				Lg	Lg	15 00 21.7	
	1.5nm,0.9s						
KAPS	**Kapalarasan**	**8.24**	**33**	Pg	**Pb**	**14 58 44.1**	**-0.4**
	0.8nm,1.0s						
KAPS				Lg	Lg	15 00 32.8	
	1.5nm,0.9s						
MKAR	**Makanchi Array**	**10.71**	**37**	P	**Pn**	**14 58 56.1**	**+0.9**
	0.0nm,0.3s,baz=215,slow=12,SNR=4.2						
GEYT	**Alibeck**	**11.74**	**272**	P	**Pn**	**14 59 10.0**	**+0.7**
	0.1nm,0.3s,baz=98,slow=10,SNR=2.9						
GEYT				S	**Sn**	**15 01 22.8**	**+2.3**
	0.1nm,0.3s,baz=78,slow=16,SNR=3.9						
BVAR	**Borovoye Array**	**14.62**	**354**	P	**P**	**14 59 53.1**	**-1.8**
	0.8nm,0.3s,baz=160,slow=10,SNR=33						
AKTO	**Aktyubinsk**	**15.98**	**323**	P	**Pn**	**15 00 08.5**	**+2.0**
	0.6nm,0.3s,baz=113,slow=18,SNR=9.0						
ZALV	**Zalesovo Beam**	**17.41**	**24**	P	**P**	**15 00 26.9**	**+1.0**
	0.1nm,0.3s,baz=209,slow=12,SNR=3.5						
SONM	**Songino Array**	**25.88**	**58**	P	**P**	**15 01 53.6**	**-0.2**
	1.1nm,0.8s,baz=259,slow=11,SNR=12						
FINES	**FINESS Array B**	**36.75**	**324**	P	**P**	**15 03 28.8**	**-0.1**
	1.9nm,0.9s,baz=115,slow=12,SNR=23						
ARCES	**ARCESS Array B**	**39.92**	**336**	P	**P**	**15 03 54.9**	**-0.7**
	2.6nm,0.9s,baz=99,slow=5.6,SNR=2.9						
TORD	**Torodi Ar. Bea**	**67.37**	**269**	P	**P**	**15 07 15.5**	**-1.9**
	0.1nm,0.3s,baz=28,slow=6.5,SNR=2.3						
YKA	**Yellowknife Ar**	**79.14**	**4**	P	**P**	**15 08 24.7**	**-1.5**
	0.2nm,0.5s,baz=349,slow=5.3,SNR=5.9						

SKHL 02 15:11:38.4±0.7, 42°.91N×145°.42E, h79km±1km, mb4.3/5
JMA 02 15:11:38.6±0.1, 43°.03N×145°.32E, h88km±1km, M3.4
IDC 02 15:11:42.0±6.1, 43°.06N×145°.02E, h112km±31km, mb3.2/6, mb1 3.4/7, mb1mx3.0/40, mbtmp3.6/7, Error ellipse: s-maj=80.5km s-min=23.9km az=173.0
ISC 02 15:11:38.5±0.9, 43°.01N±0°.07×145°.35E±0°.04, h86km±6km, n29, σ0s.72/40, mb3.5/6, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKHN	**Kushirohamanak**	**0.16**	**298**	P	**Pn**	**15 11 51.5**	**+0.6**
JKHN				eS	**Sn**	**15 12 00.7**	**+0.7**
NMR	**Nemuro--Hokkai**	**0.45**	**37**	eP	**Pn**	**15 11 52.0**	**-0.5**
NMR				eS	**Sn**	**15 12 02.0**	**-0.8**
NEM2	**Nemuro 2**	**0.46**	**38**	P	**Pn**	**15 11 52.7**	**+0.2**
NEM2				eS	**Sn**	**15 12 02.8**	**-0.1**
JAK	**Akkeshi**	**0.48**	**269**	P	**Pn**	**15 11 52.8**	**+0.1**
JAK				eS	**Sn**	**15 12 03.3**	**+0.1**
JNK	**Nakash**	**0.74**	**321**	P	**Pn**	**15 11 54.6**	**-0.5**
JNK				eS	**Sn**	**15 12 06.7**	**-0.7**
GLVR	**Golovnino**	**0.74**	**9**	eP	**Pn**	**15 11 55.0**	**-0.1**
GLVR				AMB	AMB	15 11 55.0	
	401nm,0.3s						
GLVR				eS	**Sn**	**15 12 08.0**	**+0.6**
GLVR				A	A	15 12 09.0	
	2µm,0.4s						
GLVR				A	A	15 12 09.0	
	2µm,0.4s						
JRA	**Rausu**	**0.94**	**350**	P	**Pn**	**15 11 57.4**	**+0.1**
JRA				eS	**Sn**	**15 12 11.5**	**+0.2**
GRPR	**Tuman**	**1.03**	**17**	eP	**Pn**	**15 11 58.0**	**-0.3**
GRPR				AMB	AMB	15 11 59.0	
	80nm,0.3s						
GRPR				eS	**Sn**	**15 12 13.0**	**-0.1**
GRPR				A	A	15 12 15.0	
	1µm,0.4s						
GRPR				A	A	15 12 15.0	
	810nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.09**	**20**	eP	**Pn**	**15 11 59.0**	**0.0**
YUK				AMB	AMB	15 12 01.0	
	148nm,0.3s						
YUK				eS	**Sn**	**15 12 14.0**	**-0.3**
YUK				A	A	15 12 14.0	
	1µm,0.4s						
YUK				A	A	15 12 14.0	
	923nm,0.4s						
YUK				A	A	15 12 14.0	
	148nm,0.4s						
JOB	**Onbets**	**1.12**	**265**	P	**Pn**	**15 11 59.4**	**+0.1**
JOB				eS	**Sn**	**15 12 14.6**	**-0.4**
JAR	**Ashorobuto**	**1.20**	**285**	P	**Pn**	**15 12 00.2**	**0.0**
JAR				eS	**Sn**	**15 12 16.2**	**-0.4**
SHO	**Shikotan**	**1.38**	**51**	eP	**Pn**	**15 12 02.0**	**-0.5**
SHO				AMB	AMB	15 12 03.0	
	12nm,0.1s						
SHO				eS	**Sn**	**15 12 19.0**	**-1.6**
SHO				A	A	15 12 21.0	
	160nm,0.2s						
SHO				A	A	15 12 21.0	
	188nm,0.2s						
JTKR	**Abashiri--Toko**	**1.43**	**313**	P	**Pn**	**15 12 03.1**	**0.0**
JTKR				eS	**Sn**	**15 12 21.3**	**-0.4**
JCH	**Churui**	**1.52**	**256**	P	**Pn**	**15 12 04.2**	**-0.1**
JCH				eS	**Sn**	**15 12 22.9**	**-0.9**
JMP	**Maruseppu**	**1.76**	**305**	P	**Pn**	**15 12 07.5**	**0.0**
JMP				eS	**Sn**	**15 12 29.2**	**-0.3**
ASAJ	**Asahikawa**	**2.29**	**300**	P	**Pn**	**15 12 15.3**	**+0.9**
	27nm,0.3s,baz=144,slow=9.5,SNR=427						
ASAJ				S	**Sn**	**15 12 42.1**	**+0.2**
	4.7nm,0.3s,baz=255,slow=30,SNR=14						
KUR	**Kuril'sk**	**2.87**	**38**	eP	**Pn**	**15 12 22.0**	**-0.1**
KUR				AMB	AMB	15 12 25.0	
	9.0nm,0.1s						
KUR				eS	**Sn**	**15 12 56.0**	**+0.3**
KUR				A	A	15 12 58.0	
	34nm,0.2s						
KUR				A	A	15 12 58.0	
	17nm,0.2s						
SONM	**Songino Array**	**27.56**	**294**	P	**P**	**15 17 16.5**	**-0.8**
	0.5nm,0.5s,baz=86,slow=8.4,SNR=6.1						
H11N2	**WAKE ISLAND Hy**	**29.45**	**135**	T	T	15 48 42.3	
	baz=328,slow=76,SNR=38						
H11N1	**WAKE ISLAND Hy**	**29.46**	**135**	T	T	15 48 44.4	
	baz=328,slow=76,SNR=35						
H11N3	**WAKE ISLAND Hy**	**29.46**	**135**	T	T	15 48 48.8	
	baz=328,slow=76,SNR=36						
H11S1	**WAKE ISLAND Hy**	**30.37**	**137**	T	T	15 49 55.0	
	baz=328,slow=76,SNR=54						
H11S3	**WAKE ISLAND Hy**	**30.38**	**137**	T	T	15 49 52.8	
	baz=328,slow=76,SNR=40						
H11S2	**WAKE ISLAND Hy**	**30.39**	**137**	T	T	15 49 56.7	
	baz=328,slow=76,SNR=42						
ZALV	**Zalesovo Beam**	**40.41**	**307**	P	**P**	**15 19 07.3**	**-0.5**
	0.3nm,0.4s,baz=64,slow=10,SNR=2.2						
ILAR	**Eielson Array**	**42.86**	**36**	P	**P**	**15 19 29.1**	**+1.3**
	0.8nm,0.9s,baz=270,slow=6.3,SNR=5.1						
MKAR	**Makanchi Array**	**43.77**	**298**	P	**P**	**15 19 33.9**	**-1.5**
	0.4nm,0.6s,baz=81,slow=8.9,SNR=5.2						
YKA	**Yellowknife Ar**	**57.14**	**33**	P	**P**	**15 21 17.8**	**+2.1**
	0.2nm,0.8s,baz=304,slow=6.6,SNR=4.4						
FINES	**FINESS Array B**	**64.93**	**332**	P	**P**	**15 22 07.2**	**-1.2**
	1.6nm,0.6s,baz=45,slow=5.7,SNR=8.5						

DSN 02 15:16:17.7±2.0, 26°.53N×58°.07E, h10km, ML3.7/6, Error ellipse: s-maj=31.6km s-min=15.1km az=162.0
OMAN 02 15:16:18.6±3.0, 26°.85N×57°.86E, h20km, ml3.4/12, Error ellipse: s-maj=33.2km s-min=11.1km az=33.0
TEH 02 15:16:20.4, 26°.72N×57°.77E, h10km, ML3.6
ISC 02 15:16:22.1±2.2, 26°.62N±0°.04×57°.72E±0°.06, h17km±16km, n45, σ1s.37/52, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**0.98**	**177**	ePg	**Pn**	**15 16 41.1**	**0.0**
JSK1				eSg	**Sn**	**15 16 56.6**	**+2.0**
NIAN	**Nian**	**1.22**	**320**	ePg	**Pb**	**15 16 43.5**	**-1.3**
NIAN				e		15 17 05.5	
KHNJ	**Kahnooj**	**1.32**	**360**	ePg	**Pn**	**15 16 42.8**	**-3.1**
BANOM	**Banah**	**1.45**	**242**	eP	**Pn**	**15 16 47.0**	**-0.6**
	SNR=134						
BANOM				S	**Sg**	**15 17 09.6**	**+0.7**
BANOM	**Banah**	**1.45**	**242**	P	**Pn**	**15 16 46.7**	**-0.9**
	SNR=132						
BANOM				S	**Sg**	**15 17 10.2**	**+1.3**
BANOM	**Banah**	**1.45**	**242**	ePn	**Pn**	**15 16 46.6**	**-1.0**
SHME	**Shamm**	**1.52**	**248**	eP	**Pn**	**15 16 49.0**	**+0.4**
	SNR=21						
SHME	**Shamm**	**1.52**	**248**	ePn	**Pn**	**15 16 48.6**	**0.0**
GENO	**Geno**	**1.58**	**300**	ePn	**Pb**	**15 16 50.2**	**-0.8**
GENO				eSg	**Sg**	**15 17 13.2**	**+0.1**
GENO				e		15 17 17.4	
MDH	**Madha**	**1.83**	**224**	eP	**Pn**	**15 16 50.4**	**-2.5**
	SNR=13						
MDH	**Madha**	**1.83**	**224**	P	**Pn**	**15 16 50.8**	**-2.1**
	SNR=13						
MDH				S	**Sb**	**15 17 18.5**	**+0.6**
MDH	**Madha**	**1.83**	**224**	ePn	**Pn**	**15 16 50.7**	**-2.1**
MSFE	**Esma-Masafi**	**1.88**	**228**	eP	**Pn**	**15 16 51.3**	**-2.2**
	SNR=7.7						
MSFE				S	**Sb**	**15 17 19.8**	**+0.5**
MSFE	**Esma-Masafi**	**1.88**	**228**	ePn	**Pn**	**15 16 51.8**	**-1.7**
UOSS	**Minazif**	**2.15**	**220**	P	**Pn**	**15 16 54.2**	**-3.0**
UOSS	**Minazif**	**2.15**	**220**	P	**Pn**	**15 16 54.6**	**-2.6**
UOSS	**Minazif**	**2.15**	**220**	ePn	**Pn**	**15 16 55.0**	**-2.3**
HATD	**Hatta, Dubai**	**2.29**	**219**	ePn	**Pn**	**15 16 59.5**	**+0.4**
ASHO	**Ashiyiah**	**2.44**	**218**	eP	**Pn**	**15 17 00.6**	**-0.7**
	SNR=11						
ASHO	**Ashiyiah**	**2.44**	**218**	P	**Pn**	**15 17 00.3**	**-0.9**
	SNR=11						
ASHO	**Ashiyiah**	**2.44**	**218**	ePn	**Pn**	**15 17 00.3**	**-0.9**
NAZ	**Nazwa, Dubai**	**2.46**	**229**	P	**Pn**	**15 17 02.5**	**+0.9**
NAZ	**Nazwa, Dubai**	**2.46**	**229**	ePn	**Pn**	**15 17 02.3**	**+0.8**
ASUD	**Al Ashush, Dub**	**2.93**	**228**	ePn	**Pn**	**15 17 08.9**	**+1.0**
HOQ	**Hoqain**	**3.05**	**187**	P	**Pn**	**15 17 07.2**	**-2.4**
	SNR=13						
HOQ				S	**Sn**	**15 17 45.2**	**-0.5**
BIDO	**Bidbid**	**3.11**	**173**	P	**Pn**	**15 17 08.2**	**-2.1**
	SNR=14						
ALNE	**Al Ain**	**3.11**	**215**	ePn	**Pn**	**15 17 10.4**	**0.0**
NGRK	**Negar Kerman**	**3.14**	**344**	ePn	**Pn**	**15 17 11.5**	**+0.4**
CHMN	**Cheshme madani**	**3.23**	**357**	ePn	**Pn**	**15 17 13.6**	**+1.2**
CHMN				e		15 17 25.4	
ARQ	**Araqi**	**3.44**	**199**	P	**Pn**	**15 17 15.7**	**+0.7**
	SNR=19						
TVBK	**TV Kerman**	**3.46**	**346**	ePn	**Pn**	**15 17 16.4**	**+0.9**
TVBK				e		15 17 28.5	
WSAR	**Wadi Sarin**	**3.47**	**166**	P	**Pn**	**15 17 14.1**	**-1.3**
	SNR=108						
SMDO	**Samad**	**3.56**	**175**	P	**Pn**	**15 17 16.9**	**+0.2**
	SNR=10						
BSY	**Bisya**	**3.89**	**187**	P	**Pn**	**15 17 22.3**	**+1.1**
	SNR=12						
KHGB	**Koh Gabri**	**3.90**	**344**	ePn	**Pn**	**15 17 21.6**	**+0.2**
KHGB				e		15 17 35.2	
SZD1	**Zahaedan-tmp**	**3.99**	**44**	ePn	**Pn**	**15 17 23.5**	**+0.9**
WBK	**Wadi Bani Khal**	**4.15**	**164**	P	**Pn**	**15 17 23.4**	**-1.4**
	SNR=45						
JMDO	**Jabal Madar**	**4.25**	**175**	P	**Pn**	**15 17 25.7**	**-0.3**
	SNR=8.1						
ISRV	**Sarvestan**	**4.91**	**305**	ePn	**Pn**	**15 17 35.0**	**-0.5**
NHDN	**Nehbandan**	**5.18**	**23**	ePn	**Pn**	**15 17 38.1**	**-0.8**
IMEH	**Mehriz**	**5.47**	**331**	ePn	**Pn**	**15 17 43.4**	**+0.3**
IKOO	**Kooshah**	**5.89**	**11**	ePn	**Pn**	**15 17 48.6**	**-0.3**
ITEG	**Tejag**	**6.32**	**8**	ePn	**Pn**	**15 17 55.0**	**+0.3**
KLNJ	**Kolanjah**	**6.92**	**311**	ePn	**Pn**	**15 18 02.3**	**-0.9**
IRAM	**Ramesheh**	**6.96**	**319**	ePn	**Pn**	**15 18 03.5**	**0.0**

IDC 02 15:28:43.5±2.9, 3°.36S×136°.33E, h0km, mb3.1/2, mb1 3.6/4, mb1mx3.3/24, mbtmp3.4/4, ML3.0/2, Error ellipse: s-maj=80.3km s-min=29.6km az=71.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.63**	**296**	Pn	Pn	15 30 08.6	0.0
	1.0nm,0.3s,baz=215,slow=22,SNR=8.1						
SIJI				Sn	Sn	15 31 05.4	-8.6
	0.8nm,0.3s,baz=136,slow=14,SNR=1.6						
WRA	**Warramunga Arr**	**16.60**	**187**	Pn	Pn	15 32 36.6	-1.2
	0.1nm,0.3s,baz=8.2,slow=12,SNR=2.5						
ASAR	**Alice Springs**	**20.32**	**186**	P	P	15 33 21.9	+0.5
	1.0nm,0.7s,baz=11,slow=11,SNR=10						
MKAR	**Makanchi Array**	**68.87**	**323**	P	P	15 39 50.1	0.0
	0.1nm,0.7s,baz=102,slow=5.0,SNR=1.3						

SOME 02 15:31:55.6, 39°.47N×71°.80E, h0km
KRNET 02 15:32:02.0±0.1, 39°.41N×71°.56E, mb2.9
ISC 02 15:32:01.3±2.8, 39°.3N±0°.1×71°.55E±0°.06, h10km, n14, σ2s.08/24, 15C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**0.96**	**324**	⇑iP	**Pg**	**15 32 18.3**	**-1.5**
	baz=19						
BTK				⇑iS	**Sg**	**15 32 30.2**	**-2.1**
	baz=19						
ARSB	**Arslanbob**	**2.31**	**28**	⇑iP	**Pn**	**15 32 39.2**	**-0.4**
	baz=29						
ARSB				⇑iS	**Sn**	**15 33 06.7**	**-1.5**
	baz=29						
AML	**Almayashu**	**3.28**	**29**	⇑eP	**Pn**	**15 32 53.5**	**+0.4**
	baz=30						
AML				⇑iS	**Sn**	**15 33 30.2**	**-2.2**
	baz=30						
ARLS	**Aral**	**3.33**	**38**	⇑iP	**Pn**	**15 32 53.9**	**+0.3**
	baz=40						
ARLS				⇑iS	**Sn**	**15 33 31.4**	**-1.9**
	baz=40						
MRKS	**Merke**	**3.68**	**20**	eP	**Pn**	**15 33 00.4**	**+2.0**
	1.3nm,0.1s						
MRKS				eS	**Sn**	**15 33 47.5**	**+5.6**
	8.8nm,0.2s						
UCH	**Uchtor**	**3.70**	**36**	⇑iP	**Pn**	**15 32 59.5**	**+0.5**
	baz=38						
UCH				⇑iS	**Sn**	**15 33 40.5**	**-2.4**
	baz=38						
EKS2	**Erkin-Say**	**3.77**	**26**	⇓iP	**Pn**	**15 32 59.6**	**0.0**
	baz=27						
EKS2				⇓iS	**Sn**	**15 33 41.6**	**-2.6**
	baz=27						
KK31	**Karatay Array**	**3.90**	**349**	⇓Pn	**Pn**	**15 33 01.6**	**+0.3**
	1.1nm,0.6s,baz=152,slow=11,SNR=40						
KK31				⇑Pg	**Pb**	**15 33 12.3**	**+2.2**
	3.5nm,0.5s,baz=161,slow=14,SNR=13						
KK31				⇑Lg	Lg	15 33 59.0	
	1.6nm,0.3s,baz=161,slow=30,SNR=6.1						
NRN	**Naryn**	**4.02**	**56**	⇑iP	**Pn**	**15 33 03.6**	**+0.4**
	baz=58						
NRN				⇑iS	**Sn**	**15 33 47.7**	**-2.9**
	baz=58						
AAK	**Ala-Archa**	**4.03**	**33**	⇓Pn	**Pn**	**15 33 05.0**	**+1.8**
	1.3nm,0.5s						
AAK				⇓Pg	**Pb**	**15 33 15.2**	**+2.8**
	1.9nm,0.5s						
AAK				⇑Lg	Lg	15 33 60.0	
	6.0nm,0.4s						
KST	**Kastek**	**5.02**	**40**	eP	Pn	15 33 25.1	+8.4
	0.4nm,0.0s						
KST				eS	**Sb**	**15 34 29.1**	**-0.6**
	3.1nm,0.2s						
DGS	**Degeres**	**5.08**	**37**	eP	Pb	15 33 26.2	-4.0
	1.5nm,0.2s						
DGS				eS	**Sb**	**15 34 31.2**	**-0.1**
	6.2nm,0.5s						
TNSS	**Tian-Shan**	**5.54**	**46**	eP	Pb	15 33 33.7	-4.6
	0.4nm,0.1s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS				eS	Sb	15 34 44.3	-0.6
	1.7nm,0.2s						
KUU	Kurty	5.84	36	eP	Pb	15 33 39.1	-4.1
	0.4nm,0.1s						
KUU				eS	Sb	15 34 53.9	+0.7
	3.7nm,0.3s						

IDC 02 15:42:17.3±2.2, 0.97N×126.43E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/29, mbtmp3.4/3, Error ellipse: s-maj=194.0km s-min=26.4km az=65.0
DJA 02 15:42:24.2±0.4, 1°N±5°×12°7E±°, h37km±17km, M3.4/7, MLv3.4/7
ISC 02 15:42:23.6±1.3, 1.1N±0.1×126.86E±0.06, h35km, n6, σ2.05/9, mb3.6/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.62	124	P	Pn	15 42 38.4	+2.5
TNTI				S	Sn	15 42 45.6	+1.0
KMSI	Cibinong	2.92	259	P	Pn	15 43 09.1	+1.5
KMSI				S	Sn	15 43 44.2	+2.6
SANI	Sanana	3.27	195	P	Pn	15 43 12.8	+0.4
SANI				S	Sn	15 43 50.2	+0.1
WRA	Warramunga Arr	22.18	161	P	P	15 47 15.2	-1.8
	0.8nm,0.3s,baz=338,slow=11,SNR=8.4						
ASAR	Alice Springs	25.58	165	P	P	15 47 48.0	-1.6
	0.5nm,0.3s,baz=346,slow=12,SNR=20						
MKAR	Makanchi Array	59.76	326	P	P	15 52 23.4	-1.7
	0.1nm,0.5s,baz=123,slow=7.5,SNR=4.4						

BER 02 15:44:25.5±0.9, 61.90N×5.84E, h6km±3km, ML1.0, 1D, Confirmed Earthquake, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FOO	Floro	0.48	232	eP	Pg	15 44 34.4	-0.3
FOO				eS	Sg	15 44 40.2	-0.8
FOO				IAML		15 44 41.1	
	comp=Z,14nm,0.1s						
AKN	Aaknes	0.61	62	eP	Pg	15 44 36.5	-0.8
AKN				eS	Sg	15 44 44.7	-0.6
AKN				IAML		15 44 52.3	
	comp=Z,5.7nm,0.2s						
HYA	Hoyanger	0.75	167	⇓iP	Pg	15 44 39.0	-0.9
HYA				eS	Sg	15 44 49.1	-0.5
HYA				IAML		15 44 49.7	
	comp=Z,5.4nm,0.5s						
SUE	Sulen	0.99	212	eP	Pg	15 44 43.1	-1.3
SUE				eS	Sg	15 44 56.0	-1.2
SUE				IAML		15 44 57.6	
	comp=Z,8.1nm,0.4s						
ASK	Askoy	1.45	193	eP	Pn	15 44 50.6	-1.6
ASK				eS	Sb	15 45 09.2	-2.4
ASK				IAML		15 45 11.0	
	comp=Z,3.4nm,0.1s						
SKAR	Skarslia	1.70	135	eP	Pn	15 44 54.4	-1.4
SKAR				eS	Sn	15 45 14.3	-3.7
SKAR				IAML		15 45 18.8	
	comp=Z,3.6nm,0.3s						

DNK 02 15:44:31.7±0.7, 58.81N×15.08E, h0km, ML1.5(UPP), Explosion Hypocentre not reviewed by the ISC
UPP 02 15:44:31.1±0.1, 58.81N×15.09E, h0km, ML1.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNKU	Linkoeping	0.62	159	P	Pg	15 44 42.8	-0.2
LNKU				S	Sg	15 44 51.5	+0.3
LNKU	Linkoeping	0.62	159	P		15 44 42.8	
LNKU				S		15 44 51.5	
NRAU	Nora	0.77	358	P	Pg	15 44 45.5	-0.3
NRAU				S	Sg	15 44 55.6	-0.1
NRAU	Nora	0.77	358	P		15 44 45.5	
NRAU				S		15 44 55.6	
ESKU	Eskilstuna	0.80	57	P	Pg	15 44 46.3	-0.1
ESKU				S	Sg	15 44 57.3	+0.6
ESKU	Eskilstuna	0.80	57	P		15 44 46.3	
ESKU				S		15 44 57.3	
FKPU	Falk	0.96	228	P	Pg	15 44 49.3	-0.2
FKPU	Falk	0.96	228	P		15 44 49.3	
NASU	Vaermlandsnaes	0.99	278	P	Pg	15 44 49.5	-0.6
NASU	Vaermlandsnaes	0.99	278	P		15 44 49.5	
VSTU	Vaestervik	1.38	146	P	Pg	15 44 56.5	-1.0
VSTU	Vaestervik	1.38	146	P		15 44 56.5	
BACU	Backbrunna	1.48	44	P	Pn	15 44 58.4	-0.5
BACU	Backbrunna	1.48	44	P		15 44 58.4	
UDD	Uddeholm	1.49	330	P	Pn	15 44 58.5	-0.6
NYNU	Nynaeshamn	1.53	81	P	Pn	15 44 59.4	-0.2
NYNU	Nynaeshamn	1.53	81	P		15 44 59.4	
BORU	Boraas	1.70	227	P	Pb	15 45 03.0	-0.1
OSKU	Oskarshamn	1.70	161	P	Pn	15 45 02.1	+0.1
OSKU	Oskarshamn	1.70	161	P		15 45 02.1	

TEH 02 15:46:04.5, 26.73N×57.74E, h10km, ML3.3
OMAN 02 15:46:08.1±3.4, 26.50N×57.85E, h37km±27km, ml3.1/13, Error ellipse: s-maj=29.0km s-min=16.4km az=276.0
ISC 02 15:46:07.0±1.7, 26.58N±0.04×57.82E±0.06, h34km±3km, n29, σ1.33/41, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSK1	Jask	0.94	183	ePg	Pb	15 46 25.5	+0.7
NIAN	Nian	1.32	318	ePg	Pn	15 46 27.7	-1.3
NIAN				e		15 46 51.2	
KHNJ	Kahnooj	1.37	356	ePg	Pn	15 46 27.0	-2.7
KHNJ				e		15 46 53.9	
BANOM	Banah	1.51	245	P	Pn	15 46 31.7	0.0
	SNR=136						
BANOM				S	Sb	15 46 53.7	+0.2
BANOM	Banah	1.51	245	ePn	Pn	15 46 31.2	-0.5
SHME	Shamm	1.60	251	ePn	Pn	15 46 33.4	+0.5
GENO	Geno	1.69	299	ePn	Pn	15 46 33.7	-0.5
GENO				eSg	Sb	15 46 56.1	-2.4
GENO				e		15 47 04.6	
MDH	Madha	1.87	227	P	Pn	15 46 34.8	-1.8
	SNR=9.8						
MDH				S	Sn	15 46 57.8	-1.3
MDH	Madha	1.87	227	ePn	Pn	15 46 34.8	-1.8
MSFE	Esma-Masafi	1.93	231	ePn	Pn	15 46 35.6	-1.8
UOSS	Minazif	2.18	222	ePn	Pn	15 46 39.1	-1.8
HATD	Hatta, Dubai	2.32	222	P	Pn	15 46 42.3	-0.5
HATD				S	Sn	15 47 10.4	+0.3
HATD	Hatta, Dubai	2.32	222	ePn	Pn	15 46 43.2	+0.4
ASHO	Ashiyiah	2.47	221	P	Pn	15 46 45.7	+0.8
ASHO				S	Sn	15 47 15.7	+1.9
ASHO	Ashiyiah	2.47	221	ePn	Pn	15 46 42.9	-2.0
HOQ	Hoqain	3.02	189	P	Pn	15 46 51.1	-1.3
	SNR=9.1						
HOQ				S	Sn	15 47 27.0	-0.4
BIDO	Bidbid	3.06	175	P	Pn	15 46 53.1	+0.2
BIDO				S	Sn	15 47 27.1	-1.2
NGRK	Negar Kerman	3.20	343	ePn	Pn	15 46 55.8	+0.5
NGRK				e		15 47 49.5	
CHMN	Cheshme madani	3.28	356	ePn	Pn	15 46 57.8	+1.5
CHMN				e		15 47 05.1	
ARQ	Araqi	3.44	200	P	Pn	15 46 59.7	+1.6
	SNR=26						
ARQ				S	Sn	15 47 40.2	+2.5
SMDO	Samad	3.51	177	P	Pn	15 46 59.8	+0.5
	SNR=9.5						
SMDO				S	Sn	15 47 39.3	-0.4
TVBK	TV Kerman	3.52	345	ePn	Pn	15 46 59.2	-0.4
TVBK				e		15 47 10.8	
BSY	Bisya	3.86	189	P	Pn	15 47 05.5	+1.5
	SNR=9.5						
BSY				S	Sn	15 47 48.7	+0.6
KHGB	Koh Gabri	3.96	343	e		15 47 19.6	
KHGB				ePn	Pn	15 47 07.4	+1.8
WBK	Wadi Bani Khal	4.09	165	P	Pn	15 47 07.6	+0.5
	SNR=5.3						
WBK				S	Sn	15 47 52.5	-1.3
JMDO	Jabal Madar	4.20	176	P	Pn	15 47 09.7	+1.0
JMDO				S	Sn	15 47 55.9	-0.6
NHDN	Nehbandan	5.18	22	ePn	Pn	15 47 22.3	+0.1
ITEG	Tejag	6.35	7	ePn	Pn	15 47 38.6	+0.3
IMON	Monand	6.78	13	ePn	Pn	15 47 45.8	+1.4

IDC 02 15:48:08.5±1.0, 0.58S×122.06E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.6/42, mbtmp3.8/6, ML3.8/1, MS3.1/1, Ms1 3.1/1, ms1mx2.6/42, Error ellipse: s-maj=53.8km s-min=18.3km az=70.0
DJA 02 15:48:11.7±0.2, 1°S±2°×122°2E±°, h10km, M3.9/13, MLv3.9/13
NEIC 02 15:48:13.4±0.8, 0.7S±0.1×121.96E±0.03, h32km±8km, mb4.4/5, Error ellipse: s-maj=15.7km s-min=4.8km az=176.0
ISC 02 15:48:12.9±0.7, 0.75S±0.05×121.86E±0.04, h31km, n28, σ1.56/28, mb4.0/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	Ampana	0.26	233	P	Pb	15 48 16.0	-4.0
APSI				S	Sb	15 48 21.7	-3.1
LUWI	Luwuk	0.96	107	P	Pn	15 48 29.6	-0.6
LUWI				S	Sb	15 48 43.2	-0.1
LUWI	Luwuk	0.96	107		Pn	15 48 29.4	-0.8
MPSI	Mapaga	2.24	299	P	Pn	15 48 48.4	+0.5
KMSI	Cibinong	2.50	58	P	Pn	15 48 53.6	+2.2
TTSI	Tana Toraja	3.06	222	P	Pn	15 49 01.0	+1.9
KDI	Kendari	3.27	167	P	Pn	15 49 03.6	+1.5
SPSI	Sidrap Palu	3.81	213	P	Pn	15 49 11.4	+1.9
BNSI	Bone	4.03	206	P	Pn	15 49 14.5	+2.1
SANI	Sanana	4.32	107	P	Pn	15 49 16.9	+0.3
KAPI	Kappang	4.73	206	Pn	Pn	15 49 23.5	+1.4
	3.5nm,0.3s,baz=44,slow=6.0,SNR=14						
KAPI				Sn	Sn	15 50 17.5	+1.6
	2.3nm,0.3s,baz=59,slow=23,SNR=2.0						
KAPI	Kappang	4.73	206		Pn	15 49 23.4	+1.3
BBSI	Bau Bau	4.76	171	P	Pn	15 49 24.3	+1.8
BKSI	Bulukumba	4.86	201	P	Pn	15 49 25.2	+1.3
LEM	Lembang	15.43	247	LR	LR	15 59 23.9	
	comp=Z,59nm,18.2s,baz=194,slow=43						
GENI	Genyem	18.39	96	P	Pn	15 52 39.0	+13
WRA	Warramunga Arr	22.65	148	P	P	15 53 11.8	+0.1
	2.5nm,0.7s,baz=330,slow=10,SNR=12						
ASAR	Alice Springs	25.60	154	P	P	15 53 40.5	+0.8
	0.5nm,0.7s,baz=345,slow=15,SNR=9.6						
ENH	Enshi	33.03	340	P	P	15 54 46.4	+0.8
ENH				IAmb	IAmb	15 54 51.3	
	comp=Z,3.4nm,0.8s						
SONM	Songino Array	50.23	346	P	P	15 57 06.1	-0.1
	comp=Z,0.8nm,0.7s,baz=167,slow=7.9,SNR=8.0						
SONM	Songino Array	50.23	346	IAmb	IAmb	15 57 07.2	
	comp=Z,0.6nm,0.8s						
MK31	Makanchi Array	58.66	329	P	P	15 58 07.7	+0.3
MKAR	Makanchi Array	58.66	329	P	P	15 58 07.5	+0.1
	comp=Z,0.9nm,0.8s,baz=128,slow=8.6,SNR=13						
MAKZ	Makanchi	58.83	329	P	P	15 58 08.8	+0.3
MAKZ				IAmb	IAmb	15 58 10.0	
	comp=Z,6.0nm,1.6s						
ZALV	Zalesovo Beam	62.53	336	P	P	15 58 32.9	-0.7
	comp=Z,0.8nm,0.6s,baz=123,slow=5.3,SNR=4.9						
ZALV	Zalesovo Beam	62.53	336	P	P	15 58 34.0	+0.4
KURK	Kurchatov	63.06	331	P	P	15 58 38.6	+1.4
KKAR	Karatay Array	63.35	320	P	P	15 58 40.1	+0.8

ISK 02 15:56:16.8, 36.56N×42.46E, h5km, ML3.1/9
ISN 02 15:56:17.3±0.7, 36.71N×42.68E, h20km±3km, ML2.5
DDA 02 15:56:19.8, 36.69N×42.38E, h6km±4km, ML2.7
ISC 02 15:56:16.9±1.3, 36.58N±0.04×42.53E±0.04, h1km±11km, n21, σ0.90/34, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSL	Mosul	0.50	110	ePg	Pg	15 56 27.0	+0.4
MSL				eSg	Sg	15 56 33.0	-0.1
MSL				AML	AML	15 56 39.1	
	comp=Z,281nm,0.5s						
SIRN	Sırnak	0.92	354	iP	Pb	15 56 35.7	-0.1
SIRN				iS	Sn	15 56 50.2	-0.8
SIRN				IAML		15 56 51.0	
	comp=E,436nm,0.4s						
SIRN				IAML		15 56 54.0	
	comp=N,281nm,0.5s						
SIRT	Sirnak	0.92	356	PG	Pb	15 56 35.9	+0.1
SIRT				SG	Sn	15 56 50.2	-0.9
SRTM	Siirt_Merkez	1.49	341	iP	Pb	15 56 45.4	-0.1
SRTM				iS	Sn	15 57 06.7	+1.5
SRTM				IAML		15 57 10.0	
	comp=N,144nm,0.4s						
SRTM				IAML		15 57 10.0	
	comp=E,108nm,0.4s						
MARD	Mardin	1.58	298	iP	Pn	15 56 46.0	-0.2
MARD				iS	Sg	15 57 07.7	0.0
MARD				IAML		15 57 12.0	
	comp=N,320nm,0.7s						
MARD				IAML		15 57 13.0	
	comp=E,241nm,0.4s						
AKDM	Akdamar-Van	1.78	12	PN	Pg	15 56 51.2	0.0
AKDM				SN	Sg	15 57 15.2	+0.9
MAZI	Mazidag	1.88	298	PN	Pn	15 56 50.8	+0.4
IKRK	Kirkuk	1.88	128	ePn	Pn	15 56 50.0	-0.3
IKRK				AML	AML	15 57 07.6	
	comp=Z,53nm,0.5s						
IKRK				eSn	Sn	15 57 14.5	-0.2
SVAN	Silvan-Diyarba	1.89	326	PN	Pn	15 56 51.3	+0.9
SVAN	Silvan-Diyarba	1.89	326	iP	Pb	15 56 52.0	-0.4
SVAN				iS	Sg	15 57 17.1	-0.7
SVAN				IAML		15 57 19.0	
	comp=N,44nm,0.6s						
SVAN				IAML		15 57 19.0	
	comp=E,60nm,0.6s						
GURO	Guroymak-BITLI	2.01	349	PN	Pb	15 56 53.3	-1.0
MUSM	Mu-Merkez	2.29	340	iP	Pn	15 56 55.8	-0.2
MUSM				iS	Sb	15 57 26.2	-1.7
DIYA	Diyarbakir	2.34	306	iP	Pb	15 57 00.2	+0.2
DIYA				iS	Sg	15 57 31.5	-0.7
DIYA				IAML		15 57 37.0	
	comp=E,60nm,0.4s						
DIYA				IAML		15 57 42.0	
	comp=N,80nm,0.8s						
DYBB	Diyarbakir	2.35	307	PN	Pn	15 56 57.8	+1.1
HANI	Diyarbakir_Han	2.49	318	iP	Pg	15 57 04.2	-0.6
HANI				iS	Sb	15 57 34.5	+0.7
BNGB	Bingl	2.82	329	PN	Pn	15 57 04.3	+1.1
AGRB	Hanur-Agry	3.02	7	PN	Pn	15 57 07.6	+1.6
URFA	Urfa	3.09	287	PN	Pn	15 57 08.2	+1.3
SVRC	Sivrice-ELAZID	3.13	306	PN	Pn	15 57 08.9	+1.4
BHD	Baghdad	3.63	155	ePn	Pn	15 57 15.4	+1.1
BHD				eSn	Sn	15 57 58.0	+0.2
IBDR	Badra	4.45	140	ePn	Pn	15 57 26.0	+0.5
IBDR				eSn	Sn	15 58 16.5	-1.5

IDC 02 16:00:36.0±0.8, 33.51N×45.97E, h0km, mb3.7/15, mb1 3.8/21, mb1mx3.7/40, mbtmp3.7/21, ML3.4/6, Error ellipse: s-maj=20.7km s-min=13.2km az=160.0
TEH 02 16:00:38.5, 33.51N×46.01E, h17km, ML4.0
NEIC 02 16:00:39.8±1.5, 33.41N±0.08×45.97E±0.07, h31km±5km, Error ellipse: s-maj=11.9km s-min=8.7km az=190.0
ISN 02 16:00:40.0±1.0, 33.46N×45.92E, h34km±3km, ML4.2
THR 02 16:00:45.2±0.3, 33.82N×46.60E, h14km±3km, ML3.6
DSN 02 16:00:47.6±1.5, 32.59N×46.42E, h10km, mb5.0/1, Error ellipse: s-maj=20.8km s-min=9.6km az=6.0
OMAN 02 16:00:48.5±1.1, 32.70N×46.26E, h68km±4km, Error ellipse: s-maj=20.4km s-min=2.7km az=301.0
ISC 02 16:00:38.7±0.4, 33.45N±0.03×46.01E±0.03, h19km, n137, σ1.93/147, mb3.9/22, 9C-1D, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBDR	Badra	0.35	191	ePg	Pg	16 00 47.8	+1.7
IBDR				eSg	Sb	16 00 55.0	+3.5
IBDR				AML	AML	16 01 01.1	
	comp=Z,21μm,0.4s						
IBDR	Badra	0.35	191	ePg	Pg	16 00 47.8	+1.7
IGHG	Ghaleghazi	0.99	28	ePg	Pb	16 00 56.1	-1.3
IGHG				e		16 00 58.9	
IVIS	Veis	1.28	33	e		16 01 03.9	
IVIS				ePg	Pn	16 01 01.9	+0.2
IDHR	Dehrash	1.28	14	ePg	Pn	16 01 01.0	-0.8
IDHR				e		16 01 22.6	
BHD	Baghdad	1.37	263	ePn	Pn	16 01 03.5	+0.7
BHD				eSn	Sn	16 01 21.0	+0.5
BHD	Baghdad	1.37	263	ePg	Pn	16 01 03.5	+0.7
IKOM	Komasi	1.44	60	e		16 01 28.1	
IKOM				ePn	Pn	16 01 05.0	+1.0
IKFM	Kafar-mosalman	1.54	87	e		16 01 32.4	
IKFM				ePn	Pb	16 01 08.0	+1.4
ILIN	Lien	1.66	28	e		16 01 33.5	
ILIN				ePg	Pn	16 01 08.3	+1.2
IDOB	Doab	1.84	79	ePn	Pn	16 01 11.3	+1.8
IDOB				e		16 01 48.2	
IBZA	Bozab	1.84	56	ePn	Pn	16 01 11.5	+1.9
IBZA				e		16 01 38.1	
SNGE	Sanandaj	1.98	34	ePg	Pn	16 01 11.2	-0.1
IKMR	Kamar-syah	1.98	88	ePn	Pn	16 01 13.9	+2.7
IKMR				e		16 01 48.8	
IALM	Almabolaq	2.27	51	ePn	Pn	16 01 17.6	+2.1
HSAM	Samen	2.29	70	ePn	Pn	16 01 17.7	+2.0
HSAM				e		16 01 23.4	
BMDN	Meydan	2.36	84	ePn	Pn	16 01 18.6	+2.0
BMDN				e		16 01 57.4	
IKRK	Kirkuk	2.38	325	ePn	Pn	16 01 18.0	+1.3
IKRK				eSn	Sn	16 01 45.5	+0.1
IKRK				AML	AML	16 02 04.0	
	comp=Z,2μm,0.9s						
IKRK	Kirkuk	2.38	325	ePn	Pn	16 01 18.1	+1.3
NSR	Nassriya	2.44	177	ePn	Pn	16 01 20.0	+2.5
NSR				eSn	Sn	16 01 48.0	+1.2
NSR	Nassriya	2.44	177	ePn	Pn	16 01 20.0	+2.5
BDRS	Dareh Seyedi	2.45	77	ePn	Pn	16 01 20.2	+2.3
BDRS				e		16 02 00.8	
HSRG	Sareghieh	2.59	46	ePn	Pn	16 01 21.6	+1.7
HSRG				e		16 01 28.1	
SHGR	Shooshtar-Gavs	2.71	119	ePn	Pb	16 01 27.6	+1.0
SHGR				IAML		16 02 08.3	
	comp=E,228nm,0.5s						
SHGR				IAML		16 02 21.5	
	comp=N,241nm,0.6s						
HAGD	Aghdareh	2.94	61	ePn	Pn	16 01 26.8	+2.3
HAGD				e		16 02 14.3	
KHMZ	Khomeyn	3.31	84	ePn	Pn	16 01 31.8	+2.1
KHMZ				eSg	Sn	16 02 13.0	+4.3
MAHB	Mahabad	3.31	356	ePn	Pn	16 01 31.4	+1.7
MAHB				e		16 02 12.7	
ASAO	Ashtian	3.51	71	ePn	Pn	16 01 33.6	+1.1
ASAO				eSg	Sn	16 02 16.9	+3.2
QABG	Abgarm-Qazvin	3.71	52	ePn	Pn	16 01 36.5	+1.3
IRAZ	Razeghan	3.78	58	ePn	Pn	16 01 37.7	+1.5
MSL	Mosul	3.78	322	ePn	Pn	16 01 38.0	+2.0
MSL				AML	AML	16 02 04.8	
	comp=Z,433nm,0.2s						
MSL				eSn	Sn	16 02 19.5	-0.4
MSL	Mosul	3.78	322	ePn	Pn	16 01 38.0	+2.0
ZNJK	Zanjan	3.89	34	ePn	Pn	16 01 39.0	+1.3
IQOM	Qom	4.42	70	ePn	Pn	16 01 46.1	+1.1
GHVR	GHOM	4.51	75	ePn	Pn	16 01 46.8	+0.8
QAM	Ghamsar	4.54	85	ePn	Pn	16 01 49.6	+3.0
ISRB	Sarab	4.57	17	ePn	Pn	16 01 48.2	+1.3
IKLH	Kolahrood	4.66	90	ePn	Pn	16 01 50.5	+2.2
IBRJ	Brojen	4.69	108	ePn	Pn	16 01 50.5	+1.8
QALM	Alamut, Qazvin	4.83	51	ePn	Pn	16 01 51.2	+0.6
IHRS	Heris	4.93	10	ePn	Pn	16 01 53.3	+1.4
IVRN	Varamin	4.98	70	ePn	Pn	16 01 53.5	+1.0
KRSH	Karshahi	5.13	83	ePn	Pn	16 01 56.7	+2.0
IMRD	Marand	5.25	357	ePn	Pn	16 01 58.0	+1.6
KLNJ	Kolanjah	5.32	116	ePn	Pn	16 01 58.6	+1.1
IZEF	Zefreh	5.33	94	ePn	Pn	16 01 59.4	+1.9
IDMV	Damavand	5.41	65	ePn	Pn	16 01 59.4	+0.8
IRAM	Ramesheh	5.62	105	ePn	Pn	16 02 03.0	+1.5
IPRN	Peran	5.90	60	ePn	Pn	16 02 07.6	+2.4
IMEH	Mehriz	7.56	103	ePn	Pn	16 02 29.3	+1.2
ASF	Jabal al Asfar	7.77	263	Pn	Pn	16 02 29.3	-1.6
	comp=Z,0.5nm,0.3s,baz=306,slow=18,SNR=2.4						
ASF				Sn	Sn	16 03 57.0	-1.5
	comp=Z,0.8nm,0.3s,baz=270,slow=20,SNR=2.9						
ASF				Lg	Lg	16 04 47.7	
	comp=Z,1.3nm,0.3s,baz=231,slow=23,SNR=3.6						
MMAI	Mount Meron Ar	8.89	270	Lg	Lg	16 05 16.4	
	comp=Z,1.4nm,0.3s,baz=103,slow=31,SNR=2.3						
RAYN	Ar Rayn	9.90	183	iP	Pn	16 02 59.5	-0.6
	SNR=9.2						
RAYN	Ar Rayn	9.90	183		Pn	16 02 58.6	-1.5
EIL	Elat	10.16	251	Pn	Pn	16 03 04.4	+0.9
	comp=Z,0.4nm,0.3s,baz=42,slow=15,SNR=3.4						
EIL				Lg	Lg	16 05 57.1	
	comp=Z,0.4nm,0.3s,baz=27,slow=18,SNR=2.7						
GEYT	Alibeck	10.81	62	Pn	Pn	16 03 13.9	+1.5
	comp=Z,0.1nm,0.3s,baz=306,slow=5.0,SNR=3.6						
GYA0B	ALIBECK ARRAY	10.81	62	Pn	Pn	16 03 14.6	+2.1
SHME	Shamm	11.48	127	P	Pn	16 03 20.9	-0.8
BANOM	Banah	11.67	127	iP	Pn	16 03 23.0	-1.3
	SNR=6.7						
BANOM				S	Sn	16 05 26.7	-7.4
BANOM	Banah	11.67	127	P	Pn	16 03 23.6	-0.7
	SNR=6.8						
BRTR	Keskin Array B	11.74	306	Pn	Pn	16 03 27.9	+2.7
	comp=Z,0.0nm,0.3s,baz=99,slow=19,SNR=3.7						
MSFE	Esma-Masafi	11.97	130	P	Pn	16 03 27.2	-1.1
MDH	Madha	12.10	130	iP	Pn	16 03 31.0	+0.9
	SNR=7.1						
MDH	Madha	12.10	130	P	Pn	16 03 29.4	-0.7
	SNR=7.2						
MDH				S	Sn	16 05 36.4	-8.2
UOSS	Minazif	12.29	131	P	Pn	16 03 31.2	-1.5
UOSS	Minazif	12.29	131	Pn	Pn	16 03 30.9	-1.8
HATD	Hatta, Dubai	12.33	132	P	Pn	16 03 32.1	-1.1
HATD	Hatta, Dubai	12.33	132	P	Pn	16 03 33.8	+0.5
HATD				S	Sn	16 05 43.5	-6.8
ASHO	Ashiyiah	12.39	132	iP	Pn	16 03 33.9	-0.2
	SNR=9.9						
ASHO	Ashiyiah	12.39	132	P	Pn	16 03 34.2	+0.2
	SNR=10						
ASHO				S	Sn	16 05 43.6	-8.1
SOHO	SOHO	13.08	132	P	Pn	16 03 42.4	-1.2
HOQ	Hoqain	13.97	132	P	Pn	16 03 55.8	+0.1
HOQ				S	Sn	16 06 22.3	-8.0
BSY	Bisya	14.53	134	P	Pn	16 04 01.4	-1.9
	SNR=5.7						
SMDO	Samad	14.81	131	P	Pn	16 04 05.8	-1.5
SMDO				S	Sn	16 06 42.6	-8.4
WSAR	Wadi Sarin	15.05	129	Pn	Pn	16 04 08.1	-2.4
	comp=Z,0.9nm,0.3s,baz=296,slow=7.5,SNR=12						
WSAR				Sn	Sn	16 06 45.6	-11
	comp=Z,0.1nm,0.3s,baz=180,slow=20,SNR=3.3						
JMDO	Jabal Madar	15.36	133	P	Pn	16 04 13.4	-1.0
JMDO				S	Sn	16 06 57.0	-7.0
WBK	Wadi Bani Khal	15.72	130	P	Pn	16 04 17.1	-2.1
MHTO	MHTO	16.33	136	P	Pn	16 04 26.0	-1.0
	SNR=6.1						
DQM	DQM	16.94	140	P	Pn	16 04 32.6	-2.2
WHFO	Wadi Hawf	16.97	154	P	Pn	16 04 32.7	-2.4
WHFO				P	P	16 04 33.0	-4.0
	SNR=15						
WHFO				S	Sn	16 07 32.4	-11
ABTO	Aybut	17.32	156	P	Pn	16 04 36.2	-3.3
ABTO				S	Sn	16 07 40.5	-11
RBK	Rabkut	17.51	153	P	Pn	16 04 43.0	+1.1
	SNR=5.8						
RBK				S	Sn	16 07 46.4	-10
IDI	Anoyia	17.53	282	P	Pn	16 04 42.8	+0.8
	comp=Z,0.9nm,0.3s,baz=66,slow=17,SNR=5.1						
DMTO	DMTO	17.61	151	P	Pn	16 04 40.2	-2.9
DMTO				S	Sn	16 07 46.3	-13
SHAO	Shalim	17.62	148	iP	Pn	16 04 41.5	-1.8
	SNR=26						
SHAO	Shalim	17.62	148	P	Pn	16 04 42.0	-1.3
	SNR=26						
ABKAR	Akbulak array	18.89	29	P	P	16 04 58.1	+0.2
AKTO	Aktyubinsk	19.13	24	P	P	16 05 00.8	+0.3
	comp=Z,0.5nm,0.3s,baz=200,slow=10.0,SNR=4.6						
PLOR	Plostina	19.32	316	⇑P	Pn	16 05 08.2	+4.4
MLR	Muntele Rosu	19.54	314	⇓P	Pn	16 05 11.4	+4.8
TESR	Tescani	19.68	317	⇑P	P	16 05 07.5	+0.8
SORM	Soroca	19.77	323	⇑P	P	16 05 06.5	-1.1
AGG	Agios Georgios	19.87	293	Pn	Pn	16 05 10.0	+1.3
ITM	Ithomi	19.98	288	P	P	16 05 09.6	-0.4
VOIR		20.06	313	⇑P	P	16 05 12.4	+1.4
DOPR	Dopca	20.12	314	⇑P	P	16 05 12.4	+1.0
BIZ	Bicaz	20.24	318	⇑P	Pn	16 05 17.7	+3.1
ARR	Arges	20.28	312	⇑P	P	16 05 14.4	+1.1
FNA	Florina	20.92	298	Pn	P	16 05 21.3	+1.1
BURAR	Bucovina Array	21.12	318	⇑P	P	16 05 23.1	+0.8
BURAR	Bucovina Array	21.12	318	P	P	16 05 22.0	-0.2
BUR08	Bucovina Ar. S	21.14	318	P	P	16 05 22.1	-0.5
AKASG	Malin Array Be	21.18	329	P	P	16 05 21.8	-1.0
	comp=Z,1.4nm,0.4s,baz=137,slow=9.7,SNR=16						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKASG	Malin Array Be	21.18	329	P	P	16 05 20.6	-2.1
AKBB	Malin Array Si	21.18	329	P	P	16 05 21.6	-1.2
AKBB				IAmb	IAmb	16 05 25.4	
	comp=Z,6.2nm,1.1s						
KK31	Karatay Array	21.45	56	P	P	16 05 25.8	+0.1
KKAR	Karatay Array	21.45	56	P	P	16 05 25.9	+0.1
KKAR	Karatay Array	21.45	56	P	P	16 05 25.9	+0.1
DRGR		22.14	314	⇑P	P	16 05 36.3	+3.0
SOCY	Socotra	22.39	159	P	P	16 05 32.6	-3.5
SOCY				IAmb	IAmb	16 06 00.2	
	comp=Z,19nm,1.1s						
PSZ	Piszkesteto	24.36	314	P	P	16 05 55.8	+0.3
PSZ				IAmb	IAmb	16 06 00.6	
	comp=Z,4.0nm,0.8s						
NRN	Naryn	25.02	63	P	P	16 06 03.1	+1.2
NRN				IAmb	IAmb	16 06 08.5	
	comp=Z,3.9nm,0.7s						
BVAR	Borovoye Array	26.20	34	P	P	16 06 12.4	+0.4
	comp=Z,0.8nm,0.6s,baz=224,slow=12,SNR=4.6						
GERES	GERESS Array B	28.51	312	P	P	16 06 32.3	-0.6
	comp=Z,0.3nm,0.6s,baz=102,slow=9.1,SNR=3.6						
KURBB	Kurchatov Arra	29.31	44	P	P	16 06 40.4	+0.6
	comp=Z,1.2nm,0.6s,baz=251,slow=9.1,SNR=9.6						
KURK	Kurchatov	29.40	44	P	P	16 06 41.0	+0.4
KURK				IAmb	IAmb	16 06 45.7	
	comp=Z,1.9nm,0.8s						
CLL	Collm	29.86	317	eP	P	16 06 43.0	-1.7
MK31	Makanchi Array	30.49	53	P	P	16 06 50.8	+0.4
MK31				IAmb	IAmb	16 07 46.8	
	comp=Z,6.4nm,1.8s						
MKAR	Makanchi Array	30.49	53	P	P	16 06 51.1	+0.7
	comp=Z,0.5nm,0.5s,baz=257,slow=9.2,SNR=15						
MKAR	Makanchi Array	30.49	53	P	P	16 06 50.7	+0.3
FINES	FINESS Array B	30.81	341	P	P	16 06 51.9	-1.1
	comp=Z,1.7nm,0.9s,baz=150,slow=14,SNR=5.9						
FINES	FINESS Array B	30.81	341	P	P	16 06 53.7	+0.7
SENIN	Lac Senin/Sane	32.05	305	P	P	16 07 03.5	-0.8
BNI	Bardonecchia	32.28	303	P	P	16 07 06.2	-0.1
ZAA0	Zalesovo Array	34.14	41	P	P	16 07 21.7	-0.5
ZAA0				IAmb	IAmb	16 07 58.3	
	comp=Z,6.5nm,1.6s						
ZALV	Zalesovo Beam	34.14	41	P	P	16 07 22.1	-0.2
	comp=Z,1.2nm,0.3s,baz=251,slow=10,SNR=12						
ZALV	Zalesovo Beam	34.14	41	P	P	16 07 21.6	-0.6
ARCES	ARCESS Array B	37.90	348	P	P	16 07 53.6	-0.7
	comp=Z,3.8nm,1.1s,baz=164,slow=9.0,SNR=7.2						
TORD	Torodi Ar. Bea	45.03	254	P	P	16 08 54.0	+0.6
	comp=Z,1.0nm,0.9s,baz=49,slow=7.4,SNR=3.9						
TORD	Torodi Ar. Bea	45.03	254	P	P	16 08 53.0	-0.4
SONM	Songino Array	46.86	53	P	P	16 09 09.3	+1.7
	comp=Z,0.4nm,0.9s,baz=284,slow=7.9,SNR=2.9						
CMAR	Chiang Mai Arr	49.39	94	P	P	16 09 27.3	-0.1
	comp=Z,0.2nm,0.5s,baz=292,slow=8.3,SNR=4.0						
BOSA	Boshof	64.79	200	P	P	16 11 16.9	+0.8
	comp=Z,2.0nm,0.6s,baz=17,slow=6.9,SNR=6.9						
BOSA	Boshof	64.79	200	P	P	16 11 16.3	+0.1
KSRS	Korea Array	64.80	61	P	P	16 11 14.6	-1.6
	comp=Z,0.6nm,0.5s,baz=285,slow=6.8,SNR=6.4						
ILAR	Eielson Array	81.58	6	P	P	16 12 55.2	+0.4
	comp=Z,0.2nm,0.8s,baz=319,slow=3.5,SNR=3.6						
YKA	Yellowknife Ar	83.12	351	P	P	16 13 02.5	-0.3
	comp=Z,0.2nm,0.4s,baz=18,slow=5.2,SNR=4.8						

IDC 02 16:09:46.9±22.0, 21°.44S×178°.70W, h535km±210km, mb2.6/2, mb1 2.7/2, mb1mx2.5/25, mbtmp3.6/2, Error ellipse: s-maj=189.9km s-min=113.0km az=121.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.80	245	P	P	16 16 09.4	-0.2
	0.7nm,0.4s,baz=66,slow=10.0,SNR=3.5						
ASAR	Alice Springs	43.67	258	P	P	16 17 04.7	-0.1
	0.4nm,0.7s,baz=90,slow=8.7,SNR=6.3						
ASAR				PcP	PcP	16 18 39.9	-0.2
	0.4nm,0.7s,baz=107,slow=4.2,SNR=5.8						
AKASG	Malin Array Be	143.50	330	PKP	PKPab	16 28 18.9	-0.1
	0.3nm,0.3s,baz=42,slow=4.6,SNR=5.3						
BRTR	Keskin Array B	146.97	311	PKPbc	PKPbc	16 28 29.2	-0.8
	0.5nm,0.7s,baz=64,slow=3.4,SNR=2.2						
GERES	GERESS Array B	150.91	343	PKPbc	PKiKP	16 28 39.6	0.0
	0.1nm,0.3s,baz=5.7,slow=3.0,SNR=3.5						

ATH 02 16:16:48.1, 38°.20N×20°.44E, h14km±1km, ML2.6/5, Error ellipse: s-maj=1.8km s-min=1.1km az=255.0
THE 02 16:16:48.4, 38°.19N×20°.45E, h11km±1km, ML2.8/5, Error ellipse: s-maj=2.0km s-min=0.7km az=197.0
ISC 02 16:16:48.4±1.1, 38°.20N±0°.03×20°.47E±0°.04, h12km±5km, n29, σ0.42/33, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARG2	Argostoli	0.03	141	P	Pg	16 16 50.4	-0.1
ARG2				S	Sg	16 16 52.0	+0.1
KEF2	Argostoli. Kep	0.04	154	P	Pg	16 16 50.5	0.0
KEF2				S	Sg	16 16 51.9	-0.2
KEF4	Livadi, Kephal	0.07	330	P	Pg	16 16 50.5	-0.3
KEF4				S	Sg	16 16 52.6	0.0
CHV1	Chavriata, Kef	0.07	256	P	Pg	16 16 50.7	-0.1
CHV1				S	Sg	16 16 52.8	+0.2
	17µm,0.2s						
KEF1	Kardakata, Kep	0.08	3	P	Pg	16 16 50.7	-0.2
KEF1				S	Sg	16 16 52.9	+0.2
KEF3	Kipouria, Keph	0.09	272	P	Pg	16 16 50.9	-0.2
KEF3				S	Sg	16 16 53.3	+0.2
VLS	Valsamata	0.10	103	P	Pg	16 16 51.1	-0.1
VLS				S	Sg	16 16 53.4	+0.1
	10µm,0.2s						
VLS	Valsamata	0.10	103	P	Pg	16 16 51.1	-0.1
VLS				S	Sg	16 16 53.4	+0.1
VLS				AML	AML	16 16 53.8	
	comp=N,12873µm,0.2s						
VLS				AML	AML	16 16 54.0	
	comp=E,18757µm,0.1s						
VSK1	VASILIKIADES	0.22	20	P	Pg	16 16 53.0	-0.2
VSK1				S	Sg	16 16 57.0	+0.6
	comp=E,3µm,0.2s						
VLMS	Volimes, Zakyn	0.36	154	P	Pg	16 16 55.4	-0.1
VLMS				S	Sg	16 17 01.2	+0.8
VLMS				AML	AML	16 17 02.1	
	comp=E,3842µm,0.2s						
VLMS				AML	AML	16 17 02.6	
	comp=N,3416µm,0.2s						
EVGI	Lefkada island	0.45	19	P	Pg	16 16 56.8	-0.4
EVGI				S	Sg	16 17 04.1	+0.9
EVGI	Lefkada island	0.45	19	P	Pg	16 16 56.9	-0.4
EVGI				S	Sb	16 17 04.3	-0.6
MGNA	Meganis	0.52	29	P	Pg	16 16 58.1	-0.5
MGNA				AML	AML	16 17 07.0	
	comp=N,676µm,0.1s						
MGNA				AML	AML	16 17 07.5	
	comp=E,780µm,0.1s						
AST1	Astakos	0.60	55	P	Pg	16 16 59.9	-0.1
LKD2	Lefkada island	0.61	14	P	Pg	16 16 59.9	-0.4
TSLK	Tsoukalades, L	0.64	13	P	Pg	16 17 00.9	0.0
TSLK	Tsoukalades, L	0.64	13	P	Pg	16 17 00.5	-0.4
PDO	Prodromos	0.69	55	P	Pg	16 17 01.5	-0.3
PDO				S	Sb	16 17 12.3	+0.4
	comp=E,478nm,0.3s						
PDO	Prodromos	0.69	55	P	Pg	16 17 01.4	-0.4
PDO				AML	AML	16 17 17.1	
	comp=N,767µm,0.3s						
PDO				AML	AML	16 17 17.4	
	comp=E,587µm,0.3s						
PVO	Paravola	0.93	63	P	Pg	16 17 06.1	-0.3
PVO				S	Sn	16 17 21.6	+0.9
	comp=E,488nm,0.3s						
PVO	Paravola	0.93	63	P	Pg	16 17 06.0	-0.3
PVO				AML	AML	16 17 22.0	
	comp=E,1234µm,0.3s						
PVO				AML	AML	16 17 22.4	
	comp=N,683µm,0.3s						
DRO	Drossia	1.01	104	P	Pg	16 17 06.9	-1.0
ANX	Ano Chora	1.21	71	P	Pn	16 17 11.0	-0.3
SERG	Sergoula	1.27	80	P	Pg	16 17 12.6	-0.2
TRIZ	Trizonia	1.27	82	P	Pn	16 17 11.7	-0.3
KALE	Kalithea	1.33	81	P	Pg	16 17 12.9	0.0
KLV	Kalavryta, Ach	1.34	96	P	Pn	16 17 12.7	-0.3
MAKR	Makrakomi, Fth	1.54	58	P	Pg	16 17 18.2	+0.3
AGG	Agios Georgios	1.68	60	P	Pg	16 17 20.0	-0.6

KRSC 02 16:24:08.0±0.7, 54°.40N×160°.43E, h117km±10km, ML3.8
IDC 02 16:24:11.4±1.4, 54°.47N×159°.86E, h144km±15km, mb3.2/7, mb1 3.4/9, mb1mx3.1/40, mbtmp3.7/9, Error ellipse: s-maj=21.5km s-min=18.1km az=105.0
ISC 02 16:24:08.8±0.7, 54°.42N±0°.03×160°.36E±0°.05, h121km±6km, n51, σ1.07/67, mb3.5/7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KII	Karymskiy	0.66	235	eP	Pn	16 24 28.2	+0.2
KII				eS	Sn	16 24 42.0	-0.4
KZV	Kizimen	0.70	357	iP	Pn	16 24 28.8	+0.4
KZV				eS	Sn	16 24 43.0	-0.2
TUMD	Tumrok D	0.79	2	iP	Pn	16 24 29.1	+0.1
TUMD				eS	Sn	16 24 43.5	-0.7
MKZ	Mys Kozlova	0.81	79	eP	Pn	16 24 29.5	+0.4
MKZ				eS	Sn	16 24 44.2	-0.2
TUMR	Tumrok	0.88	352	iP	Pn	16 24 30.6	+0.8
TUMR				eS	Sn	16 24 46.1	+0.3
SPN	Mys Shipunski	1.33	189	iP	Pn	16 24 34.2	-0.2
SPN				eS	Sn	16 24 52.7	-1.1
KMNR	Kamenistaya	1.35	357	eP	Pn	16 24 35.4	+0.8
KMNR				eS	Sn	16 24 54.4	+0.2
NLC	Nalytchevo	1.39	206	eP	Pn	16 24 35.3	+0.4
NLC				eS	Sn	16 24 55.0	+0.3
KRX	Arik	1.47	224	eP	Pn	16 24 37.1	+1.1
KRER	Koryakskii	1.47	221	eP	Pn	16 24 37.3	+1.2
SMAR	Somma	1.48	219	eP	Pn	16 24 37.1	+0.9
SMAR				eS	Sn	16 24 57.4	+0.4
AVH	Avacha	1.50	221	eP	Pn	16 24 37.4	+1.1
AVH				eS	Sn	16 24 58.9	+1.6
UGLR	Uglovaya	1.51	218	eP	Pn	16 24 37.6	+1.1
KOK	Koryaka	1.52	223	eP	Pn	16 24 37.6	+1.0
KIRR	Kirishev	1.54	360	eP	Pn	16 24 37.0	+0.1
KIRR				eS	Sn	16 24 57.3	-0.9
KPT	Kopyto	1.56	357	eP	Pn	16 24 37.6	+0.6
ZLN	Zelenaya	1.63	9	eP	Pn	16 24 39.5	+1.7
KOZ	Kozyrevsk	1.67	351	eP	Pn	16 24 38.6	+0.4
LGNR	Loginova	1.68	6	eP	Pn	16 24 39.7	+1.1
DALK	Dalny	1.68	215	eP	Pn	16 24 39.0	+0.6
DALK				eS	Sn	16 25 01.2	+0.3
ESO	Esso	1.79	328	eP	Pn	16 24 39.8	+0.1
ESO				eS	Sn	16 25 02.9	-0.3
KRSR	Krestovskiy	1.81	4	eP	Pn	16 24 40.1	+0.1
KLY	Klyuchi	1.91	5	eP	Pn	16 24 42.2	+1.1
SRDR	Sredinnyy	1.94	349	eP	Pn	16 24 41.7	+0.1
PETK	Petropavlovsk-	2.05	231	P	Pn	16 24 43.5	+0.6
	3.6nm,0.3s,baz=72,slow=17,SNR=76						
PETK				S	Sn	16 25 10.6	+1.6
	2.6nm,0.3s,baz=86,slow=20,SNR=5.1						
KRMR	Karymshinskiy	2.07	221	iP	Pn	16 24 43.7	+0.6
KRMR				eS	Sn	16 25 08.9	-0.5
BDR	Baidarnaya	2.21	12	eP	Pn	16 24 46.4	+1.5
SMKR	Semkarok	2.26	16	P	Pn	16 24 47.1	+1.5
RUS	Russkaya	2.27	210	eP	Pn	16 24 46.1	+0.4
RUS				eS	Sn	16 25 12.8	-1.1
KBG	Krutoberegovo	2.28	35	eP	Pn	16 24 46.7	+1.0
KBG				eS	Sn	16 25 14.1	+0.1
KBTR	Krutoberegovo	2.28	37	eP	Pn	16 24 47.0	+1.3
SRKR	Sorokina	2.29	11	eP	Pn	16 24 47.1	+1.3
GRL	Gorelyy	2.31	217	eP	Pn	16 24 47.5	+1.2
MTVR	Mutnovka	2.33	215	eP	Pn	16 24 47.4	+0.8
APC	Apacha	2.42	233	eP	Pn	16 24 49.0	+1.5
ASAK	Asacha	2.51	217	eP	Pn	16 24 50.0	+1.2
KDTR	Khodutka, Kamc	2.95	209	eP	Pn	16 24 54.4	0.0
KDTR				eS	Sn	16 25 27.8	-1.7
BKI	Bering	3.34	74	eP	Pn	16 24 59.1	-0.4
BKI				eS	Sn	16 25 37.1	-1.6
SKR	Severo-Kuril's	4.55	216	eP	Pn	16 25 16.5	+0.9
MA2	Magadan	7.36	319	P	Pn	16 25 54.6	+1.2
	1.6nm,0.3s,baz=131,slow=11,SNR=36						
YAK	Yakutsk	17.72	308	P	P	16 28 05.6	-1.0
	0.1nm,0.3s,baz=312,slow=6.0,SNR=5.4						
TIXI	Tiksi	21.95	334	P	P	16 28 50.7	-1.6
	0.9nm,0.3s,baz=126,slow=12,SNR=4.3						
ILAR	Eielson Array	27.78	47	P	P	16 29 47.3	+1.4
	0.6nm,1.1s,baz=259,slow=7.2,SNR=4.5						
H11N2	WAKE ISLAND Hy	34.98	169	T	T	17 08 13.6	
	baz=355,slow=76,SNR=34						
H11N3	WAKE ISLAND Hy	35.00	169	T	T	17 08 28.1	
	baz=355,slow=76,SNR=9.8						
H11N1	WAKE ISLAND Hy	35.00	169	T	T	17 08 28.2	
	baz=355,slow=76,SNR=12						
YKA	Yellowknife Ar	42.09	44	P	P	16 31 50.8	+2.6
	0.1nm,0.4s,baz=303,slow=8.9,SNR=2.9						
MKAR	Makanchi Array	47.73	295	P	P	16 32 30.5	-2.7
	0.3nm,0.5s,baz=56,slow=7.1,SNR=8.3						
FINES	FINESS Array B	58.97	336	P	P	16 33 53.4	-1.5
	2.7nm,0.9s,baz=35,slow=5.6,SNR=2.4						
TXAR	Lajitas Array	69.98	68	P	P	16 35 08.6	+1.4
	0.4nm,0.5s,baz=289,slow=5.6,SNR=4.0						
ASAR	Alice Springs	81.03	204	P	P	16 36 10.1	+0.2
	0.9nm,1.1s,baz=16,slow=4.9,SNR=7.1						

IDC 02 16:27:16.7±6.8, 25°.40S×116°.13W, h0km, mb3.5/2, mb1 3.9/2, mb1mx3.5/33, mbtmp3.5/2, MS3.7/3, Ms1 3.7/3, ms1mx3.3/15, Error ellipse: s-maj=594.8km s-min=100.7km az=104.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PPT	Papeete	32.02	277	LR	LR	16 42 48.7	
	comp=Z,133nm,20.7s,baz=134,slow=29						
LPIG	La Paz	49.53	7	LR	LR	16 51 29.4	
	comp=Z,53nm,18.4s,baz=26,slow=29						
AFI	Afiamalu	53.31	271	LR	LR	16 54 02.2	
	comp=Z,68nm,19.1s,baz=110,slow=30						
NVAR	Mina Array Bea	63.52	358	P	P	16 37 48.7	-0.3
	0.4nm,0.8s,baz=173,slow=9.1,SNR=2.0						
H11S2	WAKE ISLAND Hy	86.78	292	T	T	18 15 24.1	
	baz=118,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	86.79	292	T	T	18 15 27.4	
	baz=118,slow=75,SNR=8.5						
H11S3	WAKE ISLAND Hy	86.79	292	T	T	18 15 23.1	
	baz=118,slow=75,SNR=7.4						
H11N3	WAKE ISLAND Hy	87.18	293	T	T	18 15 55.5	
	baz=109						
H11N1	WAKE ISLAND Hy	87.19	293	T	T	18 15 48.6	
	baz=109						
H11N2	WAKE ISLAND Hy	87.19	293	T	T	18 15 55.2	
	baz=109						
YKA	Yellowknife Ar	87.59	1	P	P	16 40 06.4	+0.2
	1.0nm,1.0s,baz=173,slow=5.6,SNR=7.8						
ZALV	Zalesovo Beam	147.49	337	PKPbc	PKPbc	16 47 02.7	+0.4
	0.7nm,0.6s,baz=46,slow=4.2,SNR=2.4						
MKAR	Makanchi Array	154.09	330	PKPbc	PKPbc	16 47 17.2	-1.2
	0.3nm,0.9s,baz=58,slow=3.6,SNR=2.5						

WEL 02 16:39:00.8, 46°S±11°×16°7E±°, h33km, ML3.5/5, MLv3.4/10, Error ellipse: s-maj=0.0km s-min=0.0km az=7.5, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PYZ	Puysegur Point	0.26	243	P	Pn	16 39 10.0	+1.8
PYZ				S	Sb	16 39 15.1	+2.0
DCZ	Deep Cove	0.59	9	P	Pb	16 39 13.1	+0.3
DCZ				S	Sb	16 39 21.1	+0.1
WHZ	Wether Hill Ro	0.67	77	P	Pn	16 39 13.7	-0.2
WHZ				S	Sb	16 39 21.9	-1.3
MLZ	Mavora Lakes	1.03	49	P	Pb	16 39 20.2	+0.1
MLZ				S	Sb	16 39 33.9	+0.5
APZ	The Paps	1.03	140	P	Pb	16 39 20.3	+0.1
MSZ	Milford Sound	1.52	25	P	Pb	16 39 28.3	-0.1
MSZ				S	Sb	16 39 47.3	+0.1
SYZ	Scrubby Hill	1.55	109	P	Pb	16 39 27.9	-1.0
SYZ				S	Sb	16 39 46.9	-1.2
EAZ	Earnscleugh	1.80	64	P	Pb	16 39 32.3	-0.9
EAZ				S	Sb	16 39 54.2	-1.2
TUZ	Tuapeka	1.82	88	P	Pb	16 39 32.4	-1.1
TUZ				S	Sb	16 39 54.5	-1.5
WKZ	Wanaka	1.86	50	P	Pb	16 39 33.6	-0.6
JCZ	Jackson Bay	2.34	33	P	Pb	16 39 41.2	-1.1
HHSZ	Highcliff Hill	2.50	88	P	Pn	16 39 41.6	+2.4
ODZ	Otahua Downs	2.74	70	P	Pn	16 39 43.5	+1.1
LBZ	Lake Benmore	2.79	55	P	Pn	16 39 44.3	+1.2
FOZ	Fox Glacier	3.21	39	P	Pn	16 39 52.4	+3.5
DSZ	Denniston Nort	5.52	40	P	Pn	16 40 22.4	+1.7

IDC 02 16:42:21.2±5.2, 4°.77S×153°.66E, h116km±34km, mb3.1/3, mb1 3.4/4, mb1mx3.1/35, mbtmp3.6/4, Error ellipse: s-maj=55.9km s-min=25.2km az=99.0, New Ireland region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.69	286	P	Pn	16 42 50.2	-0.5
	16nm,0.3s,baz=161,slow=1.1,SNR=21						
KRVT				S	Sn	16 43 13.4	+0.2
	17nm,0.3s,baz=100,slow=23,SNR=15						
PMG	Port Moresby	7.93	234	P	Pn	16 44 15.2	+1.5
	4.1nm,0.3s,baz=43,slow=9.4,SNR=19						
PMG				S	Sn	16 45 42.0	+0.1
	0.8nm,0.3s,baz=324,slow=19,SNR=1.6						
WRA	Warramunga Arr	24.11	230	P	P	16 47 27.6	+1.1
	1.1nm,0.7s,baz=55,slow=10,SNR=5.9						
ASAR	Alice Springs	26.76	224	P	P	16 47 49.1	-1.3
	0.2nm,0.4s,baz=54,slow=8.9,SNR=8.9						
MKAR	Makanchi Array	80.87	319	P	P	16 54 22.9	+0.3
	0.1nm,0.5s,baz=91,slow=7.1,SNR=1.5						

NDI 02 16:45:18.8±3.6, 22°.61N×96°.42E, h10km, ML3.1, mb4.4(NEIC)
BJI 02 16:45:23.6±0.0, 22°.67N×95°.82E, h12km, mB4.5/17, mb4.1/24, ML4.0/2, Ms3.9/10, Ms7 3.7/9
IDC 02 16:45:24.0±1.1, 22°.85N×96°.05E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.6/45, mbtmp3.8/9, ML4.0/1, MS3.3/4, Ms1 3.3/4, ms1mx2.9/51, Error ellipse: s-maj=50.8km s-min=14.0km az=65.0
NEIC 02 16:45:24.9±1.8, 22°.80N±0°.07×96°.02E±0°.09, h14km±5km, mb4.4/15, Error ellipse: s-maj=12.8km s-min=8.5km az=62.0
ISC 02 16:45:25.6±0.5, 22°.84N±0°.05×95°.93E±0°.06, h10km, n53, σ2.03/55, mb4.1/15, MS3.3/4, 1C, Myanmar

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KOHI	KOHIMA	3.31	330	eP	Pn	16 46 20.3	+2.7
KOHI				eS	Sn	16 47 03.0	+5.8
KOHI				ex	x	16 47 08.2	
KOHI				IAML		16 47 09.7	
	comp=E,94nm,0.6s						
KOHI				IAML		16 47 11.6	
	comp=N,98nm,0.3s						
SHL	Shillong	4.58	307	eP	Pn	16 46 36.0	+0.8
SHL				eS	Sn	16 47 28.4	-0.2
SHL				IAML		16 47 36.1	
	comp=N,27nm,0.6s						
SHL	Shillong	4.58	307		Pn	16 46 35.3	+0.1
TEZP	TEZPUR	4.71	323	eP	Pn	16 46 37.0	+0.3
TEZP				IAML		16 47 33.1	
	comp=N,14nm,0.2s						
CHTO	Chiang Mai	4.90	144		Pn	16 46 36.7	-2.6
CMMT	Chiang Mai	4.90	144	P	Pn	16 46 37.6	-1.8
CMMT				S	Sb	16 47 52.4	+1.8
MHMT	Maesarieng	5.01	158	P	Pn	16 46 39.5	-1.3
MHMT				S	Sb	16 47 57.7	+4.1
CM15	Chiang Mai Arr	5.19	147	P	Pn	16 46 42.0	-1.4
CM15				S	Sb	16 48 01.4	+2.5
CM31	Chiang Mai Arr	5.20	147		Pn	16 46 40.6	-2.8
CM31	Chiang Mai Arr	5.20	147	P	Pn	16 46 41.8	-1.6
CM31				S	Sb	16 48 04.1	+5.0
CMAR	Chiang Mai Arr	5.20	147	Pn	Pn	16 46 41.4	-2.1
	comp=N,1.5nm,0.3s,baz=324,slow=14,SNR=52						
CMAR				Pg	Pb	16 46 58.9	+2.3
	comp=N,9.6nm,0.3s,baz=324,slow=18,SNR=88						
CMAR				Lg	Lg	16 48 07.0	
	comp=N,15nm,0.3s,baz=312,slow=31,SNR=8.6						
CMAR				LR	LR	16 49 05.9	
	comp=N,257nm,18.7s,baz=320,slow=43						
LAMP	Lampang	5.52	140	P	Pn	16 46 46.1	-1.7
LAMP				S	Sb	16 48 07.6	-0.8
KMI	Kunming	6.63	69	Pn	Pn	16 47 00.7	-2.6
UTTA	Uttaradit	6.67	139	P	Pn	16 47 01.7	-2.0
UMPA	Umpang Tak	7.16	157	P	Pn	16 47 11.0	+0.6
UMPA				S	Sg	16 49 13.9	-1.5
SLVN	Son La	7.55	100	Pn	Pn	16 47 14.5	-1.2
PBKT	Sadao Pong	7.84	142		Pn	16 47 17.6	-2.1
LSA	Lhasa	8.06	329		Pn	16 47 24.4	+1.2
BOK	Bokaro	9.28	278	ex	Pn	16 47 53.2	+14
BOK				eS	Sn	16 49 21.6	-2.5
ENH	Enshi	14.20	56	Pn	Pn	16 48 46.7	-0.2
LZH	Lanzhou	14.88	26	eP	P	16 49 04.6	+2.6
LZH				pP	Pn	16 49 14.3	+18
LZH				sP		16 49 20.2	
XAN	Xi'an	15.95	43	P	P	16 49 14.9	+1.1
XAN				pP	sP	16 49 20.8	+2.8
XAN				pmax	pmax		
	comp=N,8.0nm,1.2s						
XAN	Xi'an	15.95	43		Pn	16 49 09.3	-0.9
GTA	Gaotai	16.84	10	eP	P	16 49 25.5	+1.7
WHN	Wuhan	18.14	61	⇑P	P	16 49 47.7	+10
WHN				pP	sP	16 49 52.8	+11
PSI	Prapat	20.13	171	P	P	16 50 01.6	+1.6
	comp=N,6.7nm,0.7s,baz=9.9,slow=12,SNR=5.1						
RPSI	Rantau Prapat	20.24	171		P	16 50 01.6	+0.6
GSI	Gunungsitoli	21.47	176	P	P	16 50 11.8	-2.6
GSI				IAmb	IAmb	16 50 16.9	
	comp=Z,54nm,1.7s						
WMQ	Urumqi	22.00	344	eP	P	16 50 21.3	+1.3
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,98nm,5.9s						
WMQ				LR	LR		
	comp=Z,230nm,24.9s						
WMQ				LR	LR		
	comp=Z,1µm,28.8s						
HHC	Hu-ho-hao-te	22.27	33	eP	P	16 50 21.2	-1.7
HHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,45nm,4.1s						
NIL	Nilore	22.65	303	P	P	16 50 26.0	-0.9
NIL				IAmb	IAmb	16 50 29.6	
	comp=Z,7.7nm,0.7s						
TPUB	Ta-pu	22.72	84	P	P	16 50 23.3	-4.6
TPUB				IAmb	IAmb	16 51 01.6	
	comp=Z,16nm,0.8s						
KSH	Kashi	23.74	319	P	P	16 50 38.5	+0.3
KSH				pP	pP	16 50 42.8	+1.6
KSH				PcP	PcP	16 54 23.7	+1.7
KSH				S	S	16 54 50.1	-3.5
KSH				pmax	pmax		
	comp=Z,30nm,1.2s						
KSH				LR	LR		
	comp=Z,440nm,6.0s						
KSH				LR	LR		
	comp=Z,340nm,5.2s						
KSH				LR	LR		
	comp=Z,120nm,8.4s						
SONM	Songino Array	26.31	16	P	P	16 51 02.3	+0.8
	comp=Z,0.5nm,0.8s,baz=204,slow=7.8,SNR=4.6						
SONM				LR	LR	17 03 19.2	
	comp=Z,97nm,20.0s,baz=128,slow=41						
SONM	Songino Array	26.31	16	IAmb	IAmb	16 51 04.9	
	comp=Z,3.9nm,1.8s						
MK31	Makanchi Array	26.31	339	P	P	16 50 59.9	-1.5
MKAR	Makanchi Array	26.31	339	P	P	16 51 00.9	-0.6
	comp=Z,1.3nm,0.5s,baz=149,slow=10,SNR=18						
MAKZ	Makanchi	26.43	338	P	P	16 51 01.9	-0.6
AAK	Ala-Archa	26.60	323	P	P	16 51 05.3	+1.1
	comp=Z,1.5nm,0.6s,baz=45,slow=6.7,SNR=7.0						
AAK	Ala-Archa	26.60	323	P	P	16 51 04.1	-0.1
AAK				IAmb	IAmb	16 51 37.2	
	comp=Z,13nm,1.6s						
KK31	Karatay Array	29.19	320	P	P	16 51 26.5	-0.7
KK31				IAmb	IAmb	16 52 15.6	
	comp=Z,5.2nm,1.6s						
KKAR	Karatay Array	29.19	320	P	P	16 51 26.6	-0.6
KURK	Kurchatov	30.93	338	P	P	16 51 41.2	-1.3
KURK				IAmb	IAmb	16 52 30.5	
	comp=Z,13nm,2.0s						
KSRS	Korea Array	31.09	55	LR	LR	17 06 24.8	
	comp=Z,37nm,19.7s,baz=280,slow=41						
KAPI	Kappang	36.17	137	LR	LR	17 08 50.5	
	comp=Z,43nm,18.2s,baz=121,slow=39						
ABKAR	Akbulak array	38.68	322	P	P	16 52 48.5	-0.9
MJB9	Matsu-Tunnel	38.87	60	P	P	16 52 47.7	-3.5
MAJO	Matsushiro	38.88	60	P	P	16 52 47.8	-3.5
MJAR	Matsushiro Arr	38.88	60	P	P	16 52 47.8	-3.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	56.69	136	P	P	16 55 08.5	-1.1
	comp=Z,1.8nm,0.9s,baz=315,slow=7.6,SNR=3.9						
ASAR	Alice Springs	59.16	139	P	P	16 55 26.4	-0.4
	comp=Z,0.4nm,0.8s,baz=315,slow=6.6,SNR=5.1						
ILAR	Eielson Array	80.32	23	P	P	16 57 36.0	-0.7
	comp=Z,0.3nm,0.9s,baz=309,slow=5.7,SNR=3.2						
INK	Inuvik	82.22	17	P	P	16 57 46.5	-0.1
	comp=Z,0.5nm,0.3s,baz=303,slow=3.6,SNR=3.1						

*JMA **02** 16:49:44.6±0.1, 24.64N×122.39E, h28km±4km, M2.1*
*TAP **02** 16:49:44.3, 24.75N×122.31E, h7km, ML2.8, C*
ISC 02 16:49:44.0±0.9, **24.70N**±0.02×**122.38E**±0.02, **h14**km±8km, **n98**, σ0.89/183, **Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.27	238	iP	Pb	16 49 50.5	-0.2
	baz=219						
EOS1				S	Sb	16 49 55.4	+0.2
	baz=219						
TWB1	Santiao Chiao	0.47	311	P	Pg	16 49 53.2	-0.2
	baz=312						
TWB1				S	Sg	16 49 59.0	-0.8
	baz=312						
TWC	Suao	0.49	260	P	Pg	16 49 53.2	-0.6
	baz=260						
TWC				eS	Sg	16 49 59.9	-0.5
	baz=260						
NTC	Toucheng	0.53	287	eP	Pg	16 49 54.3	-0.1
	baz=283						
NTC				eS	Sb	16 50 01.7	-0.8
	baz=283						
JYNG	Yonagunijimaku	0.57	115	P	Pg	16 49 55.3	+0.1
JYNG				S	Sg	16 50 02.8	+0.1
TIPB	Shuangxi	0.57	299	eP	Pg	16 49 55.3	-0.1
	baz=296						
TIPB				eS	Sg	16 50 02.8	-0.3
	baz=296						
ILA	Ilan	0.58	277	eS	Sn	16 50 04.9	-2.2
	baz=259						
YOJ	Yonaguni jima	0.62	112	eP	Pg	16 49 56.6	+0.5
	baz=114						
YOJ				eS	Sg	16 50 05.5	+1.1
	baz=114						
YOJ	Yonaguni jima	0.62	112	P	Pg	16 49 56.2	+0.1
YOJ				S	Sg	16 50 04.3	0.0
ENA	Nanau	0.64	246	eP	Pg	16 49 56.2	-0.4
	baz=237						
ENA				S	Sb	16 50 05.5	-0.4
	baz=237						
TWE	Neicheng	0.65	272	P	Pg	16 49 56.2	-0.6
	baz=256						
TWE				eS	Sb	16 50 06.2	+0.2
	baz=256						
NWF	Wu-fen Shan	0.66	304	eP	Pb	16 49 57.6	+0.3
	baz=293						
NWF				eS	Sb	16 50 06.5	0.0
	baz=293						
WFSB	Wu-fen Shan	0.66	304	eP	Pb	16 49 57.6	+0.3
	baz=293						
WFSB				eS	Sg	16 50 05.4	-0.3
	baz=293						
SLBB	Yuanshan	0.68	275	eP	Pg	16 49 57.1	-0.3
	baz=270						
SLBB				eS	Sg	16 50 06.1	-0.3
	baz=270						
ENTT	Nioudou	0.74	266	P	Pb	16 49 58.2	-0.6
	baz=260						
ENTT				eS	Sg	16 50 08.5	+0.1
	baz=260						
TWA	Mucha	0.78	291	eP	Pg	16 49 59.2	0.0
	baz=280						
TWA				eS	Sn	16 50 10.4	-1.7
	baz=280						
NDT	Datong Townshi	0.80	263	eP	Pb	16 49 59.0	-0.7
	baz=258						
NDT				eS	Sg	16 50 10.1	0.0
	baz=258						
NWLT	Wulai	0.80	276	eP	Pb	16 49 58.9	-0.9
	baz=272						
NWLT				eS	Sg	16 50 10.2	-0.1
	baz=272						
NHDH	Xindian Distri	0.82	289	eP	Pn	16 50 00.8	-0.3
	baz=278						
NHDH				S	Sg	16 50 10.9	+0.1
	baz=278						
TATO	Taipei	0.86	289	eP	Pn	16 50 01.2	-0.5
	baz=278						
TATO				eS	Sg	16 50 12.3	+0.3
	baz=278						
YM01	YM01	0.86	301	eP	Pg	16 50 00.9	+0.1
	baz=299						
YM01				S	Sg	16 50 12.5	+0.4
	baz=299						
TAP	Taipei	0.87	293	eP	Pn	16 50 01.2	-0.5
	baz=283						
TAP				eS	Sn	16 50 13.4	-0.8
	baz=283						
YM08	YM08	0.87	304	eP	Pb	16 50 00.7	-0.2
	baz=303						
YM08				S	Sg	16 50 12.2	-0.2
	baz=303						
YM11	YM11	0.87	303	eP	Pg	16 50 00.9	0.0
	baz=301						
YM11				S	Sg	16 50 12.7	+0.3
	baz=301						
YM10	YM10	0.88	302	P	Pb	16 50 00.7	-0.3
	baz=300						
YM10				S	Sg	16 50 12.6	+0.1
	baz=300						
YM05	YM05	0.88	302	eP	Pb	16 50 00.7	-0.3
	baz=300						
YM05				S	Sb	16 50 12.0	-0.6
	baz=300						
NACB	Ninganchiao	0.89	234	eP	Pb	16 50 00.6	-0.6
	baz=238						
NACB				eS	Sg	16 50 12.5	-0.4
	baz=238						
YM04	YM04	0.89	301	eP	Pb	16 50 00.9	-0.4
	baz=299						
YM04				S	Sg	16 50 13.2	+0.1
	baz=299						
YM03	YM03	0.90	302	eP	Pb	16 50 01.1	-0.4
	baz=301						
YM03				eS	Sg	16 50 13.1	-0.4
	baz=301						
TWY	Chenhua	0.92	309	eP	Pn	16 50 02.5	0.0
	baz=309						
TWY				S	Sn	16 50 14.4	-1.0
	baz=309						
YHNB	Yeheng	0.92	269	P	Pb	16 50 01.2	-0.5
	baz=264						
YHNB				eS	Sg	16 50 13.4	-0.4
	baz=264						
ANP	Anpu	0.92	302	eP	Pn	16 50 02.3	-0.3
	baz=300						
NSK	Sanguang	0.93	269	P	Pb	16 50 01.7	-0.3
	baz=264						
NSK				eS	Sg	16 50 14.1	-0.2
	baz=264						
TWD	Chiawan	0.94	230	eP	Pn	16 50 02.8	-0.1
	baz=233						
TWD				eS	Sn	16 50 16.7	+0.6
	baz=233						
NNSB	Datong	0.95	254	eP	Pb	16 50 01.5	-0.8
	baz=248						
NNSB				eS	Sg	16 50 14.4	-0.4
	baz=248						
NNSH	Datong	0.95	254	eP	Pb	16 50 01.4	-0.9
	baz=238						
NNSH				S	Sn	16 50 15.7	-0.7
	baz=238						
NNS	Nan Shan	0.95	255	eP	Pb	16 50 02.2	-0.2
	baz=249						
NNS				S	Sn	16 50 15.4	-1.1
	baz=249						
ETLH	Xiulin Townshi	0.95	239	eP	Pg	16 50 02.6	+0.1
	baz=244						
ETLH				S	Sn	16 50 16.3	-0.3
	baz=244						
TWS1	Kuangyinshan	0.96	295	eP	Pn	16 50 03.1	0.0
	baz=292						
TWS1				S	Sn	16 50 15.8	-0.8
	baz=292						
PCYT	Pengchaiyu	0.97	343	eP	Pb	16 50 02.6	0.0
	baz=359						
WLTB	Daxi	1.04	279	eP	Pg	16 50 04.5	+0.4
	baz=276						
WLTB				eS	Sn	16 50 18.7	+0.3
	baz=276						
ENLB	Shoufeng	1.06	222	eS	Sn	16 50 22.0	+2.9
	baz=225						
NCUH	Zhongli	1.12	284	eP	Pg	16 50 06.5	+0.9
	baz=281						
NCUH				eS	Sg	16 50 22.3	+1.9
	baz=281						
WHF	Hehuan Shan	1.16	242	eP	Pn	16 50 05.9	-0.3
	baz=236						
WHF				eS	Sg	16 50 21.7	+0.1
	baz=236						
TWT	Tachien	1.19	248	eP	Pg	16 50 07.3	+0.4
	baz=243						
TWT				eS	Sg	16 50 23.2	+0.8
	baz=243						
TDCB	Techi	1.20	249	P	Pb	16 50 06.7	+0.1
	baz=236						
TDCB				eS	Sg	16 50 22.9	0.0
	baz=236						
ESL	Shilin	1.23	225	eP	Pg	16 50 08.0	+0.2
	baz=206						
ESL				eS	Sg	16 50 25.9	+1.9
	baz=206						
LIOB	Emei	1.25	268	eP	Pg	16 50 08.2	+0.2
	baz=253						
LIOB				eS	Sg	16 50 24.2	-0.1
	baz=253						
NSTT	Nanjuang	1.26	267	eP	Pg	16 50 08.6	+0.3
	baz=252						
NSTT				S	Sg	16 50 25.0	+0.3
	baz=252						
CHGB	Renai	1.27	240	eP	Pg	16 50 08.2	-0.4
	baz=235						
CHGB				S	Sg	16 50 26.0	+0.9
	baz=235						
SBCB	Hsinchu	1.27	275	eP	Pg	16 50 08.3	-0.2
	baz=271						
SBCB				eS	Sg	16 50 25.8	+0.6
	baz=271						
IRIF	Iriomote-Funau	1.28	106	P	Pn	16 50 07.6	+0.2
IRIF				S	Sn	16 50 23.2	-1.2
HSN	Hsinchu	1.29	275	eS	Sg	16 50 24.7	-1.0
	baz=293						
OWD	Renai	1.33	236	eP	Pb	16 50 08.8	+0.1
	baz=241						
OWD				eS	Sg	16 50 27.9	+1.0
	baz=241						
EGFH	Guangfu	1.34	221	eP	Pg	16 50 09.5	-0.4
	baz=196						
EGFH				eS	Sg	16 50 28.3	+0.9
	baz=196						
WHP	Taichung City	1.37	253	eP	Pg	16 50 10.1	-0.4
	baz=248						
WHP				eS	Sg	16 50 28.2	-0.2
	baz=248						
NMLH	Miaoli	1.46	264	eP	Pg	16 50 12.4	+0.3
	baz=251						
NMLH				eS	Sg	16 50 32.1	+1.1
	baz=251						
VWDT	VWDT	1.47	231	eP	Pg	16 50 11.9	-0.4
	baz=233						
VWDT				eS	Sg	16 50 31.3	-0.1
	baz=233						
DPDB	Guoxing	1.48	244	eP	Pg	16 50 12.4	-0.2
	baz=239						
DPDB				eS	Sg	16 50 32.6	+0.7
	baz=239						
HGSD	Ruisui	1.48	216	eP	Pb	16 50 11.7	+0.3
	baz=195						
HGSD				eS	Sg	16 50 31.3	-0.6
	baz=195						
NSY	Sanyi	1.50	260	eP	Pg	16 50 13.5	+0.6
	baz=246						
NSY				eS	Sg	16 50 33.4	+0.9
	baz=246						
TWQ1	Liyutan	1.51	257	eP	Pg	16 50 13.5	+0.5
	baz=253						
TWQ1				eS	Sg	16 50 33.5	+0.8
	baz=253						
EHY	Hungye	1.53	219	eP	Pn	16 50 11.4	+0.4
	baz=213						
EHY				eS	Sg	16 50 33.5	+0.1
	baz=213						
JKRS	Kuro-shima	1.55	107	P	Pn	16 50 10.4	-0.8
JKRS				S	Sn	16 50 29.5	-1.6
SMLT	Sun Moon Lake	1.58	239	eP	Pg	16 50 14.3	0.0
	baz=234						
SMLT				eS	Sg	16 50 35.5	+0.6
	baz=234						
SSLB	Suanglung	1.59	236	eP	Pb	16 50 13.4	+0.3
	baz=239						
SSLB				eS	Sg	16 50 34.0	-1.2
	baz=239						
TYC	Yuchr	1.60	241	eP	Pg	16 50 14.3	-0.5
	baz=236						
TYC				eS	Sg	16 50 35.5	-0.1
	baz=236						
WDJ	Dajia District	1.62	258	eP	Pg	16 50 15.8	+0.5
	baz=246						
WDJ				eS	Sg	16 50 36.4	+0.1
	baz=246						
YULB	Yu-li	1.63	218	eP	Pn	16 50 12.5	+0.2
	baz=211						
YULB				eS	Sb	16 50 34.0	-0.4
	baz=211						
JIJ	Ishigaki jima	1.64	101	P	Pn	16 50 11.0	-1.4
TCU	Taichung	1.65	251	eP	Pg	16 50 15.9	+0.2
	baz=246						
TCU				eS	Sg	16 50 38.0	+0.8
	baz=246						
TWF1	Yuli	1.67	217	eP	Pn	16 50 13.5	+0.7
	baz=210						
TWF1				eS	Sb	16 50 34.4	-0.9
	baz=210						
WJS	Zhushan	1.74	240	eP	Pg	16 50 17.5	0.0
	baz=233						
WJS				eS	Sg	16 50 41.9	+1.7
	baz=233						
WNT	Mingjian	1.75	243	eP	Pg	16 50 17.2	-0.4
	baz=231						
WNT				eS	Sg	16 50 41.8	+1.3
	baz=231						
JISG	Ishigakijimahi	1.76	93	P	Pn	16 50 13.9	-0.1
JISG				S	Sb	16 50 39.6	+1.7
YUS	Yu-Shan	1.78	228	eS	Sb	16 50 39.1	+0.2
	baz=204						
FULB	Fuli	1.79	214	eP	Pn	16 50 14.8	+0.3
	baz=192						
FULB				eS	Sb	16 50 39.1	+0.1
	baz=192						
ALS	Alishan	1.86	231	eP	Pb	16 50 18.8	+0.8
	baz=233						
ALS				eS	Sg	16 50 43.7	-0.4
	baz=233						
CHN5	Tsauling	1.90	235	eP	Pb	16 50 19.2	+0.6
	baz=209						
CHN5				eS	Sg	16 50 44.3	-1.1
	baz=209						
WGK	Gukeng	1.94	239	eP	Pg	16 50 20.3	-1.1
	baz=231						
WDLH	Douliu	1.96	240	eP	Pb	16 50 20.1	+0.6
	baz=253						
WDLH				eS	Sg	16 50 47.0	-0.1
	baz=253						
CHN4	Tsaushan	2.12	231	eP	Pb	16 50 22.6	+0.5
	baz=206						
CHN4				eS	Sg	16 50 51.2	-0.8
	baz=206						
TPUB	Ta-pu	2.12	229	eP	Pb	16 50 22.3	0.0
	baz=205						
TPUB				eS	Sg	16 50 50.0	-2.3
	baz=205						
WTP	Ta-pu	2.17	229	eP	Pb	16 50 23.2	+0.1
	baz=204						
WTP				eS	Sg	16 50 51.5	-2.3
	baz=204						
TWGBT	Beinan	2.22	213	eS	Sn	16 50 48.6	+1.0
	baz=207						
SNST	Tainan City	2.27	230	eP	Pb	16 50 24.7	0.0
	baz=205						
SNST				eS	Sb	16 50 54.2	+1.6
	baz=205						
CHN1	Nanshi	2.27	229	eP	Pb	16 50 24.7	-0.1
	baz=204						
CHN1				eS	Sg	16 50 54.4	-2.6
	baz=204						
SGST	Jiashian	2.30	226	eP	Pb	16 50 24.8	-0.6
	baz=203						
SGST				eS	Sb	16 50 55.2	+1.6
	baz=203						
SLGT	Liugui	2.33	224	eP	Pb	16 50 24.6	-1.1
	baz=201						
SLGT				eS	Sb	16 50 54.1	-0.1
	baz=201						
PTTC	Pingtan	2.50	289	eP	Pn	16 50 25.7	+1.5
	baz=283						
SSD	Sandimen	2.52	220	eP	Pb	16 50 27.1	-1.9
	baz=198						
SSD				eS	Sb	16 50 59.6	-0.3
	baz=198						
MASBT	Mashibuluo	2.62	218	eP	Pn	16 50 28.1	+2.2
	baz=199						
MASBT				eS	Sb	16 51 03.1	+0.2
	baz=199						
VWUC	VWUC	2.68	277	eP	Pn	16 50 28.6	+1.9
	baz=271						
PHUB	P'eng-hu	2.83	246	eS	Sb	16 51 05.8	-2.9
	baz=242						
XPSS	Dashiqiu	2.98	319	eP	Pn	16 50 31.1	+0.3
	baz=316						
XPSS				eS	Sn	16 51 08.0	+1.7
	baz=316						
PTMZ	Houxiangcun	2.98	277	eS	Sn	16 51 05.7	-0.8
	baz=274						
LYJJ	Jianjiangzhen	3.00	308	eP	Pn	16 50 32.0	+0.9
	baz=304						
LYJJ				eS	Sn	16 51 05.0	-1.9
	baz=304						
MHZQ	Yeshan	3.34	295	eP	Pn	16 50 38.2	+2.5
	baz=292						
MHZQ				eS	Sn	16 51 18.0	+2.8
	baz=292						

*CRAAG **02** 16:55:18.8, 35.75N×1.81E, Ml3.3*
*MDD **02** 16:55:20.1±1.5, 35.71N×1.83E, h5km±7km, mb4.0/6, Error ellipse: s-maj=13.4km s-min=9.0km az=106.0, PRXIMO*
ISC 02 16:55:20.7±1.1, **35.76N**±0.03×**1.77E**±0.05, **h16**km, **n30**, σ1.48/49, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ECHA	Ech Chlef	0.51	320	P	Pg	16 55 30.6	-0.2
ECHF	Ech Chlef	0.53	319	P	Pg	16 55 30.6	-0.6
ETRT	Tiaret	0.53	227	P	Pg	16 55 30.0	-1.3
ETRT	Tiaret	0.53	227	P	Pg	16 55 30.0	-1.3
EBNR	Beni Rached	0.57	340	P	Pg	16 55 31.9	0.0
EANR	'Ain N'Sour	0.58	289	P	Pg	16 55 31.9	-0.2
EANR	'Ain N'Sour	0.58	289	P	Pg	16 55 31.9	-0.2
OKGL	Djebel Kef Gue	0.96	287	P	Pb	16 55 39.0	+0.1
	109nm,0.1s,SNR=7.9						
OKGL				S	Sn	16 55 53.0	+0.2
	669nm,0.3s,SNR=7.9						
ADJB	Djebel Djouab	1.41	73	P	Pb	16 55 46.8	+0.2
EMUR	La Murta	3.19	312	P	Pn	16 56 10.1	-0.1
	0.8nm,0.2s,SNR=4.9						
EMUR				S	Sn	16 56 47.1	-0.8
	3.6nm,0.3s,SNR=7.9						
EIBI	Ibiza	3.28	354	P	Pn	16 56 12.3	+0.9
	3.6nm,0.2s,SNR=7.9						
EIBI				S	Sn	16 56 47.9	-2.2
	6.7nm,0.2s,SNR=7.9						
EBEN2	Beniarda presa	3.31	332	S	Sn	16 56 51.2	+0.4
	15nm,0.2s,SNR=4.0						
ENIJ	Nijar	3.43	292	P	Pn	16 56 13.7	+0.2
	2.6nm,0.4s,SNR=7.9						
ENIJ				S	Sn	16 56 52.8	-1.1
	5.8nm,0.3s,SNR=7.9						
AFON	Font Roja	3.44	328	P	Pn	16 56 15.4	+1.7
	0.5nm,0.1s,SNR=7.9						
AFON				S	Sn	16 56 54.7	+0.6
	5.8nm,0.5s,SNR=7.9						
TAF	Taforalt	3.55	256	P	Pn	16 56 15.0	-0.2
TAF				S	Sn	16 56 57.6	+0.7
JBK	JBK	3.83	250	P	Pn	16 56 21.0	+1.8
JBK				S	Sn	16 57 08.0	+3.9
ETOB	Tobarra	3.92	318	P	Pn	16 56 21.4	+1.2
	0.8nm,0.1s,SNR=11						
ETOB				S	Sn	16 57 05.2	-0.7
	0.1nm,0.1s,SNR=5.2						
EBER	Berja	3.93	288	P	Pn	16 56 20.3	-0.2
	3.5nm,0.1s,SNR=23						
EBER				S	Sn	16 57 05.4	-1.0
	3.0nm,0.2s,SNR=7.9						
TDRA	Tendrara	4.15	230	P	Pn	16 56 23.9	+0.4
TDRA				S	Sn	16 57 15.6	+3.7
SESP	Santiago Espad	4.19	306	P	Pn	16 56 25.9	+1.9
	3.0nm,0.2s,SNR=7.9						
SESP				S	Sn	16 57 12.6	-0.1
	4.2nm,0.2s,SNR=7.9						
SESP	Santiago Espad	4.19	306	P	Pn	16 56 24.2	+0.2
SESP				S	Sn	16 57 13.6	+1.0
EQES	Quesada	4.39	299	P	Pn	16 56 28.5	+1.8
	3.4nm,0.1s,SNR=7.9						
EQES				S	Sn	16 57 19.0	+1.3
	3.1nm,0.2s,SNR=7.9						
FIGM	Figuig	4.41	216	P	Pn	16 56 25.9	-1.2
FIGM				S	Sn	16 57 19.1	+1.0
AKLM	AKL	4.78	257	P	Pn	16 56 33.3	+1.2
AKLM				S	Sn	16 57 29.1	+1.8
EMOS	Mosqueruela	4.93	340	P	Pn	16 56 35.9	+1.7
	0.8nm,0.1s,SNR=13						
EMOS				S	Sn	16 57 28.7	-2.2
	2.7nm,0.3s,SNR=7.9						
EGOR	Sierra Gorda,	4.93	288	P	Pn	16 56 36.3	+2.0
	0.7nm,0.2s,SNR=7.9						
EMIJ	Mijas	5.36	281	P	Pn	16 56 38.2	-1.8
	1.8nm,0.2s,SNR=7.9						
EMIJ				S	Sn	16 57 37.6	-3.8
	0.9nm,0.3s,SNR=7.9						
MDT	Midelt	6.04	243	P	Pn	16 56 48.5	-1.0
MDT				S	Sn	16 57 57.3	-1.1
PAB	San Pablo	6.15	310	P	Pn	16 56 50.9	-0.1
	0.4nm,0.2s,SNR=7.9						
ECAB	El Cabril	6.21	294	P	Pn	16 56 51.0	-0.7
	0.3nm,0.2s,SNR=7.9						
ECAB				S	Sn	16 58 01.8	-0.5
	0.6nm,0.3s,SNR=7.9						

*NEIC **02** 16:57:34.4±1.3, 4.70N±0.07×128.68E±0.10, h46km±11km, mb4.7/23, Error ellipse: s-maj=17.0km s-min=5.2km az=55.0*
*BJI **02** 16:57:36.3±0.0, 4.95N×128.39E, h46km, mB5.1/10, mb4.6/11, Ms4.9/3*
*DJA **02** 16:57:41.0±3.3, 4°N±10°×12°9E±°, h30km±41km, M4.7/9, mb4.7/7, mB5.3/6, MLv4.6/9, Mw(mB)4.7/6*
*IDC **02** 16:57:43.0±4.1, 3.71N×128.27E, h45km±43km, mb3.9/7, mb1 4.1/8, mb1mx3.6/36, mbtmp4.2/8, ML4.2/1, Error ellipse: s-maj=60.0km s-min=17.3km az=67.0*
*MAN **02** 16:57:43.3, 4.16N×128.61E, h31km, mb4.6, ML3.5, MS3.4*
ISC 02 16:57:41.7±0.7, **3.87N**±0.06×**128.58E**±0.09, **h46**km, **n69**, σ2.41/57, **mb4.6**/24, **1D, North of Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	3.31	201	P	Pn	16 58 33.6	+2.5
TNTI	Ternate	3.31	201		Pn	16 58 33.2	+2.2
DDMP	Don Marcelino,	3.62	308	eP	Pn	16 58 36.0	+0.8
DDMP				eS	Sn	16 59 17.3	+0.6
MATI	Mati	3.83	323	eP	Pn	16 58 38.0	-0.2
MATI				eS	Sn	16 59 21.0	-1.0
GSPH	General Santos	4.23	301	eP	Sn	16 59 32.5	+0.4
DAV	Davao City (W)	4.36	317	S	Sn	16 59 35.4	+0.3
	49nm,0.3s,baz=255,slow=22,SNR=8.4						
LBMI	Labuha	4.61	194	P	Pn	16 58 51.4	+2.5
KCP	Kidapawan	4.67	312	⇓eP	Pn	16 58 53.8	+4.1
KCP				iS	Sn	16 59 49.4	+6.8
SKMP	Bagumbayan, Su	4.80	303	eP	Pn	16 58 53.7	+2.1
SKMP				eS	Sn	16 59 47.4	+1.4
BUKP	Musuan	5.30	319	eP	Pn	16 58 59.9	+1.5
BUKP				eS	Sn	16 59 58.6	+0.4
SWI	Sorong	5.41	150	P	Pn	16 59 01.7	+1.7
	0.3nm44nm,0.8s						
SIJI	Sorong	5.42	150	P	Pn	16 59 02.2	+2.1
	6.8nm,0.3s,baz=117,slow=6.9,SNR=36						
SIJI				S	Sn	17 00 00.7	-0.6
	7.0nm,0.3s,baz=353,slow=23,SNR=19						
CTBH	Cotabato--PC H	5.45	308	eP	Pn	16 59 03.2	+2.8
CTBH				iS	Sn	17 00 00.6	-1.2

KMSI Cibinong 5.64 235 P Pn 16 59 05.9 +2.8
1.0nm2µm164nm,0.5s
BUTP Butuan 5.85 330 eP Pn 16 59 07.2 +1.2
MRSI Marisa 7.44 243 P Pn 16 59 30.1 +2.3
2.7nm7µm747nm,0.6s
LUWI Luwuk 7.58 230 Pn Pn 16 59 33.0 +3.2
FAKI Fak Fak 7.68 151 Pn Pn 16 59 33.1 +2.0
APSI Ampana 8.40 236 P Pn 16 59 43.7 +2.8
35nm,0.7s
MPSI Mapaga 9.36 248 P Pn 16 59 56.1 +2.0
686nm28nm,0.8s
SBUM Sibu 16.39 266 Pn Pn 17 01 22.7 -6.1
MTN Manton Dam 16.80 171 P P 17 01 35.9 +0.4
KNRA Kununurra 19.43 179 P P 17 02 05.4 +1.1
FITZ Fitzroy Crossi 22.02 187 P P 17 02 31.3 -1.2
2.6nm,0.5s,baz=12,slow=7.5,SNR=4.7
FITZ Fitzroy Crossi 22.02 187 P P 17 02 31.2 -1.2
WB0 Warramunga Arr 24.18 167 P P 17 02 54.1 +0.1
WRAB Tennant Creek 24.33 167 P P 17 02 54.8 -0.5
WRAB IAmb IAmb 17 03 28.9
comp=Z,19nm,0.7s
WRA Warramunga Arr 24.34 167 P P 17 02 55.9 +0.5
comp=Z,18nm,0.7s,baz=345,slow=10,SNR=29
WRA Warramunga Arr 24.34 167 P P 17 02 54.8 -0.6
WB2 Warramunga Arr 24.34 167 P P 17 02 55.5 +0.1
WB2 IAmb IAmb 17 02 56.8
comp=Z,18nm,0.8s
WR0 Warramunga Arr 24.40 166 P P 17 02 56.1 +0.1
WR0 IAmb IAmb 17 02 57.5
comp=Z,12nm,0.7s
PSAC2 Pilbara Seismi 26.67 198 P P 17 03 16.5 -0.1
PSAC2 IAmb IAmb 17 03 39.4
comp=Z,38nm,1.4s
PSAC1 Pilbara Seismi 26.67 198 P P 17 03 16.5 -0.1
PSAB3 Pilbara Seismi 26.71 198 P P 17 03 17.0 +0.1
PSAB3 IAmb IAmb 17 04 02.1
comp=Z,24nm,1.1s
PSAD3 Pilbara Seismi 26.78 198 P P 17 03 18.3 +0.7
PSAD3 IAmb IAmb 17 03 38.0
comp=Z,43nm,1.4s
AS31 Alice Springs 27.86 170 P P 17 03 27.3 0.0
ASAR Alice Springs 27.86 170 P P 17 03 27.6 +0.4
comp=Z,1.0nm,0.5s,baz=354,slow=8.1,SNR=59
ASAR Alice Springs 27.86 170 P P 17 03 26.8 -0.5
NJ2 Nanjing 29.48 343 eP P 17 03 28.8 -13
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
SLVN Son La 29.59 308 P P 17 03 31.6 -11
PBKT Sadao Pong 29.90 297 P P 17 03 35.4 -10
ENH Enshi 31.86 328 P P 17 03 48.1 -15
ENH IAmb IAmb 17 04 12.6
comp=Z,22nm,2.0s
CMAR Chiang Mai Arr 32.41 299 P P 17 04 08.0 +0.5
comp=Z,0.4nm,0.6s,baz=116,slow=6.1,SNR=3.8
FORT Forrest 34.46 181 P P 17 04 24.9 -0.3
XAN Xi'an 35.15 331 P P 17 04 44.3 +13
XAN pP pwP 17 04 50.4 +0.6
CD2 Chengdu 35.65 322 P P 17 04 23.1 -12
CD2 pmax pmax
comp=Z,10.0nm,1.2s
BBOO Buckleboo 37.17 170 P P 17 04 48.4 0.0
STKA Stephens Creek 37.65 162 P P 17 04 53.0 +0.5
comp=Z,2.0nm,0.4s,baz=347,slow=7.5,SNR=22
STKA Stephens Creek 37.65 162 P P 17 04 52.8 +0.3
STKA IAmb IAmb 17 05 17.2
comp=Z,5.4nm,1.8s
BJT Baijiatuau 37.69 344 P P 17 04 40.2 -13
BJT IAmb IAmb 17 04 43.2
comp=Z,27nm,1.9s
BJI Beijing 37.71 344 P P 17 04 40.0 -13
BJI pmax pmax
comp=Z,6.0nm,2.3s
HHC Hu-ho-hao-te 39.87 340 eP P 17 04 59.2 -12
HHC pmax pmax
comp=Z,86nm,5.3s
H11S3 WAKE ISLAND Hy 39.99 66 T T 17 48 27.2
baz=253,slow=75,SNR=18
H11S1 WAKE ISLAND Hy 40.00 66 T T 17 48 25.4
baz=253,slow=75,SNR=20
H11S2 WAKE ISLAND Hy 40.00 66 T T 17 48 25.5
baz=253,slow=75,SNR=30
USRK Ussuriysk Ar. 40.27 4 P P 17 05 00.8 -13
H11N1 WAKE ISLAND Hy 40.53 64 T T 17 49 28.1
baz=242
H11N2 WAKE ISLAND Hy 40.54 64 T T 17 49 27.8
baz=242
H11N3 WAKE ISLAND Hy 40.55 64 T T 17 49 28.8
baz=242
ARMA Armidale 40.60 149 P P 17 05 13.9 -3.4
ARMA IAmb IAmb 17 06 19.5
comp=Z,37nm,1.6s
GTA Gaotai 43.95 328 eP P 17 05 51.3 +6.8
GTA pP pP 17 05 57.1 +1.7
GTA sP sP 17 05 59.6 -0.5
GTA Gaotai 43.95 328 eP P 17 05 31.5 -13
GTA pP pP 17 05 46.3 -9.1
GTA sP sP 17 05 51.3 -8.8
ULN Ulaanbaatar 47.58 340 P P 17 05 58.9 -14
ULN IAmb IAmb 17 06 31.6
comp=Z,14nm,1.9s
SONM Songino Array 47.77 340 P P 17 06 15.1 +0.6
comp=Z,0.2nm,0.6s,baz=150,slow=6.0,SNR=2.4
WMQ Urumqi 53.68 324 eP P 17 06 48.9 -10
WMQ pmax pmax
comp=Z,8.0nm,0.8s
WMQ pmax pmax
comp=Z,110nm,4.7s
WMQ LR LR
comp=Z,510nm,29.2s
WMQ LR LR
comp=Z,1µm,29.3s
MKAR Makanchi Array 58.50 324 P P 17 07 33.7 +0.3
comp=Z,1.2nm,0.4s,baz=114,slow=8.0,SNR=57
KSH Kashi 59.25 314 P P 17 07 32.3 -6.6
KSH pP pP 17 07 43.7 -6.3
KSH PcP PcP 17 08 19.9 -6.9
KSH PP PP 17 09 44.2 -6.0
KSH S S 17 15 32.7 -11
KSH sS pS 17 15 53.5 -4.6
KSH pmax pmax
comp=Z,4.0nm,0.5s
KSH pmax pmax
comp=Z,180nm,8.3s
KSH LR LR
comp=Z,58nm,6.1s
KSH LR LR
comp=Z,120nm,5.6s
ZALV Zalesovo Beam 61.31 332 P P 17 07 56.4 +3.9
comp=Z,0.3nm,0.4s,baz=126,slow=6.6,SNR=2.3
ARCES ARCESS Array B 90.95 340 P P 17 10 44.0 +3.5
comp=Z,5.6nm,1.1s,baz=68,slow=7.2,SNR=3.4

IDC 02 17:00:11.4±1.9,56.°49S×26.°41W,h0km,mb4.0/2, mb1 4.1/2,mb1mx3.7/16,mbtmp4.0/2,Error ellipse: s-maj=85.5km s-min=47.2km az=8.0
NEIC 02 17:00:13.3±1.7,56.°3S±0.°1×26.°5W±0.°2,h10km±1km, mb4.6/6,Error ellipse: s-maj=21.7km s-min=13.3km az=211.0
ISC 02 17:00:13.2±0.8,56.°2S±0.°2×26.°1W±0.°1,h10km,n17, σ1°29/11,mb4.1/4,South Sandwich Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HOPE Hope Point 6.26 284 Pn Pn 17 01 47.5 +2.0
SNAA Sanae 18.33 157 Pn 17 04 27.5 +0.2
PMSA Palmer Station 20.26 230 P P 17 04 40.2 -8.1
PMSA IAmb IAmb 17 04 51.6
comp=Z,72nm,1.4s
QSPA South Pole Qui 34.03 180 P P 17 06 57.3 +0.3
QSPA IAmb IAmb 17 07 16.2
comp=Z,1.7nm,0.7s
SUR Sutherland 40.09 74 P P 17 07 48.8 -0.1
SUR IAmb IAmb 17 08 02.5
comp=Z,22nm,1.2s
GO04 Tololo Observa 40.67 291 P P 17 07 51.6 -2.2
H10S2 ASCENSION HYDR47.99 15 T T 18 01 31.0
baz=189,slow=74,SNR=8.9
H10S3 ASCENSION HYDR48.00 15 T T 18 01 31.2
baz=31,slow=74,SNR=7.4
H10N1 ASCENSION HYDR49.11 15 T T 18 02 55.1
baz=196
H10N3 ASCENSION HYDR49.11 15 T T 18 02 55.0
baz=196
H10N2 ASCENSION HYDR49.13 15 T T 18 02 57.4
baz=196
LPAZ La Paz 50.99 304 P P 17 09 15.5 -0.2
comp=Z,1.3nm,0.5s,baz=146,slow=7.3,SNR=4.9
LPAZ La Paz 50.99 304 P P 17 09 14.7 -1.0
TORD Torodi Ar. Bea 72.91 28 P P 17 11 43.9 +1.6
comp=Z,0.5nm,0.5s,baz=201,slow=4.5,SNR=4.1
YKA Yellowknife Ar 136.72 317 PKP PKPdf 17 19 33.4 -0.7
comp=Z,0.1nm,0.5s,baz=131,slow=3.3,SNR=4.4
SONM Songino Array 150.12 86 PKPbc PKiKP 17 20 03.5 -0.6
comp=Z,0.7nm,0.9s,baz=216,slow=2.4,SNR=5.2
ILAR Eielson Array 150.70 311 PKPbc PKPbc 17 20 03.6 -0.4
comp=Z,0.7nm,0.7s,baz=145,slow=4.4,SNR=8.4

IDC 02 17:20:16.2±1.8,32.°65S×178.°52W,h0km,mb3.8/3, mb1 4.1/4,mb1mx3.8/33,mbtmp3.8/4,ML3.3/1,Error ellipse: s-maj=54.6km s-min=30.0km az=136.0,South of Kermadec Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
URZ Urewera 6.64 211 Pn Pn 17 21 54.7 -0.4
0.6nm,0.3s,baz=41,slow=17,SNR=2.6
URZ Sn Sn 17 23 10.3 -1.0
2.5nm,0.3s,baz=228,slow=23,SNR=8.8
ASAR Alice Springs 42.60 270 P P 17 28 14.8 +0.4
0.5nm,0.6s,baz=106,slow=7.9,SNR=12
WRA Warramunga Arr 43.79 275 P P 17 28 24.0 0.0
0.5nm,0.3s,baz=112,slow=8.0,SNR=5.9
NVAR Mina Array Bea 90.18 43 P P 17 33 19.5 +0.8
1.2nm,1.2s,baz=208,slow=5.1,SNR=2.4
FINES FINESS Array B 147.08 338 PKPbc PKPdf 17 39 58.1 -0.1
2.9nm,1.0s,baz=29,slow=3.2,SNR=5.1

KRSC 02 17:25:36.4±0.9,50.°97N×158.°29E,h40km±14km,ML4.1
IDC 02 17:25:41.4±2.1,51.°58N×156.°39E,h0km,mb3.3/6, mb1 3.6/6,mb1mx3.3/52,mbtmp3.3/6,Error ellipse: s-maj=54.1km s-min=21.0km az=149.0
ISC 02 17:25:35.4±2.2,51.°07N±0.°08×158.°09E±0.°07,h9km±11km, n34,σ1°60/38,mb3.3/6,Near east coast of Kamchatka Peninsula

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KDTR Khodutka, Kamc 0.74 359 eP Pn 17 25 53.2 +1.2
KDTR eS Sn 17 26 04.0 +0.6
PAU Pauzhetka 0.90 297 eP Pn 17 25 56.2 +2.1
PAU eS Sn 17 26 09.6 +2.4
SKR Severo-Kuril's 1.31 254 eP Pn 17 26 01.1 +1.4
SKR eS Sn 17 26 18.7 +1.4
ASAK Asacha 1.32 355 eP Pg 17 26 01.7 +0.9
RUS Russkaya 1.40 11 eP Pn 17 26 01.4 +0.5
RUS eS Sg 17 26 19.6 -0.6
MTVR Mutnovka 1.42 2 eP Pg 17 26 02.9 +0.3
GRL Gorelyy 1.49 360 eP Pg 17 26 04.3 +0.4
GRL eS Sg 17 26 23.7 +0.5
KRMR Karymshinskiy 1.77 1 eP Pb 17 26 07.9 0.0
KRMR eS Sg 17 26 31.0 -1.2
APC Apacha 1.95 343 eP Pb 17 26 11.2 +0.2
APC eS Sg 17 26 36.9 -1.1
PET Petropavlovsk 1.99 10 eP Pn 17 26 10.6 +1.5
PET eS Sb 17 26 35.4 -1.2
DALK Dalny 2.01 11 eP Pn 17 26 10.9 +1.5
DALK eS Sn 17 26 34.8 +0.2
PETK Petropavlovsk- 2.06 353 Pn Pb 17 26 12.6 -0.3
8.6nm,0.3s,baz=155,slow=17,SNR=236
PETK Sn Sg 17 26 40.5 -1.1
5.8nm,0.3s,baz=172,slow=24,SNR=5.6
PETK LR LR 17 27 03.0
comp=Z,69nm,21.1s,baz=231,slow=47
UGLR Uglovaya 2.19 12 eP Pn 17 26 14.0 +2.0
AVH Avacha 2.24 10 eP Pb 17 26 15.0 -1.0
SMAR Somma 2.24 11 eP Pb 17 26 15.9 -0.2
KOK Koryaka 2.25 8 eP Pb 17 26 15.6 -0.7
KRER Koryakskii 2.28 10 eP Pb 17 26 16.0 -0.7
KRER eS Sb 17 26 45.0 0.0
KRX Arik 2.32 8 eP Pb 17 26 16.2 -1.2
SPN Mys Shipunski 2.36 30 eP Pn 17 26 15.9 +1.7
SPN eS Sn 17 26 45.0 +1.8
MKZ Mys Kozlova 4.13 31 eP Pn 17 26 40.8 +2.3
KZV Kizimen 4.27 17 eP Pn 17 26 44.7 +4.2
TUMD Tumrok D 4.37 18 eP Pn 17 26 45.7 +3.8
TIXI Tiksi 24.46 338 P P 17 30 52.6 -1.4
0.8nm,0.4s,baz=137,slow=7.0,SNR=5.0
ILAR Eielson Array 31.13 43 P P 17 32 05.2 +11
0.4nm,0.8s,baz=253,slow=9.3,SNR=2.2
H11N2 WAKE ISLAND Hy 32.03 164 T T 18 05 54.3
baz=350,slow=76,SNR=274
H11N3 WAKE ISLAND Hy 32.05 164 T T 18 05 55.3
baz=350,slow=76,SNR=202
H11N1 WAKE ISLAND Hy 32.05 164 T T 18 05 57.4
baz=350,slow=76,SNR=183
H11S1 WAKE ISLAND Hy 33.20 165 T T 18 07 23.2
baz=350,slow=76,SNR=70
SONM Songino Array 33.20 285 P P 17 32 11.3 -1.0
0.1nm,0.5s,baz=81,slow=8.9,SNR=1.4
H11S3 WAKE ISLAND Hy 33.21 165 T T 18 07 18.7
baz=350,slow=76,SNR=77
H11S2 WAKE ISLAND Hy 33.22 165 T T 18 07 19.0
baz=350,slow=76,SNR=40
YKA Yellowknife Ar 45.50 41 P P 17 34 03.8 +9.4
0.2nm,0.7s,baz=293,slow=7.4,SNR=3.7
MKAR Makanchi Array 47.93 296 P P 17 34 11.4 -2.4
0.1nm,0.4s,baz=64,slow=7.5,SNR=8.7
CMAR Chiang Mai Arr 56.55 258 P P 17 35 18.4 +0.3
0.7nm,0.6s,baz=30,slow=8.2,SNR=7.3

IDC 02 17:36:16.9±1.2,41.°62N×48.°21E,h0km,mb3.4/4, mb1 3.4/8,mb1mx3.2/35,mbtmp3.3/8,ML2.8/4,Error ellipse: s-maj=19.3km s-min=11.3km az=163.0
DRS 02 17:36:21.1±0.0,41.°23N×48.°62E,h22km
MOS 02 17:36:24.0±0.0,41.°54N×48.°21E,h38km,MPVA4.1
ISC 02 17:36:21.3±0.8,41.°42N±0.°04×48.°39E±0.°05,h52km±8km, n60,σ2°70/83,9C-2D,Eastern Caucasus

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSMR Kasumkent 0.27 314 i Pg Pn 17 36 31.0 +0.6
KSMR i Sg Sn 17 36 38.0 +1.1
KSMR Kasumkent 0.27 314 i PG Pn 17 36 31.0 +0.6
KSMR i S Sn 17 36 38.0 +1.1
KSMR pmax pmax
comp=Z,402nm,0.2s
AKT Akhty 0.50 278 ePg Pn 17 36 34.4 +1.6
AKT eSg Sn 17 36 42.0 +1.0
AKT Akhty 0.50 278⇓iPG Pn 17 36 34.3 +1.6
AKT eS Sn 17 36 42.0 +1.0
AKT pmax pmax
comp=Z,347nm,0.2s
DRN Derbent 0.61 356 i Pg Pn 17 36 35.1 +1.1
DRN eSg Sn 17 36 44.3 +1.1
DRN Derbent 0.61 356⇑iPG Pn 17 36 35.1 +1.1
DRN e 17 36 41.0
DRN pmax pmax
comp=Z,1µm,0.4s
DRN smax smax
comp=N,3µm,0.7s
SEKA Sheki 0.92 257 PG Pn 17 36 40.3 +2.3
URKR Urkarakh 0.94 323 i Pg Pn 17 36 40.5 +2.2
URKR eSg Sn 17 36 52.4 +1.5
URKR Urkarakh 0.94 323⇓ePG Pn 17 36 39.5 +1.1
MNGR Mingechevir, A 1.18 237 PG Pn 17 36 43.9 +2.5
SGKR Sergokala 1.18 333 i Pg Pn 17 36 43.0 +1.5
SGKR i Sg Sn 17 36 58.0 +1.5
SGKR Sergokala 1.18 333 i PG Pn 17 36 43.0 +1.5
SGKR i S Sn 17 36 58.0 +1.5
KMKR Kumukh 1.20 307 ePg Pn 17 36 44.0 +2.0
KMKR eSg Sn 17 36 59.5 +2.2
KMKR Kumukh 1.20 307 ePG Pn 17 36 44.0 +2.0
KMKR pmax pmax
comp=Z,35nm,0.2s
GNBR Gunib 1.44 313 ePg Pn 17 36 47.3 +2.2
GNBR eSg Sn 17 37 04.7 +1.8
GNBR Gunib 1.44 313⇑iPG Pn 17 36 47.3 +2.2
GNBR pmax pmax
comp=Z,108nm,0.5s
ARKR Arakani 1.58 319 ePg Pn 17 36 50.2 +3.3
ARKR Arakani 1.58 319 ePN Pn 17 36 50.2 +3.3
ARKR eS Sn 17 37 12.0 +5.8
ARKR pmax pmax
comp=Z,50nm,0.2s
MAK Makhachkala 1.68 337 i Pg Pn 17 36 51.3 +3.1
MAK eSg Sn 17 37 12.0 +3.4
MAK Makhachkala 1.68 337 ePN Pn 17 36 51.0 +2.8
MAK pmax pmax
comp=Z,134nm,0.4s
XNZR Khunzakh 1.69 312 ePg Pn 17 36 53.3 +4.8
XNZR Khunzakh 1.69 312 ePN Pn 17 36 53.3 +4.8
BUJR Buynaksk 1.70 326 ePg Pn 17 36 51.9 +3.3
BUJR eSg Sn 17 37 12.0 +2.8
BUJR Buynaksk 1.70 326 ePN Pn 17 36 51.8 +3.3
GANJ Ganja 1.74 244 PN Pn 17 36 50.9 +1.8
KRNR Karanay 1.79 323 ePg Pn 17 36 52.5 +2.6
KRNR eSg Sn 17 37 14.0 +2.5
KRNR Karanay 1.79 323 ePN Pn 17 36 52.6 +2.6
KRNR pmax pmax
comp=Z,26nm,0.2s
KANR Karaman 1.90 340 ePg Pn 17 36 55.6 +4.4
KANR eSg Sn 17 37 18.4 +4.4
DBC Dubki 1.98 325 ePg Pn 17 36 55.2 +2.8
DBC eSg Sn 17 37 18.6 +2.6
DBC Dubki 1.98 325⇑ePN Pn 17 36 56.6 +4.2
BTLR Botlikh 2.04 308 ePg Pn 17 36 56.1 +2.9
BTLR Botlikh 2.04 308⇑ePN Pn 17 36 58.2 +5.0
BTLR pmax pmax
comp=Z,38nm,0.6s
DLMR Dylym 2.11 322 ePg Pn 17 36 58.0 +3.9
DLMR eSg Sn 17 37 22.0 +2.9
DLMR Dylym 2.11 322 ePN Pn 17 36 58.0 +3.9
DLMR pmax pmax
comp=Z,55nm,0.3s
GROC Groznyy 2.62 314 ePn Pn 17 37 04.3 +3.1
GROC eSn Sn 17 37 34.3 +2.5
GROC Groznyy 2.62 314 ePN Pn 17 37 03.7 +2.5
LKRN Lenkeran, Azer 2.72 174 PN Pn 17 37 05.9 +3.4
GNI Garni 3.04 247 Pg Pn 17 37 14.9 +7.9
comp=Z,1.3nm,0.3s,baz=90,slow=5.1,SNR=1.9
GNI Lg Lg 17 37 54.2
comp=Z,2.5nm,0.3s,baz=80,slow=19,SNR=3.6
GUDG Gudauri 3.10 291 ePn Pn 17 37 09.4 +1.5
GUDG eSn Sn 17 37 45.0 +1.2
ZEI Tsey 3.61 294 ePn Pn 17 37 17.2 +2.4
ONI Oni 3.86 289 ePn Pn 17 37 21.9 +3.7
ONI eSn Sn 17 38 01.6 -0.7
NEY Neytrino 4.58 295 ePn Pn 17 37 30.1 +1.9
NEY eSn Sn 17 38 19.9 -0.2
KBZ Khabaz 4.67 302 Pn Pn 17 37 29.0 -0.2
comp=Z,0.2nm,0.3s,baz=194,slow=2.9,SNR=1.8
KBZ Sn Sn 17 38 18.3 -3.6
comp=Z,0.7nm,0.3s,baz=326,slow=18,SNR=2.3
KBZ Khabaz 4.67 302 i PN Pn 17 37 28.9 -0.2
SHA1 Shidzhatmaz 4.83 301 ePn Pn 17 37 32.2 +0.6
SHA1 eSn Sn 17 38 25.1 -1.2
SHA1 Shidzhatmaz 4.83 301 i PN Pn 17 37 31.6 0.0
KVAR Kislovodsk Arr 4.90 303 Pn Pn 17 37 30.8 -1.8
baz=106,slow=19,SNR=2.0
KVAR Sn Sn 17 38 23.4 -4.6
baz=216,slow=14,SNR=2.1
KIV Kislovodsk 4.91 303 ePN Pn 17 37 32.7 +0.1
KIV pmax pmax
comp=Z,14nm,1.0s
GOF Gofitskoye 5.34 315⇑eP Pn 17 37 41.2 +2.8
GEYT Alibeck 8.27 112 Pn Pn 17 38 19.0 +0.4
comp=Z,0.1nm,0.3s,baz=305,slow=15,SNR=2.4
GEYT Sn Sn 17 39 46.5 -4.1
comp=Z,0.2nm,0.3s,baz=298,slow=16,SNR=2.0
AKTO Aktyubinsk 11.23 33 Pn Pn 17 38 57.0 -2.0
comp=Z,0.2nm,0.3s,baz=204,slow=12,SNR=1.8
AKTO Sn Sn 17 40 52.0 -11
comp=Z,0.1nm,0.3s,baz=252,slow=20,SNR=1.7
AKTO Aktyubinsk 11.23 33 ⇑Pn Pn 17 39 00.5 +1.5
comp=Z,2.1nm,0.8s
AKTO ⇑Sn Sn 17 40 55.0 -7.9
comp=Z,1.8nm,0.7s
AB31 Akbulak array 11.29 42 ⇑Pn Pn 17 39 03.3 +3.6
comp=Z,0.2nm,0.3s,baz=223,slow=12,SNR=8.5
AB31 ⇑Sn Sn 17 40 59.4 -4.9
comp=Z,0.4nm,0.5s,baz=231,slow=24,SNR=5.7
AKASG Malin Array Be 16.18 311 Pn Pn 17 40 03.6 -1.4
comp=Z,0.4nm,0.3s,baz=112,slow=12,SNR=2.6
ARU Arti 16.42 20 Pn Pn 17 40 05.0 -2.9
comp=Z,0.0nm,0.3s,baz=180,slow=15,SNR=2.3
KURBB Kurchatov Arra 22.73 56 P P 17 41 20.7 +2.0
comp=Z,0.1nm,0.3s,baz=259,slow=12,SNR=1.2
KURK Kurchatov 22.81 56 P P 17 41 20.7 +1.2
FINES FINESS Array B 24.18 334 P P 17 41 32.6 +0.2
comp=Z,2.3nm,0.9s,baz=138,slow=9.5,SNR=6.5
MKAR Makanchi Array 24.80 66 P P 17 41 39.9 +1.5
comp=Z,0.2nm,0.7s,baz=275,slow=8.3,SNR=2.8
HFS Hagfors 28.35 323 P P 17 42 09.4 -0.7
comp=Z,2.9nm,0.8s,baz=115,slow=10.0,SNR=7.5

IDC 02 17:38:10.3±1.4,25.°19S×116.°76W,h0km,mb4.0/6, mb1 4.3/6,mb1mx4.0/27,mbtmp4.0/6,MS4.0/19, Ms1 4.0/19,ms1mx3.9/32,Error ellipse: s-maj=45.6km s-min=37.8km az=39.0
GCMT 02 17:38:19.0±0.3,24.°78S±0.°03×116.°04W±0.°02,h19km±1km, MW4.9/64,Moment Tensor Solution. s14,c17; s64,c83; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.93±.18; Mθθ-1.70±.12; Mφφ2.63±.15; Mrθ-1.20±.32; Mrφ1.13±.12; Mθφ-0.51±.26; Best double couple: Mo2.86100×10^16 NP1:φs152.00000°,δ58.00000°,λ-164.00000°. NP2: φs54.00000°,δ76.00000°,λ-33.00000°. Principal axes: T 3.0690, Plg12.0000°, Azm106.0000°; N -0.4160, Plg55.0000°, Azm213.0000°; P -2.6530, Plg33.0000°, Azm9.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function
ISC 02 17:38:12.7±1.3,25.°1S±0.°3×116.°5W±0.°2,h10km,n33, σ1°46/12,mb4.2/6,MS4.1/21,Southern East Pacific Rise

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RPN Rapa Nui 6.75 109 LR LR 17 41 55.1
comp=Z,3µm,18.2s,baz=290,slow=32
TAOE Nuku Hiva Isla 27.71 301 eLR LR 17 51 02.7
comp=Z,1µm,25.6s
PPT2 Papeete2 31.65 277 eS S 17 49 47.4 +1.5
96nm,24.2s
PPT2 eLQ LQ 17 51 31.4
170nm,23.0s
PPT2 eLR LR 17 52 51.5
comp=Z,1µm,27.5s
PPT Papeete 31.66 277 LR LR 17 53 44.4
comp=Z,445nm,18.9s,baz=133,slow=30
PLCA Paso Flores 41.13 124 LR LR 17 58 45.0
comp=Z,318nm,21.8s,baz=297,slow=30
LPAZ La Paz 45.87 89 P P 17 46 38.3 +2.1
2.4nm,0.9s,baz=300,slow=6.1,SNR=7.0
LPAZ LR LR 18 01 12.8
comp=Z,180nm,18.9s,baz=279,slow=30
JTS Las Juntas de 46.69 45 LR LR 18 00 37.3
comp=Z,71nm,19.3s,baz=170,slow=29
CMIG Matias Romero 46.89 29 LR LR 18 02 09.6
comp=Z,144nm,19.0s,baz=194,slow=30
LPIG La Paz 49.24 7 LR LR 18 02 51.1
comp=Z,160nm,19.6s,baz=180,slow=30
ROSC El Rosal 50.61 60 LR LR 18 05 25.9
comp=Z,146nm,18.2s,baz=136,slow=32
CPUP Villa Florida 52.90 105 LR LR 18 05 38.8
comp=Z,218nm,21.6s,baz=221,slow=31
TXAR Lajitas Array 55.48 14 P P 17 47 47.6 -0.2
0.4nm,0.7s,baz=205,slow=15,SNR=3.4
TXAR LR LR 18 07 05.9
comp=Z,62nm,18.1s,baz=0.0,slow=31
PFO Pinyon Flats O 58.36 0 LR LR 18 06 01.1
comp=Z,84nm,20.8s,baz=188,slow=29
NVAR Mina Array Bea 63.19 358 P P 17 48 42.5 +1.3
1.8nm,0.8s,baz=192,slow=9.4,SNR=9.7
NVAR LR LR 18 09 49.0
comp=Z,195nm,18.3s,baz=172,slow=30
VNDA Vanda 63.90 194 LR LR 18 09 29.5
comp=Z,108nm,21.5s,baz=82,slow=30
BDFB Brasilia 64.31 96 LR LR 18 13 04.9
comp=Z,148nm,21.6s,baz=264,slow=32
PDAR Pinedale Array 67.80 6 P P 17 49 10.5 -0.4
1.2nm,0.7s,baz=161,slow=7.1,SNR=10
PDAR LR LR 18 13 24.6
comp=Z,64nm,20.6s,baz=132,slow=31
DZM Mont Dzumac 69.78 254 eLR LR 18 10 32.7
comp=Z,364nm,26.5s
ULM Lac du Bonnet 77.18 13 P P 17 50 05.6 -0.7
1.0nm,0.5s,baz=209,slow=5.2,SNR=4.3

ULM				LR	LR	18 19 53.3	
	comp=Z,106nm,19.2s,baz=4.5,slow=32						
H11S2	WAKE ISLAND Hy	86.36	292	T	T	19 26 14.2	
	baz=118,slow=75,SNR=54						
H11S1	WAKE ISLAND Hy	86.37	292	T	T	19 26 17.8	
	baz=118,slow=75,SNR=37						
H11S3	WAKE ISLAND Hy	86.38	292	T	T	19 26 15.4	
	baz=118,slow=75,SNR=18						
H11N3	WAKE ISLAND Hy	86.76	293	T	T	19 26 58.1	
	baz=114,slow=80,SNR=4.0						
H11N1	WAKE ISLAND Hy	86.77	293	T	T	19 26 48.2	
	baz=114,slow=80,SNR=7.0						
H11N2	WAKE ISLAND Hy	86.78	293	T	T	19 26 49.9	
	baz=114,slow=80,SNR=9.0						
YKA	Yellowknife Ar	87.27	1	P	P	17 50 59.6	+0.7
	1.8nm,0.9s,baz=174,slow=5.4,SNR=29						
YKA				LR	LR	18 25 34.8	
	comp=Z,119nm,18.2s,baz=0.0,slow=32						
MAW	Mawson	87.61	180	LR	LR	18 26 46.1	
	comp=Z,71nm,18.4s,baz=70,slow=33						
KRVT	Keravat (AS076	89.55	265	LR	LR	18 25 09.6	
	comp=Z,77nm,19.1s,baz=108,slow=32						
SONM	Songino Array	139.39	315	PKP	PKPdf	17 57 40.2	-0.1
	0.3nm,0.8s,baz=62,slow=3.4,SNR=3.2						
CMAR	Chiang Mai Arr	146.52	266	PKPbc	PKPdf	17 57 52.3	-1.2
	0.1nm,0.2s,baz=74,slow=6.7,SNR=3.3						
ZALV	Zalesovo Beam	147.07	337	PKPbc	PKPbc	17 57 54.6	-0.8
	1.9nm,0.7s,baz=347,slow=3.5,SNR=7.0						
BRTR	Keskin Array B	151.01	52	PKPbc	PKPbc	17 58 03.5	-2.7
	1.7nm,1.1s,baz=327,slow=10,SNR=2.4						
MKAR	Makanchi Array	153.65	330	PKPbc	PKiKP	17 58 11.6	-0.2
	0.6nm,0.8s,baz=76,slow=2.0,SNR=4.9						

TEH 02 17:41:25.6, 33°.48N×46°.03E, h10km, ML2.5
ISN 02 17:41:29.0±0.3, 33°.47N×46°.02E, h15km, ML2.5
ISC 02 17:41:28.0±1.3, 33°.50N±0°.08×46°.0E±0°.1, h19km, n4, σ0.86/6, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	Badra	0.39	189	ePg	Pb	17 41 36.5	+0.1
	baz=11						
IBDR				eSg	Sb	17 41 42.0	-0.1
IBDR				AML	AML	17 41 51.6	
	comp=E,125nm,0.4s						
IBDR				AML	AML	17 41 51.7	
	comp=N,1μm,0.4s						
IGHG	Ghaleghazi	0.95	29	e	Pg	17 41 47.6	+1.0
IDHR	Dehrash	1.24	15	ePg	Pn	17 41 49.7	-0.8
IDHR				e		17 41 50.3	
IKOM	Komasi	1.43	61	ePg	Pn	17 41 52.8	-0.2
IKOM				eSg	Sg	17 42 13.5	-0.7
IKOM				e		17 42 14.6	

NEIC 02 17:59:47.5±1.4, 18°.74N±0°.06×145°.4E±0°.1, h221km±6km, mb4.7/147, Error ellipse: s-maj=15.5km s-min=9.2km az=86.0
IDC 02 17:59:50.2±0.8, 18°.73N×145°.42E, h250km±7km, mb4.0/38, mb1 4.0/40, mb1mx3.9/57, mbtmp4.5/40, Error ellipse: s-maj=10.0km s-min=5.6km az=95.0
ISC 02 17:59:45.4±0.3, 18°.74N±0°.04×145°.53E±0°.07, h200km, n246, σ1.51/243, mb4.6/109, 1D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	Sarigan	2.04	173		Pn	18 00 27.4	+3.0
ANA2	Anatahan	2.39	176	Pn	Pn	18 00 31.4	+3.2
GUMO	Guam	5.16	187	P	Pn	18 01 04.0	+2.1
	67nm,0.3s,baz=134,slow=5.2,SNR=49						
GUMO				S	Sn	18 02 03.3	+1.0
	68nm,0.3s,baz=350,slow=22,SNR=6.1						
JCJ	Chichijima	8.87	340	P	Pn	18 01 50.4	+0.5
	10nm,0.3s,baz=93,slow=23,SNR=8.3						
JCJ				S	Sn	18 03 26.6	-2.8
	6.3nm,0.3s,baz=294,slow=19,SNR=3.3						
JHJ	Hachijo jima 2	15.22	341	P	Pn	18 03 13.1	+2.9
	5.6nm,0.3s,baz=128,slow=22,SNR=7.1						
JHJ				S	S	18 05 56.6	-2.5
	6.6nm,0.3s,baz=59,slow=12,SNR=3.1						
JOW	Kunigami	17.82	300	P	P	18 03 42.4	+3.1
	0.7nm,0.3s,baz=135,slow=13,SNR=45						
JOW	Kunigami	17.82	300	P	P	18 03 40.7	+1.4
MJAR	Matsushiro Arr	18.87	341	P	P	18 03 51.7	+1.1
	0.1nm,0.3s,baz=129,slow=9.9,SNR=21						
MJAR				S	S	18 07 08.5	-5.9
	0.0nm,0.3s,baz=150,slow=13,SNR=3.7						
MJAR	Matsushiro Arr	18.87	341	P	P	18 03 50.9	+0.3
MAJO	Matsushiro	18.87	341	P	P	18 03 50.3	-0.3
MAJO				IAmb	IAmb	18 04 03.9	
	comp=Z,19nm,0.8s						
MAT	Matsushiro	18.87	341	P	P	18 03 51.7	+1.1
MAT				S	S	18 07 12.1	-2.3
MJB9	Matsu-Tunnel	18.87	341	P	P	18 03 50.2	-0.5
MJB9				IAmb	IAmb	18 04 03.8	
	comp=Z,20nm,0.8s						
JNU	Nakatsue	19.43	320	P	P	18 04 00.3	+3.6
	comp=Z,0.2nm,0.3s,baz=316,slow=6.2,SNR=3.6						
JNU	Nakatsue	19.43	320	IAmb	IAmb	18 04 29.4	
	comp=Z,32nm,1.4s						
H11S3	WAKE ISLAND Hy	20.05	87	T	T	18 25 36.8	
	baz=275,slow=75,SNR=3.5						
H11S1	WAKE ISLAND Hy	20.07	87	T	T	18 25 36.2	
	baz=275,slow=75,SNR=3.4						
H11S2	WAKE ISLAND Hy	20.07	87	T	T	18 25 25.8	
	baz=275,slow=75,SNR=5.7						
H11N1	WAKE ISLAND Hy	20.19	84	T	T	18 25 59.7	
	baz=264,slow=74,SNR=3.7						
H11N2	WAKE ISLAND Hy	20.20	84	T	T	18 25 47.3	
	baz=264,slow=74,SNR=3.7						
H11N3	WAKE ISLAND Hy	20.21	84	T	T	18 26 00.6	
	baz=264,slow=74,SNR=3.9						
MANU	Manus Island	20.73	175	P	P	18 04 10.7	0.0
JAY	Jayapura	21.65	193	P	P	18 04 19.8	-0.6
	comp=Z,64nm,0.9s,baz=228,slow=4.9,SNR=11						
SMPI	Sarmi	21.67	199	P	P	18 04 21.9	+1.5
	comp=Z,83nm,1.5s						
GENI	Genyem	21.85	195	P	P	18 04 23.6	+1.4
	comp=Z,196nm,1.2s						
NACB	Ninganchiao	22.91	288	P	P	18 04 31.6	-0.5
YULB	Yu-li	23.07	286	P	P	18 04 33.1	-0.4
YULB				IAmb	IAmb	18 04 38.9	
	comp=Z,20nm,1.1s						
YHNB	Yeheng	23.19	289	P	P	18 04 35.1	+0.5
SSLB	Suanglung	23.37	283	P	P	18 04 36.7	-0.1
WAMI	Wamena	23.47	197	P	P	18 04 39.7	+2.6
	comp=Z,106nm,0.8s						
TPUB	Ta-pu	23.67	285	P	P	18 04 38.1	-0.9
RABL	Rabaul	23.71	163	P	P	18 04 39.0	-0.4
SIJI	Sorong	24.01	217	P	P	18 04 41.3	-0.8
	comp=Z,7.7nm,0.6s,baz=8.6,slow=18,SNR=6.5						
KSRS	Korea Array	24.19	324	P	P	18 04 43.5	0.0
	comp=Z,3.2nm,0.9s,baz=144,slow=9.1,SNR=9.5						
KSRS				pP	pwP	18 05 30.1	+4.5
	comp=Z,6.2nm,0.8s,baz=142,slow=9.6,SNR=5.9						
JKA	Kamikawa-asahi	25.42	355	P	P	18 04 56.3	+1.8
ASAJ	Asahikawa	25.42	355	P	P	18 04 56.3	+1.8
	comp=Z,15nm,0.7s,baz=235,slow=13,SNR=13						
QZH	Quanzhou	25.73	289	⇓/P	P	18 04 57.8	+0.3
NJ2	Nanjing	27.41	304	eP	P	18 05 12.4	-0.1
USRK	Ussuriysk Ar.	27.81	339	pP	pP	18 06 06.2	+11
	comp=Z,1.9nm,0.7s,baz=123,slow=11,SNR=2.4						
PMG	Port Moresby	28.02	177	P	P	18 05 16.8	-1.1
	comp=Z,8.3nm,0.6s,baz=19,slow=15,SNR=4.0						
PMG	Port Moresby	28.02	177	IAmb	IAmb	18 05 24.5	
	comp=Z,14nm,0.7s						
YSS	Yuzh-Sakhalins	28.23	356	P	P	18 05 20.3	+0.8
KKM	Kota Kinabalu	31.22	250	P	P	18 05 47.4	+0.9
KKM				IAmb	IAmb	18 06 02.5	
	comp=Z,15nm,1.1s						
KLR	Kul'dur	32.38	343	P	P	18 05 54.9	-1.1
	comp=Z,1.9nm,0.4s,baz=147,slow=5.6,SNR=8.6						
COEN	Coen	32.58	184	P	P	18 05 57.8	-0.2
TTSI	Tana Toraja	33.30	232	P	P	18 06 06.4	+1.9
	comp=Z,37nm,0.8s						
MTN	Manton Dam	34.45	205	P	P	18 06 14.0	-0.2
KAPI	Kappang	34.68	230	P	P	18 06 17.0	+0.7
	comp=Z,6.5nm,0.5s,baz=92,slow=5.2,SNR=4.5						
KAPI	Kappang	34.68	230	IAmb	IAmb	18 06 18.1	
	comp=Z,110nm,1.9s						
SOEI	Soe	35.24	218	P	P	18 06 19.6	-1.6
PETK	Petropavlovsk-	35.58	13	P	P	18 06 25.1	+1.5
	comp=Z,2.3nm,0.7s,baz=209,slow=8.2,SNR=8.8						
DLV	T Lat	36.30	265	P	P	18 06 28.3	-2.1
DLV				IAmb	IAmb	18 06 32.8	
	comp=Z,13nm,0.9s						
SBUM	Sibu	36.41	248	P	P	18 06 30.8	-0.3
HHC	Hu-ho-hao-te	36.46	314	eP	P	18 06 31.4	+0.1
GYA	Guiyang	36.59	289	eP	P	18 06 33.6	+1.0
KNRA	Kununurra	37.98	207	P	P	18 06 44.2	+0.1
UBPT	Khong Chiam	38.41	271	P	P	18 06 49.1	+1.3
KSM	Kuching	38.55	248	P	P	18 06 48.7	-0.3
CTA	Charters Tower	38.60	179	P	P	18 06 48.5	-0.8
	comp=Z,5.1nm,0.7s,baz=350,slow=7.4,SNR=5.7						
SLVN	Son La	39.11	281	P	P	18 06 53.9	+0.2
WB0	Warramunga Arr	39.80	197	P	P	18 06 59.5	+0.2
WR0	Warramunga Arr	39.94	196	P	P	18 07 00.8	+0.4
WRAB	Tennant Creek	39.97	196	P	P	18 07 01.0	+0.4
WB2	Warramunga Arr	39.98	196	P	P	18 07 01.1	+0.5
WRA	Warramunga Arr	39.98	197	P	P	18 07 01.2	+0.5
	comp=Z,48nm,0.6s,baz=19,slow=9.0,SNR=116						
WRA				ScP	ScP	18 12 26.6	-5.3
	comp=Z,2.4nm,0.8s,baz=22,slow=4.1,SNR=6.0						
WRA				S	S	18 12 48.7	-2.5
	comp=Z,4.2nm,1.0s,baz=22,slow=16,SNR=4.6						
WRA	Warramunga Arr	39.98	197	P	P	18 06 59.9	-0.8
SANVU	Saraoutou	40.12	146	P	P	18 07 01.8	-0.1
SANVU				IAmb	IAmb	18 07 58.9	
	comp=Z,37nm,1.0s						
MA2	Magadan	40.96	4	P	P	18 07 09.5	+1.3
	comp=Z,7.2nm,0.6s,baz=188,slow=7.9,SNR=20						
MA2	Magadan	40.96	4	P	P	18 07 09.1	+0.9
FITZ	Fitzroy Crossi	41.50	209	P	P	18 07 13.2	0.0
	comp=Z,5.1nm,0.3s,baz=26,slow=7.0,SNR=65						
PBKT	Sadao Pong	42.44	274	P	P	18 07 21.1	+0.3
SONM	Songino Array	43.01	321	P	P	18 07 24.7	-0.5
	comp=Z,0.9nm,0.6s,baz=133,slow=10,SNR=11						
SONM				pP	pwP	18 08 15.9	+4.2
	comp=Z,0.6nm,0.5s,baz=129,slow=6.8,SNR=2.1						
AS31	Alice Springs	43.65	196	P	P	18 07 30.4	0.0
ASAR	Alice Springs	43.65	196	P	P	18 07 30.2	-0.2
	comp=Z,7.0nm,0.7s,baz=20,slow=6.9,SNR=113						
ASAR				ScP	ScP	18 12 40.4	-6.2
	comp=Z,1.0nm,0.7s,baz=5.1,slow=3.6,SNR=5.4						
ASAR				S	S	18 13 40.2	-4.8
	comp=Z,2.2nm,0.9s,baz=17,slow=21,SNR=5.9						
ASAR	Alice Springs	43.65	196	P	P	18 07 30.3	-0.1
CMAR	Chiang Mai Arr	44.05	277	P	P	18 07 34.6	+0.8
	comp=Z,2.8nm,0.8s,baz=70,slow=6.5,SNR=26						
CMAR				PcP	PcP	18 09 15.2	-0.4
	comp=Z,1.1nm,0.6s,baz=83,slow=2.2,SNR=7.6						
GTA	Gaotai	44.40	308	eP	P	18 07 37.0	+0.6
GTA				pP	pwP	18 08 25.1	+1.6
GTA				sP	sP	18 08 52.4	+12
GTA				PcP	PcP	18 09 16.5	-0.1
GTA				ScP	ScP	18 12 46.6	-3.1
SEY	Seymchan	44.41	4	P	P	18 07 36.7	+0.8
	comp=Z,3.1nm,0.5s,baz=194,slow=9.3,SNR=14						
YAK	Yakutsk	44.65	349	P	P	18 07 37.2	-0.5
	comp=Z,7.5nm,0.7s,baz=190,slow=0.6,SNR=13						
YAK				ScP	ScP	18 12 43.0	-7.0
	comp=Z,1.3nm,0.4s,baz=133,slow=2.6,SNR=4.5						
YAK	Yakutsk	44.65	349	P	P	18 07 37.0	-0.8
DZM	Mont Dzumac	45.43	152	P	P	18 07 44.9	+0.3
	comp=Z,8.2nm,0.6s,baz=182,slow=7.6,SNR=11						
DZM	Mont Dzumac	45.43	152	IAmb	IAmb	18 07 49.8	
	comp=Z,51nm,1.6s						
IPM	Ipoh	45.69	258	P	P	18 07 46.0	-0.7
PSA00	Pilbara Seismi	47.30	213	P	P	18 07 58.6	-0.5
PSI	Prapat	48.26	257	P	P	18 08 07.8	+1.0
	comp=Z,4.9nm,0.6s,baz=55,slow=4.8,SNR=6.9						
GSI	Gunungsitoli	50.08	255	P	P	18 08 21.0	+0.6
	comp=Z,50nm,0.9s						
GSI	Gunungsitoli	50.08	255	P	P	18 08 20.6	+0.2
STKA	Stephens Creek	50.47	184	P	P	18 08 21.9	-1.0
	comp=Z,3.1nm,0.5s,baz=7.6,slow=8.4,SNR=13						
STKA	Stephens Creek	50.47	184	P	P	18 08 21.4	-1.5
BILL	Bilibino	51.00	10	P	P	18 08 27.0	+0.5
BILL				IAmb	IAmb	18 08 28.1	
	comp=Z,18nm,0.9s						
TAPN	Taplejung	53.50	291	eP	P	18 08 46.6	+0.7
TIXI	Tiksi	53.81	354	P	P	18 08 46.1	-0.9
	comp=Z,1.6nm,0.4s,baz=140,slow=6.3,SNR=14						
ODAN	Odare	53.82	290	eP	P	18 08 48.9	+0.8
WMQ	Urumqi	54.16	311	eP	P	18 08 50.0	-0.1
RAMN	Ramite	54.51	290	eP	P	18 08 53.6	+0.4
	comp=Z,8.4nm,0.7s						
JIRN	Jiri	54.82	291	eP	P	18 08 56.4	+0.9
GUN	Gumba	55.08	291	eP	P	18 08 57.7	+0.4
PKI	Pulchoki	55.52	291	eP	P	18 09 00.6	+0.1
PKIN	Phulchoki	55.53	291	eP	P	18 09 00.5	0.0
	comp=Z,3.8nm,0.4s						
KKN	Kakani	55.62	291	eP	P	18 09 01.4	+0.4
DMN	Daman	55.79	291	eP	P	18 09 02.6	+0.3
GKN	Gorkha	56.17	292	eP	P	18 09 05.1	+0.2
	comp=Z,12nm,0.7s						
ANM	Nome	56.22	23	P	P	18 09 05.3	+0.9
ANM				IAmb	IAmb	18 09 06.5	
	comp=Z,18nm,1.5s						
DANN	Dangsing	56.91	292	eP	P	18 09 10.8	+0.5
	comp=Z,42nm,0.7s						
KOLN	Koldanda	57.10	291	eP	P	18 09 11.6	+0.1
	comp=Z,13nm,0.8s						
ZAA0	Zalesovo Array	57.88	323	P	P	18 09 14.5	-1.8
ZALV	Zalesovo Beam	57.88	323	P	P	18 09 14.7	-1.5
	comp=Z,2.0nm,0.5s,baz=110,slow=7.1,SNR=13						
ZALV				PcP	pP	18 10 04.0	+3.4
	comp=Z,1.7nm,0.6s,baz=116,slow=4.1,SNR=4.1						
ZALV	Zalesovo Beam	57.88	323	P	P	18 09 14.2	-2.0
MK31	Makanchi Array	58.32	314	P	P	18 09 18.7	-0.7
MKAR	Makanchi Array	58.32	314	P	P	18 09 18.9	-0.6
	comp=Z,3.3nm,0.6s,baz=91,slow=7.6,SNR=70						
MKAR				PcP	pP	18 10 06.5	+2.8
	comp=Z,1.3nm,0.5s,baz=75,slow=4.8,SNR=10						
MKAR	Makanchi Array	58.32	314	P	P	18 09 18.7	-0.8
MAKZ	Makanchi	58.53	314	P	P	18 09 20.4	-0.5
RDOG	Red Dog Mine	58.84	20	P	P	18 09 23.7	+1.1
RDOG				IAmb	IAmb	18 09 24.7	
	comp=Z,16nm,1.2s						
KDAK	Kodiak Island	59.41	33	P	P	18 09 27.4	+0.7
	comp=Z,3.2nm,0.4s,baz=245,slow=1.8,SNR=12						
KDAK	Kodiak Island	59.41	33	P	P	18 09 27.4	+0.7
BRLK	Bradley Lake	60.74	31	P	P	18 09 35.4	-0.3
BRLK				IAmb	IAmb	18 09 36.2	
	comp=Z,12nm,0.8s						
SKT	Skwentna	60.98	29	P	P	18 09 36.5	-0.8
KURK	Kurchatov	61.13	318	P	P	18 09 37.1	-1.3
KURBB	Kurchatov Arra	61.18	318	P	P	18 09 37.5	-1.3
	comp=Z,6.1nm,0.7s,baz=94,slow=7.4,SNR=80						
IMAR	Indian Mountai	61.24	24	P	P	18 09 39.8	+0.8
RC01	Rabbit Creek A	61.60	30	IAmb	IAmb	18 09 43.0	
	comp=Z,13nm,0.7s						
KTH	Kantishna Hill	61.67	27	P	P	18 09 42.4	+0.4
KTH				IAmb	IAmb	18 09 43.2	
	comp=Z,21nm,1.1s						
BPAW	Bear Paw Mtn.	61.79	26	P	P	18 09 43.3	+0.6
BPAW				IAmb	IAmb	18 09 44.2	
	comp=Z,16nm,0.8s						
TRF	Thorofare Moun	61.91	27	P	P	18 09 43.5	-0.2
TRF				IAmb	IAmb	18 09 44.6	
	comp=Z,12nm,0.9s						
PMR	Palmer	61.99	29	P	P	18 09 43.8	-0.2
PMR				IAmb	IAmb	18 09 44.7	
	comp=Z,13nm,1.0s						
GHO	Glory Hole Cre	62.13	29	P	P	18 09 45.1	+0.1
GHO				IAmb	IAmb	18 09 45.9	
	comp=Z,14nm,0.9s						
MLY	Manley	62.15	25	P	P	18 09 45.9	+0.8
MLY				IAmb	IAmb	18 09 46.3	
	comp=Z,10nm,0.6s						
KNK	Knik Glacier	62.27	30	P	P	18 09 46.2	+0.2
KNK				IAmb	IAmb	18 09 47.1	
	comp=Z,16nm,0.7s						
BWN	Browne	62.45	27	P	P	18 09 47.6	+0.5
BWN				IAmb	IAmb	18 09 48.5	
	comp=Z,19nm,1.0s						
RND	Reindeer	62.53	28	P	P	18 09 47.0	-0.7
MCK	McKinley	62.57	27	P	P	18 09 48.4	+0.5
KSH	Kashi	62.71	305	P	P	18 09 52.0	+2.6
KSH				pP	pwP	18 10 43.4	+4.0
KSH				S	S	18 17 58.2	-4.0
KSH				sS	ScS	18 19 27.8	+5.3
SCM	Sheep Creek Mo	62.88	29	P	P	18 09 50.6	+0.5
WRH	Wood River Hil	63.10	26	P	P	18 09 51.0	-0.4
DHY	Denali Highway	63.11	28	P	P	18 09 51.5	-0.1
DHY				IAmb	IAmb	18 10 39.2	
	comp=Z,21nm,1.8s						
MDM	Murphy Dome	63.16	26	P	P	18 09 51.5	-0.3
CCB	Clear Creek Bu	63.27	26	P	P	18 09 52.0	-0.4
HDA	Harding Lake	63.57	27	P	P	18 09 53.5	-0.9
HDA				IAmb	IAmb	18 09 54.5	
	comp=Z,8.6nm,0.9s						
TOLK	Toolik Lake Re	63.61	22	P	P	18 09 55.7	+1.0
TOLK				IAmb	IAmb	18 09 56.2	
	comp=Z,12nm,0.6s						
IL31		63.68	26	P	P	18 09 54.1	-0.9
IL31				IAmb	IAmb	18 09 55.1	
	comp=Z,7.6nm,0.8s						
ILAR	Eielson Array	63.68	26	P	P	18 09 54.1	-1.0
	comp=Z,5.6nm,0.7s,baz=253,slow=5.4,SNR=79						
AAK	Ala-Archa	63.72	309	P	P	18 09 55.0	-1.0
	comp=Z,1.3nm,0.5s,baz=101,slow=5.0,SNR=8.6						
PAX	Paxson	63.94	28	P	P	18 09 57.3	+0.3
PAX				IAmb	IAmb	18 09 58.2	
	comp=Z,8.9nm,0.6s						
RIDG	Independent Ri	64.35	28	P	P	18 09 59.6	0.0
RIDG				IAmb	IAmb	18 10 00.6	
	comp=Z,15nm,0.8s						
GLB	Gilahina Butte	64.48	30	P	P	18 10 01.3	+0.8
GLB				IAmb	IAmb	18 10 02.1	
	comp=Z,16nm,1.2s						
VRDI	Verde Repeater	64.62	30	P	P	18 10 02.0	+0.4
VRDI				IAmb	IAmb	18 10 02.9	
	comp=Z,9.0nm,0.8s						
DOT	Dot Lake	64.68	28	P	P	18 10 01.6	-0.1
DOT				IAmb	IAmb	18 10 02.6	
	comp=Z,11nm,0.8s						
CRQM	Cirque	64.71	31	P	P	18 10 02.9	+0.7
FYU	Fort Yukon	64.72	24	P	P	18 10 02.7	+0.9
SCRK	Sand Creek	64.77	27	P	P	18 10 02.3	0.0
SCRK				IAmb	IAmb	18 10 03.4	
	comp=Z,11nm,1.0s						
MCARA	McCarthy VSAT	64.84	30	P	P	18 10 03.4	+0.7
MCARA				IAmb	IAmb	18 10 04.4	
	comp=Z,12nm,0.8s						
TGL	Tana Glacier	64.86	31	P	P	18 10 03.1	+0.1
TGL				IAmb	IAmb	18 10 04.6	
	comp=Z,11nm,1.0s						
BALM	Baldy	65.13	31	P	P	18 10 05.3	+0.5
BALM				IAmb	IAmb	18 10 06.0	
	comp=Z,9.1nm,0.8s						
BMAR	Burnt Mountain	65.14	24	P	P	18 10 05.7	+1.1
NIL	Nilore	65.37	299	P	P	18 10 06.6	-0.1
NIL				IAmb	IAmb	18 10 07.9	
	comp=Z,18nm,1.0s						
BARN	Barnard Glacie	65.46	31	P	P	18 10 07.8	+0.8
CTGM	Chitina Glacie	65.61	31	P	P	18 10 08.6	+0.7
CTGM				IAmb	IAmb	18 10 09.7	
	comp=Z,12nm,0.8s						
BCAR	Beaver Creek A	65.62	29	P	P	18 10 08.2	+0.4
PCA	Pinnacle	66.07	32	P	P	18 10 11.6	+0.8
EGAK	Eagle	66.10	27	P	P	18 10 10.7	0.0
BVAR	Borovoye Array	66.34	320	P	P	18 10 11.3	-1.1
	comp=Z,7.1nm,0.5s,baz=93,slow=7.3,SNR=72						
BRVK	Borovoye	66.40	320	P	P	18 10 11.7	-1.2
BRVK				IAmb	IAmb	18 10 13.5	
	comp=Z,12nm,0.8s						
RPZ	Rata Peaks	66.41	160	P	P	18 10 13.5	+0.5
	comp=Z,7.0nm,0.8s,baz=156,slow=7.9,SNR=4.4						
RPZ	Rata Peaks	66.41	160	P	P	18 10 12.2	-0.7
KK31	Karatay Array	66.62	310	P	P	18 10 13.7	-0.8
KKAR	Karatay Array	66.62	310	P	P	18 10 13.8	-0.6
KKAR	Karatay Array	66.62	310	P	P	18 10 13.9	-0.6
KKAR				IAmb	IAmb	18 10 15.1	
	comp=Z,7.9nm,0.8s						
EPYK	Eagle Plains	68.08	25	P	P	18 10 23.4	+0.2
EPYK				IAmb	IAmb	18 10 24.1	
	comp=Z,7.2nm,0.7s						
WHY	Whitehorse	68.76	31	P	P	18 10 28.3	+0.7
INK	Inuvik	69.39	23	P	P	18 10 31.1	-0.1
INK				IAmb	IAmb	18 10 32.0	
	comp=Z,11nm,0.8s						
C36M	Paulatuk	72.77	22	P	P	18 10 51.3	-0.1
C36M				IAmb	IAmb	18 10 52.1	
	comp=Z,14nm,1.0s						
ARU	Arti	72.94	325	P	P	18 10 51.2	-1.4
ARU				IAmb	IAmb	18 10 52.9	
	comp=Z,7.7nm,0.7s						
ABKAR	Akbulak array	73.20	317	P	P	18 10 52.6	-1.7
ABKAR	Akbulak array	73.20	317	P	P	18 10 52.7	-1.7
ABKAR				IAmb	IAmb	18 10 53.8	
	comp=Z,6.0nm,0.5s						
GEYT	Alibeck	76.74	306	P	P	18 11 14.3	-0.6
	comp=Z,3.9nm,1.0s,baz=64,slow=3.8,SNR=10						
GEYT				pP	pwP	18 12 13.1	+6.6
	comp=Z,1.3nm,0.8s,baz=202,slow=1.6,SNR=2.9						
YKA	Yellowknife Ar	78.03	28	P	P	18 11 21.1	-0.3
	comp=Z,7.9nm,0.7s,baz=290,slow=5.5,SNR=123						
LON	Longmire	78.37	45	IAmb	IAmb	18 11 25.4	
	comp=Z,18nm,1.5s						
H04A	Detroit Lake	78.64	47	P	P	18 11 25.9	+0.6
H04A				IAmb	IAmb	18 11 26.3	
	comp=Z,9.7nm,0.8s						
LTY	Liberty	78.99	44	P	P	18 11 27.7	+0.5
LTY				IAmb	IAmb	18 11 28.1	
	comp=Z,10nm,0.6s						
YBH	Yreka Blue Hor	79.05	50	P	P	18 11 28.3	+0.7
	comp=Z,7.9nm,0.8s,baz=338,slow=4.1,SNR=19						
YBH	Yreka Blue Hor	79.05	50	P	P	18 11 28.7	+1.1
YBH				IAmb	IAmb	18 11 29.7	
	comp=Z,8.9nm,0.8s						
RES	Resolute Bay	79.42	14	P	P	18 11 28.9	0.0
B08A	Colville Reser	79.55	42	P	P	18 11 30.6	+0.5
B08A				IAmb	IAmb	18 13 46.5	
	comp=Z,16nm,0.8s						
E07A	Sunnyside	79.72	44	P	P	18 11 31.5	+0.5
PINE	Pine Mountain	79.75	47	P	P	18 11 32.8	+1.3
HAWA	Hanford	79.98	44	P	P	18 11 33.4	+1.0
HAWA				IAmb	IAmb	18 14 26.4	
	comp=Z,9.7nm,0.6s						
WSAR	Wadi Sarin	80.07	291	P	P	18 11 34.8	+1.4
	comp=Z,3.0nm,0.7s,baz=186,slow=7.3,SNR=3.6						
K05A	Summer Lake	80.08	48	P	P	18 11 34.6	+1.3
D08A	Wollman Farm,	80.19	44	P	P	18 11 34.4	+0.8
D08A				IAmb	IAmb	18 14 05.3	
	comp=Z,12nm,0.7s						
ORV	Oroville	80.53	52	P	P	18 11 35.9	+0.4
ORV				IAmb	IAmb	18 11 36.7	
	comp=Z,9.2nm,0.8s						
MOD	Modoc Plateau	80.73	49	P	P	18 11 37.4	+0.7
E09A	Wood Farm, Sta	80.86	44	P	P	18 11 38.0	+0.9
E09A				IAmb	IAmb	18 11 38.6	
	comp=Z,10.0nm,0.8s						
NEW	Newport	80.99	42	P	P	18 11 38.3	+0.4
	comp=Z,7.8nm,0.8s,baz=260,slow=3.0,SNR=16						
NEW	Newport	80.99	42	P	P	18 11 37.6	-0.2
BEKR	Beckworth	81.28	51	P	P	18 11 40.2	+0.5
CMB	Columbia Colle	81.80	53	IAmb	IAmb	18 11 43.7	
	comp=Z,13nm,0.7s						
BMO	Blue Mountains	81.93	45	P	P	18 11 43.5	+0.6
PNTR	Pine Nut	82.07	52	P	P	18 11 44.8	+0.8
WAKR	Walker	82.37	52	P	P	18 11 45.8	+0.4
WAKR				IAmb	IAmb	18 11 47.2	
	comp=Z,12nm,0.7s						
YERR	Yerington	82.37	52	P	P	18 11 46.1	+0.6
YERR				IAmb	IAmb	18 11 46.9	
	comp=Z,13nm,0.7s						
ARCES	ARCESS Array B	82.40	342	P	P	18 11 42.7	-2.1
	comp=Z,7.0nm,1.0s,baz=69,slow=7.9,SNR=11						
ARCES	ARCESS Array B	82.40	342	P	P	18 11 43.0	-1.8
OMMB	Old Mammoth Mi	82.97	53	P	P	18 11 49.2	+0.5
RYN	Ryan	83.01	52	P	P	18 11 48.9	+0.1
RYN				IAmb	IAmb	18 11 50.2	
	comp=Z,11nm,0.8s						
KVN	Kaiserville	83.19	51	P	P	18 11 50.1	+0.5
KVN				IAmb	IAmb	18 11 51.0	
	comp=Z,12nm,0.7s						
NVAR	Mina Array Bea	83.24	52	P	P	18 11 50.7	+0.7
	comp=Z,18nm,0.7s,baz=268,slow=5.8,SNR=89						
NVAR	Mina Array Bea	83.24	52	P	P	18 11 50.8	+0.9
NV11	Mina Array Sit	83.35	52	P	P	18 11 51.1	+0.7
NV11				IAmb	IAmb	18 11 51.9	
	comp=Z,11nm,0.8s						
MFID	Camas Ranch	83.40	46	P	P	18 11 50.1	-0.4
MFID				IAmb	IAmb	18 11 52.0	
	comp=Z,15nm,1.2s						
ELK	Elko	84.71	49	P	P	18 11 57.5	+0.2
ELK				IAmb	IAmb	18 11 58.8	
	comp=Z,12nm,1.1s						
LRM	Limekiln Ridge	84.82	43	P	P	18 11 57.9	0.0
DLMT	Dillon	84.89	44	P	P	18 11 58.8	+0.7
MCMT	McKenzie Canyo	84.92	44	P	P	18 11 58.2	-0.1
TPNV	Topopah Spring	85.26	53	P	P	18 12 00.7	+0.6
R11A	Troy Canyon, C	85.28	51	P	P	18 12 00.2	0.0
R11A				IAmb	IAmb	18 12 01.9	

comp=Z,18nm,1.5s
KBZ Khabaz 86.00 315 P **P 18 12 02.6 -0.7**
comp=Z,2.5nm,0.9s,baz=228,slow=5.7,SNR=4.7
YHL Hebgen Lake 86.01 44 P **P 18 12 04.8 +1.0**
SHPR Sheep Range 86.23 53 P **P 18 12 05.8 +0.9**
YHH Holmes Hill 86.25 44 P **P 18 12 06.0 +1.0**
PSUT Pine Spring 86.49 51 P **P 18 12 06.4 +0.3**
FXWY Fox Creek 86.58 45 P **P 18 12 07.2 +0.7**
FXWY IAmb IAmb 18 12 08.1
comp=Z,14nm,1.6s
FLWY Flagg Ranch 86.63 45 P **P 18 12 08.0 +1.2**
FLWY IAmb IAmb 18 12 08.7
comp=Z,11nm,0.7s
DUG Dugway, Tooele 86.64 49 P **P 18 12 07.3 +0.5**
DUG IAmb IAmb 18 12 08.0
comp=Z,11nm,1.1s
FINES FINESS Array B 86.78 335 P P 18 12 03.8 -3.0
comp=Z,3.7nm,0.5s,baz=69,slow=5.1,SNR=58
FINES FINESS Array B 86.78 335 P P 18 12 03.6 -3.1
RLMT Red Lodge 87.16 43 P **P 18 12 10.4 +1.2**
RLMT IAmb IAmb 18 15 17.3
comp=Z,8.5nm,0.8s
SZCU Shurtz Canyon 87.39 51 P **P 18 12 10.9 +0.3**
W13A Hualapai Mount 87.70 54 P **P 18 12 12.5 +0.5**
MSU Marysvale 87.72 50 P **P 18 12 12.2 +0.2**
KNB Kanab 87.80 52 P **P 18 12 13.0 +0.6**
MTPU Mount Pierson 87.89 51 P **P 18 12 14.4 +1.3**
PD31 Pinedale Array 87.91 45 P **P 18 12 12.3 -0.6**
PDAR Pinedale Array 87.91 45 P **P 18 12 12.3 -0.6**
comp=Z,1.1nm,0.6s,baz=243,slow=1.8,SNR=14
PDAR Pinedale Array 87.91 45 P **P 18 12 12.6 -0.3**
U15A North Rim 88.42 52 P **P 18 12 16.0 +0.6**
U15A IAmb IAmb 18 12 17.2
comp=Z,9.8nm,1.0s
SRU San Rafael Swe 88.68 49 P **P 18 12 16.7 +0.1**
FCC Fort Churchill 88.69 27 P **P 18 12 15.4 -0.5**
FCC IAmb IAmb 18 12 15.7
comp=Z,5.8nm,0.8s
N23A Red Feather La 91.14 46 P **P 18 12 28.7 +0.7**
NOA NORSAR Array B 92.48 340 P **P 18 12 32.0 -1.5**
comp=Z,0.2nm,0.5s,baz=45,slow=4.8,SNR=2.4
ULM Lac du Bonnet 92.65 34 P P 18 12 32.6 -1.8
comp=Z,2.6nm,0.8s,baz=311,slow=5.4,SNR=7.7
ULM Lac du Bonnet 92.65 34 P **P 18 12 33.0 -1.5**
ULM IAmb IAmb 18 12 34.5
comp=Z,4.5nm,0.9s
BRTR Keskin Array B 93.97 314 P P 18 12 37.9 -3.0
comp=Z,2.1nm,0.9s,baz=96,slow=2.0,SNR=6.8
TORD Torodi Ar. Bea 132.30 309 PKP **PKPdf 18 18 35.0 -1.6**
comp=Z,0.5nm,0.5s,baz=17,slow=0.8,SNR=3.7
PLCA Paso Flores 142.15 133 PKhKP PKPpre 18 18 49.1
comp=Z,1.3nm,0.5s,baz=334,slow=2.2,SNR=4.8
LPAZ La Paz 147.83 91 PKPbc **PKPdf 18 19 08.0 +2.9**
comp=Z,5.3nm,0.6s,baz=281,slow=1.3,SNR=18
LPAZ La Paz 147.83 91 **PKPdf 18 19 08.5 +3.3**
CPUP Villa Florida 157.60 114 PKPab **PKPab 18 19 50.7 -0.8**
comp=Z,3.2nm,0.9s,baz=319,slow=4.2,SNR=5.0

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*DJA **02** 18:03:31.0±0.7,5°S±7°×10°2E±°,h12km±9km,M3.8/7, MLv3.8/7*
*IDC **02** 18:03:32.8±2.6,3.°80S×101.°73E,h0km,mb3.9/6, mb1 4.0/6,mb1mx3.5/61,mbtmp3.9/6,MS3.3/2,Ms1 3.3/2, ms1mx2.7/50,Error ellipse: s-maj=97.4km s-min=21.1km az=56.0*
ISC 02 18:03:29.2±1.7,**4.°7S**±0.°2×**101.°7E**±0.°1,**h10**km,**n21**, σ**1.§18**/12,**mb3.9**/6,**Southern Sumatera**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSI Kapahiang 1.40 43 P **Pn 18 03 54.3 -0.6**
LWLI Liwa 2.43 98 P **Pn 18 04 09.5 +0.4**
LWLI S **Sn 18 04 38.8 -0.1**
MDSI Maura Dua 2.53 86 P **Pn 18 04 10.7 +0.3**
KRJI Kerinci 2.59 356 P **Pn 18 04 10.9 -0.4**
KLSI 3.07 90 P **Pn 18 04 18.8 +0.9**
PDSI Padang 3.94 342 P **Pb 18 04 41.5 +2.7**
KAPI Kappang 18.04 92 LR LR 18 14 44.1
comp=Z,60nm,21.0s,baz=106,slow=37
H08S2 Diego Garcia H 29.13 263 T T 18 39 52.5
baz=86,slow=76,SNR=9.1
H08S3 Diego Garcia H 29.14 263 T T 18 39 51.7
baz=86,slow=76,SNR=15
H08S1 Diego Carcia H 29.15 263 T T 18 39 55.5
baz=86,slow=76,SNR=3.9
H08N1 Diego Garcia H 30.53 265 T T 18 42 13.0
H08N2 Diego Garcia H 30.55 266 T T 18 42 10.7
H08N3 Diego Garcia H 30.55 265 T T 18 42 05.3
WRA Warramunga Arr 35.25 118 P P 18 10 34.1 +10
1.0nm,1.0s,baz=304,slow=8.8,SNR=3.0
ASAR Alice Springs 36.37 124 P P 18 10 42.1 +8.1
0.3nm,0.4s,baz=301,slow=7.9,SNR=4.2
SONM Songino Array 52.47 4 P **P 18 12 41.9 -0.5**
1.7nm,0.8s,baz=185,slow=8.9,SNR=9.8
MJAR Matsushiro Arr 53.38 37 LR LR 18 35 31.5
comp=Z,55nm,21.2s,baz=70,slow=36
MKAR Makanchi Array 54.05 344 P **P 18 12 53.5 -0.4**
0.5nm,0.5s,baz=151,slow=9.0,SNR=9.0
USRK Ussuriysk Ar. 55.79 26 P **P 18 13 04.9 -1.6**
1.9nm,0.6s,baz=210,slow=2.7,SNR=5.8
ZALV Zalesovo Beam 60.10 349 P **P 18 13 35.9 -0.7**
1.0nm,0.4s,baz=172,slow=6.6,SNR=5.0
TXAR Lajitas Array 145.72 42 PKPbc **PKPdf 18 23 09.1 +0.1**
0.7nm,0.8s,baz=216,slow=2.3,SNR=4.3

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*BJI **02** 18:11:57.0±0.0,33.°60S×178.°00W,h5km,mB5.5/3, mb5.1/10,Ms7 5.2/2*
*WEL **02** 18:11:57.3±0.4,33°S±3°×17°8W±°,h12km,M4.8/39, mB5.2/31,ML5.8/39,MLv5.5/39,Mw(mB)4.6/31*
*GCMT **02** 18:11:59.5±0.6,33.°61S±0.°05×177.°71W±0.°05,h21km±1km, MW5.0/65,Moment Tensor Solution. s23,c26; s65,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.51±.35; $M_{\theta\theta}$0.97±.20; $M_{\phi\phi}$2.54±.20; $M_{r\theta}$-0.72±.41; $M_{r\phi}$1.22±.11; $M_{\theta r}$-0.37±.31; Best double couple: M_0 3.45000×10^{16} NP1:ϕ_s202.00000°,δ40.00000°,λ-100.00000°. NP2: ϕ_s35.00000°,δ51.00000°,λ-82.00000°. Principal axes: T 3.2720, Plg6.0000°, Azm119.0000°; N 0.3540, Plg6.0000°, Azm210.0000°; P -3.6280, Plg81.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **02** 18:12:01.6±1.9,33.°38S×178.°03W,h33km,mb5.1/4 Error ellipse: s-maj=14.3km s-min=12.7km az=83.9*
*NEIC **02** 18:12:02.5±1.3,33.°70S±0.°03×178.°1W±0.°1,h35km±1km, mb5.1/36,Error ellipse: s-maj=15.2km s-min=5.2km az=83.0*
*IDC **02** 18:12:04.8±1.7,33.°56S×178.°19W,h49km±14km,mb4.4/16, mb1 4.5/17,mb1mx4.4/30,mbtmp4.7/17,ML4.1/1,MS3.9/10, Ms1 3.9/10,ms1mx3.5/43,Error ellipse: s-maj=16.8km s-min=12.1km az=9.0*
ISC 02 18:11:58.7±0.6,**33.°57S**±0.°05×**177.°98W**±0.°06,**h15**km±3km, **h15**km**:pP-P,n259**,σ**1.§99**/255,**mb4.9**/34,**MS3.9**/11,**2C-1D, South of Kermadec Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GLKZ Green Lake 4.30 1 P **Pn 18 13 00.2 -3.4**
GLKZ S **Sn 18 13 47.1 -6.3**
RAO Raoul Island 4.31 1 P Pn 18 12 58.4 -5.3
40nm,0.3s,baz=259,slow=3.9,SNR=2.7
RAO S **Sn 18 13 50.7 -3.0**
312nm,0.3s,baz=110,slow=22,SNR=9.2
RIZ Raoul Island 4.32 1 S **Sn 18 13 47.7 -6.2**
MXZ Matakaoa Point 5.00 216 **Pn 18 13 11.5 -1.7**
PKGZ Pakihiroa 5.37 216 P **Pn 18 13 16.7 -1.6**
HAZ Te Kaha 5.41 218 P **Pn 18 13 17.8 -1.1**
HAZ S **Sn 18 14 20.3 -0.6**
PUZ Puketiti 5.43 213 P **Pn 18 13 16.4 -2.7**
PUZ S **Sn 18 14 18.7 -2.7**
RUGZ Raukumara Rang 5.63 218 P **Pn 18 13 20.5 -1.5**
RUGZ S **Sn 18 14 24.5 -1.9**
TWGZ Tauwharepare 5.64 214 P **Pn 18 13 20.3 -1.8**
TWGZ S **Sn 18 14 24.5 -2.2**
CNGZ Carnagh Statio 5.79 211 P **Pn 18 13 22.4 -1.7**
TKGZ Te Karaka 5.92 214 P **Pn 18 13 27.0 +1.2**
TKGZ S **Sn 18 14 30.3 -3.0**
WHRZ Whale Island 5.92 222 P **Pn 18 13 27.2 +1.3**
WHRZ S **Sn 18 14 32.7 -0.8**
MWZ Matawai 5.99 216 P **Pn 18 13 24.5 -2.4**
MWZ S **Sn 18 14 31.7 -3.4**
URZ Urewera 6.14 219 P **Pn 18 13 26.8 -2.1**
13nm,0.3s,baz=269,slow=3.7,SNR=55
URZ S **Sn 18 14 35.5 -3.3**
50nm,0.3s,baz=174,slow=20,SNR=3.1
URZ Urewera 6.14 219 **Pn 18 13 26.9 -2.0**
URZ Urewera 6.14 219 P **Pn 18 13 26.8 -2.0**
URZ S **Sn 18 14 35.6 -3.3**
OPRZ Ohinepanea 6.16 225 P **Pn 18 13 29.2 +0.1**
OPRZ S **Sn 18 14 36.8 -2.4**
RAGZ Rawiri 6.17 216 P **Pn 18 13 27.2 -2.1**
RAGZ S **Sn 18 14 35.9 -3.8**
RIGZ Rimuhau 6.17 213 P **Pn 18 13 27.0 -2.3**
RIGZ S **Sn 18 14 36.4 -3.3**
MARZ Manawahe 6.18 223 P **Pn 18 13 30.0 +0.5**
TGRZ Tauranga 6.26 227 P **Pn 18 13 33.0 +2.5**
PRGZ Paritu Road 6.30 211 P **Pn 18 13 29.2 -1.9**
SNGZ Shannon Statio 6.43 215 P **Pn 18 13 32.7 -0.2**
TARZ Mount Tarawera 6.45 222 P **Pn 18 13 33.7 +0.5**
RTZ Ruatahuna 6.48 218 P **Pn 18 13 32.0 -1.6**
MHGZ Mahia Peninsul 6.48 210 P **Pn 18 13 30.0 -3.6**
MUGZ Murupara 6.48 219 P **Pn 18 13 31.7 -1.9**
MUGZ S **Sn 18 14 43.0 -4.3**
RRRZ Republican Roa 6.52 222 P **Pn 18 13 33.3 -0.9**
KMRZ Kaimai 6.53 227 P **Pn 18 13 35.0 +0.8**
RAHZ Arahi 6.66 215 P **Pn 18 13 36.0 0.0**
WHHZ Waihua 6.71 214 P **Pn 18 13 37.0 +0.2**
MTHZ Maungataniwha 6.73 217 P **Pn 18 13 34.9 -2.1**
ALRZ Allen Road 6.77 221 P **Pn 18 13 36.4 -1.2**
NMHZ Naumai 6.93 216 P **Pn 18 13 39.9 0.0**
ARHZ Aropaoanui 6.97 214 P **Pn 18 13 39.8 -0.5**
TLZ Tolley Road 7.08 226 P **Pn 18 13 43.0 +1.1**
BKZ Black Stump Fm 7.14 217 **Pn 18 13 39.5 -3.2**
BKZ Black Stump Fm 7.14 217 P **Pn 18 13 41.3 -1.4**
OUZ Omahuta 7.15 254 Pn 18 13 45.0 +2.2
MCHZ McNeill Hill 7.26 215 P **Pn 18 13 42.3 -2.0**
RATZ Rangitukua 7.30 222 P Pb 18 13 53.2 -12
KWHZ Kaweka Forest 7.37 216 P **Pn 18 13 43.5 -2.4**
KAHZ Kahuranaki 7.46 212 P **Pn 18 13 42.5 -4.5**
KRVZ Karewarewa 7.54 221 P **Pn 18 13 48.0 -0.2**
KRHZ Kereru 7.57 215 P **Pn 18 13 45.9 -2.6**
WTVZ West Tongariro 7.58 221 P **Pn 18 13 50.1 +1.3**
BHHZ Black Hill Sta 7.60 217 P **Pn 18 13 46.9 -2.1**
HIZ Hauiti 7.61 228 P Pn 18 13 53.1 +4.0
NGZ Ngauruhoe 7.62 221 P **Pn 18 13 49.2 -0.1**
TWVZ Taurewa 7.63 222 P **Pn 18 13 48.2 -1.3**
TUVZ Tukino 7.65 220 P **Pn 18 13 49.9 +0.1**
FWVZ Far West T-bar 7.70 221 P **Pn 18 13 50.3 -0.2**
MOVZ Moawhango 7.70 219 P **Pn 18 13 48.9 -1.5**
TRVZ Turoa 7.73 221 P **Pn 18 13 50.9 -0.1**
PKVZ Pokaka 7.84 221 P **Pn 18 13 53.1 +0.9**
PNHZ Pukenui 7.86 215 P **Pn 18 13 49.9 -2.6**
PRHZ Porangahau 7.95 211 P **Pn 18 13 51.1 -2.6**
ANWZ Angora Road 8.18 211 P **Pn 18 13 54.6 -2.3**
DVHZ Dannevirke 8.18 213 P **Pn 18 13 54.3 -2.6**
WAZ Wanganui 8.36 220 P **Pn 18 13 58.8 -0.6**
POWZ Post Office Ro 8.44 214 P **Pn 18 14 02.0 +1.5**
BFZ Birch Farm 8.46 211 P **Pn 18 13 56.0 -4.7**
PRWZ Pori Road 8.48 213 P **Pn 18 13 59.6 -1.4**
PKE Pukeiti 8.56 227 P **Pn 18 14 04.8 +2.6**
TIWZ Tintock 8.69 212 P **Pn 18 14 02.2 -1.8**
MSWZ Moikau Station 9.49 213 P **Pn 18 14 12.3 -2.7**
BHW Baring Head 9.66 214 P **Pn 18 14 14.1 -3.1**
TUWZ Tuamarina 10.13 217 P **Pn 18 14 20.6 -3.0**
THZ Tophouse 10.90 219 P **Pn 18 14 31.3 -2.9**
KHZ Kahutara 11.07 215 P **Pn 18 14 33.9 -2.5**
INZ Inchbonnie 12.35 219 P **Pn 18 14 52.6 -1.4**
OXZ Oxford 12.48 216 P **Pn 18 14 53.1 -2.7**
WVZ Waitaha Valley 12.97 220 P **Pn 18 15 00.3 -2.1**
RPZ Rata Peaks 13.25 217 P **Pn 18 15 02.1 -4.3**
2.9nm,0.3s,baz=96,slow=1.4,SNR=12
RPZ S Sn 18 17 21.8 -12
7.3nm,0.3s,baz=307,slow=22,SNR=18
MSVF Nonsavu 16.17 346 *i*P **P 18 15 46.2 -2.5**
DZM Mont Dzumac 17.89 306 *e*P **P 18 16 10.7 +2.9**
65nm,1.1s
DZM *e*LQ LQ 18 19 31.8
2μm,41.1s
DZM *e*LR LR 18 20 16.9
comp=Z,688nm,32.5s
DZM Mont Dzumac 17.89 306 P **P 18 16 10.1 +2.3**
0.6nm,0.3s,baz=130,slow=15,SNR=9.4
DZM LR LR 18 22 01.2
comp=Z,326nm,19.2s,baz=192,slow=34
RAR Rarotonga 20.28 57 P **P 18 16 34.2 +0.3**
13nm,0.8s,baz=204,slow=7.5,SNR=4.2
RAR LR LR 18 22 47.1
comp=Z,154nm,20.2s,baz=258,slow=31
RAR Rarotonga 20.28 57 P **P 18 16 32.7 -1.2**
RAR Rarotonga 20.28 57 P **P 18 16 32.7 -1.2**
RAR pmax pmax
comp=Z,33nm,1.1s
AFI Afiamalu 20.37 18 P Pn 18 16 36.6 -0.4
comp=Z,52nm,0.8s,baz=277,slow=3.9,SNR=6.8
AFI Afiamalu 20.37 18 P **P 18 16 33.2 -1.8**
AFI IAmb IAmb 18 16 43.5
comp=Z,82nm,1.1s
AFI Afiamalu 20.37 18 P **P 18 16 33.2 -1.8**
AFI pmax pmax
comp=Z,82nm,1.2s
TBI Tubuai 26.99 75 *e*T T 18 45 47.2
comp=Z,8.4nm,0.4s
EIDS Eidsvold 28.07 279 P **P 18 17 52.3 +2.6**
baz=28,SNR=4.7
EIDS Eidsvold 28.07 279 P **P 18 17 49.6 -0.1**
RMQ Roma 29.56 275 P P 18 18 05.2 +2.2
baz=30,SNR=4.3
PAE Paea 29.98 65 *e*T T 18 49 33.4
comp=Z,2.0nm,0.3s
PPT2 Papeete2 30.03 65 *e*S S 18 22 56.5 -8.6
comp=Z,32nm,24.8s
PPT2 *e*LQ LQ 18 24 03.4
comp=Z,358nm,25.5s
PPT2 *e*LR LR 18 25 35.6
comp=Z,190nm,22.0s
PPT2 Papeete2 30.03 65 *e*T T 18 49 36.5
comp=Z,4.0nm,0.3s
PPTF Pamatai, Papee 30.04 65 P **P 18 18 05.9 -1.4**
PPTF IAmb IAmb 18 18 56.1
comp=Z,79nm,1.5s
PPT Papeete 30.04 65 LR LR 18 27 30.6
comp=Z,131nm,20.6s,baz=237,slow=31
PPT Papeete 30.04 65 P **P 18 18 07.3 0.0**
PPT Papeete 30.04 65 P **P 18 18 07.3 0.0**
CMSA Cobar Meteorol 30.59 264 P P 18 18 15.2 +3.2
baz=31,SNR=6.3
VAH Vaihoa 32.95 64 *e*T T 18 53 15.8
comp=Z,4.0nm,0.2s
STKA Stephens Creek 33.90 262 P **P 18 18 42.0 +0.9**
comp=Z,1.4nm,0.6s,baz=103,slow=13,SNR=3.5
STKA PcP **PcP 18 21 19.4 -0.2**
comp=Z,5.0nm,0.9s,baz=48,slow=3.1,SNR=4.2
STKA LR LR 18 32 34.5
comp=Z,361nm,18.3s,baz=58,slow=36
STKA Stephens Creek 33.90 262 **PcP 18 21 20.1 +0.5**
CTA Charters Tower 34.44 284 P **P 18 18 47.4 +1.5**
comp=Z,5.5nm,0.5s,baz=117,slow=11,SNR=14
HTT Hallett 35.74 258 P **P 18 18 57.9 +0.8**
baz=36,SNR=4.6
MTSU Mount Surprise 37.02 285 P **P 18 19 09.9 +1.8**
baz=37,SNR=7.7
BBOO Buckleboo 38.22 258 P **P 18 19 16.9 -1.2**
QIS Mount Isa 39.67 278 P **P 18 19 31.5 +1.2**
baz=40,SNR=5.4
PMG Port Moresby 40.06 299 LR LR 18 34 49.8
comp=Z,157nm,20.0s,baz=136,slow=34
PMG Port Moresby 40.06 299 *i*P **P 18 19 32.9 -0.7**
PMG pmax pmax
comp=Z,57nm,1.4s
COEN Coen 40.25 290 P P 18 19 39.2 +4.1
baz=40,SNR=3.9
COEN Coen 40.25 290 P **P 18 19 35.9 +0.7**
COEN IAmb IAmb 18 19 57.0
comp=Z,42nm,1.5s
KRVT Keravat (AS076 40.35 310 P **P 18 19 37.2 +1.2**
comp=Z,53nm,0.5s,baz=240,slow=19,SNR=3.5
AS31 Alice Springs 43.05 270 P **P 18 19 57.9 -0.2**
ASAR Alice Springs 43.05 270 P **P 18 19 57.6 -0.5**
comp=Z,8.5nm,0.7s,baz=111,slow=7.0,SNR=67
ASAR PcP **PcP 18 21 49.1 +0.9**
comp=Z,2.2nm,0.6s,baz=114,slow=3.7,SNR=4.4
ASAR S **S 18 26 19.0 -4.5**
comp=Z,1.9nm,0.9s,baz=119,slow=16,SNR=6.8
ASAR Alice Springs 43.05 270 P **P 18 19 57.4 -0.7**
ASAR Alice Springs 43.05 270 P **P 18 19 57.4 -0.7**
WR0 Warramunga Arr 44.14 275 P **P 18 20 06.8 -0.2**
WR0 IAmb IAmb 18 20 21.9
comp=Z,28nm,0.8s
WB2 Warramunga Arr 44.31 275 P **P 18 20 08.2 -0.1**
WB2 IAmb IAmb 18 20 23.2
comp=Z,35nm,0.7s
WRAB Tennant Creek 44.31 275 P **P 18 20 08.0 -0.4**
WRAB Tennant Creek 44.31 275 *i*P **P 18 20 07.2 -1.1**
WRAB pmax pmax
comp=Z,13nm,0.7s
WRA Warramunga Arr 44.32 275 P **P 18 20 07.8 -0.6**
comp=Z,12nm,0.7s,baz=119,slow=7.5,SNR=38
WRA PcP **PcP 18 21 52.9 +0.4**
comp=Z,2.6nm,0.8s,baz=111,slow=3.1,SNR=2.9
WRA S **S 18 26 37.9 -4.2**
comp=Z,1.1nm,1.0s,baz=32,slow=16,SNR=5.1
WRA LR LR 18 38 13.6
comp=Z,148nm,19.7s,baz=130,slow=36
WRA Warramunga Arr 44.32 275 P **P 18 20 08.3 -0.1**
WB0 Warramunga Arr 44.36 276 P **P 18 20 08.5 -0.2**
WB0 IAmb IAmb 18 20 21.7
comp=Z,34nm,0.7s
VNDA Vanda 44.95 186 LR LR 18 35 36.8
comp=Z,82nm,19.0s,baz=26,slow=31
WRKA Warakurna 47.17 266 P **P 18 20 30.0 -0.9**
baz=47,SNR=17
KDU Kakadu 49.55 283 P **P 18 20 51.1 +1.8**
baz=50,SNR=6.5
KNRA Kununurra 51.03 277 P **P 18 21 00.4 -0.1**
baz=51,SNR=7.5
FITZ Fitzroy Crossi 52.44 272 P **P 18 21 11.0 0.0**
baz=53,SNR=7.6
FITZ Fitzroy Crossi 52.44 272 P **P 18 21 10.8 -0.2**
comp=Z,4.9nm,0.6s,baz=156,slow=11,SNR=10.0
MEEK Meekatharra 54.55 259 P **P 18 21 28.7 +2.2**
baz=55,SNR=6.2
QSPA South Pole Qui 56.55 180 P **P 18 21 42.4 +2.0**
comp=Z,21nm,1.0s,baz=36,slow=1.4,SNR=49
QSPA South Pole Qui 56.55 180 P **P 18 21 41.9 +1.5**
QSPA IAmb IAmb 18 21 43.5
comp=Z,26nm,1.1s
MAW Mawson 69.36 201 P **P 18 23 07.8 +2.5**
comp=Z,3.0nm,0.7s,baz=84,slow=9.2,SNR=3.0
MAW Mawson 69.36 201 P **P 18 23 07.8 +2.5**
MAW pmax pmax
comp=Z,2.0nm,0.9s
SYO Syowa Base 74.04 193⇓*i*P **P 18 23 32.8 -0.6**
SYO Syowa Base 74.04 193⇑*e*pP pP 18 23 41.0 +5.3
SNAA Sanae 74.99 178 P **P 18 23 39.7 +0.6**
SNAA Sanae 74.99 178 P **P 18 23 39.7 +0.6**
SNAA Sanae 74.99 178 P **P 18 23 39.7 +0.6**
SNAA pmax pmax
comp=Z,13nm,1.0s
VNA3 Neumayer Olymp 75.15 176 P **P 18 23 40.3 +0.4**
VNA2 Neumayer--Watz 75.58 177 P **P 18 23 43.2 +0.8**
baz=176,slow=4.7
VNA1 Neumayer--Stat 75.81 176 P **P 18 23 44.5 +0.8**
PLCA Paso Flores 80.34 133 P **P 18 24 10.9 +1.4**
comp=Z,5.2nm,1.1s,baz=234,slow=7.7,SNR=5.2
PLCA Paso Flores 80.34 133 IAmb IAmb 18 25 54.9
comp=Z,37nm,1.9s
MJAR Matsushiro Arr 80.86 326 P P 18 24 15.6 +3.7
comp=Z,0.4nm,0.6s,baz=40,slow=52,SNR=2.9
MJAR Matsushiro Arr 80.86 326 P P 18 24 15.6 +3.6
MJAR pmax pmax
comp=Z,3.0nm,1.3s
GSI Gunungsitoli 86.08 274 P **P 18 24 39.9 +0.5**
KSRS Korea Array 86.77 320 P P 18 24 47.8 +5.7
comp=Z,2.2nm,0.7s,baz=146,slow=6.0,SNR=7.7
MONP2 Monument Peak 87.88 48 P **P 18 24 49.2 +1.3**
baz=227
MURC Murrieta 87.89 47 P **P 18 24 50.4 +2.7**
baz=227
ARVC Arvin 87.96 45 P **P 18 24 50.5 +2.5**
baz=226
BFSC Mount Baldy Ra 88.04 46 P **P 18 24 50.5 +1.9**
baz=226
EDW2 Edwards Air Fo 88.28 45 P **P 18 24 51.8 +2.2**
baz=226,SNR=5.4
VES Vestal, Richgr 88.31 44 P **P 18 24 51.5 +1.9**
baz=226,SNR=6.4
NJ2 Nanjing 88.32 311 *e*P P 18 24 52.8 +3.1
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
ISA Isabella, Lake 88.54 45 P **P 18 24 52.2 +1.4**
ISA IAmb IAmb 18 24 54.0
comp=Z,14nm,0.9s
ISA Isabella, Lake 88.54 45 P **P 18 24 52.2 +1.4**
ISA pmax pmax
comp=Z,14nm,0.9s
ISA Isabella, Lake 88.54 45 P **P 18 24 53.1 +2.3**
baz=226,SNR=12
LRMC Laurel Mtn Rad 88.88 45 P **P 18 24 54.8 +2.3**
baz=226,SNR=7.3
PETK Petropavlovsk- 88.88 346 P **P 18 24 53.4 +1.5**
comp=Z,7.9nm,0.8s,baz=139,slow=7.9,SNR=8.9
PETK Petropavlovsk- 88.88 346 P **P 18 24 53.0 +1.1**
PETK Petropavlovsk- 88.88 346 P **P 18 24 53.0 +1.1**
BELC Belle Mtn. Jos 88.89 47 P **P 18 24 55.2 +2.6**
baz=227,SNR=6.6
BC3 Big Chuckawall 88.99 48 P **P 18 24 56.0 +3.0**
baz=228,SNR=5.6
HEC Hector,Ludlow 89.24 46 P **P 18 24 56.6 +2.5**
baz=227
GSC Goldstone, Bar 89.28 46 P **P 18 24 55.9 +1.6**
GSC IAmb IAmb 18 24 57.4
comp=Z,14nm,1.0s
GSC Goldstone, Bar 89.28 46 P **P 18 24 55.9 +1.6**
GSC pmax pmax
comp=Z,14nm,1.0s
GSC Goldstone, Bar 89.28 46 P **P 18 24 56.7 +2.4**
baz=227,SNR=7.8
CWC Cottonwood Cre 89.31 44 P **P 18 24 56.6 +2.0**
baz=226
O02D Mt. Diablo Mer 89.34 39 P **P 18 24 57.2 +2.7**
baz=223
MPMC Manual Prospec 89.39 45 P **P 18 24 57.1 +2.1**
baz=226,SNR=6.7
IRM Iron Mountain 89.52 48 P **P 18 24 58.3 +2.9**
baz=228,SNR=12
GMRC Granite Mounta 89.62 47 P **P 18 24 58.6 +2.6**
baz=228
Y12C Blythe 89.63 48 P **P 18 24 58.6 +2.8**
baz=228
TUQ Turquoise Moun 89.90 46 P **P 18 24 59.7 +2.4**
baz=227
SHOC Shoshone, Teco 90.00 46 P **P 18 24 59.9 +2.3**
baz=227
FURC Furnace Creek, 90.04 45 P **P 18 25 00.4 +2.7**
baz=227
GRAC Grapevine Rang 90.11 44 P **P 18 25 00.5 +2.4**
baz=227
PDMCI Parker Dam,Lak 90.23 48 P **P 18 25 01.5 +2.8**
baz=228
PNTR Pine Nut 90.29 42 P **P 18 25 01.0 +1.9**
PNTR IAmb IAmb 18 25 01.8
comp=Z,10nm,0.8s
GO02 Mina Guanaco 90.34 121 P **P 18 24 59.6 -0.4**
YERR Yerington 90.42 42 P **P 18 25 01.1 +1.4**
NVAR Mina Array Bea 90.55 43 P **P 18 25 02.2 +1.8**
comp=Z,4.8nm,0.8s,baz=221,slow=8.0,SNR=32
NV11 Mina Array Sit 90.64 43 P **P 18 25 02.5 +1.8**
NV11 IAmb IAmb 18 25 03.2
comp=Z,8.3nm,1.1s
TPNV Topopah Spring 90.73 45 P **P 18 25 02.8 +1.6**
TPNV IAmb IAmb 18 25 04.2
comp=Z,7.0nm,0.8s
TPNV Topopah Spring 90.73 45 P **P 18 25 02.8 +1.6**
TPNV pmax pmax
comp=Z,7.0nm,0.8s
TPNV Topopah Spring 90.73 45 P **P 18 25 03.3 +2.1**
baz=227
TUC Tucson 91.08 51 P **P 18 25 05.6 +2.8**
baz=230
KVN Kaiserville 91.10 42 P **P 18 25 04.4 +1.5**
KVN IAmb IAmb 18 25 05.2
comp=Z,7.5nm,1.1s
KVN Kaiserville 91.10 42 P **P 18 25 04.4 +1.5**
KVN pmax pmax
comp=Z,8.0nm,1.1s
MOD Modoc Plateau 91.89 39 P **P 18 25 08.0 +1.6**
MOD IAmb IAmb 18 25 08.7
comp=Z,6.1nm,0.9s
R11A Troy Canyon, C 92.06 44 P **P 18 25 08.9 +1.6**
baz=228

I04A Tendick Farm, 92.17 37 P P 18 25 09.0 +1.5
baz=224
J05D Fort Rock, OR 92.39 38 P P 18 25 10.7 +2.0
baz=224
WUAZ Wupatki 92.75 49 P P 18 25 13.1 +2.5
baz=230
U15A North Rim 92.77 47 P P 18 25 13.6 +2.8
U15A IAmb IAmb 18 25 13.7
comp=Z,5.8nm,1.1s
KNB Kanab 92.82 47 P P 18 25 13.5 +2.6
KNB Kanab 92.82 47 P P 18 25 13.5 +2.6
KNB pmax pmax
comp=Z,4.0nm,0.9s
PINE Pine Mountain 92.90 37 P P 18 25 12.9 +1.8
PINE IAmb IAmb 18 25 13.9
comp=Z,11nm,0.8s
PB11 IPOC Station P 93.57 116 P P 18 25 15.2 +0.4
KLR Kul'dur 93.77 330 iP P 18 25 15.8 +1.1
KLR pmax pmax
comp=Z,3.0nm,1.5s
MNMC Minye Minye 94.00 116 P P 18 25 17.6 +0.6
TXAR Lajitas Array 94.08 57 P P 18 25 18.5 +1.7
comp=Z,0.6nm,0.9s,baz=195,slow=10.0,SNR=4.5
TXAR LR LR 18 59 17.3
comp=Z,43nm,21.3s,baz=0.0,slow=30
MNTX Cornudas Mount 94.30 55 P P 18 25 19.2 +1.6
baz=233
CMAR Chiang Mai Arr 94.45 289 P P 18 25 20.2 +1.6
comp=Z,0.3nm,0.6s,baz=147,slow=1.8,SNR=4.7
CMAR PP PP 18 29 09.3 +2.8
comp=Z,0.7nm,1.0s,baz=135,slow=5.1,SNR=4.8
CMAR Chiang Mai Arr 94.45 289 eP P 18 25 20.7 +2.1
BBB Bella Bella 95.88 28 LR LR 18 58 12.1
comp=Z,74nm,21.1s,baz=138,slow=29
LPAZ La Paz 96.83 115 P 18 25 31.6
comp=Z,1.2nm,0.6s,baz=188,slow=4.1,SNR=5.4
LPAZ La Paz 96.83 115 IAmb IAmb 18 25 32.2
comp=Z,1.8nm,0.8s
LPAZ La Paz 96.83 115 eP 18 25 32.5
LPAZ pmax pmax
comp=Z,1.0nm,0.7s
CD2 Chengdu 97.78 302 P Pdif 18 25 33.9 +0.3
CPUP Villa Florida 98.00 129 LR LR 19 04 58.8
comp=Z,69nm,18.5s,baz=215,slow=32
PDAR Pinedale Array 98.41 44 P Pdif 18 25 37.4 +1.1
comp=Z,0.6nm,0.9s,baz=211,slow=5.2,SNR=4.8
HHC Hu-ho-hao-te 98.44 314 eP Pdif 18 25 39.1 +2.8
HHC pmax pmax
comp=Z,2.0nm,1.3s
HHC pmax pmax
comp=Z,62nm,7.5s
BILL Bilibino 101.99 354 iP Pdif 18 25 51.2 -0.1
BILL pmax pmax
comp=Z,1.0nm,1.3s
YKA Yellowknife Ar 108.29 26 PP PKiKP 18 30 55.0 +29
comp=Z,0.2nm,0.9s,baz=265,slow=7.4,SNR=4.0
WMQ Urumqi 115.17 307 ePKP PKiKP 18 30 39.8 +0.5
WMQ LR LR
comp=Z,640nm,17.7s
MKAR Makanchi Array 119.79 309 PKP PKiKP 18 30 47.6 -0.4
comp=Z,0.7nm,0.7s,baz=90,slow=2.4,SNR=7.5
ZALV Zalesovo Beam 120.39 317 PKP PKiKP 18 30 48.0 -1.0
comp=Z,0.6nm,0.5s,baz=9.5,slow=0.9,SNR=4.3
KURBB Kurchatov Arra 123.25 312 PKP PKiKP 18 30 54.3 -0.4
comp=Z,1.8nm,0.7s,baz=111,slow=1.9,SNR=23
BVAR Borovoye Array 128.65 314 PKP PKiKP 18 31 05.3 -0.1
comp=Z,0.9nm,0.6s,baz=89,slow=3.1,SNR=7.5
GEYT Alibeck 134.84 292 PKP PKiKP 18 31 18.3 -0.2
comp=Z,1.0nm,0.7s,baz=201,slow=7.8,SNR=4.9
GEYT SKP 18 34 49.4
comp=Z,4.6nm,1.1s,baz=192,slow=2.7,SNR=14
ARU Arti 135.51 319 PKP PKiKP 18 31 18.1 -1.1
comp=Z,0.7nm,0.5s,baz=210,slow=2.9,SNR=4.8
AKTO Aktyubinsk 136.20 310 PKP PKiKP 18 31 20.7 0.0
comp=Z,1.1nm,0.6s,baz=77,slow=8.3,SNR=3.4
ARCES ARCESS Array B 141.68 347 PKhKP PKPpre 18 31 22.8
comp=Z,5.0nm,0.9s,baz=13,slow=4.8,SNR=3.9
ARCES PKP PKiKP 18 31 30.4 -0.9
comp=Z,7.4nm,0.9s,baz=350,slow=5.0,SNR=5.4
ARCES ARCESS Array B 141.68 347 ePKIKP PKiKP 18 31 31.5 +0.1
ARCES pmax pmax
comp=Z,7.0nm,0.9s
KLMR Klimovskoe 143.53 330 ePKPdf PKPbc 18 31 28.0 -1.4
KLMR AMP 18 31 30.6
comp=Z,19nm,1.3s
KLMR Klimovskoe 143.53 330 ePKHKP PKPpre 18 31 28.0
KLMR pmax pmax
comp=Z,19nm,1.3s
ZEI Tsey 146.11 298 ePKIKP PKPab 18 31 37.0 -2.0
ZEI pmax pmax
comp=Z,20nm,1.0s
VRH Novokhopyorsk 146.30 314 ePKP2 PKPab 18 31 38.0 -1.1
VRH pmax pmax
comp=Z,30nm,0.7s
GOF Gofitskoye 146.59 302⇑ePKP2 PKPab 18 31 40.3 -1.9
GOF pmax pmax
comp=Z,42nm,1.5s
KBZ Khabaz 146.80 300 PKPbc PKiKP 18 31 40.7 -2.0
comp=Z,6.0nm,0.9s,baz=121,slow=3.6,SNR=10
MOS Moscow 146.91 323 ePKP2 PKiKP 18 31 44.6 +2.1
KIV Kislovodsk 146.94 300 ePKP2 PKiKP 18 31 43.6 +0.5
KIV pmax pmax
comp=Z,37nm,1.1s
OBN Obninsk 147.73 322 iPKIKP PKPbc 18 31 39.6 -2.6
OBN pmax pmax
comp=Z,11nm,1.0s
VSR Storozhevoye 147.83 314 ePKIKP PKPbc 18 31 41.7 -0.9
VSR pmax pmax
comp=Z,20nm,1.1s
FIA1 FINESS Array S 148.10 338 PKPbc PKiKP 18 31 43.5 -1.3
FINES FINESS Array B 148.11 338 PKPbc PKiKP 18 31 43.1 -1.7
comp=Z,15nm,0.7s,baz=45,slow=3.7,SNR=61
FINES FINESS Array B 148.11 338 PKiKP 18 31 43.3 -1.5
FINES FINESS Array B 148.11 338 ePKP2 PKiKP 18 31 43.1 -1.7
FINES pmax pmax
comp=Z,6.0nm,0.9s
ASF Jabal al Asfar 150.75 277 PKPbc PKiKP 18 31 51.8 +0.5
comp=Z,7.8nm,0.8s,baz=102,slow=3.0,SNR=9.3
NC303 NORSAR Array S 151.68 350 PKiKP 18 31 52.5 +0.3
EIL Elat 151.75 271 PKPbc PKiKP 18 31 53.9 +0.5
comp=Z,12nm,0.7s,baz=299,slow=4.2,SNR=11
EIL PKPab sPKPab 18 32 02.4 -3.0
comp=Z,12nm,0.9s,baz=11,slow=9.0,SNR=4.4
NB2 NORSAR Subarra151.88 351 PKP PKiKP 18 31 52.7 0.0
comp=Z,3.0nm,0.6s,baz=15,slow=2.5
NOA NORSAR Array B151.88 351 PKPbc PKiKP 18 31 52.5 -0.2
comp=Z,4.7nm,0.6s,baz=13,slow=4.1,SNR=17
NOA PKPab sPKPab 18 32 03.3 -1.3
comp=Z,1.6nm,0.5s,baz=14,slow=4.1,SNR=6.0
LIC Lamto 152.01 165 ePKP1 PKiKP 18 31 53.8 -0.6
comp=Z,25nm,0.8s
MMAI Mount Meron Ar 152.15 278 PKPbc PKiKP 18 31 55.4 +1.2
comp=Z,6.3nm,0.6s,baz=82,slow=6.2,SNR=9.8
MMAI PKPab pPKPab 18 32 03.9 -2.2
comp=Z,8.3nm,0.6s,baz=91,slow=7.5,SNR=7.7
KIC Kosan Boka 152.21 165 ePKP1 PKiKP 18 31 54.6 -0.2
comp=Z,35nm,1.2s
TIC Toumodi 152.42 165 ePKP1 PKiKP 18 31 54.7 -0.5
DBIC Dimbokro 152.48 165 PKPbc PKiKP 18 31 55.3 0.0
comp=Z,3.9nm,0.6s,baz=179,slow=4.0,SNR=8.9
DBIC PKPab PKPab 18 32 05.5 +0.3
comp=Z,3.6nm,0.7s,baz=126,slow=5.1,SNR=6.0
AKASG Malin Array Be 153.76 319 PKPbc PKiKP 18 31 57.2 +0.4
comp=Z,0.3nm,0.4s,baz=66,slow=2.4,SNR=6.3
AKASG PKPab PKPab 18 32 06.8 -2.8
comp=Z,4.2nm,0.6s,baz=64,slow=2.4,SNR=20
BRTR Keskin Array B 153.98 293 PKPbc PKiKP 18 31 60.0 +2.1
comp=Z,2.8nm,0.5s,baz=99,slow=1.7,SNR=4.4
BRTR PKPab sPKPab 18 32 13.2 -1.4
comp=Z,3.3nm,0.6s,baz=153,slow=3.6,SNR=8.2
TORD Torodi Ar. Bea 159.66 179 PKP PKPdf 18 31 58.5 +0.9
comp=Z,0.7nm,0.8s,baz=346,slow=0.6,SNR=3.5
TORD PKPab pPKPab 18 32 36.5 -1.7
comp=Z,2.8nm,0.8s,baz=143,slow=3.4,SNR=4.8
VYHS Vyhne 160.49 325 ePKP2 PKPab 18 32 39.4 +0.7
VYHS Vyhne 160.49 325 ePKP PKPab 18 32 39.4 +0.7
CLL Collm 160.55 339 ePKPab PKPab 18 32 39.0 +0.2
CLL epPKPab sPKPab 18 32 49.0 +7.0
CLL e 18 33 01.0
CLL Lm MLR 19 48 00.0
comp=Z,200nm,19.8s
CLL Collm 160.55 339 ePKP2 PKPab 18 32 39.0 +0.2
BRG Berggiesshubel 160.63 337 ePKP PKPab 18 32 39.6 +0.4
comp=Z,12nm,1.5s
BRG Berggiesshubel 160.63 337 ePKP2 PKPab 18 32 39.6 +0.4
BRG pmax pmax
comp=Z,12nm,1.5s
IDI Anoyia 161.06 282 PKPab PKPab 18 32 41.7 -0.1
comp=Z,27nm,1.1s,baz=60,slow=12,SNR=3.4
KHC Kasperske Hory 162.23 334 ePKPAB PKPab 18 32 46.7 +0.4
KHC Kasperske Hory 162.23 334 ePKP2 PKPab 18 32 46.7 +0.4
GERES GERESS Array B 162.42 334 PKPab PKPab 18 32 47.5 +0.3
comp=Z,1.1nm,1.0s,baz=9.2,slow=4.2,SNR=4.3

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*OMAN **02** 18:15:40.7±2.0,28°.37N×57°.28E, h20km, ml4.2/16, Error ellipse: s-maj=21.0km s-min=9.5km az=29.0*
*THR **02** 18:15:42.9±0.4,28°.12N×57°.12E, h14km±4km, ML4.4*
*TEH **02** 18:15:45.5,28°.28N×57°.09E, h16km, ML4.3*
*NEIC **02** 18:15:47.0±1.9,28°.16N±0°.05×57°.1E±0°.1, h58km±8km, Error ellipse: s-maj=13.2km s-min=6.9km az=94.0*
*IDC **02** 18:15:47.7±2.7,28°.28N×57°.07E, h61km±25km, mb3.8/24, mb1 3.9/27, mb1mx3.8/45, mbtmp4.1/27, ML4.0/3, MS3.4/6, Ms1 3.4/6, ms1mx3.0/61, Error ellipse: s-maj=13.0km s-min=11.7km az=159.0*
*DSN **02** 18:15:49.8±1.5,27°.81N×57°.23E, h10km, ML4.2/10, Error ellipse: s-maj=39.6km s-min=11.5km az=127.0*
ISC 02 18:15:43.6±0.8,**28°.13N**±0°.02×**57°.18E**±0°.04,**h26**km±5km, **n186**,σ**2°36**/194,**mb4.2**/35,**Southern Iran**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KHNJ Kahnooj 0.50 111 ePg Pn 18 15 57.6 +2.4
NIAN Nian 0.64 208 ePg Pn 18 16 00.6 +3.5
NIAN e 18 16 14.1
GENO Geno 1.15 231 eSg Sb 18 16 25.5 +6.0
GENO ePg Pb 18 16 07.8 +2.9
GENO e 18 16 28.8
BNDS Bandar-Abbas 1.15 231 ePg Pn 18 16 03.5 -0.7
BNDS Bandar-Abbas 1.15 231 ePg Pn 18 16 03.5 -0.7
NGRK Negar Kerman 1.56 346 ePg Pb 18 16 12.2 +0.1
NGRK e 18 16 34.6
CHMN Cheshme madani 1.76 10 ePg Pb 18 16 15.7 +0.3
CHMN e 18 16 41.1
KRBR Kerman 1.88 349 ePn Pb 18 16 17.0 -0.5
KRBR eSg Sb 18 16 42.5 +1.7
KRBR IAML 18 16 46.5
comp=N,4μm,0.2s
KRBR IAML 18 16 47.5
comp=E,5μm,0.2s
KRBR Kerman 1.88 349 ePn Pb 18 16 17.0 -0.5
TVBK TV Kerman 1.89 349 ePn Pb 18 16 17.5 -0.1
SHME Shamm 2.27 204 eP Pb 18 16 22.5 -1.4
SNR=54
SHME S Sb 18 16 49.9 -1.6
SHME Shamm 2.27 204 ePn Pb 18 16 22.8 -1.1
KHGB Koh Gabri 2.32 345 ePn Pb 18 16 24.5 -0.5
KHGB e 18 16 57.6
BANOM Banah 2.33 200 eP Pb 18 16 23.7 -1.3
SNR=94
BANOM Banah 2.33 200 P Pb 18 16 23.5 -1.5
BANOM S Sb 18 16 52.8 -0.5
BANOM Banah 2.33 200 ePn Pb 18 16 23.5 -1.5
JSK1 Jask 2.54 168 ePn Pb 18 16 30.6 +2.2
MSFE Esma-Masafi 2.90 198 eP Pb 18 16 32.2 -2.5
SNR=6.4
MSFE Esma-Masafi 2.90 198 ePn Pb 18 16 32.6 -2.1
UMQ Umm Al-Quwin 2.92 208 eP Pb 18 16 33.2 -1.8
SNR=6.3
UMQ Umm Al-Quwin 2.92 208 P Pb 18 16 33.4 -1.7
UMQ S Sb 18 17 09.7 -0.7
MDH Madha 2.92 196 P Pn 18 16 31.6 +3.1
MDH Madha 2.92 196 P Pn 18 16 31.2 +2.7
MDH Madha 2.92 196 ePn Pn 18 16 31.9 +3.4
JHRM Jahrom 3.19 278 ePn Pn 18 16 35.2 +2.9
UOSS Minazif 3.29 196 P Pn 18 16 37.4 +3.9
UOSS Minazif 3.29 196 Pb 18 16 38.2 -3.0
UOSS Minazif 3.29 196 P Pn 18 16 36.5 +3.1
UOSS Minazif 3.29 196 ePn Pb 18 16 38.5 -2.8
NAZ Nazwa, Dubai 3.41 204 P Pb 18 16 39.7 -3.7
NAZ Nazwa, Dubai 3.41 204 P Pb 18 16 39.7 -3.7
NAZ S Sn 18 17 17.8 +3.1
NAZ Nazwa, Dubai 3.41 204 ePn Pb 18 16 39.9 -3.4
HATD Hatta, Dubai 3.42 196 P Pb 18 16 40.3 -3.2
HATD Hatta, Dubai 3.42 196 P Pn 18 16 36.5 +1.1
HATD Hatta, Dubai 3.42 196 ePn Pb 18 16 40.7 -2.8
SZD1 Zahaedan-tmp 3.51 66 ePn Pb 18 16 41.0 -4.1
ASHO Ashiyiah 3.57 197 iP Pn 18 16 41.6 +4.1
SNR=16
ASHO Ashiyiah 3.57 197 P Pn 18 16 40.9 +3.4
ASHO Ashiyiah 3.57 197 ePn Pn 18 16 41.3 +3.8
FAQ Al Faqa, Dubai 3.66 203 P Pb 18 16 43.4 -4.2
FAQ Al Faqa, Dubai 3.66 203 P Pn 18 16 42.5 +4.0
FAQ S Sn 18 17 24.0 +3.2
FAQ Al Faqa, Dubai 3.66 203 ePn Pb 18 16 43.4 -4.2
IBAF Bafgh 3.72 338 ePn Pn 18 16 42.1 +2.5
ISRV Sarvestan 3.78 290 ePn Pn 18 16 42.6 +2.1
ASUD Al Ashush, Dub 3.86 206 iP Pn 18 16 46.0 +4.6
SNR=12
ASUD Al Ashush, Dub 3.86 206 P Pn 18 16 45.9 +4.6
ASUD Al Ashush, Dub 3.86 206 ePn Pn 18 16 45.7 +4.3
CHBR Chabahar 3.88 130 ePn Pn 18 16 44.5 +2.8
CHBR IAML 18 17 28.8
comp=E,291nm,0.4s
CHBR Chabahar 3.88 130 ePn Pn 18 16 44.5 +2.8
IMEH Mehriz 3.94 326 ePn Pn 18 16 45.4 +2.7
SOHO SOHO 4.02 188 P Pn 18 16 44.7 +1.2
SOHO S Sb 18 17 39.2 -2.7
SOHO SOHO 4.02 188 ePn Pn 18 16 44.7 +1.2
NHDN Nehbandan 4.10 37 ePn Pn 18 16 49.3 +4.5
BSRN Basiran 4.18 23 ePn Pn 18 16 49.0 +3.1
BSRN Basiran 4.18 23 ePn Pn 18 16 49.0 +3.1
ALNE Al Ain 4.25 198 ePn Pn 18 16 51.8 +5.0
GHB Gharebagh 4.26 288 ePn Pn 18 16 49.0 +1.9
HOQ Hoqain 4.53 178 P Pn 18 16 52.4 +1.8
HOQ S Sn 18 17 47.7 +5.3
IKOO Kooshah 4.56 20 ePn Pn 18 16 54.7 +3.4
BIDO Bidbid 4.67 169 P Pn 18 16 54.9 +2.5
SNR=8.8
BIDO S Sn 18 17 51.2 +5.4
ICHK Chekchek 4.75 330 ePn Pn 18 16 56.7 +2.9
ARQ Araqi 4.81 187 P Pn 18 16 58.6 +4.2
SNR=50
ARQ S Sn 18 17 55.8 +6.5
ISAD Sadrabad 4.84 322 ePn Pn 18 16 58.1 +3.1
TPRV Parvadeh(Tabas 4.90 355 ePn Pn 18 16 59.4 +3.6
ITEG Tejag 4.94 16 ePn Pn 18 17 00.0 +3.6
IKAZ Kazeroun 4.96 291 ePn Pn 18 16 58.9 +2.2
WSAR Wadi Sarin 5.04 165 P Pn 18 17 01.3 +3.7
comp=E,6.2nm,0.3s,baz=341,slow=9.1,SNR=97
WSAR S Sn 18 17 55.8 +0.7
comp=E,32nm,0.3s,baz=244,slow=22,SNR=21
WSAR LR LR 18 19 19.8
comp=E,100nm,20.8s,baz=13,slow=41
SMDO Samad 5.11 171 P Pn 18 17 01.6 +2.9
SMDO S Sn 18 17 58.0 +1.2
IDAH Dahanechah 5.15 26 ePn Pn 18 17 03.7 +4.4
AHBU AHRAM 5.23 279 ePn Pn 18 17 01.9 +1.8
BSY Bisya 5.36 180 P Pn 18 17 06.2 +4.2
TKDS Koohdasht(Taba 5.47 360 ePn Pn 18 17 07.4 +3.8
IMON Monand 5.49 22 ePn Pn 18 17 08.3 +4.4
TABS Tabas 5.50 360 ePn Pn 18 17 06.8 +2.8
TABS Tabas 5.50 360 ePn Pn 18 17 06.8 +2.8
AFRZ Afriz 5.51 16 ePn Pn 18 17 08.5 +4.3
IRAM Ramesheh 5.55 313 ePn Pn 18 17 06.4 +1.7
KLNJ Kolanjah 5.65 302 ePn Pn 18 17 08.2 +2.0
UMZA Um Al Zommool 5.69 199 ePn Pn 18 17 09.3 +2.8
WBK Wadi Bani Khal 5.73 163 P Pn 18 17 09.1 +2.1
SNR=48
WBK S Sn 18 18 11.7 -0.3
JMDO Jabal Madar 5.79 171 P Pn 18 17 11.5 +3.5
ANAR Anarak 5.85 330 ePn Pn 18 17 11.3 +2.4
IZEF Zefreh 6.33 320 ePn Pn 18 17 17.2 +1.7
IBRJ Brojen 6.36 308 ePn Pn 18 17 19.1 +3.1
ROKH ROKH 6.77 310 ePn Pn 18 17 23.2 +1.6
JHBN Jahan bin 6.96 308 ePn Pn 18 17 26.0 +1.7
IPIR Pirpir 7.08 311 ePn Pn 18 17 26.2 +0.4
MHTO MHTO 7.15 174 P Pn 18 17 29.8 +3.2
KRSH Karshahi 7.25 325 ePn Pn 18 17 32.0 +3.9
QAM Ghamsar 7.47 320 ePn Pn 18 17 33.2 +2.1
HRA Herat 7.60 34 Pn 18 17 37.7 +4.8
DQM DQM 8.17 178 P Pn 18 17 43.7 +3.1
BDRS Dareh Seyedi 9.18 311 ePn Pn 18 17 55.0 +0.3
HSAM Samen 9.52 312 ePn Pn 18 17 59.6 +0.3
IDOB Doab 9.56 308 ePn Pn 18 18 00.0 +0.1
GEYT Alibeck 9.81 4 P Pn 18 18 07.2 +4.2
comp=E,0.3nm,0.3s,baz=190,slow=19,SNR=5.2
SHAO Shalim 10.16 188 P Pn 18 18 09.0 +1.1
SNR=16
IKOM Komasi 10.24 308 ePn Pn 18 18 08.7 -0.4
DMTO DMTO 10.56 192 P Pn 18 18 13.6 +0.2
WHFO Wadi Hawf 10.63 198 P Pn 18 18 14.9 +0.5
ABTO Aybut 11.30 199 P Pn 18 18 24.1 +0.5
RAYN Ar Rayn 11.47 249 Pn 18 18 24.3 -1.5
ASF Jabal al Asfar 17.99 288 P Pn 18 19 51.1 -0.9
comp=E,0.5nm,0.3s,baz=13,slow=3.2,SNR=5.0
KK31 Karatay Array 18.43 32 Pn 18 19 58.1 +0.9
KKAR Karatay Array 18.43 32 Pn 18 19 57.0 -0.2
KKAR Karatay Array 18.43 32 P Pn 18 19 58.0 +0.9
KKAR IAmb IAmb 18 20 11.7
comp=Z,3.7nm,0.8s
ARSB Arslanbob 18.46 40 P Pn 18 19 57.5 -0.2
GAZ Gaziantep 19.05 303 P P 18 20 03.7 -0.3
GAZ IAmb IAmb 18 20 16.8
comp=Z,12nm,1.0s
KSH Kashi 19.27 49 P P 18 20 02.1 -4.3
KSH pP pP 18 20 11.8 -1.9
KSH PP PnPn 18 20 24.8 +4.1
KSH S Sn 18 23 25.3 -18
KSH sS S 18 23 38.4 -4.8
MMAI Mount Meron Ar 19.36 290 P Pn 18 20 10.0 +1.4
comp=Z,0.7nm,0.3s,baz=101,slow=17,SNR=4.3
EIL Elat 19.52 280 P Pn 18 20 10.7 +0.3
comp=Z,0.4nm,0.3s,baz=128,slow=5.2,SNR=5.7
EIL LR LR 18 29 21.6
comp=Z,99nm,20.1s,baz=88,slow=42
AAK Ala-Archa 20.17 40 P Pn 18 20 17.7 -0.5
comp=Z,2.3nm,0.6s,baz=200,slow=5.4,SNR=16
AAK Ala-Archa 20.17 40 P Pn 18 20 17.0 -1.2
NRN Naryn 20.32 44 P Pn 18 20 19.1 -1.0
NRN IAmb IAmb 18 20 19.4
comp=Z,6.8nm,0.8s
ABKAR Akbulak array 21.20 5 P P 18 20 27.5 +0.3
ABKAR Akbulak array 21.20 5 P P 18 20 27.5 +0.3
ABKAR IAmb IAmb 18 20 28.3
comp=Z,11nm,0.7s
AKTO Aktyubinsk 22.29 1 P P 18 20 38.8 0.0
comp=Z,8.3nm,0.6s,baz=168,slow=9.1,SNR=23
AKTO LR LR 18 29 34.4
comp=Z,97nm,18.3s,baz=243,slow=37
BR131 Keskin Array S 22.63 307 P P 18 20 44.1 +1.4
BR131 IAmb IAmb 18 21 03.4
comp=Z,8.3nm,0.8s
BRTR Keskin Array B 22.63 307 P P 18 20 43.1 +0.4
comp=Z,3.4nm,0.7s,baz=121,slow=10,SNR=15
BRTR LR LR 18 31 06.3
comp=Z,73nm,21.6s,baz=124,slow=41
BRTR Keskin Array B 22.63 307 P P 18 20 43.9 +1.1
DANN Dangsing 23.41 83 eP P 18 20 52.2 +1.2
comp=Z,30nm,0.7s
GKN Gorkha 24.22 84 eP P 18 20 59.3 +0.8
KKN Kakani 24.81 84 eP P 18 21 04.8 +0.8
PKIN Phulchoki 24.94 85 eP P 18 21 05.5 +0.3
comp=Z,11nm,0.5s
PKI Pulchoki 24.95 85 eP P 18 21 05.1 -0.3
GUN Gumba 25.32 84 eP P 18 21 08.0 -0.7
comp=Z,11nm,0.5s
RAMN Ramite 26.09 86 eP P 18 21 16.1 +0.4
comp=Z,6.2nm,0.7s
BVAR Borovoye Array 26.73 18 P P 18 21 20.9 0.0
comp=Z,4.4nm,0.7s,baz=200,slow=9.0,SNR=42
BVAR PcP PcP 18 24 42.5 -1.2
comp=Z,0.3nm,0.3s,baz=210,slow=3.1,SNR=4.2
BRVK Borovoye 26.73 18 P P 18 21 20.4 -0.5
BRVK IAmb IAmb 18 21 21.5
comp=Z,3.0nm,0.7s
MK31 Makanchi Array 27.10 40 P P 18 21 24.6 +0.2
MKAR Makanchi Array 27.10 40 P P 18 21 24.2 -0.1
comp=Z,0.8nm,0.6s,baz=223,slow=8.3,SNR=20
MKAR Makanchi Array 27.10 40 P P 18 21 24.1 -0.2
KURBB Kurchatov Arra 27.69 30 P P 18 21 29.5 +0.1
comp=Z,1.3nm,0.6s,baz=228,slow=8.5,SNR=13
KURK Kurchatov 27.80 30 P P 18 21 30.6 +0.2
KURK IAmb IAmb 18 21 42.9
comp=Z,1.8nm,0.7s
AKASG Malin Array Be 30.90 325 P P 18 21 56.6 -1.4
comp=Z,1.5nm,0.7s,baz=131,slow=8.5,SNR=10
AKASG Malin Array Be 30.90 325 P P 18 21 56.0 -1.9
ZAA0 Zalesovo Array 32.78 30 P P 18 22 13.8 -0.6
ZAA0 IAmb IAmb 18 22 14.6
comp=Z,4.4nm,0.6s
ZALV Zalesovo Beam 32.78 30 P P 18 22 13.8 -0.6
comp=Z,3.7nm,0.3s,baz=246,slow=9.7,SNR=19
ZALV Zalesovo Beam 32.78 30 P P 18 22 14.4 -0.1
KMBO Kilima Mbogo 34.81 217 P P 18 22 34.5 +1.7
comp=Z,1.5nm,0.7s,baz=32,slow=12,SNR=4.7
OJC Ojcow 35.88 318 P P 18 22 40.8 -0.6
GTA Gaotai 36.88 61 P P 18 22 50.3 +0.1
GTA pP sP 18 22 59.3 -2.2
GTA sP pP 18 23 03.1 +4.9
DPC Dobruska-Polom 37.99 317 eP P 18 22 58.7 -0.7
TREC Trest 38.16 315 epP pP 18 23 09.9 +0.8
CHVC Chvalec 38.24 317 eP P 18 23 00.5 -0.9
GERES GERESS Array B 39.15 314 P P 18 23 08.2 -1.0
comp=Z,1.6nm,0.7s,baz=108,slow=8.6,SNR=16
GERES PcP PcP 18 25 17.4 -1.0
comp=Z,0.8nm,0.7s,baz=116,slow=3.1,SNR=5.7
GERES GERESS Array B 39.15 314 P P 18 23 07.4 -1.8
FINES FINESS Array B 39.22 337 P P 18 23 07.4 -2.1
comp=Z,3.1nm,0.9s,baz=117,slow=6.6,SNR=8.5
FINES FINESS Array B 39.22 337 P P 18 23 09.5 +0.1
KHC Kasperske Hory 39.31 314 eP P 18 23 09.2 -1.2
KHC epP sP 18 23 19.9 -1.9
CMAR Chiang Mai Arr 39.39 95 P P 18 23 13.8 +2.4
comp=Z,0.1nm,0.4s,baz=264,slow=2.7,SNR=2.8
CLL Collm 40.30 317 eP P 18 23 18.0 -0.6
SQTA Sankt Quirin 40.40 311 eP P 18 23 18.2 -1.4
comp=Z,9.6nm,0.5s,SNR=10.0
MOTA Moosalm 40.49 311 P P 18 23 18.7 -1.7
comp=Z,15nm,1.3s,SNR=7.1
BSD Bornholm Skovb 40.59 324 iP P 18 23 18.4 -2.5
FETA Feichten 40.68 310 eP P 18 23 20.8 -1.2
comp=Z,6.6nm,0.6s,SNR=13
RETA Reutte 40.74 311 eP P 18 23 20.7 -1.7
comp=Z,2.9nm,0.6s
DAVA Damuels 41.30 311 eP P 18 23 25.8 -1.3
comp=Z,8.1nm,0.6s
SONM Songino Array 42.67 49 P P 18 23 38.2 0.0
comp=Z,1.2nm,0.9s,baz=237,slow=8.7,SNR=8.3
SONM Songino Array 42.67 49 P P 18 23 37.9 -0.4
HFS Hagfors 43.38 330 LR LR 18 46 12.6
comp=Z,118nm,21.1s,baz=354,slow=42
NOA NORSAR Array B 44.89 330 P P 18 23 53.4 -2.4
comp=Z,0.7nm,0.9s,baz=93,slow=17,SNR=2.3
ARCES ARCESS Array B 45.30 345 P P 18 23 57.5 -1.4
comp=Z,4.2nm,1.0s,baz=138,slow=7.4,SNR=5.5
ARCES ARCESS Array B 45.30 345 P P 18 23 57.9 -1.0
ESDC Sonseca Array 51.15 300 P P 18 24 43.9 -0.7
comp=Z,0.7nm,0.6s,baz=60,slow=7.7,SNR=6.3
ESDC Sonseca Array 51.15 300 P P 18 24 44.2 -0.4
TOA0 Torodi Ar. Sit 53.59 266 P P 18 25 01.8 -1.1
TOA0 IAmb IAmb 18 25 02.7
comp=Z,4.9nm,0.8s
TORD Torodi Ar. Bea 53.59 266 P P 18 25 01.9 -1.0
comp=Z,5.1nm,0.6s,baz=61,slow=7.3,SNR=34
TORD Torodi Ar. Bea 53.59 266 P P 18 25 00.9 -2.0
TIXI Tiksi 57.81 21 P P 18 25 31.1 -1.2
TIXI IAmb IAmb 18 25 32.9
comp=Z,3.3nm,0.6s
KSRS Korea Array 58.95 61 P P 18 25 39.3 -1.6
comp=Z,1.1nm,0.7s,baz=268,slow=6.9,SNR=4.1
BOSA Boshof 64.17 211 P P 18 26 16.6 +0.3
comp=Z,1.8nm,0.6s,baz=32,slow=5.8,SNR=7.8
BOSA Boshof 64.17 211 P P 18 26 16.0 -0.2
TOLK Toolik Lake Re 81.52 10 P P 18 27 58.1 -0.4
TOLK IAmb IAmb 18 27 58.6
comp=Z,3.7nm,0.6s
BMAR Burnt Mountain 83.34 8 P P 18 28 07.8 -0.2
INK Inuvik 83.53 4 P P 18 28 08.0 -0.9
comp=Z,0.4nm,0.5s,baz=28,slow=11,SNR=3.2
ILAR Eielson Array 85.52 10 P P 18 28 17.6 -1.5
comp=Z,0.5nm,0.7s,baz=326,slow=4.4,SNR=3.9
ILAR Eielson Array 85.52 10 P P 18 28 17.1 -2.0
WRA Warramunga Arr 88.53 113 P P 18 28 35.1 +0.7
comp=Z,1.8nm,0.6s,baz=316,slow=4.1,SNR=14
WRA Warramunga Arr 88.53 113 IAmb IAmb 18 28 42.3
comp=Z,0.7nm,1.5s
WRAB Tennant Creek 88.54 113 P P 18 28 35.3 +0.9
WB2 Warramunga Arr 88.54 113 P P 18 28 35.0 +0.5
WR0 Warramunga Arr 88.70 113 P P 18 28 35.6 +0.4
YKA Yellowknife Ar 89.46 356 P P 18 28 37.2 -0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.9nm,0.7s,baz=360,slow=5.1,SNR=24						
ASAR	**Alice Springs**	**90.07**	**117**	P	**P**	**18 28 42.0**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=305,slow=5.1,SNR=13						
SADO	**Sadowa**	**97.23**	**330**	LR	LR	19 14 02.0	
	comp=Z,66nm,18.4s,baz=122,slow=36						

IDC 02 18:40:00.1±5.4, 4.79S×153.75E, h104km±38km, mb3.2/2, mb1 3.7/3, mb1mx3.1/40, mbtmp3.9/3, Error ellipse: s-maj=54.3km s-min=26.8km az=100.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.78**	**285**	P	Pn	18 40 29.0	-1.0
	28nm,0.3s,baz=259,slow=1.9,SNR=28						
KRVT				S	Sn	18 40 53.3	+0.4
	31nm,0.3s,baz=86,slow=3.0,SNR=7.1						
PMG	**Port Moresby**	**7.99**	**235**	P	Pn	18 41 55.5	+2.0
	8.7nm,0.3s,baz=51,slow=5.9,SNR=28						
PMG				S	Sn	18 43 22.1	-0.1
	2.1nm,0.3s,baz=325,slow=4.9,SNR=3.0						
WRA	**Warramunga Arr**	**24.17**	**230**	P	P	18 45 06.6	-0.2
	0.9nm,0.5s,baz=55,slow=10,SNR=6.7						
ASAR	**Alice Springs**	**26.80**	**224**	P	P	18 45 30.2	-0.4
	0.3nm,0.4s,baz=55,slow=8.6,SNR=9.8						
TORD	**Torodi Ar. Bea**	**151.20**	**289**	PKPbc	PKPbc	18 59 42.5	+0.2
	0.3nm,0.7s,baz=24,slow=2.9,SNR=3.3						

IDC 02 18:46:39.2±7.0, 11.17S×166.98E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/54, mbtmp3.8/3, Error ellipse: s-maj=434.3km s-min=33.3km az=139.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**33.82**	**244**	P	P	18 53 23.4	-0.1
	0.5nm,0.8s,baz=64,slow=8.5,SNR=3.7						
ILAR	**Eielson Array**	**83.25**	**18**	P	P	18 59 08.2	+0.9
	1.6nm,0.8s,baz=237,slow=5.0,SNR=15						
YKA	**Yellowknife Ar**	**94.53**	**27**	P	P	18 59 59.6	-1.7
	0.3nm,0.9s,baz=254,slow=4.2,SNR=4.5						

KRSC 02 18:49:49.8±1.6, 49.58N×157.01E, h16km±23km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.25**	**333**	eP	Pn	18 50 11.3	-1.3
SKR				eS	Sb	18 50 26.7	-2.1
PAU	**Pauzhetka**	**1.89**	**356**	eP	Pb	18 50 23.0	-1.0
PAU				eS	Sb	18 50 46.6	-0.8
KDTR	**Khodutka, Kamc**	**2.33**	**16**	eP	Pb	18 50 30.2	-1.2
KDTR				eS	Sb	18 50 59.7	-0.3
ASAK	**Asacha**	**2.86**	**11**	eP	Pb	18 50 38.4	-2.1
ASAK				eS	Sn	18 51 12.1	+3.1
MTVR	**Mutnovka**	**3.00**	**14**	eP	Pn	18 50 39.8	+3.0
RUS	**Russkaya**	**3.01**	**18**	eP	Pn	18 50 39.6	+2.8
RUS				eS	Sn	18 51 15.6	+3.1
GRL	**Gorelyy**	**3.05**	**12**	eP	Pn	18 50 40.6	+3.1
GRL				eS	Sb	18 51 17.7	-3.1
KRMR	**Karymshinskiy**	**3.33**	**12**	eP	Pn	18 50 44.8	+3.6
KRMR				eS	Sn	18 51 24.5	+4.1
DALK	**Dalny**	**3.62**	**17**	eP	Pn	18 50 48.5	+3.3
DALK				eS	Sn	18 51 31.5	+3.8
UGLR	**Uglovaya**	**3.81**	**17**	eP	Pn	18 50 51.2	+3.3
AVH	**Avacha**	**3.84**	**16**	eP	Pn	18 50 52.6	+4.2
KOK	**Koryaka**	**3.85**	**15**	eP	Pn	18 50 52.9	+4.4
SMAR	**Somma**	**3.85**	**16**	eP	Pn	18 50 52.6	+4.0
KRER	**Koryakskii**	**3.88**	**16**	eS	Sn	18 51 38.9	+4.5
SDLR	**Sedlovina**	**3.88**	**17**	P	Pn	18 50 52.6	+3.7
KRX	**Arik**	**3.92**	**14**	eP	Pn	18 50 53.4	+3.9
SPN	**Mys Shipunski**	**4.00**	**27**	eP	Pn	18 50 54.6	+4.3
MKZ	**Mys Kozlova**	**5.77**	**28**	eP	Pn	18 51 18.2	+3.5
KZV	**Kizimen**	**5.89**	**19**	eP	Pn	18 51 21.9	+5.3
KBTR	**Krutoberegovo**	**7.51**	**26**	P	Pn	18 51 42.3	+3.8

NIED **02** *18:51:00, 20.30N×120.30E, h8km, Mw5.1 Best double couple: M0 4.99000×10^16 NP1:φs 301.00000°, δ58.00000°, λ-96.00000°. NP2:φs 133.00000°, δ32.00000°, λ-80.00000°.*

JMA **02** *18:51:07.2±0.5, 20.33N×120.26E, h0km, M5.0*

BJI **02** *18:51:07.6±0.0, 20.26N×120.24E, h7km, mB5.1/61, mb4.8/72, Ms4.9/82, Ms7 4.8/72*

IDC **02** *18:51:08.2±0.3, 20.22N×120.35E, h0km, mb4.8/47, mb1 4.9/50, mb1mx4.9/60, ML3.9/3, MS4.2/40, Ms1 4.2/40, ms1mx4.1/51, Error ellipse: s-maj=11.8km s-min=8.0km az=82.0*

NEIC **02** *18:51:09.4±2.3, 20.24N±0.07×120.26E±0.06, h10km±1km, mb5.2/36, Error ellipse: s-maj=10.4km s-min=8.7km az=187.0*

GCMT **02** *18:51:10.4±0.2, 20.20N±0.01×120.19E±0.01, h12km, MW5.1/132, Moment Tensor Solution. s77,c110; s132,c220; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-5.79±.08; Mθθ 3.07±.07; Mφφ 2.72±.09; Mrθ -1.23±.26; Mrφ -2.42±.06; Mθφ 1.92±.26; Best double couple: M0 6.00300×10^16 NP1:φs 308.00000°, δ34.00000°, λ-98.00000°. NP2:φs 138.00000°, δ56.00000°, λ-85.00000°. Principal axes: T 5.7460, Plg11.0000°, Azm224.0000°; N 0.5130, Plg4.0000°, Azm315.0000°; P -6.2590, Plg78.0000°, Azm67.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MAN **02** *18:51:10.4, 20.20N×120.30E, h34km, mb5.3, ML4.3, MS4.3*

MOS **02** *18:51:11.3±1.0, 20.17N×120.34E, h33km, mb5.4/40, MS4.7/10, Error ellipse: s-maj=8.7km s-min=4.9km az=104.0*

KLM **02** *18:51:15.0, 20.30N×120.38E, h57km, mb5.2*

ISC 02 18:51:11.2±0.6, 20.20N±0.03×120.29E±0.03, h19km±2km, h19km:pP-P, n526, σ1.42/569, mb5.1/138, MS4.4/58, 35C-36D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**1.59**	**81**	eP	**Pn**	**18 51 36.8**	**-1.5**
BBP				eS	**Sn**	**18 51 55.7**	**-2.7**
SIPP	**Brgy, Tapao**	**2.27**	**176⇓**	eP	**Pn**	**18 51 45.6**	**-2.2**
SIPP				eS	**Sn**	**18 52 09.5**	**-5.8**
APYP	**Conner**	**2.50**	**159**	eP	**Pn**	**18 51 49.8**	**-1.1**
APYP				eS	**Sn**	**18 52 18.8**	**-2.1**
SGCP	**Mt. Cagua**	**2.56**	**139**	eP	**Pn**	**18 51 50.1**	**-1.6**
SGCP				eS	**Sn**	**18 52 20.6**	**-1.8**
TWG	**Pinlang**	**2.70**	**15**		**Pn**	**18 51 51.7**	**-2.0**
TPUB	**Ta-pu**	**3.10**	**6**		**Pn**	**18 51 57.0**	**-2.2**
YULB	**Yu-li**	**3.31**	**16**		**Pn**	**18 52 00.9**	**-1.1**
CAUP	**Cauayan**	**3.55**	**156**	eP	**Pn**	**18 52 07.1**	**+1.7**
SSLB	**Suanglung**	**3.62**	**10**		**Pn**	**18 52 04.4**	**-1.9**
BOLP	**Bolinao**	**3.82**	**185**	eP	**Pn**	**18 52 08.2**	**-0.8**
BOLP				eS	**Sn**	**18 52 49.9**	**-3.6**
SMPP	**San Manuel, Pa**	**4.05**	**175**	eP	**Pn**	**18 52 09.4**	**-2.8**
SMPP				eS	**Sn**	**18 52 54.5**	**-4.7**
NACB	**Ninganchiao**	**4.13**	**17**		**Pn**	**18 52 12.7**	**-0.6**
SCZP	**Santa Cruz**	**4.42**	**185**	eP	**Pn**	**18 52 17.2**	**-0.1**
YHNB	**Yeheng**	**4.56**	**13**		**Pn**	**18 52 18.8**	**-0.5**
KNMB	**Chin-men Tao**	**4.59**	**338**		**Pn**	**18 52 16.4**	**-3.3**
BALP	**Baler**	**4.60**	**164**	eP	**Pn**	**18 52 20.4**	**+0.6**
BALP				eS	**Sn**	**18 53 13.0**	**+0.1**
PCPH	**Palayan**	**4.68**	**170⇑**	iP	**Pn**	**18 52 20.4**	**-0.5**
PCPH				iS	**Sn**	**18 53 13.0**	**-1.7**
TATO	**Taipei**	**4.88**	**13**		**Pn**	**18 52 24.1**	**+0.5**
TATO	**Taipei**	**4.88**	**13**	P	**Pn**	**18 52 24.6**	**+1.0**
JYNG	**Yonagunijimaku**	**4.89**	**30**	P	**Pn**	**18 52 23.8**	**0.0**
JYNG				S	**Sn**	**18 53 18.6**	**-4.1**
YOJ	**Yonaguni jima**	**4.93**	**30**	P	**Pn**	**18 52 25.1**	**+0.8**
YOJ				eS	**Sn**	**18 53 20.4**	**-0.5**
YOJ	**Yonaguni jima**	**4.93**	**30**	P	**Pn**	**18 52 25.2**	**+0.8**
YOJ	**Yonaguni jima**	**4.93**	**30**	P	**Pn**	**18 52 25.2**	**+0.9**
QZH	**Quanzhou**	**4.97**	**342⇓**	iPn	**Pn**	**18 52 21.6**	**-3.3**
QZH				Sn	**Sn**	**18 53 16.6**	**-5.3**
QZH				LR	LR		
	comp=N,3μm,7.6s						
QZH				LR	LR		
	comp=E,6μm,9.5s						
QZH				LR	LR		
	comp=Z,6μm,12.3s						
HATJ	**Hateruma jima**	**5.03**	**40**	P	**Pn**	**18 52 26.1**	**+0.4**
HATJ				eS	**Sn**	**18 53 21.2**	**-2.2**
IRIF	**Iriomote-Funau**	**5.20**	**37**	P	**Pn**	**18 52 27.4**	**-0.6**
JKRS	**Kuro-shima**	**5.29**	**40**	P	**Pn**	**18 52 28.9**	**-0.4**
JKRS				S	**Sn**	**18 53 29.3**	**-0.5**
JIJ	**Ishigaki jima**	**5.46**	**40**	P	**Pn**	**18 52 30.4**	**-1.3**
JIJ				eS	**Sn**	**18 53 30.7**	**-3.4**
POLP	**Polilio Island**	**5.67**	**164**	eP	**Pn**	**18 52 35.0**	**+0.5**
JISG	**Ishigakijimahi**	**5.73**	**40**	P	**Pn**	**18 52 33.9**	**-1.5**
JISG				S	**Sn**	**18 53 37.6**	**-3.1**
JTJ	**Tarama**	**6.01**	**42**	P	**Pn**	**18 52 38.9**	**-0.3**
JTJ				S	**Sn**	**18 53 44.3**	**-3.3**
HKPS	**Hong Kong Po S**	**6.10**	**291**		**Pn**	**18 52 37.8**	**-2.6**
TGY	**Tagaytay City**	**6.10**	**174**	Pn	**Pn**	**18 52 41.4**	**+0.9**
	65nm,0.3s,baz=106,slow=2.3,SNR=6.5						
TGY				Sn	**Sn**	**18 53 58.3**	**+8.5**
	baz=235,slow=17,SNR=2.0						
TGY				LR	LR	18 55 31.8	
	comp=Z,5μm,18.6s,baz=352,slow=43						
LQP	**Lukban**	**6.17**	**169⇑**	eP	**Pn**	**18 52 40.9**	**-0.7**
LUBP	**Lubang**	**6.43**	**180**	eP	**Pn**	**18 52 45.6**	**+0.5**
LUBP				eS	Sn	18 53 44.9	-13
JIRB	**Irabujima**	**6.45**	**44**	P	**Pn**	**18 52 45.7**	**+0.5**
JIRB				eS	**Sn**	**18 53 54.0**	**-4.2**
JOGS	**Gusukube**	**6.55**	**45**	eS	**Sn**	**18 53 58.3**	**-2.6**
GQP	**Guinayangan**	**6.59**	**161⇓**	eP	**Pn**	**18 52 47.8**	**+0.5**
BOAC	**Boac**	**6.87**	**167**	eP	Pn	18 52 58.1	+7.1
GZH	**Guangzhou**	**7.07**	**295**	Pn	**Pn**	**18 52 50.5**	**-3.3**
GZH				Sn	**Sn**	**18 54 11.6**	**-2.1**
GZH				LR	LR		
	comp=N,4μm,10.3s						
GZH				LR	LR		
	comp=E,6μm,10.8s						
PVCP	**Virac**	**7.54**	**150**	eP	**Pn**	**18 52 57.6**	**-2.6**
BUSP	**Coron**	**8.15**	**181**	eP	**Pn**	**18 53 08.6**	**-0.1**
ENPP	**El Nido**	**8.98**	**185**	eP	**Pn**	**18 53 16.3**	**-3.8**
CUYO	**Cuyo Island**	**9.33**	**176**	eP	**Pn**	**18 53 24.4**	**-0.3**
GUIM	**Jordan**	**9.78**	**167**	eP	**Pn**	**18 53 31.7**	**+0.8**
JOW	**Kunigami**	**9.86**	**46**	Pn	**Pn**	**18 53 32.2**	**+0.2**
	0.3nm,0.3s,baz=110,slow=17,SNR=5.7						
QIZ	**Qiongzhong**	**9.92**	**265**	P	**Pn**	**18 53 31.2**	**-1.7**
QIZ				S	**Sn**	**18 55 23.1**	**-0.7**
QIZ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
QIZ				pmax	pmax		
	comp=Z,150nm,5.0s						
QIZ				LR	LR		
	comp=N,1μm,9.9s						
QIZ				LR	LR		
	comp=E,4μm,11.3s						
QIZ				LR	LR		
	comp=Z,4μm,10.4s						
SSE	**Sheshan**	**10.88**	**4**	P	**Pn**	**18 53 45.3**	**-0.6**
SSE				S	**Sn**	**18 55 49.7**	**+2.5**
SSE				pmax	pmax		
	comp=Z,120nm,7.8s						
SSE				LR	LR		
	comp=N,1μm,14.3s						
SSE				LR	LR		
	comp=E,1μm,14.5s						
MSLP	**Maasin**	**10.94**	**156**	eP	**Pn**	**18 53 48.3**	**+1.5**
WHN	**Wuhan**	**11.61**	**334⇓**	P	**Pn**	**18 53 53.3**	**-2.7**
WHN				S	**Sn**	**18 56 05.3**	**+0.2**
WHN				pmax	pmax		
	comp=Z,24nm,0.7s						
WHN				LR	LR		
	comp=Z,11μm,9.6s						
NJ2	**Nanjing**	**11.87**	**354**	eP	**Pn**	**18 53 59.7**	**+0.2**
NJ2				S	**Sn**	**18 56 13.4**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				LR	LR		
	comp=N,4μm,12.8s						
NJ2				LR	LR		
	comp=E,3μm,12.3s						
NJ2				LR	LR		
	comp=Z,4μm,13.7s						
KCP	**Kidapawan**	**13.92**	**160⇑**	iP	**P**	**18 54 32.5**	**-3.2**
GYA	**Guiyang**	**13.98**	**299⇑**	iP	**Pn**	**18 54 26.5**	**-2.0**
GYA				PP	**PnPn**	**18 54 37.5**	**+1.0**
GYA				S	**Sn**	**18 57 00.6**	**-2.7**
GYA				SS	**SnSn**	**18 57 19.7**	**+3.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,100nm,4.8s						
GYA				LR	LR		
	comp=N,3μm,12.5s						
GYA				LR	LR		
	comp=E,3μm,12.4s						
GYA				LR	LR		
	comp=Z,5μm,12.8s						
DLV	**T Lat**	**14.00**	**236**		**Pn**	**18 54 27.5**	**-1.4**
DAV	**Davao City (W)**	**14.03**	**158**	LR	LR	19 00 34.2	
	comp=Z,568nm,19.7s,baz=320,slow=40						
UBPT	**Khong Chiam**	**14.94**	**253**		**Pn**	**18 54 43.0**	**+1.4**
SLVN	**Son La**	**15.37**	**277**		**Pn**	**18 54 46.4**	**-0.9**
SLVN				IAmb	IAmb	18 55 04.3	
	comp=Z,142nm,1.6s						
JNU	**Nakatsue**	**15.96**	**34**	Pn	**Pn**	**18 54 55.0**	**+0.2**
	comp=Z,1.7nm,0.3s,baz=190,slow=3.6,SNR=19						
JNU				LR	LR	19 01 06.9	
	comp=Z,2μm,21.9s,baz=198,slow=38						
JNU	**Nakatsue**	**15.96**	**34**	P	**P**	**18 54 57.3**	**-1.0**
JNU				IAmb	IAmb	18 55 03.5	
	comp=Z,164nm,1.0s						
TIA	**Tai'an**	**16.19**	**351**	P	**Pn**	**18 54 59.3**	**+1.6**
TIA				pmax	pmax		
	comp=Z,26nm,0.6s						
TIA				LR	LR		
	comp=Z,2μm,10.8s						
TIA				LR	LR		
	comp=Z,2μm,10.6s						
TIA				LR	LR		
	comp=Z,3μm,14.1s						
XAN	**Xi'an**	**17.08**	**326**	P	**Pn**	**18 55 08.3**	**-0.8**
XAN				pP	sP	18 55 17.6	+0.9
XAN				PP	**pwP**	**18 55 22.2**	**+2.2**
XAN				S	**S**	**18 58 24.3**	**-3.8**
XAN				pmax	pmax		
	comp=Z,63nm,1.6s						
XAN				pmax	pmax		
	comp=Z,350nm,3.7s						
XAN				LR	LR		
	comp=Z,1μm,13.3s						
XAN				LR	LR		
	comp=Z,3μm,12.9s						
TJN	**Taejon**	**17.27**	**20c**	eP	**P**	**18 55 13.0**	**+0.3**
CD2	**Chengdu**	**18.31**	**309⇑**	iP	**Pn**	**18 55 23.4**	**-1.0**
CD2				sP	pwP	18 55 33.0	-0.7
CD2				S	**S**	**18 58 51.9**	**-1.3**
CD2				sS	sS	18 58 56.7	-3.4
CD2				pmax	pmax		
	comp=Z,30nm,1.6s						
CD2				pmax	pmax		
	comp=Z,600nm,9.9s						
CD2				LR	LR		
	comp=Z,5μm,10.5s						
CD2				LR	LR		
	comp=Z,5μm,12.1s						
KSAR	**Wonju Array Be**	**18.41**	**19**	P	**P**	**18 55 24.1**	**-1.2**
KSAR	**Wonju Array Be**	**18.41**	**19**	P	**P**	**18 55 24.1**	**-1.2**
KSRS	**Korea Array**	**18.43**	**20**	P	**P**	**18 55 24.7**	**-0.8**
	comp=Z,1.6nm,0.3s,baz=198,slow=12,SNR=29						
KSRS				PcP	**PcP**	**18 59 56.9**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=246,slow=1.4,SNR=4.1						
KSRS				LR	LR	19 02 51.8	
	comp=Z,1μm,20.6s,baz=198,slow=38						
KSRS	**Korea Array**	**18.43**	**20**	eP	**Pn**	**18 55 27.4**	**+1.8**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KS19	**Wonju Array Si**	**18.46**	**19**	P	**P**	**18 55 25.5**	**-0.4**
KS19				IAmb	IAmb	18 55 36.1	
	comp=Z,333nm,1.9s						
DL2	**Dalian**	**18.68**	**3⇑**	iP	**Pn**	**18 55 31.7**	**+3.1**
DL2				pmax	pmax		
	comp=Z,160nm,1.5s						
DL2				pmax	pmax		
	comp=Z,2μm,4.1s						
DL2				LR	LR		
	comp=Z,2μm,14.6s						
DL2				LR	LR		
	comp=Z,2μm,13.5s						
DL2				LR	LR		
	comp=Z,3μm,12.1s						
PBKT	**Sadao Pong**	**18.69**	**262**	P	**Pn**	**18 55 30.3**	**+1.4**
SBUM	**Sibu**	**19.32**	**205**	P	**P**	**18 55 36.0**	**+0.5**
MRSI	**Marisa**	**19.67**	**175**	P	**Pn**	**18 55 41.2**	**+0.4**
	comp=Z,2μmcomp=Z,195nm,1.0s						
MPSI	**Mapaga**	**19.75**	**181**	P	**P**	**18 55 40.7**	**+0.6**
	comp=Z,2μmcomp=Z,1μmcomp=Z,51nm,1.2s						
KMSI	**Cibinong**	**19.84**	**169**	P	**Pn**	**18 55 43.5**	**+0.7**
	comp=Z,2μmcomp=Z,213nm,0.8s						
BJI	**Beijing**	**20.09**	**351⇓**	iP	**P**	**18 55 44.5**	**+0.9**
BJI				sP	**pP**	**18 55 49.0**	**+1.3**
BJI				S	Sn	18 59 29.8	-1.2
BJI				pmax	pmax		
	comp=Z,110nm,1.1s						
BJI				LR	LR		
	comp=Z,2μm,12.9s						
BJI				LR	LR		
	comp=Z,1μm,14.8s						
CHTO	**Chiang Mai**	**20.17**	**270**	P	**P**	**18 55 44.0**	**-0.7**
CHTO	**Chiang Mai**	**20.17**	**270**	P	Pn	18 55 45.9	-0.9
CHTO	**Chiang Mai**	**20.17**	**270**	P	**P**	**18 55 44.1**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,29nm,1.1s						
CM31	**Chiang Mai Arr**	**20.22**	**269**	P	**P**	**18 55 45.0**	**-0.4**
CM31	**Chiang Mai Arr**	**20.22**	**269**	P	Pn	18 55 46.8	-0.5
CMAR	**Chiang Mai Arr**	**20.22**	**269**	P	**P**	**18 55 46.2**	**+0.9**
	comp=Z,6.4nm,0.9s,baz=76,slow=9.4,SNR=45						
CMAR				PcP	**PcP**	**18 59 59.8**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=49,slow=0.7,SNR=14						
CMAR	**Chiang Mai Arr**	**20.22**	**269**	eP	**P**	**18 55 46.2**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TNTI	**Ternate**	**20.52**	**159**	P	**P**	**18 55 49.0**	**+0.5**
	comp=Z,966nmcomp=Z,74nm,0.9s						
SMKI	**Samarinda**	**20.74**	**189**	P	Pn	18 55 52.7	-0.7
	comp=Z,310nm,1.1s						
KSM	**Kuching**	**21.02**	**209**	P	**P**	**18 55 54.0**	**0.0**
APSI	**Ampana**	**21.02**	**176**	P	**P**	**18 55 55.1**	**+1.1**
	comp=Z,1μmcomp=Z,197nm,1.0s						
JYTA	**Yamagatataniai**	**21.08**	**40**	P	**P**	**18 55 54.8**	**+0.3**
JCJ	**Chichijima**	**21.18**	**67**	LR	LR	19 02 25.3	
	comp=Z,766nm,20.8s,baz=140,slow=32						
LUWI	**Luwuk**	**21.25**	**173**	P	**P**	**18 55 56.1**	**-0.4**
	comp=Z,3μmcomp=Z,373nm,1.0s						
LUWI	**Luwuk**	**21.25**	**173**	P	**P**	**18 55 55.7**	**-0.7**
LZH	**Lanzhou**	**21.41**	**321⇓**	P	**P**	**18 55 59.3**	**+1.0**
LZH				pP	sP	18 56 04.6	+0.3
LZH				sP	pwP	18 56 09.0	+1.4
LZH				pmax	pmax		
	comp=Z,91nm,1.4s						
LZH				pmax	pmax		
	comp=Z,900nm,4.9s						
LZH				LR	LR		
	comp=Z,2μm,14.2s						
LZH				LR	LR		
	comp=Z,3μm,15.2s						
BKB	**Balikpapan**	**21.59**	**189**	P	**P**	**18 56 00.4**	**+0.3**
	comp=Z,344nm,0.9s						
JHJ	**Hachijo jima 2**	**21.61**	**49**	LR	LR	19 02 53.2	
	comp=Z,866nm,21.2s,baz=264,slow=33						
JNY	**Yasuok**	**21.62**	**42**	P	**P**	**18 56 00.4**	**+0.1**
SNY	**Shenyang**	**21.74**	**7⇓**	P	**P**	**18 55 58.0**	**-3.5**
SNY				S	**S**	**18 59 58.3**	**-2.9**
SNY				pmax	pmax		
	comp=Z,83nm,1.5s						
SNY				pmax	pmax		
	comp=Z,780nm,3.5s						
SNY				LR	LR		
	comp=Z,2μm,13.3s						
SNY				LR	LR		
	comp=Z,1μm,11.8s						
SNY				LR	LR		
	comp=Z,2μm,14.2s						
STKI	**Sintang**	**21.80**	**204**	P	**P**	**18 56 01.3**	**-1.0**
	comp=Z,4μmcomp=Z,33nm,1.4s						
LBMI	**Labuha**	**21.88**	**160**	P	**P**	**18 56 03.8**	**+0.6**
	comp=Z,2μmcomp=Z,177nm,1.1s						
HHC	**Hu-ho-hao-te**	**21.89**	**342**	eP	**P**	**18 56 04.1**	**+0.9**
HHC				pP	pP	18 56 08.6	+1.2
HHC				S	**S**	**18 59 57.7**	**-6.7**
HHC				pmax	pmax		
	comp=Z,32nm,1.1s						
HHC				pmax	pmax		
	comp=Z,410nm,4.6s						
HHC				LR	LR		
	comp=Z,2μm,12.6s						
HHC				LR	LR		
	comp=Z,830nm,12.4s						
HHC				LR	LR		
	comp=Z,2μm,13.0s						
BTO	**Baotou**	**22.15**	**339**	eP	**P**	**18 56 07.4**	**+1.4**
MAJO	**Matsushiro**	**22.60**	**40**	P	**P**	**18 56 09.0**	**-1.8**
MAJO				IAmb	IAmb	18 56 27.4	
	comp=Z,120nm,1.1s						
MAJO	**Matsushiro**	**22.60**	**40**	i P	**P**	**18 56 10.1**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,39nm,1.4s						
MAT	**Matsushiro**	**22.60**	**40**	P	**P**	**18 56 08.8**	**-2.0**
MAT				S	**S**	**19 00 16.4**	**-1.2**
MJAR	**Matsushiro Arr**	**22.60**	**40**	P	**P**	**18 56 09.4**	**-1.4**
	comp=Z,17nm,0.9s,baz=229,slow=9.8,SNR=27						
MJAR				PcP	**PcP**	**19 00 02.5**	**-1.2**
	comp=Z,2.2nm,1.0s,baz=210,slow=0.8,SNR=4.1						
MJAR				LR	LR	19 05 31.4	
	comp=Z,199nm,19.1s,baz=230,slow=38						
MJAR	**Matsushiro Arr**	**22.60**	**40**	P	**P**	**18 56 09.6**	**-1.2**
MJAR	**Matsushiro Arr**	**22.60**	**40**	P	**P**	**18 56 09.6**	**-1.2**
MJAR				pmax	pmax		
	comp=Z,65nm,1.3s						
MJA0	**Matsu Arr-Jizo**	**22.62**	**40**	eP	**P**	**18 56 10.1**	**-1.0**
MJA0				pmax	pmax		
	comp=Z,17nm,0.8s						
SANI	**Sanana**	**22.81**	**165**	P	**P**	**18 56 09.0**	**-4.1**
TTSI	**Tana Toraja**	**23.11**	**181**	P	**P**	**18 56 18.9**	**+2.7**
	comp=Z,930nmcomp=Z,119nm,1.1s						
SWI	**Sorong**	**23.53**	**152**	P	**P**	**18 56 19.4**	**-1.1**
	comp=Z,2μmcomp=Z,191nm,0.8s						
SIJI	**Sorong**	**23.54**	**152**	P	**P**	**18 56 18.9**	**-1.7**
	comp=Z,123nm,0.7s,baz=0.1,slow=4.5,SNR=45						
KBKI	**Kotabaru**	**23.70**	**190**	P	**P**	**18 56 23.7**	**+1.6**
	comp=Z,36nm,1.0s						
SPSI	**Sidrap Palu**	**24.02**	**181**	P	**P**	**18 56 25.7**	**+0.6**
	comp=Z,1μmcomp=Z,77nm,1.0s						
MSHR	**Mys Shultsa**	**24.12**	**20**	i P	**P**	**18 56 26.6**	**+0.8**
KULM	**Kulim**	**24.18**	**235**	P	**P**	**18 56 27.0**	**+0.4**
NLAI	**Namlea**	**24.24**	**163**	P	**P**	**18 56 29.1**	**+2.0**
	comp=Z,5μmcomp=Z,375nm,1.0s						
MYKOM	**Kota Tinggi**	**24.35**	**223**	P	**P**	**18 56 29.0**	**+0.8**
IPM	**Ipoh**	**24.41**	**233**	P	**P**	**18 56 29.0**	**+0.2**
BNSI	**Bone**	**24.45**	**180**	P	**P**	**18 56 30.4**	**+1.3**
	comp=Z,2μmcomp=Z,80nm,1.4s						
MSAI	**Masohi**	**24.89**	**159**	P	**P**	**18 56 34.6**	**+1.5**
	comp=Z,756nmcomp=Z,50nm,1.3s						
KAPI	**Kappang**	**25.07**	**181**	P	**P**	**18 56 35.2**	**+0.6**
	comp=Z,38nm,0.9s,baz=350,slow=11,SNR=10						
KAPI				LR	LR	19 07 13.8	
	comp=Z,272nm,19.7s,baz=34,slow=38						
KAPI	**Kappang**	**25.07**	**181**	P	**P**	**18 56 35.5**	**+0.8**
BKSI	**Bulukumba**	**25.37**	**180**	P	**P**	**18 56 38.6**	**+1.2**
	comp=Z,721nmcomp=Z,48nm,1.0s						
RKPI	**Ransiki, Papua**	**25.52**	**146**	P	**P**	**18 56 39.7**	**+0.9**
	comp=Z,150nm,0.9s						
MDJ	**Mudanjiang**	**25.54**	**16**	P	**P**	**18 56 38.9**	**+0.1**
MDJ				pP	pwP	18 56 48.2	-0.3
MDJ				pmax	pmax		
	comp=Z,42nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,710nm,5.1s						
MDJ				LR	LR		
	comp=Z,2μm,11.5s						
MDJ				LR	LR		
	comp=Z,730nm,10.7s						
MDJ				LR	LR		
	comp=Z,2μm,12.4s						
USRK	**Ussuriysk Ar.**	**25.84**	**20**	P	**P**	**18 56 41.3**	**-0.2**
	comp=Z,12nm,0.8s,baz=212,slow=8.2,SNR=11						
USRK				LR	LR	19 07 16.9	
	comp=Z,683nm,20.0s,baz=201,slow=38						
GTA	**Gaotai**	**26.01**	**322⇓**	P	**P**	**18 56 43.5**	**+0.3**
GTA				pP	pP	18 56 48.0	+0.3
GTA				sP	sP	18 56 50.5	+1.0
GTA				PcP	**PcP**	**19 00 12.4**	**+1.2**
GTA				S	**S**	**19 01 14.1**	**+0.8**
GTA				sS	sS	19 01 20.1	-0.7
GTA				PcS	**PcS**	**19 03 52.0**	**-0.2**
GTA				pmax	pmax		
	comp=Z,23nm,1.5s						

GTA pmax pmax
comp=Z,370nm,4.8s
GTA LR LR
comp=Z,1μm,12.4s
GTA LR LR
comp=Z,1μm,11.7s
GTA LR LR
comp=Z,2μm,12.1s
BAKI Biak 26.31 142 P P 18 56 46.4 +0.4
comp=Z,129nm,1.4s
PSI Prapat 27.09 233 P P 18 56 53.3 +0.1
comp=Z,49nm,1.2s,baz=30,slow=5.8,SNR=13
PSI PcP **PcP 19 00 17.1 +3.0**
comp=Z,3.5nm,0.5s,baz=222,slow=3.0,SNR=3.7
PSI LR LR 19 07 24.1
comp=Z,672nm,18.4s,baz=68,slow=36
BKNI Bangkinang 27.30 226 P P 18 56 56.6 +1.7
comp=Z,2μmcomp=Z,98nm,0.5s
LSA Lhasa 28.00 296 P P 18 57 02.8 +1.1
LSA pP **pwP 18 57 10.5 -0.8**
LSA pmax pmax
comp=Z,130nm,1.1s
LSA LR LR
comp=Z,4μm,19.2s
LSA LR LR
comp=Z,3μm,21.4s
LSA LR LR
comp=Z,3μm,15.7s
LSA Lhasa 28.00 296 P P 18 57 03.1 +1.4
LSA Lhasa 28.00 296 P P 18 57 02.8 +1.1
MLSI Meulaboh, Aceh 28.14 239 P P 18 57 01.3 -1.2
comp=Z,50nm,0.7s
PDSI Padang 28.60 225 P P 18 57 07.6 +1.0
comp=Z,18nm,1.2s
KRJI Kerinci 28.84 222 P P 18 57 08.8 0.0
comp=Z,3μmcomp=Z,192nm,1.3s
PLAI Plampang 28.95 185 P P 18 57 11.0 +1.4
comp=Z,1μmcomp=Z,58nm,1.0s
KLSI 29.08 213 P P 18 57 11.8 +1.0
comp=Z,19nm,1.8s
GSI Gunungsitoli 29.09 233 P P 18 57 09.7 -1.2
comp=Z,44nm,0.7s
GSI Gunungsitoli 29.09 233 P P 18 57 09.4 -1.5
GSI IAmb IAmb 18 57 19.6
comp=Z,25nm,0.7s
WOJI Wonogiri, Jawa 29.35 199 P P 18 57 13.5 +0.4
comp=Z,73nm,1.6s
ULN Ulaanbaatar 29.61 342 P P 18 57 15.2 -0.2
ULN IAmb IAmb 18 57 17.2
comp=Z,25nm,0.8s
ULN Ulaanbaatar 29.61 342 P P 18 57 16.0 +0.6
ULN Ulaanbaatar 29.61 342 *c*e**P P 18 57 15.5 +0.1**
ULN pmax pmax
comp=Z,49nm,1.3s
LEM Lembang 29.61 206 P P 18 57 16.2 +0.5
comp=Z,20nm,0.7s,baz=151,slow=21,SNR=3.8
LEM LR LR 19 08 34.7
comp=Z,174nm,21.2s,baz=24,slow=35
SONM Songino Array 29.78 341 P P 18 57 16.8 0.0
comp=Z,13nm,0.8s,baz=163,slow=8.9,SNR=73
SONM PcP **PcP 19 00 21.7 +1.4**
comp=Z,3.3nm,1.2s,baz=176,slow=6.6,SNR=4.2
SONM LR LR 19 11 08.9
comp=Z,694nm,18.3s,baz=150,slow=40
SONM Songino Array 29.78 341 P P 18 57 16.1 -0.8
SISI Saibi 29.83 227 P P 18 57 19.0 +1.6
comp=Z,33nm,1.5s
ASAJ Asahikawa 30.23 33 P P 18 57 20.9 +0.2
comp=Z,20nm,1.1s,baz=240,slow=12,SNR=4.0
ASAJ LR LR 19 10 10.0
comp=Z,683nm,20.0s,baz=302,slow=38
KLR Kul'dur 30.38 15 P P 18 57 21.7 -0.3
comp=Z,6.3nm,0.6s,baz=209,slow=6.4,SNR=24
KLR PcP **PcP 19 00 22.1 +0.5**
comp=Z,2.8nm,0.9s,baz=190,slow=4.5,SNR=5.5
KLR LR LR 19 10 28.6
comp=Z,953nm,20.0s,baz=192,slow=38
KLR Kul'dur 30.38 15 *e*P **P 18 57 21.1 -0.9**
KLR pmax pmax
comp=Z,57nm,1.7s
TAPN Taplejung 30.59 290 *e*P **P 18 57 24.7 +0.2**
comp=Z,141nm,1.3s
ODAN Odare 30.82 289 *e*P **P 18 57 26.9 +0.4**
comp=Z,45nm,0.6s
RAMN Ramite 31.54 289 *e*P **P 18 57 33.4 +0.6**
comp=Z,82nm,0.7s
YUK Yuzh-Kuril'sk 31.91 36 *e*P **P 18 57 35.3 -0.2**
YUK *e* 18 58 38.9
YUK *e*S **S 19 02 44.4 -1.2**
YUK *e*SS **SnSn 19 04 35.4 +0.9**
YUK pmax pmax
comp=Z,567nm,1.2s
YUK pmax pmax
comp=Z,701nm,1.2s
YUK MLR MLR
comp=Z,207nm,16.0s
JIRN Jiri 31.97 290 *e*P **P 18 57 37.3 +0.6**
comp=Z,235nm,1.2s
GUN Gumba 32.27 290 *e*P **P 18 57 39.8 +0.5**
comp=Z,171nm,1.0s
YSS Yuzh-Sakhalins 32.36 29 P P 18 57 39.2 -0.2
YSS IAmb IAmb 18 57 50.9
comp=Z,58nm,1.1s
YSS Yuzh-Sakhalins 32.36 29⇓*e*P **P 18 57 40.1 +0.7**
YSS *e* 18 57 47.6
YSS *e*S **S 19 02 55.0 +2.4**
YSS *e*SS **SnSn 19 04 42.8 -2.6**
YSS pmax pmax
comp=Z,20nm,0.7s
YSS MLR MLR
comp=N,500nm,18.0s
YSS MLR MLR
comp=Z,800nm,18.0s
PKI Pulchoki 32.65 290 *e*P **P 18 57 42.4 -0.2**
PKIN Phulchoki 32.66 290 *e*P **P 18 57 42.4 -0.3**
comp=Z,73nm,1.3s
KKN Kakani 32.78 290 *e*P **P 18 57 43.7 0.0**
comp=Z,76nm,1.0s
DMN Daman 32.92 290 *e*P **P 18 57 44.9 0.0**
ZAK Zakamensk 32.99 340 *e*P **P 18 57 44.6 -0.5**
ZAK pmax pmax
comp=Z,13nm,1.3s
GRNR Gornyy 33.06 19⇑*i*P **P 18 57 47.1 +1.6**
GRNR pmax pmax
comp=Z,4.0nm,1.1s
GRNR MLR MLR
comp=Z,330nm,20.0s
GKN Gorkha 33.37 290 *e*P **P 18 57 48.3 -0.4**
comp=Z,107nm,1.1s
ZEA Zeya 33.90 7 *e*P **P 18 57 53.2 +0.4**
ZEA pmax pmax
comp=N,96nm,1.8s
ZEA pmax pmax
comp=Z,160nm,1.8s
ZEA MLR MLR
comp=Z,2μm,13.0s
ZEA MLR MLR
comp=E,500nm,10.0s
ZEA MLR MLR
comp=N,2μm,13.0s
TLY Talaya 34.01 341 P P 18 57 54.3 +0.5
comp=N,13nm,0.7s,baz=178,slow=6.0,SNR=24
TLY LR LR 19 14 23.7
comp=N,612nm,18.6s,baz=141,slow=41
TLY Talaya 34.01 341 P P 18 57 52.5 -1.3
TLY Talaya 34.01 341 P P 18 57 54.7 +0.8
TLY Talaya 34.01 341 *e*P **P 18 57 54.7 +0.8**
TLY *e*S **S 19 03 25.0 +6.8**
TLY *e*SS **SnSn 19 05 26.0 +0.6**
TLY *e*SSS SSS 19 05 48.2
TLY pmax pmax
comp=Z,111nm,1.4s
TLY MLR MLR
comp=Z,3μm,15.0s
DANN Dangsing 34.17 291 *e*P **P 18 57 55.7 -0.2**
comp=Z,203nm,1.4s
KOLN Koldanda 34.26 290 *e*P **P 18 57 56.4 -0.2**
comp=Z,115nm,1.1s
IRK Irkutsk 34.33 342 *e*P **P 18 57 56.9 +0.3**
IRK pmax pmax
comp=Z,63nm,1.6s
MOY Mondy 34.85 339 *e*P **P 18 58 01.3 +0.1**
MOY pmax pmax
comp=Z,66nm,2.2s
WMQ Urumqi 35.94 318 *e*P **P 18 58 11.3 +0.6**
WMQ sP pwP 18 58 20.9 +0.6

WMQ pmax pmax
comp=Z,14nm,1.9s
WMQ pmax pmax
comp=Z,240nm,4.7s
WMQ LR LR
comp=Z,770nm,12.9s
WMQ LR LR
comp=Z,620nm,11.7s
WMQ LR LR
comp=Z,630nm,16.9s
BOD Bodaibo 37.85 355 *e*P **P 18 58 29.3 +2.7**
BOD pmax pmax
comp=Z,10.0nm,1.8s
FITZ Fitzroy Crossi 38.42 172 P P 18 58 31.4 -0.4
comp=Z,22nm,1.2s,baz=355,slow=14,SNR=4.1
HYB Hyderabad 39.53 273 *i* **P P 18 58 41.0 -0.3**
PMG Port Moresby 39.56 136 P P 18 58 41.0 -0.4
comp=Z,4.6nm,0.4s,baz=40,slow=14,SNR=4.3
KRVT Keravat (AS076 39.56 125 P P 18 58 41.7 +0.2
comp=Z,29nm,0.7s,baz=173,slow=22,SNR=2.8
KRVT LR LR 19 13 07.7
comp=Z,148nm,20.9s,baz=314,slow=33
MK31 Makanchi Array 40.72 320 P P 18 58 51.6 +0.8
MK31 Makanchi Array 40.72 320 P P 18 58 51.6 +0.8
MK31 pmax pmax
comp=Z,22nm,1.1s
MKAR Makanchi Array 40.72 320 P P 18 58 51.4 +0.6
comp=Z,9.5nm,0.7s,baz=114,slow=9.9,SNR=97
MKAR PcP **PcP 19 00 52.2 +0.2**
comp=Z,2.9nm,0.7s,baz=95,slow=4.8,SNR=4.4
MKAR LR LR 19 16 54.6
comp=Z,241nm,18.4s,baz=110,slow=38
COEN Coen 40.73 145 P P 18 58 48.7 -2.4
MAKZ Makanchi 40.91 319 P P 18 58 53.4 +1.0
MAKZ Makanchi 40.91 319 P P 18 58 53.4 +1.0
MAKZ pmax pmax
comp=Z,25nm,1.0s
PDGK Podgornoye 41.10 314 P P 18 58 52.9 -1.2
PSA00 Pilbara Seismi 41.52 181 P P 18 58 56.0 -1.5
PSA00 IAmb IAmb 18 59 10.3
comp=Z,34nm,0.9s
WB0 Warramunga Arr 42.06 160 P P 18 59 00.9 -1.1
WB0 IAmb IAmb 18 59 11.4
comp=Z,85nm,0.9s
WRAB Tennant Creek 42.20 160 *ce*P **P 18 59 02.9 -0.2**
WRAB pmax pmax
comp=Z,44nm,1.0s
WRA Warramunga Arr 42.20 160 P P 18 59 01.8 -1.3
comp=Z,15nm,0.8s,baz=343,slow=9.1,SNR=34
WRA PcP **PcP 19 00 56.7 -0.5**
comp=Z,4.4nm,0.6s,baz=344,slow=3.4,SNR=5.1
WRA Warramunga Arr 42.20 160 P P 18 59 01.2 -1.9
WRA Warramunga Arr 42.20 160 *i* **P P 18 59 01.7 -1.5**
WRA pmax pmax
comp=Z,15nm,0.8s
WR0 Warramunga Arr 42.28 160 P P 18 59 02.5 -1.3
WR0 IAmb IAmb 18 59 13.4
comp=Z,80nm,0.9s
YAK Yakutsk 42.30 7 P P 18 59 04.0 +0.6
comp=Z,7.4nm,0.6s,baz=232,slow=1.3,SNR=11
YAK ScP **ScP 19 04 46.0 -0.8**
comp=Z,3.8nm,0.6s,baz=9.6,slow=2.5,SNR=5.0
YAK Yakutsk 42.30 7 P P 18 59 03.2 -0.2
YAK IAmb IAmb 18 59 20.5
comp=Z,32nm,1.1s
YAK Yakutsk 42.30 7 *e*P **P 18 59 03.2 -0.2**
YAK *e**PP **pwP 18 59 15.0 +1.7**
YAK *e*S **S 19 05 22.3 -0.9**
YAK *e**SS sS 19 05 41.8 +11
YAK *e*SS **SS 19 08 29.0 -2.8**
YAK *e*SSS SSS 19 09 02.5
YAK pmax pmax
comp=Z,18nm,1.0s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=Z,103nm,3.3s
YAK pmax pmax
comp=N,152nm,3.0s
YAK pmax pmax
comp=E,64nm,3.0s
YAK smax smax
comp=N,118nm,2.2s
YAK smax smax
comp=E,40nm,2.3s
YAK MLR MLR
comp=Z,362nm,13.0s
YAK MLR MLR
comp=N,236nm,11.0s
ZALV Zalesovo Beam 43.19 330 P P 18 59 10.7 -0.1
comp=N,21nm,0.7s,baz=119,slow=7.9,SNR=89
ZALV LR LR 19 16 04.8
comp=N,160nm,22.0s,baz=123,slow=35
ZALV Zalesovo Beam 43.19 330 P P 18 59 09.8 -1.0
PETK Petropavlovsk- 43.64 32 P P 18 59 15.2 +0.7
comp=N,4.5nm,0.8s,baz=227,slow=7.0,SNR=8.4
PETK LR LR 19 17 37.1
comp=N,290nm,20.9s,baz=239,slow=36
NIL Nilore 43.68 298 P P 18 59 15.6 +0.5
H11N1 WAKE ISLAND Hy 43.69 82 T T 19 46 05.3
baz=279,slow=75,SNR=6.3
H11N2 WAKE ISLAND Hy 43.69 82 T T 19 46 08.8
baz=279,slow=75,SNR=7.8
H11S3 WAKE ISLAND Hy 43.70 84 T T 19 46 04.9
baz=281,slow=75,SNR=34
H11N3 WAKE ISLAND Hy 43.71 82 T T 19 46 06.7
baz=279,slow=75,SNR=7.7
H11S1 WAKE ISLAND Hy 43.71 84 T T 19 46 01.5
baz=281,slow=75,SNR=21
H11S2 WAKE ISLAND Hy 43.72 84 T T 19 46 02.0
baz=281,slow=75,SNR=18
POO Poona 43.74 276 *e*P **P 18 59 14.4 -1.4**
KBK Karagaybulak 44.05 311 P P 18 59 19.9 +1.7
SNR=14
UCH Uchtor 44.24 310 P P 18 59 22.1 +2.0
SNR=21
CHMS Chumysh 44.28 311 P P 18 59 20.5 +0.6
SNR=17
AAK Ala-Archa 44.37 311 P P 18 59 22.0 +1.4
SNR=6.0
AAK Ala-Archa 44.37 311 *i* **P P 18 59 21.8 +1.1**
SNR=6.9
AAK Ala-Archa 44.37 311 P P 18 59 22.1 +1.4
AAK Ala-Archa 44.37 311 *ce*P **P 18 59 22.4 +1.7**
AAK pmax pmax
comp=Z,22nm,1.7s
USP Ospenovka 44.53 312 P P 18 59 23.0 +1.1
SNR=9.6
KURK Kurchatov 44.68 323 P P 18 59 23.4 +0.5
KURK Kurchatov 44.68 323 P P 18 59 23.3 +0.4
KURK Kurchatov 44.68 323 *ce*P **P 18 59 23.2 +0.4**
KURK pmax pmax
comp=Z,104nm,1.7s
KURBB Kurchatov Arra 44.69 323 P P 18 59 22.8 -0.1
comp=Z,27nm,0.6s,baz=123,slow=7.5,SNR=320
AML Almayashu 44.81 310 P P 18 59 26.2 +1.7
SNR=18
EKS2 Erkin-Say 44.88 311 P P 18 59 26.3 +1.6
SNR=5.9
MA2 Magadan 44.97 21 P P 18 59 24.6 -0.4
comp=Z,12nm,1.0s,baz=218,slow=9.2,SNR=15
MA2 PcP **PcP 19 01 06.0 0.0**
comp=Z,3.0nm,0.6s,baz=158,slow=4.7,SNR=5.6
MA2 LR LR 19 19 42.6
comp=Z,664nm,18.4s,baz=211,slow=38
MA2 Magadan 44.97 21 *ce*P **P 18 59 24.9 -0.1**
MA2 pmax pmax
comp=Z,54nm,1.7s
AS31 Alice Springs 45.58 162 P P 18 59 29.6 -0.7
ASAR Alice Springs 45.58 162 P P 18 59 29.2 -1.0
comp=Z,13nm,0.8s,baz=350,slow=7.8,SNR=90
ASAR PcP **PcP 19 01 07.9 -0.8**
comp=Z,2.9nm,0.6s,baz=347,slow=3.4,SNR=4.1
ASAR LR LR 19 21 08.6
comp=Z,94nm,19.1s,baz=354,slow=40
ASAR Alice Springs 45.58 162 P P 18 59 29.1 -1.2
ASAR Alice Springs 45.58 162 P P 18 59 29.1 -1.2
KBL Kabul 47.23 299 P P 18 59 44.9 +1.4
KK31 Karatay Array 47.32 310 *i* **P P 18 59 44.2 +0.4**
KKAR Karatay Array 47.32 310 P P 18 59 43.8 0.0
KKAR Karatay Array 47.32 310 P P 18 59 43.8 0.0
CTA Charters Tower 47.43 146 P P 18 59 44.9 0.0
comp=Z,20nm,0.9s,baz=332,slow=8.6,SNR=18
SEY Seymchan 47.99 19 P P 18 59 48.3 -0.3
comp=Z,8.6nm,1.1s,baz=235,slow=6.9,SNR=18
SEY PcP **PcP 19 01 17.3 +0.7**

comp=Z,3.0nm,0.6s,baz=178,slow=11,SNR=5.0
SEY Seymchan 47.99 19 *i* **P P 18 59 48.8 +0.2**
HNR Honiara 48.88 123 LR LR 19 18 18.9
comp=Z,112nm,20.3s,baz=294,slow=33
BRVK Borovoye 50.35 323 P P 19 00 08.0 +1.1
BRVK IAmb IAmb 19 00 09.1
comp=Z,33nm,0.8s
BRVK Borovoye 50.35 323 P P 19 00 07.6 +0.7
BRVK Borovoye 50.35 323 P P 19 00 08.0 +1.1
BRVK pmax pmax
comp=Z,33nm,0.8s
TIXI Tiksi 51.70 3 P P 19 00 15.3 -1.4
comp=Z,13nm,0.9s,baz=191,slow=4.3,SNR=25
TIXI Tiksi 51.70 3 P P 19 00 16.0 -0.7
TIXI IAmb IAmb 19 00 20.5
comp=Z,21nm,1.0s
TIXI Tiksi 51.70 3 *ce*P **P 19 00 15.6 -1.1**
TIXI pmax pmax
comp=Z,39nm,1.7s
EIDS Eidsvold 54.29 145 P P 19 00 36.4 -0.1
EIDS IAmb IAmb 19 00 45.6
comp=Z,42nm,1.2s
BBOO Buckleboo 54.83 164 P P 19 00 39.8 -0.4
STKA Stephens Creek 55.66 158 P P 19 00 46.7 +0.4
comp=Z,14nm,0.9s,baz=345,slow=6.9,SNR=18
STKA Stephens Creek 55.66 158 P P 19 00 45.6 -0.7
AB31 Akbulak array 55.68 316 *e*P **P 19 00 46.2 -0.1**
ABKAR Akbulak array 55.68 316 P P 19 00 46.2 -0.1
BILL Bilibino 55.70 19 P P 19 00 45.9 -0.2
BILL Bilibino 55.70 19 *d i* **P P 19 00 45.5 -0.6**
BILL *i* 19 00 53.7
BILL *i* 19 01 49.7
BILL *i* 19 02 51.0
BILL pmax pmax
comp=Z,34nm,1.4s
BILL MLR MLR
comp=Z,690nm,21.0s
GEYT Alibeck 56.16 303 P P 19 00 51.1 +1.1
comp=Z,12nm,1.0s,baz=106,slow=3.2,SNR=43
GEYT Alibeck 56.16 303 P P 19 00 51.0 +1.1
GYA0B ALIBECK ARRAY 56.16 303 IAmb IAmb 19 01 02.7
comp=Z,40nm,1.1s
WBK Wadi Bani Khal 56.79 284 P P 19 00 55.2 +0.5
WBK P **P 19 00 55.2 +0.5**
SVE Sverdlovsk 56.80 325 *c i* **P P 19 00 54.8 +0.7**
SVE pmax pmax
comp=Z,89nm,1.5s
WSAR Wadi Sarin 56.99 285 LR LR 19 26 33.7
comp=Z,161nm,21.6s,baz=106,slow=37
AKTO Aktyubinsk 57.09 318 P P 19 00 55.6 -0.7
comp=Z,8.1nm,0.6s,baz=98,slow=8.7,SNR=18
AKTO LR LR 19 26 12.7
comp=Z,291nm,19.1s,baz=108,slow=37
SMDO Samad 57.55 285 P P 19 01 01.5 +1.4
SMDO P **P 19 01 01.5 +1.4**
JMDO Jabal Madar 57.62 284 P P 19 01 00.7 +0.2
JMDO P **P 19 01 00.7 +0.2**
ARU Arti 57.82 325 LR LR 19 28 30.0
comp=Z,204nm,19.4s,baz=92,slow=39
ARU Arti 57.82 325 P P 19 01 01.4 +0.1
ARU Arti 57.82 325 *d i* **P P 19 01 01.2 -0.1**
ARU 19 01 55.5
ARU 19 03 09.5
ARU PPP PPP 19 04 29.7
ARU S **S 19 09 03.4 +3.7**
ARU SS **SS 19 12 53.0 +2.8**
ARU pmax pmax
comp=Z,40nm,0.7s
ARU MLR MLR
comp=Z,381nm,13.0s
MHTO MHTO 58.00 283 P P 19 01 02.7 -0.5
SNR=5.6
MHTO P **P 19 01 02.7 -0.5**
SNR=5.6
HOQ Hoqain 58.13 286 P P 19 01 04.5 +0.4
SNR=9.2
HOQ P **P 19 01 04.5 +0.4**
SNR=9.2
BSY Bisya 58.38 285 P P 19 01 06.9 +1.0
BANOM Banah 58.66 289 P P 19 01 09.2 +1.4
BANOM Banah 58.66 289 P P 19 01 09.2 +1.4
ARMA Armidale 58.67 148 IAmb IAmb 19 01 19.9
comp=Z,36nm,1.1s
SOHO SOHO 58.73 287 P P 19 01 09.1 +0.8
SNR=9.3
SOHO P **P 19 01 09.1 +0.8**
SNR=9.3
ARQ Araqi 58.88 286 P P 19 01 09.3 -0.1
UOSS Minazif 58.90 288 P P 19 01 08.6 -0.8
ASHO Ashiyiah 59.07 287 *i* **P P 19 01 11.0 +0.3**
SNR=8.7
ASHO Ashiyiah 59.07 287 P P 19 01 11.3 +0.7
SNR=5.8
ALNE Al Ain 59.45 287 *i* **P P 19 01 13.6 +0.3**
SNR=5.3
DMTO DMTO 61.49 280 P P 19 01 27.0 -0.2
DZM Mont Dzumac 61.62 131 *e*LR LR 19 19 48.6
comp=Z,180nm,23.4s
TOO Toolangi 62.17 158 P P 19 01 32.3 +0.9
TOO Toolangi 62.17 158 P P 19 01 32.3 +0.9
RBK Rabkut 62.23 280 P P 19 01 31.9 -0.4
SNR=13
GAMB Gambell 62.36 28 P P 19 01 33.0 +0.7
WHFO Wadi Hawf 62.53 280 P P 19 01 33.2 -1.2
KIRV Kirov 63.02 326 LR LR 19 33 29.8
comp=Z,268nm,18.8s,baz=135,slow=40
ABTO Aybut 63.11 280 P P 19 01 37.7 -0.5
ABTO P **pP 19 01 39.0 -4.0**
SNR=9.0
PRGR Permogore 65.15 330 *e*P **P 19 01 49.6 -1.1**
PRGR *e* 19 01 57.8
PRGR pmax pmax
comp=Z,26nm,0.9s
GROC Groznyy 65.31 309 *e*P **P 19 01 53.2 +1.1**
GROC *e* 19 02 23.6
GROC *e* 19 04 16.2
GROC *e*S **S 19 10 38.4 +3.3**
GROC pmax pmax
comp=Z,11nm,0.5s
GNI Garni 66.41 306 LR LR 19 33 08.7
comp=Z,151nm,21.8s,baz=102,slow=38
ZEI Tsey 66.73 309 *e*P **P 19 01 58.7 -2.9**
ZEI pmax pmax
comp=Z,24nm,0.8s
AKH Akhalkalaki 67.20 307 ⇓P **P 19 02 06.1 +1.6**
KBZ Khabaz 67.35 310 P P 19 02 05.5 +0.3
comp=Z,12nm,0.8s,baz=112,slow=8.2,SNR=24
KBZ LR LR 19 34 41.4
comp=Z,150nm,19.6s,baz=74,slow=39
VRH Novokhopyorsk 67.42 318 *e*P **P 19 02 05.0 -0.5**
VRH pmax pmax
comp=Z,50nm,0.7s
KVAR Kislovodsk Arr 67.47 310 LR LR 19 34 26.4
comp=Z,247nm,20.0s,baz=228,slow=38
KIV Kislovodsk 67.48 310 ⇓P **P 19 02 06.8 +0.6**
KIV Kislovodsk 67.48 310 *i* **P P 19 02 06.6 +0.4**
SNR=17
KIV Kislovodsk 67.48 310 *e*P **P 19 02 07.1 +0.9**
KIV *e*S **S 19 11 04.1 +2.4**
KIV pmax pmax
comp=Z,189nm,1.1s
KIV pmax pmax
comp=Z,126nm,4.0s
KIV MLR MLR
comp=Z,467nm,17.0s
SHA1 Shidzhatmaz 67.52 310 *i* **P P 19 02 06.4 -0.2**
KLMR Klimovskoe 68.09 329 *e*P **P 19 02 06.1 -3.5**
KLMR AMP 19 02 11.1
comp=Z,92nm,1.4s
KLMR Klimovskoe 68.09 329 *e*P **P 19 02 06.1 -3.5**
KLMR pmax pmax
comp=Z,92nm,1.4s
TMCR Tamitsa 68.65 332 *e*P **P 19 02 11.7 -1.3**
TMCR pmax pmax
comp=Z,46nm,1.1s
RAYN Ar Rayn 68.75 288 *i* **P P 19 02 14.6 +0.1**
SNR=37
VORD Divnogorie 68.97 318 *e*P **P 19 02 13.4 -1.8**
VORD pmax pmax
comp=Z,20nm,1.4s
VSR Storozhevoye 69.02 318 *e*P **P 19 02 14.1 -1.5**
VSR pmax pmax
comp=Z,30nm,0.8s
MOS Moscow 69.46 323 *e*P **P 19 02 15.7 -2.4**
MOS pmax pmax

comp=Z,72nm,1.2s
SOC Sochi 69.66 310 eP P 19 02 19.1 -0.6
SOC e 19 04 55.8
SOC ePPP PPP 19 06 36.1
SOC eS S 19 11 26.1 -1.3
SOC pmax pmax
comp=Z,37nm,0.7s
SOC MLR MLR
comp=Z,207nm,13.0s
OBN Obninsk 70.12 323 ⇓P P 19 02 21.7 -0.6
OBN Obninsk 70.12 323 i P P 19 02 21.3 -1.0
OBN i 19 02 41.9
OBN i 19 04 55.1
OBN pmax pmax
comp=Z,44nm,1.5s
OBN MLR MLR
comp=Z,228nm,18.0s
APA Apatity 70.33 336 ⇓P P 19 02 23.8 +0.5
APA pmax pmax
comp=Z,13nm,0.9s
APA MLR MLR
comp=Z,600nm,20.0s
TOLK Toolik Lake Re 71.42 23 P P 19 02 29.8 -0.2
baz=278
KDAK Kodiak Island 71.63 34 P P 19 02 30.3 -1.1
comp=Z,10nm,0.6s,baz=275,slow=7.1,SNR=9.7
TCOL CIGO, UAF Yank 72.69 27 P P 19 02 37.2 -0.4
baz=281
POKR Poker Plat Res 72.83 26 P P 19 02 38.0 -0.4
baz=281
ARCES ARCESS Array B 72.91 338 P P 19 02 37.9 -1.0
comp=Z,4.9nm,0.7s,baz=53,slow=6.2,SNR=7.3
ARCES LR LR 19 38 06.1
comp=Z,139nm,18.9s,baz=95,slow=39
ARCES ARCESS Array B 72.91 338 eP P 19 02 39.3 +0.4
ARCES pmax pmax
comp=Z,5.0nm,0.7s
ILAR Eielson Array 73.12 27 P P 19 02 38.8 -1.4
comp=Z,6.5nm,0.8s,baz=266,slow=5.1,SNR=41
ILAR LR LR 19 36 53.7
comp=Z,62nm,19.7s,baz=290,slow=38
HDA Harding Lake 73.17 27 P P 19 02 39.7 -0.7
baz=282
SPITS Spitsbergen Ar 73.18 348 LR LR 19 38 25.0
comp=Z,204nm,21.3s,baz=140,slow=39
FINES FINESS Array B 74.46 330 P P 19 02 48.0 -0.1
comp=Z,11nm,0.7s,baz=62,slow=6.0,SNR=35
FINES LR LR 19 39 05.9
comp=Z,280nm,18.6s,baz=70,slow=39
VSU Vasula 74.84 327 eP P 19 02 50.3 0.0
BRTR Keskin Array B 74.88 307 P P 19 02 51.6 +0.4
comp=Z,2.1nm,0.6s,baz=88,slow=2.8,SNR=12
BRTR Keskin Array B 74.88 307 eP P 19 02 51.6 +0.4
BRTR pmax pmax
comp=Z,3.0nm,0.9s
AKASG Malin Array Be 75.30 319 P P 19 02 52.1 -1.0
comp=Z,2.9nm,0.6s,baz=64,slow=5.9,SNR=25
AKASG LR LR 19 39 00.0
comp=Z,94nm,18.6s,baz=40,slow=38
NACGM Naroch 75.70 323 e P 19 02 54.0 -1.3
IZAR Zarasai 75.78 324 eP P 19 02 55.5 -0.3
IZAR IAmb IAmb 19 03 06.2
comp=Z,11nm,1.0s
ISAL Salakas 75.89 324 eP P 19 02 55.8 -0.6
ISAL IAmb IAmb 19 03 06.7
comp=Z,11nm,0.9s
IIGN Ignalina 75.89 324 eP P 19 02 55.8 -0.7
IIGN IAmb IAmb 19 03 06.4
comp=Z,7.8nm,0.9s
NOR Nord 76.20 354 i P P 19 02 57.0 -0.8
comp=Z,20nm,1.3s
NOR Nord 76.20 354 i P P 19 02 57.0 -0.8
NOR pmax pmax
comp=Z,20nm,1.3s
SORM Soroca 76.49 316 ⇓P P 19 02 59.3 -0.7
LEF Lefka 76.61 303 ⇑P P 19 03 04.4 +3.4
EPYK Eagle Plains 76.76 24 P P 19 03 00.4 -0.8
baz=290
TLCR 76.96 313 ⇓P P 19 03 03.0 +0.3
PABE Paberze 77.09 325 eP P 19 03 03.2 +0.1
INK Inuvik 77.21 21 P P 19 03 03.2 -0.5
comp=Z,10nm,0.9s,baz=292,slow=6.0,SNR=27
TOPG Topolog 77.34 313 ⇓P P 19 03 05.4 +0.6
PETR Petresti 77.89 314 ⇑P P 19 03 09.4 +1.5
ICOR Ion Corvin 77.95 313 ⇑P P 19 03 08.3 0.0
SUW Suwalki 77.97 323 eP P 19 03 08.6 +0.5
SUW Suwalki 77.97 323 eP P 19 03 08.6 +0.5
ODBI Odobesti 77.99 314 ⇓P P 19 03 09.7 +1.3
TESR Tescani 78.05 315 ⇓P P 19 03 08.8 0.0
PRAR RASCA 78.08 316 ⇓P P 19 03 07.1 -1.9
VRI Vrincioaia 78.18 315 ⇑P P 19 03 10.8 +1.2
PLOR Plostina 78.24 315 ⇑P P 19 03 11.4 +1.4
BIZ Bicaz 78.28 316 ⇑P P 19 03 10.1 0.0
PGOR Pogoanele 78.28 314 ⇓P P 19 03 11.6 +1.5
BURAR Bucovina Array 78.66 317 ⇑P P 19 03 12.8 +0.5
LVV L'vov 78.74 319 eP P 19 03 12.5 -0.1
OZUR 78.74 315 ⇑P P 19 03 13.6 +0.9
MLR Muntele Rosu 78.82 314 ⇑P P 19 03 13.8 +0.6
SULR 78.85 314 ⇓P P 19 03 14.1 +0.9
DOPR Dopca 79.05 315 ⇑P P 19 03 15.5 +1.2
ARCR ARCALIA 79.38 316 ⇓P P 19 03 16.5 +0.4
VOIR 79.43 315 ⇑P P 19 03 17.2 +0.7
KWP Kalwaria Pacla 79.62 319 eP P 19 03 17.9 +0.5
KWP Kalwaria Pacla 79.62 319 eP P 19 03 17.9 +0.5
ELND Elena 79.64 312 ⇓P P 19 03 26.7 +9.1
ARR Arges 79.73 315 ⇑P P 19 03 19.3 +1.2
HUMR Humele 79.76 314 ⇑P P 19 03 18.4 +0.2
C36M Paulatuk 79.82 19 P P 19 03 17.3 -0.7
baz=301
CJR Cluj-Napoca 79.99 316 ⇑P P 19 03 20.5 +1.0
BEL Belsk 80.04 322 eP P 19 03 20.2 +0.6
BEL Belsk 80.04 322 eP P 19 03 20.2 +0.6
KOLS Kolonicke sedl 80.11 318 eP P 19 03 20.0 -0.1
KOLS Kolonicke sedl 80.11 318 eP P 19 03 20.0 -0.1
DAG Danmarks Havn 80.16 351 i P P 19 03 19.2 -0.5
DAG Danmarks Havn 80.16 351 i P P 19 03 19.2 -0.5
UZH Uzhgorod 80.20 318 i P P 19 03 21.6 +1.1
UZH e 19 03 29.2
UZH e 19 03 36.5
TRPA Tarpa 80.21 318 ⇓P P 19 03 20.7 +0.2
LOT Lotru 80.29 315 ⇑P P 19 03 22.7 +1.5
VLAD Vladila 80.32 313 ⇓P P 19 03 22.8 +1.6
DRGR 80.54 316 ⇓P P 19 03 22.7 +0.2
CRVS Cervenica-Dubn 80.63 319 eP P 19 03 24.1 +1.2
CRVS pmax pmax
comp=Z,96nm,1.6s
CRVS Cervenica-Dubn 80.63 319 eP P 19 03 24.1 +1.2
DEV Deva 80.72 315 ⇓P P 19 03 24.0 +0.7
GZR Gura Zlata 80.96 315 ⇑P P 19 03 25.4 +0.6
MPEP Malo Peshtene 80.99 313 P P 19 03 25.2 +0.3
MPEP Malo Peshtene 80.99 313 P P 19 03 25.2 +0.3
NIE Niedzica 81.17 319 eP P 19 03 27.3 +1.6
NIE Niedzica 81.17 319 eP P 19 03 27.3 +1.6
OJC Ojcow 81.19 320 eP P 19 03 26.1 +0.3
OJC Ojcow 81.19 320 eP P 19 03 26.1 +0.3
PUNG Punghina 81.23 314 ⇓P P 19 03 26.6 +0.5
NB2 NORSAR Subarra 81.34 332 P P 19 03 25.4 -1.1
comp=Z,2.0nm,0.7s,baz=60,slow=5.6
NOA NORSAR Array B 81.34 332 P P 19 03 25.4 -1.1
comp=Z,5.5nm,0.9s,baz=64,slow=5.4,SNR=11
NOA LR LR 19 43 31.3
comp=Z,266nm,19.8s,baz=55,slow=39
KECS Kecovo 81.38 318 eP P 19 03 27.5 +0.7
KECS pmax pmax
comp=Z,23nm,1.8s
KECS Kecovo 81.38 318 eP P 19 03 27.5 +0.7
SIRR Siria 81.40 316 ⇓P P 19 03 26.8 -0.2
GKP Gorka Klasztor 81.54 324 eP P 19 03 27.8 +0.3
GKP Gorka Klasztor 81.54 324 eP P 19 03 27.8 +0.3
VTS Vitosha 81.58 312 ⇓P P 19 03 29.1 +0.9
VTS Vitosha 81.58 312 ⇓P P 19 03 29.1 +0.9
VTS Vitosha 81.58 312 i P P 19 03 29.1 +0.9
BZS Buzias 81.66 315 ⇑P P 19 03 28.3 -0.1
KKB Krupnik 81.94 312 i P P 19 03 30.0 +0.1
KKB Krupnik 81.94 312 i P P 19 03 30.0 +0.1
VYHS Vyhne 82.40 319 eP P 19 03 32.5 +0.3
VYHS pmax pmax
comp=Z,29nm,1.5s
VYHS Vyhne 82.40 319 eP P 19 03 32.5 +0.3
VAY Valandovo 82.49 311 i P P 19 03 32.5 -0.3
STIP Stip 82.63 312 i P P 19 03 32.3 -1.3
MORC Moravsky Berou 82.70 320 eP P 19 03 34.5 +0.7
MORC Moravsky Berou 82.70 320 ⇑P P 19 03 34.0 +0.2
RES Resolute Bay 82.70 9 P P 19 03 33.2 -0.1
comp=Z,23nm,0.9s,baz=311,slow=5.7,SNR=56
DLBC Dease Lake 82.78 30 P P 19 03 34.8 +0.6
comp=Z,7.5nm,0.8s,baz=304,slow=4.0,SNR=4.5
JAVC Velka Javorina 82.98 320 eP P 19 03 37.3 +2.0
FRGS Fruska Gora 83.01 315 eP P 19 03 34.9 -0.6
KSP Ksiaz 83.02 322 eP P 19 03 36.2 +0.8
KSP Ksiaz 83.02 322 eP P 19 03 36.2 +0.8
SKO Skopje 83.05 312 i P P 19 03 36.5 +0.7
OSTC Ostas 83.18 321 eP P 19 03 37.0 +0.7
DPC Dobruska-Polom 83.20 321 eP P 19 03 37.4 +1.0
DPC ex x 19 03 45.7
DPC Dobruska-Polom 83.20 321 eP P 19 03 37.4 +1.0
DPC e 19 03 45.7
CHVC Chvalec 83.27 322 eP P 19 03 37.3 +0.6
DIVS Divibare 83.28 314 eP P 19 03 35.0 -2.0
UPC Upice 83.32 321 eP P 19 03 37.9 +0.9
UPC Upice 83.32 321 eP P 19 03 37.9 +0.9
MORH Mrgy, Hungar 83.38 317 eP P 19 03 37.1 -0.2
MODS Modra-Piesok 83.41 319 eP P 19 03 37.3 -0.2
MODS pmax pmax
comp=Z,32nm,1.6s
MODS Modra-Piesok 83.41 319 eP P 19 03 37.3 -0.2
VRAC Vranov 83.45 320 eP P 19 03 38.5 +0.8
VRAC Vranov 83.45 320 ⇓P P 19 03 38.3 +0.6
KRUC Moravsky 83.67 320 eP P 19 03 39.7 +0.9
BBLS Lazići 83.76 314 eP P 19 03 40.8 +1.4
RUE Ruedersdorf 83.78 324 eP P 19 03 39.5 +0.3
KMBO Kilima Mbogo 83.85 267 P P 19 03 41.6 +0.9
comp=Z,3.6nm,0.7s,baz=48,slow=6.5,SNR=9.4
HAPS Han Pijesak,Bl 83.98 315 eP P 19 03 39.1 -1.5
PVCC Panska Ves 84.15 322 eP P 19 03 42.1 +0.9
PVCC Panska Ves 84.15 322 eP P 19 03 42.1 +0.9
UPM Unac-Piva 84.34 314 eP P 19 03 42.0 -0.6
BRG Berggiesshubel 84.37 322 eP P 19 03 42.2 -0.1
comp=Z,79nm,1.6s
BRG Berggiesshubel 84.37 322 eP P 19 03 42.2 -0.1
BRG pmax pmax
comp=Z,79nm,1.6s
PDG Podgorica 84.40 313 ⇑P P 19 03 42.7 +0.1
PDG Podgorica 84.40 313 eP P 19 03 42.5 -0.1
PRU Pruhonice 84.40 321 eP P 19 03 42.8 +0.4
PRU ex x 19 03 50.5
PRU ex x 19 03 59.1
PRU Pruhonice 84.40 321 eP P 19 03 42.8 +0.4
PRU e 19 03 50.5
PRU e 19 03 59.1
CONA Conrad Observa 84.45 319 epP P 19 03 43.9 +1.0
comp=Z,26nm,1.5s,SNR=7.3
DRME Dracevica, Mon 84.54 313 eP P 19 03 42.9 -0.4
BRY Bratogost 84.70 314 eP P 19 03 44.3 -0.1
CLL Collm 84.72 323 ⇓i P P 19 03 43.6 -0.4
comp=Z,52nm,1.5s
CLL i 19 03 52.6
CLL Collm 84.72 323 ⇓i P P 19 03 43.6 -0.4
CLL i 19 03 52.6
CLL pmax pmax
comp=Z,52nm,1.5s
PBCC Pribram 84.84 321 eP P 19 03 44.8 +0.1
BLY Banja Luka 84.89 316 eP P 19 03 44.9 -0.1
ARSA Arzberg 84.94 319 ePcP P 19 03 46.1 +0.8
comp=Z,7.0nm,1.0s
MGRS Mrkonjic Grad 85.09 316 eP P 19 03 46.8 +0.7
STON Ston 85.28 314 eP P 19 03 45.3 -1.7
KHC Kasperske Hory 85.33 321 eP P 19 03 46.7 -0.5
KHC ex x 19 03 55.8
KHC Kasperske Hory 85.33 321 eP P 19 03 46.7 -0.5
KHC e 19 03 55.8
GERES GERESS Array B 85.38 321 P P 19 03 47.8 +0.3
comp=Z,5.0nm,0.8s,baz=65,slow=4.5,SNR=32
GERES LR LR 19 45 06.8
comp=Z,238nm,18.1s,baz=42,slow=38
KULLO Kullorsuaq 85.43 359 i P P 19 03 47.1 0.0
comp=Z,43nm,0.9s
KULLO Kullorsuaq 85.43 359 i P P 19 03 47.1 0.0
KULLO pmax pmax
comp=Z,43nm,0.9s
PERS Pernice 85.45 318 eP P 19 03 47.6 -0.3
MOA Molln 85.46 320 ePcP P 19 03 48.8 +0.9
comp=Z,34nm,1.3s,SNR=8.2
SOKA Soboth 85.48 318 ePcP P 19 03 48.4 +0.3
comp=Z,4.7nm,0.6s
CRES Cresnjev 85.57 317 eP P 19 03 48.1 -0.3
OBKA Obir 85.86 318 ePcP P 19 03 50.3 +0.3
comp=Z,20nm,1.1s
LJU Ljubljana 86.07 318 eP P 19 03 46.0 -4.9
LJU Ljubljana 86.07 318 eP P 19 03 46.5 -4.4
SUMG Summit 86.35 354 i P P 19 03 52.0 -0.3
comp=Z,69nm,1.0s
SUMG Summit 86.35 354 i P P 19 03 52.0 -0.3
SUMG pmax pmax
comp=Z,69nm,1.0s
KBA Koelnbreinsper 86.36 319 ePcP P 19 03 52.5 -0.1
comp=Z,9.6nm,0.9s
MYKA Terra Mystica 86.37 319 ePcP P 19 03 52.7 +0.2
comp=Z,13nm,1.4s
YKA Yellowknife Ar 86.94 22 P P 19 03 54.5 -0.4
comp=Z,5.6nm,0.6s,baz=311,slow=4.6,SNR=89
YKA LR LR 19 48 00.4
comp=Z,78nm,18.3s,baz=0.0,slow=39
ABTA Abfaltersbach 87.02 319 ePcP P 19 03 55.1 -0.5
comp=Z,9.5nm,0.9s
WATA Walderalm 87.32 320 epP P 19 03 57.6 +0.4
comp=Z,26nm,1.7s
SQTA Sankt Quirin 87.60 320 ePcP P 19 03 58.4 -0.2
comp=Z,15nm,1.0s
MOTA Moosalm 87.61 320 eP P 19 03 57.2 -1.4
comp=Z,14nm,1.3s
FETA Feichten 87.98 320 ePcP P 19 03 59.3 -1.1
comp=Z,14nm,1.4s
D03D Eldon 91.87 37 P P 19 04 19.1 +0.7
baz=303
B05A Bryant 92.03 36 P P 19 04 18.8 -0.2
baz=304
E04D Cinebar 92.70 38 P P 19 04 23.1 +0.9
baz=303
SFJD Kangerlussuaq 92.80 356 P P 19 04 21.8 -0.4
comp=Z,9.5nm,0.7s,baz=10,slow=6.0,SNR=3.8
H04D Lebanon 93.72 40 P P 19 04 27.9 +1.0
baz=303
I03D Drain, OR 93.79 41 P P 19 04 28.0 +0.7
baz=303
I04A Tendick Farm, 94.31 40 P P 19 04 29.4 -0.4
baz=303
I05D Terrebonne, OR 94.65 39 P P 19 04 31.5 +0.2
baz=304
NEW Newport 94.74 34 P P 19 04 31.3 -0.3
comp=Z,1.1nm,0.6s,baz=265,slow=2.7,SNR=4.5
NEW Newport 94.74 34 P P 19 04 31.7 +0.1
baz=308
J04D Umpqua Nationa 94.80 41 P P 19 04 32.7 +0.5
baz=304
L04D Klamath Falls 95.24 41 P P 19 04 34.4 +0.2
baz=303
YBH Yreka Blue Hor 95.25 42 P P 19 04 31.9 -2.2
comp=Z,1.9nm,1.0s,baz=270,slow=3.0,SNR=2.7
J05D Fort Rock, OR 95.30 40 P P 19 04 34.8 +0.4
baz=304
M04C Macdoel 95.77 42 P P 19 04 36.6 +0.1
baz=304
PPT Papeete 96.03 106 LR LR 19 38 13.1
comp=Z,83nm,21.6s,baz=326,slow=29
PPT2 Papeete2 96.04 106 eLR LR 19 35 42.7
comp=Z,196nm,24.8s
FRB Frobisher Bay 96.04 4 P P 19 04 35.9 -1.2
comp=Z,7.0nm,0.8s,baz=358,slow=5.9,SNR=17
MAW Mawson 97.08 199 LR LR 19 43 19.0
comp=Z,36nm,20.2s,baz=57,slow=32
TBI Tubuai 97.99 112 eLR LR 19 36 33.5
comp=Z,220nm,29.5s
NVAR Mina Array Bea 99.90 43 P Pdif 19 04 56.0 +0.7
comp=Z,0.8nm,0.8s,baz=87,slow=32,SNR=6.3
NVAR LR LR 19 42 10.0
comp=Z,48nm,20.3s,baz=322,slow=31
TAOE Nuku Hiva Isla 101.93 95 eLR LR 19 38 28.3
comp=Z,310nm,23.7s
SYO Syowa Base 105.40 202 ⇑ePdiff Pdif 19 05 20.8 +2.2
SYO Syowa Base 105.40 202 ⇑epPdiff pPdif 19 05 23.0 -0.4
TORD Torodi Ar. Bea 111.12 294 PKiKP PKiKP 19 09 43.8 -0.7
comp=Z,1.1nm,1.0s,baz=58,slow=1.7,SNR=5.3
TORD PP PP 19 10 22.4 -0.9
comp=Z,1.6nm,1.0s,baz=61,slow=5.1,SNR=4.2
TXAR Lajitas Array 115.03 42 PKP PKiKP 19 09 51.0 -0.8
comp=Z,1.2nm,0.5s,baz=311,slow=0.6,SNR=11
DBIC Dimbokro 119.83 291 PKP PKPdf 19 10 00.2 -1.1
comp=Z,2.3nm,0.9s,baz=13,slow=4.7,SNR=2.5
KIC Kosan Boka 119.88 290 ePKIKP PKPdf 19 10 00.1 -1.3
comp=Z,39nm,1.5s
TIC Toumodi 119.99 291 ePKIKP PKPdf 19 10 00.3 -1.3
LIC Lamto 120.19 290 ePKIKP PKPdf 19 10 00.0 -2.0
comp=Z,67nm,2.1s
BCIP Isla Barro Col 144.73 36 eP PKiKP 19 10 54.6 +3.0
SJCC San Jacinto, C 146.44 28 eP PKPdf 19 10 51.3 +0.5
CODC Agustn Codazz 147.14 26 eP PKPdf 19 10 52.7 +0.8
SMLC San Martn de 147.90 27 eP PKPdf 19 10 51.9 -1.3
OCAC Ocana 148.72 27 eP PKPdf 19 10 57.7 -0.8
SDV Santo Domingo 149.16 21 eP PKPbc 19 10 55.2 -0.3
BRRC Barranca, Sant 149.56 28 eP PKPdf 19 10 55.7 -0.2
SOCV Socops 149.64 22 eP PKPdf 19 10 58.3 +2.2
PTBC PUERTO BERRIO 149.72 30 eP PKPdf 19 10 55.4 -0.8
PAMC Pamplona, Colo 149.79 26 eP PKPbc 19 10 59.4 -2.2
PLMC San Jos del P 150.20 35 eP PKPdf 19 10 56.9 -0.2
BARC Barichara 150.26 28 eP PKPbc 19 11 01.2 -1.2
GUY2C Guyana, Caldas 150.41 33 eP PKPdf 19 11 01.9 -1.2
SPBC San Pablo de B 150.68 30 eP PKPdf 19 10 57.9 +0.1
RREF El Recreo 150.70 33 eP PKPbc 19 11 02.4 -1.6
RUSC La Rusia 150.92 28 eP PKPdf 19 10 59.1 +0.5
YOTC Yotoco, Valle 150.94 36 eP PKPdf 19 10 57.8 -0.5
ANIL Santa Ana 151.02 34 eP PKPdf 19 10 56.0 -2.5
ROSC El Rosal 151.27 32 PKP PKPdf 19 10 59.5 +0.5
comp=Z,7.0nm,0.6s,baz=181,slow=21,SNR=4.9
ROSC PKPbc sPKPdf 19 11 06.1 +0.4
comp=Z,26nm,0.8s,baz=168,slow=5.9,SNR=6.5
ROSC El Rosal 151.27 32 eP PKPdf 19 10 60.0 +0.9
ELOV Elorza 151.31 21 eP PKPbc 19 11 03.9 -0.7
CHIC Chingaza 151.74 31 eP PKPdf 19 10 59.6 -0.2
POPC Popayan, Colom 151.93 38 eP PKPbc 19 11 05.0 -1.3
PRAC Prado 151.94 34 eP PKPdf 19 11 02.9 +3.2
VILC Villavicencio, 152.20 31 eP PKPdf 19 11 00.9 +0.7
BETC Betania 152.51 36 eP PKPbc 19 11 07.0 -0.4
GCUF Volcan Galeras 152.57 41 eP PKPbc 19 11 08.1 0.0
PLCA Paso Flores 157.54 158 PKP PKPdf 19 11 08.0 +1.4
comp=Z,3.6nm,1.1s,baz=270,slow=7.1,SNR=2.5
BDFB Brasilia 167.98 290 PKP PKPdf 19 11 16.8 -0.8
comp=Z,2.8nm,0.9s,baz=68,slow=11,SNR=2.9
LPAZ La Paz 171.10 65 PKP PKPdf 19 11 20.5 +0.5
comp=Z,17nm,1.3s,baz=22,slow=2.0,SNR=19
LPAZ PP PP 19 16 30.9 +0.9
comp=Z,1.2nm,0.9s,baz=222,slow=6.1,SNR=3.8
CPUP Villa Florida 173.52 199 PKP PKPdf 19 11 20.1 0.0
comp=Z,1.9nm,0.9s,baz=340,slow=3.6,SNR=3.7
CPUP PKPab PKPab 19 12 48.6 -0.2
comp=Z,0.8nm,0.6s,baz=146,slow=7.3,SNR=1.9

ATH 02 19:11:14.2, 38.°20N×20.°39E, h13km±1km, ML2.5/1, Error ellipse: s-maj=1.8km s-min=1.1km az=258.0
THE 02 19:11:14.3, 38.°18N×20.°42E, h14km±1km, ML2.9/3, Error ellipse: s-maj=2.0km s-min=0.8km az=189.0
ISC 02 19:11:14.4±1.2, 38.°19N±0.°03×20.°41E±0.°05, h13km±5km, n24, σ0.°34/35, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	250	P	Pg	19 11 16.6	-0.1
CHV1				S	Sg	19 11 18.5	+0.2
	27μm,0.2s						
KEF3	Kipouria, Keph	0.05	284	P	Pg	19 11 16.6	-0.2
ARG2	Argostoli	0.06	102	P	Pg	19 11 16.9	-0.1
ARG2				S	Sg	19 11 18.9	+0.1
	8μm,0.1s						
KEF2	Argostoli. Kep	0.07	113	P	Pg	19 11 17.0	0.0
KEF2				S	Sg	19 11 18.8	0.0
KEF4	Livadi, Kephal	0.07	10	P	Pg	19 11 16.8	-0.2
KEF4				S	Sg	19 11 18.6	-0.3
KEF1	Kardakata, Kep	0.10	29	P	Pg	19 11 17.1	-0.3
KEF1				S	Sg	19 11 18.9	-0.5
VLS	Valsamata	0.14	96	P	Pg	19 11 17.8	-0.1
VLS				S	Sg	19 11 20.5	+0.1
	3μm,0.1s						
VLS	Valsamata	0.14	96	P	Pg	19 11 17.8	-0.1
VLS				S	Sg	19 11 20.6	+0.1
VLS				AML	AML	19 11 20.8	
	comp=N,3975μm,0.1s						
VLS				AML	AML	19 11 21.0	
	comp=E,6448μm,0.1s						
VSK1	VASILIKIADES	0.25	29	P	Pg	19 11 19.3	-0.4
VSK1				S	Sg	19 11 23.4	+0.1
VLMS	Volimes, Zakyn	0.37	147	P	Pg	19 11 21.7	-0.2
VLMS				S	Sb	19 11 28.1	-0.4
EVGI	Lefkada island	0.47	24	P	Pg	19 11 23.4	-0.3
EVGI				S	Sg	19 11 30.2	+0.2
EVGI	Lefkada island	0.47	24	P	Pg	19 11 23.1	-0.6
LKD2	Lefkada island	0.63	18	P	Pg	19 11 26.2	-0.4
TSLK	Tsoukalades, L	0.66	17	P	Pg	19 11 27.1	-0.2
TSLK				S	Sb	19 11 37.7	+0.8
TSLK	Tsoukalades, L	0.66	17	P	Pg	19 11 27.0	-0.2
PDO	Prodromos	0.73	56	P	Pg	19 11 28.5	-0.1
RLS	Riolos of Patr	0.84	99	P	Pg	19 11 30.4	-0.3
PVO	Paravola	0.97	64	P	Pb	19 11 32.5	-0.6
DRO	Drossia	1.05	103	P	Pb	19 11 34.2	-0.3
LAKA	Lakka	1.24	87	P	Pb	19 11 37.8	+0.2
ANX	Ano Chora	1.25	71	P	Pb	19 11 38.2	+0.2
KALE	Kalithea	1.38	81	P	Pb	19 11 40.2	+0.2
KLV	Kalavryta, Ach	1.38	96	P	Pn	19 11 39.5	+0.1
AGG	Agios Georgios	1.72	61	P	Pb	19 11 46.4	+0.6

TEH 02 19:21:47.5, 32.°56N×50.°02E, h10km, ML2.8
THR 02 19:21:48.3±0.4, 32.°60N×50.°00E, h6km±4km, ML3.1
ISC 02 19:21:48.3±0.9, 32.°56N±0.°05×50.°03E±0.°04, h11km, n14, σ0.°78/17, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHBN	Jahan bin	0.63	121	ePg	Pg	19 22 00.9	+0.2
JHBN				e		19 22 18.0	
IPIR	Pirpir	0.74	80	eSg	Sb	19 22 14.2	+0.6
IPIR				ePg	Pg	19 22 02.4	-0.3
IPIR				e		19 22 15.2	
ROKH	ROKH	0.88	104	e		19 22 23.9	
ROKH				ePg	Pg	19 22 05.0	-0.3
SHGR	Shooshtar-Gavs	1.13	247	ePg	Pn	19 22 10.0	-0.2
SHGR				eSg	Sn	19 22 25.9	+0.2
SHGR				IAML		19 22 28.7	
	comp=N,585nm,0.4s						
SHGR				IAML		19 22 28.7	
	comp=E,264nm,0.4s						
KHMZ	Khomeyn	1.17	357	ePg	Pb	19 22 10.3	-0.5
IBRJ	Brojen	1.23	122	ePg	Pg	19 22 12.4	+0.4
IBRJ				e		19 22 17.9	
IKLH	Kolahrood	1.51	60	ePg	Pg	19 22 17.7	+0.4
IKLH				e		19 22 46.4	
IKMR	Kamar-syah	1.68	305	ePg	Pg	19 22 19.4	-1.2
IKMR				e		19 22 21.6	
IKMR				eSg	Sg	19 22 44.0	+1.6
QAM	Ghamsar	1.68	44	ePg	Pg	19 22 20.1	-0.5
QAM				e		19 22 49.9	
BDRS	Dareh Seyedi	1.69	326	e	Pg	19 22 21.9	+1.2
IZEF	Zefreh	1.97	80	ePg	Pg	19 22 25.5	-0.6
IZEF				e		19 22 26.6	
IDOB	Doab	1.98	309	ePn	Pb	19 22 23.5	-0.9
IDOB				e		19 23 07.6	
ASAO	Ashtian	1.98	360	ePn	Pb	19 22 24.0	-0.5
KLNJ	Kolanjah	2.04	139	ePg	Pg	19 22 25.3	-0.4
KLNJ				e		19 23 00.7	

SJA 02 19:35:20.1±0.6, 19.°43S×70.°98W, h17km±5km, ML3.3, MW3.6
GUC 02 19:35:21.8±0.8, 19.°42S×71.°04W, h34km±2km, ML3.9
NEIC 02 19:35:22.1±2.6, 19.°51S±0.°06×71.°11W±0.°05, h23km±5km, Error ellipse: s-maj=8.8km s-min=7.2km az=165.0
IDC 02 19:35:27.5±3.5, 19.°49S×70.°90W, h58km±29km, mb3.5/4, mb1 3.8/8, mb1mx3.5/37, mbtmp3.8/8, ML3.7/4, MS3.3/1, Ms1 3.3/1, ms1mx2.6/19, Error ellipse: s-maj=36.7km s-min=17.2km az=93.0
ISC 02 19:35:22.1±1.2, 19.°42S±0.°03×71.°02W±0.°06, h30km±8km, n57, σ1.°66/68, mb3.9/6, 7C-3D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.87	102	⇓i P	Pn	19 35 37.9	-0.4
PSGC				i S	Sn	19 35 49.8	-0.2
PSGC				IAML		19 35 52.9	

comp=N,4µm,0.2s
PSGCX Pisagua 0.87 102 i P Pn 19 35 36.3 -2.0
PSGCX i Sg Sn 19 35 48.5 -1.6
AP01 Chacalluta 1.23 32 eP Pn 19 35 43.6 +0.3
AP01 i S Sb 19 35 59.5 -0.6
AP01 IAML 19 36 06.6
comp=E,6µm,0.3s
PB11 IPOC Station P 1.33 105 eP Pb 19 35 45.7 -0.9
PB11 i S Sb 19 36 03.8 +0.5
PB11 IAML 19 36 08.1
comp=N,5µm,0.4s
PB11 IPOC Station P 1.33 105 Pb 19 35 46.1 -0.5
PB11 Sn Sb 19 36 03.8 +0.5
PB11 IPOC Station P 1.33 105 i P Pn 19 35 44.7 -0.1
MNMC Minye Minye 1.38 78⇓i P Pb 19 35 46.6 -0.8
MNMC i S Sb 19 36 04.9 +0.2
MNMC IAML 19 36 10.3
comp=E,13µm,0.3s
MNMC Minye Minye 1.38 78 Pb 19 35 46.9 -0.5
MNMC Sn Sb 19 36 05.6 +0.8
MNMCX Minye Minye 1.38 78 i P Pb 19 35 46.2 +0.6
MNMCX i Sg Sb 19 36 04.5 -0.3
TA01 Diego Aracena 1.39 145⇑i P Pb 19 35 46.4 -1.0
TA01 i S Sb 19 36 04.1 -0.5
TA01 IAML 19 36 11.9
comp=E,4µm,0.6s
PATCX Punta Patache 1.61 150⇑i P Pb 19 35 49.7 -1.6
PATCX i S Sb 19 36 10.3 -1.0
PATCX IAML 19 36 17.3
comp=E,1µm,0.5s
PATCX Punta Patache 1.61 150 i P Pn 19 35 49.4 +0.8
GO01 Chusmiza 1.74 98⇑i P Pb 19 35 52.8 -0.9
GO01 i S Sb 19 36 16.4 +1.0
GO01 IAML 19 36 20.0
comp=N,4µm,0.2s
GO01 Chusmiza 1.74 98 Pb 19 35 52.6 -1.1
GO01 Sn Sb 19 36 16.4 +1.0
PB16 IPOC Station P 1.80 53⇑i P Pb 19 35 53.6 -1.1
PB16 i S Sb 19 36 17.4 +0.4
PB16 IAML 19 36 23.4
comp=N,2µm,0.5s
PB16 IPOC Station P 1.80 53 i P Pb 19 35 53.1 -1.5
PB16 i Sg Sb 19 36 18.0 +1.0
PB08 IPOC Station P 1.90 112⇑i P Pb 19 35 54.9 -1.5
PB08 i S Sb 19 36 20.3 +0.5
PB08 IAML 19 36 22.0
comp=N,1µm,0.5s
PB08 IPOC Station P 1.90 112 i P Pn 19 35 54.0 +1.1
PB08 i Sg Sb 19 36 21.1 +1.3
PB01 IPOC Station P 2.16 138⇑i P Pn 19 35 57.7 +1.5
PB01 i S Sn 19 36 23.0 +0.9
PB01 IAML 19 36 38.5
comp=N,930nm,0.6s
PB01 IPOC Station P 2.16 138 Pn 19 35 57.9 +1.6
PB02 IPOC Station P 2.16 151⇑i P Pn 19 35 57.6 +1.3
PB02 IPOC Station P 2.16 151 i P Pn 19 35 57.5 +1.3
PB07 IPOC Station P 2.53 155⇓i P Pn 19 36 02.2 +0.9
PB09 IPOC Station P 2.89 145 i P Pn 19 36 07.8 +1.4
PB04 IPOC Station P 3.01 164 Pn 19 36 07.8 -0.2
PB04 IPOC Station P 3.01 164 i P Pn 19 36 09.6 +1.6
PB06 IPOC Station P 3.54 158 i P Pn 19 36 17.4 +2.2
LVC Limon Verde 3.73 148 P Pn 19 36 20.7 +2.6
comp=N,4.2nm,0.3s,baz=352,slow=8.0,SNR=37
LVC S Sn 19 37 03.5 +2.2
comp=N,32nm,0.3s,baz=156,slow=14,SNR=6.3
LVC Limon Verde 3.73 148 Pn 19 36 21.0 +2.9
LVC Limon Verde 3.73 148 i P Pn 19 36 20.2 +2.1
PB15 IPOC Station P 4.04 159 i P Pn 19 36 24.6 +2.5
PB10 IPOC Station P 4.09 174 Pn 19 36 22.1 -0.7
LPAZ La Paz 4.16 42 P Pb 19 36 29.7 -5.2
comp=N,2.2nm,0.3s,baz=252,slow=10,SNR=14
LPAZ S Sb 19 37 28.1 +3.0
baz=277,slow=18,SNR=1.3
LPAZ La Paz 4.16 42 Pn 19 36 29.0 +4.9
LPAZ La Paz 4.16 42 Pn Pn 19 36 28.9 +4.7
YJA Yavi 5.84 119 i P Pn 19 36 50.6 +3.5
YJA IAML 19 37 01.9
comp=Z,7.5nm,0.7s
GO02 Mina Guanaco 5.87 167 Pn 19 36 47.6 +0.3
HJA Humahuaca 6.45 127 i P Pn 19 36 58.2 +2.8
HJA IAML 19 37 07.0
comp=Z,12nm,0.5s
SIV San Ignacio 10.08 72 P Pn 19 37 46.4 +1.5
comp=Z,0.9nm,0.3s,baz=280,slow=8.7,SNR=13
SIV LR LR 19 42 26.0
comp=Z,168nm,20.2s,baz=272,slow=42
CPUP Villa Florida 14.37 121 P P 19 38 46.4 -3.8
comp=Z,0.2nm,0.3s,baz=302,slow=12,SNR=7.2
CPUP Villa Florida 14.37 121 Pn 19 38 40.7 -2.8
PLCA Paso Flores 21.24 179 P P 19 40 08.2 +2.4
comp=Z,1.3nm,1.0s,baz=5.2,slow=11,SNR=2.6
PLCA Paso Flores 21.24 179 P P 19 40 02.4 -3.4
BDFB Brasilia 22.25 84 P P 19 40 20.2 +3.2
comp=Z,1.3nm,0.4s,baz=196,slow=7.4,SNR=3.0
TOA0 Torodi Ar. Sit 78.56 72 P P 19 47 21.2 -0.2
TOA0 IAmb IAmb 19 47 23.7
comp=Z,3.7nm,1.0s
TORD Torodi Ar. Bea 78.56 72 P P 19 47 21.8 +0.4
comp=Z,1.8nm,0.8s,baz=253,slow=5.3,SNR=12
TORD Torodi Ar. Bea 78.56 72 P P 19 47 21.5 +0.1
F07A Phinny Hill Vi 78.66 328 P P 19 47 19.6 -1.6
F07A IAmb IAmb 19 47 19.9
comp=Z,2.2nm,0.8s
YKA Yellowknife Ar 88.59 341 P P 19 48 13.5 +1.8
comp=Z,0.1nm,0.8s,baz=139,slow=4.4,SNR=4.2
H11S2 WAKE ISLAND Hy125.62 279 T T 22 13 39.1
baz=101,slow=74,SNR=29
H11S1 WAKE ISLAND Hy125.63 279 T T 22 13 39.6
baz=101,slow=74,SNR=8.7
H11S3 WAKE ISLAND Hy125.64 279 T T 22 13 40.3
baz=101,slow=74,SNR=8.1
H11N3 WAKE ISLAND Hy125.66 281 T T 22 13 38.8
baz=100,slow=74,SNR=5.5
H11N2 WAKE ISLAND Hy125.67 281 T T 22 13 40.3
baz=100,slow=74,SNR=5.8
H11N1 WAKE ISLAND Hy125.67 281 T T 22 13 44.0
baz=100,slow=74,SNR=4.2
MKAR Makanchi Array 145.04 33 PKPbc PKiKP 19 54 58.3 -2.1
comp=Z,0.3nm,0.8s,baz=325,slow=3.6,SNR=4.3
SONM Songino Array 151.58 4 PKPbc PKiKP 19 55 15.7 +1.7
comp=Z,0.3nm,0.6s,baz=299,slow=3.4,SNR=4.3
SONM PKPab pPKPbc 19 55 23.6 +1.1
comp=Z,0.2nm,0.6s,baz=29,slow=3.4,SNR=3.6

DJA 02 19:37:26.5±0.3, 1˚S±3˚×12˚3E±˚, h10km, M3.9/9, mb4.1/1, MLv3.9/9, Minahassa Peninsula, Sulawesi

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LUWI Luwuk 0.77 243 P Pg 19 37 40.4 -1.0
KMSI Cibinong 1.36 23 P Pn 19 37 50.2 -1.4
APSI Ampana 1.82 263 P Pn 19 37 58.1 +0.1
APSI S Sb 19 38 22.4 -0.5
MRSI Marisa 1.91 307 P Pn 19 37 56.0 -3.1
SANI Sanana 2.87 118 P Pn 19 38 12.0 -0.3
SANI S Sn 19 38 46.6 -0.3
KDI Kendari 3.35 194 P Pn 19 38 12.1 -6.9
MPSI Mapaga 3.71 286 P Pn 19 38 23.9 +0.1
TTSI Tana Toraja 4.33 237 P Pn 19 38 32.5 +0.1
NLAI Namlea 4.43 125 P Pn 19 38 35.0 +1.2
SPSI Sidrap Palu 4.92 229 P Pn 19 38 41.1 +0.6
BKSI Bulukumba 5.68 216 P Pn 19 38 51.7 +0.7

IDC 02 19:39:59.5±3.4, 18.°19S×176.°22W, h0km, mb4.4/3, mb1 4.5/4, mb1mx3.7/48, mbtmp4.4/4, ML4.1/1, Error ellipse: s-maj=174.3km s-min=31.7km az=144.0
NEIC 02 19:40:02.0±1.5, 18.°3S±0.°2×176.°1W±0.°1, h24km±10km, mb4.6/11, Error ellipse: s-maj=23.8km s-min=19.7km az=162.0
ISC 02 19:40:00.0±0.9, 18.°3S±0.°2×176.°1W±0.°1, h10km, n19, σ0.°90/18, mb4.5/9, Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSVF Nonsavu 5.57 275 Pn 19 41 14.7 -8.4
NIUE Niue 5.92 98 Pn Pn 19 41 27.9 0.0
AFI Afiamalu 6.07 44 Pn Pn 19 41 30.2 +0.2
5.3nm,0.3s,baz=338,slow=6.6,SNR=3.7
AFI Sn Sn 19 42 27.2 -12
5.5nm,0.3s,baz=307,slow=23,SNR=4.5
AFI Afiamalu 6.07 44 Pn 19 41 29.8 -0.2
CAN Canberra 35.19 234 P P 19 46 52.3 -2.1
CAN IAmb IAmb 19 47 07.4
comp=Z,15nm,1.1s
CTAO Charters Tower 35.52 261 P P 19 46 57.1 -0.3
PMG Port Moresby 36.67 279 P P 19 47 06.9 -0.4
PMG IAmb IAmb 19 47 12.5
comp=Z,7.8nm,1.0s
STKA Stephens Creek 40.33 242 P P 19 47 39.2 +1.3
comp=Z,5.3nm,1.2s,baz=88,slow=11,SNR=3.5
STKA Stephens Creek 40.33 242 P P 19 47 38.9 +1.0
BBOO Buckleboo 45.10 242 P P 19 48 15.3 -1.4
WR0 Warramunga Arr 46.49 260 P P 19 48 28.6 +0.7
WR0 IAmb IAmb 19 48 30.7
comp=Z,0.3nm,0.1s
WB0 Warramunga Arr 46.66 260 P P 19 48 30.0 +0.9
WB0 IAmb IAmb 19 48 37.6
comp=Z,14nm,1.4s
WB2 Warramunga Arr 46.67 260 P P 19 48 30.0 +0.8
WB2 IAmb IAmb 19 48 44.9
comp=Z,24nm,1.4s
WRAB Tennant Creek 46.68 260 P P 19 48 29.9 +0.6
WRA Warramunga Arr 46.69 260 P P 19 48 29.6 +0.3
comp=Z,1.4nm,0.4s,baz=97,slow=7.2,SNR=20
WRA Warramunga Arr 46.69 260 P P 19 48 29.9 +0.5
AS31 Alice Springs 46.76 255 P P 19 48 29.7 -0.3
AS31 IAmb IAmb 19 48 30.9
comp=Z,2.1nm,0.6s
ASAR Alice Springs 46.76 254 P P 19 48 30.6 +0.6
comp=Z,8.0nm,0.5s,baz=91,slow=8.1,SNR=144
ASAR Alice Springs 46.76 254 P P 19 48 30.2 +0.2

IDC 02 19:42:31.1±27.0, 2.°66N×128.°27E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.2/46, mbtmp3.5/3, MS2.4/1, Ms1 2.4/1, ms1mx2.2/26, Error ellipse: s-maj=551.3km s-min=85.6km az=152.0, Halmahera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DAV Davao City (W) 5.14 329 LR LR 19 45 20.8
comp=Z,39nm,21.3s,baz=294,slow=33
CMAR Chiang Mai Arr 32.74 301 P P 19 49 06.0 0.0
0.5nm,0.8s,baz=104,slow=7.5,SNR=3.7
SONM Songino Array 48.80 341 P P 19 51 18.4 +0.2
0.4nm,0.9s,baz=144,slow=8.2,SNR=3.0
MKAR Makanchi Array 59.31 325 P P 19 52 34.6 -0.3
0.9nm,0.8s,baz=120,slow=7.3,SNR=11

IDC 02 19:51:21.3±3.1, 44.°39N×152.°19E, h0km, mb3.5/2, mb1 3.7/5, mb1mx3.3/41, mbtmp3.6/5, ML3.1/3, Error ellipse: s-maj=95.0km s-min=27.7km az=147.0
SKHL 02 19:51:34.2±0.7, 45.°21N×150.°96E, h40km±9km, mb4.3/1
ISC 02 19:51:29.9±1.3, 45.°2N±0.°2×151.°3E±0.°1, h35km, n11, σ2.°38/17, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KUR Kuril'sk 2.43 273 eP Pn 19 52 08.0 +1.0
KUR AMB AMB 19 52 09.0
52nm,0.4s
KUR eS Sn 19 52 33.0 -2.5
KUR A A 19 52 40.0
399nm,0.3s
KUR A A 19 52 40.0
188nm,0.3s
SHO Shikotan 3.45 250 eP Pn 19 52 24.0 +3.0
SHO eS Sn 19 53 01.0 +0.4
SHO A A 19 53 10.0
90nm,0.2s
SHO A A 19 53 10.0
7.0nm,0.2s
YUK Yuzh-Kuril'sk 4.04 256 eP Pn 19 52 31.0 +1.8
YUK eS Sn 19 53 13.0 -2.3
GRPR Tuman 4.12 255 eP Pn 19 52 32.0 +1.8
GRPR eS Sn 19 53 16.0 -1.2
GLVR Golovnino 4.38 253 eP Pn 19 52 37.0 +3.2
GLVR eS Sn 19 53 24.0 +0.5
NMR Nemuro--Hokkai 4.38 248 eP Pn 19 52 36.0 +2.1
NMR eS Sn 19 53 23.0 -0.7
ASAJ Asahikawa 6.30 264 Pn Pn 19 53 03.9 +3.7
0.6nm,0.3s,baz=107,slow=19,SNR=5.1
PETK Petropavlovsk- 8.99 25 Pn Pn 19 53 38.6 +1.5
0.4nm,0.3s,baz=190,slow=12,SNR=7.7
MJAR Matsushiro Arr 13.11 234 Pn Pn 19 54 29.6 -4.0
0.1nm,0.3s,baz=45,slow=13,SNR=4.4
INK Inuvik 43.67 31 P P 19 59 29.6 -1.0
1.1nm,1.0s,baz=293,slow=5.8,SNR=4.0
YKA Yellowknife Ar 52.95 35 P P 20 00 41.1 -1.2
0.2nm,0.6s,baz=298,slow=6.7,SNR=3.8

IDC 02 19:51:31.6±2.5, 28.°31S×177.°22W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/35, mbtmp3.9/3, MS3.5/1, Ms1 3.4/1, ms1mx2.8/21, Error ellipse: s-maj=64.8km s-min=22.8km az=113.0
NEIC 02 19:51:38.9±0.9, 28.°5S±0.°1×177.°3W±0.°2, h53km±6km, mb4.4/9, Error ellipse: s-maj=28.2km s-min=12.0km az=126.0
ISC 02 19:51:38.8±1.3, 28.°5S±0.°1×177.°3W±0.°2, h54km, n15, σ0.°65/17, mb4.3/7, Kermadec Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RAO Raoul Island 0.97 215 Pn Pn 19 51 55.2 -1.2
991nm,0.3s,baz=65,slow=4.1,SNR=52
RAO Sn Sn 19 52 09.6 +0.3
2µm,0.3s,baz=140,slow=23,SNR=37
RAO Raoul Island 0.97 215 Pn 19 51 55.6 -0.8
RAO Sn 19 52 09.5 +0.3
STKA Stephens Creek 35.58 254 P P 19 58 32.2 +1.1
1.6nm,0.7s,baz=93,slow=11,SNR=5.2
STKA LR LR 20 10 35.4
comp=Z,70nm,19.9s,baz=201,slow=32
BBOO Buckleboo 40.14 252 P P 19 59 09.3 -0.3
AS31 Alice Springs 43.88 265 P P 19 59 40.6 +0.3
ASAR Alice Springs 43.89 265 P P 19 59 39.9 -0.4
0.6nm,0.5s,baz=95,slow=6.9,SNR=12
WR0 Warramunga Arr 44.52 270 P P 19 59 45.5 +0.1
WR0 IAmb IAmb 19 59 59.9
comp=Z,11nm,1.5s
WB2 Warramunga Arr 44.69 270 P P 19 59 47.0 +0.3
WB2 IAmb IAmb 19 59 50.0
comp=Z,6.1nm,1.1s
WRAB Tennant Creek 44.69 270 P P 19 59 46.6 -0.1
WRA Warramunga Arr 44.70 270 P P 19 59 46.9 0.0
comp=Z,1.9nm,0.7s,baz=111,slow=6.4,SNR=6.2
WRA Warramunga Arr 44.70 270 IAmb IAmb 19 59 47.8
comp=Z,0.3nm,1.0s
WB0 Warramunga Arr 44.72 270 P P 19 59 47.7 +0.8
QSPA South Pole Qui 61.65 180 P P 20 01 51.8 +0.9
QSPA IAmb IAmb 20 01 58.9
comp=Z,6.0nm,1.3s
SNAA Sanae 80.07 178 P P 20 03 42.3 -0.1
SNAA IAmb IAmb 20 03 58.2
comp=Z,5.6nm,1.4s
AKASG Malin Array Be 150.11 325 PKPbc PKiKP 20 11 23.3 -0.7
comp=Z,0.3nm,0.4s,baz=46,slow=2.4,SNR=5.1
AKASG PKPab PKPab 20 11 28.9 -0.3
comp=Z,1.4nm,0.7s,baz=43,slow=3.3,SNR=7.3

IDC 02 20:02:45.7±2.4, 32.°48S×69.°75W, h106km±21km, mb3.8/6, mb1 3.8/11, mb1mx3.6/28, mbtmp4.1/11, Error ellipse: s-maj=28.3km s-min=15.1km az=96.0
SJA 02 20:02:45.2±1.1, 32.°48S×69.°93W, h126km±6km, ML4.6, MW4.4
NEIC 02 20:02:45.8±2.5, 32.°54S±0.°05×69.°67W±0.°05, h109km±9km, Error ellipse: s-maj=8.3km s-min=5.5km az=206.0
ISC 02 20:02:46.4±0.6, 32.°58S±0.°04×69.°89W±0.°04, h121km±5km, n48, σ1.°88/68, mb4.3/10, Mendoza Province

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ARCO CERRO ARCO 0.85 108 eP Pn 20 03 08.3 +1.0
ARCO eS Sn 20 03 24.4 +1.3
ARCO IAML 20 03 26.8
comp=Z,8µm,0.7s
PEL Peldehue 0.88 229 Pn 20 03 07.4 0.0
PEL Sn Sn 20 03 23.8 +0.5
PEL Peldehue 0.88 229 eP Pn 20 03 07.4 0.0
PEL eS Sn 20 03 23.9 +0.5
ASAL Salagasta 0.89 91 eP Pn 20 03 08.2 +0.6
ASAL eS Sn 20 03 19.8 -3.8
RTLS Leoncito 0.92 33 eP Pn 20 03 08.5 +0.3
RTLS IAML 20 03 08.8
comp=Z,10µm,0.3s
RTLS eS Sn 20 03 24.4 -0.2
ROC1 El Roble 1.03 247 Pn 20 03 08.8 -0.3
ROC1 Sn Sn 20 03 26.6 +0.5
AAGR Agrelo 1.03 120 i P Pn 20 03 10.1 +1.1
ZON Zonda 1.45 45 eP Pn 20 03 13.1 -0.4
ZON eS Sn 20 03 33.9 -0.1
SJA San Juan 1.54 48 i Pg Pn 20 03 14.3 -0.1
SJA eS Sn 20 03 35.1 -0.6
CFA Coronel Fontan 1.71 56 eP Pn 20 03 16.3 -0.1
CFA eS Sn 20 03 38.0 -1.2
RTLL Cerro Villicun 1.73 45 i P Pn 20 03 16.4 -0.3
RTLL eS Sn 20 03 39.1 -0.6
ACAN Cantantal 2.31 83 eP Pn 20 03 23.6 -0.2
ACAN eS Sn 20 03 50.9 -1.6
GO04 Tololo Observa 2.52 342 Pn 20 03 26.1 -0.6
GO04 Sn Sn 20 03 55.7 -2.0
MORA Malargue 2.81 165 eP Pn 20 03 31.1 +0.9
MORA eS Sn 20 04 02.0 -2.0
PUMA Malargue 2.94 173 i P Pn 20 03 33.4 +1.5
GO05 Huala 2.96 214 Pn 20 03 31.0 -1.3
GO05 Sn Sn 20 04 05.9 -1.7
APLL PUNTA DE LOS L 3.60 54 eP Pn 20 03 39.2 -1.5
ACLC CERRO LA CRUZ 4.03 40 eP Pn 20 03 44.9 -1.6
VCA Vinchina 4.09 21 eP Pn 20 03 46.6 -0.8
VCA IAML 20 04 37.7
comp=Z,716nm,0.4s
TCA Tanti 4.67 76 eP Pn 20 03 53.3 -1.7
TCA eS Sn 20 04 43.5 -4.8
TCA IAML 20 04 45.1
GO03 Copiap 4.97 356 Pn 20 03 57.5 -1.6
CYA Choya 5.42 42 eP Pn 20 04 02.0 -3.1
CYA IAML 20 04 02.8
comp=Z,307nm,0.4s
GO02 Mina Guanaco 7.39 2 Pn Pn 20 04 30.7 -1.2
PLCA Paso Flores 8.16 184 P Pn 20 04 42.0 -0.1
comp=Z,0.6nm,0.3s,baz=19,slow=11,SNR=23
PLCA S Sn 20 06 06.9 -5.7
comp=Z,0.3nm,0.3s,baz=49,slow=12,SNR=2.9
PLCA Paso Flores 8.16 184 Pn 20 04 41.6 -0.4
LVC Limon Verde 9.96 5 P Pn 20 05 05.3 -1.4
comp=Z,0.3nm,0.3s,baz=258,slow=5.3,SNR=2.2
LVC Limon Verde 9.96 5 Pn 20 05 02.9 -3.9
CPUP Villa Florida 12.59 64 P Pn 20 05 37.9 -3.4
comp=Z,0.5nm,0.3s,baz=242,slow=10,SNR=6.1
CPUP S Sn 20 08 06.1 +6.2
comp=Z,0.3nm,0.3s,baz=343,slow=20,SNR=2.6
GO01 Chusmiza 12.87 3 Pn Pn 20 05 42.0 -3.4
LPAZ La Paz 16.29 6 P P 20 06 29.1 -0.6
comp=Z,0.4nm,0.3s,baz=181,slow=8.9,SNR=13
LPAZ La Paz 16.29 6 P P 20 06 27.0 -1.9
SIV San Ignacio 18.35 28 P P 20 06 51.1 -0.6
comp=Z,1.8nm,0.3s,baz=219,slow=10,SNR=35
EFI East Falkland 20.96 159 P P 20 07 19.4 -0.1
USHA Ushuaia 22.27 178 P P 20 07 35.7 +2.3
comp=Z,7.4nm,0.7s,baz=175,slow=7.1,SNR=6.5
SAML Samuel 24.32 16 P P 20 07 53.5 +0.7
SAML IAmb IAmb 20 08 20.7
comp=Z,3.4nm,0.8s
BDFB Brasilia 26.05 55 P P 20 08 07.8 -0.9
comp=Z,3.1nm,0.9s,baz=227,slow=12,SNR=4.9
RUSC La Rusia 38.37 355 P P 20 09 57.8 +1.3
SNAA Sanae 52.23 158 P P 20 11 45.8 +1.1
comp=Z,2.5nm,0.7s,baz=279,slow=8.7,SNR=13
SNAA Sanae 52.23 158 P P 20 11 45.8 +1.1
SNAA IAmb IAmb 20 11 54.1
comp=Z,4.9nm,0.8s
QSPA South Pole Qui 57.66 180 P P 20 12 25.7 +1.8
QSPA IAmb IAmb 20 13 18.2
comp=Z,6.7nm,1.4s
TXAR Lajitas Array 69.41 329 P P 20 13 41.6 +0.2
comp=Z,0.3nm,0.6s,baz=146,slow=8.7,SNR=2.4
LIC Lamto 72.61 71 eP P 20 13 58.7 -2.3
comp=Z,9.3nm,0.7s
TIC Toumodi 72.87 70 eP P 20 14 04.2 +1.7
KIC Kosan Boka 72.92 71 eP P 20 14 02.4 -0.4
comp=Z,6.4nm,0.6s
DBIC Dimbokro 73.01 70 P P 20 14 03.2 -0.2
comp=Z,2.4nm,0.7s,baz=226,slow=7.1,SNR=6.1
DBIC pP pP 20 14 34.5 +0.2
comp=Z,3.9nm,0.7s,baz=218,slow=4.1,SNR=5.5
TORD Torodi Ar. Bea 82.03 69 P P 20 14 53.6 +0.2
comp=Z,1.6nm,0.7s,baz=268,slow=4.8,SNR=13
TORD pP pP 20 15 25.2 -0.1
comp=Z,4.0nm,0.8s,baz=260,slow=4.5,SNR=14
ZALV Zalesovo Beam 152.06 33 PKPbc PKiKP 20 22 27.7 +0.5
comp=Z,1.1nm,0.4s,baz=316,slow=2.5,SNR=6.2
ZALV PKPab PKPab 20 22 37.4 +0.5
comp=Z,1.1nm,0.5s,baz=324,slow=5.1,SNR=4.3
MKAR Makanchi Array 154.48 48 PKPbc PKiKP 20 22 33.6 +1.1
comp=Z,0.2nm,0.7s,baz=328,slow=2.2,SNR=2.4

IDC 02 20:31:47.6±0.9, 13.°74N×120.°57E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/34, mbtmp3.7/7, MS2.9/1, Ms1 2.9/1, ms1mx2.6/31, Error ellipse: s-maj=18.2km s-min=14.0km az=132.0
MAN 02 20:31:49.0, 13.°66N×120.°39E, h9km, mb4.4, ML3.3, MS3.0
ISC 02 20:31:50.1±1.1, 13.°70N±0.°03×120.°37E±0.°03, h14km±7km, n27, σ1.°65/42, mb3.7/7, 5C-1D, Mindoro

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LUBP Lubang 0.12 287 eP Pg 20 31 53.3 -0.2
LUBP eS Sb 20 31 56.6 -0.4
TGY Tagaytay City 0.68 54 Pn Pg 20 32 02.4 -1.1
819nm,0.3s,baz=194,slow=3.8,SNR=29
TGY Sn Sg 20 32 12.9 +0.4
2µm,0.3s,baz=324,slow=23,SNR=40
TGY Tagaytay City 0.68 54⇑i P Pg 20 32 02.5 -1.0
TGY i S Sb 20 32 13.4 +0.1
LQP Lukban 1.21 70⇑eP Pn 20 32 10.5 -2.3
LQP i S Sg 20 32 30.3 +1.0
BOAC Boac 1.46 99 eP Pn 20 32 14.2 -1.8
BOAC eS Sn 20 32 34.9 0.0
BUSP Coron 1.69 186 eP Pn 20 32 18.8 -0.5
BUSP eS Sn 20 32 39.6 -1.2
POLP Polilio Island 1.84 56 eP Pn 20 32 20.9 -0.3
POLP eS Sn 20 32 45.0 +0.7
PCPH Palayan 1.98 21⇓eP Pn 20 32 21.6 -1.7
PCPH eS Sn 20 32 48.5 +0.5
GQP Guinayangan 2.03 84⇑eP Pn 20 32 23.2 -0.7
GQP i S Sb 20 32 52.0 +0.1
OTRP Odiongan 2.09 129 eP Pn 20 32 24.3 -0.4
OTRP eS Sn 20 32 50.0 -0.5
BALP Baler 2.34 30 eP Pn 20 32 28.4 +0.1
BALP eS Sn 20 32 52.6 -4.3
SMPP San Manuel, Pa 2.46 7 eP Pn 20 32 28.6 -1.2
SMPP eS Sn 20 33 01.5 +1.8
ENPP El Nido 2.64 200 eP Pn 20 32 31.9 -0.4
ENPP eS Sn 20 33 01.9 -2.3
BOLP Bolinao 2.70 351 eP Pn 20 32 29.7 -3.5
BOLP eS Sn 20 33 08.3 +2.6
CUYO Cuyo Island 2.90 167 eP Pn 20 32 35.3 -0.6
CUYO eS Sn 20 33 09.4 -1.2
JAP San Jose, Anti 3.31 152⇑eP Pn 20 32 42.1 +0.5
CAUP Cauayan 3.52 23 eP Pn 20 32 45.0 +0.6
APYP Conner 4.22 11 eP Pn 20 32 52.7 -1.4
APYP eS Sn 20 33 47.4 +4.1
CGP Cagayan de Oro 6.72 140⇑i P Pg 20 34 01.1 +2.3
DAV Davao City (W) 8.35 142 LR LR 20 37 39.1
comp=Z,84nm,20.1s,baz=347,slow=43
CMAR Chiang Mai Arr 21.12 286 P P 20 36 37.5 +2.8
2.2nm,1.0s,baz=97,slow=8.5,SNR=12
SONM Songino Array 35.97 344 P P 20 38 50.2 -0.3
1.1nm,0.6s,baz=166,slow=10.0,SNR=11
WRA Warramunga Arr 36.15 157 P P 20 38 51.1 -1.1
0.8nm,0.6s,baz=341,slow=9.8,SNR=6.1
ASAR Alice Springs 39.42 160 P P 20 39 19.3 -0.6
1.0nm,0.6s,baz=338,slow=7.1,SNR=16
MKAR Makanchi Array 45.84 324 P P 20 40 11.6 -0.3
0.3nm,0.7s,baz=92,slow=8.8,SNR=5.0
ZALV Zalesovo Beam 48.91 333 P P 20 40 34.5 -1.0
0.3nm,0.4s,baz=112,slow=6.4,SNR=2.8
GEYT Alibeck 59.88 306 P P 20 41 56.7 +1.0
1.5nm,1.1s,baz=54,slow=3.8,SNR=3.7

ATH 02 20:45:24.2, 38.°20N×20.°40E, h13km±1km, ML2.8/2, Error ellipse: s-maj=1.8km s-min=1.1km az=253.0
THE 02 20:45:24.5, 38.°19N×20.°40E, h12km, ML3.0/2, Error

ellipse: s-maj=1.0km s-min=0.4km az=207.0
ISC 02 20:45:24.2±1.1,38.19N±0.03×20.40E±0.05,h13km±5km, n27,σ0.30/40,Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.02 241 P Pg 20 45 26.6 +0.1
CHV1 S Sg 20 45 28.2 +0.1
KEF3 Kipouria, Keph 0.04 285 P Pg 20 45 26.7 0.0
KEF3 S Sg 20 45 28.4 0.0
KEF4 Livadi, Kephal 0.07 16 P Pg 20 45 26.9 0.0
KEF4 S Sg 20 45 28.8 0.0
ARG2 Argostoli 0.07 101 P Pg 20 45 27.0 +0.1
ARG2 S Sg 20 45 28.5 -0.3
KEF2 Argostoli. Kep 0.07 111 P Pg 20 45 27.0 0.0
KEF2 S Sg 20 45 28.4 -0.4
KEF1 Kardakata, Kep 0.10 33 P Pg 20 45 27.3 0.0
KEF1 S Sg 20 45 29.0 -0.4
VLS Valsamata 0.15 96 P Pg 20 45 27.9 0.0
VLS S Sg 20 45 30.6 +0.1
7μm,0.1s
VLS Valsamata 0.15 96 P Pg 20 45 27.9 0.0
VLS S Sg 20 45 30.6 +0.1
VLS AML AML 20 45 30.7
comp=N,18166μm,0.1s
VLS AML AML 20 45 30.7
comp=E,7584μm,0.1s
VSK1 VASILIKIADES 0.25 31 P Pg 20 45 29.7 +0.1
VSK1 S Sg 20 45 33.7 +0.5
comp=E,7μm,0.0s
VLMS Volimes, Zakyn 0.38 147 P Pg 20 45 31.9 +0.1
VLMS S Sb 20 45 38.1 -0.3
EVGI Lefkada island 0.47 25 P Pg 20 45 33.5 -0.1
EVGI S Sb 20 45 40.8 -0.4
EVGI Lefkada island 0.47 25 P Pg 20 45 33.4 -0.1
EVGI S Sg 20 45 40.6 +0.7
MGNA Meganis 0.56 33 P Pg 20 45 34.8 -0.3
MGNA S Sg 20 45 43.1 +0.6
MGNA AML AML 20 45 44.1
comp=E,1666μm,0.1s
MGNA AML AML 20 45 44.1
comp=N,2527μm,0.1s
LKD2 Lefkada island 0.63 19 P Pg 20 45 36.1 -0.4
LKD2 Lefkada island 0.63 19 P Pg 20 45 36.1 -0.4
TSLK Tsoukalades, L 0.66 17 P Pg 20 45 36.9 -0.2
TSLK Tsoukalades, L 0.66 17 P Pg 20 45 36.8 -0.4
PDO Prodromos 0.74 56 P Pg 20 45 38.4 -0.1
PDO Prodromos 0.74 56 P Pg 20 45 38.1 -0.4
PVO Paravola 0.98 64 P Pb 20 45 43.0 0.0
PVO Paravola 0.98 64 P Pb 20 45 43.0 0.0
DRO Drossia 1.06 103 P Pb 20 45 44.0 -0.4
LAKA Lakka 1.24 87 P Pn 20 45 47.3 0.0
SERG Sergoula 1.32 80 P Pn 20 45 48.3 0.0
KALE Kalithea 1.38 81 P Pg 20 45 50.7 -0.1
KLV Kalavryta, Ach 1.39 96 P Pn 20 45 49.8 +0.6
AGG Agios Georgios 1.72 61 P Pb 20 45 56.0 +0.3

SJA 02 20:47:19.2±0.6,30.89S×72.58W,h33km±24km,ML4.1, MW3.8
GUC 02 20:47:26.5±0.8,30.92S×71.64W,h42km±7km,ML4.0
ISC 02 20:47:22.4±2.7,30.81S±0.05×72.5W±0.2,h35km,n20, σ1.90/26,2C-4D,Off coast of central Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CO02 Combarbal 1.35 107⇓iP Pn 20 47 40.0 -4.8
CO02 iS Sn 20 47 49.8 -12
CO02 IAML 20 47 50.5
comp=N,11μm,0.2s
LSCH La Serena 1.41 51⇓iP Pn 20 47 46.6 +1.1
LSCH iS Sn 20 48 01.2 -1.7
GO04 Tololo Observa 1.60 67⇓iP Pn 20 47 46.8 -1.6
GO04 iS Sn 20 48 01.7 -6.3
ROCH El Roble 2.50 150⇑iP Pn 20 48 01.0 +0.2
ROCH IAML 20 48 34.7
comp=N,1μm,0.2s
VA03 San Esteban 2.56 140 eP Pn 20 48 01.2 -0.3
VA03 iS Sn 20 48 28.1 -3.3
VA03 IAML 20 48 38.4
comp=E,2μm,0.5s
PEL Peldehue 2.79 147⇓iP Pn 20 48 05.1 +0.5
PEL iS Sn 20 48 36.1 -1.0
PEL IAML 20 48 44.6
comp=E,708nm,0.4s
RTLS Leoncito 2.92 111 eP Pn 20 48 06.9 +0.3
RTLS IAML 20 48 39.8
comp=Z,447nm,0.6s
MT05 Renca 2.98 150 IAML 20 48 53.7
comp=E,1μm,0.5s
CLCH Cerro Calan 3.07 148 eP Pn 20 48 08.9 +0.4
CLCH iS Sn 20 48 43.1 -0.9
FCH Farellones 3.13 144 eP Pn 20 48 09.8 +0.2
FCH IAML 20 48 51.7
comp=E,326nm,0.3s
MT03 Universidad Ad 3.16 148 eP Pn 20 48 10.3 +0.5
MT03 IAML 20 48 58.1
comp=E,1μm,0.3s
AMOG MOGNA 3.45 93 eP Pn 20 48 14.5 +0.8
RTCV Cerro Valdivia 3.55 108 eP Pn 20 48 15.6 +0.6
RTCV eS Sn 20 48 57.3 +1.5
ASAL Salagasta 3.59 121 eP Pn 20 48 16.2 +0.5
ASAL eS Sn 20 48 58.2 +1.3
LMEL Las Melosas 3.60 148⇑iP Pn 20 48 16.9 +1.1
ARCO CERRO ARCO 3.65 125 eP Pn 20 48 17.0 +0.5
AGUA GUANDACOL 3.72 70 eP Pn 20 48 18.8 +1.4
AAGR Agrelo 3.86 127 eP Pn 20 48 19.9 +0.6
AAGR eS Sn 20 49 04.1 +0.5
VCA Vinchina 4.27 62 eP Pn 20 48 26.4 +1.4
VCA eS Sn 20 49 17.1 +3.4
VCA IAML 20 49 28.8
comp=Z,291nm,0.4s
CYA Choya 6.29 70 IAML 20 50 07.7
comp=Z,50nm,0.7s

ATH 02 20:54:13.4,38.16N×20.40E,h8km±3km,ML2.4/2,Error ellipse: s-maj=3.2km s-min=1.3km az=278.0
THE 02 20:54:13.2,38.13N×20.41E,h8km±1km,ML2.5/3,Error ellipse: s-maj=1.3km s-min=0.7km az=155.0
ISC 02 20:54:13.1±1.6,38.15N±0.04×20.41E±0.05,h9km±7km, n11,σ0.39/21,Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.04 328 P Pg 20 54 14.9 +0.1
KEF2 Argostoli. Kep 0.06 75 P Pg 20 54 15.2 +0.1
KEF2 S Sg 20 54 16.4 -0.1
ARG2 Argostoli 0.07 64 P Pg 20 54 15.2 +0.1
ARG2 S Sg 20 54 16.7 +0.1
13μm,0.1s
KEF3 Kipouria, Keph 0.07 318 P Pg 20 54 15.4 +0.2
KEF3 S Sg 20 54 16.8 0.0
KEF4 Livadi, Kephal 0.11 6 P Pg 20 54 15.9 +0.2
KEF4 S Sg 20 54 17.7 +0.1
KEF1 Kardakata, Kep 0.14 21 P Pg 20 54 16.1 0.0
KEF1 S Sg 20 54 18.1 -0.1
VLS Valsamata 0.14 79 P Pg 20 54 16.4 +0.1
VLS S Sg 20 54 18.7 +0.2
5μm,0.1s
VLS Valsamata 0.14 79 P Pg 20 54 16.4 +0.1
VLS S Sg 20 54 18.4 -0.1
VLS AML AML 20 54 18.9
comp=N,5635μm,0.1s
VLS AML AML 20 54 18.9
comp=E,14546μm,0.1s
VSK1 VASILIKIADES 0.29 25 P Pg 20 54 19.0 +0.2
VSK1 S Sg 20 54 23.7 +1.0
comp=E,485nm,0.1s
VLMS Volimes, Zakyn 0.34 144 P Pg 20 54 20.2 +0.5
VLMS S Sb 20 54 25.9 -0.8
VLMS AML AML 20 54 27.9
comp=E,1195μm,0.2s
VLMS AML AML 20 54 28.2
comp=N,896μm,0.3s
EVGI Lefkada island 0.51 22 P Pg 20 54 22.6 -0.4
EVGI S Sg 20 54 30.3 +0.6

WEL 02 21:01:47.5,44°S±4°×17°3E±°,h5km,ML3.7/7,MLv3.2/24, Error ellipse: s-maj=0.0km s-min=0.0km az=0.9,South Island

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MQZ McQueen's Vall 0.18 190 P Pg 21 01 52.5 +1.6
MQZ S Sg 21 01 55.3 +2.0
OKCZ Okains Bay 0.33 126 P Pg 21 01 54.5 +0.7
AMCZ Amberley 0.36 355 P Pb 21 01 56.6 +0.3
AKCZ Akaroa Harbour 0.37 156 P Pb 21 01 55.8 -0.8
OXZ Oxford 0.52 293 P Pb 21 01 59.8 +0.7
OXZ S Sb 21 02 08.8 +1.8
GVZ Greta Valley S 0.62 24 P Pb 21 02 01.0 +0.3
LTZ Lake Taylor 0.81 337 P Pn 21 02 05.2 -0.4
RPZ Rata Peaks 1.21 261 P Pn 21 02 11.5 +0.5
INZ Inchbonnie 1.22 311 P Pn 21 02 11.4 +0.2
KHZ Kahutara 1.28 29 P Pn 21 02 10.7 -1.3
WVZ Waitaha Valley 1.50 287 P Pg 21 02 16.5 +0.3
THZ Tophouse 1.78 5 P Pn 21 02 18.4 -0.5
DSZ Denniston Nort 1.90 339 P Pn 21 02 21.1 +0.5
LBZ Lake Benmore 2.00 244 P Pn 21 02 22.9 +0.9
BSWZ Blackbirch Sta 2.02 26 P Pn 21 02 21.6 -0.5
FOZ Fox Glacier 2.10 269 P Pb 21 02 25.6 -0.3
ODZ Otahua Downs 2.11 224 P Pn 21 02 23.9 +0.5
TUWZ Tuamarina 2.30 24 P Pn 21 02 25.3 -0.6
NNZ Nelson 2.37 13 P Pn 21 02 27.1 +0.1
TCW Tory Channel 2.60 27 P Pn 21 02 28.8 -1.4
QRZ Quartz Range 2.71 357 P Pn 21 02 31.7 0.0
PLWZ Palliser 2.73 45 P Pn 21 02 30.0 -1.9
DUWZ D'Urville Isla 2.88 19 P Pn 21 02 34.0 0.0
JCZ Jackson Bay 2.88 258 P Pn 21 02 35.1 +1.0
WKZ Wanaka 2.95 243 P Pn 21 02 35.7 +0.7
CAW Cannon Point 2.99 37 P Pn 21 02 34.0 -1.6
KIW Kapiti Island 3.14 32 P Pn 21 02 36.5 -1.0
MTW Mount Morrison 3.15 42 P Pn 21 02 35.5 -2.2
TUZ Tuapeka 3.26 221 P Pn 21 02 40.4 +1.2
OGWZ Otaki Gorge 3.28 35 P Pn 21 02 37.9 -1.6
MRZ Mangatainoka R 3.58 38 P Pn 21 02 41.2 -2.5
MLZ Mavora Lakes 3.75 239 P Pn 21 02 46.8 +0.7
BFZ Birch Farm 3.88 44 P Pn 21 02 45.9 -1.9
PREZ Palmer Road 4.33 15 P Pn 21 02 55.7 +1.7
KHEZ Kahui Hut 4.35 14 P Pn 21 02 55.7 +1.4
TRVZ Turoa 4.74 28 P Pn 21 02 59.2 -0.7
TUVZ Tukino 4.81 29 P Pn 21 03 00.6 0.0
NGZ Ngauruhoe 4.87 28 P Pn 21 03 01.8 +0.3
HIZ Hauiti 5.27 19 P Pn 21 03 06.1 -0.8

IDC 02 21:06:27.1±1.4,43.79N×105.51W,h0km,mb1 3.3/4, mb1mx3.1/62,mbtmp3.1/4,ML2.6/3,Error ellipse: s-maj=31.5km s-min=9.2km az=149.0
NEIC 02 21:06:27.5±1.5,43.79N±0.02×105.28W±0.07,h0km±2km, ML3.1/71,Error ellipse: s-maj=9.3km s-min=3.1km az=104.0
ISC 02 21:06:26.5±0.8,43.76N±0.04×105.29W±0.05,h0km,n50, σ1.39/56,Wyoming

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RSSD Black Hills 0.98 68 Pb 21 06 46.3 -0.1
K22A Casper 1.43 219 Pn Pn 21 06 53.4 -0.4
K22A Sg Sn 21 07 14.2 +0.7
K22A IAML 21 07 17.8
comp=N,318nm,0.3s
K22A IAML 21 07 18.9
comp=E,252nm,0.3s
PHWY Pilot Hill 2.46 183 Pn Pn 21 07 09.5 +1.3
RWWY Rawlins 2.51 215 Pn Pn 21 07 10.5 +1.8
RWWY Sn Sn 21 07 41.5 +1.3
RWWY IAML 21 07 45.9
comp=E,106nm,0.7s
RWWY IAML 21 07 46.5
comp=E,104nm,0.9s
N23A Red Feather La 2.91 190 Pn Pn 21 07 15.9 +1.7
N23A IAML 21 07 58.5
comp=N,70nm,0.6s
N23A IAML 21 08 02.3
comp=E,44nm,0.5s
LAO LASA Array 3.00 348 Pn 21 07 15.4 +0.1
LAO Sn Sn 21 07 52.2 +0.2
LAO IAML 21 08 13.9
comp=E,92nm,0.8s
RLMT Red Lodge 3.16 297 Pn 21 07 18.8 +1.2
RLMT IAML 21 08 07.7
comp=E,26nm,0.7s
RLMT IAML 21 08 14.2
comp=E,33nm,0.6s
PD31 Pinedale Array 3.27 254 Pn Pn 21 07 20.6 +1.4
PDAR Pinedale Array 3.27 254 Pn Pn 21 07 20.1 +0.9
comp=E,2.5nm,0.3s,baz=76,slow=16,SNR=41
PDAR Lg Lg 21 08 05.9
comp=E,8.0nm,0.3s,baz=70,slow=30,SNR=15
PDAR Pinedale Array 3.27 254 Pn 21 07 19.6 +0.4
YNE Yellowstone No 3.60 292 Pn 21 07 24.7 +0.9
YMP Mirror Lake Pl 3.63 287 Pn 21 07 25.0 +0.8
OGNE Ogallala 3.71 138 Pn Pn 21 07 26.8 +1.7
GCMT Greycliff 3.72 305 Pn 21 07 25.9 +0.6
LKWY Lake 3.76 284 Pn 21 07 25.1 -0.8
LKWY IAML 21 07 59.1
comp=E,25nm,0.6s
H17A Grant Village 3.86 281 Pn 21 07 28.8 +1.5
H17A IAML 21 08 33.8
comp=N,18nm,1.4s
FLWY Flagg Ranch 3.92 277 Pn 21 07 28.7 +0.6
FLWY IAML 21 08 37.5
comp=N,25nm,0.9s
FLWY IAML 21 08 38.6
comp=N,22nm,1.1s
MOOW Moose Ponds 3.95 272 Pn 21 07 29.4 +0.9
ISCO Idaho Springs 3.97 184 Pn Pn 21 07 31.1 +2.3
SNOW Snow King Moun 3.98 268 Pn 21 07 30.9 +1.9
SNOW IAML 21 08 36.2
comp=N,25nm,0.9s
SNOW IAML 21 08 56.6
comp=N,24nm,1.2s
YNR Norris Junctio 3.99 286 Pn Pn 21 07 32.1 +3.0
YPP Pitchstone Pla 4.01 279 Pn 21 07 31.0 +1.6
REDW Red Top Meadow 4.06 266 Pn 21 07 31.2 +1.1
REDW IAML 21 08 42.0
comp=N,24nm,0.8s
REDW IAML 21 08 47.4
comp=N,21nm,0.8s
IMW Indian Meadow 4.09 274 Pn 21 07 31.7 +1.2
IMW IAML 21 08 45.9
comp=N,21nm,0.6s
TPAW Teton Pass 4.12 268 Pn Pn 21 07 32.2 +1.3
TPAW IAML 21 08 48.1
comp=N,20nm,0.9s
TPAW IAML 21 09 07.7
comp=N,16nm,3.6s
YHH Holmes Hill 4.12 286 Pn 21 07 31.3 +0.3
FXWY Fox Creek 4.16 270 Pn 21 07 33.5 +2.1
YMR Madison River 4.18 284 Pn Pn 21 07 33.8 +2.1
O20A White River Ci 4.24 212 Pn Pn 21 07 34.3 +1.8
O20A IAML 21 08 45.5
comp=E,20nm,0.7s
O20A IAML 21 08 56.8
comp=N,28nm,1.1s
YHB Horse Butte 4.36 285 Pn Pn 21 07 35.6 +1.5
AHID Auburn Hatcher 4.36 259 Pn Pn 21 07 35.4 +1.3
AHID IAML 21 08 47.7
comp=E,20nm,1.2s
YHL Hebgen Lake 4.37 286 Pn Pn 21 07 36.2 +1.9
RDMU Red Mountain 4.50 226 Pn Pn 21 07 37.9 +1.8
QLMT Earthquake Lak 4.54 286 Pn Pn 21 07 39.1 +2.5
QLMT Pg 21 07 52.3 -1.0
SUSD Miller 4.61 79 Pn Pn 21 07 38.8 +1.3
SMCO Snowmass 4.75 196 Pn Pn 21 07 41.9 +2.2
SMCO Pg 21 07 55.4 -2.2
SMCO IAML 21 09 00.4
comp=E,12nm,0.8s
SMCO IAML 21 09 35.6
comp=E,13nm,1.1s
DGMT Dagmar 4.77 9 Pn 21 07 40.2 +0.6
Q24A Divide 4.79 179 Pn Pn 21 07 41.7 +1.4
Q24A Pg 21 07 56.0 -2.4
Q24A IAML 21 08 57.5
comp=N,8.3nm,0.8s
Q24A IAML 21 09 04.6
comp=E,14nm,0.6s
KSCO Kaye Shedlock' 5.15 156 Pn 21 07 45.8 +0.8
TCUT Toone Canyon 5.24 242 Pn Pn 21 07 46.5 +0.2
EGMT Eagleton 5.28 325 Pn 21 07 47.3 +0.6
P17A Butcher Ranch, 5.92 225 Pn 21 07 56.2 +0.7
SDCO Great Sand Dun 6.01 182 Pn Pn 21 07 58.1 +1.1
S22A 4UR Ranch, Cre 6.12 192 Pn Pn 21 07 58.1 -0.4
ECSD EROS Data Cent 6.29 87 Pn Pn 21 08 00.5 +0.1
ANMO Albuquerque 8.85 186 Pn Pn 21 08 36.6 +0.8
comp=E,0.1nm,0.3s,baz=8.5,slow=18,SNR=4.5
ANMO Albuquerque 8.85 186 Pn 21 08 36.4 +0.6
ULM Lac du Bonnet 9.13 41 Pn Pn 21 08 39.7 +0.3
comp=E,0.5nm,0.3s,baz=232,slow=12,SNR=5.9
ULM Pg 21 09 08.4
comp=E,0.3nm,0.3s,baz=208,slow=17,SNR=3.1
ULM Lg Lg 21 11 11.2
comp=E,0.2nm,0.3s,baz=136,slow=23,SNR=2.6
ULM Lac du Bonnet 9.13 41 Pn 21 08 39.1 -0.3
YKA Yellowknife Ar 19.54 347 P P 21 10 55.3 0.0
comp=E,0.0nm,0.3s,baz=163,slow=13,SNR=3.3

NEIC 02 21:13:19.1±1.6,21.47S±0.03×66.7W±0.1,h213km±11km, mb4.2/6,Error ellipse: s-maj=17.8km s-min=3.9km az=92.0
SJA 02 21:13:19.9±0.5,21.38S×66.70W,h213km±4km,ML3.1, MW2.9
IDC 02 21:13:19.7±0.8,21.40S×66.66W,h208km±10km,mb3.8/3, mb1 3.6/8,mb1mx3.3/40,mbtmp4.1/8,Error ellipse: s-maj=20.1km s-min=10.6km az=122.0
ISC 02 21:13:19.6±0.7,21.44S±0.05×66.76W±0.05,h218km±7km, n40,σ1.36/55,Southern Bolivia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
YJA Yavi 1.37 123 iP Pn 21 13 55.1 +0.7
YJA iSg S 21 14 21.1 -0.2
YJA IAML 21 14 24.1
comp=Z,85nm,0.3s
LVC Limon Verde 2.31 239 P Pn 21 14 04.6 +1.5
comp=Z,5.4nm,0.3s,baz=46,slow=6.6,SNR=39
LVC S S 21 14 37.7 +0.9
comp=Z,18nm,0.3s,baz=242,slow=20,SNR=23
LVC Limon Verde 2.31 239 Pn 21 14 03.1 0.0
LVC S 21 14 37.1 +0.3
PB09 IPOC Station P 2.34 261 iP Pn 21 14 04.3 +1.1
PB01 IPOC Station P 2.58 278 Pn 21 14 06.1 +0.5
PB01 S 21 14 42.4 +1.0
GO01 Chusmiza 2.89 307 Pn 21 14 09.4 -0.1
GO01 S 21 14 47.6 -0.5
PB15 IPOC Station P 3.07 235 iP Pn 21 14 12.9 +1.7
PB15 iSg S 21 14 51.9 +0.4
AZAP Zapla 3.18 151 iP Pn 21 14 13.6 +1.1
AZAP iSg S 21 14 53.6 -0.3
AZAP IAML 21 14 59.3
comp=Z,41nm,0.5s
PB11 IPOC Station P 3.19 301 Pn 21 14 12.7 +0.1
PB11 S 21 14 53.1 -0.8
PB04 IPOC Station P 3.27 254 Pn 21 14 13.6 0.0
PB04 S 21 14 54.6 -1.1
PB04 IPOC Station P 3.27 254 iP Pn 21 14 14.7 +1.1
ASTB Santa Barbara 3.28 140⇑iP Pn 21 14 15.0 +1.3
SLA San Lorenzo 3.46 161 iP Pn 21 14 17.1 +1.3
MNMC Minye Minye 3.52 310 Pn 21 14 16.7 +0.1
MNMC S 21 15 00.8 -0.2
PB10 IPOC Station P 4.07 239 Pn 21 14 23.8 +0.8
PB10 S 21 15 10.2 -2.5
GO02 Mina Guanaco 4.53 215 Pn 21 14 29.2 +0.3
GO02 S 21 15 22.3 -1.0
LPAZ La Paz 5.29 346 P Pn 21 14 40.3 +1.5
comp=Z,6.3nm,0.3s,baz=151,slow=7.0,SNR=88
LPAZ S S 21 15 39.8 -1.4
comp=Z,0.6nm,0.3s,baz=354,slow=17,SNR=4.8
LPAZ La Paz 5.29 346 Pn 21 14 39.0 +0.2
LPAZ S 21 15 39.8 -1.4
GO03 Copiap 6.90 207 Pn Pn 21 14 57.9 -0.7
VCA Vinchina 7.38 190 iP Pn 21 15 07.0 +1.9
SIV San Ignacio 7.64 46 P Pn 21 15 07.3 -1.0
comp=Z,4.9nm,0.3s,baz=258,slow=11,SNR=60
SIV S S 21 16 32.0 -3.1
comp=Z,0.7nm,0.3s,baz=224,slow=14,SNR=3.1
GO04 Tololo Observa 9.43 202 Pn Pn 21 15 29.7 -1.7
AMOG MOGNA 9.59 189 iSg S 21 17 15.6 -5.4
ROC1 El Roble 12.10 197 Pn Pn 21 16 05.1 -0.3
GO05 Huala 14.26 197 Pn 21 16 31.7 -0.3
BDFB Brasilia 18.68 75 P P 21 17 23.1 +1.3
comp=Z,1.3nm,0.3s,baz=243,slow=7.6,SNR=12
BDFB Brasilia 18.68 75 P P 21 17 22.7 +0.9
BDFB IAmb IAmb 21 17 25.8
comp=Z,4.4nm,0.5s
PLCA Paso Flores 19.50 189 P P 21 17 31.6 +1.2
comp=Z,0.1nm,0.3s,baz=32,slow=12,SNR=3.4
PLCA Paso Flores 19.50 189 P P 21 17 30.7 +0.3
RUSC La Rusia 27.86 346 P P 21 18 48.3 -1.5
DBIC Dimbokro 66.80 72 P P 21 23 48.5 +0.2
comp=Z,3.0nm,0.8s,baz=253,slow=9.4,SNR=4.5
DBIC Dimbokro 66.80 72 P P 21 23 47.6 -0.6
DBIC IAmb IAmb 21 23 48.9
comp=Z,3.6nm,0.9s
TOA0 Torodi Ar. Sit 75.45 69 P P 21 24 39.8 -0.4
TORD Torodi Ar. Bea 75.45 69 P P 21 24 40.2 +0.1
comp=Z,4.3nm,0.5s,baz=257,slow=5.4,SNR=67
TORD Torodi Ar. Bea 75.45 69 P P 21 24 39.4 -0.7
YKA Yellowknife Ar 91.81 340 P P 21 26 03.8 +1.6
comp=Z,0.3nm,0.6s,baz=131,slow=4.7,SNR=7.2
MKAR Makanchi Array 144.39 37 PKP PKPdf 21 32 30.5 +0.8
comp=Z,0.9nm,0.5s,baz=343,slow=2.6,SNR=22
MKAR Makanchi Array 144.39 37 PKPdf 21 32 30.3 +0.6
SONM Songino Array 153.09 10 PKPbc PKiKP 21 32 53.2 +1.8
comp=Z,0.4nm,0.5s,baz=277,slow=1.5,SNR=5.9
SONM Songino Array 153.09 10 PKiKP 21 32 52.4 +0.9

ATH 02 21:22:03.8,38.18N×20.39E,h10km±1km,ML2.8/2,Error ellipse: s-maj=2.4km s-min=1.2km az=250.0
THE 02 21:22:04.3,38.16N×20.41E,h7km,ML2.7/2,Error ellipse: s-maj=0.9km s-min=0.4km az=205.0
ISC 02 21:22:04.1±1.7,38.17N±0.03×20.41E±0.04,h8km±7km, n18,σ0.41/31,Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.02 295 P Pg 21 22 05.5 -0.1
CHV1 S Sg 21 22 06.6 -0.1
KEF3 Kipouria, Keph 0.06 302 P Pg 21 22 06.0 +0.1
KEF3 S Sg 21 22 06.9 -0.3
ARG2 Argostoli 0.06 86 P Pg 21 22 06.0 0.0
ARG2 S Sg 21 22 07.3 0.0
KEF2 Argostoli. Kep 0.06 98 P Pg 21 22 06.0 0.0
KEF2 S Sg 21 22 07.2 -0.1
KEF4 Livadi, Kephal 0.09 9 P Pg 21 22 06.5 +0.2
KEF4 S Sg 21 22 08.0 +0.1
KEF1 Kardakata, Kep 0.12 25 P Pg 21 22 06.9 +0.1
KEF1 S Sg 21 22 08.8 +0.2
VLS Valsamata 0.14 89 P Pg 21 22 07.2 0.0
VLS S Sg 21 22 09.4 0.0
4μm,0.1s
VLS Valsamata 0.14 89 P Pg 21 22 07.2 0.0
VLS AML AML 21 22 07.3
comp=E,11903μm,0.1s
VLS S Sg 21 22 09.4 0.0
VLS AML AML 21 22 09.8
comp=N,7942μm,0.1s
VSK1 VASILIKIADES 0.27 27 P Pg 21 22 09.6 +0.2
VSK1 S Sg 21 22 13.8 +0.8
comp=N,2μm,0.1s
VLMS Volimes, Zakyn 0.36 146 P Pg 21 22 11.0 -0.1
VLMS S Sg 21 22 16.7 +0.8
VLMS AML AML 21 22 19.2
comp=N,5551μm,0.2s
VLMS AML AML 21 22 20.0
comp=E,3019μm,0.4s
EVGI Lefkada island 0.49 23 P Pg 21 22 13.4 -0.2
EVGI S Sg 21 22 20.9 +0.9
MGNA Meganis 0.57 32 P Pg 21 22 14.7 -0.4
LKD2 Lefkada island 0.65 18 P Pg 21 22 15.9 -0.7
LKD2 S Sg 21 22 25.7 +0.6
TSLK Tsoukalades, L 0.68 17 P Pg 21 22 17.2 0.0
TSLK Tsoukalades, L 0.68 17 P Pg 21 22 16.7 -0.5
TSLK S Sg 21 22 26.0 -0.1
PDO Prodromos 0.74 55 P Pg 21 22 17.9 -0.5
PVO Paravola 0.98 63 P Pg 21 22 22.8 -0.2
PVO Paravola 0.98 63 P Pg 21 22 22.4 -0.7

JMA 02 21:37:03.6±0.1,23.97N×121.91E,h40km±3km
TAP 02 21:37:04.2,24.01N×121.91E,h34km,ML2.9,D

ISC 02 21:37:04.6±1.5,24.00N±0.03×121.92E±0.04,h35km±3km, n68,σ0.40/133,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	Hwalien	0.29	265	eP	Pn	21 37 12.5	+0.1
	baz=261						
HWA				eS	Sn	21 37 18.2	0.0
	baz=261						
TWD	Chiawan	0.31	285	iP	Pn	21 37 12.3	-0.3
	baz=283						
TWD				eS	Sn	21 37 18.3	-0.2
	baz=283						
ENLB	Shoufeng	0.31	251	P	Pn	21 37 12.2	-0.4
	baz=248						
ENLB				eS	Sn	21 37 18.4	-0.1
	baz=248						
NACB	Ninganchiao	0.34	300	iP	Pn	21 37 12.8	-0.2
	baz=299						
NACB				S	Sn	21 37 19.1	0.0
	baz=299						
ETLH	Xiulin Townshi	0.45	297	iP	Pn	21 37 14.1	-0.4
	baz=296						
ETLH				eS	Sn	21 37 21.5	0.0
	baz=296						
ENA	Nanau	0.45	339	iP	Pn	21 37 14.2	-0.3
	baz=340						
ENA				eS	Sn	21 37 21.9	+0.4
	baz=340						
ESL	Shilin	0.48	247	eP	Pn	21 37 14.8	-0.2
	baz=244						
ESL				eS	Sn	21 37 22.4	+0.2
	baz=244						
EGFH	Guangfu	0.56	234	eP	Pn	21 37 15.9	-0.2
	baz=232						
EGFH				eS	Sn	21 37 24.2	+0.1
	baz=232						
EOS1	EOS1	0.58	19	eP	Pn	21 37 16.0	-0.3
	baz=20						
EOS1				eS	Sn	21 37 25.0	+0.5
	baz=20						
TWC	Suao	0.61	354	P	Pn	21 37 16.4	-0.3
	baz=355						
TWC				eS	Sn	21 37 25.1	-0.2
	baz=355						
WHF	Hehuan Shan	0.61	283	iP	Pn	21 37 16.6	-0.6
	baz=282						
WHF				eS	Sn	21 37 25.7	-0.3
	baz=282						
NNSB	Datong	0.65	311	iP	Pn	21 37 17.1	-0.3
	baz=310						
NNSB				eS	Sn	21 37 26.4	-0.1
	baz=310						
NNSH	Datong	0.65	311	iP	Pn	21 37 16.8	-0.6
	baz=310						
NNSH				eS	Sn	21 37 26.4	-0.1
	baz=310						
NNS	Nan Shan	0.66	311	P	Pn	21 37 17.2	-0.4
	baz=311						
NNS				eS	Sn	21 37 26.1	-0.7
	baz=311						
HGSD	Ruisui	0.68	222	eP	Pn	21 37 17.5	-0.2
	baz=220						
HGSD				eS	Sn	21 37 28.0	+0.9
	baz=220						
OWD	Renai	0.68	266	P	Pn	21 37 17.6	-0.3
	baz=265						
OWD				eS	Sn	21 37 26.9	-0.5
	baz=265						
CHGB	Renai	0.68	275	eP	Pn	21 37 17.7	-0.2
	baz=273						
CHGB				eS	Sn	21 37 27.3	-0.2
	baz=273						
NDT	Datong Townshi	0.70	328	P	Pn	21 37 18.0	-0.1
	baz=328						
NDT				eS	Sn	21 37 27.9	+0.2
	baz=328						
ENTT	Nioudou	0.71	333	eP	Pn	21 37 17.8	-0.4
	baz=333						
ENTT				eS	Sn	21 37 28.0	+0.1
	baz=333						
TWT	Tachien	0.72	290	eP	Pn	21 37 18.2	-0.3
	baz=289						
TWT				eS	Sn	21 37 28.3	-0.1
	baz=289						
EHY	Hungye	0.74	228	eP	Pn	21 37 17.9	-0.6
	baz=226						
EHY				eS	Sn	21 37 28.1	-0.4
	baz=226						
TDCB	Techi	0.74	290	eP	Pn	21 37 18.3	-0.4
	baz=289						
TDCB				eS	Sn	21 37 28.9	+0.2
	baz=289						
TWE	Neicheng	0.75	342	P	Pn	21 37 18.5	-0.2
	baz=343						
TWE				eS	Sn	21 37 28.5	-0.3
	baz=343						
VWDT	VWDT	0.75	251	P	Pn	21 37 18.8	+0.1
	baz=249						
VWDT				eS	Sn	21 37 28.9	0.0
	baz=249						
SLBB	Yuanshan	0.79	341	eP	Pn	21 37 19.1	-0.2
	baz=341						
SLBB				eS	Sn	21 37 30.4	+0.5
	baz=341						
YHNB	Yeheng	0.83	323	P	Pn	21 37 19.6	-0.2
	baz=323						
YHNB				eS	Sn	21 37 30.7	-0.2
	baz=323						
YULB	Yu-li	0.83	223	eP	Pn	21 37 19.2	-0.6
	baz=222						
YULB				eS	Sn	21 37 29.9	-1.0
	baz=222						
NSK	Sanguang	0.84	323	P	Pn	21 37 19.6	-0.5
	baz=323						
NSK				eS	Sn	21 37 31.2	-0.1
	baz=323						
NWLT	Wulai	0.86	334	P	Pn	21 37 20.2	0.0
	baz=334						
NWLT				eS	Sn	21 37 31.7	+0.1
	baz=334						
TWF1	Yuli	0.86	222	eP	Pn	21 37 19.6	-0.7
	baz=219						
TWF1				eS	Sn	21 37 31.0	-0.6
	baz=219						
DPDB	Guoxing	0.91	272	eP	Pn	21 37 21.0	+0.1
	baz=271						
DPDB				eS	Sn	21 37 32.8	0.0
	baz=271						
SSLB	Suanglung	0.91	257	eP	Pn	21 37 20.6	-0.3
	baz=255						
SSLB				eS	Sn	21 37 32.9	+0.1
	baz=255						
WHP	Taichung City	0.93	287	eP	Pn	21 37 21.3	+0.1
	baz=286						
WHP				eS	Sn	21 37 33.1	-0.3
	baz=286						
SMLT	Sun Moon Lake	0.94	263	eP	Pn	21 37 21.4	+0.1
	baz=261						
SMLT				eS	Sn	21 37 33.1	-0.5
	baz=261						
TIPB	Shuangxi	0.97	355	eP	Pn	21 37 21.9	+0.2
	baz=355						
TIPB				eS	Sn	21 37 34.7	+0.5
	baz=355						
TYC	Yuchr	0.98	264	eP	Pn	21 37 21.5	-0.2
	baz=263						
TYC				eS	Sn	21 37 35.2	+0.9
	baz=263						
FULB	Fuli	0.98	216	eP	Pn	21 37 21.4	-0.5
	baz=214						
FULB				eS	Sn	21 37 34.3	-0.3
	baz=214						
NHDH	Xindian Distri	1.02	339	eP	Pn	21 37 22.3	-0.1
	baz=339						
NHDH				eS	Sn	21 37 35.5	0.0
	baz=339						
WHYT	Xinyi Township	1.02	253	eP	Pn	21 37 22.3	-0.1
	baz=251						
WHYT				eS	Sn	21 37 36.0	+0.5
	baz=251						
YUS	Yu-Shan	1.02	240	eP	Pn	21 37 22.9	+0.1
	baz=239						
YUS				eS	Sn	21 37 35.7	-0.5
	baz=239						
CHKT	Chengkung	1.03	210	eP	Pn	21 37 22.5	0.0
	baz=208						
JYNG	Yonagunijimaku	1.04	64	P	Pn	21 37 22.7	+0.1
WLTB	Daxi	1.04	324	eP	Pn	21 37 22.4	-0.3
	baz=324						
WLTB				eS	Sn	21 37 35.8	-0.2
	baz=324						
LIOB	Emei	1.04	308	eP	Pn	21 37 22.9	+0.1
	baz=307						
LIOB				eS	Sn	21 37 35.5	-0.6
	baz=307						
TATO	Taipei	1.04	338	eP	Pn	21 37 23.5	+0.8
	baz=338						
TATO				eS	Sn	21 37 35.5	-0.6
	baz=338						
NSTT	Nanjuang	1.05	307	P	Pn	21 37 22.7	0.0
	baz=306						
NSTT				eS	Sn	21 37 35.9	-0.2
	baz=306						
NWF	Wu-fen Shan	1.07	353	eP	Pn	21 37 23.4	+0.2
	baz=353						
NWF				eS	Sn	21 37 36.4	-0.4
	baz=353						
WFSB	Wu-fen Shan	1.07	353	eP	Pn	21 37 23.3	+0.3
	baz=353						
WFSB				eS	Sn	21 37 37.6	+0.9
	baz=353						
YOJ	Yonaguni jima	1.10	65	P	Pn	21 37 23.3	-0.1
TWQ1	Liyutan	1.10	288	eP	Pn	21 37 23.7	+0.2
	baz=287						
TWQ1				eS	Sn	21 37 37.4	-0.1
	baz=287						
WJS	Zhushan	1.10	261	eP	Pn	21 37 23.9	+0.4
	baz=259						
WJS				eS	Sn	21 37 38.0	+0.4
	baz=259						
ALS	Alishan	1.13	245	eP	Pn	21 37 24.2	0.0
	baz=243						
ALS				eS	Sn	21 37 38.3	-0.4
	baz=243						
NSY	Sanyi	1.14	291	eP	Pn	21 37 24.2	+0.2
	baz=291						
NSY				eS	Sn	21 37 37.8	-0.5
	baz=291						
WNT	Mingjian	1.14	264	eP	Pn	21 37 25.0	+1.1
	baz=263						
WNT				eS	Sn	21 37 38.6	+0.3
	baz=263						
ELDTW	Lidau	1.16	226	eP	Pn	21 37 24.2	-0.2
	baz=224						
ELDTW				eS	Sn	21 37 38.3	-0.7
	baz=224						
NMLH	Miaoli	1.16	298	eP	Pn	21 37 24.2	-0.1
	baz=297						
NMLH				eS	Sn	21 37 39.1	+0.2
	baz=297						
NCU	National Centr	1.17	325	eP	Pn	21 37 24.0	-0.4
	baz=325						
NCU				eS	Sn	21 37 39.1	-0.1
	baz=325						
TWS1	Kuangyinshan	1.19	337	eP	Pn	21 37 24.5	-0.1
	baz=337						
TWS1				eS	Sn	21 37 39.5	0.0
	baz=337						
YM04	YM04	1.20	343	eP	Pn	21 37 24.8	-0.1
	baz=343						
YM04				eS	Sn	21 37 39.6	-0.3
	baz=343						
YM05	YM05	1.20	344	eP	Pn	21 37 24.8	-0.2
	baz=344						
YM05				eS	Sn	21 37 39.7	-0.3
	baz=344						
CHN5	Tsauling	1.21	251	eP	Pn	21 37 25.4	+0.4
	baz=249						
CHN5				eS	Sn	21 37 40.2	0.0
	baz=249						
WCHH	Zhanghua	1.25	274	eP	Pn	21 37 25.9	+0.4
	baz=273						
WCHH				eS	Sn	21 37 41.5	+0.4
	baz=273						
WDLH	Douliu	1.30	256	eP	Pn	21 37 26.2	-0.1
	baz=255						
WDLH				eS	Sn	21 37 43.0	+0.6
	baz=255						
TPUB	Ta-pu	1.37	240	P	Pn	21 37 27.9	+0.6
	baz=238						
TPUB				eS	Sn	21 37 44.8	+0.6
	baz=238						
CHN4	Tsaushan	1.38	242	P	Pn	21 37 28.2	+0.9
	baz=241						
CHN4				eS	Sn	21 37 45.0	+0.7
	baz=241						
WTP	Ta-pu	1.42	238	P	Pn	21 37 27.9	+0.1
	baz=236						
WTP				eS	Sn	21 37 45.8	+0.6
	baz=236						
RLNB	Erlin	1.43	266	eP	Pn	21 37 28.8	+0.8
	baz=265						
RLNB				eS	Sn	21 37 46.1	+0.5
	baz=265						
CHN1	Nanshi	1.51	238	P	Pn	21 37 29.4	+0.2
	baz=236						
CHN1				eS	Sn	21 37 47.7	+0.1
	baz=236						

NIED 02 21:37:00,20.30N×120.40E,h8km,Mw4.1 Best double couple: Mo1.59000×10^15 NP1:φs326.00000°,δ66.00000°, λ-84.00000°. NP2:φs131.00000°,δ25.00000°, λ-103.00000°.
JMA 02 21:37:36.8±0.3,20.34N×120.39E,h0km,M3.7
IDC 02 21:37:54.2±4.8,20.35N×120.63E,h159km±48km,mb3.2/9, mb1 3.4/11,mb1mx3.2/43,mbtmp3.7/11,MS3.1/7, Ms1 3.1/7,ms1mx2.9/18,Error ellipse: s-maj=21.5km s-min=15.0km az=78.0

ISC 02 21:37:39.9±1.0,20.2N±0.1×120.4E±0.1,h26km,n18, σ1.07/18,mb3.6/8,MS2.9/5,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	4.87	29	P	Pn	21 38 51.9	+0.5
JYNG				S	Sn	21 39 47.4	+0.4
JKRS	Kuro-shima	5.26	39	P	Pn	21 38 56.3	-0.5
JKRS				eS	Sn	21 39 56.2	-0.4
JIJ	Ishigaki jima	5.43	39	P	Pn	21 38 59.9	+0.7
JIJ				eS	Sn	21 40 01.6	+0.7
JISG	Ishigakijimahi	5.70	39	P	Pn	21 39 02.9	0.0
JISG				eS	Sn	21 40 06.3	-1.2
JNU	Nakatsue	15.93	34	P	P	21 41 27.5	+1.8
	0.2nm,0.3s,baz=120,slow=5.2,SNR=3.5						
JNU				LR	LR	21 48 02.5	
	comp=Z,43nm,18.2s,baz=234,slow=39						
KSRS	Korea Array	18.42	19	P	Pn	21 41 54.9	+1.5
	0.1nm,0.3s,baz=203,slow=12,SNR=3.6						
KSRS				LR	LR	21 49 26.2	
	comp=Z,43nm,21.3s,baz=209,slow=38						
CMAR	Chiang Mai Arr	20.29	269	P	Pn	21 42 21.9	+6.1
	0.6nm,0.8s,baz=74,slow=10,SNR=4.7						
CMAR				LR	LR	21 50 38.4	
	comp=Z,50nm,18.6s,baz=138,slow=37						
JHJ	Hachijo jima 2	21.57	49	LR	LR	21 48 44.9	
	comp=Z,46nm,20.0s,baz=324,slow=31						
MJAR	Matsushiro Arr	22.57	40	P	P	21 42 38.1	0.0
	1.4nm,0.8s,baz=244,slow=10.0,SNR=5.7						
GUMO	Guam	24.34	102	LR	LR	21 52 55.1	
	comp=Z,38nm,19.1s,baz=177,slow=37						
SONM	Songino Array	29.81	341	P	P	21 43 44.7	-0.1
	1.9nm,1.0s,baz=156,slow=5.9,SNR=10						
SONM				LR	LR	21 56 35.4	
	comp=Z,73nm,18.2s,baz=270,slow=38						
MKAR	Makanchi Array	40.77	320	P	P	21 45 19.3	+0.5
	0.9nm,0.9s,baz=114,slow=8.3,SNR=7.0						
WRA	Warramunga Arr	42.17	160	P	P	21 45 31.1	+0.6
	0.9nm,0.8s,baz=342,slow=9.6,SNR=4.7						
ZALV	Zalesovo Beam	43.24	330	P	P	21 45 39.0	+0.2
	1.2nm,0.8s,baz=114,slow=6.7,SNR=5.9						
PETK	Petropavlovsk-	43.62	32	LR	LR	22 05 35.5	
	comp=Z,22nm,19.7s,baz=241,slow=38						
ASAR	Alice Springs	45.55	162	P	P	21 45 58.8	+1.1
	1.2nm,0.9s,baz=334,slow=8.3,SNR=5.6						
ILAR	Eielson Array	73.10	27	P	P	21 49 05.9	-1.7
	0.3nm,0.6s,baz=281,slow=5.1,SNR=5.2						
YKA	Yellowknife Ar	86.93	22	P	P	21 50 20.4	-1.9
	0.9nm,0.9s,baz=313,slow=4.9,SNR=14						

ANF 02 21:51:19.8±0.3,34.39N×119.97W,h21km±1km,ML2.9/18, Error ellipse: s-maj=2.9km s-min=1.4km az=74.0
PAS 02 21:51:20.1±2.8,34.40N±0.01×120.02W±0.02,h6km±4km, ML2.9/125,Error ellipse: s-maj=2.3km s-min=1.7km az=57.0
SCEDC 02 21:51:20.1,34.40N×120.02W,h6km

ISC 02 21:51:20.1±0.9,34.38N±0.02×119.99W±0.02,h20km±4km, n94,σ0.80/134,Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SYP	Santa Ynez Pea	0.15	3		Pb	21 51 25.1	+0.1
SBC	Santa Barbara	0.24	74		Sb	21 51 29.5	-0.3
SBC	Santa Barbara	0.24	74	P	Pb	21 51 25.2	-0.6
	baz=260,SNR=88						
SBC				S	Sb	21 51 29.7	0.0
	baz=260						
FIGC	Figueroa Mtn.	0.35	0		Pb	21 51 26.4	-1.3
FIGC					Sb	21 51 31.8	-1.1
BSM	San Miguel Isl	0.45	222		Pb	21 51 28.8	-0.5
BSM					Sb	21 51 35.9	+0.3
GATR	Gnd/Air Tx Cnt	0.46	293		Pb	21 51 28.7	-0.9
SCZ2	Santa Cruz Isl	0.48	142		Pb	21 51 29.3	-0.6
SCZ2					Sb	21 51 36.9	+0.4
SCZ2	Santa Cruz Isl	0.48	142	P	Pb	21 51 29.3	-0.6
	baz=322,SNR=11						
SCZ2				S	Sb	21 51 37.0	+0.5
	baz=322						
PKM	Mcpherson Peak	0.53	16		Pb	21 51 29.7	-1.2
PKM					Sb	21 51 38.3	+0.1
PKM	Mcpherson Peak	0.53	16	P	Pb	21 51 29.7	-1.2
	baz=199,SNR=32						
PKM				S	Sb	21 51 38.4	+0.1
	baz=199						
RYS	Reyes Peak	0.59	63		Pb	21 51 31.5	-0.4
BCW	Bitter Crk WRg	0.73	40		Pb	21 51 34.0	-0.4
BCW					Sb	21 51 44.6	+0.7
ABL	Mount Abel	0.79	53		Pb	21 51 34.7	-0.6
BCH	Branch Mountai	0.81	354		Pb	21 51 34.5	-1.1
BLG	Laguna Peak, P	0.81	109		Pb	21 51 34.4	-1.1
BLG					Sb	21 51 46.1	0.0
BLG	Laguna Peak, P	0.81	109	P	Pb	21 51 34.4	-1.1
	baz=291,SNR=5.3						
BLG				S	Sb	21 51 46.1	0.0
	baz=291						
MPI	Mount Pinos, F	0.82	58		Pb	21 51 35.5	-0.4
MPI					Sb	21 51 46.6	0.0
BALC	Balcom Canyon	0.85	94		Pb	21 51 36.4	+0.2
SMMC	Simmler	0.94	360		Pb	21 51 36.9	-0.8
SMMC					Sb	21 51 49.3	-0.3
SMMC	Simmler	0.94	360	P	Pb	21 51 37.0	-0.6
	baz=181,SNR=11						
SMMC				S	Sn	21 51 50.6	-0.4
	baz=181						
CARC	Carrizo Plain	0.94	7		Pb	21 51 37.0	-0.8
CARC					Sb	21 51 49.8	0.0
OSI	Osito Audit: C	1.07	77	Pg	Pb	21 51 40.4	+0.4
OSI				Sg	Sn	21 51 54.1	-0.3
OSI	Osito Audit: C	1.07	77	P	Pn	21 51 39.4	-0.6
	baz=259,SNR=7.1						
OSI				S	Sn	21 51 54.0	-0.4
	baz=259						
DCD	Diablo Creek	1.09	320		Pn	21 51 38.8	-1.4
OAT	Oat Mountain	1.14	91		Pn	21 51 41.0	-0.2
SNCC	San Nicolas Is	1.19	161	Pg	Pn	21 51 40.9	-0.7
SNCC				Sg	Sn	21 51 57.2	0.0
SNCC	San Nicolas Is	1.19	161	P	Pn	21 51 41.1	-0.5
	baz=341						
SNCC				S	Sn	21 51 57.1	-0.1
	baz=341						
SBI	Santa Barbara	1.20	138		Pn	21 51 41.4	-0.3
SBI					Sn	21 51 58.2	+0.8
BTPC	Burnt Peak	1.21	75		Pn	21 51 41.6	-0.5
BTPC					Sn	21 51 58.0	+0.1
ARVC	Arvin	1.21	52		Pn	21 51 41.3	-0.7
ARVC					Sb	21 51 57.3	-0.3
ARVC	Arvin	1.21	52	P	Pn	21 51 41.5	-0.5
	baz=234,SNR=7.8						
ARVC				S	Sb	21 51 57.4	-0.3
	baz=234						
THC	Tehachapi Micr	1.22	64		Pn	21 51 41.5	-0.6
THC					Sn	21 51 57.9	-0.2
DJJ	Donna J Jenkin	1.30	102		Pn	21 51 42.1	-1.0
DJJ					Sn	21 51 59.1	-0.8
IR2C	Iron Canyon	1.31	89		Pn	21 51 43.2	-0.2
TEJ	El Tejon	1.37	51		Pn	21 51 43.0	-1.2
PAGB	Antelope Grade	1.37	351		Pn	21 51 44.2	+0.1
PAGB					Sb	21 52 02.9	+0.8
DECC	Green Verdugo	1.38	95		Pn	21 51 43.8	-0.5
DECC					Sb	21 52 01.9	-0.5
DECC	Green Verdugo	1.38	95	P	Pn	21 51 43.7	-0.5
	baz=276						
DECC				S	Sb	21 52 02.2	-0.1
	baz=276						
LEOC	Leona Valley	1.41	79		Pn	21 51 44.4	-0.4
ALPC	Antelope	1.43	77		Pn	21 51 44.8	-0.1
ALPC					Sb	21 52 03.5	-0.4
RPV	Rancho Palos V	1.46	115		Pn	21 51 45.7	+0.4
FOXC	Fox Airport	1.50	75		Pn	21 51 46.0	+0.1
PASC	Pasadena Art C	1.51	97		Pn	21 51 45.5	-0.5
PASC				Sn	Sb	21 52 05.7	-0.4
WOFM	Oak Flat	1.56	42		Pn	21 51 46.5	-0.3
MWC	Mount Wilson	1.61	95		Pn	21 51 47.3	-0.2
MWC				Sn	Sb	21 52 08.9	-0.2
CHFC	Chilao Flat St	1.62	91		Pn	21 51 47.3	-0.5
CHFC					Sn	21 52 08.2	+0.1
LRRC	Littlerock Res	1.63	84		Pn	21 51 48.2	+0.6
CIS	Catalina Islan	1.63	126	P	Pn	21 51 47.0	-0.7
	baz=307						
CIS				S	Sn	21 52 08.1	-0.1
	baz=307						
VES	Vestal, Richgr	1.64	27	Pb	Pb	21 51 48.8	-0.8
	baz=208						
VES				Sb	Sb	21 52 10.4	+0.6
	baz=208						
EDW2	Edwards Air Fo	1.72	72		Pn	21 51 49.2	+0.2
EDW2	Edwards Air Fo	1.72	72	P	Pn	21 51 48.6	-0.4
	baz=254,SNR=12						
XTL	Crystal Lake,	1.76	92		Pn	21 51 49.6	0.0
PEM	Pine Mountain	1.77	96		Pn	21 51 50.0	+0.4
HOLC	Holcomb Ridge	1.77	87		Pn	21 51 49.9	+0.1
ISA	Isabella, Lake	1.79	44		Pn	21 51 49.8	-0.1
ISA	Isabella, Lake	1.79	44	P	Pn	21 51 50.0	+0.1
	baz=225,SNR=13						
ISA				S	Sn	21 52 11.8	-0.3
	baz=225						
SSK	Sunset Peak	1.91	94		Pn	21 51 51.8	+0.1
PMPB	Monarch Peak	1.95	340		Pn	21 51 52.9	+0.8
HYS	Haystack Butte	2.05	76		Pn	21 51 53.2	-0.4
LRMC	Laurel Mtn Rad	2.19	59		Pn	21 51 55.9	+0.4
SME	Santa Rosa Min	2.25	103		Pn	21 51 56.0	-0.3
BLKC	Black Mountain	2.39	72		Pn	21 51 58.0	-0.2
MURC	Murrieta	2.45	108	S	Sn	21 52 28.1	-0.2
	baz=290						
HMTC	Hemet	2.57	104		Pn	21 51 60.0	-0.6
POB	Polly Butte	2.64	104		Pn	21 52 01.0	-0.6
MPMC	Manual Prospec	2.65	50	Pb	Pb	21 52 06.4	-0.5
	baz=232,SNR=15						
MPMC				Sb	Sb	21 52 41.6	+2.5
	baz=232						
SAO	San Andreas Ge	2.66	334	Pn	Pn	21 52 01.8	0.0
DAC	Darwin (Calif)	2.73	45	Pn	Pn	21 52 04.2	+1.2
GSC	Goldstone, Bar	2.78	70		Pn	21 52 03.5	0.0
109C	Camp Elliot, M	2.83	121	Pn	Pn	21 52 06.5	+2.4
FRD	Ford Ranch, An	2.95	106		Pn	21 52 06.1	+0.2
PFO	Pinyon Flats O	3.03	104	Pn	Pn	21 52 07.3	+0.2
XPFO	Pion Flat	3.03	104	Pn	Pn	21 52 07.3	+0.2
TPFO	Pinon Flats	3.04	104	P	Pn	21 52 07.6	+0.5
	baz=286						
TPFO				S	Sn	21 52 43.5	+0.5
	baz=286						
HEC	Hector,Ludlow	3.05	80	P	Pn	21 52 07.6	+0.4
	baz=263						
HEC				S	Sn	21 52 42.9	-0.3
	baz=263						
BAR	Barrett	3.25	120	Pn	Pn	21 52 12.0	+2.1
MONP2	Monument Peak	3.32	115	P	Pn	21 52 11.1	-0.1
	baz=298						
MONP2				S	Sn	21 52 50.2	0.0
	baz=298						
OMMB	Old Mammoth Mi	3.33	14		Pn	21 52 12.5	+1.2
BELC	Belle Mtn. Jos	3.33	95	P	Pn	21 52 10.9	-0.2
	baz=278						
GMRC	Granite Mounta	3.59	82	P	Pn	21 52 14.4	-0.5
	baz=265						
GMRC				S	Sn	21 52 55.1	-1.6
	baz=265						
CMB	Columbia Colle	3.66	355	Pn	Pn	21 52 16.7	+1.0

TPNV Topopah Spring 3.98 49 Pn Pn 21 52 21.6 +1.4
IRM Iron Mountain 4.02 92 P Pn 21 52 20.0 -0.5
baz=275
IRM S Sn 21 53 06.4 -0.7
baz=275
WAKR Walker 4.14 6 Pn Pn 21 52 24.2 +1.7
SHPR Sheep Range 4.48 60 Pn Pn 21 52 27.8 +0.9
Y12C Blythe 4.58 96 Pn Pn 21 52 30.6 +2.4
AFDM Forest Hills D 4.63 350 Pn 21 52 29.2 +0.3
YERR Yerington 4.64 7 Pn Pn 21 52 30.6 +1.4
RUBR Rubicon Trail 4.67 358 Pn Pn 21 52 31.2 +1.6
PNTR Pine Nut 4.71 4 Pn Pn 21 52 31.0 +0.8
KVN Kaiserville 4.91 17 Pn Pn 21 52 34.4 +1.5
VCNR Virginia City 4.92 3 Pn Pn 21 52 35.1 +2.0
GDXM Geysers 4.96 334 Pn Pn 21 52 35.6 +2.0
W13A Hualapai Mount 5.08 80 Pn Pn 21 52 35.3 0.0

IDC 02 22:24:56.3±7.0, 20°.32N×120°.35E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.4/39, mbtmp3.4/5, Error ellipse: s-maj=181.1km s-min=48.0km az=17.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	29.69	341	P	P	22 31 04.5	+0.5
	0.4nm,0.7s,baz=142,slow=7.8,SNR=4.0						
MKAR	Makanchi Array	40.67	319	P	P	22 32 38.6	+0.2
	0.2nm,0.7s,baz=106,slow=7.9,SNR=4.2						
ZALV	Zalesovo Beam	43.12	330	P	P	22 32 57.5	-0.8
	0.6nm,0.6s,baz=142,slow=7.3,SNR=3.3						
ILAR	Eielson Array	72.99	27	P	P	22 36 27.8	+0.2
	0.2nm,0.6s,baz=280,slow=6.0,SNR=1.6						
YKA	Yellowknife Ar	86.82	22	P	P	22 37 42.4	-0.1
	0.3nm,0.7s,baz=315,slow=5.0,SNR=5.4						

IDC 02 22:32:08.7±1.0, 20°.53N×121°.22E, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.6/50, mbtmp3.6/8, MS3.0/4, Ms1 3.0/4, ms1mx2.6/36, Error ellipse: s-maj=53.8km s-min=20.7km az=65.0
NEIC 02 22:32:10.3±1.9, 20°.33N±0°.04×120°.9E±0°.1, h10km±1km, mb4.2/2, Error ellipse: s-maj=18.3km s-min=7.1km az=95.0
ISC 02 22:32:12.5±0.8, 20°.32N±0°.04×120°.9E±0°.1, h29km, n27, σ1s.22/30, mb3.6/9, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	Pinlang	2.49	4	Pn	Pn	22 32 51.0	-0.1
TWG				Sn	Sn	22 33 20.9	+0.3
SZP	Santa	2.79	188	Pn	Pn	22 32 55.3	+0.1
SZP					Sn	22 33 28.8	+0.9
TPUB	Ta-pu	2.97	356		Pn	22 32 58.1	+0.3
TPUB				Sn	Sn	22 33 34.4	+1.9
YULB	Yu-li	3.08	7		Pn	22 33 00.1	+0.8
YULB				Sn	Sn	22 33 37.3	+2.2
SSLB	Suanglung	3.45	1		Pn	22 33 04.2	-0.2
SSLB				Sn	Sn	22 33 46.6	+2.4
NACB	Ninganchiao	3.89	10	Pn	Pn	22 33 10.6	+0.2
NACB				Sn	Sn	22 33 52.9	-2.2
YHNB	Yeheng	4.35	6		Pn	22 33 16.3	-0.5
YHNB				Sn	Sn	22 34 07.4	+0.8
KNMB	Chin-men Tao	4.72	331		Pn	22 33 22.2	+0.4
TGY	Tagaytay City	6.19	180	LR	LR	22 36 16.9	
	comp=Z,134nm,19.7s,baz=42,slow=39						
HKPS	Hong Kong Po S	6.58	288	Pn	Pn	22 33 46.9	-0.5
KSRS	Korea Array	18.14	18	LR	LR	22 44 02.8	
	comp=Z,16nm,20.3s,baz=245,slow=40						
CMAR	Chiang Mai Arr	20.78	269	LR	LR	22 44 41.6	
	comp=Z,23nm,18.7s,baz=110,slow=36						
PSI	Prapat	27.61	234	LR	LR	22 48 13.0	
	comp=Z,123nm,19.9s,baz=221,slow=34						
SONM	Songino Array	29.85	340	P	P	22 38 18.5	+1.1
	0.8nm,0.8s,baz=159,slow=6.9,SNR=6.9						
SONM	Songino Array	29.85	340	P	P	22 38 16.7	-0.7
MKAR	Makanchi Array	40.99	319	P	P	22 39 53.7	+0.8
	0.5nm,0.7s,baz=108,slow=10,SNR=6.4						
MKAR	Makanchi Array	40.99	319	P	P	22 39 52.3	-0.6
WRA	Warramunga Arr	42.13	161	P	P	22 40 03.0	+0.5
	0.6nm,0.8s,baz=342,slow=9.0,SNR=3.2						
ZALV	Zalesovo Beam	43.37	330	P	P	22 40 11.4	-0.8
	0.7nm,0.6s,baz=120,slow=8.7,SNR=3.9						
ZALV	Zalesovo Beam	43.37	330	P	P	22 40 11.1	-1.0
KURK	Kurchatov	44.92	323	P	P	22 40 23.1	-1.5
KURK				IAmb	IAmb	22 40 25.7	
	comp=Z,3.4nm,1.1s						
KURBB	Kurchatov Arra	44.93	323	P	P	22 40 25.0	+0.3
	comp=Z,1.2nm,0.5s,baz=120,slow=7.6,SNR=7.4						
ASAR	Alice Springs	45.53	163	P	P	22 40 31.9	+2.2
	comp=Z,0.8nm,1.0s,baz=348,slow=8.5,SNR=3.0						
ASAR	Alice Springs	45.53	163	P	P	22 40 29.7	-0.1
ILAR	Eielson Array	72.77	27	P	P	22 43 35.5	-2.4
	comp=Z,0.1nm,0.5s,baz=268,slow=4.2,SNR=2.5						
ILAR	Eielson Array	72.77	27	P	P	22 43 36.7	-1.2
YKA	Yellowknife Ar	86.62	23	P	P	22 44 53.4	+0.3
	comp=Z,0.5nm,0.8s,baz=311,slow=4.7,SNR=3.5						

ATH 02 22:32:47.0, 38°.14N×20°.42E, h9km±1km, ML2.6/4, Error ellipse: s-maj=2.0km s-min=1.0km az=288.0
THE 02 22:32:47.4, 38°.15N×20°.41E, h6km±1km, ML2.8/8, Error ellipse: s-maj=1.5km s-min=0.7km az=268.0
ISC 02 22:32:47.1±1.0, 38°.14N±0°.03×20°.43E±0°.04, h8km±5km, n28, σ0s.38/43, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF2	Argostoli. Kep	0.05	57	P	Pg	22 32 48.8	0.0
KEF2				S	Sg	22 32 50.0	-0.1
ARG2	Argostoli	0.06	47	P	Pg	22 32 49.0	+0.1
ARG2				S	Sg	22 32 50.2	0.0
	41μm,0.1s						
CHV1	Chavriata, Kef	0.06	317	P	Pg	22 32 48.9	-0.1
CHV1				S	Sg	22 32 50.1	-0.2
	75μm,0.2s						
KEF3	Kipouria, Keph	0.09	313	P	Pg	22 32 49.4	0.0
KEF3				S	Sg	22 32 51.1	+0.1
KEF4	Livadi, Kephal	0.12	356	P	Pg	22 32 49.9	+0.1
KEF4				S	Sg	22 32 52.1	+0.5
VLS	Valsamata	0.13	73	P	Pg	22 32 50.0	0.0
VLS				S	Sg	22 32 52.2	+0.2
	9μm,0.1s						
VLS	Valsamata	0.13	73	P	Pg	22 32 50.0	0.0
VLS				S	Sg	22 32 51.8	-0.1
VLS				AML	AML	22 32 52.5	
	comp=E,26680μm,0.1s						
VLS				AML	AML	22 32 52.8	
	comp=N,9582μm,0.1s						
KEF1	Kardakata, Kep	0.14	12	P	Pg	22 32 50.2	0.0
KEF1				S	Sg	22 32 52.6	+0.3
VSK1	VASILIKIADES	0.29	21	P	Pg	22 32 52.9	0.0
VSK1				S	Sg	22 32 57.6	+0.8
	comp=N,2μm,0.1s						
VLMS	Volimes, Zakyn	0.32	145	P	Pg	22 32 53.7	+0.3
VLMS				S	Sg	22 32 58.2	+0.6
EVGI	Lefkada island	0.51	20	P	Pg	22 32 56.8	-0.2
EVGI				S	Sg	22 33 04.5	+0.7
	comp=N,420nm,0.2s						
EVGI	Lefkada island	0.51	20	P	Pg	22 32 56.9	-0.2
EVGI				S	Sg	22 33 04.4	+0.7
KRI1	kERI	0.56	147	P	Pg	22 32 58.0	0.0
KRI1				S	Sb	22 33 07.7	+0.2
	comp=N,575nm,0.3s						
MGNA	Meganis	0.59	28	P	Pg	22 32 58.1	-0.4
MGNA				AML	AML	22 33 07.8	
	comp=N,772μm,0.1s						
MGNA				AML	AML	22 33 08.0	
	comp=E,833μm,0.3s						
LKD2	Lefkada island	0.67	15	P	Pg	22 32 59.7	-0.4
LKD2	Lefkada island	0.67	15	P	Pg	22 32 59.4	-0.7
TSLK	Tsoukalades, L	0.71	14	P	Pg	22 33 00.7	-0.1
TSLK	Tsoukalades, L	0.71	14	P	Pg	22 33 00.6	-0.1
PDO	Prodromos	0.75	52	P	Pg	22 33 01.4	-0.1
PDO				S	Sb	22 33 13.2	+0.4
	comp=E,638nm,0.4s						
PDO	Prodromos	0.75	52	P	Pg	22 33 00.9	-0.6
PDO				AML	AML	22 33 19.4	
	comp=N,977μm,0.4s						
PDO				AML	AML	22 33 19.4	
	comp=E,816μm,0.4s						
PVO	Paravola	0.98	61	P	Pg	22 33 06.0	0.0
PVO				S	Sn	22 33 21.3	0.0
	comp=E,392nm,0.5s						
PVO	Paravola	0.98	61	P	Pg	22 33 06.0	0.0
PVO				AML	AML	22 33 25.4	
	comp=E,831μm,0.4s						
PVO				AML	AML	22 33 28.7	
	comp=N,688μm,0.7s						
DRO	Drossia	1.02	100	P	Pg	22 33 06.4	-0.4
LAKA	Lakka	1.22	85	P	Pb	22 33 09.9	-0.6
KLV	Kalavryta, Ach	1.36	93	P	Pn	22 33 12.3	-0.2
KALE	Kalithea	1.37	79	P	Pn	22 33 12.0	-0.6
MAKR	Makrakomi, Fth	1.59	56	P	Pg	22 33 17.6	0.0
AGG	Agios Georgios	1.73	59	P	Pb	22 33 19.8	+0.6

IDC 02 22:33:21.9±1.9, 3°.91S×142°.15E, h112km±17km, mb3.1/4, mb1 3.4/6, mb1mx3.1/38, mbtmp3.6/6, MS2.8/1, Ms1 2.8/1, ms1mx2.4/14, Error ellipse: s-maj=28.7km s-min=16.1km az=72.0
ISC 02 22:33:21.6±0.9, 4°.0S±0°.1×142°.3E±0°.1, h115km, n7, σ1s.88/9, mb3.4/4, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	2.10	313	P	Pn	22 33 56.7	+0.5
	9.1nm,0.3s,baz=148,slow=10,SNR=30						
JAY				S	Sn	22 34 20.1	-2.5
	5.8nm,0.3s,baz=128,slow=9.3,SNR=4.2						
PMG	Port Moresby	7.29	138	P	Pn	22 35 07.1	+1.6
	2.3nm,0.3s,baz=319,slow=19,SNR=4.7						
PMG				S	Sn	22 36 23.6	-3.2
	0.6nm,0.3s,baz=58,slow=19,SNR=1.3						
WRA	Warramunga Arr	17.67	205	P	P	22 37 18.9	-1.0
	0.2nm,0.3s,baz=24,slow=13,SNR=7.9						
ASAR	Alice Springs	21.20	202	P	P	22 37 58.6	+0.5
	0.3nm,0.3s,baz=30,slow=12,SNR=4.6						
FITZ	Fitzroy Crossi	21.50	228	P	P	22 38 02.0	+0.7
	2.0nm,0.5s,baz=41,slow=11,SNR=5.4						
FITZ				LR	LR	22 47 52.8	
	comp=Z,25nm,19.9s,baz=330,slow=41						
MKAR	Makanchi Array	72.94	322	P	P	22 44 39.2	+0.7
	0.2nm,0.4s,baz=108,slow=7.7,SNR=5.2						
ILAR	Eielson Array	85.51	24	P	P	22 45 46.3	-0.1
	0.5nm,0.7s,baz=264,slow=5.2,SNR=5.4						

BEO 02 22:47:01.9±1.2, 41°.88N×24°.38E, h3km±1km, ML2.5/5
SKO 02 22:47:01.1, 41°.94N×24°.55E, h11km
ISC 02 22:47:00.6±1.5, 41°.90N±0°.04×24°.51E±0°.05, h9km±11km, n19, σ1s.06/30, 7C-8D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRS	Serrai	1.04	222	ePn	Pg	22 47 20.6	0.0
SRS				eSn	Sb	22 47 35.7	+1.1
VTS	Vitosha	1.19	308	ePn	Pg	22 47 23.1	-0.4
VTS				eSn	Sb	22 47 39.0	-0.1
VTS	Vitosha	1.19	308	⇓P	Pg	22 47 22.1	-1.5
VTS				⇓S	Sg	22 47 38.3	-0.8
ELND	Elena	1.44	44	⇑P	Pn	22 47 26.4	-0.6
ELND				⇑S	Sn	22 47 45.0	-1.0
PLVB	Pleven	1.49	3	⇑P	Pn	22 47 28.2	+0.6
PLVB				⇑S	Sb	22 47 48.5	+0.9
VAY	Valandovo	1.57	249	i Pg	Pg	22 47 30.8	+0.1
VAY				i Sg	Sg	22 47 52.7	+1.8
BOSS	Bosilegrad	1.63	292	ePn	Pb	22 47 30.6	-0.2
BOSS				eSn	Sb	22 47 51.7	+0.2
STIP	Stip	1.75	264	i Pg	Pn	22 47 28.9	-2.3
STIP				i Sg	Sn	22 47 51.4	-2.2
ZAPS	Zavoj	1.96	315	ePn	Pn	22 47 35.6	+1.5
ZAPS				eSn	Sn	22 47 59.5	+0.7
VLAD	Vladila	2.10	358	⇓P	Pn	22 47 36.2	+0.2
BARS	Barje	2.20	296	ePn	Pn	22 47 38.3	+0.9
BARS				eSn	Sn	22 48 04.6	-0.2
RAZG	Razgrad	2.22	41	⇓P	Pn	22 47 37.6	-0.1
COPA	Copaceana	2.30	13	⇓P	Pn	22 47 39.3	+0.6
HUMR	Humele	2.65	7	⇑P	Pn	22 47 44.4	+0.8
SELS	Selova	2.84	299	ePn	Pn	22 47 47.7	+1.6
VOIR		3.56	6	⇑P	Pn	22 47 57.1	+0.9
MLR	Muntele Rosu	3.74	16	⇓P	Pn	22 47 58.8	+0.2
PLOR	Plostina	4.25	21	⇑P	Pn	22 48 06.6	+1.0
BZS	Buzias	4.27	332	⇓P	Pn	22 48 05.4	-0.4
BZS				⇓S	Sn	22 48 56.0	+0.2

IDC 02 22:53:15.6±3.8, 4°.38S×130°.90E, h0km, mb3.3/1, mb1 3.8/3, mb1mx3.5/25, mbtmp3.6/3, ML3.0/2, MS3.6/1, Ms1 3.5/1, ms1mx2.8/12, Error ellipse: s-maj=269.9km s-min=32.5km az=72.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.82	168	Pn	Pn	22 56 59.3	-0.6
	0.0nm,0.3s,baz=349,slow=11,SNR=1.8						
WRA				Sn	Sn	22 59 50.8	-5.4
	0.0nm,0.3s,baz=358,slow=22,SNR=0.9						
ASAR	Alice Springs	19.39	172	P	P	22 57 43.6	+0.3
	0.3nm,0.3s,baz=350,slow=11,SNR=6.9						
STKA	Stephens Creek	29.13	161	LR	LR	23 12 38.7	
	comp=Z,104nm,19.2s,baz=207,slow=40						
MKAR	Makanchi Array	66.56	326	P	P	23 04 07.6	0.0
	0.2nm,0.7s,baz=126,slow=8.3,SNR=3.0						

IDC 02 22:56:29.1±0.8, 22°.56S×68°.62W, h102km±9km, mb3.5/3, mb1 3.6/5, mb1mx3.3/36, mbtmp3.9/5, Error ellipse: s-maj=37.1km s-min=27.8km az=147.0
GUC 02 22:56:30.9±0.7, 22°.56S×68°.75W, h107km±5km, ML4.0
ISC 02 22:56:29.5±0.9, 22°.55S±0°.06×68°.70W±0°.08, h111km±7km, n20, σ0s.81/29, 6C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.20	254	LR	LR	22 56 32.4	
	comp=Z,36nm,21.7s,baz=30,slow=12						
LVC				P	Pn	22 56 45.7	+0.1
	373nm,0.3s,baz=58,slow=4.0,SNR=6731						
LVC				S	Sn	22 57 57.0	-0.6
	554nm,0.3s,baz=217,slow=22,SNR=29						
PB06	IPOC Station P	0.82	259	⇑iP	Pn	22 56 49.5	+0.3
PB06				i S	Sn	22 57 04.3	+0.1
PB06				IAML		22 57 08.6	
	comp=N,3μm,0.2s						
PB09	IPOC Station P	0.91	326	⇑iP	Pn	22 56 50.9	+0.7
PB09				i S	Sn	22 57 06.0	+0.4
PB03	IPOC Station P	1.10	297	⇑iP	Pn	22 56 52.3	+0.3
PB03				i S	Sn	22 57 08.4	-0.6
PB03				IAML		22 57 09.5	
	comp=E,3μm,0.1s						
PB04	IPOC Station P	1.36	279	⇑iP	Pn	22 56 55.3	+0.3
PB04				i S	Sn	22 57 13.8	-0.4
PB04				IAML		22 57 16.8	
	comp=N,2μm,0.2s						
PB07	IPOC Station P	1.37	306	eP	Pn	22 56 55.5	+0.3
PB07				i S	Sn	22 57 14.3	-0.3
PB07				IAML		22 57 15.1	
	comp=E,3μm,0.1s						
PB02	IPOC Station P	1.66	318	⇓iP	Pn	22 56 58.6	+0.2
PB02				i S	Sn	22 57 20.1	-0.3
PB02				IAML		22 57 21.0	
	comp=E,4μm,0.2s						
PB01	IPOC Station P	1.67	334	⇑iP	Pn	22 56 59.0	+0.3
PB01				i S	Sn	22 57 20.7	-0.1
PB01				IAML		22 57 21.7	
	comp=N,2μm,0.2s						
PB10	IPOC Station P	1.96	240	eP	Pn	22 57 02.1	+0.1
PATCX	Punta Patache	2.19	322	⇓iP	Pn	22 57 04.7	-0.4
PATCX				i S	Sn	22 57 31.5	-0.8
PATCX				IAML		22 57 33.3	
	comp=E,1μm,0.4s						
TA01	Diego Aracena	2.41	325	eP	Pn	22 57 07.2	-0.7
TA01				eS	Sn	22 57 36.2	-1.0
TA01				IAML		22 57 40.5	
	comp=N,792nm,0.2s						
PB08	IPOC Station P	2.44	350	⇑iP	Pn	22 57 09.5	+0.9
PB08				eS	Sn	22 57 40.2	+1.7
PB08				IAML		22 57 42.4	
	comp=E,372nm,0.5s						
GO01	Chusmiza	2.91	351	IAML		22 57 54.3	
	comp=E,771nm,0.1s						
MNMC	Minye Minye	3.51	346	IAML		22 58 08.8	
	comp=N,578nm,0.5s						
LPAZ	La Paz	6.25	5	P	Pn	22 58 00.3	+0.4
	comp=N,1.2nm,0.3s,baz=189,slow=9.6,SNR=38						
SIV	San Ignacio	9.72	49	P	Pn	22 58 44.1	-2.3
	comp=N,1.4nm,0.3s,baz=263,slow=8.3,SNR=26						
SIV				S	Sn	23 00 24.6	-9.1
	baz=159,slow=21,SNR=1.6						
BDFB	Brasilia	20.71	74	P	P	23 01 01.0	-0.3
	comp=N,1.2nm,0.4s,baz=114,slow=22,SNR=3.2						
TORD	Torodi Ar. Bea	77.53	70	P	P	23 08 13.9	+0.3
	comp=N,0.3nm,0.3s,baz=252,slow=5.1,SNR=15						
YKA	Yellowknife Ar	92.24	341	P	P	23 09 27.5	+1.2
	comp=N,0.4nm,0.6s,baz=138,slow=4.2,SNR=10						
MKAR	Makanchi Array	146.36	37	PKPbc	PKPdf	23 15 55.0	-1.0
	comp=N,0.2nm,0.5s,baz=311,slow=2.9,SNR=3.4						

IDC 02 23:19:53.7±0.9, 6°.00S×122°.41E, h0km, mb4.0/5, mb1 4.1/8, mb1mx3.8/43, mbtmp4.0/8, ML3.6/3, MS2.5/1, Ms1 2.5/1, ms1mx2.3/45, Error ellipse: s-maj=44.6km s-min=16.3km az=55.0
DJA 02 23:19:57.0±0.5, 6°S±4°×122°E±°, h10km, M4.2/7, mB4.6/2, mb4.3/2, MLv4.1/7, Mw(mB)3.8/2
NEIC 02 23:19:57.8±2.7, 6°.01S±0°.08×122°.47E±0°.08, h34km±7km, mb4.0/13, Error ellipse: s-maj=13.3km s-min=9.4km az=223.0
ISC 02 23:19:57.8±0.6, 6°.03S±0°.06×122°.45E±0°.05, h35km, n36, σ1s.19/37, mb4.1/9, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSI	Bau Bau	0.56	13	P	Pn	23 20 07.5	-1.8
KDI	Kendari	2.07	5	P	Pn	23 20 36.2	+6.1
BKSI	Bulukumba	2.42	287	P	Pn	23 20 33.3	-1.6
BKSI				S	Sn	23 21 01.5	-1.8
BNSI	Bone	2.84	305	P	Pn	23 20 40.2	-0.5
BNSI				S	Sn	23 21 13.8	+0.1
KAPI	Kappang	2.87	291	Pn	Pn	23 20 40.5	-0.6
	18nm,0.3s,baz=104,slow=3.8,SNR=24						
KAPI				Sn	Sn	23 21 15.4	+1.0
	18nm,0.3s,baz=231,slow=20,SNR=8.1						
KAPI				LR	LR	23 21 52.6	
	comp=Z,71nm,18.6s,baz=304,slow=42						
KAPI	Kappang	2.87	291		Pn	23 20 40.9	-0.2
KAPI					Sn	23 21 14.6	+0.3
SPSI	Sidrap Palu	3.37	308	P	Pn	23 20 48.4	+0.5
TTSI	Tana Toraja	3.96	318	P	Pn	23 21 04.5	+8.4
SOEI	Soe	4.12	154	P	Pn	23 21 01.3	+2.9
SOEI	Soe	4.12	154		Pn	23 20 58.9	+0.5
LUWI	Luwuk	4.97	4	Pn	Pn	23 21 09.9	-0.1
APSI	Ampana	5.15	351	P	Pn	23 21 14.2	+1.7
BKB	Balikpapan	7.29	310	Pn	Pn	23 21 41.0	-0.9
FAKI	Fak Fak	10.25	73	Pn	Pn	23 22 20.2	-2.4
MTN	Manton Dam	10.92	129	Pn	Pn	23 22 31.7	+0.1
KNRA	Kununurra	11.41	148	Pn	Pn	23 22 38.6	+0.2
FITZ	Fitzroy Crossi	12.39	166	Pn	Pn	23 22 52.1	+0.4
	0.2nm,0.3s,baz=346,slow=17,SNR=2.2						
WB0	Warramunga Arr	17.93	141		Pn	23 24 03.2	-1.2
WRA	Warramunga Arr	18.02	141	P	P	23 24 06.2	+0.3
	0.1nm,0.3s,baz=320,slow=12,SNR=5.6						
WRAB	Tennant Creek	18.02	141	P	Pn	23 24 05.2	-0.5
WRAB				IAmb	IAmb	23 24 11.4	
	comp=Z,13nm,1.1s						
WR0	Warramunga Arr	18.16	141		Pn	23 24 06.8	-0.6
GIRL	Giralia	18.32	205	P	P	23 24 08.1	-1.0
AS31	Alice Springs	20.71	149	P	Pn	23 24 37.2	-0.6
ASAR	Alice Springs	20.71	149	P	P	23 24 36.1	+0.8
	comp=Z,6.4nm,0.7s,baz=329,slow=12,SNR=37						
ASAR				PcP	PcP	23 28 44.8	+0.4
	comp=Z,0.5nm,0.7s,baz=298,slow=2.0,SNR=4.2						
COEN	Coen	21.86	113	P	P	23 24 48.5	+0.8
COEN				IAmb	IAmb	23 24 51.4	
	comp=Z,5.6nm,1.1s						
MORW	Morawa	23.70	194	P	P	23 25 05.2	-1.3
KULM	Kulim	24.50	297	P	P	23 25 13.3	-0.7
KULM				IAmb	IAmb	23 25 28.0	
	comp=Z,7.5nm,1.1s						
BBOO	Buckleboo	29.51	156	P	P	23 25 57.5	-1.4
STKA	Stephens Creek	31.33	148	P	P	23 26 17.3	+2.3
	comp=Z,2.5nm,0.8s,baz=297,slow=11,SNR=3.1						
SONM	Songino Array	55.47	347	P	P	23 29 30.5	+1.2
	comp=Z,0.8nm,0.5s,baz=167,slow=8.0,SNR=8.5						
SONM	Songino Array	55.47	347	IAmb	IAmb	23 29 38.5	
	comp=Z,1.2nm,0.9s						
MK31	Makanchi Array	63.49	330	P	P	23 30 25.8	+1.3
MK31				IAmb	IAmb	23 30 32.5	
	comp=Z,1.0nm,0.9s						
MKAR	Makanchi Array	63.49	330	P	P	23 30 25.4	+1.0
	comp=Z,0.9nm,0.5s,baz=136,slow=7.3,SNR=36						
MAKZ	Makanchi	63.65	330	P	P	23 30 26.3	+0.8
MAKZ				IAmb	IAmb	23 30 27.8	
	comp=Z,1.5nm,1.1s						
KBL	Kabul	64.50	313	P	P	23 30 31.6	+0.1
KBL				IAmb	IAmb	23 30 40.9	
	comp=Z,1.6nm,0.8s						
ZALV	Zalesovo Beam	67.58	337	P	P	23 30 51.2	+0.5
	comp=Z,2.2nm,0.9s,baz=142,slow=4.9,SNR=8.8						

IDC 02 23:21:50.1±1.2, 15°.05S×173°.56W, h0km, mb3.8/9, mb1 4.2/9, mb1mx3.9/40, mbtmp3.8/9, MS3.5/6, Ms1 3.5/6, ms1mx2.3/32, Error ellipse: s-maj=58.2km s-min=19.4km az=148.0
ISC 02 23:21:54.6±1.2, 15°.1S±0°.4×173°.6W±0°.3, h30km, n28, σ0s.46/12, mb3.8/9, MS3.6/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.10	57	Pn	Pn	23 22 19.8	-8.0
	50nm,0.3s,baz=214,slow=2.2,SNR=25						
AFI				Sn	Sn	23 22 37.4	-16
	245nm,0.3s,baz=46,slow=21,SNR=29						
AFI				LR	LR	23 22 42.9	
	comp=Z,150nm,18.4s,baz=212,slow=26						
DZM	Mont Dzumac	20.16	247	eLR	LR	23 31 28.8	
	comp=Z,295nm,25.1s						
DZM	Mont Dzumac	20.16	247	LR	LR	23 33 02.6	
	comp=Z,232nm,19.9s,baz=20,slow=33						
PPT	Papeete	23.18	99	LR	LR	23 34 54.1	
	comp=Z,26nm,19.2s,baz=142,slow=34						
PAE	Paea	23.18	100	eT	T	23 49 36.9	
	1.0nm,0.2s						
PPT2	Papeete2	23.18	100	eLR	LR	23 32 20.8	
	comp=Z,85nm,24.8s						
PPT2	Papeete2	23.18	100	eT	T	23 49 37.3	
	2.4nm,0.3s						
TBI	Tubuai	24.21	114	eT	T	23 51 02.3	
	3.8nm,0.3s						
URZ	Urewera	24.53	198	LR	LR	23 35 05.3	
	comp=Z,183nm,18.8s,baz=2.0,slow=32						
H11S2	WAKE ISLAND Hy	38.58	329	T	T	00 10 41.1	
	baz=148						
H11S3	WAKE ISLAND Hy	38.59	329	T	T	00 10 57.7	
	baz=148,slow=74						
H11S1	WAKE ISLAND Hy	38.59	329	T	T	00 10 42.2	
	baz=148,slow=74						
H11N3	WAKE ISLAND Hy	39.52	330	T	T	00 11 56.4	
	baz=150,slow=77,SNR=4.6						
H11N1	WAKE ISLAND Hy	39.53	330	T	T	00 11 58.4	
	baz=150,slow=77,SNR=6.2						
H11N2	WAKE ISLAND Hy	39.54	330	T	T	00 11 57.8	
	baz=150,slow=77,SNR=6.4						
STKA	Stephens Creek	44.05	240	P	P	23 29 59.7	-0.2
	2.2nm,0.6s,baz=46,slow=7.5,SNR=5.1						
WRA	Warramunga Arr	49.74	256	P	P	23 30 45.1	+0.4
	1.0nm,0.7s,baz=90,slow=6.9,SNR=6.5						
ASAR	Alice Springs	50.04	252	P	P	23 30 46.8	-0.1
	2.5nm,0.5s,baz=88,slow=7.8,SNR=35						
SIJI	Sorong	56.22	279	LR	LR	23 54 22.5	
	comp=Z,85nm,18.6s,baz=227,slow=35						
MJAR	Matsushiro Arr	68.56	320	P	P	23 32 54.2	-0.4
	0.8nm,0.3s,baz=134,slow=5.2,SNR=2.9						
NVAR	Mina Array Bea	74.20	42	P	P	23 33 28.6	-0.4
	0.3nm,0.7s,baz=233,slow=8.9,SNR=2.5						
NVAR				LR	LR	23 57 57.2	
	comp=Z,91nm,20.9s,baz=220,slow=29						
TXAR	Lajitas Array	80.58	56	P	P	23 34 04.9	+0.2
	0.5nm,0.8s,baz=207,slow=7.9,SNR=4.5						
PDAR	Pinedale Array	82.14	42	P	P	23 34 12.9	0.0
	0.1nm,0.3s,baz=258,slow=4.4,SNR=3.0						
ILAR	Eielson Array	82.15	11	P	P	23 34 12.2	+0.1
	0.4nm,0.7s,baz=226,slow=6.4,SNR=7.3						
YKA	Yellowknife Ar	89.86	23	P	P	23 34 50.2	-0.1
	0.5nm,1.0s,baz=234,slow=4.3,SNR=5.0						
BVAR	Borovoye Array	117.50	322	PKP	PKPdf	23 40 37.2	-0.2
	0.3nm,0.6s,baz=40,slow=2.5,SNR=2.0						
BRTR	Keskin Array B	145.77	321	PKPbc	PKPab	23 41 32.8	+1.1
	0.2nm,0.9s,baz=89,slow=1.7,SNR=6.5						
GERES	GERESS Array B	145.78	351	PKPbc	PKPbc	23 41 30.7	-0.2

0.2nm,0.5s,baz=8.5,slow=2.0,SNR=2.3

IDC 02 23:26:25.6±3.5, 4.°86S×154.°01E, h96km±26km, mb3.8/12, mb1 4.0/14, mb1mx3.7/45, mbtmp4.1/14, MS2.9/2, Ms1 2.9/2, ms1mx2.6/28, Error ellipse: s-maj=38.4km s-min=16.0km az=100.0
NEIC 02 23:26:28.2±1.8, 4.°95S±0.°10×153.°88E±0.°08, h119km±6km, mb4.5/29, Error ellipse: s-maj=14.9km s-min=10.3km az=206.0
ISC 02 23:26:26.7±0.4, 4.°91S±0.°06×153.°88E±0.°06, h105km, n67, σ1.°13/68, mb4.2/26, New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RABL Rabaul 1.86 293 Pn **Pn 23 26 59.7 +2.0**
RABL Sn **Sn 23 27 22.1 +0.8**
KRVT Keravat (AS076 1.94 288 P **Pn 23 26 58.3 -0.5**
39nm,0.3s,baz=311,slow=2.4,SNR=14
KRVT S **Sn 23 27 21.1 -2.2**
58nm,0.3s,baz=183,slow=22,SNR=15
KRVT LR LR 23 27 53.8
comp=Z,191nm,19.5s,baz=145,slow=43
HNR Honiara 7.51 127 LR LR 23 31 02.8
comp=Z,123nm,20.9s,baz=178,slow=37
HNR Honiara 7.51 127 Pn **Pn 23 28 15.0 +1.4**
PMG Port Moresby 8.02 236 P **Pn 23 28 22.7 +2.2**
8.9nm,0.3s,baz=26,slow=9.6,SNR=21
PMG S **Sn 23 29 50.4 +0.7**
3.1nm,0.3s,baz=337,slow=20,SNR=1.6
PMG Port Moresby 8.02 236 Pn 23 28 22.0 +1.4
EIDS Eidsvold 20.52 187 P **P 23 30 57.3 +0.7**
EIDS IAmb IAmb 23 31 01.3
comp=Z,11nm,0.9s
DZM Mont Dzumac 20.95 146 P **P 23 31 01.4 -0.1**
FAKI Fak Fak 21.67 274 P **P 23 31 07.3 -1.9**
FAKI IAmb IAmb 23 31 19.1
comp=Z,53nm,1.1s
WR0 Warramunga Arr 24.04 230 P **P 23 31 33.2 +0.9**
WB0 Warramunga Arr 24.04 230 P **P 23 31 33.9 +1.6**
WB0 IAmb IAmb 23 31 34.4
comp=Z,6.5nm,0.8s
WRAB Tennant Creek 24.17 230 P **P 23 31 35.2 +1.7**
WRAB IAmb IAmb 23 31 35.7
comp=Z,7.9nm,0.8s
WRA Warramunga Arr 24.19 230 P **P 23 31 34.5 +0.9**
comp=Z,5.2nm,0.7s,baz=55,slow=10.0,SNR=18
WRA Warramunga Arr 24.19 230 IAmb IAmb 23 31 35.7
comp=Z,0.3nm,0.8s
FUNA Funafuti 25.39 99 P **P 23 31 42.6 -2.0**
FUNA IAmb IAmb 23 31 50.6
comp=Z,37nm,1.1s
ARMA Armidale 25.46 185 P **P 23 31 43.6 -1.5**
AS31 Alice Springs 26.80 224 P **P 23 31 58.1 +0.8**
ASAR Alice Springs 26.80 224 P **P 23 31 57.8 +0.5**
comp=Z,2.3nm,0.8s,baz=54,slow=8.8,SNR=9.1
ASAR PcP **PcP 23 35 18.9 +1.1**
comp=Z,0.4nm,0.7s,baz=49,slow=4.2,SNR=2.8
ASAR Alice Springs 26.80 224 P **P 23 31 57.3 +0.1**
MSVF Nonsavu 26.86 120 P **P 23 31 57.4 -0.4**
MSVF IAmb IAmb 23 32 13.9
comp=Z,16nm,1.1s
KNRA Kununurra 26.89 245 P **P 23 31 57.1 -1.0**
STKA Stephens Creek 29.19 202 P **P 23 32 18.5 +0.1**
comp=Z,3.6nm,0.8s,baz=11,slow=10,SNR=6.0
STKA Stephens Creek 29.19 202 IAmb IAmb 23 32 19.9
comp=Z,0.8nm,0.8s
FITZ Fitzroy Crossi 30.55 242 P **P 23 32 30.5 -0.1**
FITZ IAmb IAmb 23 32 39.4
comp=Z,3.7nm,1.0s
BBOO Buckleboo 32.36 209 P **P 23 32 44.5 -1.7**
BBOO IAmb IAmb 23 33 00.6
comp=Z,21nm,1.1s
KNTN Kanton 34.39 88 P **P 23 33 04.5 +0.4**
FORT Forrest 35.39 220 P **P 23 33 12.0 -0.5**
PSAC2 Pilbara Seismi 36.85 240 P **P 23 33 24.4 -0.7**
PSAC2 IAmb IAmb 23 33 26.9
comp=Z,15nm,1.1s
PSA00 Pilbara Seismi 36.90 240 P **P 23 33 25.2 -0.4**
PSA00 IAmb IAmb 23 33 31.9
comp=Z,11nm,0.9s
MLZ Mavora Lakes 42.17 165 P **P 23 34 08.9 -0.1**
MORW Morawa 43.12 232 P **P 23 34 17.0 +0.1**
MJAR Matsushiro Arr 43.77 342 P **P 23 34 21.3 -0.6**
comp=Z,0.6nm,0.3s,baz=158,slow=6.9,SNR=2.5
CISI Cisompet, Garu 45.85 264 P **P 23 34 38.3 -0.6**
MCQ Macquarie Isla 49.61 176 P **P 23 35 04.0 -3.2**
USRK Ussuriysk Ar. 52.71 340 P **P 23 35 30.0 -0.5**
CMAR Chiang Mai Arr 58.90 295 P **P 23 36 15.7 +0.4**
comp=Z,0.6nm,0.6s,baz=126,slow=6.0,SNR=6.4
SONM Songino Array 67.00 327 P **P 23 37 09.4 +0.9**
comp=Z,0.8nm,0.7s,baz=128,slow=5.2,SNR=8.5
SONM Songino Array 67.00 327 IAmb IAmb 23 37 11.6
comp=Z,0.7nm,0.6s
UNV Unalaska Valle 67.28 24 P **P 23 37 09.9 0.0**
TAPN Taplejung 71.39 301 eP **P 23 37 37.5 +1.2**
comp=Z,11nm,0.8s
ODAN Odare 71.53 300 eP **P 23 37 38.5 +1.5**
comp=Z,23nm,0.7s
RAMN Ramite 72.23 300 eP **P 23 37 42.3 +1.0**
JIRN Jiri 72.77 301 eP **P 23 37 45.7 +1.1**
comp=Z,11nm,0.6s
GUN Gumba 73.10 301 eP **P 23 37 47.7 +1.2**
comp=Z,18nm,0.7s
PKI Pulchoki 73.42 301 eP **P 23 37 49.3 +0.9**
PKIN Phulchoki 73.43 301 eP **P 23 37 49.2 +0.8**
DMN Daman 73.69 300 eP **P 23 37 51.3 +1.5**
GKN Gorkha 74.19 301 eP **P 23 37 53.4 +0.8**
KOLN Koldanda 75.02 300 eP **P 23 37 58.5 +1.0**
DANN Dangsing 75.02 301 eP **P 23 37 58.2 +0.6**
comp=Z,14nm,0.9s
SVW2 Sparrevohn 76.51 23 P **P 23 38 05.5 +0.5**
SVW2 IAmb IAmb 23 38 23.6
comp=Z,5.7nm,1.2s
CNPM China Poot 77.36 25 P **P 23 38 11.3 +1.4**
CNPM IAmb IAmb 23 38 28.7
comp=Z,19nm,1.2s
BRLK Bradley Lake 77.64 25 P **P 23 38 11.9 +0.5**
BRLK IAmb IAmb 23 38 16.3
comp=Z,5.6nm,1.2s
HIN Hinchinbrook I 79.84 26 P **P 23 38 24.8 +1.3**
HIN IAmb IAmb 23 38 28.2
comp=Z,24nm,1.2s
IMAR Indian Mountai 80.13 19 P **P 23 38 26.7 +1.8**
ZALV Zalesovo Beam 81.85 326 P **P 23 38 33.9 -0.3**
comp=Z,0.7nm,0.6s,baz=102,slow=6.4,SNR=3.7
ILAR Eielson Array 81.86 22 P **P 23 38 33.4 -0.6**
comp=Z,0.8nm,0.9s,baz=239,slow=4.8,SNR=6.4
KURBB Kurchatov Arra 84.55 322 P **P 23 38 48.4 +0.2**
comp=Z,1.0nm,0.9s,baz=110,slow=4.4,SNR=5.7
NIL Nilore 84.93 304 P **P 23 38 51.5 +1.0**
NIL IAmb IAmb 23 38 52.0
comp=Z,4.2nm,0.7s
MAW Mawson 85.88 203 P **P 23 38 55.1 +0.6**
comp=Z,5.0nm,0.8s,baz=82,slow=2.1,SNR=4.6
K05A Summer Lake 89.80 47 P **P 23 39 14.4 +0.4**
BVAR Borovoye Array 89.98 323 P **P 23 39 13.7 -0.6**
comp=Z,1.9nm,0.8s,baz=101,slow=7.7,SNR=14
YKA Yellowknife Ar 95.03 28 P **P 23 39 36.9 -0.5**
comp=Z,0.2nm,0.7s,baz=263,slow=4.9,SNR=3.7
TORD Torodi Ar. Bea 151.36 288 PKPbc **PKPbc 23 46 08.4 -0.8**
comp=Z,1.5nm,0.7s,baz=68,slow=3.0,SNR=10.0
TORD PKPab **PKPab 23 46 18.0 +0.3**
comp=Z,1.2nm,0.8s,baz=54,slow=2.2,SNR=4.1
TORD Torodi Ar. Bea 151.36 288 PKPbc 23 46 09.3 +0.1
DBIC Dimbokro 158.77 276 PKPab **PKPab 23 46 49.8 +0.3**
comp=Z,1.8nm,0.9s,baz=73,slow=4.7,SNR=3.9
DBIC Dimbokro 158.77 276 PKPab 23 46 48.0 -1.4

THE 02 23:29:50.8, 38.°15N×20.°36E, h6km±1km, ML2.8/10, Error ellipse: s-maj=1.3km s-min=0.6km az=256.0
ATH 02 23:29:51.3, 38.°17N×20.°40E, h6km±2km, ML2.8/4, Error ellipse: s-maj=2.3km s-min=0.9km az=244.0
ISC 02 23:29:51.2±1.3, 38.°17N±0.°03×20.°40E±0.°04, h7km±5km, n23, σ0.°46/44, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.02 322 P **Pg 23 29 52.3 -0.1**
CHV1 S **Sg 23 29 53.1 -0.2**
236μm,0.2s
KEF3 Kipouria, Keph 0.05 312 P **Pg 23 29 52.8 +0.1**
KEF3 S **Sg 23 29 54.0 +0.2**
KEF2 Argostoli. Kep 0.07 92 P **Pg 23 29 52.9 -0.1**
KEF2 S **Sg 23 29 54.1 -0.1**
ARG2 Argostoli 0.07 82 P **Pg 23 29 53.0 0.0**
ARG2 S **Sg 23 29 54.4 +0.1**
40μm,0.2s
KEF4 Livadi, Kephal 0.09 14 P **Pg 23 29 53.5 +0.1**
KEF4 S **Sg 23 29 55.0 +0.2**
KEF1 Kardakata, Kep 0.12 28 P **Pg 23 29 53.8 0.0**
KEF1 S **Sg 23 29 56.0 +0.3**
VLS Valsamata 0.15 87 P **Pg 23 29 54.2 -0.1**
VLS S **Sg 23 29 56.7 +0.2**
7μm,0.2s
VLS Valsamata 0.15 87 P **Pg 23 29 54.2 -0.1**
VLS S **Sg 23 29 56.6 +0.2**
VLS AML AML 23 29 56.9
comp=N,17239μm,0.4s
VLS AML AML 23 29 57.3
comp=E,9896μm,0.1s
VSK1 VASILIKIADES 0.27 29 P **Pg 23 29 56.6 0.0**
VSK1 S **Sg 23 30 01.4 +1.1**
comp=E,4μm,0.2s
VLMS Volimes, Zakyn 0.36 144 P **Pg 23 29 58.1 -0.1**
VLMS S **Sg 23 30 03.9 +1.0**
VLMS AML AML 23 30 05.5
comp=E,4114μm,0.2s
VLMS AML AML 23 30 10.2
comp=N,5297μm,0.2s
EVGI Lefkada island 0.50 24 P **Pg 23 30 00.7 -0.1**
EVGI S **Sg 23 30 08.6 +1.3**
EVGI Lefkada island 0.50 24 P **Pg 23 30 00.6 -0.2**
EVGI S **Sg 23 30 08.1 +0.8**
MGNA Meganis 0.58 32 P **Pg 23 30 01.9 -0.4**
MGNA S **Sg 23 30 09.8 0.0**
MGNA AML AML 23 30 11.5
comp=E,2581μm,0.4s
MGNA AML AML 23 30 11.8
comp=N,2039μm,0.3s
KRI1 kERI 0.60 147 P **Pg 23 30 02.4 -0.5**
KRI1 S **Sg 23 30 11.4 +0.7**
comp=N,998nm,0.4s
LKD2 Lefkada island 0.65 18 P **Pg 23 30 03.4 -0.4**
LKD2 S **Sg 23 30 12.8 +0.5**
comp=N,292nm,0.3s
LKD2 Lefkada island 0.65 18 P **Pg 23 30 03.3 -0.4**
LKD2 S **Sg 23 30 12.7 +0.4**
AST1 Astakos 0.66 55 P **Pg 23 30 03.6 -0.3**
AST1 S **Sb 23 30 14.7 +0.2**
comp=N,858nm,0.4s
TSLK Tsoukalades, L 0.69 17 P **Pg 23 30 03.9 -0.5**
TSLK S **Sb 23 30 14.7 -0.6**
comp=N,528nm,0.4s
TSLK Tsoukalades, L 0.69 17 P **Pg 23 30 03.9 -0.5**
PDO Prodromos 0.75 55 P **Pg 23 30 05.5 -0.2**
PDO S **Sb 23 30 16.9 -0.3**
comp=N,658nm,0.4s
PDO Prodromos 0.75 55 P **Pg 23 30 05.3 -0.4**
PDO S **Sg 23 30 15.9 +0.4**
PDO AML AML 23 30 22.8
comp=E,732μm,0.4s
PDO AML AML 23 30 25.7
comp=N,1130μm,0.5s
PVO Paravola 0.99 63 P **Pg 23 30 10.0 -0.3**
PVO S **Sn 23 30 25.9 -0.1**
comp=N,382nm,0.5s
PVO Paravola 0.99 63 P **Pg 23 30 10.0 -0.3**

IDC 02 23:32:58.9±1.1, 28.°10N×130.°05E, h0km, mb3.8/11, mb1 3.9/12, mb1mx3.6/39, mbtmp3.8/12, ML3.3/2, MS4.3/1, Ms1 4.3/1, ms1mx2.7/48, Error ellipse: s-maj=29.7km s-min=16.6km az=96.0
NIED 02 23:33:00, 28.°00N×130.°30E, h35km, Mw3.9 Best double couple: Mo7.77000×10^14 NP1:φs48.00000°, δ75.00000°, λ40.00000°. NP2:φs305.00000°, δ52.00000°, λ161.00000°.
JMA 02 23:33:01.6±0.1, 27.°97N×130.°32E, h50km±1km, M3.7
NEIC 02 23:33:02.5±2.6, 28.°01N±0.°09×130.°2E±0.°1, h35km±6km, mb4.5/10, Error ellipse: s-maj=17.1km s-min=7.2km az=133.0
ISC 02 23:33:02.7±0.7, 27.°97N±0.°03×130.°26E±0.°04, h38km±2km, n69, σ1.°35/90, mb3.9/15, Ryukyu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JZK Kikaishima 0.42 323 P **Pn 23 33 12.3 +0.2**
JZK S **Sn 23 33 20.5 +1.5**
JAM Amami Oshima 0.72 307 P **Pn 23 33 16.5 +0.1**
JAM S **Sn 23 33 26.9 +0.7**
JAMN Amaminishikomi 0.99 286 P **Pn 23 33 20.1 0.0**
JAMN S **Sn 23 33 33.1 +0.2**
JTK Tokunoshima 1.17 261 P **Pn 23 33 23.0 +0.5**
JTK S **Sn 23 33 37.8 +0.5**
JTAJ Takarajima 1.50 322 P **Pn 23 33 27.1 +0.1**
JTAJ S **Sn 23 33 45.8 +0.5**
JOKE Okinoerabujima 1.62 248 P **Pn 23 33 29.0 +0.4**
JOKE eS **Sn 23 33 49.3 +1.0**
JYRO Yoronjima 1.86 240 P **Pn 23 33 32.4 +0.4**
JYRO eS **Sn 23 33 54.3 0.0**
JNN Nakanoshima 1.89 350 P **Pn 23 33 32.5 +0.1**
JNN eS **Sn 23 33 55.3 +0.3**
JOW Kunigami 2.10 238 P **Pn 23 33 35.6 +0.3**
JOW eS **Sn 23 34 00.7 +0.6**
JOW Kunigami 2.10 238 Pn **Pn 23 33 35.6 +0.3**
7.4nm,0.3s,baz=97,slow=18,SNR=86
JOW Sn **Sn 23 34 00.3 +0.2**
12nm,0.3s,baz=65,slow=28,SNR=8.7
JOW Kunigami 2.10 238 Pn 23 33 35.4 +0.1
JOW **Sn 23 33 60.0 -0.2**
JKDJ Kitadaitoujima 2.22 155 P **Pn 23 33 36.9 0.0**
JKDJ S **Sn 23 34 03.0 -0.1**
JIH Iheya 2.24 246 P **Pn 23 33 37.6 +0.4**
JIH S **Sn 23 34 03.1 -0.5**
JYAK Yakushimahirau 2.27 5 P **Pn 23 33 37.7 +0.1**
JYAK S **Sn 23 34 04.3 0.0**
JMZ Minamidaito 2 2.31 158 P **Pn 23 33 38.2 0.0**
JMZ eS **Sn 23 34 05.0 -0.4**
JNTH Nagotoyohara 2.46 234 P **Pn 23 33 40.6 +0.3**
JNTH S **Sn 23 34 08.9 -0.2**
JMTN Minamitane 2.48 13 P **Pn 23 33 41.1 +0.6**
JMTN eS **Sn 23 34 10.5 +1.0**
JKC Kuchinoerabu 2.48 359 P **Pn 23 33 41.0 +0.5**
JKC eS **Sn 23 34 09.5 0.0**
JTN Tanegashima 3 2.74 13 P **Pn 23 33 44.7 +0.5**
JTN eS **Sn 23 34 16.4 +0.3**
JAGN Aguni-jima 3.02 244 P **Pn 23 33 48.1 +0.2**
JAGN S **Sn 23 34 21.9 -0.9**
JKE Kume jima 2 3.50 243 P **Pn 23 33 54.3 -0.3**
JKE eS **Sn 23 34 34.4 -0.4**
JNU Nakatsue 5.16 6 Pn **Pn 23 34 17.9 +0.6**
3.0nm,0.3s,baz=31,slow=2.3,SNR=13
JNU Sn **Sn 23 35 15.2 -0.5**
1.1nm,0.3s,baz=211,slow=23,SNR=1.4
JNU Nakatsue 5.16 6 Pn 23 34 16.8 -0.6
JNU **Sn 23 35 15.3 -0.4**
YOJ Yonaguni jima 7.39 243 Pn **Pn 23 34 48.8 +0.8**
TATO Taipei 8.41 251 Pn **Pn 23 35 01.7 -0.2**
SSE Sheshan 8.49 294 Pn **Pn 23 35 00.1 -3.0**
YHNB Yeheng 8.62 250 Pn **Pn 23 35 05.0 0.0**
NACB Ninganchiao 8.66 246 Pn **Pn 23 35 03.3 -2.1**
YULB Yu-li 9.28 243 Pn **Pn 23 35 09.6 -4.3**
INU Inuyama 9.34 36 Pn **Pn 23 35 14.7 +0.1**
SSLB Suanglung 9.36 246 Pn 23 35 12.7 -2.3
KSAR Wonju Array Be 9.65 349 Pn **Pn 23 35 18.7 -0.2**
JHJ2 Mitsune 9.70 56 Pn **Pn 23 35 20.0 +0.4**
TWG Pinlang 9.76 240 Pn **Pn 23 35 16.1 -4.4**
TPUB Ta-pu 9.86 244 Pn **Pn 23 35 20.2 -1.7**
JCJ Chichijima 10.62 92 LR LR 23 38 00.8
comp=Z,37nm,21.2s,baz=114,slow=28
ERM Erimo 17.52 34 Pn **Pn 23 37 00.3 -3.6**
ERM IAmb IAmb 23 37 19.5
comp=Z,48nm,0.9s
XAN Xi'an 19.25 294 P **P 23 37 24.1 +0.2**
XAN IAmb IAmb 23 37 26.1
comp=Z,7.1nm,0.7s
KMI Kunming 24.76 270 P **P 23 38 20.3 -0.8**
SLVN Son La 24.82 260 P **P 23 38 22.1 +0.6**
SONM Songino Array 27.16 323 P **P 23 38 42.6 +0.2**
comp=Z,0.2nm,0.5s,baz=129,slow=10,SNR=2.6
CHTO Chiang Mai 30.08 259 P **P 23 39 08.2 -0.4**
CHTO IAmb IAmb 23 39 12.0
comp=Z,4.0nm,0.7s
CMAR Chiang Mai Arr 30.23 259 P **P 23 39 10.1 +0.2**
comp=Z,0.7nm,0.5s,baz=60,slow=8.5,SNR=7.1
TAPN Taplejung 37.55 279 eP **P 23 40 14.9 +1.2**
comp=Z,2.6nm,0.3s
ODAN Odare 37.93 279 eP **P 23 40 17.4 +0.5**
comp=Z,8.2nm,0.6s
JIRN Jiri 38.82 280 eP **P 23 40 27.6 +3.1**
GUN Gumba 39.04 281 eP **P 23 40 28.3 +2.0**
comp=Z,5.6nm,0.4s
PKIN Phulchoki 39.52 280 eP **P 23 40 31.3 +1.0**
comp=Z,3.7nm,0.4s
KKN Kakani 39.58 281 eP **P 23 40 32.0 +1.3**
comp=Z,6.7nm,0.5s
SMY Shemya 40.68 40 P **P 23 40 39.4 +0.3**
DANN Dangsing 40.80 282 eP **P 23 40 42.3 +1.5**
comp=Z,5.4nm,0.5s
MKAR Makanchi Array 41.76 310 P **P 23 40 46.8 -1.4**
comp=Z,0.3nm,0.6s,baz=96,slow=8.3,SNR=2.7
KURBB Kurchatov Arra 44.88 315 P **P 23 41 12.5 -0.7**
comp=Z,0.5nm,0.5s,baz=102,slow=9.2,SNR=2.2
WRA Warramunga Arr 47.80 175 P **P 23 41 37.8 +1.4**
comp=Z,0.5nm,0.4s,baz=353,slow=8.4,SNR=4.6
ASAR Alice Springs 51.46 176 P **P 23 42 08.0 +3.7**
comp=Z,0.6nm,0.7s,baz=6.8,slow=15,SNR=6.1
CNBA Chernabura Isl 56.34 41 P **P 23 42 41.3 +1.8**
CNBA IAmb IAmb 23 42 55.9
comp=Z,14nm,1.0s
BARN Barnard Glacie 65.03 32 PcP **23 44 09.2 -2.4**
ARCES ARCESS Array B 69.05 339 P **P 23 44 04.9 +0.8**
comp=Z,5.8nm,1.1s,baz=79,slow=9.3,SNR=2.8
KIV Kislovodsk 69.53 310 P **P 23 44 07.1 -0.5**
KIV IAmb IAmb 23 44 09.8
comp=Z,3.9nm,0.9s
FINES FINESS Array B 72.24 331 P **P 23 44 24.6 +1.0**
comp=Z,0.7nm,0.4s,baz=66,slow=5.0,SNR=7.9
SOCY Socotra 72.36 275 P **P 23 44 24.5 -0.7**
SOCY IAmb IAmb 23 44 25.4
comp=Z,8.5nm,1.0s
AKASG Malin Array Be 75.38 320 P **P 23 44 43.1 +0.9**
comp=Z,0.5nm,0.3s,baz=58,slow=5.9,SNR=3.6
BRTR Keskin Array B 77.39 308 P **P 23 44 55.6 +1.5**
comp=Z,0.6nm,0.8s,baz=95,slow=5.4,SNR=2.9
NOA NORSAR Array B 78.54 334 P **P 23 45 00.6 +0.7**
comp=Z,0.9nm,0.8s,baz=53,slow=5.1,SNR=2.6
NC204 NORSAR Array S 78.57 335 P **P 23 44 58.6 -1.4**
BURAR Bucovina Array 79.15 318 P **P 23 45 03.9 +0.4**
CSS Mathiatis 79.72 304 P **P 23 45 07.4 +0.7**
EIL Elat 80.88 299 LR LR 00 25 09.3
comp=Z,151nm,19.4s,baz=114,slow=39
GCMT Greycliff 88.67 37 P **P 23 45 48.1 -4.1**

IDC 02 23:35:08.7±3.2, 43.°89N×86.°19E, h0km, mb3.7/1, mb1 3.5/5, mb1mx3.1/50, mbtmp3.4/5, ML3.0/4, Error ellipse: s-maj=49.7km s-min=29.7km az=45.0
SOME 02 23:35:10.9, 43.°70N×86.°00E, h0km
NNC 02 23:35:11.5±2.5, 43.°80N×85.°80E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=20.7km s-min=10.4km az=132.0
ISC 02 23:35:10.3±1.9, 43.°69N±0.°08×85.°93E±0.°09, h10km, n23, σ2.°10/29, 8C-5D, Northern Xinjiang

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MK31 Makanchi Array 4.03 322 ⇑Pn **Pn 23 36 12.7 +0.6**
1.4nm,0.5s,baz=135,slow=15,SNR=118
MK31 ⇓Pg **Pb 23 36 23.6 +2.3**
4.8nm,0.4s,baz=140,slow=16,SNR=20
MK31 ⇑Lg Lg 23 37 14.0
4.2nm,0.3s,baz=137,slow=30,SNR=8.7
MKAR Makanchi Array 4.03 322 Pn **Pn 23 36 12.9 +0.9**
0.8nm,0.3s,baz=134,slow=15,SNR=87
MKAR Pg **Pb 23 36 24.2 +2.8**
3.5nm,0.3s,baz=131,slow=17,SNR=43
MKAR Sn **Sn 23 37 01.0 +1.7**
1.5nm,0.3s,baz=139,slow=31,SNR=3.0
MKAR Lg Lg 23 37 13.2
4.8nm,0.3s,baz=135,slow=30,SNR=12
MAKZ Makanchi 4.18 320 ⇑Pn **Pn 23 36 14.8 +0.6**
3.0nm,0.5s
MAKZ ⇑Pg **Pb 23 36 26.9 +3.0**
2.1nm,0.3s
MAKZ ⇑Lg Lg 23 37 18.5
8.9nm,0.8s
DJR Jarkent 4.47 280 eP **Pg 23 36 34.8 -1.2**
1.1nm,0.2s
DJR eS **Sg 23 37 31.5 -2.4**
7.6nm,0.2s
DJR Jarkent 4.47 280 Pg **Pb 23 36 33.1 +4.2**
1.3nm,0.4s
DJR Jarkent 4.47 280 Lg Lg 23 37 27.7
5.7nm,0.6s
PDGK Podgornoye 4.70 268 ⇓Pg **Pb 23 36 35.6 +2.8**
2.4nm,0.5s
PDGK ⇓Sn **Sn 23 37 18.2 +2.3**
3.7nm,0.6s
PDGK ⇑Lg Lg 23 37 36.5
3.9nm,0.6s
PDGK Podgornoye 4.70 268 Pg **Pb 23 36 32.2 -0.5**
0.7nm,0.7s
PDGK Podgornoye 4.70 268 Lg Lg 23 37 25.5
1.5nm,0.5s
SHLS Shalkode 4.74 266 eP **Pb 23 36 35.1 +1.6**
8.9nm,0.3s
SHLS eS **Sb 23 37 32.1 +1.5**
25nm,0.3s
KAPS Kapalarasan 4.96 291 eP **Pg 23 36 44.2 -1.1**
1.1nm,0.2s
KAPS eS **Sg 23 37 47.7 -1.9**
7.4nm,0.2s
KAPS Kapalarasan 4.96 291 Lg Lg 23 37 45.9
7.6nm,0.5s
KAPS Kapalarasan 4.96 291 Pg **Pg 23 36 44.0 -1.3**
2.3nm,0.5s
UZB Uzynbulak 5.06 266 eP **Pg 23 36 46.0 -1.2**
2.1nm,0.2s
UZB eS **Sg 23 37 51.0 -1.7**
3.3nm,0.2s
UZB Uzynbulak 5.06 266 Lg Lg 23 37 18.7
1.6nm,0.5s
UZB Uzynbulak 5.06 266 Pg **Pn 23 36 28.4 +2.0**
1.8nm,0.6s
KPKS Kokpek 5.27 270 eP **Pg 23 36 49.3 -1.8**
4.1nm,0.2s
KPKS eS **Sg 23 37 56.5 -2.9**
12nm,0.2s
KURBB Kurchatov Arra 8.57 327 Pn **Pn 23 37 13.3 -1.0**
0.2nm,0.3s,baz=135,slow=14,SNR=19
KURBB Lg Lg 23 39 38.1
0.1nm,0.3s,baz=138,slow=28,SNR=7.8
KURBB Kurchatov Arra 8.57 327 ⇑Pn **Pn 23 37 13.3 -1.0**
1.1nm,0.5s
KURBB ⇓Lg Lg 23 39 38.5
13nm,0.7s
KURK Kurchatov 8.61 327 ⇑Pn **Pn 23 37 13.0 -1.8**
0.9nm,0.5s
KURK ⇓Lg Lg 23 39 39.3
3.8nm,0.6s
ZALV Zalesovo Beam 10.29 356 Pn **Pn 23 37 36.1 -1.8**
0.5nm,0.3s,baz=182,slow=15,SNR=7.6
ZALV Lg Lg 23 40 34.9
0.1nm,0.3s,baz=176,slow=26,SNR=1.7
BVAR Borovoye Array 13.90 318 Pn **Pn 23 38 24.3 -2.9**
0.1nm,0.3s,baz=119,slow=12,SNR=1.8
NOA NORSAR Array B 46.02 319 P **P 23 43 32.1 -1.5**
0.4nm,0.4s,baz=76,slow=7.8,SNR=4.2

IDC 02 23:43:56.0±0.4, 12.°26N×95.°00E, h0km, mb4.6/44, mb1 4.7/46, mb1mx4.6/58, mbtmp4.6/46, ML4.0/2, MS4.5/35, Ms1 4.6/35, ms1mx4.5/48, Error ellipse: s-maj=13.0km s-min=9.4km az=56.0
BJI 02 23:43:57.7±0.0, 12.°10N×94.°93E, h30km, mB5.3/54, mb4.9/65, Ms5.2/76, Ms7 5.0/67
MOS 02 23:43:59.3±0.7, 12.°30N×95.°02E, h33km, mb5.3/32, MS4.9/10, Error ellipse: s-maj=6.8km s-min=4.3km az=107.8
NDI 02 23:44:00.4±4.4, 12.°54N×95.°06E, h10km±32km, mb5.1, mb5.2(NEIC)
GCMT 02 23:44:00.2±0.1, 12.°24N±0.°01×95.°15E±0.°01, h12km, MW5.4/128, Moment Tensor Solution. s85,c131; s128,c240; Duration: 1.°2 Moment tensor: Scale 10^17 Nm; Mrr-0.91±.02; Mθθ0.46±.02; Mφφ0.44±.02; Mrθ0.82±.05; Mrφ0.75±.01; Mθφ-0.61±.05; Best double couple: Mo1.44000×10^17 NP1:φs16.00000°, δ50.00000°, λ-140.00000°. NP2:φs258.00000°, δ60.00000°,

λ-48.00000°. Principal axes: T 1.2180, Plg6.0000°, Azm319.0000°; N 0.4430, Plg36.0000°, Azm53.0000°; P -1.6610, Plg54.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
DJA **02** 23:44:00.0±0.1, 12°N±2°×9°5E±°, h10km, M5.1/46, mb5.1/46, mB5.5/25, MLv5.3/5, Mw(mB)5.0/25, Mwp5.3/7
BGR **02** 23:44:01.2±0.0, 12°20N×94°74E, h29km, mb5.1, Ms4.7
NEIC **02** 23:44:01.2±1.5, 12°29N±0°06×95°06E±0°06, h34km, mb5.2/192, Error ellipse: s-maj=8.5km s-min=8.0km az=150.0
KLM **02** 23:44:02.0, 12°36N×95°29E, h40km, mb5.1
ISC 02 23:43:60.0±0.3, 12°30N±0°03×95°06E±0°03, h24km±2km, h24km:pP-P, n688, σ1°48/734, mb5.1/220, MS4.8/60, 28C-15D, Andaman Islands region

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DGPR DIGLIPUR 2.26 293 eP **Pn 23 44 36.8 +1.0**
DGPR eS **Sn 23 45 03.7 +0.7**
PBA Port Blair 2.36 254 eP Pn 23 44 37.9 +0.6
PBA eS Sn 23 45 07.8 +2.2
PBA Port Blair 2.36 254 Pn 23 44 37.7 +0.5
PBA Port Blair 2.36 254 P Pn 23 44 37.9 +0.7
SNR=40
RNTT Ranong 4.43 130 P **Pn 23 45 03.0 -2.8**
SRDT SRDT 4.44 62 P **Pn 23 45 04.7 -1.3**
PHET Kaeng Krachan 4.50 82 P **Pn 23 45 05.5 -1.2**
UMPA Umpang Tak 5.35 43 P **Pn 23 45 16.7 -1.7**
CMBY CAMPBELL BAY 5.38 192 eP **Pn 23 45 22.6 +3.8**
CMBY eS **Sn 23 46 26.5 +6.5**
PATY Pattaya 5.70 83 P **Pn 23 45 21.2 -2.0**
KRAB Krabi 5.74 135 P **Pn 23 45 21.7 -2.2**
SRIT Nakonsritamara 5.79 129 P **Pn 23 45 22.2 -2.3**
TRTT Trang 6.36 134 P **Pn 23 45 30.5 -1.8**
MHMT Maesarieng 6.46 25 P **Pn 23 45 36.6 +2.9**
SRAK Srakaew 7.01 75 P Pn 23 45 47.7 +6.5
PHIT Phitsanulok 7.10 46 P **Pn 23 45 42.3 -0.1**
CHBT CHBT 7.11 86 P **Pn 23 45 42.1 -0.5**
PBKT Sadao Pong 7.12 53 **Pn 23 45 42.2 -0.5**
PBKT Sadao Pong 7.12 53 P **Pn 23 45 43.0 +0.2**
CM13 Chiang Mai Arr 7.12 31 P **Pn 23 45 43.6 +0.8**
CM05 Chiang Mai Arr 7.13 31 P **Pn 23 45 43.6 +0.7**
CM04 Chiang Mai Arr 7.14 31 P **Pn 23 45 43.6 +0.5**
CM01 Chiang Mai Arr 7.15 31 P **Pn 23 45 43.6 +0.4**
CM02 Chiang Mai Arr 7.15 31 P **Pn 23 45 44.1 +0.9**
CM15 Chiang Mai Arr 7.16 31 P **Pn 23 45 44.0 +0.7**
CM31 Chiang Mai Arr 7.17 31 P **Pn 23 45 47.6 +4.1**
SNR=13
CM31 Chiang Mai Arr 7.17 31 P **Pn 23 45 45.2 +1.7**
CMAR Chiang Mai Arr 7.17 31 Pn **Pn 23 45 44.1 +0.6**
1.0nm,0.3s,baz=220,slow=15,SNR=26
CMAR LR LR 23 49 03.9
comp=Z,2μm,18.4s,baz=227,slow=42
CMAR Chiang Mai Arr 7.17 31 *i* P **Pn 23 45 44.9 +1.4**
CMAR pmax pmax
comp=Z,11nm,0.7s
CM09 Chiang Mai Arr 7.18 31 P **Pn 23 45 44.8 +1.1**
LHMI Lhok Sumawe 7.27 165 P **Pn 23 45 45.4 +0.6**
comp=Z,1.2nmcomp=Z,13μmcomp=Z,3μmcomp=Z,127nm,0.7s
LHMI Lhok Sumawe 7.27 165 **Pn 23 45 44.9 +0.1**
CM32 Chiang Mai Arr 7.29 30 P **Pn 23 45 47.5 +2.4**
CM36 Chiang Mai Arr 7.30 32 P **Pn 23 45 45.7 +0.4**
CM35 Chiang Mai Arr 7.46 31 P **Pn 23 45 48.6 +1.1**
CHTO Chiang Mai 7.47 30 **Pn 23 45 47.9 +0.3**
CHTO Chiang Mai 7.47 30 P **Pn 23 45 47.9 +0.3**
CMMT Chiang Mai 7.48 30 P **Pn 23 45 50.8 +3.1**
CM33 Chiang Mai Arr 7.48 30 P **Pn 23 45 49.7 +1.9**
SKLT Songkhla 7.48 132 P **Pn 23 45 44.9 -2.8**
UTTA Uttaradit 7.58 44 P **Pn 23 45 50.2 +1.2**
LAMP Lampang 7.59 35 P **Pn 23 45 51.0 +1.7**
CM34 Chiang Mai Arr 7.61 31 P **Pn 23 45 51.3 +1.8**
CHAI Chaiyaphum 7.61 61 P **Pn 23 45 49.4 -0.1**
PHRA Phrae 7.92 38 P **Pn 23 45 54.6 +0.8**
MLSI Meulaboh, Aceh 8.09 170 P **Pn 23 45 58.2 +2.1**
comp=Z,8μmcomp=Z,5μmcomp=Z,297nm,1.6s
KULM Kulim 8.89 141 **Pn 23 46 05.3 -1.7**
KULM Kulim 8.89 141 P **Pn 23 46 09.0 +2.0**
NONG Nongkai 9.68 53 P **Pn 23 46 19.7 +1.8**
IPM Ipoh 9.75 142 **Pn 23 46 16.3 -2.6**
IPM Ipoh 9.75 142 P **Pn 23 46 19.0 0.0**
SKNT Sakolnakorn 9.80 61 P **Pn 23 46 19.8 +0.2**
PSI Prapat 10.18 158 Pn **Pn 23 46 24.6 -0.3**
comp=Z,0.7nm,0.3s,baz=325,slow=13,SNR=9.7
PSI Sn **Sn 23 48 15.5 -3.0**
comp=Z,0.7nm,0.3s,baz=339,slow=15,SNR=1.5
PSI LR LR 23 50 20.1
comp=Z,2μm,20.7s,baz=318,slow=37
RPSI Rantau Prapat 10.28 158 **Pn 23 46 24.7 -1.5**
RPSI Rantau Prapat 10.28 158 **Pn 23 46 24.6 -1.5**
RPSI **Sn 23 48 15.5 -5.3**
UBPT Khong Chiam 10.53 72 **Pn 23 46 28.9 -0.7**
UBPT Khong Chiam 10.53 72 P **Pn 23 46 29.1 -0.5**
JRMM Jerantut 11.12 138 P **Pn 23 46 37.0 -0.7**
BWNR Bhubaneshwar 11.92 313 eP **Pn 23 46 48.0 -0.5**
BWNR IAmb IAmb 23 46 57.7
comp=Z,141nm,0.5s
BWNR eS Sn 23 48 50.4 -10
CHLP Challavanipeta 12.27 302 eP **Pn 23 46 52.5 -0.9**
CHLP IAmb IAmb 23 47 02.6
comp=Z,43nm,1.0s
CHLP e 23 48 59.1
CHLP IVMs_BB IVMs_BB 23 51 08.8
comp=Z,757nm,23.0s
SLVN Son La 12.34 42 **Pn 23 46 55.6 +1.3**
DLV T Lat 13.13 90 **Pn 23 47 04.5 -0.8**
BKNI Bangkinang 13.29 153 P **Pn 23 47 09.1 +1.7**
comp=Z,4μmcomp=Z,11μmcomp=Z,309nm,1.4s
BKNI Bangkinang 13.29 153 Pn **Pn 23 47 08.8 +1.5**
SHL Shillong 13.53 348 eP **Pn 23 47 08.3 -2.5**
SHL eS **Sn 23 49 37.0 -3.6**
SHL Shillong 13.53 348 **Pn 23 47 07.4 -3.3**
SHL Shillong 13.53 348 P **Pn 23 47 13.3 +2.5**
SNR=36
SHL Shillong 13.53 348 P **Pn 23 47 07.4 -3.3**
MYKOM Kota Tinggi 13.60 140 Pn **Pn 23 47 10.7 -0.9**
MYKOM Kota Tinggi 13.60 140 P **Pn 23 47 11.0 -0.5**
PVM Polavaram 13.89 292 eP **Pn 23 47 15.8 +0.3**
PVM IAmb IAmb 23 47 35.6
comp=Z,19nm,0.7s
PVM e 23 49 37.5
PVM IVMs_BB IVMs_BB 23 52 11.6
comp=Z,506nm,20.5s
PDSI Padang 14.18 157 P **Pn 23 47 22.0 +2.5**
BOK Bokaro 14.37 324 eP **Pn 23 47 22.8 +0.7**
BOK IAmb IAmb 23 47 32.2
comp=Z,34nm,0.7s
SDSI Sungai Dareh 14.59 154 P **P 23 47 30.7 -0.6**
MYLAV Mylavaram 14.65 289 eP **Pn 23 47 26.2 +0.3**
MYLAV IAmb IAmb 23 47 45.8
comp=Z,29nm,0.9s
MYLAV e 23 49 56.9
MYLAV IVMs_BB IVMs_BB 23 52 22.7
comp=Z,432nm,24.0s
KMI Kunming 14.67 29 **Pn 23 47 26.9 +0.5**
KMI Kunming 14.67 29 P **Pn 23 47 26.9 +0.5**
PALK Pallekele 15.01 252 **Pn 23 47 30.6 -0.2**
PALK Pallekele 15.01 252 *i* P **Pn 23 47 30.6 -0.2**
SKHT Srikalahasti 15.03 277 eP **Pn 23 47 31.3 +0.3**
SKHT IAmb IAmb 23 47 40.5
comp=Z,44nm,1.0s
SKHT e 23 50 04.7
SKHT IVMs_BB IVMs_BB 23 52 27.6
comp=Z,623nm,21.2s
ADKI Addanki 15.06 285 eP **Pn 23 47 31.7 +0.3**
ADKI IAmb IAmb 23 47 49.1
comp=Z,39nm,1.1s
ADKI e 23 50 04.7
ADKI IVMs_BB IVMs_BB 23 52 32.0
comp=Z,433nm,21.4s
GGR Gangavaram 15.36 293 eP **Pn 23 47 35.7 +0.3**
GGR IAmb IAmb 23 47 52.0
comp=Z,72nm,1.4s
GGR e 23 50 14.5
GGR IVMs_BB IVMs_BB 23 53 03.8
comp=Z,568nm,22.3s
KRJI Kerinci 15.65 156 P **Pn 23 47 40.4 +1.2**
comp=Z,6μmcomp=Z,3μmcomp=Z,212nm,0.8s
QIZ Qiongzhong 15.72 63 P **Pn 23 47 39.5 -0.5**
QIZ S **Sn 23 50 33.8 +0.2**
QIZ pmax pmax
comp=Z,260nm,4.7s
QIZ LR LR
comp=Z,6μm,16.0s
QIZ LR LR
comp=Z,3μm,18.6s
QIZ LR LR
comp=Z,5μm,10.7s
QIZ Qiongzhong 15.72 63 P **Pn 23 47 39.9 -0.1**
NJS Nagarjunasagar 15.84 287 eP **P 23 47 46.7 +1.5**
NJS IAmb IAmb 23 47 57.1
comp=Z,51nm,1.3s
NJS e 23 50 22.9
NJS IVMs_BB IVMs_BB 23 52 11.1
comp=Z,240nm,4.7s
SRLM Srisailam 16.13 285 eP **P 23 47 50.1 +1.6**
SRLM IAmb IAmb 23 48 00.6
comp=Z,160nm,1.5s
SRLM e 23 50 29.9
SRLM IVMsBB 23 53 36.3
comp=Z,278nm,20.4s
ODAN Odare 16.18 335 eP **Pn 23 47 47.4 +1.3**
TAPN Taplejung 16.48 336 eP **Pn 23 47 51.0 +0.9**
RPR Rampur 16.52 295 eP **P 23 47 52.3 -0.5**
RPR IAmb IAmb 23 48 01.3
comp=Z,54nm,1.4s
RPR e 23 50 41.9
RPR IVMs_BB IVMs_BB 23 53 39.1
comp=Z,588nm,18.6s
RAMN Ramite 16.60 333 eP **P 23 47 52.8 -1.0**
comp=Z,526nm,0.9s
HYB Hyderabad 16.75 290 *i* P **Pn 23 47 54.0 +0.8**
comp=Z,100nm,1.0s
HYB epP **sP 23 48 06.0 +1.8**
HYB eS **S 23 51 06.0 -3.2**
HYBB Hyderabad (bro 16.75 290 eP **Pn 23 47 54.1 +0.8**
HYBB IAmb IAmb 23 48 06.5
comp=Z,165nm,1.8s
HYBB eSn **Sn 23 51 00.3 +1.5**
HYBB IVMs_BB IVMs_BB 23 52 49.4
comp=Z,456nm,38.0s
SRSP Sriramsagar 17.39 294 eP **Pn 23 48 01.4 +0.1**
SRSP IAmb IAmb 23 48 14.3
comp=Z,67nm,1.3s
SRSP e 23 51 01.2
SRSP IVMs_BB IVMs_BB 23 54 25.1
comp=Z,567nm,17.1s
JIRN Jiri 17.39 333 eP **P 23 48 03.3 +0.5**
comp=Z,2μm,1.4s
URV Uravakonda 17.50 281 eP **P 23 48 04.3 +0.6**
URV IAmb IAmb 23 48 16.3
comp=Z,118nm,1.3s
URV e 23 51 03.7
URV IVMs_BB IVMs_BB 23 54 16.2
comp=Z,914nm,19.8s
NGP Nagpur 17.67 302 eP **P 23 48 06.3 +0.9**
PKI Pulchoki 17.68 331 eP **P 23 48 06.6 +0.7**
comp=Z,2μm,1.4s
LSA Lhasa 17.69 349 P **Pn 23 48 04.7 -0.6**
LSA IAmb IAmb 23 48 15.8
comp=Z,124nm,0.8s
LSA Lhasa 17.69 349 P **P 23 48 06.0 -0.1**
LSA Lhasa 17.69 349 P **Pn 23 48 04.7 -0.6**
LSA pmax pmax
comp=Z,125nm,0.8s
PKIN Phulchoki 17.69 331 eP **P 23 48 06.5 +0.5**
GUN Gumba 17.75 332 eP **P 23 48 07.2 +0.5**
GYA Guiyang 17.82 36⇑*i*P **P 23 48 07.9 +0.7**
GYA pP sP 23 48 15.4 -0.3
GYA PP **PnPn 23 48 21.9 +4.3**
GYA S **Sn 23 51 24.7 +0.1**
GYA pmax pmax
comp=Z,240nm,3.5s
GYA LR LR
comp=Z,6μm,11.0s
GYA LR LR
comp=Z,6μm,11.0s
GYA LR LR
comp=Z,8μm,13.2s
DMN Daman 17.86 330 eP **P 23 48 08.4 +0.6**
comp=Z,869nm,1.4s
KKN Kakani 17.93 331 eP **P 23 48 08.4 -0.1**
GKN Gorkha 18.41 330 eP **Pn 23 48 14.6 +0.6**
KSM Kuching 18.55 124 **Pn 23 48 15.5 0.0**
KSM Kuching 18.55 124 P **Pn 23 48 15.0 -0.2**
KLRI Killari 18.71 290 eP **Pn 23 48 17.8 +0.2**
KLRI IAmb IAmb 23 48 27.6
comp=Z,59nm,1.3s
KLRI e 23 51 33.1
KLRI eS **S 23 51 48.8 -0.1**
KLRI IVMs_BB IVMs_BB 23 54 53.4
comp=Z,649nm,23.6s
KOLN Koldanda 18.76 327 eP **Pn 23 48 18.9 +0.7**
comp=Z,330nm,0.8s
MDSI Maura Dua 18.98 151 P **Pn 23 48 22.9 +2.2**
comp=Z,807nmcomp=Z,31nm,0.8s
DANN Dangsing 19.14 328 eP **Pn 23 48 22.6 -0.3**
LWLI Liwa 19.39 152 P Pn 23 48 35.1 +9.3
KLSI 19.42 150 P **Pn 23 48 28.3 +2.2**
comp=Z,715nmcomp=Z,27nm,0.9s
SBUM Sibu 19.61 119 P **P 23 48 26.9 0.0**
SBUM Sibu 19.61 119 P **Pn 23 48 29.0 +0.7**
BHPL Bhopal 19.99 305 eP **Pn 23 48 33.3 +0.5**
BHPL ⇓ex x 23 52 20.4
CD2 Chengdu 20.19 22⇓*i*P **P 23 48 33.3 +0.2**
CD2 sP pwP 23 48 47.5 +5.2
CD2 PP **PnPn 23 48 54.9 +4.9**
CD2 S Sn 23 52 21.0 -0.8
CD2 sS sS 23 52 29.1 +1.2
CD2 SS **SnSn 23 52 47.7 +11**
CD2 pmax pmax
comp=Z,60nm,1.2s
CD2 pmax pmax
comp=Z,840nm,6.2s
CD2 LR LR
comp=Z,4μm,9.4s
CD2 LR LR
comp=Z,8μm,11.3s
CD2 LR LR
comp=Z,6μm,11.1s
HKPS Hong Kong Po S 20.72 59 P **P 23 48 39.0 +0.1**
KKM Kota Kinabalu 21.78 105 P **P 23 48 51.1 +0.7**
KKM IAmb IAmb 23 49 10.1
comp=Z,102nm,1.1s
MNCI Minicoy 22.01 262 P **P 23 48 53.9 +1.1**
DBJI Dramaga 22.04 148 P P 23 49 03.9 +11
ENH Enshi 22.32 35 IAmb IAmb 23 49 07.3
comp=Z,43nm,0.8s
BOM Bombay 22.40 290 ex P 23 48 47.9 -9.0
BOM ex x 23 52 56.2
LEM Lembang 22.74 146 P **P 23 49 01.0 +0.3**
comp=Z,10nm,0.3s,baz=300,slow=20,SNR=2.0
LEM LR LR 23 58 25.6
comp=Z,3μm,20.4s,baz=294,slow=38
CISI Cisompet, Garu 23.45 147 P **P 23 49 08.0 +0.1**
CISI IAmb IAmb 23 49 24.7
comp=Z,44nm,0.9s
KPJI Karang Pucung 23.89 144 P **P 23 49 14.8 +2.8**
comp=Z,2μmcomp=Z,169nm,0.8s
COCO West Island 24.40 176 P **P 23 49 16.2 -0.5**
COCO IAmb IAmb 23 49 28.4
comp=Z,86nm,0.8s
COCO West Island 24.40 176 P **P 23 49 16.2 -0.5**
COCO pmax pmax
comp=Z,86nm,0.8s
SMRI Semarang 24.56 141 P **P 23 49 21.1 +2.8**
comp=Z,470nm,0.8s
SMRI Semarang 24.56 141 P **P 23 49 17.3 -1.0**
KAAM Kaadhehdhoo 24.84 243 P **P 23 49 20.8 0.0**
LZH Lanzhou 24.97 17 eP **P 23 49 22.8 +0.8**
LZH pP sP 23 49 30.0 -0.8
LZH sP pwP 23 49 33.3 +1.5
LZH PP **PnPn 23 50 05.7 +10**
LZH pmax pmax
comp=Z,44nm,1.2s
LZH pmax pmax
comp=Z,700nm,5.4s
LZH LR LR
comp=Z,4μm,11.4s
LZH LR LR
comp=Z,4μm,12.5s
LZH LR LR
comp=Z,4μm,12.5s
SMLA Simla 24.98 321 eP **P 23 49 21.4 -0.5**
SMLA ex x 23 53 49.9
XAN Xi'an 25.05 28 P **P 23 49 22.8 +0.2**
XAN PP **PnPn 23 50 03.2 +6.7**
XAN S **S 23 53 42.4 -3.3**
XAN SS SnSn 23 54 51.5 +16
XAN pmax pmax
comp=Z,13nm,1.3s
XAN pmax pmax
comp=Z,460nm,5.3s
XAN LR LR
comp=Z,2μm,12.8s
XAN LR LR
comp=Z,5μm,12.7s
XAN LR LR
comp=Z,3μm,11.2s
KNMB Chin-men Tao 25.18 58 P **P 23 49 23.6 -0.1**
TGY Tagaytay City 25.25 83 LR LR 23 58 37.8
comp=Z,1μm,19.5s,baz=204,slow=35
UGM Wanagama 25.29 142 P **P 23 49 28.0 +3.1**
comp=Z,428nm,1.5s
UGM Wanagama 25.29 142 P **P 23 49 24.7 -0.1**
NGJI Ngawi 25.45 139 P **P 23 49 29.3 +3.0**
comp=Z,5μmcomp=Z,208nm,2.2s
WHN Wuhan 25.46 42 P **P 23 49 25.9 -0.3**
WHN pP **pP 23 49 33.1 +0.6**
WHN S **S 23 53 56.2 +4.1**
WHN LR LR
comp=Z,5μm,12.3s
WHN LR LR
comp=Z,8μm,11.6s
WHN LR LR
comp=Z,13μm,12.4s
WOJI Wonogiri, Jawa 25.47 141 P **P 23 49 31.3 +4.8**
QZH Quanzhou 25.54 57⇑*i*P **P 23 49 28.3 +1.2**
QZH S **S 23 53 56.5 +2.9**
QZH pmax pmax
comp=Z,49nm,0.9s
QZH LR LR
comp=Z,700nm,10.4s
QZH LR LR
comp=Z,2μm,10.4s
QZH LR LR
comp=Z,2μm,12.3s
DHRM DHARAMSHALA 26.29 322 eP **P 23 49 33.4 -0.7**
DHRM ex x 23 54 06.6
BHUJ Bhuj 26.49 298 eP **P 23 49 37.8 +2.1**
BHUJ IAmb IAmb 23 49 48.2
comp=Z,60nm,1.2s
TPUB Ta-pu 26.64 62 P **P 23 49 37.8 +0.7**
TWG Pinlang 26.87 64 P **P 23 49 38.5 -0.6**
TWG IAmb IAmb 23 49 54.0
comp=Z,100nm,1.1s
SSLB Suanglung 27.09 61 P **P 23 49 41.7 +0.6**
YULB Yu-li 27.25 63 P **P 23 49 43.2 +0.6**
GTA Gaotai 27.33 8⇓P **P 23 49 44.2 +1.0**
GTA pP sP 23 49 53.4 +1.0
GTA sP pwP 23 49 57.2 +5.3
GTA S **S 23 54 24.9 +3.2**
GTA sS sS 23 54 42.0 +10
GTA pmax pmax
comp=Z,31nm,1.3s
GTA pmax pmax
comp=Z,250nm,4.8s
GTA LR LR
comp=Z,990nm,11.7s
GTA LR LR
comp=Z,1μm,11.7s
GTA LR LR
comp=Z,1μm,10.5s
YHNB Yeheng 27.76 60 P **P 23 49 48.2 +1.0**
YHNB IAmb IAmb 23 49 58.7
comp=Z,39nm,1.1s
NIL Nilore 29.12 320 P **P 23 49 58.5 -0.6**
NIL IAmb IAmb 23 50 07.9
comp=Z,48nm,1.1s
NIL Nilore 29.12 320 P **P 23 49 59.0 -0.1**
NIL Nilore 29.12 320 P **P 23 49 58.5 -0.6**
NIL pmax pmax
comp=Z,48nm,1.2s
MRSI Marisa 29.13 112 P P 23 50 06.4 +7.0
SPSI Sidrap Palu 29.40 122 P **P 23 50 04.3 +2.5**
comp=Z,27nm,1.4s
NJ2 Nanjing 29.40 44 eP **P 23 50 02.2 +0.6**
NJ2 pmax pmax
comp=Z,16nm,0.5s
SSE Sheshan 30.51 48 P **P 23 50 11.6 +0.2**
SSE S **S 23 55 13.7 +2.0**
SSE pmax pmax
comp=Z,140nm,4.7s
SSE LR LR
comp=Z,1μm,15.5s
SSE LR LR
comp=Z,1μm,12.9s
SSE Sheshan 30.51 48 P **P 23 50 11.3 -0.1**
SSE IAmb IAmb 23 50 22.4
comp=Z,31nm,1.1s
LUWI Luwuk 30.54 114 P **P 23 50 14.6 +2.7**
comp=Z,2μmcomp=Z,62nm,0.8s
BTO Baotou 31.11 22 eP **P 23 50 17.3 +0.5**
HHC Hu-ho-hao-te 31.92 24 eP **P 23 50 24.6 +0.7**
HHC pP sP 23 50 32.7 0.0
HHC sP pwP 23 50 35.8 +2.0
HHC pmax pmax
comp=Z,6.0nm,0.9s
HHC pmax pmax
comp=Z,96nm,4.2s
HHC LR LR
comp=Z,1μm,12.8s
HHC LR LR
comp=Z,1μm,12.5s
HHC LR LR
comp=Z,2μm,11.8s
KSH Kashi 31.94 331 P **P 23 50 23.2 -0.9**
KSH pP pP 23 50 31.0 +0.5
KSH PP **PnPn 23 51 32.8 +3.4**
KSH PcP **PcP 23 53 08.0 -6.2**
KSH S **S 23 55 29.6 -4.6**
KSH PcS **PcS 23 56 54.3 -4.6**
KSH pmax pmax
comp=Z,30nm,1.3s
KSH pmax pmax
comp=Z,360nm,4.5s
KSH LR LR
comp=Z,940nm,11.9s
KSH LR LR
comp=Z,1μm,9.4s
KSH LR LR
comp=Z,1μm,17.5s
WMQ Urumqi 32.04 350⇑*i*P **P 23 50 26.5 +1.6**
WMQ pP pwP 23 50 33.9 -0.4
WMQ S **S 23 55 36.8 +1.3**
WMQ sS sS 23 55 47.6 +1.4
WMQ LR LR
comp=Z,690nm,19.7s
WMQ LR LR
comp=Z,730nm,14.3s
WMQ LR LR
comp=Z,1μm,29.9s
WMQ Urumqi 32.04 350 P **P 23 50 25.5 +0.6**
WMQ Urumqi 32.04 350 P **P 23 50 25.5 +0.6**
WMQ pmax pmax
comp=Z,86nm,1.1s
KBL Kabul 32.38 317 P **P 23 50 27.9 -0.3**
KBL IAmb IAmb 23 50 37.8
comp=Z,23nm,1.1s
KBL Kabul 32.38 317 P **P 23 50 28.2 0.0**
KBL P **P 23 50 28.2 0.0**
KBL Kabul 32.38 317 P **P 23 50 27.9 -0.3**
KBL pmax pmax
comp=Z,23nm,1.1s
BJT Baijiatuau 33.30 30 P **P 23 50 35.7 -0.2**
BJT Baijiatuau 33.30 30 P **P 23 50 35.7 -0.2**
BJT pmax pmax
comp=Z,11nm,0.9s
BJI Beijing 33.32 30 P **P 23 50 36.6 +0.6**
BJI pP **sP 23 50 45.0 +0.1**
BJI pmax pmax
comp=Z,13nm,2.3s
NRN Naryn 33.47 334 P **P 23 50 37.8 0.0**
NRN Naryn 33.47 334 P **P 23 50 37.8 0.0**
NRN pmax pmax
comp=Z,8.0nm,1.2s
ARSB Arslanbob 34.78 330 P **P 23 50 48.8 -0.1**
ARSB IAmb IAmb 23 50 59.3
comp=Z,56nm,1.0s
ARSB Arslanbob 34.78 330 P **P 23 50 48.8 -0.1**
ARSB pmax pmax
comp=Z,56nm,1.0s

KBK Karagaybulak 34.92 334 P P 23 50 51.9 +1.7
SNR=12
BTK Batken 34.95 327 P P 23 50 49.5 -0.8
BTK IAmb IAmb 23 50 59.8
comp=Z,37nm,0.9s
BTK Batken 34.95 327 P P 23 50 49.5 -0.8
BTK pmax pmax
comp=Z,37nm,1.0s
AML Almayashu 35.06 332 P P 23 50 52.9 +1.3
SNR=9.2
AAK Ala-Archa 35.11 333 P P 23 50 51.4 -0.3
comp=Z,15nm,1.1s,baz=156,slow=7.1,SNR=15
AAK LR LR 00 06 59.3
comp=Z,3μm,21.7s,baz=126,slow=39
AAK Ala-Archa 35.11 333 P P 23 50 53.4 +1.6
SNR=9.9
AAK Ala-Archa 35.11 333 P P 23 50 51.3 -0.4
AAK Ala-Archa 35.11 333 P P 23 50 53.1 +1.4
AAK P P 23 50 53.1 +1.4
AAK Ala-Archa 35.11 333 *i* P P 23 50 51.8 +0.1
AAK pmax pmax
comp=Z,77nm,1.3s
FRU1 Bishkek 35.19 334 P P 23 50 52.2 -0.1
FRU1 Bishkek 35.19 334 P P 23 50 52.2 -0.1
FRU1 pmax pmax
comp=Z,97nm,1.2s
CHMS Chumysh 35.28 334 P P 23 50 54.1 +1.0
SNR=13
EKS2 Erkin-Say 35.45 332 P P 23 51 03.6 +9.1
SNR=5.8
DL2 Dalian 35.47 37 *e*P P 23 51 00.6 +6.0
DL2 pmax pmax
comp=Z,40nm,0.9s
DL2 LR LR
comp=Z,2μm,14.5s
DL2 LR LR
comp=Z,1μm,11.9s
DL2 LR LR
comp=Z,2μm,12.7s
USP Ospenovka 35.61 334 P P 23 50 56.6 +0.7
SNR=16
WBK Wadi Bani Khal 35.84 292 P P 23 51 00.6 +2.5
SNR=16
WBK P P 23 51 00.6 +2.5
SNR=16
MK31 Makanchi Array 36.03 345 IAmb IAmb 23 51 10.1
comp=Z,72nm,1.1s
MKAR Makanchi Array 36.03 345 P P 23 50 59.8 +0.3
comp=Z,14nm,1.0s,baz=153,slow=8.2,SNR=59
MKAR LR LR 00 10 17.0
comp=Z,472nm,20.2s,baz=164,slow=44
MKAR Makanchi Array 36.03 345 P P 23 50 59.0 -0.4
MAKZ Makanchi 36.12 345 P P 23 51 00.5 +0.3
MAKZ IAmb IAmb 23 51 11.3
comp=Z,36nm,1.0s
MAKZ Makanchi 36.12 345 P P 23 51 00.5 +0.3
MAKZ pmax pmax
comp=Z,36nm,1.0s
WSAR Wadi Sarin 36.26 293 P P 23 51 01.2 -0.5
comp=Z,20nm,1.1s,baz=122,slow=8.6,SNR=11
WSAR LR LR 00 05 33.8
comp=Z,1μm,21.3s,baz=118,slow=36
WSAR Wadi Sarin 36.26 293 P P 23 51 03.9 +2.2
SNR=10.0
MHTO MHTO 36.50 289 P P 23 51 05.0 +1.3
SNR=20
JMDO Jabal Madar 36.59 291 P P 23 51 06.3 +1.8
SNR=11
JMDO P P 23 51 06.3 +1.8
SNR=11
SONM Songino Array 36.67 13 P P 23 51 05.5 +0.5
comp=Z,9.6nm,1.1s,baz=197,slow=9.0,SNR=40
SONM PcP PcP 23 53 27.2 -0.4
comp=Z,1.4nm,1.1s,baz=189,slow=4.2,SNR=2.1
SONM LR LR 00 08 42.5
comp=Z,620nm,19.5s,baz=194,slow=40
SONM Songino Array 36.67 13 P P 23 51 04.6 -0.4
SONM Songino Array 36.67 13 *e*P P 23 51 05.8 +0.8
SONM pmax pmax
comp=Z,10.0nm,1.1s
SMDO Samad 36.75 292 P P 23 51 08.0 +1.9
SNR=21
SMDO P P 23 51 08.0 +1.9
SNR=21
BIDO Bidbid 36.77 293 P P 23 51 08.0 +1.9
SNR=13
BIDO P P 23 51 08.0 +1.9
SNR=13
ULN Ulaanbaatar 36.85 13 P P 23 51 06.7 +0.2
ULN Ulaanbaatar 36.85 13 P P 23 51 06.7 +0.2
ULN pmax pmax
comp=Z,5.0nm,0.8s
KK31 Karatay Array 37.32 330 P P 23 51 10.4 -0.1
KK31 Karatay Array 37.32 330 P P 23 51 10.4 -0.1
KK31 pmax pmax
comp=Z,7.0nm,0.8s
KKAR Karatay Array 37.32 330 P P 23 51 09.9 -0.6
KKAR Karatay Array 37.32 330 P P 23 51 10.1 -0.4
KKAR IAmb IAmb 23 51 24.3
comp=Z,6.9nm,0.8s
KKAR Karatay Array 37.32 330 P P 23 51 10.1 -0.4
KKAR pmax pmax
comp=Z,7.0nm,0.8s
BSY Bisya 37.47 291 P P 23 51 13.9 +1.9
SNR=40
BSY P P 23 51 13.9 +1.9
SNR=40
HOQ Hoqain 37.52 293 P P 23 51 14.0 +1.6
SNR=17
HOQ P P 23 51 14.0 +1.6
SNR=17
TJN Taejon 37.66 45 *ce*P P 23 51 12.9 -0.5
ARQ Araqi 38.19 292 P P 23 51 19.0 +1.0
SNR=6.4
ARQ P P 23 51 19.0 +1.0
SNR=6.4
SOHO SOHO 38.32 293 P P 23 51 21.1 +1.9
SNR=20
ZAK Zakamensk 38.56 8 *e*P P 23 51 21.6 +0.6
ZAK pmax pmax
comp=Z,32nm,1.3s
KSAR Wonju Array Be 38.57 44 P P 23 51 21.0 0.0
KSAR PcP 23 53 34.0 +0.6
KSAR Wonju Array Be 38.57 44 P P 23 51 21.0 0.0
KSRS Korea Array 38.60 44 P P 23 51 21.3 0.0
comp=Z,4.5nm,0.9s,baz=246,slow=9.4,SNR=7.9
KSRS PcP PcP 23 53 33.5 0.0
comp=Z,1.5nm,0.9s,baz=226,slow=3.0,SNR=3.2
KSRS LR LR 00 08 26.1
comp=Z,902nm,19.4s,baz=239,slow=38
JNU Nakatsue 38.72 52 P P 23 51 22.8 +0.3
comp=Z,17nm,1.1s,baz=230,slow=7.9,SNR=3.4
JNU Nakatsue 38.72 52 P P 23 51 22.7 +0.3
JNU IAmb IAmb 23 51 33.4
comp=Z,66nm,1.1s
UOSS Minazif 38.77 295 P P 23 51 23.3 +0.3
UOSS IAmb IAmb 23 51 34.9
comp=Z,48nm,1.1s
HATD Hatta, Dubai 38.81 294 P P 23 51 25.3 +2.0
SNR=19
ASHO Ashiyiah 38.85 294 P P 23 51 25.8 +2.2
SNR=18
ASHO P P 23 51 25.8 +2.2
SNR=18
MOY Mondy 39.55 6 *e*P P 23 51 35.0 +5.8
MOY pmax pmax
comp=Z,52nm,2.1s
RBK Rabkut 39.77 283 P P 23 51 43.0 +12
SNR=6.6
RBK P P 23 51 43.0 +12
SNR=6.6
TLY Talaya 39.88 8 P P 23 51 32.5 +0.6
comp=Z,3.6nm,0.6s,baz=186,slow=9.4,SNR=8.4
TLY Talaya 39.88 8 P P 23 51 33.3 +1.5
TLY IAmb IAmb 23 51 43.4
comp=Z,49nm,1.1s
TLY Talaya 39.88 8 *d i*P P 23 51 32.5 +0.6
TLY *e*S S 23 57 36.1 +0.8
TLY *e*SSS SSS 00 01 03.5
TLY pmax pmax
comp=Z,169nm,1.5s
TLY MLR MLR
comp=Z,2μm,16.0s
FAKI Fak Fak 39.92 110 P P 23 51 32.9 +0.2
FAKI IAmb IAmb 23 51 42.4
comp=Z,42nm,0.8s

SOCY Socotra 40.11 274 P P 23 51 33.5 -0.8
WHFO Wadi Hawf 40.19 283 P P 23 51 36.0 +1.1
SNR=15
WHFO P P 23 51 36.0 +1.1
SNR=15
IRK Irkutsk 40.52 9 *e*P P 23 51 38.3 +1.2
IRK pmax pmax
comp=Z,117nm,2.9s
KURBB Kurchatov Arra 40.54 344 P P 23 51 37.5 +0.2
comp=Z,18nm,1.1s,baz=161,slow=7.9,SNR=52
KURK Kurchatov 40.60 344 P P 23 51 38.0 +0.3
KURK IAmb IAmb 23 51 48.9
comp=Z,116nm,1.1s
KURK Kurchatov 40.60 344 *ce*P P 23 51 38.3 +0.6
KURK pmax pmax
comp=Z,58nm,1.7s
ABTO Aybut 40.63 282 P P 23 51 39.9 +1.3
SNR=13
ABTO P P 23 51 39.9 +1.3
SNR=13
PSA00 Pilbara Seismi 41.54 144 P P 23 51 46.9 +1.1
PSA00 IAmb IAmb 23 51 54.6
comp=Z,29nm,0.8s
GEYT Alibeck 41.65 314 P P 23 51 47.2 +0.5
comp=Z,19nm,0.4s,baz=134,slow=7.5,SNR=176
GEYT LR LR 00 11 11.0
comp=Z,708nm,19.7s,baz=55,slow=39
GEYT Alibeck 41.65 314 P P 23 51 47.3 +0.6
HIA Hailar 42.12 24 P P 23 51 50.9 +0.5
HIA Hailar 42.12 24 P P 23 51 50.9 +0.5
HIA pmax pmax
comp=Z,26nm,1.0s
ZAA0 Zalesovo Array 42.33 351 IAmb IAmb 23 52 02.2
comp=Z,47nm,0.9s
ZALV Zalesovo Beam 42.33 351 P P 23 51 52.0 +0.1
comp=Z,7.2nm,0.8s,baz=175,slow=7.6,SNR=33
ZALV LR LR 00 12 27.9
comp=Z,405nm,21.0s,baz=174,slow=40
ZALV Zalesovo Beam 42.33 351 P P 23 51 50.4 -1.5
FITZ Fitzroy Crossi 42.70 134 P P 23 51 55.7 +0.4
baz=43,SNR=3.3
FITZ Fitzroy Crossi 42.70 134 P P 23 51 54.4 -1.0
comp=Z,5.5nm,1.0s,baz=326,slow=11,SNR=3.0
MDJ Mudanjiang 43.68 36 P P 23 52 04.0 +1.0
MDJ pP pwP 23 52 13.4 +0.4
MDJ sP sP 23 52 14.8 +2.8
MDJ S S 23 58 30.3 -1.3
MDJ pmax pmax
comp=Z,15nm,1.6s
MDJ pmax pmax
comp=Z,250nm,4.0s
MDJ LR LR
comp=Z,1μm,14.0s
MDJ LR LR
comp=Z,1μm,14.2s
MDJ LR LR
comp=Z,1μm,13.1s
USA0B Ussuriysk Arra 44.84 38 P P 23 52 12.4 +0.1
USA0B Ussuriysk Arra 44.84 38 P P 23 52 12.5 +0.1
USA0B pmax pmax
comp=Z,16nm,1.0s
USRK Ussuriysk Ar. 44.84 38 P P 23 52 12.5 +0.2
comp=Z,3.1nm,0.9s,baz=205,slow=6.4,SNR=3.9
USRK PcP PcP 23 53 53.2 -0.7
comp=Z,2.2nm,0.8s,baz=221,slow=5.7,SNR=2.9
USRK LR LR 00 12 08.2
comp=Z,493nm,18.5s,baz=220,slow=38
USRK Ussuriysk Ar. 44.84 38 P P 23 52 11.7 -0.6
USRK Ussuriysk Ar. 44.84 38 P P 23 52 11.7 -0.6
BVAR Borovoye Array 45.16 339 P P 23 52 14.7 0.0
comp=Z,2.7nm,0.8s,baz=134,slow=8.5,SNR=21
BRVK Borovoye 45.22 339 P P 23 52 15.0 -0.2
BRVK Borovoye 45.22 339 *i* P P 23 52 14.0 -1.2
BRVK pmax pmax
comp=Z,54nm,1.4s
MJB9 Matsu-Tunnel 45.59 50 P P 23 52 18.2 -0.3
MJB9 IAmb IAmb 23 52 28.8
comp=Z,37nm,1.1s
MJB9 PP PP 23 54 05.7 +0.3
MAJO Matsushiro 45.59 50 P P 23 52 19.1 +0.7
MAJO IAmb IAmb 23 52 28.8
comp=Z,35nm,1.1s
MAJO PP PP 23 54 05.5 +0.2
MAJO Matsushiro 45.59 50 P P 23 52 19.1 +0.7
MAJO 23 54 05.5
MAJO pmax pmax
comp=Z,35nm,1.1s
MAT Matsushiro 45.59 50 P P 23 52 18.6 +0.2
MAT S S 23 58 58.6 -1.0
MJAR Matsushiro Arr 45.59 50 P P 23 52 18.5 +0.1
comp=Z,7.4nm,1.1s,baz=256,slow=13,SNR=11
MJAR PcP PcP 23 53 57.0 +0.3
comp=Z,5.4nm,0.8s,baz=236,slow=2.2,SNR=7.7
MJAR LR LR 00 12 47.0
comp=Z,453nm,19.4s,baz=240,slow=38
MJAR Matsushiro Arr 45.59 50 P P 23 52 18.9 +0.5
MJAR Matsushiro Arr 45.59 50 P P 23 52 18.9 +0.5
MJAR pmax pmax
comp=Z,7.0nm,1.2s
MORW Morawa 45.85 154 P P 23 52 21.3 +0.8
baz=46,SNR=6.9
MORW Morawa 45.85 154 P P 23 52 20.7 +0.2
MORW IAmb IAmb 23 52 29.9
comp=Z,22nm,0.8s
ABKAR Akbulak array 46.87 329 P P 23 52 27.7 -0.5
KLR Kul'dur 47.65 32 *i* P P 23 52 32.9 -1.4
KLR pmax pmax
comp=Z,3.0nm,1.3s
BOD Bodaibo 47.66 14⇑*i*P P 23 52 33.9 -0.3
BOD pmax pmax
comp=Z,35nm,1.4s
RAYN Ar Rayn 48.25 291 P P 23 52 39.0 -0.4
RAYN Ar Rayn 48.25 291 P P 23 52 39.0 -0.4
RAYN pmax pmax
comp=Z,8.0nm,1.1s
MUN Mundaring 48.47 156 P P 23 52 41.3 +0.5
baz=48,SNR=4.2
ZEA Zeya 48.57 25 *e*P P 23 52 41.8 +0.4
ZEA pmax pmax
comp=Z,36nm,1.2s
ZEA MLR MLR
comp=E,1μm,12.0s
ZEA MLR MLR
comp=Z,3μm,12.0s
ZEA MLR MLR
comp=N,2μm,13.0s
AKTO Aktyubinsk 48.58 329 P P 23 52 41.2 -0.3
comp=N,6.2nm,0.8s,baz=122,slow=7.4,SNR=15
KLBR Kellerberrin 48.77 154 P P 23 52 43.1 -0.1
baz=49,SNR=4.0
DAMY Dhamar 49.26 279 P P 23 52 47.5 -0.1
DAMY IAmb IAmb 23 52 55.9
comp=Z,24nm,1.1s
WRKA Warakurna 49.27 139 P P 23 52 47.0 -0.2
baz=49,SNR=5.2
NWAO Narrogin (SRO) 49.71 155 P P 23 52 51.2 +0.9
baz=50,SNR=4.0
NWAO Narrogin (SRO) 49.71 155 P P 23 52 49.8 -0.6
comp=Z,17nm,0.9s,baz=356,slow=5.0,SNR=5.4
NWAO Narrogin (SRO) 49.71 155 P P 23 52 50.5 +0.1
NWAO IAmb IAmb 23 53 02.4
comp=Z,56nm,1.1s
NWAO Narrogin (SRO) 49.71 155 P P 23 52 50.7 +0.4
NWAO IAmb IAmb 23 53 02.4
comp=Z,36nm,1.1s
NWAO Narrogin (SRO) 49.71 155 P P 23 52 50.7 +0.4
NWAO pmax pmax
comp=Z,36nm,1.1s
WB0 Warramunga Arr 50.15 129 P P 23 52 53.5 -0.4
WB0 IAmb IAmb 23 53 03.9
comp=Z,26nm,0.8s
WRA Warramunga Arr 50.21 129 P P 23 52 54.1 -0.2
comp=Z,9.3nm,0.8s,baz=307,slow=8.2,SNR=8.7
WRA LR LR 00 17 29.1
comp=Z,308nm,19.0s,baz=305,slow=40
WRA Warramunga Arr 50.21 129 P P 23 52 54.0 -0.4
WRA Warramunga Arr 50.21 129 *i* P P 23 52 54.5 +0.1
WRA pmax pmax
comp=Z,10.0nm,0.8s
WRAB Tennant Creek 50.21 129 P P 23 52 54.2 -0.1
WRAB IAmb IAmb 23 53 03.1
comp=Z,23nm,0.7s
WRAB Tennant Creek 50.21 129 P P 23 52 54.3 -0.1
WRAB pmax pmax
comp=Z,23nm,0.7s
WR0 Warramunga Arr 50.37 129 P P 23 52 55.0 -0.6

WR0 IAmb IAmb 23 53 04.3
comp=Z,22nm,0.7s
SVE Sverdlovsk 51.68 337 *e*P P 23 53 05.3 +0.4
SVE pmax pmax
comp=Z,61nm,1.5s
GNI Garni 52.10 312 P P 23 53 13.6 +5.1
comp=Z,38nm,0.5s,baz=198,slow=1.3,SNR=35
GNI Garni 52.10 312 P P 23 53 10.7 +2.1
GNI Garni 52.10 312 P P 23 53 10.7 +2.1
GNI pmax pmax
comp=Z,83nm,0.8s
ASAR Alice Springs 52.16 133 P P 23 53 08.7 -0.3
comp=Z,6.6nm,0.9s,baz=317,slow=7.1,SNR=21
ASAR LR LR 00 15 56.2
comp=Z,423nm,21.8s,baz=308,slow=37
ASAR Alice Springs 52.16 133 P P 23 53 09.0 0.0
ASAR Alice Springs 52.16 133 P P 23 53 09.0 0.0
ARU Arti 52.23 335 P P 23 53 09.3 +0.3
comp=Z,1.8nm,0.5s,baz=125,slow=4.1,SNR=17
ARU Arti 52.23 335 P P 23 53 08.8 -0.3
ARU IAmb IAmb 23 53 26.3
comp=Z,17nm,0.9s
ARU Arti 52.23 335 *d i*P P 23 53 08.7 -0.3
ARU *PP sP 23 53 18.1 -0.2
ARU 23 54 16.6
ARU 23 55 11.0
ARU S S 00 00 33.1 +0.7
ARU SS SS 00 04 13.4 +3.4
ARU pmax pmax
comp=Z,48nm,1.5s
ARU MLR MLR
comp=Z,786nm,20.0s
GROC Groznyy 52.36 316 *e*P P 23 53 09.8 -0.4
GROC *e*S S 00 00 38.4 +3.8
GROC pmax pmax
comp=Z,12nm,0.6s
TBLG Delisi 52.60 314 P P 23 53 12.3 +0.3
TBLG IAmb IAmb 23 53 21.6
comp=Z,36nm,1.1s
TBLG Delisi 52.60 314 P P 23 53 12.3 +0.3
TBLG pmax pmax
comp=Z,36nm,1.1s
YSS Yuzh-Sakhalins 52.78 40 *e*P P 23 53 22.3 +9.1
YSS pmax pmax
comp=Z,40nm,1.2s
YSS MLR MLR
comp=Z,1μm,17.0s
YSS MLR MLR
comp=N,800nm,15.0s
YSS MLR MLR
comp=E,800nm,19.0s
FORT Forrest 53.30 144 P P 23 53 16.0 -1.2
FORT IAmb IAmb 23 53 18.1
comp=Z,38nm,0.9s
AKH Akhalkalaki 53.39 313 ⇑P P 23 53 19.3 +1.2
AKH Akhalkalaki 53.39 313 P P 23 53 17.7 -0.4
AKH IAmb IAmb 23 53 20.2
comp=Z,34nm,1.2s
AKH Akhalkalaki 53.39 313 P P 23 53 17.7 -0.4
AKH pmax pmax
comp=Z,34nm,1.2s
ZEI Tsey 53.52 315 *e*P P 23 53 16.3 -2.8
ZEI pmax pmax
comp=Z,18nm,0.6s
YUK Yuzh-Kuril'sk 53.69 44 *e*P P 23 53 18.8 -1.2
YUK *e* 23 55 19.8
YUK *e*PPP PPP 23 56 26.7
YUK *e*S S 00 00 51.5 -1.1
YUK *e*SS SKiKP 00 04 32.1 -1.4
YUK pmax pmax
comp=Z,348nm,0.9s
YUK pmax pmax
comp=Z,654nm,2.1s
YUK pmax pmax
comp=Z,593nm,18.0s
YUK pmax pmax
comp=N,173nm,10.0s
YUK pmax pmax
comp=E,367nm,16.0s
COEN Coen 54.35 117 P P 23 53 24.7 -0.5
COEN IAmb IAmb 23 53 31.3
comp=Z,17nm,1.1s
KBZ Khabaz 54.52 315 P P 23 53 25.9 -0.1
comp=Z,5.3nm,1.0s,baz=112,slow=12,SNR=5.4
KBZ Khabaz 54.52 315 *i* P P 23 53 24.5 -1.5
KBZ pmax pmax
comp=Z,3.0nm,1.5s
QIS Mount Isa 54.63 126 P P 23 53 29.0 +1.8
baz=55,SNR=3.6
SHA1 Shidzhatmaz 54.69 315 *i* P P 23 53 24.4 -3.2
KVAR Kislovodsk Arr 54.73 316 P P 23 53 29.5 +1.7
comp=Z,8.8nm,1.0s,baz=142,slow=19,SNR=6.6
KIV Kislovodsk 54.74 316 ⇑P P 23 53 28.2 +0.5
KIV Kislovodsk 54.74 316 P P 23 53 27.7 0.0
KIV IAmb IAmb 23 53 36.5
comp=Z,27nm,0.8s
KIV Kislovodsk 54.74 316 *e*P P 23 53 27.6 -0.2
KIV *e*S S 00 01 06.2 -0.9
KIV *e*SS SS 00 04 51.1 +0.8
KIV pmax pmax
comp=Z,122nm,1.0s
KIV pmax pmax
comp=Z,167nm,4.1s
KIV MLR MLR
comp=Z,1μm,17.0s
GOF Gofitskoye 54.86 317⇑*e*P P 23 53 34.0 +5.5
YAK Yakutsk 55.53 19 P P 23 53 32.5 -0.5
comp=Z,3.1nm,0.3s,baz=261,slow=2.0,SNR=5.2
YAK Yakutsk 55.53 19 P P 23 53 33.1 +0.1
YAK IAmb IAmb 23 53 42.1
comp=Z,36nm,1.1s
YAK Yakutsk 55.53 19 *e*P P 23 53 30.4 -2.6
YAK *e**PP pP 23 53 40.2 +0.6
YAK *e* 23 54 31.1
YAK *e* 23 55 33.0
YAK *e*S S 00 01 12.9 -4.0
YAK *e*SS SS 00 04 57.1 -4.8
YAK pmax pmax
comp=Z,16nm,1.4s
YAK pmax pmax
comp=N,12nm,1.5s
YAK pmax pmax
comp=E,8.0nm,1.5s
YAK pmax pmax
comp=Z,101nm,4.2s
YAK pmax pmax
comp=N,121nm,4.3s
YAK pmax pmax
comp=E,72nm,3.8s
YAK smax smax
comp=N,109nm,4.3s
YAK smax smax
comp=E,216nm,4.8s
YAK MLR MLR
comp=Z,722nm,14.0s
YAK MLR MLR
comp=N,326nm,15.0s
YAK MLR MLR
comp=E,559nm,14.0s
ASF Jabal al Asfar 56.68 300 P P 23 53 42.1 +0.2
comp=E,2.6nm,0.8s,baz=97,slow=8.1,SNR=2.3
SOC Sochi 56.68 314 *e*P P 23 53 38.6 -3.0
SOC *e* 23 55 53.3
SOC *e*PPP PPP 23 57 04.1
SOC *e*S S 00 01 31.0 -1.8
SOC *e*SS SS 00 05 17.5 -3.2
SOC *e*SSS SSS 00 07 34.0
SOC MLR MLR
comp=Z,209nm,15.0s
GAZ Gaziantep 57.13 306 P P 23 53 45.4 +0.4
GAZ pP 23 53 45.5 -6.4
GAZ IAmb IAmb 23 54 01.7
comp=Z,25nm,1.0s
KIRV Kirov 57.44 334 P P 23 53 46.7 +0.1
comp=Z,6.1nm,0.5s,baz=85,slow=4.1,SNR=9.3
VRH Novokhopyorsk 57.88 323 *e*P P 23 53 49.4 -0.5
VRH pmax pmax
comp=Z,110nm,1.8s
KMBO Kilima Mbogo 58.91 261 P P 23 53 58.3 +0.3
comp=Z,2.0nm,0.9s,baz=54,slow=11,SNR=6.5
KMBO Kilima Mbogo 58.91 261 P P 23 53 56.4 -1.6
KMBO Kilima Mbogo 58.91 261 P P 23 53 56.4 -1.6
KMBO pmax pmax
comp=Z,4.0nm,0.9s
LODK Lodwar 59.69 267 P P 23 54 03.9 +0.7

SNR=5.0
CSS Mathiatis 59.94 303 P P 23 54 03.5 -1.1
CSS IAmb IAmb 23 54 12.5
comp=Z,25nm,1.0s
BR131 Keskin Array S 60.31 309 P 23 54 06.0 -1.2
BR131 IAmb IAmb 23 54 14.8
comp=Z,10.0nm,0.7s
BRTR Keskin Array B 60.31 309 P P 23 54 05.5 -1.8
comp=Z,5.4nm,0.8s,baz=131,slow=6.1,SNR=20
BRTR Keskin Array B 60.31 309 P P 23 54 04.6 -2.6
ILGA Ilgaz 60.47 310 P P 23 54 07.3 -1.0
PRGR Permogore 60.69 335 eP P 23 54 05.7 -3.5
PRGR e*PP pP 23 54 16.1 +0.2
PRGR pmax pmax
comp=Z,42nm,0.9s
ANTO Ankara 60.98 309 ⇑P P 23 54 13.1 +1.4
HTT Hallett 61.76 139 P P 23 54 16.2 -0.7
baz=62,SNR=4.2
OBN Obninsk 62.18 326 P P 23 54 19.0 -0.3
comp=Z,2.4nm,0.5s,baz=99,slow=5.0,SNR=10.0
OBN Obninsk 62.18 326 ⇑P P 23 54 19.3 0.0
OBN Obninsk 62.18 326 P P 23 54 18.1 -1.2
OBN IAmb IAmb 23 54 19.5
comp=Z,13nm,0.6s
OBN Obninsk 62.18 326 i P P 23 54 18.8 -0.5
OBN i 23 54 24.8
OBN i 23 54 59.1
OBN i 23 56 32.7
OBN pmax pmax
comp=Z,36nm,1.2s
OBN MLR MLR
comp=Z,664nm,20.0s
MDUB Mudurnu 62.27 309 P P 23 54 19.2 -1.2
MA2 Magadan 62.45 28 P P 23 54 21.3 +0.2
MA2 Magadan 62.45 28 ceP P 23 54 21.8 +0.7
MA2 pmax pmax
comp=Z,28nm,1.7s
ISP Isparta 62.49 306 P P 23 54 20.8 -1.1
ISP pP 23 54 20.9 -8.0
ISP IAmb IAmb 23 54 28.6
comp=Z,12nm,1.0s
STKA Stephens Creek 62.56 136 P P 23 54 22.7 +0.5
baz=63,SNR=8.6
STKA Stephens Creek 62.56 136 P P 23 54 22.3 0.0
comp=Z,10nm,0.7s,baz=310,slow=7.6,SNR=13
STKA LR LR 00 24 08.1
comp=Z,469nm,20.4s,baz=293,slow=39
STKA Stephens Creek 62.56 136 P P 23 54 22.0 -0.3
STKA Stephens Creek 62.56 136 P P 23 54 22.0 -0.3
STKA pmax pmax
comp=Z,4.0nm,0.8s
TIXI Tiksi 62.74 11 P P 23 54 21.0 -1.8
TIXI IAmb IAmb 23 54 33.1
comp=Z,47nm,1.1s
TIXI Tiksi 62.74 11 ceP P 23 54 21.8 -1.0
TIXI pmax pmax
comp=Z,55nm,1.7s
ELL Elmali 62.88 305 P P 23 54 23.7 -0.8
ELL Elmali 62.88 305 P P 23 54 23.7 -0.8
ELL pmax pmax
comp=Z,114nm,1.1s
KLMR Klimovskoe 62.92 333 eP P 23 54 20.0 -4.2
KLMR AMP 23 54 34.6
comp=Z,104nm,1.7s
KLMR LQ LQ 00 18 38.5
KLMR LR LR 00 19 55.7
KLMR AMP 00 24 32.9
comp=Z,999nm,21.5s
KLMR Klimovskoe 62.92 333 eP P 23 54 20.0 -4.2
KLMR pmax pmax
comp=Z,104nm,1.7s
KLMR MLR MLR
comp=Z,999nm,22.0s
PETK Petropavlovsk- 63.91 37 P P 23 54 29.3 -1.6
PETK Petropavlovsk- 63.91 37 P P 23 54 29.3 -1.6
TLCR 64.66 314 ⇑P P 23 54 36.6 +0.7
RMQ Roma 64.87 127 P P 23 54 40.4 +2.8
baz=65,SNR=6.9
TMCR Tamitsa 64.95 336 eP P 23 54 41.9 +4.4
TMCR pmax pmax
comp=Z,25nm,0.8s
KARP Karpathos 65.02 304 P P 23 54 37.6 -1.0
MBAR Mbarara 65.09 264 P P 23 54 38.6 -0.9
MBAR Mbarara 65.09 264 P P 23 54 38.6 -0.9
MBAR pmax pmax
comp=Z,7.0nm,1.2s
CMSA Cobar Meteorol 65.22 133 P P 23 54 40.6 +0.8
baz=65,SNR=17
ICOR Ion Corvin 65.23 313 ⇑P P 23 54 40.7 +1.0
AKASG Malin Array Be 65.31 320 P P 23 54 38.5 -1.6
comp=Z,1.3nm,0.6s,baz=85,slow=4.9,SNR=27
AKASG PP PP 23 57 04.7 +0.9
comp=Z,0.4nm,0.4s,baz=101,slow=9.8,SNR=4.0
AKASG LR LR 00 26 48.0
comp=Z,462nm,21.2s,baz=115,slow=39
AKASG Malin Array Be 65.31 320 P P 23 54 38.7 -1.4
AKASG pP 23 54 39.0 -7.8
AKASG Malin Array Be 65.31 320 eP P 23 54 38.4 -1.6
AKASG pmax pmax
comp=Z,4.0nm,0.9s
SORM Soroca 65.42 317 ⇑P P 23 54 39.8 -1.1
BISRR Bisoca 66.17 314 ⇑P P 23 54 46.0 +0.1
VRI Vrincioaia 66.20 315 ⇓P P 23 54 45.7 -0.3
PLOR Plostina 66.25 315 ⇑P P 23 54 46.6 +0.2
TESR Tescani 66.33 315 ⇓P P 23 54 46.7 0.0
SANT Santorini 66.43 304 P P 23 54 47.0 -0.6
MLR Muntele Rosu 66.70 314 P P 23 54 48.9 -0.4
comp=Z,18nm,1.1s,baz=66,slow=1.2,SNR=7.0
MLR LR LR 00 27 45.6
comp=Z,784nm,21.8s,baz=114,slow=39
MLR Muntele Rosu 66.70 314 ⇓P P 23 54 49.5 +0.2
PRAR RASCA 66.73 316 ⇓P P 23 54 48.7 -0.6
BIZ Bicaz 66.76 316 ⇑P P 23 54 49.3 -0.2
OZUR 66.88 315 ⇓P P 23 54 50.0 -0.3
VOIR 67.32 314 ⇑P P 23 54 53.4 +0.2
BURAR Bucovina Array 67.44 317 ⇓P P 23 54 54.4 +0.5
BURAR Bucovina Array 67.44 317 P P 23 54 53.0 -0.9
BUR08 Bucovina Ar. S 67.45 317 P P 23 54 53.5 -0.5
ARR Arges 67.61 314 ⇓P P 23 54 54.7 -0.3
VLAD Vladila 67.66 313 ⇓P P 23 54 55.8 +0.6
IIGN Ignalina 67.96 325 eP P 23 54 55.6 -1.3
IZAR Zarasai 68.02 325 eP P 23 54 56.3 -1.0
ISAL Salakas 68.05 325 eP P 23 54 56.5 -1.0
ISAL IAmb IAmb 23 55 07.8
comp=Z,23nm,1.1s
APA Apatity 68.07 339 ⇑i P P 23 55 06.1 +8.8
APA i 23 55 27.0
APA pmax pmax
comp=Z,8.0nm,1.1s
APA MLR MLR
comp=Z,1μm,25.0s
VSU Vasula 68.30 328 eP P 23 54 58.0 -0.9
VSU IAmb IAmb 23 55 09.0
comp=Z,139nm,1.1s
VTS Vitosha 68.42 311 ⇑P P 23 55 00.2 -0.1
VTS Vitosha 68.42 311 P P 23 54 59.0 -1.3
VTS Vitosha 68.42 311 P P 23 54 59.0 -1.3
VTS pmax pmax
comp=Z,8.0nm,1.1s
CJR Cluj-Napoca 68.45 315 ⇓P P 23 55 00.6 +0.4
LVV L'vov 68.47 319 eP P 23 54 59.2 -1.0
TOO Toolangi 68.52 139 P P 23 55 02.3 +1.5
baz=69,SNR=4.0
TOO Toolangi 68.52 139 P P 23 55 00.1 -0.7
TOO IAmb IAmb 23 55 12.1
comp=Z,26nm,0.9s
TOO Toolangi 68.52 139 P P 23 55 00.1 -0.7
TOO pmax pmax
comp=Z,26nm,1.0s
DEV Deva 68.86 315 ⇑P P 23 55 02.1 -0.7
ARMA Armidale 68.99 129 P P 23 55 03.4 -0.5
ARMA IAmb IAmb 23 55 16.9
comp=Z,13nm,0.9s
PABE Paberze 69.25 325 eP P 23 55 03.4 -1.5
FIA1 FINESS Array S 69.26 331 P P 23 55 05.4 +0.5
FIA1 IAmb IAmb 23 55 15.2
comp=Z,22nm,0.9s
FINES FINESS Array B 69.26 331 P P 23 55 04.8 -0.1
comp=Z,1.8nm,0.5s,baz=93,slow=5.3,SNR=19
FINES LR LR 00 28 52.6
comp=Z,646nm,20.8s,baz=102,slow=39
FINES FINESS Array B 69.26 331 P P 23 55 04.6 -0.3
TRPA Tarpa 69.28 317 ⇑P P 23 55 05.1 -0.2
KWP Kalwaria Pacla 69.30 319 eP P 23 55 05.3 -0.1

KWP Kalwaria Pacla 69.30 319 P P 23 55 05.2 -0.2
KWP Kalwaria Pacla 69.30 319 P P 23 55 05.2 -0.2
KWP pmax pmax
comp=Z,196nm,1.0s
UZH Uzhgorod 69.48 317 eP P 23 55 04.9 -1.6
UZH e 23 55 12.2
UZH e 23 55 30.2
SUW Suwalki 69.50 323 eP P 23 55 06.0 -0.5
SUW Suwalki 69.50 323 eP P 23 55 06.0 -0.5
KOLS Kolonicke sedl 69.52 318 eP P 23 55 06.6 -0.3
KOLS pmax pmax
comp=Z,68nm,2.0s
KOLS Kolonicke sedl 69.52 318 eP P 23 55 06.5 -0.3
CAN Canberra 69.59 135 P P 23 55 07.4 -0.1
CAN IAmb IAmb 23 55 18.1
comp=Z,27nm,1.0s
CAN Canberra 69.59 135 P P 23 55 07.4 -0.1
CAN pmax pmax
comp=Z,27nm,1.0s
BZS Buzias 69.74 314 ⇑P P 23 55 07.6 -0.7
CRVS Cervenica-Dubn 70.06 318 eP P 23 55 10.4 +0.3
CRVS Cervenica-Dubn 70.06 318 eP P 23 55 10.4 +0.3
PBUR Paburge 70.47 325 eP P 23 55 11.0 -1.4
KECS Kecovo 70.67 317 eP P 23 55 13.6 -0.3
KECS pmax pmax
comp=Z,10.0nm,1.2s
KECS Kecovo 70.67 317 eP P 23 55 13.6 -0.3
BEL Belsk 70.71 321 eP P 23 55 13.9 -0.1
BEL Belsk 70.71 321 eP P 23 55 13.9 -0.1
NIE Niedzica 70.85 318 eP P 23 55 15.4 +0.4
NIE Niedzica 70.85 318 eP P 23 55 15.4 +0.4
PSZ Piszkesteto 71.04 317 ⇑P P 23 55 15.8 -0.4
PSZ Piszkesteto 71.04 317 P P 23 55 15.5 -0.7
PSZ Piszkesteto 71.04 317 P P 23 55 15.5 -0.7
PSZ pmax pmax
comp=Z,11nm,1.0s
OJC Ojcow 71.22 319 eP P 23 55 17.1 -0.1
OJC Ojcow 71.22 319 P P 23 55 16.6 -0.6
OJC IAmb IAmb 23 55 26.7
comp=Z,38nm,1.1s
OJC Ojcow 71.22 319 eP P 23 55 17.1 -0.1
ARCES ARCESS Array B 71.44 340 P P 23 55 18.4 +0.2
comp=Z,6.0nm,1.0s,baz=28,slow=8.9,SNR=4.0
ARCES LR LR 00 30 20.5
comp=Z,935nm,19.8s,baz=130,slow=39
LSZ Lusaka 71.64 249 P P 23 55 19.6 -0.8
LSZ Lusaka 71.64 249 P P 23 55 19.6 -0.8
LSZ pmax pmax
comp=Z,3.0nm,1.0s
BILL Bilibino 71.66 22 P P 23 55 19.1 -0.4
BILL IAmb IAmb 23 55 29.4
comp=Z,44nm,1.0s
BILL Bilibino 71.66 22 i P P 23 55 18.5 -1.0
BILL i 23 55 27.9
BILL i 23 55 36.5
BILL i 23 58 01.5
BILL pmax pmax
comp=Z,22nm,1.3s
BILL MLR MLR
comp=Z,772nm,18.0s
VYHS Vyhne 71.77 317 eP P 23 55 20.0 -0.5
VYHS pmax pmax
comp=Z,52nm,1.8s
VYHS Vyhne 71.77 317 eP P 23 55 20.0 -0.5
OKC Ostrava-Krasne 72.27 319 eP P 23 55 23.4 -0.1
OKC epP sP 23 55 32.6 -0.3
OKC Ostrava-Krasne 72.27 319 eP P 23 55 23.4 -0.1
OKC e 23 55 32.6
JAVC Velka Javorina 72.55 318 eP P 23 55 25.7 +0.4
MORC Moravsky Berou 72.66 318 eP P 23 55 25.5 -0.4
MORC Moravsky Berou 72.66 318 ⇓P P 23 55 25.8 0.0
MORC Moravsky Berou 72.66 318 P P 23 55 25.5 -0.4
MORC IAmb IAmb 23 55 39.5
comp=Z,18nm,1.0s
MORC Moravsky Berou 72.66 318 P P 23 55 25.5 -0.4
MORC pmax pmax
comp=Z,18nm,1.0s
MODS Modra-Piesok 72.80 317 eP P 23 55 26.1 -0.6
MODS Modra-Piesok 72.80 317 eP P 23 55 26.1 -0.6
KRLC Kraliky 73.16 319 eP P 23 55 28.8 0.0
KRLC epP sP 23 55 38.0 -0.3
KRLC Kraliky 73.16 319 eP P 23 55 28.8 0.0
KRLC e 23 55 38.0
VRAC Vranov 73.27 318 eP P 23 55 28.7 -0.7
VRAC Vranov 73.27 318 P P 23 55 29.0 -0.4
comp=Z,3.5nm,1.0s,baz=91,slow=4.9,SNR=5.9
VRAC LR LR 00 31 32.9
comp=Z,211nm,21.8s,baz=90,slow=39
VRAC Vranov 73.27 318 ⇑P P 23 55 29.4 0.0
KRUC Moravsky 73.39 318 eP P 23 55 29.5 -0.7
DPC Dobruska-Polom 73.45 319 eP P 23 55 30.2 -0.4
DPC ex x 23 55 36.7
DPC Dobruska-Polom 73.45 319 eP P 23 55 30.2 -0.4
DPC e 23 55 36.7
KSP Ksiaz 73.48 320 eP P 23 55 30.8 +0.2
KSP Ksiaz 73.48 320 eP P 23 55 30.8 +0.2
OSTC Ostas 73.52 319 eP P 23 55 31.1 +0.2
OSTC ex x 23 55 38.0
CHVC Chvalec 73.63 319 eP P 23 55 31.5 0.0
CHVC ex x 23 55 39.2
UPC Upice 73.65 319 eP P 23 55 32.1 +0.4
UPC epP pP 23 55 39.9 +1.3
UPC Upice 73.65 319 eP P 23 55 32.1 +0.4
UPC e 23 55 39.9
CONA Conrad Observa 73.75 317 eP P 23 55 32.3 -0.1
comp=Z,12nm,1.3s
ARSA Arzberg 73.99 316 eP P 23 55 34.0 +0.2
comp=Z,13nm,1.3s
TREC Trest 73.99 318 eP P 23 55 33.5 -0.2
TREC epP sP 23 55 42.1 -1.1
TREC Trest 73.99 318 eP P 23 55 33.5 -0.2
TREC e 23 55 42.1
PERS Pernice 74.28 315 eP P 23 55 35.1 -0.3
SOKA Soboth 74.33 315 eP P 23 55 36.1 +0.2
comp=Z,28nm,1.3s
GOPC GO Pecny, Ondr 74.44 319 eP P 23 55 36.2 -0.1
GOPC ex x 23 55 44.5
GOPC GO Pecny, Ondr 74.44 319 eP P 23 55 36.2 -0.1
GOPC e 23 55 44.5
PVCC Panska Ves 74.58 319 eP P 23 55 37.3 +0.3
PVCC Panska Ves 74.58 319 eP P 23 55 37.3 +0.3
PRU Pruhonice 74.60 319 eP P 23 55 37.3 +0.1
PRU epP sP 23 55 45.6 -1.1
PRU Pruhonice 74.60 319 eP P 23 55 37.3 +0.1
PRU e 23 55 45.6
PRA Prague 74.67 319 eP P 23 55 38.2 +0.6
PRA Prague 74.67 319 eP P 23 55 38.2 +0.6
MOA Molln 74.83 316 eP P 23 55 38.2 -0.4
comp=Z,11nm,1.1s
BRG Berggiesshubel 74.97 320 eP P 23 55 39.0 -0.3
comp=Z,46nm,1.5s
BRG i 23 55 48.1
comp=Z,138nm,1.9s
BRG Berggiesshubel 74.97 320 eP P 23 55 39.5 +0.2
comp=Z,21nm,1.2s,baz=87,slow=5.6
BRG Berggiesshubel 74.97 320 eP P 23 55 39.0 -0.3
BRG i 23 55 48.2
BRG pmax pmax
comp=Z,46nm,1.5s
RUE Ruedersdorf 75.04 321 eP P 23 55 39.8 +0.2
comp=Z,18nm,0.8s,baz=87,slow=5.6
RUE epP sP 23 55 48.4 -0.8
RUE Ruedersdorf 75.04 321 eP P 23 55 39.4 -0.3
HFS Hagfors 75.13 329 P P 23 55 40.3 +0.3
comp=Z,2.5nm,0.6s,baz=103,slow=5.2,SNR=16
HFS LR LR 00 32 22.1
comp=Z,574nm,20.3s,baz=93,slow=39
GEC2 GERESS Array S 75.17 317 eP P 23 55 40.6 -0.1
comp=Z,13nm,1.0s,baz=87,slow=5.6
GEC2 GERESS Array S 75.17 317 IAmb IAmb 23 55 49.5
comp=Z,17nm,1.2s
GERES GERESS Array B 75.17 317 P P 23 55 40.2 -0.4
comp=Z,6.3nm,0.8s,baz=85,slow=5.6,SNR=38
GERES LR LR 00 34 36.3
comp=Z,223nm,18.9s,baz=96,slow=40
GERES GERESS Array B 75.17 317 P P 23 55 40.1 -0.6
KHC Kasperske Hory 75.25 318 eP P 23 55 40.4 -0.6
KHC ex x 23 55 46.0
KHC Kasperske Hory 75.25 318 eP P 23 55 40.4 -0.6
KHC e 23 55 46.0
MYKA Terra Mystica 75.29 315 eP P 23 55 42.3 +0.9
comp=Z,34nm,1.8s
FBE Freiberg 75.34 320 eP P 23 55 41.9 +0.5

comp=Z,60nm,1.3s,baz=87,slow=5.6
FBE epP sP 23 55 50.2 -0.7
KBA Koelnbreinsper 75.48 316 P P 23 55 42.0 -0.6
comp=Z,13nm,1.3s
CLL Collm 75.55 320 eP P 23 55 41.9 -0.7
comp=Z,21nm,1.3s,baz=87,slow=5.6
CLL Collm 75.55 320 i P P 23 55 41.9 -0.7
comp=Z,26nm,1.4s
CLL i pP pP 23 55 50.6 +1.0
comp=Z,104nm,1.9s
CLL ePP PP 23 58 30.0 -1.9
CLL eS S 00 05 30.0 +8.0
CLL eSS SS 00 10 24.0 +11
CLL eSSS SSS 00 13 36.0
CLL e 00 14 30.0
CLL Lm MLR 00 35 00.0
comp=N,400nm,20.9s
CLL Lm MLR 00 35 00.0
comp=E,500nm,21.9s
CLL Collm 75.55 320 i P P 23 55 41.9 -0.7
CLL i *PP pP 23 55 50.6 +1.0
CLL pmax pmax
comp=Z,26nm,1.4s
WET Wettzell 75.70 318 eP P 23 55 43.6 0.0
comp=Z,14nm,1.2s,baz=87,slow=5.6
RJOB Jochberg 75.82 316 eP P 23 55 44.2 -0.2
comp=Z,8.8nm,1.0s,baz=87,slow=5.6
TANN Tannenbergstha 75.92 319 eP P 23 55 44.7 -0.2
comp=Z,38nm,1.3s,baz=87,slow=5.6
NKC Novy Kostel 75.94 319 eP P 23 55 44.9 0.0
NKC epP pP 23 55 53.2 +1.3
NKC Novy Kostel 75.94 319 eP P 23 55 44.9 0.0
NKC e 23 55 53.2
STAL STALIGIAL 75.95 315 IAmb IAmb 23 55 45.3
comp=Z,47nm,1.2s
WERN Wernitzgruen 75.98 319 eP P 23 55 45.4 +0.1
comp=Z,6.2nm,1.0s,baz=87,slow=5.6
GUNZ Gunzen 76.01 319 eP P 23 55 45.3 0.0
comp=Z,17nm,1.2s,baz=87,slow=5.6
ABTA Abfaltersbach 76.06 315 eP P 23 55 44.6 -1.2
comp=Z,16nm,1.3s
ROTZ Rotzenmuhle 76.11 318 eP P 23 55 46.3 +0.4
comp=Z,31nm,1.3s,baz=87,slow=5.6
MANZ Manzenberg 76.17 319 eP P 23 55 46.7 +0.4
comp=Z,24nm,1.2s,baz=87,slow=5.6
NC602 NORSAR Array S 76.20 330 P P 23 55 46.6 +0.5
NC602 IAmb IAmb 23 55 58.9
comp=Z,54nm,1.1s
NEUB Neuenburg 76.33 320 eP P 23 55 47.2 +0.2
comp=Z,15nm,1.0s,baz=87,slow=5.6
NEUB epP pP 23 55 55.3 +1.4
NB2 NORSAR Subarra 76.36 330 P P 23 55 46.1 -1.0
comp=Z,49nm,1.4s,baz=90,slow=5.9
NB2 NORSAR Subarra 76.36 330 P P 23 55 46.1 -1.0
baz=90,slow=5.9
NOA NORSAR Array B 76.36 330 P P 23 55 46.6 -0.5
comp=Z,3.2nm,1.0s,baz=90,slow=5.7,SNR=3.6
NOA LR LR 00 34 33.4
comp=Z,426nm,18.9s,baz=95,slow=40
MOX Moxa 76.45 319 eP P 23 55 47.9 0.0
comp=Z,5.5nm,0.9s,baz=87,slow=5.6
MOX eL L 00 34 02.9
comp=Z,419nm,20.3s
SANVU Saraoutou 76.53 109 P P 23 55 48.0 -0.8
SANVU IAmb IAmb 23 55 48.9
comp=Z,52nm,1.1s
NC204 NORSAR Array S 76.57 330 P P 23 55 47.4 -1.0
NC204 IAmb IAmb 23 56 01.1
comp=Z,19nm,1.0s
WATA Walderalm 76.67 316 eP P 23 55 48.1 -1.2
comp=Z,13nm,1.1s
CTI Castel Tesino 76.70 315 P P 23 55 48.1 -1.4
CTI IAmb IAmb 23 56 00.4
comp=Z,14nm,1.0s
CTI Castel Tesino 76.70 315 P P 23 55 48.1 -1.4
CTI pmax pmax
comp=Z,14nm,1.0s
TEOL Teolo 76.74 314 P P 23 55 48.2 -1.3
TEOL IAmb IAmb 23 55 52.0
comp=Z,18nm,0.9s
GRA1 Grafenberg Arr 76.76 318 P P 23 55 48.1 -1.5
GRF Grafenberg Arr 76.76 318 eL L 00 33 55.9
comp=Z,449nm,21.5s
GRF Grafenberg Arr 76.76 318 P P 23 55 48.1 -1.5
GRF pmax pmax
comp=Z,12nm,1.1s
LATE Laterza 76.85 311 P P 23 55 47.4 -2.9
SQTA Sankt Quirin 76.93 316 eP P 23 55 49.6 -1.2
comp=Z,13nm,1.3s
ASSE Asse, Remlinge 76.96 321 eP P 23 55 50.5 -0.1
comp=Z,11nm,1.0s,baz=87,slow=5.6
MOTA Moosalm 76.99 316 eP P 23 55 49.9 -1.2
comp=Z,19nm,1.1s
BSEG Bad Segeberg 77.08 323 eP P 23 55 51.7 +0.5
comp=Z,26nm,1.1s,baz=87,slow=5.6
CLZ Clausthal 77.17 321 eP P 23 55 52.0 +0.1
comp=Z,31nm,1.2s,baz=87,slow=5.6
CLZ epP sP 23 56 00.4 -1.0
LBTB Lobatse 77.17 241 P P 23 55 50.9 -1.5
LBTB IAmb IAmb 23 55 53.9
comp=Z,28nm,1.1s
LBTB Lobatse 77.17 241 P P 23 55 50.9 -1.5
LBTB pmax pmax
comp=Z,28nm,1.1s
OSSC Osservatorio P 77.18 312 P P 23 55 50.6 -1.5
OSSC IAmb IAmb 23 56 06.0
comp=Z,15nm,1.0s
KONO Kongsberg 77.20 329 P P 23 55 50.2 -1.6
KONO IAmb IAmb 23 56 01.5
comp=Z,24nm,1.1s
KONO Kongsberg 77.20 329 ceP P 23 55 52.4 +0.6
KONO pmax pmax
comp=Z,64nm,2.5s
RETA Reutte 77.21 316 eP P 23 55 51.4 -0.8
comp=Z,27nm,1.2s,SNR=5.7
FETA Feichten 77.27 316 eP P 23 55 52.1 -0.6
comp=Z,12nm,1.0s,SNR=5.0
NRDL Niedersach Rie 77.29 321 eP P 23 55 53.1 +0.8
comp=Z,52nm,1.3s,baz=87,slow=5.6
ZCCA Zocca 77.31 313 P P 23 55 52.2 -0.6
ZCCA IAmb IAmb 23 56 05.0
comp=Z,48nm,1.1s
GTTG Gottingen 77.44 320 eP P 23 55 53.6 +0.3
comp=Z,37nm,1.2s,baz=87,slow=5.6
GTTG epP sP 23 56 02.0 -0.8
SALO Salr 77.52 314 P P 23 55 53.1 -0.9
SALO IAmb IAmb 23 55 55.2
comp=Z,46nm,1.1s
DAVA Damuels 77.82 316 eP P 23 55 54.3 -1.5
comp=Z,20nm,1.1s
DZM Mont Dzumac 77.86 116 eS S 00 05 54.8 +6.5
comp=Z,151nm,30.8s
DZM Mont Dzumac 77.86 116 eLR LR 00 20 11.3
comp=Z,894nm,28.9s
DAVOX Davos/Dischmat 77.87 316 P P 23 55 55.5 -0.6
comp=Z,11nm,1.0s,baz=68,slow=2.4,SNR=7.3
DAVOX LR LR 00 37 20.7
comp=Z,237nm,19.0s,baz=87,slow=41
TNS Taunus Mts 78.50 319 eP P 23 55 59.5 +0.1
baz=87,slow=5.6
BOSA Boshof 78.71 237 P P 23 56 01.1 +0.1
comp=Z,30nm,1.0s,baz=77,slow=6.1,SNR=19
BOSA LR LR 00 27 20.7
comp=Z,319nm,18.5s,baz=72,slow=33
BOSA Boshof 78.71 237 P P 23 56 00.2 -0.8
BOSA IAmb IAmb 23 56 02.9
comp=Z,24nm,0.9s
BOSA Boshof 78.71 237 P P 23 56 00.2 -0.8
BOSA pmax pmax
comp=Z,24nm,1.0s
BFO Black Forest 78.77 317 eP P 23 56 00.1 -0.7
comp=Z,4.0nm,1.0s,baz=87,slow=5.6
BFO Black Forest 78.77 317 P P 23 56 00.7 -0.1
BFO Black Forest 78.77 317 P P 23 56 00.7 -0.1
BFO pmax pmax
comp=Z,6.0nm,1.1s
BUG Bochum--Univer 79.13 320 eP P 23 56 02.8 +0.2
comp=Z,16nm,0.9s,baz=87,slow=5.6
BUG epP PcP 23 56 11.3 +0.3
CASY Casey 79.20 174 P P 23 56 03.0 +0.4
CASY IAmb IAmb 23 56 13.0
comp=Z,43nm,1.1s
AHRW Bad Neuenahr-A 79.34 320 eP P 23 56 04.2 +0.3
comp=Z,13nm,1.3s,baz=87,slow=5.6
KEST Kesra 79.49 304 P P 23 56 04.1 -1.0
comp=Z,11nm,1.0s,baz=298,slow=9.8,SNR=3.7

KEST	Kesra	79.49	304	P	P	23 56 03.2	-1.9
KEST				IAmb	IAmb	23 56 20.2	
	comp=Z,17nm,1.1s						
ECH	Echery	79.56	317	P	P	23 56 04.9	-0.3
ECH	Echery	79.56	317	P	P	23 56 04.9	-0.3
SENIN	Lac Senin/Sane	79.68	315	P	P	23 56 05.3	-0.8
WLF	Walferdange	80.04	319	P	P	23 56 08.2	+0.5
WLF				PcP	PcP	23 56 15.4	+0.3
BNI	Bardonecchia	80.28	314	IAmb	IAmb	23 56 25.3	
	comp=Z,16nm,1.0s						
GAMB	Gambell	80.49	27	IAmb	IAmb	23 56 19.8	
	comp=Z,24nm,1.0s						
ATKA	Atka Island	80.85	39	P	P	23 56 11.8	-0.1
ATKA				IAmb	IAmb	23 56 24.3	
	comp=Z,58nm,1.1s						
NOR	Nord	81.02	352	iP	P	23 56 11.2	-1.2
	comp=Z,11nm,1.2s						
NOR				i		23 56 20.9	
NOR	Nord	81.02	352	eP	P	23 56 11.2	-1.2
NOR				i		23 56 20.9	
NOR				pmax	pmax		
	comp=Z,11nm,1.2s						
SSB	Saint Sauveur	81.74	314	P	P	23 56 15.6	-1.3
SSB	Saint Sauveur	81.74	314	P	P	23 56 15.6	-1.3
SSB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TSUM	Tsumeb	82.47	249	P	P	23 56 19.9	-1.5
CLF	Chambon-Foret	82.83	317	IAmb	IAmb	23 56 28.9	
	comp=Z,25nm,1.1s						
MAW	Mawson	83.03	192	P	P	23 56 22.1	-0.8
	comp=Z,2.7nm,0.5s,baz=18,slow=8.3,SNR=3.8						
MAW				LR	LR	00 30 00.2	
	comp=Z,174nm,18.3s,baz=48,slow=33						
MAW	Mawson	83.03	192	P	P	23 56 22.8	-0.1
MAW	Mawson	83.03	192	P	P	23 56 22.8	-0.1
MAW				pmax	pmax		
	comp=Z,4.0nm,1.2s						
RDOG	Red Dog Mine	83.13	22	IAmb	IAmb	23 56 33.7	
	comp=Z,34nm,1.2s						
DAG	Danmarks Havn	83.37	348	iP	P	23 56 23.4	-1.3
DAG	Danmarks Havn	83.37	348	eP	P	23 56 23.4	-1.3
EKA	Eskdalemuir Ar	84.61	325	LR	LR	00 38 41.4	
	comp=Z,171nm,21.0s,baz=60,slow=39						
IMAR	Indian Mountai	87.22	22	P	P	23 56 43.6	-0.6
TOLK	Toolik Lake Re	87.50	19	P	P	23 56 45.3	-0.3
	baz=298						
SVW2	Sparrevohn	88.41	27	P	P	23 56 50.2	+0.2
SVW2				IAmb	IAmb	23 57 00.7	
	comp=Z,26nm,1.2s						
RPZ	Rata Peaks	88.52	135	LR	LR	00 34 26.0	
	comp=Z,768nm,19.9s,baz=269,slow=34						
RPZ	Rata Peaks	88.52	135	P	P	23 56 51.1	+0.3
ESDC	Sonseca Array	89.07	310	P	P	23 56 52.8	-0.8
	comp=Z,2.0nm,1.0s,baz=64,slow=6.4,SNR=6.2						
ESDC	Sonseca Array	89.07	310	P	P	23 56 53.3	-0.3
LTZ	Lake Taylor	89.08	134	P	P	23 56 54.3	+0.8
PPLA	Purkeypile	89.13	25	P	P	23 56 54.0	+0.4
PPLA				IAmb	IAmb	23 57 03.9	
	comp=Z,25nm,1.0s						
THZ	Tophouse	89.22	133	P	P	23 56 53.0	-1.1
THZ				IAmb	IAmb	23 57 04.4	
	comp=Z,34nm,1.2s						
PAB	San Pablo	89.39	310	P	P	23 56 53.9	-1.2
PAB				IAmb	IAmb	23 57 05.7	
	comp=Z,9.7nm,1.1s						
PAB	San Pablo	89.39	310	P	P	23 56 53.9	-1.2
PAB				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MQZ	McQueen's Vall	89.62	135	P	P	23 56 54.5	-1.4
MQZ				IAmb	IAmb	23 56 58.1	
	comp=Z,11nm,1.1s						
BWN	Browne	89.64	23	P	P	23 56 55.8	+0.1
TRF	Thorofare Moun	89.66	24	P	P	23 56 56.1	+0.1
MDM	Murphy Dome	89.73	22	P	P	23 56 56.2	+0.1
BMAR	Burnt Mountain	89.73	19	P	P	23 56 56.7	+0.6
TCOL	CIGO, UAF Yank	89.91	22	P	P	23 56 56.6	-0.3
	baz=300						
POKR	Poker Plat Res	89.95	22	P	P	23 56 56.8	-0.4
	baz=300						
FYU	Fort Yukon	89.98	20	IAmb	IAmb	23 57 11.3	
	comp=Z,30nm,1.2s						
WRH	Wood River Hil	90.03	23	IAmb	IAmb	23 57 08.1	
	comp=Z,22nm,1.0s						
CCB	Clear Creek Bu	90.05	23	IAmb	IAmb	23 57 06.8	
	comp=Z,18nm,1.1s						
SUMG	Summit	90.05	347	iP	P	23 56 56.9	-1.1
SUMG				i		23 57 05.9	
SUMG	Summit	90.05	347	eP	P	23 56 56.9	-1.1
SUMG				i		23 57 05.9	
IL31		90.33	22	IAmb	IAmb	23 57 08.9	
	comp=Z,18nm,1.0s						
ILAR	Eielson Array	90.33	22	P	P	23 56 58.5	-0.4
	comp=Z,2.8nm,0.9s,baz=302,slow=3.1,SNR=24						
ILAR				PP	PP	00 00 33.6	+1.0
	comp=Z,1.3nm,1.0s,baz=301,slow=7.2,SNR=4.3						
ILAR				LR	LR	00 42 42.1	
	comp=Z,278nm,18.8s,baz=314,slow=39						
ILAR	Eielson Array	90.33	22	P	P	23 56 57.6	-1.3
ILAR	Eielson Array	90.33	22	P	P	23 56 57.6	-1.3
TORD	Torodi Ar. Bea	90.46	283	P	P	23 57 00.1	-0.4
	comp=Z,5.4nm,1.1s,baz=79,slow=4.4,SNR=17						
TORD				PP	PP	00 00 33.4	-1.8
	comp=Z,2.2nm,1.1s,baz=56,slow=4.2,SNR=6.1						
TORD				LR	LR	00 36 10.5	
	comp=Z,183nm,21.7s,baz=20,slow=35						
TORD	Torodi Ar. Bea	90.46	283	P	P	23 56 59.4	-1.1
HDA	Harding Lake	90.49	23	IAmb	IAmb	23 57 09.0	
	comp=Z,21nm,1.0s						
HDA	Harding Lake	90.49	23	P	P	23 56 58.2	-1.4
	baz=300						
MSWZ	Moikau Station	90.81	132	P	P	23 57 00.7	-0.9
DHY	Denali Highway	91.00	24	IAmb	IAmb	23 57 12.0	
	comp=Z,27nm,1.2s						
PMR	Palmer	91.00	26	P	P	23 57 01.9	-0.2
PMR	Palmer	91.00	26	P	P	23 57 01.9	-0.2
PMR				pmax	pmax		
	comp=Z,50nm,1.0s						
GHO	Glory Hole Cre	91.00	25	P	P	23 57 02.7	+0.5
CNPM	China Poot	91.04	28	P	P	23 57 02.1	-0.2
KDAK	Kodiak Island	91.17	30	P	P	23 57 02.7	-0.2
KDAK	Kodiak Island	91.17	30	P	P	23 57 02.7	-0.2
KDAK				pmax	pmax		
	comp=Z,44nm,1.1s						
SML	Sawmill	91.23	25	P	P	23 57 02.8	-0.5
KNK	Knik Glacier	91.37	26	P	P	23 57 04.3	+0.4
URZ	Urewera	91.38	129	LR	LR	00 42 50.7	
	comp=Z,212nm,18.1s,baz=270,slow=39						
SEW	Seward	91.57	27	P	P	23 57 05.0	+0.3
SCM	Sheep Creek Mo	91.64	25	P	P	23 57 04.9	-0.2
SCM	Sheep Creek Mo	91.64	25	P	P	23 57 04.9	-0.2
SCM				pmax	pmax		
	comp=Z,55nm,1.0s						
PAX	Paxson	91.80	23	P	P	23 57 06.5	+0.6
PAX				IAmb	IAmb	23 57 18.2	
	comp=Z,21nm,1.2s						
PAX	Paxson	91.80	23	P	P	23 57 06.5	+0.6
PAX				pmax	pmax		
	comp=Z,21nm,1.2s						
DOT	Dot Lake	91.97	23	IAmb	IAmb	23 57 16.9	
	comp=Z,15nm,1.0s						
EGAK	Eagle	92.38	21	IAmb	IAmb	23 57 19.0	
	comp=Z,20nm,1.1s						
MENT	Mentasta	92.49	23	P	P	23 57 10.1	+1.1
INK	Inuvik	92.51	16	P	P	23 57 08.7	-0.2
	comp=Z,10nm,1.1s,baz=309,slow=6.1,SNR=18						
INK	Inuvik	92.51	16	IAmb	IAmb	23 57 20.7	
	comp=Z,16nm,1.1s						
FID	Port Fidalgo	92.54	26	P	P	23 57 08.6	-0.6
HIN	Hinchinbrook I	92.71	26	P	P	23 57 09.8	-0.3
EPYK	Eagle Plains	92.86	18	P	P	23 57 10.1	-0.5
	baz=310						
RES	Resolute Bay	92.97	3	P	P	23 57 11.0	+0.1
RES				IAmb	IAmb	23 57 22.0	
	comp=Z,8.3nm,1.1s						
RES	Resolute Bay	92.97	3	P	P	23 57 11.0	+0.1
RES				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BCAR	Beaver Creek A	93.15	22	P	P	23 57 12.1	+0.1
BCAR					PcP	23 57 13.3	+0.6
GLB	Gilahina Butte	93.27	24	IAmb	IAmb	23 57 23.3	
	comp=Z,20nm,1.1s						
VRDI	Verde Repeater	93.54	24	P	P	23 57 14.1	+0.1
VRDI				IAmb	IAmb	23 57 24.6	
	comp=Z,18nm,1.1s						
MCARA	McCarthy VSAT	93.62	24	P	P	23 57 14.8	+0.6
CRQM	Cirque	93.92	25	P	P	23 57 15.0	-0.8
C36M	Paulatuk	94.07	13	IAmb	IAmb	23 57 21.9	
	comp=Z,6.4nm,0.8s						
C36M	Paulatuk	94.07	13	P	P	23 57 15.2	-0.9
	baz=322						
BALM	Baldy	94.09	24	P	P	23 57 16.9	+0.4
BALM				IAmb	IAmb	23 57 27.9	
	comp=Z,17nm,1.0s						
BARN	Barnard Glacie	94.35	24	P	P	23 57 18.1	+0.3
BARN				IAmb	IAmb	23 57 28.7	
	comp=Z,16nm,1.0s						
CTGM	Chitina Glacie	94.53	24	IAmb	IAmb	23 57 30.1	
	comp=Z,21nm,1.1s						
AFI	Afiamalu	95.90	103	LR	LR	00 35 21.9	
	comp=Z,127nm,19.7s,baz=333,slow=32						
VNDA	Vanda	97.06	168	LR	LR	00 39 01.9	
	comp=Z,183nm,18.8s,baz=319,slow=34						
WHY	Whitehorse	97.21	22	P	P	23 57 29.6	-1.1
WHY				IAmb	IAmb	23 57 42.4	
	comp=Z,4.9nm,0.9s						
DBIC	Dimbokro	98.21	279	LR	LR	00 41 32.9	
	comp=Z,148nm,19.8s,baz=46,slow=35						
YKA	Yellowknife Ar	101.93	14	P	Pdif	23 57 50.3	-1.3
	comp=Z,1.2nm,1.0s,baz=327,slow=4.7,SNR=9.9						
YKA				PP	PP	00 02 00.5	-1.6
	comp=Z,1.8nm,1.1s,baz=333,slow=7.0,SNR=6.1						
YKA				PKKPbc	PKKPbc	00 13 55.0	-3.5
	comp=Z,0.2nm,0.9s,baz=160,slow=2.7,SNR=4.6						
PPT2	Papeete2	117.57	104	eSS	SS	00 20 14.8	+6.1
	comp=Z,193nm,29.2s						
PPT2	Papeete2	117.57	104	eLR	LR	00 38 20.0	
	comp=Z,263nm,23.0s						
TPAW	Teton Pass	119.61	22		PKPdf	00 02 48.4	-0.2
REDW	Red Top Meadow	119.75	22		PKPdf	00 02 48.2	-0.6
NVAR	Mina Array Bea	120.67	30	PKP	PKiKP	00 02 51.0	+0.2
	comp=Z,2.1nm,1.0s,baz=287,slow=2.8,SNR=8.3						
NVAR				PKKPbc	PKKPbc	00 12 54.6	-1.9
	comp=Z,0.4nm,0.7s,baz=165,slow=6.2,SNR=3.9						
NVAR	Mina Array Bea	120.67	30		PKiKP	00 02 50.8	0.0
NVAR				pPKPdf	sPKPdf	00 03 00.4	-0.3
PDAR	Pinedale Array	120.73	21	PKP	PKPdf	00 02 50.0	-0.7
	comp=Z,1.3nm,1.1s,baz=64,slow=3.4,SNR=7.0						
PDAR	Pinedale Array	120.73	21		PKPdf	00 02 49.4	-1.3
NV11	Mina Array Sit	120.74	30	pPKPdf	pPKPdf	00 03 00.0	+1.8
CCUT	Cedar City	123.69	27		PKiKP	00 02 57.6	+0.8
LCMT	Little Creek M	124.18	27		PKiKP	00 02 57.7	0.0
LCMT				pPKPdf	sPKPdf	00 03 07.3	-0.1
PKCU	Pink Cliffs	124.24	26	pPKPdf	pPKPdf	00 03 08.0	+2.8
U15A	North Rim	125.09	27		PKPdf	00 02 59.4	+0.1
U15A				pPKPdf	sPKPdf	00 03 09.6	+0.3
W13A	Hualapai Mount	125.45	29		PKPdf	00 03 00.0	0.0
TAOE	Nuku Hiva Isla	125.69	92	eLR	LR	00 42 20.0	
	comp=Z,319nm,33.3s						
Y12C	Blythe	126.23	31		PKiKP	00 03 01.8	+0.1
Y12C				pPKPdf	sPKPdf	00 03 10.8	-0.4
214A	Organ Pipe Nat	128.53	31		PKiKP	00 03 06.7	+0.4
ANMO	Albuquerque	128.77	23		PKPdf	00 03 05.5	-0.8
ANMO				pPKPdf	sPKPdf	00 03 16.2	-0.1
ANMO	Albuquerque	128.77	23	PKIKP	PKPdf	00 03 05.5	-0.8
TUC	Tucson	129.21	28		PKPdf	00 03 07.3	+0.2
TUC				pPKPdf	sPKPdf	00 03 17.5	+0.4
MSTX	Muleshoe	130.95	20		PKPdf	00 03 10.0	-0.3
U40A	Yellville	131.03	8	pPKPdf	pPKPdf	00 03 18.3	+0.6
TX31	Lajitas Ar. Si	134.83	23		PKPdf	00 03 18.0	+0.3
TXAR	Lajitas Array	134.83	23	PKP	PKPdf	00 03 17.1	-0.7
	comp=Z,1.4nm,1.1s,baz=34,slow=0.5,SNR=5.2						
TXAR				PP	PP	00 05 51.8	+1.4
	comp=Z,1.6nm,1.0s,baz=347,slow=5.1,SNR=5.8						
TXAR	Lajitas Array	134.83	23		PKPdf	00 03 17.9	+0.2
TXAR	Lajitas Array	134.83	23	PKIKP	PKPdf	00 03 17.9	+0.2
BDFB	Brasilia	144.05	260	PKP	PKPab	00 03 32.2	0.0
	comp=Z,5.1nm,1.0s,baz=116,slow=8.6,SNR=5.3						
TLIG	Tlapa	147.41	25		PKPab	00 03 44.0	-0.9
PLCA	Paso Flores	148.98	201	PKPbc	PKPbc	00 03 46.4	0.0
	comp=Z,5.8nm,1.0s,baz=276,slow=4.3,SNR=9.6						
CPUP	Villa Florida	150.53	238	PKPbc	PKPbc	00 03 49.8	-0.7
	comp=Z,10nm,1.0s,baz=125,slow=3.4,SNR=13						
CPUP	Villa Florida	150.53	238	PKPbc	PKPbc	00 03 50.1	-0.4
CPUP				PKPab	PKPab	00 03 58.7	+1.6
SDV	Santo Domingo	154.60	325		PKPbc	00 03 59.7	-0.5
SDV					sPKPab	00 04 23.7	-0.8
SAML	Samuel	158.37	277		PKPab	00 04 30.9	0.0
SAML	Samuel	158.37	277	PKP2	PKPab	00 04 30.9	0.0
LPAZ	La Paz	163.24	254	PKPab	PKPab	00 04 52.0	-0.8
	comp=Z,9.0nm,1.1s,baz=90,slow=5.2,SNR=9.8						
OTAV	Otavalo	165.98	332		PKPdf	00 04 05.0	+0.3
OTAV	Otavalo	165.98	332	PKIKP	PKPdf	00 04 05.0	+0.3

JMA **02** *23:44:25.8±0.3,21°.96N×122°.42E,h30km*
TAP **02** *23:44:26.1,22°.09N×122°.33E,h9km,ML3.2,D*
ISC 02 23:44:26.7±1.7,**22°.18N**±0°.05×**122°.33E**±0°.04,**h13km**±10km,
n46,σ0°.66/68,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.73	259	iP	Pg	23 44 40.6	-0.4
	baz=265						
LAY				iS	Sb	23 44 51.4	0.0
	baz=265						
TWH	Lutao	0.95	304	iP	Pb	23 44 45.2	+0.1
	baz=306						
TWH				eS	Sn	23 44 58.9	-0.3
	baz=306						
CHKT	Chengkung	1.28	316	eS	Sg	23 45 08.4	+0.5
	baz=318						
TWGBT	Beinan	1.32	299	eP	Pb	23 44 51.8	+0.5
	baz=302						
TWGBT				eS	Sg	23 45 10.4	+1.1
	baz=302						
TWG	Pinlang	1.33	299	P	Pb	23 44 51.9	+0.4
	baz=302						
TWG				eS	Sg	23 45 10.2	+0.7
	baz=302						
ECL	Taimali	1.34	288	P	Pn	23 44 51.2	0.0
	baz=291						
ECL				iS	Sg	23 45 09.9	0.0
	baz=291						
EAST	Anshuo	1.39	279	P	Pn	23 44 51.4	-0.4
	baz=282						
EAST				eS	Sn	23 45 09.3	-0.8
	baz=282						
FULB	Fuli	1.40	317	iP	Pb	23 44 52.7	0.0
	baz=319						
FULB				iS	Sg	23 45 12.3	+0.6
	baz=319						
TWKBT	Hengchun	1.43	261	eP	Pn	23 44 52.5	+0.1
	baz=263						
TWKBT				eS	Sn	23 45 11.1	+0.1
	baz=263						
TWK1	Hengchun	1.43	261	P	Pn	23 44 52.4	-0.1
	baz=263						
TWK1				S	Sn	23 45 11.1	0.0
	baz=263						
HEN	Hengchun	1.48	264	eP	Pn	23 44 53.2	+0.1
	baz=266						
TWF1	Yuli	1.51	321	iP	Pb	23 44 54.3	-0.3
	baz=323						
TWF1				eS	Sg	23 45 15.9	+0.6
	baz=323						
YULB	Yu-li	1.54	322	iP	Pb	23 44 55.0	-0.1
	baz=323						
YULB				eS	Sg	23 45 16.8	+0.5
	baz=323						
HGSD	Ruisui	1.55	328	eP	Pn	23 44 54.8	+0.7
	baz=329						
HGSD				eS	Sg	23 45 16.2	-0.5
	baz=329						
ELDTW	Lidau	1.58	310	eP	Pn	23 44 54.9	+0.3
	baz=312						
SCZT	Fangliau	1.59	277	iP	Pn	23 44 54.8	+0.1
	baz=280						
EHY	Hungye	1.62	325	eP	Pb	23 44 56.6	+0.2
	baz=326						
EHY				eS	Sg	23 45 19.1	+0.3
	baz=326						
MASBT	Mashibuluo	1.63	286	eP	Pn	23 44 55.9	+0.7
	baz=288						
SSD	Sandimen	1.67	290	eP	Pb	23 44 56.7	-0.7
	baz=292						
EGFH	Guangfu	1.70	331	eP	Pb	23 44 58.0	+0.1
	baz=332						
SLGT	Liugui	1.75	298	eP	Pb	23 44 59.4	+0.6
	baz=300						
ESL	Shilin	1.83	333	eP	Pb	23 44 59.4	-0.6
	baz=334						
ESL				eS	Sb	23 45 23.3	+0.5
	baz=334						
SGST	Jiashian	1.85	300	eP	Pb	23 45 00.5	+0.1
	baz=301						
WTP	Ta-pu	1.91	304	eP	Pg	23 45 02.7	-0.7
	baz=306						
VWDT	VWDT	1.91	325	eP	Pb	23 45 01.2	-0.3
	baz=326						
TPUB	Ta-pu	1.93	306	eP	Pb	23 45 01.9	+0.2
	baz=307						
ALS	Alishan	1.93	314	eP	Pb	23 45 02.4	+0.4
	baz=315						
CHN1	Nanshi	1.94	301	eP	Pb	23 45 02.8	+0.8
	baz=303						
CHN4	Tsaushan	1.98	306	eP	Pb	23 45 03.1	+0.4
	baz=308						
TWD	Chiawan	2.01	341	eP	Pn	23 45 00.0	-0.4
	baz=341						
TWD				eS	Sb	23 45 28.3	+0.1
	baz=341						
SSLB	Suanglung	2.04	322	eP	Pb	23 45 04.3	+0.6
	baz=323						
OWD	Renai	2.06	329	eP	Pb	23 45 03.2	-1.0
	baz=330						
OWD				eS	Sb	23 45 29.3	-0.5
	baz=330						
CHN5	Tsauling	2.08	313	eP	Pb	23 45 05.0	+0.7
	baz=314						
NACB	Ninganchiao	2.10	341	eP	Pn	23 45 03.0	+1.4
	baz=342						
NACB				eS	Sb	23 45 30.3	-0.4
	baz=342						
CHGB	Renai	2.15	331	eP	Pb	23 45 04.8	-0.9
	baz=331						
ETLH	Xiulin Townshi	2.17	339	eP	Pb	23 45 04.4	-1.5
	baz=339						
ETLH				eS	Sb	23 45 31.9	-0.8
	baz=339						
TYC	Yuchr	2.19	322	eP	Pb	23 45 06.9	+0.7
	baz=323						
WHF	Hehuan Shan	2.19	334	eP	Pb	23 45 05.6	-0.9
	baz=334						
HATJ	Hateruma jima	2.31	36	eS	Sn	23 45 33.4	+0.5
JYNG	Yonagunijimaku	2.33	14	eS	Sb	23 45 36.6	-0.8
IRIF	Iriomote-Funau	2.50	31	P	Pn	23 45 08.6	+1.4
IRIF				S	Sn	23 45 39.2	+1.6
JKRS	Kuro-shima	2.57	37	P	Pn	23 45 09.1	+1.0
JKRS				eS	Sn	23 45 40.0	+0.8
JIJ	Ishigaki jima	2.74	37	P	Pn	23 45 10.8	+0.3
JIJ				eS	Sn	23 45 43.3	-0.2
JISG	Ishigakijimahi	3.01	37	P	Pn	23 45 14.4	+0.2
JISG				eS	Sn	23 45 49.9	-0.2
JTJ	Tarama	3.28	41	S	Sn	23 45 56.2	-0.6
JIRB	Irabujima	3.71	44	eS	Sn	23 46 05.9	-1.5

IDC **02** *23:50:36.9±1.4,38°.43N×20°.35E,h0km,mb3.5/4, mb1 3.5/6,mb1mx3.3/41,mbtmp3.4/6,ML3.4/1,Error ellipse: s-maj=28.3km s-min=23.1km az=61.0*
ATH **02** *23:50:38.9,38°.23N×20°.39E,h9km±1km,ML3.6/4,Error ellipse: s-maj=2.0km s-min=1.0km az=255.0*
THE **02** *23:50:38.8,38°.22N×20°.36E,h9km,ML3.4/6,Error ellipse: s-maj=0.9km s-min=0.4km az=250.0*
ISC 02 23:50:38.4±0.8,**38°.25N**±0°.02×**20°.36E**±0°.04,**h10km**±4km,
n38,σ0°.74/60,mb3.5/4,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.04	195	P	Pg	23 50 40.7	+0.3
KEF3				S	Sg	23 50 42.1	+0.2
KEF4	Livadi, Kephal	0.05	76	P	Pg	23 50 40.6	+0.1
KEF4				S	Sg	23 50 41.8	-0.2
CHV1	Chavriata, Kef	0.06	167	P	Pg	23 50 40.8	+0.2
CHV1				S	Sg	23 50 42.2	0.0
KEF1	Kardakata, Kep	0.09	70	P	Pg	23 50 41.1	+0.2
KEF1				S	Sg	23 50 42.6	-0.2
ARG2	Argostoli	0.12	125	P	Pg	23 50 41.5	+0.2
ARG2				S	Sg	23 50 43.1	-0.3
KEF2	Argostoli. Kep	0.13	130	P	Pg	23 50 41.5	+0.1
KEF2				S	Sg	23 50 43.4	-0.2
VLS	Valsamata	0.19	111	P	Pg	23 50 42.5	0.0
VLS				S	Sg	23 50 45.3	0.0
	97µm,0.2s						
VLS	Valsamata	0.19	111	P	Pg	23 50 42.5	0.0
VLS				S	Sg	23 50 45.0	-0.3
VLS				AML	AML	23 50 45.4	
VLS				AML	AML	23 50 45.4	
VSK1	VASILIKIADES	0.23	44	P	Pg	23 50 43.8	+0.6
VSK1				S	Sg	23 50 47.7	+1.3
VLMS	Volimes, Zakyn	0.44	147	P	Pg	23 50 47.0	0.0
VLMS				S	Sg	23 50 53.1	+0.3
VLMS				AML	AML	23 50 55.6	
	comp=N,22936µm,0.2s						
VLMS				AML	AML	23 50 56.6	
	comp=E,26679µm,0.2s						
EVGI	Lefkada island	0.44	31	P	Pb	23 50 47.7	-0.6
EVGI				S	Sb	23 50 55.0	+0.1
EVGI	Lefkada island	0.44	31	P	Pb	23 50 47.7	-0.6
MGNA	Meganis	0.53	39	P	Pb	23 50 49.1	+0.3
MGNA				S	Sb	23 50 56.8	-0.7
MGNA				AML	AML	23 50 57.8	
	comp=N,13080µm,0.5s						
MGNA				AML	AML	23 50 58.0	
	comp=E,18468µm,0.4s						
LKD2	Lefkada island	0.59	23	P	Pg	23 50 50.1	+0.2
LKD2				S	Sb	23 50 59.0	-0.3
	comp=E,2µm,0.5s						
LKD2	Lefkada island	0.59	23	P	Pg	23 50 50.1	+0.2
LKD2				S	Sb	23 50 58.6	-0.6
LKD2				AML	AML	23 51 04.2	
	comp=N,3648µm,0.5s						
LKD2				AML	AML	23 51 05.2	
	comp=E,3850µm,0.5s						
TSLK	Tsoukalades, L	0.62	22	P	Pg	23 50 50.9	+0.4
TSLK				S	Sb	23 51 00.6	+0.4
	comp=E,2µm,0.5s						
TSLK	Tsoukalades, L	0.62	22	P	Pg	23 50 51.0	+0.4
ZAK2	Zakynthos	0.62	137	P	Pg	23 50 50.2	-0.3
ZAK2				S	Sb	23 50 59.6	-0.6
AST1	Astakos	0.64	62	P	Pg	23 50 51.0	+0.1
AST1				S	Sb	23 51 01.2	+0.5
KRI1	kERI	0.69	148	P	Pg	23 50 51.2	-0.5
KRI1				S	Sb	23 51 01.6	-0.3
PDO	Prodromos	0.73	61	P	Pg	23 50 52.8	+0.2
PDO				S	Sb	23 51 04.0	+0.6
	comp=E,5µm,0.5s						
PDO	Prodromos	0.73	61	P	Pg	23 50 52.8	+0.2
RLS	Riolos of Patr	0.89	102	P	Pb	23 50 55.8	-0.1
PVO	Paravola	0.98	68	P	Pb	23 50 57.5	-0.1
PVO				S	Sn	23 51 12.3	0.0
	comp=E,2µm,0.4s						
PVO	Paravola	0.98	68	P	Pb	23 50 57.4	-0.1
DRO	Drossia	1.10	105	P	Pb	23 50 59.2	-0.4
DRO				S	Sn	23 51 15.5	+0.3
	comp=E,2µm,0.4s						
DRO	Drossia	1.10	105	P	Pb	23 50 59.2	-0.4
LAKA	Lakka	1.27	90	P	Pn	23 51 01.8	-0.4
TRIZ	Trizonia	1.35	84	P	Pn	23 51 03.1	-0.2
TRIZ	Trizonia	1.35	84	P	Pn	23 51 03.2	0.0
KALE	Kalithea	1.41	84	P	Pn	23 51 04.1	0.0
JAN	Janina	1.46	15	P	Pn	23 51 06.9	+0.4
IDI	Anoyia	4.68	128	Pn	Pn	23 51 52.5	+3.3
	baz=309,slow=13,SNR=1.9						
IDI				Sn	Sn	23 52 45.5	+1.9
	comp=E,0.9nm,0.3s,baz=231,slow=16,SNR=1.4						
GERES	GERESS Array B	11.64	338	Pn	Pn	23 53 23.3	-1.3
	comp=E,0.1nm,0.3s,baz=160,slow=15,SNR=4.4						
TORD	Torodi Ar. Bea	30.00	219	P	P	23 56 48.3	+1.0
	comp=E,0.6nm,1.0s,baz=17,slow=10,SNR=2.6						
KURBB	Kurchatov Arra	42.29	54	P	P	23 58 29.6	-2.3
	comp=E,0.1nm,0.4s,baz=282,slow=9.3,SNR=3.6						
MKAR	Makanchi Array	45.37	58	P	P	23 58 56.3	-0.5
	comp=E,0.4nm,0.6s,baz=279,slow=7.5,SNR=8.2						
ZALV	Zalesovo Beam	45.74	48	P	P	23 58 59.2	-0.4
	comp=E,0.6nm,0.4s,baz=284,slow=9.3,SNR=3.7						

TEH **02** *23:52:18.8,37°.81N×47°.16E,h14km,ML3.5*
THR **02** *23:52:19.7±0.3,37°.84N×47°.26E,h14km±4km,ML3.3*
ISC 02 23:52:18.8±1.9,**37°.89N**±0°.04×**47°.19E**±0°.04,**h7km**±16km,
n21,σ0°.97/24,Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC

ISRB Sarab 0.38 99 ePg Pb 23 52 26.8 -1.3
ISRB eSg Sb 23 52 33.1 -1.3
IHSH Hashtrud 0.42 8 ePg Pb 23 52 29.4 +0.5
IHSH eSg Sb 23 52 36.6 +0.9
IHRS Heris 0.45 345 ePg Pb 23 52 28.5 -0.7
AHAR Ahar 0.61 350 ePg Pb 23 52 31.8 -0.2
TABZ Tabriz 0.70 284 ePg Pb 23 52 32.9 -0.6
TVRZ Varzaqan 0.74 326 ePg Pb 23 52 34.1 -0.1
ITBZ Tabriz 0.89 293 ePg Pg 23 52 36.0 0.0
ITBZ eSg Sb 23 52 49.5 +0.5
GRMI Germi 1.07 31 ePg Pn 23 52 40.0 -0.5
GRMI eSg Sn 23 52 55.0 -0.8
GRMI IAML 23 52 56.7
comp=E,764nm,0.2s
GRMI Germi 1.07 31 ePg Pn 23 52 40.0 -0.5
IMRD Marand 1.43 306 ePg Pb 23 52 46.3 +0.3
IMRD e 23 52 48.2
MAHB Mahabad 1.63 227 ePg Pn 23 52 46.9 -1.2
MAHB e 23 53 13.7
ZNJK Zanjan 1.70 135 ePg Pn 23 52 49.5 +0.3
ZNJK eSg Sn 23 53 11.6 +0.1
ZNJK Zanjan 1.70 135 ePn Pn 23 52 49.5 +0.3
MAKU Maku 2.45 308 ePn Pb 23 53 02.4 -0.9
MAKU Maku 2.45 308 ePn Pb 23 53 02.4 -0.9
QABG Abgarm-Qazvin 2.90 138 ePn Pn 23 53 06.9 +1.2
QALM Alamut, Qazvin 3.12 117 ePn Pn 23 53 09.7 +1.0
QALM e 23 54 02.0
IRAZ Razeghan 3.31 138 ePn Pn 23 53 13.0 +1.6
IMHD Mahdasht 3.55 127 ePn Pn 23 53 16.5 +1.9
CHTH Charan 3.72 121 ePn Pn 23 53 17.9 +0.9
CHTH Charan 3.72 121 ePn Pn 23 53 17.9 +0.9

OMAN 02 23:56:34.0±4.4, 26°.55N×57°.93E, h20km, ml3.0/11, Error ellipse: s-maj=44.1km s-min=23.3km az=77.0
IDC 02 23:56:34.5±1.4, 26°.31N×57°.40E, h0km, mb3.2/4, mb1 3.3/5, mb1mx3.1/45, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=31.8km s-min=25.1km az=79.0
TEH 02 23:56:34.2, 26°.73N×57°.73E, h9km, ML3.3
ISC 02 23:56:35.0±0.9, **26°.57N**±0°.03×**57°.74E**±0°.05, **h10km, n35,** σ1s.60/42, **mb3.1**/4, **Southern Iran**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JSK1 Jask 0.93 178 ePg Pn 23 56 55.0 +1.0
NIAN Nian 1.27 321 ePg Pn 23 56 57.2 -1.7
NIAN e 23 57 20.8
KHNJ Kahnooj 1.37 359 ePg Pn 23 56 56.6 -3.7
BANOM Banah 1.44 244 P Pb 23 57 01.0 -1.0
BANOM S Sg 23 57 23.5 +2.1
BANOM Banah 1.44 244 ePn Pb 23 57 00.9 -1.1
SHME Shamm 1.52 251 ePn Pb 23 57 02.8 -0.5
GENO Geno 1.62 301 eSg Sb 23 57 25.6 -0.2
GENO ePn Pb 23 57 00.4 -1.2
GENO e 23 57 32.2
MDH Madha 1.81 226 P Pn 23 57 04.5 -1.8
MDH S Sn 23 57 27.5 -1.8
MDH Madha 1.81 226 ePn Pn 23 57 04.4 -1.8
MSFE Esma-Masafi 1.86 230 ePn Pn 23 57 05.4 -1.6
UOSS Minazif 2.13 221 ePn Pn 23 57 10.5 -0.1
HATD Hatta, Dubai 2.26 220 ePn Pb 23 57 13.7 -2.2
ASHO Ashiyiah 2.41 219 P Pn 23 57 13.9 -0.7
ASHO Ashiyiah 2.41 219 ePn Pn 23 57 14.0 -0.5
NAZ Nazwa, Dubai 2.44 230 ePn Pn 23 57 15.0 0.0
SOHO SOHO 2.66 204 P Pn 23 57 15.5 -2.3
HOQ Hoqain 3.00 188 P Pn 23 57 20.4 -2.1
BIDO Bidbid 3.05 173 P Pn 23 57 22.4 -0.9
CHMN Cheshme madani 3.29 357 ePn Pn 23 57 27.8 +1.0
CHMN e 23 57 34.8
ARQ Araqi 3.40 199 P Pn 23 57 29.5 +1.3
ARQ S Sn 23 58 11.1 +2.6
WSAR Wadi Sarin 3.41 166 Pn Pn 23 57 27.6 -0.7
5.6nm,0.3s,baz=347,slow=12,SNR=60
WSAR Sn Sn 23 58 06.1 -2.8
4.3nm,0.3s,baz=245,slow=14,SNR=9.3
SMDO Samad 3.50 175 P Pn 23 57 30.1 +0.5
SMDO S Sn 23 58 10.8 -0.4
TVBK TV Kerman 3.51 346 ePn Pn 23 57 30.7 +0.7
TVBK e 23 57 41.7
BSY Bisya 3.84 187 P Pn 23 57 34.7 +0.6
KHGB Koh Gabri 3.95 344 ePn Pn 23 57 36.6 +0.7
KHGB e 23 58 48.1
WBK Wadi Bani Khal 4.10 164 P Pn 23 57 37.5 -0.2
WBK S Sn 23 58 23.6 -2.1
JMDO Jabal Madar 4.19 175 P Pn 23 57 39.9 +0.9
NHDN Nehbandan 5.22 22 ePn Pn 23 57 52.6 -0.6
MHTO MHTO 5.56 178 P Pn 23 57 59.2 +1.4
MHTO S Sn 23 59 02.4 +0.6
IKOO Kooshah 5.94 10 ePn Pn 23 58 02.4 -0.8
IRAM Ramesheh 7.01 319 ePn Pn 23 58 17.6 -0.3
BRTR Keskin Array B 23.98 309 P P 00 01 50.4 +0.6
0.5nm,0.8s,baz=117,slow=8.4,SNR=2.7
MKAR Makanchi Array 28.00 37 P P 00 02 30.7 +4.7
0.1nm,0.4s,baz=248,slow=7.6,SNR=1.3
KURBB Kurchatov Arra 28.81 28 P P 00 02 37.0 +3.9
0.2nm,0.7s,baz=224,slow=7.8,SNR=1.6
TORD Torodi Ar. Bea 53.90 267 P P 00 05 58.0 -1.6
0.6nm,0.9s,baz=63,slow=7.5,SNR=2.2

IDC 03 00:08:45.1±1.0, 6°.85S×75°.70W, h0km, mb3.6/6, mb1 3.9/8, mb1mx3.7/27, mbtmp3.7/8, ML3.6/2, Error ellipse: s-maj=26.5km s-min=21.7km az=179.0
ISC 03 00:08:50.3±0.8, **6°.88S**±0°.09×**75°.72W**±0°.09, **h35km, n9,** σ0s.61/11, **mb3.6**/6, **Northern Peru**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ATAH Atahualpa 2.67 264 Pn Pn 00 09 30.4 -0.7
24nm,0.3s,baz=57,slow=14,SNR=77
ATAH Sn Sn 00 10 03.8 +1.2
13nm,0.3s,baz=176,slow=13,SNR=4.3
NNA Nana 5.20 192 Pn Pn 00 10 05.9 +0.2
1.9nm,0.3s,baz=216,slow=20,SNR=4.1
NNA Sn Sn 00 11 04.0 -0.5
1.7nm,0.3s,baz=232,slow=18,SNR=2.2
TXAR Lajitas Array 44.94 325 P P 00 17 02.4 +0.3
0.4nm,0.7s,baz=143,slow=7.6,SNR=4.4
NVAR Mina Array Bea 59.97 322 P P 00 18 53.4 -0.2
0.3nm,0.6s,baz=95,slow=9.5,SNR=2.5
DBIC Dimbokro 71.96 81 P P 00 20 11.2 +0.3
1.8nm,0.9s,baz=270,slow=5.8,SNR=4.2
YKA Yellowknife Ar 75.32 342 P P 00 20 29.6 0.0
0.3nm,0.6s,baz=139,slow=5.8,SNR=7.3
TORD Torodi Ar. Bea 79.40 75 P P 00 20 53.9 +0.3
0.4nm,0.4s,baz=279,slow=5.8,SNR=13
ILAR Eielson Array 88.29 336 P P 00 21 37.6 -0.3
0.3nm,0.8s,baz=103,slow=2.9,SNR=3.2
MKAR Makanchi Array 135.97 22 PKP PKPdf 00 28 07.3 -0.5
0.4nm,0.9s,baz=330,slow=5.5,SNR=4.1

IDC 03 00:26:30.8±0.4, 45°.83N×26°.27E, h138km±4km, mb3.5/12, mb1 3.4/19, mb1mx3.3/44, mbtmp3.8/19, Error ellipse: s-maj=16.2km s-min=11.4km az=145.0
SIGU 03 00:26:30.9±0.1, 46°N±1°×26°E±°, h140km±1km, mb3.4/6
MOS 03 00:26:30.1±0.9, 45°.70N×26°.43E, h146km, mb4.2/5, Error ellipse: s-maj=6.9km s-min=5.0km az=92.4
BUC 03 00:26:31.1±0.3, 45°.67N×26°.52E, h139km±2km, ml4.3/63, Error ellipse: s-maj=1.9km s-min=1.7km az=154.0
NEIC 03 00:26:31.0±1.3, 45°.70N±0°.04×26°.47E±0°.05, h142km±4km, Error ellipse: s-maj=6.5km s-min=5.4km az=182.0
SOF 03 00:26:31.8, 45°.68N×26°.40E, h100km, MD4.0
BEO 03 00:26:44.3±0.6, 45°.16N×24°.90E, h0km, ML3.0/3
ISC 03 00:26:31.0±0.5, **45°.68N**±0°.02×**26°.51E**±0°.02, **h148km**±4km, **n362,** σ1s.35/481, **mb3.8**/19, **154C-94D, Romania**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BISRR Bisoca 0.19 134 ⇑P Pn 00 26 50.9 -0.2
BISRR ⇓S Sn 00 27 04.9 -1.5
BISRR Bisoca 0.19 134 ⇑P Pn 00 26 50.9 -0.2
BISRR ⇓S Sn 00 27 04.9 -1.5
BISRR Bisoca 0.19 134 Pn 00 26 50.9 -0.2
BISRR Sn 00 27 04.9 -1.5
PLOR Plostina 0.20 30 ⇓P Pn 00 26 50.4 -0.7
PLOR ⇑S Sn 00 27 04.0 -2.4
PLOR Plostina 0.20 30 ⇓P Pn 00 26 50.4 -0.7
PLOR ⇑S Sn 00 27 04.0 -2.4
PLOR Plostina 0.20 30 Pn 00 26 50.4 -0.7
PLOR Sn 00 27 03.9 -2.5
PLOR Plostina 0.20 30 P Pn 00 26 50.4 -0.7
PLOR 00 27 03.9
VRI Vrincioaia 0.24 39 ⇓P Pn 00 26 50.6 -0.5
VRI ⇓S Sn 00 27 05.0 -1.6
VRI Vrincioaia 0.24 39 ⇓P Pn 00 26 50.6 -0.5
VRI ⇓S Sn 00 27 05.0 -1.6
VRI Vrincioaia 0.24 39 Pn 00 26 50.6 -0.5
VRI Sn 00 27 04.9 -1.6
VRI Vrincioaia 0.24 39 P Pn 00 26 50.6 -0.5
VRI 00 27 04.9
ODBI Odobesti 0.39 78 ⇓P Pn 00 26 52.0 +0.4
ODBI ⇑S Sn 00 27 07.7 +0.5
ODBI Odobesti 0.39 78 ⇓P Pn 00 26 52.0 +0.4
ODBI ⇑S Sn 00 27 07.7 +0.5
ODBI Odobesti 0.39 78 Pn 00 26 52.0 +0.4
MLR Muntele Rosu 0.44 245 ⇑P Pn 00 26 51.5 -0.5
MLR ⇑S Sn 00 27 06.7 -1.2
MLR Muntele Rosu 0.44 245 P Pn 00 26 51.5 -0.5
349nm,0.3s,baz=52,slow=1.5,SNR=3822
MLR S Sn 00 27 06.6 -1.2
1μm,0.3s,baz=80,slow=6.1,SNR=66
MLR Muntele Rosu 0.44 245 ⇑P Pn 00 26 51.5 -0.5
MLR ⇑S Sn 00 27 06.7 -1.2
GRER 0.44 133 ⇑P Pn 00 26 52.5 +0.6
GRER 0.44 133 ⇑P Pn 00 26 52.5 +0.6
GRER ⇓S Sn 00 27 09.0 +1.4
PETR Petresti 0.51 85 ⇑P Pn 00 26 52.1 +0.1
PETR ⇑S Sn 00 27 07.9 -0.2
PETR Petresti 0.51 85 ⇑P Pn 00 26 52.1 +0.1
PETR ⇑S Sn 00 27 07.9 -0.2
PETR Petresti 0.51 85 Pn 00 26 52.1 +0.1
PETR Sn 00 27 07.9 -0.2
OZUR 0.65 309 ⇓P Pn 00 26 52.1 -0.9
OZUR ⇑S Sn 00 27 07.8 -2.0
OZUR 0.65 309 ⇓P Pn 00 26 52.1 -0.9
OZUR ⇑S Sn 00 27 07.8 -2.0
OZUR 0.65 309 Pn 00 26 52.1 -0.9
OZUR Sn 00 27 07.8 -2.0
GHRR 0.73 59 ⇓P Pn 00 26 53.4 -0.1
GHRR ⇓S Sn 00 27 09.1 -1.5
GHRR 0.73 59 ⇓P Pn 00 26 53.4 -0.1
GHRR ⇓S Sn 00 27 09.1 -1.5
GHRR 0.73 59 Pn 00 26 53.4 -0.1
TUDR 0.82 96 ⇓P Pn 00 26 53.5 -0.5
TUDR ⇓S Sn 00 27 10.4 -1.2
TUDR 0.82 96 ⇓P Pn 00 26 53.5 -0.5
TUDR ⇓S Sn 00 27 10.4 -1.2
TUDR 0.82 96 Pn 00 26 53.5 -0.5
TUDR Sn 00 27 10.4 -1.2
DOPR Dopca 0.83 290 ⇓P Pn 00 26 53.7 -0.6
DOPR ⇓S Sn 00 27 10.6 -1.3
DOPR Dopca 0.83 290 ⇓P Pn 00 26 53.7 -0.6
DOPR ⇓S Sn 00 27 10.6 -1.3
DOPR Dopca 0.83 290 Pn 00 26 53.7 -0.6
TESR Tescani 0.83 7 ⇓P Pn 00 26 53.4 -0.8
TESR ⇓S Sn 00 27 10.1 -2.0
TESR Tescani 0.83 7 ⇓P Pn 00 26 53.4 -0.8
TESR ⇓S Sn 00 27 10.1 -2.0
TESR Tescani 0.83 7 Pn 00 26 53.4 -0.8
TESR Sn 00 27 10.1 -2.0
PLAR PLOIESTI 0.84 204 ⇑P Pn 00 26 54.3 0.0
PLAR ⇑S Sn 00 27 12.3 +0.4
PLAR PLOIESTI 0.84 204 ⇑P Pn 00 26 54.3 0.0
PLAR ⇑S Sn 00 27 12.3 +0.4
PGOR Pogoanele 0.84 157 ⇑P Pn 00 26 54.2 -0.1
PGOR ⇑S Sn 00 27 12.1 +0.1
PGOR Pogoanele 0.84 157 ⇑P Pn 00 26 54.2 -0.1
PGOR ⇑S Sn 00 27 12.1 +0.1
SLCR Slobozia Conac 0.89 96 ⇑P Pn 00 26 54.1 -0.5
SLCR ⇓S Sn 00 27 11.0 -1.5
SLCR Slobozia Conac 0.89 96 ⇑P Pn 00 26 54.1 -0.5
SLCR ⇓S Sn 00 27 11.0 -1.5
IZVR Izvoarele 0.89 99 ⇓P Pn 00 26 54.0 -0.7
IZVR ⇑S Sn 00 27 10.5 -2.1
IZVR Izvoarele 0.89 99 ⇓P Pn 00 26 54.0 -0.7
IZVR ⇑S Sn 00 27 10.5 -2.1
BRAG Branistea 0.96 104 ⇑P Pn 00 26 54.6 -0.6
BRAG ⇑S Sn 00 27 11.5 -2.1
BRAG Branistea 0.96 104 ⇑P Pn 00 26 54.6 -0.6
BRAG ⇑S Sn 00 27 11.5 -2.1
VARL Varlezi 0.96 76 ⇑S Sn 00 27 12.4 -1.2
VARL Varlezi 0.96 76 ⇑S Sn 00 27 12.4 -1.2
NEGR Negresti 0.96 98 ⇓P Pn 00 26 54.8 -0.4
NEGR ⇓S Sn 00 27 12.5 -1.1
NEGR Negresti 0.96 98 ⇓P Pn 00 26 54.8 -0.4
NEGR ⇓S Sn 00 27 12.5 -1.1
BIR Birlad 0.97 53 ⇑P Pn 00 26 55.1 -0.2
BIR ⇓S Sn 00 27 12.5 -1.4
BIR Birlad 0.97 53 ⇑P Pn 00 26 55.1 -0.2
BIR ⇓S Sn 00 27 12.5 -1.4
BIR Birlad 0.97 53 Pn 00 26 55.1 -0.2
BIR Sn 00 27 12.5 -1.4
BIR Birlad 0.97 53 P Pn 00 26 55.1 -0.2
BIR 00 27 12.5
SULR 1.02 190 ⇑P Pn 00 26 55.6 -0.1
SULR ⇑S Sn 00 27 14.5 0.0
SULR 1.02 190 ⇑P Pn 00 26 55.6 -0.1
SULR ⇑S Sn 00 27 14.5 0.0
VOIR 1.06 257 ⇑P Pn 00 26 55.4 -0.8
VOIR ⇑S Sn 00 27 13.5 -1.8
VOIR 1.06 257 ⇑P Pn 00 26 55.4 -0.8
VOIR ⇑S Sn 00 27 13.5 -1.8
VOIR 1.06 257 Pn 00 26 55.4 -0.8
VOIR Sn 00 27 13.5 -1.8
VOIR 1.06 257 P Pn 00 26 55.4 -0.8
VOIR 00 27 13.5
GISR Galati 1.11 102 ⇑P Pn 00 26 56.3 -0.2
GISR ⇓S Sn 00 27 14.7 -1.3
GISR Galati 1.11 102 ⇑P Pn 00 26 56.3 -0.2
GISR ⇓S Sn 00 27 14.7 -1.3
GISR Galati 1.11 102 Pn 00 26 56.0 -0.5
MTUR Matau 1.12 246 ⇑P Pn 00 26 56.5 -0.2
MTUR Matau 1.12 246 ⇑P Pn 00 26 56.5 -0.2
MTUR Matau 1.12 246 Pn 00 26 56.5 -0.2
MTUR Matau 1.12 246 P Pn 00 26 56.5 -0.2
LEHL Lehliu 1.23 170 ⇑P Pn 00 26 57.4 -0.2
LEHL ⇓S Sn 00 27 17.4 -0.5
LEHL Lehliu 1.23 170 ⇑P Pn 00 26 57.4 -0.2
LEHL ⇓S Sn 00 27 17.4 -0.5
LEHL Lehliu 1.23 170 Pn 00 26 57.4 -0.2
LEHL Sn 00 27 17.4 -0.5
JOSR Joseni 1.24 326 ⇓P Pn 00 26 57.1 -0.6
JOSR Joseni 1.24 326 ⇓P Pn 00 26 57.1 -0.6
JOSR Joseni 1.24 326 Pn 00 26 57.1 -0.6
INCR INCERC-Sediu C 1.27 191 ⇑P Pn 00 26 57.6 -0.4
INCR ⇓S Sn 00 27 17.5 -1.1
INCR INCERC-Sediu C 1.27 191 ⇑P Pn 00 26 57.6 -0.4
INCR ⇓S Sn 00 27 17.5 -1.1
INCR INCERC-Sediu C 1.27 191 Pn 00 26 57.6 -0.4
BIZ Bicaz 1.29 347 ⇓P Pn 00 26 58.7 +0.4
BIZ Bicaz 1.29 347 ⇓P Pn 00 26 58.7 +0.4
BIZ Bicaz 1.29 347 Pn 00 26 58.7 +0.4
VASR Vaslui 1.31 42 ⇑P Pn 00 26 58.1 -0.3
VASR ⇑S Sn 00 27 17.9 -1.5
VASR Vaslui 1.31 42 ⇑P Pn 00 26 58.1 -0.3
VASR ⇑S Sn 00 27 17.9 -1.5
ARR Arges 1.36 257 ⇑P Pn 00 26 58.6 -0.5
ARR Arges 1.36 257 ⇑P Pn 00 26 58.6 -0.5
ARR Arges 1.36 257 Pn 00 26 58.5 -0.5
ARR Sn 00 27 17.1 -3.3
BUC1 Bucharest 1.38 195 ⇑P Pn 00 26 58.8 -0.3
BUC1 ⇑S Sn 00 27 19.6 -1.0
BUC1 Bucharest 1.38 195 ⇑P Pn 00 26 58.8 -0.3
BUC1 ⇑S Sn 00 27 19.6 -1.0
BUC1 Bucharest 1.38 195 Pn 00 26 58.8 -0.3
BUC1 Sn 00 27 19.6 -1.0
BUC1 Bucharest 1.38 195 P Pn 00 26 58.8 -0.3
BUC1 00 27 19.6
GOLR 1.38 233 ⇓P Pn 00 26 59.0 -0.2
GOLR ⇓S Sn 00 27 20.4 -0.2
GOLR 1.38 233 ⇓P Pn 00 26 59.0 -0.2
GOLR ⇑S Sn 00 27 20.4 -0.2
GOLR 1.38 233 Pn 00 26 58.8 -0.4
HARR Harsova 1.41 134 ⇑P Pn 00 26 59.0 -0.4
HARR Harsova 1.41 134 ⇑P Pn 00 26 59.0 -0.4
HARR Harsova 1.41 134 Pn 00 26 59.0 -0.4
HARR Harsova 1.41 134 P Pn 00 26 59.1 -0.4
LEOM Leova 1.44 56 ⇑P Pn 00 26 59.7 -0.1
LEOM ⇑S Sn 00 27 20.5 -1.3
LEOM Leova 1.44 56 Pn Pn 00 26 59.7 -0.1
LEOM Leova 1.44 56 ⇑P Pn 00 26 59.7 -0.1
LEOM ⇑S Sn 00 27 20.5 -1.3
LEOM Leova 1.44 56 Pn 00 26 59.7 -0.1
LEOM Leova 1.44 56 P Pn 00 26 59.7 -0.1
SGRR Singureni 1.51 195 ⇑P Pn 00 26 60.0 -0.5
SGRR ⇑S Sn 00 27 20.8 -2.2
SGRR Singureni 1.51 195 ⇑P Pn 00 26 60.0 -0.5
SGRR ⇑S Sn 00 27 20.8 -2.2
RASA Rasa 1.54 163 ⇑P Pn 00 27 00.4 -0.4
RASA ⇑S Sn 00 27 21.5 -2.0
RASA Rasa 1.54 163 ⇑P Pn 00 27 00.4 -0.4
RASA ⇑S Sn 00 27 21.5 -2.0
MDB Medias 1.56 288 ⇓P Pn 00 27 00.9 -0.1
MDB Medias 1.56 288 ⇓P Pn 00 27 00.9 -0.1
HUMR Humele 1.58 224 ⇑P Pn 00 27 00.7 -0.7
HUMR ⇓S Sn 00 27 22.8 -1.6
HUMR Humele 1.58 224 ⇑P Pn 00 27 00.7 -0.7
HUMR ⇓S Sn 00 27 22.8 -1.6
HUMR Humele 1.58 224 Pn 00 27 00.7 -0.7
IAS Iasi 1.68 25 ⇑P Pn 00 27 01.9 -0.4
IAS ⇓S Sn 00 27 24.2 -2.1
IAS Iasi 1.68 25 ⇑P Pn 00 27 01.9 -0.4
IAS ⇓S Sn 00 27 24.2 -2.1
IAS Iasi 1.68 25 Pn 00 27 01.9 -0.4
IAS Iasi 1.68 25 P Pn 00 27 01.9 -0.4
CVDA Cernavoda 1.73 141 ⇑P Pn 00 27 02.6 -0.2
CVDA ⇑S Sn 00 27 25.0 -2.3
CVDA Cernavoda 1.73 141 ⇑P Pn 00 27 02.6 -0.2
CVDA ⇑S Sn 00 27 25.0 -2.3
CVDA Cernavoda 1.73 141 Pn 00 27 02.6 -0.2
COPA Copaceanca 1.80 211 ⇑P Pn 00 27 03.1 -0.6
COPA ⇑S Sn 00 27 27.0 -1.7
COPA Copaceanca 1.80 211 ⇑P Pn 00 27 03.1 -0.6
COPA ⇑S Sn 00 27 27.0 -1.7
COPA Copaceanca 1.80 211 Pn 00 27 03.1 -0.6
ICOR Ion Corvin 1.81 149 ⇑P Pn 00 27 03.7 -0.1
ICOR ⇓S Sn 00 27 27.5 -1.4
ICOR Ion Corvin 1.81 149 ⇑P Pn 00 27 03.7 -0.1
ICOR ⇓S Sn 00 27 27.5 -1.4
ICOR Ion Corvin 1.81 149 Pn 00 27 03.7 -0.1
JURR Jurilovca 1.91 118 ⇑P Pn 00 27 04.8 0.0
JURR Jurilovca 1.91 118 ⇑P Pn 00 27 04.8 0.0
LOT Lotru 1.94 264 ⇑P Pn 00 27 04.9 -0.6
LOT ⇑S Sn 00 27 30.7 -1.0
LOT Lotru 1.94 264 ⇑P Pn 00 27 04.9 -0.6
LOT ⇑S Sn 00 27 30.7 -1.0
MILM Milestii Mici 2.02 51 ⇑P Pn 00 27 05.9 -0.3
MILM Milestii Mici 2.02 51 Pn Pn 00 27 05.9 -0.3
MILM Milestii Mici 2.02 51 ⇑P Pn 00 27 05.9 -0.3
MILM Milestii Mici 2.02 51 Pn 00 27 05.9 -0.3
MFTR Murfatlar 2.03 137 ⇓P Pn 00 27 05.9 -0.4
MFTR ⇑S Sn 00 27 31.3 -2.0
MFTR Murfatlar 2.03 137 ⇓P Pn 00 27 05.9 -0.4
MFTR ⇑S Sn 00 27 31.3 -2.0
MFTR Murfatlar 2.03 137 Pn 00 27 05.9 -0.4
ARCR ARCALIA 2.05 314 ⇑P Pn 00 27 06.0 -0.5
ARCR ARCALIA 2.05 314 ⇑P Pn 00 27 06.0 -0.5
KIS Kishinev 2.07 50 i P Pn 00 27 06.5 -0.3
250nm,0.6s
KIS i S Sn 00 27 32.0 -2.3
4μm,0.6s
KIS Kishinev 2.07 50 ⇑P Pn 00 27 06.5 -0.3
KIS ⇑S Sn 00 27 32.2 -2.1
KIS Kishinev 2.07 50 P Pn 00 27 06.5 -0.3
KIS Kishinev 2.07 50 ⇑P Pn 00 27 06.5 -0.3
KIS ⇑S Sn 00 27 32.2 -2.1
KIS Kishinev 2.07 50 Pn 00 27 06.5 -0.3
KIS Kishinev 2.07 50 i P Pn 00 27 06.5 -0.3
KIS i S Sn 00 27 32.0 -2.3
KIS pmax pmax
comp=Z,250nm,0.6s
KIS smax smax
comp=N,4μm,0.6s
RAZG Razgrad 2.12 180 ⇑P Pn 00 27 06.9 -0.6
RAZG ⇓S Sn 00 27 33.6 -1.7
RAZG Razgrad 2.12 180 ⇑P Pn 00 27 06.9 -0.6
RAZG ⇓S Sn 00 27 33.6 -1.7
BURAR Bucovina Array 2.13 336 ⇓P Pn 00 27 08.6 +1.0
BURAR Bucovina Array 2.13 336 ⇓P Pn 00 27 08.6 +1.0
BURAR Bucovina Array 2.13 336 Pn 00 27 08.4 +0.8
BURAR Bucovina Array 2.13 336 Pn 00 27 08.6 +1.0
BUR08 Bucovina Ar. S 2.16 336 Pn 00 27 08.5 +0.6
ZIMR 2.18 202 ⇑P Pn 00 27 07.6 -0.6
ZIMR ⇑S Sn 00 27 34.5 -2.2
ZIMR 2.18 202 ⇑P Pn 00 27 07.6 -0.6
ZIMR ⇑S Sn 00 27 34.5 -2.2
EFOR EFORIE 2.20 136 ⇑P Pn 00 27 08.2 -0.1
EFOR ⇑S Sn 00 27 35.2 -1.8
EFOR EFORIE 2.20 136 ⇑P Pn 00 27 08.2 -0.1
EFOR ⇑S Sn 00 27 35.2 -1.8
EFOR EFORIE 2.20 136 Pn 00 27 08.2 -0.1
VLAD Vladila 2.25 222 ⇑P Pn 00 27 08.2 -0.9
VLAD Vladila 2.25 222 ⇑P Pn 00 27 08.2 -0.9
VLAD Vladila 2.25 222 Pn 00 27 08.2 -0.9
TSSL Sulina 2.32 102 ⇓S Sn 00 27 39.2 -0.5
TSSL Sulina 2.32 102 ⇓S Sn 00 27 39.2 -0.5
PSN Preselentsi 2.33 149 i P Pn 00 27 10.1 +0.2
MANR Mangalia 2.38 141 ⇓P Pn 00 27 10.5 -0.1
MANR ⇑S Sn 00 27 39.3 -1.7
MANR Mangalia 2.38 141 ⇓P Pn 00 27 10.5 -0.1
MANR ⇑S Sn 00 27 39.3 -1.7
SZH Strazhica 2.45 190 i P Pn 00 27 10.9 -0.5
DEV Deva 2.53 276 ⇓P Pn 00 27 12.9 +0.5
DEV ⇑S Sn 00 27 44.5 +0.2
DEV Deva 2.53 276 ⇓P Pn 00 27 12.9 +0.5
DEV ⇑S Sn 00 27 44.5 +0.2
DEV Deva 2.53 276 Pn 00 27 12.9 +0.5
DEV Deva 2.53 276 P Pn 00 27 12.9 +0.5
SRE Strehaia 2.55 248 ⇑P Pn 00 27 11.9 -0.7
SRE ⇓S Sn 00 27 42.7 -2.0
SRE Strehaia 2.55 248 ⇑P Pn 00 27 11.9 -0.7
SRE ⇓S Sn 00 27 42.7 -2.0
PVL Pavlikeni 2.60 199 i P Pn 00 27 14.2 +0.9
GZR Gura Zlata 2.64 265 ⇑P Pn 00 27 13.6 -0.2
GZR ⇓S Sn 00 27 47.3 +0.5
GZR Gura Zlata 2.64 265 ⇑P Pn 00 27 13.6 -0.2
GZR ⇓S Sn 00 27 47.3 +0.5
GZR Gura Zlata 2.64 265 Pn 00 27 13.6 -0.2
CHRU Chernivtsi 2.65 351 eP Pn 00 27 13.4 -0.4
CHRU Pm 00 27 14.0
CHRU i S Sn 00 27 45.3 -1.6
CHRU Sm 00 27 48.0
PLVB Pleven 2.66 211 ⇑P Pn 00 27 13.4 -0.6
PLVB Pleven 2.66 211 ⇑P Pn 00 27 13.4 -0.6
SORM Soroca 2.76 27 ⇓P Pn 00 27 14.5 -0.7
SORM Soroca 2.76 27 ⇓P Pn 00 27 14.5 -0.7
ELND Elena 2.79 190 ⇑P Pn 00 27 15.2 -0.5
ELND Elena 2.79 190 ⇑P Pn 00 27 15.2 -0.5
ELND Elena 2.79 190 Pn 00 27 15.2 -0.5
BAIL Bailesti 2.80 235 ⇑P Pn 00 27 15.0 -0.7
BAIL Bailesti 2.80 235 ⇑P Pn 00 27 15.0 -0.7
KSV Kosov 2.81 340 ⇓i P Pn 00 27 16.3 +0.4
RAKU Rahkiv 2.84 326 ⇑i P Pn 00 27 15.8 -0.5
DRGR 2.86 294 ⇓P Pn 00 27 15.6 -0.9
DRGR 2.86 294 ⇓P Pn 00 27 15.6 -0.9
BMR Baia Mare 2.88 315 ⇓P Pn 00 27 16.6 -0.1
BMR Baia Mare 2.88 315 ⇓P Pn 00 27 16.6 -0.1
KMPD K-Podol'skiy 2.88 359 ⇑i P Pn 00 27 16.0 -0.7
KMPD i S Sn 00 27 49.6 -2.5
NSLU Nyzhne Selyshc 2.88 332 ⇑i P Pn 00 27 21.9 +5.1
PUNG Punghina 2.90 242 ⇑P Pn 00 27 15.5 -1.5
PUNG Punghina 2.90 242 ⇑P Pn 00 27 15.5 -1.5
NDNU Novodnistrovsk 2.97 11 ⇓i P Pn 00 27 17.3 -0.6
NDNU Pm 00 27 17.5
NDNU i S Sn 00 27 51.2 -2.9
NDNU Sm 00 27 51.9
DJES Djerdap 3.00 252 ePn Pn 00 27 16.8 -1.5
MPEP Malo Peshtene 3.06 221 i P Pn 00 27 18.4 -0.6
JMB Yambol 3.21 179 i P Pn 00 27 20.4 -0.7
STNU Starunia 3.33 336 ⇑i P Pn 00 27 22.9 +0.5
KORU Korolevo 3.39 318 ⇑i P Pn 00 27 23.1 -0.1
TRSU Trosnyk 3.43 316 ⇑i P Pn 00 27 24.1 +0.4
BZS Buzias 3.43 271 ePn Pn 00 27 22.9 -0.9
BZS Buzias 3.43 271 ⇑P Pn 00 27 23.2 -0.6
BZS Buzias 3.43 271 ⇑P Pn 00 27 23.2 -0.6
MEZ Mezhgor'ye 3.50 325 ⇓i P Pn 00 27 25.0 +0.4
MEZ Pm 00 27 26.9
MEZ i S Sn 00 28 06.8 +0.6

MEZ Sm 00 28 11.2
MDVR Moldovita 3.51 257 ⇓P Pn 00 27 24.1 -0.8
MDVR Moldovita 3.51 257 ⇓P Pn 00 27 24.1 -0.8
HORU Horodok 3.53 359⇑iP Pn 00 27 24.7 -0.4
HORU eS Sn 00 28 05.2 -1.9
PGB Panagyurishte 3.56 209 P Pn 00 27 25.2 -0.3
BRIU Brid 3.57 319⇓iP Pn 00 27 25.1 -0.5
TRPA Tarpa 3.66 313 ⇑P Pn 00 27 25.8 -0.9
TRPA Tarpa 3.66 313 ⇑P Pn 00 27 25.8 -0.9
ZAPS Zavoj 3.67 230 ePn Pn 00 27 25.5 -1.5
ZAPS eSg Sn 00 28 03.9 -6.5
BERU Beregovo 3.68 315⇓iP Pn 00 27 26.4 -0.5
BANR Banloc 3.79 267 ⇑P Pn 00 27 28.8 +0.4
BANR Banloc 3.79 267 ⇑P Pn 00 27 28.8 +0.4
MUKU Mukachevo 3.81 318⇓iP Pn 00 27 28.6 0.0
VTS Vitosha 3.87 219 ePn Pn 00 27 29.8 +0.2
VTS Vitosha 3.87 219 ⇓P Pn 00 27 29.1 -0.4
VTS Vitosha 3.87 219 ⇓P Pn 00 27 29.1 -0.4
VTS Vitosha 3.87 219 iP Pn 00 27 29.2 -0.4
VTS Vitosha 3.87 219 Pn 00 27 29.2 -0.4
VTS Vitosha 3.87 219 P Pn 00 27 29.2 -0.4
MORS Morshin 3.88 334⇓iP Pn 00 27 30.7 +1.1
BOVS Bovan 3.99 241 ePn Pn 00 27 29.9 -1.2
BOVS eSg Sn 00 28 11.8 -5.9
KDZ Kurdzhali 4.11 192 iP Pn 00 27 32.4 -0.3
UZH Uzhgorod 4.12 317 eP Pn 00 27 32.5 -0.2
UZH Uzhgorod 4.12 317⇓iP Pn 00 27 31.9 -0.8
UZH eS Sn 00 28 19.0 -1.7
SHIU Shidnytsya 4.14 330 eP Pn 00 27 32.8 -0.2
RZN Rozhen 4.20 199 iP Pn 00 27 33.7 -0.3
STZU Stuzhytsa 4.26 323 eP Pn 00 27 35.3 +0.8
STZU Pm 00 27 36.7
STZU eS Sn 00 28 25.6 +1.7
STZU Sm 00 28 33.8
BOSS Bosilegrad 4.31 224 ePn Pn 00 27 35.0 -0.3
KOLS Kolonicke sedl 4.35 320 eP Pn 00 27 36.2 +0.5
KOLS Kolonicke sedl 4.35 320 ePN Pn 00 27 36.2 +0.5
BARS Barje 4.43 231 ePn Pn 00 27 22.8 -14
BARS Barje 4.43 231 ePn Pn 00 27 36.1 -0.7
BARS eSg Sn 00 27 56.9 -31
LVV L'vov 4.46 339 eP Pn 00 27 37.3 +0.1
LVV eS Sn 00 28 29.3 +0.5
LVV pmax pmax
comp=Z,30nm,1.7s
LVV smax smax
comp=N,110nm,1.6s
LVV smax smax
comp=E,90nm,1.6s
GRUS Gruza 4.50 249 ePn Pn 00 27 37.0 -0.7
MMB Musomiste 4.56 207 iP Pn 00 27 38.7 0.0
TRUS Trudelj 4.57 254 ePn Pn 00 27 37.9 -0.8
SELS Selova 4.58 239 ePn Pn 00 27 37.8 -1.0
CRVS Cervenica-Dubn 4.71 315 eP Pn 00 27 41.2 +0.7
CRVS Cervenica-Dubn 4.71 315 ePN Pn 00 27 41.1 +0.6
KWP Kalwaria Pacla 4.71 328 Pn 00 27 40.8 +0.2
KWP Kalwaria Pacla 4.71 328 P Pn 00 27 40.8 +0.2
ALN Alexandroupoli 4.79 184 iP Pn 00 27 41.8 +0.1
ALN Alexandroupoli 4.79 184 P Pn 00 27 41.8 +0.1
DIVS Divibare 4.90 253 ePn Pn 00 27 41.8 -1.3
KECS Kecovo 4.98 306 eP Pn 00 27 44.0 0.0
KECS Kecovo 4.98 306 ePN Pn 00 27 44.0 0.0
IVAS Ivanjica 5.00 247 ePn Pn 00 27 43.3 -1.2
PSZ Piszkesteto 5.06 299 ⇑P Pn 00 27 44.7 -0.5
PSZ Piszkesteto 5.06 299 ⇑P Pn 00 27 44.7 -0.5
PSZ Piszkesteto 5.06 299 Pn 00 27 44.6 -0.7
PSZ Piszkesteto 5.06 299 P Pn 00 27 44.6 -0.7
STIP Stip 5.07 220 iPn Pn 00 27 42.2 -3.1
STHS Stebnicka Huta 5.17 318 eP Pn 00 27 47.0 +0.5
STHS Stebnicka Huta 5.17 318 ePN Pn 00 27 47.0 +0.5
SEV Sevastopol' 5.19 100 eP Pn 00 27 45.3 -1.6
SEV Pm 00 27 45.6
SEV eS Sn 00 28 42.9 -3.1
SEV Sm 00 28 44.7
SEV Sevastopol' 5.19 100 eP Pn 00 27 45.3 -1.6
SEV eS Sn 00 28 42.9 -3.1
SEV pmax pmax
comp=Z,3.0nm,0.3s
SEV smax smax
comp=N,19nm,0.6s
SEV smax smax
comp=E,7.0nm,0.4s
VAY Valandovo 5.22 215 iPn Pn 00 27 47.0 -0.3
SJES Sjenica 5.27 245 ePn Pn 00 27 47.9 -0.1
AKASG Malin Array Be 5.34 19 P Pn 00 27 48.1 -0.7
comp=E,9.7nm,0.3s,baz=201,slow=12,SNR=49
AKASG S Sn 00 28 44.4 -5.1
comp=E,12nm,0.3s,baz=202,slow=21,SNR=23
AKASG Malin Array Be 5.34 19 Pn 00 27 47.0 -1.8
AKASG Malin Array Be 5.34 19 eP Pn 00 27 47.7 -1.1
AKASG pmax pmax
comp=Z,10.0nm,0.3s
AKBB Malin Array Si 5.34 19 Pn 00 27 48.3 -0.5
AKBB Malin Array Si 5.34 19 iP Pn 00 27 48.5 -0.3
BBLS Lazići 5.38 253 ePn Pn 00 27 49.0 -0.4
SIM Simferopol' 5.41 95 P Pn 00 27 57.6 +7.8
SIM pmax pmax
comp=Z,13nm,1.1s
VYHS Vyhne 5.95 301 eP Pn 00 27 56.3 -0.6
VYHS Vyhne 5.95 301 ePN Pn 00 27 56.3 -0.6
SUDU Sudak 6.04 95 eP Pn 00 28 01.9 +3.7
SUDU Pm 00 28 02.5
SUDU eS Sn 00 29 08.0 +1.7
SUDU Sm 00 29 08.5
SUDU Sudak 6.04 95 eP Pn 00 28 01.9 +3.7
SUDU eS Sn 00 29 08.0 +1.7
SUDU pmax pmax
comp=Z,8.0nm,0.6s
SUDU smax smax
comp=N,8.0nm,0.6s
SUDU smax smax
comp=E,11nm,0.4s
PDG Podgorica 6.16 241 ePn Pn 00 27 59.8 +0.1
PDG Podgorica 6.16 241 Pn Pn 00 27 59.3 -0.5
FNA Florina 6.17 219 Pn Pn 00 27 59.8 -0.2
FNA Florina 6.17 219 P Pn 00 27 59.8 -0.2
LIT Litokhoron 6.31 209 Pn Pn 00 28 00.5 -1.4
LIT Litokhoron 6.31 209 P Pn 00 28 00.5 -1.4
OJC Ojcow 6.40 318 Pn Pn 00 28 01.6 -1.3
OJC Ojcow 6.40 318 P Pn 00 28 01.6 -1.3
TIR Tirane 6.49 230 Pn Pn 00 28 05.1 +0.9
TIR Tirane 6.49 230 P Pn 00 28 05.1 +0.9
BLY Banja Luka 6.66 265 Pn Pn 00 28 05.9 -0.5
VRAC Vranov 7.63 302 P Pn 00 28 16.7 -2.7
comp=E,0.1nm,0.3s,baz=114,slow=14,SNR=5.0
ANN Anapa 7.76 93 eP Pn 00 28 27.9 +6.8
ANN pmax pmax
comp=Z,92nm,1.2s
BR131 Keskin Array S 7.93 136 Pn Pn 00 28 23.4 -0.3
BR131 Keskin Array S 7.93 136 P Pn 00 28 23.4 -0.3
BRTR Keskin Array B 7.93 136 P Pn 00 28 22.9 -0.7
comp=Z,0.2nm,0.3s,baz=319,slow=12,SNR=8.7
BRTR Keskin Array B 7.93 136 Pn Pn 00 28 23.1 -0.6
BRTR Keskin Array B 7.93 136 eP Pn 00 28 23.3 -0.3
GERES GERESS Array B 9.27 295 P Pn 00 28 38.8 -2.5
comp=Z,0.1nm,0.3s,baz=101,slow=13,SNR=2.4
FUORN Ofenpass-Fuorn 11.31 281 Pn Pn 00 29 09.6 +1.0
OBN Obninsk 11.40 30 Pn 00 29 07.7 -1.6
OBN Obninsk 11.40 30⇑eP Pn 00 29 09.1 -0.2
OBN e 00 31 24.4
OBN pmax pmax
comp=Z,4.0nm,0.5s
KIV Kislovodsk 11.62 93 eP Pn 00 29 10.9 -1.5
KIV pmax pmax
comp=Z,12nm,1.0s
MSSA Maissana 12.11 270 Pn Pn 00 29 18.1 -0.7
VSU Vasula 12.80 1 iP Pn 00 29 29.2 +1.7
VSU Vasula 12.80 1 eP Pn 00 29 29.6 +2.1
FINES FINESS Array B 15.79 359 P Pn 00 30 01.7 -3.3
comp=Z,0.2nm,0.3s,baz=173,slow=12,SNR=7.8
FINES FINESS Array B 15.79 359 Pn Pn 00 30 02.2 -2.7
FINES FINESS Array B 15.79 359 Pn Pn 00 30 02.3 -2.7
FIA1 FINESS Array S 15.79 359 Pn Pn 00 30 02.5 -2.5
FIA1 IAmb IAmb 00 30 06.8
comp=Z,9.2nm,1.1s
HFS Hagfors 16.36 337 P Pn 00 30 09.3 -2.7
comp=Z,0.2nm,0.3s,baz=138,slow=12,SNR=6.6
KLMR Klimovskoe 17.02 22 ePn P 00 30 15.6 -3.7
KLMR AMP 00 30 18.5
comp=Z,15nm,1.3s
KLMR Klimovskoe 17.02 22 eP P 00 30 15.6 -3.7
KLMR pmax pmax
comp=Z,15nm,1.3s
KONO Kongsberg 17.27 330 P Pn 00 30 22.6 -0.3
KONO IAmb IAmb 00 30 23.0
comp=Z,4.5nm,0.8s
KONO Kongsberg 17.27 330 P Pn 00 30 22.6 -0.3
KONO pmax pmax
comp=Z,4.0nm,0.8s
NC602 NORSAR Array S 17.47 335 P P 00 30 24.6 +0.3
NC405 NORSAR Array S 17.73 336 P P 00 30 26.9 -0.3
NAO01 NORSAR Array S 17.75 334 P P 00 30 25.8 -1.7
NB201 NORSAR Array S 17.80 335 P P 00 30 28.4 +0.5
NB201 IAmb IAmb 00 30 30.7
comp=Z,7.3nm,0.7s
NB2 NORSAR Subarra 17.81 335 P P 00 30 27.7 -0.4
comp=Z,0.6nm,0.6s,baz=141,slow=12
NOA NORSAR Array B 17.81 335 P P 00 30 26.6 -1.6
comp=Z,0.0nm,0.3s,baz=152,slow=11,SNR=5.8
NBO00 NORSAR Array S 17.93 335 P P 00 30 29.7 +0.2
NBO00 IAmb IAmb 00 30 37.9
comp=Z,21nm,1.1s
NC204 NORSAR Array S 18.13 335 P P 00 30 32.3 +0.6
NC204 IAmb IAmb 00 30 49.6
comp=Z,7.1nm,0.9s
KIRV Kirov 18.96 39 P P 00 30 40.3 -0.3
comp=Z,2.6nm,0.3s,baz=258,slow=3.1,SNR=7.2
PRGR Permogore 19.46 28 eP P 00 30 44.1 -1.8
PRGR pmax pmax
comp=Z,10.0nm,0.6s
AKTO Aktyubinsk 21.49 66 P P 00 31 08.1 +0.2
comp=Z,3.0nm,0.6s,baz=270,slow=7.4,SNR=10.0
CART Cartagena 22.02 258 P P 00 31 15.7 +2.3
ARU Arti 22.62 50 P P 00 31 18.8 -0.4
comp=Z,1.7nm,0.4s,baz=241,slow=8.9,SNR=12
ARU Arti 22.62 50 P P 00 31 19.6 +0.5
ARU IAmb IAmb 00 31 20.4
comp=Z,10nm,1.2s
ARU Arti 22.62 50 d iP P 00 31 19.9 +0.7
ARU 00 31 56.2
ARU S S 00 35 20.0 +4.4
ARU pmax pmax
comp=Z,11nm,1.3s
ABKAR Akbulak array 22.77 69 P P 00 31 22.3 +1.7
ARCES ARCESS Array B 23.92 359 P P 00 31 28.9 -2.0
comp=Z,2.1nm,0.7s,baz=180,slow=9.0,SNR=9.6
ARCES ARCESS Array B 23.92 359 P P 00 31 31.7 +0.8
ARCES ARCESS Array B 23.92 359 eP P 00 31 31.4 +0.4
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARE0 ARCESS Array S 23.92 359 P P 00 31 32.4 +1.4
MTE Manteigas 25.32 270 P P 00 31 43.4 -0.6
RAYN Ar Rayn 26.94 139 P P 00 32 00.4 +1.7
RAYN Ar Rayn 26.94 139 P P 00 32 00.4 +1.7
RAYN pmax pmax
comp=Z,1.0nm,0.7s
BRVK Borovoye 29.06 59 P P 00 32 19.5 +2.4
BRVK IAmb IAmb 00 32 19.6
comp=Z,2.5nm,0.5s
BRVK Borovoye 29.06 59 P P 00 32 19.5 +2.4
BRVK pmax pmax
comp=Z,3.0nm,0.5s
BVAR Borovoye Array 29.12 59 P P 00 32 19.4 +1.7
comp=Z,0.7nm,0.5s,baz=273,slow=9.5,SNR=7.9
KKAR Karatay Array 31.25 79 P P 00 32 38.8 +2.2
KKAR Karatay Array 31.25 79 P P 00 32 38.8 +2.2
AAK Ala-Archa 34.15 78 P P 00 33 04.8 +2.8
AAK IAmb IAmb 00 33 10.4
comp=Z,6.5nm,1.4s
AAK Ala-Archa 34.15 78 P P 00 33 04.8 +2.8
AAK pmax pmax
comp=Z,7.0nm,1.5s
KURK Kurchatov 34.49 62 iP P 00 33 05.9 +1.3
KURK pmax pmax
comp=Z,5.0nm,1.5s
KSH Kashi 36.45 82 P P 00 33 19.1 -2.5
KSH pP pP 00 33 50.3 -3.2
KSH PP PP 00 34 45.1 -2.3
KSH PcP PcP 00 35 42.0 -0.4
KSH S S 00 38 44.4 -8.0
KSH sS sS 00 39 41.0 -7.7
ZAA0 Zalesovo Array 37.54 56 P P 00 33 32.2 +1.7
ZAA0 IAmb IAmb 00 33 32.8
comp=Z,2.7nm,0.7s
ZALV Zalesovo Beam 37.54 56 P P 00 33 32.1 +1.6
comp=Z,2.3nm,0.4s,baz=280,slow=9.4,SNR=14
ZALV Zalesovo Beam 37.54 56 P P 00 33 31.9 +1.4
MAKZ Makanchi 37.70 68 P P 00 33 33.7 +1.7
MAKZ Makanchi 37.70 68 P P 00 33 33.7 +1.7
MAKZ pmax pmax
comp=Z,1.0nm,0.9s
MK31 Makanchi Array 37.91 68 P P 00 33 35.7 +2.0
MK31 Makanchi Array 37.91 68 P P 00 33 35.7 +2.0
MKAR Makanchi Array 37.91 68 P P 00 33 35.4 +1.7
comp=Z,0.9nm,0.5s,baz=273,slow=8.2,SNR=23
MKAR Makanchi Array 37.91 68 P P 00 33 35.7 +2.0
TOA0 Torodi Ar. Sit 38.65 221 P P 00 33 41.0 +0.9
TOA0 IAmb IAmb 00 33 42.5
comp=Z,0.7nm,0.7s
TORD Torodi Ar. Bea 38.65 221 P P 00 33 40.7 +0.5
comp=Z,1.0nm,0.5s,baz=29,slow=8.7,SNR=27
TORD Torodi Ar. Bea 38.65 221 P P 00 33 40.2 +0.1
WMQ Urumqi 42.55 70 eP P 00 34 15.2 +3.2
DBIC Dimbokro 47.40 225 P P 00 34 50.1 -0.3
comp=Z,0.8nm,0.4s,baz=27,slow=8.7,SNR=6.2
DBIC Dimbokro 47.40 225 P P 00 34 50.2 -0.3
DBIC IAmb IAmb 00 34 57.2
comp=Z,5.3nm,1.1s
DBIC Dimbokro 47.40 225 P P 00 34 50.3 -0.2
DBIC pmax pmax
comp=Z,5.0nm,1.2s
SONM Songino Array 52.41 57 P P 00 35 30.0 +1.9
comp=Z,1.2nm,0.7s,baz=296,slow=9.3,SNR=5.4
SONM Songino Array 52.41 57 P P 00 35 30.2 +2.1
SONM Songino Array 52.41 57 eP P 00 35 30.3 +2.1
SONM pmax pmax
comp=Z,1.0nm,0.6s
HHC Hu-ho-hao-te 59.30 62 eP P 00 36 18.9 +1.7
INK Inuvik 65.35 352 P P 00 36 56.8 0.0
comp=Z,0.6nm,0.4s,baz=358,slow=4.7,SNR=6.6
YKA Yellowknife Ar 67.78 342 P P 00 37 12.5 +0.2
comp=Z,0.3nm,0.5s,baz=32,slow=5.9,SNR=7.3
PDAR Pinedale Array 83.64 329 P P 00 38 43.0 -0.1
comp=Z,0.2nm,0.7s,baz=40,slow=3.5,SNR=2.8

LVSN 03 00:29:04.9±0.3, 59.57N×24.91E, h0km±5km, ML1.8,
Baltic States-Belarus-Northwestern Russia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MTSE Matsula 1.03 214 eS Sg 00 29 36.6 -1.2
VSU Vasula 1.46 139 eS Sg 00 29 47.9 -3.8
VSU AML AML 00 29 54.0
comp=N,77nm,0.3s
VSU AML AML 00 29 54.0
comp=Z,83nm,0.3s
VSU AML AML 00 29 54.6
comp=E,127nm,0.3s
RAF Rauma 2.14 314 eS Sn 00 30 04.3 -4.8
RAF AML AML 00 30 04.8
comp=N,3.2nm,0.4s
RAF AML AML 00 30 29.0
comp=E,2.4nm,0.8s
RAF AML AML 00 30 36.7
comp=Z,5.5nm,0.8s

IDC 03 00:46:03.4±1.5, 3.06S×129.56E, h0km, mb3.6/2, mb1 3.9/4, mb1mx3.6/30, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=47.4km s-min=25.0km az=84.0
DJA 03 00:46:07.7±0.4, 3.S±5×13.0E±, h10km, M3.5/6, MLv3.5/6
NEIC 03 00:46:08.0±2.4, 3.06S±0.07×129.83E±0.07, h35km±3km, mb4.0/7, Error ellipse: s-maj=10.9km s-min=9.4km az=114.0
ISC 03 00:46:05.6±0.7, 2.90S±0.06×129.93E±0.06, h25km, n20, σ0.96/23, mb4.0/3, Seram

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSAI Masohi 1.10 246 P Pn 00 46 24.7 -0.7
MSAI S Sb 00 46 38.0 -1.8
BNDI Bandanaira 1.61 181 P Pb 00 46 36.8 +2.1
AAI Ambon 1.90 246 P Pn 00 46 37.5 +1.0
AAI S Sn 00 47 00.5 +0.8
FAKI Fak Fak 2.31 91 Pn Pb 00 46 45.7 -0.9
SIJI Sorong 2.42 33 Pn Pb 00 46 48.8 +0.3
28nm,0.3s,baz=196,slow=18,SNR=120
SIJI Sn Sb 00 47 19.2 +1.4
18nm,0.3s,baz=176,slow=23,SNR=10.0
SWI Sorong 2.42 33 P Pb 00 46 48.8 +0.4
KAPI Kappang 10.37 258 Pn Pn 00 48 32.6 -0.3
KNRA Kununurra 12.75 185 Pn Pn 00 49 05.4 0.0
FITZ Fitzroy Crossi 15.68 195 Pn Pn 00 49 45.0 0.0
FITZ IAmb IAmb 00 49 56.6
comp=Z,34nm,1.5s
WB0 Warramunga Arr 17.32 166 Pn Pn 00 50 05.3 -0.6
WB0 IAmb IAmb 00 50 12.5
comp=Z,17nm,1.5s
WRA Warramunga Arr 17.48 166 P Pn 00 50 06.8 -1.0
comp=Z,0.1nm,0.3s,baz=346,slow=12,SNR=2.0
WR0 Warramunga Arr 17.54 165 P 00 50 09.7 +0.1
WR0 IAmb IAmb 00 50 18.1
comp=Z,6.0nm,1.2s
PSA00 Pilbara Seismi 21.00 207 P P 00 50 47.0 -0.3
PSA00 IAmb IAmb 00 50 50.9
comp=Z,7.2nm,1.0s
AS31 Alice Springs 21.00 170 P P 00 50 46.3 -1.0
ASAR Alice Springs 21.00 170 P P 00 50 48.2 +0.9
comp=Z,3.6nm,0.6s,baz=350,slow=11,SNR=24
ASAR Alice Springs 21.00 170 P P 00 50 47.5 +0.1
SNZO South Karori 55.45 140 P P 00 55 38.0 -0.2
MKAR Makanchi Array 64.80 326 P P 00 56 43.5 +1.2
comp=Z,0.3nm,0.7s,baz=119,slow=8.5,SNR=3.3
GSTR Great Sitkin T 71.18 32 P P 00 57 22.5 +0.2
VNDA Vanda 76.50 173 P P 00 57 52.2 -0.7
VNDA IAmb IAmb 00 58 05.2
comp=Z,2.0nm,0.9s

ATH 03 00:58:11.5, 38.23N×20.42E, h10km±1km, ML2.6/3, Error ellipse: s-maj=2.3km s-min=1.2km az=251.0
THE 03 00:58:11.4, 38.21N×20.41E, h10km, ML2.9/6, Error ellipse: s-maj=0.9km s-min=0.3km az=212.0
ISC 03 00:58:11.0±1.1, 38.22N±0.03×20.41E±0.05, h12km±5km, n25, σ0.28/38, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.04 216 P Pg 00 58 13.3 +0.1
CHV1 S Sg 00 58 14.7 0.0
88μm,0.2s
KEF4 Livadi, Kephal 0.04 13 P Pg 00 58 13.3 0.0
KEF4 S Sg 00 58 14.6 -0.2
KEF3 Kipouria, Keph 0.05 255 P Pg 00 58 13.5 +0.2
KEF3 S Sg 00 58 14.9 -0.1
ARG2 Argostoli 0.07 123 P Pg 00 58 13.7 +0.2
ARG2 S Sg 00 58 15.1 -0.1
35μm,0.1s
KEF1 Kardakata, Kep 0.08 37 P Pg 00 58 13.6 +0.1
KEF1 S Sg 00 58 15.1 -0.3
KEF2 Argostoli. Kep 0.08 131 P Pg 00 58 13.8 +0.2
KEF2 S Sg 00 58 15.1 -0.3
VLS Valsamata 0.14 106 P Pg 00 58 14.7 +0.2
VLS S Sg 00 58 17.0 +0.1
7μm,0.1s
VLS Valsamata 0.14 106 P Pg 00 58 14.6 +0.2
VLS S Sg 00 58 16.9 -0.1
VLS AML AML 00 58 17.1
comp=N,11789μm,0.2s
VLS AML AML 00 58 17.2
comp=E,14108μm,0.1s
VSK1 VASILIKIADES 0.23 32 P Pg 00 58 16.1 +0.3
VSK1 S Sg 00 58 19.7 +0.6
comp=E,3μm,0.4s
VLMS Volimes, Zakyn 0.39 150 P Pg 00 58 19.3 +0.5
VLMS S Sb 00 58 25.6 -0.4
VLMS AML AML 00 58 26.6
comp=E,2131μm,0.2s
VLMS AML AML 00 58 31.7
comp=N,2316μm,0.5s
EVGI Lefkada island 0.45 25 P Pg 00 58 20.2 +0.4
EVGI S Sb 00 58 26.9 -0.7
EVGI Lefkada island 0.45 25 P Pg 00 58 20.2 +0.4
MGNA Meganis 0.53 34 P Pg 00 58 21.5 0.0
MGNA AML AML 00 58 30.3
comp=E,1546μm,0.4s
MGNA AML AML 00 58 30.4
comp=N,1063μm,0.3s
LKD2 Lefkada island 0.60 19 P Pg 00 58 22.7 -0.1
LKD2 S Sb 00 58 32.0 -0.1
comp=N,202nm,0.6s
LKD2 Lefkada island 0.60 19 P Pg 00 58 22.8 -0.1
AST1 Astakos 0.62 58 P Pg 00 58 23.1 -0.1
TSLK Tsoukalades, L 0.64 17 P Pg 00 58 23.5 +0.1
TSLK Tsoukalades, L 0.64 17 P Pg 00 58 23.5 +0.1
PDO Prodromos 0.72 58 P Pg 00 58 24.8 -0.1
PDO S Sb 00 58 35.9 +0.6
comp=N,455nm,0.4s
PVO Paravola 0.96 65 P Pg 00 58 29.7 +0.1
DRO Drossia 1.06 104 P Pg 00 58 31.0 -0.4
LAKA Lakka 1.23 88 P Pn 00 58 34.0 -0.1
TRIZ Trizonia 1.31 83 P Pn 00 58 35.3 0.0
KLV Kalavryta, Ach 1.38 97 P Pn 00 58 36.4 +0.2
KLV Kalavryta, Ach 1.38 97 P Pb 00 58 36.9 +0.1

ATH 03 01:16:05.9, 38.41N×20.50E, h17km±4km, ML2.5/3, Error ellipse: s-maj=4.7km s-min=1.0km az=261.0
THE 03 01:16:06.5, 38.43N×20.43E, h7km±1km, ML2.6/6, Error ellipse: s-maj=1.7km s-min=0.3km az=118.0
ISC 03 01:16:06.3±1.2, 38.41N±0.03×20.48E±0.05, h13km±6km, n22, σ0.45/35, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VSK1 VASILIKIADES 0.07 92 P Pg 01 16 08.7 -0.2
VSK1 S Sg 01 16 10.4 -0.4
31μm,0.1s
KEF1 Kardakata, Kep 0.13 181 P Pg 01 16 09.7 0.0
KEF1 S Sg 01 16 12.2 +0.2
KEF4 Livadi, Kephal 0.16 194 P Pg 01 16 10.1 +0.1
KEF4 S Sg 01 16 13.2 +0.5
KEF3 Kipouria, Keph 0.23 206 P Pg 01 16 10.5 -0.8
KEF3 S Sg 01 16 15.4 +0.8
ARG2 Argostoli 0.23 177 P Pg 01 16 11.3 0.0
ARG2 S Sg 01 16 15.3 +0.7
6μm,0.2s
KEF2 Argostoli. Kep 0.25 178 P Pg 01 16 11.7 +0.2
KEF2 S Sg 01 16 15.2 +0.2
VLS Valsamata 0.25 159 P Pg 01 16 10.3 -1.3
VLS S Sg 01 16 15.8 +0.6
VLS AML AML 01 16 16.0
comp=E,2981μm,0.1s
VLS AML AML 01 16 17.4
comp=N,3926μm,0.2s
EVGI Lefkada island 0.25 34 P Pg 01 16 11.6 0.0
EVGI S Sg 01 16 15.6 +0.3
EVGI Lefkada island 0.25 34 P Pg 01 16 11.7 0.0
MGNA Meganis 0.35 45 P Pg 01 16 13.1 -0.2
MGNA AML AML 01 16 19.7
comp=E,1535μm,0.1s
MGNA AML AML 01 16 20.6
comp=N,1137μm,0.1s
LKD2 Lefkada island 0.40 21 P Pg 01 16 14.1 -0.3
LKD2 S Sg 01 16 20.1 +0.3
comp=N,280nm,0.3s
LKD2 Lefkada island 0.40 21 P Pg 01 16 14.1 -0.3
TSLK Tsoukalades, L 0.44 19 P Pg 01 16 14.8 -0.2
TSLK S Sg 01 16 21.2 +0.4
comp=N,348nm,0.5s
TSLK Tsoukalades, L 0.44 19 P Pg 01 16 14.8 -0.2
AST1 Astakos 0.50 75 P Pg 01 16 16.2 +0.1
AST1 S Sg 01 16 24.2 0.0
comp=N,800nm,0.2s
VLMS Volimes, Zakyn 0.55 164 P Pg 01 16 16.9 -0.2
VLMS S Sg 01 16 25.1 +0.6
VLMS AML AML 01 16 26.4
comp=N,1608μm,0.9s
VLMS AML AML 01 16 27.9
comp=E,1508μm,0.3s
PDO Prodromos 0.59 71 P Pg 01 16 17.8 0.0
PDO S Sb 01 16 27.2 +0.5
comp=E,420nm,0.5s
PVO Paravola 0.85 76 P Pg 01 16 22.8 0.0
LAKA Lakka 1.20 98 P Pn 01 16 28.5 -0.3
TRIZ Trizonia 1.26 92 P Pn 01 16 29.2 -0.4
KALE Kalithea 1.31 90 P Pn 01 16 30.0 -0.4
KLV Kalavryta, Ach 1.37 105 P Pn 01 16 31.2 0.0

JMA **03** *01:48:49.6, 24°.15N×122°.21E, h40km±2km, M2.8*
TAP **03** *01:48:50.0, 24°.25N×122°.22E, h52km, ML3.5, C*
ISC 03 01:48:50.3±1.2, **24°.21N**±0°.02×**122°.26E**±0°.02, **h40**km±14km, **n105, σ1°.10**/199, **3C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.36**	**341**	P	**Pn**	**01 48 59.6**	**+0.4**
	baz=337						
EOS1				S	**Sn**	**01 49 06.8**	**+1.4**
	baz=337						
ENA	**Nanau**	**0.52**	**295**	⇑iP	**Pn**	**01 49 01.2**	**-0.1**
	baz=299						
ENA				S	**Sn**	**01 49 09.6**	**+0.5**
	baz=299						
TWC	**Suao**	**0.55**	**317**	P	**Pn**	**01 49 01.2**	**-0.4**
	baz=318						
TWC				S	**Sn**	**01 49 09.0**	**-0.7**
	baz=318						
NACB	**Ninganchiao**	**0.61**	**267**	⇑iP	**Pn**	**01 49 02.1**	**-0.4**
	baz=263						
NACB				S	**Sn**	**01 49 09.2**	**-1.9**
	baz=263						
TWD	**Chiawan**	**0.62**	**258**	⇑iP	**Pn**	**01 49 02.2**	**-0.3**
	baz=245						
TWD				S	**Sn**	**01 49 11.3**	**0.0**
	baz=245						
HWA	**Hwalien**	**0.64**	**249**	eP	**Pn**	**01 49 03.0**	**+0.1**
	baz=244						
HWA				eS	**Sn**	**01 49 13.2**	**+1.3**
	baz=244						
ENLB	**Shoufeng**	**0.67**	**244**	P	**Pn**	**01 49 02.4**	**-0.9**
	baz=233						
ENLB				S	**Sn**	**01 49 12.5**	**-0.1**
	baz=233						
JYNG	**Yonagunijimaku**	**0.67**	**69**	P	**Pn**	**01 49 03.6**	**+0.3**
JYNG				S	**Sn**	**01 49 13.2**	**+0.5**
ETLH	**Xiulin Townshi**	**0.71**	**270**	P	**Pn**	**01 49 03.6**	**-0.3**
	baz=267						
ETLH				S	**Sn**	**01 49 13.8**	**+0.1**
	baz=267						
ILA	**Ilan**	**0.73**	**320**	eP	**Pn**	**01 49 04.2**	**+0.1**
	baz=320						
ILA				eS	**Sn**	**01 49 14.7**	**+0.7**
	baz=320						
YOJ	**Yonaguni jima**	**0.73**	**69**	P	**Pn**	**01 49 04.4**	**+0.3**
	baz=73						
YOJ				S	**Sn**	**01 49 14.6**	**+0.4**
	baz=73						
YOJ	**Yonaguni jima**	**0.73**	**69**	P	**Pn**	**01 49 04.3**	**+0.1**
YOJ				eS	**Sn**	**01 49 14.9**	**+0.7**
TWE	**Neicheng**	**0.74**	**314**	⇓iP	**Pn**	**01 49 04.3**	**0.0**
	baz=307						
TWE				S	**Sn**	**01 49 14.5**	**+0.1**
	baz=307						
NTC	**Toucheng**	**0.76**	**329**	eP	**Pn**	**01 49 03.7**	**-0.8**
	baz=338						
NTC				eS	**Sn**	**01 49 14.9**	**+0.3**
	baz=338						
ENTT	**Nioudou**	**0.76**	**305**	⇓iP	**Pn**	**01 49 04.7**	**+0.1**
	baz=303						
ENTT				S	**Sn**	**01 49 14.8**	**-0.1**
	baz=303						
NDT	**Datong Townshi**	**0.79**	**300**	P	**Pn**	**01 49 05.0**	**+0.1**
	baz=293						
NDT				S	**Sn**	**01 49 15.7**	**+0.2**
	baz=293						
SLBB	**Yuanshan**	**0.79**	**314**	eP	**Pn**	**01 49 05.2**	**+0.3**
	baz=309						
SLBB				eS	**Sn**	**01 49 16.4**	**+0.8**
	baz=309						
NNSB	**Datong**	**0.83**	**286**	P	**Pn**	**01 49 05.4**	**-0.2**
	baz=283						
NNSB				S	**Sn**	**01 49 16.2**	**-0.5**
	baz=283						
NNSH	**Datong**	**0.83**	**286**	eP	**Pn**	**01 49 05.6**	**0.0**
	baz=283						
NNSH				eS	**Sn**	**01 49 16.4**	**-0.3**
	baz=283						
TWB1	**Santiao Chiao**	**0.84**	**343**	P	**Pn**	**01 49 04.9**	**-0.7**
	baz=345						
TWB1				S	**Sn**	**01 49 15.2**	**-1.5**
	baz=345						
NNS	**Nan Shan**	**0.84**	**286**	P	**Pn**	**01 49 05.5**	**-0.2**
	baz=284						
NNS				S	**Sn**	**01 49 16.6**	**-0.3**
	baz=284						
ESL	**Shilin**	**0.85**	**243**	eP	**Pn**	**01 49 05.2**	**-0.5**
	baz=239						
ESL				eS	**Sn**	**01 49 16.5**	**-0.6**
	baz=239						
TIPB	**Shuangxi**	**0.86**	**333**	eP	**Pn**	**01 49 05.5**	**-0.4**
	baz=343						
TIPB				eS	**Sn**	**01 49 16.1**	**-1.2**
	baz=343						
NWLT	**Wulai**	**0.89**	**310**	P	**Pn**	**01 49 06.6**	**+0.2**
	baz=300						
NWLT				eS	**Sn**	**01 49 18.2**	**+0.1**
	baz=300						
WHF	**Hehuan Shan**	**0.91**	**266**	eP	**Pn**	**01 49 06.4**	**-0.6**
	baz=254						
WHF				eS	**Sn**	**01 49 18.7**	**-0.3**
	baz=254						
YHNB	**Yeheng**	**0.93**	**300**	i P	**Pn**	**01 49 06.8**	**-0.1**
	baz=299						
YHNB				S	**Sn**	**01 49 18.4**	**-0.7**
	baz=299						
EGFH	**Guangfu**	**0.93**	**235**	eP	**Pn**	**01 49 06.5**	**-0.3**
	baz=226						
EGFH				eS	**Sn**	**01 49 19.2**	**+0.2**
	baz=226						
NSK	**Sanguang**	**0.94**	**300**	⇓iP	**Pn**	**01 49 07.0**	**-0.1**
	baz=299						
NSK				S	**Sn**	**01 49 18.6**	**-0.9**
	baz=299						
NWF	**Wu-fen Shan**	**0.96**	**333**	eP	**Pn**	**01 49 07.0**	**-0.5**
	baz=345						
NWF				eS	**Sn**	**01 49 19.0**	**-1.0**
	baz=345						
WFSB	**Wu-fen Shan**	**0.96**	**333**	eP	**Pn**	**01 49 07.0**	**-0.4**
	baz=344						
WFSB				eS	**Sn**	**01 49 19.3**	**-0.5**
	baz=344						
TWA	**Mucha**	**0.99**	**322**	eP	**Pn**	**01 49 08.4**	**+0.8**
	baz=332						
TWA				eS	**Sn**	**01 49 21.0**	**+0.6**
	baz=332						
TWT	**Tachien**	**0.99**	**273**	eP	**Pn**	**01 49 08.4**	**+0.6**
	baz=270						
TWT				eS	**Sn**	**01 49 20.9**	**+0.2**
	baz=270						
CHGB	**Renai**	**1.00**	**262**	P	**Pn**	**01 49 07.9**	**-0.1**
	baz=251						
CHGB				S	**Sn**	**01 49 20.9**	**-0.2**
	baz=251						
TDCB	**Techi**	**1.00**	**273**	eP	**Pn**	**01 49 08.1**	**+0.1**
	baz=271						
TDCB				S	**Sn**	**01 49 20.7**	**-0.4**
	baz=271						
NHDH	**Xindian Distri**	**1.01**	**319**	eP	**Pn**	**01 49 08.3**	**+0.4**
	baz=328						
NHDH				eS	**Sn**	**01 49 21.5**	**+0.6**
	baz=328						
OWD	**Renai**	**1.02**	**256**	eP	**Pn**	**01 49 08.1**	**-0.1**
	baz=253						
OWD				eS	**Sn**	**01 49 20.6**	**-0.8**
	baz=253						
TATO	**Taipei**	**1.04**	**318**	P	**Pn**	**01 49 08.6**	**+0.2**
	baz=317						
TATO				eS	**Sn**	**01 49 22.2**	**+0.5**
	baz=317						
HGSD	**Ruisui**	**1.04**	**227**	eP	**Pn**	**01 49 08.0**	**-0.4**
	baz=220						
HGSD				eS	**Sn**	**01 49 22.2**	**+0.4**
	baz=220						
EHY	**Hungye**	**1.10**	**231**	eP	**Pn**	**01 49 08.7**	**-0.6**
	baz=229						
EHY				eS	**Sn**	**01 49 22.5**	**-0.8**
	baz=229						
VWDT	**VWDT**	**1.11**	**246**	P	**Pn**	**01 49 09.6**	**+0.2**
	baz=235						
VWDT				eS	**Sn**	**01 49 23.4**	**-0.1**
	baz=235						
WLTB	**Daxi**	**1.12**	**305**	eP	**Pn**	**01 49 10.1**	**+0.7**
	baz=296						
WLTB				eS	**Sn**	**01 49 24.3**	**+0.6**
	baz=296						
YM01	**YM01**	**1.13**	**326**	eP	**Pn**	**01 49 09.1**	**-0.5**
	baz=337						
YM01				eS	**Sn**	**01 49 24.2**	**+0.2**
	baz=337						
YM10	**YM10**	**1.14**	**326**	eP	**Pn**	**01 49 09.4**	**-0.4**
	baz=337						
YM10				eS	**Sn**	**01 49 23.5**	**-0.7**
	baz=337						
YM05	**YM05**	**1.14**	**327**	eP	**Pn**	**01 49 09.3**	**-0.6**
	baz=337						
YM05				eS	**Sn**	**01 49 25.7**	**+1.3**
	baz=337						
YM04	**YM04**	**1.15**	**325**	eP	**Pn**	**01 49 09.6**	**-0.3**
	baz=336						
YM04				eS	**Sn**	**01 49 23.3**	**-1.2**
	baz=336						
TWS1	**Kuangyinshan**	**1.17**	**320**	P	**Pn**	**01 49 10.4**	**+0.1**
	baz=330						
TWS1				eS	**Sn**	**01 49 25.3**	**+0.3**
	baz=330						
YULB	**Yu-li**	**1.20**	**228**	P	**Pn**	**01 49 09.9**	**-0.6**
	baz=237						
YULB				eS	**Sn**	**01 49 24.4**	**-1.2**
	baz=237						
WHP	**Taichung City**	**1.20**	**274**	eP	**Pn**	**01 49 12.3**	**+1.7**
	baz=272						
WHP				eS	**Sn**	**01 49 26.3**	**+0.5**
	baz=272						
LIOB	**Emei**	**1.21**	**291**	P	**Pn**	**01 49 11.4**	**+0.6**
	baz=290						
LIOB				S	**Sn**	**01 49 27.2**	**+1.2**
	baz=290						
NSTT	**Nanjuang**	**1.22**	**291**	P	**Pn**	**01 49 11.5**	**+0.6**
	baz=289						
NSTT				S	**Sn**	**01 49 26.5**	**+0.3**
	baz=289						
TWY	**Chenhua**	**1.22**	**331**	eP	**Pn**	**01 49 11.5**	**+0.6**
	baz=340						
TWY				eS	**Sn**	**01 49 26.0**	**-0.2**
	baz=340						
TWF1	**Yuli**	**1.22**	**226**	eP	**Pn**	**01 49 10.4**	**-0.5**
	baz=235						
TWF1				eS	**Sn**	**01 49 25.1**	**-1.1**
	baz=235						
DPDB	**Guoxing**	**1.23**	**262**	eP	**Pn**	**01 49 11.6**	**+0.6**
	baz=255						
DPDB				eS	**Sn**	**01 49 27.6**	**+1.2**
	baz=255						
SSLB	**Suanglung**	**1.26**	**251**	eP	**Pn**	**01 49 11.4**	**0.0**
	baz=249						
SSLB				eS	**Sn**	**01 49 26.6**	**-0.6**
	baz=249						
SMLT	**Sun Moon Lake**	**1.28**	**256**	eP	**Pn**	**01 49 12.2**	**+0.4**
	baz=247						
SMLT				eS	**Sn**	**01 49 28.6**	**+0.8**
	baz=247						
SBCB	**Hsinchu**	**1.30**	**297**	eP	**Pn**	**01 49 12.4**	**+0.5**
	baz=308						
SBCB				eS	**Sn**	**01 49 29.5**	**+1.4**
	baz=308						
TYC	**Yuchr**	**1.31**	**257**	eP	**Pn**	**01 49 12.7**	**+0.5**
	baz=248						
TYC				eS	**Sn**	**01 49 28.7**	**+0.3**
	baz=248						
FULB	**Fuli**	**1.33**	**222**	P	**Pn**	**01 49 11.8**	**-0.6**
	baz=211						
FULB				S	**Sn**	**01 49 28.8**	**-0.2**
	baz=211						
IRIF	**Iriomote-Funau**	**1.35**	**84**	P	**Pn**	**01 49 13.0**	**+0.4**
IRIF				S	**Sn**	**01 49 29.3**	**0.0**
TWQ1	**Liyutan**	**1.36**	**276**	eP	**Pn**	**01 49 13.7**	**+0.9**
	baz=275						
TWQ1				eS	**Sn**	**01 49 31.1**	**+1.4**
	baz=275						
CHKT	**Chengkung**	**1.37**	**217**	eP	**Pn**	**01 49 12.0**	**-0.9**
	baz=207						
CHKT				eS	**Sn**	**01 49 27.7**	**-2.1**
	baz=207						
NMLH	**Miaoli**	**1.38**	**284**	eP	**Pn**	**01 49 13.8**	**+0.7**
	baz=282						
NMLH				eS	**Sn**	**01 49 30.6**	**+0.6**
	baz=282						
NSY	**Sanyi**	**1.38**	**279**	eP	**Pn**	**01 49 14.1**	**+1.0**
	baz=277						
NSY				eS	**Sn**	**01 49 32.4**	**+2.2**
	baz=277						
WHYT	**Xinyi Township**	**1.38**	**249**	eP	**Pn**	**01 49 14.0**	**+0.9**
	baz=247						
WHYT				eS	**Sn**	**01 49 32.4**	**+2.2**
	baz=247						
YUS	**Yu-Shan**	**1.39**	**239**	eP	**Pn**	**01 49 14.0**	**+0.3**
	baz=238						
YUS				eS	**Sn**	**01 49 30.5**	**-0.5**
	baz=238						
HATJ	**Hateruma jima**	**1.42**	**96**	P	**Pn**	**01 49 14.6**	**+1.0**
HATJ				S	**Sn**	**01 49 32.8**	**+1.7**
WJS	**Zhushan**	**1.45**	**255**	eP	**Pn**	**01 49 15.6**	**+1.6**
	baz=249						
WJS				eS	**Sn**	**01 49 34.0**	**+2.2**
	baz=249						
WNT	**Mingjian**	**1.48**	**258**	eP	**Pn**	**01 49 16.0**	**+1.7**
	baz=256						
WNT				eS	**Sn**	**01 49 34.5**	**+2.1**
	baz=256						
WDJ	**Dajia District**	**1.48**	**276**	eP	**Pn**	**01 49 13.9**	**-0.6**
	baz=274						
WDJ				eS	**Sn**	**01 49 33.6**	**+1.0**
	baz=274						
ALS	**Alishan**	**1.50**	**243**	eP	**Pn**	**01 49 15.6**	**+0.6**
	baz=232						
ELDTW	**Lidau**	**1.52**	**229**	eP	**Pn**	**01 49 14.6**	**-0.5**
	baz=227						
ELDTW				eS	**Sn**	**01 49 32.5**	**-1.3**
	baz=227						
CHN5	**Tsauling**	**1.57**	**248**	eP	**Pn**	**01 49 17.7**	**+2.0**
	baz=237						
CHN5				eS	**Sn**	**01 49 36.8**	**+2.0**
	baz=237						
JKRS	**Kuro-shima**	**1.60**	**88**	P	**Pn**	**01 49 16.8**	**+0.8**
JKRS				S	**Sn**	**01 49 36.5**	**+1.0**
TWH	**Lutao**	**1.65**	**206**	eP	**Pn**	**01 49 16.1**	**-0.7**
	baz=204						
TWH				eS	**Sn**	**01 49 34.9**	**-1.9**
	baz=204						
WDLH	**Douliu**	**1.66**	**252**	eP	**Pn**	**01 49 18.8**	**+1.9**
	baz=241						
WDLH				eS	**Sn**	**01 49 39.9**	**+3.1**
	baz=241						
STYT	**Tauyuan**	**1.72**	**233**	eP	**Pn**	**01 49 18.8**	**+1.0**
	baz=224						
STYT				S	**Sn**	**01 49 39.8**	**+1.2**
	baz=224						
JIJ	**Ishigaki jima**	**1.73**	**84**	P	**Pn**	**01 49 18.0**	**+0.2**
JIJ				eS	**Sn**	**01 49 38.1**	**-0.6**
TPUB	**Ta-pu**	**1.74**	**239**	eP	**Pn**	**01 49 19.5**	**+1.4**
	baz=238						
TPUB				eS	**Sn**	**01 49 41.0**	**+1.9**
	baz=238						
CHN4	**Tsaushan**	**1.75**	**241**	eP	**Pn**	**01 49 19.8**	**+1.7**
	baz=231						
CHN4				eS	**Sn**	**01 49 42.0**	**+2.9**
	baz=231						
TWGBT	**Beinan**	**1.75**	**218**	eP	**Pn**	**01 49 17.4**	**-0.8**
	baz=225						
TWGBT				eS	**Sn**	**01 49 38.0**	**-1.3**
	baz=225						
TWG	**Pinlang**	**1.76**	**219**	eP	**Pn**	**01 49 17.4**	**-0.8**
	baz=225						
TWG				eS	**Sn**	**01 49 38.0**	**-1.3**
	baz=225						
RLNB	**Erlin**	**1.76**	**260**	eP	**Pn**	**01 49 19.5**	**+1.3**
	baz=259						
RLNB				eS	**Sn**	**01 49 41.0**	**+1.5**
	baz=259						
CHN2	**Minshiung**	**1.76**	**248**	eP	**Pn**	**01 49 20.6**	**+2.3**
	baz=238						
CHN2				eS	**Sn**	**01 49 43.5**	**+4.0**
	baz=238						
WTP	**Ta-pu**	**1.78**	**238**	eP	**Pn**	**01 49 19.8**	**+1.2**
	baz=237						
WTP				eS	**Sn**	**01 49 42.5**	**+2.4**
	baz=237						
CHN1	**Nanshi**	**1.88**	**238**	eP	**Pn**	**01 49 21.5**	**+1.6**
	baz=237						
CHN1				eS	**Sn**	**01 49 44.2**	**+1.7**
	baz=237						
SNST	**Tainan City**	**1.89**	**239**	eP	**Pn**	**01 49 21.6**	**+1.5**
	baz=238						
SNST				eS	**Sn**	**01 49 44.9**	**+2.3**
	baz=238						
SGST	**Jiashian**	**1.90**	**234**	eP	**Pn**	**01 49 21.1**	**+0.9**
	baz=233						
SGST				S	**Sn**	**01 49 44.9**	**+2.0**
	baz=233						
SLGT	**Liugui**	**1.91**	**231**	eP	**Pn**	**01 49 21.8**	**+1.5**
	baz=239						
SLGT				eS	**Sn**	**01 49 45.8**	**+2.7**
	baz=239						
JISG	**Ishigakijimahi**	**1.91**	**78**	P	**Pn**	**01 49 20.2**	**-0.1**
ECL	**Taimali**	**2.00**	**217**	eP	**Pn**	**01 49 21.1**	**-0.5**
	baz=216						
ECL				eS	**Sn**	**01 49 44.0**	**-1.4**
	baz=216						
SSD	**Sandimen**	**2.08**	**226**	eP	**Pn**	**01 49 23.8**	**+1.1**
	baz=225						
SSD				eS	**Sn**	**01 49 49.1**	**+1.7**
	baz=225						
MASBT	**Mashibuluo**	**2.18**	**224**	eP	**Pn**	**01 49 24.5**	**+0.5**
	baz=223						
MASBT				eS	**Sn**	**01 49 52.4**	**+2.7**
	baz=223						
EAST	**Anshuo**	**2.23**	**216**	eP	**Pn**	**01 49 24.3**	**-0.4**
	baz=209						
EAST				eS	**Sn**	**01 49 50.6**	**-0.4**
	baz=209						
LAY	**Lan-yu**	**2.25**	**197**	eP	**Pn**	**01 49 23.9**	**-1.1**
	baz=197						
LAY				eS	**Sn**	**01 49 49.5**	**-2.1**
	baz=197						
PHUB	**P'eng-hu**	**2.55**	**255**	eP	**Pn**	**01 49 29.2**	**+0.1**
	baz=254						
PHUB				eS	**Sn**	**01 49 57.4**	**-1.6**
	baz=254						
WDGT	**Dungji**	**2.56**	**249**	eP	**Pn**	**01 49 29.6**	**+0.4**
	baz=249						
WDGT				eS	**Sn**	**01 49 59.0**	**-0.2**
	baz=249						
PTTC	**Pingtan**	**2.60**	**300**	eP	**Pn**	**01 49 28.5**	**-1.3**
	baz=299						
VWUC	**VWUC**	**2.67**	**288**	eP	**Pn**	**01 49 29.7**	**-1.1**
	baz=286						
PTMZ	**Houxiangcun**	**2.97**	**287**	eP	**Pn**	**01 49 34.0**	**-0.9**
	baz=286						
LYJJ	**Jianjiangzhen**	**3.25**	**316**	eP	**Pn**	**01 49 37.1**	**-1.6**
	baz=316						
XPSS	**Dashiqiu**	**3.29**	**326**	eP	**Pn**	**01 49 38.4**	**-0.9**
	baz=335						
MHZQ	**Yeshan**	**3.48**	**304**	eP	**Pn**	**01 49 40.5**	**-1.4**
	baz=302						
KNMB	**Chin-men Tao**	**3.54**	**275**	eP	**Pn**	**01 49 41.7**	**-1.0**
	baz=274						
AXDP	**Jialang**	**3.96**	**281**	eP	**Pn**	**01 49 47.8**	**-0.7**
	baz=279						
ZPLA	**Ao Xicun**	**4.13**	**267**	eP	**Pn**	**01 49 49.6**	**-1.2**
	baz=266						

IDC **03** *02:16:42.3±1.5, 25°.97N×141°.24E, h99km±11km, mb3.5/11, mb1 3.8/11, mb1mx3.4/52, mbtmp3.9/11, Error ellipse: s-maj=24.0km s-min=16.1km az=107.0*
NEIC **03** *02:16:42.9±1.2, 25°.8N±0°.1×141°.6E±0°.2, h103km±8km, mb4.1/8, Error ellipse: s-maj=26.7km s-min=13.3km az=112.0*
JMA **03** *02:16:43.2, 25°.95N×141°.40E, h101km±1km, M4.5*
ISC 03 02:16:43.5±0.8, **26°.0N**±0°.1×**141°.5E**±0°.1, **h110**km, **n30, σ1°.00**/32, **mb3.8**/11, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**0.92**	**41**	P	**Pn**	**02 17 03.6**	**-0.2**
JHH2				S	**Sn**	**02 17 19.0**	**-0.2**
CBIJ	**Chichi jima**	**1.30**	**28**	P	**Pn**	**02 17 07.9**	**-0.1**
CBIJ				S	**Sn**	**02 17 26.4**	**-0.1**
JCJ	**Chichijima**	**1.30**	**28**	P	**Pn**	**02 17 07.8**	**-0.1**
	160nm,0.3s,baz=265,slow=11,SNR=90						
JCJ				S	**Sn**	**02 17 26.1**	**-0.4**
	286nm,0.3s,baz=287,slow=19,SNR=41						
BSO3	**Boso 3**	**8.87**	**355**	P	**Pn**	**02 18 47.4**	**-1.0**
BSO4	**Boso 4**	**9.07**	**354**	P	**Pn**	**02 18 52.3**	**+1.0**
MJAR	**Matsushiro Arr**	**10.93**	**346**	Pn	**Pn**	**02 19 17.8**	**+1.1**
JFK	**Kawauchi**	**11.40**	**357**	P	**Pn**	**02 19 21.1**	**-1.8**
YHNB	**Yeheng**	**18.24**	**270**	P	**Pn**	**02 20 50.0**	**+0.4**
YHNB				IAmb	IAmb	02 20 51.4	
	comp=Z,8.9nm,0.7s						
YULB	**Yu-li**	**18.54**	**266**	P	**Pn**	**02 20 53.5**	**+0.4**
YULB				IAmb	IAmb	02 20 54.6	
	comp=Z,8.0nm,0.7s						
SSLB	**Suanglung**	**18.77**	**268**	P	**Pn**	**02 20 56.3**	**+0.5**
TPUB	**Ta-pu**	**19.15**	**267**	P	**Pn**	**02 21 00.5**	**+0.1**
TPUB				IAmb	IAmb	02 21 05.6	
	comp=Z,7.9nm,1.0s						
KNMB	**Chin-men Tao**	**20.96**	**271**	P	**P**	**02 21 18.5**	**+0.7**
KNMB				IAmb	IAmb	02 21 19.0	
	comp=Z,6.5nm,0.5s						
SONM	**Songino Array**	**35.13**	**318**	P	**P**	**02 23 26.1**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=104,slow=8.2,SNR=2.8						
WB0	**Warramunga Arr**	**45.96**	**189**	P	**P**	**02 24 54.9**	**-0.8**
WR0	**Warramunga Arr**	**46.13**	**189**	P	**P**	**02 24 55.8**	**-1.1**
WRA	**Warramunga Arr**	**46.14**	**189**	P	**P**	**02 24 56.2**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=6.6,slow=8.6,SNR=9.3						
WRA	**Warramunga Arr**	**46.14**	**189**	IAmb	IAmb	02 24 58.1	
	comp=Z,0.1nm,0.5s						
ASAR	**Alice Springs**	**49.86**	**189**	P	**P**	**02 25 25.8**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=18,slow=9.2,SNR=5.9						
KURBB	**Kurchatov Arra**	**53.41**	**315**	P	**P**	**02 25 50.9**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=92,slow=8.3,SNR=2.9						
ILAR	**Eielson Array**	**59.01**	**28**	P	**P**	**02 26 31.6**	**+0.2**
	comp=Z,1.8nm,0.9s,baz=258,slow=6.0,SNR=14						
ILAR	**Eielson Array**	**59.01**	**28**	P	**P**	**02 26 32.0**	**+0.6**
INK	**Inuvik**	**64.33**	**24**	P	**P**	**02 27 07.6**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=293,slow=6.0,SNR=15						
INK	**Inuvik**	**64.33**	**24**	P	**P**	**02 27 08.0**	**+1.1**
YKA	**Yellowknife Ar**	**73.44**	**28**	P	**P**	**02 28 04.4**	**+0.9**
	comp=Z,2.1nm,0.7s,baz=295,slow=6.2,SNR=20						
FINES	**FINESS Array B**	**78.70**	**334**	P	**P**	**02 28 31.4**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=76,slow=5.9,SNR=8.8						
FINES	**FINESS Array B**	**78.70**	**334**	P	**P**	**02 28 34.3**	**+1.0**
NVAR	**Mina Array Bea**	**81.71**	**51**	P	**P**	**02 28 52.0**	**+1.8**
	comp=Z,0.6nm,0.6s,baz=294,slow=5.6,SNR=5.7						
NVAR	**Mina Array Bea**	**81.71**	**51**	P	**P**	**02 28 49.7**	**-0.6**
NOA	**NORSAR Array B**	**84.45**	**338**	P	**P**	**02 29 01.5**	**-2.1**
	comp=Z,1.0nm,0.8s,baz=38,slow=5.0,SNR=2.6						
PDAR	**Pinedale Array**	**85.46**	**44**	P	**P**	**02 29 10.8**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=278,slow=3.4,SNR=6.8						

IDC **03** *02:48:28.4±4.5, 3°.83N×128°.49E, h49km±48km, mb3.8/5, mb1 4.0/6, mb1mx3.4/38, mbtmp4.1/6, ML3.7/1, Error ellipse: s-maj=82.1km s-min=22.5km az=70.0*
MAN **03** *02:48:35.6, 3°.74N×127°.81E, h32km, MS3.7*
ISC 03 02:48:29.5±1.2, **3°.5N**±0°.2×**128°.3E**±0°.1, **h45**km, **n9, σ2°.44**/13, **mb4.2**/5, **1D, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**3.60**	**315**	eP	**Pn**	**02 49 23.9**	**+1.1**
DDMP				eS	**Sn**	**02 50 00.4**	**-3.7**
KCP	**Kidapawan**	**4.67**	**318**	⇓iP	**Pn**	**02 49 39.6**	**+2.0**
KCP				i S	**Sn**	**02 50 35.3**	**+4.6**
SKMP	**Bagumbayan, Su**	**4.74**	**309**	eP	**Pn**	**02 49 39.7**	**+1.1**
SKMP				eS	**Sn**	**02 50 29.6**	**-2.7**
SIJI	**Sorong**	**5.31**	**146**	P	**Pn**	**02 49 47.0**	**+0.6**
	2.3nm,0.3s,baz=343,slow=19,SNR=9.4						
SIJI				S	**Sn**	**02 50 44.7**	**-1.7**
	4.2nm,0.3s,baz=355,slow=23,SNR=6.5						
FITZ	**Fitzroy Crossi**	**21.66**	**187**	P	**P**	**02 53 17.8**	**+1.4**
	6.3nm,1.0s,baz=0.0,slow=11,SNR=5.4						
WRA	**Warramunga Arr**	**24.09**	**166**	P	**P**	**02 53 41.6**	**+0.5**
	5.8nm,0.6s,baz=347,slow=10,SNR=13						
ASAR	**Alice Springs**	**27.60**	**169**	P	**P**	**02 54 13.2**	**+0.4**
	0.6nm,0.5s,baz=354,slow=8.5,SNR=13						
STKA	**Stephens Creek**	**37.44**	**161**	P	**P**	**02 55 38.8**	**+0.2**
	3.7nm,0.9s,baz=343,slow=8.2,SNR=6.6						
MKAR	**Makanchi Array**	**58.59**	**325**	P	**P**	**02 58 19.6**	**-2.3**
	0.8nm,0.4s,baz=116,slow=8.2,SNR=35						

IDC **03** *03:02:43.9±0.6, 38°.30N×73°.02E, h0km, mb4.2/30, mb1 4.3/38, mb1mx4.2/68, mbtmp4.2/38, MS3.7/8, MS3.5/2, Ms1 3.5/2, ms1mx3.1/60, Error ellipse: s-maj=11.9km s-min=9.4km az=3.0*
NNC **03** *03:02:44.6±1.4, 38°.24N×73°.25E, h2km±6km, mb5.0,*

mpv4.8, Error ellipse: s-maj=10.4km s-min=7.1km az=165.0

*BJI **03** 03:02:46.0±0.0, 38.38N×73.19E, h8km, mB4.6/18, mb4.4/20, ML4.7/6, Ms4.1/15, Ms7 3.8/11*

*NEIC **03** 03:02:50.7±2.0, 38.37N±0.05×72.97E±0.07, h56km±6km, mb4.5/24, Error ellipse: s-maj=7.9km s-min=7.8km az=135.0*

ISC 03 03:02:44.6±0.3, 38.18N±0.03×72.94E±0.03, h10km, n169, σ2.45/170, mb4.3/39, 10C-9D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	Batken	2.50	319		Pn	03 03 27.9	+2.5
KSH	Kashi	2.71	60	⇑iPg	Pn	03 03 22.1	-6.4
KSH				Sg	Sn	03 03 47.8	-14
KSH				smax	smax		
	comp=N,11μm,0.8s						
KSH				smax	smax		
	comp=E,11μm,0.8s						
ARSB	Arslanbob	3.14	1		Pn	03 03 35.2	+1.0
AML	Almayashu	3.98	8	P	Pn	03 03 47.4	+1.2
	SNR=45						
NRN	Naryn	4.01	35		Pn	03 03 46.9	+0.5
UCH	Uchtor	4.21	16	P	Pn	03 03 50.5	+1.2
	SNR=38						
KZA	Kyzart	4.27	24	P	Pn	03 03 51.2	+1.1
	SNR=16						
EKS2	Erkin-Say	4.52	8	P	Pn	03 03 55.7	+2.5
	SNR=9.1						
CHCP	Chirah Chowk	4.52	177	P	Pb	03 03 59.7	-4.5
NIL	Nilore	4.53	177		Pb	03 03 59.7	-4.6
AAK	Ala-Archa	4.60	14	Pn	Pn	03 03 56.1	+1.7
	5.0nm,0.3s,baz=157,slow=4.6,SNR=49						
AAK				Sn	Sn	03 04 48.7	+0.7
	4.4nm,0.3s,baz=162,slow=20,SNR=3.1						
AAK				LR	LR	03 05 54.2	
	comp=Z,417nm,19.5s,baz=184,slow=42						
AAK	Ala-Archa	4.60	14	P	Pn	03 03 56.2	+1.7
	SNR=31						
AAK	Ala-Archa	4.60	14	⇑Pn	Pn	03 03 53.5	-1.0
	182nm,0.8s						
AAK				⇑Sn	Sn	03 04 49.8	+1.7
	383nm,1.1s						
AAK	Ala-Archa	4.60	14		Pn	03 03 56.0	+1.6
AAK					Sn	03 04 41.0	-7.1
JBG	Jabagly	4.61	337	Pg	Pg	03 04 12.7	-0.3
	306nm,1.2s						
JBG				Lg	Lg	03 05 16.2	
	297nm,0.8s						
KBK	Karagaybulak	4.72	18	P	Pn	03 03 57.9	+1.8
	SNR=21						
ULHL	Ulahol	4.78	31	P	Pn	03 03 59.7	+2.8
	SNR=8.1						
FRU1	Bishkek	4.80	15	Pn	Pn	03 04 02.4	+5.3
KBL	Kabul	4.81	222		Pb	03 04 05.1	-4.0
DZA	Taraz	4.86	346	Pg	Pb	03 04 13.6	+3.7
	437nm,0.5s						
DZA				Lg	Lg	03 05 16.6	
	380nm,0.5s						
CHMS	Chumysh	5.00	15	P	Pn	03 04 01.2	+1.4
	SNR=17						
KDJ	Kajisay	5.11	38	Pn	Pn	03 04 03.4	+2.0
USP	Ospenovka	5.21	13	P	Pn	03 04 04.0	+1.2
	SNR=8.3						
KK31	Karatay Array	5.25	340	⇓Pn	Pn	03 04 03.6	+0.4
	24nm,0.5s,baz=152,slow=12,SNR=460						
KK31				⇓Pg	Pb	03 04 19.8	+3.3
	77nm,0.7s,baz=161,slow=16,SNR=7.2						
KK31				⇓Sn	Sn	03 05 06.9	+3.1
	168nm,0.7s,baz=149,slow=24,SNR=6.8						
KK31				⇑Lg	Lg	03 05 32.1	
	140nm,0.7s,baz=132,slow=26,SNR=3.6						
KK31	Karatay Array	5.25	340		Pn	03 04 04.6	+1.4
KKAR	Karatay Array	5.25	340		Pn	03 04 04.2	+1.0
KKAR	Karatay Array	5.25	340		Pn	03 04 04.6	+1.4
KKAR					Sn	03 04 56.0	-7.7
KST	Kastek	5.37	24	Pg	Pb	03 04 20.5	+1.8
	60nm,0.5s						
KST				Lg	Lg	03 05 28.3	
	303nm,0.8s						
BRLS	Borolday	5.39	335	Pg	Pb	03 04 20.3	+1.5
	11nm,0.7s						
BRLS				Lg	Lg	03 05 29.5	
	90nm,0.5s						
THW	Thamme Wali	5.47	191	P	Pn	03 04 11.4	+5.2
IZV	Izvestkoviy	5.59	29	Pg	Pb	03 04 25.2	+2.7
	87nm,0.5s						
IZV				Lg	Lg	03 05 36.4	
	217nm,0.7s						
MTBS	Maitube	5.61	27	Pg	Pb	03 04 23.8	+1.2
	35nm,0.4s						
MTBS				Lg	Lg	03 05 34.1	
	86nm,0.5s						
TNSS	Tian-Shan	5.73	31	Pg	Pb	03 04 26.4	+1.6
	77nm,0.7s						
TNSS				Lg	Lg	03 05 39.0	
	228nm,0.7s						
AAA	Alma-Ata	5.86	30	Pg	Pb	03 04 29.8	+2.9
	39nm,0.1s						
AAA				Lg	Lg	03 05 45.0	
	152nm,0.6s						
MDOK	Medeo	5.87	31	⇑Pg	Pb	03 04 29.1	+1.9
	83nm,1.0s						
MDOK				⇑Lg	Lg	03 05 48.6	
	399nm,1.0s						
MDOK	Medeo	5.87	31	Pg	Pb	03 04 29.4	+2.2
	57nm,0.6s						
MDOK				Lg	Lg	03 05 43.6	
	238nm,0.9s						
KNDC	Almaty	5.88	30	⇓Pg	Pb	03 04 29.8	+2.4
	195nm,0.8s						
KNDC				⇓Lg	Lg	03 05 49.0	
	1μm,1.4s						
KOTS	Kotyrbulak	5.96	31	Pg	Pb	03 04 30.0	+1.4
	118nm,0.5s						
KOTS				Lg	Lg	03 05 44.7	
	244nm,0.6s						
PRZ	Przheval'sk	5.99	42	Pn	Pn	03 04 14.8	+1.3
THN	Thein Dam	6.17	158	eP	Pn	03 04 19.5	+3.7
THN				eS	Sn	03 05 29.0	+2.6
KTBS	Karatobe	6.21	26	Pg	Pb	03 04 35.1	+2.3
	54nm,0.5s						
KTBS				Lg	Lg	03 05 53.4	
	177nm,0.8s						
SARP	Sargodha	6.25	182	P	Pn	03 04 21.2	+4.3
KUU	Kurty	6.25	23	Pg	Pb	03 04 35.3	+1.7
	31nm,0.6s						
KUU				Lg	Lg	03 05 53.7	
	129nm,0.6s						
SATY	Saty	6.40	39	Pg	Pb	03 04 37.8	+1.6
	72nm,0.8s						
SATY				Lg	Lg	03 05 57.7	
	250nm,1.4s						
CHKK	Chushkaly	6.44	27	Pg	Pb	03 04 39.5	+2.8
	28nm,0.8s						
CHKK				Lg	Lg	03 06 01.1	
	78nm,0.6s						
ZHN	Zhinishke	6.50	38	Pg	Pb	03 04 40.4	+2.6
	35nm,0.6s						
ZHN				Lg	Lg	03 06 02.1	
	33nm,0.8s						
DHRM	DHARAMSHALA	6.53	154	eP	Pn	03 04 24.3	+3.4
DHRM				eS	Sn	03 05 38.1	+2.6
UZB	Uzynbulak	6.78	41	Pg	Pb	03 04 45.6	+3.1
	40nm,0.6s						
UZB				Lg	Lg	03 06 11.0	
	77nm,1.5s						
BTLS	Baital	6.90	7	Pg	Pb	03 04 47.7	+3.0
	5.9nm,0.5s						
BTLS				Lg	Lg	03 06 15.3	
	37nm,0.8s						
SHLS	Shalkode	7.02	43	Pg	Pg	03 04 53.0	-5.9
	89nm,0.8s						
SHLS				Lg	Lg	03 06 23.7	
	217nm,1.0s						
ARXS	Arharly	7.06	30	Pg	Pb	03 04 49.6	+2.3
	20nm,0.8s						
ARXS				Lg	Lg	03 06 18.9	
	73nm,0.7s						
PDGK	Podgornoye	7.15	42	Pg	Pb	03 04 51.5	+2.6
	13nm,0.7s						
PDGK				Lg	Lg	03 06 21.1	
	64nm,0.9s						
PDGK	Podgornoye	7.15	42	⇓Pn	Pn	03 04 29.0	-0.4
	46nm,0.8s						
PDGK				⇑Pg	Pb	03 04 52.7	+3.8
	41nm,0.6s						
PDGK				⇓Lg	Lg	03 06 27.2	
	168nm,1.1s						
SMLA	Simla	7.85	152	eP	Pn	03 04 42.1	+3.2
SMLA				eS	Sn	03 06 07.7	-0.1
TDK	Taldyqorghan	7.95	29	Pg	Pb	03 05 06.7	+4.2
	55nm,0.4s						
TDK				Lg	Lg	03 06 47.1	
	253nm,1.2s						
DJR	Jarkent	8.02	38	Pg	Pb	03 05 09.6	+5.9
	4.0nm,0.5s						
DJR				Lg	Lg	03 06 52.5	
	53nm,1.5s						
KAPS	Kapalarasan	8.56	32	Pg	Pg	03 05 16.7	-12
	12nm,0.4s						
KAPS				Lg	Lg	03 07 04.7	
	23nm,0.7s						
DDI	Dehra Dun	8.91	150	eP	Pn	03 04 56.4	+2.9
DDI				eS	Sn	03 06 35.7	+1.7
JOSI	Joshimath	9.37	142	eP	Pn	03 05 00.7	+0.8
JOSI				IAML		03 06 55.5	
	comp=E,413nm,0.5s						
JOSI				IAML		03 06 56.4	
	comp=N,254nm,0.9s						
HRA	Herat	9.43	250		Pn	03 05 05.0	+4.2
NDI	New Delhi	10.12	158	eP	Pn	03 05 15.0	+4.9
NDI				eS	Sn	03 07 01.5	-2.2
KUDL	Kundal	10.44	162	IAML		03 07 07.5	
	comp=E,261nm,0.3s						
SONA	Sohna	10.49	160	eP	Pn	03 05 20.3	+5.2
SONA				eS	Sn	03 07 10.8	-1.9
SONA				IAML		03 07 15.2	
	comp=E,104nm,0.5s						
MAKZ	Makanchi	10.89	35	⇑Pn	Pn	03 05 19.1	-1.4
	comp=E,18nm,1.2s						
MAKZ				⇓Lg	Lg	03 08 26.3	
	comp=E,42nm,1.2s						
MAKZ	Makanchi	10.89	35		Pn	03 05 22.3	+1.8
MK31	Makanchi Array	11.02	36	Pn	Pn	03 05 21.1	-1.3
	comp=E,5.5nm,0.7s,baz=216,slow=14,SNR=41						
MK31				Lg	Lg	03 08 31.7	
	comp=E,26nm,1.2s,baz=216,slow=25,SNR=4.1						
MK31	Makanchi Array	11.02	36		Pn	03 05 23.1	+0.7
MKAR	Makanchi Array	11.02	36	Pn	Pn	03 05 22.9	+0.6
	comp=E,0.4nm,0.3s,baz=216,slow=12,SNR=40						
MKAR				Lg	Lg	03 08 28.0	
	comp=E,0.2nm,0.3s,baz=224,slow=25,SNR=2.9						
MKAR				LR	LR	03 09 57.5	
	comp=E,271nm,20.2s,baz=223,slow=40						
MKAR	Makanchi Array	11.02	36		Pn	03 05 22.5	+0.1
GEYT	Alibeck	11.69	273	Pn	Pn	03 05 31.9	+0.4
	comp=E,1.1nm,0.3s,baz=106,slow=11,SNR=20						
GEYT				Sn	Sn	03 07 42.2	+0.1
	comp=E,0.5nm,0.3s,baz=85,slow=16,SNR=7.8						
GEYT	Alibeck	11.69	273		Pn	03 05 32.0	+0.4
GEYT					Sn	03 07 39.2	-2.9
GYA0B	ALIBECK ARRAY	11.69	273		Pn	03 05 32.6	+1.0
WMQ	Urumqi	12.48	59	eP	Pn	03 05 43.4	+1.1
WMQ				pP		03 05 46.1	
WMQ				sP		03 05 50.2	
WMQ				S	Sn	03 08 04.7	+3.3
WMQ				pmax	pmax		
	comp=E,14nm,1.1s						
WMQ				pmax	pmax		
	comp=E,170nm,4.3s						
WMQ	Urumqi	12.48	59		Pn	03 05 40.7	-1.7
KURBB	Kurchatov Arra	13.06	16	Pn	Pn	03 05 47.4	-2.7
	comp=E,0.1nm,0.3s,baz=203,slow=12,SNR=16						
KURBB				Lg	Lg	03 09 30.2	
	comp=E,0.1nm,0.3s,baz=198,slow=28,SNR=6.7						
KURBB	Kurchatov Arra	13.06	16	⇑Pn	Pn	03 05 50.1	0.0
	comp=E,6.3nm,0.8s						
KURBB				⇑Lg	Lg	03 09 37.4	
	comp=E,85nm,1.1s						
KURK	Kurchatov	13.16	16		Pn	03 05 49.4	-2.2
DANN	Dangsing	13.33	134	eP	Pn	03 05 50.1	-4.2
	comp=E,73nm,0.4s						
KOLN	Koldanda	13.70	136	eP	Pn	03 05 55.0	-4.1
	comp=E,42nm,0.5s						
GKN	Gorkha	14.10	133	eP	Pn	03 05 59.6	-5.0
	comp=E,52nm,0.3s						
AB31	Akbulak array	14.49	324	P	Pn	03 06 06.5	-3.2
	comp=E,3.9nm,0.6s,baz=132,slow=12,SNR=110						
ABKAR	Akbulak array	14.49	324		Pn	03 06 06.8	-3.0
ABKAR	Akbulak array	14.49	324		Pn	03 06 07.3	-2.4
KKN	Kakani	14.63	131	eP	Pn	03 06 05.8	-6.2
	comp=E,57nm,0.7s						
DMN	Daman	14.67	132	eP	Pn	03 06 07.7	-4.8
PKIN	Phulchoki	14.86	132	eP	Pn	03 06 10.1	-5.0
PKI	Pulchoki	14.87	132	eP	Pn	03 06 10.2	-5.1
GUN	Gumba	14.91	130	eP	Pn	03 06 10.1	-5.7
	comp=E,49nm,0.5s						
BVAR	Borovoye Array	14.95	354	Pn	Pn	03 06 12.7	-3.2
	comp=E,0.4nm,0.3s,baz=166,slow=13,SNR=17						
BVAR				Lg	Lg	03 10 33.7	
	comp=E,0.2nm,0.3s,baz=168,slow=28,SNR=2.7						
BRVK	Borovoye	14.99	354		Pn	03 06 13.6	-2.8
JIRN	Jiri	15.28	130	eP	Pn	03 06 15.7	-5.0
	comp=E,50nm,0.3s						
RAMN	Ramite	16.04	130	eP	Pn	03 06 24.2	-6.4
AKTO	Aktyubinsk	16.21	324	Pn	Pn	03 06 31.1	-1.3
	comp=E,0.5nm,0.3s,baz=129,slow=14,SNR=23						
AKTO				Sn	Sn	03 09 24.0	-8.1
	baz=180,slow=20,SNR=2.3						
AKTO	Aktyubinsk	16.21	324	P	P	03 06 35.0	-0.5
TAPN	Taplejung	16.44	127	eP	Pn	03 06 30.0	-5.7
	comp=E,25nm,0.5s						
ODAN	Odare	16.59	129	eP	Pn	03 06 31.1	-6.5
	comp=E,44nm,0.6s						
LSA	Lhasa	17.30	114	P	Pn	03 06 47.0	+0.3
LSA				pP	P	03 06 49.6	+1.4
LSA				pmax	pmax		
	comp=E,32nm,1.3s						
LSA				LR	LR		
	comp=E,820nm,12.8s						
LSA				LR	LR		
	comp=E,450nm,8.9s						
LSA				LR	LR		
	comp=E,710nm,10.0s						
LSA	Lhasa	17.30	114	Pn	Pn	03 06 46.0	-0.7
LSA				S	S	03 10 04.4	-4.1
ZAA0	Zalesovo Array	17.75	24	⇓P	Pn	03 06 50.8	-0.9
	comp=E,3.9nm,1.1s						
ZALV	Zalesovo Beam	17.75	24	P	Pn	03 06 49.5	-2.2
	comp=E,1.0nm,0.3s,baz=217,slow=10,SNR=28						
ZALV	Zalesovo Beam	17.75	24	P	Pn	03 06 49.2	-2.5
WSAR	Wadi Sarin	19.28	224	P	Pn	03 07 13.0	+2.4
	comp=E,0.3nm,0.3s,baz=78,slow=10,SNR=6.4						
UOSS	Minazif	19.39	232	P	Pn	03 07 12.2	+0.3
UOSS				IAmb	IAmb	03 07 24.6	
	comp=Z,23nm,0.9s						
SHL	Shillong	20.37	123	P	Pn	03 07 22.8	-0.9
SHL				IAmb	IAmb	03 07 29.8	
	comp=Z,26nm,0.6s						
ARU	Arti	20.62	337	P	P	03 07 23.5	-0.4
	comp=Z,3.0nm,0.2s,baz=150,slow=13,SNR=5.4						
GTA	Gaotai	20.96	78	eP	P	03 07 27.4	-0.5
GTA				pP	pP	03 07 31.7	-0.3
GTA				sP	sP	03 07 34.6	+0.7
GTA				S	S	03 11 13.6	-7.8
GTA				pmax	pmax		
	comp=Z,100nm,5.1s						
GTA				LR	LR		
	comp=Z,230nm,17.1s						
GTA				LR	LR		
	comp=Z,380nm,18.7s						
GTA				LR	LR		
	comp=Z,240nm,18.4s						
TBLG	Delisi	21.87	288	P	P	03 07 38.0	+0.5
TBLG				IAmb	IAmb	03 07 47.5	
	comp=Z,33nm,1.4s						
GNI	Garni	21.92	284	P	P	03 07 40.4	+2.1
	comp=Z,2.8nm,0.5s,baz=75,slow=20,SNR=2.7						
GNI	Garni	21.92	284	IAmb	IAmb	03 07 57.4	
	comp=Z,28nm,1.0s						
AKH	Akhalkalaki	22.80	287	P	P	03 07 48.0	+0.3
AKH				IAmb	IAmb	03 08 00.1	
	comp=Z,15nm,0.9s						
KBZ	Khabaz	23.28	293	P	P	03 07 53.5	+1.2
	comp=Z,2.0nm,0.8s,baz=63,slow=6.8,SNR=2.7						
KIV	Kislovodsk	23.45	294	P	P	03 07 54.5	+0.3
KIV				IAmb	IAmb	03 08 13.9	
	comp=Z,12nm,0.8s						
TLY	Talaya	25.36	48	P	P	03 08 12.0	+0.3
	comp=Z,6.7nm,0.9s,baz=261,slow=6.8,SNR=10						
TLY	Talaya	25.36	48	P	P	03 08 11.5	-0.2
KIRV	Kirov	25.46	331	P	P	03 08 12.7	+0.2
	comp=Z,6.3nm,0.8s,baz=146,slow=15,SNR=2.9						
SONM	Songino Array	26.12	58	P	P	03 08 19.0	+0.2
	comp=Z,7.3nm,1.0s,baz=256,slow=6.0,SNR=27						
SONM	Songino Array	26.12	58	P	P	03 08 19.0	+0.2
ULN	Ulaanbaatar	26.56	58	P	P	03 08 21.6	-1.2
CMAR	Chiang Mai Arr	30.00	124	P	P	03 08 55.4	+1.8
	comp=Z,1.4nm,0.3s,baz=309,slow=11,SNR=8.6						
BRTR	Keskin Array B	30.44	285	P	P	03 08 59.6	+2.1
	comp=Z,1.6nm,0.8s,baz=98,slow=8.9,SNR=6.6						
BRTR	Keskin Array B	30.44	285	P	P	03 08 55.9	-1.6
PBKT	Sadao Pong	32.69	123	P	P	03 09 17.2	-0.1
PBKT				IAmb	IAmb	03 09 28.6	
	comp=Z,5.9nm,0.9s						
AKASG	Malin Array Be	33.14	307	P	P	03 09 21.6	+0.7
	comp=Z,0.6nm,0.5s,baz=86,slow=7.3,SNR=7.5						
WHN	Wuhan	34.79	90	P	P	03 09 41.0	+5.5
MLR	Muntele Rosu	35.35	297	P	P	03 09 41.0	+0.7
	comp=Z,4.3nm,0.9s,baz=138,slow=18,SNR=2.7						
FINES	FINESS Array B	36.98	324	P	P	03 09 54.4	+0.5
	comp=Z,1.9nm,0.4s,baz=123,slow=7.0,SNR=16						
FINES	FINESS Array B	36.98	324	P	P	03 09 53.8	-0.1
ARCES	ARCESS Array B	40.20	336	P	P	03 10 21.3	+0.5
	comp=Z,5.4nm,0.7s,baz=112,slow=7.6,SNR=15						
DPC	Dobruska-Polom	41.37	306	eP	P	03 10 32.8	+2.1
PSI	Prapat	42.49	140	P	P	03 10 42.9	+2.6
	comp=Z,2.8nm,0.5s,baz=349,slow=2.6,SNR=3.8						
RPSI	Rantau Prapat	42.58	140	P	P	03 10 42.9	+2.0
HFS	Hagfors	42.72	321	P	P	03 10 41.5	-0.1
	comp=Z,5.9nm,0.5s,baz=98,slow=9.4,SNR=19						
BRG	Berggiesshubel	42.82	307	eP	P	03 10 43.7	+1.2
	comp=Z,6.0nm,1.2s						
BRG				e		03 10 50.8	
	comp=Z,11nm,1.4s						
KSRS	Korea Array	42.89	73	P	P	03 10 44.0	+0.7
	comp=Z,2.6nm,0.9s,baz=271,slow=11,SNR=4.2						
KLR	Kul'dur	42.91	55	P	P	03 10 43.0	-0.2
	comp=Z,1.2nm,0.6s,baz=296,slow=8.3,SNR=8.2						
GERES	GERESS Array B	43.25	304	P	P	03 10 48.0	+1.9
	comp=Z,0.5nm,0.6s,baz=52,slow=8.6,SNR=4.9						
KHC	Kasperske Hory	43.28	304	eP	P	03 10 48.3	+1.9
TIXI	Tiksi	43.63	22	P	P	03 10 47.4	-1.4
	comp=Z,5.3nm,0.7s,baz=267,slow=3.0,SNR=10						
TIXI	Tiksi	43.63	22	P	P	03 10 47.7	-1.1
TIXI				IAmb	IAmb	03 10 52.9	
	comp=Z,6.3nm,0.7s						
NB2	NORSAR Subarra	43.99	322	P	P	03 10 52.0	+0.1
	comp=Z,4.5nm,0.8s,baz=90,slow=7.9						
NOA	NORSAR Array B	43.99	322	P	P	03 10 51.5	-0.3
	comp=Z,3.7nm,0.8s,baz=92,slow=7.9,SNR=10						
USRK	Ussuriysk Ar.	44.01	63	P	P	03 10 52.9	+0.7
	comp=Z,1.8nm,0.7s,baz=158,slow=16,SNR=3.9						
USRK	Ussuriysk Ar.	44.01	63	P	P	03 10 52.1	-0.1
TEOL	Teolo	45.28	300	P	P	03 11 02.9	+0.6
DAVOX	Davos/Dischmat	46.17	302	P	P	03 11 10.3	+0.8
	comp=Z,3.1nm,0.6s,baz=87,slow=9.1,SNR=11						
JNU	Nakatsue	46.70	78	P	P	03 11 15.1	+1.4
	comp=Z,5.3nm,0.8s,baz=257,slow=16,SNR=3.8						
JNU	Nakatsue	46.70	78	P	P	03 11 13.7	0.0
SEY	Seymchan	52.16	35	P	P	03 11 55.7	+0.8
	comp=Z,1.2nm,0.8s,baz=297,slow=13,SNR=4.5						
DAG	Danmarks Havn	53.56	343	iP	P	03 12 04.7	-0.4
ESDC	Sonseca Array	58.04	298	P	P	03 12 38.4	+0.4
	comp=Z,0.4nm,0.6s,baz=53,slow=7.4,SNR=3.5						
SUMG	Summit	59.97	341	iP	P	03 12 55.2	+4.0
TOA0	Torodi Ar. Sit	67.30	269	P	P	03 13 39.7	-0.2
TOA0				IAmb	IAmb	03 13 42.0	
	comp=Z,2.9nm,0.7s						
TORD	Torodi Ar. Bea	67.30	269	P	P	03 13 39.6	-0.2
	comp=Z,2.2nm,0.6s,baz=46,slow=5.5,SNR=26						
TORD	Torodi Ar. Bea	67.30	269	P	P	03 13 39.7	-0.2
TOLK	Toolik Lake Re	68.90	15	P	P	03 13 47.6	-1.6
TOLK				IAmb	IAmb	03 13 54.3	
	comp=Z,6.5nm,0.7s						
IMAR	Indian Mountai	70.09	18	P	P	03 13 55.2	-1.4
BMAR	Burnt Mountain	70.94	14	P	P	03 14 02.1	+0.4
INK	Inuvik	71.99	10	P	P	03 14 08.0	0.0
	comp=Z,3.0nm,0.5s,baz=336,slow=6.1,SNR=16						
INK	Inuvik	71.99	10	P	P	03 14 07.8	-0.2
ILAR	Eielson Array	72.73	17	P	P	03 14 11.6	-0.9
	comp=Z,2.0nm,0.8s,baz=333,slow=5.0,SNR=8.0						
ILAR	Eielson Array	72.73	17	P	P	03 14 11.1	-1.5
DHY	Denali Highway	74.06	18	P	P	03 14 18.7	-1.9
DHY				IAmb	IAmb	03 14 26.0	
	comp=Z,8.1nm,1.3s						
PAX	Paxson	74.60	17	IAmb	IAmb	03 14 32.1	
	comp=Z,3.4nm,0.8s						
BCAR	Beaver Creek A	75.34	16	P	P	03 14 27.6	-0.2
YKA	Yellowknife Ar	79.48	4	P	P	03 14 50.1	-0.8
	comp=Z,1.1nm,0.6s,baz=349,slow=5.5,SNR=18						
SCHQ	Schefferville	81.14	338	P	P	03 15 00.3	+0.2
	comp=Z,1.7nm,0.8s,baz=63,slow=3.4,SNR=3.9						
WRA	Warramunga Arr	81.59	123	P	P	03 15 01.0	-1.9
	comp=Z,5.3nm,0.3s,baz=327,slow=4.9,SNR=20						
ASAR	Alice Springs	83.97	126	P	P	03 15 14.4	-0.8
	comp=Z,1.4nm,0.8s,baz=317,slow=4.9,SNR=8.4						
PLCA	Paso Flores	151.82	253	PKPbc	PKPbc	03 22 39.2	-0.3
	comp=Z,1.9nm,0.9s,baz=8.4,slow=1.2,SNR=3.5						

ROM 03 03:08:38.2±0.1, 41.722N±0.004×13.851E±0.006, h6km, ML1.9/1, 1C, Error ellipse: s-maj=0.5km s-min=0.3km az=235.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CERA	Filignano	0.18	134	⇑P	Pg	03 08 42.4	+0.7
CERA				S	Sg	03 08 45.3	+1.1
CERA				AML	AML		
	comp=E,832μm,0.2s						
CERA				AML	AML		
	comp=N,1005μm,0.3s						
CERA				AML	AML		
	comp=E,798μm,0.2s						
CERA				AML	AML		
	comp=N,976μm,0.3s						
VVLD	Villa Vallelon	0.23	311	P	Pg	03 08 43.6	+0.8
VVLD				S	Sg	03 08 47.3	+1.5
VVLD				AML	AML		
	comp=E,364μm,0.5s						
VVLD				AML	AML		
	comp=N,359μm,0.3s						
INTR	Introdacqua	0.29	8	P	Pg	03 08 44.7	+0.7
INTR				S	Sb	03 08 49.8	-1.3
GUAR	Guarcino	0.41	280	P	Pb	03 08 47.1	-0.8
GUAR				S	Sb	03 08 53.7	-0.7
LPEL	Lama dei Pelig	0.41	37	P	Pb	03 08 47.0	-0.8
LPEL				S	Sb	03 08 53.9	-0.5
VAGA	Valle Agricola	0.42	137	P	Pg	03 08 46.9	+0.5
VAGA				S	Sb	03 08 54.7	0.0
GIUL	Giuliano Di Ro	0.48	250	P	Pg	03 08 48.1	+0.7
GIUL				S	Sb	03 08 56.0	-0.3

*NIED **03** 03:08:00, 43.40N×146.80E, h35km, Mw4.4 Best double couple: M0 4.93000×10^15 NP1:φs 18.00000°, δ68.00000°, λ78.00000°. NP2:φs 226.00000°, δ25.00000°, λ116.00000°.*

*MOS **03** 03:08:43.1±1.0, 43.30N×147.05E, h46km, mb4.6/6, Error ellipse: s-maj=8.9km s-min=6.9km az=98.7*

MOS Felt (III) at Malokuril'skoye, (II) at Yuzhno-Kuril'sk, Lagunnoye, Goryachiy Plyazh.

*NEIC **03** 03:08:44.1±1.6, 43.42N±0.03×146.87E±0.05, h24km±5km, mb4.3/22, Error ellipse: s-maj=7.0km s-min=0.9km az=131.0*

*JMA **03** 03:08:46.1±0.2, 43.36N×146.79E, h45km±3km, M4.2*

JMA Felt II J1.

*SKHL **03** 03:08:46.0±0.3, 43.47N×146.98E, h44km±4km, mb5.0/11*

SKHL Felt (II) at Yushno-Kuril'sk, Goryachiy Plyazh; (III) at Malokuril'skoye.

*BJI **03** 03:08:46.4±0.0, 43.43N×147.07E, h79km, mB5.0/10, mb4.6/25, Ms4.9/2, Ms7 4.8/1*

*IDC **03** 03:08:46.6±1.8, 43.47N×146.84E, h45km±17km, mb4.1/23, mb1 4.2/31, mb1mx4.1/55, mbtmp4.3/31, ML3.7/5, MS3.0/2, Ms1 3.0/2, ms1mx2.9/67, Error ellipse: s-maj=16.2km s-min=12.2km az=136.0*

ISC 03 03:08:45.6±0.6, 43.42N±0.05×146.92E±0.05, h37km±1km, n138, σ1.57/147, mb4.4/35, 3C-5D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	Shikotan	0.45	352	iP	Pn	03 08 55.0	-0.4
SHO				AMB	AMB	03 08 57.0	
	3μm,0.5s						

SHO AMB AMB 03 08 57.0
8µm,0.5s
SHO i S Sn 03 09 02.0 -0.4
SHO A A 03 09 03.0
82µm,0.5s
SHO A A 03 09 03.0
93µm,0.5s
SHO Shikotan 0.45 352 d i PN **Pn 03 08 55.7 +0.3**
SHO i S **Sn 03 09 02.3 -0.1**
SHO pmax pmax
comp=Z,8µm,0.6s
SHO pmax pmax
comp=N,5µm,0.3s
SHO pmax pmax
comp=E,3µm,0.3s
SHO smax smax
comp=E,93µm,0.5s
SHO smax smax
comp=N,82µm,0.4s
NEM2 Nemuro 2 0.86 266 P **Pn 03 09 00.7 -0.4**
NEM2 eS **Sn 03 09 11.4 -1.1**
NMR Nemuro--Hokkai 0.87 267 i P **Pn 03 09 00.0 -1.3**
NMR i S **Sn 03 09 13.0 +0.2**
NMR Nemuro--Hokkai 0.87 267 ⇓i PN **Pn 03 09 00.7 -0.6**
NMR i S **Sn 03 09 13.2 +0.4**
YUK Yuzh-Kuril'sk 0.98 309 i P **Pn 03 09 02.0 -0.8**
YUK AMB AMB 03 09 03.0
comp=N,362nm,0.2s
YUK AMB AMB 03 09 03.0
comp=N,800nm,0.2s
YUK AMB AMB 03 09 03.0
comp=N,14µm,0.2s
YUK i S **Sn 03 09 14.0 -1.4**
YUK A A 03 09 17.0
comp=N,9µm,0.5s
YUK A A 03 09 17.0
comp=N,17µm,0.5s
YUK Yuzh-Kuril'sk 0.98 309 c i PN **Pn 03 09 02.3 -0.5**
YUK i S **Sn 03 09 14.9 -0.5**
YUK pmax pmax
comp=N,362nm,0.2s
YUK pmax pmax
comp=Z,14µm,0.2s
YUK pmax pmax
comp=E,797nm,0.1s
YUK smax smax
comp=E,17µm,0.5s
YUK smax smax
comp=N,9µm,0.3s
GRPR Tuman 1.01 305 i P **Pn 03 09 02.0 -1.2**
GRPR AMB AMB 03 09 03.0
comp=N,2µm,0.6s
GRPR AMB AMB 03 09 03.0
comp=N,3µm,0.6s
GRPR AMB AMB 03 09 03.0
comp=N,8µm,0.6s
GRPR i S **Sn 03 09 15.0 -1.1**
GRPR A A 03 09 17.0
comp=N,28µm,0.4s
GRPR A A 03 09 17.0
comp=N,11µm,0.4s
GRPR Tuman 1.01 305 c i PN **Pn 03 09 02.5 -0.7**
GRPR i S **Sn 03 09 15.7 -0.4**
GRPR pmax pmax
comp=N,2µm,0.6s
GRPR pmax pmax
comp=Z,8µm,0.6s
GRPR pmax pmax
comp=E,3µm,0.2s
GRPR smax smax
comp=N,28µm,0.4s
GRPR smax smax
comp=E,11µm,0.4s
GLVR Golovnino 1.07 288 i P **Pn 03 09 04.0 +0.1**
GLVR AMB AMB 03 09 04.0
comp=E,290nm,0.3s
GLVR AMB AMB 03 09 04.0
comp=E,400nm,0.3s
GLVR AMB AMB 03 09 04.0
comp=E,3µm,0.3s
GLVR i S **Sn 03 09 16.0 -1.5**
GLVR A A 03 09 19.0
comp=E,6µm,0.6s
GLVR A A 03 09 19.0
comp=E,7µm,0.6s
GLVR A A 03 09 19.0
comp=E,6µm,0.6s
GLVR Golovnino 1.07 288 ⇓i PN **Pn 03 09 04.0 +0.1**
GLVR i S **Sn 03 09 16.2 -1.3**
GLVR pmax pmax
comp=Z,3µm,0.3s
GLVR pmax pmax
comp=E,400nm,0.1s
GLVR pmax pmax
comp=N,289nm,0.3s
GLVR smax smax
comp=E,7µm,0.6s
GLVR smax smax
comp=N,6µm,0.3s
GLVR smax smax
comp=E,11µm,1.1s
GLVR smax smax
comp=N,7µm,0.6s
JKHN Kushirohamanak 1.33 256 P **Pn 03 09 07.5 -0.1**
JRA Rausu 1.40 292 P **Pn 03 09 08.9 +0.3**
JNSB Nemuroshibetsu 1.44 285 P **Pn 03 09 09.4 +0.4**
JNK Nakash 1.61 277 P **Pn 03 09 11.3 -0.1**
JNK eS **Sn 03 09 29.9 -1.0**
JAK Akkeshi 1.68 256 P **Pn 03 09 11.9 -0.5**
KUR Kuril'sk 1.93 20 i P **Pn 03 09 16.0 +0.1**
KUR AMB AMB 03 09 20.0
comp=N,346nm,0.6s
KUR i S **Sn 03 09 38.2 -0.7**
KUR A A 03 09 43.0
comp=N,2µm,0.3s
KUR A A 03 09 43.0
comp=N,4µm,0.3s
KUR Kuril'sk 1.93 20 c i PN **Pn 03 09 16.6 +0.7**
KUR i S **Sn 03 09 39.5 +0.6**
KUR pmax pmax
comp=Z,346nm,0.6s
KUR pmax pmax
comp=N,63nm,0.2s
KUR pmax pmax
comp=E,148nm,0.2s
KUR smax smax
comp=N,2µm,0.3s
KUR smax smax
comp=E,4µm,0.3s
JTKR Abashiri--Toko 2.25 285 P **Pn 03 09 21.6 +1.4**
JAR Ashorobuto 2.30 268 P **Pn 03 09 21.5 +0.6**
JAR eS **Sn 03 09 47.5 -0.5**
JOB Onbets 2.32 258 P **Pn 03 09 21.9 +0.8**
JCH Churui 2.73 254 P **Pn 03 09 27.2 +0.3**
JCH eS **Sn 03 09 57.4 -1.2**
ERM Erimo 3.11 244 Pn **Pn 03 09 35.3 +3.2**
ERM Erimo 3.11 244 PN **Pn 03 09 35.3 +3.2**
JKA Kamikawa-asahi 3.21 284 eP **Pn 03 09 34.9 +1.5**
JKA Kamikawa-asahi 3.21 284 **Pn 03 09 34.9 +1.5**
JKA **Sn 03 10 17.9 +7.6**
ASAJ Asahikawa 3.21 284 P **Pn 03 09 34.9 +1.5**
comp=E,11nm,0.3s,baz=103,slow=11,SNR=48
ASAJ S **Sn 03 10 17.9 +7.5**
comp=E,13nm,0.3s,baz=192,slow=19,SNR=2.7
YSS Yuzh-Sakhalins 4.60 322 eP **Pn 03 09 54.0 +1.5**
YSS AMB AMB 03 09 55.0
comp=E,40nm,0.8s
YSS eS **Sn 03 10 44.0 -0.5**
YSS A A 03 10 46.0
comp=E,70nm,0.6s
YSS A A 03 10 46.0
comp=E,50nm,0.6s
YSS Yuzh-Sakhalins 4.60 322 **Pn 03 09 53.0 +0.6**
YSS **Sn 03 10 47.1 +2.5**
YSS Yuzh-Sakhalins 4.60 322⇓ePN **Pn 03 09 54.0 +1.5**
YSS pmax pmax
comp=Z,40nm,0.8s
YSS pmax pmax
comp=N,20nm,0.5s
YSS pmax pmax
comp=E,20nm,0.4s
YSS MLR MLR
comp=Z,800nm,17.0s
TYV Tymovskoe 7.99 340 eP **Pn 03 10 40.4 +1.4**
TYV AMB AMB 03 10 42.7
comp=Z,15nm,1.0s

TYV Tymovskoe 7.99 340 ePN Pn 03 10 43.9 +4.9
TYV pmax pmax
comp=Z,8.0nm,0.9s
MJA0 Matsu Arr-Jizo 9.56 227 ePN **Pn 03 11 00.9 +0.2**
MJB9 Matsu-Tunnel 9.58 227 **Pn 03 10 59.0 -1.9**
MAJO Matsushiro 9.58 227 **Pn 03 10 59.3 -1.7**
MAJO Matsushiro 9.58 227 PN **Pn 03 10 59.3 -1.7**
MAT Matsushiro 9.58 227 P **Pn 03 11 00.4 -0.6**
MAT eS **Sn 03 12 49.5 +2.2**
MJAR Matsushiro Arr 9.58 227 P **Pn 03 11 01.0 +0.1**
comp=Z,0.2nm,0.3s,baz=29,slow=12,SNR=11
MJAR Matsushiro Arr 9.58 227 **Pn 03 11 00.3 -0.7**
GRNR Gornyy 10.25 319 eP **Pn 03 11 12.5 +2.5**
GRNR AMB AMB 03 11 14.8
comp=Z,8.0nm,0.7s
GRNR Gornyy 10.25 319 ePN **Pn 03 11 12.5 +2.5**
GRNR pmax pmax
comp=Z,8.0nm,0.7s
GRNR MLR MLR
comp=Z,120nm,15.0s
USRK Ussuriysk Ar. 10.82 279 P **Pn 03 11 19.4 +1.6**
baz=91,slow=13,SNR=3.0
USRK LR LR 03 15 37.4
comp=Z,321nm,18.9s,baz=91,slow=38
USRK Ussuriysk Ar. 10.82 279 **Pn 03 11 19.0 +1.1**
JHJ Hachijo jima 2 11.71 211 P **Pn 03 11 29.4 -0.6**
comp=Z,5.3nm,0.3s,baz=197,slow=15,SNR=2.8
JHJ LR LR 03 16 33.5
comp=Z,14nm,19.0s,baz=53,slow=40
KLR Kul'dur 11.98 304 P **Pn 03 11 32.5 -1.2**
baz=180,slow=20,SNR=2.2
KLR Kul'dur 11.98 304 eP **Pn 03 11 36.0 +2.4**
KLR Kul'dur 11.98 304 i PN **Pn 03 11 36.0 +2.4**
KLR pmax pmax
comp=Z,2.0nm,0.9s
PEA0B Petropavlovsk- 12.05 33 Pn **Pn 03 11 34.5 0.0**
PEA0B Petropavlovsk- 12.05 33 PN **Pn 03 11 34.6 0.0**
PETK Petropavlovsk- 12.05 33 P **Pn 03 11 34.0 -0.5**
comp=Z,1.5nm,0.3s,baz=204,slow=15,SNR=19
EKMR Ekimchan 13.38 321 eP **Pn 03 11 53.0 +0.2**
EKMR AMB AMB 03 11 59.0
comp=Z,15nm,1.0s
KSRS Korea Array 15.63 254 P **Pn 03 12 20.9 -2.2**
comp=Z,0.2nm,0.3s,baz=64,slow=12,SNR=3.1
KSRS Korea Array 15.63 254 eP **P 03 12 26.1 -0.6**
BMKR Bomnak 16.31 320 eP **Pn 03 12 30.0 -1.6**
BMKR AMB AMB 03 12 34.8
comp=Z,5.0nm,0.8s
MA2 Magadan 16.35 7 P **P 03 12 32.8 -1.7**
comp=Z,0.5nm,0.3s,baz=162,slow=20,SNR=2.2
ZEA Zeya 16.55 315 erx rx 03 12 42.0
ZEA Zeya 16.55 315 eP **P 03 12 42.0 +5.2**
ZEA pmax pmax
comp=Z,18nm,1.4s
KROS Kirovskiy 17.05 317 eP **Pn 03 12 40.0 -1.0**
KROS AMB AMB 03 12 43.0
comp=Z,6.0nm,0.8s
SEY Seymchan 19.80 7 P **Pn 03 13 13.1 -1.2**
comp=Z,0.2nm,0.3s,baz=192,slow=8.6,SNR=7.5
YAK Yakutsk 21.23 337 eP **P 03 13 29.1 +1.2**
BJT Baijiatuau 23.14 272 P **P 03 13 46.2 -2.2**
BJT IAmb IAmb 03 13 52.8
comp=Z,5.2nm,0.6s
BJT Baijiatuau 23.14 272 P **P 03 13 46.2 -2.2**
BJT pmax pmax
comp=Z,5.0nm,0.6s
TIA Tai'an 23.91 263 P **P 03 13 56.2 +0.4**
TIA pmax pmax
comp=Z,20nm,0.8s
BILL Bilibino 26.72 16 eP **P 03 14 19.9 -1.1**
BILL Bilibino 26.72 16⇓eP **P 03 14 19.9 -1.1**
BILL e*PP **pP 03 14 29.6 -1.9**
BILL e*SP **sP 03 14 38.0 +2.0**
BILL PPP PPP 03 15 12.0
BILL pmax pmax
comp=Z,7.0nm,1.6s
BILL MLR MLR
comp=Z,541nm,22.0s
ULN Ulaanbaatar 28.00 293 eP **P 03 14 32.5 -0.4**
ULN Ulaanbaatar 28.00 293 P **P 03 14 32.5 -0.4**
ULN IAmb IAmb 03 14 34.0
comp=Z,8.1nm,0.8s
ULN Ulaanbaatar 28.00 293 P **P 03 14 32.5 -0.4**
ULN pmax pmax
comp=Z,8.0nm,0.8s
SONM Songino Array 28.44 293 P **P 03 14 36.6 -0.2**
comp=Z,6.7nm,0.8s,baz=89,slow=8.8,SNR=44
SONM Songino Array 28.44 293 P **P 03 14 36.2 -0.6**
WHN Wuhan 28.83 254 P P 03 14 52.7 +12
H11N2 WAKE ISLAND Hy 28.97 138 T T 03 45 24.5
baz=330,slow=76,SNR=3458
H11N1 WAKE ISLAND Hy 28.98 138 T T 03 45 27.2
baz=330,slow=76,SNR=4078
H11N3 WAKE ISLAND Hy 28.98 138 T T 03 45 28.1
baz=330,slow=76,SNR=3644
H11S1 WAKE ISLAND Hy 29.92 140 T T 03 46 32.3
baz=331,slow=76,SNR=8646
H11S3 WAKE ISLAND Hy 29.93 140 T T 03 46 37.0
baz=331,slow=76,SNR=5405
H11S2 WAKE ISLAND Hy 29.94 140 T T 03 46 37.9
baz=331,slow=76,SNR=3749
XAN Xi'an 30.86 265 P **P 03 14 57.3 -1.0**
XAN pP sP 03 15 13.6 +0.3
XAN pmax pmax
comp=Z,4.0nm,0.9s
XAN pmax pmax
comp=Z,88nm,3.7s
XAN Xi'an 30.86 265 P **P 03 14 58.2 -0.1**
XAN IAmb IAmb 03 15 04.9
comp=Z,5.0nm,0.7s
XAN Xi'an 30.86 265 P **P 03 14 58.2 -0.1**
XAN pmax pmax
comp=Z,5.0nm,0.7s
IMAR Indian Mountai 39.01 34 P **P 03 16 08.9 +0.9**
KDAK Kodiak Island 39.59 47 P **P 03 16 11.9 -1.0**
comp=Z,4.4nm,0.8s,baz=336,slow=20,SNR=2.2
KDAK Kodiak Island 39.59 47 IAmb IAmb 03 16 17.5
comp=Z,14nm,1.1s
KTH Kantishna Hill 40.11 38 P **P 03 16 19.6 +2.3**
KTH IAmb IAmb 03 16 24.6
comp=Z,8.1nm,1.2s
RND Reindeer 41.04 38 P **P 03 16 25.5 +0.5**
RND IAmb IAmb 03 16 33.5
comp=Z,3.8nm,0.8s
RND Reindeer 41.04 38 P **P 03 16 25.5 +0.5**
RND pmax pmax
comp=Z,4.0nm,0.8s
ZALV Zalesovo Beam 41.06 307 P **P 03 16 24.8 -0.4**
comp=Z,1.0nm,0.6s,baz=72,slow=6.8,SNR=4.4
DHY Denali Highway 41.73 39 P **P 03 16 31.7 +1.0**
HDA Harding Lake 41.84 37 P **P 03 16 31.9 +0.5**
HDA IAmb IAmb 03 16 40.2
comp=Z,2.7nm,0.6s
IL31 41.85 36 P **P 03 16 31.7 +0.2**
ILAR Eielson Array 41.85 36 P **P 03 16 31.8 +0.3**
comp=Z,0.8nm,0.6s,baz=274,slow=8.2,SNR=12
ILAR Eielson Array 41.85 36 eP **P 03 16 34.5 +3.0**
ILAR pmax pmax
comp=Z,2.0nm,0.6s
SLVN Son La 41.89 252 P **P 03 16 33.2 +0.8**
FYU Fort Yukon 42.47 33 IAmb IAmb 03 16 40.5
comp=Z,4.2nm,0.6s
BMAR Burnt Mountain 42.70 32 P **P 03 16 39.8 +1.4**
SCRK Sand Creek 43.16 37 P **P 03 16 40.8 -1.5**
BCAR Beaver Creek A 44.26 38 P **P 03 16 52.4 +1.3**
EGAK Eagle 44.29 36 P **P 03 16 52.4 +1.2**
EGAK IAmb IAmb 03 16 57.6
comp=Z,4.4nm,1.1s
MKAR Makanchi Array 44.59 298 P **P 03 16 53.2 -0.7**
comp=Z,5.5nm,0.6s,baz=83,slow=8.9,SNR=60
MAKZ Makanchi 44.78 298 P **P 03 16 55.2 -0.2**
MAKZ Makanchi 44.78 298 P **P 03 16 55.2 -0.2**
MAKZ pmax pmax
comp=Z,30nm,0.8s
DLV T Lat 45.62 238 P **P 03 17 03.9 +1.3**
EPYK Eagle Plains 45.89 33 IAmb IAmb 03 17 08.6
comp=Z,4.4nm,0.9s
INK Inuvik 46.77 30 P **P 03 17 11.2 +0.5**
comp=Z,2.6nm,0.5s,baz=286,slow=7.8,SNR=62
INK Inuvik 46.77 30 P **P 03 17 11.7 +1.0**
INK IAmb IAmb 03 17 20.9
comp=Z,2.9nm,0.7s
INK Inuvik 46.77 30 P **P 03 17 11.7 +1.0**
INK pmax pmax
comp=Z,3.0nm,0.7s

CMAR Chiang Mai Arr 47.27 254 P **P 03 17 15.9 +0.6**
comp=Z,1.2nm,0.4s,baz=46,slow=7.7,SNR=3.6
C36M Paulatuk 49.84 28 P **P 03 17 34.5 +0.1**
TAPN Taplejung 49.85 272 eP P 03 17 48.9 +13
ODAN Odare 50.37 271 eP P 03 17 44.9 +5.6
comp=Z,15nm,0.3s
JIRN Jiri 50.78 273 eP **P 03 17 42.8 +0.2**
GUN Gumba 50.87 273 eP **P 03 17 43.3 +0.1**
comp=Z,65nm,0.7s
RAMN Ramite 50.89 272 eP **P 03 17 43.2 0.0**
comp=Z,44nm,0.6s
KSH Kashi 51.83 292 P **P 03 17 54.3 +4.4**
KSH pP sP 03 18 17.9 +13
KSH PcS **PcS 03 23 00.3 -0.4**
KSH S **S 03 25 11.7 +2.0**
YKA Yellowknife Ar 56.17 34 P **P 03 18 21.6 +0.6**
comp=Z,1.0nm,0.6s,baz=301,slow=7.0,SNR=10
WRA Warramunga Arr 64.10 193 P **P 03 19 15.4 -0.4**
comp=Z,2.6nm,0.8s,baz=12,slow=6.5,SNR=6.3
GEYT Alibeck 64.45 299 P **P 03 19 16.9 -1.3**
comp=Z,3.6nm,0.7s,baz=58,slow=9.2,SNR=2.5
FINES FINESS Array B 65.09 333 P **P 03 19 21.1 -0.7**
comp=Z,8.5nm,0.6s,baz=46,slow=7.8,SNR=4.5
ASAR Alice Springs 67.82 193 P **P 03 19 40.6 +0.9**
comp=Z,2.6nm,0.8s,baz=4.7,slow=5.1,SNR=16
ASAR Alice Springs 67.82 193 P **P 03 19 40.4 +0.7**
NVAR Mina Array Bea 67.89 58 P **P 03 19 41.0 +0.5**
comp=Z,0.6nm,0.7s,baz=292,slow=6.8,SNR=5.0
NB2 NORSAR Subarra 69.85 339 P **P 03 19 51.3 -0.7**
comp=Z,6.0nm,0.7s,baz=32,slow=6.5
NOA NORSAR Array B 69.85 339 P **P 03 19 51.5 -0.4**
comp=Z,6.9nm,0.7s,baz=32,slow=6.3,SNR=9.3
KBZ Khabaz 69.89 311 P **P 03 19 53.2 +0.8**
comp=Z,12nm,0.8s,baz=144,slow=2.4,SNR=3.7
HFS Hagfors 69.93 337 P **P 03 19 51.8 -0.6**
comp=Z,13nm,0.6s,baz=15,slow=6.8,SNR=13
PDAR Pinedale Array 70.25 50 P **P 03 19 55.2 +0.1**
comp=Z,0.3nm,0.7s,baz=323,slow=1.4,SNR=2.7
AKASG Malin Array Be 71.74 324 P **P 03 20 03.1 -0.5**
comp=Z,6.9nm,0.6s,baz=41,slow=6.1,SNR=9.1
AKASG Malin Array Be 71.74 324 IAmb IAmb 03 20 05.8
comp=Z,2.2nm,0.8s
AKASG Malin Array Be 71.74 324 i P **P 03 20 03.0 -0.6**
AKASG pmax pmax
comp=Z,7.0nm,0.6s
CLL Collm 77.53 332 eP **P 03 20 37.0 -0.1**
CLL Collm 77.53 332 eP **P 03 20 36.0 -1.1**
BRTR Keskin Array B 77.65 314 P **P 03 20 38.0 -0.2**
comp=Z,1.3nm,0.7s,baz=27,slow=4.4,SNR=2.3
BRTR Keskin Array B 77.65 314 P **P 03 20 38.0 -0.2**
EKA Eskdalemuir Ar 78.39 343 P **P 03 20 41.6 -0.2**
comp=Z,2.6nm,0.6s,baz=29,slow=5.5,SNR=8.2
GERES GERESS Array 79.36 331 P **P 03 20 47.3 -0.1**
comp=Z,1.1nm,0.5s,baz=44,slow=5.8,SNR=4.8
TXAR Lajitas Array 82.97 56 P **P 03 21 08.3 +1.4**
comp=Z,0.3nm,0.5s,baz=283,slow=3.9,SNR=3.6
ESDC Sonseca Array 93.19 338 P **P 03 21 55.3 -0.7**
comp=Z,0.3nm,0.5s,baz=8.4,slow=3.1,SNR=4.2
ESDC Sonseca Array 93.19 338 IAmb IAmb 03 21 59.7
comp=Z,1.0nm,1.1s

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*TIR **03** 03:08:35.9, 37°.87N×20°.53E, h7km, Md5.7/7*
*GII **03** 03:08:37.8±0.0, 38°.26N×20°.32E, h2km*
*BJI **03** 03:08:42.6±0.0, 38°.29N×20°.34E, h10km, mB6.1/84, mb5.6/82, Ms6.4/91, Ms7 6.1/89*
*IDC **03** 03:08:44.6±0.3, 38°.32N×20°.44E, h0km, mb5.5/48, mb1 5.5/62, mb1mx5.4/67, mbtmp5.4/62, ML4.8/14, MS6.0/58, Ms1 6.0/58, ms1mx5.8/70, Error ellipse: s-maj=8.7km s-min=8.1km az=132.0*
*NEIC **03** 03:08:44.3±2.6, 38°.24N±0°.04×20°.38E±0°.05, h4km±2km, Error ellipse: s-maj=5.7km s-min=5.0km az=213.0, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr0.87; Mθθ-0.19; Mφφ-0.67; Mrθ0.02; Mθφ0.66; Mφr0.29; Fault plane solution: M0 1.07000×10^18 NP1: φs129.31000°, δ40.67000°, λ66.49000°. NP2: φs339.14000°, δ53.30000°, λ108.92000°. Principal axes: T 0.9441, Plg74.0000°, Azm303.0000°; N 0.2198, Plg15.0000°, Azm148.0000°; P -1.1638, Plg7.0000°, Azm56.0000°;*
*ATH **03** 03:08:44.7, 38°.25N×20°.40E, h11km±1km, ML5.7/25 Error ellipse: s-maj=1.3km s-min=1.0km az=61.0*
*PDG **03** 03:08:44.3±0.5, 38°.26N×20°.33E, h6km, MD5.9/14, ML5.7/14, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*
*THE **03** 03:08:44.4, 38°.27N×20°.32E, h9km±1km, ML5.8/31, Error ellipse: s-maj=1.8km s-min=0.5km az=118.0*
*MED_RC **03** 03:08:45.0±0.2, 38°.25N×20°.34E, h8km, MW6.2/23, Moment Tensor Solution. Body waves: s9,c14; Mantle waves: s23,c51; Duration: 2s4 Moment tensor: Scale 10^18Nm; Mrr0.74±.02; Mθθ0.34±.02; Mφφ-1.08±.02; Mrθ1.37±.09; Mθφ1.07±.01; Mφr-1.39±.08; Best double couple: M0 2.34000×10^18 NP1: φs9.00000°, δ24.00000°, λ145.00000°. NP2: φs131.00000°, δ77.00000°, λ70.00000°. Principal axes: T 1.9900, Plg54.0000°, Azm17.0000°; N 0.7100, Plg19.0000°, Azm136.0000°; P -2.7000, Plg29.0000°, Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*
*MOS **03** 03:08:45.1±1.1, 38°.30N×20°.32E, h22km, mb5.8/76, MS6.1/71 Error ellipse: s-maj=5.4km s-min=3.0km az=84.6*
*BEO **03** 03:08:45.4±2.3, 37°.99N×20°.05E, h42km±5km, ML5.7/8*
*KLM **03** 03:08:47.0, 38°.13N×20°.58E, h10km, mb6.0*
*GCMT **03** 03:08:48.2±0.1, 38°.07N×20°.37E, h12km, MW6.0/162, Moment Tensor Solution. s147,c322; s162,c538; Duration: 2s5 Moment tensor: Scale 10^18Nm; Mrr0.75±.01; Mθθ0.30±.01; Mφφ-1.05±.01; Mrθ0.30±.02; Mθφ1.05±.01; Mφr-0.24±.02; Best double couple: M0 1.33200×10^18 NP1: φs12.00000°, δ57.00000°, λ157.00000°. NP2: φs115.00000°, δ71.00000°, λ35.00000°. Principal axes: T 0.9880, Plg38.0000°, Azm338.0000°; N 0.6890, Plg51.0000°, Azm140.0000°; P -1.6770, Plg8.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*BGR **03** 03:08:48.0±0.6, 38°.40N×20°.62E, h13km Error ellipse: s-maj=27.8km s-min=8.9km az=51.0*
*SKO **03** 03:08:49.6, 38°.57N×20°.45E, h0km*
*NEIC **03** 03:08:50, 38°.12N×20°.37E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr0.74; Mθθ0.32; Mφφ-1.06; Mrθ0.51; Mθφ1.09; Mφr-0.58; Fault plane solution: M0 1.63000×10^18 NP1: φs12.00000°, δ45.00000°, λ154.00000°. NP2: φs120.00000°, δ72.00000°, λ48.00000°. Principal axes: T 1.1026, Plg46.0000°, Azm347.0000°; N 0.7758, Plg40.0000°, Azm136.0000°; P -1.8784, Plg16.0000°, Azm240.0000°;*
*NEIC **03** 03:08:51, 38°.19N×20°.34E, h16km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr0.90; Mθθ0.14; Mφφ-1.03; Mrθ0.17; Mθφ0.96; Mφr0.03; Fault plane solution: M0 1.38000×10^18 NP1: φs356.00000°, δ50.00000°, λ127.00000°. NP2: φs126.00000°, δ52.00000°, λ54.00000°. Principal axes: T 0.9815, Plg62.0000°, Azm333.0000°; N 0.5902, Plg28.0000°, Azm150.0000°; P -1.5717, Plg1.0000°, Azm241.0000°;*
*NEIC **03** 03:08:54.5, 38°.53N×20°.03E, h10km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr0.75; Mθθ0.15; Mφφ-0.90; Mrθ1.11; Mθφ0.96; Mφr-0.62; Fault plane solution: M0 1.77000×10^18 NP1: φs120.59000°, δ74.20000°, λ59.79000°. NP2: φs5.53000°, δ33.75000°, λ150.64000°. Principal axes: T 1.6021, Plg51.0000°, Azm356.0000°; N 0.3388, Plg29.0000°, Azm130.0000°; P -1.9409, Plg23.0000°, Azm233.0000°;*
*HLW **03** 03:08:54.3, 38°.14N×21°.71E, h10km±15km, Md5.6, Ml6.2*
ISC 03 03:08:46.3±0.3, **38°.26N**±0°.01×**20°.44E**±0°.01, **h14**km±1km, **h14km:pP-P, n2356,** σ**1s97**/2530, **mb5.6**/432, **MS6.1**/463, **94C-51D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.01**	**286**	P	**Pg**	**03 08 45.9**	**-2.9**
KEF1	**Kardakata, Kep**	**0.04**	**50**	P	**Pg**	**03 08 46.1**	**-2.8**
CHV1	**Chavriata, Kef**	**0.08**	**211**	P	**Pg**	**03 08 47.4**	**-1.9**
ARG2	**Argostoli**	**0.09**	**152**	P	**Pg**	**03 08 47.5**	**-1.9**
ARG2				S	**Sg**	**03 08 50.2**	**-1.2**

KEF3	Kipouria, Keph	0.09	233	P	Pg	03 08 47.3	-2.1
KEF2	Argostoli. Kep	0.10	156	P	Pg	03 08 48.0	-1.5
VLS	Valsamata	0.14	123	P	Pg	03 08 48.4	-1.7
VLS	Valsamata	0.14	123	P	Pg	03 08 48.4	-1.7
VSK1	VASILIKIADES	0.18	33	P	Pg	03 08 48.9	-1.8
VSK1				S	Sg	03 08 52.1	-1.5
	6626µm,0.5s						
EVGI	Lefkada island	0.40	25	P	Pg	03 08 52.8	-1.7
EVGI				S	Sg	03 08 59.9	-0.1
EVGI	Lefkada island	0.40	25	P	Pg	03 08 52.9	-1.6
EVGI	Lefkada island	0.40	25		Pg	03 08 52.8	-1.7
VLMS	Volimes, Zakyn	0.42	155	P	Pg	03 08 53.7	-1.0
MGNA	Meganis	0.49	35	P	Pg	03 08 54.6	-1.4
MGNA				S	Sg	03 09 02.3	-0.2
MGNA				AML	AML	03 09 03.0	
MGNA				AML	AML	03 09 06.7	
MGNA	Meganis	0.49	35		Pg	03 08 54.2	-1.8
LKD2	Lefkada island	0.56	18	P	Pg	03 08 55.5	-1.9
LKD2				S	Sg	03 09 04.2	-0.6
LKD2	Lefkada island	0.56	18	P	Pg	03 08 55.6	-1.8
LKD2				S	Sg	03 09 04.3	-0.6
LKD2				AML	AML	03 09 12.9	
LKD2				AML	AML	03 09 13.4	
LKD2	Lefkada island	0.56	18		Pg	03 08 55.5	-1.9
AST1	Astakos	0.59	61	P	Pg	03 08 56.6	-1.3
AST1				S	Sb	03 09 07.4	+0.9
	1484µm,0.4s						
ZAK2	Zakynthos	0.59	142	P	Pg	03 08 57.3	-0.7
ZAK2				S	Sb	03 09 07.9	+1.3
	4836µm,0.6s						
TSLK	Tsoukalades, L	0.59	17	P	Pg	03 08 56.1	-1.9
TSLK				S	Sg	03 09 05.5	-0.4
	644µm,1.5s						
TSLK	Tsoukalades, L	0.59	17	P	Pg	03 08 56.5	-1.5
TSLK	Tsoukalades, L	0.59	17		Pg	03 08 56.1	-1.9
KRI1	kERI	0.66	153	P	Pg	03 08 57.6	-1.7
KRI1				S	Sb	03 09 08.4	-0.3
	1515µm,1.2s						
PDO	Prodromos	0.68	59	P	Pg	03 08 58.2	-1.4
PDO				S	Sb	03 09 09.8	+0.6
	1181µm,0.6s						
PDO	Prodromos	0.68	59	P	Pg	03 08 58.2	-1.4
PDO				S	Sg	03 09 08.2	-0.3
PDO				AML	AML	03 09 12.1	
PDO				AML	AML	03 09 14.2	
RLS	Riolos of Patr	0.83	103	P	Pg	03 09 01.2	-1.3
RLS				S	Sb	03 09 14.4	+0.8
	462µm,1.4s						
RLS	Riolos of Patr	0.83	103	P	Pg	03 09 01.2	-1.3
RLS				S	Sb	03 09 13.8	+0.1
RLS				AML	AML	03 09 25.8	
RLS				AML	AML	03 09 27.2	
RLS	Riolos of Patr	0.83	103		Pg	03 09 00.9	-1.6
PVO	Paravola	0.93	67	P	Pg	03 09 03.0	-1.3
PVO				S	Sn	03 09 18.6	+0.6
	543µm,0.7s						
PVO	Paravola	0.93	67	P	Pn	03 09 03.1	-1.2
PVO				S	Sb	03 09 16.1	-0.2
PVO				AML	AML	03 09 25.9	
PVO				AML	AML	03 09 28.9	
DRO	Drossia	1.05	106	P	Pg	03 09 04.6	-2.0
DRO				S	Sn	03 09 21.3	+0.3
	598µm,0.8s						
DRO	Drossia	1.05	106	P	Pg	03 09 04.9	-1.7
DRO				S	Sn	03 09 20.4	-0.6
DRO				AML	AML	03 09 30.1	
DRO				AML	AML	03 09 34.4	
UPR	University Cam	1.06	88	P	Pg	03 09 06.2	-0.6
LAKA	Lakka	1.21	90	P	Pb	03 09 07.5	-1.6
LAKA				S	Sn	03 09 27.3	+2.2
	323µm,1.8s						
LAKA	Lakka	1.21	90	P	Pb	03 09 07.9	-1.2
LAKA				AML	AML	03 09 37.5	
LAKA				AML	AML	03 09 38.4	
LAKA	Lakka	1.21	90		Pb	03 09 07.4	-1.7
AMT	Artemida-Makis	1.24	125	P	Pn	03 09 07.9	-1.3
AMT				S	Sn	03 09 26.0	+0.3
	482µm,0.9s						
AMT	Artemida-Makis	1.24	125	P	Pn	03 09 08.5	-0.7
AMT				AML	AML	03 09 37.1	
AMT				AML	AML	03 09 43.6	
EVR	Evrytania	1.26	58	P	Pn	03 09 08.5	-1.1
EVR				S	Sn	03 09 28.2	+1.8
	180µm,1.8s						
EVR	Evrytania	1.26	58	P	Pn	03 09 08.5	-1.1
EVR				AML	AML	03 09 37.4	
EVR				AML	AML	03 09 41.1	
EVR	Evrytania	1.26	58		Pn	03 09 08.4	-1.1
SERG	Sergoula	1.28	82	P	Pn	03 09 09.1	-0.7
SERG	Sergoula	1.28	82	P	Pn	03 09 08.9	-0.9
TRIZ	Trizonia	1.29	85	P	Pn	03 09 08.6	-1.3
TRIZ				S	Sn	03 09 28.2	+1.3
	289µm,1.0s						
TRIZ	Trizonia	1.29	85	P	Pn	03 09 08.7	-1.2
ALIK	Aliki, Aigiali	1.32	89	P	Pn	03 09 08.8	-1.4
KALE	Kalithea	1.35	84	P	Pn	03 09 09.3	-1.4
KALE				S	Sg	03 09 31.0	+1.2
	225µm,0.8s						
KALE	Kalithea	1.35	84	P	Pn	03 09 10.7	0.0
KALE				AML	AML	03 09 39.7	
KALE				AML	AML	03 09 40.0	
KALE	Kalithea	1.35	84		Pn	03 09 09.7	-1.0
KLV	Kalavryta, Ach	1.37	98	P	Pn	03 09 09.9	-1.1
KLV				S	Sg	03 09 30.0	-0.5
	166µm,1.4s						
KLV	Kalavryta, Ach	1.37	98	P	Pn	03 09 10.4	-0.6
KLV				S	Sg	03 09 29.5	-1.0
KLV				AML	AML	03 09 43.5	
KLV				AML	AML	03 09 43.6	
KLV	Kalavryta, Ach	1.37	98		Pn	03 09 10.1	-0.9
JAN	Janina	1.44	13	P	Pn	03 09 11.9	0.0
JAN				S	Sg	03 09 32.5	-0.2
	185µm,0.7s						
JAN	Janina	1.44	13	P	Pn	03 09 12.5	+0.6
JAN				AML	AML	03 09 38.6	
JAN				AML	AML	03 09 39.6	
JAN	Janina	1.44	13		Pn	03 09 12.7	+0.8
JAN	Janina	1.44	13	P	Pn	03 09 12.7	+0.8
MAKR	Makrakomi, Fth	1.53	60	P	Pn	03 09 13.2	0.0
MAKR				S	Sg	03 09 34.6	-1.0
	275µm,0.9s						
MAKR	Makrakomi, Fth	1.53	60	P	Pn	03 09 13.8	+0.6
MAKR				AML	AML	03 09 48.6	
MAKR				AML	AML	03 09 50.1	
MAKR	Makrakomi, Fth	1.53	60		Pn	03 09 13.6	+0.4
KASA	Kassiopi	1.54	345	P	Pn	03 09 14.5	+1.2
KASA				AML	AML	03 09 38.7	
KASA				AML	AML	03 09 46.8	
KASA	Kassiopi	1.54	345		Pn	03 09 14.5	+1.2
ITM	Ithomi	1.60	132	P	Pn	03 09 14.2	+0.1
ITM				S	Sn	03 09 33.8	-0.7
	228µm,1.4s						
ITM	Ithomi	1.60	132	P	Pn	03 09 14.5	+0.3
ITM				AML	AML	03 09 49.9	
ITM				AML	AML	03 09 54.7	
ITM	Ithomi	1.60	132	P	Pb	03 09 15.5	-0.1
ITM	Ithomi	1.60	132		Pn	03 09 14.4	+0.3
ITM					Sn	03 09 31.7	-2.8
DLFA	Delphi	1.63	82	P	Pb	03 09 15.6	-0.6
DLFA				AML	AML	03 09 47.2	
DLFA				AML	AML	03 09 49.6	
DLFA	Delphi	1.63	82		Pb	03 09 16.0	-0.3
SRN	Sarande	1.66	348	P	Pn	03 09 14.7	-0.2
SRN	Sarande	1.66	348	*i* PN	Pn	03 09 14.9	-0.1
SRN				*i* SN	Sg	03 09 44.9	+5.2
AGG	Agios Georgios	1.67	62	P	Pn	03 09 14.6	-0.5
AGG	Agios Georgios	1.67	62	P	Pn	03 09 15.8	+0.7
AGG				AML	AML	03 09 46.6	
AGG				AML	AML	03 09 52.4	
AGG	Agios Georgios	1.67	62	P	Pb	03 09 17.3	+0.5
AGG	Agios Georgios	1.67	62	Pn	Pn	03 09 15.6	+0.5
AGG	Agios Georgios	1.67	62	P	Pn	03 09 15.6	+0.5
PYL	PYLOS	1.71	142	P	Pn	03 09 15.6	0.0
PYL				S	Sn	03 09 37.9	+0.7
	119µm,1.2s						
KLMT	Kalamata	1.75	132	P	Pn	03 09 17.0	+0.8
VLX	Vlachokerasia	1.77	119	P	Pn	03 09 17.4	+0.8
VLX				S	Sb	03 09 41.4	+0.6
	257µm,1.0s						
THL	Klokotos Trika	1.80	43	P	Pn	03 09 17.9	+1.1
THL				S	Sb	03 09 41.3	0.0
	121µm,0.7s						
THL	Klokotos Trika	1.80	43	P	Pn	03 09 17.8	+1.1
THL				AML	AML	03 09 50.9	
THL				AML	AML	03 09 52.0	
THL	Klokotos Trika	1.80	43		Pn	03 09 18.0	+1.1
AXAR	Agios Charalam	1.82	73	P	Pn	03 09 18.1	+1.0
AXAR				AML	AML	03 10 05.0	
AXAR				AML	AML	03 10 13.3	
AXAR	Agios Charalam	1.82	73		Pb	03 09 19.2	-0.1
KPRO	Kipourio	1.84	23	P	Pn	03 09 18.6	+1.0
KPRO				S	Sn	03 09 41.6	+0.9
	180µm,1.0s						
KPRO	Kipourio	1.84	23		Pb	03 09 19.8	-0.1
LTK	Loutraki	2.01	96	P	Pn	03 09 21.1	+1.3
LTK				S	Sg	03 09 48.9	-2.0
	121µm,1.7s						
PENT	Pentalofos	2.01	15	P	Pn	03 09 21.7	+1.8
PENT				S	Sb	03 09 48.4	+0.7
	67µm,2.1s						
PENT	Pentalofos	2.01	15	P	Pb	03 09 21.9	-0.8
PENT				AML	AML	03 10 01.0	
PENT				AML	AML	03 10 02.6	
	comp=E,89408µm,0.8s						
PENT	Pentalofos	2.01	15		Pb	03 09 22.1	-0.7
LOUT	Loutraki	2.02	97	P	Pb	03 09 21.6	-1.2
LOUT	Loutraki	2.02	97	P	Pn	03 09 21.0	+1.1
LOUT	Loutraki	2.02	97		Pb	03 09 21.9	-0.9
LKR	Lokris	2.05	78	P	Pb	03 09 22.2	-1.1
LKR	Lokris	2.05	78	P	Pb	03 09 22.4	-0.9
LKR				AML	AML	03 10 10.1	
LKR				AML	AML	03 10 14.4	
LKR	Lokris	2.05	78		Pb	03 09 22.1	-1.2
TPE	Tepelena	2.06	351	P	Pn	03 09 20.7	+0.2
TPE	Tepelena	2.06	351	*i* PN	Pn	03 09 21.8	+1.2
TPE				*i* SN	Sg	03 09 55.4	+2.7
LRSO	Larissa Observ	2.08	47		Pb	03 09 22.9	-0.9
NEST	Nestorio	2.21	12	P	Pb	03 09 25.1	-1.0
NEST				S	Sb	03 09 53.8	+0.5
	comp=E,51µm,1.6s						
NEST	Nestorio	2.21	12		Pb	03 09 25.1	-1.0
VIL2	Platees	2.23	90	P	Pb	03 09 25.1	-1.3
VIL2				AML	AML	03 10 14.6	
VIL2				AML	AML	03 10 19.4	
VILL	Villia	2.27	91	P	Pn	03 09 24.9	+1.5
VILL				S	Sb	03 09 55.3	+0.4
	comp=E,159µm,1.0s						
VILL	Villia	2.27	91		Pn	03 09 24.8	+1.4
KZN	Kozani	2.29	26	P	Pn	03 09 25.3	+1.5
KZN				S	Sb	03 09 55.2	-0.6
	comp=E,75µm,1.1s						
KZN	Kozani	2.29	26	P	Pn	03 09 25.3	+1.5
KZN	Kozani	2.29	26		Pn	03 09 25.6	+1.8
KZN	Kozani	2.29	26	P	Pn	03 09 25.6	+1.8
KRND	KRANIDI	2.32	111	P	Pn	03 09 25.7	+1.7
KRND				S	Sb	03 09 55.5	-0.8
	comp=E,160µm,1.8s						
KRND	KRANIDI	2.32	111		Pn	03 09 25.6	+1.7
VLO	Vlora	2.33	342	*i* PN	Pn	03 09 25.4	+1.3
VLO				*i* SN	Sg	03 10 03.1	+1.9
DID	Didima	2.34	108	P	Pn	03 09 25.6	+1.3
SCTE	Santa Cesarea	2.37	320	P	Pn	03 09 24.9	+0.1
SCTE	Santa Cesarea	2.37	320		Pn	03 09 23.7	-1.0
NEO	Neokhori	2.42	63	P	Pn	03 09 27.4	+2.0
NEO	Neokhori	2.42	63	P	Pn	03 09 27.1	+1.7
NEO	Neokhori	2.42	63		Pn	03 09 27.4	+2.0
XOR	Xorichti	2.42	62	P	Pn	03 09 27.6	+2.2
XOR	Xorichti	2.42	62		Pn	03 09 27.6	+2.2
LIT	Litokhoron	2.44	40	P	Pn	03 09 26.9	+1.2
LIT	Litokhoron	2.44	40		Pn	03 09 26.5	+0.8
LIT					Sn	03 09 53.5	-1.8
LIT	Litokhoron	2.44	40	P	Pn	03 09 26.5	+0.8
LIT						03 09 53.5	
VLI	Veliai	2.51	127	P	Pn	03 09 28.5	+1.8
VLI	Veliai	2.51	127		Pb	03 09 29.0	-2.1
MRKA	Markates	2.51	79	P	Pn	03 09 28.1	+1.4
MRKA	Markates	2.51	79	P	Pn	03 09 28.4	+1.7
MRKA				AML	AML	03 10 19.7	
MRKA				AML	AML	03 10 20.4	
MRKA	Markates	2.51	79		Pn	03 09 28.3	+1.6
SKIA	Skiathos	2.54	68	P	Pn	03 09 29.4	+2.3
SKIA	Skiathos	2.54	68	P	Pn	03 09 29.2	+2.1
YDRA	Hydra	2.56	110	P	Pb	03 09 29.8	-2.2
ATH	Athens Observa	2.60	95	P	Pn	03 09 29.4	+1.5
ATH				S	Sb	03 10 02.6	-1.9
	comp=E,114µm,1.8s						
ATH	Athens Observa	2.60	95	P	Pn	03 09 29.4	+1.5
ATH				AML	AML	03 10 20.3	
ATH				AML	AML	03 10 27.0	
FNA	Florina	2.63	16	P	Pn	03 09 29.4	+1.1
FNA	Florina	2.63	16	*e*Pn	Pn	03 09 30.2	+1.9
FNA				*e*Sn	Sn	03 10 02.8	+2.8
FNA	Florina	2.63	16		Pn	03 09 29.0	+0.6
FNA	Florina	2.63	16	P	Pn	03 09 29.0	+0.6
ATHU	Athens Univers	2.66	95	P	Pn	03 09 30.2	+1.5
ATHU	Athens Univers	2.66	95	P	Pn	03 09 29.5	+0.8
VLY	Voula,Athens	2.68	98	P	Pn	03 09 30.3	+1.3
VLY				S	Sb	03 10 04.5	-2.3
	comp=E,66µm,2.0s						
PTL	Penteli	2.71	93	P	Pn	03 09 30.8	+1.3
PTL	Penteli	2.71	93	P	Pn	03 09 30.7	+1.3
PTL				AML	AML	03 10 24.5	
PTL				AML	AML	03 10 25.3	
EREA	Eretria	2.75	85	P	Pn	03 09 31.7	+1.7
EREA	Eretria	2.75	85	P	Pn	03 09 32.5	+2.4
ALNA	Alonissos	2.83	71	P	Pn	03 09 33.7	+2.7
AOS	Alonnisos	2.84	70	P	Pn	03 09 32.9	+1.7
AOS	Alonnisos	2.84	70	P	Pb	03 09 34.3	-2.5
KTHR	Kythira	2.86	133	P	Pn	03 09 33.6	+2.2
OHR	Ohrid	2.87	5	*i* Pn	Pn	03 09 33.4	+1.8
OHR				*e*Sg	Sb	03 10 10.0	-2.2
OHR				*e*Lg	Lg	03 10 10.2	
	comp=E,14µm,0.7s						
OHR				*e*Lg	Lg	03 10 10.7	
	comp=N,8µm,0.7s						
KTHA	Kythira Island	2.89	133	P	Pn	03 09 34.4	+2.5
KTHA	Kythira Island	2.89	133	P	Pn	03 09 32.6	+0.7
TIP	Timpagrande	3.02	289	P	Pn	03 09 33.9	+0.1
TIP	Timpagrande	3.02	289	⇓P	Pn	03 09 33.5	-0.3
TIP				⇑S	Sn	03 10 07.0	-2.7
TIP	Timpagrande	3.02	289		Pn	03 09 32.5	-1.2
PAIG	Paliouri	3.03	56	P	Pn	03 09 34.4	+0.7
PAIG	Paliouri	3.03	56	P	Pn	03 09 34.5	+0.7
THE	Thessaloniki	3.08	39	P	Pn	03 09 35.0	+0.6
HORT	Hortiatis	3.12	41	P	Pn	03 09 36.3	+1.2
TIR	Tirane	3.12	352	*e*Pn	Pn	03 09 35.9	+0.9
TIR				*e*Sn	Sn	03 10 13.2	+1.1
TIR	Tirane	3.12	352	*i* PN	Pn	03 09 35.9	+0.9
TIR				*i* SN	Sb	03 10 18.9	-0.5
TIR	Tirane	3.12	352	P	Pn	03 09 35.7	+0.7
TIR	Tirane	3.12	352	⇓P	Pn	03 09 36.1	+1.1
TIR				⇑S	Sn	03 10 13.3	+1.2
TIR	Tirane	3.12	352		Pn	03 09 35.3	+0.3
TIR	Tirane	3.12	352	P	Pn	03 09 35.3	+0.3
PLG	Polygyros	3.15	47	P	Pn	03 09 36.3	+0.8
PLG	Polygyros	3.15	47	P	Pn	03 09 36.3	+0.8
KARY	Karystos	3.16	93	P	Pn	03 09 36.5	+0.9
SKY	Skiros Island	3.28	78	P	Pn	03 09 39.6	+2.3
ANKY	Antikythira Is	3.31	135	P	Pn	03 09 39.6	+2.0
ANKY	Antikythira Is	3.31	135	P	Pn	03 09 39.9	+2.3
TAR1	Taranto	3.33	314	⇓*i*Pn	Pn	03 09 37.7	-0.2
TAR1				(Sn)	Sg	03 10 42.8	+9.4
SERI	Serifos	3.39	108	P	Pn	03 09 39.0	+0.2
SERI	Serifos	3.39	108	P	Pn	03 09 40.6	+1.8
SOH	Sokhos	3.41	40	P	Pn	03 09 40.6	+1.4
PHP	Peshkopia	3.42	0	*i* PN	Pn	03 09 40.1	+0.8
PHP				*i* SN	Sb	03 10 29.6	+1.4
OUR	Ouranopolis	3.45	52	P	Pn	03 09 40.7	+1.2
OUR	Ouranopolis	3.45	52	P	Pn	03 09 42.7	+3.2
KNT	Kendrikon	3.47	32	P	Pn	03 09 40.5	+0.7
VAY	Valandovo	3.48	28	*e*Pn	Pn	03 09 41.4	+1.5
VAY				*e*Sn	Sn	03 10 23.9	+3.1
VAY	Valandovo	3.48	28	*i* Pn	Pn	03 09 40.6	+0.7
MASS	Massafra	3.48	314	⇓*i*Pn	Pn	03 09 39.7	-0.3
MASS				Sn	Sg	03 10 45.8	+7.6
MHLO	Agia Marina, M	3.52	115	P	Pn	03 09 39.3	-1.2
CEL	Celeste	3.58	271		Pn	03 09 40.9	-0.5
STIP	Stip	3.69	21	*i* Pn	Pn	03 09 45.0	+2.2
MATE	Matera	3.75	311	⇑P	Pn	03 09 44.0	+0.3
SRS	Serrai	3.75	39	P	Pn	03 09 44.4	+0.6
SRS	Serrai	3.75	39	*e*Pn	Pn	03 09 44.9	+1.1
RODP	Rodopos	3.78	134	P	Pn	03 09 46.0	+1.8
RODP	Rodopos	3.78	134	P	Pn	03 09 45.9	+1.8
SKO	Skopje	3.79	11	*e*Pn	Pn	03 09 45.6	+1.3
SKO				*e*Sn	Sn	03 10 30.8	+2.2
SKO	Skopje	3.79	11	*i* Pn	Pn	03 09 45.3	+1.0
PUK	Puka	3.81	354	*i* PN	Pn	03 09 45.1	+0.5
PUK				*i* SN	Sb	03 10 38.9	-0.3
ULC	Ulcinj	3.81	347	*e*Sn	Sn	03 10 29.5	+0.2
ULC	Ulcinj	3.81	347	*e*Pn	Pn	03 09 43.8	-0.8
SG1	Sgolgore (BA)	3.89	313	*e*Pn	Pn	03 09 45.7	+0.1
BAI	Bari	3.96	317	⇓*i*Pn	Pn	03 09 46.1	-0.4
CHAN	Chania	3.98	132	P	Pn	03 09 46.6	-0.2
IMMV	Iera Moni Meta	3.98	133	P	Pn	03 09 47.8	+0.9
KNDR	Palaiochora Ch	3.99	138	P	Pn	03 09 47.1	+0.2
KNDR	Palaiochora Ch	3.99	138	P	Pn	03 09 47.4	+0.5
DRME	Dracevica, Mon	4.04	347	⇓*i*Pn	Pn	03 09 47.2	-0.5
DRME	Dracevica, Mon	4.04	347	*e*Sn	Sn	03 10 35.8	+1.0
DRME	Dracevica, Mon	4.04	347	*e*Pn	Pn	03 09 47.4	-0.3
NVR	Nevrokopi	4.06	39	P	Pn	03 09 49.5	+1.5
THAS	Thassos island	4.06	53	P	Pn	03 09 49.1	+1.1
BCI	Bajram Curri	4.12	356	*i* PN	Pn	03 09 50.0	+1.3
BCI				*i* SN	Sn	03 10 41.7	+5.0
VAM	Vamos	4.15	132	P	Pn	03 09 49.4	+0.2
IOSP	Ios island	4.15	110	P	Pn	03 09 49.7	+0.5
KAVA	Kavala	4.17	48	P	Pn	03 09 50.3	+0.8
BUM	Brajici-Budva	4.21	344	*e*Sn	Sn	03 10 38.8	-0.2
BUM	Brajici-Budva	4.21	344	*e*Pn	Pn	03 09 49.5	-0.6
APE	Apeiranthos	4.21	105	P	Pn	03 09 49.7	-0.4
APE	Apeiranthos	4.21	105	⇓P	Pn	03 09 53.9	+3.8
APE	Apeiranthos	4.21	105	P	Pn	03 09 50.4	+0.3
APE	Apeiranthos	4.21	105	*i* P	Pn	03 09 50.3	+0.2
PDG	Podgorica	4.27	348	*e*Pn	Pn	03 09 50.7	-0.1
PDG				*e*Sn	Sn	03 10 39.2	-1.2
PDG	Podgorica	4.27	348	⇑P	Pn	03 09 50.9	+0.1
PDG				⇑S	Sn	03 10 39.1	-1.2
PDG	Podgorica	4.27	348	⇓*i*Pn	Pn	03 09 50.1	-0.7
PDG	Podgorica	4.27	348		Pn	03 09 49.8	-1.0
PDG					Sn	03 10 39.0	-1.4
TTG	Podgorica	4.27	348	*e*Sn	Sn	03 10 41.2	+0.9
TTG	Podgorica	4.27	348	*e*Pn	Pn	03 09 50.5	-0.3
ACER	Acerenza	4.30	307		Pn	03 09 50.6	-0.7
THR5	Thira Island,	4.32	114	P	Pn	03 09 53.7	+2.1
SIGR	SIGRI	4.34	76	P	Pn	03 09 53.9	+2.1
SIGR	SIGRI	4.34	76	P	Pn	03 09 54.8	+3.0
PVY	Plav	4.35	355	*e*Sn	Sn	03 10 43.8	+1.2
PVY	Plav	4.35	355	*e*Pn	Pn	03 09 52.7	+0.6
PRNS	Prines Rethymn	4.35	130	P	Pn	03 09 51.9	-0.1
THR3	Thira Island,	4.36	113	P	Pn	03 09 54.0	+1.9
THT2	Imerovigli	4.37	113	P	Pn	03 09 53.0	+0.8
THT2	Imerovigli	4.37	113	P	Pn	03 09 53.8	+1.6
SFIR	Foira Santorin	4.38	113	P	Pn	03 09 53.2	+0.8
THR7	Fira-Santorini	4.38	113	P	Pn	03 09 54.2	+1.8
SAP1	Santorini-Akro	4.38	114	P	Pn	03 09 53.1	+0.7
THR6	Thira Island,	4.38	114	P	Pn	03 09 54.4	+2.0
THT1	Athinios (Pele	4.39	114	P	Pn	03 09 53.5	+1.0
SAP2K	Karterados	4.40	113	P	Pn	03 09 53.9	+1.3
CHOS	Chios island	4.42	87	P	Pn	03 09 54.4	+1.4
CHOS	Chios island	4.42	87	P	Pn	03 09 55.0	+2.0
THR8	Santorini-Mono	4.42	113	P	Pn	03 09 53.7	+0.8
SANT	Santorini	4.42	114	P	Pn	03 09 53.9	+0.9
SANT	Santorini	4.42	114	P	Pn	03 09 54.4	+1.4
SANT	Santorini	4.42	114		Pn	03 09 53.8	+0.8
CEME	Cevo	4.44	345	*e*Sn	Sn	03 10 43.4	-1.3
CEME	Cevo	4.44	345	*e*Pn	Pn	03 09 52.5	-0.8
HCY	Herceg Novi	4.44	341	*e*Pn	Pn	03 09 51.5	-1.7
HCY	Herceg Novi	4.44	341	*e*Sn	Sn	03 10 45.9	+1.2
HCY	Herceg Novi	4.44	341	*e*Pn	Pn	03 09 51.9	-1.3
GVD	Gavdhos	4.50	138	P	Pn	03 09 53.9	-0.1
GVD	Gavdhos	4.50	138	P	Pn	03 09 42.6	-11
BOSS	Bosilegrad	4.51	20	*e*Pn	Pn	03 09 55.7	+1.5
SMTH	Samothraki Isl	4.53	59	P	Pn	03 09 55.0	+0.6
AMGA	Amorgos Island	4.56	106	P	Pn	03 09 55.5	+0.6
IVA	Berane	4.63	355	*e*Sn	Sn	03 10 50.3	+0.9
IVA	Berane	4.63	355	*e*Pn	Pn	03 09 56.2	+0.3
IDI	Anoyia	4.64	128	Pn	Pn	03 09 56.4	+0.3
	comp=N,11nm,0.3s,baz=275,slow=7.7,SNR=82						
IDI				Sn	Sn	03 10 51.0	+1.3
	comp=N,261nm,0.3s,baz=337,slow=18,SNR=10						
IDI	Anoyia	4.64	128	P	Pn	03 09 57.1	+1.1
KOME	Kolasin	4.64	352	*e*Sn	Sn	03 10 49.7	-0.1
KOME	Kolasin	4.64	352	*e*Pn	Pn	03 09 56.2	+0.1
NKME	Niksic	4.65	346	*e*Sn	Sn	03 10 50.7	+0.9
NKME	Niksic	4.65	346	*e*Pn	Pn	03 09 54.9	-1.2
BOZC	Bozcaada	4.65	68	P	Pn	03 09 59.8	+3.7
GADA	Gvkgeada	4.66	64	P	Pn	03 09 59.6	+3.4
BARS	Barje	4.68	13	*e*Pn	Pn	03 09 57.1	+0.7
BARS	Barje	4.68	13	*e*Pn	Pg	03 10 13.2	-2.7
NKY	Niksic	4.68	347	*e*Sn	Sn	03 10 50.9	+0.1
NKY	Niksic	4.68	347	*e*Pn	Pn	03 09 56.1	-0.5
TMBK	Timbaki Herakl	4.71	131	P	Pn	03 09 57.6	+0.7
TREB	Trebinje	4.73	341	*e*Pn	Pn	03 09 56.0	-1.2
TREB				*e*Sn	Sn	03 10 48.6	-3.2
TREB	Trebinje	4.73	341	*e*Pn	Pn	03 09 55.4	-1.8
KSTL	Kastelli Herak	4.74	127	P	Pn	03 10 02.7	+5.3
HRKL	Herakleio	4.76	127	P	Pn	03 09 56.9	-0.7
HRKL	Herakleio	4.76	127	P	Pn	03 09 57.5	-0.1
SIVA	Sivas	4.78	131	P	Pn	03 09 58.6	+0.8
VAE	Valguarnera	4.83	263	Pn	Pn	03 09 58.4	-0.2
	comp=N,24nm,0.3s,baz=139,slow=9.3,SNR=74						
VAE				Sn	Sn	03 10 52.7	-1.6
	comp=N,197nm,0.3s,baz=71,slow=17,SNR=6.6						
EZN	Ezine	4.84	69	P	Pn	03 10 00.4	+1.7
EZN	Ezine	4.84	69	P	Pn	03 10 01.8	+3.1
VTS	Vitosha	4.85	25	P	Pn	03 09 59.7	+0.7
VTS	Vitosha	4.85	25	*e*Pn	Pn	03 10 00.7	+1.7
VTS				*e*Sn	Sn	03 10 56.7	+1.7
VTS	Vitosha	4.85	25	⇑P	Pn	03 10 00.6	+1.6
VTS	Vitosha	4.85	25		Pn	03 09 59.9	+0.9
VTS	Vitosha	4.85	25	P	Pn	03 09 59.9	+0.9
BRY	Bratogost	4.86	343	*e*Pn	Pn	03 09 57.6	-1.5
BRY	Bratogost	4.86	343	*e*Sn	Sn	03 10 54.3	-0.9
BRY	Bratogost	4.86	343	*e*Pn	Pn	03 09 58.0	-1.1
RDO	Rodhopi	4.88	52	P	Pn	03 10 00.4	+1.2
RDO	Rodhopi	4.88	52	P	Pn	03 10 00.6	+1.4
SELS	Selova	4.99	6	*e*Pn	Pn	03 10 00.5	-0.2
SJES	Sjenica	5.01	356	*e*Pn	Pn	03 10 01.6	+0.4
SJES				*e*Sn	Sn	03 10 57.1	-1.8
STON	Ston	5.06	337	*e*Pn	Pn	03 09 59.5	-2.2
ALN	Alexandroupoli	5.07	57	P	Pn	03 10 03.3	+1.4
ALN	Alexandroupoli	5.07	57	P	Pn	03 10 04.9	+3.0
ALN	Alexandroupoli	5.07	57		Pn	03 10 02.5	+0.7
ALN	Alexandroupoli	5.07	57	P	Pn	03 10 02.6	+0.7
UPM	Unac-Piva	5.08	347	*e*Pn	Pn	03 10 01.3	-0.8
UPM	Unac-Piva	5.08	347	*i* Sn	Sn	03 10 58.2	-2.4
UPM	Unac-Piva	5.08	347	*e*Pn	Pn	03 10 01.6	-0.5
SMG	Samos	5.09	94	P	Pn	03 10 03.3	+1.2
LAST	Lasithi	5.09	126	P	Pn	03 10 01.3	-0.9
NPS	Neapolis	5.12	124	P	Pn	03 10 00.8	-1.7
DKL	Dikili	5.13	79	P	Pn	03 10 06.2	+3.6
PLE	Pljevlja	5.13	351	*e*Sn	Sn	03 11 02.1	+0.3
PLE	Pljevlja	5.13	351	*e*Pn	Pn	03 10 02.6	-0.2
GELI	Tayfur-Gelibol	5.15	64	P	Pn	03 10 03.1	+0.2
BLCB	Balcova	5.20	87	P	Pn	03 10 05.9	+2.3
ZAPS	Zavoj	5.28	18	*e*Pn	Pn	03 10 06.6	+1.8
ERIK	Erikli-Kesan	5.29	61	P	Pn	03 10 07.1	+2.3
WDD	Wied Dalam	5.31	245		Pn	03 10 03.5	-1.6
WDD					Sn	03 11 03.5	-2.5
PAOL	Paolisi	5.31	303		Pn	03 10 05.2	0.0
IVAS	Ivanjica	5.32	358	*e*Pn	Pn	03 10 04.7	-0.6
IVAS				*e*Sn	Sn	03 11 04.5	-1.9
LPK	Lapseki	5.34	65	P	Pn	03 10 07.6	+2.1
FRMA	Ierapetra Chan	5.35	126	P	Pn	03 10 07.1	+1.5
GCAM	G?zelcaml?	5.40	94	P	Pn	03 10 08.1	+1.8
KOSK	Kos Island	5.41	104	P	Pn	03 10 07.8	+1.3
KOSK	Kos Island	5.41	104	P	Pn	03 10 07.1	+0.6
RUDO	Rudo	5.42	352	*e*Pn	Pn	03 10 05.8	-0.8
BOVS	Bovan	5.46	10	*e*Pn	Pn	03 10 07.3	+0.1
BOVS				*e*Sn	Sn	03 11 09.0	-0.7
STIA	Sitia Lasithi	5.47	122	P	Pn	03 10 08.8	+1.5
NISR	Nisiros	5.57	105	P	Pn	03 10 10.4	+1.7
UKOP	Uzunkopru-Edir	5.57	57	P	Pn	03 10 10.9	+2.2
ZKR	Zakros	5.60	122	P	Pn	03 10 09.5	+0.3
ZKR	Zakros	5.60	122	P	Pn	03 10 10.5	+1.3
GRUS	Gruza	5.63	2	*e*Pn	Pn	03 10 09.2	-0.4
BBLS	Lazići	5.66	352	*e*Pn	Pn	03 10 09.8	-0.2
BBLS	Lazići	5.66	352	*e*Pn	Pn	03 10 08.7	-1.3
KRBG	Karabiga-Canak	5.73	66	P	Pn	03 10 13.1	+2.2
CLTB	Caltabellotta	5.75	265		Pn	03 10 11.0	-0.3
RKY	Sarkoy-Tekirda	5.75	63	P	Pn	03 10 15.1	+3.8
DIVS	Divibare	5.85	357	*e*Pn	Pn	03 10 11.9	-0.7
DIVS	Divibare	5.85	357	*e*Pn	Pn	03 10 11.4	-1.2

DAT Datca 5.88 103 P Pn 03 10 14.1 +1.0
AYDB Zeytinkoy-Aydi 5.89 91 P Pn 03 10 15.8 +2.6
HAPS Han Pijesak,BI 5.93 350 ePn Pn 03 10 11.9 -1.9
TRUS Trudelj 5.96 360 ePn Pn 03 10 13.4 -0.7
BALB Balikesir 5.96 74 P Pn 03 10 15.9 +1.8
MRMT Marmara Adasi 6.02 65 P Pn 03 10 19.1 +4.2
EDRB Edirne 6.02 51 P Pn 03 10 15.7 +0.8
KARP Karpathos 6.03 115 P Pn 03 10 15.0 0.0
KARP Karpathos 6.03 115 P Pn 03 10 15.9 +0.9
KARP Karpathos 6.03 115 Pn 03 10 15.5 +0.5
PLVB Pleven 6.03 30 ⇓P Pn 03 10 16.8 +1.8
SVIS Svilajnac 6.03 5 ePn Pn 03 10 15.7 +0.7
EDC Edincik 6.13 68 P Pn 03 10 20.5 +4.1
BAIL Bailesti 6.16 20 ⇑P Pn 03 10 17.5 +0.7
ELND Elena 6.24 40 ⇑P Pn 03 10 19.3 +1.5
INTR Introdacqua 6.25 309 Pn 03 10 19.0 +0.8
PUNG Punghina 6.30 17 ⇓P Pn 03 10 19.2 +0.4
CRLT Corlu 6.32 61 P Pn 03 10 21.6 +2.6
YER Yerkesik 6.32 98 P Pn 03 10 22.4 +3.3
TEKS Tekeris 6.33 354 ePn Pn 03 10 18.1 -1.0
TEKS Tekeris 6.33 354 ePn Pn 03 10 17.7 -1.4
MANT Manisa 6.38 85 Pn 03 10 23.2 +3.1
ARG Arkhangelos 6.46 106 P Pn 03 10 22.5 +1.5
ARG Arkhangelos 6.46 106 P Pn 03 10 21.1 +0.1
KULA Kula-Manisa 6.47 85 P Pn 03 10 24.1 +3.0
VLAD Vladila 6.47 26 ⇑P Pn 03 10 22.3 +1.3
MDVR Moldovita 6.59 8 ⇑P Pn 03 10 22.8 0.0
DJES Djerdap 6.59 13 ePn Pn 03 10 23.7 +0.9
TURN Turunc 6.63 100 P Pn 03 10 23.1 -0.2
MGRS Mrkonjic Grad 6.65 339 ⇓/Pn Pn 03 10 23.2 -0.4
DALY Dalyan (Mula) 6.69 100 P Pn 03 10 25.9 +1.9
SLVT Silivri 6.69 61 P Pn 03 10 27.3 +3.3
DOB Doboj 6.71 346 ePn Pn 03 10 22.3 -2.0
SRE Strehaia 6.73 17 ⇑P Pn 03 10 25.4 +0.7
SIMA Simav-Kutahya 6.74 80 P Pn 03 10 28.8 +4.0
SB02 Marmara Sea 6.75 64 P Pn 03 10 25.9 +1.0
AQU L'Aquila 6.76 310 ⇑/Pn Pn 03 10 26.6 +1.5
AQU L'Aquila 6.76 310 Pn 03 10 26.1 +1.0
AQU L'Aquila 6.76 310 P Pn 03 10 26.1 +1.0
CTYL Yalikoy Yolu 6.84 60 P Pn 03 10 28.1 +1.9
MDNY Mudanya-Bursa 6.88 70 P Pn 03 10 30.5 +3.8
COPA Copaceanca 6.89 30 ⇑P Pn 03 10 28.5 +1.7
CTKS Kestanelik-??a 6.89 62 P Pn 03 10 29.2 +2.3
FRGS Fruska Gora 6.91 356 ePn Pn 03 10 25.4 -1.8
FRGS Fruska Gora 6.91 356 ePn Pn 03 10 23.4 -3.8
ARMT Armutlu 6.92 68 P Pn 03 10 29.6 +2.3
BLY Banja Luka 6.93 340 ⇑P Pn 03 10 26.7 -0.7
BLY Banja Luka 6.93 340 ePn Pn 03 10 26.1 -1.3
FETY Fethiye 7.07 101 P Pn 03 10 33.5 +4.2
GEDZ Gediz 7.07 81 P Pn 03 10 30.9 +1.5
HUMR Humele 7.14 27 ⇑P Pn 03 10 31.3 +1.1
BANR Banloc 7.14 4 ⇓P Pn 03 10 29.9 -0.3
TVSB Tavsanli 7.14 78 P Pn 03 10 35.6 +5.2
ISK Istanbul-Kandi 7.22 64 P Pn 03 10 32.6 +1.3
ISK Istanbul-Kandi 7.22 64 P Pn 03 10 34.9 +3.6
KAVV Kandilli-Istan 7.22 64 P Pn 03 10 34.9 +3.6
KLYT Kilyos 7.27 63 P Pn 03 10 36.1 +4.0
YLV Yalova 7.29 69 P Pn 03 10 34.8 +2.4
GZR Gura Zlata 7.34 13 ⇑P Pn 03 10 33.2 +0.1
BUC1 Bucharest 7.40 33 ⇓P Pn 03 10 36.2 +2.4
BZS Buzias 7.41 6 ⇓P Pn 03 10 33.4 -0.5
HRT Hereke 7.58 67 P Pn 03 10 39.9 +3.5
AKAS Kas 7.59 103 P Pn 03 10 41.1 +4.6
BASM Basmaki-Afyon 7.59 90 P Pn 03 10 41.1 +4.6
LOT Lotru 7.61 18 ⇑P Pn 03 10 37.7 +1.0
SILT Sile 7.66 65 P Pn 03 10 35.5 -1.9
ELL Elmali 7.68 98 Pn 03 10 41.4 +3.6
ELL Elmali 7.68 98 P Pn 03 10 41.4 +3.6
SULR 7.76 32 ⇓P Pn 03 10 40.9 +2.1
ARR Arges 7.77 22 ⇑P Pn 03 10 39.8 +0.9
MTUR Matau 7.78 25 ⇓P Pn 03 10 41.4 +2.3
SLUM Salum 7.80 148 AMP 03 12 00.0
baz=155
MURB Monte Urbino 7.81 312 Pn 03 10 40.5 +1.0
DEV Deva 7.84 13 ⇓P Pn 03 10 42.3 +2.5
LATE Laterza 7.89 306 Pn 03 10 41.1 +0.4
SHUT Suhut-Afyon 7.95 85 P Pn 03 10 45.5 +4.0
VOIR 7.96 24 ⇓P Pn 03 10 42.8 +1.3
BORA Eskisehir 7.96 75 P Pn 03 10 45.1 +3.5
KORT Korkueli 7.97 96 P Pn 03 10 46.6 +4.9
ISP Isparta 7.97 90 P Pn 03 10 43.8 +2.0
SPNC Sapanca-Adapaz 8.01 69 P Pn 03 10 46.8 +4.6
SAUV Serdivan-Sakar 8.04 69 P Pn 03 10 45.3 +2.7
SIRR Siria 8.06 6 ⇓P Pn 03 10 43.0 +0.1
MORH Mrgy, Hungar 8.06 351 ePn Pn 03 10 40.3 -2.6
ICOR Ion Corvin 8.07 41 ⇑P Pn 03 10 46.4 +3.4
BCK Bucak 8.07 93 P Pn 03 10 47.5 +4.4
GULT Gulveren 8.11 71 P Pn 03 10 47.1 +3.5
SRCK Saricakaya, Es 8.12 74 P Pn 03 10 47.1 +3.4
BOJS Bojanci 8.21 334 ePn Pn 03 10 44.1 -0.8
BOJS eSn Sn 03 12 13.7 -3.7
ANTB Antalya 8.22 96 P Pn 03 10 50.7 +5.6
ZAG Zagreb 8.26 338 ePn Pn 03 10 43.8 -1.8
MLR Muntele Rosu 8.31 28 Pn Pn 03 10 48.1 +1.6
comp=N,5.0nm,0.3s,baz=243,slow=7.0,SNR=58
MLR LR LR 03 14 26.2
comp=N,152μm,18.9s,baz=210,slow=41
MLR Muntele Rosu 8.31 28 ⇓P Pn 03 10 48.4 +1.9
CIFT Cifteler, Eski 8.37 79 P Pn 03 10 50.7 +3.5
GCIS Gornji Cirnik 8.40 336 ePn Pn 03 10 45.8 -1.8
GCIS eSn Sn 03 12 16.9 -5.3
MDB Medias 8.40 19 ⇓P Pn 03 10 50.5 +2.9
CRES Cresnjev 8.42 336 ⇓/Pn Pn 03 10 45.6 -2.2
DOPR Dopca 8.54 24 ⇓P Pn 03 10 50.5 +1.1
VISS Visnje 8.61 333 ePn Pn 03 10 49.7 -0.8
VISS eSn Sn 03 12 23.1 -4.3
GRER 8.63 32 ⇓P Pn 03 10 53.3 +2.7
BISRR Bisoca 8.66 31 ⇑P Pn 03 10 54.1 +3.0
DRGR 8.69 10 ⇑P Pn 03 10 52.5 +0.8
SVRH Sivrihisar-ESK 8.73 79 P Pn 03 10 56.2 +4.0
AUSIV SIVRIHISAR 8.74 79 P Pn 03 10 55.9 +3.5
CJR Cluj-Napoca 8.77 14 ⇓P Pn 03 10 53.6 +1.0
OZUR 8.78 25 ⇑P Pn 03 10 54.3 +1.5
PLOR Plostina 8.88 29 ⇑P Pn 03 10 56.2 +2.0
VRI Vrincioaia 8.93 30 ⇑P Pn 03 10 56.8 +2.1
LJU Ljubljana 8.93 332 ⇓/Pn Pn 03 10 53.5 -1.3
ODBI Odobesti 8.97 31 ⇓P Pn 03 10 59.3 +4.0
KIZT Kizilcal 8.99 82 P Pn 03 10 59.9 +4.2
KDZE Karadeniz Ereo 9.01 67 ⇓P Pn 03 10 58.1 +2.2
PETR Petresti 9.01 32 ⇓P Pn 03 10 59.4 +3.5
JURR Jurilovca 9.07 42 ⇑P Pn 03 10 58.0 +1.3
I48TN KESRA INFRASON 9.22 258 i 04 07 00.0
baz=71,slow=319,SNR=5.7
KEST Kesra 9.22 258 Pn Pn 03 10 59.4 +0.4
comp=N,8.1nm,0.3s,baz=42,slow=3.1,SNR=80
KEST Sn Sn 03 12 38.9 -3.7
baz=135,slow=19,SNR=2.4
KEST LR LR 03 15 21.0
comp=N,100μm,20.1s,baz=23,slow=43
KEST Kesra 9.22 258 Pn 03 10 58.7 -0.2
SOKA Soboth 9.31 336 i Pn Pn 03 10 58.2 -1.9
comp=N,351nm,0.4s,SNR=164
SOKA Sn Sn 03 12 36.6 -8.1
comp=N,225nm,0.6s
OBKA Obir 9.32 334 ePn Pn 03 10 59.3 -1.0
OBKA eSn Sn 03 12 38.4 -6.5
OBKA Obir 9.32 334 ePn Pn 03 10 59.7 -0.6
comp=N,374nm,0.6s,SNR=71
OBKA Sn Sn 03 12 38.7 -6.2
comp=N,565nm,0.8s
TLCR 9.33 39 ⇓P Pn 03 11 02.6 +2.3
GHRR 9.36 31 ⇑P Pn 03 11 02.5 +1.9
LADK Ladik-KONYA 9.39 87 P Pn 03 11 05.7 +4.5
KONT Konya--Tatoy 9.41 88 P Pn 03 11 06.3 +4.9
TESR Tescani 9.44 27 ⇓P Pn 03 11 04.0 +2.2
BIZ Bicaz 9.63 24 ⇓P Pn 03 11 06.2 +1.8
HDMB Hadim 9.65 94 P Pn 03 11 08.5 +3.6
TEOL Teolo 9.65 320 Pn Pn 03 11 03.5 -1.2
PSZ Piszkesteto 9.67 358 ⇑P Pn 03 11 04.4 -0.5
BMR Baia Mare 9.68 12 ⇓P Pn 03 11 06.3 +1.3
SRO Srobarova 9.68 351 eP Pn 03 11 05.6 +0.6
SRO e 03 12 54.3
SRO Srobarova 9.68 351 ePN Pn 03 11 05.6 +0.6
SRO eSN Sn 03 12 54.3 +0.8
GAZI Gazipasa 9.68 98 P Pn 03 11 05.1 -0.1
ARSA Arzberg 9.69 340 ePn Pn 03 11 03.9 -1.3
ARSA Arzberg 9.69 340 ePn Pn 03 11 03.2 -1.9
comp=N,67nm,0.5s,SNR=33
ARSA Sn Sn 03 12 47.3 -6.4
comp=N,171nm,0.7s
ANTO Ankara 9.75 77 ⇑P Pn 03 11 09.3 +3.2
ANTO Ankara 9.75 77 Pn 03 11 06.8 +0.7
ANTO Ankara 9.75 77 P Pn 03 11 06.8 +0.7
MYKA Terra Mystica 9.76 331 ePn Pn 03 11 04.9 -1.3
comp=N,55nm,0.3s,SNR=29
MYKA Sn Sn 03 12 51.5 -4.0
comp=N,169nm,0.5s
GIRR Girov 9.77 25 ⇓P Pn 03 11 08.7 +2.4
VASR Vaslui 9.98 31 ⇑P Pn 03 11 10.2 +1.0
BURAR Bucovina Array 9.99 19 ⇓P Pn 03 11 11.4 +2.0
BURAR Bucovina Array 9.99 19 Pn 03 11 09.9 +0.6
TRPA Tarpa 9.99 8 ⇑P Pn 03 11 09.2 -0.1
PRMA PARMA 9.99 314 P Pn 03 11 10.8 +1.4
PRMA PARMA 9.99 314 Pn Pn 03 11 10.5 +1.1
PRMA Sn 03 12 59.5 -1.6
LEOM Leova 10.04 33 ⇓P Pn 03 11 12.4 +2.5
KECS Kecovo 10.22 0 eP Pn 03 11 13.0 +0.5
KECS e 03 13 01.5
KECS Kecovo 10.22 0 ePN Pn 03 11 13.0 +0.5
KECS eSN Sn 03 13 01.5 -5.4
CONA Conrad Observa 10.23 342 ePn Pn 03 11 10.8 -1.9
comp=N,23nm,0.5s,SNR=24
KBA Koelnbreinsper 10.24 332 ePn Pn 03 11 12.1 -0.9
KBA eSn Sn 03 13 02.4 -5.2
KBA Koelnbreinsper 10.24 332 ePn Pn 03 11 11.8 -1.1
comp=N,44nm,0.3s,SNR=52
KBA Sn Sn 03 13 01.5 -6.1
comp=N,249nm,0.7s
VYHS Vyhne 10.30 354 eP Pn 03 11 12.9 -0.7
VYHS e 03 13 04.9
VYHS MLR MLR
comp=Z,114μm,21.0s
VYHS Vyhne 10.30 354 ePN Pn 03 11 12.9 -0.7
VYHS eSN Sn 03 13 04.9 -3.9
VYHS eL L 03 15 32.0
ABTA Abfaltersbach 10.30 328 ePn Pn 03 11 12.3 -1.4
comp=Z,206nm,0.7s,SNR=68
ABTA Sn Sn 03 13 02.4 -6.5
comp=Z,692nm,1.0s
MODS Modra-Piesok 10.37 348 eP Pn 03 11 12.9 -1.7
MODS e 03 13 04.1
MODS MLR MLR
comp=Z,199μm,17.8s
MODS Modra-Piesok 10.37 348 ePN Pn 03 11 12.9 -1.7
MODS eSN Sn 03 13 04.1 -6.4
MODS eL L 03 16 14.6
BR131 Keskin Array S 10.38 78 i P Pn 03 11 17.2 +2.3
BRTR Keskin Array B 10.38 78 Pn Pn 03 11 19.6 +4.7
comp=Z,3.4nm,0.3s,baz=260,slow=10,SNR=118
BRTR LR LR 03 15 55.3
comp=Z,126μm,21.3s,baz=244,slow=42
BRTR PKiKP PKiKP 03 25 20.3 +0.4
comp=Z,0.1nm,0.3s,baz=188,slow=3.7,SNR=4.8
BRTR Keskin Array B 10.38 78 Pn 03 11 16.7 +1.8
UZH Uzhgorod 10.46 7 eP Pn 03 11 16.3 +0.6
UZH eS Sn 03 13 13.1 +0.5
CMAH Djebel Manchou 10.48 265 P Pn 03 11 18.0 +1.9
SMOL Smolenice 10.48 349 eP Pn 03 11 16.1 0.0
SMOL e 03 13 08.1
SMOL Smolenice 10.48 349 ePN Pn 03 11 16.1 0.0
SMOL eSN Sn 03 13 08.1 -5.2
MOA Molln 10.59 337 ePn Pn 03 11 16.4 -1.3
MOA eSn Sn 03 13 09.2 -6.8
MOA Molln 10.59 337 i Pn Pn 03 11 16.3 -1.3
comp=Z,170nm,0.3s,SNR=103
MOA eSn Sn 03 13 11.7 -4.3
comp=Z,129nm,0.7s
MILM Milestii Mici 10.63 33 ⇓P Pn 03 11 19.1 +1.0
CRVS Cervenica-Dubn 10.67 4 eP Pn 03 11 18.9 +0.3
CRVS MLR MLR
comp=Z,91μm,17.2s
CRVS Cervenica-Dubn 10.67 4 ePN Pn 03 11 18.9 +0.3
CRVS eL L 03 16 41.1
KIS Kishinev 10.69 33 eP Pn 03 11 20.0 +1.1
comp=Z,840nm,2.0s
KIS Kishinev 10.69 33 i PP Pn 03 11 29.0 +10
KIS i S Sn 03 13 20.0 +1.7
comp=Z,19μm,12.0s
KIS i Li 03 14 12.0
KIS i LQ LQ 03 14 25.0
KIS LRM MLR 03 16 44.0
comp=Z,101μm,14.0s
KIS Kishinev 10.69 33 ⇑P Pn 03 11 20.1 +1.1
KIS Kishinev 10.69 33 eP Pn 03 11 20.0 +1.1
KIS i S Sn 03 13 20.0 +1.7
KIS pmax pmax
comp=Z,840nm,2.0s
KIS pmax pmax
comp=Z,4μm,14.0s
KIS smax smax
comp=N,19μm,12.0s
KIS MLR MLR
comp=Z,101μm,14.0s
KOLS Kolonicke sedl 10.76 7 eP Pn 03 11 20.4 +0.6
KOLS MLR MLR
comp=Z,30μm,24.3s
KOLS Kolonicke sedl 10.76 7 ePN Pn 03 11 20.4 +0.6
KOLS eL L 03 14 55.1
JAVC Velka Javorina 10.79 350 ePN Pn 03 11 21.5 +1.2
JAVC eSN Sn 03 13 15.9 -4.9
CSS Mathiatis 10.87 104 Pn 03 11 20.1 -1.3
CSS Mathiatis 10.87 104 Pn Pn 03 11 16.1 -5.4
CAEH 'Ain El Ouahch 10.89 266 P Pn 03 11 22.9 +1.2
HBRG Burj al `Arab 10.90 132 P Pn 03 11 18.1 -3.8
baz=136
HBRG AMP 03 13 00.0
baz=136
RJOB Jochberg 11.00 332 ePn Pn 03 11 22.1 -1.1
RJOB eSn Sn 03 13 19.2 -6.7
CKFL Kef-Lekhel 11.08 265 P Pn 03 11 22.6 -1.8
NIE Niedzica 11.16 360 eP Pn 03 11 25.7 +0.3
NIE eS Sn 03 13 56.6 +27
NIE Niedzica 11.16 360 eP Pn 03 11 25.7 +0.3
WATA Walderalm 11.16 327 ePn Pn 03 11 25.1 -0.3
comp=Z,259nm,0.5s,SNR=167
WATA Sn Sn 03 13 27.1 -2.9
comp=Z,731nm,0.8s
STHS Stebnicka Huta 11.17 3 eP Pn 03 11 26.7 +1.2
STHS e 03 13 27.2
STHS Stebnicka Huta 11.17 3 ePN Pn 03 11 26.7 +1.2
STHS Stebnicka Huta 11.17 3 eSN Sn 03 13 27.2 -3.0
KRUC Moravsky 11.19 346 ePN Pn 03 11 24.6 -1.1
KRUC Moravsky 11.19 346 eSN Sn 03 13 25.8 -4.7
SQTA Sankt Quirin 11.23 326 ePn Pn 03 11 26.5 0.0
comp=Z,133nm,0.5s,SNR=48
SQTA eSn Sn 03 13 29.0 -2.7
comp=Z,258nm,0.8s
CASM Ain Smara 11.29 264 P Pn 03 11 21.3 -6.0
FETA Feichten 11.30 324 ePn Pn 03 11 27.3 -0.1
comp=Z,6.5nm,0.4s,SNR=44
FETA Sn Sn 03 13 29.5 -3.9
comp=Z,146nm,0.6s
MOTA Moosalm 11.37 326 ePn Pn 03 11 28.6 +0.2
comp=Z,133nm,0.6s,SNR=82
MOTA eSn Sn 03 13 33.4 -1.8
comp=Z,345nm,0.6s
VRAC Vranov 11.39 347 ePN Pn 03 11 27.8 -0.7
VRAC Vranov 11.39 347 eSN Sn 03 13 30.9 -4.6
VRAC Vranov 11.39 347 Pn Pn 03 11 27.7 -0.8
comp=Z,1.2nm,0.3s,baz=178,slow=14,SNR=3.1
VRAC Sn Sn 03 13 27.4 -8.1
comp=Z,0.5nm,0.3s,baz=152,slow=18,SNR=1.3
VRAC LR LR 03 16 35.3
comp=Z,82μm,21.4s,baz=166,slow=42
VRAC Vranov 11.39 347 ⇓P Pn 03 11 27.9 -0.6
CTEI Djebel Teioual 11.41 263 P Pn 03 11 31.4 +2.5
SORM Soroca 11.43 28 ⇑P Pn 03 11 30.0 +1.0
KWP Kalwaria Pacla 11.49 7 eP Pn 03 11 31.6 +1.8
KWP Kalwaria Pacla 11.49 7 eP Pn 03 11 31.6 +1.8
DAVOX Davos/Dischmat 11.53 321 Pn Pn 03 11 30.6 0.0
comp=Z,9.7nm,0.3s,baz=100,slow=19,SNR=69
DAVOX Sn Sn 03 13 30.1 -9.2
comp=Z,8.4nm,0.3s,baz=163,slow=17,SNR=3.4
DAVOX LR LR 03 16 34.9
comp=Z,70μm,20.8s,baz=122,slow=41
TREC Trest 11.60 344 ePN Pn 03 11 31.2 -0.1
TREC AMS AMS 03 17 00.0
comp=Z,81μm,10.8s
TREC Trest 11.60 344 eP Pn 03 11 31.2 -0.1
TREC MLR MLR
comp=Z,81μm,10.8s
RETA Reutte 11.63 326 ePn Pn 03 11 31.7 -0.1
comp=Z,63nm,0.5s,SNR=34
RETA Sn Sn 03 13 38.6 -2.9
comp=Z,109nm,0.5s
GEC2 GERESS Array S 11.65 337 ePn Pn 03 11 30.6 -1.6
GERES GERESS Array B 11.65 337 Pn Pn 03 11 30.6 -1.6
comp=Z,12nm,0.3s,baz=156,slow=11,SNR=142
GERES Sn Sn 03 13 33.7 -8.3
comp=Z,4.8nm,0.3s,baz=151,slow=25,SNR=3.8
GERES LR LR 03 17 35.1
comp=Z,47μm,19.7s,baz=152,slow=46
GERES GERESS Array B 11.65 337 Pn 03 11 29.9 -2.2
OKC Ostrava-Krasne 11.70 353 ePN Pn 03 11 32.6 0.0
OKC AMS AMS 03 17 20.0
comp=Z,97μm,15.9s
OKC Ostrava-Krasne 11.70 353 eP Pn 03 11 32.6 0.0
OKC MLR MLR
comp=Z,97μm,15.9s
MORC Moravsky Berou 11.70 351 ePN Pn 03 11 32.4 -0.4
MORC Moravsky Berou 11.70 351 eSN Sn 03 13 38.4 -4.8
MORC Moravsky Berou 11.70 351 ⇓P Pn 03 11 33.0 +0.2
DFRA Djebel Bou Aff 11.71 266 P Pn 03 11 31.5 -1.5
LVV L'vov 11.84 11 eP Pn 03 11 36.3 +1.6
LVV eS Sn 03 13 48.7 +2.2
LVV pmax pmax
comp=Z,250nm,1.2s
LVV smax smax
comp=E,330nm,1.6s
LVV smax smax
comp=N,230nm,1.8s
LVV MLR MLR
comp=Z,34μm,9.0s
LVV MLR MLR
comp=E,81μm,10.0s
LVV MLR MLR
comp=N,26μm,9.0s
DIKM Dikmen 11.87 69 ⇑P Pn 03 11 38.8 +3.7
DAVA Damuels 11.89 323 ePn Pn 03 11 36.5 +1.0
DAVA eSn Sn 03 13 40.9 -7.0
DAVA Damuels 11.89 323 ePn Pn 03 11 36.0 +0.5
comp=N,52nm,0.4s,SNR=17
DAVA Sn Sn 03 13 45.5 -2.4
comp=N,228nm,0.7s
RAC Raciborz 11.93 353 eP Pn 03 11 35.5 -0.4
RAC eS Sn 03 13 46.1 -2.6
RAC MLR MLR
comp=Z,98μm,17.3s
FUR Furstenfeldbru 11.94 329 ePn Pn 03 11 34.6 -1.4
FUR eSn Sn 03 13 42.9 -6.0
KHC Kasperske Hory 11.94 338 ePN Pn 03 11 34.5 -1.6
KHC eSN Sn 03 13 42.0 -7.1
KHC AMS AMS 03 17 00.0
comp=Z,207μm,12.2s
KHC Kasperske Hory 11.94 338 eP Pn 03 11 34.5 -1.6
KHC e 03 13 42.0
KHC MLR MLR
comp=Z,207μm,12.2s
OJC Ojcow 11.97 358 eP Pn 03 11 37.6 +1.2
OJC eS Sn 03 13 50.1 +0.5
OJC Ojcow 11.97 358 eP Pn 03 11 37.6 +1.2
OJC eS Sn 03 13 50.1 +0.5
UBR Ueberruh 12.07 325 ePn Pn 03 11 37.6 -0.3
KRLC Kraliky 12.10 349 ePN Pn 03 11 37.9 -0.4
KRLC AMS AMS 03 17 30.0
comp=Z,138μm,12.7s
KRLC Kraliky 12.10 349 eP Pn 03 11 37.9 -0.4
KRLC MLR MLR
comp=Z,138μm,12.7s
CKHR Kef el Ahmar 12.12 264 P Pn 03 11 41.5 +2.9
SET Setif 12.16 265 P Pn 03 11 41.0 +1.8
WET Wettzell 12.17 336 ePn Pn 03 11 36.9 -2.3
SIM Simferopol' 12.22 52 deP Pn 03 11 41.7 +1.8
SIM eS Sn 03 13 59.0 +3.2
SIM pmax pmax
comp=Z,108nm,1.0s
SIM pmax pmax
comp=Z,2μm,5.3s
SIM MLR MLR
comp=N,40μm,11.0s
PBCC Pribram 12.33 340 ePN Pn 03 11 39.8 -1.5
GOPC GO Pecny, Ondr 12.34 343 ePN Pn 03 11 40.1 -1.3
GOPC AMS AMS 03 17 50.0
comp=N,102μm,11.4s
GOPC GO Pecny, Ondr 12.34 343 eP Pn 03 11 40.1 -1.3
GOPC MLR MLR
comp=Z,102μm,11.4s
DPC Dobruska-Polom 12.44 348 ePN Pn 03 11 43.3 +0.4
DPC AMS AMS 03 17 30.0
comp=Z,122μm,14.4s
DPC Dobruska-Polom 12.44 348 eP Pn 03 11 43.3 +0.4
DPC MLR MLR
comp=Z,122μm,14.4s
PRU Pruhonice 12.46 342 ePN Pn 03 11 41.9 -1.3
PRU AMS AMS 03 18 00.0
comp=Z,110μm,11.4s
PRU Pruhonice 12.46 342 eP Pn 03 11 41.9 -1.3
PRU MLR MLR
comp=Z,110μm,11.4s
KOT Kottamia 12.57 128 P Pn 03 11 40.9 -3.8
baz=131
KOT AMP 03 14 44.0
baz=131
PRA Prague 12.57 342 ePN Pn 03 11 43.5 -1.0
PRA AMS AMS 03 18 00.0
comp=Z,105μm,12.4s
PRA Prague 12.57 342 eP Pn 03 11 43.5 -1.0
PRA MLR MLR
comp=Z,105μm,12.4s
UPC Upice 12.65 347 ePN Pn 03 11 46.0 +0.3
UPC AMS AMS 03 17 40.0
comp=Z,125μm,12.2s
UPC Upice 12.65 347 eP Pn 03 11 46.0 +0.3
UPC MLR MLR
comp=Z,125μm,12.2s
OSTC Ostas 12.66 348 ePN Pn 03 11 45.4 -0.5
OSTC AMS AMS 03 17 30.0
comp=Z,110μm,14.4s
MAHO Mahon 12.68 282 eP Pn 03 11 42.1 -3.9
MAHO eS Sn 03 13 59.5 -7.4
HHAG Hagoal 12.72 127 P Pn 03 11 43.3 -3.5
baz=130
CHVC Chvalec 12.72 347 ePN Pn 03 11 46.9 +0.3
CHVC AMS AMS 03 17 40.0
comp=Z,106μm,13.1s
KSP Ksiaz 12.93 348 eP Pn 03 11 50.2 +0.8
KSP Ksiaz 12.93 348 eP Pn 03 11 50.2 +0.8
ROTZ Rotzenmuhle 12.93 335 ePn Pn 03 11 48.1 -1.4
PVCC Panska Ves 12.96 343 ePN Pn 03 11 49.0 -0.9
PVCC AMS AMS 03 17 50.0
comp=Z,85μm,12.8s
PVCC Panska Ves 12.96 343 eP Pn 03 11 49.0 -0.9
PVCC MLR MLR
comp=Z,85μm,12.8s
HNTI Hanita 13.04 109 Pn Pn 03 11 46.0 -5.1
BHL Bhannes 13.05 105 eP Pn 03 11 50.3 -1.1
OFRI `Ofer 13.12 111 Pn Pn 03 11 46.8 -5.5
HWQ Hawqa 13.13 103 eP Pn 03 11 49.6 -2.8
MANZ Manzenberg 13.15 336 ePn Pn 03 11 50.4 -2.2
NBNS Bani Suef 13.20 134 AMP 03 14 44.0
baz=137
GRF Grafenberg Arr 13.21 333 ePn Pn 03 11 50.5 -2.7
BLGI Bet Lehem HaGe 13.22 110 Pn Pn 03 11 47.6 -5.9
MMA0B Mount Meron ar 13.24 109 Pn Pn 03 11 48.7 -5.3
MMAI Mount Meron Ar 13.24 109 Pn Pn 03 11 50.5 -3.4
comp=Z,15nm,0.3s,baz=290,slow=12,SNR=75
MMAI Sn Sn 03 14 13.5 -7.5
comp=Z,33nm,0.3s,baz=306,slow=22,SNR=10
MMAI LR LR 03 17 58.5
comp=Z,40μm,18.1s,baz=310,slow=42
NKC Novy Kostel 13.26 337 ePN Pn 03 11 53.7 -0.4
NKC AMS AMS 03 17 50.0
comp=Z,192μm,13.1s
NKC Novy Kostel 13.26 337 eP Pn 03 11 53.7 -0.4
NKC MLR MLR
comp=Z,192μm,13.1s
STU Stuttgart 13.29 326 ePn Pn 03 11 52.8 -1.6
STU eSn Sn 03 14 13.8 -8.0
WERN Wernitzgruen 13.33 337 ePn Pn 03 11 54.8 -0.3
SLTI Sal'it 13.35 112 Pn Pn 03 11 49.8 -5.6
KSDI Kefar Szold 13.36 108 Pn Pn 03 11 50.2 -5.2
BFO Black Forest 13.37 323 ePn Pn 03 11 53.7 -1.8
BFO eSn Sn 03 14 16.2 -7.7
BFO Black Forest 13.37 323 Pn 03 11 54.4 -1.1
BFO Black Forest 13.37 323 P Pn 03 11 54.4 -1.1
NATI Neve Ativ 13.38 107 Pn Pn 03 11 50.1 -5.6
GUNZ Gunzen 13.41 337 ePn Pn 03 11 53.9 -2.2
TANN Tannenbergstha 13.42 338 ePn Pn 03 11 55.4 -0.9
BRG Berggiesshubel 13.43 342 i P Pn 03 11 54.7 -1.6

comp=Z,91nm,1.2s
BRG S Sn 03 14 20.0 -5.3
BRG Berggiesshubel 13.43 342 ePn Pn 03 11 54.1 -2.2
BRG Berggiesshubel 13.43 342 i P Pn 03 11 54.7 -1.6
BRG S Sn 03 14 20.0 -5.3
BRG pmax pmax
comp=Z,91nm,1.2s
BRG MLR MLR
comp=N,92μm,9.2s
BRG MLR MLR
comp=E,94μm,9.6s
BRG MLR MLR
comp=Z,119μm,10.2s
MMLI Mount Malkishu 13.53 111 Pn Pn 03 11 52.9 -5.0
PLN Plauen 13.57 337 ePn Pn 03 11 57.5 -0.7
BEL Belsk 13.58 1 eP Pn 03 12 01.6 +3.2
BEL Belsk 13.58 1 eP Pn 03 12 01.6 +3.2
FBE Freiberg 13.62 341 ePn Pn 03 11 57.7 -1.3
KZIT Kziot 13.63 118 Pn Pn 03 11 52.8 -6.4
AMAZ Amatzia 13.64 115 Pn Pn 03 11 53.9 -5.4
HMDT Nahal Hemdat 13.70 111 Pn Pn 03 11 54.6 -5.5
YTIR Yattir 13.87 115 Pn Pn 03 11 57.0 -5.6
MOX Moxa 13.88 336 ePn Pn 03 12 00.8 -1.7
AKASG Malin Array Be 13.92 24 Pn **Pn 03 12 00.9 -2.0**
comp=Z,7.9nm,0.3s,baz=206,slow=12,SNR=54
AKASG PcP **PcP 03 17 25.0 +0.6**
comp=Z,3.0nm,0.3s,baz=235,slow=1.0,SNR=7.3
AKASG LR LR 03 18 20.2
comp=Z,56μm,19.7s,baz=195,slow=42
AKASG ScP **ScP 03 20 57.6 +0.2**
baz=227,slow=1.6,SNR=9.0
AKASG Malin Array Be 13.92 24 Pn 03 12 01.9 -1.1
AKASG **ScP 03 20 58.3 +0.9**
AKASG Malin Array Be 13.92 24 P **Pn 03 12 01.0 -2.0**
AKBB Malin Array Si 13.92 24 i P **Pn 03 12 02.5 -0.5**
DSI Dead Sea 13.95 114 Pn Pn 03 11 57.7 -5.8
CLL Collm 14.07 340 ePn **Pn 03 12 04.7 -0.3**
CLL Collm 14.07 340 eP **Pn 03 12 05.0 0.0**
CLL esP P 03 12 07.0 -5.8
CLL i sPP 03 12 15.7
comp=Z,270nm,1.3s
CLL e(sPPP) 03 12 21.0
CLL e 03 15 18.0
CLL Lmax 03 18 00.0
CLL Collm 14.07 340 eP **Pn 03 12 05.0 0.0**
GHAJ Ghor Haditha 14.23 115 Pn **Pn 03 12 02.6 -4.7**
ANN Anapa 14.30 57 d i P **Pn 03 13 09.2 +1.0**
ANN eS **Sn 03 14 52.5 +6.0**
ANN pmax pmax
comp=Z,587nm,1.7s
ANN pmax pmax
comp=N,355nm,1.6s
ANN pmax pmax
comp=E,342nm,1.6s
NEUB Neuenburg 14.32 337 ePn **Pn 03 12 08.3 -0.2**
KRMI Paran Flat 14.33 120 Pn Pn 03 12 02.9 -5.9
PRNI Paran 14.38 119 Pn Pn 03 12 03.7 -5.8
PRNI Sn **Sn 03 14 45.1 -3.6**
ZFRI Zfri 14.38 118 Pn Pn 03 12 03.5 -5.9
UBBA Unterbreizbach 14.58 333 ePn **Pn 03 12 09.7 -2.2**
HRFI Mount Harif 14.59 120 Pn Pn 03 12 06.6 -5.8
TNS Taunus Mts 14.71 328 ePn **Pn 03 12 12.1 -1.7**
TNS eSn **Sn 03 14 49.4 -7.0**
ASF Jabal al Asfar 14.75 109 Pn **Pn 03 12 13.6 -1.0**
comp=E,1.5nm,0.3s,baz=250,slow=5.4,SNR=22
ASF Sn **Sn 03 14 51.6 -6.2**
comp=E,1.4nm,0.3s,baz=253,slow=20,SNR=2.8
EIL Elat 14.76 121 Pn **Pn 03 12 10.5 -4.2**
comp=E,4.8nm,0.3s,baz=311,slow=2.4,SNR=64
EIL Sn Sn 03 14 46.0 -12
comp=E,12nm,0.3s,baz=251,slow=17,SNR=6.7
EIL Elat 14.76 121 Pn Pn 03 12 09.0 -5.7
RUE Ruedersdorf 14.96 344 ePn **Pn 03 12 17.4 +0.2**
RUE Ruedersdorf 14.96 344 eP **P 03 12 22.9 +0.3**
GKP Gorka Klasztor 15.18 353 eP **Pn 03 12 22.5 +2.4**
GKP eS **S 03 15 24.8 0.0**
GKP Gorka Klasztor 15.18 353 eP **Pn 03 12 22.5 +2.4**
EBNR Beni Rached 15.18 268 P **Pn 03 12 20.5 +0.2**
GTTG Gottingen 15.20 334 ePn **Pn 03 12 20.0 -0.3**
CLZ Clausthal 15.31 336 ePn **Pn 03 12 20.9 -1.0**
WLF Walferdange 15.33 323 ePn **Pn 03 12 23.5 +1.4**
ECHA Ech Chlef 15.34 268 P **Pn 03 12 21.5 -0.8**
ASSE Asse, Remlinge 15.47 337 ePn **Pn 03 12 24.2 +0.4**
SOC Sochi 15.51 64 eP **Pn 03 12 24.4 0.0**
SOC e 03 15 24.6
SOC pmax pmax
comp=Z,460nm,0.9s
SOC MLR MLR
comp=Z,22μm,12.0s
AHRW Bad Neuenahr-A 15.53 327 ePn **Pn 03 12 23.8 -0.9**
ETRT Tiaret 15.59 265 P **Pn 03 12 25.0 -0.7**
EANR 'Ain N'Sour 15.60 267 P **Pn 03 12 24.0 -1.8**
SUW Suwalki 15.87 6 eP **Pn 03 12 29.2 +0.1**
SUW Suwalki 15.87 6 eP **Pn 03 12 29.2 +0.1**
OKGL Djebel Kef Gue 15.94 268 P **Pn 03 12 32.0 +1.9**
NRDL Niedersach Rie 15.96 336 ePn **Pn 03 12 31.0 +0.8**
OJGS Djebel Guires 15.99 266 P **P 03 12 37.0 +2.7**
BUG Bochum--Univer 16.12 329 ePn **Pn 03 12 32.2 -0.1**
BUG eSn **Sn 03 15 21.6 -9.1**
OJBR Djebel Berber 16.29 267 P **Pn 03 12 30.0 -4.6**
CLF Chambon-Foret 16.44 312 IAmb IAmb 03 12 44.6
comp=Z,706nm,1.1s
IBBN Ibbenburen 16.61 332 ePn **Pn 03 12 40.4 +1.9**
ODJA Bouhanifia 16.75 266 P **Pn 03 12 45.0 +2.3**
CART Cartagena 16.93 274 **Pn 03 12 41.2 -1.5**
CART Cartagena 16.93 274 eP **Pn 03 12 40.2 -2.5**
CART eS **Sn 03 15 49.6 -0.9**
UCC Uccle 16.94 323 IAmb IAmb 03 12 51.1
comp=Z,624nm,1.2s
RGN Rugen 17.00 346 eP **Pn 03 12 42.0 -1.5**
MICGM Minsk 17.03 15⇓i P **Pn 03 12 39.0 -4.8**
MICGM PM 03 12 40.0
comp=N,1.2nm,1.5s
MICGM PM 03 12 41.0
comp=Z,1.0nm,1.5s
MICGM PM 03 12 41.0
comp=E,0.4nm,1.5s
MICGM PM 03 12 48.0
comp=Z,2.4nm,4.0s
MICGM ePP sP 03 13 08.0 +17
MICGM PPM 03 13 10.0
comp=Z,9.0nm,2.0s
MICGM eS Sn 03 15 40.0 -13
MICGM SM 03 15 44.0
comp=N,8.5nm,12.0s
MICGM SM 03 15 44.0
comp=N,9.0nm,12.0s
MICGM eSS **S 03 16 00.0 -2.5**
MICGM eLR LR 03 18 50.0
MICGM LRM MLR 03 20 00.0
comp=Z,42nm,20.0s
MICGM LRM MLR 03 20 00.0
comp=N,41nm,20.0s
MICGM LRM MLR 03 20 04.0
comp=Z,45nm,12.0s
MICGM LRM MLR 03 20 04.0
comp=N,80nm,12.0s
MNK Minsk 17.03 15⇓i P **Pn 03 12 39.0 -4.8**
MNK eSS **S 03 16 00.0 -2.5**
MNK pmax pmax
comp=Z,1μm,1.5s
BSEG Bad Segeberg 17.15 339 ePn **Pn 03 12 44.6 -0.8**
NACGM Naroch 17.20 12 eP **Pn 03 12 43.0 -3.0**
NACGM PM 03 12 48.0
comp=Z,3.4nm,1.0s
NACGM ePP sP 03 13 06.0 +13
NACGM eS Sn 03 15 46.0 -11
NACGM eSS **SnSn 03 16 13.0 +2.7**
NACGM eLQ LQ 03 18 04.0
NACGM eLR LR 03 18 12.0
NACGM LRM MLR 03 19 20.0
comp=N,53nm,14.0s
OTSS Djebel Tessala 17.27 267 P **P 03 12 50.0 +1.5**
BSD Bornholm Skovb 17.27 349⇓i P **Pn 03 12 46.7 -0.2**
comp=N,250nm,1.0s
BSD Bornholm Skovb 17.27 349⇓i P **Pn 03 12 46.7 -0.2**
BSD pmax pmax
comp=Z,250nm,1.0s
BSD MLR MLR
comp=Z,68μm,15.0s
PABE Paberze 17.42 7 eP **Pn 03 12 47.0 -1.6**
IIGN Ignalina 17.54 11 eP **Pn 03 12 49.0 -1.2**
KIV Kislovodsk 17.69 64 P **P 03 12 53.1 0.0**
KIV Kislovodsk 17.69 64 P **P 03 12 53.3 +0.3**
KIV IAmb IAmb 03 12 58.9
comp=Z,546nm,1.1s
KIV Kislovodsk 17.69 64 eP **P 03 12 53.1 0.0**
KIV eS **Sn 03 16 11.1 +2.1**
KIV pmax pmax
comp=Z,2μm,1.1s
KIV MLR MLR
comp=Z,42μm,14.0s
KVAR Kislovodsk Arr 17.69 64 Pn **P 03 12 55.6 +2.5**
baz=256,slow=20,SNR=46
KVAR LR LR 03 22 00.5
comp=Z,42μm,18.6s,baz=119,slow=45
ISAL Salakas 17.74 11 eP **Pn 03 12 51.0 -1.7**
KBZ Khabaz 17.80 65 Pn **P 03 12 55.6 +1.5**
comp=Z,2.2nm,0.3s,baz=268,slow=8.2,SNR=120
KBZ LR LR 03 20 52.4
comp=Z,31μm,19.3s,baz=242,slow=41
KBZ Khabaz 17.80 65 i P **Pn 03 12 53.7 +0.3**
KBZ pmax pmax
comp=Z,380nm,1.1s
PBUR Paburge 17.80 3 eP **Pn 03 12 51.8 -1.6**
PBUR eS **Sn 03 16 13.6 +2.1**
IZAR Zarasai 17.93 11 eP **Pn 03 12 53.1 -1.9**
AKH Akhalkalaki 17.98 73⇑P **P 03 12 57.4 +1.0**
AKH Akhalkalaki 17.98 73 P **P 03 12 56.6 +0.3**
AKH Akhalkalaki 17.98 73 P **P 03 12 56.6 +0.3**
AKH pmax pmax
comp=Z,273nm,0.9s
SESP Santiago Espad 18.06 277 P **Pn 03 12 56.3 -0.6**
SNR=17
GOF Gofitskoye 18.18 61⇓eP **P 03 12 59.9 +1.6**
GOF pmax pmax
comp=Z,352nm,0.6s
COP Copenhagen 18.25 345 i P **Pn 03 12 59.3 +0.4**
COP Copenhagen 18.25 345 i P **Pn 03 12 59.3 +0.4**
COP MLR MLR
comp=Z,34μm,12.0s
NCK Nalchik 18.26 66 i P **Pn 03 12 59.2 +0.1**
NCK pmax pmax
comp=Z,2μm,2.6s
ZEI Tsey 18.39 68 eP **P 03 13 02.2 +1.3**
ZEI pmax pmax
comp=Z,328nm,0.8s
UCM Universidad Co 18.44 284 eP **P 03 12 59.8 -1.5**
UCM eS **Sn 03 16 24.7 -2.4**
FIGM Figuig 18.74 258 P **P 03 13 05.1 +0.3**
SNR=63
VORR Voronezh 18.80 38 eP **P 03 13 05.0 -0.2**
VORR pmax pmax
comp=Z,1μm,2.0s
GNI Garni 18.92 77 P **Pn 03 13 07.6 +0.2**
comp=Z,22nm,0.3s,baz=265,slow=2.0,SNR=203
GNI LR LR 03 20 32.8
comp=Z,64μm,19.6s,baz=272,slow=38
GNI Garni 18.92 77 P **Pn 03 13 07.6 +0.2**
GNI Garni 18.92 77 P **Pn 03 13 07.9 +0.5**
GNI Garni 18.92 77 P **Pn 03 13 07.9 +0.5**
GNI pmax pmax
comp=Z,1μm,0.9s
TBLG Delisi 18.92 72 **P 03 13 06.9 +0.3**
TBLG IAmb IAmb 03 13 12.3
comp=Z,218nm,0.9s
TBLG Delisi 18.92 72 P **P 03 13 06.9 +0.3**
TBLG pmax pmax
comp=Z,218nm,0.9s
MELI Melilla 18.95 268 eP **P 03 13 06.0 -0.8**
MELI eS **Sn 03 16 34.7 -4.6**
GOG Mont Gurugu 19.01 268 P **P 03 13 08.0 +0.3**
SNR=31
ESBB Sonseca Array 19.02 282 P **P 03 13 06.3 -1.4**
ESDC Sonseca Array 19.02 282 P **P 03 13 07.5 -0.1**
comp=Z,3.6nm,0.3s,baz=76,slow=11,SNR=67
ESDC LR LR 03 20 24.5
comp=Z,27μm,20.3s,baz=85,slow=37
ESDC ScP **ScP 03 21 09.1 +1.4**
baz=83,slow=3.3,SNR=5.7
ESDC P3KPbc 03 47 44.1
comp=Z,0.1nm,0.3s,baz=275,slow=3.6,SNR=5.3
ESDC Sonseca Array 19.02 282 **P 03 13 05.5 -2.2**
ESDC **ScP 03 21 10.2 +2.4**
PAB San Pablo 19.32 282 P **P 03 13 09.5 -1.6**
PAB San Pablo 19.32 282 P **P 03 13 09.5 -1.6**
PAB pmax pmax
comp=Z,242nm,1.2s
SLIT Slitere, Latvi 19.42 3 eP **P 03 13 09.6 -2.3**
SLIT eS **Sn 03 16 46.7 -3.8**
JLP Les Platons 19.57 311 eP **P 03 13 14.4 +0.9**
JSA Saint Aubin 19.58 311 eP **P 03 13 14.8 +1.2**
JSA IAmb IAmb 03 13 21.6
comp=Z,603nm,1.6s
JSA IAMs_20 IAMs_20 03 21 37.1
comp=Z,47μm,14.9s
MUD Monsted U'grnd 19.69 341 i P **P 03 13 15.8 +0.9**
MUD Monsted U'grnd 19.69 341 i P **P 03 13 15.8 +0.9**
MUD MLR MLR
comp=Z,77μm,12.0s
EMAL Malaga-Limoner 19.77 273 eP **P 03 13 15.0 -0.8**
EMAL eS **S 03 16 52.0 -6.3**
GROC Groznyy 19.81 68 eP **Pn 03 13 17.4 -0.5**
GROC eS **Sn 03 17 00.6 +0.4**
GROC pmax pmax
comp=Z,219nm,0.7s
VRH Novokhopyorsk 19.81 42 eP **P 03 13 17.3 +1.1**
VRH eS **S 03 16 52.9 -6.0**
VRH pmax pmax
comp=Z,550nm,1.3s
VRH smax smax
comp=N,20μm,8.9s
VRH MLR MLR
comp=Z,60μm,12.0s
WACR West Acre 19.96 323 eP **Pn 03 13 19.8 +0.3**
WACR IAmb IAmb 03 13 26.1
comp=Z,1μm,1.1s
WACR IVMsBB 03 24 41.9
comp=Z,20μm,14.2s
TAM Tamanrasset 20.02 224 P **P 03 13 20.3 +1.4**
TAM Tamanrasset 20.02 224 P **P 03 13 20.3 +1.4**
TAM pmax pmax
comp=Z,163nm,1.1s
TAM MLR MLR
comp=Z,113μm,18.0s
PVLZ Peæn de 20.05 269 eP **P 03 13 17.4 -1.6**
PVLZ eS **S 03 16 59.0 -4.9**
BTLR Botlikh 20.08 69 i P **P 03 13 19.4 +0.1**
BTLR pmax pmax
comp=Z,191nm,0.8s
OBN Obninsk 20.09 28 P **P 03 13 18.6 -0.5**
comp=Z,37nm,0.5s,baz=218,slow=1.4,SNR=34
OBN LR LR 03 22 28.0
comp=Z,7μm,20.0s,baz=217,slow=41
OBN Obninsk 20.09 28 P **P 03 13 18.2 -0.9**
OBN Obninsk 20.09 28 c i P **P 03 13 18.3 -0.9**
OBN i *SP **sP 03 13 26.6 +1.4**
OBN PPP PPP 03 13 42.0
OBN i S **S 03 17 03.9 -0.3**
OBN i SSS SSS 03 17 31.1
OBN 03 17 34.0
OBN pmax pmax
comp=Z,905nm,2.5s
OBN MLR MLR
comp=Z,41μm,15.0s
GOET G??ttrup 20.20 342⇑i P Pn 03 13 23.2 +0.9
comp=Z,668nm,1.0s
HORN Hornachuelos 20.23 277 P **P 03 13 20.0 -0.8**
SNR=28
SWN1 Swindon 20.49 317 eP **P 03 13 25.0 +1.4**
SWN1 IAmb IAmb 03 13 30.6
comp=Z,503nm,0.9s
SWN1 IAMs_20 IAMs_20 03 23 14.9
comp=Z,79μm,12.2s
LIJA Lijar 20.51 274 eP **P 03 13 23.0 -1.0**
VSU Vasula 20.63 9 eP **P 03 13 24.6 -0.4**
VSU eS **S 03 17 10.7 -4.3**
VSU Vasula 20.63 9 c eP **P 03 13 24.8 -0.2**
BATH Bath 20.73 317 eP **P 03 13 26.8 +0.6**
BATH IAMs_20 IAMs_20 03 23 16.2
comp=Z,63μm,12.8s
SSW Stow on the Wo 20.75 319 eP **P 03 13 27.8 +1.3**
SMIR Smir Dam 20.77 271 P **P 03 13 28.0 +1.2**
SNR=64
STRD Stroud 20.82 318 eP **P 03 13 27.9 +0.7**
STRD IAmb IAmb 03 13 33.4
comp=Z,794nm,1.0s
STRD IAMs_20 IAMs_20 03 23 32.0
comp=Z,83μm,12.1s
CHEFC Chefchaouen 20.89 269 P **P 03 13 29.0 +0.8**
SNR=43
CWF Charnwood Fore 20.91 321 eP **P 03 13 28.6 +0.5**
CWF IAmb IAmb 03 13 34.9
comp=Z,1μm,1.3s
CWF IAMs_20 IAMs_20 03 21 49.8
comp=Z,54μm,22.1s
MOS Moscow 20.95 28 eP **P 03 13 27.4 -1.1**
MOS e 03 13 47.1
MOS eS **S 03 17 21.9 +0.5**
MOS eSS **SnSn 03 17 48.7 +6.5**
MOS pmax pmax
comp=Z,1μm,1.5s
MOS MLR MLR
comp=Z,36μm,14.0s
OLDB Oldbury-Upon-S 20.96 317 eP **P 03 13 29.2 +0.5**
OLDB IAMs_20 IAMs_20 03 23 30.7
comp=Z,62μm,13.2s
GIBL Gibalbin 20.97 274 eP **P 03 13 27.0 -1.9**
MAK Makhachkala 21.04 69 d i P **P 03 13 30.7 +1.1**
MAK eS **S 03 17 26.9 +3.5**
MAK pmax pmax
comp=Z,2μm,0.8s
MDT Midelt 21.06 263 P **P 03 13 30.1 0.0**
comp=Z,138nm,0.8s,baz=83,slow=12,SNR=56
MDT LR LR 03 22 58.3
comp=Z,30μm,20.1s,baz=73,slow=40
MDT Midelt 21.06 263 P **P 03 13 30.5 +0.5**
SNR=13
PBRG Braganca 21.08 288 eP **P 03 13 29.5 -0.6**
comp=Z,346nm,1.6s
PBRG eS **S 03 17 20.2 -4.1**
PBRG eLR LR 03 20 58.3
CNIL Conil 21.13 273 eP **P 03 13 32.0 +1.3**
AKT Akhty 21.16 73⇑i P **P 03 13 31.5 +0.4**
AKT e 03 13 50.2
AKT eS **S 03 17 28.2 +2.1**
AKT eSS **SnSn 03 17 52.1 +4.4**
AKT pmax pmax
comp=Z,1μm,1.0s
MONM Monmouth 21.19 317 eP **P 03 13 32.4 +1.3**
MONM IAmb IAmb 03 13 36.0
comp=Z,1μm,1.2s
MONM IAMs_20 IAMs_20 03 23 44.5
comp=Z,67μm,12.7s
IFR Ifrane 21.22 265 eP **P 03 13 30.8 -1.0**
IFR eS **S 03 17 27.9 +0.5**
SFS San Fernando 21.23 273 P **P 03 13 30.3 -1.4**
SFS IAmb IAmb 03 13 35.6
comp=Z,245nm,1.0s
SFS San Fernando 21.23 273 P **P 03 13 30.3 -1.4**
SFS pmax pmax
comp=Z,245nm,1.0s
SFS MLR MLR
comp=Z,24μm,20.0s
SFS San Fernando 21.23 273 eP **P 03 13 29.3 -2.4**
SFS eS **S 03 17 21.8 -5.5**
MVO Moncorvo 21.30 287 eP **P 03 13 31.9 -0.6**
comp=Z,622nm,1.7s
MVO i LQ LQ 03 13 57.7
MVO eS **S 03 17 24.2 -4.5**
MVO eLR LR 03 19 52.8
comp=Z,30μm,18.0s
ARF Arif 21.32 259 P **P 03 13 34.0 +1.2**
SNR=49
HEX Exmoor 21.36 315 eP **P 03 13 33.7 +0.7**
MCH1 Michaelchurch 21.37 318 eP **P 03 13 33.6 +0.5**
MCH1 IAmb IAmb 03 13 37.7
comp=Z,1μm,1.3s
MCH1 IAMs_20 IAMs_20 03 23 50.4
comp=Z,69μm,12.3s
HOMB Homborsund 21.48 343 eP **P 03 13 34.2 0.0**
HOMB eP **pP 03 13 35.8 -1.9**
HOMB eS **S 03 17 34.9 +3.0**
LBWR Ladybower, Pea 21.50 322 eP **P 03 13 35.4 +1.0**
LBWR IAmb IAmb 03 13 40.3
comp=Z,2μm,1.5s
LBWR IAMs_20 IAMs_20 03 24 08.7
comp=Z,54μm,12.6s
HLM1 Long Mynd 21.58 319 eP **P 03 13 35.4 0.0**
HLM1 IAmb IAmb 03 13 39.6
comp=Z,410nm,0.8s
HLM1 IAMs_20 IAMs_20 03 24 04.1
comp=Z,64μm,14.1s
PMRV Marv??o 21.68 282 eP **P 03 13 36.7 +0.2**
comp=Z,698nm,1.4s
PMRV eS **S 03 17 31.1 -5.0**
PMRV eLR LR 03 21 26.4
comp=Z,20μm,20.0s
GDLE Glaisdale, N Y 21.70 325 eP **P 03 13 37.8 +1.2**
GDLE IAMs_20 IAMs_20 03 24 09.2
comp=Z,36μm,14.9s
PCBR Castelo Branco 21.71 283 eP **P 03 13 36.2 -0.6**
comp=Z,351nm,1.6s
HTL Hartland 21.71 314 eP **P 03 13 37.5 +0.7**
HTL IAmb IAmb 03 13 43.1
comp=Z,1μm,1.3s
HTL IAMs_20 IAMs_20 03 24 26.2
comp=Z,44μm,15.0s
MTE Manteigas 21.72 284 eP **P 03 13 36.6 -0.4**
comp=Z,792nm,1.7s
MTE i LQ LQ 03 14 02.6
MTE eS **S 03 17 33.8 -3.1**
MTE eLR LR 03 19 52.4
comp=Z,43μm,20.0s
MTE Manteigas 21.72 284 IAmb IAmb 03 13 38.5
comp=Z,294nm,1.1s
GOLM Goulmima 21.77 260 P **P 03 13 39.0 +1.3**
SNR=56
GOLM P **P 03 13 39.0 +1.3**
SNR=56
PVRL Vila Real 21.81 287 eP **P 03 13 38.3 +0.3**
SNART Snartemo 21.86 341 eP **P 03 13 38.5 +0.3**
PESTR Estremoz 21.89 280 i LQ LQ 03 14 02.7
PESTR eS **S 03 17 35.0 -5.3**
PESTR eLR LR 03 21 21.9
comp=Z,25μm,20.0s
PESTR Estremoz 21.89 280 P **P 03 13 37.9 -0.9**
SNR=8.7
PESTR P **P 03 13 37.9 -0.9**
SNR=8.7
FOEL Foel Wylfa 21.95 319 eP **P 03 13 39.7 +0.4**
FOEL IAmb IAmb 03 13 47.0
comp=Z,2μm,1.3s
FOEL IAMs_20 IAMs_20 03 24 24.6
comp=Z,62μm,16.0s
PVIS Viseu 21.97 285 eP **P 03 13 38.8 -0.9**
PCAB Cabril 22.04 288 eP **P 03 13 41.9 +1.5**
comp=Z,454nm,1.5s
LLW Llanuwychllyn 22.16 319 eP **P 03 13 41.4 -0.2**
LLW IAmb IAmb 03 13 47.2
comp=Z,793nm,1.7s
LLW IAMs_20 IAMs_20 03 24 30.2
comp=Z,31μm,19.2s
PVAQ Vaqueiros 22.22 277 eP **P 03 13 43.1 +0.7**
comp=Z,297nm,1.8s
PVAQ i LQ LQ 03 14 07.2
PVAQ eS **S 03 17 39.8 -6.8**
PVAQ eLR LR 03 18 54.5
comp=Z,16μm,18.0s
PVAQ Vaqueiros 22.22 277 P **P 03 13 42.2 -0.2**
SNR=12
PVAQ Vaqueiros 22.22 277 IAmb IAmb 03 13 51.5
comp=Z,132nm,0.9s
PBEJ Beja 22.23 278 eP **P 03 13 41.2 -1.3**
comp=Z,268nm,1.1s
EVO Evora 22.27 280 eP **P 03 13 41.5 -1.4**
comp=Z,369nm,2.1s
EVO Evora 22.27 280 eP **P 03 13 38.1 -4.7**
EVO es **S 03 17 41.6 -5.8**
HFS Hagfors 22.31 351 P **P 03 13 42.2 -0.9**
comp=Z,202nm,0.5s,baz=160,slow=11,SNR=122
HFS LR LR 03 22 50.3
comp=Z,40μm,21.7s,baz=165,slow=38
PMTG Montargil 22.36 281 eP **P 03 13 42.3 -1.5**
comp=Z,417nm,1.8s
PMTG eS **S 03 17 44.0 -5.1**
PMTG eLR LR 03 21 23.6
comp=Z,22μm,18.0s
COI Coimbra 22.39 284 eP **P 03 13 44.7 +0.5**
comp=Z,613nm,1.9s
COI eS **S 03 17 46.9 -2.8**
COI Coimbra 22.39 284 P **P 03 13 43.3 -0.9**
COI Coimbra 22.39 284 P **P 03 13 43.3 -0.9**

COI				pmax	pmax		
	comp=Z,415nm,1.1s						
COI				MLR	MLR		
	comp=Z,39µm,19.0s						
PBDV	Barranco-do-Ve	22.42	276	eP	P	03 13 44.2	-0.4
	comp=Z,388nm,2.1s						
PBDV				i LQ	LQ	03 14 08.4	
PBDV				eS	S	03 17 43.5	-6.9
PBDV				eLR	LR	03 21 56.5	
	comp=Z,17µm,18.0s						
PCVE	Castro Verde	22.43	277	eP	P	03 13 44.8	+0.2
	comp=Z,361nm,1.7s						
PCVE				i LQ	LQ	03 14 09.5	
PCVE				eS	S	03 17 44.2	-6.3
PUL	Pulkovo	22.44	13	ceP	P	03 13 43.6	-0.9
PUL				pmax	pmax		
	comp=Z,2µm,1.3s						
PTOM	Tomar	22.44	283	eP	P	03 13 44.3	-0.4
	comp=Z,272nm,1.1s						
PCAS	Casmilo, Conde	22.47	284	eP	P	03 13 44.9	-0.1
	comp=Z,310nm,1.8s						
PCAS				eS	S	03 17 46.7	-4.5
PCAS				eLR	LR	03 21 06.5	
	comp=Z,30µm,20.0s						
EDMD	Edmundbyers	22.48	325	eP	P	03 13 44.5	-0.4
EDMD				IAmb	IAmb	03 13 49.5	
	comp=Z,889nm,1.4s						
EDMD				IAMs_20	IAMs_20	03 26 27.9	
	comp=Z,37µm,11.8s						
KONO	Kongsberg	22.51	346	eP	P	03 13 45.5	+0.3
KONO				IVmB_BB		03 13 53.4	
	comp=Z,5µm,3.5s						
KONO				eS	S	03 17 53.7	+2.3
KONO				eScS	ScS	03 25 01.7	+1.1
KONO	Kongsberg	22.51	346	P	P	03 13 44.0	-1.2
KONO				IAmb	IAmb	03 13 47.8	
	comp=Z,279nm,1.1s						
KONO	Kongsberg	22.51	346	ceP	P	03 13 46.1	+0.9
KONO				pmax	pmax		
	comp=Z,323nm,1.3s						
OSL	Oslo	22.57	347	eP	P	03 13 46.0	+0.2
OSL				IVmB_BB		03 13 52.1	
	comp=Z,6µm,1.7s						
OSL				eS	S	03 17 54.6	+2.1
TZRR	Tazzarine	22.64	259	P	P	03 13 49.0	+2.0
	SNR=14						
TZRR				P	P	03 13 49.0	+2.0
	SNR=14						
PNCL	Nicolau / Gran	22.73	279	eP	P	03 13 46.2	-1.6
	comp=Z,432nm,1.5s						
PNCL				eS	S	03 17 51.9	-4.0
WLF1	Llynfaes	22.77	319	eP	P	03 13 48.2	+0.2
WLF1				IAmb	IAmb	03 13 50.2	
	comp=Z,349nm,1.0s						
WLF1				IAMs_20	IAMs_20	03 24 49.5	
	comp=Z,114µm,18.1s						
WME	Myndd Eilian	22.78	320	eP	P	03 13 49.2	+1.0
YRC	Rhoscolyn	22.84	319	eP	P	03 13 48.9	+0.1
KESW	Keswick, Cumbr	22.86	323	eP	P	03 13 50.0	+1.1
KESW				IAmb	IAmb	03 13 52.7	
	comp=Z,279nm,1.2s						
WPS	Cemaes, Angles	22.88	320	eP	P	03 13 50.0	+0.8
WPS				IAMs_20	IAMs_20	03 25 01.7	
	comp=Z,57µm,15.0s						
MORF	Marmelete	22.97	277	eP	P	03 13 49.3	-1.1
MORF				eS	S	03 17 59.9	-0.3
MORF				AMS	AMS	03 27 13.6	
	comp=Z,19µm,18.3s						
MORF	Marmelete	22.97	277	eP	P	03 13 49.8	-0.6
	comp=Z,308nm,1.9s						
MORF				i LQ	LQ	03 14 14.5	
MORF				eS	S	03 17 56.1	-4.2
MORF				eLR	LR	03 22 12.8	
	comp=Z,20µm,18.0s						
ZGR	Zagora	22.98	257	P	P	03 13 52.0	+1.5
	SNR=25						
ZGR				P	P	03 13 52.0	+1.5
	SNR=25						
PTEO	Sao Teotonio	22.98	277	eP	P	03 13 49.5	-0.9
	comp=Z,474nm,1.6s						
BLS5	Blasjo	23.00	342	eP	P	03 13 50.6	+0.1
BLS5				IVmB_BB		03 13 58.9	
	comp=Z,8µm,3.5s						
BLS5				eS	S	03 18 02.6	+2.3
AVE	Averroes	23.09	266	P	P	03 13 52.7	+1.2
	SNR=30						
AVE	Averroes	23.09	266	eP	P	03 13 51.5	0.0
AVE				eS	S	03 17 59.1	-3.1
LIS	Lisbon	23.12	280	eP	P	03 13 50.9	-0.9
LIS				eS	S	03 18 02.8	+0.1
LIS				AMS	AMS	03 25 54.3	
	comp=N,34µm,14.9s						
LIS	Lisbon	23.12	280	eP	P	03 13 54.1	+2.3
KMY	Karmoy	23.13	340	eP	P	03 13 52.0	+0.3
KMY				eS	S	03 18 05.3	+2.9
PFVI	Vila Bisbo	23.14	276	eP	P	03 13 52.2	+0.1
	comp=N,530nm,1.6s						
PFVI				eS	S	03 17 58.8	-4.3
PFVI				eLR	LR	03 22 23.3	
	comp=N,20µm,18.0s						
PFVI	Vila Bisbo	23.14	276	P	P	03 13 51.6	-0.5
PFVI				IAmb	IAmb	03 14 06.7	
	comp=Z,127nm,0.9s						
NC602	NORSAR Array S	23.19	349	eP	P	03 13 51.6	-0.7
NC602				IVmB_BB		03 13 59.9	
	comp=Z,8µm,2.2s						
NC602				eS	S	03 18 04.1	+0.7
NC602				eScP	ScP	03 21 20.3	+2.9
PMAFR	Mafra	23.19	281	eS	S	03 18 02.0	-1.9
EKA	Eskdalemuir Ar	23.33	325	P	P	03 13 53.6	-0.1
	comp=Z,424nm,0.9s,baz=127,slow=10,SNR=147						
EKA				LR	LR	03 24 09.2	
	comp=Z,20µm,19.6s,baz=125,slow=40						
ESK	Eskdalemuir	23.34	325	eP	P	03 13 53.6	-0.2
ESK				IAmb	IAmb	03 13 57.9	
	comp=Z,446nm,0.9s						
ESK				IAMs_20	IAMs_20	03 25 45.5	
	comp=Z,28µm,10.9s						
ESK	Eskdalemuir	23.34	325	P	P	03 13 53.9	+0.1
ESK	Eskdalemuir	23.34	325	P	P	03 13 53.9	+0.1
ESK				pmax	pmax		
	comp=Z,409nm,0.9s						
ESK				MLR	MLR		
	comp=Z,27µm,20.0s						
WIM	Isle of Man	23.37	321	eP	P	03 13 54.4	+0.2
IOMK	Kirk Michael	23.38	321	eP	P	03 13 53.5	-0.7
IOMK				IAmb	IAmb	03 13 57.6	
	comp=Z,481nm,1.0s						
IOMK				IAMs_20	IAMs_20	03 25 23.9	
	comp=Z,140µm,12.1s						
ODD1	Odda	23.39	342	eP	P	03 13 54.8	+0.4
ODD1				IVmB_BB		03 14 02.0	
	comp=Z,7µm,5.7s						
ODD1				eS	S	03 18 09.1	+2.3
ESY	Stoneypath	23.45	326	eP	P	03 13 55.0	+0.1
FINES	FINESS Array B	23.48	7	P	P	03 13 53.9	-1.3
	comp=Z,195nm,0.7s,baz=178,slow=8.3,SNR=186						
FINES				PcP	PcP	03 17 40.9	+0.3
	comp=Z,21nm,0.7s,baz=154,slow=4.7,SNR=4.2						
FINES				S	S	03 18 02.6	-5.5
	comp=Z,5.8nm,0.6s,baz=171,slow=9.4,SNR=2.0						
FINES				ScP	ScP	03 21 18.0	-0.2
	comp=Z,10nm,0.9s,baz=139,slow=6.6,SNR=2.8						
FINES				LR	LR	03 25 16.1	
	comp=Z,36µm,18.3s,baz=192,slow=42						
FINES	FINESS Array B	23.48	7	P	P	03 13 53.9	-1.3
FINES				PcP	PcP	03 17 41.8	+1.2
NB2	NORSAR Subarra	23.53	349	P	P	03 13 55.6	-0.2
	comp=Z,1µm,2.0s,baz=160,slow=10						
NB2	NORSAR Subarra	23.53	349	P	P	03 13 55.6	-0.2
	baz=160,slow=10						
NOA	NORSAR Array B	23.53	349	P	P	03 13 54.4	-1.3
	comp=Z,83nm,0.8s,baz=160,slow=9.1,SNR=188						
NOA				LR	LR	03 25 03.8	
	comp=Z,37µm,18.9s,baz=155,slow=42						
EBL	Broad Law	23.55	326	eP	P	03 13 57.0	+1.1
EDI	Edinburgh	23.70	326	eP	P	03 13 58.4	+1.0
EDI				IAmb	IAmb	03 14 02.5	
	comp=Z,636nm,1.2s						
EDI				IAMs_20	IAMs_20	03 26 11.9	
	comp=Z,31µm,13.9s						
SKAR	Skarslia	23.71	345	eP	P	03 13 58.0	+0.5
SKAR				IVmB_BB		03 14 03.7	
	comp=Z,8µm,2.7s						
SKAR				eS	S	03 18 08.8	-3.2
SKAR				eS	Sn	03 18 14.1	-19
GAL1	Galloway	23.78	322	eP	P	03 13 58.5	+0.3
GAL1				IAMs_20	IAMs_20	03 25 36.0	
	comp=Z,40µm,15.5s						
NC204	NORSAR Array S	23.82	348	IAmb	IAmb	03 14 01.2	
	comp=Z,158nm,1.0s						
DRUM	Mains of Drumt	24.04	328	eP	P	03 14 01.9	+1.3
DRUM				IAMs_20	IAMs_20	03 26 16.1	
	comp=Z,48µm,13.6s						
BER	Bergen	24.12	342	eP	P	03 14 01.7	+0.4
BER				IVmB_BB		03 14 07.8	
	comp=Z,7µm,3.2s						
BER				eS	S	03 18 21.4	+3.1
PGBU	Glenifferbraes	24.22	325	eP	P	03 14 03.7	+1.4
PGBU				IAmb	IAmb	03 14 07.9	
	comp=Z,1µm,2.1s						
ASK	Askoy	24.24	342	eP	P	03 14 02.7	+0.3
ASK				IVmBBB		03 14 08.5	
	comp=Z,5µm,2.3s						
ASK				eS	S	03 18 23.1	+2.8
OUK	Oukaimeden	24.24	262	P	P	03 14 05.0	+1.8
	SNR=62						
INVG	Invergeldie, C	24.39	326	eP	P	03 14 04.0	+0.1
INVG				IAmb	IAmb	03 14 07.4	
	comp=Z,931nm,1.6s						
INVG				IAMs_20	IAMs_20	03 25 28.6	
	comp=Z,32µm,15.4s						
CLGH	Cloghs, Cushen	24.57	322	eP	P	03 14 06.4	+0.9
HYA	Hoyanger	24.60	343	eP	P	03 14 06.1	+0.4
HYA				eS	S	03 18 29.1	+3.0
DOMB	Dombas	24.83	347	eP	P	03 14 08.6	+0.8
DOMB				eS	S	03 18 32.5	+2.6
SUE	Sulen	24.84	342	eP	P	03 14 08.3	+0.5
SUE				IVmB_BB		03 14 30.0	
	comp=Z,8µm,4.5s						
SUE				eS	S	03 18 33.3	+3.3
TTIG	Tnine Tigouga,	24.97	261	P	P	03 14 12.0	+2.5
	SNR=57						
FOO	Floro	25.25	343	eP	P	03 14 11.9	+0.4
FOO				eS	S	03 18 39.1	+2.7
MLA1	Latheron	25.32	330	eP	P	03 14 12.9	+0.7
AKN	Aaknes	25.34	345	eP	P	03 14 12.9	+0.4
AKN				IVmB_BB		03 14 18.8	
	comp=Z,3µm,3.8s						
AKN				eS	S	03 18 40.7	+2.7
MOL	Molde	25.59	346	eP	P	03 14 15.1	+0.4
MOL				IVmB_BB		03 14 22.6	
	comp=Z,4µm,1.3s						
MOL				eS	S	03 18 44.5	+2.6
KAC	Achnashellach	25.59	327	eP	P	03 14 15.6	+0.8
KLMR	Klimovskoe	25.59	22 ⇑	iP	P	03 14 13.8	-0.9
KLMR				eP	P	03 14 13.8	-0.9
KLMR				eP	P	03 14 13.8	-0.9
KLMR				AMP		03 14 19.3	
	comp=Z,3µm,3.0s						
KLMR				AMP		03 14 28.6	
	comp=Z,672nm,1.1s						
KLMR				S	S	03 18 43.3	+1.4
KLMR				S	S	03 18 43.3	+1.4
KLMR				LQ	LQ	03 21 57.3	
KLMR				LQ	LQ	03 21 57.3	
KLMR				LR	LR	03 22 32.6	
KLMR				AMP		03 25 29.1	
	comp=Z,81µm,13.9s						
KLMR	Klimovskoe	25.59	22	c iP	P	03 14 13.8	-0.9
KLMR				S	S	03 18 43.3	+1.4
KLMR				pmax	pmax		
	comp=Z,672nm,1.1s						
KLMR				pmax	pmax		
	comp=Z,3µm,3.0s						
KLMR				MLR	MLR		
	comp=Z,81µm,14.0s						
KPL	Plockton	25.65	327	eP	P	03 14 16.1	+0.8
KPL				IAmb	IAmb	03 14 20.8	
	comp=Z,147nm,0.9s						
KPL				IAMs_20	IAMs_20	03 28 34.8	
	comp=Z,52µm,13.2s						
TBLU	Trondheim	25.78	349	eP	P	03 14 17.8	+1.5
TBLU				IVmB_BB		03 14 25.3	
	comp=Z,5µm,2.3s						
TBLU				eS	S	03 18 48.8	+4.0
RAYN	Ar Rayn	25.94	117	P	P	03 14 18.5	+0.2
RAYN	Ar Rayn	25.94	117	P	P	03 14 19.1	+0.8
RAYN	Ar Rayn	25.94	117	P	P	03 14 19.1	+0.8
RAYN				pmax	pmax		
	comp=Z,221nm,1.1s						
LEWI	Lewis, Hebride	26.65	327	eP	P	03 14 24.5	+0.1
LEWI				IAmb	IAmb	03 14 28.7	
	comp=Z,261nm,1.2s						
LEWI				IAMs_20	IAMs_20	03 29 14.3	
	comp=Z,40µm,13.5s						
NSS	Namsos	26.79	352	eP	P	03 14 25.3	-0.1
NSS				IVmB_BB		03 14 30.8	
	comp=Z,3µm,1.8s						
NSS				eS	S	03 19 01.8	+1.1
KIRV	Kirov	27.63	33	P	P	03 14 32.1	-0.9
	comp=Z,114nm,0.5s,baz=241,slow=5.4,SNR=48						
KIRV				LR	LR	03 26 09.7	
	comp=Z,61µm,20.1s,baz=236,slow=38						
TMCR	Tamitsa	27.98	16	eP	P	03 14 34.2	-2.0
TMCR				eS	S	03 19 20.3	+0.7
TMCR				pmax	pmax		
	comp=Z,127nm,0.8s						
PRGR	Permogore	28.12	26 ⇑	iP	P	03 14 36.7	-0.7
PRGR				eS	S	03 19 18.0	-3.8
PRGR				pmax	pmax		
	comp=Z,285nm,0.8s						
MOR8	Moi Rana	28.17	355	eP	P	03 14 38.5	+0.6
MOR8				IVmB_BB		03 14 44.2	
	comp=Z,2µm,1.8s						
MOR8				eS	S	03 19 27.4	+4.8
STOK	Stokkvaagen	28.45	354	eP	P	03 14 40.9	+0.6
STOK				eS	S	03 19 30.0	+3.3
STOK				eScS	ScS	03 25 26.4	+1.3
KONS	Konsvik	28.60	354	eP	P	03 14 41.9	+0.2
AKTO	Aktyubinsk	29.19	53	P	P	03 14 46.3	-0.8
	comp=Z,37nm,0.8s,baz=241,slow=5.4,SNR=69						
AKTO				S	S	03 19 29.4	-9.5
	comp=Z,6.9nm,0.8s,baz=292,slow=16,SNR=1.4						
AKTO				LR	LR	03 28 38.6	
	comp=Z,26µm,19.9s,baz=286,slow=41						
GEYT	Alibeck	29.52	79	P	P	03 14 49.9	-0.4
	comp=Z,97nm,0.6s,baz=281,slow=8.0,SNR=211						
GEYT				S	S	03 19 36.6	-7.9
	comp=Z,3.8nm,1.0s,baz=257,slow=5.8,SNR=1.8						
GEYT				LR	LR	03 28 56.1	
	comp=Z,20µm,20.1s,baz=290,slow=41						
GEYT	Alibeck	29.52	79	P	P	03 14 49.6	-0.6
GYA0B	ALIBECK ARRAY	29.52	79	P	P	03 14 49.1	-1.1
STEI	Steigen	29.87	356	eP	P	03 14 53.1	+0.3
STEI				IVmB_BB		03 14 58.7	
	comp=Z,2µm,2.0s						
STEI				eS	S	03 19 51.8	+2.7
TOC2	Torodi Ar. Sit	30.03	219	IAMs_20	IAMs_20	03 28 13.1	
	comp=Z,35µm,20.0s						
TOB2	Torodi Ar. Sit	30.04	219	IAMs_20	IAMs_20	03 28 13.4	
	comp=Z,35µm,20.0s						
TOC7	Torodi Ar. Sit	30.04	219	IAMs_20	IAMs_20	03 28 13.5	
	comp=Z,32µm,20.0s						
TOC3	Torodi Ar. Sit	30.05	219	IAMs_20	IAMs_20	03 28 13.6	
	comp=Z,36µm,20.0s						
TOA2	Torodi Ar. Sit	30.05	219	IAMs_20	IAMs_20	03 28 13.6	
	comp=Z,34µm,20.0s						
TOA0	Torodi Ar. Sit	30.05	219	IAMs_20	IAMs_20	03 28 29.6	
	comp=Z,39µm,18.0s						
TORD	Torodi Ar. Bea	30.05	219	P	P	03 14 54.7	-0.3
	comp=Z,172nm,0.8s,baz=32,slow=8.3,SNR=193						
TORD				S	S	03 19 44.7	-8.1
	comp=Z,3.1nm,0.9s,baz=34,slow=11,SNR=2.2						
TORD				ScP	ScP	03 21 38.9	+0.4
	comp=Z,26nm,1.2s,baz=34,slow=6.5,SNR=9.5						
TORD				LR	LR	03 28 32.7	
	comp=Z,37µm,18.3s,baz=15,slow=40						
TORD	Torodi Ar. Bea	30.05	219	P	P	03 14 54.4	-0.6
TORD				PcP	PcP	03 17 54.9	-2.0
TOB5	Torodi Ar. Sit	30.05	219	IAMs_20	IAMs_20	03 28 13.7	
	comp=Z,33µm,20.0s						
TOB3	Torodi Ar. Sit	30.05	219	IAMs_20	IAMs_20	03 28 29.8	
	comp=Z,39µm,18.0s						
TOA3	Torodi Ar. Sit	30.05	219	IAMs_20	IAMs_20	03 28 29.8	
	comp=Z,41µm,18.0s						
TOB4	Torodi Ar. Sit	30.06	219	IAMs_20	IAMs_20	03 28 14.0	
	comp=Z,33µm,21.0s						
TOC4	Torodi Ar. Sit	30.07	219	IAMs_20	IAMs_20	03 28 15.2	
	comp=Z,34µm,20.0s						
TOC5	Torodi Ar. Sit	30.07	219	IAMs_20	IAMs_20	03 28 14.3	
	comp=Z,37µm,20.0s						
LOF	Lofoten	30.17	355	eP	P	03 14 55.1	-0.5
LOF				IVmB_BB		03 15 00.7	
	comp=Z,2µm,2.4s						
LOF				eS	S	03 19 56.0	+2.1
LOF				eScS	ScS	03 25 34.7	+1.6
APA	Apatity	30.25	10 ⇓	iP	P	03 14 56.4	+0.1
APA				i		03 15 52.6	
APA				i S	S	03 19 55.0	-0.2
APA				pmax	pmax		
	comp=Z,33nm,0.7s						
AB31	Akbulak array	30.25	56	P	P	03 14 55.9	-0.6
ABKAR	Akbulak array	30.25	56	P	P	03 14 55.6	-0.9
ABKAR				PcP	PcP	03 17 57.2	+0.3
LVZ	Lovozero	30.73	10	P	P	03 14 58.9	-1.7
LVZ				IAmb	IAmb	03 15 15.3	
	comp=Z,60nm,1.0s						
LVZ	Lovozero	30.73	10	ceP	P	03 14 59.7	-0.9
LVZ				pmax	pmax		
	comp=Z,121nm,1.7s						
PMAR	Madeira	30.76	271	eP	P	03 15 03.9	+2.5
	comp=Z,470nm,1.6s						
FUL	Funchal	30.77	271	eP	P	03 15 02.9	+1.6
	comp=Z,243nm,1.4s						
KTK1	Kautokeino	30.85	2	eP	P	03 15 02.2	+0.6
PMOZ	Porto Moniz, M	30.95	272	eS	S	03 20 06.7	-0.4
PMOZ				eLR	LR	03 24 06.9	
	comp=Z,4µm,16.0s						
ARU	Arti	31.05	42	P	P	03 15 02.9	-0.5
	comp=Z,13nm,0.4s,baz=241,slow=6.6,SNR=41						
ARU	Arti	31.05	42	P	P	03 15 02.6	-0.9
ARU				IAmb	IAmb	03 15 06.4	
	comp=Z,56nm,0.9s						
ARU				PcP	PcP	03 17 56.3	-2.5
ARU				IAMs_20	IAMs_20	03 28 27.8	
	comp=Z,42µm,22.0s						
ARU	Arti	31.05	42	c iP	P	03 15 01.6	-1.8
ARU				PPP	PPP	03 16 12.1	
ARU						03 17 55.4	
ARU				S	S	03 20 07.9	+0.1
ARU				SS	SnSn	03 21 46.8	-1.8
ARU				SSS	SSS	03 22 13.2	
ARU				pmax	pmax		
	comp=Z,109nm,1.2s						
ARU				MLR	MLR		
	comp=Z,32µm,13.0s						
TRO	Tromso	31.45	359	eP	P	03 15 06.8	0.0
TRO				IVmBBB		03 15 10.7	
	comp=Z,2µm,3.0s						
TRO				IVmB_BB		03 15 12.2	
	comp=Z,2µm,1.8s						
TRO				eS	S	03 20 15.0	+1.2
ARCES	ARCESS Array B	31.46	3	P	P	03 15 06.5	-0.5
	comp=Z,17nm,0.4s,baz=187,slow=9.5,SNR=129						
ARCES				PcP	PcP	03 18 00.1	+0.3
	comp=Z,8.1nm,0.5s,baz=211,slow=2.5,SNR=11						
ARCES				PKiKP	PKiKP	03 25 27.8	-0.9
	comp=Z,3.6nm,0.9s,baz=207,slow=1.4,SNR=5.1						
ARCES				LR	LR	03 28 19.3	
	comp=Z,29µm,18.9s,baz=183,slow=37						
ARCES	ARCESS Array B	31.46	3	P	P	03 15 06.3	-0.6
ARCES	ARCESS Array B	31.46	3		PKiKP	03 25 27.8	-0.9
ARE0	ARCESS Array S	31.46	3	eP	P	03 15 06.8	-0.2
ARE0				IVmB_BB		03 15 18.5	
	comp=Z,2µm,3.5s						
ARE0				eS	S	03 20 17.1	+3.0
KEV	Kevo	31.76	4	P	P	03 15 08.3	-1.2
KEV				IAmb	IAmb	03 15 18.8	
	comp=Z,64nm,1.0s						
KEV				IAMs_20	IAMs_20	03 28 16.0	
	comp=Z,32µm,20.0s						
KEV	Kevo	31.76	4	P	P	03 15 08.3	-1.2
KEV				pmax	pmax		
	comp=Z,64nm,1.0s						
KEV				MLR	MLR		
	comp=Z,32µm,20.0s						
SVE	Sverdlovsk	32.26	42	deP	P	03 15 13.4	-0.7
SVE				eS	S	03 20 23.5	-3.3
SVE				pmax	pmax		
	comp=Z,354nm,1.7s						
SVE				MLR	MLR		
	comp=Z,38µm,13.0s						
AJN	Ajban	32.29	105	i P	P	03 15 14.0	-0.7
	SNR=18						
AJN	Ajban	32.29	105	P	P	03 15 14.5	-0.2
	SNR=7.9						
AJN				P	P	03 15 14.5	-0.2
	SNR=7.9						
AJN				S	S	03 20 27.1	-0.8
AJN				S	S	03 20 27.1	-0.8
UMQ	Umm Al-Quwin	32.29	103	i P	P	03 15 14.8	+0.1
	SNR=13						
UMQ	Umm Al-Quwin	32.29	103	P	P	03 15 15.0	+0.3
	SNR=7.5						
UMQ				P	P	03 15 15.0	+0.3
	SNR=7.5						
SHME	Shamm	32.39	101	i P	P	03 15 14.3	-1.4
	SNR=51						
SHME				S	S	03 20 24.0	-5.6
HAMF	Hammerfest	32.50	2	eP	P	03 15 16.0	0.0
HAMF				IVmB_BB		03 15 19.3	
	comp=Z,2µm,2.2s						
HAMF				eS	S	03 20 33.2	+3.0
ASUD	Al Ashush, Dub	32.52	104	i P	P	03 15 16.9	+0.1
	SNR=7.2						
ASUD	Al Ashush, Dub	32.52	104	P	P	03 15 16.8	+0.1
	SNR=6.3						
ASUD				S	S	03 20 30.9	-0.5
BANOM	Banah	32.58	102	i P	P	03 15 16.5	-0.8
	SNR=30						
BANOM	Banah	32.58	102	P	P	03 15 16.8	-0.5
	SNR=12						
NAZ	Nazwa, Dubai	32.58	104	i P	P	03 15 16.5	-0.7
	SNR=85						
NAZ	Nazwa, Dubai	32.58	104	P	P	03 15 17.0	-0.3
	SNR=15						
FAQ	Al Faqa, Dubai	32.66	104	i P	P	03 15 18.4	+0.4
	SNR=19						
FAQ	Al Faqa, Dubai	32.66	104	P	P	03 15 17.5	-0.4
FAQ				P	P	03 15 17.5	-0.4
MSFE	Esma-Masafi	32.76	103	i P	P	03 15 18.1	-0.8
	SNR=31						
MDH	Madha	32.90	103	P	P	03 15 19.1	-1.0
	SNR=24						
MDH				P	P	03 15 19.1	-1.0
	SNR=24						
MDH				S	S	03 20 33.7	-3.7
MDH				S	S	03 20 33.7	-3.7
UOSS	Minazif	33.02	103	i P	P	03 15 20.1	-1.0
	SNR=68						
UOSS	Minazif	33.02	103	P	P	03 15 20.1	-1.0
UOSS				S	S	03 20 37.5	-1.7
HATD	Hatta, Dubai	33.03	103	i P	P	03 15 20.6	-0.6
	SNR=106						
HATD	Hatta, Dubai	33.03	103	P	P	03 15 20.6	-0.6
	SNR=33						
HATD				S	S	03 20 36.2	-3.2
ASHO	Ashiyiah	33.05	104	i P	P	03 15 20.2	-1.2
	SNR=117						
ASHO	Ashiyiah	33.05	104	P	P	03 15 20.6	-0.7
	SNR=44						
ASHO				P	P	03 15 20.6	-0.7
	SNR=44						
ASHO				S	S	03 20 35.3	-4.4
ASHO				S	S	03 20 35.3	-4.4
ALNE	Al Ain	33.15	105	i P	P	03 15 21.3	-1.0
	SNR=69						
ATD	Arta Tunnel	33.30	137	P	P	03 15 24.6	+0.9
	comp=Z,45nm,0.9s,baz=17,slow=5.6,SNR=8.2						
ATD	Arta Tunnel	33.30	137	i P	P	03 15 25.8	+2.1
ATD				eS	S	03 20 51.7	+7.9
ATD	Arta Tunnel	33.30	137	IAmb	IAmb	03 15 29.6	
	comp=Z,90nm,1.1s						
ATD	Arta Tunnel	33.30	137	P	P	03 15 26.0	+2.3
	SNR=6.8						
AAE	Adis Abeba	33.45	146	i P	P	03 15 28.6	+3.3
AAE				eS	S	03 20 52.4	+5.8
FURI	Furi	33.53	146	i P	P	03 15 29.6	+3.6
FURI				eS	S	03 20 58.7	+11
FURI	Furi	33.53	146	P	P	03 15 25.6	-0.4
HRA	Herat	33.70	84	IAmb	IAmb	03 15 29.0	
	comp=Z,45nm,0.8s						
SOHO	SOHO	33.71	104	P	P	03 15 26.2	-0.9
	SNR=100						

SOHO P P 03 15 26.2 -0.9
SNR=100
SOHO P P 03 15 26.2 -0.9
SNR=100
ARQ Araqi 34.14 105 P P 03 15 30.6 -0.3
SNR=54
ARQ P P 03 15 30.6 -0.3
SNR=54
ARQ P P 03 15 30.6 -0.3
SNR=54
ARQ S S 03 20 55.2 -1.5
ARQ S S 03 20 55.2 -1.5
ARQ S S 03 20 55.2 -1.5
HOQ Hoqain 34.60 104 P P 03 15 33.6 -1.3
SNR=55
HOQ P P 03 15 33.6 -1.3
SNR=55
HOQ S S 03 21 01.5 -2.3
HOQ S S 03 21 01.5 -2.3
BSY Bisya 34.99 106 P P 03 15 37.5 -0.7
SNR=66
BSY P P 03 15 37.5 -0.7
SNR=66
BIDO Bidbid 35.26 104 P P 03 15 39.0 -1.6
SNR=18
BIDO P P 03 15 39.0 -1.6
SNR=18
WHFO Wadi Hawf 35.43 116 P P 03 15 42.0 -0.1
SNR=42
SMDO Samad 35.46 104 P P 03 15 42.0 -0.4
SNR=65
ABTO Aybut 35.47 117 P P 03 15 43.0 +0.5
SNR=41
ABTO P P 03 15 43.0 +0.5
SNR=41
BART Pico Bartolome 35.65 284 eS S 03 21 10.9 -9.0
PSMN Pico do Norte, 35.78 282 eS S 03 21 22.2 +0.5
PSMN eSnSn SnSn 03 23 43.0 -1.1
WSAR Wadi Sarin 35.80 104 P P 03 15 45.4 +0.1
comp=Z,34nm,0.7s,baz=318,slow=9.5,SNR=25
WSAR Wadi Sarin 35.80 104 P P 03 15 45.7 +0.4
SNR=23
JMDO Jabal Madar 35.89 105 P P 03 15 46.0 +0.1
SNR=37
CMLA Cha da Macela 35.93 284 eS S 03 21 17.7 -6.2
BORG Borgarnes 36.01 331 IAMs_20 IAMs_20 03 33 16.0
comp=Z,22μm,19.0s
RBK Rabkut 36.02 116 P P 03 15 47.2 +0.1
SNR=84
RBK P P 03 15 47.2 +0.1
SNR=84
BJO1 Bjornoya 36.34 359 eP P 03 15 49.8 +0.6
BJO1 eS S 03 21 31.5 +2.2
DMTO DMTO 36.41 115 P P 03 15 51.0 +0.6
SNR=26
DMTO P P 03 15 51.0 +0.6
SNR=26
DMTO P P 03 15 51.0 +0.6
SNR=26
WBK Wadi Bani Khal 36.41 104 P P 03 15 51.0 +0.5
SNR=54
MHTO MHTO 36.59 107 P P 03 15 52.0 0.0
SNR=76
MHTO P P 03 15 52.0 0.0
SNR=76
SHAO Shalim 36.69 113 P P 03 15 54.0 +1.1
SNR=14
SHAO P P 03 15 54.0 +1.1
SNR=14
SHAO P P 03 15 54.0 +1.1
SNR=14
DQM DQM 36.90 109 P P 03 15 55.0 +0.4
SNR=29
DQM P P 03 15 55.0 +0.4
SNR=29
JLN Jalan Bani Buh 37.01 104 P P 03 15 59.0 +3.5
SNR=6.5
BRVK Borovoye 37.06 50 P P 03 15 55.4 -0.2
BRVK IAmb IAmb 03 16 05.4
comp=Z,68nm,0.8s
BRVK Borovoye 37.06 50 P P 03 15 55.4 -0.2
BRVK pmax pmax
comp=Z,68nm,0.9s
BRVK MLR MLR
comp=Z,11μm,18.0s
BVAR Borovoye Array 37.12 50 P P 03 15 56.4 +0.2
comp=Z,17nm,0.5s,baz=270,slow=7.3,SNR=92
LODK Lodwar 37.26 155 P P 03 15 60.0 +2.2
SNR=49
TAS Tashkent 37.27 69 IAmb IAmb 03 16 03.4
comp=Z,148nm,0.9s
CHM Chimkent 37.31 68 eP P 03 15 56.9 -1.0
CHM eLR LR 03 34 45.6
CHM Chimkent 37.31 68 eP P 03 15 56.8 -1.1
BRLS Borolday 37.35 67 eS S 03 21 42.4 -3.2
PGRA Graciosa 37.47 287 eS S 03 21 49.0 +1.6
PGRA eSnSn SnSn 03 24 22.6 -2.2
IUG Iuzhnay 37.65 68 eP P 03 16 01.4 +0.5
comp=Z,102nm,2.8s
IUG eS S 03 21 48.6 -1.8
IUG Iuzhnay 37.65 68 eP P 03 16 01.4 +0.5
IUG eS S 03 21 48.5 -1.8
IUG pmax pmax
comp=Z,102nm,2.8s
ROSA Rosais 37.74 286 eS S 03 22 01.2 +10
KK31 Karatay Array 37.83 66 P P 03 16 01.2 -1.1
KKAR Karatay Array 37.83 66 P P 03 16 01.6 -0.7
KKAR Karatay Array 37.83 66 IAmb IAmb 03 16 05.8
comp=Z,154nm,0.7s
KKAR Karatay Array 37.83 66 P P 03 16 01.6 -0.7
JBG Jabagly 37.97 67 eP P 03 16 04.2 +0.5
JBG eS S 03 21 55.6 +0.3
JBG pmax pmax
comp=Z,81nm,0.9s
HOPEN Hopen 38.41 2 eP P 03 16 07.5 +0.8
HOPEN eS S 03 22 02.5 +1.7
DZA Taraz 38.45 66 eP P 03 16 05.4 -2.2
DZA eS S 03 22 01.9 -0.5
DZA Taraz 38.45 66 eP P 03 16 05.4 -2.2
DZA eS S 03 22 01.8 -0.5
BRZS Berezniki 38.55 55 eP P 03 16 07.5 -0.8
comp=Z,411nm,3.2s
BRZS ePP PP 03 17 36.8 +0.4
BRZS eS S 03 22 01.9 -1.7
BRZS eLR LR 03 34 20.4
BRZS Berezniki 38.55 55 eP P 03 16 07.4 -0.8
BRZS e 03 17 36.7
BRZS eS S 03 22 01.8 -1.7
BRZS pmax pmax
comp=Z,411nm,3.2s
BTK Batken 38.69 71 IAmb IAmb 03 16 12.2
comp=Z,96nm,0.8s
DBIC Dimbokro 38.90 223 P P 03 16 11.3 -0.2
comp=Z,136nm,0.9s,baz=13,slow=9.7,SNR=145
DBIC S S 03 21 57.7 -12
comp=Z,5.0nm,0.8s,baz=15,slow=19,SNR=1.5
DBIC LR LR 03 33 18.6
comp=Z,45μm,18.8s,baz=19,slow=38
HSPB Hornsund (broa 38.91 358 eP P 03 16 11.7 +0.7
HSPB IVmB_BB 03 16 18.1
comp=Z,2μm,2.5s
HSPB eS S 03 22 10.7 +2.4
HSPB eSS SS 03 25 03.3 +3.8
HSPB IVMs_BB IVMs_BB 03 32 14.1
comp=Z,11μm,23.8s
KBL Kabul 38.95 80 P P 03 16 11.3 -0.7
KBL IAMs_20 IAMs_20 03 34 24.0
comp=Z,24μm,20.0s
KBL Kabul 38.95 80 P P 03 16 11.4 -0.7
KBL pmax pmax
comp=Z,42nm,0.9s
KBL MLR MLR
comp=Z,24μm,20.0s
TIC Toumodi 39.01 223 eP P 03 16 12.2 -0.3
comp=Z,436nm,1.1s
SCO Scoresbysund 39.09 339 i P P 03 16 14.6 +2.1
comp=Z,493nm,1.3s
SCO Scoresbysund 39.09 339 IAmb IAmb 03 16 18.9
comp=Z,182nm,0.9s
SCO Scoresbysund 39.09 339 i P P 03 16 14.6 +2.1
SCO pmax pmax
comp=Z,490nm,1.3s
SCO MLR MLR
comp=Z,14μm,18.0s
KIC Kosan Boka 39.10 222 eP P 03 16 13.1 -0.1
comp=Z,272nm,0.9s
LIC Lamto 39.37 222 eP P 03 16 15.3 -0.1
comp=Z,752nm,1.1s
SOCY Socotra 39.57 122 P P 03 16 15.9 -1.3
SNR=27
H07S1 FLORES T-PHASE 39.80 288 eS S 03 22 20.9 -1.7
MBAR Mbarara 39.81 164 P P 03 16 20.2 +0.9
comp=Z,45nm,1.0s,baz=347,slow=12,SNR=29
MBAR Mbarara 39.81 164⇑eP P 03 16 20.3 +1.0
MBAR Mbarara 39.81 164 P P 03 16 17.7 -1.6
MBAR IAMs_20 IAMs_20 03 34 09.5
comp=Z,22μm,20.0s
MBAR Mbarara 39.81 164 P P 03 16 17.7 -1.6
MBAR pmax pmax
comp=Z,85nm,1.2s
MBAR MLR MLR
comp=Z,22μm,20.0s
BTLS Baital 40.00 63 eP P 03 16 19.8 -0.7
comp=Z,60nm,1.7s
BTLS ePP PP 03 17 49.1 -3.2
BTLS eS S 03 22 25.3 -0.2
BTLS eLR LR 03 35 35.3
BTLS Baital 40.00 63 eP P 03 16 19.8 -0.7
BTLS e 03 17 49.9
BTLS eS S 03 22 25.3 -0.2
BTLS pmax pmax
comp=Z,60nm,1.7s
SPA0 Spitsbergen Ar 40.07 359 eP P 03 16 21.4 +0.8
SPA0 IVmB_BB 03 16 27.2
comp=Z,2μm,1.8s
SPA0 eScP ScP 03 22 15.7 +2.2
SGDS Sogindy 40.71 65 eP P 03 16 25.1 -1.3
comp=Z,468nm,4.3s
SGDS ePP PP 03 17 59.0 -1.2
SGDS eS S 03 22 35.1 -1.2
SGDS eLR LR 03 35 55.4
AAK Ala-Archa 40.79 66 P P 03 16 26.9 -0.3
comp=Z,36nm,0.7s,baz=263,slow=6.2,SNR=21
AAK Ala-Archa 40.79 66 IAmb IAmb 03 16 33.6
comp=Z,107nm,0.9s
AAK PP PP 03 17 56.2 -4.9
AAK Ala-Archa 40.79 66ceP P 03 16 26.3 -0.9
AAK pmax pmax
comp=Z,148nm,1.0s
KBS Kingsbay 40.93 358 eP P 03 16 28.1 +0.4
KBS IVmB_BB 03 16 33.3
comp=Z,2μm,2.0s
KBS eS S 03 22 41.7 +3.2
KBS eSS SnSn 03 25 45.2 -2.0
KBS IVMs_BB IVMs_BB 03 35 11.9
comp=Z,7μm,13.4s
KBS Kingsbay 40.93 358 P P 03 16 27.2 -0.5
KBS SS SS 03 25 39.3 -0.6
KBS Kingsbay 40.93 358 IAMs_20 IAMs_20 03 35 20.9
comp=Z,17μm,18.0s
KBS Kingsbay 40.93 358ceP P 03 16 27.8 +0.1
KBS pmax pmax
comp=Z,1μm,2.5s
KUU Kurty 41.83 64 eP P 03 16 34.9 -0.8
comp=Z,491nm,1.9s
KUU ePP PP 03 18 12.3 +0.1
KUU eS S 03 22 48.9 -4.0
KUU eLR LR 03 37 58.8
KUU Kurty 41.83 64 eP P 03 16 34.8 -0.8
KUU e 03 18 12.3
KUU eS S 03 22 48.8 -4.0
KUU pmax pmax
comp=Z,491nm,1.9s
BOOM Boomskoye usch 41.86 66 IAmb IAmb 03 16 50.4
comp=Z,137nm,0.8s
MTBS Maitube 42.06 65 eP P 03 16 38.0 +0.4
MTBS Maitube 42.06 65 eP P 03 16 38.0 +0.4
KMBO Kilima Mbogo 42.15 154 P P 03 16 41.0 +2.4
comp=Z,15nm,0.7s,baz=348,slow=8.4,SNR=43
KMBO LR LR 03 37 12.7
comp=Z,19μm,18.6s,baz=338,slow=40
KMBO Kilima Mbogo 42.15 154 i P P 03 16 40.8 +2.2
KMBO Kilima Mbogo 42.15 154 P P 03 16 36.9 -1.7
KMBO Kilima Mbogo 42.15 154 IAMs_20 IAMs_20 03 37 00.4
comp=Z,20μm,19.0s
NRN Naryn 42.16 68 IAMs_20 IAMs_20 03 36 11.4
comp=Z,18μm,20.0s
DAG Danmarks Havn 42.20 348 i P P 03 16 38.9 +0.7
comp=Z,96nm,1.4s
DAG Danmarks Havn 42.20 348 i P P 03 16 38.9 +0.7
DAG pmax pmax
comp=Z,96nm,1.4s
DAG MLR MLR
comp=Z,13μm,21.0s
KURBB Kurchatov Arra 42.24 54 P P 03 16 38.0 -0.7
comp=Z,54nm,0.8s,baz=282,slow=8.9,SNR=76
KURBB PcP PcP 03 18 33.5 +1.0
comp=Z,28nm,0.7s,baz=276,slow=3.9,SNR=5.5
KURK Kurchatov 42.28 53 P P 03 16 39.0 -0.2
KURK IAmb IAmb 03 16 44.0
comp=Z,166nm,1.1s
KURK Kurchatov 42.28 53ceP P 03 16 38.9 -0.2
KURK pmax pmax
comp=Z,167nm,1.0s
CHKK Chushkaly 42.30 64 eP P 03 16 39.1 -0.3
CHKK ePP PP 03 18 17.6 +0.3
CHKK eS S 03 22 58.1 -1.6
CHKK Chushkaly 42.30 64 eP P 03 16 39.1 -0.3
CHKK e 03 18 17.5
CHKK eS S 03 22 58.9 -0.8
AAA Alma-Ata 42.39 65 eP P 03 16 39.4 -0.8
AAA Alma-Ata 42.39 65 eP P 03 16 39.4 -0.8
TNSS Tian-Shan 42.45 65 eP P 03 16 40.0 -1.2
TNSS ePP PP 03 18 16.7 -2.7
TNSS Tian-Shan 42.45 65 eP P 03 16 39.9 -1.2
TNSS e 03 18 16.6
MDOK Medeo 42.50 65 eP P 03 16 40.6 -0.6
MDOK ePP PP 03 18 17.9 -1.6
MDOK eS S 03 22 59.7 -3.3
MDOK eLR LR 03 37 46.7
MDOK Medeo 42.50 65 eP P 03 16 40.6 -0.6
MDOK e 03 18 17.9
MDOK eS S 03 22 59.6 -3.3
NIL Nilore 42.52 79 P P 03 16 41.5 +0.1
NIL Nilore 42.52 79 P P 03 16 41.5 +0.1
NIL pmax pmax
comp=Z,219nm,1.2s
KSH Kashi 42.66 70 P P 03 16 38.5 -4.0
KSH pP pP 03 16 42.1 -5.1
KSH PP PP 03 18 19.1 -2.2
KSH S S 03 22 56.3 -9.0
KSH pmax pmax
comp=Z,770nm,1.9s
KSH pmax pmax
comp=Z,8μm,5.4s
KSH LR LR
comp=Z,36μm,18.4s
KSH LR LR
comp=Z,16μm,15.6s
KSH LR LR
comp=Z,21μm,23.2s
ANGG Ammassalik, Gr 42.80 329 IAMs_20 IAMs_20 03 35 09.7
comp=Z,17μm,20.0s
KDJ Kajisay 42.84 66 IAmb IAmb 03 16 53.7
comp=Z,81nm,1.0s
TDK Taldyqorghan 43.05 62⇑iP P 03 16 45.9 +0.4
comp=Z,1μm,4.0s
TDK ePP PP 03 18 25.4 +0.1
TDK eS S 03 23 10.1 -0.6
TDK eLR LR 03 36 55.5
TDK Taldyqorghan 43.05 62c iP P 03 16 45.8 +0.4
TDK e 03 18 25.4
TDK eS S 03 23 10.0 -0.6
TDK pmax pmax
comp=Z,1μm,4.0s
SEM Semipalatinsk 43.35 54 eP P 03 16 47.2 -1.0
comp=Z,250nm,3.1s
SEM ePP PP 03 18 28.3 -0.4
SEM eS S 03 23 08.9 -6.6
SEM eLR LR 03 38 02.2
SEM Semipalatinsk 43.35 54 eP P 03 16 47.1 -1.0
SEM e 03 18 28.2
SEM eS S 03 23 08.8 -6.6
SEM pmax pmax
comp=Z,250nm,3.1s
ZHN Zhinishke 43.48 64 eP P 03 16 49.4 +0.3
comp=Z,110nm,1.9s
ZHN ePP PP 03 18 29.7 -0.5
ZHN eLR LR 03 37 05.9
ZHN Zhinishke 43.48 64 eP P 03 16 49.3 +0.2
ZHN e 03 18 29.6
ZHN pmax pmax
comp=Z,110nm,1.9s
SATY Saty 43.49 65 eP P 03 16 49.5 +0.3
comp=Z,211nm,1.5s
SATY ePP PP 03 18 30.4 +0.2
SATY eS S 03 23 16.4 -1.1
SATY eLR LR 03 37 13.8
SATY Saty 43.49 65 eP P 03 16 49.5 +0.3
SATY e 03 18 30.4
SATY eS S 03 23 16.3 -1.1
SATY pmax pmax
comp=Z,211nm,1.5s
KIBK Kibwezi 43.55 154 P P 03 16 52.1 +2.2
SNR=18
KPKS Kokpek 43.59 64⇑iP P 03 16 49.0 -1.0
comp=Z,527nm,3.9s
KPKS ePP PP 03 18 28.9 -2.3
KPKS eS S 03 23 18.6 -0.2
KPKS eLR LR 03 37 29.8
KPKS Kokpek 43.59 64c iP P 03 16 48.9 -1.0
KPKS e 03 18 28.9
KPKS eS S 03 23 18.5 -0.2
KPKS pmax pmax
comp=Z,527nm,3.9s
UZB Uzynbulak 43.90 64 eP P 03 16 52.5 -0.1
comp=Z,250nm,2.8s
UZB ePP PP 03 18 33.8 -0.8
UZB eS S 03 23 22.2 -1.3
UZB eLR LR 03 39 20.8
UZB Uzynbulak 43.90 64 eP P 03 16 52.4 -0.1
UZB e 03 18 33.8
UZB eS S 03 23 22.2 -1.3
UZB pmax pmax
comp=Z,250nm,2.8s
PDGK Podgornoye 44.19 64 P P 03 16 53.5 -1.3
SHLS Shalkode 44.21 64 eP P 03 16 56.7 +1.6
comp=Z,544nm,4.6s
SHLS ePP PcP 03 18 39.6 +0.1
SHLS eS S 03 23 31.7 +3.7
SHLS eLR LR 03 38 01.4
SHLS Shalkode 44.21 64 eP P 03 16 56.6 +1.6
SHLS e 03 18 39.6
SHLS eS S 03 23 31.6 +3.7
BHUJ Bhuj 44.35 95⇑iP P 03 16 56.1 -0.1
BHUJ i PP PcP 03 18 42.3 +2.2
SUMG Summit 44.73 338 i P P 03 17 00.0 +1.0
comp=Z,732nm,1.3s
SUMG Summit 44.73 338 IAMs_20 IAMs_20 03 35 41.7
comp=Z,16μm,19.0s
SUMG Summit 44.73 338 i P P 03 17 00.0 +1.0
SUMG pmax pmax
comp=Z,730nm,1.3s
SUMG MLR MLR
comp=Z,41μm,16.0s
MAKZ Makanchi 45.10 58 P P 03 17 01.5 -0.4
SACV Santiago Islan 45.15 251 IAMs_20 IAMs_20 03 36 33.2
comp=Z,28μm,21.0s
MK31 Makanchi Array 45.32 58 P P 03 17 02.6 -1.0
MKAR Makanchi Array 45.32 58 P P 03 17 03.4 -0.3
comp=Z,84nm,0.6s,baz=279,slow=7.8,SNR=432
MKAR PcP PcP 03 18 42.9 -0.2
comp=Z,25nm,0.7s,baz=284,slow=4.5,SNR=2.3
MKAR ScP ScP 03 22 36.1 +0.8
comp=Z,4.4nm,0.9s,baz=269,slow=5.8,SNR=3.1
MKAR S S 03 23 40.7 -3.0
comp=Z,7.5nm,0.8s,baz=269,slow=12,SNR=4.9
MKAR LR LR 03 40 01.8
comp=Z,18μm,20.5s,baz=286,slow=42
MKAR Makanchi Array 45.32 58 S S 03 23 41.4 -2.3
NOR Nord 45.40 353 i P P 03 17 05.2 +1.4
NOR Nord 45.40 353 i P P 03 17 05.2 +1.4
NOR MLR MLR
comp=Z,15μm,18.0s
DHRM DHARAMSHALA 45.43 80⇑iP P 03 17 03.6 -1.3
DHRM IAmb IAmb 03 17 11.8
comp=Z,52nm,0.7s
ZALV Zalesovo Beam 45.69 48 P P 03 17 05.9 -0.5
comp=Z,134nm,0.5s,baz=274,slow=8.6,SNR=473
ZALV S S 03 23 45.4 -3.3
comp=Z,6.4nm,0.9s,baz=263,slow=10.0,SNR=3.8
ZALV LR LR 03 38 39.2
comp=Z,33μm,19.2s,baz=284,slow=39
NRS Narsarsuaq 45.94 322 IAMs_20 IAMs_20 03 38 20.0
comp=Z,19μm,18.0s
ZSN Zaisan 46.88 57⇑iP P 03 17 15.3 -0.7
comp=Z,389nm,3.4s
ZSN ePP PP 03 19 07.0 +0.9
ZSN eS S 03 24 04.2 -2.0
ZSN i S S 03 24 04.8 -1.4
ZSN eLR LR 03 38 30.9
ZSN Zaisan 46.88 57c iP P 03 17 15.3 -0.7
ZSN e 03 19 06.9
ZSN eS S 03 24 04.2 -2.0
ZSN pmax pmax
comp=Z,389nm,3.4s
DDI Dehra Dun 47.60 81⇑iP P 03 17 20.3 -1.5
DDI IAmb IAmb 03 17 23.6
comp=Z,116nm,0.4s
AYAN Aya Nagar 47.69 84 eP P 03 17 21.4 -1.1
AYAN IAmb IAmb 03 17 25.6
comp=Z,73nm,0.7s
SFJD Kangerlussuaq 48.13 330 LR LR 03 38 23.7
comp=Z,16μm,21.7s,baz=90,slow=37
SFJD Kangerlussuaq 48.13 330 i P P 03 17 25.0 -0.3
SFJD Kangerlussuaq 48.13 330 P P 03 17 25.1 -0.2
SFJD Kangerlussuaq 48.13 330 IAMs_20 IAMs_20 03 38 55.8
comp=Z,16μm,21.0s
SFJD Kangerlussuaq 48.13 330 i P P 03 17 25.0 -0.3
SFJD MLR MLR
comp=Z,15μm,22.0s
ILULI Ilulissat 48.32 333 i P P 03 17 28.4 +1.7
comp=Z,179nm,1.2s
ILULI Ilulissat 48.32 333 IAMs_20 IAMs_20 03 40 12.8
comp=Z,13μm,18.0s
ILULI Ilulissat 48.32 333 i P P 03 17 28.4 +1.7
ILULI pmax pmax
comp=Z,180nm,1.2s
ILULI MLR MLR
comp=Z,13μm,16.0s
JOSI Joshimath 48.67 80 eP P 03 17 29.2 -1.0
BOM Bombay 49.19 98⇑ix P 03 17 24.2 -10
BOM ex PP 03 19 17.7 -10
WMQ Urumqi 49.78 61 P P 03 17 38.2 -0.2
WMQ pP sP 03 17 42.9 -1.9
WMQ sP pP 03 17 49.5 +6.5
WMQ PP PP 03 19 34.1 +1.2
WMQ S S 03 24 46.1 -1.2
WMQ pmax pmax
comp=Z,50nm,1.1s
WMQ pmax pmax
comp=Z,1μm,4.9s
WMQ LR LR
comp=Z,12μm,16.1s
WMQ LR LR
comp=Z,5μm,14.3s
WMQ LR LR
comp=Z,12μm,29.0s
WMQ Urumqi 49.78 61 IAmb IAmb 03 17 43.7
comp=Z,89nm,1.0s
WMQ Urumqi 49.78 61 IAMs_20 IAMs_20 03 42 33.1
comp=Z,18μm,20.0s
POO Poona 50.21 97⇑iP P 03 17 41.4 -0.5
POO ex S 03 24 47.8 -5.9
KULLO Kullorsuaq 50.27 340 i P P 03 17 43.8 +2.2
KULLO Kullorsuaq 50.27 340 i P P 03 17 43.8 +2.2
KULLO MLR MLR
comp=Z,16μm,20.0s
BHPL Bhopal 50.47 90⇑iP P 03 17 43.2 -0.6
BHPL IAmb IAmb 03 17 47.8
comp=Z,87nm,0.4s
BHPL ePP PP 03 19 40.6 +1.1
GOA Goa 51.95 101⇑iP P 03 17 55.0 0.0
GOA IAmb IAmb 03 17 58.9
comp=Z,85nm,0.9s
KLRI Killari 52.62 96 eP P 03 17 59.0 -0.9
KLRI IAmb IAmb 03 18 02.9
comp=Z,129nm,1.0s
KLRI ePP PP 03 19 59.2 +0.1
KLRI e 03 25 23.6
KLRI IVMs_BB IVMs_BB 03 44 40.2
comp=Z,3μm,14.4s
NGP Nagpur 52.85 91 eP P 03 18 00.3 -1.4
NGP IAmb IAmb 03 18 05.2
comp=Z,86nm,1.1s

NGP Nagpur 52.85 91 eP P 03 18 00.8 -0.8
NGP eS S 03 25 29.6 -0.5
DANN Dangsing 52.93 81 eP P 03 18 01.6 -0.9
comp=Z,799nm,1.0s
TULEG Thule 53.00 343 IAmb IAmb 03 18 04.2
comp=Z,99nm,1.1s
TULEG IAMs_20 IAMs_20 03 40 54.4
comp=Z,14μm,20.0s
KOLN Koldanda 53.08 81 eP P 03 18 02.0 -1.5
MONG Mongu 53.18 177 iP P 03 18 06.7 +2.7
SRSP Sriramsagar 53.51 94 eP P 03 18 04.8 -1.7
SRSP IAmb IAmb 03 18 08.4
comp=Z,90nm,0.9s
SRSP e 03 25 33.3
SRSP IVMs_BB IVMs_BB 03 45 00.6
comp=Z,2μm,16.6s
MSEY Mahe Island 53.66 135 P P 03 18 07.8 +0.2
MSEY Mahe Island 53.66 135 P P 03 18 07.8 +0.2
MSEY pmax pmax
comp=Z,106nm,1.1s
MSEY MLR MLR
comp=Z,7μm,19.0s
LSZ Lusaka 53.74 171 iP P 03 18 09.7 +1.5
LSZ Lusaka 53.74 171 iP P 03 18 09.7 +1.5
LSZ Lusaka 53.74 171 P P 03 18 08.4 +0.2
LSZ IAmb IAmb 03 18 11.2
comp=Z,60nm,0.8s
LSZ Lusaka 53.74 171 P P 03 18 08.4 +0.2
LSZ pmax pmax
comp=Z,60nm,0.9s
LSZ MLR MLR
comp=Z,20μm,18.0s
GKN Gorkha 53.77 81 eP P 03 18 08.0 -0.6
comp=Z,503nm,1.0s
ITZ Itezhi-Tezhi 53.97 173⇑iP P 03 18 08.8 -1.0
ITZ i 03 18 09.5
baz=269,slow=9.3
ITZ Itezhi-Tezhi 53.97 173⇑iP P 03 18 08.8 -1.0
ITZ i 03 18 09.5
baz=269,slow=9.3
ITZ iS S 03 20 21.2 -324
ITZ Itezhi-Tezhi 53.97 173⇑iP P 03 18 10.8 +0.9
RPR Rampur 54.29 93 eP P 03 18 10.4 -1.8
RPR IAmb IAmb 03 18 14.1
comp=Z,60nm,0.8s
RPR ePP PP 03 20 11.6 -2.5
RPR e 03 25 43.6
DMN Daman 54.33 81 eP P 03 18 11.6 -1.1
comp=Z,600nm,1.2s
KKN Kakani 54.38 81 eP P 03 18 12.1 -0.9
comp=Z,111nm,0.6s
HYBB Hyderabad (bro 54.52 95 eP P 03 18 12.3 -1.7
HYBB IAmb IAmb 03 18 16.3
comp=Z,110nm,1.0s
HYBB ePP PP 03 20 17.8 +1.6
HYBB e 03 25 48.6
HYBB IVMs_BB IVMs_BB 03 46 02.1
comp=Z,2μm,13.7s
HYB Hyderabad 54.52 95 iP P 03 18 12.0 -1.9
HYB ePcP PcP 03 19 17.0 -0.2
HYB ePP PP 03 20 16.0 -0.2
HYB Hyderabad 54.52 95⇑iP P 03 18 12.9 -1.0
HYB IAmb IAmb 03 18 17.2
comp=Z,122nm,0.4s
PKIN Phulchoki 54.57 81 eP P 03 18 12.6 -1.9
PKI Pulchoki 54.58 81 eP P 03 18 12.5 -2.1
GUN Gumba 54.78 80 eP P 03 18 14.7 -1.4
URV Uravakonda 54.94 99 eP P 03 18 15.6 -1.3
URV IAmb IAmb 03 18 21.6
comp=Z,122nm,1.2s
URV e 03 25 54.4
URV IVMs_BB IVMs_BB 03 44 28.1
comp=Z,3μm,15.4s
JIRN Jiri 55.15 80 eP P 03 18 17.6 -1.2
SRLM Srisailam 55.54 96 eP P 03 18 20.0 -1.3
SRLM IAmb IAmb 03 18 24.8
comp=Z,116nm,0.9s
SRLM e 03 26 01.2
SRLM IVMs_BB IVMs_BB 03 46 18.8
comp=Z,2μm,14.0s
GGR Gangavaram 55.58 94 eP P 03 18 20.1 -1.5
GGR IAmb IAmb 03 18 23.5
comp=Z,96nm,1.2s
GGR e 03 26 01.9
GGR IVMs_BB IVMs_BB 03 47 05.7
comp=Z,2μm,14.5s
NJS Nagarjunasagar 55.60 96 eP P 03 18 20.2 -1.5
NJS IAmb IAmb 03 18 24.2
comp=Z,152nm,1.3s
NJS e 03 26 02.3
NJS IVMs_BB IVMs_BB 03 46 43.3
comp=Z,2μm,15.7s
MOY Mondy 55.75 48 eP P 03 18 23.2 +0.7
MOY pmax pmax
comp=Z,255nm,2.7s
RAMN Ramite 55.81 81 eP P 03 18 21.7 -1.7
comp=Z,156nm,0.7s
MNCY Minicoy 55.85 108 eP P 03 18 21.4 -2.1
FRB Frobisher Bay 56.05 328 LR LR 03 43 41.9
comp=Z,21μm,18.1s,baz=68,slow=38
ODAN Odare 56.47 80 eP P 03 18 26.7 -1.4
comp=Z,216nm,1.0s
TAPN Taplejung 56.47 80 eP P 03 18 26.8 -1.4
comp=Z,424nm,1.1s
ADKI Addanki 56.53 96 eP P 03 18 27.3 -1.1
ADKI IAmb IAmb 03 18 30.5
comp=Z,69nm,1.1s
ADKI e 03 26 14.9
ADKI IVMs_BB IVMs_BB 03 47 13.5
comp=Z,2μm,15.0s
MYLAV Mylavaram 56.53 95 eP P 03 18 27.3 -1.0
MYLAV IAmb IAmb 03 18 30.7
comp=Z,129nm,0.8s
MYLAV e 03 26 14.5
MYLAV IVMsBB 03 46 58.7
comp=Z,2μm,19.0s
BOK Bokaro 56.84 84⇑iP P 03 18 27.7 -2.8
BOK IAmb IAmb 03 18 34.4
comp=Z,57nm,0.7s
BOK ex S 03 26 20.2 -3.4
PVM Polavaram 57.02 94 eP P 03 18 30.9 -0.9
PVM IAmb IAmb 03 18 35.0
comp=Z,146nm,1.0s
PVM e 03 26 18.7
PVM IVMs_BB IVMs_BB 03 47 09.2
comp=Z,2μm,15.8s
GTK Tadong 57.18 79⇑iP P 03 18 31.7 -1.3
TSUM Tsumeb 57.21 183 iP P 03 18 33.6 +0.5
TSUM Tsumeb 57.21 183 iP P 03 18 33.6 +0.5
TSUM Tsumeb 57.21 183 P P 03 18 33.7 +0.5
TSUM IAmb IAmb 03 18 36.3
comp=Z,48nm,1.1s
TLY Talaya 57.28 47 P P 03 18 34.6 +1.3
comp=Z,43nm,0.9s,baz=274,slow=5.5,SNR=70
TLY Talaya 57.28 47 P P 03 18 33.8 +0.5
TLY IAmb IAmb 03 18 36.8
comp=Z,83nm,1.1s
TLY ScP ScP 03 23 30.9 +4.2
TLY Talaya 57.28 47c iP P 03 18 33.9 +0.6
TLY e 03 19 28.8
TLY e 03 20 46.4
TLY ePPP PPP 03 21 57.5
TLY eS S 03 26 29.9 +1.1
TLY e 03 28 25.6
TLY eSS SS 03 30 17.7 +0.2
TLY pmax pmax
comp=Z,589nm,1.8s
TLY MLR MLR
comp=Z,70μm,17.0s
IRK Irkutsk 57.44 46 eP P 03 18 33.6 -0.7
IRK e 03 26 29.6
IRK pmax pmax
comp=Z,378nm,2.3s
ZAK Zakamensk 57.56 49 eP P 03 18 35.8 +0.5
ZAK e 03 20 48.2
ZAK pmax pmax
comp=Z,45nm,1.6s
ZAK pmax pmax
comp=Z,17nm,1.4s
SKHT Srikalahasti 57.56 98 eP P 03 18 34.5 -1.1
SKHT IAmb IAmb 03 18 38.2
comp=Z,29nm,0.8s
SKHT ePP PP 03 20 40.9 -2.5
SKHT e 03 26 29.7
SKHT IVMs_BB IVMs_BB 03 47 53.9
comp=Z,2μm,16.4s
LSA Lhasa 57.98 76 P P 03 18 38.6 -0.5
LSA pP sP 03 18 44.5 -1.0
LSA S S 03 26 37.2 -2.2
LSA LR LR
comp=Z,21μm,27.1s
LSA LR LR
comp=Z,21μm,25.6s
LSA LR LR
comp=Z,31μm,25.6s
CHLP Challavanipeta 58.23 91 eP P 03 18 39.2 -1.1
CHLP IAmb IAmb 03 18 43.2
comp=Z,126nm,1.0s
CHLP e 03 26 36.7
CHLP IVMs_BB IVMs_BB 03 44 30.0
comp=Z,2μm,25.8s
SCHQ Schefferville 58.36 317 P P 03 18 41.4 +0.6
comp=Z,27nm,0.6s,baz=58,slow=5.7,SNR=74
SCHQ LR LR 03 41 56.0
comp=Z,9μm,21.1s,baz=72,slow=34
SCHQ Schefferville 58.36 317 P P 03 18 41.4 +0.6
SCHQ IAmb IAmb 03 18 54.4
comp=Z,85nm,1.1s
SBV Sambava 58.39 146 P P 03 18 43.5 +2.2
SNR=17
BWNR Bhubaneshwar 58.63 88⇑iP P 03 18 41.0 -2.0
TRD Trivandrum 58.66 105 eP P 03 18 42.9 -0.5
MATP Matopo 58.86 171 iP P 03 18 44.2 -0.5
MATP Matopo 58.86 171 iP P 03 18 44.2 -0.5
TIXI Tiksi 59.60 20 P P 03 18 49.6 +0.5
comp=Z,30nm,1.0s,baz=302,slow=6.4,SNR=48
TIXI S S 03 26 58.8 +0.5
baz=202,slow=19
TIXI LR LR 03 48 12.7
comp=Z,49μm,18.5s,baz=299,slow=40
TIXI Tiksi 59.60 20 P P 03 18 49.6 +0.5
TIXI IAmb IAmb 03 19 08.2
comp=Z,63nm,1.1s
TIXI PcP PcP 03 19 33.2 -2.9
TIXI PP PP 03 20 57.7 -2.5
TIXI Tiksi 59.60 20ceP P 03 18 49.4 +0.3
TIXI pmax pmax
comp=Z,132nm,1.7s
TIXI MLR MLR
comp=Z,50μm,17.0s
RES Resolute Bay 59.68 344 S S 03 27 00.0 +0.8
comp=Z,1.6nm,1.0s,baz=49,slow=20,SNR=1.9
RES LR LR 03 44 46.0
comp=Z,11μm,21.7s,baz=66,slow=36
RES Resolute Bay 59.68 344 IAMs_20 IAMs_20 03 44 45.7
comp=Z,12μm,21.0s
GTA Gaotai 59.85 62 ⇑P P 03 18 50.4 -1.1
GTA pP pP 03 18 55.8 -0.4
GTA sP sP 03 18 58.8 +0.9
GTA PP PP 03 21 05.3 +2.0
GTA S S 03 27 00.1 -2.6
GTA SS SS 03 31 00.1 +1.6
GTA pmax pmax
comp=Z,23nm,1.0s
GTA pmax pmax
comp=Z,1μm,4.9s
GTA LR LR
comp=Z,9μm,20.0s
GTA LR LR
comp=Z,9μm,18.7s
GTA LR LR
comp=Z,12μm,20.9s
BOD Bodaibo 60.35 38⇑iP P 03 18 53.8 -0.7
BOD pmax pmax
comp=Z,129nm,1.8s
SONM Songino Array 60.46 51 P P 03 18 55.9 +0.3
comp=Z,41nm,0.8s,baz=284,slow=8.6,SNR=120
SONM PcP PcP 03 19 43.1 +2.9
comp=Z,16nm,0.8s,baz=269,slow=3.7,SNR=4.6
SONM LR LR 03 47 44.4
comp=Z,29μm,19.2s,baz=304,slow=39
SONM PKP2bc 03 48 23.6
comp=Z,0.6nm,0.9s,baz=113,slow=2.3,SNR=3.6
SONM Songino Array 60.46 51 P P 03 18 54.5 -1.0
SONM Songino Array 60.46 51 P P 03 18 54.5 -1.0
SONM pmax pmax
comp=Z,59nm,1.1s
SHL Shillong 60.60 79 eP P 03 18 54.8 -2.1
SHL Shillong 60.60 79 P P 03 18 56.0 -0.9
SNR=35
ULN Ulaanbaatar 60.85 50 P P 03 18 58.0 -0.2
ULN IAmb IAmb 03 19 03.5
comp=Z,55nm,0.8s
ULN PP PP 03 21 10.7 -1.2
ULN Ulaanbaatar 60.85 50ceP P 03 18 58.1 -0.2
ULN pmax pmax
comp=Z,77nm,1.0s
LMN Caledonia Moun 60.88 307 IAmb IAmb 03 19 11.8
comp=Z,64nm,1.0s
LMN IAMs_20 IAMs_20 03 47 51.5
comp=Z,10μm,19.0s
MSNA Messina 60.95 170 iP P 03 19 00.7 +1.9
MSNA Messina 60.95 170 iP P 03 19 00.7 +1.9
ABPO Ambohimpanom 62.28 151 P P 03 19 08.2 +0.1
ABPO Ambohimpanom 62.28 151 P P 03 19 08.2 +0.1
ABPO pmax pmax
comp=Z,91nm,1.0s
ABPO MLR MLR
comp=Z,8μm,18.0s
PALK Pallekele 62.30 103 P P 03 19 08.6 +0.3
PALK Pallekele 62.30 103 P P 03 19 08.6 +0.3
PALK pmax pmax
comp=Z,114nm,0.9s
PALK MLR MLR
comp=Z,9μm,20.0s
D63A Stockholm 62.39 309 P P 03 19 04.8 -3.6
baz=63,SNR=8.6
D63A S S 03 27 34.5 0.0
baz=63
GGN Saint George 62.49 307 IAmb IAmb 03 19 15.8
comp=Z,36nm,1.1s
PQI Presque Isle 62.50 309 IAmb IAmb 03 19 26.2
comp=Z,54nm,1.0s
E64A Bridgewater 62.50 309 P P 03 19 06.4 -2.8
baz=62,SNR=15
E64A S S 03 27 34.8 -1.2
baz=62
CIT Chita 62.72 44 eP P 03 19 11.2 +0.6
CIT e 03 19 23.5
CIT e 03 19 52.5
CIT pmax pmax
comp=Z,170nm,1.9s
LKP Lekhapani 62.74 76 eP P 03 19 08.1 -2.9
E63A Oxbow 62.86 309 IAmb IAmb 03 19 25.6
comp=Z,61nm,1.1s
E63A Oxbow 62.86 309 P P 03 19 06.3 -5.3
baz=62,SNR=11
E63A S S 03 27 39.7 -0.8
baz=62
G65A Princeton 62.90 307 P P 03 19 08.7 -3.2
baz=62,SNR=6.3
G65A S S 03 27 41.5 +0.4
baz=62
D62A Allapoint, All 62.94 310 IAMs_20 IAMs_20 03 46 06.8
comp=Z,10μm,20.0s
D62A Allapoint, All 62.94 310 P P 03 19 07.2 -4.9
baz=62,SNR=19
D62A S S 03 27 42.2 +0.7
baz=62
H66A Whiting 62.94 307 P P 03 19 07.3 -4.8
baz=62,SNR=9.1
H66A S S 03 27 42.7 +1.2
baz=62
EMMW East Machias 63.07 307 IAmb IAmb 03 19 16.0
comp=Z,61nm,1.1s
EMMW IAMs_20 IAMs_20 03 49 17.4
comp=Z,9μm,18.0s
F64A Sherman 63.08 308 IAmb IAmb 03 19 27.1
comp=Z,54nm,1.1s
F64A IAMs_20 IAMs_20 03 49 46.7
comp=Z,11μm,18.0s
F64A Sherman 63.08 308 P P 03 19 09.0 -4.0
baz=62,SNR=9.5
F64A S S 03 27 45.1 +1.9
baz=62
LBTB Lobatse 63.12 175 iP P 03 19 14.3 +0.8
LBTB Lobatse 63.12 175 iP P 03 19 14.3 +0.8
D61A St Aubert, Com 63.56 310 P P 03 19 12.5 -3.7
baz=62,SNR=9.3
D61A S S 03 27 48.8 -0.4
baz=62
H65A Eastbrook 63.57 307 P P 03 19 12.3 -4.0
baz=62
H65A S S 03 27 50.9 +1.5
baz=62
F63A Nahmakanta, Br 63.62 309 IAmb IAmb 03 19 30.9
comp=Z,47nm,1.1s
F63A IAMs_20 IAMs_20 03 50 01.9
comp=Z,11μm,18.0s
F63A Nahmakanta, Br 63.62 309 P P 03 19 12.2 -4.5
baz=61,SNR=5.5
F63A S S 03 27 48.2 -1.8
baz=61
G64A Maxfield 63.62 308 P P 03 19 13.5 -3.2
baz=61,SNR=8.9
G64A S S 03 27 49.7 -0.3
baz=61
PKME Peaks-Kenny Pk 63.95 308 P P 03 19 18.9 +0.1
PKME IAmb IAmb 03 19 36.5
comp=Z,39nm,1.0s
PKME Peaks-Kenny Pk 63.95 308 P P 03 19 15.9 -2.9
baz=61
E61A Lac Etchemin 64.12 310 P P 03 19 15.4 -4.5
baz=61
E61A S S 03 27 58.5 +2.2
baz=61
D60A Saint Jean D'O 64.14 310 P P 03 19 15.6 -4.4
baz=61
D60A S S 03 27 58.6 +2.2
baz=61
H64A Troy 64.20 308 P P 03 19 15.2 -5.3
baz=61,SNR=5.9
H64A S S 03 27 59.6 +2.3
baz=61
G63A Kingsbury 64.22 308 P P 03 19 15.7 -4.9
baz=61
G63A S S 03 28 00.2 +2.6
baz=61
LZH Lanzhou 64.23 63 eP P 03 19 20.5 -0.5
LZH sP sP 03 19 29.8 +2.3
LZH PP PP 03 21 40.6 -1.4
LZH S S 03 27 53.1 -5.1
LZH sS sS 03 28 07.8 +1.7
LZH SS SS 03 32 04.6 -2.6
LZH pmax pmax
comp=Z,120nm,1.2s
LZH pmax pmax
comp=Z,2μm,6.0s
LZH LR LR
comp=Z,11μm,17.9s
LZH LR LR
comp=Z,10μm,16.8s
LZH LR LR
comp=Z,13μm,19.5s
WVL Waterville 64.52 308 IAmb IAmb 03 19 25.6
comp=Z,28nm,1.1s
D59A Saint-Raymond 64.64 311 P P 03 19 19.9 -3.4
baz=60
D59A S S 03 28 03.9 +1.3
baz=60
F61A St Evariste 64.64 310 P P 03 19 19.8 -3.6
baz=60,SNR=9.1
F61A S S 03 28 03.4 +0.7
baz=60
H63A New Sharon 64.70 308 P P 03 19 21.0 -2.7
baz=60,SNR=7.3
H63A S S 03 28 05.3 +1.9
baz=60
E60A Ste Agathe de 64.73 310 P P 03 19 19.0 -4.9
baz=60,SNR=7.8
E60A S S 03 28 05.5 +1.8
baz=60
G62A West of Eustis 64.74 309 IAMs_20 IAMs_20 03 50 34.4
comp=Z,8μm,18.0s
G62A West of Eustis 64.74 309 P P 03 19 19.1 -4.9
baz=60,SNR=7.5
G62A S S 03 28 05.5 +1.6
baz=60
I64A Boothbay 64.82 307 P P 03 19 21.3 -3.1
baz=60
I64A S S 03 28 05.6 +0.8
baz=60
VOI Vohitsoka 64.84 153 P P 03 19 26.4 +1.6
SNR=16
LATQ La Tuque 65.02 312 P P 03 19 22.6 -3.2
baz=60,SNR=5.5
YAK Yakutsk 65.07 29 P P 03 19 26.1 +0.2
comp=Z,45nm,0.4s,baz=191,slow=0.6,SNR=27
YAK LR LR 03 50 20.6
comp=Z,19μm,18.8s,baz=298,slow=38
YAK Yakutsk 65.07 29 P P 03 19 25.7 -0.1
YAK PP PP 03 21 48.0 -0.5
YAK Yakutsk 65.07 29 eP P 03 19 25.5 -0.3
YAK e*PP pP 03 19 30.1 -0.5
YAK ePPP PPP 03 23 27.3
YAK eS S 03 28 04.0 -3.4
YAK e*SS sS 03 28 20.3 +5.0
YAK e 03 29 12.1
YAK pmax pmax
comp=Z,55nm,0.7s
YAK pmax pmax
comp=N,25nm,1.3s
YAK pmax pmax
comp=E,35nm,1.1s
YAK smax smax
comp=N,1μm,5.0s
YAK smax smax
comp=E,1μm,5.1s
D58A Chemin du LacG 65.22 311 P P 03 19 24.3 -2.8
baz=60,SNR=11
D58A S S 03 28 08.7 -1.1
baz=60
F60A Warwick 65.23 310 P P 03 19 24.4 -2.7
baz=60,SNR=21
F60A S S 03 28 09.7 -0.1
baz=60
E59A St. Maurice 65.31 311 P P 03 19 22.4 -5.3
baz=60
G61A St-Isidore-de- 65.31 309 P P 03 19 24.1 -3.6
baz=60,SNR=16
G61A S S 03 28 13.8 +2.8
baz=60
I63A Otisfield 65.35 308 IAmb IAmb 03 19 32.3
comp=Z,32nm,0.9s
I63A Otisfield 65.35 308 P P 03 19 24.8 -3.2
baz=60,SNR=6.4
I63A S S 03 28 12.0 +0.7
baz=60
H62A Milan 65.44 308 IAmb IAmb 03 19 43.2
comp=Z,50nm,1.1s
H62A IAMs_20 IAMs_20 03 51 07.3
comp=Z,11μm,18.0s
H62A Milan 65.44 308 P P 03 19 25.8 -2.8
baz=60,SNR=9.7
H62A S S 03 28 15.1 +2.6
baz=60
F59A Saint Guilaume 65.79 310 P P 03 19 29.6 -1.2
baz=60,SNR=8.4
F59A S S 03 28 18.4 +1.7
baz=60
E58A La Victoria 65.82 311 P P 03 19 28.2 -2.7
baz=59,SNR=17
E58A S S 03 28 18.1 +0.9
baz=59
D57A Chemin Vers le 65.86 312 P P 03 19 30.0 -1.2
baz=59,SNR=5.7
D57A S S 03 28 19.8 +2.2
baz=59
G60A Masonville 65.90 309 P P 03 19 30.0 -1.5
baz=59,SNR=7.2
G60A S S 03 28 20.6 +2.4
baz=59
I62A Tamworth 65.91 308 IAmb IAmb 03 19 35.5
comp=Z,44nm,1.1s
I62A Tamworth 65.91 308 P P 03 19 28.8 -2.8
baz=60,SNR=6.6
I62A S S 03 28 22.1 +3.9
baz=60
H61A Lyndonville 65.94 309 P P 03 19 29.5 -2.3
baz=59,SNR=11
H61A S S 03 28 21.3 +2.7
baz=59
L65A Cape Cod Natio 66.03 305 P P 03 19 27.5 -4.8
baz=59
J63A Strafford 66.05 307 P P 03 19 30.6 -1.8
baz=59
J63A S S 03 28 24.1 +4.1
baz=59

LBNH Lisbon 66.09 308 IAMs_20 IAMs_20 03 51 26.8
comp=Z,9µm,18.0s
LBNH Lisbon 66.09 308 P P 03 19 31.1 -1.6
baz=59,SNR=8.1
BTO Baotou 66.17 56 eP P 03 19 31.3 -2.1
D56A ZEC Mazanza, M 66.35 312 S S 03 28 24.9 +1.4
baz=59
H60A Morristown 66.40 309 P P 03 19 30.7 -4.0
baz=59,SNR=6.4
H60A S S 03 28 26.8 +2.5
baz=59
F58A St-Lin Laurent 66.40 310 P P 03 19 29.9 -4.8
baz=59
I61A Oroboro, Fairl 66.42 308 P P 03 19 30.0 -4.9
baz=59
I61A S S 03 28 27.9 +3.4
baz=59
G59A Clarenceville 66.42 310 P P 03 19 30.9 -4.0
baz=59
J62A Henniker 66.53 307 P P 03 19 31.2 -4.4
baz=59,SNR=8.3
J62A S S 03 28 28.7 +2.8
baz=59
MATQ Matagami 66.57 316 P P 03 19 32.3 -3.4
baz=58,SNR=27
LSQQ Lebel-sur-Quev 66.57 315 P P 03 19 31.7 -4.0
baz=58
L64A Middleborough 66.58 306 P P 03 19 33.2 -2.7
baz=59,SNR=5.6
L64A S S 03 28 29.0 +2.6
baz=59
HNH Hanover 66.58 308 IAMs_20 IAMs_20 03 51 51.4
comp=Z,11µm,18.0s
K63A Dunstable 66.63 307 P P 03 19 33.9 -2.3
baz=59,SNR=7.4
K63A S S 03 28 29.3 +2.3
baz=59
M65A Busby, Falmout 66.65 305 P P 03 19 33.6 -2.7
baz=59
M65A S S 03 28 28.5 +1.2
baz=59
WES Weston 66.66 306 IAMs_20 IAMs_20 03 52 15.4
comp=Z,8µm,18.0s
BOSA Boshof 66.67 175 i P P 03 19 38.3 +1.7
BOSA Boshof 66.67 175 P P 03 19 37.6 +1.0
comp=Z,53nm,0.9s,baz=360,slow=6.4,SNR=44
BOSA LR LR 03 50 29.3
comp=Z,30µm,20.5s,baz=358,slow=38
BOSA Boshof 66.67 175 i P P 03 19 38.3 +1.7
HRV Adam Dziewonsk 66.75 306 P P 03 19 37.8 +0.9
HRV IAmb IAmb 03 19 40.5
comp=Z,52nm,1.1s
HRV Adam Dziewonsk 66.75 306 IAMs_20 IAMs_20 03 51 35.7
comp=Z,9µm,18.0s
HRV Adam Dziewonsk 66.75 306 P P 03 19 37.8 +0.9
HRV pmax pmax
comp=Z,52nm,1.1s
HRV MLR MLR
comp=Z,9µm,18.0s
HRV Adam Dziewonsk 66.75 306 P P 03 19 35.1 -1.9
baz=59
E56A St. Veronique 66.77 312 P P 03 19 34.8 -2.3
baz=58,SNR=22
E56A S S 03 28 28.7 -0.1
baz=58
D55A Sainte-Anne-du 66.78 312 P P 03 19 34.0 -3.2
baz=58,SNR=35
D55A S S 03 28 30.7 +1.9
baz=58
FRNY Flat Rock 66.80 309 IAmb IAmb 03 19 40.4
comp=Z,30nm,1.1s
FRNY IAMs_20 IAMs_20 03 49 18.0
comp=Z,10µm,18.0s
CD2 Chengdu 66.80 68⇑ iP P 03 19 36.7 -0.9
CD2 sP sP 03 19 45.6 +1.5
CD2 PP PP 03 22 03.7 -0.8
CD2 S S 03 28 23.4 -6.2
CD2 ScS SKSac 03 29 32.6 -1.7
CD2 pmax pmax
comp=Z,50nm,1.3s
CD2 pmax pmax
comp=Z,2µm,5.0s
CD2 LR LR
comp=Z,15µm,30.8s
CD2 LR LR
comp=Z,8µm,22.9s
CD2 LR LR
comp=Z,9µm,25.4s
G58A Ormstown 66.92 310 P P 03 19 36.5 -1.5
baz=58,SNR=7.9
G58A S S 03 28 33.6 +3.2
baz=58
J61A Chester 66.94 308 P P 03 19 35.4 -2.7
baz=59,SNR=6.9
J61A S S 03 28 35.2 +4.5
baz=59
F57A Harrington 66.95 311 P P 03 19 34.7 -3.6
baz=58
F57A S S 03 28 32.3 +1.4
baz=58
H59A Cadyville 66.96 309 P P 03 19 35.6 -2.8
baz=58,SNR=18
H59A S S 03 28 31.9 +0.8
baz=58
M64A Tiverton 67.02 305 P P 03 19 36.0 -2.7
baz=59
M64A S S 03 28 34.3 +2.6
baz=59
HHC Hu-ho-hao-te 67.05 55 eP P 03 19 44.4 +5.3
HHC PP PP 03 22 13.7 +7.3
HHC S S 03 28 36.0 +3.6
HHC Hu-ho-hao-te 67.05 55 SS SS 03 32 56.3 +5.7
HHC Hu-ho-hao-te 67.05 55 eP P 03 19 39.8 +0.7
HHC PP PP 03 22 08.8 +2.4
HHC S S 03 28 32.6 +0.2
HHC SS SS 03 32 51.8 +1.2
HHC pmax pmax
comp=Z,32nm,1.1s
HHC pmax pmax
comp=Z,740nm,6.9s
HHC LR LR
comp=Z,6µm,14.2s
HHC LR LR
comp=Z,7µm,13.7s
HHC LR LR
comp=Z,5µm,20.6s
K62A Royalston 67.09 307 IAmb IAmb 03 19 43.3
comp=Z,64nm,1.1s
K62A IAMs_20 IAMs_20 03 49 54.8
comp=Z,8µm,18.0s
K62A Royalston 67.09 307 P P 03 19 37.7 -1.5
baz=58,SNR=8.5
K62A S S 03 28 35.7 +3.1
baz=58
L63A North Scituate 67.11 306 P P 03 19 37.4 -1.9
baz=59,SNR=7.4
L63A S S 03 28 36.9 +4.0
baz=59
I60A Shoreham 67.13 308 P P 03 19 37.9 -1.5
baz=58,SNR=6.7
I60A S S 03 28 37.0 +3.9
baz=58
VLDQ Val d'Or 67.34 314 IAmb IAmb 03 19 44.7
comp=Z,49nm,1.1s
BBSR BB Station 67.35 294 P P 03 19 40.4 -0.5
BBSR BB Station 67.35 294 IAMs_20 IAMs_20 03 48 28.4
comp=Z,8µm,19.0s
QUA2 Belchertown 67.36 307 IAmb IAmb 03 19 44.9
comp=Z,51nm,1.0s
H58A Gabriels 67.38 309 P P 03 19 39.5 -1.5
baz=58,SNR=11
H58A S S 03 28 38.0 +1.9
baz=58
D54A Lac Fusel, La 67.40 313 P P 03 19 38.7 -2.3
baz=58,SNR=33
D54A S S 03 28 36.6 +0.4
baz=58
E55A Montcerf-Lytto 67.42 312 P P 03 19 38.9 -2.3
baz=58,SNR=14
E55A S S 03 28 38.8 +2.3
baz=58
L61B Northampton 67.48 307 P P 03 19 38.9 -2.7
baz=58,SNR=8.1
L61B S S 03 28 40.2 +2.9
baz=58
G57A Newington 67.50 310 P P 03 19 39.4 -2.3
baz=58,SNR=8.0
G57A S S 03 28 40.3 +2.8
baz=58
LONY Lake Ozonia 67.52 310 IAmb IAmb 03 19 45.3
comp=Z,32nm,1.0s
LONY IAMs_20 IAMs_20 03 48 47.0
comp=Z,9µm,20.0s
LONY Lake Ozonia 67.52 310 P P 03 19 40.8 -1.1
baz=58,SNR=12
I59A Olmsteadville 67.52 309 P P 03 19 40.0 -1.9
baz=58,SNR=10
I59A S S 03 28 40.9 +3.1
baz=58
J60A Lant Hill Farm 67.53 308 P P 03 19 40.0 -1.9
baz=58
J60A S S 03 28 41.0 +3.1
baz=58
ACCN Adirondack Com 67.61 308 IAmb IAmb 03 19 46.4
comp=Z,52nm,1.1s
M63A Gales Ferry 67.63 306 P P 03 19 40.7 -1.9
baz=58,SNR=10
M63A S S 03 28 42.7 +3.6
baz=58
L62A Suffield 67.69 306 P P 03 19 39.8 -3.1
baz=58
L62A S S 03 28 44.0 +4.2
baz=58
K61A Williamstown 67.74 307 P P 03 19 41.4 -1.9
baz=58,SNR=12
K61A S S 03 28 44.8 +4.4
baz=58
RER Riviere de l'E 67.77 144 IAMs_20 IAMs_20 03 48 45.0
comp=Z,10µm,20.0s
F55A Otter Lake 67.93 311 P P 03 19 42.9 -1.5
baz=58,SNR=8.4
F55A S S 03 28 45.0 +2.4
baz=58
TRY Troy 67.95 308 IAMs_20 IAMs_20 03 52 34.6
comp=Z,7µm,18.0s
J59A Piesco 68.08 309 IAMs_20 IAMs_20 03 52 57.0
comp=Z,9µm,18.0s
J59A Piesco 68.08 309 P P 03 19 44.5 -0.9
baz=58,SNR=9.3
J59A S S 03 28 49.0 +4.4
baz=58
H57A Richville 68.09 310 P P 03 19 43.5 -1.9
baz=58,SNR=8.0
H57A S S 03 28 47.5 +3.0
baz=58
E54A Lac Daplat, Po 68.09 312 P P 03 19 43.5 -1.9
baz=57
E54A S S 03 28 46.0 +1.4
baz=57
M62A Hamden 68.15 306 P P 03 19 43.6 -2.3
baz=58,SNR=9.3
M62A S S 03 28 48.9 +3.6
baz=58
K60A Five Rivers En 68.15 308 P P 03 19 43.6 -2.3
baz=58,SNR=8.1
K60A S S 03 28 49.9 +4.6
baz=58
RCBR Riachuelo 68.16 243 eP P 03 19 48.5 +2.2
RCBR Riachuelo 68.16 243 P P 03 19 45.2 -1.1
RCBR IAmb IAmb 03 19 51.0
comp=Z,48nm,1.1s
RCBR PP PP 03 22 12.9 -3.9
L61A Hillsdale 1, H 68.17 307 P P 03 19 44.5 -1.5
baz=58,SNR=7.7
L61A S S 03 28 50.0 +4.4
baz=58
YLE Yale 68.25 306 IAMs_20 IAMs_20 03 52 21.4
comp=Z,9µm,19.0s
I58A Old Forge 68.25 309 P P 03 19 44.6 -2.0
baz=58,SNR=11
I58A S S 03 28 50.0 +3.4
baz=58
DGPR DIGLIPUR 68.26 90 eP P 03 19 45.7 -1.2
DGPR IAmb IAmb 03 19 53.2
comp=Z,4µm,3.1s
KSCT Kent School, K 68.37 307 IAmb IAmb 03 19 56.9
comp=Z,28nm,1.0s
E53A Dumoine, Ponti 68.40 313 P P 03 19 45.0 -2.3
baz=57
E53A S S 03 28 48.4 +0.2
baz=57
G55A Calabogie 68.46 311 P P 03 19 46.3 -1.5
baz=57
G55A S S 03 28 51.8 +2.9
baz=57
I57A Carthage 68.53 309 P P 03 19 46.8 -1.5
baz=57,SNR=7.8
I57A S S 03 28 51.8 +1.9
baz=57
H56A Elgin 68.54 310 P P 03 19 47.2 -1.0
baz=57,SNR=6.5
H56A S S 03 28 53.3 +3.4
baz=57
WSPT Westport, CT 68.57 306 IAmb IAmb 03 19 53.4
comp=Z,34nm,1.0s
WSPT IAMs_20 IAMs_20 03 52 41.1
comp=Z,8µm,18.0s
J58A Remsen 68.62 309 IAmb IAmb 03 19 52.6
comp=Z,38nm,1.1s
J58A IAMs_20 IAMs_20 03 53 13.1
comp=Z,9µm,18.0s
J58A Remsen 68.62 309 P P 03 19 47.7 -1.1
baz=57,SNR=9.7
J58A S S 03 28 55.3 +4.4
baz=57
K59A Cooperstown 68.67 308 P P 03 19 47.6 -1.5
baz=57,SNR=7.0
K59A S S 03 28 54.6 +3.1
baz=57
L60A Shokan 68.70 307 P P 03 19 47.8 -1.5
baz=57
L60A S S 03 28 55.4 +3.4
baz=57
M61A Granite Spring 68.78 306 P P 03 19 47.9 -1.9
baz=57,SNR=9.0
M61A S S 03 28 56.9 +4.0
baz=57
N62A Caumsett State 68.79 306 P P 03 19 48.4 -1.4
baz=57
N62A S S 03 28 54.0 +1.0
baz=57
XAN Xi'an 68.85 63 P P 03 19 49.7 -0.7
XAN PP PP 03 22 21.2 -1.0
XAN S S 03 28 46.5 -7.5
XAN pmax pmax
comp=Z,63nm,1.3s
XAN pmax pmax
comp=Z,2µm,5.9s
XAN LR LR
comp=Z,12µm,17.8s
XAN LR LR
comp=Z,4µm,14.1s
XAN LR LR
comp=Z,8µm,19.1s
XAN Xi'an 68.85 63 IAMs_20 IAMs_20 03 52 29.8
comp=Z,9µm,19.0s
ZEA Zeya 68.86 38 eP P 03 19 50.8 +0.7
ZEA e 03 22 23.0
ZEA eS S 03 28 53.0 -0.4
ZEA eSSS SSS 03 36 22.0
ZEA pmax pmax
comp=E,500nm,5.0s
ZEA pmax pmax
comp=Z,2µm,5.0s
ZEA pmax pmax
comp=E,120nm,1.6s
ZEA pmax pmax
comp=Z,160nm,1.4s
ZEA pmax pmax
comp=Z,900nm,7.0s
ZEA smax smax
comp=N,1µm,11.0s
ZEA smax smax
comp=E,4µm,11.0s
ZEA MLR MLR
comp=Z,25µm,15.0s
ZEA MLR MLR
comp=E,15µm,16.0s
ZEA MLR MLR
comp=N,13µm,14.0s
ALGO Algonquin Park 68.86 312 P P 03 19 49.2 -1.0
baz=56,SNR=19
NBPA Parau_RN 68.96 244 eP P 03 19 53.9 +2.6
D51A Lot 18 Range I 68.99 314 P P 03 19 49.5 -1.6
baz=56,SNR=22
D51A S S 03 28 57.1 +1.9
baz=56
PBA Port Blair 69.01 92 eP P 03 19 48.6 -3.0
PBA Port Blair 69.01 92 IAMs_20 IAMs_20 03 52 09.9
comp=Z,12µm,22.0s
PBA Port Blair 69.01 92 P P 03 19 53.9 +2.3
SNR=8.6
E52A Mattawa 69.03 313 P P 03 19 50.2 -1.1
baz=56,SNR=29
E52A S S 03 28 56.3 +0.7
baz=56
PAL Palisades 69.03 306 P P 03 19 50.3 -1.0
baz=57,SNR=12
PAL S S 03 28 58.9 +3.1
baz=57
L59A Walton 69.10 308 IAmb IAmb 03 19 55.8
comp=Z,61nm,1.1s
L59A IAMs_20 IAMs_20 03 53 10.0
comp=Z,8µm,18.0s
L59A Walton 69.10 308 P P 03 19 50.3 -1.5
baz=57,SNR=13
L59A S S 03 28 58.4 +1.6
baz=57
H55A Tweed 69.12 311 P P 03 19 50.0 -1.9
baz=57,SNR=17
H55A S S 03 28 58.9 +2.1
baz=57
KMI Kunming 69.15 74 IAmb IAmb 03 19 57.9
comp=Z,25nm,0.9s
KMI Kunming 69.15 74 IAMs_20 IAMs_20 03 54 34.2
comp=Z,9µm,22.0s
K58A Earlville 69.17 308 IAmb IAmb 03 19 55.9
comp=Z,64nm,1.1s
K58A IAMs_20 IAMs_20 03 53 30.6
comp=Z,8µm,20.0s
K58A Earlville 69.17 308 P P 03 19 50.7 -1.5
baz=57,SNR=12
K58A S S 03 29 01.7 +4.3
baz=57
G54A Lake Saint Pet 69.19 312 P P 03 19 51.4 -0.9
baz=56,SNR=21
G54A S S 03 29 00.8 +3.2
baz=56
M60A Port Jervis 69.31 307 P P 03 19 51.7 -1.5
baz=57,SNR=5.9
M60A S S 03 29 01.7 +2.5
baz=57
MHMT Maesarieng 69.31 83 P P 03 19 53.4 -0.1
N61A South Mountain 69.42 306 P P 03 19 52.3 -1.4
baz=57
N61A S S 03 29 04.3 +4.0
baz=57
C36M Paulatuk 69.57 347 IAmb IAmb 03 19 58.7
comp=Z,50nm,1.0s
C36M IAMs_20 IAMs_20 03 52 13.2
comp=Z,8µm,19.0s
C36M Paulatuk 69.57 347 P P 03 19 51.8 -2.4
baz=29,SNR=48
C36M S S 03 29 03.5 +2.2
baz=29
I55A Frankford 69.60 311 P P 03 19 53.6 -1.3
baz=56,SNR=5.1
I55A S S 03 29 05.4 +2.9
baz=56
BRNJ Basking Ridge 69.62 306 IAMs_20 IAMs_20 03 53 45.9
comp=Z,8µm,18.0s
J56A Wolcott 69.62 309 IAMs_20 IAMs_20 03 50 44.8
comp=Z,9µm,18.0s
J56A Wolcott 69.62 309 P P 03 19 54.8 -0.2
baz=56
J56A S S 03 29 06.1 +3.3
baz=56
G53A Haliburton 69.65 312 P P 03 19 53.7 -1.5
baz=56,SNR=8.2
G53A S S 03 29 05.2 +2.1
baz=56
BINY Binghamton 69.68 308 IAmb IAmb 03 19 59.1
comp=Z,57nm,1.1s
BINY IAMs_20 IAMs_20 03 52 44.4
comp=Z,7µm,18.0s
BINY Binghamton 69.68 308 P P 03 19 53.9 -1.5
baz=56,SNR=13
L58A Harry Jones Me 69.68 308 P P 03 19 53.9 -1.5
baz=56,SNR=11
L58A S S 03 29 08.0 +4.4
baz=56
M59A Waymart 69.70 307 P P 03 19 53.6 -1.9
baz=56,SNR=8.3
M59A S S 03 29 07.1 +3.3
baz=56
K57A Scipio Center 69.72 309 P P 03 19 53.7 -1.9
baz=56
K57A S S 03 29 06.2 +2.2
baz=56
CHTO Chiang Mai 69.74 82 P P 03 19 55.2 -0.9
CHTO IAmb IAmb 03 19 58.9
comp=Z,56nm,0.8s
CHTO PP PP 03 22 21.0 -9.3
CHTO Chiang Mai 69.74 82 P P 03 19 55.2 -0.9
CHTO pmax pmax
comp=Z,56nm,0.9s
CM33 Chiang Mai Arr 69.74 82 P P 03 19 55.7 -0.4
CMMT Chiang Mai 69.75 82 P P 03 19 56.3 +0.1
CM32 Chiang Mai Arr 69.76 82 P P 03 19 56.1 -0.1
N60A Cedar Hill Far 69.86 306 P P 03 19 54.2 -2.3
baz=56,SNR=18
N60A S S 03 29 08.6 +2.9
baz=56
CM34 Chiang Mai Arr 69.88 82 P P 03 19 56.8 -0.1
CM15 Chiang Mai Arr 69.93 82 P P 03 19 57.1 -0.2
CM13 Chiang Mai Arr 69.94 82 P P 03 19 57.2 -0.1
H53A Bobcaygeon 69.94 311 P P 03 19 55.2 -1.7
baz=56,SNR=13
H53A S S 03 29 09.0 +2.5
baz=56
O61A Allentown 69.94 306 P P 03 19 55.6 -1.4
baz=56,SNR=5.8
O61A S S 03 29 09.6 +3.0
baz=56
CM31 Chiang Mai Arr 69.94 82 IAmb IAmb 03 20 10.1
comp=Z,50nm,0.8s
CM31 Chiang Mai Arr 69.94 82 P P 03 19 57.4 0.0
SNR=19
CM31 P P 03 19 57.4 0.0
SNR=19
CM31 Chiang Mai Arr 69.94 82 P P 03 19 57.2 -0.1
CMAR Chiang Mai Arr 69.94 82 P P 03 19 57.1 -0.3
comp=Z,31nm,0.7s,baz=304,slow=7.9,SNR=104
CMAR S S 03 29 05.8 -1.5
comp=Z,0.5nm,0.3s,baz=274,slow=12,SNR=2.7
CMAR PKP2bc 03 48 06.6
comp=Z,0.7nm,0.3s,baz=132,slow=2.1,SNR=4.6
CMAR LR LR 03 58 18.9
comp=Z,5µm,18.4s,baz=300,slow=42
F51A Arnstein 69.95 313 P P 03 19 55.1 -1.9
baz=56,SNR=18
F51A S S 03 29 09.5 +3.0
baz=56
CM02 Chiang Mai Arr 69.96 82 P P 03 19 56.8 -0.6
CM01 Chiang Mai Arr 69.98 82 P P 03 19 57.6 0.0
CM05 Chiang Mai Arr 69.98 82 P P 03 19 57.6 0.0
CM35 Chiang Mai Arr 69.98 82 P P 03 19 56.7 -0.9
CM09 Chiang Mai Arr 69.99 82 P P 03 19 57.5 -0.2
D49A Beulah Townshi 70.00 315 P P 03 19 56.6 -0.7
baz=55,SNR=22
D49A S S 03 29 10.3 +3.2
baz=55
CM04 Chiang Mai Arr 70.00 82 P P 03 19 57.2 -0.5
CM36 Chiang Mai Arr 70.03 82 P P 03 19 57.7 -0.2
SADO Sadowa 70.16 312 LR LR 03 51 07.0
comp=Z,6µm,18.4s,baz=36,slow=36
SADO Sadowa 70.16 312 IAmb IAmb 03 20 01.8
comp=Z,68nm,1.1s
SADO IAMs_20 IAMs_20 03 51 13.7
comp=Z,10µm,18.0s
J55A Hilton 70.21 310 IAMs_20 IAMs_20 03 51 01.3
comp=Z,8µm,21.0s
J55A Hilton 70.21 310 P P 03 19 56.7 -1.9
baz=56
K56A Middlesex 70.23 309 P P 03 19 57.3 -1.5
baz=56,SNR=11
K56A S S 03 29 12.8 +2.8
baz=56
N59A State Game Lan 70.26 307 P P 03 19 56.2 -2.8
baz=56,SNR=20
N59A S S 03 29 15.0 +4.6
baz=56

SUR Sutherland 70.28 180 P P 03 19 59.7 +0.5
D48A Paudash Townsh 70.31 315 P P 03 19 58.2 -1.0
baz=55,SNR=14
D48A S S 03 29 13.7 +2.9
baz=55
P61A Hammonton 70.32 305 P P 03 19 56.7 -2.7
baz=56
P61A S S 03 29 14.4 +3.4
baz=56
L57A Andrews Acres 70.33 308 P P 03 19 57.9 -1.5
baz=56,SNR=13
L57A S S 03 29 13.4 +2.2
baz=56
O60A Telford 70.36 306 P P 03 19 58.1 -1.4
baz=56,SNR=17
O60A S S 03 29 15.1 +3.7
baz=56
M58A Price's Panora 70.44 308 P P 03 19 59.0 -1.1
baz=56,SNR=13
M58A S S 03 29 15.1 +2.6
baz=56
BJI Beijing 70.45 54⇑eP P 03 19 59.8 -0.3
BJI sP sP 03 20 04.6 -2.0
BJI S S 03 29 12.0 -0.5
BJI SKS SKSac 03 30 00.4 -1.0
BJI pmax pmax
comp=Z,52nm,2.4s
BJI LR LR
comp=Z,14μm,14.3s
BJI LR LR
comp=Z,11μm,15.0s
BJI LR LR
comp=Z,7μm,31.9s
MMNY Mt. Morris Dam 70.57 309 IAMs_20 IAMs_20 03 51 13.7
comp=Z,11μm,19.0s
PSUB Penn St. - Bra 70.61 306 IAmb IAmb 03 20 16.1
comp=Z,42nm,1.0s
PSUB IAMs_20 IAMs_20 03 52 58.9
comp=Z,7μm,18.0s
MEDO Medina 70.65 310 IAMs_20 IAMs_20 03 52 14.0
comp=Z,9μm,18.0s
H52A Wyevale 70.67 312 P P 03 19 59.1 -2.3
baz=55,SNR=6.6
K55A Perry 70.67 309 P P 03 20 00.4 -1.1
baz=56,SNR=10.0
K55A S S 03 29 18.0 +2.9
baz=56
L56A Greenwood 70.69 309 IAmb IAmb 03 20 05.3
comp=Z,60nm,0.9s
L56A IAMs_20 IAMs_20 03 50 47.0
comp=Z,8μm,20.0s
L56A Greenwood 70.69 309 P P 03 19 58.8 -2.8
baz=56,SNR=15
L56A S S 03 29 18.6 +3.2
baz=56
J54A Appleton 70.70 310 IAMs_20 IAMs_20 03 54 06.3
comp=Z,7μm,18.0s
J54A Appleton 70.70 310 P P 03 19 59.8 -1.9
baz=55,SNR=5.6
J54A S S 03 29 19.7 +4.3
baz=55
P60A Greenville 70.79 306 IAmb IAmb 03 20 05.4
comp=Z,41nm,1.1s
P60A Greenville 70.79 306 P P 03 19 59.9 -2.3
baz=56,SNR=6.5
P60A S S 03 29 19.8 +3.3
baz=56
O59A Robesonia 70.86 306 P P 03 20 01.2 -1.5
baz=56,SNR=11
O59A S S 03 29 20.2 +2.8
baz=56
M57A Sunshine Farm, 70.87 308 IAmb IAmb 03 20 06.5
comp=Z,71nm,1.1s
M57A IAMs_20 IAMs_20 03 54 14.9
comp=Z,8μm,19.0s
M57A Sunshine Farm, 70.87 308 P P 03 19 60.0 -2.7
baz=56,SNR=18
M57A S S 03 29 21.7 +4.3
baz=56
N58A Sunbury 70.89 307 IAmb IAmb 03 20 05.8
comp=Z,32nm,0.8s
N58A Sunbury 70.89 307 P P 03 20 01.8 -1.0
baz=56,SNR=11
N58A S S 03 29 20.9 +3.2
baz=56
E48A Lockeyer 70.91 314 P P 03 20 01.0 -1.9
baz=54,SNR=24
E48A S S 03 29 20.9 +3.1
baz=54
PHRA Phrae 70.92 81 P P 03 20 03.3 0.0
BILL Bilibino 70.96 13 P P 03 20 02.9 +0.1
BILL Bilibino 70.96 13c iP P 03 20 02.4 -0.3
BILL i*PP pP 03 20 07.0 -0.5
BILL e*SP sP 03 20 11.8 +2.5
BILL i 03 20 18.5
BILL 03 22 43.0
BILL ePPP PPP 03 24 19.4
BILL iS S 03 29 18.2 +0.6
BILL pmax pmax
comp=Z,72nm,1.1s
BILL MLR MLR
comp=Z,15μm,20.0s
I53A Kortright Cn E 70.96 311 P P 03 20 01.3 -1.9
baz=55,SNR=9.5
Q61A Milford 71.11 305 S S 03 29 25.2 +5.0
baz=56
K54A Basiliko Farm, 71.11 310 P P 03 20 01.8 -2.3
baz=55,SNR=11
K54A S S 03 29 22.2 +1.9
baz=55
MVL Millersville 71.14 306 IAmb IAmb 03 20 12.7
comp=Z,38nm,1.2s
MVL IAMs_20 IAMs_20 03 54 40.0
comp=Z,8μm,18.0s
UMPA Umpang Tak 71.17 84 P P 03 20 05.6 +0.7
WVNY West Valley, N 71.17 309 IAMs_20 IAMs_20 03 51 31.8
comp=Z,12μm,20.0s
L55A Hinsdale 71.20 309 P P 03 20 03.2 -1.5
baz=55,SNR=13
L55A S S 03 29 24.2 +2.9
baz=55
F49A Sandfield 71.26 314 P P 03 20 04.4 -0.6
baz=54,SNR=33
F49A S S 03 29 23.5 +1.7
baz=54
ENH Enshi 71.30 66 IAMs_20 IAMs_20 03 56 28.9
comp=Z,10μm,18.0s
GYA Guiyang 71.36 71⇑iP P 03 20 04.8 -1.2
GYA S S 03 29 15.7 -8.1
GYA SKS SKSac 03 30 02.9 -6.1
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,1μm,6.4s
GYA LR LR
comp=Z,4μm,18.5s
GYA LR LR
comp=Z,5μm,20.7s
GYA LR LR
comp=Z,5μm,20.3s
Q60A Greensboro 71.38 305 IAMs_20 IAMs_20 03 54 36.3
comp=Z,7μm,18.0s
Q60A Greensboro 71.38 305 P P 03 20 04.3 -1.4
baz=56,SNR=8.5
Q60A S S 03 29 26.8 +3.5
baz=56
P59A Jarrettsville 71.41 306 P P 03 20 03.7 -2.3
baz=56
P59A S S 03 29 27.5 +3.8
baz=56
R61A Willards 71.43 304 IAMs_20 IAMs_20 03 52 17.7
comp=Z,9μm,20.0s
R61A Willards 71.43 304 P P 03 20 03.0 -3.1
baz=56
R61A S S 03 29 25.7 +1.7
baz=56
O58A Lewisberry 71.43 307 P P 03 20 04.2 -1.9
baz=55
O58A S S 03 29 25.7 +1.7
baz=55
M56A Emporium 71.44 308 IAMs_20 IAMs_20 03 54 59.9
comp=Z,9μm,18.0s
M56A Emporium 71.44 308 P P 03 20 05.1 -1.1
baz=55,SNR=26
M56A S S 03 29 25.7 +1.6
baz=55
N57A Milroy 71.47 307 P P 03 20 05.3 -1.0
baz=55,SNR=24
N57A S S 03 29 26.9 +2.5
baz=55
E47A Iron Bridge 71.55 315 P P 03 20 05.7 -1.0
baz=54,SNR=33
E47A S S 03 29 27.7 +2.6
baz=54
F48A Evansville 71.55 314 P P 03 20 05.3 -1.5
baz=54,SNR=16
F48A S S 03 29 24.3 -0.9
baz=54
UTTA Uttaradit 71.61 82 P P 03 20 07.1 -0.4
L54A Sinclairville 71.71 310 P P 03 20 06.3 -1.5
baz=55,SNR=17
L54A S S 03 29 28.8 +1.6
baz=55
D46A Sault St. Mari 71.71 316 P P 03 20 06.6 -1.1
baz=53
D46A S S 03 29 29.2 +2.2
baz=53
SSPA Standing Stone 71.74 308 P P 03 20 08.6 +0.6
SSPA Standing Stone 71.74 308 IAMs_20 IAMs_20 03 50 25.9
comp=Z,7μm,20.0s
SSPA Standing Stone 71.74 308 P P 03 20 06.1 -1.9
baz=55
M55A Ridgway 71.81 309 IAMs_20 IAMs_20 03 52 04.6
comp=Z,8μm,19.0s
M55A Ridgway 71.81 309 P P 03 20 08.2 -0.2
baz=55,SNR=30
M55A S S 03 29 30.9 +2.5
baz=55
I51A Listowel 71.82 312 P P 03 20 08.2 -0.2
baz=54,SNR=20
I51A S S 03 29 30.4 +2.1
baz=54
PHIT Phitsanulok 71.82 82 P P 03 20 08.8 +0.1
J52A Paris 71.82 311 P P 03 20 08.4 0.0
baz=54,SNR=12
J52A S S 03 29 31.4 +3.0
baz=54
O57A Amberson 71.83 307 P P 03 20 07.5 -1.0
baz=55,SNR=13
O57A S S 03 29 31.1 +2.4
baz=55
N56A West Decatur 71.84 308 P P 03 20 07.9 -0.7
baz=55,SNR=24
N56A S S 03 29 30.6 +1.9
baz=55
Q59A Harwood 71.97 305 P P 03 20 08.8 -0.6
baz=55
Q59A S S 03 29 32.0 +1.7
baz=55
INK Inuvik 71.98 350 P P 03 20 09.6 +0.8
comp=Z,20nm,1.0s,baz=14,slow=7.5,SNR=21
INK LR LR 03 53 28.7
comp=Z,6μm,20.3s,baz=27,slow=37
S61A Accomac 72.01 304 IAMs_20 IAMs_20 03 54 28.2
comp=Z,9μm,19.0s
S61A Accomac 72.01 304 P P 03 20 08.6 -1.0
baz=55
S61A S S 03 29 35.7 +5.0
baz=55
P58A Pank, Wackersv 72.03 306 P P 03 20 08.3 -1.4
baz=55,SNR=25
P58A S S 03 29 33.8 +2.9
baz=55
SEY Seymchan 72.09 21 P P 03 20 11.2 +1.5
comp=Z,22nm,0.7s,baz=304,slow=5.0,SNR=35
SEY LR LR 03 53 37.5
comp=Z,2μm,19.1s,baz=325,slow=37
SEY Seymchan 72.09 21c iP P 03 20 10.7 +1.1
SLVN Son La 72.15 77 IAmb IAmb 03 20 16.6
comp=Z,40nm,1.0s
E46A Sault Ste Mari 72.17 315 IAmb IAmb 03 20 13.6
comp=Z,47nm,0.9s
E46A IAMs_20 IAMs_20 03 54 47.0
comp=Z,8μm,19.0s
ERPA Erie 72.18 310 IAMs_20 IAMs_20 03 52 22.4
comp=Z,8μm,18.0s
ERPA Erie 72.18 310 P P 03 20 09.1 -1.5
baz=54,SNR=52
K52A Tillsonburg 72.23 311 P P 03 20 08.6 -2.3
baz=54,SNR=7.9
K52A S S 03 29 35.4 +2.3
baz=54
R60A Leonardtown, M 72.27 305 P P 03 20 08.5 -2.7
baz=55
R60A S S 03 29 37.2 +3.6
baz=55
M54A Oil Creek Stat 72.34 309 IAMs_20 IAMs_20 03 52 18.6
comp=Z,10μm,20.0s
M54A Oil Creek Stat 72.34 309 P P 03 20 10.1 -1.5
baz=54,SNR=30
M54A S S 03 29 37.1 +2.6
baz=54
N55A Marion Center 72.34 308 P P 03 20 11.4 -0.2
baz=54,SNR=41
N55A S S 03 29 38.1 +3.6
baz=54
O56A Blue Knob Stat 72.38 308 IAmb IAmb 03 20 17.0
comp=Z,50nm,0.9s
O56A IAMs_20 IAMs_20 03 54 25.8
comp=Z,8μm,18.0s
O56A Blue Knob Stat 72.38 308 P P 03 20 11.6 -0.3
baz=55,SNR=30
O56A S S 03 29 36.8 +1.8
baz=55
L53A Girard 72.44 310 P P 03 20 10.7 -1.5
baz=54,SNR=29
L53A S S 03 29 39.2 +3.6
baz=54
SRDT SRDT 72.45 85 P P 03 20 12.5 0.0
P57A Homestead Farm 72.48 307 IAmb IAmb 03 20 27.3
comp=Z,62nm,1.1s
P57A IAMs_20 IAMs_20 03 53 59.6
comp=Z,9μm,18.0s
P57A Homestead Farm 72.48 307 P P 03 20 12.3 -0.2
baz=55,SNR=22
P57A S S 03 29 39.5 +3.4
baz=55
ALLY Alegheny Colle 72.55 309 IAmb IAmb 03 20 16.1
comp=Z,61nm,1.1s
ALLY IAMs_20 IAMs_20 03 52 24.2
comp=Z,12μm,20.0s
Q58A Fox Den Farm, 72.59 306 P P 03 20 12.5 -0.6
baz=55,SNR=22
Q58A S S 03 29 40.1 +2.8
baz=55
PBKT Sadao Pong 72.61 82 IAmb IAmb 03 20 26.1
comp=Z,32nm,0.8s
PBKT Sadao Pong 72.61 82 P P 03 20 13.3 -0.1
H48A Harrisville 72.62 313 IAmb IAmb 03 20 16.4
comp=Z,49nm,0.8s
H48A IAMs_20 IAMs_20 03 49 51.9
comp=Z,11μm,22.0s
H48A Harrisville 72.62 313 P P 03 20 11.3 -1.9
baz=53,SNR=13
H48A S S 03 29 40.7 +3.2
baz=53
S60A Water View 72.64 304 P P 03 20 12.4 -1.0
baz=55,SNR=6.3
S60A S S 03 29 39.9 +2.1
baz=55
G47A Hillman 72.64 314 P P 03 20 12.2 -1.0
baz=53,SNR=29
G47A S S 03 29 41.3 +3.6
baz=53
R59A King George, V 72.65 305 P P 03 20 12.0 -1.4
baz=55,SNR=12
R59A S S 03 29 36.5 -1.5
baz=55
CMBY CAMPBELL BAY 72.73 95 eP P 03 20 12.3 -1.9
CMBY IAmb IAmb 03 20 20.4
comp=Z,167nm,0.9s
K51A Iona Station 72.74 311 P P 03 20 12.4 -1.5
baz=54,SNR=7.1
K51A S S 03 29 41.9 +3.0
baz=54
I49A Point Hope 72.79 313 IAmb IAmb 03 20 17.6
comp=Z,70nm,1.1s
I49A Point Hope 72.79 313 P P 03 20 13.1 -1.0
baz=53,SNR=7.0
I49A S S 03 29 40.2 +0.8
baz=53
CBN Corbin Frederi 72.81 305 IAmb IAmb 03 20 19.4
comp=Z,55nm,0.8s
CBN Corbin Frederi 72.81 305 P P 03 20 13.8 -0.6
baz=55,SNR=8.0
N54A Moraine State 72.86 309 IAMs_20 IAMs_20 03 52 36.3
comp=Z,9μm,19.0s
N54A Moraine State 72.86 309 P P 03 20 13.6 -1.1
baz=54,SNR=25
N54A S S 03 29 41.7 +1.3
baz=54
O55A Ligonier 72.87 308 P P 03 20 13.7 -1.1
baz=54,SNR=33
O55A S S 03 29 43.3 +2.7
baz=54
E44A Grand Marais A 72.91 316 IAMs_20 IAMs_20 03 54 47.4
comp=Z,7μm,18.0s
E44A Grand Marais A 72.91 316 P P 03 20 14.6 -0.2
baz=52,SNR=21
E44A S SKiKP 03 29 44.8 -2.6
baz=52
P56A Dayton Farm, R 72.99 307 P P 03 20 14.4 -1.0
baz=54,SNR=21
P56A S S 03 29 43.5 +1.6
baz=54
M53A WI Miller and 73.00 310 P P 03 20 14.4 -1.0
baz=54,SNR=23
M53A S S 03 29 43.0 +1.1
baz=54
Q57A Strasburg 73.00 306 P P 03 20 13.6 -1.9
baz=54
Q57A S SKiKP 03 29 45.0 -2.7
baz=54
T60A Surry 73.01 304 IAMs_20 IAMs_20 03 49 55.7
comp=Z,10μm,22.0s
T60A Surry 73.01 304 P P 03 20 14.6 -1.0
baz=55,SNR=10.0
T60A S SKiKP 03 29 44.7 -3.1
baz=55
S59A Mechanicsville 73.02 305 P P 03 20 14.2 -1.4
baz=55,SNR=12
S59A S SKiKP 03 29 46.2 -1.6
baz=55
I48A Sherman Twp 73.15 313 P P 03 20 16.7 +0.4
baz=53,SNR=17
I48A S S 03 29 44.8 +1.3
baz=53
TOLK Toolik Lake Re 73.16 356 IAmb IAmb 03 20 19.6
comp=Z,56nm,1.1s
TOLK IAMs_20 IAMs_20 03 50 49.2
comp=Z,12μm,22.0s
TOLK Toolik Lake Re 73.16 356 P P 03 20 14.7 -1.3
baz=8.3,SNR=34
R58A Rapidan 73.16 306 P P 03 20 13.8 -2.7
baz=54
R58A S S 03 29 45.5 +1.7
baz=54
H47A Mio 73.19 314 P P 03 20 14.6 -1.9
baz=53,SNR=6.6
H47A S SKiKP 03 29 46.0 -1.9
baz=53
TIA Tai'an 73.23 57 P P 03 20 15.9 -1.0
TIA S S 03 29 42.9 -1.8
TIA SKS SKSac 03 30 14.1 -8.5
TIA pmax pmax
comp=Z,43nm,0.9s
TIA pmax pmax
comp=Z,1μm,3.5s
TIA LR LR
comp=Z,8μm,18.0s
TIA LR LR
comp=Z,7μm,15.6s
TIA LR LR
comp=Z,10μm,19.8s
F45A CMU Biological 73.26 315 P P 03 20 16.3 -0.6
baz=52,SNR=29
F45A S S 03 29 45.9 +1.2
baz=52
R58B Mineral 73.28 305 IAmb IAmb 03 20 28.0
comp=Z,38nm,0.9s
R58B IAMs_20 IAMs_20 03 55 43.7
comp=Z,8μm,18.0s
R58B Mineral 73.28 305 P P 03 20 16.2 -1.0
baz=54,SNR=15
R58B S S 03 29 46.2 +1.1
baz=54
GLMI Grayling 73.28 314 IAMs_20 IAMs_20 03 50 20.4
comp=Z,11μm,21.0s
GLMI Grayling 73.28 314 P P 03 20 14.3 -2.8
baz=52,SNR=12
ANWB Willy Bob 73.29 279 eP P 03 20 08.0 -10
U61A Possum Corner 73.29 303 IAMs_20 IAMs_20 03 55 31.1
comp=Z,7μm,18.0s
U61A Possum Corner 73.29 303 P P 03 20 15.9 -1.4
baz=55,SNR=10.0
U61A S SKiKP 03 29 49.8 +1.6
baz=55
YKA Yellowknife Ar 73.30 340 P P 03 20 17.6 +0.7
comp=Z,8.5nm,0.6s,baz=33,slow=5.8,SNR=58
YKA PKP2bc 03 47 52.5
comp=Z,0.1nm,0.5s,baz=225,slow=2.3,SNR=3.4
YKA LR LR 03 53 46.2
comp=Z,9μm,19.9s,baz=0.0,slow=37
J49A Marlette 73.32 312 P P 03 20 16.7 -0.6
baz=53,SNR=18
J49A S SKiKP 03 29 46.8 -1.3
baz=53
M52A Chesterland 73.35 310 IAMs_20 IAMs_20 03 53 06.3
comp=Z,10μm,19.0s
M52A Chesterland 73.35 310 P P 03 20 16.5 -1.1
baz=54,SNR=27
M52A S S 03 29 48.1 +2.1
baz=54
NONG Nongkai 73.44 80 P P 03 20 18.1 -0.3
N53A Lisbon 73.47 309 IAMs_20 IAMs_20 03 52 20.5
comp=Z,9μm,21.0s
N53A Lisbon 73.47 309 P P 03 20 17.2 -1.0
baz=54,SNR=20
N53A S SKiKP 03 29 50.3 +1.8
baz=54
Q56A Snyder Ridge, 73.48 307 IAMs_20 IAMs_20 03 56 30.6
comp=Z,9μm,18.0s
Q56A Snyder Ridge, 73.48 307 P P 03 20 15.7 -2.7
baz=54,SNR=35
Q56A S SKiKP 03 29 49.4 +0.9
baz=54
R57A Stanardsville 73.50 306 P P 03 20 16.2 -2.3
baz=54,SNR=11
R57A S SKiKP 03 29 50.5 +2.0
baz=54
MCWV Mont Chateau 73.53 308 IAmb IAmb 03 20 24.0
comp=Z,34nm,0.8s
MCWV Mont Chateau 73.53 308 P P 03 20 18.9 +0.2
baz=54,SNR=28
O54A Avella 73.55 308 IAmb IAmb 03 20 30.0
comp=Z,35nm,0.8s
O54A IAMs_20 IAMs_20 03 52 26.8
comp=Z,11μm,20.0s
O54A Avella 73.55 308 P P 03 20 18.6 -0.2
baz=54,SNR=13
O54A S SKiKP 03 29 51.3 +2.7
baz=54
S58A Poland Farm, P 73.59 305 IAmb IAmb 03 20 23.4
comp=Z,72nm,1.1s
S58A Poland Farm, P 73.59 305 P P 03 20 18.5 -0.6
baz=54,SNR=15
S58A S SKiKP 03 29 51.1 +2.4
baz=54
P55A Reedsville 73.61 307 P P 03 20 18.1 -1.1
baz=54,SNR=25
P55A S S 03 29 51.6 +2.7
baz=54
E43A Lone Tree Farm 73.64 316 IAmb IAmb 03 20 23.0
comp=Z,33nm,0.8s
E43A IAMs_20 IAMs_20 03 55 02.8
comp=Z,11μm,18.0s
T59A Double "B" Far 73.64 304 IAmb IAmb 03 20 22.6
comp=Z,41nm,1.1s
T59A IAMs_20 IAMs_20 03 54 04.4
comp=Z,9μm,20.0s
T59A Double "B" Far 73.64 304 P P 03 20 18.8 -0.5
baz=54,SNR=11
T59A S S 03 29 51.4 +2.1
baz=54
U60A Pendleton 73.68 304 P P 03 20 19.4 -0.1
baz=54
U60A S S 03 29 51.6 +1.9
baz=54
V61A Roper 73.69 303 IAmb IAmb 03 20 27.9
comp=Z,48nm,1.1s
V61A Roper 73.69 303 P P 03 20 17.0 -2.6
baz=54
V61A S S 03 29 53.2 +3.3

baz=54
PHET Kaeng Krachan 73.69 86 P P 03 20 20.0 +0.1
I47A Gladwin 73.71 313 IAMs_20 IAMs_20 03 50 24.7
comp=Z,11µm,22.0s
I47A Gladwin 73.71 313 P P 03 20 19.0 -0.6
baz=52,SNR=14
I47A S S 03 29 53.1 +3.2
baz=52
J48A Bridge Port 73.73 313 IAmb IAmb 03 20 23.1
comp=Z,50nm,1.0s
J48A Bridge Port 73.73 313 P P 03 20 19.8 0.0
baz=53,SNR=13
J48A S S 03 29 53.3 +3.1
baz=53
G45A Suttons Bay 73.73 315 IAMs_20 IAMs_20 03 50 33.3
comp=Z,10µm,21.0s
G45A Suttons Bay 73.73 315 P P 03 20 19.4 -0.3
baz=52,SNR=30
H46A Fife Lake 73.79 314 P P 03 20 19.0 -1.0
baz=52,SNR=27
H46A S S 03 29 53.6 +2.8
baz=52
CHAI Chaiyaphum 73.79 82 P P 03 20 20.1 -0.3
K49A Clarkson 73.85 312 P P 03 20 16.9 -3.6
baz=53
K49A S S 03 29 54.0 +2.4
baz=53
KLR Kul'dur 73.86 39 P P 03 20 21.2 +0.9
comp=Z,95nm,0.9s,baz=312,slow=6.1,SNR=220
KLR LR LR 03 54 41.7
comp=Z,10µm,18.8s,baz=317,slow=37
KLR Kul'dur 73.86 39c iP P 03 20 20.3 -0.1
KLR pmax pmax
comp=Z,181nm,1.4s
KLR MLR MLR
comp=Z,15µm,12.0s
L50A Kingsville 73.92 311 P P 03 20 20.7 -0.2
baz=53,SNR=17
L50A S S 03 29 54.4 +2.1
baz=53
P54A Burton 73.96 308 P P 03 20 20.1 -1.1
baz=54,SNR=26
P54A S S 03 29 55.7 +2.8
baz=54
M51A Elyria 73.97 310 P P 03 20 20.2 -1.0
baz=53,SNR=8.5
M51A S S 03 29 54.2 +1.3
baz=53
RDOG Red Dog Mine 73.98 1 IAmb IAmb 03 20 25.5
comp=Z,76nm,0.9s
N52A McGinn's Farm, 73.98 309 P P 03 20 20.2 -1.0
baz=53,SNR=24
N52A S S 03 29 55.3 +2.2
baz=53
SNY Shenyang 73.98 49 ⇑P P 03 20 18.0 -3.2
SNY S SKiKP 03 29 45.0 -4.1
SNY LR LR
comp=Z,12µm,20.2s
SNY LR LR
comp=Z,13µm,19.3s
SNY LR LR
comp=Z,26µm,16.2s
R56A Bull Pasture M 73.99 306 P P 03 20 19.9 -1.5
baz=54,SNR=9.9
R56A S S 03 29 55.4 +2.0
baz=54
BMAR Burnt Mountain 74.03 354 P P 03 20 22.1 +1.0
O53A New Philadelph 74.03 309 P P 03 20 20.9 -0.6
baz=53,SNR=24
O53A S S 03 29 55.1 +1.5
baz=53
D41A Chassel 74.05 318 IAmb IAmb 03 20 29.2
comp=Z,60nm,0.9s
D41A IAMs_20 IAMs_20 03 51 00.6
comp=Z,10µm,21.0s
SMRT St. Maarten 74.06 281 eP P 03 20 08.0 -14
Q55A Buckhannon 74.07 307 P P 03 20 20.4 -1.5
baz=54,SNR=17
Q55A S S 03 29 57.4 +3.1
baz=54
S57A Dark Hollow, R 74.09 306 IAMs_20 IAMs_20 03 55 30.3
comp=Z,6µm,18.0s
S57A Dark Hollow, R 74.09 306 P P 03 20 20.5 -1.4
baz=54,SNR=8.6
S57A S S 03 29 56.0 +1.6
baz=54
DWS Wesley 74.14 277 eP P 03 20 19.9 -2.6
DWS Wesley 74.14 277 P P 03 20 19.9 -2.6
MLYT Lee's Yard 74.15 279 eP P 03 20 27.9 +5.3
V60A Jim Taylor Roa 74.16 303 IAmb IAmb 03 20 28.4
comp=Z,71nm,1.1s
V60A Jim Taylor Roa 74.16 303 P P 03 20 20.5 -1.8
baz=54,SNR=6.3
V60A S S 03 29 57.4 +2.3
baz=54
U59A Littleton 74.16 304 IAmb IAmb 03 20 41.7
comp=Z,46nm,1.0s
U59A IAMs_20 IAMs_20 03 50 28.1
comp=Z,10µm,22.0s
U59A Littleton 74.16 304 P P 03 20 21.0 -1.4
baz=54,SNR=16
U59A S S 03 29 58.0 +2.8
baz=54
BBGH Gun Hill 74.18 274 eP P 03 20 19.9 -2.9
H45A Beulah 74.21 315 P P 03 20 20.6 -1.9
baz=52,SNR=7.6
H45A S S 03 29 58.0 +2.6
baz=52
SKI Saint Kitts 74.22 280 eP P 03 20 24.4 +1.4
SKI Saint Kitts 74.22 280 P P 03 20 22.6 -0.4
SKI IAMs_20 IAMs_20 03 52 38.4
comp=Z,8µm,20.0s
SKI Saint Kitts 74.22 280 P P 03 20 22.6 -0.4
SKI pmax pmax
comp=Z,93nm,0.9s
SKI MLR MLR
comp=Z,8µm,20.0s
EPYK Eagle Plains 74.23 351 IAmb IAmb 03 20 28.7
comp=Z,49nm,0.9s
EPYK Eagle Plains 74.23 351 P P 03 20 20.5 -1.8
baz=19,SNR=52
K48A Perry 74.23 312 P P 03 20 21.6 -1.0
baz=52,SNR=13
K48A S S 03 29 58.2 +2.4
baz=52
MA2 Magadan 74.25 24 P P 03 20 23.8 +1.4
comp=Z,31nm,0.6s,baz=314,slow=4.3,SNR=28
MA2 Magadan 74.25 24 P P 03 20 21.9 -0.6
MA2 Magadan 74.25 24ceP P 03 20 23.3 +0.8
MA2 pmax pmax
comp=Z,289nm,1.7s
I46A Reed City 74.29 314 P P 03 20 22.9 -0.1
baz=52,SNR=19
I46A S S 03 30 00.0 +3.6
baz=52
T58A Grand View Acr 74.30 305 P P 03 20 21.7 -1.4
baz=54,SNR=9.9
T58A S S 03 29 58.2 +1.5
baz=54
SEUS St. Eustatius 74.32 280 eP P 03 20 27.1 +3.6
SEUS St. Eustatius 74.32 280 IAMs_20 IAMs_20 03 52 19.0
comp=Z,8µm,20.0s
W61A Ground Anchor 74.32 302 P P 03 20 21.1 -2.2
baz=54
W61A S S 03 29 59.9 +2.9
baz=54
N51A Ashland 74.33 310 IAmb IAmb 03 20 26.5
comp=Z,89nm,1.1s
N51A IAMs_20 IAMs_20 03 53 37.5
comp=Z,10µm,19.0s
N51A Ashland 74.33 310 P P 03 20 22.3 -1.0
baz=53,SNR=16
N51A S S 03 29 58.8 +1.8
baz=53
J47A Sumner 74.37 313 IAMs_20 IAMs_20 03 50 58.1
comp=Z,10µm,22.0s
J47A Sumner 74.37 313 P P 03 20 22.4 -1.0
baz=52,SNR=23
J47A S S 03 29 59.5 +2.2
baz=52
M50A Fremont 74.44 311 IAmb IAmb 03 20 43.1
comp=Z,44nm,1.1s
M50A IAMs_20 IAMs_20 03 53 55.2
comp=Z,7µm,18.0s
M50A Fremont 74.44 311 P P 03 20 22.5 -1.4
baz=52
M50A S S 03 29 59.5 +1.3
baz=52
L49A Milan 74.44 312 P P 03 20 22.1 -1.9
baz=52,SNR=7.2
L49A S S 03 29 59.5 +1.3
baz=52
SABA Saba 74.44 280 eP P 03 20 20.1 -4.2
SABA Saba 74.44 280 IAMs_20 IAMs_20 03 52 23.3
comp=Z,7µm,20.0s
FDF Fort de France 74.50 277 eP P 03 20 19.9 -4.7
R55A Marlinton 74.52 307 IAmb IAmb 03 20 28.0
comp=Z,71nm,1.1s
R55A IAMs_20 IAMs_20 03 57 11.5
comp=Z,8µm,18.0s
R55A Marlinton 74.52 307 P P 03 20 23.4 -1.1
baz=53,SNR=18
R55A S S 03 29 59.5 +0.2
baz=53
S56A Natural Bridge 74.53 306 P P 03 20 23.5 -1.0
baz=54,SNR=8.8
S56A S S 03 30 02.5 +3.2
baz=54
DL2 Dalian 74.55 53⇑iP P 03 20 23.5 -1.1
DL2 PP PP 03 23 13.6 +2.9
DL2 S S 03 29 57.2 -2.2
DL2 pmax pmax
comp=Z,80nm,1.3s
DL2 pmax pmax
comp=Z,1µm,4.9s
DL2 LR LR
comp=Z,12µm,15.1s
DL2 LR LR
comp=Z,16µm,15.4s
DL2 LR LR
comp=Z,16µm,18.0s
Q54A Coxs Mills 74.55 308 IAmb IAmb 03 20 27.7
comp=Z,54nm,0.9s
Q54A IAMs_20 IAMs_20 03 53 01.2
comp=Z,8µm,19.0s
Q54A Coxs Mills 74.55 308 P P 03 20 24.0 -0.6
baz=53,SNR=21
Q54A S S 03 30 00.1 +0.7
baz=53
P53A Whipple 74.59 308 IAmb IAmb 03 20 42.9
comp=Z,94nm,1.1s
P53A IAMs_20 IAMs_20 03 53 09.3
comp=Z,10µm,21.0s
P53A Whipple 74.59 308 P P 03 20 25.1 +0.3
baz=53,SNR=23
P53A S S 03 30 01.4 +1.4
baz=53
COLD Coldfoot 74.60 356 IAmb IAmb 03 20 30.8
comp=Z,52nm,1.0s
COLD IAMs_20 IAMs_20 03 51 54.5
comp=Z,10µm,22.0s
WHN Wuhan 74.61 63 ⇓P P 03 20 24.6 -0.4
WHN PP PP 03 23 08.9 -2.6
WHN S SKiKP 03 29 55.7 +5.3
WHN pmax pmax
comp=Z,360nm,1.9s
WHN pmax pmax
comp=Z,2µm,3.7s
WHN LR LR
comp=Z,15µm,15.5s
WHN LR LR
comp=Z,3µm,10.8s
WHN LR LR
comp=Z,18µm,16.4s
U58A Oxford 74.63 304 P P 03 20 24.1 -1.0
baz=54,SNR=11
U58A S S 03 30 02.2 +1.7
baz=54
PATY Pattaya 74.65 86 P P 03 20 25.8 +0.3
I45A Fountain 74.68 314 IAMs_20 IAMs_20 03 51 02.4
comp=Z,9µm,21.0s
I45A Fountain 74.68 314 P P 03 20 24.6 -0.6
baz=51,SNR=7.6
I45A S S 03 30 03.3 +2.5
baz=51
SKNT Sakolnakorn 74.72 80 P P 03 20 26.4 +0.5
T57A Hurt 74.73 305 P P 03 20 24.3 -1.4
baz=54,SNR=10
T57A S S 03 30 02.7 +1.2
baz=54
J46A Howard City 74.77 313 P P 03 20 23.9 -1.9
baz=52,SNR=7.9
J46A S S 03 30 03.8 +2.0
baz=52
V59A Middlesex 74.80 304 P P 03 20 24.7 -1.4
baz=54,SNR=15
V59A S S 03 30 03.7 +1.3
baz=54
K47A Vermontville 74.82 313 P P 03 20 24.2 -1.9
baz=52,SNR=29
K47A S S 03 30 04.6 +2.2
baz=52
W60A Pink Hill 74.87 303 P P 03 20 24.3 -2.2
baz=54
W60A S S 03 30 02.6 -0.5
baz=54
RNTT Ranong 74.88 90 P P 03 20 26.7 -0.1
CNNC Cliffs of the 74.88 303 IAMs_20 IAMs_20 03 56 27.2
comp=Z,6µm,18.0s
CNNC Cliffs of the 74.88 303 P P 03 20 23.9 -2.6
baz=54
N50A Nevada 74.89 310 P P 03 20 24.3 -2.3
baz=52,SNR=14
N50A S S 03 30 04.6 +1.3
baz=52
SRAK Srakaew 74.94 84 P P 03 20 30.7 +3.5
L48A N Adams 74.94 312 P P 03 20 24.9 -1.9
baz=52,SNR=24
L48A S S 03 30 03.8 +0.1
baz=52
O51A Pataskala 74.94 309 P P 03 20 25.8 -1.0
baz=52,SNR=39
O51A S S 03 30 03.9 0.0
baz=52
M49A Liberty Center 74.95 311 P P 03 20 25.0 -1.9
baz=52,SNR=7.9
M49A S S 03 30 04.9 +1.0
baz=52
P52A Corning 74.96 309 P P 03 20 26.0 -1.0
baz=53,SNR=20
P52A S S 03 30 05.5 +1.4
baz=53
EYMN Ely 75.00 320 IAMs_20 IAMs_20 03 56 05.6
comp=Z,8µm,18.0s
EYMN Ely 75.00 320 P P 03 20 25.6 -1.5
baz=49,SNR=26
Q53A Leroy 75.06 308 P P 03 20 26.5 -1.0
baz=53,SNR=22
Q53A S S 03 30 06.6 +1.4
baz=53
S55A Lewisburg 75.06 306 P P 03 20 27.5 -0.2
baz=53,SNR=17
S55A S S 03 30 08.5 +3.1
baz=53
FFC Flin Flon 75.08 330 P P 03 20 28.7 +1.3
FFC IAmb IAmb 03 20 32.2
comp=Z,55nm,1.1s
FFC Flin Flon 75.08 330 P P 03 20 28.7 +1.3
FFC pmax pmax
comp=Z,55nm,1.1s
FFC MLR MLR
comp=Z,14µm,19.0s
GRNR Gornyy 75.09 36⇓iP P 03 20 28.7 +1.2
GRNR eS S 03 30 11.4 +6.2
GRNR pmax pmax
comp=Z,110nm,0.6s
GRNR smax smax
comp=E,9.0nm,0.7s
GRNR MLR MLR
comp=Z,13µm,16.0s
ACSO Alum Creek Sta 75.12 310 IAmb IAmb 03 20 47.1
comp=Z,63nm,1.1s
ACSO IAMs_20 IAMs_20 03 54 10.8
comp=Z,9µm,19.0s
ACSO Alum Creek Sta 75.12 310 P P 03 20 26.9 -1.0
baz=52,SNR=18
U57A Blanch 75.12 305 P P 03 20 27.4 -0.6
baz=53,SNR=12
U57A S S 03 30 07.4 +1.5
baz=53
R54A Victor 75.13 307 P P 03 20 26.5 -1.5
baz=53,SNR=11
R54A S S 03 30 08.6 +2.5
baz=53
T56A Rocky Mt 75.21 306 P P 03 20 27.0 -1.4
baz=53,SNR=16
T56A S S 03 30 09.1 +2.1
baz=53
K46A Dorr 75.26 313 P P 03 20 28.5 -0.2
baz=51,SNR=12
K46A S S 03 30 09.0 +1.7
baz=51
H43A Windswept, Lux 75.27 315 IAMs_20 IAMs_20 03 56 39.8
comp=Z,9µm,18.0s
W59A Clinton 75.29 303 P P 03 20 26.3 -2.6
baz=53
W59A S S 03 30 09.3 +1.5
baz=53
NKL Nikolayevsk 75.32 33 eP P 03 20 26.8 -2.0
NKL eS S 03 30 09.1 +1.6
NKL pmax pmax
comp=N,5.0nm,1.0s
NKL pmax pmax
comp=E,12nm,1.0s
NKL pmax pmax
comp=Z,141nm,1.0s
NKL pmax pmax
comp=Z,355nm,1.5s
NKL smax smax
comp=E,49nm,6.4s
NKL smax smax
comp=N,11nm,3.4s
X60A Albert Glenn T 75.33 302 P P 03 20 27.8 -1.3
baz=54
X60A S S 03 30 10.7 +2.5
baz=54
BLA Blacksburg 75.35 306 IAMs_20 IAMs_20 03 56 32.5
comp=Z,7µm,18.0s
BLA Blacksburg 75.35 306 P P 03 20 28.3 -1.1
baz=53
V58A Windy Hill, Pi 75.36 304 IAMs_20 IAMs_20 03 51 14.7
comp=Z,8µm,22.0s
V58A Windy Hill, Pi 75.36 304 P P 03 20 29.6 +0.3
baz=53,SNR=8.2
V58A S S 03 30 10.3 +1.7
baz=53
L47A Sherwood 75.37 312 P P 03 20 28.3 -1.0
baz=52,SNR=22
L47A S S 03 30 09.3 +0.8
baz=52
M48A Edgerton 75.39 311 IAmb IAmb 03 20 33.7
comp=Z,32nm,0.7s
M48A IAMs_20 IAMs_20 03 51 46.2
comp=Z,12µm,22.0s
M48A Edgerton 75.39 311 P P 03 20 28.0 -1.4
baz=52
M48A S S 03 30 09.7 +1.0
baz=52
N49A Columbus Grove 75.42 311 IAmb IAmb 03 20 36.6
comp=Z,38nm,0.8s
N49A IAMs_20 IAMs_20 03 52 04.0
comp=Z,10µm,22.0s
N49A Columbus Grove 75.42 311 P P 03 20 29.7 +0.1
baz=52,SNR=23
N49A S S 03 30 09.1 0.0
baz=52
SVB Belmont 75.44 276 eP P 03 20 30.1 0.0
SVB Belmont 75.44 276 e P 03 20 33.0 +3.0
SVB Belmont 75.44 276 P P 03 20 28.8 -1.3
Q52A Bidwell 75.45 308 P P 03 20 28.8 -1.0
baz=52,SNR=25
Q52A S S 03 30 10.5 +0.9
baz=52
O50A Cable 75.56 310 P P 03 20 29.4 -1.0
baz=52,SNR=20
O50A S S 03 30 11.9 +1.2
baz=52
S54A Dingess, Beckl 75.56 307 IAMs_20 IAMs_20 03 57 35.0
comp=Z,8µm,18.0s
S54A Dingess, Beckl 75.56 307 P P 03 20 30.7 +0.2
baz=53,SNR=8.5
S54A S S 03 30 12.5 +1.6
baz=53
ULM Lac du Bonnet 75.60 324 P P 03 20 31.3 +0.9
comp=Z,59nm,1.0s,baz=47,slow=5.8,SNR=52
ULM LR LR 03 54 57.3
comp=Z,6µm,19.8s,baz=50,slow=37
ULM Lac du Bonnet 75.60 324 IAmb IAmb 03 20 33.9
comp=Z,69nm,0.9s
ULM IAMs_20 IAMs_20 03 55 46.1
comp=Z,10µm,18.0s
P51A Williamsport 75.62 309 IAMs_20 IAMs_20 03 54 20.6
comp=Z,10µm,19.0s
P51A Williamsport 75.62 309 P P 03 20 28.9 -1.8
baz=52,SNR=9.7
P51A S S 03 30 12.3 +0.9
baz=52
T55A Pulaski 75.64 306 P P 03 20 31.5 +0.5
baz=53,SNR=11
T55A S S 03 30 12.7 +0.9
baz=53
R53A Hurricane 75.64 308 IAmb IAmb 03 20 46.0
comp=Z,62nm,0.8s
R53A Hurricane 75.64 308 P P 03 20 31.5 +0.5
baz=52,SNR=17
R53A S S 03 30 11.3 -0.4
baz=52
MDJ Mudanjiang 75.69 44 P P 03 20 31.9 +0.8
MDJ pP sP 03 20 36.2 -1.5
MDJ sP pP 03 20 37.9 +2.0
MDJ PcP PcP 03 20 45.3 +1.5
MDJ PP PP 03 23 20.1 -0.2
MDJ S S 03 30 11.0 -1.0
MDJ sS sS 03 30 18.4 -1.7
MDJ ScS SKKSac 03 30 43.7 +2.5
MDJ SS SS 03 35 03.0 +0.4
MDJ pmax pmax
comp=Z,58nm,0.9s
MDJ pmax pmax
comp=Z,1µm,9.3s
MDJ LR LR
comp=Z,27µm,17.1s
MDJ LR LR
comp=Z,37µm,18.5s
MDJ LR LR
comp=Z,36µm,14.2s
MDJ Mudanjiang 75.69 44 IAmb IAmb 03 20 44.3
comp=Z,65nm,1.1s
V57A Coltrane Farms 75.73 304 P P 03 20 31.6 +0.2
baz=53,SNR=17
V57A S S 03 30 14.1 +1.4
baz=53
X59A McDuffie Farm, 75.75 303 P P 03 20 29.3 -2.2
baz=53
X59A S S 03 30 15.7 +2.8
baz=53
Y60A Bolivia 75.83 302 P P 03 20 31.1 -0.9
baz=53
U56A King 75.84 305 IAmb IAmb 03 20 40.8
comp=Z,47nm,1.1s
U56A IAMs_20 IAMs_20 03 55 23.7
comp=Z,6µm,20.0s
U56A King 75.84 305 P P 03 20 32.8 +0.6
baz=53,SNR=15
U56A S S 03 30 15.4 +1.4
baz=53
W58A Raeford 75.89 303 P P 03 20 31.9 -0.5
baz=53,SNR=12
W58A S S 03 30 16.3 +1.7
baz=53
CHBT 75.90 85 P P 03 20 33.3 +0.6
E38A The Farm, Brul 75.91 319 IAmb IAmb 03 20 35.1
comp=Z,52nm,1.1s
E38A IAMs_20 IAMs_20 03 52 27.8
comp=Z,7µm,20.0s
MTP Monte Pirata 75.95 282 IAmb IAmb 03 20 39.0
comp=Z,48nm,1.0s
N48A Decatur 75.96 311 P P 03 20 32.4 -0.3
baz=51,SNR=21
N48A S S 03 30 14.7 -0.3
baz=51
O49A Covington 75.96 310 IAmb IAmb 03 20 39.5
comp=Z,44nm,0.8s
O49A IAMs_20 IAMs_20 03 54 44.8
comp=Z,9µm,18.0s
O49A Covington 75.96 310 P P 03 20 32.1 -0.6
baz=52,SNR=16
O49A S S 03 30 15.4 +0.2
baz=52
L46A Eue Claire 75.98 313 IAmb IAmb 03 20 35.7
comp=Z,40nm,1.1s
L46A IAMs_20 IAMs_20 03 51 58.8
comp=Z,11µm,22.0s
L46A Eue Claire 75.98 313 P P 03 20 31.3 -1.4

baz=51
L46A S S 03 30 15.4 +0.1
baz=51
PRP Porcupine Dome 75.98 354 IAmb IAmb 03 20 37.8
comp=Z,54nm,1.1s
IMAR Indian Mountai 75.99 358 P P 03 20 34.1 +1.7
P50A Jamestown 76.00 309 P P 03 20 31.1 -1.9
baz=52,SNR=13
P50A S S 03 30 15.3 -0.3
baz=52
M47A Cromwell 76.00 312 P P 03 20 31.4 -1.4
baz=51,SNR=12
M47A S S 03 30 16.1 +0.6
baz=51
R52A Catlettsburg 76.07 308 P P 03 20 32.8 -0.6
baz=52,SNR=5.3
R52A S S 03 30 17.4 +1.1
baz=52
Q51A Peebles 76.08 309 IAmb IAmb 03 20 36.3
comp=Z,77nm,1.1s
Q51A IAMs_20 IAMs_20 03 54 34.6
comp=Z,11µm,19.0s
Q51A Peebles 76.08 309 P P 03 20 33.4 0.0
baz=52,SNR=15
Q51A S S 03 30 17.2 +0.7
baz=52
CBYP Canovanas 76.08 282 IAmb IAmb 03 20 36.6
comp=Z,53nm,1.1s
S53A Williamson 76.15 307 P P 03 20 32.4 -1.5
baz=52,SNR=12
S53A S S 03 30 18.5 +1.1
baz=52
T54A Tazewell 76.18 306 P P 03 20 33.8 -0.2
baz=52,SNR=17
T54A S S 03 30 19.0 +1.2
baz=52
U55A TA2, Sparta 76.18 306 P P 03 20 33.0 -1.1
baz=52,SNR=25
U55A S S 03 30 19.0 +1.2
baz=52
LHMI Lhok Sumawe 76.19 94 P P 03 20 35.4 +1.1
comp=Z,4µmcomp=Z,60nm,0.5s
GCPR Guaynabo City 76.24 283 IAmb IAmb 03 20 40.2
comp=Z,56nm,0.8s
SRIT Nakonsritamara 76.24 90 P P 03 20 35.2 +0.6
V56A Mocksville 76.24 305 P P 03 20 33.4 -1.0
baz=53,SNR=7.9
V56A S S 03 30 19.7 +1.3
baz=53
X58A Rowland 76.24 303 P P 03 20 33.0 -1.4
baz=53
X58A S S 03 30 20.3 +1.9
baz=53
I42A Draeger Farm, 76.27 315 IAmb IAmb 03 20 37.6
comp=Z,39nm,1.1s
I42A IAMs_20 IAMs_20 03 52 12.2
comp=Z,7µm,21.0s
Y59A Loris 76.27 302 IAMs_20 IAMs_20 03 57 22.1
comp=Z,7µm,19.0s
Y59A Loris 76.27 302 P P 03 20 32.4 -2.2
baz=53
Y59A S S 03 30 20.8 +2.0
baz=53
W57A Gilead 76.31 304 IAMs_20 IAMs_20 03 51 54.1
comp=Z,9µm,22.0s
W57A Gilead 76.31 304 P P 03 20 32.6 -2.2
baz=53,SNR=11
W57A S S 03 30 20.6 +1.5
baz=53
N47A Urbana 76.34 311 IAmb IAmb 03 20 41.5
comp=Z,43nm,0.7s
N47A Urbana 76.34 311 P P 03 20 33.4 -1.4
baz=51,SNR=13
N47A S S 03 30 18.9 -0.4
baz=51
MLSI Meulaboh, Aceh 76.35 95 P P 03 20 35.7 +0.4
comp=Z,5µmcomp=Z,218nm,0.9s
SJG San Juan 76.40 282 P P 03 20 35.1 -0.4
SJG IAmb IAmb 03 20 49.1
comp=Z,40nm,0.9s
SJG San Juan 76.40 282 P P 03 20 35.1 -0.4
SJG pmax pmax
comp=Z,41nm,0.9s
O48A Farmland 76.41 311 P P 03 20 33.8 -1.4
baz=51,SNR=10
O48A S S 03 30 19.9 -0.2
baz=51
GRGR Grenville 76.43 275 eP P 03 20 23.9 -12
POKR Poker Plat Res 76.52 355 P P 03 20 33.3 -2.1
baz=9.9,SNR=36
Q50A Georgetown 76.58 309 P P 03 20 34.8 -1.4
baz=52
Q50A S S 03 30 21.5 -0.5
baz=52
P49A Miami Univ. Ec 76.60 310 P P 03 20 36.2 -0.2
baz=51,SNR=13
P49A S S 03 30 21.0 -1.2
baz=51
U54A Nelsons Funny 76.66 306 IAmb IAmb 03 20 39.9
comp=Z,68nm,1.1s
U54A IAMs_20 IAMs_20 03 58 22.2
comp=Z,7µm,18.0s
U54A Nelsons Funny 76.66 306 P P 03 20 37.7 +0.9
baz=52,SNR=25
U54A S S 03 30 24.6 +1.5
baz=52
R51A Hillsboro 76.67 308 P P 03 20 37.0 +0.2
baz=52,SNR=12
R51A S S 03 30 23.2 +0.2
baz=52
V55A Taylorsville 76.68 305 IAmb IAmb 03 20 40.3
comp=Z,47nm,1.1s
V55A IAMs_20 IAMs_20 03 55 47.8
comp=Z,6µm,20.0s
V55A Taylorsville 76.68 305 P P 03 20 37.2 +0.3
baz=52,SNR=16
V55A S S 03 30 23.9 +0.7
baz=52
K43A Burlington 76.71 314 IAmb IAmb 03 20 40.1
comp=Z,60nm,1.0s
K43A IAMs_20 IAMs_20 03 52 25.0
comp=Z,8µm,21.0s
W56A Indian Trail 76.71 304 P P 03 20 36.1 -1.0
baz=52,SNR=11
W56A S S 03 30 24.6 +1.1
baz=52
MDM Murphy Dome 76.74 355 IAmb IAmb 03 20 41.6
comp=Z,76nm,1.1s
S52A Salyersville 76.74 308 P P 03 20 37.0 -0.2
baz=52,SNR=26
S52A S S 03 30 25.0 +1.2
baz=52
TRTT Trang 76.77 90 P P 03 20 37.8 +0.2
X57A Johnson Farm, 76.79 303 P P 03 20 36.2 -1.4
baz=52
COLA College 76.80 355 P P 03 20 37.6 +0.6
COLA IAmb IAmb 03 20 41.8
comp=Z,51nm,1.1s
COLA PP PP 03 23 34.7 +5.8
COLA College 76.80 355 P P 03 20 37.6 +0.6
COLA 03 23 34.7
COLA pmax pmax
comp=Z,51nm,1.2s
COLA MLR MLR
comp=Z,6µm,20.0s
TCOL CIGO, UAF Yank 76.80 355 P P 03 20 35.3 -1.7
baz=9.5
TCOL S S 03 30 29.3 +5.9
baz=9.5
L44A Lake County Fo 76.81 314 IAmb IAmb 03 20 44.5
comp=Z,51nm,0.8s
L44A IAMs_20 IAMs_20 03 56 21.6
comp=Z,10µm,18.0s
L44A Lake County Fo 76.81 314 P P 03 20 36.8 -0.6
baz=50,SNR=6.4
L44A S S 03 30 24.7 +0.4
baz=50
MLY Manley 76.82 356 IAmb IAmb 03 20 48.2
comp=Z,34nm,0.9s
MLY IAMs_20 IAMs_20 03 53 16.9
comp=Z,8µm,21.0s
ILAR Eielson Array 76.83 354 P P 03 20 38.2 +1.0
comp=Z,13nm,0.9s,baz=3.6,slow=4.3,SNR=47
ILAR PKP2bc 03 47 47.0
comp=Z,0.9nm,0.9s,baz=219,slow=3.8,SNR=4.7
ILAR LR LR 03 56 53.1
comp=Z,5µm,19.6s,baz=4.0,slow=38
ILAR Eielson Array 76.83 354 P P 03 20 37.8 +0.6

T53A Wise 76.83 307 P P 03 20 36.3 -1.5
baz=52,SNR=8.9
T53A S S 03 30 25.8 +0.9
baz=52
NJ2 Nanjing 76.83 60 eP P 03 20 37.2 -0.6
NJ2 pP sP 03 20 42.3 -2.0
NJ2 sP pP 03 20 44.6 +2.0
NJ2 PP PP 03 23 31.7 +1.4
NJ2 S S 03 30 23.8 -1.1
NJ2 SS SS 03 35 24.1 +3.6
NJ2 pmax pmax
comp=Z,57nm,0.9s
NJ2 pmax pmax
comp=Z,1µm,5.3s
NJ2 LR LR
comp=Z,6µm,15.6s
NJ2 LR LR
comp=Z,8µm,15.2s
NJ2 LR LR
comp=Z,8µm,15.6s
Y58A Scranton 76.85 303 IAmb IAmb 03 20 45.9
comp=Z,47nm,1.1s
Y58A IAMs_20 IAMs_20 03 57 16.4
comp=Z,7µm,19.0s
Y58A Scranton 76.85 303 P P 03 20 35.6 -2.2
baz=53
UBPT Khong Chiam 76.86 81 IAmb IAmb 03 20 43.0
comp=Z,59nm,0.9s
UBPT Khong Chiam 76.86 81 P P 03 20 37.8 -0.4
BIRD Birdtown, Kers 76.93 304 IAMs_20 IAMs_20 03 52 00.3
comp=Z,9µm,22.0s
Z59A Georgetown, SC 76.99 302 P P 03 20 35.6 -3.0
baz=53
T52A Hallie 77.04 307 IAMs_20 IAMs_20 03 58 21.1
comp=Z,8µm,19.0s
T52A Hallie 77.04 307 P P 03 20 37.9 -1.0
baz=52,SNR=7.3
T52A S S 03 30 28.1 +1.1
baz=52
Q49A Aurora 77.04 310 P P 03 20 38.8 0.0
baz=51,SNR=9.5
Q49A S S 03 30 27.5 +0.6
baz=51
P48A Milroy 77.07 310 IAmb IAmb 03 20 41.3
comp=Z,46nm,1.1s
P48A IAMs_20 IAMs_20 03 53 06.8
comp=Z,9µm,20.0s
P48A Milroy 77.07 310 P P 03 20 37.6 -1.4
baz=51,SNR=17
P48A S S 03 30 26.8 -0.5
baz=51
S51A Beattyville 77.09 308 IAMs_20 IAMs_20 03 54 48.4
comp=Z,11µm,20.0s
S51A Beattyville 77.09 308 P P 03 20 37.7 -1.4
baz=52,SNR=7.5
S51A S S 03 30 28.1 +0.6
baz=52
MPR Mayaguez 77.10 283 IAmb IAmb 03 20 42.0
comp=Z,38nm,0.8s
R50A Paris 77.14 309 IAMs_20 IAMs_20 03 55 16.8
comp=Z,10µm,19.0s
R50A Paris 77.14 309 P P 03 20 39.9 +0.5
baz=51,SNR=8.1
NEA Nenana 77.17 355 IAmb IAmb 03 20 38.0
comp=Z,58nm,1.0s
MLPR Magueyes Islan 77.17 283 IAmb IAmb 03 20 54.8
comp=Z,57nm,0.8s
HDA Harding Lake 77.19 354 P P 03 20 38.3 -0.9
baz=10,SNR=52
HDA S S 03 30 31.5 +3.7
baz=10
HDA S S 03 30 31.5 +3.7
baz=10
KMSC Kings Mountain 77.19 305 IAmb IAmb 03 20 50.4
comp=Z,42nm,1.1s
KMSC Kings Mountain 77.19 305 P P 03 20 39.6 -0.1
baz=52,SNR=10
KMSC S S 03 30 29.1 +0.3
baz=52
V54A Nebo 77.20 305 P P 03 20 39.2 -0.6
baz=52,SNR=20
V54A S S 03 30 29.7 +0.8
baz=52
I40A Norwalk 77.20 316 IAmb IAmb 03 20 46.9
comp=Z,39nm,0.8s
WRH Wood River Hil 77.21 355 IAmb IAmb 03 20 43.8
comp=Z,68nm,1.0s
U53A Fall Branch 77.24 306 P P 03 20 40.3 +0.3
baz=52,SNR=11
U53A S S 03 30 30.2 +0.8
baz=52
Y57A Sumter 77.26 303 IAmb IAmb 03 20 48.8
comp=Z,45nm,0.9s
Y57A IAMs_20 IAMs_20 03 56 25.2
comp=Z,10µm,19.0s
Y57A Sumter 77.26 303 P P 03 20 39.2 -0.9
baz=52
USRK Ussuriysk Ar. 77.27 43 P P 03 20 40.3 +0.3
comp=Z,65nm,0.8s,baz=292,slow=4.4,SNR=50
USRK LR LR 03 57 10.1
comp=Z,13µm,19.3s,baz=314,slow=38
USRK Ussuriysk Ar. 77.27 43 P P 03 20 39.8 -0.2
Z58A St. Stephen 77.29 302 P P 03 20 39.8 -0.5
baz=52,SNR=11
SCRK Sand Creek 77.36 353 IAmb IAmb 03 20 44.9
comp=Z,39nm,1.2s
SCRK IAMs_20 IAMs_20 03 58 16.4
comp=Z,7µm,19.0s
M44A Midewin, Midew 77.39 313 IAmb IAmb 03 20 47.6
comp=Z,48nm,1.1s
X56A White Oak 77.39 304 P P 03 20 39.5 -1.4
baz=52,SNR=13
X56A S S 03 30 32.5 +1.6
baz=52
ANM Nome 77.41 3 IAmb IAmb 03 20 45.0
comp=Z,73nm,1.1s
SFIN Lafayette 77.48 312 IAmb IAmb 03 20 55.2
comp=Z,43nm,0.8s
SFIN Lafayette 77.48 312 P P 03 20 40.6 -0.6
baz=50,SNR=26
SFIN S S 03 30 32.0 +0.3
baz=50
SPMN Marine on St. 77.48 318 IAmb IAmb 03 20 44.5
comp=Z,37nm,0.8s
SPMN IAMs_20 IAMs_20 03 53 17.3
comp=Z,11µm,20.0s
SPMN Marine on St. 77.48 318 P P 03 20 39.8 -1.5
baz=48,SNR=22
SPMN S S 03 30 33.3 +1.7
baz=48
S50A Richmond 77.56 308 P P 03 20 40.4 -1.4
baz=51,SNR=6.9
S50A S S 03 30 34.5 +1.8
baz=51
TPTI 77.58 96 P P 03 20 41.4 -0.8
comp=Z,980nmcomp=Z,34nm,0.8s
Q48A North Vernon 77.59 310 P P 03 20 40.5 -1.4
baz=51,SNR=22
Q48A S S 03 30 32.9 0.0
baz=51
JFWS Jewell Farm 77.64 315 IAmb IAmb 03 20 48.9
comp=Z,38nm,0.8s
JFWS Jewell Farm 77.64 315 IAMs_20 IAMs_20 03 56 15.7
comp=Z,8µm,18.0s
JFWS Jewell Farm 77.64 315 P P 03 20 40.3 -1.9
baz=49,SNR=20
R49A Shelbyville 77.65 309 IAmb IAmb 03 20 49.3
comp=Z,34nm,1.0s
R49A Shelbyville 77.65 309 P P 03 20 40.4 -1.8
baz=51,SNR=12
R49A S S 03 30 33.3 -0.4
baz=51
RIDG Independent Ri 77.67 353 IAmb IAmb 03 20 49.2
comp=Z,83nm,1.1s
NHSC New Hope 77.67 302 IAmb IAmb 03 20 50.5
comp=Z,63nm,1.1s
NHSC IAMs_20 IAMs_20 03 57 54.2
comp=Z,7µm,19.0s
NHSC New Hope 77.67 302 P P 03 20 42.0 -0.5
baz=52,SNR=7.9
DOT Dot Lake 77.69 353 IAmb IAmb 03 20 47.3
comp=Z,82nm,1.2s
U52A Thorn Hill 77.72 307 P P 03 20 41.7 -1.0
baz=51,SNR=8.2
U52A S S 03 30 35.2 +0.6
baz=51
T51A Gray 77.73 307 P P 03 20 41.7 -1.0
baz=51,SNR=15

T51A S S 03 30 35.5 +0.9
baz=51
TZTN Tazewell 77.74 307 IAMs_20 IAMs_20 03 58 52.7
comp=Z,9µm,18.0s
TZTN Tazewell 77.74 307 P P 03 20 42.3 -0.6
baz=51,SNR=8.6
BPAW Bear Paw Mtn. 77.76 356 IAmb IAmb 03 20 46.6
comp=Z,48nm,1.0s
BPAW IAMs_20 IAMs_20 03 53 56.7
comp=Z,7µm,21.0s
W54A Cherokee Point 77.78 305 P P 03 20 41.2 -1.8
baz=52,SNR=11
W54A S S 03 30 36.9 +1.8
baz=52
X55A Gracelyn & Ava 77.80 304 P P 03 20 40.9 -2.2
baz=52,SNR=10
X55A S S 03 30 36.5 +1.2
baz=52
V53A Saluda 77.82 306 IAMs_20 IAMs_20 03 57 14.8
comp=Z,8µm,19.0s
V53A Saluda 77.82 306 P P 03 20 41.4 -1.9
baz=52,SNR=12
V53A S S 03 30 35.1 -0.5
baz=52
TYV Tymovskoe 77.82 33 eP P 03 20 43.8 +0.8
TYV eS S 03 30 38.6 +3.6
TYV pmax pmax
comp=Z,41nm,1.2s
TYV pmax pmax
comp=Z,1µm,6.1s
TYV smax smax
comp=E,20nm,1.9s
TYV smax smax
comp=E,3µm,6.0s
TYV MLR MLR
comp=Z,9µm,16.0s
SKLT Songkhla 77.90 90 P P 03 20 44.8 +0.8
Z57A Bowman 77.91 303 P P 03 20 43.7 -0.1
baz=52
158A Hollywood 77.91 302 P P 03 20 43.7 -0.1
baz=52
158A S S 03 30 38.9 +2.3
baz=52
BLO Bloomington 77.91 311 IAMs_20 IAMs_20 03 53 41.1
comp=Z,10µm,21.0s
L42A Oliver, Polo 77.91 314 IAmb IAmb 03 20 46.6
comp=Z,77nm,1.1s
Y56A Pelion 78.00 304 P P 03 20 43.3 -0.9
baz=52
Y56A S S 03 30 38.8 +1.3
baz=52
MCK McKinley 78.00 355 IAMs_20 IAMs_20 03 57 10.2
comp=Z,6µm,20.0s
BCAR Beaver Creek A 78.02 352 P P 03 20 44.8 +0.9
BCAR PP PP 03 23 33.0 -6.4
QIZ Qiongzhong 78.02 75 P P 03 20 44.2 -0.4
QIZ PP PP 03 23 39.5 -1.1
QIZ S S 03 30 37.4 -0.8
QIZ SS SS 03 35 41.3 +2.2
QIZ pmax pmax
comp=Z,50nm,1.0s
QIZ pmax pmax
comp=Z,1µm,4.4s
QIZ LR LR
comp=Z,5µm,28.2s
QIZ LR LR
comp=Z,5µm,20.8s
QIZ LR LR
comp=Z,5µm,36.3s
P46A Rosedale 78.04 311 IAmb IAmb 03 20 59.3
comp=Z,44nm,0.7s
S49A Springfield 78.04 309 P P 03 20 44.6 +0.1
baz=51,SNR=13
S49A S S 03 30 37.8 -0.1
baz=51
U51A La Follette 78.14 307 P P 03 20 45.3 +0.2
baz=51,SNR=30
U51A S S 03 30 40.4 +1.3
baz=51
V52A Sevierville 78.21 306 IAMs_20 IAMs_20 03 54 26.1
comp=Z,8µm,21.0s
V52A Sevierville 78.21 306 P P 03 20 45.3 -0.1
baz=51,SNR=8.8
V52A S S 03 30 39.9 +0.1
baz=51
X54A Belton 78.23 305 P P 03 20 43.3 -2.2
baz=52,SNR=12
T50A Nancy 78.25 308 P P 03 20 44.6 -1.0
baz=51,SNR=22
T50A S S 03 30 40.1 -0.1
baz=51
GZH Guangzhou 78.25 70⇑iP P 03 20 44.9 -0.9
GZH S S 03 30 36.2 -4.3
GZH SS SS 03 35 37.7 -4.6
GZH pmax pmax
comp=Z,2µm,3.8s
GZH LR LR
comp=Z,5µm,20.4s
GZH LR LR
comp=Z,6µm,18.6s
Y55A Saluda 78.27 304 P P 03 20 46.7 +0.9
baz=52,SNR=8.7
KTH Kantishna Hill 78.30 356 IAmb IAmb 03 21 05.8
comp=Z,41nm,1.1s
KTH IAMs_20 IAMs_20 03 54 02.1
comp=Z,8µm,21.0s
D32A Dogwood Acres, 78.30 322 IAMs_20 IAMs_20 03 53 15.8
comp=Z,12µm,22.0s
RND Reindeer 78.32 355 IAMs_20 IAMs_20 03 57 30.6
comp=Z,7µm,21.0s
Z56A Williston 78.33 303 IAMs_20 IAMs_20 03 56 56.5
comp=Z,9µm,20.0s
Z56A Williston 78.33 303 P P 03 20 44.8 -1.3
baz=52
HODGE Hodges 78.35 304 IAMs_20 IAMs_20 03 53 06.0
comp=Z,8µm,22.0s
W53A Cullowhee 78.35 306 P P 03 20 44.8 -1.5
baz=51,SNR=8.7
TRF Thorofare Moun 78.36 356 IAmb IAmb 03 20 53.9
comp=Z,43nm,1.0s
TRF IAMs_20 IAMs_20 03 57 37.8
comp=Z,7µm,20.0s
WCI Wyandotte Cave 78.38 310 P P 03 20 45.6 -0.7
WCI IAmb IAmb 03 20 53.5
comp=Z,42nm,0.8s
WCI Wyandotte Cave 78.38 310 P P 03 20 45.6 -0.7
WCI pmax pmax
comp=Z,42nm,0.8s
WCI MLR MLR
comp=Z,6µm,19.0s
WCI Wyandotte Cave 78.38 310 P P 03 20 45.7 -0.6
baz=50
O44A Mansfield 78.43 312 IAmb IAmb 03 20 53.6
comp=Z,55nm,0.8s
TKL Tuckaleechee C 78.44 306 IAmb IAmb 03 20 58.7
comp=Z,34nm,1.0s
TKL IAMs_20 IAMs_20 03 54 33.2
comp=Z,7µm,20.0s
157A Early Branch 78.48 302 P P 03 20 46.5 -0.5
baz=52,SNR=7.5
157A S S 03 30 45.5 +2.8
baz=52
INCN Inchon 78.53 51 P P 03 20 46.9 -0.3
INCN IAmb IAmb 03 21 05.7
comp=Z,79nm,1.1s
INCN Inchon 78.53 51 P P 03 20 46.9 -0.3
INCN pmax pmax
comp=Z,79nm,1.1s
INCN MLR MLR
comp=Z,16µm,19.0s
T49A Edmonton 78.63 308 P P 03 20 48.4 +0.7
baz=50,SNR=23
T49A S S 03 30 44.2 0.0
baz=50
U50A Jamestown 78.63 307 P P 03 20 48.4 +0.6
baz=51,SNR=21
U50A S S 03 30 44.8 +0.5
baz=51
HDIL Hopedale 78.65 313 IAmb IAmb 03 20 54.8
comp=Z,57nm,0.8s
HDIL IAMs_20 IAMs_20 04 00 31.4
comp=Z,6µm,20.0s
V51A Loudon 78.71 307 IAmb IAmb 03 20 56.3
comp=Z,50nm,1.1s
V51A IAMs_20 IAMs_20 03 55 34.4
comp=Z,8µm,20.0s
V51A Loudon 78.71 307 P P 03 20 47.6 -0.6
baz=51,SNR=16

V51A S S 03 30 45.3 +0.1
baz=51
L40A Anamosa 78.74 315 IAmb IAmb 03 20 55.1
comp=Z,70nm,0.8s
L40A IAMs_20 IAMs_20 03 56 59.9
comp=Z,8µm,18.0s
156A Sylvania 78.83 303 P P 03 20 47.5 -1.3
baz=52
X53A Estanollee 78.86 305 P P 03 20 48.9 -0.1
baz=51,SNR=13
X53A S S 03 30 46.1 -0.6
baz=51
Y54A Tignall 78.86 304 P P 03 20 49.9 +0.8
baz=51,SNR=22
Y54A S S 03 30 46.4 -0.3
baz=51
W52A Murphy 78.89 306 IAMs_20 IAMs_20 03 57 58.1
comp=Z,6µm,18.0s
W52A Murphy 78.89 306 P P 03 20 49.1 -0.2
baz=51,SNR=12
Z55A Blythe 78.90 304 P P 03 20 49.2 -0.1
baz=51
SSE Sheshan 78.99 59 P P 03 20 49.8 0.0
SSE S S 03 30 48.2 0.0
SSE pmax pmax
comp=Z,31nm,1.3s
SSE pmax pmax
comp=Z,760nm,4.8s
SSE LR LR
comp=Z,4µm,16.0s
SSE LR LR
comp=Z,3µm,15.9s
SSE Sheshan 78.99 59 IAmb IAmb 03 20 55.4
comp=Z,52nm,1.1s
PPLA Purkeypile 79.02 357 IAmb IAmb 03 20 56.6
comp=Z,104nm,1.2s
PPLA IAMs_20 IAMs_20 03 54 36.1
comp=Z,8µm,20.0s
MDND Maddock 79.03 324 IAmb IAmb 03 20 55.0
comp=Z,83nm,1.1s
MDND IAMs_20 IAMs_20 03 57 54.9
comp=Z,8µm,18.0s
MDND Maddock 79.03 324 P P 03 20 49.2 -0.5
baz=44,SNR=8.1
CPCT Cooper Cave 79.04 307 IAMs_20 IAMs_20 03 56 41.2
comp=Z,7µm,20.0s
KULM Kulim 79.06 92 IAmb IAmb 03 20 54.2
comp=Z,54nm,0.8s
KULM Kulim 79.06 92 P P 03 20 50.0 -0.4
SDD Santo Domingo 79.08 285 IAMs_20 IAMs_20 03 49 36.9
comp=Z,11µm,22.0s
GSI Gunungsitoli 79.10 97 IAMs_20 IAMs_20 03 58 49.4
comp=Z,8µm,21.0s
TEY Ternei 79.13 40⇑eP P 03 20 50.0 -0.3
TEY e 03 30 48.9
TEY pmax pmax
comp=Z,20nm,1.0s
TEY pmax pmax
comp=N,20nm,1.0s
TEY pmax pmax
comp=Z,400nm,3.9s
OLIL Olney 79.14 311 IAmb IAmb 03 20 57.8
comp=Z,81nm,1.1s
OLIL IAMs_20 IAMs_20 03 53 52.4
comp=Z,11µm,22.0s
U49A Red Boiling Sp 79.16 308 P P 03 20 50.6 0.0
baz=50,SNR=35
U49A S S 03 30 50.0 +0.1
baz=50
X52A Dahlonega 79.17 306 P P 03 20 50.6 -0.2
baz=51,SNR=23
X52A S S 03 30 50.1 0.0
baz=51
V50A Pikevile 79.27 307 P P 03 20 49.4 -1.8
baz=50,SNR=29
V50A S S 03 30 51.2 +0.1
baz=50
KS19 Wonju Array Si 79.27 51 IAmb IAmb 03 20 56.1
comp=Z,56nm,0.7s
RPSI Rantau Prapat 79.30 95 IAMs_20 IAMs_20 04 00 49.6
comp=Z,7µm,21.0s
KSAR Wonju Array Be 79.32 51 P P 03 20 51.2 -0.2
KSAR Wonju Array Be 79.32 51 P P 03 20 51.2 -0.2
HKPS Hong Kong Po S 79.32 70 IAMs_20 IAMs_20 04 00 26.5
comp=Z,8µm,22.0s
KSRS Korea Array 79.33 51 P P 03 20 52.1 +0.6
comp=Z,36nm,0.6s,baz=310,slow=4.7,SNR=63
KSRS LR LR 03 59 40.1
comp=Z,12µm,18.3s,baz=319,slow=38
Z54A Sparta 79.35 304 P P 03 20 52.1 +0.3
baz=51,SNR=10.0
W51A Cleveland 79.37 306 P P 03 20 50.0 -1.8
baz=50,SNR=22
W51A S S 03 30 52.4 +0.1
baz=50
USIN University of 79.38 310 IAmb IAmb 03 20 54.3
comp=Z,82nm,1.1s
USIN IAMs_20 IAMs_20 03 54 25.8
comp=Z,11µm,20.0s
P43A Skaggs, Pawnee 79.38 312 IAmb IAmb 03 20 54.2
comp=Z,40nm,0.8s
P43A IAMs_20 IAMs_20 03 53 52.8
comp=Z,11µm,22.0s
N41A Harden Midland 79.44 314 IAmb IAmb 03 20 59.2
comp=Z,54nm,0.8s
Y53A Monroe 79.44 305 P P 03 20 51.7 -0.5
baz=51,SNR=17
Y53A S S 03 30 52.8 -0.2
baz=51
155A Kite 79.49 303 P P 03 20 50.7 -1.8
baz=51,SNR=9.8
ORIV Oritupano 79.64 273 eP P 03 20 52.9 -0.7
ORIV Oritupano 79.64 273 eS S 03 31 03.0 +7.5
ORIV Oritupano 79.64 273 P P 03 20 52.9 -0.7
GOGA Godfrey 79.65 304 IAMs_20 IAMs_20 03 53 32.8
comp=Z,7µm,21.0s
GOGA Godfrey 79.65 304 P P 03 20 52.4 -0.9
baz=51,SNR=15
T47A Sharon Grove 79.67 309 IAMs_20 IAMs_20 03 58 38.6
comp=Z,9µm,18.0s
W50A Signal Mountai 79.70 307 IAmb IAmb 03 20 56.9
comp=Z,44nm,0.9s
W50A IAMs_20 IAMs_20 03 56 03.7
comp=Z,8µm,20.0s
W50A Signal Mountai 79.70 307 P P 03 20 52.6 -1.0
baz=50,SNR=27
V49A McMinnville 79.71 308 P P 03 20 52.7 -1.0
baz=50,SNR=22
V49A S S 03 30 54.7 -1.0
baz=50
Y52A Lilburn 79.75 305 IAmb IAmb 03 20 57.2
comp=Z,62nm,1.1s
Y52A Lilburn 79.75 305 P P 03 20 52.9 -1.0
baz=51,SNR=21
Y52A S S 03 30 56.2 -0.1
baz=51
SCM Sheep Creek Mo 79.77 354 IAmb IAmb 03 21 11.8
comp=Z,60nm,1.0s
Z53A Monticello 79.80 304 P P 03 20 53.7 -0.5
baz=51,SNR=14
Z53A S S 03 30 56.7 0.0
baz=51
MCARA McCarthy VSAT 79.80 352 IAmb IAmb 03 21 03.3
comp=Z,50nm,1.0s
SDDR Presa de Saban 79.81 286 IAMs_20 IAMs_20 03 52 11.2
comp=Z,8µm,20.0s
X51A Calhoun 79.81 306 IAMs_20 IAMs_20 03 58 24.6
comp=Z,7µm,19.0s
X51A Calhoun 79.81 306 P P 03 20 52.9 -1.4
baz=50,SNR=7.9
X51A S S 03 30 57.7 +0.8
baz=50
GLB Gilahina Butte 79.83 352 IAMs_20 IAMs_20 03 56 25.4
comp=Z,7µm,21.0s
IPM Ipoh 79.85 92 P P 03 20 54.0 -0.7
SKT Skwentna 79.90 356 IAmb IAmb 03 20 57.9
comp=Z,71nm,1.1s
SKT IAMs_20 IAMs_20 03 55 25.4
comp=Z,7µm,22.0s
154A Montrose 79.91 304 IAmb IAmb 03 21 06.3
comp=Z,53nm,1.1s
154A Montrose 79.91 304 P P 03 20 53.9 -0.9
baz=51
154A S S 03 30 59.4 +1.4
baz=51
255A Hazlehurst 79.93 303 IAMs_20 IAMs_20 03 59 40.9
comp=Z,7µm,19.0s
255A Hazlehurst 79.93 303 P P 03 20 54.4 -0.5
baz=51
GHO Glory Hole Cre 79.95 355 IAmb IAmb 03 21 01.0
comp=Z,66nm,1.0s
SCIA State Center 79.95 316 IAmb IAmb 03 21 02.1
comp=Z,41nm,0.8s
SCIA IAMs_20 IAMs_20 03 58 44.7
comp=Z,9µm,18.0s
SCIA State Center 79.95 316 P P 03 20 53.4 -1.5
baz=47
BALM Baldy 80.06 352 IAmb IAmb 03 21 00.3
comp=Z,68nm,1.1s
KNK Knik Glacier 80.27 355 IAmb IAmb 03 21 01.0
comp=Z,55nm,1.0s
V48A Smith Brothers 80.30 308 IAmb IAmb 03 20 59.6
comp=Z,44nm,1.0s
V48A IAMs_20 IAMs_20 03 57 17.3
comp=Z,9µm,20.0s
W49A Belvidere 80.35 307 P P 03 20 56.6 -0.6
baz=50,SNR=26
W49A S S 03 31 03.1 +0.6
baz=50
Y51A Rockmart 80.37 306 P P 03 20 55.0 -2.2
baz=50,SNR=18
SUA Susitna One 80.37 356 IAmb IAmb 03 21 07.2
comp=Z,70nm,1.0s
SUA IAMs_20 IAMs_20 03 55 09.8
comp=Z,7µm,22.0s
TGL Tana Glacier 80.39 352 IAmb IAmb 03 21 02.9
comp=Z,46nm,1.0s
Z52A Williamson 80.40 305 P P 03 20 56.9 -0.5
baz=50,SNR=13
CRQM Cirque 80.42 352 IAmb IAmb 03 21 12.5
comp=Z,48nm,0.9s
SLM Saint Louis 80.46 312 IAmb IAmb 03 21 00.1
comp=Z,41nm,0.9s
ECSD EROS Data Cent 80.49 319 IAmb IAmb 03 21 05.0
comp=Z,48nm,0.8s
ECSD EROS Data Cent 80.49 319 IAMs_20 IAMs_20 03 58 44.8
comp=Z,7µm,18.0s
ECSD EROS Data Cent 80.49 319 P P 03 20 55.8 -1.9
baz=45,SNR=27
S44A Carbondale 80.50 311 IAmb IAmb 03 21 05.2
comp=Z,57nm,0.8s
S44A IAMs_20 IAMs_20 03 57 52.6
comp=Z,9µm,18.0s
SKAG Skagway 80.59 348 IAMs_20 IAMs_20 03 59 27.5
comp=Z,10µm,20.0s
DGMT Dagmar 80.65 326 IAMs_20 IAMs_20 04 01 07.6
comp=Z,8µm,18.0s
DGMT Dagmar 80.65 326 P P 03 20 57.5 -1.1
baz=41,SNR=10.0
WVT Waverly 80.67 309 P P 03 20 59.2 +0.4
WVT PP PP 03 23 53.4 -8.6
WVT Waverly 80.67 309 IAMs_20 IAMs_20 03 57 27.0
comp=Z,8µm,18.0s
WVT Waverly 80.67 309 P P 03 20 57.0 -1.8
baz=49
RC01 Rabbit Creek A 80.68 355 IAmb IAmb 03 21 03.8
comp=Z,77nm,1.0s
GLI Glacier Island 80.69 354 IAmb IAmb 03 21 03.1
comp=Z,86nm,1.2s
WAX Waxell Ridge 80.69 352 IAmb IAmb 03 21 05.7
comp=Z,42nm,1.0s
PCA Pinnacle 80.72 350 IAmb IAmb 03 21 04.0
comp=Z,85nm,1.0s
YSS Yuzh-Sakhalins 80.74 36 P P 03 21 00.0 +1.1
YSS Yuzh-Sakhalins 80.74 36⇑eP P 03 20 59.8 +0.8
YSS e*SP PcP 03 21 07.2 +1.5
YSS e 03 21 12.7
YSS e 03 24 00.7
YSS ePPP PPP 03 26 00.0
YSS eS S 03 31 05.6 -0.6
YSS ePS PnS 03 31 59.0 +7.0
YSS eSS SS 03 36 18.0 -0.2
YSS pmax pmax
comp=Z,330nm,0.8s
YSS pmax pmax
comp=N,70nm,0.9s
YSS pmax pmax
comp=E,50nm,0.8s
YSS pmax pmax
comp=Z,2µm,5.8s
YSS pmax pmax
comp=N,700nm,3.1s
YSS pmax pmax
comp=E,800nm,5.2s
YSS smax smax
comp=N,2µm,5.7s
YSS smax smax
comp=E,3µm,9.0s
YSS MLR MLR
comp=Z,16µm,16.0s
YSS MLR MLR
comp=N,11µm,14.0s
YSS MLR MLR
comp=E,19µm,17.0s
FID Port Fidalgo 80.76 354 IAmb IAmb 03 21 04.0
comp=Z,62nm,1.1s
BSFB Barra de Sao F 80.77 237 eP P 03 21 00.9 +1.4
Z51A Franklin 80.81 305 IAMs_20 IAMs_20 03 57 23.1
comp=Z,7µm,21.0s
MESA MESA 80.85 351 IAmb IAmb 03 21 06.9
comp=Z,75nm,1.1s
MESA IAMs_20 IAMs_20 03 58 25.7
comp=Z,7µm,21.0s
EYAK Cordova Ski Ar 80.90 353 IAMs_20 IAMs_20 03 59 56.7
comp=Z,9µm,20.0s
SJMB Sao Joao De Ma 80.90 238 eP P 03 21 00.5 +0.4
152A Waverly Hall 80.93 304 IAMs_20 IAMs_20 03 59 25.3
comp=Z,7µm,18.0s
152A Waverly Hall 80.93 304 P P 03 20 58.5 -1.8
baz=50,SNR=9.4
SVW2 Sparrevohn 80.94 358 IAmb IAmb 03 21 05.2
comp=Z,56nm,1.1s
SVW2 IAMs_20 IAMs_20 04 03 54.2
comp=Z,7µm,19.0s
RAGM Ragged Mountai 80.95 353 IAMs_20 IAMs_20 03 57 11.1
comp=Z,8µm,22.0s
QZH Quanzhou 80.95 65⇑iP P 03 20 59.6 -0.9
QZH S S 03 31 05.2 -3.9
QZH pmax pmax
comp=Z,53nm,1.7s
QZH pmax pmax
comp=Z,820nm,5.4s
QZH LR LR
comp=Z,4µm,13.7s
QZH LR LR
comp=Z,6µm,15.2s
QZH LR LR
comp=Z,6µm,17.5s
HMT Hamilton 80.96 352 IAMs_20 IAMs_20 03 57 00.3
comp=Z,7µm,22.0s
TIGA Tifton 80.97 303 IAmb IAmb 03 21 09.1
comp=Z,47nm,1.1s
TIGA IAMs_20 IAMs_20 04 00 02.5
comp=Z,6µm,18.0s
TIGA Tifton 80.97 303 P P 03 20 59.6 -0.9
baz=50
TIGA S S 03 31 09.4 +0.3
baz=50
KNMB Chin-men Tao 81.10 66 IAmb IAmb 03 21 04.2
comp=Z,72nm,1.0s
KNMB IAMs_20 IAMs_20 04 00 08.4
comp=Z,6µm,21.0s
HIN Hinchinbrook I 81.11 353 IAmb IAmb 03 21 05.6
comp=Z,66nm,1.1s
SUCK Suckling Hills 81.16 352 IAMs_20 IAMs_20 03 58 54.0
comp=Z,7µm,20.0s
SUSD Miller 81.17 321 IAMs_20 IAMs_20 03 55 20.7
comp=Z,7µm,20.0s
SUSD Miller 81.17 321 P P 03 20 59.9 -1.5
baz=44
SUSD S S 03 31 10.2 -0.7
baz=44
Y49A Blount Mountai 81.25 306 IAmb IAmb 03 21 12.6
comp=Z,48nm,1.1s
Y49A IAMs_20 IAMs_20 03 58 39.8
comp=Z,8µm,18.0s
X48A Hartselle 81.27 307 IAMs_20 IAMs_20 03 58 33.1
comp=Z,8µm,18.0s
Z50A Ashland 81.33 306 IAMs_20 IAMs_20 03 57 27.9
comp=Z,7µm,21.0s
Z50A Ashland 81.33 306 P P 03 21 03.5 +1.0
baz=50,SNR=11
Z50A S S 03 31 12.2 -0.7
baz=50
JRMM Jerantut 81.36 92 P P 03 21 02.0 -0.8
DHAK Deception Hill 81.40 349 IAMs_20 IAMs_20 04 03 06.9
comp=Z,7µm,20.0s
CCM Cathedral Cave 81.44 312 P P 03 21 03.5 +0.6
CCM IAmb IAmb 03 21 10.2
comp=Z,36nm,0.7s
CCM Cathedral Cave 81.44 312 P P 03 21 03.5 +0.6
CCM pmax pmax
comp=Z,36nm,0.7s
CCM MLR MLR
comp=Z,12µm,18.0s
CCM Cathedral Cave 81.44 312 P P 03 21 02.3 -0.6
baz=48
JIS Juneau Island 81.54 347 IAmb IAmb 03 21 14.6
comp=Z,53nm,1.2s
PLAL Pickwick Lake 81.57 308 IAmb IAmb 03 21 06.0
comp=Z,50nm,1.1s
PLAL IAMs_20 IAMs_20 03 57 55.9
comp=Z,10µm,20.0s
DWPF Disney Wildern 81.61 299 IAMs_20 IAMs_20 03 58 46.6
comp=Z,6µm,20.0s
PVMO Portageville 81.62 310 IAMs_20 IAMs_20 03 55 55.1
comp=Z,7µm,20.0s
SEW Seward 81.64 355 IAmb IAmb 03 21 09.2
comp=Z,35nm,0.9s
PETK Petropavlovsk- 81.76 24 LR LR 04 02 09.1
comp=Z,16µm,18.3s,baz=319,slow=39
PBMO Poplar Bluff 81.81 311 IAmb IAmb 03 21 11.9
comp=Z,35nm,0.8s
PBMO IAMs_20 IAMs_20 03 56 00.2
comp=Z,9µm,22.0s
352A Blakely 81.83 304 IAmb IAmb 03 21 17.2
comp=Z,39nm,1.1s
352A IAMs_20 IAMs_20 03 59 33.3
comp=Z,6µm,19.0s
352A Blakely 81.83 304 P P 03 21 05.8 +0.8
baz=50
SISI Saibi 81.91 98 P P 03 21 08.5 +2.8
comp=Z,3µmcomp=Z,73nm,0.8s
PEBM Pemiscott Bayo 81.91 310 IAMs_20 IAMs_20 03 58 21.0
comp=Z,7µm,18.0s
BRLK Bradley Lake 82.07 356 IAmb IAmb 03 21 10.5
comp=Z,77nm,1.1s
BRLK IAMs_20 IAMs_20 04 04 05.2
comp=Z,7µm,19.0s
GTBY Guantanamo Bay 82.11 289 IAMs_20 IAMs_20 03 51 52.9
comp=Z,7µm,22.0s
PET Petropavlovsk 82.14 24 eP P 03 21 07.2 +1.0
PET eS S 03 31 18.4 -2.0
PET eSS SS 03 36 39.7 +1.2
HOM Homer 82.22 356 IAMs_20 IAMs_20 04 00 13.8
comp=Z,6µm,20.0s
553A Crawfordville 82.32 302 IAMs_20 IAMs_20 04 01 05.6
comp=Z,9µm,18.0s
CNPM China Poot 82.33 356 IAMs_20 IAMs_20 04 04 29.6
comp=Z,9µm,19.0s
250A Grady 82.38 305 IAmb IAmb 03 21 17.8
comp=Z,60nm,1.1s
250A IAMs_20 IAMs_20 04 00 00.6
comp=Z,6µm,18.0s
BKNI Bangkinang 82.41 96 P P 03 21 10.9 +2.6
comp=Z,4µmcomp=Z,4µmcomp=Z,118nm,0.7s
BKNI Bangkinang 82.41 96 IAMs_20 IAMs_20 04 00 54.2
comp=Z,6µm,21.0s
MET Memphis--Engin 82.62 309 IAMs_20 IAMs_20 04 01 04.6
comp=Z,8µm,18.0s
061Z Ochoppi 82.64 297 P P 03 21 09.4 0.0
baz=51
OXF Oxford 82.70 308 P P 03 21 09.5 -0.1
baz=48
LCAR Lake Charles 82.72 311 IAmb IAmb 03 21 12.2
comp=Z,24nm,0.8s
PDSI Padang 82.73 97 P P 03 21 10.0 0.0
comp=Z,3µmcomp=Z,140nm,0.8s
ASAJ Asahikawa 82.77 38 P P 03 21 10.2 +0.4
comp=Z,45nm,0.6s,baz=0.5,slow=5.7,SNR=25
SIT Sitka 82.87 347 IAMs_20 IAMs_20 03 59 17.7
comp=Z,8µm,20.0s
LAO LASA Array 82.90 326 IAMs_20 IAMs_20 04 00 09.0
comp=Z,10µm,20.0s
LAO LASA Array 82.90 326 P P 03 21 11.0 +0.5
baz=40,SNR=70
451A Vernon 82.92 303 IAMs_20 IAMs_20 04 00 18.0
comp=Z,7µm,19.0s
BGNE Belgrade 82.94 318 IAMs_20 IAMs_20 03 56 44.7
comp=Z,8µm,20.0s
BGNE Belgrade 82.94 318 P P 03 21 10.1 -0.7
baz=44,SNR=8.8
TATO Taipei 83.00 64 P P 03 21 10.9 -0.4
TATO IAmb IAmb 03 21 28.0
comp=Z,31nm,0.8s
TATO Taipei 83.00 64 IAMs_20 IAMs_20 04 05 09.6
comp=Z,7µm,20.0s
YHNB Yeheng 83.11 64 IAMs_20 IAMs_20 04 01 48.3
comp=Z,6µm,19.0s
EGMT Eagleton 83.34 329 P P 03 21 13.3 +0.5
baz=37,SNR=95
SSLB Suanglung 83.36 65 IAmb IAmb 03 21 19.3
comp=Z,32nm,0.7s
SSLB IAMs_20 IAMs_20 04 03 11.1
comp=Z,8µm,19.0s
BRAL Brewton 83.41 305 IAMs_20 IAMs_20 04 00 04.0
comp=Z,6µm,20.0s
BRAL Brewton 83.41 305 P P 03 21 12.0 -1.3
baz=49
BDFB Brasilia 83.49 244 P P 03 21 15.4 +1.5
comp=Z,15nm,0.7s,baz=67,slow=5.6,SNR=38
BDFB LR LR 03 59 02.7
comp=Z,10µm,18.5s,baz=61,slow=36
BDFB Brasilia 83.49 244 IAmb IAmb 03 21 22.3
comp=Z,42nm,1.1s
SDSI Sungai Dareh 83.50 96 P P 03 21 13.3 -0.6
comp=Z,5µmcomp=Z,116nm,0.9s
U40A Yellville 83.53 312 IAmb IAmb 03 21 21.0
comp=Z,30nm,0.8s
U40A Yellville 83.53 312 P P 03 21 13.3 -0.6
baz=47,SNR=28
NACB Ninganchiao 83.57 64 IAMs_20 IAMs_20 04 03 04.7
comp=Z,6µm,20.0s
X43A Marvell 83.60 309 IAMs_20 IAMs_20 04 01 51.7
comp=Z,9µm,18.0s
X43A Marvell 83.60 309 P P 03 21 12.8 -1.4
baz=48
MYKOM Kota Tinggi 83.72 93 IAmb IAmb 03 21 19.2
comp=Z,34nm,0.9s
MYKOM IAMs_20 IAMs_20 04 02 43.6
comp=Z,6µm,20.0s
MYKOM Kota Tinggi 83.72 93 P P 03 21 15.0 -0.1
KSU1 Kansas State U 83.76 316 P P 03 21 15.0 +0.1
baz=45,SNR=36
YULB Yu-li 83.85 65 IAmb IAmb 03 21 18.2
comp=Z,30nm,0.7s
YULB IAMs_20 IAMs_20 04 03 28.1
comp=Z,8µm,18.0s
RSSD Black Hills 83.87 323 P P 03 21 15.3 -0.4
RSSD IAmb IAmb 03 21 20.9
comp=Z,38nm,1.0s
RSSD Black Hills 83.87 323 P P 03 21 15.3 -0.4
RSSD pmax pmax
comp=Z,38nm,1.0s
RSSD Black Hills 83.87 323 P P 03 21 13.9 -1.8
baz=41
CRAG Craig 83.95 345 IAMs_20 IAMs_20 03 59 08.3
comp=Z,6µm,22.0s
W41B Gary Mavity, V 83.98 311 IAmb IAmb 03 21 22.8
comp=Z,51nm,0.9s
W41B IAMs_20 IAMs_20 03 57 03.7
comp=Z,10µm,22.0s
W41B Gary Mavity, V 83.98 311 P P 03 21 14.8 -1.4
baz=47,SNR=40
JNU Nakatsue 84.00 52 P P 03 21 16.8 +0.4
comp=Z,63nm,0.9s,baz=95,slow=2.0,SNR=23
KDAK Kodiak Island 84.14 356 P P 03 21 18.3 +1.8
comp=Z,42nm,0.8s,baz=43,slow=3.4,SNR=22
KDAK Kodiak Island 84.14 356 P P 03 21 16.1 -0.4
KDAK Kodiak Island 84.14 356 IAMs_20 IAMs_20 03 57 43.6
comp=Z,8µm,22.0s
KDAK Kodiak Island 84.14 356 P P 03 21 16.1 -0.4
KDAK pmax pmax
comp=Z,93nm,1.0s
KDAK MLR MLR
comp=Z,8µm,22.0s
HHAR Hobbs 84.22 312 IAmb IAmb 03 21 20.4
comp=Z,41nm,1.1s
HHAR IAMs_20 IAMs_20 03 59 29.9
comp=Z,8µm,18.0s
KRJI Kerinci 84.24 97 P P 03 21 20.2 +2.3
comp=Z,8µmcomp=Z,475nm,1.3s
UALR University of 84.31 310 IAmb IAmb 03 21 20.8
comp=Z,48nm,1.1s

KUR Kuril'sk 84.36 34 eP P 03 21 16.0 -1.9
KUR eS S 03 31 36.3 -6.9
KUR MLR MLR
comp=Z,10μm,18.0s
KUR MLR MLR
comp=N,8μm,16.0s
KUR MLR MLR
comp=E,8μm,18.0s
YUK Yuzh-Kuril'sk 84.38 36 eP P 03 21 16.1 -1.9
YUK e 03 21 22.4
YUK e 03 24 32.6
YUK ePPP PPP 03 26 24.6
YUK eS S 03 31 41.0 -2.4
YUK eSS SS 03 37 15.2 +3.0
YUK eSSS SSS 03 40 45.5
YUK pmax pmax
comp=Z,939nm,3.9s
YUK MLR MLR
comp=Z,9μm,16.0s
YUK MLR MLR
comp=N,10μm,18.0s
YUK MLR MLR
comp=E,2μm,14.0s
YOJ Yonaguni jima 84.39 63 IAMs_20 IAMs_20 04 05 55.3
comp=Z,5μm,19.0s
CCAR Cane Creek 84.55 309 IAMs_20 IAMs_20 04 02 55.8
comp=Z,8μm,18.0s
ERM Erimo 84.60 39 P P 03 21 18.3 -0.9
ERM Erimo 84.60 39 P P 03 21 18.3 -0.9
ERM pmax pmax
comp=Z,358nm,1.2s
URIC Uribia, Colomb 84.75 281 eP P 03 21 21.7 +1.4
X40A Basin Creek Fa 84.80 310 IAmb IAmb 03 21 24.0
comp=Z,29nm,0.8s
X40A Basin Creek Fa 84.80 310 P P 03 21 20.2 -0.1
baz=46,SNR=26
W39A Magazine 84.88 311 IAmb IAmb 03 21 33.2
comp=Z,50nm,1.1s
W39A Magazine 84.88 311 P P 03 21 19.7 -1.0
baz=46,SNR=22
BSCB Bom Sucesso 84.91 238 eP P 03 21 22.8 +1.8
VAS01 Vassouras-RJ 84.92 237 eP P 03 21 22.9 +2.0
VBMS Vicksburg 84.92 307 IAMs_20 IAMs_20 04 00 29.8
comp=Z,8μm,18.0s
VBMS Vicksburg 84.92 307 P P 03 21 20.0 -0.9
baz=48
IPMB Ipameri, GO 85.20 243 eP P 03 21 23.4 +0.8
MIAR Mount Ida 85.20 311 P P 03 21 22.2 -0.1
baz=46,SNR=45
OGNE Ogallala 85.28 320 IAMs_20 IAMs_20 04 00 42.4
comp=Z,7μm,20.0s
OGNE Ogallala 85.28 320 P P 03 21 20.7 -2.0
baz=42
SDV Santo Domingo 85.41 278 LR LR 03 57 00.2
comp=Z,1μm,20.2s,baz=65,slow=34
SDV Santo Domingo 85.41 278 eP P 03 21 25.1 +1.2
SDV Santo Domingo 85.41 278 P P 03 21 25.2 +1.2
SDV PP PP 03 24 41.5 -0.5
RLMT Red Lodge 85.45 327 IAmb IAmb 03 21 35.3
comp=Z,62nm,1.1s
RLMT Red Lodge 85.45 327 P P 03 21 23.2 -0.5
baz=37,SNR=53
LLLB Lillooet 85.51 337 IAmb IAmb 03 21 43.4
comp=Z,32nm,1.1s
LLLB IAMs_20 IAMs_20 04 02 24.8
comp=Z,7μm,19.0s
WLAR White Oak Lake 85.52 310 IAMs_20 IAMs_20 03 58 04.4
comp=Z,8μm,21.0s
TUL1 Leonard 85.55 313 P P 03 21 23.1 -1.0
baz=45,SNR=24
Z41A Richland Creek 85.63 309 P P 03 21 24.8 +0.3
baz=46,SNR=14
CBKS Cedar Bluff 85.66 317 IAMs_20 IAMs_20 04 05 12.6
comp=Z,6μm,18.0s
CBKS Cedar Bluff 85.66 317 P P 03 21 23.9 -0.7
baz=43,SNR=32
ELOV Elorza 85.66 275 eP P 03 21 26.4 +1.5
BBB Bella Bella 85.85 341 IAMs_20 IAMs_20 04 05 25.6
comp=Z,8μm,18.0s
DIB Dawson Inlet, 85.94 344 IAmb IAmb 03 21 30.6
comp=Z,36nm,1.0s
NEW Newport 85.95 333 IAmb IAmb 03 21 29.6
comp=Z,34nm,0.9s
NEW Newport 85.95 333 IAMs_20 IAMs_20 04 00 52.6
comp=Z,8μm,20.0s
NEW Newport 85.95 333 P P 03 21 25.2 -0.7
baz=32,SNR=45
MSO Missoula 85.97 331 IAmb IAmb 03 21 42.6
comp=Z,47nm,1.1s
MSO Missoula 85.97 331 P P 03 21 25.3 -0.8
baz=34,SNR=36
MAJO Matsushiro 85.98 46 P P 03 21 26.7 +0.5
MAJO Matsushiro 85.98 46 P P 03 21 26.7 +0.5
MAJO pmax pmax
comp=Z,97nm,1.1s
MAJO MLR MLR
comp=Z,18μm,18.0s
MAT Matsushiro 85.98 46 P P 03 21 26.2 0.0
MAT S S 03 32 00.0 +0.4
MJAR Matsushiro Arr 85.98 46 P P 03 21 26.9 +0.7
comp=Z,56nm,0.8s,baz=323,slow=4.7,SNR=70
MJAR LR LR 04 02 24.9
comp=Z,9μm,18.4s,baz=285,slow=38
MJAR Matsushiro Arr 85.98 46 P P 03 21 25.8 -0.4
MJAR Matsushiro Arr 85.98 46 P P 03 21 25.8 -0.4
MJAR pmax pmax
comp=Z,35nm,0.9s
CLDB Colider 86.07 253 eP P 03 21 26.8 -0.1
KSI Kapahiang 86.09 98 P P 03 21 28.2 +1.1
comp=Z,12μmcomp=Z,332nm,0.8s
INU Inuyama 86.15 47 IAMs_20 IAMs_20 04 05 51.8
comp=Z,10μm,22.0s
K22A Casper 86.16 324 IAmb IAmb 03 21 31.4
comp=Z,46nm,1.1s
K22A IAMs_20 IAMs_20 03 58 25.5
comp=Z,10μm,22.0s
K22A Casper 86.16 324 P P 03 21 27.6 +0.4
baz=39,SNR=20
ARAG Araguaiana, MT 86.26 247 eP P 03 21 29.7 +2.0
JOW Kunigami 86.48 58 IAmb IAmb 03 21 34.0
comp=Z,43nm,0.9s
JOW IAMs_20 IAMs_20 04 00 18.6
comp=Z,8μm,19.0s
SMY Shemya 86.54 16 IAMs_20 IAMs_20 04 03 14.7
comp=Z,8μm,21.0s
H17A Grant Village 86.59 327 P P 03 21 30.1 +0.7
baz=36,SNR=34
B08A Colville Reser 86.64 334 IAmb IAmb 03 21 46.0
comp=Z,34nm,1.1s
DLMT Dillon 86.64 329 IAmb IAmb 03 21 33.4
comp=Z,42nm,1.1s
DLMT IAMs_20 IAMs_20 04 03 25.0
comp=Z,8μm,18.0s
PHWY Pilot Hill 86.69 322 IAmb IAmb 03 21 46.9
comp=Z,38nm,1.0s
PHWY IAMs_20 IAMs_20 03 58 29.8
comp=Z,10μm,22.0s
SMRC Santa Marta, M 86.80 282⇑eP P 03 21 38.3 +7.8
OKCFA Oklahoma City 86.85 314 IAMs_20 IAMs_20 04 03 33.5
comp=Z,7μm,18.0s
FLWY Flagg Ranch 86.89 327 IAMs_20 IAMs_20 04 01 54.7
comp=Z,9μm,22.0s
CODC Agustn Codazz 86.95 280⇑eP P 03 21 32.4 +1.1
KSCO Kaye Shedlock' 87.02 319 IAmb IAmb 03 21 35.0
comp=Z,56nm,1.0s
KSCO Kaye Shedlock' 87.02 319 P P 03 21 31.5 0.0
baz=41,SNR=11
U32A Winter Ranch, 87.03 315 IAMs_20 IAMs_20 04 03 08.1
comp=Z,7μm,19.0s
COCO West Island 87.04 108 IAMs_20 IAMs_20 04 01 28.7
comp=Z,6μm,21.0s
PARB Paraibuna 87.09 237 eP P 03 21 32.8 +1.1
IMW Indian Meadow 87.14 327 IAmb IAmb 03 21 38.1
comp=Z,36nm,1.1s
IMW IAMs_20 IAMs_20 04 02 02.3
comp=Z,10μm,22.0s
MOOW Moose Ponds 87.18 327 IAMs_20 IAMs_20 04 01 52.3
comp=Z,8μm,21.0s
B06A Marblemount 87.22 336 IAMs_20 IAMs_20 04 01 08.8
comp=Z,7μm,20.0s
N23A Red Feather La 87.24 322 IAMs_20 IAMs_20 03 58 57.6
comp=Z,10μm,22.0s
N23A Red Feather La 87.24 322 P P 03 21 31.2 -1.4
baz=39,SNR=19
PMBI Palembang 87.34 96 P P 03 21 48.3 +15
FXWY Fox Creek 87.39 327 IAmb IAmb 03 21 40.6
comp=Z,28nm,1.1s
FXWY IAMs_20 IAMs_20 04 02 09.9
comp=Z,8μm,22.0s
A04D Lummi Island 87.43 337 P P 03 21 30.7 -2.3
baz=28
PDAR Pinedale Array 87.45 326 P P 03 21 34.0 +0.4
comp=Z,5.1nm,0.8s,baz=58,slow=3.7,SNR=26
PDAR PP PP 03 24 54.2 -3.1
comp=Z,4.3nm,1.0s,baz=60,slow=8.8,SNR=3.9
PDAR PKKPbc PKKPbc 03 39 23.1 +1.1
comp=Z,0.3nm,0.8s,baz=242,slow=6.7,SNR=3.2
PDAR LR LR 04 03 14.0
comp=Z,11μm,18.5s,baz=38,slow=37
PDAR Pinedale Array 87.45 326 P P 03 21 32.3 -1.2
PDAR PP 03 24 49.4 -8.0
TPAW Teton Pass 87.48 327 IAmb IAmb 03 21 37.0
comp=Z,24nm,0.9s
TPAW IAMs_20 IAMs_20 04 02 00.2
comp=Z,8μm,22.0s
BB19B Bebedouro 87.50 241 eP P 03 21 36.8 +3.1
REDW Red Top Meadow 87.54 327 IAmb IAmb 03 21 41.5
comp=Z,34nm,1.1s
C06D Leavenworth 87.54 335 P P 03 21 32.6 -1.1
baz=30,SNR=6.8
441A DeRidder 87.59 308 IAMs_20 IAMs_20 04 02 04.4
comp=Z,7μm,20.0s
ARGC Ariguani, Magd 87.62 281 eP P 03 21 37.0 +2.5
B05A Bryant 87.64 336 P P 03 21 32.2 -1.9
baz=29
X34A Smith Ranch, M 87.65 313 IAmb IAmb 03 21 38.5
comp=Z,44nm,1.0s
X34A IAMs_20 IAMs_20 04 03 44.7
comp=Z,7μm,18.0s
NATX Nacogdoches 87.79 309 P P 03 21 34.1 -1.0
baz=45
TAMC Tame, Arauca 87.81 276 eP P 03 21 37.0 +1.5
E09A Wood Farm, Sta 87.81 333 IAmb IAmb 03 21 55.7
comp=Z,45nm,1.2s
MDSI Maura Dua 87.84 97 P P 03 21 34.9 -0.6
comp=Z,3μmcomp=Z,81nm,1.9s
ISCO Idaho Springs 87.93 321 P P 03 21 35.4 -0.6
baz=40,SNR=18
F10A Beach Ranch, E 87.94 332 IAmb IAmb 03 21 44.1
comp=Z,23nm,0.8s
PAMC Pamplona, Colo 87.96 278 eP P 03 21 35.7 -1.1
LTY Liberty 88.05 335 IAmb IAmb 03 21 40.5
comp=Z,26nm,1.1s
UNV Unalaska Valle 88.07 4 IAMs_20 IAMs_20 04 01 34.1
comp=Z,9μm,21.0s
LWLI Liwa 88.08 98 P P 03 21 46.1 +9.3
WMOK Wichita Mounta 88.09 314 IAmb IAmb 03 21 40.2
comp=Z,35nm,0.9s
WMOK Wichita Mounta 88.09 314 IAMs_20 IAMs_20 04 04 39.4
comp=Z,8μm,18.0s
WMOK Wichita Mounta 88.09 314 P P 03 21 36.3 -0.2
baz=43,SNR=35
AHID Auburn Hatcher 88.12 327 IAmb IAmb 03 21 41.9
comp=Z,28nm,0.9s
SMLC San Martn de 88.13 280 eP P 03 21 37.0 0.0
E08A Dider Farm, El 88.16 333 IAmb IAmb 03 21 40.1
comp=Z,27nm,1.1s
SJCC San Jacinto, C 88.32 281 eP P 03 21 39.7 +1.8
Q24A Divide 88.34 321 IAMs_20 IAMs_20 03 59 34.4
comp=Z,8μm,21.0s
Q24A Divide 88.34 321 P P 03 21 36.1 -1.9
baz=40
E07A Sunnyside 88.38 334 IAmb IAmb 03 21 54.8
comp=Z,30nm,1.1s
E07A IAMs_20 IAMs_20 04 03 25.6
comp=Z,7μm,18.0s
KLSI 88.40 97 P P 03 21 39.7 +1.5
comp=Z,1μmcomp=Z,35nm,2.2s
HAWA Hanford 88.41 334 IAmb IAmb 03 21 41.5
comp=Z,52nm,1.1s
D05A Enumclaw 88.55 335 IAmb IAmb 03 21 45.9
comp=Z,46nm,1.2s
D05A IAMs_20 IAMs_20 04 05 15.0
comp=Z,7μm,18.0s
D03D Eldon 88.60 336 P P 03 21 38.4 -0.2
baz=28,SNR=11
KASI Kota Agung 88.73 98 P P 03 21 41.0 +1.3
comp=Z,3μmcomp=Z,155nm,0.8s
BARC Barichara 88.80 277 eP P 03 21 40.3 -0.1
CRZF Crozet Islands 88.89 159 IAMs_20 IAMs_20 04 06 51.7
comp=Z,5μm,19.0s
BRRC Barranca, Sant 88.90 278 eP P 03 21 51.0 +10
BMO Blue Mountains 88.91 331 IAmb IAmb 03 21 56.0
comp=Z,46nm,1.1s
O20A White River Ci 88.93 323 IAmb IAmb 03 21 45.6
comp=Z,44nm,0.9s
O20A White River Ci 88.93 323 P P 03 21 41.6 +1.0
baz=38,SNR=29
F07A Phinny Hill Vi 88.97 334 IAmb IAmb 03 22 02.3
comp=Z,28nm,1.1s
ADK Adak 89.00 11 IAMs_20 IAMs_20 04 04 07.4
comp=Z,8μm,21.0s
KSM Kuching 89.00 89 IAmb IAmb 03 21 46.5
comp=Z,44nm,0.9s
KSM Kuching 89.00 89 P P 03 21 43.0 +2.0
C2SB Chapadao do Su 89.00 245 eP P 03 21 42.4 +1.6
SMCO Snowmass 89.07 322 IAMs_20 IAMs_20 04 00 08.8
comp=Z,9μm,20.0s
RUSC La Rusia 89.15 277 eP P 03 21 41.7 -0.7
SALV Santo Antonio 89.22 249 eP P 03 21 43.8 +1.9
E04D Cinebar 89.29 335 P P 03 21 40.4 -1.5
baz=28,SNR=6.7
WHTX Lake Whitney, 89.31 311 P P 03 21 42.5 +0.3
baz=44,SNR=6.9
T25A Trinidad 89.36 319 IAmb IAmb 03 21 45.8
comp=Z,26nm,1.0s
T25A IAMs_20 IAMs_20 04 00 39.5
comp=Z,7μm,20.0s
T25A Trinidad 89.36 319 P P 03 21 41.4 -1.3
baz=40,SNR=19
JHJ2 Mitsune 89.36 47 IAMs_20 IAMs_20 04 01 21.7
comp=Z,7μm,20.0s
PTGC Puerto Gaitan, 89.45 275 eP P 03 21 43.6 +0.5
SDCO Great Sand Dun 89.45 320 IAMs_20 IAMs_20 04 00 18.9
comp=Z,9μm,20.0s
SDCO Great Sand Dun 89.45 320 P P 03 21 44.0 +0.8
baz=40,SNR=18
TPI Tanjungpandan 89.50 94 P P 03 21 46.1 +2.7
comp=Z,2μmcomp=Z,98nm,1.5s
MFID Camas Ranch 89.56 330 IAmb IAmb 03 21 54.5
comp=Z,39nm,1.1s
AMTX Amarillo 89.60 316 IAMs_20 IAMs_20 04 07 49.2
comp=Z,7μm,18.0s
AMTX Amarillo 89.60 316 P P 03 21 40.0 -3.7
baz=42
PCMB Pacaembu 89.75 242 eP P 03 21 47.4 +3.1
HKT Hockley 89.78 309 P P 03 21 44.2 -0.2
HKT IAmb IAmb 03 21 53.8
comp=Z,26nm,1.1s
HKT Hockley 89.78 309 P P 03 21 44.2 -0.2
HKT pmax pmax
comp=Z,26nm,1.1s
HKT MLR MLR
comp=Z,10μm,21.0s
F04A Amboy 89.79 335 IAmb IAmb 03 22 00.3
comp=Z,29nm,1.1s
PTBC PUERTO BERRIO, 89.83 278 eP P 03 21 45.6 +0.7
F04D Rainier, OR 89.86 336 P P 03 21 43.1 -1.5
baz=28
LCBC Los crdobas, 89.88 281 eP P 03 21 50.3 +5.1
SBUM Sibu 89.90 87 P P 03 21 47.0 +1.7
UREC San Jos de Ur 89.92 280 eP P 03 21 45.0 -0.4
G05D Wamic, OR 90.03 334 P P 03 21 45.1 -0.3
baz=29
SPBC San Pablo de B 90.07 277 eP P 03 21 47.0 +0.8
S22A 4UR Ranch, Cre 90.12 321 IAMs_20 IAMs_20 04 04 02.8
comp=Z,8μm,20.0s
S22A 4UR Ranch, Cre 90.12 321 P P 03 21 45.7 -0.6
baz=39,SNR=21
ABTX Abilene, Hawle 90.12 313 IAMs_20 IAMs_20 04 00 36.1
comp=Z,6μm,21.0s
ABTX Abilene, Hawle 90.12 313 P P 03 21 44.2 -1.9
baz=43,SNR=31
F03A Seaside 90.17 336 IAMs_20 IAMs_20 04 03 01.2
comp=Z,8μm,21.0s
435B Jarrell 90.25 311 P P 03 21 45.7 -1.0
baz=44,SNR=8.4
CHIC Chingaza 90.44 276 eP P 03 21 47.0 -1.3
SAML Samuel 90.51 259 eP P 03 21 49.4 +1.4
SAML Samuel 90.51 259 P P 03 21 48.1 +0.1
SAML Samuel 90.51 259 P P 03 21 48.1 +0.1
SAML pmax pmax
comp=Z,12nm,1.1s
J08A Circle Bar Ran 90.63 331 IAmb IAmb 03 21 53.2
comp=Z,22nm,1.0s
G03D McMinnville, O 90.71 335 P P 03 21 47.9 -0.6
baz=28,SNR=5.8
VILC Villavicencio, 90.72 276 eP P 03 21 50.3 +1.0
VILC eP PcP 03 21 51.0 +0.6
NORC Norcasia 90.75 278 eP P 03 21 49.0 -0.3
ROSC El Rosal 90.77 277 P P 03 21 51.2 +1.4
comp=Z,12nm,0.6s,baz=85,slow=4.6,SNR=10
ROSC LR LR 04 01 03.5
comp=Z,1μm,18.9s,baz=48,slow=35
ROSC El Rosal 90.77 277 IAMs_20 IAMs_20 04 08 32.0
comp=Z,6μm,19.0s
STKI Sintang 90.78 89 P P 03 21 50.2 +0.8
KKM Kota Kinabalu 90.82 82 IAmb IAmb 03 21 53.1
comp=Z,29nm,0.9s
I05D Terrebonne, OR 90.82 334 P P 03 21 48.4 -0.8
baz=29
HELC Santa Helena 90.88 279 eP P 03 21 49.6 -0.7
MSTX Muleshoe 90.88 316 IAmb IAmb 03 21 57.2
comp=Z,38nm,1.1s
MSTX IAMs_20 IAMs_20 04 01 21.2
comp=Z,8μm,22.0s
MSTX Muleshoe 90.88 316 P P 03 21 49.0 -0.8
baz=41,SNR=18
DBBC Dabeiba 90.89 280 eP P 03 21 52.3 +2.3
DUG Dugway, Tooele 90.96 326 IAmb IAmb 03 21 57.2
comp=Z,42nm,1.1s
DUG IAMs_20 IAMs_20 04 08 14.5
comp=Z,8μm,19.0s
DUG Dugway, Tooele 90.96 326 P P 03 21 48.8 -1.3
baz=35,SNR=39
DBJI Dramaga 91.12 97 P P 03 21 54.0 +3.1
comp=Z,155nm,0.9s
H04D Lebanon 91.14 335 P P 03 21 49.1 -1.5
baz=28,SNR=7.6
PINE Pine Mountain 91.16 333 IAmb IAmb 03 21 55.6
comp=Z,23nm,1.1s
PINE IAMs_20 IAMs_20 04 04 28.2
comp=Z,8μm,18.0s
GUY2C Guyana, Caldas 91.35 278 eP P 03 21 53.6 +1.0
MVCO Mesa Verde 91.36 322 IAmb IAmb 03 22 12.3
comp=Z,23nm,1.1s
MVCO Mesa Verde 91.36 322 P P 03 21 50.2 -1.8
baz=38,SNR=12
TEIG Tepich 91.45 297 P P 03 21 51.5 -0.9
TEIG IAmb IAmb 03 22 00.9
comp=Z,34nm,1.0s
CBOC Ciudad Bolivar 91.45 279 eP P 03 21 53.6 +0.9
CBOC ⇑eP PcP 03 21 54.3 +0.6
WVOR Wild Horse Val 91.48 331 IAmb IAmb 03 21 57.5
comp=Z,33nm,1.1s
WVOR IAMs_20 IAMs_20 04 04 01.9
comp=Z,7μm,20.0s
ELK Elko 91.55 328 IAMs_20 IAMs_20 04 06 27.9
comp=Z,8μm,19.0s
I04A Tendick Farm, 91.67 334 P P 03 21 51.9 -1.2
baz=28,SNR=8.9
J05D Fort Rock, OR 91.70 333 P P 03 21 53.1 -0.3
baz=29,SNR=21
JCT Junction City 91.78 312 IAmb IAmb 03 22 09.9
comp=Z,32nm,1.1s
JCT Junction City 91.78 312 P P 03 21 55.1 +1.2
baz=43,SNR=8.2
ANIL Santa Ana 91.83 277 eP P 03 21 56.3 +1.7
SPMM Sapulut 91.84 83 P P 03 21 54.0 -0.3
I02D Swisshome 91.88 335 P P 03 21 55.0 +1.0
baz=27
PRAC Prado 91.90 276 eP P 03 21 55.0 +0.3
J04D Umpqua Nationa 92.05 334 P P 03 21 54.1 -1.0
baz=29
PTAC Punta Ardita, 92.05 281 eP P 03 21 58.3 +3.0
MACC Macarena, Meta 92.05 274 eP P 03 21 55.6 +0.3
ORTC Ortega, Tolima 92.06 277 eP P 03 21 56.3 +0.9
ORTC eP P 03 21 56.3 +0.9
K05A Summer Lake 92.07 333 IAmb IAmb 03 21 59.4
comp=Z,39nm,1.1s
I03D Drain, OR 92.08 335 P P 03 21 55.9 +1.0
baz=28
ANMO Albuquerque 92.10 319 P P 03 21 55.4 -0.1
ANMO PP PP 03 25 38.9 +4.3
ANMO Albuquerque 92.10 319 IAMs_20 IAMs_20 04 07 52.2
comp=Z,6μm,18.0s
ANMO Albuquerque 92.10 319ceP P 03 21 54.4 -1.1
ANMO pmax pmax
comp=Z,20nm,1.7s
ANMO Albuquerque 92.10 319 P P 03 21 55.8 +0.4
baz=39
PLMC San Jos del P 92.26 278 eP P 03 21 57.6 +1.3
SOLC Bahia Solano 92.32 280 eP P 03 21 58.3 +1.8
K04D Chiloquin, OR 92.47 333 P P 03 21 57.7 +0.8
baz=29
MOD Modoc Plateau 92.57 332 IAmb IAmb 03 22 04.6
comp=Z,22nm,0.9s
CISI Cisompet, Garu 92.57 98 P P 03 22 00.2 +2.5
comp=Z,4μmcomp=Z,154nm,1.4s
J01E Myrtle Point 92.75 335 P P 03 21 57.7 -0.3
baz=27
YOTC Yotoco, Valle 92.88 277 eP P 03 21 58.3 -1.0
HUMO Hull Mountain 92.91 334 IAMs_20 IAMs_20 04 07 37.4
comp=Z,6μm,18.0s
BETC Betania 92.97 276 eP P 03 21 55.0 -4.7
L04D Klamath Falls 93.02 333 P P 03 21 57.8 -1.7
baz=28,SNR=11
Y22D IRIS PASSCAL I 93.02 319 IAMs_20 IAMs_20 04 09 47.5
comp=Z,6μm,18.0s
PIZC Pizarro, Choco 93.06 279 eP P 03 21 43.0 -17
K02D Willamette Mer 93.07 334 P P 03 21 59.7 0.0
baz=28
833A Chaparral WMA, 93.11 310 IAMs_20 IAMs_20 04 02 39.4
comp=Z,8μm,22.0s
833A Chaparral WMA, 93.11 310 P P 03 22 01.1 +1.1
baz=43
KEBM Edson Butte 93.14 335 IAMs_20 IAMs_20 04 06 31.1
comp=Z,6μm,19.0s
M04C Macdoel 93.23 333 P P 03 21 59.4 -1.1
baz=29,SNR=9.0
SIV San Ignacio 93.27 252 LR LR 04 06 26.8
comp=Z,12μm,18.5s,baz=86,slow=37
L02E Cave Junction 93.53 334 P P 03 22 03.4 +1.8
baz=28
YBH Yreka Blue Hor 93.59 333 IAMs_20 IAMs_20 04 06 08.6
comp=Z,7μm,18.0s
KBO Bosley Butte 93.69 334 IAMs_20 IAMs_20 04 09 59.1
comp=Z,6μm,18.0s
R11A Troy Canyon, C 93.70 327 P P 03 22 01.4 -1.4
baz=33,SNR=25
FLOC Florencia 93.82 275 eP P 03 22 02.9 -0.5
M02C Callahan 93.94 333 P P 03 22 03.7 0.0
baz=28
PTLC Puerto Leguiza 94.01 273 eP P 03 22 04.9 +0.6
MNTX Cornudas Mount 94.03 316 IAMs_20 IAMs_20 04 07 04.5
comp=Z,6μm,18.0s
MNTX Cornudas Mount 94.03 316 P P 03 22 04.4 +0.2
baz=40,SNR=30
ITAB Concordia 94.05 238 eP P 03 22 07.0 +2.9
WUAZ Wupatki 94.10 322 IAmb IAmb 03 22 12.1
comp=Z,18nm,0.9s
WUAZ IAMs_20 IAMs_20 04 08 27.9
comp=Z,6μm,19.0s
WUAZ Wupatki 94.10 322 P P 03 22 04.7 +0.1
baz=36,SNR=16
PAHR Pah Rah Range 94.11 330 IAmb IAmb 03 22 09.9
comp=Z,21nm,1.0s
PAHR IAMs_20 IAMs_20 04 03 55.4
comp=Z,7μm,20.0s
KRMB Red Mountain 94.19 334 IAMs_20 IAMs_20 04 10 17.5
comp=Z,7μm,19.0s
N02D Trinity Center 94.25 333 P P 03 22 04.7 -0.4
baz=28
BEKR Beckworth 94.35 331 IAMs_20 IAMs_20 04 03 56.9
comp=Z,7μm,21.0s
VCNR Virginia City 94.57 330 IAMs_20 IAMs_20 04 04 10.2
comp=Z,8μm,20.0s
EPT El Paso 94.58 317 IAMs_20 IAMs_20 04 04 09.1
comp=Z,7μm,19.0s
ACON Acoyapa 94.60 289 IAMs_20 IAMs_20 04 01 01.0
comp=Z,6μm,22.0s
121A Cookes Peak, D 94.67 318 IAMs_20 IAMs_20 04 09 05.3
comp=Z,7μm,18.0s
121A Cookes Peak, D 94.67 318 P P 03 22 06.4 -0.9
baz=38,SNR=8.5
YERR Yerington 94.67 330 IAmb IAmb 03 22 11.4
comp=Z,22nm,1.1s
YERR IAMs_20 IAMs_20 04 06 10.5
comp=Z,7μm,20.0s
PNTR Pine Nut 94.73 330 IAMs_20 IAMs_20 04 04 04.8
comp=Z,8μm,21.0s

ESTN Estel 94.75 291 IAmb IAmb 03 22 16.3
comp=Z,35nm,1.1s
NVAR Mina Array Bea 94.77 329 P P 03 22 09.0 +1.3
comp=Z,3.8nm,0.8s,baz=47,slow=4.7,SNR=20
NVAR PP PP 03 25 57.4 +2.1
comp=Z,2.9nm,1.1s,baz=15,slow=5.1,SNR=6.1
NVAR PKKPbc PKKPdf 03 39 02.8 +1.0
comp=Z,1.0nm,0.7s,baz=188,slow=3.4,SNR=7.3
NVAR LR LR 04 08 19.6
comp=Z,10μm,19.2s,baz=28,slow=38
NVAR Mina Array Bea 94.77 329 P P 03 22 07.5 -0.2
NVAR PP 03 25 57.6 +2.3
TGUH Tegucigalpa,Un 94.80 292 IAMs_20 IAMs_20 04 03 30.5
comp=Z,5μm,20.0s
TXAR Lajitas Array 94.87 313 P P 03 22 10.0 +1.8
comp=Z,11nm,1.0s,baz=66,slow=4.3,SNR=25
TXAR PKKPbc PKKPdf 03 39 02.8 +1.2
comp=Z,0.7nm,0.8s,baz=196,slow=6.4,SNR=2.6
TXAR LR LR 04 03 55.6
comp=Z,3μm,20.6s,baz=0.0,slow=35
TXAR Lajitas Array 94.87 313 P P 03 22 07.8 -0.4
TXAR PKKPdf PKKPbc 03 39 05.7 +2.7
TXAR Lajitas Array 94.87 313 P P 03 22 07.8 -0.4
GR1C Gorgona, Isla 94.91 278⇑eP P 03 22 08.2 -0.2
RUBR Rubicon Trail 94.98 330 IAMs_20 IAMs_20 04 04 24.9
comp=Z,6μm,21.0s
X16A Lo Mia Camp, P 95.02 322 IAMs_20 IAMs_20 04 09 09.3
comp=Z,6μm,20.0s
SHPR Sheep Range 95.05 326 IAMs_20 IAMs_20 04 11 58.6
comp=Z,5μm,18.0s
HDC Heredia 95.07 287 IAMs_20 IAMs_20 03 59 10.6
comp=Z,5μm,22.0s
TPNV Topopah Spring 95.16 327 P P 03 22 10.2 +0.7
baz=33
AFDM Forest Hills D 95.38 331 IAmb IAmb 03 22 26.4
comp=Z,17nm,1.2s
JTS Las Juntas de 95.52 288 LR LR 03 59 56.0
comp=Z,5μm,22.0s,baz=103,slow=32
JTS Las Juntas de 95.52 288 IAMs_20 IAMs_20 03 59 32.4
comp=Z,6μm,22.0s
GRAC Grapevine Rang 95.59 327 P P 03 22 12.6 +1.3
baz=32
FURC Furnace Creek, 95.83 327 P P 03 22 13.2 +1.0
baz=32
BKB Balikpapan 95.86 87 IAMs_20 IAMs_20 04 10 23.8
comp=Z,6μm,22.0s
CMB Columbia Colle 95.95 330 IAMs_20 IAMs_20 04 07 43.1
comp=Z,6μm,20.0s
SHOC Shoshone, Teco 96.05 326 P P 03 22 13.4 0.0
baz=33
TUQ Turquoise Moun 96.28 325 P P 03 22 15.3 +0.7
baz=33
319A Douglas 96.36 319 IAmb IAmb 03 22 27.5
comp=Z,14nm,1.1s
319A IAMs_20 IAMs_20 04 12 17.0
comp=Z,7μm,18.0s
CWC Cottonwood Cre 96.37 327 P P 03 22 16.1 +1.1
baz=32
TUC Tucson 96.39 320 P P 03 22 17.0 +1.9
TUC Tucson 96.39 320 P P 03 22 17.0 +1.9
TUC pmax pmax
comp=Z,9.0nm,1.1s
TUC MLR MLR
comp=Z,9μm,19.0s
TUC Tucson 96.39 320 P P 03 22 15.4 +0.4
baz=36
PDMCI Parker Dam,Lak 96.40 324 P P 03 22 14.6 -0.3
baz=34
MPMC Manual Prospec 96.44 327 P P 03 22 15.1 -0.2
baz=32
GMRC Granite Mounta 96.70 325 P P 03 22 18.0 +1.6
baz=33
GSC Goldstone, Bar 96.78 326 IAMs_20 IAMs_20 04 08 53.5
comp=Z,7μm,19.0s
GSC Goldstone, Bar 96.78 326 P P 03 22 18.4 +1.6
baz=32
OTAV Otavalo 96.84 276 eP P 03 22 18.9 +1.1
OTAV Otavalo 96.84 276 P P 03 22 15.4 -2.4
OTAV IAmb IAmb 03 22 20.9
comp=Z,17nm,0.9s
OTAV Otavalo 96.84 276 P P 03 22 15.4 -2.4
OTAV pmax pmax
comp=Z,17nm,1.0s
OTAV MLR MLR
comp=Z,4μm,21.0s
HEC Hector,Ludlow 96.97 325 P P 03 22 18.4 +0.8
baz=33
IRM Iron Mountain 96.99 324 P P 03 22 17.6 -0.1
baz=34,SNR=9.9
CPUP Villa Florida 97.03 242 LR LR 04 07 41.2
comp=Z,22μm,18.3s,baz=53,slow=36
Y12C Blythe 97.04 324 P Pdif 03 22 19.1 +1.2
baz=34
KCP Kidapawan 97.06 75⇑eP P 03 22 16.4 -2.0
ISA Isabella, Lake 97.20 327 IAmb IAmb 03 22 24.4
comp=Z,12nm,0.9s
ISA Isabella, Lake 97.20 327 P P 03 22 19.4 +0.8
baz=31
MPSI Mapaga 97.23 84 P P 03 22 15.3 -3.7
VES Vestal, Richgr 97.30 328 P Pdif 03 22 19.9 +0.8
baz=31
DAV Davao City (W) 97.39 75 IAMs_20 IAMs_20 04 13 56.7
comp=Z,5μm,20.0s
SAO San Andreas Ge 97.47 330 IAMs_20 IAMs_20 04 05 52.4
comp=Z,6μm,20.0s
BELC Belle Mtn. Jos 97.51 325 P Pdif 03 22 22.1 +1.9
baz=33
BC3 Big Chuckawall 97.55 324 P P 03 22 21.0 +0.7
baz=34
EDW2 Edwards Air Fo 97.66 327 P P 03 22 21.5 +0.8
baz=32
214A Organ Pipe Nat 97.69 321 P P 03 22 20.8 0.0
baz=35
GLA Glamis 97.76 323 IAMs_20 IAMs_20 04 05 35.9
comp=Z,7μm,20.0s
PLTB Pedras Altas 97.97 236 eP Pdif 03 22 23.9 +2.0
XPFO Pion Flat 98.04 325 P P 03 22 20.6 -2.0
XPFO Pion Flat 98.04 325 IAMs_20 IAMs_20 04 05 40.0
comp=Z,8μm,22.0s
PFO Pinyon Flats O 98.05 325 P P 03 22 20.9 -1.7
PFO Pinyon Flats O 98.05 325 IAMs_20 IAMs_20 04 05 40.0
comp=Z,8μm,21.0s
PFO Pinyon Flats O 98.05 325 P P 03 22 20.9 -1.7
PFO pmax pmax
comp=Z,8.0nm,1.0s
PFO MLR MLR
comp=Z,8μm,21.0s
PFO Pinyon Flats O 98.05 325 P P 03 22 23.2 +0.7
baz=33
CMIG Matias Romero 98.16 299 LR LR 04 05 32.7
comp=Z,4μm,20.1s,baz=42,slow=35
MWC Mount Wilson 98.24 326 IAMs_20 IAMs_20 04 10 28.1
comp=Z,7μm,20.0s
PASC Pasadena Art C 98.34 326 IAMs_20 IAMs_20 04 11 22.8
comp=Z,6μm,20.0s
MURC Murrieta 98.39 325 P Pdif 03 22 26.4 +2.4
baz=32
PKM Mcpherson Peak 98.42 328 P Pdif 03 22 25.3 +1.0
baz=30
MONP2 Monument Peak 98.63 324 P Pdif 03 22 26.7 +1.4
baz=33
IKP In-Ko-Pah, Jac 98.69 324 P Pdif 03 22 27.4 +2.0
baz=33
LPAZ La Paz 98.80 256 P P 03 22 25.8 -0.9
comp=Z,1.2nm,0.7s,baz=346,slow=5.5,SNR=3.4
LPAZ LR LR 04 06 57.9
comp=Z,3μm,21.8s,baz=56,slow=35
LPAZ La Paz 98.80 256 eP P 03 22 25.9 -0.7
LPAZ La Paz 98.80 256 P P 03 22 24.5 -2.2
HSIG 99.11 318 IAMs_20 IAMs_20 04 14 03.7
comp=Z,4μm,18.0s
MNMC Minye Minye 101.61 255 IAMs_20 IAMs_20 04 16 40.4
comp=Z,5μm,18.0s
GO01 Chusmiza 101.63 254 IAMs_20 IAMs_20 04 11 28.8
comp=Z,7μm,19.0s
PB11 IPOC Station P 102.03 254 IAMs_20 IAMs_20 04 12 00.5
comp=Z,6μm,19.0s
PB01 IPOC Station P 102.66 253 IAMs_20 IAMs_20 04 11 43.1
comp=Z,6μm,20.0s
LPA La Plata 102.76 236 PDIFF Pdif 03 22 42.5 -0.5
LPA PP PP 03 26 58.7 +1.4
LPA PPP PPP 03 29 07.7
LPA SKIKP 03 30 39.2
LPA SDIFF 03 34 27.8
LPA PS PS 03 35 58.2 -6.4
LPA PSP PSP 03 36 55.5
LPA SS SS 03 41 37.6 +0.4
LPA SSS SSS 03 45 35.8
NNA Nana 102.99 265 IAMs_20 IAMs_20 04 14 06.7
comp=Z,6μm,20.0s
LVC Limon Verde 103.14 252 IAMs_20 IAMs_20 04 15 41.1
comp=Z,6μm,20.0s
PB04 IPOC Station P 103.91 253 IAMs_20 IAMs_20 04 14 48.3
comp=Z,6μm,19.0s
HOPE Hope Point 104.33 210 IAMs_20 IAMs_20 04 04 20.2
comp=Z,7μm,21.0s
GO02 Mina Guanaco 105.13 250 IAMs_20 IAMs_20 04 14 01.8
comp=Z,7μm,20.0s
PSAC1 Pilbara Seismi 110.14 102 IAMs_20 IAMs_20 04 17 57.9
comp=Z,4μm,21.0s
PSAA1 Pilbara Seismi 110.19 102 IAMs_20 IAMs_20 04 17 50.1
comp=Z,4μm,22.0s
PSAA2 Pilbara Seismi 110.19 102 IAMs_20 IAMs_20 04 17 50.1
comp=Z,4μm,21.0s
PSA00 Pilbara Seismi 110.19 102 IAMs_20 IAMs_20 04 20 56.2
comp=Z,4μm,18.0s
PSAB2 Pilbara Seismi 110.20 102 IAMs_20 IAMs_20 04 20 57.2
comp=Z,4μm,19.0s
PSAC3 Pilbara Seismi 110.21 102 IAMs_20 IAMs_20 04 20 56.5
comp=Z,4μm,20.0s
MORW Morawa 111.43 111 IAMs_20 IAMs_20 04 13 12.9
comp=Z,4μm,21.0s
PLCA Paso Flores 114.28 236 PKP PKiKP 03 27 26.2 +1.0
comp=Z,5.6nm,1.0s,baz=115,slow=7.4,SNR=7.3
MANU Manus Island 119.64 67 IAMs_20 IAMs_20 04 30 00.1
comp=Z,4μm,22.0s
WRA Warramunga Arr 120.61 92 PKP PKPdf 03 27 37.3 -0.6
comp=Z,4.3nm,0.5s,baz=322,slow=2.0,SNR=29
WRA PP PP 03 29 04.1 -1.6
comp=Z,6.8nm,1.0s,baz=315,slow=7.2,SNR=5.0
WRA Warramunga Arr 120.61 92 PKPdf 03 27 37.4 -0.5
FORT Forrest 121.27 106 IAMs_20 IAMs_20 04 18 02.7
comp=Z,5μm,22.0s
PMSA Palmer Station 121.65 210 IAMs_20 IAMs_20 04 15 01.0
comp=Z,4μm,20.0s
ASAR Alice Springs 122.25 96 PKP PKPdf 03 27 40.9 -0.1
comp=Z,8.2nm,0.6s,baz=328,slow=1.7,SNR=42
ASAR PP PP 03 29 14.9 -1.9
comp=Z,5.4nm,1.0s,baz=308,slow=4.0,SNR=4.7
ASAR PKKPbc PKKPbc 03 37 36.6 +0.8
comp=Z,0.8nm,0.5s,baz=118,slow=3.6,SNR=6.5
ASAR Alice Springs 122.25 96 PKPdf 03 27 40.3 -0.7
CASY Casey 124.36 151 IAMs_20 IAMs_20 04 22 57.2
comp=Z,4μm,20.0s
PMG Port Moresby 124.38 73c iPKIKP PKiKP 03 27 48.2 +2.6
PMG pmax pmax
comp=Z,104nm,1.3s
QSPA South Pole Qui 128.11 180 PKiKP 03 27 52.3 +0.8
BBOO Buckleboo 128.26 105 IAMs_20 IAMs_20 04 22 23.7
comp=Z,5μm,22.0s
CTAO Charters Tower 130.06 85 IAMs_20 IAMs_20 04 35 00.4
comp=Z,4μm,20.0s
STKA Stephens Creek 132.11 101 PKP PKPdf 03 27 60.0 +0.4
comp=Z,8.5nm,0.9s,baz=335,slow=5.3,SNR=8.6
STKA Stephens Creek 132.11 101 PKIKP PKPdf 03 28 00.0 +0.4
EIDS Eidsvold 136.61 88 IAMs_20 IAMs_20 04 34 35.5
comp=Z,3μm,21.0s
TOO Toolangi 137.19 107 IAMs_20 IAMs_20 04 37 43.3
comp=Z,3μm,20.0s
CAN Canberra 139.13 102 IAMs_20 IAMs_20 04 34 20.6
comp=Z,3μm,20.0s
FUNA Funafuti 144.75 38 PKPab 03 28 21.1 -0.8
TAOE Nuku Hiva Isla 145.90 324 eLR LR 04 16 24.3
comp=Z,5μm,23.9s
NOUC Port Laguerre 146.62 71 IAMs_20 IAMs_20 04 36 16.9
comp=Z,4μm,22.0s
DZM Mont Dzumac 146.70 71 ePKPbc PKPbc 03 28 26.6 -1.4
comp=Z,270nm,1.4s
DZM Mont Dzumac 146.70 71 eLR LR 04 16 49.2
comp=Z,6μm,25.8s
DZM Mont Dzumac 146.70 71 PKPdf 03 28 27.2 +0.9
DZM IAMs_20 IAMs_20 04 31 21.2
comp=Z,4μm,22.0s
MSVF Nonsavu 151.70 50 PKPbc 03 28 41.3 +0.5
MSVF Nonsavu 151.70 50 PKIKP PKPbc 03 28 41.3 +0.5
PMOR Pomariorio Ree 154.65 333 ePKIKP PKPdf 03 28 38.6 -0.1
comp=Z,28nm,1.1s
RPZ Rata Peaks 157.23 113 PKPdf PKPdf 03 28 39.6 -1.7
RPZ PKPab 03 29 11.3 -1.1
PPT2 Papeete2 157.63 334 ePKIKP PKPdf 03 28 42.6 -0.1
comp=Z,37nm,1.3s
PPT2 Papeete2 157.63 334 eSS SS 03 52 51.2 +2.3
comp=Z,2μm,27.8s
PPT2 Papeete2 157.63 334 eLR LR 04 21 42.5
comp=Z,6μm,25.2s

IDC 03 03:16:12.3±2.8, 38.°18N×20.°47E, h0km, mb4.1/10, mb1 4.1/12, mb1mx3.9/37, mbtmp4.0/12, ML3.2/2, MS5.5/2, Ms1 5.5/2, ms1mx4.5/62, Error ellipse: s-maj=61.7km s-min=22.4km az=25.0
NEIC 03 03:16:15.8±4.8, 38.°13N±0.°03×20.°37E±0.°04, h20km±5km, Error ellipse: s-maj=5.4km s-min=3.1km az=125.0
ATH 03 03:16:15.9, 38.°21N×20.°38E, h8km±3km, ML4.4/2, Error ellipse: s-maj=3.8km s-min=1.5km az=284.0
THE 03 03:16:15.0, 38.°22N×20.°37E, h12km±1km, ML4.4/4, Error ellipse: s-maj=3.1km s-min=0.8km az=87.0
ISC 03 03:16:14.4±0.8, 38.°19N±0.°03×20.°35E±0.°04, h13km±4km, n84, σ1§84/96, mb4.1/10, 2C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.01	356	P	Pg	03 16 17.5	+0.9
KEF4	Livadi, Kephal	0.09	41	P	Pg	03 16 17.7	+0.4
ARG2	Argostoli	0.11	96	P	Pg	03 16 17.1	-0.4
ARG2				S	Sg	03 16 20.3	+0.7
	543μm,0.3s						
ARG2	Argostoli	0.11	96		Pg	03 16 17.1	-0.4
ARG2					Sg	03 16 20.3	+0.7
KEF2	Argostoli. Kep	0.11	103	P	Pg	03 16 17.8	+0.3
KEF1	Kardakata, Kep	0.13	48	P	Pg	03 16 18.1	+0.4
KEF1				S	Sg	03 16 20.1	-0.1
VLS	Valsamata	0.19	94	P	Pg	03 16 19.1	+0.4
VLS				S	Sg	03 16 22.0	+0.4
	245μm,0.3s						
VLS	Valsamata	0.19	94	P	Pg	03 16 19.0	+0.3
VLS				S	Sg	03 16 22.1	+0.5
VLS				AML	AML	03 16 22.3	
VLS				AML	AML	03 16 22.6	
VLS	Valsamata	0.19	94		Pg	03 16 19.1	+0.4
VLS					Sg	03 16 22.0	+0.4
VSK1	VASILIKIADES	0.28	38	P	Pg	03 16 19.9	-0.3
VSK1				S	Sg	03 16 23.9	-0.2
	61μm,0.3s						
VLMS	Volimes, Zakyn	0.40	142	P	Pb	03 16 23.5	+0.1
VLMS				S	Sb	03 16 29.9	+0.4
VLMS				AML	AML	03 16 30.7	
VLMS				AML	AML	03 16 30.7	
EVGI	Lefkada island	0.49	29	P	Pg	03 16 23.9	-0.2
EVGI	Lefkada island	0.49	29	P	Pb	03 16 25.2	+0.2
EVGI	Lefkada island	0.49	29		Pg	03 16 23.9	-0.2
MGNA	Meganis	0.58	37	P	Pb	03 16 26.1	-0.3
ZAK2	Zakynthos	0.59	133	P	Pb	03 16 26.9	+0.3
ZAK2	Zakynthos	0.59	133		Pb	03 16 26.9	+0.3
KRI1	kERI	0.64	145	P	Pb	03 16 27.7	+0.2
KRI1				S	Sb	03 16 37.0	+0.6
	30μm,0.3s						
AST1	Astakos	0.68	59	P	Pg	03 16 27.2	-0.4
RLS	Riolos of Patr	0.89	98	P	Pg	03 16 31.2	-0.4
RLS	Riolos of Patr	0.89	98	P	Pn	03 16 32.6	-0.1
LAKA	Lakka	1.28	87		Pg	03 16 39.8	+0.7
EVR	Evrytania	1.35	57		Pg	03 16 44.0	+3.5
KALE	Kalithea	1.42	81		Pg	03 16 43.7	+1.9
KLV	Kalavryta, Ach	1.43	95		Pg	03 16 43.8	+2.0
JAN	Janina	1.52	15		Pg	03 16 47.2	+3.6
KASA	Kassiopi	1.59	348		Pg	03 16 51.7	+6.8
ITM	Ithomi	1.61	128		Pg	03 16 48.2	+2.9
ITM	Ithomi	1.61	128		Pn	03 16 42.1	-0.4
MAKR	Makrakomi, Fth	1.62	59		Pg	03 16 49.9	+4.3
DLFA	Delphi	1.71	80		Pg	03 16 48.3	+1.0
AGG	Agios Georgios	1.76	61		Pg	03 16 50.5	+2.3
AGG	Agios Georgios	1.76	61		Pn	03 16 44.3	-0.4
AGG	Agios Georgios	1.76	61		Pg	03 17 05.0	+17
THL	Klokotos Trika	1.89	43		Pg	03 16 52.5	+1.8
LKR	Lokris	2.13	77		Pb	03 16 52.2	-0.7
LRSO	Larissa Observ	2.17	46		Pg	03 16 57.7	+1.6
KRND	KRANIDI	2.36	109		Pg	03 16 59.4	-0.3
SCTE	Santa Cesarea	2.38	323	Pn	Pn	03 16 54.0	+0.8
VLI	Veliai	2.53	125		Pg	03 17 05.7	+2.8
LIT	Litokhoron	2.53	40		Pn	03 16 54.2	-1.1
FNA	Florina	2.71	17	Pn	Pn	03 16 57.5	-0.2
TIP	Timpagrande	2.98	290	⇓P	Pn	03 17 03.1	+1.7
TIP				⇑S	Sn	03 17 36.5	-0.6
TIP	Timpagrande	2.98	290	Pn	Pn	03 17 02.6	+1.1
TIP					Sn	03 17 32.5	-4.6
TIR	Tirane	3.17	353	⇓P	Pn	03 17 05.9	+1.8
TIR				⇑S	Sn	03 17 41.6	-0.2
TIR	Tirane	3.17	353	Pn	Pn	03 17 05.6	+1.5
CEL	Celeste	3.51	272		Pn	03 17 07.4	-1.4
APE	Apeiranthos	4.26	104	⇓P	Pb	03 17 26.0	-3.3
PDG	Podgorica	4.32	349	⇓S	Sn	03 18 06.5	-3.5
PDG	Podgorica	4.32	349	Pn	Pn	03 17 21.1	+1.3
PDG				Sn	Sn	03 18 09.8	-0.2
ALN	Alexandroupoli	5.17	57	Pn	Pn	03 17 32.4	+0.9
WDD	Wied Dalam	5.22	245	Pn	Pn	03 17 32.7	+0.5
CORL	Corleone	5.57	269	Pn	Pn	03 17 39.1	+2.1
KARP	Karpathos	6.06	114	Pn	Pn	03 17 44.4	+0.6
NRCA	Norcia	7.20	312	Pn	Pn	03 18 00.7	+1.2
MURB	Monte Urbino	7.81	313	Pn	Pn	03 18 10.5	+2.7
OSSC	Osservatorio P	8.71	311	Pn	Pn	03 18 22.3	+2.2
SOKA	Soboth	9.35	337	ePn	Pn	03 18 28.7	-0.2
	4.2nm,0.3s						
OBKA	Obir	9.35	335	ePn	Pn	03 18 29.8	+0.8
	2.1nm,0.2s						
OBKA				eSn	Sn	03 20 10.5	-3.5
	6.6nm,0.3s						
VLC	Villacollemand	9.59	312	Pn	Pn	03 18 34.3	+2.2
STAL	STALIGIAL	9.85	327	Pn	Pn	03 18 36.7	+1.0
CTI	Castel Tesino	10.16	323		Pn	03 18 39.3	-0.8
CTI					Sn	03 20 27.8	-6.2
ABTA	Abfaltersbach	10.32	328	eSn	Sn	03 20 34.2	-3.5
	5.9nm,0.6s						
BRTR	Keskin Array B	10.46	77	Pn	Pn	03 18 47.1	+2.8
	0.1nm,0.3s,baz=262,slow=12,SNR=2.6						
MOA	Molln	10.63	337	ePn	Pn	03 18 47.4	+1.0
	3.4nm,0.2s						
MOA				Sn	Sn	03 20 40.8	-4.5
	1.8nm,0.3s						
WATA	Walderalm	11.18	328	ePn	Pn	03 18 55.1	+1.0
	2.3nm,0.2s						
WATA				Sn	Sn	03 20 55.5	-3.4
	7.2nm,0.5s						
SQTA	Sankt Quirin	11.25	326	eSn	Sn	03 20 57.1	-3.5
	3.9nm,0.3s						
MMAI	Mount Meron Ar	13.29	108	Pn	Pn	03 19 20.1	-2.8
	0.2nm,0.3s,baz=308,slow=14,SNR=3.3						
CLL	Collm	14.11	341	e(PP)	P	03 19 45.0	+3.5
GNI	Garni	19.00	76	P	P	03 20 36.2	+0.2
GNI				IAmb	IAmb	03 20 43.0	
	comp=Z,14nm,1.0s						
HFS	Hagfors	22.37	351	P	P	03 21 11.8	-0.3
	comp=Z,5.0nm,0.7s,baz=171,slow=10,SNR=4.0						
EKA	Eskdalemuir Ar	23.34	325	P	P	03 21 21.9	-0.3
	comp=Z,3.1nm,0.7s,baz=126,slow=11,SNR=4.0						
FINES	FINESS Array B	23.55	7	P	P	03 21 24.2	-0.1
	comp=Z,20nm,1.1s,baz=184,slow=9.2,SNR=4.4						
NOA	NORSAR Array B	23.58	349	P	P	03 21 24.2	-0.4
	comp=Z,1.1nm,0.7s,baz=151,slow=10,SNR=2.9						
ARCES	ARCESS Array B	31.53	3	P	P	03 22 36.0	0.0
	comp=Z,5.0nm,0.8s,baz=197,slow=8.5,SNR=3.8						
ARCES	ARCESS Array B	31.53	3	P	P	03 22 36.0	0.0
BORG	Borgarnes	36.04	331	LR	LR	03 38 35.6	
	comp=Z,7μm,18.4s,baz=114,slow=37						
MKAR	Makanchi Array	45.41	58	P	P	03 24 31.9	-0.9
	comp=Z,2.5nm,0.5s,baz=274,slow=7.5,SNR=12						
ZALV	Zalesovo Beam	45.78	48	P	P	03 24 34.2	-1.3
	comp=Z,5.1nm,0.5s,baz=276,slow=8.2,SNR=8.4						
SONM	Songino Array	60.55	51	P	P	03 26 24.0	-0.6
	comp=Z,1.3nm,1.0s,baz=287,slow=7.0,SNR=3.8						
SONM	Songino Array	60.55	51	IAmb	IAmb	03 26 32.7	
	comp=Z,0.9nm,1.1s						
YKA	Yellowknife Ar	73.33	340	P	P	03 27 45.7	+0.3
	comp=Z,0.4nm,0.6s,baz=31,slow=5.7,SNR=3.3						
ILAR	Eielson Array	76.88	354	P	P	03 28 06.6	+0.7
	comp=Z,0.6nm,0.9s,baz=353,slow=3.8,SNR=3.2						
JCJ	Chichijima	95.25	50	LR	LR	04 13 37.8	
	comp=Z,2μm,19.8s,baz=332,slow=36						

KRSC 03 03:16:56.7±2.2, 50.°66N×157.°85E, h47km±24km, ML5.2, FELT [III] at Severo-Kurilsk.
MOS 03 03:16:57.8±0.9, 50.°63N×157.°57E, h50km, mb4.4/4, Error ellipse: s-maj=13.3km s-min=3.2km az=79.5
MOS Felt (III) at Severo-Kuril'sk.
IDC 03 03:17:06.3±2.2, 51.°26N×157.°23E, h105km±15km, mb3.7/18, mb1 3.9/21, mb1mx3.8/40, mbtmp4.0/21, MS4.6/1, Ms1 4.6/1, ms1mx3.5/68, Error ellipse: s-maj=22.3km s-min=12.3km az=166.0
ISC 03 03:16:59.6±1.0, 50.71N±0.°07×157.°57E±0.°05, h64km±8km, n129, σ1§79/167, mb4.2/22, 2C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	Pauzhetka	0.90	328	eP	Pn	03 17 15.9	-0.6
PAU				eS	Sn	03 17 27.8	-1.2
PAU	Pauzhetka	0.90	328	PN	Pn	03 17 15.9	-0.6
PAU				S	Sn	03 17 27.8	-1.2
SKR	Severo-Kuril's	0.93	269	eP	Pn	03 17 16.8	0.0
SKR				eS	Sn	03 17 29.2	-0.4
SKR	Severo-Kuril's	0.93	269⇑	iPN	Pn	03 17 16.9	+0.1
SKR				eS	Sn	03 17 29.2	-0.4
SKR				pmax	pmax		
	comp=Z,1μm,0.5s						
SKR				smax	smax		
	comp=E,9μm,0.6s						
SKR				smax	smax		
	comp=N,5μm,0.4s						
KDTR	Khodutka, Kamc	1.15	16	eP	Pn	03 17 18.7	-1.0
KDTR				eS	Sn	03 17 32.3	-2.3
KDTR	Khodutka, Kamc	1.15	16	PN	Pn	03 17 18.7	-1.0
KDTR				S	Sn	03 17 32.3	-2.3
ASAK	Asacha	1.69	7	eP	Pn	03 17 26.6	-0.4
ASAK				eS	Sn	03 17 46.1	-1.6
ASAK	Asacha	1.69	7	PN	Pn	03 17 26.6	-0.4
ASAK				S	Sn	03 17 46.1	-1.6
MTVR	Mutnovka	1.82	12	eP	Pn	03 17 28.5	-0.3
MTVR	Mutnovka	1.82	12	PN	Pn	03 17 28.5	-0.3
RUS	Russkaya	1.82	18	eP	Pn	03 17 27.8	-0.9
RUS				eS	Sn	03 17 48.3	-2.5
RUS	Russkaya	1.82	18	PN	Pn	03 17 27.8	-0.9
RUS				S	Sn	03 17 48.3	-2.5
GRL	Gorelyy	1.87	9	eP	Pn	03 17 29.6	+0.1
GRL				eS	Sn	03 17 51.3	-0.9
GRL	Gorelyy	1.87	9	PN	Pn	03 17 29.6	+0.1
GRL				S	Sn	03 17 51.3	-0.9
KRMR	Karymshinskiy	2.15	9	eP	Pn	03 17 33.2	0.0
KRMR				eS	Sn	03 17 59.7	+1.0
KRMR	Karymshinskiy	2.15	9	PN	Pn	03 17 33.2	0.0
KRMR				S	Sn	03 17 59.7	+1.0
APC	Apacha	2.23	354	eP	Pn	03 17 34.3	0.0
APC	Apacha	2.23	354	PN	Pn	03 17 34.3	0.0
PEA0B	Petropavlovsk-	2.40	2d	iPN	Pn	03 17 36.9	+0.3
PETK	Petropavlovsk-	2.40	2	P	Pn	03 17 37.0	+0.4
	comp=N,24nm,0.3s,baz=167,slow=15,SNR=194						
PETK				S	Sn	03 18 01.7	-3.2
	comp=N,36nm,0.3s,baz=153,slow=16,SNR=6.6						
PETK				LR	LR	03 18 45.5	
	comp=N,220nm,20.9s,baz=242,slow=53						
PET	Petropavlovsk	2.41	16	eP	Pn	03 17 36.8	+0.1
PET				eS	Sn	03 18 04.3	-0.8
PET	Petropavlovsk	2.41	16	PN	Pn	03 17 36.8	+0.1
PET				S	Sn	03 18 04.3	-0.8
DALK	Dalny	2.44	17	eP	Pn	03 17 37.1	+0.1
DALK				eS	Sn	03 18 04.5	-1.2
DALK	Dalny	2.44	17	PN	Pn	03 17 37.1	+0.1
DALK				S	Sn	03 18 04.5	-1.2
UGLR	Uglovaya	2.62	17	eP	Pn	03 17 40.4	+0.8
UGLR				eS	Sn	03 18 13.5	+3.2
UGLR	Uglovaya	2.62	17	PN	Pn	03 17 40.4	+0.8
UGLR				S	Sn	03 18 13.5	+3.2
AVH	Avacha	2.66	15	eP	Pn	03 17 41.4	+1.3
AVH				eS	Sn	03 18 13.0	+1.8
AVH	Avacha	2.66	15	PN	Pn	03 17 41.4	+1.3
AVH				S	Sn	03 18 13.0	+1.8
SMAR	Somma	2.67	16	eP	Pn	03 17 41.5	+1.1
SMAR				eS	Sn	03 18 14.3	+2.6
SMAR	Somma	2.67	16	PN	Pn	03 17 41.5	+1.1
SMAR				S	Sn	03 18 14.3	+2.6
KOK	Koryaka	2.67	14	eP	Pn	03 17 41.8	+1.5
KOK				eS	Sn	03 18 13.0	+1.5
KOK	Koryaka	2.67	14	PN	Pn	03 17 41.8	+1.5
KOK				S	Sn	03 18 13.0	+1.5

SDLR Sedlovina 2.70 17 eP Pn 03 17 40.9 +0.2
SDLR eS Sn 03 18 13.8 +1.6
SDLR Sedlovina 2.70 17 PN Pn 03 17 40.9 +0.2
SDLR S Sn 03 18 13.8 +1.6
KRER Koryakskii 2.70 15 eP Pn 03 17 41.9 +1.1
KRER eS Sn 03 18 12.8 +0.4
KRER Koryakskii 2.70 15 PN Pn 03 17 41.9 +1.1
KRER S Sn 03 18 12.8 +0.4
NLC Nalytchevo 2.70 23 eP Pn 03 17 38.6 -2.0
NLC eS Sn 03 18 08.7 -3.3
NLC Nalytchevo 2.70 23 PN Pn 03 17 38.6 -2.0
NLC S Sn 03 18 08.7 -3.3
KRX Arik 2.74 14 eP Pn 03 17 42.4 +1.2
KRX eS Sn 03 18 15.6 +2.4
KRX Arik 2.74 14 PN Pn 03 17 42.4 +1.2
KRX S Sn 03 18 15.6 +2.4
SPN Mys Shipunski 2.83 31 eP Pn 03 17 42.5 +0.1
SPN eS Sn 03 18 14.0 -1.3
SPN Mys Shipunski 2.83 31 PN Pn 03 17 42.5 +0.1
SPN S Sn 03 18 14.0 -1.3
KII Karymskiy 3.52 18 eP Pn 03 17 53.9 +2.0
KII eS Sn 03 18 34.7 +2.3
KII Karymskiy 3.52 18 PN Pn 03 17 53.9 +2.0
KII S Sn 03 18 34.7 +2.3
KZV Kizimen 4.71 19 eP Pn 03 18 10.7 +2.5
KZV eS Sn 03 19 03.6 +2.1
KZV Kizimen 4.71 19 PN Pn 03 18 10.7 +2.5
KZV S Sn 03 19 03.6 +2.1
TUMD Tumrok D 4.81 20 eP Pn 03 18 10.6 +1.1
TUMD eS Sn 03 19 06.1 +2.2
TUMR Tumrok 4.84 18 eP Pn 03 18 11.8 +1.9
TUMR Tumrok 4.84 18 PN Pn 03 18 10.6 +0.7
TUMR S Sn 03 19 06.1 +1.5
ESO Esso 5.27 7 eP Pn 03 18 17.6 +1.9
ESO Esso 5.27 7 PN Pn 03 18 17.6 +1.9
KMNR Kamenistaya 5.30 17 eP Pn 03 18 18.2 +2.0
KMNR Kamenistaya 5.30 17 PN Pn 03 18 18.2 +2.0
KPT Kopyto 5.50 16 eP Pn 03 18 21.4 +2.5
KPT Kopyto 5.50 16 PN Pn 03 18 21.4 +2.5
KIRR Kirishev 5.51 16 eP Pn 03 18 20.6 +1.5
KIRR Kirishev 5.51 16 PN Pn 03 18 20.6 +1.5
BZMR Bezymyannaya 5.52 17 eP Pn 03 18 20.7 +1.5
BZMR Bezymyannaya 5.52 17 PN Pn 03 18 20.7 +1.5
BZGR Bezymyannyi-Gr 5.56 18 eP Pn 03 18 21.8 +2.0
BZGR Bezymyannyi-Gr 5.56 18 PN Pn 03 18 21.8 +2.0
ZLN Zelenaya 5.66 19 eP Pn 03 18 23.5 +2.4
ZLN Zelenaya 5.66 19 PN Pn 03 18 23.5 +2.4
LGNR Loginova 5.70 18 eP Pn 03 18 22.0 +0.2
LGNR Loginova 5.70 18 PN Pn 03 18 22.0 +0.2
CIRR Tsirk 5.74 18 eP Pn 03 18 25.0 +2.8
CIRR Tsirk 5.74 18 PN Pn 03 18 25.0 +2.8
SRDR Sredninnyy 5.76 12 eP Pn 03 18 24.2 +1.7
SRDR Sredninnyy 5.76 12 PN Pn 03 18 24.2 +1.7
KRSR Krestovskiy 5.80 17 eP Pn 03 18 24.8 +1.8
KRSR Krestovskiy 5.80 17 PN Pn 03 18 24.8 +1.8
KLY Klyuchi 5.91 17 eP Pn 03 18 28.2 +3.8
KLY eS Sn 03 19 33.5 +2.9
KLY Klyuchi 5.91 17 PN Pn 03 18 28.2 +3.8
BDR Baidarnaya 6.25 19 eP Pn 03 18 30.4 +1.2
BDR Baidarnaya 6.25 19 PN Pn 03 18 30.4 +1.2
SRKR Sorokina 6.33 18 eP Pn 03 18 31.7 +1.5
SRKR Sorokina 6.33 18 PN Pn 03 18 31.7 +1.5
KBTR Krutoberegovo 6.33 28 eP Pn 03 18 30.4 +0.1
KBTR Krutoberegovo 6.33 28 PN Pn 03 18 30.4 +0.1
KBG Krutoberegovo 6.34 27 eP Pn 03 18 30.8 +0.5
KBG Krutoberegovo 6.34 27 PN Pn 03 18 30.8 +0.5
BKI Bering 6.78 45 eP Pn 03 18 36.0 -0.3
BKI eS Sn 03 19 45.0 -7.0
BKI Bering 6.78 45 PN Pn 03 18 36.0 -0.3
KUR Kuril'sk 8.51 234 iPN Pn 03 18 59.6 -0.4
MA2 Magadan 9.70 339 P Pn 03 19 15.6 -0.6
comp=N,0.6nm,0.3s,baz=150,slow=8.9,SNR=11
MA2 Magadan 9.70 339⇓iPN Pn 03 19 16.5 +0.3
YUK Yuzh-Kuril'sk 10.37 234 iPN Pn 03 19 27.5 +2.1
YSS Yuzh-Sakhalins 10.47 255 ePN Pn 03 19 28.6 +1.9
TILK Tilichiki 10.89 23 eP Pn 03 19 34.0 +1.6
TILK Tilichiki 10.89 23 PN Pn 03 19 34.0 +1.6
ASAJ Asahikawa 12.09 243 P P 03 19 55.1 -4.3
comp=N,0.7nm,0.3s,baz=0.0,slow=19,SNR=3.1
SEY Seymchan 12.57 349 P Pn 03 19 53.6 -1.7
comp=N,0.2nm,0.3s,baz=180,slow=20,SNR=3.5
SEY Seymchan 12.57 349 ePN Pn 03 19 55.9 +0.5
ERM Erimo 13.20 234⇑iPN Pn 03 20 04.3 +0.3
ILAR Eielson Array 31.62 42 P P 03 23 15.2 -0.7
comp=N,1.3nm,0.7s,baz=262,slow=6.2,SNR=4.2
H11N2 WAKE ISLAND Hy 31.78 163 T T 03 57 08.3
baz=349,slow=76,SNR=340
H11N3 WAKE ISLAND Hy 31.80 163 T T 03 57 06.9
baz=349,slow=76,SNR=315
H11N1 WAKE ISLAND Hy 31.80 163 T T 03 57 08.3
baz=349,slow=76,SNR=186
H11S1 WAKE ISLAND Hy 32.94 164 T T 03 58 33.2
baz=349,slow=76,SNR=111
H11S3 WAKE ISLAND Hy 32.95 164 T T 03 58 34.2
baz=349,slow=76,SNR=72
H11S2 WAKE ISLAND Hy 32.96 164 T T 03 58 32.6
baz=349,slow=76,SNR=68
SONM Songino Array 32.97 285 P P 03 23 28.4 +0.3
comp=N,0.7nm,0.5s,baz=60,slow=7.1,SNR=5.8
INK Inuvik 36.72 35 P P 03 23 58.7 -1.3
comp=N,2.9nm,0.9s,baz=256,slow=4.8,SNR=3.2
ZALV Zalesovo Beam 42.78 304 PcP PcP 03 26 41.5 +0.9
comp=N,0.9nm,0.4s,baz=66,slow=4.5,SNR=3.7
YKA Yellowknife Ar 45.99 40 P P 03 25 16.6 +0.7
comp=N,1.8nm,0.6s,baz=295,slow=7.4,SNR=6.1
RES Resolute Bay 46.12 21 P P 03 25 16.2 -0.5
comp=N,0.7nm,0.4s,baz=321,slow=10,SNR=6.0
KURK Kurchatov 47.68 302 eP P 03 25 28.2 -1.1
KURK pmax pmax
comp=Z,4.0nm,0.9s
MKAR Makanchi Array 47.79 296 P P 03 25 28.6 -1.7
comp=Z,1.2nm,0.4s,baz=60,slow=6.4,SNR=12
ARU Arti 54.09 317 iP P 03 26 17.6 +0.3
ARU pmax pmax
comp=Z,4.0nm,0.9s
AAK Ala-Archa 54.73 296 iP P 03 26 23.4 +1.0
AAK pmax pmax
comp=Z,4.0nm,1.0s
ARCES ARCESS Array B 55.06 341 P P 03 26 22.2 -2.0
comp=Z,2.5nm,0.8s,baz=41,slow=7.5,SNR=3.2
KSH Kashi 55.87 292 P P 03 26 29.1 -1.5
KSH sP sP 03 26 51.2 -3.4
KSH PcS PcS 03 31 20.1 -9.1
KSH S S 03 34 06.6 -6.6
CMAR Chiang Mai Arr 56.15 257 P P 03 26 34.7 +2.1
comp=Z,1.3nm,0.3s,baz=30,slow=5.7,SNR=4.6
NVAR Mina Array Bea 58.07 67 P P 03 26 48.8 +2.6
comp=Z,3.4nm,0.6s,baz=296,slow=7.5,SNR=21
AKTO Aktyubinsk 58.27 312 P P 03 26 46.5 -0.8
comp=Z,0.9nm,0.4s,baz=44,slow=8.6,SNR=4.5
PDAR Pinedale Array 60.08 58 P P 03 27 01.9 +1.7
comp=Z,2.1nm,1.0s,baz=295,slow=3.3,SNR=6.5
FINES FINESS Array B 61.67 336 P P 03 27 07.6 -2.7
comp=Z,3.2nm,1.0s,baz=28,slow=6.3,SNR=3.4
NOA NORSAR Array B 65.38 343 P P 03 27 32.7 -2.1
comp=Z,0.3nm,0.4s,baz=31,slow=7.7,SNR=3.5
PSI Prapat 68.42 247 LR LR 03 59 02.9
comp=Z,506nm,21.6s,baz=298,slow=37
SCHQ Schefferville 68.48 26 P P 03 27 54.5 0.0
comp=Z,1.3nm,0.5s,baz=346,slow=3.9,SNR=6.4
AKASG Malin Array Be 69.83 328 P P 03 28 00.1 -2.8
comp=Z,0.4nm,0.4s,baz=30,slow=6.9,SNR=4.2
AKASG Malin Array Be 69.83 328 eP P 03 28 04.4 +1.5
KBZ Khabaz 70.17 316 P P 03 28 04.7 -0.4
comp=Z,1.6nm,0.9s,baz=45,slow=7.1,SNR=3.7
TXAR Lajitas Array 73.04 64 P P 03 28 24.7 +1.9
comp=Z,6.1nm,0.6s,baz=297,slow=5.1,SNR=37
GERES GERESS Array B 76.10 336 P P 03 28 39.8 -0.3
comp=Z,0.3nm,0.6s,baz=30,slow=4.5,SNR=3.0
BRTR Keskin Array B 77.43 319 P P 03 28 47.0 -0.8
comp=Z,1.1nm,0.9s,baz=15,slow=12,SNR=4.1
BRTR Keskin Array B 77.43 319 eP P 03 28 51.0 +3.1
BRTR pmax pmax
comp=Z,1.0nm,0.8s
PLCA Paso Flores 145.51 92 PKPbc PKPab 03 36 31.4 +1.0
comp=Z,1.7nm,0.6s,baz=272,slow=4.7,SNR=7.5
PLCA Paso Flores 145.51 92 ePKIKP PKPab 03 36 31.5 +1.1
PLCA pmax pmax
comp=Z,2.0nm,0.6s

IDC 03 03:20:14.6±59.0, 37°.58N×19°.46E, h0km, mb3.8/3, mb1 3.8/3, mb1mx3.4/31, mbtmp3.8/3, Error ellipse:
s-maj=1113.0km s-min=68.0km az=42.0, Ionian Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FINES FINESS Array B 24.25 8 P P 03 25 33.0 +0.1
5.2nm,1.1s,baz=188,slow=8.4,SNR=2.0
MKAR Makanchi Array 46.33 58 P P 03 28 42.5 +0.3
0.2nm,0.4s,baz=273,slow=6.9,SNR=4.2
ZALV Zalesovo Beam 46.72 48 P P 03 28 44.6 -0.5
0.6nm,0.4s,baz=292,slow=7.6,SNR=2.9

IDC 03 03:38:05.5±1.2, 38°.39N×20°.54E, h0km, mb3.5/5, mb1 3.5/7, mb1mx3.3/70, mbtmp3.4/7, ML3.5/1, Error ellipse: s-maj=27.4km s-min=20.9km az=80.0
ISC 03 03:38:07.0±1.0, 38°.4N±0°.1×20°.6E±0°.1, h9km, n7, σ1§15/8, mb3.5/5, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
IDI Anoyia 4.61 130 Pn Pn 03 39 18.4 +1.4
baz=324,slow=19,SNR=2.2
IDI Sn Sn 03 40 09.4 -1.3
0.7nm,0.3s,baz=308,slow=17,SNR=3.4
GERES GERESS Array B 11.60 337 Pn Pn 03 40 52.4 -0.4
0.1nm,0.3s,baz=161,slow=18,SNR=2.8
HFS Hagfors 22.23 351 P P 03 43 04.1 +0.5
1.1nm,0.6s,baz=165,slow=17,SNR=2.9
FINES FINESS Array B 23.36 7 P P 03 43 16.6 +1.2
3.1nm,0.9s,baz=186,slow=11,SNR=3.9
TORD Torodi Ar. Bea 30.21 219 P P 03 44 17.6 -0.3
0.4nm,1.0s,baz=20,slow=4.6,SNR=2.6
MKAR Makanchi Array 45.16 59 P P 03 46 23.1 -0.8
0.2nm,0.4s,baz=266,slow=7.0,SNR=5.8
ZALV Zalesovo Beam 45.53 48 P P 03 46 26.1 -0.6
0.4nm,0.4s,baz=275,slow=8.0,SNR=2.4

KRSC 03 03:38:57.1±0.7, 54°.44N×161°.78E, h48km±9km, ML4.5, FELT [III] at GMS Kronoki.
MOS 03 03:38:58.6±0.8, 54°.47N×161°.81E, h47km, mb4.2/1, Error ellipse: s-maj=8.4km s-min=4.0km az=82.4
IDC 03 03:39:02.1±1.9, 54°.75N×161°.29E, h64km±19km, mb3.6/26, mb1 3.8/30, mb1mx3.6/74, mbtmp3.9/30, Error ellipse: s-maj=17.1km s-min=12.1km az=144.0
ISC 03 03:38:59.0±0.8, 54°.49N±0°.03×161°.68E±0°.03, h43km±7km, n123, σ1§72/163, mb3.8/26, 1D, Near east coast of Kamchatka Peninsula

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MKZ Mys Kozlova 0.07 21 iP Pn 03 39 05.6 -0.3
MKZ Mys Kozlova 0.07 21 PN Pn 03 39 05.6 -0.3
KZV Kizimen 1.02 308 eP Pn 03 39 17.3 +0.3
KZV eS Sn 03 39 30.6 +0.4
KZV Kizimen 1.02 308 PN Pn 03 39 17.3 +0.3
KZV S Sn 03 39 30.6 +0.4
TUMD Tumrok D 1.03 315 iP Pn 03 39 17.2 +0.2
TUMD eS Sn 03 39 30.3 0.0
TUMR Tumrok 1.19 313 iP Pn 03 39 20.0 +0.7
TUMR Tumrok 1.19 313 PN Pn 03 39 17.2 -2.1
TUMR S Sn 03 39 30.3 -4.1
KII Karymskiy 1.39 252 eP Pn 03 39 23.0 +1.1
KII eS Sn 03 39 40.3 +1.2
KII Karymskiy 1.39 252 PN Pn 03 39 23.0 +1.1
KII S Sn 03 39 40.3 +1.2
KMNR Kamenistaya 1.52 327 eP Pn 03 39 25.2 +1.5
KMNR Kamenistaya 1.52 327 PN Pn 03 39 25.2 +1.5
BZGR Bezymyannyi-Gr 1.56 339 eP Pn 03 39 25.2 +0.9
BZGR Bezymyannyi-Gr 1.56 339 PN Pn 03 39 25.2 +0.9
ZLN Zelenaya 1.61 342 iP Pn 03 39 26.7 +1.7
ZLN Zelenaya 1.61 342 PN Pn 03 39 26.7 +1.7
KIRR Kirishev 1.66 333 eP Pn 03 39 27.0 +1.3
KIRR eS Sn 03 39 48.2 +2.4
KIRR Kirishev 1.66 333 PN Pn 03 39 27.0 +1.3
KIRR S Sn 03 39 48.2 +2.4
LGNR Loginova 1.70 341 eP Pn 03 39 27.7 +1.4
LGNR Loginova 1.70 341 PN Pn 03 39 27.7 +1.4
KPT Kopyto 1.70 331 eP Pn 03 39 27.8 +1.6
KPT Kopyto 1.70 331 PN Pn 03 39 27.8 +1.6
SPN Mys Shipunski 1.71 216 iP Pn 03 39 25.7 -0.5
SPN eS Sn 03 39 44.9 -1.8
SPN Mys Shipunski 1.71 216 PN Pn 03 39 25.7 -0.5
SPN S Sn 03 39 44.9 -1.8
CIRR Tsirk 1.72 342 eP Pn 03 39 28.0 +1.5
CIRR Tsirk 1.72 342 PN Pn 03 39 28.0 +1.5
KBTR Krutoberegovo 1.84 20 eP Pn 03 39 28.7 +0.6
KBTR eS Sn 03 39 50.8 +0.7
KBTR Krutoberegovo 1.84 20 PN Pn 03 39 28.7 +0.6
KBTR S Sn 03 39 50.8 +0.7
KRSR Krestovskiy 1.85 340 eP Pn 03 39 29.2 +1.0
KRSR Krestovskiy 1.85 340 PN Pn 03 39 29.2 +1.0
KBG Krutoberegovo 1.86 18 eP Pn 03 39 30.1 +1.8
KBG eS Sn 03 39 53.4 +2.8
KBG Krutoberegovo 1.86 18 PN Pn 03 39 30.1 +1.8
KBG S Sn 03 39 53.4 +2.8
KOZ Kozyrevsk 1.89 327 eP Pn 03 39 30.4 +1.7
KOZ Kozyrevsk 1.89 327 PN Pn 03 39 30.4 +1.7
NLC Nalytchevo 1.91 227 eP Pn 03 39 29.7 +0.7
NLC eS Sn 03 39 51.9 +0.1
NLC Nalytchevo 1.91 227 PN Pn 03 39 29.7 +0.7
NLC S Sn 03 39 51.9 +0.1
KLY Klyuchi 1.92 343 eP Pn 03 39 30.0 +0.9
KLY eS Sn 03 39 53.3 +1.2
KLY Klyuchi 1.92 343 PN Pn 03 39 30.0 +0.9
KLY S Sn 03 39 53.3 +1.2
SMAR Somma 2.10 235 eP Pn 03 39 33.6 +1.8
SMAR eS Sn 03 39 58.3 +1.5
SMAR Somma 2.10 235 PN Pn 03 39 33.6 +1.8
SMAR S Sn 03 39 58.3 +1.5
BDR Baidarnaya 2.10 353 eP Pn 03 39 33.3 +1.6
BDR eS Sn 03 39 58.9 +2.2
BDR Baidarnaya 2.10 353 PN Pn 03 39 33.3 +1.6
BDR S Sn 03 39 58.9 +2.2
KRER Koryakskii 2.10 237 eP Pn 03 39 33.9 +2.1
KRER Koryakskii 2.10 237 PN Pn 03 39 33.9 +2.1
SMKR Semkarok 2.10 357 eP Pn 03 39 33.4 +1.7
SMKR Semkarok 2.10 357 PN Pn 03 39 33.4 +1.7
KRX Arik 2.12 239 eP Pn 03 39 34.3 +2.3
KRX eS Sn 03 39 59.0 +1.8
KRX Arik 2.12 239 PN Pn 03 39 34.3 +2.3
KRX S Sn 03 39 59.0 +1.8
UGLR Uglovaya 2.12 234 iP Pn 03 39 33.8 +1.8
UGLR eS Sn 03 39 58.9 +1.7
UGLR Uglovaya 2.12 234 PN Pn 03 39 33.8 +1.8
UGLR S Sn 03 39 58.9 +1.7
AVH Avacha 2.13 236 eP Pn 03 39 34.1 +2.0
AVH eS Sn 03 39 59.5 +2.1
AVH Avacha 2.13 236 PN Pn 03 39 34.1 +2.0
AVH S Sn 03 39 59.5 +2.1
SRDR Srednínnyy 2.15 329 eP Pn 03 39 33.5 +1.2
SRDR Srednínnyy 2.15 329 PN Pn 03 39 33.5 +1.2
KOK Koryaka 2.17 238 eP Pn 03 39 34.5 +1.9
KOK Koryaka 2.17 238 PN Pn 03 39 34.5 +1.9
SRKR Sorokina 2.19 353 eP Pn 03 39 34.3 +1.4
SRKR Sorokina 2.19 353 PN Pn 03 39 34.3 +1.4
ESO Esso 2.24 311 eP Pn 03 39 34.7 +1.2
ESO Esso 2.24 311 PN Pn 03 39 34.7 +1.2
DALK Dalny 2.27 231 eP Pn 03 39 35.3 +1.4
DALK eS Sn 03 40 01.6 +1.0
DALK Dalny 2.27 231 PN Pn 03 39 35.3 +1.4
DALK S Sn 03 40 01.6 +1.0
PET Petropavlovsk 2.32 232 ePN Pn 03 39 36.2 +1.6
PET eS Sn 03 40 02.9 +1.0
PET pmax pmax
comp=Z,181nm,0.4s
PET smax smax
comp=N,1μm,0.4s
BKI Bering 2.58 72 eP Pn 03 39 38.4 +0.2
BKI eS Sn 03 40 07.2 -1.1
BKI Bering 2.58 72 PN Pn 03 39 38.4 +0.2
BKI S Sn 03 40 07.2 -1.1
KRMR Karymshinskiy 2.69 233 eP Pn 03 39 41.6 +1.9
KRMR eS Sn 03 40 12.4 +1.5
KRMR Karymshinskiy 2.69 233 PN Pn 03 39 41.6 +1.9
KRMR S Sn 03 40 12.4 +1.5
PETK Petropavlovsk- 2.74 241 P Pn 03 39 42.1 +1.8
comp=N,15nm,0.3s,baz=65,slow=18,SNR=151
PETK S Sn 03 40 15.5 +3.3
comp=N,21nm,0.3s,baz=88,slow=22,SNR=7.8
GRL Gorelyy 2.90 229 eP Pn 03 39 44.7 +2.0
GRL eS Sn 03 40 18.7 +2.4
GRL Gorelyy 2.90 229 PN Pn 03 39 44.7 +2.0
GRL S Sn 03 40 18.7 +2.4
MTVR Mutnovka 2.90 228 eP Pn 03 39 44.1 +1.4
MTVR Mutnovka 2.90 228 PN Pn 03 39 44.1 +1.4
ASAK Asacha 3.09 229 eP Pn 03 39 47.7 +2.4
ASAK Asacha 3.09 229 PN Pn 03 39 47.7 +2.4
APC Apacha 3.11 242 eP Pn 03 39 47.6 +2.1
APC eS Sn 03 40 23.8 +2.4
APC Apacha 3.11 242 PN Pn 03 39 47.6 +2.1
APC S Sn 03 40 23.8 +2.4
KDTR Khodutka, Kamc 3.45 220 eP Pn 03 39 51.9 +1.8
KDTR eS Sn 03 40 31.1 +1.4
KDTR Khodutka, Kamc 3.45 220 PN Pn 03 39 51.9 +1.8
KDTR S Sn 03 40 31.1 +1.4
PAU Pauzhetka 4.22 226 eP Pn 03 40 03.2 +2.5
PAU eS Sn 03 40 52.1 +3.4
PAU Pauzhetka 4.22 226 PN Pn 03 40 03.2 +2.5
PAU S Sn 03 40 52.1 +3.4
PALN Palana 4.71 349 P Pn 03 40 09.4 +2.0
PALN Palana 4.71 349 PN Pn 03 40 09.4 +2.0
OSSR Ossora 4.83 8 eP Pn 03 40 12.5 +3.4
OSSR Ossora 4.83 8 PN Pn 03 40 12.5 +3.4
TILK Tilichiki 6.44 20 eP Pn 03 40 34.1 +3.0
TILK eS Sn 03 41 44.7 +1.6
TILK Tilichiki 6.44 20 PN Pn 03 40 34.1 +3.0
MA2 Magadan 7.83 315 P Pn 03 40 48.2 -2.0
comp=N,1.2nm,0.3s,baz=160,slow=18,SNR=2.1
BILL Bilibino 13.77 7⇓eP Pn 03 42 14.6 +3.3
BILL pmax pmax
comp=Z,4.0nm,1.3s
BILL MLR MLR
comp=Z,2μm,18.0s
ASAJ Asahikawa 16.15 238 P Pn 03 42 43.2 +0.5
comp=Z,0.4nm,0.3s,baz=18,slow=20,SNR=2.1
KLR Kul'dur 19.13 266 P P 03 43 17.1 -1.0
comp=Z,0.1nm,0.3s,baz=76,slow=19,SNR=5.0
USRK Ussuriysk Ar. 21.75 254 P P 03 43 45.5 -1.0
comp=Z,0.8nm,0.6s,baz=50,slow=13,SNR=3.2
TIXI Tiksi 22.24 333 P P 03 43 49.0 -2.5
comp=Z,1.2nm,0.3s,baz=117,slow=8.1,SNR=5.9
MJAR Matsushiro Arr 24.15 232 P P 03 44 11.2 +0.4
comp=Z,1.1nm,0.4s,baz=28,slow=8.4,SNR=4.7
ILAR Eielson Array 27.17 47 P P 03 44 37.9 0.0
comp=Z,0.6nm,0.8s,baz=269,slow=8.3,SNR=5.3
INK Inuvik 32.19 39 P P 03 45 22.8 +0.6
comp=Z,0.4nm,0.4s,baz=277,slow=6.8,SNR=5.0
SONM Songino Array 34.51 282 P P 03 45 42.3 -0.6
comp=Z,0.1nm,0.5s,baz=81,slow=11,SNR=2.0
H11N2 WAKE ISLAND Hy 34.92 171 T T 04 22 55.3
baz=355,slow=76,SNR=705
H11N3 WAKE ISLAND Hy 34.94 171 T T 04 22 56.3
baz=355,slow=76,SNR=579
H11N1 WAKE ISLAND Hy 34.94 171 T T 04 22 56.5
baz=355,slow=76,SNR=756
H11S1 WAKE ISLAND Hy 36.12 172 T T 04 24 24.9
baz=349,SNR=39
H11S3 WAKE ISLAND Hy 36.13 172 T T 04 24 23.8
baz=349,slow=74,SNR=42
H11S2 WAKE ISLAND Hy 36.14 172 T T 04 24 23.8
baz=349,slow=74,SNR=31
YKA Yellowknife Ar 41.50 44 P P 03 46 42.4 +1.1
comp=Z,0.5nm,0.6s,baz=299,slow=8.2,SNR=7.4
YKA PcP PcP 03 48 38.8 +0.7
comp=Z,0.4nm,0.8s,baz=302,slow=3.6,SNR=5.3
RES Resolute Bay 41.67 23 P P 03 46 42.9 +0.4
comp=Z,0.9nm,0.8s,baz=304,slow=4.7,SNR=4.4
SPITS Spitsbergen Ar 45.91 351 P P 03 47 14.9 -1.7
comp=Z,9.6nm,0.9s,baz=93,slow=7.0,SNR=10
MKAR Makanchi Array 48.40 295 P P 03 47 33.1 -3.3
comp=Z,0.3nm,0.5s,baz=42,slow=7.4,SNR=5.2
ARCES ARCESS Array B 52.25 342 P P 03 48 03.9 -1.3
comp=Z,3.5nm,0.8s,baz=25,slow=8.6,SNR=10
NVAR Mina Array Bea 54.40 72 P P 03 48 24.1 +2.5
comp=Z,0.3nm,0.7s,baz=309,slow=5.7,SNR=4.7
FRB Frobisher Bay 55.85 24 P P 03 48 31.0 -0.3
comp=Z,1.3nm,0.3s,baz=324,slow=8.4,SNR=13
PDAR Pinedale Array 56.03 63 P P 03 48 35.3 +2.0
comp=Z,0.3nm,0.6s,baz=347,slow=6.1,SNR=3.7
FINES FINESS Array B 59.21 337 P P 03 48 54.1 -0.9
comp=Z,3.2nm,0.5s,baz=32,slow=7.7,SNR=18
NB2 NORSAR Subarra 62.46 344 P P 03 49 16.6 -0.6
comp=Z,0.6nm,0.4s,baz=20,slow=6.9
NOA NORSAR Array B 62.46 344 P P 03 49 16.4 -0.8
comp=Z,0.6nm,0.4s,baz=23,slow=6.0,SNR=8.2
HFS Hagfors 62.91 343 P P 03 49 19.0 -1.1
comp=Z,1.6nm,0.5s,baz=354,slow=3.0,SNR=12
HFS Hagfors 62.91 343 P P 03 49 19.0 -1.1
SCHQ Schefferville 63.97 29 P P 03 49 26.4 -0.8
comp=Z,0.9nm,0.7s,baz=302,slow=8.4,SNR=3.6
AKASG Malin Array Be 67.89 330 P P 03 49 50.7 -1.8
comp=Z,0.4nm,0.4s,baz=29,slow=6.9,SNR=4.9
KBZ Khabaz 69.16 317 P P 03 49 58.8 -1.7
comp=Z,2.4nm,0.8s,baz=106,slow=1.2,SNR=3.6
TXAR Lajitas Array 69.23 69 P P 03 50 02.6 +1.2
comp=Z,0.3nm,0.4s,baz=306,slow=6.0,SNR=4.4
EKA Eskdalemuir Ar 69.84 351 P P 03 50 03.6 -0.8
comp=Z,1.3nm,0.5s,baz=20,slow=5.8,SNR=6.6
GERES GERESS Array B 73.57 339 P P 03 50 26.8 -0.4
comp=Z,0.6nm,0.6s,baz=43,slow=6.0,SNR=5.2
BRTR Keskin Array B 76.13 321 P P 03 50 41.5 -0.7
comp=Z,0.9nm,1.0s,baz=30,slow=2.8,SNR=4.6
MMAI Mount Meron Ar 81.35 317 P P 03 51 11.0 +0.1
comp=Z,0.7nm,0.4s,baz=0.0,slow=4.3,SNR=3.0
ASAR Alice Springs 81.42 206 P P 03 51 12.3 +1.3
comp=Z,1.1nm,0.7s,baz=13,slow=5.9,SNR=9.9

IDC 03 03:40:45.0±1.8, 38°.53N×20°.48E, h0km, mb3.8/6, mb1 3.7/11, mb1mx3.4/69, mbtmp3.6/11, ML3.0/5, MS4.8/1, Ms1 4.8/1, ms1mx3.5/81, Error ellipse: s-maj=31.5km s-min=20.9km az=34.0
ATH 03 03:40:46.2, 38°.19N×20°.37E, h12km±4km, ML3.6/3, Error ellipse: s-maj=4.6km s-min=1.7km az=94.0
THE 03 03:40:46.3, 38°.18N×20°.41E, h12km±1km, ML3.5/4, Error ellipse: s-maj=1.7km s-min=0.8km az=213.0
ISC 03 03:40:45.6±0.8, 38°.22N±0°.03×20°.36E±0°.04, h15km±4km, n32, σ1§34/43, mb4.1/7, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.04 150 P Pg 03 40 48.4 +0.1
CHV1 S Sg 03 40 50.1 0.0
KEF4 Livadi, Kephal 0.07 50 P Pg 03 40 48.9 +0.3
ARG2 Argostoli 0.11 110 P Pg 03 40 48.8 -0.2
ARG2 S Sg 03 40 50.4 -0.8
KEF1 Kardakata, Kep 0.11 54 P Pg 03 40 49.3 +0.3
KEF2 Argostoli. Kep 0.11 116 P Pg 03 40 48.9 -0.1
VLS Valsamata 0.19 102 P Pg 03 40 49.7 -0.4
VLS S Sg 03 40 52.3 -0.8
47μm,0.3s
VLS Valsamata 0.19 102 P Pg 03 40 49.7 -0.4
VLS AML AML 03 40 52.6
VLS S S 03 40 52.6 -0.5
VLS AML AML 03 40 52.7
comp=N,52806μm,0.1s
VSK1 VASILIKIADES 0.25 40 P Pg 03 40 51.6 +0.5
VSK1 S Sg 03 40 55.8 +0.9
FSK Fiskardo 0.29 33 P Pg 03 40 51.8 0.0
FSK S Sg 03 40 56.7 +0.7
comp=N,15μm,0.4s
FSK Fiskardo 0.29 33 P Pg 03 40 52.0 +0.2
FSK S Sg 03 40 56.8 +0.7
VLMS Volimes, Zakyn 0.41 144 P Pg 03 40 53.9 -0.1
VLMS AML AML 03 41 00.4
comp=N,44124μm,0.4s
VLMS AML AML 03 41 00.7
comp=E,47050μm,0.2s
EVGI Lefkada island 0.47 30 P Pb 03 40 56.3 +0.8
EVGI S Sb 03 41 02.9 +0.6
EVGI Lefkada island 0.47 30 P Pb 03 40 55.8 +0.3
LKD2 Lefkada island 0.62 22 P Pg 03 40 57.9 +0.1
LKD2 S Sn 03 41 08.8 -0.8
comp=E,2μm,0.4s
LKD2 Lefkada island 0.62 22 P Pg 03 40 58.2 +0.4
LKD2 AML AML 03 41 15.5
comp=N,4344μm,0.4s
LKD2 AML AML 03 41 15.9
comp=E,4492μm,0.5s
PVO Paravola 1.00 66 P Pb 03 41 04.9 +0.3
PVO S Sn 03 41 19.3 +0.4
comp=E,3μm,0.7s
IDI Anoyia 4.67 127 Pn Pn 03 41 59.3 +3.8
comp=E,0.2nm,0.3s,baz=315,slow=14,SNR=2.8
IDI Sn Sn 03 42 50.3 +0.9

comp=E,1.1nm,0.3s,baz=313,slow=19,SNR=3.3
VAE Valguarnera 4.76 263 Pn **Pn 03 41 60.0 +3.1**
comp=E,0.6nm,0.3s,baz=53,slow=20,SNR=2.4
VAE Sn **Sn 03 42 51.0 -0.9**
comp=E,1.8nm,0.3s,baz=16,slow=7.4,SNR=3.4
SOKA Soboth 9.33 337 *e*Pn **Pn 03 43 00.1 +0.6**
comp=E,2.2nm,0.4s
OBKA Obir 9.33 334 Pn **Pn 03 43 00.9 +1.3**
comp=E,4.6nm,0.6s
BRTR Keskin Array B 10.45 78 Pn **Pn 03 43 17.5 +2.6**
comp=E,0.0nm,0.3s,baz=272,slow=11,SNR=3.2
MOA Molln 10.61 337 *e*Pn **Pn 03 43 18.5 +1.5**
comp=E,2.6nm,0.4s
GERES GERESS Array B 11.67 338 Pn **Pn 03 43 31.2 -0.3**
comp=E,0.1nm,0.3s,baz=154,slow=14,SNR=4.4
AKASG Malin Array Be 13.98 24 Pn **Pn 03 43 59.0 -4.0**
comp=E,0.2nm,0.3s,baz=214,slow=10,SNR=2.4
HFS Hagfors 22.34 351 P **P 03 45 40.4 -2.2**
comp=E,2.7nm,0.9s,baz=168,slow=15,SNR=3.6
FINES FINESS Array B 23.53 7 P **P 03 45 53.3 -1.4**
comp=E,9.5nm,1.2s,baz=142,slow=7.0,SNR=4.7
NOA NORSAR Array B 23.56 349 P **P 03 45 54.9 -0.3**
comp=E,0.5nm,0.8s,baz=166,slow=7.3,SNR=3.5
ARCES ARCESS Array B 31.50 3 P **P 03 47 04.3 -2.1**
comp=E,2.7nm,0.8s,baz=191,slow=13,SNR=3.9
MKAR Makanchi Array 45.39 58 P **P 03 49 03.0 -0.3**
comp=E,0.5nm,0.5s,baz=273,slow=8.0,SNR=8.0
ZALV Zalesovo Beam 45.76 48 P **P 03 49 05.7 -0.4**
comp=E,0.8nm,0.3s,baz=274,slow=8.0,SNR=5.3
LSZ Lusaka 53.71 171 LR LR 04 14 42.0
comp=E,796nm,19.7s,baz=351,slow=38
TIXI Tiksi 59.66 20 P **P 03 50 48.7 +0.1**
comp=E,3.5nm,0.3s,baz=223,slow=2.9,SNR=3.8

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*IDC **03** 03:43:19.8±1.0, 38.°06N×20.°41E, h0km, mb3.7/9, mb1 3.7/15, mb1mx3.6/71, mbtmp3.6/15, ML3.2/5, Error ellipse: s-maj=18.0km s-min=17.1km az=19.0*
*ATH **03** 03:43:22.8, 38.°27N×20.°40E, h9km±2km, ML3.6/5, Error ellipse: s-maj=2.3km s-min=1.2km az=250.0*
*THE **03** 03:43:22.8, 38.°28N×20.°41E, h17km±1km, ML3.6/4, Error ellipse: s-maj=2.5km s-min=0.8km az=271.0*
ISC 03 03:43:23.1±0.7**, 38.°26N**±0.°02**×20.°40E**±0.°03**, h15**km±4km**, n68, σ1§70**/80**, mb3.7**/9**, 7C-7D, Greece**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.02 90 P **Pg 03 43 24.4 -1.3**
KEF1 Kardakata, Kep 0.06 70 P **Pg 03 43 24.6 -1.3**
KEF1 S **Sg 03 43 26.0 -1.8**
KEF3 Kipouria, Keph 0.07 217 P **Pg 03 43 25.1 -0.9**
CHV1 Chavriata, Kef 0.08 191 P **Pg 03 43 26.6 +0.5**
CHV1 S **Sg 03 43 29.0 +1.0**
ARG2 Argostoli 0.10 139 P **Pg 03 43 27.7 +1.3**
ARG2 S **Sg 03 43 29.4 +0.9**
KEF2 Argostoli. Kep 0.12 144 P **Pg 03 43 25.6 -0.9**
KEF2 S **Sg 03 43 28.0 -0.8**
VLS Valsamata 0.17 118 P **Pg 03 43 26.4 -0.9**
VLS Valsamata 0.17 118 P **Pg 03 43 26.2 -1.0**
VLS S **Sg 03 43 28.9 -1.1**
VLS AML AML 03 43 29.6
VLS AML AML 03 43 29.7
VSK1 VASILIKIADES 0.20 40 P **Pg 03 43 26.6 -1.1**
EVGI Lefkada island 0.41 29 P **Pg 03 43 30.7 -0.8**
EVGI Lefkada island 0.41 29 P **Pg 03 43 30.8 -0.6**
VLMS Volimes, Zakyn 0.43 151 P **Pg 03 43 31.2 -0.6**
VLMS S **Sg 03 43 38.2 +0.6**
VLMS AML AML 03 43 38.9
comp=E,49053μm,0.5s
VLMS AML AML 03 43 39.5
comp=N,80050μm,0.6s
MGNA Meganis 0.50 38 P **Pg 03 43 32.0 -1.0**
LKD2 Lefkada island 0.57 21 P **Pg 03 43 33.5 -0.8**
LKD2 Lefkada island 0.57 21 P **Pg 03 43 34.0 -0.3**
LKD2 S **Sg 03 43 41.4 -0.5**
LKD2 AML AML 03 43 52.2
comp=E,5322μm,0.5s
LKD2 AML AML 03 43 54.4
comp=N,4837μm,0.6s
TSLK Tsoukalades, L 0.60 19 P **Pg 03 43 33.9 -1.0**
TSLK Tsoukalades, L 0.60 19 P **Pg 03 43 33.8 -1.0**
AST1 Astakos 0.61 62 P **Pg 03 43 34.0 -1.1**
AST1 S **Sb 03 43 43.9 0.0**
comp=N,8μm,0.3s
KRI1 kERI 0.68 151 P **Pg 03 43 35.2 -1.2**
KRI1 S **Sb 03 43 46.8 +0.9**
comp=N,15μm,0.3s
RLS Riolos of Patr 0.86 103 P **Pg 03 43 38.8 -1.1**
RLS S **Sg 03 43 50.9 -0.3**
comp=N,3μm,0.7s
RLS Riolos of Patr 0.86 103 P **Pg 03 43 39.2 -0.7**
RLS S **Sb 03 43 51.6 +0.4**
RLS AML AML 03 44 02.2
comp=E,5596μm,1.0s
RLS AML AML 03 44 02.3
comp=N,4866μm,0.5s
DRO Drossia 1.08 106 P **Pb 03 43 43.5 0.0**
LAKA Lakka 1.24 90 P **Pn 03 43 45.2 -0.8**
LAKA AML AML 03 44 12.1
comp=E,2942μm,0.6s
LAKA AML AML 03 44 13.9
comp=N,2491μm,0.6s
EVR Evrytania 1.28 59 P **Pn 03 43 46.7 0.0**
SERG Sergoula 1.31 83 P **Pn 03 43 46.6 -0.4**
TRIZ Trizonia 1.32 85 P **Pn 03 43 46.7 -0.3**
KLV Kalavryta, Ach 1.40 98 P **Pn 03 43 47.9 -0.2**
JAN Janina 1.44 14 P **Pg 03 43 50.8 0.0**
MAKR Makrakomi, Fth 1.55 60 P **Pb 03 43 51.4 -0.2**
ITM Ithomi 1.62 131 P **Pb 03 43 53.3 +0.6**
ITM Ithomi 1.62 131 P **Pb 03 43 52.5 -0.2**
AGG Agios Georgios 1.69 63 P **Pb 03 43 54.4 +0.4**
THL Klokotos Trika 1.81 43 P **Pb 03 43 56.0 0.0**
LKR Lokris 2.08 78 P **Pb 03 43 59.5 -1.0**
NEST Nestorio 2.21 13 P **Pb 03 44 03.5 +0.6**
KZN Kozani 2.31 27 P **Pb 03 44 04.5 0.0**
FNA Florina 2.63 16 P **Pb 03 44 09.2 -0.8**
OHR Ohrid 2.87 6 *i* Pn **Pg 03 44 15.8 -2.2**
TIP Timpagrande 2.99 289 ⇓P **Pb 03 44 13.6 -2.5**
TIP ⇓S **Sn 03 44 46.0 +0.2**
TIR Tirane 3.11 353 ⇑P **Pn 03 44 13.1 +1.4**
TIR ⇓S **Sn 03 44 48.7 +0.1**
STIP Stip 3.70 21 *i* Pn Pn 03 44 13.0 -6.7
APE Apeiranthos 4.24 105 ⇑P **Pb 03 44 38.2 +0.8**
PDG Podgorica 4.26 349 ⇑P **Pn 03 44 30.6 +3.2**
PDG ⇑S **Sn 03 45 16.5 -0.4**
IDI Anoyia 4.67 128 Pn **Pn 03 44 31.8 -1.3**
comp=N,0.2nm,0.3s,baz=274,slow=14,SNR=1.4
IDI Sn **Sn 03 45 24.2 -2.9**
comp=N,1.3nm,0.3s,baz=295,slow=19,SNR=2.8
VAE Valguarnera 4.80 263 Pn **Pn 03 44 35.1 +0.1**
comp=N,0.7nm,0.3s,baz=189,slow=11,SNR=3.7
VAE Sn **Sn 03 45 29.6 -0.7**
comp=N,2.6nm,0.3s,baz=178,slow=6.0,SNR=3.1
VTS Vitosha 4.86 26 ⇓P Pn 03 44 41.6 +5.7
BLY Banja Luka 6.92 341 ⇑P **Pn 03 45 05.9 +2.0**
BZS Buzias 7.41 7 ⇓P **Pn 03 45 14.6 +3.9**
VOIR 7.97 24 ⇑P **Pn 03 45 23.1 +4.6**
MLR Muntele Rosu 8.32 28 Pn **Pn 03 45 26.1 +2.7**
baz=135,slow=16,SNR=2.1
MLR Muntele Rosu 8.32 28 ⇓P **Pn 03 45 28.1 +4.7**
PLOR Plostina 8.89 29 ⇑P Pn 03 45 36.3 +5.2
VRI Vrincioaia 8.94 30 ⇓P Pn 03 45 37.3 +5.6
SOKA Soboth 9.30 337 *e*Pn **Pn 03 45 39.9 +3.2**
comp=N,6.5nm,0.4s
OBKA Obir 9.31 334 *e*Pn **Pn 03 45 41.6 +4.8**
comp=N,2.0nm,0.2s
BRTR Keskin Array B 10.41 78 Pn **Pn 03 45 55.2 +3.2**
comp=N,0.0nm,0.3s,baz=268,slow=14,SNR=2.5
MOA Molln 10.58 337 *e*Pn **Pn 03 45 58.3 +4.1**
comp=N,2.2nm,0.3s
GERES GERESS Array B 11.64 338 Pn **Pn 03 46 11.0 +2.3**
comp=N,0.3nm,0.3s,baz=156,slow=14,SNR=7.2
AKASG Malin Array Be 13.93 24 Pn **Pn 03 46 40.8 +1.0**
comp=N,0.4nm,0.3s,baz=210,slow=10,SNR=6.6
HFS Hagfors 22.31 351 P **P 03 48 22.1 +2.4**
comp=N,3.9nm,0.7s,baz=164,slow=13,SNR=8.1
FINES FINESS Array B 23.48 7 P **P 03 48 33.4 +1.5**
comp=N,1.1nm,0.6s,baz=178,slow=9.7,SNR=3.7
NOA NORSAR Array B 23.52 349 P **P 03 48 33.0 +0.6**
comp=N,0.7nm,0.8s,baz=173,slow=11,SNR=3.8
TORD Torodi Ar. Bea 30.03 219 P **P 03 49 29.7 -1.9**
comp=N,0.4nm,0.8s,baz=44,slow=6.6,SNR=4.3
MKAR Makanchi Array 45.34 58 P **P 03 51 40.0 -0.5**
comp=N,1.0nm,0.5s,baz=281,slow=7.2,SNR=28
ZALV Zalesovo Beam 45.71 48 P **P 03 51 42.5 -0.8**
comp=N,2.6nm,0.5s,baz=275,slow=8.6,SNR=9.6
SONM Songino Array 60.48 51 P **P 03 53 32.4 -0.1**
comp=N,0.4nm,0.6s,baz=288,slow=8.0,SNR=5.0
CMAR Chiang Mai Arr 69.97 82 P **P 03 54 32.7 -1.6**
comp=N,0.6nm,0.3s,baz=308,slow=8.8,SNR=3.5
YKA Yellowknife Ar 73.28 340 P **P 03 54 52.5 -1.0**
comp=N,0.1nm,0.5s,baz=31,slow=5.5,SNR=2.8

IDC 03 03:47:22.9±1.9**, 33.°67S**×**77.°44E, h0**km**, mb4.0**/6**, mb1 4.2**/6**, mb1mx3.7**/51**, mbtmp4.0**/6**, Error ellipse: s-maj=65.9km s-min=33.8km az=20.0, Mid-Indian Ridge**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
H08S2 Diego Garcia H 26.30 349 T T 04 20 02.2
baz=170,slow=76,SNR=55
H08S1 Diego Carcia H 26.30 349 T T 04 19 57.5
baz=170,slow=76,SNR=21
H08S3 Diego Garcia H 26.32 349 T T 04 20 01.4
baz=170,slow=76,SNR=230
H01W2 Cape Leeuwin H 30.24 103 T T 04 24 51.6
baz=262,slow=74,SNR=12
H01W3 Cape Leeuwin H 30.24 103 T T 04 24 51.8
baz=262,slow=74,SNR=11
H01W1 Cape Leeuwin H 30.26 103 T T 04 24 53.3
baz=262,slow=74,SNR=12
ASAR Alice Springs 50.01 94 P P 03 56 19.4 +0.1
1.5nm,1.0s,baz=247,slow=5.6,SNR=6.2
WRA Warramunga Arr 52.01 90 P P 03 56 34.2 -0.1
1.5nm,0.9s,baz=246,slow=7.2,SNR=3.5
CMAR Chiang Mai Arr 55.75 25 P P 03 57 01.0 -0.5
1.3nm,0.3s,baz=218,slow=5.7,SNR=2.9
SONM Songino Array 85.19 19 P P 04 00 00.5 -0.4
0.2nm,0.5s,baz=212,slow=4.1,SNR=2.4
TORD Torodi Ar. Bea 85.68 289 P P 04 00 03.9 0.0
0.3nm,0.9s,baz=123,slow=5.3,SNR=2.5
ZALV Zalesovo Beam 87.49 4 P P 04 00 13.1 +1.2
1.5nm,0.6s,baz=170,slow=4.4,SNR=6.2
YKA Yellowknife Ar 150.16 11 PKPbc PKPbc 04 07 13.6 -1.3
0.2nm,0.7s,baz=320,slow=3.5,SNR=3.9

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*IDC **03** 03:51:16.6±4.8, 38.°09N×20.°68E, h0km, mb3.6/4, mb1 3.5/6, mb1mx3.3/51, mbtmp3.5/6, ML2.5/2, Error ellipse: s-maj=88.2km s-min=28.8km az=51.0*
*THE **03** 03:51:20.2, 38.°17N×20.°39E, h11km, ML3.6/6, Error ellipse: s-maj=1.3km s-min=0.7km az=260.0*
*ATH **03** 03:51:20.8, 38.°20N×20.°40E, h9km±2km, ML3.2/4, Error ellipse: s-maj=2.3km s-min=1.0km az=256.0*
ISC 03 03:51:19.1±0.9**, 38.°17N**±0.°03**×20.°37E**±0.°05**, h16**km±4km**, n29, σ0§94**/43**, mb3.6**/4**, Greece**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.02 33 P **Pg 03 51 22.3 +0.4**
CHV1 S **Sg 03 51 23.8 0.0**
168μm,0.2s
KEF3 Kipouria, Keph 0.04 337 P **Pg 03 51 22.5 +0.5**
KEF3 S **Sg 03 51 24.0 0.0**
KEF2 Argostoli. Kep 0.09 91 P **Pg 03 51 22.8 +0.4**
KEF2 S **Sg 03 51 24.2 -0.4**
ARG2 Argostoli 0.10 83 P **Pg 03 51 22.7 +0.3**
ARG2 S **Sg 03 51 24.4 -0.2**
89μm,0.2s
KEF4 Livadi, Kephal 0.10 26 P **Pg 03 51 22.4 -0.1**
KEF1 Kardakata, Kep 0.14 36 P **Pg 03 51 23.2 +0.3**
KEF1 S **Sg 03 51 25.0 -0.4**
VLS Valsamata 0.17 87 P **Pg 03 51 23.7 +0.2**
VLS S **Sg 03 51 26.4 -0.1**
15μm,0.2s
VLS Valsamata 0.17 87 P **Pg 03 51 23.7 +0.2**
VLS S **Sg 03 51 26.3 -0.1**
VLS AML AML 03 51 26.7
comp=E,30415μm,0.2s
VLS AML AML 03 51 27.1
comp=N,26613μm,0.2s
VSK1 VASILIKIADES 0.29 32 P **Pg 03 51 25.5 +0.2**
VSK1 S **Sg 03 51 29.8 +0.3**
comp=N,15μm,0.2s
VLMS Volimes, Zakyn 0.37 141 P **Pb 03 51 27.9 +0.7**
VLMS S **Sb 03 51 33.8 +1.0**
VLMS AML AML 03 51 34.5
comp=N,25623μm,0.4s
VLMS AML AML 03 51 34.8
comp=E,23711μm,0.2s
EVGI Lefkada island 0.51 26 P **Pg 03 51 29.6 +0.4**
EVGI Lefkada island 0.51 26 P **Pb 03 51 30.0 +0.4**
EVGI S **Sb 03 51 36.9 +0.1**
MGNA Meganis 0.59 34 P **Pb 03 51 31.0 0.0**
MGNA S **Sb 03 51 38.6 -0.6**
MGNA AML AML 03 51 40.4
comp=E,7196μm,0.1s
MGNA AML AML 03 51 40.6
comp=N,3987μm,0.4s
KRI1 kERI 0.62 145 P **Pb 03 51 31.6 +0.2**
KRI1 S **Sg 03 51 40.4 +1.0**
comp=N,6μm,0.2s
LKD2 Lefkada island 0.66 20 P **Pg 03 51 32.7 +0.6**
AST1 Astakos 0.68 56 P **Pb 03 51 32.7 +0.2**
PDO Prodromos 0.77 56 P **Pb 03 51 34.3 +0.2**
PDO Prodromos 0.77 56 P **Pg 03 51 34.5 +0.4**
RLS Riolos of Patr 0.87 97 P **Pn 03 51 37.3 +0.6**
RLS S **Sn 03 51 48.7 -0.3**
RLS AML AML 03 51 51.8
comp=E,2399μm,0.8s
RLS AML AML 03 51 58.0
comp=N,1130μm,0.2s
PVO Paravola 1.01 63 P **Pg 03 51 39.1 +0.4**
PVO S **Sn 03 51 55.0 +2.5**
comp=N,3μm,0.3s
PVO Paravola 1.01 63 P **Pg 03 51 39.3 +0.5**
DRO Drossia 1.08 101 P **Pg 03 51 40.7 +0.7**
TRIZ Trizonia 1.36 81 P **Pb 03 51 44.0 -0.1**
IDI Anoyia 4.63 127 Pn Pn 03 52 24.6 -3.8
comp=N,0.3nm,0.3s,baz=300,slow=20,SNR=2.4
IDI Sn **Sn 03 53 18.0 -3.9**
comp=N,0.3nm,0.3s,baz=302,slow=13,SNR=2.5
BRTR Keskin Array B 10.46 77 Pn **Pn 03 53 48.0 -0.3**
comp=N,0.0nm,0.3s,baz=277,slow=14,SNR=2.6
HFS Hagfors 22.39 351 P **P 03 56 17.3 +0.9**
comp=N,2.9nm,0.9s,baz=181,slow=16,SNR=2.5
KURBB Kurchatov Arra 42.33 53 P **P 03 59 10.1 -1.8**
comp=N,0.5nm,0.8s,baz=278,slow=7.7,SNR=3.5
MKAR Makanchi Array 45.41 58 P **P 03 59 35.4 -1.5**
comp=N,0.2nm,0.3s,baz=275,slow=7.8,SNR=5.8
ZALV Zalesovo Beam 45.79 48 P **P 03 59 40.0 +0.3**
comp=N,0.5nm,0.4s,baz=273,slow=8.5,SNR=4.7

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*IDC **03** 03:51:32.4±1.1, 40.°89N×48.°42E, h0km, mb3.6/6, mb1 3.6/12, mb1mx3.5/43, mbtmp3.5/12, ML3.4/4, Error ellipse: s-maj=24.9km s-min=12.2km az=163.0*
*AZER **03** 03:51:33.6, 40.°80N×48.°42E, h12km, ML3.7*
*MOS **03** 03:51:34.2±2.4, 40.°70N×48.°71E, h19km, mb4.1/3, Error ellipse: s-maj=10.6km s-min=5.7km az=113.4*
*TEH **03** 03:51:35.5, 40.°79N×48.°38E, h8km, ML3.7*
ISC 03 03:51:34.6±0.9**, 40.°79N**±0.°02**×48.°39E**±0.°02**, h17**km±6km**, n99, σ1§51**/140**, mb3.5**/6**, 2C-5D, Eastern Caucasus**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PQL Pirkuli 0.15 89 P **Pg 03 51 38.3 -0.6**
SNR=5883
PQL S **Sb 03 51 41.8 -0.3**
PQL Pirkuli 0.15 89 *e*Pg **Pg 03 51 38.4 -0.6**
IML Ismayilli 0.16 273 P **Pb 03 51 39.3 +0.2**
SNR=419
IML S **Sb 03 51 43.7 +1.5**
IML Ismayilli 0.16 273 *e*Pg **Pb 03 51 39.3 +0.2**
ATGJ Altiaghaj 0.42 80 P **Pb 03 51 43.5 -0.1**
SNR=191
ATGJ S **Sb 03 51 50.8 +1.0**
ATGJ Altiaghaj 0.42 80 *e*Pg **Pb 03 51 43.5 -0.1**
XNQ Khinaliq 0.43 334 P **Pb 03 51 44.2 +0.3**
SNR=1561
XNQ S **Sb 03 51 51.5 +1.4**
XNQ Khinaliq 0.43 334 *e*Pg **Pb 03 51 44.2 +0.3**
KDMR Kurdemir 0.44 201 P **Pb 03 51 44.0 +0.1**
SNR=19
KDMR S **Sn 03 51 52.7 -0.9**
KDMR Kurdemir 0.44 201 *e*Pg **Pb 03 51 44.0 +0.1**
QBL Gabala 0.45 291 P **Pb 03 51 44.6 +0.5**
SNR=430
QBL S **Sn 03 51 52.9 -1.1**
QBL Gabala 0.45 291 *e*Pn **Pb 03 51 44.6 +0.5**
SIZA Siyzn 0.48 53 P **Pb 03 51 45.2 +0.5**
SNR=2888
SIZA S **Sn 03 51 53.4 -1.5**
SIZA Siyzn 0.48 53 *e*Pn **Pb 03 51 45.2 +0.5**
GBS Qobustan 0.49 121 P **Pb 03 51 45.1 +0.3**
SNR=202
GBS S **Sn 03 51 54.4 -0.6**
GBS Qobustan 0.49 121 *e*Pn **Pb 03 51 45.1 +0.3**
QUBA Quba, Azerbaij 0.57 8 P **Pn 03 51 47.7 -0.3**
SNR=306
QUBA S **Sn 03 51 57.6 +0.5**
QUB Quba 0.59 358 *e*Pn **Pn 03 51 47.8 -0.5**
QSAR Qusar 0.73 352 P **Pn 03 51 50.3 +0.1**
SNR=135
QSAR S **Sn 03 52 01.6 +0.6**
QSAR Qusar 0.73 352 *e*Pn **Pn 03 51 50.3 +0.1**
ZRD Zardab 0.74 227 P **Pn 03 51 49.8 -0.4**
SNR=343
ZRD S **Sn 03 52 03.0 +2.0**
ZRD Zardab 0.74 227 *e*Pn **Pn 03 51 49.8 -0.4**
KSMR Kasumkent 0.84 346 *e*PG **Pn 03 51 52.0 +0.3**
KSMR *e*S **Sn 03 52 04.0 +0.3**
AKT Akhty 0.85 324 ⇑*i*PG **Pg 03 51 51.5 +0.2**
AKT pmax pmax
comp=Z,313nm,0.2s
AKT Akhty 0.85 324 *e*Pn **Pn 03 51 51.7 -0.2**
SAAT Saatly 0.92 179 P **Pn 03 51 51.8 -0.3**
SAAT S **Sn 03 52 05.7 +0.2**
ALIB Äli-Bayra 0.95 150 P **Pn 03 51 54.1 +1.0**
SNR=43
ALIB S **Sn 03 52 12.0 +5.7**
ALIB Äli-Bayra 0.95 150 *e*Pn **Pn 03 51 54.3 +1.2**
MNGR Mingechevir, A 0.99 270 PG **Pn 03 51 54.6 +0.9**
MNGR Mingechevir, A 0.99 270 P **Pn 03 51 54.3 +0.6**
SNR=70
MNGR S **Sn 03 52 10.7 +3.4**
MNGR Mingechevir, A 0.99 270 *e*Pn **Pn 03 51 54.6 +0.9**
SEKA Sheki 1.00 295 PG **Pb 03 51 53.5 0.0**
SEKA Sheki 1.00 295 P **Pb 03 51 53.5 0.0**
SNR=208
SEKA S **Sn 03 52 09.4 +1.9**
SEKA Sheki 1.00 295 *e*Pn **Pb 03 51 53.5 0.0**
BRDA Brd 1.06 241 P **Pg 03 51 55.8 +0.7**
SNR=41
BRDA S **Sn 03 52 13.4 +4.4**
BRDA Brd 1.06 241 *e*Pn **Pg 03 51 55.9 +0.7**
GOBA Gobu 1.09 110 P **Pg 03 51 58.3 +2.5**
GOBA S **Sn 03 52 12.4 +2.7**
AGDM Agdam 1.19 236 P **Pb 03 51 57.1 +0.3**
SNR=136
AGDM S **Sg 03 52 15.4 +2.2**
NDR Nardaran 1.23 99 P **Pg 03 51 59.3 +1.0**
SNR=15
NDR S **Sn 03 52 13.4 +0.2**
NDR Nardaran 1.23 99 *e*Pn **Pg 03 51 59.8 +1.4**
BLQ Beylaqan 1.24 211 P **Pn 03 51 57.0 -0.1**
SNR=42
BLQ Sn **Sg 03 52 14.7 -0.1**
DRN Derbent 1.24 358 *e*PG **Pg 03 52 00.2 +1.6**
DRN *e*S **Sg 03 52 17.8 +2.9**
DRN pmax pmax
comp=Z,505nm,0.6s
GALA Gala 1.39 105 P **Pn 03 51 59.2 0.0**
GALA S **Sb 03 52 18.2 +0.6**
URKR Urkarakh 1.49 338 ⇓*i*PN **Pg 03 52 04.7 +1.3**
URKR *e*S **Sg 03 52 25.3 +2.5**
GLBA Cliilabad 1.54 180 Pn **Pn 03 52 01.2 0.0**
SNR=186
GLBA Sn **Sb 03 52 22.0 +0.1**
QRD Qoradiz 1.56 212 Pn **Pn 03 52 01.9 +0.4**
SNR=64
QRD S **Sb 03 52 22.8 +0.4**
GANJ Ganja 1.58 266 Pn **Pn 03 52 01.7 -0.1**
SNR=52
GANJ Sn **Sb 03 52 23.3 +0.3**
ZKTA Zakatala 1.58 303 Pn **Pb 03 52 03.5 +0.1**
SNR=168
ZKTA Sn **Sg 03 52 26.7 +1.0**
KMKR Kumukh 1.66 325 *e*PN **Pg 03 52 07.0 +0.5**
KMKR pmax pmax
comp=Z,117nm,0.2s
DDFL Dedoflistskaro 1.84 292 P **Pg 03 52 09.2 -0.7**
DDFL S **Sg 03 52 36.5 +2.6**
YRD Yardimli 1.87 184 Pn **Pn 03 52 05.6 -0.3**
SNR=62
YRD Sn **Sn 03 52 30.2 +0.9**
GNBR Gunib 1.93 327 ⇑*i*PN **Pg 03 52 11.3 -0.3**
GNBR pmax pmax
comp=Z,132nm,0.7s
GDB GEDABAY 2.00 269 Pn **Pn 03 52 08.2 +0.4**
SNR=31
GDB Sn **Sb 03 52 34.5 -0.9**
LKRN Lenkeran, Azer 2.10 172 PN **Pn 03 52 10.0 +1.1**
LKRN Lenkeran, Azer 2.10 172 Pn **Pn 03 52 08.8 -0.1**
SNR=5.2
LKRN Sn **Sn 03 52 36.2 +1.7**
LRK Lerik 2.14 181 Pn **Pn 03 52 09.7 +0.1**
SNR=46
LRK Sn **Sn 03 52 37.7 +1.8**
ASTR Astara 2.25 172 Pn **Pn 03 52 10.5 -0.4**
SNR=41
ASTR Sn **Sb 03 52 42.4 +0.3**
BUJR Buynaksk 2.25 335 ⇓*e*PN **Pg 03 52 19.8 +2.0**
BUJR *e* 03 52 50.4
MAK Makhachkala 2.27 343 ⇓*i*PN **Pb 03 52 16.2 +1.1**
MAK *e* 03 52 20.8
MAK *e* 03 52 48.0
MAK *e* 03 52 51.9
MAK pmax pmax
comp=Z,153nm,0.3s
MAK smax smax
comp=E,517nm,0.5s
MAK smax smax
comp=E,613nm,0.6s
QZX Qazax, Azerbai 2.30 278 Pn **Pn 03 52 12.6 +0.8**
SNR=91
QZX Sn **Sb 03 52 43.9 0.0**
BTLR Botlikh 2.48 320 ⇓*e*PN **Pg 03 52 22.5 +0.3**
BTLR *e* 03 52 54.3
BTLR pmax pmax
comp=Z,76nm,0.6s
BTLR smax smax
comp=E,130nm,1.0s
AHAR Ahar 2.52 205 *e*Pn **Pn 03 52 16.2 +1.4**
DBC Dubki 2.52 333 ⇓*e*PN **Pg 03 52 22.0 -0.9**
DBC *e* 03 52 55.5
SBZ Shahbuz 2.58 238 Pn **Pn 03 52 18.1 +2.4**
SNR=55
SBZ Sn **Sb 03 52 50.8 -1.2**
ORD Ordubad 2.62 226 Pn **Pn 03 52 17.3 +1.2**
SNR=35
ORD Sn **Sn 03 52 50.2 +2.6**
IHRS Heris 2.68 203 *e*Pn **Pn 03 52 17.9 +0.8**
IHRS *e* 03 52 57.7
NAX Nakhchivan 2.75 235 PN **Pb 03 52 21.7 -1.6**
NAX Nakhchivan 2.75 235 Pn **Pn 03 52 20.7 +2.8**
SNR=20
NAX Sg **Sg 03 53 02.2 -0.7**
GNI Garni 2.86 258 Pn **Pb 03 52 23.4 -1.8**
comp=E,1.7nm,0.3s,baz=115,slow=22,SNR=14
GNI Lg Lg 03 52 59.7
comp=E,10nm,0.3s,baz=50,slow=19,SNR=5.6
HYR Heyderabad 2.91 250 Pn **Pn 03 52 22.6 +2.4**
SNR=8.5
HYR Sn **Sb 03 52 59.8 -1.6**
TBLG Delisi 2.91 290 P **Pn 03 52 22.6 +2.4**
ISRB Sarab 3.01 191 *e*Pn **Pn 03 52 22.7 +1.0**
ISRB *e* 03 52 35.1
GROC Groznyy 3.09 322 *e*PN **Pb 03 52 28.7 -0.4**
GROC *e* 03 52 38.0
GROC *e* 03 53 10.5
GROC *e* 03 53 29.7
GROC pmax pmax
comp=Z,46nm,0.5s
GROC pmax pmax
comp=Z,53nm,0.4s
GROC smax smax
comp=E,91nm,0.6s
GROC smax smax
comp=N,94nm,0.6s
GROC smax smax

	comp=E,91nm,0.5s						
GROC				smax	smax		
	comp=N,85nm,0.7s						
GROC				smax	smax		
	comp=E,119nm,0.8s						
GROC				MLR	MLR		
	comp=Z,15nm,2.0s						
TRLG	Trialeti	3.33	284	P	Pn	03 52 28.4	+2.4
TRLG				S	Sb	03 53 13.4	0.0
GUDG	Gudauri	3.38	301	P	Pn	03 52 29.0	+2.2
BGD	Bogdanovka	3.66	279	P	Pn	03 52 34.9	+4.3
AKH	Akhalkalaki	3.75	281	P	Pn	03 52 36.2	+4.3
ONI	Oni	4.11	298	P	Pn	03 52 39.8	+3.1
IGZV	Ghazvin	4.62	161	ePn	Pn	03 52 42.8	-1.0
IGZV				e		03 53 43.6	
QALM	Alamut, Qazvin	4.69	157	ePn	Pn	03 52 43.6	-1.2
KBZ	Khabaz	5.03	308	Pn	Pn	03 52 51.2	+2.1
	comp=Z,0.1nm,0.3s,baz=165,slow=12,SNR=2.9						
KBZ				Lg	Lg	03 54 06.5	
	comp=Z,0.3nm,0.3s,baz=93,slow=17,SNR=2.3						
SHA1	Shidzhatmaz	5.18	307	iP	Pn	03 52 49.3	-2.2
KIV	Kislovodsk	5.28	309	eP	Pn	03 52 53.6	+0.9
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
IPRN	Peran	5.49	144	ePn	Pn	03 52 54.6	-1.1
GEYT	Alibeck	8.06	108	Pn	Pn	03 53 29.2	-1.6
	comp=Z,0.2nm,0.3s,baz=326,slow=5.7,SNR=5.4						
GEYT				Sn	Sn	03 54 58.6	-2.9
	comp=Z,0.4nm,0.3s,baz=283,slow=14,SNR=2.6						
ANN	Anapa	9.00	300	eP	Pn	03 53 41.0	-2.6
ANN				pmax	pmax		
	comp=Z,9.0nm,0.4s						
AKTO	Aktyubinsk	11.76	32	Pn	Pn	03 54 18.9	-2.5
	comp=Z,0.3nm,0.3s,baz=252,slow=6.5,SNR=7.2						
AKASG	Malin Array Be	16.61	313	Pn	Pn	03 55 24.9	-1.5
	comp=Z,0.3nm,0.3s,baz=123,slow=12,SNR=3.7						
ARU	Arti	17.01	20	Pn	Pn	03 55 30.1	-1.3
	comp=Z,0.0nm,0.3s,baz=192,slow=5.9,SNR=3.8						
BVAR	Borovoye Array	19.29	43	P	P	03 55 57.3	-1.0
	comp=Z,0.1nm,0.3s,baz=223,slow=9.9,SNR=4.6						
AAK	Ala-Archa	19.55	76	P	P	03 56 02.0	+0.5
	comp=Z,0.1nm,0.3s,baz=270,slow=5.1,SNR=3.1						
AAK	Ala-Archa	19.55	76	P	P	03 56 02.0	+0.5
PRGR	Permogore	20.95	356	eP	P	03 56 14.3	-2.0
PRGR				pmax	pmax		
	comp=Z,15nm,0.6s						
FINES	FINESS Array B	24.74	334	P	P	03 56 54.2	-0.6
	comp=Z,2.0nm,0.6s,baz=134,slow=10,SNR=12						
MKAR	Makanchi Array	25.06	65	P	P	03 56 58.4	+0.4
	comp=Z,0.5nm,0.6s,baz=269,slow=8.5,SNR=6.3						
ARCES	ARCESS Array B	31.22	345	P	P	03 57 52.3	-0.3
	comp=Z,2.0nm,0.8s,baz=163,slow=8.5,SNR=5.0						
SONM	Songino Array	41.24	60	P	P	03 59 18.6	-0.1
	comp=Z,0.2nm,0.6s,baz=302,slow=8.2,SNR=2.9						
ILAR	Eielson Array	74.10	7	P	P	04 03 09.2	0.0
	comp=Z,0.2nm,0.7s,baz=318,slow=4.1,SNR=4.8						
YKA	Yellowknife Ar	76.16	352	P	P	04 03 21.4	+0.3
	comp=Z,0.3nm,0.5s,baz=13,slow=5.6,SNR=6.6						

IDC 03 03:56:01.1±0.7, 6˚71N×72˚94W, h158km±7km, mb3.3/6, mb1 3.5/9, mb1mx3.2/51, mbtmp3.9/9, Error ellipse: s-maj=23.9km s-min=7.1km az=134.0

RSNC 03 03:56:02.7±1.1, 6˚80N×73˚14W, h146km±4km, ML3.8, Mw3.7

ISC 03 03:56:01.0±0.7, 6˚83N±0˚03×73˚11W±0˚03, h154km±5km, n52, σ1˚67/108, mb3.4/6, 7C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.25	198	⇑iP	Pn	03 56 22.6	+0.4
BARC				eS	Sn	03 56 37.7	-0.7
BARC				i		03 56 39.8	
	comp=Z,3μm,0.2s						
PAMC	Pamplona, Colo	0.65	39	⇓eP	Pn	03 56 25.4	+1.2
PAMC				eS	Sn	03 56 41.9	0.0
PAMC				i		03 56 43.7	
	comp=Z,726nm,0.6s						
BRRC	Barranca, Sant	0.66	294	eP	Pn	03 56 24.4	+0.8
BRRC				eS	Sn	03 56 41.4	+0.5
BRRC				i		03 56 42.4	
	comp=Z,1μm,0.2s						
BRRC				i		03 56 42.5	
	comp=Z,1μm,0.3s						
RUSC	La Rusia	0.93	179	eP	Pn	03 56 26.5	+0.3
RUSC				eS	Sn	03 56 44.4	-1.0
RUSC				i		03 56 46.1	
	comp=Z,879nm,0.3s						
RUSC				i		03 56 46.4	
	comp=Z,856nm,0.3s						
TAMC	Tame, Arauca	1.36	107	⇓iP	Pn	03 56 30.9	+1.4
TAMC				eS	Sn	03 56 51.9	+0.5
TAMC				i		03 56 53.1	
	comp=Z,557nm,0.6s						
TAMC				i		03 56 53.1	
	comp=Z,420nm,0.6s						
PTBC	PUERTO BERRIO,	1.37	258	eP	Pn	03 56 29.1	-0.5
PTBC				eS	Sn	03 56 49.9	-1.6
PTBC				i		03 56 52.5	
	comp=Z,1μm,0.1s						
PTBC				i		03 56 52.6	
	comp=Z,1μm,0.1s						
OCAC	Ocana	1.41	351	eP	Pn	03 56 30.8	+0.6
OCAC				eS	Sn	03 56 52.3	-0.3
OCAC				i		03 56 57.1	
	comp=Z,835nm,0.2s						
OCAC				i		03 56 57.1	
	comp=Z,813nm,0.2s						
SPBC	San Pablo de B	1.52	219	⇑eP	Pn	03 56 31.4	+0.2
SPBC				eS	Sn	03 56 53.5	-0.8
SPBC				i		03 57 00.3	
	comp=Z,727nm,0.3s						
SPBC				i		03 57 00.5	
	comp=Z,786nm,0.3s						
ZARC	Zaragoza, Cauc	1.86	291	eP	Pn	03 56 35.2	+0.4
ZARC				eS	Sn	03 57 01.3	+0.6
ZARC				i		03 57 06.5	
	comp=Z,765nm,0.2s						
ZARC				i		03 57 07.0	
	comp=Z,1μm,0.4s						
NORC	Norcasia	2.16	234	eP	Pn	03 56 38.4	+0.1
NORC				eS	Sn	03 57 05.8	-1.2
NORC				i		03 57 10.1	
	comp=Z,537nm,0.2s						
NORC				i		03 57 10.7	
	comp=Z,485nm,0.3s						
SMLC	San Martn de	2.18	334	eP	Pn	03 56 38.7	+0.2
SMLC				eS	Sn	03 57 07.5	+0.1
SMLC				i		03 57 12.3	
	comp=Z,675nm,0.2s						
SMLC				i		03 57 12.4	
	comp=Z,605nm,0.1s						
CHIC	Chingaza	2.28	196	eP	Pn	03 56 40.4	+0.3
CHIC				eS	Sn	03 57 09.3	-0.8
CHIC				i		03 57 14.2	
	comp=Z,234nm,0.4s						
CHIC				i		03 57 20.4	
	comp=Z,208nm,0.6s						
ROSC	El Rosal	2.32	211	P	Pn	03 56 42.6	+2.1
	comp=Z,71nm,0.3s,baz=224,slow=4.1,SNR=189						
ROSC				S	Sn	03 57 11.2	+0.2
	comp=Z,54nm,0.3s,baz=126,slow=22,SNR=12						
ROSC	El Rosal	2.32	211	⇑eP	Pn	03 56 42.4	+1.9
ROSC				eS	Sn	03 57 12.6	+1.6
ROSC				i		03 57 18.4	
	comp=Z,482nm,0.3s						
HELC	Santa Helena	2.49	255	eP	Pn	03 56 42.8	+0.2
HELC				eS	Sn	03 57 14.4	-0.2
HELC				i		03 57 21.6	
	comp=Z,427nm,0.3s						
HELC				i		03 57 21.8	
	comp=Z,447nm,0.4s						
UREC	San Jos de Ur	2.58	291	eP	Pn	03 56 42.5	-0.8
UREC				eS	Sn	03 57 13.7	-2.2
UREC				i		03 57 25.9	
	comp=Z,525nm,0.2s						
UREC				i		03 57 27.1	
	comp=Z,514nm,0.2s						
SOCV	Socops	2.66	57	eP	Pn	03 56 45.0	+0.7
SOCV				eS	Sn	03 57 16.3	-1.4
GUY2C	Guyana, Caldas	2.76	235	eP	Pn	03 56 46.9	+0.9
GUY2C				eS	Sn	03 57 20.8	+0.2
GUY2C				i		03 57 27.3	
	comp=Z,489nm,0.5s						
GUY2C				i		03 57 29.1	
	comp=Z,366nm,0.5s						
VILC	Villavicencio,	2.77	192	eP	Pn	03 56 45.8	+0.1
VILC				eS	Sn	03 57 19.2	-1.1
VILC				i		03 57 25.2	
	comp=Z,347nm,0.3s						
PTGC	Puerto Gaitan,	2.79	160	⇑eP	Pn	03 56 45.6	-0.3
PTGC				eS	Sn	03 57 18.7	-2.0
PTGC				i		03 57 23.6	
	comp=Z,212nm,0.2s						
RREF	El Recreo	2.94	229	eP	Pn	03 56 49.2	+0.8
RREF				eS	Sn	03 57 24.8	-0.2
RREF				i		03 57 31.5	
	comp=Z,300nm,0.2s						
RREF				i		03 57 32.7	
	comp=Z,312nm,0.6s						
CBOC	Ciudad Bolivar	3.04	252	eP	Pn	03 56 50.4	+1.1
CBOC				eS	Sn	03 57 26.9	+0.3
CBOC				i		03 57 28.4	
	comp=Z,148nm,0.4s						
CBOC				i		03 57 36.9	
	comp=Z,135nm,0.7s						
DBBC	Dabeiba	3.09	274	eP	Pn	03 56 50.3	+0.6
DBBC				eS	Sn	03 57 27.0	-0.4
DBBC				i		03 57 30.8	
	comp=Z,450nm,0.4s						
CODC	Agustn Codazz	3.10	354	eP	Pn	03 56 50.0	+0.2
CODC				eS	Sn	03 57 28.8	+1.1
CODC				i		03 57 35.0	
	comp=Z,82nm,0.7s						
CODC				i		03 57 35.5	
	comp=Z,88nm,0.6s						
TOLC	Tolima	3.14	225	eP	Pn	03 56 52.1	+1.5
TOLC				eS	Sn	03 57 29.4	+0.5
TOLC				i		03 57 35.4	
	comp=Z,138nm,0.2s						
SDV	Santo Domingo	3.19	50	P	Pn	03 56 52.2	+1.2
	comp=Z,41nm,0.3s,baz=209,slow=5.4,SNR=285						
SDV				S	Sn	03 57 29.1	-0.8
	comp=Z,42nm,0.3s,baz=259,slow=19,SNR=23						
ARGC	Ariguani, Magd	3.21	339	eP	Pn	03 56 52.9	+1.7
ARGC				eS	Sn	03 57 32.2	+2.0
ARGC				i		03 57 33.8	
	comp=Z,151nm,0.3s						
ARGC				i		03 57 38.0	
	comp=Z,134nm,0.3s						
ANIL	Santa Ana	3.26	225	eP	Pn	03 56 53.1	+1.0
ANIL				eS	Sn	03 57 31.7	0.0
ANIL				i		03 57 38.2	
	comp=Z,3μm,0.3s						
ANIL				i		03 57 39.7	
	comp=Z,3μm,0.4s						
PRAC	Prado	3.57	210	eP	Pn	03 56 55.7	-0.2
PRAC				eS	Sn	03 57 38.9	+0.4
PRAC				i		03 57 42.7	
	comp=Z,381nm,0.6s						
PRAC				i		03 57 43.6	
	comp=Z,376nm,0.3s						
ORTC	Ortega, Tolima	3.60	216	eP	Pn	03 56 56.8	+0.5
ORTC				eS	Sn	03 57 39.1	-0.1
ORTC				i		03 57 45.4	
	comp=Z,264nm,0.3s						
ORTC				i		03 57 45.6	
	comp=Z,285nm,0.4s						
SJCC	San Jacinto, C	3.67	326	⇑eP	Pn	03 56 56.5	-0.6
SJCC				eS	Sn	03 57 38.2	-2.6
SJCC				i		03 57 41.7	
	comp=Z,162nm,0.5s						
SJCC				i		03 57 42.6	
	comp=Z,151nm,0.4s						
PLMC	San Jos del P	3.70	239	eP	Pn	03 56 58.5	+1.0
PLMC				eS	Sn	03 57 38.3	-3.1
PLMC				i		03 57 46.0	
	comp=Z,200nm,0.1s						
LCBC	Los crdobas,	3.81	302	eP	Pn	03 56 58.8	0.0
LCBC				eS	Sn	03 57 45.6	+1.8
LCBC				i		03 57 46.7	
	comp=Z,150nm,1.2s						
GUVC	San Jose del G	4.29	174	eP	Pn	03 57 04.3	-0.8
GUVC				eS	Sn	03 57 53.5	-1.6
GUVC				i		03 58 01.5	
	comp=Z,204nm,0.3s						
YOTC	Yotoco, Valle	4.29	229	eP	Pn	03 57 05.3	+0.1
YOTC				eS	Sn	03 57 55.5	+0.1
YOTC				i		03 58 01.1	
	comp=Z,25nm,1.2s						
YOTC				i		03 58 01.4	
	comp=Z,15nm,0.5s						
SMRC	Santa Marta, M	4.44	346	eP	Pn	03 57 08.2	+1.0
SMRC				eP	Pn	03 57 08.2	+1.0
SMRC				eS	Sn	03 57 55.8	-3.0
SMRC				eS	Sn	03 57 55.8	-3.0
SMRC				i		03 57 58.4	
	comp=Z,57nm,0.4s						
SMRC				i		03 57 58.4	
	comp=Z,57nm,0.4s						
SMRC				i		03 58 00.6	
	comp=Z,53nm,0.4s						
SMRC				i		03 58 00.6	
	comp=Z,53nm,0.4s						
PIZC	Pizarro, Choco	4.62	247	eP	Pn	03 57 11.5	+2.0
PIZC				eP	Pn	03 57 11.5	+2.0
PIZC				eS	Sn	03 58 01.8	-1.1
PIZC				eS	Sn	03 58 01.8	-1.1
PIZC				i		03 58 12.8	
	comp=Z,66nm,0.8s						
PIZC				i		03 58 12.8	
	comp=Z,66nm,0.8s						
PTAC	Punta Ardita,	4.68	274	eP	Pn	03 57 10.1	-0.1
PTAC				eP	Pn	03 57 10.1	-0.1
PTAC				eS	Sn	03 58 01.1	-3.1
PTAC				eS	Sn	03 58 01.1	-3.1
PTAC				i		03 58 05.1	
	comp=Z,104nm,0.3s						
PTAC				i		03 58 05.1	
	comp=Z,104nm,0.3s						
PTAC				i		03 58 17.6	
	comp=Z,120nm,0.3s						
PTAC				i		03 58 17.6	
	comp=Z,120nm,0.3s						
MACC	Macarena, Meta	4.71	189	⇑eP	Pn	03 57 09.5	-1.3
MACC				⇑eP	Pn	03 57 09.5	-1.3
MACC				eS	Sn	03 58 00.9	-4.4
MACC				eS	Sn	03 58 00.9	-4.4
MACC				i		03 58 06.5	
	comp=Z,106nm,0.8s						
MACC				i		03 58 06.5	
	comp=Z,106nm,0.8s						
MACC				i		03 58 08.1	
	comp=Z,68nm,0.5s						
MACC				i		03 58 08.1	
	comp=Z,68nm,0.5s						
DABV	Dabajuro	4.74	31	eP	Pn	03 57 11.7	+0.6
DABV				eP	Pn	03 57 11.7	+0.6
DABV				eS	Sn	03 57 54.1	-12
DABV				eS	Sn	03 57 54.1	-12
URIC	Uribia, Colomb	4.96	13	eP	Pn	03 57 12.8	-1.1
URIC				eP	Pn	03 57 12.8	-1.1
URIC				eS	Sn	03 58 04.6	-6.4
URIC				eS	Sn	03 58 04.6	-6.4
URIC				i		03 58 16.2	
	comp=Z,23nm,0.3s						
URIC				i		03 58 16.2	
	comp=Z,23nm,0.3s						
FLOC	Florencia	5.80	206	eP	Pn	03 57 25.2	+0.1
FLOC				eP	Pn	03 57 25.2	+0.1
FLOC				eS	Sn	03 58 20.9	-10
FLOC				eS	Sn	03 58 20.9	-10
FLOC				i		03 58 35.2	
	comp=Z,17nm,0.5s						
FLOC				i		03 58 35.2	
	comp=Z,17nm,0.5s						
FLOC				i		03 58 59.5	
	comp=Z,34nm,1.1s						
FLOC				i		03 58 59.5	
	comp=Z,34nm,1.1s						
BBAC	Balboa, Cauca	6.32	221	eP	Pn	03 57 32.0	-0.1
BBAC				eP	Pn	03 57 32.0	-0.1
BBAC				eS	Sn	03 58 40.0	-3.5
BBAC				eS	Sn	03 58 40.0	-3.5
PCRV	Puerto La Cruz	9.01	68	P	Pn	03 58 08.9	+1.0
	comp=Z,1.0nm,0.3s,baz=285,slow=1.8,SNR=8.5						
PCRV				S	Sn	03 59 46.6	-1.4
	comp=Z,0.5nm,0.3s,baz=150,slow=20,SNR=1.9						
ULM	Lac du Bonnet	47.28	340	P	P	04 04 19.2	+0.5
	comp=Z,1.3nm,0.6s,baz=168,slow=5.3,SNR=3.2						
PDAR	Pinedale Array	48.08	324	P	P	04 04 27.1	+1.8
	comp=Z,0.1nm,0.5s,baz=116,slow=10,SNR=2.4						
SCHQ	Schefferville	48.13	5	P	P	04 04 26.1	+1.0
	comp=Z,0.9nm,0.8s,baz=211,slow=6.7,SNR=5.2						
YKA	Yellowknife Ar	63.26	340	P	P	04 06 13.0	+0.2
	comp=Z,0.2nm,0.5s,baz=135,slow=6.5,SNR=8.8						
TORD	Torodi Ar. Bea	73.72	78	P	P	04 07 17.2	-1.5
	comp=Z,0.3nm,0.8s,baz=256,slow=4.3,SNR=2.5						
ARCES	ARCESS Array B	86.66	20	P	P	04 08 27.0	+0.2
	comp=Z,1.8nm,0.8s,baz=285,slow=7.2,SNR=2.1						
ASAR	Alice Springs	149.13	234	PKPbc	PKPbc	04 15 31.7	-0.3
	comp=Z,0.9nm,0.6s,baz=121,slow=3.1,SNR=8.7						
WRA	Warramunga Arr	150.36	241	PKPbc	PKPbc	04 15 34.4	-0.6
	comp=Z,0.4nm,0.3s,baz=106,slow=2.9,SNR=11						

IDC 03 03:56:53.6±20.0, 38˚58N×20˚96E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.2/55, mbtmp3.5/4, Error ellipse: s-maj=389.5km s-min=45.8km az=40.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	Anoyia	4.55	135	Sn	Sn	03 58 57.2	-0.2
	1.0nm,0.3s,baz=325,slow=21,SNR=6.4						
HFS	Hagfors	22.06	350	P	P	04 01 49.7	0.0
	1.9nm,0.9s,baz=171,slow=10,SNR=2.2						
FINES	FINESS Array B	23.11	6	P	P	04 02 00.9	+0.1
	2.0nm,0.8s,baz=177,slow=7.0,SNR=1.9						
MKAR	Makanchi Array	44.80	59	P	P	04 05 09.1	+0.1
	0.2nm,0.5s,baz=280,slow=6.1,SNR=4.1						
ZALV	Zalesovo Beam	45.16	48	P	P	04 05 11.4	-0.4
	0.3nm,0.4s,baz=278,slow=10.0,SNR=2.5						

PDG 03 04:03:48.6±0.3, 38˚26N×20˚49E, h10km, ML4.1/14, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0

THE 03 04:03:48.0, 38˚27N×20˚42E, h13km, ML4.2/8, Error ellipse: s-maj=1.0km s-min=0.3km az=251.0

NEIC 03 04:03:50.3±2.7, 38˚29N±0˚04×20˚43E±0˚03, h1km±4km, Error ellipse: s-maj=6.2km s-min=2.6km az=210.0

IDC 03 04:03:51.3±0.8, 38˚43N×20˚48E, h0km, mb3.9/13, mb1 4.0/22, mb1mx3.8/74, mbtmp3.8/22, ML3.6/8, Error ellipse: s-maj=15.2km s-min=13.1km az=25.0

ISC 03 04:03:51.6±0.4, 38˚28N±0˚02×20˚46E±0˚03, h10km, n138, σ2˚12/165, mb4.0/17, 13C-6D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	Argostoli	0.10	166	P	Pg	04 03 51.4	-2.8
ARG2				S	Sg	04 03 53.5	-2.5
	345μm,0.1s						
ARG2	Argostoli	0.10	166		Pg	04 03 51.4	-2.8
ARG2					Sg	04 03 53.5	-2.5
CHV1	Chavriata, Kef	0.11	211	P	Pg	04 03 50.2	-4.1
CHV1				S	Sg	04 03 53.4	-2.8
	519μm,0.2s						
VLS	Valsamata	0.15	134	P	Pg	04 03 51.6	-3.3
VLS				S	Sg	04 03 54.6	-2.6
	115μm,0.2s						
VLS	Valsamata	0.15	134		Pg	04 03 51.6	-3.3
VLS					Sg	04 03 54.6	-2.6
VSK1	VASILIKIADES	0.15	33	P	Pg	04 03 52.1	-2.9
VSK1				S	Sg	04 03 55.1	-2.3
	147μm,0.3s						
EVGI	Lefkada island	0.38	25	P	Pg	04 03 55.9	-3.1
EVGI				S	Sg	04 04 01.9	-2.1
EVGI	Lefkada island	0.38	25		Pg	04 03 55.9	-3.1
LKD2	Lefkada island	0.53	17	P	Pg	04 03 58.8	-3.2
LKD2				S	Sg	04 04 06.5	-2.5
	10μm,0.5s						
LKD2	Lefkada island	0.53	17		Pg	04 03 58.8	-3.2
AST1	Astakos	0.56	62	P	Pg	04 03 59.2	-3.3
AST1				S	Sg	04 04 08.4	-1.5
	29μm,0.3s						
TSLK	Tsoukalades, L	0.57	16	P	Pg	04 03 59.1	-3.5
TSLK				S	Sg	04 04 08.3	-1.8
	11μm,0.6s						
TSLK	Tsoukalades, L	0.57	16		Pg	04 04 00.8	-1.8
KRI1	kERI	0.68	155	P	Pg	04 04 01.1	-3.6
KRI1				S	Sg	04 04 11.0	-2.6
	27μm,0.2s						
RLS	Riolos of Patr	0.83	105	P	Pg	04 04 04.3	-3.2
RLS	Riolos of Patr	0.83	105		Pn	04 04 08.5	-0.7
LAKA	Lakka	1.20	91	P	Pb	04 04 10.4	-4.0
LAKA	Lakka	1.20	91		Pg	04 04 14.2	-0.4
EVR	Evrytania	1.24	59		Pg	04 04 15.7	+0.3
TRIZ	Trizonia	1.27	86	P	Pb	04 04 11.4	-4.0
ALIK	Aliki, Aigiali	1.30	90	P	Pb	04 04 11.8	-4.0
KALE	Kalithea	1.33	85	P	Pn	04 04 12.1	-4.2
KALE	Kalithea	1.33	85		Pg	04 04 16.6	-0.5
KLV	Kalavryta, Ach	1.36	99	P	Pn	04 04 12.4	-4.2
KLV	Kalavryta, Ach	1.36	99		Pb	04 04 16.2	-0.9
JAN	Janina	1.41	13		Pn	04 04 16.2	-1.2
MAKR	Makrakomi, Fth	1.50	60		Pg	04 04 19.9	-0.5
KASA	Kassiopi	1.52	345		Pg	04 04 19.7	-1.0
ITM	Ithomi	1.60	133		Pb	04 04 20.5	-0.7
ITM	Ithomi	1.60	133	Pn	Pb	04 04 20.1	-1.2
DLFA	Delphi	1.62	82		Pg	04 04 24.8	+2.2
AGG	Agios Georgios	1.65	63		Pb	04 04 21.6	-0.4
AGG	Agios Georgios	1.65	63	Pn	Pb	04 04 21.2	-0.8
KZN	Kozani	2.27	26	P	Pn	04 04 27.7	-1.5
SCTE	Santa Cesarea	2.37	320	Pn	Pn	04 04 29.0	-1.5
LIT	Litokhoron	2.41	40		Pb	04 04 32.3	-2.7
FNA	Florina	2.60	16	P	Pn	04 04 31.7	-2.0
FNA	Florina	2.60	16		Pn	04 04 32.3	-1.5
TIP	Timpagrande	3.03	288	⇑P	Pn	04 04 36.8	-2.9
TIP				⇑S	Sn	04 05 11.5	-4.4
TIP	Timpagrande	3.03	288		Pn	04 04 37.6	-2.0
TIR	Tirane	3.10	352	⇑P	Pn	04 04 38.4	-2.1
TIR				⇑S	Sn	04 05 14.6	-3.0
TIR	Tirane	3.10	352		Pn	04 04 38.6	-2.0
MASS	Massafra	3.48	314	ePn	Pn	04 04 43.0	-2.7
CEL	Celeste	3.59	271		Pn	04 04 45.1	-2.2
MATE	Matera	3.75	310	⇓P	Pb	04 04 52.7	-5.1
ULC	Ulcinj	3.79	346	⇓iPn	Pn	04 04 48.5	-1.6
ULC				eSn	Sn	04 05 35.7	+0.9
SG1	Sgolgore (BA)	3.88	312	ePn	Pn	04 04 48.3	-3.0
BAI	Bari	3.95	317	ePn	Pn	04 04 49.4	-2.8
DRME	Dracevica, Mon	4.02	346	ePn	Pn	04 04 52.1	-1.1
DRME				eSn	Sn	04 05 40.9	+0.5
BUM	Brajici-Budva	4.19	344	ePn	Pn	04 04 54.7	-0.9
BUM				eSn	Sn	04 05 44.4	-0.2
APE	Apeiranthos	4.20	105	⇑P	Pb	04 05 00.1	-5.5
PDG	Podgorica	4.25	348	⇓P	Pn	04 04 55.1	-1.2
PDG	Podgorica	4.25	348		Pn	04 04 53.5	-2.8
PDG					Sn	04 05 42.6	-3.3
TTG	Podgorica	4.25	348	ePn	Pn	04 04 55.7	-0.6
TTG				eSn	Sn	04 05 46.0	+0.1
ACER	Acerenza	4.29	307		Pn	04 04 54.3	-2.7
PVY	Plav	4.33	355	ePn	Pn	04 04 56.5	-1.0
PVY				eSn	Sn	04 05 47.9	-0.2
CEME	Cevo	4.42	345	ePn	Pn	04 04 57.3	-1.5
CEME				eSn	Sn	04 05 51.2	+0.9
HCY	Herceg Novi	4.42	341	⇑iPn	Pn	04 04 57.4	-1.4
HCY				eSn	Sn	04 05 50.1	-0.2
IVA	Berane	4.61	355	ePn	Pn	04 04 59.9	-1.5
IVA				eSn	Sn	04 05 54.9	-0.1
KOME	Kolasin	4.62	351	ePn	Pn	04 04 59.9	-1.7
KOME				eSn	Sn	04 05 54.8	-0.5
NKME	Niksic	4.63	346	ePn	Pn	04 05 00.3	-1.3
NKME				eSn	Sn	04 05 55.1	-0.3
IDI	Anoyia	4.64	129	Pn	Pn	04 05 03.1	+1.3
	0.4nm,0.3s,baz=322,slow=19,SNR=1.2						
IDI				Sn	Sn	04 05 57.5	+1.5
	8.2nm,0.3s,baz=313,slow=20,SNR=3.2						
NKY	Niksic	4.66	347	ePn	Pn	04 05 00.9	-1.2
NKY				eSn	Sn	04 05 56.4	0.0
VTS	Vitosha	4.83	25	⇑P	Pn	04 05 05.2	+0.8
VTS	Vitosha	4.83	25		Pn	04 05 02.5	-1.8
BRY	Bratogost	4.84	343	⇑iPn	Pn	04 05 03.3	-1.3
BRY				eSn	Sn	04 06 00.4	-0.4
VAE	Valguarnera	4.85	262	Pn	Pn	04 05 07.9	+3.3
	0.8nm,0.3s,baz=328,slow=19,SNR=1.3						
VAE				Sn	Sn	04 06 00.5	-0.4
	2.9nm,0.3s,baz=307,slow=2.3,SNR=6.4						
SGRT	San Giovanni R	5.01	315	Pn	Pn	04 05 07.4	+0.4
ALN	Alexandroupoli	5.05	57	Pn	Pn	04 05 08.3	+1.0
UPM	Unac-Piva	5.06	347	ePn	Pn	04 05 05.9	-1.7
UPM				eSn	Sn	04 06 06.4	+0.2
PLE	Pljevlja	5.11	351	ePn	Pn	04 05 07.4	-0.9
PLE				eSn	Sn	04 06 06.7	-0.7
PAOL	Paolisi	5.31	303		Pn	04 05 09.9	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WDD	Wied Dalam	5.33	245	Pn	Pn	04 05 11.2	0.0
WDD					Sn	04 06 11.8	-0.9
ELND	Elena	6.21	40	⇑P	Pn	04 05 24.3	+1.0
INTR	Introdacqua	6.25	309		Pn	04 05 22.5	-1.4
AQU	L'Aquila	6.75	309	Pn	Pn	04 05 30.3	-0.5
BLY	Banja Luka	6.91	340	⇑P	Pn	04 05 31.6	-1.3
BLY	Banja Luka	6.91	340	Pn	Pn	04 05 32.7	-0.3
NRCA	Norcia	7.21	311		Pn	04 05 35.6	-1.4
GZR	Gura Zlata	7.32	13	⇑P	Pn	04 05 39.5	+1.0
BZS	Buzias	7.38	6	⇓P	Pn	04 05 40.1	+0.7
MURB	Monte Urbino	7.81	312	Pn	Pn	04 05 46.5	+1.2
VOIR		7.93	24	⇑P	Pn	04 05 48.5	+1.6
MORH	Mrgy, Hungar	8.04	351	ePn	Pn	04 05 51.0	+2.6
MLR	Muntele Rosu	8.29	28	Pn	Pn	04 05 53.2	+1.3
	0.2nm,0.3s,baz=288,slow=10,SNR=4.2						
MLR	Muntele Rosu	8.29	28	⇓P	Pn	04 05 53.7	+1.9
PLOR	Plostina	8.86	29	⇓P	Pn	04 06 01.3	+1.7
VRI	Vrincioaia	8.90	30	⇑P	Pn	04 06 01.9	+1.7
TRI	Trieste	8.94	328	Pn	Pn	04 06 03.4	+2.7
KEST	Kesra	9.24	257	Pn	Pn	04 06 05.8	+0.8
SOKA	Soboth	9.30	336	Pn	Pn	04 06 01.3	-4.4
	13nm,0.9s						
OBKA	Obir	9.31	334	ePn	Pn	04 06 07.3	+1.4
	2.2nm,0.2s						
TEOL	Teolo	9.64	320	Pn	Pn	04 06 10.5	+0.1
ARSA	Arzberg	9.67	340	Pn	Pn	04 06 12.1	+1.4
	1.0nm,0.4s						
MYKA	Terra Mystica	9.74	331	Pn	Pn	04 06 14.9	+3.1
	1.2nm,0.3s						
CONA	Conrad Observa	10.21	342	Pn	Pn	04 06 22.4	+4.3
	0.4nm,0.3s						
KBA	Koelnbreinsper	10.23	332	Pn	Pn	04 06 21.3	+2.8
	1.7nm,0.3s						
VYHS	Vyhne	10.28	354	eSN	Sn	04 08 08.1	-6.2
MODS	Modra-Piesok	10.35	348	eSN	Sn	04 08 10.8	-5.3
BRTR	Keskin Array B	10.36	78	Pn	Pn	04 06 25.1	+4.8
	0.2nm,0.3s,baz=260,slow=13,SNR=12						
MOA	Molln	10.58	337	ePn	Pn	04 06 19.8	-3.3
	0.7nm,0.2s						
DAVOX	Davos/Dischmat	11.53	321	Pn	Pn	04 06 36.1	-0.2
	0.1nm,0.3s,baz=155,slow=19,SNR=2.2						
DAVOX				Sn	Sn	04 08 43.7	-1.4
	0.2nm,0.3s,baz=336,slow=20,SNR=2.1						
GERES	GERESS Array B	11.64	337	Pn	Pn	04 06 39.0	+1.3
	0.3nm,0.3s,baz=158,slow=13,SNR=7.9						
GERES				Sn	Sn	04 08 43.0	-4.7
	0.4nm,0.3s,baz=150,slow=22,SNR=5.2						
GERES	GERESS Array B	11.64	337		Pn	04 06 38.5	+0.7
KHC	Kasperske Hory	11.93	338	ePN	Pn	04 06 43.0	+1.4
KHC				ex	x	04 07 03.0	
MMAI	Mount Meron Ar	13.24	109	Pn	Pn	04 06 56.5	-3.1
	0.4nm,0.3s,baz=285,slow=11,SNR=2.2						
AKASG	Malin Array Be	13.89	24	Pn	Pn	04 07 09.9	+1.5
	0.7nm,0.3s,baz=210,slow=11,SNR=6.6						
AKASG	Malin Array Be	13.89	24		Pn	04 07 08.2	-0.2
CLL	Collm	14.05	340	esPP		04 07 21.0	
EIL	Elat	14.76	121	Pn	Pn	04 07 22.4	+2.0
	0.6nm,0.3s,baz=317,slow=9.5,SNR=4.2						
EIL				Sn	Sn	04 09 53.7	-10
	0.9nm,0.3s,baz=35,slow=4.2,SNR=5.2						
KBZ	Khabaz	17.77	65	P	P	04 08 00.2	+0.5
	0.1nm,0.3s,baz=279,slow=5.6,SNR=6.0						
GNI	Garni	18.90	77	P	Pn	04 08 15.9	+3.0
	0.8nm,0.3s,baz=320,slow=5.7,SNR=5.3						
GNI	Garni	18.90	77	P	Pn	04 08 12.8	-0.2
GNI				IAmb	IAmb	04 08 22.1	
	comp=Z,16nm,0.9s						
ESDC	Sonseca Array	19.03	282	P	Pn	04 08 15.8	+1.5
	comp=Z,0.2nm,0.3s,baz=276,slow=26,SNR=4.4						
MDT	Midelt	21.08	263	P	P	04 08 38.0	+1.9
	comp=Z,1.8nm,0.8s,baz=84,slow=9.2,SNR=2.6						
HFS	Hagfors	22.29	351	P	P	04 08 48.1	-0.7
	comp=Z,2.7nm,0.6s,baz=161,slow=11,SNR=9.4						
FINES	FINESS Array B	23.45	7	P	P	04 08 59.9	-1.0
	comp=Z,2.0nm,0.6s,baz=161,slow=12,SNR=3.9						
FIA1	FINESS Array S	23.45	7	P	P	04 08 59.0	-1.9
FIA1				IAmb	IAmb	04 09 06.3	
	comp=Z,10.0nm,0.9s						
NB2	NORSAR Subarra	23.51	349	P	P	04 09 02.7	+1.2
	comp=Z,2.4nm,0.8s,baz=157,slow=10						
NOA	NORSAR Array B	23.51	349	P	P	04 09 00.6	-0.9
	comp=Z,1.2nm,0.9s,baz=157,slow=9.1,SNR=5.8						
GEYT	Alibeck	29.51	79	P	P	04 09 58.1	+2.1
	comp=Z,1.8nm,0.7s,baz=294,slow=14,SNR=3.9						
GEYT	Alibeck	29.51	79	IAmb	IAmb	04 10 03.7	
	comp=Z,1.5nm,0.7s						
TORD	Torodi Ar. Bea	30.08	219	P	P	04 10 03.1	+2.0
	comp=Z,1.9nm,0.8s,baz=27,slow=9.6,SNR=14						
TORD	Torodi Ar. Bea	30.08	219	P	P	04 10 01.1	-0.1
ARCES	ARCESS Array B	31.43	3	P	P	04 10 13.4	+0.8
	comp=Z,3.3nm,1.0s,baz=191,slow=10,SNR=10						
TIC	Toumodi	39.04	223	eP	P	04 11 20.0	+1.4
KIC	Kosan Boka	39.13	222	eP	P	04 11 20.7	+1.3
	comp=Z,6.2nm,0.7s						
LIC	Lamto	39.40	222	eP	P	04 11 23.2	+1.6
	comp=Z,9.6nm,0.5s						
MKAR	Makanchi Array	45.29	58	P	P	04 12 08.2	-1.2
	comp=Z,1.4nm,0.4s,baz=279,slow=6.0,SNR=22						
MKAR	Makanchi Array	45.29	58	P	P	04 12 09.0	-0.4
ZAA0	Zalesovo Array	45.66	48	P	P	04 12 12.1	0.0
ZALV	Zalesovo Beam	45.66	48	P	P	04 12 11.6	-0.5
	comp=Z,3.0nm,0.5s,baz=273,slow=9.4,SNR=13						
ZALV	Zalesovo Beam	45.66	48	P	P	04 12 12.7	+0.5
SONM	Songino Array	60.43	51	P	P	04 14 02.0	+0.7
	comp=Z,0.6nm,0.8s,baz=285,slow=9.1,SNR=5.3						
CMAR	Chiang Mai Arr	69.93	82	P	P	04 15 04.8	+1.6
	comp=Z,0.5nm,0.3s,baz=316,slow=9.5,SNR=4.9						
YKA	Yellowknife Ar	73.28	340	P	P	04 15 22.2	-0.5
	comp=Z,0.3nm,0.8s,baz=37,slow=5.8,SNR=4.5						
KLR	Kul'dur	73.83	39	P	P	04 15 26.8	+0.6
	comp=Z,1.1nm,0.6s,baz=204,slow=8.1,SNR=2.5						
DLBC	Dease Lake	80.53	345	P	P	04 16 04.7	+1.0
	comp=Z,27nm,0.9s,baz=334,slow=0.9,SNR=5.0						

*PDG **03** 04:10:12.1±0.6, 38°.29N×20°.32E, h4km±1km, ML3.9/14, Error ellipse: s-maj=1.2km s-min=1.2km az=90.0*
*THE **03** 04:10:13.5, 38°.27N×20°.45E, h10km±1km, ML3.7/11, Error ellipse: s-maj=1.3km s-min=0.4km az=254.0*
*ATH **03** 04:10:13.0, 38°.26N×20°.46E, h16km±2km, ML3.3/9, Error ellipse: s-maj=3.5km s-min=1.0km az=256.0*
*IDC **03** 04:10:16.7±1.4, 38°.36N×20°.39E, h43km±20km, mb3.5/8, mb1 3.6/13, mb1mx3.3/73, mbtmp3.6/13, ML3.3/4, Error ellipse: s-maj=17.1km s-min=11.3km az=20.0*
ISC 03 04:10:13.4±0.7, 38°.26N±0°.02×20°.43E±0°.03, h13km±4km, n101, σ0°.97/137, mb3.7/8, 10C-8D, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.01	241	P	Pg	04 10 15.5	-0.2
KEF1	Kardakata, Kep	0.04	62	P	Pg	04 10 15.5	-0.3
CHV1	Chavriata, Kef	0.09	207	P	Pg	04 10 16.2	0.0
CHV1				S	Sg	04 10 18.5	+0.3
	441μm,0.3s						
KEF3	Kipouria, Keph	0.09	229	P	Pg	04 10 16.3	0.0
ARG2	Argostoli	0.09	151	P	Pg	04 10 16.1	-0.2
ARG2				S	Sg	04 10 17.8	-0.6
	145μm,0.3s						
KEF2	Argostoli. Kep	0.10	155	P	Pg	04 10 16.2	-0.3
VLS	Valsamata	0.15	124	P	Pg	04 10 16.6	-0.5
VLS				S	Sg	04 10 19.0	-0.7
	51μm,0.3s						
VLS	Valsamata	0.15	124	P	Pg	04 10 16.6	-0.5
VLS				S	Sg	04 10 19.0	-0.7
VLS				AML	AML	04 10 19.4	
	comp=E,94186μm,0.2s						
VLS				AML	AML	04 10 21.0	
	comp=N,52477μm,0.3s						
VSK1	VASILIKIADES	0.18	35	P	Pg	04 10 17.5	-0.1
VSK1				S	Sg	04 10 19.7	-0.8
	comp=N,72μm,0.2s						
KFL	Anninata	0.32	118	P	Pg	04 10 19.5	-0.4
KFL				S	Sg	04 10 24.1	-0.2
KFL	Anninata	0.32	118	P	Pg	04 10 19.6	-0.3
EVGI	Lefkada island	0.40	26	P	Pg	04 10 21.2	-0.2
EVGI				S	Sg	04 10 26.6	-0.2
EVGI	Lefkada island	0.40	26	P	Pg	04 10 21.3	-0.1
EVGI				S	Sg	04 10 26.7	-0.1
VLMS	Volimes, Zakyn	0.42	154	P	Pg	04 10 21.4	-0.5
VLMS				S	Sg	04 10 28.0	+0.4
VLMS				AML	AML	04 10 28.8	
	comp=N,24376μm,0.4s						
VLMS				AML	AML	04 10 33.2	
	comp=E,14423μm,0.2s						
MGNA	Meganis	0.49	36	P	Pg	04 10 22.5	-0.5
MGNA				S	Sg	04 10 29.2	-0.2
MGNA				AML	AML	04 10 30.5	
	comp=E,12025μm,0.3s						
MGNA				AML	AML	04 10 34.4	
	comp=N,11271μm,0.4s						
LKD2	Lefkada island	0.56	19	P	Pg	04 10 23.8	-0.5
LKD2				S	Sg	04 10 31.2	-0.5
	comp=N,4μm,0.4s						
LKD2	Lefkada island	0.56	19	P	Pg	04 10 23.9	-0.5
LKD2				S	Sg	04 10 31.8	+0.1
LKD2				AML	AML	04 10 39.1	
	comp=N,7783μm,0.3s						
LKD2				AML	AML	04 10 40.2	
	comp=E,6700μm,0.3s						
AST1	Astakos	0.59	61	P	Pg	04 10 24.3	-0.6
AST1				S	Sb	04 10 33.5	-0.2
	comp=E,9μm,0.2s						
TSLK	Tsoukalades, L	0.59	17	P	Pg	04 10 24.4	-0.5
TSLK				S	Sb	04 10 33.7	-0.1
	comp=E,5μm,0.5s						
TSLK	Tsoukalades, L	0.59	17	P	Pg	04 10 24.7	-0.2
TSLK				S	Sb	04 10 33.3	-0.5
KRI1	kERI	0.67	153	P	Pg	04 10 25.4	-1.0
KRI1				S	Sb	04 10 36.1	0.0
	comp=E,9μm,0.5s						
PDO	Prodromos	0.68	60	P	Pg	04 10 25.9	-0.7
PDO	Prodromos	0.68	60	P	Pg	04 10 26.1	-0.5
RLS	Riolos of Patr	0.84	104	P	Pg	04 10 28.6	-1.1
RLS	Riolos of Patr	0.84	104	P	Pg	04 10 28.5	-1.2
RLS				AML	AML	04 10 47.5	
	comp=E,3012μm,0.6s						
RLS				AML	AML	04 10 48.1	
	comp=N,4446μm,0.5s						
PVO	Paravola	0.93	67	P	Pb	04 10 30.5	-0.8
PVO				S	Sb	04 10 44.1	+0.5
	comp=N,4μm,0.3s						
PVO	Paravola	0.93	67	P	Pb	04 10 30.9	-0.5
DRO	Drossia	1.05	107	P	Pb	04 10 32.5	-1.0
DRO				S	Sn	04 10 49.9	+1.5
	comp=N,4μm,0.5s						
UPR	University Cam	1.07	88	P	Pb	04 10 33.7	0.0
LAKA	Lakka	1.22	90	P	Pn	04 10 35.2	-0.9
LAKA				S	Sg	04 10 53.6	+0.9
	comp=N,908nm,0.7s						
LAKA	Lakka	1.22	90	P	Pn	04 10 35.1	-0.9
LAKA				AML	AML	04 10 58.5	
	comp=E,1718μm,0.4s						
LAKA				AML	AML	04 10 59.2	
	comp=N,2216μm,0.4s						
EVR	Evrytania	1.26	58	P	Pn	04 10 36.0	-0.8
EVR	Evrytania	1.26	58	P	Pn	04 10 36.2	-0.5
EVR				AML	AML	04 11 06.6	
	comp=E,1448μm,0.4s						
EVR				AML	AML	04 11 09.8	
	comp=N,1702μm,0.8s						
SERG	Sergoula	1.29	83	P	Pn	04 10 36.4	-0.7
TRIZ	Trizonia	1.30	85	P	Pn	04 10 36.1	-1.0
TRIZ	Trizonia	1.30	85	P	Pn	04 10 36.2	-0.9
ALIK	Aliki, Aigiali	1.32	89	P	Pn	04 10 36.9	-0.6
KALE	Kalithea	1.35	84	P	Pn	04 10 36.9	-1.0
KALE	Kalithea	1.35	84	P	Pn	04 10 36.9	-1.0
KALE				AML	AML	04 11 03.7	
	comp=N,3023μm,0.6s						
KALE				AML	AML	04 11 05.4	
	comp=E,2054μm,0.6s						
KLV	Kalavryta, Ach	1.37	99	P	Pn	04 10 37.9	-0.3
KLV	Kalavryta, Ach	1.37	99	P	Pn	04 10 38.0	-0.2
KLV				AML	AML	04 11 07.3	
	comp=N,1306μm,1.0s						
KLV				AML	AML	04 11 10.6	
	comp=E,1244μm,0.6s						
JAN	Janina	1.43	13	P	Pb	04 10 39.9	0.0
MAKR	Makrakomi, Fth	1.53	60	P	Pb	04 10 41.2	-0.4
SRN	Sarande	1.65	348	P	Pn	04 10 42.6	+0.6
THL	Klokotos Trika	1.79	43	P	Pb	04 10 46.0	-0.1
KPRO	Kipourio	1.84	23	P	Pb	04 10 47.1	+0.2
LKR	Lokris	2.05	78	P	Pb	04 10 49.5	-1.0
NEST	Nestorio	2.20	12	P	Pb	04 10 52.7	-0.4
FNA	Florina	2.62	16	P	Pn	04 10 57.0	+1.5
TIP	Timpagrande	3.02	289	⇑P	Pn	04 11 01.7	+0.9
TIP				⇑S	Sn	04 11 34.9	-1.9
TIR	Tirane	3.11	352	⇑P	Pn	04 11 03.5	+1.4
TIR				⇑S	Sn	04 11 40.0	+0.8
TAR1	Taranto	3.33	314	ePn	Pn	04 11 05.6	+0.6
MASS	Massafra	3.48	314	ePn	Pn	04 11 08.1	+1.0
MATE	Matera	3.74	311	⇓P	Pn	04 11 11.3	+0.5
ULC	Ulcinj	3.81	347	ePn	Pn	04 11 11.2	-0.5
SG1	Sgolgore (BA)	3.88	313	ePn	Pn	04 11 13.0	+0.3
BAI	Bari	3.95	317	ePn	Pn	04 11 13.9	+0.3
DRME	Dracevica, Mon	4.04	347	ePn	Pn	04 11 14.9	+0.1
DRME				eSn	Sn	04 12 02.6	+0.7
BUM	Brajici-Budva	4.20	344	⇓iPn	Pn	04 11 16.6	-0.6
BUM				eSn	Sn	04 12 06.4	+0.3
PDG	Podgorica	4.26	348	⇓P	Pn	04 11 18.0	+0.2
TTG	Podgorica	4.26	348	ePn	Pn	04 11 17.6	-0.3
TTG				eSn	Sn	04 12 08.2	+0.8
PVY	Plav	4.34	355	ePn	Pn	04 11 20.0	+0.8
PVY				eSn	Sn	04 12 10.6	+0.9
CEME	Cevo	4.43	345	ePn	Pn	04 11 20.2	-0.1
CEME				eSn	Sn	04 12 11.9	+0.1
HCY	Herceg Novi	4.44	341	ePn	Pn	04 11 19.2	-1.1
IVA	Berane	4.62	355	ePn	Pn	04 11 23.2	+0.2
IVA				eSn	Sn	04 12 17.5	+1.0
KOME	Kolasin	4.64	352	⇓iPn	Pn	04 11 23.8	+0.6
KOME				eSn	Sn	04 12 17.8	+0.9
NKME	Niksic	4.64	346	ePn	Pn	04 11 22.9	-0.2
NKME				i Sn	Sn	04 12 16.8	-0.1
IDI	Anoyia	4.65	128	P	Pn	04 11 26.3	+3.0
	comp=E,0.3nm,0.3s,baz=306,slow=14,SNR=1.8						
IDI				S	Sn	04 12 19.5	+2.3
	comp=E,2.0nm,0.3s,baz=149,slow=24,SNR=11						
NKY	Niksic	4.68	347	ePn	Pn	04 11 23.8	+0.1
NKY				eSn	Sn	04 12 18.3	+0.4
VAE	Valguarnera	4.83	263	P	Pn	04 11 27.6	+1.8
	comp=E,0.3nm,0.3s,baz=128,slow=20,SNR=1.5						
VAE				S	Sn	04 12 22.8	+1.3
	comp=E,2.7nm,0.3s,baz=128,slow=20,SNR=3.4						
VTS	Vitosha	4.85	25	⇑P	Pn	04 11 27.7	+1.5
VTS				⇓S	Sn	04 12 23.7	+1.5
BRY	Bratogost	4.85	343	ePn	Pn	04 11 25.3	-0.9
BRY				eSn	Sn	04 12 22.7	+0.4
UPM	Unac-Piva	5.07	347	ePn	Pn	04 11 29.0	-0.2
UPM				i Sn	Sn	04 12 28.0	+0.3
PLE	Pljevlja	5.12	351	ePn	Pn	04 11 30.1	+0.2
PLE				eSn	Sn	04 12 29.7	+0.8
ELND	Elena	6.24	40	⇑P	Pn	04 11 46.5	+1.5
BLY	Banja Luka	6.92	340	⇓P	Pn	04 11 54.8	+0.3
GZR	Gura Zlata	7.34	13	⇑P	Pn	04 12 01.8	+1.6
BZS	Buzias	7.40	6	⇑P	Pn	04 12 00.6	-0.4
VOIR		7.95	24	⇑P	Pn	04 12 10.6	+1.9
MLR	Muntele Rosu	8.31	28	⇑P	Pn	04 12 14.2	+0.6
PLOR	Plostina	8.88	29	⇓P	Pn	04 12 23.1	+1.7
VRI	Vrincioaia	8.92	30	⇓P	Pn	04 12 24.1	+2.2
SOKA	Soboth	9.31	336	ePn	Pn	04 12 26.2	-1.0
	comp=E,5.0nm,0.4s,SNR=6.6						
OBKA	Obir	9.32	334	ePn	Pn	04 12 27.7	+0.4
	comp=E,1.9nm,0.2s						
ARSA	Arzberg	9.68	340	ePn	Pn	04 12 31.3	-1.0
	comp=E,1.0nm,0.3s						
KBA	Koelnbreinsper	10.24	332	ePn	Pn	04 12 40.1	+0.1
	comp=E,1.1nm,0.5s						
BRTR	Keskin Array B	10.39	78	P	Pn	04 12 45.1	+3.0
	comp=E,0.1nm,0.3s,baz=257,slow=14,SNR=5.3						
MOA	Molln	10.59	337	ePn	Pn	04 12 44.2	-0.5
	comp=E,2.2nm,0.3s,SNR=5.8						
SQTA	Sankt Quirin	11.22	326	ePn	Pn	04 12 55.9	+2.5
	comp=E,1.6nm,0.4s						
MOTA	Moosalm	11.36	326	Pn	Pn	04 12 56.3	+0.9
	comp=E,0.9nm,0.3s						
DAVOX	Davos/Dischmat	11.53	321	P	Pn	04 12 58.6	+0.9
	comp=E,0.4nm,0.3s,baz=149,slow=18,SNR=2.5						
GERES	GERESS Array B	11.64	337	P	Pn	04 12 56.8	-2.4
	comp=E,0.2nm,0.3s,baz=156,slow=13,SNR=6.8						
HFS	Hagfors	22.31	351	P	P	04 15 09.2	-1.1
	comp=E,1.9nm,0.5s,baz=164,slow=12,SNR=10						
FINES	FINESS Array B	23.47	7	P	P	04 15 20.5	-1.8
	comp=E,0.9nm,0.4s,baz=149,slow=8.8,SNR=8.7						
NOA	NORSAR Array B	23.52	349	P	P	04 15 21.2	-1.7
	comp=E,0.6nm,0.6s,baz=160,slow=9.8,SNR=4.2						
TORD	Torodi Ar. Bea	30.05	219	P	P	04 16 21.9	-0.3
	comp=E,0.4nm,0.5s,baz=24,slow=9.7,SNR=6.2						
ARCES	ARCESS Array B	31.45	3	P	P	04 16 32.9	-1.2
	comp=E,2.3nm,0.8s,baz=181,slow=8.1,SNR=3.8						
BVAR	Borovoye Array	37.12	50	P	P	04 17 24.8	+1.5
	comp=E,0.3nm,0.5s,baz=258,slow=8.3,SNR=2.0						
MKAR	Makanchi Array	45.32	58	P	P	04 18 29.8	-1.1
	comp=E,0.9nm,0.4s,baz=272,slow=6.9,SNR=14						
ZALV	Zalesovo Beam	45.69	48	P	P	04 18 32.1	-1.5
	comp=E,0.8nm,0.4s,baz=276,slow=8.8,SNR=6.2						
YKA	Yellowknife Ar	73.29	340	P	P	04 21 43.8	-0.2
	comp=E,0.0nm,0.4s,baz=167,slow=23,SNR=4.0						

*NNC **03** 04:11:21.4±1.4, 37°.59N×71°.79E, h133km±25km, mb3.2, mpv3.9, Error ellipse: s-maj=13.4km s-min=9.0km az=27.0*
ISC 03 04:11:14.3±3.0, 37°.2N±0°.2×72°.05E±0°.10, h100km, n11, σ2°.96/15, 4C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	3.85	52	Pn	Pn	04 12 12.6	+1.0
KSH				Sn	Sn	04 12 51.5	-4.5
AML	Almayashu	5.08	14	P	Pn	04 12 31.3	+2.8
	SNR=18						
UCH	Uchtor	5.37	20	P	Pn	04 12 35.5	+3.1
	SNR=36						
EKS2	Erkin-Say	5.61	13	P	Pn	04 12 38.4	+3.0
	SNR=35						
AAK	Ala-Archa	5.74	18	P	Pn	04 12 40.7	+3.5
	SNR=17						
AAK	Ala-Archa	5.74	18	⇓P	Pn	04 12 40.5	+3.3
	5.3nm,0.3s						
AAK				⇑S	Sn	04 13 42.9	+1.0
	20nm,0.6s						
ULHL	Ulahol	5.98	31	P	Pn	04 12 43.2	+2.7
	SNR=17						
KK31	Karatay Array	6.01	349	P	Pn	04 12 42.6	+1.9
	5.5nm,0.3s,baz=170,slow=12,SNR=218						
KK31				⇓S	Sn	04 13 46.0	-2.1
	4.4nm,0.2s,baz=172,slow=22,SNR=16						
CHMS	Chumysh	6.15	19	P	Pn	04 12 45.6	+3.0
	SNR=5.8						
AB31	Akbulak array	14.91	328	⇑P	Pn	04 14 38.8	-0.9
AB31				⇑S	Sn	04 17 21.1	-2.9
	0.4nm,0.5s						
AKTO	Aktyubinsk	16.62	327	⇑P	Pn	04 15 01.0	-0.1
	2.4nm,0.7s						

*ATH **03** 04:12:29.3, 38°.30N×20°.42E, h10km±2km, ML3.3/8, Error ellipse: s-maj=2.6km s-min=0.9km az=245.0*
*THE **03** 04:12:29.0, 38°.31N×20°.39E, h10km±2km, ML3.9/11, Error ellipse: s-maj=2.0km s-min=0.5km az=229.0*
*IDC **03** 04:12:33.9±2.0, 38°.27N×20°.38E, h53km±27km, mb3.4/6, mb1 3.5/10, mb1mx3.2/72, mbtmp3.6/10, ML2.2/2, Error ellipse: s-maj=21.4km s-min=12.0km az=9.0*
ISC 03 04:12:29.0±0.7, 38°.34N±0°.03×20°.43E±0°.03, h9km±4km, n48, σ0°.81/73, mb3.7/6, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF1	Kardakata, Kep	0.07	154	P	Pg	04 12 30.9	-0.2
KEF1				S	Sg	04 12 32.1	-0.6
KEF4	Livadi, Kephal	0.08	185	P	Pg	04 12 31.0	-0.2
KEF4				S	Sg	04 12 32.4	-0.5
VSK1	VASILIKIADES	0.12	56	P	Pg	04 12 32.4	+0.5
VSK1				S	Sb	04 12 35.4	+1.4
	31μm,0.3s						
KEF3	Kipouria, Keph	0.15	206	P	Pg	04 12 32.1	-0.2
KEF3				S	Sg	04 12 34.3	-0.3
CHV1	Chavriata, Kef	0.16	195	P	Pg	04 12 32.0	-0.5
CHV1				S	Sg	04 12 34.7	-0.2
	253μm,0.1s						
ARG2	Argostoli	0.17	165	P	Pg	04 12 32.3	-0.3
ARG2				S	Sg	04 12 34.5	-0.5
	207μm,0.3s						
KEF2	Argostoli. Kep	0.18	166	P	Pg	04 12 32.6	-0.2
KEF2				S	Sg	04 12 35.1	-0.2
VLS	Valsamata	0.20	143	P	Pg	04 12 33.0	-0.2
VLS				S	Sg	04 12 35.8	-0.3
	34μm,0.3s						
VLS	Valsamata	0.20	143	P	Pg	04 12 33.0	-0.2
VLS				S	Sg	04 12 35.5	-0.6
VLS				AML	AML	04 12 36.9	
	comp=E,51843μm,0.1s						
VLS				AML	AML	04 12 37.6	
	comp=N,70208μm,0.3s						
EVGI	Lefkada island	0.33	32	P	Pb	04 12 36.0	-1.1
EVGI				S	Sb	04 12 42.7	+0.2
EVGI	Lefkada island	0.33	32	P	Pb	04 12 36.7	-0.4
EVGI				S	Sb	04 12 42.5	0.0
KFL	Anninata	0.36	129	P	Pg	04 12 36.0	-0.1
KFL				S	Sg	04 12 41.5	+0.5
KFL	Anninata	0.36	129	P	Pg	04 12 36.0	-0.1
MGNA	Meganis	0.42	42	P	Pb	04 12 37.4	0.0
MGNA				S	Sb	04 12 44.4	-0.7
MGNA				AML	AML	04 12 46.0	
	comp=E,7885μm,0.2s						
MGNA				AML	AML	04 12 46.1	
	comp=N,7073μm,0.2s						
LKD2	Lefkada island	0.48	21	P	Pb	04 12 39.0	-0.7
LKD2				S	Sb	04 12 47.1	+0.2
	comp=N,2μm,0.3s						
LKD2	Lefkada island	0.48	21	P	Pb	04 12 39.2	-0.4
LKD2				AML	AML	04 12 54.4	
	comp=N,3538μm,0.3s						
LKD2				AML	AML	04 12 54.8	
	comp=E,2966μm,0.2s						
VLMS	Volimes, Zakyn	0.50	159	P	Pg	04 12 38.3	-0.4
VLMS				S	Sg	04 12 45.8	+0.6
VLMS				AML	AML	04 12 46.6	
VLMS				AML	AML	04 12 47.6	
TSLK	Tsoukalades, L	0.52	20	P	Pb	04 12 39.7	-0.5
TSLK	Tsoukalades, L	0.52	20	P	Pb	04 12 39.9	-0.3
TSLK				S	Sb	04 12 48.9	-2.5
AST1	Astakos	0.55	68	P	Pb	04 12 40.3	-0.5
AST1				S	Sb	04 12 49.6	+0.8
	comp=E,12μm,0.3s						
PDO	Prodromos	0.64	66	P	Pg	04 12 41.1	-0.4
PDO				S	Sb	04 12 51.8	+0.3
	comp=E,8μm,0.4s						
PDO	Prodromos	0.64	66	P	Pb	04 12 42.1	-0.3
PDO				S	Sb	04 12 51.4	-0.1
PDO				AML	AML	04 12 54.7	
	comp=N,10810μm,0.5s						
PDO				AML	AML	04 12 54.7	
	comp=E,11123μm,0.3s						
ZAK2	Zakynthos	0.66	146	P	Pg	04 12 41.4	-0.4
ZAK2				S	Sb	04 12 52.4	+0.4
	comp=E,75μm,0.8s						
KRI1	kERI	0.74	156	P	Pg	04 12 42.2	-1.1
KRI1				S	Sg	04 12 53.4	+0.4
	comp=E,24μm,0.3s						
RLS	Riolos of Patr	0.86	109	P	Pg	04 12 45.5	-0.1
RLS				S	Sb	04 12 57.4	-0.3
RLS				AML	AML	04 13 05.0	
	comp=N,3278μm,0.4s						
RLS				AML	AML	04 13 05.1	
	comp=E,4459μm,0.6s						
PVO	Paravola	0.90	72	P	Pn	04 12 46.9	-0.9
PVO				S	Sn	04 13 01.6	+0.7
	comp=E,3μm,0.3s						
PVO	Paravola	0.90	72	P	Pn	04 12 46.9	-0.9
PVO				AML	AML	04 13 03.2	
	comp=E,6741μm,0.3s						
PVO				AML	AML	04 13 08.3	
	comp=N,4236μm,0.4s						
UPR	University Cam	1.07	93	P	Pn	04 12 50.7	+0.6
LAKA	Lakka	1.22	94	P	Pn	04 12 51.6	-0.6
LAKA				S	Sg	04 13 10.8	+2.5
	comp=N,838nm,0.7s						
LAKA	Lakka	1.22	94	P	Pn	04 12 51.8	-0.4
EVR	Evrytania	1.22	61	P	Pg	04 12 52.6	+0.1
EVR				AML	AML	04 13 18.7	
	comp=N,1016μm,0.6s						
EVR				AML	AML	04 13 19.9	
	comp=E,1253μm,0.7s						
SERG	Sergoula	1.28	86	P	Pn	04 12 52.4	-0.6
SERG	Sergoula	1.28	86	P	Pb	04 12 52.7	-0.5
TRIZ	Trizonia	1.29	88	P	Pn	04 12 52.7	-0.4
TRIZ	Trizonia	1.29	88	P	Pn	04 12 52.7	-0.4
KALE	Kalithea	1.34	87	P	Pn	04 12 53.6	-0.3
KALE	Kalithea	1.34	87	P	Pn	04 12 53.5	-0.5
KLV	Kalavryta, Ach	1.39	102	P	Pn	04 12 54.2	-0.3
IDI	Anoyia	4.70	129	P	Pn	04 13 41.9	+1.8
	baz=12,slow=20,SNR=1.3						
IDI				S	Sn	04 14 35.9	+1.2

comp=E,1.9nm,0.3s,baz=178,slow=22,SNR=2.1
VAE Valguarnera 4.84 262 P **Pn 04 13 43.8 +1.8**
comp=E,0.3nm,0.3s,baz=293,slow=18,SNR=0.9
VAE S **Sn 04 14 38.5 +0.3**
comp=E,1.4nm,0.3s,baz=267,slow=13,SNR=2.0
BRTR Keskin Array B 10.37 78 P Pn 04 15 02.6 +4.7
comp=E,0.0nm,0.3s,baz=262,slow=16,SNR=2.1
ESDC Sonseca Array 19.00 282 P **Pn 04 16 52.3 +0.8**
baz=84,slow=12,SNR=2.1
HFS Hagfors 22.23 351 P **P 04 17 25.5 -0.2**
comp=E,4.1nm,1.0s,baz=158,slow=16,SNR=1.7
FINES FINESS Array B 23.39 7 P **P 04 17 38.6 +0.8**
comp=E,2.6nm,0.9s,baz=186,slow=8.4,SNR=1.5
NOA NORSAR Array B 23.45 349 P **P 04 17 40.7 +2.3**
comp=E,1.0nm,1.0s,baz=153,slow=9.8,SNR=1.7
TORD Torodi Ar. Bea 30.11 219 P **P 04 18 38.4 -0.6**
comp=E,0.4nm,0.7s,baz=33,slow=11,SNR=4.3
MKAR Makanchi Array 45.28 59 P **P 04 20 45.7 -1.1**
comp=E,0.3nm,0.4s,baz=270,slow=7.6,SNR=6.1
ZALV Zalesovo Beam 45.63 48 P **P 04 20 48.8 -0.6**
comp=E,1.2nm,0.6s,baz=277,slow=8.3,SNR=4.2

ATH 03 04:21:44.3, 38.19N×20.36E, h10km±2km, ML3.1/4, Error ellipse: s-maj=3.1km s-min=1.4km az=263.0
THE 03 04:21:44.1, 38.16N×20.34E, h7km±1km, ML3.2/7, Error ellipse: s-maj=2.0km s-min=0.6km az=281.0
IDC 03 04:21:52.7±3.8, 38.43N×20.87E, h43km±42km, mb3.3/6, mb1 3.4/7, mb1mx3.2/48, mbtmp3.6/7, ML2.8/1, Error ellipse: s-maj=28.1km s-min=24.5km az=78.0
ISC 03 04:21:44.6±0.9, 38.18N±0.03×20.36E±0.05, h8km±5km, n35, σ0.68/45, mb3.5/6, Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

CHV1 Chavriata, Kef 0.01 74 P **Pg 04 21 45.8 -0.2**
KEF3 Kipouria, Keph 0.03 332 P **Pg 04 21 45.9 -0.2**
KEF3 S **Sg 04 21 47.2 0.0**
KEF4 Livadi, Kephal 0.09 31 P **Pg 04 21 46.8 0.0**
ARG2 Argostoli 0.10 90 P **Pg 04 21 46.8 -0.1**
KEF2 Argostoli. Kep 0.10 98 P **Pg 04 21 47.2 +0.3**
KEF1 Kardakata, Kep 0.13 41 P **Pg 04 21 47.4 0.0**
KEF1 S **Sg 04 21 49.7 +0.3**
VLS Valsamata 0.18 91 P **Pg 04 21 48.1 -0.1**
VLS S **Sg 04 21 51.0 +0.3**
35μm,0.2s
VLS Valsamata 0.18 91 P **Pg 04 21 48.1 -0.1**
VLS S **Sg 04 21 51.1 +0.3**
VLS AML AML 04 21 51.3
comp=N,65494μm,0.2s
VLS AML AML 04 21 51.4
comp=E,71822μm,0.2s
VSK1 VASILIKIADES 0.28 34 P **Pg 04 21 49.9 -0.2**
VSK1 S **Sg 04 21 54.5 +0.6**
comp=E,9μm,0.4s
KFL Anninata 0.34 102 P **Pg 04 21 51.1 -0.2**
KFL Anninata 0.34 102 P **Pg 04 21 51.1 -0.2**
VLMS Volimes, Zakyn 0.38 142 P **Pg 04 21 52.2 +0.1**
VLMS S **Sg 04 21 58.4 +1.2**
VLMS AML AML 04 21 59.7
comp=E,9405μm,0.3s
VLMS AML AML 04 22 03.7
comp=N,14752μm,0.3s
EVGI Lefkada island 0.50 27 P **Pg 04 21 53.8 -0.4**
MGNA Meganis 0.58 35 P **Pg 04 21 55.4 -0.4**
KRI1 kERI 0.63 145 P **Pg 04 21 56.1 -0.6**
KRI1 S **Sg 04 22 05.1 +0.2**
comp=N,4μm,0.4s
LKD2 Lefkada island 0.65 21 P **Pg 04 21 57.2 +0.1**
LKD2 AML AML 04 22 15.2
comp=N,1432μm,0.7s
LKD2 AML AML 04 22 20.1
comp=E,1308μm,0.5s
AST1 Astakos 0.68 57 P **Pg 04 21 57.3 -0.3**
AST1 S **Sb 04 22 07.9 -0.2**
comp=E,2μm,0.4s
PDO Prodromos 0.77 57 P **Pg 04 21 58.8 -0.5**
PDO S **Sb 04 22 10.4 -0.4**
comp=E,2μm,0.5s
PDO Prodromos 0.77 57 P **Pg 04 21 58.6 -0.7**
RLS Riolos of Patr 0.88 98 P **Pg 04 22 00.9 -0.5**
RLS Riolos of Patr 0.88 98 P **Pg 04 22 01.0 -0.5**
PVO Paravola 1.01 64 P **Pg 04 22 03.7 -0.3**
PVO S **Sn 04 22 20.0 +0.6**
comp=E,1μm,0.5s
PVO Paravola 1.01 64 P **Pg 04 22 03.8 -0.3**
DRO Drossia 1.09 102 P **Pb 04 22 05.0 -0.6**
LAKA Lakka 1.27 87 P **Pn 04 22 07.7 -0.9**
LAKA S **Sg 04 22 27.5 +2.0**
comp=E,500nm,0.5s
LAKA Lakka 1.27 87 P **Pn 04 22 07.8 -0.9**
LAKA AML AML 04 22 28.4
comp=N,1002μm,0.5s
LAKA AML AML 04 22 35.1
comp=E,1130μm,0.6s
TRIZ Trizonia 1.36 82 P **Pn 04 22 09.1 -0.7**
KALE Kalithea 1.41 81 P **Pn 04 22 11.3 -0.4**
IDI Anoyia 4.64 127 P Pn 04 22 59.6 +4.6
comp=E,0.4nm,0.3s,baz=356,slow=23,SNR=2.0
IDI S **Sn 04 23 49.5 +0.4**
comp=E,0.8nm,0.3s,baz=337,slow=18,SNR=1.5
HFS Hagfors 22.38 351 P **P 04 26 44.9 +1.9**
comp=E,12nm,1.3s,baz=163,slow=15,SNR=1.7
FINES FINESS Array B 23.56 7 P **P 04 26 55.4 +0.3**
comp=E,5.5nm,1.1s,baz=174,slow=14,SNR=2.8
TORD Torodi Ar. Bea 29.95 219 P P 04 28 00.8 +7.5
comp=E,0.5nm,1.0s,baz=43,slow=11,SNR=2.5
KURBB Kurchatov Arra 42.33 53 P **P 04 29 40.0 +1.3**
comp=E,0.2nm,0.6s,baz=284,slow=8.3,SNR=2.1
MKAR Makanchi Array 45.41 58 P **P 04 30 02.3 -1.3**
comp=E,0.2nm,0.5s,baz=283,slow=6.9,SNR=6.2
SONM Songino Array 60.55 51 P **P 04 31 55.3 -0.2**
comp=E,0.2nm,0.3s,baz=316,slow=6.0,SNR=5.0

ATH 03 04:24:06.8, 38.12N×20.42E, h10km±3km, ML3.2/4, Error ellipse: s-maj=3.2km s-min=1.3km az=288.0
THE 03 04:24:07.4, 38.14N×20.42E, h7km, ML3.5/5, Error ellipse: s-maj=0.7km s-min=0.4km az=232.0
IDC 03 04:24:12.9±3.7, 38.22N×20.43E, h66km±39km, mb3.2/8, mb1 3.3/10, mb1mx3.2/47, mbtmp3.5/10, ML3.2/2, Error ellipse: s-maj=25.7km s-min=22.2km az=81.0
ISC 03 04:24:06.9±0.8, 38.14N±0.03×20.39E±0.03, h12km±4km, n52, σ1.51/69, mb3.4/8, 5C-3D, Greece

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CHV1 Chavriata, Kef 0.04 355 P **Pg 04 24 08.9 -0.2**
CHV1 S **Sg 04 24 10.4 -0.3**
KEF3 Kipouria, Keph 0.07 333 P **Pg 04 24 09.3 0.0**
KEF3 S **Sg 04 24 11.2 +0.1**
KEF2 Argostoli. Kep 0.08 75 P **Pg 04 24 08.9 -0.6**
ARG2 Argostoli 0.09 67 P **Pg 04 24 09.2 -0.4**
ARG2 S **Sg 04 24 10.5 -1.0**
KEF4 Livadi, Kephal 0.12 15 P **Pg 04 24 10.8 +0.9**
KEF4 S **Sg 04 24 12.4 +0.3**
KEF1 Kardakata, Kep 0.15 27 P **Pg 04 24 10.3 -0.2**
KEF1 S **Sg 04 24 12.9 -0.1**
VLS Valsamata 0.16 78 P **Pg 04 24 10.1 -0.6**
VLS S **Sg 04 24 12.3 -1.0**
35μm,0.3s
VLS Valsamata 0.16 78 P **Pg 04 24 10.1 -0.6**
VLS S **Sg 04 24 12.3 -1.0**
VSK1 VASILIKIADES 0.30 28 P **Pg 04 24 12.9 -0.1**
VSK1 S **Sg 04 24 17.4 +0.3**
KFL Anninata 0.32 96 P **Pg 04 24 12.7 -0.6**
VLMS Volimes, Zakyn 0.34 141 P **Pg 04 24 12.8 -1.0**
EVGI Lefkada island 0.52 24 P **Pg 04 24 16.9 -0.1**
EVGI S **Sg 04 24 24.8 +0.8**
EVGI Lefkada island 0.52 24 P **Pg 04 24 17.0 -0.1**
EVGI S **Sg 04 24 24.5 +0.5**
MGNA Meganis 0.60 32 P **Pg 04 24 18.2 -0.5**
MGNA S **Sg 04 24 27.4 +0.8**
MGNA AML AML 04 24 27.8
comp=E,6045μm,0.3s
MGNA AML AML 04 24 28.0
comp=N,6204μm,0.2s
LKD2 Lefkada island 0.68 18 P **Pg 04 24 20.1 0.0**
LKD2 S **Sg 04 24 29.7 +0.7**
comp=N,1μm,0.5s
LKD2 Lefkada island 0.68 18 P **Pg 04 24 20.1 0.0**
LKD2 AML AML 04 24 57.8
comp=N,2875μm,0.4s
LKD2 AML AML 04 24 59.2
comp=E,3022μm,0.3s
AST1 Astakos 0.68 54 P **Pg 04 24 19.8 -0.3**
AST1 S **Sb 04 24 29.8 -0.2**
TSLK Tsoukalades, L 0.71 17 P **Pb 04 24 21.6 +0.4**
PDO Prodromos 0.77 54 P **Pg 04 24 21.3 -0.6**
PDO S **Sb 04 24 32.5 -0.2**
comp=E,4μm,0.4s
PDO Prodromos 0.77 54 P **Pg 04 24 21.0 -0.9**
RLS Riolos of Patr 0.86 95 P **Pg 04 24 23.5 +0.1**
RLS Riolos of Patr 0.86 95 P **Pg 04 24 23.0 -0.4**
RLS AML AML 04 25 03.3
comp=N,2480μm,0.9s
RLS AML AML 04 25 08.3
comp=E,2997μm,0.5s
PVO Paravola 1.01 62 P **Pg 04 24 26.0 -0.4**
PVO S **Sn 04 24 40.7 -0.4**
comp=E,3μm,0.4s
PVO Paravola 1.01 62 P **Pg 04 24 25.9 -0.5**
PVO AML AML 04 24 44.6
comp=E,6706μm,0.3s
PVO AML AML 04 24 48.4
comp=N,5800μm,0.5s
DRO Drossia 1.06 100 P **Pg 04 24 26.5 -0.8**
DRO S **Sn 04 24 42.1 -0.2**
comp=N,2μm,0.4s
UPR University Cam 1.11 82 P **Pb 04 24 27.6 -0.4**
SERG Sergoula 1.34 78 P **Pn 04 24 31.0 -0.5**
SERG Sergoula 1.34 78 P **Pn 04 24 30.5 -1.0**
TRIZ Trizonia 1.35 80 P **Pn 04 24 30.9 -0.5**
TRIZ Trizonia 1.35 80 P **Pn 04 24 31.0 -0.5**
KLV Kalavryta, Ach 1.40 94 P **Pn 04 24 32.7 +0.5**
KLV S **Sg 04 24 51.7 -0.1**
KALE Kalithea 1.40 79 P **Pn 04 24 31.9 -0.4**
KALE Kalithea 1.40 79 P **Pn 04 24 31.9 -0.4**
TIP Timpagrande 3.02 291 ⇓P **Pn 04 24 57.1 +2.5**
TIP ⇑S **Sn 04 25 23.3 -7.4**
TIR Tirane 3.22 353 ⇓P **Pn 04 24 56.7 -0.6**
TIR ⇑S Sn 04 25 24.2 -11
PDG Podgorica 4.37 349 ⇑P **Pn 04 25 10.8 -2.2**
IDI Anoyia 4.61 127 P **Pn 04 25 21.1 +4.7**
comp=N,0.4nm,0.3s,baz=23,slow=15,SNR=1.6
IDI S **Sn 04 26 13.2 +3.3**
comp=N,1.2nm,0.3s,baz=137,slow=23,SNR=12
VTS Vitosha 4.97 25 ⇓P Pn 04 25 26.3 +4.9
BZS Buzias 7.52 7 ⇑P **Pn 04 25 57.3 +1.0**
VRI Vrincioaia 9.04 29 ⇑P Pn 04 26 23.3 +6.1
SOKA Soboth 9.40 337 *e*Pn **Pn 04 26 23.3 +1.2**
comp=N,2.1nm,0.4s
OBKA Obir 9.41 335 *e*Pn **Pn 04 26 25.3 +3.0**
comp=N,2.7nm,0.4s
MOA Molln 10.68 337 *e*Pn **Pn 04 26 40.7 +1.0**
comp=N,0.8nm,0.3s
AKASG Malin Array Be 14.04 24 P **Pn 04 27 28.7 +3.2**
comp=N,0.2nm,0.3s,baz=219,slow=9.5,SNR=3.0
FINES FINESS Array B 23.59 7 P **P 04 29 15.7 -1.5**
comp=N,1.0nm,0.6s,baz=184,slow=11,SNR=1.3
NOA NORSAR Array B 23.63 349 P **P 04 29 17.0 -0.7**
comp=N,0.5nm,0.7s,baz=155,slow=9.3,SNR=1.5
TORD Torodi Ar. Bea 29.94 219 P **P 04 30 15.2 +0.2**
comp=N,0.4nm,0.9s,baz=54,slow=11,SNR=2.5
ARCES ARCESS Array B 31.57 3 P **P 04 30 27.6 -1.2**
comp=N,2.5nm,0.8s,baz=204,slow=13,SNR=1.2
KURBB Kurchatov Arra 42.33 53 P **P 04 31 58.4 -2.1**
comp=N,0.4nm,0.7s,baz=281,slow=8.8,SNR=2.4
MKAR Makanchi Array 45.41 58 P **P 04 32 24.6 -0.7**
comp=N,0.3nm,0.4s,baz=280,slow=6.6,SNR=9.7
ZALV Zalesovo Beam 45.79 48 P **P 04 32 27.2 -0.9**
comp=N,1.2nm,0.5s,baz=274,slow=8.8,SNR=6.4
YKA Yellowknife Ar 73.39 340 P **P 04 35 38.0 -0.2**
comp=N,0.1nm,0.7s,baz=30,slow=4.3,SNR=1.9

IDC 03 04:24:36.7±3.9, 38.16N×20.63E, h84km±41km, mb3.3/6, mb1 3.3/8, mb1mx3.3/48, mbtmp3.6/8, MS4.2/1, Ms1 4.2/1, ms1mx3.4/31, Error ellipse: s-maj=28.5km s-min=23.9km az=108.0
ISC 03 04:24:27.9±1.0, 38.1N±0.1×20.9E±0.1, h13km, n9, σ1.58/9, mb3.6/6, Greece

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IDI Anoyia 4.24 130 P **Pb 04 25 41.5 -0.8**
0.7nm,0.3s,baz=267,slow=22,SNR=1.3
IDI S **Sb 04 26 33.5 +0.1**
2.2nm,0.3s,baz=67,slow=17,SNR=2.3
AKASG Malin Array Be 13.92 22 P **P 04 27 50.9 -2.0**
0.2nm,0.3s,baz=214,slow=10,SNR=1.8
FINES FINESS Array B 23.59 6 P **P 04 29 40.0 +1.9**
3.3nm,1.0s,baz=186,slow=13,SNR=2.0
NOA NORSAR Array B 23.77 348 P **P 04 29 39.6 -0.2**
0.9nm,0.9s,baz=159,slow=8.7,SNR=1.6
TORD Torodi Ar. Bea 30.17 220 P **P 04 30 38.1 +0.2**
0.5nm,1.0s,baz=40,slow=9.5,SNR=2.2
JMIC Jan Mayen 36.33 344 LR LR 04 47 00.7
comp=Z,328nm,18.8s,baz=270,slow=37
MKAR Makanchi Array 45.07 58 P **P 04 32 46.0 +2.5**
1.0nm,0.5s,baz=275,slow=7.3,SNR=11
ZALV Zalesovo Beam 45.51 48 P **P 04 32 47.4 +0.6**
1.6nm,0.6s,baz=275,slow=10,SNR=6.1
YKA Yellowknife Ar 73.58 340 P **P 04 35 59.8 -0.5**
0.2nm,0.8s,baz=39,slow=5.1,SNR=2.2

BJI 03 04:25:56.4±0.0, 4.86S×154.11E, h100km, mB5.6/47, mb5.5/68
GCMT 03 04:25:59.9±0.1, 4.99S±0.01×153.75E±0.01, h90km±1km, MW5.7/152, Moment Tensor Solution. s132,c199; s152,c286; Duration: 1.6 Moment tensor: Scale 10^{17} Nm; Mrr3.11±.05; Mθθ-0.85±.05; Mϕϕ-2.26±.05; Mrθ-1.21±.04; Mrϕ1.61±.05; Mθϕ1.80±.04; Best double couple: Mo3.87500×10^{17} NP1:ϕs147.00000°, δ28.00000°, λ91.00000°. NP2:ϕs326.00000°, δ62.00000°, λ90.00000°. Principal axes: T 3.7740, Plg73.0000°, Azm235.0000°; N 0.2040, Plg0.0000°, Azm327.0000°; P -3.9760, Plg17.0000°, Azm57.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC 03 04:25:59.9±2.1, 4.90S±0.07×153.74E±0.06, h109km±4km, mb5.3/189, Mwc5.7/57, Mww5.6, Mwc5.7(GCMT) Error ellipse: s-maj=10.6km s-min=7.6km az=209.0
MOS 03 04:25:59.5±1.1, 4.88S×153.71E, h112km, mb5.4/26, Error ellipse: s-maj=8.2km s-min=6.1km az=102.0
IDC 03 04:26:00.6±0.4, 4.93S×153.71E, h109km±3km, mb4.9/39, mb1 5.0/43, mb1mx4.9/48, mbtmp5.2/43, MS4.6/13, Ms1 4.6/13, ms1mx4.5/25, Error ellipse: s-maj=8.4km s-min=7.1km az=37.0
DJA 03 04:26:01.5±0.6, 5°S±3°×15°4E±°, h107km±5km, M5.6/84, mB6.0/49, mb5.6/84, MLv6.2/2, Mw(mB)5.6/49, Mwp5.7/1
NEIC 03 04:26:01, 5.00S×153.78E, h96km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr3.18; Mθθ-0.77; Mϕϕ-2.41; Mrθ-1.28; Mrϕ1.55; Mθϕ1.82; Fault plane solution: Mo3.95000×10^{17} NP1:ϕs152.00000°, δ28.00000°, λ94.00000°. NP2:ϕs327.00000°, δ62.00000°, λ88.00000°. Principal axes: T 3.8690, Plg73.0000°, Azm231.0000°; N 0.1587, Plg2.0000°, Azm328.0000°; P -4.0277, Plg17.0000°, Azm58.0000°;
NEIC 03 04:26:01, 4.95S×153.65E, h100km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr2.71; Mθθ-0.32; Mϕϕ-2.39; Mrθ-1.10; Mrϕ1.22; Mθϕ1.92; Fault plane solution: Mo3.60000×10^{17} NP1:ϕs159.00000°, δ26.00000°, λ96.00000°. NP2:ϕs332.00000°, δ64.00000°, λ87.00000°. Principal axes: T 3.4794, Plg71.0000°, Azm235.0000°; N 0.2366, Plg3.0000°, Azm333.0000°; P -3.7160, Plg19.0000°, Azm64.0000°;
KLM 03 04:26:08.0, 4.89S×153.87E, h188km, mb5.6
NEIC 03 04:26:13, 4.59S×152.57E, h71km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr3.39; Mθθ-0.89; Mϕϕ-2.50; Mrθ-1.89; Mrϕ1.06; Mθϕ2.30; Fault plane solution: Mo4.37000×10^{17} NP1:ϕs159.78000°, δ24.19000°, λ103.31000°. NP2:ϕs325.23000°, δ66.50000°, λ84.09000°. Principal axes: T 4.5882, Plg68.0000°, Azm224.0000°; N -0.4313, Plg5.0000°, Azm328.0000°; P -4.1570, Plg21.0000°, Azm60.0000°;
ISC 03 04:26:00.0±0.3, 4.88S±0.04×153.78E±0.04, h107km±2km, h108km:pP-P, n457, σ1.43/447, mb5.3/188, 7C-16D, New Ireland region

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RABL Rabaul 1.75 293 Pn **Pn 04 26 29.4 -0.4**
RABL **Sn 04 26 46.5 -5.9**
KRVT Keravat (AS076 1.84 288 P **Pn 04 26 30.3 -0.6**
1μm,0.3s,baz=126,slow=1.1,SNR=128
KRVT S **Sn 04 26 53.0 -1.3**
3μm,0.3s,baz=14,slow=23,SNR=57
KRVT LR LR 04 27 20.6
comp=Z,162μm,19.4s,baz=243,slow=45
MANU Manus Island 6.99 294 **Pn 04 27 39.8 -0.1**
HNR Honiara 7.61 127 P **Pn 04 27 49.1 +0.8**
32nm,0.3s,baz=257,slow=5.9,SNR=4.1
HNR S **Sn 04 29 09.7 -3.3**
35nm,0.3s,baz=249,slow=6.4,SNR=1.5
HNR LR LR 04 30 05.2
comp=Z,5μm,21.5s,baz=314,slow=32
HNR Honiara 7.61 127 **Pn 04 27 48.4 +0.1**
HNR **Sn 04 29 11.7 -1.2**
HNR Honiara 7.61 127 P **Pn 04 27 48.4 +0.1**
HNR 04 29 11.7
PMG Port Moresby 7.96 235 P **Pn 04 27 54.2 +1.2**
175nm,0.3s,baz=54,slow=6.1,SNR=121
PMG S **Sn 04 29 23.5 +2.1**
144nm,0.3s,baz=5.6,slow=20,SNR=9.3
PMG LR LR 04 31 12.2
comp=Z,5μm,18.6s,baz=64,slow=40
PATS Pohnpei 12.49 21 P **Pn 04 28 53.5 -0.7**
baz=13,SNR=10
PATS Pohnpei 12.49 21 **Pn 04 28 52.8 -1.4**
PATS Sn 04 31 01.1 -11
JAY Jayapura 13.25 280 P **Pn 04 29 05.8 +1.6**
0.3nm,0.3s,baz=90,slow=24,SNR=7.4
JAY LR LR 04 34 40.4
comp=Z,4μm,18.4s,baz=57,slow=39
GENI Genyem 13.77 279 P **Pn 04 29 11.3 +0.5**
8μm334nm,0.7s
COEN Coen 13.80 228 P **Pn 04 29 13.0 +1.8**
baz=14,SNR=21
COEN Coen 13.80 228 **Pn 04 29 11.5 +0.3**
COEN **Sn 04 31 42.5 -0.9**
SMPI Sarmi 15.31 280 P **Pn 04 29 30.5 0.0**
6μm298nm,1.5s
MTSU Mount Surprise 16.09 214 P **P 04 29 43.6 +2.1**
baz=16,SNR=8.8
CTA Charters Tower 16.80 205 P **P 04 29 50.1 +0.8**
1.3nm,0.3s,baz=32,slow=13,SNR=9.5
CTAO Charters Tower 16.80 205 Pn **Pn 04 29 46.4 -2.4**
CTAO Charters Tower 16.80 205 P **Pn 04 29 46.4 -2.4**
CTAO pmax pmax
comp=Z,27nm,1.0s
BAKI Biak 18.02 281 P **P 04 30 02.5 -0.3**
comp=Z,174nm,0.8s
RKPI Ransiki, Papua 19.85 279 P **P 04 30 23.7 +0.9**
comp=Z,7μmcomp=Z,599nm,1.6s
TARA Tarawa 20.11 73 P **P 04 30 24.6 -1.0**
GUMO Guam 20.37 334 P **P 04 30 29.6 +1.2**
comp=Z,184nm,0.8s,baz=183,slow=10,SNR=7.4
GUMO LR LR 04 38 26.9
comp=Z,646nm,19.1s,baz=130,slow=37
EIDS Eidsvold 20.53 187 P **P 04 30 30.7 +0.7**
baz=20,SNR=22
EIDS Eidsvold 20.53 187 P **P 04 30 29.9 -0.1**
EIDS IAmb IAmb 04 30 33.1
comp=Z,246nm,1.4s
QIS Mount Isa 20.80 220 P **P 04 30 33.5 +0.5**
baz=21,SNR=28
NOUC Port Laguerre 20.98 146 P **P 04 30 34.5 -0.3**
NOUC IAmb IAmb 04 31 10.0
comp=Z,99nm,0.9s
DZM Mont Dzumac 21.04 145 P **P 04 30 36.1 +0.6**
comp=Z,23nm,0.6s,baz=251,slow=7.4,SNR=18
DZM Mont Dzumac 21.04 145 P **P 04 30 34.4 -1.2**
FAKI Fak Fak 21.57 274 P **P 04 30 40.6 -0.6**
comp=Z,4μmcomp=Z,165nm,0.9s
FAKI Fak Fak 21.57 274 P **P 04 30 39.8 -1.4**
FAKI IAmb IAmb 04 30 42.9
comp=Z,131nm,0.9s
RMQ Roma 22.01 192 P **P 04 30 46.4 +0.6**
baz=22,SNR=157
KDU Kakadu 22.42 248 P **P 04 30 50.3 +0.2**
baz=22,SNR=40
SAUI Saumlaki 22.54 261 P **P 04 30 50.7 -0.7**
comp=Z,19μmcomp=Z,1μm,1.2s
SAUI Saumlaki 22.54 261 P **P 04 30 50.0 -1.4**
SIJI Sorong 22.83 279 P **P 04 30 55.1 +0.8**
comp=Z,61nm,0.5s,baz=96,slow=8.0,SNR=23
SIJI LR LR 04 39 46.7
comp=Z,1μm,21.2s,baz=84,slow=36
SWI Sorong 22.84 279 P **P 04 30 54.0 -0.3**
comp=Z,5μmcomp=Z,272nm,0.8s
SARN Sarigan 22.86 340 P **P 04 30 52.9 -1.6**
SARN IAmb IAmb 04 31 11.5
comp=Z,385nm,1.9s
QLP Quilpie 23.43 202 P **P 04 30 59.5 -0.3**
baz=24,SNR=12
MTN Manton Dam 23.71 249 P **P 04 31 02.7 +0.3**
baz=24,SNR=14
MTN Manton Dam 23.71 249 P **P 04 31 02.2 -0.2**
MTN IAmb IAmb 04 31 05.1
comp=Z,267nm,1.2s
WR0 Warramunga Arr 23.98 230 P **P 04 31 05.3 +0.4**
WB0 Warramunga Arr 23.98 230 P **P 04 31 04.8 -0.1**
WRAB Tennant Creek 24.11 230 P **P 04 31 05.7 -0.3**
WRAB IAmb IAmb 04 31 36.1
comp=Z,201nm,0.8s
WRAB Tennant Creek 24.11 230 ⇓*e*P **P 04 31 06.6 +0.6**
WRAB pmax pmax
comp=Z,134nm,0.9s
WRA Warramunga Arr 24.13 230 P **P 04 31 06.2 -0.1**
comp=Z,104nm,0.9s,baz=55,slow=10,SNR=121
WRA Warramunga Arr 24.13 230 P **P 04 31 06.6 +0.4**
WRA PcP **PcP 04 34 43.9 -0.9**
WRA Warramunga Arr 24.13 230 *i* P **P 04 31 06.1 -0.1**
WRA pmax pmax
comp=Z,109nm,0.9s
ARMA Armidale 25.48 184 P **P 04 31 18.7 +0.3**
baz=26,SNR=23
ARMA Armidale 25.48 184 P **P 04 31 18.2 -0.3**
ARMA IAmb IAmb 04 31 21.1
comp=Z,103nm,0.9s
FUNA Funafuti 25.50 100 P **P 04 31 18.4 -0.3**
FUNA IAmb IAmb 04 31 22.5
comp=Z,124nm,0.8s
AAI Ambon 25.54 272 P **P 04 31 17.7 -1.3**
comp=Z,2μmcomp=Z,157nm,0.7s
H11S3 WAKE ISLAND Hy 26.49 28 T T 05 00 10.4
baz=208,slow=76,SNR=81
H11S2 WAKE ISLAND Hy 26.49 28 T T 05 00 01.9
baz=208,slow=76,SNR=93
H11S1 WAKE ISLAND Hy 26.51 28 T T 05 00 04.3
baz=208,slow=76,SNR=6.1
LBMI Labuha 26.58 278 P **P 04 31 31.2 +2.8**
comp=Z,4μmcomp=Z,173nm,1.5s
NLAI Namlea 26.66 272 P **P 04 31 30.2 +1.1**
comp=Z,2μmcomp=Z,76nm,1.0s
AS31 Alice Springs 26.75 224 P **P 04 31 29.5 -0.4**
ASAR Alice Springs 26.75 224 P **P 04 31 29.6 -0.3**
comp=Z,60nm,0.9s,baz=56,slow=8.3,SNR=134
ASAR LR LR 04 41 17.9
comp=Z,3μm,21.4s,baz=59,slow=34
ASAR Alice Springs 26.75 224 P **P 04 31 28.0 -1.9**
ASAR PcP **PcP 04 34 48.9 -1.8**
ASAR Alice Springs 26.75 224 P **P 04 31 28.0 -1.9**
ASAR 04 34 48.9
KNRA Kununurra 26.81 245 P **P 04 31 30.7 +0.2**
baz=27,SNR=17
KNRA Kununurra 26.81 245 P **P 04 31 29.8 -0.6**
TNTI Ternate 26.97 281 P **P 04 31 33.3 +1.3**
comp=Z,2μmcomp=Z,95nm,1.3s
CMSA Cobar Meteorol 27.58 195 P **P 04 31 36.7 -0.5**
baz=28,SNR=40
H11N1 WAKE ISLAND Hy 27.64 27 T T 05 01 29.1
SNR=6.9
H11N3 WAKE ISLAND Hy 27.65 27 T T 05 01 26.3
baz=194,slow=74,SNR=9.2
H11N2 WAKE ISLAND Hy 27.66 27 T T 05 01 33.1
baz=80,slow=74,SNR=3.8
SANI Sanana 27.88 275 P **P 04 31 42.0 +2.0**
comp=Z,2μmcomp=Z,112nm,0.9s
MGCD Mangrove Creek 28.29 185 P **P 04 31 45.2 +1.7**
baz=28,SNR=7.0
STKA Stephens Creek 29.18 202 P **P 04 31 50.8 -0.7**
baz=29,SNR=28
STKA Stephens Creek 29.18 202 P **P 04 31 50.9 -0.5**
comp=Z,58nm,0.7s,baz=10,slow=9.8,SNR=53

STKA LR LR 04 43 15.3
comp=Z,8μm,20.6s,baz=7.2,slow=36
SOEI Soe 29.66 259 P P 04 31 58.3 +2.3
comp=Z,151nm,1.5s
SOEI Soe 29.66 259 P P 04 31 55.2 -0.7
MATI Mati 29.87 293 eP P 04 31 56.3 -1.5
DDMP Don Marcelino, 30.07 291 eP P 04 31 58.1 -1.4
KMSI Cibinong 30.25 280 P P 04 32 03.3 +2.2
comp=Z,244nm,0.7s
FITZ Fitzroy Crossi 30.48 242 P P 04 32 02.4 -0.6
baz=30,SNR=40
CNB Canberra Magne 30.56 187 P P 04 32 05.4 +1.8
baz=31,SNR=6.8
CAN Canberra 30.61 188 IAmb IAmb 04 32 06.7
comp=Z,65nm,1.1s
KCP Kidapawan 30.97 292 ⇑iP P 04 32 09.0 +1.5
BBSI Bau Bau 31.08 267 P P 04 32 16.6 +8.2
LUWI Luwuk 31.19 276 P P 04 32 10.4 +1.0
comp=Z,4μmcomp=Z,319nm,1.2s
SKMP Bagumbayan, Su 31.30 291 eP P 04 32 09.8 -0.5
BUKP Musuan 31.32 294 eP P 04 32 11.9 +1.3
HTT Hallett 31.59 204 P P 04 32 12.6 -0.2
baz=32,SNR=32
WRKA Warakurna 31.62 228 P P 04 32 13.0 -0.1
baz=32,SNR=56
MRSI Marisa 32.24 279 P P 04 32 19.9 +1.3
comp=Z,87nm,0.8s
BBOO Buckleboo 32.34 209 P P 04 32 18.8 -0.5
baz=32,SNR=18
PAGZ Pagadian 32.85 292 eP P 04 32 24.4 +0.5
OCLP Ormoc 33.06 299 eP P 04 32 26.4 +0.6
TOO Toolangi 33.41 192 P P 04 32 29.8 +1.3
baz=34,SNR=4.7
BKSI Bulukumba 33.52 268 P P 04 32 30.9 +1.1
comp=Z,1μmcomp=Z,40nm,0.9s
WSI Waingapu 33.53 260 P P 04 32 31.2 +1.3
comp=Z,19μmcomp=Z,2μm,1.3s
BNSI Bone 33.56 269 P P 04 32 31.6 +1.5
comp=Z,2μmcomp=Z,128nm,0.9s
KAPI Kappang 33.90 268 P P 04 32 33.1 +0.1
comp=Z,58nm,0.8s,baz=123,slow=6.3,SNR=20
SPSI Sidrap Palu 33.92 270 P P 04 32 33.7 +0.5
comp=Z,828nmcomp=Z,71nm,0.9s
TTSI Tana Toraja 33.92 272 P P 04 32 32.9 -0.3
comp=Z,1μmcomp=Z,30nm,1.1s
MPSI Mapaga 34.23 278 P P 04 32 35.8 -0.1
comp=Z,2μmcomp=Z,138nm,1.2s
GUIM Jordan 34.66 296 eP P 04 32 40.6 +0.9
PVCP Virac 34.67 302 eP P 04 32 38.6 -1.0
FORT Forrest 35.35 220 P P 04 32 44.9 -0.4
baz=35,SNR=60
OTRP Odiongan 35.91 299 eP P 04 32 51.1 +0.8
PLAI Plampang 35.94 262 P P 04 32 49.6 -1.0
comp=Z,3μmcomp=Z,335nm,0.7s
CUYO Cuyo Island 36.16 296 eP P 04 32 54.7 +2.2
BUSP Coron 37.37 297 eP P 04 33 03.2 +0.6
ENPP El Nido 37.74 295 eP P 04 33 06.4 +0.6
MOO Moorlands 37.86 188 P P 04 33 07.5 +1.1
baz=38,SNR=4.4
BALP Baler 37.89 303 eP P 04 33 08.4 +1.3
LUBP Lubang 38.07 299 eP P 04 33 08.1 -0.5
TAU Tasmania Unive 38.30 188 P P 04 33 10.3 +0.2
TAU Tasmania Unive 38.30 188 P P 04 33 10.3 +0.2
TAU pmax pmax
comp=Z,112nm,1.1s
CAUP Cauayan 38.31 305 eP P 04 33 13.0 +2.4
BATP Bataraza 38.36 291 eP P 04 33 11.5 +0.4
SPMM Sapulut 38.47 284 P P 04 33 13.0 +1.0
IGBI Denpasar 38.54 262 P P 04 33 12.3 -0.3
comp=Z,3μmcomp=Z,216nm,0.7s
KKM Kota Kinabalu 39.04 286 P P 04 33 16.2 -0.7
URZ Urewera 39.43 151 P P 04 33 20.8 +1.1
URZ IAmb IAmb 04 33 43.0
comp=Z,30nm,0.9s
JAGI Jajag, Banyuwa 39.50 263 P P 04 33 19.1 -1.5
comp=Z,2μmcomp=Z,236nm,0.9s
BKZ Black Stump Fm 39.85 152 P P 04 33 22.6 -0.6
KMBL Kambalda 39.88 225 P P 04 33 23.1 -0.4
baz=40,SNR=33
MEEK Meekatharra 39.93 233 P P 04 33 23.9 -0.2
baz=40,SNR=28
JOW Kunigami 40.04 323 P P 04 33 26.0 +1.2
comp=Z,5.0nm,0.4s,baz=167,slow=13,SNR=24
JOW Kunigami 40.04 323 IAmb IAmb 04 33 54.8
comp=Z,54nm,1.1s
GMJI Gumukmas 40.19 263 P P 04 33 26.6 +0.3
comp=Z,60nm,1.0s
THZ Tophouse 40.50 158 P P 04 33 27.9 -0.6
THZ IAmb IAmb 04 33 29.8
comp=Z,35nm,0.9s
FOZ Fox Glacier 41.02 162 IAmb IAmb 04 33 34.2
comp=Z,48nm,1.0s
LTZ Lake Taylor 41.16 159 P P 04 33 31.6 -2.3
LTZ IAmb IAmb 04 33 36.2
comp=Z,28nm,0.8s
PLWZ Palliser 41.27 155 P P 04 33 33.6 -1.2
KHZ Kahutara 41.30 158 P P 04 33 33.9 -1.1
KHZ IAmb IAmb 04 33 35.7
comp=Z,43nm,1.0s
RPZ Rata Peaks 41.57 161 P P 04 33 36.9 -0.3
comp=Z,61nm,0.8s,baz=287,slow=2.8,SNR=35
RPZ Rata Peaks 41.57 161 IAmb IAmb 04 33 39.3
comp=Z,65nm,0.8s
LBZ Lake Benmore 41.90 162 P P 04 33 39.4 -0.5
LBZ IAmb IAmb 04 33 41.9
comp=Z,42nm,0.9s
WKZ Wanaka 41.97 164 IAmb IAmb 04 33 58.5
comp=Z,110nm,1.5s
PBKI Pangkalan Bun 42.06 271 P P 04 33 44.5 +2.8
comp=Z,450nm,1.0s
DCZ Deep Cove 42.08 166 IAmb IAmb 04 33 42.7
comp=Z,60nm,1.0s
GIRL Giralia 42.08 241 P P 04 33 42.8 +1.1
baz=42,SNR=8.7
SBUM Sibu 42.15 279 P P 04 33 42.6 +0.2
SBUM IAmb IAmb 04 33 45.6
comp=Z,44nm,1.1s
SBUM Sibu 42.15 279 P P 04 33 44.0 +1.6
MLZ Mavora Lakes 42.23 165 P P 04 33 41.3 -1.2
YULB Yu-li 42.36 313 IAmb IAmb 04 33 47.4
comp=Z,36nm,0.8s
PCJI Pacitan 42.43 263 P P 04 33 44.7 0.0
comp=Z,6μmcomp=Z,523nm,0.8s
STKI Sintang 42.53 275 P P 04 33 47.6 +2.1
comp=Z,124nm,1.4s
WHZ Wether Hill Ro 42.67 165 IAmb IAmb 04 33 46.9
comp=Z,48nm,0.9s
WOJI Wonogiri, Jawa 42.68 264 P P 04 33 47.7 +1.1
comp=Z,119nm,1.8s
TPUB Ta-pu 42.80 312 IAmb IAmb 04 34 16.4
comp=Z,37nm,0.8s
SSLB Suanglung 42.85 313 IAmb IAmb 04 33 51.9
comp=Z,32nm,0.7s
MORW Morawa 43.05 232 P P 04 33 48.6 -0.9
baz=43,SNR=64
MORW Morawa 43.05 232 P P 04 33 48.6 -0.9
YHNB Yeheng 43.09 314 IAmb IAmb 04 33 57.1
comp=Z,80nm,0.8s
TATO Taipei 43.20 315 P P 04 33 51.3 +0.7
TATO IAmb IAmb 04 33 53.7
comp=Z,71nm,0.9s
BLDU Ballidu 43.26 229 P P 04 33 50.2 -0.9
baz=43,SNR=49
JNU Nakatsue 43.59 332 P P 04 33 54.5 +0.8
comp=Z,65nm,0.8s,baz=142,slow=1.9,SNR=29
JNU Nakatsue 43.59 332 IAmb IAmb 04 33 55.8
comp=Z,67nm,0.9s
MJAR Matsushiro Arr 43.71 342 P P 04 33 54.6 0.0
comp=Z,7.1nm,0.6s,baz=174,slow=9.9,SNR=13
MJAR PcP PcP 04 35 39.6 -0.2
comp=Z,5.5nm,0.7s,baz=167,slow=4.0,SNR=4.4
MJAR LR LR 04 50 23.8
comp=Z,340nm,21.2s,baz=230,slow=34
MJAR Matsushiro Arr 43.71 342 P P 04 33 53.3 -1.3
MJAR Matsushiro Arr 43.71 342 P P 04 33 53.3 -1.3
MJAR pmax pmax
comp=Z,5.0nm,0.8s
MAT Matsushiro 43.71 342 P P 04 33 54.2 -0.4
MAT S S 04 40 18.0 +1.2
MJB9 Matsu-Tunnel 43.71 342 IAmb IAmb 04 33 56.5
comp=Z,79nm,1.9s
KSM Kuching 43.88 277 P P 04 33 56.1 -0.3
KSM Kuching 43.88 277 P P 04 33 57.0 +0.7
NWAO Narrogin (SRO) 44.03 226 P P 04 33 57.8 +0.5
baz=44,SNR=6.3
NWAO Narrogin (SRO) 44.03 226 P P 04 33 55.9 -1.3

NWAO IAmb IAmb 04 33 58.5
comp=Z,77nm,1.1s
NWAO Narrogin (SRO) 44.03 226 P P 04 33 56.0 -1.3
NWAO Narrogin (SRO) 44.03 226 P P 04 33 55.9 -1.3
NWAO pmax pmax
comp=Z,77nm,1.1s
MUN Mundaring 44.30 228 P P 04 33 59.8 +0.4
baz=44,SNR=33
KPJI Karang Pucung 44.64 265 P P 04 34 03.4 +1.0
comp=Z,4μmcomp=Z,392nm,0.8s
RKGY Rocky Gully 45.10 224 P P 04 34 06.8 +1.1
baz=45,SNR=6.2
CMJI Cimerak 45.13 264 P P 04 34 06.1 -0.1
comp=Z,9μmcomp=Z,953nm,0.9s
KNMB Chin-men Tao 45.14 312 IAmb IAmb 04 34 09.5
comp=Z,108nm,1.3s
QZH Quanzhou 45.26 313 ⇑iP P 04 34 07.5 +0.4
QZH pP pP 04 34 29.2 -1.8
QZH S S 04 40 39.1 -0.5
QZH pmax pmax
comp=Z,59nm,1.3s
CISI Cisompet, Garu 45.75 264 P P 04 34 10.7 -0.6
comp=Z,12μmcomp=Z,1μm,0.7s
LEM Lembang 45.95 265 P P 04 34 13.2 +0.3
comp=Z,149nm,0.7s,baz=118,slow=2.2,SNR=9.0
CNJI Cibinong 46.43 265 P P 04 34 16.2 -0.3
comp=Z,13μmcomp=Z,1μm,0.9s
DBJI Dramaga 46.81 266 P P 04 34 21.3 +1.8
comp=Z,85nm,0.6s
SKJI Sukabumi 47.00 265 P P 04 34 21.2 +0.3
comp=Z,5μmcomp=Z,503nm,0.7s
PPBI Pangkal Pinang 47.62 272 P P 04 34 28.4 +2.6
TJN Taejon 47.91 331 ⇓eP P 04 34 28.8 +1.2
KSRS Korea Array 48.52 332 P P 04 34 32.8 +0.6
comp=Z,14nm,0.8s,baz=149,slow=8.6,SNR=27
KSRS pP pwP 04 35 00.7 -0.9
comp=Z,10nm,0.9s,baz=150,slow=9.0,SNR=4.3
KSAR Wonju Array Be 48.52 332 P P 04 34 33.5 +1.2
KSAR Wonju Array Be 48.52 332 P P 04 34 33.5 +1.2
KLSI 48.87 268 P P 04 34 36.6 +1.2
comp=Z,25nm,2.3s
KASI Kota Agung 49.07 267 P P 04 34 35.8 -1.1
comp=Z,147nm,1.1s
INCN Inchon 49.15 331 P P 04 34 37.1 0.0
INCN Inchon 49.15 331 P P 04 34 37.1 0.0
INCN pmax pmax
comp=Z,117nm,1.0s
QIZ Qiongzhong 49.35 300 P P 04 34 39.7 +0.8
QIZ pP pP 04 35 01.5 -1.5
QIZ S S 04 41 40.6 +2.8
QIZ pmax pmax
comp=Z,30nm,1.4s
QIZ Qiongzhong 49.35 300 IAmb IAmb 04 34 42.4
comp=Z,118nm,1.7s
MDSI Maura Dua 49.42 268 P P 04 34 39.1 -0.5
comp=Z,116nm,1.6s
LWLI Liwa 49.52 268 P P 04 34 41.2 +0.7
comp=Z,117nm,1.0s
NJ2 Nanjing 49.52 320 eP P 04 34 42.3 +2.3
NJ2 pmax pmax
comp=Z,28nm,1.0s
MCQ Macquarie Isla 49.65 176 P P 04 34 42.4 +1.9
baz=50,SNR=7.0
MYKOM Kota Tinggi 50.32 276 P P 04 34 48.0 +1.6
WHN Wuhan 51.59 316 ⇓iP P 04 34 57.6 +2.0
WHN pP pP 04 35 19.6 -0.3
WHN pmax pmax
comp=Z,86nm,1.0s
JRMM Jerantut 51.98 279 P P 04 34 59.0 +0.2
KRJI Kerinci 52.28 271 P P 04 35 02.1 +0.9
comp=Z,420nm,1.0s
SDSI Sungai Dareh 52.41 273 P P 04 35 01.8 -0.2
comp=Z,15μmcomp=Z,253nm,0.9s
YSS Yuzh-Sakhalins 52.53 351 eP P 04 35 03.7 +1.5
YSS MLR MLR
comp=Z,1μm,18.0s
USA0B Ussuriysk Arra 52.65 340 IAmb IAmb 04 35 49.6
comp=Z,22nm,0.9s
USA0B Ussuriysk Arra 52.65 340 ⇓eP P 04 35 03.4 +0.3
USRK Ussuriysk Ar. 52.65 340 P P 04 35 04.4 +1.3
comp=Z,21nm,0.8s,baz=147,slow=4.3,SNR=30
USRK Ussuriysk Ar. 52.65 340 P P 04 35 03.9 +0.8
USRK Ussuriysk Ar. 52.65 340 P P 04 35 03.9 +0.8
DL2 Dalian 52.75 329 P P 04 35 05.2 +1.2
DL2 pP pwP 04 35 32.2 -1.4
DL2 S S 04 42 27.4 +3.4
DL2 pmax pmax
comp=Z,61nm,1.1s
DL2 LR LR
comp=Z,940nm,14.8s
DL2 LR LR
comp=Z,510nm,17.1s
DL2 LR LR
comp=Z,970nm,15.5s
BKNI Bangkinang 52.93 274 P P 04 35 06.7 +0.9
comp=Z,5μmcomp=Z,270nm,0.9s
TIA Tai'an 53.36 323 P P 04 35 08.7 +0.1
TIA pmax pmax
comp=Z,47nm,0.7s
PDSI Padang 53.38 272 P P 04 35 08.1 -1.0
comp=Z,2μmcomp=Z,142nm,0.8s
IPM Ipoh 53.51 279 P P 04 35 09.4 -0.7
IPM PcP PcP 04 36 16.8 +1.0
IPM Ipoh 53.51 279 P P 04 35 11.0 +0.9
MDJ Mudanjiang 53.84 339 P P 04 35 12.7 +0.8
MDJ pP pP 04 35 36.3 -0.1
MDJ sP sP 04 35 46.7 -1.2
MDJ PcP PcP 04 36 15.9 -0.4
MDJ PP PP 04 37 15.9 +1.6
MDJ ScP ScP 04 40 04.0 -0.6
MDJ PcS PcS 04 40 14.8 -0.7
MDJ ScS ScS 04 44 50.9 +0.1
MDJ pmax pmax
comp=Z,650nm,11.8s
MDJ LR LR
comp=Z,550nm,19.9s
MDJ LR LR
comp=Z,640nm,18.5s
MDJ LR LR
comp=Z,830nm,15.7s
MDJ Mudanjiang 53.84 339 IAmb IAmb 04 35 14.8
comp=Z,89nm,1.8s
KULM Kulim 54.01 280 P P 04 35 13.6 -0.1
KULM Kulim 54.01 280 P P 04 35 13.0 -0.7
SISI Saibi 54.71 272 P P 04 35 19.3 +0.5
comp=Z,2μmcomp=Z,162nm,1.6s
GYA Guiyang 55.22 307 ⇑iP P 04 35 23.6 +1.2
GYA pP pwP 04 35 50.5 -2.0
GYA PcP PcP 04 36 23.9 +1.7
GYA PP PP 04 37 26.2 -0.9
GYA S S 04 43 01.6 +3.6
GYA sS sS 04 43 38.3 -4.0
GYA SS SS 04 46 38.9 -5.0
GYA pmax pmax
comp=Z,50nm,1.1s
GYA pmax pmax
comp=Z,410nm,5.1s
SLVN Son La 55.38 300 IAmb IAmb 04 35 53.8
comp=Z,75nm,1.8s
BJT Baijiatuau 56.49 326 IAmb IAmb 04 35 32.7
comp=Z,110nm,1.9s
BJI Beijing 56.50 326 ⇓eP P 04 35 31.5 +0.4
BJI pmax pmax
comp=Z,24nm,1.3s
PPT Papeete 56.77 108 P P 04 35 36.1 +2.6
comp=Z,31nm,0.8s,baz=82,slow=20,SNR=5.2
TPTI 57.12 277 P P 04 35 35.2 -0.8
KLR Kul'dur 57.20 343 ⇓eP P 04 35 34.7 -1.2
KLR pmax pmax
comp=Z,16nm,0.9s
XAN Xi'an 57.35 316 P P 04 35 37.4 +0.1
XAN PP PP 04 37 45.5 -0.4
XAN S S 04 43 17.4 -8.5
XAN pmax pmax
comp=Z,120nm,0.8s
XAN pmax pmax
comp=Z,520nm,5.1s
XAN LR LR
comp=Z,370nm,15.7s
XAN LR LR
comp=Z,570nm,16.7s
XAN LR LR
comp=Z,430nm,20.6s
GRNR Gornyy 57.41 347 ⇓iP P 04 35 38.7 +1.4
GRNR pmax pmax

comp=Z,7.0nm,1.3s
GRNR MLR MLR
comp=Z,240nm,17.0s
KMI Kunming 57.84 304 IAmb IAmb 04 35 44.7
comp=Z,61nm,1.1s
PEA0B Petropavlovsk- 57.87 3 P P 04 35 40.5 0.0
PEA0B Petropavlovsk- 57.87 3 P P 04 35 40.5 0.0
PEA0B pmax pmax
comp=Z,76nm,1.1s
PETK Petropavlovsk- 57.87 3 P P 04 35 41.5 +1.0
comp=Z,29nm,0.6s,baz=167,slow=8.2,SNR=26
PETK pP pwP 04 36 09.2 -1.2
comp=Z,19nm,0.7s,baz=177,slow=8.1,SNR=4.0
PETK LR LR 04 58 07.1
comp=Z,369nm,20.4s,baz=201,slow=33
PETK Petropavlovsk- 57.87 3 P P 04 35 42.2 +1.7
CMAR Chiang Mai Arr 58.79 295 P P 04 35 49.0 +1.4
comp=Z,19nm,0.8s,baz=115,slow=5.2,SNR=69
CMAR pP pwP 04 36 15.8 -2.0
comp=Z,16nm,0.9s,baz=114,slow=5.2,SNR=4.5
CMAR Chiang Mai Arr 58.79 295 iP P 04 35 49.0 +1.4
CMAR pmax pmax
comp=Z,21nm,0.8s
CHTO Chiang Mai 58.90 295 P P 04 35 48.3 -0.1
CHTO IAmb IAmb 04 35 51.4
comp=Z,72nm,1.5s
CHTO Chiang Mai 58.90 295 P P 04 35 48.3 -0.1
CHTO pmax pmax
comp=Z,72nm,1.5s
CD2 Chengdu 59.53 310 ⇑iP P 04 35 53.5 +1.0
CD2 pmax pmax
comp=Z,40nm,1.2s
HHC Hu-ho-hao-te 59.68 324 eP P 04 35 59.0 +5.5
HHC Hu-ho-hao-te 59.68 324 eP P 04 35 57.0 +3.5
HIA Hailar 61.51 335 IAmb IAmb 04 36 07.5
comp=Z,30nm,1.2s
HIA Hailar 61.51 335 ⇓eP P 04 36 06.4 +0.8
HIA pmax pmax
comp=Z,107nm,0.9s
LZH Lanzhou 61.97 315 eP P 04 36 10.6 +1.5
LZH pP pP 04 36 36.4 +2.3
LZH sP sP 04 36 46.1 +0.8
LZH pmax pmax
comp=Z,100nm,1.1s
LZH pmax pmax
comp=Z,250nm,4.9s
LZH LR LR
comp=Z,830nm,15.7s
LZH LR LR
comp=Z,730nm,15.7s
LZH LR LR
comp=Z,950nm,16.8s
ZEA Zeya 62.51 343 eP P 04 36 12.8 +0.7
ZEA pmax pmax
comp=Z,41nm,1.0s
MA2 Magadan 64.30 358 P P 04 36 24.9 +1.1
comp=Z,77nm,0.7s,baz=166,slow=7.2,SNR=12
MA2 Magadan 64.30 358 P P 04 36 23.7 -0.2
MA2 Magadan 64.30 358 ⇓eP P 04 36 23.6 -0.2
MA2 pmax pmax
comp=Z,48nm,0.7s
GTA Gaotai 66.38 317 ⇑P P 04 36 39.0 +1.2
GTA pP pwP 04 37 08.3 -0.5
GTA S S 04 45 19.0 -0.6
GTA pmax pmax
comp=Z,98nm,1.0s
GTA pmax pmax
comp=Z,410nm,6.0s
GTA LR LR
comp=Z,400nm,19.7s
GTA LR LR
comp=Z,430nm,19.0s
GTA LR LR
comp=Z,570nm,17.1s
ULN Ulaanbaatar 66.58 328 P P 04 36 39.4 +0.4
ULN IAmb IAmb 04 36 41.8
comp=Z,38nm,1.0s
ULN Ulaanbaatar 66.58 328 ⇓eP P 04 36 40.2 +1.2
ULN pmax pmax
comp=Z,39nm,1.0s
SONM Songino Array 66.92 327 P P 04 36 41.9 +0.8
comp=Z,22nm,0.7s,baz=143,slow=6.5,SNR=86
SONM Songino Array 66.92 327 P P 04 36 40.9 -0.2
SONM Songino Array 66.92 327 P P 04 36 40.9 -0.2
SONM pmax pmax
comp=Z,21nm,0.7s
SEY Seymchan 67.64 359 P P 04 36 46.5 +1.4
comp=Z,16nm,0.7s,baz=167,slow=4.7,SNR=48
SEY Seymchan 67.64 359 ⇓eP P 04 36 45.4 +0.3
LSA Lhasa 69.09 304 IAmb IAmb 04 36 58.8
comp=Z,50nm,0.9s
YAK Yakutsk 69.25 348 eP P 04 36 55.9 +0.7
YAK e 04 37 21.0
YAK eS S 04 45 53.2 +0.6
YAK e*SS SKiKP 04 46 34.2 -0.3
YAK eSS SS 04 50 22.0 +0.5
YAK pmax pmax
comp=Z,25nm,0.8s
YAK pmax pmax
comp=N,13nm,0.9s
YAK pmax pmax
comp=E,6.0nm,0.8s
YAK pmax pmax
comp=Z,100nm,3.7s
YAK pmax pmax
comp=N,95nm,4.3s
YAK pmax pmax
comp=E,56nm,3.0s
YAK smax smax
comp=E,558nm,5.2s
YAK smax smax
comp=N,293nm,4.8s
ZAK Zakamensk 70.07 328 eP P 04 37 00.8 +0.2
ZAK pmax pmax
comp=Z,46nm,1.1s
BOD Bodaibo 70.22 339 eP P 04 37 01.0 -0.2
BOD pmax pmax
comp=Z,27nm,0.9s
TLY Talaya 70.64 330 P P 04 37 03.0 -1.0
TLY Talaya 70.64 330 ⇓eP P 04 37 04.5 +0.5
TLY pmax pmax
comp=Z,11nm,0.8s
SDPT Sand Point 70.87 26 IAmb IAmb 04 37 44.1
comp=Z,62nm,1.0s
TAPN Taplejung 71.28 301 eP P 04 37 09.8 +1.1
comp=Z,367nm,1.0s
ODAN Odare 71.42 300 eP P 04 37 10.0 +0.5
comp=Z,472nm,0.7s
MOY Mondy 71.99 329 eP P 04 37 13.5 +1.3
MOY pmax pmax
comp=Z,71nm,2.0s
RAMN Ramite 72.13 300 eP P 04 37 14.2 +0.5
comp=Z,108nm,0.7s
JIRN Jiri 72.67 301 eP P 04 37 17.7 +0.6
comp=Z,300nm,0.8s
VNDA Vanda 72.72 178 P P 04 37 16.5 +0.5
comp=Z,12nm,0.9s,baz=327,slow=6.1,SNR=8.3
GUN Gumba 73.00 301 eP P 04 37 19.7 +0.7
comp=Z,463nm,0.8s
BILL Bilibino 73.29 5 P P 04 37 20.1 +0.7
BILL IAmb IAmb 04 37 23.1
comp=Z,47nm,0.7s
BILL Bilibino 73.29 5 ⇓iP P 04 37 19.9 +0.5
BILL e 04 37 31.7
BILL i*SP sP 04 37 56.3 0.0
BILL pmax pmax
comp=Z,42nm,0.7s
PKI Pulchoki 73.31 301 eP P 04 37 21.1 +0.3
comp=Z,280nm,1.0s
PKIN Phulchoki 73.32 301 eP P 04 37 21.1 +0.3
comp=Z,221nm,1.0s
KKN Kakani 73.48 301 eP P 04 37 22.1 +0.4
comp=Z,210nm,0.7s
DMN Daman 73.58 300 eP P 04 37 23.0 +0.7
comp=Z,390nm,0.8s
GKN Gorkha 74.08 301 eP P 04 37 25.6 +0.5
comp=Z,682nm,1.1s
KOLN Koldanda 74.92 300 eP P 04 37 30.2 +0.2
comp=Z,356nm,0.9s
DANN Dangsing 74.92 301 eP P 04 37 30.1 0.0
comp=Z,295nm,0.9s
OHAK Old Harbor 75.18 27 IAmb IAmb 04 37 34.1
comp=Z,35nm,0.8s
ANM Nome 75.57 17 IAmb IAmb 04 37 35.9
comp=Z,44nm,1.2s
KDAK Kodiak Island 75.81 26 P P 04 37 35.7 +1.5

comp=Z,9.6nm,0.7s,baz=200,slow=6.2,SNR=8.8
KDAK Kodiak Island 75.81 26 P P 04 37 36.4 +2.2
KDAK IAmb IAmb 04 38 16.2
comp=Z,57nm,1.4s
KDAK Kodiak Island 75.81 26 P P 04 37 36.4 +2.2
KDAK pmax pmax
comp=Z,57nm,1.4s
WMQ Urumqi 76.46 317 eP P 04 37 40.1 +1.8
WMQ pP pP 04 38 06.4 +2.3
WMQ S S 04 47 16.8 +1.4
WMQ SKS SKSac 04 47 32.5 -7.7
WMQ pmax pmax
comp=Z,450nm,3.9s
WMQ LR LR
comp=Z,180nm,26.9s
WMQ LR LR
comp=Z,220nm,17.3s
WMQ LR LR
comp=Z,520nm,24.7s
WMQ Urumqi 76.46 317 IAmb IAmb 04 37 41.3
comp=Z,105nm,1.4s
HYB Hyderabad 77.44 289 iP P 04 37 43.0 -1.3
HYB epP pP 04 38 12.0 +1.9
BRLK Bradley Lake 77.65 25 IAmb IAmb 04 37 47.8
comp=Z,26nm,0.7s
TIXI Tiksi 78.11 352 P P 04 37 46.6 -0.2
comp=Z,12nm,0.7s,baz=123,slow=6.7,SNR=24
TIXI Tiksi 78.11 352⇓eP P 04 37 47.8 +1.0
TIXI pmax pmax
comp=Z,15nm,0.9s
SEW Seward 78.44 25 IAmb IAmb 04 38 20.2
comp=Z,41nm,1.0s
SUA Susitna One 78.64 24 IAmb IAmb 04 37 52.0
comp=Z,26nm,0.6s
RDOG Red Dog Mine 78.80 15 IAmb IAmb 04 38 22.8
comp=Z,71nm,1.2s
RC01 Rabbit Creek A 78.85 24 IAmb IAmb 04 37 54.1
comp=Z,66nm,1.3s
PPLA Purkeypile 78.88 22 IAmb IAmb 04 38 22.4
comp=Z,104nm,2.0s
KNK Knik Glacier 79.54 24 IAmb IAmb 04 38 26.5
comp=Z,52nm,1.3s
GLI Glacier Island 79.84 25 IAmb IAmb 04 38 27.9
comp=Z,42nm,1.0s
IMAR Indian Mountai 80.14 19 P P 04 37 58.6 +0.7
SCM Sheep Creek Mo 80.22 24 IAmb IAmb 04 38 30.2
comp=Z,59nm,1.2s
RND Reindeer 80.43 23 IAmb IAmb 04 38 01.3
comp=Z,32nm,0.8s
MCK McKinley 80.57 22 IAmb IAmb 04 38 02.4
comp=Z,64nm,1.0s
MLY Manley 80.61 21 IAmb IAmb 04 38 03.8
comp=Z,25nm,0.7s
MK31 Makanchi Array 81.03 319 IAmb IAmb 04 38 05.7
comp=Z,46nm,1.1s
MK31 Makanchi Array 81.03 319 P P 04 38 03.6 +0.4
MKAR Makanchi Array 81.03 319 P P 04 38 03.3 +0.1
comp=Z,35nm,0.9s,baz=94,slow=7.6,SNR=144
MKAR PKPPKP P'P'df 05 04 47.9 +3.8
comp=Z,0.3nm,0.6s,baz=270,slow=5.5,SNR=3.7
MKAR Makanchi Array 81.03 319 P P 04 38 03.5 +0.3
MAKZ Makanchi 81.24 319 P P 04 38 04.7 +0.4
MAKZ IAmb IAmb 04 38 06.6
comp=Z,68nm,1.1s
MAKZ Makanchi 81.24 319 P P 04 38 04.7 +0.4
MAKZ pmax pmax
comp=Z,68nm,1.1s
GLB Gilahina Butte 81.51 26 IAmb IAmb 04 38 08.1
comp=Z,25nm,0.8s
TCOL CIGO, UAF Yank 81.56 22 P P 04 38 05.8 +0.3
baz=239
COLA College 81.57 22 P P 04 38 05.0 -0.6
COLA IAmb IAmb 04 38 06.9
comp=Z,36nm,0.8s
COLA College 81.57 22 P P 04 38 05.0 -0.6
COLA pmax pmax
comp=Z,36nm,0.8s
VRDI Verde Repeater 81.57 26 IAmb IAmb 04 38 37.5
comp=Z,36nm,1.2s
HDA Harding Lake 81.67 22 P P 04 38 05.5 -0.6
baz=240
ZALV Zalesovo Beam 81.76 326 P P 04 38 06.0 -0.8
comp=Z,20nm,0.7s,baz=114,slow=5.6,SNR=84
ZALV pP pP 04 38 35.8 +2.8
comp=Z,6.8nm,0.7s,baz=122,slow=5.0,SNR=2.5
ZALV LR LR 05 16 23.1
comp=Z,169nm,18.8s,baz=92,slow=37
ZALV Zalesovo Beam 81.76 326 P P 04 38 06.0 -0.8
POKR Poker Plat Res 81.84 21 P P 04 38 06.9 -0.2
baz=239
ILAR Eielson Array 81.87 22 P P 04 38 06.8 -0.4
comp=Z,15nm,0.8s,baz=252,slow=5.2,SNR=103
ILAR LR LR 05 14 53.3
comp=Z,298nm,18.1s,baz=230,slow=36
ILAR Eielson Array 81.87 22 P P 04 38 06.0 -1.2
ILAR Eielson Array 81.87 22 P P 04 38 06.0 -1.2
PDGK Podgornoye 82.00 315 P P 04 38 08.7 +0.2
RIDG Independent Ri 82.15 23 IAmb IAmb 04 38 40.9
comp=Z,104nm,1.6s
CTGM Chitina Glacie 82.39 26 IAmb IAmb 04 38 42.1
comp=Z,31nm,1.1s
DOT Dot Lake 82.42 23 IAmb IAmb 04 38 12.4
comp=Z,26nm,0.9s
PCA Pinnacle 82.52 27 IAmb IAmb 04 38 43.4
comp=Z,72nm,1.7s
TOLK Toolik Lake Re 82.99 18 P P 04 38 13.7 +0.7
baz=237
BCAR Beaver Creek A 83.08 24 P P 04 38 14.1 +0.5
KSH Kashi 83.73 310 P P 04 38 19.3 +1.8
KSH pP pP 04 38 44.1 +0.3
KSH PP PP 04 41 37.9 +5.9
KSH S S 04 48 34.1 +2.2
KSH pmax pmax
comp=Z,610nm,1.7s
KSH pmax pmax
comp=Z,2μm,10.4s
KSH LR LR
comp=Z,850nm,16.7s
KSH LR LR
comp=Z,870nm,17.0s
KSH LR LR
comp=Z,840nm,21.5s
BMAR Burnt Mountain 83.99 20 P P 04 38 18.8 +0.7
H02N1 VAN INLET T-PH 84.22 35 T T 06 11 54.2
SNR=4.4
H02S1 DAWSON INLET T 84.25 35 T T 06 11 54.1
BOOM Boomskoye usch 84.35 313 IAmb IAmb 04 38 23.7
comp=Z,64nm,0.8s
KURK Kurchatov 84.43 322 P P 04 38 20.2 -0.4
KURK IAmb IAmb 04 38 22.5
comp=Z,79nm,1.1s
KURK Kurchatov 84.43 322⇓eP P 04 38 20.7 +0.1
KURK pmax pmax
comp=Z,57nm,1.0s
KURBB Kurchatov Arra 84.47 322 P P 04 38 20.4 -0.4
comp=Z,29nm,0.9s,baz=107,slow=3.9,SNR=109
KURBB pP pP 04 38 50.0 +2.9
comp=Z,9.1nm,0.9s,baz=99,slow=4.8,SNR=2.6
KZA Kyzart 84.77 313 P P 04 38 25.0 +1.9
SNR=9.6
NIL Nilore 84.83 304 P P 04 38 22.8 -0.3
NIL Nilore 84.83 304 P P 04 38 22.8 -0.3
NIL pmax pmax
comp=Z,160nm,0.7s
QSPA South Pole Qui 85.08 180 P P 04 38 23.5 -0.3
KBK Karagaybulak 85.11 313 P P 04 38 26.2 +1.7
SNR=19
WHY Whitehorse 85.22 28 IAmb IAmb 04 38 56.6
comp=Z,61nm,2.0s
CHMS Chumysh 85.31 314 P P 04 38 25.7 +0.4
SNR=34
UCH Uchtor 85.34 313 P P 04 38 27.8 +1.8
SNR=33
FRU1 Bishkek 85.36 314 IAmb IAmb 04 38 58.4
comp=Z,75nm,1.1s
AAK Ala-Archa 85.43 313 P P 04 38 26.8 +0.7
comp=Z,33nm,0.9s,baz=117,slow=4.1,SNR=62
AAK pP pP 04 38 54.2 +1.8
comp=Z,32nm,0.8s,baz=90,slow=4.0,SNR=5.8
AAK Ala-Archa 85.43 313 P P 04 38 27.9 +1.8
SNR=23
AAK Ala-Archa 85.43 313 P P 04 38 27.0 +0.9
AAK IAmb IAmb 04 38 58.8
comp=Z,40nm,0.8s
AAK Ala-Archa 85.43 313⇓eP P 04 38 27.0 +0.9
AAK pmax pmax
comp=Z,40nm,1.0s

USP Ospenovka 85.54 314 P P 04 38 28.1 +1.6
SNR=28
MAW Mawson 85.87 203 P P 04 38 27.0 -0.4
baz=86,SNR=60
MAW Mawson 85.87 203 P P 04 38 27.0 -0.4
comp=Z,98nm,0.8s,baz=94,slow=6.7,SNR=82
MAW Mawson 85.87 203 P P 04 38 27.1 -0.4
MAW IAmb IAmb 04 38 29.3
comp=Z,23nm,0.8s
MAW Mawson 85.87 203 P P 04 38 27.1 -0.4
MAW pmax pmax
comp=Z,23nm,0.8s
AML Almayashu 85.92 313 P P 04 38 31.0 +2.2
SNR=36
EKS2 Erkin-Say 85.95 313 P P 04 38 30.9 +2.3
SNR=15
EPYK Eagle Plains 86.37 22 IAmb IAmb 04 38 32.7
comp=Z,52nm,0.9s
EPYK Eagle Plains 86.37 22 P P 04 38 30.7 +0.7
baz=249
DLBC Dease Lake 86.95 31 P P 04 38 35.6 +2.5
comp=Z,18nm,0.9s,baz=350,slow=1.1,SNR=4.2
BTK Batken 87.73 310 IAmb IAmb 04 39 09.9
comp=Z,67nm,1.1s
INK Inuvik 88.18 21 P P 04 38 38.9 +0.3
comp=Z,11nm,0.9s,baz=239,slow=3.8,SNR=31
YBH Yreka Blue Hor 88.39 48 P P 04 38 41.6 +1.3
comp=Z,2.5nm,0.7s,baz=278,slow=6.5,SNR=5.2
KK31 Karatay Array 88.39 313 IAmb IAmb 04 38 42.0
comp=Z,17nm,0.9s
KK31 Karatay Array 88.39 313 iP P 04 38 40.4 +0.2
KKAR Karatay Array 88.39 313 P P 04 38 39.7 -0.5
KKAR Karatay Array 88.39 313 IAmb IAmb 04 38 42.0
comp=Z,17nm,0.9s
KKAR Karatay Array 88.39 313 P P 04 38 39.7 -0.5
KBL Kabul 88.41 305 P P 04 38 40.1 -0.6
KBL IAmb IAmb 04 38 41.7
comp=Z,19nm,0.9s
KBL Kabul 88.41 305 P P 04 38 40.1 -0.6
KBL pmax pmax
comp=Z,19nm,1.0s
BVAR Borovoye Array 89.89 323 P P 04 38 45.7 -1.3
comp=Z,45nm,0.8s,baz=106,slow=4.8,SNR=174
BVAR pP pP 04 39 15.6 +2.0
comp=Z,18nm,0.8s,baz=102,slow=6.7,SNR=5.4
BRVK Borovoye 89.96 323 P P 04 38 46.2 -1.1
BRVK IAmb IAmb 04 38 48.8
comp=Z,40nm,0.8s
BRVK Borovoye 89.96 323 P P 04 38 46.2 -1.1
BRVK pmax pmax
comp=Z,40nm,0.9s
YERR Yerington 90.69 51 IAmb IAmb 04 39 24.7
comp=Z,31nm,2.0s
HAWA Hanford 91.22 44 IAmb IAmb 04 39 40.9
comp=Z,28nm,2.0s
NVAR Mina Array Bea 91.37 52 P P 04 38 56.4 +1.9
comp=Z,3.7nm,0.7s,baz=254,slow=6.3,SNR=26
NVAR PP PP 04 42 37.0 +3.5
comp=Z,2.0nm,0.9s,baz=254,slow=7.2,SNR=3.6
NVAR LR LR 05 12 13.5
comp=Z,629nm,21.8s,baz=234,slow=30
NVAR Mina Array Bea 91.37 52 P P 04 38 54.2 -0.3
NV11 Mina Array Sit 91.49 52 IAmb IAmb 04 39 27.4
comp=Z,18nm,1.4s
E08A Dider Farm, El 91.55 44 IAmb IAmb 04 39 25.5
comp=Z,37nm,2.0s
J08A Circle Bar Ran 91.68 47 IAmb IAmb 04 40 07.7
comp=Z,24nm,1.8s
C36M Paulatuk 91.76 21 IAmb IAmb 04 38 57.7
comp=Z,12nm,1.1s
E09A Wood Farm, Sta 92.18 44 IAmb IAmb 04 39 28.2
comp=Z,18nm,1.4s
C09A Chrisman Ranch 92.20 42 IAmb IAmb 04 40 10.2
comp=Z,28nm,2.0s
BMO Blue Mountains 92.64 45 P P 04 39 00.9 +0.9
BMO IAmb IAmb 04 39 27.2
comp=Z,22nm,1.8s
BMO Blue Mountains 92.64 45 P P 04 39 01.0 +0.9
BMO pmax pmax
comp=Z,22nm,1.8s
TPNV Topopah Spring 92.88 53 IAmb IAmb 04 40 09.6
comp=Z,25nm,1.6s
NEW Newport 93.01 42 P P 04 39 02.0 +0.4
comp=Z,5.4nm,1.1s,baz=266,slow=3.8,SNR=7.2
R11A Troy Canyon, C 93.50 52 IAmb IAmb 04 39 31.6
comp=Z,17nm,1.6s
SHPR Sheep Range 93.73 54 P P 04 39 04.7 -0.7
SHPR IAmb IAmb 04 39 33.9
comp=Z,15nm,1.4s
HRA Herat 93.99 304 IAmb IAmb 04 39 07.9
comp=Z,19nm,1.0s
YKA Yellowknife Ar 95.05 28 P P 04 39 10.2 -0.4
comp=Z,5.4nm,0.8s,baz=269,slow=4.8,SNR=66
YKA pP pP 04 39 37.3 -0.3
comp=Z,2.8nm,1.0s,baz=269,slow=4.9,SNR=2.8
YKA PKKP PKKPdf 04 56 04.2 -3.1
comp=Z,0.6nm,0.7s,baz=86,slow=2.6,SNR=11
CCUT Cedar City 95.21 53 P P 04 39 11.4 -0.8
KNB Kanab 95.62 53 P P 04 39 15.2 +1.1
KNB Kanab 95.62 53 P P 04 39 15.2 +1.1
KNB pmax pmax
comp=Z,19nm,1.5s
ABKAR Akbulak array 96.17 319 P P 04 39 13.6 -2.4
H06E1 SOCORRO T-PHAS96.56 72 T T 06 28 00.1
SNR=5.1
ARU Arti 96.93 326 P P 04 39 17.7 -1.5
comp=Z,1.8nm,0.3s,baz=31,slow=0.9,SNR=15
ARU pP pP 04 39 46.1 +0.2
comp=Z,1.9nm,0.2s,baz=183,slow=3.1,SNR=1.4
ARU Arti 96.93 326 P P 04 39 17.0 -2.2
ARU IAmb IAmb 04 39 19.1
comp=Z,20nm,1.0s
ARU Arti 96.93 326 P P 04 39 17.7 -1.5
ARU *PP pP 04 39 47.4 +1.5
ARU 04 43 13.9
ARU S SKSac 04 49 42.9 -3.4
ARU SP SP 04 51 48.6 -5.1
ARU SS SS 04 57 10.2 -0.5
AKTO Aktyubinsk 97.41 320 P P 04 39 20.8 -0.8
comp=Z,4.3nm,0.8s,baz=104,slow=5.2,SNR=15
GEYT Alibeck 97.44 307 P Pdif 04 39 22.2 +0.1
comp=Z,5.0nm,0.9s,baz=153,slow=1.0,SNR=18
GEYT pP pP 04 39 50.0 +1.3
comp=Z,4.3nm,1.0s,baz=119,slow=1.9,SNR=4.0
GEYT PP PP 04 43 16.4 -4.1
comp=Z,2.3nm,0.8s,baz=64,slow=6.8,SNR=4.6
GEYT Alibeck 97.44 307 P P 04 39 21.1 -0.9
PDAR Pinedale Array 98.19 48 P P 04 39 25.0 -0.6
comp=Z,0.6nm,0.6s,baz=223,slow=1.6,SNR=6.6
PDAR PP PP 04 43 28.6 +2.3
comp=Z,0.3nm,0.4s,baz=270,slow=9.9,SNR=3.8
PDAR LR LR 05 16 09.1
comp=Z,525nm,21.7s,baz=258,slow=31
PDAR Pinedale Array 98.19 48 P P 04 39 24.4 -1.2
RES Resolute Bay 100.24 15 P Pdif 04 39 33.7 0.0
comp=Z,1.9nm,0.8s,baz=302,slow=2.6,SNR=8.5
RES Resolute Bay 100.24 15 Pdif 04 39 34.6 +1.0
PRGR Permogore 102.86 332 eP Pdif 04 39 44.2 -1.4
PRGR pmax pmax
comp=Z,14nm,0.7s
TXAR Lajitas Array 103.32 61 PP PKiKP 04 44 05.3 -2.1
comp=Z,0.7nm,0.9s,baz=326,slow=4.7,SNR=3.1
TXAR PKKPbc PKKPbc 04 55 42.5 -0.9
comp=Z,1.1nm,0.7s,baz=116,slow=4.9,SNR=8.8
APA Apatity 105.75 340⇑iP Pdif 04 39 57.7 -0.6
APA pmax pmax
comp=Z,4.0nm,1.4s
APA MLR MLR
comp=Z,1μm,21.0s
KLMR Klimovskoe 105.91 332 ePdif Pdif 04 39 56.7 -2.5
KLMR AMP 04 40 01.6
comp=Z,30nm,2.1s
KLMR Klimovskoe 105.91 332 eP Pdif 04 39 56.7 -2.5
KLMR pmax pmax
comp=Z,30nm,2.1s
ARCES ARCESS Array B 107.23 343 Pdiff Pdif 04 40 05.9 +1.0
comp=Z,2.7nm,0.8s,baz=42,slow=9.7,SNR=3.6
ARCES PKiKP PKiKP 04 44 14.1 +0.8
comp=Z,2.4nm,0.8s,baz=358,slow=3.1,SNR=4.1
FINES FINESS Array B 111.53 336 Pdiff Pdif 04 40 23.3 -0.8
comp=Z,1.0nm,0.6s,baz=29,slow=4.4,SNR=6.2
AKASG Malin Array Be 115.13 325 PKP PKiKP 04 44 27.8 -0.9
comp=Z,1.3nm,0.5s,baz=60,slow=2.2,SNR=13
AKASG pPKP pPKiKP 04 44 56.1 -0.5
comp=Z,0.6nm,0.5s,baz=54,slow=2.7,SNR=2.3
AKASG Malin Array Be 115.13 325c iPKIKP PKiKP 04 44 27.7 -1.0
AKASG pmax pmax

comp=Z,1.0nm,0.5s
BRTR Keskin Array B 116.08 312 PP PP 04 45 36.7 -0.4
comp=Z,4.3nm,0.9s,baz=91,slow=7.4,SNR=7.8
CLTN Cedars of Leba 116.86 52 PKPdf 04 44 32.5 0.0
S51A Beattyville 118.55 50 PKPdf 04 44 35.5 -0.3
PLCA Paso Flores 119.12 143 PKP PKPdf 04 44 35.5 -1.4
comp=Z,1.3nm,0.6s,baz=270,slow=2.7,SNR=8.9
PLCA PKKPbc PKKPbc 04 54 52.5 +0.5
comp=Z,1.7nm,0.8s,baz=124,slow=4.2,SNR=4.1
KOLS Kolonicke sedl 119.93 325 ePKIKP PKPdf 04 44 37.9 -0.2
KOLS Kolonicke sedl 119.93 325 ePKP PKPdf 04 44 37.9 -0.2
KOLS Kolonicke sedl 119.93 325 ePN PKPdf 04 44 37.9 -0.2
BOSA Boshof 120.35 233 PKP PKPdf 04 44 39.7 0.0
comp=Z,5.2nm,0.8s,baz=140,slow=0.7,SNR=8.3
VYHS Vyhne 122.09 326 ePKIKP PKiKP 04 44 43.6 +1.1
VYHS Vyhne 122.09 326 ePKP PKiKP 04 44 43.6 +1.1
LSZ Lusaka 122.51 249 PKPdf 04 44 42.8 -1.3
LSZ Lusaka 122.51 249 PKIKP PKPdf 04 44 42.8 -1.3
PVCC Panska Ves 123.13 330 ePKPDF PKiKP 04 44 45.0 +0.6
PVCC Panska Ves 123.13 330 ePKIKP PKiKP 04 44 45.0 +0.6
BRG Berggiesshubel 123.22 331 ePKP sPKiKP 04 45 29.6 +6.6
comp=Z,148nm,1.3s
CLL Collm 123.39 332 ePKiKP PKiKP 04 44 45.0 +0.1
comp=Z,6.0nm,0.8s
CLL epPKPdf pPKPdf 04 45 12.0 -0.5
CLL e 04 45 29.0
CLL Collm 123.39 332 ePKIKP PKiKP 04 44 45.0 +0.1
CLL e 04 45 12.0
CLL pmax pmax
comp=Z,6.0nm,0.8s
GOPC GO Pecny, Ondr 123.41 329 ePKPDF PKiKP 04 44 45.3 +0.3
GOPC GO Pecny, Ondr 123.41 329 ePKIKP PKiKP 04 44 45.3 +0.3
KHC Kasperske Hory 124.51 329 ePKPDF PKPdf 04 44 47.0 +0.1
KHC epPKP pPKPdf 04 45 14.9 +0.1
KHC ex x 04 45 28.0
KHC Kasperske Hory 124.51 329 ePKIKP PKPdf 04 44 47.0 +0.1
KHC e 04 45 14.9
KHC e 04 45 28.0
GERES GERESS Array B 124.63 329 PKP PKPdf 04 44 46.5 -0.7
comp=Z,2.7nm,0.7s,baz=48,slow=2.0,SNR=23
EKA Eskdalemuir Ar 126.39 344 PKP PKiKP 04 44 50.6 -0.1
comp=Z,1.5nm,0.5s,baz=17,slow=3.4,SNR=6.3
DAVOX Davos/Dischmat 127.93 329 PKP PKPdf 04 44 53.8 +0.1
comp=Z,4.9nm,0.7s,baz=294,slow=4.1,SNR=8.4
GO01 Chusmiza 131.21 121 PKPdf 04 45 01.0 -0.1
ROSC El Rosal 132.09 88 PKP PKPdf 04 45 02.7 -0.1
comp=Z,5.9nm,0.5s,baz=133,slow=22,SNR=4.9
LPAZ La Paz 133.52 118 PKP PKPdf 04 45 05.5 -0.2
comp=Z,2.9nm,0.6s,baz=248,slow=3.4,SNR=11
SDV Santo Domingo 135.75 82 PKPdf 04 45 09.4 0.0
CPUP Villa Florida 136.75 137 PKP PKPdf 04 45 10.7 -0.1
comp=Z,3.7nm,0.8s,baz=304,slow=2.2,SNR=9.2
SIV San Ignacio 139.76 122 SKP SKPdf 04 48 45.4 +3.6
comp=Z,2.7nm,1.0s,baz=299,slow=3.9,SNR=4.7
ESDC Sonseca Array 139.95 333 PKhKP PKPpre 04 45 08.8
comp=Z,0.6nm,0.7s,baz=19,slow=3.1,SNR=5.2
ESDC PKP PKPdf 04 45 16.7 +0.4
comp=Z,1.1nm,0.7s,baz=10,slow=2.6,SNR=5.5
ESDC PP PP 04 48 11.6 -1.3
comp=Z,1.9nm,0.7s,baz=24,slow=6.6,SNR=9.2
ESDC Sonseca Array 139.95 333 PKPdf 04 45 14.9 -1.4
SAML Samuel 140.68 110 PKPdf 04 45 15.3 -2.8
SAML Samuel 140.68 110 PKIKP PKPdf 04 45 15.4 -2.8
TAM Tamanrasset 144.54 303 PKPbc 04 45 24.4 +0.5
TAM Tamanrasset 144.54 303 PKIKP PKPbc 04 45 24.4 +0.5
TOSP Speyside 145.46 77 PKPdf 04 45 24.1 -2.5
MDT Midelt 145.66 327 PKPbc PKPab 04 45 27.4 0.0
comp=Z,19nm,0.7s,baz=30,slow=2.6,SNR=36
MDT pPKPbc pPKPab 04 45 56.8 +2.2
comp=Z,16nm,0.7s,baz=72,slow=4.5,SNR=6.3
BDFB Brasilia 150.31 134 PKP PKPdf 04 45 35.0 +0.3
comp=Z,18nm,0.7s,baz=214,slow=3.3,SNR=8.8
BDFB PKPbc PKPbc 04 45 38.2 -1.8
comp=Z,22nm,0.8s,baz=245,slow=1.1,SNR=26
BDFB Brasilia 150.31 134 PKPdf 04 45 34.1 -0.6
BDFB PKPbc PKPbc 04 45 38.5 -1.5
TOA0 Torodi Ar. Sit 151.26 288 PKPdf 04 45 36.4 +0.3
TORD Torodi Ar. Bea 151.26 288 PKP PKPdf 04 45 36.8 +0.8
comp=Z,5.9nm,0.6s,baz=50,slow=1.0,SNR=12
TORD PKPbc PKPbc 04 45 41.7 -0.4
comp=Z,24nm,0.6s,baz=40,slow=3.4,SNR=123
TORD pPKPbc pPKPbc 04 46 11.0 +1.2
comp=Z,30nm,0.8s,baz=88,slow=2.3,SNR=4.9
TORD PP PP 04 49 20.5 -1.1
comp=Z,7.0nm,1.0s,baz=44,slow=4.8,SNR=4.4
TORD Torodi Ar. Bea 151.26 288 PKPdf 04 45 35.7 -0.4
TORD PKPbc 04 45 41.7 -0.4
KIC Kosan Boka 158.57 275 ePKIKP PKPdf 04 46 01.9 +16
comp=Z,7.2nm,0.9s
KIC Kosan Boka 158.57 275 eP PP 04 50 02.3 -0.4
comp=Z,114nm,2.2s
DBIC Dimbokro 158.67 276 PKP PKPdf 04 45 47.1 +0.9
comp=Z,2.6nm,0.8s,baz=243,slow=2.2,SNR=4.6
DBIC PKPbc pPKPdf 04 46 01.6 -13
comp=Z,3.3nm,0.6s,baz=66,slow=2.7,SNR=9.0
DBIC PKPab PKPab 04 46 22.4 +0.3
comp=Z,23nm,0.6s,baz=77,slow=4.3,SNR=29
DBIC PP PP 04 49 54.9 -8.3
comp=Z,2.8nm,0.9s,baz=33,slow=4.1,SNR=3.5
DBIC Dimbokro 158.67 276 PKPdf 04 45 45.3 -0.9
DBIC PKPab 04 46 22.1 0.0
DBIC Dimbokro 158.67 276 PKIKP PKPdf 04 45 45.3 -0.9
DBIC 04 46 22.1
TIC Toumodi 158.83 276 ePKIKP PKPdf 04 46 02.2 +16
comp=Z,5.9nm,0.5s
TIC Toumodi 158.83 276 eP PP 04 50 00.6 -3.5
LIC Lamto 158.86 275 ePKIKP PKPdf 04 46 02.3 +16
comp=Z,14nm,0.8s
LIC Lamto 158.86 275 eP PP 04 50 04.0 -0.2
comp=Z,27nm,1.2s

ATH 03 04:27:25.1, 38.29N×20.40E, h12km±2km, ML3.3/9, Error ellipse: s-maj=2.6km s-min=1.0km az=254.0
THE 03 04:27:25.5, 38.29N×20.40E, h10km±1km, ML3.3/6, Error ellipse: s-maj=1.1km s-min=0.3km az=244.0
ISC 03 04:27:25.3±0.8, 38.29N±0.02×20.42E±0.04, h10km±5km, n45, σ0§49/73, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.03	170	P	Pg	04 27 27.2	0.0
KEF4				S	Sg	04 27 28.3	-0.2
KEF1	Kardakata, Kep	0.04	106	P	Pg	04 27 27.1	-0.2
KEF1				S	Sg	04 27 28.3	-0.5
KEF3	Kipouria, Keph	0.10	212	P	Pg	04 27 28.1	+0.2
KEF3				S	Sg	04 27 30.4	+0.5
CHV1	Chavriata, Kef	0.11	195	P	Pg	04 27 28.4	+0.4
CHV1				S	Sg	04 27 30.6	+0.6
ARG2	Argostoli	0.12	154	P	Pg	04 27 28.5	+0.2
ARG2				S	Sg	04 27 30.7	+0.3
KEF2	Argostoli. Kep	0.14	156	P	Pg	04 27 28.6	+0.1
VSK1	VASILIKIADES	0.17	44	P	Pg	04 27 29.1	+0.1
VSK1				S	Sg	04 27 31.8	+0.3
VLS	Valsamata	0.18	130	P	Pg	04 27 29.2	+0.1
VLS				S	Sg	04 27 31.9	+0.1
	21μm,0.3s						
VLS	Valsamata	0.18	130	P	Pg	04 27 29.1	+0.1
VLS				S	Sg	04 27 32.0	+0.3
VLS				AML	AML	04 27 32.5	
	comp=E,38532μm,0.1s						
VLS				AML	AML	04 27 33.1	
	comp=N,28592μm,0.3s						
KFL	Anninata	0.34	122	P	Pg	04 27 32.1	0.0
EVGI	Lefkada island	0.38	29	P	Pg	04 27 33.0	+0.2
EVGI				S	Sb	04 27 39.3	-0.7
EVGI	Lefkada island	0.38	29	P	Pg	04 27 33.0	+0.2
EVGI				S	Sg	04 27 39.2	+1.3
VLMS	Volimes, Zakyn	0.46	155	P	Pg	04 27 34.4	+0.2
VLMS				S	Sb	04 27 41.4	-0.8
VLMS				AML	AML	04 27 42.6	
	comp=N,42656μm,0.4s						
VLMS				AML	AML	04 27 43.6	
	comp=E,21193μm,0.3s						
MGNA	Meganis	0.47	39	P	Pg	04 27 34.4	-0.1
MGNA				S	Sg	04 27 40.8	+0.1
MGNA				AML	AML	04 27 42.4	
	comp=N,16786μm,0.2s						
MGNA				AML	AML	04 27 42.5	
	comp=E,16637μm,0.2s						
LKD2	Lefkada island	0.53	21	P	Pg	04 27 35.5	-0.2
LKD2				S	Sb	04 27 44.3	-0.2
	comp=E,3μm,0.5s						
LKD2	Lefkada island	0.53	21	P	Pg	04 27 35.5	-0.2

LKD2				S	Sg	04 27 42.5	-0.3
LKD2				AML	AML	04 27 48.7	
	comp=N,4373μm,0.3s						
LKD2				AML	AML	04 27 49.1	
	comp=E,4749μm,0.4s						
TSLK	**Tsoukalades, L**	**0.57**	**19**	P	**Pg**	**04 27 36.4**	**+0.1**
TSLK				S	**Sb**	**04 27 44.9**	**-0.5**
	comp=E,3μm,0.6s						
TSLK	**Tsoukalades, L**	**0.57**	**19**	P	**Pg**	**04 27 36.4**	**+0.1**
TSLK				S	**Sg**	**04 27 44.7**	**+0.9**
AST1	**Astakos**	**0.58**	**64**	P	**Pg**	**04 27 36.8**	**+0.2**
AST1				S	**Sb**	**04 27 46.5**	**+0.6**
ZAK2	**Zakynthos**	**0.63**	**143**	P	**Pg**	**04 27 37.9**	**+0.4**
ZAK2				S	**Sb**	**04 27 47.4**	**+0.3**
PDO	**Prodromos**	**0.68**	**63**	P	**Pg**	**04 27 38.4**	**0.0**
PDO				S	**Sb**	**04 27 49.4**	**+0.9**
PDO	**Prodromos**	**0.68**	**63**	P	**Pg**	**04 27 38.3**	**0.0**
PDO				S	**Sb**	**04 27 49.1**	**+0.6**
PDO				AML	AML	04 27 51.3	
	comp=N,10909μm,0.3s						
PDO				AML	AML	04 27 53.4	
	comp=E,9068μm,0.4s						
KRI1	**kERI**	**0.70**	**153**	P	**Pg**	**04 27 38.5**	**-0.4**
KRI1				S	**Sb**	**04 27 49.8**	**+0.6**
RLS	**Riolos of Patr**	**0.86**	**105**	P	**Pg**	**04 27 41.5**	**-0.3**
RLS				S	**Sn**	**04 27 55.3**	**-0.6**
RLS	**Riolos of Patr**	**0.86**	**105**	P	**Pg**	**04 27 41.6**	**-0.3**
RLS				S	**Sb**	**04 27 54.9**	**+1.1**
RLS				AML	AML	04 28 02.5	
	comp=N,2470μm,0.5s						
RLS				AML	AML	04 28 04.0	
	comp=E,2365μm,0.7s						
PVO	**Paravola**	**0.93**	**69**	P	**Pg**	**04 27 43.3**	**+0.1**
PVO				S	**Sn**	**04 27 57.2**	**-0.5**
	comp=E,2μm,0.7s						
PVO	**Paravola**	**0.93**	**69**	P	**Pg**	**04 27 43.3**	**+0.1**
PVO				AML	AML	04 28 01.2	
	comp=N,2634μm,0.4s						
PVO				AML	AML	04 28 04.1	
	comp=E,5427μm,0.5s						
DRO	**Drossia**	**1.07**	**108**	P	**Pb**	**04 27 45.7**	**-0.2**
DRO				S	**Sn**	**04 28 01.3**	**0.0**
	comp=E,3μm,0.6s						
DRO	**Drossia**	**1.07**	**108**	P	**Pb**	**04 27 45.3**	**-0.6**
LAKA	**Lakka**	**1.23**	**92**	P	**Pn**	**04 27 48.2**	**-0.3**
LAKA				S	**Sn**	**04 28 06.2**	**+1.0**
LAKA	**Lakka**	**1.23**	**92**	P	**Pn**	**04 27 48.1**	**-0.3**
EVR	**Evrytania**	**1.26**	**60**	P	**Pn**	**04 27 48.4**	**-0.5**
EVR	**Evrytania**	**1.26**	**60**	P	**Pn**	**04 27 48.4**	**-0.5**
EVR				AML	AML	04 28 13.0	
	comp=E,1294μm,0.6s						
EVR				AML	AML	04 28 13.1	
	comp=N,833μm,0.6s						
SERG	**Sergoula**	**1.29**	**84**	P	**Pn**	**04 27 49.3**	**-0.1**
SERG				S	**Sg**	**04 28 07.4**	**+0.4**
	comp=N,952nm,0.7s						
SERG	**Sergoula**	**1.29**	**84**	P	**Pn**	**04 27 49.2**	**-0.2**
TRIZ	**Trizonia**	**1.30**	**86**	P	**Pn**	**04 27 49.1**	**-0.4**
TRIZ	**Trizonia**	**1.30**	**86**	P	**Pn**	**04 27 48.7**	**-0.8**
KALE	**Kalithea**	**1.36**	**85**	P	**Pn**	**04 27 49.8**	**-0.5**
KALE	**Kalithea**	**1.36**	**85**	P	**Pn**	**04 27 49.8**	**-0.5**
KALE				AML	AML	04 28 19.5	
	comp=N,1748μm,0.8s						
KALE				AML	AML	04 28 26.3	
	comp=E,964μm,0.8s						
KLV	**Kalavryta, Ach**	**1.39**	**100**	P	**Pn**	**04 27 50.6**	**-0.1**
KLV				S	**Sn**	**04 28 09.0**	**-0.1**
KLV	**Kalavryta, Ach**	**1.39**	**100**	P	**Pn**	**04 27 50.3**	**-0.4**
AGG	**Agios Georgios**	**1.67**	**63**	P	**Pn**	**04 27 55.4**	**+0.9**
SOKA	**Soboth**	**9.28**	**336**	*e*Pn	**Pn**	**04 29 38.3**	**-0.8**
	comp=E,1.8nm,0.3s						
OBKA	**Obir**	**9.29**	**334**	*e*Pn	**Pn**	**04 29 39.3**	**+0.1**
	comp=E,0.7nm,0.2s						
MOA	**Molln**	**10.56**	**337**	*e*Pn	**Pn**	**04 29 57.5**	**+1.0**
	comp=E,1.2nm,0.3s						

THE **03** *04:41:59.9, 38.25N×20.36E, h9km±1km, ML3.9/14, Error ellipse: s-maj=1.8km s-min=0.5km az=247.0*
PDG **03** *04:41:59.0±0.4, 38.24N×20.30E, h13km, ML3.9/14, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*
ATH **03** *04:42:00.1, 38.25N×20.42E, h10km±1km, ML3.6/11, Error ellipse: s-maj=2.5km s-min=1.0km az=260.0*
IDC **03** *04:42:01.0±1.4, 38.50N×20.84E, h0km, mb3.8/9, mb1 3.8/12, mb1mx3.6/57, mbtmp3.8/12, ML2.8/3, Error ellipse: s-maj=30.5km s-min=17.8km az=31.0*
ISC 03 04:41:59.9±0.7, **38.26N**±0.02×**20.38E**±0.03, **h9**km±4km, **n116**, σ1.32/160, **mb3.9**/9, **6C-7D, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.04**	**89**	P	**Pg**	**04 42 01.7**	**+0.2**
KEF4				S	**Sg**	**04 42 02.8**	**+0.1**
KEF3	**Kipouria, Keph**	**0.06**	**202**	P	**Pg**	**04 42 02.2**	**+0.5**
KEF3				S	**Sg**	**04 42 03.6**	**+0.5**
CHV1	**Chavriata, Kef**	**0.07**	**176**	P	**Pg**	**04 42 02.2**	**+0.3**
CHV1				S	**Sg**	**04 42 03.9**	**+0.5**
	540μm,0.4s						
KEF1	**Kardakata, Kep**	**0.08**	**75**	P	**Pg**	**04 42 02.1**	**+0.1**
KEF1				S	**Sg**	**04 42 03.3**	**-0.2**
ARG2	**Argostoli**	**0.12**	**132**	P	**Pg**	**04 42 02.5**	**-0.1**
ARG2				S	**Sg**	**04 42 04.3**	**-0.1**
	437μm,0.1s						
KEF2	**Argostoli. Kep**	**0.13**	**136**	P	**Pg**	**04 42 02.8**	**+0.1**
KEF2				S	**Sg**	**04 42 04.5**	**-0.2**
VLS	**Valsamata**	**0.19**	**115**	P	**Pg**	**04 42 03.5**	**-0.2**
VLS	**Valsamata**	**0.19**	**115**	P	**Pg**	**04 42 03.5**	**-0.2**
VLS				S	**Sg**	**04 42 06.2**	**-0.2**
VLS				AML	AML	04 42 06.3	
VLS				AML	AML	04 42 06.7	
VSK1	**VASILIKIADES**	**0.21**	**44**	P	**Pg**	**04 42 04.6**	**+0.4**
VSK1				S	**Sg**	**04 42 08.3**	**+1.1**
	70μm,0.3s						
KFL	**Anninata**	**0.36**	**114**	P	**Pg**	**04 42 06.6**	**-0.3**
KFL				S	**Sg**	**04 42 11.8**	**+0.2**
KFL	**Anninata**	**0.36**	**114**	P	**Pg**	**04 42 06.7**	**-0.2**
EVGI	**Lefkada island**	**0.42**	**31**	P	**Pg**	**04 42 08.6**	**+0.4**
EVGI				S	**Sb**	**04 42 15.5**	**-0.7**
EVGI	**Lefkada island**	**0.42**	**31**	P	**Pg**	**04 42 08.5**	**+0.4**
EVGI				S	**Sb**	**04 42 15.3**	**-0.9**
VLMS	**Volimes, Zakyn**	**0.44**	**149**	P	**Pg**	**04 42 08.4**	**-0.1**
VLMS				S	**Sg**	**04 42 14.7**	**+0.4**
VLMS				AML	AML	04 42 17.0	
	comp=E,74145μm,0.4s						
VLMS				AML	AML	04 42 21.7	
	comp=N,64059μm,0.5s						
MGNA	**Meganis**	**0.52**	**39**	P	**Pg**	**04 42 10.0**	**+0.1**
MGNA				AML	AML	04 42 18.5	
	comp=E,12960μm,0.2s						
MGNA				AML	AML	04 42 18.9	
	comp=N,13419μm,0.1s						
LKD2	**Lefkada island**	**0.57**	**23**	P	**Pg**	**04 42 11.2**	**+0.1**
LKD2				S	**Sg**	**04 42 18.7**	**+0.1**
	comp=N,3μm,0.3s						
LKD2	**Lefkada island**	**0.57**	**23**	P	**Pg**	**04 42 11.2**	**+0.1**
LKD2				S	**Sg**	**04 42 18.7**	**+0.1**
LKD2				AML	AML	04 42 25.4	
	comp=N,5937μm,0.2s						
LKD2				AML	AML	04 42 27.4	
	comp=E,6256μm,0.4s						
TSLK	**Tsoukalades, L**	**0.61**	**21**	P	**Pg**	**04 42 11.7**	**0.0**
TSLK				S	**Sg**	**04 42 20.3**	**+0.7**
	comp=E,3μm,0.3s						
TSLK	**Tsoukalades, L**	**0.61**	**21**	P	**Pg**	**04 42 11.9**	**+0.3**
TSLK				S	**Sg**	**04 42 19.6**	**0.0**
ZAK2	**Zakynthos**	**0.63**	**138**	P	**Pg**	**04 42 11.8**	**-0.2**
ZAK2				S	**Sb**	**04 42 22.2**	**+0.3**
	comp=E,92μm,0.5s						
AST1	**Astakos**	**0.63**	**63**	P	**Pg**	**04 42 11.9**	**-0.1**
AST1				S	**Sb**	**04 42 21.9**	**-0.1**
	comp=E,18μm,0.4s						
KRI1	**kERI**	**0.69**	**149**	P	**Pg**	**04 42 12.4**	**-0.8**
KRI1				S	**Sb**	**04 42 23.0**	**-0.7**
	comp=E,18μm,0.4s						
PDO	**Prodromos**	**0.72**	**62**	P	**Pg**	**04 42 13.6**	**-0.2**
PDO				S	**Sg**	**04 42 23.4**	**+0.2**
	comp=E,11μm,0.5s						
PDO	**Prodromos**	**0.72**	**62**	P	**Pg**	**04 42 13.6**	**-0.2**
PDO				AML	AML	04 42 25.9	
	comp=E,16510μm,0.5s						
PDO				AML	AML	04 42 31.9	
	comp=N,13588μm,0.6s						
RLS	**Riolos of Patr**	**0.88**	**103**	P	**Pg**	**04 42 16.0**	**-0.9**
RLS				S	**Sb**	**04 42 30.1**	**+0.8**
	comp=N,4μm,0.4s						
RLS	**Riolos of Patr**	**0.88**	**103**	P	**Pg**	**04 42 16.2**	**-0.7**
RLS				AML	AML	04 42 33.2	
	comp=E,9624μm,0.3s						
RLS				AML	AML	04 42 35.4	
	comp=N,6011μm,0.5s						
PVO	**Paravola**	**0.97**	**68**	P	**Pg**	**04 42 18.4**	**-0.2**
PVO				S	**Sn**	**04 42 33.9**	**+0.2**
	comp=N,6μm,0.4s						
PVO	**Paravola**	**0.97**	**68**	P	**Pg**	**04 42 18.5**	**-0.1**
DRO	**Drossia**	**1.10**	**106**	P	**Pg**	**04 42 20.0**	**-0.9**
LAKA	**Lakka**	**1.26**	**90**	P	**Pn**	**04 42 22.8**	**-1.0**
LAKA				S	**Sn**	**04 42 41.5**	**+0.6**
	comp=N,2μm,0.4s						
LAKA	**Lakka**	**1.26**	**90**	P	**Pn**	**04 42 23.0**	**-0.8**
LAKA				AML	AML	04 42 43.2	
	comp=N,3909μm,0.4s						
LAKA				AML	AML	04 42 49.2	
	comp=E,3277μm,0.5s						
AMT	**Artemida-Makis**	**1.28**	**124**	P	**Pn**	**04 42 23.5**	**-0.5**
AMT				S	**Sn**	**04 42 43.0**	**+1.7**
	comp=E,3μm,0.5s						
EVR	**Evrytania**	**1.30**	**59**	P	**Pn**	**04 42 23.9**	**-0.5**
EVR				AML	AML	04 42 49.3	
	comp=N,2121μm,0.6s						
EVR				AML	AML	04 42 53.4	
	comp=E,2477μm,0.5s						
SERG	**Sergoula**	**1.33**	**83**	P	**Pn**	**04 42 24.1**	**-0.7**
SERG				AML	AML	04 42 51.4	
	comp=N,3901μm,0.3s						
SERG				AML	AML	04 42 52.3	
	comp=E,3178μm,0.5s						
TRIZ	**Trizonia**	**1.34**	**85**	P	**Pn**	**04 42 23.7**	**-1.1**
TRIZ				S	**Sg**	**04 42 43.9**	**+0.9**
	comp=E,3μm,0.4s						
TRIZ	**Trizonia**	**1.34**	**85**	P	**Pn**	**04 42 23.8**	**-1.1**
ALIK	**Aliki, Aigiali**	**1.37**	**89**	P	**Pn**	**04 42 24.2**	**-1.0**
ALIK				S	**Sg**	**04 42 45.6**	**+1.8**
KALE	**Kalithea**	**1.39**	**84**	P	**Pn**	**04 42 24.6**	**-1.0**
KALE	**Kalithea**	**1.39**	**84**	P	**Pn**	**04 42 24.8**	**-0.8**
KALE				AML	AML	04 42 52.5	
	comp=N,3876μm,0.5s						
KALE				AML	AML	04 42 53.8	
	comp=E,3270μm,0.6s						
KLV	**Kalavryta, Ach**	**1.42**	**98**	P	**Pn**	**04 42 25.6**	**-0.3**
KLV				AML	AML	04 42 53.3	
	comp=E,2002μm,0.7s						
KLV				AML	AML	04 42 58.7	
	comp=N,2052μm,0.6s						
ITM	**Ithomi**	**1.63**	**131**	P	**Pn**	**04 42 29.0**	**+0.1**
AGG	**Agios Georgios**	**1.71**	**63**	P	**Pg**	**04 42 32.4**	**-0.3**
THL	**Klokotos Trika**	**1.83**	**44**	P	**Pb**	**04 42 33.3**	**-0.2**
KPRO	**Kipourio**	**1.86**	**24**	P	**Pg**	**04 42 35.3**	**-0.3**
LKR	**Lokris**	**2.10**	**78**	P	**Pb**	**04 42 37.0**	**-1.1**
NEST	**Nestorio**	**2.22**	**13**	P	**Pb**	**04 42 40.0**	**-0.2**
OHR	**Ohrid**	**2.87**	**6**	*i* Pn	**Pb**	**04 42 48.8**	**-2.5**
TIP	**Timpagrande**	**2.98**	**289**	⇑P	**Pn**	**04 42 48.7**	**+1.3**
TIP				⇓S	**Sn**	**04 43 24.5**	**+1.3**
TIR	**Tirane**	**3.11**	**353**	⇓P	**Pn**	**04 42 51.1**	**+1.9**
TIR				⇑S	**Sn**	**04 43 28.3**	**+1.8**
MASS	**Massafra**	**3.45**	**314**	*e*Pn	**Pn**	**04 42 54.6**	**+0.8**
STIP	**Stip**	**3.70**	**21**	*i* Pn	**Pb**	**04 43 01.8**	**-3.7**
MATE	**Matera**	**3.71**	**311**	⇓P	**Pn**	**04 42 58.2**	**+0.8**
ULC	**Ulcinj**	**3.80**	**347**	*e*Pn	**Pn**	**04 42 58.4**	**-0.3**
ULC				*e*Sn	**Sn**	**04 43 44.1**	**+0.5**
SG1	**Sgolgore (BA)**	**3.85**	**313**	*e*Pn	**Pn**	**04 43 00.4**	**+1.0**
BAI	**Bari**	**3.92**	**318**	*e*Pn	**Pn**	**04 43 00.8**	**+0.5**
DRME	**Dracevica, Mon**	**4.03**	**347**	*e*Pn	**Pn**	**04 43 01.5**	**-0.3**
DRME	**Dracevica, Mon**	**4.03**	**347**	*e*Pn	**Pn**	**04 43 01.7**	**-0.1**
DRME				*e*Sn	**Sn**	**04 43 49.8**	**+0.6**
BUM	**Brajici-Budva**	**4.20**	**345**	*e*Pn	**Pn**	**04 43 04.0**	**-0.1**
BUM				*e*Sn	**Sn**	**04 43 53.2**	**-0.1**
PDG	**Podgorica**	**4.25**	**349**	⇑P	**Pn**	**04 43 06.2**	**+1.3**
PDG	**Podgorica**	**4.25**	**349**	*e*Pn	**Pn**	**04 43 03.5**	**-1.4**
TTG	**Podgorica**	**4.25**	**349**	*e*Pn	**Pn**	**04 43 05.1**	**+0.2**
TTG				*e*Sn	**Sn**	**04 43 54.7**	**0.0**
APE	**Apeiranthos**	**4.26**	**105**	⇑P	**Pb**	**04 43 11.3**	**-3.7**
PVY	**Plav**	**4.34**	**356**	*e*Pn	**Pn**	**04 43 06.7**	**+0.4**
PVY				*e*Sn	**Sn**	**04 43 57.7**	**+0.6**
HCY	**Herceg Novi**	**4.42**	**342**	*e*Pn	**Pn**	**04 43 05.7**	**-1.6**
HCY	**Herceg Novi**	**4.42**	**342**	*e*Pn	**Pn**	**04 43 06.6**	**-0.7**
HCY				*e*Sn	**Sn**	**04 43 58.5**	**-0.4**
CEME	**Cevo**	**4.43**	**346**	*e*Pn	**Pn**	**04 43 07.0**	**-0.3**
CEME				*e*Sn	**Sn**	**04 43 58.6**	**-0.5**
IVA	**Berane**	**4.62**	**356**	*e*Pn	**Pn**	**04 43 10.4**	**+0.3**
IVA				*e*Sn	**Sn**	**04 44 04.7**	**+0.7**
NKME	**Niksic**	**4.63**	**347**	*e*Pn	**Pn**	**04 43 10.2**	**0.0**
NKME				*e*Sn	**Sn**	**04 44 04.1**	**0.0**
KOME	**Kolasin**	**4.63**	**352**	*e*Pn	**Pn**	**04 43 10.5**	**+0.3**
KOME				*e*Sn	**Sn**	**04 44 04.1**	**-0.1**
NKY	**Niksic**	**4.67**	**347**	*e*Pn	**Pn**	**04 43 10.9**	**+0.2**
NKY				*e*Sn	**Sn**	**04 44 05.4**	**+0.3**
IDI	**Anoyia**	**4.68**	**128**	Pn	**Pn**	**04 43 11.4**	**+0.6**
	comp=N,1.0nm,0.3s,baz=320,slow=16,SNR=8.9						
IDI				Sn	**Sn**	**04 44 05.1**	**-0.3**
	comp=N,4.5nm,0.3s,baz=305,slow=22,SNR=9.6						
TREB	**Trebinje**	**4.71**	**342**	*e*Pn	**Pn**	**04 43 10.1**	**-1.1**
VAE	**Valguarnera**	**4.78**	**262**	Pn	**Pb**	**04 43 21.4**	**-2.6**
	comp=N,1.1nm,0.3s,baz=38,slow=16,SNR=3.1						
BRY	**Bratogost**	**4.84**	**344**	*e*Pn	**Pn**	**04 43 12.0**	**-1.2**
BRY	**Bratogost**	**4.84**	**344**	*e*Pn	**Pn**	**04 43 12.7**	**-0.5**
BRY				*e*Sn	**Sn**	**04 44 09.0**	**-0.5**
VTS	**Vitosha**	**4.87**	**26**	⇓P	**Pn**	**04 43 17.0**	**+3.4**
STON	**Ston**	**5.04**	**337**	*e*Pn	**Pn**	**04 43 14.4**	**-1.3**
UPM	**Unac-Piva**	**5.07**	**348**	*e*Pn	**Pn**	**04 43 15.8**	**-0.4**
UPM	**Unac-Piva**	**5.07**	**348**	*e*Pn	**Pn**	**04 43 15.9**	**-0.3**
UPM				*e*Sn	**Sn**	**04 44 14.9**	**-0.1**
PLE	**Pljevlja**	**5.12**	**352**	*e*Pn	**Pn**	**04 43 17.4**	**+0.5**
PLE				*e*Sn	**Sn**	**04 44 16.4**	**+0.1**
RUDO	**Rudo**	**5.41**	**352**	*e*Pn	**Pn**	**04 43 20.2**	**-0.6**
BBLS	**Lazići**	**5.65**	**353**	*e*Pn	**Pn**	**04 43 23.5**	**-0.7**
DIVS	**Divibare**	**5.84**	**357**	*e*Pn	**Pn**	**04 43 25.6**	**-1.2**
HAPS	**Han Pijesak,Bl**	**5.92**	**350**	*e*Pn	**Pn**	**04 43 26.6**	**-1.3**
MGRS	**Mrkonjic Grad**	**6.63**	**339**	*e*Pn	**Pn**	**04 43 38.4**	**+0.8**
BLY	**Banja Luka**	**6.91**	**341**	*e*Pn	**Pn**	**04 43 41.7**	**+0.3**
GZR	**Gura Zlata**	**7.35**	**13**	⇓P	**Pn**	**04 43 50.3**	**+2.8**
BZS	**Buzias**	**7.41**	**7**	⇑P	**Pn**	**04 43 51.3**	**+3.1**
VOIR		**7.98**	**24**	⇑P	**Pn**	**04 43 59.3**	**+3.2**
MLR	**Muntele Rosu**	**8.34**	**28**	Pn	**Pn**	**04 44 02.7**	**+1.6**
	comp=N,0.1nm,0.3s,baz=204,slow=15,SNR=2.0						
MLR	**Muntele Rosu**	**8.34**	**28**	⇓P	**Pn**	**04 44 04.8**	**+3.8**
CRES	**Cresnjev**	**8.40**	**336**	*e*Pn	**Pn**	**04 44 00.1**	**-1.7**
VRI	**Vrincioaia**	**8.95**	**30**	⇓P	**Pn**	**04 44 12.4**	**+3.1**
SOKA	**Soboth**	**9.29**	**337**	*e*Pn	**Pn**	**04 44 13.2**	**-0.9**
	comp=N,3.5nm,0.3s,SNR=8.6						
OBKA	**Obir**	**9.30**	**334**	*e*Pn	**Pn**	**04 44 14.8**	**+0.6**
	comp=N,3.2nm,0.3s						
ARSA	**Arzberg**	**9.67**	**340**	*e*Pn	**Pn**	**04 44 18.4**	**-0.8**
	comp=N,2.4nm,0.3s						
KBA	**Koelnbreinsper**	**10.22**	**332**	Pn	**Pn**	**04 44 26.3**	**-0.6**
	comp=N,1.5nm,0.5s						
ABTA	**Abfaltersbach**	**10.27**	**328**	*e*Pn	**Pn**	**04 44 27.6**	**0.0**
	comp=N,0.8nm,0.2s						
VYHS	**Vyhne**	**10.29**	**354**	*e*PN	**Pn**	**04 44 26.7**	**-1.1**
VYHS				*e*SN	**Sn**	**04 46 14.8**	**-8.5**
BRTR	**Keskin Array B**	**10.43**	**78**	Pn	**Pn**	**04 44 29.2**	**-0.6**
	comp=N,0.0nm,0.3s,baz=262,slow=12,SNR=3.3						
BRTR	**Keskin Array B**	**10.43**	**78**	PKIKP	**Pn**	**04 44 29.2**	**-0.6**
MOA	**Molln**	**10.57**	**337**	*e*Pn	**Pn**	**04 44 31.8**	**+0.2**
	comp=N,1.8nm,0.2s						
WATA	**Walderalm**	**11.13**	**327**	Pn	**Pn**	**04 44 40.8**	**+1.4**
	comp=N,2.7nm,0.3s						
MOTA	**Moosalm**	**11.34**	**326**	Pn	**Pn**	**04 44 43.6**	**+1.4**
	comp=N,1.4nm,0.3s						
RETA	**Reutte**	**11.60**	**326**	*e*Pn	**Pn**	**04 44 48.1**	**+2.4**
	comp=N,0.9nm,0.3s						
DAVA	**Damuels**	**11.86**	**323**	Pn	**Pn**	**04 44 51.8**	**+2.5**
	comp=N,3.1nm,0.5s						
HFS	**Hagfors**	**22.30**	**351**	P	**P**	**04 46 57.6**	**+0.1**
	comp=N,3.7nm,0.8s,baz=176,slow=7.3,SNR=4.7						
EKA	**Eskdalemuir Ar**	**23.30**	**325**	P	**P**	**04 47 08.8**	**+0.9**
	comp=N,3.4nm,0.9s,baz=124,slow=11,SNR=3.6						
FINES	**FINESS Array B**	**23.48**	**7**	P	**P**	**04 47 08.5**	**-1.1**
	comp=N,1.9nm,0.8s,baz=172,slow=12,SNR=7.4						
NB2	**NORSAR Subarra**	**23.52**	**349**	P	**P**	**04 47 09.0**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=159,slow=10						
NOA	**NORSAR Array B**	**23.52**	**349**	P	**P**	**04 47 11.6**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=158,slow=9.7,SNR=4.6						
GEYT	**Alibeck**	**29.57**	**79**	P	**P**	**04 48 04.4**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=271,slow=8.5,SNR=4.6						
ARCES	**ARCESS Array B**	**31.46**	**3**	P	**P**	**04 48 22.7**	**+1.3**
	comp=Z,3.1nm,1.1s,baz=185,slow=11,SNR=4.9						
MKAR	**Makanchi Array**	**45.36**	**58**	P	**P**	**04 50 17.4**	**-1.1**
	comp=Z,1.2nm,0.5s,baz=276,slow=7.0,SNR=22						
ZALV	**Zalesovo Beam**	**45.72**	**48**	P	**P**	**04 50 20.3**	**-0.9**
	comp=Z,1.4nm,0.4s,baz=275,slow=8.2,SNR=8.3						
YKA	**Yellowknife Ar**	**73.28**	**340**	P	**P**	**04 53 32.9**	**+1.7**
	comp=Z,0.1nm,0.5s,baz=32,slow=5.2,SNR=3.7						

IDC **03** *04:46:58.6±1.6, 27.11N×52.70E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.4/49, mbtmp3.6/8, ML3.6/1, MS4.1/1, Ms1 4.1/1, ms1mx3.3/39, Error ellipse: s-maj=37.1km s-min=26.4km az=11.0*
ISC 03 04:47:00.0±1.1, **27.1N**±0.2×**52.7E**±0.2, **h10**km, **n9**, σ0.78/7, **mb3.6**/6, **Southern Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**6.63**	**124**	Pn	**Pn**	**04 48 37.6**	**0.0**
	1.1nm,0.3s,baz=313,slow=11,SNR=8.6						
BRTR	**Keskin Array B**	**20.21**	**313**	P	Pn	04 51 36.4	-0.8
	0.7nm,0.6s,baz=142,slow=10,SNR=5.3						
AAK	**Ala-Archa**	**23.57**	**43**	LR	LR	05 03 11.0	
	comp=Z,414nm,18.5s,baz=350,slow=41						
MKAR	**Makanchi Array**	**30.48**	**42**	P	**P**	**04 53 13.4**	**+0.3**
	0.2nm,0.4s,baz=233,slow=9.5,SNR=5.4						
ZALV	**Zalesovo Beam**	**35.73**	**33**	P	**P**	**04 53 58.6**	**-0.1**
	0.4nm,0.4s,baz=253,slow=9.8,SNR=2.2						
FINES	**FINESS Array B**	**38.69**	**340**	P	**P**	**04 54 24.8**	**+1.1**
	2.0nm,0.8s,baz=173,slow=13,SNR=1.9						
HFS	**Hagfors**	**42.33**	**332**	P	**P**	**04 54 53.1**	**-0.8**
	2.9nm,0.9s,baz=124,slow=7.7,SNR=2.0						
TORD	**Torodi Ar. Bea**	**49.52**	**264**	P	**P**	**04 55 51.6**	**+0.3**
	0.2nm,0.6s,baz=57,slow=8.2,SNR=1.8						
YKA	**Yellowknife Ar**	**90.12**	**354**	P	**P**	**04 59 59.5**	**-0.6**
	0.2nm,0.6s,baz=2.9,slow=4.8,SNR=4.3						

PDG **03** *04:48:04.8±0.2, 38.26N×20.33E, h18km, ML3.6/14, Error ellipse: s-maj=0.7km s-min=0.6km az=90.0*
NEIC **03** *04:48:05.9±2.0, 38.19N±0.05×20.37E±0.05, h15km±5km, Error ellipse: s-maj=6.9km s-min=5.1km az=192.0*
ATH **03** *04:48:05.6, 38.25N×20.39E, h13km±1km, ML3.5/8, Error ellipse: s-maj=2.5km s-min=1.2km az=254.0*
THE **03** *04:48:06.0, 38.27N×20.40E, h10km±1km, ML4.0/9, Error ellipse: s-maj=2.1km s-min=0.7km az=261.0*
IDC **03** *04:48:09.6±1.8, 38.36N×20.47E, h47km±19km, mb3.5/10, mb1 3.6/16, mb1mx3.4/51, mbtmp3.6/16, ML3.2/6, Error ellipse: s-maj=20.6km s-min=17.6km az=156.0*
ISC 03 04:48:05.3±0.7, **38.26N**±0.02×**20.36E**±0.02, **h14**km±4km, **n117**, σ1.29/162, **mb3.7**/10, **11C-9D, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.05**	**188**	P	**Pg**	**04 48 08.0**	**+0.2**
KEF3				S	**Sg**	**04 48 09.4**	**-0.2**
KEF4	**Livadi, Kephal**	**0.05**	**88**	P	**Pg**	**04 48 07.8**	**0.0**
KEF4				S	**Sg**	**04 48 09.4**	**-0.2**
CHV1	**Chavriata, Kef**	**0.07**	**165**	P	**Pg**	**04 48 08.2**	**+0.2**
CHV1				S	**Sg**	**04 48 10.0**	**+0.1**
	470μm,0.4s						
KEF1	**Kardakata, Kep**	**0.09**	**76**	P	**Pg**	**04 48 08.1**	**-0.1**
KEF1				S	**Sg**	**04 48 10.0**	**-0.3**
ARG2	**Argostoli**	**0.13**	**127**	P	**Pg**	**04 48 08.7**	**0.0**
ARG2				S	**Sg**	**04 48 10.8**	**-0.2**
	294μm,0.3s						
ARG2	**Argostoli**	**0.13**	**127**		**Pg**	**04 48 08.7**	**0.0**
ARG2					**Sg**	**04 48 10.8**	**-0.2**
KEF2	**Argostoli. Kep**	**0.14**	**131**	P	**Pg**	**04 48 08.7**	**0.0**
KEF2				S	**Sg**	**04 48 11.2**	**0.0**
VLS	**Valsamata**	**0.20**	**113**	P	**Pg**	**04 48 09.6**	**-0.1**
VLS				S	**Sg**	**04 48 12.6**	**-0.2**
	136μm,0.2s						
VLS	**Valsamata**	**0.20**	**113**	P	**Pg**	**04 48 09.7**	**-0.1**
VLS				S	**Sg**	**04 48 12.6**	**-0.2**
VLS				AML	AML	04 48 12.8	
VLS				AML	AML	04 48 12.8	
VLS	**Valsamata**	**0.20**	**113**		**Pg**	**04 48 09.6**	**-0.1**
VLS					**Sg**	**04 48 12.6**	**-0.2**
VSK1	**VASILIKIADES**	**0.22**	**47**	P	**Pg**	**04 48 10.1**	**-0.1**
VSK1				S	**Sg**	**04 48 13.2**	**-0.3**
	36μm,0.5s						
EVGI	**Lefkada island**	**0.43**	**33**	P	**Pg**	**04 48 13.8**	**-0.1**
EVGI				S	**Sb**	**04 48 20.7**	**-0.5**
EVGI	**Lefkada island**	**0.43**	**33**	P	**Pg**	**04 48 13.9**	**-0.1**
EVGI	**Lefkada island**	**0.43**	**33**		**Pg**	**04 48 13.8**	**-0.1**
VLMS	**Volimes, Zakyn**	**0.45**	**147**	P	**Pg**	**04 48 14.2**	**0.0**
VLMS				S	**Sb**	**04 48 21.0**	**-0.6**
VLMS				AML	AML	04 48 22.8	
	comp=E,43455μm,0.2s						
VLMS				AML	AML	04 48 23.5	
	comp=N,75609μm,0.3s						
MGNA	**Meganis**	**0.53**	**40**	P	**Pg**	**04 48 15.6**	**0.0**
MGNA				AML	AML	04 48 26.4	
	comp=N,6282μm,0.4s						
MGNA				AML	AML	04 48 29.9	
	comp=E,5793μm,0.7s						
LKD2	**Lefkada island**	**0.58**	**24**	P	**Pb**	**04 48 17.1**	**-0.2**
LKD2				AML	AML	04 48 32.9	
	comp=N,4705μm,0.4s						
LKD2				AML	AML	04 48 35.9	
	comp=E,3326μm,0.7s						
TSLK	**Tsoukalades, L**	**0.61**	**22**	P	**Pg**	**04 48 17.3**	**0.0**
TSLK	**Tsoukalades, L**	**0.61**	**22**	P	**Pg**	**04 48 17.5**	**+0.2**
ZAK2	**Zakynthos**	**0.63**	**137**	P	**Pg**	**04 48 17.7**	**+0.1**
ZAK2				S	**Sb**	**04 48 27.6**	**+0.7**
	comp=E,36μm,0.5s						
AST1	**Astakos**	**0.64**	**63**	P	**Pg**	**04 48 17.2**	**-0.6**
KRI1	**kERI**	**0.69**	**148**	P	**Pg**	**04 48 18.4**	**-0.4**
KRI1				S	**Sb**	**04 48 28.8**	**+0.2**
	comp=E,13μm,0.3s						
PDO	**Prodromos**	**0.73**	**62**	P	**Pg**	**04 48 19.1**	**-0.4**
PDO				S	**Sg**	**04 48 27.9**	**-1.3**
	comp=E,8μm,0.5s						
RLS	**Riolos of Patr**	**0.90**	**102**	P	**Pg**	**04 48 21.7**	**-0.9**
RLS	**Riolos of Patr**	**0.90**	**102**	P	**Pg**	**04 48 22.1**	**-0.4**
RLS				AML	AML	04 48 40.6	
	comp=E,3304μm,0.7s						
RLS				AML	AML	04 48 43.5	
	comp=N,5217μm,0.5s						
RLS	**Riolos of Patr**	**0.90**	**102**		**Pn**	**04 48 23.3**	**-0.2**
PVO	**Paravola**	**0.99**	**68**	P	**Pn**	**04 48 24.0**	**-0.1**
PVO				S	**Sn**	**04 48 38.4**	**-0.1**
	comp=N,5μm,0.4s						
PVO	**Paravola**	**0.99**	**68**	P	**Pb**	**04 48 24.1**	**-0.1**
PVO				AML	AML	04 48 43.4	
	comp=E,13026μm,0.4s						
PVO				AML	AML	04 48 46.5	
	comp=N,7866μm,0.5s						
DRO	**Drossia**	**1.11**	**105**	P	**Pb**	**04 48 25.7**	**-0.6**
DRO				S	**Sn**	**04 48 44.2**	**+2.6**
	comp=N,6μm,0.6s						
LAKA	**Lakka**	**1.28**	**90**	P	**Pn**	**04 48 28.2**	**-0.6**
LAKA	**Lakka**	**1.28**	**90**	P	**Pn**	**04 48 28.1**	**-0.6**
LAKA				AML	AML	04 48 53.6	
	comp=N,2969μm,0.7s						
LAKA				AML	AML	04 48 54.3	
	comp=E,3763μm,0.7s						
LAKA	**Lakka**	**1.28**	**90**		**Pn**	**04 48 28.4**	**-0.3**
EVR	**Evrytania**	**1.31**	**59**	P	**Pn**	**04 48 29.6**	**+0.3**
EVR	**Evrytania**	**1.31**	**59**		**Pn**	**04 48 32.9**	**+2.4**
TRIZ	**Trizonia**	**1.35**	**85**	P	**Pn**	**04 48 29.4**	**-0.4**
TRIZ	**Trizonia**	**1.35**	**85**	P	**Pn**	**04 48 30.0**	**+0.2**
KALE	**Kalithea**	**1.41**	**84**	P	**Pn**	**04 48 30.6**	**0.0**
KALE				AML	AML	04 48 57.2	
	comp=N,2562μm,0.5s						
KALE				AML	AML	04 48 57.6	
	comp=E,2569μm,0.6s						
KALE	**Kalithea**	**1.41**	**84**		**Pg**	**04 48 32.6**	**+0.2**
KLV	**Kalavryta, Ach**	**1.43**	**98**	P	**Pb**	**04 48 31.4**	**-0.4**
KLV	**Kalavryta, Ach**	**1.43**	**98**		**Pg**	**04 48 32.4**	**-0.4**
JAN	**Janina**	**1.45**	**15**		**Pg**	**04 48 34.7**	**+1.5**
KASA	**Kassiopi**	**1.52**	**348**		**Pg**	**04 48 37.0**	**+2.5**
ITM	**Ithomi**	**1.64**	**130**		**Pn**	**04 48 33.5**	**-0.3**
ITM					**Pb**	**04 48 33.7**	**-1.7**
AGG	**Agios Georgios**	**1.72**	**63**	Pn	**Pn**	**04 48 35.2**	**+0.3**
AGG				Pg	**Pg**	**04 48 38.4**	**0.0**
THL	**Klokotos Trika**	**1.84**	**44**		**Pg**	**04 48 39.8**	**-0.8**
KPRO	**Kipourio**	**1.87**	**24**		**Pg**	**04 48 41.1**	**0.0**
SCTE	**Santa Cesarea**	**2.33**	**322**	Pn	**Pn**	**04 48 43.4**	**+0.1**
LIT	**Litokhoron**	**2.48**	**41**		**Pn**	**04 48 46.4**	**+1.1**
FNA	**Florina**	**2.65**	**17**		**Pn**	**04 48 49.6**	**+2.0**
TIP	**Timpagrande**	**2.96**	**289**	⇓P	**Pn**	**04 48 53.7**	**+1.7**

TIP				⇓S	Sb	04 49 31.5	-2.5
TIP	**Timpagrande**	**2.96**	**289**		**Pn**	**04 48 53.0**	**+1.0**
TIR	**Tirane**	**3.11**	**353**	⇑P	**Pn**	**04 48 56.0**	**+2.0**
TIR				⇓S	**Sn**	**04 49 30.8**	**-0.2**
TIR	**Tirane**	**3.11**	**353**		**Pn**	**04 48 55.7**	**+1.8**
CEL	**Celeste**	**3.51**	**271**	Pn	**Pn**	**04 49 00.2**	**+0.7**
CEL					**Sn**	**04 49 41.8**	**+0.8**
MATE	**Matera**	**3.70**	**311**	⇓P	**Pn**	**04 49 04.6**	**+2.5**
STIP	**Stip**	**3.71**	**22**	*i* Pn	**Pn**	**04 49 05.3**	**+3.2**
ULC	**Ulcinj**	**3.80**	**347**	*e*Pn	**Pn**	**04 49 03.6**	**+0.1**
ULC				*e*Sn	**Sn**	**04 49 48.7**	**+0.7**
SG1	**Sgolgore (BA)**	**3.84**	**313**	*e*Pn	**Pn**	**04 49 05.4**	**+1.4**
BAI	**Bari**	**3.91**	**318**	*e*Pn	**Pn**	**04 49 07.0**	**+2.1**
DRME	**Dracevica, Mon**	**4.03**	**347**	⇑*i*Pn	**Pn**	**04 49 07.1**	**+0.5**
DRME				*e*Sn	**Sn**	**04 49 54.1**	**+0.5**
BUM	**Brajici-Budva**	**4.19**	**345**	*e*Pn	**Pn**	**04 49 08.8**	**-0.1**
BUM				*e*Sn	**Sn**	**04 49 58.1**	**+0.4**
ACER	**Acerenza**	**4.25**	**308**		**Pn**	**04 49 11.4**	**+1.8**
ACER					**Sn**	**04 49 58.9**	**-0.2**
PDG	**Podgorica**	**4.25**	**349**	⇑P	**Pn**	**04 49 10.3**	**+0.7**
PDG				⇑S	**Sn**	**04 49 58.9**	**-0.2**
PDG	**Podgorica**	**4.25**	**349**	Pn	**Pn**	**04 49 10.3**	**+0.7**
PDG					**Sn**	**04 49 59.0**	**-0.2**
TTG	**Podgorica**	**4.25**	**349**	*e*Pn	**Pn**	**04 49 09.9**	**+0.3**
TTG				*e*Sn	**Sn**	**04 49 59.8**	**+0.7**
APE	**Apeiranthos**	**4.27**	**105**	⇑P	**Pn**	**04 49 14.2**	**+4.3**
APE				⇑S	**Sn**	**04 50 05.0**	**+5.3**
PVY	**Plav**	**4.34**	**356**	⇓*i*Pn	**Pn**	**04 49 11.5**	**+0.5**
PVY				*e*Sn	**Sn**	**04 50 01.9**	**+0.3**
HCY	**Herceg Novi**	**4.42**	**342**	*e*Pn	**Pn**	**04 49 11.9**	**-0.1**
HCY				*e*Sn	**Sn**	**04 50 03.2**	**-0.1**
CEME	**Cevo**	**4.42**	**346**	*e*Pn	**Pn**	**04 49 12.0**	**-0.1**
CEME				*e*Sn	**Sn**	**04 50 03.4**	**0.0**
IVA	**Berane**	**4.62**	**356**	*e*Pn	**Pn**	**04 49 15.0**	**+0.2**
IVA				*e*Sn	**Sn**	**04 50 08.6**	**+0.2**
NKME	**Niksic**	**4.63**	**347**	*e*Pn	**Pn**	**04 49 14.7**	**-0.2**
NKME				*e*Sn	**Sn**	**04 50 08.8**	**+0.3**
KOME	**Kolasin**	**4.63**	**352**	*e*Pn	**Pn**	**04 49 15.1**	**+0.1**
KOME				*e*Sn	**Sn**	**04 50 09.1**	**+0.5**
NKY	**Niksic**	**4.67**	**348**	*e*Pn	**Pn**	**04 49 15.7**	**+0.2**
NKY				*e*Sn	**Sn**	**04 50 09.7**	**+0.2**
IDI	**Anoyia**	**4.69**	**128**	P	**Pn**	**04 49 19.7**	**+3.9**
	comp=E,0.7nm,0.3s,baz=56,slow=18,SNR=0.8						
IDI				S	**Sn**	**04 50 07.6**	**-2.4**
	comp=E,2.5nm,0.3s,baz=271,slow=11,SNR=2.5						
VAE	**Valguarnera**	**4.77**	**262**	P	**Pn**	**04 49 20.8**	**+4.0**
	comp=E,1.4nm,0.3s,baz=4.6,slow=14,SNR=1.5						
VAE				S	**Sn**	**04 50 10.8**	**-1.2**
	comp=E,2.4nm,0.3s,baz=59,slow=10,SNR=2.4						
BRY	**Bratogost**	**4.84**	**344**	*e*Pn	**Pn**	**04 49 17.4**	**-0.5**
BRY				*e*Sn	**Sn**	**04 50 13.7**	**-0.1**
VTS	**Vitosha**	**4.88**	**26**	⇑P	**Pn**	**04 49 19.5**	**+1.1**
VTS				⇓S	**Sn**	**04 50 14.9**	**+0.2**
VTS	**Vitosha**	**4.88**	**26**	Pn	**Pn**	**04 49 19.8**	**+1.4**
SGRT	**San Giovanni R**	**4.97**	**316**	Pn	**Pn**	**04 49 20.8**	**+1.2**
SGRT					**Sn**	**04 50 13.5**	**-3.5**
UPM	**Unac-Piva**	**5.06**	**348**	*e*Pn	**Pn**	**04 49 21.0**	**0.0**
UPM				*e*Sn	**Sn**	**04 50 19.0**	**-0.4**
PLE	**Pljevlja**	**5.12**	**352**	*e*Pn	**Pn**	**04 49 22.0**	**+0.3**
PLE				*e*Sn	**Sn**	**04 50 20.9**	**+0.2**
ALN	**Alexandroupoli**	**5.12**	**57**	Pn	**Pn**	**04 49 22.7**	**+1.1**
CORL	**Corleone**	**5.58**	**268**	Pn	**Pn**	**04 49 29.0**	**+1.1**
CLTB	**Caltabellotta**	**5.69**	**265**	Pn	**Pn**	**04 49 33.2**	**+3.7**
INTR	**Introdacqua**	**6.21**	**309**		**Pn**	**04 49 39.2**	**+2.6**
ELND	**Elena**	**6.28**	**40**	⇑P	**Pn**	**04 49 38.9**	**+1.5**
BLY	**Banja Luka**	**6.91**	**341**	⇓P	**Pn**	**04 49 47.4**	**+1.3**
NRCA	**Norcia**	**7.16**	**312**		**Pn**	**04 49 52.0**	**+2.4**
GZR	**Gura Zlata**	**7.36**	**13**	⇓P	**Pn**	**04 49 52.8**	**+0.5**
BZS	**Buzias**	**7.42**	**7**	⇑P	**Pn**	**04 49 54.8**	**+1.8**
MURB	**Monte Urbino**	**7.77**	**313**	Pn	**Pn**	**04 50 01.2**	**+3.2**
VOIR		**7.98**	**25**	⇑P	**Pn**	**04 50 02.3**	**+1.4**
MLR	**Muntele Rosu**	**8.34**	**28**	P	**Pn**	**04 50 07.1**	**+1.2**
	comp=E,0.1nm,0.3s,baz=236,slow=17,SNR=3.9						
MLR	**Muntele Rosu**	**8.34**	**28**	⇑P	**Pn**	**04 50 07.7**	**+1.8**
PLOR	**Plostina**	**8.91**	**30**	⇓P	**Pn**	**04 50 13.8**	**+0.2**
SOKA	**Soboth**	**9.29**	**337**	*e*Pn	**Pn**	**04 50 19.2**	**+0.4**
	comp=E,1.2nm,0.3s						
OBKA	**Obir**	**9.30**	**334**	*e*Pn	**Pn**	**04 50 20.2**	**+1.3**
	comp=E,1.5nm,0.2s						
TEOL	**Teolo**	**9.61**	**320**	Pn	**Pn**	**04 50 23.6**	**+0.4**
CTI	**Castel Tesino**	**10.11**	**323**	Pn	**Pn**	**04 50 30.3**	**+0.1**
BRTR	**Keskin Array B**	**10.44**	**78**	P	**Pn**	**04 50 35.0**	**+0.3**
	comp=E,0.0nm,0.3s,baz=267,slow=12,SNR=2.1						
MOA	**Molln**	**10.57**	**337**	*e*Pn	**Pn**	**04 50 37.9**	**+1.6**
	comp=E,2.3nm,0.3s						
FUORN	**Ofenpass-Fuorn**	**11.19**	**322**	Pn	**Pn**	**04 50 46.9**	**+1.9**
GEC2	**GERESS Array S**	**11.63**	**338**	Pn	**Pn**	**04 50 51.2**	**+0.3**
GERES	**GERESS Array B**	**11.63**	**338**	P	**Pn**	**04 50 50.2**	**-0.6**
	comp=E,0.2nm,0.3s,baz=161,slow=17,SNR=5.1						
AKASG	**Malin Array Be**	**13.95**	**24**	P	**Pn**	**04 51 21.7**	**-0.6**
	comp=E,0.2nm,0.3s,baz=210,slow=10,SNR=2.6						
HFS	**Hagfors**	**22.30**	**351**	P	**P**	**04 53 02.6**	**+0.5**
	comp=E,1.3nm,0.5s,baz=161,slow=9.4,SNR=5.1						
FINES	**FINESS Array B**	**23.48**	**7**	P	**P**	**04 53 13.2**	**-1.1**
	comp=E,1.2nm,0.6s,baz=160,slow=6.1,SNR=8.0						
FINES	**FINESS Array B**	**23.48**	**7**	P	**P**	**04 53 13.4**	**-0.9**
NC204	**NORSAR Array S**	**23.81**	**348**	P	**P**	**04 53 16.9**	**-0.7**
TORD	**Torodi Ar. Bea**	**30.01**	**219**	P	**P**	**04 54 14.5**	**+0.8**
	comp=E,0.6nm,0.6s,baz=31,slow=8.9,SNR=5.4						
ARCES	**ARCESS Array B**	**31.46**	**3**	P	**P**	**04 54 25.3**	**-0.7**
	comp=E,2.6nm,0.9s,baz=194,slow=10,SNR=1.9						
KURBB	**Kurchatov Arra**	**42.29**	**54**	P	**P**	**04 55 56.0**	**-2.2**
	comp=E,0.2nm,0.3s,baz=280,slow=9.1,SNR=4.9						
MKAR	**Makanchi Array**	**45.37**	**58**	P	**P**	**04 56 22.0**	**-1.2**
	comp=E,0.6nm,0.5s,baz=278,slow=6.8,SNR=18						
ZALV	**Zalesovo Beam**	**45.73**	**48**	P	**P**	**04 56 24.9**	**-0.9**
	comp=E,2.1nm,0.5s,baz=277,slow=8.9,SNR=11						
SCHQ	**Schefferville**	**58.31**	**317**	P	**P**	**04 57 59.5**	**-0.1**
	comp=E,1.3nm,0.8s,baz=43,slow=2.3,SNR=3.7						
SONM	**Songino Array**	**60.51**	**51**	P	**P**	**04 58 13.8**	**-1.1**
	comp=E,0.7nm,0.9s,baz=289,slow=14,SNR=4.3						
YKA	**Yellowknife Ar**	**73.27**	**340**	P	**P**	**04 59 36.2**	**+0.4**
	comp=E,0.2nm,0.6s,baz=34,slow=5.6,SNR=5.2						

*IDC **03** 04:50:56.6±1.5, 19°.36S×70°.97W, h0km, mb3.9/2, mb1 3.9/5, mb1mx3.6/31, mbtmp3.7/5, ML3.3/3, Error ellipse: s-maj=48.6km s-min=19.2km az=60.0*
*GUC **03** 04:50:59.5±0.6, 19°.42S×71°.03W, h36km±1km, ML3.7*
ISC 03 04:50:58.6±1.8**, 19°.39S**±0°.04×**70°.97W**±0°.07**, h15**km±10km**,**
n26, σ1s08/31**, 7C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.83**	**105**	⇓*e*P	**Pn**	**04 51 15.4**	**-0.5**
PSGC				*e*S	**Sn**	**04 51 27.4**	**-0.4**
PSGC				IAML		04 51 28.7	
	comp=N,2μm,0.3s						
AP01	**Chacalluta**	**1.17**	**31**	⇑*i*P	**Pg**	**04 51 21.7**	**+0.4**
AP01				*i* S	**Sg**	**04 51 38.0**	**+1.4**
PB11	**IPOC Station P**	**1.29**	**107**	⇓*e*P	**Pg**	**04 51 23.2**	**-0.4**
PB11				*e*S	**Sg**	**04 51 40.8**	**+0.2**
PB11				IAML		04 51 45.2	
	comp=N,2μm,0.6s						
MNMC	**Minye Minye**	**1.32**	**79**	⇑*i*P	**Pg**	**04 51 24.1**	**-0.1**
MNMC				*e*S	**Sg**	**04 51 42.5**	**+1.0**
TA01	**Diego Aracena**	**1.39**	**148**	⇑*i*P	**Pb**	**04 51 23.7**	**-0.6**
TA01				*e*S	**Sb**	**04 51 41.6**	**-0.2**
TA01				IAML		04 51 48.9	
	comp=E,4μm,0.8s						
PATCX	**Punta Patache**	**1.62**	**152**	⇓*e*P	**Pb**	**04 51 27.1**	**-1.2**
PATCX				*e*S	**Sb**	**04 51 48.9**	**+0.3**
PATCX				IAML		04 52 07.7	
	comp=E,572nm,0.6s						
GO01	**Chusmiza**	**1.70**	**100**	⇑*i*P	**Pb**	**04 51 30.2**	**+0.3**
GO01				*e*S	**Sg**	**04 51 54.0**	**+0.5**
GO01				IAML		04 51 57.3	
	comp=N,2μm,0.3s						
PB16	**IPOC Station P**	**1.74**	**53**	⇑*i*P	**Pg**	**04 51 31.1**	**+0.5**
PB16				*e*S	**Sg**	**04 51 54.8**	**0.0**
PB16				IAML		04 52 03.4	
	comp=N,1μm,0.5s						
PB08	**IPOC Station P**	**1.87**	**114**	⇑*i*P	**Pb**	**04 51 32.2**	**-0.5**
PB08				*e*S	**Sb**	**04 51 56.9**	**+0.9**
PB08				IAML		04 52 06.8	
	comp=N,584nm,0.6s						
PB01	**IPOC Station P**	**2.16**	**140**	⇑*i*P	**Pb**	**04 51 35.0**	**+0.9**
PB01				*e*S	**Sb**	**04 52 02.0**	**-2.1**
PB01				IAML		04 52 15.7	
	comp=N,461nm,0.5s						
PB02	**IPOC Station P**	**2.17**	**152**	*e*P	**Pn**	**04 51 34.9**	**+0.6**
PB02				IAML		04 52 13.1	
	comp=E,1μm,0.8s						
PB07	**IPOC Station P**	**2.54**	**157**	IAML		04 52 31.9	
	comp=E,498nm,0.7s						
LVC	**Limon Verde**	**3.74**	**149**	Pn	**Pn**	**04 51 58.3**	**+2.1**
	comp=E,1.4nm,0.3s,baz=348,slow=8.9,SNR=33						
LVC				Sn	**Sn**	**04 52 41.0**	**+0.9**
	comp=E,6.3nm,0.3s,baz=283,slow=7.9,SNR=5.2						
LVC				Lg	Lg	04 52 55.9	
	comp=E,7.3nm,0.3s,baz=64,slow=22,SNR=10						
LPAZ	**La Paz**	**4.10**	**42**	Pn	**Pb**	**04 52 08.9**	**-2.1**
	comp=E,1.4nm,0.3s,baz=202,slow=3.5,SNR=11						
LPAZ				Pg	**Pg**	**04 52 15.4**	**-1.9**
	comp=E,2.4nm,0.3s,baz=225,slow=10,SNR=30						
LPAZ				Lg	Lg	04 53 11.6	
	comp=E,1.2nm,0.3s,baz=325,slow=6.6,SNR=1.4						
SIV	**San Ignacio**	**10.02**	**72**	Pn	**Pn**	**04 53 23.9**	**+1.7**
	comp=E,0.4nm,0.3s,baz=54,slow=7.5,SNR=8.3						
CPUP	**Villa Florida**	**14.34**	**121**	Pn	**Pn**	**04 54 19.6**	**-1.6**
	comp=E,0.0nm,0.3s,baz=304,slow=14,SNR=2.2						
TORD	**Torodi Ar. Bea**	**78.50**	**72**	P	**P**	**05 02 59.3**	**-0.5**
	comp=E,1.2nm,0.8s,baz=250,slow=5.6,SNR=5.8						
YKA	**Yellowknife Ar**	**88.57**	**341**	P	**P**	**05 03 50.8**	**+0.4**
	comp=E,0.4nm,0.7s,baz=138,slow=4.5,SNR=11						
H11S2	**WAKE ISLAND Hy**	**125.66**	**279**	T	T	07 29 16.6	
	baz=101,slow=74,SNR=5.9						
H11S1	**WAKE ISLAND Hy**	**125.67**	**279**	T	T	07 29 14.7	
	baz=101,slow=74,SNR=4.5						
H11S3	**WAKE ISLAND Hy**	**125.68**	**279**	T	T	07 29 17.0	
	baz=101,slow=74,SNR=4.0						
H11N3	**WAKE ISLAND Hy**	**125.70**	**281**	T	T	07 29 18.4	
	baz=173,slow=74,SNR=4.9						
H11N2	**WAKE ISLAND Hy**	**125.71**	**281**	T	T	07 29 19.2	
	baz=101,slow=74,SNR=6.4						
H11N1	**WAKE ISLAND Hy**	**125.71**	**281**	T	T	07 29 15.1	
MKAR	**Makanchi Array**	**144.98**	**33**	PKP	**PKPdf**	**05 10 35.6**	**+0.2**
	comp=E,0.5nm,0.8s,baz=316,slow=3.3,SNR=4.9						
SONM	**Songino Array**	**151.54**	**4**	PKPbc	**PKiKP**	**05 10 52.7**	**-0.1**
	comp=E,0.9nm,1.0s,baz=288,slow=1.4,SNR=3.6						

*ATH **03** 04:54:35.6, 38°.20N×20°.38E, h15km±1km, ML3.6/8, Error ellipse: s-maj=2.6km s-min=1.4km az=253.0*
*PDG **03** 04:54:35.3±0.3, 38°.19N×20°.37E, h22km, ML3.8/14, Error ellipse: s-maj=0.8km s-min=0.8km az=0.0*
*THE **03** 04:54:36.0, 38°.20N×20°.39E, h12km, ML3.5/6, Error ellipse: s-maj=0.7km s-min=0.3km az=254.0*
*IDC **03** 04:54:40.2±1.4, 38°.22N×20°.35E, h57km±17km, mb3.4/11, mb1 3.5/19, mb1mx3.4/52, mbtmp3.6/19, ML3.3/8, Error ellipse: s-maj=14.9km s-min=10.5km az=15.0*
ISC 03 04:54:36.0±0.7**, 38°.22N**±0°.02×**20°.40E**±0°.03**, h14**km±3km**,**
n96, σ1s35/145**, mb3.6**/11**, 5C-10D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.04**	**198**	P	**Pg**	**04 54 38.3**	**-0.3**
CHV1				S	**Sg**	**04 54 40.0**	**-0.3**
KEF3	**Kipouria, Keph**	**0.04**	**247**	P	**Pg**	**04 54 38.2**	**-0.4**
KEF3				S	**Sg**	**04 54 39.7**	**-0.6**
KEF4	**Livadi, Kephal**	**0.04**	**29**	P	**Pg**	**04 54 38.5**	**-0.2**
KEF4				S	**Sg**	**04 54 40.5**	**0.0**
ARG2	**Argostoli**	**0.08**	**119**	P	**Pg**	**04 54 38.8**	**-0.2**
ARG2				S	**Sg**	**04 54 40.6**	**-0.3**
KEF1	**Kardakata, Kep**	**0.08**	**45**	P	**Pg**	**04 54 38.8**	**-0.2**
KEF1				S	**Sg**	**04 54 41.0**	**0.0**
KEF2	**Argostoli. Kep**	**0.09**	**127**	P	**Pg**	**04 54 38.8**	**-0.2**
KEF2				S	**Sg**	**04 54 40.7**	**-0.3**
VLS	**Valsamata**	**0.16**	**105**	P	**Pg**	**04 54 39.7**	**-0.2**
VLS				S	**Sg**	**04 54 42.3**	**-0.3**
	61μm,0.3s						
VLS	**Valsamata**	**0.16**	**105**	P	**Pg**	**04 54 39.7**	**-0.2**
VLS				S	**Sg**	**04 54 42.3**	**-0.3**
VLS				AML	AML	04 54 42.6	
VLS				AML	AML	04 54 43.2	
	comp=N,72123μm,0.3s						
VSK1	**VASILIKIADES**	**0.23**	**35**	P	**Pg**	**04 54 41.3**	**+0.2**
VSK1				S	**Sg**	**04 54 45.1**	**+0.5**
KFL	**Anninata**	**0.33**	**109**	P	**Pg**	**04 54 42.6**	**-0.2**
KFL				S	**Sg**	**04 54 47.7**	**+0.4**
VLMS	**Volimes, Zakyn**	**0.40**	**148**	P	**Pg**	**04 54 43.8**	**-0.3**
VLMS				S	**Sg**	**04 54 50.0**	**+0.5**
VLMS				AML	AML	04 54 51.0	
	comp=N,39026μm,0.4s						
VLMS				AML	AML	04 54 51.2	
	comp=E,33131μm,0.1s						
EVGI	**Lefkada island**	**0.45**	**27**	P	**Pg**	**04 54 45.3**	**+0.3**
EVGI				S	**Sb**	**04 54 52.4**	**0.0**
EVGI	**Lefkada island**	**0.45**	**27**	P	**Pg**	**04 54 44.7**	**-0.4**
EVGI				S	**Sb**	**04 54 52.4**	**0.0**
MGNA	**Meganis**	**0.54**	**35**	P	**Pg**	**04 54 46.3**	**-0.2**
MGNA				AML	AML	04 54 55.5	
	comp=E,22476μm,0.4s						
MGNA				AML	AML	04 54 55.6	
	comp=N,19279μm,0.2s						
LKD2	**Lefkada island**	**0.60**	**20**	P	**Pg**	**04 54 47.6**	**-0.3**
LKD2				S	**Sg**	**04 54 56.0**	**0.0**
	comp=N,5μm,0.3s						
LKD2	**Lefkada island**	**0.60**	**20**	P	**Pg**	**04 54 47.9**	**-0.1**
LKD2				AML	AML	04 55 04.6	
	comp=N,8766μm,0.3s						
LKD2				AML	AML	04 55 05.5	
	comp=E,9828μm,0.3s						
AST1	**Astakos**	**0.63**	**59**	P	**Pg**	**04 54 48.3**	**-0.1**
AST1				S	**Sb**	**04 54 58.2**	**+0.6**
TSLK	**Tsoukalades, L**	**0.64**	**18**	P	**Pg**	**04 54 48.4**	**-0.1**
TSLK				S	**Sb**	**04 54 58.5**	**+0.7**
	comp=E,4μm,0.7s						
TSLK	**Tsoukalades, L**	**0.64**	**18**	P	**Pb**	**04 54 49.0**	**0.0**
KRI1	**kERI**	**0.65**	**149**	P	**Pg**	**04 54 48.0**	**-0.7**
KRI1				S	**Sb**	**04 54 58.1**	**+0.1**
PDO	**Prodromos**	**0.72**	**58**	P	**Pg**	**04 54 50.0**	**-0.2**
PDO				S	**Sn**	**04 55 01.5**	**-1.3**
PDO	**Prodromos**	**0.72**	**58**	P	**Pg**	**04 54 49.9**	**-0.2**
RLS	**Riolos of Patr**	**0.86**	**100**	P	**Pb**	**04 54 51.8**	**-0.9**
RLS				S	**Sn**	**04 55 05.3**	**-0.7**
	comp=E,2μm,0.6s						
RLS	**Riolos of Patr**	**0.86**	**100**	P	**Pb**	**04 54 51.9**	**-0.8**
RLS				AML	AML	04 55 11.0	
	comp=E,3580μm,0.6s						
RLS				AML	AML	04 55 13.6	
	comp=N,4370μm,0.6s						
PVO	**Paravola**	**0.97**	**66**	P	**Pb**	**04 54 54.6**	**0.0**
PVO				S	**Sn**	**04 55 08.8**	**-0.1**
	comp=N,5μm,0.6s						
PVO	**Paravola**	**0.97**	**66**	P	**Pb**	**04 54 54.7**	**0.0**
PVO				AML	AML	04 55 10.9	
	comp=E,11397μm,0.4s						
PVO				AML	AML	04 55 15.0	
	comp=N,7363μm,0.5s						
DRO	**Drossia**	**1.07**	**104**	P	**Pb**	**04 54 55.8**	**-0.5**
DRO				S	**Sn**	**04 55 12.0**	**+0.7**
	comp=N,4μm,0.6s						
UPR	**University Cam**	**1.10**	**86**	P	**Pn**	**04 54 56.9**	**-0.1**
AMT	**Artemida-Makis**	**1.24**	**123**	P	**Pn**	**04 54 58.8**	**-0.2**
LAKA	**Lakka**	**1.25**	**89**	P	**Pn**	**04 54 58.8**	**-0.3**
LAKA				S	**Sg**	**04 55 16.7**	**+0.4**
LAKA	**Lakka**	**1.25**	**89**	P	**Pn**	**04 54 58.8**	**-0.3**
LAKA				AML	AML	04 55 23.1	
	comp=N,3046μm,0.5s						
LAKA				AML	AML	04 55 23.3	
	comp=E,2556μm,0.5s						
EVR	**Evrytania**	**1.31**	**57**	P	**Pn**	**04 54 59.5**	**-0.5**
EVR	**Evrytania**	**1.31**	**57**	P	**Pn**	**04 54 59.5**	**-0.5**
SERG	**Sergoula**	**1.32**	**81**	P	**Pn**	**04 54 59.3**	**-0.8**
TRIZ	**Trizonia**	**1.33**	**83**	P	**Pn**	**04 54 59.5**	**-0.6**
TRIZ	**Trizonia**	**1.33**	**83**	P	**Pn**	**04 54 59.6**	**-0.6**
KALE	**Kalithea**	**1.38**	**82**	P	**Pn**	**04 55 00.7**	**-0.3**
KALE	**Kalithea**	**1.38**	**82**	P	**Pn**	**04 55 00.9**	**0.0**
KALE				AML	AML	04 55 29.8	
	comp=E,2131μm,0.6s						
KALE				AML	AML	04 55 33.0	
	comp=N,3207μm,0.4s						
KLV	**Kalavryta, Ach**	**1.39**	**97**	P	**Pn**	**04 55 01.1**	**0.0**
KLV				S	**Sb**	**04 55 19.8**	**+0.2**
ITM	**Ithomi**	**1.60**	**130**	P	**Pn**	**04 55 03.5**	**-0.4**
TIP	**Timpagrande**	**3.00**	**290**	⇓P	**Pn**	**04 55 23.8**	**+0.6**
TIP				⇓S	**Sn**	**04 55 59.6**	**+0.5**
TIR	**Tirane**	**3.15**	**353**	⇓P	**Pn**	**04 55 24.8**	**-0.4**
MASS	**Massafra**	**3.49**	**315**	*e*Pn	**Pn**	**04 55 30.3**	**+0.5**
STIP	**Stip**	**3.73**	**21**	*i* Pn	**Pn**	**04 55 37.1**	**+3.8**
MATE	**Matera**	**3.75**	**311**	⇓P	**Pn**	**04 55 33.6**	**+0.2**
ULC	**Ulcinj**	**3.84**	**347**	*e*Pn	**Pn**	**04 55 34.9**	**+0.1**
ULC				*e*Sn	**Sn**	**04 56 19.8**	**+0.1**
SG1	**Sgolgore (BA)**	**3.89**	**313**	*e*Pn	**Pn**	**04 55 36.1**	**+0.7**
SG1				Sn	**Sn**	**04 56 20.3**	**-0.5**
BAI	**Bari**	**3.96**	**318**	*e*Pn	**Pn**	**04 55 37.6**	**+1.3**
BAI				Sn	**Sn**	**04 56 21.9**	**-0.6**
DRME	**Dracevica, Mon**	**4.07**	**347**	*e*Pn	**Pn**	**04 55 38.1**	**+0.2**
DRME				*e*Sn	**Sn**	**04 56 25.2**	**-0.1**
APE	**Apeiranthos**	**4.23**	**104**	⇓P	**Pn**	**04 55 39.0**	**-1.2**
BUM	**Brajici-Budva**	**4.24**	**345**	*e*Pn	**Pn**	**04 55 40.0**	**-0.2**
BUM				*e*Sn	**Sn**	**04 56 29.0**	**-0.5**
PDG	**Podgorica**	**4.30**	**349**	⇑P	**Pn**	**04 55 41.3**	**+0.3**
PDG				⇓S	**Sn**	**04 56 31.0**	**+0.2**
TTG	**Podgorica**	**4.30**	**349**	*e*Pn	**Pn**	**04 55 41.4**	**+0.5**
TTG				*e*Sn	**Sn**	**04 56 30.6**	**-0.2**
PVY	**Plav**	**4.38**	**356**	*e*Pn	**Pn**	**04 55 42.7**	**+0.4**
PVY				*e*Sn	**Sn**	**04 56 33.2**	**0.0**
HCY	**Herceg Novi**	**4.47**	**342**	*e*Pn	**Pn**	**04 55 42.8**	**-0.5**
HCY				*e*Sn	**Sn**	**04 56 34.4**	**-0.7**
CEME	**Cevo**	**4.47**	**346**	*e*Pn	**Pn**	**04 55 43.2**	**-0.2**
CEME				*e*Sn	**Sn**	**04 56 34.1**	**-1.1**
IDI	**Anoyia**	**4.64**	**128**	P	**Pn**	**04 55 47.9**	**+2.1**
	comp=N,0.2nm,0.3s,baz=288,slow=13,SNR=2.7						
IDI				S	**Sn**	**04 56 40.8**	**+1.2**
	comp=N,2.7nm,0.3s,baz=296,slow=23,SNR=6.7						
IVA	**Berane**	**4.66**	**355**	*e*Pn	**Pn**	**04 55 46.4**	**+0.3**
IVA				*e*Sn	**Sn**	**04 56 40.2**	**+0.1**
NKME	**Niksic**	**4.67**	**347**	*e*Pn	**Pn**	**04 55 46.0**	**-0.2**
NKME				*e*Sn	**Sn**	**04 56 40.1**	**-0.2**
KOME	**Kolasin**	**4.67**	**352**	*e*Pn	**Pn**	**04 55 46.6**	**+0.3**
KOME				*e*Sn	**Sn**	**04 56 40.3**	**0.0**
NKY	**Niksic**	**4.71**	**347**	*e*Pn	**Pn**	**04 55 46.5**	**-0.3**
NKY				*e*Sn	**Sn**	**04 56 41.0**	**-0.3**
VAE	**Valguarnera**	**4.79**	**263**	P	**Pn**	**04 55 51.4**	**+3.5**
	comp=N,1.9nm,0.3s,baz=342,slow=15,SNR=2.2						
VAE				S	**Sn**	**04 56 46.0**	**+2.7**
	comp=N,3.7nm,0.3s,baz=1.7,slow=9.7,SNR=4.6						
BRY	**Bratogost**	**4.89**	**344**	*e*Pn	**Pn**	**04 55 48.8**	**-0.4**
BRY				*e*Sn	**Sn**	**04 56 44.7**	**-0.9**
VTS	**Vitosha**	**4.90**	**25**	⇑P	**Pn**	**04 55 49.3**	**-0.1**
VTS				⇓S	**Sn**	**04 56 48.2**	**+2.3**
UPM	**Unac-Piva**	**5.11**	**348**	*e*Pn	**Pn**	**04 55 52.1**	**-0.2**
UPM				*e*Sn	**Sn**	**04 56 50.8**	**-0.3**
PLE	**Pljevlja**	**5.16**	**352**	*e*Pn	**Pn**	**04 55 53.4**	**+0.4**
PLE				*e*Sn	**Sn**	**04 56 51.9**	**-0.5**
BLY	**Banja Luka**	**6.96**	**341**	⇓P	**Pn**	**04 56 16.7**	**-0.8**
BLY				⇓S	**Sn**	**04 57 34.5**	**-1.8**
GZR	**Gura Zlata**	**7.38**	**13**	⇓P	**Pn**	**04 56 24.2**	**+0.7**
BZS	**Buzias**	**7.45**	**7**	⇑P	**Pn**	**04 56 23.6**	**-0.7**
VOIR		**8.00**	**24**	⇑P	**Pn**	**04 56 32.8**	**+0.8**
MLR	**Muntele Rosu**	**8.36**	**28**	P	**Pn**	**04 56 39.9**	**+3.0**
	comp=N,0.1nm,0.3s,baz=247,slow=13,SNR=2.2						
MLR	**Muntele Rosu**	**8.36**	**28**	⇑P	**Pn**	**04 56 37.5**	**+0.6**
SOKA	**Soboth**	**9.33**	**337**	*e*Pn	**Pn**	**04 56 49.6**	**-0.6**
	comp=N,2.0nm,0.3s						
SOKA				*e*Sn	**Sn**	**04 58 28.7**	**-6.2**
	comp=N,1.7nm,0.4s						
OBKA	**Obir**	**9.34**	**334**	*e*Pn	**Pn**	**04 56 51.3**	**+1.0**
	comp=N,1.6nm,0.2s						
OBKA				Sn	**Sn**	**04 58 33.0**	**-2.2**
	comp=N,8.9nm,0.6s						
ARSA	**Arzberg**	**9.71**	**340**	*e*Pn	**Pn**	**04 56 55.6**	**+0.4**
	comp=N,1.0nm,0.3s						
KBA	**Koelnbreinsper**	**10.26**	**332**	*e*Pn	**Pn**	**04 57 03.7**	**+0.7**
	comp=N,1.4nm,0.3s						
KBA				Sn	**Sn**	**04 58 52.3**	**-5.5**
	comp=N,1.7nm,0.4s						
ABTA	**Abfaltersbach**	**10.32**	**328**	Sn	**Sn**	**04 58 55.0**	**-4.0**
	comp=N,9.7nm,0.8s						
BRTR	**Keskin Array B**	**10.42**	**78**	P	**Pn**	**04 57 08.8**	**+3.6**
	comp=N,0.1nm,0.3s,baz=267,slow=12,SNR=3.9						
MOA	**Molln**	**10.62**	**337**	*e*Pn	**Pn**	**04 57 08.6**	**+0.9**
	comp=N,3.8nm,0.3s						
WATA	**Walderalm**	**11.17**	**327**	*e*Pn	**Pn**	**04 57 17.0**	**+1.6**
	comp=N,1.7nm,0.3s						
DAVOX	**Davos/Dischmat**	**11.54**	**321**	P	**Pn**	**04 57 20.3**	**-0.2**
	comp=N,0.2nm,0.3s,baz=109,slow=3.7,SNR=3.6						
GERES	**GERESS Array B**	**11.67**	**338**	P	**Pn**	**04 57 22.4**	**+0.2**
	comp=N,0.3nm,0.3s,baz=157,slow=13,SNR=9.5						
GERES				S	**Sn**	**04 59 26.0**	**-6.3**
	comp=N,0.3nm,0.3s,baz=153,slow=24,SNR=5.3						
KHC	**Kasperske Hory**	**11.97**	**338**	*e*PN	**Pn**	**04 57 26.0**	**-0.1**
AKASG	**Malin Array Be**	**13.97**	**24**	P	**Pn**	**04 57 56.9**	**+3.5**
	comp=N,0.2nm,0.3s,baz=210,slow=11,SNR=3.3						
KBZ	**Khabaz**	**17.84**	**65**	P	**P**	**04 58 45.7**	**+1.4**
	comp=N,0.1nm,0.3s,baz=270,slow=11,SNR=4.3						
HFS	**Hagfors**	**22.34**	**351**	P	**P**	**04 59 32.4**	**-0.8**
	comp=N,2.1nm,0.8s,baz=152,slow=10,SNR=6.1						
EKA	**Eskdalemuir Ar**	**23.34**	**325**	P	**P**	**04 59 41.4**	**-2.3**
	comp=N,1.1nm,0.6s,baz=190,slow=27,SNR=3.8						
FINES	**FINESS Array B**	**23.52**	**7**	P	**P**	**04 59 44.4**	**-0.9**
	comp=N,1.1nm,0.6s,baz=174,slow=13,SNR=4.9						
NOA	**NORSAR Array B**	**23.56**	**349**	P	**P**	**04 59 45.5**	**-0.3**
	comp=N,1.0nm,0.9s,baz=176,slow=8.8,SNR=3.7						
TORD	**Torodi Ar. Bea**	**30.00**	**219**	P	**P**	**05 00 43.3**	**-1.1**
	comp=N,0.6nm,1.0s,baz=38,slow=7.3,SNR=2.6						
ARCES	**ARCESS Array B**	**31.50**	**3**	P	**P**	**05 00 55.9**	**-1.1**
	comp=N,1.9nm,0.8s,baz=18,slow=5.1,SNR=5.6						
BVAR	**Borovoye Array**	**37.17**	**50**	P	**P**	**05 01 46.6**	**+0.3**
	comp=N,0.3nm,0.6s,baz=235,slow=7.0,SNR=3.8						
KURBB	**Kurchatov Arra**	**42.28**	**54**	P	**P**	**05 02 28.4**	**-0.5**
	comp=N,0.5nm,0.5s,baz=282,slow=8.8,SNR=4.2						
MKAR	**Makanchi Array**	**45.36**	**58**	P	**P**	**05 02 52.8**	**-1.0**
	comp=N,0.9nm,0.5s,baz=274,slow=6.8,SNR=22						
ZALV	**Zalesovo Beam**	**45.74**	**48**	P	**P**	**05 02 55.8**	**-0.7**
	comp=N,2.5nm,0.6s,baz=278,slow=8.2,SNR=13						
SONM	**Songino Array**	**60.51**	**51**	P	**P**	**05 04 44.5**	**-1.2**
	comp=N,0.6nm,0.9s,baz=290,slow=9.3,SNR=4.0						

*DSN **03** 04:59:57.6±2.1, 26°.38N×57°.97E, h10km, ML3.7/6, Error ellipse: s-maj=29.1km s-min=11.9km az=8.0*
*OMAN **03** 04:59:59.4±0.5, 26°.56N×57°.85E, h20km, ml3.6/9, Error ellipse: s-maj=9.7km s-min=4.0km az=22.0*
*TEH **03** 05:00:00.0, 26°.79N×57°.66E, h10km, ML3.6*
*THR **03** 05:00:03.2±0.7, 26°.85N×57°.89E, h14km±7km, ML3.5*
ISC 03 04:59:58.2±1.4**, 26°.54N**±0°.03×**57°.60E**±0°.04**, h3**km±12km**,**
n46, σ2s55/52**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**0.91**	**170**	*e*Pg	**Pn**	**05 00 21.2**	**+3.4**
NIAN	**Nian**	**1.23**	**326**	*e*Pg	**Pn**	**05 00 21.5**	**-0.7**
NIAN				*e*		05 00 44.4	
BANOM	**Banah**	**1.32**	**243**	*e*P	**Pn**	**05 00 25.4**	**+1.9**
	SNR=100						
BANOM				S	**Sn**	**05 00 46.8**	**+5.3**
BANOM	**Banah**	**1.32**	**243**	P	**Pn**	**05 00 25.4**	**+1.9**
	SNR=55						
BANOM				S	**Sn**	**05 00 46.6**	**+5.0**
BANOM	**Banah**	**1.32**	**243**	*e*Pn	**Pn**	**05 00 24.7**	**+1.2**
SHME	**Shamm**	**1.40**	**250**	*e*P	**Pg**	**05 00 27.4**	**+2.4**
	SNR=23						
SHME	**Shamm**	**1.40**	**250**	*e*Pn	**Pg**	**05 00 26.9**	**+1.9**
KHNJ	**Kahnooj**	**1.41**	**4**	*e*Pg	Pn	05 00 21.0	-3.8
KHNJ				*e*Sg	**Sn**	**05 00 38.9**	**-5.0**
GENO	**Geno**	**1.54**	**304**	*e*Pn	**Pn**	**05 00 27.7**	**+1.0**
GENO				*e*Sg	**Sg**	**05 00 49.2**	**+1.5**
GENO				*e*		05 00 56.0	
BNDS	**Bandar-Abbas**	**1.54**	**304**	IAML		05 00 55.7	
	comp=E,507nm,0.4s						
MDH	**Madha**	**1.70**	**224**	*e*P	**Pg**	**05 00 28.9**	**-1.9**
	SNR=5.6						
MDH	**Madha**	**1.70**	**224**	*e*Pn	**Pg**	**05 00 29.0**	**-1.8**
MSFE	**Esma-Masafi**	**1.75**	**228**	*e*P	**Pg**	**05 00 30.1**	**-1.6**
	SNR=13						
MSFE	**Esma-Masafi**	**1.75**	**228**	*e*Pn	**Pg**	**05 00 30.1**	**-1.6**
UOSS	**Minazif**	**2.02**	**219**	P	**Pb**	**05 00 32.9**	**-2.7**
UOSS	**Minazif**	**2.02**	**219**	P	**Pb**	**05 00 32.9**	**-2.7**
UOSS	**Minazif**	**2.02**	**219**	*e*Pn	**Pn**	**05 00 32.7**	**-0.5**
HATD	**Hatta, Dubai**	**2.16**	**218**	*e*P	**Pn**	**05 00 34.7**	**-0.3**
	SNR=12						
HATD	**Hatta, Dubai**	**2.16**	**218**	P	**Pb**	**05 00 35.1**	**-2.8**
HATD	**Hatta, Dubai**	**2.16**	**218**	*e*Pn	**Pb**	**05 00 34.9**	**-3.0**
ASHO	**Ashiyiah**	**2.31**	**217**	*e*P	**Pb**	**05 00 39.5**	**-1.0**
	SNR=17						
ASHO	**Ashiyiah**	**2.31**	**217**	P	**Pb**	**05 00 38.4**	**-2.1**
	SNR=7.2						
ASHO	**Ashiyiah**	**2.31**	**217**	*e*Pn	**Pb**	**05 00 37.9**	**-2.6**
NAZ	**Nazwa, Dubai**	**2.33**	**229**	P	**Pg**	**05 00 40.9**	**-1.9**
NAZ	**Nazwa, Dubai**	**2.33**	**229**	*e*Pn	**Pb**	**05 00 38.6**	**-2.2**
SOHO	**SOHO**	**2.58**	**202**	*e*Pn	**Pn**	**05 00 40.1**	**-0.7**
CHBR	**Chabahar**	**2.76**	**109**	*e*Pn	**Pn**	**05 00 47.7**	**+4.5**
CHBR				*e*Sg	**Sb**	**05 01 25.6**	**+3.3**
CHBR	**Chabahar**	**2.76**	**109**	*e*Pn	**Pn**	**05 00 47.7**	**+4.5**
HOQ	**Hoqain**	**2.95**	**185**	P	**Pn**	**05 00 45.3**	**-0.7**
	SNR=10						
HOQ				S	**Sn**	**05 01 21.8**	**-0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ALNE	Al Ain	2.98	215	ePn	Pb	05 00 48.2	-3.7
BIDO	Bidbid	3.04	171	ePn	Pn	05 00 46.6	-0.5
CHMN	Cheshme madani	3.31	359	ePn	Pn	05 00 52.8	+1.6
CHMN				e		05 01 54.8	
ARQ	Araqi	3.33	197	P	Pb	05 00 54.1	-3.8
	SNR=20						
ARQ				S	Sb	05 01 37.4	-1.5
SMDO	Samad	3.48	173	P	Pb	05 00 57.0	-3.6
	SNR=8.0						
KRBR	Kerman	3.51	348	ePn	Pn	05 00 56.0	+2.1
KRBR				eSg	Sb	05 01 45.3	+0.9
KRBR	Kerman	3.51	348	ePn	Pn	05 00 56.0	+2.1
TVBK	TV Kerman	3.52	348	ePn	Pn	05 00 55.2	+1.2
TVBK				e		05 01 05.5	
KHGB	Koh Gabri	3.95	346	e	Sg	05 02 09.3	+4.1
WBK	Wadi Bani Khal	4.10	162	P	Pn	05 01 02.0	+0.2
	SNR=20						
ZHSF	Zahedan	4.16	42	ePn	Pn	05 01 03.0	+0.4
ZHSF	Zahedan	4.16	42	ePn	Pn	05 01 03.0	+0.4
UMZA	Um Al Zommool	4.40	211	ePn	Pn	05 01 07.6	+1.7
IKOO	Kooshah	6.00	11	ePn	Pn	05 01 28.4	+0.4
SHRT	Shahrakht	7.46	18	ePn	Pn	05 01 49.0	+1.0
SHRT	Shahrakht	7.46	18	ePn	Pn	05 01 49.0	+1.0
WHFO	Wadi Hawf	9.28	203	S	Sn	05 03 56.0	-1.9
	SNR=8.1						

NEIC **03** *05:02:57.5±1.2, 4°.7S±0°.1×153°.7E±0°.1, h116km±8km, mb4.3/3, Error ellipse: s-maj=23.1km s-min=11.1km az=147.0*
IDC **03** *05:02:57.2±5.1, 4°.62S×153°.73E, h114km±40km, mb3.2/2, mb1 3.6/3, mb1mx3.2/35, mbtmp3.8/3, Error ellipse: s-maj=58.0km s-min=31.6km az=113.0*
ISC 03 05:02:55.7±1.5, 4°.7S±0°.1×153°.8E±0°.1, h100km, n10, $\sigma 1^{s}28$/13, New Ireland region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.73	288	Pn	Pn	05 03 25.8	+0.9
RABL				Sn	Sn	05 03 46.2	-0.9
KRVT	Keravat (AS076	1.83	283	P	Pn	05 03 26.7	+0.6
	21nm,0.3s,baz=192,slow=2.0,SNR=5.4						
KRVT				S	Sn	05 03 49.8	+0.5
	55nm,0.3s,baz=359,slow=21,SNR=12						
PMG	Port Moresby	8.08	234	P	Pn	05 04 52.2	+1.9
	4.6nm,0.3s,baz=23,slow=14,SNR=3.2						
PMG	Port Moresby	8.08	234	Pn	Pn	05 04 52.0	+1.7
PMG				Sn	Sn	05 06 17.6	-2.5
WB0	Warramunga Arr	24.12	230	P	P	05 08 01.3	-1.0
WB0				IAmb	IAmb	05 08 10.8	
	comp=Z,25nm,1.5s						
WR0	Warramunga Arr	24.12	229	P	P	05 08 02.5	+0.1
WR0				IAmb	IAmb	05 08 09.7	
	comp=Z,10nm,1.2s						
WRA	Warramunga Arr	24.26	230	P	P	05 08 03.6	-0.1
	comp=Z,1.3nm,0.6s,baz=54,slow=9.9,SNR=7.9						
WRA	Warramunga Arr	24.26	230	P	P	05 08 03.9	+0.2
ILAR	Eielson Array	81.71	22	P	P	05 15 02.3	-0.5
	comp=Z,0.2nm,0.8s,baz=211,slow=6.9,SNR=1.6						
TORD	Torodi Ar. Bea	151.25	289	PKPbc	PKPbc	05 22 38.4	-0.2
	comp=Z,0.1nm,0.4s,baz=90,slow=1.7,SNR=1.2						

IDC **03** *05:07:28.7±3.2, 4°.87S×153°.87E, h94km±24km, mb3.7/13, mb1 4.0/14, mb1mx3.8/35, mbtmp4.1/14, Error ellipse: s-maj=29.2km s-min=14.0km az=100.0*
NEIC **03** *05:07:29.7±1.5, 4°.92S±0°.09×153°.93E±0°.08, h107km±7km, mb4.4/13, Error ellipse: s-maj=13.1km s-min=11.6km az=213.0*
ISC 03 05:07:29.6±0.5, 4°.90S±0°.06×153°.92E±0°.07, h105km, n38, $\sigma 1^{s}08$/42, mb4.1/19, New Ireland region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.89	292	Pn	Pn	05 08 01.4	+0.4
RABL				Sn	Sn	05 08 25.1	+0.1
KRVT	Keravat (AS076	1.98	287	P	Pn	05 08 01.3	-0.9
	81nm,0.3s,baz=170,slow=0.8,SNR=24						
KRVT				S	Sn	05 08 23.8	-3.2
	99nm,0.3s,baz=310,slow=18,SNR=10						
HNR	Honiara	7.48	127	Pn	Pn	05 09 14.2	-1.9
PMG	Port Moresby	8.06	236	P	Pn	05 09 24.4	+0.4
	14nm,0.3s,baz=38,slow=6.0,SNR=18						
PMG				S	Sn	05 10 55.0	+1.5
	3.9nm,0.3s,baz=312,slow=23,SNR=4.5						
PMG	Port Moresby	8.06	236		Pn	05 09 25.6	+1.6
PMG					Sn	05 10 54.0	+0.4
PATS	Pohnpei	12.46	21	Pn	Pn	05 10 24.3	+0.9
WR0	Warramunga Arr	24.08	230	P	P	05 12 36.3	+0.8
WR0				IAmb	IAmb	05 12 37.6	
	comp=Z,5.5nm,0.8s						
WB0	Warramunga Arr	24.08	230	P	P	05 12 36.5	+1.0
WB0				IAmb	IAmb	05 12 43.7	
	comp=Z,28nm,1.5s						
WRA	Warramunga Arr	24.22	230	P	P	05 12 37.1	+0.3
	comp=Z,5.3nm,0.6s,baz=56,slow=10,SNR=26						
WRA	Warramunga Arr	24.22	230	P	P	05 12 36.8	-0.1
ARMA	Armidale	25.47	185	P	P	05 12 48.2	0.0
ARMA				IAmb	IAmb	05 12 50.1	
	comp=Z,7.4nm,0.8s						
AS31	Alice Springs	26.84	224	P	P	05 13 00.1	-0.3
ASAR	Alice Springs	26.84	224	P	P	05 13 00.6	+0.1
	comp=Z,3.3nm,0.9s,baz=54,slow=8.8,SNR=16						
ASAR	Alice Springs	26.84	224	P	P	05 12 59.9	-0.6
STKA	Stephens Creek	29.22	202	P	P	05 13 20.7	-0.8
	comp=Z,3.2nm,0.7s,baz=33,slow=14,SNR=6.5						
STKA	Stephens Creek	29.22	202	P	P	05 13 20.9	-0.6
FITZ	Fitzroy Crossi	30.59	242	P	P	05 13 33.1	-0.7
	comp=Z,3.7nm,0.5s,baz=77,slow=9.2,SNR=8.9						
BBOO	Buckleboo	32.39	209	P	P	05 13 49.5	0.0
FORT	Forrest	35.42	220	P	P	05 14 15.6	-0.1
PSA00	Pilbara Seismi	36.94	240	P	P	05 14 27.4	-1.4
PSA00				IAmb	IAmb	05 14 29.3	
	comp=Z,14nm,0.9s						
MLZ	Mavora Lakes	42.17	165	P	P	05 15 12.5	+0.6
MLZ				IAmb	IAmb	05 15 12.8	
	comp=Z,5.5nm,0.8s						
USRK	Ussuriysk Ar.	52.72	340	P	P	05 16 34.9	+1.5
	comp=Z,0.7nm,0.4s,baz=151,slow=7.6,SNR=2.5						
ENH	Enshi	55.05	312	P	P	05 16 50.7	0.0
ENH				IAmb	IAmb	05 16 52.0	
	comp=Z,9.0nm,1.0s						
CMAR	Chiang Mai Arr	58.93	295	P	P	05 17 19.3	+1.0
	comp=Z,1.0nm,0.3s,baz=106,slow=4.6,SNR=5.4						
SONM	Songino Array	67.01	327	P	P	05 18 11.9	+0.4
	comp=Z,0.6nm,0.6s,baz=144,slow=6.0,SNR=7.0						
SONM	Songino Array	67.01	327	P	P	05 18 11.7	+0.2
IMAR	Indian Mountai	80.11	19	P	P	05 19 29.0	+1.4
MKAR	Makanchi Array	81.14	319	P	P	05 19 33.8	+0.2
	comp=Z,0.5nm,0.5s,baz=103,slow=5.2,SNR=7.0						
MKAR	Makanchi Array	81.14	319	P	P	05 19 33.4	-0.2
ILAR	Eielson Array	81.84	22	P	P	05 19 35.8	-1.1
	comp=Z,0.5nm,0.9s,baz=238,slow=5.2,SNR=6.4						
ILAR	Eielson Array	81.84	22	P	P	05 19 34.8	-2.1
ZALV	Zalesovo Beam	81.86	326	P	P	05 19 36.3	-0.9
	comp=Z,0.4nm,0.4s,baz=103,slow=5.2,SNR=4.3						
ZALV	Zalesovo Beam	81.86	326	P	P	05 19 37.0	-0.2
MAW	Mawson	85.90	203	P	P	05 19 57.5	0.0
	comp=Z,3.9nm,0.7s,baz=57,slow=5.7,SNR=6.4						
MAW	Mawson	85.90	203	P	P	05 19 55.8	-1.6
MAW				IAmb	IAmb	05 19 58.4	
	comp=Z,1.3nm,0.8s						
NVAR	Mina Array Bea	91.27	52	P	P	05 20 25.8	+1.9
	comp=Z,0.3nm,0.7s,baz=256,slow=7.2,SNR=2.3						
YKA	Yellowknife Ar	95.00	28	P	P	05 20 40.0	-0.2
	comp=Z,0.2nm,0.8s,baz=270,slow=5.6,SNR=6.1						
TORD	Torodi Ar. Bea	151.40	289	PKPbc	PKPbc	05 27 11.4	-0.8
	comp=Z,1.6nm,0.7s,baz=69,slow=1.9,SNR=9.0						

KNET **03** *05:17:20.2±0.3, 42°.48N×74°.42E, h15km±3km, ml2.7, Error ellipse: s-maj=2.2km s-min=1.6km az=149.0*
SOME **03** *05:17:20.2, 42°.48N×74°.40E, h10km*
NNC **03** *05:17:21.1±0.5, 42°.47N×74°.43E, h0km±3km, mb4.0, mpv3.7, Error ellipse: s-maj=5.7km s-min=3.0km az=149.0*
KRNET **03** *05:17:21.0±0.1, 42°.48N×74°.43E, h16km, mb3.5*
ISC 03 05:17:21.1±0.8, 42°.48N±0°.02×74°.44E±0°.01, h14km±6km, n79, $\sigma 1^{s}08$/136, 53C-23D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	0.16	14	⇑iP	Pg	05 17 24.7	-0.6
	baz=17						
AAK				⇑iS	Sg	05 17 27.2	-0.9
	baz=17						
AAK	Ala-Archa	0.16	14	⇑P	Pg	05 17 24.7	-0.6
	268nm,0.1s,SNR=1070						
AAK				⇑S	Sg	05 17 27.2	-0.9
	2µm,0.1s						
AAK	Ala-Archa	0.16	14	⇑P	Pg	05 17 24.7	-0.6
	111nm,0.3s						
AAK				⇓S	Sg	05 17 27.1	-0.9
	834nm,0.2s						
UCH	Uchtor	0.26	168	⇓iP	Pg	05 17 26.7	-0.2
	baz=66						
UCH				⇓iS	Sg	05 17 30.7	-0.1
	baz=66						
UCH	Uchtor	0.26	168	⇑P	Pg	05 17 26.6	-0.2
	590nm,0.1s,SNR=2985						
UCH				⇓S	Sg	05 17 30.7	-0.1
	2µm,0.1s						
FRU1	Bishkek	0.36	23	⇑iP	Pg	05 17 28.3	-0.1
	baz=24						
FRU1				⇑iS	Sg	05 17 33.4	0.0
	baz=24						
KBK	Karagaybulak	0.41	65	⇑iP	Pg	05 17 29.4	-0.1
	baz=65						
KBK				⇑iS	Sg	05 17 35.2	0.0
	baz=65						
KBK	Karagaybulak	0.41	65	⇑P	Pg	05 17 29.4	-0.1
	222nm,0.1s,SNR=690						
KBK				⇑S	Sg	05 17 35.4	+0.2
	419nm,0.2s						
EKS2	Erkin-Say	0.52	291	⇓iP	Pg	05 17 31.1	-0.3
	baz=91						
EKS2				⇓iS	Sg	05 17 38.5	+0.1
	baz=91						
EKS2	Erkin-Say	0.52	291	⇓P	Pg	05 17 31.1	-0.3
	122nm,0.1s,SNR=633						
EKS2				⇑S	Sg	05 17 38.5	+0.1
	420nm,0.2s						
CHMS	Chumysh	0.57	24	⇑iP	Pg	05 17 31.9	-0.3
	baz=24						
CHMS				⇑iS	Sg	05 17 39.5	-0.3
	baz=24						
CHMS	Chumysh	0.57	24	P	Pg	05 17 31.9	-0.3
	122nm,0.1s,SNR=240						
CHMS				⇑S	Sg	05 17 39.6	-0.2
	658nm,0.1s						
ARLS	Aral	0.62	188	⇑iP	Pg	05 17 32.9	-0.5
	baz=87						
ARLS				⇑iS	Sg	05 17 41.3	-0.3
	baz=87						
AML	Almayashu	0.65	238	⇑iP	Pg	05 17 33.5	-0.5
	baz=38						
AML				⇑iS	Sg	05 17 42.5	-0.2
	baz=38						
AML	Almayashu	0.65	238	P	Pg	05 17 33.5	-0.5
	104nm,0.1s,SNR=752						
AML				⇑S	Sg	05 17 42.5	-0.2
	105nm,0.2s						
KZA	Kyzart	0.72	124	⇑iP	Pg	05 17 35.1	-0.1
	baz=23						
KZA				⇑iS	Sb	05 17 45.4	-0.2
	baz=23						
KZA	Kyzart	0.72	124	P	Pg	05 17 35.1	-0.1
	52nm,0.2s,SNR=243						
KZA				⇑S	Sb	05 17 45.6	0.0
	208nm,0.2s						
USP	Ospenovka	0.79	3	⇓iP	Pg	05 17 35.8	-0.6
	baz=4.0						
USP				⇓iS	Sg	05 17 46.3	-0.5
	baz=4.0						
USP	Ospenovka	0.79	3	⇓P	Pg	05 17 35.8	-0.6
	17nm,0.1s,SNR=6.8						
USP				⇑S	Sg	05 17 46.3	-0.5
	158nm,0.1s						
BOOM	Boomskoye usch	1.11	89	⇑iP	Pb	05 17 42.0	-0.1
	baz=89						
BOOM				⇑iS	Sb	05 17 56.6	+0.1
	baz=89						
KST	Kastek	1.25	63	⇑iP	Pn	05 17 44.4	+0.1
	baz=63						
KST				⇑iS	Sg	05 18 01.9	+0.2
	baz=63						
KST	Kastek	1.25	63	⇑iP	Pn	05 17 44.4	+0.1
	36nm,0.2s						
KST				⇑iS	Sg	05 18 01.9	+0.2
	43nm,0.3s						
KST	Kastek	1.25	63	P	Pn	05 17 44.2	-0.1
	36nm,0.2s						
KST				S	Sg	05 18 01.6	-0.1
	24nm,0.2s						
ULHL	Ulahol	1.35	99	⇑iP	Pn	05 17 46.0	+0.2
	baz=99						
ULHL				⇑iS	Sb	05 18 04.3	+0.7
	baz=99						
KRBS	Karabastau	1.52	36	⇑iP	Pb	05 17 49.0	0.0
	41nm,0.1s						
KRBS				eS	Sg	05 18 09.9	0.0
	30nm,0.2s						
KRBS	Karabastau	1.52	36	P	Pb	05 17 49.0	0.0
	41nm,0.1s						
KRBS				S	Sg	05 18 09.8	-0.1
	21nm,0.2s						
NRN	Naryn	1.56	131	⇑iP	Pb	05 17 50.1	+0.1
	baz=32						
NRN				⇑iS	Sg	05 18 10.9	-0.6
	baz=32						
ARSB	Arslanbob	1.59	224	⇑iP	Pb	05 17 50.3	0.0
	baz=24						
ARSB				⇑iS	Sg	05 18 11.4	-0.8
	baz=24						
MTBS	Maitube	1.60	65	⇑iP	Pb	05 17 50.5	0.0
	baz=66						
MTBS				⇑iS	Sg	05 18 12.2	-0.5
	baz=66						
MTBS	Maitube	1.60	65	⇑iP	Pb	05 17 50.5	0.0
	26nm,0.2s						
MTBS				⇑iS	Sg	05 18 12.2	-0.5
	39nm,0.2s						
MTBS	Maitube	1.60	65	P	Pb	05 17 50.5	0.0
	26nm,0.2s						
MTBS				S	Sg	05 18 11.9	-0.8
	27nm,0.2s						
IZV	Izvestkoviy	1.69	70	⇑iP	Pb	05 17 52.4	+0.3
	baz=70						
IZV				⇑iS	Sg	05 18 16.2	+0.5
	baz=70						
IZV	Izvestkoviy	1.69	70	⇑iP	Pb	05 17 52.4	+0.3
	39nm,0.2s						
IZV				⇑iS	Sg	05 18 16.2	+0.5
	44nm,0.2s						
IZV	Izvestkoviy	1.69	70	P	Pb	05 17 52.3	+0.3
	39nm,0.2s						
IZV				S	Sg	05 18 16.2	+0.5
	36nm,0.2s						
TNSS	Tian-Shan	1.93	72	⇓iP	Pb	05 17 56.9	+0.7
	baz=72						
TNSS				⇓iS	Sg	05 18 23.0	-0.1
	baz=72						
TNSS	Tian-Shan	1.93	72	⇓iP	Pb	05 17 56.9	+0.7
	47nm,0.2s						
TNSS				⇓iS	Sg	05 18 23.1	-0.1
	46nm,0.4s						
TNSS	Tian-Shan	1.93	72	Pg	Pb	05 17 56.6	+0.4
	47nm,0.2s						
TNSS				Lg	Lg	05 18 22.7	
	20nm,0.3s						
ARK	Arkit	1.96	251	⇑iP	Pb	05 17 56.1	-0.6
	baz=50						
ARK				⇑iS	Sb	05 18 21.8	+0.7
	baz=50						
KUU	Kurty	1.98	44	⇓iP	Pb	05 17 57.0	+0.1
	baz=44						
KUU				⇓iS	Sb	05 18 23.1	+1.7
	baz=44						
KUU	Kurty	1.98	44	⇓iP	Pb	05 17 57.0	+0.1
	28nm,0.2s						
KUU				⇓iS	Sb	05 18 23.1	+1.7
	58nm,0.3s						
KUU	Kurty	1.98	44	Pg	Pb	05 17 56.8	-0.1
	25nm,0.3s						
KUU				Lg	Lg	05 18 23.2	
	56nm,0.3s						
MDOK	Medeo	2.04	70	eP	Pb	05 17 58.3	+0.4
	baz=70						
MDOK				eS	Sg	05 18 25.7	-0.9
	baz=70						
MDOK	Medeo	2.04	70	eP	Pb	05 17 58.3	+0.4
	56nm,0.2s						
MDOK				eS	Sg	05 18 25.7	-0.9
	18nm,0.3s						
MDOK	Medeo	2.04	70	⇓P	Pb	05 17 58.8	+0.8
	24nm,0.4s						
MDOK	Medeo	2.04	70	Pg	Pb	05 17 58.3	+0.4
	56nm,0.2s						
MDOK				Lg	Lg	05 18 25.7	
	18nm,0.3s						
KTBS	Karatobe	2.05	52	eP	Pb	05 17 58.2	0.0
	33nm,0.3s						
KTBS				eS	Sg	05 18 25.7	-1.4
	52nm,0.2s						
KTBS	Karatobe	2.05	52	Pg	Pb	05 17 58.1	0.0
	30nm,0.2s						
KTBS				Lg	Lg	05 18 25.3	
	47nm,0.2s						
KDJ	Kajisay	2.06	99	⇑iP	Pb	05 17 57.4	-1.0
	baz=99						
KDJ				⇑iS	Sb	05 18 24.2	+0.3
	baz=99						
KOTS	Kotyrbulak	2.10	68	eP	Pb	05 17 59.8	+0.7
	92nm,0.3s						
KOTS				eS	Sg	05 18 28.6	-0.2
	30nm,0.3s						
KOTS	Kotyrbulak	2.10	68	Pg	Pb	05 17 59.8	+0.7
	93nm,0.3s						
KOTS				Lg	Lg	05 18 28.6	
	30nm,0.3s						
CHKK	Chushkaly	2.31	53	eP	Pb	05 18 02.6	0.0
	12nm,0.4s						
CHKK				eS	Sb	05 18 33.3	+2.2
	56nm,0.2s						
CHKK	Chushkaly	2.31	53	Pg	Pb	05 18 02.6	0.0
	12nm,0.3s						
CHKK				Lg	Lg	05 18 33.3	
	56nm,0.2s						
DZA	Taraz	2.33	281	eP	Pb	05 18 01.6	-1.3
	baz=81						
DZA				eS	Sb	05 18 31.8	+0.3
	baz=81						
DZA	Taraz	2.33	281	eP	Pb	05 18 01.6	-1.3
	91nm,0.2s						
DZA				eS	Sb	05 18 31.8	+0.3
	106nm,0.2s						
ANVS	Anan'yevo	2.40	82	⇑eP	Pb	05 18 02.3	-1.9
	baz=82						
ANVS				⇑iS	Sb	05 18 32.2	-1.5
	baz=82						
BTLS	Baital	2.58	354	eP	Pb	05 18 06.2	-0.8
	0.4nm,0.1s						
BTLS				eS	Sb	05 18 40.0	+1.5
	30nm,0.3s						
BTLS	Baital	2.58	354	Pg	Pb	05 18 06.2	-0.8
	0.4nm,0.1s						
BTLS				Lg	Lg	05 18 39.6	
	5.1nm,0.3s						
JBG	Jabagly	2.88	270	Pg	Pg	05 18 14.2	-2.2
	15nm,0.4s						
JBG				Lg	Lg	05 18 53.2	
	38nm,0.3s						
KK31	Karatay Array	2.96	283	⇑Pg	Pb	05 18 14.1	+0.5
	0.7nm,0.2s,baz=99,slow=14,SNR=45						
KK31				Lg	Lg	05 18 53.1	
	6.0nm,0.3s,baz=118,slow=22,SNR=21						
SATY	Saty	2.98	77	eP	Pb	05 18 15.7	+1.7
	30nm,0.3s						
SATY				eS	Sg	05 18 56.0	-0.7
	35nm,0.3s						
SATY	Saty	2.98	77	Pg	Pb	05 18 15.8	+1.9
	30nm,0.3s						
SATY				Lg	Lg	05 18 55.6	
	29nm,0.5s						
ARXS	Arharly	3.02	54	eP	Pb	05 18 15.6	+1.0
	7.2nm,0.3s						
ARXS				eS	Sg	05 18 55.6	-2.4
	25nm,0.5s						
ARXS	Arharly	3.02	54	Pg	Pb	05 18 14.9	+0.3
	7.2nm,0.3s						
ARXS				Lg	Lg	05 18 54.6	
	17nm,0.3s						
ZHN	Zhinishke	3.02	75	eP	Pb	05 18 15.9	+1.3
	27nm,0.3s						
ZHN				eS	Sg	05 18 57.2	-0.8
	18nm,0.2s						
ZHN	Zhinishke	3.02	75	Pg	Pb	05 18 15.9	+1.3
	27nm,0.3s						
ZHN				Lg	Lg	05 18 56.7	
	18nm,0.2s						
KPKS	Kokpek	3.27	71	eP	Pb	05 18 20.0	+1.1
	17nm,0.1s						
KPKS				eS	Sg	05 19 03.1	-2.9
	54nm,0.4s						
IUG	Iuzhnay	3.29	266	eP	Pb	05 18 19.2	-0.1
	1.4nm,0.2s						
IUG				eS	Sb	05 19 02.4	+3.3
	36nm,0.3s						
BRLS	Borolday	3.44	281	eP	Pb	05 18 23.2	+1.5
	0.6nm,0.1s						
BRLS				eS	Sg	05 19 09.1	-2.3
	9.9nm,0.3s						
BRLS	Borolday	3.44	281	Pg	Pb	05 18 23.2	+1.5
	0.5nm,0.2s						
BRLS				Lg	Lg	05 19 09.1	
	9.9nm,0.3s						
UZB	Uzynbulak	3.44	77	eP	Pb	05 18 22.8	+1.0
	9.4nm,0.3s						
UZB				eS	Sg	05 19 09.2	-2.3
	11nm,0.4s						
UZB	Uzynbulak	3.44	77	Pg	Pb	05 18 22.8	+1.0
	9.4nm,0.3s						
UZB				Lg	Lg	05 19 08.5	
PDGK	Podgornoye	3.81	75	Pg	Pb	05 18 29.0	+0.9
	3.7nm,0.7s						
PDGK				Lg	Lg	05 19 18.3	
	6.1nm,0.7s						
PDGK	Podgornoye	3.81	75	⇓Pg	Pb	05 18 29.2	+1.1
	12nm,0.9s						
PDGK				⇓Lg	Lg	05 19 22.4	
	18nm,0.8s						
DJR	Jarkent	4.32	63	eP	Pg	05 18 40.3	-3.5
	1.7nm,0.1s						
DJR				eS	Sg	05 19 37.7	-1.9
	4.3nm,0.5s						
DJR	Jarkent	4.32	63	Pg	Pg	05 18 41.2	-2.6
	1.6nm,0.1s						
DJR				Lg	Lg	05 19 39.4	
	4.3nm,0.5s						
KAPS	Kapalarasan	4.53	50	eP	Pb	05 18 42.9	+2.6
	2.0nm,0.3s						
KAPS				eS	Sg	05 19 43.4	-3.0
	6.2nm,0.6s						
KAPS	Kapalarasan	4.53	50	Pg	Pb	05 18 42.7	+2.4
	2.0nm,0.3s						
KAPS				Lg	Lg	05 19 42.0	
	6.1nm,0.2s						
MK31	Makanchi Array	7.07	50	Pn	Pn	05 19 06.8	+2.7
	0.7nm,0.6s,baz=232,slow=14,SNR=12						
MK31				⇓Lg	Lg	05 21 06.9	
	1.1nm,0.8s,baz=115,slow=5.5,SNR=5.6						
KURBB	Kurchatov Arra	8.62	18	⇓Lg	Lg	05 21 55.1	
	8.1nm,0.8s						

IDC 03 05:24:25.7±4.4, 18°.91S×169°.33E, h224km±60km, mb3.3/3, mb1 3.5/4, mb1mx3.2/25, mbtmp3.8/4, Error ellipse: s-maj=144.4km s-min=34.0km az=152.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.14	220	P	Pn	05 25 30.3	+0.1
	2.9nm,0.3s,baz=166,slow=19,SNR=31						
DZM				S	S	05 26 15.7	-5.4
	baz=269,slow=22,SNR=0.8						
ASAR	Alice Springs	33.29	256	P	P	05 30 42.2	-0.3
	1.1nm,0.4s,baz=81,slow=8.7,SNR=17						
SONM	Songino Array	87.01	323	P	P	05 36 46.5	+0.7
	0.6nm,0.8s,baz=146,slow=5.3,SNR=3.9						
ILAR	Eielson Array	89.89	17	P	P	05 36 58.2	-0.6
	0.2nm,0.5s,baz=236,slow=4.8,SNR=5.9						
ARCES	ARCESS Array B	124.77	345	PKP	PKPdf	05 42 58.1	0.0
	1.3nm,0.9s,baz=66,slow=2.2,SNR=0.7						

TRN **03** *05:27:55.7, 19°.49N×64°.88W, h25km, M4.1(RSPR)*
IDC **03** *05:27:56.1±0.5, 19°.16N×64°.75W, h0km, mb4.0/18, mb1 4.3/22, mb1mx4.2/46, mbtmp4.2/22, ML3.7/4, MS3.9/2,*

Ms1 3.9/2, ms1mx3.4/34, Error ellipse: s-maj=14.3km s-min=12.7km az=67.0

*RSPR **03** 05:28:01.7, 19.°05N×64.°83W, h8km±4km, MD4.1/13*

*NEIC **03** 05:28:01.4±2.3, 19.°01N±0.°05×64.°84W±0.°04, h28km±5km, Error ellipse: s-maj=8.1km s-min=5.3km az=199.0*

*OSPL **03** 05:28:02.7±0.9, 19.°06N×65.°05W, h0km±134km, ML4.0*

ISC 03 05:28:00.8±1.0**, 19.°05N**±0.°04×**64.°85W**±0.°03**, h28**km±7km**,**
n442, σ**1.°72**/438**, mb4.4**/47**, 36C-3D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.67**	**160**	⇑eP	**Pb**	**05 28 13.8**	**-0.2**
TBVI	**Tortola**	**0.67**	**160**	⇑eP	**Pb**	**05 28 13.8**	**-0.2**
TBVI	**Tortola**	**0.67**	**160**		**Pb**	**05 28 13.8**	**-0.2**
MTP	**Monte Pirata**	**1.16**	**215**	⇑eP	**Pn**	**05 28 21.5**	**+0.4**
MTP				eS	**Sn**	**05 28 36.1**	**0.0**
MTP	**Monte Pirata**	**1.16**	**215**	⇑eP	**Pn**	**05 28 21.5**	**+0.4**
MTP	**Monte Pirata**	**1.16**	**215**	Pg	**Pn**	**05 28 21.2**	**+0.1**
MTP				Sg	**Sn**	**05 28 36.1**	**0.0**
CBYP	**Canovanas**	**1.23**	**231**	⇑eP	**Pn**	**05 28 21.9**	**-0.3**
CBYP				eS	**Sn**	**05 28 38.0**	**+0.1**
CBYP	**Canovanas**	**1.23**	**231**	⇑eP	**Pn**	**05 28 21.9**	**-0.3**
CBYP	**Canovanas**	**1.23**	**231**	⇑eP	**Pn**	**05 28 22.1**	**0.0**
CBYP				eS	**Sb**	**05 28 38.5**	**-0.5**
CBYP	**Canovanas**	**1.23**	**231**		**Pn**	**05 28 21.8**	**-0.3**
CBYP				Sg	**Sb**	**05 28 39.0**	**+0.1**
CDVI	**St. Croix**	**1.30**	**176**		**Pb**	**05 28 24.3**	**-0.3**
CDVI				Sn	**Sb**	**05 28 39.8**	**-1.1**
HUMP	**Col San Antoni**	**1.31**	**226**	⇑eP	**Pn**	**05 28 23.3**	**+0.1**
HUMP				eS	**Sn**	**05 28 39.8**	**0.0**
HUMP	**Col San Antoni**	**1.31**	**226**	⇑eP	**Pn**	**05 28 23.6**	**+0.3**
HUMP				eS	**Sn**	**05 28 40.3**	**+0.5**
HUMP	**Col San Antoni**	**1.31**	**226**	⇑eP	**Pn**	**05 28 23.3**	**+0.1**
HUMP	**Col San Antoni**	**1.31**	**226**		**Pn**	**05 28 23.1**	**-0.1**
HUMP				Sn	**Sb**	**05 28 40.8**	**-0.4**
GCPR	**Guaynabo City**	**1.38**	**238**	⇑eP	**Pn**	**05 28 24.1**	**-0.1**
GCPR	**Guaynabo City**	**1.38**	**238**	eS	**Sn**	**05 28 41.8**	**+0.2**
GCPR	**Guaynabo City**	**1.38**	**238**		**Pn**	**05 28 23.5**	**-0.7**
GCPR					**Sn**	**05 28 41.4**	**-0.1**
PDPR	**Patillas Dam,**	**1.51**	**227**	⇑eP	**Pn**	**05 28 26.5**	**+0.4**
PDPR				eS	**Sn**	**05 28 44.9**	**+0.1**
PDPR	**Patillas Dam,**	**1.51**	**227**		**Pn**	**05 28 26.2**	**+0.2**
SJG	**San Juan**	**1.54**	**233**	Pn	**Pn**	**05 28 26.1**	**-0.4**
	53nm,0.3s,baz=195,slow=9.6,SNR=358						
SJG				Sn	**Sn**	**05 28 45.3**	**-0.3**
	464nm,0.3s,baz=265,slow=18,SNR=19						
SJG	**San Juan**	**1.54**	**233**		**Pn**	**05 28 26.1**	**-0.4**
SJG				Sn	**Sn**	**05 28 45.9**	**+0.3**
IGPR	**InterUniversit**	**1.61**	**228**	⇑eP	**Pn**	**05 28 27.7**	**+0.3**
IGPR				eS	**Sn**	**05 28 48.1**	**+1.0**
IGPR	**InterUniversit**	**1.61**	**228**	⇑eP	**Pn**	**05 28 27.5**	**+0.2**
IGPR	**InterUniversit**	**1.61**	**228**	eS	**Sn**	**05 28 47.8**	**+0.7**
IGPR	**InterUniversit**	**1.61**	**228**		**Pn**	**05 28 27.4**	**0.0**
EMPR	**Esperanza - Ma**	**1.69**	**250**	⇑eP	**Pn**	**05 28 28.9**	**+0.5**
EMPR	**Esperanza - Ma**	**1.69**	**250**	eS	**Sn**	**05 28 49.8**	**+0.6**
EMPR	**Esperanza - Ma**	**1.69**	**250**		**Pn**	**05 28 26.7**	**-1.7**
EMPR				Sn	**Sn**	**05 28 44.8**	**-4.3**
CELP	**Cerrillos**	**1.90**	**240**	⇓eP	**Pn**	**05 28 31.5**	**+0.1**
CELP	**Cerrillos**	**1.90**	**240**	⇓eP	**Pn**	**05 28 31.5**	**+0.1**
CELP	**Cerrillos**	**1.90**	**240**		**Pn**	**05 28 31.5**	**+0.1**
AOPR	**Arecibo Observ**	**1.93**	**249**	⇑eP	**Pn**	**05 28 31.8**	**-0.1**
AOPR				eS	**Sn**	**05 28 56.3**	**+1.0**
AOPR	**Arecibo Observ**	**1.93**	**249**	⇑eP	**Pn**	**05 28 31.8**	**-0.1**
AOPR	**Arecibo Observ**	**1.93**	**249**	⇑eP	**Pn**	**05 28 32.4**	**+0.5**
UUPR	**Utuado, UPR, P**	**1.94**	**246**		**Pn**	**05 28 32.1**	**+0.2**
OBIP	**Obispado Ponce**	**1.94**	**239**	⇑eP	**Pn**	**05 28 32.1**	**+0.1**
OBIP				eS	**Sn**	**05 28 56.6**	**+1.2**
OBIP	**Obispado Ponce**	**1.94**	**239**	⇑eP	**Pn**	**05 28 32.1**	**+0.1**
OBIP	**Obispado Ponce**	**1.94**	**239**		**Pn**	**05 28 31.0**	**-1.0**
SMRT	**St. Maarten**	**1.96**	**120**	eP	**Pn**	**05 28 32.3**	**+0.1**
SMRT				eS	**Sb**	**05 28 59.3**	**-0.7**
SMRT	**St. Maarten**	**1.96**	**120**		**Pn**	**05 28 32.1**	**-0.1**
ICMP	**Isla Caja de M**	**1.97**	**234**	⇑eP	**Pn**	**05 28 33.0**	**+0.8**
ICMP	**Isla Caja de M**	**1.97**	**234**	eS	**Sn**	**05 28 56.8**	**+0.8**
ICMP	**Isla Caja de M**	**1.97**	**234**		**Pn**	**05 28 32.9**	**+0.6**
SABA	**Saba**	**2.09**	**133**	eP	**Pn**	**05 28 35.3**	**+1.3**
SABA				eS	**Sb**	**05 29 05.5**	**+1.8**
SABA	**Saba**	**2.09**	**133**		**Pn**	**05 28 34.8**	**+0.7**
GBPR	**Guanica, Bosqu**	**2.20**	**241**	⇑eP	**Pn**	**05 28 36.5**	**+1.1**
GBPR				eS	**Sn**	**05 29 02.8**	**+1.0**
GBPR	**Guanica, Bosqu**	**2.20**	**241**	⇑eP	**Pn**	**05 28 36.5**	**+1.1**
GBPR	**Guanica, Bosqu**	**2.20**	**241**		**Pn**	**05 28 36.5**	**+1.1**
GBPR					**Sn**	**05 29 02.8**	**+1.0**
AGPR	**Aguadilla, PR**	**2.22**	**255**	⇑eP	**Pn**	**05 28 35.9**	**+0.1**
AGPR				eS	**Sn**	**05 29 02.9**	**+0.7**
AGPR	**Aguadilla, PR**	**2.22**	**255**	iP	**Pn**	**05 28 36.2**	**+0.5**
AGPR				eS	**Sn**	**05 29 01.2**	**-1.0**
AGPR				IAML		05 29 12.1	
	comp=Z,491nm,0.3s						
AGPR	**Aguadilla, PR**	**2.22**	**255**	⇑eP	**Pn**	**05 28 35.9**	**+0.1**
AGPR	**Aguadilla, PR**	**2.22**	**255**		**Pn**	**05 28 35.5**	**-0.3**
LSP	**Las Mesas**	**2.29**	**248**	⇑eP	**Pn**	**05 28 37.3**	**+0.5**
LSP				eS	**Sn**	**05 29 05.3**	**+1.3**
LSP	**Las Mesas**	**2.29**	**248**	⇑eP	**Pn**	**05 28 37.3**	**+0.5**
LSP	**Las Mesas**	**2.29**	**248**		**Pn**	**05 28 37.3**	**+0.5**
LSP					**Sn**	**05 29 05.3**	**+1.3**
MPR	**Mayaguez**	**2.32**	**249**	iP	**Pn**	**05 28 37.5**	**+0.4**
MPR				eS	**Sn**	**05 29 04.2**	**-0.6**
MPR				IAML		05 29 24.6	
	comp=Z,560nm,0.8s						
MPR	**Mayaguez**	**2.32**	**249**		**Pn**	**05 28 37.8**	**+0.6**
MLPR	**Magueyes Islan**	**2.34**	**243**	⇑eP	**Pn**	**05 28 37.5**	**0.0**
MLPR	**Magueyes Islan**	**2.34**	**243**	eS	**Sn**	**05 29 06.3**	**+1.0**
MLPR	**Magueyes Islan**	**2.34**	**243**		**Pn**	**05 28 36.9**	**-0.5**
SEUS	**St. Eustatius**	**2.36**	**131**	eP	**Pn**	**05 28 39.9**	**+2.1**
SEUS				eS	**Sb**	**05 29 11.9**	**+0.4**
SEUS	**St. Eustatius**	**2.36**	**131**		**Pn**	**05 28 38.4**	**+0.7**
CRPR	**Cabo Rojo, PR**	**2.38**	**244**	⇑eP	**Pn**	**05 28 38.8**	**+0.9**
CRPR				eS	**Sn**	**05 29 07.2**	**+1.0**
CRPR	**Cabo Rojo, PR**	**2.38**	**244**	⇑eP	**Pn**	**05 28 38.8**	**+0.9**
CRPR	**Cabo Rojo, PR**	**2.38**	**244**		**Pn**	**05 28 38.3**	**+0.4**
SKI	**Saint Kitts**	**2.64**	**130**	eP	**Pn**	**05 28 43.1**	**+1.5**
SKI				eS	**Sb**	**05 29 18.3**	**-1.2**
SKI	**Saint Kitts**	**2.64**	**130**		**Pn**	**05 28 42.6**	**+1.0**
SKOC	**St. Kitts, UWI**	**2.67**	**131**	eP	**Pn**	**05 28 43.0**	**+1.0**
SKOC				eS	**Sb**	**05 29 18.5**	**-1.8**
SKTB	**Turtle Beach**	**2.81**	**130**	eS	**Sb**	**05 29 20.3**	**-4.0**
NVRH	**Round Hill, Ne**	**2.84**	**131**	eS	**Sb**	**05 29 22.9**	**-2.3**
NVDO	**Nevis, Disaste**	**2.87**	**132**	eP	**Pn**	**05 28 45.8**	**+1.1**
NVDO				eS	**Sb**	**05 29 23.9**	**-2.1**
NVBH	**Bath Hotel, Ne**	**2.87**	**132**	eS	**Sb**	**05 29 23.1**	**-2.9**
NEV	**Hard Times**	**2.89**	**131**	eP	**Pn**	**05 28 47.2**	**+2.1**
NEV				eS	**Sb**	**05 29 24.1**	**-2.6**
ANWB	**Willy Bob**	**3.22**	**115**	eP	**Pn**	**05 28 48.0**	**-1.5**
ANWB				eS	**Sn**	**05 29 28.8**	**+1.8**
ANWB	**Willy Bob**	**3.22**	**115**		**Pn**	**05 28 48.2**	**-1.4**
PCDR	**Punta Cana, DR**	**3.38**	**261**	⇑eP	**Pn**	**05 28 53.1**	**+1.3**
PCDR	**Punta Cana, DR**	**3.38**	**261**	iP	**Pn**	**05 28 52.2**	**+0.4**
PCDR				IAML		05 30 00.4	
	comp=Z,703nm,0.9s						
PCDR	**Punta Cana, DR**	**3.38**	**261**	⇑eP	**Pn**	**05 28 53.1**	**+1.3**
PCDR	**Punta Cana, DR**	**3.38**	**261**		**Pn**	**05 28 53.9**	**+2.1**
MLYT	**Lee's Yard**	**3.44**	**132**	eP	**Pn**	**05 28 53.7**	**+1.1**
MLYT				eS	**Sb**	**05 29 37.1**	**-5.3**
BPA	**Boggy Peak**	**3.48**	**125**	eP	**Pn**	**05 28 53.7**	**+0.6**
BPA				eS	**Sn**	**05 29 37.1**	**+3.6**
MDPO	**Dominica; Chan**	**4.75**	**136**	eP	**Pn**	**05 29 12.4**	**+1.9**
MDPO	**Dominica; Chan**	**4.75**	**136**	eS	**Sn**	**05 30 08.7**	**+4.0**
DWS	**Wesley**	**4.84**	**135**	eP	**Pn**	**05 29 12.9**	**+1.0**
DWS	**Wesley**	**4.84**	**135**	eS	**Sn**	**05 30 11.6**	**+4.5**
MDN	**Morne-Daniel**	**4.97**	**138**	eP	**Pn**	**05 29 14.7**	**+1.0**
BANI	**BANI**	**5.26**	**264**	Pn	**Pn**	**05 29 20.6**	**+2.9**
SC01	**Santiago de lo**	**5.56**	**275**		**Pn**	**05 29 23.4**	**+1.7**
FDF	**Fort de France**	**5.57**	**140**	eP	**Pn**	**05 29 24.5**	**+2.6**
FDF	**Fort de France**	**5.57**	**140**	eS	**Sn**	**05 30 29.5**	**+4.5**
FDF	**Fort de France**	**5.57**	**140**		**Pn**	**05 29 23.5**	**+1.6**
SDDR	**Presa de Saban**	**6.09**	**270**	iP	**Pn**	**05 29 29.8**	**+0.7**
SDDR				eS	**Sn**	**05 30 32.7**	**-5.1**
SDDR				IAML		05 30 42.6	
	comp=Z,79nm,0.6s						
SDDR	**Presa de Saban**	**6.09**	**270**		**Pn**	**05 29 29.9**	**+0.9**
SLBI	**Saint Lucia, B**	**6.23**	**143**	eP	**Pn**	**05 29 33.3**	**+2.3**
SLBI	**Saint Lucia, B**	**6.23**	**143**	eS	**Sn**	**05 30 45.5**	**+4.2**
SLB	**Belfond**	**6.36**	**144**	eP	**Pn**	**05 29 34.9**	**+2.2**
SLB	**Belfond**	**6.36**	**144**	eS	**Sn**	**05 30 48.3**	**+3.9**
GRTK	**Grand Turk**	**6.38**	**294**	Pn	**Pn**	**05 29 31.3**	**-1.7**
MCLT	**Moule a Chique**	**6.51**	**144**	eP	**Pn**	**05 29 37.7**	**+3.0**
MCLT	**Moule a Chique**	**6.51**	**144**	eS	**Sn**	**05 30 52.1**	**+4.0**
MCLT	**Moule a Chique**	**6.51**	**144**	Pn	**Pn**	**05 29 36.5**	**+1.8**
SVV	**Soufriere Volc**	**6.69**	**148**	eP	**Pn**	**05 29 39.9**	**+2.6**
SVB	**Belmont**	**6.71**	**148**	eP	**Pn**	**05 29 41.0**	**+3.5**
SVB	**Belmont**	**6.71**	**148**	e	Pb	05 30 54.3	+57
SVB	**Belmont**	**6.71**	**148**		**Pn**	**05 29 38.3**	**+0.7**
SVCV	**St. Vincent, C**	**6.76**	**148**	eP	**Pn**	**05 29 41.4**	**+3.1**
SVCV	**St. Vincent, C**	**6.76**	**148**	e	Pb	05 30 50.4	+53
LGNH	**Logne**	**7.36**	**267**	Pn	**Pn**	**05 29 47.6**	**+1.2**
GRSS	**Sisters**	**7.41**	**155**	eP	**Pn**	**05 29 50.7**	**+3.6**
GRHS	**Sauteurs**	**7.46**	**155**	eP	**Pn**	**05 29 51.4**	**+3.5**
GRGR	**Grenville**	**7.54**	**155**	eP	**Pn**	**05 29 53.1**	**+4.2**
GRGR	**Grenville**	**7.54**	**155**	Pn	**Pn**	**05 29 50.0**	**+1.1**
BBGH	**Gun Hill**	**7.77**	**138**	eP	**Pn**	**05 29 53.6**	**+1.5**
BBSP	**Saint Philip**	**7.87**	**138**	eP	**Pn**	**05 29 55.7**	**+2.3**
TOSP	**Speyside**	**8.76**	**151**	eP	**Pn**	**05 30 08.5**	**+2.8**
TOSP	**Speyside**	**8.76**	**151**	eS	**Sn**	**05 31 45.9**	**+2.2**
TOSP	**Speyside**	**8.76**	**151**	Pn	**Pn**	**05 30 06.4**	**+0.7**
PCRV	**Puerto La Cruz**	**8.83**	**179**	Pn	**Pn**	**05 30 07.2**	**+0.5**
	comp=Z,5.0nm,0.3s,baz=348,slow=7.1,SNR=20						
PCRV				Sn	**Sn**	**05 31 43.6**	**-1.7**
	comp=Z,1.5nm,0.3s,baz=194,slow=16,SNR=2.9						
PCRV				LR	LR	05 33 47.4	
	comp=Z,577nm,19.2s,slow=39						
PLCV	**Puerto La Cruz**	**8.84**	**178**		**Pn**	**05 30 07.2**	**+0.3**
PLCV					**Sn**	**05 31 43.6**	**-2.0**
TRN	**Trinidad (W)**	**9.00**	**158**	eP	**Pn**	**05 30 11.6**	**+2.6**
TRN	**Trinidad (W)**	**9.00**	**158**	eS	**Sn**	**05 31 52.4**	**+3.0**
TBH	**Brigand Hill**	**9.27**	**156**	eP	**Pn**	**05 30 16.8**	**+4.1**
TPP	**Pointe-a-Pierr**	**9.29**	**159**	eP	**Pn**	**05 30 16.6**	**+3.7**
ORIV	**Oritupano**	**10.02**	**172**	eP	**Pn**	**05 30 26.5**	**+3.4**
ORIV	**Oritupano**	**10.02**	**172**	eS	**Sn**	**05 32 18.6**	**+4.0**
SDV	**Santo Domingo**	**11.56**	**210**	Pn	**Pn**	**05 30 46.0**	**+1.8**
	comp=Z,2.3nm,0.3s,baz=58,slow=10,SNR=21						
SDV				Sn	**Sn**	**05 32 52.7**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=269,slow=20,SNR=2.6						
SDV	**Santo Domingo**	**11.56**	**210**		**Pn**	**05 30 44.8**	**+0.6**
SJCC	**San Jacinto, C**	**13.51**	**229**	eP	**P**	**05 31 19.7**	**0.0**
OCAC	**Ocana**	**13.53**	**219**	eP	**Pn**	**05 31 09.1**	**-2.0**
SMLC	**San Martn de**	**13.55**	**222**	eP	**Pn**	**05 31 13.8**	**+2.4**
PAMC	**Pamplona, Colo**	**13.92**	**214**	eP	**Pn**	**05 31 17.1**	**+0.3**
TAMC	**Tame, Arauca**	**14.24**	**209**	eP	**P**	**05 31 26.4**	**-1.4**
BARC	**Barichara**	**14.80**	**214**	eP	**P**	**05 31 32.4**	**-1.9**
UREC	**San Jos de Ur**	**15.29**	**224**	eP	**Pn**	**05 31 34.4**	**-0.5**
RUSC	**La Rusia**	**15.34**	**213**	eP	**Pn**	**05 31 37.7**	**+1.7**
RUSC	**La Rusia**	**15.34**	**213**		**Pn**	**05 31 36.7**	**+0.7**
PTBC	**PUERTO BERRIO,**	**15.56**	**218**	eP	**Pn**	**05 31 37.0**	**-1.4**
SPBC	**San Pablo de B**	**16.07**	**215**	eP	**Pn**	**05 31 46.3**	**+1.3**
PTGC	**Puerto Gaitan,**	**16.39**	**207**	eP	**P**	**05 31 51.6**	**0.0**
PTGC				⇑eP	**pP**	**05 31 56.3**	**-2.3**
HELC	**Santa Helena**	**16.48**	**220**	⇑eP	**P**	**05 31 54.3**	**+1.3**
NORC	**Norcasia**	**16.59**	**217**	eP	**P**	**05 31 53.0**	**-0.9**
ROSC	**El Rosal**	**16.88**	**214**	P	**P**	**05 31 57.8**	**+0.3**
	comp=Z,2.3nm,0.3s,baz=55,slow=9.5,SNR=27						
ROSC				LR	LR	05 39 02.8	
	comp=Z,530nm,19.4s,baz=26,slow=39						
ROSC	**El Rosal**	**16.88**	**214**	eP	**P**	**05 31 58.9**	**+1.5**
ROSC	**El Rosal**	**16.88**	**214**		**P**	**05 31 58.1**	**+0.7**
CBOC	**Ciudad Bolivar**	**17.03**	**221**	⇓eP	**Pn**	**05 31 53.6**	**-3.6**
CBOC				eP	**P**	**05 31 57.6**	**-1.3**
GUY2C	**Guyana, Caldas**	**17.15**	**218**	eP	**Pn**	**05 31 59.6**	**+0.6**
GUY2C				eP	**P**	**05 32 02.9**	**+2.4**
VILC	**Villavicencio,**	**17.18**	**211**	eP	**P**	**05 32 00.9**	**+0.4**
BCIP	**Isla Barro Col**	**17.53**	**238**	Pn	**P**	**05 32 05.3**	**+1.1**
BCIP				IAmb	IAmb	05 32 12.4	
	comp=Z,63nm,1.2s						
TOLC	**Tolima**	**17.64**	**217**	eP	**P**	**05 32 06.9**	**+1.1**
PLMC	**San Jos del P**	**17.95**	**220**	⇑eP	**Pn**	**05 32 08.9**	**+0.4**
PLMC				⇑eP	**P**	**05 32 09.6**	**+0.6**
GUVC	**San Jose del G**	**18.09**	**206**	eP	**P**	**05 32 10.9**	**+0.5**
PRAC	**Prado**	**18.13**	**214**	eP	**Pn**	**05 32 10.9**	**+0.2**
ORTC	**Ortega, Tolima**	**18.16**	**215**	eP	**Pn**	**05 32 10.9**	**-0.2**
MDP	**Montagnes des**	**18.28**	**138**	P	**Pn**	**05 32 12.6**	**0.0**
	comp=Z,0.3nm,0.3s,baz=341,slow=14,SNR=4.1						
MACC	**Macarena, Meta**	**18.97**	**209**	eP	**P**	**05 32 20.2**	**+0.1**
Y60A	**Bolivia**	**19.07**	**324**	P	**Pn**	**05 32 24.2**	**+2.3**
Y60A				IAmb	IAmb	05 32 36.1	
	comp=Z,24nm,0.7s						
Y60A	**Bolivia**	**19.07**	**324**	P	Pn	05 32 27.0	+5.1
	baz=138						
656A	**Willston**	**19.09**	**306**	P	**Pn**	**05 32 24.5**	**+2.2**
656A				IAmb	IAmb	05 32 36.6	
	comp=Z,24nm,0.8s						
Z59A	**Georgetown, SC**	**19.13**	**320**	P	Pn	05 32 27.2	+4.5
	baz=134						
V62A	**Hyde County Ai**	**19.15**	**331**	P	**Pn**	**05 32 25.2**	**+2.3**
158A	**Hollywood**	**19.36**	**318**	P	**Pn**	**05 32 30.3**	**+4.9**
	baz=131						
X60A	**Albert Glenn T**	**19.36**	**326**	P	Pn	05 32 29.7	+4.2
	baz=140						
456A	**Hilliard**	**19.40**	**310**	P	**Pn**	**05 32 27.7**	**+1.7**
257A	**Skidaway Islan**	**19.42**	**315**	P	**Pn**	**05 32 27.3**	**+1.1**
CSU	**Charleston Sou**	**19.45**	**319**	P	**P**	**05 32 25.8**	**+0.6**
RGRS	**Roger Stewart**	**19.47**	**318**	P	**P**	**05 32 26.0**	**+0.6**
Z58A	**St. Stephen**	**19.52**	**320**	P	**Pn**	**05 32 32.5**	**+5.1**
	baz=133,SNR=10						
W60A	**Pink Hill**	**19.59**	**327**	P	Pn	05 32 32.6	+4.3
	baz=141						
NHSC	**New Hope**	**19.59**	**319**	P	**P**	**05 32 27.1**	**+0.3**
NHSC	**New Hope**	**19.59**	**319**	P	**Pn**	**05 32 33.3**	**+5.1**
	baz=132,SNR=6.0						
V61A	**Roper**	**19.62**	**331**	P	**Pn**	**05 32 29.0**	**+0.4**
V61A				IAmb	IAmb	05 32 39.3	
	comp=Z,40nm,1.1s						
V61A	**Roper**	**19.62**	**331**	P	Pn	05 32 33.2	+4.6
	baz=145						
X59A	**McDuffie Farm,**	**19.70**	**324**	P	Pn	05 32 34.6	+5.0
	baz=138						
CNNC	**Cliffs of the**	**19.83**	**327**	P	**P**	**05 32 31.0**	**+1.6**
CNNC	**Cliffs of the**	**19.83**	**327**	P	**Pn**	**05 32 36.8**	**+5.8**
	baz=141,SNR=6.5						
Y58A	**Scranton**	**19.83**	**321**	P	**Pn**	**05 32 31.6**	**+0.6**
Y58A				IAmb	IAmb	05 32 46.0	
	comp=Z,27nm,0.8s						
Y58A	**Scranton**	**19.83**	**321**	P	Pn	05 32 36.3	+5.2
	baz=135						
157A	**Early Branch**	**19.84**	**316**	P	Pn	05 32 36.7	+5.5
	baz=129						
V60A	**Jim Taylor Roa**	**19.93**	**329**	P	**Pn**	**05 32 32.6**	**+0.4**
V60A				IAmb	IAmb	05 32 43.9	
	comp=Z,26nm,0.7s						
U61A	**Possum Corner**	**20.01**	**332**	P	**P**	**05 32 32.9**	**+1.6**
Z57A	**Bowman**	**20.05**	**318**	P	Pn	05 32 39.4	+5.7
	baz=131,SNR=6.2						
W59A	**Clinton**	**20.06**	**326**	P	Pn	05 32 39.9	+6.1
	baz=140						
X58A	**Rowland**	**20.10**	**323**	P	Pn	05 32 34.5	+0.2
X58A				IAmb	IAmb	05 32 42.3	
	comp=Z,16nm,0.8s						
X58A	**Rowland**	**20.10**	**323**	P	Pn	05 32 39.6	+5.3
	baz=137						
FLOC	**Florencia**	**20.33**	**213**	eP	Pn	05 32 39.5	+2.3
FLOC	**Florencia**	**20.33**	**213**	P	**P**	**05 32 34.2**	**-0.8**
Y57A	**Sumter**	**20.34**	**320**	P	**P**	**05 32 36.7**	**+1.8**
W58A	**Raeford**	**20.38**	**324**	P	Pn	05 32 44.1	+6.6
	baz=138						
255A	**Hazlehurst**	**20.39**	**312**	P	Pn	05 32 43.0	+5.3
	baz=125,SNR=6.9						
V59A	**Middlesex**	**20.41**	**327**	P	Pn	05 32 44.8	+6.8
	baz=141,SNR=13						
U60A	**Pendleton**	**20.45**	**331**	P	Pn	05 32 44.5	+6.2
	baz=145						
X57A	**Johnson Farm,**	**20.47**	**322**	P	Pn	05 32 45.1	+6.5
	baz=135,SNR=8.4						
Z56A	**Williston**	**20.49**	**317**	P	**P**	**05 32 37.6**	**+1.0**
Z56A	**Williston**	**20.49**	**317**	P	Pn	05 32 45.0	+6.1
	baz=130						
U59A	**Littleton**	**20.66**	**329**	P	Pn	05 32 46.8	+6.1
	baz=143,SNR=5.4						
Y56A	**Pelion**	**20.75**	**318**	P	Pn	05 32 48.6	+6.7
	baz=131,SNR=6.5						
155A	**Kite**	**20.79**	**314**	P	Pn	05 32 47.9	+5.6
	baz=126						
T60A	**Surry**	**20.81**	**332**	P	**P**	**05 32 42.0**	**+2.0**
T60A	**Surry**	**20.81**	**332**	P	Pn	05 32 48.4	+5.9
	baz=147						
BIRD	**Birdtown, Kers**	**20.82**	**321**	P	**P**	**05 32 40.5**	**+0.4**
S61A	**Accomac**	**20.83**	**335**	P	**P**	**05 32 41.5**	**+1.3**
V58A	**Windy Hill, Pi**	**20.89**	**326**	P	**P**	**05 32 43.0**	**+2.1**
V58A				IAmb	IAmb	05 32 52.4	
	comp=Z,18nm,0.7s						
V58A	**Windy Hill, Pi**	**20.89**	**326**	P	Pn	05 32 50.4	+6.8
	baz=139,SNR=6.7						
W57A	**Gilead**	**20.90**	**323**	P	**P**	**05 32 42.6**	**+1.6**
W57A				IAmb	IAmb	05 32 52.6	
	comp=Z,21nm,1.1s						
W57A	**Gilead**	**20.90**	**323**	P	Pn	05 32 50.9	+7.3
	baz=136,SNR=5.4						
TIGA	**Tifton**	**20.92**	**310**	P	**P**	**05 32 42.1**	**+0.8**
TIGA				IAmb	IAmb	05 32 51.9	
	comp=Z,40nm,1.4s						
Z55A	**Blythe**	**20.93**	**316**	P	Pn	05 32 50.8	+6.9
	baz=128						
553A	**Crawfordville**	**20.93**	**306**	P	Pn	05 32 44.0	-0.1
T59A	**Double "B" Far**	**21.04**	**331**	P	**P**	**05 32 45.0**	**+2.5**
T59A	**Double "B" Far**	**21.04**	**331**	P	P	05 32 51.6	+9.1
	baz=145						
JSC	**Jenkinsville**	**21.05**	**319**	P	**P**	**05 32 42.3**	**-0.3**
X56A	**White Oak**	**21.05**	**320**	P	P	05 32 52.2	+10
	baz=133						
U58A	**Oxford**	**21.06**	**328**	P	P	05 32 51.1	+8.4
	baz=142						
Y55A	**Saluda**	**21.20**	**318**	P	P	05 32 54.4	+10
	baz=130,SNR=5.0						
154A	**Montrose**	**21.22**	**313**	P	**P**	**05 32 48.5**	**+4.0**
154A	**Montrose**	**21.22**	**313**	P	P	05 32 54.8	+10
	baz=125						
W56A	**Indian Trail**	**21.23**	**322**	P	P	05 32 55.6	+11
	baz=135						
S60A	**Water View**	**21.25**	**333**	P	P	05 32 54.2	+10
	baz=148						
R61A	**Willards**	**21.27**	**337**	P	**P**	**05 32 46.6**	**+1.7**
JTS	**Las Juntas de**	**21.29**	**249**	P	**P**	**05 32 47.8**	**+2.4**
	comp=Z,6.1nm,0.8s,baz=222,slow=4.1,SNR=3.5						
JTS	**Las Juntas de**	**21.29**	**249**	P	**P**	**05 32 47.4**	**+2.1**
V57A	**Coltrane Farms**	**21.32**	**325**	P	P	05 32 55.8	+10
	baz=138,SNR=6.1						
X55A	**Gracelyn & Ava**	**21.40**	**319**	P	P	05 32 57.0	+11
	baz=132,SNR=6.0						
Z54A	**Sparta**	**21.41**	**315**	P	P	05 32 57.0	+11
	baz=127						
U57A	**Blanch**	**21.49**	**327**	P	P	05 32 58.6	+11
	baz=140						
S59A	**Mechanicsville**	**21.57**	**332**	P	P	05 32 58.5	+10
	baz=146						
HODGE	**Hodges**	**21.64**	**318**	P	**P**	**05 32 51.7**	**+2.7**
HODGE				IAmb	IAmb	05 33 01.7	
	comp=Z,13nm,0.5s						
KMSC	**Kings Mountain**	**21.68**	**321**	P	**P**	**05 32 53.1**	**+3.8**
KMSC				IAmb	IAmb	05 33 01.7	
	comp=Z,9.9nm,0.6s						
KMSC	**Kings Mountain**	**21.68**	**321**	P	P	05 33 01.0	+12
Y54A	**Tignall**	**21.68**	**316**	P	P	05 33 00.3	+11
	baz=128						
PAULI	**Pauline**	**21.75**	**320**	P	**P**	**05 32 51.8**	**+1.7**
PAULI				IAmb	IAmb	05 33 03.1	
	comp=Z,17nm,1.1s						
T57A	**Hurt**	**21.89**	**328**	P	**P**	**05 32 54.5**	**+2.9**
T57A				IAmb	IAmb	05 33 08.1	
	comp=Z,17nm,0.9s						
T57A	**Hurt**	**21.89**	**328**	P	P	05 33 03.0	+11
	baz=141						
X54A	**Belton**	**21.92**	**318**	P	P	05 33 04.3	+12
	baz=130						
GOGA	**Godfrey**	**21.93**	**314**	P	P	05 33 03.7	+12
	baz=126						
CBN	**Corbin Frederi**	**21.98**	**333**	P	P	05 33 04.6	+12
	baz=147,SNR=6.6						
U56A	**King**	**21.99**	**325**	P	P	05 33 05.5	+13
	baz=138,SNR=9.4						
R58B	**Mineral**	**22.00**	**332**	P	**P**	**05 32 55.2**	**+2.4**
R58B				IAmb	IAmb	05 33 06.5	
	comp=Z,12nm,0.5s						
R58B	**Mineral**	**22.00**	**332**	P	P	05 33 04.3	+11
	baz=145						
Q60A	**Greensboro**	**22.04**	**337**	P	P	05 33 05.0	+12
	baz=151						
TEIG	**Tepich**	**22.09**	**277**	P	**P**	**05 32 54.6**	**+0.7**
TEIG				IAmb	IAmb	05 32 57.0	
	comp=Z,22nm,1.1s						
V55A	**Taylorsville**	**22.10**	**323**	P	**P**	**05 32 55.9**	**+2.0**
V55A				IAmb	IAmb	05 33 10.1	
	comp=Z,30nm,1.4s						
V55A	**Taylorsville**	**22.10**	**323**	P	P	05 33 07.0	+13
	baz=135						
451A	**Vernon**	**22.14**	**305**	P	**P**	**05 32 55.5**	**+1.2**
W54A	**Cherokee Point**	**22.15**	**320**	P	P	05 33 07.8	+13
	baz=132						
Y53A	**Monroe**	**22.27**	**315**	P	P	05 33 07.7	+12
	baz=127						
T56A	**Rocky Mt**	**22.31**	**327**	P	P	05 33 10.3	+14
	baz=139						
R58A	**Rapidan**	**22.33**	**332**	P	P	05 33 09.4	+13
	baz=146						
S57A	**Dark Hollow, R**	**22.34**	**329**	P	P	05 33 09.8	+13
	baz=143,SNR=5.1						
152A	**Waverly Hall**	**22.38**	**311**	P	**P**	**05 32 58.5**	**+1.5**
152A				IAmb	IAmb	05 33 10.5	
	comp=Z,20nm,1.3s						
U55A	**TA2, Sparta**	**22.47**	**324**	P	**P**	**05 32 58.0**	**0.0**
	baz=136,SNR=11						
V54A	**Nebo**	**22.48**	**321**	P	**P**	**05 32 58.2**	**+0.3**
	baz=133						
X53A	**Estanollee**	**22.48**	**317**	P	**P**	**05 32 57.9**	**-0.1**
	baz=129						
R57A	**Stanardsville**	**22.57**	**331**	P	**P**	**05 32 59.9**	**+1.1**
	baz=144,SNR=10						
O61A	**Allentown**	**22.57**	**340**	P	**P**	**05 32 59.6**	**+0.8**
	baz=156,SNR=8.6						
S56A	**Natural Bridge**	**22.57**	**328**	P	**P**	**05 32 59.7**	**+0.7**
	baz=141,SNR=10						
Y52A	**Lilburn**	**22.60**	**315**	P	**P**	**05 32 58.4**	**-0.9**
	baz=126						
BLA	**Blacksburg**	**22.65**	**326**	P	**P**	**05 33 00.5**	**+0.6**
	baz=139,SNR=9.6						
Q58A	**Fox Den Farm,**	**22.73**	**333**	P	**P**	**05 33 01.5**	**+0.9**
	baz=147						
T55A	**Pulaski**	**22.77**	**325**	P	**P**	**05 33 02.0**	**+0.8**
	baz=138,SNR=7.0						
P59A	**Jarrettsville**	**22.80**	**336**	P	**P**	**05 33 01.6**	**+0.3**
	baz=151						
W53A	**Cullowhee**	**22.81**	**318**	P	**P**	**05 33 01.0**	**-0.7**
	baz=130						
U54A	**Nelsons Funny**	**22.92**	**323**	P	**P**	**05 33 04.7**	**+2.1**
U54A				IAmb	IAmb	05 33 15.8	
	comp=Z,17nm,1.4s						
U54A	**Nelsons Funny**	**22.92**	**323**	P	**P**	**05 33 02.8**	**+0.2**
	baz=135,SNR=5.6						
V53A	**Saluda**	**22.92**	**320**	P	**P**	**05 33 02.2**	**-0.5**
	baz=132						
X52A	**Dahlonega**	**22.93**	**316**	P	**P**	**05 33 03.5**	**+0.8**
	baz=128						
OTAV	**Otavalo**	**22.97**	**217**	P	**P**	**05 33 03.5**	**-0.3**
OTAV				IAmb	IAmb	05 33 07.6	
	comp=Z,10nm,0.8s						
P58A	**Pank, Wackersv**	**23.03**	**335**	P	**P**	**05 33 05.2**	**+1.5**
	baz=149						
O60A	**Telford**	**23.05**	**339**	P	**P**	**05 33 04.4**	**+0.5**
	baz=154						
R56A	**Bull Pasture M**	**23.07**	**330**	P	**P**	**05 33 04.2**	**+0.1**
	baz=143,SNR=17						
M63A	**Gales Ferry**	**23.11**	**346**	P	**P**	**05 33 05.9**	**+1.4**
	baz=162						
S55A	**Lewisburg**	**23.12**	**327**	P	**P**	**05 33 04.7**	**+0.1**
	baz=140,SNR=6.1						
Q57A	**Strasburg**	**23.12**	**332**	P	**P**	**05 33 05.1**	**+0.5**
	baz=146						
T54A	**Tazewell**	**23.16**	**324**	P	**P**	**05 33 04.2**	**-1.0**
	baz=136,SNR=5.8						
U53A	**Fall Branch**	**23.25**	**322**	P	**P**	**05 33 05.9**	**-0.1**
	baz=133						
W52A	**Murphy**	**23.25**	**317**	P	**P**	**05 33 05.4**	**-0.6**
	baz=129						
Y51A	**Rockmart**	**23.30**	**313**	P	**P**	**05 33 05.3**	**-1.2**
	baz=124						
R55A	**Marlinton**	**23.32**	**328**	P	**P**	**05 33 07.1**	**+0.4**
	baz=141,SNR=19						
O59A	**Robesonia**	**23.32**	**338**	P	**P**	**05 33 08.4**	**+1.8**
	baz=152						
P57A	**Homestead Farm**	**23.32**	**334**	P	**P**	**05 33 06.8**	**+0.2**
	baz=147						
L65A	**Cape Cod Natio**	**23.33**	**350**	P	**P**	**05 33 07.3**	**+0.7**
	baz=168						
N60A	**Cedar Hill Far**	**23.45**	**340**	P	**P**	**05 33 07.8**	**-0.1**
	baz=155,SNR=11						
M61A	**Granite Spring**	**23.46**	**343**	P	**P**	**05 33 11.1**	**+3.2**
	baz=158,SNR=5.5						
Q56A	**Snyder Ridge,**	**23.47**	**331**	P	**P**	**05 33 08.9**	**+0.8**
	baz=144,SNR=10						
S54A	**Dingess, Beckl**	**23.56**	**326**	P	**P**	**05 33 10.7**	**+1.6**
	baz=138,SNR=11						
R54A	**Victor**	**23.68**	**327**	P	**P**	**05 33 11.0**	**+0.9**
	baz=139,SNR=9.6						

P56A	Dayton Farm, R	23.69	332	P	P	05 33 11.1	+0.9
	baz=145,SNR=6.7						
N59A	State Game Lan	23.71	339	P	P	05 33 11.4	+1.0
	baz=154,SNR=11						
W51A	Cleveland	23.83	316	P	P	05 33 10.9	-0.7
	baz=127						
L62A	Suffield	23.85	346	P	P	05 33 11.8	+0.1
	baz=162						
S53A	Williamson	23.91	324	P	P	05 33 11.7	-0.7
	baz=136						
V51A	Loudon	23.96	318	P	P	05 33 12.3	-0.6
	baz=129						
T52A	Hallie	24.00	322	P	P	05 33 12.6	-0.6
	baz=134						
HRV	Adam Dziewonsk	24.06	348	P	P	05 33 13.7	0.0
	baz=164						
U51A	La Follette	24.12	320	P	P	05 33 13.7	-0.7
	baz=131						
P55A	Reedsville	24.14	331	P	P	05 33 14.8	+0.3
	baz=143						
M59A	Waymart	24.16	340	P	P	05 33 13.6	-1.1
	baz=155						
Q54A	Coxs Mills	24.21	328	P	P	05 33 15.4	+0.3
	baz=141						
W50A	Signal Mountai	24.22	316	P	P	05 33 14.4	-0.8
	baz=126						
L61A	Hillsdale 1, H	24.22	344	P	P	05 33 15.4	+0.2
	baz=160						
L61B	Northampton	24.25	346	P	P	05 33 15.1	-0.3
	baz=162						
V50A	Pikevile	24.36	317	P	P	05 33 14.9	-1.6
	baz=128						
Q53A	Leroy	24.46	327	P	P	05 33 16.3	-1.1
	baz=139						
O55A	Ligonier	24.48	333	P	P	05 33 16.3	-1.2
	baz=145						
P54A	Burton	24.52	330	P	P	05 33 19.4	+1.4
	baz=142						
K61A	Williamstown	24.60	345	P	P	05 33 19.9	+1.4
	baz=161						
N56A	West Decatur	24.65	335	P	P	05 33 19.6	+0.5
	baz=148,SNR=6.8						
U50A	Jamestown	24.66	319	P	P	05 33 19.7	+0.4
	baz=129						
K60A	Five Rivers En	24.71	344	P	P	05 33 21.4	+1.8
	baz=159,SNR=6.8						
J62A	Henniker	24.80	348	P	P	05 33 18.9	-1.6
	baz=164						
W49A	Belvidere	24.81	314	P	P	05 33 20.9	+0.4
	baz=125						
N55A	Marion Center	24.81	334	P	P	05 33 21.5	+0.9
	baz=147						
Q52A	Bidwell	24.93	326	P	P	05 33 20.8	-0.8
	baz=138						
BINY	Binghamton	24.93	340	P	P	05 33 21.5	-0.2
	baz=154						
O54A	Avella	24.93	331	P	P	05 33 20.4	-1.3
	baz=143						
V49A	McMinnville	24.94	316	P	P	05 33 20.2	-1.6
	baz=126						
T50A	Nancy	25.04	320	P	P	05 33 21.5	-1.1
	baz=130						
K59A	Cooperstown	25.12	342	P	P	05 33 25.1	+1.8
	baz=157						
J60A	Lant Hill Farm	25.18	345	P	P	05 33 23.5	-0.3
	baz=161						
S50A	Richmond	25.21	321	P	P	05 33 22.8	-1.4
	baz=132						
U49A	Red Boiling Sp	25.31	318	P	P	05 33 25.1	0.0
	baz=128						
O53A	New Philadelph	25.38	330	P	P	05 33 25.8	+0.1
	baz=142						
N54A	Moraine State	25.39	333	P	P	05 33 26.2	+0.4
	baz=145						
T49A	Edmonton	25.52	319	P	P	05 33 26.8	-0.2
	baz=129						
R50A	Paris	25.57	323	P	P	05 33 27.2	-0.3
	baz=133						
K57A	Scipio Center	25.59	340	P	P	05 33 29.3	+1.8
	baz=154						
J59A	Piesco	25.66	344	P	P	05 33 27.6	-0.6
	baz=158						
I59A	Olmsteadville	25.81	345	P	P	05 33 25.7	-3.8
	baz=160,SNR=5.3						
PLAL	Pickwick Lake	25.98	312	P	P	05 33 32.0	+0.8
PLAL				IAmb	IAmb	05 33 34.6	
	comp=Z,6.8nm,0.8s						
H61A	Lyndonville	26.09	348	P	P	05 33 33.2	+1.1
	baz=165						
CCIG	Comitan	26.13	268	P	P	05 33 33.2	+0.3
CCIG				IAmb	IAmb	05 33 44.1	
	comp=Z,8.2nm,0.9s						
OXF	Oxford	26.69	310	P	P	05 33 36.3	-1.3
	baz=119						
WCI	Wyandotte Cave	26.70	320	P	P	05 33 36.9	-0.8
	baz=130						
LONY	Lake Ozonia	26.76	344	P	P	05 33 37.9	-0.2
	baz=159						
SAML	Samuel	27.87	176	P	P	05 33 47.6	-0.8
SAML				IAmb	IAmb	05 33 49.1	
	comp=Z,17nm,1.2s						
ALGO	Algonquin Park	28.96	341	P	P	05 33 57.6	-0.2
	baz=154						
W41B	Gary Mavity, V	29.06	309	P	P	05 33 57.6	-1.2
	baz=116						
X40A	Basin Creek Fa	29.20	307	P	P	05 33 58.5	-1.6
	baz=115						
CCM	Cathedral Cave	29.76	315	P	P	05 34 04.0	-1.0
	baz=122						
MIAR	Mount Ida	29.79	307	P	P	05 34 02.8	-2.5
	baz=114						
U40A	Yellville	30.04	311	P	P	05 34 06.0	-1.5
	baz=118						
W39A	Magazine	30.21	308	P	P	05 34 07.2	-1.7
	baz=115						
LSQQ	Lebel-sur-Quev	31.49	345	P	P	05 34 19.1	-1.0
	baz=158						
TUL1	Leonard	31.99	308	P	P	05 34 24.9	+0.2
	baz=114						
WMOK	Wichita Mounta	33.86	304	P	P	05 34 40.1	-1.0
	baz=109						
ABTX	Abilene, Hawle	33.94	300	P	P	05 34 40.9	-0.9
	baz=105						
LPAZ	La Paz	35.27	185	P	P	05 34 52.6	-1.4
	comp=Z,2.4nm,0.8s,baz=128,slow=2.5,SNR=6.3						
LPAZ	La Paz	35.27	185	P	P	05 34 54.3	+0.3
SCHQ	Schefferville	35.75	358	P	P	05 34 55.7	-1.4
	comp=Z,1.8nm,0.6s,baz=198,slow=5.9,SNR=8.6						
SCHQ	Schefferville	35.75	358	P	P	05 34 56.2	-0.9
SCHQ				IAmb	IAmb	05 34 57.3	
	comp=Z,7.6nm,1.2s						
BGNE	Belgrade	36.05	315	P	P	05 34 59.3	-0.6
	baz=118						
ECSD	EROS Data Cent	36.24	320	P	P	05 35 00.5	-1.0
ECSD	EROS Data Cent	36.24	320	P	P	05 35 00.1	-1.4
	baz=123						
TXAR	Lajitas Array	36.70	294	P	P	05 35 05.4	-0.3
	comp=Z,0.7nm,0.6s,baz=163,slow=4.8,SNR=4.1						
TXAR	Lajitas Array	36.70	294	P	P	05 35 06.7	+0.9
TX32	Lajitas Array	36.71	294	P	P	05 35 06.3	+0.6
RCBR	Riachuelo	37.75	128	P	P	05 35 14.7	+0.1
	comp=Z,11nm,0.9s,baz=308,slow=7.1,SNR=8.7						
RCBR	Riachuelo	37.75	128	P	P	05 35 15.4	+0.8
RCBR				IAmb	IAmb	05 35 18.2	
	comp=Z,12nm,0.9s						
MNMC	Minye Minye	38.23	187	P	P	05 35 17.2	-1.6
MNMC				IAmb	IAmb	05 35 23.7	
	comp=Z,9.3nm,1.0s						
BDFB	Brasilia	38.25	153	P	P	05 35 19.0	+0.1
	comp=Z,2.1nm,0.6s,baz=310,slow=11,SNR=5.1						
BDFB	Brasilia	38.25	153	P	P	05 35 18.7	-0.2
MNTX	Cornudas Mount	38.51	297	P	P	05 35 22.2	+1.3
MNTX	Cornudas Mount	38.51	297	P	P	05 35 20.7	-0.2
	baz=99						
GO01	Chusmiza	38.72	187	P	P	05 35 20.1	-3.1
GO01				IAmb	IAmb	05 35 26.1	
	comp=Z,10nm,1.2s						
PB11	IPOC Station P	38.86	187	P	P	05 35 21.4	-2.6
PB11				IAmb	IAmb	05 35 26.4	
	comp=Z,15nm,0.9s						
T25A	Trinidad	38.94	306	P	P	05 35 24.9	+0.2
T25A	Trinidad	38.94	306	P	P	05 35 25.2	+0.6
	baz=107						
ULM	Lac du Bonnet	39.72	329	P	P	05 35 30.3	-0.4
	comp=Z,0.8nm,0.4s,baz=126,slow=12,SNR=2.1						
ULM	Lac du Bonnet	39.72	329	P	P	05 35 30.8	+0.1
SDCO	Great Sand Dun	39.94	306	P	P	05 35 33.2	+0.1
SDCO	Great Sand Dun	39.94	306	P	P	05 35 32.9	-0.2
	baz=106						
ANMO	Albuquerque	40.00	302	P	P	05 35 33.7	+0.2
	baz=102						
PB01	IPOC Station P	40.11	187	P	P	05 35 31.1	-3.2
PB01				IAmb	IAmb	05 35 35.7	
	comp=Z,17nm,1.1s						
ISCO	Idaho Springs	40.64	309	P	P	05 35 39.1	+0.3
	baz=109						
S22A	4UR Ranch, Cre	40.95	306	P	P	05 35 42.2	+0.7
S22A	4UR Ranch, Cre	40.95	306	P	P	05 35 41.9	+0.5
	baz=105						
PHWY	Pilot Hill	41.02	312	P	P	05 35 42.9	+0.8
PHWY				IAmb	IAmb	05 35 43.2	
	comp=Z,10nm,1.4s						
K22A	Casper	42.24	313	P	P	05 35 52.9	+1.1
	baz=111						
WUAZ	Wupatki	44.06	302	P	P	05 36 08.3	+1.7
	baz=99						
PD31	Pinedale Array	44.39	312	P	P	05 36 09.4	+0.2
PDAR	Pinedale Array	44.39	312	P	P	05 36 08.6	-0.6
	comp=Z,2.0nm,0.6s,baz=107,slow=7.9,SNR=20						
PDAR				PcP	PcP	05 37 52.5	-0.3
	comp=Z,2.5nm,0.9s,baz=106,slow=3.8,SNR=6.3						
PDAR	Pinedale Array	44.39	312	P	P	05 36 09.4	+0.2
214A	Organ Pipe Nat	44.82	296	P	P	05 36 15.7	+3.1
	baz=95						
RLMT	Red Lodge	44.97	315	P	P	05 36 13.7	-0.1
RLMT				IAmb	IAmb	05 36 15.1	
	comp=Z,9.0nm,1.2s						
RLMT	Red Lodge	44.97	315	P	P	05 36 12.8	-1.0
	baz=110						
YNE	Yellowstone No	45.42	315	P	P	05 36 17.4	0.0
AHID	Auburn Hatcher	45.47	312	P	P	05 36 17.9	+0.1
AHID				IAmb	IAmb	05 36 24.9	
	comp=Z,8.0nm,0.9s						
REDW	Red Top Meadow	45.47	313	P	P	05 36 18.1	+0.2
MOOW	Moose Ponds	45.52	313	P	P	05 36 18.8	+0.7
TPAW	Teton Pass	45.58	313	P	P	05 36 18.0	-0.8
TPAW				IAmb	IAmb	05 36 31.6	
	comp=Z,4.8nm,0.9s						
FLWY	Flagg Ranch	45.59	314	P	P	05 36 19.4	+0.7
FLWY				IAmb	IAmb	05 36 19.6	
	comp=Z,6.7nm,1.2s						
H17A	Grant Village	45.60	314	P	P	05 36 20.2	+1.3
H17A	Grant Village	45.60	314	P	P	05 36 20.4	+1.5
	baz=109						
FXWY	Fox Creek	45.68	313	P	P	05 36 20.7	+1.2
CPUP	Villa Florida	45.70	171	P	P	05 36 16.8	-2.6
	comp=Z,6.3nm,0.8s,baz=354,slow=8.7,SNR=13						
CPUP	Villa Florida	45.70	171	P	P	05 36 17.4	-2.0
YHH	Holmes Hill	45.91	315	P	P	05 36 22.7	+1.3
DUG	Dugway, Tooele	46.07	308	P	P	05 36 23.1	+0.6
	baz=103						
YHB	Horse Butte	46.13	314	P	P	05 36 22.9	-0.2
YHL	Hebgen Lake	46.16	314	P	P	05 36 24.6	+1.3
QLMT	Earthquake Lak	46.32	314	P	P	05 36 25.9	+1.4
EGMT	Eagleton	46.35	319	P	P	05 36 24.9	+0.4
	baz=113						
BGU	Big Grassy Mou	46.39	309	P	P	05 36 25.7	+0.6
IRM	Iron Mountain	46.96	299	P	P	05 36 32.4	+2.9
	baz=95						
BC3	Big Chuckawall	47.17	299	P	P	05 36 33.2	+2.0
	baz=95						
DLMT	Dillon	47.27	315	P	P	05 36 32.8	+0.9
DLMT				IAmb	IAmb	05 36 39.8	
	comp=Z,8.3nm,1.2s						
MCMT	McKenzie Canyo	47.28	314	P	P	05 36 33.7	+1.6
MONP2	Monument Peak	47.93	297	P	P	05 36 39.5	+2.3
	baz=94						
TPNV	Topopah Spring	48.16	303	P	P	05 36 41.7	+2.7
	baz=97						
GRAC	Grapevine Rang	49.06	303	P	P	05 36 48.2	+2.6
	baz=96						
JTMT	Jette	49.11	317	P	P	05 36 45.4	-0.6
JTMT				IAmb	IAmb	05 36 58.2	
	comp=Z,3.9nm,1.0s						
NVAR	Mina Array Bea	49.96	305	P	P	05 36 53.3	+0.6
	comp=Z,0.8nm,0.7s,baz=86,slow=8.3,SNR=6.4						
PKM	Mcpherson Peak	50.86	300	P	P	05 37 01.1	+1.5
	baz=93						
NEW	Newport	51.08	317	P	P	05 37 00.2	-0.7
NEW				IAmb	IAmb	05 37 00.8	
	comp=Z,6.8nm,1.1s						
NEW	Newport	51.08	317	P	P	05 37 00.1	-0.8
	baz=106						
CMB	Columbia Colle	51.55	304	P	P	05 37 06.5	+2.0
L04D	Klamath Falls	53.47	309	P	P	05 37 20.1	+1.4
	baz=97						
YKA	Yellowknife Ar	55.17	334	P	P	05 37 28.4	-2.2
	comp=Z,0.7nm,0.7s,baz=110,slow=7.3,SNR=8.2						
SUMG	Summit	55.62	9	iP	P	05 37 34.1	-0.1
ESDC	Sonseca Array	55.84	55	P	P	05 37 34.8	-1.1
	comp=Z,1.1nm,0.8s,baz=266,slow=7.7,SNR=4.1						
TIC	Toumodi	59.37	94	eP	P	05 38 00.2	-0.9
LIC	Lamto	59.50	94	eP	P	05 38 01.0	-0.9
	comp=Z,7.6nm,0.7s						
DBIC	Dimbokro	59.52	93	P	P	05 38 00.8	-1.3
	comp=Z,9.0nm,0.8s,baz=273,slow=6.9,SNR=17						
DBIC	Dimbokro	59.52	93	P	P	05 38 02.1	0.0
PLCA	Paso Flores	59.71	185	P	P	05 38 02.6	-0.3
	comp=Z,2.8nm,0.9s,baz=25,slow=8.4,SNR=5.4						
PLCA	Paso Flores	59.71	185	P	P	05 38 03.2	+0.3
KIC	Kosan Boka	59.72	94	eP	P	05 38 02.7	-0.8
	comp=Z,14nm,0.8s						
TOA0	Torodi Ar. Sit	63.89	84	P	P	05 38 30.5	-1.1
TOA0				IAmb	IAmb	05 38 31.0	
	comp=Z,2.3nm,0.8s						
TORD	Torodi Ar. Bea	63.89	84	P	P	05 38 30.4	-1.2
	comp=Z,1.7nm,0.7s,baz=293,slow=6.8,SNR=9.9						
TORD	Torodi Ar. Bea	63.89	84	P	P	05 38 31.0	-0.6
PCA	Pinnacle	66.41	328	P	P	05 38 49.6	+2.3
BCAR	Beaver Creek A	67.28	331	P	P	05 38 52.2	-0.5
ILAR	Eielson Array	69.55	333	P	P	05 39 06.9	+0.1
	comp=Z,0.6nm,0.8s,baz=89,slow=4.1,SNR=6.8						
ILAR	Eielson Array	69.55	333	P	P	05 39 09.0	+2.2
FINES	FINESS Array B	73.91	30	P	P	05 39 32.3	-0.8
	comp=Z,4.4nm,1.1s,baz=242,slow=11,SNR=3.4						
H09N1	TRISTAN DA CUN	74.61	139	T	T	07 01 51.7	
	SNR=17						
AKASG	Malin Array Be	78.02	40	P	P	05 39 54.9	-1.8
	comp=Z,0.2nm,0.4s,baz=284,slow=5.1,SNR=2.6						
BRTR	Keskin Array B	84.33	50	P	P	05 40 30.0	-0.7
	comp=Z,1.4nm,0.9s,baz=298,slow=3.1,SNR=3.5						
BRTR	Keskin Array B	84.33	50	P	P	05 40 31.1	+0.4
ASAR	Alice Springs	161.94	252	PKPab	PKPab	05 48 45.1	-1.2
	comp=Z,1.8nm,0.8s,baz=114,slow=4.8,SNR=9.1						
ASAR	Alice Springs	161.94	252	PKPdf	PKPdf	05 47 59.3	-0.9
ASAR				PKPab	PKPab	05 48 45.3	-1.0

THE ***03*** *05:32:50.7, 38.°15N×20.°43E, h8km, ML2.8/2, Error ellipse: s-maj=0.7km s-min=0.5km az=287.0*
ATH ***03*** *05:32:50.4, 38.°18N×20.°41E, h9km±1km, ML2.7/5, Error ellipse: s-maj=2.1km s-min=1.2km az=249.0*
ISC 03 05:32:50.0±1.1**, 38.°16N**±0.°03×**20.°41E**±0.°05**, h11**km±5km**, n31, σ0.40**/43**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	311	P	Pg	05 32 52.7	+0.6
CHV1				S	Sg	05 32 53.6	+0.1
KEF2	Argostoli. Kep	0.06	88	P	Pg	05 32 52.5	+0.2
KEF2				S	Sg	05 32 53.4	-0.6
ARG2	Argostoli	0.06	76	P	Pg	05 32 52.4	+0.1
ARG2				S	Sg	05 32 53.4	-0.6
KEF3	Kipouria, Keph	0.06	309	P	Pg	05 32 52.9	+0.5
KEF3				S	Sg	05 32 53.5	-0.5
KEF4	Livadi, Kephal	0.10	6	P	Pg	05 32 52.2	-0.5
KEF4				S	Sg	05 32 54.9	+0.2
KEF1	Kardakata, Kep	0.12	22	P	Pg	05 32 52.9	-0.1
KEF1				S	Sg	05 32 55.0	-0.3
VLS	Valsamata	0.14	84	P	Pg	05 32 53.6	+0.2
VLS				S	Sg	05 32 55.7	-0.1
	6µm,0.2s						
VLS	Valsamata	0.14	84	P	Pg	05 32 53.5	+0.1
VLS				S	Sg	05 32 55.6	-0.2
VLS				AML	AML	05 32 55.7	
	comp=E,12874µm,0.2s						
VLS				AML	AML	05 32 56.1	
	comp=N,12460µm,0.2s						
VSK1	VASILIKIADES	0.27	26	P	Pg	05 32 56.1	+0.5
VSK1				S	Sg	05 33 00.3	+0.9
	comp=N,4µm,0.3s						
VLMS	Volimes, Zakyn	0.35	145	P	Pg	05 32 56.9	-0.1
VLMS				S	Sb	05 33 03.3	-0.4
VLMS				AML	AML	05 33 09.3	
	comp=E,3613µm,0.3s						
VLMS				AML	AML	05 33 17.2	
	comp=N,4643µm,0.5s						
EVGI	Lefkada island	0.50	23	P	Pg	05 33 00.0	+0.3
EVGI				S	Sb	05 33 07.8	-0.2
EVGI	Lefkada island	0.50	23	P	Pg	05 33 00.1	+0.3
EVGI				S	Sg	05 33 05.9	-0.4
KRI1	kERI	0.59	147	P	Pg	05 33 01.5	-0.1
AST1	Astakos	0.65	54	P	Pg	05 33 02.8	+0.1
LKD2	Lefkada island	0.65	17	P	Pg	05 33 01.8	-0.9
TSLK	Tsoukalades, L	0.69	16	P	Pg	05 33 03.0	-0.3
TSLK				AML	AML	05 33 22.2	
	comp=E,848µm,0.5s						
TSLK				AML	AML	05 33 24.3	
	comp=N,862µm,0.6s						
PDO	Prodromos	0.75	54	P	Pg	05 33 04.6	+0.2
PDO	Prodromos	0.75	54	P	Pg	05 33 04.6	+0.2
PDO				AML	AML	05 33 23.9	
	comp=N,1333µm,0.4s						
PDO				AML	AML	05 33 26.2	
	comp=E,1190µm,0.6s						
PVO	Paravola	0.99	62	P	Pg	05 33 09.4	+0.4
PVO	Paravola	0.99	62	P	Pg	05 33 09.3	+0.4
PVO				AML	AML	05 33 27.0	
	comp=E,1606µm,0.4s						
PVO				AML	AML	05 33 33.1	
	comp=N,1001µm,0.6s						
AMT	Artemida-Makis	1.21	121	P	Pg	05 33 13.5	+0.4
LAKA	Lakka	1.24	86	P	Pb	05 33 13.3	0.0
LAKA	Lakka	1.24	86	P	Pb	05 33 13.4	0.0
SERG	Sergoula	1.32	79	P	Pn	05 33 14.4	+0.1
TRIZ	Trizonia	1.32	81	P	Pn	05 33 14.5	+0.2
TRIZ	Trizonia	1.32	81	P	Pn	05 33 14.4	0.0
KLV	Kalavryta, Ach	1.38	94	P	Pn	05 33 14.9	-0.3
KLV	Kalavryta, Ach	1.38	94	P	Pn	05 33 16.0	+0.8
KALE	Kalithea	1.38	80	P	Pn	05 33 15.2	0.0
KALE	Kalithea	1.38	80	P	Pn	05 33 15.3	+0.2
AGG	Agios Georgios	1.73	60	P	Pg	05 33 23.4	+0.2

THR ***03*** *05:33:57.6±0.5, 27.°12N×52.°70E, h15km, ML4.0*
IDC ***03*** *05:33:57.1±1.1, 27.°20N×52.°71E, h0km, mb4.0/16, mb1 4.1/19, mb1mx4.0/38, mbtmp4.0/19, ML3.5/3, Error ellipse: s-maj=25.3km s-min=16.7km az=164.0*
TEH ***03*** *05:33:58.3, 27.°25N×52.°76E, h10km, ML4.2*
DSN ***03*** *05:33:59.1±2.1, 27.°42N×52.°85E, h10km, ML4.5/7, Error ellipse: s-maj=37.0km s-min=8.4km az=4.0*
NEIC ***03*** *05:34:02.0±1.3, 27.°17N±0.°06×52.°75E±0.°06, h37km±8km, Error ellipse: s-maj=9.2km s-min=8.1km az=182.0*
OMAN ***03*** *05:34:06.9±0.3, 26.°80N×52.°86E, h35km, ml4.3/9, Error ellipse: s-maj=8.8km s-min=5.9km az=0.0*
ISC 03 05:33:58.4±0.4**, 27.°13N**±0.°04×**52.°68E**±0.°04**, h10**km**, n160, σ1.48**/178**, mb4.1**/21**, 1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHRM	Jahrom	1.58	30	Pn	Pb	05 34 27.2	-0.7
JHRM	Jahrom	1.58	30	ePg	Pn	05 34 26.8	+0.2
JHRM				e		05 34 50.7	
LAR1	LAR	1.60	70	ePg	Pb	05 34 27.7	-0.4
LAR1				eSg	Sg	05 34 48.7	-1.3
LAR1				e		05 34 57.8	
AHBU	AHRAM	2.12	325	ePn	Pn	05 34 34.8	+1.0
JRN	Qarnain Island	2.19	176	ePn	Pg	05 34 42.0	+1.7
GHB	Gharebagh	2.24	357	ePn	Pn	05 34 36.0	+0.1
GHB				e		05 35 27.9	
ISRV	Sarvestan	2.28	10	ePn	Pn	05 34 36.8	+0.5
ISRV				e		05 35 35.1	
SHI	Shiraz	2.51	357	Pn	Pn	05 34 40.2	+0.8
SHI	Shiraz	2.51	357	ePn	Pn	05 34 40.1	+0.7
IKAZ	Kazeroun	2.74	345	Pn	Pn	05 34 42.9	+0.2
IKAZ	Kazeroun	2.74	345	ePn	Pn	05 34 43.3	+0.6
IKAZ				e		05 35 46.5	
BNDS	Bandar-Abbas	3.12	84	IAML		05 35 48.1	
	comp=N,276nm,0.6s						
GENO	Geno	3.12	84	Pn	Pn	05 34 47.4	-0.5
GENO	Geno	3.12	84	ePn	Pn	05 34 47.6	-0.3
GENO				e		05 35 55.0	
GHWR	Ruwais	3.16	177	ePn	Pb	05 34 52.9	-1.7
SHME	Shamm	3.28	108	P	Pn	05 34 50.5	+0.5
SHME				S	Sn	05 35 28.1	-1.0
SHME	Shamm	3.28	108	ePn	Pn	05 34 49.5	-0.5
NAZ	Nazwa, Dubai	3.43	128	P	Pn	05 34 54.4	+2.5
NAZ	Nazwa, Dubai	3.43	128	P	Pn	05 34 54.0	+2.0
NAZ				S	Sn	05 35 33.8	+1.2
	SNR=14						
NAZ	Nazwa, Dubai	3.43	128	ePn	Pn	05 34 53.9	+2.0
ASUD	Al Ashush, Dub	3.45	136	P	Pn	05 34 55.4	+3.2
BANOM	Banah	3.46	110	iP	Pn	05 34 52.9	+0.5
	SNR=18						
BANOM	Banah	3.46	110	P	Pn	05 34 53.6	+1.2
	SNR=18						
BANOM				S	Sn	05 35 30.4	-3.1
BANOM	Banah	3.46	110	ePn	Pn	05 34 52.9	+0.5
FAQ	Al Faqa, Dubai	3.54	131	ePn	Pn	05 34 54.7	+1.3
NIAN	Nian	3.72	82	e	Sg	05 36 03.7	+5.7
MDH	Madha	3.73	118	ePn	Pn	05 34 57.1	+1.1
MDH	Madha	3.73	118	P	Pn	05 34 57.7	+1.6
	SNR=7.6						
MDH				S	Sn	05 35 38.0	-2.1
MDH	Madha	3.73	118	ePn	Pn	05 34 57.5	+1.5
UOSS	Minazif	3.85	124	iP	Pn	05 34 59.0	+1.3
	SNR=8.2						
UOSS	Minazif	3.85	124		Pn	05 34 58.9	+1.2
UOSS				Sn	Sn	05 35 41.4	-1.6
UOSS	Minazif	3.85	124	ePn	Pn	05 34 59.0	+1.3
HATD	Hatta, Dubai	3.87	126	iP	Pn	05 35 00.2	+2.1
	SNR=11						
HATD	Hatta, Dubai	3.87	126	P	Pn	05 34 59.7	+1.8
	SNR=11						
HATD				S	Sn	05 35 43.8	+0.4
	SNR=7.3						
HATD	Hatta, Dubai	3.87	126	ePn	Pn	05 34 59.2	+1.3
ASHO	Ashiyiah	3.90	128	iP	Pn	05 34 60.0	+1.6
	SNR=17						
ASHO	Ashiyiah	3.90	128	P	Pn	05 35 00.3	+1.8
	SNR=18						
ASHO				S	Sn	05 35 44.6	+0.3
	SNR=9.4						
ASHO	Ashiyiah	3.90	128	ePn	Pn	05 35 00.3	+1.8
KLNJ	Kolanjah	3.98	346	ePn	Pn	05 34 59.2	-0.6
IMEH	Mehriz	4.57	21	ePn	Pn	05 35 09.1	+1.3
KRBR	Kerman	4.58	51	ePn	Pn	05 35 08.9	+0.9
KRBR				IAML		05 36 13.5	
	comp=N,90nm,0.4s						
KRBR				IAML		05 36 14.6	
	comp=E,98nm,0.8s						
KRBR	Kerman	4.58	51	Pn	Pn	05 35 08.0	0.0
KRBR	Kerman	4.58	51	ePn	Pn	05 35 08.9	+0.9
TVBK	TV Kerman	4.58	51	e		05 35 09.9	
TVBK				ePn	Pn	05 35 08.6	+0.5
SOHO	SOHO	4.58	130	P	Pn	05 35 09.4	+1.6
SOHO				S	Sn	05 36 01.7	+0.6
SOHO	SOHO	4.58	130	ePn	Pn	05 35 09.1	+1.3
KHGB	Koh Gabri	4.65	45	ePn	Pn	05 35 08.7	-0.2
KHGB				e		05 36 10.8	
IRAM	Ramesheh	4.67	357	ePn	Pn	05 35 08.8	-0.4
ISAD	Sadrabad	4.85	10	ePn	Pn	05 35 12.4	+0.7
IBRJ	Brojen	4.92	346	ePn	Pn	05 35 12.1	-0.5
UMZA	Um Al Zommool	4.94	152	ePn	Pn	05 35 15.7	+3.0
CHMN	Cheshme madani	5.07	56	ePn	Pn	05 35 16.1	+1.3
CHMN				e		05 35 17.7	
IBAF	Bafgh	5.11	29	ePn	Pn	05 35 15.5	+0.3
ARQ	Araqi	5.14	136	P	Pn	05 35 17.0	+1.6
ARQ				S	Sn	05 36 15.0	+0.2
ICHK	Chekchek	5.31	16	ePn	Pn	05 35 18.3	+0.3
JHBN	Jahan bin	5.38	341	ePn	Pn	05 35 18.4	-0.6
HOQ	Hoqain	5.48	129	P	Pn	05 35 21.7	+1.5
HOQ				S	Sn	05 36 21.4	-1.9
YZKH	Yazd	5.50	17	ePn	Pn	05 35 21.0	+0.6
YZKH	Yazd	5.50	17	Pn	Pn	05 35 21.0	+0.6
YZKH	Yazd	5.50	17	ePn	Pn	05 35 21.0	+0.6
IPIR	Pirpir	5.75	345	ePn	Pn	05 35 24.3	+0.2
IZEF	Zefreh	5.75	357	ePn	Pn	05 35 23.5	-0.6
BSY	Bisya	5.99	136	P	Pn	05 35 29.4	+2.1
	SNR=26						
BSY				S	Sn	05 36 33.9	-2.0
SHGR	Shooshtar-Gavs	6.00	327	ePn	Pn	05 35 28.4	+1.2
SHGR	Shooshtar-Gavs	6.00	327	Pn	Pn	05 35 28.0	+0.8

SHGR Shooshtar-Gavs 6.00 327 ePn Pn 05 35 28.4 +1.2
ANAR Anarak 6.11 8 ePn Pn 05 35 28.2 -0.6
SMDO Samad 6.34 129 P Pn 05 35 33.4 +1.4
SNR=30
SMDO S Sn 05 36 41.9 -2.7
WSAR Wadi Sarin 6.64 124 Pn Pn 05 35 37.3 +1.2
comp=E,2.5nm,0.3s,baz=334,slow=8.1,SNR=22
WSAR Wadi Sarin 6.64 124 P Pn 05 35 36.9 +0.8
SNR=9.8
WSAR S Sn 05 36 48.6 -3.3
QAM Ghamsar 6.69 351 ePn Pn 05 35 36.1 -0.9
TPRV Parvadeh(Tabas 6.83 30 ePn Pn 05 35 37.7 -1.0
KRSH Karshahi 6.83 356 ePn Pn 05 35 38.3 -0.5
CHBR Chabahar 7.17 101 ePn Pn 05 35 43.5 +0.2
CHBR Chabahar 7.17 101 Pn Pn 05 35 43.0 -0.3
CHBR Chabahar 7.17 101 ePn Pn 05 35 43.5 +0.2
WBK Wadi Bani Khal 7.27 127 P Pn 05 35 45.3 +0.5
SNR=6.7
WBK S Sn 05 37 03.3 -4.2
RAYN Ar Rayn 7.42 243 iP Pn 05 35 49.4 +2.6
SNR=12
RAYN Ar Rayn 7.42 243 Pn 05 35 49.1 +2.3
RAYN Sn Sn 05 37 12.4 +1.4
GHVR GHOM 7.42 351 ePn Pn 05 35 47.8 +1.0
GHVR IAML 05 37 10.5
comp=N,16nm,0.3s
GHVR GHOM 7.42 351 Pn Pn 05 35 47.0 +0.2
GHVR GHOM 7.42 351 ePn Pn 05 35 47.8 +1.0
TKDS Koohdasht(Taba 7.51 30 ePn Pn 05 35 47.3 -0.9
BDRS Dareh Seyedi 7.55 335 ePn Pn 05 35 48.9 +0.1
ZHSF Zahedan 7.55 69 ePn Pn 05 35 50.0 +1.3
ZHSF Zahedan 7.55 69 Pn Pn 05 35 49.0 +0.3
ZHSF Zahedan 7.55 69 ePn Pn 05 35 50.0 +1.3
IDOB Doab 7.69 331 ePn Pn 05 35 51.2 +0.6
MHTO MHTO 7.80 141 P Pn 05 35 53.9 +2.0
SNR=40
MHTO S Sn 05 37 16.6 -3.7
HSAM Samen 7.88 335 ePn Pn 05 35 53.6 +0.3
IKOM Komasi 8.31 329 ePn Pn 05 35 59.9 +0.8
AFRZ Afriz 8.33 40 ePn Pn 05 35 59.5 +0.1
DQM DQM 8.44 147 P Pn 05 36 01.8 +1.0
SNR=11
DQM S Sn 05 37 31.7 -4.5
IGHG Ghaleghazi 8.89 325 ePn Pn 05 36 07.9 +0.7
QABG Abgarm-Qazvin 8.95 344 ePn Pn 05 36 08.5 +0.6
WHFO Wadi Hawf 9.22 173 P Pn 05 36 13.3 +1.7
SNR=11
WHFO S Sn 05 37 50.0 -5.5
IDHR Dehrash 9.28 326 ePn Pn 05 36 11.8 -0.6
DMTO DMTO 9.60 167 P Pn 05 36 17.3 +0.6
SNR=6.6
DMTO S Sn 05 37 59.2 -5.5
ABTO Aybut 9.75 176 P Pn 05 36 20.4 +1.7
SNR=6.9
ABTO S Sn 05 38 06.6 -1.7
HRA Herat 10.95 46 Pn Pn 05 36 36.3 +0.9
GEYT Alibeck 11.70 22 Pn Pn 05 36 45.8 +0.4
comp=N,0.2nm,0.3s,baz=200,slow=12,SNR=8.5
GEYT Alibeck 11.70 22 Pn 05 36 46.1 +0.6
GYA0B ALIBECK ARRAY 11.70 22 Pn 05 36 44.8 -0.6
KBL Kabul 15.87 58 Pn Pn 05 37 41.4 -0.6
KBZ Khabaz 18.35 337 P Pn 05 38 14.2 +1.2
comp=N,0.1nm,0.3s,baz=162,slow=8.4,SNR=5.5
KIV Kislovodsk 18.63 337 P P 05 38 15.8 -0.4
KIV IAmb IAmb 05 38 22.6
comp=Z,14nm,1.0s
NIL Nilore 18.89 65 P P 05 38 18.1 -1.0
NIL IAmb IAmb 05 38 21.8
comp=Z,15nm,0.8s
BTK Batken 19.82 45 P P 05 38 28.9 -0.3
BTK IAmb IAmb 05 38 29.7
comp=Z,15nm,0.6s
BR131 Keskin Array S 20.20 313 P Pn 05 38 35.0 -0.5
BRTR Keskin Array B 20.20 313 P Pn 05 38 35.0 -0.5
comp=Z,3.3nm,0.6s,baz=137,slow=12,SNR=29
BRTR Keskin Array B 20.20 313 P P 05 38 34.3 +0.8
ANTO Ankara 20.83 313 P P 05 38 41.0 +0.8
ANTO IAmb IAmb 05 38 47.4
comp=Z,13nm,0.9s
ILGA Ilgaz 20.90 316 P P 05 38 40.3 -0.9
KK31 Karatay Array 21.54 38 P P 05 38 46.8 -1.0
KKAR Karatay Array 21.54 38 P P 05 38 45.7 -2.0
KKAR Karatay Array 21.54 38 P P 05 38 46.1 -1.6
KKAR IAmb IAmb 05 38 50.4
comp=Z,4.1nm,0.8s
ARSB Arslanbob 21.89 45 P P 05 38 51.0 -0.7
ARSB IAmb IAmb 05 38 51.9
comp=Z,15nm,0.8s
ABKAR Akbulak array 22.79 12 P P 05 39 00.6 -0.5
KSH Kashi 22.98 52 P P 05 39 01.0 -2.3
KSH pP sP 05 39 22.1 +15
KSH S S 05 42 54.1 -20
KSH sS Sn 05 43 28.2 -1.4
AAK Ala-Archa 23.56 43 P P 05 39 10.1 +1.0
comp=Z,2.8nm,0.3s,baz=246,slow=12,SNR=5.2
AAK Ala-Archa 23.56 43 P P 05 39 10.2 +1.0
AAK IAmb IAmb 05 39 12.2
comp=Z,14nm,1.5s
AKTO Aktyubinsk 23.63 9 P P 05 39 10.4 +0.9
comp=Z,1.0nm,0.4s,baz=217,slow=15,SNR=3.6
BRVK Borovoye 29.03 22 P P 05 39 58.0 -0.4
BRVK IAmb IAmb 05 40 01.5
comp=Z,8.3nm,1.5s
BVAR Borovoye Array 29.04 22 P P 05 39 57.8 -0.7
comp=Z,2.2nm,0.7s,baz=207,slow=6.3,SNR=12
AKASG Malin Array Be 29.54 329 P P 05 40 02.2 -0.8
comp=Z,0.4nm,0.3s,baz=117,slow=6.9,SNR=4.6
MAKZ Makanchi 30.29 42 P P 05 40 09.5 -0.2
MAKZ IAmb IAmb 05 40 10.3
comp=Z,4.2nm,0.6s
MK31 Makanchi Array 30.47 42 P P 05 40 10.7 -0.6
MKAR Makanchi Array 30.47 42 P P 05 40 10.8 -0.5
comp=Z,1.3nm,0.6s,baz=231,slow=9.3,SNR=14
MKAR Makanchi Array 30.47 42 P P 05 40 10.6 -0.7
WMQ Urumqi 32.73 50 eP P 05 40 32.3 +1.0
MODS Modra-Piesok 34.67 317 eP P 05 40 46.9 -1.2
ZAA0 Zalesovo Array 35.72 33 P P 05 40 55.5 -1.5
ZAA0 IAmb IAmb 05 40 56.8
comp=Z,3.8nm,0.8s
ZALV Zalesovo Beam 35.72 33 P P 05 40 56.0 -0.9
comp=Z,3.6nm,0.6s,baz=240,slow=9.6,SNR=19
ZALV Zalesovo Beam 35.72 33 P P 05 40 55.6 -1.3
CLL Collm 38.40 320 e(sP) P 05 41 19.0 -0.8
MSSA Maissana 38.51 308 P P 05 41 21.2 +0.3
FIA1 FINESS Array S 38.67 340 P P 05 41 21.9 -0.1
FIA1 IAmb IAmb 05 41 22.4
comp=Z,4.1nm,0.8s
FINES FINESS Array B 38.67 340 P P 05 41 21.3 -0.7
comp=Z,3.5nm,0.8s,baz=153,slow=9.6,SNR=10
FINES FINESS Array B 38.67 340 P P 05 41 21.7 -0.2
GTA Gaotai 40.85 60 ⇓P P 05 41 40.7 +0.2
GTA pP sP 05 41 46.3 +1.4
GTA sP pP 05 41 49.7 +6.1
NC405 NORSAR Array S 43.67 333 P P 05 42 02.4 -0.7
NB201 NORSAR Array S 43.81 332 P P 05 42 03.8 -0.4
NB2 NORSAR Subarra 43.84 332 P P 05 42 03.4 -1.1
comp=Z,1.4nm,0.5s,baz=121,slow=8.6
NOA NORSAR Array B 43.84 332 P P 05 42 03.5 -1.1
comp=Z,0.1nm,0.3s,baz=120,slow=8.0,SNR=5.1
ARCES ARCESS Array B 45.29 347 P P 05 42 15.4 -0.5
comp=Z,3.0nm,0.9s,baz=146,slow=9.8,SNR=2.0
ARCES ARCESS Array B 45.29 347 P P 05 42 14.8 -1.1
SONM Songino Array 46.33 49 P P 05 42 23.9 -0.7
comp=Z,0.7nm,0.8s,baz=275,slow=7.6,SNR=5.8
SONM Songino Array 46.33 49 P P 05 42 23.7 -0.9
ESDC Sonseca Array 48.19 300 P P 05 42 39.0 -0.2
comp=Z,0.7nm,0.6s,baz=64,slow=10,SNR=5.4
PAB San Pablo 48.49 300 P P 05 42 42.8 +1.3
TOA0 Torodi Ar. Sit 49.53 264 P P 05 42 48.8 -0.9
TOA0 IAmb IAmb 05 43 01.7
comp=Z,2.5nm,1.2s
TORD Torodi Ar. Bea 49.53 264 P P 05 42 50.2 +0.5
comp=Z,0.7nm,0.8s,baz=70,slow=7.9,SNR=11
TORD Torodi Ar. Bea 49.53 264 P P 05 42 50.1 +0.5
HHC Hu-ho-hao-te 49.84 58 eP P 05 42 51.8 -0.1
DBIC Dimbokro 58.16 261 P P 05 43 54.1 +1.2
comp=Z,0.8nm,0.6s,baz=85,slow=13,SNR=3.2
DBIC Dimbokro 58.16 261 P P 05 43 50.8 -2.0
DBIC IAmb IAmb 05 44 04.7
comp=Z,4.6nm,1.2s
BMAR Burnt Mountain 84.84 7 P P 05 46 33.6 +0.7
ILAR Eielson Array 87.14 8 P P 05 46 43.2 -1.1
comp=Z,0.4nm,0.8s,baz=333,slow=4.9,SNR=4.1
ILAR Eielson Array 87.14 8 P P 05 46 43.9 -0.4
YKA Yellowknife Ar 90.11 354 P P 05 46 58.4 0.0
comp=Z,1.2nm,0.8s,baz=4.2,slow=4.9,SNR=27

DJA 03 05:36:40.0±3.1, 8°S±9°×10°9E±°, h30km±45km, M4.0/13, MLv4.0/13, Jawa

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
CMJI Cimerak 0.99 313 P Pn 05 36 57.9 0.0
CMJI S Sn 05 37 09.9 -1.1
KPJI Karang Pucung 1.16 348 P Pn 05 37 00.1 -0.1
KPJI S Sn 05 37 14.1 -0.9
UGM Wanagama 1.44 67 P Pn 05 37 04.1 0.0
UGM S Sn 05 37 21.0 -1.0
CISI Cisompet, Garu 1.63 304 P Pn 05 37 06.8 +0.1
CISI S Sn 05 37 26.0 -0.7
WOJI Wonogiri, Jawa 1.84 70 P Pn 05 37 08.6 -0.9
SMRI Semarang 1.89 42 P Pn 05 37 10.8 +0.6
PCJI Pacitan 2.00 82 P Pn 05 37 12.4 +0.7
LEM Lembang 2.25 316 P Pn 05 37 16.2 +0.8
CNJI Cibinong 2.34 299 P Pn 05 37 15.0 -1.4
NGJI Ngawi 2.51 64 P Pn 05 37 18.8 0.0
UWJI Ujung Watu 2.69 41 P Pn 05 37 20.7 -0.5
SKJI Sukabumi 2.98 299 P Pn 05 37 25.4 +0.1
GRJI Gresik 3.62 65 P Pn 05 37 33.7 -0.3
GMJI Gumukmas 4.22 88 P Pn 05 37 41.8 -0.6
JAGI Jajag, Banyuwa 4.92 90 P Pn 05 37 53.8 +1.9

IDC 03 05:55:11.9±1.0, 52°11N×169°40W, h0km, mb3.7/10, mb1 4.0/12, mb1mx3.7/59, mbtmp3.7/12, ML3.4/2, Error ellipse: s-maj=31.2km s-min=16.9km az=172.0
NEIC 03 05:55:12.6±3.0, 52°1N±0°1×169°5W±0°1, h9km±5km, Error ellipse: s-maj=22.4km s-min=5.8km az=152.0
AEIC 03 05:55:18.2±8, 53°1N±0°1×170°14W±0°06, h14km±4km, mb3.8/12(NEIC), Error ellipse: s-maj=18.4km s-min=4.5km az=171.0
ISC 03 05:55:13.0±0.7, 52°03N±0°08×169°47W±0°05, h10km, n54, σ1§38/59, mb3.9/11, Fox Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
NIKH Nikolski High 1.02 22 Pg 05 55 33.0 +0.5
NIKH Nikolski High 1.02 22 Sg 05 55 46.5 +0.7
NIKH Nikolski High 1.02 22 Sn Sb 05 55 47.4 +1.3
OKSP Okmok Steeple 1.42 30 Pn 05 55 38.7 -0.2
OKFG Magazine Ridge 1.68 34 Pn 05 55 42.7 +0.3
OKFG Sn 05 56 03.1 -0.9
MSW Makushin Switc 2.49 40 Pn 05 55 54.1 +0.5
UNV Unalaska Valle 2.56 43 Pn 05 55 55.0 +0.6
UNV Unalaska Valle 2.56 43 Sn 05 56 25.9 +0.3
KOFP Korovin Flat P 2.86 277 Pn 05 55 59.9 +1.3
ATKA Atka Island 2.92 275 Pn 05 55 58.7 -0.7
ATKA Sn Sn 05 56 35.6 +1.2
AKUT Akutan 3.07 45 Pn Pn 05 56 02.2 +0.7
AKUT Lg 05 56 59.1
GSTR Great Sitkin T 4.07 274 Pn Pn 05 56 13.5 -1.7
GSTR Sn Sn 05 57 02.6 -0.3
GSMY Great Sitkin M 4.07 273 Pn 05 56 16.6 +1.4
GSTD Great Sitkin T 4.12 273 Pn 05 56 17.0 +1.0
GSTD Sn 05 57 03.1 -1.2
ADK Adak 4.46 271 Pn Pn 05 56 19.3 -1.3
ADK Sn Sn 05 57 10.6 -2.0
KIMD Kanaga Island 4.81 270 Pn 05 56 28.2 +2.7
CNBA Chernabura Isl 6.54 61 Pn Pn 05 56 51.3 +2.2
OHAK Old Harbor 10.72 55 Pn Pn 05 57 45.5 -0.9
KDAK Kodiak Island 11.29 53 Pn Pn 05 57 52.5 -1.7
0.3nm,0.3s,baz=241,slow=10,SNR=1.5
KDAK Kodiak Island 11.29 53 Pn 05 57 54.2 0.0
CNPM China Poot 12.69 47 Pn Pn 05 58 12.9 -0.4
SEW Seward 13.75 46 Pn Pn 05 58 26.6 -1.2
SUA Susitna One 13.90 40 Pn Pn 05 58 27.7 -2.3
GHO Glory Hole Cre 14.80 41 Pn Pn 05 58 41.9 -0.4
KNK Knik Glacier 14.81 42 Pn Pn 05 58 40.0 -2.3
HIN Hinchinbrook I 15.21 48 Pn Pn 05 58 46.0 -1.6
FID Port Fidalgo 15.36 46 Pn Pn 05 58 46.5 -3.2
SCM Sheep Creek Mo 15.49 42 Pn Pn 05 58 49.0 -2.3
EYAK Cordova Ski Ar 15.61 48 Pn Pn 05 58 50.8 -2.0
EYAK IAmb IAmb 05 59 05.5
comp=Z,9.7nm,1.2s
GLB Gilahina Butte 16.83 46 Pn Pn 05 59 07.1 -1.4
GLB IAmb IAmb 05 59 22.9
comp=Z,8.2nm,1.4s
CCB Clear Creek Bu 16.88 33 Pn 05 59 07.9 -1.2
CRQM Cirque 16.89 49 Pn Pn 05 59 08.5 -0.9
CRQM IAmb IAmb 05 59 08.9
comp=Z,5.7nm,0.8s
VRDI Verde Repeater 16.91 47 Pn Pn 05 59 08.3 -1.4
VRDI IAmb IAmb 05 59 20.4
comp=Z,3.5nm,0.8s
ILAR Eielson Array 17.27 34 P Pn 05 59 12.9 -1.0
comp=Z,0.1nm,0.3s,baz=224,slow=9.0,SNR=6.2
EGAK Eagle 19.35 38 P P 05 59 36.8 -1.5
PEA0B Petropavlovsk- 19.89 286 P P 05 59 44.5 +0.2
PETK Petropavlovsk- 19.89 286 P P 05 59 44.1 -0.1
comp=Z,0.9nm,0.3s,baz=87,slow=12,SNR=10
PETK Petropavlovsk- 19.89 286 P P 05 59 44.4 +0.1
INK Inuvik 23.67 33 P P 06 00 22.5 -1.7
comp=Z,0.8nm,0.4s,baz=243,slow=6.5,SNR=12
INK Inuvik 23.67 33 P P 06 00 22.3 -1.8
INK IAmb IAmb 06 00 30.6
comp=Z,2.5nm,1.1s
C36M Paulatuk 27.25 33 P P 06 00 56.2 -0.6
YKA Yellowknife Ar 30.52 48 P P 06 01 26.3 +0.4
comp=Z,0.4nm,0.5s,baz=272,slow=8.1,SNR=20
EGMT Eagleton 37.63 72 P P 06 02 29.2 +1.4
PDAR Pinedale Array 40.53 79 P P 06 02 52.6 +0.3
comp=Z,0.8nm,0.8s,baz=300,slow=3.7,SNR=7.1
FCC Fort Churchill 41.21 50 P P 06 02 58.1 +0.8
FCC IAmb IAmb 06 03 06.6
comp=Z,4.9nm,1.4s
KSRS Korea Array 45.38 277 P P 06 03 33.8 +2.4
comp=Z,1.0nm,0.7s,baz=115,slow=12,SNR=12
SONM Songino Array 51.42 301 P P 06 04 19.7 +1.8
comp=Z,0.3nm,0.8s,baz=57,slow=5.3,SNR=2.1
TXAR Lajitas Array 52.82 89 P P 06 04 28.5 0.0
comp=Z,1.7nm,0.7s,baz=300,slow=5.8,SNR=13
ARCES ARCESS Array B 58.25 354 P P 06 05 07.9 +0.9
comp=Z,2.6nm,0.9s,baz=11,slow=6.4,SNR=1.4
MKAR Makanchi Array 63.99 313 P P 06 05 44.7 -1.6
comp=Z,0.2nm,0.6s,baz=65,slow=5.2,SNR=1.7
FINES FINESS Array B 66.20 352 P P 06 05 59.6 -0.6
comp=Z,1.4nm,0.8s,baz=15,slow=7.9,SNR=6.0
FINES FINESS Array B 66.20 352 P P 06 05 59.5 -0.7
KKAR Karatay Array 72.00 318 P P 06 06 34.6 -2.1
ASAR Alice Springs 90.13 230 P P 06 08 12.8 -0.3
comp=Z,0.8nm,0.7s,baz=32,slow=4.5,SNR=8.3

IDC 03 06:04:12.8±8.7, 22°44N×143°13E, h259km±52km, mb2.9/5, mb1 3.1/6, mb1mx2.9/43, mbtmp3.6/6, Error ellipse: s-maj=91.1km s-min=32.8km az=176.0, Volcano Islands region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
JCJ Chichijima 4.72 350 P Pn 06 05 25.3 -0.1
6.0nm,0.3s,baz=92,slow=22,SNR=6.7
JCJ S S 06 06 24.2 +0.8
5.2nm,0.3s,baz=264,slow=21,SNR=2.1
SONM Songino Array 38.74 320 P P 06 11 10.8 -1.6
0.3nm,0.5s,baz=137,slow=7.2,SNR=3.6
MKAR Makanchi Array 54.16 312 P P 06 13 11.7 0.0
0.2nm,0.5s,baz=92,slow=9.4,SNR=2.2
ILAR Eielson Array 61.41 27 P P 06 14 01.0 -0.5
0.3nm,0.6s,baz=268,slow=5.2,SNR=6.5
YKA Yellowknife Ar 75.83 28 P P 06 15 30.4 +0.1
0.2nm,0.4s,baz=291,slow=6.0,SNR=7.8
FINES FINESS Array B 82.49 334 P P 06 16 08.2 +1.9
1.5nm,1.0s,baz=91,slow=7.6,SNR=1.2

IDC 03 06:05:57.2±3.7, 4°87S×153°84E, h104km±28km, mb3.8/9, mb1 4.0/10, mb1mx3.7/40, mbtmp4.2/10, Error ellipse: s-maj=36.6km s-min=15.2km az=103.0
NEIC 03 06:05:58.2±1.7, 4°80S±0°08×153°9E±0°1, h115km±4km, mb4.4/17, Error ellipse: s-maj=15.4km s-min=12.1km az=79.0
ISC 03 06:05:57.3±0.7, 4°86S±0°07×153°90E±0°09, h105km, n48, σ1§06/50, mb4.2/16, New Ireland region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
RABL Rabaul 1.85 291 Pn Pn 06 06 28.8 +0.5
RABL Sn Sn 06 06 53.2 +1.4
KRVT Keravat (AS076 1.94 286 P Pn 06 06 29.1 -0.2
55nm,0.3s,baz=207,slow=1.0,SNR=18
KRVT S Sn 06 06 52.6 -1.2
74nm,0.3s,baz=223,slow=2.9,SNR=5.8
KRVT LR LR 06 07 24.6
comp=Z,213nm,18.7s,baz=125,slow=46
PMG Port Moresby 8.07 236 P Pn 06 07 53.1 +1.3
32nm,0.3s,baz=49,slow=7.4,SNR=22
PMG S Sn 06 09 19.8 -1.6
1.7nm,0.3s,baz=2.2,slow=15,SNR=1.5
PMG Port Moresby 8.07 236 Pn 06 07 53.2 +1.3
PMG Sn 06 09 23.2 +1.8
COEN Coen 13.91 229 Pn Pn 06 09 11.8 +1.8
EIDS Eidsvold 20.57 187 P P 06 10 28.9 +1.0
EIDS IAmb IAmb 06 10 34.5
comp=Z,14nm,1.1s
DZM Mont Dzumac 20.99 146 P P 06 10 32.9 +0.4
DZM IAmb IAmb 06 10 40.3
comp=Z,21nm,1.4s
WR0 Warramunga Arr 24.09 230 P P 06 11 03.9 +0.5
WR0 IAmb IAmb 06 11 11.4
comp=Z,22nm,1.5s
WB0 Warramunga Arr 24.09 230 P P 06 11 03.9 +0.5
WB0 IAmb IAmb 06 11 05.5
comp=Z,40nm,1.4s
WRAB Tennant Creek 24.22 230 P P 06 11 04.4 -0.1
WRAB IAmb IAmb 06 11 06.2
comp=Z,8.7nm,0.7s
WRA Warramunga Arr 24.24 230 P P 06 11 05.3 +0.6
comp=Z,5.0nm,0.6s,baz=56,slow=10,SNR=25
WRA Warramunga Arr 24.24 230 P P 06 11 04.3 -0.4
ARMA Armidale 25.52 185 P P 06 11 17.3 +1.1
ARMA IAmb IAmb 06 11 27.2
comp=Z,20nm,1.4s
H11S3 WAKE ISLAND Hy 26.41 28 T T 06 40 14.7
baz=209,slow=74,SNR=5.6
H11S2 WAKE ISLAND Hy 26.41 28 T T 06 40 21.4
baz=360,slow=74,SNR=9.3
H11S1 WAKE ISLAND Hy 26.43 28 T T 06 40 03.2
AS31 Alice Springs 26.85 224 P P 06 11 28.2 -0.2
ASAR Alice Springs 26.86 224 P P 06 11 28.4 +0.1
comp=Z,1.6nm,0.4s,baz=55,slow=8.9,SNR=26
ASAR Alice Springs 26.86 224 P P 06 11 27.4 -1.0
STKA Stephens Creek 29.25 202 P P 06 11 48.1 -1.4
comp=Z,2.8nm,0.7s,baz=35,slow=14,SNR=5.5
STKA Stephens Creek 29.25 202 P P 06 11 49.3 -0.2
FITZ Fitzroy Crossi 30.59 242 P P 06 12 00.7 -0.8
comp=Z,8.2nm,0.8s,baz=84,slow=9.1,SNR=9.0
FORT Forrest 35.44 220 P P 06 12 43.2 -0.4
PSA00 Pilbara Seismi 36.95 240 P P 06 12 55.8 -0.7
MORW Morawa 43.16 232 P P 06 13 47.5 -0.3
MORW IAmb IAmb 06 13 47.9
comp=Z,12nm,0.7s
CISI Cisompet, Garu 45.87 264 P P 06 14 07.8 -1.9
ENH Enshi 55.00 312 P P 06 15 18.8 +0.7
ENH IAmb IAmb 06 15 20.2
comp=Z,4.9nm,0.8s
SONM Songino Array 66.96 327 P P 06 16 39.9 +1.0
comp=Z,0.7nm,0.7s,baz=146,slow=7.2,SNR=6.7
SONM Songino Array 66.96 327 P P 06 16 38.1 -0.8
TAPN Taplejung 71.37 301 eP P 06 17 08.1 +1.3
comp=Z,15nm,0.8s
ODAN Odare 71.52 300 eP P 06 17 08.8 +1.2
comp=Z,20nm,0.7s
RAMN Ramite 72.22 300 eP P 06 17 12.8 +1.0
comp=Z,5.5nm,0.5s
JIRN Jiri 72.76 301 eP P 06 17 16.1 +1.0
comp=Z,18nm,0.7s
GUN Gumba 73.09 301 eP P 06 17 18.1 +1.1
comp=Z,16nm,0.7s
PKI Pulchoki 73.40 300 eP P 06 17 19.1 +0.2
KKN Kakani 73.57 301 eP P 06 17 20.6 +0.9
comp=Z,12nm,0.6s
DMN Daman 73.67 300 eP P 06 17 21.7 +1.3
KOLN Koldanda 75.01 300 eP P 06 17 28.1 +0.1
DANN Dangsing 75.01 301 eP P 06 17 28.3 +0.2
comp=Z,8.7nm,0.7s
ILAR Eielson Array 81.80 22 P P 06 18 04.0 -0.4
comp=Z,0.2nm,0.5s,baz=246,slow=6.3,SNR=4.7
ILAR Eielson Array 81.80 22 P P 06 18 04.6 +0.3
ZALV Zalesovo Beam 81.81 326 P P 06 18 04.2 -0.4
comp=Z,0.6nm,0.5s,baz=111,slow=3.9,SNR=4.1
ZALV Zalesovo Beam 81.81 326 P P 06 18 04.1 -0.5
QSPA South Pole Qui 85.10 180 P P 06 18 20.8 -0.6
QSPA IAmb IAmb 06 18 38.5
comp=Z,3.2nm,1.3s
MAW Mawson 85.94 203 P P 06 18 24.4 -0.9
comp=Z,2.7nm,0.7s,baz=96,slow=8.0,SNR=4.3
MAW Mawson 85.94 203 P P 06 18 24.3 -1.0
YKA Yellowknife Ar 94.97 28 P P 06 19 08.1 +0.4
comp=Z,0.3nm,0.9s,baz=274,slow=5.0,SNR=3.4
TORD Torodi Ar. Bea 151.36 289 PKPbc PKPbc 06 25 38.9 -1.0
comp=Z,1.4nm,0.7s,baz=64,slow=2.5,SNR=6.4
TORD pPKPbc pPKPbc 06 26 10.3 +3.1
comp=Z,2.0nm,0.8s,baz=74,slow=2.3,SNR=4.7

IDC 03 06:12:17.6±1.0, 19°27S×70°77W, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.9/29, mbtmp4.1/6, ML3.9/1, MS3.2/1, Ms1 3.2/1, ms1mx2.8/27, Error ellipse: s-maj=38.6km s-min=18.6km az=77.0
NEIC 03 06:12:18.6±2.2, 19°48S±0°05×71°13W±0°06, h16km±2km, mb4.4/8, ML4.4(GUC), Error ellipse: s-maj=9.2km s-min=7.3km az=117.0
VAO 03 06:12:19.7±0.5, 19°41S×71°25W, h10km, mb4.2
GUC 03 06:12:20.0±0.7, 19°43S×71°05W, h35km±2km, ML4.4
ISC 03 06:12:18.4±2.9, 19°45S±0°04×71°13W±0°06, h11km±18km, n68, σ1§74/77, mb4.1/7, 5C-3D, Off coast of northern Chile

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
PSGC Pisagua 0.96 99 ⇓iP Pb 06 12 36.0 -1.0
PSGC eS Sb 06 12 48.0 -1.8
PSGC IAML 06 12 50.9
comp=N,12μm,0.2s
AP01 Chacalluta 1.30 35 eP Pn 06 12 41.9 -0.6
AP01 IAML 06 13 05.4
comp=E,8μm,0.5s
PB11 IPOC Station P 1.42 103 ⇓eP Pn 06 12 43.8 -0.5
PB11 eS Sb 06 13 02.1 -1.2
PB11 IAML 06 13 04.7
comp=N,17μm,0.4s
PB11 IPOC Station P 1.42 103 Pn 06 12 43.8 -0.5
PB11 Sn Sn 06 13 01.8 -1.3
TA01 Diego Aracena 1.43 142 ⇑iP Pn 06 12 44.5 +0.3
TA01 eS Sn 06 13 02.1 -0.9
TA01 IAML 06 13 09.7
comp=E,9μm,0.5s
MNMC Minye Minye 1.48 78 eP Pn 06 12 44.8 -0.4
MNMC eS Sb 06 13 03.6 -1.4
MNMC IAML 06 13 08.5
comp=E,26μm,0.4s
MNMC Minye Minye 1.48 78 Pn 06 12 45.1 -0.1
MNMC Sn Sb 06 13 03.3 -1.7
PATCX Punta Patache 1.65 146 iP Pn 06 12 47.7 +0.3
PATCX IAML 06 13 16.5
comp=E,3μm,0.4s
GO01 Chusmiza 1.83 97 ⇑iP Pb 06 12 51.0 -1.3
GO01 eS Sb 06 13 14.2 -1.3
GO01 IAML 06 13 18.1
comp=N,8μm,0.4s
GO01 Chusmiza 1.83 97 Pb 06 12 51.0 -1.3
GO01 Sn Sn 06 13 12.8 -1.1
PB16 IPOC Station P 1.89 54 ⇑iP Pb 06 12 51.8 -1.5
PB16 eS Sb 06 13 15.8 -1.2
PB16 IAML 06 13 22.0
comp=N,4μm,0.7s
PB08 IPOC Station P 1.98 111 ⇑iP Pn 06 12 52.9 +0.6
PB08 eS Sb 06 13 18.3 -1.3
PB08 IAML 06 13 21.9
comp=N,3μm,0.2s
PB02 IPOC Station P 2.19 148 ⇓eP Pn 06 12 55.4 +0.5
PB02 IAML 06 13 33.8
comp=E,5μm,0.7s
PB01 IPOC Station P 2.21 136 ⇑iP Pn 06 12 55.8 +0.6
PB01 IAML 06 13 30.0
comp=E,3μm,0.3s
PB01 IPOC Station P 2.21 136 Pn 06 12 55.8 +0.6
PB01 Sn Sn 06 13 20.6 -2.0

PB07	**IPOC Station P**	**2.55**	**153**	IAML		06 13 43.5	
	comp=E,2µm,0.5s						
PB09	**IPOC Station P**	**2.93**	**143**	IAML		06 13 57.5	
	comp=E,2µm,0.6s						
PB04	**IPOC Station P**	**3.02**	**163**		**Pn**	**06 13 05.9**	**-0.5**
PB04				Sn	**Sn**	**06 13 39.6**	**-2.9**
LVC	**Limon Verde**	**3.77**	**147**	Pn	**Pn**	**06 13 18.7**	**+1.9**
	comp=E,9.8nm,0.3s,baz=352,slow=7.1,SNR=54						
LVC				Sn	**Sn**	**06 14 00.9**	**-0.5**
	comp=E,39nm,0.3s,baz=339,slow=6.1,SNR=5.3						
LVC				Lg	Lg	06 14 16.5	
	comp=E,72nm,0.3s,baz=68,slow=22,SNR=8.6						
LVC	**Limon Verde**	**3.77**	**147**	eP	**Pn**	**06 13 18.7**	**+1.9**
LVC	**Limon Verde**	**3.77**	**147**		**Pn**	**06 13 18.8**	**+1.9**
LVC					**Sn**	**06 13 59.6**	**-1.8**
PB10	**IPOC Station P**	**4.08**	**173**		**Pn**	**06 13 19.9**	**-1.0**
PB10				Sn	**Sn**	**06 14 04.8**	**-3.9**
LPAZ	**La Paz**	**4.24**	**43**	Pn	**Pn**	**06 13 25.9**	**+2.4**
	comp=E,2.6nm,0.3s,baz=245,slow=12,SNR=32						
LPAZ				Lg	Lg	06 14 29.9	
	baz=341,slow=10,SNR=1.1						
LPAZ	**La Paz**	**4.24**	**43**	eP	**Pn**	**06 13 25.8**	**+2.2**
LPAZ	**La Paz**	**4.24**	**43**	Pn	**Pn**	**06 13 26.9**	**+3.4**
GO02	**Mina Guanaco**	**5.87**	**166**		**Pn**	**06 13 45.4**	**-0.2**
GO02				Sn	**Sn**	**06 14 49.7**	**-3.3**
GO03	**Copiap**	**8.15**	**174**	Pn	**Pn**	**06 14 16.4**	**-0.4**
GO03				Sn	**Sn**	**06 15 45.1**	**-3.9**
SIV	**San Ignacio**	**10.18**	**72**	Pn	**Pn**	**06 14 44.5**	**-0.1**
	comp=E,1.8nm,0.3s,baz=272,slow=9.8,SNR=40						
SAML	**Samuel**	**12.96**	**37**	eP	**Pn**	**06 15 25.1**	**+2.4**
SAML	**Samuel**	**12.96**	**37**		**Pn**	**06 15 22.3**	**-0.4**
CPUP	**Villa Florida**	**14.44**	**121**	Pn	**Pn**	**06 15 45.7**	**+2.9**
	comp=E,0.2nm,0.3s,baz=306,slow=12,SNR=22						
CPUP				LR	LR	06 21 40.6	
	comp=E,91nm,19.2s,baz=250,slow=40						
CPUP	**Villa Florida**	**14.44**	**121**	Pn	**Pn**	**06 15 41.3**	**-1.5**
SALV	**Santo Antonio**	**15.12**	**79**	eP	**Pn**	**06 15 53.2**	**+1.0**
CLDB	**Colider**	**17.06**	**62**	eP	**P**	**06 16 19.2**	**+0.3**
C2SB	**Chapadao do Su**	**17.30**	**91**	eP	**P**	**06 16 23.9**	**+2.5**
TRCB	**Terra Rica**	**17.57**	**104**	eP	**P**	**06 16 27.2**	**+2.6**
PTGB	**Pitanga**	**18.42**	**110**	eP	**Pn**	**06 16 36.4**	**+2.4**
ARAG	**Araguaiana, MT**	**18.78**	**82**	eP	**Pn**	**06 16 41.4**	**+3.1**
OTAV	**Otavalo**	**20.84**	**339**	eP	**P**	**06 16 60.0**	**-0.8**
PLCA	**Paso Flores**	**21.22**	**179**	P	**P**	**06 17 06.6**	**+2.2**
	comp=E,3.0nm,0.9s,baz=16,slow=14,SNR=6.9						
PLCA	**Paso Flores**	**21.22**	**179**	eP	**P**	**06 17 06.6**	**+2.2**
PLCA	**Paso Flores**	**21.22**	**179**	P	**P**	**06 17 02.4**	**-2.0**
BB19B	**Bebedouro**	**21.26**	**98**	eP	**P**	**06 17 06.8**	**+1.8**
FLOC	**Florencia**	**21.36**	**347**	P	**P**	**06 17 06.2**	**+0.2**
BDFB	**Brasilia**	**22.35**	**84**	P	**P**	**06 17 19.7**	**+3.0**
	comp=E,4.1nm,0.6s,baz=250,slow=14,SNR=8.7						
VAO	**Valinhos**	**22.79**	**103**	eP	**P**	**06 17 23.6**	**+2.3**
RUSC	**La Rusia**	**25.25**	**355**	P	**P**	**06 17 45.4**	**+0.1**
PMSA	**Palmer Station**	**45.55**	**176**	eP	**P**	**06 20 39.9**	**+2.0**
FPAL	**Fort Paine**	**55.43**	**345**	P	**P**	**06 21 51.1**	**-1.9**
DBIC	**Dimbokro**	**70.18**	**75**	P	**P**	**06 23 30.8**	**-1.0**
	comp=E,1.5nm,0.7s,baz=228,slow=5.2,SNR=3.3						
DBIC	**Dimbokro**	**70.18**	**75**	IAmb	IAmb	06 23 36.0	
	comp=Z,4.9nm,1.2s						
QSPA	**South Pole Qui**	**70.73**	**180**	P	**P**	**06 23 36.6**	**+2.1**
	comp=Z,0.7nm,0.6s,baz=247,slow=2.4,SNR=8.0						
TOA0	**Torodi Ar. Sit**	**78.65**	**72**	P	**P**	**06 24 19.6**	**-1.5**
TOA0				IAmb	IAmb	06 24 20.6	
	comp=Z,2.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.65**	**72**	P	**P**	**06 24 19.9**	**-1.2**
	comp=Z,2.8nm,0.7s,baz=252,slow=5.6,SNR=16						
TORD	**Torodi Ar. Bea**	**78.65**	**72**	P	**P**	**06 24 19.9**	**-1.2**
YKA	**Yellowknife Ar**	**88.58**	**341**	P	**P**	**06 25 11.9**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=136,slow=4.6,SNR=17						
H11S2	**WAKE ISLAND Hy**	**125.53**	**279**	T	T	08 50 34.6	
	baz=101,slow=74,SNR=70						
H11S1	**WAKE ISLAND Hy**	**125.54**	**279**	T	T	08 50 35.8	
	baz=101,slow=74,SNR=34						
H11S3	**WAKE ISLAND Hy**	**125.55**	**279**	T	T	08 50 37.7	
	baz=101,slow=74,SNR=36						
H11N3	**WAKE ISLAND Hy**	**125.56**	**281**	T	T	08 50 37.6	
	baz=100,slow=75,SNR=9.8						
H11N2	**WAKE ISLAND Hy**	**125.58**	**281**	T	T	08 50 39.2	
	baz=100,slow=75,SNR=9.6						
H11N1	**WAKE ISLAND Hy**	**125.58**	**281**	T	T	08 50 38.9	
	baz=100,slow=75,SNR=7.7						
ZALV	**Zalesovo Beam**	**140.92**	**22**	PKP	**PKPdf**	**06 31 49.7**	**+1.4**
	comp=Z,0.6nm,0.5s,baz=85,slow=1.7,SNR=3.3						
ZALV	**Zalesovo Beam**	**140.92**	**22**	PKPdf	**PKPdf**	**06 31 46.8**	**-1.6**
MKAR	**Makanchi Array**	**145.11**	**33**	PKP	**PKPab**	**06 31 55.9**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=320,slow=3.6,SNR=8.5						
MKAR	**Makanchi Array**	**145.11**	**33**		**PKPdf**	**06 31 56.0**	**-0.1**
SONM	**Songino Array**	**151.61**	**4**	PKPbc	**PKPbc**	**06 32 13.1**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=280,slow=1.8,SNR=5.7						
SONM	**Songino Array**	**151.61**	**4**		**PKPbc**	**06 32 13.2**	**+0.2**
SONM				PKPab	**PKPab**	**06 32 21.9**	**+0.4**

NEIC ***03*** *06:14:31.4±2.1, 33°42S±0°08×178°7W±0°2, h35km±2km, mb4.4/10, Error ellipse: s-maj=23.6km s-min=10.4km az=117.0*
IDC ***03*** *06:14:34.7±6.0, 33°28S×178°47W, h76km±48km, mb4.4/5, mb1 4.4/7, mb1mx4.0/33, mbtmp4.7/7, ML3.9/2, MS3.8/3, Ms1 3.8/3, ms1mx3.3/27, Error ellipse: s-maj=41.1km s-min=29.6km az=53.0*
WEL ***03*** *06:15:40.9, 38°S±53°×17°8E±2°0, h52km±29km, M2.8/15, ML3.0/14, MLv2.8/15, Error ellipse: s-maj=0.1km s-min=0.0km az=1.2*
ISC 03 06:14:32.0±0.8**, 33°31S**±0°07×**178°7W**±0°1**, h41km, n76, σ2§11**/86**, mb4.6**/7**, MS3.5**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.10**	**10**	Pn	**Pn**	**06 15 35.6**	**+3.5**
RAO				Sn	**Sn**	**06 16 20.8**	**+1.9**
MXZ	**Matakaoa Point**	**4.89**	**209**	Pn	**Pn**	**06 15 39.8**	**-3.2**
MXZ				Sn	**Sn**	**06 16 35.7**	**-2.6**
WMGZ	**Waiomatatini S**	**5.07**	**207**	P	Pn	06 15 49.4	+4.0
PKGZ	**Pakihiroa**	**5.26**	**209**	P	**Pn**	**06 15 48.0**	**-0.1**
HAZ	**Te Kaha**	**5.28**	**212**	P	**Pn**	**06 15 51.9**	**+3.7**
PUZ	**Puketiti**	**5.35**	**206**	P	**Pn**	**06 15 51.6**	**+2.3**
RUGZ	**Raukumara Rang**	**5.50**	**211**	P	**Pn**	**06 15 53.9**	**+2.5**
TWGZ	**Tauwhareparae**	**5.55**	**208**	P	**Pn**	**06 15 55.6**	**+3.5**
CNGZ	**Carnagh Statio**	**5.74**	**205**	P	**Pn**	**06 15 56.6**	**+2.1**
MWZ	**Matawai**	**5.87**	**210**	P	**Pn**	**06 15 59.6**	**+3.2**
URZ	**Urewera**	**5.99**	**213**	P	**Pn**	**06 16 01.7**	**+3.7**
	3.2nm,0.3s,baz=288,slow=3.3,SNR=16						
URZ				S	**Sn**	**06 17 13.3**	**+7.9**
	11nm,0.3s,baz=172,slow=20,SNR=7.8						
URZ	**Urewera**	**5.99**	**213**	P	**Pn**	**06 16 01.8**	**+3.7**
RIGZ	**Rimuhau**	**6.09**	**207**	P	**Pn**	**06 16 02.3**	**+2.8**
PRGZ	**Paritu Road**	**6.24**	**205**	P	**Pn**	**06 16 03.0**	**+1.5**
SNGZ	**Shannon Statio**	**6.33**	**209**	P	**Pn**	**06 16 06.5**	**+3.8**
RAHZ	**Arahi**	**6.54**	**210**	P	Pn	06 16 09.9	+4.2
MTHZ	**Maungataniwha**	**6.60**	**212**	P	**Pn**	**06 16 09.8**	**+3.4**
OUZ	**Omahuta**	**6.64**	**251**	Pn	**Pn**	**06 16 06.5**	**-0.4**
NMHZ	**Naumai**	**6.81**	**211**	P	Pn	06 16 14.1	+4.6
BKZ	**Black Stump Fm**	**7.01**	**212**		**Pn**	**06 16 12.3**	**+0.2**
BKZ				Sn	**Sn**	**06 17 28.0**	**-2.5**
BKZ	**Black Stump Fm**	**7.01**	**212**	P	**Pn**	**06 16 14.7**	**+2.7**
KWHZ	**Kaweka Forest**	**7.25**	**211**	P	**Pn**	**06 16 17.8**	**+2.3**
HIZ	**Hauiti**	**7.36**	**223**	Pn	**Pn**	**06 16 15.5**	**-1.3**
HIZ				Sn	**Sn**	**06 17 37.3**	**-1.6**
KAHZ	**Kahuranaki**	**7.38**	**207**	P	**Pn**	**06 16 18.9**	**+1.8**
KRHZ	**Kereru**	**7.46**	**211**	P	**Pn**	**06 16 20.5**	**+2.3**
BHHZ	**Black Hill Sta**	**7.47**	**213**	P	**Pn**	**06 16 22.4**	**+4.1**
BFZ	**Birch Farm**	**8.39**	**207**	Pn	**Pn**	**06 16 31.4**	**+0.5**
BFZ	**Birch Farm**	**8.39**	**207**	P	**Pn**	**06 16 32.5**	**+1.6**
PLWZ	**Palliser**	**9.54**	**208**	Pn	**Pn**	**06 16 46.7**	**0.0**
PLWZ				Sn	**Sn**	**06 18 29.9**	**-2.6**
SNZO	**South Karori**	**9.55**	**211**	Pn	**Pn**	**06 16 45.2**	**-1.6**
SNZO				Sn	**Sn**	**06 18 31.3**	**-1.4**
BHW	**Baring Head**	**9.56**	**210**	Pn	**Pn**	**06 16 46.3**	**-0.7**
TUWZ	**Tuamarina**	**9.99**	**214**	Pn	**Pn**	**06 16 51.0**	**-1.9**
TUWZ				Sn	**Sn**	**06 18 43.6**	**+0.1**
NNZ	**Nelson**	**10.09**	**216**	Pn	**Pn**	**06 16 53.2**	**-1.1**
NNZ				Sn	**Sn**	**06 18 45.1**	**-1.0**
CMWZ	**Cape Campbell**	**10.12**	**212**	Pn	**Pn**	**06 16 52.9**	**-1.7**
CMWZ				Sn	**Sn**	**06 18 46.6**	**-0.1**
BSWZ	**Blackbirch Sta**	**10.24**	**213**	Pn	**Pn**	**06 16 56.8**	**+0.4**
BSWZ				Sn	**Sn**	**06 18 47.0**	**-2.8**
QRZ	**Quartz Range**	**10.25**	**220**	Pn	**Pn**	**06 16 56.9**	**+0.4**
QRZ				Sn	**Sn**	**06 18 49.1**	**-0.9**
THZ	**Tophouse**	**10.74**	**216**	Pn	**Pn**	**06 17 02.8**	**-0.3**
THZ				Sn	**Sn**	**06 19 01.4**	**-0.6**
THZ	**Tophouse**	**10.74**	**216**	P	**Pn**	**06 17 04.4**	**+1.3**
KHZ	**Kahutara**	**10.95**	**212**	Pn	**Pn**	**06 17 08.0**	**+2.0**
KHZ				Sn	**Sn**	**06 19 06.5**	**-0.7**
MQZ	**McQueen's Vall**	**12.38**	**210**	Pn	**Pn**	**06 17 25.5**	**0.0**
RPZ	**Rata Peaks**	**13.11**	**215**	P	**Pn**	**06 17 36.4**	**+0.9**
	0.7nm,0.3s,baz=326,slow=16,SNR=1.8						
RPZ				S	**Sn**	**06 19 55.9**	**-3.9**
	0.3nm,0.3s,baz=136,slow=21,SNR=2.5						
RPZ	**Rata Peaks**	**13.11**	**215**	Pn	**Pn**	**06 17 36.8**	**+1.3**
RPZ				Sn	**Sn**	**06 19 57.8**	**-2.1**
ODZ	**Otahua Downs**	**14.31**	**212**	Pn	**Pn**	**06 17 51.5**	**-0.4**
MLZ	**Mavora Lakes**	**15.74**	**216**	Pn	**Pn**	**06 18 10.1**	**-0.6**
WHZ	**Wether Hill Ro**	**16.20**	**215**	Pn	**Pn**	**06 18 14.8**	**-1.8**
WHZ				IAmb	IAmb	06 18 24.4	
	comp=Z,17nm,1.1s						
DZM	**Mont Dzumac**	**17.23**	**307**	eP	**P**	**06 18 32.9**	**+2.0**
	comp=Z,8.9nm,1.2s						
DZM				eLR	LR	06 22 28.8	
	comp=Z,326nm,21.3s						
DZM	**Mont Dzumac**	**17.23**	**307**	P	**P**	**06 18 32.3**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=112,slow=16,SNR=5.1						
DZM				LR	LR	06 24 04.8	
	comp=Z,478nm,19.6s,baz=180,slow=33						
DZM	**Mont Dzumac**	**17.23**	**307**	P	**P**	**06 18 32.4**	**+1.6**
DZM				IAmb	IAmb	06 18 35.6	
	comp=Z,28nm,1.0s						
NOUC	**Port Laguerre**	**17.31**	**306**	P	**P**	**06 18 33.2**	**+1.6**
NOUC				IAmb	IAmb	06 18 45.8	
	comp=Z,31nm,1.1s						
RAR	**Rarotonga**	**20.67**	**59**	LR	LR	06 25 44.4	
	comp=Z,165nm,19.1s,baz=267,slow=33						
PPT2	**Papeete2**	**30.48**	**66**	eLR	LR	06 28 18.0	
	comp=Z,141nm,23.5s						
STKA	**Stephens Creek**	**33.33**	**261**	LR	LR	06 34 20.7	
	comp=Z,203nm,18.4s,baz=62,slow=35						
CTA	**Charters Tower**	**33.78**	**284**	P	**P**	**06 21 11.7**	**+1.7**
	comp=Z,4.3nm,0.5s,baz=118,slow=15,SNR=3.7						
PMG	**Port Moresby**	**39.39**	**299**	P	**P**	**06 21 59.1**	**+1.3**
	comp=Z,27nm,0.4s,baz=268,slow=19,SNR=8.1						
AS31	**Alice Springs**	**42.43**	**270**	P	**P**	**06 22 23.9**	**+1.0**
ASAR	**Alice Springs**	**42.43**	**270**	P	**P**	**06 22 23.6**	**+0.8**
	comp=Z,5.0nm,0.8s,baz=110,slow=7.9,SNR=27						
ASAR	**Alice Springs**	**42.43**	**270**	P	**P**	**06 22 22.8**	**-0.1**
WR0	**Warramunga Arr**	**43.50**	**276**	P	**P**	**06 22 31.6**	**0.0**
WR0				IAmb	IAmb	06 22 48.3	
	comp=Z,16nm,1.4s						
WB2	**Warramunga Arr**	**43.67**	**276**	P	**P**	**06 22 32.9**	**-0.1**
WRA	**Warramunga Arr**	**43.68**	**276**	P	**P**	**06 22 33.2**	**+0.2**
	comp=Z,5.4nm,0.6s,baz=115,slow=7.6,SNR=13						
WRA	**Warramunga Arr**	**43.68**	**276**	P	**P**	**06 22 33.2**	**+0.2**
WB0	**Warramunga Arr**	**43.71**	**276**	P	**P**	**06 22 33.0**	**-0.3**
WB0				IAmb	IAmb	06 22 34.0	
	comp=Z,8.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**51.80**	**273**	P	**P**	**06 23 35.8**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=133,slow=8.3,SNR=1.9						
FITZ	**Fitzroy Crossi**	**51.80**	**273**	P	**P**	**06 23 36.0**	**0.0**
KURBB	**Kurchatov Arra**	**122.62**	**312**	PKP	**PKPdf**	**06 33 19.1**	**-3.5**
	comp=Z,0.8nm,0.8s,baz=123,slow=2.1,SNR=6.1						
BVAR	**Borovoye Array**	**128.02**	**314**	PKP	**PKPdf**	**06 33 31.5**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=21,slow=9.3,SNR=3.2						
KBZ	**Khabaz**	**146.13**	**300**	PKPbc	**PKPab**	**06 34 07.8**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=128,slow=3.0,SNR=3.9						
FIA1	**FINESS Array S**	**147.63**	**338**		**PKPdf**	**06 34 08.4**	**+0.1**
FINES	**FINESS Array B**	**147.63**	**338**	PKPbc	**PKPdf**	**06 34 08.4**	**+0.1**
	comp=Z,4.4nm,0.5s,baz=34,slow=2.7,SNR=19						
FINES	**FINESS Array B**	**147.63**	**338**		**PKPdf**	**06 34 08.3**	**0.0**
NB2	**NORSAR Subarra**	**151.51**	**350**	PKP	**PKiKP**	**06 34 21.5**	**+0.2**
	comp=Z,3.8nm,0.8s,baz=17,slow=4.3						
NOA	**NORSAR Array B**	**151.51**	**350**	PKPbc	**PKPbc**	**06 34 20.4**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=14,slow=4.1,SNR=4.9						
HFS	**Hagfors**	**151.94**	**347**	PKPbc	**PKPbc**	**06 34 21.7**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=97,slow=3.6,SNR=4.5						
AKASG	**Malin Array Be**	**153.15**	**319**	PKPbc	**PKPbc**	**06 34 22.4**	**-2.3**
	comp=Z,0.3nm,0.3s,baz=45,slow=3.0,SNR=2.4						
AKASG	**Malin Array Be**	**153.15**	**319**		**PKPbc**	**06 34 23.8**	**-1.0**
BRTR	**Keskin Array B**	**153.31**	**293**	PKPbc	**PKPbc**	**06 34 23.2**	**-2.5**
	comp=Z,0.6nm,0.6s,baz=107,slow=4.1,SNR=2.6						

NNC ***03*** *06:16:30.6±0.7, 46°28N×79°31E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=8.1km s-min=3.0km az=131.0*
SOME ***03*** *06:16:32.3, 46°18N×79°17E, h5km*
ISC 03 06:16:29.6±1.3**, 46°26N**±0°03×**79°22E**±0°03**, h4km**±12km**, n36, σ1§22**/57**, 6C-7D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPS	**Kapalarasan**	**0.98**	**174**	⇓iP	**Pn**	**06 16 50.2**	**-0.1**
	41nm,0.1s						
KAPS				⇑iS	**Sn**	**06 17 03.6**	**-1.1**
	64nm,0.2s						
KAPS	**Kapalarasan**	**0.98**	**174**	P	**Pn**	**06 16 50.2**	**-0.1**
	41nm,0.1s						
KAPS				S	**Sn**	**06 17 03.6**	**-1.1**
	60nm,0.2s						
TDK	**Taldyqorghan**	**1.38**	**205**	⇓iP	**Pg**	**06 16 56.9**	**+0.8**
	53nm,0.2s						
TDK				eS	**Sg**	**06 17 14.5**	**+0.4**
	200nm,0.2s						
DJR	**Jarkent**	**1.97**	**168**	eP	**Pg**	**06 17 07.0**	**-0.3**
	8.2nm,0.3s						
DJR				eS	**Sg**	**06 17 31.1**	**-1.8**
	48nm,0.2s						
DJR	**Jarkent**	**1.97**	**168**	P	**Pb**	**06 17 05.4**	**-0.7**
	2.5nm,0.2s						
DJR				S	**Sb**	**06 17 29.7**	**-1.4**
	48nm,0.2s						
MAKZ	**Makanchi**	**1.98**	**73**	⇑Pn	**Pn**	**06 17 03.8**	**-0.1**
	1.6nm,0.3s						
MAKZ				⇓Sn	**Sb**	**06 17 29.7**	**-1.5**
	26nm,0.5s						
MK31	**Makanchi Array**	**2.18**	**75**	Pn	**Pn**	**06 17 07.0**	**+0.3**
	6.2nm,0.5s,baz=251,slow=14,SNR=159						
MK31				⇓Sn	**Sb**	**06 17 36.1**	**-1.1**
	8.0nm,0.5s,baz=269,slow=15,SNR=10						
ARXS	**Arharly**	**2.27**	**206**	eP	**Pg**	**06 17 13.2**	**0.0**
	5.9nm,0.4s						
ARXS				eS	**Sg**	**06 17 42.0**	**-0.6**
	28nm,0.3s						
ARXS	**Arharly**	**2.27**	**206**	Pg	**Pg**	**06 17 12.7**	**-0.5**
	5.9nm,0.2s						
ARXS				Lg	Lg	06 17 42.0	
	60nm,0.3s						
KPKS	**Kokpek**	**2.82**	**188**	eP	**Pg**	**06 17 24.4**	**+0.7**
	24nm,0.3s						
KPKS				eS	**Sg**	**06 18 01.4**	**+1.2**
	41nm,0.4s						
CHKK	**Chushkaly**	**2.88**	**214**	eP	**Pg**	**06 17 24.6**	**-0.2**
	3.8nm,0.3s						
CHKK				eS	**Sg**	**06 18 01.9**	**-0.2**
	67nm,0.3s						
CHKK	**Chushkaly**	**2.88**	**214**	Pg	**Pg**	**06 17 25.2**	**+0.4**
	3.3nm,0.2s						
CHKK				Lg	Lg	06 18 03.0	
	44nm,0.4s						
PDGK	**Podgornoye**	**2.94**	**176**	Pg	**Pg**	**06 17 25.7**	**-0.2**
	3.6nm,0.3s						
PDGK				Lg	Lg	06 18 03.7	
	3.5nm,0.3s						
PDGK	**Podgornoye**	**2.94**	**176**	⇓Pg	**Pg**	**06 17 25.3**	**-0.6**
	10nm,0.7s						
PDGK				⇓Lg	Lg	06 18 05.8	
	6.9nm,0.5s						
SHLS	**Shalkode**	**3.11**	**177**	eP	**Pg**	**06 17 30.4**	**+1.2**
	3.2nm,0.2s						
SHLS				eS	**Sg**	**06 18 10.4**	**+1.0**
	13nm,0.5s						
UZB	**Uzynbulak**	**3.12**	**183**	eP	**Pg**	**06 17 29.9**	**+0.6**
	4.0nm,0.3s						
UZB				eS	**Sg**	**06 18 11.4**	**+1.6**
	7.5nm,0.3s						
UZB	**Uzynbulak**	**3.12**	**183**	Pg	**Pg**	**06 17 29.8**	**+0.5**
	4.0nm,0.3s						
UZB				Lg	Lg	06 18 11.3	
	7.7nm,0.2s						
KTBS	**Karatobe**	**3.12**	**216**	eP	**Pg**	**06 17 29.4**	**0.0**
	2.6nm,0.3s						
KTBS				eS	**Sg**	**06 18 10.7**	**+0.8**
	36nm,0.3s						
KTBS	**Karatobe**	**3.12**	**216**	Pg	**Pg**	**06 17 29.4**	**0.0**
	1.6nm,0.2s						
KTBS				Lg	Lg	06 18 10.6	
	43nm,0.4s						
KUU	**Kurty**	**3.13**	**222**	eP	**Pg**	**06 17 29.1**	**-0.5**
	1.6nm,0.1s						
KUU				eS	**Sg**	**06 18 09.1**	**-1.0**
	47nm,0.2s						
KUU	**Kurty**	**3.13**	**222**	Pg	**Pg**	**06 17 29.0**	**-0.5**
	1.7nm,0.2s						
KUU				Lg	Lg	06 18 08.2	
	43nm,0.2s						
ZHN	**Zhinishke**	**3.14**	**191**	eP	**Pg**	**06 17 30.6**	**+0.8**
	9.1nm,0.2s						
ZHN				eS	**Sg**	**06 18 12.5**	**+2.0**
	7.4nm,0.3s						
ZHN	**Zhinishke**	**3.14**	**191**	Pg	**Pg**	**06 17 31.2**	**+1.4**
	9.3nm,0.3s						
ZHN				Lg	Lg	06 18 13.4	
	7.4nm,0.2s						
SATY	**Saty**	**3.25**	**191**	eP	**Pg**	**06 17 31.7**	**-0.3**
	7.3nm,0.2s						
SATY				eS	**Sg**	**06 18 14.5**	**+0.4**
	11nm,0.1s						
KOTS	**Kotyrbulak**	**3.38**	**207**	eP	**Pg**	**06 17 33.9**	**-0.4**
	4.2nm,0.2s						
KOTS				eS	**Sg**	**06 18 17.5**	**-0.7**
	70nm,0.5s						
MDOK	**Medeo**	**3.46**	**207**	eP	**Pg**	**06 17 35.2**	**-0.8**
	2.9nm,0.3s						
MDOK				eS	**Sg**	**06 18 21.4**	**+0.5**
	18nm,0.5s						
MDOK	**Medeo**	**3.46**	**207**	Pg	**Pg**	**06 17 34.9**	**-1.1**
	4.8nm,0.3s						
MDOK				Lg	Lg	06 18 21.3	
	16nm,0.5s						
KRBS	**Karabastau**	**3.59**	**226**	eP	**Pg**	**06 17 37.5**	**-1.0**
	0.9nm,0.2s						
KRBS				eS	**Sg**	**06 18 23.6**	**-1.4**
	7.6nm,0.3s						
TNSS	**Tian-Shan**	**3.61**	**208**	eP	**Pg**	**06 17 37.2**	**-1.6**
	15nm,1.1s						
TNSS				eS	**Sg**	**06 18 23.4**	**-2.2**
	13nm,0.5s						
TNSS	**Tian-Shan**	**3.61**	**208**	Pg	**Pg**	**06 17 39.5**	**+0.7**
	4.7nm,0.3s						
TNSS				Lg	Lg	06 18 26.6	
	13nm,0.5s						
BTLS	**Baital**	**3.83**	**253**	eP	**Pg**	**06 17 41.7**	**-1.3**
	1.3nm,0.4s						
BTLS				eS	**Sg**	**06 18 31.0**	**-1.6**
	5.2nm,0.4s						
ZSN	**Zaisan**	**4.05**	**71**	eP	**Pb**	**06 17 43.1**	**+1.6**
	3.5nm,0.2s						
ZSN				eS	**Sb**	**06 18 34.2**	**+3.4**
	8.7nm,0.6s						
ZSN	**Zaisan**	**4.05**	**71**	Pg	**Pg**	**06 17 44.1**	**-3.1**
	3.5nm,0.2s						
ZSN				Lg	Lg	06 18 36.8	
	6.3nm,0.6s						
KURK	**Kurchatov**	**4.47**	**355**	⇑Pg	**Pb**	**06 17 51.2**	**+2.5**
	1.9nm,0.6s						
KURK				⇑Lg	Lg	06 18 51.4	
	9.9nm,0.9s						
AAK	**Ala-Archa**	**4.96**	**225**	⇑Lg	Lg	06 19 08.3	
	11nm,1.1s						
KK31	**Karatay Array**	**6.97**	**246**	⇓Pn	**Pn**	**06 18 13.9**	**+1.4**
	0.5nm,0.7s,baz=62,slow=12,SNR=4.9						
KK31				⇑Lg	Lg	06 20 13.1	
	2.9nm,0.5s						

SJA ***03*** *06:19:51.4±0.9, 21°19S×68°53W, h144km±7km, ML3.2, MW3.3*
GUC ***03*** *06:19:52.1±0.7, 21°21S×68°60W, h141km±5km, ML3.7*
ISC 03 06:19:52.6±1.9**, 21°19S**±0°04×**68°57W**±0°07**, h142km**±15km**, n31, σ0§31**/47**, 7C-6D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.87**	**226**	⇑iP	**Pn**	**06 20 15.9**	**+0.2**
PB09				eS	**Sn**	**06 20 33.4**	**+0.1**
PB09	**IPOC Station P**	**0.87**	**226**	eP	**Pn**	**06 20 15.9**	**+0.2**
PB09				eS	**Sn**	**06 20 33.6**	**+0.4**
PB09				IAML		06 20 35.0	
	comp=Z,763nm,0.4s						
PB01	**IPOC Station P**	**0.87**	**280**	⇓eP	**Pn**	**06 20 15.2**	**-0.4**
PB01				eS	**Sn**	**06 20 32.5**	**-0.5**
PB01				IAML		06 20 34.0	
	comp=N,2µm,0.1s						
PB08	**IPOC Station P**	**1.18**	**332**	⇓iP	**Pn**	**06 20 18.8**	**+0.1**
PB08				iS	**Sn**	**06 20 38.3**	**-0.2**
PB08				IAML		06 20 39.1	
	comp=N,508nm,0.2s						
PB08	**IPOC Station P**	**1.18**	**332**	eP	**Pn**	**06 20 18.9**	**+0.2**
PB08				⇓eS	**Sn**	**06 20 38.4**	**-0.2**
PB02	**IPOC Station P**	**1.24**	**264**	⇓iP	**Pn**	**06 20 19.2**	**+0.2**
PB02				iS	**Sn**	**06 20 39.0**	**-0.1**
PB02				IAML		06 20 40.8	
	comp=E,2µm,0.1s						
PB02	**IPOC Station P**	**1.24**	**264**	eP	**Pn**	**06 20 19.3**	**+0.3**
PB02				eS	**Sn**	**06 20 39.4**	**+0.3**
PB07	**IPOC Station P**	**1.34**	**246**	⇑iP	**Pn**	**06 20 20.1**	**+0.1**
PB07				eS	**Sn**	**06 20 40.8**	**-0.1**
PB07				IAML		06 20 41.9	
	comp=E,2µm,0.2s						
PB07	**IPOC Station P**	**1.34**	**246**	eP	**Pn**	**06 20 20.3**	**+0.3**
PB07				eS	**Sn**	**06 20 40.8**	**-0.1**
PB03	**IPOC Station P**	**1.39**	**232**	⇑iP	**Pn**	**06 20 20.6**	**+0.1**
PB03				eS	**Sn**	**06 20 41.5**	**-0.5**
PB03				IAML		06 20 42.3	
	comp=E,2µm,0.6s						
PB03	**IPOC Station P**	**1.39**	**232**	eP	**Pn**	**06 20 20.7**	**+0.1**
PB03				eS	**Sn**	**06 20 42.0**	**0.0**
LVC	**Limon Verde**	**1.45**	**193**	eP	**Pn**	**06 20 21.1**	**-0.2**
LVC	**Limon Verde**	**1.45**	**193**	eP	**Pn**	**06 20 21.1**	**-0.2**
PATCX	**Punta Patache**	**1.52**	**284**	eP	**Pn**	**06 20 22.2**	**+0.3**
PATCX				eS	**Sn**	**06 20 43.9**	**-0.3**
PATCX				IAML		06 20 45.9	
	comp=N,830nm,0.3s						
GO01	**Chusmiza**	**1.62**	**339**	eP	**Pn**	**06 20 23.4**	**0.0**
GO01				eS	**Sn**	**06 20 47.8**	**+0.9**
GO01				IAML		06 20 50.7	
	comp=N,957nm,0.1s						
TA01	**Diego Aracena**	**1.63**	**292**	⇓iP	**Pn**	**06 20 22.7**	**-0.2**
TA01				iS	**Sn**	**06 20 46.1**	**0.0**
TA01				IAML		06 20 48.0	
	comp=E,360nm,0.2s						
PB11	**IPOC Station P**	**1.75**	**324**	⇓iP	**Pn**	**06 20 24.1**	**-0.4**
PB11				IAML		06 20 49.7	
	comp=N,949nm,0.1s						
PB11	**IPOC Station P**	**1.75**	**324**	eP	**Pn**	**06 20 24.3**	**-0.2**
PB11				eS	**Sn**	**06 20 48.9**	**0.0**
PB06	**IPOC Station P**	**1.77**	**211**	⇑iP	**Pn**	**06 20 24.7**	**0.0**
PB06				eS	**Sn**	**06 20 49.3**	**-0.1**
PB06				IAML		06 20 50.1	
	comp=E,490nm,0.1s						
PB06	**IPOC Station P**	**1.77**	**211**	eP	**Pn**	**06 20 24.8**	**0.0**
PB06				IAML		06 20 25.7	
	comp=Z,318nm,0.4s						
PB04	**IPOC Station P**	**1.86**	**232**	⇑iP	**Pn**	**06 20 25.8**	**+0.1**
PB04				IAML		06 20 51.9	
	comp=N,636nm,0.1s						
PB04	**IPOC Station P**	**1.86**	**232**	eP	**Pn**	**06 20 26.1**	**+0.4**
PB04				IAML		06 20 53.7	
	comp=Z,447nm,0.1s						
PSGCX	**Pisagua**	**2.15**	**317**	eP	**Pn**	**06 20 28.4**	**-0.8**
PSGCX				eS	**Sn**	**06 20 57.8**	**+0.5**
PB15	**IPOC Station P**	**2.17**	**202**	⇑eP	**Pn**	**06 20 29.3**	**-0.2**
PB15				eS	**Sn**	**06 20 58.4**	**+0.5**
PB15	**IPOC Station P**	**2.17**	**202**	eP	**Pn**	**06 20 29.9**	**+0.3**
PB05	**IPOC Station P**	**2.24**	**222**	iP	**Pn**	**06 20 30.1**	**-0.1**
PB05				IAML		06 21 02.0	
	comp=E,224nm,0.3s						
PB05	**IPOC Station P**	**2.24**	**222**	eP	**Pn**	**06 20 30.2**	**-0.1**
MNMC	**Minye Minye**	**2.26**	**335**	⇑iP	**Pn**	**06 20 31.2**	**+0.4**
YJA	**Yavi**	**3.01**	**110**	IAML		06 20 40.3	
	comp=Z,7.8nm,0.4s						
HJA	**Humahuaca**	**3.55**	**125**	eP	**Pn**	**06 20 47.0**	**-0.1**
HJA				IAML		06 20 47.7	
	comp=Z,20nm,0.6s						
PB14	**IPOC Station P**	**3.81**	**206**	IAML		06 21 35.7	
	comp=Z,35nm,0.1s						

NEIC ***03*** *06:20:31.6±2.5, 38°23N±0°04×20°42E±0°06, h10km±2km, Error ellipse: s-maj=7.8km s-min=3.8km az=59.0*
PDG ***03*** *06:20:31.5±0.3, 38°22N×20°29E, h16km, ML4.0/14, Error ellipse: s-maj=1.1km s-min=0.9km az=90.0*
ATH ***03*** *06:20:32.5, 38°23N×20°39E, h12km, ML3.5/15, Error ellipse: s-maj=1.6km s-min=1.0km az=261.0*
THE ***03*** *06:20:32.7, 38°23N×20°39E, h12km±1km, ML3.9/6, Error*

ellipse: s-maj=1.1km s-min=0.4km az=203.0
*IDC **03** 06:20:35.3±3.0, 38.81N×20.92E, h0km, mb3.7/7, mb1 3.8/10, mb1mx3.5/47, mbtmp3.7/10, ML3.4/3, Error ellipse: s-maj=63.0km s-min=20.2km az=43.0*
ISC 03 06:20:32.1±0.7**, 38.21N**±0.03×**20.39E**±0.03**, h14**km±4km**,** **n95, σ1.09**/140**, mb4.0**/9**, 2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	189	P	Pg	06 20 34.9	+0.3
CHV1				S	Sg	06 20 36.8	+0.5
	216μm,0.4s						
KEF3	Kipouria, Keph	0.03	251	P	Pg	06 20 34.9	+0.3
KEF3				S	Sg	06 20 36.6	+0.2
KEF4	Livadi, Kephal	0.05	33	P	Pg	06 20 33.8	-1.0
KEF4				S	Sg	06 20 36.1	-0.6
ARG2	Argostoli	0.09	114	P	Pg	06 20 35.4	+0.3
ARG2				S	Sg	06 20 37.2	+0.1
	84μm,0.1s						
KEF1	Kardakata, Kep	0.09	46	P	Pg	06 20 35.2	0.0
KEF1				S	Sg	06 20 37.0	-0.2
KEF2	Argostoli. Kep	0.09	122	P	Pg	06 20 35.4	+0.3
KEF2				S	Sg	06 20 37.3	+0.1
VLS	Valsamata	0.16	103	P	Pg	06 20 36.3	+0.2
VLS				S	Sg	06 20 39.1	+0.3
	17μm,0.1s						
VLS	Valsamata	0.16	103	P	Pg	06 20 36.3	+0.2
VLS				S	Sg	06 20 39.1	+0.3
VLS				AML	AML	06 20 39.8	
	comp=E,47428μm,0.2s						
VLS				AML	AML	06 20 39.8	
	comp=N,35256μm,0.1s						
VSK1	VASILIKIADES	0.24	35	P	Pg	06 20 37.5	+0.1
VSK1				S	Sb	06 20 41.5	-0.8
	comp=N,119μm,0.2s						
VLMS	Volimes, Zakyn	0.40	147	P	Pg	06 20 40.9	+0.7
VLMS				S	Sg	06 20 45.9	+0.2
VLMS				AML	AML	06 20 50.0	
	comp=E,20972μm,0.2s						
VLMS				AML	AML	06 20 51.2	
	comp=N,27096μm,0.4s						
EVGI	Lefkada island	0.46	27	P	Pg	06 20 41.2	0.0
EVGI				S	Sg	06 20 47.7	+0.3
EVGI	Lefkada island	0.46	27	P	Pg	06 20 41.4	+0.1
MGNA	Meganis	0.54	36	P	Pg	06 20 42.6	-0.3
MGNA				S	Sg	06 20 49.6	-0.5
MGNA				AML	AML	06 20 54.2	
	comp=E,23553μm,0.4s						
MGNA				AML	AML	06 20 54.5	
	comp=N,25602μm,0.5s						
LKD2	Lefkada island	0.61	20	P	Pg	06 20 43.8	-0.3
LKD2				S	Sb	06 20 52.9	-0.2
	comp=N,5μm,0.7s						
LKD2	Lefkada island	0.61	20	P	Pg	06 20 43.7	-0.5
LKD2				S	Sg	06 20 52.1	-0.1
LKD2				AML	AML	06 21 01.9	
	comp=N,9844μm,0.6s						
LKD2				AML	AML	06 21 03.6	
	comp=E,9068μm,0.4s						
AST1	Astakos	0.64	59	P	Pg	06 20 44.6	-0.1
AST1				S	Sb	06 20 54.5	+0.6
	comp=E,15μm,0.1s						
TSLK	Tsoukalades, L	0.65	19	P	Pg	06 20 44.7	-0.1
TSLK	Tsoukalades, L	0.65	19	P	Pg	06 20 44.3	-0.4
TSLK				S	Sb	06 20 54.2	+0.2
TSLK				AML	AML	06 21 00.2	
	comp=N,9126μm,0.4s						
TSLK				AML	AML	06 21 03.0	
	comp=E,12400μm,0.5s						
PDO	Prodromos	0.73	58	P	Pg	06 20 46.4	0.0
PDO	Prodromos	0.73	58	P	Pg	06 20 46.4	0.0
PDO				AML	AML	06 21 01.0	
	comp=N,20269μm,0.3s						
PDO				AML	AML	06 21 01.2	
	comp=E,14548μm,0.8s						
RLS	Riolos of Patr	0.86	100	P	Pg	06 20 48.8	-0.1
RLS				AML	AML	06 21 04.3	
	comp=E,2871μm,0.5s						
RLS				AML	AML	06 21 07.6	
	comp=N,2948μm,0.7s						
PVO	Paravola	0.98	65	P	Pn	06 20 51.4	-0.1
PVO	Paravola	0.98	65	P	Pn	06 20 51.3	-0.1
PVO				AML	AML	06 21 07.9	
	comp=N,11187μm,0.3s						
PVO				AML	AML	06 21 08.1	
	comp=E,14047μm,0.3s						
DRO	Drossia	1.08	104	P	Pg	06 20 53.5	+0.6
LAKA	Lakka	1.25	88	P	Pn	06 20 54.8	-0.4
LAKA				AML	AML	06 21 19.9	
	comp=E,3473μm,0.9s						
LAKA				AML	AML	06 21 20.7	
	comp=N,2310μm,1.1s						
ANX	Ano Chora	1.26	72	P	Pb	06 20 55.8	+0.1
ANX				AML	AML	06 21 20.0	
	comp=N,8592μm,0.6s						
ANX				AML	AML	06 21 20.9	
	comp=E,7843μm,1.1s						
EVR	Evrytania	1.32	57	P	Pn	06 20 56.4	+0.2
EVR	Evrytania	1.32	57	P	Pn	06 20 56.4	+0.2
EVR				AML	AML	06 21 23.7	
	comp=N,2988μm,1.2s						
EVR				AML	AML	06 21 29.3	
	comp=E,2300μm,0.7s						
SERG	Sergoula	1.33	81	P	Pb	06 20 56.9	+0.1
SERG				AML	AML	06 21 22.8	
	comp=E,2630μm,0.4s						
SERG				AML	AML	06 21 23.8	
	comp=N,2376μm,0.4s						
TRIZ	Trizonia	1.33	83	P	Pb	06 20 56.8	0.0
KALE	Kalithea	1.39	82	P	Pb	06 20 58.2	+0.3
KALE				AML	AML	06 21 24.5	
	comp=N,2577μm,1.2s						
KALE				AML	AML	06 21 26.1	
	comp=E,1799μm,0.6s						
KLV	Kalavryta, Ach	1.40	96	P	Pb	06 20 58.0	0.0
KLV				AML	AML	06 21 23.7	
	comp=E,1340μm,0.9s						
KLV				AML	AML	06 21 26.9	
	comp=N,945μm,0.5s						
JAN	Janina	1.49	14	P	Pg	06 21 01.0	+0.3
MAKR	Makrakomi, Fth	1.58	59	P	Pg	06 21 02.7	+0.2
ITM	Ithomi	1.60	130	Pn	Pn	06 20 58.5	-1.5
ITM				Sn	Sn	06 21 20.7	+0.4
AGG	Agios Georgios	1.72	61	P	Pg	06 21 05.1	-0.1
AXAR	Agios Charalam	1.87	72	P	Pg	06 21 07.2	-0.7
AXAR				AML	AML	06 21 43.8	
	comp=N,3300μm,0.9s						
AXAR				AML	AML	06 21 49.0	
	comp=E,5014μm,1.2s						
KPRO	Kipourio	1.90	23	P	Pb	06 21 07.0	+0.4
LKR	Lokris	2.10	77	P	Pb	06 21 09.3	-0.5
VIL2	Platees	2.27	89	P	Pb	06 21 12.1	-0.7
SCTE	Santa Cesarea	2.38	322	Pn	Pn	06 21 11.5	+0.8
SCTE				Sn	Sn	06 21 41.0	+1.3
LIT	Litokhoron	2.49	40	Pn	Pn	06 21 10.1	-2.2
LIT				Sn	Sn	06 21 41.7	-0.9
MRKA	Markates	2.56	78	P	Pn	06 21 15.3	+2.2
FNA	Florina	2.68	16		Pn	06 21 15.6	+0.8
FNA				Sn	Sn	06 21 47.4	+0.3
TIP	Timpagrande	3.00	290	Pn	Pn	06 21 21.1	+1.8
TIR	Tirane	3.16	353	Pn	Pn	06 21 21.4	+0.1
TIR				Sn	Sn	06 21 58.7	-0.1
MASS	Massafra	3.48	315	ePn	Pn	06 21 27.5	+1.6
CEL	Celeste	3.54	272	Pn	Pn	06 21 26.2	-0.5
CEL				Sn	Sn	06 22 08.8	+0.5
STIP	Stip	3.74	21	iPn	Pn	06 21 33.1	+3.8
ULC	Ulcinj	3.85	347	ePn	Pn	06 21 30.8	-0.1
ULC				eSn	Sn	06 22 16.0	+0.1
SG1	Sgolgore (BA)	3.89	314	ePn	Pn	06 21 32.7	+1.3
BAI	Bari	3.96	318	ePn	Pn	06 21 33.1	+0.7
DRME	Dracevica, Mon	4.07	347	ePn	Pn	06 21 33.8	-0.2
DRME				eSn	Sn	06 22 22.1	+0.7
BUM	Brajici-Budva	4.24	345	ePn	Pn	06 21 36.5	+0.2
BUM				eSn	Sn	06 22 25.5	-0.1
ACER	Acerenza	4.29	308	Pn	Pn	06 21 37.7	+0.6
ACER				Sn	Sn	06 22 26.7	-0.2
PDG	Podgorica	4.30	349	Pn	Pn	06 21 35.3	-1.8
PDG				Sn	Sn	06 22 24.4	-2.6
TTG	Podgorica	4.30	349	ePn	Pn	06 21 37.2	+0.2
TTG				eSn	Sn	06 22 27.6	+0.6
PVY	Plav	4.39	356	ePn	Pn	06 21 39.0	+0.6
PVY				eSn	Sn	06 22 30.5	+1.1
HCY	Herceg Novi	4.47	342	ePn	Pn	06 21 39.8	+0.4
HCY				eSn	Sn	06 22 31.0	-0.2
CEME	Cevo	4.47	346	⇓iPn	Pn	06 21 39.5	0.0
CEME				eSn	Sn	06 22 31.2	-0.1
IDI	Anoyia	4.65	128	Pn	Pb	06 21 49.0	-4.4
	comp=E,0.5nm,0.3s,baz=280,slow=12,SNR=2.7						
IDI				Sn	Sn	06 22 37.2	+1.6
	comp=E,1.1nm,0.3s,baz=341,slow=23,SNR=6.3						
IVA	Berane	4.67	356	ePn	Pn	06 21 43.0	+0.8
IVA				eSn	Sn	06 22 36.7	+0.5
NKME	Niksic	4.68	347	ePn	Pn	06 21 42.8	+0.5
NKME				eSn	Sn	06 22 36.2	-0.2
KOME	Kolasin	4.68	352	ePn	Pn	06 21 42.9	+0.5
KOME				eSn	Sn	06 22 36.5	0.0
NKY	Niksic	4.72	347	ePn	Pn	06 21 43.0	+0.1
NKY				eSn	Sn	06 22 36.5	-0.9
BRY	Bratogost	4.89	344	ePn	Pn	06 21 45.6	+0.3
BRY				eSn	Sn	06 22 41.2	-0.5
VTS	Vitosha	4.91	25	Pn	Pn	06 21 44.4	-1.2
VTS				Sn	Sn	06 22 40.7	-1.5
SGRT	San Giovanni R	5.02	316	Pn	Pn	06 21 46.8	-0.3
SGRT					Sn	06 22 42.9	-2.1
UPM	Unac-Piva	5.11	348	ePn	Pn	06 21 48.4	0.0
UPM				eSn	Sn	06 22 46.8	-0.4
ALN	Alexandroupoli	5.13	57	Pn	Pn	06 21 49.6	+1.2
PLE	Pljevlja	5.17	352	⇓iPn	Pn	06 21 49.5	+0.4
PLE				eSn	Sn	06 22 48.7	+0.2
INTR	Introdacqua	6.25	309	Pn	Pn	06 22 01.7	-2.2
NRCA	Norcia	7.21	312		Pn	06 22 19.7	+2.6
NRCA				Sn	Sn	06 23 38.8	0.0
MURB	Monte Urbino	7.81	313	Pn	Pn	06 22 26.7	+1.4
MURB				Sn	Sn	06 23 50.8	-2.8
TRI	Trieste	8.96	329	Pn	Pn	06 22 42.4	+1.3
TRI				Sn	Sn	06 24 17.4	-4.3
SOKA	Soboth	9.34	337	ePn	Pn	06 22 46.6	+0.4
	comp=E,1.8nm,0.2s						
OBKA	Obir	9.35	334	ePn	Pn	06 22 47.6	+1.2
	comp=E,1.4nm,0.2s						
TEOL	Teolo	9.66	320	Pn	Pn	06 22 50.6	0.0
VYHS	Vyhne	10.34	354	ePN	Pn	06 23 01.1	+1.2
VYHS				eSN	Sn	06 24 52.9	-2.6
MOA	Molln	10.62	337	ePn	Pn	06 23 05.3	+1.6
	comp=E,1.5nm,0.2s						
DAVOX	Davos/Dischmat	11.54	321	Pn	Pn	06 23 19.0	+2.5
	comp=E,0.2nm,0.3s,baz=231,slow=5.7,SNR=3.2						
GERES	GERESS Array B	11.68	338	Pn	Pn	06 23 17.7	-0.6
	comp=E,0.2nm,0.3s,baz=159,slow=14,SNR=3.9						
HFS	Hagfors	22.35	351	P	P	06 25 29.9	+0.6
	comp=E,2.9nm,0.8s,baz=154,slow=11,SNR=3.4						
FINES	FINESS Array B	23.52	7	P	P	06 25 41.7	+0.3
	comp=E,5.5nm,1.1s,baz=168,slow=9.8,SNR=4.5						
NOA	NORSAR Array B	23.56	349	P	P	06 25 43.8	+1.9
	comp=E,1.1nm,0.9s,baz=162,slow=8.6,SNR=2.9						
ARCES	ARCESS Array B	31.50	3	P	P	06 26 52.4	-0.7
	comp=E,2.8nm,1.1s,baz=189,slow=11,SNR=2.6						
KK31	Karatay Array	37.88	66	P	P	06 27 49.7	+1.1
KK31				IAmb	IAmb	06 27 51.3	
	comp=Z,1.9nm,0.6s						
KKAR	Karatay Array	37.88	66	P	P	06 27 49.3	+0.7
KKAR	Karatay Array	37.88	66	P	P	06 27 48.6	+0.1
KKAR				IAmb	IAmb	06 27 51.3	
	comp=Z,1.9nm,0.6s						
MK31	Makanchi Array	45.37	58	P	P	06 28 50.0	+0.1
MKAR	Makanchi Array	45.37	58	P	P	06 28 49.4	-0.5
	comp=Z,0.6nm,0.4s,baz=276,slow=7.0,SNR=11						
MKAR	Makanchi Array	45.37	58	P	P	06 28 49.5	-0.4
ZALV	Zalesovo Beam	45.74	48	P	P	06 28 52.5	-0.2
	comp=Z,1.4nm,0.5s,baz=272,slow=8.4,SNR=6.4						
ZALV	Zalesovo Beam	45.74	48	P	P	06 28 52.7	0.0
SONM	Songino Array	60.52	51	P	P	06 30 41.7	-0.1
	comp=Z,0.1nm,0.3s,baz=26,slow=31,SNR=2.6						

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*IDC **03** 06:21:17.4±2.2, 37.11N×70.04E, h0km, mb3.4/2, mb1 3.5/9, mb1mx3.3/54, mbtmp3.4/9, ML3.1/7, Error ellipse: s-maj=45.2km s-min=18.5km az=142.0*
*NNC **03** 06:21:28.1±4.1, 37.92N×69.44E, h11km±17km, mb3.9, mpv3.4, Error ellipse: s-maj=27.4km s-min=17.1km az=19.0*
ISC 03 06:21:24.1±1.5**, 37.5N**±0.1×**69.66E**±0.09**, h27**km**, n13,** **σ1.81**/17**, 5C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.59	6	⇑Pn	Pn	06 22 47.0	+1.6
	1.4nm,0.5s,baz=199,slow=20,SNR=32						
KK31				⇑Pg	Pb	06 23 03.2	+2.3
	2.8nm,0.6s,baz=192,slow=19,SNR=8.5						
KK31				⇑Lg	Lg	06 24 15.0	
	7.2nm,0.5s,baz=193,slow=26,SNR=5.0						
AAK	Ala-Archa	6.29	35	Pn	Pn	06 22 57.4	+2.2
	1.6nm,0.3s,baz=172,slow=6.7,SNR=16						
AAK				Sn	Sn	06 24 04.5	-1.8
	0.4nm,0.3s,baz=323,slow=21,SNR=1.0						
AAK				Lg	Lg	06 24 40.7	
	0.5nm,0.3s,baz=101,slow=22,SNR=4.2						
AAK	Ala-Archa	6.29	35	⇑Pn	Pn	06 22 57.7	+2.5
	4.0nm,0.5s						
AAK				⇓Lg	Lg	06 24 43.2	
	30nm,1.1s						
GEYT	Alibeck	9.15	276	Pn	Pn	06 23 34.6	+0.3
	0.3nm,0.3s,baz=94,slow=4.8,SNR=2.3						
GEYT				Sn	Sn	06 25 15.8	-0.6
	0.5nm,0.3s,baz=118,slow=12,SNR=1.8						
MKAR	Makanchi Array	13.15	41	Pn	Pn	06 24 27.6	-1.4
	0.0nm,0.3s,baz=226,slow=11,SNR=3.5						
AB31	Akbulak array	13.66	332	Pn	Pn	06 24 37.3	+1.5
	0.4nm,0.3s,baz=155,slow=12,SNR=23						
AB31				⇓Sn	Sn	06 27 03.5	-3.1
	1.6nm,0.7s						
KURBB	Kurchatov Arra	14.53	23	Pn	Pn	06 24 45.3	-2.5
	0.0nm,0.3s,baz=213,slow=12,SNR=2.7						
AKTO	Aktyubinsk	15.35	331	Pn	Pn	06 24 58.8	+0.1
	0.1nm,0.3s,baz=112,slow=15,SNR=2.9						
AKTO	Aktyubinsk	15.35	331	⇑Pn	Pn	06 24 58.4	-0.2
	6.5nm,1.0s						
BVAR	Borovoye Array	15.49	2	Pn	Pn	06 24 58.9	-1.6
	0.1nm,0.3s,baz=236,slow=37,SNR=2.6						
ZALV	Zalesovo Beam	19.45	28	P	P	06 25 47.7	-0.7
	0.4nm,0.3s,baz=212,slow=11,SNR=6.5						
TORD	Torodi Ar. Bea	64.68	267	P	P	06 31 59.2	-0.6
	0.1nm,0.5s,baz=52,slow=7.5,SNR=1.1						
YKA	Yellowknife Ar	80.25	2	P	P	06 33 31.7	-0.2
	0.3nm,0.5s,baz=351,slow=5.4,SNR=11						

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*IDC **03** 06:40:44.7±2.1, 24.80S×179.90W, h468km±22km, mb3.8/12, mb1 4.0/13, mb1mx3.8/30, mbtmp4.6/13, Error ellipse: s-maj=17.3km s-min=15.5km az=62.0*
*NEIC **03** 06:40:45.3±1.5, 24.9S±0.1×179.9W±0.1, h477km±7km, mb4.6/42, Error ellipse: s-maj=15.9km s-min=14.2km az=122.0*
ISC 03 06:40:46.7±0.5**, 24.88S**±0.06×**179.82W**±0.07**, h496**km**,** **n120, σ1.49**/126**, mb4.5**/26**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.68	159	S	S	06 43 19.1	+0.2
	144nm,0.3s,baz=258,slow=22,SNR=4.8						
RAO	Raoul Island	4.68	159	P	P	06 42 07.1	-3.3
RAO					S	06 43 15.9	-3.0
MSVF	Nonsavu	7.38	344	P	P	06 42 35.2	-1.6
NIUE	Niue	10.84	60	P	P	06 43 12.8	-0.2
DZM	Mont Dzumac	12.91	280	P	P	06 43 36.1	+1.0
	0.7nm,0.3s,baz=51,slow=16,SNR=7.3						
DZM	Mont Dzumac	12.91	280	P	P	06 43 35.4	+0.3
NOUC	Port Laguerre	13.03	279	P	P	06 43 37.2	+1.0
AFI	Afiamalu	13.28	36	P	P	06 43 38.0	-1.1
URZ	Urewera	13.60	190	P	P	06 43 40.1	-1.9
	1.6nm,0.3s,baz=215,slow=1.0,SNR=9.0						
URZ				S	S	06 46 05.9	-0.7
	5.1nm,0.3s,baz=71,slow=22,SNR=23						
URZ	Urewera	13.60	190	P	P	06 43 40.2	-1.8
URZ					S	06 46 04.8	-1.8
RAHZ	Arahi	14.24	190	P	S	06 46 25.3	+6.3
HIZ	Hauiti	14.33	197	P	P	06 43 50.5	+0.8
WHHZ	Waihua	14.38	189	P	S	06 46 26.3	+4.7
NMHZ	Naumai	14.46	191	P	S	06 46 28.6	+5.2
BKZ	Black Stump Fm	14.58	191	P	P	06 43 51.1	-1.4
BKZ	Black Stump Fm	14.58	191	P	S	06 46 25.4	-0.3
TWVZ	Taurewa	14.71	195	P	S	06 46 28.3	+0.1
MCHZ	McNeill Hill	14.82	191	P	S	06 46 33.2	+3.1
KWHZ	Kaweka Forest	14.85	191	P	S	06 46 31.3	+0.5
KRHZ	Kereru	15.07	191	P	S	06 46 34.3	-0.7
KAHZ	Kahuranaki	15.13	190	P	S	06 46 37.0	+0.8
PNHZ	Pukenui	15.36	192	P	S	06 46 41.5	+0.9
DVHZ	Dannevirke	15.74	191	P	S	06 46 46.8	-1.1
ANWZ	Angora Road	15.85	190	P	S	06 46 47.0	-2.7
POWZ	Post Office Ro	15.91	192	P	S	06 46 47.8	-3.2
BFZ	Birch Farm	16.10	191	P	P	06 44 05.3	-3.0
BFZ	Birch Farm	16.10	191	P	S	06 46 53.5	-1.0
MRZ	Mangatainoka R	16.20	193	P	S	06 46 54.8	-1.6
MSWZ	Moikau Station	17.00	193	P	P	06 44 17.1	-0.5
SNZO	South Karori	17.01	194	P	P	06 44 16.4	-1.3
BHW	Baring Head	17.07	194	P	P	06 44 17.5	-0.8
QRZ	Quartz Range	17.14	200	P	P	06 44 18.6	-0.5
PLWZ	Palliser	17.14	193	P	P	06 44 17.0	-2.0
NNZ	Nelson	17.25	198	P	P	06 44 19.0	-1.1
NNZ				IAmb	IAmb	06 44 26.1	
	comp=Z,26nm,1.0s						
TUWZ	Tuamarina	17.30	196	P	P	06 44 18.2	-2.3
CMWZ	Cape Campbell	17.54	195	P	P	06 44 22.2	-0.6
BSWZ	Blackbirch Sta	17.59	196	P	P	06 44 22.9	-0.4
THZ	Tophouse	17.89	198	P	P	06 44 24.8	-1.3
KHZ	Kahutara	18.34	196	P	P	06 44 29.2	-0.8
KHZ				IAmb	IAmb	06 44 35.2	
	comp=Z,17nm,0.6s						
LTZ	Lake Taylor	19.01	198	P	P	06 44 35.5	-0.9
OXZ	Oxford	19.58	198	P	P	06 44 40.8	-0.7
MQZ	McQueen's Vall	19.77	196	P	P	06 44 42.2	-1.0
MQZ				IAmb	IAmb	06 44 56.1	
	comp=Z,46nm,1.4s						
RPZ	Rata Peaks	20.22	199	P	P	06 44 46.8	-0.6
	comp=Z,11nm,0.5s,baz=315,slow=1.5,SNR=20						
RPZ	Rata Peaks	20.22	199	P	P	06 44 46.0	-1.4
RPZ				IAmb	IAmb	06 44 54.1	
	comp=Z,6.2nm,0.5s						
FOZ	Fox Glacier	20.46	202	P	P	06 44 48.5	-0.9
FOZ				IAmb	IAmb	06 44 49.8	
	comp=Z,11nm,0.7s						
ODZ	Otahua Downs	21.55	199	P	P	06 44 59.5	+0.1
WKZ	Wanaka	21.87	202	P	P	06 45 01.0	-1.3
WKZ				IAmb	IAmb	06 45 16.9	
	comp=Z,40nm,1.5s						
MLZ	Mavora Lakes	22.65	202	P	P	06 45 09.7	+0.4
DCZ	Deep Cove	23.08	204	P	P	06 45 13.6	+0.5
DCZ				IAmb	IAmb	06 45 14.9	
	comp=Z,14nm,1.1s						
WHZ	Wether Hill Ro	23.17	202	P	P	06 45 12.1	-1.8
WHZ				IAmb	IAmb	06 45 14.6	
	comp=Z,18nm,1.1s						
ARMA	Armidale	25.85	251	P	P	06 45 38.8	+0.7
	baz=27						
ARMA	Armidale	25.85	251	P	P	06 45 39.4	+1.3
EIDS	Eidsvold	26.33	263	P	P	06 45 42.6	+0.3
	baz=27,SNR=3.9						
EIDS	Eidsvold	26.33	263	P	P	06 45 41.3	-0.9
EIDS				IAmb	IAmb	06 45 43.7	
	comp=Z,26nm,1.4s						
MGCD	Mangrove Creek	26.67	245	P	P	06 45 46.8	+1.6
	baz=28,SNR=6.3						
RMQ	Roma	28.33	260	P	P	06 46 01.0	+1.2
	baz=29,SNR=4.5						
CAN	Canberra	28.81	241	P	P	06 46 03.8	-0.1
CAN				IAmb	IAmb	06 46 11.8	
	comp=Z,16nm,1.1s						
PPTF	Pamatai, Papee	29.07	81	P	P	06 46 07.1	+0.6
YNG	Young	29.09	244	P	P	06 46 07.6	+1.2
	baz=30,SNR=4.7						
CMSA	Cobar Meteorol	31.02	250	P	P	06 46 23.3	+0.2
	baz=32,SNR=15						
TOO	Toolangi	32.07	238	P	P	06 46 32.9	+0.8
	baz=33,SNR=5.8						
TOO	Toolangi	32.07	238	P	P	06 46 31.5	-0.6
TOO				IAmb	IAmb	06 46 47.1	
	comp=Z,32nm,1.4s						
TAU	Tasmania Unive	32.40	228	P	P	06 46 35.8	+1.1
TAU				IAmb	IAmb	06 46 45.5	
	comp=Z,18nm,1.1s						
MTSU	Mount Surprise	33.96	274	P	P	06 46 48.8	+0.4
	baz=35,SNR=24						
STKA	Stephens Creek	34.52	249	P	P	06 46 53.1	+0.2
	baz=36,SNR=22						
STKA	Stephens Creek	34.52	249	P	P	06 46 53.0	+0.2
	comp=Z,7.3nm,0.4s,baz=94,slow=11,SNR=31						
STKA	Stephens Creek	34.52	249	P	P	06 46 52.6	-0.2
COEN	Coen	36.44	280	P	P	06 47 09.9	+0.8
	baz=38,SNR=5.0						
COEN	Coen	36.44	280	P	P	06 47 06.7	-2.4
COEN				IAmb	IAmb	06 47 10.8	
	comp=Z,24nm,1.1s						
HTT	Hallett	36.83	247	P	P	06 47 12.0	-0.1
	baz=38,SNR=9.5						
QIS	Mount Isa	37.58	268	P	P	06 47 18.6	+0.2
	baz=39,SNR=3.7						
BBOO	Buckleboo	39.22	248	P	P	06 47 30.8	-0.8
	baz=40,SNR=15						
BBOO	Buckleboo	39.22	248	P	P	06 47 31.1	-0.6
BBOO				IAmb	IAmb	06 47 42.5	
	comp=Z,38nm,1.4s						
AS31	Alice Springs	42.04	262	P	P	06 47 53.9	-0.5
ASAR	Alice Springs	42.05	262	P	P	06 47 53.8	-0.6
	comp=Z,5.7nm,0.3s,baz=93,slow=7.3,SNR=204						
ASAR				ScP	ScP	06 52 42.9	+1.9
	comp=Z,0.9nm,0.7s,baz=109,slow=3.3,SNR=5.1						
ASAR	Alice Springs	42.05	262	P	P	06 47 53.5	-0.9
WR0	Warramunga Arr	42.32	267	P	P	06 47 55.7	-0.9
WR0				IAmb	IAmb	06 47 56.1	
	comp=Z,13nm,0.8s						
WRAB	Tennant Creek	42.50	267	P	P	06 47 57.0	-1.0
WRAB				IAmb	IAmb	06 47 57.5	
	comp=Z,29nm,1.1s						
WB0	Warramunga Arr	42.51	267	P	P	06 47 57.1	-1.0
WRA	Warramunga Arr	42.51	267	P	P	06 47 57.0	-1.1
	comp=Z,21nm,0.5s,baz=104,slow=8.0,SNR=10						
WRA				ScP	ScP	06 52 45.8	+2.8
	comp=Z,1.9nm,1.1s,baz=100,slow=3.7,SNR=10						
WRA	Warramunga Arr	42.51	267	P	P	06 47 56.1	-2.0
FORT	Forrest	46.13	250	P	P	06 48 25.0	-1.0
KDU	Kakadu	46.55	276	P	P	06 48 28.0	-1.2
	baz=48,SNR=7.4						
WRKA	Warakurna	46.79	258	P	P	06 48 30.3	-0.8
	baz=48,SNR=18						
KNRA	Kununurra	48.85	271	P	P	06 48 46.1	-0.5
	baz=50,SNR=25						
KNRA	Kununurra	48.85	271	P	P	06 48 45.9	-0.7
KNRA				IAmb	IAmb	06 48 47.3	
	comp=Z,54nm,1.1s						
FITZ	Fitzroy Crossi	50.92	266	P	P	06 49 01.4	-0.4
	baz=52,SNR=15						
FITZ	Fitzroy Crossi	50.92	266	P	P	06 49 01.5	-0.4
FITZ				IAmb	IAmb	06 49 02.8	
	comp=Z,19nm,0.8s						
SIJI	Sorong	52.90	289	P	P	06 49 15.3	-0.9
	comp=Z,24nm,0.7s,baz=100,slow=11,SNR=5.8						
KLBR	Kellerberrin	54.77	248	P	P	06 49 28.1	-1.1
	baz=56,SNR=8.6						
MEEK	Meekatharra	54.99	254	P	P	06 49 29.6	-1.3
	baz=56,SNR=6.1						
PSA00	Pilbara Seismi	55.15	260	P	P	06 49 30.4	-1.7
PSA00				IAmb	IAmb	06 49 35.2	
	comp=Z,32nm,1.4s						
BLDU	Ballidu	55.82	249	P	P	06 49 35.6	-1.0
	baz=57,SNR=12						
MORW	Morawa	56.70	250	P	P	06 49 42.0	-0.6
	baz=58,SNR=6.1						
MORW	Morawa	56.70	250	P	P	06 49 42.0	-0.6
CASY	Casey	59.31	206	P	P	06 50 00.3	+0.5
CASY				IAmb	IAmb	06 50 13.8	
	comp=Z,48nm,1.4s						
GIRL	Giralia	59.86	257	P	P	06 50 05.2	+1.0
QSPA	South Pole Qui	65.21	180	P	P	06 50 40.0	+1.7
	comp=Z,3.4nm,0.7s,baz=302,slow=0.7,SNR=20						
QSPA	South Pole Qui	65.21	180	P	P	06 50 39.9	+1.6
MAW	Mawson	76.90	200	P	P	06 51 47.0	+0.2
	comp=Z,3.1nm,0.5s,baz=121,slow=6.1,SNR=9.8						
MAW	Mawson	76.90	200	P	P	06 51 48.1	+1.3
KSRS	Korea Array	79.10	320	P	P	06 51 59.7	+0.5
	comp=Z,1.5nm,0.7s,baz=132,slow=6.1,SNR=3.6						
SNAA	Sanae	83.69	179	P	P	06 52 23.1	+0.7
NVAR	Mina Array Bea	85.34	44	P	P	06 52 31.4	+0.3
	comp=Z,1.1nm,0.8s,baz=217,slow=8.5,SNR=5.4						
NVAR	Mina Array Bea	85.34	44	P	P	06 52 31.7	+0.5
TUC	Tucson	86.98	52	P	P	06 52 40.2	+1.2
CMAR	Chiang Mai Arr	90.02	290	P	P	06 52 54.4	+1.0
	comp=Z,1.6nm,0.4s,baz=145,slow=3.5,SNR=7.3						
TMUT	Trail Mountain	90.39	46	P	P	06 52 56.5	+1.5
TX31	Lajitas Ar. Si	90.81	58	P	P	06 52 58.3	+1.4
TX32	Lajitas Array	90.81	58	P	P	06 52 58.3	+1.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	90.81	58	P	P	06 52 57.5	+0.6
	comp=Z,1.4nm,0.8s,baz=207,slow=7.6,SNR=11						
TXAR	Lajitas Array	90.81	58	P	P	06 52 57.9	+1.0
PDAR	Pinedale Array	93.28	44	P	P	06 53 09.3	+1.2
	comp=Z,0.2nm,0.6s,baz=222,slow=2.0,SNR=4.0						
PDAR	Pinedale Array	93.28	44	P	P	06 53 08.5	+0.4
FINES	FINESS Array B	139.42	341	PKhKP	PKPpre	06 59 08.4	
	comp=Z,1.4nm,0.9s,baz=34,slow=7.1,SNR=3.6						
AKASG	Malin Array Be	145.87	327	PKPbc	PKPdf	06 59 28.9	+0.6
	comp=Z,1.8nm,0.5s,baz=45,slow=4.6,SNR=11						
AKASG	Malin Array Be	145.87	327	PKPdf	PKPdf	06 59 28.3	+0.1
BR131	Keskin Array S	148.29	306	PKPbc	PKPbc	06 59 36.0	-0.9
BR131				PKPab	PKPab	06 59 41.5	-0.4
BRTR	Keskin Array B	148.29	306	PKPbc	PKPbc	06 59 36.5	-0.3
	comp=Z,1.1nm,0.6s,baz=138,slow=5.0,SNR=5.4						
BRTR	Keskin Array B	148.29	306		PKPbc	06 59 36.7	-0.2
BRTR				PKPab	PKPab	06 59 41.5	-0.4

*NEIC **03** 06:50:05.8±1.2, 6.08S±0.10×147.5E±0.1, h50km±10km, mb4.0/8, Error ellipse: s-maj=19.3km s-min=9.0km az=129.0*

*IDC **03** 06:50:11.0±5.2, 6.37S×147.66E, h81km±48km, mb3.5/4, mb1 3.7/6, mb1mx3.4/34, mbtmp3.8/6, ML3.8/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/29, Error ellipse: s-maj=55.8km s-min=33.1km az=128.0*

ISC 03 06:50:09.3±0.9, **6.20S**±0.08×**147.5E**±0.2, **h77km, n21, σ1.34/22, mb3.9/6, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.20	186	P	Pn	06 50 57.6	+0.2
	12nm,0.3s,baz=10,slow=2.9,SNR=11						
PMG				S	Sn	06 51 33.1	-1.3
	14nm,0.3s,baz=232,slow=23,SNR=10						
PMG	Port Moresby	3.20	186		Pn	06 50 55.4	-1.9
PMG					Sn	06 51 33.7	-0.7
COEN	Coen	8.80	209	Pn	Pn	06 52 15.1	+1.3
COEN				Sn	Sn	06 53 50.4	-1.0
WR0	Warramunga Arr	18.58	221	P	P	06 54 21.6	+1.1
WR0				IAmb	IAmb	06 54 27.6	
	comp=Z,15nm,1.3s						
WRAB	Tennant Creek	18.69	222	P	P	06 54 20.6	-1.0
WRAB				IAmb	IAmb	06 54 23.7	
	comp=Z,17nm,1.5s						
WRA	Warramunga Arr	18.70	222	P	Pn	06 54 24.4	+1.5
	comp=Z,0.3nm,0.3s,baz=50,slow=10,SNR=5.2						
EIDS	Eidsvold	19.37	170	P	P	06 54 28.8	-0.1
GUMO	Guam	19.83	352	LR	LR	07 01 58.3	
	comp=Z,76nm,20.4s,baz=88,slow=35						
AS31	Alice Springs	21.73	216	P	P	06 54 54.4	0.0
ASAR	Alice Springs	21.73	216	P	P	06 54 55.2	+0.7
	comp=Z,1.8nm,0.6s,baz=54,slow=8.8,SNR=22						
ASAR	Alice Springs	21.73	216	P	P	06 54 54.2	-0.3
FITZ	Fitzroy Crossi	24.38	239	P	P	06 55 21.6	+1.1
	comp=Z,2.5nm,0.5s,baz=55,slow=14,SNR=2.4						
FITZ	Fitzroy Crossi	24.38	239	P	P	06 55 17.6	-2.8
STKA	Stephens Creek	26.13	191	P	P	06 55 37.9	+1.6
	comp=Z,4.6nm,1.1s,baz=11,slow=5.5,SNR=2.8						
STKA	Stephens Creek	26.13	191	P	P	06 55 36.9	+0.7
TGY	Tagaytay City	33.19	308	LR	LR	07 09 37.7	
	comp=Z,85nm,19.3s,baz=178,slow=35						
KSAR	Wonju Array Be	47.12	339	P	P	06 58 31.7	-2.0
KURK	Kurchatov	81.66	323	P	P	07 02 18.4	-0.7
KURK				IAmb	IAmb	07 02 33.9	
	comp=Z,2.7nm,1.1s						
QSPA	South Pole Qui	83.77	180	P	P	07 02 30.2	+0.3
QSPA				IAmb	IAmb	07 02 43.1	
	comp=Z,1.0nm,0.8s						
ILAR	Eielson Array	85.47	23	P	P	07 02 40.1	+1.8
	comp=Z,0.2nm,0.6s,baz=229,slow=4.6,SNR=4.2						
TORD	Torodi Ar. Bea	145.61	284	PKPbc	PKPdf	07 09 40.2	+0.4
	comp=Z,0.7nm,0.6s,baz=83,slow=3.7,SNR=3.6						

*ANF **03** 06:59:16.8±0.1, 34.05N×117.55W, h18km±1km, ML3.1/28, Error ellipse: s-maj=1.1km s-min=0.9km az=19.0*

*IASPEI **03** 06:59:17.1±0.8, 34.06N±0.01×117.55W±0.01, h18km±2km, Error ellipse: s-maj=2.3km s-min=1.6km az=27.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NEIC **03** 06:59:17.3±1.1, 34.072N±0.009×117.55W±0.01, h20km±1km, Error ellipse: s-maj=1.4km s-min=1.3km az=166.0*

*PAS **03** 06:59:18.0±1.4, 34.063N±0.009×117.553W±0.008, h15km±1km, ML3.1/231, Error ellipse: s-maj=1.3km s-min=0.9km az=195.0*

*SCEDC **03** 06:59:18.0, 34.06N×117.55W, h15km*

ISC 03 06:59:17.3±0.8, **34.05N**±0.01×**117.55W**±0.01, **h18km**±1km, **n152, σ0.70/221, Southern California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MLSC	Mira Loma	0.05	191		Pg	06 59 20.6	-0.1
MLSC					Sg	06 59 22.6	-0.4
FON	Fontana	0.10	63		Pg	06 59 21.1	-0.1
FON					Sg	06 59 23.4	-0.3
CHNC	Chino	0.12	244		Pg	06 59 21.4	+0.1
CHNC					Sg	06 59 24.3	+0.3
SS2	San Sevaine	0.16	15		Pg	06 59 21.7	-0.1
CRNC	Corona	0.18	183		Pg	06 59 22.1	+0.2
CRNC					Sg	06 59 25.3	+0.1
SSK	Sunset Peak	0.20	323		Pg	06 59 22.3	-0.2
CLTC	Calectric	0.20	78		Pg	06 59 22.6	+0.2
RSBC	Riverside Bore	0.20	113		Pg	06 59 22.3	0.0
RSBC					Sg	06 59 25.7	-0.1
RSBC	Riverside Bore	0.20	113		Pg	06 59 22.4	0.0
RSBC					Sg	06 59 25.7	-0.1
BFSC	Mount Baldy Ra	0.21	334		Pb	06 59 22.1	-0.2
BFSC					Sb	06 59 25.1	-0.3
BFSC	Mount Baldy Ra	0.21	334	P	Pb	06 59 22.0	-0.2
	baz=154,SNR=308						
BFSC				S	Sb	06 59 25.0	-0.3
	baz=154						
PSRC	Puddingstone R	0.22	281		Pg	06 59 26.0	+3.4
CFSC	Central Fire S	0.23	77		Pg	06 59 23.0	+0.2
SME	Santa Rosa Min	0.28	145		Pg	06 59 23.8	+0.1
HLNC	Highland	0.28	76		Pb	06 59 23.9	0.0
HLNC					Sg	06 59 28.3	+0.3
PEM	Pine Mountain	0.29	293		Pg	06 59 23.8	0.0
XTL	Crystal Lake,	0.35	313		Pg	06 59 24.6	-0.3
FULC	Fullerton	0.36	240		Pb	06 59 25.9	+0.7
CFT	Crafton Hills	0.36	93		Pg	06 59 25.3	+0.2
CFT					Sb	06 59 30.9	+0.1
SVD	Seven Oaks Dam	0.38	82		Pg	06 59 25.3	0.0
SVD					Sb	06 59 31.1	-0.1
BREC	Barre Substati	0.43	236		Pb	06 59 27.4	+0.9
SANC	Santa Ana	0.45	219		Pg	06 59 27.3	+0.6
MWC	Mount Wilson	0.45	292		Pg	06 59 26.4	-0.3
GVRC	Garvey Reservo	0.47	270		Pg	06 59 27.1	+0.1
CACC	Caltech Cellar	0.48	280		Pg	06 59 26.9	-0.3
CACC					Sg	06 59 33.4	-0.3
CHFC	Chilao Flat St	0.48	306		Pg	06 59 26.8	-0.5
CHFC					Sg	06 59 33.2	-0.7
GSA	Caltech--GSA	0.49	280		Pg	06 59 26.9	-0.3
BBSC	Beaumont Base	0.49	105		Pg	06 59 27.5	+0.2
BBSC					Sb	06 59 34.5	+0.1
BTL	Butler Peak	0.50	66		Pg	06 59 27.6	0.0
ADO	Adelanto Recei	0.51	11		Pg	06 59 27.2	-0.4
ADO					Sg	06 59 33.9	-0.7
MURC	Murrieta	0.54	147		Pb	06 59 28.0	-0.2
MURC					Sb	06 59 35.6	0.0
MURC	Murrieta	0.54	147	P	Pb	06 59 28.0	-0.2
	baz=327,SNR=88						
MURC				S	Sb	06 59 35.5	-0.1
	baz=327						
VTV	Victorville	0.54	20		Pb	06 59 27.7	-0.6
VTV					Sb	06 59 34.8	-0.9
PASC	Pasadena Art C	0.54	283	Pg	Pb	06 59 27.6	-0.6
PASC				Sg	Sb	06 59 34.9	-0.7
BBRC	Big Bear Solar	0.56	68		Pb	06 59 28.6	-0.1
BBRC					Sb	06 59 36.2	-0.2
BBRC	Big Bear Solar	0.56	68	P	Pb	06 59 28.6	-0.1
	baz=249,SNR=50						
BBRC				S	Sb	06 59 36.2	-0.2
	baz=249						
HMTC	Hemet	0.57	127		Pb	06 59 28.4	-0.3
WTT2	Watts, South G	0.59	260		Pg	06 59 30.0	+0.8
DGR	Domenigoni Val	0.60	132		Pb	06 59 29.1	-0.2
DGR					Sb	06 59 37.1	-0.3
BACC	Bachelor Mtn.	0.61	136		Pb	06 59 29.1	-0.3
BACC					Sb	06 59 37.4	-0.2
LRRC	Littlerock Res	0.62	320		Pb	06 59 29.2	-0.3
GR2C	Griffith Obs.	0.63	276		Pb	06 59 29.2	-0.5
POB	Polly Butte	0.64	125		Pb	06 59 29.6	-0.3
SBB	Saddle Back Bu	0.67	340		Pb	06 59 30.1	-0.5
SBB					Sb	06 59 38.9	-0.6
DECC	Green Verdugo	0.68	287		Pb	06 59 30.1	-0.5
DECC					Sb	06 59 39.4	-0.2
DECC	Green Verdugo	0.68	287	P	Pb	06 59 30.2	-0.5
	baz=106,SNR=32						
DECC				S	Sb	06 59 39.4	-0.2
	baz=106						
HLLC	North Hollywoo	0.68	281		Pb	06 59 30.6	-0.1
HLLC					Sb	06 59 39.3	-0.4
FMP	Fort Macarthur	0.70	241		Pb	06 59 31.0	-0.1
FMP	Fort Macarthur	0.70	241	P	Pb	06 59 30.9	-0.1
	baz=60,SNR=7.0						
FMP				S	Sb	06 59 40.3	-0.1
	baz=60						
DJJ	Donna J Jenkin	0.75	274		Pb	06 59 31.2	-0.7
DJJ					Sb	06 59 41.6	-0.2
DJJ	Donna J Jenkin	0.75	274		Pb	06 59 31.2	-0.7
RPV	Rancho Palos V	0.77	247		Pb	06 59 31.8	-0.5
RPV					Sg	06 59 43.7	+0.9
IR2C	Iron Canyon	0.78	296		Pb	06 59 31.7	-0.6
HYS	Haystack Butte	0.81	359		Pb	06 59 32.5	-0.4
DEVC	Devers	0.82	98		Sg	06 59 44.2	+0.1
GVDA	Garner Valley	0.82	117		Pb	06 59 33.1	-0.1
GVDA					Sb	06 59 43.7	-0.3
CRY	Cary Ranch	0.83	125		Pb	06 59 33.1	-0.2
CRY					Sb	06 59 44.1	-0.1
LEOC	Leona Valley	0.85	313		Pb	06 59 33.0	-0.6
LEOC					Sb	06 59 44.4	-0.3
ALPC	Antelope	0.89	316		Pb	06 59 33.9	-0.3
ALPC					Sb	06 59 45.3	-0.4
FOXC	Fox Airport	0.89	321		Pb	06 59 34.2	-0.1
PLM	Palomar	0.90	140		Pb	06 59 34.3	-0.3
PLM					Sb	06 59 46.5	+0.2
EDW2	Edwards Air Fo	0.90	336		Pb	06 59 34.3	-0.2
EDW2					Sb	06 59 46.0	-0.2
EDW2	Edwards Air Fo	0.90	336	P	Pb	06 59 34.3	-0.2
	baz=156,SNR=74						
EDW2				S	Sb	06 59 46.0	-0.2
	baz=156						
DNR	Dunn Ranch,Anz	0.91	122		Pb	06 59 34.7	+0.1
DNR					Sg	06 59 46.9	-0.1
BZNA	Buzz No.'s Pla	0.92	127		Pb	06 59 34.8	0.0
BZNA					Sb	06 59 46.9	+0.1
SNDA	J Saunders Pla	0.93	122		Pb	06 59 35.0	0.0
SNDA					Sb	06 59 47.4	+0.4
OAT	Oat Mountain	0.93	289		Pg	06 59 36.0	+0.5
GORC	Green Oak Ranc	0.94	163		Pb	06 59 34.6	-0.4
GORC					Sb	06 59 47.1	+0.1
RRX	Edison Barstow	0.94	29		Pb	06 59 35.1	-0.1
RRX					Sg	06 59 47.7	-0.4
RRX	Edison Barstow	0.94	29	P	Pb	06 59 35.0	-0.1
	baz=210,SNR=10						
RRX				S	Sg	06 59 47.6	-0.4
	baz=210						
EW2	E Wide Canyon	0.95	96		Pb	06 59 35.5	+0.1
EW2					Sg	06 59 48.3	-0.3
BLAC	Blackrock camp	0.96	89		Pb	06 59 35.6	0.0
BLAC					Sg	06 59 48.8	-0.1
FRD	Ford Ranch, An	0.97	125		Pb	06 59 35.5	-0.1
FRD					Sb	06 59 48.2	+0.2
FRD	Ford Ranch, An	0.97	125		Pb	06 59 35.4	-0.1
FRD					Sb	06 59 48.2	+0.2
CIAC	Catalina I. Ai	0.97	228		Pb	06 59 35.5	0.0
CIAC					Sg	06 59 48.7	-0.3
CIS	Catalina Islan	0.97	228	P	Pb	06 59 35.2	-0.4
	baz=47,SNR=7.9						
CIS				S	Sb	06 59 48.6	+0.5
	baz=47						
PFO	Pinyon Flats O	1.01	116		Pb	06 59 35.9	-0.5
PFO					Sb	06 59 49.0	-0.2
PFO	Pinyon Flats O	1.01	116		Pb	06 59 35.8	-0.5
PFO				Sg	Sb	06 59 48.8	-0.5
PFO	Pinyon Flats O	1.01	116	P	Pb	06 59 35.9	-0.5
	baz=297,SNR=25						
PFO				S	Sb	06 59 49.1	-0.2
	baz=297						
XPFO	Pion Flat	1.01	115		Pg	06 59 35.9	-0.5
XPFO				Sg	Sb	06 59 48.9	-0.4
XPFO	Pion Flat	1.01	115		Pb	06 59 35.8	-0.5
XPFO					Sb	06 59 49.0	-0.4
STTC	Scott Ranch	1.05	315		Pn	06 59 37.4	+0.2
BTPC	Burnt Peak	1.05	307		Pb	06 59 36.6	-0.5
OSI	Osito Audit: C	1.12	300		Pn	06 59 38.1	0.0
OSI				Sg	Sb	06 59 52.3	-0.2
OSI	Osito Audit: C	1.12	300	S	Sb	06 59 52.6	+0.1
	baz=119						
HWB	Hans Werner Br	1.14	154		Pn	06 59 37.7	-0.7
HWB					Sn	06 59 53.3	-0.1
DPP	Dos Picos Cty	1.17	154		Pn	06 59 38.1	-0.7
DPP					Sb	06 59 54.0	+0.2
QAL	Quail Lake	1.19	306		Pn	06 59 39.2	+0.1
109C	Camp Elliot, M	1.22	162		Pn	06 59 39.2	-0.2
109C	Camp Elliot, M	1.22	162	P	Pn	06 59 39.2	-0.2
	baz=342,SNR=32						
109C				S	Sb	06 59 55.2	0.0
	baz=342						
BORC	Borrego Spring	1.23	129		Pb	06 59 40.0	+0.1
BORC					Sn	06 59 55.6	0.0
DTP	Desert Tortois	1.24	349		Pb	06 59 40.0	-0.2
TPC	Twentynine Pal	1.25	87		Pb	06 59 40.4	0.0
THC	Tehachapi Micr	1.25	313		Pb	06 59 40.4	-0.2
BLG	Laguna Peak, P	1.26	273		Pb	06 59 39.3	-0.7
BLG	Laguna Peak, P	1.26	273	P	Pn	06 59 39.3	-0.7
	baz=92						
BLG				S	Sn	06 59 56.5	0.0
	baz=92						
HEC	Hector,Ludlow	1.27	52		Pn	06 59 40.4	+0.2
HEC	Hector,Ludlow	1.27	52	P	Pn	06 59 40.2	0.0
	baz=233,SNR=55						
BELC	Belle Mtn. Jos	1.29	92		Sg	06 59 58.7	-0.5
BELC	Belle Mtn. Jos	1.29	92	P	Pn	06 59 40.8	+0.3
	baz=273,SNR=191						
BELC				S	Sb	06 59 57.7	+0.3
	baz=273						
EML	El Monte Cty P	1.30	153		Pn	06 59 40.7	+0.1
EML					Sb	06 59 57.6	0.0
SCI2	San Clemente I	1.35	218	P	Pn	06 59 41.0	-0.3
	baz=37						
CTCC	Cactus City	1.36	107		Pb	06 59 42.9	+0.7
TJR	Tejon Ranch	1.38	315		Pg	06 59 43.7	-0.4
GSC	Goldstone, Bar	1.39	26		Pn	06 59 42.2	+0.3
GSC	Goldstone, Bar	1.39	26	P	Pn	06 59 42.2	+0.3
	baz=207,SNR=38						
GSC				S	Sb	06 59 59.9	-0.3
	baz=207						
SDRC	San Diego Road	1.41	159		Pn	06 59 42.5	+0.5
SDRC					Sb	07 00 00.7	+0.1
LRMC	Laurel Mtn Rad	1.43	356	S	Sb	07 00 01.0	-0.4
	baz=176						
MONP2	Monument Peak	1.49	141		Pn	06 59 42.7	-0.7
MONP2	Monument Peak	1.49	141	P	Pn	06 59 42.8	-0.7
	baz=322,SNR=32						
MONP2				Sb	Sb	07 00 03.9	+0.6
	baz=322						
TEJ	El Tejon	1.50	322		Pb	06 59 45.2	+0.4
ARVC	Arvin	1.50	316		Pb	06 59 45.4	+0.7
ARVC	Arvin	1.50	316	P	Pn	06 59 44.0	+0.6
	baz=135,SNR=15						
ARVC				Sb	Sb	07 00 04.4	+1.0
	baz=135						
MPI	Mount Pinos, F	1.52	300		Pb	06 59 44.6	-0.6
OLP	Otay Lakes Par	1.53	160		Sb	07 00 04.5	+0.3
BAR	Barrett	1.55	152		Pn	06 59 40.7	-3.4
CBKC	Canebrake	1.58	136		Pb	06 59 43.6	-0.9
HAY	Hayfield	1.59	102		Pg	06 59 47.6	-0.4
DSCC	Desert Studies	1.61	47		Pb	06 59 47.2	+0.6
GMRC	Granite Mounta	1.73	64		Pb	06 59 49.5	+0.9
GMRC	Granite Mounta	1.73	64	P	Pn	06 59 46.4	-0.2
	baz=246,SNR=68						
GMRC				S	Sn	07 00 08.2	+0.1
	baz=246						
CLC	China Lake	1.76	359		Pn	06 59 47.4	+0.4
ISA	Isabella, Lake	1.78	335		Pn	06 59 47.4	+0.2
ISA	Isabella, Lake	1.78	335	P	Pn	06 59 47.3	+0.1
	baz=154,SNR=14						
ISA				Sb	Sb	07 00 12.7	+1.3
	baz=154						
BC3	Big Chuckawall	1.79	102	P	Pn	06 59 47.2	-0.2
	baz=284,SNR=19						
BC3				Sb	Sb	07 00 13.3	+1.6
	baz=284						
BAKC	Calstate	1.82	316		Pn	06 59 47.1	-0.5
SNCC	San Nicolas Is	1.83	245	Pn	Pn	06 59 47.6	-0.3
WASM	Alta Sierra Ca	1.87	334		Pg	06 59 52.5	-0.9
WCHM	Chimney Peak	1.88	347		Pb	06 59 52.0	+0.8
TUQ	Turquoise Moun	1.92	44	P	Pn	06 59 49.0	-0.2
	baz=225,SNR=12						
IRM	Iron Mountain	2.00	86	P	Pn	06 59 49.8	-0.4
	baz=268,SNR=28						
MPMC	Manual Prospec	2.00	1	P	Pn	06 59 50.3	-0.1
	baz=182,SNR=19						
PKM	Mcpherson Peak	2.05	295	P	Pn	06 59 51.1	+0.1
	baz=113						
Y12C	Blythe	2.54	96	Pn	Pn	06 59 57.4	-0.1
Y12C	Blythe	2.54	96	P	Pn	06 59 57.4	-0.1
	baz=278,SNR=16						
PAGB	Antelope Grade	2.78	308	Pn	Pn	07 00 03.4	+2.4
TPNV	Topopah Spring	3.08	20		Pn	07 00 06.5	+1.3
TPNV	Topopah Spring	3.08	20	P	Pn	07 00 06.1	+0.9
	baz=201						
SHPR	Sheep Range	3.13	38		Pn	07 00 07.7	+1.7
W13A	Hualapai Mount	3.20	70		Pn	07 00 07.5	+0.6
PMPB	Monarch Peak	3.43	310	Pn	Pn	07 00 08.2	-1.7
OMMB	Old Mammoth Mi	3.74	342	Pn	Pn	07 00 16.3	+1.9
Y14A	Wickenburg	3.78	90	Pn	Pn	07 00 15.5	+0.8
SAO	San Andreas Ge	4.18	311	Pn	Pn	07 00 20.3	+0.2
NV11	Mina Array Sit	4.40	354	Pn	Pn	07 00 25.0	+1.7
NVAR	Mina Array Bea	4.41	352	Pn	Pn	07 00 22.4	-1.1
R11A	Troy Canyon, C	4.57	20	Pn	Pn	07 00 26.8	+1.1
LCMT	Little Creek M	4.59	49		Pn	07 00 27.7	+1.8
KNB	Kanab	4.86	51		Pn	07 00 31.0	+1.4
U15A	North Rim	4.91	60	Pn	Pn	07 00 32.1	+1.6
SZCU	Shurtz Canyon	5.06	44	Pn	Pn	07 00 35.2	+2.6
X16A	Lo Mia Camp, P	5.07	84	Pn	Pn	07 00 29.2	-3.4

IDC 03 07:15:27.6±1.5, **20.83N×121.30E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, Error ellipse: s-maj=126.7km s-min=26.7km az=77.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONM	Songino Array	29.51	339	P	P	07 21 33.6	-0.2
	0.6nm,0.9s,baz=160,slow=9.0,SNR=2.5						
WRA	Warramunga Arr	42.48	162	P	P	07 23 26.2	+1.5
	0.6nm,0.6s,baz=344,slow=9.5,SNR=2.0						
ASAR	Alice Springs	45.90	164	P	P	07 23 50.7	-1.5
	0.2nm,0.5s,baz=347,slow=7.0,SNR=4.7						
YKA	Yellowknife Ar	86.01	23	P	P	07 28 09.9	+0.1
	0.3nm,0.8s,baz=316,slow=4.9,SNR=4.3						

WEL 03 07:26:39.2, 37°S±12°×**18°0E**±1°0, **h33km, M3.3/19, ML3.5/17, MLv3.3/19, Error ellipse: s-maj=0.0km s-min=0.0km az=15.9, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.46	225	P	Pn	07 27 04.2	+1.0
MXZ				S	Sb	07 27 23.0	-0.9
WMGZ	Waiomatatini S	1.59	216	P	Pb	07 27 07.6	-0.4
PUZ	Puketiti	1.87	215	P	Pb	07 27 11.0	-1.8
HAZ	Te Kaha	1.90	230	P	Pn	07 27 10.7	+1.5
RUGZ	Raukumara Rang	2.10	227	P	Pn	07 27 14.2	+2.2
MWZ	Matawai	2.44	222	P	Pn	07 27 18.5	+1.8
MWZ				S	Sn	07 27 47.4	+2.0
URZ	Urewera	2.62	228	P	Pn	07 27 20.8	+1.6
URZ				S	Sn	07 27 51.8	+1.8
KNZ	Kokohu	2.91	211	P	Pn	07 27 23.8	+0.6
RTZ	Ruatahuna	2.94	224	P	Pn	07 27 24.8	+1.2
MUGZ	Murupara	2.97	229	P	Pn	07 27 25.7	+1.7
RAHZ	Arahi	3.10	219	P	Pn	07 27 27.7	+1.9
KUZ	Kuaotunu	3.13	265	P	Pn	07 27 27.4	+1.2
MTHZ	Maungataniwha	3.18	223	P	Pn	07 27 28.6	+1.7
MTHZ				S	Sn	07 28 05.9	+2.1
KMRZ	Kaimai	3.20	245	P	Pn	07 27 29.2	+2.0
NMHZ	Naumai	3.38	220	P	Pn	07 27 31.2	+1.5
NMHZ				S	Sn	07 28 11.3	+2.6
TOZ	Tahuroa Road	3.49	249	P	Pn	07 27 33.0	+1.9
BKZ	Black Stump Fm	3.60	222	P	Pn	07 27 33.5	+0.8
WIAZ	Waiheke Island	3.60	265	P	Pn	07 27 33.3	+0.6
MKAZ	Moumakai	3.61	260	P	Pn	07 27 33.8	+1.1
ETAZ	East Tamaki Re	3.78	262	P	Pn	07 27 37.2	+2.1
KWHZ	Kaweka Forest	3.82	220	P	Pn	07 27 36.3	+0.5
KAHZ	Kahuranaki	3.90	213	P	Pn	07 27 36.6	-0.2
AWAZ	Awhitu Peninsu	4.02	261	P	Pn	07 27 41.1	+2.7
WTAZ	Waiatarua	4.06	263	P	Pn	07 27 41.9	+2.9
BHHZ	Black Hill Sta	4.06	222	P	Pn	07 27 40.1	+1.1
MOVZ	Moawhango	4.18	226	P	Pn	07 27 40.8	+0.1
HIZ	Hauiti	4.26	241	P	Pn	07 27 43.8	+2.1
WCZ	Waipu Caves	4.29	276	P	Pn	07 27 43.6	+1.4
OUZ	Omahuta	5.05	283	P	Pn	07 27 53.7	+1.0

*IDC **03** 07:26:53.8±2.2, 4.67N×127.11E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.5/33, mbtmp3.8/4, Error ellipse: s-maj=186.0km s-min=26.0km az=65.0*

*NEIC **03** 07:26:58.2±0.9, 4.7N±0.3×127.2E±0.5, h35km±2km, mb4.2/7, Error ellipse: s-maj=105.5km s-min=8.0km az=57.0*

*MAN **03** 07:27:02.0, 5.34N×127.93E, h30km, MS3.5*

ISC 03 07:26:57.5±0.9, **5.2N**±0.1×**128.2E**±0.1, **h35km, n19, σ1.37/21, mb3.9/7, 1C, East of Philippine Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	2.63	291	eP	Pn	07 27 38.6	+1.0
DDMP				eS	Sn	07 28 06.4	-1.9
KCP	Kidapawan	3.58	301	⇑iP	Pn	07 27 56.5	+5.9
KCP				eS	Sn	07 28 21.2	-11
SKMP	Bagumbayan, Su	3.87	291	eP	Pn	07 27 57.4	+2.9
SKMP				eS	Sn	07 28 38.8	+0.1
BUKP	Musuan	4.11	311	eP	Pn	07 27 59.5	+1.6
BUKP				eS	Sn	07 28 44.5	-0.4
WB0	Warramunga Arr	25.52	166	P	P	07 32 22.0	-0.9
WRAB	Tennant Creek	25.66	167	P	P	07 32 23.3	-1.0
WRAB				IAmb	IAmb	07 32 42.3	
	comp=Z,15nm,1.5s						
WRA	Warramunga Arr	25.67	167	P	P	07 32 24.1	-0.3
	comp=Z,0.7nm,0.3s,baz=342,slow=10,SNR=8.0						
WRA	Warramunga Arr	25.67	167	P	P	07 32 23.1	-1.3
WR0	Warramunga Arr	25.73	166	P	P	07 32 24.1	-0.8
WR0				IAmb	IAmb	07 32 41.5	
	comp=Z,5.7nm,1.2s						
AS31	Alice Springs	29.19	169	P	P	07 32 55.5	-0.4
ASAR	Alice Springs	29.19	169	P	P	07 32 55.3	-0.7
	comp=Z,0.5nm,0.6s,baz=354,slow=7.5,SNR=7.6						
ASAR	Alice Springs	29.19	169	P	P	07 32 54.2	-1.7
STKA	Stephens Creek	38.99	162	P	P	07 34 20.2	-0.4
	comp=Z,1.8nm,0.7s,baz=338,slow=7.8,SNR=4.2						
STKA	Stephens Creek	38.99	162	P	P	07 34 20.5	-0.1
STKA				IAmb	IAmb	07 34 36.9	
	comp=Z,3.4nm,1.5s						
MKAR	Makanchi Array	57.23	324	P	P	07 36 41.4	-0.1
	comp=Z,0.5nm,0.8s,baz=115,slow=7.0,SNR=4.6						
MKAR	Makanchi Array	57.23	324	P	P	07 36 41.6	+0.1
KURK	Kurchatov	61.34	327	P	P	07 37 09.2	-0.5
KURK				IAmb	IAmb	07 37 24.8	
	comp=Z,4.2nm,1.4s						
BKZ	Black Stump Fm	62.69	139	P	P	07 37 21.3	+2.3
ABKAR	Akbulak array	71.97	320	P	P	07 38 15.5	-2.2

WEL 03 08:15:28.2, 40°S±4°×**17°5E**±°, **h33km, ML3.7/13, MLv3.2/79, Error ellipse: s-maj=0.0km s-min=0.0km az=0.8, Cook Strait**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OHWZ	Ohakea	0.39	102	P	Pb	08 15 37.0	-0.1
OHWZ				S	Sb	08 15 43.4	+0.1
WAZ	Wanganui	0.39	20	P	Pb	08 15 37.3	+0.1
WAZ				S	Sb	08 15 42.8	-0.5
LREZ	Lake Rotokare	0.73	334	P	Pb	08 15 43.4	+0.7
LREZ				S	Sb	08 15 55.1	+2.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KIW	Kapiti Island	0.74	174	P	Pn	08 15 42.4	0.0
KIW				S	Sn	08 15 51.6	-0.8
OGWZ	Otaki Gorge	0.74	159	P	Pn	08 15 42.5	+0.1
OGWZ				S	Sn	08 15 52.4	-0.2
POWZ	Post Office Ro	0.78	110	P	Pb	08 15 43.2	-0.1
POWZ				S	Sb	08 15 53.7	0.0
MRZ	Mangatainoka R	0.79	133	P	Pb	08 15 43.5	-0.1
MRZ				S	Sb	08 15 54.2	+0.2
TSZ	Takapari Road	0.88	86	P	Pn	08 15 44.6	+0.3
TSZ				S	Sn	08 15 55.9	-0.1
MTVZ	Mangateitei	0.90	35	P	Pn	08 15 44.1	-0.4
MTVZ				S	Sb	08 15 57.4	+0.3
PKVZ	Pokaka	0.93	26	P	Pn	08 15 44.7	-0.3
PREZ	Palmer Road	0.93	327	P	Pn	08 15 46.0	+0.1
PREZ				S	Sb	08 16 00.8	+2.8
HOWZ	Holdsworth Sta	0.94	146	P	Pb	08 15 45.7	-0.3
DUWZ	D'Urville Isla	0.96	225	P	Pn	08 15 45.8	+0.4
PRWZ	Pori Road	0.98	116	P	Pb	08 15 47.0	+0.2
CAW	Cannon Point	1.00	169	P	Pn	08 15 46.4	+0.5
TRVZ	Turoa	1.00	35	P	Pn	08 15 45.8	-0.3
VRZ	Vera Road	1.00	357	P	Pb	08 15 46.8	-0.3
VRZ				S	Sb	08 16 01.2	+1.3
NMEZ	Namu Road	1.01	314	P	Pb	08 15 47.8	+0.5
MOVZ	Moawhango	1.02	46	P	Pn	08 15 45.8	-0.5
DRZ	Dome Shelter	1.03	34	P	Pn	08 15 46.6	+0.1
WHVZ	Whangaehu Hut	1.03	36	P	Pn	08 15 46.3	-0.3
KHEZ	Kahui Hut	1.03	323	P	Pb	08 15 48.2	+0.5
FWVZ	Far West T-bar	1.04	33	P	Pn	08 15 46.3	-0.3
TIWZ	Tintock	1.04	129	P	Pb	08 15 47.8	-0.1
DREZ	Durham Road	1.05	333	P	Pb	08 15 48.2	+0.3
DVHZ	Dannevirke	1.05	100	P	Pb	08 15 47.8	-0.1
TUVZ	Tukino	1.07	37	P	Pn	08 15 47.1	0.0
PNHZ	Pukenui	1.08	79	P	Pn	08 15 47.5	+0.4
MHEZ	Mangahewa	1.11	340	P	Pb	08 15 49.4	+0.5
NBEZ	Newall Road No	1.12	319	P	Pb	08 15 49.5	+0.4
NGZ	Ngauruhoe	1.12	33	P	Pn	08 15 47.7	-0.1
PKE	Pukeiti	1.13	325	P	Pb	08 15 49.4	+0.2
BHHZ	Black Hill Sta	1.15	57	P	Pn	08 15 47.8	-0.3
MTW	Mount Morrison	1.16	153	P	Pb	08 15 49.2	-0.5
TWVZ	Taurewa	1.16	25	P	Pn	08 15 47.9	-0.3
WEL	Wellington	1.16	182	P	Pb	08 15 49.8	+0.1
TCW	Tory Channel	1.16	201	P	Pn	08 15 48.5	+0.4
WTVZ	West Tongariro	1.17	31	P	Pn	08 15 48.2	-0.2
KRVZ	Karewarewa	1.21	32	P	Pn	08 15 48.9	-0.1
BFZ	Birch Farm	1.23	117	P	Pb	08 15 49.9	+0.8
WPHZ	Waipukurau	1.25	88	P	Pb	08 15 51.3	+0.1
TMWZ	Te Maipa	1.28	141	P	Pb	08 15 50.6	+0.8
BHW	Baring Head	1.28	178	P	Pb	08 15 51.1	-0.7
KRHZ	Kereru	1.29	69	P	Pn	08 15 50.7	+0.8
ANWZ	Angora Road	1.31	105	P	Pb	08 15 51.4	-0.9
MSWZ	Moikau Station	1.33	166	P	Pb	08 15 52.1	-0.6
KATZ	Kakaramea	1.33	31	P	Pn	08 15 51.0	+0.3
PAWZ	Paruwai Farm	1.34	160	P	Pb	08 15 52.2	-0.5
KWHZ	Kaweka Forest	1.42	61	P	Pn	08 15 52.2	+0.4
TRWZ	Traveller	1.44	153	P	Pb	08 15 53.8	-0.3
RATZ	Rangitukua	1.46	31	P	Pb	08 15 54.0	-0.8
TUWZ	Tuamarina	1.46	207	P	Pn	08 15 53.3	+1.0
PLWZ	Palliser	1.48	167	P	Pb	08 15 54.1	-1.1
NNZ	Nelson	1.54	225	P	Pn	08 15 54.6	+1.2
PXZ	Pawanui	1.57	87	P	Pb	08 16 00.2	+3.5
HATZ	Hinemaiaia	1.58	39	P	Pn	08 15 54.6	+0.7
WATZ	Wairara	1.58	27	P	Pn	08 15 55.2	+1.2
MCHZ	McNeill Hill	1.60	65	P	Pb	08 15 56.6	-0.6
HIZ	Hauiti	1.61	1	P	Pn	08 15 55.2	+0.9
BKZ	Black Stump Fm	1.61	54	P	Pn	08 15 55.7	+1.4
CMWZ	Cape Campbell	1.69	195	P	Pb	08 15 58.4	-0.2
BSWZ	Blackbirch Sta	1.74	204	P	Pb	08 15 58.6	-0.9
MRHZ	Matea Rd	1.79	44	P	Pb	08 15 59.2	-1.2
KUTZ	Kaahu Road	1.81	26	P	Pb	08 16 00.4	-0.3
NMHZ	Naumai	1.85	57	P	Pb	08 16 00.0	-1.4
TLZ	Tolley Road	1.88	18	P	Pn	08 15 58.1	+0.1
QRZ	Quartz Range	1.88	247	P	Pn	08 15 59.2	+1.2
WPRZ	Whakapapatarin	1.91	34	P	Pn	08 15 59.7	+1.2
ALRZ	Allen Road	1.96	38	P	Pn	08 16 00.0	+0.9
MTHZ	Maungataniwha	2.02	52	P	Pn	08 16 00.9	+1.0
RAHZ	Arahi	2.13	56	P	Pn	08 16 03.1	+1.6
THZ	Tophouse	2.18	221	P	Pn	08 16 04.4	+2.1
MUGZ	Murupara	2.24	43	P	Pn	08 16 04.4	+1.5
RTZ	Ruatahuna	2.26	49	P	Pn	08 16 05.7	+2.4
SNGZ	Shannon Statio	2.37	56	P	Pb	08 16 09.6	-0.7
TOZ	Tahuroa Road	2.45	13	P	Pn	08 16 05.8	0.0
KHZ	Kahutara	2.48	202	P	Pn	08 16 07.4	+1.1
URZ	Urewera	2.58	44	P	Pn	08 16 08.1	+0.4
TGRZ	Tauranga	2.64	26	P	Pn	08 16 12.2	-2.6
OPRZ	Ohinepanea	2.65	31	P	Pn	08 16 11.6	+3.0
MWZ	Matawai	2.76	51	P	Pn	08 16 11.2	+1.0
DSZ	Denniston Nort	2.80	234	P	Pn	08 16 12.4	+1.7
KBAZ	Karaka Road Bo	3.03	1	P	Pn	08 16 15.2	+1.5
MKAZ	Moumakai	3.03	5	P	Pn	08 16 14.4	+0.6
AWAZ	Awhitu Peninsu	3.06	357	P	Pn	08 16 15.4	+1.2
RUGZ	Raukumara Rang	3.10	47	P	Pn	08 16 15.3	+0.4
TWGZ	Tauwhareparae	3.14	53	P	Pn	08 16 16.5	+1.2
GVZ	Greta Valley S	3.14	205	P	Pn	08 16 16.0	+0.6
WTAZ	Waiatarua	3.19	357	P	Pn	08 16 17.7	+1.6
LTZ	Lake Taylor	3.27	215	P	Pn	08 16 18.3	+1.1
HAZ	Te Kaha	3.31	45	P	Pn	08 16 19.0	+1.4
INZ	Inchbonnie	3.63	223	P	Pn	08 16 22.0	0.0
MQZ	McQueen's Vall	3.92	204	P	Pn	08 16 25.8	-0.3
OUZ	Omahuta	4.99	348	P	Pn	08 16 42.2	+1.4
FOZ	Fox Glacier	5.05	226	P	Pn	08 16 42.7	+1.1
JCZ	Jackson Bay	5.97	227	P	Pn	08 16 54.6	+0.3

IDC 03 08:15:31.6±9.3, 18.09S×175.89W, h0km, mb3.8/3, mb1 4.2/3, mb1mx3.7/39, mbtmp3.8/3, MS4.0/2, Ms1 4.0/2, ms1mx2.9/43, Error ellipse: s-maj=412.1km s-min=38.8km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.95	259	P	P	08 24 04.0	-0.7
	0.4nm,0.5s,baz=96,slow=6.6,SNR=4.7						
ASAR	Alice Springs	47.05	254	P	P	08 24 05.5	+0.2
	1.7nm,0.4s,baz=90,slow=7.7,SNR=30						
GUMO	Guam	49.89	306	LR	LR	08 42 50.5	
	comp=Z,260nm,21.4s,baz=97,slow=33						
TGY	Tagaytay City	70.02	293	LR	LR	08 52 15.4	
	comp=Z,68nm,20.4s,baz=194,slow=32						
ILAR	Eielson Array	85.55	12	P	P	08 28 11.2	0.0
	0.6nm,1.0s,baz=223,slow=5.4,SNR=4.8						

IDC 03 08:30:49.6±0.8, 38.23N×20.38E, h0km, mb4.0/13, mb1 4.0/21, mb1mx3.9/62, mbtmp3.9/21, ML3.7/7, MS3.1/1, Ms1 3.1/1, ms1mx2.3/60, Error ellipse: s-maj=14.8km s-min=14.0km az=40.0
NEIC 03 08:30:50.8±2.9, 38.15N±0.04×20.40E±0.05, h5km±2km, Error ellipse: s-maj=6.5km s-min=4.8km az=212.0
THE 03 08:30:51.8, 38.19N×20.44E, h4km±1km, ML3.4/5, Error ellipse: s-maj=1.7km s-min=0.5km az=248.0
ATH 03 08:30:51.4, 38.17N×20.43E, h7km±2km, ML3.5/5, Error ellipse: s-maj=2.5km s-min=0.9km az=283.0
ISC 03 08:30:50.8±0.7, 38.19N±0.02×20.42E±0.02, h9km±4km, n116, σ1.30/141, mb4.0/16, 3C-9D, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	265	P	Pg	08 30 53.0	+0.6
CHV1				S	Sg	08 30 54.2	+0.7
ARG2	Argostoli	0.05	98	P	Pg	08 30 52.7	+0.1
ARG2				S	Sg	08 30 53.7	-0.2
KEF2	Argostoli. Kep	0.06	111	P	Pg	08 30 52.8	+0.1
KEF3	Kipouria, Keph	0.06	287	P	Pg	08 30 53.4	+0.7
KEF4	Livadi, Kephal	0.07	3	P	Pg	08 30 53.6	+0.8
KEF4				S	Sg	08 30 55.3	+1.0
KEF1	Kardakata, Kep	0.10	24	P	Pg	08 30 53.6	+0.6
KEF1				S	Sg	08 30 55.6	+0.7
VLS	Valsamata	0.13	94	P	Pg	08 30 54.0	+0.2
VLS				S	Sg	08 30 55.8	-0.1
	54μm,0.1s						
VLS	Valsamata	0.13	94	P	Pg	08 30 54.0	+0.2
VLS				S	Sg	08 30 56.0	+0.2
VLS				AML	AML	08 30 56.1	
VLS				AML	AML	08 30 57.6	
	comp=N,74838μm,0.2s						
VSK1	VASILIKIADES	0.25	27	P	Pg	08 30 56.5	+0.7
VSK1				S	Sg	08 31 00.3	+1.1
FSK	Fiskardo	0.29	22	P	Pg	08 30 57.3	+0.6
FSK				S	Sg	08 31 01.7	+1.1
	comp=N,7μm,0.5s						
FSK	Fiskardo	0.29	22	P	Pg	08 30 57.2	+0.6
FSK				S	Sg	08 31 01.7	+1.1
FSK				AML	AML	08 31 05.3	
	comp=N,15197μm,0.6s						
FSK				AML	AML	08 31 06.8	
	comp=E,14804μm,0.5s						
VLMS	Volimes, Zakyn	0.36	148	P	Pg	08 30 58.4	+0.5
VLMS				S	Sg	08 31 03.7	+0.9
VLMS				AML	AML	08 31 09.8	
	comp=E,48255μm,0.3s						
VLMS				AML	AML	08 31 11.1	
	comp=N,60484μm,0.6s						
EVGI	Lefkada island	0.47	23	P	Pg	08 31 00.6	+0.6
EVGI				S	Sb	08 31 08.1	-0.3
EVGI	Lefkada island	0.47	23	P	Pg	08 31 00.6	+0.6
EVGI				S	Sb	08 31 08.0	-0.4
ZAK2	Zakynthos	0.55	136	P	Pg	08 31 02.3	+0.9
ZAK2				S	Sb	08 31 11.1	+0.6
MGNA	Meganis	0.55	32	P	Pg	08 31 01.8	+0.3
MGNA				S	Sg	08 31 10.2	+1.5
MGNA				AML	AML	08 31 11.6	
	comp=N,4619μm,0.1s						
MGNA				AML	AML	08 31 13.3	
	comp=E,7093μm,0.6s						
KRI1	kERI	0.61	149	P	Pg	08 31 02.6	+0.1
KRI1				S	Sb	08 31 12.3	0.0
LKD2	Lefkada island	0.63	17	P	Pg	08 31 03.0	0.0
LKD2				S	Sg	08 31 12.3	+1.1
	comp=E,3μm,0.5s						
LKD2	Lefkada island	0.63	17	P	Pg	08 31 03.5	+0.5
AST1	Astakos	0.64	56	P	Pg	08 31 03.4	+0.4
AST1				S	Sb	08 31 13.2	+0.2
TSLK	Tsoukalades, L	0.66	16	P	Pg	08 31 04.1	+0.5
PDO	Prodromos	0.73	55	P	Pg	08 31 04.8	0.0
PDO				S	Sb	08 31 16.7	+1.0
	comp=E,10μm,0.6s						
PDO	Prodromos	0.73	55	P	Pg	08 31 05.6	+0.8
RLS	Riolos of Patr	0.84	98	P	Pg	08 31 06.8	0.0
RLS				S	Sg	08 31 18.6	+0.9
	comp=E,3μm,0.6s						
RLS	Riolos of Patr	0.84	98	P	Pg	08 31 06.9	0.0
RLS				S	Sg	08 31 18.8	+1.1
RLS				AML	AML	08 31 26.4	
	comp=N,4288μm,0.4s						
RLS				AML	AML	08 31 31.0	
	comp=E,6145μm,0.8s						
PVO	Paravola	0.97	63	P	Pg	08 31 09.7	+0.3
PVO	Paravola	0.97	63	P	Pg	08 31 09.9	+0.5
DRO	Drossia	1.04	102	P	Pg	08 31 10.8	0.0
DRO	Drossia	1.04	102	P	Pg	08 31 11.1	+0.2
LAKA	Lakka	1.23	87	P	Pn	08 31 13.8	-0.4
LAKA	Lakka	1.23	87	P	Pn	08 31 13.7	-0.5
ANX	Ano Chora	1.25	71	P	Pg	08 31 15.7	+1.0
TRIZ	Trizonia	1.31	82	P	Pn	08 31 14.8	-0.5
TRIZ	Trizonia	1.31	82	P	Pn	08 31 15.0	-0.3
KLV	Kalavryta, Ach	1.37	95	P	Pn	08 31 16.3	+0.1
ITM	Ithomi	1.56	130		Pn	08 31 17.2	-1.5
ITM				Sn	Sn	08 31 39.2	+0.1
AGG	Agios Georgios	1.71	60	Pn	Pn	08 31 20.6	-0.3
AGG				Sn	Sb	08 31 44.4	+0.2
SCTE	Santa Cesarea	2.42	322	Pn	Pn	08 31 32.2	+1.7
SCTE				Sn	Sn	08 32 02.1	+1.9
FNA	Florina	2.70	16	Pn	Pn	08 31 36.4	+2.0
OHR	Ohrid	2.94	6	ePn	Pn	08 31 38.3	+0.7
TIP	Timpagrande	3.03	290	⇓P	Pn	08 31 38.2	-0.7
TIP				⇓S	Sn	08 32 12.8	-2.6
TIP	Timpagrande	3.03	290		Pn	08 31 39.9	+0.9
TIP				Sn	Sn	08 32 15.7	+0.3
TIR	Tirane	3.19	352	⇑P	Pb	08 31 44.9	-2.6
TIR				⇑S	Sb	08 32 24.1	-2.4
TIR	Tirane	3.19	352	Pn	Pn	08 31 40.1	-0.9
VAY	Valandovo	3.54	27	ePn	Pb	08 31 50.2	-3.4
CEL	Celeste	3.56	273		Pn	08 31 46.6	+0.3
STIP	Stip	3.76	21	ePn	Pn	08 31 53.0	+4.1
MATE	Matera	3.79	312	⇓P	Pn	08 31 49.7	+0.5
SG1	Sgolgore (BA)	3.92	314	ePn	Pn	08 31 52.5	+1.3
SG1				Sn	Sn	08 32 37.1	-0.3
DRME	Dracevica, Mon	4.11	347	ePn	Pn	08 31 54.1	+0.4
APE	Apeiranthos	4.21	104	⇑P	Pb	08 32 00.7	-4.3
ACER	Acerenza	4.33	308		Pn	08 31 58.4	+1.6
PDG	Podgorica	4.33	349	⇓P	Pn	08 31 58.5	+1.8
PDG	Podgorica	4.33	349	ePn	Pn	08 31 56.2	-0.6
PDG	Podgorica	4.33	349	Pn	Pn	08 31 56.3	-0.4
PDG					Sn	08 32 48.3	+1.0
HCY	Herceg Novi	4.50	342	ePn	Pn	08 31 56.6	-2.6
IDI	Anoyia	4.61	127	Pn	Pn	08 32 02.0	+1.3
	comp=E,2.0nm,0.3s,baz=308,slow=12,SNR=9.1						
IDI				Sn	Sn	08 32 55.2	+0.8
	comp=E,4.8nm,0.3s,baz=280,slow=3.1,SNR=8.1						
TREB	Trebinje	4.79	341	ePn	Pn	08 32 02.7	-0.4
VTS	Vitosha	4.92	25	⇓P	Pn	08 32 10.8	+5.8
BRY	Bratogost	4.92	344	ePn	Pn	08 32 04.4	-0.7
SGRT	San Giovanni R	5.06	316	Pn	Pn	08 32 07.9	+1.0
STON	Ston	5.12	337	ePn	Pn	08 32 06.8	-0.8
ALN	Alexandroupoli	5.12	56	Pn	Pn	08 32 09.3	+1.7
UPM	Unac-Piva	5.14	348	ePn	Pn	08 32 08.2	+0.1
WDD	Wied Dalam	5.27	245	Pn	Pn	08 32 10.1	+0.5
PAOL	Paolisi	5.34	304		Pn	08 32 12.6	+1.9
CORL	Corleone	5.62	269	Pn	Pn	08 32 14.3	-0.3
BBLS	Lazići	5.73	353	ePn	Pn	08 32 15.4	-0.6
DIVS	Divibare	5.92	357	ePn	Pn	08 32 15.4	-0.6
HAPS	Han Pijesak,Bl	6.00	350	ePn	Pn	08 32 18.5	-1.3
PLVB	Pleven	6.09	30	⇓P	Pn	08 32 27.4	+6.4
INTR	Introdacqua	6.29	309		Pn	08 32 27.0	+3.3
MGRS	Mrkonjic Grad	6.71	339	ePn	Pn	08 32 29.9	+0.4
NRCA	Norcia	7.25	312		Pn	08 32 39.8	+2.9
MURB	Monte Urbino	7.85	313		Pn	08 32 40.9	-4.2
VOIR		8.03	24	⇓P	Pn	08 32 53.9	+6.3
MLR	Muntele Rosu	8.38	28	Pn	Pn	08 32 55.4	+2.9
	comp=E,0.1nm,0.3s,baz=330,slow=20,SNR=3.5						
MLR				LR	LR	08 36 56.4	
	comp=E,138nm,19.5s,baz=115,slow=44						
MLR	Muntele Rosu	8.38	28	⇓P	Pn	08 32 59.1	+6.6
CRES	Cresnjev	8.48	336	ePn	Pn	08 32 52.9	-0.8
PLOR	Plostina	8.95	29	⇓P	Pn	08 33 06.7	+6.5
SOKA	Soboth	9.37	337	ePn	Pn	08 33 05.7	-0.3
	comp=E,7.8nm,0.5s						
OBKA	Obir	9.38	334	Pn	Pn	08 33 08.5	+2.4
	comp=E,4.1nm,0.4s						
BRTR	Keskin Array B	10.41	77	Pn	Pn	08 33 24.4	+4.0
	comp=E,0.1nm,0.3s,baz=265,slow=14,SNR=3.8						
MOA	Molln	10.65	337	ePn	Pn	08 33 25.1	+1.5
	comp=E,2.1nm,0.3s						
GERES	GERESS Array B	11.71	338	Pn	Pn	08 33 37.3	-0.8
	comp=E,0.3nm,0.3s,baz=165,slow=13,SNR=5.4						
GERES				Sn	Sn	08 35 45.3	-3.6
	comp=E,0.1nm,0.3s,baz=152,slow=23,SNR=2.6						
AKASG	Malin Array Be	13.99	24	Pn	Pn	08 34 09.1	+0.1
	comp=E,0.3nm,0.3s,baz=208,slow=12,SNR=2.9						
AKASG	Malin Array Be	13.99	24	P	Pn	08 34 08.9	-0.1
KBZ	Khabaz	17.84	65	P	Pn	08 34 59.0	-0.1
	comp=E,0.1nm,0.3s,baz=277,slow=1.7,SNR=3.9						
GNI	Garni	18.95	76	P	Pn	08 35 14.1	+1.2
	comp=E,0.7nm,0.3s,baz=120,slow=7.2,SNR=2.9						
GNI	Garni	18.95	76	P	P	08 35 12.3	0.0
GNI				IAmb	IAmb	08 35 17.9	
	comp=Z,14nm,1.0s						
ESDC	Sonseca Array	19.02	282	P	Pn	08 35 14.2	+0.6
	comp=Z,0.3nm,0.3s,baz=79,slow=13,SNR=3.2						
ESDC	Sonseca Array	19.02	282	P	Pn	08 35 13.3	-0.3
HFS	Hagfors	22.38	351	P	P	08 35 49.9	+0.8
	comp=Z,2.4nm,0.6s,baz=163,slow=11,SNR=7.8						
EKA	Eskdalemuir Ar	23.38	325	P	P	08 35 58.3	-1.1
	comp=Z,3.6nm,0.8s,baz=120,slow=11,SNR=4.4						
FINES	FINESS Array B	23.55	7	P	P	08 36 00.5	-0.7
	comp=Z,2.9nm,0.7s,baz=173,slow=9.9,SNR=7.3						
FINES	FINESS Array B	23.55	7	P	P	08 35 59.9	-1.2
NB2	NORSAR Subarra	23.59	349	P	P	08 36 02.1	+0.4
	comp=Z,0.9nm,0.6s,baz=153,slow=10						
NOA	NORSAR Array B	23.59	349	P	P	08 36 01.1	-0.6
	comp=Z,1.1nm,0.6s,baz=163,slow=11,SNR=4.4						
GEYT	Alibeck	29.55	79	P	P	08 36 55.4	-0.3
	comp=Z,0.8nm,0.5s,baz=244,slow=12,SNR=3.6						
GEYT	Alibeck	29.55	79	P	P	08 36 55.7	-0.1
TOA0	Torodi Ar. Sit	29.99	219	P	P	08 37 01.0	+1.3
TOA0				IAmb	IAmb	08 37 02.9	
	comp=Z,5.3nm,1.1s						
TORD	Torodi Ar. Bea	29.99	219	P	P	08 37 00.2	+0.5
	comp=Z,2.5nm,1.0s,baz=31,slow=8.0,SNR=8.4						
ARCES	ARCESS Array B	31.53	3	P	P	08 37 12.8	0.0
	comp=Z,5.3nm,1.2s,baz=190,slow=10,SNR=2.5						
KK31	Karatay Array	37.87	66	P	P	08 38 09.1	+1.2
KK31				IAmb	IAmb	08 38 16.1	
	comp=Z,2.6nm,1.0s						
KKAR	Karatay Array	37.87	66	P	P	08 38 08.8	+0.8
KKAR	Karatay Array	37.87	66	P	P	08 38 09.1	+1.2
KKAR				IAmb	IAmb	08 38 16.2	
	comp=Z,2.6nm,1.0s						
DBIC	Dimbokro	38.84	223	P	P	08 38 16.1	-0.2
	comp=Z,3.0nm,0.8s,baz=318,slow=7.3,SNR=3.6						
DBIC	Dimbokro	38.84	223	P	P	08 38 16.2	-0.1
DBIC				IAmb	IAmb	08 38 18.9	
	comp=Z,6.4nm,1.1s						
MK31	Makanchi Array	45.37	58	P	P	08 39 08.9	-0.4
MKAR	Makanchi Array	45.37	58	P	P	08 39 09.0	-0.3
	comp=Z,1.0nm,0.4s,baz=278,slow=7.6,SNR=16						
ZAA0	Zalesovo Array	45.74	48	P	P	08 39 12.1	-0.1
ZALV	Zalesovo Beam	45.74	48	P	P	08 39 12.1	-0.1
	comp=Z,4.4nm,0.6s,baz=280,slow=9.4,SNR=15						
ZALV	Zalesovo Beam	45.74	48	P	P	08 39 11.8	-0.4
SCHQ	Schefferville	58.40	317	P	P	08 40 48.0	+1.7
	comp=Z,1.4nm,0.8s,baz=238,slow=13,SNR=3.0						
SONM	Songino Array	60.51	51	P	P	08 41 01.0	-0.2
	comp=Z,0.8nm,0.8s,baz=290,slow=8.6,SNR=6.1						
YKA	Yellowknife Ar	73.36	340	P	P	08 42 22.0	-0.5
	comp=Z,0.3nm,0.7s,baz=34,slow=5.0,SNR=2.4						

ATH 03 08:40:23.4, 38.38N×20.45E, h15km±1km, ML3.2/17, Error ellipse: s-maj=1.7km s-min=0.7km az=258.0
THE 03 08:40:24.1, 38.37N×20.46E, h9km, ML3.2/5, Error ellipse: s-maj=0.9km s-min=0.3km az=96.0
ISC 03 08:40:23.8±0.9, 38.37N±0.02×20.48E±0.04, h11km±5km, n47, σ0.52/68, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VSK1	VASILIKIADES	0.08	62	P	Pg	08 40 26.1	-0.1
VSK1				S	Sg	08 40 28.0	0.0
	38μm,0.2s						
KEF1	Kardakata, Kep	0.10	184	P	Pg	08 40 26.0	-0.4
KEF1				S	Sg	08 40 28.2	-0.1
FSK	Fiskardo	0.11	37	P	Pg	08 40 26.6	0.0
FSK				S	Sg	08 40 28.7	0.0
	29μm,0.7s						
KEF4	Livadi, Kephal	0.12	201	P	Pg	08 40 27.0	+0.2
KEF4				S	Sg	08 40 29.3	+0.4
ARG2	Argostoli	0.19	178	P	Pg	08 40 28.3	+0.4
ARG2				S	Sg	08 40 31.4	+0.6
KEF3	Kipouria, Keph	0.20	211	P	Pg	08 40 28.1	+0.1
KEF3				S	Sg	08 40 32.2	+1.3
KEF2	Argostoli. Kep	0.21	178	P	Pg	08 40 28.3	+0.2
KEF2				S	Sg	08 40 32.3	+1.2
VLS	Valsamata	0.21	156	P	Pg	08 40 28.6	+0.3
VLS				S	Sg	08 40 32.1	+0.7
	9μm,0.2s						
VLS	Valsamata	0.21	156	P	Pg	08 40 28.1	-0.3
VLS				S	Sg	08 40 32.0	+0.6
VLS				AML	AML	08 40 34.7	
	comp=E,22878μm,0.2s						
VLS				AML	AML	08 40 36.5	
	comp=N,15554μm,0.5s						
EVGI	Lefkada island	0.28	29	P	Pg	08 40 29.9	+0.3
EVGI				S	Sg	08 40 34.6	+1.1
EVGI	Lefkada island	0.28	29	P	Pg	08 40 29.9	+0.3
EVGI				S	Sg	08 40 34.7	+1.3
MGNA	Meganis	0.37	41	P	Pg	08 40 31.3	+0.1
MGNA				S	Sg	08 40 35.9	-0.3
MGNA				AML	AML	08 40 37.6	
	comp=E,17892μm,0.5s						
MGNA				AML	AML	08 40 37.9	
	comp=N,18917μm,0.3s						
LKD2	Lefkada island	0.44	19	P	Pg	08 40 32.3	-0.1
LKD2				S	Sg	08 40 39.2	+0.9
	comp=N,2μm,0.6s						
LKD2	Lefkada island	0.44	19	P	Pg	08 40 32.3	-0.1
LKD2				S	Sb	08 40 39.5	-0.7
LKD2				AML	AML	08 40 41.3	
	comp=N,4642μm,0.3s						
LKD2				AML	AML	08 40 46.1	
	comp=E,5172μm,0.5s						
TSLK	Tsoukalades, L	0.47	17	P	Pg	08 40 33.1	+0.1
TSLK				S	Sb	08 40 40.4	-0.7
	comp=E,3μm,0.5s						
TSLK	Tsoukalades, L	0.47	17	P	Pg	08 40 33.2	+0.1
TSLK				S	Sg	08 40 39.2	-0.1
TSLK				AML	AML	08 40 42.0	
	comp=E,5079μm,0.4s						
TSLK				AML	AML	08 40 45.2	
	comp=N,10538μm,0.4s						
AST1	Astakos	0.51	70	P	Pg	08 40 34.1	+0.4
AST1				S	Sb	08 40 41.7	-0.4
VLMS	Volimes, Zakyn	0.52	164	P	Pg	08 40 33.7	-0.2
VLMS				S	Sb	08 40 42.1	-0.3
VLMS				AML	AML	08 40 45.3	
	comp=N,10649μm,0.4s						
VLMS				AML	AML	08 40 49.4	
	comp=E,8482μm,0.3s						
PDO	Prodromos	0.60	68	P	Pg	08 40 35.5	+0.1
PDO	Prodromos	0.60	68	P	Pg	08 40 35.6	+0.1
PDO				S	Sb	08 40 45.0	+0.3
PDO				AML	AML	08 40 48.9	
	comp=E,6369μm,0.5s						
PDO				AML	AML	08 40 49.7	
	comp=N,4655μm,0.4s						
KRI1	kERI	0.76	159	P	Pg	08 40 38.1	-0.3
KRI1				S	Sb	08 40 49.7	+0.4
RLS	Riolos of Patr	0.84	112	P	Pg	08 40 39.9	0.0
RLS				AML	AML	08 40 56.9	
	comp=N,2098μm,0.8s						
RLS				AML	AML	08 41 03.2	
	comp=E,1953μm,0.6s						
PVO	Paravola	0.86	73	P	Pg	08 40 40.5	+0.2
PVO	Paravola	0.86	73	P	Pg	08 40 40.6	+0.2
PVO				AML	AML	08 40 58.8	
	comp=E,4004μm,0.4s						
PVO				AML	AML	08 41 00.7	
	comp=N,4303μm,0.6s						
DRO	Drossia	1.06	113	P	Pb	08 40 44.0	-0.1
DRO	Drossia	1.06	113	P	Pb	08 40 43.7	-0.4
DRO				AML	AML	08 41 06.3	
	comp=N,6514μm,0.4s						
DRO				AML	AML	08 41 07.5	
	comp=E,7316μm,0.6s						
ANX	Ano Chora	1.15	79	P	Pb	08 40 45.8	0.0
ANX	Ano Chora	1.15	79	P	Pb	08 40 45.3	-0.5
EVR	Evrytania	1.17	62	P	Pn	08 40 45.7	-0.6
EVR				AML	AML	08 41 09.6	
	comp=N,1630μm,0.7s						
EVR				AML	AML	08 41 12.2	
	comp=E,2003μm,0.7s						
LAKA	Lakka	1.19	96	P	Pn	08 40 45.8	-0.6
LAKA				S	Sn	08 41 03.5	+1.0
LAKA				AML	AML	08 41 07.0	
	comp=N,1031μm,0.5s						
LAKA				AML	AML	08 41 10.0	
	comp=E,1249μm,0.6s						
SERG	Sergoula	1.24	88	P	Pn	08 40 46.5	-0.6
SERG	Sergoula	1.24	88	P	Pn	08 40 46.4	-0.6
TRIZ	Trizonia	1.25	90	P	Pn	08 40 46.5	-0.7
AMT	Artemida-Makis	1.28	130	P	Pg	08 40 48.8	+0.4
AMT				AML	AML	08 41 19.8	
	comp=N,3787μm,0.6s						
AMT				AML	AML	08 41 26.2	
	comp=E,3011μm,0.6s						
KALE	Kalithea	1.30	89	P	Pn	08 40 47.6	-0.5
KALE	Kalithea	1.30	89	P	Pn	08 40 47.6	-0.5
KALE				AML	AML	08 41 13.9	
	comp=N,2698μm,0.7s						
KALE				AML	AML	08 41 15.7	
	comp=E,1864μm,0.6s						
KLV	Kalavryta, Ach	1.36	104	P	Pn	08 40 48.6	-0.1
KLV				AML	AML	08 41 18.7	
	comp=N,1058μm,0.6s						
KLV				AML	AML	08 41 26.1	
	comp=E,811μm,0.8s						
KASA	Kassiopi	1.44	343	P	Pb	08 40 50.1	-0.5
MAKR	Makrakomi, Fth	1.44	63	P	Pb	08 40 50.6	-0.1
MAKR				AML	AML	08 41 17.0	
	comp=N,1386μm,0.6s						
MAKR				AML	AML	08 41 23.8	
	comp=E,1574μm,0.4s						
AGG	Agios Georgios	1.59	65	P	Pb	08 40 53.3	+0.1
AGG				AML	AML	08 41 28.1	
	comp=N,906μm,0.6s						
AGG				AML	AML	08 41 31.4	
	comp=E,1098μm,0.9s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ITM	**Ithomi**	**1.65**	**136**	P	**Pb**	**08 40 53.9**	**-0.4**
THL	**Klokotos Trika**	**1.69**	**45**	P	**Pb**	**08 40 54.5**	**-0.3**
KPRO	**Kipourio**	**1.72**	**23**	P	**Pn**	**08 40 54.3**	**+0.5**
AXAR	**Agios Charalam**	**1.75**	**76**	P	**Pb**	**08 40 55.7**	**-0.3**
AXAR	comp=E,1634μm,0.8s			AML	AML	08 41 30.0	
AXAR	comp=N,2033μm,0.9s			AML	AML	08 41 34.1	
PYL	**PYLOS**	**1.78**	**145**	P	**Pb**	**08 40 55.7**	**-0.8**
LKR	**Lokris**	**2.00**	**81**	P	**Pb**	**08 41 00.2**	**+0.1**
DID	**Didima**	**2.35**	**111**	P	**Pb**	**08 41 05.1**	**-1.0**

*IDC **03** 08:47:21.9±21.0, 38.11N×20.14E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.3/41, mbtmp3.5/4, ML3.4/1, Error ellipse: s-maj=403.3km s-min=34.4km az=36.0*
*THE **03** 08:47:26.8, 38.37N×20.51E, h9km, ML3.1/4, Error ellipse: s-maj=1.1km s-min=0.4km az=283.0*
*ATH **03** 08:47:26.4, 38.37N×20.49E, h13km±1km, ML3.2/16, Error ellipse: s-maj=1.4km s-min=0.6km az=275.0*
ISC 03 08:47:26.5±0.8, 38.38N±0.02×20.51E±0.03, h10km±4km, n61, σ0.59/82, mb3.8/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.05**	**53**	P	**Pg**	**08 47 28.4**	**-0.2**
VSK1				S	**Sg**	**08 47 30.1**	**0.0**
FSK	**Fiskardo**	**0.09**	**27**	P	**Pg**	**08 47 28.9**	**-0.1**
FSK	28μm,0.2s			S	**Sg**	**08 47 30.9**	**+0.1**
FSK	**Fiskardo**	**0.09**	**27**	P	**Pg**	**08 47 28.9**	**-0.1**
FSK				S	**Sg**	**08 47 31.0**	**+0.1**
KEF1	**Kardakata, Kep**	**0.10**	**197**	P	**Pg**	**08 47 29.0**	**-0.1**
KEF1				S	**Sg**	**08 47 31.1**	**+0.2**
KEF4	**Livadi, Kephal**	**0.14**	**209**	P	**Pg**	**08 47 29.6**	**0.0**
KEF4				S	**Sg**	**08 47 32.3**	**+0.6**
ARG2	**Argostoli**	**0.20**	**185**	P	**Pg**	**08 47 30.8**	**+0.2**
ARG2				S	**Sg**	**08 47 34.0**	**+0.6**
VLS	**Valsamata**	**0.21**	**162**	P	**Pg**	**08 47 30.9**	**+0.1**
VLS	10μm,0.3s			S	**Sg**	**08 47 34.3**	**+0.5**
VLS	**Valsamata**	**0.21**	**162**	P	**Pg**	**08 47 30.9**	**+0.1**
VLS				S	**Sg**	**08 47 34.5**	**+0.7**
VLS	comp=N,14574μm,0.2s			AML	AML	08 47 34.9	
VLS	comp=E,23094μm,0.2s			AML	AML	08 47 36.6	
KEF2	**Argostoli. Kep**	**0.21**	**185**	P	**Pg**	**08 47 30.9**	**0.0**
KEF2				S	**Sg**	**08 47 34.7**	**+0.8**
KEF3	**Kipouria, Keph**	**0.21**	**216**	P	**Pg**	**08 47 30.8**	**-0.1**
KEF3				S	**Sg**	**08 47 33.8**	**-0.2**
CHV1	**Chavriata, Kef**	**0.22**	**208**	P	**Pg**	**08 47 30.9**	**-0.1**
CHV1				S	**Sg**	**08 47 34.8**	**+0.8**
EVGI	**Lefkada island**	**0.27**	**25**	P	**Pg**	**08 47 32.2**	**+0.2**
EVGI				S	**Sg**	**08 47 36.7**	**+1.1**
EVGI	**Lefkada island**	**0.27**	**25**	P	**Pg**	**08 47 32.1**	**+0.2**
EVGI				S	**Sg**	**08 47 37.1**	**+1.4**
MGNA	**Meganis**	**0.36**	**38**	P	**Pg**	**08 47 33.6**	**0.0**
MGNA				S	**Sg**	**08 47 39.2**	**+0.9**
MGNA	comp=E,14240μm,0.3s			AML	AML	08 47 39.9	
MGNA	comp=N,15299μm,0.4s			AML	AML	08 47 40.1	
LKD2	**Lefkada island**	**0.43**	**16**	P	**Pg**	**08 47 34.7**	**-0.2**
LKD2	comp=N,2μm,0.9s			S	**Sg**	**08 47 41.8**	**+1.2**
LKD2	**Lefkada island**	**0.43**	**16**	P	**Pg**	**08 47 34.7**	**-0.2**
LKD2				S	**Sg**	**08 47 41.5**	**+0.9**
LKD2	comp=N,3660μm,0.3s			AML	AML	08 47 45.7	
LKD2	comp=E,3843μm,0.4s			AML	AML	08 47 46.9	
TSLK	**Tsoukalades, L**	**0.46**	**14**	P	**Pg**	**08 47 35.5**	**0.0**
TSLK	comp=E,3μm,0.5s			S	**Sb**	**08 47 43.0**	**-0.6**
TSLK	**Tsoukalades, L**	**0.46**	**14**	P	**Pg**	**08 47 35.5**	**0.0**
TSLK				S	**Sb**	**08 47 43.1**	**-0.5**
TSLK	comp=N,6445μm,0.5s			AML	AML	08 47 43.8	
TSLK	comp=E,5589μm,0.6s			AML	AML	08 47 45.0	
AST1	**Astakos**	**0.48**	**70**	P	**Pg**	**08 47 36.4**	**+0.5**
VLMS	**Volimes, Zakyn**	**0.51**	**166**	P	**Pg**	**08 47 36.5**	**+0.1**
VLMS				S	**Sg**	**08 47 43.3**	**+0.1**
VLMS	comp=E,14038μm,0.3s			AML	AML	08 47 52.9	
VLMS	comp=N,14082μm,0.4s			AML	AML	08 47 53.2	
PDO	**Prodromos**	**0.57**	**67**	P	**Pg**	**08 47 37.8**	**+0.2**
PDO	**Prodromos**	**0.57**	**67**	P	**Pg**	**08 47 37.9**	**+0.3**
PDO	comp=N,6406μm,0.3s			AML	AML	08 47 52.2	
PDO	comp=E,4940μm,0.3s			AML	AML	08 47 55.2	
KRI1	**kERI**	**0.75**	**161**	P	**Pg**	**08 47 40.4**	**-0.6**
RLS	**Riolos of Patr**	**0.82**	**113**	P	**Pg**	**08 47 42.2**	**0.0**
PVO	**Paravola**	**0.83**	**73**	P	**Pg**	**08 47 42.9**	**+0.4**
PVO	**Paravola**	**0.83**	**73**	P	**Pb**	**08 47 43.1**	**+0.1**
PVO				S	**Sg**	**08 47 53.5**	**+0.1**
PVO	comp=E,3743μm,0.5s			AML	AML	08 48 03.8	
PVO	comp=N,3450μm,0.7s			AML	AML	08 48 07.2	
DRO	**Drossia**	**1.04**	**114**	P	**Pg**	**08 47 46.2**	**-0.2**
DRO	**Drossia**	**1.04**	**114**	P	**Pg**	**08 47 45.9**	**-0.5**
DRO	comp=E,5297μm,0.3s			AML	AML	08 48 08.8	
DRO	comp=N,4123μm,0.4s			AML	AML	08 48 12.1	
ANX	**Ano Chora**	**1.13**	**79**	P	**Pg**	**08 47 47.6**	**-0.5**
ANX	**Ano Chora**	**1.13**	**79**	P	**Pg**	**08 47 47.7**	**-0.5**
ANX	comp=N,2917μm,0.6s			AML	AML	08 48 11.3	
ANX	comp=E,4994μm,0.7s			AML	AML	08 48 12.3	
EVR	**Evrytania**	**1.15**	**62**	P	**Pb**	**08 47 47.8**	**-0.7**
EVR	comp=E,1584μm,0.8s			AML	AML	08 48 11.8	
EVR	comp=N,1643μm,1.0s			AML	AML	08 48 15.5	
LAKA	**Lakka**	**1.16**	**96**	P	**Pb**	**08 47 48.0**	**-0.7**
LAKA				S	**Sn**	**08 48 05.9**	**+1.1**
LAKA	comp=N,1092μm,0.9s			AML	AML	08 48 11.7	
LAKA	comp=E,790μm,0.7s			AML	AML	08 48 17.5	
SERG	**Sergoula**	**1.22**	**88**	P	**Pn**	**08 47 48.7**	**-0.9**
SERG	**Sergoula**	**1.22**	**88**	P	**Pn**	**08 47 48.8**	**-0.7**
TRIZ	**Trizonia**	**1.23**	**90**	P	**Pn**	**08 47 49.1**	**-0.6**
AMT	**Artemida-Makis**	**1.27**	**131**	P	**Pb**	**08 47 50.7**	**+0.2**
AMT	comp=E,2369μm,0.6s			AML	AML	08 48 21.8	
AMT	comp=N,2482μm,0.8s			AML	AML	08 48 22.3	
KALE	**Kalithea**	**1.28**	**89**	P	**Pn**	**08 47 49.8**	**-0.7**
KALE	**Kalithea**	**1.28**	**89**	P	**Pn**	**08 47 49.9**	**-0.6**
KALE	comp=E,1056μm,0.5s			AML	AML	08 48 15.2	
KALE	comp=N,2525μm,0.7s			AML	AML	08 48 16.3	
JAN	**Janina**	**1.31**	**12**	P	**Pg**	**08 47 51.6**	**0.0**
KLV	**Kalavryta, Ach**	**1.33**	**104**	P	**Pn**	**08 47 51.0**	**-0.2**
KLV	**Kalavryta, Ach**	**1.33**	**104**	P	**Pn**	**08 47 51.0**	**-0.2**
KLV	comp=N,740μm,0.5s			AML	AML	08 48 19.7	
KLV	comp=E,660μm,0.9s			AML	AML	08 48 21.7	
MAKR	**Makrakomi, Fth**	**1.42**	**63**	P	**Pb**	**08 47 53.0**	**-0.1**
MAKR	comp=N,1084μm,0.4s			AML	AML	08 48 25.5	
MAKR	comp=E,1422μm,0.8s			AML	AML	08 48 28.6	
KASA	**Kassiopi**	**1.44**	**342**	P	**Pg**	**08 47 53.7**	**-0.4**
AGG	**Agios Georgios**	**1.56**	**65**	P	**Pb**	**08 47 55.5**	**0.0**
ITM	**Ithomi**	**1.64**	**136**	P	**Pb**	**08 47 57.0**	**+0.2**
THL	**Klokotos Trika**	**1.67**	**44**	P	**Pb**	**08 47 57.2**	**0.0**
KPRO	**Kipourio**	**1.71**	**23**	P	**Pg**	**08 47 59.0**	**-0.2**
AXAR	**Agios Charalam**	**1.73**	**76**	P	**Pg**	**08 47 59.4**	**-0.3**
AXAR	comp=N,1701μm,0.7s			AML	AML	08 48 35.8	
AXAR	comp=E,1942μm,1.1s			AML	AML	08 48 39.2	
PYL	**PYLOS**	**1.77**	**146**	P	**Pn**	**08 47 58.0**	**+0.8**
VLX	**Vlachokerasia**	**1.79**	**124**	P	**Pb**	**08 48 00.0**	**+0.6**
LTK	**Loutraki**	**1.97**	**100**	P	**Pb**	**08 48 02.1**	**-0.3**
LKR	**Lokris**	**1.97**	**81**	P	**Pb**	**08 48 02.1**	**-0.3**
NEST	**Nestorio**	**2.08**	**11**	P	**Pb**	**08 48 04.4**	**+0.1**
VIL2	**Platees**	**2.18**	**93**	P	**Pb**	**08 48 05.0**	**-1.0**
LIT	**Litokhoron**	**2.31**	**41**	P	**Pb**	**08 48 06.8**	**-1.4**
DID	**Didima**	**2.33**	**111**	P	**Pb**	**08 48 07.0**	**-1.5**
MRKA	**Markates**	**2.44**	**81**	P	**Pn**	**08 48 07.9**	**+1.6**
GERES	**GERESS Array B**	**11.56**	**337**	Pn	**Pn**	**08 50 11.4**	**-0.2**
	comp=E,0.1nm,0.3s,baz=167,slow=14,SNR=2.1						
FINES	**FINESS Array B**	**23.35**	**7**	P	**P**	**08 52 34.3**	**-0.4**
	comp=E,2.8nm,0.9s,baz=191,slow=10,SNR=2.8						
MKAR	**Makanchi Array**	**45.20**	**59**	P	**P**	**08 55 43.0**	**-0.5**
	comp=E,0.2nm,0.4s,baz=283,slow=7.3,SNR=3.5						
ZALV	**Zalesovo Beam**	**45.57**	**48**	P	**P**	**08 55 46.9**	**+0.7**
	comp=E,0.6nm,0.4s,baz=280,slow=8.5,SNR=2.6						

*NEIC **03** 08:51:41.2±1.7, 59.60N±0.03×152.34W±0.09, h79km±7km, Error ellipse: s-maj=6.7km s-min=4.0km az=100.0*
AEIC 03 08:51:42.2±1.7, 59.63N±0.04×152.37W±0.08, h73km±6km, ML2.5/68, Error ellipse: s-maj=6.6km s-min=5.3km az=127.0, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOM	**Homer**	**0.37**	**85**		Pn	08 51 54.0	-0.2
HOM					Sn	08 52 02.4	-0.6
ILS	**Iliamna Low So**	**0.49**	**313**		Pn	08 51 54.5	-0.8
ILS					Sn	08 52 04.4	-0.6
IVE	**Iliamna Volcan**	**0.51**	**320**		Pn	08 51 54.6	-1.0
AU22	**Augustine Moun**	**0.57**	**244**		Pn	08 51 55.5	-0.4
AU22					Sn	08 52 06.1	+0.1
CNPM	**China Poot**	**0.58**	**99**		Pn	08 51 55.7	-0.4
CNPM					Sn	08 52 06.2	-0.2
ILW	**Iliamna West**	**0.58**	**319**		Pn	08 51 55.7	-0.6
AUP	**Augustine Pinn**	**0.60**	**244**		Pn	08 51 56.1	-0.2
BRLK	**Bradley Lake**	**0.76**	**79**		Pn	08 51 57.4	-0.7
BRSE	**Bradley Lake S**	**0.83**	**81**		Pn	08 51 58.1	-0.8
BRSE					Sn	08 52 10.8	-0.4
RSO	**Redoubt South**	**0.86**	**347**		Pn	08 51 58.6	-0.8
RDJH	**Redoubt Jeurge**	**0.99**	**347**		Pn	08 52 00.3	-0.6
RDJH					Sn	08 52 14.4	-0.4
CAPN	**Captain Cook N**	**1.30**	**27**		Pn	08 52 06.0	+1.4
SLKM	**Skilak Lake**	**1.39**	**50**		Pn	08 52 05.1	-0.8
SLKM					Sn	08 52 23.9	+0.2
SEW	**Seward**	**1.55**	**71**		Pn	08 52 07.0	-0.8
CKL	**Chakachamna La**	**1.58**	**0**		Pn	08 52 08.1	-0.3
SPCR	**Spurr Chakacha**	**1.58**	**3**		Pn	08 52 08.1	-0.3
SPCR					Sn	08 52 27.8	-0.4
KDAK	**Kodiak Island**	**1.85**	**184**		Pn	08 52 10.8	-1.1
KDAK	**Kodiak Island**	**1.85**	**184**	Sn	Sn	08 52 34.1	-0.4
KDAK	**Kodiak Island**	**1.85**	**184**		Pn	08 52 11.0	-0.9
KCG	**Knife Ck. Glac**	**1.94**	**228**		Pn	08 52 12.6	-0.5
KCG					Sn	08 52 35.9	-0.8
RC01	**Rabbit Creek A**	**1.97**	**41**		Pn	08 52 14.0	+0.6
RC01				Sn	Sn	08 52 37.3	+0.1
SUA	**Susitna One**	**2.01**	**23**		Pn	08 52 14.3	+0.2
SUA				Sn	Sn	08 52 40.1	+1.7
KABU	**Katmai Buttres**	**2.03**	**229**		Pn	08 52 14.0	-0.4
SVW2	**Sparrevohn**	**2.17**	**314**		Pn	08 52 15.1	-1.1
SVW2				Sn	Sn	08 52 40.8	-1.5
PWL	**Port Wells**	**2.36**	**57**		Pn	08 52 17.7	-1.0
PWL					Sn	08 52 44.6	-2.1
SKT	**Skwentna**	**2.40**	**9**		Pn	08 52 19.1	-0.2
SKT				Sn	Sn	08 52 48.1	+0.5
OHAK	**Old Harbor**	**2.46**	**192**		Pn	08 52 18.6	-1.4
PMR	**Palmer**	**2.54**	**38**		Pn	08 52 19.7	-1.3
PMR				Sn	Sn	08 52 49.4	-1.5
KNK	**Knik Glacier**	**2.64**	**45**		Pn	08 52 21.6	-0.9
KNK					Sn	08 52 52.0	-1.4
GHO	**Glory Hole Cre**	**2.74**	**37**		Pn	08 52 23.7	-0.2
GHO				Sn	Sn	08 52 55.4	-0.5
GLI	**Glacier Island**	**2.91**	**62**		Pn	08 52 24.1	-2.1
GLI				Sn	Sn	08 52 55.6	-4.5
SML	**Sawmill**	**2.95**	**40**	Pn	Pn	08 52 26.5	-0.3
SML				Sn	Sn	08 52 59.2	-1.9
HIN	**Hinchinbrook I**	**3.04**	**73**		Pn	08 52 26.6	-1.4
HIN				Sn	Sn	08 53 01.6	-1.7
PPLA	**Purkeypile**	**3.28**	**1**	Pn	Pn	08 52 31.5	+0.2
SCM	**Sheep Creek Mo**	**3.32**	**46**		Pn	08 52 31.3	-0.5
SCM				Sn	Sn	08 53 09.1	-1.1
EYAK	**Cordova Ski Ar**	**3.44**	**72**		Pn	08 52 31.8	-1.5
EYAK				Sn	Sn	08 53 11.1	-1.8
WAT1	**Susitna Watana**	**3.71**	**28**		Pn	08 52 37.0	0.0
WAT6	**Susitna Watana**	**3.72**	**35**		Pn	08 52 36.9	-0.4
TT01	**Tatalina**	**3.73**	**333**		Pn	08 52 36.6	-0.7
TTA	**Tatalina**	**3.75**	**334**		Pn	08 52 36.9	-0.8
RAGM	**Ragged Mountai**	**3.94**	**76**	Pn	Pn	08 52 38.5	-1.7
TRF	**Thorofare Moun**	**3.96**	**14**		Pn	08 52 41.7	+1.0
KTH	**Kantishna Hill**	**4.00**	**9**		Pn	08 52 41.5	+0.5
HMT	**Hamilton**	**4.13**	**77**	Pn	Pn	08 52 42.7	-0.2
HMT				Sn	Sn	08 53 28.5	-1.4
RND	**Reindeer**	**4.15**	**22**		Pn	08 52 41.9	-1.2
DHY	**Denali Highway**	**4.21**	**33**	Pn	Pn	08 52 44.3	+0.3
DHY				Sn	Sn	08 53 30.9	-1.1
NICHA	**Nichawak Mount**	**4.27**	**78**		Pn	08 52 44.0	-0.7
BERG	**Berg Lake**	**4.42**	**76**		Pn	08 52 45.8	-0.9
MCK	**McKinley**	**4.43**	**20**	Pn	Pn	08 52 46.9	0.0
MCK				Sn	Sn	08 53 35.9	-1.3
GRIN	**Grindle Hills**	**4.60**	**78**		Pn	08 52 48.6	-0.5
GLB	**Gilahina Butte**	**4.60**	**63**		Pn	08 52 48.1	-1.1
GLB				Sn	Sn	08 53 36.4	-4.9
KHIT	**Khitrov Hills**	**4.65**	**76**		Pn	08 52 49.1	-0.8
VRDI	**Verde Repeater**	**4.70**	**66**	Pn	Pn	08 52 49.4	-1.3
VRDI				Sn	Sn	08 53 40.9	-3.1
PAX	**Paxson**	**4.72**	**42**	Pn	Pn	08 52 50.4	-0.5
PAX				Sn	Sn	08 53 40.9	-3.5
WAX	**Waxell Ridge**	**4.84**	**76**		Pn	08 52 51.5	-1.1
TGL	**Tana Glacier**	**4.89**	**73**		Pn	08 52 52.5	-0.7
TGL	**Tana Glacier**	**4.89**	**73**	Sn	Sn	08 53 45.7	-2.9
MCARA	**McCarthy VSAT**	**4.94**	**65**		Pn	08 52 48.9	-5.0
MCARA				Sn	Sn	08 53 47.7	-1.9
KIAG	**Kiagna River**	**5.15**	**71**		Pn	08 52 56.1	-0.7
PTPK	**Patty Peak**	**5.15**	**68**		Pn	08 52 55.7	-1.2
BALM	**Baldy**	**5.18**	**70**		Pn	08 52 56.2	-0.9
BALM				Sn	Sn	08 53 51.3	-4.2
WRH	**Wood River Hil**	**5.26**	**21**	Pn	Pn	08 52 58.1	-0.1
WRH				Sn	Sn	08 53 54.9	-2.5
MESA	**MESA**	**5.27**	**79**	Pn	Pn	08 52 58.5	0.0
GRNC	**Granite Creek**	**5.41**	**74**		Pn	08 52 59.8	-0.7
HDA	**Harding Lake**	**5.43**	**26**	Pn	Pn	08 53 00.5	-0.1
HDA				Sn	Sn	08 54 00.9	-0.7
RIDG	**Independent Ri**	**5.46**	**38**	Pn	Pn	08 53 00.9	0.0
CCB	**Clear Creek Bu**	**5.47**	**21**	Pn	Pn	08 52 59.4	-1.6
CCB				Sn	Sn	08 53 59.5	-3.0
MLY	**Manley**	**5.48**	**7**	Pn	Pn	08 53 01.2	0.0
BARN	**Barnard Glacie**	**5.51**	**70**		Pn	08 53 00.8	-0.9
BARN				Sn	Sn	08 54 02.0	-1.7
CTGM	**Chitina Glacie**	**5.65**	**72**		Pn	08 53 04.0	+0.4
CTGM				Sn	Sn	08 54 01.5	-5.6
YUK2	**White River**	**6.06**	**64**		Pn	08 53 08.5	-0.6
PCA	**Pinnacle**	**6.12**	**80**		Pn	08 53 09.7	-0.2
PCA					Sn	08 54 15.1	-3.4
PNL	**Peninsula**	**6.58**	**84**		Pn	08 53 15.4	-0.7
DHAK	**Deception Hill**	**7.25**	**88**		Pn	08 53 24.7	-0.7
DHAK				Sn	Sn	08 54 44.1	-2.1
ANM	**Nome**	**7.85**	**315**	Pn	Pn	08 53 33.6	+0.1
WHY	**Whitehorse**	**8.78**	**76**	Pn	Pn	08 53 46.3	0.0
WHY				Sn	Sn	08 55 20.1	-3.5
JIS	**Juneau Island**	**9.39**	**90**	Pn	Pn	08 53 54.5	0.0
JIS				Sn	Sn	08 55 34.6	-3.6

*IDC **03** 09:03:20.7±0.6, 37.25N×97.83W, h0km, mb4.0/7, mb1 4.1/15, mb1mx3.8/68, mbtmp3.9/15, ML3.7/8, MS2.8/4, Ms1 2.7/4, ms1mx2.5/68, Error ellipse: s-maj=10.7km s-min=9.3km az=134.0*
*NEIC **03** 09:03:21.6±0.9, 37.13N±0.03×97.77W±0.06, h5km±2km, Mwr3.6(SLM), Error ellipse: s-maj=8.3km s-min=5.7km az=282.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.43; $M_{\theta\theta}$0.71; $M_{\phi\phi}$1.72; $M_{r\theta}$-0.77; $M_{\theta\phi}$1.55; $M_{\phi r}$0.65; Fault plane solution: $M_0$2.85000×10^{14} NP1:ϕ_s57.00000°, δ48.00000°, λ-59.00000°. NP2: ϕ_s195.00000°, δ50.00000°, λ-120.00000°. Principal axes: T 2.8462, Plg1.0000°, Azm306.0000°; N 0.0026, Plg23.0000°, Azm215.0000°; P -2.8488, Plg67.0000°, Azm38.0000°;*
*ANF **03** 09:03:22.2±0.2, 37.12N×97.80W, h5km, ML4.9/16 Error ellipse: s-maj=3.6km s-min=2.8km az=34.0*
ISC 03 09:03:21.2±0.5, 37.17N±0.03×97.70W±0.04, h10km, n95, σ1.52/103, mb3.9/6, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**1.31**	**233**		**Pn**	**09 03 44.2**	**-1.4**
ADOK	**Arcadia Dam**	**1.54**	**170**		**Pb**	**09 03 49.2**	**-0.6**
ADOK				Sn	**Sg**	**09 04 09.7**	**-1.1**
OK005	**Luther M Schoo**	**1.57**	**165**		**Pb**	**09 03 49.9**	**-0.5**
OK005					**Sg**	**09 04 10.3**	**-1.4**
OK009	**Oakdale Elemen**	**1.60**	**172**	Pn	**Pb**	**09 03 50.0**	**-0.9**
OK009					**Sg**	**09 04 11.2**	**-1.6**
OKCFA	**Oklahoma City**	**1.77**	**173**		**Pb**	**09 03 52.4**	**-1.3**
OKCSW	**OKLAHOMA CITY**	**1.78**	**173**		**Pb**	**09 03 52.5**	**-1.4**
FNO	**Franklin**	**1.93**	**173**		**Pb**	**09 03 55.3**	**-1.2**
TUL1	**Leonard**	**1.99**	**129**		**Pb**	**09 03 56.5**	**-1.0**
TUL1	**Leonard**	**1.99**	**129**	P	**Pb**	**09 03 57.4**	**-0.1**
	baz=308						
KSU1	**Kansas State U**	**2.11**	**24**	P	**Pb**	**09 03 59.1**	**-0.4**
KSU1	baz=205			S	**Sg**	**09 04 27.4**	**-1.6**
	baz=205						
W35A	**Tecumseh**	**2.12**	**161**		**Pb**	**09 03 57.6**	**-2.2**
CBKS	**Cedar Bluff**	**2.30**	**316**		**Pb**	**09 04 00.6**	**-2.1**
CBKS	**Cedar Bluff**	**2.30**	**316**	P	**Pb**	**09 04 00.7**	**-2.1**
	baz=137						
X34A	**Smith Ranch, M**	**2.57**	**182**		**Pn**	**09 04 03.5**	**+0.6**
WMOK	**Wichita Mounta**	**2.58**	**200**		**Pn**	**09 04 03.1**	**-0.1**
WMOK	**Wichita Mounta**	**2.58**	**200**	P	**Pn**	**09 04 03.2**	**+0.1**
	baz=19						
WMOK	baz=19			S	**Sn**	**09 04 34.8**	**+0.3**
HHAR	**Hobbs**	**3.15**	**105**		**Pn**	**09 04 12.9**	**+1.9**
W39A	**Magazine**	**3.73**	**121**		**Pn**	**09 04 20.2**	**+1.3**
W39A	**Magazine**	**3.73**	**121**	P	**Pn**	**09 04 21.3**	**+2.4**
	baz=302						
W39A	baz=302			Sb	**Sg**	**09 05 17.4**	**-3.7**
AMTX	**Amarillo**	**3.95**	**236**		**Pn**	**09 04 22.7**	**+0.7**
AMTX	**Amarillo**	**3.95**	**236**	P	**Pn**	**09 04 22.5**	**+0.5**
	baz=54						
AMTX	baz=54			Sb	**Sb**	**09 05 21.2**	**+2.2**
U40A	**Yellville**	**3.98**	**100**		**Pn**	**09 04 23.6**	**+1.4**
U40A	**Yellville**	**3.98**	**100**	P	**Pn**	**09 04 24.2**	**+1.9**
	baz=283						
BGNE	**Belgrade**	**4.25**	**355**		**Pn**	**09 04 27.5**	**+1.5**
BGNE	**Belgrade**	**4.25**	**355**	P	**Pn**	**09 04 27.7**	**+1.7**
	baz=176						
MIAR	**Mount Ida**	**4.25**	**127**		**Pn**	**09 04 27.8**	**+1.7**
MIAR	**Mount Ida**	**4.25**	**127**	P	**Pn**	**09 04 28.2**	**+2.2**
	baz=308						
MIAR	baz=308			S	**Sn**	**09 05 18.7**	**+2.9**
KSCO	**Kaye Shedlock'**	**4.30**	**297**		**Pn**	**09 04 27.9**	**+1.0**
KSCO	**Kaye Shedlock'**	**4.30**	**297**	P	**Pn**	**09 04 28.0**	**+1.1**
	baz=115						
KSCO	baz=115			Sb	**Sb**	**09 05 32.2**	**+3.2**
WHAR	**Wooly Hollow**	**4.76**	**112**		**Pn**	**09 04 34.5**	**+1.4**
X40A	**Basin Creek Fa**	**4.78**	**123**		**Pn**	**09 04 34.6**	**+1.3**
X40A	**Basin Creek Fa**	**4.78**	**123**	P	**Pn**	**09 04 35.5**	**+2.2**
	baz=305						
ABTX	**Abilene, Hawle**	**4.81**	**200**	P	**Pn**	**09 04 33.3**	**-0.5**
	baz=18						
W41B	**Gary Mavity, V**	**4.84**	**113**		**Pn**	**09 04 35.7**	**+1.6**
W41B	**Gary Mavity, V**	**4.84**	**113**	P	**Pn**	**09 04 36.1**	**+2.0**
	baz=295						
UALR	**University of**	**4.96**	**117**		**Pn**	**09 04 37.0**	**+1.3**
OGNE	**Ogallala**	**5.05**	**320**		**Pn**	**09 04 38.8**	**+1.6**
OGNE	**Ogallala**	**5.05**	**320**	P	**Pn**	**09 04 39.4**	**+2.2**
	baz=138						
WHTX	**Lake Whitney,**	**5.17**	**178**		**Pn**	**09 04 38.7**	**0.0**
WHTX	**Lake Whitney,**	**5.17**	**178**	P	**Pn**	**09 04 38.9**	**+0.2**
	baz=357						
CCM	**Cathedral Cave**	**5.20**	**78**		**Pn**	**09 04 40.7**	**+1.6**
MSTX	**Muleshoe**	**5.22**	**234**		**Pn**	**09 04 39.5**	**-0.1**
MSTX	**Muleshoe**	**5.22**	**234**	P	**Pn**	**09 04 40.5**	**+1.0**
	baz=51						
T25A	**Trinidad**	**5.36**	**272**		**Pn**	**09 04 41.4**	**-0.1**
LCAR	**Lake Charles**	**5.38**	**100**		**Pn**	**09 04 43.5**	**+2.0**
Z41A	**Richland Creek**	**5.60**	**133**	Pn	**Pn**	**09 04 45.3**	**+0.8**
SCIA	**State Center**	**5.86**	**35**		**Pn**	**09 04 50.1**	**+2.0**
NATX	**Nacogdoches**	**5.95**	**154**		**Pn**	**09 04 50.1**	**+0.7**
SLM	**Saint Louis**	**6.08**	**74**		**Pn**	**09 04 52.7**	**+1.5**
X43A	**Marvell**	**6.14**	**114**		**Pn**	**09 04 53.7**	**+1.7**
SDCO	**Great Sand Dun**	**6.23**	**278**		**Pn**	**09 04 54.3**	**+0.7**
435B	**Jarrell**	**6.37**	**179**		**Pn**	**09 04 54.7**	**-0.6**
ECSD	**EROS Data Cent**	**6.61**	**7**		**Pn**	**09 04 59.3**	**+0.9**
ISCO	**Idaho Springs**	**6.74**	**295**		**Pn**	**09 05 01.1**	**+0.6**
S44A	**Carbondale**	**6.74**	**83**		**Pn**	**09 05 01.7**	**+1.4**
S22A	**4UR Ranch, Cre**	**7.28**	**277**		**Pn**	**09 05 08.2**	**+0.2**
SUSD	**Miller**	**7.33**	**353**		**Pn**	**09 05 09.2**	**+0.9**
ANMO	**Albuquerque**	**7.43**	**255**	Pn	**Pn**	**09 05 10.8**	**+0.9**
	0.2nm,0.3s,baz=115,slow=13,SNR=4.2						
ANMO				Lg	Lg	09 07 12.2	
	8.9nm,0.3s,baz=307,slow=22,SNR=8.8						
O44A	**Mansfield**	**7.81**	**65**		**Pn**	**09 05 16.1**	**+1.1**
WVT	**Waverly**	**8.00**	**95**		**Pn**	**09 05 19.0**	**+1.4**
PLAL	**Pickwick Lake**	**8.09**	**103**		**Pn**	**09 05 20.0**	**+1.2**
RSSD	**Black Hills**	**8.45**	**327**		**Pn**	**09 05 25.1**	**+1.3**
P46A	**Rosedale**	**8.59**	**70**	Pn	**Pn**	**09 05 26.9**	**+1.3**
RWWY	**Rawlins**	**8.63**	**304**	Pn	**Pn**	**09 05 26.8**	**+0.4**
SPMN	**Marine on St.**	**8.85**	**23**		**Pn**	**09 05 30.7**	**+1.6**
BLO	**Bloomington**	**9.03**	**76**		**Pn**	**09 05 33.5**	**+1.9**
WCI	**Wyandotte Cave**	**9.10**	**80**		**Pn**	**09 05 35.2**	**+2.5**
CLTN	**Cedars of Leba**	**9.20**	**93**	Pn	**Pn**	**09 05 35.5**	**+1.5**
TXAR	**Lajitas Array**	**9.27**	**214**	Pn	**Pn**	**09 05 33.7**	**-1.4**
	0.8nm,0.3s,baz=39,slow=10,SNR=31						
TXAR				Lg	Lg	09 08 08.5	
	2.2nm,0.3s,baz=29,slow=32,SNR=4.0						
TXAR				LR	LR	09 09 37.7	
	comp=Z,17nm,19.5s,baz=0.0,slow=41						
TXAR	**Lajitas Array**	**9.27**	**214**		**Pn**	**09 05 33.8**	**-1.3**
H43A	**Windswept, Lux**	**10.47**	**43**	Pn	**Pn**	**09 05 51.9**	**+0.5**
PDAR	**Pinedale Array**	**10.67**	**305**	Pn	**Pn**	**09 05 53.6**	**-0.8**
	0.7nm,0.3s,baz=124,slow=14,SNR=26						
PDAR				Lg	Lg	09 08 51.5	
	1.6nm,0.3s,baz=108,slow=35,SNR=3.5						
PDAR				LR	LR	09 10 23.6	
	comp=Z,68nm,18.5s,baz=58,slow=40						
CPCT	**Cooper Cave**	**10.77**	**95**		**Pn**	**09 05 57.2**	**+1.6**
V51A	**Loudon**	**10.84**	**93**		**Pn**	**09 05 58.1**	**+1.7**
COWI	**Conover**	**10.98**	**33**	Pn	**Pn**	**09 05 59.3**	**+1.0**
TKL	**Tuckaleechee C**	**11.32**	**93**	Pn	**Pn**	**09 06 03.9**	**+0.8**
	0.6nm,0.3s,baz=232,slow=6.0,SNR=8.7						
TKL				Lg	Lg	09 09 13.9	
	3.0nm,0.3s,baz=182,slow=22,SNR=13						
TKL				LR	LR	09 10 26.3	
	comp=Z,63nm,19.6s,baz=321,slow=37						
EYMN	**Ely**	**11.69**	**21**		**Pn**	**09 06 06.4**	**-1.7**
T52A	**Hallie**	**11.75**	**86**	Pn	**Pn**	**09 06 10.3**	**+1.4**
RLMT	**Red Lodge**	**11.78**	**316**		**Pn**	**09 06 09.5**	**-0.1**
FXWY	**Fox Creek**	**12.03**	**307**	Pn	**Pn**	**09 06 12.3**	**-0.6**
J48A	**Bridge Port**	**12.26**	**56**		**Pn**	**09 06 15.6**	**-0.3**
ULM	**Lac du Bonnet**	**13.14**	**5**	Pn	**Pn**	**09 06 23.8**	**-4.0**
	0.9nm,0.3s,baz=180,slow=12,SNR=11						
ULM				Sn	Sn	09 08 42.9	-11
	1.0nm,0.3s,baz=105,slow=20,SNR=4.6						
ULM				Lg	Lg	09 10 10.6	
	0.4nm,0.3s,baz=107,slow=19,SNR=2.1						
I49A	**Point Hope**	**13.17**	**54**		**Pn**	**09 06 26.7**	**-1.5**
M52A	**Chesterland**	**13.38**	**66**	Pn	**Pn**	**09 06 30.9**	**-0.2**
ELK	**Elko**	**14.11**	**290**	LR	LR	09 11 44.5	
	comp=Z,48nm,20.5s,baz=100,slow=36						
SADO	**Sadowa**	**15.92**	**56**	Pn	**Pn**	**09 07 01.7**	**-3.6**
	0.4nm,0.3s,baz=272,slow=12,SNR=4.4						
SADO				Lg	Lg	09 11 41.2	
	0.5nm,0.3s,baz=251,slow=1.7,SNR=5.4						
NVAR	**Mina Array Bea**	**16.33**	**281**	Pn	**Pn**	**09 07 11.0**	**+0.1**
	0.1nm,0.3s,baz=82,slow=12,SNR=2.4						
TEIG	**Tepich**	**18.78**	**151**	P	**Pn**	**09 07 43.3**	**+2.2**
	0.5nm,0.3s,baz=139,slow=7.7,SNR=3.4						
CMIG	**Matias Romero**	**20.16**	**172**	P	Pn	09 07 59.3	+1.7
	0.4nm,0.3s,baz=254,slow=17,SNR=4.3						
YKA	**Yellowknife Ar**	**27.41**	**343**	P	**P**	**09 09 07.2**	**+0.5**
	1.1nm,0.9s,baz=145,slow=8.9,SNR=16						
YKA				PcP	**PcP**	**09 12 26.3**	**+1.1**
	0.2nm,0.5s,baz=157,slow=2.0,SNR=4.1						
SCHQ	**Schefferville**	**27.45**	**40**	P	**P**	**09 09 07.3**	**+0.1**
	1.3nm,0.9s,baz=107,slow=17,SNR=3.6						
DLBC	**Dease Lake**	**29.92**	**326**	P	**P**	**09 09 28.1**	**-1.1**
	9.1nm,0.8s,baz=286,slow=1.9,SNR=2.1						

ILAR	**Eielson Array**	**39.88**	**330**	P	**P**	**09 10 56.5**	**+1.6**
	2.5nm,0.6s,baz=107,slow=7.3,SNR=35						
ARCES	**ARCESS Array B**	**65.84**	**19**	P	**P**	**09 14 06.5**	**+0.1**
	3.4nm,0.9s,baz=316,slow=3.3,SNR=6.0						
AKASG	**Malin Array Be**	**80.84**	**31**	P	**P**	**09 15 36.0**	**+0.9**
	0.2nm,0.3s,baz=317,slow=4.4,SNR=4.9						

*IDC **03** 09:03:58.2±48.0, 38°.16N×20°.35E, h0km, mb3.6/3, mb1 3.6/3, mb1mx3.2/59, mbtmp3.6/3, Error ellipse: s-maj=902.8km s-min=67.8km az=45.0*
*THE **03** 09:04:00.7, 38°.38N×20°.43E, h0km±2km, ML2.9/8, Error ellipse: s-maj=2.3km s-min=0.5km az=275.0*
ISC 03 09:04:00.4±1.1**, 38°.39N**±0°.03×**20°.43E**±0°.06**, h10**km±6km**, n17, σ1.06**/30**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.11**	**81**	P	**Pg**	**09 04 02.6**	**-0.5**
VSK1				S	**Sg**	**09 04 04.4**	**-0.7**
ARG2	**Argostoli**	**0.22**	**168**	P	**Pg**	**09 04 05.0**	**+0.1**
ARG2				S	**Sg**	**09 04 08.6**	**+0.6**
VLS	**Valsamata**	**0.25**	**149**	P	**Pg**	**09 04 05.2**	**-0.3**
VLS				S	**Sg**	**09 04 09.1**	**+0.2**
	6μm,0.3s						
EVGI	**Lefkada island**	**0.29**	**38**	P	**Pb**	**09 04 06.4**	**-1.4**
EVGI				S	**Sb**	**09 04 11.3**	**-1.4**
LKD2	**Lefkada island**	**0.43**	**24**	P	**Pb**	**09 04 09.2**	**-1.1**
LKD2				S	**Sb**	**09 04 15.8**	**-1.1**
	2μm,0.5s						
TSLK	**Tsoukalades, L**	**0.47**	**22**	P	**Pb**	**09 04 09.8**	**-1.0**
TSLK				S	**Sn**	**09 04 17.9**	**+2.1**
	2μm,0.6s						
AST1	**Astakos**	**0.54**	**74**	P	**Pb**	**09 04 11.0**	**-1.0**
AST1				S	**Sb**	**09 04 19.6**	**-0.2**
PDO	**Prodromos**	**0.63**	**71**	P	**Pg**	**09 04 12.2**	**-0.4**
PDO				S	**Sb**	**09 04 21.6**	**-0.8**
	3μm,0.3s						
KRI1	**kERI**	**0.79**	**157**	P	**Pb**	**09 04 14.9**	**-1.4**
KRI1				S	**Sb**	**09 04 27.3**	**+0.3**
PVO	**Paravola**	**0.89**	**75**	P	**Pb**	**09 04 17.5**	**-0.1**
PVO				S	**Sn**	**09 04 31.7**	**-0.3**
	1μm,0.5s						
ANX	**Ano Chora**	**1.19**	**80**	P	**Pb**	**09 04 22.4**	**-0.7**
ANX				S	**Sg**	**09 04 41.2**	**+2.5**
	1μm,0.5s						
LAKA	**Lakka**	**1.23**	**97**	P	**Pb**	**09 04 23.4**	**-0.4**
LAKA				S	**Sg**	**09 04 40.8**	**+0.8**
	332nm,0.6s						
KALE	**Kalithea**	**1.34**	**90**	P	**Pn**	**09 04 24.8**	**-0.5**
KLV	**Kalavryta, Ach**	**1.40**	**104**	P	**Pn**	**09 04 25.2**	**-0.9**
KLV				S	**Sg**	**09 04 46.0**	**+0.5**
	198nm,0.5s						
FINES	**FINESS Array B**	**23.34**	**7**	P	**P**	**09 09 10.2**	**+1.6**
	1.6nm,0.7s,baz=186,slow=9.8,SNR=3.6						
MKAR	**Makanchi Array**	**45.25**	**59**	P	**P**	**09 12 18.4**	**+0.5**
	0.0nm,100.0s,baz=273,slow=7.6,SNR=7.0						
ZALV	**Zalesovo Beam**	**45.60**	**48**	P	**P**	**09 12 21.4**	**+0.8**
	0.5nm,0.3s,baz=277,slow=8.3,SNR=3.0						

*IDC **03** 09:16:38.1±1.2, 38°.32N×20°.57E, h0km, mb3.8/8, mb1 3.7/12, mb1mx3.5/49, mbtmp3.7/12, ML4.2/2, Error ellipse: s-maj=23.2km s-min=17.9km az=47.0*
*THE **03** 09:16:39.2, 38°.14N×20°.39E, h12km, ML3.6/4, Error ellipse: s-maj=1.0km s-min=0.6km az=264.0*
*ATH **03** 09:16:39.1, 38°.15N×20°.41E, h13km±1km, ML3.5/6, Error ellipse: s-maj=1.9km s-min=1.0km az=245.0*
ISC 03 09:16:39.3±0.7**, 38°.17N**±0°.03×**20°.41E**±0°.03**, h13**km±3km**, n57, σ1.08**/80**, mb3.9**/8**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.03**	**301**	P	**Pg**	**09 16 41.4**	**-0.3**
CHV1				S	**Sg**	**09 16 42.8**	**-0.6**
KEF2	**Argostoli. Kep**	**0.06**	**94**	P	**Pg**	**09 16 41.7**	**-0.3**
KEF2				S	**Sg**	**09 16 43.3**	**-0.5**
KEF3	**Kipouria, Keph**	**0.06**	**304**	P	**Pg**	**09 16 41.7**	**-0.3**
KEF3				S	**Sg**	**09 16 43.3**	**-0.5**
ARG2	**Argostoli**	**0.06**	**82**	P	**Pg**	**09 16 41.8**	**-0.2**
ARG2				S	**Sg**	**09 16 43.5**	**-0.3**
KEF4	**Livadi, Kephal**	**0.09**	**7**	P	**Pg**	**09 16 42.3**	**0.0**
KEF4				S	**Sg**	**09 16 44.5**	**+0.2**
KEF1	**Kardakata, Kep**	**0.12**	**23**	P	**Pg**	**09 16 42.6**	**0.0**
KEF1				S	**Sg**	**09 16 45.0**	**+0.1**
VLS	**Valsamata**	**0.14**	**87**	P	**Pg**	**09 16 42.8**	**-0.2**
VLS				S	**Sg**	**09 16 45.6**	**+0.2**
	69μm,0.2s						
VLS	**Valsamata**	**0.14**	**87**	P	**Pg**	**09 16 42.8**	**-0.2**
VLS				S	**Sg**	**09 16 45.4**	**0.0**
VLS				AML	AML	09 16 45.8	
VLS				AML	AML	09 16 47.3	
	comp=N,95320μm,0.3s						
VSK1	**VASILIKIADES**	**0.27**	**27**	P	**Pg**	**09 16 45.2**	**+0.2**
VSK1				S	**Sb**	**09 16 50.1**	**-0.4**
VLMS	**Volimes, Zakyn**	**0.35**	**146**	P	**Pg**	**09 16 46.5**	**0.0**
VLMS				S	**Sg**	**09 16 51.5**	**+0.2**
VLMS				AML	AML	09 16 52.8	
	comp=E,23318μm,0.3s						
VLMS				AML	AML	09 16 55.8	
	comp=N,33278μm,0.3s						
EVGI	**Lefkada island**	**0.49**	**23**	P	**Pg**	**09 16 49.0**	**0.0**
EVGI				S	**Sb**	**09 16 57.2**	**+0.3**
EVGI	**Lefkada island**	**0.49**	**23**	P	**Pg**	**09 16 49.0**	**0.0**
MGNA	**Meganis**	**0.57**	**31**	P	**Pg**	**09 16 50.4**	**-0.1**
MGNA				S	**Sb**	**09 16 59.1**	**-0.1**
MGNA				AML	AML	09 17 00.1	
	comp=E,16055μm,0.3s						
MGNA				AML	AML	09 17 00.2	
	comp=N,12621μm,0.2s						
KRI1	**kERI**	**0.60**	**148**	P	**Pb**	**09 16 49.8**	**-1.3**
KRI1				S	**Sb**	**09 17 00.0**	**0.0**
LKD2	**Lefkada island**	**0.65**	**17**	P	**Pg**	**09 16 51.7**	**-0.3**
LKD2				S	**Sb**	**09 17 02.8**	**+1.3**
	comp=N,3μm,0.4s						
LKD2	**Lefkada island**	**0.65**	**17**	P	**Pg**	**09 16 52.0**	**0.0**
LKD2				S	**Sg**	**09 17 00.9**	**+0.3**
LKD2				AML	AML	09 17 09.0	
	comp=E,6850μm,0.3s						
LKD2				AML	AML	09 17 10.0	
	comp=N,3951μm,0.4s						
AST1	**Astakos**	**0.65**	**55**	P	**Pg**	**09 16 51.9**	**-0.1**
AST1				S	**Sb**	**09 17 02.3**	**+0.9**
TSLK	**Tsoukalades, L**	**0.68**	**16**	P	**Pg**	**09 16 52.3**	**-0.3**
TSLK	**Tsoukalades, L**	**0.68**	**16**	P	**Pg**	**09 16 52.5**	**-0.1**
PDO	**Prodromos**	**0.74**	**55**	P	**Pg**	**09 16 53.5**	**-0.2**
PDO				S	**Sb**	**09 17 04.1**	**0.0**
	comp=N,10μm,0.5s						
PDO	**Prodromos**	**0.74**	**55**	P	**Pg**	**09 16 53.5**	**-0.2**
PDO				S	**Sg**	**09 17 03.9**	**+0.4**
PDO				AML	AML	09 17 06.1	
	comp=E,12383μm,0.4s						
PDO				AML	AML	09 17 11.9	
	comp=N,14172μm,0.4s						
RLS	**Riolos of Patr**	**0.84**	**97**	P	**Pg**	**09 16 55.0**	**-0.6**
RLS	**Riolos of Patr**	**0.84**	**97**	P	**Pg**	**09 16 55.0**	**-0.6**
RLS				S	**Sb**	**09 17 06.6**	**-0.3**
RLS				AML	AML	09 17 13.9	
	comp=E,3282μm,0.7s						
RLS				AML	AML	09 17 16.6	
	comp=N,3274μm,0.4s						
PVO	**Paravola**	**0.98**	**63**	P	**Pg**	**09 16 58.1**	**-0.2**
PVO	**Paravola**	**0.98**	**63**	P	**Pb**	**09 16 58.3**	**+0.1**
DRO	**Drossia**	**1.05**	**102**	P	**Pb**	**09 16 58.9**	**-0.4**
DRO	**Drossia**	**1.05**	**102**	P	**Pb**	**09 16 58.9**	**-0.4**
AMT	**Artemida-Makis**	**1.21**	**121**	P	**Pn**	**09 17 01.4**	**-0.5**
LAKA	**Lakka**	**1.24**	**86**	P	**Pn**	**09 17 01.8**	**-0.5**
LAKA				S	**Sn**	**09 17 18.9**	**0.0**
	comp=N,902nm,0.4s						
LAKA	**Lakka**	**1.24**	**86**	P	**Pn**	**09 17 02.0**	**-0.3**
ANX	**Ano Chora**	**1.26**	**70**	P	**Pn**	**09 17 02.4**	**-0.3**
ANX	**Ano Chora**	**1.26**	**70**	P	**Pn**	**09 17 02.8**	**+0.1**
SERG	**Sergoula**	**1.32**	**79**	P	**Pn**	**09 17 03.1**	**-0.3**
SERG	**Sergoula**	**1.32**	**79**	P	**Pn**	**09 17 03.1**	**-0.3**
TRIZ	**Trizonia**	**1.32**	**81**	P	**Pn**	**09 17 03.2**	**-0.2**
TRIZ	**Trizonia**	**1.32**	**81**	P	**Pn**	**09 17 03.3**	**-0.1**
KALE	**Kalithea**	**1.38**	**80**	P	**Pn**	**09 17 04.0**	**-0.3**
KALE	**Kalithea**	**1.38**	**80**	P	**Pn**	**09 17 04.1**	**-0.2**
KLV	**Kalavryta, Ach**	**1.38**	**95**	P	**Pn**	**09 17 04.3**	**0.0**
MASS	**Massafra**	**3.53**	**315**	*e*Pn	**Pn**	**09 17 34.5**	**+0.7**
SG1	**Sgolgore (BA)**	**3.93**	**314**	*e*Pn	**Pn**	**09 17 40.1**	**+0.8**
SG1				Sn	**Sn**	**09 18 26.0**	**+0.7**
IDI	**Anoyia**	**4.61**	**127**	Pn	**Pn**	**09 17 48.2**	**-0.5**
	comp=N,0.4nm,0.3s,baz=321,slow=16,SNR=2.0						
IDI				Sn	**Sn**	**09 18 44.1**	**+2.1**
	comp=N,3.3nm,0.3s,baz=132,slow=23,SNR=8.5						
SOKA	**Soboth**	**9.38**	**337**	*e*Pn	**Pn**	**09 18 53.7**	**-0.5**
	comp=N,2.0nm,0.2s						
OBKA	**Obir**	**9.39**	**334**	*e*Pn	**Pn**	**09 18 54.6**	**+0.3**
	comp=N,1.5nm,0.2s						
BRTR	**Keskin Array B**	**10.42**	**77**	Pn	**Pn**	**09 19 12.5**	**+3.9**
	comp=N,0.1nm,0.3s,baz=263,slow=12,SNR=2.5						
MOA	**Molln**	**10.66**	**337**	*e*Pn	**Pn**	**09 19 12.3**	**+0.6**
	comp=N,1.6nm,0.3s						
GERES	**GERESS Array B**	**11.72**	**338**	Pn	**Pn**	**09 19 26.4**	**+0.2**
	comp=N,0.3nm,0.3s,baz=158,slow=15,SNR=5.4						
GERES				Sn	**Sn**	**09 21 30.3**	**-6.7**
	comp=N,0.4nm,0.3s,baz=155,slow=24,SNR=5.1						
ESDC	**Sonseca Array**	**19.02**	**282**	P	**Pn**	**09 21 03.4**	**+1.8**
	comp=N,0.3nm,0.3s,baz=108,slow=12,SNR=3.3						
HFS	**Hagfors**	**22.39**	**351**	P	**P**	**09 21 37.1**	**0.0**
	comp=N,3.6nm,0.7s,baz=152,slow=10,SNR=12						
FINES	**FINESS Array B**	**23.57**	**7**	P	**P**	**09 21 47.9**	**-1.3**
	comp=N,1.9nm,0.7s,baz=174,slow=10,SNR=14						
NB2	**NORSAR Subarra**	**23.61**	**349**	P	**P**	**09 21 49.0**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=150,slow=10						
NOA	**NORSAR Array B**	**23.61**	**349**	P	**P**	**09 21 48.9**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=149,slow=9.9,SNR=3.9						
TORD	**Torodi Ar. Bea**	**29.97**	**219**	P	**P**	**09 22 49.8**	**+2.3**
	comp=Z,0.4nm,0.6s,baz=40,slow=7.8,SNR=3.0						
ARCES	**ARCESS Array B**	**31.55**	**3**	P	**P**	**09 23 00.3**	**-0.6**
	comp=Z,1.8nm,0.9s,baz=189,slow=12,SNR=10						
MKAR	**Makanchi Array**	**45.38**	**58**	P	**P**	**09 24 56.5**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=274,slow=7.3,SNR=16						
ZALV	**Zalesovo Beam**	**45.76**	**48**	P	**P**	**09 24 59.4**	**-0.8**
	comp=Z,2.0nm,0.4s,baz=271,slow=9.3,SNR=4.4						
SONM	**Songino Array**	**60.53**	**51**	P	**P**	**09 26 48.6**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=288,slow=10,SNR=2.5						

*IDC **03** 09:20:29.6±1.3, 38°.40N×20°.28E, h0km, mb3.8/6, mb1 3.7/9, mb1mx3.5/46, mbtmp3.7/9, ML3.2/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/49, Error ellipse: s-maj=26.3km s-min=17.3km az=58.0*
*THE **03** 09:20:31.3, 38°.24N×20°.40E, h6km±1km, ML3.3/7, Error ellipse: s-maj=1.5km s-min=0.4km az=235.0*
*ATH **03** 09:20:31.0, 38°.24N×20°.41E, h8km±2km, ML3.4/7, Error ellipse: s-maj=3.0km s-min=1.0km az=251.0*
ISC 03 09:20:30.6±0.8**, 38°.25N**±0°.02×**20°.38E**±0°.04**, h10**km±4km**, n46, σ0.98**/67**, mb3.8**/6**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.04**	**82**	P	**Pg**	**09 20 32.5**	**0.0**
KEF3	**Kipouria, Keph**	**0.06**	**204**	P	**Pg**	**09 20 32.9**	**+0.3**
CHV1	**Chavriata, Kef**	**0.07**	**177**	P	**Pg**	**09 20 32.9**	**+0.1**
CHV1				S	**Sg**	**09 20 34.4**	**0.0**
KEF1	**Kardakata, Kep**	**0.08**	**71**	P	**Pg**	**09 20 32.8**	**-0.1**
ARG2	**Argostoli**	**0.12**	**130**	P	**Pg**	**09 20 33.2**	**-0.2**
ARG2				S	**Sg**	**09 20 34.7**	**-0.7**
KEF2	**Argostoli. Kep**	**0.12**	**135**	P	**Pg**	**09 20 33.4**	**-0.1**
VLS	**Valsamata**	**0.18**	**114**	P	**Pg**	**09 20 34.3**	**-0.2**
VLS				S	**Sg**	**09 20 36.7**	**-0.6**
	78μm,0.1s						
VLS	**Valsamata**	**0.18**	**114**	P	**Pg**	**09 20 34.2**	**-0.2**
VLS				S	**Sg**	**09 20 36.6**	**-0.6**
VLS				AML	AML	09 20 36.9	
VLS				AML	AML	09 20 37.2	
VSK1	**VASILIKIADES**	**0.21**	**43**	P	**Pg**	**09 20 35.6**	**+0.6**
VSK1				S	**Sg**	**09 20 38.2**	**+0.1**
EVGI	**Lefkada island**	**0.43**	**31**	P	**Pg**	**09 20 39.5**	**+0.5**
EVGI				S	**Sb**	**09 20 46.6**	**-0.1**
EVGI	**Lefkada island**	**0.43**	**31**	P	**Pg**	**09 20 39.5**	**+0.5**
EVGI				S	**Sg**	**09 20 45.7**	**+1.1**
VLMS	**Volimes, Zakyn**	**0.44**	**149**	P	**Pg**	**09 20 39.1**	**-0.1**
VLMS				S	**Sg**	**09 20 45.4**	**+0.5**
VLMS				AML	AML	09 20 50.2	
	comp=E,16214μm,0.5s						
VLMS				AML	AML	09 20 51.7	
	comp=N,12441μm,0.3s						
MGNA	**Meganis**	**0.52**	**39**	P	**Pg**	**09 20 40.8**	**+0.1**
MGNA				S	**Sg**	**09 20 48.2**	**+0.8**
MGNA				AML	AML	09 20 49.4	
	comp=E,20526μm,0.4s						
MGNA				AML	AML	09 20 49.6	
	comp=N,11602μm,0.3s						
LKD2	**Lefkada island**	**0.58**	**22**	P	**Pg**	**09 20 42.0**	**+0.2**
LKD2				S	**Sg**	**09 20 50.2**	**+0.7**
	comp=N,2μm,0.6s						
LKD2	**Lefkada island**	**0.58**	**22**	P	**Pg**	**09 20 41.8**	**0.0**
LKD2				S	**Sg**	**09 20 50.7**	**+1.3**
LKD2				AML	AML	09 20 53.4	
	comp=N,4217μm,0.2s						
LKD2				AML	AML	09 20 54.6	
	comp=E,3672μm,0.4s						
TSLK	**Tsoukalades, L**	**0.61**	**21**	P	**Pg**	**09 20 42.6**	**+0.2**
TSLK				S	**Sb**	**09 20 52.6**	**+0.6**
	comp=E,3μm,0.6s						
TSLK	**Tsoukalades, L**	**0.61**	**21**	P	**Pg**	**09 20 42.8**	**+0.3**
AST1	**Astakos**	**0.63**	**63**	P	**Pg**	**09 20 42.9**	**+0.1**
AST1				S	**Sb**	**09 20 52.5**	**0.0**
KRI1	**kERI**	**0.69**	**149**	P	**Pg**	**09 20 43.4**	**-0.4**
KRI1				S	**Sb**	**09 20 53.8**	**-0.3**
PDO	**Prodromos**	**0.72**	**61**	P	**Pg**	**09 20 44.5**	**0.0**
PDO				S	**Sg**	**09 20 54.7**	**+0.8**
	comp=E,8μm,0.5s						
PDO	**Prodromos**	**0.72**	**61**	P	**Pg**	**09 20 44.7**	**+0.2**
PDO				S	**Sg**	**09 20 54.0**	**+0.1**
PDO				AML	AML	09 20 56.4	
	comp=E,11604μm,0.5s						
PDO				AML	AML	09 20 57.9	
	comp=N,10547μm,0.3s						
RLS	**Riolos of Patr**	**0.88**	**102**	P	**Pg**	**09 20 47.2**	**-0.3**
RLS				S	**Sb**	**09 21 00.2**	**+0.5**
	comp=N,1μm,0.6s						
RLS	**Riolos of Patr**	**0.88**	**102**	P	**Pg**	**09 20 47.1**	**-0.3**
RLS				S	**Sg**	**09 20 59.0**	**0.0**
RLS				AML	AML	09 21 02.6	
	comp=E,3138μm,0.7s						
RLS				AML	AML	09 21 06.2	
	comp=N,2110μm,0.4s						
PVO	**Paravola**	**0.97**	**68**	P	**Pg**	**09 20 49.3**	**0.0**
PVO	**Paravola**	**0.97**	**68**	P	**Pg**	**09 20 49.4**	**+0.1**
PVO				S	**Sg**	**09 21 02.2**	**+0.3**
PVO				AML	AML	09 21 06.0	
	comp=E,5438μm,0.3s						
PVO				AML	AML	09 21 06.0	
	comp=N,4655μm,0.3s						
DRO	**Drossia**	**1.09**	**106**	P	**Pg**	**09 20 51.1**	**-0.5**
ANX	**Ano Chora**	**1.26**	**74**	P	**Pg**	**09 20 54.0**	**-0.8**
LAKA	**Lakka**	**1.26**	**90**	P	**Pg**	**09 20 53.8**	**-1.0**
LAKA				S	**Sn**	**09 21 12.4**	**+1.1**
	comp=N,820nm,0.5s						
LAKA	**Lakka**	**1.26**	**90**	P	**Pg**	**09 20 53.7**	**-1.1**
SERG	**Sergoula**	**1.33**	**83**	P	**Pn**	**09 20 54.6**	**-0.6**
SERG	**Sergoula**	**1.33**	**83**	P	**Pn**	**09 20 55.2**	**0.0**
TRIZ	**Trizonia**	**1.34**	**85**	P	**Pn**	**09 20 54.7**	**-0.5**
TRIZ				S	**Sb**	**09 21 13.2**	**+0.3**
	comp=N,2μm,0.5s						
TRIZ	**Trizonia**	**1.34**	**85**	P	**Pn**	**09 20 54.7**	**-0.5**
KALE	**Kalithea**	**1.39**	**84**	P	**Pn**	**09 20 55.4**	**-0.7**
KLV	**Kalavryta, Ach**	**1.41**	**98**	P	**Pn**	**09 20 56.6**	**+0.2**
AGG	**Agios Georgios**	**1.71**	**63**	P	**Pg**	**09 21 03.4**	**0.0**
IDI	**Anoyia**	**4.68**	**128**	Pn	**Pn**	**09 21 45.5**	**+4.2**
	comp=N,0.3nm,0.3s,baz=45,slow=20,SNR=4.4						
IDI				Sn	**Sn**	**09 22 38.4**	**+2.8**
	comp=N,0.9nm,0.3s,baz=178,slow=23,SNR=5.9						
BRTR	**Keskin Array B**	**10.43**	**78**	Pn	Pn	09 23 05.6	+5.3
	comp=N,0.1nm,0.3s,baz=260,slow=13,SNR=2.7						
GERES	**GERESS Array B**	**11.64**	**338**	Pn	**Pn**	**09 23 15.3**	**-1.4**
	comp=N,0.1nm,0.3s,baz=151,slow=14,SNR=2.6						
GERES				Sn	**Sn**	**09 25 22.6**	**-4.1**
	comp=N,0.2nm,0.3s,baz=153,slow=26,SNR=2.7						
HFS	**Hagfors**	**22.31**	**351**	P	**P**	**09 25 28.0**	**+0.1**
	comp=N,1.8nm,0.7s,baz=157,slow=7.8,SNR=2.5						
FINES	**FINESS Array B**	**23.49**	**7**	P	**P**	**09 25 39.5**	**-0.6**
	comp=N,0.9nm,0.6s,baz=185,slow=8.4,SNR=5.0						
AKTO	**Aktyubinsk**	**29.23**	**53**	LR	LR	09 42 35.6	
	comp=N,25nm,19.0s,baz=4.7,slow=45						
TORD	**Torodi Ar. Bea**	**30.02**	**219**	P	**P**	**09 26 40.5**	**+1.0**
	comp=N,1.0nm,0.8s,baz=18,slow=9.6,SNR=3.6						
ARCES	**ARCESS Array B**	**31.46**	**3**	P	**P**	**09 26 51.7**	**-0.1**
	comp=N,2.0nm,0.9s,baz=184,slow=12,SNR=2.9						
MKAR	**Makanchi Array**	**45.36**	**58**	P	**P**	**09 28 48.3**	**-0.5**
	comp=N,0.7nm,0.4s,baz=268,slow=7.6,SNR=17						
ZALV	**Zalesovo Beam**	**45.73**	**48**	P	**P**	**09 28 51.2**	**-0.4**
	comp=N,1.5nm,0.5s,baz=272,slow=9.5,SNR=7.2						

ROM 03 09:24:57.9±0.1**, 43°.404N**±0°.003×**12°.486E**±0°.005**, h6**km±1km**, Md1.0**/6**, 1C, Error ellipse: s-maj=0.4km s-min=0.2km az=61.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATVO	**AVT- Monte Val**	**0.06**	**250**	P	Pg	09 24 59.6	+0.1
ATVO				S	Sg	09 25 01.0	+0.3
ATVO				END			
ATFO	**Monte Foce - G**	**0.07**	**121**	P	Pg	09 24 59.7	-0.1
ATFO				S	Sg	09 25 01.2	+0.3
ATFO				AML	AML		
	comp=N,156μm,0.4s						
ATFO				AML	AML		
	comp=E,141μm,1.0s						
ATFO				END			
ATPI	**Pietralunga -**	**0.08**	**308**	P	Pg	09 24 59.9	+0.2
ATPI				S	Sg	09 25 01.6	+0.5
ATPI				END			
PIEI	**Pieia**	**0.14**	**15**	P	Pg	09 25 01.1	+0.3
PIEI				S	Sg	09 25 03.8	+1.1
PIEI				END			
MURB	**Monte Urbino**	**0.14**	**169**	P	Pg	09 25 01.2	+0.3
MURB				S	Sg	09 25 04.1	+1.2
MURB				END			
ATCC	**AVT- Casa Cast**	**0.25**	**153**	P	Pg	09 25 03.4	+0.6
ATCC				S	Sg	09 25 07.8	+1.9
ATCC				END			
PE3	**Peglio**	**0.29**	**1**	⇑P	Pg	09 24 54.3	-9.4

*IDC **03** 09:25:25.8±1.1, 38°.28N×20°.52E, h0km, mb3.8/14, mb1 3.9/18, mb1mx3.8/44, mbtmp3.8/18, ML3.6/4, MS3.0/5, Ms1 3.1/5, ms1mx2.6/56, Error ellipse: s-maj=21.7km s-min=17.0km az=11.0*
*PDG **03** 09:25:26.5±0.3, 38°.14N×20°.35E, h19km, ML4.0/14, Error ellipse: s-maj=0.7km s-min=0.7km az=0.0*
*ATH **03** 09:25:27.7, 38°.15N×20°.42E, h12km±1km, ML3.9/7, Error ellipse: s-maj=2.2km s-min=1.0km az=252.0*
*NEIC **03** 09:25:27.6±3.1, 38°.08N±0°.05×20°.29E±0°.06, h10km±1km, Error ellipse: s-maj=10.5km s-min=5.7km az=214.0*
*THE **03** 09:25:27.6, 38°.16N×20°.42E, h13km, ML4.0/7, Error ellipse: s-maj=0.9km s-min=0.3km az=260.0*
*BEO **03** 09:25:29.4±0.7, 38°.09N×20°.27E, h33km±4km, ML4.1/5*
ISC 03 09:25:27.3±0.7**, 38°.16N**±0°.02×**20°.41E**±0°.03**, h14**km±3km**, n175, σ1.35**/218**, mb4.0**/17**, MS3.0**/3**, 11C-7D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF2	**Argostoli. Kep**	**0.06**	**84**	P	**Pg**	**09 25 30.1**	**+0.1**
KEF2				S	**Sg**	**09 25 31.7**	**-0.1**
ARG2	**Argostoli**	**0.06**	**72**	P	**Pg**	**09 25 30.1**	**+0.1**
ARG2				S	**Sg**	**09 25 31.9**	**0.0**
KEF3	**Kipouria, Keph**	**0.07**	**310**	P	**Pg**	**09 25 29.5**	**-0.6**
KEF4	**Livadi, Kephal**	**0.10**	**5**	P	**Pg**	**09 25 30.6**	**+0.2**
KEF4				S	**Sg**	**09 25 32.9**	**+0.4**
KEF1	**Kardakata, Kep**	**0.13**	**21**	P	**Pg**	**09 25 30.9**	**+0.2**
KEF1				S	**Sg**	**09 25 33.4**	**+0.3**
VLS	**Valsamata**	**0.14**	**83**	P	**Pg**	**09 25 30.9**	**0.0**
VLS				S	**Sg**	**09 25 33.5**	**+0.1**
	136μm,0.4s						
VLS	**Valsamata**	**0.14**	**83**	P	**Pg**	**09 25 30.9**	**0.0**
VLS				S	**Sg**	**09 25 33.5**	**+0.1**
VLS				AML	AML	09 25 34.4	
VLS				AML	AML	09 25 34.5	
VSK1	**VASILIKIADES**	**0.28**	**25**	P	**Pg**	**09 25 33.3**	**+0.1**
VSK1				S	**Sb**	**09 25 38.1**	**-0.5**
VLMS	**Volimes, Zakyn**	**0.34**	**145**	P	**Pg**	**09 25 34.5**	**+0.1**
VLMS				S	**Sb**	**09 25 40.2**	**-0.4**
VLMS				AML	AML	09 25 41.4	
VLMS				AML	AML	09 25 41.7	
EVGI	**Lefkada island**	**0.50**	**22**	P	**Pg**	**09 25 37.2**	**0.0**
EVGI				S	**Sg**	**09 25 44.2**	**+0.3**
EVGI	**Lefkada island**	**0.50**	**22**	P	**Pg**	**09 25 37.2**	**0.0**
EVGI				S	**Sb**	**09 25 45.2**	**+0.2**
ZAK2	**Zakynthos**	**0.53**	**134**	P	**Pb**	**09 25 38.2**	**-0.2**
ZAK2				S	**Sb**	**09 25 46.6**	**+0.6**
MGNA	**Meganis**	**0.58**	**31**	P	**Pg**	**09 25 38.4**	**-0.2**
MGNA				S	**Sg**	**09 25 46.5**	**+0.1**
MGNA				AML	AML	09 25 51.0	
	comp=E,18812μm,0.5s						
MGNA				AML	AML	09 25 56.7	
	comp=N,14460μm,0.7s						
KRI1	**kERI**	**0.59**	**147**	P	**Pg**	**09 25 38.6**	**-0.3**
KRI1				S	**Sb**	**09 25 47.9**	**+0.3**
AST1	**Astakos**	**0.65**	**54**	P	**Pg**	**09 25 39.9**	**-0.2**
AST1				S	**Sb**	**09 25 49.1**	**-0.4**
LKD2	**Lefkada island**	**0.66**	**17**	P	**Pg**	**09 25 39.7**	**-0.5**
LKD2				S	**Sb**	**09 25 49.9**	**+0.3**
	comp=N,7μm,0.5s						
LKD2	**Lefkada island**	**0.66**	**17**	P	**Pg**	**09 25 40.0**	**-0.1**
TSLK	**Tsoukalades, L**	**0.69**	**16**	P	**Pg**	**09 25 40.5**	**-0.3**
TSLK				S	**Sb**	**09 25 50.8**	**+0.2**
	comp=N,10μm,0.5s						
TSLK	**Tsoukalades, L**	**0.69**	**16**	P	**Pg**	**09 25 40.8**	**0.0**
RLS	**Riolos of Patr**	**0.84**	**97**	P	**Pg**	**09 25 43.2**	**-0.3**
RLS				S	**Sb**	**09 25 55.0**	**+0.3**
	comp=N,7μm,0.4s						
RLS	**Riolos of Patr**	**0.84**	**97**	P	**Pg**	**09 25 43.2**	**-0.3**
PVO	**Paravola**	**0.99**	**62**	P	**Pg**	**09 25 46.3**	**-0.1**
PVO				S	**Sn**	**09 26 00.3**	**-0.2**
	comp=N,11μm,0.4s						
PVO	**Paravola**	**0.99**	**62**	P	**Pg**	**09 25 46.2**	**-0.1**
DRO	**Drossia**	**1.04**	**101**	P	**Pb**	**09 25 46.8**	**-0.4**
DRO				S	**Sn**	**09 26 02.3**	**+0.3**
	comp=N,14μm,0.5s						
DRO	**Drossia**	**1.04**	**101**	P	**Pb**	**09 25 47.0**	**-0.2**
DRO				AML	AML	09 26 10.4	
	comp=E,35384μm,0.4s						
DRO				AML	AML	09 26 15.8	
	comp=N,19284μm,0.6s						
UPR	**University Cam**	**1.09**	**83**	P	**Pg**	**09 25 48.8**	**+0.5**
AMT	**Artemida-Makis**	**1.20**	**121**	P	**Pg**	**09 25 50.8**	**+0.4**
LAKA	**Lakka**	**1.23**	**86**	P	**Pn**	**09 25 49.9**	**-0.3**
LAKA				S	**Sn**	**09 26 06.7**	**0.0**
LAKA	**Lakka**	**1.23**	**86**	P	**Pn**	**09 25 50.0**	**-0.3**
LAKA				AML	AML	09 26 13.9	
	comp=N,4663μm,0.6s						
LAKA				AML	AML	09 26 14.9	
	comp=E,6268μm,0.5s						
ANX	**Ano Chora**	**1.26**	**69**	P	**Pn**	**09 25 50.7**	**+0.1**
ANX				S	**Sg**	**09 26 08.5**	**+0.5**
	comp=E,14μm,0.7s						
ANX	**Ano Chora**	**1.26**	**69**	P	**Pg**	**09 25 51.8**	**+0.2**
SERG	**Sergoula**	**1.32**	**78**	P	**Pn**	**09 25 51.0**	**-0.3**
EVR	**Evrytania**	**1.33**	**55**	P	**Pb**	**09 25 51.9**	**-0.2**
EVR	**Evrytania**	**1.33**	**55**	P	**Pg**	**09 25 52.7**	**-0.2**
IGT	**Igoumenitsa**	**1.37**	**357**	*e*Pg	**Pg**	**09 25 56.4**	**+2.7**
IGT				*e*Sg	**Sg**	**09 26 15.1**	**+3.5**
IGT	**Igoumenitsa**	**1.37**	**357**	P	**Pg**	**09 25 54.6**	**+0.9**
KLV	**Kalavryta, Ach**	**1.38**	**94**	P	**Pn**	**09 25 52.1**	**-0.1**
KALE	**Kalithea**	**1.38**	**80**	P	**Pn**	**09 25 51.0**	**-1.2**
JAN	**Janina**	**1.53**	**13**	P	**Pg**	**09 25 57.2**	**+0.4**
JAN				AML	AML	09 26 26.0	
	comp=E,3176μm,0.7s						
JAN				AML	AML	09 26 28.4	
	comp=N,2914μm,0.4s						
ITM	**Ithomi**	**1.55**	**129**	P	**Pb**	**09 25 56.1**	**+0.3**
ITM				AML	AML	09 26 21.8	
	comp=N,3448μm,0.5s						
ITM				AML	AML	09 26 25.7	
	comp=E,3020μm,0.5s						
ITM	**Ithomi**	**1.55**	**129**		**Pg**	**09 25 56.5**	**-0.6**
ITM				Sn	**Sg**	**09 26 16.5**	**-0.7**
PYL	**PYLOS**	**1.65**	**140**	P	**Pg**	**09 25 58.5**	**-0.4**
AGG	**Agios Georgios**	**1.73**	**60**	P	**Pn**	**09 25 57.6**	**+0.6**
AGG	**Agios Georgios**	**1.73**	**60**	P	**Pg**	**09 26 00.0**	**-0.5**
AGG	**Agios Georgios**	**1.73**	**60**		**Pg**	**09 26 00.1**	**-0.4**
MEV	**Metsovon**	**1.74**	**21**	P	**Pg**	**09 26 00.8**	**0.0**
THL	**Klokotos Trika**	**1.88**	**41**	P	**Pb**	**09 26 01.9**	**+0.5**
KZN	**Kozani**	**2.39**	**26**	P	**Pb**	**09 26 09.3**	**-0.9**
SCTE	**Santa Cesarea**	**2.44**	**322**	Pn	**Pn**	**09 26 07.5**	**+0.8**
SCTE					**Sn**	**09 26 38.4**	**+2.1**
XOR	**Xorichti**	**2.48**	**60**	P	**Pb**	**09 26 10.0**	**-1.8**
LIT	**Litokhoron**	**2.52**	**39**		**Pb**	**09 26 11.0**	**-1.4**
FNA	**Florina**	**2.73**	**16**	*e*Pn	**Pn**	**09 26 13.2**	**+2.5**
FNA	**Florina**	**2.73**	**16**		**Pb**	**09 26 13.5**	**-2.4**
OHR	**Ohrid**	**2.96**	**6**	*e*Pn	**Pn**	**09 26 16.7**	**+2.7**

TIP	Timpagrande	3.04	291	⇑P	Pn	09 26 15.1	+0.1
TIP				⇓S	Sn	09 26 50.2	-1.1
TIP	Timpagrande	3.04	291		Pn	09 26 16.0	+1.0
TIR	Tirane	3.21	353	eSn	Sn	09 26 56.2	+0.8
TIR	Tirane	3.21	353	⇑S	Sn	09 26 56.2	+0.8
MASS	Massafra	3.54	315	ePn	Pn	09 26 23.0	+1.2
VAY	Valandovo	3.57	27	ePn	Pn	09 26 24.3	+2.1
VAY	Valandovo	3.57	27	ePn	Pn	09 26 24.3	+2.1
STIP	Stip	3.78	21	ePn	Pn	09 26 28.6	+3.3
SRS	Serrai	3.84	39	ePn	Pn	09 26 28.8	+2.8
SKO	Skopje	3.89	11	ePn	Pn	09 26 28.5	+1.8
ULC	Ulcinj	3.90	347	ePn	Pn	09 26 26.8	-0.1
ULC				eSn	Sn	09 27 12.4	-0.1
SG1	Sgolgore (BA)	3.94	314	ePn	Pn	09 26 28.1	+0.7
SG1				Sn	Sn	09 27 14.7	+1.3
DRME	Dracevica, Mon	4.13	347	ePn	Pn	09 26 30.3	+0.3
DRME	Dracevica, Mon	4.13	347	ePn	Pn	09 26 30.4	+0.4
DRME				eSn	Sn	09 27 18.5	+0.4
APE	Apeiranthos	4.21	103	⇑P	Pb	09 26 38.0	-3.1
BUM	Brajici-Budva	4.30	345	ePn	Pn	09 26 32.6	+0.3
BUM				eSn	Sn	09 27 22.3	0.0
ACER	Acerenza	4.34	309		Pn	09 26 35.0	+2.1
PDG	Podgorica	4.36	349	ePn	Pn	09 26 34.2	+1.1
PDG				eSn	Sn	09 27 23.2	-0.4
PDG	Podgorica	4.36	349	⇑S	Sn	09 27 23.4	-0.2
PDG	Podgorica	4.36	349	ePn	Pn	09 26 33.2	+0.1
PDG	Podgorica	4.36	349		Pn	09 26 34.0	+0.9
PDG	Podgorica	4.36	349	⇑P	Pn	09 26 34.3	+1.2
TTG	Podgorica	4.36	349	⇓/Pn	Pn	09 26 33.2	+0.1
TTG				eSn	Sn	09 27 23.5	-0.1
PVY	Plav	4.44	356	ePn	Pn	09 26 34.7	+0.3
PVY				eSn	Sn	09 27 26.4	+0.4
HCY	Herceg Novi	4.53	342	ePn	Pn	09 26 34.5	-0.9
HCY	Herceg Novi	4.53	342	ePn	Pn	09 26 35.1	-0.3
HCY				eSn	Sn	09 27 27.4	-0.5
CEME	Cevo	4.53	346	ePn	Pn	09 26 35.3	-0.2
CEME				eSn	Sn	09 27 27.4	-0.6
IDI	Anoyia	4.60	127	Sn	Sn	09 27 31.5	+1.8
	comp=E,9.4nm,0.3s,baz=83,slow=23,SNR=13						
BOSS	Bosilegrad	4.61	19	ePn	Pn	09 26 38.4	+1.8
IVA	Berane	4.72	355	ePn	Pn	09 26 38.3	+0.1
IVA				eSn	Sn	09 27 33.0	+0.2
NKME	Niksic	4.74	347	ePn	Pn	09 26 38.2	-0.1
NKME				eSn	Sn	09 27 32.7	-0.4
KOME	Kolasin	4.74	352	ePn	Pn	09 26 38.9	+0.5
KOME				eSn	Sn	09 27 32.5	-0.6
BARS	Barje	4.77	12	ePn	Pn	09 26 40.4	+1.6
NKY	Niksic	4.77	347	ePn	Pn	09 26 38.9	0.0
NKY				eSn	Sn	09 27 33.4	-0.7
VAE	Valguarnera	4.80	264	Sn	Sn	09 27 33.3	-1.5
	comp=E,4.2nm,0.3s,baz=180,slow=3.0,SNR=2.7						
TREB	Trebinje	4.82	342	ePn	Pn	09 26 39.2	-0.2
TREB				eSn	Sn	09 27 34.1	-0.9
TREB	Trebinje	4.82	342	ePn	Pn	09 26 38.9	-0.5
VTS	Vitosha	4.95	25	⇑P	Pn	09 26 43.5	+2.2
BRY	Bratogost	4.95	344	ePn	Pn	09 26 41.2	-0.1
BRY	Bratogost	4.95	344	ePn	Pn	09 26 41.2	-0.1
BRY				eSn	Sn	09 27 37.6	-0.8
SGRT	San Giovanni R	5.08	316	Pn	Pn	09 26 43.8	+0.7
SELS	Selova	5.08	6	ePn	Pn	09 26 43.1	0.0
SELS				eSn	Sn	09 27 40.5	-1.1
SJES	Sjenica	5.11	356	ePn	Pn	09 26 44.9	+1.4
ALN	Alexandroupoli	5.14	56	Pn	Pn	09 26 46.0	+2.2
STON	Ston	5.14	337	ePn	Pn	09 26 43.9	+0.1
STON				eSn	Sn	09 27 40.2	-2.7
STON	Ston	5.14	337	ePn	Pn	09 26 42.8	-1.0
UPM	Unac-Piva	5.17	348	ePn	Pn	09 26 45.0	+0.6
UPM	Unac-Piva	5.17	348	⇓/Pn	Pn	09 26 44.8	+0.4
UPM				eSn	Sn	09 27 43.3	-0.6
PLE	Pljevlja	5.22	352	ePn	Pn	09 26 45.0	-0.1
PLE				eSn	Sn	09 27 45.0	-0.2
WDD	Wied Dalam	5.25	246	Pn	Pn	09 26 43.2	-2.2
PAOL	Paolisi	5.35	304		Pn	09 26 48.7	+1.9
ZAPS	Zavoj	5.38	18	ePn	Pn	09 26 47.6	+0.4
IVAS	Ivanjica	5.42	358	ePn	Pn	09 26 47.5	-0.2
BOVS	Bovan	5.56	10	ePn	Pn	09 26 51.4	+1.8
GRUS	Gruza	5.73	2	ePn	Pn	09 26 52.7	+0.8
BBLS	Lazići	5.75	353	ePn	Pn	09 26 53.6	+1.3
BBLS	Lazići	5.75	353	ePn	Pn	09 26 53.1	+0.8
DIVS	Divibare	5.94	357	ePn	Pn	09 26 55.0	+0.1
DIVS	Divibare	5.94	357	ePn	Pn	09 26 53.9	-1.0
HAPS	Han Pijesak,Bl	6.02	350	ePn	Pn	09 26 55.4	-0.7
HAPS				eSn	Sn	09 28 01.6	-3.3
HAPS	Han Pijesak,Bl	6.02	350	ePn	Pn	09 26 55.4	-0.7
TRUS	Trudelj	6.06	360	ePn	Pn	09 26 56.5	0.0
PLVB	Pleven	6.12	30	⇑P	Pn	09 26 58.9	+1.6
INTR	Introdacqua	6.30	310		Pn	09 27 02.0	+2.2
MGRS	Mrkonjic Grad	6.74	339	ePn	Pn	09 27 06.5	+0.7
FRGS	Fruska Gora	7.01	356	ePn	Pn	09 27 08.7	-0.8
FRGS	Fruska Gora	7.01	356	ePn	Pn	09 27 05.8	-3.7
BLY	Banja Luka	7.02	341	ePn	Pn	09 27 10.7	+1.1
NRCA	Norcia	7.26	312		Pn	09 27 15.2	+2.1
GZR	Gura Zlata	7.44	13	⇑P	Pn	09 27 16.6	+1.1
BZS	Buzias	7.50	6	⇓P	Pn	09 27 17.0	+0.7
ARR	Arges	7.86	22	⇓P	Pn	09 27 23.5	+2.3
MURB	Monte Urbino	7.87	313		Pn	09 27 23.6	+2.3
VOIR		8.05	24	⇑P	Pn	09 27 25.0	+1.1
MORH	Mrgy, Hungar	8.16	351	ePn	Pn	09 27 23.7	-1.5
BOJS	Bojanci	8.29	334	ePn	Pn	09 27 27.5	+0.5
MLR	Muntele Rosu	8.41	28	Pn	Pn	09 27 34.3	+5.5
	comp=E,0.5nm,0.3s,baz=218,slow=14,SNR=8.0						
MLR	Muntele Rosu	8.41	28	⇑P	Pn	09 27 32.0	+3.2
CRES	Cresnjev	8.50	336	ePn	Pn	09 27 28.4	-1.6
PLOR	Plostina	8.97	29	⇑P	Pn	09 27 38.2	+1.7
VRI	Vrincioaia	9.02	29	⇓P	Pn	09 27 39.2	+2.1
SOKA	Soboth	9.39	337	ePn	Pn	09 27 41.6	-0.7
	comp=E,9.3nm,0.4s						
OBKA	Obir	9.40	334	ePn	Pn	09 27 43.0	+0.6
	comp=E,4.4nm,0.3s						
TEOL	Teolo	9.71	321	Pn	Pn	09 27 48.2	+1.6
BURAR	Bucovina Array	10.08	19	⇓P	Pn	09 27 54.2	+2.4
CTI	Castel Tesino	10.22	323	Pn	Pn	09 27 55.5	+1.9
VYHS	Vyhne	10.39	354	ePN	Pn	09 27 56.9	+1.0
VYHS				eSN	Sn	09 29 46.4	-5.7
BRTR	Keskin Array B	10.42	77	Pn	Pn	09 28 00.8	+4.3
	comp=E,0.1nm,0.3s,baz=264,slow=9.9,SNR=3.3						
BRTR				LR	LR	09 32 56.7	
	comp=E,81nm,19.3s,baz=214,slow=44						
BRTR	Keskin Array B	10.42	77		Pn	09 27 59.8	+3.3
MOA	Molln	10.68	337	ePn	Pn	09 28 00.2	+0.4
MOA	Molln	10.68	337	ePn	Pn	09 28 00.8	+1.0
	comp=E,4.0nm,0.3s						
GERES	GERESS Array B	11.73	338	Pn	Pn	09 28 14.3	0.0
	comp=E,0.4nm,0.3s,baz=154,slow=14,SNR=7.4						
GERES				Sn	Sn	09 30 18.6	-6.4
	comp=E,0.8nm,0.3s,baz=151,slow=22,SNR=8.3						
SENIN	Lac Senin/Sane	12.70	314	Pn	Pn	09 28 29.6	+2.0
AKASG	Malin Array Be	14.02	24	Pn	Pn	09 28 43.6	-1.7
	comp=E,0.4nm,0.3s,baz=206,slow=12,SNR=5.4						
KBZ	Khabaz	17.85	65	Pn	P	09 29 37.2	+1.4
	comp=E,0.1nm,0.3s,baz=257,slow=12,SNR=5.0						
GNI	Garni	18.96	76	LR	LR	09 37 00.3	
	comp=E,14nm,19.6s,baz=268,slow=37						
OBN	Obninsk	20.18	28	LR	LR	09 39 01.2	
	comp=E,33nm,18.6s,baz=0.5,slow=41						
HFS	Hagfors	22.41	351	P	P	09 30 24.4	-0.8
	comp=E,2.6nm,0.4s,baz=155,slow=11,SNR=19						
EKA	Eskdalemuir Ar	23.39	325	P	P	09 30 36.3	+0.8
	comp=E,1.8nm,0.8s,baz=139,slow=11,SNR=3.0						
FINES	FINESS Array B	23.57	7	P	P	09 30 35.9	-1.3
	comp=E,2.9nm,0.6s,baz=170,slow=9.2,SNR=12						
FINES	FINESS Array B	23.57	7	P	P	09 30 36.2	-1.0
FIA1	FINESS Array S	23.58	7	P	P	09 30 36.9	-0.4
NB2	NORSAR Subarra	23.62	349	P	P	09 30 37.4	-0.3
	comp=Z,1.2nm,0.6s,baz=162,slow=9.3						
NOA	NORSAR Array B	23.62	349	P	P	09 30 37.1	-0.6
	comp=Z,1.4nm,0.6s,baz=149,slow=10.0,SNR=9.3						
NOA				LR	LR	09 41 00.2	
	comp=Z,45nm,18.2s,baz=355,slow=40						
AKTO	Aktyubinsk	29.26	53	P	P	09 31 27.3	-1.5
	comp=Z,0.7nm,0.5s,baz=132,slow=15,SNR=3.1						
TORD	Torodi Ar. Bea	29.96	219	P	P	09 31 36.8	+1.5
	comp=Z,0.5nm,0.6s,baz=34,slow=8.5,SNR=4.2						
ARCES	ARCESS Array B	31.56	3	P	P	09 31 48.3	-0.5
	comp=Z,1.4nm,0.6s,baz=189,slow=11,SNR=11						
KK31	Karatay Array	37.88	66	IAmb	IAmb	09 32 50.8	
	comp=Z,3.5nm,0.8s						
KSH	Kashi	42.71	70	P	P	09 33 23.0	-1.0
KSH				S	S	09 39 45.1	-2.1
KSH				SKS	SS	09 42 42.7	-15
MK31	Makanchi Array	45.38	58	P	P	09 33 44.6	-0.6
MK31				IAmb	IAmb	09 33 52.0	
	comp=Z,1.6nm,0.6s						
MKAR	Makanchi Array	45.38	58	P	P	09 33 44.5	-0.8
	comp=Z,1.3nm,0.6s,baz=274,slow=7.0,SNR=22						
MKAR	Makanchi Array	45.38	58	P	P	09 33 44.6	-0.7
ZAA0	Zalesovo Array	45.77	48	P	P	09 33 47.7	-0.4
ZAA0				IAmb	IAmb	09 33 48.0	
	comp=Z,3.6nm,0.7s						
ZALV	Zalesovo Beam	45.77	48	P	P	09 33 47.2	-0.8
	comp=Z,4.3nm,0.6s,baz=275,slow=8.8,SNR=21						
ZALV	Zalesovo Beam	45.77	48	P	P	09 33 47.6	-0.5
TLY	Talaya	57.36	47	LR	LR	10 01 33.0	
	comp=Z,48nm,18.9s,baz=128,slow=38						
SCHQ	Schefferville	58.42	317	P	P	09 35 22.7	+0.4
	comp=Z,1.2nm,0.8s,baz=114,slow=9.6,SNR=3.6						
SONM	Songino Array	60.53	51	P	P	09 35 36.8	-0.3
	comp=Z,1.0nm,0.7s,baz=282,slow=7.9,SNR=7.4						
YKA	Yellowknife Ar	73.38	340	P	P	09 36 58.8	+0.4
	comp=Z,0.1nm,0.7s,baz=30,slow=5.1,SNR=3.8						
ILAR	Eielson Array	76.92	354	P	P	09 37 19.9	+1.1
	comp=Z,0.3nm,0.8s,baz=14,slow=4.2,SNR=4.0						
KSRS	Korea Array	79.41	51	P	P	09 37 32.9	-0.1
	comp=Z,1.2nm,0.6s,baz=312,slow=5.9,SNR=3.8						

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*IDC **03** 09:30:16.2±1.3, 38.°35N×20.°61E, h0km, mb3.8/11, mb1 3.8/13, mb1mx3.7/45, mbtmp3.8/13, ML3.5/2, Error ellipse: s-maj=25.0km s-min=21.5km az=31.0*
*THE **03** 09:30:17.8, 38.°36N×20.°45E, h6km±1km, ML3.6/8, Error ellipse: s-maj=1.8km s-min=0.3km az=170.0*
*ATH **03** 09:30:17.2, 38.°35N×20.°46E, h16km±2km, ML3.5/8, Error ellipse: s-maj=3.4km s-min=0.9km az=254.0*
*BEO **03** 09:30:18.3±1.1, 38.°29N×19.°98E, h17km±7km, ML3.5/3*
ISC 03 09:30:17.3±0.8, **38.°37N**±0.°02×**20.°43E**±0.°03, **h8**km±5km, **n85**, σ**1.s47**/111, **mb3.7**/11, **5C-3D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF1	Kardakata, Kep	0.10	159	P	Pg	09 30 19.6	0.0
KEF1				S	Sg	09 30 21.5	+0.3
KEF4	Livadi, Kephal	0.11	181	P	Pg	09 30 20.2	+0.4
KEF4				S	Sg	09 30 22.6	+1.1
VSK1	VASILIKIADES	0.12	69	P	Pg	09 30 19.8	-0.1
VSK1				S	Sg	09 30 21.7	0.0
FSK	Fiskardo	0.14	49	P	Pg	09 30 20.4	+0.1
FSK				S	Sg	09 30 22.6	+0.2
	59μm,0.4s						
KEF3	Kipouria, Keph	0.18	201	P	Pg	09 30 21.5	+0.5
KEF3				S	Sg	09 30 24.8	+1.4
CHV1	Chavriata, Kef	0.19	191	P	Pg	09 30 21.8	+0.6
CHV1				S	Sg	09 30 25.1	+1.4
ARG2	Argostoli	0.20	166	P	Pg	09 30 21.6	+0.3
ARG2				S	Sg	09 30 24.0	+0.1
KEF2	Argostoli. Kep	0.21	167	P	Pg	09 30 21.6	+0.1
KEF2				S	Sg	09 30 25.1	+0.8
VLS	Valsamata	0.23	146	P	Pg	09 30 21.9	0.0
VLS				S	Sg	09 30 25.4	+0.4
	26μm,0.3s						
VLS	Valsamata	0.23	146	P	Pg	09 30 21.9	0.0
VLS				S	Sg	09 30 25.4	+0.4
VLS				AML	AML	09 30 25.7	
	comp=E,51384μm,0.3s						
VLS				AML	AML	09 30 25.7	
	comp=N,50676μm,0.3s						
EVGI	Lefkada island	0.31	35	P	Pg	09 30 23.9	+0.4
EVGI				S	Sg	09 30 28.8	+1.2
EVGI	Lefkada island	0.31	35	P	Pg	09 30 23.9	+0.4
MGNA	Meganis	0.41	45	P	Pg	09 30 25.3	+0.1
MGNA				AML	AML	09 30 32.2	
	comp=N,46274μm,0.5s						
MGNA				AML	AML	09 30 32.5	
	comp=E,48170μm,0.4s						
LKD2	Lefkada island	0.46	23	P	Pg	09 30 26.2	0.0
LKD2				S	Sg	09 30 32.9	+0.6
	comp=E,6μm,0.5s						
LKD2	Lefkada island	0.46	23	P	Pg	09 30 26.4	+0.1
LKD2				S	Sg	09 30 32.4	+0.2
LKD2				AML	AML	09 30 39.3	
	comp=N,12172μm,0.5s						
LKD2				AML	AML	09 30 40.9	
	comp=E,10426μm,0.6s						
TSLK	Tsoukalades, L	0.49	21	P	Pg	09 30 27.1	+0.3
TSLK				S	Sb	09 30 35.3	-0.3
	comp=E,7μm,0.5s						
TSLK	Tsoukalades, L	0.49	21	P	Pg	09 30 27.1	+0.3
TSLK				S	Sb	09 30 35.1	-0.5
VLMS	Volimes, Zakyn	0.52	159	P	Pg	09 30 27.4	-0.1
VLMS				S	Sg	09 30 34.9	+0.5
VLMS				AML	AML	09 30 39.7	
	comp=N,53707μm,0.5s						
VLMS				AML	AML	09 30 40.8	
	comp=E,23876μm,0.3s						
AST1	Astakos	0.55	71	P	Pg	09 30 28.0	+0.1
AST1				S	Sb	09 30 36.6	-0.6
PDO	Prodromos	0.64	69	P	Pg	09 30 29.4	-0.2
PDO				S	Sb	09 30 38.9	-0.9
KRI1	kERI	0.77	156	P	Pg	09 30 31.4	-0.7
KRI1				S	Sb	09 30 43.5	-0.1
RLS	Riolos of Patr	0.88	110	P	Pb	09 30 33.4	-1.4
RLS	Riolos of Patr	0.88	110	P	Pb	09 30 33.3	-1.4
RLS				AML	AML	09 30 54.2	
	comp=N,3617μm,0.4s						
RLS				AML	AML	09 30 59.9	
	comp=E,3165μm,0.5s						
PVO	Paravola	0.90	74	P	Pb	09 30 34.6	-0.6
PVO				S	Sn	09 30 47.9	-1.6
	comp=E,4μm,0.8s						
DRO	Drossia	1.09	112	P	Pb	09 30 37.5	-1.0
DRO				S	Sn	09 30 54.5	+0.1
	comp=E,5μm,0.5s						
IGT	Igoumenitsa	1.17	356	P	Pn	09 30 39.2	-0.8
IGT				S	Sg	09 30 57.0	+2.1
	comp=E,1μm,0.4s						
IGT	Igoumenitsa	1.17	356	ePg	Pg	09 30 40.7	+1.0
IGT				eSg	Sg	09 30 59.3	+4.5
ANX	Ano Chora	1.19	79	P	Pn	09 30 39.2	-1.3
ANX				S	Sg	09 30 57.6	+1.9
	comp=E,3μm,0.8s						
EVR	Evrytania	1.21	63	P	Pn	09 30 39.4	-1.3
EVR	Evrytania	1.21	63	P	Pn	09 30 39.8	-1.0
EVR				AML	AML	09 31 07.6	
	comp=N,3179μm,0.6s						
EVR				AML	AML	09 31 10.1	
	comp=E,2156μm,0.7s						
LAKA	Lakka	1.23	96	P	Pn	09 30 39.8	-1.1
LAKA				S	Sg	09 30 57.7	+0.9
LAKA	Lakka	1.23	96	P	Pn	09 30 39.7	-1.1
LAKA				AML	AML	09 31 06.6	
	comp=N,1822μm,0.5s						
LAKA				AML	AML	09 31 08.5	
	comp=E,2207μm,0.5s						
SERG	Sergoula	1.28	87	P	Pn	09 30 40.4	-1.2
TRIZ	Trizonia	1.29	90	P	Pn	09 30 40.6	-1.2
TRIZ	Trizonia	1.29	90	P	Pn	09 30 40.5	-1.2
KALE	Kalithea	1.35	88	P	Pn	09 30 41.5	-1.0
KALE	Kalithea	1.35	88	P	Pn	09 30 41.0	-1.5
KALE				AML	AML	09 31 10.9	
	comp=N,2633μm,0.5s						
KALE				AML	AML	09 31 13.5	
	comp=E,2679μm,0.6s						
KLV	Kalavryta, Ach	1.40	103	P	Pn	09 30 42.3	-0.9
KLV	Kalavryta, Ach	1.40	103	P	Pn	09 30 42.5	-0.7
AGG	Agios Georgios	1.63	66	P	Pb	09 30 46.9	-0.7
FNA	Florina	2.52	17	ePn	Pn	09 31 00.5	+1.8
OHR	Ohrid	2.75	6	ePn	Pn	09 31 03.9	+1.9
TIP	Timpagrande	2.98	287	⇑P	Pn	09 31 04.8	-0.2
TIR	Tirane	3.01	352	ePn	Pn	09 31 06.8	+1.5
TIR	Tirane	3.01	352	⇓P	Pn	09 31 07.4	+2.0
VAY	Valandovo	3.38	29	ePn	Pb	09 31 15.1	-2.4
VAY	Valandovo	3.38	29	ePn	Pb	09 31 15.7	-1.8
STIP	Stip	3.59	22	ePn	Pb	09 31 18.0	-3.0
MATE	Matera	3.67	310	⇑P	Pg	09 31 27.0	-0.7
SRS	Serrai	3.67	41	ePn	Pn	09 31 17.9	+3.4
PDG	Podgorica	4.16	348	ePn	Pn	09 31 22.3	+1.2
PDG				eSn	Sn	09 32 07.7	-2.1
PDG	Podgorica	4.16	348	⇓P	Pn	09 31 22.4	+1.2
PDG				⇑S	Sn	09 32 06.3	-3.5
BOSS	Bosilegrad	4.41	20	ePn	Pn	09 31 26.9	+2.3
TREB	Trebinje	4.62	341	ePn	Pn	09 31 27.1	-0.4
TREB				eSn	Sn	09 32 18.2	-3.2
IDI	Anoyia	4.72	129	Sn	Sn	09 32 26.7	+2.8
	comp=E,1.7nm,0.3s,baz=292,slow=11,SNR=2.8						
VTS	Vitosha	4.75	26	ePn	Pn	09 31 32.6	+3.1
VTS	Vitosha	4.75	26	⇑P	Pb	09 31 36.3	-4.8
SELS	Selova	4.88	6	ePn	Pn	09 31 31.1	+0.1
SJES	Sjenica	4.90	356	ePn	Pn	09 31 32.0	+0.6
STON	Ston	4.95	336	ePn	Pn	09 31 31.9	-0.1
STON				eSn	Sn	09 32 26.3	-3.2
ZAPS	Zavoj	5.18	18	ePn	Pn	09 31 38.3	+3.1
IVAS	Ivanjica	5.21	358	ePn	Pn	09 31 35.1	-0.5
BBLS	Lazići	5.55	352	ePn	Pn	09 31 40.4	+0.1
DIVS	Divibare	5.73	357	ePn	Pn	09 31 42.4	-0.5
HAPS	Han Pijesak,Bl	5.82	349	ePn	Pn	09 31 42.7	-1.4
TRUS	Trudelj	5.85	360	ePn	Pn	09 31 44.6	+0.2
MLR	Muntele Rosu	8.22	28	Pn	Pn	09 32 21.3	+4.3
	comp=E,0.2nm,0.3s,baz=3.5,slow=19,SNR=1.5						
MLR	Muntele Rosu	8.22	28	⇑P	Pn	09 32 24.0	+7.0
PLOR	Plostina	8.79	30	⇓P	Pn	09 32 31.7	+6.9
SOKA	Soboth	9.21	336	ePn	Pn	09 32 30.2	-0.3
	comp=E,2.3nm,0.3s						
OBKA	Obir	9.22	334	ePn	Pn	09 32 32.2	+1.5
	comp=E,0.7nm,0.2s						
MOA	Molln	10.49	337	ePn	Pn	09 32 50.0	+2.0
	comp=E,2.6nm,0.4s						
DAVOX	Davos/Dischmat	11.44	321	Pn	Pn	09 33 03.9	+2.7
	comp=E,0.2nm,0.3s,baz=150,slow=20,SNR=2.4						
GERES	GERESS Array B	11.55	337	Pn	Pn	09 33 03.2	+0.7
	comp=E,0.2nm,0.3s,baz=147,slow=13,SNR=2.8						
HFS	Hagfors	22.20	351	P	P	09 35 14.3	+0.4
	comp=E,1.3nm,0.5s,baz=161,slow=14,SNR=2.1						
EKA	Eskdalemuir Ar	23.23	325	P	P	09 35 26.3	+1.5
	comp=E,1.8nm,0.7s,baz=122,slow=9.3,SNR=2.1						
FINES	FINESS Array B	23.37	7	P	P	09 35 25.1	-1.0
	comp=E,3.3nm,1.0s,baz=203,slow=10,SNR=2.6						
NOA	NORSAR Array B	23.42	349	P	P	09 35 26.9	+0.2
	comp=E,1.3nm,0.7s,baz=160,slow=9.8,SNR=3.3						
GEYT	Alibeck	29.51	79	P	P	09 36 21.1	-1.1
	comp=E,0.6nm,0.4s,baz=151,slow=21,SNR=1.8						
TORD	Torodi Ar. Bea	30.13	219	P	P	09 36 28.0	+0.2
	comp=E,0.7nm,0.7s,baz=37,slow=9.8,SNR=3.8						
ARCES	ARCESS Array B	31.35	3	P	P	09 36 39.5	+1.5
	comp=E,1.8nm,0.9s,baz=188,slow=11,SNR=1.6						
MKAR	Makanchi Array	45.26	59	P	P	09 38 34.1	-1.2
	comp=E,0.6nm,0.4s,baz=282,slow=7.5,SNR=6.9						
ZALV	Zalesovo Beam	45.62	48	P	P	09 38 37.1	-0.8
	comp=E,1.3nm,0.3s,baz=271,slow=9.2,SNR=6.1						
SCHQ	Schefferville	58.27	317	P	P	09 40 12.7	+0.5
	comp=E,0.9nm,0.5s,baz=142,slow=7.0,SNR=4.6						
YKA	Yellowknife Ar	73.19	340	P	P	09 41 50.0	+1.7
	comp=E,0.1nm,0.6s,baz=40,slow=5.9,SNR=2.9						

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*IDC **03** 09:34:15.1±1.3, 17.°93S×178.°46W, h557km±15km, mb3.8/18, mb1 4.0/20, mb1mx3.7/44, mbtmp4.7/20, Error ellipse: s-maj=16.5km s-min=9.3km az=147.0*
*NEIC **03** 09:34:16.5±1.7, 17.°9S±0.°1×178.°46W±0.°08, h579km±6km, mb4.5/95, Error ellipse: s-maj=18.4km s-min=10.7km az=163.0*
ISC 03 09:34:16.5±0.4, **17.°90S**±0.°09×**178.°46W**±0.°07, **h579**km, **n116**, σ**0.s96**/96, **mb4.4**/58, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.33	272	P	P	09 35 37.9	+1.9
AFI	Afiamalu	7.55	59	P	P	09 36 09.6	-1.4
	2.8nm,0.3s,baz=62,slow=17,SNR=3.8						
AFI				S	S	09 37 41.3	-3.4
	7.7nm,0.3s,baz=182,slow=6.6,SNR=6.0						
AFI	Afiamalu	7.55	59	P	P	09 36 09.9	-1.2
AFI				S	S	09 37 44.2	-0.5
NIUE	Niue	8.18	100	P	P	09 36 17.6	+0.7
SANVU	Saraoutou	13.95	278	P	P	09 37 16.1	+0.9
DZM	Mont Dzumac	14.78	251	P	P	09 37 23.2	-0.2
	1.6nm,0.3s,baz=120,slow=15,SNR=20						
DZM	Mont Dzumac	14.78	251	P	P	09 37 23.4	0.0
NOUC	Port Laguerre	14.92	251	P	P	09 37 24.8	+0.2
KNTN	Kanton	16.42	25	P	P	09 37 37.7	-1.1
OUZ	Omahuta	18.64	201	P	P	09 38 00.8	+2.0
OUZ				IAmb	IAmb	09 38 19.0	
	comp=Z,31nm,1.4s						
URZ	Urewera	20.65	190	P	P	09 38 15.0	-1.9
	comp=Z,4.8nm,0.6s,baz=31,slow=2.9,SNR=6.0						
URZ	Urewera	20.65	190	P	P	09 38 15.1	-1.8
URZ				IAmb	IAmb	09 38 29.7	
	comp=Z,11nm,1.0s						
THZ	Tophouse	24.91	195	P	P	09 38 54.7	-0.1
THZ				IAmb	IAmb	09 39 05.6	
	comp=Z,21nm,1.5s						
LTZ	Lake Taylor	26.03	196	P	P	09 39 04.6	-0.1
EIDS	Eidsvold	29.22	250	P	P	09 39 32.4	-0.4
MLZ	Mavora Lakes	29.59	199	P	P	09 39 35.7	+0.1
MLZ				IAmb	IAmb	09 39 53.2	
	comp=Z,8.5nm,1.1s						
ARMA	Armidale	29.90	240	P	P	09 39 39.0	+0.3
WHZ	Wether Hill Ro	30.11	199	P	P	09 39 39.5	-0.6
WHZ				IAmb	IAmb	09 39 57.1	
	comp=Z,18nm,1.1s						
CAN	Canberra	33.67	233	P	P	09 40 10.8	+0.3
CAN				IAmb	IAmb	09 40 11.8	
	comp=Z,16nm,0.8s						
PMG	Port Moresby	34.41	280	P	P	09 40 17.4	+0.6
COEN	Coen	37.05	270	P	P	09 40 39.1	+0.4
TOO	Toolangi	37.14	231	P	P	09 40 39.1	0.0
STKA	Stephens Creek	38.59	241	P	P	09 40 51.6	+0.6
	comp=Z,21nm,0.5s,baz=93,slow=10,SNR=28						
STKA	Stephens Creek	38.59	241	P	P	09 40 51.5	+0.6
STKA				IAmb	IAmb	09 40 52.4	
	comp=Z,7.6nm,1.0s						
JAY	Jayapura	42.85	286	P	P	09 41 25.7	+0.6
	comp=Z,16nm,0.4s,baz=175,slow=9.3,SNR=14						
KHU	Kahuku	43.20	32	P	P	09 41 28.1	+0.2
BBOO	Buckleboo	43.37	241	P	P	09 41 28.6	-0.2
AIN	Ainahou	43.38	32	P	P	09 41 29.6	+0.3
MLH	Mauna Loa	43.52	32	P	P	09 41 31.1	+0.7
HMH	Humu‘ula Sheep	43.56	32	P	P	09 41 30.3	-0.4
KEKH	Kekaha	43.68	26	P	P	09 41 30.8	-0.4
WR0	Warramunga Arr	44.39	260	P	P	09 41 35.9	-1.0
WR0				IAmb	IAmb	09 41 37.7	
	comp=Z,22nm,1.3s						
WB0	Warramunga Arr	44.55	260	P	P	09 41 37.0	-1.1
WRAB	Tennant Creek	44.58	260	P	P	09 41 37.1	-1.2
WRAB				IAmb	IAmb	09 41 37.9	
	comp=Z,19nm,0.7s						
WRA	Warramunga Arr	44.58	260	P	P	09 41 37.8	-0.6
	comp=Z,14nm,0.5s,baz=95,slow=7.1,SNR=41						
WRA	Warramunga Arr	44.58	260	P	P	09 41 37.0	-1.4
AS31	Alice Springs	44.74	254	P	P	09 41 39.2	-0.3
ASAR	Alice Springs	44.74	254	P	P	09 41 39.3	-0.3
	comp=Z,132nm,0.6s,baz=88,slow=8.5,SNR=1813						
ASAR				PcP	PcP	09 43 08.9	-0.3
	comp=Z,2.0nm,0.5s,baz=107,slow=4.0,SNR=4.4						
ASAR				ScP	ScP	09 46 08.4	+1.6
	comp=Z,0.9nm,0.9s,baz=82,slow=6.8,SNR=4.1						
ASAR				S	S	09 47 32.4	-2.9
	comp=Z,2.4nm,1.1s,baz=80,slow=17,SNR=5.3						
ASAR	Alice Springs	44.74	254	P	P	09 41 39.0	-0.6
MTN	Manton Dam	48.75	268	P	P	09 42 09.4	-0.3
FORT	Forrest	49.97	245	P	P	09 42 17.4	-1.1
KNRA	Kununurra	50.44	264	P	P	09 42 21.4	-0.7
FAKI	Fak Fak	50.53	281	P	P	09 42 22.5	-0.3
FITZ	Fitzroy Crossi	52.98	261	P	P	09 42 40.2	-0.1
FITZ				IAmb	IAmb	09 42 40.7	
	comp=Z,9.5nm,0.8s						
PSA00	Pilbara Seismi	57.86	255	P	P	09 43 13.3	-0.9
PSA00				IAmb	IAmb	09 43 14.2	
	comp=Z,24nm,0.7s						
NWAO	Narrogin (SRO)	59.17	242	P	P	09 43 22.1	-0.6
NWAO	Narrogin (SRO)	59.17	242	P	P	09 43 22.2	-0.6
NWAO				IAmb	IAmb	09 43 22.6	
	comp=Z,12nm,0.8s						
JAGI	Jajag, Banyuwa	65.99	269	P	P	09 44 05.6	-1.4
MJAR	Matsushiro Arr	67.87	323	P	P	09 44 17.8	-0.2
	comp=Z,2.7nm,0.6s,baz=142,slow=5.6,SNR=7.5						
MJAR	Matsushiro Arr	67.87	323	IAmb	IAmb	09 44 18.2	
	comp=Z,1.7nm,0.6s						
MAT	Matsushiro	67.87	323	P	P	09 44 17.8	-0.2
JKA	Kamikawa-asahi	71.24	331	P	P	09 44 38.6	+0.7
ASAJ	Asahikawa	71.24	331	P	P	09 44 38.6	+0.7
	comp=Z,6.8nm,0.8s,baz=336,slow=20,SNR=2.8						
QSPA	South Pole Qui	72.16	180	P	P	09 44 43.5	+0.4
	comp=Z,2.1nm,0.8s,baz=244,slow=0.3,SNR=6.5						
SSLB	Suanglung	72.19	303	P	P	09 44 42.9	-1.0
SSLB				IAmb	IAmb	09 44 43.6	
	comp=Z,7.7nm,0.5s						
TPUB	Ta-pu	72.21	302	P	P	09 44 42.9	-1.1
TPUB				IAmb	IAmb	09 44 43.6	
	comp=Z,19nm,0.7s						
KSM	Kuching	72.63	277	P	P	09 44 47.2	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
PETK	Petropavlovsk-	73.66	345	P	P	09 44 51.7	+0.1
	comp=Z,5.2nm,0.9s,baz=119,slow=8.2,SNR=3.8						
PMPB	Monarch Peak	76.57	45	P	P	09 45 09.0	+0.7
KMRM	Mail Ridge	77.04	40	P	P	09 45 12.1	+1.3
KMRM				IAmb	IAmb	09 45 22.4	
	comp=Z,28nm,1.3s						
MWC	Mount Wilson	77.37	48	P	P	09 45 12.6	-0.3
MWC				IAmb	IAmb	09 45 14.1	
	comp=Z,8.9nm,0.6s						
WDC	Whiskeytown Da	77.97	40	P	P	09 45 16.2	+0.5
PFO	Pinyon Flats O	78.19	49	P	P	09 45 18.1	+0.9
	comp=Z,1.6nm,0.8s,baz=261,slow=9.2,SNR=4.1						
OMMB	Old Mammoth Mi	78.55	44	IAmb	IAmb	09 45 21.2	
	comp=Z,15nm,1.4s						
YBH	Yreka Blue Hor	78.55	39	P	P	09 45 20.0	+1.1
	comp=Z,7.6nm,0.8s,baz=198,slow=1.5,SNR=24						
WAKR	Walker	78.75	43	IAmb	IAmb	09 45 22.4	
	comp=Z,9.2nm,0.9s						
BEKR	Beckworth	78.92	42	IAmb	IAmb	09 45 22.7	
	comp=Z,19nm,1.4s						
PNTR	Pine Nut	78.97	43	IAmb	IAmb	09 45 23.4	
	comp=Z,18nm,0.9s						
YERR	Yerington	79.14	43	IAmb	IAmb	09 45 24.0	
	comp=Z,22nm,1.2s						
NVAR	Mina Array Bea	79.45	44	P	P	09 45 24.9	+0.9
	comp=Z,5.1nm,0.7s,baz=224,slow=8.7,SNR=45						
NVAR	Mina Array Bea	79.45	44	P	P	09 45 24.7	+0.8
MOD	Modoc Plateau	80.11	40	IAmb	IAmb	09 45 28.9	
	comp=Z,9.1nm,0.7s						
K05A	Summer Lake	80.22	39	IAmb	IAmb	09 45 30.0	
	comp=Z,17nm,1.0s						
PINE	Pine Mountain	80.81	38	P	P	09 45 31.9	+1.1
PINE				IAmb	IAmb	09 45 33.1	
	comp=Z,12nm,0.9s						
E03A	Lebam	80.97	35	P	P	09 45 32.3	+1.0
E03A				IAmb	IAmb	09 45 33.1	
	comp=Z,14nm,0.9s						
WVOR	Wild Horse Val	81.43	40	IAmb	IAmb	09 45 35.9	
	comp=Z,11nm,1.0s						
G06A	Carlson Farm,	81.83	37	P	P	09 45 36.2	+0.4
G06A				IAmb	IAmb	09 45 36.8	
	comp=Z,11nm,1.2s						
I07A	Izee	81.83	39	IAmb	IAmb	09 45 37.9	
	comp=Z,10nm,0.8s						
LON	Longmire	82.06	35	P	P	09 45 36.7	-0.2
U15A	North Rim	82.55	48	IAmb	IAmb	09 45 42.4	
	comp=Z,12nm,0.8s						
ELK	Elko	82.68	43	P	P	09 45 41.0	+0.5
	comp=Z,4.0nm,0.9s,baz=241,slow=4.5,SNR=18						
LTY	Liberty	82.99	35	P	P	09 45 42.4	+0.7
E07A	Sunnyside	83.04	36	P	P	09 45 41.9	0.0
E07A				IAmb	IAmb	09 45 43.2	
	comp=Z,6.7nm,0.6s						
HAWA	Hanford	83.13	37	IAmb	IAmb	09 45 44.0	
	comp=Z,12nm,1.1s						
MTPU	Mount Pierson	83.39	47	P	P	09 45 43.0	-1.2
SEY	Seymchan	83.75	347	P	P	09 45 44.7	-0.2
	comp=Z,2.8nm,0.5s,baz=145,slow=6.3,SNR=17						
F10A	Beach Ranch, E	84.22	38	IAmb	IAmb	09 45 49.0	
	comp=Z,12nm,1.0s						
LLLB	Lillooet	84.33	32	P	P	09 45 48.8	+0.6
B08A	Colville Reser	84.36	35	IAmb	IAmb	09 45 49.2	
	comp=Z,7.1nm,0.8s						
NEW	Newport	85.53	36	P	P	09 45 54.3	+0.3
	comp=Z,3.3nm,0.7s,baz=227,slow=5.0,SNR=8.2						
TX31	Lajitas Ar. Si	86.03	58	IAmb	IAmb	09 45 59.7	
	comp=Z,11nm,1.0s						
TX32	Lajitas Array	86.03	58	IAmb	IAmb	09 45 59.7	
	comp=Z,11nm,1.0s						
TXAR	Lajitas Array	86.03	58	P	P	09 45 58.7	+1.8
	comp=Z,5.6nm,0.8s,baz=218,slow=6.2,SNR=43						
TXAR	Lajitas Array	86.03	58	P	P	09 45 58.6	+1.7
XAN	Xi'an	86.21	307	P	P	09 45 58.6	+1.0
XAN				pP	pP	09 48 05.1	+2.7
DLMT	Dillon	86.68	40	IAmb	IAmb	09 46 01.5	
	comp=Z,5.7nm,0.9s						
REDW	Red Top Meadow	86.81	42	IAmb	IAmb	09 46 02.4	
	comp=Z,11nm,1.1s						
IMW	Indian Meadow	87.01	42	IAmb	IAmb	09 46 03.5	
	comp=Z,6.7nm,0.8s						
HHC	Hu-ho-hao-te	87.23	314	eP	P	09 46 01.7	-0.6
FLWY	Flagg Ranch	87.25	42	IAmb	IAmb	09 46 04.7	
	comp=Z,10.0nm,1.1s						
PD31	Pinedale Array	87.38	43	IAmb	IAmb	09 46 04.3	
	comp=Z,4.1nm,0.7s						
PDAR	Pinedale Array	87.38	43	P	P	09 46 03.6	+0.5
	comp=Z,3.2nm,0.6s,baz=216,slow=3.2,SNR=44						
PDAR	Pinedale Array	87.38	43	P	P	09 46 03.1	0.0
MSTX	Muleshoe	88.53	54	IAmb	IAmb	09 46 09.9	
	comp=Z,8.8nm,0.9s						
CMAR	Chiang Mai Arr	88.83	290	P	P	09 46 11.6	+1.4
	comp=Z,3.3nm,1.0s,baz=104,slow=3.1,SNR=10.0						
ABTX	Abilene, Hawle	90.46	56	IAmb	IAmb	09 46 18.9	
	comp=Z,13nm,1.3s						
LAO	LASA Array	91.24	41	IAmb	IAmb	09 46 22.6	
	comp=Z,5.3nm,0.7s						
RSSD	Black Hills	91.59	44	P	P	09 46 23.1	+0.5
RSSD				IAmb	IAmb	09 46 23.6	
	comp=Z,2.9nm,0.7s						
YKA	Yellowknife Ar	94.34	25	P	P	09 46 34.1	-0.3
	comp=Z,0.9nm,0.6s,baz=244,slow=4.6,SNR=16						
BRTR	Keskin Array B	144.74	315	PKP	PKPdf	09 52 48.8	+0.4
	comp=Z,1.4nm,0.5s,baz=100,slow=3.0,SNR=7.9						
KOLS	Kolonicke sedl	144.77	336	ePKP	PKPbc	09 52 49.2	+0.6
CRVS	Cervenica-Dubn	145.11	337	ePKP	PKPab	09 52 50.6	-0.1
CLL	Collm	145.44	347	iPKPbc	PKPbc	09 52 50.5	+0.1
MMAI	Mount Meron Ar	146.09	303	PKPbc	PKPbc	09 52 53.3	+0.3
	comp=Z,1.5nm,0.3s,baz=180,slow=0.9,SNR=3.5						
MODS	Modra-Piesok	147.01	341	ePKP	PKiKP	09 52 57.7	+1.0
GERES	GERESS Array B	147.59	345	PKPbc	PKPbc	09 52 56.5	0.0
	comp=Z,0.7nm,0.4s,baz=46,slow=5.8,SNR=5.4						

MAN 03 09:35:12.6, 11.23N×124.50E, h9km, MS3.3
IDC 03 09:35:55.0±72.0, 15.21N×120.37E, h0km, mb3.5/3, mb1 3.5/3, mb1mx3.3/67, mbtmp3.5/3, Error ellipse: s-maj=1332.0km s-min=185.1km az=140.0
ISC 03 09:35:13.2±1.5, 11.23N±0.06×124.42E±0.05, h4km±11km, n13, σ1.28/19, mb3.4/3, 2C-3D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
OCLP	Ormoc	0.26	134	eP	Pg	09 35 17.9	-0.2
OCLP				eS	Sg	09 35 23.0	+1.5
LLP	Lapu-Lapu	1.01	206	⇑eP	Pg	09 35 32.1	-0.5
LLP				iS	Sn	09 35 48.6	-0.2
MSLP	Maasin	1.17	158	eP	Pb	09 35 33.4	-2.5
MSLP				eS	Sn	09 35 54.2	+1.4
RCP	Roxas	1.68	282	⇑eP	Pn	09 35 43.4	0.0
RCP				eS	Sn	09 36 03.4	-1.9
GUIM	Jordan	1.90	252	eP	Pn	09 35 45.6	-0.8
GUIM				eS	Sb	09 36 14.2	+1.8
JAP	San Jose, Anti	2.48	259	⇓eP	Pb	09 35 58.2	0.0
CGP	Cagayan de Oro	2.77	174	⇓eP	Pb	09 36 03.6	+0.3
BUKP	Musuan	3.39	169	eP	Pn	09 36 07.1	+0.2
BUKP				eS	Sb	09 36 54.2	-1.3
PAGZ	Pagadian	3.51	197	eP	Pn	09 36 08.7	+0.1
PAGZ				eS	Sn	09 36 51.3	+0.7
KCP	Kidapawan	4.24	171	⇓iP	Pb	09 36 22.7	-5.8
SONM	Songino Array	39.51	341	P	P	09 42 45.1	0.0
	1.2nm,1.1s,baz=160,slow=8.8,SNR=2.9						
MKAR	Makanchi Array	50.17	323	P	P	09 44 09.2	-0.8
	0.3nm,0.6s,baz=118,slow=7.5,SNR=4.1						
ZALV	Zalesovo Beam	52.92	332	P	P	09 44 32.3	+1.8
	0.3nm,0.2s,baz=126,slow=7.3,SNR=1.7						

IDC 03 09:37:36.9±11.0, 38.64N×20.81E, h0km, mb3.5/5, mb1 3.5/5, mb1mx3.5/5, mbtmp3.5/5, Error ellipse: s-maj=224.0km s-min=36.3km az=37.0
ISC 03 09:37:39.6±4.2, 38.7N±0.4×20.8E±0.5, h14km, n6, σ0.71/6, mb3.5/5, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
IDI	Anoyia	4.72	135	Sn	Sn	09 39 45.2	+0.1
	1.3nm,0.3s,baz=200,slow=23,SNR=1.9						
HFS	Hagfors	21.90	350	P	P	09 42 31.8	-0.2
	1.0nm,0.5s,baz=173,slow=12,SNR=1.4						
FINES	FINESS Array B	22.98	6	P	P	09 42 44.2	+0.8
	0.9nm,0.7s,baz=172,slow=11,SNR=1.4						
NOA	NORSAR Array B	23.13	348	P	P	09 42 45.4	+0.3
	0.4nm,0.6s,baz=161,slow=11,SNR=1.3						
MKAR	Makanchi Array	44.81	59	P	P	09 45 53.1	+0.2
	0.3nm,0.5s,baz=280,slow=8.2,SNR=4.0						
ZALV	Zalesovo Beam	45.15	49	P	P	09 45 54.6	-0.8
	0.8nm,0.4s,baz=274,slow=8.5,SNR=3.5						

IDC 03 09:43:04.9±1.4, 61.14N×150.33W, h0km, mb3.6/1, mb1 3.9/5, mb1mx3.4/62, mbtmp3.7/5, ML3.7/4, Error ellipse: s-maj=38.2km s-min=11.1km az=109.0
NEIC 03 09:43:05.4±1.7, 61.46N±0.04×151.75W±0.08, h94km±5km, Error ellipse: s-maj=6.2km s-min=5.2km az=142.0
AEIC 03 09:43:06.7±1.7, 61.42N±0.04×151.66W±0.09, h85km±4km, ML3.6/112, Error ellipse: s-maj=6.5km s-min=6.0km az=125.0
ISC 03 09:43:06.0±0.9, 61.42N±0.03×151.64W±0.04, h89km±7km, n117, σ0.96/132, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
SPCG	Spurr Capps Gl	0.22	236		Pn	09 43 18.5	-0.7
SPCG					Sn	09 43 27.9	-0.9
SPCR	Spurr Chakacha	0.35	232		Pn	09 43 19.1	-0.6
SPBG	Spurr Blockage	0.38	246		Pn	09 43 19.5	-0.4
SPBG					Sn	09 43 30.6	+0.3
CKL	Chakachamna La	0.40	237		Pn	09 43 19.4	-0.6
SUA	Susitna One	0.43	83		Pn	09 43 20.3	0.0
SUA					Sn	09 43 31.3	+0.4
SKT	Skwentna	0.57	5		Pn	09 43 20.5	-0.8
SKT					Sn	09 43 31.9	-0.7
CAPN	Captain Cook N	0.69	160		Pn	09 43 23.8	+1.5
FIS	Fire Island	0.74	111		Pn	09 43 23.6	+0.8
DFR	Drift River	0.97	212		Pn	09 43 25.2	-0.2
DFR					Sn	09 43 39.6	-0.3
RC01	Rabbit Creek A	0.98	109		Pn	09 43 25.9	+0.6
RC01					Sn	09 43 41.1	+1.3
RDJH	Redoubt Jeurge	1.00	215		Pn	09 43 25.6	-0.1
RDJH					Sn	09 43 40.8	+0.2
RDWB	Redoubt West	1.10	213		Pn	09 43 26.7	-0.2
RDWB					Sn	09 43 42.4	-0.2
RSO	Redoubt South	1.10	210		Pn	09 43 27.1	+0.1
RED	Redoubt Volcan	1.14	209		Pn	09 43 27.2	-0.2
SLKM	Skilak Lake	1.15	142		Pn	09 43 27.1	-0.3
PMR	Palmer	1.22	81		Pn	09 43 27.6	-0.6
PMR					Sn	09 43 44.3	-0.5
GHO	Glory Hole Cre	1.35	73		Pn	09 43 29.3	-0.6
PPLA	Purkeypile	1.51	350		Pn	09 43 31.5	-0.4
KNK	Knik Glacier	1.53	89		Pn	09 43 31.6	-0.5
KNK					Sn	09 43 51.9	+0.1
ILW	Iliamna West	1.55	209		Pn	09 43 32.2	-0.2
IVE	Iliamna Volcan	1.56	206		Pn	09 43 32.4	-0.2
ILS	Iliamna Low So	1.62	206		Pn	09 43 33.5	+0.1
SML	Sawmill	1.63	75		Pn	09 43 32.6	-0.8
BRLK	Bradley Lake	1.70	167		Pn	09 43 34.2	-0.1
PWL	Port Wells	1.70	108		Pn	09 43 33.4	-0.9
PWL					Sn	09 43 55.1	-0.6
SEW	Seward	1.70	140		Pn	09 43 33.7	-0.5
BRSE	Bradley Lake S	1.74	165		Pn	09 43 34.5	-0.3
HOM	Homer	1.76	180		Pn	09 43 35.7	+0.6
HUR	Hurricane	1.83	30		Pn	09 43 36.5	+0.6
CNPM	China Poot	1.91	174		Pn	09 43 36.5	-0.4
SVW2	Sparrevohn	1.93	262		Pn	09 43 36.8	-0.4
CAST	Castle Rocks	2.02	354		Pn	09 43 37.9	-0.6
WAT1	Susitna Watana	2.03	44		Pn	09 43 38.3	-0.3
SCM	Sheep Creek Mo	2.10	77		Pn	09 43 38.8	-0.8
TRF	Thorofare Moun	2.14	17		Pn	09 43 39.8	-0.3
KTH	Kantishna Hill	2.17	9		Pn	09 43 40.2	-0.2
GLI	Glacier Island	2.27	102		Pn	09 43 40.0	-1.7
RND	Reindeer	2.38	32		Pn	09 43 43.2	-0.1
CHUM	Lake Minchumin	2.50	353		Pn	09 43 44.3	-0.4
TT01	Tatalina	2.54	308		Pn	09 43 44.8	-0.5
TTA	Tatalina	2.55	308		Pn	09 43 44.8	-0.7
FID	Port Fidalgo	2.60	103		Pn	09 43 43.9	-2.2
DHY	Denali Highway	2.60	48		Pn	09 43 45.9	-0.3
MCK	McKinley	2.64	27		Pn	09 43 47.4	+0.7
BPAW	Bear Paw Mtn.	2.71	6		Pn	09 43 46.9	-0.7
HIN	Hinchinbrook I	2.71	110		Pn	09 43 45.9	-1.7
BWN	Browne	2.94	19		Pn	09 43 51.1	+0.5
EYAK	Cordova Ski Ar	3.00	104		Pn	09 43 49.6	-1.8
PS12	TAPS Pump St12	3.12	86		Pn	09 43 51.4	-1.7
KAHG	Katmai Hook Gl	3.27	208		Pn	09 43 56.0	+0.8
PAX	Paxson	3.29	59		Pn	09 43 55.4	0.0
NEA	Nenana	3.38	19		Pn	09 43 56.4	-0.2
PS10	TAPS Pump St10	3.40	51		Pn	09 43 57.8	+1.0
WRH	Wood River Hil	3.47	26		Pn	09 43 57.0	-0.7
GOAT	Goat Mountain	3.47	101		Pn	09 43 55.9	-1.9
RAGM	Ragged Mountai	3.56	104		Pn	09 43 57.0	-2.0
KABU	Katmai Buttres	3.65	212		Pn	09 44 01.2	+0.9
MLY	Manley	3.65	6		Pn	09 43 59.8	-0.5
KDAK	Kodiak Island	3.68	188	Pn	Pn	09 43 58.9	-1.6
	9.4nm,0.3s,baz=39,slow=7.9,SNR=122						
KDAK				Sn	Sn	09 44 41.2	-1.6
	14nm,0.3s,baz=112,slow=19,SNR=9.2						
KDAK	Kodiak Island	3.68	188		Pn	09 43 59.2	-1.4
CCB	Clear Creek Bu	3.68	27		Pn	09 43 59.6	-1.0
HDA	Harding Lake	3.69	34		Pn	09 44 01.2	+0.4
GLB	Gilahina Butte	3.76	86		Pn	09 44 00.5	-1.3
HMT	Hamilton	3.77	103		Pn	09 44 02.3	+0.4
PS08	TAPS Pump Stn8	3.83	33		Pn	09 44 03.6	+1.0
TCOL	CIGO, UAF Yank	3.87	25		Pn	09 44 02.7	-0.5
COLA	College	3.87	25		Pn	09 44 02.5	-0.7
MDM	Murphy Dome	3.88	22		Pn	09 44 03.5	+0.2
RIDG	Independent Ri	3.91	50		Pn	09 44 04.5	+0.7
VRDI	Verde Repeater	3.95	89		Pn	09 44 02.7	-1.8
IL31		4.00	31		Pn	09 44 04.2	-0.8
ILAR	Eielson Array	4.00	31	Pn	Pn	09 44 04.1	-0.9
	17nm,0.3s,baz=220,slow=14,SNR=535						
ILAR				Sn	Sn	09 44 50.1	-0.5
	16nm,0.3s,baz=221,slow=19,SNR=8.9						
ILAR	Eielson Array	4.00	31		Pn	09 44 03.7	-1.2
MENT	Mentasta	4.02	64		Pn	09 44 04.8	-0.4
MCARA	McCarthy VSAT	4.14	87		Pn	09 44 07.5	+0.6
POKR	Poker Flat Res	4.17	25		Pn	09 44 07.9	+0.6
CRQM	Cirque	4.18	95		Pn	09 44 06.5	-1.1
PS07	TAPS Pump Stn7	4.19	20		Pn	09 44 07.8	+0.2
OHAK	Old Harbor	4.29	192		Pn	09 44 06.8	-2.0
TGL	Tana Glacier	4.33	95		Pn	09 44 08.4	-1.2
SCRK	Sand Creek	4.36	51		Pn	09 44 09.5	-0.5
WAX	Waxell Ridge	4.40	99		Pn	09 44 10.0	-0.4
WAX				Sn	Sn	09 44 57.9	-2.5
PTPK	Patty Peak	4.43	89		Pn	09 44 09.9	-1.1
BALM	Baldy	4.51	91		Pn	09 44 10.5	-1.5
KIAG	Kiagna River	4.52	92		Pn	09 44 10.6	-1.6
PS06	TAPS Pump Stn6	4.54	10		Pn	09 44 12.7	+0.4
IM03		4.68	349		Pn	09 44 13.4	-0.7
IMAR	Indian Mountai	4.68	349		Pn	09 44 13.1	-1.0
BARN	Barnard Glacie	4.84	90		Pn	09 44 16.2	-0.3
GRNC	Granite Creek	4.85	94		Pn	09 44 15.3	-1.4
BC03		4.90	66		Pn	09 44 16.7	-0.4
BCAR	Beaver Creek A	4.90	66		Pn	09 44 16.3	-0.8
MESA	MESA	4.91	100	Pn	Pn	09 44 16.5	-1.0
PRP	Porcupine Dome	4.95	31		Pn	09 44 18.8	+0.9
CTGM	Chitina Glacie	5.01	91		Pn	09 44 18.5	-0.3
YUK2	White River	5.17	81		Pn	09 44 20.1	-0.9
YUK1	Sand Pete Hill	5.33	77		Pn	09 44 23.6	+0.5
CHX	Chaix Hills	5.34	100		Pn	09 44 23.6	+0.3
YUK3	Moose Creek	5.35	81		Pn	09 44 22.7	-0.8
PS05	TAPS Pump Stn5	5.43	4		Pn	09 44 25.0	+0.6
PCA	Pinnacle	5.74	98		Pn	09 44 28.4	-0.2
EGAK	Eagle	5.83	50		Pn	09 44 29.3	-0.5
COLD	Coldfoot	5.87	5		Pn	09 44 30.6	+0.3
YUK4	Talbot Arm	6.25	85		Pn	09 44 35.4	-0.3
YUK5	Granite Creek	6.65	86		Pn	09 44 39.2	-1.9
BM03	Burnt Mountain	6.75	24		Pn	09 44 42.0	-0.3
BMAR	Burnt Mountain	6.76	24		Pn	09 44 41.4	-1.1
HYT	Haines Junctio	6.88	89		Pn	09 44 43.9	-0.3
ANM	Nome	7.00	303		Pn	09 44 46.5	+0.8
TOLK	Toolik Lake Re	7.31	6		Pn	09 44 51.4	+1.5
WHY	Whitehorse	8.17	88		Pn	09 45 00.6	-1.2
EPYK	Eagle Plains	8.23	46		Pn	09 45 02.3	-0.2
INK	Inuvik	10.31	40	Pn	Pn	09 45 30.4	-0.3
	0.4nm,0.3s,baz=238,slow=19,SNR=26						
INK				Sn	Sn	09 47 25.5	+1.3
	0.2nm,0.3s,baz=174,slow=9.2,SNR=2.6						
INK	Inuvik	10.31	40		Pn	09 45 30.6	-0.1
C36M	Paulatuk	13.84	43		Pn	09 46 15.2	-2.7
YKA	Yellowknife Ar	17.30	70	Pn	Pn	09 47 01.0	-0.4
	0.1nm,0.3s,baz=279,slow=11,SNR=9.0						
NVAR	Mina Array Bea	30.88	123	P	P	09 49 16.5	+2.5
	0.5nm,0.6s,baz=315,slow=8.9,SNR=4.7						

BEO 03 09:44:42.9±1.0, 38.21N×20.07E, h10km±5km, ML3.9/6
IDC 03 09:44:43.1±0.9, 38.38N×20.46E, h0km, mb3.9/12, mb1 3.8/18, mb1mx3.7/53, mbtmp3.8/18, ML3.6/6, MS3.4/13, Ms1 3.4/13, ms1mx3.1/43, Error ellipse: s-maj=18.3km s-min=15.4km az=2.0
PDG 03 09:44:43.7±0.3, 38.42N×20.41E, h10km±1km, ML3.9/13, Error ellipse: s-maj=0.9km s-min=0.7km az=90.0
ATH 03 09:44:43.8, 38.38N×20.46E, h13km±3km, ML3.7/13, Error ellipse: s-maj=3.4km s-min=0.9km az=258.0
THE 03 09:44:44.3, 38.39N×20.47E, h0km±1km, ML3.7/5, Error ellipse: s-maj=1.8km s-min=0.4km az=299.0
ISC 03 09:44:43.9±1.0, 38.41N±0.02×20.43E±0.03, h4km±7km, n123, σ1.41/151, mb3.9/12, MS3.3/7, 8C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
FSK	Fiskardo	0.12	62	P	Pg	09 44 46.4	+0.2
FSK	Fiskardo	0.12	62	P	Pg	09 44 46.5	+0.3
KEF1	Kardakata, Kep	0.13	166	P	Pg	09 44 46.4	0.0
KEF1				S	Sg	09 44 48.2	+0.1
KEF4	Livadi, Kephal	0.15	182	P	Pg	09 44 47.1	+0.4
KEF4				S	Sg	09 44 49.9	+1.2
KEF3	Kipouria, Keph	0.21	198	P	Pg	09 44 48.5	+0.5
KEF3				S	Sg	09 44 51.6	+0.9
CHV1	Chavriata, Kef	0.22	190	P	Pg	09 44 49.1	+0.9
CHV1				S	Sg	09 44 52.0	+0.9
KEF2	Argostoli. Kep	0.24	169	P	Pg	09 44 48.2	-0.4
KEF2				S	Sg	09 44 51.8	+0.1
VLS	Valsamata	0.26	151	P	Pg	09 44 48.5	-0.4
VLS				S	Sg	09 44 52.7	+0.4
	32μm,0.4s						
VLS	Valsamata	0.26	151	P	Pg	09 44 48.2	-0.6
VLS				S	Sg	09 44 52.6	+0.3
VLS				AML	AML	09 44 56.0	
	comp=N,63604μm,0.3s						
VLS				AML	AML	09 44 57.9	
	comp=E,58628μm,0.3s						
EVGI	Lefkada island	0.28	39	P	Pg	09 44 49.8	+0.5
MGNA	Meganis	0.38	48	P	Pg	09 44 51.3	+0.2
MGNA				S	Sg	09 44 57.4	+1.3
MGNA				AML	AML	09 44 59.2	
	comp=N,30284μm,0.3s						
MGNA				AML	AML	09 45 00.7	
	comp=E,21199μm,0.3s						
LKD2	Lefkada island	0.42	25	P	Pg	09 44 52.5	+0.5
LKD2				S	Sg	09 44 58.5	+0.9
	comp=E,9μm,0.9s						
LKD2	Lefkada island	0.42	25	P	Pg	09 44 52.6	+0.5
LKD2				AML	AML	09 45 04.0	
	comp=N,21553μm,0.8s						
LKD2				AML	AML	09 45 04.7	
	comp=E,16855μm,1.1s						
TSLK	Tsoukalades, L	0.46	23	P	Pg	09 44 53.3	+0.7
AST1	Astakos	0.54	75	P	Pg	09 44 54.3	+0.1
AST1				S	Sg	09 45 02.1	+1.0
VLMS	Volimes, Zakyn	0.56	161	P	Pg	09 44 54.2	-0.4
VLMS				S	Sg	09 45 01.9	+0.1
VLMS				AML	AML	09 45 08.3	
	comp=E,37030μm,0.6s						
VLMS				AML	AML	09 45 12.0	
	comp=N,77832μm,0.5s						
PDO	Prodromos	0.62	72	P	Pg	09 44 55.6	-0.2
PDO				S	Sb	09 45 05.4	-1.1
PDO	Prodromos	0.62	72	P	Pg	09 44 55.6	-0.2
PVO	Paravola	0.89	76	P	Pg	09 45 00.7	-0.2
PVO				AML	AML	09 45 17.9	
	comp=N,16365μm,1.1s						
PVO				AML	AML	09 45 27.9	
	comp=E,14229μm,0.8s						
RLS	Riolos of Patr	0.89	113	P	Pg	09 45 00.5	-0.4
RLS				S	Sg	09 45 13.3	+0.9
	comp=E,3μm,1.1s						
RLS	Riolos of Patr	0.89	113	P	Pg	09 45 00.6	-0.4
RLS				AML	AML	09 45 23.1	
	comp=N,4984μm,0.7s						
RLS				AML	AML	09 45 24.5	
	comp=E,4786μm,0.6s						
UPR	University Cam	1.07	96	P	Pg	09 45 04.2	-0.3
DRO	Drossia	1.11	114	P	Pg	09 45 04.5	-0.6
DRO				S	Sb	09 45 20.6	+0.2
	comp=E,5μm,0.6s						
DRO	Drossia	1.11	114	P	Pg	09 45 04.7	-0.4
DRO				AML	AML	09 45 30.7	
	comp=N,10124μm,0.5s						
DRO				AML	AML	09 45 33.1	
	comp=E,11362μm,0.7s						
IGT	Igoumenitsa	1.13	356	P	Pn	09 45 06.4	-0.1
IGT	Igoumenitsa	1.13	356	ePg	Pn	09 45 07.6	+1.1
IGT				eSg	Sn	09 45 24.9	+2.4
EFP	Efpalio	1.16	88	P	Pg	09 45 05.0	-1.1
EFP				S	Sb	09 45 21.8	-0.1
	comp=E,6μm,0.8s						
EFP	Efpalio	1.16	88	P	Pg	09 45 05.2	-0.9
EFP				AML	AML	09 45 28.9	
	comp=N,12036μm,0.9s						
EFP				AML	AML	09 45 28.9	
	comp=E,12850μm,0.8s						
ANX	Ano Chora	1.19	80	P	Pg	09 45 05.9	-0.7
ANX				AML	AML	09 45 31.0	
	comp=N,14299μm,1.0s						
ANX				AML	AML	09 45 31.2	
	comp=E,13518μm,1.2s						
EVR	Evrytania	1.19	64	P	Pg	09 45 05.8	-1.0
EVR	Evrytania	1.19	64	P	Pg	09 45 05.8	-1.0
EVR				AML	AML	09 45 30.5	
	comp=N,3572μm,0.8s						
EVR				AML	AML	09 45 34.1	
	comp=E,4311μm,0.8s						
LAKA	Lakka	1.23	97	P	Pg	09 45 06.3	-1.1
LAKA				AML	AML	09 45 36.8	
	comp=E,4383μm,1.5s						
LAKA				AML	AML	09 45 37.8	
	comp=N,3844μm,1.1s						
SERG	Sergoula	1.28	89	P	Pg	09 45 07.5	-0.9
SERG				AML	AML	09 45 31.9	
	comp=E,5931μm,0.8s						
SERG				AML	AML	09 45 32.2	
	comp=N,5697μm,0.5s						
TRIZ	Trizonia	1.29	91	P	Pn	09 45 06.9	-1.8
AMT	Artemida-Makis	1.33	130	P	Pg	09 45 09.6	+0.1
KALE	Kalithea	1.34	90	P	Pn	09 45 08.2	-1.3
KALE	Kalithea	1.34	90	P	Pn	09 45 08.6	-1.0
KALE				AML	AML	09 45 34.4	
	comp=N,5863μm,0.8s						
KALE				AML	AML	09 45 41.6	
	comp=E,3610μm,0.9s						
KLV	Kalavryta, Ach	1.40	104	P	Pn	09 45 08.8	-1.5
KLV	Kalavryta, Ach	1.40	104	P	Pn	09 45 08.8	-1.5
AGG	Agios Georgios	1.61	67	P	Pn	09 45 13.2	0.0
THL	Klokotos Trika	1.69	46	P	Pn	09 45 14.8	+0.5
FNA	Florina	2.49	17	ePn	Pb	09 45 27.2	-2.0
OHR	Ohrid	2.72	6	ePn	Pb	09 45 31.2	-1.9
TIP	Timpagrande	2.97	286	⇓P	Pb	09 45 34.8	-2.6
TIR	Tirane	2.97	352	ePn	Pb	09 45 32.9	+1.1
TIR				eSn	Sb	09 46 10.9	-3.2
TIR	Tirane	2.97	352	⇑P	Pb	09 45 35.0	-2.4
TAR1	Taranto	3.23	312	ePn	Pb	09 45 38.7	-3.0
VAY	Valandovo	3.35	29	ePn	Pn	09 45 39.6	+2.6
VAY	Valandovo	3.35	29	ePn	Pn	09 45 38.7	+1.8
MASS	Massafra	3.38	312	ePn	Pn	09 45 39.0	+1.6
STIP	Stip	3.55	22	ePn	Pb	09 45 43.9	-3.4
SRS	Serrai	3.64	41	ePn	Pn	09 45 44.1	+3.0
ULC	Ulcinj	3.67	346	ePn	Pn	09 45 41.3	+0.2
ULC				eSn	Sn	09 46 25.2	0.0
SG1	Sgolgore (BA)	3.78	311	ePn	Pn	09 45 44.3	+1.3
DRME	Dracevica, Mon	3.90	346	ePn	Pn	09 45 44.5	-0.1
DRME				eSn	Sn	09 46 30.9	+0.1
BUM	Brajici-Budva	4.06	344	ePn	Pn	09 45 47.3	+0.4
BUM				eSn	Sn	09 46 34.9	-0.1
PDG	Podgorica	4.12	348	ePn	Pn	09 45 48.7	+1.1
PDG				eSn	Sn	09 46 36.4	+0.2
PDG	Podgorica	4.12	348	⇑P	Pn	09 45 49.1	+1.5
TTG	Podgorica	4.12	348	ePn	Pn	09 45 47.9	+0.3
TTG				eSn	Sn	09 46 36.4	+0.2
PVY	Plav	4.20	355	ePn	Pn	09 45 49.2	+0.3
PVY				eSn	Sn	09 46 38.4	-0.1
CEME	Cevo	4.29	345	ePn	Pn	09 45 49.8	-0.3
CEME				eSn	Sn	09 46 40.5	-0.2
HCY	Herceg Novi	4.30	341	ePn	Pn	09 45 49.6	-0.5
HCY				eSn	Sn	09 46 40.4	-0.3
BOSS	Bosilegrad	4.38	20	ePn	Pn	09 45 53.0	+1.8
IVA	Berane	4.48	355	ePn	Pn	09 45 52.7	0.0

IVA				eSn	Sn	09 46 45.5	+0.2
KOME	**Kolasin**	**4.50**	**351**	ePn	**Pn**	**09 45 53.2**	**+0.3**
KOME				eSn	**Sn**	**09 46 45.9**	**+0.2**
NKME	**Niksic**	**4.50**	**346**	ePn	**Pn**	**09 45 53.1**	**+0.2**
NKME				eSn	**Sn**	**09 46 45.9**	**+0.2**
BARS	**Barje**	**4.53**	**13**	ePn	**Pn**	**09 45 54.2**	**+0.9**
NKY	**Niksic**	**4.54**	**347**	⇓Pn	**Pn**	**09 45 54.5**	**+1.0**
NKY				eSn	**Sn**	**09 46 46.0**	**-0.7**
TREB	**Trebinje**	**4.59**	**340**	ePn	**Pn**	**09 45 52.9**	**-1.2**
TREB				eSn	**Sn**	**09 46 45.7**	**-2.2**
BRY	**Bratogost**	**4.72**	**343**	ePn	**Pn**	**09 45 55.4**	**-0.6**
BRY				eSn	**Sn**	**09 46 50.8**	**-0.4**
VTS	**Vitosha**	**4.72**	**26**	ePn	**Pn**	**09 45 57.0**	**+1.0**
VTS	**Vitosha**	**4.72**	**26**	⇑P	**Pn**	**09 45 59.5**	**+3.4**
IDI	**Anoyia**	**4.74**	**130**	Pn	**Pn**	**09 45 55.1**	**-1.2**
	comp=E,0.4nm,0.3s,baz=318,slow=5.7,SNR=2.7						
IDI				Sn	**Sn**	**09 46 53.2**	**+1.5**
	comp=E,3.4nm,0.3s,baz=246,slow=23,SNR=3.1						
SELS	**Selova**	**4.84**	**6**	ePn	**Pn**	**09 45 59.2**	**+1.7**
VAE	**Valguarnera**	**4.85**	**261**	Pn	**Pn**	**09 45 58.5**	**+0.9**
	comp=E,2.5nm,0.3s,baz=168,slow=9.3,SNR=1.9						
VAE				Sn	**Sn**	**09 46 55.3**	**+1.0**
	comp=E,4.9nm,0.3s,baz=32,slow=10,SNR=2.8						
SJES	**Sjenica**	**4.86**	**356**	ePn	**Pn**	**09 45 58.6**	**+0.6**
STON	**Ston**	**4.92**	**336**	ePn	**Pn**	**09 45 58.1**	**-0.5**
UPM	**Unac-Piva**	**4.93**	**347**	ePn	**Pn**	**09 45 59.0**	**0.0**
UPM				eSn	**Sn**	**09 46 56.5**	**-0.1**
PLE	**Pljevlja**	**4.98**	**351**	ePn	**Pn**	**09 45 59.7**	**+0.1**
PLE				eSn	**Sn**	**09 46 57.6**	**-0.1**
ZAPS	**Zavoj**	**5.14**	**18**	ePn	**Pn**	**09 46 03.9**	**+2.2**
IVAS	**Ivanjica**	**5.17**	**358**	ePn	**Pn**	**09 46 02.4**	**+0.1**
BOVS	**Bovan**	**5.31**	**10**	ePn	**Pn**	**09 46 04.6**	**+0.6**
GRUS	**Gruza**	**5.48**	**2**	ePn	**Pn**	**09 46 07.0**	**+0.6**
BBLS	**Lazići**	**5.51**	**352**	ePn	**Pn**	**09 46 07.3**	**+0.5**
DIVS	**Divibare**	**5.70**	**357**	ePn	**Pn**	**09 46 08.4**	**-1.0**
HAPS	**Han Pijesak,Bl**	**5.78**	**349**	ePn	**Pn**	**09 46 09.5**	**-1.1**
TRUS	**Trudelj**	**5.81**	**360**	ePn	**Pn**	**09 46 11.1**	**+0.2**
PLVB	**Pleven**	**5.90**	**31**	⇓P	**Pn**	**09 46 14.7**	**+2.6**
ELND	**Elena**	**6.13**	**41**	⇑P	**Pn**	**09 46 17.0**	**+1.8**
BZS	**Buzias**	**7.26**	**7**	⇓P	**Pn**	**09 46 34.3**	**+3.6**
VOIR		**7.82**	**25**	⇑P	**Pn**	**09 46 41.0**	**+2.4**
MLR	**Muntele Rosu**	**8.18**	**28**	Pn	**Pn**	**09 46 47.9**	**+4.4**
	comp=E,0.2nm,0.3s,baz=289,slow=16.3,SNR=3.6						
MLR				LR	LR	09 51 12.5	
	comp=E,147nm,18.4s,baz=293,slow=48						
MLR	**Muntele Rosu**	**8.18**	**28**	⇑P	**Pn**	**09 46 46.8**	**+3.3**
PLOR	**Plostina**	**8.76**	**30**	⇑P	**Pn**	**09 46 54.9**	**+3.6**
VRI	**Vrincioaia**	**8.80**	**30**	⇑P	**Pn**	**09 46 54.5**	**+2.6**
SOKA	**Soboth**	**9.17**	**336**	ePn	**Pn**	**09 46 55.8**	**-1.3**
	comp=E,5.7nm,0.5s						
OBKA	**Obir**	**9.19**	**334**	ePn	**Pn**	**09 46 58.3**	**+1.0**
	comp=E,5.3nm,0.4s						
KEST	**Kesra**	**9.25**	**257**	LR	LR	09 51 08.3	
	comp=E,172nm,19.5s,baz=254,slow=42						
MODS	**Modra-Piesok**	**10.22**	**348**	eSN	**Pn**	**09 49 02.2**	**-4.3**
BRTR	**Keskin Array B**	**10.36**	**79**	Pn	**Pn**	**09 47 17.5**	**+4.1**
	comp=E,0.1nm,0.3s,baz=259,slow=13,SNR=1.7						
BRTR				LR	LR	09 51 50.3	
	comp=E,124nm,20.8s,baz=239,slow=41						
MOA	**Molln**	**10.46**	**337**	ePn	**Pn**	**09 47 15.2**	**+0.7**
	comp=E,4.7nm,0.6s						
VRAC	**Vranov**	**11.24**	**347**	LR	LR	09 53 12.7	
	comp=E,162nm,18.8s,baz=168,slow=45						
GERES	**GERESS Array B**	**11.51**	**337**	Pn	**Pn**	**09 47 29.0**	**-0.1**
	comp=E,0.1nm,0.3s,baz=159,slow=14,SNR=2.8						
AKASG	**Malin Array Be**	**13.79**	**24**	Pn	**Pn**	**09 48 00.9**	**+0.9**
	comp=E,0.6nm,0.3s,baz=210,slow=12,SNR=1.9						
EIL	**Elat**	**14.85**	**122**	LR	LR	09 56 16.8	
	comp=E,73nm,18.9s,baz=289,slow=47						
GNI	**Garni**	**18.89**	**77**	LR	LR	09 56 38.6	
	comp=E,98nm,19.0s,baz=282,slow=38						
ESDC	**Sonseca Array**	**18.98**	**281**	P	**Pn**	**09 49 07.2**	**+0.2**
	comp=E,0.3nm,0.3s,baz=83,slow=11,SNR=4.3						
MDT	**Midelt**	**21.08**	**262**	LR	LR	09 58 58.5	
	comp=E,98nm,18.8s,baz=145,slow=40						
HFS	**Hagfors**	**22.16**	**351**	P	**P**	**09 49 40.7**	**+0.1**
	comp=E,3.8nm,0.8s,baz=153,slow=10.0,SNR=2.7						
HFS				LR	LR	09 59 51.4	
	comp=E,142nm,18.6s,baz=162,slow=41						
FINES	**FINESS Array B**	**23.33**	**7**	P	**P**	**09 49 51.4**	**-1.4**
	comp=E,1.1nm,0.4s,baz=171,slow=9.8,SNR=2.7						
NB2	**NORSAR Subarra**	**23.38**	**349**	P	**P**	**09 49 55.0**	**+1.6**
	comp=Z,1.0nm,0.6s,baz=155,slow=11						
NOA	**NORSAR Array B**	**23.38**	**349**	P	**P**	**09 49 54.0**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=157,slow=10,SNR=3.4						
NOA				LR	LR	10 00 46.6	
	comp=Z,73nm,18.1s,baz=160,slow=41						
KIRV	**Kirov**	**27.50**	**33**	LR	LR	10 02 12.9	
	comp=Z,102nm,20.8s,baz=252,slow=38						
GEYT	**Alibeck**	**29.50**	**79**	P	**P**	**09 50 49.4**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=254,slow=9.9,SNR=3.0						
GEYT				LR	LR	10 06 08.7	
	comp=Z,62nm,18.2s,baz=325,slow=44						
TORD	**Torodi Ar. Bea**	**30.16**	**219**	P	**P**	**09 50 54.9**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=44,slow=4.9,SNR=5.1						
ARCES	**ARCESS Array B**	**31.31**	**3**	P	**P**	**09 51 06.3**	**+1.5**
	comp=Z,1.8nm,0.9s,baz=188,slow=11,SNR=1.5						
DBIC	**Dimbokro**	**39.01**	**222**	LR	LR	10 08 47.7	
	comp=Z,108nm,18.2s,baz=5.5,slow=37						
KURBB	**Kurchatov Arra**	**42.15**	**54**	P	**P**	**09 52 37.5**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=282,slow=8.9,SNR=2.0						
MKAR	**Makanchi Array**	**45.24**	**59**	P	**P**	**09 53 00.2**	**-2.1**
	comp=Z,0.9nm,0.5s,baz=289,slow=4.4,SNR=2.9						
ZALV	**Zalesovo Beam**	**45.59**	**48**	P	**P**	**09 53 03.6**	**-1.3**
	comp=Z,4.1nm,0.7s,baz=279,slow=9.1,SNR=14						
ZALV				LR	LR	10 15 43.9	
	comp=Z,32nm,18.4s,baz=300,slow=41						
SCHQ	**Schefferville**	**58.24**	**317**	P	**P**	**09 54 39.7**	**+0.5**
	comp=Z,2.2nm,0.8s,baz=54,slow=6.5,SNR=1.3						
YKA	**Yellowknife Ar**	**73.15**	**340**	P	**P**	**09 56 15.9**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=37,slow=5.2,SNR=2.5						
KLR	**Kul'dur**	**73.74**	**40**	P	**P**	**09 56 18.7**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=326,slow=5.7,SNR=3.2						

*KRSC **03** 09:47:03.6±1.0, 53°.44N×160°.74E, h50km±17km, ML4.0*
*IDC **03** 09:47:09.9±2.5, 53°.83N×160°.11E, h88km±40km, mb3.3/8, mb1 3.5/8, mb1mx3.2/48, mbtmp3.6/8, Error ellipse: s-maj=64.5km s-min=22.0km az=178.0*
ISC 03 09:47:05.4±1.0**, 53°.44N**±0°.04×**160°.69E**±0°.05**, h53**km±9km**, n56, σ1s.45**/77**, mb3.5**/8**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.52**	**230**	eP	**Pn**	**09 47 17.5**	**+0.4**
SPN				eS	**Sn**	**09 47 26.1**	**+0.6**
NLC	**Nalytchevo**	**0.85**	**252**	eP	**Pn**	**09 47 21.3**	**+0.2**
NLC				eS	**Sn**	**09 47 33.0**	**+0.3**
KII	**Karymskiy**	**0.95**	**310**	eP	**Pn**	**09 47 22.1**	**-0.5**
KII				eS	**Sn**	**09 47 34.2**	**-1.0**
SDLR	**Sedlovina**	**1.09**	**262**	eP	**Pn**	**09 47 24.6**	**+0.1**
SDLR				eS	**Sn**	**09 47 38.9**	**+0.2**
UGLR	**Uglovaya**	**1.14**	**259**	eP	**Pn**	**09 47 25.5**	**+0.4**
SMAR	**Somma**	**1.14**	**262**	eP	**Pn**	**09 47 25.2**	**-0.1**
SMAR				eS	**Sn**	**09 47 39.8**	**-0.2**
KRER	**Koryakskii**	**1.17**	**264**	eP	**Pn**	**09 47 25.9**	**+0.3**
KRER				eS	**Sn**	**09 47 40.9**	**+0.3**
AVH	**Avacha**	**1.18**	**262**	eP	**Pn**	**09 47 26.0**	**+0.3**
AVH				eS	**Sn**	**09 47 41.7**	**+1.0**
KRX	**Arik**	**1.22**	**267**	eP	**Pn**	**09 47 26.3**	**0.0**
KRX				eS	**Sn**	**09 47 41.5**	**-0.3**
DALK	**Dalny**	**1.23**	**251**	eP	**Pn**	**09 47 26.3**	**+0.1**
DALK				eS	**Sn**	**09 47 41.8**	**0.0**
KOK	**Koryaka**	**1.24**	**264**	eP	**Pn**	**09 47 26.6**	**+0.2**
KOK				eS	**Sn**	**09 47 42.0**	**-0.1**
MKZ	**Mys Kozlova**	**1.28**	**28**	eP	**Pn**	**09 47 27.1**	**+0.2**
MKZ				eS	**Sn**	**09 47 42.8**	**-0.2**
PET	**Petropavlovsk**	**1.29**	**252**	eP	**Pn**	**09 47 27.2**	**+0.2**
PET				eS	**Sn**	**09 47 43.3**	**+0.1**
KRMR	**Karymshinskiy**	**1.66**	**249**	eP	**Pn**	**09 47 32.2**	**+0.2**
KRMR				eS	**Sn**	**09 47 52.5**	**+0.4**
RUS	**Russkaya**	**1.66**	**233**	eP	**Pn**	**09 47 32.3**	**+0.3**
RUS				eS	**Sn**	**09 47 51.9**	**-0.2**
KZV	**Kizimen**	**1.69**	**352**	eP	**Pn**	**09 47 33.1**	**+0.4**
KZV				eS	**Sn**	**09 47 53.6**	**+0.3**
TUMD	**Tumrok D**	**1.78**	**355**	eP	**Pn**	**09 47 33.9**	**+0.2**
TUMD				eS	**Sn**	**09 47 54.9**	**-0.3**
MTVR	**Mutnovka**	**1.79**	**239**	eP	**Pn**	**09 47 34.7**	**+0.7**
GRL	**Gorelyy**	**1.81**	**242**	eP	**Pn**	**09 47 35.3**	**+1.0**
GRL				eS	**Sn**	**09 47 57.2**	**+1.1**
PETK	**Petropavlovsk-**	**1.82**	**261**	P	**Pn**	**09 47 35.1**	**+0.8**
	8.1nm,0.3s,baz=89,slow=21,SNR=124						
PETK				S	**Sn**	**09 47 57.8**	**+1.5**
	21nm,0.3s,baz=230,slow=47,SNR=10						
TUMR	**Tumrok**	**1.88**	**351**	eP	**Pn**	**09 47 36.0**	**+0.9**
TUMR				eS	**Sn**	**09 47 58.6**	**+0.9**
ASAK	**Asacha**	**1.99**	**239**	eP	**Pn**	**09 47 38.2**	**+1.5**
ASAK				eS	**Sn**	**09 48 02.2**	**+1.8**
APC	**Apacha**	**2.18**	**258**	eP	**Pn**	**09 47 41.2**	**+2.0**
APC				eS	**Sn**	**09 48 07.8**	**+2.8**
KDTR	**Khodutka, Kamc**	**2.28**	**225**	eP	**Pn**	**09 47 41.7**	**+1.2**
KDTR				eS	**Sn**	**09 48 08.2**	**+0.9**
KMNR	**Kamenistaya**	**2.34**	**354**	eP	**Pn**	**09 47 42.9**	**+1.5**
KMNR				eS	**Sn**	**09 48 10.4**	**+1.4**
BZMR	**Bezymyannaya**	**2.51**	**357**	eP	**Pn**	**09 47 45.5**	**+1.7**
BZGR	**Bezymyannyi-Gr**	**2.51**	**0**	eP	**Pn**	**09 47 45.4**	**+1.6**
KIRR	**Kirishev**	**2.53**	**356**	eP	**Pn**	**09 47 45.6**	**+1.5**
KPT	**Kopyto**	**2.55**	**354**	eP	**Pn**	**09 47 45.9**	**+1.6**
ZLN	**Zelenaya**	**2.59**	**1**	eP	**Pn**	**09 47 46.9**	**+2.1**
LGNR	**Loginova**	**2.65**	**0**	eP	**Pn**	**09 47 48.3**	**+2.4**
LGNR				eS	**Sn**	**09 48 20.0**	**+3.1**
KOZ	**Kozyrevsk**	**2.67**	**350**	eP	**Pn**	**09 47 46.8**	**+0.9**
CIRR	**Tsirk**	**2.68**	**1**	eP	**Pn**	**09 47 48.2**	**+2.0**
CIRR				eS	**Sn**	**09 48 20.2**	**+2.7**
ESO	**Esso**	**2.75**	**336**	eP	**Pn**	**09 47 47.5**	**+0.6**
KRSR	**Krestovskiy**	**2.79**	**359**	eP	**Pn**	**09 47 48.9**	**+1.3**
KLY	**Klyuchi**	**2.88**	**360**	eP	**Pn**	**09 47 50.4**	**+1.6**
KLY				eS	**Sn**	**09 48 23.4**	**+1.3**
SRDR	**Sredinnyy**	**2.94**	**349**	eP	**Pn**	**09 47 50.1**	**+0.5**
KBTR	**Krutoberegovo**	**3.04**	**23**	eP	**Pn**	**09 47 52.1**	**+1.2**
KBG	**Krutoberegovo**	**3.06**	**22**	eP	**Pn**	**09 47 53.3**	**+2.2**
PAU	**Pauzhetka**	**3.08**	**232**	eP	**Pn**	**09 47 55.0**	**+3.5**
SRKR	**Sorokina**	**3.24**	**5**	eP	**Pn**	**09 47 55.7**	**+2.0**
BKI	**Bering**	**3.57**	**58**	eP	**Pn**	**09 47 57.6**	**-0.5**
BKI				eS	**Sn**	**09 48 36.1**	**-2.8**
INK	**Inuvik**	**33.38**	**38**	P	**P**	**09 53 38.6**	**+0.5**
	0.7nm,1.0s,baz=293,slow=7.3,SNR=2.2						
H11N2	**WAKE ISLAND Hy**	**33.98**	**169**	T	T	10 30 13.9	
	baz=353,slow=76,SNR=24						
H11N3	**WAKE ISLAND Hy**	**34.00**	**169**	T	T	10 30 13.4	
	baz=353,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	**34.00**	**170**	T	T	10 30 10.1	
	baz=353,slow=76,SNR=21						
H11S1	**WAKE ISLAND Hy**	**35.17**	**170**	T	T	10 31 24.2	
	baz=352						
H11S3	**WAKE ISLAND Hy**	**35.18**	**170**	T	T	10 31 38.6	
H11S2	**WAKE ISLAND Hy**	**35.19**	**170**	T	T	10 31 41.7	
	baz=352						
YKA	**Yellowknife Ar**	**42.67**	**43**	P	**P**	**09 54 57.1**	**+0.8**
	0.2nm,0.5s,baz=296,slow=8.1,SNR=3.9						
KURBB	**Kurchatov Arra**	**47.95**	**302**	P	**P**	**09 55 34.5**	**-3.7**
	0.7nm,0.3s,baz=56,slow=8.0,SNR=1.5						
MKAR	**Makanchi Array**	**48.33**	**296**	P	**P**	**09 55 38.3**	**-2.9**
	0.3nm,0.8s,baz=58,slow=5.4,SNR=1.9						
PDAR	**Pinedale Array**	**57.05**	**61**	P	**P**	**09 56 47.7**	**+1.8**
	0.2nm,0.5s,baz=289,slow=5.6,SNR=3.1						
FINES	**FINESS Array B**	**59.94**	**337**	P	**P**	**09 57 03.6**	**-1.9**
	2.5nm,1.0s,baz=46,slow=8.2,SNR=2.1						
HFS	**Hagfors**	**63.73**	**342**	P	**P**	**09 57 28.2**	**-2.7**
	2.6nm,1.0s,baz=54,slow=7.4,SNR=4.0						
TXAR	**Lajitas Array**	**70.18**	**67**	P	**P**	**09 58 14.0**	**+1.5**
	0.4nm,0.6s,baz=296,slow=4.5,SNR=4.2						

*THE **03** 09:48:15.0, 38°.32N×20°.40E, h2km±28km, ML3.4/1, Error ellipse: s-maj=28.8km s-min=0.6km az=202.0*
*ATH **03** 09:48:16.1, 38°.24N×20°.40E, h9km±1km, ML3.2/2, Error ellipse: s-maj=2.3km s-min=1.2km az=300.0*
ISC 03 09:48:13.3±1.4**, 38°.35N**±0°.04×**20°.34E**±0°.08**, h16**km±6km**, n16, σ0s.80**/27**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.11**	**144**	P	**Pb**	**09 48 18.1**	**+1.0**
KEF4				S	**Sb**	**09 48 19.1**	**-0.4**
KEF1	**Kardakata, Kep**	**0.12**	**124**	P	**Pg**	**09 48 17.9**	**+0.8**
KEF1				S	**Sg**	**09 48 20.0**	**+0.5**
KEF3	**Kipouria, Keph**	**0.14**	**178**	P	**Pb**	**09 48 18.0**	**+0.4**
KEF3				S	**Sg**	**09 48 19.2**	**-0.7**
CHV1	**Chavriata, Kef**	**0.17**	**169**	P	**Pb**	**09 48 17.8**	**-0.2**
CHV1				S	**Sg**	**09 48 19.0**	**-1.4**
VSK1	**VASILIKIADES**	**0.18**	**70**	P	**Pb**	**09 48 18.0**	**-0.4**
VSK1				S	**Sb**	**09 48 20.1**	**-1.6**
ARG2	**Argostoli**	**0.20**	**146**	P	**Pb**	**09 48 18.5**	**-0.1**
ARG2				S	**Sg**	**09 48 20.1**	**-1.3**
FSK	**Fiskardo**	**0.21**	**57**	P	**Pb**	**09 48 18.7**	**0.0**
FSK				S	**Sb**	**09 48 21.9**	**-0.4**
KEF2	**Argostoli. Kep**	**0.21**	**148**	P	**Pb**	**09 48 18.7**	**-0.2**
VLS	**Valsamata**	**0.26**	**131**	P	**Pb**	**09 48 19.7**	**+0.1**
VLS				S	**Sg**	**09 48 22.2**	**-0.8**
	18μm,0.2s						
VLS	**Valsamata**	**0.26**	**131**	P	**Pb**	**09 48 19.6**	**0.0**
VLS				S	**Sg**	**09 48 22.2**	**-0.8**
VLS				AML	AML	09 48 22.3	
	comp=N,48228μm,0.3s						
VLS				AML	AML	09 48 22.4	
	comp=E,34876μm,0.1s						
EVGI	**Lefkada island**	**0.37**	**42**	P	**Pb**	**09 48 22.0**	**+0.5**
EVGI				S	**Sb**	**09 48 27.5**	**+0.5**
EVGI	**Lefkada island**	**0.37**	**42**	P	**Pn**	**09 48 24.9**	**+0.9**
VLMS	**Volimes, Zakyn**	**0.53**	**152**	P	**Pb**	**09 48 24.2**	**-0.1**
VLMS				S	**Sg**	**09 48 30.5**	**-0.6**
VLMS				AML	AML	09 48 31.7	
	comp=E,5124μm,0.2s						
VLMS				AML	AML	09 48 33.2	
	comp=N,6977μm,0.4s						
TSLK	**Tsoukalades, L**	**0.54**	**27**	P	**Pn**	**09 48 25.2**	**-1.1**
PDO	**Prodromos**	**0.71**	**69**	P	**Pn**	**09 48 29.2**	**+0.6**
RLS	**Riolos of Patr**	**0.93**	**108**	P	**Pn**	**09 48 32.5**	**+0.8**

*IDC **03** 09:48:34.4±1.3, 38°.40N×20°.21E, h0km, mb3.5/4, mb1 3.5/6, mb1mx3.3/49, mbtmp3.5/6, ML3.4/2, MS3.6/1, Ms1 3.6/1, ms1mx2.5/35, Error ellipse: s-maj=30.8km s-min=21.7km az=84.0*
*THE **03** 09:48:35.8, 38°.25N×20°.41E, h5km±1km, ML3.1/2, Error ellipse: s-maj=1.2km s-min=0.4km az=240.0*
*ATH **03** 09:48:35.6, 38°.25N×20°.39E, h3km±1km, ML3.2/2, Error ellipse: s-maj=2.5km s-min=1.2km az=260.0*
ISC 03 09:48:35.3±0.9**, 38°.26N**±0°.03×**20°.37E**±0°.05**, h6**km±6km**, n25, σ0s.90**/35**, mb3.5**/4**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.04**	**91**	P	**Pg**	**09 48 36.3**	**-0.3**
KEF3	**Kipouria, Keph**	**0.06**	**200**	P	**Pg**	**09 48 37.1**	**+0.3**
CHV1	**Chavriata, Kef**	**0.07**	**175**	P	**Pg**	**09 48 37.4**	**+0.3**
CHV1				S	**Sg**	**09 48 38.8**	**+0.5**
KEF1	**Kardakata, Kep**	**0.08**	**76**	P	**Pg**	**09 48 36.9**	**-0.2**
ARG2	**Argostoli**	**0.12**	**132**	P	**Pg**	**09 48 37.9**	**+0.1**
ARG2				S	**Sg**	**09 48 39.4**	**-0.1**
KEF2	**Argostoli. Kep**	**0.13**	**136**	P	**Pg**	**09 48 38.0**	**0.0**
KEF2				S	**Sg**	**09 48 39.9**	**+0.2**
VLS	**Valsamata**	**0.19**	**116**	P	**Pg**	**09 48 38.8**	**-0.2**
VLS				S	**Sg**	**09 48 41.6**	**0.0**
	14μm,0.2s						
VLS	**Valsamata**	**0.19**	**116**	P	**Pg**	**09 48 38.8**	**-0.2**
VLS				S	**Sg**	**09 48 41.6**	**0.0**
VLS				AML	AML	09 48 42.4	
	comp=E,27470μm,0.1s						
VLS				AML	AML	09 48 45.5	
	comp=N,29038μm,0.3s						
FSK	**Fiskardo**	**0.25**	**36**	P	**Pg**	**09 48 40.5**	**+0.3**
FSK				S	**Sg**	**09 48 44.3**	**+0.8**
	comp=N,6μm,0.6s						
FSK	**Fiskardo**	**0.25**	**36**	P	**Pg**	**09 48 40.4**	**+0.3**
FSK				S	**Sg**	**09 48 44.8**	**+1.3**
EVGI	**Lefkada island**	**0.42**	**31**	P	**Pg**	**09 48 43.7**	**+0.2**
EVGI				S	**Sg**	**09 48 49.6**	**+0.5**
EVGI	**Lefkada island**	**0.42**	**31**	P	**Pg**	**09 48 44.1**	**+0.6**
MGNA	**Meganis**	**0.52**	**39**	P	**Pg**	**09 48 45.3**	**+0.1**
MGNA				S	**Sg**	**09 48 52.8**	**+0.8**
MGNA				AML	AML	09 48 53.7	
	comp=N,6918μm,0.5s						
MGNA				AML	AML	09 48 53.9	
	comp=E,5316μm,0.3s						
PDO	**Prodromos**	**0.72**	**62**	P	**Pg**	**09 48 49.9**	**+0.8**
RLS	**Riolos of Patr**	**0.89**	**103**	P	**Pg**	**09 48 51.6**	**-0.7**
PVO	**Paravola**	**0.97**	**68**	P	**Pg**	**09 48 53.8**	**-0.2**
DRO	**Drossia**	**1.10**	**106**	P	**Pg**	**09 48 55.8**	**-0.6**
ALIK	**Aliki, Aigiali**	**1.37**	**89**	P	**Pn**	**09 49 00.7**	**-0.2**
KLV	**Kalavryta, Ach**	**1.42**	**98**	P	**Pn**	**09 49 00.6**	**-1.1**
IDI	**Anoyia**	**4.68**	**128**	Pn	**Pn**	**09 49 49.0**	**+2.4**
	comp=E,0.4nm,0.3s,baz=29,slow=19,SNR=2.8						
IDI				Sn	**Sn**	**09 50 43.7**	**+2.4**
	comp=E,1.2nm,0.3s,baz=262,slow=14,SNR=1.6						
GERES	**GERESS Array B**	**11.63**	**338**	Pn	**Pn**	**09 51 19.3**	**-2.5**
	comp=E,0.2nm,0.3s,baz=162,slow=14,SNR=3.0						
HFS	**Hagfors**	**22.30**	**351**	P	**P**	**09 53 33.0**	**-0.2**
	comp=E,1.3nm,0.6s,baz=174,slow=16,SNR=1.6						
FINES	**FINESS Array B**	**23.48**	**7**	P	**P**	**09 53 44.8**	**-0.6**
	comp=E,1.0nm,0.6s,baz=198,slow=8.5,SNR=4.6						
TORD	**Torodi Ar. Bea**	**30.02**	**219**	P	**P**	**09 54 45.3**	**+0.4**
	comp=E,0.5nm,0.8s,baz=41,slow=7.0,SNR=2.9						
TORD				LR	LR	10 07 05.3	
	comp=E,97nm,19.0s,baz=320,slow=37						
MKAR	**Makanchi Array**	**45.36**	**58**	P	**P**	**09 56 54.1**	**-0.2**
	comp=E,0.5nm,0.5s,baz=272,slow=7.6,SNR=6.8						

*NEIC **03** 10:10:56.5±2.0, 14°.8S±0°.1×167°.5E±0°.2, h127km±7km, mb4.6/22, Error ellipse: s-maj=21.7km s-min=15.1km az=95.0*
*IDC **03** 10:10:59.8±5.1, 15°.01S×167°.29E, h141km±40km, mb4.1/9, mb1 4.1/10, mb1mx3.8/33, mbtmp4.5/10, MS2.8/1, Ms1 2.8/1, ms1mx2.5/26, Error ellipse: s-maj=38.0km s-min=18.8km az=39.0*
ISC 03 10:10:57.3±1.2**, 14°.88S**±0°.10×**167°.4E**±0°.2**, h129**km**, n38, σ0s.93**/40**, mb4.6**/16**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.60**	**201**		**Pn**	**10 11 16.5**	**-0.4**
SANVU				Sn	**Sn**	**10 11 30.1**	**-1.7**
DZM	**Mont Dzumac**	**7.21**	**187**	P	**Pn**	**10 12 40.4**	**+0.1**
	8.8nm,0.3s,baz=25,slow=14,SNR=80						
DZM				S	**Sn**	**10 13 60.0**	**-0.9**
	1.4nm,0.3s,baz=299,slow=21,SNR=3.6						
NOUC	**Port Laguerre**	**7.26**	**188**		**Pn**	**10 12 41.9**	**+1.1**
NOUC					**Sn**	**10 14 02.6**	**+0.8**
HNR	**Honiara**	**9.09**	**306**	LR	LR	10 16 27.4	
	comp=Z,53nm,19.5s,baz=128,slow=36						
EIDS	**Eidsvold**	**18.54**	**233**	P	**Pn**	**10 15 05.0**	**-0.8**
EIDS				IAmb	IAmb	10 15 07.0	
	comp=Z,22nm,0.8s						
CTA	**Charters Tower**	**20.84**	**253**	P	**P**	**10 15 30.2**	**+1.3**
	comp=Z,8.9nm,0.8s,baz=74,slow=13,SNR=7.4						
OUZ	**Omahuta**	**21.00**	**166**	P	**P**	**10 15 30.8**	**+0.3**
OUZ				IAmb	IAmb	10 15 32.6	
	comp=Z,32nm,0.9s						
HIZ	**Hauiti**	**24.44**	**166**	P	**P**	**10 16 05.3**	**+1.3**
URZ	**Urewera**	**24.82**	**162**	P	**P**	**10 16 09.0**	**+1.6**
	comp=Z,18nm,0.9s,baz=303,slow=5.8,SNR=9.1						
URZ	**Urewera**	**24.82**	**162**	P	**P**	**10 16 07.4**	**0.0**
URZ				IAmb	IAmb	10 16 11.4	
	comp=Z,29nm,1.1s						
BKZ	**Black Stump Fm**	**25.48**	**163**	P	**P**	**10 16 12.9**	**-0.6**
BKZ				IAmb	IAmb	10 16 15.0	
	comp=Z,9.0nm,0.5s						
BFZ	**Birch Farm**	**26.84**	**165**	P	**P**	**10 16 24.1**	**-1.5**
TUWZ	**Tuamarina**	**27.05**	**169**	P	**P**	**10 16 27.4**	**-0.1**
THZ	**Tophouse**	**27.21**	**171**	P	**P**	**10 16 28.8**	**-0.2**
THZ				IAmb	IAmb	10 16 39.5	
	comp=Z,18nm,1.3s						
MSWZ	**Moikau Station**	**27.30**	**167**	P	**P**	**10 16 28.3**	**-1.5**
KHZ	**Kahutara**	**27.94**	**170**	P	**P**	**10 16 34.4**	**-1.1**
KHZ				IAmb	IAmb	10 16 45.5	
	comp=Z,16nm,1.2s						
LTZ	**Lake Taylor**	**28.12**	**172**	P	**P**	**10 16 36.5**	**-0.6**
OXZ	**Oxford**	**28.63**	**173**	P	**P**	**10 16 41.2**	**-0.4**
OXZ				IAmb	IAmb	10 16 41.6	
	comp=Z,8.1nm,0.6s						
FOZ	**Fox Glacier**	**28.63**	**176**	P	**P**	**10 16 41.8**	**+0.3**
FOZ				IAmb	IAmb	10 16 43.5	
	comp=Z,14nm,0.8s						
RPZ	**Rata Peaks**	**28.91**	**175**	P	**P**	**10 16 43.9**	**-0.1**
	comp=Z,11nm,0.7s,baz=333,slow=3.4,SNR=11						
RPZ	**Rata Peaks**	**28.91**	**175**	P	**P**	**10 16 43.6**	**-0.5**
RPZ				IAmb	IAmb	10 16 45.2	
	comp=Z,16nm,0.9s						
STKA	**Stephens Creek**	**29.01**	**230**	P	**P**	**10 16 46.0**	**+0.9**
	comp=Z,5.0nm,0.4s,baz=49,slow=8.6,SNR=17						
STKA	**Stephens Creek**	**29.01**	**230**	P	**P**	**10 16 46.0**	**+0.9**
MQZ	**McQueen's Vall**	**29.08**	**172**	P	**P**	**10 16 45.0**	**-0.5**
LBZ	**Lake Benmore**	**29.50**	**176**	P	**P**	**10 16 49.0**	**-0.3**
WKZ	**Wanaka**	**29.88**	**178**	P	**P**	**10 16 53.2**	**+0.5**
WKZ				IAmb	IAmb	10 16 58.7	
	comp=Z,18nm,1.1s						
MLZ	**Mavora Lakes**	**30.40**	**179**	P	**P**	**10 16 58.2**	**+1.0**
WB0	**Warramunga Arr**	**31.87**	**256**	P	**P**	**10 17 08.8**	**-1.7**
WB0				IAmb	IAmb	10 17 10.3	
	comp=Z,19nm,1.3s						
WB2	**Warramunga Arr**	**31.92**	**256**	P	**P**	**10 17 10.1**	**-0.8**
WRA	**Warramunga Arr**	**31.93**	**256**	P	**P**	**10 17 10.0**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=84,slow=8.4,SNR=5.1						
AS31	**Alice Springs**	**32.76**	**249**	P	**P**	**10 17 17.5**	**-0.8**
ASAR	**Alice Springs**	**32.76**	**249**	P	**P**	**10 17 17.4**	**-0.9**
	comp=Z,5.6nm,0.7s,baz=77,slow=9.3,SNR=78						
ASAR				PcP	**PcP**	**10 20 00.3**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=69,slow=3.1,SNR=5.3						
ASAR	**Alice Springs**	**32.76**	**249**	P	**P**	**10 17 17.1**	**-1.2**
VNDA	**Vanda**	**62.72**	**181**	P	**P**	**10 21 08.2**	**+0.1**
	comp=Z,2.9nm,0.5s,baz=32,slow=5.9,SNR=8.3						
VNDA	**Vanda**	**62.72**	**181**	P	**P**	**10 21 07.8**	**-0.2**
QSPA	**South Pole Qui**	**75.15**	**180**	P	**P**	**10 22 24.9**	**-0.4**
QSPA				IAmb	IAmb	10 22 25.7	
	comp=Z,7.9nm,0.9s						
SONM	**Songino Array**	**82.70**	**324**	P	**P**	**10 23 08.2**	**+1.5**
	comp=Z,0.8nm,0.9s,baz=111,slow=2.1,SNR=4.2						
MKAR	**Makanchi Array**	**97.41**	**316**	P	Pdif	10 24 17.6	+1.3
	comp=Z,0.7nm,0.8s,baz=99,slow=7.5,SNR=3.7						

*IDC **03** 10:24:02.7±0.8, 38°.37N×20°.50E, h0km, mb3.8/15, mb1 3.9/22, mb1mx3.8/47, mbtmp3.8/22, ML3.6/7, MS3.0/7, Ms1 3.0/7, ms1mx2.7/56, Error ellipse: s-maj=16.1km s-min=12.0km az=178.0*
*THE **03** 10:24:03.6, 38°.28N×20°.45E, h9km±1km, ML3.9/11, Error ellipse: s-maj=1.1km s-min=0.3km az=249.0*
*ATH **03** 10:24:03.2, 38°.26N×20°.46E, h13km±1km, ML3.9/15, Error ellipse: s-maj=1.8km s-min=0.8km az=262.0*
*PDG **03** 10:24:03.7±0.3, 38°.35N×20°.38E, h19km±1km, ML4.1/14, Error ellipse: s-maj=1.7km s-min=0.7km az=90.0*
*BEO **03** 10:24:04.4±0.8, 38°.25N×20°.01E, h19km±5km, ML4.0/8*
ISC 03 10:24:03.6±0.7**, 38°.29N**±0°.02×**20°.45E**±0°.02**, h9**km±4km**, n166, σ1s.48**/217**, mb3.9**/15**, 16C-6D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF1	**Kardakata, Kep**	**0.02**	**124**	P	**Pg**	**10 24 05.3**	**0.0**
KEF1				S	**Sg**	**10 24 06.3**	**-0.1**
KEF4	**Livadi, Kephal**	**0.04**	**207**	P	**Pg**	**10 24 05.3**	**0.0**
KEF4				S	**Sg**	**10 24 06.6**	**0.0**
KEF3	**Kipouria, Keph**	**0.12**	**221**	P	**Pg**	**10 24 06.2**	**-0.1**
KEF3				S	**Sg**	**10 24 08.2**	**0.0**
CHV1	**Chavriata, Kef**	**0.12**	**205**	P	**Pg**	**10 24 06.2**	**-0.1**
CHV1				S	**Sg**	**10 24 08.3**	**0.0**
KEF2	**Argostoli. Kep**	**0.13**	**165**	P	**Pg**	**10 24 06.4**	**-0.2**
KEF2				S	**Sg**	**10 24 08.4**	**-0.2**
VLS	**Valsamata**	**0.16**	**135**	P	**Pg**	**10 24 06.8**	**-0.2**
VLS				S	**Sg**	**10 24 09.3**	**-0.2**
	205μm,0.2s						
VLS	**Valsamata**	**0.16**	**135**	P	**Pg**	**10 24 06.8**	**-0.2**
VLS				S	**Sg**	**10 24 09.4**	**0.0**
VLS				AML	AML	10 24 09.9	
VLS				AML	AML	10 24 10.2	
FSK	**Fiskardo**	**0.19**	**29**	P	**Pg**	**10 24 08.1**	**+0.5**
FSK				S	**Sg**	**10 24 11.3**	**+1.0**
	103μm,0.2s						
FSK	**Fiskardo**	**0.19**	**29**	P	**Pg**	**10 24 08.0**	**+0.5**
FSK				S	**Sg**	**10 24 11.3**	**+1.0**
FSK				AML	AML	10 24 12.2	
FSK				AML	AML	10 24 12.3	
EVGI	**Lefkada island**	**0.37**	**27**	P	**Pg**	**10 24 11.2**	**+0.3**
EVGI				S	**Sg**	**10 24 16.0**	**+0.2**
EVGI	**Lefkada island**	**0.37**	**27**	P	**Pg**	**10 24 11.2**	**+0.3**
EVGI				S	**Sg**	**10 24 16.7**	**+0.9**
VLMS	**Volimes, Zakyn**	**0.45**	**157**	P	**Pg**	**10 24 11.8**	**-0.5**
VLMS				S	**Sg**	**10 24 17.8**	**-0.5**
VLMS				AML	AML	10 24 20.4	
	comp=E,62409μm,0.2s						
VLMS				AML	AML	10 24 23.6	
	comp=N,71164μm,0.3s						
MGNA	**Meganis**	**0.45**	**37**	P	**Pg**	**10 24 12.4**	**0.0**
MGNA				S	**Sb**	**10 24 19.8**	**-0.8**

MGNA				AML	AML	10 24 20.7	
	comp=E,88911μm,0.2s						
MGNA				AML	AML	10 24 20.8	
	comp=N,88024μm,0.2s						
LKD2	Lefkada island	0.52	18	P	Pg	10 24 13.7	-0.1
LKD2				S	Sg	10 24 21.3	+0.6
	comp=N,11μm,0.7s						
LKD2	Lefkada island	0.52	18	P	Pg	10 24 13.6	-0.2
LKD2				S	Sb	10 24 21.8	-0.9
LKD2				AML	AML	10 24 28.3	
	comp=N,25042μm,1.0s						
LKD2				AML	AML	10 24 29.7	
	comp=E,19953μm,0.5s						
TSLK	Tsoukalades, L	0.56	17	P	Pg	10 24 14.3	-0.1
TSLK				S	Sb	10 24 22.9	-0.7
	comp=E,13μm,0.8s						
TSLK	Tsoukalades, L	0.56	17	P	Pg	10 24 14.4	0.0
TSLK				S	Sb	10 24 23.2	-0.4
PDO	Prodromos	0.66	62	P	Pg	10 24 15.9	-0.3
PDO				S	Sb	10 24 26.2	-0.2
	comp=E,22μm,0.4s						
PDO	Prodromos	0.66	62	P	Pg	10 24 16.2	-0.1
PDO				AML	AML	10 24 28.3	
	comp=E,31865μm,0.6s						
PDO				AML	AML	10 24 29.1	
	comp=N,28584μm,0.3s						
RLS	Riolos of Patr	0.84	106	P	Pg	10 24 19.1	-0.6
RLS				S	Sb	10 24 31.4	-0.2
	comp=N,4μm,0.7s						
RLS	Riolos of Patr	0.84	106	P	Pg	10 24 19.2	-0.5
PVO	Paravola	0.91	69	P	Pg	10 24 20.9	-0.1
PVO	Paravola	0.91	69	P	Pg	10 24 21.1	0.0
PVO				AML	AML	10 24 37.4	
	comp=E,14610μm,0.6s						
PVO				AML	AML	10 24 47.0	
	comp=N,15796μm,0.8s						
DRO	Drossia	1.05	108	P	Pg	10 24 23.2	-0.6
DRO				S	Sn	10 24 38.7	-0.6
	comp=N,8μm,0.6s						
DRO	Drossia	1.05	108	P	Pg	10 24 23.3	-0.6
DRO				AML	AML	10 24 49.8	
	comp=N,14397μm,0.4s						
DRO				AML	AML	10 24 51.2	
	comp=E,18433μm,0.6s						
EFP	Efpalio	1.16	83	P	Pb	10 24 24.5	-1.1
EFP				S	Sn	10 24 42.2	+0.5
	comp=E,5μm,0.6s						
EFP	Efpalio	1.16	83	P	Pb	10 24 24.6	-1.1
EFP				AML	AML	10 24 55.5	
	comp=N,6920μm,0.9s						
EFP				AML	AML	10 24 55.7	
	comp=E,10479μm,0.6s						
ANX	Ano Chora	1.20	75	P	Pb	10 24 25.7	-0.7
ANX				S	Sn	10 24 42.8	-0.1
	comp=E,9μm,0.7s						
ANX	Ano Chora	1.20	75	P	Pb	10 24 25.5	-1.0
ANX				AML	AML	10 24 50.5	
	comp=N,19702μm,0.6s						
ANX				AML	AML	10 24 51.6	
	comp=E,17994μm,0.9s						
LAKA	Lakka	1.21	92	P	Pb	10 24 25.6	-1.0
LAKA				S	Sn	10 24 43.1	0.0
	comp=E,3μm,0.4s						
LAKA	Lakka	1.21	92	P	Pb	10 24 25.6	-1.0
LAKA				AML	AML	10 24 46.2	
	comp=N,8114μm,0.3s						
LAKA				AML	AML	10 24 58.6	
	comp=E,4530μm,0.8s						
EVR	Evrytania	1.24	59	P	Pn	10 24 26.1	-0.9
IGT	Igoumenitsa	1.24	356	ePg	Pb	10 24 27.2	0.0
IGT				eSg	Sn	10 24 46.8	+2.9
IGT	Igoumenitsa	1.24	356	P	Pg	10 24 27.4	0.0
IGT				AML	AML	10 24 48.3	
	comp=E,5500μm,0.3s						
IGT				AML	AML	10 24 58.0	
	comp=N,6158μm,0.6s						
AMT	Artemida-Makis	1.25	127	P	Pn	10 24 26.3	-1.0
AMT				AML	AML	10 24 55.2	
	comp=N,10711μm,0.9s						
AMT				AML	AML	10 25 01.8	
	comp=E,9114μm,1.0s						
SERG	Sergoula	1.27	84	P	Pn	10 24 26.4	-1.1
SERG	Sergoula	1.27	84	P	Pn	10 24 26.7	-0.8
TRIZ	Trizonia	1.28	86	P	Pn	10 24 26.5	-1.1
TRIZ				S	Sn	10 24 45.4	+0.6
	comp=E,4μm,0.5s						
TRIZ	Trizonia	1.28	86	P	Pn	10 24 26.4	-1.1
KALE	Kalithea	1.34	85	P	Pn	10 24 27.4	-1.0
KALE	Kalithea	1.34	85	P	Pn	10 24 27.4	-1.0
KLV	Kalavryta, Ach	1.37	100	P	Pn	10 24 28.0	-0.8
KLV	Kalavryta, Ach	1.37	100	P	Pn	10 24 28.1	-0.7
JAN	Janina	1.40	13	P	Pg	10 24 31.1	+0.7
JAN				AML	AML	10 24 58.1	
	comp=N,5322μm,0.5s						
JAN				AML	AML	10 24 59.1	
	comp=E,5649μm,0.6s						
MAKR	Makrakomi, Fth	1.50	61	P	Pn	10 24 31.1	+0.4
KASA	Kassiopi	1.51	345	P	Pb	10 24 31.4	-0.3
MEV	Metsovon	1.61	22	P	Pb	10 24 34.0	+0.4
ITM	Ithomi	1.62	133	P	Pn	10 24 32.2	0.0
ITM	Ithomi	1.62	133	P	Pn	10 24 32.1	0.0
ITM				AML	AML	10 25 05.0	
	comp=N,4029μm,0.8s						
ITM				AML	AML	10 25 17.7	
	comp=E,3640μm,1.8s						
AGG	Agios Georgios	1.65	63	P	Pb	10 24 33.9	-0.2
PYL	PYLOS	1.73	143	P	Pn	10 24 33.7	-0.1
THL	Klokotos Trika	1.77	43	P	Pb	10 24 36.2	+0.1
VLX	Vlachokerasia	1.79	120	P	Pb	10 24 36.2	-0.2
DID	Didima	2.34	109	P	Pb	10 24 44.2	-1.7
FNA	Florina	2.59	16	ePn	Pn	10 24 47.4	+1.7
OHR	Ohrid	2.83	5	ePn	Pn	10 24 50.9	+1.9
TIP	Timpagrande	3.02	288	⇓P	Pn	10 24 51.9	+0.4
TIP				⇑S	Sn	10 25 28.0	+0.2
TIR	Tirane	3.08	352	ePn	Pn	10 24 52.8	+0.4
TIR	Tirane	3.08	352	⇑P	Pn	10 24 52.7	+0.4
TIR				⇑S	Sn	10 25 28.4	-1.0
TAR1	Taranto	3.31	313	ePn	Pn	10 24 56.0	+0.5
TAR1				Sn	Sn	10 25 33.6	-1.4
VAY	Valandovo	3.44	28	ePn	Pb	10 25 01.0	-3.6
VAY	Valandovo	3.44	28	ePn	Pn	10 24 57.3	+0.1
MASS	Massafra	3.46	314	ePn	Pn	10 24 57.6	0.0
MASS				Sn	Sn	10 25 37.5	-1.2
STIP	Stip	3.65	21	ePn	Pn	10 25 03.0	+2.8
SRS	Serrai	3.72	40	ePn	Pb	10 25 05.5	-3.9
MATE	Matera	3.73	310	⇑P	Pn	10 25 01.4	+0.2
MATE				⇑S	Sn	10 25 42.1	-3.2
ULC	Ulcinj	3.78	346	⇓iPn	Pn	10 25 01.3	-0.7
ULC				iSn	Sn	10 25 45.3	-1.3
SG1	Sgolgore (BA)	3.87	312	ePn	Pn	10 25 03.3	+0.1
SG1				Sn	Sn	10 25 46.7	-2.0
BAI	Bari	3.93	317	ePn	Pn	10 25 04.0	0.0
BAI				Sn	Sn	10 25 47.7	-2.6
DRME	Dracevica, Mon	4.01	346	ePn	Pn	10 25 04.7	-0.4
DRME	Dracevica, Mon	4.01	346	ePn	Pn	10 25 04.5	-0.6
DRME				eSn	Sn	10 25 50.9	-1.3
BUM	Brajici-Budva	4.18	344	ePn	Pn	10 25 06.5	-1.0
BUM				eSn	Sn	10 25 54.3	-2.1
APE	Apeiranthos	4.21	105	⇓P	Pn	10 25 12.5	+4.5
PDG	Podgorica	4.23	348	ePn	Pn	10 25 08.0	-0.2
PDG	Podgorica	4.23	348	⇑P	Pn	10 25 08.1	-0.2
PDG				⇑S	Sn	10 25 55.9	-1.7
PDG	Podgorica	4.23	348	ePn	Pn	10 25 07.9	-0.2
TTG	Podgorica	4.23	348	ePn	Pn	10 25 07.5	-0.7
TTG				eSn	Sn	10 25 56.1	-1.6
PVY	Plav	4.32	355	ePn	Pn	10 25 08.8	-0.6
PVY				eSn	Sn	10 25 58.2	-1.7
CEME	Cevo	4.41	345	ePn	Pn	10 25 09.6	-1.0
CEME				eSn	Sn	10 26 00.2	-1.9
HCY	Herceg Novi	4.41	341	ePn	Pn	10 25 06.8	-3.8
HCY	Herceg Novi	4.41	341	ePn	Pn	10 25 09.1	-1.3
HCY				eSn	Sn	10 26 00.0	-2.1
BOSS	Bosilegrad	4.48	20	ePn	Pn	10 25 13.9	+2.3
IVA	Berane	4.59	355	ePn	Pn	10 25 13.2	0.0
IVA				eSn	Sn	10 26 05.0	-1.7
KOME	Kolasin	4.61	351	ePn	Pn	10 25 13.2	-0.2
KOME				eSn	Sn	10 26 05.4	-1.7
NKME	Niksic	4.61	346	ePn	Pn	10 25 12.7	-0.7
NKME				eSn	Sn	10 26 05.1	-2.0
BARS	Barje	4.64	13	ePn	Pn	10 25 14.4	+0.6
BARS	Barje	4.64	13	ePn	Pg	10 25 32.4	0.0
NKY	Niksic	4.65	347	⇑iPn	Pn	10 25 13.8	-0.2
NKY				iSn	Sn	10 26 06.3	-1.8
IDI	Anoyia	4.66	129	Pn	Pn	10 25 15.9	+1.8
	comp=E,1.3nm,0.3s,baz=330,slow=7.9,SNR=8.6						
IDI				Sn	Sn	10 26 11.2	+2.9
	comp=E,6.5nm,0.3s,baz=135,slow=24,SNR=8.5						
TREB	Trebinje	4.70	341	ePn	Pn	10 25 13.6	-1.0
TREB				eSn	Sn	10 26 05.9	-3.3
TREB	Trebinje	4.70	341	ePn	Pn	10 25 13.1	-1.6
VTS	Vitosha	4.82	25	ePn	Pn	10 25 18.9	+2.6
VTS	Vitosha	4.82	25	⇓P	Pn	10 25 17.7	+1.4
VTS				⇑S	Sn	10 26 10.1	-2.2
BRY	Bratogost	4.83	343	ePn	Pn	10 25 15.3	-1.2
BRY	Bratogost	4.83	343	ePn	Pn	10 25 15.4	-1.1
BRY				eSn	Sn	10 26 10.4	-2.2
VAE	Valguarnera	4.84	262	Pn	Pn	10 25 19.6	+3.0
	comp=E,3.1nm,0.3s,baz=145,slow=13,SNR=2.4						
VAE				Sn	Sn	10 26 15.8	+3.0
	comp=E,4.0nm,0.3s,baz=73,slow=12,SNR=3.7						
VAE				Lg	Lg	10 26 39.1	
	comp=E,4.3nm,0.3s,baz=41,slow=17,SNR=5.8						
SELS	Selova	4.95	6	ePn	Pn	10 25 17.8	-0.3
SELS				eSn	Sn	10 26 14.2	-1.2
SJES	Sjenica	4.98	356	ePn	Pn	10 25 19.0	+0.5
STON	Ston	5.03	336	ePn	Pn	10 25 17.8	-1.3
STON				eSn	Sn	10 26 12.9	-4.4
STON	Ston	5.03	336	ePn	Pn	10 25 17.0	-2.1
UPM	Unac-Piva	5.04	347	ePn	Pn	10 25 19.1	-0.4
UPM	Unac-Piva	5.04	347	ePn	Pn	10 25 19.1	-0.4
UPM				eSn	Sn	10 26 16.1	-1.9
PLE	Pljevlja	5.10	351	⇓iPn	Pn	10 25 19.6	-0.6
PLE				eSn	Sn	10 26 17.1	-2.1
ZAPS	Zavoj	5.25	18	ePn	Pn	10 25 22.8	+0.7
IVAS	Ivanjica	5.29	358	ePn	Pn	10 25 22.3	-0.4
IVAS				eSn	Sn	10 26 21.8	-1.9
RUDO	Rudo	5.38	352	ePn	Pn	10 25 22.7	-1.3
BOVS	Bovan	5.42	10	ePn	Pn	10 25 24.4	-0.1
GRUS	Gruza	5.60	2	ePn	Pn	10 25 27.3	+0.4
BBLS	Lazići	5.62	352	ePn	Pn	10 25 31.2	+3.8
ZAGS	Zajecar	5.68	13	ePn	Pn	10 25 29.3	+1.3
DIVS	Divibare	5.81	357	ePn	Pn	10 25 29.0	-0.9
DIVS				eSn	Sn	10 26 33.1	-3.6
DIVS	Divibare	5.81	357	ePn	Pn	10 25 28.8	-1.1
HAPS	Han Pijesak,Bl	5.90	349	ePn	Pn	10 25 29.9	-1.3
HAPS	Han Pijesak,Bl	5.90	349	ePn	Pn	10 25 29.5	-1.7
TRUS	Trudelj	5.93	360	ePn	Pn	10 25 30.7	-0.7
PLVB	Pleven	5.99	31	⇑P	Pn	10 25 33.8	+1.5
ELND	Elena	6.21	40	⇑P	Pn	10 25 38.4	+3.1
MGRS	Mrkonjic Grad	6.62	339	ePn	Pn	10 25 40.5	-0.5
FRGS	Fruska Gora	6.88	356	ePn	Pn	10 25 43.5	-1.0
FRGS	Fruska Gora	6.88	356	ePn	Pn	10 25 41.8	-2.7
BLY	Banja Luka	6.90	340	⇑P	Pn	10 25 44.5	-0.3
BLY	Banja Luka	6.90	340	ePn	Pn	10 25 44.3	-0.5
BZS	Buzias	7.37	6	⇑P	Pn	10 25 53.5	+2.3
TIM	Timisoara	7.46	4	⇓P	Pn	10 25 53.5	+1.0
VOIR		7.92	24	⇑P	Pn	10 26 00.9	+2.1
MORH	Mrgy, Hungar	8.03	351	ePn	Pn	10 25 59.5	-0.8
BOJS	Bojanci	8.18	333	ePn	Pn	10 26 00.6	-1.7
MLR	Muntele Rosu	8.28	28	Pn	Pn	10 26 05.4	+1.6
	comp=E,0.4nm,0.3s,baz=136,slow=16,SNR=2.3						
MLR	Muntele Rosu	8.28	28	⇑P	Pn	10 26 06.2	+2.3
CRES	Cresnjev	8.39	335	ePn	Pn	10 26 04.3	-1.0
VRI	Vrincioaia	8.89	30	⇑P	Pn	10 26 14.5	+2.4
LJU	Ljubljana	8.90	332	ePn	Pn	10 26 11.5	-0.8
KEST	Kesra	9.24	257	Pn	Pn	10 26 17.4	+0.4
	comp=E,0.6nm,0.3s,baz=10,slow=5.7,SNR=4.6						
SOKA	Soboth	9.28	336	ePn	Pn	10 26 16.2	-1.3
	comp=E,8.1nm,0.3s						
OBKA	Obir	9.29	334	Pn	Pn	10 26 17.3	-0.5
	comp=E,2.4nm,0.2s						
ARSA	Arzberg	9.65	340	Pn	Pn	10 26 21.3	-1.3
	comp=E,3.4nm,0.6s						
KBA	Koelnbreinsper	10.21	332	ePn	Pn	10 26 29.7	-0.7
	comp=E,3.2nm,0.5s						
BRTR	Keskin Array B	10.37	78	Pn	Pn	10 26 35.3	+2.7
	comp=E,0.1nm,0.3s,baz=66,slow=14,SNR=2.8						
MOA	Molln	10.56	337	ePn	Pn	10 26 35.0	-0.1
	comp=E,6.9nm,0.3s						
WATA	Walderalm	11.13	327	ePn	Pn	10 26 42.7	-0.2
	comp=E,6.4nm,0.4s						
FETA	Feichten	11.27	324	Pn	Pn	10 26 45.8	+0.9
	comp=E,2.8nm,0.5s						
MOTA	Moosalm	11.35	326	ePn	Pn	10 26 46.7	+0.9
	comp=E,3.0nm,0.4s						
VRAC	Vranov	11.36	347	LR	LR	10 31 39.1	
	comp=E,93nm,21.8s,baz=152,slow=40						
DAVOX	Davos/Dischmat	11.51	321	Pn	Pn	10 26 48.8	+0.6
	comp=E,0.6nm,0.3s,baz=138,slow=18,SNR=4.4						
GERES	GERESS Array B	11.62	337	Pn	Pn	10 26 48.6	-1.0
	comp=E,0.4nm,0.3s,baz=158,slow=14,SNR=7.6						
GERES				Sn	Sn	10 28 52.6	-6.8
	comp=E,0.6nm,0.3s,baz=155,slow=22,SNR=5.2						
GERES				LR	LR	10 32 34.7	
	comp=E,68nm,19.7s,baz=272,slow=44						
KHC	Kasperske Hory	11.91	338	ePN	Pn	10 26 50.5	-3.0
MMAI	Mount Meron Ar	13.25	109	LR	LR	10 33 52.9	
	comp=E,40nm,18.0s,baz=335,slow=45						
GNI	Garni	18.91	77	LR	LR	10 35 59.5	
	comp=E,47nm,21.7s,baz=286,slow=38						
HFS	Hagfors	22.28	351	P	P	10 29 00.6	-0.1
	comp=E,3.7nm,0.6s,baz=150,slow=12,SNR=12						
EKA	Eskdalemuir Ar	23.30	325	P	P	10 29 13.3	+1.8
	comp=E,2.8nm,0.6s,baz=123,slow=9.1,SNR=6.1						
FINES	FINESS Array B	23.44	7	P	P	10 29 11.6	-1.2
	comp=E,1.2nm,0.5s,baz=165,slow=7.9,SNR=7.4						
NB2	NORSAR Subarra	23.50	349	P	P	10 29 12.6	-0.8
	comp=Z,2.4nm,0.9s,baz=162,slow=9.3						
NOA	NORSAR Array B	23.50	349	P	P	10 29 12.9	-0.5
	comp=Z,0.4nm,0.6s,baz=193,slow=20,SNR=8.1						
NOA				LR	LR	10 40 09.1	
	comp=Z,38nm,18.2s,baz=355,slow=41						
AKTO	Aktyubinsk	29.16	53	LR	LR	10 43 41.3	
	comp=Z,44nm,18.3s,baz=292,slow=40						
GEYT	Alibeck	29.51	79	LR	LR	10 43 15.7	
	comp=Z,34nm,19.6s,baz=305,slow=39						
TORD	Torodi Ar. Bea	30.08	219	P	P	10 30 13.8	+0.5
	comp=Z,0.6nm,0.5s,baz=29,slow=9.7,SNR=5.1						
ARCES	ARCESS Array B	31.42	3	P	P	10 30 23.7	-0.9
	comp=Z,1.3nm,0.8s,baz=188,slow=12,SNR=5.0						
BVAR	Borovoye Array	37.09	50	P	P	10 31 14.0	+0.1
	comp=Z,0.6nm,0.5s,baz=319,slow=6.3,SNR=2.3						
KURBB	Kurchatov Arra	42.21	54	P	P	10 31 57.0	+0.4
	comp=Z,0.3nm,0.4s,baz=282,slow=8.5,SNR=4.8						
MKAR	Makanchi Array	45.29	58	P	P	10 32 20.3	-1.2
	comp=Z,0.5nm,0.3s,baz=269,slow=7.4,SNR=12						
ZALV	Zalesovo Beam	45.66	48	P	P	10 32 22.7	-1.5
	comp=Z,2.9nm,0.5s,baz=275,slow=8.9,SNR=12						
SCHQ	Schefferville	58.34	317	P	P	10 34 00.0	+1.4
	comp=Z,1.5nm,0.5s,baz=48,slow=3.7,SNR=7.8						
SONM	Songino Array	60.43	51	P	P	10 34 15.1	+1.7
	comp=Z,0.3nm,0.6s,baz=292,slow=7.6,SNR=3.3						
CMAR	Chiang Mai Arr	69.93	82	P	P	10 35 15.2	-0.1
	comp=Z,0.4nm,0.3s,baz=298,slow=4.6,SNR=4.3						
YKA	Yellowknife Ar	73.26	340	P	P	10 35 35.2	+0.5
	comp=Z,0.3nm,0.8s,baz=41,slow=5.5,SNR=6.1						
ULM	Lac du Bonnet	75.57	324	P	P	10 35 49.0	+0.7
	comp=Z,1.5nm,0.7s,baz=82,slow=8.3,SNR=3.8						

*ATH **03** 10:34:22.8, 38°.21N×20°.43E, h13km±1km, ML3.1/6, Error ellipse: s-maj=2.0km s-min=1.0km az=260.0*
*THE **03** 10:34:22.8, 38°.20N×20°.42E, h13km, ML3.3/13, Error ellipse: s-maj=0.9km s-min=0.4km az=260.0*
ISC 03 10:34:22.7±1.0, 38°.20N±0°.02×20°.43E±0°.04, h14km±4km, n32, σ0§42/57, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.01	88	P	Pg	10 34 25.2	+0.1
LXR1				S	Sg	10 34 26.9	+0.2
	69μm,0.3s						
CHV1	Chavriata, Kef	0.04	247	P	Pg	10 34 25.3	0.0
CHV1				S	Sg	10 34 26.9	-0.1
	48μm,0.3s						
ARG2	Argostoli	0.05	117	P	Pg	10 34 25.3	0.0
ARG2				S	Sg	10 34 26.9	-0.2
	41μm,0.1s						
KEF2	Argostoli. Kep	0.06	129	P	Pg	10 34 25.4	0.0
KEF2				S	Sg	10 34 26.9	-0.3
KEF4	Livadi, Kephal	0.06	354	P	Pg	10 34 25.4	0.0
KEF3	Kipouria, Keph	0.07	272	P	Pg	10 34 25.6	+0.1
KEF3				S	Sg	10 34 27.3	-0.1
KEF1	Kardakata, Kep	0.08	22	P	Pg	10 34 25.5	-0.1
KEF1				S	Sg	10 34 27.6	0.0
VLS	Valsamata	0.13	101	P	Pg	10 34 26.1	-0.1
VLS				S	Sg	10 34 28.4	-0.1
	17μm,0.1s						
VLS	Valsamata	0.13	101	P	Pg	10 34 26.1	-0.1
VLS				S	Sg	10 34 28.2	-0.3
VLS				AML	AML	10 34 28.7	
	comp=E,38298μm,0.1s						
VLS				AML	AML	10 34 29.1	
	comp=N,31583μm,0.3s						
VSK1	VASILIKIADES	0.23	26	P	Pg	10 34 27.9	+0.1
VSK1				S	Sg	10 34 32.0	+0.7
	comp=N,11μm,0.2s						
FSK	Fiskardo	0.28	22	P	Pg	10 34 28.6	0.0
FSK				S	Sg	10 34 33.2	+0.6
	comp=N,11μm,0.2s						
FSK	Fiskardo	0.28	22	P	Pg	10 34 28.6	0.0
FSK				S	Sg	10 34 32.9	+0.3
VLMS	Volimes, Zakyn	0.37	151	P	Pg	10 34 30.3	+0.1
VLMS				S	Sg	10 34 36.3	+1.0
VLMS				AML	AML	10 34 37.2	
	comp=N,80835μm,0.3s						
VLMS				AML	AML	10 34 38.5	
	comp=E,40531μm,0.3s						
EVGI	Lefkada island	0.46	23	P	Pg	10 34 31.6	-0.2
EVGI				S	Sb	10 34 38.7	-0.5
EVGI	Lefkada island	0.46	23	P	Pg	10 34 31.6	-0.2
EVGI				S	Sg	10 34 38.6	+0.7
MGNA	Meganis	0.54	32	P	Pg	10 34 32.9	-0.3
MGNA				S	Sg	10 34 41.0	+0.6
MGNA				AML	AML	10 34 41.8	
	comp=N,3599μm,0.2s						
MGNA				AML	AML	10 34 41.9	
	comp=E,5356μm,0.2s						
ZAK2	Zakynthos	0.55	138	P	Pg	10 34 33.8	+0.2
ZAK2				S	Sb	10 34 42.0	0.0
	comp=E,14μm,0.4s						
LKD2	Lefkada island	0.61	17	P	Pg	10 34 34.2	-0.6
LKD2				S	Sg	10 34 43.3	+0.4
	comp=E,995nm,0.3s						
LKD2	Lefkada island	0.61	17	P	Pg	10 34 34.4	-0.4
LKD2				S	Sg	10 34 42.7	-0.2
LKD2				AML	AML	10 34 51.3	
	comp=E,2237μm,0.3s						
LKD2				AML	AML	10 34 53.8	
	comp=N,1695μm,0.3s						
KRI1	kERI	0.62	150	P	Pg	10 34 34.4	-0.4
KRI1				S	Sb	10 34 44.6	+0.8
	comp=N,5μm,0.3s						
AST1	Astakos	0.62	56	P	Pg	10 34 34.5	-0.3
AST1				S	Sb	10 34 44.4	+0.5
	comp=N,3μm,0.2s						
TSLK	Tsoukalades, L	0.65	16	P	Pg	10 34 35.0	-0.4
TSLK				S	Sb	10 34 45.1	+0.4
	comp=N,1μm,0.5s						
TSLK	Tsoukalades, L	0.65	16	P	Pg	10 34 35.0	-0.4
PDO	Prodromos	0.71	56	P	Pg	10 34 36.3	-0.3
PDO				S	Sb	10 34 47.6	+1.0
PDO	Prodromos	0.71	56	P	Pg	10 34 36.4	-0.3
PDO				S	Sg	10 34 46.3	+0.3
PDO				AML	AML	10 34 54.5	
	comp=N,3207μm,0.3s						
PDO				AML	AML	10 34 54.5	
	comp=E,3316μm,0.4s						
RLS	Riolos of Patr	0.83	100	P	Pg	10 34 38.2	-0.6
RLS				S	Sb	10 34 50.9	+1.0
	comp=E,458nm,0.4s						
RLS	Riolos of Patr	0.83	100	P	Pg	10 34 38.3	-0.5
RLS				AML	AML	10 34 54.4	
	comp=E,933μm,0.5s						
RLS				AML	AML	10 34 59.7	
	comp=N,842μm,0.3s						
PVO	Paravola	0.95	64	P	Pb	10 34 41.2	+0.1
PVO				S	Sn	10 34 55.1	0.0
	comp=N,2μm,0.3s						
PVO	Paravola	0.95	64	P	Pb	10 34 41.2	+0.1
AMT	Artemida-Makis	1.21	123	P	Pn	10 34 44.9	-0.4
LAKA	Lakka	1.22	88	P	Pn	10 34 45.2	-0.2
LTK	Loutraki	2.01	94	P	Pb	10 34 58.5	-0.6

*AZER **03** 10:43:44.3, 40°.75N×48°.41E, h9km, ML3.6*
*IDC **03** 10:43:45.3±1.1, 40°.97N×48°.40E, h0km, mb3.6/4, mb1 3.6/8, mb1mx3.4/37, mbtmp3.4/8, ML3.0/3, Error ellipse: s-maj=20.2km s-min=10.4km az=168.0*
*MOS **03** 10:43:46.6±1.3, 40°.64N×48°.54E, h20km, mb4.1/1, Error ellipse: s-maj=10.9km s-min=5.5km az=117.6*
ISC 03 10:43:47.1±0.8, 40°.75N±0°.02×48°.37E±0°.02, h12km±5km, n68, σ1§36/107, mb3.6/4, 3C-5D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IML	Ismayilli	0.15	287	P	Pg	10 43 51.0	+0.3
	SNR=120						
IML				S	Sb	10 43 55.3	+2.1
PQL	Pirkuli	0.17	77	P	Pg	10 43 50.0	-1.0
	SNR=2348						
PQL				S	Sg	10 43 53.5	-0.4
KDMR	Kurdemir	0.40	201	P	Pg	10 43 55.7	+0.7
	SNR=10						
KDMR				S	Sb	10 44 04.0	+1.7
ATGJ	Altiaghaj	0.44	75	P	Pg	10 43 55.3	-0.6
	SNR=156						
ATGJ				S	Sg	10 44 02.5	+0.6
QBL	Gabala	0.45	296	P	Pg	10 43 56.3	+0.3
	SNR=90						
QBL				S	Sb	10 44 04.5	+0.7
XNQ	Khinaliq	0.46	337	P	Pg	10 43 55.8	-0.3
	SNR=1034						
XNQ				S	Sb	10 44 03.3	-0.8
GBS	Qobustan	0.48	116	P	Pg	10 43 56.9	+0.2
	SNR=31						
GBS				S	Sb	10 44 04.8	0.0
SIZA	Siyzn	0.52	51	P	Pg	10 43 56.9	-0.3
	SNR=636						
SIZA				S	Sb	10 44 06.2	+0.5
QUBA	Quba, Azerbaij	0.61	9	P	Pb	10 43 59.5	-0.4
	SNR=61						
QUBA				S	Sb	10 44 09.4	+1.0
ZRD	Zardab	0.70	228	P	Pb	10 44 01.6	+0.2
	SNR=42						
ZRD				S	Sn	10 44 14.6	+0.8
QSAR	Qusar	0.77	354	P	Pg	10 44 02.0	0.0
	SNR=85						
QSAR				S	Sb	10 44 13.4	+0.4
KSMR	Kasumkent	0.87	348	iPG	Pb	10 44 04.0	-0.3
KSMR				iS	Sn	10 44 17.0	-1.1
KSMR				pmax	pmax		
	comp=Z,1μm,0.3s						
AKT	Akhty	0.88	327	⇑iPG	Pg	10 44 03.2	-0.9
AKT				pmax	pmax		
	comp=Z,248nm,0.3s						
SAAT	Saatly	0.89	177	P	Pg	10 44 03.6	-0.7
	SNR=3.6						
SAAT				S	Sg	10 44 15.5	-0.4
ALIB	Äli-Bayra	0.93	148	P	Pn	10 44 05.9	-0.1
ALIB				S	Sn	10 44 23.4	+4.1
MNGR	Mingechevir, A	0.98	272	PG	Pg	10 44 06.2	+0.2
MNGR	Mingechevir, A	0.98	272	P	Pg	10 44 06.2	+0.2
	SNR=11						
MNGR				S	Sn	10 44 22.6	+2.0
SEKA	Sheki	1.00	298	PG	Pb	10 44 05.1	-1.3
SEKA	Sheki	1.00	298	P	Pb	10 44 05.2	-1.3
	SNR=21						
SEKA				S	Sn	10 44 20.5	-0.7
BRDA	Brd	1.03	242	P	Pn	10 44 07.5	0.0
	SNR=6.8						
BRDA				S	Sn	10 44 24.9	+3.1
GOBA	Gobu	1.09	108	P	Pg	10 44 09.5	+1.4
GOBA				S	Sn	10 44 24.2	+0.8
AGDM	Agdam	1.16	237	P	Pb	10 44 08.8	-0.3
	SNR=39						
AGDM				S	Sn	10 44 27.0	+1.9
BLQ	Beylaqan	1.20	211	P	Pn	10 44 08.7	-1.1
	SNR=25						
BLQ				S	Sg	10 44 26.4	+0.5
NDR	Nardaran	1.24	97	P	Pn	10 44 09.7	-0.6
DRN	Derbent	1.28	359	⇓iPG	Pg	10 44 12.4	+0.7
DRN				i		10 44 29.6	
DRN				pmax	pmax		
	comp=Z,326nm,0.6s						
DRN				smax	smax		
	comp=N,567nm,0.9s						
GLBA	Clilabad	1.51	179	Pn	Pn	10 44 12.8	-1.2
	SNR=15						
GLBA				Sn	Sb	10 44 33.9	-0.2
QRD	Qoradiz	1.52	212	Pn	Pn	10 44 13.6	-0.6

SNR=28
QRD Sn Sb 10 44 34.7 +0.3
URKR Urkarakh 1.52 339⇓iPN Pg 10 44 16.4 +0.1
GANJ Ganja 1.56 267 PN Pn 10 44 13.9 -0.9
GANJ Ganja 1.56 267 Pn Pn 10 44 13.9 -0.9
SNR=32
GANJ Sn Sn 10 44 35.0 0.0
ZKTA Zakatala 1.59 304 Pn Pn 10 44 15.3 +0.1
SNR=27
ZKTA Sn Sg 10 44 38.5 +0.1
KMKR Kumukh 1.68 326⇑iPN Pg 10 44 19.0 -0.4
KMKR pmax pmax
comp=Z,117nm,0.2s
YRD Yardimli 1.83 183 Pn Pn 10 44 17.5 -1.2
SNR=100
YRD Sn Sn 10 44 41.4 -0.5
DDFL Dedoflistskaro 1.84 293 P Pb 10 44 21.0 +0.2
DDFL S Sg 10 44 49.6 +3.3
LGD Lagodekhi 1.94 305 P Pb 10 44 22.2 -0.2
LGD S Sg 10 44 52.4 +3.0
GNBR Gunib 1.95 328⇓iPN Pb 10 44 23.2 +0.6
GNBR e 10 44 50.8
GNBR pmax pmax
comp=Z,116nm,0.7s
GNBR smax smax
comp=N,257nm,0.9s
GDB GEDABAY 1.99 270 Pn Pn 10 44 19.9 -0.9
SNR=31
GDB Sn Sn 10 44 46.1 +0.3
LKRN Lenkeran, Azer 2.06 171 PN Pn 10 44 20.5 -1.1
LKRN Lenkeran, Azer 2.06 171 Pn Pn 10 44 20.5 -1.1
SNR=11
LKRN Sn Sn 10 44 47.5 +0.3
LRK Lerik 2.10 181 Pn Pn 10 44 21.5 -0.8
SNR=20
LRK Sn Sn 10 44 49.2 +0.6
ASTR Astara 2.21 171 Pn Pn 10 44 22.4 -1.2
SNR=6.6
ASTR Sn Sn 10 44 50.6 -0.4
UNCR Uncukul 2.29 329 ePN Pb 10 44 29.0 +0.6
UNCR eS Sg 10 44 59.0 -1.7
UNCR pmax pmax
comp=Z,134nm,0.4s
QZX Qazax, Azerbai 2.29 279 Pn Pn 10 44 24.7 -0.2
SNR=25
QZX Sn Sb 10 44 55.8 -1.1
MAK Makhachkala 2.30 344 ePN Pb 10 44 27.7 -0.9
MAK e 10 44 35.2
MAK e 10 44 59.5
MAK e 10 45 03.5
MAK e 10 45 09.0
MAK pmax pmax
comp=Z,145nm,0.3s
MAK smax smax
comp=E,375nm,0.6s
MAK smax smax
comp=E,448nm,0.4s
BTLR Botlikh 2.50 321⇓iPN Pg 10 44 34.1 -0.9
BTLR e 10 45 10.6
BTLR pmax pmax
comp=Z,74nm,0.6s
BTLR smax smax
comp=E,114nm,1.0s
DBC Dubki 2.54 334⇑ePN Pb 10 44 31.7 -1.1
DBC e 10 45 06.4
SBZ Shahbuz 2.55 239 Pn Pn 10 44 28.9 +0.4
SNR=26
SBZ Sg Sb 10 45 05.6 +1.3
ORD Ordubad 2.58 226 Pn Pn 10 44 29.0 +0.2
SNR=16
ORD Sn Sn 10 45 01.9 +1.6
NAX Nakhchivan 2.71 235 PN Pn 10 44 31.4 +0.7
NAX Nakhchivan 2.71 235 Pn Pn 10 44 31.4 +0.7
SNR=6.5
NAX Sg Sg 10 45 12.3 -2.0
GNI Garni 2.83 259 Pn Pb 10 44 36.6 -1.2
comp=E,2.2nm,0.3s,baz=181,slow=16,SNR=4.8
GNI Sn Sb 10 45 12.0 -0.5
comp=E,7.4nm,0.3s,baz=94,slow=2.7,SNR=4.9
GNI Lg Lg 10 45 19.2
comp=E,15nm,0.3s,baz=37,slow=20,SNR=6.0
HYR Heyderabad 2.88 250 Pn Pn 10 44 33.8 +0.7
SNR=6.0
HYR Sg Sg 10 45 17.2 -2.6
GROC Groznyy 3.11 323 ePN Pn 10 44 38.4 +2.3
GROC e 10 45 22.3
GROC pmax pmax
comp=Z,28nm,0.5s
GROC smax smax
comp=E,24nm,0.5s
GROC smax smax
comp=N,72nm,0.7s
GROC smax smax
comp=E,99nm,0.8s
GROC MLR MLR
comp=Z,12nm,2.0s
TRLG Trialeti 3.32 285 P Pn 10 44 40.9 +1.8
ONI Oni 4.12 298 P Pn 10 44 51.5 +1.6
NCK Nalchik 4.49 309 ePN Pn 10 44 58.3 +3.3
NCK pmax pmax
comp=Z,16nm,0.4s
KBZ Khabaz 5.04 308 Pn Pn 10 45 03.9 +1.4
comp=Z,0.1nm,0.3s,baz=53,slow=5.1,SNR=2.2
KBZ Pg Pb 10 45 15.2 0.0
comp=Z,0.3nm,0.3s,baz=66,slow=5.9,SNR=7.3
KBZ Lg Lg 10 46 23.0
comp=Z,0.4nm,0.3s,baz=259,slow=4.9,SNR=3.9
SHA1 Shidzhatmaz 5.19 307 ePN Pn 10 45 06.4 +1.6
KIV Kislovodsk 5.29 309 eP Pn 10 45 07.5 +1.4
KIV pmax pmax
comp=Z,10.0nm,0.9s
GEYT Alibeck 8.06 107 Pn Pn 10 45 45.1 +1.1
comp=Z,0.6nm,0.3s,baz=290,slow=18,SNR=3.7
AKASG Malin Array Be 16.62 313 iP P 10 47 42.2 -0.1
AKASG pmax pmax
comp=Z,1.0nm,0.4s
BVAR Borovoye Array 19.32 43 P P 10 48 11.0 -1.1
comp=Z,0.1nm,0.3s,baz=230,slow=9.3,SNR=4.6
AAK Ala-Archa 19.58 76⇓eP Pn 10 48 21.6 +5.2
AAK pmax pmax
comp=Z,4.0nm,1.0s
KURBB Kurchatov Arra 23.12 55 P P 10 48 51.4 -1.5
comp=Z,0.6nm,0.3s,baz=262,slow=9.5,SNR=6.1
KURK Kurchatov 23.20 54 P P 10 48 51.4 -2.3
FINES FINESS Array B 24.77 334 P P 10 49 06.2 -2.3
comp=Z,2.0nm,0.7s,baz=139,slow=9.3,SNR=6.6
MKAR Makanchi Array 25.09 65 P P 10 49 10.3 -1.3
comp=Z,0.5nm,0.6s,baz=270,slow=7.2,SNR=5.5
YKA Yellowknife Ar 76.19 352 P P 10 55 33.2 -1.6
comp=Z,0.3nm,0.6s,baz=9.8,slow=5.6,SNR=7.0

IDC 03 10:52:15.7±2.6, 36.27N×70.83E, h169km±22km, mb3.5/11, mb1 3.6/17, mb1mx3.3/52, mbtmp4.0/17, MS3.3/1, Ms1 3.3/1, ms1mx2.4/51, Error ellipse: s-maj=19.7km s-min=14.6km az=177.0
NEIC 03 10:52:19.1±1.9, 36.52N±0.05×70.8E±0.1, h192km±9km, mb4.3/5, Error ellipse: s-maj=14.6km s-min=6.2km az=102.0
NNC 03 10:52:22.6±2.6, 36.83N×70.72E, h195km±21km, mb3.2, mpv4.7, Error ellipse: s-maj=23.4km s-min=14.0km az=24.0
ISC 03 10:52:18.1±0.5, 36.48N±0.05×70.78E±0.05, h188km, n76, σ1.29/87, mb3.8/12, 6C-5D, Hindu Kush region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KBL Kabul 2.40 217 Pn 10 53 01.6 +1.2
KBL Sn Sn 10 53 32.7 -0.5
CEP Cherat 2.81 160 ⇓P Pn 10 53 06.8 +1.8
CEP S Sn 10 53 42.0 +0.4
CHCP Chirah Chowk 3.47 143 P Pn 10 53 15.0 +2.0
NIL Nilore 3.48 144 Pn 10 53 15.1 +2.1
BTK Batken 3.57 0 Pn 10 53 16.1 +1.9
THW Thamme Wali 3.76 168 P Pn 10 53 17.9 +1.3
SARP Sargodha 4.81 160 P Pn 10 53 30.4 +0.6
ARSB Arslanbob 5.13 19 Pn 10 53 34.3 +0.2
THN Thein Dam 5.74 133 eP Pn 10 53 43.5 +1.7
THN eS Sn 10 54 46.5 -1.2
AML Almayashu 6.08 21 P Pn 10 53 47.3 +0.8
SNR=593
DHRM DHARAMSHALA 6.21 131 eP Pn 10 53 48.9 +0.6
DHRM eS Sn 10 54 57.3 -2.1
DHRM IAML 10 55 01.3
comp=N,363nm,0.4s
DHRM IAML 10 55 02.0
comp=E,612nm,0.7s
NRN Naryn 6.40 38 Pn 10 53 50.3 -0.5
UCH Uchtor 6.43 26 P Pn 10 53 51.9 +0.7
SNR=57
KZA Kyzart 6.58 30 P Pn 10 53 53.3 +0.2
SNR=43
EKS2 Erkin-Say 6.59 20 P Pn 10 53 54.0 +1.0
SNR=299
KK31 Karatay Array 6.62 358 ⇓P Pn 10 53 53.8 +0.5
comp=E,54nm,0.6s,baz=169,slow=11,SNR=363
KK31 ⇑S Sn 10 55 04.4 -4.1
comp=E,4.3nm,0.3s,baz=191,slow=26,SNR=4.2
KK31 Karatay Array 6.62 358 Pn 10 53 53.8 +0.5
KKAR Karatay Array 6.62 358 Pn 10 53 53.5 +0.2
KKAR Sn Sn 10 55 05.0 -3.5
KKAR Karatay Array 6.62 358 Pn 10 53 53.9 +0.6
AAK Ala-Archa 6.79 24 P Pn 10 53 56.3 +0.7
comp=E,22nm,0.3s,baz=172,slow=6.0,SNR=261
AAK S Sn 10 55 11.6 -1.0
comp=E,2.2nm,0.3s,baz=3.4,slow=21,SNR=11
AAK Ala-Archa 6.79 24 P Pn 10 53 56.6 +1.0
SNR=73
AAK Ala-Archa 6.79 24 ⇓P Pn 10 53 56.5 +1.0
comp=E,18nm,0.3s
AAK ⇑S Sn 10 55 11.5 -1.1
comp=E,32nm,0.7s
AAK Ala-Archa 6.79 24 Pn 10 53 56.6 +1.0
KBK Karagaybulak 6.96 26 P Pn 10 53 59.0 +1.2
SNR=22
FRU1 Bishkek 6.99 24 Pn 10 53 59.3 +1.2
FRU1 Sn 10 55 20.2 +3.0
ULHL Ulahol 7.14 35 P Pn 10 54 00.7 +0.3
SNR=16
CHMS Chumysh 7.19 24 P Pn 10 54 01.3 +0.6
SNR=24
USP Ospenovka 7.36 22 P Pn 10 54 03.1 +0.1
SNR=22
KDJ Kajisay 7.51 39 Pn Pn 10 54 05.8 +0.7
SMLA Simla 7.53 133 iP Pn 10 54 05.3 +0.1
SMLA eS Sn 10 55 26.4 -3.7
SMLA IAML 10 55 28.6
comp=N,141nm,0.1s
SMLA IAML 10 55 29.3
comp=E,149nm,0.2s
MDOK Medeo 8.23 34 ⇑P Pn 10 54 15.8 +1.2
comp=E,30nm,0.8s
JOSI Joshimath 9.41 126 eP Pn 10 54 31.5 +1.4
JOSI eS Sn 10 56 11.6 -3.7
JOSI IAML 10 56 14.9
comp=N,75nm,0.3s
JOSI IAML 10 56 14.9
comp=E,94nm,0.3s
PDGK Podgornoye 9.57 42 ⇑P Pn 10 54 32.6 +0.7
comp=E,3.7nm,0.7s
KUDL Kundal 9.61 148 eP Pn 10 54 23.3 -9.2
KUDL eS Sn 10 56 03.2 -17
GEYT Alibeck 10.21 282 P Pn 10 54 40.1 -0.1
comp=E,0.2nm,0.3s,baz=96,slow=5.8,SNR=2.4
GEYT S S 10 56 34.8 +0.2
comp=E,0.7nm,0.3s,baz=168,slow=30,SNR=3.9
MAKZ Makanchi 13.27 36 Pn 10 55 19.6 +0.3
MK31 Makanchi Array 13.41 36 P Pn 10 55 21.7 +0.7
comp=E,1.6nm,0.8s,baz=222,slow=11,SNR=14
MK31 Makanchi Array 13.41 36 Pn 10 55 21.0 -0.1
MKAR Makanchi Array 13.41 36 P Pn 10 55 21.8 +0.7
comp=E,0.2nm,0.3s,baz=220,slow=15,SNR=11
MKAR Makanchi Array 13.41 36 Pn 10 55 21.4 +0.4
DANN Dangsing 13.62 123 eP Pn 10 55 23.5 -0.7
comp=E,6.5nm,0.2s
KOLN Koldanda 13.90 125 eP Pn 10 55 27.6 +0.1
DMN Daman 15.01 122 eP Pn 10 55 41.5 +0.2
comp=E,12nm,0.3s
AB31 Akbulak array 15.02 332 P Pn 10 55 40.7 -0.2
comp=E,1.6nm,0.5s,baz=143,slow=11,SNR=88
AB31 S Sn 10 58 27.0 -1.6
comp=E,1.0nm,0.4s,baz=163,slow=23,SNR=5.8
ABKAR Akbulak array 15.02 332 P Pn 10 55 40.3 -0.6
KURBB Kurchatov Arra 15.20 19 P Pn 10 55 42.5 -0.6
comp=E,0.2nm,0.3s,baz=209,slow=11,SNR=5.4
KURBB Kurchatov Arra 15.20 19 ⇑P Pn 10 55 41.2 -1.9
comp=E,4.7nm,1.0s
PKI Pulchoki 15.24 121 eP Pn 10 55 44.5 +0.3
comp=E,37nm,0.6s
GUN Gumba 15.36 120 eP P 10 55 46.6 +0.4
comp=E,7.6nm,0.3s
JIRN Jiri 15.73 120 eP P 10 55 50.8 +0.5
comp=E,29nm,0.3s
RAMN Ramite 16.46 121 eP P 10 55 58.8 0.0
comp=E,14nm,0.5s
BVAR Borovoye Array 16.55 359 P P 10 55 59.0 +0.3
comp=E,0.5nm,0.3s,baz=168,slow=9.7,SNR=11
BRVK Borovoye 16.58 359 ⇓P P 10 55 59.0 0.0
comp=E,2.2nm,0.8s
BRVK Borovoye 16.58 359 P P 10 55 58.5 -0.5
AKTO Aktyubinsk 16.71 331 P Pn 10 56 02.1 +0.7
comp=E,1.8nm,0.3s,baz=139,slow=9.3,SNR=34
AKTO Aktyubinsk 16.71 331 ⇑P Pn 10 56 01.1 -0.2
TAPN Taplejung 16.99 118 eP Pn 10 56 06.7 +1.4
comp=E,7.1nm,0.3s
ZAA0 Zalesovo Array 20.01 25 ⇓P P 10 56 37.3 +1.1
comp=E,0.6nm,0.8s
ZAA0 Zalesovo Array 20.01 25 P P 10 56 36.3 +0.1
ZAA0 IAmb IAmb 10 56 42.8
comp=Z,3.3nm,0.6s
ZALV Zalesovo Beam 20.01 25 P P 10 56 37.5 +1.4
comp=Z,3.7nm,0.5s,baz=224,slow=11,SNR=12
ZALV Zalesovo Beam 20.01 25 P P 10 56 36.9 +0.7
ARU Arti 21.59 341 P P 10 56 54.2 +1.2
comp=Z,2.1nm,0.2s,baz=160,slow=12,SNR=4.2
FIA1 FINESS Array S 37.40 326 P P 10 59 13.3 +0.7
FINES FINESS Array B 37.40 326 P P 10 59 14.1 +1.5
comp=Z,3.3nm,0.6s,baz=117,slow=9.6,SNR=12
FINES FINESS Array B 37.40 326 P P 10 59 13.6 +1.0
ARCES ARCESS Array B 41.10 338 P P 10 59 44.9 +1.8
comp=Z,1.3nm,0.5s,baz=108,slow=7.8,SNR=7.8
HFS Hagfors 42.97 322 P P 10 59 58.9 +0.6
comp=Z,1.8nm,0.5s,baz=93,slow=14,SNR=8.4
NOA NORSAR Array B 44.29 323 P P 11 00 09.5 +0.6
comp=Z,1.0nm,0.7s,baz=97,slow=7.7,SNR=4.2
BFO Black Forest 46.40 305 P P 11 00 24.7 -0.9
BFO IAmb IAmb 11 00 30.0
comp=Z,13nm,0.7s
JHJ Hachijo jima 2 55.65 72 LR LR 11 26 10.3
comp=Z,32nm,21.7s,baz=333,slow=36
TORD Torodi Ar. Bea 65.54 269 P P 11 02 40.5 -1.3
comp=Z,2.0nm,0.6s,baz=54,slow=6.2,SNR=10
ILAR Eielson Array 74.85 16 P P 11 03 38.0 +0.5
comp=Z,0.3nm,0.6s,baz=1.5,slow=3.4,SNR=4.9
YKA Yellowknife Ar 81.27 3 P P 11 04 13.8 +1.0
comp=Z,0.5nm,0.3s,baz=348,slow=5.4,SNR=19
WRA Warramunga Arr 82.13 122 P P 11 04 17.2 -0.8
comp=Z,0.6nm,0.9s,baz=347,slow=8.2,SNR=6.5
WB2 Warramunga Arr 82.14 122 P P 11 04 17.6 -0.4
WB2 IAmb IAmb 11 04 22.2
comp=Z,9.1nm,1.1s
ASAR Alice Springs 84.39 125 P P 11 04 28.6 -0.9
comp=Z,0.7nm,0.8s,baz=315,slow=4.7,SNR=9.7

IDC 03 10:54:07.0±2.2, 27.37N×52.88E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.6/42, mbtmp3.8/8, ML3.5/1, Error ellipse: s-maj=49.8km s-min=26.6km az=26.0
TEH 03 10:54:08.2, 27.16N×52.88E, h10km, ML3.8
ISC 03 10:54:07.3±1.2, 27.14N±0.09×52.81E±0.07, h10km, n18, σ1.15/20, mb3.8/6, Southern Iran

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LMD1 Lamerd 0.38 57 ePg Pg 10 54 14.2 -0.5
LMD1 eSg Sg 10 54 19.7 0.0
LAR1 LAR 1.49 69 ePg Pg 10 54 35.7 -0.2
LAR1 e 10 55 06.4
JHRM Jahrom 1.52 26 ePn Pb 10 54 35.8 +0.1
JHRM e 10 55 05.6
SHI Shiraz 2.51 354 ePn Pn 10 54 49.5 +1.2
KLNJ Kolanjah 4.00 345 ePn Pn 10 55 09.3 +0.3
TVBK TV Kerman 4.49 50 ePn Pn 10 55 17.5 +1.8
TVBK e 10 55 18.5
IMEH Mehriz 4.52 20 ePn Pn 10 55 16.9 +0.8
KHGB Koh Gabri 4.56 44 ePn Pn 10 55 17.9 +1.4
KHGB e 10 56 19.1
ISAD Sadrabad 4.82 9 ePn Pn 10 55 21.0 +0.8
IBAF Bafgh 5.05 28 ePn Pn 10 55 24.2 +1.0
WSAR Wadi Sarin 6.55 125 Pn Pn 10 55 46.2 +2.6
1.0nm,0.3s,baz=326,slow=12,SNR=8.8
WSAR Sn Sn 10 56 56.6 -1.9
1.6nm,0.3s,baz=173,slow=23,SNR=8.0
BRTR Keskin Array B 20.29 313 P P 10 58 44.0 +0.8
1.1nm,0.6s,baz=133,slow=12,SNR=8.2
BVAR Borovoye Array 28.99 22 P P 11 00 07.0 +0.1
0.9nm,0.7s,baz=212,slow=10,SNR=4.4
MKAR Makanchi Array 30.39 42 P P 11 00 18.2 -1.2
0.4nm,0.5s,baz=238,slow=9.4,SNR=4.7
ZALV Zalesovo Beam 35.65 33 P P 11 01 04.8 -0.4
1.2nm,0.5s,baz=241,slow=8.7,SNR=4.7
FINES FINESS Array B 38.71 340 P P 11 01 30.6 -0.6
2.5nm,0.8s,baz=143,slow=12,SNR=3.7
HFS Hagfors 42.37 332 P P 11 02 00.9 -0.5
1.9nm,0.6s,baz=116,slow=9.8,SNR=3.5
YKA Yellowknife Ar 90.11 354 P P 11 07 07.3 +0.1
0.3nm,0.6s,baz=6.8,slow=5.2,SNR=7.0

BEO 03 11:12:22.5±1.1, 38.05N×20.06E, h22km±6km, ML3.4/5
PDG 03 11:12:22.4±0.2, 38.18N×20.34E, h18km, ML3.5/11, Error ellipse: s-maj=0.7km s-min=0.6km az=90.0
THE 03 11:12:23.5, 38.20N×20.39E, h11km, ML3.4/12, Error ellipse: s-maj=0.6km s-min=0.3km az=258.0
ATH 03 11:12:23.3, 38.20N×20.42E, h12km±1km, ML3.4/14, Error ellipse: s-maj=1.8km s-min=0.9km az=259.0
ISC 03 11:12:23.2±0.8, 38.20N±0.02×20.38E±0.03, h12km±4km, n86, σ0.85/136, 2C-3D, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.01 179 P Pg 11 12 25.5 +0.2
CHV1 S Sg 11 12 27.0 +0.3
KEF3 Kipouria, Keph 0.03 287 P Pg 11 12 25.7 +0.3
KEF3 S Sg 11 12 27.3 +0.4
LXR1 Lixouri, Cepha 0.04 83 P Pg 11 12 25.6 +0.1
LXR1 S Sg 11 12 26.9 -0.2
KEF4 Livadi, Kephal 0.07 28 P Pg 11 12 25.7 0.0
KEF4 S Sg 11 12 27.4 -0.2
ARG2 Argostoli 0.09 101 P Pg 11 12 25.9 0.0
ARG2 S Sg 11 12 27.3 -0.5
KEF2 Argostoli. Kep 0.09 110 P Pg 11 12 26.1 +0.2
KEF2 S Sg 11 12 27.5 -0.3
KEF1 Kardakata, Kep 0.11 40 P Pg 11 12 26.1 -0.1
KEF1 S Sg 11 12 27.5 -0.8
VLS Valsamata 0.17 96 P Pg 11 12 26.9 -0.1
VLS S Sg 11 12 29.3 -0.4
42μm,0.1s
VLS Valsamata 0.17 96 P Pg 11 12 26.9 -0.1
VLS S Sg 11 12 29.4 -0.3
VLS AML AML 11 12 29.6
VLS AML AML 11 12 29.8
comp=E,59112μm,0.1s
VSK1 VASILIKIADES 0.26 34 P Pg 11 12 28.6 0.0
VSK1 S Sg 11 12 32.3 +0.1
FSK Fiskardo 0.30 28 P Pg 11 12 29.3 0.0
FSK S Sg 11 12 33.8 +0.3
comp=E,15μm,0.3s
FSK Fiskardo 0.30 28 P Pg 11 12 29.4 0.0
FSK S Sg 11 12 34.0 +0.6
FSK AML AML 11 12 34.5
comp=E,37995μm,0.2s
FSK AML AML 11 12 35.2
comp=N,19380μm,0.2s
VLMS Volimes, Zakyn 0.39 145 P Pg 11 12 31.2 +0.2
VLMS S Sb 11 12 37.2 -0.8
VLMS AML AML 11 12 38.5
comp=N,54650μm,0.4s
VLMS AML AML 11 12 38.9
comp=E,26673μm,0.2s
EVGI Lefkada island 0.48 27 P Pg 11 12 32.4 -0.2
EVGI S Sg 11 12 39.6 +0.6
EVGI Lefkada island 0.48 27 P Pg 11 12 32.4 -0.2
EVGI S Sb 11 12 39.8 -0.8
MGNA Meganis 0.56 35 P Pg 11 12 33.7 -0.5
MGNA S Sg 11 12 42.2 +0.5
MGNA AML AML 11 12 42.5
comp=N,18506μm,0.4s
MGNA AML AML 11 12 42.5
comp=E,23410μm,0.4s
LKD2 Lefkada island 0.63 20 P Pg 11 12 35.0 -0.5
LKD2 S Sb 11 12 44.4 -0.7
comp=E,3μm,0.5s
LKD2 Lefkada island 0.63 20 P Pg 11 12 34.7 -0.8
LKD2 S Sg 11 12 44.0 +0.1
LKD2 AML AML 11 12 50.3
comp=E,4883μm,0.6s
LKD2 AML AML 11 12 50.5
comp=N,6478μm,0.4s
KRI1 kERI 0.63 147 P Pg 11 12 35.4 -0.2
KRI1 S Sb 11 12 45.7 +0.6
AST1 Astakos 0.66 58 P Pg 11 12 35.7 -0.3
AST1 S Sb 11 12 45.6 -0.1
TSLK Tsoukalades, L 0.66 19 P Pg 11 12 35.7 -0.5
TSLK S Sb 11 12 46.0 0.0
comp=N,3μm,0.5s
TSLK Tsoukalades, L 0.66 19 P Pg 11 12 35.6 -0.5
TSLK S Sg 11 12 44.2 -0.7
PDO Prodromos 0.75 57 P Pg 11 12 37.4 -0.3
PDO S Sb 11 12 48.9 +0.5
PDO Prodromos 0.75 57 P Pg 11 12 37.4 -0.3
PDO S Sb 11 12 48.1 -0.3
PDO AML AML 11 12 49.5
comp=E,8313μm,0.5s
PDO AML AML 11 12 52.6
comp=N,8855μm,0.4s
RLS Riolos of Patr 0.87 99 P Pg 11 12 39.2 -0.8
RLS S Sb 11 12 52.0 +0.2
comp=N,1μm,0.5s
RLS Riolos of Patr 0.87 99 P Pg 11 12 39.3 -0.6
RLS AML AML 11 12 55.3
comp=N,2198μm,0.4s
RLS AML AML 11 13 02.5
comp=E,2744μm,0.5s
PVO Paravola 0.99 65 P Pg 11 12 42.1 -0.3
PVO S Sn 11 12 56.9 0.0
comp=E,4μm,0.4s
PVO Paravola 0.99 65 P Pg 11 12 42.1 -0.3
PVO AML AML 11 13 03.2
comp=E,7530μm,0.4s
PVO AML AML 11 13 03.9
comp=N,6369μm,0.3s
DRO Drossia 1.08 103 P Pb 11 12 43.3 -0.5
DRO S Sn 11 12 59.4 +0.4
comp=N,3μm,0.3s
DRO Drossia 1.08 103 P Pb 11 12 43.2 -0.5
EFP Efpalio 1.22 79 P Pn 11 12 45.1 -1.0
EFP S Sn 11 13 03.6 +1.0
comp=N,1μm,0.7s
EFP Efpalio 1.22 79 P Pn 11 12 45.2 -1.0
AMT Artemida-Makis 1.24 122 P Pn 11 12 46.9 -0.2
AMT S Sg 11 13 04.1 +0.9
comp=N,2μm,0.7s
LAKA Lakka 1.26 87 P Pn 11 12 46.2 -0.5
LAKA S Sg 11 13 04.2 +0.4
LAKA Lakka 1.26 87 P Pn 11 12 45.9 -0.8
LAKA AML AML 11 13 14.0
comp=N,1180μm,0.7s
LAKA AML AML 11 13 14.9
comp=E,1177μm,0.6s
ANX Ano Chora 1.27 71 P Pn 11 12 46.5 -0.5
ANX S Sg 11 13 04.5 +0.2
comp=E,2μm,0.5s
ANX Ano Chora 1.27 71 P Pn 11 12 46.5 -0.5
IGT Igoumenitsa 1.34 358 P Pb 11 12 48.1 -0.1
IGT S Sg 11 13 06.1 -0.2
comp=E,725nm,0.6s
IGT Igoumenitsa 1.34 358 ePg Pg 11 12 49.3 +0.4
IGT eSg Sg 11 13 10.3 +4.0
IGT Igoumenitsa 1.34 358 P Pb 11 12 48.5 +0.2
IGT AML AML 11 13 13.6
comp=E,1576μm,0.4s
IGT AML AML 11 13 14.3
comp=N,1163μm,0.3s
SERG Sergoula 1.34 80 P Pn 11 12 47.3 -0.4
SERG Sergoula 1.34 80 P Pn 11 12 47.2 -0.6
TRIZ Trizonia 1.34 82 P Pn 11 12 47.2 -0.5
TRIZ S Sg 11 13 06.2 -0.2
comp=N,1μm,0.6s
TRIZ Trizonia 1.34 82 P Pn 11 12 47.2 -0.5
KALE Kalithea 1.40 81 P Pn 11 12 48.1 -0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KALE	Kalithea	1.40	81	P	Pn	11 12 48.1	-0.5
KALE				AML	AML	11 13 22.1	
	comp=E,1243μm,0.5s						
KALE				AML	AML	11 13 25.1	
	comp=N,1911μm,0.5s						
KLV	Kalavryta, Ach	1.40	96	P	Pb	11 12 49.0	-0.4
KLV				S	Sb	11 13 07.6	+0.3
KLV	Kalavryta, Ach	1.40	96	P	Pn	11 12 48.9	+0.2
JAN	Janina	1.50	14	P	Pg	11 12 52.3	+0.1
JAN				AML	AML	11 13 17.2	
	comp=E,1736μm,0.4s						
JAN				AML	AML	11 13 24.0	
	comp=N,1426μm,0.5s						
ITM	Ithomi	1.59	129	P	Pb	11 12 52.7	+0.1
MAKR	Makrakomi, Fth	1.60	59	P	Pg	11 12 53.6	-0.3
MAKR				AML	AML	11 13 23.5	
	comp=E,2445μm,0.7s						
MAKR				AML	AML	11 13 24.8	
	comp=N,2398μm,0.6s						
PYL	PYLOS	1.69	140	P	Pb	11 12 53.7	-0.6
AGG	Agios Georgios	1.74	61	P	Pb	11 12 55.3	+0.2
THL	Klokotos Trika	1.87	42	P	Pb	11 12 57.9	+0.6
THL				AML	AML	11 13 29.7	
	comp=N,1032μm,0.8s						
THL				AML	AML	11 13 32.8	
	comp=E,986μm,0.7s						
KPRO	Kipourio	1.92	23	P	Pb	11 12 58.8	+0.7
LIT	Litokhoron	2.51	40	P	Pb	11 13 07.2	-1.1
FNA	Florina	2.70	16	ePn	Pn	11 13 08.3	+1.8
FNA	Florina	2.70	16	P	Pn	11 13 08.5	+2.0
VLY	Voula,Athens	2.72	96	P	Pn	11 13 08.9	+2.2
OHR	Ohrid	2.93	6	ePn	Pn	11 13 12.4	+2.7
VAY	Valandovo	3.55	28	ePn	Pn	11 13 19.4	+1.3
STIP	Stip	3.76	21	ePn	Pn	11 13 24.3	+3.3
ULC	Ulcinj	3.86	347	⇓iPn	Pn	11 13 22.3	-0.3
ULC				eSn	Sn	11 14 08.0	+0.2
DRME	Dracevica, Mon	4.09	347	ePn	Pn	11 13 25.5	-0.1
DRME				eSn	Sn	11 14 13.6	+0.2
BUM	Brajici-Budva	4.26	345	ePn	Pn	11 13 27.6	-0.3
BUM				eSn	Sn	11 14 17.4	-0.2
TTG	Podgorica	4.32	349	⇓iPn	Pn	11 13 28.9	+0.2
TTG				eSn	Sn	11 14 18.9	0.0
PVY	Plav	4.41	356	ePn	Pn	11 13 30.1	+0.1
PVY				eSn	Sn	11 14 21.2	-0.1
HCY	Herceg Novi	4.49	342	ePn	Pn	11 13 30.6	-0.4
HCY				eSn	Sn	11 14 21.6	-1.5
CEME	Cevo	4.49	346	⇓iPn	Pn	11 13 30.7	-0.4
CEME				eSn	Sn	11 14 22.2	-1.1
BOSS	Bosilegrad	4.58	20	ePn	Pn	11 13 33.3	+0.9
NKME	Niksic	4.70	347	ePn	Pn	11 13 34.2	+0.3
NKME				eSn	Sn	11 14 28.0	-0.3
KOME	Kolasin	4.70	352	⇑iPn	Pn	11 13 34.3	+0.3
KOME				eSn	Sn	11 14 28.3	-0.2
NKY	Niksic	4.73	348	⇑iPn	Pn	11 13 34.7	+0.2
NKY				eSn	Sn	11 14 29.1	-0.3
BARS	Barje	4.74	13	ePn	Pn	11 13 35.5	+0.9
TREB	Trebinje	4.78	342	ePn	Pn	11 13 34.6	-0.4
TREB				eSn	Sn	11 14 28.4	-1.9
BRY	Bratogost	4.91	344	ePn	Pn	11 13 36.8	-0.1
BRY				eSn	Sn	11 14 33.0	-0.7
SELS	Selova	5.05	6	ePn	Pn	11 13 38.4	-0.4
UPM	Unac-Piva	5.13	348	ePn	Pn	11 13 39.8	-0.2
UPM				eSn	Sn	11 14 38.9	-0.3
ZAPS	Zavoj	5.35	18	ePn	Pn	11 13 44.7	+1.7
IVAS	Ivanjica	5.38	358	ePn	Pn	11 13 42.8	-0.5
IVAS				eSn	Sn	11 14 43.4	-1.8
ZAGS	Zajecar	5.78	13	ePn	Pn	11 13 49.7	+0.9
DIVS	Divibare	5.91	357	ePn	Pn	11 13 49.5	-1.1
DIVS				eSn	Sn	11 14 55.8	-2.4
TRUS	Trudelj	6.02	0	ePn	Pn	11 13 51.1	-1.0
SOKA	Soboth	9.35	337	ePn	Pn	11 14 37.3	-0.6
	comp=E,1.9nm,0.3s						
OBKA	Obir	9.36	334	ePn	Pn	11 14 38.7	+0.7
	comp=E,1.1nm,0.3s						
MOA	Molln	10.63	337	ePn	Pn	11 14 56.4	+1.0
	comp=E,0.3nm,0.2s						

*ATH **03** 11:17:42.4, 38°.23N×20°.41E, h11km±1km, ML2.9/4, Error ellipse: s-maj=2.3km s-min=1.1km az=262.0*
*THE **03** 11:17:42.5, 38°.22N×20°.36E, h9km±1km, ML2.9/9, Error ellipse: s-maj=1.4km s-min=0.6km az=225.0*
ISC 03 11:17:42.5±1.0, **38°.23N**±0°.02×**20°.39E**±0°.04, **h10**km±5km, **n35**, σ1s.46/58, **Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.04	39	P	Pg	11 17 44.3	-0.1
KEF4				S	Sg	11 17 45.6	-0.1
KEF3	Kipouria, Keph	0.04	235	P	Pg	11 17 44.5	+0.1
KEF3				S	Sg	11 17 46.0	+0.2
CHV1	Chavriata, Kef	0.04	191	P	Pg	11 17 44.5	+0.1
CHV1				S	Sg	11 17 46.0	+0.2
LXR1	Lixouri, Cepha	0.04	127	P	Pg	11 17 44.5	+0.1
LXR1				S	Sg	11 17 46.0	+0.2
KEF1	Kardakata, Kep	0.08	51	P	Pg	11 17 44.6	-0.2
KEF1				S	Sg	11 17 46.1	-0.4
ARG2	Argostoli	0.09	123	P	Pg	11 17 44.9	0.0
ARG2				S	Sg	11 17 46.8	+0.1
KEF2	Argostoli. Kep	0.10	130	P	Pg	11 17 45.0	0.0
KEF2				S	Sg	11 17 46.6	-0.2
VLS	Valsamata	0.16	108	P	Pg	11 17 46.0	-0.1
VLS				S	Sg	11 17 48.7	+0.2
	8μm,0.1s						
VLS	Valsamata	0.16	108	P	Pg	11 17 45.8	-0.3
VLS				S	Sg	11 17 48.5	0.0
VLS				AML	AML	11 17 48.7	
	comp=N,14423μm,0.1s						
VLS				AML	AML	11 17 48.9	
	comp=E,17086μm,0.1s						
VSK1	VASILIKIADES	0.23	37	P	Pg	11 17 47.2	0.0
VSK1				S	Sg	11 17 50.9	+0.6
	comp=E,11μm,0.3s						
FSK	Fiskardo	0.27	30	P	Pg	11 17 48.1	+0.2
FSK				S	Sg	11 17 52.5	+0.9
FSK	Fiskardo	0.27	30	P	Pg	11 17 47.9	0.0
FSK				S	Sg	11 17 51.9	+0.4
VLMS	Volimes, Zakyn	0.41	149	P	Pg	11 17 50.6	+0.1
VLMS				S	Sg	11 17 56.8	+0.8
VLMS				AML	AML	11 17 59.2	
	comp=E,4156μm,0.2s						
VLMS				AML	AML	11 18 01.1	
	comp=N,7508μm,0.3s						
EVGI	Lefkada island	0.44	28	P	Pg	11 17 51.2	-0.1
EVGI				S	Sb	11 17 58.5	-0.7
EVGI	Lefkada island	0.44	28	P	Pg	11 17 51.1	-0.1
EVGI				S	Sg	11 17 58.0	+0.9
MGNA	Meganis	0.53	36	P	Pg	11 17 52.3	-0.5
MGNA				S	Sg	11 18 00.5	+0.7
MGNA				AML	AML	11 18 01.2	
	comp=N,2321μm,0.2s						
MGNA				AML	AML	11 18 01.5	
	comp=E,1813μm,0.1s						
LKD2	Lefkada island	0.60	20	P	Pg	11 17 53.8	-0.3
LKD2				S	Sb	11 18 03.4	-0.2
	comp=E,370nm,0.3s						
LKD2	Lefkada island	0.60	20	P	Pg	11 17 54.0	-0.1
AST1	Astakos	0.63	60	P	Pg	11 17 54.5	-0.2
AST1				S	Sb	11 18 04.8	+0.3
	comp=E,4μm,0.3s						
TSLK	Tsoukalades, L	0.63	19	P	Pg	11 17 54.6	-0.2
TSLK				S	Sb	11 18 04.8	+0.2
	comp=E,410nm,0.3s						
TSLK	Tsoukalades, L	0.63	19	P	Pg	11 17 54.3	-0.4
KRI1	kERI	0.66	149	P	Pg	11 17 54.8	-0.4
KRI1				S	Sb	11 18 05.8	+0.5
	comp=E,2μm,0.3s						
PDO	Prodromos	0.72	59	P	Pg	11 17 56.0	-0.5
PDO				S	Sb	11 18 08.4	+1.2
	comp=E,1μm,0.5s						
PDO	Prodromos	0.72	59	P	Pg	11 17 56.0	-0.5
PDO				AML	AML	11 18 08.1	
	comp=E,2318μm,0.5s						
PDO				AML	AML	11 18 09.4	
	comp=N,1893μm,0.4s						
RLS	Riolos of Patr	0.86	101	P	Pg	11 17 59.2	+0.1
RLS				S	Sb	11 18 12.4	+1.2
	comp=N,340nm,0.3s						
RLS	Riolos of Patr	0.86	101	P	Pg	11 17 59.0	-0.2
PVO	Paravola	0.97	66	P	Pg	11 18 01.0	-0.2
PVO				S	Sn	11 18 16.3	+0.2
	comp=N,698nm,0.4s						
PVO	Paravola	0.97	66	P	Pg	11 18 01.0	-0.2
DRO	Drossia	1.07	104	P	Pg	11 18 02.5	-0.7
LAKA	Lakka	1.25	89	P	Pn	11 18 05.2	-0.9
ANX	Ano Chora	1.25	73	P	Pn	11 18 05.7	-0.5
SERG	Sergoula	1.32	81	P	Pn	11 18 06.3	-0.7
KLV	Kalavryta, Ach	1.40	97	P	Pn	11 18 07.6	-0.5
ITM	Ithomi	1.60	130	P	Pb	11 18 12.3	0.0
AGG	Agios Georgios	1.71	62	P	Pb	11 18 14.5	+0.4

*IDC **03** 11:18:18.8±1.1, 11°.52N×125°.59E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.6/64, mbtmp3.8/8, Error ellipse: s-maj=51.4km s-min=23.3km az=66.0*
*MAN **03** 11:18:26.4, 11°.31N×125°.37E, h79km, MS3.3*
ISC 03 11:18:26.2±0.9, **11°.33N**±0°.05×**125°.50E**±0°.09, **h53**km, **n16**, σ1s.64/21, **mb3.6**/8, **1C**, **Samar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OCLP	Ormoc	0.91	253	eP	Pn	11 18 43.5	+0.6
OCLP				eS	Sn	11 18 58.3	+3.2
MSLP	Maasin	1.34	208	eP	Pn	11 18 49.8	+1.2
MSLP				eS	Sn	11 19 08.1	+2.8
CNP	Catarman	1.43	325	eP	Pn	11 18 50.7	+0.9
CNP				eS	Sn	11 19 09.3	+1.7
PVCP	Virac	2.61	330	eP	Pn	11 19 07.2	+1.2
PVCP				eS	Sn	11 19 40.0	+3.6
RCP	Roxas	2.71	275	⇑eP	Pn	11 19 08.3	+1.0
GUIM	Jordan	2.94	257	eP	Pn	11 19 09.7	-0.8
GUIM				eS	Sn	11 19 43.0	-1.5
OTRP	Odiongan	3.56	287	eP	Pn	11 19 19.2	+0.3
CUYO	Cuyo Island	4.42	264	eP	Pn	11 19 31.3	+0.5
CUYO				eS	Sn	11 19 53.6	-28
CMAR	Chiang Mai Arr	26.60	289	P	P	11 23 59.4	-0.4
	0.5nm,0.3s,baz=115,slow=8.5,SNR=4.7						
ASAR	Alice Springs	35.74	167	P	P	11 25 21.1	+1.0
	0.4nm,0.4s,baz=350,slow=8.2,SNR=14						
SONM	Songino Array	39.77	340	P	P	11 25 53.4	-0.7
	0.3nm,0.4s,baz=139,slow=10,SNR=3.6						
MKAR	Makanchi Array	50.73	323	P	P	11 27 20.1	-0.7
	0.5nm,0.5s,baz=120,slow=7.9,SNR=10						
KURBB	Kurchatov Arra	54.78	325	P	P	11 27 49.3	-1.3
	0.2nm,0.3s,baz=118,slow=6.6,SNR=5.1						
ARCES	ARCESS Array B	82.95	340	P	P	11 30 44.5	-0.7
	4.2nm,1.0s,baz=81,slow=5.8,SNR=3.2						
FINES	FINESS Array B	84.61	332	P	P	11 30 52.2	-1.5
	1.4nm,0.8s,baz=107,slow=2.6,SNR=5.3						
YKA	Yellowknife Ar	93.11	24	P	P	11 31 33.5	-0.7
	0.1nm,0.5s,baz=274,slow=5.2,SNR=3.6						

*BEO **03** 11:19:31.4±2.4, 38°.26N×19°.85E, h9km±1km, ML3.3/5*
*THE **03** 11:19:32.5, 38°.37N×20°.46E, h8km±1km, ML3.5/7, Error ellipse: s-maj=1.0km s-min=0.3km az=268.0*
*ATH **03** 11:19:32.4, 38°.36N×20°.45E, h9km±2km, ML3.4/6, Error ellipse: s-maj=2.7km s-min=0.6km az=254.0*
ISC 03 11:19:31.5±0.8, **38°.35N**±0°.02×**20°.48E**±0°.02, **h13**km±5km, **n62**, σ1s.44/98, **8C-3D**, **Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF1	Kardakata, Kep	0.07	182	P	Pg	11 19 34.4	+0.2
KEF1				S	Sg	11 19 36.2	+0.1
VSK1	VASILIKIADES	0.09	51	P	Pg	11 19 34.6	+0.2
VSK1				S	Sg	11 19 36.5	+0.1
KEF4	Livadi, Kephal	0.10	203	P	Pb	11 19 35.0	-0.3
KEF4				S	Sb	11 19 37.2	-0.7
FSK	Fiskardo	0.13	33	P	Pb	11 19 35.2	-0.6
FSK				S	Sb	11 19 37.4	-1.3
FSK	Fiskardo	0.13	33	P	Pb	11 19 35.1	-0.6
FSK				S	Sb	11 19 37.6	-1.0
LXR1	Lixouri, Cepha	0.15	191	P	Pb	11 19 35.9	-0.4
LXR1				S	Sb	11 19 39.3	-0.1
ARG2	Argostoli	0.17	177	P	Pb	11 19 36.4	-0.2
ARG2				S	Sb	11 19 39.2	-0.8
KEF3	Kipouria, Keph	0.18	214	P	Pb	11 19 36.2	-0.5
KEF3				S	Sg	11 19 39.1	+0.7
CHV1	Chavriata, Kef	0.18	204	P	Pb	11 19 36.5	-0.3
CHV1				S	Sb	11 19 40.0	-0.2
KEF2	Argostoli. Kep	0.19	177	P	Pb	11 19 36.4	-0.4
KEF2				S	Sb	11 19 39.9	-0.4
VLS	Valsamata	0.20	153	P	Pb	11 19 36.6	-0.4
VLS				S	Sb	11 19 39.7	-1.0
	17μm,0.2s						
VLS	Valsamata	0.20	153	P	Pb	11 19 36.6	-0.4
VLS				S	Sb	11 19 40.3	-0.4
VLS				AML	AML	11 19 41.2	
	comp=E,30637μm,0.2s						
VLS				AML	AML	11 19 42.9	
	comp=N,34244μm,0.4s						
EVGI	Lefkada island	0.30	28	P	Pb	11 19 38.5	-0.3
EVGI				S	Sb	11 19 43.3	-0.5
EVGI	Lefkada island	0.30	28	P	Pb	11 19 38.5	-0.3
EVGI				S	Sb	11 19 43.3	-0.5
MGNA	Meganis	0.39	39	P	Pb	11 19 40.0	-0.4
MGNA				S	Sb	11 19 45.5	-0.8
MGNA				AML	AML	11 19 46.8	
	comp=N,30224μm,0.4s						
MGNA				AML	AML	11 19 47.0	
	comp=E,17062μm,0.3s						
LKD2	Lefkada island	0.46	18	P	Pb	11 19 41.0	-0.5
LKD2				S	Sb	11 19 47.3	-1.0
	comp=E,4μm,0.8s						
LKD2	Lefkada island	0.46	18	P	Pb	11 19 41.2	-0.3
LKD2				S	Sb	11 19 47.9	-0.4
LKD2				AML	AML	11 19 48.7	
	comp=E,5586μm,0.5s						
LKD2				AML	AML	11 19 49.0	
	comp=N,7276μm,0.7s						
TSLK	Tsoukalades, L	0.49	17	P	Pb	11 19 41.8	-0.2
TSLK				S	Sb	11 19 49.2	0.0
	comp=N,5μm,0.8s						
TSLK	Tsoukalades, L	0.49	17	P	Pb	11 19 41.8	-0.2
TSLK				S	Sb	11 19 49.2	0.0
VLMS	Volimes, Zakyn	0.50	163	P	Pn	11 19 42.4	-2.0
VLMS				S	Sn	11 19 50.3	-2.6
VLMS				AML	AML	11 19 51.3	
	comp=N,48365μm,0.5s						
VLMS				AML	AML	11 19 52.5	
	comp=E,26818μm,0.2s						
AST1	Astakos	0.52	68	P	Pn	11 19 42.7	-1.9
AST1				S	Sn	11 19 50.5	-2.8
PDO	Prodromos	0.61	66	P	Pn	11 19 44.2	-1.7
PDO				S	Sn	11 19 53.6	-2.0
PDO	Prodromos	0.61	66	P	Pn	11 19 44.2	-1.7
PDO				S	Sn	11 19 53.3	-2.3
PDO				AML	AML	11 19 57.1	
	comp=E,9462μm,0.5s						
PDO				AML	AML	11 19 58.4	
	comp=N,8991μm,0.6s						
KRI1	kERI	0.74	158	P	Pn	11 19 46.1	-1.6
KRI1				S	Sn	11 19 58.4	-0.4
RLS	Riolos of Patr	0.83	110	P	Pn	11 19 48.2	-0.8
RLS				S	Sn	11 20 01.0	-0.1
RLS	Riolos of Patr	0.83	110	P	Pn	11 19 48.5	-0.5
RLS				S	Sn	11 20 00.2	-0.9
RLS				AML	AML	11 20 10.3	
	comp=E,1876μm,0.5s						
RLS				AML	AML	11 20 10.3	
	comp=N,2711μm,0.5s						
PVO	Paravola	0.87	72	P	Pn	11 19 49.2	-0.2
PVO				S	Sn	11 20 01.9	0.0
	comp=N,3μm,0.8s						
PVO	Paravola	0.87	72	P	Pn	11 19 49.2	-0.2
DRO	Drossia	1.05	112	P	Pg	11 19 52.3	+0.5
DRO				S	Sn	11 20 09.0	+2.4
	comp=N,3μm,0.5s						
EFP	Efpalio	1.13	86	P	Pg	11 19 53.4	+0.2
EFP				S	Sg	11 20 10.7	+2.8
	comp=N,3μm,0.8s						
ANX	Ano Chora	1.16	78	P	Pg	11 19 54.1	+0.2
ANX				S	Sg	11 20 11.5	+2.5
	comp=N,3μm,0.5s						
IGT	Igoumenitsa	1.18	355	ePg	Pg	11 19 55.1	+0.8
IGT				eSg	Sg	11 20 13.6	+3.9
EVR	Evrytania	1.19	61	P	Pg	11 19 54.2	-0.2
LAKA	Lakka	1.19	95	P	Pg	11 19 54.6	+0.2
LAKA				S	Sg	11 20 11.7	+1.8
SERG	Sergoula	1.24	87	P	Pg	11 19 55.4	-0.1
TRIZ	Trizonia	1.26	89	P	Pg	11 19 55.3	-0.4
TRIZ				S	Sg	11 20 14.0	+2.0
KALE	Kalithea	1.31	88	P	Pg	11 19 56.2	-0.5
KLV	Kalavryta, Ach	1.36	103	P	Pg	11 19 57.2	-0.4
KLV				S	Sg	11 20 16.7	+1.5
AGG	Agios Georgios	1.60	65	P	Pg	11 20 01.4	-0.8
FNA	Florina	2.53	16	ePn	Pb	11 20 15.3	-1.5
TIP	Timpagrande	3.02	287	⇑P	Pb	11 20 23.8	-1.4
TIP				⇑S	Sn	11 20 55.6	+0.4
TIR	Tirane	3.03	351	ePn	Pb	11 20 21.2	-4.0
TIR	Tirane	3.03	351	⇑P	Pb	11 20 21.3	-4.0
TIR				⇓S	Sb	11 20 58.6	-3.5
VAY	Valandovo	3.38	28	ePn	Pb	11 20 29.7	-1.5
MATE	Matera	3.71	309	⇑P	Pb	11 20 37.9	+1.0
MATE				⇑S	Sg	11 21 32.6	+1.9
PDG	Podgorica	4.18	348	ePn	Pn	11 20 36.0	+1.1
PDG	Podgorica	4.18	348	⇑P	Pn	11 20 36.0	+1.1
PDG				⇓S	Sn	11 21 23.9	+0.3
BOSS	Bosilegrad	4.41	20	ePn	Pb	11 20 43.3	-5.6
BARS	Barje	4.57	12	ePn	Pn	11 20 43.6	+3.2
TREB	Trebinje	4.65	340	ePn	Pn	11 20 41.0	-0.5
VTS	Vitosha	4.75	25	⇑P	Pn	11 20 33.5	-10
VTS				⇓S	Sn	11 21 40.3	+2.3
SELS	Selova	4.89	6	ePn	Pn	11 20 45.8	+1.1
SJES	Sjenica	4.92	356	ePn	Pn	11 20 46.6	+1.4
ZAPS	Zavoj	5.18	18	ePn	Pn	11 20 50.5	+1.7
IVAS	Ivanjica	5.22	357	ePn	Pn	11 20 49.9	+0.5
ZAGS	Zajecar	5.61	13	ePn	Pn	11 20 58.1	+3.4
HAPS	Han Pijesak,BI	5.84	349	ePn	Pn	11 20 57.4	-0.5
TRUS	Trudelj	5.87	360	ePn	Pn	11 20 58.8	+0.7
BZS	Buzias	7.31	6	⇑P	Pb	11 21 27.0	-11
SOKA	Soboth	9.24	336	ePn	Pn	11 21 44.3	-0.2
	comp=N,1.4nm,0.3s						
OBKA	Obir	9.25	334	ePn	Pn	11 21 46.0	+1.4
	comp=N,1.3nm,0.2s						
MOA	Molln	10.52	336	ePn	Pn	11 22 03.1	+1.1
	comp=N,1.0nm,0.3s						

IDC 03 11:51:31.2±3.5, **13°.04N**×**143°.79E**, **h137**km±25km, **mb3.2**/4, **mb1 3.6**/4, **mb1mx3.1**/30, **mbtmp3.6**/4, **Error ellipse: s-maj=105.6km s-min=20.4km az=116.0**, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.18	63	P	Pn	11 51 57.0	+0.6
	29nm,0.3s,baz=251,slow=17,SNR=41						
GUMO				S	Sn	11 52 15.6	-0.1
	167nm,0.3s,baz=44,slow=18,SNR=24						
WRA	Warramunga Arr	34.07	196	P	P	11 58 02.2	-0.5
	1.1nm,1.0s,baz=16,slow=14,SNR=5.7						
ASAR	Alice Springs	37.74	195	P	P	11 58 34.0	0.0
	0.4nm,0.7s,baz=18,slow=13,SNR=15						
YKA	Yellowknife Ar	83.82	27	P	P	12 03 44.4	-0.7
	0.2nm,0.4s,baz=285,slow=5.1,SNR=4.6						
NVAR	Mina Array Bea	88.08	51	P	P	12 04 07.6	+0.8
	0.3nm,0.6s,baz=272,slow=4.6,SNR=3.9						

*NIED **03** 12:07:00, 34°.30N×136°.70E, h35km, Mw3.8 Best double couple: M0 4.88000×10^14 NP1:φs219.00000°, δ67.00000°, λ39.00000°. NP2:φs111.00000°, δ55.00000°, λ151.00000°.*
*IDC **03** 12:07:39.5±1.0, 34°.26N×136°.67E, h0km, mb3.5/5, mb1 3.5/10, mb1mx3.4/61, mbtmp3.5/10, ML3.1/5, MS2.4/1, Ms1 2.4/1, ms1mx2.2/43, Error ellipse: s-maj=22.7km s-min=18.5km az=63.0*
*JMA **03** 12:07:43.8, 34°.27N×136°.67E, h37km±km, M3.9 Broadband fault plane solution: P waves. NP1: φs222.00000°, δ55.00000°, λ40.00000°. NP2: φs107.00000°, δ58.00000°, λ138.00000°. Principal axes: T Plg51.0000°, Azm73.0000°; N Plg39.0000°, Azm257.0000°; P Plg2.0000°, Azm165.0000°;*
JMA Felt II J1.
ISC 03 12:07:44.0±1.0, **34°.26N**±0°.03×**136°.67E**±0°.03, **h33**km±3km, **n33**, σ0s.58/41, **mb3.3**/5, **5C-7D**, **Western Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIE	Ise	0.13	13	⇑P	Pb	12 07 50.1	+0.1
JIE				S	Sb	12 07 54.3	+0.2
JKN2	Miekihoku	0.33	266	⇑P	Pb	12 07 51.9	-0.2
JKN2				S	Sb	12 07 57.6	0.0
TSUJ	Tsu 2	0.49	335	⇓P	Pb	12 07 54.2	-0.3
TSUJ				S	Sb	12 08 01.0	-0.7
JAA	Atsumi	0.54	47	⇑P	Pb	12 07 54.9	-0.3
JAA				S	Sb	12 08 02.1	-0.8
TTO2	TONANKAI O.B.S	0.60	150	⇓P	Pb	12 07 56.3	+0.3
TTO1	TONANKAI O.B.S	0.65	171	⇓P	Pb	12 07 56.8	+0.1
TTO3	TONANKAI O.B.S	0.72	123	⇓P	Pb	12 07 57.8	+0.1
TTO4	TONANKAI O.B.S	0.76	109	⇓P	Pn	12 07 58.0	-0.2
TTO4				eX		12 08 08.4	
TTO5	TONANKAI O.B.S	0.87	90	P	Pn	12 07 59.4	-0.3
TTO5				eX		12 08 11.4	
JWY	Kouya	0.89	268	⇑P	Pn	12 08 00.1	-0.2
JWY				S	Sn	12 08 11.4	-0.7
JHE	Heguri	0.90	296	⇓P	Pn	12 08 00.0	-0.4
JHE				S	Sn	12 08 11.5	-0.8
TK01	Tokai 1	0.91	123	P	Pn	12 07 59.5	-0.7
TK01				S	Sn	12 08 11.8	-0.2
TK02	Tokai 2	0.96	109	⇓P	Pn	12 08 00.2	-0.7
TK02				S	Sn	12 08 12.9	-0.3
JTNC	Tanabenakahech	0.98	244	⇑P	Pn	12 08 01.2	-0.3
JTNC				S	Sn	12 08 14.1	-0.2
TK04	Tokai 4	1.00	83	P	Pn	12 08 01.2	-0.5
TK03	Tokai 3	1.08	95	P	Pn	12 08 03.2	+0.5
TK03				S	Sn	12 08 16.7	+0.3
MAT	Matsushiro	2.60	28	P	Pn	12 08 23.6	-0.1
MAT				S	Sn	12 08 54.6	+0.4
MJAR	Matsushiro Arr	2.60	28	Pn	Pn	12 08 23.5	-0.2
	0.5nm,0.3s,baz=152,slow=24,SNR=24						
MJAR				Sn	Sn	12 08 55.1	+0.9
	3.1nm,0.3s,baz=212,slow=12,SNR=18						
JHJ	Hachijo jima 2	2.83	113	Pn	Pn	12 08 27.1	+0.2
	36nm,0.3s,baz=327,slow=18,SNR=25						
JHJ				Sn	Sn	12 08 59.0	-0.9
	128nm,0.3s,baz=137,slow=23,SNR=17						
JNU	Nakatsue	4.96	258	Pn	Pn	12 08 56.9	+0.7
	0.9nm,0.3s,baz=16,slow=9.7,SNR=12						
JNU				LR	LR	12 10 44.6	
	comp=Z,47nm,21.2s,baz=68,slow=37						
KSRS	Korea Array	7.78	297	Pn	Pn	12 09 36.1	+1.2
	0.2nm,0.3s,baz=111,slow=14,SNR=2.8						
KSRS				Sn	Sn	12 11 01.2	-0.6
	0.2nm,0.3s,baz=104,slow=25,SNR=3.1						
KLR	Kul'dur	15.39	348	Pn	Pn	12 11 20.2	+1.6
	0.1nm,0.3s,baz=140,slow=5.3,SNR=4.8						
SONM	Songino Array	26.36	310	P	P	12 13 17.1	0.0
	0.3nm,0.7s,baz=114,slow=9.6,SNR=3.7						
H11N2	WAKE ISLAND Hy	30.44	111	T	T	12 45 48.9	
	baz=304,slow=75,SNR=7.6						
H11N1	WAKE ISLAND Hy	30.44	111	T	T	12 46 17.6	
	baz=304,slow=75,SNR=4.0						
H11N3	WAKE ISLAND Hy	30.45	111	T	T	12 45 49.7	
	baz=304,slow=75,SNR=6.3						
H11S3	WAKE ISLAND Hy	30.99	113	T	T	12 47 05.9	
H11S1	WAKE ISLAND Hy	30.99	113	T	T	12 47 07.3	
H11S2	WAKE ISLAND Hy	31.01	113	T	T	12 47 09.3	
ZALV	Zalesovo Beam	41.02	315	P	P	12 15 23.3	-0.6
	0.3nm,0.4s,baz=86,slow=10,SNR=2.0						
MKAR	Makanchi Array	42.39	304	P	P	12 15 35.1	0.0
	0.4nm,0.6s,baz=87,slow=11,SNR=5.7						
WRA	Warramunga Arr	53.95	183	P	P	12 17 04.0	-0.6
	0.5nm,0.5s,baz=359,slow=7.9,SNR=4.8						
ASAR	Alice Springs	57.67	183	P	P	12 17 32.0	+0.9
	0.3nm,0.6s,baz=11,slow=14,SNR=5.1						

*IDC **03** 12:37:17.8±3.2, 32°.69S×178°.26W, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.7/28, mbtmp3.7/3, ML3.3/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/36, Error ellipse: s-maj=75.1km s-min=37.5km az=116.0*
*NEIC **03** 12:37:22.9±1.3, 32°.7S±0°.1×178°.38W±0°.06, h35km±2km, mb4.1/5, Error ellipse: s-maj=17.2km s-min=8.4km az=185.0*
ISC 03 12:37:22.1±1.4, **32°.69S**±0°.09×**178°.3W**±0°.2, **h33**km, **n14**, σ1s.90/16, **mb3.7**/4, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.70	213	Pn	Pn	12 38 57.8	-0.2
	0.6nm,0.3s,baz=20,slow=4.5,SNR=3.3						
URZ				Sn	Sn	12 40 14.2	+1.1
	2.7nm,0.3s,baz=149,slow=23,SNR=14						

OUZ Omahuta 7.19 247 Pn Pn 12 39 06.9 +2.1
BKZ Black Stump Fm 7.71 212 Pn Pn 12 39 13.2 +1.1
BKZ Sn Sn 12 40 38.2 -0.2
THZ Tophouse 11.44 215 Pn Pn 12 40 03.5 +0.4
THZ Sn Sn 12 42 04.4 -5.4
MSVF Nonsavu 15.26 347 Pn Pn 12 40 52.5 -2.7
AS31 Alice Springs 42.78 270 P P 12 45 16.8 0.0
AS31 IAmb IAmb 12 45 26.2
comp=Z,2.7nm,1.4s
ASAR Alice Springs 42.78 270 P P 12 45 18.1 +1.3
comp=Z,0.6nm,0.6s,baz=111,slow=7.6,SNR=11
ASAR Alice Springs 42.78 270 P P 12 45 17.0 +0.3
WRA Warramunga Arr 43.98 275 P P 12 45 26.8 +0.3
comp=Z,0.5nm,0.4s,baz=112,slow=8.1,SNR=4.9
WRA Warramunga Arr 43.98 275 P P 12 45 26.1 -0.3
WB0 Warramunga Arr 44.01 275 P P 12 45 27.6 +0.9
WB0 IAmb IAmb 12 45 46.7
comp=Z,12nm,1.2s
JAY Jayapura 48.76 299 LR LR 13 04 32.0
comp=Z,35nm,19.7s,baz=26,slow=34
QSPA South Pole Qui 57.42 180 P P 12 47 08.5 +1.2
FINES FINESS Array B 147.19 339 PKPbc PKPbc 12 57 01.4 +0.3
comp=Z,1.0nm,0.6s,baz=12,slow=4.1,SNR=4.5

VIE 03 12:43:15.9±2.7, 51.°57N×16.°09E, h0km, mb2.4/3, ml2.9/4, Error ellipse: s-maj=26.5km s-min=17.6km az=28.0 83 km NW of Wroclaw Suspected Mining induced.
PRU 03 12:43:16.7±0.0, 51.°55N×15.°99E, h0km
BGR 03 12:43:16.5±0.4, 51.°56N×15.°99E, h1km, ML3.0/16, Error ellipse: s-maj=4.4km s-min=2.2km az=15.0
ISC 03 12:43:14.6±0.9, 51.°65N±0.°03×16.°04E±0.°02, h0km, n41, σ1.°01/80, Poland

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSP Ksiaz 0.82 169 ePg Pg 12 43 30.7 +0.3
KSP eSg Sg 12 43 40.9 -0.1
KSP Ksiaz 0.82 169 ePg Pg 12 43 30.5 +0.2
KSP iSg Sg 12 43 40.8 -0.1
CHVC Chvalec 1.06 179 ePG Pg 12 43 35.2 +0.3
CHVC eSG Sg 12 43 48.1 -0.5
comp=Z,76nm,0.5s
OSTC Ostas 1.10 174 ePG Pg 12 43 36.1 +0.5
UPC Upice 1.14 181 ePG Pg 12 43 36.3 -0.2
UPC eSG Sg 12 43 50.4 -0.8
comp=Z,81nm,0.5s
DPC Dobruska-Polom 1.31 172 ePG Pg 12 43 39.4 -0.3
DPC eSG Sg 12 43 55.6 -1.1
comp=Z,63nm,0.5s
DPC Dobruska-Polom 1.31 172 ePg Pg 12 43 39.6 -0.1
DPC eSg Sb 12 43 57.5 0.0
PVCC Panska Ves 1.45 220 ePG Pn 12 43 42.3 +0.1
PVCC eSG Sn 12 44 01.4 +0.1
comp=Z,91nm,0.2s
BRG Berggiesshubel 1.53 240 PG Pb 12 43 43.8 0.0
BRG SG Sg 12 44 03.4 -0.3
127nm,0.4s
BRG Berggiesshubel 1.53 240 ePg Pb 12 43 43.8 0.0
BRG eSg Sg 12 44 03.2 -0.4
KRLC Kraliky 1.64 163 ePG Pb 12 43 45.7 -0.1
KRLC eSG Sn 12 44 06.7 +0.1
comp=Z,61nm,0.6s
FBE Freiberg 1.84 248 ePg Pb 12 43 49.4 +0.3
FBE eSg Sg 12 44 13.2 -0.3
GOPC GO Pecny, Ondr 1.91 205 ePG Pb 12 43 50.2 -0.1
GOPC eSG Sb 12 44 14.2 -0.5
PRU Pruhonice 1.91 210 ePN Pn 12 43 48.0 -0.5
PRU ePG Pb 12 43 50.0 -0.4
PRU eSG Sb 12 44 14.5 -0.3
comp=Z,39nm,0.5s
CLL Collm 1.93 261 ePn Pn 12 43 48.0 -0.7
CLL ePg Pb 12 43 51.0 +0.4
CLL i 12 43 55.2
CLL eSg Sg 12 44 17.0 +0.5
comp=Z,24nm,0.5s
CLL Collm 1.93 261 eSg Sg 12 44 16.3 -0.3
MORC Moravsky Berou 2.10 152 ePN Pn 12 43 50.9 -0.3
MORC eSG Sn 12 44 19.0 +1.0
MORC Moravsky Berou 2.10 152 ePn Pn 12 43 50.8 -0.3
MORC eSg Sb 12 44 19.7 -0.5
OKC Ostrava-Krasne 2.25 143 eSG Sg 12 44 26.8 -0.2
comp=Z,30nm,0.5s
OKC Ostrava-Krasne 2.25 143 ePg Pg 12 43 57.3 -0.5
OKC eSg Sg 12 44 27.1 +0.1
VRAC Vranov 2.37 171 ePN Pn 12 43 55.2 +0.5
VRAC eSG Sb 12 44 28.3 +0.4
TANN Tannenbergstha 2.57 243 ePn Pn 12 43 57.5 -0.1
TANN ePg Pg 12 44 04.3 +0.4
TANN eSg Sb 12 44 35.6 +1.7
KRUC Moravsky 2.60 175 ePN Pn 12 43 59.0 +1.1
KRUC eSG Sb 12 44 35.7 +1.2
NKC Novy Kostel 2.68 239 ePN Pn 12 43 59.3 +0.3
NKC ePG Pg 12 44 05.5 -0.4
NKC eSG Sg 12 44 39.4 -1.2
comp=Z,55nm,0.4s
OJC Ojcow 2.77 120 ePg Pg 12 44 07.3 -0.5
OJC eSg Sg 12 44 44.3 +0.6
OJC Ojcow 2.77 120 ePg Pg 12 44 08.6 +0.8
OJC eSg Sg 12 44 44.0 +0.3
MOX Moxa 2.96 252 ePn Pn 12 44 03.1 +0.2
MOX ePg Pg 12 44 11.0 -0.4
MOX eSg Sg 12 44 48.2 -1.4
KHC Kasperske Hory 2.97 213 ePN Pn 12 44 03.4 +0.4
KHC ePG Pb 12 44 08.9 +0.5
KHC eSG Sb 12 44 47.0 +1.7
comp=Z,10nm,0.5s
JAVC Velka Javorina 2.98 159 eSG Sb 12 44 47.0 +1.4
MANZ Manzenberg 3.00 238 ePn Pn 12 44 03.4 0.0
MANZ eSg Sg 12 44 50.4 -0.5
ROTZ Rotzenmuhle 3.08 234 ePn Pn 12 44 04.8 +0.3
ROTZ eSg Sb 12 44 50.7 +2.3
GEC2 GERESS Array S 3.18 209 ePn Pn 12 44 06.2 +0.2
GEC2 ePg Pb 12 44 13.1 +1.0
GEC2 eSg Sg 12 44 54.6 -2.2
WET Wettzell 3.22 220 ePn Pn 12 44 06.8 +0.4
WET eSg Sg 12 44 56.2 -1.8
SMOL Smolenice 3.26 164 ePN Pn 12 44 02.8 -4.2
MODS Modra-Piesok 3.37 166 eSG Sg 12 45 02.5 -0.4
CLZ Clausthal 3.53 275 ePn Pn 12 44 11.7 +1.0
CLZ eSg Sg 12 45 07.2 -0.6
BSD Bornholm Skovb 3.54 349 iP Pn 12 44 11.2 +0.4
BSD iS Sn 12 44 51.0 -2.3
VYHS Vyhne 3.63 149 ePN Pn 12 44 12.3 +0.2
VYHS eSG Sg 12 45 09.2 -2.1
GRF Grafenberg Arr 3.64 239 eSg Sg 12 45 08.9 -2.5
CONA Conrad Observa 3.72 182 ePn Pn 12 44 15.4 +2.0
comp=Z,0.5nm,0.1s
MOA Molln 3.97 198 ePn Pn 12 44 16.9 +0.1
comp=Z,4.2nm,0.4s

NEIC 03 12:54:33.9±1.3, 4.°88S±0.°07×153.°89E±0.°06, h99km±7km, mb4.5/20, Error ellipse: s-maj=10.8km s-min=7.6km az=200.0
IDC 03 12:54:35.0±0.7, 4.°85S×153.°72E, h104km±5km, mb3.8/14, mb1 4.0/15, mb1mx3.8/37, mbtmp4.2/15, MS2.8/5, Ms1 2.8/5, ms1mx2.7/37, Error ellipse: s-maj=12.5km s-min=10.9km az=31.0
ISC 03 12:54:34.4±0.4, 4.°84S±0.°05×153.°87E±0.°06, h105km, n52, σ1.°59/59, mb4.2/21, New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RABL Rabaul 1.82 291 Pn Pn 12 55 03.4 -1.5
RABL Sn Sn 12 55 27.2 -0.9
KRVT Keravat (AS076 1.91 286 P Pn 12 55 04.6 -1.4
70nm,0.3s,baz=150,slow=0.5,SNR=59
KRVT S Sn 12 55 26.9 -3.3
100nm,0.3s,baz=259,slow=13,SNR=15
KRVT LR LR 12 55 59.7
comp=Z,302nm,19.0s,baz=94,slow=48
HNR Honiara 7.56 127 LR LR 12 59 26.3
comp=Z,135nm,20.8s,baz=328,slow=38
HNR Honiara 7.56 127 Pn Pn 12 56 20.5 -1.5
HNR Sn Sn 12 57 45.6 -0.5
PMG Port Moresby 8.06 235 P Pn 12 56 28.0 -0.7
26nm,0.3s,baz=46,slow=39,SNR=60
PMG S Sn 12 57 58.4 +0.2
9.1nm,0.3s,baz=57,slow=18,SNR=4.8
PMG LR LR 12 59 35.1
comp=Z,63nm,21.8s,baz=82,slow=38
PMG Port Moresby 8.06 235 Pn 12 56 28.7 0.0
PMG Sn 12 57 55.7 -2.5
PATS Pohnpei 12.41 21 Pn Pn 12 57 27.6 +0.1
PATS Sn Sn 12 59 39.1 -5.0
COEN Coen 13.90 229 Pn Pn 12 57 46.5 -0.5
TARA Tarawa 20.00 73 P P 12 58 58.7 -0.2
TARA IAmb IAmb 12 59 00.4
comp=Z,54nm,0.9s
GUMO Guam 20.37 334 LR LR 13 05 29.7
comp=Z,14nm,21.8s,baz=120,slow=32
GUMO Guam 20.37 334 P P 12 59 04.0 +1.2
EIDS Eidsvold 20.59 187 P P 12 59 04.7 -0.4
EIDS IAmb IAmb 12 59 06.9
comp=Z,27nm,1.2s
DZM Mont Dzumac 21.02 146 P P 12 59 08.6 -1.2
DZM IAmb IAmb 12 59 11.7
comp=Z,22nm,1.2s
MTN Manton Dam 23.82 249 P P 12 59 38.4 +0.4
WR0 Warramunga Arr 24.09 230 P P 12 59 40.5 +0.3
WR0 IAmb IAmb 12 59 41.9
comp=Z,12nm,0.8s
WB2 Warramunga Arr 24.22 230 P P 12 59 41.8 +0.3
WB2 IAmb IAmb 12 59 42.8
comp=Z,8.6nm,0.7s
WRA Warramunga Arr 24.23 230 P P 12 59 42.0 +0.4
comp=Z,9.1nm,0.8s,baz=54,slow=9.8,SNR=23
WRA LR LR 13 08 22.2
comp=Z,35nm,21.8s,baz=280,slow=34
WRA Warramunga Arr 24.23 230 P P 12 59 40.9 -0.7
ARMA Armidale 25.53 184 P P 12 59 53.5 +0.1
ARMA IAmb IAmb 12 59 56.7
comp=Z,16nm,1.2s
H11S3 WAKE ISLAND Hy 26.41 28 T T 13 28 39.6
baz=208,slow=76,SNR=3.8
H11S2 WAKE ISLAND Hy 26.41 28 T T 13 28 42.5
baz=208,slow=76,SNR=3.9
H11S1 WAKE ISLAND Hy 26.42 28 T T 13 28 46.4
baz=208,slow=76,SNR=4.1
AS31 Alice Springs 26.85 224 P P 13 00 04.5 -0.9
ASAR Alice Springs 26.85 224 P P 13 00 05.0 -0.3
comp=Z,0.9nm,0.5s,baz=55,slow=9.1,SNR=28
ASAR pP pP 13 00 28.4 +1.0
comp=Z,2.8nm,0.9s,baz=58,slow=9.5,SNR=6.4
ASAR Alice Springs 26.85 224 P P 13 00 04.4 -0.9
KNRA Kununurra 26.92 245 P P 13 00 07.0 +1.1
STKA Stephens Creek 29.26 202 P P 13 00 25.7 -0.9
comp=Z,7.2nm,0.8s,baz=16,slow=7.6,SNR=14
STKA Stephens Creek 29.26 202 P P 13 00 26.0 -0.6
RPZ Rata Peaks 41.58 161 P P 13 02 12.5 +0.7
comp=Z,6.4nm,0.7s,baz=255,slow=1.2,SNR=6.7
RPZ Rata Peaks 41.58 161 P P 13 02 12.0 +0.1
RPZ IAmb IAmb 13 02 13.1
comp=Z,7.8nm,0.7s
KSRS Korea Array 48.52 332 LR LR 13 23 27.5
comp=Z,10.0nm,18.1s,baz=140,slow=36
ENH Enshi 54.97 312 P P 13 03 55.5 +0.5
ENH IAmb IAmb 13 03 56.8
comp=Z,9.9nm,1.0s
CMAR Chiang Mai Arr 58.86 295 P P 13 04 24.1 +1.5
comp=Z,0.5nm,0.4s,baz=108,slow=5.0,SNR=6.7
SONM Songino Array 66.93 327 P P 13 05 17.3 +1.6
comp=Z,0.9nm,0.7s,baz=149,slow=6.0,SNR=7.9
SONM Songino Array 66.93 327 P P 13 05 17.0 +1.3
SHL Shillong 67.25 300 P P 13 05 18.8 +0.6
TIXI Tiksi 78.08 352 P P 13 06 20.6 -0.6
comp=Z,1.2nm,0.3s,baz=100,slow=0.9,SNR=5.6
BPAW Bear Paw Mtn. 79.93 21 PcP 13 06 45.1 +6.5
NEA Nenana 80.89 22 PcP 13 06 45.7 +2.9
MK31 Makanchi Array 81.06 319 P P 13 06 37.9 0.0
MKAR Makanchi Array 81.06 319 P P 13 06 39.0 +1.0
comp=Z,0.9nm,0.8s,baz=94,slow=7.4,SNR=12
MKAR Makanchi Array 81.06 319 P P 13 06 38.3 +0.4
ZALV Zalesovo Beam 81.78 326 P P 13 06 41.6 +0.2
comp=Z,0.6nm,0.5s,baz=102,slow=5.9,SNR=3.7
ZALV pP pwP 13 07 10.4 -2.4
comp=Z,0.7nm,0.6s,baz=103,slow=3.8,SNR=2.5
ILAR Eielson Array 81.80 22 P P 13 06 42.0 +0.6
comp=Z,0.3nm,0.6s,baz=233,slow=5.0,SNR=5.2
KURK Kurchatov 84.46 322 P P 13 06 55.7 +0.4
KURK IAmb IAmb 13 06 56.7
comp=Z,2.7nm,1.1s
KURBB Kurchatov Arra 84.49 322 P P 13 06 55.6 +0.1
comp=Z,1.0nm,0.9s,baz=102,slow=3.9,SNR=10
KURBB pP pP 13 07 23.4 +2.0
comp=Z,0.7nm,0.8s,baz=105,slow=4.3,SNR=4.7
KURBB PP PP 13 10 10.2 -2.0
comp=Z,0.2nm,0.6s,baz=95,slow=8.3,SNR=5.4
NIL Nilore 84.88 304 P P 13 06 57.2 -0.8
NIL IAmb IAmb 13 06 59.4
comp=Z,7.0nm,0.8s
MAW Mawson 85.94 203 P P 13 07 01.6 -0.8
comp=Z,4.9nm,0.7s,baz=87,slow=6.1,SNR=8.9
MAW Mawson 85.94 203 P P 13 07 02.1 -0.3
BVAR Borovoye Array 89.91 323 P P 13 07 20.7 -0.9
comp=Z,1.8nm,0.8s,baz=102,slow=6.2,SNR=12
BVAR pP pP 13 07 49.7 +1.9
comp=Z,1.4nm,0.8s,baz=114,slow=7.2,SNR=5.0
YKA Yellowknife Ar 94.96 28 P P 13 07 45.5 +0.8
comp=Z,0.3nm,0.9s,baz=270,slow=4.4,SNR=3.8
TORD Torodi Ar. Bea 151.33 289 PKPbc PKPbc 13 14 16.1 -0.7
comp=Z,1.1nm,0.6s,baz=83,slow=2.1,SNR=8.7
TORD PKPab PKPab 13 14 25.8 +0.5
comp=Z,1.9nm,0.9s,baz=85,slow=4.1,SNR=5.7
TORD pPKPbc pPKPbc 13 14 44.6 +0.6
comp=Z,1.0nm,0.7s,baz=66,slow=2.3,SNR=5.6

ATH 03 13:03:10.5, 38.°12N×20.°44E, h11km±3km, ML2.7/1, Error ellipse: s-maj=3.6km s-min=1.4km az=317.0
THE 03 13:03:11.1, 38.°12N×20.°41E, h5km±1km, ML2.7/5, Error ellipse: s-maj=1.3km s-min=0.5km az=313.0
ISC 03 13:03:10.6±1.1, 38.°11N±0.°03×20.°42E±0.°05, h8km±5km, n26, σ0.°39/42, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF2 Argostoli. Kep 0.07 44 P Pg 13 03 12.6 +0.1
KEF2 S Sg 13 03 13.8 -0.1
CHV1 Chavriata, Kef 0.08 335 P Pg 13 03 12.5 -0.1
CHV1 S Sg 13 03 13.8 -0.2
ARG2 Argostoli 0.08 38 P Pg 13 03 12.8 +0.2
ARG2 S Sg 13 03 14.1 0.0
LXR1 Lixouri, Cepha 0.09 8 P Pg 13 03 12.8 +0.1
LXR1 S Sg 13 03 14.7 +0.4
KEF3 Kipouria, Keph 0.11 327 P Pg 13 03 13.1 +0.1
KEF4 Livadi, Kephal 0.14 0 P Pg 13 03 13.7 +0.1
KEF4 S Sg 13 03 16.3 +0.6
VLS Valsamata 0.15 64 P Pg 13 03 13.8 +0.1
VLS S Sg 13 03 16.3 +0.5
6μm,0.2s
VLS Valsamata 0.15 64 P Pg 13 03 13.7 +0.1
VLS S Sg 13 03 16.4 +0.5
VLS AML AML 13 03 16.6
comp=N,9622μm,0.1s
VLS AML AML 13 03 16.6
comp=E,10598μm,0.1s
KEF1 Kardakata, Kep 0.17 13 P Pg 13 03 14.1 +0.1
KEF1 S Sg 13 03 16.8 +0.4
VLMS Volimes, Zakyn 0.30 141 P Pg 13 03 16.9 +0.4
FSK Fiskardo 0.36 17 P Pg 13 03 18.1 +0.4
FSK S Sg 13 03 23.4 +0.9
comp=E,908nm,0.3s
EVGI Lefkada island 0.54 20 P Pg 13 03 20.8 -0.2
EVGI S Sg 13 03 28.6 +0.5
KRI1 kERI 0.55 145 P Pg 13 03 21.5 +0.4
KRI1 S Sb 13 03 30.9 +0.5
AST1 Astakos 0.68 51 P Pg 13 03 23.9 +0.3
AST1 S Sb 13 03 34.3 +0.1
LKD2 Lefkada island 0.70 15 P Pg 13 03 24.2 +0.1
TSLK Tsoukalades, L 0.73 14 P Pg 13 03 24.9 +0.2
PDO Prodromos 0.77 51 P Pg 13 03 25.2 -0.2
PDO S Sb 13 03 36.7 -0.2
PVO Paravola 1.00 60 P Pg 13 03 29.8 0.0
PVO S Sn 13 03 45.0 -0.3
comp=E,545nm,0.4s
DRO Drossia 1.03 99 P Pg 13 03 30.4 +0.1
DRO S Sn 13 03 45.7 -0.3
comp=E,342nm,0.3s
EFP Efpalio 1.21 75 P Pb 13 03 33.4 -0.3
LAKA Lakka 1.23 84 P Pb 13 03 33.3 -0.9
ANX Ano Chora 1.27 67 P Pn 13 03 34.7 -0.1
ANX S Sn 13 03 52.5 +0.4
comp=E,342nm,0.5s
KLV Kalavryta, Ach 1.36 92 P Pn 13 03 35.6 -0.4
KLV Kalavryta, Ach 1.36 92 P Pn 13 03 35.6 -0.4
KALE Kalithea 1.38 78 P Pn 13 03 35.5 -0.7
THL Klokotos Trika 1.91 40 P Pb 13 03 46.1 +0.5

THE 03 13:05:17.9, 38.°40N×20.°44E, h0km±2km, ML2.9/9, Error ellipse: s-maj=2.5km s-min=0.6km az=273.0
ATH 03 13:05:17.1, 38.°38N×20.°48E, h18km±2km, ML2.8/9, Error ellipse: s-maj=2.6km s-min=0.8km az=274.0
ISC 03 13:05:17.7±0.9, 38.°39N±0.°02×20.°48E±0.°04, h9km±5km, n32, σ0.°79/57, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VSK1 VASILIKIADES 0.07 72 P Pg 13 05 19.5 -0.2
VSK1 S Sg 13 05 20.9 -0.3
FSK Fiskardo 0.10 41 P Pg 13 05 19.9 -0.1
FSK S Sg 13 05 21.7 0.0
6μm,0.2s
FSK Fiskardo 0.10 41 P Pg 13 05 19.9 -0.1
KEF1 Kardakata, Kep 0.11 185 P Pg 13 05 20.4 +0.2
KEF1 S Sg 13 05 22.8 +0.8
KEF4 Livadi, Kephal 0.14 199 P Pg 13 05 20.9 +0.2
KEF4 S Sg 13 05 23.6 +0.9
ARG2 Argostoli 0.21 179 P Pg 13 05 22.1 +0.2
ARG2 S Sg 13 05 25.9 +1.1
KEF3 Kipouria, Keph 0.21 210 P Pg 13 05 22.1 +0.1
KEF3 S Sg 13 05 26.0 +1.1
KEF2 Argostoli. Kep 0.22 179 P Pg 13 05 22.3 +0.2
KEF2 S Sg 13 05 26.4 +1.2
VLS Valsamata 0.23 158 P Pg 13 05 22.3 0.0
VLS S Sg 13 05 26.5 +1.1
VLS AML AML 13 05 27.5
comp=E,6408μm,0.1s
VLS AML AML 13 05 28.4
comp=N,5034μm,0.2s
EVGI Lefkada island 0.27 30 P Pg 13 05 23.2 +0.1
EVGI S Sg 13 05 28.1 +1.4
EVGI Lefkada island 0.27 30 P Pg 13 05 23.2 +0.1
EVGI S Sg 13 05 27.8 +1.1
MGNA Meganis 0.36 42 P Pg 13 05 24.9 +0.1
MGNA S Sg 13 05 30.5 +0.9
MGNA AML AML 13 05 31.2
comp=N,4268μm,0.3s
MGNA AML AML 13 05 31.5
comp=E,3681μm,0.1s
LKD2 Lefkada island 0.42 19 P Pg 13 05 25.9 -0.1
LKD2 S Sg 13 05 32.6 +1.0
comp=E,1μm,0.5s
LKD2 Lefkada island 0.42 19 P Pg 13 05 25.9 -0.1
LKD2 S Sb 13 05 32.8 -1.1
LKD2 AML AML 13 05 33.6
comp=N,2209μm,0.4s
LKD2 AML AML 13 05 35.1
comp=E,2153μm,0.5s
TSLK Tsoukalades, L 0.46 17 P Pg 13 05 26.7 +0.1
TSLK S Sb 13 05 34.1 -0.7
comp=E,2μm,0.6s
TSLK Tsoukalades, L 0.46 17 P Pg 13 05 26.1 -0.5
TSLK S Sg 13 05 33.4 +0.8
TSLK AML AML 13 05 35.9
comp=E,2916μm,0.3s
TSLK AML AML 13 05 39.5
comp=N,3344μm,0.6s
AST1 Astakos 0.50 72 P Pg 13 05 27.9 +0.5
AST1 S Sb 13 05 36.5 +0.4
VLMS Volimes, Zakyn 0.53 164 P Pg 13 05 27.7 -0.2
VLMS S Sg 13 05 35.3 +0.4
VLMS AML AML 13 05 39.1
comp=E,3295μm,0.2s
VLMS AML AML 13 05 41.6
comp=N,4595μm,0.3s
PDO Prodromos 0.59 69 P Pg 13 05 29.3 +0.2
PDO S Sb 13 05 38.5 -0.1
comp=N,2μm,0.6s
PDO Prodromos 0.59 69 P Pg 13 05 29.2 +0.1
PDO AML AML 13 05 41.1
comp=E,2183μm,0.4s
PDO AML AML 13 05 44.1
comp=N,2689μm,0.6s
KRI1 kERI 0.77 160 P Pg 13 05 32.2 -0.3
KRI1 S Sn 13 05 45.3 -1.2
PVO Paravola 0.85 74 P Pg 13 05 34.3 +0.3
PVO S Sn 13 05 48.1 -0.3
comp=N,772nm,0.4s
PVO Paravola 0.85 74 P Pg 13 05 33.9 -0.1
PVO AML AML 13 05 51.8
comp=E,1275μm,0.4s
PVO AML AML 13 05 52.2
comp=N,1567μm,0.4s
DRO Drossia 1.06 114 P Pg 13 05 38.1 +0.1
DRO S Sn 13 05 53.6 -0.1
comp=N,792nm,0.5s
EFP Efpalio 1.12 88 P Pb 13 05 38.7 -0.5
EFP S Sn 13 05 56.8 +1.7
comp=N,778nm,0.5s
EFP Efpalio 1.12 88 P Pb 13 05 38.0 -1.2
EFP S Sg 13 05 53.3 -0.4
EFP AML AML 13 06 01.7
comp=E,1145μm,0.7s
EFP AML AML 13 06 02.2
comp=N,1862μm,0.4s
ANX Ano Chora 1.15 79 P Pb 13 05 39.4 -0.3
ANX S Sn 13 05 58.1 +2.2
comp=N,842nm,0.5s
TRIZ Trizonia 1.25 91 P Pn 13 05 40.6 -0.7
TRIZ S Sn 13 06 00.3 +2.0
comp=N,382nm,0.5s
TRIZ Trizonia 1.25 91 P Pn 13 05 40.3 -1.1
KALE Kalithea 1.30 89 P Pn 13 05 41.5 -0.7
KALE AML AML 13 06 07.8
comp=N,814μm,0.6s
KALE AML AML 13 06 07.8
comp=E,420μm,0.6s
KLV Kalavryta, Ach 1.36 104 P Pn 13 05 42.2 -0.6
AGG Agios Georgios 1.58 66 P Pn 13 05 46.5 +0.6

ANF 03 13:12:05.5±0.3, 32.°63N×115.°65W, h22km±2km, ML2.9/25, Error ellipse: s-maj=2.5km s-min=1.8km az=175.0
NEIC 03 13:12:05.5±1.6, 32.°57N±0.°01×115.°69W±0.°02, h22km±7km, Error ellipse: s-maj=2.9km s-min=1.2km az=132.0
ECX 03 13:12:06.9±0.7, 32.°57N×115.°71W, h4km±2km, MD3.0, ML3.2
SCEDC 03 13:12:06.3, 32.°57N×115.°70W, h13km
PAS 03 13:12:06.3±2.2, 32.°57N±0.°02×115.°70W±0.°01, h13km±2km, ML3.2/165, ML3.2(ECX), Error ellipse: s-maj=2.4km s-min=1.5km az=146.0
MEX 03 13:12:08.1±0.3, 32.°64N×115.°69W, h20km, MD3.8
ISC 03 13:12:05.2±0.8, 32.°57N±0.°01×115.°70W±0.°01, h16km±6km, n136, σ0.°93/198, 1C-8D, California-Baja California border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CEA0 Mexicali 0.08 18 eP Pg 13 12 08.4 -0.1
WESC Westside Schoo 0.19 352 ⇓iP Pb 13 12 10.5 +0.2
WESC Westside Schoo 0.19 352 Pb 13 12 13.9 +3.6
UABX UABC, Campus M 0.23 75 eP Pb 13 12 11.5 +0.5
UABX UABC, Campus M 0.23 75 Pb 13 12 11.5 +0.5
UABX Sb 13 12 16.0 +1.2
ERMX Rumorosa 0.28 266 eP Pb 13 12 12.0 +0.1
ERMX eS Sg 13 12 15.9 +0.4
COK2 Cook Ranch 2 0.28 355 ⇓iP Pb 13 12 12.2 +0.4
COK2 Cook Ranch 2 0.28 355 Pb 13 12 12.3 +0.4
COK2 Sb 13 12 17.4 +1.1
DREC Desert Rsrch C 0.32 42 eP Pb 13 12 13.1 +0.7
DREC Desert Rsrch C 0.32 42 Pb 13 12 13.1 +0.7
DREC Sb 13 12 19.2 +1.9
RMX La Rumorosa 0.32 276 Pb 13 12 12.0 -0.1
RMX Sg 13 12 15.9 -0.9
IKP In-Ko-Pah, Jac 0.35 283 ⇓eP Pb 13 12 13.2 0.0
IKP eS Sb 13 12 18.2 -0.4
IKP In-Ko-Pah, Jac 0.35 283 Pb 13 12 13.2 0.0
IKP Sb 13 12 18.2 -0.4
IKP In-Ko-Pah, Jac 0.35 283 P Pb 13 12 13.2 0.0
baz=103,SNR=116
IKP S Sb 13 12 18.2 -0.4
baz=103
SNR Schaffner Ranc 0.36 37 Pb 13 12 14.1 +0.8
SNR Sb 13 12 20.7 +2.0
CPBX Cerro Prieto 0.37 114 eP Pb 13 12 13.6 +0.2

CPBX eS Sb 13 12 19.4 +0.6
CPBX ⇑e 13 12 24.5
CPBX IAML 13 12 24.5
comp=N,5μm,0.2s
CPBX IAML 13 12 26.5
comp=E,8μm,0.2s
CPBX ⇓e 13 12 26.5
CPBX Cerro Prieto 0.37 114 Pb 13 12 13.5 +0.2
SWSC Sam W. Stewart 0.38 347 ⇓iP Pb 13 12 13.7 +0.1
SWSC eS Sb 13 12 19.2 -0.1
SWSC Sam W. Stewart 0.38 347 Pb 13 12 13.7 +0.1
SWSC Sb 13 12 19.2 -0.1
SWSC Sam W. Stewart 0.38 347 P Pb 13 12 13.7 +0.1
baz=167,SNR=131
SWSC S Sg 13 12 18.0 -0.4
baz=167
CRR Carrizo Plain 0.39 324 ⇓iP Pb 13 12 13.9 +0.2
CRR Carrizo Plain 0.39 324 Pb 13 12 13.9 +0.2
SUP Superstition M 0.40 345 Pb 13 12 14.1 +0.2
SUP Superstition M 0.40 345 Sb 13 12 19.7 0.0
SALX Saltillo 0.50 107 eP Pn 13 12 20.1 +2.4
ERRC Elmore Ranch 0.55 349 Pb 13 12 17.4 +0.8
CBKC Canebrake 0.57 305 Pb 13 12 17.4 +0.6
CLIC Calipatria 0.59 14 Pb 13 12 17.7 +0.6
ESJX Sierra Juarez 0.60 200 ⇓eP Pb 13 12 17.4 0.0
ESJX eS Sb 13 12 25.5 -0.3
ESJX Sierra Juarez 0.60 200 Pb 13 12 17.4 0.0
ESJX Sb 13 12 25.6 -0.2
MONP2 Monument Peak 0.69 298 eP Pb 13 12 19.2 +0.2
MONP2 Monument Peak 0.69 298 Pb 13 12 19.0 +0.1
MONP2 Sb 13 12 28.4 +0.1
MONP2 Monument Peak 0.69 298 P Pb 13 12 19.2 +0.2
baz=118,SNR=53
MONP2 S Sb 13 12 28.4 +0.1
baz=118
SALN Salton City 0.75 341 Pb 13 12 20.2 +0.4
TKX Tecate 0.77 270 eP Pb 13 12 20.6 +0.4
TKX eS Sb 13 12 30.6 +0.2
TKX Tecate 0.77 270 Pb 13 12 20.4 +0.3
TKX Sb 13 12 30.6 +0.2
BAR Barrett 0.83 278 ⇓eP Pg 13 12 21.6 +0.3
BAR Barrett 0.83 278 Pg 13 12 21.6 +0.3
BAR Barrett 0.83 278 Sb 13 12 32.4 +0.2
FRK Frink 0.83 4 Pb 13 12 21.0 -0.3
TJIG Tijuana 0.83 261 eP Pg 13 12 21.6 +0.1
TJIG eS Sg 13 12 32.4 -0.1
TJIG Tijuana 0.83 261 Pg 13 12 21.6 +0.1
TJIG Sb 13 12 32.2 -0.1
TJIG Tijuana 0.83 261 eP Pg 13 12 21.6 +0.1
TJIG eS Sb 13 12 32.2 -0.1
CBX Cerro Bola 0.85 253 eP Pg 13 12 22.2 +0.3
CBX eS Sb 13 12 33.4 +0.4
CBX Cerro Bola 0.85 253 Pg 13 12 22.2 +0.3
CBX Cerro Bola 0.85 253 Pg 13 12 22.1 +0.3
CBX Sg 13 12 32.6 -0.6
CBX Cerro Bola 0.85 253 eP Pg 13 12 22.1 +0.3
CBX eS Sg 13 12 32.6 -0.6
GLA Glamis 0.88 57 Pg Pb 13 12 21.7 -0.5
GLA Glamis 0.88 57 Pb 13 12 32.9 -0.6
GLA Glamis 0.88 57 P Pb 13 12 21.6 -0.5
baz=237,SNR=23
GLA S Sb 13 12 32.7 -0.9
baz=237
BORC Borrego Spring 0.92 319 Pb 13 12 22.6 -0.2
BORC Sg 13 12 35.6 +0.4
EML El Monte Cty P 1.02 289 eP Pg 13 12 24.8 -0.2
EML El Monte Cty P 1.02 289 Pg 13 12 24.7 -0.2
EML Sb 13 12 37.8 +0.3
OLP Otay Lakes Par 1.04 272 eP Pg 13 12 25.4 0.0
OLP Otay Lakes Par 1.04 272 Pg 13 12 25.4 0.0
OLP Sb 13 12 38.5 +0.3
SDRC San Diego Road 1.06 279 eP Pg 13 12 25.7 -0.1
SDRC San Diego Road 1.06 279 Pg 13 12 25.7 -0.1
SDRC Sb 13 12 39.1 +0.3
CCX Cicese 1.08 230 Pg 13 12 26.2 +0.1
CCX Sn 13 12 40.2 0.0
BC3 Big Chuckawall 1.10 11 Pb 13 12 25.3 -0.6
BC3 Sb 13 12 39.1 -1.0
BC3 Big Chuckawall 1.10 11 P Pb 13 12 25.3 -0.6
baz=191,SNR=21
BC3 S Sb 13 12 39.0 -1.0
baz=191
CTCC Cactus City 1.11 347 Pb 13 12 25.1 -1.0
CTCC Sb 13 12 39.5 -0.8
DPP Dos Picos Cty 1.13 292 Pn 13 12 26.5 +0.1
DPP Sb 13 12 41.1 +0.3
TJX Tijuana 1.15 267 eP Pn 13 12 26.6 0.0
TJX eS Sn 13 12 41.9 +0.1
TJX Tijuana 1.15 267 Pn 13 12 26.6 0.0
TJX Sn 13 12 42.0 +0.1
HWB Hans Werner Br 1.15 293 Pn 13 12 26.8 +0.1
HWB Sn 13 12 42.1 -0.1
FRD Ford Ranch, An 1.19 321 Pn 13 12 26.9 -0.4
FRD Sb 13 12 42.5 -0.2
XPFO Pion Flat 1.22 329 Pn 13 12 26.9 -0.8
XPFO Pion Flat 1.22 329 Pn 13 12 27.0 -0.6
XPFO Sb 13 12 42.4 -1.0
PFO Pinyon Flats O 1.22 329 Pn 13 12 26.9 -0.8
PFO Pinyon Flats O 1.22 329 Pn 13 12 27.1 -0.6
PFO Sb 13 12 42.6 -0.9
PFO Pinyon Flats O 1.22 329 P Pn 13 12 27.1 -0.6
baz=148,SNR=29
PFO S Sb 13 12 42.6 -0.9
baz=148
BZNA Buzz No.'s Pla 1.23 319 Pn 13 12 27.4 -0.4
BZNA Sg 13 12 45.4 +0.5
109C Camp Elliot, M 1.23 285 Pb 13 12 28.0 0.0
109C Camp Elliot, M 1.23 285 P Pb 13 12 28.1 0.0
baz=105,SNR=19
109C S Sn 13 12 44.3 +0.4
baz=105
ECBX El Chinero 1.23 153 eP Pb 13 12 28.1 +0.1
ECBX eS Sg 13 12 44.8 -0.1
SNDA J Saunders Pla 1.24 322 Pn 13 12 27.8 -0.2
PLM Palomar 1.25 309 Pn 13 12 28.1 -0.1
DNR Dunn Ranch,Anz 1.26 322 Pn 13 12 28.1 -0.2
DNR Sn 13 12 45.1 +0.1
CRY Cary Ranch 1.32 319 Pn 13 12 28.8 -0.3
GORC Green Oak Ranc 1.41 295 Pn 13 12 30.4 +0.2
GORC Sg 13 12 49.9 -0.9
BELC Belle Mtn. Jos 1.45 350 P Pn 13 12 30.5 -0.4
baz=170,SNR=14
BELC S Sn 13 12 48.3 -1.2
baz=170
EW2 E Wide Canyon 1.49 337 Pn 13 12 31.1 -0.2
EW2 Sn 13 12 49.9 -0.6
POB Polly Butte 1.51 318 Pn 13 12 31.6 -0.1
BACC Bachelor Mtn. 1.53 313 Pn 13 12 31.7 -0.2
SPIG San Pedro Mart 1.53 172 eP Pn 13 12 32.4 +0.1
SPIG eS Sg 13 12 54.3 -0.5
SPIG San Pedro Mart 1.53 172 Pn 13 12 32.3 +0.1
SPIG Sn 13 12 51.9 0.0
SPIG San Pedro Mart 1.53 172 eP Pn 13 12 32.3 +0.1
SPIG eS Sn 13 12 51.9 0.0
Y12C Blythe 1.53 40 Pn 13 12 31.4 -0.5
Y12C Blythe 1.53 40 P Pn 13 12 31.4 -0.5
baz=220,SNR=8.5
Y12C Sb Sn 13 12 51.6 +0.1
baz=220
DGR Domenigoni Val 1.54 315 Pn 13 12 31.9 -0.1
SPX San Pedro Mart 1.54 173 eP Pn 13 12 32.4 0.0
SPX eS Sg 13 12 54.2 -0.9
SPX San Pedro Mart 1.54 173 Pn 13 12 32.4 0.0
SPX San Pedro Mart 1.54 173 Pn 13 12 32.4 0.0
SPX Sg 13 12 54.2 -0.9
SPX San Pedro Mart 1.54 173 eP Pn 13 12 32.4 0.0
SPX i S Sn 13 12 51.8 -0.4
TPC Twentynine Pal 1.56 349 Pn 13 12 32.2 -0.1
HMTC Hemet 1.58 316 Pn 13 12 32.8 +0.2
HMTC Pg 13 12 35.3 -0.2
BLAC Blackrock camp 1.60 339 Pn 13 12 32.8 -0.2
MURC Murrieta 1.62 310 Pg 13 12 36.2 -0.2
MURC Murrieta 1.62 310 P Pn 13 12 33.3 +0.2
baz=129
MURC Sb Sg 13 12 56.7 -0.8
baz=129
IRM Iron Mountain 1.65 16 P Pn 13 12 33.3 -0.2
baz=196,SNR=13
IRM Sb Sn 13 12 55.1 +0.7
baz=196
SFX San Felipe 1.69 154 eP Pb 13 12 36.5 +0.6
SFX eS Sg 13 12 59.5 -0.3
SFX San Felipe 1.69 154 Pg 13 12 37.0 -0.8
SME Santa Rosa Min 1.87 312 Pg 13 12 40.0 -1.0
BBRC Big Bear Solar 1.97 329 Sb Sb 13 13 07.0 +1.7
baz=149
BTL Butler Peak 2.00 327 Pn 13 12 39.5 +0.9
GMRC Granite Mounta 2.21 1 S Sn 13 13 07.3 -1.1
baz=181
HEC Hector,Ludlow 2.31 347 S Sn 13 13 10.3 -0.5
baz=167
BFSC Mount Baldy Ra 2.33 316 Pg 13 12 49.0 -1.0
BFSC Mount Baldy Ra 2.33 316 Sb Sb 13 13 17.8 +2.2
baz=135
NEE2 Needles Airpor 2.37 22 S Sn 13 13 11.3 -0.8
baz=203
CIS Catalina Islan 2.43 291 P Pn 13 12 44.2 0.0
baz=109
CIS S Sn 13 13 14.8 +1.2
baz=109
SCI2 San Clemente I 2.43 280 S Sn 13 13 15.3 +1.6
baz=99
FMP Fort Macarthur 2.46 298 Sb Sb 13 13 21.4 +2.4
baz=117
214A Organ Pipe Nat 2.52 103 Pn Pn 13 12 44.8 -0.7
214A Organ Pipe Nat 2.52 103 P Pn 13 12 44.9 -0.7
baz=285
214A S Sn 13 13 14.2 -1.8
baz=285
RRX Edison Barstow 2.54 335 Sb Sb 13 13 23.4 +2.0
baz=155
MWC Mount Wilson 2.57 311 Pn Pn 13 12 47.3 +1.0
Y14A Wickenburg 2.64 58 Pn 13 12 47.1 0.0
DECC Green Verdugo 2.77 308 Sb Sg 13 13 31.5 -2.7
baz=127
GSC Goldstone, Bar 2.87 342 Pn Pn 13 12 50.7 +0.3
GSC Goldstone, Bar 2.87 342 Sb Sg 13 13 35.1 -2.5
baz=161
W13A Hualapai Mount 2.94 30 Pn Pn 13 12 51.6 +0.2
EDW2 Edwards Air Fo 2.99 321 Sb Sb 13 13 37.7 +3.1
baz=140
OSI Osito Audit: C 3.24 310 Sb Sg 13 13 45.6 -3.8
baz=128
ARVC Arvin 3.64 315 Sb Sb 13 13 55.6 +2.5
baz=134
SHPR Sheep Range 3.95 6 Pn Pn 13 13 06.9 +1.6
X16A Lo Mia Camp, P 4.01 61 Pn 13 13 07.5 +1.4
TUC Tucson 4.16 92 S Sn 13 13 54.4 -2.1
baz=275
TPNV Topopah Spring 4.39 354 Pn Pn 13 13 13.3 +1.9
WUAZ Wupatki 4.64 50 Pn Pn 13 13 16.4 +1.7
U15A North Rim 4.77 35 Pn 13 13 18.4 +1.8
LCMT Little Creek M 4.87 24 Pn 13 13 19.6 +1.7
KNB Kanab 5.03 27 Pn Pn 13 13 21.9 +1.8
X18A Snowflake 5.18 66 Pn Pn 13 13 23.6 +1.3
CCUT Cedar City 5.32 20 Pn Pn 13 13 26.5 +2.3
SZCU Shurtz Canyon 5.45 22 Pn Pn 13 13 27.8 +1.8

NEIC 03 13:15:19.5±1.3, 4.89S±0.06×153.7E±0.1, h113km±8km, mb4.5/12, Error ellipse: s-maj=16.6km s-min=8.8km az=81.0

IDC 03 13:15:20.8±1.2, 4.86S×153.46E, h114km±7km, mb3.3/6, mb1 3.6/7, mb1mx3.3/40, mbtmp3.8/7, Error ellipse: s-maj=18.0km s-min=14.9km az=68.0

ISC 03 13:15:18.1±0.9, 4.88S±0.08×153.7E±0.1, h100km, n30, σ1§37/33, mb3.8/10, New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

RABL Rabaul 1.70 294 Pn Pn 13 15 47.1 +0.3
RABL Sn Sn 13 16 10.8 +2.1
KRVT Keravat (AS076 1.78 289 P Pn 13 15 47.8 -0.1
36nm,0.3s,baz=126,slow=1.7,SNR=67
KRVT S Sn 13 16 08.6 -2.1
35nm,0.3s,baz=23,slow=13,SNR=5.9
MANU Manus Island 6.94 294 Pn Pn 13 16 58.6 +1.3
PMG Port Moresby 7.91 235 P Pn 13 17 11.9 +1.4
13nm,0.3s,baz=42,slow=7.1,SNR=27
PMG S Sn 13 18 38.9 +0.5
1.9nm,0.3s,baz=173,slow=18,SNR=3.5
PMG Port Moresby 7.91 235 Pn Pn 13 17 12.3 +1.8
WB0 Warramunga Arr 23.94 230 P P 13 20 23.2 0.0
WB0 IAmb IAmb 13 20 56.8
comp=Z,16nm,1.2s
WR0 Warramunga Arr 23.94 230 P P 13 20 23.4 +0.2
WR0 IAmb IAmb 13 20 28.2
comp=Z,16nm,1.3s
WB2 Warramunga Arr 24.08 230 P P 13 20 24.5 0.0
WB2 IAmb IAmb 13 20 32.0
comp=Z,58nm,1.9s
WRA Warramunga Arr 24.09 230 P P 13 20 24.0 -0.6
comp=Z,1.8nm,0.7s,baz=55,slow=9.8,SNR=7.1
WRA pP pwP 13 20 49.2 0.0
comp=Z,2.0nm,0.8s,baz=50,slow=12,SNR=5.0
WRA Warramunga Arr 24.09 230 P P 13 20 24.2 -0.3
H11S3 WAKE ISLAND Hy 26.51 28 T T 13 49 35.3
baz=208,slow=76,SNR=5.6
H11S2 WAKE ISLAND Hy 26.52 29 T T 13 49 31.6
baz=208,slow=76,SNR=4.9
H11S1 WAKE ISLAND Hy 26.53 28 T T 13 49 23.7
baz=208,slow=76,SNR=5.0
AS31 Alice Springs 26.71 224 P P 13 20 48.0 -0.3
ASAR Alice Springs 26.72 224 P P 13 20 47.5 -0.9
comp=Z,0.4nm,0.4s,baz=54,slow=8.9,SNR=24
ASAR Alice Springs 26.72 224 P P 13 20 47.2 -1.1
STKA Stephens Creek 29.16 202 P P 13 21 10.3 +0.3
comp=Z,2.4nm,0.8s,baz=46,slow=14,SNR=4.5
STKA Stephens Creek 29.16 202 P P 13 21 09.5 -0.5
STKA IAmb IAmb 13 22 05.7
comp=Z,8.1nm,1.8s
FITZ Fitzroy Crossi 30.43 242 P P 13 21 21.2 -0.1
FITZ IAmb IAmb 13 22 25.7
comp=Z,38nm,1.6s
FORT Forrest 35.31 220 P P 13 22 02.2 -1.6
MLZ Mavora Lakes 42.24 165 P P 13 23 00.5 -0.9
WHZ Wether Hill Ro 42.69 165 P P 13 23 05.1 +0.1
MORW Morawa 43.01 232 P P 13 23 06.5 -1.4
CMAR Chiang Mai Arr 58.74 295 P P 13 25 07.0 +0.9
comp=Z,0.2nm,0.5s,baz=134,slow=6.4,SNR=2.8
CMAR pP pwP 13 25 33.8 -1.3
comp=Z,0.4nm,0.4s,baz=120,slow=5.4,SNR=3.1
SONM Songino Array 66.88 327 P P 13 26 00.5 +0.8
comp=Z,0.3nm,0.7s,baz=149,slow=7.0,SNR=3.0
SONM Songino Array 66.88 327 P P 13 25 59.1 -0.7
MKAR Makanchi Array 80.99 319 P P 13 27 22.0 +0.1
comp=Z,0.2nm,0.5s,baz=93,slow=7.1,SNR=7.7
MKAR Makanchi Array 80.99 319 P P 13 27 21.3 -0.6
TORD Torodi Ar. Bea 151.20 288 PKPbc PKPbc 13 34 59.1 -1.8
comp=Z,0.6nm,0.7s,baz=48,slow=2.1,SNR=3.5
TORD pPKPbc pPKPbc 13 35 31.1 +4.3
comp=Z,0.8nm,0.8s,baz=52,slow=2.7,SNR=3.1
MDP Montagnes des 153.74 88 PKPbc PKiKP 13 35 09.1 +2.3
comp=Z,12nm,1.0s,baz=190,slow=2.3,SNR=3.7

IDC 03 13:27:21.8±1.3, 52.39S×17.29E, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.5/42, mbtmp3.9/2, MS3.1/2, Ms1 3.1/2, ms1mx2.8/22, Error ellipse: s-maj=57.4km s-min=41.0km az=77.0

NEIC 03 13:27:24.4±0.9, 52.4S±0.2×17.5E±0.4, h15km±3km, mb4.5/6, Error ellipse: s-maj=33.6km s-min=24.2km az=63.0

ISC 03 13:27:23.0±1.1, 52.4S±0.2×17.7E±0.2, h10km, n14, σ1§13/14, mb3.9/3, Southwest of Africa

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

SUR Sutherland 20.14 8 LR LR 13 37 52.5
comp=Z,48nm,21.3s,baz=175,slow=31
SNAA Sanae 21.36 198 P P 13 32 09.7 -0.4
4.5nm,1.0s,baz=23,slow=9.8,SNR=7.8
SNAA LR LR 13 38 42.3
comp=Z,59nm,18.2s,baz=25,slow=32
SNAA Sanae 21.36 198 P P 13 32 09.4 -0.7
SNAA IAmb IAmb 13 32 10.6
comp=Z,4.8nm,0.9s
QSPA South Pole Qui 37.83 180 P P 13 34 39.5 +0.1
QSPA IAmb IAmb 13 35 44.6
comp=Z,15nm,1.8s
PMSA Palmer Station 41.24 220 P P 13 35 08.0 +0.4
PMSA IAmb IAmb 13 36 09.3
comp=Z,85nm,1.6s
CASY Casey 44.73 145 P P 13 35 33.7 -2.2
VNDA Vanda 48.44 170 P P 13 36 05.8 +1.0
SBA Scott Base 48.62 172 P P 13 36 07.4 +1.3
ASAR Alice Springs 86.15 124 P P 13 40 06.0 +1.6
comp=Z,0.7nm,0.9s,baz=201,slow=4.7,SNR=6.4
PDAR Pinedale Array 143.87 276 PKP PKPdf 13 46 59.0 +0.9
comp=Z,0.3nm,0.6s,baz=123,slow=3.3,SNR=3.8
PDAR Pinedale Array 143.87 276 PKPdf 13 46 58.4 +0.4
NVAR Mina Array Bea 146.64 263 PKPbc PKPbc 13 47 03.6 -0.9
comp=Z,0.8nm,0.8s,baz=150,slow=6.3,SNR=7.2
NVAR Mina Array Bea 146.64 263 PKPdf 13 47 03.0 +0.1
YKA Yellowknife Ar 153.04 311 PKPbc PKPbc 13 47 18.1 -1.2
comp=Z,0.2nm,0.7s,baz=91,slow=1.8,SNR=4.3
YKA PKPab PKPab 13 47 30.8 0.0
comp=Z,0.2nm,0.8s,baz=94,slow=2.8,SNR=4.1

IDC 03 13:28:42.8±0.9, 6.35N×77.75W, h0km, mb3.6/10, mb1 3.9/12, mb1mx3.8/31, mbtmp3.7/12, ML2.6/2, MS3.0/2, Ms1 3.0/2, ms1mx2.5/30, Error ellipse: s-maj=28.2km s-min=13.4km az=29.0

RSNC 03 13:28:44.7±1.1, 6.38N×77.75W, h8km±6km, ML3.4, Mw3.8

NEIC 03 13:28:48.4±1.9, 6.50N±0.04×77.68W±0.05, h37km±8km, mb4.5/9, Error ellipse: s-maj=9.7km s-min=2.3km az=130.0

ISC 03 13:28:44.4±1.3, 6.43N±0.03×77.74W±0.05, h10km±8km, n55, σ1§56/65, mb3.8/13, 1C, Near west coast of Colombia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

SOLC Bahia Solano 0.39 121 eP Pg 13 28 51.8 -0.3
SOLC eS Sg 13 28 56.9 -0.4
SOLC i 13 28 58.0
comp=Z,17μm,0.3s
PTAC Punta Ardita, 0.72 355 eP Pg 13 28 58.0 -0.4
PTAC eS Sg 13 29 08.7 +1.0
PTAC i 13 29 10.7
comp=Z,15μm,0.2s
PTAC i 13 29 10.8
comp=Z,17μm,0.2s
PIZC Pizarro, Choco 1.50 165 eP Pn 13 29 09.9 -1.6
PIZC eS Sn 13 29 29.6 -1.5
PIZC i 13 29 59.3
comp=Z,275nm,0.7s
DBBC Dabeiba 1.63 69 eP Pn 13 29 12.1 -1.2
DBBC i 13 29 40.8
comp=Z,682nm,0.4s
CBOC Ciudad Bolivar 1.81 108 ⇑eP Pn 13 29 13.7 -2.2
CBOC eS Sn 13 29 33.7 -5.3
CBOC i 13 29 50.7
comp=Z,242nm,0.6s
CBOC i 13 29 51.7
comp=Z,158nm,0.5s
PLMC San Jos del P 2.10 136 eP Pn 13 29 17.3 -2.4
PLMC i 13 29 55.4
comp=Z,152nm,0.6s
HELC Santa Helena 2.21 96 eP Pn 13 29 20.9 -0.7
HELC eS Sn 13 29 48.9 -0.4
HELC i 13 29 58.6
comp=Z,171nm,0.8s
UREC San Jos de Ur 2.56 59 eP Pn 13 29 25.6 -0.4
UREC eS Sn 13 29 57.9 +0.6
UREC i 13 30 06.0
comp=Z,163nm,0.8s
GUY2C Guyana, Caldas 2.65 117 eP Pn 13 29 27.1 -0.7
GUY2C i 13 30 15.7
comp=Z,125nm,0.7s
YOTC Yotoco, Valle 2.80 150 eP Pn 13 29 28.4 -1.1
RREF El Recreo 2.83 122 eP Pn 13 29 30.3 +0.1
RREF eS Sn 13 30 07.8 +3.1
RREF i 13 30 21.1
comp=Z,130nm,1.5s
NORC Norcasia 2.98 107 eP Pn 13 29 32.4 +0.4
NORC eS Sn 13 30 09.9 +2.0
NORC i 13 30 14.9
comp=Z,99nm,1.0s
ANIL Santa Ana 3.02 129 eP Pn 13 29 33.0 +0.3
ANIL i 13 30 24.6
comp=Z,567nm,0.4s
ZARC Zaragoza, Cauc 3.05 70 eP Pn 13 29 32.5 -0.4
ZARC eS Sn 13 30 11.5 +1.9
ZARC i 13 30 21.7
comp=Z,123nm,0.5s
PTBC PUERTO BERRIO, 3.27 88 eP Pn 13 29 36.0 +0.2
PTBC eS Sn 13 30 14.6 -0.3
PTBC i 13 30 33.0
comp=Z,107nm,1.7s
BCIP Isla Barro Col 3.42 323 eP Pn 13 29 35.2 -2.7
BCIP i 13 30 54.3
comp=Z,46nm,1.9s
BCIP Isla Barro Col 3.42 323 Pn 13 29 35.5 -2.4
ORTC Ortega, Tolima 3.53 135 eP Pn 13 29 41.0 +1.5
ORTC eS Sn 13 30 19.4 -1.8
ORTC i 13 30 39.2
comp=Z,45nm,0.7s
SPBC San Pablo de B 3.73 102 eP Pn 13 29 43.2 +0.9
SPBC i 13 30 52.7
comp=Z,44nm,1.0s
ROSC El Rosal 3.75 115 Pn Pn 13 29 44.0 +1.1
comp=Z,6.4nm,0.3s,baz=213,slow=23,SNR=4.0
ROSC Lg Lg 13 30 40.5
comp=Z,7.3nm,0.3s,baz=333,slow=22,SNR=2.6
ROSC El Rosal 3.75 115 eP Pn 13 29 45.0 +2.2
ROSC i 13 31 01.8
comp=Z,52nm,1.4s
ROSC El Rosal 3.75 115 Pn 13 29 45.1 +2.2
PRAC Prado 3.92 133 eP Pn 13 29 47.4 +2.6
PRAC i 13 30 54.2
comp=Z,56nm,1.2s
POPC Popayan, Colom 4.00 165 eP Pn 13 29 47.8 +1.6
POPC i 13 30 38.8
comp=Z,11nm,0.5s
BRRC Barranca, Sant 4.06 80 eP Pn 13 29 49.8 +3.0
SJCC San Jacinto, C 4.28 36 eP Pn 13 29 49.0 -0.8
SMLC San Martn de 4.34 57 eP Pn 13 29 50.2 -0.4
CHIC Chingaza 4.38 114 eP Pn 13 29 53.3 +1.9
BARC Barichara 4.54 88 eP Pn 13 29 54.6 +1.1
RUSC La Rusia 4.66 96 Pn 13 29 56.6 +1.2
PAMC Pamplona, Colo 5.09 79 eP Pn 13 30 02.1 +0.8
FLOC Florencia 5.25 156 Pn Pn 13 30 05.0 +2.0
OTAV Otavalo 6.19 187 Pn Pn 13 30 18.4 +2.0
SDV Santo Domingo 7.46 70 Pn Pn 13 30 33.8 +0.2
comp=Z,2.0nm,0.3s,baz=262,slow=9.8,SNR=13
SDV Sn Sn 13 31 55.5 -3.0
comp=Z,1.2nm,0.3s,baz=270,slow=9.9,SNR=2.1
SDV Lg Lg 13 32 41.4
comp=Z,0.7nm,0.3s,baz=22,slow=7.9,SNR=3.4
SDV LR LR 13 33 39.3
comp=Z,134nm,18.4s,baz=252,slow=40
JTS Las Juntas de 8.10 299 LR LR 13 33 46.4
comp=Z,72nm,19.5s,baz=164,slow=37
SAML Samuel 21.07 136 P P 13 33 26.7 -2.4
MNMC Minye Minye 26.64 163 P P 13 34 24.8 +1.0
MNMC IAmb IAmb 13 34 30.1
comp=Z,7.7nm,0.8s
PB11 IPOC Station P 27.21 163 P P 13 34 29.6 +0.7
PB11 IAmb IAmb 13 34 35.8
comp=Z,13nm,1.0s
SIV San Ignacio 27.72 144 P P 13 34 32.3 -1.1
comp=Z,2.3nm,0.5s,baz=316,slow=11,SNR=14
TXAR Lajitas Array 33.42 316 P P 13 35 24.9 +1.1
comp=Z,0.1nm,0.5s,baz=137,slow=11,SNR=2.4
TXAR Lajitas Array 33.42 316 P P 13 35 24.4 +0.7
PDAR Pinedale Array 45.80 327 P P 13 37 07.4 +0.5
comp=Z,0.1nm,0.5s,baz=143,slow=9.1,SNR=2.4
NVAR Mina Array Bea 48.56 317 P P 13 37 29.2 +0.8
comp=Z,0.7nm,0.8s,baz=122,slow=6.7,SNR=5.3
YKA Yellowknife Ar 62.12 342 P P 13 39 05.0 -0.4
comp=Z,0.5nm,0.7s,baz=132,slow=6.8,SNR=9.2
SKAG Skagway 68.43 332 P P 13 39 46.1 -0.3
INK Inuvik 71.88 341 P P 13 40 08.0 +0.6
comp=Z,0.4nm,0.5s,baz=126,slow=5.8,SNR=4.6
INK Inuvik 71.88 341 P P 13 40 07.4 0.0
INK IAmb IAmb 13 40 45.0
comp=Z,5.2nm,1.3s
DBIC Dimbokro 72.34 85 P P 13 40 12.3 +1.0
comp=Z,1.1nm,0.5s,baz=234,slow=13,SNR=3.2
DBIC Dimbokro 72.34 85 P P 13 40 11.4 +0.1
DBIC IAmb IAmb 13 41 27.5
comp=Z,12nm,1.6s
ESDC Sonseca Array 73.44 51 P P 13 40 18.0 +0.6
comp=Z,0.3nm,0.4s,baz=258,slow=6.3,SNR=3.0
ILAR Eielson Array 75.40 336 P P 13 40 27.6 -0.6
comp=Z,0.2nm,0.6s,baz=111,slow=4.9,SNR=3.5
TOA0 Torodi Ar. Sit 78.31 78 P P 13 40 44.6 -1.0
TOA0 IAmb IAmb 13 40 49.2

comp=Z,12nm,1.9s
TORD Torodi Ar. Bea 78.31 78 P P 13 40 45.4 -0.3
comp=Z,0.6nm,0.7s,baz=265,slow=5.9,SNR=3.7
TORD Torodi Ar. Bea 78.31 78 P P 13 40 44.7 -0.9
ASAR Alice Springs 145.09 237 PKPbc PKPbc 13 48 22.0 -0.6
comp=Z,0.3nm,0.8s,baz=115,slow=3.7,SNR=2.9

NIED 03 13:32:00, 47.°00N×152.°90E, h17km, Mw3.9 Best double couple: M0 6.78000×10^14 NP1: φs 126.00000°, δ 87.00000°, λ -33.00000°. NP2: φs 218.00000°, δ 57.00000°, λ -176.00000°.
SKHL 03 13:32:49.9±0.6, 45.°93N×153.°48E, h47km±6km, mb4.6/6
NEIC 03 13:32:55.6±1.0, 46.°87N±0.°09×152.°6E±0.°1, h73km±6km, mb4.6/12, Error ellipse: s-maj=18.3km s-min=7.2km az=132.0
IDC 03 13:32:58.1±2.4, 46.°95N×152.°69E, h93km±21km, mb3.4/14, mb1 3.6/21, mb1mx3.5/57, mbtmp3.8/21, MS3.2/8, Ms1 3.2/8, ms1mx2.9/29, Error ellipse: s-maj=21.8km s-min=12.6km az=142.0
ISC 03 13:32:51.9±0.6, 46.°65N±0.°08×152.°75E±0.°07, h40km, n84, σ0.°23/82, mb3.9/19, MS3.3/6, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KUR Kuril'sk 3.69 249 eP Pn 13 33 51.0 +4.7
KUR AMB AMB 13 33 55.0
60nm,0.4s
KUR eS Sn 13 34 34.1 +5.6
KUR A A 13 34 51.0
173nm,0.6s
KUR A A 13 34 51.0
162nm,0.6s
SKR Severo-Kuril's 4.61 28 eP Pn 13 34 03.5 +4.5
SKR eS Sn 13 34 58.2 +6.9
SKR A A 13 34 59.5
140nm,1.0s
SKR A A 13 34 59.5
213nm,1.0s
SHO Shikotan 5.02 239 i P Pn 13 34 05.0 +0.4
SHO AMB AMB 13 34 19.0
30nm,0.3s
SHO eS Sn 13 35 03.0 +1.7
SHO A A 13 35 19.0
17nm,0.5s
SHO A A 13 35 19.0
88nm,0.5s
PAU Pauzhetka 5.51 27 erx rx 13 35 09.9
YUK Yuzh-Kuril'sk 5.51 244 eP Pn 13 34 13.1 +1.7
YUK AMB AMB 13 34 21.0
71nm,0.7s
YUK eS Sn 13 35 17.7 +4.2
YUK A A 13 35 33.0
130nm,0.9s
YUK A A 13 35 33.0
101nm,0.9s
GRPR Tuman 5.59 244 eP Pn 13 34 15.0 +2.5
GRPR AMB AMB 13 34 25.0
67nm,0.4s
GRPR eS Sn 13 35 18.0 +2.6
GRPR A A 13 35 31.0
118nm,0.6s
GRPR A A 13 35 31.0
81nm,0.6s
GLVR Golovnino 5.88 243 eP Pn 13 34 18.0 +1.6
GLVR AMB AMB 13 34 26.0
24nm,0.8s
GLVR eS Sn 13 35 24.0 +1.5
GLVR A A 13 35 30.0
352nm,1.0s
GLVR A A 13 35 30.0
155nm,1.0s
NEM2 Nemuro 2 5.95 239 P Pn 13 34 18.8 +1.4
NEM2 eS Sn 13 35 24.7 +0.4
NMR Nemuro--Hokkai 5.96 239 i P Pn 13 34 18.0 +0.5
NMR i S Sn 13 35 24.0 -0.5
JRA Rausu 6.02 246 P Pn 13 34 22.3 +3.9
JNK Nakash 6.45 245 P Pn 13 34 27.5 +3.2
JTKR Abashiri--Toko 6.78 250 P Pn 13 34 33.1 +4.3
JAK Akkeshi 6.79 240 P Pn 13 34 30.2 +1.3
JAK eS Sn 13 35 44.4 -0.5
YSS Yuzh-Sakhalins 6.87 276 eP Pn 13 34 37.9 +7.9
JAR Ashorobuto 7.20 245 P Pn 13 34 37.8 +3.3
JAR eS Sn 13 35 59.0 +4.1
PEA0B Petropavlovsk- 7.21 24 Pn Pn 13 34 36.2 +1.5
PETK Petropavlovsk- 7.21 24 P Pn 13 34 36.0 +1.3
0.6nm,0.3s,baz=184,slow=12,SNR=10
JOB Onbets 7.36 243 P Pn 13 34 40.3 +3.5
JOB eS Sn 13 35 59.9 +0.9
PET Petropavlovsk 7.43 29 Pn Pn 13 34 39.8 +2.1
JKA Kamikawa-asahi 7.58 254 Pn 13 34 45.2 +5.5
JKK2 Kamakawa 2 7.58 252 P Pn 13 34 44.4 +4.6
ASAJ Asahikawa 7.58 254 P Pn 13 34 45.2 +5.4
0.6nm,0.3s,baz=86,slow=19,SNR=7.7
ASAJ LR LR 13 37 32.6
comp=Z,97nm,21.2s,baz=150,slow=36
JCH Churui 7.81 242 P Pn 13 34 45.1 +2.1
JCH eS Sn 13 36 09.5 -0.6
ERM Erimo 8.29 239 Pn Pn 13 34 52.2 +2.7
JBT2 Biratori 2 8.35 246 P Pn 13 34 53.2 +2.9
JNBK Urakawa-nobuka 8.38 242 P Pn 13 34 52.0 +1.3
JNB Noboribetsu 9.34 248 P Pn 13 35 06.4 +2.5
JKB Kayabe 9.66 245 P Pn 13 35 09.2 +1.0
JKB eS Sn 13 36 52.6 -2.7
JYM2 Yakumo 2 9.95 247 P Pn 13 35 14.0 +1.8
JANG Nango 10.29 236 P Pn 13 35 15.6 -1.2
MA2 Magadan 13.00 356 P Pn 13 35 54.0 +0.1
1.5nm,0.3s,baz=180,slow=6.0,SNR=5.7
MA2 LR LR 13 40 41.3
comp=Z,40nm,20.6s,baz=113,slow=36
EKMR Ekimchan 14.27 304 eP Pn 13 36 19.0 +1.3
EKMR AMB AMB 13 36 24.0
5.0nm,0.7s
KLR Kul'dur 14.31 288 P P 13 36 16.1 -1.9
0.0nm,0.3s,baz=113,slow=13,SNR=2.0
USRK Ussuriysk Ar. 14.78 268 P P 13 36 21.7 -1.6
baz=69,slow=9.5,SNR=5.5
USRK S Sn 13 38 54.4 -6.0
baz=43,slow=11,SNR=5.8
MAJO Matsushiro 14.82 232 P P 13 36 26.4 +2.5
MJAR Matsushiro Arr 14.82 232 P P 13 36 25.9 +2.1
0.0nm,0.3s,baz=35,slow=9.0,SNR=6.8
MJB9 Matsu-Tunnel 14.82 232 P P 13 36 26.3 +2.4
SEY Seymchan 16.32 359 P P 13 36 39.2 -1.1
0.2nm,0.3s,baz=160,slow=11,SNR=6.5
BMKR Bomnak 17.10 307 eP P 13 36 50.0 +1.0
KROS Kirovskiy 18.06 305 erx rx 13 37 11.3
KSRS Korea Array 20.53 252 P Pn 13 37 30.9 +1.9
2.2nm,0.8s,baz=63,slow=9.2,SNR=4.0
KSRS LR LR 13 45 04.5
comp=Z,28nm,18.2s,baz=313,slow=35
H11N2 WAKE ISLAND Hy 29.25 152 T T 14 10 15.4
baz=340,slow=76,SNR=369
H11N1 WAKE ISLAND Hy 29.26 152 T T 14 10 16.6
baz=340,slow=76,SNR=178
H11N3 WAKE ISLAND Hy 29.26 152 T T 14 10 18.1
baz=340,slow=76,SNR=167
H11S1 WAKE ISLAND Hy 30.33 153 T T 14 11 36.5
baz=341,slow=76,SNR=274
H11S3 WAKE ISLAND Hy 30.34 153 T T 14 11 25.8
baz=341,slow=76,SNR=226
H11S2 WAKE ISLAND Hy 30.35 153 T T 14 11 22.6
baz=341,slow=76,SNR=234
SARN Sarigan 30.42 193 P P 13 39 00.2 -0.3
SONM Songino Array 31.13 289 P P 13 39 08.4 +1.8
1.0nm,1.1s,baz=87,slow=8.8,SNR=4.7
SONM LR LR 13 51 24.2
comp=Z,50nm,21.1s,baz=32,slow=36
SONM Songino Array 31.13 289 P P 13 39 05.9 -0.8
TLY Talaya 32.00 297 P P 13 39 13.2 -0.9
TTA Tatalina 32.66 41 P P 13 39 18.8 -1.1
TTA IAmb IAmb 13 39 58.0
comp=Z,18nm,1.8s
IMAR Indian Mountai 34.00 36 P P 13 39 30.0 -1.3
TOLK Toolik Lake Re 35.96 32 P P 13 39 47.6 -0.7
TOLK IAmb IAmb 13 40 52.5
comp=Z,26nm,2.0s
ILAR Eielson Array 36.78 38 P P 13 39 54.4 -0.9
comp=Z,0.6nm,0.9s,baz=242,slow=9.1,SNR=5.1
ILAR Eielson Array 36.78 38 P P 13 39 55.0 -0.3
BMAR Burnt Mountain 37.74 34 P P 13 40 03.9 +0.5
BCAR Beaver Creek A 39.14 41 P P 13 40 14.5 -0.7
EGAK Eagle 39.23 38 P P 13 40 15.0 -0.9
EGAK IAmb IAmb 13 41 00.5
comp=Z,15nm,1.8s
INK Inuvik 41.87 32 P P 13 40 37.5 -0.1
comp=Z,1.2nm,0.7s,baz=270,slow=9.7,SNR=6.0
ZALV Zalesovo Beam 42.47 306 LR LR 13 58 56.8
comp=Z,66nm,19.1s,baz=38,slow=37
C36M Paulatuk 45.03 30 P P 13 41 02.6 -0.5
C36M IAmb IAmb 13 41 38.4
comp=Z,16nm,1.8s
DAV Davao City (W) 45.82 219 LR LR 13 57 00.6
comp=Z,14nm,21.6s,baz=132,slow=31
MKAR Makanchi Array 46.77 297 P P 13 41 16.0 -1.1
comp=Z,0.6nm,0.8s,baz=70,slow=8.1,SNR=6.1
MKAR LR LR 14 01 44.0
comp=Z,65nm,18.6s,baz=50,slow=37
YKA Yellowknife Ar 51.16 37 P P 13 41 50.0 -0.4
comp=Z,0.5nm,0.8s,baz=297,slow=7.1,SNR=5.7
CMAR Chiang Mai Arr 52.10 256 P P 13 41 59.3 +1.2
comp=Z,0.9nm,0.6s,baz=38,slow=6.4,SNR=8.2
CMAR LR LR 14 06 15.4
comp=Z,32nm,18.3s,baz=190,slow=38
KKAR Karatay Array 55.83 299 P P 13 42 24.9 -0.1
ABKAR Akbulak array 58.30 310 P P 13 42 40.8 -1.5
FINES FINESS Array B 64.02 335 P P 13 43 19.3 -1.6
comp=Z,0.8nm,0.3s,baz=38,slow=6.9,SNR=10
FINES FINESS Array B 64.02 335 P P 13 43 19.1 -1.8
PDAR Pinedale Array 65.01 54 P P 13 43 27.4 -0.5
comp=Z,0.6nm,0.8s,baz=304,slow=1.1,SNR=5.5
PDAR Pinedale Array 65.01 54 P P 13 43 27.1 -0.8
NOA NORSAR Array B 68.24 341 P P 13 43 45.2 -2.8
comp=Z,1.5nm,0.7s,baz=28,slow=6.2,SNR=3.6
AKASG Malin Array Be 71.49 326 P P 13 44 06.5 -1.6
comp=Z,0.6nm,0.3s,baz=34,slow=6.3,SNR=4.5
AS31 Alice Springs 72.03 198 P P 13 44 12.8 +1.2
AS31 IAmb IAmb 13 45 11.8
comp=Z,7.1nm,1.1s
ASAR Alice Springs 72.03 198 P P 13 44 12.7 +1.1
comp=Z,0.6nm,0.6s,baz=9.9,slow=5.9,SNR=13
ASAR Alice Springs 72.03 198 P P 13 44 12.5 +1.0
MNTX Cornudas Mount 75.03 60 P P 13 44 29.2 -0.1
MNTX IAmb IAmb 13 45 02.1
comp=Z,12nm,1.9s
BUR08 Bucovina Ar. S 75.52 326 P P 13 44 30.6 -1.3
BURAR Bucovina Array 75.53 326 P P 13 44 30.8 -1.3
TXAR Lajitas Array 77.76 60 P P 13 44 44.6 -0.3
comp=Z,0.4nm,0.9s,baz=316,slow=3.5,SNR=4.0
TXAR Lajitas Array 77.76 60 P P 13 44 44.2 -0.7
BRTR Keskin Array B 78.29 317 P P 13 44 45.0 -2.7
comp=Z,0.9nm,0.8s,baz=174,slow=1.2,SNR=4.0
PLCA Paso Flores 148.45 95 PKPbc PKPbc 13 52 34.1 +0.4
comp=Z,1.7nm,0.8s,baz=185,slow=3.4,SNR=4.8

ATH 03 13:36:37.5, 38.°29N×20.°39E, h8km±1km, ML2.9/4, Error ellipse: s-maj=1.9km s-min=0.8km az=208.0
THE 03 13:36:37.7, 38.°27N×20.°39E, h10km±1km, ML2.6/7, Error ellipse: s-maj=1.5km s-min=0.5km az=246.0
ISC 03 13:36:37.4±1.0, 38.°27N±0.°02×20.°41E±0.°05, h10km±5km, n31, σ0.°42/55, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.02 139 P Pg 13 36 39.1 -0.2
KEF4 S Sg 13 36 40.2 -0.3
KEF1 Kardakata, Kep 0.05 86 P Pg 13 36 39.2 -0.2
KEF1 S Sg 13 36 40.6 -0.3
LXR1 Lixouri, Cepha 0.08 161 P Pg 13 36 39.9 +0.2
LXR1 S Sg 13 36 41.9 +0.5
KEF3 Kipouria, Keph 0.09 213 P Pg 13 36 39.9 +0.1
KEF3 S Sg 13 36 41.6 +0.1
CHV1 Chavriata, Kef 0.09 192 P Pg 13 36 40.1 +0.2
CHV1 S Sg 13 36 42.2 +0.5
ARG2 Argostoli 0.12 146 P Pg 13 36 40.4 +0.2
ARG2 S Sg 13 36 42.4 +0.2
KEF2 Argostoli. Kep 0.13 150 P Pg 13 36 40.5 +0.1
KEF2 S Sg 13 36 42.8 +0.3
VLS Valsamata 0.17 124 P Pg 13 36 41.2 0.0
VLS S Sg 13 36 44.0 +0.2
14μm,0.2s
VLS Valsamata 0.17 124 P Pg 13 36 41.1 0.0
VLS S Sg 13 36 44.0 +0.2
VLS AML AML 13 36 44.5
comp=E,18113μm,0.1s
VLS AML AML 13 36 44.5
comp=N,27187μm,0.2s
VSK1 VASILIKIADES 0.18 43 P Pg 13 36 41.5 +0.2
VSK1 S Sg 13 36 44.8 +0.7
FSK Fiskardo 0.22 34 P Pg 13 36 42.2 +0.2
FSK S Sg 13 36 45.5 +0.4
comp=N,2μm,0.4s
FSK Fiskardo 0.22 34 P Pg 13 36 42.1 +0.1
FSK S Sg 13 36 45.1 0.0
FSK AML AML 13 36 49.1
comp=N,3513μm,0.5s
FSK AML AML 13 36 49.5
comp=E,3738μm,0.4s
EVGI Lefkada island 0.40 29 P Pg 13 36 45.3 0.0
EVGI S Sb 13 36 51.9 -0.8
EVGI Lefkada island 0.40 29 P Pg 13 36 45.3 0.0
EVGI S Sb 13 36 51.8 -0.8
VLMS Volimes, Zakyn 0.45 153 P Pg 13 36 46.1 0.0
VLMS S Sb 13 36 53.6 -0.4
VLMS AML AML 13 36 55.3
comp=E,11667μm,0.2s
VLMS AML AML 13 36 56.0
comp=N,14304μm,0.3s
MGNA Meganis 0.49 38 P Pg 13 36 46.7 -0.2
MGNA S Sg 13 36 54.4 +1.0
MGNA AML AML 13 36 54.8
comp=N,1414μm,0.2s
MGNA AML AML 13 36 54.9
comp=E,1478μm,0.2s
LKD2 Lefkada island 0.55 21 P Pg 13 36 48.4 +0.3
LKD2 S Sb 13 36 56.7 -0.4
comp=E,250nm,0.5s
LKD2 Lefkada island 0.55 21 P Pg 13 36 48.2 +0.1
LKD2 S Sg 13 36 55.2 -0.2
TSLK Tsoukalades, L 0.58 19 P Pg 13 36 49.1 +0.3
TSLK S Sb 13 36 58.4 +0.4
comp=E,390nm,0.5s
TSLK Tsoukalades, L 0.58 19 P Pg 13 36 49.0 +0.3
TSLK S Sg 13 36 55.9 -0.5
PDO Prodromos 0.69 62 P Pg 13 36 50.5 -0.2
PDO S Sb 13 37 02.1 +1.0
comp=E,1μm,0.5s
PDO Prodromos 0.69 62 P Pg 13 36 50.6 -0.2
KRI1 kERI 0.69 152 P Pg 13 36 50.3 -0.5
KRI1 S Sb 13 37 01.2 +0.1
PVO Paravola 0.94 68 P Pg 13 36 55.5 0.0
PVO S Sn 13 37 10.8 +0.7
comp=E,335nm,0.4s
PVO Paravola 0.94 68 P Pg 13 36 55.6 0.0
DRO Drossia 1.08 107 P Pb 13 36 58.0 -0.1
DRO S Sn 13 37 14.6 +1.1
comp=E,475nm,0.5s
DRO Drossia 1.08 107 P Pb 13 36 58.2 +0.2
EFP Efpalio 1.19 82 P Pb 13 36 59.3 -0.7
ANX Ano Chora 1.23 75 P Pn 13 37 00.3 -0.4
LAKA Lakka 1.24 91 P Pn 13 37 00.2 -0.5
KALE Kalithea 1.37 85 P Pn 13 37 02.3 -0.2

IDC 03 13:39:43.3±1.0, 7.°25S×153.°56E, h0km, mb4.1/11, mb1 4.3/13, mb1mx4.1/36, mbtmp4.1/13, ML3.5/2, MS3.4/10, Ms1 3.4/10, ms1mx3.2/28, Error ellipse: s-maj=26.4km s-min=15.2km az=103.0
NEIC 03 13:39:45.0±1.1, 7.°16S±0.°07×153.°5E±0.°1, h16km±4km, mb4.6/17, Error ellipse: s-maj=16.3km s-min=10.2km az=101.0
ISC 03 13:39:47.6±0.6, 7.°16S±0.°06×153.°51E±0.°09, h30km, n43, σ0.°94/42, mb4.5/17, MS3.4/5, New Britain region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRVT Keravat (AS076 3.20 332 Pn Pn 13 40 35.2 -0.7
48nm,0.3s,baz=129,slow=0.8,SNR=55
KRVT Sn Sn 13 41 12.4 -0.7
157nm,0.3s,baz=344,slow=21,SNR=14
KRVT Lg Lg 13 41 25.3
154nm,0.3s,baz=38,slow=22,SNR=5.8
KRVT LR LR 13 41 56.0
comp=Z,338nm,20.9s,baz=205,slow=40
RABL Rabaul 3.24 336 Pn Pn 13 40 35.3 -1.3
RABL Sn Sn 13 41 13.2 -0.9
PMG Port Moresby 6.67 250 Pn Pn 13 41 22.9 -0.7
14nm,0.3s,baz=63,slow=6.3,SNR=33
PMG Sn Sn 13 42 38.8 +0.2
3.8nm,0.3s,baz=61,slow=23,SNR=7.5
PMG LR LR 13 43 48.6
comp=Z,509nm,20.5s,baz=55,slow=37
PMG Port Moresby 6.67 250 Pn 13 41 23.3 -0.3
HNR Honiara 6.75 110 LR LR 13 43 58.2
comp=Z,166nm,18.8s,baz=306,slow=38
COEN Coen 12.20 236 Pn Pn 13 42 39.1 -0.3
JAY Jayapura 13.57 289 LR LR 13 48 28.1
comp=Z,151nm,18.4s,baz=26,slow=38
EIDS Eidsvold 18.25 187 P P 13 43 58.6 -0.1
DZM Mont Dzumac 19.37 141 P Pn 13 44 12.7 +0.3
1.4nm,0.3s,baz=187,slow=6.5,SNR=17
DZM LR LR 13 49 57.0
comp=Z,192nm,18.6s,baz=358,slow=32
DZM Mont Dzumac 19.37 141 IAmb IAmb 13 44 14.1
comp=Z,37nm,1.3s
FAKI Fak Fak 21.59 280 P P 13 44 35.9 +0.7
FAKI IAmb IAmb 13 44 46.8
comp=Z,58nm,1.1s
GUMO Guam 22.33 337 LR LR 13 51 07.0
comp=Z,54nm,21.8s,baz=68,slow=30
WR0 Warramunga Arr 22.37 233 P P 13 44 42.8 -0.8
WR0 IAmb IAmb 13 44 57.7
comp=Z,27nm,1.1s
WB0 Warramunga Arr 22.39 234 P P 13 44 42.7 -1.0
WB0 IAmb IAmb 13 44 51.5
comp=Z,21nm,1.1s
WRAB Tennant Creek 22.51 234 P P 13 44 44.7 -0.3
WRAB IAmb IAmb 13 44 52.1
comp=Z,18nm,1.0s
WB2 Warramunga Arr 22.51 234 P P 13 44 44.4 -0.7
WB2 IAmb IAmb 13 44 52.3
comp=Z,16nm,0.9s
WRA Warramunga Arr 22.52 234 P P 13 44 45.3 +0.2
comp=Z,8.5nm,0.9s,baz=58,slow=10,SNR=16
WRA LR LR 13 53 02.9
comp=Z,157nm,20.1s,baz=60,slow=36
WRA Warramunga Arr 22.52 234 P P 13 44 44.6 -0.6
MTN Manton Dam 22.74 254 P P 13 44 47.3 -0.2
AS31 Alice Springs 24.97 227 P P 13 45 08.0 -0.8
ASAR Alice Springs 24.97 227 P P 13 45 08.1 -0.8
comp=Z,13nm,0.9s,baz=58,slow=9.5,SNR=79
ASAR Alice Springs 24.97 227 P P 13 45 08.0 -0.8
KNRA Kununurra 25.67 249 P P 13 45 15.9 +0.8
STKA Stephens Creek 26.98 203 P P 13 45 26.2 -0.6
comp=Z,4.5nm,0.8s,baz=16,slow=7.5,SNR=7.1
STKA LR LR 13 55 16.2
comp=Z,65nm,20.8s,baz=19,slow=35
FITZ Fitzroy Crossi 29.24 246 P P 13 45 46.5 -0.6
comp=Z,4.8nm,1.0s,baz=97,slow=8.1,SNR=5.0
FITZ LR LR 13 57 54.8
comp=Z,125nm,18.0s,baz=72,slow=37
FITZ Fitzroy Crossi 29.24 246 P P 13 45 45.6 -1.5
FITZ IAmb IAmb 13 45 54.9
comp=Z,22nm,1.4s
CMAR Chiang Mai Arr 59.53 296 P P 13 49 51.1 +2.4
comp=Z,0.3nm,0.7s,baz=131,slow=5.4,SNR=3.9
PETK Petropavlovsk- 60.15 3 P P 13 49 54.1 +1.8
comp=Z,6.2nm,1.1s,baz=156,slow=11,SNR=3.2
SONM Songino Array 68.69 328 P P 13 50 50.7 +2.2
comp=Z,2.0nm,0.9s,baz=133,slow=5.2,SNR=11
SONM Songino Array 68.69 328 P P 13 50 49.4 +0.9
LSA Lhasa 70.16 305 P P 13 50 58.1 -0.2
LSA IAmb IAmb 13 51 08.5
comp=Z,5.5nm,0.9s
BILL Bilibino 75.57 5 P P 13 51 28.8 -0.2
BILL IAmb IAmb 13 51 33.2
comp=Z,8.0nm,1.2s
MKAR Makanchi Array 82.56 319 P P 13 52 09.8 +2.0
comp=Z,0.5nm,0.9s,baz=96,slow=7.4,SNR=5.0
MKAR Makanchi Array 82.56 319 P P 13 52 07.2 -0.7
QSPA South Pole Qui 82.81 180 P P 13 52 08.5 -0.4
ZALV Zalesovo Beam 83.50 326 P P 13 52 12.2 -0.2
comp=Z,1.1nm,0.7s,baz=112,slow=6.5,SNR=5.1
ZALV Zalesovo Beam 83.50 326 P P 13 52 11.9 -0.5
ILAR Eielson Array 84.07 22 P P 13 52 14.8 -0.4
comp=Z,0.5nm,0.7s,baz=242,slow=5.2,SNR=7.5
ILAR Eielson Array 84.07 22 P P 13 52 14.3 -0.8
YKA Yellowknife Ar 97.17 28 P Pdif 13 53 17.1 +0.1
comp=Z,0.2nm,0.9s,baz=267,slow=5.0,SNR=4.0
PDAR Pinedale Array 99.90 48 LR LR 14 34 22.0
comp=Z,14nm,18.4s,baz=318,slow=33
TORD Torodi Ar. Bea 151.65 284 PKPbc PKiKP 13 59 40.2 -0.4
comp=Z,1.6nm,0.7s,baz=61,slow=2.3,SNR=9.5
TORD PKPab PKPab 13 59 48.4 -0.5
comp=Z,1.7nm,0.8s,baz=85,slow=2.5,SNR=6.7
TORD Torodi Ar. Bea 151.65 284 PKPbc 13 59 39.7 -0.5
TORD pPKPbc 13 59 47.8 -0.7

BEO 03 13:46:44.5±0.9, 38.°37N×21.°05E, h10km±6km, ML3.5/5
THE 03 13:46:45.1, 38.°38N×20.°42E, h10km±1km, ML3.2/8, Error ellipse: s-maj=1.5km s-min=0.3km az=229.0
ATH 03 13:46:45.1, 38.°37N×20.°48E, h13km±2km, ML3.1/7, Error ellipse: s-maj=2.9km s-min=0.8km az=263.0
ISC 03 13:46:44.9±0.8, 38.°38N±0.°02×20.°46E±0.°03, h11km±5km, n60, σ0.°91/90, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VSK1 VASILIKIADES 0.09 73 P Pg 13 46 47.3 -0.2
KEF1 Kardakata, Kep 0.11 174 P Pg 13 46 47.6 -0.1
KEF1 S Sg 13 46 49.8 +0.1
FSK Fiskardo 0.11 47 P Pg 13 46 47.9 0.0
FSK Fiskardo 0.11 47 P Pg 13 46 47.8 0.0
FSK S Sg 13 46 49.8 -0.1
FSK AML AML 13 46 50.9
comp=N,17694μm,0.2s
FSK AML AML 13 46 52.6
comp=E,32594μm,0.2s
KEF4 Livadi, Kephal 0.13 192 P Pg 13 46 48.1 +0.1
KEF4 S Sg 13 46 50.2 -0.1
LXR1 Lixouri, Cepha 0.18 185 P Pg 13 46 48.5 -0.4
LXR1 S Sg 13 46 52.3 +0.7
KEF3 Kipouria, Keph 0.20 205 P Pg 13 46 49.2 0.0
KEF3 S Sg 13 46 53.3 +1.2
ARG2 Argostoli 0.21 173 P Pg 13 46 49.4 +0.1
ARG2 S Sg 13 46 52.8 +0.5
CHV1 Chavriata, Kef 0.21 196 P Pg 13 46 48.9 -0.4
CHV1 S Sg 13 46 53.4 +1.1
KEF2 Argostoli. Kep 0.22 174 P Pg 13 46 49.5 0.0
KEF2 S Sg 13 46 53.2 +0.6
VLS Valsamata 0.23 153 P Pg 13 46 49.7 -0.1
VLS S Sg 13 46 53.5 +0.5
comp=E,10μm,0.1s
VLS Valsamata 0.23 153 P Pg 13 46 49.6 -0.1
VLS S Sg 13 46 53.5 +0.5
EVGI Lefkada island 0.28 33 P Pg 13 46 51.1 +0.4
EVGI S Sb 13 46 56.0 -0.8
EVGI Lefkada island 0.28 33 P Pg 13 46 51.2 +0.4
EVGI S Sb 13 46 55.9 -0.8
MGNA Meganis 0.38 44 P Pg 13 46 52.6 +0.1
MGNA S Sg 13 46 58.1 +0.6
MGNA AML AML 13 46 59.2
comp=N,11404μm,0.2s
MGNA AML AML 13 46 59.5
comp=E,8745μm,0.2s
LKD2 Lefkada island 0.43 21 P Pg 13 46 53.7 +0.2
LKD2 S Sb 13 47 00.7 -0.4
comp=E,2μm,0.4s
LKD2 Lefkada island 0.43 21 P Pg 13 46 53.4 -0.1
LKD2 S Sb 13 47 00.8 -0.4
LKD2 AML AML 13 47 03.0
comp=E,3799μm,0.2s
LKD2 AML AML 13 47 03.6
comp=N,3426μm,0.3s
TSLK Tsoukalades, L 0.47 19 P Pg 13 46 54.3 +0.2
TSLK S Sb 13 47 01.8 -0.2
comp=N,4μm,0.7s
TSLK Tsoukalades, L 0.47 19 P Pg 13 46 54.3 +0.2
TSLK S Sg 13 47 00.8 +0.5
TSLK AML AML 13 47 06.0
comp=E,8328μm,0.7s
TSLK AML AML 13 47 06.3
comp=N,7416μm,0.6s
AST1 Astakos 0.52 72 P Pg 13 46 55.4 +0.3
AST1 S Sb 13 47 04.4 +0.9
VLMS Volimes, Zakyn 0.53 162 P Pg 13 46 55.1 -0.2
VLMS S Sb 13 47 03.1 -0.8
VLMS AML AML 13 47 05.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,11613µm,0.2s						
VLMS				AML	AML	13 47 05.4	
	comp=N,17698µm,0.2s						
PDO	**Prodromos**	**0.61**	**69**	P	**Pg**	**13 46 56.8**	**+0.1**
PDO				S	**Sb**	**13 47 06.7**	**+0.6**
	comp=N,2µm,0.4s						
PDO	**Prodromos**	**0.61**	**69**	P	**Pg**	**13 46 56.8**	**+0.1**
PDO				AML	AML	13 47 11.0	
	comp=N,3825µm,0.3s						
PDO				AML	AML	13 47 11.6	
	comp=E,3015µm,0.3s						
KRI1	**kERI**	**0.77**	**158**	P	**Pg**	**13 46 59.3**	**-0.5**
KRI1				S	**Sb**	**13 47 11.9**	**+1.1**
RLS	**Riolos of Patr**	**0.86**	**112**	P	**Pb**	**13 47 01.7**	**-0.1**
PVO	**Paravola**	**0.87**	**74**	P	**Pb**	**13 47 02.0**	**0.0**
PVO				S	**Sn**	**13 47 15.3**	**-0.4**
	comp=E,1µm,0.5s						
PVO	**Paravola**	**0.87**	**74**	P	**Pb**	**13 47 02.0**	**0.0**
PVO				AML	AML	13 47 21.0	
	comp=E,1913µm,0.6s						
PVO				AML	AML	13 47 23.9	
	comp=N,4174µm,0.8s						
DRO	**Drossia**	**1.08**	**113**	P	**Pg**	**13 47 05.6**	**0.0**
DRO	**Drossia**	**1.08**	**113**	P	**Pg**	**13 47 05.6**	**0.0**
EFP	**Efpalio**	**1.14**	**87**	P	**Pb**	**13 47 06.0**	**-0.6**
EFP				S	**Sn**	**13 47 24.0**	**+1.7**
	comp=N,2µm,0.7s						
EFP	**Efpalio**	**1.14**	**87**	P	**Pb**	**13 47 05.9**	**-0.6**
IGT	**Igoumenitsa**	**1.15**	**355**	P	**Pg**	**13 47 07.2**	**+0.1**
IGT				S	**Sn**	**13 47 23.6**	**+0.9**
	comp=N,748nm,0.5s						
IGT	**Igoumenitsa**	**1.15**	**355**	*e*Pg	**Pg**	**13 47 07.6**	**+0.6**
IGT				*e*Sg	**Sn**	**13 47 25.4**	**+2.7**
ANX	**Ano Chora**	**1.17**	**79**	P	**Pb**	**13 47 06.7**	**-0.4**
ANX				S	**Sn**	**13 47 25.2**	**+2.0**
	comp=N,1µm,0.7s						
ANX	**Ano Chora**	**1.17**	**79**	P	**Pb**	**13 47 06.6**	**-0.6**
EVR	**Evrytania**	**1.19**	**63**	P	**Pb**	**13 47 07.2**	**-0.2**
LAKA	**Lakka**	**1.21**	**96**	P	**Pn**	**13 47 07.4**	**-0.3**
SERG	**Sergoula**	**1.26**	**88**	P	**Pn**	**13 47 08.0**	**-0.4**
SERG	**Sergoula**	**1.26**	**88**	P	**Pn**	**13 47 07.7**	**-0.7**
JAN	**Janina**	**1.31**	**13**	P	**Pg**	**13 47 10.9**	**+0.8**
KALE	**Kalithea**	**1.32**	**89**	P	**Pn**	**13 47 09.0**	**-0.3**
KALE	**Kalithea**	**1.32**	**89**	P	**Pn**	**13 47 09.0**	**-0.3**
KLV	**Kalavryta, Ach**	**1.38**	**104**	P	**Pn**	**13 47 10.1**	**0.0**
KLV				S	**Sg**	**13 47 29.2**	**0.0**
KLV	**Kalavryta, Ach**	**1.38**	**104**	P	**Pn**	**13 47 10.0**	**0.0**
KASA	**Kassiopi**	**1.42**	**344**	P	**Pg**	**13 47 12.7**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.45**	**64**	P	**Pg**	**13 47 12.4**	**-0.4**
AGG	**Agios Georgios**	**1.60**	**66**	P	**Pb**	**13 47 14.9**	**+0.5**
FNA	**Florina**	**2.50**	**16**	*e*Pn	**Pn**	**13 47 25.0**	**-0.5**
FNA				*e*Sn	**Sn**	**13 47 54.4**	**-1.6**
OHR	**Ohrid**	**2.74**	**5**	*e*Pn	Pn	13 47 21.9	-6.8
VAY	**Valandovo**	**3.35**	**28**	*e*Pn	**Pn**	**13 47 40.6**	**+3.4**
STIP	**Stip**	**3.56**	**21**	*e*Pn	**Pb**	**13 47 47.2**	**-0.7**
BOSS	**Bosilegrad**	**4.39**	**20**	*e*Pn	**Pn**	**13 47 49.1**	**-2.3**
BARS	**Barje**	**4.55**	**13**	*e*Pn	**Pn**	**13 47 51.9**	**-1.7**
SELS	**Selova**	**4.86**	**6**	*e*Pn	**Pn**	**13 47 56.5**	**-1.4**
SJES	**Sjenica**	**4.89**	**356**	*e*Pn	**Pn**	**13 47 58.2**	**-0.1**
SJES				*e*Sn	**Sn**	**13 48 54.4**	**-0.5**
ZAPS	**Zavoj**	**5.16**	**18**	*e*Pn	**Pn**	**13 47 59.2**	**-2.8**
IVAS	**Ivanjica**	**5.19**	**358**	*e*Pn	**Pn**	**13 48 03.5**	**+1.0**
GRUS	**Gruza**	**5.50**	**2**	*e*Pn	**Pn**	**13 48 05.5**	**-1.2**
BBLS	**Lazići**	**5.54**	**352**	*e*Pn	**Pn**	**13 48 08.4**	**+1.2**
BBLS				*e*Sn	**Sn**	**13 49 09.5**	**-1.3**
DIVS	**Divibare**	**5.72**	**357**	*e*Pn	**Pn**	**13 48 10.3**	**+0.5**
DIVS				*e*Sn	**Sn**	**13 49 14.0**	**-1.4**

*ATH **03** 14:14:32.5, 38.°40N×20.°42E, h11km±4km, ML2.7/6, Error ellipse: s-maj=4.6km s-min=0.9km az=116.0*
*THE **03** 14:14:32.2, 38.°38N×20.°39E, h2km±32km, ML2.6/6, Error ellipse: s-maj=32.6km s-min=0.6km az=88.0*
ISC 03 14:14:33.0±1.1, **38.°39N**±0.°02×**20.°46E**±0.°04, **h7**km±7km, **n19**, σ**0.s65**/38, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.08**	**76**	P	**Pg**	**14 14 34.6**	**-0.5**
VSK1				S	**Sg**	**14 14 36.4**	**-0.1**
FSK	**Fiskardo**	**0.11**	**49**	P	**Pg**	**14 14 35.0**	**-0.4**
FSK				S	**Sg**	**14 14 37.3**	**+0.3**
	7µm,0.4s						
FSK	**Fiskardo**	**0.11**	**49**	P	**Pg**	**14 14 35.0**	**-0.4**
FSK				S	**Sg**	**14 14 37.4**	**+0.3**
FSK				AML	AML	14 14 39.9	
	comp=N,11544µm,0.4s						
FSK				AML	AML	14 14 40.9	
	comp=E,16689µm,0.4s						
KEF4	**Livadi, Kephal**	**0.13**	**192**	P	**Pg**	**14 14 35.2**	**-0.6**
KEF4				S	**Sg**	**14 14 38.7**	**+1.0**
KEF3	**Kipouria, Keph**	**0.21**	**205**	P	**Pg**	**14 14 37.1**	**-0.1**
KEF3				S	**Sg**	**14 14 41.0**	**+1.2**
VLS	**Valsamata**	**0.23**	**154**	P	**Pg**	**14 14 37.5**	**-0.2**
VLS				S	**Sg**	**14 14 40.9**	**+0.1**
	comp=E,3µm,0.5s						
VLS	**Valsamata**	**0.23**	**154**	P	**Pg**	**14 14 37.4**	**-0.2**
VLS				S	**Sg**	**14 14 41.1**	**+0.3**
VLS				AML	AML	14 14 41.8	
	comp=E,5680µm,0.4s						
VLS				AML	AML	14 14 44.5	
	comp=N,6367µm,0.3s						
EVGI	**Lefkada island**	**0.28**	**33**	P	**Pg**	**14 14 38.2**	**-0.3**
EVGI				S	**Sg**	**14 14 43.6**	**+1.4**
EVGI	**Lefkada island**	**0.28**	**33**	P	**Pg**	**14 14 38.4**	**-0.1**
EVGI				S	**Sg**	**14 14 43.7**	**+1.4**
MGNA	**Meganis**	**0.37**	**44**	P	**Pg**	**14 14 39.9**	**-0.3**
MGNA				S	**Sg**	**14 14 46.1**	**+0.9**
MGNA				AML	AML	14 14 46.6	
	comp=E,3209µm,0.2s						
MGNA				AML	AML	14 14 46.7	
	comp=N,2784µm,0.1s						
LKD2	**Lefkada island**	**0.43**	**21**	P	**Pg**	**14 14 40.6**	**-0.7**
LKD2				S	**Sg**	**14 14 47.7**	**+0.7**
	comp=N,738nm,0.6s						
LKD2	**Lefkada island**	**0.43**	**21**	P	**Pg**	**14 14 40.9**	**-0.4**
LKD2				S	**Sg**	**14 14 47.6**	**+0.6**
LKD2				AML	AML	14 14 48.2	
	comp=E,1036µm,0.8s						
LKD2				AML	AML	14 14 48.6	
	comp=N,1524µm,0.8s						
TSLK	**Tsoukalades, L**	**0.46**	**19**	P	**Pg**	**14 14 41.5**	**-0.4**
TSLK				S	**Sg**	**14 14 48.8**	**+0.8**
	comp=N,1µm,0.8s						
TSLK	**Tsoukalades, L**	**0.46**	**19**	P	**Pg**	**14 14 41.6**	**-0.4**
TSLK				S	**Sg**	**14 14 48.0**	**0.0**
TSLK				AML	AML	14 14 54.2	
	comp=E,2098µm,1.0s						
TSLK				AML	AML	14 14 55.3	
	comp=N,1820µm,0.6s						
AST1	**Astakos**	**0.52**	**73**	P	**Pg**	**14 14 42.8**	**-0.2**
AST1				S	**Sb**	**14 14 52.0**	**0.0**
VLMS	**Volimes, Zakyn**	**0.54**	**163**	P	**Pg**	**14 14 43.0**	**-0.4**
VLMS				S	**Sg**	**14 14 51.3**	**+1.0**
VLMS				AML	AML	14 14 55.6	
	comp=N,4776µm,0.5s						
VLMS				AML	AML	14 14 57.9	
	comp=E,3213µm,0.4s						
PDO	**Prodromos**	**0.60**	**70**	P	**Pg**	**14 14 44.2**	**-0.5**
PDO				S	**Sb**	**14 14 55.2**	**+0.6**
	comp=E,2µm,0.7s						
KRI1	**kERI**	**0.78**	**159**	P	**Pg**	**14 14 47.3**	**-0.6**
KRI1				S	**Sb**	**14 14 59.1**	**-0.5**
IGT	**Igoumenitsa**	**1.15**	**355**	P	**Pg**	**14 14 54.4**	**-0.6**
IGT				S	**Sn**	**14 15 10.8**	**-0.6**
	comp=E,160nm,0.6s						

ATH 03 14:16:24.3, 38.°31N×22.°02E, h7km±2km, ML2.7/10, Error ellipse: s-maj=2.3km s-min=0.6km az=314.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.07**	**39**	P	Pg	14 16 26.0	-0.1
TRIZ				S	Sg	14 16 27.5	+0.1
LAKA	**Lakka**	**0.08**	**203**	P	Pg	14 16 26.1	-0.1
LAKA				S	Sg	14 16 27.8	+0.2
LAKA				AML	AML	14 16 27.9	
	comp=N,4457µm,0.2s						
LAKA				AML	AML	14 16 29.1	
	comp=E,5030µm,0.2s						
SERG	**Sergoula**	**0.11**	**17**	P	Pg	14 16 26.6	-0.2
SERG				S	Sg	14 16 28.6	+0.2
SERG				AML	AML	14 16 28.7	
	comp=E,17678µm,0.2s						
SERG				AML	AML	14 16 29.2	
	comp=N,18820µm,0.3s						
KALE	**Kalithea**	**0.12**	**51**	P	Pg	14 16 27.1	0.0
KALE				S	Sg	14 16 29.1	+0.2
KALE				AML	AML	14 16 30.4	
	comp=N,19712µm,0.2s						
KALE				AML	AML	14 16 31.3	
	comp=E,10680µm,0.5s						
EFP	**Efpalio**	**0.14**	**323**	P	Pg	14 16 27.1	-0.2
EFP				S	Sg	14 16 29.8	+0.4
EFP				AML	AML	14 16 30.1	
	comp=E,22917µm,0.4s						
EFP				AML	AML	14 16 30.7	
	comp=N,13476µm,0.2s						
UPR	**University Cam**	**0.18**	**261**	P	Pg	14 16 27.8	-0.2
UPR				S	Sg	14 16 31.4	+0.9
KLV	**Kalavryta, Ach**	**0.29**	**159**	P	Pg	14 16 29.8	-0.1
KLV				S	Sg	14 16 34.9	+1.1
ANX	**Ano Chora**	**0.29**	**345**	P	Pg	14 16 29.8	-0.3
ANX				S	Sg	14 16 34.6	+0.6
ANX				AML	AML	14 16 35.3	
	comp=N,8962µm,0.2s						
ANX				AML	AML	14 16 35.4	
	comp=E,13320µm,0.2s						
DLFA	**Delphi**	**0.41**	**66**	P	Pg	14 16 31.8	-0.5
DLFA				S	Sg	14 16 38.9	+1.1
DRO	**Drossia**	**0.43**	**214**	P	Pg	14 16 32.8	0.0
DRO				S	Sg	14 16 39.5	+1.2
DRO				AML	AML	14 16 40.5	
	comp=N,2895µm,0.3s						
DRO				AML	AML	14 16 40.6	
	comp=E,3309µm,0.3s						
RLS	**Riolos of Patr**	**0.50**	**240**	P	Pg	14 16 34.1	+0.1
RLS				S	Sg	14 16 41.4	+0.8
RLS				AML	AML	14 16 44.1	
	comp=N,877µm,0.2s						
RLS				AML	AML	14 16 44.9	
	comp=E,884µm,0.2s						
EVR	**Evrytania**	**0.63**	**345**	P	Pg	14 16 35.9	-0.5
EVR				S	Sg	14 16 45.6	+1.0
EVR				AML	AML	14 16 48.2	
	comp=E,1332µm,0.4s						
EVR				AML	AML	14 16 48.3	
	comp=N,908µm,0.4s						
AXAR	**Agios Charalam**	**0.68**	**48**	P	Pg	14 16 37.0	-0.3
AXAR				S	Sb	14 16 47.2	-0.9
AXAR				AML	AML	14 16 50.2	
	comp=E,2580µm,0.4s						
AXAR				AML	AML	14 16 51.3	
	comp=N,2040µm,0.6s						
MAKR	**Makrakomi, Fth**	**0.71**	**7**	P	Pg	14 16 37.7	-0.2
MAKR				S	Sg	14 16 47.9	+0.7
MAKR				AML	AML	14 16 51.2	
	comp=N,1690µm,0.6s						
MAKR				AML	AML	14 16 52.0	
	comp=E,1898µm,0.3s						
AGG	**Agios Georgios**	**0.75**	**19**	P	Pg	14 16 37.7	-1.0
LTK	**Loutraki**	**0.80**	**111**	P	Pg	14 16 39.7	0.0
AMT	**Artemida-Makis**	**0.81**	**197**	P	Pg	14 16 39.7	-0.2
LKR	**Lokris**	**0.84**	**66**	P	Pg	14 16 39.7	-0.8
LKR				S	Sb	14 16 52.2	-0.5
VLX	**Vlachokerasia**	**0.98**	**163**	P	Pg	14 16 42.3	-0.9
VIL2	**Platees**	**0.99**	**95**	P	Pn	14 16 44.8	+0.1
ITM	**Ithomi**	**1.13**	**184**	P	Pg	14 16 45.1	-0.9
THL	**Klokotos Trika**	**1.25**	**360**	P	Pg	14 16 48.3	0.0
DID	**Didima**	**1.26**	**129**	P	Pg	14 16 48.8	+0.4

THE 03 14:16:47.4, 38.°13N×20.°44E, h6km, ML3.0/6, Error ellipse: s-maj=0.9km s-min=0.5km az=219.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.06**	**37**	P	Pg	14 16 48.9	-0.1
ARG2				S	Sg	14 16 49.9	-0.2
	96µm,0.1s						
LXR1	**Lixouri, Cepha**	**0.07**	**358**	P	Pg	14 16 49.0	-0.1
LXR1				S	Sg	14 16 50.5	+0.2
	57µm,0.4s						
CHV1	**Chavriata, Kef**	**0.07**	**318**	P	Pg	14 16 49.1	0.0
CHV1				S	Sg	14 16 50.5	+0.2
	40µm,0.2s						
VLS	**Valsamata**	**0.13**	**68**	P	Pg	14 16 50.0	-0.1
VLS				S	Sg	14 16 52.1	+0.3
	4µm,0.1s						
VSK1	**VASILIKIADES**	**0.29**	**19**	P	Pg	14 16 53.1	-0.1
VSK1				S	Sg	14 16 57.5	+0.4
	2µm,0.2s						
FSK	**Fiskardo**	**0.34**	**16**	P	Pg	14 16 53.7	-0.4
FSK				S	Sg	14 16 58.9	+0.3
	718nm,0.4s						
EVGI	**Lefkada island**	**0.52**	**19**	P	Pg	14 16 57.2	-0.2
EVGI				S	Sg	14 17 04.9	+0.7

*IDC **03** 14:22:34.7±0.6, 12.°87N×143.°35E, h127km±6km, mb3.8/18, mb1 3.8/19, mb1mx3.7/51, mbtmp4.1/19, Error ellipse: s-maj=11.4km s-min=9.1km az=129.0*
*NEIC **03** 14:22:34.2±1.2, 12.°84N±0.°09×143.°44E±0.°09, h129km±2km, mb4.7/38, Error ellipse: s-maj=13.3km s-min=13.0km az=102.0*
ISC 03 14:22:36.0±0.4, **12.°84N**±0.°07×**143.°48E**±0.°07, **h150**km, **n76**, σ**1.s23**/84, **mb4.4**/37, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.55**	**61**	P	**Pn**	**14 23 03.3**	**-2.8**
	126nm,0.3s,baz=278,slow=1.0,SNR=72						
GUMO				S	**Sn**	**14 23 27.3**	**-1.8**
	178nm,0.3s,baz=26,slow=20,SNR=7.9						
GUMO	**Guam**	**1.55**	**61**	Pn	**Pn**	**14 23 03.1**	**-3.0**
ANA2	**Anatahan**	**4.10**	**32**	Pn	**Pn**	**14 23 36.0**	**-1.6**
SARN	**Sarigan**	**4.44**	**30**	Pn	**Pn**	**14 23 40.0**	**-2.0**
PATS	**Pohnpei**	**15.78**	**111**	P	**Pn**	**14 26 10.3**	**+0.1**
JOW	**Kunigami**	**19.93**	**317**	P	**P**	**14 26 56.7**	**+0.4**
	0.5nm,0.3s,baz=156,slow=12,SNR=7.1						
JOW	**Kunigami**	**19.93**	**317**	P	**P**	**14 26 55.7**	**-0.6**
JNU	**Nakatsue**	**23.24**	**332**	P	**P**	**14 27 29.6**	**-0.4**
	10nm,0.7s,baz=171,slow=3.6,SNR=10						
JNU	**Nakatsue**	**23.24**	**332**	IAmb	IAmb	14 27 31.5	
SSLB	**Suanglung**	**23.96**	**300**	P	**P**	**14 27 36.3**	**-0.3**
SSLB				IAmb	IAmb	14 28 26.5	
	comp=Z,46nm,1.6s						
TPUB	**Ta-pu**	**24.05**	**299**	P	**P**	**14 27 36.0**	**-1.5**
TPUB				IAmb	IAmb	14 27 55.8	
	comp=Z,52nm,1.7s						
MJAR	**Matsushiro Arr**	**24.07**	**350**	P	**P**	**14 27 37.2**	**-0.4**
	comp=Z,4.6nm,0.9s,baz=171,slow=11,SNR=8.6						
MJAR	**Matsushiro Arr**	**24.07**	**350**	P	**P**	**14 27 36.5**	**-1.0**
MAJO	**Matsushiro**	**24.07**	**350**	P	**P**	**14 27 37.4**	**-0.1**
MAJO				IAmb	IAmb	14 27 42.6	
	comp=Z,34nm,1.5s						
MJB9	**Matsu-Tunnel**	**24.08**	**350**	P	**P**	**14 27 37.3**	**-0.3**
MJB9				IAmb	IAmb	14 27 42.6	
	comp=Z,34nm,1.5s						
LUWI	**Luwuk**	**24.74**	**238**	P	**P**	**14 27 43.8**	**-0.1**
LUWI				IAmb	IAmb	14 27 47.3	
	comp=Z,34nm,0.8s						
KSRS	**Korea Array**	**28.18**	**333**	P	**P**	**14 28 12.8**	**-1.6**
	comp=Z,0.9nm,0.6s,baz=149,slow=35,SNR=4.2						
USRK	**Ussuriysk Ar.**	**32.77**	**345**	P	**P**	**14 28 56.3**	**+1.6**
	comp=Z,2.4nm,0.7s,baz=88,slow=14,SNR=4.5						
USRK	**Ussuriysk Ar.**	**32.77**	**345**	P	**P**	**14 28 55.7**	**+1.0**
WB0	**Warramunga Arr**	**33.61**	**196**	P	**P**	**14 29 02.7**	**+0.4**
WB0				IAmb	IAmb	14 29 48.3	
	comp=Z,44nm,1.8s						
WR0	**Warramunga Arr**	**33.76**	**195**	P	**P**	**14 29 04.3**	**+0.7**
WRAB	**Tennant Creek**	**33.78**	**196**	P	**P**	**14 29 03.7**	**-0.1**
WRAB				IAmb	IAmb	14 29 22.2	
	comp=Z,52nm,1.9s						
WB2	**Warramunga Arr**	**33.79**	**196**	P	**P**	**14 29 04.4**	**+0.5**
WB2				IAmb	IAmb	14 30 08.7	
	comp=Z,54nm,2.0s						
WRA	**Warramunga Arr**	**33.80**	**196**	P	**P**	**14 29 04.5**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=17,slow=9.3,SNR=9.9						
WRA				pP	**pP**	**14 29 31.2**	**-3.2**
	comp=Z,2.2nm,0.8s,baz=18,slow=9.6,SNR=4.4						
WRA				PcP	**PcP**	**14 31 41.7**	**+1.9**
	comp=Z,0.7nm,0.7s,baz=22,slow=3.5,SNR=3.8						
WRA	**Warramunga Arr**	**33.80**	**196**	P	**P**	**14 29 04.2**	**+0.3**
ENH	**Enshi**	**35.87**	**304**	P	**P**	**14 29 21.7**	**0.0**
ENH				IAmb	IAmb	14 29 22.8	
	comp=Z,10nm,1.0s						
BJT	**Baijiatuau**	**36.20**	**323**	P	**P**	**14 29 24.4**	**+0.1**
BJT				IAmb	IAmb	14 29 25.1	
	comp=Z,5.4nm,0.6s						
AS31	**Alice Springs**	**37.47**	**195**	P	**P**	**14 29 36.2**	**+1.0**
ASAR	**Alice Springs**	**37.47**	**195**	P	**P**	**14 29 36.2**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=22,slow=11,SNR=36						
ASAR				pP	**pP**	**14 30 03.3**	**-3.3**
	comp=Z,1.3nm,0.6s,baz=18,slow=13,SNR=6.5						
ASAR				PcP	**PcP**	**14 31 52.5**	**+1.9**
	comp=Z,0.4nm,0.7s,baz=22,slow=2.5,SNR=4.3						
PBKT	**Sadao Pong**	**41.23**	**281**	P	**P**	**14 30 06.0**	**-0.6**
IPM	**Ipoh**	**42.73**	**263**	P	**P**	**14 30 18.8**	**0.0**
IPM				IAmb	IAmb	14 31 46.0	
	comp=Z,9.9nm,1.2s						
KULM	**Kulim**	**42.90**	**264**	P	**P**	**14 30 20.2**	**0.0**
KULM				IAmb	IAmb	14 31 39.7	
	comp=Z,14nm,1.4s						
CMAR	**Chiang Mai Arr**	**43.16**	**283**	P	**P**	**14 30 22.7**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=83,slow=6.7,SNR=9.4						
CMAR				pP	**pP**	**14 30 51.3**	**-3.3**
	comp=Z,0.4nm,0.4s,baz=99,slow=7.0,SNR=2.1						
STKA	**Stephens Creek**	**44.50**	**182**	P	**P**	**14 30 33.3**	**+0.7**
	comp=Z,2.7nm,0.7s,baz=3.7,slow=4.9,SNR=4.1						
STKA	**Stephens Creek**	**44.50**	**182**	P	**P**	**14 30 33.2**	**+0.7**
RPSI	**Rantau Prapat**	**45.20**	**261**	P	**P**	**14 30 38.3**	**-0.2**
BBOO	**Buckleboo**	**45.94**	**189**	P	**P**	**14 30 44.8**	**+0.8**
ULN	**Ulaanbaatar**	**46.24**	**326**	P	**P**	**14 30 46.9**	**+0.6**
SONM	**Songino Array**	**46.58**	**326**	P	**P**	**14 30 49.9**	**+1.0**
	comp=Z,1.3nm,0.5s,baz=148,slow=7.9,SNR=19						
SONM				pP	**pP**	**14 31 18.9**	**-2.5**
	comp=Z,0.4nm,0.6s,baz=146,slow=8.0,SNR=1.6						
SONM				PcP	**PcP**	**14 32 21.3**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=46,slow=4.2,SNR=3.4						
SONM	**Songino Array**	**46.58**	**326**	P	**P**	**14 30 49.7**	**+0.7**
GSI	**Gunungsitoli**	**46.88**	**260**	P	**P**	**14 30 50.1**	**-1.5**
GSI				IAmb	IAmb	14 32 24.4	
	comp=Z,16nm,1.0s						
MORW	**Morawa**	**49.38**	**212**	P	**P**	**14 31 10.2**	**-0.3**
YAK	**Yakutsk**	**50.11**	**352**	P	**P**	**14 31 15.7**	**+0.2**
YAK				IAmb	IAmb	14 31 17.9	
	comp=Z,6.7nm,0.7s						
RAMN	**Ramite**	**54.88**	**294**	*e*P	**P**	**14 31 52.6**	**+1.0**
JIRN	**Jiri**	**55.28**	**295**	*e*P	**P**	**14 31 54.5**	**-0.2**
	comp=Z,16nm,0.7s						
GUN	**Gumba**	**55.57**	**295**	*e*P	**P**	**14 31 56.7**	**0.0**
	comp=Z,9.9nm,0.5s						
GKN	**Gorkha**	**56.68**	**295**	*e*P	**P**	**14 32 04.1**	**-0.2**
	comp=Z,8.9nm,0.3s						
DANN	**Dangsing**	**57.47**	**295**	*e*P	**P**	**14 32 09.8**	**-0.2**
	comp=Z,19nm,0.6s						
MK31	**Makanchi Array**	**61.09**	**317**	P	**P**	**14 32 34.0**	**-0.2**
MKAR	**Makanchi Array**	**61.09**	**317**	P	**P**	**14 32 35.1**	**+0.9**
	comp=Z,1.9nm,0.8s,baz=94,slow=8.8,SNR=23						
MKAR	**Makanchi Array**	**61.09**	**317**	P	**P**	**14 32 34.8**	**+0.5**
MAKZ	**Makanchi**	**61.30**	**317**	P	**P**	**14 32 36.4**	**+0.7**
ZAA0	**Zalesovo Array**	**61.45**	**325**	P	**P**	**14 32 36.3**	**-0.1**
ZAA0				IAmb	IAmb	14 32 37.5	
	comp=Z,2.8nm,0.7s						
ZALV	**Zalesovo Beam**	**61.45**	**325**	P	**P**	**14 32 36.7**	**+0.3**
	comp=Z,2.0nm,0.4s,baz=106,slow=7.0,SNR=13						
ZALV				PcP	**pwP**	**14 33 16.1**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=117,slow=1.9,SNR=2.6						
ZALV	**Zalesovo Beam**	**61.45**	**325**	P	**P**	**14 32 36.4**	**0.0**
KURK	**Kurchatov**	**64.28**	**320**	P	**P**	**14 32 55.9**	**+0.6**
KURK				IAmb	IAmb	14 32 56.8	
	comp=Z,9.9nm,0.8s						
KURBB	**Kurchatov Arra**	**64.32**	**320**	P	**P**	**14 32 56.1**	**+0.6**
	comp=Z,6.6nm,0.7s,baz=104,slow=6.8,SNR=51						
CNPM	**China Poot**	**66.56**	**30**	P	**P**	**14 33 10.8**	**+1.1**
NIL	**Nilore**	**66.61**	**301**	P	**P**	**14 33 09.5**	**-1.2**
NIL				IAmb	IAmb	14 33 12.1	
	comp=Z,6.5nm,0.8s						
GHO	**Glory Hole Cre**	**68.22**	**28**	P	**P**	**14 33 23.0**	**+2.7**
GHO				IAmb	IAmb	14 34 19.9	
	comp=Z,25nm,1.4s						
NEA	**Nenana**	**68.86**	**25**	P	**P**	**14 33 24.5**	**+0.4**
KKAR	**Karatay Array**	**68.92**	**311**	P	**P**	**14 33 25.3**	**+0.3**
BVAR	**Borovoye Array**	**69.67**	**322**	P	**P**	**14 33 30.0**	**+0.7**
	comp=Z,3.6nm,0.4s,baz=103,slow=8.0,SNR=36						
BRVK	**Borovoye**	**69.74**	**322**	P	**P**	**14 33 30.4**	**+0.7**
ILAR	**Eielson Array**	**69.82**	**25**	P	**P**	**14 33 29.9**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=252,slow=5.6,SNR=8.8						
VRDI	**Verde Repeater**	**70.69**	**29**	P	**P**	**14 33 36.5**	**+0.9**
VRDI				IAmb	IAmb	14 33 43.0	
	comp=Z,22nm,1.8s						
BMAR	**Burnt Mountain**	**71.31**	**23**	P	**P**	**14 33 40.6**	**+1.5**
ABKAR	**Akbulak array**	**76.19**	**318**	P	**P**	**14 34 07.8**	**+0.1**
YKA	**Yellowknife Ar**	**84.14**	**27**	P	**P**	**14 34 50.9**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=287,slow=5.1,SNR=4.8						
ARCES	**ARCESS Array B**	**87.37**	**342**	P	**P**	**14 35 06.4**	**+0.5**
	comp=Z,1.6nm,0.9s,baz=70,slow=7.8,SNR=4.5						
NVAR	**Mina Array Bea**	**88.44**	**51**	P	**P**	**14 35 14.2**	**+2.3**
	comp=Z,0.3nm,0.6s,baz=270,slow=5.4,SNR=3.8						
NVAR	**Mina Array Bea**	**88.44**	**51**	P	**P**	**14 35 11.6**	**-0.3**
FINES	**FINESS Array B**	**91.26**	**335**	P	**P**	**14 35 23.5**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=63,slow=5.1,SNR=23						
TORD	**Torodi Ar. Bea**	**134.15**	**303**	PKP	**PKiKP**	**14 41 39.1**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=40,slow=2.5,SNR=2.4						
LPAZ	**La Paz**	**149.24**	**100**	PKPbc	**PKiKP**	**14 42 11.9**	**+2.1**
	comp=Z,1.6nm,0.5s,baz=317,slow=1.4,SNR=6.2						
LPAZ	**La Paz**	**149.24**	**100**		**PKPbc**	**14 42 09.7**	**+1.0**

*IDC **03** 14:26:17.3±0.8, 32.°77S×178.°38W, h0km, mb4.7/5, mb1 4.7/8, mb1mx4.3/28, mbtmp4.6/8, ML4.1/3, MS3.9/13, Ms1 3.9/13, ms1mx3.8/24, Error ellipse: s-maj=25.9km s-min=20.8km az=104.0*
*WEL **03** 14:26:17.5±0.6, 33.°S±3.°×17.°8W±1.°0, h33km, mB5.1/10, ML5.2/16, MLv4.9/20, Mw(mB)4.4/10*
*NEIC **03** 14:26:21.9±3.3, 32.°68S±0.°09×178.°54W±0.°08, h35km±2km, mb4.8/20, Error ellipse: s-maj=16.5km s-min=10.6km az=336.0*
ISC 03 14:26:20.7±0.5, **32.°99S**±0.°05×**178.°26W**±0.°09, **h32**km, **n99**, σ**2.s12**/96, **mb4.8**/9, **MS3.9**/13, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.73**	**5**	P	**Pn**	**14 27 13.8**	**-2.2**
GLKZ				S	**Sn**	**14 27 55.9**	**-3.0**
RAO	**Raoul Island**	**3.74**	**5**	Pn	**Pn**	**14 27 11.8**	**-4.4**
	33nm,0.3s,baz=84,slow=19,SNR=3.1						
RAO				Sn	**Sn**	**14 27 57.3**	**-1.8**
	87nm,0.3s,baz=123,slow=21,SNR=3.3						
RIZ	**Raoul Island**	**3.74**	**4**	S	**Sn**	**14 27 57.3**	**-1.9**
MXZ	**Matakaoa Point**	**5.36**	**211**	P	**Pn**	**14 27 35.8**	**-2.6**
MXZ	**Matakaoa Point**	**5.36**	**211**	P	**Pn**	**14 27 36.2**	**-2.2**
MXZ				S	**Sn**	**14 28 37.3**	**-1.7**
WMGZ	**Waiomatatini S**	**5.53**	**208**	P	**Pn**	**14 27 40.4**	**-0.3**
WMGZ				S	**Sn**	**14 28 45.2**	**+1.9**
PKGZ	**Pakihiroa**	**5.73**	**210**	P	**Pn**	**14 27 42.6**	**-1.0**
PKGZ				S	**Sn**	**14 28 47.3**	**-1.0**
HAZ	**Te Kaha**	**5.75**	**213**	P	**Pn**	**14 27 42.0**	**-1.7**
HAZ				S	**Sn**	**14 28 50.6**	**+1.9**
PUZ	**Puketiti**	**5.81**	**208**	P	**Pn**	**14 27 42.4**	**-2.3**
PUZ				S	**Sn**	**14 28 50.0**	**-0.2**
RUGZ	**Raukumara Rang**	**5.97**	**213**	P	**Pn**	**14 27 45.7**	**-1.2**
RUGZ				S	**Sn**	**14 28 55.2**	**+0.9**
TWGZ	**Tauwhareparae**	**6.01**	**210**	P	**Pn**	**14 27 45.7**	**-1.8**
CNGZ	**Carnagh Statio**	**6.19**	**207**	P	**Pn**	**14 27 47.9**	**-1.9**
WHRZ	**Whale Island**	**6.22**	**217**	P	**Pn**	**14 27 52.1**	**+1.9**
TKGZ	**Te Karaka**	**6.29**	**209**	P	**Pn**	**14 27 49.8**	**-1.4**
TKGZ				S	**Sn**	**14 29 00.5**	**-1.5**
MWZ	**Matawai**	**6.34**	**212**	P	**Pn**	**14 27 49.3**	**-2.6**
MWZ				S	**Sn**	**14 29 01.2**	**-2.0**
OPRZ	**Ohinepanea**	**6.43**	**220**	P	**Pn**	**14 27 54.4**	**+1.2**
URZ	**Urewera**	**6.47**	**214**	Pn	**Pn**	**14 27 52.0**	**-1.7**
	8.5nm,0.3s,baz=5.1,slow=3.2,SNR=53						
URZ				Sn	**Sn**	**14 29 04.2**	**-2.1**
	26nm,0.3s,baz=155,slow=20,SNR=9.5						
URZ	**Urewera**	**6.47**	**214**		**Pn**	**14 27 51.6**	**-2.0**
URZ	**Urewera**	**6.47**	**214**	P	**Pn**	**14 27 52.2**	**-1.4**
URZ				S	**Sn**	**14 29 04.3**	**-2.0**
MARZ	**Manawahe**	**6.47**	**218**	P	**Pn**	**14 27 53.9**	**+0.1**
RAGZ	**Rawiri**	**6.52**	**211**	P	**Pn**	**14 27 54.1**	**-0.4**
RIGZ	**Rimuhau**	**6.55**	**208**	P	**Pn**	**14 27 52.9**	**-2.0**
PRGZ	**Paritu Road**	**6.70**	**207**	P	**Pn**	**14 27 54.1**	**-2.7**
KARZ	**Kaharoa**	**6.73**	**220**	P	**Pn**	**14 27 58.2**	**+0.9**
SNGZ	**Shannon Statio**	**6.79**	**210**	P	**Pn**	**14 27 56.9**	**-1.3**
MUGZ	**Murupara**	**6.80**	**215**	P	**Pn**	**14 27 55.9**	**-2.4**
OUZ	**Omahuta**	**7.11**	**250**	Pn	**Pn**	**14 28 04.9**	**+2.4**
OUZ	**Omahuta**	**7.11**	**250**	P	**Pn**	**14 28 05.6**	**+3.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BKZ	Black Stump Fm	7.48	213		Pn	14 28 05.6	-2.1
BFZ	Birch Farm	8.85	208		Pn	14 28 23.2	-3.1
BHW	Baring Head	10.03	211		Pn	14 28 38.3	-4.2
TUWZ	Tuamarina	10.46	214		Pn	14 28 44.0	-4.4
BSWZ	Blackbirch Sta	10.72	213	Pn	Pn	14 28 49.4	-2.6
QRZ	Quartz Range	10.74	221	Pn	Pn	14 28 49.1	-3.2
THZ	Tophouse	11.22	216		Pn	14 28 53.9	-5.0
KHZ	Kahutara	11.43	212	Pn	Pn	14 28 57.6	-4.0
LTZ	Lake Taylor	12.30	215	Pn	Pn	14 29 11.7	-1.9
OXZ	Oxford	12.83	214	Pn	Pn	14 29 16.2	-4.5
RPZ	Rata Peaks	13.59	215	Pn	Pn	14 29 24.9	-6.3
	0.7nm,0.3s,baz=260,slow=19,SNR=5.6						
RPZ				Sn	Sn	14 31 46.4	-15
	0.9nm,0.3s,baz=350,slow=18,SNR=10						
RPZ	Rata Peaks	13.59	215		Pn	14 29 24.7	-6.4
FOZ	Fox Glacier	14.07	218	Pn	Pn	14 29 35.4	-2.3
ODZ	Otahua Downs	14.79	212	Pn	Pn	14 29 44.5	-2.9
WKZ	Wanaka	15.40	216	Pn	Pn	14 29 51.3	-4.3
WKZ				IAmb	IAmb	14 30 19.4	
	comp=Z,60nm,1.6s						
MLZ	Mavora Lakes	16.23	216	P	P	14 30 09.5	+0.4
WHZ	Wether Hill Ro	16.69	215	Pn	Pn	14 30 08.8	-3.2
DCZ	Deep Cove	16.79	218	Pn	Pn	14 30 09.9	-3.3
DCZ				IAmb	IAmb	14 30 54.2	
	comp=Z,73nm,1.8s						
DZM	Mont Dzumac	17.37	305	eP	P	14 30 25.2	+3.3
	comp=Z,80nm,1.2s						
DZM				eLR	LR	14 34 27.8	
	comp=Z,941nm,22.5s						
DZM	Mont Dzumac	17.37	305	P	Pn	14 30 18.1	-2.7
	comp=Z,0.3nm,0.3s,baz=150,slow=20,SNR=3.0						
DZM				LR	LR	14 36 07.3	
	comp=Z,1μm,18.1s,baz=144,slow=34						
AFI	Afiamalu	19.89	19	P	P	14 30 47.9	-1.7
	comp=Z,0.5nm,0.3s,baz=238,slow=19,SNR=2.1						
AFI	Afiamalu	19.89	19	IAmb	IAmb	14 31 21.5	
	comp=Z,46nm,1.1s						
RAR	Rarotonga	20.17	59	LR	LR	14 39 06.8	
	comp=Z,192nm,18.6s,baz=242,slow=38						
PPT2	Papeete2	30.00	66	eLR	LR	14 40 05.6	
	comp=Z,184nm,21.0s,baz=234						
PPT	Papeete	30.01	66	LR	LR	14 45 00.0	
	comp=Z,177nm,18.1s,baz=230,slow=37						
KNTN	Kanton	30.68	13	P	P	14 32 30.9	-1.6
HNR	Honiara	30.89	314	LR	LR	14 42 40.1	
	comp=Z,74nm,19.2s,baz=194,slow=32						
STKA	Stephens Creek	33.76	261	LR	LR	14 46 20.7	
	comp=Z,657nm,18.1s,baz=51,slow=36						
BBOO	Buckleboo	38.12	257	P	P	14 33 35.0	-1.9
KRVT	Keravat (AS076	39.80	309	P	P	14 33 50.4	-0.6
	comp=Z,66nm,0.9s,baz=42,slow=19,SNR=4.1						
TAOE	Nuku Hiva Isla	42.58	64	P	P	14 34 15.8	+1.8
AS31	Alice Springs	42.81	270	P	P	14 34 15.8	0.0
ASAR	Alice Springs	42.81	270	P	P	14 34 15.9	+0.1
	comp=Z,5.6nm,0.8s,baz=112,slow=7.7,SNR=60						
ASAR	Alice Springs	42.81	270	P	P	14 34 14.6	-1.2
WR0	Warramunga Arr	43.86	275	P	P	14 34 24.1	-0.1
WR0				IAmb	IAmb	14 35 09.9	
	comp=Z,38nm,1.6s						
WB2	Warramunga Arr	44.03	275	P	P	14 34 25.5	-0.1
WRA	Warramunga Arr	44.04	275	P	P	14 34 25.6	-0.1
	comp=Z,6.2nm,0.4s,baz=115,slow=7.7,SNR=60						
WRA				LR	LR	14 51 05.8	
	comp=Z,156nm,21.2s,baz=110,slow=34						
WRA	Warramunga Arr	44.04	275	P	P	14 34 25.5	-0.1
WB0	Warramunga Arr	44.07	275	P	P	14 34 25.9	0.0
WB0				IAmb	IAmb	14 34 44.7	
	comp=Z,29nm,1.4s						
FORT	Forrest	45.22	258	P	P	14 34 34.5	-0.5
VNDA	Vanda	45.50	186	LR	LR	14 50 50.9	
	comp=Z,155nm,18.8s,baz=23,slow=32						
MTN	Manton Dam	50.22	281	P	P	14 35 10.6	-3.3
KNRA	Kununurra	50.73	277	P	P	14 35 15.6	-2.1
FITZ	Fitzroy Crossi	52.18	272	P	P	14 35 25.8	-2.8
FITZ				IAmb	IAmb	14 36 27.6	
	comp=Z,22nm,1.4s						
QSPA	South Pole Qui	57.13	180	P	P	14 36 06.5	+2.5
	comp=Z,6.4nm,1.1s,baz=20,slow=3.5,SNR=8.2						
QSPA	South Pole Qui	57.13	180	P	P	14 36 06.2	+2.3
QSPA				IAmb	IAmb	14 36 20.8	
	comp=Z,16nm,1.0s						
SNAA	Sanae	75.58	179	P	P	14 38 03.6	+1.7
SNAA				IAmb	IAmb	14 38 15.1	
	comp=Z,8.5nm,1.2s						
PLCA	Paso Flores	80.91	133	LR	LR	15 08 55.6	
	comp=Z,109nm,18.2s,baz=222,slow=32						
KSRS	Korea Array	86.18	320	LR	LR	15 15 05.4	
	comp=Z,44nm,19.0s,baz=179,slow=34						
PETK	Petropavlovsk-	88.26	346	LR	LR	15 10 47.9	
	comp=Z,54nm,21.6s,baz=240,slow=30						
NVAR	Mina Array Bea	90.28	43	P	P	14 39 21.0	+2.5
	comp=Z,0.7nm,0.9s,baz=226,slow=12,SNR=4.7						
TXAR	Lajitas Array	93.97	58	LR	LR	15 17 17.5	
	comp=Z,48nm,18.0s,baz=0.0,slow=33						
CMAR	Chiang Mai Arr	94.05	289	LR	LR	15 23 31.8	
	comp=Z,33nm,19.3s,baz=155,slow=37						
PDAR	Pinedale Array	98.15	44	LR	LR	15 25 03.2	
	comp=Z,54nm,18.2s,baz=256,slow=36						
MKAR	Makanchi Array	119.25	309	PKP	PKiKP	14 45 07.8	+1.5
	comp=Z,0.3nm,0.8s,baz=99,slow=2.7,SNR=2.9						
MKAR	Makanchi Array	119.25	309		PKPdf	14 45 06.1	-0.2
ZALV	Zalesovo Beam	119.80	317	PKP	PKiKP	14 45 09.4	+2.3
	comp=Z,0.5nm,0.5s,baz=116,slow=3.4,SNR=2.5						
KURBB	Kurchatov Arra	122.69	313	PKP	PKiKP	14 45 12.9	0.0
	comp=Z,0.8nm,0.8s,baz=101,slow=2.5,SNR=8.7						
ARCES	ARCESS Array B	141.06	347	PKhKP	PKPpre	14 45 42.8	
	comp=Z,7.9nm,1.1s,baz=45,slow=2.7,SNR=4.9						
KBZ	Khabaz	146.31	301	PKPbc	PKPab	14 45 59.2	+0.5
	comp=Z,2.5nm,0.9s,baz=127,slow=3.9,SNR=3.7						
FIA1	FINESS Array S	147.48	338	PKPbc	PKPbc	14 46 00.6	0.0
FINES	FINESS Array B	147.48	338	PKPbc	PKPbc	14 46 01.3	+0.7
	comp=Z,4.5nm,0.5s,baz=43,slow=3.7,SNR=22						
FINES	FINESS Array B	147.48	338		PKPbc	14 46 00.7	+0.1
NOA	NORSAR Array B	151.27	350	PKPbc	PKPbc	14 46 10.2	0.0
	comp=Z,3.3nm,0.9s,baz=14,slow=4.2,SNR=7.5						
MMAI	Mount Meron Ar	151.84	279	PKPbc	PKiKP	14 46 14.8	+2.0
	comp=Z,5.3nm,0.7s,baz=94,slow=4.3,SNR=3.5						
MMAI				PKPab	PKPab	14 46 23.9	+2.3
	comp=Z,3.9nm,0.5s,baz=42,slow=6.6,SNR=2.1						
AKASG	Malin Array Be	153.17	319	PKPbc	PKiKP	14 46 15.9	+1.0
	comp=Z,1.4nm,0.5s,baz=25,slow=2.5,SNR=6.8						
BRTR	Keskin Array B	153.54	294	PKPbc	PKPbc	14 46 17.6	+1.4
	comp=Z,1.1nm,0.5s,baz=148,slow=3.7,SNR=6.5						
BRTR				PKPab	PKPab	14 46 30.0	+1.3
	comp=Z,0.7nm,0.7s,baz=136,slow=43,SNR=3.1						
BRTR	Keskin Array B	153.54	294		PKiKP	14 46 16.3	+0.1
CLL	Collm	159.92	339	ePKPab	PKPab	14 46 57.0	+1.5
TORD	Torodi Ar. Bea	160.25	180	PKPab	PKPab	14 46 59.3	+1.6
	comp=Z,1.0nm,0.9s,baz=166,slow=2.4,SNR=3.0						
GERES	GERESS Array B	161.80	334	PKPab	PKPab	14 47 03.9	0.0
	comp=Z,0.7nm,0.8s,baz=325,slow=1.2,SNR=3.2						

IDC 03 14:30:52.7±1.4, 27.°26N×52.°77E, h0km, mb3.6/11, mb1 3.8/13, mb1mx3.6/43, mbtmp3.7/13, ML2.9/2, Error ellipse: s-maj=30.9km s-min=21.0km az=7.0
TEH 03 14:30:55.2, 27.°23N×52.°87E, h14km, ML3.7
NEIC 03 14:30:58.0±0.8, 27.°2N±0.°1×52.°79E±0.°06, h40km±8km, Error ellipse: s-maj=16.5km s-min=8.3km az=174.0
OMAN 03 14:31:01.4±0.7, 26.°85N×52.°78E, h50km±16km, ml3.6/8, Error ellipse: s-maj=24.2km s-min=5.0km az=247.0
ISC 03 14:30:54.0±0.6, 27.°16N±0.°05×52.°78E±0.°04, h10km, n67, σ1§75/85, mb3.7/12, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	Lamerd	0.39	63	ePg	Pg	14 31 01.0	-0.7
LMD1				eSg	Sg	14 31 06.2	-0.6
LMD1				e		14 31 10.4	
LAR1	LAR	1.50	70	ePg	Pb	14 31 22.5	+0.4
LAR1				e		14 31 52.7	
JHRM	Jahrom	1.51	28	ePg	Pn	14 31 20.8	-0.5
JHRM				e		14 31 58.6	
JRN	Qarnain Island	2.21	178	ePn	Pn	14 31 34.2	+3.4
GHB	Gharebagh	2.22	355	ePn	Pb	14 31 33.6	-0.8
GHWR	Ruwais	3.19	178	ePn	Pn	14 31 47.2	+3.0
SHME	Shamm	3.21	109	ePn	Pn	14 31 46.2	+1.6
NAZ	Nazwa, Dubai	3.38	129	P	Pn	14 31 50.0	+3.1
NAZ				S	Sn	14 32 28.9	+1.9
	SNR=8.2						
BANOM	Banah	3.39	111	P	Pn	14 31 49.1	+2.1
	SNR=6.0						
BANOM				S	Sn	14 32 28.7	+1.4
BANOM	Banah	3.39	111	ePn	Pn	14 31 48.6	+1.6
ASUD	Al Ashush, Dub	3.41	137	P	Pn	14 31 50.2	+2.8
ASUD				S	Sn	14 32 30.2	+2.3
ASUD	Al Ashush, Dub	3.41	137	ePn	Pn	14 31 50.3	+2.9
MSFE	Esma-Masafi	3.53	120	ePn	Pn	14 31 50.6	+1.7
MZWR	Madinat Zayed	3.53	163	ePn	Pn	14 31 52.5	+3.5
MDH	Madha	3.67	120	P	Pn	14 31 52.9	+2.1
MDH				S	Sn	14 32 33.1	-1.0
MDH	Madha	3.67	120	ePn	Pn	14 31 52.5	+1.7
UOSS	Minazif	3.79	125	Pn	Pn	14 31 54.0	+1.5
UOSS	Minazif	3.79	125	ePn	Pn	14 31 53.7	+1.2
HATD	Hatta, Dubai	3.81	127	P	Pn	14 31 55.1	+2.3
HATD				S	Sn	14 32 38.5	+0.8
	SNR=6.8						
HATD	Hatta, Dubai	3.81	127	ePn	Pn	14 31 53.7	+0.9
ASHO	Ashiyiah	3.85	129	P	Pn	14 31 55.5	+2.1
	SNR=9.6						
ASHO				S	Sn	14 32 39.5	+0.8
	SNR=6.4						
ASHO	Ashiyiah	3.85	129	ePn	Pn	14 31 55.3	+1.9
KLNJ	Kolanjah	3.97	345	ePn	Pn	14 31 56.1	+0.8
TVBK	TV Kerman	4.49	50	e		14 32 05.1	
TVBK				ePn	Pn	14 32 03.9	+1.4
IMEH	Mehriz	4.51	20	ePn	Pn	14 32 03.5	+0.9
SOHO	SOHO	4.54	131	ePn	Pn	14 32 04.5	+1.7
KHGB	Koh Gabri	4.56	45	ePn	Pn	14 32 03.6	+0.3
KHGB				e		14 33 05.7	
IRAM	Ramesheh	4.64	356	ePn	Pn	14 32 04.4	0.0
ISAD	Sadrabad	4.80	9	ePn	Pn	14 32 07.9	+1.2
CHMN	Cheshme madani	4.98	56	ePn	Pn	14 32 12.0	+2.8
IBAF	Bafgh	5.04	28	ePn	Pn	14 32 10.9	+1.1
ICHK	Chekchek	5.26	15	ePn	Pn	14 32 13.0	+0.1
JHBN	Jahan bin	5.37	341	ePn	Pn	14 32 17.0	+2.4
HOQ	Hoqain	5.43	130	P	Pn	14 32 17.1	+1.9
HOQ				S	Sn	14 33 17.2	-0.5
	SNR=6.3						
BSY	Bisya	5.95	137	P	Pn	14 32 24.7	+2.4
	SNR=7.0						
BSY				S	Sn	14 33 30.0	-0.6
SMDO	Samad	6.29	129	P	Pn	14 32 28.9	+1.9
SMDO				S	Sn	14 33 37.4	-1.5
	SNR=6.6						
WSAR	Wadi Sarin	6.58	125	Pn	Pn	14 32 32.7	+1.7
	1.0nm,0.3s,baz=310,slow=9.0,SNR=7.5						
WSAR				Sn	Sn	14 33 43.6	-2.5
	2.0nm,0.3s,baz=82,slow=13,SNR=6.9						
JMDO	Jabal Madar	6.79	133	P	Pn	14 32 35.2	+1.3
JMDO				S	Sn	14 33 47.5	-3.9
WBK	Wadi Bani Khal	7.22	128	P	Pn	14 32 41.1	+1.3
WBK				S	Sn	14 33 58.6	-3.2
RAYN	Ar Rayn	7.51	243		Pn	14 32 45.3	+1.6
MHTO	MHTO	7.76	141	P	Pn	14 32 49.0	+1.9
MHTO				S	Sn	14 34 12.0	-3.1
	SNR=9.2						
WHFO	Wadi Hawf	9.25	174	P	Pn	14 33 07.5	0.0
	SNR=5.3						
WHFO				S	Sn	14 34 49.4	-2.3
DMTO	DMTO	9.61	168	P	Pn	14 33 12.8	+0.2
RBK	Rabkut	9.70	172	P	Pn	14 33 14.1	+0.3
RBK				S	Sn	14 34 58.3	-4.6
ABTO	Aybut	9.78	177	P	Pn	14 33 15.7	+0.9
ABTO				S	Sn	14 35 01.8	-2.9
GNI	Garni	14.57	335	Pn	Pn	14 34 22.2	+1.8
	0.8nm,0.3s,baz=149,slow=13,SNR=2.2						
NIL	Nilore	18.79	65	P	P	14 35 13.5	-0.1
BTK	Batken	19.73	45	P	P	14 35 24.0	+0.1
BTK				IAmb	IAmb	14 35 24.9	
	comp=Z,5.0nm,0.6s						
BR131	Keskin Array S	20.25	313	P	P	14 35 29.6	0.0
BR131				IAmb	IAmb	14 35 35.3	
	comp=Z,17nm,1.9s						
BRTR	Keskin Array B	20.25	313	P	P	14 35 30.6	+1.0
	comp=Z,1.4nm,0.6s,baz=135,slow=13,SNR=9.6						
BRTR	Keskin Array B	20.25	313	P	P	14 35 30.2	+0.5
ABKAR	Akbulak array	22.74	12	P	P	14 35 56.0	-0.2
BVAR	Borovoye Array	28.97	22	P	P	14 36 53.5	-0.1
	comp=Z,0.9nm,0.7s,baz=201,slow=7.8,SNR=4.5						
AKASG	Malin Array Be	29.56	329	P	P	14 36 57.7	-1.1
	comp=Z,0.5nm,0.5s,baz=124,slow=6.5,SNR=2.6						
BUR08	Bucovina Ar. S	29.71	321	P	P	14 37 01.1	+0.8
MAKZ	Makanchi	30.20	42	P	P	14 37 04.7	+0.1
MAKZ				IAmb	IAmb	14 37 55.5	
	comp=Z,6.3nm,1.6s						
MK31	Makanchi Array	30.38	42	P	P	14 37 06.1	-0.1
MK31				IAmb	IAmb	14 37 42.3	
	comp=Z,6.2nm,1.9s						
MKAR	Makanchi Array	30.38	42	P	P	14 37 06.1	-0.1
	comp=Z,0.5nm,0.6s,baz=229,slow=9.7,SNR=8.1						
MKAR				PcP	PcP	14 40 05.3	-0.6
	comp=Z,0.2nm,0.8s,baz=208,slow=2.2,SNR=2.9						
MKAR	Makanchi Array	30.38	42	P	P	14 37 05.8	-0.4
KURBB	Kurchatov Arra	30.55	33	P	P	14 37 06.0	-1.6
	comp=Z,0.3nm,0.8s,baz=200,slow=8.3,SNR=2.4						
ZALV	Zalesovo Beam	35.64	33	P	P	14 37 51.4	-0.5
	comp=Z,1.2nm,0.6s,baz=234,slow=9.7,SNR=6.0						
ZALV	Zalesovo Beam	35.64	33	P	P	14 37 51.3	-0.7
FINES	FINESS Array B	38.68	340	P	P	14 38 16.9	-0.7
	comp=Z,2.8nm,1.0s,baz=151,slow=4.4,SNR=5.4						
NOA	NORSAR Array B	43.85	332	P	P	14 38 59.5	-0.8
	comp=Z,1.1nm,0.7s,baz=122,slow=7.5,SNR=3.4						
SONM	Songino Array	46.24	49	P	P	14 39 19.4	-0.1
	comp=Z,0.3nm,0.9s,baz=261,slow=9.6,SNR=2.8						
TORD	Torodi Ar. Bea	49.62	264	P	P	14 39 45.8	-0.2
	comp=Z,0.3nm,0.6s,baz=64,slow=7.2,SNR=3.4						
YKA	Yellowknife Ar	90.08	354	P	P	14 43 53.6	-0.3
	comp=Z,0.3nm,0.6s,baz=5.4,slow=5.2,SNR=9.0						

IDC 03 14:33:24.9±1.2, 38.°40N×20.°42E, h0km, mb3.6/5, mb1 3.6/7, mb1mx3.4/39, mbtmp3.5/7, ML3.3/2, Error ellipse: s-maj=27.4km s-min=21.6km az=71.0
ATH 03 14:33:27.2, 38.°32N×20.°48E, h11km±1km, ML3.4/17, Error ellipse: s-maj=2.0km s-min=0.8km az=259.0
THE 03 14:33:27.1, 38.°34N×20.°39E, h10km±1km, ML3.5/16, Error ellipse: s-maj=1.1km s-min=0.3km az=257.0
BEO 03 14:33:28.5±0.8, 38.°31N×20.°05E, h22km±4km, ML3.4/7
ISC 03 14:33:26.9±0.7, 38.°34N±0.°02×20.°43E±0.°02, h11km±4km, n90, σ1§21/135, mb3.6/5, 9C-2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF1	Kardakata, Kep	0.07	153	P	Pg	14 33 29.1	-0.1
KEF1				S	Sg	14 33 30.7	-0.2
KEF4	Livadi, Kephal	0.08	185	P	Pg	14 33 29.4	0.0
KEF4				S	Sg	14 33 31.3	+0.1
VSK1	VASILIKIADES	0.12	55	P	Pg	14 33 30.2	+0.2
VSK1				S	Sg	14 33 32.7	+0.4
	52μm,0.3s						
LXR1	Lixouri, Cepha	0.14	178	P	Pg	14 33 30.4	+0.3
LXR1				S	Sg	14 33 33.1	+0.7
	158μm,0.2s						
KEF3	Kipouria, Keph	0.15	206	P	Pg	14 33 30.5	+0.2
KEF3				S	Sg	14 33 32.9	+0.1
FSK	Fiskardo	0.16	40	P	Pg	14 33 30.8	+0.3
FSK				S	Sg	14 33 33.7	+0.6
	25μm,0.3s						
FSK	Fiskardo	0.16	40	P	Pg	14 33 30.8	+0.3
FSK				S	Sg	14 33 33.7	+0.6
FSK				AML	AML	14 33 34.0	
	comp=E,39799μm,0.2s						
FSK				AML	AML	14 33 34.3	
	comp=N,60642μm,0.4s						
CHV1	Chavriata, Kef	0.16	195	P	Pg	14 33 30.7	+0.2
CHV1				S	Sg	14 33 33.6	+0.6
ARG2	Argostoli	0.17	165	P	Pg	14 33 30.8	+0.2
ARG2				S	Sg	14 33 33.5	+0.4
KEF2	Argostoli. Kep	0.18	166	P	Pg	14 33 30.9	+0.1
KEF2				S	Sg	14 33 33.5	0.0
VLS	Valsamata	0.20	142	P	Pg	14 33 31.2	0.0
VLS				S	Sg	14 33 34.7	+0.5
	comp=N,42μm,0.2s						
VLS	Valsamata	0.20	142	P	Pg	14 33 31.2	0.0
VLS				S	Sg	14 33 34.5	+0.3
VLS				AML	AML	14 33 34.8	
VLS				AML	AML	14 33 34.8	
	comp=E,62821μm,0.2s						
EVGI	Lefkada island	0.33	32	P	Pg	14 33 33.9	+0.3
EVGI				S	Sb	14 33 39.3	-0.9
EVGI	Lefkada island	0.33	32	P	Pg	14 33 33.8	+0.2
EVGI				S	Sb	14 33 39.2	-0.9
LKD2	Lefkada island	0.48	21	P	Pg	14 33 36.5	+0.1
LKD2	Lefkada island	0.48	21	P	Pg	14 33 36.4	+0.1
VLMS	Volimes, Zakyn	0.49	158	P	Pg	14 33 36.4	-0.1
VLMS				S	Sg	14 33 43.6	+0.5
VLMS				AML	AML	14 33 45.4	
	comp=N,37957μm,0.3s						
VLMS				AML	AML	14 33 47.3	
	comp=E,22166μm,0.3s						
TSLK	Tsoukalades, L	0.52	20	P	Pg	14 33 37.3	+0.3
TSLK				S	Sb	14 33 45.5	+0.1
	comp=E,3μm,0.5s						
TSLK	Tsoukalades, L	0.52	20	P	Pg	14 33 37.1	+0.1
TSLK				S	Sb	14 33 45.1	-0.3
TSLK				AML	AML	14 33 48.8	
	comp=N,4501μm,0.3s						
TSLK				AML	AML	14 33 49.4	
	comp=E,4282μm,0.3s						
AST1	Astakos	0.55	68	P	Pg	14 33 37.9	+0.2
AST1				S	Sb	14 33 46.9	+0.4
PDO	Prodromos	0.64	66	P	Pg	14 33 39.5	+0.1
PDO				S	Sn	14 33 50.3	-1.8
	comp=E,7μm,0.4s						
PDO	Prodromos	0.64	66	P	Pg	14 33 39.5	+0.1
PDO				S	Sg	14 33 47.9	0.0
PDO				AML	AML	14 33 53.5	
	comp=N,11734μm,0.3s						
PDO				AML	AML	14 33 55.1	
	comp=E,9256μm,0.5s						
ZAK2	Zakynthos	0.66	146	P	Pg	14 33 39.5	-0.2
ZAK2				S	Sn	14 33 51.1	-1.4
KRI1	kERI	0.74	156	P	Pg	14 33 40.6	-0.6
KRI1				S	Sb	14 33 52.6	+0.8
	comp=E,21μm,0.3s						
RLS	Riolos of Patr	0.86	109	P	Pg	14 33 43.4	-0.1
RLS				S	Sn	14 33 57.0	-0.4
	comp=E,2μm,0.4s						
RLS	Riolos of Patr	0.86	109	P	Pg	14 33 43.4	-0.1
RLS				AML	AML	14 34 00.9	
	comp=N,3298μm,0.4s						
RLS				AML	AML	14 34 05.4	
	comp=E,2449μm,0.8s						
PVO	Paravola	0.90	72	P	Pb	14 33 44.4	-0.1
PVO				S	Sn	14 33 58.1	-0.4
	comp=E,4μm,0.3s						
PVO	Paravola	0.90	72	P	Pb	14 33 44.5	0.0
PVO				AML	AML	14 34 00.0	
	comp=E,9542μm,0.3s						
PVO				AML	AML	14 34 01.4	
	comp=N,5417μm,0.3s						
DRO	Drossia	1.08	111	P	Pb	14 33 47.3	-0.2
DRO				S	Sn	14 34 03.9	+1.1
	comp=N,3μm,0.3s						
DRO	Drossia	1.08	111	P	Pb	14 33 47.4	-0.2
DRO				AML	AML	14 34 10.1	
	comp=N,6737μm,0.4s						
DRO				AML	AML	14 34 12.2	
	comp=E,6891μm,0.5s						
EFP	Efpalio	1.16	85	P	Pb	14 33 48.1	-0.8
EFP				S	Sn	14 34 06.1	+1.3
	comp=E,2μm,0.5s						
EFP	Efpalio	1.16	85	P	Pb	14 33 48.1	-0.8
EFP				S	Sg	14 34 04.3	0.0
EFP				AML	AML	14 34 11.7	
	comp=E,4620μm,0.4s						
EFP				AML	AML	14 34 14.2	
	comp=N,2623μm,0.4s						
ANX	Ano Chora	1.20	77	P	Pn	14 33 49.2	-0.4
ANX				S	Sn	14 34 07.5	+1.6
	comp=N,2μm,0.7s						
ANX	Ano Chora	1.20	77	P	Pn	14 33 49.0	-0.6
ANX				AML	AML	14 34 13.6	
	comp=E,5571μm,0.8s						
ANX				AML	AML	14 34 17.6	
	comp=N,3196μm,0.5s						
IGT	Igoumenitsa	1.20	356	P	Pg	14 33 49.9	0.0
IGT	Igoumenitsa	1.20	356	ePg	Pg	14 33 50.5	+0.6
IGT				eSg	Sg	14 34 08.3	+2.9
IGT	Igoumenitsa	1.20	356	P	Pg	14 33 49.8	0.0
LAKA	Lakka	1.22	94	P	Pn	14 33 49.2	-0.6
LAKA				S	Sg	14 34 08.4	+2.2
	comp=N,755nm,0.5s						
LAKA	Lakka	1.22	94	P	Pn	14 33 49.2	-0.6
LAKA				AML	AML	14 34 09.2	
	comp=N,1692μm,0.3s						
LAKA				AML	AML	14 34 12.6	
	comp=E,1487μm,0.4s						
EVR	Evrytania	1.22	61	P	Pn	14 33 49.7	-0.3
EVR				AML	AML	14 34 15.4	
	comp=E,1638μm,0.6s						
EVR				AML	AML	14 34 22.4	
	comp=N,2391μm,0.7s						
SERG	Sergoula	1.28	86	P	Pn	14 33 50.1	-0.6
SERG				S	Sg	14 34 09.9	+1.8
	comp=N,2μm,0.3s						
SERG	Sergoula	1.28	86	P	Pn	14 33 50.0	-0.7
SERG				AML	AML	14 34 15.4	
	comp=E,2656μm,0.3s						
SERG				AML	AML	14 34 16.4	
	comp=N,3489μm,0.4s						
AMT	Artemida-Makis	1.29	128	P	Pg	14 33 51.6	-0.1
AMT				AML	AML	14 34 17.7	
	comp=E,3729μm,0.7s						
AMT				AML	AML	14 34 22.9	
	comp=N,4223μm,0.5s						
TRIZ	Trizonia	1.29	88	P	Pn	14 33 50.2	-0.6
TRIZ				S	Sg	14 34 10.3	+1.9
	comp=N,2μm,0.5s						
TRIZ	Trizonia	1.29	88	P	Pn	14 33 50.2	-0.6
KALE	Kalithea	1.34	87	P	Pn	14 33 51.0	-0.6
KALE	Kalithea	1.34	87	P	Pn	14 33 50.9	-0.6
KALE				AML	AML	14 34 17.0	
	comp=E,1515μm,0.6s						
KALE				AML	AML	14 34 21.5	
	comp=N,2370μm,0.7s						
JAN	Janina	1.36	14	P	Pg	14 33 53.5	+0.5
KLV	Kalavryta, Ach	1.39	102	P	Pn	14 33 52.0	-0.1
KLV				S	Sg	14 34 12.3	+0.8
	comp=N,648nm,0.5s						
KLV	Kalavryta, Ach	1.39	102	P	Pn	14 33 52.1	-0.1
KLV				AML	AML	14 34 16.0	
	comp=N,1476μm,0.3s						
KLV				AML	AML	14 34 18.5	
	comp=E,1166μm,0.8s						
MAKR	Makrakomi, Fth	1.49	63	P	Pb	14 33 54.5	-0.1
AGG	Agios Georgios	1.64	65	P	Pg	14 33 56.9	-0.2
ITM	Ithomi	1.66	134	P	Pg	14 33 58.2	-0.5
THL	Klokotos Trika	1.74	45	P	Pb	14 33 59.2	+0.4
THL				AML	AML	14 34 34.2	
	comp=E,2002μm,0.6s						
THL				AML	AML	14 34 34.6	
	comp=N,1163μm,0.6s						
KPRO	Kipourio	1.77	24	P	Pb	14 34 01.3	+0.4
LTK	Loutraki	2.02	98	P	Pb	14 34 02.8	-0.9
LKR	Lokris	2.04	80	P	Pb	14 34 03.2	-0.7
FNA	Florina	2.55	16	ePn	Pb	14 34 11.1	-1.5
FNA				eSn	Sb	14 34 42.0	-2.0
VLY	Voula,Athens	2.70	99	P	Pn	14 34 11.8	+1.7
OHR	Ohrid	2.79	6	ePn	Pb	14 34 14.9	-1.7
TIP	Timpagrande	2.99	287	⇑P	Pb	14 34 20.6	+0.4
TIP				⇑S	Sn	14 34 51.5	+1.3
TIR	Tirane	3.04	352	⇑P	Pb	14 34 17.7	+2.9
TIR				⇑S	Sb	14 35 00.4	+2.4
VAY	Valandovo	3.40	28	ePn	Pb	14 34 23.8	-3.4
VAY	Valandovo	3.40	28	ePn	Pb	14 34 23.7	-3.5
STIP	Stip	3.61	21	ePn	Pb	14 34 27.8	-2.9
MATE	Matera	3.69	310	⇓P	Pn	14 34 26.8	+3.0
MATE				⇓S	Sn	14 35 05.7	-1.6
PDG	Podgorica	4.19	348	⇑P	Pn	14 34 24.0	-6.6
PDG				⇑S	Sn	14 35 18.2	-1.2
BOSS	Bosilegrad	4.44	20	ePn	Pn	14 34 36.7	+2.6
BOSS				eSn	Sn	14 35 26.2	+0.5
BARS	Barje	4.60	13	ePn	Pn	14 34 37.0	+0.7
TREB	Trebinje	4.65	341	ePn	Pn	14 34 35.5	-1.5
TREB				eSn	Sn	14 35 27.6	-3.4
IDI	Anoyia	4.70	129	Pn	Pn	14 34 39.2	+1.5
	comp=N,0.3nm,0.3s,baz=281,slow=5.4,SNR=3.7						
IDI				Sn	Sn	14 35 32.6	+0.5
	comp=N,1.7nm,0.3s,baz=314,slow=23,SNR=7.0						
VTS	Vitosha	4.78	26	eSn	Sn	14 35 34.9	+0.6
VTS	Vitosha	4.78	26	⇑P	Pb	14 34 48.9	-1.8
VTS				⇑S	Sn	14 35 35.2	+0.9
SJES	Sjenica	4.93	356	ePn	Pn	14 34 42.2	+1.2
SJES				eSn	Sn	14 35 37.0	-1.0
ZAPS	Zavoj	5.21	18	ePn	Pn	14 34 47.4	+2.7
IVAS	Ivanjica	5.24	358	eSn	Sn	14 35 44.1	-1.4
GRUS	Gruza	5.55	2	ePn	Pn	14 34 49.5	+0.2
BBLS	Lazići	5.58	352	ePn	Pn	14 34 50.5	+0.7
BBLS				eSn	Sn	14 35 51.4	-2.5

ZAGS	**Zajecar**	**5.64**	**13**	eSn	**Sn**	**14 35 55.1**	**-0.1**
DIVS	**Divibare**	**5.76**	**357**	ePn	**Pn**	**14 34 52.0**	**-0.4**
DIVS				eSn	Sn	14 35 55.5	-3.0
BZS	**Buzias**	**7.33**	**7**	⇑P	**Pb**	**14 35 37.5**	**+3.5**
SOKA	**Soboth**	**9.24**	**336**	ePn	**Pn**	**14 35 39.3**	**-0.7**
	comp=N,0.9nm,0.2s						
OBKA	**Obir**	**9.25**	**334**	ePn	**Pn**	**14 35 41.2**	**+1.0**
	comp=N,1.7nm,0.4s						
GERES	**GERESS Array B**	**11.57**	**337**	Pn	**Pn**	**14 36 11.7**	**-0.4**
	comp=N,0.2nm,0.3s,baz=157,slow=13,SNR=2.7						
FINES	**FINESS Array B**	**23.40**	**7**	P	**P**	**14 38 34.9**	**-0.5**
	comp=N,0.9nm,0.5s,baz=177,slow=11,SNR=5.5						
TORD	**Torodi Ar. Bea**	**30.11**	**219**	P	**P**	**14 39 36.4**	**-0.2**
	comp=N,0.6nm,0.8s,baz=24,slow=11,SNR=3.2						
KURBB	**Kurchatov Arra**	**42.19**	**54**	P	**P**	**14 41 18.1**	**-1.3**
	comp=N,0.2nm,0.6s,baz=283,slow=9.1,SNR=3.1						
MKAR	**Makanchi Array**	**45.28**	**59**	P	**P**	**14 41 43.5**	**-0.9**
	comp=N,0.3nm,0.4s,baz=271,slow=7.7,SNR=19						
MKAR				PcP	**PcP**	**14 43 24.7**	**+0.7**
	comp=N,0.5nm,0.8s,baz=270,slow=2.9,SNR=3.2						
ZALV	**Zalesovo Beam**	**45.64**	**48**	P	**P**	**14 41 46.4**	**-0.7**
	comp=N,0.9nm,0.3s,baz=276,slow=7.8,SNR=6.6						
ASAR	**Alice Springs**	**122.26**	**96**	PKP	**PKPdf**	**14 52 21.5**	**-0.6**
	comp=N,0.2nm,0.4s,baz=302,slow=1.6,SNR=4.6						

ATH 03 15:13:37.7, 38.26N×20.38E, h14km±1km, ML3.0/8, Error ellipse: s-maj=2.0km s-min=1.0km az=266.0
THE 03 15:13:38.0, 38.24N×20.41E, h14km±1km, ML3.6/5, Error ellipse: s-maj=1.8km s-min=0.6km az=261.0
ISC 03 15:13:37.8±1.0, 38.25N±0.03×20.41E±0.05, h14km±5km, n36, σ0.34/52, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.02**	**59**	P	**Pg**	**15 13 40.2**	**-0.2**
KEF4				S	**Sg**	**15 13 41.6**	**-0.5**
LXR1	**Lixouri, Cepha**	**0.06**	**151**	P	**Pg**	**15 13 40.6**	**0.0**
LXR1				S	**Sg**	**15 13 42.6**	**+0.2**
	110μm,0.3s						
KEF1	**Kardakata, Kep**	**0.06**	**61**	P	**Pg**	**15 13 40.4**	**-0.2**
KEF1				S	**Sg**	**15 13 42.1**	**-0.3**
KEF3	**Kipouria, Keph**	**0.06**	**224**	P	**Pg**	**15 13 40.5**	**-0.1**
KEF3				S	**Sg**	**15 13 42.2**	**-0.3**
CHV1	**Chavriata, Kef**	**0.07**	**196**	P	**Pg**	**15 13 40.6**	**-0.1**
CHV1				S	**Sg**	**15 13 42.5**	**0.0**
	69μm,0.2s						
ARG2	**Argostoli**	**0.10**	**137**	P	**Pg**	**15 13 41.1**	**+0.1**
ARG2				S	**Sg**	**15 13 43.1**	**+0.1**
	64μm,0.1s						
KEF2	**Argostoli. Kep**	**0.10**	**142**	P	**Pg**	**15 13 41.2**	**+0.1**
KEF2				S	**Sg**	**15 13 43.5**	**+0.3**
VLS	**Valsamata**	**0.16**	**116**	P	**Pg**	**15 13 41.9**	**0.0**
VLS				S	**Sg**	**15 13 44.8**	**+0.2**
	16μm,0.2s						
VLS	**Valsamata**	**0.16**	**116**	P	**Pg**	**15 13 41.9**	**0.0**
VLS				S	**Sg**	**15 13 44.7**	**+0.1**
VLS				AML	AML	15 13 45.0	
	comp=E,32474μm,0.2s						
VLS				AML	AML	15 13 45.1	
	comp=N,29967μm,0.2s						
VSK1	**VASILIKIADES**	**0.20**	**38**	P	**Pg**	**15 13 42.4**	**-0.1**
FSK	**Fiskardo**	**0.24**	**30**	P	**Pg**	**15 13 43.3**	**+0.1**
FSK				S	**Sg**	**15 13 47.2**	**+0.4**
	comp=N,4μm,0.2s						
FSK	**Fiskardo**	**0.24**	**30**	P	**Pg**	**15 13 43.2**	**+0.1**
FSK				S	**Sg**	**15 13 47.3**	**+0.5**
FSK				AML	AML	15 13 47.7	
	comp=N,5026μm,0.3s						
FSK				AML	AML	15 13 47.8	
	comp=E,9128μm,0.1s						
EVGI	**Lefkada island**	**0.42**	**28**	P	**Pg**	**15 13 46.4**	**+0.1**
EVGI				S	**Sb**	**15 13 53.0**	**-0.3**
EVGI	**Lefkada island**	**0.42**	**28**	P	**Pg**	**15 13 46.4**	**+0.1**
EVGI				S	**Sg**	**15 13 51.3**	**-0.8**
VLMS	**Volimes, Zakyn**	**0.42**	**151**	P	**Pg**	**15 13 46.6**	**+0.2**
VLMS				S	**Sb**	**15 13 53.2**	**-0.1**
VLMS				AML	AML	15 13 55.4	
	comp=E,10754μm,0.2s						
VLMS				AML	AML	15 13 56.1	
	comp=N,16650μm,0.3s						
MGNA	**Meganis**	**0.51**	**37**	P	**Pg**	**15 13 47.7**	**-0.2**
MGNA				S	**Sg**	**15 13 55.3**	**+0.6**
LKD2	**Lefkada island**	**0.57**	**20**	P	**Pb**	**15 13 50.0**	**+0.3**
LKD2				S	**Sg**	**15 13 57.0**	**+0.2**
LKD2	**Lefkada island**	**0.57**	**20**	P	**Pg**	**15 13 49.0**	**-0.2**
TSLK	**Tsoukalades, L**	**0.61**	**19**	P	**Pg**	**15 13 49.8**	**0.0**
TSLK	**Tsoukalades, L**	**0.61**	**19**	P	**Pg**	**15 13 49.6**	**-0.2**
TSLK				AML	AML	15 14 07.7	
	comp=E,891μm,0.5s						
TSLK				AML	AML	15 14 10.3	
	comp=N,658μm,0.8s						
AST1	**Astakos**	**0.61**	**61**	P	**Pg**	**15 13 50.0**	**+0.1**
PDO	**Prodromos**	**0.70**	**60**	P	**Pg**	**15 13 51.6**	**0.0**
PDO	**Prodromos**	**0.70**	**60**	P	**Pg**	**15 13 51.6**	**0.0**
PDO				AML	AML	15 14 03.5	
	comp=E,1916μm,0.6s						
PDO				AML	AML	15 14 09.1	
	comp=N,1811μm,0.4s						
RLS	**Riolos of Patr**	**0.86**	**102**	P	**Pb**	**15 13 53.0**	**-1.5**
PVO	**Paravola**	**0.95**	**67**	P	**Pb**	**15 13 56.3**	**+0.2**
PVO	**Paravola**	**0.95**	**67**	P	**Pg**	**15 13 56.5**	**+0.2**
PVO				AML	AML	15 14 13.3	
	comp=E,1867μm,0.3s						
PVO				AML	AML	15 14 13.4	
	comp=N,1341μm,0.3s						
DRO	**Drossia**	**1.07**	**106**	P	**Pb**	**15 13 58.2**	**+0.1**
DRO				AML	AML	15 14 22.2	
	comp=E,1225μm,0.6s						
DRO				AML	AML	15 14 23.1	
	comp=N,1324μm,0.4s						
EFP	**Efpalio**	**1.19**	**81**	P	**Pn**	**15 13 59.9**	**-0.2**
LAKA	**Lakka**	**1.24**	**90**	P	**Pn**	**15 14 00.7**	**0.0**
ANX	**Ano Chora**	**1.24**	**73**	P	**Pn**	**15 14 00.9**	**+0.1**
ANX				AML	AML	15 14 26.5	
	comp=E,1117μm,0.5s						
ANX				AML	AML	15 14 28.4	
	comp=N,600μm,0.5s						
IGT	**Igoumenitsa**	**1.28**	**358**	P	**Pg**	**15 14 02.2**	**-0.4**
SERG	**Sergoula**	**1.31**	**82**	P	**Pb**	**15 14 02.1**	**-0.1**
TRIZ	**Trizonia**	**1.32**	**84**	P	**Pn**	**15 14 02.1**	**+0.4**
KLV	**Kalavryta, Ach**	**1.39**	**98**	P	**Pb**	**15 14 03.5**	**-0.1**
ITM	**Ithomi**	**1.61**	**131**	P	**Pb**	**15 14 07.9**	**+0.5**
AGG	**Agios Georgios**	**1.69**	**62**	P	**Pg**	**15 14 10.1**	**-0.3**

IDC 03 15:17:14.2±1.6, 4.69S×128.35E, h0km, mb3.5/1, mb1 3.9/4, mb1mx3.5/40, mbtmp3.7/4, ML3.7/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/23, Error ellipse: s-maj=49.5km s-min=27.1km az=78.0
NEIC 03 15:17:25.8±0.8, 4.62S±0.09×129.5E±0.1, h124km±12km, mb4.4/7, Error ellipse: s-maj=16.4km s-min=11.1km az=117.0
ISC 03 15:17:24.4±2.1, 4.73S±0.08×129.6E±0.3, h100km, n13, σ3.18/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**3.20**	**56**	Pn	**Pn**	**15 18 15.9**	**+3.0**
FAKI				Sn	Sn	15 18 47.8	-2.5
SIJI	**Sorong**	**4.19**	**24**	Pn	**Pn**	**15 18 27.0**	**+0.8**
	12nm,0.3s,baz=59,slow=4.2,SNR=262						
SIJI				Sn	**Sn**	**15 19 09.3**	**-4.7**
	7.9nm,0.3s,baz=75,slow=24,SNR=20						
WB0	**Warramunga Arr**	**15.66**	**163**	P	**P**	**15 21 01.6**	**+0.1**
WB0				IAmb	IAmb	15 21 56.3	
	comp=Z,101nm,2.0s						
WRA	**Warramunga Arr**	**15.81**	**163**	Pn	**P**	**15 21 02.8**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=336,slow=13,SNR=5.7						
WRA				Sn	**Sn**	**15 23 50.0**	**-6.4**
	comp=Z,0.1nm,0.3s,baz=331,slow=29,SNR=2.8						
WB2	**Warramunga Arr**	**15.81**	**163**	P	**P**	**15 21 04.6**	**+1.3**
WB2				IAmb	IAmb	15 21 34.8	
	comp=Z,54nm,1.9s						
WR0	**Warramunga Arr**	**15.88**	**163**	P	**P**	**15 21 06.8**	**+2.8**
WR0				IAmb	IAmb	15 21 50.1	
	comp=Z,16nm,1.4s						
AS31	**Alice Springs**	**19.27**	**168**	Pn	**Pn**	**15 21 45.1**	**+1.7**
ASAR	**Alice Springs**	**19.28**	**168**	P	**Pn**	**15 21 44.9**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=347,slow=10,SNR=36						
ASAR				S	**S**	**15 25 12.7**	**-1.8**
	comp=Z,0.0nm,0.3s,baz=352,slow=19,SNR=3.5						
GUMO	**Guam**	**23.69**	**40**	LR	LR	15 30 48.4	
	comp=Z,54nm,19.4s,baz=221,slow=33						

EIDS	**Eidsvold**	**29.09**	**137**	P	**P**	**15 23 16.3**	**+0.7**
MK31	**Makanchi Array**	**66.12**	**326**	P	P	15 27 59.0	-2.1
MK31				IAmb	IAmb	15 28 19.6	
	comp=Z,7.5nm,1.8s						
MKAR	**Makanchi Array**	**66.12**	**326**	P	P	15 27 59.0	-2.1
	comp=Z,0.2nm,0.4s,baz=123,slow=8.2,SNR=8.2						
MKAR	**Makanchi Array**	**66.12**	**326**	P	P	15 27 58.8	-2.3

IDC 03 15:22:57.1±0.7, 63.15S×159.68W, h0km, mb4.0/6, mb1 4.2/6, mb1mx4.0/31, mbtmp4.0/6, MS4.4/18, Ms1 4.4/18, ms1mx4.2/32, Error ellipse: s-maj=31.6km s-min=23.1km az=31.0
NEIC 03 15:22:59.9±2.0, 63.2S±0.2×159.6W±0.2, h10km±1km, mb4.8/7, Error ellipse: s-maj=30.7km s-min=16.3km az=197.0
GCMT 03 15:23:05.9±0.2, 62.65S±0.01×158.98W±0.02, h12km, MW5.1/112, Moment Tensor Solution. s59,c65; s112,c162; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.76±.13; $M_{\theta\theta}$4.86±.12; $M_{\phi\phi}$-4.09±.11; $M_{r\theta}$1.68±.34; $M_{\theta\phi}$2.49±.11; $M_{\phi r}$2.18±.34; Best double couple: $M_0$5.81100×10^{16} NP1:ϕ_s121.00000°,δ61.00000°, λ-3.00000°. NP2:ϕ_s212.00000°,δ87.00000°, λ-151.00000°. Principal axes: T 6.2100, Plg18.0000°, Azm343.0000°; N -0.7920, Plg61.0000°, Azm217.0000°; P -5.4120, Plg22.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 03 15:22:59.1±0.6, 62.94S±0.10×159.3W±0.1, h10km, n54, σ1.36/27, mb4.3/6, MS4.5/20, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**19.01**	**205**	P	**Pn**	**15 27 23.8**	**+2.5**
	0.2nm,0.3s,baz=64,slow=13,SNR=4.2						
VNDA				LR	LR	15 32 59.2	
	comp=Z,1μm,21.0s,baz=64,slow=32						
QSPA	**South Pole Qui**	**27.18**	**180**	P	**P**	**15 28 41.6**	**-0.8**
	1.5nm,1.1s,baz=86,slow=2.2,SNR=1.7						
QSPA				LR	LR	15 38 14.4	
	comp=Z,821nm,18.2s,baz=65,slow=34						
QSPA	**South Pole Qui**	**27.18**	**180**	IAmb	IAmb	15 28 56.8	
	comp=Z,26nm,1.3s						
URZ	**Urewera**	**28.57**	**319**	LR	LR	15 37 40.8	
	comp=Z,837nm,21.6s,baz=168,slow=31						
TBI	**Tubuai**	**40.12**	**14**	eLQ	LQ	15 39 49.9	
	comp=Z,403nm,29.5s						
TBI				eLR	LR	15 41 14.9	
	comp=Z,1μm,27.5s,baz=186						
TBI	**Tubuai**	**40.12**	**14**	eT	T	16 12 38.0	
	comp=Z,80nm,0.2s						
RAR	**Rarotonga**	**41.70**	**359**	LR	LR	15 42 52.2	
	comp=Z,588nm,20.1s,baz=218,slow=28						
SNAA	**Sanae**	**44.69**	**170**	P	**P**	**15 31 09.0**	**-2.5**
	comp=Z,1.4nm,1.0s,baz=54,slow=5.4,SNR=2.1						
SNAA	**Sanae**	**44.69**	**170**	P	**P**	**15 31 10.6**	**-0.9**
SNAA				IAmb	IAmb	15 31 24.0	
	comp=Z,19nm,1.4s						
TVO	**Taravao**	**45.65**	**13**	eT	T	16 19 33.7	
	comp=Z,5.7nm,0.3s						
MEH	**Mehetia**	**45.69**	**15**	eT	T	16 19 37.4	
	comp=Z,93nm,0.2s						
PAE	**Paea**	**45.73**	**13**	eT	T	16 19 40.0	
	comp=Z,5.1nm,0.3s						
PPT2	**Papeete2**	**45.80**	**13**	eS	**S**	**15 38 04.4**	**-0.1**
	comp=Z,196nm,25.5s						
PPT2				eLQ	LQ	15 41 34.4	
	comp=Z,1μm,30.5s						
PPT2				eLR	LR	15 43 48.0	
	comp=Z,2μm,27.2s,baz=187						
PPT2	**Papeete2**	**45.80**	**13**	eT	T	16 19 45.2	
	comp=Z,7.7nm,0.3s						
PPT	**Papeete**	**45.83**	**13**	LR	LR	15 44 54.7	
	comp=Z,445nm,21.1s,baz=185,slow=29						
TIAR	**Tiarei**	**45.86**	**13**	eT	T	16 19 49.3	
	comp=Z,7.4nm,0.3s						
MAW	**Mawson**	**46.26**	**201**	LR	LR	15 49 11.8	
	comp=Z,334nm,19.1s,baz=160,slow=34						
DZM	**Mont Dzumac**	**46.94**	**314**	eS	**S**	**15 38 19.8**	**-1.1**
	comp=Z,93nm,23.5s						
DZM				eLR	LR	15 44 28.3	
	comp=Z,1μm,23.0s						
DZM	**Mont Dzumac**	**46.94**	**314**	LR	LR	15 47 32.3	
	comp=Z,624nm,21.4s,baz=173,slow=31						
DZM	**Mont Dzumac**	**46.94**	**314**	P	**P**	**15 31 31.9**	**+2.1**
STKA	**Stephens Creek**	**48.17**	**281**	LR	LR	15 49 19.8	
	comp=Z,308nm,18.1s,baz=154,slow=33						
VAH	**Vaihoa**	**48.34**	**15**	eT	T	16 22 53.9	
	comp=Z,319nm,0.3s						
PMOR	**Pomariorio Ree**	**48.54**	**15**	eT	T	16 23 10.8	
	comp=Z,15nm,0.3s						
AFI	**Afiamalu**	**49.76**	**344**	LR	LR	15 47 26.5	
	comp=Z,362nm,21.4s,baz=222,slow=29						
EFI	**East Falkland**	**50.17**	**127**	P	**P**	**15 31 55.1**	**+0.9**
PLCA	**Paso Flores**	**54.14**	**110**	LR	LR	15 49 46.0	
	comp=Z,312nm,22.0s,baz=235,slow=30						
TAOE	**Nuku Hiva Isla**	**55.73**	**23**	eS	**S**	**15 40 21.4**	**-0.9**
	comp=Z,112nm,26.3s						
TAOE				eLR	LR	15 48 46.5	
	comp=Z,655nm,24.4s						
H01W1	**Cape Leeuwin H**	**58.07**	**255**	T	T	16 36 43.0	
	baz=146,slow=76,SNR=9.2						
H01W2	**Cape Leeuwin H**	**58.08**	**255**	T	T	16 36 43.3	
	baz=146,slow=76,SNR=8.3						
H01W3	**Cape Leeuwin H**	**58.09**	**255**	T	T	16 36 44.2	
	baz=146,slow=76,SNR=7.9						
NWAO	**Narrogin (SRO)**	**58.35**	**259**	LR	LR	15 52 30.2	
	comp=Z,394nm,18.4s,baz=164,slow=30						
AS31	**Alice Springs**	**58.67**	**279**	P	**P**	**15 32 57.0**	**+0.5**
ASAR	**Alice Springs**	**58.67**	**279**	P	**P**	**15 32 54.6**	**-1.9**
	comp=Z,2.4nm,1.0s,baz=146,slow=6.5,SNR=14						
ASAR				LR	LR	15 54 06.9	
	comp=Z,577nm,21.8s,baz=152,slow=32						
ASAR	**Alice Springs**	**58.67**	**279**	P	**P**	**15 32 58.0**	**+1.5**
WRA	**Warramunga Arr**	**61.72**	**282**	P	**P**	**15 33 17.0**	**-0.3**
	comp=Z,6.2nm,1.2s,baz=153,slow=5.7,SNR=4.3						
WRA				LR	LR	15 57 50.8	
	comp=Z,275nm,18.1s,baz=165,slow=34						
WRA	**Warramunga Arr**	**61.72**	**282**	P	**P**	**15 33 16.6**	**-0.8**
CPUP	**Villa Florida**	**72.10**	**113**	P	**P**	**15 34 22.1**	**-1.3**
	comp=Z,6.7nm,0.9s,baz=206,slow=10,SNR=2.9						
CPUP				LR	LR	16 01 55.0	
	comp=Z,196nm,19.4s,baz=211,slow=32						
CPUP	**Villa Florida**	**72.10**	**113**	P	**P**	**15 34 25.1**	**+1.7**
CPUP				IAmb	IAmb	15 34 32.4	
	comp=Z,14nm,1.1s						
LPAZ	**La Paz**	**76.16**	**99**	LR	LR	16 00 34.4	
	comp=Z,92nm,20.0s,baz=176,slow=30						
ATAH	**Atahualpa**	**79.53**	**85**	P	**P**	**15 35 08.2**	**+1.7**
	comp=Z,1.5nm,0.5s,baz=75,slow=8.0,SNR=3.2						
BDFB	**Brasilia**	**85.50**	**116**	LR	LR	16 10 35.4	
	comp=Z,392nm,20.3s,baz=167,slow=33						
BOSA	**Boshof**	**88.69**	**184**	LR	LR	16 14 02.4	
	comp=Z,384nm,18.1s,baz=176,slow=35						
ROSC	**El Rosal**	**91.97**	**83**	LR	LR	16 09 55.3	
	comp=Z,175nm,18.7s,baz=234,slow=31						
NEA	**Nenana**	**127.44**	**6**		**PKiKP**	**15 42 03.5**	**+0.6**
ILAR	**Eielson Array**	**127.74**	**7**	PKP	**PKiKP**	**15 42 03.6**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=217,slow=4.4,SNR=5.3						
ILAR	**Eielson Array**	**127.74**	**7**		**PKiKP**	**15 42 03.8**	**+0.3**
TORD	**Torodi Ar. Bea**	**128.47**	**156**	PKP	**PKPdf**	**15 42 05.4**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=212,slow=4.7,SNR=2.0						
YKA	**Yellowknife Ar**	**129.54**	**25**	PKP	**PKPdf**	**15 42 06.8**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=184,slow=2.3,SNR=2.9						
MKAR	**Makanchi Array**	**142.73**	**274**	PKP	**PKPdf**	**15 42 30.3**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=138,slow=4.0,SNR=2.8						
RES	**Resolute Bay**	**143.58**	**24**	PKP	PKPbc	15 42 29.5	0.0
	comp=Z,1.0nm,0.6s,baz=213,slow=0.5,SNR=4.1						
GEYT	**Alibeck**	**146.28**	**240**	PKPbc	**PKPdf**	**15 42 35.8**	**-2.1**
	comp=Z,0.2nm,0.4s,baz=110,slow=1.7,SNR=2.3						
ZALV	**Zalesovo Beam**	**146.66**	**285**	PKPbc	**PKPdf**	**15 42 37.2**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=134,slow=4.2,SNR=2.8						
ZALV	**Zalesovo Beam**	**146.66**	**285**	PKPdf	**PKPdf**	**15 42 37.6**	**-0.3**
ESDC	**Sonseca Array**	**152.40**	**136**	PKPbc	**PKPbc**	**15 42 53.2**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=207,slow=3.2,SNR=3.1						

IDC 03 15:27:26.0±1.9, 24.48S×179.88E, h489km±21km, mb3.1/8, mb1 3.4/10, mb1mx3.2/30, mbtmp4.1/10, Error ellipse: s-maj=23.6km s-min=16.6km az=160.0
NEIC 03 15:27:27.7±1.8, 24.6S±0.1×179.9E±0.1, h519km±12km, mb4.8/19, Error ellipse: s-maj=20.4km s-min=16.7km az=143.0
ISC 03 15:27:28.0±0.6, 24.52S±0.08×179.89E±0.09, h517km, n45, σ1.20/48, mb3.8/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.97**	**345**	P	**P**	**15 29 13.6**	**-1.1**
NIUE	**Niue**	**10.90**	**62**	P	**P**	**15 29 56.3**	**+1.3**
OUZ	**Omahuta**	**11.97**	**206**	P	**P**	**15 30 08.1**	**+2.0**
DZM	**Mont Dzumac**	**12.60**	**278**	P	**P**	**15 30 13.9**	**+1.0**
	0.3nm,0.3s,baz=143,slow=15,SNR=3.0						
DZM	**Mont Dzumac**	**12.60**	**278**	P	**P**	**15 30 14.1**	**+1.1**
NOUC	**Port Laguerre**	**12.72**	**278**	P	**P**	**15 30 14.1**	**0.0**
MXZ	**Matakaoa Point**	**13.07**	**186**	P	**P**	**15 30 18.1**	**+0.6**
AFI	**Afiamalu**	**13.16**	**38**	P	**P**	**15 30 17.2**	**-1.7**
	1.3nm,0.3s,baz=217,slow=20,SNR=3.0						
AFI				S	S	15 32 28.3	-11
	0.7nm,0.3s,baz=102,slow=21,SNR=2.4						
AFI	**Afiamalu**	**13.16**	**38**	P	**P**	**15 30 17.5**	**-1.5**
URZ	**Urewera**	**13.90**	**189**	P	**P**	**15 30 24.8**	**-1.4**
	1.6nm,0.3s,baz=352,slow=3.0,SNR=14						
URZ				S	**S**	**15 32 51.4**	**-1.8**
	0.3nm,0.3s,baz=223,slow=22,SNR=6.1						
URZ	**Urewera**	**13.90**	**189**	P	**P**	**15 30 24.9**	**-1.3**
HIZ	**Hauiti**	**14.59**	**196**	P	**P**	**15 30 32.9**	**-0.6**
BKZ	**Black Stump Fm**	**14.88**	**190**	P	**P**	**15 30 35.6**	**-0.9**
MSWZ	**Moikau Station**	**17.29**	**192**	P	**P**	**15 30 59.1**	**-1.7**
QRZ	**Quartz Range**	**17.39**	**199**	P	**P**	**15 31 00.8**	**-1.0**
QRZ				IAmb	IAmb	15 31 26.6	
	comp=Z,30nm,1.3s						
PLWZ	**Palliser**	**17.43**	**192**	P	**P**	**15 31 00.7**	**-1.5**
NNZ	**Nelson**	**17.51**	**197**	P	**P**	**15 31 01.8**	**-1.1**
NNZ				IAmb	IAmb	15 31 22.2	
	comp=Z,38nm,1.6s						
THZ	**Tophouse**	**18.15**	**197**	P	**P**	**15 31 07.9**	**-0.8**
THZ				IAmb	IAmb	15 31 14.0	
	comp=Z,21nm,1.5s						
KHZ	**Kahutara**	**18.61**	**195**	P	**P**	**15 31 11.3**	**-1.4**
LTZ	**Lake Taylor**	**19.27**	**197**	P	**P**	**15 31 16.8**	**-2.2**
LTZ				IAmb	IAmb	15 31 56.7	
	comp=Z,47nm,1.9s						
OXZ	**Oxford**	**19.84**	**197**	P	**P**	**15 31 23.3**	**-0.8**
OXZ				IAmb	IAmb	15 31 49.9	
	comp=Z,63nm,1.7s						
MQZ	**McQueen's Vall**	**20.04**	**195**	P	**P**	**15 31 25.1**	**-0.7**
RPZ	**Rata Peaks**	**20.47**	**199**	P	**P**	**15 31 29.8**	**-0.1**
RPZ				IAmb	IAmb	15 31 33.6	
	comp=Z,55nm,1.9s						
FOZ	**Fox Glacier**	**20.69**	**201**	P	**P**	**15 31 32.0**	**+0.3**
FOZ				IAmb	IAmb	15 31 59.5	
	comp=Z,23nm,1.3s						
CTA	**Charters Tower**	**31.39**	**271**	P	**P**	**15 33 06.9**	**+0.4**
	comp=Z,3.3nm,0.7s,baz=88,slow=9.4,SNR=8.6						
STKA	**Stephens Creek**	**34.40**	**249**	P	**P**	**15 33 32.0**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=96,slow=9.2,SNR=3.5						
STKA	**Stephens Creek**	**34.40**	**249**	P	**P**	**15 33 31.1**	**-0.8**
PMG	**Port Moresby**	**34.61**	**290**	P	**P**	**15 33 33.6**	**-0.1**
BBOO	**Buckleboo**	**39.11**	**248**	P	**P**	**15 34 09.9**	**-0.7**
AS31	**Alice Springs**	**41.84**	**261**	P	**P**	**15 34 31.8**	**-0.8**
ASAR	**Alice Springs**	**41.84**	**261**	P	**P**	**15 34 32.2**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=93,slow=7.4,SNR=12						
ASAR				ScP	**ScP**	**15 39 20.6**	**+2.9**
	comp=Z,0.3nm,0.9s,baz=101,slow=4.8,SNR=3.6						
ASAR	**Alice Springs**	**41.84**	**261**	P	**P**	**15 34 32.1**	**-0.6**
WR0	**Warramunga Arr**	**42.08**	**267**	P	**P**	**15 34 33.7**	**-0.8**
WR0				IAmb	IAmb	15 35 59.6	
	comp=Z,25nm,0.5s						
WRAB	**Tennant Creek**	**42.26**	**267**	P	**P**	**15 34 35.0**	**-1.0**
WRAB				IAmb	IAmb	15 34 40.4	
	comp=Z,28nm,1.5s						
WB0	**Warramunga Arr**	**42.27**	**267**	P	**P**	**15 34 35.1**	**-0.9**
WB0				IAmb	IAmb	15 34 43.7	
	comp=Z,46nm,1.7s						
WRA	**Warramunga Arr**	**42.27**	**267**	P	**P**	**15 34 35.3**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=103,slow=8.0,SNR=8.4						
WRA				ScP	**ScP**	**15 39 22.5**	**+3.1**
	comp=Z,0.9nm,0.8s,baz=96,slow=3.9,SNR=4.7						
WRA	**Warramunga Arr**	**42.27**	**267**	P	**P**	**15 34 35.2**	**-0.9**
KNRA	**Kununurra**	**48.59**	**270**	P	**P**	**15 35 24.4**	**0.0**
QSPA	**South Pole Qui**	**65.56**	**180**	P	**P**	**15 37 21.0**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=48,slow=15,SNR=7.4						
NVAR	**Mina Array Bea**	**85.27**	**44**	P	**P**	**15 39 10.6**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=239,slow=8.0,SNR=2.9						
TXAR	**Lajitas Array**	**90.84**	**58**	P	**P**	**15 39 37.5**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=213,slow=5.8,SNR=11						
TXAR	**Lajitas Array**	**90.84**	**58**	P	**P**	**15 39 36.9**	**+0.5**
PDAR	**Pinedale Array**	**93.20**	**44**	P	**P**	**15 39 47.0**	**-0.2**
	comp=Z,0.2nm,0.7s,baz=214,slow=6.0,SNR=2.2						
AKASG	**Malin Array Be**	**145.44**	**327**	PKPbc	**PKPdf**	**15 46 06.7**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=45,slow=3.5,SNR=3.2						
CLL	**Collm**	**151.42**	**343**	ePKPbc	**PKPbc**	**15 46 23.0**	**+0.1**

ATH 03 15:28:58.7, 38.13N×20.36E, h11km±2km, ML2.7/3, Error ellipse: s-maj=2.6km s-min=1.4km az=256.0
THE 03 15:28:58.9, 38.12N×20.38E, h8km, ML2.8/2, Error ellipse: s-maj=1.0km s-min=0.6km az=26.0
ISC 03 15:28:58.9±1.3, 38.14N±0.04×20.39E±0.05, h10km±5km, n27, σ0.37/41, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.04**	**354**	P	**Pg**	**15 29 00.8**	**0.0**
CHV1				S	**Sg**	**15 29 02.0**	**-0.2**
KEF3	**Kipouria, Keph**	**0.07**	**334**	P	**Pg**	**15 29 01.3**	**+0.1**
KEF3				S	**Sg**	**15 29 03.1**	**+0.3**
LXR1	**Lixouri, Cepha**	**0.07**	**33**	P	**Pg**	**15 29 01.3**	**+0.2**
LXR1				S	**Sg**	**15 29 03.0**	**+0.3**
KEF2	**Argostoli. Kep**	**0.08**	**72**	P	**Pg**	**15 29 01.3**	**+0.1**
KEF2				S	**Sg**	**15 29 02.9**	**-0.1**
ARG2	**Argostoli**	**0.09**	**64**	P	**Pg**	**15 29 01.4**	**+0.1**
ARG2				S	**Sg**	**15 29 02.9**	**-0.1**
KEF1	**Kardakata, Kep**	**0.15**	**26**	P	**Pg**	**15 29 02.5**	**+0.2**
KEF1				S	**Sg**	**15 29 05.0**	**+0.3**
VLS	**Valsamata**	**0.16**	**77**	P	**Pg**	**15 29 02.5**	**0.0**
VLS				S	**Sg**	**15 29 05.1**	**+0.1**
	11μm,0.1s						
VLS	**Valsamata**	**0.16**	**77**	P	**Pg**	**15 29 02.6**	**0.0**
VLS				S	**Sg**	**15 29 05.1**	**+0.1**
VLS				AML	AML	15 29 05.3	
	comp=N,13536μm,0.2s						
VLS				AML	AML	15 29 05.3	
	comp=E,28845μm,0.1s						
VSK1	**VASILIKIADES**	**0.30**	**27**	P	**Pg**	**15 29 05.1**	**+0.1**
VLMS	**Volimes, Zakyn**	**0.34**	**140**	P	**Pg**	**15 29 06.0**	**+0.3**
VLMS				S	**Sb**	**15 29 12.2**	**-0.5**
VLMS				AML	AML	15 29 14.9	
	comp=E,2745μm,0.2s						
VLMS				AML	AML	15 29 17.1	
	comp=N,4104μm,0.3s						
FSK	**Fiskardo**	**0.35**	**23**	P	**Pg**	**15 29 05.9**	**+0.1**
FSK				S	**Sg**	**15 29 11.5**	**+1.1**
	comp=N,1μm,0.3s						
FSK	**Fiskardo**	**0.35**	**23**	P	**Pg**	**15 29 06.0**	**+0.2**
FSK				S	**Sg**	**15 29 11.6**	**+1.1**
FSK				AML	AML	15 29 12.5	
	comp=E,2472μm,0.2s						
FSK				AML	AML	15 29 14.8	
	comp=N,1240μm,0.3s						
EVGI	**Lefkada island**	**0.52**	**24**	P	**Pg**	**15 29 09.1**	**-0.1**
EVGI				S	**Sb**	**15 29 17.6**	**-0.4**
MGNA	**Meganis**	**0.60**	**31**	P	**Pg**	**15 29 10.3**	**-0.4**
MGNA				S	**Sb**	**15 29 19.8**	**-0.4**
LKD2	**Lefkada island**	**0.68**	**18**	P	**Pg**	**15 29 11.9**	**-0.2**
LKD2	**Lefkada island**	**0.68**	**18**	P	**Pg**	**15 29 11.7**	**-0.4**
TSLK	**Tsoukalades, L**	**0.71**	**17**	P	**Pg**	**15 29 12.5**	**-0.3**
TSLK	**Tsoukalades, L**	**0.71**	**17**	P	**Pg**	**15 29 12.4**	**-0.3**
TSLK				S	**Sg**	**15 29 22.9**	**+0.8**
PDO	**Prodromos**	**0.78**	**54**	P	**Pg**	**15 29 13.7**	**-0.2**
PDO	**Prodromos**	**0.78**	**54**	P	**Pg**	**15 29 13.7**	**-0.2**
PVO	**Paravola**	**1.01**	**62**	P	**Pg**	**15 29 18.4**	**0.0**
PVO	**Paravola**	**1.01**	**62**	P	**Pg**	**15 29 18.4**	**0.0**
SERG	**Sergoula**	**1.34**	**78**	P	**Pn**	**15 29 23.7**	**-0.1**
SERG	**Sergoula**	**1.34**	**78**	P	**Pn**	**15 29 23.7**	**-0.1**
TRIZ	**Trizonia**	**1.35**	**80**	P	**Pn**	**15 29 23.4**	**-0.4**
KLV	**Kalavryta, Ach**	**1.39**	**93**	P	**Pn**	**15 29 24.8**	**+0.3**
KALE	**Kalithea**	**1.40**	**79**	P	**Pg**	**15 29 26.2**	**+0.3**

GUC 03 15:32:11.3±0.6, 19.43S×71.02W, h30km±15km, ML3.6
IDC 03 15:32:14.1±6.2, 19.36S×70.90W, h35km±47km, mb3.5/3, mb1 3.7/6, mb1mx3.4/29, mbtmp3.6/6, ML2.9/3, MS3.3/3, Ms1 3.3/3, ms1mx2.9/24, Error ellipse: s-maj=54.6km s-min=18.9km az=100.0

ISC 03 15:32:12.0±2.2, 19.°40S±0.°04×70.°92W±0.°08, h19km±7km, n24, σ0.°81/27, mb3.8/3, 6C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.77	105⇑	iP	Pb	15 32 26.8	-0.1
PSGC				iS	Sg	15 32 38.4	+0.8
AP01	Chacalluta	1.16	28	eP	Pb	15 32 32.9	-0.4
AP01				eS	Sg	15 32 48.9	-0.7
AP01					IAML	15 33 01.3	
	comp=E,3μm,0.4s						
PB11	IPOC Station P	1.24	107⇑	iP	Pb	15 32 34.5	-0.4
PB11				eS	Sg	15 32 51.9	-0.5
PB11					IAML	15 32 58.0	
	comp=E,2μm,0.5s						
MNMC	Minye Minye	1.28	78⇑	iP	Pb	15 32 35.5	0.0
MNMC				eS	Sg	15 32 53.9	+0.4
TA01	Diego Aracena	1.35	149	eP	Pn	15 32 35.3	-0.5
TA01				iS	Sn	15 32 52.9	-0.3
TA01					IAML	15 33 00.6	
	comp=E,2μm,0.7s						
PATCX	Punta Patache	1.59	153	iP	Pn	15 32 38.6	-0.5
PATCX				iS	Sn	15 32 58.4	-0.8
PATCX					IAML	15 33 11.3	
	comp=E,1μm,0.5s						
GO01	Chusmiza	1.65	100⇑	iP	Pb	15 32 41.9	0.0
GO01				iS	Sg	15 33 05.6	+0.2
GO01					IAML	15 33 08.6	
	comp=N,2μm,0.3s						
PB16	IPOC Station P	1.70	52⇑	iP	Pb	15 32 42.5	-0.4
PB16				eS	Sg	15 33 06.7	-0.4
PB16					IAML	15 33 11.2	
	comp=N,826nm,0.6s						
PB08	IPOC Station P	1.82	114⇑	iP	Pb	15 32 43.9	-0.9
PB08				iS	Sg	15 33 09.3	-1.4
PB08					IAML	15 33 12.1	
	comp=N,589nm,0.3s						
PB01	IPOC Station P	2.12	141	IAML		15 33 24.6	
	comp=E,542nm,0.6s						
PB07	IPOC Station P	2.51	158	IAML		15 33 39.7	
	comp=E,448nm,0.7s						
LVC	Limon Verde	3.71	150	Pn	Pn	15 33 09.2	+0.7
	comp=E,2.4nm,0.3s,baz=330,slow=10,SNR=7.5						
LVC				Pg	Pb	15 33 17.7	+0.7
	comp=E,8.2nm,0.3s,baz=300,slow=11,SNR=15						
LVC				Sn	Sn	15 33 52.6	+0.8
	comp=E,13nm,0.3s,baz=106,slow=18,SNR=7.9						
LVC				Lg	Lg	15 34 08.2	
	comp=E,8.7nm,0.3s,baz=100,slow=18,SNR=6.1						
LPAZ	La Paz	4.08	41	Pn	Pn	15 33 15.4	+1.6
	comp=E,0.1nm,0.3s,baz=194,slow=4.2,SNR=4.0						
LPAZ				Lg	Lg	15 34 22.8	
	comp=E,0.9nm,0.3s,baz=27,slow=16,SNR=1.5						
SIV	San Ignacio	9.97	72	Pn	Pn	15 34 35.8	+1.5
	comp=E,0.4nm,0.3s,baz=250,slow=12,SNR=9.1						
CPUP	Villa Florida	14.29	121	LR	LR	15 41 46.0	
	comp=E,47nm,21.5s,baz=200,slow=40						
PLCA	Paso Flores	21.27	179	P	P	15 36 57.8	+0.6
	comp=E,2.6nm,0.9s,baz=27,slow=11,SNR=4.6						
SDV	Santo Domingo	28.11	1	LR	LR	15 50 28.5	
	comp=E,40nm,20.8s,baz=312,slow=39						
QSPA	South Pole Qui	70.78	180	P	P	15 43 27.7	+0.7
	baz=252,slow=6.4						
NVAR	Mina Array Bea	72.69	323	LR	LR	16 16 20.7	
	comp=E,105nm,18.3s,baz=213,slow=36						
TORD	Torodi Ar. Bea	78.45	72	P	P	15 44 10.9	-1.3
	comp=E,1.1nm,0.8s,baz=258,slow=5.5,SNR=3.7						
YKA	Yellowknife Ar	88.60	341	P	P	15 45 02.8	-0.3
	comp=E,0.4nm,0.8s,baz=134,slow=4.7,SNR=5.9						
H11S2	WAKE ISLAND Hy	125.72	279	T	T	18 10 30.5	
	baz=101,slow=74,SNR=4.8						
H11S1	WAKE ISLAND Hy	125.72	279	T	T	18 10 30.8	
	baz=101,slow=74,SNR=2.6						
H11S3	WAKE ISLAND Hy	125.73	279	T	T	18 10 30.6	
	baz=101,slow=74,SNR=3.2						

ATH 03 15:35:31.5, 38.°18N×20.°29E, h5km±3km, ML2.8/3, Error ellipse: s-maj=3.4km s-min=1.3km az=74.0
THE 03 15:35:31.7, 38.°16N×20.°33E, h0km, ML2.6/8, Error ellipse: s-maj=0.8km s-min=0.5km az=229.0
ISC 03 15:35:32.0±1.3, 38.°18N±0.°03×20.°34E±0.°06, h5km±5km, n25, σ0.°63/43, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.03	16	P	Pg	15 35 33.1	+0.1
KEF3				S	Sg	15 35 33.9	+0.1
CHV1	Chavriata, Kef	0.04	77	P	Pg	15 35 32.9	-0.2
CHV1				S	Sg	15 35 33.7	-0.2
LXR1	Lixouri, Cepha	0.08	72	P	Pg	15 35 33.9	+0.1
LXR1				S	Sg	15 35 35.5	+0.4
VLS	Valsamata	0.20	89	P	Pg	15 35 35.9	-0.1
VLS				S	Sg	15 35 38.7	+0.1
	5μm,0.2s						
VLS	Valsamata	0.20	89	P	Pg	15 35 35.9	-0.1
VLS				S	Sg	15 35 38.9	+0.4
VLS				AML	AML	15 35 39.3	
	comp=N,12653μm,0.3s						
VLS				AML	AML	15 35 39.4	
	comp=E,7455μm,0.1s						
FSK	Fiskardo	0.33	32	P	Pg	15 35 38.6	0.0
FSK				S	Sg	15 35 43.6	+0.7
	comp=E,1μm,0.4s						
FSK	Fiskardo	0.33	32	P	Pg	15 35 38.5	0.0
FSK				S	Sg	15 35 43.9	+1.0
FSK				AML	AML	15 35 44.6	
	comp=E,3274μm,0.2s						
FSK				AML	AML	15 35 47.0	
	comp=N,1672μm,0.6s						
VLMS	Volimes, Zakyn	0.39	139	P	Pg	15 35 39.5	-0.1
VLMS				S	Sg	15 35 46.2	+1.4
VLMS				AML	AML	15 35 52.2	
	comp=N,4546μm,0.3s						
VLMS				AML	AML	15 35 52.6	
	comp=E,2725μm,0.4s						
EVGI	Lefkada island	0.51	29	P	Pg	15 35 41.8	-0.1
EVGI				S	Sg	15 35 49.0	+0.5
EVGI	Lefkada island	0.51	29	P	Pg	15 35 41.7	-0.1
EVGI				S	Sg	15 35 49.0	+0.5
KRI1	kERI	0.64	143	P	Pg	15 35 43.9	-0.4
KRI1				S	Sg	15 35 53.1	+0.6
LKD2	Lefkada island	0.66	22	P	Pg	15 35 44.2	-0.6
LKD2				S	Sb	15 35 55.5	-0.2
	comp=E,262nm,0.5s						
LKD2	Lefkada island	0.66	22	P	Pg	15 35 44.0	-0.8
AST1	Astakos	0.69	58	P	Pg	15 35 45.4	0.0
TSLK	Tsoukalades, L	0.69	21	P	Pg	15 35 45.0	-0.4
TSLK				S	Sb	15 35 56.4	-0.2
	comp=E,352nm,0.5s						
TSLK	Tsoukalades, L	0.69	21	P	Pg	15 35 45.1	-0.4
PDO	Prodromos	0.79	57	P	Pg	15 35 46.6	-0.5
PDO				S	Sb	15 35 59.4	+0.2
PDO	Prodromos	0.79	57	P	Pg	15 35 46.6	-0.5
RLS	Riolos of Patr	0.90	97	P	Pb	15 35 49.8	-0.3
PVO	Paravola	1.03	64	P	Pg	15 35 50.6	-1.2
PVO				S	Sb	15 36 06.5	+0.2
	comp=E,458nm,0.6s						
DRO	Drossia	1.11	101	P	Pg	15 35 52.3	-0.9
DRO				S	Sb	15 36 09.1	+0.7
	comp=E,355nm,0.5s						
EFP	Efpalio	1.26	78	P	Pg	15 35 55.4	-0.8
EFP				S	Sb	15 36 13.8	+1.0
	comp=E,265nm,0.5s						
ANX	Ano Chora	1.31	71	P	Pg	15 35 56.4	-0.8
ANX				S	Sn	15 36 16.6	+1.5
	comp=E,298nm,0.6s						
IGT	Igoumenitsa	1.35	360	P	Pb	15 35 58.1	+0.2
KLV	Kalavryta, Ach	1.44	95	P	Pn	15 35 57.7	-1.1

ATH 03 15:36:26.9, 38.°23N×20.°39E, h8km±1km, ML2.8/3, Error ellipse: s-maj=1.8km s-min=0.8km az=259.0
THE 03 15:36:27.0, 38.°22N×20.°40E, h9km, ML3.1/6, Error ellipse: s-maj=0.7km s-min=0.3km az=234.0
BEO 03 15:36:40.2±1.5, 38.°72N×19.°99E, h10km, ML3.5/4
ISC 03 15:36:26.3±0.9, 38.°23N±0.°02×20.°37E±0.°04, h11km±4km, n43, σ0.°52/69, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.03	220	P	Pg	15 36 28.7	+0.4
KEF3				S	Sg	15 36 30.1	+0.4
CHV1	Chavriata, Kef	0.04	169	P	Pg	15 36 28.6	+0.2
CHV1				S	Sg	15 36 30.1	+0.3
KEF4	Livadi, Kephal	0.05	52	P	Pg	15 36 28.5	0.0
KEF4				S	Sg	15 36 29.8	-0.3
LXR1	Lixouri, Cepha	0.06	115	P	Pg	15 36 28.6	+0.1
LXR1				S	Sg	15 36 29.9	-0.2
KEF1	Kardakata, Kep	0.09	56	P	Pg	15 36 28.9	0.0
KEF1				S	Sg	15 36 30.4	-0.5
ARG2	Argostoli	0.10	117	P	Pg	15 36 29.1	+0.1
ARG2				S	Sg	15 36 30.9	-0.1
KEF2	Argostoli. Kep	0.11	123	P	Pg	15 36 29.3	+0.2
KEF2				S	Sg	15 36 31.1	-0.1
VLS	Valsamata	0.18	106	P	Pg	15 36 30.1	-0.1
VLS				S	Sg	15 36 32.5	-0.4
	13μm,0.2s						
VLS	Valsamata	0.18	106	P	Pg	15 36 30.1	-0.1
VLS				S	Sg	15 36 32.6	-0.4
VLS				AML	AML	15 36 32.9	
	comp=N,16765μm,0.2s						
VLS				AML	AML	15 36 33.3	
	comp=E,15538μm,0.1s						
VSK1	VASILIKIADES	0.24	39	P	Pg	15 36 31.6	+0.3
VSK1				S	Sg	15 36 35.3	+0.7
FSK	Fiskardo	0.28	33	P	Pg	15 36 32.3	+0.3
FSK				S	Sg	15 36 36.6	+0.8
	comp=E,6μm,0.1s						
FSK	Fiskardo	0.28	33	P	Pg	15 36 32.2	+0.2
FSK				S	Sg	15 36 36.5	+0.7
FSK				AML	AML	15 36 36.9	
	comp=N,5766μm,0.2s						
FSK				AML	AML	15 36 37.1	
	comp=E,18429μm,0.1s						
VLMS	Volimes, Zakyn	0.42	146	P	Pg	15 36 34.8	+0.3
VLMS				S	Sg	15 36 41.5	+1.4
EVGI	Lefkada island	0.45	29	P	Pg	15 36 35.6	+0.4
EVGI				S	Sb	15 36 42.6	-0.5
EVGI	Lefkada island	0.45	29	P	Pg	15 36 35.6	+0.4
EVGI				S	Sg	15 36 42.2	+1.0
MGNA	Meganis	0.54	37	P	Pg	15 36 36.7	-0.1
MGNA				S	Sg	15 36 44.5	+0.5
LKD2	Lefkada island	0.61	22	P	Pg	15 36 38.3	+0.2
LKD2				S	Sg	15 36 46.7	+0.6
	comp=E,695nm,0.6s						
LKD2	Lefkada island	0.61	22	P	Pg	15 36 38.0	-0.1
LKD2				S	Sg	15 36 45.9	-0.2
LKD2				AML	AML	15 36 53.2	
	comp=N,1129μm,0.5s						
LKD2				AML	AML	15 36 56.3	
	comp=E,1503μm,0.6s						
TSLK	Tsoukalades, L	0.64	20	P	Pg	15 36 38.8	+0.1
TSLK				S	Sb	15 36 48.6	+0.2
TSLK	Tsoukalades, L	0.64	20	P	Pg	15 36 38.7	0.0
TSLK				S	Sb	15 36 48.6	+0.2
AST1	Astakos	0.65	61	P	Pg	15 36 38.8	0.0
AST1				S	Sg	15 36 47.6	+0.3
KRI1	kERI	0.66	148	P	Pg	15 36 39.0	-0.1
KRI1				S	Sb	15 36 49.2	+0.1
PDO	Prodromos	0.74	59	P	Pg	15 36 40.6	0.0
PDO				S	Sb	15 36 51.8	+0.5
PDO	Prodromos	0.74	59	P	Pg	15 36 40.5	0.0
RLS	Riolos of Patr	0.88	101	P	Pg	15 36 43.3	+0.1
RLS	Riolos of Patr	0.88	101	P	Pg	15 36 43.0	-0.2
PVO	Paravola	0.99	66	P	Pg	15 36 45.4	+0.1
PVO				S	Sb	15 36 59.2	+0.8
	comp=E,1μm,0.3s						
PVO	Paravola	0.99	66	P	Pg	15 36 45.3	0.0
DRO	Drossia	1.09	104	P	Pg	15 36 47.0	-0.3
DRO				S	Sn	15 37 03.2	+0.6
	comp=E,978nm,0.4s						
LAKA	Lakka	1.27	89	P	Pn	15 36 49.9	0.0
LAKA	Lakka	1.27	89	P	Pn	15 36 49.9	0.0
ANX	Ano Chora	1.27	73	P	Pn	15 36 49.9	-0.2
ANX				S	Sn	15 37 07.4	+0.1
	comp=E,788nm,0.5s						
IGT	Igoumenitsa	1.31	359	ePg	Pg	15 36 57.1	+5.7
IGT				eSg	Sb	15 37 08.0	+0.4
SERG	Sergoula	1.34	81	P	Pn	15 36 50.7	-0.2
TRIZ	Trizonia	1.35	84	P	Pn	15 36 50.6	-0.4
KLV	Kalavryta, Ach	1.41	97	P	Pn	15 36 52.2	+0.2
PDG	Podgorica	4.29	349	eSn	Sn	15 38 21.7	+0.3
TREB	Trebinje	4.74	342	ePn	Pn	15 37 43.9	+6.2
TREB				eSn	Sn	15 38 32.4	-0.3
SELS	Selova	5.02	6	eSn	Sn	15 38 39.1	-0.5
SJES	Sjenica	5.04	357	ePn	Pn	15 37 47.5	+5.6
SJES				eSn	Sn	15 38 40.3	+0.1
STON	Ston	5.07	337	eSn	Sn	15 38 38.6	-2.0
BBLS	Lazići	5.68	353	eSn	Sn	15 38 55.3	-0.6
DIVS	Divibare	5.88	357	eSn	Sn	15 38 58.9	-1.8

IDC 03 15:47:27.4±1.2, 32.°96S×178.°38W, h0km, mb4.2/5, mb1 4.4/7, mb1mx4.0/42, mbtmp4.3/7, ML4.3/2, MS3.6/2, Ms1 3.6/2, ms1mx3.0/31, Error ellipse: s-maj=32.6km s-min=26.5km az=102.0
NEIC 03 15:47:31.6±1.5, 33.°04S±0.°04×178.°4W±0.°2, h35km±2km, mb4.8/8, Error ellipse: s-maj=28.7km s-min=3.7km az=102.0
WEL 03 15:48:34.3, 37.°S±49.°×17.°9E±2.°1, h61km±28km, M2.6/8, ML2.6/7, MLv2.6/8, Error ellipse: s-maj=0.1km s-min=0.0km az=170.3
ISC 03 15:47:31.8±1.0, 32.°95S±0.°09×178.°5W±0.°2, h32km, n47, σ1.°66/46, mb4.6/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.72	8	Pn	Pn	15 48 26.9	-0.2
	49nm,0.3s,baz=86,slow=24,SNR=2.4						
RAO				Sn	Sn	15 49 05.3	-4.6
	50nm,0.3s,baz=116,slow=19,SNR=2.9						
MXZ	Matakaoa Point	5.29	209	Pn	Pn	15 48 47.2	-1.4
MXZ	Matakaoa Point	5.29	209	P	Pn	15 48 47.5	-1.0
WMGZ	Waiomatatini S	5.47	207	P	Pn	15 48 51.6	+0.6
PKGZ	Pakihiroa	5.66	209	P	Pn	15 48 52.2	-1.6
HAZ	Te Kaha	5.67	211	P	Pn	15 48 52.9	-0.9
PUZ	Puketiti	5.75	206	P	Pn	15 48 53.0	-1.9
RUGZ	Raukumara Rang	5.89	211	P	Pn	15 48 56.6	-0.3
TWGZ	Tauwhareparae	5.95	208	P	Pn	15 48 56.2	-1.5
CNGZ	Carnagh Statio	6.13	205	P	Pn	15 48 58.7	-1.5
TKGZ	Te Karaka	6.23	207	P	Pn	15 49 02.6	+1.1
URZ	Urewera	6.39	213	Pn	Pn	15 49 02.6	-1.1
	3.5nm,0.3s,baz=276,slow=2.6,SNR=27						
URZ				Sn	Sn	15 50 13.5	-1.9
	2.5nm,0.3s,baz=168,slow=22,SNR=7.6						
URZ	Urewera	6.39	213		Pn	15 49 02.5	-1.2
URZ	Urewera	6.39	213	P	Pn	15 49 02.6	-1.1
RAGZ	Rawiri	6.45	210	P	Pn	15 49 04.9	+0.3
RIGZ	Rimuhau	6.49	207	P	Pn	15 49 04.0	-1.1
SNGZ	Shannon Statio	6.72	209	P	Pn	15 49 07.3	-1.0
BKZ	Black Stump Fm	7.41	212		Pn	15 49 16.1	-1.6
BFZ	Birch Farm	8.79	207	Pn	Pn	15 49 34.6	-2.0
MSWZ	Moikau Station	9.80	209	Pn	Pn	15 49 49.6	-1.0
THZ	Tophouse	11.13	215	Pn	Pn	15 50 05.6	-3.1
RPZ	Rata Peaks	13.50	214	Pn	Pn	15 50 36.7	-4.4
	0.6nm,0.3s,baz=26,slow=15,SNR=4.0						
RPZ				Sn	Sn	15 52 51.7	-18
	0.1nm,0.3s,baz=156,slow=20,SNR=1.9						
RPZ	Rata Peaks	13.50	214		Pn	15 50 37.8	-3.3
FOZ	Fox Glacier	13.98	218	Pn	Pn	15 50 45.8	-1.7
WHZ	Wether Hill Ro	16.60	215	P	P	15 51 23.5	-0.8
WHZ				IAmb	IAmb	15 52 21.3	
	comp=Z,87nm,1.7s						
DZM	Mont Dzumac	17.18	305	LR	LR	15 57 17.3	
	comp=Z,229nm,19.2s,baz=186,slow=34						
STKA	Stephens Creek	33.56	261	LR	LR	16 07 22.4	
	comp=Z,81nm,18.2s,baz=80,slow=36						
CTA	Charters Tower	33.87	283	P	P	15 54 13.8	+2.1
	comp=Z,11nm,1.1s,baz=108,slow=13,SNR=3.9						
AS31	Alice Springs	42.61	270	P	P	15 55 25.4	+0.1
ASAR	Alice Springs	42.61	270	P	P	15 55 26.0	+0.7
	comp=Z,2.6nm,0.7s,baz=110,slow=7.2,SNR=35						
ASAR	Alice Springs	42.61	270	P	P	15 55 25.5	+0.2
WR0	Warramunga Arr	43.65	275	P	P	15 55 34.4	+0.7
WR0				IAmb	IAmb	15 56 28.3	
	comp=Z,16nm,1.0s						
WB2	Warramunga Arr	43.82	275	P	P	15 55 35.7	+0.6
WB2				IAmb	IAmb	15 56 35.0	
	comp=Z,36nm,1.5s						
WRAB	Tennant Creek	43.82	275	P	P	15 55 35.5	+0.4
WRA	Warramunga Arr	43.83	275	P	P	15 55 35.6	+0.5
	comp=Z,2.7nm,0.5s,baz=115,slow=7.6,SNR=17						
WRA	Warramunga Arr	43.83	275	IAmb	IAmb	15 55 41.6	
	comp=Z,0.5nm,1.3s						
WB0	Warramunga Arr	43.86	275	P	P	15 55 35.9	+0.5
QSPA	South Pole Qui	57.16	180	P	P	15 57 16.5	+1.1
	comp=Z,3.5nm,1.0s,baz=37,slow=4.8,SNR=6.5						
QSPA	South Pole Qui	57.16	180	P	P	15 57 15.8	+0.4
QSPA				IAmb	IAmb	15 57 27.5	
	comp=Z,18nm,1.6s						
CMAR	Chiang Mai Arr	93.84	289	P	P	16 00 49.0	+2.7
	comp=Z,0.1nm,0.4s,baz=117,slow=1.0,SNR=2.8						
FINES	FINESS Array B	147.37	338	PKPbc	PKPbc	16 07 11.2	-0.2
	comp=Z,4.5nm,0.8s,baz=44,slow=3.9,SNR=17						
FINES	FINESS Array B	147.37	338		PKPbc	16 07 11.1	-0.4
NB2	NORSAR Subarra	151.19	350	PKPdf	PKPbc	16 07 20.6	-0.6
	comp=Z,1.6nm,0.9s,baz=24,slow=2.1						
NOA	NORSAR Array B	151.19	350	PKPbc	PKPbc	16 07 20.9	-0.2
	comp=Z,1.4nm,0.8s,baz=13,slow=4.1,SNR=4.0						
AKASG	Malin Array Be	153.01	319	PKPbc	PKiKP	16 07 26.2	+0.5
	comp=Z,0.7nm,0.6s,baz=50,slow=2.0,SNR=2.7						
BRTR	Keskin Array B	153.34	294	PKPbc	PKiKP	16 07 27.0	0.0
	comp=Z,0.5nm,0.8s,baz=70,slow=4.7,SNR=2.5						
CLL	Collm	159.81	339	ePKPab	PKPab	16 08 08.0	+1.9

IDC 03 15:49:06.2±3.5, 33.°20S×178.°30W, h0km, mb3.5/2, mb1 3.9/3, mb1mx3.7/41, mbtmp3.8/3, ML3.9/1, Error ellipse: s-maj=84.3km s-min=38.8km az=117.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.28	215	Pn	Pn	15 50 39.3	-0.8
	2.7nm,0.3s,baz=198,slow=6.4,SNR=2.7						
URZ				Sn	Sn	15 51 54.4	+1.9
	baz=16,slow=18,SNR=0.6						
ASAR	Alice Springs	42.78	270	P	P	15 57 05.7	-0.1
	0.3nm,0.5s,baz=109,slow=7.9,SNR=1.3						
WRA	Warramunga Arr	44.02	275	P	P	15 57 15.9	0.0
	0.3nm,0.4s,baz=114,slow=7.8,SNR=1.4						
FINES	FINESS Array B	147.66	338	PKPbc	PKPbc	16 08 51.2	-0.7
	3.4nm,0.9s,baz=64,slow=4.4,SNR=2.3						

WEL 03 15:50:38.2, 40.°6S±0.°7×17.°6E±.°, h29km±1km, M2.1/16, ML2.3/16, MLv2.1/16, Error ellipse: s-maj=0.0km s-min=0.0km az=94.4, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRWZ	Pori Road	0.12	48	P	Pn	15 50 44.1	-0.1
TIWZ	Tintock	0.14	169	P	Pn	15 50 44.3	-0.2
MRZ	Mangatainoka R	0.21	263	P	Pb	15 50 44.7	+0.2
POWZ	Post Office Ro	0.25	345	P	Pb	15 50 45.4	+0.4
BFZ	Birch Farm	0.30	99	P	Pb	15 50 45.9	+0.2
HOWZ	Holdsworth Sta	0.36	224	P	Pb	15 50 46.9	+0.3
CPWZ	Castlepoint	0.38	136	P	Pn	15 50 47.7	0.0
DVHZ	Dannevirke	0.41	36	P	Pn	15 50 47.3	0.0
TMWZ	Te Maipa	0.47	176	P	Pb	15 50 48.6	+0.4
ANWZ	Angora Road	0.51	70	P	Pb	15 50 49.1	+0.4
OGWZ	Otaki Gorge	0.55	251	P	Pb	15 50 49.7	+0.3
MTW	Mount Morrison	0.58	207	P	Pb	15 50 50.1	+0.1
TSZ	Takapari Road	0.58	8	P	Pb	15 50 50.1	+0.1
PRHZ	Porangahau	0.70	58	P	Pb	15 50 51.7	-0.3
WPHZ	Waipukurau	0.73	38	P	Pn	15 50 52.6	+0.1
KIW	Kapiti Island	0.75	252	P	Pn	15 50 53.0	+0.2
CAW	Cannon Point	0.76	231	P	Pb	15 50 52.9	0.0
PNHZ	Pukenui	0.77	20	P	Pb	15 50 53.1	-0.1
PAWZ	Paruwai Farm	0.81	203	P	Pb	15 50 54.3	+0.5
MSWZ	Moikau Station	0.90	210	P	Pn	15 50 55.0	+0.1
WAZ	Wanganui	1.10	323	P	Pb	15 50 59.6	+0.9
TCW	Tory Channel	1.32	244	P	Pn	15 51 01.0	+0.3

THE 03 15:58:54.6, 38.°21N×20.°39E, h10km, ML3.1/6, Error ellipse: s-maj=0.9km s-min=0.4km az=261.0
ATH 03 15:58:54.1, 38.°19N×20.°39E, h12km, ML3.0/15, Error ellipse: s-maj=1.5km s-min=1.0km az=243.0
NEIC 03 15:58:55.5±2.7, 38.°21N±0.°08×20.°37E±0.°07, h10km±2km, mb4.1/2, Error ellipse: s-maj=15.8km s-min=4.4km az=212.0
IDC 03 15:58:58.8±6.9, 38.°66N×21.°30E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.3/57, mbtmp3.6/4, ML2.5/1, MS3.9/1, Ms1 3.9/1, ms1mx2.7/42, Error ellipse: s-maj=143.5km s-min=35.2km az=67.0
ISC 03 15:58:54.9±0.7, 38.°20N±0.°02×20.°42E±0.°03, h10km±4km, n69, σ0.°94/87, mb4.0/5, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.01	100	P	Pg	15 58 56.5	-0.1
LXR1				S	Sg	15 58 58.1	+0.3
CHV1	Chavriata, Kef	0.04	237	P	Pg	15 58 56.5	-0.2
CHV1				S	Sg	15 58 58.0	0.0
KEF4	Livadi, Kephal	0.06	3	P	Pg	15 58 56.7	-0.3
KEF4				S	Sg	15 58 58.1	-0.3
KEF3	Kipouria, Keph	0.06	270	P	Pg	15 58 56.6	-0.3
KEF3				S	Sg	15 58 58.0	-0.4
ARG2	Argostoli	0.06	115	P	Pg	15 58 56.9	0.0
ARG2				S	Sg	15 58 58.6	+0.2
KEF2	Argostoli. Kep	0.06	126	P	Pg	15 58 57.1	+0.1
KEF2				S	Sg	15 58 58.2	-0.4
KEF1	Kardakata, Kep	0.08	28	P	Pg	15 58 57.0	-0.2
KEF1				S	Sg	15 58 58.6	-0.4
VLS	Valsamata	0.14	101	P	Pg	15 58 57.9	-0.1
VLS				S	Sg	15 59 00.6	+0.4
	17μm,0.1s						
VLS	Valsamata	0.14	101	P	Pg	15 58 57.9	-0.1
VLS				S	Sg	15 59 00.6	+0.4
VLS				AML	AML	15 59 00.8	
	comp=E,43899μm,0.1s						
VLS				AML	AML	15 59 01.2	
	comp=N,21244μm,0.1s						
VSK1	VASILIKIADES	0.23	29	P	Pg	15 58 59.5	-0.2
VSK1				S	Sg	15 59 02.9	-0.1
	comp=N,16μm,0.2s						
VLMS	Volimes, Zakyn	0.38	150	P	Pg	15 59 01.7	-0.7
VLMS				S	Sg	15 59 07.6	+0.3
VLMS				AML	AML	15 59 09.5	
	comp=E,11547μm,0.2s						
VLMS				AML	AML	15 59 13.8	
	comp=N,13429μm,0.4s						
EVGI	Lefkada island	0.46	24	P	Pg	15 59 03.4	-0.4
EVGI				S	Sg	15 59 10.6	+0.7
EVGI	Lefkada island	0.46	24	P	Pg	15 59 03.4	-0.4
EVGI				S	Sg	15 59 10.4	+0.6
MGNA	Meganis	0.54	33	P	Pg	15 59 04.7	-0.6
MGNA				AML	AML	15 59 13.4	
	comp=N,3182μm,0.2s						
MGNA				AML	AML	15 59 13.7	
	comp=E,3298μm,0.1s						
LKD2	Lefkada island	0.61	18	P	Pg	15 59 06.2	-0.6
LKD2				AML	AML	15 59 22.5	
	comp=N,1733μm,0.3s						
LKD2				AML	AML	15 59 26.9	
	comp=E,1317μm,0.3s						
KRI1	kERI	0.62	150	P	Pg	15 59 06.4	-0.6
KRI1				S	Sg	15 59 16.7	+1.5
	comp=E,4μm,0.2s						
AST1	Astakos	0.62	57	P	Pg	15 59 06.7	-0.3
TSLK	Tsoukalades, L	0.65	16	P	Pg	15 59 06.8	-0.6
TSLK				AML	AML	15 59 25.0	
	comp=E,2156μm,0.5s						
TSLK				AML	AML	15 59 26.8	
	comp=N,1571μm,0.6s						
PDO	Prodromos	0.72	56	P	Pg	15 59 08.2	-0.6
PDO				AML	AML	15 59 20.2	
	comp=E,3458μm,0.5s						
PDO				AML	AML	15 59 20.7	
	comp=N,3129μm,0.6s						
RLS	Riolos of Patr	0.84	100	P	Pg	15 59 10.1	-0.9
RLS				S	Sb	15 59 23.8	+1.0
	comp=N,528nm,0.5s						
RLS	Riolos of Patr	0.84	100	P	Pg	15 59 10.3	-0.7
PVO	Paravola	0.96	64	P	Pg	15 59 12.9	-0.5
PVO				AML	AML	15 59 29.6	
	comp=E,3558μm,0.4s						
PVO				AML	AML	15 59 34.5	
	comp=N,2535μm,0.5s						
DRO	Drossia	1.05	103	P	Pg	15 59 14.9	-0.1
DRO	Drossia	1.05	103	P	Pg	15 59 14.0	-1.0
DRO				AML	AML	15 59 40.2	
	comp=E,2576μm,0.4s						
DRO				AML	AML	15 59 40.7	
	comp=N,2527μm,0.4s						
EFP	Efpalio	1.19	79	P	Pn	15 59 16.1	-1.5
EFP				AML	AML	15 59 43.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,1040µm,0.3s						
EFP				AML	AML	15 59 46.9	
	comp=N,856µm,0.5s						
LAKA	**Lakka**	**1.23**	**88**	P	**Pn**	**15 59 17.2**	**-0.9**
LAKA				S	**Sn**	**15 59 36.0**	**+1.2**
	comp=N,265nm,0.4s						
LAKA	**Lakka**	**1.23**	**88**	P	**Pn**	**15 59 17.0**	**-1.1**
LAKA				S	**Sn**	**15 59 35.9**	**+1.0**
LAKA				AML	AML	15 59 37.6	
	comp=E,637µm,0.4s						
LAKA				AML	AML	15 59 48.4	
	comp=N,629µm,0.6s						
ANX	**Ano Chora**	**1.24**	**71**	P	**Pn**	**15 59 17.4**	**-1.0**
ANX				AML	AML	15 59 43.7	
	comp=E,1439µm,0.6s						
ANX				AML	AML	15 59 44.7	
	comp=N,1458µm,0.5s						
EVR	**Evrytania**	**1.30**	**56**	P	**Pn**	**15 59 19.2**	**0.0**
SERG	**Sergoula**	**1.30**	**80**	P	**Pn**	**15 59 18.1**	**-1.0**
SERG				AML	AML	15 59 44.4	
	comp=N,1154µm,0.3s						
SERG				AML	AML	15 59 46.2	
	comp=E,829µm,0.5s						
TRIZ	**Trizonia**	**1.31**	**82**	P	**Pn**	**15 59 18.2**	**-1.1**
TRIZ				S	**Sg**	**15 59 38.2**	**+1.2**
	comp=E,598nm,0.5s						
TRIZ	**Trizonia**	**1.31**	**82**	P	**Pn**	**15 59 18.1**	**-1.1**
IGT	**Igoumenitsa**	**1.33**	**357**	P	**Pn**	**15 59 20.0**	**+0.5**
KALE	**Kalithea**	**1.36**	**82**	P	**Pn**	**15 59 19.1**	**-1.0**
KALE	**Kalithea**	**1.36**	**82**	P	**Pn**	**15 59 19.0**	**-1.0**
KALE				AML	AML	15 59 49.3	
	comp=E,792µm,0.3s						
KALE				AML	AML	15 59 56.4	
	comp=N,687µm,0.6s						
KLV	**Kalavryta, Ach**	**1.37**	**96**	P	**Pn**	**15 59 20.0**	**-0.2**
KLV	**Kalavryta, Ach**	**1.37**	**96**	P	**Pn**	**15 59 19.6**	**-0.6**
KLV				AML	AML	15 59 50.1	
	comp=N,444µm,0.9s						
KLV				AML	AML	15 59 59.2	
	comp=E,323µm,0.6s						
MAKR	**Makrakomi, Fth**	**1.56**	**58**	P	**Pn**	**15 59 24.1**	**+1.3**
MAKR				AML	AML	15 59 55.8	
	comp=N,902µm,0.5s						
MAKR				AML	AML	15 59 56.9	
	comp=E,788µm,0.5s						
ITM	**Ithomi**	**1.57**	**130**	P	**Pn**	**15 59 23.2**	**+0.3**
ITM	**Ithomi**	**1.57**	**130**	Pn	**Pn**	**15 59 23.9**	**+1.0**
KASA	**Kassiopi**	**1.59**	**346**	P	**Pb**	**15 59 24.2**	**-0.1**
PYL	**PYLOS**	**1.68**	**141**	P	**Pn**	**15 59 24.6**	**+0.4**
AGG	**Agios Georgios**	**1.71**	**61**	P	**Pb**	**15 59 26.4**	**+0.1**
AGG	**Agios Georgios**	**1.71**	**61**		**Pb**	**15 59 26.4**	**+0.1**
THL	**Klokotos Trika**	**1.84**	**42**	P	**Pb**	**15 59 28.7**	**0.0**
LTK	**Loutraki**	**2.02**	**94**	P	**Pn**	**15 59 30.4**	**+1.5**
PENT	**Pentalofos**	**2.07**	**15**	P	**Pn**	**15 59 31.1**	**+1.3**
LKR	**Lokris**	**2.07**	**77**	P	**Pn**	**15 59 31.1**	**+1.4**
VIL2	**Platees**	**2.24**	**89**	P	**Pn**	**15 59 34.2**	**+2.1**
DID	**Didima**	**2.33**	**106**	P	**Pn**	**15 59 35.3**	**+1.9**
LIT	**Litokhoron**	**2.49**	**40**	Pn	**Pb**	**15 59 39.0**	**-0.7**
FNA	**Florina**	**2.68**	**16**	Pn	**Pn**	**15 59 39.2**	**+1.0**
TIP	**Timpagrande**	**3.03**	**290**	Pn	**Pn**	**15 59 42.9**	**0.0**
PDG	**Podgorica**	**4.32**	**348**	Pn	**Pn**	**16 00 01.0**	**+0.5**
ACER	**Acerenza**	**4.32**	**308**	Pn	**Pn**	**16 00 01.1**	**+0.4**
IDI	**Anoyia**	**4.62**	**128**	Pn	**Pn**	**16 00 07.3**	**+2.4**
	comp=E,0.3nm,0.3s,baz=288,slow=16,SNR=2.3						
IDI				Sn	**Sn**	**16 00 56.4**	**-2.2**
	comp=E,0.5nm,0.3s,baz=100,slow=15,SNR=3.7						
SGRT	**San Giovanni R**	**5.05**	**316**	Pn	**Pn**	**16 00 09.9**	**-0.8**
INTR	**Introdacqua**	**6.28**	**309**	Pn	**Pn**	**16 00 29.0**	**+1.4**
NRCA	**Norcia**	**7.24**	**312**	Pn	**Pn**	**16 00 42.0**	**+1.3**
CLL	**Collm**	**14.11**	**341**	eP	**P**	**16 02 23.0**	**+0.6**
FINES	**FINESS Array B**	**23.53**	**7**	P	**P**	**16 04 04.9**	**-0.1**
	comp=E,2.0nm,0.9s,baz=191,slow=13,SNR=2.6						
KKAR	**Karatay Array**	**37.86**	**66**	P	**P**	**16 06 12.3**	**+0.5**
DBIC	**Dimbokro**	**38.86**	**223**	LR	LR	16 24 51.7	
	comp=E,153nm,19.2s,baz=154,slow=39						
MK31	**Makanchi Array**	**45.35**	**58**	P	**P**	**16 07 11.8**	**-1.4**
MK31				IAmb	IAmb	16 08 16.7	
	comp=Z,3.5nm,1.6s						
MKAR	**Makanchi Array**	**45.35**	**58**	P	**P**	**16 07 12.0**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=270,slow=7.8,SNR=14						
MKAR	**Makanchi Array**	**45.35**	**58**	P	**P**	**16 07 11.5**	**-1.7**
ZAA0	**Zalesovo Array**	**45.73**	**48**	P	**P**	**16 07 14.7**	**-1.3**
ZAA0				IAmb	IAmb	16 07 15.4	
	comp=Z,3.3nm,1.3s						
ZALV	**Zalesovo Beam**	**45.73**	**48**	P	**P**	**16 07 14.7**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=289,slow=9.2,SNR=3.7						
ZALV	**Zalesovo Beam**	**45.73**	**48**	P	**P**	**16 07 14.4**	**-1.6**

*MAN **03** 16:05:19.4,20.13N×120.27E, h17km, MS3.9*
*NEIC **03** 16:05:19.7±2.4,20.09N±0.05×120.30E±0.09, h10km±1km, mb4.6/12, Error ellipse: s-maj=15.3km s-min=7.0km az=292.0*
*IDC **03** 16:05:24.8±4.4,20.13N×120.38E, h44km±44km, mb3.6/11, mb1 3.7/12, mb1mx3.5/42, mbtmp3.8/12, ML3.5/1, Error ellipse: s-maj=25.1km s-min=16.0km az=75.0*
ISC 03 16:05:22.6±0.5,**20.20N**±0.04×**120.33E**±0.06,**h28km,n47, σ1.73**/46,**mb3.8**/13,**1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**1.55**	**81**	eP	**Pn**	**16 05 46.2**	**-2.1**
BBP				eS	**Sn**	**16 06 01.0**	**-6.5**
SIPP	**Brgy, Tapao**	**2.26**	**177**	⇑eP	**Pn**	**16 05 55.5**	**-2.7**
SIPP				eS	**Sn**	**16 06 25.4**	**+0.3**
APYP	**Conner**	**2.48**	**160**	eP	**Pn**	**16 05 59.2**	**-1.8**
APYP				eS	**Sn**	**16 06 28.9**	**-1.5**
SGCP	**Mt. Cagua**	**2.53**	**140**	eP	**Pn**	**16 06 00.5**	**-1.3**
SGCP				eS	**Sn**	**16 06 31.7**	**0.0**
TWG	**Pinlang**	**2.70**	**15**	Pn	**Pn**	**16 06 03.1**	**-1.1**
TPUB	**Ta-pu**	**3.10**	**5**		**Pn**	**16 06 07.1**	**-2.6**
YULB	**Yu-li**	**3.31**	**16**		**Pn**	**16 06 11.9**	**-0.6**
CAUP	**Cauayan**	**3.53**	**156**	eP	**Pn**	**16 06 17.1**	**+1.5**
CAUP				eS	Sb	16 07 20.5	+14
SSLB	**Suanglung**	**3.62**	**9**	Pn	**Pn**	**16 06 15.0**	**-1.9**
SMPP	**San Manuel, Pa**	**4.04**	**175**	eP	**Pn**	**16 06 21.0**	**-1.6**
SMPP				eS	**Sn**	**16 07 07.4**	**-1.5**
NACB	**Ninganchiao**	**4.13**	**16**	Pn	**Pn**	**16 06 23.4**	**-0.4**
YHNB	**Yeheng**	**4.56**	**12**	Pn	**Pn**	**16 06 29.0**	**-0.7**
BALP	**Baler**	**4.59**	**165**	eP	**Pn**	**16 06 32.7**	**+2.6**
KNMB	**Chin-men Tao**	**4.61**	**337**	Pn	**Pn**	**16 06 27.8**	**-2.7**
TATO	**Taipei**	**4.88**	**12**	Pn	**Pn**	**16 06 36.1**	**+2.0**
HKPS	**Hong Kong Po S**	**6.14**	**291**	Pn	**Pn**	**16 06 49.4**	**-2.0**
DAV	**Davao City (W)**	**14.01**	**158**	Pn	Pn	16 08 34.1	-5.2
KSRS	**Korea Array**	**18.42**	**19**	P	**P**	**16 09 37.4**	**+1.5**
	0.1nm,0.3s,baz=201,slow=12,SNR=3.5						
BJT	**Baijiatuan**	**20.08**	**351**	P	**P**	**16 09 55.0**	**+1.2**
CMAR	**Chiang Mai Arr**	**20.26**	**269**	P	Pn	16 09 58.0	0.0
	0.1nm,0.5s,baz=74,slow=7.6,SNR=2.8						
MJAR	**Matsushiro Arr**	**22.58**	**40**	P	**P**	**16 10 22.0**	**+1.2**
	1.8nm,0.7s,baz=251,slow=9.9,SNR=3.3						
SIJI	**Sorong**	**23.52**	**152**	P	**P**	**16 10 30.2**	**-0.3**
	12nm,0.8s,baz=340,slow=15,SNR=3.4						
SONM	**Songino Array**	**29.80**	**341**	P	**P**	**16 11 27.5**	**+0.3**
	1.5nm,1.0s,baz=168,slow=9.3,SNR=7.3						
SONM	**Songino Array**	**29.80**	**341**	IAmb	IAmb	16 11 28.9	
	comp=Z,1.4nm,1.1s						
MTN	**Manton Dam**	**34.51**	**161**	P	**P**	**16 12 06.2**	**-2.3**
KNRA	**Kununurra**	**36.60**	**166**	P	**P**	**16 12 25.9**	**-0.6**
MKAR	**Makanchi Array**	**40.75**	**320**	P	**P**	**16 13 01.7**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=116,slow=8.8,SNR=6.8						
MKAR				PcP	**PcP**	**16 15 02.4**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=104,slow=4.8,SNR=3.7						
WRA	**Warramunga Arr**	**42.18**	**160**	P	**P**	**16 13 11.8**	**-1.3**
	comp=Z,0.8nm,0.9s,baz=344,slow=9.3,SNR=3.2						
WRA				PcP	**PcP**	**16 15 06.3**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=347,slow=3.4,SNR=3.2						
ZALV	**Zalesovo Beam**	**43.22**	**330**	P	**P**	**16 13 21.2**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=138,slow=7.4,SNR=4.5						
H11S3	**WAKE ISLAND Hy**	**43.66**	**84**	T	T	17 00 17.9	
	baz=287						
H11S1	**WAKE ISLAND Hy**	**43.67**	**84**	T	T	17 00 16.3	
	baz=287						
H11S2	**WAKE ISLAND Hy**	**43.68**	**84**	T	T	17 00 16.3	
	baz=287						
ASAR	**Alice Springs**	**45.56**	**162**	P	**P**	**16 13 40.0**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=350,slow=7.8,SNR=5.9						
KKAR	**Karatay Array**	**47.35**	**310**	P	**P**	**16 13 54.6**	**+0.5**
BRVK	**Borovoye**	**50.38**	**323**	P	**P**	**16 14 16.7**	**-0.5**
BRVK				IAmb	IAmb	16 14 50.2	
	comp=Z,11nm,1.9s						
BILL	**Bilibino**	**55.69**	**19**	P	**P**	**16 14 56.5**	**+0.4**
BILL				IAmb	IAmb	16 16 26.2	
	comp=Z,14nm,1.8s						
IMAR	**Indian Mountai**	**70.09**	**26**	P	**P**	**16 16 33.1**	**+1.2**
GHO	**Glory Hole Cre**	**72.77**	**30**	P	**P**	**16 16 48.9**	**+0.7**
SEW	**Seward**	**72.83**	**32**	P	**P**	**16 16 49.3**	**+0.9**
ILAR	**Eielson Array**	**73.11**	**27**	P	**P**	**16 16 49.5**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=275,slow=5.1,SNR=6.0						
BMAR	**Burnt Mountain**	**73.47**	**24**	P	**P**	**16 16 54.0**	**+1.7**
BCAR	**Beaver Creek A**	**75.71**	**28**	P	**P**	**16 17 06.3**	**+1.0**
INK	**Inuvik**	**77.20**	**21**	P	**P**	**16 17 15.1**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=268,slow=4.1,SNR=2.8						
INK	**Inuvik**	**77.20**	**21**	IAmb	IAmb	16 17 17.6	
	comp=Z,5.2nm,1.4s						
RES	**Resolute Bay**	**82.71**	**9**	P	**P**	**16 17 43.7**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=292,slow=6.9,SNR=4.6						
RES	**Resolute Bay**	**82.71**	**9**	IAmb	IAmb	16 20 14.7	
	comp=Z,21nm,1.9s						
YKA	**Yellowknife Ar**	**86.94**	**22**	P	**P**	**16 18 05.7**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=311,slow=4.8,SNR=14						

*IDC **03** 16:24:56.4±1.4,7.33S×126.74E, h288km±16km, mb3.7/12, mb1 3.7/17, mb1mx3.6/38, mbtmp4.4/17, Error ellipse: s-maj=12.6km s-min=8.6km az=74.0*
*DJA **03** 16:24:56.2±0.2,7°S±3°×12°7E±°, h273km±5km, M4.6/11, mb4.3/11, mB5.5/1, MLv4.8/8, Mw(mB)4.9/1*
*NEIC **03** 16:24:56.8±1.5,7.35S±0.08×126.72E±0.08, h299km±4km, mb4.4/36, Error ellipse: s-maj=12.1km s-min=10.6km az=165.0*
ISC 03 16:24:56.2±0.4,**7.39S**±0.04×**126.81E**±0.05,**h300km,n101, σ1.20**/108,**mb4.2**/24,**1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**3.44**	**227**	P	**Pn**	**16 25 56.9**	**+0.2**
SOEI				S	**S**	**16 26 43.3**	**-1.7**
SOEI	**Soe**	**3.44**	**227**		**Pn**	**16 25 56.9**	**+0.2**
SAUI	**Saumlaki**	**4.49**	**98**	P	**Pn**	**16 26 07.2**	**-0.7**
SAUI				S	**S**	**16 27 02.3**	**-3.1**
SAUI	**Saumlaki**	**4.49**	**98**	Pn	**Pn**	**16 26 09.2**	**+1.3**
BBSI	**Bau Bau**	**4.62**	**294**	P	**Pn**	**16 26 10.0**	**+0.6**
SANI	**Sanana**	**5.36**	**351**	P	**Pn**	**16 26 18.6**	**+0.5**
	0.1nm26nm,0.6s						
WSI	**Waingapu**	**6.83**	**250**	P	**Pn**	**16 26 33.5**	**-2.1**
	3.9nm7µm422nm,0.6s						
MTN	**Manton Dam**	**6.89**	**142**		**Pn**	**16 26 37.0**	**+0.7**
BKSI	**Bulukumba**	**6.96**	**287**	P	**Pn**	**16 26 37.2**	**+0.1**
	0.1nm34nm,0.9s						
FAKI	**Fak Fak**	**7.00**	**51**	P	**Pn**	**16 26 36.7**	**-1.0**
	0.2nm46nm,1.3s						
FAKI				S	**S**	**16 27 56.6**	**-3.1**
	0.2nm46nm,1.3s						
FAKI	**Fak Fak**	**7.00**	**51**	Pn	**Pn**	**16 26 37.0**	**-0.7**
BNSI	**Bone**	**7.30**	**294**	P	**Pn**	**16 26 40.0**	**-1.3**
	0.1nm41nm,0.7s						
KAPI	**Kappang**	**7.40**	**288**	P	**Pn**	**16 26 43.2**	**+0.7**
	0.7nm,0.3s,baz=135,slow=9.3,SNR=5.0						
KAPI	**Kappang**	**7.40**	**288**		**Pn**	**16 26 42.1**	**-0.5**
KMPI	**Kaimana, Papua**	**7.79**	**62**	P	**Pn**	**16 26 45.7**	**-1.7**
	0.8nm215nm,0.8s						
SIJI	**Sorong**	**7.85**	**35**	P	**Pn**	**16 26 48.0**	**-0.1**
	1.0nm,0.3s,baz=154,slow=23,SNR=6.9						
SIJI				S	**S**	**16 28 16.0**	**-2.8**
	1.3nm,0.3s,baz=73,slow=19,SNR=4.0						
TTSI	**Tana Toraja**	**8.19**	**301**	P	Pn	16 27 03.3	+11
APSI	**Ampana**	**8.24**	**321**	P	Pn	16 27 10.7	+18
KNRA	**Kununurra**	**8.46**	**167**	Pn	**Pn**	**16 26 56.8**	**+1.3**
PLAI	**Plampang**	**9.06**	**260**	P	**Pn**	**16 27 00.1**	**-2.8**
	29nm,0.4s						
MRSI	**Marisa**	**9.20**	**328**	P	**P**	**16 27 07.1**	**-2.0**
FITZ	**Fitzroy Crossi**	**10.71**	**186**	P	**Pn**	**16 27 23.3**	**+0.2**
	0.2nm,0.3s,baz=22,slow=16,SNR=3.5						
FITZ				S	**S**	**16 29 23.5**	**+0.2**
	0.7nm,0.3s,baz=94,slow=15,SNR=1.9						
FITZ	**Fitzroy Crossi**	**10.71**	**186**	Pn	**Pn**	**16 27 23.6**	**+0.5**
JAGI	**Jajag, Banyuwa**	**12.59**	**264**	Pn	**Pn**	**16 27 42.4**	**-3.5**
WB0	**Warramunga Arr**	**14.34**	**150**	P	**Pn**	**16 28 07.4**	**+0.5**
DAV	**Davao City (W)**	**14.41**	**355**	P	**Pn**	**16 28 07.4**	**-0.5**
WRAB	**Tennant Creek**	**14.46**	**150**	P	**Pn**	**16 28 08.8**	**+0.4**
WRA	**Warramunga Arr**	**14.46**	**150**	P	**Pn**	**16 28 08.8**	**+0.5**
	5.1nm,0.3s,baz=337,slow=17,SNR=104						
WRA				S	**S**	**16 30 44.0**	**-2.3**
	0.5nm,0.3s,baz=325,slow=21,SNR=7.1						
WRA	**Warramunga Arr**	**14.46**	**150**	P	**P**	**16 28 06.6**	**-0.9**
WB2	**Warramunga Arr**	**14.47**	**150**	P	**Pn**	**16 28 08.9**	**+0.4**
WR0	**Warramunga Arr**	**14.57**	**150**	P	**Pn**	**16 28 10.1**	**+0.4**
PSA00	**Pilbara Seismi**	**15.63**	**205**	P	**P**	**16 28 20.9**	**+0.7**
PSA00				IAmb	IAmb	16 29 04.0	
	comp=Z,62nm,1.6s						
UGM	**Wanagama**	**16.15**	**267**	P	**P**	**16 28 25.9**	**-0.1**
KKM	**Kota Kinabalu**	**17.02**	**321**	P	**Pn**	**16 28 37.2**	**-1.3**
KKM				IAmb	IAmb	16 28 38.0	
	comp=Z,10.0nm,0.9s						
COEN	**Coen**	**17.35**	**113**	P	**Pn**	**16 28 41.0**	**-1.3**
SBUM	**Sibu**	**17.53**	**303**	P	**Pn**	**16 28 43.5**	**-0.9**
AS31	**Alice Springs**	**17.56**	**158**	P	**Pn**	**16 28 43.4**	**-1.3**
ASAR	**Alice Springs**	**17.56**	**158**	P	**Pn**	**16 28 43.5**	**-1.3**
	comp=Z,7.3nm,0.3s,baz=335,slow=12,SNR=682						
ASAR				S	**S**	**16 31 49.2**	**+1.1**
	baz=337,slow=21,SNR=4.4						
ASAR	**Alice Springs**	**17.56**	**158**	P	**P**	**16 28 43.3**	**-1.4**
KSM	**Kuching**	**18.67**	**297**	P	**P**	**16 28 53.5**	**+0.3**
KSM				IAmb	IAmb	16 28 58.5	
	comp=Z,7.2nm,0.6s						
CISI	**Cisompet, Garu**	**18.84**	**268**	P	**P**	**16 28 55.0**	**-0.1**
PMG	**Port Moresby**	**20.23**	**97**	P	**P**	**16 29 11.9**	**+2.2**
	comp=Z,7.7nm,0.7s,baz=338,slow=3.9,SNR=5.1						
PMG	**Port Moresby**	**20.23**	**97**	P	**P**	**16 29 11.4**	**+1.8**
PMG				IAmb	IAmb	16 29 43.5	
	comp=Z,52nm,1.6s						
CTA	**Charters Tower**	**22.68**	**126**	P	**P**	**16 29 35.7**	**+3.1**
	comp=Z,2.4nm,0.5s,baz=304,slow=11,SNR=22						
CTAO	**Charters Tower**	**22.68**	**126**	P	**P**	**16 29 32.5**	**-0.1**
CTAO				IAmb	IAmb	16 29 54.2	
	comp=Z,18nm,0.8s						
MORW	**Morawa**	**23.84**	**204**	P	**P**	**16 29 45.0**	**+2.0**
MORW				IAmb	IAmb	16 30 15.9	
	comp=Z,85nm,2.0s						
RABL	**Rabaul**	**25.42**	**84**	P	**P**	**16 29 57.7**	**+0.3**
NWAO	**Narrogin (SRO)**	**26.93**	**198**	P	**P**	**16 30 11.3**	**+0.7**
	comp=Z,5.8nm,0.7s,baz=34,slow=11,SNR=3.8						
NWAO	**Narrogin (SRO)**	**26.93**	**198**		**P**	**16 30 11.2**	**+0.6**
NWAO				IAmb	IAmb	16 30 53.3	
	comp=Z,37nm,1.1s						
GUMO	**Guam**	**27.49**	**41**	P	**P**	**16 30 16.5**	**+0.8**
	comp=Z,18nm,0.3s,baz=358,slow=21,SNR=9.7						
GUMO	**Guam**	**27.49**	**41**	P	**P**	**16 30 16.3**	**+0.5**
STKA	**Stephens Creek**	**28.00**	**152**	P	**P**	**16 30 22.1**	**+2.0**
	comp=Z,4.1nm,0.7s,baz=325,slow=11,SNR=8.2						
STKA	**Stephens Creek**	**28.00**	**152**	P	**P**	**16 30 21.8**	**+1.8**
IPM	**Ipoh**	**28.30**	**294**	P	**P**	**16 30 23.3**	**+0.3**
IPM				IAmb	IAmb	16 30 23.8	
	comp=Z,10nm,1.1s						
KULM	**Kulim**	**28.98**	**295**	P	**P**	**16 30 28.8**	**-0.2**
KULM				IAmb	IAmb	16 30 29.7	
	comp=Z,6.0nm,0.6s						
RPSI	**Rantau Prapat**	**29.57**	**289**	P	**P**	**16 30 34.0**	**-0.2**
RPSI				IAmb	IAmb	16 30 35.5	
	comp=Z,7.3nm,0.7s						
RPSI	**Rantau Prapat**	**29.57**	**289**	P	**P**	**16 30 34.7**	**+0.5**
PSI	**Prapat**	**29.61**	**289**	P	**P**	**16 30 34.7**	**0.0**
	comp=Z,6.4nm,0.6s,baz=108,slow=6.4,SNR=6.7						
UBPT	**Khong Chiam**	**30.89**	**317**	P	**P**	**16 30 45.3**	**-0.4**
UBPT				IAmb	IAmb	16 31 45.7	
	comp=Z,9.8nm,1.7s						
TPUB	**Ta-pu**	**31.09**	**349**	P	**P**	**16 30 46.6**	**-0.7**
TPUB				IAmb	IAmb	16 31 49.8	
	comp=Z,35nm,1.2s						
SSLB	**Suanglung**	**31.51**	**350**	P	**P**	**16 30 50.6**	**-0.4**
SSLB				IAmb	IAmb	16 32 06.0	
	comp=Z,56nm,1.6s						
LHMI	**Lhok Sumawe**	**32.33**	**292**	P	**P**	**16 30 58.0**	**-0.2**
SLVN	**Son La**	**36.34**	**322**	P	**P**	**16 31 32.3**	**+0.8**
CMAR	**Chiang Mai Arr**	**37.62**	**313**	P	**P**	**16 31 44.1**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=141,slow=6.7,SNR=5.4						
CMAR				PcP	**PcP**	**16 33 55.9**	**+1.9**
	comp=Z,1.3nm,0.6s,baz=169,slow=2.7,SNR=9.9						
CHTO	**Chiang Mai**	**37.85**	**314**	P	**P**	**16 31 45.6**	**+0.5**
ENH	**Enshi**	**40.97**	**337**	P	**P**	**16 32 10.4**	**-0.2**
XAN	**Xi'an**	**44.55**	**339**	P	**P**	**16 32 38.4**	**-0.7**
XAN				pP	pP	16 33 19.5	-20
XAN	**Xi'an**	**44.55**	**339**	P	**P**	**16 32 38.9**	**-0.2**
KSRS	**Korea Array**	**44.62**	**1**	P	**P**	**16 32 41.3**	**+1.9**
	comp=Z,1.9nm,1.1s,baz=179,slow=8.8,SNR=4.4						
MJAR	**Matsushiro Arr**	**44.99**	**13**	P	**P**	**16 32 42.3**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=182,slow=8.5,SNR=7.2						
LZH	**Lanzhou**	**48.33**	**335**	eP	**P**	**16 33 09.5**	**+1.1**
LSA	**Lhasa**	**50.34**	**319**	P	**P**	**16 33 25.2**	**+1.2**
ODAN	**Odare**	**51.17**	**313**	eP	**P**	**16 33 30.3**	**+0.4**
	comp=Z,7.0nm,0.4s						
TAPN	**Taplejung**	**51.23**	**314**	eP	**P**	**16 33 30.4**	**0.0**
	comp=Z,8.1nm,0.4s						
RAMN	**Ramite**	**51.79**	**313**	eP	**P**	**16 33 35.2**	**+0.7**
	comp=Z,20nm,0.6s						
JIRN	**Jiri**	**52.50**	**313**	eP	**P**	**16 33 40.5**	**+0.7**
	comp=Z,11nm,0.6s						
GTA	**Gaotai**	**52.85**	**334**	⇑P	**P**	**16 33 42.6**	**+0.7**
GUN	**Gumba**	**52.87**	**313**	eP	**P**	**16 33 43.0**	**+0.5**
	comp=Z,13nm,0.6s						
PKI	**Pulchoki**	**53.01**	**313**	eP	**P**	**16 33 43.7**	**+0.2**
PKIN	**Phulchoki**	**53.03**	**313**	eP	**P**	**16 33 43.2**	**-0.3**
	comp=Z,6.2nm,0.5s						
KKN	**Kakani**	**53.23**	**313**	eP	**P**	**16 33 45.3**	**+0.3**
	comp=Z,5.3nm,0.6s						
DMN	**Daman**	**53.26**	**313**	eP	**P**	**16 33 45.2**	**0.0**
GKN	**Gorkha**	**53.82**	**313**	eP	**P**	**16 33 49.1**	**0.0**
	comp=Z,13nm,0.4s						
KOLN	**Koldanda**	**54.45**	**312**	eP	**P**	**16 33 53.8**	**+0.1**
	comp=Z,11nm,0.6s						
DANN	**Dangsing**	**54.66**	**312**	eP	**P**	**16 33 56.0**	**+0.7**
	comp=Z,11nm,0.6s						
ULN	**Ulaanbaatar**	**57.72**	**344**	P	**P**	**16 34 17.1**	**+0.9**
SONM	**Songino Array**	**57.87**	**344**	P	**P**	**16 34 18.2**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=162,slow=8.7,SNR=9.5						
SONM	**Songino Array**	**57.87**	**344**	P	**P**	**16 34 18.1**	**+0.8**
NIL	**Nilore**	**65.10**	**312**	P	**P**	**16 35 05.5**	**-0.1**
NIL				IAmb	IAmb	16 35 06.2	
	comp=Z,4.7nm,0.6s						
PEA0B	**Petropavlovsk-**	**65.72**	**20**	P	**P**	**16 35 10.8**	**+1.8**
PETK	**Petropavlovsk-**	**65.72**	**20**	P	**P**	**16 35 10.8**	**+1.7**
	comp=Z,1.4nm,0.5s,baz=191,slow=5.8,SNR=12						
PETK	**Petropavlovsk-**	**65.72**	**20**	P	**P**	**16 35 10.6**	**+1.6**
KSH	**Kashi**	**66.20**	**319**	P	P	16 35 19.7	+7.2
KSH				pP	pP	16 36 03.1	-15
KSH					PcS	16 39 50.8	
KSH				S	S	16 43 50.5	+13
MK31	**Makanchi Array**	**66.85**	**328**	P	**P**	**16 35 16.9**	**+0.5**
MK31				IAmb	IAmb	16 35 51.9	
	comp=Z,6.7nm,1.8s						
MKAR	**Makanchi Array**	**66.85**	**328**	P	**P**	**16 35 16.9**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=117,slow=7.8,SNR=22						
MKAR				PcP	**PcP**	**16 35 43.1**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=110,slow=4.7,SNR=4.2						
MKAR	**Makanchi Array**	**66.85**	**328**	P	**P**	**16 35 16.4**	**0.0**
MKAR					**PcP**	**16 35 42.7**	**+0.1**
ZAA0	**Zalesovo Array**	**70.56**	**335**	P	**P**	**16 35 38.5**	**-0.4**
ZAA0				IAmb	IAmb	16 35 39.6	
	comp=Z,3.8nm,0.7s						
ZALV	**Zalesovo Beam**	**70.56**	**335**	P	**P**	**16 35 39.0**	**+0.1**
	comp=Z,5.5nm,0.7s,baz=134,slow=5.0,SNR=18						
ZALV	**Zalesovo Beam**	**70.56**	**335**	P	**P**	**16 35 38.4**	**-0.6**
KURK	**Kurchatov**	**71.23**	**330**	P	**P**	**16 35 44.1**	**+1.1**
KURK				IAmb	IAmb	16 35 45.4	
	comp=Z,4.5nm,1.1s						
SOCY	**Socotra**	**74.95**	**285**	P	**P**	**16 36 04.6**	**-0.9**
SOCY				IAmb	IAmb	16 37 05.9	
	comp=Z,17nm,1.3s						

*ATH **03** 16:31:58.4,38.14N×20.39E, h16km±2km, ML2.9/6, Error ellipse: s-maj=2.5km s-min=1.1km az=251.0*
*THE **03** 16:31:58.9,38.15N×20.40E, h13km, ML3.1/7, Error ellipse: s-maj=1.0km s-min=0.6km az=238.0*
ISC 03 16:31:58.9±1.2,**38.15N**±0.03×**20.41E**±0.05,**h14km**±5km,**n37, σ0.38**/58,**Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.04**	**326**	P	**Pg**	**16 32 01.3**	**-0.1**
CHV1				S	**Sg**	**16 32 03.0**	**-0.1**
	128µm,0.1s						
LXR1	**Lixouri, Cepha**	**0.05**	**26**	P	**Pg**	**16 32 01.5**	**0.0**
LXR1				S	**Sg**	**16 32 03.4**	**+0.1**
KEF2	**Argostoli. Kep**	**0.06**	**78**	P	**Pg**	**16 32 01.4**	**-0.1**
KEF2				S	**Sg**	**16 32 03.2**	**-0.2**
ARG2	**Argostoli**	**0.07**	**67**	P	**Pg**	**16 32 01.5**	**-0.1**
ARG2				S	**Sg**	**16 32 03.4**	**-0.1**
KEF4	**Livadi, Kephal**	**0.11**	**7**	P	**Pg**	**16 32 02.0**	**0.0**
KEF4				S	**Sg**	**16 32 04.5**	**+0.3**
KEF1	**Kardakata, Kep**	**0.14**	**21**	P	**Pg**	**16 32 02.3**	**-0.1**
KEF1				S	**Sg**	**16 32 04.7**	**-0.1**
VLS	**Valsamata**	**0.14**	**80**	P	**Pg**	**16 32 02.4**	**-0.2**
VLS				S	**Sg**	**16 32 05.0**	**-0.1**
	12µm,0.1s						
VLS	**Valsamata**	**0.14**	**80**	P	**Pg**	**16 32 02.4**	**-0.2**
VLS				S	**Sg**	**16 32 05.1**	**-0.1**
VLS				AML	AML	16 32 05.2	
	comp=N,29725µm,0.2s						
VLS				AML	AML	16 32 05.4	
	comp=E,16623µm,0.1s						
VSK1	**VASILIKIADES**	**0.28**	**25**	P	**Pg**	**16 32 04.8**	**0.0**
VSK1				S	**Sg**	**16 32 09.4**	**+0.5**
	comp=E,18µm,0.3s						
FSK	**Fiskardo**	**0.33**	**21**	P	**Pg**	**16 32 05.4**	**-0.2**
FSK				S	**Sg**	**16 32 10.5**	**+0.3**
	comp=E,6µm,0.3s						
FSK	**Fiskardo**	**0.33**	**21**	P	**Pg**	**16 32 05.7**	**0.0**
FSK				S	**Sg**	**16 32 10.9**	**+0.7**
VLMS	**Volimes, Zakyn**	**0.34**	**144**	P	**Pg**	**16 32 05.9**	**+0.1**
VLMS				S	**Sg**	**16 32 10.9**	**+0.4**
VLMS				AML	AML	16 32 11.9	
	comp=E,13092µm,0.2s						
VLMS				AML	AML	16 32 12.1	
	comp=N,6668µm,0.1s						
EVGI	**Lefkada island**	**0.51**	**22**	P	**Pg**	**16 32 08.5**	**-0.4**
EVGI				S	**Sb**	**16 32 16.5**	**-0.3**
EVGI	**Lefkada island**	**0.51**	**22**	P	**Pg**	**16 32 08.7**	**-0.2**
EVGI				S	**Sb**	**16 32 16.6**	**-0.3**
MGNA	**Meganis**	**0.59**	**31**	P	**Pg**	**16 32 09.9**	**-0.5**
MGNA				S	**Sb**	**16 32 18.9**	**-0.2**
MGNA				AML	AML	16 32 19.6	
	comp=N,1478µm,0.2s						
MGNA				AML	AML	16 32 19.8	
	comp=E,1788µm,0.1s						
AST1	**Astakos**	**0.66**	**54**	P	**Pg**	**16 32 11.6**	**-0.2**
AST1				S	**Sg**	**16 32 20.9**	**+0.4**
LKD2	**Lefkada island**	**0.67**	**17**	P	**Pg**	**16 32 10.8**	**-1.1**
LKD2	**Lefkada island**	**0.67**	**17**	P	**Pg**	**16 32 11.8**	**-0.1**
LKD2				S	**Sb**	**16 32 22.1**	**+0.7**
LKD2				AML	AML	16 32 22.8	
	comp=N,670µm,0.4s						
LKD2				AML	AML	16 32 28.7	
	comp=E,1262µm,0.2s						
TSLK	**Tsoukalades, L**	**0.70**	**16**	P	**Pg**	**16 32 12.2**	**-0.3**
TSLK	**Tsoukalades, L**	**0.70**	**16**	P	**Pg**	**16 32 12.2**	**-0.3**
TSLK				S	**Sb**	**16 32 22.6**	**+0.2**
TSLK				AML	AML	16 32 28.8	
	comp=N,1172µm,0.4s						
TSLK				AML	AML	16 32 30.6	
	comp=E,1253µm,0.4s						
PDO	**Prodromos**	**0.76**	**54**	P	**Pg**	**16 32 13.1**	**-0.4**
PDO	**Prodromos**	**0.76**	**54**	P	**Pg**	**16 32 13.2**	**-0.4**
RLS	**Riolos of Patr**	**0.84**	**96**	P	**Pg**	**16 32 14.5**	**-0.6**
RLS				S	**Sb**	**16 32 27.2**	**+0.8**
	comp=E,310nm,0.3s						
RLS	**Riolos of Patr**	**0.84**	**96**	P	**Pg**	**16 32 14.6**	**-0.6**
PVO	**Paravola**	**0.99**	**62**	P	**Pb**	**16 32 17.8**	**0.0**
PVO				S	**Sn**	**16 32 33.2**	**+0.9**
	comp=E,2µm,0.2s						
PVO	**Paravola**	**0.99**	**62**	P	**Pb**	**16 32 17.9**	**0.0**
DRO	**Drossia**	**1.05**	**101**	P	**Pb**	**16 32 18.4**	**-0.4**
DRO	**Drossia**	**1.05**	**101**	P	**Pb**	**16 32 18.4**	**-0.4**
EFP	**Efpalio**	**1.21**	**76**	P	**Pn**	**16 32 20.7**	**-0.7**
EFP	**Efpalio**	**1.21**	**76**	P	**Pn**	**16 32 21.0**	**-0.4**
LAKA	**Lakka**	**1.24**	**85**	P	**Pn**	**16 32 21.6**	**-0.2**
LAKA				S	**Sg**	**16 32 39.2**	**+0.3**
	comp=E,155nm,0.5s						
LAKA	**Lakka**	**1.24**	**85**	P	**Pn**	**16 32 21.7**	**-0.2**
ANX	**Ano Chora**	**1.27**	**69**	P	**Pn**	**16 32 22.1**	**-0.2**
ANX	**Ano Chora**	**1.27**	**69**	P	**Pb**	**16 32 22.9**	**+0.3**
SERG	**Sergoula**	**1.32**	**78**	P	**Pn**	**16 32 23.0**	**0.0**
SERG	**Sergoula**	**1.32**	**78**	P	**Pn**	**16 32 23.0**	**0.0**
IGT	**Igoumenitsa**	**1.38**	**358**	P	**Pb**	**16 32 24.2**	**-0.2**

*IDC **03** 16:34:56.1±4.5, 4.96S×153.70E, h112km±31km, mb3.2/6, mb1 3.4/6, mb1mx3.3/32, mbtmp3.5/6, Error ellipse: s-maj=46.4km s-min=21.8km az=105.0*

ISC 03 16:34:55.6±1.3, 4°.8S±0°.1×153°.8E±0°.1, h105km, n8, σ1s.18/10, mb3.3/6, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.84	286	P	Pn	16 35 26.7	+0.3
	12nm,0.3s,baz=44,slow=0.6,SNR=14						
KRVT				S	Sn	16 35 49.9	+0.1
	27nm,0.3s,baz=13,slow=22,SNR=24						
PMG	Port Moresby	8.01	235	P	Pn	16 36 51.0	+1.7
	2.7nm,0.3s,baz=45,slow=12,SNR=6.9						
PMG				S	Sn	16 38 17.7	-0.5
	0.8nm,0.3s,baz=287,slow=13,SNR=2.6						
WRA	Warramunga Arr	24.18	230	P	P	16 40 00.9	-1.5
	0.8nm,0.7s,baz=54,slow=9.9,SNR=5.3						
ASAR	Alice Springs	26.81	224	P	P	16 40 24.4	-1.8
	0.5nm,0.8s,baz=55,slow=9.0,SNR=11						
SONM	Songino Array	66.88	327	P	P	16 45 36.3	-0.4
	0.2nm,0.4s,baz=139,slow=6.3,SNR=2.3						
MKAR	Makanchi Array	81.00	319	P	P	16 46 59.0	+0.2
	0.2nm,0.7s,baz=99,slow=7.8,SNR=4.5						
ZALV	Zalesovo Beam	81.72	326	P	P	16 47 03.0	+0.5
	0.2nm,0.3s,baz=134,slow=6.2,SNR=2.2						
ILAR	Eielson Array	81.81	22	P	P	16 47 03.1	+0.4
	0.7nm,1.1s,baz=248,slow=4.8,SNR=2.9						

IDC 03 16:38:13.3±5.3, 4°.73S×153°.73E, h109km±35km, mb3.1/3, mb1 3.4/4, mb1mx3.2/35, mbtmp3.7/4, MS3.5/1, Ms1 3.5/1, ms1mx2.7/13, Error ellipse: s-maj=54.8km s-min=23.1km az=97.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.75	284	P	Pn	16 38 42.8	-0.3
	19nm,0.3s,baz=222,slow=0.9,SNR=14						
KRVT				S	Sn	16 39 06.0	+0.2
	32nm,0.3s,baz=123,slow=20,SNR=8.0						
PMG	Port Moresby	8.01	234	P	Pn	16 40 07.9	+1.0
	3.0nm,0.3s,baz=54,slow=7.1,SNR=9.5						
PMG				S	Sn	16 41 37.9	+2.0
	1.0nm,0.3s,baz=66,slow=19,SNR=3.6						
SIJI	Sorong	22.76	279	LR	LR	16 51 53.1	
	comp=Z,121nm,21.7s,baz=153,slow=36						
WRA	Warramunga Arr	24.19	230	P	P	16 43 19.4	-0.5
	1.0nm,0.7s,baz=53,slow=10,SNR=5.1						
ASAR	Alice Springs	26.84	224	P	P	16 43 42.9	-0.8
	0.7nm,0.9s,baz=53,slow=9.0,SNR=8.6						
MKAR	Makanchi Array	80.88	319	P	P	16 50 16.1	+0.6
	0.1nm,0.5s,baz=109,slow=5.6,SNR=2.6						

IDC 03 16:39:21.6±0.9, 63°.79N×149°.24W, h116km±9km, mb3.6/13, mb1 3.7/16, mb1mx3.5/50, mbtmp4.0/16, Error ellipse: s-maj=17.4km s-min=10.8km az=121.0
NEIC 03 16:39:22.9±1.3, 63°.89N±0°.03×149°.04W±0°.08, h129km±4km, Error ellipse: s-maj=5.2km s-min=3.6km az=70.0
AEIC 03 16:39:23.9±1.0, 63°.89N±0°.03×149°.02W±0°.08, h119km±4km, ML3.5/125, mb4.2/4(NEIC), Error ellipse: s-maj=5.2km s-min=4.6km az=122.0
ISC 03 16:39:22.8±0.6, 63°.88N±0°.03×149°.04W±0°.03, h123km±5km, n139, σ1s.01/152, mb3.9/13, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCK	McKinley	0.15	162		Pn	16 39 40.4	+0.7
MCK					Sn	16 39 53.2	+0.9
BWN	Browne	0.35	328		Pn	16 39 41.0	+0.8
BWN					Sn	16 39 53.9	+0.5
RND	Reindeer	0.48	170		Pn	16 39 41.5	+0.5
RND					Sn	16 39 55.0	+0.3
NEA	Nenana	0.70	359		Pn	16 39 43.0	+0.6
TRF	Thorofare Moun	0.70	233		Pn	16 39 43.5	+0.9
TRF					Sn	16 39 58.2	+0.6
WRH	Wood River Hil	0.73	35		Pn	16 39 43.1	+0.6
WRH					Sn	16 39 57.8	+0.2
BPAW	Bear Paw Mtn.	0.89	285		Pn	16 39 44.6	+0.6
BPAW					Sn	16 39 60.0	0.0
KTH	Kantishna Hill	0.90	250		Pn	16 39 45.0	+0.9
KTH					Sn	16 40 00.8	+0.5
CCB	Clear Creek Bu	0.94	34		Pn	16 39 45.0	+0.6
CCB					Sn	16 40 00.4	-0.3
WAT2	Susitna Watana	0.94	167		Pn	16 39 45.0	+0.4
WAT2					Sn	16 40 01.3	+0.2
HUR	Hurricane	0.94	197		Pn	16 39 45.2	+0.7
HDA	Harding Lake	1.06	59		Pn	16 39 46.2	+0.6
HDA					Sn	16 40 03.0	+0.1
WAT1	Susitna Watana	1.08	168		Pn	16 39 46.2	+0.4
DHY	Denali Highway	1.10	136		Pn	16 39 47.0	+0.8
TCOL	CIGO, UAF Yank	1.12	27		Pn	16 39 46.8	+0.7
TCOL					Sn	16 40 04.1	+0.2
COLA	College	1.12	27		Pn	16 39 46.7	+0.6
COLA					Sn	16 40 04.0	0.0
MDM	Murphy Dome	1.14	18		Pn	16 39 47.1	+0.7
MDM					Sn	16 40 04.3	-0.1
PS08	TAPS Pump Stn8	1.18	55		Pn	16 39 47.2	+0.4
IL31		1.30	45		Pn	16 39 48.2	+0.3
ILAR	Eielson Array	1.30	45	P	Pn	16 39 48.3	+0.3
	61nm,0.3s,baz=229,slow=11,SNR=4418						
ILAR				LR	LR	16 39 53.7	
	comp=Z,80nm,21.5s,baz=85,slow=23						
ILAR				S	Sn	16 40 07.5	+0.2
	40nm,0.3s,baz=235,slow=20,SNR=21						
ILAR	Eielson Array	1.30	45		Pn	16 39 47.8	-0.2
MLY	Manley	1.37	328		Pn	16 39 49.5	+0.6
POKR	Poker Plat Res	1.42	29		Pn	16 39 50.0	+0.6
WAT6	Susitna Watana	1.43	155		Pn	16 39 50.4	+0.7
CAST	Castle Rocks	1.44	253		Pn	16 39 50.1	+0.5
CHUM	Lake Minchumin	1.45	272		Pn	16 39 50.5	+0.8
PS07	TAPS Pump Stn7	1.48	13		Pn	16 39 50.8	+0.8
PS10	TAPS Pump St10	1.53	106		Pn	16 39 52.1	+1.4
PPLA	Purkeypile	1.73	237		Pn	16 39 54.0	+0.8
PAX	Paxson	1.85	118		Pn	16 39 55.1	+0.6
RIDG	Independent Ri	1.87	92		Pn	16 39 55.5	+0.8
PS06	TAPS Pump Stn6	2.01	352		Pn	16 39 57.1	+0.7
SML	Sawmill	2.10	171		Pn	16 39 58.5	+0.8
GHO	Glory Hole Cre	2.12	179		Pn	16 39 58.6	+0.8
SCM	Sheep Creek Mo	2.20	158		Pn	16 39 59.5	+0.6
SKT	Skwentna	2.22	212		Pn	16 39 59.3	+0.2
DOT	Dot Lake	2.22	94		Pn	16 39 59.5	+0.4
PRP	Porcupine Dome	2.23	41		Pn	16 39 59.7	+0.4
SCRK	Sand Creek	2.23	85		Pn	16 39 59.9	+0.5
PMR	Palmer	2.30	181		Pn	16 40 00.8	+0.9
KNK	Knik Glacier	2.49	174		Pn	16 40 03.5	+1.0
SUA	Susitna One	2.55	199		Pn	16 40 05.2	+1.8
MENT	Mentasta	2.57	109		Pn	16 40 04.4	+0.9
RC01	Rabbit Creek A	2.82	187		Pn	16 40 09.2	+2.4
IM03		2.91	319		Pn	16 40 08.3	+0.5
IMAR	Indian Mountai	2.91	319		Pn	16 40 08.1	+0.2
SPCG	Spurr Capps Gl	2.94	209		Pn	16 40 09.7	+1.3
PS12	TAPS Pump St12	3.01	142		Pn	16 40 09.6	+0.4
SPBG	Spurr Blockage	3.05	212		Pn	16 40 11.7	+1.9
PWL	Port Wells	3.05	173		Pn	16 40 10.5	+0.8
JPK	Jack Peak	3.05	157		Pn	16 40 09.7	-0.1
SPCR	Spurr Chakacha	3.06	210		Pn	16 40 11.8	+1.8
CKL	Chakachamna La	3.10	211		Pn	16 40 11.6	+1.1
FYU	Fort Yukon	3.14	29		Pn	16 40 11.9	+1.2
GLI	Glacier Island	3.14	162		Pn	16 40 11.0	0.0
CAPN	Captain Cook N	3.27	198		Pn	16 40 15.8	+3.2
TTA	Tatalina	3.28	256		Pn	16 40 13.0	+0.2
TT01	Tatalina	3.29	256		Pn	16 40 13.2	+0.3
BC03		3.36	101		Pn	16 40 13.8	+0.1
BCAR	Beaver Creek A	3.36	101		Pn	16 40 13.6	-0.2
FID	Port Fidalgo	3.36	158		Pn	16 40 13.9	+0.1
COLD	Coldfoot	3.40	352		Pn	16 40 14.8	+0.6
SLKM	Skilak Lake	3.43	190		Pn	16 40 15.8	+1.0
GLB	Gilahina Butte	3.44	133		Pn	16 40 15.7	+0.8
EGAK	Eagle	3.55	72		Pn	16 40 16.2	0.0
EYAK	Cordova Ski Ar	3.68	154		Pn	16 40 18.1	+0.1
HIN	Hinchinbrook I	3.69	160		Pn	16 40 18.2	0.0
VRDI	Verde Repeater	3.71	133		Pn	16 40 18.9	+0.3
DFR	Drift River	3.71	209		Pn	16 40 19.9	+1.4
MCARA	McCarthy VSAT	3.74	129		Pn	16 40 20.6	+1.8
RDJH	Redoubt Jeurge	3.74	210		Pn	16 40 20.4	+1.5
SEW	Seward	3.79	183		Pn	16 40 19.7	+0.2
RDWB	Redoubt West	3.84	209		Pn	16 40 21.4	+1.1
RSO	Redoubt South	3.85	209		Pn	16 40 21.6	+1.2
GOAT	Goat Mountain	3.88	147		Pn	16 40 20.6	0.0
RED	Redoubt Volcan	3.89	208		Pn	16 40 22.0	+1.1
BVCY	Beaver Creek	3.99	108		Pn	16 40 22.2	0.0
BM03	Burnt Mountain	4.00	25		Pn	16 40 22.6	+0.3
BMAR	Burnt Mountain	4.01	25		Pn	16 40 22.5	0.0
RAGM	Ragged Mountai	4.06	148		Pn	16 40 23.3	+0.2
PTPK	Patty Peak	4.07	129		Pn	16 40 24.3	+0.9
SVW2	Sparrevohn	4.12	230		Pn	16 40 24.2	+0.3
CRQM	Cirque	4.17	136		Pn	16 40 24.6	-0.1
HMT	Hamilton	4.20	146		Pn	16 40 24.8	-0.2
BALM	Baldy	4.22	130		Pn	16 40 25.5	+0.2
BRLK	Bradley Lake	4.22	193		Pn	16 40 26.3	+1.0
BRSE	Bradley Lake S	4.23	192		Pn	16 40 26.1	+0.8
YUK1	Sand Pete Hill	4.25	110		Pn	16 40 25.7	0.0
DAWY	Dawson	4.26	83		Pn	16 40 26.1	+0.4
TGL	Tana Glacier	4.27	134		Pn	16 40 25.3	-0.6
ILW	Iliamna West	4.29	209		Pn	16 40 27.1	+0.8
KIAG	Kiagna River	4.29	131		Pn	16 40 26.3	-0.1
YUK2	White River	4.30	115		Pn	16 40 27.3	+0.9
IVE	Iliamna Volcan	4.31	208		Pn	16 40 27.4	+0.9
ILS	Iliamna Low So	4.37	208		Pn	16 40 28.5	+1.2
HOM	Homer	4.41	197		Pn	16 40 28.8	+1.0
BARN	Barnard Glacie	4.44	126		Pn	16 40 30.0	+1.6
YUK3	Moose Creek	4.46	114		Pn	16 40 29.6	+1.0
CNPM	China Poot	4.49	194		Pn	16 40 29.5	+0.6
WAX	Waxell Ridge	4.50	137		Pn	16 40 28.9	-0.2
SUCK	Suckling Hills	4.55	145		Pn	16 40 29.7	0.0
CTGM	Chitina Glacie	4.62	126		Pn	16 40 32.5	+1.8
GRNC	Granite Creek	4.64	130		Pn	16 40 31.0	0.0
TOLK	Toolik Lake Re	4.79	358		Pn	16 40 34.4	+1.6
PCA	Pinnacle	5.61	129		Pn	16 40 44.8	+0.8
EPYK	Eagle Plains	5.77	59		Pn	16 40 46.1	+0.2
YUK6	Outpost Mounta	5.77	116		Pn	16 40 46.8	+0.7
YUK7	Dusty Glacier	6.10	118		Pn	16 40 52.0	+1.4
HYT	Haines Junctio	6.18	114		Pn	16 40 53.7	+2.0
KCG	Knife Ck. Glac	6.32	211		Pn	16 40 54.2	+0.8
KDAK	Kodiak Island	6.36	197	P	Pn	16 40 52.1	-1.8
	4.0nm,0.3s,baz=56,slow=6.5,SNR=29						
KDAK				S	Sn	16 42 00.0	-5.0
	4.1nm,0.3s,baz=232,slow=20,SNR=6.8						
KABU	Katmai Buttres	6.39	211		Pn	16 40 54.5	+0.1
ANCK	Angle Creek	6.50	212		Pn	16 40 56.5	+0.6
OHAK	Old Harbor	7.00	199		Pn	16 41 01.0	-1.5
RDOG	Red Dog Mine	7.04	313		Pn	16 41 03.7	+0.7
WHY	Whitehorse	7.35	110		Pn	16 41 07.5	+0.2
INK	Inuvik	7.70	48	P	Pn	16 41 12.6	+0.8
	4.4nm,0.3s,baz=234,slow=17,SNR=195						
INK				S	Sn	16 42 39.1	+1.9
	0.0nm,0.3s,baz=334,slow=32,SNR=3.0						
INK	Inuvik	7.70	48		Pn	16 41 12.1	+0.3
C36M	Paulatuk	11.27	50		Pn	16 41 58.0	-1.8
YKA	Yellowknife Ar	15.49	79	P	Pn	16 42 53.1	-1.0
	0.4nm,0.3s,baz=291,slow=13,SNR=21						
RES	Resolute Bay	21.04	37	P	P	16 43 57.1	+0.9
	0.5nm,0.3s,baz=242,slow=14,SNR=5.1						
RES	Resolute Bay	21.04	37	IAmb	IAmb	16 44 04.5	
	comp=Z,20nm,1.9s						
SEY	Seymchan	25.45	295	P	P	16 44 38.6	-0.1
	comp=Z,1.5nm,0.4s,baz=85,slow=7.0,SNR=21						
PD31	Pinedale Array	30.88	114	P	P	16 45 25.7	-1.7
PD31				IAmb	IAmb	16 45 29.5	
	comp=Z,3.8nm,0.8s						
PDAR	Pinedale Array	30.88	114	P	P	16 45 27.8	+0.4
	comp=Z,0.9nm,0.5s,baz=73,slow=36,SNR=13						
PDAR	Pinedale Array	30.88	114	P	P	16 45 25.0	-2.5
SPITS	Spitsbergen Ar	37.90	5	P	P	16 46 27.7	+0.5
	comp=Z,12nm,1.0s,baz=352,slow=8.7,SNR=5.4						
ARCES	ARCESS Array B	46.81	3	P	P	16 47 38.9	-0.4
	comp=Z,2.2nm,0.9s,baz=0.0,slow=9.8,SNR=3.7						
SONM	Songino Array	54.01	306	P	P	16 48 34.9	+1.1
	comp=Z,0.6nm,0.6s,baz=46,slow=8.3,SNR=8.4						
SONM	Songino Array	54.01	306	IAmb	IAmb	16 48 35.6	
	comp=Z,1.5nm,1.2s						
FINES	FINESS Array B	54.94	3	P	P	16 48 39.6	-0.5
	comp=Z,1.8nm,0.7s,baz=356,slow=5.6,SNR=12						
ZALV	Zalesovo Beam	55.32	325	P	P	16 48 42.1	-1.0
	comp=Z,1.1nm,0.4s,baz=16,slow=8.1,SNR=6.6						
EKA	Eskdalemuir Ar	58.23	22	P	P	16 49 04.6	+1.1
	comp=Z,0.4nm,0.4s,baz=343,slow=6.3,SNR=3.3						
MKAR	Makanchi Array	62.52	323	P	P	16 49 31.6	-1.2
	comp=Z,1.1nm,0.4s,baz=37,slow=6.9,SNR=37						
AKASG	Malin Array Be	65.75	1	P	P	16 49 53.1	-0.7
	comp=Z,0.7nm,0.4s,baz=2.9,slow=6.6,SNR=5.9						
GERES	GERESS Array B	66.80	12	P	P	16 50 01.8	+1.1
	comp=Z,0.2nm,0.4s,baz=352,slow=6.3,SNR=3.2						
CMAR	Chiang Mai Arr	82.84	298	P	P	16 51 31.3	-1.9
	comp=Z,0.3nm,0.6s,baz=31,slow=5.6,SNR=3.9						
VNDA	Vanda	144.31	196	PKP	PKPab	16 58 42.7	+2.2
	comp=Z,6.3nm,0.9s,baz=52,slow=3.4,SNR=2.6						
BOSA	Boshof	144.53	9	PKP	PKPab	16 58 42.6	-0.2
	comp=Z,2.2nm,0.9s,baz=322,slow=4.0,SNR=3.0						

IDC 03 16:50:25.4±3.0, 22°.95N×12°.00W, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.5/56, mbtmp3.8/5, ML3.2/1, Error ellipse: s-maj=83.0km s-min=36.1km az=69.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I11CV	MAIO ISLAND IN	13.05	236	i		18 11 50.0	
	baz=50,slow=308,SNR=1.8						
TORD	Torodi Ar. Bea	16.25	125	Pn	Pn	16 54 13.4	-1.8
	0.1nm,0.3s,baz=293,slow=13,SNR=3.0						
TORD				Sn	Sn	16 57 20.0	+3.7
	0.1nm,0.3s,baz=310,slow=28,SNR=3.9						
I48TN	KESRA INFRASON	22.51	51	i		19 22 00.0	
	baz=242,slow=320,SNR=5.3						
GERES	GERESS Array B	32.88	32	P	P	16 57 01.0	-0.2
	0.8nm,0.9s,baz=239,slow=8.7,SNR=4.7						
HFS	Hagfors	41.29	19	P	P	16 58 12.1	-0.2
	1.9nm,0.7s,baz=210,slow=8.6,SNR=4.7						
MKAR	Makanchi Array	76.44	45	P	P	17 02 17.2	+0.1
	0.5nm,0.7s,baz=289,slow=5.3,SNR=8.9						
SONM	Songino Array	90.50	36	P	P	17 03 29.8	+0.4
	0.2nm,0.5s,baz=290,slow=4.2,SNR=3.3						
ASAR	Alice Springs	148.72	98	PKPbc	PKPbc	17 10 14.8	-0.7
	0.8nm,0.8s,baz=276,slow=1.9,SNR=7.3						

IDC 03 16:55:19.1±8.9, 7°.93S×127°.89E, h147km±96km, mb3.2/2, mb1 3.2/5, mb1mx3.1/30, mbtmp3.6/5, Error ellipse: s-maj=68.3km s-min=38.2km az=43.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.34	192	P	Pn	16 57 44.0	+0.3
	0.2nm,0.3s,baz=4.1,slow=14,SNR=3.3						
FITZ				S	Sn	16 59 40.3	+2.2
	0.1nm,0.3s,baz=260,slow=18,SNR=2.4						
WRA	Warramunga Arr	13.48	153	P	Pn	16 58 22.9	-1.7
	0.2nm,0.3s,baz=320,slow=13,SNR=6.6						
WRA				S	Sn	17 00 52.9	-0.9
	0.1nm,0.3s,baz=329,slow=20,SNR=3.9						
ASAR	Alice Springs	16.68	160	P	P	16 59 04.0	-0.1
	0.1nm,0.3s,baz=335,slow=10,SNR=7.4						
ASAR				S	Sn	17 02 11.9	+1.3
	0.1nm,0.3s,baz=344,slow=27,SNR=3.4						
MKAR	Makanchi Array	67.88	328	P	P	17 06 02.1	+0.4
	0.5nm,0.6s,baz=128,slow=7.6,SNR=4.7						
ZALV	Zalesovo Beam	71.51	335	P	P	17 06 23.3	-0.4
	0.6nm,0.7s,baz=114,slow=3.6,SNR=3.5						

NEIC 03 16:59:07.8±1.8, 17°.39N±0°.05×97°.15W±0°.05, h72km±12km, Error ellipse: s-maj=8.0km s-min=6.1km az=205.0
MEX 03 16:59:08.9±1.0, 17°.39N×97°.17W, h74km±6km, MD4.3
IDC 03 16:59:11.6±3.2, 17°.62N×96°.86W, h86km±37km, mb3.2/5, mb1 3.6/7, mb1mx3.3/36, mbtmp3.6/7, MS3.1/1, Ms1 3.1/1, ms1mx2.4/18, Error ellipse: s-maj=56.5km s-min=28.9km az=19.0
ISC 03 16:59:08.0±0.7, 17°.43N±0°.03×97°.14W±0°.03, h64km±6km, n74, σ1s.56/101, mb4.0/8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	0.53	133	i P	Pn	16 59 21.1	+0.3
VHO				i S	Sn	16 59 30.5	+0.3
OXBJ	Oaxaca	0.54	133		Pn	16 59 21.2	+0.2
OXBJ					Sn	16 59 30.6	+0.3
OXBJ	Oaxaca	0.54	133	eP	Pn	16 59 21.2	+0.2
OXBJ				eS	Sn	16 59 30.6	+0.3
YOIG	Yosondua	0.69	214	i P	Pn	16 59 22.9	+0.1
YOIG				eS	Sn	16 59 33.8	+0.3
HLIG	Huajuapan de L	0.75	302	i P	Pn	16 59 23.2	-0.1
HLIG				eS	Sn	16 59 34.3	-0.2
FTIG	Fresnillo de T	1.06	297	eP	Pn	16 59 27.3	+0.5
FTIG				eS	Sn	16 59 40.7	-0.6
TLIG	Tlapa	1.37	276		Pn	16 59 31.2	0.0
TLIG				Sn	Sn	16 59 47.1	-1.5
TLIG	Tlapa	1.37	276		Pn	16 59 31.2	0.0
TLIG					Sn	16 59 47.7	-0.9
TLIG	Tlapa	1.37	276	eP	Pn	16 59 31.2	0.0
TLIG				eS	Sn	16 59 47.7	-0.9
HMTT	Tlapaneco	1.40	285		Pn	16 59 31.5	-0.1
HMTT					Sn	16 59 49.1	-0.2
HMTT	Tlapaneco	1.40	285	eP	Pn	16 59 31.5	-0.1
HMTT				eS	Sn	16 59 49.1	-0.2
PNIG	Pinotepa	1.40	223		Pn	16 59 30.2	-1.4
PNIG					Sn	16 59 47.4	-1.9
PNIG	Pinotepa	1.40	223	eP	Pn	16 59 30.2	-1.4
PNIG				i S	Sn	16 59 47.4	-1.9
PEIG	Puerto Escondi	1.43	180	eP	Pn	16 59 31.2	-0.7
PHPU	Puebla	1.88	329	i P	Pn	16 59 47.6	+9.5
HUIG	Huatulco	1.93	149		Pn	16 59 39.2	+0.6
HUIG	Huatulco	1.93	149	eP	Pn	16 59 39.2	+0.6
PPM	Popocatepetl	2.15	319	eP	Pn	16 59 42.3	+0.2
CMIG	Matias Romero	2.18	99	P	Pn	16 59 42.4	+0.4
	25nm,0.3s,baz=280,slow=12,SNR=221						
CMIG				S	Sn	17 00 07.7	-0.3
	46nm,0.3s,baz=66,slow=18,SNR=11						
CMIG				LR	LR	17 00 41.3	
	comp=Z,77nm,18.1s,baz=248,slow=46						
CMIG	Matias Romero	2.18	99	eP	Pn	16 59 42.4	+0.4
AMVM	AMECAMECA	2.30	317		Pn	16 59 44.4	+0.4
AMVM	AMECAMECA	2.30	317	eP	Pn	16 59 44.4	+0.4
YAIG	Yautepec	2.32	308		Pn	16 59 44.9	+0.9
YAIG	Yautepec	2.32	308	eP	Pn	16 59 44.9	+0.9
LVIG	Laguna Verde	2.38	17		Pn	16 59 42.8	-1.9
LVIG					Sn	17 00 10.1	-2.7
LVIG	Laguna Verde	2.38	17	eP	Pn	16 59 42.8	-1.9
LVIG				i S	Sn	17 00 10.1	-2.7
MEIG	Mezcala	2.42	282		Pn	16 59 45.8	+0.6
MEIG					Sn	17 00 12.0	-1.8
MEIG	Mezcala	2.42	282	eP	Pn	16 59 45.8	+0.6
MEIG				eS	Sn	17 00 12.0	-1.8
PLIG	Platanillo	2.44	293		Pn	16 59 46.5	+0.8
PLIG	Platanillo	2.44	293	eP	Pn	16 59 46.5	+0.8
ACP2	Acapulco	2.69	258		Pn	16 59 47.3	-1.6
ACP2					Sn	17 00 18.2	-2.1
ACP2	Acapulco	2.69	258	i P	Pn	16 59 47.3	-1.6
ACP2				i S	Sn	17 00 18.2	-2.1
MAVM	Malinalco, Edo	2.70	304		Pn	16 59 50.0	+0.7
MAVM	Malinalco, Edo	2.70	304	eP	Pn	16 59 50.0	+0.7
VTVM	Tizayuca	2.79	327		Pn	16 59 54.3	+3.6
VTVM	Tizayuca	2.79	327	eP	Pn	16 59 54.3	+3.6
CAIG	El Cayaco	3.02	263		Pn	16 59 52.0	-1.4
CAIG	El Cayaco	3.02	263	eP	Pn	16 59 52.0	-1.4
ARIG	Puente Sto Nin	3.17	286		Pn	16 59 56.5	+1.0
ARIG					Sn	17 00 28.6	-3.6
ARIG	Puente Sto Nin	3.17	286	i P	Pn	16 59 56.5	+1.0
ARIG				eS	Sn	17 00 28.6	-3.6
ZIIG	Zihuatanejo	4.13	273		Pn	17 00 08.1	-0.5
ZIIG	Zihuatanejo	4.13	273	eP	Pn	17 00 08.1	-0.5
PCIG		4.13	114		Pn	17 00 08.2	-0.5
PCIG					Sn	17 00 55.5	-0.2
PCIG		4.13	114	i P	Pn	17 00 08.2	-0.5
PCIG				i S	Sn	17 00 55.5	-0.2
CCIG	Comitan	4.92	103		Pn	17 00 18.4	-1.2
CCIG					Sn	17 01 17.8	+2.3
CCIG	Comitan	4.92	103	Pn	Pn	17 00 20.6	+0.9
CCIG	Comitan	4.92	103	i P	Pn	17 00 18.4	-1.2
CCIG				i S	Sn	17 01 17.8	+2.3
MMIG	Aquila	5.97	279		Pn	17 00 33.9	0.0
MMIG	Aquila	5.97	279	eP	Pn	17 00 33.9	0.0
TEIG	Tepich	8.84	70	P	Pn	17 01 12.5	-0.5
	4.1nm,0.3s,baz=322,slow=0.7,SNR=21						
TEIG				S	Sn	17 02 42.6	-8.6
	3.8nm,0.3s,baz=319,slow=21,SNR=10						
TXAR	Lajitas Array	13.27	334	P	Pn	17 02 16.2	+2.6
	0.0nm,0.3s,baz=159,slow=14,SNR=3.4						
553A	Crawfordville	17.20	40		P	17 03 04.3	-0.3
MIAR	Mount Ida	17.34	10	P	P	17 03 05.9	-0.3
UALR	University of	17.79	13	P	Pn	17 03 11.8	+0.5
UALR				IAmb	IAmb	17 03 48.9	
	comp=Z,18nm,1.4s						
X48A	Hartselle	19.20	26	P	P	17 03 26.6	-0.1
PLAL	Pickwick Lake	19.26	23	P	P	17 03 27.1	-0.2
PLAL				IAmb	IAmb	17 03 49.5	
	comp=Z,22nm,1.8s						
LCAR	Lake Charles	19.31	15	P	P	17 03 28.1	+0.3
ANMO	Albuquerque	19.32	336	LR	LR	17 11 27.7	
	comp=Z,60nm,21.2s,baz=62,slow=38						
GOGA	Godfrey	20.10	35	P	P	17 03 35.7	-0.8
SWET	Sewanee	20.33	27	P	P	17 03 38.5	-0.5
SWET				IAmb	IAmb	17 03 41.2	
	comp=Z,6.3nm,0.7s						
WVT	Waverly	20.37	22	P	P	17 03 39.0	-0.4
WVT				IAmb	IAmb	17 04 02.3	
	comp=Z,19nm,1.8s						
W50A	Signal Mountai	20.59	28	P	P	17 03 41.0	-0.9
W50A				IAmb	IAmb	17 04 23.0	
	comp=Z,14nm,1.4s						
CLTN	Cedars of Leba	20.91	25	P	P	17 03 45.6	+0.4
TKL	Tuckaleechee C	21.69	31	P	P	17 03 52.1	-1.5
	comp=Z,3.4nm,1.0s,baz=215,slow=16,SNR=3.2						
TKL	Tuckaleechee C	21.69	31	P	P	17 03 53.6	0.0
TKL				IAmb	IAmb	17 04 20.7	
	comp=Z,25nm,1.8s						
T49A	Edmonton	22.11	25	P	P	17 03 57.4	-0.6
T49A				IAmb	IAmb	17 03 59.4	
	comp=Z,13nm,1.5s						
WCI	Wyandotte Cave	22.79	22	P	P	17 04 05.0	-0.3
WCI				IAmb	IAmb	17 04 32.5	
	comp=Z,5.8nm,0.8s						
V55A	Taylorsville	23.16	35	P	P	17 04 07.2	-1.9
Y60A	Bolivia	23.66	42	P	P	17 04 14.3	+0.6
O49A	Covington	25.24	23	P	P	17 04 28.4	+0.4
O49A				IAmb	IAmb	17 05 02.9	
	comp=Z,12nm,1.1s						
NVAR	Mina Array Bea	27.93	323	P	P	17 04 54.6	+2.0
	comp=Z,0.3nm,0.6s,baz=144,slow=9.5,SNR=3.1						
SCHQ	Schefferville	43.97	25	P	P	17 07 07.8	-0.9
	comp=Z,1.0nm,0.4s,baz=243,slow=10,SNR=6.0						
YKA	Yellowknife Ar	46.64	349	P	P	17 07 29.5	-0.2
	comp=Z,0.2nm,0.5s,baz=155,slow=7.3,SNR=4.4						
YKA				pP	pP	17 07 45.8	-0.9
	comp=Z,0.5nm,0.7s,baz=156,slow=7.4,SNR=6.9						
YKA				sP	sP	17 07 53.9	-0.5
	comp=Z,0.6nm,0.8s,baz=155,slow=7.1,SNR=6.1						
ILAR	Eielson Array	57.76	337	P	P	17 08 53.4	+1.2
	comp=Z,0.4nm,0.9s,baz=140,slow=7.1,SNR=3.7						

THE 03 17:11:19.8, 38°.20N×20°.37E, h8km±1km, ML2.6/10, Error ellipse: s-maj=1.7km s-min=0.6km az=203.0
ATH 03 17:11:20.1, 38°.22N×20°.39E, h6km±1km, ML2.5/3, Error ellipse: s-maj=2.1km s-min=0.9km az=251.0
ISC 03 17:11:20.0±1.1, 38°.22N±0°.03×20°.40E±0°.04, h6km±5km, n27, σ0s.61/50, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.03	117	P	Pg	17 11 21.4	+0.1
LXR1				S	Sg	17 11 22.4	+0.2
CHV1	Chavriata, Kef	0.04	203	P	Pg	17 11 21.5	+0.2
CHV1				S	Sg	17 11 22.6	+0.3
	88μm,0.3s						
KEF3	Kipouria, Keph	0.04	253	P	Pg	17 11 21.7	+0.2
KEF3				S	Sg	17 11 22.9	+0.5
KEF4	Livadi, Kephal	0.05	25	P	Pg	17 11 21.4	0.0
KEF4				S	Sg	17 11 22.7	+0.1
ARG2	Argostoli	0.08	118	P	Pg	17 11 22.1	+0.2
ARG2				S	Sg	17 11 23.4	+0.2
	11μm,0.2s						
KEF1	Kardakata, Kep	0.08	42	P	Pg	17 11 22.0	0.0
KEF1				S	Sg	17 11 23.2	-0.2
KEF2	Argostoli. Kep	0.09	126	P	Pg	17 11 22.3	+0.3
KEF2				S	Sg	17 11 23.5	+0.1
VLS	Valsamata	0.15	104	P	Pg	17 11 23.2	0.0
VLS				S	Sg	17 11 25.8	+0.4
	6μm,0.1s						
VLS	Valsamata	0.15	104	P	Pg	17 11 23.2	0.0
VLS				S	Sg	17 11 25.7	+0.4
VLS				AML	AML	17 11 25.9	
	comp=E,8746μm,0.1s						
VLS				AML	AML	17 11 25.9	
	comp=N,14783μm,0.2s						
VSK1	VASILIKIADES	0.23	34	P	Pg	17 11 24.9	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VSK1				S	Sg	17 11 28.9	+1.1
	comp=N,4μm,0.2s						
FSK	Fiskardo	0.28	28	P	Pg	17 11 25.6	+0.2
FSK				S	Sg	17 11 30.1	+1.0
	comp=N,1μm,0.2s						
FSK	Fiskardo	0.28	28	P	Pg	17 11 25.6	+0.2
FSK				S	Sg	17 11 30.2	+1.0
FSK				AML	AML	17 11 31.0	
	comp=E,2806μm,0.1s						
FSK				AML	AML	17 11 32.8	
	comp=N,1460μm,0.3s						
VLMS	Volimes, Zakyn	0.40	148	P	Pg	17 11 28.0	+0.2
VLMS				S	Sg	17 11 34.3	+1.3
VLMS				AML	AML	17 11 39.4	
	comp=E,1738μm,0.2s						
VLMS				AML	AML	17 11 42.7	
	comp=N,1870μm,0.4s						
EVGI	Lefkada island	0.45	26	P	Pg	17 11 28.8	0.0
EVGI				S	Sg	17 11 36.0	+1.3
	comp=N,540nm,0.3s						
EVGI	Lefkada island	0.45	26	P	Pg	17 11 28.8	0.0
EVGI				S	Sg	17 11 35.5	+0.8
MGNA	Meganis	0.54	35	P	Pg	17 11 30.2	-0.2
MGNA				S	Sg	17 11 38.6	+1.2
LKD2	Lefkada island	0.61	19	P	Pg	17 11 31.3	-0.4
LKD2				S	Sg	17 11 40.4	+0.7
	comp=N,208nm,0.4s						
LKD2	Lefkada island	0.61	19	P	Pg	17 11 31.1	-0.7
LKD2				S	Sg	17 11 41.0	+1.3
TSLK	Tsoukalades, L	0.64	18	P	Pg	17 11 32.0	-0.3
TSLK				S	Sb	17 11 42.2	-0.6
	comp=N,212nm,0.4s						
TSLK	Tsoukalades, L	0.64	18	P	Pg	17 11 32.1	-0.3
TSLK				S	Sg	17 11 41.9	+1.1
PDO	Prodromos	0.72	58	P	Pg	17 11 33.7	-0.3
PDO				S	Sb	17 11 45.2	0.0
PDO	Prodromos	0.72	58	P	Pg	17 11 33.3	-0.7
PDO				S	Sg	17 11 44.0	+0.7
RLS	Riolos of Patr	0.86	100	P	Pg	17 11 36.0	-0.4
PVO	Paravola	0.97	65	P	Pg	17 11 38.7	0.0
PVO				S	Sn	17 11 54.7	+0.5
	comp=N,205nm,0.4s						
PVO	Paravola	0.97	65	P	Pg	17 11 38.5	-0.1
DRO	Drossia	1.07	104	P	Pg	17 11 40.3	-0.2
IGT	Igoumenitsa	1.32	358	P	Pn	17 11 44.0	-0.9

PAS 03 17:20:42.6±3.7,34°.13N±0°.04×118°.41W±0°.07,h2km±7km, ML1.9,Error ellipse: s-maj=0.0km s-min=0.0km az=206.0
NEIC 03 17:20:38.9±0.6,33°.93N±0°.05×118°.51W±0°.05,h6km±8km, Error ellipse: s-maj=8.2km s-min=4.0km az=218.0, Southern California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PASC	Pasadena Art C	0.36	48	Pg	Pg	17 20 45.9	-0.1
MWC	Mount Wilson	0.48	51	Pg	Pg	17 20 48.3	0.0
OSI	Osito Audit: C	0.71	346	Pg	Pg	17 20 52.1	-0.5
ISA	Isabella, Lake	1.73	1	Pn	Pn	17 21 09.5	-0.2
PFO	Pinyon Flats O	1.74	100	Pn	Pn	17 21 10.0	+0.2
XPFO	Pion Flat	1.74	100	Pn	Pn	17 21 10.0	+0.1
GSC	Goldstone, Bar	1.96	45		Pb	17 21 15.6	+0.3

BEO 03 17:27:43.1±0.9,38°.30N×20°.03E,h0km,ML3.4/5
THE 03 17:27:44.8,38°.38N×20°.42E,h5km±2km,ML3.2/13,Error ellipse: s-maj=2.7km s-min=0.4km az=69.0
ATH 03 17:27:44.6,38°.39N×20°.42E,h10km±3km,ML3.4/7,Error ellipse: s-maj=3.1km s-min=0.7km az=173.0
IDC 03 17:27:46.5±9.1,38°.92N×20°.74E,h0km,mb3.6/3, mb1 3.5/4,mb1mx3.3/36,mbtmp3.5/4,ML3.1/1,Error ellipse: s-maj=168.4km s-min=31.7km az=34.0
ISC 03 17:27:44.5±0.8,38°.37N±0°.02×20°.41E±0°.03,h11km±5km, n52,σ1§16/79,mb3.5/3,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF1	Kardakata, Kep	0.11	154	P	Pg	17 27 47.3	+0.1
KEF1				S	Sg	17 27 49.3	0.0
KEF4	Livadi, Kephal	0.12	175	P	Pg	17 27 47.8	+0.4
KEF4				S	Sg	17 27 50.2	+0.6
VSK1	VASILIKIADES	0.12	74	P	Pg	17 27 47.0	-0.6
FSK	Fiskardo	0.15	54	P	Pg	17 27 47.5	-0.4
FSK				S	Sg	17 27 49.1	-1.2
	29μm,0.2s						
FSK	Fiskardo	0.15	54	P	Pg	17 27 47.5	-0.4
FSK				S	Sg	17 27 49.6	-0.7
FSK				AML	AML	17 27 50.1	
	comp=N,36298μm,0.2s						
FSK				AML	AML	17 27 50.1	
	comp=E,78033μm,0.2s						
ARG2	Argostoli	0.20	163	P	Pg	17 27 49.0	+0.2
ARG2				S	Sg	17 27 52.5	+0.7
	comp=E,75μm,0.3s						
KEF2	Argostoli. Kep	0.22	164	P	Pg	17 27 49.2	+0.1
KEF2				S	Sg	17 27 53.1	+0.9
VLS	Valsamata	0.24	144	P	Pg	17 27 49.4	-0.2
VLS				S	Sg	17 27 53.1	+0.2
VLS				AML	AML	17 27 53.5	
	comp=N,21998μm,0.2s						
VLS				AML	AML	17 27 53.9	
	comp=E,14602μm,0.2s						
EVGI	Lefkada island	0.31	38	P	Pg	17 27 50.8	0.0
EVGI				S	Sg	17 27 55.6	+0.6
EVGI	Lefkada island	0.31	38	P	Pg	17 27 50.7	0.0
EVGI				S	Sg	17 27 55.6	+0.6
MGNA	Meganis	0.41	46	P	Pg	17 27 52.3	-0.3
MGNA				S	Sg	17 27 58.4	+0.3
MGNA				AML	AML	17 27 58.9	
	comp=N,38094μm,0.4s						
MGNA				AML	AML	17 27 58.9	
	comp=E,27917μm,0.4s						
LKD2	Lefkada island	0.46	25	P	Pg	17 27 53.2	-0.3
LKD2				S	Sg	17 28 00.4	+0.8
	comp=E,3μm,0.4s						
LKD2	Lefkada island	0.46	25	P	Pg	17 27 53.2	-0.3
LKD2				S	Sg	17 27 59.6	0.0
LKD2				AML	AML	17 28 02.6	
	comp=E,5222μm,0.2s						
LKD2				AML	AML	17 28 07.2	
	comp=N,6920μm,0.5s						
TSLK	Tsoukalades, L	0.49	23	P	Pg	17 27 53.9	-0.2
TSLK				S	Sg	17 28 01.3	+0.7
	comp=N,5μm,0.6s						
TSLK	Tsoukalades, L	0.49	23	P	Pg	17 27 54.0	0.0
VLMS	Volimes, Zakyn	0.54	158	P	Pg	17 27 54.6	-0.3
VLMS				S	Sg	17 28 03.3	+1.3
VLMS				AML	AML	17 28 04.0	
	comp=N,19600μm,0.5s						
VLMS				AML	AML	17 28 07.6	
	comp=E,12047μm,0.3s						
AST1	Astakos	0.56	72	P	Pg	17 27 55.0	-0.3
AST1				S	Sg	17 28 03.6	+0.9
	comp=E,8μm,0.2s						
PDO	Prodromos	0.65	69	P	Pg	17 27 56.2	-0.8
PDO				S	Sg	17 28 05.9	+0.4
	comp=E,4μm,0.5s						
PDO	Prodromos	0.65	69	P	Pg	17 27 56.6	-0.4
PDO				S	Sg	17 28 06.1	+0.6
PDO				AML	AML	17 28 10.4	
	comp=E,7079μm,0.5s						
PDO				AML	AML	17 28 10.4	
	comp=N,5795μm,0.4s						
KRI1	kERI	0.78	156	P	Pg	17 27 58.8	-0.7
KRI1				S	Sb	17 28 11.5	+0.9
	comp=N,5μm,0.2s						
RLS	Riolos of Patr	0.89	110	P	Pg	17 28 00.9	-0.7
RLS	Riolos of Patr	0.89	110	P	Pg	17 28 01.3	-0.3
PVO	Paravola	0.91	74	P	Pg	17 28 01.4	-0.6
PVO				S	Sb	17 28 15.5	+1.2
	comp=N,2μm,0.7s						
PVO	Paravola	0.91	74	P	Pg	17 28 01.6	-0.3
PVO				AML	AML	17 28 21.0	
	comp=E,3081μm,0.5s						
PVO				AML	AML	17 28 23.2	
	comp=N,2740μm,0.5s						
IGT	Igoumenitsa	1.16	357	ePn	Pb	17 28 07.1	+0.6
ANX	Ano Chora	1.21	79	P	Pg	17 28 06.5	-1.1
ANX				S	Sn	17 28 25.1	+1.4
	comp=N,1μm,0.6s						
LAKA	Lakka	1.24	96	P	Pg	17 28 06.7	-1.6
LAKA				S	Sb	17 28 25.0	+1.1
	comp=N,455nm,0.8s						
SERG	Sergoula	1.29	88	P	Pn	17 28 07.4	-1.1
SERG				S	Sn	17 28 27.2	+1.4
	comp=N,752nm,0.5s						
TRIZ	Trizonia	1.31	90	P	Pn	17 28 07.6	-1.0
KALE	Kalithea	1.36	89	P	Pn	17 28 08.4	-1.0
KALE				S	Sn	17 28 29.3	+1.9
	comp=N,532nm,0.6s						
KLV	Kalavryta, Ach	1.41	103	P	Pn	17 28 09.6	-0.5
KLV				S	Sn	17 28 30.1	+1.4
	comp=N,298nm,0.4s						
MAKR	Makrakomi, Fth	1.49	64	P	Pn	17 28 10.5	-0.7
FNA	Florina	2.52	17	ePn	Pn	17 28 28.0	+2.6
OHR	Ohrid	2.75	6	ePn	Pn	17 28 31.0	+2.4
VAY	Valandovo	3.38	29	ePn	Pb	17 28 43.1	-1.2
STIP	Stip	3.58	22	ePn	Pn	17 28 43.4	+3.5
SRS	Serrai	3.68	41	ePn	Pn	17 28 43.7	+2.5
PDG	Podgorica	4.15	348	ePn	Pn	17 28 48.1	+0.5
PDG				eSn	Sn	17 29 35.6	-0.5
BOSS	Bosilegrad	4.41	20	ePn	Pn	17 28 52.9	+1.6
BARS	Barje	4.56	13	ePn	Pn	17 28 54.4	+1.0
TREB	Trebinje	4.61	341	ePn	Pn	17 28 53.7	-0.4
TREB				eSn	Sn	17 29 45.7	-1.9
VTS	Vitosha	4.75	26	eSn	Sn	17 29 55.3	+4.0
SELS	Selova	4.87	6	ePn	Pn	17 28 58.0	+0.4
SJES	Sjenica	4.89	356	eSn	Sn	17 29 54.3	-0.4
STON	Ston	4.94	336	ePn	Pn	17 28 58.4	-0.2
STON				eSn	Sn	17 29 53.3	-2.4
IVAS	Ivanjica	5.20	358	ePn	Pn	17 29 02.2	0.0
DIVS	Divibare	5.73	357	ePn	Pn	17 29 10.5	+1.0
TRUS	Trudelj	5.84	360	ePn	Pn	17 29 10.9	-0.1
GERES	GERESS Array B	11.54	337	Pn	Pn	17 30 27.6	-1.4
	comp=N,0.1nm,0.3s,baz=151,slow=14,SNR=2.4						
FINES	FINESS Array B	23.36	7	P	P	17 32 52.0	-0.7
	comp=N,1.2nm,0.8s,baz=188,slow=9.3,SNR=3.7						
MKAR	Makanchi Array	45.27	59	P	P	17 36 01.4	-0.5
	comp=N,0.3nm,0.6s,baz=279,slow=7.4,SNR=5.8						
ZALV	Zalesovo Beam	45.62	48	P	P	17 36 03.7	-0.8
	comp=N,0.7nm,0.5s,baz=278,slow=10,SNR=4.1						

IDC 03 17:31:44.5±13.0,38°.38N×20°.37E,h0km,mb3.8/3, mb1 3.7/4,mb1mx3.4/35,mbtmp3.6/4,ML3.4/1,Error ellipse: s-maj=244.8km s-min=33.1km az=36.0
BEO 03 17:31:46.6±0.8,38°.15N×20°.16E,h27km±5km,ML3.5/8
ATH 03 17:31:47.1,38°.28N×20°.46E,h13km,ML3.3/10,Error ellipse: s-maj=1.4km s-min=0.8km az=258.0
THE 03 17:31:47.3,38°.30N×20°.41E,h12km±1km,ML3.6/11,Error ellipse: s-maj=1.2km s-min=0.4km az=259.0
ISC 03 17:31:47.0±0.7,38°.30N±0°.02×20°.45E±0°.02,h12km±4km, n99,σ1§25/136,mb3.7/3,7C-3D,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF1	Kardakata, Kep	0.03	129	P	Pg	17 31 49.3	+0.2
KEF1				S	Sg	17 31 50.5	0.0
KEF4	Livadi, Kephal	0.04	203	P	Pg	17 31 49.3	+0.1
KEF4				S	Sg	17 31 50.9	+0.2
LXR1	Lixouri, Cepha	0.09	183	P	Pg	17 31 50.1	+0.4
LXR1				S	Sg	17 31 52.4	+0.7
KEF3	Kipouria, Keph	0.12	220	P	Pg	17 31 50.2	+0.2
KEF3				S	Sg	17 31 52.5	+0.3
ARG2	Argostoli	0.12	164	P	Pg	17 31 50.4	+0.3
ARG2				S	Sg	17 31 52.8	+0.5
	191μm,0.1s						
CHV1	Chavriata, Kef	0.12	204	P	Pg	17 31 50.3	+0.2
CHV1				S	Sg	17 31 52.9	+0.6
KEF2	Argostoli. Kep	0.13	165	P	Pg	17 31 50.6	+0.3
KEF2				S	Sg	17 31 53.0	+0.4
VSK1	VASILIKIADES	0.15	39	P	Pg	17 31 50.9	+0.4
VSK1				S	Sg	17 31 53.6	+0.6
	43μm,0.2s						
VLS	Valsamata	0.16	136	P	Pg	17 31 51.0	+0.3
VLS				S	Sg	17 31 54.0	+0.6
	169μm,0.1s						
VLS	Valsamata	0.16	136	P	Pg	17 31 51.0	+0.3
VLS				S	Sg	17 31 54.0	+0.6
VLS				AML	AML	17 31 54.2	
VLS				AML	AML	17 31 54.3	
FSK	Fiskardo	0.19	29	P	Pg	17 31 51.6	+0.4
FSK				S	Sg	17 31 54.7	+0.5
	37μm,0.3s						
FSK	Fiskardo	0.19	29	P	Pg	17 31 51.6	+0.4
FSK				S	Sg	17 31 54.5	+0.5
FSK				AML	AML	17 31 55.3	
	comp=N,62941μm,0.4s						
FSK				AML	AML	17 31 55.4	
	comp=E,86076μm,0.1s						
EVGI	Lefkada island	0.37	27	P	Pg	17 31 54.6	+0.2
EVGI				S	Sg	17 32 00.5	+1.2
EVGI	Lefkada island	0.37	27	P	Pg	17 31 54.6	+0.2
EVGI				S	Sg	17 32 00.2	+0.9
VLMS	Volimes, Zakyn	0.45	158	P	Pg	17 31 55.4	-0.5
VLMS				S	Sg	17 32 02.4	+0.5
VLMS				AML	AML	17 32 05.0	
	comp=E,15171μm,0.1s						
VLMS				AML	AML	17 32 07.8	
	comp=N,13462μm,0.2s						
MGNA	Meganis	0.45	37	P	Pg	17 31 55.8	-0.2
MGNA				S	Sg	17 32 01.7	-0.2
MGNA				AML	AML	17 32 03.8	
	comp=E,5775μm,0.2s						
MGNA				AML	AML	17 32 03.9	
	comp=N,6635μm,0.1s						
LKD2	Lefkada island	0.52	19	P	Pg	17 31 57.1	-0.2
LKD2				S	Sb	17 32 05.4	-0.3
LKD2				AML	AML	17 32 05.8	
	comp=N,5780μm,0.3s						
LKD2				AML	AML	17 32 11.4	
	comp=E,2861μm,0.3s						
TSLK	Tsoukalades, L	0.56	17	P	Pg	17 31 57.7	-0.2
TSLK				S	Sb	17 32 07.0	+0.3
	comp=E,2μm,0.4s						
TSLK	Tsoukalades, L	0.56	17	P	Pg	17 31 57.7	-0.2
TSLK				S	Sg	17 32 05.8	+0.6
TSLK				AML	AML	17 32 08.2	
	comp=N,3520μm,0.2s						
TSLK				AML	AML	17 32 10.4	
	comp=E,4578μm,0.4s						
AST1	Astakos	0.56	64	P	Pg	17 31 58.2	+0.2
AST1				S	Sb	17 32 07.6	+0.7
	comp=E,9μm,0.2s						
PDO	Prodromos	0.66	62	P	Pg	17 31 59.9	+0.1
PDO				S	Sb	17 32 10.6	+1.1
	comp=E,8μm,0.4s						
PDO	Prodromos	0.66	62	P	Pg	17 31 59.8	+0.1
PDO				S	Sg	17 32 08.3	0.0
PDO				AML	AML	17 32 14.7	
	comp=E,10536μm,0.4s						
PDO				AML	AML	17 32 14.7	
	comp=N,12008μm,0.3s						
KRI1	kERI	0.70	155	P	Pg	17 32 00.3	-0.2
KRI1				S	Sb	17 32 11.7	+1.0
	comp=N,5μm,0.3s						
RLS	Riolos of Patr	0.84	106	P	Pg	17 32 03.2	0.0
RLS	Riolos of Patr	0.84	106	P	Pg	17 32 02.9	-0.3
PVO	Paravola	0.91	69	P	Pg	17 32 04.8	+0.2
PVO				S	Sn	17 32 19.6	+0.9
	comp=N,3μm,0.3s						
PVO	Paravola	0.91	69	P	Pg	17 32 04.8	+0.2
PVO				AML	AML	17 32 20.9	
	comp=E,8478μm,0.3s						
PVO				AML	AML	17 32 21.0	
	comp=N,3981μm,0.3s						
DRO	Drossia	1.05	109	P	Pb	17 32 06.8	-0.4
DRO	Drossia	1.05	109	P	Pb	17 32 06.8	-0.4
EFP	Efpalio	1.16	83	P	Pn	17 32 08.5	-0.5
EFP	Efpalio	1.16	83	P	Pn	17 32 08.5	-0.5
ANX	Ano Chora	1.20	75	P	Pn	17 32 09.7	0.0
ANX	Ano Chora	1.20	75	P	Pn	17 32 09.5	-0.2
LAKA	Lakka	1.21	92	P	Pn	17 32 09.6	-0.2
LAKA				S	Sg	17 32 27.8	+1.8
	comp=N,692nm,0.3s						
LAKA	Lakka	1.21	92	P	Pn	17 32 09.4	-0.4
LAKA				AML	AML	17 32 29.1	
	comp=N,1804μm,0.3s						
LAKA				AML	AML	17 32 29.5	
	comp=E,1153μm,0.3s						
EVR	Evrytania	1.24	59	P	Pn	17 32 10.0	-0.3
IGT	Igoumenitsa	1.24	356	ePg	Pg	17 32 12.5	+1.6
IGT				eSg	Sg	17 32 30.5	+3.5
IGT	Igoumenitsa	1.24	356	P	Pg	17 32 10.7	-0.1
AMT	Artemida-Makis	1.26	127	P	Pg	17 32 11.7	+0.5
SERG	Sergoula	1.27	84	P	Pn	17 32 10.5	-0.2
TRIZ	Trizonia	1.28	86	P	Pn	17 32 10.3	-0.5
KALE	Kalithea	1.34	85	P	Pn	17 32 11.3	-0.3
KALE				AML	AML	17 32 34.9	
	comp=N,1401μm,0.2s						
KALE				AML	AML	17 32 38.4	
	comp=E,1158μm,0.4s						
KLV	Kalavryta, Ach	1.37	100	P	Pn	17 32 12.2	+0.2
KLV				S	Sb	17 32 31.5	+1.4
	comp=E,410nm,0.6s						
KLV	Kalavryta, Ach	1.37	100	P	Pn	17 32 12.1	0.0
JAN	Janina	1.40	13	P	Pg	17 32 14.7	+0.8
KASA	Kassiopi	1.50	345	P	Pg	17 32 15.5	-0.4
MAKR	Makrakomi, Fth	1.50	61	P	Pg	17 32 16.4	+0.5
MEV	Metsovon	1.61	22	P	Pg	17 32 17.6	-0.3
ITM	Ithomi	1.62	133	P	Pb	17 32 17.1	+0.2
DLFA	Delphi	1.62	83	P	Pb	17 32 17.6	+0.6
AGG	Agios Georgios	1.65	63	P	Pb	17 32 17.6	+0.3
PYL	PYLOS	1.74	143	P	Pn	17 32 17.9	+0.9
THL	Klokotos Trika	1.76	44	P	Pb	17 32 19.8	+0.5
AXAR	Agios Charalam	1.80	74	P	Pb	17 32 20.6	+0.7
KPRO	Kipourio	1.81	23	P	Pb	17 32 20.6	+0.5
PROD	Prodromos	1.93	90	P	Pb	17 32 22.1	-0.2
PENT	Pentalofos	1.97	16	P	Pb	17 32 23.4	+0.4
LTK	Loutraki	2.01	97	P	Pb	17 32 22.7	-0.8
LOUT	Loutraki	2.02	98	P	Pb	17 32 22.9	-0.8
LKR	Lokris	2.04	79	P	Pb	17 32 23.6	-0.4
NEST	Nestorio	2.17	12	P	Pb	17 32 25.8	-0.5
VIL2	Platees	2.22	91	P	Pb	17 32 26.0	-1.2
KRND	KRANIDI	2.33	112	P	Pb	17 32 27.2	+2.0
DID	Didima	2.34	109	P	Pb	17 32 27.5	+2.1
LIT	Litokhoron	2.40	41	P	Pb	17 32 28.1	+1.9
MRKA	Markates	2.50	80	P	Pb	17 32 29.5	+1.9
FNA	Florina	2.59	16	ePn	Pb	17 32 31.0	+2.2
FNA	Florina	2.59	16	P	Pb	17 32 30.6	+1.8
VLY	Voula,Athens	2.68	98	P	Pb	17 32 31.6	+1.6
OHR	Ohrid	2.83	5	ePn	Pb	17 32 35.3	-2.2
TIP	Timpagrande	3.02	288	⇑P	Pn	17 32 20.9	-14
TIP				⇓S	Sn	17 33 11.2	+0.4
TIR	Tirane	3.08	352	ePn	Pn	17 32 35.9	+0.3
TIR	Tirane	3.08	352	⇑P	Pn	17 32 27.1	-8.4
TIR				⇓S	Sn	17 33 15.1	+2.7
PLG	Polygyros	3.12	47	P	Pn	17 32 37.3	+1.2
VAY	Valandovo	3.44	28	ePn	Pn	17 32 41.4	+1.0
VAY	Valandovo	3.44	28	ePn	Pn	17 32 41.4	+1.0
STIP	Stip	3.65	21	ePn	Pn	17 32 46.6	+3.3
SRS	Serrai	3.72	40	ePn	Pn	17 32 45.9	+1.6
MATE	Matera	3.73	310	⇑P	Pn	17 32 47.1	+2.7
MATE				⇑S	Sg	17 33 52.6	+5.9
SKO	Skopje	3.75	11	ePn	Pn	17 32 45.1	+0.3
PDG	Podgorica	4.23	348	ePn	Pn	17 32 51.1	-0.2
PDG				eSn	Sn	17 33 39.6	-1.0
PDG	Podgorica	4.23	348	⇑P	Pn	17 32 51.8	+0.5
PDG				⇓S	Sn	17 33 39.7	-1.0
BOSS	Bosilegrad	4.47	20	ePn	Pn	17 32 56.0	+1.3
BARS	Barje	4.64	13	ePn	Pn	17 32 57.6	+0.7
TREB	Trebinje	4.70	341	ePn	Pn	17 32 56.0	-1.8
TREB				eSn	Sn	17 33 49.0	-3.2
VTS	Vitosha	4.81	25	⇑P	Pn	17 32 57.0	-2.5
VTS				⇑S	Sn	17 33 57.5	+2.2
SELS	Selova	4.95	6	ePn	Pn	17 33 00.7	-0.5
SJES	Sjenica	4.97	356	ePn	Pn	17 33 02.2	+0.5
SJES				eSn	Sn	17 33 57.6	-1.6
STON	Ston	5.03	336	ePn	Pn	17 33 00.5	-1.7
STON				eSn	Sn	17 33 57.3	-3.0
IVAS	Ivanjica	5.28	358	ePn	Pn	17 33 05.2	-0.6
IVAS				eSn	Sn	17 34 04.6	-2.1
GRUS	Gruza	5.59	2	ePn	Pn	17 33 09.5	-0.5
DIVS	Divibare	5.81	357	ePn	Pn	17 33 12.9	-0.9
DIVS				eSn	Sn	17 34 16.7	-3.0
TRUS	Trudelj	5.92	360	ePn	Pn	17 33 13.5	-1.1
TRUS				eSn	Sn	17 34 21.0	-1.4
SOKA	Soboth	9.28	336	ePn	Pn	17 33 59.6	-1.1
	comp=E,0.8nm,0.3s						
OBKA	Obir	9.29	334	ePn	Pn	17 34 00.4	-0.5
	comp=E,0.6nm,0.2s						
GERES	GERESS Array B	11.62	337	Pn	Pn	17 34 31.3	-1.4
	comp=E,0.1nm,0.3s,baz=153,slow=15,SNR=2.3						
FINES	FINESS Array B	23.44	7	P	P	17 36 54.4	-1.5
	comp=E,1.1nm,0.6s,baz=168,slow=11,SNR=5.1						
MKAR	Makanchi Array	45.29	58	P	P	17 40 03.7	-0.9
	comp=E,0.5nm,0.5s,baz=278,slow=7.2,SNR=13						
ZALV	Zalesovo Beam	45.66	48	P	P	17 40 06.5	-0.8
	comp=E,1.4nm,0.5s,baz=282,slow=9.2,SNR=8.1						

ISK 03 17:42:24.7,34°.16N×35°.14E,h27km,ML3.1/24
NIC 03 17:42:26.5±0.0,34°.20N×35°.10E,h24km±19km,Ml2.9/5
GRAL 03 17:42:26.8±0.3,34°.12N×35°.18E,h29km±2km,MD3.2
DDA 03 17:42:26.7,34°.54N×35°.08E,h9km±3km,ML2.4
GII 03 17:42:28.4±0.2,34°.16N×35°.26E,h31km,MD2.6/7, Mm2.7/11
ISC 03 17:42:24.6±1.7,34°.14N±0°.02×35°.14E±0°.03,h19km±4km, n72,σ0§94/104,Jordan-Syria region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BEYL	Beirut	0.40	133	eP	Pb	17 42 34.6	-0.8
BHL	Bhannes	0.49	119	eP	Pb	17 42 35.7	+1.0
BHL				eS	Sb	17 42 42.4	+0.8
DQRL	Deir Qamar	0.56	141	eP	Pb	17 42 36.7	+0.8
HWQ	Hawqa	0.68	78	eP	Pb	17 42 38.9	+0.9
HWQ				eS	Sb	17 42 47.8	+0.8
QRWL	Qaraoun	0.75	143	eP	Pn	17 42 39.8	-0.5
QRWL				eS	Sb	17 42 49.4	+0.4
RCY	Rachaya	0.87	138	eP	Pn	17 42 41.7	-0.3
RCY				eS	Sb	17 42 52.7	+0.2
NATI	Neve Ativ	1.01	150	Pg	Pn	17 42 43.7	-0.5
NATI				Sg	Sb	17 42 56.3	-0.1
KSDI	Kefar Szold	1.04	155	Pg	Pn	17 42 44.3	0.0
KSDI				Sg	Sb	17 42 57.1	-0.3
HNTI	Hanita	1.06	179	Pg	Pn	17 42 44.2	-0.2
HNTI				Sg	Sb	17 42 57.3	-0.6
MMA0B	Mount Meron ar	1.15	169	Pg	Pn	17 42 45.8	0.0
MMA0B				Sg	Sb	17 42 59.8	-0.7
PARAL	Paralimni	1.24	313	P	Pb	17 42 47.4	-0.1
PARAL				AML	AML	17 43 03.1	
	2.2nm,0.5s						
PARAL				AML	AML	17 43 03.1	
	2.2nm,0.5s						
PARAL				S	Sb	17 43 03.1	0.0
PARAL				AML	AML	17 43 03.4	
	3.0nm,0.5s						
PARAL				AML	AML	17 43 03.4	
	3.0nm,0.5s						
KSHT	Keshet	1.29	154	Pg	Pb	17 42 48.4	+0.1
BLGI	Bet Lehem HaGe	1.41	178	Pn	Pb	17 42 49.7	-0.6
BLGI				Sn	Sn	17 43 06.5	-0.8
MVOU	Mavrovouni	1.52	305	P	Pn	17 42 50.8	0.0
MVOU				S	Sn	17 43 08.9	-1.2
MVOU				AML	AML	17 43 10.8	
	0.5nm,0.3s						
MVOU				AML	AML	17 43 10.8	
	0.5nm,0.3s						
MVOU				AML	AML	17 43 11.2	
	0.6nm,0.5s						
MVOU				AML	AML	17 43 11.2	
	0.6nm,0.5s						
OFRI	`Ofer	1.52	185	Pn	Pn	17 42 51.2	+0.3
OFRI				Sn	Sn	17 43 09.7	-0.6
EREN	Erenkoy	1.60	330	PN	Pn	17 42 51.8	-0.1
AKIN	Akıncılar- Kıb	1.63	303	PN	Pn	17 42 52.2	-0.2
ASGA	Asgata	1.69	293	P	Pn	17 42 53.5	+0.3
ASGA				S	Sn	17 43 13.7	-0.6
ASGA				AML	AML	17 43 15.5	
	0.3nm,0.2s						
ASGA				AML	AML	17 43 15.5	
	0.3nm,0.2s						
ASGA				AML	AML	17 43 17.5	
	0.4nm,0.3s						
ASGA				AML	AML	17 43 17.5	
	0.4nm,0.3s						
CSS	Mathiatis	1.70	299	PN	Pn	17 42 53.3	-0.1
CSS	Mathiatis	1.70	299	P	Pn	17 42 54.1	+0.7
CSS				S	Sn	17 43 14.2	-0.4
CSS				AML	AML	17 43 14.6	
	0.2nm,0.6s						
CSS				AML	AML	17 43 14.6	
	0.2nm,0.6s						
CSS				AML	AML	17 43 16.6	
	0.1nm,0.6s						
CSS				AML	AML	17 43 16.6	

0.1nm,0.6s
CSS Mathiatis 1.70 299 Pn Pn 17 42 53.8 +0.4
MMLI Mount Malkishu 1.72 172 PN Pn 17 42 53.9 +0.3
MMLI SN Sn 17 43 14.9 -0.2
MMLI Mount Malkishu 1.72 172 Pn Pn 17 42 54.3 +0.7
MMLI Sn Sn 17 43 14.4 -0.7
SLTI Sal'it 1.90 183 Pn Pn 17 42 57.0 +0.9
SLTI Sn Sn 17 43 19.1 -0.4
HMDT Nahal Hemdat 1.91 170 Pn Pn 17 42 57.1 +0.9
HMDT Sn Sn 17 43 18.9 -0.9
SZAC Souni 1.96 289 P Pn 17 42 57.9 +0.9
SZAC S Sn 17 43 21.3 +0.1
SZAC AML AML 17 43 21.7
1.2nm,0.3s
SZAC AML AML 17 43 21.7
1.2nm,0.3s
SZAC AML AML 17 43 22.0
2.0nm,0.3s
SZAC AML AML 17 43 22.0
2.0nm,0.3s
YAYL Yayladag 2.04 23 iP Pn 17 42 58.4 +0.2
YAYL iS Sn 17 43 22.7 -0.6
YAYL IAML 17 43 43.0
comp=E,54nm,0.5s
LEF Lefka 2.10 298 PN Pn 17 42 59.4 +0.7
TISA Tisan-Mersin 2.34 330 PN Pn 17 43 02.6 +0.5
KARG Kargicak-Mersi 2.37 331 PN Pn 17 43 02.7 +0.2
TAHT Tahtakopru-Hat 2.38 21 PN Pn 17 43 03.1 +0.4
YESI Yesilovacik-Me 2.39 329 PN Pn 17 43 03.3 +0.6
AKKU Akkuyu-Mersin 2.40 327 PN Pn 17 43 03.1 +0.2
IKL Isikli 2.41 331 PN Pn 17 43 03.3 +0.3
GULN MERSIN_Gulnar 2.42 328 iP Pn 17 43 03.5 +0.3
GULN IAML 17 43 31.0
comp=N,28nm,0.4s
GULN iS Sn 17 43 31.3 -1.0
GULN IAML 17 43 33.0
comp=E,31nm,0.4s
KRTS Karatas 2.43 4 PN Pn 17 43 03.8 +0.5
KIZK Mersin 2.47 341 PN Pn 17 43 03.9 0.0
KIZK Mersin 2.47 341 iP Pn 17 43 04.6 +0.7
KIZK iS Sn 17 43 33.4 -0.2
KIZK IAML 17 43 38.0
comp=E,47nm,1.1s
KIZK IAML 17 43 50.0
comp=N,34nm,1.3s
DSI Dead Sea 2.58 175 Pn Pn 17 43 06.3 +1.0
DSI Sn Sn 17 43 35.2 -1.0
KEBE Keben-Mersin 2.58 333 PN Pn 17 43 05.8 +0.4
TEKE Tekeli-Mersin 2.59 321 PN Pn 17 43 05.9 +0.3
AMAZ Amatzia 2.61 184 Pn Pn 17 43 07.5 +1.6
AMAZ Sn Sn 17 43 37.2 +0.1
TEVE Tevekalti-Mers 2.67 329 PN Pn 17 43 07.2 +0.4
BERE Bereket-Mersin 2.70 325 PN Pn 17 43 07.6 +0.4
YURE YUREGIR 2.71 8 PN Pn 17 43 07.6 +0.4
YURE YUREGIR 2.71 8 iP Pn 17 43 08.8 +1.7
YURE iS Sn 17 43 41.2 +1.7
MERS Mersin 2.76 350 PN Pn 17 43 08.6 +0.6
YTIR Yattir 2.77 180 Pn Pn 17 43 09.6 +1.4
YTIR Sn Sn 17 43 41.7 +0.5
DED Mersin 2.83 354 iP Pn 17 43 09.5 +0.7
DED iS Sn 17 43 40.6 -1.8
DED IAML 17 44 05.0
comp=N,18nm,3.0s
DED IAML 17 44 16.0
comp=E,15nm,1.3s
GHAJ Ghor Haditha 2.85 173 Pn Pn 17 43 10.1 +0.9
CEYT Ceyhan 2.90 10 PN Pn 17 43 09.9 +0.1
KARA Karaisali 3.11 359 PN Pn 17 43 13.4 +0.7
GAZI Gazipasa 3.12 313 PN Pn 17 43 13.4 +0.6
GULE Gulek 3.15 355 iP Pn 17 43 14.7 +1.4
GULE iS Sn 17 43 50.1 -0.4
GULE IAML 17 44 07.0
comp=E,21nm,0.7s
GULE IAML 17 44 08.0
comp=N,23nm,1.3s
KAMA Osmaniye 3.28 22 iP Pn 17 43 15.8 +0.7
KAMA iS Sn 17 43 49.8 -3.9
KAMA IAML 17 43 53.0
comp=E,9.6nm,0.3s
KAMA IAML 17 43 57.0
comp=N,6.5nm,0.7s
KZIT Kziot 3.29 191 PN Pn 17 43 16.2 +1.0
KZIT Kziot 3.29 191 Pn Pn 17 43 16.5 +1.3
KERG Konya-Eregli 3.37 346 iP Pn 17 43 17.8 +1.4
KERG iS Sn 17 43 57.1 +1.2
KERG IAML 17 43 58.0
comp=N,18nm,0.3s
KERG IAML 17 43 59.0
comp=E,14nm,0.3s
KOZT Kozan 3.38 9 PN Pn 17 43 16.9 +0.5
GAZ Gaziantep 3.46 29 PN Pn 17 43 18.4 +0.8
HCB Kahramanmara 3.50 24 iP Pn 17 43 18.6 +0.5
HCB iS Sn 17 43 55.8 -3.3
HCB IAML 17 43 58.0
comp=E,11nm,0.5s
HCB IAML 17 43 59.0
comp=N,11nm,0.2s
CMRD Camardi-Nigde 3.51 358 PN Pn 17 43 19.0 +0.6
HDMB Hadim 3.55 323 PN Pn 17 43 19.7 +0.7
ANDN Andirin 3.56 16 iP Pn 17 43 20.3 +1.2
ANDN IAML 17 43 59.0
comp=E,23nm,0.9s
ANDN iS Sn 17 43 59.6 -1.2
ANDN IAML 17 44 01.0
comp=N,11nm,0.3s
KMRS Kahramanmaras 3.65 23 PN Pn 17 43 20.6 +0.5
PRNI Paran 3.78 182 Pn Pn 17 43 23.2 +1.2
YESY Yesilyurt 3.80 343 PN Pn 17 43 23.1 +0.8
YAHY KAYSERI_Yahyal 3.95 3 iP Pn 17 43 26.4 +2.0
YAHY IAML 17 44 33.0
comp=E,7.6nm,3.1s
HRFI Mount Harif 4.10 181 PN Pn 17 43 27.1 +0.8
HRFI Mount Harif 4.10 181 Pn Pn 17 43 27.3 +1.0
SARI SarD1z-Kayseri 4.38 13 PN Pn 17 43 31.1 +0.8
EIL Elat 4.46 182 Pn Pn 17 43 32.5 +1.2

IDC 03 17:56:47.1±3.4, 32.82S×178.37W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.6/24, mbtmp3.6/3, ML3.6/1, MS3.6/2, Ms1 3.5/2, ms1mx2.7/23, Error ellipse: s-maj=77.7km s-min=48.4km az=118.0, South of Kermadec Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
URZ Urewera 6.55 213 Pn Pn 17 58 24.3 -0.5
1.2nm,0.3s,baz=265,slow=5.3,SNR=8.8
URZ Sn Sn 17 59 31.1 -9.1
0.7nm,0.3s,baz=249,slow=14,SNR=3.1
STKA Stephens Creek 33.69 261 LR LR 18 16 19.6
comp=Z,68nm,18.4s,baz=343,slow=35
ASAR Alice Springs 42.72 270 P P 18 04 46.1 -0.1
0.4nm,0.6s,baz=109,slow=7.7,SNR=8.4
WRA Warramunga Arr 43.93 275 P P 18 04 55.9 -0.1
0.5nm,0.5s,baz=110,slow=8.2,SNR=5.7
JNU Nakatsue 81.16 319 LR LR 18 42 46.7
comp=Z,36nm,18.4s,baz=252,slow=34
FINES FINESS Array B 147.29 338 PKPbc PKPbc 18 16 31.0 -0.8
1.6nm,0.9s,baz=49,slow=4.2,SNR=1.5

IDC 03 18:10:04.1±2.4, 28.35N×51.51E, h0km, mb3.6/7, mb1 3.6/9, mb1mx3.5/31, mbtmp3.5/9, ML3.4/2, Error ellipse: s-maj=51.1km s-min=26.6km az=160.0
TEH 03 18:10:06.2, 28.40N×51.64E, h20km, ML3.8
THR 03 18:10:08.6±0.3, 28.61N×51.60E, h30km±6km, ML3.7
OMAN 03 18:10:13.7±1.0, 27.97N×51.78E, h35km, ml3.9/6, Error ellipse: s-maj=51.9km s-min=19.2km az=268.0
ISC 03 18:10:06.8±0.5, 28.33N±0.05×51.63E±0.06, h24km, n61, σ1§78/77, mb3.5/7, Southern Iran

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AHBU AHRAM 0.61 331 ePg Pb 18 10 16.9 -2.1
GHB Gharebagh 1.32 37 ePg Pn 18 10 29.8 -0.3
GHB eSg Sb 18 10 48.3 +0.6
GHB e 18 10 54.3
IKAZ Kazeroun 1.46 7 ePg Pb 18 10 33.0 -0.6
IKAZ e 18 10 54.8
SHI Shiraz 1.52 30 ePg Pn 18 10 33.1 +0.4
SHI e 18 10 35.1
SHI eSg Sb 18 10 52.7 -0.7
JHRM Jahrom 1.72 84 ePn Pn 18 10 36.8 +1.4
JHRM e 18 11 03.3
KLNJ Kolanjah 2.67 359 ePn Pn 18 10 49.4 +0.6
KLNJ e 18 11 51.0
IRAM Ramesheh 3.53 10 ePn Pn 18 11 00.3 -0.1
IBRJ Brojen 3.58 355 ePn Pn 18 11 02.0 +0.8
JHBN Jahan bin 3.98 348 ePn Pn 18 11 07.4 +0.7
ISAD Sadrabad 3.99 26 ePn Pn 18 11 08.2 +1.4
IMEH Mehriz 4.00 40 ePn Pn 18 11 08.3 +1.4
IPIR Pirpir 4.39 352 ePn Pn 18 11 12.1 -0.2
SHGR Shooshtar-Gavs 4.50 328 IAML 18 12 51.3
comp=N,63nm,0.6s
ICHK Chekchek 4.58 31 ePn Pn 18 11 15.7 +0.8
IZEF Zefreh 4.59 7 ePn Pn 18 11 15.8 +0.7
SHME Shamm 4.61 118 ePn Pn 18 11 16.7 +1.6
KHGB Koh Gabri 4.70 63 ePn Pn 18 11 17.2 +0.8
KHGB e 18 12 45.4
KRBR Kerman 4.78 69 eP Pn 18 11 20.1 +2.5
KRBR IAML 18 12 40.6
comp=N,44nm,0.5s
KRBR Kerman 4.78 69 ePn Pn 18 11 20.1 +2.5
YZKH Yazd 4.79 32 eP Pn 18 11 18.1 +0.5
YZKH Yazd 4.79 32 ePn Pn 18 11 18.1 +0.5
BANOM Banah 4.80 119 P Pn 18 11 18.5 +0.8
SNR=13
BANOM S Sn 18 12 11.7 -0.8
BANOM Banah 4.80 119 ePn Pn 18 11 18.6 +0.9
NAZ Nazwa, Dubai 4.90 132 P Pn 18 11 22.4 +3.3
NAZ S Sn 18 12 15.8 +0.7
NAZ Nazwa, Dubai 4.90 132 ePn Pn 18 11 23.2 +4.1
MDH Madha 5.14 125 P Pn 18 11 23.1 +0.7
MDH S Sn 18 12 18.8 -2.3
MDH Madha 5.14 125 ePn Pn 18 11 24.0 +1.6
UOSS Minazif 5.30 128 ePn Pn 18 11 26.0 +1.5
HATD Hatta, Dubai 5.33 130 P Pn 18 11 27.1 +2.2
HATD S Sn 18 12 23.4 -2.1
SNR=5.6
HATD Hatta, Dubai 5.33 130 ePn Pn 18 11 27.1 +2.2
ASHO Ashiyiah 5.37 131 P Pn 18 11 26.9 +1.3
SNR=14
ASHO S Sn 18 12 25.3 -1.5
SNR=9.7
ASHO Ashiyiah 5.37 131 ePn Pn 18 11 26.8 +1.3
CHMN Cheshme madani 5.39 72 ePn Pn 18 11 26.9 +0.8
ALNE Al Ain 5.63 138 ePn Pn 18 11 32.0 +2.8
KRSH Karshahi 5.64 4 ePn Pn 18 11 29.5 +0.1
SOHO SOHO 6.06 132 P Pn 18 11 36.1 +1.1
SOHO S Sn 18 12 43.4 -0.3
SOHO SOHO 6.06 132 ePn Pn 18 11 35.8 +0.8
GHVR GHOM 6.14 357 eP Pn 18 11 35.8 -0.4
GHVR GHOM 6.14 357 ePn Pn 18 11 35.8 -0.4
TPRV Parvadeh(Tabas 6.39 42 ePn Pn 18 11 41.2 +1.5
UMZA Um Al Zommool 6.43 150 ePn Pn 18 11 42.0 +1.9
ARQ Araqi 6.64 137 P Pn 18 11 46.5 +3.5
SNR=12
ARQ S Sn 18 12 56.9 -1.0
SNR=5.7
HOQ Hoqain 6.96 131 P Pn 18 11 49.6 +2.2
HOQ S Sn 18 13 02.6 -3.2
TNSJ Nastanj 7.05 36 ePn Pn 18 11 49.2 +0.5
TKDS Koohdasht(Taba 7.07 40 ePn Pn 18 11 48.1 -0.8
BSY Bisya 7.49 137 P Pn 18 11 56.2 +1.5
BSY S Sn 18 13 15.5 -3.5
SMDO Samad 7.81 131 P Pn 18 11 59.9 +0.8
SMDO S Sn 18 13 24.5 -2.3
SNR=6.6
WSAR Wadi Sarin 8.09 127 P Pn 18 12 03.0 +0.1
SNR=15
WSAR S Sn 18 13 29.9 -3.7
JMDO Jabal Madar 8.33 134 P Pn 18 12 05.9 -0.2
JMDO S Sn 18 13 36.8 -2.8
WBK Wadi Bani Khal 8.73 129 P Pn 18 12 11.7 -0.1
WBK S Sn 18 13 45.8 -3.7
MHTO MHTO 9.30 140 P Pn 18 12 21.3 +1.8
SNR=14
MHTO S Sn 18 13 59.1 -4.3
DMTO DMTO 10.99 163 P Pn 18 12 44.0 +1.3
SNR=10
DMTO S Sn 18 14 42.4 -2.4
GEYT Alibeck 11.01 28 Pn Pn 18 12 43.6 +0.7
comp=N,0.2nm,0.3s,baz=207,slow=15,SNR=4.6
BRTR Keskin Array B 18.72 312 P Pn 18 14 25.1 +0.7
comp=N,0.2nm,0.3s,baz=136,slow=12,SNR=6.6
AKASG Malin Array Be 28.05 329 P P 18 15 55.0 -1.1
comp=N,0.5nm,0.7s,baz=128,slow=6.0,SNR=2.7
MKAR Makanchi Array 30.23 44 P P 18 16 16.6 +1.0
comp=N,0.2nm,0.6s,baz=239,slow=10,SNR=4.4
ZALV Zalesovo Beam 35.23 34 P P 18 16 59.8 +0.7
comp=N,0.3nm,0.4s,baz=239,slow=11,SNR=2.9
FINES FINESS Array B 37.24 340 P P 18 17 16.5 +0.3
comp=N,1.4nm,0.7s,baz=127,slow=15,SNR=4.3
NOA NORSAR Array B 42.35 332 P P 18 17 58.5 -0.3
comp=N,0.8nm,0.9s,baz=124,slow=8.6,SNR=2.9
TORD Torodi Ar. Bea 48.75 263 P P 18 18 49.5 -0.5
comp=N,0.4nm,0.6s,baz=56,slow=8.6,SNR=4.0
YKA Yellowknife Ar 88.83 354 P P 18 23 01.4 +2.8
comp=N,0.1nm,0.5s,baz=13,slow=5.5,SNR=3.9

IDC 03 18:28:01.9±2.4, 19.22N×145.31E, h225km±25km, mb3.3/11, mb1 3.6/12, mb1mx3.3/45, mbtmp3.9/12, Error ellipse: s-maj=26.6km s-min=15.0km az=111.0
ISC 03 18:27:60.0±0.7, 19.34N±0.08×145.3E±0.2, h200km, n12, σ1§24/13, mb3.6/11, Mariana Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GUMO Guam 5.73 184 P Pn 18 29 25.7 +1.9
5.8nm,0.3s,baz=90,slow=20,SNR=5.2
GUMO S Sn 18 30 30.0 -0.1
3.6nm,0.3s,baz=352,slow=17,SNR=2.0
PETK Petropavlovsk- 35.06 13 P P 18 34 34.4 +0.8
7.1nm,1.0s,baz=191,slow=12,SNR=3.2
WRA Warramunga Arr 40.48 196 P P 18 35 17.2 -2.2
0.9nm,0.7s,baz=19,slow=8.1,SNR=4.7
FITZ Fitzroy Crossi 41.90 209 P P 18 35 29.8 -1.2
4.5nm,1.0s,baz=23,slow=15,SNR=5.0
SONM Songino Array 42.39 321 P P 18 35 35.3 +0.5
0.3nm,0.6s,baz=116,slow=3.4,SNR=2.9
CMAR Chiang Mai Arr 43.73 277 P P 18 35 46.6 +0.8
0.3nm,0.8s,baz=54,slow=8.2,SNR=3.3
ASAR Alice Springs 44.16 195 P P 18 35 48.4 -0.7
0.4nm,0.5s,baz=19,slow=6.8,SNR=4.8
ILAR Eielson Array 63.26 26 P P 18 38 06.0 -1.0
0.7nm,0.7s,baz=250,slow=5.7,SNR=8.5
YKA Yellowknife Ar 77.62 28 P P 18 39 34.0 +0.2
0.8nm,0.6s,baz=289,slow=5.5,SNR=11
ARCES ARCESS Array B 81.76 342 P P 18 39 56.1 +0.2
2.3nm,0.9s,baz=26,slow=7.0,SNR=3.4
NVAR Mina Array Bea 83.07 52 P P 18 40 04.1 +0.4
1.3nm,0.6s,baz=263,slow=6.4,SNR=11
FINES FINESS Array B 86.13 335 P P 18 40 16.6 -1.5
0.5nm,0.3s,baz=81,slow=4.0,SNR=12

MOS 03 18:29:43.6±1.5, 34.81N×32.50E, h33km, mb4.4/6, Error ellipse: s-maj=11.5km s-min=6.2km az=93.9
ISK 03 18:29:43.9, 34.83N×32.56E, h25km, ML4.1/59
DDA 03 18:29:44.3, 34.81N×32.55E, h25km±2km, MW4.1
HLW 03 18:29:45.0, 35.02N×31.71E, h10km±20km, Md3.9, Ml4.2
NIC 03 18:29:45.1±0.0, 34.94N×32.60E, h29km, Ml4.5/9
NEIC 03 18:29:45.0±2.1, 34.88N±0.06×32.51E±0.05, h29km±5km, Error ellipse: s-maj=8.4km s-min=5.7km az=197.0
IDC 03 18:29:46.6±1.5, 34.91N×32.52E, h44km±15km, mb3.6/17, mb1 3.7/25, mb1mx3.7/41, mbtmp3.8/25, ML4.0/8, MS3.1/7, Ms1 3.0/7, ms1mx2.9/27, Error ellipse: s-maj=12.7km s-min=12.6km az=87.0
GII 03 18:29:46.7±0.0, 34.72N×32.72E, h12km, mb4.1/2, MD3.8/6, Mm3.6/10
ISC 03 18:29:45.5±0.7, 34.86N±0.02×32.55E±0.02, h34km±2km, n293, σ1§81/318, mb3.9/26, MS3.0/3, 19C-13D, Cyprus region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NATA Nata 0.08 170 ⇑iP Pb 18 29 50.7 -0.7
NATA S Sb 18 29 55.6 +0.2
NATA AML AML 18 29 58.4
931nm,0.4s
NATA AML AML 18 29 58.4
931nm,0.4s
NATA AML AML 18 30 01.3
667nm,0.5s
NATA AML AML 18 30 01.3
667nm,0.5s
AKMS Akamas 0.24 312 ⇑iP Pn 18 29 51.7 -0.6
AKMS S Sb 18 29 56.8 -0.9
AKMS AML AML 18 29 58.6
211nm,0.5s
AKMS AML AML 18 29 58.6
211nm,0.5s
AKMS AML AML 18 30 00.3
178nm,0.2s
AKMS AML AML 18 30 00.3
178nm,0.2s
SZAC Souni 0.29 110 ⇓iP Pn 18 29 52.6 -0.5
SZAC AML AML 18 29 58.3
541nm,0.4s
SZAC AML AML 18 29 58.3
541nm,0.4s
SZAC S Sb 18 29 58.4 -0.1
SZAC AML AML 18 29 58.7
548nm,0.6s
SZAC AML AML 18 29 58.7
548nm,0.6s
ALFC Alefka 0.30 7 ⇓iP Pb 18 29 51.6 -1.9
ALFC AML AML 18 29 55.9
518nm,0.2s
ALFC AML AML 18 29 55.9
518nm,0.2s
ALFC S Sn 18 29 56.3 -1.8
ALFC AML AML 18 29 56.8
521nm,0.3s
ALFC AML AML 18 29 56.8
521nm,0.3s
LEF Lefka 0.38 46 ⇑P Pb 18 29 52.9 -1.6
LEF ⇓S Sb 18 29 58.6 -2.0
LEF Lefka 0.38 46 PG Pb 18 29 52.6 -1.9
LEF SG Sb 18 29 58.5 -2.1
LEF Lefka 0.38 46 iP Pb 18 29 52.6 -1.9
LEF iS Sb 18 29 58.1 -2.5
LEF IAML 18 29 59.0
comp=E,27μm,0.5s
LEF IAML 18 30 02.0
comp=N,20μm,0.5s
ASGA Asgata 0.58 97 ⇑eP Pn 18 29 56.3 -0.9
ASGA S Sb 18 30 05.0 -0.5
ASGA AML AML 18 30 06.8
comp=N,273nm,0.5s
ASGA AML AML 18 30 06.8
comp=N,273nm,0.5s
ASGA AML AML 18 30 06.8
comp=N,107nm,0.3s
ASGA AML AML 18 30 06.8
comp=N,107nm,0.3s
CSS Mathiatis 0.65 80 PG Pn 18 29 57.4 -0.8
CSS SG Sb 18 30 07.0 -0.5
CSS Mathiatis 0.65 80 P Pn 18 29 57.5 -0.8
CSS Mathiatis 0.65 80 Pn 18 29 57.2 -0.9
CSS Mathiatis 0.65 80 ⇓iP Pn 18 29 57.3 -0.9
CSS S Sb 18 30 07.0 -0.5
CSS AML AML 18 30 08.0
comp=N,21nm,0.7s
CSS AML AML 18 30 08.0
comp=N,21nm,0.7s
CSS AML AML 18 30 08.1
comp=N,21nm,0.7s
CSS AML AML 18 30 08.1
comp=N,21nm,0.7s
CSS Mathiatis 0.65 80 Pg Pn 18 29 57.1 -1.1
CSS Sg Sn 18 30 07.3 0.0
ATHAL Athalassa 0.75 67 ⇓iP Pn 18 29 59.1 -0.5
ATHAL S Sb 18 30 10.3 +0.1
ATHAL AML AML 18 30 21.4
comp=N,86nm,0.8s
ATHAL AML AML 18 30 21.4
comp=N,86nm,0.8s
ATHAL AML AML 18 30 31.7
comp=N,83nm,0.6s
ATHAL AML AML 18 30 31.7
comp=N,83nm,0.6s
AKIN Akıncılar- Kıb 0.77 78 PG Pn 18 29 59.4 -0.5
AKIN SG Sb 18 30 10.7 0.0
MVOU Mavrovouni 0.90 79 P Pn 18 30 01.2 -0.5
MVOU S Sn 18 30 13.1 -0.4
MVOU AML AML 18 30 16.8
comp=N,36nm,0.5s
MVOU AML AML 18 30 16.8
comp=N,36nm,0.5s
MVOU AML AML 18 30 19.6
comp=N,29nm,1.0s
MVOU AML AML 18 30 19.6
comp=N,29nm,1.0s
PARAL Paralimni 1.23 83 P Pb 18 30 08.3 +0.1
PARAL S Sb 18 30 26.5 +2.7
PARAL AML AML 18 30 31.8
comp=N,22nm,0.6s
PARAL AML AML 18 30 31.8
comp=N,22nm,0.6s
PARAL AML AML 18 30 34.3
comp=N,28nm,0.7s
PARAL AML AML 18 30 34.3
comp=N,28nm,0.7s
TEKE Tekeli-Mersin 1.36 19 PN Pn 18 30 07.7 -0.4
GAZI Gazipasa 1.39 352 PN Pn 18 30 08.3 -0.2
GAZI SN Sn 18 30 26.7 +1.1
GAZI Gazipasa 1.39 352 iP Pn 18 30 07.9 -0.6
GAZI iS Sn 18 30 23.8 -1.9
GAZI IAML 18 30 27.0
comp=N,1μm,0.5s
GAZI IAML 18 30 29.0
comp=E,2μm,0.3s
YORU Yoruktepe-Mers 1.47 28 PN Pn 18 30 09.2 -0.4
EREN Erenkoy 1.48 63 PN Pn 18 30 10.0 +0.3
EREN Erenkoy 1.48 63 iP Pn 18 30 10.3 +0.6
EREN iS Sb 18 30 33.3 +2.2
EREN IAML 18 30 39.0
comp=E,2μm,0.6s
EREN IAML 18 30 44.0
comp=N,2μm,1.1s
AKK2 Akkuyu-Mersin 1.52 32 PN Pn 18 30 10.1 0.0
AKK1 Akkuyu-Mersin 1.52 32 PN Pn 18 30 10.0 -0.2
AKKU Akkuyu-Mersin 1.53 32 PN Pn 18 30 10.1 -0.3
OREN Orenkoy-Mersin 1.54 28 PN Pn 18 30 10.5 0.0
GULN MERSIN_Gulnar 1.55 31 iP Pn 18 30 10.3 -0.3
GULN iS Sn 18 30 26.8 -2.8
BERE Bereket-Mersin 1.59 20 PN Pn 18 30 11.2 -0.1
TEPK Tepekoy-MERSIN 1.59 30 PN Pn 18 30 11.0 -0.2
TISA Tisan-Mersin 1.59 35 PN Pn 18 30 11.3 +0.1
YESI Yesilovacik-Me 1.60 33 PN Pn 18 30 11.7 +0.3
KARG Kargicak-Mersi 1.64 35 PN Pn 18 30 12.2 +0.3
IKL Isikli 1.66 33 PN Pn 18 30 11.9 -0.3
TEVE Tevekalti-Mers 1.74 24 PN Pn 18 30 13.5 +0.2
ALAN Alanya-ANTALYA 1.75 346 PN Pn 18 30 13.4 0.0
ERMK Ermenek 1.81 9 iP Pn 18 30 15.2 +0.9
ERMK iS Sb 18 30 39.5 -0.9
ERMK IAML 18 30 50.0
comp=E,1μm,0.3s
ERMK IAML 18 30 58.0
comp=N,1μm,0.6s
KEBE Keben-Mersin 1.85 30 PN Pn 18 30 15.4 +0.6
KIZK Mersin 2.08 38 PN Pn 18 30 18.6 +0.8
KIZK Mersin 2.08 38 iP Pn 18 30 18.7 +0.8
KIZK iS Sn 18 30 44.5 +2.0
HDMB Hadim 2.10 359 PN Pn 18 30 19.3 +0.8
MNVG Manavgat-Antal 2.14 335 PN Pn 18 30 19.5 +0.7
KEPZ Antalya-Kepez 2.18 340 iP Pn 18 30 20.1 +0.7
KEPZ iS Sn 18 30 46.1 +0.9
KEPZ IAML 18 30 55.0
comp=N,621nm,0.6s
KEPZ IAML 18 31 00.0
comp=E,465nm,0.6s
AKUM Antalya-Kumluc 2.32 310 iP Pn 18 30 24.0 +2.7
AKUM iS Sb 18 31 01.1 +6.2
KEMT Kemer-ANTALYA 2.38 318 PN Pn 18 30 22.8 +0.7
ANTB Antalya 2.56 323 PN Pn 18 30 24.9 +0.4
MERS Mersin 2.57 38 PN Pn 18 30 25.9 +1.2
BHL Bhannes 2.73 109 eP Pn 18 30 26.4 -0.6
DQRL Deir Qamar 2.75 114 eP Pn 18 30 29.2 +2.0
AKAS Kas 2.77 301 PN Pn 18 30 28.6 +1.1
AKAS Kas 2.77 301 iP Pn 18 30 28.9 +1.3
DED Mersin 2.78 40 iP Pn 18 30 29.4 +1.7
DED iS Sn 18 31 03.3 +3.3
KORT Korkueli 2.79 321 PN Pn 18 30 28.9 +1.1
KORT Korkueli 2.79 321 iP Pn 18 30 31.1 +3.2
KORT iS Sb 18 31 12.5 +3.9
HNTI Hanita 2.81 128 Pn Pn 18 30 28.1 +0.2
HNTI Sn Sn 18 31 00.6 +0.1

KERG Konya-Eregli 2.85 26 iP Pn 18 30 31.9 +3.2
KERG iS Sb 18 31 06.7 -3.7
KERG IAML 18 31 11.0
comp=N,529nm,0.5s
KERG IAML 18 31 12.0
comp=E,473nm,0.4s
HWQ Hawqa 2.86 101 eP Pn 18 30 29.4 +0.6
ELL Elmali 2.86 312 PN Pn 18 30 30.1 +1.3
ELL Elmali 2.86 312 Pn 18 30 28.2 -0.6
ELL Elmali 2.86 312 P Pn 18 30 28.2 -0.6
KRTS Karatas 2.87 52 PN Pn 18 30 29.8 +1.1
QRWL Qaraoun 2.90 116 eP Pn 18 30 29.8 +0.5
KMER Konya-Meram 2.91 357 iP Pn 18 30 33.0 +3.6
KMER iS Sn 18 31 07.4 +4.1
KMER IAML 18 31 10.0
comp=E,629nm,1.1s
KMER IAML 18 31 10.0
comp=N,354nm,0.6s
MMA0B Mount Meron ar 3.00 127 Pn Pn 18 30 31.2 +0.6
MMA0B Sn Sn 18 31 05.8 +0.4
MMAI Mount Meron Ar 3.00 127 P Pn 18 30 31.4 +0.8
comp=N,68nm,0.3s,baz=313,slow=12,SNR=236
MMAI S Sn 18 31 05.5 +0.1
comp=N,192nm,0.3s,baz=309,slow=27,SNR=17
OFRI `Ofer 3.01 137 Pn Pn 18 30 31.5 +0.7
OFRI Sn Sn 18 31 06.4 +0.7
GULE Gulek 3.02 36 iP Pn 18 30 33.7 +2.7
GULE iS Sb 18 31 10.8 -4.4
GULE IAML 18 31 15.0
comp=N,558nm,0.5s
GULE IAML 18 31 26.0
comp=E,749nm,0.7s
RCY Rachaya 3.04 116 eP Pn 18 30 32.1 +0.8
BCK Bucak 3.05 329 PN Pn 18 30 32.6 +1.3
BLGI Bet Lehem HaGe 3.05 133 Pn Pn 18 30 32.0 +0.7
KSDI Kefar Szold 3.07 122 P Pn 18 30 32.9 +1.4
comp=E,1.4nmcomp=E,7µmcomp=E,124nm,0.6s
KSDI Kefar Szold 3.07 122 Pn Pn 18 30 32.4 +0.9
KSDI Sn Sn 18 31 07.6 +0.6
YESY Yesilyurt 3.08 18 PN Pn 18 30 33.2 +1.5
NATI Neve Ativ 3.08 120 Pn Pn 18 30 32.5 +0.8
NATI Sn Sn 18 31 07.5 +0.1
KONT Konya--Tatoy 3.09 357 PN Pn 18 30 33.9 +2.1
KONT Konya--Tatoy 3.09 357 iP Pn 18 30 35.6 +3.7
KONT iS Sb 18 31 12.4 -4.6
KARA Karaisali 3.14 39 PN Pn 18 30 33.8 +1.3
YURE YUREGIR 3.18 51 PN Pn 18 30 33.9 +0.8
YURE YUREGIR 3.18 51 iP Pn 18 30 34.8 +1.6
KSHT Keshet 3.29 124 Pn Pn 18 30 36.1 +1.5
DOGA KONYA_Doganhis 3.32 348 iP Pn 18 30 39.4 +4.3
TAHT Tahtakopru-Hat 3.33 62 PN Pn 18 30 36.1 +1.0
SLTI Sal'it 3.33 141 Pn Pn 18 30 36.1 +0.9
FETY Fethiye 3.33 303 PN Pn 18 30 36.2 +1.0
FETY Fethiye 3.33 303 iP Pn 18 30 37.0 +1.8
LADK Ladik-KONYA 3.34 357 PN Pn 18 30 36.9 +1.5
CEYT Ceyhan 3.37 49 PN Pn 18 30 36.7 +1.1
ISP Isparta 3.38 332 PN Pn 18 30 37.2 +1.2
ISP Isparta 3.38 332 Pn 18 30 33.7 -2.3
ISP Isparta 3.38 332 P Pn 18 30 33.7 -2.3
GOLH Golhisar 3.40 315 iP Pn 18 30 39.3 +3.2
MMLI Mount Malkishu 3.40 134 PN Pn 18 30 36.9 +0.8
MMLI Mount Malkishu 3.40 134 P Pn 18 30 38.5 +2.4
comp=E,0.8nmcomp=E,3µmcomp=E,52nm,0.4s
MMLI Mount Malkishu 3.40 134 Pn Pn 18 30 36.9 +0.8
MMLI Sn Sn 18 31 15.9 +0.7
CMRD Camardi-Nigde 3.42 34 PN Pn 18 30 37.9 +1.4
SULT Sultanhani-AKS 3.43 13 PN Pn 18 30 37.9 +1.4
BAGO Egridir - ISPA 3.44 336 iP Pn 18 30 40.5 +3.8
BRDR BURDUR-Merkez 3.48 325 iP Pn 18 30 39.7 +2.5
AKO Adana 3.50 41 iP Pn 18 30 39.6 +2.1
AKO iS Sn 18 31 22.2 +4.5
HMDT Nahal Hemdat 3.59 135 Pn Pn 18 30 40.1 +1.4
HMDT Sn Sn 18 31 21.2 +1.3
NIG Nigde 3.65 26 PN Pn 18 30 40.6 +0.9
BASM Basmaki-Afyon 3.67 327 PN Pn 18 30 41.7 +1.9
DALY Dalyan (Mula) 3.72 303 PN Pn 18 30 41.2 +0.7
DALY Dalyan (Mula) 3.72 303 iP Pn 18 30 41.8 +1.2
KOZT Kozan 3.73 44 PN Pn 18 30 41.7 +1.1
CHBY Cihanbeyli 3.73 4 PN Pn 18 30 42.2 +1.5
TURN Turunc 3.79 303 PN Pn 18 30 45.2 +3.8
TURN Turunc 3.79 303 iP Pn 18 30 45.1 +3.7
ARG Arkhangelos 3.86 292 PN Pn 18 30 43.1 +0.7
AMAZ Amatzia 3.86 148 Pn Pn 18 30 43.6 +1.2
AKSY AKSARAY - Alti 3.91 14 iP Pn 18 30 45.5 +2.3
KZIL AFYON_Kizioren 3.91 331 iP Pn 18 30 44.8 +1.6
TAVA DENIZLI_Tavas 3.93 313 iP Pn 18 30 46.5 +3.0
YAHY KAYSERI_Yahyal 3.95 34 iP Pn 18 30 47.1 +3.4
SHUT Suhut-Afyon 4.03 337 PN Pn 18 30 46.8 +1.8
DSI Dead Sea 4.04 143 Pn Pn 18 30 45.7 +0.8
KIZT Kizilcal 4.05 353 PN Pn 18 30 46.6 +1.4
BOLV Bolvadin 4.07 342 iP Pn 18 30 48.8 +3.4
KAMA Osmaniye 4.07 54 iP Pn 18 30 46.7 +1.4
YTIR Yattir 4.09 148 Pn Pn 18 30 47.2 +1.5
YTIR Sn Sn 18 31 34.0 +1.6
HSUJ Al Zarqa 4.09 131 P Pn 18 30 47.7 +2.0
comp=E,1.1nmcomp=E,3µmcomp=E,120nm,0.5s
ANDN Andirin 4.10 47 iP Pn 18 30 48.9 +3.1
KUZU Kuzuini 4.14 61 iP Pn 18 30 47.7 +1.3
YER Yerkesik 4.14 305 PN Pn 18 30 47.9 +1.6
SERE Sereflikochisa 4.16 11 PN Pn 18 30 48.2 +1.5
KULU Kulu 4.20 5 PN Pn 18 30 48.9 +1.8
YAYX Yaylak 4.20 14 PN Pn 18 30 48.9 +1.7
KZIT Kziot 4.23 158 PN Pn 18 30 48.5 +1.0
KZIT Kziot 4.23 158 Pn 18 30 49.0 +1.5
KZIT Kziot 4.23 158 Pn Pn 18 30 48.6 +1.0
WALJ Wala 4.27 139 P Pn 18 30 50.1 +2.0
comp=E,1.3nmcomp=E,3µmcomp=E,164nm,0.6s
AYKD Aykdinkavak 4.29 52 iP Pn 18 30 50.1 +1.9
KHAL Karahalli 4.29 326 iP Pn 18 30 49.6 +1.3
HCB Kahramanmara 4.31 54 iP Pn 18 30 50.5 +1.8
KKUL Konya-Kulu 4.32 4 iP Pn 18 30 50.5 +1.7
AVNS Nevsehir-Avano 4.35 24 iP Pn 18 30 52.0 +2.7
GHAJ Ghor Haditha 4.35 144 P Pn 18 30 52.4 +3.2
comp=E,1.0nmcomp=E,4µmcomp=E,134nm,0.4s
GHAJ Ghor Haditha 4.35 144 Pn Pn 18 30 51.1 +1.9
KMRS Kahramanmaras 4.40 52 PN Pn 18 30 51.4 +1.5
DAMI2 DAM2 4.40 146 Pn Pn 18 30 50.0 +0.2
KIRS Krehir-Merke 4.41 14 iP Pn 18 30 52.1 +2.1
GAZ Gaziantep 4.43 57 PN Pn 18 30 51.4 +1.1
GAZ Gaziantep 4.43 57 Pn 18 30 51.3 +1.0
DAT Datca 4.46 296 iP Pn 18 30 51.3 +0.6
DAT iS Sn 18 31 40.4 -1.0
KARP Karpathos 4.47 280 Pn Pn 18 30 50.5 -0.3
ASF Jabal al Asfar 4.51 125 P Pn 18 30 53.4 +2.0
comp=E,3.5nm,0.3s,baz=262,slow=5.0,SNR=25
ASF S Sn 18 31 42.9 +0.2
comp=E,8.1nm,0.3s,baz=82,slow=22,SNR=3.7
ASF Jabal al Asfar 4.51 125 P Pn 18 30 53.4 +2.0
comp=E,0.2nmcomp=E,867nmcomp=E,35nm,0.7s
AFSR Afar-Bala (An 4.60 5 PN Pn 18 30 54.8 +2.1
RMNI Mount Ramon 4.64 156 Pn Pn 18 30 54.4 +1.2
AUSIV SIVRIHISAR 4.65 350 PN Pn 18 30 55.0 +1.7
SWQJ Swaqa 4.65 140 P Pn 18 30 56.8 +3.4
comp=E,0.7nmcomp=E,3µmcomp=E,122nm,0.6s
CIFT Cifteler, Eski 4.65 346 PN Pn 18 30 55.4 +2.0
SVRH Sivrihisar-ESK 4.66 350 PN Pn 18 30 55.3 +1.9
SARI SarD1z-Kayseri 4.71 40 PN Pn 18 30 56.1 +1.8
BNN Bunyan 4.78 33 PN Pn 18 30 56.8 +1.6
ZFRI Zfri 4.83 152 Pn Pn 18 30 56.4 +0.7
HBRG Burj al `Arab 4.84 209 S Sn 18 31 43.1 -7.7
baz=201
HBRG AMP 18 32 00.0
baz=201
JDRJ Daraweish 4.88 147 P Pn 18 30 58.9 +2.3
comp=E,0.6nmcomp=E,2µmcomp=E,75nm,0.5s
HHAG Hagoal 4.90 185 P Pn 18 30 58.1 +1.3
baz=176
BRTR Keskin Array B 4.94 10 P Pn 18 30 59.4 +2.0
comp=E,5.2nm,0.3s,baz=186,slow=15,SNR=142
BRTR S Sn 18 31 53.8 +0.5
baz=180,slow=17,SNR=3.3
BRTR LR LR 18 33 08.1
comp=E,161nm,18.4s,baz=180,slow=41
BRTR Keskin Array B 4.94 10 Pn 18 30 59.2 +1.8
BR131 Keskin Array S 4.94 10 Pn 18 30 59.6 +2.3
BR131 Keskin Array S 4.94 10 P Pn 18 30 59.6 +2.3
PRNI Paran 4.94 155 Pn Pn 18 30 58.6 +1.2
KOT Kottamia 4.95 187 P Pn 18 30 58.0 +0.6
baz=178
KOT S Sn 18 31 51.1 -2.5
baz=178
KOT AMP 18 32 00.0
baz=178
BR231 Keskin MP Arra 4.98 2 Pn 18 30 60.0 +2.1
SUZ Suez 5.01 177 P Pn 18 30 59.2 +1.1
baz=169
ANTO Ankara 5.01 2 ⇑P Pb 18 31 11.2 -1.2
ANTO Ankara 5.01 2 Pn 18 31 00.7 +2.5
ANTO Ankara 5.01 2 P Pn 18 31 00.7 +2.5
KRMI Paran Flat 5.07 158 Pn Pn 18 31 00.1 +1.0
GCAM G?zelcaml? 5.15 305 iP Pn 18 31 00.4 +0.3
GCAM iS Sn 18 31 54.4 -3.9
HRFI Mount Harif 5.24 156 P Pn 18 31 03.2 +1.7
HRFI Mount Harif 5.24 156 Pn Pn 18 31 02.7 +1.2
HRFI Sn Sn 18 32 02.6 +1.9
GLL Jalalah 5.31 188 P Pn 18 31 02.9 +0.5
baz=181
MBRI Mt Berech 5.43 158 Pn Pn 18 31 05.4 +1.4
HNAT Natroun 5.46 198 P Pn 18 31 05.3 +0.9
baz=191
HNAT AMP 18 32 00.0
baz=191
HNAT S Sn 18 32 00.3 -5.7
baz=191
EIL Elat 5.55 158 P Pn 18 31 07.1 +1.4
comp=E,5.6nm,0.3s,baz=256,slow=2.8,SNR=82
EIL S Sn 18 32 08.2 -0.1
comp=E,9.2nm,0.3s,baz=358,slow=19,SNR=4.0
EIL LR LR 18 33 52.7
comp=E,80nm,19.2s,baz=314,slow=44
EIL Elat 5.55 158 Pn Pn 18 31 06.8 +1.1
ZAF Zafarana 5.56 180 P Pn 18 31 06.7 +0.9
baz=172
SANT Santorini 5.97 287 ⇓S Sn 18 32 11.3 -7.4
SANT Santorini 5.97 287 Pn Pn 18 31 10.4 -1.0
APE Apeiranthos 6.11 293 ⇑P Pn 18 31 13.4 +0.1
APE ⇑S Sn 18 32 17.8 -4.3
APE Apeiranthos 6.11 293⇑eP Pn 18 31 08.4 -4.9
IDI Anoyia 6.30 276 P Pn 18 31 15.5 -0.5
comp=E,4.4nm,0.3s,baz=20,slow=5.3,SNR=28
IDI S Sn 18 32 23.1 -3.6
comp=E,15nm,0.3s,baz=209,slow=21,SNR=9.3
IDI LR LR 18 35 29.4
comp=E,99nm,18.5s,baz=100,slow=55
NBNS Bani Suef 6.31 190 P Pn 18 31 16.5 +0.5
baz=184
DIKM Dikmen 7.11 17 ⇑P Pb 18 31 40.3 -7.8
SWA2 8.22 229 S Sn 18 32 57.4 -17
baz=225
HFRF Wahat Farafira 8.50 206 AMP 18 31 00.0
baz=202
GNI Garni 11.03 58 LR LR 18 37 07.7
comp=E,81nm,20.6s,baz=262,slow=40
VRI Vrincioaia 11.86 340 ⇑P Pn 18 32 40.7 +8.7
VRI Vrincioaia 11.86 340 ⇑P Pn 18 32 40.7 +8.6
PLOR Plostina 11.87 340 ⇓P Pn 18 32 39.2 +7.0
PLOR Plostina 11.87 340 ⇓P Pn 18 32 39.2 +7.0
ZEI Tsey 11.87 45 eP Pn 18 32 29.2 -3.2
ZEI pmax pmax
comp=Z,5.0nm,0.9s
KBZ Khabaz 11.94 39 LR LR 18 38 14.3
comp=Z,84nm,18.2s,baz=271,slow=43
VOIR 12.02 334 ⇑P Pn 18 32 40.3 +5.9
VOIR 12.02 334 ⇑P Pn 18 32 40.3 +5.9
GOF Gofitskoye 12.97 35⇑eP Pn 18 32 41.0 -6.3
SORM Soroca 13.63 348 ⇓P P 18 33 05.0 +0.3
SORM Soroca 13.63 348 ⇓P P 18 33 05.0 +0.3
BURAR Bucovina Array 13.88 339 ⇑P P 18 33 07.9 +0.4
BURAR Bucovina Array 13.88 339 P 18 33 06.8 -0.7
BURAR Bucovina Array 13.88 339 ⇑P P 18 33 07.9 +0.4
BUR08 Bucovina Ar. S 13.91 339 P 18 33 08.9 +1.0
CORL Corleone 15.80 287 P P 18 33 28.1 -0.8
KOLS Kolonicke sedl 15.99 335 eP P 18 33 37.0 +6.1
AKASG Malin Array Be 16.02 352 P Pn 18 33 27.4 -0.7
comp=Z,1.3nm,0.3s,baz=177,slow=10,SNR=8.6
AKASG Malin Array Be 16.02 352 P P 18 33 30.6 -0.6
AKASG Malin Array Be 16.02 352 P P 18 33 30.6 -0.6
AKASG pmax pmax
comp=Z,2.0nm,0.9s
AKBB Malin Array Si 16.02 352 P P 18 33 31.4 +0.2
AKBB IAmb IAmb 18 33 31.7
comp=Z,20nm,1.4s
AKBB Malin Array Si 16.02 352 P P 18 33 31.4 +0.2
AKBB pmax pmax
comp=Z,19nm,1.4s
VYHS Vyhne 17.01 327 eP P 18 33 43.5 +1.3
VYHS Vyhne 17.01 327 eP P 18 33 43.5 +1.3
VRH Novokhopyorsk 17.64 19 eP Pn 18 33 48.4 +0.1
VRH pmax pmax
comp=Z,30nm,1.4s
KEST Kesra 18.96 279 P P 18 34 04.0 +0.2
comp=Z,0.1nm,0.3s,baz=25,slow=19,SNR=2.4
KEST Kesra 18.96 279 IAmb IAmb 18 34 15.9
comp=Z,11nm,1.2s
TEOL Teolo 19.06 310 P Pn 18 34 05.4 -0.3
GEC2 GERESS Array S 19.74 321 P Pn 18 34 10.6 -1.7
GEC2 IAmb IAmb 18 34 25.8
comp=Z,4.6nm,0.7s
GERES GERESS Array B 19.74 321 P P 18 34 12.1 -0.2
comp=Z,0.2nm,0.3s,baz=129,slow=11,SNR=9.7
GERES GERESS Array B 19.74 321 P P 18 34 11.1 -1.2
KHC Kasperske Hory 19.98 321 eP P 18 34 14.5 -0.3
KHC Kasperske Hory 19.98 321 P P 18 34 14.4 -0.3
KHC Kasperske Hory 19.98 321⇓eP P 18 34 14.0 -0.8
KHC pmax pmax
comp=Z,6.0nm,0.8s
WATA Walderalm 20.06 315 ePn Pn 18 34 19.8 +2.0
comp=Z,1.1nm,0.4s
SQTA Sankt Quirin 20.22 314 eP Pn 18 34 23.1 +3.5
comp=Z,3.0nm,0.5s
OBN Obninsk 20.45 7⇑iP Pn 18 34 27.3 +5.3
OBN i 18 34 37.9
OBN PPP PPP 18 34 47.0
OBN SS Sn 18 38 42.0 +31
OBN pmax pmax
comp=Z,10.0nm,0.9s
OBN MLR MLR 18 34 27.3 +3.1
comp=Z,68nm,19.0s
RETA Reutte 20.61 314 eP Pn 18 34 27.3 +3.1
comp=Z,1.6nm,0.4s
GEYT Alibeck 20.79 74 P P 18 34 24.7 +1.0
comp=Z,3.9nm,0.8s,baz=265,slow=12,SNR=12
GEYT Alibeck 20.79 74 P P 18 34 24.4 +0.7
GYA0B ALIBECK ARRAY 20.79 74 P P 18 34 24.3 +0.6
GYA0B IAmb IAmb 18 34 35.0
comp=Z,7.2nm,0.9s
DAVOX Davos/Dischmat 20.81 312 P Pn 18 34 26.0 -0.5
comp=Z,0.9nm,0.4s,baz=35,slow=12,SNR=3.3
DAVA Damuels 21.04 313 eP P 18 34 27.7 +1.3
comp=Z,2.4nm,0.5s
SENIN Lac Senin/Sane 22.25 309 P P 18 34 42.2 +2.6
SENIN IAmb IAmb 18 34 54.6
comp=Z,12nm,1.4s
BFO Black Forest 22.45 314 P P 18 34 44.6 +3.1
BFO Black Forest 22.45 314 P P 18 34 44.6 +3.1
AKTO Aktyubinsk 24.19 42 P P 18 34 58.3 -0.3
comp=Z,1.4nm,0.5s,baz=224,slow=12,SNR=5.8
HRA Herat 24.40 83 P P 18 35 02.2 +1.2
ABKAR Akbulak array 24.74 46 P P 18 35 03.8 +0.2
KLMR Klimovskoe 26.40 8 eP P 18 35 17.0 -1.5
KLMR AMP 18 35 24.9
comp=Z,25nm,1.6s
KLMR Klimovskoe 26.40 8 eP P 18 35 17.0 -1.5
KLMR pmax pmax
comp=Z,25nm,1.6s
FINES FINESS Array B 26.93 353 P P 18 35 22.0 -1.2
comp=Z,2.3nm,0.4s,baz=156,slow=11,SNR=20
FINES FINESS Array B 26.93 353 P P 18 35 21.9 -1.3
ARU Arti 27.91 31 P P 18 35 33.3 +1.2
comp=Z,0.8nm,0.5s,baz=212,slow=13,SNR=4.2
ARU Arti 27.91 31 IAmb IAmb 18 35 40.6
comp=Z,4.3nm,0.7s
ARU Arti 27.91 31diP P 18 35 39.6 +7.5
ARU 18 36 26.9
ARU SS SS 18 41 52.0 -20
ARU pmax pmax
comp=Z,6.0nm,0.9s
PRGR Permogore 28.07 13 eP P 18 35 32.0 -1.4
PRGR pmax pmax
comp=Z,5.0nm,0.5s
HFS Hagfors 28.11 340 P P 18 35 33.5 -0.3
comp=Z,1.0nm,0.6s,baz=113,slow=10,SNR=5.1
ESDC Sonseca Array 29.32 290 P P 18 35 44.4 -0.6
comp=Z,0.2nm,0.4s,baz=82,slow=9.2,SNR=3.0
NOA NORSAR Array B 29.56 339 P P 18 35 46.1 -0.7
comp=Z,1.1nm,0.8s,baz=147,slow=11,SNR=3.3
NOA LR LR 18 49 42.6
comp=Z,26nm,20.4s,baz=15,slow=40
KK31 Karatay Array 30.43 63 P P 18 35 54.0 -0.6
KK31 IAmb IAmb 18 36 05.1
comp=Z,2.5nm,0.9s
KK31 Karatay Array 30.43 63 P P 18 35 54.0 -0.6
KK31 pmax pmax
comp=Z,3.0nm,0.9s
KKAR Karatay Array 30.43 63 P P 18 35 54.9 +0.3
KKAR Karatay Array 30.43 63 P P 18 35 54.9 +0.3
NIL Nilore 33.50 80 P P 18 36 23.0 +1.3
NIL Nilore 33.50 80 P P 18 36 23.0 +1.3
NIL pmax pmax
comp=Z,3.0nm,0.8s
KSH Kashi 34.65 69 P P 18 36 33.1 +1.3
KSH sP pP 18 36 40.0 -1.9
KSH S S 18 41 59.1 -0.1
KSH sS pS 18 42 07.7 -2.7
ARCES ARCESS Array B 34.95 356 P P 18 36 32.5 -1.3
comp=Z,1.8nm,0.7s,baz=176,slow=10,SNR=11
ARCES ARCESS Array B 34.95 356 P P 18 36 32.6 -1.2
ARCES ARCESS Array B 34.95 356 P P 18 36 32.6 -1.2
TORD Torodi Ar. Bea 35.28 240 P P 18 36 38.2 +0.9
comp=Z,1.1nm,0.6s,baz=66,slow=6.2,SNR=8.2
TORD Torodi Ar. Bea 35.28 240 P P 18 36 37.8 +0.5
KURK Kurchatov 36.69 50⇓eP P 18 36 55.7 +6.8
KURK pmax pmax
comp=Z,2.0nm,1.0s
MAKZ Makanchi 38.66 57 P P 18 37 05.8 +0.2
MAKZ Makanchi 38.66 57 P P 18 37 05.8 +0.2
MAKZ pmax pmax
comp=Z,1.0nm,0.8s
MK31 Makanchi Array 38.87 57 P P 18 37 07.8 +0.4
MK31 Makanchi Array 38.87 57 P P 18 37 07.8 +0.4
MK31 pmax pmax
comp=Z,3.0nm,1.3s
MKAR Makanchi Array 38.87 57 P P 18 37 08.2 +0.7
comp=Z,1.0nm,0.8s,baz=275,slow=6.4,SNR=11
ZALV Zalesovo Beam 40.85 46 P P 18 37 23.1 -0.6
comp=Z,0.5nm,0.4s,baz=254,slow=11,SNR=3.8
DANN Dangsing 43.71 84 eP P 18 37 49.4 +1.7
comp=Z,22nm,0.7s
KOLN Koldanda 43.80 85 eP P 18 37 49.3 +1.0
DBIC Dimbokro 44.40 240 P P 18 37 53.3 +0.4
comp=Z,0.8nm,0.5s,baz=27,slow=4.5,SNR=2.5
DBIC Dimbokro 44.40 240 IAmb IAmb 18 38 01.6
comp=Z,3.3nm,1.4s
GKN Gorkha 44.55 84 eP P 18 37 55.5 +1.2
comp=Z,12nm,0.6s
DMN Daman 45.09 84 eP P 18 38 00.0 +1.3
comp=Z,7.3nm,0.6s
KKN Kakani 45.16 84 eP P 18 38 00.3 +1.1
comp=Z,12nm,0.6s
PKIN Phulchoki 45.34 84 eP P 18 38 01.9 +1.2
PKI Pulchoki 45.35 84 eP P 18 38 01.9 +1.0
comp=Z,6.1nm,0.6s
GUN Gumba 45.60 83 eP P 18 38 04.0 +1.1
RAMN Ramite 46.57 84 eP P 18 38 11.1 +0.7
ODAN Odare 47.25 84 eP P 18 38 16.3 +0.6
TAPN Taplejung 47.32 83 eP P 18 38 17.2 +0.9
SONM Songino Array 54.93 52 P P 18 39 12.2 -0.8
comp=Z,0.8nm,1.1s,baz=282,slow=9.2,SNR=4.4
SONM LR LR 19 06 35.5
comp=Z,51nm,18.5s,baz=76,slow=40
SONM Songino Array 54.93 52 P P 18 39 13.1 +0.1
SONM Songino Array 54.93 52 P P 18 39 13.1 +0.1
SONM pmax pmax
comp=Z,1.0nm,1.1s
TIXI Tiksi 59.27 21 P P 18 39 42.6 -0.5
TIXI IAmb IAmb 18 39 53.8
comp=Z,2.2nm,1.1s
TIXI Tiksi 59.27 21 P P 18 39 42.6 -0.5
TIXI pmax pmax
comp=Z,2.0nm,1.1s
CMAR Chiang Mai Arr 60.55 87 P P 18 39 52.5 -0.2
comp=Z,0.8nm,0.8s,baz=296,slow=8.5,SNR=9.9
CMAR Chiang Mai Arr 60.55 87ceP P 18 39 59.5 +6.8
CMAR pmax pmax
comp=Z,1.0nm,0.7s
BILL Bilibino 71.74 17⇑eP P 18 41 09.0 +5.3
YKA Yellowknife Ar 79.45 345 P P 18 41 47.6 -0.3
comp=Z,0.2nm,0.5s,baz=25,slow=5.2,SNR=4.4
ILAR Eielson Array 80.70 360 P P 18 41 55.8 +1.2
comp=Z,0.2nm,0.7s,baz=359,slow=3.8,SNR=3.4
MJAR Matsushiro Arr 80.88 52 P P 18 41 55.9 -0.3
comp=Z,2.2nm,0.7s,baz=327,slow=3.7,SNR=3.4

IDC 03 18:32:18.5±1.1, 6°.54S×154°.39E, h0km, mb4.1/10, mb1 4.3/12, mb1mx4.1/30, mbtmp4.2/12, ML3.4/2, MS3.3/1, Ms1 3.3/1, ms1mx2.5/29, Error ellipse: s-maj=31.3km s-min=18.9km az=117.0

NEIC 03 18:32:27.9±0.7, 6°.6S±0°.1×154°.1E±0°.1, h65km±9km, mb4.3/10, Error ellipse: s-maj=25.0km s-min=11.8km az=134.0

ISC 03 18:32:26.4±0.8, 6°.43S±0°.08×154°.1E±0°.1, h48km, n28, σ1°.02/30, mb4.1/13, Bougainville-Solomon Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRVT Keravat (AS076 2.95 316 Pn Pn 18 33 09.6 -1.2
16nm,0.3s,baz=251,slow=1.1,SNR=19
KRVT Sn Sn 18 33 44.1 -0.9
37nm,0.3s,baz=73,slow=7.3,SNR=8.4
PMG Port Moresby 7.48 246 Pn Pn 18 34 12.3 -0.7
13nm,0.3s,baz=71,slow=7.0,SNR=67
PMG Sn Sn 18 35 36.8 +0.2
0.9nm,0.3s,baz=131,slow=20,SNR=1.8
PMG Port Moresby 7.48 246 Pn Pn 18 34 13.5 +0.5
WRA Warramunga Arr 23.42 233 P P 18 37 30.7 -0.8
5.5nm,0.8s,baz=55,slow=9.9,SNR=17
WRA Warramunga Arr 23.42 233 P P 18 37 30.6 -0.9
ASAR Alice Springs 25.90 226 P P 18 37 53.8 -0.3
3.4nm,0.8s,baz=57,slow=9.4,SNR=18
ASAR PcP PcP 18 41 22.3 0.0
0.4nm,0.8s,baz=71,slow=3.4,SNR=3.1
ASAR Alice Springs 25.90 226 P P 18 37 53.0 -1.1
STKA Stephens Creek 27.88 203 P P 18 38 10.8 -1.0
3.1nm,0.9s,baz=28,slow=16,SNR=4.3
STKA Stephens Creek 27.88 203 P P 18 38 10.2 -1.6
FITZ Fitzroy Crossi 30.08 245 P P 18 38 30.9 -0.6
9.8nm,0.7s,baz=57,slow=7.9,SNR=16
FITZ Fitzroy Crossi 30.08 245 IAmb IAmb 18 38 32.9
comp=Z,7.4nm,0.8s
SBUM Sibu 42.73 281 P P 18 40 19.9 +0.6
PETK Petropavlovsk- 59.39 3 LR LR 19 07 07.8
comp=Z,23nm,19.4s,baz=239,slow=35
CMAR Chiang Mai Arr 59.74 296 P P 18 42 28.3 +1.5
comp=Z,2.0nm,0.9s,baz=118,slow=5.3,SNR=10
CHTO Chiang Mai 59.86 296 P P 18 42 28.5 +0.9
CHTO IAmb IAmb 18 42 31.0
comp=Z,2.4nm,1.1s
SONM Songino Array 68.38 328 P P 18 43 24.1 +0.9
comp=Z,0.6nm,0.5s,baz=142,slow=4.9,SNR=9.3
SONM Songino Array 68.38 328 P P 18 43 24.1 +0.9
MCK McKinley 81.87 22 P P 18 44 41.1 +0.7
MK31 Makanchi Array 82.40 319 P P 18 44 44.1 +0.7
MK31 IAmb IAmb 18 44 58.1
comp=Z,3.6nm,1.1s
MKAR Makanchi Array 82.40 319 P P 18 44 44.3 +0.8
comp=Z,2.0nm,1.0s,baz=98,slow=7.8,SNR=13
MKAR Makanchi Array 82.40 319 P P 18 44 44.1 +0.6
MAKZ Makanchi 82.61 319 P P 18 44 44.9 +0.3
MAKZ IAmb IAmb 18 45 02.5
comp=Z,3.9nm,1.0s
ILAR Eielson Array 83.18 22 P P 18 44 45.4 -1.7
comp=Z,0.2nm,0.5s,baz=252,slow=5.3,SNR=3.0
ZALV Zalesovo Beam 83.22 326 P P 18 44 47.7 +0.1
comp=Z,0.8nm,0.7s,baz=116,slow=3.4,SNR=4.6
NVAR Mina Array Bea 92.07 52 P P 18 45 29.1 -1.9
comp=Z,0.1nm,0.3s,baz=277,slow=7.0,SNR=4.2
WVOR Wild Horse Val 92.27 48 P P 18 45 33.7 +2.0
TORD Torodi Ar. Bea 152.02 286 PKPbc PKPbc 18 52 17.2 -0.1
comp=Z,1.8nm,0.7s,baz=81,slow=2.4,SNR=9.7
TORD PKPab PKPab 18 52 27.5 +0.6
comp=Z,1.3nm,0.6s,baz=73,slow=3.1,SNR=5.3
TORD Torodi Ar. Bea 152.02 286 PKiKP 18 52 17.6 -0.1

ATH 03 18:42:51.9, 38°.25N×20°.43E, h9km±1km, ML2.6/5, Error ellipse: s-maj=2.2km s-min=0.9km az=263.0

THE 03 18:42:52.1, 38°.25N×20°.39E, h6km±2km, ML2.6/9, Error ellipse: s-maj=2.1km s-min=0.4km az=208.0

ISC 03 18:42:51.9±1.0, 38°.25N±0°.02×20°.41E±0°.04, h7km±5km,

n32, σ0s.55/55, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.01	43	P	Pg	18 42 53.4	+0.1
KEF4				S	Sg	18 42 54.3	+0.1
LXR1	Lixouri, Cepha	0.05	159	P	Pg	18 42 53.3	-0.2
LXR1				S	Sg	18 42 54.1	-0.6
KEF1	Kardakata, Kep	0.05	58	P	Pg	18 42 53.6	+0.1
KEF1				S	Sg	18 42 54.8	0.0
KEF3	Kipouria, Keph	0.07	228	P	Pg	18 42 53.9	+0.1
KEF3				S	Sg	18 42 55.5	+0.4
CHV1	Chavriata, Kef	0.07	201	P	Pg	18 42 54.0	+0.2
CHV1				S	Sg	18 42 55.8	+0.7
ARG2	Argostoli	0.09	141	P	Pg	18 42 54.4	+0.3
ARG2				S	Sg	18 42 56.3	+0.7
KEF2	Argostoli. Kep	0.10	146	P	Pg	18 42 54.5	+0.2
KEF2				S	Sg	18 42 56.4	+0.5
VLS	Valsamata	0.16	118	P	Pg	18 42 55.3	+0.1
VLS				S	Sg	18 42 58.0	+0.6
	3μm,0.1s						
VLS	Valsamata	0.16	118	P	Pg	18 42 55.3	+0.1
VLS				S	Sg	18 42 57.8	+0.4
VLS				AML	AML	18 42 58.1	
	comp=N,6191μm,0.1s						
VLS				AML	AML	18 42 58.5	
	comp=E,7297μm,0.2s						
VSK1	VASILIKIADES	0.20	36	P	Pg	18 42 56.2	+0.3
VSK1				S	Sg	18 42 59.4	+0.7
	comp=E,7μm,0.3s						
FSK	Fiskardo	0.24	29	P	Pg	18 42 57.0	+0.3
FSK				S	Sg	18 43 01.0	+1.1
	comp=E,3μm,0.2s						
FSK	Fiskardo	0.24	29	P	Pg	18 42 56.9	+0.3
FSK				S	Sg	18 43 00.7	+0.8
FSK				AML	AML	18 43 01.2	
	comp=N,6883μm,0.2s						
FSK				AML	AML	18 43 01.3	
	comp=E,6242μm,0.2s						
EVGI	Lefkada island	0.42	27	P	Pg	18 43 00.1	+0.1
EVGI				S	Sg	18 43 06.8	+1.3
EVGI	Lefkada island	0.42	27	P	Pg	18 43 00.2	+0.1
EVGI				S	Sg	18 43 05.8	+0.3
VLMS	Volimes, Zakyn	0.42	152	P	Pg	18 43 00.3	+0.2
VLMS				S	Sg	18 43 06.6	+0.9
VLMS				AML	AML	18 43 07.6	
	comp=E,1609μm,0.5s						
VLMS				AML	AML	18 43 09.3	
	comp=N,2040μm,0.3s						
MGNA	Meganis	0.50	36	P	Pg	18 43 01.4	-0.3
MGNA				S	Sg	18 43 08.8	+0.5
MGNA				AML	AML	18 43 09.9	
	comp=E,2381μm,0.2s						
MGNA				AML	AML	18 43 10.3	
	comp=N,1517μm,0.3s						
LKD2	Lefkada island	0.57	19	P	Pg	18 43 02.8	-0.2
LKD2				S	Sg	18 43 10.7	+0.2
	comp=N,350nm,0.2s						
LKD2	Lefkada island	0.57	19	P	Pg	18 43 02.7	-0.3
LKD2				S	Sg	18 43 10.3	-0.1
TSLK	Tsoukalades, L	0.60	18	P	Pg	18 43 03.4	-0.2
TSLK				S	Sb	18 43 13.4	-0.1
	comp=N,322nm,0.5s						
TSLK	Tsoukalades, L	0.60	18	P	Pg	18 43 03.3	-0.2
PDO	Prodromos	0.70	60	P	Pg	18 43 05.5	+0.2
PDO				S	Sb	18 43 16.7	+0.5
	comp=N,848nm,0.6s						
PDO	Prodromos	0.70	60	P	Pg	18 43 05.1	-0.2
PDO				AML	AML	18 43 19.9	
	comp=E,1286μm,0.6s						
PDO				AML	AML	18 43 21.8	
	comp=N,824μm,0.4s						
PVO	Paravola	0.95	67	P	Pg	18 43 10.1	0.0
PVO	Paravola	0.95	67	P	Pg	18 43 10.0	0.0
DRO	Drossia	1.06	106	P	Pg	18 43 12.0	-0.3
DRO				S	Sn	18 43 29.1	+0.8
	comp=N,330nm,0.5s						
DRO	Drossia	1.06	106	P	Pg	18 43 11.8	-0.5
EFP	Efpalio	1.19	81	P	Pg	18 43 14.0	-0.7
ANX	Ano Chora	1.23	73	P	Pb	18 43 14.9	-0.6
ANX				S	Sn	18 43 33.4	+0.9
	comp=N,320nm,0.6s						
LAKA	Lakka	1.23	90	P	Pb	18 43 14.7	-0.8
LAKA				S	Sn	18 43 33.7	+1.3
	comp=N,102nm,0.6s						
TRIZ	Trizonia	1.31	84	P	Pn	18 43 16.1	-0.4
KALE	Kalithea	1.36	84	P	Pn	18 43 16.6	-0.8
KLV	Kalavryta, Ach	1.38	98	P	Pn	18 43 16.9	-0.7

*DSN **03** 19:00:26.7±2.2, 26°.66N×57°.92E, h10km, ML4.3/8, Error ellipse: s-maj=30.9km s-min=12.7km az=178.0*
*IDC **03** 19:00:26.6±0.7, 26°.63N×57°.77E, h0km, mb3.8/24, mb1 4.0/27, mb1mx3.9/45, mbtmp3.9/27, ML3.7/3, MS3.3/13, Ms1 3.3/13, ms1mx3.1/43, Error ellipse: s-maj=16.3km s-min=14.3km az=178.0*
*TEH **03** 19:00:28.4, 26°.71N×57°.76E, h11km, ML4.3*
*OMAN **03** 19:00:28.9±3.5, 26°.76N×57°.94E, h35km±161km, ml4.2/19, ms3.0/1, Error ellipse: s-maj=208.4km s-min=18.2km az=305.0*
*NEIC **03** 19:00:29.9±1.9, 26°.60N±0°.06×57°.64E±0°.06, h21km±5km, Error ellipse: s-maj=10.1km s-min=6.6km az=138.0*
*THR **03** 19:00:31.3±0.3, 26°.68N×57°.56E, h15km, ML4.0*
ISC 03 19:00:28.2±0.4, **26°.65N**±0°.03×**57°.79E**±0°.03, **h10**km, **n176**, σ1s.53/176, **mb4.2**/31, **MS3.2**/12, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSK1	Jask	1.00	181	ePg	Pn	19 00 49.1	+0.8
JSK1				e		19 01 24.8	
NIAN	Nian	1.25	317	ePg	Pg	19 00 51.8	-0.3
NIAN				e		19 01 16.3	
KHNJ	Kahnooj	1.30	357	ePg	Pn	19 00 51.4	-1.1
KHNJ				e		19 01 19.7	
BANOM	Banah	1.52	242	eP	Pn	19 00 55.0	-0.4
	SNR=2422						
BANOM				S	Sg	19 01 17.6	+0.5
BANOM	Banah	1.52	242	P	Pn	19 00 55.3	-0.2
	SNR=2404						
BANOM				S	Sg	19 01 18.6	+1.5
BANOM	Banah	1.52	242	ePn	Pn	19 00 55.5	0.0
SHME	Shamm	1.59	248	eP	Pb	19 00 57.3	-0.5
	SNR=310						
SHME				S	Sg	19 01 19.4	-0.2
SHME	Shamm	1.59	248	ePn	Pn	19 00 57.2	+0.7
BNDS	Bandar-Abbas	1.63	298	IAML		19 01 25.9	
	comp=N,2μm,0.6s						
GENO	Geno	1.63	298	ePn	Pb	19 00 57.7	-0.7
GENO				e		19 01 26.3	
MDH	Madha	1.90	225	eP	Pn	19 00 59.3	-1.3
	SNR=81						
MDH	Madha	1.90	225	P	Pn	19 00 59.4	-1.3
MDH				S	Sb	19 01 26.8	+0.1
MDH	Madha	1.90	225	ePn	Pn	19 01 00.6	-0.1
MSFE	Esma-Masafi	1.95	229	eP	Pn	19 01 00.4	-1.0
	SNR=25						
MSFE	Esma-Masafi	1.95	229	ePn	Pn	19 01 01.1	-0.3
UMQ	Umm Al-Quwin	2.21	240	ePn	Pn	19 01 04.7	-0.3
UOSS	Minazif	2.22	221	eP	Pn	19 01 03.1	-1.9
	SNR=26						
UOSS	Minazif	2.22	221		Pn	19 01 03.2	-1.9
UOSS	Minazif	2.22	221	P	Pn	19 01 03.3	-1.7
UOSS	Minazif	2.22	221	ePn	Pn	19 01 05.0	-0.1
HATD	Hatta, Dubai	2.35	220	eP	Pn	19 01 05.1	-1.8
	SNR=39						
HATD	Hatta, Dubai	2.35	220	P	Pn	19 01 05.4	-1.5
HATD	Hatta, Dubai	2.35	220	ePn	Pn	19 01 06.5	-0.4
ASHO	Ashiyiah	2.50	219	eP	Pn	19 01 09.0	0.0
	SNR=22						
ASHO	Ashiyiah	2.50	219	P	Pn	19 01 08.7	-0.3
	SNR=22						
ASHO	Ashiyiah	2.50	219	ePn	Pn	19 01 08.6	-0.4
NAZ	Nazwa, Dubai	2.53	230	eP	Pn	19 01 11.2	+1.9
	SNR=49						
NAZ	Nazwa, Dubai	2.53	230	P	Pn	19 01 11.5	+2.1
NAZ	Nazwa, Dubai	2.53	230	ePn	Pn	19 01 09.5	+0.1
CHBR	Chabahar	2.64	113	ePn	Pg	19 01 18.0	-0.7
CHBR	Chabahar	2.64	113	ePn	Pg	19 01 18.0	-0.7
FAQ	Al Faqa, Dubai	2.74	227	P	Pn	19 01 14.3	+2.1
FAQ	Al Faqa, Dubai	2.74	227	ePn	Pn	19 01 12.3	0.0
SOHO	SOHO	2.75	205	P	Pn	19 01 10.6	-1.7
	SNR=67						
SOHO	SOHO	2.75	205	ePn	Pn	19 01 12.0	-0.3
ASUD	Al Ashush, Dub	3.00	228	iP	Pn	19 01 17.7	+1.9
	SNR=7.9						
ASUD	Al Ashush, Dub	3.00	228	P	Pn	19 01 18.1	+2.3
ASUD	Al Ashush, Dub	3.00	228	ePn	Pn	19 01 15.9	+0.1
HOQ	Hoqain	3.08	188	P	Pn	19 01 15.8	-1.1
	SNR=81						
HOQ				S	Sn	19 01 52.4	-1.5
BIDO	Bidbid	3.13	174	P	Pn	19 01 17.1	-0.5
	SNR=14						
BIDO				S	Sn	19 01 56.7	+1.7
BIDO	Bidbid	3.13	174	ePn	Pn	19 01 17.2	-0.4
NGRK	Negar Kerman	3.13	343	ePn	Pb	19 01 21.0	-3.2
NGRK				e		19 02 12.2	
ALNE	Al Ain	3.17	216	iP	Pn	19 01 19.7	+1.6
	SNR=18						
ALNE	Al Ain	3.17	216	ePn	Pn	19 01 19.8	+1.6
LAR1	LAR	3.21	289	ePn	Pn	19 01 18.7	-0.1
CHMN	Cheshme madani	3.21	356	ePn	Pb	19 01 22.1	-3.4
CHMN				e		19 02 29.2	
KRBR	Kerman	3.44	345	ePn	Pb	19 01 25.8	-3.7
KRBR				IAML		19 02 26.4	
	comp=N,358nm,0.6s						
KRBR				IAML		19 02 28.4	
	comp=E,249nm,0.6s						
KRBR	Kerman	3.44	345	ePn	Pb	19 01 25.8	-3.7
TVBK	TV Kerman	3.45	345	ePn	Pn	19 01 24.0	+1.7
TVBK				e		19 02 38.0	
WSAR	Wadi Sarin	3.48	167	Pn	Pn	19 01 22.8	+0.4
	comp=E,23nm,0.3s,baz=338,slow=5.7,SNR=331						
WSAR				Sn	Sn	19 02 01.2	-2.4
	comp=E,34nm,0.3s,baz=244,slow=22,SNR=14						
WSAR	Wadi Sarin	3.48	167	P	Pn	19 01 22.9	+0.5
	SNR=55						
ARQ	Araqi	3.49	200	P	Pn	19 01 24.2	+1.6
	SNR=175						
SMDO	Samad	3.58	176	P	Pn	19 01 24.0	+0.1
SMDO				S	Sn	19 02 05.4	-0.9
KHGB	Koh Gabri	3.89	343	e		19 02 52.2	
BSY	Bisya	3.92	188	P	Pn	19 01 30.0	+1.5
BSY				S	Sn	19 02 17.8	+3.1
SZD1	Zahaedan-tmp	3.92	43	ePn	Pn	19 01 33.0	+4.3
ZHSF	Zahedan	3.96	41	ePn	Pb	19 01 35.5	-2.7
ZHSF	Zahedan	3.96	41	ePn	Pb	19 01 35.5	-2.7
WBK	Wadi Bani Khal	4.16	165	P	Pn	19 01 31.7	-0.1
WBK				S	Sn	19 02 17.3	-3.2
JMDO	Jabal Madar	4.27	176	P	Pn	19 01 34.2	+0.9
JMDO				S	Sn	19 02 21.4	-1.7
UMZA	Um Al Zommool	4.59	212	ePn	Pn	19 01 37.5	-0.2
NHDN	Nehbandan	5.13	22	ePn	Pn	19 01 47.0	+1.8
GHB	Gharebagh	5.38	302	ePn	Pn	19 01 49.8	+0.9
IMEH	Mehriz	5.48	330	ePn	Pn	19 01 51.0	+0.8
MHTO	MHTO	5.64	178	P	Pn	19 01 53.1	+1.0
MHTO				S	Sn	19 02 56.2	-0.7
IKOO	Kooshah	5.85	10	ePn	Pn	19 01 56.8	+1.5
IKAZ	Kazeroun	6.11	302	ePn	Pn	19 01 58.1	-0.8
ITEG	Tejag	6.28	7	ePn	Pn	19 02 02.6	+1.5
ICHK	Chekchek	6.31	333	ePn	Pn	19 02 02.9	+1.4
IDAH	Dahanechah	6.33	16	ePn	Pn	19 02 04.7	+2.8
ISAD	Sadrabad	6.36	327	ePn	Pn	19 02 03.4	+1.2
TPRV	Parvadeh(Tabas	6.43	352	ePn	Pn	19 02 06.0	+2.9
DQM	DQM	6.69	182	P	Pn	19 02 06.3	-0.3
IMON	Monand	6.72	14	ePn	Pn	19 02 09.5	+2.3
AFRZ	Afriz	6.84	9	ePn	Pn	19 02 10.9	+2.2
KLNJ	Kolanjah	6.96	310	ePn	Pn	19 02 10.0	-0.6
IRAM	Ramesheh	6.98	319	ePn	Pn	19 02 10.8	0.0
SHRT	Shahrakht	7.30	17	ePn	Pn	19 02 20.1	+5.1
SHRT	Shahrakht	7.30	17	ePn	Pn	19 02 20.1	+5.1
TNSJ	Nastanj	7.36	352	ePn	Pn	19 02 19.3	+3.4
IBRJ	Brojen	7.75	314	ePn	Pn	19 02 22.3	+1.0
IZEF	Zefreh	7.83	324	ePn	Pn	19 02 22.3	-0.1
ROKH	ROKH	8.18	316	ePn	Pn	19 02 28.9	+1.7
JHBN	Jahan bin	8.34	314	ePn	Pn	19 02 29.0	-0.5
IPIR	Pirpir	8.50	317	ePn	Pn	19 02 31.5	-0.1
HRA	Herat	8.62	25	Pn	Pn	19 02 35.7	+2.5
KRSH	Karshahi	8.78	328	ePn	Pn	19 02 37.9	+2.5
QAM	Ghamsar	8.97	324	ePn	Pn	19 02 39.3	+1.3
DMTO	DMTO	9.27	197	P	Pn	19 02 39.9	-2.0
	SNR=13						
WHFO	Wadi Hawf	9.45	204	P	Pn	19 02 41.2	-3.3
	SNR=21						
RBK	Rabkut	9.69	201	P	Pn	19 02 47.2	-0.5
IPAY	Payeh	9.83	6	ePn	Pn	19 02 54.1	+4.3
ABTO	Aybut	10.14	205	P	Pn	19 02 51.5	-2.5
	SNR=9.9						
IGLO	Ghaloghah	10.39	342	ePn	Pn	19 03 00.2	+2.7
BMDN	Meydan	10.45	314	ePn	Pn	19 02 57.7	-0.6
BDRS	Dareh Seyedi	10.59	316	ePn	Pn	19 02 59.7	-0.7
IKMR	Kamar-syah	10.64	312	ePn	Pn	19 02 59.3	-1.4
HSAM	Samen	10.94	316	ePn	Pn	19 03 04.4	-0.6
HAGD	Aghdareh	11.03	320	ePn	Pn	19 03 06.2	-0.1
GEYT	Alibeck	11.25	1	Pn	Pn	19 03 08.6	-0.5
	comp=E,0.1nm,0.3s,baz=183,slow=9.8,SNR=2.2						
GEYT	Alibeck	11.25	1		Pn	19 03 08.4	-0.8
QABG	Abgarm-Qazvin	11.44	324	ePn	Pn	19 03 12.9	+1.0
RAYN	Ar Rayn	11.56	257	iP	Pn	19 03 13.0	-0.4
	SNR=10						
RAYN	Ar Rayn	11.56	257		Pn	19 03 10.0	-3.4
IKOM	Komasi	11.61	313	ePn	Pn	19 03 12.8	-1.4
NIL	Nilore	15.08	59		Pn	19 04 02.4	+1.0
NIL				IAmb	IAmb	19 04 08.8	
	comp=Z,13nm,0.8s						
BTK	Batken	17.22	36	P	Pn	19 04 28.0	-0.9
GNI	Garni	17.30	324	P	P	19 04 32.7	+1.3
	comp=Z,0.7nm,0.3s,baz=67,slow=7.7,SNR=3.7						
GNI				LR	LR	19 12 24.4	
	comp=Z,52nm,20.9s,baz=126,slow=42						
GNI	Garni	17.30	324	P	Pn	19 04 29.3	-0.6
DAMY	Dhamar	17.35	229	Pn	Pn	19 04 30.8	-0.1
DAMY				IAmb	IAmb	19 04 46.2	
	comp=Z,27nm,1.0s						
ASF	Jabal al Asfar	19.01	292	P	P	19 04 49.5	-0.8
	comp=Z,0.4nm,0.3s,baz=73,slow=14,SNR=3.0						
ASF				S	Sn	19 08 10.1	-14
	comp=Z,0.2nm,0.3s,baz=360,slow=19,SNR=2.6						
KK31	Karatay Array	19.42	29	P	Pn	19 04 55.2	-0.5
KK31				IAmb	IAmb	19 05 02.6	
	comp=Z,16nm,1.2s						
KKAR	Karatay Array	19.42	29	P	Pn	19 04 55.3	-0.4
KKAR	Karatay Array	19.42	29	P	Pn	19 04 55.9	+0.2
KKAR				IAmb	IAmb	19 05 02.6	
	comp=Z,16nm,1.2s						
KSH	Kashi	19.87	45	P	P	19 04 57.2	-2.5
KSH				sP	sP	19 05 09.7	+5.3
KSH				S	S	19 08 26.1	-17
KSH				sS	Sn	19 08 38.3	-6.5
EIL	Elat	20.36	284	P	Pn	19 05 06.0	-0.9
	comp=Z,4.5nm,0.7s,baz=129,slow=12,SNR=4.7						
EIL				S	Sn	19 09 00.9	+4.5
	comp=Z,2.7nm,0.7s,baz=13,slow=19,SNR=2.2						
EIL				LR	LR	19 13 25.2	
	comp=Z,77nm,18.6s,baz=96,slow=38						
MMAI	Mount Meron Ar	20.41	293	P	P	19 05 06.4	+0.8
	comp=Z,4.9nm,0.8s,baz=125,slow=12,SNR=3.8						
MMAI				LR	LR	19 14 57.7	
	comp=Z,51nm,18.1s,baz=110,slow=43						
ATD	Arta Tunnel	20.59	226	LR	LR	19 15 07.6	
	comp=Z,31nm,19.0s,baz=124,slow=43						
KBZ	Khabaz	20.89	328	P	P	19 05 10.1	-0.4
	comp=Z,1.2nm,0.8s,baz=212,slow=19,SNR=2.2						
AAK	Ala-Archa	20.99	36	P	P	19 05 12.3	+0.5
	comp=Z,1.5nm,0.6s,baz=342,slow=8.8,SNR=8.9						
AAK				LR	LR	19 15 37.9	
	comp=Z,44nm,18.2s,baz=186,slow=43						
AAK	Ala-Archa	20.99	36	P	P	19 05 12.7	+0.8
ABKAR	Akbulak array	22.63	4	P	P	19 05 29.1	-0.2
AKTO	Aktyubinsk	23.75	0	P	P	19 05 41.0	+0.3
	comp=Z,4.0nm,0.6s,baz=178,slow=8.7,SNR=19						
AKTO				LR	LR	19 15 29.6	
	comp=Z,84nm,19.9s,baz=170,slow=38						
BR131	Keskin Array S	23.97	309	P	P	19 05 43.7	+0.8
BR131				IAmb	IAmb	19 05 49.9	
	comp=Z,6.2nm,0.9s						
BRTR	Keskin Array B	23.97	309	P	P	19 05 43.2	+0.3
	comp=Z,4.6nm,0.7s,baz=133,slow=11,SNR=28						
BRTR				LR	LR	19 16 03.6	
	comp=Z,50nm,19.6s,baz=70,slow=39						
BRTR	Keskin Array B	23.97	309	P	P	19 05 43.0	0.0
MDUB	Mudurnu	25.98	309	P	P	19 06 01.0	-0.2
MK31	Makanchi Array	27.91	37	P	P	19 06 18.7	+0.3
MK31				IAmb	IAmb	19 07 00.6	
	comp=Z,7.9nm,1.8s						
MKAR	Makanchi Array	27.91	37	P	P	19 06 19.1	+0.7
	comp=Z,0.7nm,1.0s,baz=228,slow=9.1,SNR=2.6						
MKAR	Makanchi Array	27.91	37	P	P	19 06 18.8	+0.3
BVAR	Borovoye Array	27.98	16	P	P	19 06 18.7	-0.2
	comp=Z,1.1nm,0.5s,baz=206,slow=5.7,SNR=11						
BRVK	Borovoye	27.98	16	P	P	19 06 18.7	-0.3
BRVK				IAmb	IAmb	19 06 33.8	
	comp=Z,14nm,1.9s						
KURBB	Kurchatov Arra	28.71	28	P	P	19 06 25.3	-0.2
	comp=Z,0.4nm,0.5s,baz=228,slow=8.4,SNR=4.2						
AKASG	Malin Array Be	32.42	325	P	P	19 06 57.4	-0.9
	comp=Z,3.4nm,0.7s,baz=126,slow=8.2,SNR=19						
AKASG				LR	LR	19 22 54.3	
	comp=Z,56nm,19.2s,baz=300,slow=42						
AKBB	Malin Array Si	32.42	325	P	P	19 06 57.6	-0.7
ZALV	Zalesovo Beam	33.79	29	P	P	19 07 08.7	-1.5
	comp=Z,1.0nm,0.4s,baz=240,slow=12,SNR=5.7						
ZALV	Zalesovo Beam	33.79	29	P	P	19 07 09.6	-0.5
KMBO	Kilima Mbogo	33.98	219	P	P	19 07 10.4	-2.0
	comp=Z,0.5nm,0.4s,baz=58,slow=17,SNR=2.7						
KMBO	Kilima Mbogo	33.98	219	P	P	19 07 11.2	-1.3
KMBO				IAmb	IAmb	19 07 12.2	
	comp=Z,5.7nm,1.3s						
KOLS	Kolonicke sedl	35.34	319	eP	P	19 07 24.8	+1.1
GTA	Gaotai	37.14	59	eP	P	19 07 47.3	+8.0
GTA				pP	sP	19 07 51.8	+7.4
GTA				sP	pP	19 07 54.3	+11
VYHS	Vyhne	37.25	316	eP	P	19 07 42.6	+2.6
OJC	Ojcow	37.35	319	P	P	19 07 40.4	-0.4
OJC				IAmb	IAmb	19 07 44.6	
	comp=Z,7.8nm,0.9s						
CMAR	Chiang Mai Arr	38.74	93	P	P	19 07 51.9	-1.0
	comp=Z,0.2nm,0.3s,baz=287,slow=9.3,SNR=3.2						
CMAR				LR	LR	19 26 41.2	
	comp=Z,63nm,19.0s,baz=223,slow=41						
MOA	Molln	39.93	314	eP	P	19 08 03.0	+0.4
	comp=Z,5.1nm,0.9s						
GERES	GERESS Array B	40.58	315	P	P	19 08 07.9	-0.1
	comp=Z,1.5nm,0.8s,baz=113,slow=10,SNR=8.3						
KHC	Kasperske Hory	40.74	315	eP	P	19 08 08.0	-1.2
KHC	Kasperske Hory	40.74	315	P	P	19 08 08.9	-0.3
FINES	FINESS Array B	40.80	337	P	P	19 08 09.8	+0.4
	comp=Z,4.5nm,0.7s,baz=134,slow=9.0,SNR=18						
FINES	FINESS Array B	40.80	337	P	P	19 08 09.6	+0.2
PBKT	Sadao Pong	41.21	95	P	P	19 08 14.0	+0.6
WATA	Walderalm	41.56	312	pP	pP	19 08 18.1	-1.6
	comp=Z,6.3nm,1.0s						
SQTA	Sankt Quirin	41.78	312	pP	pP	19 08 19.9	-1.6
	comp=Z,5.4nm,0.6s						
FETA	Feichten	42.06	312	eP	P	19 08 19.5	-0.8
	comp=Z,7.6nm,0.9s						
DAVA	Damuels	42.68	312	eP	P	19 08 24.6	-0.7
	comp=Z,13nm,0.8s						
SONM	Songino Array	43.25	48	P	P	19 08 30.0	+0.2
	comp=Z,0.7nm,0.9s,baz=240,slow=6.0,SNR=5.2						
HFS	Hagfors	44.94	330	LR	LR	19 31 40.0	
	comp=Z,71nm,20.3s,baz=288,slow=42						
NB2	NORSAR Subarra	46.44	331	P	P	19 08 53.1	-1.9
	comp=Z,1.6nm,0.9s,baz=113,slow=7.9						
NOA	NORSAR Array B	46.44	331	P	P	19 08 54.4	-0.6
	comp=Z,1.4nm,0.8s,baz=114,slow=7.6,SNR=5.9						
NOA				LR	LR	19 30 52.0	
	comp=Z,35nm,20.3s,baz=200,slow=39						
ARCES	ARCESS Array B	46.87	345	P	P	19 08 58.6	+0.4
	comp=Z,2.7nm,0.8s,baz=143,slow=9.1,SNR=4.7						
ESDC	Sonseca Array	52.37	301	P	P	19 09 40.6	0.0
	comp=Z,0.3nm,0.4s,baz=74,slow=7.6,SNR=5.1						
TOA0	Torodi Ar. Sit	54.05	267	P	P	19 09 52.6	-0.6
TOA0				IAmb	IAmb	19 10 09.1	
	comp=Z,4.6nm,1.1s						
TORD	Torodi Ar. Bea	54.05	267	P	P	19 09 52.2	-1.0
	comp=Z,1.5nm,0.6s,baz=66,slow=6.8,SNR=12						
TORD	Torodi Ar. Bea	54.05	267	P	P	19 09 52.5	-0.7
KSRS	Korea Array	59.19	61	P	P	19 10 32.6	+3.1
	comp=Z,1.3nm,0.8s,baz=276,slow=6.7,SNR=3.1						
KSRS				LR	LR	19 39 22.8	
	comp=Z,41nm,19.4s,baz=232,slow=40						
DBIC	Dimbokro	62.62	264	P	P	19 10 56.2	+3.0
	comp=Z,0.7nm,0.4s,baz=43,slow=6.1,SNR=3.7						
BOSA	Boshof	63.20	212	LR	LR	19 39 38.0	
	comp=Z,47nm,18.6s,baz=52,slow=37						
SUMG	Summit	66.67	341	iP	P	19 11 24.2	+5.0
C36M	Paulatuk	84.28	1	P	P	19 13 00.4	+0.6
IMAR	Indian Mountai	84.56	12	P	P	19 13 02.0	+0.7
BMAR	Burnt Mountain	84.72	8	P	P	19 13 03.2	+1.0
INK	Inuvik	84.96	4	P	P	19 13 07.3	+4.0
ILAR	Eielson Array	86.88	10	P	P	19 13 13.7	+0.8
	comp=Z,0.3nm,0.6s,baz=317,slow=3.9,SNR=5.8						
WRA	Warramunga Arr	87.44	114	P	P	19 13 18.2	+1.9
	comp=Z,0.7nm,1.0s,baz=324,slow=3.1,SNR=2.6						
ASAR	Alice Springs	88.92	117	P	P	19 13 23.7	+0.4
	comp=Z,0.4nm,1.1s,baz=312,slow=5.8,SNR=3.1						
YKA	Yellowknife Ar	90.96	356	P	P	19 13 32.8	+0.6
	comp=Z,0.3nm,0.8s,baz=356,slow=4.7,SNR=5.1						

*THE **03** 19:06:50.9, 38°.15N×20°.41E, h10km, ML2.8/3, Error ellipse: s-maj=0.9km s-min=0.5km az=256.0*
*ATH **03** 19:06:50.3, 38°.16N×20°.39E, h14km±1km, ML2.6/6, Error ellipse: s-maj=2.0km s-min=1.0km az=256.0*
ISC 03 19:06:50.4±1.1, **38°.15N**±0°.03×**20°.41E**±0°.05, **h13**km±5km, **n31**, σ**0s.27**/49, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.04	330	P	Pg	19 06 52.8	-0.1
CHV1				S	Sg	19 06 54.5	-0.1
LXR1	Lixouri, Cepha	0.06	28	P	Pg	19 06 53.1	+0.1
LXR1				S	Sg	19 06 54.9	+0.1
KEF2	Argostoli. Kep	0.07	78	P	Pg	19 06 53.1	0.0
KEF2				S	Sg	19 06 54.9	-0.1
KEF3	Kipouria, Keph	0.07	319	P	Pg	19 06 53.0	-0.1
KEF3				S	Sg	19 06 54.9	-0.1
ARG2	Argostoli	0.07	67	P	Pg	19 06 53.1	0.0
ARG2				S	Sg	19 06 54.8	-0.2
KEF4	Livadi, Kephal	0.11	8	P	Pg	19 06 53.6	0.0
KEF4				S	Sg	19 06 55.8	+0.1
KEF1	Kardakata, Kep	0.14	22	P	Pg	19 06 53.9	-0.1
KEF1				S	Sg	19 06 56.3	-0.1
VLS	Valsamata	0.15	80	P	Pg	19 06 54.1	0.0
VLS				S	Sg	19 06 56.8	+0.1
	6μm,0.1s						
VLS	Valsamata	0.15	80	P	Pg	19 06 54.1	0.0
VLS				S	Sg	19 06 56.8	+0.1
VLS				AML	AML	19 06 56.9	
	comp=N,13548μm,0.1s						
VLS				AML	AML	19 06 57.6	
	comp=E,8239μm,0.3s						
VSK1	VASILIKIADES	0.29	26	P	Pg	19 06 56.5	+0.1
VSK1				S	Sg	19 07 01.0	+0.5
	comp=E,5μm,0.3s						
KFL	Anninata	0.30	98	P	Pg	19 06 56.7	0.0
FSK	Fiskardo	0.33	22	P	Pg	19 06 57.2	0.0
FSK				S	Sg	19 07 02.5	+0.7
	comp=E,2μm,0.4s						
FSK	Fiskardo	0.33	22	P	Pg	19 06 57.2	0.0
FSK				S	Sg	19 07 02.1	+0.4
FSK				AML	AML	19 07 03.4	
	comp=E,4496μm,0.2s						
FSK				AML	AML	19 07 03.9	
	comp=N,2244μm,0.4s						
VLMS	Volimes, Zakyn	0.34	143	P	Pg	19 06 57.6	+0.2
VLMS				S	Sb	19 07 03.4	-0.2
VLMS				AML	AML	19 07 03.8	
	comp=E,3359μm,0.2s						
VLMS				AML	AML	19 07 04.3	
	comp=N,2856μm,0.1s						
EVGI	Lefkada island	0.51	23	P	Pg	19 07 00.2	-0.2
EVGI				S	Sb	19 07 08.5	0.0
EVGI	Lefkada island	0.51	23	P	Pg	19 07 00.3	-0.2
EVGI				S	Sg	19 07 07.0	-0.3
MGNA	Meganis	0.59	31	P	Pg	19 07 01.4	-0.5
MGNA				S	Sg	19 07 10.0	+0.3
MGNA				AML	AML	19 07 11.0	
	comp=E,710μm,0.2s						
MGNA				AML	AML	19 07 11.2	
	comp=N,620μm,0.3s						
LKD2	Lefkada island	0.67	17	P	Pg	19 07 03.5	+0.1
LKD2	Lefkada island	0.67	17	P	Pg	19 07 02.7	-0.7
TSLK	Tsoukalades, L	0.70	16	P	Pg	19 07 04.4	+0.3
TSLK	Tsoukalades, L	0.70	16	P	Pg	19 07 03.8	-0.3
PDO	Prodromos	0.76	54	P	Pg	19 07 04.8	-0.3
PDO	Prodromos	0.76	54	P	Pg	19 07 04.7	-0.4
PDO				S	Sb	19 07 16.0	+0.4
PDO				AML	AML	19 07 23.5	
	comp=N,973μm,0.4s						

PDO AML AML 19 07 25.0
comp=E,746μm,0.3s
RLS Riolos of Patr 0.84 96 P Pg 19 07 06.4 -0.4
PVO Paravola 1.00 62 P Pb 19 07 09.3 -0.2
PVO Paravola 1.00 62 P Pb 19 07 09.4 -0.2
PVO S Sg 19 07 22.9 +0.2
PVO AML AML 19 07 26.3
comp=E,1030μm,0.3s
PVO AML AML 19 07 26.4
comp=N,714μm,0.3s
DRO Drossia 1.05 101 P Pb 19 07 10.4 0.0
DRO Drossia 1.05 101 P Pb 19 07 10.1 -0.3
ANX Ano Chora 1.27 69 P Pn 19 07 13.9 0.0
KLV Kalavryta, Ach 1.38 94 P Pn 19 07 15.8 +0.4
KLV Kalavryta, Ach 1.38 94 P Pb 19 07 16.1 0.0

IDC 03 19:31:19.7±1.2, 38.°26N×20.°40E, h0km, mb3.7/10, mb1 3.7/16, mb1mx3.5/63, mbtmp3.6/16, ML3.3/6, MS2.4/2, Ms1 2.5/2, ms1mx2.2/40, Error ellipse: s-maj=21.0km s-min=18.1km az=48.0
ATH 03 19:31:21.5, 38.°16N×20.°41E, h14km±1km, ML3.5/18, Error ellipse: s-maj=2.4km s-min=1.0km az=65.0
THE 03 19:31:21.5, 38.°17N×20.°37E, h12km, ML3.7/11, Error ellipse: s-maj=0.7km s-min=0.3km az=263.0
BEO 03 19:31:23.5±0.8, 38.°18N×20.°11E, h19km±5km, ML3.7/7
ISC 03 19:31:21.4±0.7, 38.°17N±0.°02×20.°40E±0.°03, h14km±3km, n147, σ1§32/186, mb3.7/10, 18C-3D, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.02 316 P Pg 19 31 23.7 -0.1
CHV1 S Sg 19 31 24.9 -0.6
LXR1 Lixouri, Cepha 0.04 47 P Pg 19 31 24.1 +0.1
LXR1 S Sg 19 31 25.7 0.0
ARG2 Argostoli 0.07 84 P Pg 19 31 24.4 +0.2
ARG2 S Sg 19 31 25.7 -0.4
KEF2 Argostoli. Kep 0.07 94 P Pg 19 31 24.3 +0.1
KEF2 S Sg 19 31 26.0 -0.1
KEF4 Livadi, Kephal 0.09 14 P Pg 19 31 24.4 +0.1
KEF4 S Sg 19 31 26.5 +0.1
KEF1 Kardakata, Kep 0.12 28 P Pg 19 31 24.9 +0.1
KEF1 S Sg 19 31 27.0 -0.1
VLS Valsamata 0.15 87 P Pg 19 31 25.4 +0.2
VLS S Sg 19 31 28.1 +0.3
56μm,0.2s
VLS Valsamata 0.15 87 P Pg 19 31 25.4 +0.2
VLS S Sg 19 31 28.1 +0.3
VLS AML AML 19 31 28.4
comp=N,82440μm,0.2s
VLS AML AML 19 31 28.9
comp=E,85050μm,0.1s
VSK1 VASILIKIADES 0.27 29 P Pg 19 31 27.4 +0.3
VSK1 S Sb 19 31 31.9 -0.6
comp=E,55μm,0.5s
FSK Fiskardo 0.32 24 P Pg 19 31 28.2 +0.3
FSK S Sb 19 31 33.3 -0.5
comp=E,26μm,0.6s
FSK Fiskardo 0.32 24 P Pg 19 31 28.1 +0.3
FSK S Sb 19 31 33.4 -0.4
FSK AML AML 19 31 34.0
comp=N,43926μm,0.5s
FSK AML AML 19 31 35.5
comp=E,35702μm,0.6s
VLMS Volimes, Zakyn 0.36 144 P Pg 19 31 28.9 +0.2
VLMS S Sg 19 31 34.3 +0.6
VLMS AML AML 19 31 36.3
comp=N,31170μm,0.5s
VLMS AML AML 19 31 36.8
comp=E,16298μm,0.2s
EVGI Lefkada island 0.49 24 P Pg 19 31 31.2 +0.1
EVGI S Sb 19 31 38.6 -0.3
EVGI Lefkada island 0.49 24 P Pg 19 31 31.0 -0.1
EVGI S Sb 19 31 38.6 -0.3
ZAK2 Zakynthos 0.55 134 P Pg 19 31 31.6 -0.6
ZAK2 S Sb 19 31 40.8 +0.3
comp=E,33μm,0.6s
MGNA Meganis 0.57 32 P Pg 19 31 32.5 -0.2
MGNA S Sb 19 31 40.9 -0.3
MGNA AML AML 19 31 42.2
comp=E,14592μm,0.3s
MGNA AML AML 19 31 42.4
comp=N,13708μm,0.3s
KRI1 kERI 0.61 147 P Pg 19 31 33.2 0.0
KRI1 S Sb 19 31 42.5 +0.4
comp=N,8μm,0.5s
LKD2 Lefkada island 0.65 18 P Pg 19 31 33.8 -0.3
LKD2 S Sb 19 31 44.0 +0.5
comp=N,4μm,0.5s
LKD2 Lefkada island 0.65 18 P Pg 19 31 33.7 -0.4
LKD2 AML AML 19 31 49.8
comp=E,6673μm,0.4s
LKD2 AML AML 19 31 49.9
comp=N,8028μm,0.7s
AST1 Astakos 0.66 56 P Pg 19 31 34.1 -0.1
AST1 S Sb 19 31 44.3 +0.7
comp=N,9μm,0.4s
TSLK Tsoukalades, L 0.68 17 P Pg 19 31 34.5 -0.2
TSLK S Sb 19 31 44.5 +0.1
comp=N,4μm,0.5s
TSLK Tsoukalades, L 0.68 17 P Pg 19 31 34.4 -0.3
TSLK S Sb 19 31 45.1 +0.7
TSLK AML AML 19 31 48.2
comp=N,6903μm,0.8s
TSLK AML AML 19 31 49.4
comp=E,7298μm,0.4s
PDO Prodromos 0.75 55 P Pg 19 31 35.7 -0.3
PDO S Sn 19 31 47.9 -0.8
comp=E,6μm,0.5s
PDO Prodromos 0.75 55 P Pg 19 31 36.0 0.0
PDO AML AML 19 31 56.5
comp=N,11696μm,0.4s
PDO AML AML 19 31 57.8
comp=E,6130μm,0.4s
RLS Riolos of Patr 0.85 97 P Pg 19 31 37.7 -0.1
RLS Riolos of Patr 0.85 97 P Pg 19 31 37.8 0.0
RLS AML AML 19 31 56.3
comp=N,3621μm,0.7s
RLS AML AML 19 31 58.7
comp=E,2857μm,0.5s
PVO Paravola 0.99 63 P Pg 19 31 40.6 +0.1
PVO S Sn 19 31 54.5 -0.2
comp=E,4μm,1.0s
PVO Paravola 0.99 63 P Pg 19 31 40.6 +0.1
PVO AML AML 19 32 01.8
comp=N,5866μm,0.5s
PVO AML AML 19 32 02.2
comp=E,8812μm,0.7s
DRO Drossia 1.06 101 P Pb 19 31 41.1 -0.3
DRO Drossia 1.06 101 P Pb 19 31 41.2 -0.3
DRO AML AML 19 32 05.0
comp=E,7389μm,1.0s
DRO AML AML 19 32 09.4
comp=N,7120μm,0.5s
UPR University Cam 1.10 84 P Pg 19 31 43.0 +0.4
EFP Efpalio 1.21 77 P Pn 19 31 43.3 -0.6
EFP Efpalio 1.21 77 P Pn 19 31 43.2 -0.7
EFP AML AML 19 32 09.6
comp=E,3977μm,0.5s
EFP AML AML 19 32 10.4
comp=N,3165μm,0.6s
AMT Artemida-Makis 1.22 121 P Pg 19 31 45.8 +0.9
LAKA Lakka 1.25 86 P Pb 19 31 44.7 0.0
LAKA Lakka 1.25 86 P Pb 19 31 44.6 -0.1
LAKA AML AML 19 32 08.9
comp=N,2679μm,0.6s
LAKA AML AML 19 32 09.1
comp=E,2297μm,0.7s
ANX Ano Chora 1.27 70 P Pn 19 31 44.9 +0.2
ANX Ano Chora 1.27 70 P Pn 19 31 45.0 +0.2
ANX AML AML 19 32 11.2
comp=E,7683μm,0.7s
ANX AML AML 19 32 11.5
comp=N,5610μm,0.8s
SERG Sergoula 1.33 79 P Pb 19 31 45.8 -0.3
SERG Sergoula 1.33 79 P Pn 19 31 45.7 +0.2
TRIZ Trizonia 1.33 81 P Pn 19 31 45.6 +0.1
TRIZ Trizonia 1.33 81 P Pn 19 31 45.7 +0.1
EVR Evrytania 1.33 56 P Pb 19 31 46.2 0.0
EVR Evrytania 1.33 56 P Pb 19 31 46.5 +0.3
EVR AML AML 19 32 14.7
comp=E,1354μm,0.5s
EVR AML AML 19 32 20.9
comp=N,1787μm,0.6s
ALIK Aliki, Aigiali 1.35 86 P Pb 19 31 46.4 0.0
IGT Igoumenitsa 1.36 358 P Pb 19 31 46.4 -0.2
IGT S Sb 19 32 03.9 0.0
comp=N,1μm,0.4s
IGT Igoumenitsa 1.36 358 ePg Pg 19 31 48.8 +1.3
IGT eSg Sg 19 32 06.2 +0.9
IGT Igoumenitsa 1.36 358 P Pb 19 31 46.8 +0.2
KLV Kalavryta, Ach 1.39 95 P Pb 19 31 46.8 -0.3
KLV Kalavryta, Ach 1.39 95 P Pb 19 31 47.0 -0.1
KLV AML AML 19 32 13.6
comp=N,1597μm,0.7s
KLV AML AML 19 32 16.1
comp=E,1558μm,0.7s
KALE Kalithea 1.39 80 P Pn 19 31 46.5 +0.2
KALE Kalithea 1.39 80 P Pn 19 31 46.6 +0.2
KALE AML AML 19 32 13.6
comp=E,1678μm,0.8s
KALE AML AML 19 32 17.9
comp=N,1972μm,0.8s
JAN Janina 1.52 13 P Pg 19 31 51.2 +0.5
JAN AML AML 19 32 17.8
comp=E,2419μm,0.6s
JAN AML AML 19 32 19.7
comp=N,2040μm,0.6s
ITM Ithomi 1.56 129 P Pb 19 31 50.5 +0.4
ITM AML AML 19 32 27.2
comp=E,1112μm,0.7s
ITM AML AML 19 32 29.8
comp=N,1567μm,0.8s
MAKR Makrakomi, Fth 1.60 58 P Pg 19 31 52.0 -0.1
KASA Kassiopi 1.61 347 P Pb 19 31 51.3 +0.4
PYL PYLOS 1.66 140 P Pb 19 31 51.2 -0.5
AGG Agios Georgios 1.74 60 P Pb 19 31 53.3 +0.3
MEV Metsovon 1.74 22 P Pb 19 31 54.2 -0.5
AXAR Agios Charalam 1.87 71 P Pn 19 31 53.0 0.0
THL Klokotos Trika 1.88 42 P Pb 19 31 55.9 +0.4
KPRO Kipourio 1.93 23 P Pb 19 31 56.9 +0.5
LTK Loutraki 2.03 93 P Pb 19 31 57.3 -0.7
PENT Pentalofos 2.10 16 P Pb 19 31 59.4 +0.1
VIL2 Platees 2.26 88 P Pb 19 32 01.4 -0.6
NEST Nestorio 2.30 13 P Pb 19 32 02.3 -0.4
KRND KRANIDI 2.32 109 P Pb 19 32 01.8 -1.1
DID Didima 2.34 106 P Pb 19 32 02.5 -0.9
NEO Neokhori 2.48 62 P Pb 19 32 04.4 -1.4
LIT Litokhoron 2.52 40 P Pb 19 32 05.1 -1.3
VLY Voula,Athens 2.70 96 P Pn 19 32 06.0 +1.6
FNA Florina 2.72 16 ePn Pn 19 32 07.2 +2.6
FNA Florina 2.72 16 P Pn 19 32 07.2 +2.6
OHR Ohrid 2.95 6 ePn Pb 19 32 11.0 -2.8
TIP Timpagrande 3.02 291 ⇑P Pn 19 32 09.4 +0.6
TIP ⇑S Sn 19 32 44.2 -0.7
GRG Griva 3.18 28 P Pn 19 32 12.9 +1.8
TIR Tirane 3.20 353 ePn Pn 19 32 12.9 +1.7
TIR Tirane 3.20 353 ⇑P Pn 19 32 13.2 +1.9
TIR ⇑S Sn 19 32 51.0 +1.9
VAY Valandovo 3.56 27 ePn Pn 19 32 18.3 +2.1
VAY Valandovo 3.56 27 ePn Pn 19 32 18.1 +1.9
STIP Stip 3.78 21 ePn Pn 19 32 20.3 +1.1
MATE Matera 3.78 312 ⇓P Pn 19 32 19.1 -0.1
MATE ⇑S Sn 19 33 03.2 -0.3
SRS Serrai 3.84 39 ePn Pn 19 32 22.8 +2.8
SKO Skopje 3.88 12 ePn Pn 19 32 24.2 +3.6
DRME Dracevica, Mon 4.12 347 ePn Pn 19 32 23.8 0.0
APE Apeiranthos 4.22 104 ⇓P Pn 19 32 28.8 +3.5
APE ⇑S Sb 19 33 21.2 -5.0
PDG Podgorica 4.34 349 ePn Pn 19 32 28.7 +1.8
PDG eSn Sn 19 33 16.6 -0.7
PDG Podgorica 4.34 349 ⇑P Pn 19 32 28.4 +1.5
PDG ⇑S Sn 19 33 17.6 +0.3
PDG Podgorica 4.34 349 ePn Pn 19 32 27.6 +0.7
HCY Herceg Novi 4.51 342 ePn Pn 19 32 28.6 -0.7
BOSS Bosilegrad 4.60 20 ePn Pn 19 32 34.0 +3.5
IDI Anoyia 4.61 127 Pn Pn 19 32 32.8 +2.1
comp=N,0.8nm,0.3s,baz=330,slow=16,SNR=5.4
IDI Sn Sn 19 33 24.9 +0.8
comp=N,1.6nm,0.3s,baz=285,slow=20,SNR=4.6
IDI LR LR 19 34 18.6
comp=N,22nm,19.9s,baz=298,slow=38
BARS Barje 4.76 13 ePn Pn 19 32 35.0 +2.3
VAE Valguarnera 4.79 264 Pn Pn 19 32 38.4 +5.3
comp=N,0.8nm,0.3s,baz=16,slow=20,SNR=2.1
VAE Sn Sn 19 33 29.1 +0.6
comp=N,2.0nm,0.3s,baz=183,slow=19,SNR=3.1
TREB Trebinje 4.80 342 ePn Pn 19 32 32.7 -0.5
TREB eSn Sn 19 33 25.7 -3.0
TREB Trebinje 4.80 342 ePn Pn 19 32 32.6 -0.6
BRY Bratogost 4.93 344 ePn Pn 19 32 36.2 +1.0
VTS Vitosha 4.94 25 ePn Pn 19 32 37.1 +1.8
VTS eSn Sn 19 33 32.5 +0.2
VTS Vitosha 4.94 25 ⇑P Pn 19 32 37.2 +1.8
VTS ⇑S Sn 19 33 32.9 +0.6
SELS Selova 5.07 6 ePn Pn 19 32 36.9 -0.1
SELS eSn Sn 19 33 35.3 -0.1
STON Ston 5.13 337 ePn Pn 19 32 37.7 +0.1
STON eSn Sn 19 33 33.4 -3.2
STON Ston 5.13 337 ePn Pn 19 32 37.6 0.0
UPM Unac-Piva 5.15 348 ePn Pn 19 32 38.8 +0.6
IVAS Ivanjica 5.40 358 ePn Pn 19 32 42.2 +0.6
RUDO Rudo 5.50 352 ePn Pn 19 32 44.6 +1.8
BLKB Belogradchik 5.71 17 ⇑S Sn 19 33 49.9 -1.2
GRUS Gruza 5.72 2 ePn Pn 19 32 48.0 +2.2
BBLS Lazići 5.74 353 ePn Pn 19 32 46.9 +0.7
BBLS Lazići 5.74 353 ePn Pn 19 32 46.5 +0.3
ZAGS Zajecar 5.80 13 ePn Pn 19 32 49.2 +2.2
DIVS Divibare 5.93 357 ePn Pn 19 32 49.1 +0.3
DIVS eSn Sn 19 33 54.3 -2.3
DIVS Divibare 5.93 357 ePn Pn 19 32 49.1 +0.3
HAPS Han Pijesak,Bl 6.01 350 ePn Pn 19 32 48.5 -1.4
PLVB Pleven 6.12 30 ⇑P Pn 19 32 54.0 +2.7
MGRS Mrkonjic Grad 6.72 339 ePn Pn 19 32 59.0 -0.6
BLY Banja Luka 7.00 341 ⇑P Pn 19 33 04.7 +1.3
BLY ⇑S Sn 19 34 22.9 +0.1
BLY Banja Luka 7.00 341 ePn Pn 19 33 04.4 +1.0
BZS Buzias 7.50 7 ⇓P Pn 19 33 11.1 +0.9
VOIR 8.05 24 ⇑P Pn 19 33 20.7 +2.8
MORH Mrgy, Hungar 8.14 351 ePn Pn 19 33 18.3 -0.8
MLR Muntele Rosu 8.40 28 Pn Pn 19 33 22.6 -0.2
comp=N,0.1nm,0.3s,baz=192,slow=14,SNR=2.5
MLR Muntele Rosu 8.40 28 ⇑P Pn 19 33 24.8 +2.0
CRES Cresnjev 8.49 336 ePn Pn 19 33 23.7 -0.1
PLOR Plostina 8.97 29 ⇑P Pn 19 33 33.1 +2.6
VRI Vrincioaia 9.02 29 ⇑P Pn 19 33 32.2 +1.1
SOKA Soboth 9.38 337 ePn Pn 19 33 35.6 -0.5
comp=N,5.5nm,0.5s
OBKA Obir 9.39 334 ePn Pn 19 33 37.5 +1.3
comp=N,2.5nm,0.3s
KBA Koelnbreinsper 10.30 332 Pn Pn 19 33 51.2 +2.3
comp=N,1.3nm,0.4s
VYHS Vyhne 10.38 354 eSN Sn 19 35 43.1 -2.7
BRTR Keskin Array B 10.43 77 Pn Pn 19 33 52.2 +1.6
comp=N,0.0nm,0.3s,baz=261,slow=16,SNR=2.9
MOA Molln 10.66 337 ePn Pn 19 33 54.8 +1.2
comp=N,1.4nm,0.3s
MOTA Moosalm 11.43 326 ePn Pn 19 34 07.7 +3.5
comp=N,2.5nm,0.4s
DAVOX Davos/Dischmat 11.58 321 Sn Sn 19 36 09.2 -6.3
comp=N,0.3nm,0.3s,baz=180,slow=20,SNR=3.1
GERES GERESS Array B 11.72 338 Pn Pn 19 34 08.6 +0.4
comp=N,0.3nm,0.3s,baz=160,slow=14,SNR=8.4
AKASG Malin Array Be 14.01 24 Pn Pn 19 34 38.2 -1.1
comp=N,0.3nm,0.3s,baz=211,slow=12,SNR=3.7
KBZ Khabaz 17.86 65 P P 19 35 30.1 +0.3
comp=N,0.0nm,0.3s,baz=282,slow=9.3,SNR=3.7
HFS Hagfors 22.39 351 P P 19 36 18.9 -0.1
comp=N,1.4nm,0.6s,baz=160,slow=17,SNR=5.9
EKA Eskdalemuir Ar 23.38 325 P P 19 36 29.1 -0.3
comp=N,19nm,1.3s,baz=126,slow=11,SNR=3.9
FINES FINESS Array B 23.57 7 P P 19 36 30.8 -0.3
comp=N,2.1nm,0.7s,baz=183,slow=9.4,SNR=8.4
NB2 NORSAR Subarra 23.61 349 P P 19 36 33.3 +1.7
comp=Z,0.8nm,0.7s,baz=152,slow=11
NOA NORSAR Array B 23.61 349 P P 19 36 31.6 0.0
comp=Z,0.7nm,0.7s,baz=314,slow=7.2,SNR=2.6
NOA LR LR 19 46 38.1
comp=Z,20nm,18.7s,baz=260,slow=39
TORD Torodi Ar. Bea 29.96 219 P P 19 37 30.1 +0.8
comp=Z,0.5nm,0.7s,baz=40,slow=12,SNR=4.0
ARCES ARCESS Array B 31.55 3 P P 19 37 41.9 -0.9
comp=Z,2.2nm,0.9s,baz=192,slow=11,SNR=4.8
KURBB Kurchatov Arra 42.31 53 P P 19 39 14.0 -0.4
comp=Z,0.3nm,0.6s,baz=281,slow=9.0,SNR=4.3
MKAR Makanchi Array 45.39 58 P P 19 39 39.5 +0.2
comp=Z,0.7nm,0.5s,baz=272,slow=7.5,SNR=18
ZALV Zalesovo Beam 45.77 48 P P 19 39 42.3 +0.1
comp=Z,1.5nm,0.4s,baz=271,slow=8.9,SNR=8.6
SONM Songino Array 60.54 51 P P 19 41 31.5 +0.3
comp=Z,0.2nm,0.6s,baz=274,slow=8.5,SNR=2.7

NEIC 03 19:32:10.5±1.5, 60.°33N±0.°02×141.°14W±0.°03, h15km±9km, Error ellipse: s-maj=2.7km s-min=1.9km az=128.0
AEIC 03 19:32:10.8±1.9, 60.°33N±0.°05×141.°18W±0.°08, h15km±6km, ML2.7/44, Error ellipse: s-maj=7.8km s-min=4.7km az=212.0, Southeastern Alaska

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RKAV Rock Avalanche 0.09 251 Pg 19 32 13.9 -0.3
RKAV Sg 19 32 17.3 +1.0
CHX Chaix Hills 0.27 173 Pg 19 32 16.1 -0.5
MESA MESA 0.41 249 Pg 19 32 19.4 +0.2
MESA Sg 19 32 19.7 -5.2
GRNC Granite Creek 0.49 325 Pg 19 32 20.6 -0.1
GRNC Sb 19 32 28.3 -0.1
PCA Pinnacle 0.52 116 Pg 19 32 20.3 -0.8
PCA Pinnacle 0.52 116 Sg 19 32 27.9 -0.1
CTGM Chitina Glacie 0.64 353 Pg Pg 19 32 23.4 -0.1
CTGM Pb 19 32 23.4 -0.4
CTGM Sb 19 32 32.6 0.0
BARN Barnard Glacie 0.77 342 Pg Pg 19 32 25.5 -0.4
BARN Pb 19 32 25.5 -0.5
KULT Kultieth River 0.77 265 Pg 19 32 25.5 -0.3
KULT Sb 19 32 37.3 +1.0
KIAG Kiagna River 0.83 316 Pb 19 32 26.3 -0.7
KIAG Sb 19 32 38.3 +0.2
WAX Waxell Ridge 0.84 279 Pg 19 32 26.7 -0.4
WAX Sn 19 32 39.3 -0.9
BALM Baldy 0.91 322 Pb 19 32 27.5 -0.9
BALM Sg 19 32 40.7 +0.2
TGL Tana Glacier 0.92 298 Pb 19 32 27.5 -1.0
CROM Cirque 1.06 295 Pb 19 32 29.5 -1.4
PTPK Patty Peak 1.07 324 Pb 19 32 30.1 -1.0
PTPK Sg 19 32 45.4 0.0
YKU2 Yakutat 1.12 137 Pb 19 32 29.9 -1.9
SUCK Suckling Hills 1.32 260 Pn 19 32 34.8 +0.1
MCARA McCarthy VSAT 1.39 320 Pn 19 32 35.5 -0.2
VRDI Verde Repeater 1.43 310 Pn 19 32 35.5 -0.9
YUK2 White River 1.47 6 Pb 19 32 37.7 -0.2
YUK3 Moose Creek 1.49 13 Pb 19 32 38.0 -0.4
YUK6 Outpost Mounta 1.52 65 Pn 19 32 38.1 +0.5
YUK7 Dusty Glacier 1.52 81 Pn 19 32 37.9 +0.2
HMT Hamilton 1.53 272 Pn 19 32 37.7 +0.1
GLB Gilahina Butte 1.70 312 Pn 19 32 39.8 -0.2
RAGM Ragged Mountai 1.74 273 Pn 19 32 40.5 0.0
GOAT Goat Mountain 1.78 280 Pn 19 32 41.5 +0.5
HYT Haines Junctio 1.88 73 Pn 19 32 43.2 +0.7
DHAK Deception Hill 1.95 128 Pn 19 32 42.7 -0.6
EYAK Cordova Ski Ar 2.28 278 Pn 19 32 47.9 +0.1
PLBC Pleasant Camp 2.58 108 Pn 19 32 51.3 -0.6
HIN Hinchinbrook I 2.65 274 Pn Pn 19 32 53.1 +0.2
FID Port Fidalgo 2.65 281 Pn 19 32 52.7 -0.3
BC03 2.76 354 Pn 19 32 55.5 +1.1
BCAR Beaver Creek A 2.76 354 Pn 19 32 55.2 +0.7
JPK Jack Peak 2.76 288 Pn 19 32 56.3 +1.8
MENT Mentasta 2.88 336 Pn 19 32 57.4 +1.2
GLI Glacier Island 2.97 283 Pn Pn 19 32 57.8 +0.4
SKAG Skagway 3.08 104 Pn Pn 19 32 58.1 -0.6
WHY Whitehorse 3.13 81 Pn 19 32 59.6 -0.1
SCM Sheep Creek Mo 3.35 299 Pn 19 33 02.7 +0.2
PAX Paxson 3.35 324 Pn 19 33 02.8 +0.1
DOT Dot Lake 3.60 339 Pn Pn 19 33 05.3 -0.7
BESE Bessie Mountai 3.67 116 Pn Pn 19 33 06.1 -1.0
KNK Knik Glacier 3.72 290 Pn 19 33 07.2 -0.4
DAWY Dawson 3.84 12 Pn 19 33 10.8 +1.4
SCRK Sand Creek 3.89 341 Pn Pn 19 33 09.5 -0.6
GHO Glory Hole Cre 4.03 294 Pn Pn 19 33 12.6 +0.6
DHY Denali Highway 4.04 316 Pn 19 33 14.2 +2.1
JIS Juneau Island 4.05 118 Pn Pn 19 33 11.0 -1.1
SEW Seward 4.13 270 Pn Pn 19 33 12.4 -0.8
RC01 Rabbit Creek A 4.27 284 Pn Pn 19 33 14.9 -0.3
SIT Sitka 4.48 135 Pn Pn 19 33 17.1 -0.9
RND Reindeer 4.77 314 Pn Pn 19 33 23.4 +1.3
IL31 5.18 332 Pn Pn 19 33 27.5 -0.1
SKT Skwentna 5.28 293 Pn Pn 19 33 29.5 +0.5
NEA Nenana 5.62 323 Pn Pn 19 33 33.2 -0.5
KTH Kantishna Hill 5.62 309 Pn Pn 19 33 36.0 +2.2
BMAR Burnt Mountain 7.28 350 Pn 19 33 58.6 +2.1

THR 03 19:33:43.9±0.3, 27.°04N×52.°76E, h15km, ML4.0
DSN 03 19:33:45.5±2.2, 27.°38N×52.°86E, h10km, ML4.1/5, Error ellipse: s-maj=42.7km s-min=7.0km az=4.0
TEH 03 19:33:46.9, 27.°23N×52.°84E, h26km, ML4.0
NEIC 03 19:33:48.6±1.1, 27.°2N±0.°1×52.°79E±0.°09, h35km±7km, Error ellipse: s-maj=14.8km s-min=11.1km az=176.0
IDC 03 19:33:49.2±3.2, 27.°21N×52.°81E, h40km±28km, mb3.7/17, mb1 3.8/22, mb1mx3.7/48, mbtmp3.9/22, ML3.5/5, MS2.7/2, Ms1 2.7/2, ms1mx2.5/29, Error ellipse: s-maj=23.0km s-min=14.6km az=168.0
OMAN 03 19:33:50.1±0.5, 27.°10N×52.°81E, h35km, ml3.7/6, Error ellipse: s-maj=4.4km s-min=3.8km az=107.0
ISC 03 19:33:45.4±0.5, 27.°23N±0.°04×52.°80E±0.°05, h10km, n116, σ1§15/126, mb3.9/20, Southern Iran

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JHRM Jahrom 1.45 28 ePg Pb 19 34 13.4 +0.9
JHRM e 19 34 45.4
LAR1 LAR 1.47 72 ePn Pb 19 34 13.4 +0.6
LAR1 e 19 34 43.8
GHB Gharebagh 2.15 354 ePn Pn 19 34 23.1 +1.4
GHB e 19 35 09.4
JRN Qarnain Island 2.28 179 ePg Pb 19 34 27.8 +1.2
SHI Shiraz 2.42 354 ePn Pn 19 34 26.5 +1.3
IKAZ Kazeroun 2.68 342 ePn Pn 19 34 30.1 +1.2
IKAZ e 19 35 31.3
GENO Geno 3.00 86 ePn Pn 19 34 33.6 +0.3
SHME Shamm 3.21 111 i P Pn 19 34 36.0 0.0
SNR=8.3
SHME S Sn 19 35 14.4 0.0
SHME Shamm 3.21 111 ePn Pn 19 34 36.1 +0.1
GHWR Ruwais 3.25 179 ePn Pn 19 34 37.5 +1.0
SLWR Sila 3.30 198 ePn Pn 19 34 39.7 +2.5
BANOM Banah 3.39 112 i P Pn 19 34 39.3 +0.9
SNR=12
BANOM Banah 3.39 112 P Pn 19 34 39.4 +0.9
SNR=12
BANOM S Sn 19 35 19.4 +0.6
BANOM Banah 3.39 112 ePn Pn 19 34 39.5 +1.0
NAZ Nazwa, Dubai 3.41 130 P Pn 19 34 40.4 +1.8
NAZ Nazwa, Dubai 3.41 130 ePn Pn 19 34 39.3 +0.7
ASUD Al Ashush, Dub 3.45 138 ePn Pn 19 34 40.8 +1.6
MSFE Esma-Masafi 3.54 121 i P Pn 19 34 41.4 +0.8
SNR=16
MDH Madha 3.68 121 ePn Pn 19 34 43.7 +1.3
UOSS Minazif 3.81 126 i P Pn 19 34 45.1 +0.9
SNR=13
UOSS Minazif 3.81 126 Pn 19 34 44.9 +0.7
UOSS Minazif 3.81 126 ePn Pn 19 34 44.9 +0.7
HATD Hatta, Dubai 3.84 128 P Pn 19 34 46.0 +1.4
HATD Hatta, Dubai 3.84 128 ePn Pn 19 34 45.8 +1.3
ASHO Ashiyiah 3.88 130 i P Pn 19 34 46.5 +1.4
SNR=34
ASHO Ashiyiah 3.88 130 P Pn 19 34 46.3 +1.2
SNR=33
ASHO S Sn 19 35 31.0 +0.2
ASHO Ashiyiah 3.88 130 ePn Pn 19 34 46.0 +0.9
KLNJ Kolanjah 3.91 345 ePn Pn 19 34 45.8 -0.1
KHNJ Kahnooj 4.41 80 ePn Pn 19 34 53.3 +0.8
KRBR Kerman 4.43 51 ePn Pn 19 34 55.2 +2.2
KRBR IAML 19 36 21.4
comp=E,70nm,0.8s
KRBR Kerman 4.43 51 ePn Pn 19 34 55.2 +2.2
TVBK TV Kerman 4.43 51 ePn Pn 19 34 55.3 +2.2
TVBK e 19 34 56.1
IMEH Mehriz 4.44 20 ePn Pn 19 34 55.5 +2.5
KHGB Koh Gabri 4.50 45 ePn Pn 19 34 53.9 0.0
KHGB e 19 35 56.6
SOHO SOHO 4.56 132 P Pn 19 34 55.4 +0.9
SNR=7.0
SOHO S Sn 19 35 48.2 +0.5
SOHO SOHO 4.56 132 ePn Pn 19 34 55.3 +0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
IRAM	Ramesheh	4.58	356	ePn	Pn	19 34 55.6	+0.7
ISAD	Sadrabad	4.73	9	ePn	Pn	19 34 58.8	+1.7
IBRJ	Brojen	4.85	344	ePn	Pn	19 34 58.7	0.0
CHMN	Cheshme madani	4.92	57	ePn	Pn	19 35 01.8	+2.0
IBAF	Bafgh	4.97	28	ePn	Pn	19 35 01.8	+1.5
UMZA	Um Al Zommool	4.98	154	ePn	Pn	19 35 00.0	-0.3
ARQ	Araqi	5.13	138	P	Pn	19 35 03.4	+1.0
	SNR=18						
ARQ				S	Sn	19 36 02.7	+0.9
ICHK	Chekchek	5.19	15	ePn	Pn	19 35 04.9	+1.6
JHBN	Jahan bin	5.32	340	ePn	Pn	19 35 04.8	-0.4
HOQ	Hoqain	5.46	131	P	Pn	19 35 08.1	+1.2
	SNR=23						
HOQ				S	Sn	19 36 08.1	-1.7
IZEF	Zefreh	5.66	356	ePn	Pn	19 35 09.8	-0.1
IPIR	Pirpir	5.68	344	ePn	Pn	19 35 11.1	+0.9
SHGR	Shooshtar-Gavs	5.98	325	ePn	Pn	19 35 15.9	+2.0
SHGR				IAML		19 36 24.9	
	comp=E,57nm,0.5s						
SHGR				IAML		19 36 41.4	
	comp=N,32nm,0.4s						
SHGR	Shooshtar-Gavs	5.98	325	ePn	Pn	19 35 15.9	+2.0
BSY	Bisya	5.99	137	P	Pn	19 35 15.6	+1.5
	SNR=24						
BSY				S	Sn	19 36 25.3	+2.4
ANAR	Anarak	6.00	7	ePn	Pn	19 35 14.7	+0.4
IKLH	Kolahrood	6.16	350	ePn	Pn	19 35 16.5	-0.2
WSAR	Wadi Sarin	6.61	126	Pn	Pn	19 35 23.2	+0.6
	comp=N,1.4nm,0.3s,baz=311,slow=7.2,SNR=19						
WSAR				Sn	Sn	19 36 32.7	-5.4
	comp=N,1.6nm,0.3s,baz=159,slow=20,SNR=6.8						
WSAR				LR	LR	19 38 27.8	
	comp=N,42nm,18.7s,baz=271,slow=42						
WSAR	Wadi Sarin	6.61	126	P	Pn	19 35 23.2	+0.6
	SNR=18						
TPRV	Parvadeh(Tabas	6.69	29	ePn	Pn	19 35 24.0	+0.2
KRSH	Karshahi	6.74	355	ePn	Pn	19 35 25.4	+0.8
CHBR	Chabahar	7.08	102	ePn	Pn	19 35 29.3	+0.2
CHBR	Chabahar	7.08	102	ePn	Pn	19 35 29.3	+0.2
WBK	Wadi Bani Khal	7.25	128	P	Pn	19 35 31.6	+0.2
	SNR=14						
WBK				S	Sn	19 36 51.5	-2.3
TKDS	Koohdasht(Taba	7.38	29	ePn	Pn	19 35 33.8	+0.5
ZHSF	Zahedan	7.41	69	ePn	Pn	19 35 35.5	+1.7
ZHSF	Zahedan	7.41	69	ePn	Pn	19 35 35.5	+1.7
TNSJ	Nastanj	7.47	25	ePn	Pn	19 35 35.1	+0.5
BDRS	Dareh Seyedi	7.50	334	ePn	Pn	19 35 35.3	+0.1
RAYN	Ar Rayn	7.56	242	iP	Pn	19 35 36.1	+0.3
	SNR=15						
RAYN	Ar Rayn	7.56	242		Pn	19 35 36.0	+0.3
IVRN	Varamin	7.80	353	ePn	Pn	19 35 38.4	-0.6
MHTO	MHTO	7.80	142	P	Pn	19 35 39.9	+0.9
	SNR=27						
HSAM	Samen	7.84	334	ePn	Pn	19 35 39.9	+0.1
IKOM	Komasi	8.28	328	ePn	Pn	19 35 46.1	+0.3
IBZA	Bozab	8.37	331	ePn	Pn	19 35 46.7	-0.4
DQM	DQM	8.47	148	P	Pn	19 35 47.8	-0.3
	SNR=12						
IDHR	Dehrash	9.26	325	ePn	Pn	19 35 58.9	-0.3
GEYT	Alibeck	11.57	21	Pn	Pn	19 36 31.6	+0.9
	comp=N,0.1nm,0.3s,baz=206,slow=9.7,SNR=5.1						
GEYT				LR	LR	19 41 59.3	
	comp=N,59nm,19.2s,baz=0.0,slow=42						
GEYT	Alibeck	11.57	21	P	Pn	19 36 32.1	+1.4
KBL	Kabul	15.72	58	P	Pn	19 37 29.6	+2.4
MMAI	Mount Meron Ar	16.11	295	Pn	Pn	19 37 32.0	-0.1
	comp=N,0.4nm,0.3s,baz=134,slow=10,SNR=2.4						
KBZ	Khabaz	18.31	337	P	P	19 38 01.2	+1.7
	comp=N,0.1nm,0.3s,baz=158,slow=5.4,SNR=4.2						
KVAR	Kislovodsk Arr	18.58	337	P	P	19 38 03.4	+0.8
	baz=220,slow=16,SNR=3.5						
NIL	Nilore	18.75	65	P	P	19 38 04.1	-0.4
NIL				IAmb	IAmb	19 38 27.6	
	comp=Z,45nm,1.9s						
BTK	Batken	19.67	45	P	P	19 38 15.2	+0.5
BTK				IAmb	IAmb	19 38 16.0	
	comp=Z,11nm,0.6s						
BR131	Keskin Array S	20.22	313	P	P	19 38 21.6	+0.9
BR131				IAmb	IAmb	19 38 22.2	
	comp=Z,4.9nm,0.6s						
BRTR	Keskin Array B	20.22	313	P	P	19 38 21.7	+1.0
	comp=Z,4.9nm,0.6s,baz=134,slow=13,SNR=35						
BRTR	Keskin Array B	20.22	313	P	P	19 38 21.6	+0.9
KK31	Karatay Array	21.39	38	P	P	19 38 33.3	+0.1
KKAR	Karatay Array	21.39	38	P	P	19 38 33.0	-0.2
KKAR	Karatay Array	21.39	38	P	P	19 38 32.9	-0.3
KKAR				IAmb	IAmb	19 38 41.8	
	comp=Z,3.3nm,0.8s						
ELL	Elmali	21.57	302	P	P	19 38 35.4	+0.1
ARSB	Arslanbob	21.74	45	P	P	19 38 36.8	-0.3
ARSB				IAmb	IAmb	19 38 37.8	
	comp=Z,9.0nm,0.6s						
ABKAR	Akbulak array	22.68	12	P	P	19 38 46.9	+0.1
AAK	Ala-Archa	23.41	43	P	P	19 38 55.3	+0.6
	comp=Z,1.1nm,0.5s,baz=211,slow=5.9,SNR=5.3						
AAK	Ala-Archa	23.41	43	P	P	19 38 55.2	+0.6
AKTO	Aktyubinsk	23.51	8	P	P	19 38 55.9	+0.4
	comp=Z,1.3nm,0.6s,baz=179,slow=13,SNR=3.8						
IDI	Anoyia	25.11	296	P	P	19 39 11.2	+0.6
	comp=Z,31nm,1.0s,baz=49,slow=9.3,SNR=3.6						
BVAR	Borovoye Array	28.91	22	P	P	19 39 44.7	+0.3
	comp=Z,1.6nm,0.7s,baz=213,slow=6.6,SNR=12						
AKASG	Malin Array Be	29.52	329	P	P	19 39 49.0	-0.8
	comp=Z,0.7nm,0.4s,baz=117,slow=6.9,SNR=5.8						
MAKZ	Makanchi	30.14	42	P	P	19 39 55.5	0.0
MAKZ				IAmb	IAmb	19 39 56.5	
	comp=Z,2.8nm,0.7s						
MKAR	Makanchi Array	30.32	42	P	P	19 39 56.5	-0.5
	comp=Z,0.6nm,0.5s,baz=237,slow=8.8,SNR=8.4						
MKAR				PcP	PcP	19 42 56.1	-1.0
	comp=Z,0.2nm,0.5s,baz=246,slow=2.7,SNR=4.7						
KURBB	Kurchatov Arra	30.48	33	P	P	19 39 58.3	0.0
	comp=Z,0.8nm,0.6s,baz=233,slow=8.6,SNR=5.0						
ZAA0	Zalesovo Array	35.57	33	P	P	19 40 42.3	-0.5
ZAA0				IAmb	IAmb	19 40 43.1	
	comp=Z,3.1nm,0.6s						
ZALV	Zalesovo Beam	35.57	33	P	P	19 40 42.4	-0.4
	comp=Z,3.1nm,0.5s,baz=242,slow=9.8,SNR=13						
ZALV	Zalesovo Beam	35.57	33	P	P	19 40 42.1	-0.6
FINES	FINESS Array B	38.62	340	P	P	19 41 08.1	-0.5
	comp=Z,3.0nm,0.6s,baz=141,slow=11,SNR=13						
FINES	FINESS Array B	38.62	340	P	P	19 41 07.9	-0.6
NB2	NORSAR Subarra	43.80	332	P	P	19 41 50.0	-1.2
	comp=Z,1.1nm,0.6s,baz=120,slow=8.6						
NOA	NORSAR Array B	43.80	332	P	P	19 41 50.0	-1.2
	comp=Z,1.5nm,0.6s,baz=120,slow=8.1,SNR=8.5						
ARCES	ARCESS Array B	45.22	347	P	P	19 42 02.5	+0.1
	comp=Z,1.4nm,0.8s,baz=158,slow=9.7,SNR=4.3						
SONM	Songino Array	46.18	49	P	P	19 42 10.4	-0.1
	comp=Z,0.2nm,0.6s,baz=265,slow=7.3,SNR=4.2						
ESDC	Sonseca Array	48.23	300	P	P	19 42 26.6	0.0
	comp=Z,0.8nm,0.7s,baz=64,slow=7.9,SNR=5.1						
TORD	Torodi Ar. Bea	49.65	264	P	P	19 42 36.9	-0.7
	comp=Z,0.8nm,0.6s,baz=66,slow=8.0,SNR=8.5						
TORD	Torodi Ar. Bea	49.65	264	P	P	19 42 37.3	-0.3
DBIC	Dimbokro	58.28	261	P	P	19 43 40.5	-0.2
	comp=Z,2.3nm,0.7s,baz=55,slow=8.3,SNR=3.7						
DBIC	Dimbokro	58.28	261	P	P	19 43 40.4	-0.4
ILAR	Eielson Array	87.03	8	P	P	19 46 29.6	-1.2
	comp=Z,0.2nm,0.6s,baz=322,slow=5.7,SNR=3.5						
YKA	Yellowknife Ar	90.02	354	P	P	19 46 45.0	0.0
	comp=Z,0.8nm,0.6s,baz=5.2,slow=5.0,SNR=21						

GCG ***03*** *19:35:24.8±0.6,14.30N×91.62W,h77km±10km,MD3.0*
MEX ***03*** *19:35:25.1±0.3,13.95N×91.81W,h20km,MD3.9*
ISC 03 19:35:24.5±2.6,14.1N±0.3×91.7W±0.1,h71km±24km,n6, σ0.41/11,Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
ERG	Entre ros, C	0.33	23	eP	Pn	19 35 36.1	0.0
STG3	Santiaguito 3,	0.58	12	eP	Pn	19 35 38.5	0.0
STG3				eS	Sn	19 35 48.7	-0.1
FUG	Fuego 3	0.89	69	eP	Pn	19 35 41.7	-0.2
FUG				eS	Sn	19 35 55.2	+0.5
PCG	Pacaya	1.09	76	eP	Pn	19 35 44.3	-0.1
PCG				eS	Sn	19 35 59.6	+0.4
IXG	Ixpaco	1.22	88	eP	Pn	19 35 46.4	+0.3
IXG				eS	Sn	19 36 01.4	-0.8
PCIG		2.14	317	eP	Pn	19 35 58.2	+0.1
PCIG				eS	Sn	19 36 23.7	-0.1

NEIC ***03*** *19:38:06.9±1.6,25.3S±0.2×179.0W±0.1,h423km±19km, mb4.7/12,Error ellipse: s-maj=36.3km s-min=10.8km az=160.0*
IDC ***03*** *19:38:07.1±8.1,25.26S×179.36W,h402km±79km,mb3.2/3, mb1 3.6/4,mb1mx3.2/33,mbtmp4.2/4,Error ellipse: s-maj=48.5km s-min=33.5km az=40.0*
ISC 03 19:38:05.4±0.8,25.14S±0.09×179.3W±0.1,h388km,n28, σ1.27/29,mb3.6/5,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
RAO	Raoul Island	4.27	164	S	S	19 40 20.9	+1.8
	71nm,0.3s,baz=90,slow=20,SNR=4.1						
RAO	Raoul Island	4.27	164		Pn	19 39 19.9	+0.6
URZ	Urewera	13.44	192	P	P	19 40 59.9	-1.3
	4.9nm,0.3s,baz=270,slow=2.7,SNR=14						
URZ				S	S	19 43 25.9	-0.7
	2.0nm,0.3s,baz=85,slow=23,SNR=15						
URZ	Urewera	13.44	192	P	P	19 41 00.2	-1.0
HIZ	Hauiti	14.24	199	P	P	19 41 10.3	+0.4
BKZ	Black Stump Fm	14.44	193	P	P	19 41 11.6	-0.6
BFZ	Birch Farm	15.95	193	P	P	19 41 29.0	+0.6
BFZ				IAmb	IAmb	19 41 53.6	
	comp=Z,66nm,1.5s						
MSWZ	Moikau Station	16.87	194	P	P	19 41 37.8	-0.5
QRZ	Quartz Range	17.08	202	P	P	19 41 41.0	+0.4
QRZ				IAmb	IAmb	19 41 59.8	
	comp=Z,35nm,1.4s						
NNZ	Nelson	17.17	199	P	P	19 41 40.8	-0.7
NNZ				IAmb	IAmb	19 42 38.7	
	comp=Z,79nm,2.0s						
THZ	Tophouse	17.81	200	P	P	19 41 47.0	-1.3
KHZ	Kahutara	18.23	197	P	P	19 41 52.3	-0.4
KHZ				IAmb	IAmb	19 41 55.4	
	comp=Z,55nm,1.3s						
RAR	Rarotonga	18.32	82	P	P	19 41 52.4	-1.6
FOZ	Fox Glacier	20.42	203	P	P	19 42 14.0	-0.3
FOZ				IAmb	IAmb	19 43 06.1	
	comp=Z,27nm,1.3s						
ASAR	Alice Springs	42.52	262	P	P	19 45 25.3	+0.5
	comp=Z,0.2nm,0.4s,baz=82,slow=8.5,SNR=7.7						
WB2	Warramunga Arr	43.01	267	P	P	19 45 28.9	+0.3
WB2				IAmb	IAmb	19 46 53.0	
	comp=Z,78nm,1.9s						
WRAB	Tennant Creek	43.01	267	P	P	19 45 28.8	+0.1
WRAB				IAmb	IAmb	19 46 18.3	
	comp=Z,65nm,1.8s						
WB0	Warramunga Arr	43.02	267	P	P	19 45 29.2	+0.4
WRA	Warramunga Arr	43.02	267	P	P	19 45 27.8	-1.0
	comp=Z,1.8nm,0.5s,baz=103,slow=8.1,SNR=9.5						
WRA	Warramunga Arr	43.02	267	P	P	19 45 26.9	-1.8
KNRA	Kununurra	49.38	271	P	P	19 46 18.8	+1.2
ILAR	Eielson Array	93.07	13	P	P	19 50 37.7	+2.3
	comp=Z,0.5nm,1.0s,baz=217,slow=4.4,SNR=3.2						
NB2	NORSAR Subarra	143.40	351	PKP	PKPdf	19 56 51.5	-2.2
	comp=Z,0.7nm,0.6s,baz=14,slow=3.5						
NOA	NORSAR Array B	143.40	351	PKP	PKPdf	19 56 51.6	-2.2
	comp=Z,1.3nm,0.8s,baz=21,slow=3.9,SNR=4.2						
AKASG	Malin Array Be	146.38	327	PKPbc	PKPbc	19 57 00.5	-0.6
	comp=Z,0.4nm,0.5s,baz=47,slow=4.5,SNR=5.0						
BRTR	Keskin Array B	148.86	306	PKPbc	PKiKP	19 57 08.0	-1.3
	comp=Z,0.3nm,0.5s,baz=139,slow=5.5,SNR=3.4						
CLL	Collm	152.23	343	ePKPbc	PKiKP	19 57 18.0	+2.4
TORD	Torodi Ar. Bea	168.04	184	PKPab	PKPab	19 58 36.7	+0.1
	comp=Z,0.2nm,0.5s,baz=170,slow=4.9,SNR=2.2						

IDC ***03*** *19:52:18.8±2.1,24.07S×66.98W,h183km±30km,mb3.1/2, mb1 3.2/5,mb1mx3.0/33,mbtmp3.7/5,Error ellipse: s-maj=40.9km s-min=22.5km az=109.0*
GUC ***03*** *19:52:19.9±0.5,24.06S×67.40W,h210km±13km,ML3.9*
ISC 03 19:52:19.1±1.3,24.11S±0.07×67.2W±0.2,h199km±19km, n14,σ0.94/24,2C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
LVC	Limon Verde	2.19	313	P	Pn	19 53 00.3	+0.3
	11nm,0.3s,baz=138,slow=10,SNR=17						
LVC				S	Sn	19 53 31.6	-0.1
	15nm,0.3s,baz=283,slow=21,SNR=19						
PB15	IPOC Station P	2.30	293	⇑iP	Pn	19 53 01.7	+0.7
PB15				iS	Sn	19 53 33.5	0.0
PB15				IAML		19 53 36.8	
	comp=E,1μm,0.2s						
GO02	Mina Guanaco	2.44	244	iP	Pn	19 53 02.4	-0.2
GO02				iS	Sn	19 53 35.7	-0.9
GO02				IAML		19 53 37.0	
	comp=N,303nm,0.4s						
PB06	IPOC Station P	2.62	302	⇑iP	Pn	19 53 05.2	+0.7
PB06				iS	Sn	19 53 39.4	-0.4
PB06				IAML		19 53 40.7	
	comp=N,350nm,0.1s						
PB09	IPOC Station P	3.00	320	iP	Pn	19 53 10.3	+1.4
PB09				iS	Sn	19 53 48.0	+0.3
PB09				IAML		19 53 49.5	
	comp=E,104nm,0.5s						
PB03	IPOC Station P	3.15	310	eP	Pn	19 53 11.2	+0.6
PB03				iS	Sn	19 53 49.6	-1.3
PB03				IAML		19 53 52.4	
	comp=E,189nm,0.4s						
PB10	IPOC Station P	3.16	280	eP	Pn	19 53 11.2	+0.5
PB10				iS	Sn	19 53 50.1	-0.7
PB10				IAML		19 53 53.2	
	comp=N,88nm,0.4s						
PB07	IPOC Station P	3.45	313	iP	Pn	19 53 14.9	+0.6
PB07				iS	Sn	19 53 55.9	-1.6
PB08	IPOC Station P	4.36	335	eP	Pn	19 53 26.9	+1.1
PB08				iS	Sn	19 54 17.9	-0.3
LPAZ	La Paz	7.83	353	P	Pn	19 54 11.3	+0.4
	comp=N,0.3nm,0.3s,baz=180,slow=2.0,SNR=5.5						
LPAZ				S	Sn	19 55 37.5	-2.1
	comp=N,0.1nm,0.3s,baz=319,slow=11,SNR=2.3						
BDFB	Brasilia	19.86	68	P	P	19 56 35.1	-0.2
	comp=N,0.6nm,0.3s,baz=221,slow=9.3,SNR=3.4						
SNAA	Sanae	59.30	161	P	P	20 02 00.5	+0.9
	comp=N,1.1nm,0.9s,baz=252,slow=9.6,SNR=3.2						
TORD	Torodi Ar. Bea	76.75	69	P	P	20 03 48.2	-0.8
	comp=N,0.2nm,0.4s,baz=255,slow=5.9,SNR=2.6						
MKAR	Makanchi Array	146.70	40	PKPbc	PKPab	20 11 39.3	+0.3
	comp=N,0.3nm,0.9s,baz=287,slow=2.5,SNR=4.1						

THE ***03*** *19:55:01.6,38.39N×20.46E,h0km,ML2.7/13,Error ellipse: s-maj=0.9km s-min=0.3km az=98.0*
ATH ***03*** *19:55:01.4,38.39N×20.50E,h11km±2km,ML2.6/11,Error ellipse: s-maj=2.5km s-min=0.6km az=271.0*
ISC 03 19:55:01.7±1.0,38.39N±0.02×20.50E±0.03,h8km±5km, n37,σ0.58/68,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
VSK1	VASILIKIADES	0.06	69	P	Pg	19 55 03.3	-0.2
VSK1				S	Sg	19 55 04.8	0.0
	19μm,0.2s						
FSK	Fiskardo	0.09	36	P	Pg	19 55 03.7	-0.2
FSK				S	Sg	19 55 05.5	+0.1
	3μm,0.3s						
FSK	Fiskardo	0.09	36	P	Pg	19 55 03.7	-0.2
FSK				S	Sg	19 55 05.5	+0.1
FSK				AML	AML	19 55 06.2	
	comp=E,7176μm,0.2s						
FSK				AML	AML	19 55 08.1	
	comp=N,5191μm,0.4s						
KEF1	Kardakata, Kep	0.11	190	P	Pg	19 55 04.1	-0.1
KEF1				S	Sg	19 55 06.4	+0.4
KEF4	Livadi, Kephal	0.14	204	P	Pg	19 55 04.5	-0.3
KEF4				S	Sg	19 55 07.3	+0.5
ARG2	Argostoli	0.21	182	P	Pg	19 55 06.0	0.0
ARG2				S	Sg	19 55 09.4	+0.6
	comp=N,15μm,0.2s						
KEF3	Kipouria, Keph	0.22	212	P	Pg	19 55 05.7	-0.4
KEF3				S	Sg	19 55 09.6	+0.6
KEF2	Argostoli. Kep	0.22	182	P	Pg	19 55 06.0	-0.2
KEF2				S	Sg	19 55 09.2	0.0
VLS	Valsamata	0.22	161	P	Pg	19 55 06.1	-0.2
VLS				S	Sg	19 55 09.9	+0.6
	comp=N,2μm,0.4s						
VLS	Valsamata	0.22	161	P	Pg	19 55 06.0	-0.2
VLS				S	Sg	19 55 09.7	+0.5
VLS				AML	AML	19 55 10.3	
	comp=E,4683μm,0.3s						
VLS				AML	AML	19 55 13.5	
	comp=N,4190μm,0.4s						
CHV1	Chavriata, Kef	0.22	204	P	Pg	19 55 06.0	-0.2
CHV1				S	Sg	19 55 09.4	+0.2
EVGI	Lefkada island	0.26	28	P	Pg	19 55 07.0	0.0
EVGI				S	Sg	19 55 11.7	+1.1
EVGI	Lefkada island	0.26	28	P	Pg	19 55 06.9	0.0
EVGI				S	Sg	19 55 11.3	+0.7
MGNA	Meganis	0.35	41	P	Pg	19 55 08.4	-0.3
MGNA				S	Sg	19 55 13.4	+0.1
MGNA				AML	AML	19 55 15.0	
	comp=E,1238μm,0.2s						
MGNA				AML	AML	19 55 15.1	
	comp=N,2212μm,0.2s						
LKD2	Lefkada island	0.42	17	P	Pg	19 55 09.4	-0.5
LKD2				S	Sg	19 55 16.0	+0.5
	comp=N,575nm,0.5s						
LKD2	Lefkada island	0.42	17	P	Pg	19 55 09.4	-0.5
LKD2				S	Sg	19 55 16.0	+0.5
LKD2				AML	AML	19 55 21.8	
	comp=N,1218μm,0.7s						
LKD2				AML	AML	19 55 22.8	
	comp=E,1013μm,0.4s						
TSLK	Tsoukalades, L	0.45	16	P	Pg	19 55 10.3	-0.3
TSLK				S	Sb	19 55 17.9	-1.1
	comp=E,832nm,0.7s						
TSLK	Tsoukalades, L	0.45	16	P	Pg	19 55 10.2	-0.3
TSLK				S	Sg	19 55 16.8	+0.3
TSLK				AML	AML	19 55 21.4	
	comp=E,1653μm,0.6s						
TSLK				AML	AML	19 55 21.7	
	comp=N,1583μm,0.8s						
AST1	Astakos	0.49	72	P	Pg	19 55 11.6	+0.4
AST1				S	Sb	19 55 19.7	-0.3
	comp=N,1μm,0.3s						
VLMS	Volimes, Zakyn	0.53	166	P	Pg	19 55 11.6	-0.3
VLMS				S	Sg	19 55 19.5	+0.6
VLMS				AML	AML	19 55 23.1	
	comp=N,5483μm,0.4s						
VLMS				AML	AML	19 55 25.5	
	comp=E,3166μm,0.2s						
PDO	Prodromos	0.58	69	P	Pg	19 55 12.8	-0.1
PDO				S	Sg	19 55 20.5	0.0
PDO				AML	AML	19 55 37.1	
	comp=E,1368μm,0.1s						
PDO				AML	AML	19 55 38.0	
	comp=N,1984μm,0.2s						
KRI1	kERI	0.77	161	P	Pg	19 55 15.7	-0.8
KRI1				S	Sb	19 55 27.9	-0.1
	comp=N,1μm,0.2s						
RLS	Riolos of Patr	0.83	113	P	Pg	19 55 17.5	-0.2
RLS				S	Sg	19 55 28.3	-0.2
RLS				AML	AML	19 55 39.3	
	comp=N,449μm,0.6s						
RLS				AML	AML	19 55 39.4	
	comp=E,260μm,0.6s						
PVO	Paravola	0.84	74	P	Pg	19 55 18.0	+0.1
PVO				S	Sb	19 55 30.9	+0.9
	comp=E,532nm,0.5s						
PVO	Paravola	0.84	74	P	Pg	19 55 17.8	-0.1
PVO				S	Sg	19 55 29.0	+0.2
PVO				AML	AML	19 55 37.1	
	comp=N,1191μm,0.7s						
PVO				AML	AML	19 55 38.6	
	comp=E,929μm,0.4s						
DRO	Drossia	1.05	114	P	Pg	19 55 21.4	-0.5
DRO				S	Sn	19 55 38.2	+0.5
	comp=E,390nm,0.4s						
DRO	Drossia	1.05	114	P	Pg	19 55 21.4	-0.5
EFP	Efpalio	1.11	88	P	Pg	19 55 22.3	-0.7
EFP				S	Sn	19 55 39.8	+0.7
	comp=E,445nm,0.8s						
EFP	Efpalio	1.11	88	P	Pg	19 55 22.1	-0.9
EFP				S	Sg	19 55 37.9	+0.5
EFP				AML	AML	19 55 45.0	
	comp=N,796μm,0.8s						
EFP				AML	AML	19 55 45.1	
	comp=E,939μm,0.8s						
ANX	Ano Chora	1.14	79	P	Pg	19 55 23.0	-0.6
ANX				S	Sn	19 55 40.8	+0.9
	comp=E,442nm,0.5s						
ANX	Ano Chora	1.14	79	P	Pg	19 55 22.9	-0.7
ANX				S	Sg	19 55 38.6	+0.2
ANX				AML	AML	19 55 46.3	
	comp=N,1037μm,0.6s						
ANX				AML	AML	19 55 50.8	
	comp=E,766μm,0.5s						
IGT	Igoumenitsa	1.15	354	P	Pg	19 55 23.3	-0.5
SERG	Sergoula	1.23	88	P	Pg	19 55 24.7	-0.5
TRIZ	Trizonia	1.24	91	P	Pg	19 55 24.0	-1.5
KALE	Kalithea	1.29	89	P	Pn	19 55 25.1	-1.1
KALE				S	Sn	19 55 45.4	+1.7
	comp=E,248nm,0.7s						
KALE	Kalithea	1.29	89	P	Pn	19 55 25.2	-1.0
MAKR	Makrakomi, Fth	1.42	64	P	Pn	19 55 28.3	+0.3

IDC ***03*** *19:59:46.6±3.1,32.95S×178.48W,h0km,mb3.6/2, mb1 3.9/3,mb1mx3.7/26,mbtmp3.7/3,ML3.7/1,Error ellipse: s-maj=77.0km s-min=47.6km az=125.0*
NEIC ***03*** *19:59:51.7±0.8,33.2S±0.1×178.5W±0.3,h35km±2km, mb4.6/5,Error ellipse: s-maj=47.5km s-min=3.2km az=121.0*
ISC 03 19:59:50.6±2.1,33.1S±0.2×178.3W±0.4,h32km,n13, σ0.68/14,mb4.2/4,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
MXZ	Matakaoa Point	5.20	211	Pn	Pn	20 01 05.2	-0.9
URZ	Urewera	6.31	215	Pn	Pn	20 01 21.4	0.0
	1.6nm,0.3s,baz=306,slow=14,SNR=3.2						
URZ				Sn	Sn	20 02 33.1	+0.7
	1.7nm,0.3s,baz=164,slow=20,SNR=4.0						
URZ	Urewera	6.31	215		Pn	20 01 20.2	-1.2
BKZ	Black Stump Fm	7.33	213	Pn	Pn	20 01 35.8	+0.4
ASAR	Alice Springs	42.74	270	P	P	20 07 45.5	+0.4
	0.5nm,0.8s,baz=112,slow=8.2,SNR=2.5						
WR0	Warramunga Arr	43.80	275	P	P	20 07 53.9	+0.2
WR0				IAmb	IAmb	20 08 19.6	
	comp=Z,18nm,1.4s						
WB2	Warramunga Arr	43.97	275	P	P	20 07 55.2	+0.2
WRAB	Tennant Creek	43.97	275	P	P	20 07 54.9	-0.1
WRA	Warramunga Arr	43.98	275	P	P	20 07 54.2	-0.9
	comp=Z,0.5nm,0.3s,baz=115,slow=8.0,SNR=6.5						
WRA	Warramunga Arr	43.98	275	P	P	20 07 54.2	-0.9
WB0	Warramunga Arr	44.01	275	P	P	20 07 55.2	-0.2
WB0				IAmb	IAmb	20 08 07.4	
	comp=Z,15nm,1.4s						
FINES	FINESS Array B	147.58	338	PKPbc	PKPbc	20 19 30.7	-0.1
	comp=Z,1.4nm,0.7s,baz=48,slow=4.1,SNR=6.2						
FINES	FINESS Array B	147.58	338		PKPdf	20 19 28.8	+0.7

IDC 03 20:08:28.7±4.3,4.00S×153.11E,h0km,mb3.4/2, mb1 3.7/2,mb1mx3.4/21,mbtmp3.4/2,Error ellipse: s-maj=218.6km s-min=49.5km az=119.0,New Ireland region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
WRA	Warramunga Arr	24.20	228	P	P	20 13 47.7	+0.5
	0.9nm,0.6s,baz=55,slow=10,SNR=1.9						
ASAR	Alice Springs	26.95	222	P	P	20 14 12.2	+0.2
	0.3nm,0.7s,baz=56,slow=9.1,SNR=7.3						
TORD	Torodi Ar. Bea	150.34	290	PKPbc	PKPbc	20 28 22.3	-0.8
	0.5nm,1.1s,baz=66,slow=2.0,SNR=3.3						

ATH ***03*** *20:12:19.9,38.18N×20.42E,h7km±1km,ML2.7/12,Error ellipse: s-maj=1.9km s-min=0.7km az=250.0*
THE ***03*** *20:12:20.0,38.18N×20.42E,h5km,ML2.9/9,Error ellipse: s-maj=1.0km s-min=0.5km az=252.0*
ISC 03 20:12:19.5±1.0,38.18N±0.02×20.41E±0.04,h8km±4km, n36,σ0.40/66,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
CHV1	Chavriata, Kef	0.03	289	P	Pg	20 12 21.1	+0.2
CHV1				S	Sg	20 12 22.1	+0.2
LXR1	Lixouri, Cepha	0.03	40	P	Pg	20 12 21.0	0.0
LXR1				S	Sg	20 12 22.0	-0.1
KEF3	Kipouria, Keph	0.06	299	P	Pg	20 12 21.5	+0.3
KEF3				S	Sg	20 12 22.8	+0.3
ARG2	Argostoli	0.06	87	P	Pg	20 12 21.4	+0.1
ARG2				S	Sg	20 12 22.6	+0.1
KEF2	Argostoli. Kep	0.06	99	P	Pg	20 12 21.4	+0.1
KEF2				S	Sg	20 12 22.7	+0.1

KEF4 Livadi, Kephal 0.08 7 P Pg 20 12 21.9 +0.3
KEF4 S Sg 20 12 23.6 +0.5
KEF1 Kardakata, Kep 0.11 25 P Pg 20 12 22.2 +0.2
KEF1 S Sg 20 12 23.9 +0.1
VLS Valsamata 0.14 89 P Pg 20 12 22.6 +0.1
VLS S Sg 20 12 24.6 0.0
11μm,0.2s
VLS Valsamata 0.14 89 P Pg 20 12 22.6 +0.1
VLS S Sg 20 12 24.9 +0.4
VLS AML AML 20 12 25.6
comp=E,15298μm,0.1s
VLS AML AML 20 12 26.2
comp=N,12404μm,0.2s
VSK1 VASILIKIADES 0.26 27 P Pg 20 12 25.3 +0.6
VSK1 S Sg 20 12 28.8 +0.5
comp=N,5μm,0.2s
FSK Fiskardo 0.31 23 P Pg 20 12 25.8 +0.2
FSK S Sg 20 12 30.2 +0.6
comp=N,2μm,0.2s
FSK Fiskardo 0.31 23 P Pg 20 12 25.8 +0.2
FSK S Sg 20 12 30.3 +0.6
FSK AML AML 20 12 31.1
comp=N,3242μm,0.2s
FSK AML AML 20 12 31.4
comp=E,5732μm,0.2s
VLMS Volimes, Zakyn 0.36 146 P Pg 20 12 27.0 +0.5
VLMS S Sg 20 12 32.6 +1.3
VLMS AML AML 20 12 35.6
comp=N,5712μm,0.3s
VLMS AML AML 20 12 35.8
comp=E,5892μm,0.3s
EVGI Lefkada island 0.48 23 P Pg 20 12 29.1 +0.2
EVGI S Sb 20 12 36.7 -0.9
EVGI Lefkada island 0.48 23 P Pg 20 12 29.0 +0.2
EVGI S Sg 20 12 35.8 +0.5
MGNA Meganis 0.56 32 P Pg 20 12 30.3 -0.1
MGNA S Sg 20 12 38.1 +0.3
MGNA AML AML 20 12 39.7
comp=N,1951μm,0.1s
MGNA AML AML 20 12 39.9
comp=E,1764μm,0.3s
KRI1 kERI 0.60 148 P Pg 20 12 31.0 -0.1
KRI1 S Sb 20 12 40.7 -0.3
comp=E,2μm,0.5s
LKD2 Lefkada island 0.64 17 P Pg 20 12 31.8 -0.1
LKD2 S Sb 20 12 41.8 -0.4
comp=E,305nm,0.2s
LKD2 Lefkada island 0.64 17 P Pg 20 12 32.0 +0.1
LKD2 S Sg 20 12 40.5 +0.2
LKD2 AML AML 20 12 50.6
comp=E,648μm,0.2s
LKD2 AML AML 20 12 51.7
comp=N,587μm,0.5s
AST1 Astakos 0.65 55 P Pg 20 12 32.2 +0.2
AST1 S Sg 20 12 40.9 +0.5
comp=N,2μm,0.2s
TSLK Tsoukalades, L 0.68 16 P Pg 20 12 32.2 -0.3
TSLK S Sb 20 12 42.6 -0.5
comp=N,402nm,0.9s
TSLK Tsoukalades, L 0.68 16 P Pg 20 12 32.3 -0.3
TSLK S Sg 20 12 42.2 +0.8
TSLK AML AML 20 12 50.0
comp=E,789μm,0.5s
TSLK AML AML 20 12 52.8
comp=N,730μm,0.4s
PDO Prodromos 0.74 55 P Pg 20 12 33.7 0.0
PDO S Sb 20 12 44.4 -0.5
comp=N,1μm,0.3s
PDO Prodromos 0.74 55 P Pg 20 12 33.8 +0.1
PDO S Sg 20 12 44.1 +0.8
PDO AML AML 20 12 52.0
comp=E,1616μm,0.4s
PDO AML AML 20 12 55.5
comp=N,1666μm,0.3s
RLS Riolos of Patr 0.84 98 P Pg 20 12 35.5 -0.1
RLS Riolos of Patr 0.84 98 P Pg 20 12 35.5 -0.1
RLS S Sb 20 12 47.5 -0.3
RLS AML AML 20 12 50.9
comp=E,1560μm,0.5s
RLS AML AML 20 12 56.9
comp=N,832μm,0.5s
PVO Paravola 0.98 63 P Pg 20 12 38.5 +0.2
PVO S Sn 20 12 53.7 0.0
comp=N,778nm,0.5s
PVO Paravola 0.98 63 P Pg 20 12 38.5 +0.2
PVO S Sb 20 12 52.1 +0.3
PVO AML AML 20 12 56.5
comp=E,1861μm,0.3s
PVO AML AML 20 12 59.4
comp=N,1193μm,0.6s
DRO Drossia 1.05 102 P Pg 20 12 39.8 +0.1
DRO S Sb 20 12 54.3 +0.4
DRO AML AML 20 13 01.8
comp=N,1400μm,0.4s
DRO AML AML 20 13 08.6
comp=E,1796μm,0.6s
EFP Efpalio 1.20 77 P Pg 20 12 42.4 -0.1
EFP S Sb 20 12 58.8 +0.6
EFP AML AML 20 13 08.1
comp=E,386μm,0.4s
EFP AML AML 20 13 09.4
comp=N,481μm,0.8s
AMT Artemida-Makis 1.21 122 P Pg 20 12 42.1 -0.6
LAKA Lakka 1.24 87 P Pb 20 12 42.7 -0.4
ANX Ano Chora 1.26 70 P Pn 20 12 43.3 -0.2
ANX S Sb 20 13 00.3 +0.4
ANX AML AML 20 13 08.8
comp=N,1228μm,0.6s
ANX AML AML 20 13 09.2
comp=E,1068μm,0.6s
ALIK Aliki, Aigiali 1.34 86 P Pn 20 12 44.4 -0.1
IGT Igoumenitsa 1.36 357 P Pg 20 12 45.7 +0.2
KLV Kalavryta, Ach 1.38 95 P Pn 20 12 45.1 0.0

IDC 03 20:30:32.6±1.5, 1.91N×126.38E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.7/42, mbtmp3.8/5, ML3.7/1, Error ellipse: s-maj=122.7km s-min=18.7km az=70.0
NEIC 03 20:30:36.0±0.7, 2.1N±0.1×126.4E±0.1, h55km±12km, mb4.6/9, Error ellipse: s-maj=17.6km s-min=14.3km az=216.0
DJA 03 20:30:38.9±1.2, 2°N±4°×12°6E±°, h19km±11km, M3.8/7, mb4.0/1, MLv3.7/7
ISC 03 20:30:37.4±0.9, 1.94N±0.08×126.45E±0.06, h47km, n24, σ1§82/26, mb4.3/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.48	141	P	Pn	20 31 02.9	+1.3
TNTI				S	Sn	20 31 23.3	+3.5
TNTI	Ternate	1.48	141	P	Pn	20 31 02.6	+1.0
KMSI	Cibinong	2.81	241	P	Pn	20 31 21.6	+1.7
SANI	Sanana	3.98	187	P	Pn	20 31 36.2	+0.2
SANI				S	Sn	20 32 18.2	-3.3
LUWI	Luwuk	4.72	231	P	Pn	20 31 46.8	+0.7
LUWI				S	Sn	20 32 41.2	+1.7
LUWI	Luwuk	4.72	231	Pn	Pn	20 31 45.6	-0.5
MRSI	Marisa	4.73	252	P	Pn	20 31 48.9	+2.6
SOEI	Soe	11.81	191	Pn	Pn	20 33 30.5	+7.0
FITZ	Fitzroy Crossi	19.92	182	P	Pn	20 35 06.7	-0.7
	0.2nm,0.3s,baz=21,slow=12,SNR=1.8						
WB0	Warramunga Arr	22.93	160	P	P	20 35 37.5	-0.3
WB0				IAmb	IAmb	20 36 33.1	
	comp=Z,32nm,1.6s						
WRAB	Tennant Creek	23.07	161	P	P	20 35 39.0	-0.2
WRA	Warramunga Arr	23.08	161	P	P	20 35 39.4	+0.2
	comp=Z,1.7nm,0.4s,baz=337,slow=10,SNR=18						
WRA	Warramunga Arr	23.08	161	P	P	20 35 39.2	0.0
WB2	Warramunga Arr	23.08	161	P	P	20 35 39.9	+0.7
WB2				IAmb	IAmb	20 36 22.9	
	comp=Z,63nm,1.8s						
WR0	Warramunga Arr	23.16	160	P	P	20 35 40.0	-0.1
WR0				IAmb	IAmb	20 36 10.7	
	comp=Z,51nm,1.8s						
AS31	Alice Springs	26.46	165	P	P	20 36 09.4	-0.9
ASAR	Alice Springs	26.46	165	P	P	20 36 11.3	+1.0
	comp=Z,0.6nm,0.3s,baz=346,slow=9.1,SNR=14						
ASAR	Alice Springs	26.46	165	P	P	20 36 09.4	-0.9
ULN	Ulaanbaatar	48.73	343	P	P	20 39 13.8	-3.7
ULN				IAmb	IAmb	20 39 16.4	
	comp=Z,4.9nm,1.6s						
SONM	Songino Array	48.90	342	P	P	20 39 15.8	-3.0
MK31	Makanchi Array	58.87	326	P	P	20 40 33.0	+1.5
MK31				IAmb	IAmb	20 42 31.1	
	comp=Z,6.7nm,1.7s						
MKAR	Makanchi Array	58.87	326	P	P	20 40 33.5	+2.0
	comp=Z,0.6nm,0.4s,baz=120,slow=7.7,SNR=24						
MKAR	Makanchi Array	58.87	326	P	P	20 40 32.8	+1.3
ZALV	Zalesovo Beam	62.05	334	P	P	20 40 54.5	+1.5
	comp=Z,0.3nm,0.4s,baz=133,slow=6.1,SNR=2.7						

THE 03 20:33:34.3, 38.25N×20.39E, h10km±1km, ML3.2/6, Error ellipse: s-maj=1.6km s-min=0.5km az=222.0
ATH 03 20:33:34.4, 38.26N×20.36E, h8km±1km, ML3.1/17, Error ellipse: s-maj=2.0km s-min=0.9km az=250.0
IDC 03 20:33:40.0±11.0, 38.95N×21.28E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.3/46, mbtmp3.5/4, ML3.4/1, Error ellipse: s-maj=220.4km s-min=30.3km az=33.0
ISC 03 20:33:34.7±0.8, 38.26N±0.02×20.40E±0.03, h7km±4km, n43, σ0§85/77, mb3.6/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.02	87	P	Pg	20 33 36.1	+0.1
KEF4				S	Sg	20 33 37.3	+0.4
KEF1	Kardakata, Kep	0.06	69	P	Pg	20 33 36.5	+0.1
KEF1				S	Sg	20 33 37.6	+0.1
LXR1	Lixouri, Cepha	0.06	154	P	Pg	20 33 36.5	+0.1
LXR1				S	Sg	20 33 38.1	+0.5
KEF3	Kipouria, Keph	0.07	219	P	Pg	20 33 36.6	+0.2
KEF3				S	Sg	20 33 38.5	+0.7
CHV1	Chavriata, Kef	0.07	193	P	Pg	20 33 36.6	0.0
CHV1				S	Sg	20 33 38.3	+0.4
ARG2	Argostoli	0.10	140	P	Pg	20 33 37.0	0.0
ARG2				S	Sg	20 33 38.6	0.0
KEF2	Argostoli. Kep	0.11	144	P	Pg	20 33 37.2	+0.1
KEF2				S	Sg	20 33 39.0	+0.1
VLS	Valsamata	0.17	118	P	Pg	20 33 37.9	-0.2
VLS				S	Sg	20 33 40.5	+0.1
VLS	Valsamata	0.17	118	P	Pg	20 33 37.9	-0.2
VLS				S	Sg	20 33 40.6	+0.2
VLS				AML	AML	20 33 40.7	
	comp=N,57505μm,0.2s						
VLS				AML	AML	20 33 41.4	
	comp=E,32730μm,0.2s						
VSK1	VASILIKIADES	0.20	40	P	Pg	20 33 38.9	+0.2
VSK1				S	Sg	20 33 42.5	+1.1
FSK	Fiskardo	0.24	32	P	Pg	20 33 39.6	+0.2
FSK				S	Sg	20 33 43.6	+1.0
	comp=E,14μm,0.2s						
FSK	Fiskardo	0.24	32	P	Pg	20 33 39.7	+0.2
FSK				S	Sg	20 33 43.7	+1.0
FSK				AML	AML	20 33 44.0	
	comp=N,24282μm,0.2s						
FSK				AML	AML	20 33 44.1	
	comp=E,29436μm,0.2s						
EVGI	Lefkada island	0.41	29	P	Pg	20 33 42.8	+0.1
EVGI				S	Sg	20 33 49.2	+1.0
EVGI	Lefkada island	0.41	29	P	Pg	20 33 42.9	+0.1
EVGI				S	Sb	20 33 49.7	-1.1
VLMS	Volimes, Zakyn	0.43	152	P	Pg	20 33 42.7	-0.3
VLMS				S	Sg	20 33 50.0	+1.3
VLMS				AML	AML	20 33 51.8	
	comp=N,14413μm,0.4s						
VLMS				AML	AML	20 33 52.1	
	comp=E,6997μm,0.2s						
MGNA	Meganis	0.50	37	P	Pg	20 33 44.1	-0.2
MGNA				S	Sg	20 33 51.6	+0.7
MGNA				AML	AML	20 33 52.7	
	comp=E,8055μm,0.2s						
MGNA				AML	AML	20 33 53.1	
	comp=N,6888μm,0.2s						
LKD2	Lefkada island	0.57	21	P	Pg	20 33 45.2	-0.4
LKD2				S	Sg	20 33 53.6	+0.6
	comp=N,2μm,0.4s						
LKD2	Lefkada island	0.57	21	P	Pg	20 33 45.1	-0.5
LKD2				S	Sg	20 33 53.7	+0.6
LKD2				AML	AML	20 33 59.6	
	comp=N,2620μm,0.3s						
LKD2				AML	AML	20 34 01.6	
	comp=E,3703μm,0.5s						
TSLK	Tsoukalades, L	0.60	19	P	Pg	20 33 46.0	-0.3
TSLK				S	Sg	20 33 54.2	+0.1
	comp=E,2μm,0.6s						
TSLK	Tsoukalades, L	0.60	19	P	Pg	20 33 46.2	-0.1
TSLK				S	Sg	20 33 54.4	+0.3
TSLK				AML	AML	20 33 59.3	
	comp=N,3009μm,0.4s						
TSLK				AML	AML	20 34 04.1	
	comp=E,4200μm,0.5s						
AST1	Astakos	0.61	62	P	Pg	20 33 46.2	-0.2
AST1				S	Sb	20 33 56.0	-0.4
PDO	Prodromos	0.70	61	P	Pg	20 33 48.0	-0.1
PDO				S	Sb	20 33 58.9	-0.2
	comp=E,5μm,0.5s						
PDO	Prodromos	0.70	61	P	Pg	20 33 48.1	-0.1
PDO				S	Sb	20 33 59.5	+0.5
PDO				AML	AML	20 34 02.6	
	comp=E,7383μm,0.6s						
PDO				AML	AML	20 34 07.0	
	comp=N,4940μm,0.4s						
RLS	Riolos of Patr	0.86	103	P	Pg	20 33 50.3	-0.9
RLS				S	Sb	20 34 03.8	+0.1
	comp=N,792nm,0.3s						
RLS	Riolos of Patr	0.86	103	P	Pg	20 33 50.4	-0.8
RLS				S	Sb	20 34 04.3	+0.7
RLS				AML	AML	20 34 07.6	
	comp=E,1882μm,0.3s						
RLS				AML	AML	20 34 07.8	
	comp=N,1260μm,0.3s						
PVO	Paravola	0.95	67	P	Pg	20 33 52.8	-0.2
PVO				S	Sg	20 34 05.7	+0.4
	comp=N,2μm,0.5s						
PVO	Paravola	0.95	67	P	Pg	20 33 52.9	0.0
PVO				S	Sg	20 34 05.9	+0.5
PVO				AML	AML	20 34 12.6	
	comp=E,4498μm,0.4s						
PVO				AML	AML	20 34 14.1	
	comp=N,2565μm,0.5s						
ANX	Ano Chora	1.24	74	P	Pb	20 33 57.5	-0.9
ANX				AML	AML	20 34 23.0	
	comp=N,3571μm,0.6s						
ANX				AML	AML	20 34 23.4	
	comp=E,4260μm,0.8s						
LAKA	Lakka	1.24	90	P	Pn	20 33 57.1	-1.4
LAKA				S	Sn	20 34 16.6	+1.2
LAKA				AML	AML	20 34 23.5	
	comp=E,1042μm,0.7s						
LAKA				AML	AML	20 34 24.4	
	comp=N,1104μm,0.5s						
AMT	Artemida-Makis	1.26	125	P	Pn	20 33 58.2	-0.5
AMT				S	Sn	20 34 17.0	+1.1
AMT				AML	AML	20 34 25.3	
	comp=N,1518μm,0.8s						
AMT				AML	AML	20 34 34.5	
	comp=E,1260μm,0.8s						
IGT	Igoumenitsa	1.27	358	P	Pg	20 33 59.4	+0.3
IGT				S	Sg	20 34 16.0	+0.3
IGT				AML	AML	20 34 20.0	
	comp=E,780μm,0.6s						
IGT				AML	AML	20 34 21.3	
	comp=N,609μm,0.3s						
SERG	Sergoula	1.31	83	P	Pn	20 33 58.2	-1.2
SERG				S	Sn	20 34 18.9	+1.8
SERG				AML	AML	20 34 25.7	
	comp=N,1175μm,0.4s						
SERG				AML	AML	20 34 26.1	
	comp=E,1303μm,0.6s						
TRIZ	Trizonia	1.32	85	P	Pn	20 33 58.7	-0.7
KLV	Kalavryta, Ach	1.39	98	P	Pn	20 33 59.8	-0.8
KLV				S	Sg	20 34 21.2	+1.7
KLV				AML	AML	20 34 26.9	
	comp=N,517μm,0.4s						
KLV				AML	AML	20 34 27.6	
	comp=E,646μm,0.7s						
MAKR	Makrakomi, Fth	1.55	60	P	Pb	20 34 03.5	-0.2
MAKR				S	Sg	20 34 26.7	+2.2
MAKR				AML	AML	20 34 32.4	
	comp=N,1213μm,0.9s						
MAKR				AML	AML	20 34 37.0	
	comp=E,2049μm,0.7s						
ITM	Ithomi	1.62	131	P	Pg	20 34 06.6	+0.9
ITM				S	Sg	20 34 28.6	+2.0
AGG	Agios Georgios	1.69	63	P	Pg	20 34 07.8	+0.7
AGG				AML	AML	20 34 36.8	
	comp=N,826μm,0.5s						
AGG				AML	AML	20 34 37.1	
	comp=E,590μm,0.4s						
PYL	PYLOS	1.73	142	P	Pb	20 34 06.1	-0.5
LKR	Lokris	2.08	78	P	Pb	20 34 11.5	-1.1
GERES	GERESS Array B	11.64	338	Pn	Pn	20 36 23.9	+2.7
	comp=E,0.1nm,0.3s,baz=161,slow=12,SNR=1.4						
FINES	FINESS Array B	23.48	7	P	P	20 38 42.9	-1.7
	comp=E,1.2nm,0.8s,baz=188,slow=8.4,SNR=1.6						
MKAR	Makanchi Array	45.34	58	P	P	20 41 51.9	-1.4
	comp=E,0.4nm,0.6s,baz=276,slow=6.3,SNR=9.4						
ZALV	Zalesovo Beam	45.71	48	P	P	20 41 54.9	-1.1
	comp=E,0.9nm,0.5s,baz=275,slow=8.1,SNR=5.5						

GCG 03 20:34:44.3±0.8, 16.21N×91.98W, h50km±843km, MD3.8
MEX 03 20:34:47.4±0.6, 13.89N×92.66W, h16km±65km, MD3.9, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.08	21	*i* P	Pb	20 35 04.4	-3.4
THIG				*i* S	Sb	20 35 17.4	-4.3
ERG	Entre ros, C	1.19	63	*e*P	Pn	20 35 09.3	-0.2
ERG				*e*S	Sg	20 35 37.0	+11
STG3	Santiaguito 3,	1.34	52	*e*P	Pn	20 35 10.3	-1.4
STG3				*e*S	Sn	20 35 28.8	-0.4
FUG	Fuego 3	1.85	72	*e*P	Pn	20 35 17.4	-1.3
FUG				*e*S	Sn	20 35 42.6	+0.7
PCIG		1.88	343	*e*P	Pn	20 35 15.6	-3.4
PCIG				*e*S	Sn	20 35 37.8	-4.6
IXG	Ixpaco	2.17	82	*e*P	Pn	20 35 23.3	+0.1
IXG				*e*S	Sb	20 35 54.2	+0.9
CCIG	Comitan	2.43	12	*e*P	Pn	20 35 26.4	-0.3
CCIG				*i* S	Sn	20 35 54.3	-2.0
TGIG		2.91	351	*e*P	Pn	20 35 31.1	-2.1
TGIG				*e*S	Sn	20 36 03.9	-3.9
CMIG	Matias Romero	3.84	326	*e*P	Pn	20 35 43.2	-2.6

ATH 03 20:37:09.8, 38.15N×20.38E, h16km±1km, ML3.1/5, Error ellipse: s-maj=1.8km s-min=0.9km az=251.0
THE 03 20:37:10.0, 38.17N×20.34E, h12km±1km, ML2.7/5, Error ellipse: s-maj=1.3km s-min=0.6km az=260.0
ISC 03 20:37:10.2±1.0, 38.16N±0.02×20.38E±0.05, h14km±4km, n39, σ0§45/66, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	2	P	Pg	20 37 12.5	-0.1
CHV1				S	Sg	20 37 14.2	0.0
KEF3	Kipouria, Keph	0.05	330	P	Pg	20 37 12.7	-0.1
KEF3				S	Sg	20 37 14.6	0.0
LXR1	Lixouri, Cepha	0.06	47	P	Pg	20 37 12.8	0.0
LXR1				S	Sg	20 37 14.7	0.0
KEF2	Argostoli. Kep	0.08	86	P	Pg	20 37 12.9	-0.1
KEF2				S	Sg	20 37 14.8	-0.2
ARG2	Argostoli	0.09	77	P	Pg	20 37 12.9	-0.2
ARG2				S	Sg	20 37 14.8	-0.3
KEF4	Livadi, Kephal	0.10	19	P	Pg	20 37 13.2	-0.1
KEF4				S	Sg	20 37 15.7	+0.2
KEF1	Kardakata, Kep	0.14	31	P	Pg	20 37 13.6	-0.1
KEF1				S	Sg	20 37 16.2	0.0
VLS	Valsamata	0.17	84	P	Pg	20 37 13.9	-0.2
VLS				S	Sg	20 37 16.8	-0.1
VLS	Valsamata	0.17	84	P	Pg	20 37 13.8	-0.3
VLS				S	Sg	20 37 16.7	-0.1
VLS				AML	AML	20 37 17.0	
	comp=N,12731μm,0.1s						
VLS				AML	AML	20 37 17.1	
	comp=E,25837μm,0.1s						
VSK1	VASILIKIADES	0.29	30	P	Pg	20 37 16.0	-0.2
VSK1				S	Sg	20 37 20.7	+0.4
FSK	Fiskardo	0.33	25	P	Pg	20 37 16.8	-0.1
FSK				S	Sg	20 37 21.9	+0.4
FSK	Fiskardo	0.33	25	P	Pg	20 37 16.9	-0.1
FSK				S	Sg	20 37 22.1	+0.6
FSK				AML	AML	20 37 22.7	
	comp=N,7035μm,0.2s						
FSK				AML	AML	20 37 22.9	
	comp=E,10703μm,0.2s						
VLMS	Volimes, Zakyn	0.36	142	P	Pg	20 37 17.5	0.0
VLMS				S	Sb	20 37 23.3	-0.6
VLMS				AML	AML	20 37 23.8	
	comp=E,14943μm,0.1s						
VLMS				AML	AML	20 37 24.1	
	comp=N,16913μm,0.3s						
EVGI	Lefkada island	0.51	25	P	Pg	20 37 19.9	-0.3
EVGI				S	Sg	20 37 27.4	+0.4
EVGI	Lefkada island	0.51	25	P	Pg	20 37 20.1	-0.1
EVGI				S	Sb	20 37 27.8	-0.5
ZAK2	Zakynthos	0.55	132	P	Pg	20 37 21.2	+0.2
ZAK2				S	Sb	20 37 30.7	+1.3
MGNA	Meganis	0.59	33	P	Pg	20 37 21.4	-0.4
MGNA				S	Sg	20 37 30.0	+0.3
MGNA				AML	AML	20 37 30.7	
	comp=E,1698μm,0.4s						
MGNA				AML	AML	20 37 30.8	
	comp=N,1275μm,0.2s						
KRI1	kERI	0.60	145	P	Pg	20 37 21.4	-0.6
KRI1				S	Sb	20 37 30.9	0.0
LKD2	Lefkada island	0.67	19	P	Pg	20 37 22.7	-0.5
LKD2				S	Sb	20 37 33.1	+0.3
	comp=N,450nm,0.5s						
LKD2	Lefkada island	0.67	19	P	Pg	20 37 23.0	-0.2
AST1	Astakos	0.68	55	P	Pg	20 37 22.9	-0.4
AST1				S	Sb	20 37 33.3	+0.3
	comp=N,1μm,0.6s						
TSLK	Tsoukalades, L	0.70	18	P	Pg	20 37 23.4	-0.3
TSLK				S	Sb	20 37 33.4	-0.3
	comp=N,418nm,0.4s						
TSLK	Tsoukalades, L	0.70	18	P	Pg	20 37 23.5	-0.3
PDO	Prodromos	0.77	55	P	Pg	20 37 24.4	-0.7
PDO	Prodromos	0.77	55	P	Pg	20 37 24.6	-0.5
RLS	Riolos of Patr	0.86	96	P	Pg	20 37 26.0	-0.9
RLS				S	Sn	20 37 40.8	+0.5
	comp=N,410nm,0.7s						
RLS	Riolos of Patr	0.86	96	P	Pg	20 37 25.9	-0.9
RLS				S	Sg	20 37 37.7	-0.4
PVO	Paravola	1.01	63	P	Pb	20 37 29.2	-0.2
PVO				S	Sn	20 37 45.1	+1.1
	comp=N,575nm,0.7s						
PVO	Paravola	1.01	63	P	Pb	20 37 29.2	-0.2
AMT	Artemida-Makis	1.22	120	P	Pn	20 37 32.5	-0.4
LAKA	Lakka	1.26	86	P	Pn	20 37 33.0	-0.5
LAKA				S	Sg	20 37 52.3	+1.4
ANX	Ano Chora	1.29	70	P	Pn	20 37 33.6	-0.3
ANX	Ano Chora	1.29	70	P	Pn	20 37 33.5	-0.3
ANX				AML	AML	20 37 58.3	
	comp=E,791μm,0.6s						
ANX				AML	AML	20 37 58.5	
	comp=N,1266μm,0.5s						
TRIZ	Trizonia	1.35	81	P	Pn	20 37 34.2	-0.4
IGT	Igoumenitsa	1.37	358	P	Pg	20 37 35.9	-0.6
IGT				S	Sg	20 37 54.2	-0.2
KLV	Kalavryta, Ach	1.40	94	P	Pn	20 37 35.4	0.0
KALE	Kalithea	1.40	80	P	Pn	20 37 35.1	-0.4
ITM	Ithomi	1.57	128	P	Pb	20 37 39.1	+0.1
ITM				S	Sg	20 38 00.9	+0.3
MAKR	Makrakomi, Fth	1.62	58	P	Pb	20 37 40.3	+0.5

BJI 03 20:37:08.3±0.0, 7.75S×128.59E, h10km, mB5.3/49, mb5.0/62, Ms4.8/26, Ms7 4.4/25
IDC 03 20:37:14.1±0.4, 7.21S×128.11E, h0km, mb4.8/22, mb1 4.9/27, mb1mx4.8/34, mbtmp4.9/27, ML4.6/4, MS4.0/26, Ms1 4.0/26, ms1mx3.9/36, Error ellipse: s-maj=16.5km s-min=10.4km az=75.0
NEIC 03 20:37:15.8±1.9, 7.22S±0.05×128.28E±0.06, h18km±2km, mb5.2/101, Error ellipse: s-maj=8.7km s-min=6.8km az=64.0
GCMT 03 20:37:16.8±0.2, 7.05S±0.01×128.17E±0.01, h13km, MW5.0/104, Moment Tensor Solution. s49,c71; s104,c168; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.46±.12; Mθθ-3.83±.09; Mφφ1.37±.09; Mrθ-1.59±.21; Mrφ2.00±.06; Mθφ0.75±.24; Best double couple: M0 3.92000×10^16 NP1:φs93.00000°, δ33.00000°, λ68.00000°. NP2:φs299.00000°, δ59.00000°, λ104.00000°. Principal axes: T 2.9160, Plg72.0000°, Azm243.0000°; N 2.0080, Plg12.0000°, Azm112.0000°; P -4.9240, Plg13.0000°, Azm19.0000°; nsta1 refers to body waves,

cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function
DJA **03** 20:37:18.2±0.4, 7°S±1°×12°8E±°, h33km±4km, M5.0/71, mb5.2/71, mB5.5/35, MLv5.0/13, Mw(mB)5.0/35, Mwp5.1/7
KLM **03** 20:37:18.0, 7.28S×128.46E, h35km, mb5.2
ISC 03 20:37:18.5±0.3, **7.25S**±0.03×**128.24E**±0.04, **h35km, n320, σ1.72**/332, **mb5.1**/78, **MS4.1**/29, **5C, Banda Sea**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC

SAUI Saumlaki 3.12 104 P Pn 20 38 07.5 +2.3
SAUI Saumlaki 3.12 104 Pn 20 38 04.8 -0.4
BNDI Bandanaira 3.17 32 P Pn 20 38 02.4 -3.5
BNDI S Sn 20 38 39.9 -2.7
AAI Ambon 3.54 359 P Pn 20 38 07.3 -3.7
AAI S Sn 20 38 45.5 -6.1
MSAI Masohi 3.94 10 P Pn 20 38 12.3 -4.1
MSAI S Sn 20 38 58.2 -3.2
NLAI Namlea 4.14 344 P Pn 20 38 18.1 -1.2
SOEI Soe 4.65 237 P Pn 20 38 28.7 +2.3
SOEI S Sn 20 39 24.7 +5.4
SOEI Soe 4.65 237 Pn 20 38 29.1 +2.7
SANI Sanana 5.63 336 P Pn 20 38 38.7 -1.0
0.4nm3μm2μm94nm,0.8s
SANI S Sn 20 39 39.4 -3.8
0.4nm3μm2μm94nm,0.8s
FAKI Fak Fak 5.87 43 P Pn 20 38 41.5 -1.5
0.6nm6μm2μm158nm,0.8s
FAKI S Sn 20 39 45.6 -3.5
0.6nm6μm2μm158nm,0.8s
FAKI Fak Fak 5.87 43 Pn 20 38 42.1 -0.9
MTN Manton Dam 6.25 153 P Pn 20 38 51.9 +3.7
baz=6.4,SNR=46
MTN Manton Dam 6.25 153 Pn 20 38 51.4 +3.2
KDI Kendari 6.48 300 P Pn 20 38 49.1 -2.3
0.9nm94nm,1.0s
KMPI Kaimana, Papua 6.50 57 P Pn 20 38 50.1 -1.6
1.7nm6μm637nm,1.2s
LBMI Labuha 6.61 354 P Pn 20 38 53.9 +0.7
1.2nm161nm,0.8s
LBMI S Sn 20 40 02.8 -4.5
1.2nm161nm,0.8s
KDU Kakadu 6.83 143 P Pn 20 38 58.1 +2.0
baz=6.9,SNR=74
SIJI Sorong 7.02 26 Pn Pn 20 38 57.3 -1.6
8.5nm,0.3s,baz=205,slow=11,SNR=26
SIJI Sn Sn 20 40 12.8 -4.6
1.2nm,0.3s,baz=86,slow=19,SNR=2.3
SIJI LR LR 20 42 04.7
comp=Z,2μm,21.7s,baz=210,slow=41
SWI Sorong 7.02 26 P Pn 20 38 57.2 -1.6
0.6nm4μm2μm180nm,0.8s
TNTI Ternate 8.01 354 P Pn 20 39 10.4 -2.1
0.3nm1μm1μm68nm,1.5s
TNTI Ternate 8.01 354 Pn 20 39 11.4 -1.0
RKPI Ransiki, Papua 8.21 46 P Pn 20 39 14.2 -1.1
13μm227nm,0.8s
WSI Waingapu 8.22 252 P Pn 20 39 15.6 +0.3
397nm,1.2s
LUWI Luwuk 8.23 318 P Pn 20 39 11.1 -4.4
2μm164nm,0.7s
LUWI Luwuk 8.23 318 Pn 20 39 14.7 -0.7
KNRA Kununurra 8.39 177 P Pn 20 39 19.4 +1.7
baz=8.5,SNR=153
KNRA Kununurra 8.39 177 Pn 20 39 18.9 +1.3
BNSI Bone 8.57 289 P Pn 20 39 20.8 +0.6
285nm,0.9s
TTSI Tana Toraja 9.37 296 P Pn 20 39 31.0 -0.1
BAKI Biak 9.88 53 P Pn 20 39 36.8 -1.4
MRSI Marisa 9.92 320 P Pn 20 39 38.8 +0.2
1μm87nm,0.8s
PLAI Plampang 10.48 261 P Pn 20 39 48.4 +2.1
2μm150nm,1.0s
WAMI Wamena 10.94 73 P Pn 20 39 57.0 +4.3
3μm228nm,1.0s
FITZ Fitzroy Crossi 11.08 193 P Pn 20 39 53.6 -0.9
baz=11,SNR=65
FITZ Fitzroy Crossi 11.08 193 Pn Pn 20 39 53.4 -1.1
5.3nm,0.3s,baz=30,slow=11,SNR=42
FITZ Sn Sn 20 41 50.8 -6.4
8.7nm,0.3s,baz=266,slow=22,SNR=7.4
FITZ LR LR 20 44 53.4
comp=Z,3μm,19.9s,baz=20,slow=41
FITZ Fitzroy Crossi 11.08 193 Pn 20 39 53.2 -1.3
SMPI Sarmi 11.67 64 P Pn 20 40 00.9 -1.7
74nm,1.1s
GENI Genyem 12.75 69 P Pn 20 40 18.4 +1.0
2μm118nm,1.0s
DDMP Don Marcelino, 13.50 349 eP P 20 40 35.5 -0.8
WB0 Warramunga Arr 13.80 155 Pn 20 40 30.2 -1.6
WRAB Tennant Creek 13.93 155 Pn 20 40 32.1 -1.4
WRA Warramunga Arr 13.94 155 Pn Pn 20 40 32.1 -1.5
2.7nm,0.3s,baz=328,slow=12,SNR=45
WRA Sn Sn 20 42 57.8 -9.4
1.7nm,0.3s,baz=334,slow=21,SNR=4.5
WRA LR LR 20 46 19.8
comp=Z,1μm,18.6s,baz=335,slow=39
WRA Warramunga Arr 13.94 155 Pn 20 40 30.6 -3.0
WB2 Warramunga Arr 13.94 155 P Pn 20 40 34.6 +0.9
baz=14
WB2 Warramunga Arr 13.94 155 Pn 20 40 32.1 -1.6
JAGI Jajag, Banyuwa 14.01 264 P Pn 20 40 36.7 +2.1
79nm,1.3s
JAGI Jajag, Banyuwa 14.01 264 Pn 20 40 35.0 +0.4
WR0 Warramunga Arr 14.04 155 Pn 20 40 33.1 -1.8
SKMP Bagumbayan, Su 14.16 345 eP Pn 20 40 35.9 -0.9
DAV Davao City (W) 14.47 349 Pn Pn 20 40 42.1 +1.2
121nm,0.3s,baz=34,slow=11,SNR=2.4
KCP Kidapawan 14.51 347 ⇑iP Pn 20 40 40.4 -1.1
BUKP Musuan 15.36 348 eP P 20 40 57.9 +0.9
PAGZ Pagadian 15.76 342 eP P 20 41 03.1 +1.6
CGP Cagayan de Oro 15.99 347 eP P 20 41 06.7 +2.6
COEN Coen 16.12 116 P Pn 20 41 03.0 +0.5
baz=16,SNR=10
COEN Coen 16.12 116 P Pn 20 41 02.0 -0.5
PSAD1 Pilbara Seismi 16.30 209 Pn Pn 20 41 03.2 -1.5
BUTP Butuan 16.32 351 eP P 20 41 11.0 +3.3
PSAC2 Pilbara Seismi 16.35 209 Pn Pn 20 41 03.8 -1.7
PSAB2 Pilbara Seismi 16.37 209 Pn Pn 20 41 03.9 -1.7
PSAD2 Pilbara Seismi 16.37 208 Pn Pn 20 41 04.4 -1.4
PSAC1 Pilbara Seismi 16.37 209 Pn Pn 20 41 04.5 -1.3
PSAA2 Pilbara Seismi 16.38 209 Pn Pn 20 41 04.2 -1.7
PSA00 Pilbara Seismi 16.39 209 Pn 20 41 04.5 -1.4
PSA00 IAmb IAmb 20 41 13.6
comp=Z,88nm,0.8s
PSAA3 Pilbara Seismi 16.39 209 Pn Pn 20 41 04.2 -1.8
PSAA1 Pilbara Seismi 16.40 209 Pn Pn 20 41 04.5 -1.7
PSAA1 IAmb IAmb 20 41 13.7
comp=Z,91nm,0.8s
PSAB1 Pilbara Seismi 16.40 209 Pn Pn 20 41 04.0 -2.1
PSAB3 Pilbara Seismi 16.40 209 Pn Pn 20 41 04.3 -1.8
PSAB3 IAmb IAmb 20 41 13.8
comp=Z,86nm,0.8s
PSAC3 Pilbara Seismi 16.44 209 Pn Pn 20 41 04.9 -1.7
PSAD3 Pilbara Seismi 16.48 209 Pn Pn 20 41 04.5 -2.6
NGJI Ngawi 16.64 269 P Pn 20 41 10.2 +1.0
comp=Z,87nm,1.0s
PCJI Pacitan 16.94 266 P Pn 20 41 10.6 -2.3
comp=Z,234nm,1.2s
WOJI Wonogiri, Jawa 17.18 267 P Pn 20 41 15.2 -0.7
comp=Z,162nm,1.1s
AS31 Alice Springs 17.21 162 Pn 20 41 14.1 -2.1
ASAR Alice Springs 17.21 162 P Pn 20 41 16.2 0.0
comp=Z,1.3nm,0.3s,baz=332,slow=8.5,SNR=41
ASAR S Sn 20 44 22.1 -4.7
comp=Z,1.7nm,0.3s,baz=334,slow=17,SNR=4.5
ASAR LR LR 20 48 10.7
comp=Z,1μm,19.9s,baz=332,slow=38
ASAR Alice Springs 17.21 162 Pn 20 41 14.6 -1.6
QIS Mount Isa 17.21 141 P Pn 20 41 15.9 -0.4
baz=17,SNR=15
UGM Wanagama 17.58 267 P Pn 20 41 14.2 -6.7
WRKA Warakurna 17.69 180 P Pn 20 41 21.4 -0.8
baz=18,SNR=12
KKM Kota Kinabalu 17.84 317 P Pn 20 41 22.7 -1.5
STKI Sintang 18.23 293 P Pn 20 41 30.0 +1.1
comp=Z,52nm,1.3s
OCLP Ormoc 18.54 349 eP Pn 20 41 36.1 +3.5
SBUM Sibu 18.67 301 P Pn 20 41 35.8 +1.6
SBUM Sibu 18.67 301 P Pn 20 41 36.0 +1.8
PMG Port Moresby 18.84 98 P Pn 20 41 38.9 +2.6
comp=Z,0.8nm,0.3s,baz=285,slow=11,SNR=20
PMG LR LR 20 49 41.7
comp=Z,564nm,20.8s,baz=234,slow=39
PMG Port Moresby 18.84 98 P P 20 41 33.7 -1.9
PMG IAmb IAmb 20 41 46.9
comp=Z,152nm,1.1s
MTSU Mount Surprise 19.03 126 P Pn 20 41 39.9 +1.3
baz=19,SNR=20
BATP Bataraza 19.04 327 eP Pn 20 41 39.6 +0.9
KPJI Karang Pucung 19.16 269 P P 20 41 39.4 +0.4
comp=Z,60nm,1.7s
CUYO Cuyo Island 19.36 338 eP Pn 20 41 42.4 -0.2
KSM Kuching 19.88 295 P Pn 20 41 48.1 -0.7
KSM IAmb IAmb 20 41 49.8
comp=Z,145nm,1.1s
KSM Kuching 19.88 295 P Pn 20 41 49.0 +0.2
CISI Cisompet, Garu 20.26 268 P P 20 41 47.9 -3.2
comp=Z,97nm,1.2s
CISI Cisompet, Garu 20.26 268 P P 20 41 49.9 -1.3
CISI IAmb IAmb 20 41 56.8
comp=Z,208nm,1.4s
ENPP El Nido 20.32 334 eP P 20 41 51.5 -0.3
GIRL Giralia 20.40 220 P Pn 20 41 55.5 +0.7
baz=21,SNR=6.0
GIRL Giralia 20.40 220 P Pn 20 41 54.1 -0.7
GIRL IAmb IAmb 20 41 56.3
comp=Z,160nm,0.9s
OTRP Odiongan 20.44 342 eP P 20 41 53.8 +0.8
LEM Lembang 20.47 270 P P 20 41 53.1 -0.5
comp=Z,66nm,0.8s,baz=86,slow=6.8,SNR=9.1
LEM Lembang 20.47 270 P P 20 41 52.7 -0.9
comp=Z,57nm,1.0s
BUSP Coron 20.73 337 eP Pn 20 41 58.0 -0.7
CNJI Cibinong 20.94 268 P P 20 41 58.4 -0.1
comp=Z,2μmcomp=Z,158nm,1.1s
TPI Tanjungpandan 20.98 281 P P 20 41 59.6 +0.7
comp=Z,1μmcomp=Z,91nm,1.2s
PVCP Virac 21.10 349 eP P 20 41 59.2 -0.9
DBJI Dramaga 21.35 271 P P 20 42 05.4 +2.5
MEEK Meekatharra 21.35 204 P P 20 42 04.4 +1.6
baz=22,SNR=33
BOAC Boac 21.53 343 eP P 20 42 05.2 +0.5
CTA Charters Tower 21.63 128 P P 20 42 07.0 +1.1
comp=Z,14nm,1.1s,baz=314,slow=15,SNR=3.6
CTA LR LR 20 51 33.3
comp=Z,1μm,19.7s,baz=309,slow=40
LUBP Lubang 22.31 339 eP P 20 42 14.0 +0.9
TGY Tagaytay City 22.42 341 P P 20 42 16.5 +2.2
comp=Z,90nm,0.3s,baz=282,slow=2.4,SNR=10
TGY LR LR 20 52 39.4
comp=Z,258nm,21.2s,baz=138,slow=41
FORT Forrest 23.41 180 P P 20 42 25.5 +1.1
FORT IAmb IAmb 20 42 40.9
comp=Z,120nm,0.9s
PMBI Palembang 23.76 279 P P 20 42 29.8 +1.9
comp=Z,5μmcomp=Z,338nm,1.2s
PMBI Palembang 23.76 279 P P 20 42 30.1 +2.2
BALP Baler 23.78 344 eP P 20 42 28.3 +0.4
KRVT Keravat (AS076 23.84 84 LR LR 20 54 28.1
comp=Z,170nm,20.0s,baz=259,slow=43
MDSI Maura Dua 24.09 275 P P 20 42 28.8 -2.2
comp=Z,28nm,1.3s
QLP Quilpie 24.52 144 P P 20 42 37.0 +2.2
baz=25,SNR=15
MORW Morawa 24.57 206 P P 20 42 37.1 +1.9
baz=25,SNR=22
MORW Morawa 24.57 206 P P 20 42 36.8 +1.6
MORW IAmb IAmb 20 42 40.0
comp=Z,43nm,0.8s
KMBL Kambalda 24.72 193 P P 20 42 38.7 +2.1
baz=25,SNR=9.2
CAUP Cauayan 24.86 345 eP P 20 42 38.6 +0.7
BLDU Ballidu 25.64 203 P P 20 42 46.3 +1.4
baz=26,SNR=38
APYP Conner 25.89 345 eP P 20 42 46.5 -0.7
MYKOM Kota Tinggi 25.94 289 P P 20 42 47.3 -0.5
MYKOM IAmb IAmb 20 42 51.3
comp=Z,108nm,1.6s
KLBR Kellerberrin 26.12 201 P P 20 42 51.3 +1.9
baz=26,SNR=14
BBOO Buckleboo 26.45 165 P P 20 42 54.1 +1.9
baz=27,SNR=12
BBOO Buckleboo 26.45 165 P P 20 42 52.8 +0.5
BBOO IAmb IAmb 20 43 02.6
comp=Z,43nm,0.9s
RGRI Rengat 26.73 284 P P 20 42 56.1 +1.1
MUN Mundaring 27.04 203 P P 20 42 59.1 +1.5
baz=27,SNR=8.7
KRJI Kerinci 27.17 280 P P 20 42 58.7 -0.3
comp=Z,170nm,1.1s
DLV T Lat 27.38 314 P P 20 43 00.3 -0.7
DLV IAmb IAmb 20 43 03.1
comp=Z,94nm,2.0s
SDSI Sungai Dareh 27.46 282 P P 20 43 01.1 -0.4
comp=Z,5μmcomp=Z,110nm,2.2s
STKA Stephens Creek 27.49 155 P P 20 43 03.6 +2.0
baz=28,SNR=7.7
STKA Stephens Creek 27.49 155 P P 20 43 02.9 +1.3
comp=Z,12nm,0.7s,baz=318,slow=8.9,SNR=18
STKA LR LR 20 54 47.8
comp=Z,701nm,19.7s,baz=324,slow=38
STKA Stephens Creek 27.49 155 P P 20 43 02.3 +0.7
NWAO Narrogin (SRO) 27.52 200 P P 20 43 03.6 +1.7
baz=28,SNR=13
NWAO Narrogin (SRO) 27.52 200 P P 20 43 03.6 +1.7
comp=Z,18nm,0.6s,baz=32,slow=8.1,SNR=18
NWAO LR LR 20 55 25.0
comp=Z,767nm,19.1s,baz=32,slow=40
NWAO Narrogin (SRO) 27.52 200 P P 20 43 02.9 +1.0
NWAO IAmb IAmb 20 43 12.7
comp=Z,44nm,1.1s
HTT Hallett 27.87 161 P P 20 43 06.9 +1.8
baz=28,SNR=3.6
JRMM Jerantut 27.99 292 P P 20 43 09.0 +2.7
BKNI Bangkinang 28.16 284 P P 20 43 09.3 +1.5
comp=Z,1μmcomp=Z,99nm,1.0s
BKNI Bangkinang 28.16 284 P P 20 43 09.1 +1.3
PDSI Padang 28.40 282 P P 20 43 09.1 -0.9
comp=Z,12nm,1.5s
RKGY Rocky Gully 29.14 199 P P 20 43 18.9 +2.6
baz=29,SNR=4.8
CMSA Cobar Meteorol 29.15 148 P P 20 43 18.5 +2.2
baz=29,SNR=14
IPM Ipoh 29.55 292 P P 20 43 19.5 -0.7
IPM IAmb IAmb 20 43 23.6
comp=Z,31nm,1.1s
IPM Ipoh 29.55 292 P P 20 43 20.0 -0.2
KULM Kulim 30.22 294 P P 20 43 24.8 -1.3
KULM IAmb IAmb 20 43 29.2
comp=Z,78nm,1.7s
KULM Kulim 30.22 294 P P 20 43 26.0 -0.1
RPSI Rantau Prapat 30.88 288 P P 20 43 31.1 -0.9
RPSI Rantau Prapat 30.88 288 P P 20 43 32.0 +0.1
PSI Prapat 30.91 288 P P 20 43 32.0 -0.4
comp=Z,96nm,1.0s,baz=156,slow=5.0,SNR=50
UBPT Khong Chiam 31.78 315 P P 20 43 39.9 +0.1
QIZ Qiongzhong 31.79 325 P P 20 43 41.4 +1.6
QIZ S S 20 48 54.3 +6.3
QIZ LR LR
comp=Z,210nm,13.2s
QIZ LR LR
comp=Z,290nm,12.2s
LHMI Lhok Sumawe 33.60 291 P P 20 43 54.0 -1.8
comp=Z,2μmcomp=Z,185nm,1.1s
LHMI Lhok Sumawe 33.60 291 P P 20 43 55.0 -0.8
TOO Toolangi 34.01 155 P P 20 43 58.6 -0.5
TOO IAmb IAmb 20 44 14.0
comp=Z,56nm,1.3s
PBKT Sadao Pong 35.89 311 P P 20 44 15.4 0.0
SLVN Son La 37.11 320 P P 20 44 25.1 -0.9
SLVN IAmb IAmb 20 44 28.5
comp=Z,34nm,1.4s
CM31 Chiang Mai Arr 38.57 312 P P 20 44 38.2 -0.1
CMAR Chiang Mai Arr 38.57 312 P P 20 44 38.4 +0.1
comp=Z,4.1nm,0.8s,baz=144,slow=7.3,SNR=33
CMAR PcP PcP 20 46 52.1 +1.6
comp=Z,3.2nm,0.9s,baz=163,slow=2.7,SNR=6.6
CMAR LR LR 21 04 38.1
comp=Z,184nm,18.2s,baz=140,slow=43
CHTO Chiang Mai 38.80 312 P P 20 44 39.6 -0.5
GYA Guiyang 39.51 329 ⇑iP P 20 44 46.6 +0.5
GYA PP PP 20 46 18.8 +1.5
GYA S S 20 50 46.6 +0.2
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,240nm,5.5s
GYA LR LR
comp=Z,320nm,4.9s
GYA LR LR
comp=Z,260nm,4.5s
GYA LR LR
comp=Z,140nm,4.8s
DZM Mont Dzumac 39.65 116 eS S 20 50 44.2 -4.4
comp=Z,142nm,25.9s
DZM eLR LR 20 55 37.6
comp=Z,557nm,23.3s
WHN Wuhan 39.87 341 P P 20 44 49.8 +0.9
WHN pmax pmax
comp=Z,52nm,1.3s
NJ2 Nanjing 40.09 348 eP P 20 44 53.5 +2.8
NJ2 pmax pmax
comp=Z,16nm,0.5s
KMI Kunming 40.64 323 P P 20 44 56.1 +0.5
KMI IAmb IAmb 20 44 58.5
comp=Z,46nm,1.4s
ENH Enshi 41.42 335 P P 20 45 01.3 -0.5
KSAR Wonju Array Be 44.46 360 P P 20 45 25.5 -0.7
KSRS Korea Array 44.47 360 P P 20 45 27.6 +1.3
comp=Z,7.1nm,0.7s,baz=178,slow=9.2,SNR=18
KSRS LR LR 21 02 59.3
comp=Z,255nm,20.8s,baz=170,slow=35
KS19 Wonju Array Si 44.52 360 P P 20 45 26.1 -0.6
MAJO Matsushiro 44.55 11 P P 20 45 26.5 -0.6
MAJO IAmb IAmb 20 45 34.4
comp=Z,35nm,0.8s
MAT Matsushiro 44.55 11 P P 20 45 26.4 -0.6
MAT S S 20 52 03.2 +2.8
MJAR Matsushiro Arr 44.55 11 P P 20 45 26.7 -0.3
comp=Z,16nm,0.9s,baz=189,slow=9.5,SNR=23
MJAR LR LR 21 01 52.5
comp=Z,162nm,21.5s,baz=185,slow=33
MJAR Matsushiro Arr 44.55 11 P P 20 45 25.2 -1.8
MJB9 Matsu-Tunnel 44.55 11 P P 20 45 26.5 -0.6
MJB9 IAmb IAmb 20 45 34.4
comp=Z,36nm,0.8s
CD2 Chengdu 44.60 330 ⇑iP P 20 45 27.2 -0.4
CD2 S S 20 52 07.4 +6.0
CD2 SS ScS 20 55 24.1 +1.0
CD2 pmax pmax
comp=Z,30nm,0.8s
CD2 pmax pmax
comp=Z,420nm,11.0s
CD2 LR LR
comp=Z,440nm,16.4s
CD2 LR LR
comp=Z,390nm,21.0s
XAN Xi'an 44.96 337 P P 20 45 29.0 -1.3
XAN pP pP 20 45 36.3 -3.5
XAN PcP PcP 20 47 11.9 +0.6
XAN pmax pmax
comp=Z,13nm,1.2s
XAN pmax pmax
comp=Z,150nm,4.4s
XAN Xi'an 44.96 337 P P 20 45 29.1 -1.2
SHL Shillong 48.10 314 P P 20 45 54.7 -0.6
BJT Baijiatuau 48.34 348 P P 20 45 56.4 -0.2
BJI Beijing 48.35 348 ⇑eP P 20 45 55.8 -0.9
BJI pmax pmax
comp=Z,8.0nm,1.0s
LZH Lanzhou 48.83 334 ⇑P P 20 46 01.0 +0.3
LZH sP pP 20 46 07.6 -2.6
LZH pmax pmax
comp=Z,47nm,1.1s
LZH pmax pmax
comp=Z,190nm,5.4s
LZH LR LR
comp=Z,430nm,13.3s
LZH LR LR
comp=Z,370nm,13.8s
LZH LR LR
comp=Z,490nm,14.6s
PALK Pallekele 49.56 286 P P 20 46 05.5 -1.0
HHC Hu-ho-hao-te 50.26 344 eP P 20 46 15.8 +4.3
HHC pmax pmax
comp=Z,65nm,6.6s
LSA Lhasa 51.19 318 P P 20 46 20.1 +1.0
LSA pP pP 20 46 29.2 +0.8
LSA pmax pmax
comp=Z,98nm,1.1s
LSA pmax pmax
comp=Z,1μm,3.6s
LSA LR LR
comp=Z,250nm,5.7s
LSA LR LR
comp=Z,240nm,6.3s
LSA LR LR
comp=Z,210nm,5.2s
LSA Lhasa 51.19 318 P P 20 46 19.6 +0.5
LSA IAmb IAmb 20 46 21.1
comp=Z,20nm,0.8s
USA0B Ussuriysk Arra 51.32 3 P P 20 46 19.5 +0.3
USA0B IAmb IAmb 20 46 26.7
comp=Z,17nm,0.8s
USRK Ussuriysk Ar. 51.32 3 P P 20 46 20.2 +1.0
comp=Z,9.2nm,0.7s,baz=180,slow=6.9,SNR=15
USRK LR LR 21 08 33.2
comp=Z,172nm,19.7s,baz=165,slow=37
USRK Ussuriysk Ar. 51.32 3 P P 20 46 19.5 +0.3
MDJ Mudanjiang 51.64 1 P P 20 46 22.6 +1.0
MDJ pmax pmax
comp=Z,29nm,1.3s
MDJ pmax pmax
comp=Z,310nm,4.0s
ODAN Odare 52.12 312 eP P 20 46 25.5 -0.3
comp=Z,28nm,0.9s
RPZ Rata Peaks 52.12 141 P P 20 46 27.8 +2.5
comp=Z,16nm,0.9s,baz=344,slow=1.6,SNR=6.7
RPZ Rata Peaks 52.12 141 P P 20 46 25.5 +0.2
RPZ IAmb IAmb 20 46 34.9
comp=Z,20nm,0.8s
TAPN Taplejung 52.16 313 eP P 20 46 26.1 -0.1
comp=Z,28nm,0.8s
RAMN Ramite 52.75 312 eP P 20 46 30.6 +0.1
comp=Z,48nm,0.6s
GTA Gaotai 53.37 333 P P 20 46 34.9 +0.2
GTA pP pP 20 46 39.7 -4.7
GTA sP sP 20 46 42.4 -5.7
GTA PcP PcP 20 47 42.8 +1.0
GTA pmax pmax
comp=Z,30nm,1.1s
GTA pmax pmax
comp=Z,140nm,5.1s
GTA LR LR
comp=Z,100nm,18.4s
GTA LR LR
comp=Z,130nm,18.7s
GTA LR LR
comp=Z,190nm,19.4s
JIRN Jiri 53.45 312 eP P 20 46 35.7 -0.1
GUN Gumba 53.81 312 eP P 20 46 38.2 -0.3
comp=Z,48nm,0.7s
PKI Pulchoki 53.97 312 eP P 20 46 38.8 -0.8
comp=Z,15nm,0.6s
PKIN Phulchoki 53.99 312 eP P 20 46 38.8 -0.8
comp=Z,14nm,0.7s
KKN Kakani 54.19 312 eP P 20 46 40.6 -0.5
comp=Z,23nm,0.8s
DMN Daman 54.22 312 eP P 20 46 40.9 -0.4
comp=Z,33nm,0.9s
GKN Gorkha 54.78 312 eP P 20 46 44.9 -0.4
HYB Hyderabad 54.87 297 i P P 20 46 44.0 -1.9
KOLN Koldanda 55.43 311 eP P 20 46 50.1 +0.1
comp=Z,96nm,1.1s
YSS Yuzh-Sakhalins 55.48 12 P P 20 46 50.1 +0.3
YSS IAmb IAmb 20 46 58.5
comp=Z,22nm,0.8s
DANN Dangsing 55.62 312 eP P 20 46 51.1 -0.4
comp=Z,90nm,1.2s
KLR Kul'dur 56.32 3 LR LR 21 10 11.0
comp=Z,97nm,19.1s,baz=181,slow=35
ULN Ulaanbaatar 57.98 343 P P 20 47 07.8 +0.1
ULN P 20 47 08.1 +0.4
ULN IAmb IAmb 20 47 09.7
comp=Z,23nm,1.0s
SONM Songino Array 58.14 343 P P 20 47 09.5 +0.7
comp=Z,14nm,0.9s,baz=162,slow=5.5,SNR=84
SONM Songino Array 58.14 343 P P 20 47 08.8 0.0
TLY Talaya 62.38 343 P P 20 47 37.0 -0.6
TLY IAmb IAmb 20 47 40.0
comp=Z,8.1nm,0.8s
WMQ Urumqi 62.66 328 eP P 20 47 40.7 +1.0
WMQ pP pP 20 47 47.1 -2.4
WMQ sP sP 20 47 49.5 -3.8
WMQ pmax pmax
comp=Z,29nm,1.5s

WMQ pmax pmax
comp=Z,120nm,3.7s
WMQ LR LR
comp=Z,500nm,29.2s
WMQ LR LR
comp=Z,700nm,28.9s
WMQ LR LR
comp=Z,170nm,29.0s
WMQ Urumqi 62.66 328 P P 20 47 39.6 -0.1
WMQ IAmb IAmb 20 47 41.1
comp=Z,26nm,1.0s
PETK Petropavlovsk- 65.11 19 P P 20 47 56.4 +0.8
comp=Z,10nm,0.6s,baz=188,slow=4.9,SNR=23
PETK LR LR 21 11 59.4
comp=Z,131nm,21.8s,baz=239,slow=32
PETK Petropavlovsk- 65.11 19 P P 20 47 55.5 -0.1
NIL Nilore 66.07 312 P P 20 48 01.9 -0.3
KSH Kashi 67.03 318 P P 20 48 08.9 +0.6
KSH PcS 20 52 38.1
KSH S S 20 56 57.8 -2.1
KSH pmax pmax
comp=Z,110nm,0.8s
KSH pmax pmax
comp=Z,650nm,3.0s
KSH LR LR
comp=Z,430nm,8.4s
KSH LR LR
comp=Z,320nm,7.4s
KSH LR LR
comp=Z,370nm,9.5s
MK31 Makanchi Array 67.49 328 P P 20 48 11.3 +0.3
MKAR Makanchi Array 67.49 328 P P 20 48 11.7 +0.7
comp=Z,24nm,0.8s,baz=130,slow=7.9,SNR=240
MKAR Makanchi Array 67.49 328 P P 20 48 11.1 +0.2
MAKZ Makanchi 67.66 328 P P 20 48 12.4 +0.3
NRN Naryn 68.03 320 P P 20 48 15.5 +0.7
NRN IAmb IAmb 20 48 16.6
comp=Z,35nm,1.1s
YAK Yakutsk 69.08 1 LR LR 21 17 51.6
comp=Z,92nm,20.9s,baz=190,slow=35
YAK Yakutsk 69.08 1 P P 20 48 20.4 -0.1
YAK IAmb IAmb 20 48 22.0
comp=Z,25nm,0.8s
KBK Karagaybulak 69.34 321 P P 20 48 24.2 +1.4
SNR=13
UCH Uchtor 69.39 320 P P 20 48 24.9 +1.4
SNR=12
KBL Kabul 69.60 311 P P 20 48 24.6 0.0
KBL IAmb IAmb 20 48 26.1
comp=Z,24nm,1.0s
AAK Ala-Archa 69.61 321 P P 20 48 25.9 +1.4
SNR=22
AAK Ala-Archa 69.61 321 P P 20 48 25.5 +1.0
CHMS Chumysh 69.64 321 P P 20 48 25.4 +0.9
SNR=9.8
AML Almayashu 69.86 320 P P 20 48 27.2 +0.8
SNR=20
ARSB Arslanbob 69.92 319 P P 20 48 27.1 +0.8
USP Ospenovka 69.94 321 P P 20 48 27.4 +1.1
SNR=27
EKS2 Erkin-Say 70.08 320 P P 20 48 28.7 +1.4
SNR=14
BTK Batken 70.75 317 P P 20 48 31.7 +0.3
ZAA0 Zalesovo Array 71.04 335 P P 20 48 32.5 -0.2
ZALV Zalesovo Beam 71.04 335 P P 20 48 32.8 0.0
comp=Z,35nm,0.8s,baz=122,slow=4.3,SNR=179
ZALV LR LR 21 22 00.4
comp=Z,66nm,21.1s,baz=123,slow=38
ZALV Zalesovo Beam 71.04 335 P P 20 48 32.3 -0.5
KURK Kurchatov 71.83 329 P P 20 48 38.0 +0.5
TAS Tashkent 72.36 317 P P 20 48 40.8 -0.2
KKAR Karatay Array 72.39 319 P P 20 48 41.5 +0.4
KK31 IAmb IAmb 20 48 43.0
comp=Z,36nm,1.3s
KKAR Karatay Array 72.39 319 P P 20 48 41.1 0.0
KKAR Karatay Array 72.39 319 P P 20 48 41.6 +0.5
KKAR IAmb IAmb 20 48 43.0
comp=Z,36nm,1.3s
VNDA Vanda 72.42 173 P P 20 48 42.2 +1.5
comp=Z,6.6nm,1.0s,baz=340,slow=12,SNR=3.6
VNDA LR LR 21 20 26.1
comp=Z,318nm,18.6s,baz=334,slow=36
MAW Mawson 74.08 201 P P 20 48 51.5 +0.9
comp=Z,6.2nm,0.9s,baz=61,slow=11,SNR=3.4
MAW LR LR 21 19 58.6
comp=Z,193nm,18.9s,baz=61,slow=35
MAW Mawson 74.08 201 P P 20 48 51.4 +0.7
HRA Herat 74.73 308 P P 20 48 55.2 -0.1
HRA IAmb IAmb 20 48 57.0
comp=Z,51nm,1.8s
BRVK Borovoye 77.42 328 P P 20 49 10.2 +0.3
TIXI Tiksi 78.73 0 P P 20 49 16.1 -0.7
TIXI IAmb IAmb 20 49 17.9
comp=Z,12nm,0.7s
GEYT Alibeck 79.05 311 P P 20 49 20.0 +0.7
comp=Z,4.6nm,1.1s,baz=101,slow=1.5,SNR=15
GEYT Alibeck 79.05 311 P P 20 49 18.9 -0.5
GYA0B ALIBECK ARRAY 79.05 311 P P 20 49 19.7 +0.3
GYA0B IAmb IAmb 20 49 21.6
comp=Z,44nm,1.8s
OPO Ambohidratompo 79.28 252 P P 20 49 19.9 -1.3
comp=Z,3.6nm,0.8s,baz=87,slow=7.5,SNR=4.1
TBI Tubuai 80.12 112 eLR LR 21 14 23.3
comp=Z,228nm,29.2s
PPT2 Papeete2 80.42 107 eLR LR 21 14 34.7
comp=Z,135nm,24.0s
PPT Papeete 80.43 107 LR LR 21 21 47.4
comp=Z,32nm,20.6s,baz=197,slow=33
ABKAR Akbulak array 81.62 322 P P 20 49 32.6 -0.3
QSPA South Pole Qui 82.73 180 P P 20 49 39.7 +1.1
comp=Z,5.2nm,1.0s,baz=313,slow=4.0,SNR=9.3
QSPA South Pole Qui 82.73 180 P P 20 49 38.8 +0.2
QSPA IAmb IAmb 20 49 56.4
comp=Z,10nm,0.8s
AKTO Aktyubinsk 83.21 323 LR LR 21 29 35.9
comp=Z,63nm,20.6s,baz=120,slow=38
FALS False Pass 83.72 33 P P 20 49 43.2 -0.4
GAMB Gambell 83.81 23 P P 20 49 44.7 +0.8
GAMB IAmb IAmb 20 49 45.6
comp=Z,11nm,0.9s
ARU Arti 85.00 328 P P 20 49 50.0 -0.1
DAMY Dhamar 85.89 285 P P 20 49 54.5 -1.4
DAMY IAmb IAmb 20 49 57.8
comp=Z,26nm,1.4s
RAYN Ar Rayn 86.25 294 P P 20 49 57.1 -0.1
RAYN IAmb IAmb 20 49 58.3
comp=Z,14nm,0.9s
RDOG Red Dog Mine 88.94 21 P P 20 50 09.2 +0.1
RDOG IAmb IAmb 20 50 09.6
comp=Z,8.3nm,1.1s
TTA Tatalina 89.98 26 P P 20 50 14.2 0.0
TTA IAmb IAmb 20 50 31.1
comp=Z,19nm,1.5s
KBZ Khabaz 91.60 314 P P 20 50 22.0 +0.1
comp=Z,2.5nm,1.0s,baz=18,slow=3.2,SNR=3.2
KBZ LR LR 21 39 33.8
comp=Z,14nm,18.2s,baz=98,slow=41
PPLA Purkeypile 91.67 27 P P 20 50 22.0 0.0
TRF Thorofare Moun 92.63 26 P P 20 50 25.9 -0.6
MLY Manley 92.74 25 P P 20 50 26.0 -0.8
GHO Glory Hole Cre 92.95 28 P P 20 50 27.6 -0.3
KNK Knik Glacier 93.11 29 P P 20 50 28.9 +0.3
SML Sawmill 93.23 28 P P 20 50 29.2 +0.1
SML IAmb IAmb 20 50 29.8
comp=Z,10nm,0.8s
RND Reindeer 93.25 27 P P 20 50 27.9 -1.4
RND IAmb IAmb 20 50 35.7
comp=Z,9.5nm,0.8s
SCM Sheep Creek Mo 93.71 28 P P 20 50 32.0 +0.6
DHY Denali Highway 93.86 27 P P 20 50 31.9 -0.3
DHY IAmb IAmb 20 50 33.0
comp=Z,6.4nm,0.8s
CCB Clear Creek Bu 93.91 25 P P 20 50 31.3 -0.9
CCB IAmb IAmb 20 50 31.9
comp=Z,5.4nm,0.9s
IL31 94.31 25 P P 20 50 33.6 -0.3
IL31 IAmb IAmb 20 52 31.7
comp=Z,4.6nm,0.7s
ILAR Eielson Array 94.31 25 P P 20 50 32.0 -2.0
comp=Z,1.7nm,0.8s,baz=240,slow=5.2,SNR=14
ILAR PP PP 20 54 25.9 +4.5
comp=Z,0.7nm,0.9s,baz=257,slow=6.4,SNR=3.5
ILAR LR LR 21 28 38.4
comp=Z,59nm,20.4s,baz=273,slow=33
ILAR Eielson Array 94.31 25 P P 20 50 32.9 -1.1
PAX Paxson 94.71 27 P P 20 50 36.0 0.0
PAX IAmb IAmb 20 51 28.8
comp=Z,16nm,1.6s
SNAA Sanae 95.01 194 P P 20 50 39.3 +2.1
SNAA Sanae 95.01 194 P P 20 50 38.9 +1.7
comp=Z,3.9nm,0.7s,baz=131,slow=4.4,SNR=16
SNAA Sanae 95.01 194 P P 20 50 37.9 +0.6
SNAA IAmb IAmb 20 50 46.2
comp=Z,6.3nm,0.9s
RIDG Independent Ri 95.08 26 P P 20 50 37.1 -0.5
RIDG IAmb IAmb 20 54 07.2
comp=Z,17nm,1.3s
MENT Mentasta 95.50 27 P P 20 50 39.5 0.0
BMAR Burnt Mountain 95.55 23 P P 20 50 39.9 +0.2
BARN Barnard Glacie 96.33 29 P P 20 50 43.5 -0.1
BARN IAmb IAmb 20 50 45.5
comp=Z,26nm,1.8s
BCAR Beaver Creek A 96.39 27 P P 20 50 43.6 -0.1
BOSA Boshof 97.83 240 P Pdif 20 50 51.2 +0.1
comp=Z,1.8nm,0.6s,baz=136,slow=5.8,SNR=4.1
BOSA LR LR 21 29 31.9
comp=Z,91nm,21.9s,baz=94,slow=32
BOSA Boshof 97.83 240 P Pdif 20 50 51.9 +0.7
BRTR Keskin Array B 98.12 309 LR LR 21 43 03.7
comp=Z,14nm,19.3s,baz=74,slow=40
ARCES ARCESS Array B 101.20 340 P **Pdif 20 51 04.9 -0.1**
comp=Z,1.8nm,0.7s,baz=168,slow=15,SNR=3.4
ARCES ARCESS Array B 101.20 340 Pdif 20 51 04.7 -0.3
YKA Yellowknife Ar 108.74 26 PKiKP **PKiKP 20 55 44.0 +0.5**
comp=Z,0.2nm,0.6s,baz=288,slow=1.6,SNR=3.7
YKA PKKPbc **PKKPbc 21 06 51.2 -3.6**
comp=Z,0.4nm,0.7s,baz=104,slow=2.8,SNR=5.4
GERES GERESS Array B 111.49 320 PKiKP **PKiKP 20 55 49.7 +0.4**
comp=Z,0.4nm,0.6s,baz=135,slow=0.4,SNR=4.0
PDAR Pinedale Array 118.30 45 PKP **PKiKP 20 56 03.1 +0.3**
comp=Z,0.3nm,0.6s,baz=184,slow=2.4,SNR=4.0
PDAR Pinedale Array 118.30 45 PKiKP 20 56 02.8 0.0
O20A White River Ci 120.03 48 PKPdf 20 56 04.4 -1.7
SDCO Great Sand Dun 122.79 49 PKiKP 20 56 11.8 0.0
MNTX Cornudas Mount 124.55 56 PKiKP 20 56 15.2 +0.1
TXAR Lajitas Array 126.55 59 PKP **PKiKP 20 56 20.1 +0.9**
comp=Z,0.8nm,0.8s,baz=238,slow=2.2,SNR=7.6
TXAR Lajitas Array 126.55 59 PKiKP 20 56 19.2 -0.1
TOA0 Torodi Ar. Sit 127.14 281 PKPdf 20 56 20.0 -0.2
TORD Torodi Ar. Bea 127.14 281 PKP **PKPdf 20 56 20.2 0.0**
comp=Z,2.3nm,0.9s,baz=65,slow=2.5,SNR=8.8
TORD Torodi Ar. Bea 127.14 281 PKPdf 20 56 19.9 -0.2
JCT Junction City 129.49 56 PKiKP 20 56 25.6 +0.6
U40A Yellville 132.65 46 PKPdf 20 56 28.9 -1.2
CPUP Villa Florida 146.19 171 PKPbc **PKPab 20 56 56.4 -0.1**
comp=Z,2.4nm,0.5s,baz=186,slow=3.5,SNR=9.6
CPUP Villa Florida 146.19 171 PKPdf 20 56 55.3 +0.4
JTS Las Juntas de 147.06 82 PKPbc 20 56 57.9 -0.9
PB11 IPOC Station P 147.89 147 PKPdf 20 56 56.7 -1.4
GO01 Chusmiza 148.22 148 PKiKP 20 57 04.2 +0.1
MNMC Minye Minye 148.44 146 PKPdf 20 56 58.0 -1.2
NNA Nana 148.58 127 PKPdf 20 57 03.7 -0.7
LPAZ La Paz 151.55 145 PKP **PKPdf 20 57 06.5 +2.0**
comp=Z,1.2nm,0.7s,baz=4.5,slow=3.5,SNR=5.9
LPAZ PKPbc **PKiKP 20 57 12.3 +1.1**
comp=Z,3.7nm,0.6s,baz=209,slow=1.8,SNR=12
SDV Santo Domingo 161.24 84 PKPdf 20 57 16.5 -0.2

IDC 03 20:42:31.5±1.6, 7.19S×128.20E, h0km, mb3.7/3, mb1 4.2/6, mb1mx3.9/20, mbtmp4.0/6, ML3.7/2, Error ellipse: s-maj=61.2km s-min=28.8km az=88.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 6.99 26 Pn Pn 20 44 16.1 +0.9
1.1nm,0.3s,baz=105,slow=20,SNR=1.7
SIJI Sn Sn 20 45 30.6 -4.8
0.6nm,0.3s,baz=288,slow=20,SNR=1.3
FITZ Fitzroy Crossi 11.12 193 Pn Pn 20 45 12.8 +0.9
0.5nm,0.3s,baz=5.7,slow=10,SNR=1.3
FITZ Sn Sn 20 47 11.5 -5.6
0.8nm,0.3s,baz=330,slow=20,SNR=1.4
WRA Warramunga Arr 14.01 155 Pn Pn 20 45 51.0 -0.4
baz=339,slow=13,SNR=0.9
WRA Sn Sn 20 48 20.8 -7.0
0.6nm,0.3s,baz=57,slow=31,SNR=1.4
ASAR Alice Springs 17.27 162 S Sn 20 49 41.7 -5.6
0.3nm,0.3s,baz=339,slow=25,SNR=2.1
SONM Songino Array 58.08 343 P P 20 52 28.2 +1.5
0.5nm,0.8s,baz=170,slow=7.7,SNR=3.3
MKAR Makanchi Array 67.42 328 P P 20 53 28.6 -0.4
0.8nm,0.7s,baz=121,slow=8.3,SNR=9.9
ZALV Zalesovo Beam 70.98 335 P P 20 53 49.1 -1.8
0.8nm,0.6s,baz=107,slow=4.8,SNR=3.0

IDC 03 20:50:13.7±4.4, 4.79S×153.87E, h94km±30km, mb3.3/6, mb1 3.5/6, mb1mx3.3/26, mbtmp3.6/6, Error ellipse: s-maj=40.5km s-min=22.4km az=93.0
ISC 03 20:50:14.4±1.2, 4.75S±0.1×153.9E±0.1, h100km, n9, σ1.03/10, mb3.3/6, New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRVT Keravat (AS076 1.89 283 P **Pn 20 50 45.8 +0.2**
36nm,0.3s,baz=90,slow=0.2,SNR=27
KRVT S **Sn 20 51 08.5 -0.9**
56nm,0.3s,baz=4.8,slow=22,SNR=21
PMG Port Moresby 8.12 235 P **Pn 20 52 10.5 +0.9**
baz=32,slow=14
WRA Warramunga Arr 24.30 230 P **P 20 55 22.1 -0.6**
2.3nm,0.7s,baz=55,slow=10.0,SNR=9.7
ASAR Alice Springs 26.93 224 P **P 20 55 45.0 -1.5**
0.7nm,0.7s,baz=59,slow=8.8,SNR=5.4
CMAR Chiang Mai Arr 58.82 295 P **P 21 00 04.3 +1.4**
0.3nm,0.4s,baz=86,slow=6.6,SNR=3.1
SONM Songino Array 66.84 327 P **P 21 00 56.2 +0.5**
0.2nm,0.5s,baz=148,slow=3.8,SNR=4.1
MKAR Makanchi Array 80.98 319 P **P 21 02 18.1 0.0**
0.2nm,0.5s,baz=98,slow=7.9,SNR=7.0
ILAR Eielson Array 81.69 22 P **P 21 02 20.8 -0.6**
0.4nm,0.9s,baz=225,slow=7.3,SNR=2.9
TORD Torodi Ar. Bea 151.30 289 PKPbc **PKPbc 21 09 56.7 -0.7**
0.7nm,0.8s,baz=46,slow=2.0,SNR=4.1

IDC 03 20:54:34.2±1.5, 7.37S×128.13E, h0km, mb3.9/6, mb1 3.9/8, mb1mx3.6/29, mbtmp3.8/8, ML3.6/2, Error ellipse: s-maj=154.6km s-min=28.5km az=67.0
NEIC 03 20:54:34.9±1.2, 7.2S±0.1×128.59E±0.08, h10km±2km, mb4.7/6, Error ellipse: s-maj=21.0km s-min=4.8km az=143.0
ISC 03 20:54:38.5±0.8, 7.37S±0.07×128.6E±0.1, h35km, n26, σ0.96/28, mb4.0/8, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SOEI Soe 4.89 241 Pn **Pn 20 55 50.6 +0.9**
FAKI Fak Fak 5.72 40 Pn **Pn 20 56 01.5 +0.4**
MTN Manton Dam 5.99 156 Pn **Pn 20 56 06.0 +1.3**
KNRA Kununurra 8.26 179 Pn **Pn 20 56 36.9 +1.0**
FITZ Fitzroy Crossi 11.05 195 Pn **Pn 20 57 13.9 -0.2**
WB0 Warramunga Arr 13.55 156 Pn **Pn 20 57 46.0 -2.3**
WRAB Tennant Creek 13.68 156 Pn **Pn 20 57 52.0 +1.8**
WRA Warramunga Arr 13.68 157 Pn **Pn 20 57 51.0 +0.8**
0.3nm,0.3s,baz=327,slow=13,SNR=7.9
WRA Sn **Sn 21 00 19.8 -1.3**
0.4nm,0.3s,baz=321,slow=25,SNR=6.6
WRA Warramunga Arr 13.68 157 Pn 20 57 50.8 +0.5
WB2 Warramunga Arr 13.69 157 Pn **Pn 20 57 50.7 +0.4**
WR0 Warramunga Arr 13.78 156 Pn **Pn 20 57 51.2 -0.4**
ASAR Alice Springs 16.99 163 P **P 20 58 36.2 +1.1**
0.2nm,0.3s,baz=327,slow=9.7,SNR=7.7
ASAR S **Sn 21 01 40.5 -0.9**
0.1nm,0.3s,baz=196,slow=30,SNR=3.4
SONM Songino Array 58.36 343 P **P 21 04 30.3 -0.1**
0.6nm,0.9s,baz=161,slow=7.1,SNR=4.7
SONM Songino Array 58.36 343 P **P 21 04 30.0 -0.4**
MK31 Makanchi Array 67.78 328 P **P 21 05 32.2 -0.6**
MK31 IAmb IAmb 21 07 10.7
comp=Z,9.9nm,2.0s
MKAR Makanchi Array 67.78 328 P **P 21 05 32.4 -0.5**
comp=Z,0.6nm,0.6s,baz=114,slow=8.6,SNR=14
MKAR Makanchi Array 67.78 328 P **P 21 05 32.1 -0.8**
AAK Ala-Archa 69.93 320 P **P 21 05 47.0 +0.5**
comp=Z,0.9nm,0.9s,baz=155,slow=8.0,SNR=3.7
AAK Ala-Archa 69.93 320 P **P 21 05 47.0 +0.5**
AAK IAmb IAmb 21 06 47.1
comp=Z,35nm,1.9s
ARSB Arslanbob 70.24 319 P **P 21 05 48.0 -0.4**
ZAA0 Zalesovo Array 71.30 334 P **P 21 05 53.3 -1.0**
ZALV Zalesovo Beam 71.30 334 P **P 21 05 53.5 -0.9**
comp=Z,1.7nm,0.9s,baz=116,slow=3.4,SNR=5.7
ZALV Zalesovo Beam 71.30 334 P **P 21 05 53.2 -1.2**
KURBB Kurchatov Arra 72.10 329 P **P 21 05 58.9 -0.4**
comp=Z,1.4nm,0.8s,baz=128,slow=5.0,SNR=12
KURK Kurchatov 72.11 329 P **P 21 05 58.7 -0.6**
KURK IAmb IAmb 21 05 59.7
comp=Z,3.5nm,1.1s
BVAR Borovoye Array 77.64 328 P **P 21 06 31.0 -0.3**
comp=Z,0.6nm,0.7s,baz=131,slow=5.9,SNR=4.3

IDC 03 21:04:17.1±10.0, 40.27N×141.93E, h0km, mb3.5/4, mb1 3.5/5, mb1mx3.2/39, mbtmp3.4/5, ML2.4/1, Error ellipse: s-maj=194.1km s-min=43.3km az=96.0
JMA 03 21:04:20.6±0.1, 39.88N×142.17E, h47km±1km, M3.4
JMA Felt I J1.
ISC 03 21:04:20.1±1.9, 39.90N±0.05×142.3E±0.1, h44km±10km, n22, σ0.71/24, mb3.4/4, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JTH Tanohata 0.30 278 P **Pn 21 04 29.3 +0.6**
JTH S **Sn 21 04 35.1 +0.3**
MIYJ Miyakonagasawa 0.46 226 P **Pn 21 04 30.5 -0.1**
MIYJ S **Sn 21 04 37.3 -0.7**
JKEN Kujiedanarisaw 0.52 306 P **Pn 21 04 31.3 +0.1**
JKEN S **Sn 21 04 39.0 -0.2**
JKZ Kuzumaki 0.71 277 P **Pn 21 04 34.0 +0.1**
JKZ eS **Sn 21 04 43.2 -0.6**
JANG Nango 0.74 310 P **Pn 21 04 34.1 -0.1**
JANG S **Sn 21 04 43.8 -0.5**
JOM Ohasama 0.85 240 P **Pn 21 04 35.5 -0.2**
JOM S **Sn 21 04 46.3 -0.8**
OFUJ Ofunato 0.93 209 P **Pn 21 04 36.7 -0.1**
JMK Ichinoseki 1.24 221 P **Pn 21 04 41.0 +0.1**
JTM Tenmabayashi 1.27 315 P **Pn 21 04 41.6 +0.3**
JTM eS **Sn 21 04 57.7 +0.5**
JAH Hinai 1.27 284 P **Pn 21 04 41.7 +0.3**
JAH eS **Sn 21 04 57.5 +0.1**
JRG Rokugo 1.35 249 P **Pn 21 04 42.8 +0.4**
MJAR Matsushiro Arr 4.62 225 Pn **Pn 21 05 29.3 +1.9**
0.2nm,0.3s,baz=30,slow=15,SNR=6.1
SONM Songino Array 26.85 299 P **P 21 09 57.4 +1.0**
0.1nm,0.4s,baz=111,slow=7.7,SNR=1.6
H11N2 WAKE ISLAND Hy 29.18 126 T T 21 40 56.8
baz=319,slow=76,SNR=96
H11N1 WAKE ISLAND Hy 29.19 126 T T 21 40 59.1
baz=319,slow=76,SNR=107
H11N3 WAKE ISLAND Hy 29.20 126 T T 21 41 01.9
baz=319,slow=76,SNR=96
H11S1 WAKE ISLAND Hy 29.99 128 T T 21 42 01.9
baz=320,slow=76,SNR=10
H11S3 WAKE ISLAND Hy 29.99 128 T T 21 41 59.3
baz=320,slow=76,SNR=9.0
H11S2 WAKE ISLAND Hy 30.00 128 T T 21 42 00.1
baz=320,slow=76,SNR=9.4
ZALV Zalesovo Beam 40.53 310 P **P 21 11 53.0 -1.6**
0.4nm,0.3s,baz=108,slow=9.3,SNR=2.6
MKAR Makanchi Array 43.22 300 P **P 21 12 16.5 -0.2**
0.5nm,0.7s,baz=83,slow=11,SNR=5.6
KURBB Kurchatov Arra 44.81 306 P **P 21 12 28.9 -0.4**
0.7nm,0.4s,baz=81,slow=8.6,SNR=6.4

NCEDC 03 21:04:18.8±3.7, 41.81N±0.04×126.3W±0.1, h22km±9km, ML3.3/14, Error ellipse: s-maj=11.9km s-min=6.3km az=80.0
ANF 03 21:04:22.9±1.5, 41.89N×125.71W, h20km, ML3.3/15, Error ellipse: s-maj=17.5km s-min=6.0km az=71.0
NEIC 03 21:04:20.4±1.8, 41.73N±0.03×125.8W±0.1, h11km±9km, Error ellipse: s-maj=11.7km s-min=3.8km az=78.0, Off coast of northern California

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KBO Bosley Butte 1.26 67 Pn 21 04 43.5 -0.6
KRMB Red Mountain 1.43 98 Pn 21 04 46.4 +0.1
KRMB Sb 21 05 05.6 +0.3
KSXB Camp Six Broad 1.44 85 Pn 21 04 46.5 0.0
KSXB Sb 21 05 05.7 +0.1
KRPM Rodgers 1.45 113 Pn 21 04 46.8 +0.2
KRPM Sg 21 05 07.1 +0.2
KEBM Edson Butte 1.57 43 Pn 21 04 46.6 -1.7
KEBM Sn 21 05 08.2 -0.5
JCC Jacoby Creek, 1.61 124 Pn 21 04 48.6 -0.1
JCC Jacoby Creek, 1.61 124 Sb 21 05 10.0 -0.4
JCC Jacoby Creek, 1.61 124 Pn 21 04 48.8 +0.1
JCC Sn 21 05 06.2 -3.2
KCTM Capetown 1.66 138 Pn 21 04 49.6 +0.1
KCTM Sb 21 05 12.1 0.0
L02E Cave Junction 1.69 74 Pn 21 04 49.7 -0.1
L02E Cave Junction 1.69 74 P Pn 21 04 49.6 -0.2
baz=259,SNR=351
KHMM Horse Mountain 1.77 118 Pn 21 04 51.6 +0.5
KOMM Orleans Mounta 1.81 104 Pn 21 04 52.3 +0.6
KTRM Thompson Ridge 1.81 83 Pn 21 04 51.6 -0.1
KMPM Mount Pierce 1.82 135 Pn 21 04 51.6 -0.1
K02D Willamette Mer 1.85 58 P Pn 21 04 51.2 -0.9
baz=243,SNR=126
KSMM Slide Mountain 1.97 141 Pn 21 04 53.3 -0.5
KCRM Chalk Rock 1.98 130 Pn 21 04 54.3 +0.4
J01E Myrtle Point 1.99 43 P Pn 21 04 52.1 -1.8
baz=229,SNR=25
J01E S Sn 21 05 16.9 -1.9
baz=229
KMRM Mail Ridge 2.18 133 Pn 21 04 57.3 +0.7
KHBM Hayfork Bally 2.21 118 Pn 21 04 57.9 +0.6
M02C Callahan 2.23 98 Pn 21 04 58.3 +0.9
M02C Callahan 2.23 98 P Pn 21 04 58.2 +0.8
baz=280,SNR=170
HUMO Hull Mountain 2.28 66 Pn 21 04 58.0 -0.1
HUMO Hull Mountain 2.28 66 Pn 21 04 58.2 +0.2
KPPM Pickett Peak 2.30 126 Pn 21 04 59.3 +0.9
YBH Yreka Blue Hor 2.31 89 Pn 21 05 00.1 +1.6
YBH Yreka Blue Hor 2.31 89 Pn 21 05 00.2 +1.8
LAMM Antelope Mount 2.37 92 Pn 21 05 01.1 +1.7
LGPM Granite Peak 2.37 109 Pn 21 05 00.0 +0.6
LBKM Bonanza King 2.44 104 Pn 21 05 01.2 +0.9
N02D Trinity Center 2.44 107 P Pn 21 05 00.8 +0.5
baz=289,SNR=12
N02D S Sn 21 05 31.9 +1.7
baz=289
KBSM Bell Springs 2.46 137 Pn 21 05 01.1 +0.5
B040 Montague 2.52 87 Pn 21 05 03.0 +1.6
BBOR Butler Butte 2.58 62 Pn 21 05 02.9 +0.6
KIPM Iron Peak 2.60 137 Pn 21 05 02.9 +0.4
LBPM Beegum Peak 2.61 122 Pn 21 05 03.5 +0.9
KCPM Cahto Peak 2.64 140 Pn 21 05 03.1 +0.1
L04D Klamath Falls 2.65 78 Pn 21 05 04.6 +1.5
L04D Klamath Falls 2.65 78 P Pn 21 05 04.3 +1.2
baz=262,SNR=102
I03D Drain, OR 2.67 42 P Pn 21 05 01.6 -1.7
baz=227,SNR=13
I03D S Sn 21 05 33.8 -1.8
baz=227
LHEM Herd Peak 2.68 91 Pn 21 05 05.6 +1.9
KBNM Bluenose Ridge 2.69 132 Pn 21 05 04.9 +1.1
WDC Whiskeytown Da 2.71 114 Pn 21 05 05.4 +1.6
LGBM Gray Butte 2.73 97 Pn 21 05 06.6 +2.2
LMPM Military Pass 2.73 94 Pb 21 05 07.1 -2.3
KFPM Farley Peak 2.75 138 Pn 21 05 04.6 +0.1
I02D Swisshome 2.77 30 P Pn 21 05 03.2 -1.6
baz=215,SNR=26
I02D S Sn 21 05 35.0 -3.2
baz=215
M03C McCloud 2.79 98 Pb 21 05 07.8 -2.6
KRKM Rackout Spring 2.93 137 Pn 21 05 07.4 +0.3
LBFM Black Fox Moun 2.95 96 Pn 21 05 10.1 +2.7
M04C Macdoel 2.96 88 P Pn 21 05 09.4 +2.0
baz=271,SNR=37
LGMM Garner Mountai 2.97 91 Pn 21 05 09.8 +2.2
GROM Round Mountain 2.98 126 Pn 21 05 09.1 +1.4
GVV Valley View 3.07 128 Pn 21 05 10.2 +1.2
J04D Umpqua Nationa 3.11 60 P Pn 21 05 09.9 +0.2
baz=244,SNR=16
GHMM Hull Mountain 3.12 135 Pn 21 05 10.1 +0.4
K04D Chiloquin, OR 3.13 72 P Pn 21 05 09.3 -0.5
baz=256,SNR=7.3

LASM Arnica Sink 3.16 91 Pn 21 05 11.9 +1.6
I04A Tendick Farm, 3.23 49 P Pn 21 05 11.0 -0.2
baz=234
COR Corvallis 3.39 32 Pn Pn 21 05 12.7 -0.5
COR Sn 21 05 51.2 -2.2
LBCM Butte Creek Ri 3.46 103 Pn 21 05 16.1 +1.7
H04D Lebanon 3.58 38 P Pn 21 05 15.2 -0.6
baz=222
H04D S Sn 21 05 56.2 -1.9
baz=222
J05D Fort Rock, OR 3.71 64 P Pn 21 05 17.9 +0.1
baz=248,SNR=16
K05A Summer Lake 3.77 73 Pn Pn 21 05 19.5 +0.8
ORV Oroville 3.92 122 Pn 21 05 21.6 +1.1
G03D McMinnville, O 3.94 27 S Sn 21 06 03.9 -3.1
baz=211
H04A Detroit Lake 3.96 41 Pn 21 05 20.8 -0.3
MOD Modoc Plateau 4.11 86 Pn 21 05 24.1 +0.9
MOD Modoc Plateau 4.11 86 Pn 21 05 24.3 +1.1
PINE Pine Mountain 4.12 58 Pn 21 05 24.0 +0.5
F03A Seaside 4.50 20 Pn Pn 21 05 25.4 -3.1
F03A Sn 21 06 16.5 -4.3
BEKR Beckworth 4.52 112 Pn 21 05 31.7 +2.7
AFDM Forest Hills D 4.61 125 Pn Pn 21 05 29.8 -0.3
AFDM Sn 21 06 20.3 -3.3
F04A Amboy 4.86 29 Pn 21 05 33.6 +0.1
F04A Sn 21 06 25.5 -4.2
E03A Lebam 5.08 18 Pn Pn 21 05 36.9 +0.5
G06A Carlson Farm, 5.13 45 Pn Pn 21 05 37.7 +0.5
I07A Izee 5.18 61 Pn 21 05 39.6 +1.7
PAHR Pah Rah Range 5.27 110 Pn Pn 21 05 41.1 +1.8
E04D Cinebar 5.36 25 P Pn 21 05 40.7 +0.5
baz=209,SNR=25
PNTR Pine Nut 5.41 117 Pn Pn 21 05 43.0 +1.8
CMB Columbia Colle 5.56 130 Pn Pn 21 05 44.6 +1.6
J08A Circle Bar Ran 5.64 71 Pn 21 05 44.0 -0.3
LON Longmire 5.78 28 Pn 21 05 46.3 +0.2
LON Sn 21 06 49.0 -3.4
WAKR Walker 5.84 121 Pn Pn 21 05 46.0 -1.0
D05A Enumclaw 6.10 25 Pn Pn 21 05 49.5 -0.9
D05A Sn 21 06 58.1 -2.1
KVN Kaiserville 6.45 112 Pn 21 05 58.7 +3.2
PMPB Monarch Peak 6.74 143 Pn Pn 21 05 58.7 -0.6
BMO Blue Mountains 6.93 60 Pn 21 06 02.1 +0.1
B05A Bryant 7.04 21 P Pn 21 06 03.8 +0.4
baz=205
MFID Camas Ranch 7.54 74 Pn 21 06 07.8 -2.7
B08A Colville Reser 8.05 32 Pn Pn 21 06 17.3 0.0
ISA Isabella, Lake 8.33 134 Pn Pn 21 06 24.1 +3.0
R11A Troy Canyon, C 8.52 110 Pn Pn 21 06 27.1 +3.1

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*IDC **03** 21:10:21.9±0.6, 19.48N×64.47W, h0km, mb4.1/13, mb1 4.2/15, mb1mx4.0/54, mbtmp4.1/15, ML3.6/2, MS3.0/4, Ms1 3.1/4, ms1mx2.7/38, Error ellipse: s-maj=17.0km s-min=15.2km az=41.0*
*NEIC **03** 21:10:26.4±3.1, 19.59N±0.06×64.61W±0.05, h38km±8km, Error ellipse: s-maj=9.1km s-min=6.1km az=195.0*
*RSPR **03** 21:10:27.0, 19.63N×64.59W, h55km±14km, MD3.6/16*
ISC 03 21:10:25.3±0.4, **19.54N**±0.04×**64.55W**±0.04, **h27km, n163, σ1§60**/163, **mb4.2**/19, **14C-4D, Virgin Islands**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
TBVI Tortola 1.12 183⇑eP Pn 21 10 44.6 -0.6
TBVI Tortola 1.12 183 eS Sb 21 11 00.4 +0.2
TBVI Tortola 1.12 183 Pn 21 10 44.6 -0.6
TBVI Sb 21 11 00.4 +0.2
MTP Monte Pirata 1.72 214⇑eP Pn 21 10 54.1 +0.7
MTP Monte Pirata 1.72 214 eS Sn 21 11 16.0 +1.4
MTP Monte Pirata 1.72 214 Pn 21 10 54.4 +1.0
MTP Monte Pirata 1.72 214 Sn 21 11 16.0 +1.4
CBYP Canovanas 1.76 225⇑eP Pn 21 10 54.4 +0.3
CBYP Canovanas 1.76 225⇑eP Pn 21 10 55.0 +0.9
CBYP Canovanas 1.76 225 Pn 21 10 54.5 +0.3
CDVI St. Croix 1.79 187⇑eP Pn 21 10 55.6 +1.2
CDVI St. Croix 1.79 187 eS Sb 21 11 18.7 -0.7
CDVI St. Croix 1.79 187 Pn 21 10 55.6 +1.2
CDVI St. Croix 1.79 187 Sn 21 11 14.7 -1.5
HUMP Col San Antoni 1.85 222⇑eP Pn 21 10 56.0 +0.7
HUMP Col San Antoni 1.85 222 eS Sn 21 11 19.4 +1.5
HUMP Col San Antoni 1.85 222 Pn 21 10 56.0 +0.7
HUMP Col San Antoni 1.85 222 Sn 21 11 17.7 -0.2
GCPR Guaynabo City 1.90 230⇓eP Pn 21 10 56.2 +0.3
GCPR Guaynabo City 1.90 230 eS Sn 21 11 20.0 +1.0
GCPR Guaynabo City 1.90 230 Pn 21 10 56.2 +0.3
GCPR Guaynabo City 1.90 230 Sn 21 11 14.6 -4.4
SMRT St. Maarten 2.04 136 Pb 21 11 01.0 -0.7
SJG San Juan 2.07 227 Pn Pn 21 10 58.9 +0.6
18nm,0.3s,baz=64,slow=13,SNR=31
SJG Sn Sn 21 11 25.0 +1.7
63nm,0.3s,baz=275,slow=14,SNR=11
SJG LR LR 21 11 59.3
comp=Z,220nm,21.1s,baz=90,slow=46
SJG San Juan 2.07 227 eP Pn 21 10 58.6 +0.3
SJG San Juan 2.07 227 Pn 21 10 58.8 +0.4
EMPR Esperanza - Ma 2.15 241⇑eP Pn 21 11 00.1 +0.7
EMPR Esperanza - Ma 2.15 241 eS Sn 21 11 25.3 +0.2
EMPR Esperanza - Ma 2.15 241 Pn 21 11 00.1 +0.7
EMPR Esperanza - Ma 2.15 241 Sn 21 11 16.4 -8.7
IGPR InterUniversit 2.15 223⇓eP Pn 21 11 00.3 +0.9
IGPR InterUniversit 2.15 223 Pn 21 11 00.5 +1.1
SABA Saba 2.28 147 Pn 21 11 03.5 +2.3
AOPR Arecibo Observ 2.40 241⇑eP Pn 21 11 03.4 +0.5
AOPR Arecibo Observ 2.40 241 eS Sn 21 11 31.0 -0.4
AOPR Arecibo Observ 2.40 241 Pn 21 11 03.4 +0.5
AOPR Sn 21 11 31.0 -0.4
CELP Cerrillos 2.41 233⇑/P Pn 21 11 03.9 +0.9
CELP Cerrillos 2.41 233 Pn 21 11 03.9 +0.9
OBIP Obispado Ponce 2.45 233 eS Sn 21 11 33.4 +0.8
OBIP Obispado Ponce 2.45 233⇑eP Pn 21 11 04.4 +0.9
OBIP Obispado Ponce 2.45 233 Pn 21 11 04.4 +0.9
OBIP Sn 21 11 33.4 +0.8
ICMP Isla Caja de M 2.49 229 Pn 21 11 05.7 +1.6
AGPR Aguadilla, PR 2.65 247 eS Sn 21 11 37.5 +0.1
AGPR Aguadilla, PR 2.65 247⇑eP Pn 21 11 06.4 +0.1
AGPR Aguadilla, PR 2.65 247 Pn 21 11 06.4 +0.1
AGPR Sn 21 11 37.5 +0.1
GBPR Guanica, Bosqu 2.70 235⇑eP Pn 21 11 08.1 +1.1
GBPR Guanica, Bosqu 2.70 235 Pn 21 11 08.1 +1.1
LSP Las Mesas 2.75 241⇓eP Pn 21 11 08.6 +0.9
LSP Las Mesas 2.75 241 Pn 21 11 08.6 +0.9
MPR Mayaguez 2.78 242 Pn 21 11 08.6 +0.5
MLPR Magueyes Islan 2.83 237 eS Sn 21 11 42.3 +0.3
MLPR Magueyes Islan 2.83 237⇑eP Pn 21 11 09.2 +0.4
MLPR Magueyes Islan 2.83 237 Pn 21 11 09.2 +0.4
MLPR Sn 21 11 42.3 +0.3
CRPR Cabo Rojo, PR 2.86 238⇑eP Pn 21 11 10.1 +0.9
CRPR Cabo Rojo, PR 2.86 238 eS Sn 21 11 43.0 +0.2
CRPR Cabo Rojo, PR 2.86 238 Pn 21 11 10.1 +0.9
CRPR Sn 21 11 43.0 +0.2
IDE Isla Desecheo 2.99 248⇑eP Pn 21 11 11.9 +0.9
IDE Isla Desecheo 2.99 248 eS Sn 21 11 46.6 +0.6
IDE Isla Desecheo 2.99 248 Pn 21 11 11.9 +0.9
IDE Sn 21 11 46.6 +0.6
PCDR Punta Cana, DR 3.76 255⇓eP Pn 21 11 22.6 +1.0
PCDR Punta Cana, DR 3.76 255 eS Sn 21 12 05.5 +0.5
PCDR Punta Cana, DR 3.76 255 Pn 21 11 22.6 +1.0
PCDR Sn 21 12 05.5 +0.5
H05N1 Guadeloupe/Mar 4.62 133 Pn Pn 21 11 35.2 +1.8
H05N1 Sn Sn 21 12 25.0 -1.3
BANI BANI 5.61 259 Pn 21 11 49.1 +2.0
BANI Sn 21 12 50.5 -0.3
H05S1 Guadeloupe/Mar 6.21 144 T T 21 16 38.7
SNR=22
SDDR Presa de Saban 6.39 266 Pn 21 11 57.6 -0.1
SDDR Sn 21 13 07.9 -1.9
PCRV Puerto La Cruz 9.31 181 Pn Pn 21 12 40.0 +2.1
1.5nm,0.3s,baz=270,slow=4.0,SNR=3.8
PLCV Puerto La Cruz 9.32 180 Pn 21 12 40.0 +2.0
SDV Santo Domingo 12.12 210 Pn Pn 21 13 20.7 +4.3
1.0nm,0.3s,baz=41,slow=8.7,SNR=18
SDV Sn Sn 21 15 20.9 -10
0.3nm,0.3s,baz=260,slow=19,SNR=3.7
SDV LR LR 21 18 51.3
comp=Z,76nm,18.6s,baz=117,slow=42
SDV Santo Domingo 12.12 210 eP Pn 21 13 19.8 +3.4
SDV Santo Domingo 12.12 210 Pn 21 13 17.5 +1.0
BBSR BB Station 12.78 359 Pn Pn 21 13 21.7 -3.6
SJCC San Jacinto, C 14.05 228 eP Pn 21 13 44.4 +1.7
PAMC Pamplona, Colo 14.48 214 eP P 21 13 53.2 -2.3
BARC Barichara 15.36 214 eP Pn 21 14 01.1 +0.4
RUSC La Rusia 15.90 213 eP Pn 21 14 08.1 +0.2
RUSC La Rusia 15.90 213 Pn 21 14 08.0 +0.2
PTBC PUERTO BERRIO, 16.11 218 eP Pn 21 14 08.1 -2.0
DBBC Dabeiba 16.83 224 eP Pn 21 14 19.5 +0.2
NORC Norcasia 17.14 217 eP Pn 21 14 22.1 -1.1
ROSC El Rosal 17.44 214 P P 21 14 30.2 +1.9
4.0nm,0.3s,baz=48,slow=11,SNR=9.2
ROSC LR LR 21 21 08.9
comp=Z,61nm,22.0s,baz=84,slow=37
ROSC El Rosal 17.44 214 P Pn 21 14 25.6 -1.5
GUY2C Guyana, Caldas 17.70 218 eP Pn 21 14 30.0 -0.5
MDP Montagnes des 18.46 140 P P 21 14 37.9 -1.2
0.2nm,0.3s,baz=259,slow=16,SNR=1.8
ORTC Ortega, Tolima 18.71 215 eP P 21 14 41.4 -0.6
Z59A Georgetown, SC 18.95 319 P P 21 14 41.8 -2.6
baz=132
X60A Albert Glenn T 19.13 324 P P 21 14 45.7 -0.7
baz=138
158A Hollywood 19.20 316 P P 21 14 47.1 0.0
baz=129
Y59A Loris 19.22 321 P P 21 14 46.4 -1.0
baz=135
RGRS Roger Stewart 19.31 317 P P 21 14 47.3 -1.1
Z58A St. Stephen 19.34 318 P P 21 14 46.4 -2.3
baz=132
W60A Pink Hill 19.35 326 P P 21 14 46.3 -2.5
baz=140
NHSC New Hope 19.43 317 P Pn 21 14 54.0 +3.2
baz=130
V60A Jim Taylor Roa 19.67 328 P P 21 14 51.0 -1.1
baz=142
157A Early Branch 19.70 315 P P 21 14 51.0 -1.6
baz=128
Z57A Bowman 19.89 317 P Pn 21 15 01.7 +5.3
baz=130
156A Sylvania 20.02 314 P Pn 21 15 04.3 +6.4
baz=127
W58A Raeford 20.16 323 P Pn 21 15 05.5 +5.9
baz=136
V59A Middlesex 20.17 326 P Pn 21 15 07.9 +8.2
baz=140
X57A Johnson Farm, 20.28 320 P Pn 21 15 09.5 +8.5
baz=133
255A Hazlehurst 20.28 311 P Pn 21 15 08.3 +7.2
baz=123
Z56A Williston 20.34 316 P Pn 21 15 10.5 +8.8
baz=128
Y56A Pelion 20.59 317 P Pn 21 15 13.9 +9.3
baz=129
BIRD Birdtown, Kers 20.62 320 P P 21 15 00.2 -2.4
BIRD IAmb IAmb 21 15 16.4
comp=Z,12nm,0.6s
V58A Windy Hill, Pi 20.66 325 P P 21 15 00.6 -2.4
V58A IAmb IAmb 21 15 16.1
comp=Z,14nm,1.1s
V58A Windy Hill, Pi 20.66 325 P Pn 21 15 14.0 +8.6
baz=138
155A Kite 20.66 313 P Pn 21 15 14.0 +8.5
baz=125
W57A Gilead 20.69 322 P Pn 21 15 14.8 +9.0
baz=135
T59A Double "B" Far 20.77 329 P Pn 21 15 16.1 +9.4
baz=143
HODGE Hodges 21.48 317 P P 21 15 09.4 -2.5
KMSC Kings Mountain 21.48 320 P P 21 15 12.0 +0.1
KMSC IAmb IAmb 21 15 30.1
comp=Z,12nm,0.7s
R58B Mineral 21.72 331 P P 21 15 12.9 -1.5
JTS Las Juntas de 21.73 248 P P 21 15 15.8 +1.1
comp=Z,5.0nm,0.7s,baz=79,slow=16,SNR=3.4
GOGA Godfrey 21.80 313 P P 21 15 17.7 +2.3
GOGA IAmb IAmb 21 15 34.5
comp=Z,19nm,1.4s
BLA Blacksburg 22.41 325 P P 21 15 18.4 -3.5
BLA Blacksburg 22.41 325 P P 21 15 37.5 +16
baz=138
V52A Sevierville 23.34 318 P P 21 15 30.8 -0.7
V52A IAmb IAmb 21 15 44.8
comp=Z,7.3nm,1.0s
OTAV Otavalo 23.53 217 P P 21 15 32.5 -1.5
V51A Loudon 23.80 317 P P 21 15 35.6 -0.3
V51A IAmb IAmb 21 15 46.5
comp=Z,5.9nm,0.8s
X48A Hartselle 24.87 311 P P 21 15 44.0 -1.8
SAML Samuel 28.34 177 P P 21 16 17.7 +0.6
D50A G1974 Best Tow 30.26 339 P P 21 16 34.9 +1.0
baz=150
E48A Lockeyer 30.52 336 P P 21 16 36.7 +0.4
baz=146
ABTX Abilene, Hawle 33.94 300 P P 21 17 07.0 +0.5
baz=104
EYMN Ely 35.77 329 P P 21 17 22.8 +0.7
baz=133
TXAR Lajitas Array 36.77 293 P P 21 17 33.0 +2.1
comp=Z,2.0nm,0.8s,baz=110,slow=9.8,SNR=22
TXAR PcP PcP 21 19 55.5 +2.5
comp=Z,0.4nm,0.8s,baz=140,slow=5.9,SNR=3.5
TXAR Lajitas Array 36.77 293 P P 21 17 29.1 -1.9
TX31 Lajitas Ar. Si 36.77 293 P P 21 17 29.1 -1.9
TX31 IAmb IAmb 21 17 35.4
comp=Z,2.7nm,0.9s
TX32 Lajitas Array 36.77 293 P P 21 17 28.6 -2.4
TX32 IAmb IAmb 21 17 35.4
comp=Z,2.9nm,0.9s
AGMN Agassiz Nation 38.23 326 P P 21 17 44.1 +1.2
baz=128
MNTX Cornudas Mount 38.54 297 P P 21 17 46.8 +1.0
baz=98
BDFB Brasilia 38.56 154 P P 21 17 46.6 +0.5
comp=Z,5.0nm,0.9s,baz=320,slow=5.0,SNR=6.0
BDFB Brasilia 38.56 154 P P 21 17 45.1 -1.0
BDFB IAmb IAmb 21 17 48.1
comp=Z,6.8nm,1.1s
ULM Lac du Bonnet 39.45 328 P P 21 17 54.0 +0.9
comp=Z,1.8nm,0.6s,baz=134,slow=10,SNR=5.1
SDCO Great Sand Dun 39.88 306 P P 21 17 58.1 +0.9
baz=105
ANMO Albuquerque 39.99 301 P P 21 17 58.6 +0.5
baz=101
S22A 4UR Ranch, Cre 40.90 305 P P 21 18 06.7 +1.0
baz=104
TUC Tucson 43.17 297 P P 21 18 25.0 +0.9
baz=95
WUAZ Wupatki 44.05 301 P P 21 18 30.5 -0.7
baz=98
PDAR Pinedale Array 44.28 312 P P 21 18 34.1 +1.2
comp=Z,0.7nm,0.8s,baz=118,slow=9.6,SNR=4.6
PDAR PcP PcP 21 20 18.5 +1.4
comp=Z,0.2nm,0.5s,baz=96,slow=5.6,SNR=2.5
DUG Dugway, Tooele 46.00 307 P P 21 18 47.5 +0.9
baz=102
CPUP Villa Florida 46.13 171 P P 21 18 45.7 -1.7
comp=Z,3.0nm,0.7s,baz=341,slow=7.0,SNR=7.9
CPUP Villa Florida 46.13 171 P P 21 18 45.8 -1.7
CPUP IAmb IAmb 21 18 47.6
comp=Z,5.2nm,1.0s
SWSC Sam W. Stewart 47.44 297 P P 21 18 58.6 +0.8
baz=93
GMRC Granite Mounta 47.45 300 P P 21 18 59.1 +1.0
baz=95
PFO Pinyon Flats O 48.03 298 P P 21 19 00.8 -1.8
baz=93
TPNV Topopah Spring 48.14 302 P P 21 19 02.4 -1.0
baz=96
ISA Isabella, Lake 49.82 301 P P 21 19 14.5 -1.7
baz=94
NEW Newport 50.92 317 P P 21 19 24.4 +0.1
baz=105
M02C Callahan 53.71 307 P P 21 19 44.0 -1.1
baz=95
G03D McMinnville, O 54.45 312 P P 21 19 48.0 -2.3
baz=98
J01E Myrtle Point 54.68 309 P P 21 19 49.9 -2.2
baz=96
YKA Yellowknife Ar 54.86 334 P P 21 19 53.8 +0.8
comp=Z,2.3nm,0.7s,baz=110,slow=7.3,SNR=31
DBIC Dimbokro 59.27 94 P P 21 20 25.8 +0.8
comp=Z,1.3nm,0.6s,baz=279,slow=10,SNR=5.5
TORD Torodi Ar. Bea 63.56 85 P P 21 20 54.7 +0.6
comp=Z,1.7nm,0.7s,baz=293,slow=6.0,SNR=9.0
TORD Torodi Ar. Bea 63.56 85 P P 21 20 52.6 -1.5
NOA NORSAR Array B 66.22 31 LR LR 21 46 10.7
comp=Z,22nm,20.6s,baz=55,slow=32
ILAR Eielson Array 69.25 333 P P 21 21 30.6 +0.9
comp=Z,1.5nm,0.9s,baz=103,slow=4.2,SNR=14
ILAR Eielson Array 69.25 333 P P 21 21 30.2 +0.6
POKR Poker Plat Res 69.47 333 P P 21 21 30.6 -0.4
baz=88
ARCES ARCESS Array B 71.89 22 P P 21 21 47.2 +1.5
comp=Z,1.8nm,0.6s,baz=287,slow=5.9,SNR=7.8
FINES FINESS Array B 73.35 30 P P 21 21 55.6 +1.1
comp=Z,2.7nm,1.0s,baz=260,slow=7.6,SNR=3.7
BRTR Keskin Array B 83.80 50 P P 21 22 52.2 -0.5
comp=Z,0.8nm,0.8s,baz=289,slow=4.4,SNR=3.3

IDC 03 21:15:12.3±2.4, **5.54S×130.55E, h0km, mb3.4/1, mb1 3.6/3, mb1mx3.3/43, mbtmp3.4/3, ML3.2/2, Error ellipse: s-maj=147.8km s-min=31.4km az=71.0, Banda Sea**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
WRA Warramunga Arr 14.79 166 Pn Pn 21 18 43.6 +0.6
0.1nm,0.3s,baz=346,slow=11,SNR=1.5
WRA Sn Sn 21 21 08.8 -19
0.1nm,0.3s,baz=263,slow=11,SNR=2.4
ASAR Alice Springs 18.31 170 P Pn 21 19 27.6 -0.5
0.1nm,0.3s,baz=350,slow=8.7,SNR=5.8
MKAR Makanchi Array 67.31 326 P P 21 26 09.2 0.0
0.2nm,0.4s,baz=111,slow=8.1,SNR=7.6

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*IDC **03** 21:21:20.1±1.2, 38.29N×20.31E, h0km, mb3.7/6, mb1 3.6/10, mb1mx3.4/47, mbtmp3.6/10, ML3.1/4, Error ellipse: s-maj=24.0km s-min=19.8km az=65.0*
*ATH **03** 21:21:22.0, 38.22N×20.45E, h17km±1km, ML3.4/7, Error ellipse: s-maj=2.3km s-min=1.0km az=251.0*
*BEO **03** 21:21:22.5±0.7, 38.21N×20.08E, h10km±4km, ML3.5/10*
*THE **03** 21:21:22.7, 38.23N×20.45E, h13km, ML3.3/7, Error ellipse: s-maj=0.7km s-min=0.3km az=263.0*
ISC 03 21:21:22.3±0.7, **38.23N**±0.02×**20.42E**±0.02, **h15km**±3km, **n93, σ1§15**/137, **mb3.6**/6, **6C-5D, Greece**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
LXR1 Lixouri, Cepha 0.03 157 P Pg 21 21 25.0 0.0
LXR1 S Sg 21 21 26.9 +0.1
KEF4 Livadi, Kephal 0.03 1 P Pg 21 21 25.0 -0.1
KEF4 S Sg 21 21 26.8 -0.1
CHV1 Chavriata, Kef 0.06 217 P Pg 21 21 25.2 0.0
CHV1 S Sg 21 21 27.2 +0.2
KEF1 Kardakata, Kep 0.06 37 P Pg 21 21 25.0 -0.2
KEF1 S Sg 21 21 26.8 -0.4
KEF3 Kipouria, Keph 0.06 248 P Pg 21 21 25.4 +0.1
KEF3 S Sg 21 21 27.5 +0.3
ARG2 Argostoli 0.07 134 P Pg 21 21 25.0 -0.3
ARG2 S Sg 21 21 26.8 -0.4
KEF2 Argostoli. Kep 0.08 141 P Pg 21 21 25.2 -0.2
KEF2 S Sg 21 21 27.0 -0.4
VLS Valsamata 0.14 111 P Pg 21 21 25.8 -0.4
VLS S Sg 21 21 28.0 -0.6
VLS Valsamata 0.14 111 P Pg 21 21 25.7 -0.4
VLS S Sg 21 21 28.2 -0.5
VLS AML AML 21 21 28.3
comp=N,99758μm,0.2s
VLS AML AML 21 21 28.4
VSK1 VASILIKIADES 0.21 31 P Pg 21 21 27.1 -0.1
VSK1 S Sg 21 21 30.5 0.0
FSK Fiskardo 0.26 25 P Pg 21 21 27.9 0.0
FSK S Sg 21 21 32.0 +0.3
comp=N,15μm,0.4s
FSK Fiskardo 0.26 25 P Pg 21 21 27.9 0.0
FSK S Sb 21 21 32.1 -0.7
FSK AML AML 21 21 32.6
comp=E,38123μm,0.5s
FSK AML AML 21 21 35.6
comp=N,19811μm,0.5s
VLMS Volimes, Zakyn 0.40 152 P Pg 21 21 30.4 0.0
VLMS S Sg 21 21 36.3 +0.5
VLMS AML AML 21 21 37.3
comp=N,57191μm,0.6s
VLMS AML AML 21 21 38.7
comp=E,34451μm,0.2s
EVGI Lefkada island 0.43 25 P Pg 21 21 30.9 -0.1
EVGI S Sb 21 21 38.0 0.0
EVGI Lefkada island 0.43 25 P Pg 21 21 31.0 0.0
EVGI S Sb 21 21 38.0 0.0
MGNA Meganis 0.52 34 P Pg 21 21 32.2 -0.4
MGNA S Sb 21 21 40.0 -0.3
MGNA AML AML 21 21 40.8
comp=N,5217μm,0.3s
MGNA AML AML 21 21 42.1
comp=E,6731μm,0.2s
ZAK2 Zakynthos 0.58 139 P Pg 21 21 33.6 -0.1
ZAK2 S Sb 21 21 42.6 +0.5
LKD2 Lefkada island 0.59 18 P Pg 21 21 33.6 -0.3
LKD2 Lefkada island 0.59 18 P Pg 21 21 33.6 -0.3
LKD2 S Sg 21 21 41.3 -0.5
LKD2 AML AML 21 21 49.7
comp=N,4459μm,0.6s
LKD2 AML AML 21 21 51.8
comp=E,3834μm,0.3s
AST1 Astakos 0.61 59 P Pg 21 21 33.9 -0.4
AST1 S Sb 21 21 42.9 -0.1
comp=E,5μm,0.3s
TSLK Tsoukalades, L 0.62 17 P Pg 21 21 34.4 -0.2
TSLK S Sb 21 21 43.7 +0.2
comp=E,3μm,0.6s
TSLK Tsoukalades, L 0.62 17 P Pg 21 21 34.3 -0.2
TSLK S Sg 21 21 42.6 -0.3
TSLK AML AML 21 21 49.8
comp=N,5011μm,0.5s
TSLK AML AML 21 21 51.4
comp=E,5730μm,0.8s
KRI1 kERI 0.65 151 P Pg 21 21 34.4 -0.5
KRI1 S Sb 21 21 44.9 +0.9
PDO Prodromos 0.70 58 P Pg 21 21 35.5 -0.5
PDO S Sb 21 21 45.6 -0.1
PDO Prodromos 0.70 58 P Pg 21 21 35.7 -0.4
RLS Riolos of Patr 0.84 101 P Pg 21 21 37.9 -0.8
RLS S Sb 21 21 50.1 +0.5
RLS Riolos of Patr 0.84 101 P Pg 21 21 37.8 -0.8
PVO Paravola 0.95 65 P Pb 21 21 40.4 0.0
PVO S Sb 21 21 52.8 0.0
comp=E,3μm,0.5s
PVO Paravola 0.95 65 P Pb 21 21 40.4 0.0
DRO Drossia 1.05 105 P Pb 21 21 41.9 -0.3
DRO S Sb 21 21 56.4 0.0
comp=E,2μm,0.6s
EFP Efpalio 1.18 80 P Pn 21 21 43.6 -0.7
EFP S Sn 21 22 01.5 +1.4
comp=E,740nm,0.5s
EFP Efpalio 1.18 80 P Pn 21 21 43.5 -0.7
LAKA Lakka 1.22 89 P Pn 21 21 44.6 -0.3
LAKA S Sg 21 22 02.2 +0.3
comp=E,532nm,0.8s
LAKA Lakka 1.22 89 P Pn 21 21 44.6 -0.3
AMT Artemida-Makis 1.23 124 P Pn 21 21 44.9 -0.1
ANX Ano Chora 1.23 72 P Pn 21 21 45.0 0.0
ANX Ano Chora 1.23 72 P Pn 21 21 45.0 0.0
EVR Evrytania 1.28 57 P Pn 21 21 45.6 -0.2
SERG Sergoula 1.30 81 P Pn 21 21 45.4 -0.5
SERG Sergoula 1.30 81 P Pn 21 21 45.8 -0.1
IGT Igoumenitsa 1.30 357 P Pb 21 21 46.8 +0.3
IGT Igoumenitsa 1.30 357 ePg Pb 21 21 46.8 +0.3
IGT eSg Sg 21 22 04.9 +0.4
IGT Igoumenitsa 1.30 357 P Pb 21 21 46.9 +0.3
IGT S Sg 21 22 04.9 +0.4
IGT AML AML 21 22 09.5
comp=N,1021μm,0.4s
IGT AML AML 21 22 09.8
comp=E,1752μm,0.4s
TRIZ Trizonia 1.30 83 P Pn 21 21 45.6 -0.3
TRIZ Trizonia 1.30 83 P Pn 21 21 45.7 -0.3
ALIK Aliki, Aigiali 1.33 88 P Pn 21 21 45.6 -0.7
KALE Kalithea 1.36 83 P Pn 21 21 46.5 -0.3
KALE Kalithea 1.36 83 P Pn 21 21 46.5 -0.3
KLV Kalavryta, Ach 1.37 97 P Pn 21 21 47.3 +0.3
KLV Kalavryta, Ach 1.37 97 P Pn 21 21 47.3 +0.3
PYL PYLOS 1.69 141 P Pn 21 21 52.0 +0.7
FNA Florina 2.66 16 ePn Pn 21 22 07.1 +2.5
OHR Ohrid 2.90 6 ePn Pn 21 22 10.7 +2.8
TIP Timpagrande 3.02 289 ⇑P Pn 21 22 07.2 -2.4
TIP ⇑S Sn 21 22 46.0 +0.4
TIR Tirane 3.15 352 ePn Pn 21 22 13.2 +1.9
TIR Tirane 3.15 352 ⇓P Pn 21 22 12.3 +1.0
TIR ⇓S Sn 21 22 51.2 +2.6

VAY Valandovo 3.50 27 ePn Pn 21 22 19.1 +2.9
VAY Valandovo 3.50 27 ePn Pn 21 22 19.8 +3.6
STIP Stip 3.72 21 ePn Pn 21 22 22.9 +3.7
MATE Matera 3.76 311 ⇓P Pn 21 22 18.8 -0.9
MATE ⇑S Sn 21 23 04.3 +0.6
SRS Serrai 3.78 39 ePn Pn 21 22 23.7 +3.7
PDG Podgorica 4.29 348 ePn Pn 21 22 27.6 +0.6
PDG eSn Sn 21 23 16.0 -0.8
PDG Podgorica 4.29 348 ⇓P Pn 21 22 26.9 -0.1
PDG ⇓S Sn 21 23 16.1 -0.6
BOSS Bosilegrad 4.54 20 ePn Pn 21 22 33.7 +3.2
IDI Anoyia 4.63 128 Pn Pn 21 22 34.8 +3.0
comp=E,0.2nm,0.3s,baz=355,slow=4.0,SNR=3.2
IDI Sn Sn 21 23 26.8 +1.5
comp=E,1.2nm,0.3s,baz=114,slow=23,SNR=6.6
TREB Trebinje 4.75 341 ePn Pn 21 22 32.8 -0.6
TREB eSn Sn 21 23 25.6 -2.6
VAE Valguarnera 4.82 263 Pn Pn 21 22 37.5 +3.2
comp=E,0.5nm,0.3s,baz=130,slow=18,SNR=3.0
VAE Sn Sn 21 23 28.5 -1.3
comp=E,1.1nm,0.3s,baz=105,slow=20,SNR=3.4
VTS Vitosha 4.88 25 ePn Pn 21 22 36.9 +1.6
VTS eSn Sn 21 23 32.9 +1.3
VTS Vitosha 4.88 25 ⇑P Pn 21 22 35.9 +0.7
VTS ⇑S Sn 21 23 33.4 +1.9
SELS Selova 5.01 6 ePn Pn 21 22 37.4 +0.4
SJES Sjenica 5.04 356 ePn Pn 21 22 38.2 +0.8
SJES eSn Sn 21 23 35.2 -0.2
STON Ston 5.08 337 ePn Pn 21 22 37.3 -0.5
STON eSn Sn 21 23 34.1 -2.1
ZAPS Zavoj 5.31 18 ePn Pn 21 22 42.8 +1.7
IVAS Ivanjica 5.35 358 ePn Pn 21 22 41.3 -0.3
IVAS eSn Sn 21 23 41.5 -1.4
GRUS Gruza 5.66 2 ePn Pn 21 22 46.0 +0.2
GRUS eSn Sn 21 23 51.0 +0.5
BBLS Lazići 5.69 353 eSn Sn 21 23 50.0 -1.2
DIVS Divibare 5.87 357 ePn Pn 21 22 48.4 -0.4
DIVS eSn Sn 21 23 53.5 -2.4
TRUS Trudelj 5.99 360 ePn Pn 21 22 50.6 +0.2
TRUS eSn Sn 21 23 57.3 -1.4
BZS Buzias 7.44 6 ⇑S Sn 21 24 32.1 -2.1
MLR Muntele Rosu 8.34 28 Pn Pn 21 23 27.6 +4.9
comp=E,0.1nm,0.3s,baz=151,slow=19,SNR=2.8
SOKA Soboth 9.33 336 ePn Pn 21 23 35.8 -0.5
comp=E,1.1nm,0.2s
OBKA Obir 9.35 334 Pn Pn 21 23 36.6 +0.2
comp=E,2.2nm,0.4s
KBA Koelnbreinsper 10.26 332 Pn Pn 21 23 50.1 +1.0
comp=E,0.7nm,0.3s
BRTR Keskin Array B 10.40 78 Pn Pn 21 23 56.4 +5.4
comp=E,0.1nm,0.3s,baz=266,slow=12,SNR=2.1
MOA Molln 10.62 337 ePn Pn 21 23 55.4 +1.6
comp=E,1.4nm,0.3s
DAVOX Davos/Dischmat 11.55 321 Pn Pn 21 24 06.8 +0.1
comp=E,0.2nm,0.3s,baz=132,slow=15,SNR=3.5
GERES GERESS Array B 11.67 338 Pn Pn 21 24 07.4 -0.9
comp=E,0.1nm,0.3s,baz=159,slow=14,SNR=3.4
HFS Hagfors 22.34 351 P P 21 26 19.9 +0.6
comp=E,1.9nm,0.7s,baz=173,slow=12,SNR=4.7
FINES FINESS Array B 23.51 7 P P 21 26 30.6 -0.7
comp=E,1.7nm,1.0s,baz=211,slow=7.5,SNR=4.9
TORD Torodi Ar. Bea 30.02 219 P P 21 27 30.3 -0.3
comp=E,0.4nm,0.9s,baz=22,slow=8.5,SNR=2.5
ARCES ARCESS Array B 31.49 3 P P 21 27 43.0 0.0
comp=E,6.2nm,1.2s,baz=195,slow=10,SNR=2.8
MKAR Makanchi Array 45.34 58 P P 21 29 39.4 -0.3
comp=E,0.4nm,0.6s,baz=274,slow=7.8,SNR=9.5
ZALV Zalesovo Beam 45.72 48 P P 21 29 41.9 -0.5
comp=E,0.4nm,0.3s,baz=264,slow=8.5,SNR=3.9

*ATH **03** 21:27:33.5, 38.°24N×20.°40E, h8km±2km, ML2.9/1, Error ellipse: s-maj=2.9km s-min=1.4km az=259.0*
*THE **03** 21:27:33.7, 38.°24N×20.°41E, h9km, ML2.5/3, Error ellipse: s-maj=0.8km s-min=0.3km az=273.0*
ISC 03 21:27:33.3±1.4, 38.°24N±0.°03×20.°41E±0.°05, h11km±6km, n19, σ0.s28/31, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
KEF4	Livadi, Kephal	0.03	35	P	Pg	21 27 35.1	-0.2
KEF4				S	Sg	21 27 36.3	-0.4
LXR1	Lixouri, Cepha	0.04	145	P	Pg	21 27 35.5	+0.1
LXR1				S	Sg	21 27 37.2	+0.4
KEF3	Kipouria, Keph	0.06	233	P	Pg	21 27 35.5	0.0
KEF3				S	Sg	21 27 36.9	-0.2
CHV1	Chavriata, Kef	0.06	199	P	Pg	21 27 35.6	+0.1
CHV1				S	Sg	21 27 37.3	+0.3
KEF1	Kardakata, Kep	0.07	51	P	Pg	21 27 35.5	-0.1
KEF1				S	Sg	21 27 36.9	-0.4
ARG2	Argostoli	0.09	132	P	Pg	21 27 36.0	+0.2
ARG2				S	Sg	21 27 37.8	+0.2
KEF2	Argostoli. Kep	0.10	138	P	Pg	21 27 36.1	+0.1
KEF2				S	Sg	21 27 37.9	0.0
VLS	Valsamata	0.16	112	P	Pg	21 27 36.9	0.0
VLS				S	Sg	21 27 39.6	+0.3
	7μm,0.1s						
VLS	Valsamata	0.16	112	P	Pg	21 27 36.7	-0.2
VLS				S	Sg	21 27 39.3	0.0
VLS				AML	AML	21 27 39.7	
	comp=N,11580μm,0.2s						
VLS				AML	AML	21 27 39.8	
	comp=E,16430μm,0.1s						
VSK1	VASILIKIADES	0.21	36	P	Pg	21 27 37.9	+0.1
VSK1				S	Sg	21 27 41.3	+0.4
	comp=E,1μm,0.3s						
FSK	Fiskardo	0.25	29	P	Pg	21 27 38.6	0.0
FSK				S	Sg	21 27 42.8	+0.7
	comp=E,1μm,0.1s						
FSK	Fiskardo	0.25	29	P	Pg	21 27 38.6	0.0
FSK				S	Sg	21 27 42.7	+0.6
EVGI	Lefkada island	0.43	27	P	Pg	21 27 41.7	-0.1
AST1	Astakos	0.62	60	P	Pg	21 27 45.2	-0.1
PDO	Prodromos	0.71	59	P	Pg	21 27 46.7	-0.4
PVO	Paravola	0.96	66	P	Pg	21 27 51.8	0.0
LAKA	Lakka	1.24	89	P	Pn	21 27 56.5	-0.1
KALE	Kalithea	1.37	83	P	Pn	21 27 58.3	-0.2
KLV	Kalavryta, Ach	1.39	97	P	Pn	21 27 58.7	0.0

*ATH **03** 21:27:46.5, 38.°22N×20.°45E, h10km±1km, ML3.0/8, Error ellipse: s-maj=1.9km s-min=0.8km az=242.0*
*THE **03** 21:27:46.0, 38.°23N×20.°46E, h12km, ML3.4/3, Error ellipse: s-maj=0.9km s-min=0.3km az=243.0*
ISC 03 21:27:46.6±1.1, 38.°23N±0.°02×20.°47E±0.°03, h9km±5km, n26, σ0.s44/45, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
LXR1	Lixouri, Cepha	0.03	222	P	Pg	21 27 48.2	-0.1
LXR1				S	Sg	21 27 50.1	+0.6
KEF4	Livadi, Kephal	0.05	314	P	Pg	21 27 48.3	-0.2
KEF4				S	Sg	21 27 50.1	+0.3
ARG2	Argostoli	0.05	161	P	Pg	21 27 48.3	-0.1
ARG2				S	Sg	21 27 50.0	+0.2
KEF1	Kardakata, Kep	0.05	3	P	Pg	21 27 48.2	-0.3
KEF1				S	Sg	21 27 50.0	+0.2
KEF2	Argostoli. Kep	0.06	165	P	Pg	21 27 48.2	-0.3
KEF2				S	Sg	21 27 50.4	+0.3
CHV1	Chavriata, Kef	0.08	238	P	Pg	21 27 48.4	-0.4
CHV1				S	Sg	21 27 50.5	+0.2
KEF3	Kipouria, Keph	0.10	257	P	Pg	21 27 48.5	-0.5
KEF3				S	Sg	21 27 50.8	0.0
VLS	Valsamata	0.11	117	P	Pg	21 27 48.9	-0.3
VLS				S	Sg	21 27 51.4	+0.3
	29μm,0.2s						
VLS	Valsamata	0.11	117	P	Pg	21 27 48.9	-0.3
VLS				S	Sg	21 27 51.4	+0.3
VLS				AML	AML	21 27 51.5	
	comp=N,66993μm,0.3s						
VLS				AML	AML	21 27 51.8	
	comp=E,71569μm,0.1s						
VSK1	VASILIKIADES	0.20	23	P	Pg	21 27 50.3	-0.4
VSK1				S	Sg	21 27 53.9	+0.4
	comp=E,18μm,0.3s						
FSK	Fiskardo	0.24	18	P	Pg	21 27 51.1	-0.4
FSK				S	Sg	21 27 55.1	+0.2
	comp=E,13μm,0.2s						
FSK	Fiskardo	0.24	18	P	Pg	21 27 51.2	-0.4
FSK				S	Sg	21 27 55.5	+0.6
FSK				AML	AML	21 27 55.8	
	comp=E,36234μm,0.2s						
FSK				AML	AML	21 27 55.9	
	comp=N,17281μm,0.2s						
VLMS	Volimes, Zakyn	0.38	156	P	Pg	21 27 53.6	-0.5
VLMS				S	Sg	21 27 59.8	+0.7
VLMS				AML	AML	21 28 01.8	
	comp=E,11854μm,0.3s						
VLMS				AML	AML	21 28 02.1	
	comp=N,16716μm,0.4s						
EVGI	Lefkada island	0.42	21	P	Pg	21 27 54.2	-0.6
EVGI				S	Sg	21 28 00.4	0.0
EVGI	Lefkada island	0.42	21	P	Pb	21 27 55.8	-0.4
EVGI				S	Sg	21 28 01.0	+0.6
MGNA	Meganis	0.50	31	P	Pg	21 27 55.7	-0.6
MGNA				S	Sg	21 28 03.4	+0.5
MGNA				AML	AML	21 28 04.0	
	comp=N,4186μm,0.1s						
MGNA				AML	AML	21 28 05.3	
	comp=E,4490μm,0.1s						
LKD2	Lefkada island	0.58	15	P	Pg	21 27 57.7	-0.2
LKD2				S	Sg	21 28 06.1	+0.5
LKD2				AML	AML	21 28 13.3	
	comp=N,1681μm,0.2s						
LKD2				AML	AML	21 28 13.5	
	comp=E,2004μm,0.4s						
PDO	Prodromos	0.68	56	P	Pg	21 27 58.7	-0.9
RLS	Riolos of Patr	0.81	102	P	Pg	21 28 02.2	+0.1
RLS				S	Sb	21 28 13.6	-0.1
RLS				AML	AML	21 28 18.5	
	comp=E,555μm,0.4s						
RLS				AML	AML	21 28 19.8	
	comp=N,1128μm,0.5s						
PVO	Paravola	0.92	65	P	Pg	21 28 03.7	-0.6
PVO	Paravola	0.92	65	P	Pg	21 28 03.6	-0.7
AMT	Artemida-Makis	1.20	125	P	Pb	21 28 09.5	0.0
IGT	Igoumenitsa	1.31	355	P	Pb	21 28 11.4	+0.1
IGT				S	Sg	21 28 29.7	+1.0
JAN	Janina	1.46	12	P	Pg	21 28 14.9	+0.3
JAN				AML	AML	21 28 38.4	
	comp=E,1144μm,0.3s						
JAN				AML	AML	21 28 42.3	
	comp=N,612μm,0.4s						
MAKR	Makrakomi, Fth	1.52	58	P	Pg	21 28 16.0	+0.2
MAKR				AML	AML	21 28 46.0	
	comp=E,471μm,0.5s						
MAKR				AML	AML	21 28 49.9	
	comp=N,352μm,0.4s						
AGG	Agios Georgios	1.66	61	P	Pg	21 28 18.4	0.0

*ATH **03** 21:55:29.1, 38.°18N×20.°43E, h8km±3km, ML3.1/3, Error ellipse: s-maj=3.9km s-min=1.4km az=245.0*
*THE **03** 21:55:29.1, 38.°17N×20.°43E, h6km, ML2.6/3, Error ellipse: s-maj=0.8km s-min=0.5km az=245.0*
ISC 03 21:55:29.0±1.2, 38.°18N±0.°03×20.°44E±0.°03, h6km±5km, n31, σ0.s59/42, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
LXR1	Lixouri, Cepha	0.03	359	P	Pg	21 55 30.0	-0.2
LXR1				S	Sg	21 55 30.8	-0.3
ARG2	Argostoli	0.04	85	P	Pg	21 55 30.5	+0.2
ARG2				S	Sg	21 55 31.7	+0.5
KEF2	Argostoli. Kep	0.04	104	P	Pg	21 55 30.6	+0.3
CHV1	Chavriata, Kef	0.05	281	P	Pg	21 55 30.4	0.0
CHV1				S	Sg	21 55 31.4	0.0
KEF3	Kipouria, Keph	0.08	291	P	Pg	21 55 30.8	-0.1
KEF3				S	Sg	21 55 32.8	+0.7
VLS	Valsamata	0.12	89	P	Pg	21 55 31.4	-0.2
VLS				S	Sg	21 55 34.0	+0.7
	8μm,0.3s						
VLS	Valsamata	0.12	89	P	Pg	21 55 31.4	-0.2
VLS				S	Sg	21 55 33.4	+0.2
VLS				AML	AML	21 55 34.4	
	comp=E,15237μm,0.1s						
VLS				AML	AML	21 55 39.0	
	comp=N,17351μm,0.4s						
VSK1	VASILIKIADES	0.25	23	P	Pg	21 55 34.1	+0.1
VSK1				S	Sg	21 55 38.0	+0.6
	comp=N,2μm,0.2s						
FSK	Fiskardo	0.30	19	P	Pg	21 55 35.1	+0.2
FSK				S	Sg	21 55 40.0	+1.1
	comp=N,872nm,0.6s						
FSK	Fiskardo	0.30	19	P	Pg	21 55 34.8	-0.1
VLMS	Volimes, Zakyn	0.35	149	P	Pg	21 55 36.2	+0.4
VLMS				S	Sg	21 55 41.5	+1.2
VLMS				AML	AML	21 55 47.4	
	comp=E,6915μm,0.5s						
VLMS				AML	AML	21 55 48.0	
	comp=N,12420μm,0.3s						
EVGI	Lefkada island	0.48	21	P	Pg	21 55 38.2	0.0
EVGI				S	Sg	21 55 45.8	+1.3
EVGI	Lefkada island	0.48	21	P	Pg	21 55 38.2	0.0
EVGI				S	Sg	21 55 45.9	+1.4
LKD2	Lefkada island	0.64	16	P	Pg	21 55 41.6	+0.2
LKD2	Lefkada island	0.64	16	P	Pg	21 55 41.5	+0.2
TSLK	Tsoukalades, L	0.67	15	P	Pg	21 55 41.5	-0.5
TSLK	Tsoukalades, L	0.67	15	P	Pg	21 55 41.5	-0.5
PDO	Prodromos	0.72	54	P	Pg	21 55 42.7	-0.3
PDO	Prodromos	0.72	54	P	Pg	21 55 42.6	-0.3
RLS	Riolos of Patr	0.82	98	P	Pg	21 55 44.8	0.0
RLS	Riolos of Patr	0.82	98	P	Pg	21 55 44.8	0.0
PVO	Paravola	0.96	62	P	Pg	21 55 47.3	-0.2
PVO	Paravola	0.96	62	P	Pg	21 55 47.4	-0.2
DRO	Drossia	1.03	102	P	Pg	21 55 48.6	-0.2
EFP	Efpalio	1.18	77	P	Pg	21 55 51.8	+0.1
LAKA	Lakka	1.22	86	P	Pn	21 55 51.4	-0.9
ANX	Ano Chora	1.24	70	P	Pn	21 55 53.3	+0.3
SERG	Sergoula	1.29	79	P	Pn	21 55 52.7	-1.0
SERG	Sergoula	1.29	79	P	Pn	21 55 52.7	-1.0
KALE	Kalithea	1.36	80	P	Pn	21 55 53.7	-0.9
KLV	Kalavryta, Ach	1.36	95	P	Pn	21 55 54.1	-0.5

IDC 03 22:00:15.1±6.1, 4.°66S×133.°66E, h0km, mb3.3/1, mb1 3.7/3, mb1mx3.4/35, mbtmp3.5/3, ML3.4/2, Error ellipse: s-maj=364.1km s-min=16.6km az=77.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
WRA	Warramunga Arr	15.21	178	Pn	Pn	22 03 50.2	-1.2
	0.2nm,0.3s,baz=357,slow=12,SNR=2.8						
ASAR	Alice Springs	18.90	179	P	Pn	22 04 38.1	0.0
	0.1nm,0.3s,baz=2.3,slow=12,SNR=6.0						
MKAR	Makanchi Array	68.35	325	P	P	22 11 18.3	-0.1
	0.3nm,1.0s,baz=119,slow=5.1,SNR=2.0						

*IDC **03** 22:03:04.0±4.6, 4.°84S×153.°91E, h93km±33km, mb3.5/6, mb1 3.8/7, mb1mx3.5/31, mbtmp3.9/7, MS2.8/1, Ms1 2.8/1, ms1mx2.6/19, Error ellipse: s-maj=42.3km s-min=18.3km az=96.0*
ISC 03 22:03:05.4±1.1, 4.°8S±0.°1×153.°8E±0.°1, h105km, n9, σ1.s04/12, mb3.4/6, New Ireland region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
KRVT	Keravat (AS076	1.88	286	P	Pn	22 03 36.7	0.0
	30nm,0.3s,baz=359,slow=5.7,SNR=5.0						
KRVT				S	Sn	22 04 00.0	-0.6
	19nm,0.3s,baz=264,slow=5.8,SNR=5.2						
PMG	Port Moresby	8.04	235	P	Pn	22 05 00.9	+1.3
	6.0nm,0.3s,baz=22,slow=10.0,SNR=16						
PMG				S	Sn	22 06 27.3	-1.6
	1.1nm,0.3s,baz=174,slow=23,SNR=1.5						
PMG				LR	LR	22 07 50.8	
	comp=Z,73nm,21.0s,baz=119,slow=35						
WRA	Warramunga Arr	24.22	230	P	P	22 08 12.9	+0.4
	3.3nm,0.7s,baz=54,slow=10.0,SNR=4.9						
ASAR	Alice Springs	26.84	224	P	P	22 08 36.3	0.0
	1.5nm,0.9s,baz=57,slow=8.8,SNR=7.8						
STKA	Stephens Creek	29.26	202	P	P	22 08 57.1	-0.6
	3.0nm,0.7s,baz=40,slow=16,SNR=3.0						
SONM	Songino Array	66.90	327	P	P	22 13 47.7	+1.2
	0.3nm,0.7s,baz=140,slow=7.5,SNR=3.3						
MKAR	Makanchi Array	81.03	319	P	P	22 15 09.6	+0.8
	0.1nm,0.3s,baz=88,slow=3.4,SNR=7.2						
ILAR	Eielson Array	81.79	22	P	P	22 15 10.8	-1.6
	0.5nm,0.9s,baz=238,slow=5.2,SNR=3.5						
TORD	Torodi Ar. Bea	151.30	289	PKPbc	PKPbc	22 22 47.6	-0.2
	0.6nm,0.5s,baz=86,slow=2.2,SNR=7.5						
TORD				PKPab	PKPab	22 22 56.4	+0.2
	0.9nm,1.0s,baz=87,slow=5.9,SNR=3.7						

*SNET **03** 22:04:46.8±0.6, 13.°69N×90.°29W, h56km±55km, ML3.2*
*GCG **03** 22:04:47.8±0.6, 13.°38N×90.°23W, h35km±176km, MD3.4*
ISC 03 22:04:47.1±3.8, 13.°5N±0.°3×90.°0W±0.°1, h81km±24km, n9, σ0.s60/15, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
CEVE	Cerro Verde	0.51	53	eP	Pn	22 05 01.0	-0.3
CEVE				eS	Sn	22 05 12.4	+0.6
CEVE				IAML		22 05 17.1	
	comp=Z,847nm,0.3s						
SBLS	San Blas	0.52	52	eP	Pn	22 05 01.0	-0.4
SBLS				eS	Sn	22 05 12.8	+0.8
RTR	El Retiro	0.54	45	eP	Pn	22 05 01.3	-0.2
RTR				eS	Sn	22 05 11.8	-0.4
SNJE	San Jose	0.55	50	eP	Pn	22 05 01.4	-0.2
IXG	Ixpaco	0.76	329	eP	Pn	22 05 03.2	-0.5
PCG	Pacaya	1.03	328	eP	Pn	22 05 05.9	-0.9
PCG				eS	Sn	22 05 22.6	+1.0
MTO3	Montecristo	1.09	37	eP	Pn	22 05 07.4	-0.2
FUG	Fuego 3	1.21	320	eP	Pn	22 05 08.8	-0.2
FUG				eS	Sn	22 05 25.4	0.0
STG3	Santiaguito 3,	1.90	309	eP	Pn	22 05 18.3	+0.3
STG3				eS	Sn	22 05 41.3	-0.1

*VIE **03** 22:12:35.7±0.8, 49.°79N×18.°59E, h0km, mb2.1/3, ml2.8/4, Error ellipse: s-maj=6.4km s-min=5.4km az=61.0 25 km E of Ostrava Suspected Mining induced.*
*PRU **03** 22:12:36.8±0.0, 49.°83N×18.°48E, h0km, Mining Induced Event Csm, E=9.8e+05*
*IPEC **03** 22:12:36.4±0.2, 49.°85N×18.°57E, h0km, ML2.3/4, Error ellipse: s-maj=1.6km s-min=1.1km az=151.0*
ISC 03 22:12:35.5±0.8, 49.°84N±0.°03×18.°57E±0.°02, h0km, n32, σ0.s74/59, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
OKC	Ostrava-Krasne	0.27	270	ePG	Pb	22 12 42.1	-1.3
OKC				eSG	Sg	22 12 44.4	+0.1
	comp=Z,172nm,0.5s						
MORC	Moravsky Berou	0.67	265	ePG	Pb	22 12 49.5	-0.7
MORC				eSG	Sg	22 12 57.5	+0.5
MORC	Moravsky Berou	0.67	265	ePg	Pb	22 12 49.4	-0.7
	baz=83						
MORC				eSg	Sg	22 12 57.5	+0.5
	55nm,0.2s,baz=83						
OJC	Ojcow	0.88	64	ePg	Pg	22 12 52.8	+0.4
OJC				eSg	Sb	22 13 05.2	-0.8
JAVC	Velka Javorina	1.14	211	ePG	Pn	22 12 58.9	+0.1
JAVC				eSG	Sg	22 13 12.8	+0.6
JAVC	Velka Javorina	1.14	211	ePg	Pn	22 12 58.8	0.0
	baz=30						
JAVC				eSg	Sg	22 13 12.8	+0.6
	25nm,0.4s,baz=30						
KRLC	Kraliky	1.18	282	ePG	Pg	22 12 57.7	-0.4
KRLC				eSG	Sg	22 13 12.7	-0.7
	comp=Z,87nm,0.3s						
NIE	Niedzica	1.20	110	ePg	Pn	22 12 59.3	-0.3
NIE				eSg	Sn	22 13 17.5	+0.9
VYHS	Vyhne	1.35	173	ePG	Pn	22 13 01.6	-0.1
VYHS				eSG	Sb	22 13 19.9	+0.3
VRAC	Vranov	1.39	248	ePG	Pn	22 13 02.3	0.0
VRAC				eSG	Sg	22 13 20.3	+0.1
VRAC	Vranov	1.39	248	ePg	Pn	22 13 02.2	0.0
	baz=66						
VRAC				eSg	Sg	22 13 20.3	+0.1
	50nm,0.3s,baz=66						
SMOL	Smolenice	1.52	210	ePG	Pg	22 13 04.0	0.0
SMOL				eSG	Sg	22 13 24.1	-0.3
DPC	Dobruska-Polom	1.54	290	ePG	Pn	22 13 04.2	-0.1
DPC				eSG	Sg	22 13 24.6	-0.3
	comp=Z,43nm,0.3s						
KRUC	Moravsky	1.62	242	ePG	Pn	22 13 05.7	+0.4
KRUC				eSG	Sb	22 13 27.2	0.0
KRUC	Moravsky	1.62	242	ePg	Pn	22 13 05.6	+0.3
	baz=60						
KRUC				eSg	Sb	22 13 27.2	0.0
	28nm,0.2s,baz=60						
OSTC	Ostas	1.68	296	ePG	Pn	22 13 06.6	+0.4
OSTC				eSG	Sg	22 13 29.3	-0.1
	comp=Z,52nm,0.6s						
MODS	Modra-Piesok	1.69	211	ePG	Pn	22 13 05.7	-0.7
MODS				eSG	Sn	22 13 27.6	-1.1
KSP	Ksiaz	1.77	305	ePg	Pg	22 13 09.4	-0.1
KSP				eSg	Sb	22 13 31.9	+0.2
UPC	Upice	1.78	293	ePG	Pb	22 13 08.8	-0.2
UPC				eSG	Sb	22 13 32.0	+0.2
CHVC	Chvalec	1.78	296	ePG	Pb	22 13 07.7	+0.1
CHVC				eSG	Sb	22 13 31.5	-0.5
	comp=Z,34nm,0.4s						
STHS	Stebnicka Huta	1.79	103	ePN	Pg	22 13 09.6	-0.2
STHS				eSN	Sg	22 13 33.8	+0.9
STHS				eLG	Lg	22 13 37.7	
KECS	Kecovo	1.85	136	ePN	Pn	22 13 08.7	+0.2
KECS				eSN	Sn	22 13 31.5	-1.0
KECS				eLG	Lg	22 13 36.8	
TREC	Trest	2.08	256	eSG	Sb	22 13 40.8	+0.3
	comp=Z,22nm,0.3s						
CRVS	Cervenica-Dubn	2.11	115	ePN	Pg	22 13 15.3	-0.6
GOPC	GO Pecny, Ondr	2.45	273	ePG	Pb	22 13 20.4	0.0
GOPC				eSG	Sb	22 13 51.6	+0.4
	comp=Z,12nm,0.3s						
PRU	Pruhonice	2.61	275	ePG	Pb	22 13 23.8	+0.7
PRU				eSG	Sb	22 13 56.4	+0.7
	comp=Z,14nm,0.4s						
CONA	Conrad Observa	2.62	224	Pn	Pn	22 13 18.9	-0.2
	0.9nm,0.4s						
PVCC	Panska Ves	2.66	287	eSG	Sb	22 13 58.9	+1.6
	comp=Z,23nm,0.3s						
BRG	Berggiesshubel	3.14	291	PG	Pb	22 13 33.7	+1.5
BRG				SG	Sg	22 14 14.5	-1.9
	9.4nm,0.4s						
KHC	Kasperske Hory	3.33	260	ePN	Pn	22 13 30.0	+1.1
KHC				ePG	Pb	22 13 36.1	+0.6
KHC				eSG	Sb	22 14 19.3	+2.8
	comp=Z,13nm,0.4s						
MOA	Molln	3.47	237	ePn	Pn	22 13 30.4	-0.4
	0.3nm,0.2s						
CLL	Collm	3.84	295	eSg	Sg	22 14 38.0	-0.9
	comp=Z,16nm,0.7s						

*ATH **03** 22:23:08.5, 38.°12N×20.°36E, h8km±3km, ML2.5/6, Error ellipse: s-maj=3.0km s-min=0.8km az=337.0*
*THE **03** 22:23:09.2, 38.°14N×20.°40E, h8km, ML2.4/2, Error ellipse: s-maj=1.0km s-min=0.5km az=259.0*
ISC 03 22:23:08.6±1.1, 38.°12N±0.°03×20.°38E±0.°05, h8km±5km, n41, σ0.s40/59, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
CHV1	Chavriata, Kef	0.06	5	P	Pg	22 23 10.8	+0.3
CHV1				S	Sg	22 23 12.2	+0.3
KEF3	Kipouria, Keph	0.08	345	P	Pg	22 23 10.3	-0.5
KEF3				S	Sg	22 23 12.2	-0.1
LXR1	Lixouri, Cepha	0.09	33	P	Pg	22 23 11.1	+0.2
LXR1				S	Sg	22 23 12.8	+0.2
KEF2	Argostoli. Kep	0.10	64	P	Pg	22 23 11.0	0.0
KEF2				S	Sg	22 23 12.5	-0.2
ARG2	Argostoli	0.10	58	P	Pg	22 23 11.2	+0.1
ARG2				S	Sg	22 23 12.6	-0.3
KEF4	Livadi, Kephal	0.14	16	P	Pg	22 23 11.3	-0.4
KEF4				S	Sg	22 23 14.4	+0.6
KEF1	Kardakata, Kep	0.17	26	P	Pg	22 23 12.5	+0.3
KEF1				S	Sg	22 23 15.2	+0.5
VLS	Valsamata	0.18	72	P	Pg	22 23 12.2	-0.1
VLS				S	Sg	22 23 14.8	-0.1
	6μm,0.2s						
VLS	Valsamata	0.18	72	P	Pg	22 23 12.3	-0.1
VLS				AML	AML	22 23 14.8	
	comp=E,12188μm,0.2s						
VLS				S	Sg	22 23 14.9	0.0
VLS				AML	AML	22 23 15.7	
	comp=N,10158μm,0.3s						
KFL	Anninata	0.33	92	P	Pg	22 23 15.0	-0.1
KFL	Anninata	0.33	92	P	Pg	22 23 15.2	+0.1
VLMS	Volimes, Zakyn	0.34	137	P	Pg	22 23 15.6	+0.3
VLMS				S	Sg	22 23 20.4	+0.7
VLMS				AML	AML	22 23 22.9	
	comp=E,2463μm,0.1s						

VLMS				AML	AML	22 23 23.3	
	comp=N,3860μm,0.2s						
FSK	**Fiskardo**	**0.37**	**24**	P	**Pg**	**22 23 16.0**	**+0.2**
FSK				S	**Sg**	**22 23 21.0**	**+0.3**
	comp=N,372nm,0.4s						
EVGI	**Lefkada island**	**0.54**	**24**	P	**Pg**	**22 23 19.1**	**-0.1**
EVGI				S	**Sg**	**22 23 27.3**	**+1.0**
EVGI	**Lefkada island**	**0.54**	**24**	P	**Pg**	**22 23 19.1**	**-0.1**
EVGI				S	**Sb**	**22 23 27.5**	**-0.8**
KRI1	**kERI**	**0.58**	**143**	P	**Pg**	**22 23 19.9**	**+0.1**
KRI1				S	**Sb**	**22 23 28.8**	**-0.5**
MGNA	**Meganis**	**0.62**	**31**	P	**Pg**	**22 23 20.4**	**-0.3**
MGNA				S	**Sg**	**22 23 29.7**	**+0.8**
LKD2	**Lefkada island**	**0.70**	**18**	P	**Pg**	**22 23 22.1**	**-0.1**
LKD2	**Lefkada island**	**0.70**	**18**	P	**Pg**	**22 23 22.3**	**+0.1**
TSLK	**Tsoukalades, L**	**0.73**	**17**	P	**Pg**	**22 23 22.1**	**-0.7**
TSLK				AML	AML	22 23 42.8	
	comp=E,425μm,0.8s						
TSLK				AML	AML	22 23 43.5	
	comp=N,384μm,0.6s						
PDO	**Prodromos**	**0.79**	**53**	P	**Pg**	**22 23 23.6**	**-0.3**
PDO	**Prodromos**	**0.79**	**53**	P	**Pg**	**22 23 23.6**	**-0.3**
PDO				AML	AML	22 23 37.3	
	comp=N,461μm,0.5s						
PDO				AML	AML	22 23 40.7	
	comp=E,599μm,0.4s						
RLS	**Riolos of Patr**	**0.86**	**94**	P	**Pg**	**22 23 25.1**	**-0.1**
RLS	**Riolos of Patr**	**0.86**	**94**	P	**Pg**	**22 23 24.8**	**-0.4**
RLS				S	**Sg**	**22 23 36.5**	**0.0**
PVO	**Paravola**	**1.03**	**61**	P	**Pg**	**22 23 28.3**	**-0.2**
PVO	**Paravola**	**1.03**	**61**	P	**Pg**	**22 23 28.2**	**-0.2**
PVO				S	**Sb**	**22 23 42.6**	**+0.2**
PVO				AML	AML	22 23 48.0	
	comp=E,937μm,0.3s						
PVO				AML	AML	22 23 48.1	
	comp=N,479μm,0.3s						
DRO	**Drossia**	**1.07**	**99**	P	**Pg**	**22 23 29.2**	**+0.1**
DRO	**Drossia**	**1.07**	**99**	P	**Pb**	**22 23 29.4**	**+0.1**
AMT	**Artemida-Makis**	**1.21**	**119**	P	**Pb**	**22 23 31.5**	**-0.2**
EFP	**Efpalio**	**1.24**	**75**	P	**Pn**	**22 23 31.7**	**-0.5**
EFP				AML	AML	22 23 57.5	
	comp=E,262μm,0.7s						
EFP				AML	AML	22 23 57.8	
	comp=N,363μm,0.7s						
LAKA	**Lakka**	**1.27**	**84**	P	**Pn**	**22 23 32.4**	**-0.2**
LAKA				S	**Sn**	**22 23 50.4**	**+0.5**
ANX	**Ano Chora**	**1.30**	**68**	P	**Pn**	**22 23 33.4**	**+0.3**
SERG	**Sergoula**	**1.35**	**77**	P	**Pn**	**22 23 32.9**	**-0.9**
SERG	**Sergoula**	**1.35**	**77**	P	**Pn**	**22 23 33.6**	**-0.2**
KLV	**Kalavryta, Ach**	**1.40**	**93**	P	**Pn**	**22 23 34.7**	**+0.2**
KLV	**Kalavryta, Ach**	**1.40**	**93**	P	**Pn**	**22 23 34.9**	**+0.4**
IGT	**Igoumenitsa**	**1.41**	**359**	P	**Pn**	**22 23 34.6**	**+0.1**
KALE	**Kalithea**	**1.42**	**79**	P	**Pn**	**22 23 33.7**	**-1.0**
ITM	**Ithomi**	**1.55**	**127**	P	**Pb**	**22 23 37.7**	**+0.2**
PYL	**PYLOS**	**1.64**	**138**	P	**Pb**	**22 23 38.6**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.64**	**57**	P	**Pb**	**22 23 39.5**	**+0.4**

THE ***03*** *22:31:36.6, 38°.13N×20°.38E, h6km, ML3.0/3, Error ellipse: s-maj=0.9km s-min=0.6km az=22.0*
ATH ***03*** *22:31:36.4, 38°.13N×20°.37E, h8km±2km, ML3.0/5, Error ellipse: s-maj=2.4km s-min=1.0km az=291.0*
IDC ***03*** *22:31:37.3±1.8, 38°.40N×20°.73E, h0km, mb3.6/4, mb1 3.6/6, mb1mx3.2/73, mbtmp3.5/6, ML3.2/2, Error ellipse: s-maj=43.9km s-min=4.1km az=55.0*
ISC 03 22:31:36.6±0.8**, 38°.15N**±0°.03**×20°.39E**±0°.04**, h8km**±4km**, n37, σ0s55**/54**, mb3.7**/4**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.03**	**350**	P	**Pg**	**22 31 38.1**	**0.0**
CHV1				S	**Sg**	**22 31 39.2**	**-0.1**
KEF3	**Kipouria, Keph**	**0.06**	**328**	P	**Pg**	**22 31 38.6**	**+0.2**
KEF3				S	**Sg**	**22 31 40.3**	**+0.5**
LXR1	**Lixouri, Cepha**	**0.06**	**39**	P	**Pg**	**22 31 38.6**	**+0.1**
LXR1				S	**Sg**	**22 31 40.1**	**+0.3**
KEF2	**Argostoli. Kep**	**0.08**	**80**	P	**Pg**	**22 31 38.7**	**+0.1**
KEF2				S	**Sg**	**22 31 40.3**	**+0.2**
ARG2	**Argostoli**	**0.08**	**71**	P	**Pg**	**22 31 38.8**	**+0.1**
ARG2				S	**Sg**	**22 31 40.3**	**+0.1**
KEF4	**Livadi, Kephal**	**0.11**	**15**	P	**Pg**	**22 31 39.4**	**+0.3**
KEF4				S	**Sg**	**22 31 41.7**	**+0.8**
KEF1	**Kardakata, Kep**	**0.14**	**27**	P	**Pg**	**22 31 40.0**	**+0.3**
KEF1				S	**Sg**	**22 31 42.3**	**+0.5**
VLS	**Valsamata**	**0.16**	**81**	P	**Pg**	**22 31 40.0**	**0.0**
VLS				S	**Sg**	**22 31 42.6**	**+0.3**
	11μm,0.4s						
VLS	**Valsamata**	**0.16**	**81**	P	**Pg**	**22 31 39.9**	**-0.1**
VLS				S	**Sg**	**22 31 42.4**	**+0.1**
VLS				AML	AML	22 31 42.6	
	comp=E,23773μm,0.2s						
VLS				AML	AML	22 31 43.5	
	comp=N,14325μm,0.2s						
VSK1	**VASILIKIADES**	**0.29**	**28**	P	**Pg**	**22 31 42.7**	**+0.3**
VSK1				S	**Sg**	**22 31 47.4**	**+1.1**
	comp=N,5μm,0.4s						
FSK	**Fiskardo**	**0.34**	**24**	P	**Pg**	**22 31 43.4**	**+0.2**
FSK				S	**Sg**	**22 31 48.9**	**+1.2**
	comp=N,2μm,0.2s						
FSK	**Fiskardo**	**0.34**	**24**	P	**Pg**	**22 31 43.4**	**+0.2**
FSK				S	**Sg**	**22 31 48.5**	**+0.8**
VLMS	**Volimes, Zakyn**	**0.35**	**142**	P	**Pg**	**22 31 43.8**	**+0.4**
EVGI	**Lefkada island**	**0.51**	**24**	P	**Pg**	**22 31 46.6**	**0.0**
EVGI				S	**Sb**	**22 31 54.9**	**-0.6**
EVGI	**Lefkada island**	**0.51**	**24**	P	**Pg**	**22 31 46.5**	**0.0**
EVGI				S	**Sb**	**22 31 54.9**	**-0.6**
MGNA	**Meganis**	**0.59**	**32**	P	**Pg**	**22 31 47.8**	**-0.2**
MGNA				S	**Sb**	**22 31 57.4**	**-0.4**
MGNA				AML	AML	22 31 57.5	
	comp=N,2264μm,0.5s						
MGNA				AML	AML	22 31 57.7	
	comp=E,2500μm,0.3s						
LKD2	**Lefkada island**	**0.67**	**18**	P	**Pg**	**22 31 49.7**	**+0.2**
LKD2	**Lefkada island**	**0.67**	**18**	P	**Pg**	**22 31 49.8**	**+0.2**
AST1	**Astakos**	**0.68**	**55**	P	**Pg**	**22 31 49.7**	**+0.1**
TSLK	**Tsoukalades, L**	**0.70**	**17**	P	**Pg**	**22 31 50.0**	**-0.2**
TSLK	**Tsoukalades, L**	**0.70**	**17**	P	**Pg**	**22 31 49.8**	**-0.3**
TSLK				S	**Sg**	**22 32 00.5**	**+1.2**
PDO	**Prodromos**	**0.77**	**54**	P	**Pg**	**22 31 51.5**	**+0.1**
PDO				AML	AML	22 32 10.9	
	comp=E,2264μm,0.5s						
PDO				AML	AML	22 32 11.0	
	comp=N,2552μm,0.3s						
RLS	**Riolos of Patr**	**0.86**	**96**	P	**Pg**	**22 31 53.0**	**0.0**
PVO	**Paravola**	**1.01**	**62**	P	**Pg**	**22 31 56.0**	**+0.1**
PVO	**Paravola**	**1.01**	**62**	P	**Pg**	**22 31 55.9**	**0.0**
PVO				AML	AML	22 32 13.6	
	comp=E,2529μm,0.3s						
PVO				AML	AML	22 32 18.7	
	comp=N,1208μm,1.0s						
DRO	**Drossia**	**1.06**	**100**	P	**Pn**	**22 31 57.6**	**-0.1**
AMT	**Artemida-Makis**	**1.21**	**120**	P	**Pb**	**22 31 59.3**	**-0.5**
AMT				AML	AML	22 32 26.5	
	comp=N,1514μm,0.5s						
AMT				AML	AML	22 32 29.2	
	comp=E,944μm,0.8s						
IGT	**Igoumenitsa**	**1.38**	**358**	P	**Pn**	**22 32 02.4**	**+0.2**
JAN	**Janina**	**1.54**	**13**	P	**Pn**	**22 32 06.4**	**+0.1**
ITM	**Ithomi**	**1.56**	**128**	P	**Pn**	**22 32 04.9**	**+0.3**
PYL	**PYLOS**	**1.65**	**139**	P	**Pb**	**22 32 07.3**	**0.0**
IDI	**Anoyia**	**4.61**	**127**	Pn	**Pn**	**22 32 47.5**	**+0.9**
	comp=E,0.2nm,0.3s,baz=317,slow=19,SNR=1.5						
IDI				Sn	**Sn**	**22 33 42.3**	**+2.0**
	comp=E,1.1nm,0.3s,baz=136,slow=23,SNR=23						
GERES	**GERESS Array B**	**11.73**	**338**	Pn	**Pn**	**22 34 24.2**	**0.0**
	comp=E,0.1nm,0.3s,baz=160,slow=12,SNR=2.0						
HFS	**Hagfors**	**22.41**	**351**	P	**P**	**22 36 35.3**	**0.0**
	comp=E,1.6nm,0.9s,baz=173,slow=13,SNR=1.4						
ARCES	**ARCESS Array B**	**31.57**	**3**	P	**P**	**22 37 58.7**	**-0.4**
	comp=E,1.7nm,0.8s,baz=190,slow=10,SNR=1.8						
MKAR	**Makanchi Array**	**45.40**	**58**	P	**P**	**22 39 54.4**	**-1.2**
	comp=E,0.2nm,0.4s,baz=276,slow=7.6,SNR=5.8						
ZALV	**Zalesovo Beam**	**45.79**	**48**	P	**P**	**22 39 57.7**	**-0.7**
	comp=E,0.6nm,0.5s,baz=289,slow=9.0,SNR=3.7						

BJI ***03*** *22:36:32.4±0.0, 7°.64S×128°.63E, h6km, mB5.9/72, mb5.5/71, Ms5.7/86, Ms7 5.4/79*
IDC ***03*** *22:36:37.9±0.3, 7°.18S×128°.19E, h0km, mb5.5/46, mb1 5.4/51, mb1mx5.3/58, mbtmp5.5/51, ML5.2/4, MS5.3/32, Ms1 5.3/32, ms1mx5.1/44, Error ellipse: s-maj=11.4km s-min=7.9km az=68.0*
NEIC ***03*** *22:36:37.1±2.8, 7°.19S±0°.05×128°.17E±0°.05, h7km±2km, mb5.6/176, Ms_20 5.5/495, Mwb5.8/50, Mwc5.9/50, Mww5.8, Mwc5.9(GCMT), Error ellipse: s-maj=7.1km s-min=7.0km az=209.0*
NEIC ***03*** *22:36:39.3, 7°.19S×128°.14E, h10km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr3.74; Mθθ-3.55; Mφφ-0.18; Mrθ-4.86; Mθφ0.26; Mφr-0.87; Fault plane solution: M0 6.12000×10^17 NP1:φs264.65000°, δ71.84000°, λ84.28000°. NP2:φs102.46000°, δ19.01000°, λ106.90000°. Principal axes: T 6.2511, Plg63.0000°, Azm166.0000°; N -0.2660, Plg5.0000°, Azm266.0000°; P -5.9851, Plg27.0000°, Azm359.0000°;*
MOS ***03*** *22:36:40.9±1.3, 7°.16S×128°.16E, h33km, mb6.0/47, MS5.3/47 Error ellipse: s-maj=8.4km s-min=4.5km az=113.8*
GCMT ***03*** *22:36:42.1±0.1, 7°.12S×128°.20E, h12km, MW5.9/166, Moment Tensor Solution. s150,c300; s166,c531; Duration: 2s1 Moment tensor: Scale 10^18Nm; Mrr0.68±.00; Mθθ-0.75±.00; Mφφ0.06±.00; Mrθ-0.30±.01; Mθφ-0.12±.00; Mφr-0.09±.01; Best double couple: M0 0.79200×10^18 NP1:φs86.00000°, δ33.00000°, λ97.00000°. NP2:φs258.00000°, δ57.00000°, λ85.00000°. Principal axes: T 0.7520, Plg78.0000°, Azm153.0000°; N 0.0780, Plg4.0000°, Azm261.0000°; P -0.8310, Plg12.0000°, Azm351.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC ***03*** *22:36:42, 7°.11S×128°.21E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr6.82; Mθθ-7.60; Mφφ0.77; Mrθ-1.99; Mθφ-1.25; Mφr-0.52; Fault plane solution: M0 7.63000×10^17 NP1:φs84.00000°, δ37.00000°, λ93.00000°. NP2:φs260.00000°, δ53.00000°, λ87.00000°. Principal axes: T 7.1123, Plg82.0000°, Azm157.0000°; N 0.9479, Plg2.0000°, Azm261.0000°; P -8.0603, Plg8.0000°, Azm351.0000°;*
KLM ***03*** *22:36:43.0, 7°.26S×128°.37E, h30km, mb5.8*
DJA ***03*** *22:36:43.1±0.2, 7°S±1°×12°8E±°, h40km±2km, M5.8/92, mb5.5/92, mB6.2/79, MLv5.8/12, Mw(mB)5.9/79, Mwp5.8/53*
NEIC ***03*** *22:36:43, 7°.16S×128°.10E, h22km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr6.23; Mθθ-6.29; Mφφ0.06; Mrθ0.13; Mθφ-0.46; Mφr-1.35; Fault plane solution: M0 6.43000×10^17 NP1:φs254.00000°, δ46.00000°, λ73.00000°. NP2:φs98.00000°, δ46.00000°, λ107.00000°. Principal axes: T 6.5218, Plg78.0000°, Azm85.0000°; N -0.1954, Plg12.0000°, Azm266.0000°; P -6.3264, Plg0.0000°, Azm176.0000°;*
NEIC ***03*** *22:36:56.2, 6°.70S×128°.61E, h10km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr0.66; Mθθ-0.68; Mφφ0.02; Mrθ-0.78; Mθφ-0.10; Mφr-0.15; Fault plane solution: M0 1.05000×10^18 NP1:φs259.68000°, δ69.78000°, λ88.55000°. NP2:φs83.86000°, δ20.27000°, λ93.92000°. Principal axes: T 1.0284, Plg65.0000°, Azm167.0000°; N 0.0333, Plg1.0000°, Azm260.0000°; P -1.0617, Plg25.0000°, Azm351.0000°;*
ISC 03 22:36:40.7±0.4**, 7°.24S**±0°.02**×128°.23E**±0°.03**, h24km**±2km**, h24km:pP-P, n1183, σ2s04**/1092**, mb5.6**/221**, MS5.5**/316**, 73C-22D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.14**	**104**	P	**Pn**	**22 37 30.7**	**+2.1**
SAUI				S	**Sn**	**22 38 06.6**	**+1.3**
SAUI	**Saumlaki**	**3.14**	**104**		**Pn**	**22 37 27.2**	**-1.4**
SAUI				Sn	**Sn**	**22 38 01.3**	**-4.0**
BNDI	**Bandanaira**	**3.18**	**32**	P	**Sn**	**22 38 01.9**	**-4.5**
BNDI				S	**Sn**	**22 38 01.8**	**-4.6**
AAI	**Ambon**	**3.53**	**360**	P	**Pn**	**22 37 31.7**	**-2.4**
AAI				S	**Sn**	**22 38 08.8**	**-6.4**
MSAI	**Masohi**	**3.93**	**10**	P	**Pn**	**22 37 38.4**	**-1.2**
MSAI				S	**Sn**	**22 38 21.5**	**-3.6**
NLAI	**Namlea**	**4.13**	**344**	P	**Pn**	**22 37 42.0**	**-0.4**
NLAI				S	**Sn**	**22 38 26.8**	**-3.1**
SOEI	**Soe**	**4.64**	**237**	P	**Pn**	**22 37 53.3**	**+3.8**
SOEI				S	**Sn**	**22 38 48.1**	**+5.4**
SOEI	**Soe**	**4.64**	**237**	Pn	**Pn**	**22 37 45.8**	**-3.7**
SOEI				Sn	**Sn**	**22 38 39.0**	**-3.7**
SANI	**Sanana**	**5.62**	**337**	P	**Pn**	**22 38 03.0**	**+0.2**
	4.4nm141μm22μm474nm,0.9s						
SANI				S	**Sn**	**22 39 02.8**	**-3.9**
	4.4nm141μm22μm474nm,0.9s						
FAKI	**Fak Fak**	**5.88**	**43**	P	**Pn**	**22 38 06.1**	**-0.2**
	2.8nm98μm18μm737nm,0.6s						
FAKI				S	**Sn**	**22 39 10.1**	**-2.9**
	2.8nm98μm18μm737nm,0.6s						
FAKI	**Fak Fak**	**5.88**	**43**		**Pn**	**22 38 04.0**	**-2.3**
FAKI				Sn	**Sn**	**22 39 07.5**	**-5.5**
MTN	**Manton Dam**	**6.26**	**153**	P	**Pn**	**22 38 15.1**	**+3.5**
	baz=6.3,SNR=338						
MTN	**Manton Dam**	**6.26**	**153**		**Pn**	**22 38 10.8**	**-0.8**
MTN					**Sn**	**22 39 18.0**	**-4.4**
KDI	**Kendari**	**6.46**	**300**	P	**Pn**	**22 38 14.7**	**+0.3**
	5.3nm300nm,1.9s						
KMPI	**Kaimana, Papua**	**6.51**	**57**	P	**Pn**	**22 38 15.4**	**+0.3**
	6.0nm23μm2μm,1.0s						
LBMI	**Labuha**	**6.60**	**354**	P	**Pn**	**22 38 17.4**	**+1.1**
	6.5nm18μm1μm,1.3s						
KDU	**Kakadu**	**6.84**	**143**	P	**Pn**	**22 38 21.7**	**+2.1**
	baz=6.9,SNR=125						
SIJI	**Sorong**	**7.02**	**26**	Pn	**Pn**	**22 38 21.5**	**-0.6**
	26nm,0.3s,baz=208,slow=12,SNR=39						
SIJI				Sn	**Sn**	**22 39 33.8**	**-7.5**
	7.2nm,0.3s,baz=266,slow=20,SNR=1.1						
SIJI				LR	LR	22 41 29.8	
	comp=Z,31μm,21.4s,baz=205,slow=42						
SWI	**Sorong**	**7.02**	**26**	P	**Pn**	**22 38 21.5**	**-0.6**
	2.7nm57μm11μm763nm,0.8s						
TNTI	**Ternate**	**8.01**	**354**	P	**Pn**	**22 38 36.1**	**+0.5**
	1.6nm35μm8μm363nm,1.3s						
TNTI	**Ternate**	**8.01**	**354**		**Pn**	**22 38 33.8**	**-1.9**
WSI	**Waingapu**	**8.20**	**252**	P	**Pn**	**22 38 41.1**	**+2.8**
	21μm757nm,1.0s						
LUWI	**Luwuk**	**8.22**	**318**	P	**Pn**	**22 38 39.5**	**+1.0**
	54μm9μm385nm,0.9s						
LUWI	**Luwuk**	**8.22**	**318**		**Pn**	**22 38 34.5**	**-4.0**
RKPI	**Ransiki, Papua**	**8.22**	**46**	P	**Pn**	**22 38 38.2**	**-0.4**
	11μm980nm,0.7s						
KNRA	**Kununurra**	**8.40**	**176**	P	**Pn**	**22 38 43.2**	**+2.3**
	baz=8.5,SNR=690						
KNRA	**Kununurra**	**8.40**	**176**		**Pn**	**22 38 41.9**	**+0.9**
KNRA				Sn	**Sn**	**22 40 16.1**	**+1.1**
KMSI	**Cibinong**	**8.85**	**331**	P	**Pn**	**22 38 49.1**	**+2.0**
	467nm,0.8s						
APSI	**Ampana**	**9.09**	**314**	P	**Pn**	**22 38 52.0**	**+1.6**
	5μm213nm,1.2s						
BAKI	**Biak**	**9.89**	**53**	P	**Pn**	**22 39 02.4**	**+0.9**
	10μm439nm,0.8s						
MRSI	**Marisa**	**9.90**	**320**	P	**Pn**	**22 39 03.5**	**+1.8**
PLAI	**Plampang**	**10.46**	**261**	P	**Pn**	**22 39 12.5**	**+3.1**
	11μm8μm574nm,1.1s						
WAMI	**Wamena**	**10.96**	**73**	P	Pn	22 39 20.9	+4.8
	11μm602nm,1.1s						
FITZ	**Fitzroy Crossi**	**11.08**	**193**	P	**Pn**	**22 39 17.7**	**0.0**
	baz=11,SNR=91						
FITZ	**Fitzroy Crossi**	**11.08**	**193**	Pn	**Pn**	**22 39 18.6**	**+0.8**
	20nm,0.3s,baz=31,slow=11,SNR=105						
FITZ				Sn	**Sn**	**22 41 15.3**	**-5.7**
	11nm,0.3s,baz=284,slow=9.6,SNR=6.4						
FITZ				LR	LR	22 44 18.6	
	comp=Z,47μm,20.0s,baz=20,slow=41						
FITZ	**Fitzroy Crossi**	**11.08**	**193**		**Pn**	**22 39 17.7**	**0.0**
SMPI	**Sarmi**	**11.68**	**64**	P	**Pn**	**22 39 23.2**	**-2.8**
	9μm266nm,1.9s						
MMPI	**Merauke**	**12.11**	**97**	P	**Pn**	**22 39 34.2**	**+2.4**
	62nm7.6nm,0.8s						
BKB	**Balikpapan**	**12.76**	**297**	P	**Pn**	**22 39 41.8**	**+1.0**
GENI	**Genyem**	**12.76**	**69**	P	**Pn**	**22 39 40.7**	**-0.1**
	13μm15μm493nm,1.5s						
IGBI	**Denpasar**	**13.05**	**262**	P	**Pn**	**22 39 47.0**	**+2.3**
	4μm182nm,1.2s						
DDMP	**Don Marcelino,**	**13.49**	**349**	*e*P	**Pn**	**22 39 49.0**	**-1.8**
WB0	**Warramunga Arr**	**13.81**	**155**		**Pn**	**22 39 54.1**	**-1.1**
WB0					**Sn**	**22 42 22.9**	**-5.0**
WRAB	**Tennant Creek**	**13.94**	**155**		**Pn**	**22 39 55.0**	**-1.9**
WRAB					**Sn**	**22 42 27.0**	**-4.1**
WRAB	**Tennant Creek**	**13.94**	**155**	*d i*P	**Pn**	**22 39 55.7**	**-1.2**
WRAB				MLR	MLR		
	comp=Z,36μm,13.0s						
WRA	**Warramunga Arr**	**13.95**	**155**	Pn	**Pn**	**22 39 54.9**	**-2.1**
	comp=Z,9.8nm,0.3s,baz=329,slow=13,SNR=65						
WRA				Sn	**Sn**	**22 42 22.4**	**-8.8**
	comp=Z,6.5nm,0.3s,baz=336,slow=20,SNR=7.2						
WRA				LR	LR	22 45 46.4	
	comp=Z,49μm,18.6s,baz=325,slow=39						
WRA	**Warramunga Arr**	**13.95**	**155**		**Pn**	**22 39 54.8**	**-2.2**
WRA	**Warramunga Arr**	**13.95**	**155**	P	**Pn**	**22 39 54.8**	**-2.2**
WB2	**Warramunga Arr**	**13.95**	**155**	P	**Pn**	**22 39 56.3**	**-0.8**
	baz=14						
WB2	**Warramunga Arr**	**13.95**	**155**	Pn	**Pn**	**22 39 54.7**	**-2.4**
WB2					**Sn**	**22 42 26.6**	**-4.7**
JAGI	**Jajag, Banyuwa**	**13.99**	**264**	P	**P**	**22 40 02.6**	**-2.8**
	comp=Z,9μmcomp=Z,8μmcomp=Z,172nm,1.3s						
JAGI	**Jajag, Banyuwa**	**13.99**	**264**		**Pn**	**22 39 55.9**	**-1.7**
WR0	**Warramunga Arr**	**14.05**	**155**	Pn	**Pn**	**22 39 55.5**	**-2.8**
SKMP	**Bagumbayan, Su**	**14.16**	**345**	*e*P	**Pn**	**22 39 59.3**	**-0.5**
MATI	**Mati**	**14.23**	**352**	*e*P	**Pn**	**22 40 03.6**	**+2.7**
DAV	**Davao City (W)**	**14.46**	**349**	Pn	**Pn**	**22 40 02.7**	**-1.3**
	comp=Z,18nm,0.3s,baz=124,slow=3.2,SNR=9.4						
DAV	**Davao City (W)**	**14.46**	**349**	⇑*e*P	**Pn**	**22 40 01.0**	**-3.0**
DAV	**Davao City (W)**	**14.46**	**349**		**Pn**	**22 39 59.9**	**-4.1**
KCP	**Kidapawan**	**14.50**	**347**	⇑*e*P	**Pn**	**22 40 04.2**	**-0.4**
GMJI	**Gumukmas**	**14.68**	**265**	P	**P**	**22 40 16.9**	**+3.9**
CTBH	**Cotabato--PC H**	**14.91**	**344**	⇓*i*P	**Pn**	**22 40 09.0**	**-1.0**
BUKP	**Musuan**	**15.35**	**348**	*e*P	**Pn**	**22 40 15.5**	**-0.5**
GRJI	**Gresik**	**15.63**	**270**	P	**P**	**22 40 24.0**	**+0.5**
	comp=Z,939nmcomp=Z,2μmcomp=Z,151nm,1.0s						
PAGZ	**Pagadian**	**15.75**	**342**	*e*P	**Pn**	**22 40 22.8**	**+1.6**
CGP	**Cagayan de Oro**	**15.99**	**347**	⇓*e*P	**P**	**22 40 27.5**	**0.0**
COEN	**Coen**	**16.13**	**116**	P	**Pn**	**22 40 24.7**	**-1.4**
	baz=16,SNR=10						
COEN	**Coen**	**16.13**	**116**	Pn	**Pn**	**22 40 25.9**	**-0.1**
COEN				IAmb	IAmb	22 40 33.0	
	comp=Z,553nm,1.4s						
BUTP	**Butuan**	**16.31**	**351**	*e*P	**Pn**	**22 40 28.4**	**+0.1**
PSAB2	**Pilbara Seismi**	**16.36**	**209**	Pn	**Pn**	**22 40 28.2**	**-0.7**
PSAB2				IAmb	IAmb	22 40 38.1	
	comp=Z,359nm,0.9s						
PSAB2				S	**Sn**	**22 43 23.1**	**-6.8**
PSA00	**Pilbara Seismi**	**16.38**	**209**	Pn	**Pn**	**22 40 28.1**	**-1.2**
PSA00	**Pilbara Seismi**	**16.38**	**209**	Pn	**Pn**	**22 40 28.5**	**-0.8**
PSA00				IAmb	IAmb	22 40 38.3	
	comp=Z,391nm,0.9s						
NGJI	**Ngawi**	**16.63**	**269**	P	**P**	**22 40 34.0**	**-0.6**
	comp=Z,18μmcomp=Z,16μmcomp=Z,285nm,1.5s						
PCJI	**Pacitan**	**16.92**	**266**	P	**Pn**	**22 40 35.7**	**-0.3**
	comp=Z,6μmcomp=Z,525nm,1.4s						
WOJI	**Wonogiri, Jawa**	**17.16**	**267**	P	**Pn**	**22 40 39.6**	**+0.5**
	comp=Z,4μmcomp=Z,320nm,1.0s						
AS31	**Alice Springs**	**17.22**	**162**		**Pn**	**22 40 39.2**	**-0.5**
ASAR	**Alice Springs**	**17.22**	**162**	P	**Pn**	**22 40 39.7**	**-0.1**
	comp=Z,4.0nm,0.3s,baz=330,slow=9.2,SNR=141						
ASAR				S	**Sn**	**22 43 42.9**	**-7.8**
	comp=Z,6.1nm,0.3s,baz=336,slow=18,SNR=6.8						
ASAR				LR	LR	22 47 37.1	
	comp=Z,33μm,20.6s,baz=333,slow=38						
ASAR	**Alice Springs**	**17.22**	**162**		**Pn**	**22 40 39.4**	**-0.4**
ASAR				S	**Sn**	**22 43 46.7**	**-4.0**
ASAR	**Alice Springs**	**17.22**	**162**	P	**Pn**	**22 40 39.4**	**-0.4**
ASAR				S	**Sn**	**22 43 46.7**	**-4.0**
QIS	**Mount Isa**	**17.22**	**141**	P	**Pn**	**22 40 39.2**	**-0.7**
	baz=17,SNR=27						
UGM	**Wanagama**	**17.56**	**267**	P	**Pn**	**22 40 39.1**	**-5.0**
UGM	**Wanagama**	**17.56**	**267**	P	**Pn**	**22 40 43.5**	**-0.6**
UGM				IAmb	IAmb	22 41 01.0	
	comp=Z,438nm,1.3s						
MSLP	**Maasin**	**17.59**	**349**	*e*P	**Pn**	**22 40 43.8**	**-0.5**
SMRI	**Semarang**	**17.65**	**270**	P	**Pn**	**22 40 45.5**	**+0.4**
	comp=Z,414nm,1.8s						
WRKA	**Warakurna**	**17.70**	**180**	P	**P**	**22 40 46.9**	**+0.4**
	baz=18,SNR=143						
KKM	**Kota Kinabalu**	**17.83**	**317**		**Pn**	**22 40 45.7**	**-1.7**
OCLP	**Ormoc**	**18.53**	**349**	*e*P	**Pn**	**22 40 58.7**	**+2.8**
GUIM	**Jordan**	**18.62**	**342**	*e*P	**Pn**	**22 40 57.9**	**+0.9**
SBUM	**Sibu**	**18.65**	**301**	P	**P**	**22 40 55.0**	**-2.0**
SBUM	**Sibu**	**18.65**	**301**	P	**Pn**	**22 41 01.0**	**+3.6**
PMG	**Port Moresby**	**18.86**	**98**	P	**Pn**	**22 41 01.5**	**+1.5**
	comp=Z,4.5nm,0.3s,baz=288,slow=9.0,SNR=63						
PMG				S	**Sn**	**22 44 25.5**	**-5.0**
	comp=Z,1.1nm,0.3s,baz=280,slow=21,SNR=1.4						
PMG				LR	LR	22 49 17.0	
	comp=Z,4μm,19.5s,baz=338,slow=40						
PMG	**Port Moresby**	**18.86**	**98**	P	**P**	**22 40 57.4**	**-1.9**
PMG				IAmb	IAmb	22 41 08.2	
	comp=Z,710nm,1.3s						
PMG	**Port Moresby**	**18.86**	**98**	*ce*P	**Pn**	**22 41 01.4**	**+1.5**
PMG				MLR	MLR		
	comp=Z,40μm,16.0s						
BATP	**Bataraza**	**19.02**	**327**	*e*P	**Pn**	**22 41 02.3**	**+0.4**
MTSU	**Mount Surprise**	**19.05**	**126**	P	**Pn**	**22 41 03.8**	**+1.6**
	baz=19,SNR=36						
KPJI	**Karang Pucung**	**19.14**	**269**	P	**P**	**22 40 59.9**	**-2.5**
	comp=Z,8μmcomp=Z,133nm,2.4s						
RCP	**Roxas**	**19.46**	**344**	⇑*e*P	**Pn**	**22 41 09.7**	**+2.6**
CMJI	**Cimerak**	**19.61**	**267**	P	**P**	**22 41 05.8**	**-1.8**
	comp=Z,6μmcomp=Z,230nm,1.1s						
MANU	**Manus Island**	**19.76**	**76**	P	**P**	**22 41 06.1**	**-3.1**
MANU				IAmb	IAmb	22 41 14.0	
	comp=Z,634nm,1.4s						
KSM	**Kuching**	**19.86**	**295**	P	**P**	**22 41 07.3**	**-3.0**
KSM	**Kuching**	**19.86**	**295**	P	**Pn**	**22 41 13.0**	**+1.0**
CNP	**Catarman**	**19.94**	**350**	*e*P	**Pn**	**22 41 14.0**	**+1.2**
CISI	**Cisompet, Garu**	**20.24**	**268**	P	**P**	**22 41 12.7**	**-1.8**
	comp=Z,6μmcomp=Z,290nm,1.3s						
CISI	**Cisompet, Garu**	**20.24**	**268**	P	**P**	**22 41 11.9**	**-2.6**
CISI				IAmb	IAmb	22 41 29.8	
	comp=Z,247nm,0.9s						
ENPP	**El Nido**	**20.31**	**334**	*e*P	Pn	22 41 16.9	-0.3
GIRL	**Giralia**	**20.39**	**220**	P	Pn	22 41 19.7	+1.6
	baz=20,SNR=18						
GIRL	**Giralia**	**20.39**	**220**	P	**P**	**22 41 13.9**	**-2.0**
OTRP	**Odiongan**	**20.43**	**342**	*e*P	Pn	22 41 20.1	+1.5
LEM	**Lembang**	**20.46**	**270**	P	Pn	22 41 18.1	-1.0
	comp=Z,121nm,0.9s,baz=44,slow=6.2,SNR=8.5						
LEM				S	**S**	**22 45 04.8**	**-0.4**
	comp=Z,17nm,0.4s,baz=344,slow=22,SNR=1.7						
LEM				LR	LR	22 50 36.4	
	comp=Z,17μm,19.3s,baz=84,slow=41						
LEM	**Lembang**	**20.46**	**270**	P	**P**	**22 41 17.5**	**+0.6**
	comp=Z,5μmcomp=Z,6μmcomp=Z,206nm,1.5s						
BUSP	**Coron**	**20.72**	**337**	*e*P	Pn	22 41 21.9	-0.1
CNJI	**Cibinong**	**20.93**	**268**	P	**P**	**22 41 20.5**	**-1.3**
	comp=Z,10μmcomp=Z,528nm,1.0s						
TPI	**Tanjungpandan**	**20.97**	**281**	P	Pn	22 41 25.5	+0.6
	comp=Z,11μmcomp=Z,9μmcomp=Z,267nm,1.7s						
PVCP	**Virac**	**21.09**	**349**	*e*P	**P**	**22 41 25.2**	**+1.6**
DBJI	**Dramaga**	**21.33**	**271**	P	**P**	**22 41 24.6**	**-1.6**
	comp=Z,12μmcomp=Z,274nm,1.3s						
MEEK	**Meekatharra**	**21.34**	**204**	P	**P**	**22 41 28.7**	**+2.4**
	baz=22,SNR=70						
SKJI	**Sukabumi**	**21.50**	**269**	P	**P**	**22 41 31.4**	**+3.4**
	comp=Z,7μmcomp=Z,10μmcomp=Z,335nm,0.8s						
BOAC	**Boac**	**21.52**	**343**	*e*P	**P**	**22 41 31.8**	**+3.6**
CTA	**Charters Tower**	**21.65**	**128**	P	**P**	**22 41 30.8**	**+1.2**
	comp=Z,39nm,1.1s,baz=302,slow=13,SNR=15						
CTA				S	**S**	**22 45 28.0**	**-0.3**
	comp=Z,5.2nm,0.7s,baz=70,slow=21,SNR=0.9						
CTA				LR	LR	22 50 46.5	
	comp=Z,16μm,18.8s,baz=310,slow=39						
CTAO	**Charters Tower**	**21.65**	**128**	IAMs_20	IAMs_20	22 50 35.7	
	comp=Z,20μm,20.0s						
LUBP	**Lubang**	**22.30**	**339**	*e*P	**P**	**22 41 38.3**	**+1.8**
TGY	**Tagaytay City**	**22.41**	**341**	P	**P**	**22 41 37.9**	**+0.2**
	comp=Z,127nm,0.4s,baz=248,slow=1.8,SNR=25						
TGY				LR	LR	22 52 35.2	
	comp=Z,5μm,19.4s,baz=141,slow=43						
POLP	**Polilio Island**	**22.70**	**344**	*e*P	**P**	**22 41 43.4**	**+2.5**
FORT	**Forrest**	**23.41**	**180**	P	**P**	**22 41 50.6**	**+2.6**
	baz=24,SNR=18						
FORT	**Forrest**	**23.41**	**180**	P	**P**	**22 41 46.4**	**-1.6**
KLSI		**23.50**	**275**	P	**P**	**22 41 45.8**	**-3.3**
	comp=Z,2μmcomp=Z,37nm,1.9s						
PMBI	**Palembang**	**23.75**	**279**	P	**P**	**22 41 54.0**	**+2.6**
	comp=Z,924nm,1.2s						
PMBI	**Palembang**	**23.75**	**279**	P	**P**	**22 41 50.2**	**-1.2**
BALP	**Baler**	**23.77**	**344**	*e*P	**P**	**22 41 52.3**	**+0.8**
KRVT	**Keravat (AS076**	**23.86**	**84**	P	**P**	**22 41 52.7**	**+0.2**
	comp=Z,58nm,0.5s,baz=164,slow=12,SNR=8.4						
KRVT				LR	LR	22 51 47.0	
	comp=Z,6μm,19.7s,baz=269,slow=38						
RABL	**Rabaul**	**24.01**	**84**	P	**P**	**22 41 53.9**	**0.0**
MDSI	**Maura Dua**	**24.07**	**275**	P	**P**	**22 41 52.9**	**-1.6**
	comp=Z,3μmcomp=Z,88nm,1.6s						

LWLI Liwa 24.13 274 P P 22 41 52.6 -2.5
comp=Z,87nm,1.9s
SCZP Santa Cruz 24.31 340 eP P 22 41 56.0 -0.5
QLP Quilpie 24.53 143 P P 22 42 00.8 +2.2
baz=25,SNR=83
MORW Morawa 24.56 206 P P 22 42 01.4 +2.6
baz=25,SNR=74
MORW Morawa 24.56 206 P P 22 41 57.2 -1.6
KMBL Kambalda 24.72 193 P P 22 42 02.7 +2.4
baz=25,SNR=42
CAUP Cauayan 24.85 345 eP P 22 42 02.9 +1.4
BOLP Bolinao 24.87 341 eP P 22 42 00.8 -0.8
BLDU Ballidu 25.64 203 P P 22 42 10.7 +2.2
baz=26,SNR=90
KSI Kapahiang 25.76 277 P P 22 42 11.0 +1.1
SZP Santa 25.80 343 P P 22 42 05.9 -4.2
SZP IAmb IAmb 22 42 22.0
comp=Z,138nm,0.8s
APYP Conner 25.88 345 eP P 22 42 09.9 -0.9
MYKOM Kota Tinggi 25.92 289 P P 22 42 07.7 -3.7
MYKOM Kota Tinggi 25.92 289 P P 22 42 15.0 +3.7
SGCP Mt. Cagua 26.05 347 eP P 22 42 17.6 +5.2
KLBR Kellerberrin 26.12 201 P P 22 42 15.3 +2.4
baz=26,SNR=75
SIPP Brgy, Tapao 26.16 343⇑eP P 22 42 16.1 +2.8
BBOO Buckleboo 26.46 165 P P 22 42 18.3 +2.4
baz=27,SNR=45
BBOO Buckleboo 26.46 165 P P 22 42 15.2 -0.8
BBOO IAmb IAmb 22 42 20.0
comp=Z,183nm,1.2s
GUMO Guam 26.49 39 P P 22 42 17.6 +1.2
comp=Z,343nm,1.0s,baz=186,slow=6.3,SNR=7.2
GUMO Guam 26.49 39 P P 22 42 13.5 -2.9
GUMO Guam 26.49 39 P P 22 42 13.5 -2.9
GUMO pmax pmax
comp=Z,485nm,1.1s
MUN Mundaring 27.04 203 P P 22 42 23.3 +2.1
baz=27,SNR=20
KRJI Kerinci 27.15 280 P P 22 42 23.2 +0.7
comp=Z,7µmcomp=Z,14µmcomp=Z,420nm,1.1s
RMQ Roma 27.35 137 P P 22 42 26.7 +2.7
baz=27,SNR=7.4
DLV T Lat 27.36 314 P P 22 42 21.6 -2.8
SDSI Sungai Dareh 27.44 282 P P 22 42 25.8 +0.8
comp=Z,11µmcomp=Z,354nm,2.7s
STKA Stephens Creek 27.50 155 P P 22 42 27.4 +2.0
baz=28,SNR=46
STKA Stephens Creek 27.50 155 P P 22 42 27.2 +2.0
comp=Z,42nm,0.7s,baz=327,slow=9.6,SNR=59
STKA S S 22 47 19.8 +15
comp=Z,12nm,0.8s,baz=323,slow=23,SNR=1.8
STKA LR LR 22 54 13.7
comp=Z,25µm,19.6s,baz=324,slow=38
STKA Stephens Creek 27.50 155 P P 22 42 25.5 +0.1
STKA Stephens Creek 27.50 155 P P 22 42 25.5 +0.1
STKA pmax pmax
comp=Z,23nm,1.1s
STKA MLR MLR
comp=Z,5µm,19.0s
NWAO Narrogin (SRO) 27.52 200 P P 22 42 27.8 +2.3
baz=28,SNR=24
NWAO Narrogin (SRO) 27.52 200 P P 22 42 27.6 +2.0
comp=Z,108nm,0.9s,baz=30,slow=8.5,SNR=26
NWAO S S 22 47 09.6 +4.4
comp=Z,19nm,1.0s,baz=13,slow=13,SNR=1.3
NWAO LR LR 22 55 08.8
comp=Z,14µm,18.9s,baz=24,slow=40
NWAO Narrogin (SRO) 27.52 200 P P 22 42 23.9 -1.6
NWAO Narrogin (SRO) 27.52 200 P P 22 42 27.3 +1.8
NWAO IAmb IAmb 22 42 32.2
comp=Z,211nm,1.1s
NWAO Narrogin (SRO) 27.52 200 P P 22 42 28.3 +2.8
NWAO Narrogin (SRO) 27.52 200 P P 22 42 23.9 -1.6
NWAO S S 22 47 09.6 +4.4
NWAO pmax pmax
comp=Z,240nm,1.1s
NWAO MLR MLR
comp=Z,15µm,18.0s
HTT Hallett 27.88 161 P P 22 42 31.4 +2.6
baz=28,SNR=26
JRMM Jerantut 27.97 292 P P 22 42 33.0 +3.2
BKNI Bangkinang 28.14 284 P P 22 42 33.2 +1.9
comp=Z,6µmcomp=Z,205nm,1.1s
BKNI pP sP 22 42 39.1 -1.0
comp=Z,6µmcomp=Z,205nm,1.1s
BKNI Bangkinang 28.14 284 P P 22 42 28.9 -2.4
EIDS Eidsvold 28.30 132 P P 22 42 32.5 -0.1
EIDS IAMs_20 IAMs_20 22 54 35.0
comp=Z,12µm,18.0s
PDSI Padang 28.38 282 P P 22 42 32.6 -0.9
comp=Z,3µmcomp=Z,2µmcomp=Z,40nm,1.3s
RKGY Rocky Gully 29.14 199 P P 22 42 42.1 +2.2
baz=29,SNR=16
CMSA Cobar Meteorol 29.16 148 P P 22 42 42.4 +2.3
baz=29,SNR=57
SARN Sarigan 29.45 36 P P 22 42 41.8 -1.1
IPM Ipoh 29.54 292 P P 22 42 41.2 -2.5
IPM Ipoh 29.54 292 P P 22 42 47.0 +3.3
SISI Saibi 29.63 280 P P 22 42 44.0 -0.5
comp=Z,2µmcomp=Z,43nm,2.6s
KULM Kulim 30.20 294 P P 22 42 47.3 -2.3
KULM IAmb IAmb 22 42 56.9
comp=Z,35nm,0.6s
KULM Kulim 30.20 294 P P 22 42 52.0 +2.4
TWG Pinlang 30.69 347 P P 22 42 51.2 -2.5
TWG IAmb IAmb 22 43 03.6
comp=Z,104nm,1.0s
RPSI Rantau Prapat 30.86 288 S S 22 47 54.4 -3.7
PSI Prapat 30.90 288 P P 22 42 55.9 0.0
comp=Z,159nm,1.0s,baz=138,slow=8.4,SNR=70
PSI S S 22 47 54.4 -4.5
comp=Z,1.6nm,0.4s,baz=101,slow=23,SNR=1.2
TPUB Ta-pu 31.25 346 P P 22 42 55.9 -2.8
TPUB IAmb IAmb 22 43 05.1
comp=Z,61nm,1.2s
HNR Honiara 31.46 96 P P 22 43 01.7 +1.1
comp=Z,39nm,0.3s,baz=156,slow=14,SNR=5.2
HNR LR LR 22 57 05.9
comp=Z,2µm,18.1s,baz=282,slow=39
HNR Honiara 31.46 96 P P 22 42 58.1 -2.5
HNR Honiara 31.46 96 P P 22 42 58.1 -2.5
HNR pmax pmax
comp=Z,392nm,1.2s
SSLB Suanglung 31.65 347 P P 22 43 00.3 -1.9
SSLB IAmb IAmb 22 43 12.2
comp=Z,72nm,1.3s
UBPT Khong Chiam 31.77 315 P P 22 43 01.4 -1.9
UBPT IAmb IAmb 22 43 09.0
comp=Z,86nm,1.2s
QIZ Qiongzhong 31.78 325 P P 22 43 03.9 +0.5
QIZ PP PP 22 44 16.9 +1.4
QIZ S S 22 48 10.0 -2.3
QIZ pmax pmax
comp=Z,2µm,5.3s
QIZ LR LR
comp=Z,2µm,16.8s
QIZ LR LR
comp=Z,3µm,9.6s
QIZ LR LR
comp=Z,3µm,13.1s
QIZ Qiongzhong 31.78 325 P P 22 43 02.3 -1.1
ARMA Armidale 31.83 139 P P 22 43 05.2 +1.3
YHNB Yeheng 32.41 348 P P 22 43 07.8 -1.2
YHNB IAmb IAmb 22 43 23.0
comp=Z,76nm,1.2s
YNG Young 32.73 148 P P 22 43 14.7 +3.0
baz=33,SNR=16
PATS Pohnpei 33.11 66 P P 22 43 13.4 -1.8
PATS IAmb IAmb 22 43 19.7
comp=Z,124nm,1.3s
QZH Quanzhou 33.34 344⇓iP PP 22 43 19.2 +2.2
QZH PP PnPn 22 44 29.5 +1.5
QZH S S 22 48 37.1 +0.7
QZH pmax pmax
comp=Z,2µm,10.4s
QZH LR LR
comp=Z,2µm,11.4s
QZH LR LR
comp=Z,4µm,13.3s
QZH LR LR
comp=Z,4µm,22.5s
GZH Guangzhou 33.48 335 P P 22 43 22.9 +4.7
GZH S S 22 48 45.7 +7.1
GZH pmax pmax
comp=Z,2µm,6.2s
LHMI Lhok Sumawe 33.58 291 P P 22 43 19.9 +0.6

comp=Z,8µmcomp=Z,11µmcomp=Z,374nm,1.2s
CAN Canberra 33.83 149 IAmb IAmb 22 43 41.7
comp=Z,47nm,0.8s
JOW Kunigami 33.87 0 P P 22 43 22.6 +1.0
comp=Z,10nm,0.9s,baz=180,slow=13,SNR=5.4
JOW Kunigami 33.87 0 IAmb IAmb 22 43 31.3
comp=Z,119nm,1.0s
TOO Toolangi 34.02 155 P P 22 43 27.1 +4.2
baz=34,SNR=12
TOO Toolangi 34.02 155 P P 22 43 22.7 -0.2
TOO Toolangi 34.02 155 P P 22 43 22.7 -0.2
TOO pmax pmax
comp=Z,268nm,1.5s
TOO MLR MLR
comp=Z,22µm,18.0s
JCJ Chichijima 36.72 21 P P 22 43 46.8 +0.7
comp=Z,440nm,1.0s,baz=284,slow=9.3,SNR=6.3
JCJ LR LR 22 58 49.0
comp=Z,3µm,18.2s,baz=202,slow=36
CMBY CAMPBELL BAY 37.02 292 eP P 22 43 46.9 -2.0
CMBY IAmb IAmb 22 43 52.7
comp=Z,86nm,0.7s
SLVN Son La 37.10 320 P P 22 43 48.0 -1.5
SLVN IAmb IAmb 22 44 00.1
comp=Z,112nm,1.5s
LHI Lord Howe Isla 37.56 134 IAMs_20 IAMs_20 22 57 57.2
comp=Z,7µm,20.0s
CM31 Chiang Mai Arr 38.56 312 P P 22 44 03.1 +1.2
CM31 P P 22 44 03.1 +1.2
CMAR Chiang Mai Arr 38.56 312 P P 22 44 02.4 +0.5
comp=Z,4.4nm,0.7s,baz=140,slow=6.7,SNR=38
CMAR PcP PcP 22 46 15.2 +0.8
comp=Z,6.8nm,0.9s,baz=175,slow=2.4,SNR=4.6
CMAR LR LR 23 00 57.2
comp=Z,5µm,20.9s,baz=134,slow=38
SSE Sheshan 38.71 350 IAmb IAmb 22 44 07.0
comp=Z,119nm,1.4s
CHTO Chiang Mai 38.78 312 P P 22 44 01.5 -2.2
CHTO Chiang Mai 38.78 312 P P 22 44 01.5 -2.2
CHTO pmax pmax
comp=Z,38nm,1.0s
CHTO MLR MLR
comp=Z,5µm,19.0s
MOO Moorlands 38.85 157 P P 22 44 07.5 +3.5
baz=39,SNR=4.1
SANVU Saraoutou 39.02 106 P P 22 44 04.6 -1.1
SANVU PcP PcP 22 46 12.5 -3.3
TAU Tasmania Unive 39.31 158 P P 22 44 07.7 -0.1
TAU IAmb IAmb 22 44 17.1
comp=Z,173nm,1.4s
TAU Tasmania Unive 39.31 158 P P 22 44 07.7 -0.1
TAU pmax pmax
comp=Z,173nm,1.4s
TAU MLR MLR
comp=Z,17µm,19.0s
GYA Guiyang 39.50 329⇑iP P 22 44 10.8 +1.1
GYA PP PnPn 22 45 48.6 +4.9
GYA S S 22 50 11.8 +1.0
GYA pmax pmax
comp=Z,60nm,1.3s
GYA pmax pmax
comp=Z,2µm,4.5s
GYA LR LR
comp=Z,2µm,16.3s
GYA LR LR
comp=Z,2µm,11.0s
GYA LR LR
comp=Z,3µm,15.4s
NOUC Port Laguerre 39.55 116 P P 22 44 09.3 -0.8
DZM Mont Dzumac 39.66 116 eP P 22 44 12.0 +0.8
comp=Z,209nm,1.6s
DZM eS S 22 50 09.2 -4.3
comp=Z,5µm,30.4s
DZM eLQ LQ 22 53 13.2
comp=Z,6µm,24.4s
DZM eLR LR 22 55 01.6
comp=Z,9µm,36.0s
DZM Mont Dzumac 39.66 116 LR LR 23 00 51.0
comp=Z,2µm,18.5s,baz=292,slow=37
DZM Mont Dzumac 39.66 116 P P 22 44 11.2 0.0
WHN Wuhan 39.86 341 ⇑P P 22 44 13.8 +1.3
WHN pP sP 22 44 21.2 -0.4
WHN PP PnPn 22 45 52.7 +4.9
WHN pmax pmax
comp=Z,190nm,1.2s
WHN pmax pmax
comp=Z,3µm,4.3s
WHN LR LR
comp=Z,8µm,21.3s
WHN LR LR
comp=Z,3µm,10.5s
WHN LR LR
comp=Z,9µm,21.0s
PBA Port Blair 39.98 298 P P 22 44 11.1 -2.6
PBA IAMs_20 IAMs_20 23 02 11.7
comp=Z,6µm,20.0s
NJ2 Nanjing 40.09 348 eP P 22 44 15.2 +0.9
NJ2 sP sP 22 44 22.9 -0.5
NJ2 PP PnPn 22 45 55.0 +4.6
NJ2 pmax pmax
comp=Z,61nm,1.4s
NJ2 pmax pmax
comp=Z,2µm,5.9s
NJ2 LR LR
comp=Z,3µm,20.8s
NJ2 LR LR
comp=Z,2µm,19.0s
NJ2 LR LR
comp=Z,4µm,24.1s
JNU Nakatsue 40.22 3 P P 22 44 15.8 +0.2
comp=Z,82nm,1.1s,baz=262,slow=0.8,SNR=10
JNU LR LR 22 59 50.5
comp=Z,3µm,19.1s,baz=158,slow=35
JNU Nakatsue 40.22 3 IAmb IAmb 22 44 19.8
comp=Z,85nm,1.0s
KMI Kunming 40.63 323 IAmb IAmb 22 44 25.3
comp=Z,149nm,1.4s
ENH Enshi 41.41 335 IAMs_20 IAMs_20 23 03 42.4
comp=Z,6µm,20.0s
INU Inuyama 43.17 11 IAmb IAmb 22 44 48.9
comp=Z,137nm,1.0s
INU IAMs_20 IAMs_20 23 01 43.6
comp=Z,5µm,20.0s
TJN Taejon 43.40 359c iP P 22 44 42.5 +1.1
KSAR Wonju Array Be 44.45 360 P P 22 44 48.0 -1.8
KSAR Wonju Array Be 44.45 360 P P 22 44 48.0 -1.8
KSRS Korea Array 44.47 360 P P 22 44 51.5 +1.5
comp=Z,74nm,1.0s,baz=178,slow=10,SNR=76
KSRS PcP PP 22 46 34.0 0.0
comp=Z,4.7nm,0.8s,baz=196,slow=4.1,SNR=3.2
KSRS LR LR 23 01 24.1
comp=Z,5µm,21.8s,baz=165,slow=34
TIA Tai'an 44.47 347 P P 22 44 49.6 -0.4
TIA S S 22 51 21.9 -1.9
TIA pmax pmax
comp=Z,2µm,5.2s
TIA LR LR
comp=Z,2µm,12.9s
TIA LR LR
comp=Z,1µm,11.7s
TIA LR LR
comp=Z,2µm,14.1s
KS19 Wonju Array Si 44.51 360 P P 22 44 48.5 -1.9
KS19 IAmb IAmb 22 44 55.1
comp=Z,80nm,0.9s
INCN Inchon 44.52 358 P P 22 44 47.5 -2.9
INCN IAmb IAmb 22 44 53.3
comp=Z,175nm,1.2s
INCN Inchon 44.52 358 IAMs_20 IAMs_20 23 01 35.6
comp=Z,6µm,20.0s
INCN Inchon 44.52 358 P P 22 44 51.7 +1.3
INCN Inchon 44.52 358 P P 22 44 47.5 -2.9
INCN pmax pmax
comp=Z,175nm,1.3s
INCN MLR MLR
comp=Z,6µm,20.0s
MJAR Matsushiro Arr 44.55 11 P P 22 44 50.5 -0.3
comp=Z,203nm,0.9s,baz=188,slow=9.2,SNR=134
MJAR LR LR 23 01 39.0
comp=Z,4µm,21.8s,baz=185,slow=34
MJAR Matsushiro Arr 44.55 11 P P 22 44 48.4 -2.3
MJAR Matsushiro Arr 44.55 11 P P 22 44 48.4 -2.3
MJAR pmax pmax
comp=Z,38nm,0.9s
MAJO Matsushiro 44.55 11 P P 22 44 49.4 -1.3
MAJO Matsushiro 44.55 11c iP P 22 44 50.3 -0.4

MAJO pmax pmax
comp=Z,269nm,1.0s
MAJO MLR MLR
comp=Z,3µm,18.0s
MAT Matsushiro 44.55 11 P P 22 44 50.2 -0.5
MAT S S 22 51 24.6 -0.4
MJB9 Matsu-Tunnel 44.55 11 IAMs_20 IAMs_20 23 01 05.8
comp=Z,5µm,20.0s
CD2 Chengdu 44.59 330⇑iP P 22 44 51.5 +0.3
CD2 pP pP 22 44 56.5 -1.2
CD2 PP PP 22 46 37.7 +2.1
CD2 pmax pmax
comp=Z,90nm,1.3s
CD2 pmax pmax
comp=Z,2µm,5.0s
CD2 LR LR
comp=Z,5µm,15.1s
CD2 LR LR
comp=Z,5µm,27.7s
CD2 LR LR
comp=Z,6µm,30.4s
XAN Xi'an 44.95 337 P P 22 44 53.5 -0.5
XAN PcP PcP 22 46 36.4 +1.3
XAN PP PP 22 46 40.7 +1.4
XAN pmax pmax
comp=Z,51nm,1.3s
XAN pmax pmax
comp=Z,1µm,5.5s
XAN LR LR
comp=Z,3µm,16.3s
XAN LR LR
comp=Z,2µm,12.9s
XAN LR LR
comp=Z,4µm,20.6s
XAN Xi'an 44.95 337 IAmb IAmb 22 44 55.2
comp=Z,115nm,1.4s
DL2 Dalian 46.32 353⇑iP P 22 45 04.4 -0.2
DL2 PP PP 22 46 52.6 -1.2
DL2 S S 22 51 50.5 +0.1
DL2 pmax pmax
comp=Z,53nm,1.1s
DL2 pmax pmax
comp=Z,2µm,5.6s
DL2 LR LR
comp=Z,2µm,18.2s
DL2 LR LR
comp=Z,3µm,18.3s
DL2 LR LR
comp=Z,4µm,17.8s
SHL Shillong 48.08 314 eP P 22 45 18.1 -0.8
SHL IAmb IAmb 22 45 33.9
comp=Z,74nm,1.6s
SHL Shillong 48.08 314 P P 22 45 16.6 -2.3
SHL IAmb IAmb 22 45 24.6
comp=Z,34nm,1.0s
SHL Shillong 48.08 314 P P 22 45 19.4 +0.5
SHL Shillong 48.08 314 P P 22 45 16.6 -2.3
SHL pmax pmax
comp=Z,35nm,1.0s
TEZP TEZPUR 48.09 316 eP P 22 45 18.6 -0.1
BJT Baijiatuau 48.33 348 IAmb IAmb 22 45 33.2
comp=Z,40nm,1.0s
BJI Beijing 48.35 348⇑iP P 22 45 20.4 0.0
BJI pP pP 22 45 26.5 -0.4
BJI sP sP 22 45 28.4 -1.1
BJI PcP PcP 22 46 49.6 +2.8
BJI PP PP 22 47 12.1 -1.1
BJI S S 22 52 21.1 +1.9
BJI ScS ScS 22 55 13.1 +1.2
BJI pmax pmax
comp=Z,36nm,1.3s
BJI LR LR
comp=Z,2µm,25.5s
BJI LR LR
comp=Z,2µm,24.3s
BJI LR LR
comp=Z,4µm,31.0s
LZH Lanzhou 48.81 334 ⇑P P 22 45 25.6 +1.3
LZH pP pP 22 45 30.1 -0.8
LZH PP PP 22 47 18.3 +0.5
LZH S S 22 52 24.7 -1.7
LZH sS sS 22 52 36.2 -0.5
LZH SS SS 22 55 52.6 -4.7
LZH pmax pmax
comp=Z,160nm,1.1s
LZH pmax pmax
comp=Z,3µm,6.5s
LZH LR LR
comp=Z,3µm,16.3s
LZH LR LR
comp=Z,3µm,18.1s
LZH LR LR
comp=Z,4µm,18.4s
PALK Pallekele 49.54 286 i P P 22 45 30.3 +0.2
SNR=8.6
PALK Pallekele 49.54 286 P P 22 45 28.9 -1.2
PALK IAmb IAmb 22 45 42.1
comp=Z,49nm,1.1s
PALK Pallekele 49.54 286 P P 22 45 30.0 -0.1
PALK Pallekele 49.54 286⇑iP P 22 45 29.0 -1.2
PALK pmax pmax
comp=Z,36nm,1.3s
PALK MLR MLR
comp=Z,4µm,17.0s
MSVF Nonsavu 49.62 107 P P 22 45 29.8 -0.9
MSVF Nonsavu 49.62 107⇓iP P 22 45 32.2 +1.5
MSVF pmax pmax
comp=Z,21nm,1.0s
MSVF MLR MLR
comp=Z,2µm,18.0s
MSHR Mys Shultsa 49.66 3c eP P 22 45 31.8 +1.4
BWNR Bhubaneshwar 49.89 304⇑iP P 22 45 30.2 -2.3
OUZ Omahuta 50.02 130 P P 22 45 34.5 +1.2
HHC Hu-ho-hao-te 50.25 344 eP P 22 45 39.1 +4.0
HHC PP PP 22 47 35.6 +4.8
HHC S S 22 52 50.1 +3.9
HHC pmax pmax
comp=Z,1µm,6.6s
HHC LR LR
comp=Z,780nm,19.4s
HHC LR LR
comp=Z,850nm,16.5s
BTO Baotou 50.48 342 eP P 22 45 37.5 +0.7
CHLP Challavanipeta 50.52 301 eP P 22 45 38.0 +0.6
CHLP IAmb IAmb 22 45 46.4
comp=Z,29nm,1.1s
CHLP eS S 22 52 50.1 -0.3
CHLP IVMs_BB IVMs_BB 23 02 49.3
comp=Z,555nm,39.5s
ERM Erimo 50.89 14 P P 22 45 38.5 -1.3
ERM IAmb IAmb 22 45 49.5
comp=Z,113nm,0.8s
ERM Erimo 50.89 14⇓iP P 22 45 41.8 +2.1
ERM pmax pmax
comp=Z,101nm,1.0s
LSA Lhasa 51.17 318 P P 22 45 44.3 +1.6
LSA pP pwP 22 45 53.2 -0.6
LSA PcP PcP 22 46 52.5 -5.6
LSA S S 22 53 02.6 +2.5
LSA pmax pmax
comp=Z,230nm,0.7s
LSA LR LR
comp=Z,6µm,29.9s
LSA LR LR
comp=Z,5µm,32.7s
LSA LR LR
comp=Z,18µm,39.9s
LSA Lhasa 51.17 318 P P 22 45 43.9 +1.2
LSA Lhasa 51.17 318 IAmb IAmb 22 45 54.1
comp=Z,96nm,1.1s
LSA Lhasa 51.17 318 P P 22 45 44.6 +1.9
USA0B Ussuriysk Arra 51.32 3 IAmb IAmb 22 45 52.5
comp=Z,120nm,0.9s
USA0B Ussuriysk Arra 51.32 3c iP P 22 45 44.1 +1.2
USRK Ussuriysk Ar. 51.32 3 P P 22 45 44.0 +1.0
comp=Z,61nm,0.7s,baz=185,slow=6.4,SNR=77
USRK Ussuriysk Ar. 51.32 3 P P 22 45 42.4 -0.5
USRK Ussuriysk Ar. 51.32 3 P P 22 45 42.4 -0.5
GTK Tadong 51.48 314 eP P 22 45 43.1 -1.6
WHZ Wether Hill Ro 51.49 145 IAmb IAmb 22 45 50.4
comp=Z,51nm,1.0s
BOK Bokaro 51.57 308⇑iP P 22 45 45.9 +0.6
BOK IAmb IAmb 22 45 55.9
comp=Z,430nm,2.9s
MDJ Mudanjiang 51.63 1 P P 22 45 46.5 +1.2

MDJ pP pP 22 45 52.4 +0.5
MDJ sP sP 22 45 54.5 +0.1
MDJ PcP **PcP** **22 46 57.5 -1.3**
MDJ PP **PP** **22 47 44.9 +1.8**
MDJ ScP **ScP** **22 50 53.4 -0.8**
MDJ PcS **PcS** **22 50 55.9 -0.7**
MDJ S **S** **22 53 12.1 +7.1**
MDJ sS sS 22 53 21.8 +6.0
MDJ ScS **ScS** **22 55 35.2 +1.1**
MDJ pmax pmax
comp=Z,170nm,1.1s
MDJ pmax pmax
comp=Z,4μm,10.7s
MDJ LR LR
comp=Z,2μm,20.6s
MDJ LR LR
comp=Z,2μm,19.2s
MDJ LR LR
comp=Z,9μm,24.6s
MDJ Mudanjiang 51.63 1 IAMs_20 IAMs_20 23 04 09.2
comp=Z,4μm,20.0s
PVM Polavaram 52.09 298 eP **P** **22 45 49.7 +0.5**
PVM IAmb IAmb 22 45 53.1
comp=Z,1μm,4.1s
PVM eS **S** **22 53 10.7 -1.4**
PVM IVMs_BB IVMs_BB 23 04 37.2
comp=Z,403nm,31.4s
ODAN Odare 52.10 312 eP **P** **22 45 48.1 -1.3**
RPZ Rata Peaks 52.13 141 P **P** **22 45 51.6 +2.4**
comp=Z,75nm,0.8s,baz=248,slow=2.8,SNR=27
RPZ Rata Peaks 52.13 141 P **P** **22 45 50.9 +1.7**
RPZ IAmb IAmb 22 46 06.8
comp=Z,104nm,0.9s
TAPN Taplejung 52.15 313 eP **P** **22 45 48.5 -1.3**
comp=Z,212nm,1.1s
SKHT Srikalahasti 52.48 293 eP **P** **22 45 52.5 +0.4**
SKHT IAmb IAmb 22 45 55.0
comp=Z,275nm,2.3s
SKHT eS **S** **22 53 15.8 -1.8**
SKHT IVMs_BB IVMs_BB 23 08 24.8
comp=Z,534nm,18.6s
TEY Ternei 52.58 7⇑iP **P** **22 45 53.6 +1.3**
TEY e 22 53 20.4
TEY pmax pmax
comp=E,10.0nm,4.5s
TEY MLR MLR
comp=Z,100nm,17.0s
RAMN Ramite 52.73 312 eP **P** **22 45 53.5 -0.6**
ASAJ Asahikawa 52.75 13 P **P** **22 45 54.5 +0.9**
comp=Z,108nm,0.9s,baz=234,slow=12,SNR=32
MYLAV Mylavaram 52.76 297 eP **P** **22 45 54.8 +0.6**
MYLAV IAmb IAmb 22 45 57.2
comp=Z,185nm,2.0s
MYLAV eS **S** **22 53 18.9 -2.3**
MYLAV IVMs_BB IVMs_BB 23 05 00.1
comp=Z,331nm,23.3s
ADKI Addanki 53.00 296 eP **P** **22 45 56.2 +0.2**
ADKI IAmb IAmb 22 45 57.8
comp=Z,209nm,2.1s
ADKI eS **S** **22 53 23.4 -1.2**
ADKI IVMs_BB IVMs_BB 23 10 21.6
comp=Z,396nm,18.1s
KHZ Kahutara 53.07 139 eP **P** **22 45 56.5 +0.4**
GTA Gaotai 53.36 333 ⇑P **P** **22 45 59.3 +0.9**
GTA pP pP 22 46 03.7 -1.3
GTA sP sP 22 46 06.3 -1.4
GTA S **S** **22 53 29.4 +0.3**
GTA sS sS 22 53 39.6 +0.2
GTA SS **SS** **22 57 11.0 +1.5**
GTA pmax pmax
comp=Z,86nm,1.2s
GTA pmax pmax
comp=Z,2μm,4.4s
GTA LR LR
comp=Z,2μm,20.6s
GTA LR LR
comp=Z,2μm,21.6s
GTA LR LR
comp=Z,3μm,23.5s
JIRN Jiri 53.43 312 eP **P** **22 45 58.3 -1.1**
TRD Trivandrum 53.44 286 eP **P** **22 45 59.7 +0.4**
YUK Yuzh-Kuril'sk 53.48 16c iP **P** **22 45 59.9 +1.0**
YUK iS S 22 53 39.2 +9.1
YUK e 22 55 48.1
YUK eSS **SKiKP** **22 57 13.9 +0.1**
YUK eSSS SSS 22 59 01.7
YUK pmax pmax
comp=Z,848nm,0.9s
YUK pmax pmax
comp=E,167nm,1.1s
YUK pmax pmax
comp=N,164nm,1.3s
YUK MLR MLR
comp=Z,2μm,18.0s
GGR Gangavaram 53.56 298 eP **P** **22 46 00.2 0.0**
GGR IAmb IAmb 22 46 18.0
comp=Z,102nm,1.5s
GGR eS **S** **22 53 31.3 -1.0**
GGR IVMs_BB IVMs_BB 23 05 21.0
comp=Z,481nm,21.4s
URZ Urewera 53.79 133 P **P** **22 46 02.5 +1.1**
comp=Z,5.3nm,0.5s,baz=160,slow=2.3,SNR=3.6
URZ Urewera 53.79 133 IAMs_20 IAMs_20 23 07 59.4
comp=Z,5μm,21.0s
GUN Gumba 53.80 312 eP **P** **22 46 01.0 -1.1**
comp=Z,268nm,1.0s
NJS Nagarjunasagar 53.86 296 eP **P** **22 46 02.1 -0.1**
NJS IAmb IAmb 22 46 03.5
comp=Z,380nm,2.7s
NJS eS **S** **22 53 32.9 -3.3**
NJS IVMs_BB IVMs_BB 23 06 02.8
comp=Z,310nm,20.0s
PKI Pulchoki 53.96 312 eP **P** **22 46 01.6 -1.6**
comp=Z,143nm,1.2s
PKIN Phulchoki 53.97 312 eP **P** **22 46 01.9 -1.4**
comp=Z,98nm,1.1s
SRLM Srisailam 54.06 296 eP **P** **22 46 03.5 -0.3**
SRLM IAmb IAmb 22 46 06.1
comp=Z,322nm,2.5s
SRLM eS **S** **22 53 35.4 -3.7**
SRLM IVMsBB 23 12 44.1
comp=Z,349nm,18.1s
KKN Kakani 54.17 312 eP **P** **22 46 03.5 -1.2**
DMN Daman 54.20 312 eP **P** **22 46 04.0 -0.9**
comp=Z,328nm,1.4s
RPR Rampur 54.76 299 eP **P** **22 46 09.2 +0.4**
RPR IAmb IAmb 22 46 10.4
comp=Z,197nm,1.8s
RPR IVMs_BB IVMs_BB 23 04 42.7
comp=Z,336nm,55.1s
GKN Gorkha 54.77 312 eP **P** **22 46 07.4 -1.5**
HYB Hyderabad 54.85 297 iP **P** **22 46 08.0 -1.5**
comp=Z,286nm,1.5s
HYB eS **S** **22 53 48.0 -1.7**
HYB Hyderabad 54.85 297⇑iP **P** **22 46 06.4 -3.1**
HYB IAmb IAmb 22 46 27.2
comp=Z,104nm,1.4s
HYBB Hyderabad (bro 54.85 297 eP **P** **22 46 09.2 -0.3**
HYBB IAmb IAmb 22 46 10.6
comp=Z,178nm,1.8s
HYBB eS **S** **22 53 47.9 -1.9**
HYBB IVMsBB 23 03 45.6
comp=Z,228nm,9.5s
HYBB IVMs_BB IVMs_BB 23 03 45.8
comp=Z,323nm,21.1s
URV Uravakonda 55.12 294 eP **P** **22 46 11.0 -0.5**
URV IAmb IAmb 22 46 12.3
comp=Z,345nm,2.4s
URV eS **S** **22 53 50.5 -2.9**
URV IVMs_BB IVMs_BB 23 10 01.8
comp=Z,807nm,20.1s
KUR Kuril'sk 55.14 17c iP **P** **22 46 12.2 +1.2**
KUR e 22 47 08.0
KUR e 22 48 11.2
KUR iS **S** **22 53 51.7 -0.8**
KUR pmax pmax
comp=Z,352nm,1.4s
KUR pmax pmax
comp=Z,3μm,6.5s
KUR MLR MLR
comp=Z,2μm,21.0s
KUR MLR MLR
comp=N,2μm,14.0s
KOLN Koldanda 55.41 311 eP **P** **22 46 12.3 -1.4**
comp=N,1μm,1.6s

YSS Yuzh-Sakhalins 55.48 12 P **P** **22 46 14.5 +1.0**
YSS IAmb IAmb 22 46 18.1
comp=Z,103nm,1.1s
YSS Yuzh-Sakhalins 55.48 12c eP **P** **22 46 13.4 -0.1**
YSS eS **S** **22 53 55.0 -2.1**
YSS eSS **SS** **22 57 43.0 +0.6**
YSS pmax pmax
comp=Z,110nm,0.8s
YSS pmax pmax
comp=Z,3μm,6.4s
YSS pmax pmax
comp=N,1μm,4.3s
YSS pmax pmax
comp=E,700nm,4.8s
YSS MLR MLR
comp=Z,2μm,15.0s
YSS MLR MLR
comp=N,1μm,18.0s
YSS MLR MLR
comp=E,1μm,14.0s
DANN Dangsing 55.60 312 eP **P** **22 46 13.6 -1.5**
comp=E,221nm,0.9s
SRSP Sriramsagar 55.61 299 eP **P** **22 46 14.6 -0.4**
SRSP IAmb IAmb 22 46 16.1
comp=Z,148nm,1.8s
SRSP eS **S** **22 53 55.9 -4.0**
SRSP IVMs_BB IVMs_BB 23 05 30.7
comp=Z,323nm,23.5s
KAAM Kaadhehdhoo 55.62 276 IAMs_20 IAMs_20 23 09 22.4
comp=Z,3μm,21.0s
NGP Nagpur 55.91 301 iP **P** **22 46 16.7 -0.4**
NGP IAmb IAmb 22 46 26.6
comp=Z,16nm,0.7s
NGP iS **S** **22 54 04.8 +1.1**
JBP Jabalpur 56.01 304⇑eP **P** **22 46 20.3 +2.6**
JBP eS **S** **22 54 05.5 +0.6**
KLR Kul'dur 56.32 3 P **P** **22 46 20.5 +1.0**
comp=Z,66nm,1.2s,baz=201,slow=5.2,SNR=59
KLR Kul'dur 56.32 3c iP **P** **22 46 20.3 +0.8**
KLR pmax pmax
comp=Z,81nm,1.3s
KLR MLR MLR
comp=Z,2μm,18.0s
HIA Hailar 56.76 353 IAMs_20 IAMs_20 23 10 11.6
comp=Z,4μm,20.0s
KLRI Killari 56.82 297 eP **P** **22 46 22.9 -0.8**
KLRI IAmb IAmb 22 46 24.5
comp=Z,817nm,3.1s
KLRI eS **S** **22 54 14.7 -1.3**
KLRI IVMs_BB IVMs_BB 23 01 06.9
comp=Z,380nm,13.0s
ULN Ulaanbaatar 57.97 343 P **P** **22 46 30.6 -0.8**
ULN IAmb IAmb 22 46 35.3
comp=Z,112nm,1.1s
ULN Ulaanbaatar 57.97 343 P **P** **22 46 32.9 +1.6**
ULN Ulaanbaatar 57.97 343 P **P** **22 46 30.6 -0.8**
ULN pmax pmax
comp=Z,112nm,1.1s
ULN MLR MLR
comp=Z,2μm,20.0s
SONM Songino Array 58.13 343 P **P** **22 46 33.6 +1.1**
comp=Z,51nm,0.9s,baz=158,slow=5.0,SNR=171
SONM LR LR 23 14 37.5
comp=Z,1μm,18.2s,baz=146,slow=39
SONM PKPPKP **P'P'df** **23 16 15.4 +3.8**
comp=Z,1.4nm,1.1s,baz=309,slow=0.9,SNR=2.7
SONM Songino Array 58.13 343 P **P** **22 46 32.0 -0.5**
BHPL Bhopal 58.16 303⇑iP **P** **22 46 31.5 -1.5**
BHPL IAmb IAmb 22 46 41.7
comp=Z,299nm,2.0s
GRNR Gornyy 58.21 6⇑iP **P** **22 46 34.2 +1.4**
GRNR eS **S** **22 54 38.9 +5.8**
GRNR eSS **SS** **22 58 17.4 -7.9**
GRNR pmax pmax
comp=Z,40nm,1.2s
GRNR smax smax
comp=N,5.0nm,0.8s
GOA Goa 58.43 293⇑iP **P** **22 46 35.2 +0.2**
GOA IAmb IAmb 22 46 49.3
comp=Z,152nm,1.6s
TYV Tymovskoe 59.20 11 eP **P** **22 46 41.6 +1.9**
TYV eS **S** **22 54 51.5 +5.6**
TYV pmax pmax
comp=Z,97nm,1.3s
TYV pmax pmax
comp=Z,4μm,6.1s
TYV smax smax
comp=E,2μm,5.4s
TYV smax smax
comp=E,11nm,1.3s
TYV MLR MLR
comp=Z,2μm,24.0s
AFI Afiamalu 59.23 102 P **P** **22 46 42.6 +1.9**
comp=Z,19nm,0.7s,baz=211,slow=8.8,SNR=6.1
AFI Afiamalu 59.23 102 P **P** **22 46 40.7 0.0**
AFI IAmb IAmb 22 46 51.6
comp=Z,86nm,1.2s
AFI Afiamalu 59.23 102 P **P** **22 46 40.7 0.0**
AFI pmax pmax
comp=Z,86nm,1.2s
POO Poona 59.42 296⇑iP **P** **22 46 39.8 -2.1**
POO IAmb IAmb 22 46 49.7
comp=Z,38nm,1.1s
POO Poona 59.42 296⇓iP **P** **22 46 39.6 -2.3**
comp=Z,110nm,3.0s
CASY Casey 60.20 188 IAMs_20 IAMs_20 23 12 14.4
comp=Z,4μm,20.0s
CIT Chita 60.36 350 eP **P** **22 46 49.6 +1.9**
CIT e 22 47 06.7
CIT pmax pmax
comp=Z,170nm,2.9s
ZEA Zeya 60.76 359c eP **P** **22 46 51.4 +1.1**
ZEA e 22 47 28.5
ZEA e 22 49 02.5
ZEA ePPP PPP 22 50 43.0
ZEA e 22 55 03.0
ZEA e 22 55 31.0
ZEA eSS SS 22 59 03.0 -2.1
ZEA eSSS SSS 23 01 42.0
ZEA pmax pmax
comp=N,160nm,1.8s
ZEA pmax pmax
comp=Z,240nm,1.8s
ZEA pmax pmax
comp=Z,2μm,6.0s
ZEA pmax pmax
comp=N,1μm,5.0s
ZEA pmax pmax
comp=Z,1μm,8.0s
ZEA pmax pmax
comp=N,600nm,9.0s
ZEA MLR MLR
comp=Z,3μm,18.0s
ZEA MLR MLR
comp=E,2μm,16.0s
ZEA MLR MLR
comp=N,2μm,19.0s
DDI Dehra Dun 60.88 311⇑iP **P** **22 46 50.3 -1.5**
DDI IAmb IAmb 22 47 00.7
comp=Z,391nm,1.9s
NKL Nikolayevsk 61.09 9 eP **P** **22 46 53.0 +0.5**
NKL eS **S** **22 55 14.4 +4.4**
NKL pmax pmax
comp=Z,120nm,1.5s
NKL pmax pmax
comp=N,5.0nm,0.6s
NKL pmax pmax
comp=E,4.0nm,1.5s
NKL pmax pmax
comp=Z,311nm,3.5s
NKL smax smax
comp=E,27nm,3.9s
NKL smax smax
comp=N,8.0nm,3.4s
ZAK Zakamensk 61.33 342 eP **P** **22 46 55.2 +0.8**
ZAK pmax pmax
comp=Z,33nm,1.0s
TLY Talaya 62.37 343 P **P** **22 47 02.6 +1.3**
comp=Z,23nm,0.7s,baz=182,slow=5.7,SNR=69
TLY LR LR 23 17 14.4
comp=Z,1μm,18.6s,baz=134,slow=39
TLY Talaya 62.37 343 P **P** **22 47 00.9 -0.4**
TLY IAmb IAmb 22 47 12.3
comp=Z,51nm,0.8s
TLY Talaya 62.37 343 P **P** **22 47 03.2 +1.9**
TLY Talaya 62.37 343c iP **P** **22 47 02.7 +1.3**

TLY e 22 47 37.9
TLY eS **S** **22 55 28.6 +2.1**
TLY eSS **SS** **22 59 27.5 -3.1**
TLY pmax pmax
comp=Z,225nm,1.3s
TLY MLR MLR
comp=Z,3μm,16.0s
SKR Severo-Kuril's 62.54 20 eP P 22 46 57.3 -5.0
SKR e 22 49 22.7
SKR eS **S** **22 55 27.0 -1.4**
SKR eSS **SS** **22 59 37.6 +4.5**
SKR eSSS SSS 23 02 09.7
SKR pmax pmax
comp=Z,121nm,1.9s
SKR pmax pmax
comp=Z,1μm,4.0s
SKR pmax pmax
comp=Z,700nm,6.7s
SKR MLR MLR
comp=Z,900nm,14.0s
SKR MLR MLR
comp=Z,700nm,17.0s
WMQ Urumqi 62.65 328 P **P** **22 47 04.9 +1.5**
WMQ sP sP 22 47 12.6 -0.2
WMQ PcP **PcP** **22 47 41.2 -0.9**
WMQ S **S** **22 55 31.8 +1.4**
WMQ ScS **ScS** **22 56 56.2 +1.7**
WMQ pmax pmax
comp=Z,96nm,2.1s
WMQ pmax pmax
comp=Z,1μm,3.8s
WMQ LR LR
comp=Z,1μm,21.7s
WMQ LR LR
comp=Z,1μm,23.9s
WMQ LR LR
comp=Z,5μm,28.8s
IRK Irkutsk 62.70 344 eP **P** **22 47 04.0 +0.6**
IRK pmax pmax
comp=Z,370nm,4.2s
DHRM DHARAMSHALA 63.13 312⇑iP **P** **22 47 06.0 -1.0**
DHRM IAmb IAmb 22 47 15.7
comp=Z,121nm,0.4s
MOY Mondy 63.17 341 eP **P** **22 47 08.4 +1.7**
MOY pmax pmax
comp=Z,517nm,3.9s
BHUJ Bhuj 64.75 300⇑iP **P** **22 47 17.1 -0.4**
BHUJ IAmb IAmb 22 47 26.2
comp=Z,111nm,1.5s
PEA0B Petropavlovsk- 65.11 19 IAMs_20 IAMs_20 23 10 14.8
comp=Z,3μm,21.0s
PEA0B Petropavlovsk- 65.11 19c iP **P** **22 47 19.8 +0.5**
PETK Petropavlovsk- 65.11 19 P **P** **22 47 20.6 +1.3**
comp=Z,65nm,0.7s,baz=167,slow=2.3,SNR=60
PETK Petropavlovsk- 65.11 19 P **P** **22 47 19.8 +0.4**
PETK Petropavlovsk- 65.11 19 P **P** **22 47 19.8 +0.4**
PET Petropavlovsk 65.36 20 P **P** **22 47 20.1 -0.7**
PET Petropavlovsk 65.36 20c iP **P** **22 47 21.8 +0.9**
PET eS **S** **22 56 02.4 -1.0**
PET eSS **SS** **23 00 16.8 -0.3**
PET pmax pmax
comp=Z,216nm,1.3s
PET pmax pmax
comp=Z,3μm,14.2s
PET pmax pmax
comp=Z,2μm,14.2s
BOD Bodaibo 65.87 352⇓iP **P** **22 47 24.9 +0.8**
BOD pmax pmax
comp=Z,160nm,1.4s
NIL Nilore 66.05 312 P **P** **22 47 25.3 -0.5**
NIL Nilore 66.05 312 P **P** **22 47 26.7 +0.8**
NIL P **P** **22 47 26.7 +0.8**
NIL Nilore 66.05 312 P **P** **22 47 25.3 -0.5**
NIL pmax pmax
comp=Z,94nm,0.7s
ZSN Zaisan 66.57 329⇓eP **P** **22 47 28.0 -0.9**
comp=Z,304nm,3.1s
ZSN eS **S** **22 56 19.0 +0.5**
ZSN Zaisan 66.57 329d eP **P** **22 47 27.9 -0.9**
ZSN eS **S** **22 56 19.0 +0.5**
ZSN pmax pmax
comp=Z,304nm,3.1s
SHLS Shalkode 66.85 323 eP **P** **22 47 29.9 -0.9**
comp=Z,339nm,1.8s
SHLS eS **S** **22 56 16.9 -5.4**
SHLS Shalkode 66.85 323 eP **P** **22 47 29.9 -0.9**
SHLS eS **S** **22 56 16.8 -5.4**
SHLS pmax pmax
comp=Z,339nm,1.8s
KSH Kashi 67.02 318 P **P** **22 47 33.5 +1.5**
KSH sP sP 22 47 41.4 -0.1
KSH PcS 22 52 02.1
KSH S **S** **22 56 20.7 -3.8**
KSH pmax pmax
comp=Z,490nm,1.5s
KSH pmax pmax
comp=Z,5μm,6.0s
KSH LR LR
comp=Z,4μm,19.2s
KSH LR LR
comp=Z,6μm,23.0s
KSH LR LR
comp=Z,4μm,17.8s
UZB Uzynbulak 67.10 323⇓iP **P** **22 47 31.9 -0.7**
comp=Z,327nm,2.1s
UZB eS **S** **22 56 24.8 -0.6**
UZB Uzynbulak 67.10 323d iP **P** **22 47 31.8 -0.7**
UZB eS **S** **22 56 24.8 -0.6**
UZB pmax pmax
comp=Z,327nm,2.1s
SATY Saty 67.42 323 eP **P** **22 47 34.0 -0.6**
SATY eS **S** **22 56 31.4 +2.2**
SATY Saty 67.42 323 eP **P** **22 47 33.9 -0.6**
SATY eS **S** **22 56 31.4 +2.2**
ZHN Zhinishke 67.47 323⇑iP **P** **22 47 33.8 -1.0**
comp=Z,146nm,1.7s
ZHN eS **S** **22 56 31.5 +1.8**
ZHN Zhinishke 67.47 323c iP **P** **22 47 33.7 -1.0**
ZHN eS **S** **22 56 31.5 +1.8**
ZHN pmax pmax
comp=Z,146nm,1.7s
MKAR Makanchi Array 67.48 328 P **P** **22 47 35.7 +1.1**
comp=Z,67nm,0.8s,baz=132,slow=5.2,SNR=284
MKAR PKP2bc 23 15 59.9
comp=Z,1.0nm,1.0s,baz=321,slow=3.1,SNR=4.8
MKAR LR LR 23 18 25.8
comp=Z,1μm,21.4s,baz=118,slow=37
MKAR Makanchi Array 67.48 328 P **P** **22 47 34.5 -0.1**
MKAR Makanchi Array 67.48 328 iP **P** **22 47 35.7 +1.1**
MKAR pmax pmax
comp=Z,66nm,0.8s
KPKS Kokpek 67.49 323⇑iP **P** **22 47 35.6 +0.7**
KPKS eS **S** **22 56 29.6 -0.3**
KPKS Kokpek 67.49 323c iP **P** **22 47 35.6 +0.7**
KPKS eS **S** **22 56 29.6 -0.3**
MAKZ Makanchi 67.65 328 P **P** **22 47 35.6 -0.2**
MAKZ Makanchi 67.65 328 P **P** **22 47 35.6 -0.2**
MAKZ pmax pmax
comp=Z,113nm,1.1s
MAKZ MLR MLR
comp=Z,1μm,19.0s
NRN Naryn 68.01 320 IAmb IAmb 22 47 48.7
comp=Z,68nm,1.1s
NRN IAMs_20 IAMs_20 23 21 49.7
comp=Z,3μm,22.0s
TNSS Tian-Shan 68.29 322 iP **P** **22 47 40.5 +0.1**
TNSS Tian-Shan 68.29 322 iP **P** **22 47 40.4 +0.1**
MDOK Medeo 68.30 322 eP **P** **22 47 40.2 +0.1**
MDOK eS **S** **22 56 42.2 +2.4**
MDOK Medeo 68.30 322 eP **P** **22 47 40.2 +0.1**
MDOK eS **S** **22 56 42.1 +2.4**
AAA Alma-Ata 68.41 322 eP **P** **22 47 41.6 +1.0**
AAA eS **S** **22 56 40.9 +0.1**
AAA Alma-Ata 68.41 322 eP **P** **22 47 42.6 +2.0**
AAA pmax pmax
comp=Z,2μm,4.9s
AAA MLR MLR
comp=Z,700nm,4.0s
TDK Taldyqorghan 68.54 324⇓iP **P** **22 47 41.5 +0.1**
TDK eS **S** **22 56 45.7 +3.4**
TDK Taldyqorghan 68.54 324d iP **P** **22 47 41.4 +0.1**
TDK eS **S** **22 56 45.7 +3.4**
MTBS Maitube 68.66 322 eP **P** **22 47 43.5 +1.2**
MTBS Maitube 68.66 322 eP **P** **22 47 43.4 +1.2**

CHKK Chushkaly 68.72 323 eP P 22 47 43.2 +0.7
CHKK Chushkaly 68.72 323 eP P 22 47 43.2 +0.7
MA2 Magadan 68.99 12 P P 22 47 43.1 -0.7
MA2 Magadan 68.99 12 P P 22 47 43.1 -0.7
MA2 pmax pmax
comp=Z,164nm,1.4s
MA2 MLR MLR
comp=Z,2µm,19.0s
YAK Yakutsk 69.08 1 P P 22 47 44.7 +0.5
comp=Z,74nm,0.7s,baz=194,slow=0.1,SNR=40
YAK Yakutsk 69.08 1 P P 22 47 44.8 +0.5
YAK Yakutsk 69.08 1 c iP P 22 47 44.7 +0.5
YAK e*PP pP 22 47 52.0 +0.8
YAK e 22 48 07.1
YAK eS S 22 56 48.2 +0.4
YAK e 22 57 45.6
YAK pmax pmax
comp=Z,121nm,1.0s
YAK pmax pmax
comp=N,74nm,1.2s
YAK pmax pmax
comp=E,21nm,1.2s
YAK pmax pmax
comp=Z,525nm,4.8s
YAK pmax pmax
comp=N,386nm,4.1s
YAK pmax pmax
comp=E,136nm,3.8s
YAK smax smax
comp=E,1µm,5.8s
YAK smax smax
comp=N,1µm,4.9s
KUU Kurty 69.13 323 ⇑iP P 22 47 45.4 +0.3
KUU eS S 22 56 50.7 +1.3
KUU Kurty 69.13 323 c iP P 22 47 45.4 +0.3
KUU eS S 22 56 50.6 +1.2
KBK Karagaybulak 69.33 321 P P 22 47 48.4 +1.9
SNR=34
UCH Uchtor 69.38 320 P P 22 47 48.9 +1.7
SNR=33
KBL Kabul 69.58 311 P P 22 47 46.5 -1.8
KBL IAmb IAmb 22 47 54.5
comp=Z,68nm,1.1s
KBL Kabul 69.58 311 P P 22 47 49.3 +1.0
KBL P P 22 47 49.3 +1.0
KBL S S 22 56 52.6 -2.8
KBL S S 22 56 52.6 -2.8
KBL Kabul 69.58 311 P P 22 47 46.5 -1.8
KBL pmax pmax
comp=Z,68nm,1.1s
KBL MLR MLR
comp=Z,900nm,22.0s
AAK Ala-Archa 69.60 321 P P 22 47 49.8 +1.6
comp=Z,51nm,0.7s,baz=122,slow=5.2,SNR=125
AAK LR LR 23 21 28.9
comp=Z,1µm,20.5s,baz=99,slow=39
AAK Ala-Archa 69.60 321 P P 22 47 49.7 +1.6
SNR=43
AAK Ala-Archa 69.60 321 iP P 22 47 49.6 +1.4
SNR=22
AAK Ala-Archa 69.60 321 P P 22 47 45.5 -2.7
AAK Ala-Archa 69.60 321 P P 22 47 50.2 +2.0
AAK P P 22 47 50.2 +2.0
AAK Ala-Archa 69.60 321 iP P 22 47 49.3 +1.1
AAK pmax pmax
comp=Z,154nm,1.0s
AAK MLR MLR
comp=Z,2µm,21.0s
FRU1 Bishkek 69.61 321 IAmb IAmb 22 47 57.5
comp=Z,42nm,0.9s
CHMS Chumysh 69.63 321 P P 22 47 49.2 +1.0
SNR=23
AML Almayashu 69.85 320 P P 22 47 52.1 +2.1
SNR=12
USP Ospenovka 69.92 321 P P 22 47 51.6 +1.5
SNR=53
SGDS Sogindy 69.94 321 eP P 22 47 50.1 0.0
comp=Z,293nm,2.7s
SGDS eS S 22 56 58.8 -0.2
EKS2 Erkin-Say 70.06 320 P P 22 47 53.0 +2.0
SNR=47
RAR Rarotonga 70.67 110 P P 22 47 55.9 +1.0
comp=Z,12nm,0.4s,baz=238,slow=3.6,SNR=4.3
BTK Batken 70.74 317 IAmb IAmb 22 48 14.3
comp=Z,66nm,1.1s
SEM Semipalatinsk 70.81 330 ⇓iP P 22 47 55.4 -0.1
comp=Z,343nm,2.5s
SEM eS S 22 57 08.6 -0.6
SEM Semipalatinsk 70.81 330 d iP P 22 47 55.4 -0.1
SEM eS S 22 57 08.5 -0.6
SEM pmax pmax
comp=Z,343nm,2.5s
ZALV Zalesovo Beam 71.03 335 P P 22 47 56.9 +0.4
comp=Z,236nm,1.0s,baz=131,slow=4.9,SNR=285
ZALV PKP2bc 23 15 50.0
comp=Z,0.5nm,0.3s,baz=302,slow=6.8,SNR=4.6
ZALV LR LR 23 20 26.6
comp=Z,1µm,21.3s,baz=116,slow=37
RER Riviere de l'E 71.11 250 P P 22 47 55.3 -2.5
BTLS Baital 71.14 323 ⇓iP P 22 47 58.1 +0.7
comp=Z,67nm,2.1s
BTLS eS S 22 57 12.0 -0.7
BTLS Baital 71.14 323 d iP P 22 47 58.0 +0.7
BTLS eS S 22 57 12.0 -0.7
BTLS pmax pmax
comp=Z,67nm,2.1s
DZA Taraz 71.74 320 eP P 22 48 01.4 +0.3
comp=Z,505nm,3.1s
DZA eS S 22 57 18.4 -1.5
DZA Taraz 71.74 320 eP P 22 48 01.4 +0.3
DZA eS S 22 57 18.4 -1.5
DZA pmax pmax
comp=Z,505nm,3.1s
KURBB Kurchatov Arra 71.81 329 P P 22 48 02.1 +0.9
comp=Z,107nm,0.8s,baz=133,slow=5.0,SNR=489
KURK Kurchatov 71.82 329 P P 22 48 02.5 +1.3
KURK Kurchatov 71.82 329 P P 22 48 02.9 +1.6
KURK P P 22 48 02.9 +1.6
KURK Kurchatov 71.82 329 c iP P 22 48 02.1 +0.8
KURK pmax pmax
comp=Z,325nm,1.1s
KURK MLR MLR
comp=Z,1µm,23.0s
JBG Jabagly 72.03 319 c iP P 22 48 04.1 +1.2
JBG eS S 22 57 27.3 +3.9
JBG pmax pmax
comp=Z,244nm,1.8s
IUG Iuzhnay 72.23 318 ⇑iP P 22 48 05.3 +1.2
comp=Z,27nm,1.7s
IUG eS S 22 57 25.2 -0.5
IUG Iuzhnay 72.23 318 c iP P 22 48 05.3 +1.2
IUG eS S 22 57 25.2 -0.5
IUG pmax pmax
comp=Z,27nm,1.7s
KK31 Karatay Array 72.37 319 P P 22 48 02.3 -2.5
KK31 Karatay Array 72.37 319 P P 22 48 02.3 -2.5
KK31 pmax pmax
comp=Z,140nm,1.4s
KKAR Karatay Array 72.37 319 P P 22 48 02.3 -2.5
KKAR Karatay Array 72.37 319 P P 22 48 02.3 -2.5
SEY Seymchan 72.38 11 P P 22 48 05.4 +1.0
comp=Z,44nm,0.6s,baz=208,slow=4.6,SNR=88
SEY Seymchan 72.38 11 ⇑iP P 22 48 05.9 +1.5
VNDA Vanda 72.42 173 P P 22 48 07.0 +2.5
comp=Z,12nm,0.7s,baz=308,slow=9.5,SNR=10
VNDA LR LR 23 19 50.6
comp=Z,7µm,18.8s,baz=354,slow=36
CHM Chimkent 72.60 318 ⇑iP P 22 48 07.4 +1.2
comp=Z,538nm,2.9s
CHM Chimkent 72.60 318 c iP P 22 48 07.4 +1.2
CHM pmax pmax
comp=Z,538nm,2.9s
BRLS Borolday 72.77 319 eS S 22 57 31.0 -0.7
WBK Wadi Bani Khal 73.93 296 P P 22 48 15.3 +0.8
SNR=7.8
WBK P P 22 48 15.3 +0.8
SNR=7.8
WBK S S 22 57 45.6 +0.1
WBK S S 22 57 45.6 +0.1
MAW Mawson 74.08 201 P P 22 48 16.3 +1.9
comp=Z,44nm,1.1s,baz=56,slow=7.4,SNR=10
MAW LR LR 23 17 31.8
comp=Z,3µm,21.6s,baz=61,slow=33
MAW Mawson 74.08 201 P P 22 48 14.4 0.0
MAW Mawson 74.08 201 P P 22 48 14.4 0.0
MAW pmax pmax
comp=Z,17nm,1.2s
MAW MLR MLR
comp=Z,700nm,21.0s
WSAR Wadi Sarin 74.39 296 P P 22 48 17.8 +0.7
comp=Z,15nm,0.9s,baz=138,slow=7.1,SNR=10.0
WSAR Wadi Sarin 74.39 296 P P 22 48 18.1 +1.0
SNR=9.2
MHTO MHTO 74.42 294 P P 22 48 17.5 +0.2
SNR=12
MHTO P P 22 48 17.5 +0.2
SNR=12
MHTO S S 22 57 48.4 -2.6
MHTO S S 22 57 48.4 -2.6
BRZS Berezniki 74.53 326 ⇑iP P 22 48 17.4 0.0
BRZS eS S 22 57 55.6 +4.3
BRZS Berezniki 74.53 326 c iP P 22 48 17.3 0.0
BRZS eS S 22 57 55.5 +4.3
DQM DQM 74.56 293 P P 22 48 18.5 +0.4
SNR=5.0
DQM P P 22 48 18.5 +0.4
SNR=5.0
DQM S S 22 57 51.2 -1.4
DQM S S 22 57 51.2 -1.4
JMDO Jabal Madar 74.64 295 P P 22 48 19.1 +0.5
SNR=9.0
JMDO S S 22 57 51.8 -1.7
HRA Herat 74.72 308 IAmb IAmb 22 48 25.2
comp=Z,66nm,1.4s
SMDO Samad 74.86 296 P P 22 48 20.7 +0.7
SNR=7.6
SMDO P P 22 48 20.7 +0.7
SNR=7.6
SMDO S S 22 57 56.6 +0.5
SMDO S S 22 57 56.6 +0.5
BIDO Bidbid 74.91 297 P P 22 48 21.0 +0.8
SNR=15
BIDO P P 22 48 21.0 +0.8
SNR=15
BIDO S S 22 57 56.9 +0.5
BIDO S S 22 57 56.9 +0.5
ADK Adak 75.31 32 P P 22 48 21.8 0.0
ADK Adak 75.31 32 P P 22 48 21.8 0.0
ADK pmax pmax
comp=Z,324nm,1.3s
BSY Bisya 75.54 296 P P 22 48 24.1 +0.2
SNR=11
BSY P P 22 48 24.1 +0.2
SNR=11
HOQ Hoqain 75.65 296 P P 22 48 24.9 +0.5
SNR=16
HOQ P P 22 48 24.9 +0.5
SNR=16
HOQ S S 22 58 03.6 -1.1
HOQ S S 22 58 03.6 -1.1
SHAO Shalim 75.89 291 iP P 22 48 26.4 +0.5
SNR=5.6
SHAO Shalim 75.89 291 P P 22 48 26.1 +0.2
SHAO P P 22 48 26.1 +0.2
SHAO S S 22 58 05.1 -2.4
SHAO S S 22 58 05.1 -2.4
SOCY Socotra 76.28 284 IAmb IAmb 22 48 43.8
comp=Z,68nm,1.1s
SOCY Socotra 76.28 284 P P 22 48 28.0 -0.2
SOCY S S 22 58 07.1 -4.9
ARQ Araqi 76.29 296 P P 22 48 28.5 +0.4
ARQ P P 22 48 28.5 +0.4
ARQ S S 22 58 10.0 -1.8
ARQ S S 22 58 10.0 -1.8
SOHO SOHO 76.48 297 P P 22 48 29.6 +0.5
SNR=10
SOHO P P 22 48 29.6 +0.5
SNR=10
UOSS Minazif 76.97 298 iP P 22 48 31.7 -0.1
SNR=9.4
HATD Hatta, Dubai 77.00 297 iP P 22 48 32.5 +0.4
SNR=7.1
HATD Hatta, Dubai 77.00 297 P P 22 48 32.8 +0.7
SNR=9.3
HATD P P 22 48 32.8 +0.7
SNR=9.3
HATD S S 22 58 18.3 -1.2
HATD S S 22 58 18.3 -1.2
ASHO Ashiyiah 77.03 297 iP P 22 48 32.8 +0.6
SNR=9.6
ASHO Ashiyiah 77.03 297 P P 22 48 32.9 +0.6
SNR=6.3
ASHO P P 22 48 32.9 +0.6
SNR=6.3
RBK Rabkut 77.10 290 P P 22 48 32.9 +0.1
SNR=5.9
RBK P P 22 48 32.9 +0.1
SNR=5.9
MSFE Esma-Masafi 77.11 298 iP P 22 48 33.4 +0.7
SNR=7.1
BANOM Banah 77.13 299 iP P 22 48 33.7 +0.9
SNR=7.1
BANOM Banah 77.13 299 P P 22 48 33.8 +1.0
ALNE Al Ain 77.15 297 iP P 22 48 33.5 +0.6
SNR=9.7
SHME Shamm 77.30 299 iP P 22 48 34.6 +0.9
SNR=6.5
BVAR Borovoye Array 77.34 328 P P 22 48 34.3 +1.0
comp=Z,122nm,0.9s,baz=130,slow=4.6,SNR=190
BRVK Borovoye 77.41 328 P P 22 48 33.6 -0.1
BRVK Borovoye 77.41 328 iP P 22 48 34.3 +0.6
BRVK pmax pmax
comp=Z,239nm,1.3s
NAZ Nazwa, Dubai 77.46 298 P P 22 48 34.8 +0.2
FAQ Al Faqa, Dubai 77.46 297 iP P 22 48 35.0 +0.4
SNR=6.0
UMQ Umm Al-Quwin 77.59 298 P P 22 48 36.6 +1.3
WHFO Wadi Hawf 77.59 290 P P 22 48 35.4 -0.1
SNR=7.0
WHFO P P 22 48 35.4 -0.1
SNR=7.0
ASUD Al Ashush, Dub 77.66 297 P P 22 48 36.5 +0.8
ABTO Aybut 77.92 289 P P 22 48 37.7 +0.3
SNR=20
ABTO P P 22 48 37.7 +0.3
SNR=20
AJN Ajban 77.95 297 P P 22 48 37.8 +0.4
TIXI Tiksi 78.73 0 P P 22 48 40.4 -0.2
comp=Z,55nm,0.6s,baz=176,slow=3.9,SNR=98
TIXI Tiksi 78.73 0 P P 22 48 40.9 +0.3
TIXI IAmb IAmb 22 48 43.1
comp=Z,54nm,0.7s
TIXI Tiksi 78.73 0 c iP P 22 48 40.5 -0.2
TIXI pmax pmax
comp=Z,47nm,0.8s
TIXI MLR MLR
comp=Z,3µm,20.0s
GEYT Alibeck 79.03 311 P P 22 48 44.1 +1.0
comp=Z,14nm,1.0s,baz=135,slow=3.4,SNR=48
GEYT Alibeck 79.03 311 P P 22 48 43.0 -0.1
ABPO Ambohimpanom 79.20 252 P P 22 48 43.5 -1.1
ABPO Ambohimpanom 79.20 252 P P 22 48 43.5 -1.1
ABPO pmax pmax
comp=Z,14nm,1.1s
ABPO MLR MLR
comp=Z,2µm,19.0s
VOI Vohitsoka 79.49 249 P P 22 48 46.7 +0.7
SNR=6.6
BILL Bilibino 79.76 14 P P 22 48 45.5 -0.8
BILL IAMs_20 IAMs_20 23 21 57.2
comp=Z,2µm,21.0s
BILL Bilibino 79.76 14 c iP P 22 48 46.6 +0.3
BILL i 22 48 53.3
BILL i *SP pwP 22 48 58.9 +1.9
BILL e 22 51 45.5
BILL iS S 22 58 53.9 +6.6
BILL ePS PnS 22 59 36.6 +3.1
BILL eSS SS 23 03 57.7 +1.1
BILL eSSS SSS 23 07 14.8
BILL pmax pmax
comp=Z,71nm,2.7s
BILL MLR MLR
comp=Z,996nm,21.0s
TBI Tubuai 80.14 112 eS S 22 58 51.5 -1.6
comp=Z,773nm,33.2s
TBI Tubuai 80.14 112 eLQ LQ 23 10 23.2
comp=Z,2µm,36.5s
TBI eLR LR 23 13 47.2
comp=Z,2µm,29.0s
PAE Paea 80.43 107 eP P 22 48 53.3 +2.3
comp=Z,11nm,1.3s
PPT2 Papeete2 80.44 107 eP P 22 48 53.5 +2.3
comp=Z,88nm,1.4s
PPT2 Papeete2 80.44 107 eS S 22 58 54.0 -2.7
comp=Z,491nm,24.0s
PPT2 Papeete2 80.44 107 eLQ LQ 23 10 31.8
comp=Z,3µm,34.5s
PPT2 eLR LR 23 13 51.5
comp=Z,2µm,25.2s
PPT Papeete 80.44 107 P P 22 48 53.1 +2.0
comp=Z,38nm,1.0s,baz=259,slow=19,SNR=3.2
PPT LR LR 23 21 20.5
comp=Z,228nm,19.9s,baz=260,slow=33
TIAR Tiarei 80.66 107 eP P 22 48 54.7 +2.4
comp=Z,24nm,1.4s
TVO Taravao 80.73 107 eP P 22 48 55.3 +2.5
comp=Z,28nm,1.5s
ABKAR Akbulak array 81.61 322 P P 22 48 56.6 0.0
ABKAR Akbulak array 81.61 322 IAmb IAmb 22 49 01.8
comp=Z,46nm,1.1s
MEH Mehetia 81.85 107 eP P 22 49 00.9 +2.3
comp=Z,43nm,1.3s
PMOR Pomariorio Ree 82.28 104 eP P 22 49 03.0 +2.1
comp=Z,138nm,1.5s
VAH Vaihoa 82.51 104 eP P 22 49 04.2 +2.1
comp=Z,90nm,1.5s
QSPA South Pole Qui 82.73 180 P P 22 49 03.9 +1.4
comp=Z,29nm,1.0s,baz=317,slow=1.6,SNR=39
QSPA South Pole Qui 82.73 180 P P 22 49 03.1 +0.6
QSPA IAmb IAmb 22 49 07.3
comp=Z,44nm,1.1s
AKTO Aktyubinsk 83.19 323 P P 22 49 05.8 +0.8
comp=Z,53nm,1.1s,baz=110,slow=6.7,SNR=27
SVE Sverdlovsk 84.07 329 d eP P 22 49 10.1 +0.9
SVE e 22 52 23.3
SVE eS S 22 59 30.2 -2.0
SVE e 23 08 34.1
SVE pmax pmax
comp=Z,341nm,2.3s
ARU Arti 84.98 328 P P 22 49 14.0 +0.1
comp=Z,21nm,1.0s,baz=114,slow=3.8,SNR=34
ARU Arti 84.98 328 P P 22 49 14.1 +0.3
ARU IAmb IAmb 22 49 20.0
comp=Z,77nm,1.1s
ARU Arti 84.98 328 c iP P 22 49 14.3 +0.4
ARU 22 52 25.5
ARU PPP PPP 22 54 25.4
ARU S S 22 59 37.7 -3.6
ARU SS SS 23 05 18.2 +3.5
ARU SSS SSS 23 08 45.5
ARU pmax pmax
comp=Z,273nm,2.2s
ARU MLR MLR
comp=Z,1µm,20.0s
RAYN Ar Rayn 86.23 294 iP P 22 49 21.4 +0.5
SNR=22
RAYN Ar Rayn 86.23 294 P P 22 49 20.7 -0.2
RAYN IAmb IAmb 22 49 29.6
comp=Z,54nm,1.1s
RAYN IAMs_20 IAMs_20 23 28 59.4
comp=Z,2µm,21.0s
RAYN Ar Rayn 86.23 294 P P 22 49 20.7 -0.2
RAYN pmax pmax
comp=Z,54nm,1.2s
RAYN MLR MLR
comp=Z,2µm,21.0s
AKT Akhty 87.68 312 eP P 22 49 28.5 +0.8
AKT e 22 52 56.0
AKT pmax pmax
comp=Z,85nm,1.9s
MAK Makhachkala 88.14 314 eP P 22 49 27.7 -1.9
MAK e 22 59 52.9
MAK eSSS SSS 23 09 35.6
MAK pmax pmax
comp=Z,255nm,2.2s
GNBR Gunib 88.42 313 d eP P 22 49 32.6 +1.5
GNBR pmax pmax
comp=Z,52nm,1.0s
RDOG Red Dog Mine 88.95 21 IAmb IAmb 22 49 38.1
comp=Z,56nm,1.2s
GROC Groznyy 89.42 314 eP P 22 49 36.1 +0.4
GROC e 22 53 05.2
GROC pmax pmax
comp=Z,18nm,1.1s
GNI Garni 89.66 310 P P 22 49 37.6 +0.5
comp=Z,4.7nm,0.9s,baz=190,slow=10,SNR=3.6
GNI Garni 89.66 310 iP P 22 49 37.8 +0.7
SNR=6.5
GNI Garni 89.66 310 P P 22 49 35.9 -1.2
GNI Garni 89.66 310 c iP P 22 49 36.0 -1.2
GNI pmax pmax
comp=Z,12nm,1.1s
KIBK Kibwezi 89.89 268 P P 22 49 40.4 +1.8
SNR=6.4
TBLG Delisi 89.93 312 IAmb IAmb 22 49 59.2
comp=Z,42nm,1.2s
TTA Tatalina 89.99 26 IAmb IAmb 22 49 44.5
comp=Z,33nm,1.1s
KIRV Kirov 90.33 329 P P 22 49 41.0 +1.5
comp=Z,9.0nm,0.7s,baz=87,slow=0.8,SNR=10
KDAK Kodiak Island 90.35 32 P P 22 49 39.6 0.0
comp=Z,19nm,0.8s,baz=256,slow=6.9,SNR=9.1
KDAK Kodiak Island 90.35 32 IAmb IAmb 22 49 50.5
comp=Z,60nm,1.2s
KDAK IAMs_20 IAMs_20 23 28 42.3
comp=Z,2µm,20.0s
TAOE Nuku Hiva Isla 90.50 99 eLR LR 23 18 22.9
comp=Z,1µm,25.9s
ZEI Tsey 90.72 313 eP P 22 49 43.2 +1.2
ZEI pmax pmax
comp=Z,19nm,1.1s
AKH Akhalkalaki 90.80 311 IAmb IAmb 22 49 52.2
comp=Z,25nm,1.1s
KMBO Kilima Mbogo 90.82 269 P P 22 49 43.9 +0.7
comp=Z,1.0nm,0.4s,baz=94,slow=4.4,SNR=15
KMBO Kilima Mbogo 90.82 269 iP P 22 49 43.6 +0.4
SNR=5.9
KMBO Kilima Mbogo 90.82 269 P P 22 49 41.4 -1.8
KMBO Kilima Mbogo 90.82 269 P P 22 49 41.4 -1.8
KMBO pmax pmax
comp=Z,1.0nm,0.5s
KMBO MLR MLR
comp=Z,900nm,20.0s
CNPM China Poot 91.41 30 IAMs_20 IAMs_20 23 23 52.8
comp=Z,2µm,22.0s
PYA1 Pyatigorsk 91.49 314 P P 22 49 47.1 +1.7
KBZ Khabaz 91.59 314 P P 22 49 46.6 +0.9
comp=Z,4.2nm,1.1s,baz=133,slow=21,SNR=5.7
KBZ LR LR 23 38 59.5
comp=Z,629nm,19.2s,baz=86,slow=41
KBZ Khabaz 91.59 314 c iP P 22 49 45.4 -0.3
KBZ MLR MLR
comp=Z,1µm,26.0s
NVL N'lazarevskaya 91.60 197 eP P 22 49 48.2 +2.9
NVL eS SKSac 23 00 16.0 -0.2
NVL pmax pmax
comp=Z,22nm,0.9s
NVL MLR MLR
comp=Z,4µm,17.0s
BRLK Bradley Lake 91.64 30 IAMs_20 IAMs_20 23 24 10.4
comp=Z,2µm,22.0s
PPLA Purkeypile 91.67 27 IAmb IAmb 22 49 59.2
comp=Z,22nm,0.9s
GOF Gofitskoye 91.68 315 ⇑eP P 22 49 47.2 +1.0
GOF pmax pmax
comp=Z,44nm,1.5s
IMAR Indian Mountai 91.72 24 P P 22 49 46.0 +0.1
SHA1 Shidzhatmaz 91.76 314 c iP P 22 49 45.0 -1.9
KIV Kislovodsk 91.77 314 iP P 22 49 46.7 0.0
SNR=6.7
KIV Kislovodsk 91.77 314 eP P 22 49 46.3 -0.4
KIV e 22 53 25.0
KIV e 23 00 17.6
KIV eSS SS 23 06 54.4 0.0
KIV eSSS SSS 23 10 33.4
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV MLR MLR
comp=Z,2µm,20.0s
SKT Skwentna 91.78 28 IAmb IAmb 22 49 47.2
comp=Z,18nm,0.8s
SKT IAMs_20 IAMs_20 23 24 46.2
comp=Z,2µm,21.0s
SUA Susitna One 92.04 28 IAmb IAmb 22 49 49.8
comp=Z,32nm,0.8s
SUA IAMs_20 IAMs_20 23 25 40.2
comp=Z,2µm,22.0s

KTH	Kantishna Hill	92.37	26	IAmb	IAmb	22 49 54.5	
	comp=Z,22nm,1.0s						
KTH				IAMs_20	IAMs_20	23 26 31.7	
	comp=Z,2µm,21.0s						
TRF	Thorofare Moun	92.63	26	IAmb	IAmb	22 49 57.8	
	comp=Z,18nm,1.0s						
TRF				IAMs_20	IAMs_20	23 24 50.6	
	comp=Z,2µm,21.0s						
MLY	Manley	92.74	25	IAmb	IAmb	22 49 53.6	
	comp=Z,19nm,0.8s						
PRGR	Permogore	92.81	332	eP	P	22 49 48.3	-2.6
PRGR				pmax	pmax		
	comp=Z,29nm,1.5s						
PMR	Palmer	92.82	28	IAmb	IAmb	22 50 00.7	
	comp=Z,24nm,1.0s						
GHO	Glory Hole Cre	92.95	28	IAmb	IAmb	22 49 57.5	
	comp=Z,28nm,1.2s						
GHO				IAMs_20	IAMs_20	23 25 03.3	
	comp=Z,2µm,22.0s						
SML	Sawmill	93.23	28	IAMs_20	IAMs_20	23 25 33.8	
	comp=Z,2µm,21.0s						
RND	Reindeer	93.26	27	IAMs_20	IAMs_20	23 25 03.1	
	comp=Z,2µm,22.0s						
LODK	Lodwar	93.26	273	P	P	22 49 55.8	+1.5
	SNR=6.5						
NEA	Nenana	93.36	25	IAMs_20	IAMs_20	23 30 51.9	
	comp=Z,2µm,21.0s						
VRH	Novokhopyorsk	93.40	321	eP	P	22 49 53.4	-0.5
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GLI	Glacier Island	93.68	29	IAmb	IAmb	22 50 05.1	
	comp=Z,37nm,1.0s						
GLI				IAMs_20	IAMs_20	23 26 10.8	
	comp=Z,2µm,22.0s						
SCM	Sheep Creek Mo	93.71	28	IAMs_20	IAMs_20	23 25 59.3	
	comp=Z,2µm,22.0s						
WRH	Wood River Hil	93.76	26	IAmb	IAmb	22 50 05.3	
	comp=Z,41nm,1.1s						
TOLK	Toolik Lake Re	93.86	21	IAmb	IAmb	22 50 00.4	
	comp=Z,24nm,1.1s						
TOLK	Toolik Lake Re	93.86	21	P	P	22 49 56.3	+0.5
	baz=260						
SOC	Sochi	93.86	313	eP	P	22 49 51.7	-4.5
SOC				e		22 53 37.3	
SOC				eSS	SS	23 07 16.5	-7.6
SOC				MLR	MLR		
	comp=Z,1µm,20.0s						
CCB	Clear Creek Bu	93.91	25	IAmb	IAmb	22 49 57.1	
	comp=Z,24nm,0.8s						
COLA	College	93.92	25	P	P	22 49 54.0	-1.9
COLA	College	93.92	25	P	P	22 49 54.1	-1.9
COLA				pmax	pmax		
	comp=Z,12nm,0.9s						
COLA				MLR	MLR		
	comp=Z,1µm,19.0s						
FID	Port Fidalgo	93.97	29	IAMs_20	IAMs_20	23 26 37.4	
	comp=Z,2µm,21.0s						
POKR	Poker Flat Res	94.14	25	P	P	22 49 57.6	+0.5
	baz=262						
HDA	Harding Lake	94.24	26	IAmb	IAmb	22 49 59.2	
	comp=Z,23nm,0.9s						
HDA	Harding Lake	94.24	26	P	P	22 49 56.2	-1.3
	baz=262						
IL31		94.32	25	P	P	22 49 55.9	-1.9
IL31				IAmb	IAmb	22 50 01.1	
	comp=Z,24nm,1.3s						
IL31				PP	PP	22 53 39.5	-5.5
ILAR	Eielson Array	94.32	25	P	P	22 49 56.4	-1.4
	comp=Z,6.7nm,0.7s,baz=253,slow=3.3,SNR=65						
ILAR				PP	PP	22 53 40.0	-5.1
	comp=Z,3.9nm,1.0s,baz=262,slow=6.8,SNR=7.9						
ILAR				PKKPbc	PKKPdf	23 06 57.9	-2.3
	comp=Z,0.7nm,1.0s,baz=105,slow=0.9,SNR=4.5						
ILAR				LR	LR	23 26 48.8	
	comp=Z,926nm,21.9s,baz=276,slow=32						
ILAR	Eielson Array	94.32	25	P	P	22 49 56.0	-1.9
ILAR	Eielson Array	94.32	25	P	P	22 49 56.0	-1.9
PAX	Paxson	94.72	27	IAmb	IAmb	22 50 04.1	
	comp=Z,27nm,1.0s						
RAGM	Ragged Mountai	94.81	30	IAMs_20	IAMs_20	23 26 12.5	
	comp=Z,1µm,20.0s						
VORD	Divnogorie	94.89	321	eP	P	22 50 00.1	-0.7
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SNAA	Sanae	95.01	194	P	P	22 50 03.4	+2.3
SNAA	Sanae	95.01	194	IAmb	IAmb	22 50 05.2	
	comp=Z,38nm,1.1s						
SNAA	Sanae	95.01	194⇑	eP	P	22 50 02.2	+1.1
SNAA				pmax	pmax		
	comp=Z,1µm,1.0s						
RIDG	Independent Ri	95.08	26	IAmb	IAmb	22 50 02.9	
	comp=Z,32nm,0.9s						
RIDG				IAMs_20	IAMs_20	23 28 31.4	
	comp=Z,2µm,21.0s						
GLB	Gilahina Butte	95.33	29	IAmb	IAmb	22 50 07.0	
	comp=Z,28nm,1.1s						
DOT	Dot Lake	95.42	27	IAmb	IAmb	22 50 04.5	
	comp=Z,21nm,0.8s						
SCRK	Sand Creek	95.48	26	IAMs_20	IAMs_20	23 28 21.0	
	comp=Z,2µm,22.0s						
VRDI	Verde Repeater	95.48	29	IAmb	IAmb	22 50 07.7	
	comp=Z,15nm,1.0s						
MENT	Mentasta	95.51	27	IAmb	IAmb	22 50 05.3	
	comp=Z,14nm,0.7s						
BMAR	Burnt Mountain	95.56	23	P	P	22 50 02.8	-0.8
CRQM	Cirque	95.60	30	IAmb	IAmb	22 50 09.1	
	comp=Z,27nm,1.0s						
ANN	Anapa	95.61	314	eP	P	22 50 07.0	+2.8
ANN				e*PP	sP	22 50 13.5	-0.3
ANN				e		22 53 57.1	
ANN				eSP	SP	23 02 47.8	+10
ANN				pmax	pmax		
	comp=Z,78nm,1.6s						
ANN				MLR	MLR		
	comp=Z,2µm,25.0s						
ANN				MLR	MLR		
	comp=E,937nm,25.0s						
KLMR	Klimovskoe	95.64	331	eP	P	22 49 55.5	-8.5
KLMR				AMP		22 50 13.6	
	comp=Z,58nm,1.5s						
KLMR	Klimovskoe	95.64	331	eP	P	22 49 55.5	-8.5
KLMR				pmax	pmax		
	comp=Z,58nm,1.5s						
MCARA	McCarthy VSAT	95.70	29	IAmb	IAmb	22 50 10.2	
	comp=Z,20nm,1.0s						
WAX	Waxell Ridge	95.71	30	IAmb	IAmb	22 50 08.6	
	comp=Z,18nm,0.8s						
TGL	Tana Glacier	95.75	30	IAmb	IAmb	22 50 06.7	
	comp=Z,29nm,1.0s						
BALM	Baldy	96.00	29	IAmb	IAmb	22 50 07.9	
	comp=Z,15nm,0.9s						
BALM				IAMs_20	IAMs_20	23 28 30.1	
	comp=Z,2µm,22.0s						
MMAI	Mount Meron Ar	96.25	302	LR	LR	23 38 36.5	
	comp=Z,834nm,21.6s,baz=115,slow=39						
MOS	Moscow	96.27	325	eP	P	22 50 04.5	-2.4
MOS				e		22 53 58.5	
MOS				e		23 01 19.6	
MOS				e		23 02 43.8	
MOS				eSS	SS	23 07 58.3	+0.6
MOS				pmax	pmax		
	comp=Z,23nm,0.9s						
BARN	Barnard Glacie	96.34	29	IAmb	IAmb	22 50 09.8	
	comp=Z,20nm,0.8s						
BCAR	Beaver Creek A	96.40	27	P	P	22 50 08.1	+0.6
TMCR	Tamitsa	96.55	334	eP	P	22 50 01.8	-6.2
TMCR				pmax	pmax		
	comp=Z,36nm,1.2s						
VNA2	Neumayer--Watz	96.59	193	P	P	22 50 11.0	+2.8
	baz=125,slow=4.7						
EGAK	Eagle	96.76	26	IAmb	IAmb	22 50 17.4	
	comp=Z,12nm,0.9s						
OBN	Obninsk	96.83	325	P	P	22 50 09.6	0.0
	comp=Z,2.6nm,0.4s,baz=39,slow=6.3,SNR=6.4						
OBN	Obninsk	96.83	325	P	P	22 50 07.7	-1.8
OBN	Obninsk	96.83	325	eP	P	22 50 09.1	-0.4
OBN				i*PP	pP	22 50 16.5	-0.1
OBN				e		22 54 11.9	
OBN				e		23 00 44.0	
OBN				ePS	PS	23 02 52.5	-1.5
OBN				SSS	SSS	23 11 52.0	
OBN				pmax	pmax		
	comp=Z,15nm,1.0s						
OBN				MLR	MLR		
	comp=Z,1µm,23.0s						
LSZ	Lusaka	97.70	254	P	P	22 50 12.4	-2.2
LSZ	Lusaka	97.70	254	IAMs_20	IAMs_20	23 31 28.2	
	comp=Z,1µm,21.0s						
LSZ	Lusaka	97.70	254	P	P	22 50 12.4	-2.2
LSZ				pmax	pmax		
	comp=Z,13nm,1.5s						
LSZ				MLR	MLR		
	comp=Z,1µm,21.0s						
BOSA	Boshof	97.82	240	P	Pdif	22 50 15.1	+0.2
	comp=Z,3.3nm,0.7s,baz=76,slow=3.1,SNR=8.1						
BOSA				LR	LR	23 29 09.5	
	comp=Z,810nm,21.6s,baz=104,slow=32						
BOSA	Boshof	97.82	240	IAmb	IAmb	22 50 17.3	
	comp=Z,20nm,1.4s						
SIM	Simferopol'	97.97	314	eP	P	22 50 12.4	-2.5
SIM				e		22 54 14.0	
SIM				eS	S	23 01 37.0	-3.3
SIM				ePS	PS	23 03 14.0	+7.1
SIM				ePPS	PPS	23 03 53.0	
SIM				pmax	pmax		
	comp=Z,140nm,8.3s						
SIM				MLR	MLR		
	comp=Z,500nm,23.0s						
BRTR	Keskin Array B	98.10	309	P	Pdif	22 50 16.3	+0.4
	comp=Z,0.5nm,0.7s,baz=128,slow=3.8,SNR=3.5						
BRTR				LR	LR	23 41 15.6	
	comp=Z,215nm,21.0s,baz=72,slow=40						
BRTR	Keskin Array B	98.10	309	P	P	22 50 13.8	-2.0
BRTR	Keskin Array B	98.10	309	P	P	22 50 13.8	-2.0
APA	Apatity	98.49	337⇓	iP	P	22 50 11.7	-5.0
APA				i		23 00 56.0	
APA				iPS	PS	23 03 02.0	-10
APA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
APA				pmax	pmax		
	comp=E,2µm,24.0s						
EPYK	Eagle Plains	98.62	24	IAmb	IAmb	22 50 22.7	
	comp=Z,21nm,1.1s						
EPYK	Eagle Plains	98.62	24	P	Pdif	22 50 18.2	+0.7
	baz=272						
INK	Inuvik	99.74	22	P	Pdif	22 50 22.6	+0.3
	comp=Z,15nm,1.1s,baz=281,slow=5.3,SNR=12						
INK				LR	LR	23 34 36.2	
	comp=Z,729nm,20.3s,baz=279,slow=35						
INK	Inuvik	99.74	22	IAmb	IAmb	22 50 27.2	
	comp=Z,16nm,1.1s						
INK				IAMs_20	IAMs_20	23 34 37.4	
	comp=Z,2µm,22.0s						
MDUB	Mudurnu	100.00	310	IAMs_20	IAMs_20	23 44 56.4	
	comp=Z,2µm,19.0s						
ARCES	ARCESS Array B	101.19	340	P	Pdif	22 50 29.3	+0.5
	comp=Z,9.5nm,0.9s,baz=86,slow=7.8,SNR=12						
ARCES				PKKPbc	PKKPbc	23 06 40.2	-1.7
	comp=Z,1.8nm,0.8s,baz=268,slow=4.5,SNR=3.5						
ARCES	ARCESS Array B	101.19	340		Pdif	22 50 27.1	-1.7
ARCES	ARCESS Array B	101.19	340	P	Pdif	22 50 27.1	-1.7
AKASG	Malin Array Be	101.27	320	P	Pdif	22 50 29.4	-0.1
	comp=Z,1.1nm,0.7s,baz=71,slow=4.4,SNR=7.5						
AKASG	Malin Array Be	101.27	320	iP	Pdif	22 50 28.7	-0.8
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SPITS	Spitsbergen Ar	101.46	349	P	Pdif	22 50 30.2	+0.4
	comp=Z,44nm,1.1s,baz=133,slow=8.5,SNR=4.7						
KBS	Kingsbay	102.00	350	IAMs_20	IAMs_20	23 37 23.7	
	comp=Z,2µm,20.0s						
FINES	FINESS Array B	102.13	331	P	Pdif	22 50 33.0	0.0
	comp=Z,2.8nm,0.9s,baz=354,slow=1.9,SNR=3.9						
FINES				PKiKP	PKiKP	22 54 55.9	+0.6
	comp=Z,1.4nm,0.7s,baz=90,slow=2.9,SNR=4.6						
NACGM	Naroch	102.47	325	ePP	PP	22 54 45.0	-2.6
NACGM				ePPP	PPP	22 57 06.0	
NACGM				eSKKKS		23 02 31.0	
NACGM				ePS	PS	23 03 40.0	-15
NACGM				eSS	SS	23 09 36.0	+12
NACGM				eSSS	SSS	23 14 08.0	
NACGM				eLQ	LQ	23 34 30.0	
NACGM				eLR	LR	23 38 04.0	
NACGM				LRM	MLR	23 42 21.0	
	comp=Z,2.9nm,21.0s						
C36M	Paulatuk	102.95	20	P	Pdif	22 50 37.4	+0.9
	baz=284						
MLR	Muntele Rosu	103.74	315	Pdiff	Pdif	22 50 41.6	+0.8
	comp=Z,1.8nm,0.7s,baz=73,slow=11,SNR=3.2						
BURAR	Bucovina Array	104.08	317		Pdif	22 50 43.7	+1.5
KOLS	Kolonicke sedl	105.90	319	eP	Pdif	22 50 52.7	+2.5
KOLS	Kolonicke sedl	105.90	319	ePDIFF	Pdif	22 50 52.7	+2.5
UZH	Uzhgorod	105.92	318	eP	Pdif	22 50 50.9	+0.6
UZH				e		22 55 09.0	
UZH				iS	Sdif	23 02 47.5	+0.9
UZH				eSS	SKKPbc	23 10 07.0	-2.1
TSUM	Tsumeb	106.83	248	IAMs_20	IAMs_20	23 36 06.5	
	comp=Z,1µm,20.0s						
LLLB	Lillooet	108.16	39	IAMs_20	IAMs_20	23 31 04.7	
	comp=Z,1µm,22.0s						
RES	Resolute Bay	108.25	11	Pdiff	Pdif	22 51 01.2	+1.2
	comp=Z,2.1nm,0.9s,baz=332,slow=8.8,SNR=5.5						
RES				PKiKP	PKiKP	22 55 07.0	+0.8
	comp=Z,3.1nm,1.1s,baz=218,slow=5.5,SNR=6.2						
RES	Resolute Bay	108.25	11	IAMs_20	IAMs_20	23 39 43.6	
	comp=Z,1µm,20.0s						
L02E	Cave Junction	108.29	48	P	PKiKP	22 55 07.7	+0.4
	baz=277						
HFS	Hagfors	108.34	331	Pdiff	Pdif	22 51 00.6	-0.1
	comp=Z,2.9nm,1.1s,baz=104,slow=6.1,SNR=2.6						
H04D	Lebanon	108.60	46	P	PKiKP	22 55 08.2	+0.5
	baz=278						
YKA	Yellowknife Ar	108.74	26	Pdiff	Pdif	22 51 02.8	+0.3
	comp=Z,0.8nm,0.7s,baz=289,slow=5.1,SNR=13						
YKA				PKiKP	PKiKP	22 55 07.7	+0.3
	comp=Z,1.1nm,0.8s,baz=284,slow=1.7,SNR=12						
YKA				PKKPbc	PKKPbc	23 06 15.9	-2.7
	comp=Z,1.5nm,0.9s,baz=109,slow=3.0,SNR=18						
MORC	Moravsky Berou	108.82	320	ePP	PP	22 55 39.2	+4.4
MORC	Moravsky Berou	108.82	320	IAMs_20	IAMs_20	23 43 17.0	
	comp=Z,1µm,22.0s						
JAVC	Velka Javorina	108.91	319	ePP	PP	22 55 40.4	+4.9
M02C	Callahan	108.94	49	P	PKiKP	22 55 10.1	+1.5
	baz=277						
I04A	Tendick Farm,	108.94	46	P	PKiKP	22 55 09.3	+0.8
	baz=278						
YBH	Yreka Blue Hor	109.00	48	IAMs_20	IAMs_20	23 31 55.4	
	comp=Z,1µm,22.0s						
NOA	NORSAR Array B	109.19	333	Pdiff	Pdif	22 51 06.0	+1.5
	comp=Z,0.6nm,0.7s,baz=65,slow=4.2,SNR=3.4						
WDC	Whiskeytown Da	109.28	50	IAMs_20	IAMs_20	23 31 42.8	
	comp=Z,2µm,22.0s						
VRAC	Vranov	109.52	320	ePP	PP	22 55 44.1	+4.3
LTY	Liberty	109.58	42	IAMs_20	IAMs_20	23 31 32.8	
	comp=Z,2µm,22.0s						
KRUC	Moravsky	109.69	320	ePP	PP	22 55 45.4	+4.3
PINE	Pine Mountain	109.99	46	IAMs_20	IAMs_20	23 34 20.3	
	comp=Z,1µm,20.0s						
B08A	Colville Reser	110.24	41	IAMs_20	IAMs_20	23 36 59.1	
	comp=Z,1µm,21.0s						
BRG	Berggiesshubel	110.82	322	ePKP	PKP	22 55 53.6	
	comp=Z,178nm,2.3s						
BRG				SDIFF	PS	23 05 34.0	+14
PERS	Pernice	111.04	317	ePP	PP	22 55 54.1	+3.1
CLL	Collm	111.28	322	ePdif	Pdif	22 51 13.0	-1.0
CLL				ePKiKP	PKiKP	22 55 13.0	+0.4
CLL				e		22 55 43.0	
CLL				ePPlp		22 55 54.0	
CLL				ePPP	PPP	22 58 16.0	
CLL				eSdif	Sdif	23 03 28.0	-3.2
CLL				ePS	PS	23 05 24.0	-0.4
CLL				ePPS	PPS	23 06 28.0	
CLL				eSS	SS	23 11 18.0	-6.0
CLL				eSSS	SSS	23 15 36.0	
CLL				e		23 16 54.0	
CLL				Lm	MLR	23 47 00.0	
	comp=Z,1µm,21.7s						
CLL				Lm	MLR	00 51 00.0	
	comp=Z,400nm,19.9s						
CLL	Collm	111.28	322	IAMs_20	IAMs_20	23 47 34.9	
	comp=Z,1µm,22.0s						
CLL	Collm	111.28	322	eP	Pdif	22 51 13.0	-1.0
CLL				e		22 55 13.0	
CLL				MLR	MLR		
	comp=Z,1µm,21.7s						
GERES	GERESS Array B	111.47	320	PKiKP	PKiKP	22 55 13.7	+0.6
	comp=Z,2.0nm,0.6s,baz=62,slow=2.1,SNR=18						
GERES				PP	PP	22 55 53.0	-1.0
	comp=Z,0.7nm,0.7s,baz=58,slow=3.5,SNR=4.7						
KHC	Kasperske Hory	111.48	320	ePKP	PKiKP	22 55 11.5	-1.6
KHC	Kasperske Hory	111.48	320	ePKIKP	PKiKP	22 55 11.5	-1.6
LJU	Ljubljana	111.57	317	ePP	PP	22 55 57.8	+3.1
WVOR	Wild Horse Val	111.89	47	IAMs_20	IAMs_20	23 34 01.6	
	comp=Z,1µm,22.0s						
F10A	Beach Ranch, E	112.16	43	IAMs_20	IAMs_20	23 33 35.2	
	comp=Z,1µm,20.0s						
ABTA	Abfaltersbach	112.76	318	ePPKiKP	PKiKP	22 55 15.9	+0.2
	comp=Z,1.9nm,0.6s						
NVAR	Mina Array Bea	112.82	51	Pdiff	Pdif	22 51 22.8	+1.3
	comp=Z,0.1nm,0.3s,baz=270,slow=6.1,SNR=2.2						
NVAR				PKiKP	PKiKP	22 55 17.4	+1.2
	comp=Z,1.2nm,0.8s,baz=253,slow=2.2,SNR=6.0						
NVAR				PP	PP	22 56 04.2	0.0
	comp=Z,1.5nm,0.8s,baz=272,slow=6.5,SNR=5.7						
NVAR				PKKPbc	PKKPbc	23 06 06.2	+1.3
	comp=Z,0.5nm,0.6s,baz=144,slow=5.0,SNR=3.7						
NVAR	Mina Array Bea	112.82	51		Pdif	22 51 22.7	+1.2
ISA	Isabella, Lake	113.10	54	IAMs_20	IAMs_20	23 34 14.6	
	comp=Z,1µm,22.0s						
ISA	Isabella, Lake	113.10	54	P	PKiKP	22 55 17.8	+1.2
	baz=278						
WATA	Walderalm	113.23	319	ePPKiKP	PKiKP	22 55 16.9	+0.3
	comp=Z,2.0nm,0.5s						
NRCA	Norcia	113.24	314	IAMs_20	IAMs_20	23 50 35.6	
	comp=Z,1µm,20.0s						
CWC	Cottonwood Cre	113.30	54	P	PKiKP	22 55 18.5	+1.4
	baz=279						
FMP	Fort Macarthur	113.50	56	P	PKiKP	22 55 19.5	+2.2
	baz=277						
PASC	Pasadena Art C	113.53	56	IAMs_20	IAMs_20	23 37 01.3	
	comp=Z,1µm,21.0s						
MOTA	Moosalm	113.54	319	ePPKiKP	PKiKP	22 55 17.6	+0.3
	comp=Z,2.0nm,0.5s						
EDW2	Edwards Air Fo	113.59	55	P	PKiKP	22 55 18.9	+1.4
	baz=278						
MWC	Mount Wilson	113.63	56	IAMs_20	IAMs_20	23 37 14.3	
	comp=Z,1µm,20.0s						
TEOL	Teolo	113.67	316	IAMs_20	IAMs_20	23 37 42.8	
	comp=Z,1µm,20.0s						
GRAC	Grapevine Rang	113.78	53	P	PKiKP	22 55 18.8	+1.0
	baz=279						
MPMC	Manual Prospec	113.83	54	P	PKiKP	22 55 19.1	+0.9
	baz=279						
FETA	Feichten	113.87	318	ePPKPdf	PKiKP	22 55 18.6	+0.7
	comp=Z,1.1nm,0.5s						
MSO	Missoula	114.15	42	IAMs_20	IAMs_20	23 33 28.6	
	comp=Z,1µm,22.0s						
MSO	Missoula	114.15	42	P	PKiKP	22 55 19.3	+0.9
	baz=286						
FUORN	Ofenpass-Fuorn	114.29	318	IAMs_20	IAMs_20	23 50 52.1	
	comp=Z,1µm,20.0s						
GSC	Goldstone, Bar	114.50	55	P	PKiKP	22 55 20.7	+1.3
	baz=279						
DAVOX	Davos/Dischmat	114.50	318	PKPbc	PKPbc	23 05 59.7	+0.3
	comp=Z,1.7nm,0.7s,baz=306,slow=19,SNR=3.9						
VLC	Villacollemand	114.86	315	IAMs_20	IAMs_20	23 52 52.3	
	comp=Z,1µm,19.0s						
R11A	Troy Canyon, C	114.94	51	P	PKPdf	22 55 21.5	+1.3
	baz=281						
BAR	Barrett	114.98	57	IAMs_20	IAMs_20	23 34 39.9	
	comp=Z,1µm,22.0s						
PFO	Pinyon Flats O	115.03	56	P	PKiKP	22 55 22.3	+1.9
	baz=278						
MONP2	Monument Peak	115.16	57	P	PKiKP	22 55 23.0	+2.2
	baz=278						
BELC	Belle Mtn. Jos	115.35	56	P	PKiKP	22 55 23.1	+2.0
	baz=279						
IKP	In-Ko-Pah, Jac	115.45	57	P	PKiKP	22 55 23.3	+2.1
	baz=278						
DLMT	Dillon	115.46	43	IAMs_20	IAMs_20	23 35 05.4	
	comp=Z,1µm,21.0s						
GMRC	Granite Mounta	115.50	55	P	PKiKP	22 55 23.1	+1.7
	baz=279						
SWSC	Sam W. Stewart	115.67	57	P	PKiKP	22 55 23.1	+1.6
	baz=278						
BC3	Big Chuckawall	115.85	56	P	PKiKP	22 55 23.6	+1.6
	baz=279						
IRM	Iron Mountain	116.03	56	P	PKiKP	22 55 24.2	+2.0
	baz=280						
EGMT	Eagleton	116.49	39	P	PKiKP	22 55 23.6	+0.8
	baz=290						
Y12C	Blythe	116.60	56	IAMs_20	IAMs_20	23 35 30.6	
	comp=Z,1µm,22.0s						
Y12C	Blythe	116.60	56	P	PKiKP	22 55 25.8	+2.5
	baz=280						
DUG	Dugway, Tooele	116.65	49	P	PKiKP	22 55 24.9	+1.5
	baz=284						
H17A	Grant Village	117.11	44	P	PKiKP	22 55 26.4	+2.0
	baz=288						
SNOW	Snow King Moun	117.27	45	IAMs_20	IAMs_20	23 39 18.5	
	comp=Z,1µm,22.0s						
KEST	Kesra	117.56	307	PP	PP	22 56 38.2	+0.7
	comp=Z,7.1nm,0.9s,baz=57,slow=13,SNR=4.4						
RLMT	Red Lodge	117.77	42	P	PKiKP	22 55 27.4	+1.9
	baz=289						
Y14A	Wickenburg	117.81	55	IAMs_20	IAMs_20	23 35 33.7	
	comp=Z,1µm,22.0s						
FFC	Flin Flon	118.06	30		PKiKP	22 55 25.6	+0.1
FFC				IAMs_20	IAMs_20	23 43 48.2	
	comp=Z,1µm,21.0s						
FFC	Flin Flon	118.06	30	PKIKP	PKiKP	22 55 25.6	+0.1
FFC				MLR	MLR		
	comp=Z,1µm,21.0s						
PDAR	Pinedale Array	118.31	45	PKP	PKiKP	22 55 26.8	+0.1
	comp=Z,2.1nm,0.7s,baz=248,slow=0.7,SNR=20						
PDAR				PKKPbc	PKKPbc	23 05 46.4	+0.5
	comp=Z,1.0nm,0.7s,baz=108,slow=4.8,SNR=4.4						
PDAR	Pinedale Array	118.31	45		PKPdf	22 55 26.3	-0.3
214A	Organ Pipe Nat	118.32	58	P	PKiKP	22 55 28.1	+1.4
	baz=280						
WUAZ	Wupatki	118.82	53	IAMs_20	IAMs_20	23 37 58.9	
	comp=Z,996nm,21.0s						
WUAZ	Wupatki	118.82	53	P	PKiKP	22 55 29.1	+1.3
	baz=283						
X16A	Lo Mia Camp, P	118.99	55	IAMs_20	IAMs_20	23 36 22.8	
	comp=Z,1µm,22.0s						
LAO	LASA Array	119.21	40	IAMs_20	IAMs_20	23 42 33.7	
	comp=Z,1µm,21.0s						
LAO	LASA Array	119.21	40	P	PKiKP	22 55 29.5	+1.5
	baz=293						
SRIG	Santa Rosalia	119.49	63	IAMs_20	IAMs_20	23 40 40.5	
	comp=Z,997nm,20.0s						
DGMT	Dagmar	119.75	37	IAMs_20	IAMs_20	23 38 12.6	
	comp=Z,1µm,21.0s						
TUC	Tucson	119.95	57		PKiKP	22 55 30.1	+0.1
TUC	Tucson	119.95	57	IAMs_20	IAMs_20	23 37 12.4	
	comp=Z,1µm,21.0s						
TUC	Tucson	119.95	57	PKIKP	PKiKP	22 55 30.1	+0.1
TUC				MLR	MLR		
	comp=Z,1µm,21.0s						
TUC	Tucson	119.95	57	P	PKiKP	22 55 30.5	+0.5
	baz=281						
O20A	White River Ci	120.04	48	IAMs_20	IAMs_20	23 48 04.9	
	comp=Z,1µm,19.0s						
O20A	White River Ci	120.04	48	P	PKiKP	22 55 31.4	+1.3
	baz=287						
X18A	Snowflake	120.17	54	IAMs_20	IAMs_20	23 38 29.9	
	comp=Z,1µm,22.0s						
W18A	Petrified Fore	120.21	54	IAMs_20	IAMs_20	23 38 20.9	
	comp=Z,983nm,20.0s						
W18A	Petrified Fore	120.21	54	P	PKiKP	22 55 31.9	+1.3
	baz=284						
K22A	Casper	120.47	44	P	PKiKP	22 55 30.9	+0.1
	baz=290						
MVCO	Mesa Verde	120.67	51	IAMs_20	IAMs_20	23 44 21.5	
	comp=Z,988nm,21.0s						
MVCO	Mesa Verde	120.67	51	P	PKiKP	22 55 32.9	+1.4
	baz=286						
EFI	East Falkland	121.07	175	iPKIKP	PKiKP	22 55 33.0	+1.5
SMCO	Snowmass	121.26	48	IAMs_20	IAMs_20	23 43 05.8	
	comp=Z,1µm,22.0s						
N23A	Red Feather La	121.47	46	IAMs_20	IAMs_20	23 41 27.4	
	comp=Z,1µm,21.0s						
N23A	Red Feather La	121.47	46	P	PKiKP	22 55 33.9	+0.9
	baz=290						
RSSD	Black Hills	121.62	42		PKPdf	22 55 32.4	-0.5
RSSD				PP	PP	22 57 05.0	-0.2
RSSD	Black Hills	121.62	42	IAMs_20	IAMs_20	23 38 29.2	
	comp=Z,1µm,22.0s						
RSSD	Black Hills	121.62	42	PKIKP	PKPdf	22 55 32.4	-0.5
RSSD				MLR	MLR		
	comp=Z,1µm,22.0s						
RSSD	Black Hills	121.62	42	P	PKiKP	22 55 33.2	+0.1
	baz=293						
S22A	4UR Ranch, Cre	121.79	50	P	PKiKP	22 55 35.3	+1.6
	baz=287						
ISCO	Idaho Springs	122.06	47	IAMs_20	IAMs_20	23 48 37.4	
	comp=Z,930nm,19.0s						
ISCO	Idaho Springs	122.06	47	P	PKiKP	22 55 35.7	+1.4
	baz=289						

FRB Frobisher Bay 122.32 9 PKP PKPdf 22 55 33.1 -0.2
comp=Z,4.7nm,0.7s,baz=10,slow=2.9,SNR=11
121A Cookes Peak, D 122.38 56 IAMs_20 IAMs_20 23 45 20.1
comp=Z,974nm,19.0s
121A Cookes Peak, D 122.38 56 P PKiKP 22 55 36.2 +1.3
baz=283
Y22D IRIS PASSCAL I 122.72 54 IAMs_20 IAMs_20 23 40 02.7
comp=Z,1µm,22.0s
MDND Maddock 122.77 36 IAMs_20 IAMs_20 23 45 11.3
comp=Z,1µm,22.0s
SDCO Great Sand Dun 122.80 49 IAMs_20 IAMs_20 23 42 38.2
comp=Z,1µm,21.0s
SDCO Great Sand Dun 122.80 49 P PKiKP 22 55 36.8 +1.1
baz=288
ANMO Albuquerque 122.86 53 PKPdf 22 55 35.1 -0.5
ANMO Albuquerque 122.86 53 PKIKP PKPdf 22 55 35.1 -0.5
ANMO MLR MLR
comp=Z,900nm,22.0s
ANMO Albuquerque 122.86 53 P PKiKP 22 55 36.9 +1.1
baz=286
ULM Lac du Bonnet 123.60 32 PKP PKPdf 22 55 36.0 -0.2
comp=Z,3.4nm,0.7s,baz=289,slow=2.0,SNR=9.5
ULM Lac du Bonnet 123.60 32 IAMs_20 IAMs_20 23 43 28.8
comp=Z,1µm,22.0s
EPT El Paso 123.61 57 IAMs_20 IAMs_20 23 39 37.8
comp=Z,1µm,22.0s
T25A Trinidad 123.81 50 IAMs_20 IAMs_20 23 48 32.0
comp=Z,957nm,21.0s
T25A Trinidad 123.81 50 P PKiKP 22 55 38.9 +1.2
baz=289
OGNE Ogallala 124.21 45 IAMs_20 IAMs_20 23 41 03.9
comp=Z,1µm,22.0s
OGNE Ogallala 124.21 45 P PKiKP 22 55 39.1 +1.0
baz=293
KSCO Kaye Shedlock' 124.51 47 IAMs_20 IAMs_20 23 41 33.0
comp=Z,1µm,22.0s
MNTX Cornudas Mount 124.56 56 P PKiKP 22 55 40.3 +1.3
baz=284
D32A Dogwood Acres, 124.64 36 IAMs_20 IAMs_20 23 46 25.4
comp=Z,1µm,20.0s
SUSD Miller 124.78 40 IAMs_20 IAMs_20 23 45 28.1
comp=Z,1µm,22.0s
HPIG 125.34 62 IAMs_20 IAMs_20 23 44 53.3
comp=Z,1µm,20.0s
UCM Universidad Co 125.67 315 ePP PP 22 57 45.5 +13
MSTX Muleshoe 126.06 53 IAMs_20 IAMs_20 23 44 48.5
comp=Z,1µm,22.0s
MSTX Muleshoe 126.06 53 P PKiKP 22 55 42.4 +0.3
baz=288
ESDC Sonseca Array 126.43 315 PKP PKiKP 22 55 42.4 -0.2
comp=Z,1.1nm,0.8s,baz=34,slow=3.2,SNR=4.9
ESDC PP PP 22 57 41.5 +4.0
comp=Z,3.3nm,1.1s,baz=72,slow=6.8,SNR=4.8
ESDC Sonseca Array 126.43 315 PKPdf 22 55 41.9 -0.3
TXAR Lajitas Array 126.56 59 PKP PKPdf 22 55 43.7 +0.6
comp=Z,2.6nm,0.6s,baz=252,slow=1.8,SNR=30
TXAR Lajitas Array 126.56 59 PKPdf 22 55 42.8 +0.1
TXAR Lajitas Array 126.56 59 PKIKP PKPdf 22 55 42.8 +0.1
ECSD EROS Data Cent 126.60 40 IAMs_20 IAMs_20 23 41 06.7
comp=Z,964nm,22.0s
ECSD EROS Data Cent 126.60 40 P PKPdf 22 55 42.2 0.0
baz=300
AMTX Amarillo 126.63 52 P PKiKP 22 55 43.9 +0.8
baz=289
CBKS Cedar Bluff 126.67 46 P PKiKP 22 55 43.8 +0.8
baz=294
BGNE Belgrade 126.69 43 P PKPdf 22 55 42.6 +0.1
baz=297
TOC2 Torodi Ar. Sit 127.10 281 IAMs_20 IAMs_20 23 50 20.8
comp=Z,958nm,22.0s
TOC3 Torodi Ar. Sit 127.10 281 IAMs_20 IAMs_20 23 50 21.8
comp=Z,959nm,22.0s
TOB2 Torodi Ar. Sit 127.11 281 IAMs_20 IAMs_20 23 49 37.2
comp=Z,1µm,22.0s
TOA0 Torodi Ar. Sit 127.13 281 PKPdf 22 55 43.4 -0.7
TORD Torodi Ar. Bea 127.13 281 PKP PKiKP 22 55 44.3 -0.2
comp=Z,5.7nm,1.0s,baz=51,slow=2.2,SNR=16
TORD PKKP PKKPdf 23 06 00.2 +2.6
comp=Z,1.0nm,1.1s,baz=247,slow=2.6,SNR=3.7
TORD Torodi Ar. Bea 127.13 281 PKPdf 22 55 43.1 -0.9
EYMN Ely 127.28 33 IAMs_20 IAMs_20 23 45 50.3
comp=Z,1µm,22.0s
EYMN Ely 127.28 33 P PKiKP 22 55 43.8 -0.2
baz=307
EMAL Malaga-Limoner 127.91 312 ePP PP 22 57 54.3 +7.1
E38A The Farm, Brul 128.05 34 IAMs_20 IAMs_20 23 47 39.7
comp=Z,1µm,22.0s
SPMN Marine on St. 128.14 36 IAMs_20 IAMs_20 23 45 51.4
comp=Z,969nm,22.0s
SPMN Marine on St. 128.14 36 P PKiKP 22 55 46.2 +0.5
baz=304
U32A Winter Ranch, 128.15 49 IAMs_20 IAMs_20 23 46 26.7
comp=Z,1µm,22.0s
KSU1 Kansas State U 128.76 45 IAMs_20 IAMs_20 23 46 42.4
comp=Z,1µm,21.0s
KSU1 Kansas State U 128.76 45 P PKiKP 22 55 47.6 +0.4
baz=296
WMOK Wichita Mounta 128.92 51 IAMs_20 IAMs_20 23 44 48.4
comp=Z,919nm,21.0s
WMOK Wichita Mounta 128.92 51 P PKiKP 22 55 47.5 -0.2
baz=291
ABTX Abilene, Hawle 128.97 54 IAMs_20 IAMs_20 23 44 01.1
comp=Z,983nm,22.0s
ABTX Abilene, Hawle 128.97 54 P PKiKP 22 55 48.4 +0.6
baz=289
PLCA Paso Flores 129.23 162 PKP PKiKP 22 55 48.9 +0.6
comp=Z,5.4nm,0.9s,baz=274,slow=2.4,SNR=7.6
PLCA Paso Flores 129.23 162 PKiKP 22 55 49.1 +0.9
D41A Chassel 129.39 32 IAMs_20 IAMs_20 23 47 43.2
comp=Z,856nm,21.0s
JCT Junction City 129.50 56 P PKiKP 22 55 49.8 +0.9
baz=287
G40A Rib Lake 129.61 35 IAMs_20 IAMs_20 23 47 24.6
comp=Z,1µm,22.0s
IFR Ifrane 129.63 308 ePP PP 22 58 08.6 +10
OKCFA Oklahoma City 129.68 49 IAMs_20 IAMs_20 23 50 35.3
comp=Z,1µm,20.0s
COWI Conover 129.69 33 IAMs_20 IAMs_20 23 46 28.1
comp=Z,982nm,22.0s
X34A Smith Ranch, M 129.70 51 IAMs_20 IAMs_20 23 51 07.0
comp=Z,1µm,20.0s
EVO Evora 129.77 315 ePP PP 22 58 04.2 +5.0
I40A Norwalk 130.18 36 IAMs_20 IAMs_20 23 47 14.5
comp=Z,1µm,22.0s
833A Chaparral WMA, 130.44 59 IAMs_20 IAMs_20 23 44 45.7
comp=Z,986nm,22.0s
833A Chaparral WMA, 130.44 59 P PKiKP 22 55 52.3 +1.4
baz=286
F42A Maple Grove Fa 130.45 33 IAMs_20 IAMs_20 23 47 02.1
comp=Z,882nm,21.0s
E43A Lone Tree Farm 130.66 32 IAMs_20 IAMs_20 23 48 22.9
comp=Z,800nm,20.0s
TUL1 Leonard 130.72 48 IAMs_20 IAMs_20 23 47 34.6
comp=Z,1µm,22.0s
TUL1 Leonard 130.72 48 P PKiKP 22 55 52.2 +1.0
baz=295
WHTX Lake Whitney, 130.92 54 IAMs_20 IAMs_20 23 46 15.9
comp=Z,989nm,22.0s
WHTX Lake Whitney, 130.92 54 P PKiKP 22 55 52.8 +1.1
baz=290
JFWS Jewell Farm 130.97 37 IAMs_20 IAMs_20 23 51 44.9
comp=Z,1µm,21.0s
JFWS Jewell Farm 130.97 37 P PKiKP 22 55 51.2 -0.3
baz=306
SCHQ Schefferville 131.03 11 PKP PKiKP 22 55 51.4 +0.2
comp=Z,2.9nm,0.6s,baz=357,slow=2.5,SNR=17
E44A Grand Marais A 131.05 31 P PKiKP 22 55 52.1 +0.5
baz=313
I42A Draeger Farm, 131.17 35 IAMs_20 IAMs_20 23 45 21.6
comp=Z,1µm,20.0s
435B Jarrell 131.22 55 IAMs_20 IAMs_20 23 50 51.0
comp=Z,877nm,22.0s
H43A Windswept, Lux 131.46 34 IAMs_20 IAMs_20 23 46 48.1
comp=Z,961nm,22.0s
AVE Averroes 131.49 309 ePP PP 22 58 22.8 +12
D46A Sault St. Mari 131.80 29 P PKiKP 22 55 53.3 +0.3
baz=315
N41A Harden Midland 131.82 40 IAMs_20 IAMs_20 23 50 08.6
comp=Z,858nm,20.0s
F45A CMU Biological 131.89 32 P PKiKP 22 55 53.3 +0.1
baz=312
HHAR Hobbs 131.91 47 IAMs_20 IAMs_20 23 51 30.5
comp=Z,947nm,20.0s
D47A Chapleau 132.13 29 P PKiKP 22 55 54.4 +0.7
baz=316
K43A Burlington 132.23 36 IAMs_20 IAMs_20 23 45 28.7
comp=Z,1µm,21.0s
G45A Suttons Bay 132.24 32 IAMs_20 IAMs_20 23 54 44.9
comp=Z,961nm,22.0s
E47A Iron Bridge 132.48 29 P PKiKP 22 55 55.2 +0.8
baz=316
UNM Universidad Na 132.48 70 IAMs_20 IAMs_20 23 43 38.5
comp=Z,1µm,21.0s
W39A Magazine 132.50 48 IAMs_20 IAMs_20 23 52 20.4
comp=Z,891nm,21.0s
W39A Magazine 132.50 48 P PKPdf 22 55 53.7 0.0
baz=296
I45A Fountain 132.59 34 IAMs_20 IAMs_20 23 48 50.6
comp=Z,1µm,22.0s
D48A Paudash Townsh 132.65 28 P PKiKP 22 55 54.7 0.0
baz=318
U40A Yellville 132.66 46 IAMs_20 IAMs_20 23 48 48.2
comp=Z,1µm,21.0s
U40A Yellville 132.66 46 P PKiKP 22 55 55.5 +0.4
baz=298
D49A Beulah Townshi 132.79 27 P PKiKP 22 55 55.3 +0.3
baz=318
L44A Lake County Fo 132.79 37 IAMs_20 IAMs_20 23 46 19.7
comp=Z,1µm,22.0s
J45A Montague 132.89 34 IAMs_20 IAMs_20 23 51 21.4
comp=Z,1µm,22.0s
HDIL Hopedale 132.90 39 IAMs_20 IAMs_20 23 49 31.3
comp=Z,983nm,21.0s
HKT Hockley 132.92 56 IAMs_20 IAMs_20 23 57 18.5
comp=Z,879nm,20.0s
MIAR Mount Ida 132.94 49 IAMs_20 IAMs_20 23 51 36.0
comp=Z,1µm,21.0s
MIAR Mount Ida 132.94 49 P PKiKP 22 55 56.5 +0.8
baz=296
CCM Cathedral Cave 132.96 43 PKPdf 22 55 53.5 -1.0
CCM Cathedral Cave 132.96 43 PKIKP PKPdf 22 55 53.5 -1.0
CCM MLR MLR
comp=Z,800nm,22.0s
CCM Cathedral Cave 132.96 43 P PKiKP 22 55 55.9 +0.3
baz=301
E48A Lockeyer 132.99 29 P PKiKP 22 55 55.7 +0.2
baz=317
G47A Hillman 133.09 31 P PKiKP 22 55 56.2 +0.5
baz=314
M44A Midewin, Midew 133.19 38 IAMs_20 IAMs_20 23 49 11.7
comp=Z,986nm,22.0s
LSQQ Lebel-sur-Quev 133.22 23 P PKPdf 22 55 53.9 -0.7
baz=325
NATX Nacogdoches 133.22 53 IAMs_20 IAMs_20 23 45 20.3
comp=Z,879nm,21.0s
F48A Evansville 133.25 29 P PKPdf 22 55 55.1 +0.3
baz=316
P43A Skaggs, Pawnee 133.26 40 IAMs_20 IAMs_20 23 50 42.2
comp=Z,734nm,19.0s
KIC Kosan Boka 133.30 272 ePKP1 PKPdf 22 55 50.7 -5.1
comp=Z,194nm,2.4s
DBIC Dimbokro 133.44 272 PKP PKiKP 22 55 57.3 0.0
comp=Z,4.2nm,0.9s,baz=24,slow=3.7,SNR=6.0
DBIC Dimbokro 133.44 272 PKPdf 22 55 55.3 -0.7
DBIC PP PP 22 58 13.7 -10
DBIC Dimbokro 133.44 272 PKIKP PKPdf 22 55 55.3 -0.7
X40A Basin Creek Fa 133.51 48 IAMs_20 IAMs_20 23 52 22.2
comp=Z,975nm,20.0s
I47A Gladwin 133.54 33 IAMs_20 IAMs_20 23 49 39.2
comp=Z,1µm,22.0s
D50A G1974 Best Tow 133.54 26 P PKiKP 22 55 56.8 +0.3
baz=320
WHAR Wooly Hollow 133.56 47 IAMs_20 IAMs_20 23 51 55.1
comp=Z,1µm,22.0s
LIC Lamto 133.58 272 ePKP1 PKPdf 22 55 50.5 -5.8
comp=Z,38nm,1.4s
TIC Toumodi 133.60 272 ePKP1 PKPdf 22 55 51.4 -5.0
W41B Gary Mavity, V 133.64 47 IAMs_20 IAMs_20 23 47 49.8
comp=Z,1µm,22.0s
VLDQ Val d'Or 133.80 24 IAMs_20 IAMs_20 23 52 14.2
comp=Z,981nm,21.0s
J47A Sunmer 133.89 34 IAMs_20 IAMs_20 23 49 17.2
comp=Z,1µm,22.0s
LCAR Lake Charles 134.01 46 IAMs_20 IAMs_20 23 48 31.1
comp=Z,1µm,21.0s
K47A Vermontville 134.16 34 P PKiKP 22 55 57.9 0.0
baz=311
PBMO Poplar Bluff 134.16 44 IAMs_20 IAMs_20 23 54 43.7
comp=Z,835nm,22.0s
D52A ZEK Kipawa Sen 134.31 25 P PKiKP 22 55 57.5 -0.6
baz=322
SFIN Lafayette 134.36 38 IAMs_20 IAMs_20 23 50 10.0
comp=Z,1µm,21.0s
SFIN Lafayette 134.36 38 P PKiKP 22 55 58.9 +0.5
baz=307
J48A Bridge Port 134.41 33 IAMs_20 IAMs_20 23 49 55.4
comp=Z,1µm,21.0s
J48A Bridge Port 134.41 33 P PKiKP 22 55 59.0 +0.6
baz=313
F51A Arnstein 134.45 27 P PKiKP 22 55 58.4 0.0
baz=319
I49A Point Hope 134.48 31 P PKiKP 22 55 59.2 +0.7
baz=314
D53A Lac Vacive, Po 134.53 25 IAMs_20 IAMs_20 00 00 36.4
comp=Z,934nm,19.0s
D53A Lac Vacive, Po 134.53 25 P PKiKP 22 55 58.3 -0.2
baz=323
OLIL Olney 134.69 41 IAMs_20 IAMs_20 23 51 05.9
comp=Z,1µm,22.0s
J49A Marlette 134.71 32 P PKiKP 22 55 58.6 -0.4
baz=314
E52A Mattawa 134.74 26 P PKiKP 22 55 59.1 +0.1
baz=321
P46A Rosedale 134.75 39 IAMs_20 IAMs_20 23 53 17.2
comp=Z,1µm,21.0s
F52A Sundridge 134.82 27 P PKiKP 22 55 58.6 -0.6
baz=320
PEBM Pemiscott Bayo 134.89 45 IAMs_20 IAMs_20 23 48 38.6
comp=Z,1µm,22.0s
D54A Lac Fusel, La 134.90 24 P PKiKP 22 55 59.2 -0.1
baz=324
N47A Urbana 134.90 37 IAMs_20 IAMs_20 23 47 01.0
comp=Z,906nm,21.0s
X43A Marvell 134.94 47 IAMs_20 IAMs_20 23 48 49.8
comp=Z,970nm,20.0s
L48A N Adams 134.96 35 P PKPdf 22 55 58.8 +0.6
baz=311
E53A Dumoine, Ponti 135.10 25 P PKiKP 22 55 59.4 -0.3
baz=322
342A Flagon Creek P 135.21 52 IAMs_20 IAMs_20 23 51 06.7
comp=Z,1µm,22.0s
L49A Milan 135.22 34 P PKiKP 22 56 00.0 -0.1
baz=312
MET Memphis--Engin 135.34 46 IAMs_20 IAMs_20 23 51 03.0
comp=Z,999nm,22.0s
K50A Casco 135.39 33 IAMs_20 IAMs_20 23 51 08.2
comp=Z,906nm,21.0s
USIN University of 135.40 41 IAMs_20 IAMs_20 23 58 04.9
comp=Z,770nm,20.0s
D55A Sainte-Anne-du 135.47 23 P PKiKP 22 56 00.4 -0.1
baz=326
I51A Listowel 135.49 30 P PKiKP 22 56 00.2 -0.4
baz=317
M49A Liberty Center 135.52 35 P PKiKP 22 56 00.1 -0.6
baz=311
O48A Farmland 135.61 37 P PKiKP 22 56 01.1 +0.1
baz=309
G53A Haliburton 135.66 27 P PKiKP 22 56 01.7 +0.8
baz=320
G54A Lake Saint Pet 135.68 27 P PKiKP 22 56 01.2 +0.3
baz=321
SADO Sadowa 135.69 28 PKhKP PKPpre 22 55 47.2
comp=Z,1.5nm,0.6s,baz=280,slow=6.1,SNR=2.8
SADO Sadowa 135.69 28 IAMs_20 IAMs_20 23 52 51.3
comp=Z,1µm,22.0s
E55A Montcerf-Lytto 135.70 24 P PKiKP 22 56 02.0 +1.1
baz=325
D56A ZEC Mazanza, M 135.72 22 P PKiKP 22 56 00.5 -0.5
baz=327
N49A Columbus Grove 135.76 36 P PKiKP 22 56 00.9 -0.4
baz=311
P48A Milroy 135.94 38 IAMs_20 IAMs_20 23 51 06.7
comp=Z,1µm,22.0s
P48A Milroy 135.94 38 P PKPdf 22 56 00.5 +0.4
baz=308
OXF Oxford 136.01 47 IAMs_20 IAMs_20 23 48 31.0
comp=Z,1µm,22.0s
Q48A North Vernon 136.08 39 P PKPdf 22 56 00.9 +0.6
baz=307
H53A Bobcaygeon 136.09 28 P PKiKP 22 56 01.4 -0.4
baz=320
M50A Fremont 136.09 34 IAMs_20 IAMs_20 23 50 16.1
comp=Z,894nm,22.0s
M50A Fremont 136.09 34 P PKiKP 22 56 02.1 +0.2
baz=312
WCI Wyandotte Cave 136.13 40 P PKiKP 22 56 01.4 -0.6
baz=306
O49A Covington 136.14 37 IAMs_20 IAMs_20 23 47 38.8
comp=Z,1µm,22.0s
LATQ La Tuque 136.16 21 P PKiKP 22 56 01.0 -0.8
baz=329
WVT Waverly 136.29 44 PKPdf 22 56 00.2 -0.5
WVT PP PP 22 58 30.4 -11
WVT Waverly 136.29 44 PKIKP PKPdf 22 56 00.2 -0.5
WVT Waverly 136.29 44 P PKPdf 22 56 01.3 +0.5
baz=303
T47A Sharon Grove 136.31 42 IAMs_20 IAMs_20 23 55 15.2
comp=Z,771nm,21.0s
P49A Miami Univ. Ec 136.33 38 P PKiKP 22 56 02.1 -0.4
baz=309
G55A Calabogie 136.39 26 P PKiKP 22 56 02.2 -0.1
baz=323
DELO Deloro Mine 136.58 27 IAMs_20 IAMs_20 23 54 22.7
comp=Z,1µm,21.0s
N51A Ashland 136.79 34 IAMs_20 IAMs_20 23 50 48.6
comp=Z,1µm,22.0s
R49A Shelbyville 136.81 39 IAMs_20 IAMs_20 23 54 11.9
comp=Z,884nm,20.0s
CMIG Matias Romero 136.83 73 PKP PKPdf 22 56 02.8 +0.6
comp=Z,8.4nm,0.7s,baz=310,slow=0.8,SNR=12
M52A Chesterland 136.92 33 IAMs_20 IAMs_20 23 51 42.9
comp=Z,1µm,22.0s
R50A Paris 137.34 39 IAMs_20 IAMs_20 23 52 01.9
comp=Z,994nm,22.0s
P51A Williamsport 137.35 36 IAMs_20 IAMs_20 23 48 49.7
comp=Z,1µm,22.0s
Q51A Peebles 137.47 37 IAMs_20 IAMs_20 23 49 14.1
comp=Z,757nm,20.0s
ALLY Alegheny Colle 137.49 32 IAMs_20 IAMs_20 00 02 26.7
comp=Z,1µm,22.0s
D62A Allapoint, All 137.64 18 IAMs_20 IAMs_20 00 00 53.7
comp=Z,798nm,20.0s
N53A Lisbon 137.72 33 IAMs_20 IAMs_20 23 52 07.9
comp=Z,1µm,21.0s
X48A Hartselle 137.72 45 IAMs_20 IAMs_20 23 51 35.1
comp=Z,1µm,22.0s
LONY Lake Ozonia 137.80 24 IAMs_20 IAMs_20 23 58 10.9
comp=Z,1µm,22.0s
J56A Wolcott 137.89 27 IAMs_20 IAMs_20 00 00 04.5
comp=Z,861nm,21.0s
FRNY Flat Rock 138.02 23 IAMs_20 IAMs_20 00 01 59.6
comp=Z,842nm,20.0s
N54A Moraine State 138.06 32 IAMs_20 IAMs_20 23 58 29.9
comp=Z,1µm,21.0s
J57A Williamstown 138.17 27 IAMs_20 IAMs_20 23 54 06.9
comp=Z,1µm,21.0s
S51A Beattyville 138.19 39 IAMs_20 IAMs_20 00 05 03.5
comp=Z,1µm,20.0s
PQI Presque Isle 138.31 17 IAMs_20 IAMs_20 00 00 22.4
comp=Z,900nm,21.0s
P53A Whipple 138.31 35 IAMs_20 IAMs_20 00 07 14.0
comp=Z,919nm,20.0s
E63A Oxbow 138.42 17 IAMs_20 IAMs_20 00 01 27.3
comp=Z,851nm,20.0s
NCB Newcomb 138.48 25 IAMs_20 IAMs_20 23 59 43.9
comp=Z,803nm,21.0s
Y49A Blount Mountai 138.48 46 IAMs_20 IAMs_20 23 54 24.2
comp=Z,830nm,22.0s
W50A Signal Mountai 138.51 43 IAMs_20 IAMs_20 00 02 29.7
comp=Z,875nm,20.0s
VT1 Waterbury 138.77 23 IAMs_20 IAMs_20 23 58 28.6
comp=Z,1µm,20.0s
J59A Piesco 138.78 25 IAMs_20 IAMs_20 23 59 15.9
comp=Z,976nm,20.0s
G62A West of Eustis 138.81 20 IAMs_20 IAMs_20 00 02 16.2
comp=Z,1µm,20.0s
K58A Earlville 138.84 27 IAMs_20 IAMs_20 23 56 13.6
comp=Z,840nm,20.0s
F63A Nahmakanta, Br 138.86 18 IAMs_20 IAMs_20 00 03 27.1
comp=Z,925nm,21.0s
TZTN Tazewell 138.89 40 IAMs_20 IAMs_20 23 55 08.2
comp=Z,895nm,21.0s
T52A Hallie 138.90 39 IAMs_20 IAMs_20 23 53 47.3
comp=Z,1µm,21.0s
CPCT Cooper Cave 138.91 42 IAMs_20 IAMs_20 23 54 23.8
comp=Z,1µm,21.0s
F64A Sherman 138.94 18 IAMs_20 IAMs_20 00 01 54.3
comp=Z,919nm,20.0s
MCWV Mont Chateau 139.06 34 IAMs_20 IAMs_20 23 52 59.5
comp=Z,773nm,21.0s
Z50A Ashland 139.15 46 IAMs_20 IAMs_20 23 51 20.9
comp=Z,1µm,21.0s
H62A Milan 139.16 21 IAMs_20 IAMs_20 23 55 14.4
comp=Z,1µm,22.0s
LBNH Lisbon 139.16 22 IAMs_20 IAMs_20 23 54 02.6
comp=Z,1µm,21.0s
ACCN Adirondack Com 139.19 25 IAMs_20 IAMs_20 23 49 38.7
comp=Z,1µm,21.0s
TKL Tuckaleechee C 139.28 41 PKP PKPdf 22 56 06.6 +0.3
comp=Z,11nm,0.6s,baz=165,slow=5.0,SNR=15
SSPA Standing Stone 139.40 31 IAMs_20 IAMs_20 23 54 19.0
comp=Z,715nm,20.0s
HNH Hanover 139.48 23 IAMs_20 IAMs_20 23 57 31.1
comp=Z,1µm,22.0s
250A Grady 139.55 48 IAMs_20 IAMs_20 23 51 48.9
comp=Z,981nm,22.0s
L59A Walton 139.57 27 IAMs_20 IAMs_20 23 53 11.8
comp=Z,989nm,21.0s
Z51A Franklin 139.64 45 IAMs_20 IAMs_20 23 54 42.0
comp=Z,752nm,20.0s
WVL Waterville 139.69 20 IAMs_20 IAMs_20 00 02 41.2
comp=Z,958nm,20.0s
I62A Tamworth 139.69 22 IAMs_20 IAMs_20 23 55 04.7
comp=Z,1µm,20.0s
TRY Troy 139.73 25 IAMs_20 IAMs_20 23 54 39.0
comp=Z,1µm,21.0s
I63A Otisfield 139.82 21 IAMs_20 IAMs_20 23 55 33.8
comp=Z,1µm,22.0s
R55A Marlinton 139.86 35 IAMs_20 IAMs_20 23 50 18.9
comp=Z,1µm,21.0s
V53A Saluda 139.90 41 IAMs_20 IAMs_20 23 57 13.9
comp=Z,1µm,21.0s
FFD Franklin Falls 139.92 23 IAMs_20 IAMs_20 00 00 14.7
comp=Z,985nm,22.0s
LMN Caledonia Moun 139.92 14 IAMs_20 IAMs_20 00 00 17.7
comp=Z,987nm,22.0s
GGN Saint George 140.06 17 IAMs_20 IAMs_20 23 58 07.0
comp=Z,842nm,20.0s
Y52A Lilburn 140.12 44 IAMs_20 IAMs_20 23 54 16.3
comp=Z,824nm,20.0s
P57A Homestead Farm 140.18 32 IAMs_20 IAMs_20 23 54 55.6
comp=Z,973nm,21.0s
BG3 Lake Jocassee 140.23 42 IAMs_20 IAMs_20 23 55 10.7
comp=Z,1µm,22.0s
EMMW East Machias 140.25 18 IAMs_20 IAMs_20 00 02 50.1
comp=Z,1µm,21.0s
K62A Royalston 140.37 24 IAMs_20 IAMs_20 23 59 09.9
comp=Z,1µm,21.0s
KSCT Kent School, K 140.63 26 IAMs_20 IAMs_20 00 04 23.0
comp=Z,1µm,20.0s
QUA2 Belchertown 140.65 24 IAMs_20 IAMs_20 23 57 46.3
comp=Z,949nm,21.0s
MVL Millersville 140.65 30 IAMs_20 IAMs_20 23 55 40.0
comp=Z,945nm,21.0s
HRV Adam Dziewonsk 140.77 23 IAMs_20 IAMs_20 23 59 38.5
comp=Z,1µm,22.0s
GOGA Godfrey 140.78 44 IAMs_20 IAMs_20 23 54 45.9
comp=Z,856nm,22.0s
U56A King 141.00 38 IAMs_20 IAMs_20 23 54 22.5
comp=Z,1µm,21.0s
GBN Guysborough 141.05 11 IAMs_20 IAMs_20 23 53 33.4
comp=Z,1µm,21.0s
KMSC Kings Mountain 141.17 40 IAMs_20 IAMs_20 23 49 38.5
comp=Z,941nm,21.0s
T57A Hurt 141.24 36 IAMs_20 IAMs_20 23 51 23.5
comp=Z,838nm,20.0s
BRYW Bryant College 141.28 24 IAMs_20 IAMs_20 00 00 18.9
comp=Z,1µm,20.0s
CBN Corbin Frederi 141.45 33 IAMs_20 IAMs_20 23 55 43.7
comp=Z,983nm,21.0s
553A Crawfordville 141.80 49 IAMs_20 IAMs_20 23 53 42.8
comp=Z,965nm,21.0s
W57A Gilead 142.01 39 IAMs_20 IAMs_20 00 06 26.6
comp=Z,954nm,20.0s
BIRD Birdtown, Kers 142.04 40 IAMs_20 IAMs_20 23 50 38.5
comp=Z,1µm,22.0s
V58A Windy Hill, Pi 142.13 37 IAMs_20 IAMs_20 23 51 37.4
comp=Z,1µm,22.0s
TEIG Tepich 142.37 66 PKhKP PKPpre 22 56 08.3
comp=Z,10nm,0.9s,baz=319,slow=4.2,SNR=3.6
TEIG PKP PKPdf 22 56 13.7 +1.5
comp=Z,17nm,0.7s,baz=319,slow=0.4,SNR=6.8
TEIG Tepich 142.37 66 eP PKPdf 22 56 07.5 -4.8
TEIG Tepich 142.37 66 PKPdf 22 56 09.1 -3.2

U59A Littleton 142.53 36 IAMs_20 IAMs_20 23 52 02.7
comp=Z,996nm,21.0s
CPSB Cacapava Do Su 142.53 178 eP PKiKP 22 56 15.5 +0.1
X58A Rowland 142.81 39 IAMs_20 IAMs_20 23 57 07.7
comp=Z,1μm,20.0s
V60A Jim Taylor Roa 143.25 36 IAMs_20 IAMs_20 00 05 17.7
comp=Z,962nm,20.0s
Y59A Loris 143.47 39 IAMs_20 IAMs_20 23 57 28.2
comp=Z,1μm,20.0s
PB14 IPOC Station P 143.49 151 iP PKPbc 22 56 12.3 +0.5
656A Willston 143.64 49 IAMs_20 IAMs_20 23 54 19.4
comp=Z,776nm,21.0s
PB10 IPOC Station P 144.34 150⇑iP PKPdf 22 56 15.9 +0.2
PB10 IPOC Station P 144.34 150 iP PKPab 22 56 16.2 +0.5
TGUH Tegucigalpa,Un 144.50 76 eP PKPbc 22 56 15.0 +0.1
PB05 IPOC Station P 145.07 149⇑iP PKPdf 22 56 18.3 +1.2
PB05 IPOC Station P 145.07 149 iP PKPdf 22 56 18.4 +1.2
DWPF Disney Wildern 145.11 50 PKPdf 22 56 16.8 0.0
DWPF Disney Wildern 145.11 50 IAMs_20 IAMs_20 23 57 44.6
comp=Z,830nm,22.0s
PB15 IPOC Station P 145.14 151⇑iP PKPdf 22 56 18.8 +1.4
PB15 IPOC Station P 145.14 151 iP PKiKP 22 56 19.4 -1.8
PB06 IPOC Station P 145.51 150 iP PKPab 22 56 19.7 +1.5
PB06 IPOC Station P 145.51 150 iP PKPab 22 56 19.8 +1.6
PB04 IPOC Station P 145.53 149⇑iP PKPab 22 56 20.1 +1.8
PB04 IPOC Station P 145.53 149 iP PKPab 22 56 20.0 +1.7
ITAB Concordia 145.72 179 eP PKiKP 22 56 20.5 -1.6
LVC Limon Verde 145.91 151 iP PKPdf 22 56 19.2 +0.3
LVC Limon Verde 145.91 151 eP PKiKP 22 56 22.0 -1.0
PB03 IPOC Station P 145.97 149⇑iP PKPab 22 56 20.2 +0.3
PB03 IPOC Station P 145.97 149 iP PKPab 22 56 21.4 +1.5
PB07 IPOC Station P 146.17 149 iP PKPab 22 56 21.9 +1.3
PB07 IPOC Station P 146.17 149 iP PKPab 22 56 22.0 +1.3
CPUP Villa Florida 146.19 171 PKPbc PKPbc 22 56 20.1 -0.3
comp=Z,18nm,0.7s,baz=171,slow=1.9,SNR=38
CPUP Villa Florida 146.19 171 eP PKiKP 22 56 22.1 -1.0
CPUP Villa Florida 146.19 171 PKPab 22 56 20.5 +0.1
PB09 IPOC Station P 146.44 150 iP PKPab 22 56 22.5 +0.7
PB09 IPOC Station P 146.44 150 iP PKPab 22 56 22.4 +0.7
060A Indiantown 146.48 51 IAMs_20 IAMs_20 00 14 04.9
comp=Z,710nm,20.0s
PB02 IPOC Station P 146.50 148⇑iP PKiKP 22 56 23.0 -0.9
PB02 IPOC Station P 146.50 148 iP PKiKP 22 56 23.4 -0.6
061Z Ochoppi 146.63 53 IAMs_20 IAMs_20 23 58 36.4
comp=Z,1μm,21.0s
PATCX Punta Patache 146.78 147⇑iP PKPbc 22 56 21.4 -0.3
HJA Humahuaca 146.93 157 iP PKPab 22 56 23.4 -0.4
PB01 IPOC Station P 146.94 149⇑iP PKPbc 22 56 22.1 -0.1
PB01 IPOC Station P 146.94 149 iP PKPbc 22 56 22.0 -0.2
TA01 Diego Aracena 146.97 147 iP PKPbc 22 56 21.8 -0.4
JTS Las Juntas de 147.08 82 PKPbc 22 56 22.0 -0.7
JTS Las Juntas de 147.08 82 PKP2 PKPbc 22 56 22.0 -0.7
JTS MLR MLR
comp=Z,700nm,21.0s
PSGC Pisagua 147.78 146⇑iP PKPdf 22 56 23.1 +1.3
PSGCX Pisagua 147.78 146 iP PKPdf 22 56 23.0 +1.2
YJA Yavi 147.81 156 eP PKPbc 22 56 24.8 -0.3
PB08 IPOC Station P 147.86 148 iP PKPbc 22 56 24.2 -1.0
PB08 IPOC Station P 147.86 148 iP PKPbc 22 56 24.2 -1.0
PB11 IPOC Station P 147.91 147⇑iP PKPbc 22 56 23.6 -1.4
PB11 IPOC Station P 147.91 147 iP PKPbc 22 56 24.2 -0.8
HDC Heredia 147.92 83 IAMs_20 IAMs_20 23 54 34.8
comp=Z,879nm,22.0s
GO01 Chusmiza 148.23 148⇓iP PKPbc 22 56 26.2 -0.1
PTGB Pitanga 148.23 180 eP PKPbc 22 56 26.4 +0.7
MNMC Minye Minye 148.45 146⇑iP PKPbc 22 56 25.1 -1.5
MNMCX Minye Minye 148.45 146 iP PKPbc 22 56 25.4 -1.2
NNA Nana 148.59 127 PKPbc PKPbc 22 56 25.9 -0.9
comp=Z,54nm,0.9s,baz=253,slow=4.6,SNR=21
NNA Nana 148.59 127 PKPbc 22 56 26.3 -0.5
NNA Nana 148.59 127 PKP2 PKPbc 22 56 26.3 -0.5
NNA MLR MLR
comp=Z,1μm,19.0s
AP01 Chacalluta 148.64 144 iP PKPdf 22 56 24.4 +1.3
PARB Paraibuna 149.02 191 eP PKPbc 22 56 28.2 +0.5
SPB Sao Paulo 149.06 188 eP PKPbc 22 56 27.6 -0.1
PB16 IPOC Station P 149.14 146 iP PKPbc 22 56 27.0 -1.8
FRTB Fartura 149.52 184 eP PKPbc 22 56 27.5 -1.4
VAS01 Vassouras-RJ 149.54 195 eP PKPbc 22 56 29.1 +0.1
VAO Valinhos 149.57 189 eP PKPdf 22 56 26.6 +2.0
ATAH Atahualpa 149.85 118 PKPbc PKiKP 22 56 32.4 +0.9
comp=Z,16nm,1.0s,baz=201,slow=1.3,SNR=12
TRCB Terra Rica 150.13 178 eP PKPbc 22 56 29.5 -0.9
BSCB Bom Sucesso 151.10 194 eP PKPbc 22 56 29.8 +2.7
PCMB Pacaembu 151.32 181 eP PKPbc 22 56 30.7 -2.6
LPAZ La Paz 151.56 145 iP PKPbc 22 56 30.2 +1.7
LPAZ La Paz 151.56 145 PKP PKPdf 22 56 29.2 +0.7
comp=Z,18nm,1.3s,baz=272,slow=1.0,SNR=16
LPAZ PKPbc pPKPdf 22 56 36.0 +0.1
comp=Z,30nm,0.9s,baz=130,slow=3.9,SNR=24
LPAZ La Paz 151.56 145 PKPdf 22 56 31.4 +2.9
LPAZ La Paz 151.56 145 iP PKPdf 22 56 30.5 +2.1
BB19B Bebedouro 151.69 186 eP PKPdf 22 56 30.7 +2.8
AZU Azuero 151.74 87 eP PKPdf 22 56 28.3 +0.3
BSFB Barra de Sao F 151.92 202 eP PKPdf 22 56 31.4 +3.1
BCIP Isla Barro Col 152.16 84 eP PKPdf 22 56 27.7 -1.0
BCIP Isla Barro Col 152.16 84 IAMs_20 IAMs_20 00 01 32.3
comp=Z,840nm,22.0s
AQDB Aquidauana 152.19 172 eP PKPdf 22 56 31.6 +3.0
UPA Univ. de Panam 152.47 84 eP PKPdf 22 56 27.6 -1.5
OTAV Otavalo 152.50 104 eP PKPdf 22 56 31.2 +1.4
OTAV Otavalo 152.50 104 eP PKPdf 22 56 30.7 +0.9
TUMC Tumaco 152.61 100 eP PKPdf 22 56 32.0 +2.7
MTDJ Mount Denham 152.65 64 eP PKPdf 22 56 30.0 +0.6
GCUF Volcan Galeras 153.82 102 eP PKPdf 22 56 33.5 +1.7
BBAC Balboa, Cauca 154.10 100 eP PKPdf 22 56 32.7 +0.9
PTAC Punta Ardita, 154.17 89 eP PKPdf 22 56 32.0 +0.4
PIZC Pizarro, Choco 154.46 94 eP PKPdf 22 56 33.7 +1.7
SOLC Bahia Solano 154.53 91 eP PKPdf 22 56 33.5 +1.4
POPC Popayan, Colom 154.76 99 eP PKPdf 22 56 32.7 0.0
SIV San Ignacio 155.15 158 PKP PKPdf 22 56 34.0 +1.1
comp=Z,4.2nm,0.8s,baz=236,slow=2.2,SNR=18
SIV PKPab PKPab 22 56 58.6 +1.2
comp=Z,9.2nm,0.8s,baz=242,slow=7.2,SNR=3.8
YOTC Yotoco, Valle 155.34 96 eP PKPdf 22 56 33.8 +0.4
PLMC San Jos del P 155.52 94 eP PKPdf 22 56 32.7 -0.9
FLOC Florencia 155.55 102 eP PKPdf 22 56 34.8 +1.3
DBBC Dabeiba 155.75 89 eP PKPdf 22 56 31.5 -2.4
CBOC Ciudad Bolivar 155.88 92 eP PKPdf 22 56 35.4 +1.2
PTLC Puerto Leguiza 155.99 106 eP PKPdf 22 56 35.0 +0.9
BETC Betania 156.00 100 eP PKPdf 22 56 35.2 +1.0
HELC Santa Helena 156.39 91 eP PKPdf 22 56 35.6 +0.5
ORTC Ortega, Tolima 156.41 97 eP PKPdf 22 56 35.4 +0.6
UREC San Jos de Ur 156.44 87 eP PKPdf 22 56 34.8 +0.1
GUY2C Guyana, Caldas 156.47 94 eP PKPdf 22 56 35.9 +0.6
SJCC San Jacinto, C 156.71 82 eP PKPdf 22 56 36.2 +1.1
PRAC Prado 156.73 97 eP PKPdf 22 56 35.6 +0.4
BDFB Brasilia 156.96 189 PKP PKPdf 22 56 36.0 +0.6
comp=Z,3.1nm,0.7s,baz=120,slow=0.9,SNR=4.6
BDFB PKPab PKPab 22 57 06.2 +1.0
comp=Z,9.4nm,0.9s,baz=162,slow=6.1,SNR=6.0
NORC Norcasia 156.99 93 eP PKPdf 22 56 34.8 -0.6
ZARC Zaragoza, Cauc 157.11 88 eP PKPdf 22 56 36.2 +0.6
MACC Macarena, Meta 157.43 102 eP PKPdf 22 56 36.2 +0.2
ROSC El Rosal 157.46 95 PKP PKPdf 22 56 36.9 +0.4
comp=Z,16nm,0.8s,baz=234,slow=1.5,SNR=7.4
ROSC PKPab PKPab 22 57 09.1 +0.9
comp=Z,15nm,0.7s,baz=288,slow=14,SNR=7.2
ROSC El Rosal 157.46 95 eP PKPdf 22 56 37.7 +1.2
PTBC PUERTO BERRIO 157.47 90 eP PKPdf 22 56 36.2 +0.2
SMRC Santa Marta, M 157.50 78 eP PKPdf 22 56 36.6 +0.7
ARGC Ariguani, Magd 157.63 82 eP PKPdf 22 56 37.9 +1.7
CVER Cruz Verde, Cu 157.66 96 eP PKPab 22 57 13.1 +4.0
SPBC San Pablo de B 157.79 93 eP PKPdf 22 56 36.9 +0.4
SMLC San Martn de 157.87 84 eP PKPdf 22 56 36.7 +0.3
VILC Villavicencio, 157.97 97 eP PKPdf 22 56 35.8 -1.0
CHIC Chingaza 158.01 96 eP PKPdf 22 56 37.4 +0.2
BRRC Barranca, Sant 158.24 89 eP PKPdf 22 56 37.8 +0.8
CODC Agustn Codazz 158.41 81 eP PKPdf 22 56 37.9 +0.8
OCAC Ocana 158.63 86 eP PKPdf 22 56 36.2 -1.4
GUVC San Jose del G 158.71 102 eP PKPdf 22 56 37.4 -0.2
BARC Barichara 158.74 90 eP PKPdf 22 56 35.6 -2.3
RUSC La Rusia 158.79 92 eP PKPdf 22 56 38.4 +0.2
PAMC Pamplona, Colo 159.25 88 eP PKPdf 22 56 38.7 -0.1
PTGC Puerto Gaitan, 159.52 97 eP PKPdf 22 56 37.8 -0.7
URIC Uribia, Colomb 159.58 76 eP PKPdf 22 56 39.0 +0.5
TAMC Tame, Arauca 160.11 91 eP PKPdf 22 56 40.2 +1.0
SAML Samuel 160.30 145 eP PKPdf 22 56 40.5 +1.2
SAML Samuel 160.30 145 eP PKPdf 22 56 42.8 +3.5
SAML Samuel 160.30 145 PKPdf 22 56 40.7 +1.4
SAML Samuel 160.30 145 PKIKP PKPdf 22 56 40.7 +1.4
DABV Dabajuro 161.02 78 eP PKPdf 22 56 40.1 +0.1
SOCV Socops 161.07 86 eP PKPdf 22 56 39.3 -0.9
SDV Santo Domingo 161.26 84 PKP PKPdf 22 56 41.0 +0.4
comp=Z,19nm,0.8s,baz=265,slow=2.0,SNR=28
SDV PKPab PKPab 22 57 26.0 +1.6
comp=Z,9.6nm,0.7s,baz=291,slow=6.0,SNR=5.4
SDV Santo Domingo 161.26 84 eP PKPdf 22 56 40.8 +0.2
SDV Santo Domingo 161.26 84 eP PKPdf 22 56 42.7 +2.1
ELOV Elorza 162.43 90 eP PKPdf 22 56 42.8 +1.2
BAUV El Baul 163.81 83 eP PKPdf 22 56 42.8 -0.1
BAUV El Baul 163.81 83 PKPdf 22 56 42.8 -0.1
SMRT St. Maarten 164.62 45 eP PKPdf 22 56 31.3 -12
SABA Saba 164.79 46 eP PKPdf 22 56 31.3 -12
SEUS St. Eustatius 165.06 46 eP PKPdf 22 56 29.4 -14
SKI Saint Kitts 165.34 46 eP PKPdf 22 56 22.4 -22
ANWB Willy Bob 165.76 42 eP PKPdf 22 56 49.7 +5.3
DWS Wesley 167.52 48 eP PKPdf 22 56 36.8 -9.1
FDF Fort de France 168.17 50 eP PKPdf 22 56 44.1 -2.3
FDF Fort de France 168.17 50 PKPdf 22 56 44.1 -2.3
FDF Fort de France 168.17 50 PKIKP PKPdf 22 56 44.1 -2.3
ORIV Oritupano 168.34 80 eP PKPdf 22 56 46.5 0.0
ORIV Oritupano 168.34 80 PKPdf 22 56 46.5 0.0
SVB Belmont 168.92 57 eP PKPdf 22 56 49.6 +2.8
GRGR Grenville 169.12 63 eP PKPdf 22 56 36.6 -10
BBGH Gun Hill 170.35 52 eP PKPdf 22 56 54.0 +6.3
TOSP Speyside 170.46 64 eP PKPdf 22 56 35.2 -13

IDC 03 22:40:56.9±1.9, 7°.58S×128°.47E, h0km, mb4.4/12, mb1 4.4/12, mb1mx4.1/57, mbtmp4.4/12, MS5.0/2, Ms1 5.0/2, ms1mx4.2/46, Error ellipse: s-maj=45.1km s-min=36.0km az=152.0
NEIC 03 22:40:58.1±1.4, 7°.65S±0°.07×128°.37E±0°.07, h10km±1km, mb4.4/4, Error ellipse: s-maj=15.4km s-min=7.2km az=136.0
ISC 03 22:41:01.4±0.7, 7°.68S±0°.09×128°.42E±0°.08, h35km, n26, σ0.77/23, mb4.5/13, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SAUI Saumlaki 2.87 96 Pn Pn 22 41 45.9 +1.1
SOEI Soe 4.59 243 Pn Pn 22 42 09.2 +0.7
FAKI Fak Fak 6.08 39 Pn Pn 22 42 28.6 -0.2
FITZ Fitzroy Crossi 10.70 194 Pn Pn 22 43 31.5 -0.8
FORT Forrest 22.98 181 P P 22 46 02.4 -0.6
RPSI Rantau Prapat 31.18 288 P P 22 47 17.4 -0.1
PSI Prapat 31.21 288 P P 22 47 17.4 -0.5
8.7nm,0.9s,baz=153,slow=6.8,SNR=3.5
KSRS Korea Array 44.90 359 P P 22 49 12.9 +0.2
1.5nm,0.7s,baz=176,slow=10,SNR=4.1
MJAR Matsushiro Arr 44.94 11 P P 22 49 11.7 -1.3
3.0nm,0.8s,baz=192,slow=9.6,SNR=5.7
MJAR Matsushiro Arr 44.94 11 IAmb IAmb 22 49 14.8
comp=Z,1.0nm,0.9s
USRK Ussuriysk Ar. 51.74 3 P P 22 50 05.3 0.0
comp=Z,1.5nm,0.7s,baz=192,slow=7.1,SNR=3.1
USRK Ussuriysk Ar. 51.74 3 P P 22 50 04.2 -1.2
KLR Kul'dur 56.75 3 LR LR 23 12 50.4
comp=Z,1μm,21.3s,baz=175,slow=34
ULN Ulaanbaatar 58.44 343 P P 22 50 53.7 -0.2
ULN IAmb IAmb 22 50 57.7
comp=Z,3.1nm,0.9s
SONM Songino Array 58.60 343 P P 22 50 55.4 +0.4
comp=Z,3.9nm,0.9s,baz=158,slow=7.6,SNR=4.5
SONM Songino Array 58.60 343 P P 22 50 54.9 -0.1
PETK Petropavlovsk- 65.47 19 P P 22 51 40.8 0.0
comp=Z,5.5nm,0.8s,baz=211,slow=1.7,SNR=3.4
PETK Petropavlovsk- 65.47 19 P P 22 51 41.5 +0.7
MKAR Makanchi Array 67.95 328 P P 22 51 57.4 +0.6
comp=Z,5.5nm,0.7s,baz=130,slow=7.7,SNR=6.5
AAK Ala-Archa 70.06 321 P P 22 52 11.3 +1.1
comp=Z,3.3nm,0.7s,baz=148,slow=9.5,SNR=3.8
ZALV Zalesovo Beam 71.51 335 P P 22 52 18.5 0.0
comp=Z,6.1nm,0.8s,baz=132,slow=5.1,SNR=5.7
KURBB Kurchatov Arra 72.28 329 P P 22 52 24.1 +0.9
comp=Z,6.8nm,0.9s,baz=129,slow=4.9,SNR=6.2
BVAR Borovoye Array 77.81 328 P P 22 52 56.4 +1.3
comp=Z,2.3nm,0.9s,baz=103,slow=6.2,SNR=2.8
TIXI Tiksi 79.17 0 P P 22 53 02.5 +0.3
comp=Z,2.2nm,0.8s,baz=121,slow=12,SNR=2.0
ARU Arti 85.46 328 LR LR 23 32 17.6
comp=Z,809nm,21.9s,baz=114,slow=36
LPAZ La Paz 151.10 146 PKPbc PKiKP 23 00 53.9 +0.6
comp=Z,1.6nm,0.9s,baz=256,slow=4.2,SNR=2.1

IDC 03 22:43:45.8±24.0, 8°.01S×130°.02E, h0km, mb3.9/4, mb1 3.9/4, mb1mx3.6/49, mbtmp3.9/4, Error ellipse: s-maj=637.4km s-min=174.3km az=126.0, Tanimbar Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SONM Songino Array 59.40 342 P P 22 53 50.2 0.0
0.5nm,0.8s,baz=148,slow=8.5,SNR=2.1
MKAR Makanchi Array 69.08 327 P P 22 54 53.6 0.0
0.8nm,0.8s,baz=132,slow=7.2,SNR=1.5
ZALV Zalesovo Beam 72.49 334 P P 22 55 14.1 -0.1
0.9nm,0.7s,baz=134,slow=6.2,SNR=2.7
KURBB Kurchatov Arra 73.38 329 P P 22 55 19.7 +0.1
0.5nm,0.3s,baz=136,slow=5.1,SNR=2.0

TAP 03 22:44:34.9, 24°.31N×121°.47E, h8km, ML1.2, B, Taiwan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ETLH Xiulin Townshi 0.10 172 eP Pg 22 44 37.3 0.0
baz=171
ETLH eS Sg 22 44 39.0 0.0
baz=171
NNSB Datong 0.14 327 P Pg 22 44 37.9 -0.1
baz=327
NNSB S Sg 22 44 40.0 -0.1
NNSH Datong 0.14 327 eP Pg 22 44 37.8 -0.1
baz=327
NNSH eS Sg 22 44 39.9 -0.2
baz=327
NNS Nan Shan 0.16 327 P Pg 22 44 38.1 -0.1
baz=328
NNS S Sg 22 44 40.5 0.0
baz=328
NACB Ninganchiao 0.18 139 P Pg 22 44 38.5 0.0
baz=138
NACB S Sg 22 44 41.1 +0.1
baz=138
WHF Hehuan Shan 0.25 228 P Pg 22 44 39.6 -0.3
baz=227
WHF S Sg 22 44 43.2 -0.1
baz=227
ENA Nanau 0.28 65 eP Pg 22 44 40.5 +0.1
baz=65
ENA eS Sg 22 44 44.5 +0.4
baz=65
NDT Datong Townshi 0.29 8 eP Pg 22 44 40.7 0.0
baz=8.0
NDT eS Sg 22 44 44.9 +0.2
baz=8.0
ENTT Nioudou 0.34 15 eP Pg 22 44 41.6 0.0
baz=16
ENTT eS Sg 22 44 46.4 +0.2
baz=16
OWD Renai 0.44 217 eP Pg 22 44 42.9 -0.6
baz=216
OWD eS Sg 22 44 49.6 +0.3
baz=216
TWE Neicheng 0.45 24 eP Pg 22 44 43.7 +0.1
baz=25
TWE eS Sg 22 44 50.1 +0.6
baz=25
NWLT Wulai 0.47 4 eP Pg 22 44 43.9 -0.1
baz=4.0
NWLT eS Sg 22 44 50.6 +0.5
baz=4.0

JMA 03 22:44:58.3±0.2, 24°.90N×123°.39E, h20km, M1.6, Southwestern Ryukyu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
IRIF Iriomote-Funau 0.64 151 P Pb 22 45 10.5 -0.3
IRIF eS Sb 22 45 19.3 -0.1
JKRS Kuro-shima 0.87 139 P Pb 22 45 14.7 0.0
JKRS S Sb 22 45 26.1 +0.3
JIJ Ishigaki jima 0.87 128 P Pb 22 45 14.2 -0.5
JIJ S Sb 22 45 25.3 -0.6
JISG Ishigakijimahi 0.89 110 eS Sb 22 45 25.9 -0.7

DDA 03 22:45:33.9, 40°.81N×34°.61E, h7km±1km, ML1.6
ISK 03 22:45:33.5, 40°.86N×34°.64E, h15km, ML2.7/11
ISC 03 22:45:33.7±1.0, 40°.84N±0°.03×34°.62E±0°.03, h11km±9km, n24, σ0.56/32, Turkey

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CTAK Corum_Osmancik 0.23 147 iP Pg 22 45 38.7 0.0
CTAK IAML 22 45 42.0
comp=E,121nm,0.7s
CTAK iS Sg 22 45 42.5 +0.4
CTAK IAML 22 45 52.0
comp=N,82nm,0.4s
KAGI orum-Kargı 0.31 340 iP Pg 22 45 40.6 +0.5
KAGI IAML 22 45 45.0
comp=N,93nm,0.6s
KAGI iS Sb 22 45 46.2 -0.3
KAGI IAML 22 45 48.0
comp=E,40nm,0.9s
COAL Corum-Alaca 0.65 155 iP Pg 22 45 46.0 -0.3
COAL IAML 22 45 55.0
comp=N,43nm,0.7s
COAL IAML 22 45 55.0
comp=E,49nm,1.3s
ILGA Ilgaz 0.72 287 iP Pb 22 45 48.3 -0.1
ILGA iS Sb 22 45 58.5 +0.2
ILGA IAML 22 46 02.0
comp=N,9.0nm,0.4s
ILGA IAML 22 46 11.0
comp=E,11nm,0.6s
CANT Cankiri 0.80 253 PG Pb 22 45 49.9 +0.3
CANT SG Sb 22 46 01.3 +0.9
HAVZ Havza 0.86 74 iP Pb 22 45 50.9 +0.1
HAVZ iS Sb 22 46 03.3 +1.0
HAVZ IAML 22 46 04.0
comp=N,73nm,0.3s
HAVZ IAML 22 46 04.0
comp=E,54nm,0.3s
KAYA Kayacik-Havza(0.86 83 PG Pg 22 45 50.2 -0.2
YARM Yarimca-Ladik(0.92 85 PG Pg 22 45 51.4 0.0
YARM SG Sb 22 46 04.5 +0.6
DIKM Dikmen 0.94 31 PG Pg 22 45 51.8 0.0
GULF Gulfidan-Ladik 0.96 85 PG Pg 22 45 51.9 -0.3
ELDT Eldivan 0.97 249 iP Pn 22 45 53.4 -0.1
ELDT IAML 22 46 09.0
comp=N,14nm,0.2s
DELI KIRIKKALE 1.00 213 iP Pg 22 45 52.1 -1.0
DELI iS Sg 22 46 05.2 -0.8
DELI IAML 22 46 12.0
comp=E,21nm,0.2s
DELI IAML 22 46 13.0
comp=N,16nm,0.2s
HKOY Hamitkoy-Ladik 1.04 87 PG Pg 22 45 53.6 -0.1
KVT Kavak 1.10 77 PN Pb 22 45 54.7 -0.2
CDAG Cicekdag 1.23 189 iP Pb 22 45 57.1 0.0
CDAG iS Sn 22 46 14.3 +0.6
CDAG IAML 22 46 15.0
comp=N,16nm,0.4s
CDAG IAML 22 46 17.0
comp=E,20nm,0.4s
SNOP Sinop 1.25 20 PN Pn 22 45 55.8 -1.4
YOZ Yozgat 1.32 156 PN Pn 22 45 58.2 +0.1
BRTR Keskin Array B 1.35 214 PN Pn 22 45 58.8 -0.2
ERBA Erbaa 1.63 95 iP Pg 22 46 04.4 -0.6
ERBA IAML 22 46 45.0
comp=N,5.1nm,2.0s
BBAL Bala 1.73 222 iP Pb 22 46 05.4 -0.2
BBAL IAML 22 46 29.0
comp=N,8.8nm,1.4s
BBAL IAML 22 47 05.0
comp=E,9.2nm,1.2s
KIRS Kırehir-Merke 1.79 198 iP Pb 22 46 06.8 +0.2
KIRS IAML 22 46 36.0
comp=E,4.3nm,1.0s
KIRS IAML 22 46 39.0
comp=N,3.5nm,0.9s
AFSR Afar-Bala (An 1.83 221 PN Pn 22 46 05.6 +0.4
CUSAR Sarkisla-SIVAS 1.89 138 iP Pg 22 46 09.1 -0.9
CUSAR IAML 22 47 04.0
comp=E,6.9nm,2.0s
CUSAR IAML 22 47 07.0
comp=N,7.9nm,2.4s
YAYX Yaylak 2.00 198 PN Pn 22 46 08.2 +0.6

IDC 03 22:49:56.7±0.6, 7°.21S×128°.18E, h0km, mb4.6/19, mb1 4.6/24, mb1mx4.4/52, mbtmp4.6/24, ML4.1/4, Error ellipse: s-maj=21.5km s-min=12.7km az=67.0
NEIC 03 22:49:58.0±2.6, 7°.19S±0°.06×128°.08E±0°.06, h10km±1km, mb4.9/34, Error ellipse: s-maj=10.8km s-min=9.6km az=57.0
MOS 03 22:49:59.0±0.8, 7°.17S×128°.17E, h29km, mb4.8/9, Error ellipse: s-maj=14.0km s-min=6.6km az=111.7
DJA 03 22:50:01.5±0.9, 7°S±2°×12°8E±°, h36km±16km, M5.0/12, mb4.8/12, MLv5.2/8
ISC 03 22:50:01.4±0.3, 7°.23S±0°.04×128°.17E±0°.05, h35km, n157, σ1.69/161, mb4.8/47, 9C-1D, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SAUI Saumlaki 3.19 104 Pn Pn 22 50 49.6 +0.6
NLAI Namlea 4.11 345 P Pn 22 51 00.5 -1.2
SOEI Soe 4.61 237 P Pn 22 51 12.8 +4.1
SOEI Soe 4.61 237 Pn 22 51 06.5 -2.1
SANI Sanana 5.59 337 P Pn 22 51 22.6 +0.6
FAKI Fak Fak 5.90 44 P Pn 22 51 24.3 -2.1
0.7nm73nm,0.8s
FAKI Fak Fak 5.90 44 Pn Pn 22 51 25.2 -1.2
MTN Manton Dam 6.29 153 P Pn 22 51 34.6 +2.8
baz=6.5,SNR=16
MTN Manton Dam 6.29 153 Pn 22 51 33.1 +1.4
MTN Sn Sn 22 52 43.8 +1.3
LBMI Labuha 6.58 354 P Pn 22 51 36.5 +0.8
0.6nm51nm,0.9s
KDU Kakadu 6.88 142 P Pn 22 51 40.7 +0.9
baz=7.0,SNR=8.0
SIJI Sorong 7.03 26 Pn Pn 22 51 40.2 -1.7
1.8nm,0.3s,baz=221,slow=20,SNR=3.0
SWI Sorong 7.03 26 P Pn 22 51 40.3 -1.6
2.2nm74nm,1.1s
LUWI Luwuk 8.17 319 Pn Pn 22 51 55.4 -2.1
KNRA Kununurra 8.41 176 P Pn 22 52 03.8 +3.0
baz=8.6,SNR=8.0
KNRA Kununurra 8.41 176 Pn 22 52 01.6 +0.8
KNRA Sn Sn 22 53 34.8 +0.1
PLAI Plampang 10.42 261 P Pn 22 52 30.8 +2.5
53nm,0.9s
FITZ Fitzroy Crossi 11.08 193 P Pn 22 52 38.3 +0.8
baz=11,SNR=3.6
FITZ Fitzroy Crossi 11.08 193 Pn Pn 22 52 37.1 -0.3
1.5nm,0.3s,baz=28,slow=11,SNR=7.9
FITZ Fitzroy Crossi 11.08 193 Pn Pn 22 52 37.7 +0.2
WB0 Warramunga Arr 13.85 155 Pn 22 53 12.5 -2.8
WB0 Sn Sn 22 55 41.9 -6.0
WRAB Tennant Creek 13.98 155 Pn Pn 22 53 15.0 -2.1
WRAB Tennant Creek 13.98 155 eP Pn 22 53 16.1 -1.0
WRA Warramunga Arr 13.98 155 Pn Pn 22 53 14.8 -2.3
1.2nm,0.3s,baz=341,slow=12,SNR=16
WRA Sn Sn 22 55 37.7 -13
baz=329,slow=22,SNR=4.9
WB2 Warramunga Arr 13.99 155 Pn 22 53 15.0 -2.2
WR0 Warramunga Arr 14.08 155 Pn Pn 22 53 16.1 -2.4
KCP Kidapawan 14.47 348⇑iP P 22 53 29.9 -0.3
COEN Coen 16.18 116 P Pn 22 53 47.4 +1.1
baz=16,SNR=9.2
COEN Coen 16.18 116 P Pn 22 53 45.3 -1.0
PSA00 Pilbara Seismi 16.37 209 Pn 22 53 46.3 -2.3
PSA00 Sn Sn 22 56 43.3 -6.0
AS31 Alice Springs 17.25 162 Pn 22 53 58.5 -1.1
ASAR Alice Springs 17.25 162 P Pn 22 53 58.6 -1.0
0.5nm,0.3s,baz=332,slow=9.9,SNR=13
ASAR S Sn 22 57 02.5 -8.0
0.4nm,0.3s,baz=325,slow=21,SNR=5.5
ASAR Alice Springs 17.25 162 P Pn 22 53 59.2 -0.4
ASAR Alice Springs 17.25 162 P Pn 22 53 59.3 -0.4
QIS Mount Isa 17.27 141 P P 22 54 02.8 +1.7
baz=17,SNR=4.7
WRKA Warakurna 17.71 180 P P 22 54 07.6 +1.7
baz=18,SNR=4.7

KKM	**Kota Kinabalu**	**17.78**	**318**		**Pn**	**22 54 02.1**	**-4.3**
SBUM	**Sibu**	**18.60**	**301**	P	**P**	**22 54 13.2**	**-2.6**
PMG	**Port Moresby**	**18.91**	**98**	P	**P**	**22 54 17.4**	**+0.1**
	1.0nm,0.3s,baz=324,slow=3.2,SNR=4.0						
PMG	**Port Moresby**	**18.91**	**98**	P	**P**	**22 54 17.4**	**-1.9**
PMG	**Port Moresby**	**18.91**	**98**	⇑iP	**Pn**	**22 54 20.8**	**+0.7**
PMG				pmax	pmax		
	comp=Z,148nm,1.3s						
KSM	**Kuching**	**19.81**	**295**	P	**P**	**22 54 24.9**	**-4.2**
GIRL	**Giralia**	**20.37**	**220**	P	Pn	22 54 37.6	+0.2
	baz=20						
CTA	**Charters Tower**	**21.70**	**128**	P	**P**	**22 54 49.9**	**+0.4**
	comp=Z,15nm,1.1s,baz=318,slow=18,SNR=2.0						
FORT	**Forrest**	**23.43**	**180**	P	**P**	**22 55 09.9**	**+2.4**
FORT				IAmb	IAmb	22 55 19.1	
	comp=Z,36nm,0.8s						
MORW	**Morawa**	**24.55**	**206**	P	**P**	**22 55 20.5**	**+2.5**
	baz=25,SNR=5.0						
MORW	**Morawa**	**24.55**	**206**	P	**P**	**22 55 20.4**	**+2.4**
MORW				IAmb	IAmb	22 55 26.4	
	comp=Z,26nm,0.8s						
MNAI	**Manna**	**25.25**	**275**	P	**P**	**22 55 25.5**	**+1.1**
BBOO	**Buckleboo**	**26.49**	**165**	P	**P**	**22 55 35.7**	**+0.2**
BBOO				IAmb	IAmb	22 55 44.9	
	comp=Z,22nm,0.9s						
NWAO	**Narrogin (SRO)**	**27.51**	**200**	P	**P**	**22 55 45.5**	**+0.8**
NWAO				IAmb	IAmb	22 55 53.8	
	comp=Z,47nm,1.5s						
NWAO	**Narrogin (SRO)**	**27.51**	**200**	P	**P**	**22 55 45.5**	**+0.8**
NWAO				pmax	pmax		
	comp=Z,47nm,1.5s						
STKA	**Stephens Creek**	**27.53**	**155**	P	**P**	**22 55 45.5**	**+0.6**
	comp=Z,5.3nm,0.8s,baz=337,slow=10,SNR=3.7						
STKA	**Stephens Creek**	**27.53**	**155**	P	**P**	**22 55 46.6**	**+1.7**
STKA	**Stephens Creek**	**27.53**	**155**	P	**P**	**22 55 46.6**	**+1.7**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RPSI	**Rantau Prapat**	**30.81**	**288**	P	**P**	**22 56 14.2**	**0.0**
PSI	**Prapat**	**30.84**	**288**	P	**P**	**22 56 14.2**	**-0.4**
	comp=Z,30nm,1.0s,baz=167,slow=5.2,SNR=16						
CAN	**Canberra**	**33.87**	**149**	P	**P**	**22 56 42.7**	**+1.8**
CAN	**Canberra**	**33.87**	**149**	P	**P**	**22 56 42.7**	**+1.8**
TOO	**Toolangi**	**34.05**	**155**	P	**P**	**22 56 44.5**	**+2.1**
TOO	**Toolangi**	**34.05**	**155**	P	**P**	**22 56 44.5**	**+2.1**
CMAR	**Chiang Mai Arr**	**38.51**	**312**	P	**P**	**22 57 20.2**	**-0.5**
	comp=Z,1.8nm,1.0s,baz=147,slow=7.3,SNR=7.3						
NJ2	**Nanjing**	**40.06**	**348**	eP	**P**	**22 57 36.2**	**+2.9**
NJ2				pmax	pmax		
	comp=Z,19nm,0.5s						
JHJ2	**Mitsune**	**41.62**	**15**	P	**P**	**22 57 46.7**	**+0.5**
KSAR	**Wonju Array Be**	**44.44**	**360**	P	**P**	**22 58 08.9**	**-0.1**
KSAR	**Wonju Array Be**	**44.44**	**360**	P	**P**	**22 58 08.9**	**-0.1**
KSRS	**Korea Array**	**44.45**	**360**	P	**P**	**22 58 09.8**	**+0.8**
	comp=Z,4.5nm,0.9s,baz=171,slow=8.9,SNR=6.6						
MJAR	**Matsushiro Arr**	**44.55**	**12**	P	**P**	**22 58 09.2**	**-0.7**
	comp=Z,10.0nm,1.0s,baz=194,slow=9.5,SNR=11						
MJAR	**Matsushiro Arr**	**44.55**	**12**	P	**P**	**22 58 09.5**	**-0.4**
MJAR	**Matsushiro Arr**	**44.55**	**12**	P	**P**	**22 58 09.5**	**-0.4**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAJO	**Matsushiro**	**44.55**	**12**	⇑iP	**P**	**22 58 08.6**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,14nm,1.1s						
MAT	**Matsushiro**	**44.55**	**12**	P	**P**	**22 58 09.0**	**-0.9**
MAT				S	**S**	**23 04 39.8**	**-3.4**
CD2	**Chengdu**	**44.55**	**330**	P	**P**	**22 58 12.1**	**+2.0**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
LZH	**Lanzhou**	**48.78**	**334**	eP	**P**	**22 58 44.3**	**+1.1**
LZH				pP	pwP	22 59 02.3	+4.9
LZH				sP	sP	22 59 09.8	+14
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
MSHR	**Mys Shultsa**	**49.65**	**3**	⇑iP	**P**	**22 58 50.5**	**+1.0**
HHC	**Hu-ho-hao-te**	**50.22**	**344**	eP	**P**	**22 58 58.3**	**+4.2**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,230nm,5.7s						
LSA	**Lhasa**	**51.13**	**318**	P	**P**	**22 59 01.9**	**+0.3**
LSA				IAmb	IAmb	22 59 05.5	
	comp=Z,9.7nm,0.9s						
LSA	**Lhasa**	**51.13**	**318**	P	**P**	**22 59 01.9**	**+0.3**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
USRK	**Ussuriysk Ar.**	**51.30**	**4**	P	**P**	**22 59 02.8**	**+0.8**
	comp=Z,1.9nm,0.5s,baz=187,slow=7.3,SNR=12						
USA0B	**Ussuriysk Arra**	**51.31**	**4**	P	**P**	**22 59 02.8**	**+0.8**
USA0B				IAmb	IAmb	22 59 09.1	
	comp=Z,15nm,1.2s						
USA0B	**Ussuriysk Arra**	**51.31**	**4**	P	**P**	**22 59 02.8**	**+0.8**
USA0B				pmax	pmax		
	comp=Z,15nm,1.3s						
MDJ	**Mudanjiang**	**51.62**	**1**	P	**P**	**22 59 06.1**	**+1.7**
MDJ				pmax	pmax		
	comp=Z,18nm,1.1s						
ODAN	**Odare**	**52.05**	**312**	eP	**P**	**22 59 09.0**	**+0.8**
TAPN	**Taplejung**	**52.10**	**313**	eP	**P**	**22 59 07.9**	**-0.8**
	comp=Z,22nm,1.1s						
RPZ	**Rata Peaks**	**52.17**	**141**	P	**P**	**22 59 10.2**	**+1.6**
	comp=Z,10nm,0.9s,baz=272,slow=3.1,SNR=3.2						
RPZ	**Rata Peaks**	**52.17**	**141**	P	**P**	**22 59 10.2**	**+1.6**
RPZ				IAmb	IAmb	22 59 16.9	
	comp=Z,17nm,0.7s						
RAMN	**Ramite**	**52.69**	**312**	eP	**P**	**22 59 14.3**	**+1.4**
GTA	**Gaotai**	**53.32**	**333**	⇓P	**P**	**22 59 18.3**	**+1.0**
GTA				pmax	pmax		
	comp=Z,11nm,1.0s						
GTA				pmax	pmax		
	comp=Z,210nm,7.6s						
GTA				LR	LR		
	comp=Z,1μm,17.8s						
GTA				LR	LR		
	comp=Z,710nm,17.8s						
GTA				LR	LR		
	comp=Z,1μm,17.8s						
JIRN	**Jiri**	**53.38**	**312**	eP	**P**	**22 59 20.3**	**+2.1**
YUK	**Yuzh-Kuril'sk**	**53.48**	**16**	⇑iP	**P**	**22 59 16.6**	**-1.5**
GUN	**Gumba**	**53.75**	**312**	eP	**P**	**22 59 22.5**	**+1.6**
	comp=Z,25nm,0.7s						
PKI	**Pulchoki**	**53.91**	**312**	eP	**P**	**22 59 23.4**	**+1.3**
	comp=Z,8.7nm,0.7s						
PKIN	**Phulchoki**	**53.92**	**312**	eP	**P**	**22 59 22.7**	**+0.6**
KKN	**Kakani**	**54.13**	**312**	eP	**P**	**22 59 24.0**	**+0.5**
DMN	**Daman**	**54.16**	**312**	eP	**P**	**22 59 24.8**	**+1.0**
GKN	**Gorkha**	**54.72**	**312**	eP	**P**	**22 59 27.8**	**+0.1**
	comp=Z,14nm,0.5s						
KOLN	**Koldanda**	**55.37**	**311**	eP	**P**	**22 59 33.7**	**+1.2**
	comp=Z,36nm,0.9s						
DANN	**Dangsing**	**55.56**	**312**	eP	**P**	**22 59 34.9**	**+1.0**
	comp=Z,27nm,0.8s						
KLR	**Kul'dur**	**56.31**	**3**	P	**P**	**22 59 39.4**	**+0.9**
	comp=Z,2.4nm,1.0s,baz=194,slow=8.4,SNR=5.5						
KLR	**Kul'dur**	**56.31**	**3**	eP	**P**	**22 59 37.2**	**-1.3**
KLR				pmax	pmax		
	comp=Z,12nm,1.5s						
ULN	**Ulaanbaatar**	**57.94**	**343**	P	**P**	**22 59 51.0**	**+0.7**
ULN				IAmb	IAmb	22 59 54.4	
	comp=Z,10nm,1.1s						
ULN	**Ulaanbaatar**	**57.94**	**343**	P	**P**	**22 59 51.0**	**+0.7**
ULN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SONM	**Songino Array**	**58.10**	**343**	P	**P**	**22 59 52.0**	**+0.6**
	comp=Z,7.3nm,0.9s,baz=157,slow=5.4,SNR=36						
SONM	**Songino Array**	**58.10**	**343**	P	**P**	**22 59 51.8**	**+0.4**
SONM	**Songino Array**	**58.10**	**343**	P	**P**	**22 59 51.8**	**+0.4**
SONM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ZAK	**Zakamensk**	**61.30**	**342**	eP	**P**	**23 00 13.7**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WMQ	**Urumqi**	**62.61**	**328**	eP	**P**	**23 00 22.8**	**+0.5**
WMQ				pP	pwP	23 00 36.8	+0.2
WMQ				sP	sP	23 00 44.0	+8.5
WMQ				pmax	pmax		
	comp=Z,12nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,140nm,11.5s						
WMQ				LR	LR		
	comp=Z,540nm,16.3s						
WMQ				LR	LR		
	comp=Z,460nm,22.1s						
WMQ				LR	LR		
	comp=Z,720nm,20.1s						
WMQ	**Urumqi**	**62.61**	**328**	P	**P**	**23 00 23.5**	**+1.2**
WMQ	**Urumqi**	**62.61**	**328**	P	**P**	**23 00 23.5**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
MOY	**Mondy**	**63.14**	**341**	eP	**P**	**23 00 26.8**	**+1.2**
PETK	**Petropavlovsk-**	**65.12**	**19**	P	**P**	**23 00 39.4**	**+0.9**
	comp=Z,11nm,1.1s,baz=190,slow=7.4,SNR=3.0						
PETK	**Petropavlovsk-**	**65.12**	**19**	P	**P**	**23 00 39.1**	**+0.6**
PETK	**Petropavlovsk-**	**65.12**	**19**	P	**P**	**23 00 39.1**	**+0.6**
BOD	**Bodaibo**	**65.84**	**352**	eP	**P**	**23 00 43.7**	**+0.6**
BOD				pmax	pmax		
	comp=Z,11nm,1.5s						
NIL	**Nilore**	**66.00**	**312**	P	**P**	**23 00 44.4**	**-0.3**
NIL				IAmb	IAmb	23 00 46.3	
	comp=Z,14nm,0.9s						
NIL	**Nilore**	**66.00**	**312**	P	**P**	**23 00 44.4**	**-0.3**
NIL				pmax	pmax		
	comp=Z,14nm,0.9s						
KSH	**Kashi**	**66.97**	**318**	P	**P**	**23 00 52.1**	**+1.2**
KSH				pP	pwP	23 01 08.0	+2.9
KSH				ScP		23 05 17.4	
KSH				pmax	pmax		
	comp=Z,48nm,1.1s						
KSH				LR	LR		
	comp=Z,650nm,11.2s						
KSH				LR	LR		
	comp=Z,1μm,13.2s						
KSH				LR	LR		
	comp=Z,1μm,17.2s						
MKAR	**Makanchi Array**	**67.44**	**328**	P	**P**	**23 00 54.4**	**+0.9**
	comp=Z,15nm,0.9s,baz=127,slow=7.9,SNR=96						
MKAR	**Makanchi Array**	**67.44**	**328**	P	**P**	**23 00 54.2**	**+0.7**
MAKZ	**Makanchi**	**67.61**	**328**	P	**P**	**23 00 55.8**	**+1.2**
MAKZ				IAmb	IAmb	23 01 02.5	
	comp=Z,13nm,0.9s						
MAKZ	**Makanchi**	**67.61**	**328**	P	**P**	**23 00 55.8**	**+1.2**
MAKZ				pmax	pmax		
	comp=Z,13nm,0.9s						
NRN	**Naryn**	**67.97**	**320**	P	**P**	**23 00 56.2**	**-1.1**
NRN	**Naryn**	**67.97**	**320**	P	**P**	**23 00 56.2**	**-1.1**
NRN				pmax	pmax		
	comp=Z,21nm,1.2s						
YAK	**Yakutsk**	**69.06**	**1**	P	**P**	**23 01 03.1**	**-0.2**
KBL	**Kabul**	**69.53**	**311**	P	**P**	**23 01 06.6**	**-0.5**
KBL				IAmb	IAmb	23 01 08.9	
	comp=Z,7.0nm,1.0s						
KBL	**Kabul**	**69.53**	**311**	P	**P**	**23 01 06.6**	**-0.5**
KBL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AAK	**Ala-Archa**	**69.56**	**321**	P	**P**	**23 01 08.4**	**+1.4**
	comp=Z,14nm,1.1s,baz=131,slow=5.0,SNR=19						
AAK	**Ala-Archa**	**69.56**	**321**	⇑iP	**P**	**23 01 07.5**	**+0.5**
AAK				pmax	pmax		
	comp=Z,12nm,0.9s						
BTK	**Batken**	**70.69**	**317**	P	**P**	**23 01 13.5**	**-0.4**
BTK				IAmb	IAmb	23 01 17.0	
	comp=Z,12nm,1.3s						
BTK	**Batken**	**70.69**	**317**	P	**P**	**23 01 13.5**	**-0.4**
BTK				pmax	pmax		
	comp=Z,12nm,1.3s						
ZAA0	**Zalesovo Array**	**71.00**	**335**	P	**P**	**23 01 15.6**	**+0.2**
ZALV	**Zalesovo Beam**	**71.00**	**335**	P	**P**	**23 01 15.8**	**+0.5**
	comp=Z,24nm,0.9s,baz=114,slow=3.7,SNR=64						
ZALV	**Zalesovo Beam**	**71.00**	**335**	P	**P**	**23 01 15.3**	**-0.1**
ZALV	**Zalesovo Beam**	**71.00**	**335**	P	**P**	**23 01 15.3**	**-0.1**
KURBB	**Kurchatov Arra**	**71.77**	**329**	P	**P**	**23 01 21.1**	**+1.1**
	comp=Z,16nm,0.7s,baz=131,slow=4.9,SNR=44						
KURK	**Kurchatov**	**71.78**	**329**	P	**P**	**23 01 21.2**	**+1.1**
KURK	**Kurchatov**	**71.78**	**329**	c iP	**P**	**23 01 20.9**	**+0.8**
KURK				pmax	pmax		
	comp=Z,42nm,1.0s						
KKAR	**Karatay Array**	**72.33**	**319**	P	**P**	**23 01 23.8**	**+0.2**
KKAR	**Karatay Array**	**72.33**	**319**	P	**P**	**23 01 23.8**	**+0.2**
SEY	**Seymchan**	**72.38**	**11**	P	**P**	**23 01 23.6**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=257,slow=20,SNR=4.6						
BRVK	**Borovoye**	**77.37**	**328**	P	**P**	**23 01 51.5**	**-1.0**
BRVK				IAmb	IAmb	23 01 54.6	
	comp=Z,17nm,1.1s						
BRVK	**Borovoye**	**77.37**	**328**	P	**P**	**23 01 51.5**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,17nm,1.2s						
TIXI	**Tiksi**	**78.72**	**0**	P	**P**	**23 01 59.7**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=177,slow=2.9,SNR=6.0						
BILL	**Bilibino**	**79.76**	**14**	⇑eP	**P**	**23 02 04.7**	**-0.7**
BILL				e		23 02 14.3	
BILL				e		23 02 21.3	
BILL						23 05 05.0	
BILL				e		23 13 09.5	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.8s						
ABKAR	**Akbulak array**	**81.57**	**322**	P	**P**	**23 02 14.6**	**-0.9**
SVE	**Sverdlovsk**	**84.03**	**329**	eP	**P**	**23 02 28.5**	**+0.4**
ARU	**Arti**	**84.95**	**328**	P	**P**	**23 02 32.7**	**0.0**
ARU				IAmb	IAmb	23 02 36.0	
	comp=Z,15nm,1.3s						
ARU	**Arti**	**84.95**	**328**	⇑iP	**P**	**23 02 33.7**	**+0.9**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
RAYN	**Ar Rayn**	**86.18**	**294**	P	**P**	**23 02 38.1**	**-1.6**
RAYN				IAmb	IAmb	23 02 41.5	
	comp=Z,5.1nm,0.9s						
RAYN	**Ar Rayn**	**86.18**	**294**	P	**P**	**23 02 38.2**	**-1.6**
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ILAR	**Eielson Array**	**94.33**	**25**	P	**P**	**23 03 16.0**	**-1.0**
	comp=Z,0.6nm,1.0s,baz=248,slow=4.8,SNR=4.7						
SNAA	**Sanae**	**95.01**	**194**	P	**P**	**23 03 21.1**	**+0.9**
	comp=Z,2.9nm,1.1s,baz=236,slow=3.6,SNR=3.5						
SNAA	**Sanae**	**95.01**	**194**	IAmb	IAmb	23 03 23.2	
	comp=Z,4.1nm,1.1s						
SNAA	**Sanae**	**95.01**	**194**	P	**P**	**23 03 21.1**	**+0.9**
SNAA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CPUP	**Villa Florida**	**146.22**	**171**	PKPbc	**PKPab**	**23 09 39.4**	**-0.1**
	comp=Z,3.9nm,1.0s,baz=204,slow=2.5,SNR=5.8						
CPUP	**Villa Florida**	**146.22**	**171**	PKPdf	**PKPab**	**23 09 39.5**	**0.0**
CPUP	**Villa Florida**	**146.22**	**171**	PKP2	**PKPab**	**23 09 39.5**	**0.0**
LPAZ	**La Paz**	**151.60**	**145**	PKPbc	**PKPbc**	**23 09 54.1**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=104,slow=5.7,SNR=5.7						

IDC 03 22:51:39.0±0.8**, 7°.03S**×**128°.92E, h0**km**, mb4.0**/3**, mb1 4.1**/5**, mb1mx3.7**/45**, mbtmp4.0**/5**, ML4.0**/1**, Error ellipse: s-maj=93.4km s-min=11.7km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.87**	**158**	Pn	Pn	22 54 57.9	+0.8
	0.7nm,0.3s,baz=339,slow=12,SNR=0.9						
WRA				Sn	Sn	22 57 25.9	-6.0
	0.8nm,0.3s,baz=336,slow=23,SNR=2.4						
ASAR	**Alice Springs**	**17.22**	**164**	P	Pn	22 55 40.3	-0.8
	baz=343,slow=13,SNR=0.8						
SONM	**Songino Array**	**58.14**	**342**	P	P	23 01 35.4	+0.7
	1.1nm,1.0s,baz=151,slow=5.9,SNR=2.3						
MKAR	**Makanchi Array**	**67.67**	**327**	P	P	23 02 38.0	-0.1
	0.7nm,0.5s,baz=125,slow=7.5,SNR=3.5						
ZALV	**Zalesovo Beam**	**71.14**	**334**	P	P	23 02 58.9	-0.5
	2.9nm,1.0s,baz=140,slow=5.3,SNR=3.3						

*IDC **03** 22:53:35.5±0.6, 7°.18S×128°.22E, h0km, mb4.5/14, mb1 4.6/19, mb1mx4.4/44, mbtmp4.5/19, ML4.0/5, Error ellipse: s-maj=22.1km s-min=13.0km az=76.0*

*NEIC **03** 22:53:36.1±3.0, 7°.29S±0°.05×128°.27E±0°.05, h10km±1km, mb4.7/24, Error ellipse: s-maj=11.1km s-min=5.0km az=39.0*

ISC 03 22:53:39.4±0.4**, 7°.34S**±0°.04×**128°.34E**±0°.06**, h35**km**, n77,** σ**2.12**/89**, mb4.6**/22**, 1C-1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.00**	**103**	Pn	**Pn**	**22 54 23.5**	**-1.0**
SOEI	**Soe**	**4.69**	**239**	Pn	**Pn**	**22 54 46.6**	**-1.3**
SOEI				Sn	Sn	22 55 31.6	-10
FAKI	**Fak Fak**	**5.86**	**42**	Pn	**Pn**	**22 55 04.4**	**+0.5**
MTN	**Manton Dam**	**6.12**	**154**	Pn	**Pn**	**22 55 09.4**	**+1.9**
MTN				Sn	**Sn**	**22 56 13.8**	**-2.5**
SIJI	**Sorong**	**7.05**	**25**	Pn	**Pn**	**22 55 19.6**	**-0.7**
	2.7nm,0.3s,baz=218,slow=19,SNR=8.8						
SIJI				Sn	**Sn**	**22 56 32.2**	**-7.1**
	baz=220,slow=22,SNR=1.5						
KNRA	**Kununurra**	**8.30**	**177**	Pn	**Pn**	**22 55 37.8**	**+0.5**
KNRA				Sn	**Sn**	**22 57 12.4**	**+2.5**
FITZ	**Fitzroy Crossi**	**11.02**	**194**	Pn	**Pn**	**22 56 15.8**	**+1.2**
	1.3nm,0.3s,baz=352,slow=15,SNR=1.9						
FITZ				Sn	**Sn**	**22 58 14.7**	**-2.0**
	1.6nm,0.3s,baz=105,slow=15,SNR=4.4						
FITZ	**Fitzroy Crossi**	**11.02**	**194**	Pn	**Pn**	**22 56 14.5**	**-0.1**
FITZ					**Sn**	**22 58 13.7**	**-3.0**
WRA	**Warramunga Arr**	**13.82**	**156**	Pn	**Pn**	**22 56 53.7**	**+0.8**
	1.7nm,0.3s,baz=336,slow=13,SNR=3.4						
WRA				Sn	**Sn**	**22 59 24.2**	**-1.0**
	2.0nm,0.3s,baz=319,slow=24,SNR=6.7						
WRA	**Warramunga Arr**	**13.82**	**156**		**Pn**	**22 56 51.1**	**-1.8**
WRA					**Sn**	**22 59 21.8**	**-3.4**
WB2	**Warramunga Arr**	**13.82**	**156**	Pn	**Pn**	**22 56 51.4**	**-1.6**
WB2					**Sn**	**22 59 19.5**	**-5.8**
WR0	**Warramunga Arr**	**13.91**	**155**	Pn	**Pn**	**22 56 54.7**	**+0.5**
KCP	**Kidapawan**	**14.61**	**347**	⇓eP	**Pn**	**22 57 01.3**	**-2.5**
PSA00	**Pilbara Seismi**	**16.36**	**209**	Pn	**Pn**	**22 57 25.5**	**-1.0**
PSA00				IAmb	IAmb	22 57 33.2	
	comp=Z,40nm,1.1s						
PSA00	**Pilbara Seismi**	**16.36**	**209**	Pn	**Pn**	**22 57 25.0**	**-1.5**
PSA00				IAmb	IAmb	22 57 32.7	
	comp=Z,15nm,1.0s						
AS31	**Alice Springs**	**17.09**	**162**	Pn	**Pn**	**22 57 34.2**	**-1.6**
ASAR	**Alice Springs**	**17.09**	**162**	P	**P**	**22 57 37.6**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=315,slow=19,SNR=4.6						
ASAR				S	**Sn**	**23 00 35.1**	**-10**
	comp=Z,0.0nm,0.3s,baz=335,slow=24,SNR=2.8						
KKM	**Kota Kinabalu**	**17.97**	**317**	Pn	**Pn**	**22 57 43.5**	**-3.3**
PMG	**Port Moresby**	**18.73**	**98**	P	**Pn**	**22 57 57.3**	**+1.4**
	comp=Z,2.0nm,0.3s,baz=288,slow=9.4,SNR=6.3						
PMG	**Port Moresby**	**18.73**	**98**	P	**P**	**22 57 54.6**	**-0.7**
PMG				IAmb	IAmb	22 58 02.4	
	comp=Z,50nm,1.1s						
SBUM	**Sibu**	**18.80**	**301**	P	**P**	**22 57 53.1**	**-2.9**
KSM	**Kuching**	**20.01**	**295**	P	**P**	**22 58 07.1**	**-2.2**
KSM				IAmb	IAmb	22 58 13.3	
	comp=Z,31nm,1.2s						
BBOO	**Buckleboo**	**26.34**	**165**	P	**P**	**22 59 12.3**	**+0.1**
BBOO				IAmb	IAmb	22 59 19.2	
	comp=Z,17nm,0.9s						
STKA	**Stephens Creek**	**27.37**	**155**	P	**P**	**22 59 24.0**	**+2.6**
	comp=Z,7.0nm,0.9s,baz=340,slow=16,SNR=2.9						
STKA	**Stephens Creek**	**27.37**	**155**	P	**P**	**22 59 21.4**	**-0.1**
NWAO	**Narrogin (SRO)**	**27.47**	**201**	P	**P**	**22 59 24.5**	**+2.1**
	comp=Z,9.1nm,0.7s,baz=18,slow=11,SNR=5.8						
NWAO	**Narrogin (SRO)**	**27.47**	**201**	P	**P**	**22 59 24.1**	**+1.7**
RPSI	**Rantau Prapat**	**31.00**	**288**	P	**P**	**22 59 53.8**	**-0.1**
PSI	**Prapat**	**31.04**	**288**	P	**P**	**22 59 53.8**	**-0.6**
	comp=Z,26nm,1.0s,baz=126,slow=3.9,SNR=13						
CMAR	**Chiang Mai Arr**	**38.71**	**312**	P	**P**	**23 01 00.2**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=144,slow=7.1,SNR=6.4						
CMAR				PcP	**PcP**	**23 03 13.3**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=154,slow=3.8,SNR=5.2						
WHN	**Wuhan**	**39.98**	**341**	P	P	23 01 24.0	+13
KSRS	**Korea Array**	**44.56**	**360**	P	**P**	**23 01 47.1**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=178,slow=9.6,SNR=3.5						
MJAR	**Matsushiro Arr**	**44.62**	**11**	P	**P**	**23 01 48.3**	**-0.2**
	comp=Z,7.6nm,0.9s,baz=190,slow=10,SNR=11						
LZH	**Lanzhou**	**48.95**	**334**	eP	**P**	**23 02 23.9**	**+1.3**
LZH				pP	pP	23 02 27.3	-5.1
LZH				sP	pwP	23 02 30.0	-5.0
HHC	**Hu-ho-hao-te**	**50.37**	**343**	eP	**P**	**23 02 37.9**	**+4.6**
LSA	**Lhasa**	**51.32**	**318**	P	**P**	**23 02 39.4**	**-1.7**
USRK	**Ussuriysk Ar.**	**51.40**	**3**	P	**P**	**23 02 41.1**	**+0.3**
	comp=Z,3.0nm,0.8s,baz=173,slow=5.8,SNR=3.9						
RPZ	**Rata Peaks**	**51.99**	**141**	P	**P**	**23 02 48.2**	**+2.9**
	comp=Z,6.0nm,0.8s,baz=282,slow=9.3,SNR=3.2						
RPZ	**Rata Peaks**	**51.99**	**141**	P	**P**	**23 02 47.5**	**+2.2**
RPZ				IAmb	IAmb	23 02 52.3	
	comp=Z,12nm,0.9s						
ODAN	**Odare**	**52.25**	**312**	eP	**P**	**23 02 49.3**	**+1.5**
TAPN	**Taplejung**	**52.30**	**313**	eP	**P**	**23 02 49.3**	**+1.1**
	comp=Z,13nm,1.0s						
RAMN	**Ramite**	**52.88**	**312**	eP	**P**	**23 02 54.3**	**+1.8**
GTA	**Gaotai**	**53.49**	**333**	⇑P	**P**	**23 02 57.1**	**+0.5**
GTA				pP	pP	23 03 05.7	-0.8
GTA				sP	sP	23 03 10.0	-0.4
GTA				PcP	**PcP**	**23 04 03.8**	**+0.6**
JIRN	**Jiri**	**53.58**	**312**	eP	**P**	**23 02 59.6**	**+1.9**
	comp=Z,30nm,0.9s						
GUN	**Gumba**	**53.95**	**312**	eP	**P**	**23 03 01.3**	**+0.9**
	comp=Z,21nm,0.9s						
PKI	**Pulchoki**	**54.11**	**312**	eP	**P**	**23 03 02.5**	**+1.0**
KKN	**Kakani**	**54.32**	**312**	eP	**P**	**23 03 03.7**	**+0.7**
KOLN	**Koldanda**	**55.56**	**311**	eP	**P**	**23 03 12.6**	**+0.7**
	comp=Z,18nm,0.8s						
DANN	**Dangsing**	**55.75**	**312**	eP	**P**	**23 03 13.9**	**+0.5**
	comp=Z,13nm,0.8s						
KLR	**Kul'dur**	**56.41**	**3**	P	**P**	**23 03 17.6**	**+0.4**
	comp=Z,2.2nm,1.0s,baz=196,slow=1.4,SNR=3.9						
ULN	**Ulaanbaatar**	**58.09**	**343**	P	**P**	**23 03 29.3**	**-0.1**
ULN				IAmb	IAmb	23 03 32.4	
	comp=Z,5.5nm,0.8s						
SONM	**Songino Array**	**58.26**	**343**	P	**P**	**23 03 30.5**	**0.0**
	comp=Z,4.8nm,0.9s,baz=161,slow=5.1,SNR=20						
SONM	**Songino Array**	**58.26**	**343**	P	**P**	**23 03 31.0**	**+0.5**
WMQ	**Urumqi**	**62.79**	**328**	eP	**P**	**23 04 02.7**	**+1.2**
PETK	**Petropavlovsk-**	**65.16**	**19**	P	**P**	**23 04 18.8**	**+2.0**
	comp=Z,8.1nm,0.9s,baz=184,slow=4.3,SNR=3.0						
PETK	**Petropavlovsk-**	**65.16**	**19**	P	**P**	**23 04 18.3**	**+1.5**
NIL	**Nilore**	**66.20**	**312**	P	**P**	**23 04 23.5**	**-0.5**
KSH	**Kashi**	**67.16**	**318**	P	**P**	**23 04 31.6**	**+1.5**
KSH				pP	pP	23 04 37.0	-3.4
KSH				PcS		23 09 02.4	
KSH				S	**S**	**23 13 24.4**	**+2.0**
MK31	**Makanchi Array**	**67.62**	**328**	P	**P**	**23 04 33.8**	**+1.0**
MK31				IAmb	IAmb	23 04 34.5	
	comp=Z,6.9nm,0.9s						
MKAR	**Makanchi Array**	**67.62**	**328**	P	**P**	**23 04 33.2**	**+0.5**
	comp=Z,5.7nm,0.7s,baz=128,slow=7.7,SNR=25						
MKAR	**Makanchi Array**	**67.62**	**328**	P	**P**	**23 04 33.7**	**+1.0**
MAKZ	**Makanchi**	**67.79**	**328**	P	**P**	**23 04 34.8**	**+1.0**
MAKZ				IAmb	IAmb	23 04 35.5	
	comp=Z,8.0nm,0.9s						
KBL	**Kabul**	**69.73**	**311**	P	**P**	**23 04 45.1**	**-1.3**
KBL				IAmb	IAmb	23 04 47.7	
	comp=Z,5.5nm,0.9s						
AAK	**Ala-Archa**	**69.75**	**321**	P	**P**	**23 04 47.4**	**+1.1**
AAK				IAmb	IAmb	23 04 48.7	
	comp=Z,8.2nm,0.8s						
ARSB	**Arslanbob**	**70.05**	**319**	P	**P**	**23 04 48.5**	**+0.4**
BTK	**Batken**	**70.89**	**317**	P	**P**	**23 04 54.1**	**+1.0**
BTK				IAmb	IAmb	23 04 55.9	
	comp=Z,5.3nm,1.1s						
ZAA0	**Zalesovo Array**	**71.17**	**335**	P	**P**	**23 04 55.0**	**+0.5**
ZALV	**Zalesovo Beam**	**71.17**	**335**	P	**P**	**23 04 54.9**	**+0.5**
	comp=Z,17nm,1.0s,baz=124,slow=4.3,SNR=29						
ZALV	**Zalesovo Beam**	**71.17**	**335**	P	**P**	**23 04 54.4**	**0.0**
KURK	**Kurchatov**	**71.95**	**329**	P	**P**	**23 04 58.3**	**-0.9**
KKAR	**Karatay Array**	**72.52**	**319**	P	**P**	**23 05 02.4**	**-0.4**
BRVK	**Borovoye**	**77.55**	**328**	P	**P**	**23 05 31.7**	**+0.1**
BRVK				IAmb	IAmb	23 05 33.6	
	comp=Z,10.0nm,1.1s						
TIXI	**Tiksi**	**78.82**	**0**	P	**P**	**23 05 38.1**	**-0.2**
	comp=Z,1.6nm,0.3s,baz=214,slow=3.4,SNR=8.6						
ABKAR	**Akbulak array**	**81.75**	**322**	P	**P**	**23 05 53.4**	**-1.1**
TORD	**Torodi Ar. Bea**	**127.26**	**281**	PKP	**PKiKP**	**23 12 42.0**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=106,slow=1.5,SNR=3.3						
CPUP	**Villa Florida**	**146.09**	**171**	PKPbc	**PKPbc**	**23 13 17.7**	**+1.2**
	comp=Z,2.3nm,0.6s,baz=116,slow=0.3,SNR=5.7						
LPAZ	**La Paz**	**151.42**	**145**	PKPbc	**PKPbc**	**23 13 34.1**	**+2.7**
	comp=Z,2.3nm,0.9s,baz=55,slow=1.2,SNR=5.1						
LPAZ				PKPab	**PKPab**	**23 13 42.9**	**+3.4**
	comp=Z,3.3nm,0.8s,baz=181,slow=3.6,SNR=7.3						

*IDC **03** 22:58:20.4±0.8, 7°.17S×128°.35E, h0km, mb4.2/10, mb1 4.3/14, mb1mx4.0/47, mbtmp4.2/14, ML3.9/4, Error ellipse: s-maj=29.9km s-min=16.9km az=74.0*

*NEIC **03** 22:58:23.1±2.6, 7°.12S±0°.06×128°.26E±0°.08, h10km±1km, mb4.4/8, Error ellipse: s-maj=16.0km s-min=6.0km az=121.0*

ISC 03 22:58:25.1±0.6**, 7°.27S**±0°.06×**128°.37E**±0°.10**, h35**km**, n32,** σ**1.44**/33**, mb4.2**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**4.75**	**238**	Pn	**Pn**	**22 59 36.9**	**+2.5**
FAKI	**Fak Fak**	**5.80**	**42**	Pn	**Pn**	**22 59 49.5**	**+0.8**
MTN	**Manton Dam**	**6.17**	**154**	Pn	Pn	23 00 00.8	+7.0
SIJI	**Sorong**	**6.98**	**25**	Pn	**Pn**	**23 00 03.0**	**-2.0**
	1.6nm,0.3s,baz=210,slow=20,SNR=2.8						
KNRA	**Kununurra**	**8.36**	**177**	Pn	**Pn**	**23 00 26.5**	**+2.6**
FITZ	**Fitzroy Crossi**	**11.09**	**194**	Pn	**Pn**	**23 01 01.1**	**-0.1**

1.0nm,0.3s,baz=9.7,slow=12,SNR=6.7
FITZ Sn Sn 23 03 01.8 -2.3
0.9nm,0.3s,baz=257,slow=22,SNR=1.7
FITZ Fitzroy Crossi 11.09 194 Pn 23 01 00.9 -0.3
WRA Warramunga Arr 13.86 156 Pn Pn 23 01 38.7 -0.6
1.1nm,0.3s,baz=326,slow=13,SNR=7.0
WRA Sn Sn 23 04 09.8 -2.3
1.1nm,0.3s,baz=328,slow=23,SNR=4.3
WB2 Warramunga Arr 13.87 156 Pn 23 01 42.7 +3.4
ASAR Alice Springs 17.15 163 P Pn 23 02 22.3 +0.1
0.1nm,0.3s,baz=343,slow=10,SNR=3.3
ASAR S Sn 23 05 29.5 -2.4
0.4nm,0.3s,baz=334,slow=21,SNR=2.9
STKA Stephens Creek 27.41 155 P P 23 04 08.5 +0.9
4.0nm,0.8s,baz=327,slow=9.2,SNR=3.0
RPSI Rantau Prapat 31.01 288 P P 23 04 40.0 +0.3
PSI Prapat 31.04 288 P P 23 04 40.0 -0.1
3.8nm,0.4s,baz=171,slow=6.7,SNR=5.9
CMAR Chiang Mai Arr 38.68 312 P P 23 05 44.3 -1.6
0.5nm,0.3s,baz=148,slow=7.2,SNR=3.4
MJAR Matsushiro Arr 44.55 11 P P 23 06 32.8 -0.8
0.5nm,0.3s,baz=191,slow=9.2,SNR=2.6
MJAR Matsushiro Arr 44.55 11 IAmb IAmb 23 06 33.5
comp=Z,2.7nm,1.1s
USRK Ussuriysk Ar. 51.33 3 P P 23 07 25.5 -0.5
comp=Z,0.5nm,0.5s,baz=176,slow=8.7,SNR=1.7
SONM Songino Array 58.20 343 P P 23 08 15.8 -0.1
comp=Z,1.2nm,0.9s,baz=140,slow=7.2,SNR=6.9
SONM Songino Array 58.20 343 P P 23 08 16.3 +0.4
MK31 Makanchi Array 67.58 328 P P 23 09 19.6 +1.4
MK31 IAmb IAmb 23 09 19.6
comp=Z,1.8nm,0.9s
MKAR Makanchi Array 67.58 328 P P 23 09 18.6 +0.4
comp=Z,1.2nm,0.6s,baz=129,slow=7.9,SNR=13
MKAR Makanchi Array 67.58 328 P P 23 09 19.0 +0.8
MAKZ Makanchi 67.75 327 P P 23 09 20.4 +1.1
MAKZ IAmb IAmb 23 09 20.5
comp=Z,1.8nm,0.9s
AAK Ala-Archa 69.71 321 P P 23 09 32.9 +1.1
comp=Z,2.8nm,0.9s,baz=258,slow=16,SNR=5.0
AAK Ala-Archa 69.71 321 P P 23 09 33.2 +1.5
AAK IAmb IAmb 23 09 34.0
comp=Z,4.4nm,1.0s
ZAA0 Zalesovo Array 71.12 335 P P 23 09 40.7 +0.8
ZAA0 IAmb IAmb 23 09 41.9
comp=Z,4.1nm,1.0s
ZALV Zalesovo Beam 71.12 335 P P 23 09 40.0 +0.1
comp=Z,2.6nm,0.7s,baz=126,slow=4.2,SNR=11
ZALV Zalesovo Beam 71.12 335 P P 23 09 40.5 +0.7
KURBB Kurchatov Arra 71.90 329 P P 23 09 44.9 +0.2
comp=Z,3.7nm,0.7s,baz=132,slow=5.0,SNR=17
KURK Kurchatov 71.91 329 P P 23 09 45.8 +1.0
LPAZ La Paz 151.46 145 PKPbc PKiKP 23 18 19.1 +1.4
comp=Z,0.8nm,0.6s,baz=176,slow=5.8,SNR=2.8
LPAZ La Paz 151.46 145 PKiKP 23 18 18.5 +0.8

IDC 03 22:59:57.2±0.4, 7.28S×128.44E, h0km, mb4.2/4, mb1 4.2/7, mb1mx3.8/46, mbtmp4.1/7, ML4.0/3, Error ellipse: s-maj=31.5km s-min=6.1km az=69.0, Banda Sea
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FITZ Fitzroy Crossi 11.10 194 Pn Pn 23 02 37.9 +0.5
1.1nm,0.3s,baz=16,slow=12,SNR=1.7
FITZ Sn Sn 23 04 40.7 -1.6
0.2nm,0.3s,baz=250,slow=18,SNR=0.9
WRA Warramunga Arr 13.83 156 Pn Pn 23 03 14.6 -0.1
0.9nm,0.3s,baz=325,slow=14,SNR=1.9
WRA Sn Sn 23 05 49.7 +0.6
0.5nm,0.3s,baz=331,slow=30,SNR=1.7
ASAR Alice Springs 17.12 163 P Pn 23 03 59.0 +0.9
0.2nm,0.3s,baz=335,slow=10,SNR=0.9
SONM Songino Array 58.23 343 P P 23 09 53.8 +0.3
1.1nm,0.9s,baz=167,slow=6.1,SNR=6.2
MKAR Makanchi Array 67.62 328 P P 23 10 56.0 0.0
1.6nm,0.6s,baz=123,slow=7.6,SNR=13
ZALV Zalesovo Beam 71.16 334 P P 23 11 17.2 -0.4
1.9nm,0.6s,baz=141,slow=5.5,SNR=6.7
KURBB Kurchatov Arra 71.95 329 P P 23 11 22.5 0.0
2.0nm,0.6s,baz=131,slow=5.1,SNR=9.7

IDC 03 23:12:47.9±1.6, 7.24S×128.17E, h0km, mb3.7/3, mb1 3.7/6, mb1mx3.5/36, mbtmp3.6/6, ML3.4/3, Error ellipse: s-maj=95.6km s-min=24.3km az=76.0, Banda Sea
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FITZ Fitzroy Crossi 11.07 193 Pn Pn 23 15 28.6 +1.0
0.2nm,0.3s,baz=17,slow=11,SNR=2.6
WRA Warramunga Arr 13.98 155 Pn Pn 23 16 07.5 +0.1
0.2nm,0.3s,baz=334,slow=12,SNR=5.9
WRA Sn Sn 23 18 34.8 -8.7
0.3nm,0.3s,baz=334,slow=23,SNR=6.4
ASAR Alice Springs 17.24 162 P Pn 23 16 49.0 -1.3
0.1nm,0.3s,baz=333,slow=11,SNR=5.1
SONM Songino Array 58.11 343 P P 23 22 43.3 -0.1
0.4nm,1.0s,baz=154,slow=7.2,SNR=2.3
MKAR Makanchi Array 67.44 328 P P 23 23 45.3 -0.2
0.4nm,0.8s,baz=134,slow=7.3,SNR=3.8
KURBB Kurchatov Arra 71.77 329 P P 23 24 12.3 +0.2
0.4nm,0.2s,baz=115,slow=4.4,SNR=3.5

IDC 03 23:17:54.6±1.6, 7.12S×128.59E, h0km, mb3.9/4, mb1 3.9/7, mb1mx3.6/38, mbtmp3.8/7, ML3.5/3, Error ellipse: s-maj=95.7km s-min=23.9km az=77.0
ISC 03 23:17:59.4±1.1, 7.36S±0.08×128.5E±0.2, h35km, n7, σ2.60/10, mb3.9/4, Banda Sea
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FITZ Fitzroy Crossi 11.03 194 Pn Pn 23 20 37.0 +2.3
0.3nm,0.3s,baz=20,slow=14,SNR=3.1
FITZ Sn Sn 23 22 35.3 -1.5
0.2nm,0.3s,baz=14,slow=19,SNR=1.7
WRA Warramunga Arr 13.74 156 Pn Pn 23 21 13.1 +1.3
0.3nm,0.3s,baz=336,slow=18,SNR=3.3
WRA Sn Sn 23 23 44.3 +1.1
0.6nm,0.3s,baz=325,slow=24,SNR=5.7
ASAR Alice Springs 17.03 163 P Pn 23 21 56.9 +2.0
0.1nm,0.3s,baz=340,slow=11,SNR=3.7
ASAR S Sn 23 24 57.8 -5.5
baz=338,slow=27,SNR=2.9
SONM Songino Array 58.32 343 P P 23 27 50.0 -0.9
0.8nm,1.0s,baz=145,slow=5.3,SNR=4.8
MKAR Makanchi Array 67.71 328 P P 23 28 52.8 -0.4
0.4nm,0.5s,baz=124,slow=8.0,SNR=10
ZALV Zalesovo Beam 71.25 334 P P 23 29 14.0 -0.9
0.9nm,0.6s,baz=120,slow=5.8,SNR=4.9
KURBB Kurchatov Arra 72.03 329 P P 23 29 20.3 +0.6
0.7nm,0.3s,baz=136,slow=5.7,SNR=5.5

IDC 03 23:26:30.0±0.9, 7.22S×128.17E, h0km, mb4.2/10, mb1 4.2/13, mb1mx4.0/46, mbtmp4.2/13, ML4.0/3, Error ellipse: s-maj=34.7km s-min=18.3km az=72.0
NEIC 03 23:26:31.4±1.9, 7.20S±0.05×128.39E±0.08, h10km±1km, mb4.5/14, Error ellipse: s-maj=15.3km s-min=4.6km az=120.0
ISC 03 23:26:34.1±0.6, 7.29S±0.05×128.50E±0.09, h35km, n44, σ2.20/47, mb4.3/17, Banda Sea
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SOEI Soe 4.85 239 Pn Pn 23 27 45.8 +1.1
FAKI Fak Fak 5.73 41 Pn Pn 23 27 58.6 +1.9
MTN Manton Dam 6.10 155 Pn Pn 23 28 10.1 +8.3
SIJI Sorong 6.95 24 Pn Pn 23 28 13.6 0.0
2.4nm,0.3s,baz=199,slow=18,SNR=2.0
SIJI Sn Sn 23 29 27.0 -4.4
baz=241,slow=22,SNR=1.9
KNRA Kununurra 8.34 178 Pn 23 28 35.4 +2.8
FITZ Fitzroy Crossi 11.10 194 Pn Pn 23 29 10.1 -0.4
0.8nm,0.3s,baz=3.6,slow=4.6,SNR=9.7
FITZ Sn Sn 23 31 10.8 -2.6
0.8nm,0.3s,baz=270,slow=19,SNR=3.2
FITZ Fitzroy Crossi 11.10 194 Pn 23 29 10.3 -0.1
WB0 Warramunga Arr 13.66 156 Pn 23 29 46.1 +0.6
WRAB Tennant Creek 13.79 156 Pn Pn 23 29 48.6 +1.4
WRA Warramunga Arr 13.79 156 Pn Pn 23 29 46.7 -0.6
0.9nm,0.3s,baz=338,slow=12,SNR=7.9
WRA Sn Sn 23 32 12.4 -6.9
0.3nm,0.3s,baz=339,slow=21,SNR=4.3
WRA Warramunga Arr 13.79 156 Pn 23 29 48.6 +1.2
WB2 Warramunga Arr 13.80 156 Pn Pn 23 29 47.9 +0.5
WR0 Warramunga Arr 13.89 156 Pn 23 29 49.4 +0.8
PSA00 Pilbara Seismi 16.48 210 P Pn 23 30 23.4 +0.7
AS31 Alice Springs 17.09 163 P P 23 30 33.7 +1.8
ASAR Alice Springs 17.09 163 P Pn 23 30 30.8 +0.3
0.6nm,0.3s,baz=333,slow=9.8,SNR=12
ASAR S Sn 23 33 31.9 -7.6
0.1nm,0.3s,baz=343,slow=24,SNR=3.3
ASAR Alice Springs 17.09 163 P P 23 30 32.6 +0.7
MORW Morawa 24.64 207 P P 23 31 53.1 +1.6
MORW IAmb IAmb 23 32 01.5
comp=Z,18nm,1.3s
STKA Stephens Creek 27.34 155 P P 23 32 19.4 +3.5
comp=Z,1.7nm,0.5s,baz=338,slow=11,SNR=4.4
STKA Stephens Creek 27.34 155 P P 23 32 19.6 +3.6
NWAO Narrogin (SRO) 27.57 201 P P 23 32 19.1 +1.1
RPSI Rantau Prapat 31.14 288 P P 23 32 47.7 -2.1
RPSI IAmb IAmb 23 32 49.5
comp=Z,8.0nm,0.8s
RPSI Rantau Prapat 31.14 288 P P 23 32 47.2 -2.6
PSI Prapat 31.17 288 P P 23 32 47.2 -3.1
comp=Z,5.8nm,0.7s,baz=101,slow=8.3,SNR=5.7
CMAR Chiang Mai Arr 38.79 312 P P 23 33 54.6 -1.2
comp=Z,0.7nm,0.3s,baz=148,slow=7.0,SNR=3.7
USRK Ussuriysk Ar. 51.35 3 P P 23 35 35.4 +0.3
comp=Z,1.1nm,0.7s,baz=200,slow=6.6,SNR=3.3
SONM Songino Array 58.26 343 P P 23 36 25.2 -0.1
comp=Z,1.7nm,0.9s,baz=166,slow=5.7,SNR=10
SONM Songino Array 58.26 343 P P 23 36 26.2 +0.9
MK31 Makanchi Array 67.66 328 P P 23 37 28.0 +0.3
MK31 IAmb IAmb 23 37 28.6
comp=Z,2.5nm,0.9s
MKAR Makanchi Array 67.66 328 P P 23 37 27.9 +0.2
comp=Z,1.7nm,0.6s,baz=121,slow=8.2,SNR=32
MKAR Makanchi Array 67.66 328 P P 23 37 27.7 0.0
MAKZ Makanchi 67.84 327 P P 23 37 29.4 +0.6
MAKZ IAmb IAmb 23 37 29.6
comp=Z,2.4nm,0.8s
AAK Ala-Archa 69.81 320 P P 23 37 41.4 +0.1
comp=Z,2.8nm,0.7s,baz=132,slow=6.0,SNR=8.2
AAK Ala-Archa 69.81 320 P P 23 37 42.2 +0.8
ARSB Arslanbob 70.12 319 P P 23 37 43.8 +0.5
ARSB IAmb IAmb 23 37 44.2
comp=Z,5.6nm,0.8s
ZAA0 Zalesovo Array 71.19 334 P P 23 37 49.7 +0.4
ZAA0 IAmb IAmb 23 37 49.9
comp=Z,4.6nm,0.8s
ZALV Zalesovo Beam 71.19 334 P P 23 37 49.1 -0.2
comp=Z,3.9nm,0.8s,baz=132,slow=5.0,SNR=16
ZALV Zalesovo Beam 71.19 334 P P 23 37 49.6 +0.3
KURBB Kurchatov Arra 71.98 329 P P 23 37 54.2 +0.1
comp=Z,3.8nm,0.8s,baz=130,slow=5.1,SNR=32
KURK Kurchatov 72.00 329 P P 23 37 54.7 +0.5
BVAR Borovoye Array 77.52 328 P P 23 38 26.3 +0.1
comp=Z,1.8nm,0.9s,baz=139,slow=7.0,SNR=8.4
BRVK Borovoye 77.59 328 P P 23 38 26.4 -0.2
BRVK IAmb IAmb 23 38 27.7
comp=Z,4.0nm,1.1s
LPAZ La Paz 151.37 145 PKPbc PKiKP 23 46 27.8 +1.3
comp=Z,0.5nm,0.4s,baz=190,slow=2.6,SNR=2.6
LPAZ La Paz 151.37 145 PKiKP 23 46 28.1 +1.6

THE 03 23:38:30.5, 38.22N×20.36E, h8km, ML2.6/4, Error ellipse: s-maj=1.1km s-min=0.5km az=85.0
ATH 03 23:38:30.7, 38.24N×20.39E, h8km±2km, ML2.6/4, Error ellipse: s-maj=2.2km s-min=1.1km az=273.0
ISC 03 23:38:30.4±1.1, 38.23N±0.03×20.37E±0.05, h9km±5km, n29, σ0.44/46, Greece
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF3 Kipouria, Keph 0.04 212 P Pg 23 38 32.3 +0.2
KEF3 S Sg 23 38 33.2 -0.1
KEF4 Livadi, Kephal 0.05 59 P Pg 23 38 32.2 0.0
KEF4 S Sg 23 38 33.3 -0.2
CHV1 Chavriata, Kef 0.05 171 P Pg 23 38 32.3 +0.1
CHV1 S Sg 23 38 33.5 0.0
LXR1 Lixouri, Cepha 0.06 122 P Pg 23 38 32.4 +0.1
LXR1 S Sg 23 38 33.9 +0.2
KEF1 Kardakata, Kep 0.09 60 P Pg 23 38 32.8 +0.1
KEF1 S Sg 23 38 34.3 -0.1
ARG2 Argostoli 0.11 121 P Pg 23 38 33.2 +0.3
ARG2 S Sg 23 38 34.9 +0.2
KEF2 Argostoli. Kep 0.11 127 P Pg 23 38 33.3 +0.3
KEF2 S Sg 23 38 35.2 +0.3
VLS Valsamata 0.18 108 P Pg 23 38 34.3 +0.1
VLS S Sg 23 38 37.2 +0.5
7μm,0.2s
VLS Valsamata 0.18 108 P Pg 23 38 34.3 +0.1
VLS S Sg 23 38 37.0 +0.2
VLS AML AML 23 38 37.2
comp=N,11652μm,0.2s
VLS AML AML 23 38 37.2
comp=E,14032μm,0.1s
VSK1 VASILIKIADES 0.23 41 P Pg 23 38 35.1 0.0
VSK1 S Sg 23 38 39.6 +1.3
comp=E,5μm,0.4s
FSK Fiskardo 0.27 33 P Pg 23 38 36.2 +0.4
FSK S Sg 23 38 40.9 +1.4
comp=E,1μm,0.3s
VLMS Volimes, Zakyn 0.42 147 P Pg 23 38 39.1 +0.4
VLMS S Sg 23 38 45.0 +0.8
VLMS AML AML 23 38 46.7
comp=E,2416μm,0.2s
VLMS AML AML 23 38 46.7
comp=N,2614μm,0.6s
EVGI Lefkada island 0.45 30 P Pg 23 38 39.5 +0.4
EVGI S Sb 23 38 46.7 -0.5
LKD2 Lefkada island 0.60 22 P Pg 23 38 41.9 -0.1
LKD2 S Sb 23 38 51.2 -0.4
comp=N,232nm,0.6s
TSLK Tsoukalades, L 0.63 21 P Pg 23 38 42.7 +0.1
PDO Prodromos 0.73 60 P Pg 23 38 44.5 0.0
PDO Prodromos 0.73 60 P Pg 23 38 44.7 +0.1
PDO S Sg 23 38 53.6 -0.6
PDO AML AML 23 38 58.1
comp=E,667μm,0.5s
PDO AML AML 23 38 59.0
comp=N,951μm,0.4s
PVO Paravola 0.98 67 P Pg 23 38 49.5 +0.2
PVO Paravola 0.98 67 P Pg 23 38 49.5 +0.2
PVO S Sg 23 39 01.6 -0.5
PVO AML AML 23 39 08.6
comp=N,430μm,0.8s
PVO AML AML 23 39 09.3
comp=E,450μm,0.3s
DRO Drossia 1.09 104 P Pg 23 38 50.9 -0.4
EFP Efpalio 1.22 80 P Pb 23 38 52.8 -0.8
EFP Efpalio 1.22 80 P Pb 23 38 53.7 +0.1
LAKA Lakka 1.27 89 P Pn 23 38 53.9 -0.3
LAKA Lakka 1.27 89 P Pn 23 38 54.0 -0.3
LAKA S Sb 23 39 11.1 +0.3
ANX Ano Chora 1.27 73 P Pn 23 38 54.5 +0.1
TRIZ Trizonia 1.34 84 P Pn 23 38 55.1 -0.2
KALE Kalithea 1.40 83 P Pb 23 38 57.2 +0.4
KLV Kalavryta, Ach 1.42 97 P Pn 23 38 56.3 -0.1
MAKR Makrakomi, Fth 1.58 60 P Pg 23 39 00.9 +0.2

IDC 03 23:40:24.9±0.9, 38.27N×20.44E, h0km, mb3.7/11, mb1 3.7/18, mb1mx3.6/48, mbtmp3.6/18, ML3.0/7, Error ellipse: s-maj=18.2km s-min=15.2km az=20.0
ATH 03 23:40:27.1, 38.22N×20.39E, h11km±1km, ML3.5/6, Error ellipse: s-maj=2.1km s-min=1.0km az=250.0
THE 03 23:40:27.2, 38.23N×20.36E, h8km±1km, ML3.7/14, Error ellipse: s-maj=1.3km s-min=0.5km az=215.0
BEO 03 23:40:27.0±0.8, 38.16N×20.11E, h14km±4km, ML3.5/9
ISC 03 23:40:26.8±0.7, 38.23N±0.02×20.38E±0.03, h11km±3km, n78, σ0.89/116, mb3.7/11, Greece
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF3 Kipouria, Keph 0.04 219 P Pg 23 40 29.4 +0.6
KEF3 S Sg 23 40 31.0 +0.7
KEF4 Livadi, Kephal 0.04 55 P Pg 23 40 29.1 +0.3
KEF4 S Sg 23 40 30.5 +0.1
CHV1 Chavriata, Kef 0.05 178 P Pg 23 40 29.2 +0.3
CHV1 S Sg 23 40 30.8 +0.3
380μm,0.3s
LXR1 Lixouri, Cepha 0.06 125 P Pg 23 40 29.1 +0.1
LXR1 S Sg 23 40 30.4 -0.2
KEF1 Kardakata, Kep 0.08 58 P Pg 23 40 29.5 +0.2
KEF1 S Sg 23 40 31.0 -0.1
ARG2 Argostoli 0.10 123 P Pg 23 40 29.6 +0.1
ARG2 S Sg 23 40 31.1 -0.4
184μm,0.1s
KEF2 Argostoli. Kep 0.11 129 P Pg 23 40 29.9 +0.3
KEF2 S Sg 23 40 31.5 -0.1
VLS Valsamata 0.17 109 P Pg 23 40 30.6 0.0
VLS S Sg 23 40 33.2 -0.1
47μm,0.1s
VLS Valsamata 0.17 109 P Pg 23 40 30.6 0.0
VLS S Sg 23 40 33.2 -0.1
VLS AML AML 23 40 33.3
VLS AML AML 23 40 33.3
comp=E,70539μm,0.1s
VSK1 VASILIKIADES 0.23 40 P Pg 23 40 32.0 +0.4
VSK1 S Sg 23 40 35.9 +1.1
comp=E,41μm,0.3s
FSK Fiskardo 0.27 32 P Pg 23 40 32.8 +0.5
FSK S Sg 23 40 37.1 +1.1
comp=E,12μm,0.2s
VLMS Volimes, Zakyn 0.42 148 P Pg 23 40 35.4 +0.3
VLMS S Sg 23 40 41.6 +0.9
VLMS AML AML 23 40 47.2
comp=N,22436μm,0.4s
VLMS AML AML 23 40 48.4
comp=E,18984μm,0.3s
EVGI Lefkada island 0.44 29 P Pg 23 40 35.9 +0.4
EVGI S Sb 23 40 43.1 -0.2
EVGI Lefkada island 0.44 29 P Pg 23 40 36.1 +0.5
EVGI S Sb 23 40 43.2 -0.1
MGNA Meganis 0.53 37 P Pg 23 40 37.4 +0.2
MGNA S Sb 23 40 45.6 -0.2
LKD2 Lefkada island 0.60 21 P Pg 23 40 38.3 -0.1
LKD2 S Sg 23 40 46.6 +0.3
comp=E,3μm,0.6s
LKD2 Lefkada island 0.60 21 P Pg 23 40 38.6 +0.2
LKD2 S Sg 23 40 46.9 +0.6
LKD2 AML AML 23 40 52.9
comp=N,4139μm,0.3s
LKD2 AML AML 23 40 55.4
comp=E,5656μm,0.6s
ZAK2 Zakynthos 0.61 137 P Pg 23 40 39.0 +0.5
ZAK2 S Sb 23 40 48.9 +1.0
comp=E,31μm,0.5s
TSLK Tsoukalades, L 0.63 20 P Pg 23 40 39.2 +0.2
TSLK Tsoukalades, L 0.63 20 P Pg 23 40 39.3 +0.3
TSLK S Sb 23 40 48.5 -0.1
TSLK AML AML 23 40 54.6
comp=E,6118μm,0.5s
TSLK AML AML 23 40 56.6
comp=N,4669μm,0.4s
AST1 Astakos 0.64 61 P Pg 23 40 39.3 +0.1
AST1 S Sb 23 40 49.5 +0.7
comp=N,14μm,0.3s
KRI1 kERI 0.67 149 P Pg 23 40 39.6 -0.1
KRI1 S Sb 23 40 50.3 +0.6
comp=N,6μm,0.3s
PDO Prodromos 0.73 60 P Pg 23 40 41.0 +0.1
PDO S Sb 23 40 52.3 +0.8
comp=N,7μm,0.4s
PDO Prodromos 0.73 60 P Pg 23 40 41.0 +0.1
PDO S Sb 23 40 51.8 +0.3
PDO AML AML 23 40 55.1
comp=E,12774μm,0.5s
PDO AML AML 23 40 58.5
comp=N,9035μm,0.4s
RLS Riolos of Patr 0.88 101 P Pg 23 40 43.1 -0.6
RLS Riolos of Patr 0.88 101 P Pg 23 40 43.3 -0.4
PVO Paravola 0.98 67 P Pg 23 40 45.6 0.0
PVO S Sn 23 41 01.2 +0.9
comp=N,3μm,0.5s
PVO Paravola 0.98 67 P Pg 23 40 45.8 +0.2
PVO S Sn 23 40 59.7 -0.6
PVO AML AML 23 41 02.3
comp=E,8160μm,0.4s
PVO AML AML 23 41 03.0
comp=N,4935μm,0.3s
DRO Drossia 1.09 105 P Pb 23 40 47.1 -0.5
DRO S Sn 23 41 04.9 +1.9
comp=N,3μm,0.4s
DRO Drossia 1.09 105 P Pb 23 40 47.2 -0.5
UPR University Cam 1.11 87 P Pn 23 40 48.8 +0.5
EFP Efpalio 1.22 80 P Pn 23 40 49.0 -0.7
LAKA Lakka 1.26 89 P Pn 23 40 50.0 -0.3
LAKA S Sg 23 41 08.7 +1.4
comp=N,1μm,0.5s
LAKA Lakka 1.26 89 P Pn 23 40 50.1 -0.3
ANX Ano Chora 1.26 73 P Pn 23 40 50.4 -0.1
IGT Igoumenitsa 1.30 358 ePg Pg 23 40 52.0 +0.3
IGT eSg Sg 23 41 10.9 +2.3
IGT Igoumenitsa 1.30 358 P Pn 23 40 51.8 +0.1
SERG Sergoula 1.33 82 P Pn 23 40 51.0 -0.3
SERG Sergoula 1.33 82 P Pn 23 40 51.1 -0.2
TRIZ Trizonia 1.34 84 P Pn 23 40 50.9 -0.5
TRIZ S Sg 23 41 11.2 +1.3
comp=N,2μm,0.4s
KALE Kalithea 1.39 83 P Pn 23 40 51.8 -0.4
KLV Kalavryta, Ach 1.41 97 P Pn 23 40 52.6 +0.2
FNA Florina 2.66 17 ePn Pn 23 41 11.9 +2.2
PDG Podgorica 4.28 349 ePn Pn 23 41 32.7 +0.9
PDG eSn Sn 23 42 21.6 -0.1
BOSS Bosilegrad 4.55 20 ePn Pn 23 41 36.5 +0.9
IDI Anoyia 4.66 128 Pn Pn 23 41 37.3 +0.1
comp=N,0.2nm,0.3s,baz=322,slow=12,SNR=1.6
IDI Sn Sn 23 42 31.7 +0.3
comp=N,2.4nm,0.3s,baz=169,slow=23,SNR=8.1
BARS Barje 4.71 13 ePn Pn 23 41 39.1 +1.4
TREB Trebinje 4.74 342 ePn Pn 23 41 38.3 +0.2
TREB eSn Sn 23 42 30.6 -2.5
VAE Valguarnera 4.78 263 Pn Pn 23 41 39.6 +0.8
comp=N,0.3nm,0.3s,baz=60,slow=8.1,SNR=2.7
VAE Sn Sn 23 42 34.8 +0.5
comp=N,1.4nm,0.3s,baz=142,slow=15,SNR=2.5
VTS Vitosha 4.89 26 eSn Sn 23 42 38.2 +1.1
SELS Selova 5.01 6 ePn Pn 23 41 42.1 +0.2
SJES Sjenica 5.03 357 ePn Pn 23 41 43.5 +1.2
SJES eSn Sn 23 42 39.1 -1.4
STON Ston 5.06 337 ePn Pn 23 41 43.0 +0.4
STON eSn Sn 23 42 38.1 -2.9
IVAS Ivanjica 5.34 358 ePn Pn 23 41 46.5 0.0
IVAS eSn Sn 23 42 47.0 -1.0
GRUS Gruza 5.66 2 ePn Pn 23 41 50.6 -0.1
BBLS Lazići 5.67 353 ePn Pn 23 41 49.7 -1.4
BBLS eSn Sn 23 42 55.1 -1.1
DIVS Divibare 5.87 357 ePn Pn 23 41 53.8 +0.1
DIVS eSn Sn 23 42 59.2 -1.8
MLR Muntele Rosu 8.35 28 Pn Pn 23 42 28.5 +0.6
comp=N,0.1nm,0.3s,baz=156,slow=10,SNR=2.0
SOKA Soboth 9.31 337 ePn Pn 23 42 41.6 +0.6
comp=N,1.1nm,0.3s
OBKA Obir 9.32 334 ePn Pn 23 42 43.1 +1.9
comp=N,1.6nm,0.2s
BRTR Keskin Array B 10.43 78 Pn Pn 23 42 57.8 +1.4
comp=N,0.1nm,0.3s,baz=261,slow=13,SNR=3.3
MOA Molln 10.60 337 ePn Pn 23 42 59.9 +1.4
comp=N,1.2nm,0.3s
DAVOX Davos/Dischmat 11.52 321 Pn Pn 23 43 10.5 -0.8
comp=N,0.1nm,0.3s,baz=165,slow=12,SNR=2.2
GERES GERESS Array B 11.65 338 Pn Pn 23 43 13.6 +0.5
comp=N,0.2nm,0.3s,baz=159,slow=14,SNR=5.1
MMAI Mount Meron Ar 13.28 109 Pn Pn 23 43 33.9 -1.4
comp=N,0.1nm,0.3s,baz=297,slow=13,SNR=2.6
KBZ Khabaz 17.84 65 P P 23 44 37.9 +2.2
comp=N,0.1nm,0.3s,baz=291,slow=3.4,SNR=4.4
GNI Garni 18.97 77 P Pn 23 44 50.6 +1.8
comp=N,0.3nm,0.3s,baz=349,slow=3.0,SNR=4.6
MDT Midelt 21.02 263 P P 23 45 10.5 0.0
comp=N,2.5nm,0.7s,baz=264,slow=7.3,SNR=4.4
HFS Hagfors 22.33 351 P P 23 45 24.6 +0.4
comp=N,1.1nm,0.6s,baz=180,slow=20,SNR=4.1
FINES FINESS Array B 23.50 7 P P 23 45 34.5 -1.9
comp=N,3.4nm,1.0s,baz=202,slow=7.2,SNR=3.8
NOA NORSAR Array B 23.54 349 P P 23 45 36.2 -0.7
comp=N,0.3nm,0.7s,baz=167,slow=11,SNR=2.9
GEYT Alibeck 29.57 79 P P 23 46 31.0 -0.7
comp=N,1.1nm,0.6s,baz=274,slow=9.8,SNR=4.2
TORD Torodi Ar. Bea 30.00 219 P P 23 46 36.1 +0.5
comp=N,0.7nm,1.0s,baz=29,slow=11,SNR=3.3
MKAR Makanchi Array 45.37 58 P P 23 48 44.3 -0.7
comp=N,1.1nm,0.5s,baz=274,slow=7.0,SNR=33
ZALV Zalesovo Beam 45.74 48 P P 23 48 47.3 -0.5
comp=N,2.3nm,0.5s,baz=276,slow=8.9,SNR=13
SONM Songino Array 60.51 51 P P 23 50 36.7 -0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=N,0.3nm,0.7s,baz=295,slow=10,SNR=3.6						
CMAR	Chiang Mai Arr	69.99	82	P	P	23 51 37.7	-0.9
	comp=N,0.5nm,0.3s,baz=313,slow=7.0,SNR=3.8						
YKA	Yellowknife Ar	73.30	340	P	P	23 51 57.6	-0.2
	comp=N,0.1nm,0.3s,baz=40,slow=4.9,SNR=2.5						

IDC 03 23:41:19.0±41.0,37°.93N×20°.00E,h0km,mb3.8/3, mb1 3.8/3,mb1mx3.3/37,mbtmp3.8/3,Error ellipse: s-maj=776.2km s-min=73.1km az=44.0,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FINES	FINESS Array B	23.84	7	P	P	23 46 33.5	0.0
	2.0nm,0.9s,baz=198,slow=10,SNR=2.5						
MKAR	Makanchi Array	45.78	58	P	P	23 49 42.1	-0.1
	0.4nm,0.4s,baz=281,slow=7.2,SNR=3.7						
ZALV	Zalesovo Beam	46.16	48	P	P	23 49 44.9	-0.1
	1.2nm,0.6s,baz=276,slow=7.9,SNR=3.8						

IDC 03 23:46:00.6±1.5,7°.06S×128°.50E,h0km,mb3.3/1, mb1 3.6/3,mb1mx3.4/28,mbtmp3.4/3,ML3.5/2,Error ellipse: s-maj=146.3km s-min=15.5km az=65.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.00	157	Pn	Pn	23 49 20.5	+0.1
	0.2nm,0.3s,baz=336,slow=11,SNR=4.3						
WRA				Sn	Sn	23 51 49.8	-6.9
	0.2nm,0.3s,baz=329,slow=22,SNR=2.5						
ASAR	Alice Springs	17.31	163	P	Pn	23 50 03.7	-0.1
	0.2nm,0.3s,baz=344,slow=12,SNR=2.4						
MKAR	Makanchi Array	67.47	328	P	P	23 56 58.4	0.0
	0.4nm,1.0s,baz=120,slow=5.7,SNR=1.8						

*ATH **03** 23:53:06.2,38°.23N×20°.38E,h9km±1km,ML2.7/5,Error ellipse: s-maj=2.0km s-min=1.0km az=263.0*
*THE **03** 23:53:06.4,38°.21N×20°.38E,h8km±1km,ML2.6/7,Error ellipse: s-maj=1.5km s-min=0.7km az=254.0*
ISC 03 23:53:05.3±1.2,38°.23N±0°.03×20°.35E±0°.06,h13km±4km, n26,σ0s.64/48,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.02	175	P	Pg	23 53 08.2	+0.7
KEF3				S	Sg	23 53 09.6	+0.5
CHV1	Chavriata, Kef	0.05	146	P	Pb	23 53 08.1	+0.4
CHV1				S	Sg	23 53 09.6	+0.2
KEF4	Livadi, Kephal	0.07	63	P	Pg	23 53 08.0	+0.1
KEF4				S	Sg	23 53 09.3	-0.4
LXR1	Lixouri, Cepha	0.08	109	P	Pg	23 53 08.0	+0.1
LXR1				S	Sg	23 53 09.4	-0.4
KEF1	Kardakata, Kep	0.11	62	P	Pg	23 53 08.3	0.0
KEF1				S	Sg	23 53 09.6	-0.9
ARG2	Argostoli	0.12	113	P	Pg	23 53 08.4	-0.1
ARG2				S	Sg	23 53 10.1	-0.7
KEF2	Argostoli. Kep	0.13	119	P	Pg	23 53 08.6	0.0
KEF2				S	Sg	23 53 10.2	-0.7
VLS	Valsamata	0.20	104	P	Pg	23 53 09.4	-0.3
VLS				S	Sg	23 53 12.0	-0.7
	5μm,0.1s						
VLS	Valsamata	0.20	104	P	Pg	23 53 09.4	-0.3
FSK	Fiskardo	0.29	36	P	Pg	23 53 11.6	+0.3
FSK				S	Sg	23 53 16.1	+0.9
	1μm,0.7s						
FSK	Fiskardo	0.29	36	P	Pg	23 53 11.7	+0.4
FSK				S	Sg	23 53 16.1	+0.9
FSK				AML	AML	23 53 16.6	
	comp=N,1073μm,0.5s						
FSK				AML	AML	23 53 18.5	
	comp=E,2408μm,0.4s						
VLMS	Volimes, Zakyn	0.43	144	P	Pg	23 53 14.2	+0.3
VLMS				S	Sg	23 53 20.6	+1.1
VLMS				AML	AML	23 53 24.5	
	comp=E,5893μm,0.2s						
VLMS				AML	AML	23 53 26.6	
	comp=N,5881μm,0.4s						
EVGI	Lefkada island	0.46	32	P	Pb	23 53 14.8	-0.6
EVGI				S	Sb	23 53 22.2	0.0
EVGI	Lefkada island	0.46	32	P	Pb	23 53 14.7	-0.6
EVGI				S	Sb	23 53 21.8	-0.4
MGNA	Meganis	0.55	39	P	Pg	23 53 16.1	-0.1
MGNA				S	Sg	23 53 24.4	+0.9
LKD2	Lefkada island	0.61	23	P	Pn	23 53 19.7	-0.1
LKD2	Lefkada island	0.61	23	P	Pn	23 53 18.4	-1.4
TSLK	Tsoukalades, L	0.65	22	P	Pb	23 53 18.5	0.0
AST1	Astakos	0.66	61	P	Pb	23 53 18.9	+0.1
AST1				S	Sg	23 53 28.0	+1.0
	comp=N,912nm,0.4s						
KRI1	kERI	0.68	146	P	Pg	23 53 18.2	-0.2
KRI1				S	Sb	23 53 28.5	+0.3
	comp=N,2μm,0.2s						
PDO	Prodromos	0.76	60	P	Pn	23 53 21.3	-0.4
PDO				S	Sg	23 53 31.6	+1.7
	comp=N,822nm,0.5s						
PDO	Prodromos	0.76	60	P	Pb	23 53 20.2	-0.1
PDO				S	Sb	23 53 30.7	+0.1
PDO				AML	AML	23 53 31.7	
	comp=E,1381μm,0.6s						
PDO				AML	AML	23 53 41.1	
	comp=N,1007μm,0.4s						
RLS	Riolos of Patr	0.90	100	P	Pb	23 53 22.5	-0.3
RLS				S	Sg	23 53 36.0	+1.6
	comp=N,295nm,0.4s						
PVO	Paravola	1.01	67	P	Pn	23 53 24.7	-0.5
PVO				S	Sb	23 53 38.2	+0.4
	comp=N,440nm,0.5s						
PVO	Paravola	1.01	67	P	Pb	23 53 24.3	-0.3
PVO				S	Sn	23 53 39.4	+0.1
PVO				AML	AML	23 53 41.2	
	comp=E,949μm,0.4s						
PVO				AML	AML	23 53 50.0	
	comp=N,834μm,0.7s						
DRO	Drossia	1.11	104	P	Pb	23 53 26.6	+0.1
DRO				S	Sn	23 53 42.2	+0.3
DRO				AML	AML	23 53 50.9	
	comp=N,1074μm,0.4s						
DRO				AML	AML	23 53 55.0	
	comp=E,1319μm,0.4s						

*BJI **03** 23:54:08.2±0.0,7°.49S×128°.61E,h10km,mB5.1/38, mb4.7/50,Ms4.7/14,Ms7 4.4/14*
*NEIC **03** 23:54:11.4±2.7,7°.23S±0°.06×128°.25E±0°.06,h10km±1km, mb5.0/55,Error ellipse: s-maj=10.6km s-min=8.7km az=222.0*
*IDC **03** 23:54:11.5±0.5,7°.23S×128°.18E,h0km,mb4.8/16, mb1 4.8/20,mb1mx4.6/41,mbtmp4.8/20,ML3.9/4,MS4.0/10, Ms1 4.0/10,ms1mx3.7/38,Error ellipse: s-maj=19.1km s-min=12.0km az=64.0*
*MOS **03** 23:54:13.2±1.2,7°.28S×128°.33E,h33km,mb5.2/26,Error ellipse: s-maj=14.8km s-min=6.4km az=110.8*
*KLM **03** 23:54:14.0,7°.49S×128°.30E,h17km,mb5.1*
*DJA **03** 23:54:15.4±0.2,7°S±2°×12°8E±°,h41km±4km,M4.8/36, mb5.1/36,mB5.4/14,MLv4.8/13,Mw(mB)4.8/14*
ISC 03 23:54:15.3±0.3,7°.25S±0°.03×128°.28E±0°.04,h35km,n235, σ1s.87/252,mb5.0/64,MS4.1/10,12C-4D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.08	104	P	Pn	23 55 06.0	+4.5
SAUI	Saumlaki	3.08	104	Pn	Pn	23 55 01.7	+0.2
BNDI	Bandanaira	3.15	31	P	Pn	23 54 59.6	-2.9
BNDI				S	Sn	23 55 35.8	-3.1
AAI	Ambon	3.54	359	P	Pn	23 55 05.3	-2.5
AAI				S	Sn	23 55 42.8	-5.7
MSAI	Masohi	3.93	9	P	Pn	23 55 11.0	-2.2
MSAI				S	Sn	23 55 52.2	-5.9
NLAI	Namlea	4.15	343	P	Pn	23 55 16.3	0.0
NLAI				S	Sn	23 56 00.5	-3.1
SOEI	Soe	4.69	238	P	Pn	23 55 26.1	+2.4
SOEI	Soe	4.69	238		Pn	23 55 22.8	-0.9
SANI	Sanana	5.65	336	P	Pn	23 55 36.0	-0.8
	0.2nm1μm54nm,1.0s						
SANI				S	Sn	23 56 36.4	-4.1
	0.2nm1μm54nm,1.0s						
FAKI	Fak Fak	5.84	43	P	Pn	23 55 40.5	+1.0
	0.4nm2μm106nm,0.9s						
FAKI	Fak Fak	5.84	43		Pn	23 55 36.7	-2.8
MTN	Manton Dam	6.23	153	P	Pn	23 55 46.2	+1.4
	baz=6.3,SNR=6.2						
MTN	Manton Dam	6.23	153		Pn	23 55 47.7	+2.9
MTN					Sn	23 56 51.0	-3.8
KMPI	Kaimana, Papua	6.47	57	P	Pn	23 55 50.2	+2.1
	1.0nm252nm,0.8s						
LBMI	Labuha	6.61	353	P	Pn	23 55 51.3	+1.2
	0.9nm101nm,1.0s						
KDU	Kakadu	6.80	143	P	Pn	23 55 54.5	+1.9
	baz=6.9,SNR=49						
SIJI	Sorong	7.00	25	Pn	Pn	23 55 55.2	-0.2
	4.8nm,0.3s,baz=216,slow=6.9,SNR=6.6						
SIJI				Sn	Sn	23 57 08.1	-5.8
	baz=131,slow=24,SNR=1.1						
SIJI				LR	LR	23 58 11.5	
	comp=Z,572nm,21.6s,baz=334,slow=34						
SWI	Sorong	7.00	25	P	Pn	23 55 56.1	+0.6
	0.4nm91nm,1.1s						
TNTI	Ternate	8.02	353	Pn	Pn	23 56 07.2	-2.2
RKPI	Ransiki, Papua	8.19	46	P	Pn	23 56 12.2	+0.5
	9μm132nm,0.7s						
LUWI	Luwuk	8.26	318	P	Pn	23 56 22.7	+10
LUWI	Luwuk	8.26	318		Pn	23 56 13.2	+0.5
KNRA	Kununurra	8.39	177	P	Pn	23 56 16.1	+1.6
	baz=8.5,SNR=58						
KNRA	Kununurra	8.39	177		Pn	23 56 15.3	+0.8
KNRA				Sn	Sn	23 57 47.8	-0.2
TTSI	Tana Toraja	9.40	296	P	Pn	23 56 29.2	+0.8
	46nm,0.8s						
PLAI	Plampang	10.52	261	P	Pn	23 56 44.0	+0.3
	96nm,0.8s						
FITZ	Fitzroy Crossi	11.09	193	P	Pn	23 56 50.6	-0.9
	baz=11,SNR=26						
FITZ	Fitzroy Crossi	11.09	193	Pn	Pn	23 56 50.0	-1.4
	1.7nm,0.3s,baz=29,slow=11,SNR=24						
FITZ				Sn	Sn	23 58 49.4	-4.8
	1.3nm,0.3s,baz=72,slow=7.2,SNR=2.3						
FITZ				LR	LR	00 01 39.4	
	comp=Z,1μm,20.9s,baz=30,slow=40						
FITZ	Fitzroy Crossi	11.09	193		Pn	23 56 50.9	-0.5
WB0	Warramunga Arr	13.79	155		Pn	23 57 26.0	-2.4
WB0					Sn	23 59 56.8	-3.6
WRAB	Tennant Creek	13.92	156		Pn	23 57 27.7	-2.4
WRAB	Tennant Creek	13.92	156	c iP	Pn	23 57 27.8	-2.4
WRAB				pmax	pmax		
	comp=Z,88nm,1.1s						
WRA	Warramunga Arr	13.92	156	Pn	Pn	23 57 28.1	-2.1
	comp=Z,2.1nm,0.3s,baz=321,slow=14,SNR=48						
WRA				Sn	Sn	23 59 52.9	-11
	comp=Z,0.4nm,0.3s,baz=329,slow=21,SNR=4.6						
WRA				LR	LR	00 03 17.6	
	comp=Z,751nm,18.6s,baz=345,slow=39						
WRA	Warramunga Arr	13.92	156		Pn	23 57 26.7	-3.5
WRA					Sn	23 59 55.3	-8.3
WRA	Warramunga Arr	13.92	156	ceP	Pn	23 57 27.7	-2.5
WRA				pmax	pmax		
	comp=Z,47nm,0.8s						
WB2	Warramunga Arr	13.93	156	Pn	Pn	23 57 28.0	-2.3
WR0	Warramunga Arr	14.02	155		Pn	23 57 29.5	-2.1
WR0					Sn	00 00 06.3	+0.3
KCP	Kidapawan	14.52	347	⇑eP	Pn	23 57 37.7	-0.7
COEN	Coen	16.08	116	P	Pn	23 57 58.1	-0.8
	baz=16,SNR=10						
COEN	Coen	16.08	116		Pn	23 57 59.1	+0.2
PSA00	Pilbara Seismi	16.41	209		Pn	23 58 01.4	-1.6
PSA00				IAmb	IAmb	23 58 08.7	
	comp=Z,108nm,0.8s						
PSA00	Pilbara Seismi	16.41	209	Pn	Pn	23 58 01.1	-1.9
PSA00				IAmb	IAmb	23 58 08.1	
	comp=Z,42nm,0.8s						
PCJI	Pacitan	16.98	266	P	Pn	23 58 07.5	-2.7
	comp=Z,85nm,1.3s						
QIS	Mount Isa	17.18	141	P	Pn	23 58 11.8	-1.0
	baz=17,SNR=9.6						
AS31	Alice Springs	17.19	162		Pn	23 58 12.2	-0.7
ASAR	Alice Springs	17.19	162	P	Pn	23 58 12.1	-0.9
	comp=Z,0.9nm,0.3s,baz=336,slow=8.9,SNR=41						
ASAR				S	Sn	00 01 18.1	-5.1
	comp=Z,0.3nm,0.3s,baz=334,slow=20,SNR=4.9						
ASAR				LR	LR	00 04 58.3	
	comp=Z,666nm,18.6s,baz=326,slow=38						
ASAR	Alice Springs	17.19	162		Pn	23 58 12.3	-0.6
ASAR	Alice Springs	17.19	162	P	Pn	23 58 12.3	-0.6
WOJI	Wonogiri, Jawa	17.22	267	P	Pn	23 58 12.9	-0.3
	comp=Z,81nm,1.0s						
WRKA	Warakurna	17.69	180	P	Pn	23 58 18.2	-0.9
	baz=18,SNR=34						
KKM	Kota Kinabalu	17.87	317		Pn	23 58 18.6	-2.8
SBUM	Sibu	18.70	300	P	P	23 58 26.6	-4.3
SBUM	Sibu	18.70	300	P	Pn	23 58 34.0	+2.5
PMG	Port Moresby	18.80	98	P	Pn	23 58 33.6	+0.9
	comp=Z,1.5nm,0.3s,baz=270,slow=16,SNR=9.8						
PMG	Port Moresby	18.80	98	P	P	23 58 30.9	-1.1
PMG				IAmb	IAmb	23 58 37.9	
	comp=Z,151nm,1.1s						
PMG	Port Moresby	18.80	98	P	P	23 58 30.9	-1.1
PMG				pmax	pmax		
	comp=Z,151nm,1.2s						
MTSU	Mount Surprise	19.00	126	P	Pn	23 58 36.4	+1.3
	baz=19,SNR=14						
KSM	Kuching	19.92	295	P	P	23 58 41.5	-2.7
KSM	Kuching	19.92	295	P	Pn	23 58 46.0	0.0
GIRL	Giralia	20.43	220	P	P	23 58 50.0	+0.4
	baz=20,SNR=4.2						
GIRL	Giralia	20.43	220	P	P	23 58 49.0	-0.6
CNJI	Cibinong	20.98	268	P	P	23 58 55.1	-0.6
	comp=Z,2μmcomp=Z,170nm,1.1s						
TPI	Tanjungpandan	21.02	281	P	P	23 58 57.2	+1.0
	comp=Z,1μmcomp=Z,64nm,1.1s						
MEEK	Meekatharra	21.36	204	P	P	23 59 01.1	+1.3
	baz=22,SNR=29						
CTA	Charters Tower	21.60	128	P	P	23 59 04.3	+2.0
	comp=Z,16nm,1.1s,baz=295,slow=12,SNR=4.4						
FORT	Forrest	23.41	180	P	P	23 59 20.2	-1.0
MDSI	Maura Dua	24.13	275	P	P	23 59 26.9	-1.3
	comp=Z,24nm,1.3s						
MORW	Morawa	24.58	206	P	P	23 59 34.0	+1.8
	baz=25,SNR=23						
MORW	Morawa	24.58	206	P	P	23 59 33.1	+0.9
KMBL	Kambalda	24.73	193	P	P	23 59 35.4	+1.9
	baz=25,SNR=8.2						
BLDU	Ballidu	25.65	204	P	P	23 59 43.7	+1.8
	baz=26,SNR=38						
MYKOM	Kota Tinggi	25.98	289	P	P	23 59 43.2	-1.8
KLBR	Kellerberrin	26.14	201	P	P	23 59 48.4	+2.1
	baz=26,SNR=22						
BBOO	Buckleboo	26.44	165	P	P	23 59 51.2	+2.2
	baz=27,SNR=9.4						
BBOO	Buckleboo	26.44	165	P	P	23 59 47.7	-1.3
BBOO				IAmb	IAmb	23 59 54.8	
	comp=Z,29nm,0.8s						
MUN	Mundaring	27.06	203	P	P	23 59 56.2	+1.7
	baz=27,SNR=8.8						
DLV	T Lat	27.41	314	P	P	23 59 55.7	-2.3
STKA	Stephens Creek	27.47	155	P	P	00 00 00.1	+1.8
	comp=Z,28nm,0.8s,baz=328,slow=9.2,SNR=30						
STKA				LR	LR	00 10 57.5	
	comp=Z,356nm,18.0s,baz=308,slow=36						
STKA	Stephens Creek	27.47	155	P	P	23 59 58.5	+0.2
STKA	Stephens Creek	27.47	155	P	P	23 59 58.5	+0.2
STKA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NWAO	Narrogin (SRO)	27.53	200	P	P	00 00 00.3	+1.5
	comp=Z,28nm,0.8s,baz=38,slow=7.4,SNR=10						
NWAO				LR	LR	00 12 11.5	
	comp=Z,302nm,19.1s,baz=358,slow=39						
NWAO	Narrogin (SRO)	27.53	200	P	P	23 59 58.4	-0.5
NWAO				IAmb	IAmb	00 00 04.7	
	comp=Z,42nm,0.9s						
NWAO	Narrogin (SRO)	27.53	200	P	P	23 59 58.6	-0.2
NWAO				IAmb	IAmb	00 00 04.8	
	comp=Z,34nm,0.9s						
NWAO	Narrogin (SRO)	27.53	200	P	P	23 59 58.6	-0.2
NWAO				pmax	pmax		
	comp=Z,34nm,1.0s						
BKNI	Bangkinang	28.19	284	P	P	00 00 05.1	+0.2
IPM	Ipoh	29.59	292	P	P	00 00 16.6	-0.7
IPM				IAmb	IAmb	00 00 21.3	
	comp=Z,12nm,0.7s						
IPM	Ipoh	29.59	292	P	P	00 00 19.0	+1.6
KULM	Kulim	30.25	294	P	P	00 00 21.8	-1.4
KULM	Kulim	30.25	294	P	P	00 00 25.0	+1.8
PSI	Prapat	30.95	288	P	P	00 00 29.6	0.0
	comp=Z,69nm,0.9s,baz=143,slow=5.4,SNR=37						
LHMI	Lhok Sumawe	33.63	291	P	P	00 00 51.8	-1.1
	comp=Z,2μmcomp=Z,117nm,0.9s						
TOO	Toolangi	33.99	155	P	P	00 00 56.3	+0.5
TOO	Toolangi	33.99	155	P	P	00 00 56.3	+0.5
TOO				pmax	pmax		
	comp=Z,40nm,1.1s						
JCJ	Chichijima	36.70	21	LR	LR	00 14 21.8	
	comp=Z,114nm,20.0s,baz=36,slow=33						
SLVN	Son La	37.14	320	P	P	00 01 22.6	-0.4
CMAR	Chiang Mai Arr	38.60	312	P	P	00 01 35.8	+0.4
	comp=Z,2.7nm,0.7s,baz=142,slow=7.2,SNR=16						
CMAR				PcP	PcP	00 03 48.8	+1.4
	comp=Z,2.1nm,0.6s,baz=174,slow=2.9,SNR=8.1						
CMAR				LR	LR	00 18 38.0	
	comp=Z,87nm,19.8s,baz=125,slow=38						
CMAR	Chiang Mai Arr	38.60	312	ceP	P	00 01 37.7	+2.3
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GYA	Guiyang	39.53	329	⇓iP	P	00 01 44.4	+1.2
GYA				S	S	00 07 46.1	+2.5
GYA				SS	SS	00 10 34.6	-4.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,150nm,5.9s						
GYA				LR	LR		
	comp=Z,320nm,17.0s						
GYA				LR	LR		
	comp=Z,200nm,17.3s						
GYA				LR	LR		
	comp=Z,160nm,17.1s						
DZM	Mont Dzumac	39.61	116	P	P	00 01 45.3	+1.4
	comp=Z,8.8nm,0.8s,baz=357,slow=8.1,SNR=3.0						
DZM	Mont Dzumac	39.61	116	P	P	00 01 43.7	-0.2
WHN	Wuhan	39.88	341	P	P	00 01 45.1	-0.7
TJN	Taejon	43.40	359	⇑eP	P	00 02 12.8	-1.8
KSAR	Wonju Array Be	44.46	360	P	P	00 02 22.1	-1.0
KSAR	Wonju Array Be	44.46	360	P	P	00 02 22.1	-1.0
KSRS	Korea Array	44.47	360	P	P	00 02 25.0	+1.9
	comp=Z,4.7nm,0.8s,baz=179,slow=10,SNR=9.8						
MAJO	Matsushiro	44.55	11	P	P	00 02 24.9	+1.1
MAJO				IAmb	IAmb	00 02 25.5	
	comp=Z,20nm,0.9s						
MAJO	Matsushiro	44.55	11	⇑eP	P	00 02 23.2	-0.6
MAJO				pmax	pmax		
	comp=Z,24nm,1.0s						
MAT	Matsushiro	44.55	11	P	P	00 02 24.4	+0.6
MJAR	Matsushiro Arr	44.55	11	P	P	00 02 24.2	+0.5
	comp=Z,14nm,0.9s,baz=188,slow=9.4,SNR=17						
MJAR	Matsushiro Arr	44.55	11	P	P	00 02 24.1	+0.3
MJAR	Matsushiro Arr	44.55	11	P	P	00 02 24.1	+0.3
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MJB9	Matsu-Tunnel	44.55	11	P	P	00 02 23.5	-0.3
MJB9				IAmb	IAmb	00 02 25.5	
	comp=Z,21nm,0.9s						
CD2	Chengdu	44.62	329	P	P	00 02 26.6	+2.0
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
XAN	Xi'an	44.98	337	P	P	00 02 27.2	-0.1
XAN				sP	sP	00 02 42.7	+2.3
XAN				PcP	PP	00 04 12.6	-0.3
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,150nm,4.8s						
LZH	Lanzhou	48.84	334	eP	P	00 02 58.8	+1.1
LZH				pP	pP	00 03 03.5	-3.6
LZH				sP	pwP	00 03 06.0	-5.3
LZH				PP	PP	00 04 51.8	+0.5
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,6.0s						
LZH				LR	LR		
	comp=Z,260nm,13.7s						
LZH				LR	LR		
	comp=Z,370nm,14.3s						
LZH				LR	LR		
	comp=Z,410nm,18.0s						
MSHR	Mys Shultsa	49.66	3	⇑iP	P	00 03 03.8	+0.3
HHC	Hu-ho-hao-te	50.27	344	eP	P	00 03 12.6	+4.2
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,80nm,5.9s						
LSA	Lhasa	51.22	318	P	P	00 03 16.1	-0.1
LSA				IAmb	IAmb	00 03 20.1	
	comp=Z,17nm,1.1s						
LSA	Lhasa	51.22	318	P	P	00 03 16.1	-0.1
LSA				pmax	pmax		
	comp=Z,17nm,1.1s						
USRK	Ussuriysk Ar.	51.32	3	P	P	00 03 17.5	+1.4
	comp=Z,6.2nm,0.8s,baz=181,slow=7.7,SNR=9.3						
USRK	Ussuriysk Ar.	51.32	3	P	P	00 03 15.7	-0.3
USRK	Ussuriysk Ar.	51.32	3	P	P	00 03 15.7	-0.3
MDJ	Mudanjiang	51.64	1	P	P	00 03 19.7	+1.2
MDJ				pmax	pmax		
	comp=Z,27nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,260nm,3.7s						
RPZ	Rata Peaks	52.09	141	P	P	00 03 25.3	+3.3
	comp=Z,26nm,1.0s,baz=353,slow=4.8,SNR=8.9						
RPZ	Rata Peaks	52.09	141	P	P	00 03 23.9	+2.0
ODAN	Odare	52.15	312	eP	P	00 03 24.0	+1.1
	comp=Z,33nm,1.2s						
TAPN	Taplejung	52.19	313	eP	P	00 03 24.2	+0.9
	comp=Z,30nm,1.1s						
RAMN	Ramite	52.78	312	eP	P	00 03 28.9	+1.3
	comp=Z,30nm,0.8s						
GTA	Gaotai	53.39	333	⇓P	P	00 03 33.1	+1.4
GTA				pP	pP	00 03 36.5	-4.7
GTA				sP	pwP	00 03 40.3	-5.1
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA				pmax	pmax		
	comp=Z,26nm,4.6s						
GTA				LR	LR		
	comp=Z,120nm,14.3s						
GTA				LR	LR		
	comp=Z,150nm,16.2s						
GTA				LR	LR		
	comp=Z,100nm,15.6s						
JIRN	Jiri	53.48	312	eP	P	00 03 34.1	+1.2
	comp=Z,39nm,1.0s						
GUN	Gumba	53.84	312	eP	P	00 03 36.8	+1.3
	comp=Z,32nm,0.8s						
PKI	Pulchoki	54.00	312	eP	P	00 03 37.3	+0.6
PKIN	Phulchoki	54.02	312	eP	P	00 03 37.9	+1.2
	comp=Z,8.7nm,0.7s						
KKN	Kakani	54.22	312	eP	P	00 03 39.8	+1.7
GKN	Gorkha	54.81	312	eP	P	00 03 43.4	+1.1
HYB	Hyderabad	54.90	297	iP	P	00 03 42.0	-1.0
KOLN	Koldanda	55.46	311	eP	P	00 03 48.0	+0.9
	comp=Z,66nm,1.2s						
DANN	Dangsing	55.65	312	eP	P	00 03 49.4	+0.9
	comp=Z,43nm,1.0s						
KLR	Kul'dur	56.32	3	⇓iP	P	00 03 53.0	+0.4
KLR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ULN	Ulaanbaatar	57.99	343	P	P	00 04 05.3	+0.7
ULN				IAmb	IAmb	00 04 08.6	
	comp=Z,18nm,1.1s						
ULN	Ulaanbaatar	57.99	343	P	P	00 04 05.3	+0.7
ULN				pmax	pmax		
	comp=Z,18nm,1.1s						
ZEA	Zeya	60.76	359	eP	P	00 04 26.0	+2.6
ZAK	Zakamensk	61.36	342	eP	P	00 04 28.8	+1.1
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TLY	Talaya	62.40	343	eP	P	00 04 37.2	+2.7
TLY				pmax	pmax		
	comp=Z,30nm,1.8s						
WMQ	Urumqi	62.69	328	eP	P	00 04 38.2	+1.5
WMQ				pP	pP	00 04 42.9	-3.5
WMQ				pmax	pmax		
	comp=Z,22nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,3.8s						
WMQ				LR	LR		
	comp=Z,690nm,28.8s						
WMQ				LR	LR		
	comp=Z,750nm,29.2s						
WMQ	Urumqi	62.69	328	P	P	00 04 37.2	+0.5
WMQ	Urumqi	62.69	328	P	P	00 04 37.2	+0.5
WMQ				pmax	pmax		
	comp=Z,21nm,0.9s						

MOY	Mondy	63.19	341	eP	P	00 04 42.0	+2.1
MOY				pmax	pmax		
	comp=Z,49nm,1.9s						
PETK	Petropavlovsk-	65.10	19	P	P	00 04 54.1	+1.8
	comp=Z,15nm,0.9s,baz=200,slow=7.9,SNR=6.7						
PETK	Petropavlovsk-	65.10	19	P	P	00 04 53.2	+0.9
PETK	Petropavlovsk-	65.10	19	P	P	00 04 53.2	+0.9
BOD	Bodaibo	65.88	352	eP	P	00 04 58.7	+1.5
BOD				pmax	pmax		
	comp=Z,16nm,1.6s						
NIL	Nilore	66.10	312	P	P	00 04 59.9	+0.7
NIL	Nilore	66.10	312	P	P	00 04 59.9	+0.7
NIL				pmax	pmax		
	comp=Z,20nm,0.9s						
KSH	Kashi	67.06	318	P	P	00 05 07.0	+1.6
KSH				pP	pP	00 05 12.6	-2.6
KSH				PcP	PcP	00 05 30.4	-3.1
KSH				PP	PP	00 07 36.4	+2.9
KSH				PcS		00 09 37.0	
KSH				S	S	00 13 56.1	-0.9
KSH				ScS	SKSac	00 14 59.2	-1.0
KSH				pmax	pmax		
	comp=Z,26nm,1.0s						
KSH				pmax	pmax		
	comp=Z,150nm,5.4s						
KSH				LR	LR		
	comp=Z,88nm,5.1s						
KSH				LR	LR		
	comp=Z,140nm,3.5s						
KSH				LR	LR		
	comp=Z,210nm,5.0s						
MK31	Makanchi Array	67.51	328	IAmb	IAmb	00 05 10.3	
	comp=Z,15nm,0.9s						
MKAR	Makanchi Array	67.51	328	P	P	00 05 09.3	+1.3
	comp=Z,13nm,0.8s,baz=131,slow=7.9,SNR=152						
MKAR	Makanchi Array	67.51	328	P	P	00 05 08.8	+0.9
MAKZ	Makanchi	67.69	328	P	P	00 05 10.2	+1.2
MAKZ				IAmb	IAmb	00 05 11.2	
	comp=Z,14nm,0.9s						
MAKZ	Makanchi	67.69	328	P	P	00 05 10.2	+1.2
MAKZ				pmax	pmax		
	comp=Z,14nm,0.9s						
MA2	Magadan	68.98	12⇑	iP	P	00 05 15.1	-1.7
MA2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
YAK	Yakutsk	69.08	1	eP	P	00 05 17.9	+0.6
YAK				e*PP	pP	00 05 28.2	+0.8
YAK				e		00 05 40.1	
YAK				e		00 07 52.2	
YAK				eS	S	00 14 20.2	+0.2
YAK				e*SS	sS	00 14 39.4	+3.0
YAK				e		00 15 08.6	
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,1.3s						
YAK				pmax	pmax		
	comp=Z,146nm,4.1s						
YAK				pmax	pmax		
	comp=E,94nm,4.3s						
YAK				smax	smax		
	comp=E,238nm,5.3s						
YAK				smax	smax		
	comp=N,145nm,4.3s						
KBK	Karagaybulak	69.36	321	P	P	00 05 22.0	+2.2
	SNR=5.0						
UCH	Uchtor	69.41	320	P	P	00 05 22.8	+2.3
	SNR=6.9						
KBL	Kabul	69.63	311	P	P	00 05 21.1	-0.6
KBL				IAmb	IAmb	00 05 23.4	
	comp=Z,11nm,1.0s						
KBL	Kabul	69.63	311	P	P	00 05 21.1	-0.6
KBL				pmax	pmax		
	comp=Z,11nm,1.0s						
AAK	Ala-Archa	69.64	321	P	P	00 05 23.8	+2.3
	SNR=8.4						
AAK	Ala-Archa	69.64	321	P	P	00 05 22.9	+1.4
AAK	Ala-Archa	69.64	321⇑	iP	P	00 05 21.4	-0.1
AAK				pmax	pmax		
	comp=Z,72nm,2.5s						
CHMS	Chumysh	69.67	321	P	P	00 05 23.1	+1.6
	SNR=5.8						
AML	Almayashu	69.89	320	P	P	00 05 25.5	+2.2
	SNR=13						
ARSB	Arslanbob	69.94	319	P	P	00 05 23.7	+0.3
ARSB	Arslanbob	69.94	319	P	P	00 05 23.7	+0.3
ARSB				pmax	pmax		
	comp=Z,30nm,0.9s						
USP	Ospenovka	69.97	321	P	P	00 05 25.3	+1.9
	SNR=14						
EKS2	Erkin-Say	70.11	320	P	P	00 05 26.4	+2.1
	SNR=9.2						
BTK	Batken	70.78	317	P	P	00 05 27.3	-1.1
BTK				IAmb	IAmb	00 05 31.6	
	comp=Z,12nm,1.1s						
BTK	Batken	70.78	317	P	P	00 05 27.3	-1.1
BTK				pmax	pmax		
	comp=Z,12nm,1.1s						
ZALV	Zalesovo Beam	71.06	335	P	P	00 05 30.4	+0.7
	comp=Z,26nm,0.8s,baz=120,slow=4.2,SNR=108						
ZALV	Zalesovo Beam	71.06	335	P	P	00 05 30.2	+0.5
ZALV	Zalesovo Beam	71.06	335	P	P	00 05 30.2	+0.5
KURK	Kurchatov	71.85	329	P	P	00 05 35.9	+1.4
KURK	Kurchatov	71.85	329c	iP	P	00 05 35.6	+1.1
KURK				pmax	pmax		
	comp=Z,47nm,0.9s						
KK31	Karatay Array	72.41	319	P	P	00 05 37.2	-0.9
KK31				IAmb	IAmb	00 05 40.3	
	comp=Z,12nm,1.1s						
KK31	Karatay Array	72.41	319	P	P	00 05 37.2	-0.9
KK31				pmax	pmax		
	comp=Z,12nm,1.2s						
KKAR	Karatay Array	72.41	319	P	P	00 05 37.6	-0.5
KKAR	Karatay Array	72.41	319	P	P	00 05 36.7	-1.4
KKAR				IAmb	IAmb	00 05 40.4	
	comp=Z,12nm,1.1s						
KKAR	Karatay Array	72.41	319	P	P	00 05 37.6	-0.5
KKAR				pmax	pmax		
	comp=Z,12nm,1.2s						
VNDA	Vanda	72.41	173	LR	LR	00 37 39.7	
	comp=Z,139nm,18.0s,baz=318,slow=36						
BRVK	Borovoye	77.44	328	P	P	00 06 05.8	-1.1
BRVK				IAmb	IAmb	00 06 09.3	
	comp=Z,24nm,1.1s						
BRVK	Borovoye	77.44	328	P	P	00 06 05.8	-1.1
BRVK				pmax	pmax		
	comp=Z,24nm,1.1s						
TIXI	Tiksi	78.73	0	P	P	00 06 13.6	-0.1
TIXI				IAmb	IAmb	00 06 20.2	
	comp=Z,13nm,1.1s						
TIXI	Tiksi	78.73	0⇑	iP	P	00 06 13.3	-0.4
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GEYT	Alibeck	79.08	311	P	P	00 06 18.1	+1.7
	comp=Z,1.5nm,0.8s,baz=179,slow=5.8,SNR=9.3						
GEYT	Alibeck	79.08	311	P	P	00 06 15.8	-0.5
ABKAR	Akbulak array	81.65	322	P	P	00 06 30.2	+0.3
QSPA	South Pole Qui	82.73	180	P	P	00 06 35.9	+0.4
QSPA				IAmb	IAmb	00 06 37.3	
	comp=Z,12nm,1.1s						
AKTO	Aktyubinsk	83.23	323	P	P	00 06 39.8	+1.6
	comp=Z,4.2nm,0.8s,baz=106,slow=4.4,SNR=13						
GAMB	Gambell	83.80	23	IAmb	IAmb	00 06 43.6	
	comp=Z,12nm,0.9s						
SVE	Sverdlovsk	84.10	329	eP	P	00 06 43.9	+1.5
SVE				pmax	pmax		
	comp=Z,31nm,1.6s						
ARU	Arti	85.02	328	P	P	00 06 48.3	+1.3
	comp=Z,1.4nm,0.7s,baz=86,slow=4.0,SNR=9.0						
ARU	Arti	85.02	328	P	P	00 06 46.3	-0.8
ARU	Arti	85.02	328d	iP	P	00 06 48.2	+1.1
ARU						00 10 02.7	
ARU				S	S	00 17 13.0	-0.7
ARU				SS	SS	00 22 55.5	+8.0
ARU				pmax	pmax		
	comp=Z,16nm,1.2s						
RAYN	Ar Rayn	86.29	294	P	P	00 06 52.0	-2.2
RAYN				IAmb	IAmb	00 06 55.6	
	comp=Z,13nm,1.1s						
RAYN	Ar Rayn	86.29	294	P	P	00 06 52.0	-2.2
RAYN				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV	Kislovodsk	91.81	314	eP	P	00 07 20.4	+0.5
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
MLY	Manley	92.72	25	IAmb	IAmb	00 07 28.7	
	comp=Z,3.6nm,0.5s						
MCK	McKinley	93.26	26	IAmb	IAmb	00 07 33.2	
	comp=Z,6.1nm,1.0s						
DHY	Denali Highway	93.85	27	IAmb	IAmb	00 07 30.4	
	comp=Z,11nm,1.0s						
PAX	Paxson	94.69	27	IAmb	IAmb	00 07 51.7	
	comp=Z,5.6nm,1.1s						
SNAA	Sanae	95.02	194⇑	iP	P	00 07 34.9	+0.7
FYU	Fort Yukon	95.20	24	IAmb	IAmb	00 07 42.0	
	comp=Z,7.3nm,0.9s						
BMAR	Burnt Mountain	95.54	23	P	P	00 07 35.5	-1.0
BRTR	Keskin Array B	98.15	309	LR	LR	00 59 37.9	
	comp=Z,137nm,22.0s,baz=232,slow=40						
YKA	Yellowknife Ar	108.72	26	Pdiff	Pdif	00 08 36.4	+1.0
	comp=Z,0.5nm,1.0s,baz=277,slow=5.6,SNR=5.2						
YKA				PKiKP	PKiKP	00 12 41.7	+1.3
	comp=Z,0.2nm,0.7s,baz=294,slow=1.2,SNR=3.9						
NVAR	Mina Array Bea	112.78	51	PKiKP	PKiKP	00 12 51.3	+2.2
	comp=Z,0.2nm,0.3s,baz=261,slow=3.6,SNR=3.7						
PDAR	Pinedale Array	118.28	45	PKP	PKiKP	00 13 01.2	+1.6
	comp=Z,0.7nm,0.8s,baz=232,slow=1.7,SNR=5.7						
PDAR	Pinedale Array	118.28	45		PKiKP	00 12 59.8	+0.2
RWWY	Rawlins	120.27	46		PKPdf	00 13 02.9	-0.5
SDCO	Great Sand Dun	122.76	50		PKPdf	00 13 10.3	+1.7
ANMO	Albuquerque	122.82	53		PKPdf	00 13 08.1	-0.4
ANMO	Albuquerque	122.82	53	PKIKP	PKPdf	00 13 08.1	-0.4
TXAR	Lajitas Array	126.52	59	PKP	PKiKP	00 13 17.1	+1.1
	comp=Z,1.6nm,1.0s,baz=298,slow=1.2,SNR=9.3						
TXAR	Lajitas Array	126.52	59		PKPdf	00 13 15.4	-0.2
TXAR	Lajitas Array	126.52	59	PKIKP	PKPdf	00 13 15.4	-0.2
TOA0	Torodi Ar. Sit	127.18	281		PKPdf	00 13 15.2	-1.9
TORD	Torodi Ar. Bea	127.18	281	PKP	PKPdf	00 13 17.8	+0.2
	comp=Z,2.4nm,0.9s,baz=74,slow=2.0,SNR=10						
TORD	Torodi Ar. Bea	127.18	281		PKPdf	00 13 15.2	-1.9
JCT	Junction City	129.45	56		PKPdf	00 13 20.3	-0.8
JCT	Junction City	129.45	56	PKIKP	PKPdf	00 13 20.3	-0.8
CPUP	Villa Florida	146.18	171	PKPbc	PKPab	00 13 53.8	+0.5
	comp=Z,9.0nm,1.0s,baz=193,slow=3.0,SNR=12						
CPUP	Villa Florida	146.18	171		PKPab	00 13 53.0	-0.3
CPUP	Villa Florida	146.18	171	PKP2	PKPab	00 13 53.0	-0.3
PB11	IPOC Station P	147.87	147		PKPdf	00 13 53.7	-1.2
PB11				PKPbc	PKiKP	00 13 59.5	-0.3
GO01	Chusmiza	148.19	148		PKPbc	00 13 59.1	0.0
BANI	BANI	158.74	57		PKPdf	00 14 07.9	-2.6

*IDC **03** 23:57:57.4±1.1, 38.19N×20.40E, h0km, mb3.9/9, mb1 3.8/17, mb1mx3.7/49, mbtmp3.8/17, ML3.0/7, Error ellipse: s-maj=19.6km s-min=15.9km az=33.0*

*ATH **03** 23:57:59.0, 38.14N×20.31E, h15km, ML3.8/17, Error ellipse: s-maj=1.4km s-min=0.8km az=59.0*

*PDG **03** 23:57:59.7±0.5, 38.16N×20.33E, h12km, ML3.9/14, Error ellipse: s-maj=0.8km s-min=1.2km az=0.0*

*THE **03** 23:58:00.6, 38.18N×20.40E, h10km±1km, ML3.8/21, Error ellipse: s-maj=1.4km s-min=0.7km az=257.0*

*NEIC **03** 23:58:03.6±2.5, 38.11N±0.04×20.37E±0.06, h52km±11km, Error ellipse: s-maj=7.1km s-min=5.6km az=110.0*

ISC 03 23:57:59.7±0.6, **38.18N**±0.02×**20.37E**±0.02, **h13**km±3km, **n219, σ1.51**/284, **mb4.0**/11, **1C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.01	34	P	Pg	23 58 02.4	+0.4
CHV1				S	Sg	23 58 03.9	+0.3
	457μm,0.2s						
KEF3	Kipouria, Keph	0.04	324	P	Pg	23 58 02.6	+0.5
KEF3				S	Sg	23 58 04.8	+1.0
LXR1	Lixouri, Cepha	0.06	63	P	Pg	23 58 02.7	+0.4
ARG2	Argostoli	0.09	88	P	Pg	23 58 02.8	+0.2
ARG2				S	Sg	23 58 04.5	-0.1
	400μm,0.1s						
KEF2	Argostoli. Kep	0.09	96	P	Pg	23 58 02.8	+0.2
KEF2				S	Sg	23 58 04.4	-0.2
KEF4	Livadi, Kephal	0.09	25	P	Pg	23 58 03.3	+0.6
KEF4				S	Sg	23 58 05.7	+1.0
KEF1	Kardakata, Kep	0.13	36	P	Pg	23 58 03.5	+0.4
KEF1				S	Sg	23 58 06.2	+0.7
VLS	Valsamata	0.17	89	P	Pg	23 58 03.7	0.0
VLS				S	Sg	23 58 06.2	-0.3
	74μm,0.1s						
VLS	Valsamata	0.17	89	P	Pg	23 58 03.7	0.0
VLS				S	Sg	23 58 06.6	+0.1
VLS				AML	AML	23 58 06.8	
VLS				AML	AML	23 58 07.3	
VSK1	VASILIKIADES	0.28	32	P	Pg	23 58 06.0	+0.5
VSK1				S	Sb	23 58 10.8	-0.4
	115μm,0.4s						
FSK	Fiskardo	0.32	27	P	Pg	23 58 06.8	+0.5
FSK				S	Sb	23 58 12.2	-0.2
	39μm,0.3s						
FSK	Fiskardo	0.32	27	P	Pg	23 58 06.8	+0.5
FSK				S	Sb	23 58 12.1	-0.3
FSK				AML	AML	23 58 12.7	
	comp=N,36528μm,0.2s						
FSK				AML	AML	23 58 13.1	
VLMS	Volimes, Zakyn	0.38	142	P	Pg	23 58 07.3	0.0
VLMS				S	Sg	23 58 13.0	+0.7
VLMS				AML	AML	23 58 13.4	
VLMS				AML	AML	23 58 14.4	
	comp=N,87176μm,0.2s						
EVGI	Lefkada island	0.50	26	P	Pg	23 58 09.9	+0.4
EVGI				S	Sg	23 58 15.8	-0.4
	comp=N,5μm,0.2s						
EVGI	Lefkada island	0.50	26	P	Pg	23 58 09.7	+0.2
EVGI				S	Sb	23 58 18.7	+1.2
ZAK2	Zakynthos	0.57	133	P	Pg	23 58 11.0	+0.2
ZAK2				S	Sb	23 58 20.6	+1.2
	comp=N,60μm,0.3s						
MGNA	Meganis	0.58	34	P	Pg	23 58 11.1	0.0
MGNA				S	Sb	23 58 20.4	+0.5
MGNA				AML	AML	23 58 23.7	
	comp=E,19026μm,0.4s						
MGNA				AML	AML	23 58 23.9	
	comp=N,16277μm,0.5s						
KRI1	kERI	0.62	145	P	Pg	23 58 11.2	-0.6
LKD2	Lefkada island	0.65	20	P	Pg	23 58 12.4	0.0
LKD2	Lefkada island	0.65	20	P	Pg	23 58 12.5	0.0
LKD2				S	Sb	23 58 22.3	+0.3
LKD2				AML	AML	23 58 28.4	
	comp=E,7558μm,0.6s						
LKD2				AML	AML	23 58 30.3	
	comp=N,7699μm,0.5s						
AST1	Astakos	0.67	57	P	Pg	23 58 12.6	-0.2
AST1				S	Sg	23 58 21.8	+0.2
	comp=N,13μm,0.4s						
TSLK	Tsoukalades, L	0.69	19	P	Pg	23 58 13.1	+0.1
TSLK				S	Sb	23 58 22.8	-0.1
	comp=N,6μm,0.6s						
TSLK	Tsoukalades, L	0.69	19	P	Pg	23 58 13.2	+0.1
PDO	Prodromos	0.76	56	P	Pg	23 58 14.4	-0.1
PDO	Prodromos	0.76	56	P	Pg	23 58 14.2	-0.3
RLS	Riolos of Patr	0.87	97	P	Pb	23 58 15.9	-0.8
RLS				S	Sg	23 58 27.4	-0.5
	comp=N,5μm,0.5s						
RLS	Riolos of Patr	0.87	97	P	Pb	23 58 15.9	-0.8
RLS				S	Sn	23 58 30.1	0.0
RLS				AML	AML	23 58 31.7	
	comp=N,9128μm,0.4s						
RLS				AML	AML	23 58 32.4	
	comp=E,9396μm,0.6s						
PVO	Paravola	1.01	64	P	Pb	23 58 18.9	-0.1
PVO				S	Sn	23 58 34.8	+1.2
	comp=E,10μm,0.3s						
PVO	Paravola	1.01	64	P	Pb	23 58 19.1	+0.1
PVO				S	Sn	23 58 34.6	+1.1
PVO				AML	AML	23 58 36.0	
	comp=E,21791μm,0.3s						
PVO				AML	AML	23 58 36.0	
	comp=N,19118μm,0.3s						
DRO	Drossia	1.08	101	P	Pg	23 58 22.5	+2.0
DRO				S	Sn	23 58 38.1	+2.8
	comp=N,9μm,0.4s						
DRO	Drossia	1.08	101	P	Pb	23 58 20.2	0.0
DRO				S	Sn	23 58 36.2	+0.8
DRO				AML	AML	23 58 40.7	
	comp=N,15063μm,0.4s						
DRO				AML	AML	23 58 43.8	
	comp=E,21048μm,0.5s						
UPR	University Cam	1.12	84	P	Pg	23 58 21.4	+0.2
EFP	Efpalio	1.23	78	P	Pn	23 58 22.2	-0.4
EFP				S	Sg	23 58 41.8	+2.4
	comp=E,4μm,0.5s						
EFP	Efpalio	1.23	78	P	Pb	23 58 23.0	+0.2
EFP				S	Sg	23 58 40.7	+1.3
EFP				AML	AML	23 58 46.0	
	comp=E,6409μm,0.5s						
EFP				AML	AML	23 58 46.6	
	comp=N,7245μm,0.4s						
AMT	Artemida-Makis	1.24	121	P	Pb	23 58 23.1	+0.2
AMT	Artemida-Makis	1.24	121	P	Pb	23 58 23.0	+0.1
LAKA	Lakka	1.27	87	P	Pn	23 58 22.7	-0.4
LAKA				S	Sg	23 58 42.4	+1.8
	comp=N,2μm,0.7s						
LAKA	Lakka	1.27	87	P	Pn	23 58 23.0	-0.1
LAKA				S	Sg	23 58 42.4	+1.8
LAKA				AML	AML	23 58 47.8	
	comp=E,5339μm,0.6s						
LAKA				AML	AML	23 58 50.7	
	comp=N,3514μm,0.5s						
ANX	Ano Chora	1.28	71	P	Pn	23 58 23.6	+0.1
ANX	Ano Chora	1.28	71	P	Pn	23 58 23.6	+0.1
ANX				S	Sg	23 58 43.3	+2.1
SERG	Sergoula	1.34	79	P	Pn	23 58 23.8	-0.4
EVR	Evrytania	1.35	56	P	Pn	23 58 24.4	+0.1
EVR				S	Sg	23 58 45.2	+2.0
	comp=N,2μm,0.6s						
EVR	Evrytania	1.35	56	P	Pg	23 58 25.8	+0.1
EVR				S	Sg	23 58 45.4	+2.2
EVR				AML	AML	23 58 50.0	
	comp=E,3560μm,0.7s						
EVR				AML	AML	23 58 50.4	
	comp=N,3069μm,0.6s						
TRIZ	Trizonia	1.35	81	P	Pn	23 58 24.0	-0.2
TRIZ				S	Sg	23 58 44.8	+1.6
	comp=N,4μm,0.5s						
TRIZ	Trizonia	1.35	81	P	Pn	23 58 24.0	-0.2
TRIZ				S	Sg	23 58 45.4	+2.2
IGT	Igoumenitsa	1.36	359	P	Pg	23 58 26.0	+0.2
IGT				S	Sg	23 58 45.3	+1.9
	comp=N,1μm,0.6s						
ALIK	Aliki, Aigiali	1.37	86	P	Pn	23 58 24.7	+0.2
KALE	Kalithea	1.41	81	P	Pn	23 58 24.8	-0.3
KALE	Kalithea	1.41	81	P	Pb	23 58 26.4	+0.5
KALE				S	Sg	23 58 46.3	+1.3
KALE				AML	AML	23 58 51.0	
	comp=N,5465μm,0.4s						
KALE				AML	AML	23 58 54.3	
	comp=E,3960μm,0.6s						
KLV	Kalavryta, Ach	1.41	95	P	Pg	23 58 27.9	+1.1
KLV				S	Sg	23 58 45.9	+0.8
	comp=E,1μm,0.9s						
KLV	Kalavryta, Ach	1.41	95	P	Pn	23 58 25.2	+0.1
KLV				S	Sg	23 58 47.2	+2.2
KLV				AML	AML	23 58 57.8	
	comp=E,2249μm,0.9s						
KLV				AML	AML	23 59 04.6	
	comp=N,2923μm,1.0s						
JAN	Janina	1.53	14	P	Pg	23 58 29.1	0.0
JAN	Janina	1.53	14	P	Pg	23 58 29.1	0.0
JAN				S	Sg	23 58 49.1	+0.2
JAN				AML	AML	23 58 58.6	
	comp=E,2499μm,0.6s						
JAN				AML	AML	23 59 00.5	
	comp=N,2432μm,0.8s						
ITM	Ithomi	1.58	128	P	Pb	23 58 28.5	-0.3
ITM				S	Sg	23 58 50.7	+0.1
	comp=N,902nm,0.6s						
ITM	Ithomi	1.58	128	P	Pb	23 58 28.8	-0.1
ITM				S	Sg	23 58 51.0	+0.3
ITM	Ithomi	1.58	128		Pb	23 58 29.4	+0.6
KASA	Kassiopi	1.61	348	P	Pb	23 58 29.5	+0.3
KASA				S	Sg	23 58 51.1	-0.3
KASA				AML	AML	23 58 59.7	
	comp=E,2720μm,0.4s						
KASA				AML	AML	23 59 02.4	
	comp=N,1496μm,0.7s						
MAKR	Makrakomi, Fth	1.61	58	P	Pb	23 58 29.7	+0.4
MAKR	Makrakomi, Fth	1.61	58	P	Pb	23 58 29.8	+0.4
MAKR				S	Sg	23 58 53.1	+1.5
MAKR				AML	AML	23 59 01.8	
	comp=E,4873μm,1.1s						
MAKR				AML	AML	23 59 04.1	
	comp=N,4965μm,0.7s						
PYL	PYLOS	1.68	139	P	Pb	23 58 29.6	-0.8
DLFA	Delphi	1.70	79	P	Pg	23 58 32.1	-0.1
SRN	Sarande	1.73	350	P	Pb	23 58 31.4	+0.1
AGG	Agios Georgios	1.75	60	P	Pb	23 58 32.2	+0.5
AGG	Agios Georgios	1.75	60		Pg	23 58 33.2	-0.1
VLX	Vlachokerasia	1.78	116	P	Pb	23 58 33.0	+0.8
AXAR	Agios Charalam	1.89	71	P	Pb	23 58 34.6	+0.6
THL	Klokotos Trika	1.89	42	P	Pb	23 58 34.4	+0.4
THL				S	Sb	23 58 58.9	+1.4
	comp=N,875nm,0.7s						
THL	Klokotos Trika	1.89	42	P	Pb	23 58 34.3	+0.3
KPRO	Kipourio	1.94	23	P	Pb	23 58 35.5	+0.6
PROD	Prodromos	1.99	87	P	Pb	23 58 35.2	-0.6
PROD	Prodromos	1.99	87	P	Pb	23 58 35.3	-0.6
LTK	Loutraki	2.05	93	P	Pb	23 58 35.6	-1.2
LTK	Loutraki	2.05	93	P	Pb	23 58 35.7	-1.2
LOUT	Loutraki	2.06	94	P	Pb	23 58 35.8	-1.1
LOUT	Loutraki	2.06	94	P	Pb	23 58 35.8	-1.1
PENT	Pentalofos	2.10	16	P	Pb	23 58 38.2	+0.4
LKR	Lokris	2.12	76	P	Pb	23 58 36.9	-1.0
LKR	Lokris	2.12	76	P	Pb	23 58 36.7	-1.2
LKR				S	Sb	23 59 05.1	+1.0
LKR				AML	AML	23 59 06.0	
	comp=E,1252μm,0.3s						
LKR				AML	AML	23 59 06.1	
	comp=N,1452μm,0.5s						
LRSO	Larissa Observ	2.17	46	P	Pb	23 58 38.5	-0.3
LRSO	Larissa Observ	2.17	46	P	Pb	23 58 38.2	-0.6
VIL2	Platees	2.28	88	P	Pb	23 58 39.2	-1.5
NEST	Nestorio	2.30	13	P	Pb	23 58 41.2	+0.1
NEST	Nestorio	2.30	13	P	Pb	23 58 40.2	-0.9
VILL	Villia	2.31	89	P	Pn	23 58 39.1	+1.5
KRND	KRANIDI	2.34	109	P	Pb	23 58 40.0	-1.7
DID	Didima	2.36	106	P	Pb	23 58 40.2	-2.0
DID	Didima	2.36	106	P	Pb	23 58 40.1	-2.0
KZN	Kozani	2.39	27	P	Pb	23 58 42.0	-0.6
KZN	Kozani	2.39	27	P	Pb	23 58 41.8	-0.8
NEO	Neokhori	2.50	62	P	Pb	23 58 42.5	-1.9
NEO	Neokhori	2.50	62	P	Pn	23 58 42.1	+2.0
VLI	Veliai	2.50	125	P	Pb	23 58 43.7	-0.8
VLI	Veliai	2.50	125	P	Pb	23 58 43.1	-1.4
LIT	Litokhoron	2.53	40	P	Pb	23 58 43.5	-1.5
LIT	Litokhoron	2.53	40		Pn	23 58 45.2	+0.2
MRKA	Markates	2.58	77	P	Pn	23 58 43.3	+2.1
MRKA	Markates	2.58	77	P	Pn	23 58 43.3	+2.1
SKIA	Skiathos	2.62	67	P	Pn	23 58 44.0	+2.3
ATH	Athens Observa	2.65	93	P	Pn	23 58 43.7	+1.7
ATH	Athens Observa	2.65	93	P	Pn	23 58 43.8	+1.8
ATH				S	Sb	23 59 17.4	-1.9
ATHU	Athens Univers	2.70	93	P	Pn	23 58 44.2	+1.4
ATHU	Athens Univers	2.70	93	P	Pn	23 58 43.8	+1.0
FNA	Florina	2.72	16	P	Pb	23 58 45.6	-2.6
FNA	Florina	2.72	16		Pb	23 58 45.7	-2.5
VLY	Voula,Athens	2.72	96	P	Pn	23 58 44.2	+1.2
VLY	Voula,Athens	2.72	96	P	Pn	23 58 44.3	+1.3
PTL	Penteli	2.76	92	P	Pn	23 58 45.0	+1.4
EREA	Eretria	2.81	84	P	Pn	23 58 46.2	+1.8
KTHR	Kythira	2.84	132	P	Pb	23 58 47.6	-2.6
KTHA	Kythira Island	2.88	131	P	Pb	23 58 48.1	-2.8
AOS	Alonnisos	2.92	69	P	Pn	23 58 47.4	+1.6
TIP	Timpagrande	3.00	291	P	Pn	23 58 48.3	+1.3
TIP				S	Sn	23 59 23.2	+0.3
TIP	Timpagrande	3.00	291		Pn	23 58 48.2	+1.1
PAIG	Paliouri	3.11	55	P	Pn	23 58 50.2	+1.8
THE	Thessaloniki	3.17	38	P	Pn	23 58 51.4	+2.1
GRG	Griva	3.19	29	P	Pn	23 58 51.8	+2.2
TIR	Tirane	3.19	353	P	Pn	23 58 51.9	+2.3
TIR	Tirane	3.19	353		Pn	23 58 51.6	+2.0
KARY	Karystos	3.21	91	P	Pn	23 58 51.0	+1.2
KARY	Karystos	3.21	91	P	Pn	23 58 51.0	+1.2
HORT	Hortiatis	3.21	40	P	Pn	23 58 51.7	+1.8
PLG	Polygyros	3.24	46	P	Pn	23 58 52.2	+1.9
MASS	Massafra	3.50	315	ePn	Pn	23 58 55.0	+1.1
SOH	Sokhos	3.51	40	P	Pn	23 58 56.0	+2.0
SOH				S	Sn	23 59 36.3	+1.0
	comp=N,200nm,0.7s						
SOH	Sokhos	3.51	40	P	Pn	23 58 56.7	+2.8
CEL	Celeste	3.53	273		Pn	23 58 54.3	+0.1
OUR	Ouranopolis	3.53	51	P	Pn	23 58 56.5	+2.2
OUR	Ouranopolis	3.53	51	P	Pn	23 58 56.3	+2.0
KNT	Kendrikon	3.56	32	P	Pn	23 58 56.7	+2.0

VAY Valandovo 3.57 28 ePn Pb 23 58 59.0 -3.7
STIP Stip 3.78 21 ePn Pb 23 59 02.2 -4.1
SRS Serrai 3.85 39 P Pn 23 59 00.4 +1.8
SRS Serrai 3.85 39 P Pn 23 59 00.1 +1.5
SKO Skopje 3.88 12 ePn Pg 23 59 12.3 -1.7
ULC Ulcinj 3.88 347 ePn Pn 23 58 59.7 +0.6
ULC eSn Sn 23 59 46.6 +2.1
SG1 Sgolgore (BA) 3.91 314 ePn Pn 23 59 01.1 +1.7
BAI Bari 3.98 318 ePn Pn 23 59 01.9 +1.5
DRME Dracevica, Mon 4.11 348 ePn Pn 23 59 02.9 +0.7
DRME Dracevica, Mon 4.11 348 ePn Pn 23 59 03.2 +1.0
DRME eSn Sn 23 59 52.3 +2.2
NVR Nevrokopi 4.16 39 P Pn 23 59 05.6 +2.7
KAVA Kavala 4.26 47 P Pn 23 59 06.1 +1.8
BUM Brajici-Budva 4.27 345 ePn Pn 23 59 05.6 +1.1
BUM eSn Sn 23 59 56.2 +1.9
ACER Acerenza 4.31 309 Pn 23 59 07.1 +2.1
PDG Podgorica 4.34 349 ePn Pn 23 59 05.7 +0.4
PDG Podgorica 4.34 349 Pn 23 59 06.6 +1.4
TTG Podgorica 4.34 349 ePn Pn 23 59 06.4 +1.1
TTG eSn Sn 23 59 58.1 +2.4
PVY Plav 4.43 356 ePn Pn 23 59 08.1 +1.4
PVY eSn Sn 00 00 00.0 +1.9
HCY Herceg Novi 4.50 342 ePn Pn 23 59 06.2 -1.4
HCY Herceg Novi 4.50 342 ePn Pn 23 59 07.6 0.0
HCY eSn Sn 00 00 01.3 +1.5
CEME Cevo 4.51 346 ePn Pn 23 59 08.1 +0.4
CEME eSn Sn 00 00 01.8 +1.8
IDI Anoyia 4.63 127 Pn Pn 23 59 09.4 -0.1
comp=N,0.3nm,0.3s,baz=300,slow=17,SNR=3.8
IDI Sn Sn 00 00 02.5 -0.6
comp=N,2.4nm,0.3s,baz=242,slow=23,SNR=2.1
IVA Berane 4.71 356 ePn Pn 23 59 11.9 +1.4
IVA eSn Sn 00 00 07.2 +2.3
NKME Niksic 4.71 347 ePn Pn 23 59 11.2 +0.7
NKME eSn Sn 00 00 06.6 +1.5
KOME Kolasin 4.72 352 ePn Pn 23 59 11.9 +1.3
KOME eSn Sn 00 00 07.4 +2.2
NKY Niksic 4.75 348 ePn Pn 23 59 12.3 +1.2
NKY eSn Sn 00 00 08.1 +2.0
VAE Valguarnera 4.77 263 Pn Pn 23 59 11.8 +0.5
comp=N,0.6nm,0.3s,baz=117,slow=4.5,SNR=2.9
VAE Sn Sn 00 00 10.3 +3.8
comp=N,1.3nm,0.3s,baz=4.0,slow=12,SNR=3.2
TREB Trebinje 4.79 342 ePn Pn 23 59 10.2 -1.4
BRY Bratogost 4.92 344 ePn Pn 23 59 13.4 -0.1
BRY Bratogost 4.92 344 ePn Pn 23 59 13.8 +0.3
BRY eSn Sn 00 00 12.0 +1.6
VTS Vitosha 4.95 25 Pn 23 59 17.1 +3.3
RDO Rodhopi 4.97 52 P Pn 23 59 15.9 +1.9
SGRT San Giovanni R 5.04 317 Pn Pn 23 59 16.1 +1.0
STON Ston 5.12 337 ePn Pn 23 59 15.7 -0.3
UPM Unac-Piva 5.15 348 ePn Pn 23 59 17.5 +1.0
UPM Unac-Piva 5.15 348 ⇑iPn Pn 23 59 17.6 +1.0
UPM eSn Sn 00 00 17.2 +1.3
ALN Alexandroupoli 5.16 56 Pn Pn 23 59 18.6 +2.0
PLE Pljevlja 5.20 352 ePn Pn 23 59 19.8 +2.5
PLE eSn Sn 00 00 19.4 +2.1
PAOL Paolisi 5.32 304 Pn 23 59 22.1 +3.3
RUDO Rudo 5.49 352 ePn Pn 23 59 22.1 +0.9
CORL Corleone 5.59 269 Pn Pn 23 59 25.8 +3.2
BBLS Lazići 5.73 353 ePn Pn 23 59 29.4 +4.8
DIVS Divibare 5.92 357 ePn Pn 23 59 26.5 -0.7
HAPS Han Pijesak,BI 6.00 350 ePn Pn 23 59 27.7 -0.6
INTR Introdacqua 6.27 310 Pn 23 59 34.5 +2.6
MGRS Mrkonjic Grad 6.71 339 ePn Pn 23 59 37.5 -0.4
FRGS Fruska Gora 6.99 357 ePn Pn 23 59 40.0 -1.1
BLY Banja Luka 6.99 341 ePn Pn 23 59 44.0 +2.3
BLY Banja Luka 6.99 341 Pn Pn 23 59 44.5 +2.8
NRCA Norcia 7.23 312 Pn 23 59 47.8 +2.7
MURB Monte Urbino 7.83 313 Pn Pn 23 59 57.3 +4.0
MORH Mrgy, Hungar 8.14 351 ePn Pn 23 59 57.4 0.0
MLR Muntele Rosu 8.41 28 Pn Pn 00 00 06.5 +5.2
comp=N,0.2nm,0.3s,baz=220,slow=19,SNR=7.9
MLR Sn Sn 00 01 38.1 +2.0
baz=178,slow=15,SNR=1.7
CRES Cresnjev 8.47 336 ePn Pn 00 00 02.0 -0.1
LJU Ljubljana 8.98 333 ePn Pn 00 00 08.9 -0.2
SOKA Soboth 9.37 337 ePn Pn 00 00 14.3 -0.1
comp=N,8.5nm,0.6s
SOKA eSn Sn 00 01 54.4 -5.2
comp=N,3.9nm,0.5s
OBKA Obir 9.38 335 ePn Pn 00 00 16.3 +1.8
comp=N,2.6nm,0.4s
TEOL Teolo 9.68 321 Pn Pn 00 00 22.8 +4.1
BRTR Keskin Array B 10.45 77 Pn Pn 00 00 31.7 +2.4
comp=N,0.1nm,0.3s,baz=263,slow=11,SNR=3.5
MOA Molln 10.65 337 ePn Pn 00 00 33.4 +1.4
comp=N,1.4nm,0.3s
GERES GERESS Array B 11.71 338 Pn Pn 00 00 46.6 +0.2
comp=N,0.2nm,0.3s,baz=154,slow=14,SNR=5.9
GERES Sn Sn 00 02 50.7 -6.3
comp=N,0.2nm,0.3s,baz=162,slow=24,SNR=3.7
SENIN Lac Senin/Sane 12.66 314 Pn Pn 00 01 04.0 +4.3
MMAI Mount Meron Ar 13.27 108 Pn Pn 00 01 06.0 -1.8
comp=N,0.4nm,0.3s,baz=305,slow=18,SNR=3.0
AKASG Malin Array Be 14.01 24 Pn Pn 00 01 17.4 -0.4
baz=204,slow=9.3,SNR=2.6
KBZ Khabaz 17.87 65 P P 00 02 08.3 -0.2
comp=N,0.1nm,0.3s,baz=235,slow=18,SNR=3.9
GNI Garni 18.99 76 P P 00 02 19.9 -1.2
comp=N,0.3nm,0.3s,baz=247,slow=10,SNR=3.8
GNI Garni 18.99 76 P Pn 00 02 22.8 +1.0
GNI IAmb IAmb 00 02 23.3
comp=Z,13nm,1.1s
HFS Hagfors 22.39 351 P P 00 02 56.4 -1.0
comp=Z,2.2nm,0.6s,baz=158,slow=9.6,SNR=7.9
EKA Eskdalemuir Ar 23.36 325 P P 00 03 07.6 -0.1
comp=Z,5.8nm,0.9s,baz=123,slow=10,SNR=5.0
FINES FINESS Array B 23.56 7 P P 00 03 08.7 -0.9
comp=Z,1.0nm,0.5s,baz=180,slow=9.5,SNR=12
FINES FINESS Array B 23.56 7 P P 00 03 10.2 +0.6
FIA1 FINESS Array S 23.57 7 P P 00 03 10.1 +0.5
FIA1 IAmb IAmb 00 03 17.3
comp=Z,4.3nm,0.8s
NB201 NORSAR Array S 23.60 349 P P 00 03 09.3 -0.7
NB2 NORSAR Subarra 23.60 349 P P 00 03 11.4 +1.4
comp=Z,1.6nm,0.9s,baz=162,slow=9.3
NOA NORSAR Array B 23.60 349 P P 00 03 09.4 -0.7
comp=Z,2.4nm,1.0s,baz=163,slow=11,SNR=2.7
NC303 NORSAR Array S 23.75 349 P P 00 03 14.6 +3.1
TORD Torodi Ar. Bea 29.95 219 P P 00 04 07.8 +0.1
comp=Z,0.7nm,0.9s,baz=34,slow=10,SNR=4.1
TORD Torodi Ar. Bea 29.95 219 IAmb IAmb 00 04 15.4
comp=Z,1.4nm,1.1s
ABKAR Akbulak array 30.34 56 P P 00 04 10.8 -0.1
ARU Arti 31.14 42 P P 00 04 16.9 -0.9
comp=Z,0.5nm,0.4s,baz=264,slow=10,SNR=3.7
ARU Arti 31.14 42 P P 00 04 17.1 -0.7
ARU IAmb IAmb 00 04 21.7
comp=Z,4.4nm,1.4s
ARCES ARCESS Array B 31.54 3 P P 00 04 20.9 -0.4
comp=Z,1.4nm,0.8s,baz=190,slow=12,SNR=5.4
BRVK Borovoye 37.15 50 P P 00 05 10.8 +0.9
KKAR Karatay Array 37.90 66 P P 00 05 17.1 +0.6
MK31 Makanchi Array 45.40 58 P P 00 06 17.2 -0.7
MK31 IAmb IAmb 00 06 17.5
comp=Z,5.8nm,1.4s
MKAR Makanchi Array 45.40 58 P P 00 06 17.2 -0.7
comp=Z,1.0nm,0.4s,baz=272,slow=7.4,SNR=23
MKAR Makanchi Array 45.40 58 P P 00 06 17.0 -0.9
ZAA0 Zalesovo Array 45.78 48 P P 00 06 19.7 -1.0
ZALV Zalesovo Beam 45.78 48 P P 00 06 20.2 -0.5
comp=Z,2.0nm,0.4s,baz=279,slow=8.0,SNR=9.7
ZALV PP PP 00 08 05.7 -2.1
comp=Z,0.5nm,0.6s,baz=290,slow=9.1,SNR=2.0
ZALV Zalesovo Beam 45.78 48 P P 00 06 19.8 -0.9

*IDC **04** 00:10:02.5±0.5, 4°.90S×153°.77E, h105km±3km, mb4.2/20, mb1 4.3/20, mb1mx4.2/35, mbtmp4.5/20, MS4.2/11, Ms1 4.2/11, ms1mx3.7/44, Error ellipse: s-maj=10.3km s-min=7.9km az=19.0*

*NEIC **04** 00:10:02.3±2.0, 4°.85S±0°.07×153°.82E±0°.07, h110km±5km, mb4.8/58, Error ellipse: s-maj=11.4km s-min=8.7km az=216.0*

*BJI **04** 00:10:03.8±0.0, 4°.59S×153°.82E, h119km, mB5.1/33, mb4.8/49*

*GCMT **04** 00:10:03.3±0.2, 5°.02S±0°.02×153°.75E±0°.01, h95km±1km, MW5.2/131, Moment Tensor Solution. s86,c108; s131,c183; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.68±.02; Mθθ-0.21±.03; Mφφ-0.47±.03; Mrθ-0.27±.02; Mrφ0.33±.03; Mθφ0.45±.01; Best double couple: M0 0.86100×10^17 NP1:φs144.00000°, δ26.00000°, λ87.00000°. NP2:φs328.00000°, δ64.00000°, λ92.00000°. Principal axes: T 0.8530, Plg71.0000°, Azm241.0000°; N 0.0150, Plg1.0000°, Azm147.0000°; P -0.8680, Plg19.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **04** 00:10:08.6±0.8, 5°S±5°×154°E±°, h151km±7km, M5.3/33, mb5.0/33, mB5.7/12, MLv5.6/2, Mw(mB)5.3/12, Mwp5.2/1*

ISC 04 00:10:02.2±0.3, 4°.82S±0°.04×153°.85E±0°.05, h105km, n182, σ1s49/184, mb4.8/67, 3C, New Ireland region

Code Station Name Δ° AZ° Phase Op ID ISC Time h m s Res ISC

RABL Rabaul 1.79 290 Pn Pn 00 10 32.1 -0.2
RABL Sn 00 10 51.8 -3.5
KRVT Keravat (AS076 1.89 286 P Pn 00 10 32.5 -1.0
288nm,0.3s,baz=190,slow=0.8,SNR=43
KRVT S Sn 00 10 56.6 -0.9
503nm,0.3s,baz=15,slow=20,SNR=18
KRVT LR LR 00 11 29.6
comp=Z,5µm,18.6s,baz=98,slow=47
HNR Honiara 7.59 127 S Sn 00 13 12.8 -1.9
30nm,0.3s,baz=329,slow=19,SNR=7.8
HNR Honiara 7.59 127 eP Pn 00 11 58.0 +7.8
HNR Honiara 7.59 127 Pn 00 11 50.2 +0.1
HNR Sn 00 13 09.0 -5.7
PMG Port Moresby 8.05 235 P Pn 00 11 57.2 +0.7
104nm,0.3s,baz=47,slow=6.4,SNR=79
PMG S Sn 00 13 28.1 +2.2
28nm,0.3s,baz=91,slow=18,SNR=5.7
PMG LR LR 00 15 15.2
comp=Z,945nm,18.3s,baz=88,slow=39
PMG Port Moresby 8.05 235 Pn 00 11 58.5 +2.1
PATS Pohnpei 12.40 21 Pn Pn 00 12 55.5 +0.3
PATS Sn 00 15 08.0 -3.8
COEN Coen 13.90 228 P Pn 00 13 16.3 +1.5
baz=14,SNR=10
COEN Coen 13.90 228 Pn 00 13 15.9 +1.2
SMPI Sarmi 15.37 280 P P 00 13 35.8 0.0
6µm71nm,1.5s
MTSU Mount Surprise 16.19 214 P P 00 13 47.3 +2.4
baz=16,SNR=32
CTA Charters Tower 16.88 205 P P 00 13 54.2 +1.7
0.5nm,0.3s,baz=29,slow=14,SNR=7.1
BAKI Biak 18.08 281 P Pn 00 14 07.9 +1.2
70nm,1.0s
RKPI Ransiki, Papua 19.91 279 P P 00 14 26.1 +0.3
29µm122nm,1.1s
EIDS Eidsvold 20.61 187 P P 00 14 33.7 +0.6
baz=21,SNR=7.2
EIDS Eidsvold 20.61 187 P P 00 14 33.9 +0.8
EIDS IAmb IAmb 00 14 35.5
comp=Z,78nm,1.1s
QIS Mount Isa 20.89 220 P P 00 14 37.1 +0.8
baz=21,SNR=13
NOUC Port Laguerre 20.99 146 P P 00 14 37.4 +0.2
DZM Mont Dzumac 21.05 146 eP P 00 14 47.4 +9.4
comp=Z,173nm,1.2s
DZM eLR LR 00 19 48.6
comp=Z,912nm,30.1s
DZM Mont Dzumac 21.05 146 pP pP 00 14 58.4 +0.6
comp=Z,26nm,0.7s,baz=24,slow=10.0,SNR=5.4
DZM LR LR 00 21 55.0
comp=Z,252nm,20.2s,baz=359,slow=34
DZM Mont Dzumac 21.05 146 P 00 14 38.5 +0.5
DZM IAmb IAmb 00 14 44.7
comp=Z,41nm,1.3s
FAKI Fak Fak 21.63 274 P P 00 14 43.2 -1.0
FAKI IAmb IAmb 00 14 46.0
comp=Z,52nm,1.1s
RMQ Roma 22.09 192 P P 00 14 49.7 +0.7
baz=22,SNR=66
KDU Kakadu 22.51 248 P P 00 14 52.0 -1.4
baz=22,SNR=11
SAUI Saumlaki 22.62 261 P P 00 14 53.4 -1.2
SIJI Sorong 22.89 279 P P 00 14 58.0 +0.8
comp=Z,19nm,0.6s,baz=76,slow=6.7,SNR=6.3
SIJI pP pP 00 15 18.1 +0.1
comp=Z,26nm,0.8s,baz=99,slow=7.1,SNR=2.9
SWI Sorong 22.90 279 P P 00 14 58.0 +0.7
comp=Z,1µmcomp=Z,78nm,1.1s
QLP Quilpie 23.51 202 P P 00 15 02.7 -0.2
baz=24,SNR=69
MTN Manton Dam 23.80 249 P P 00 15 05.4 -0.3
MTN IAmb IAmb 00 15 07.4
comp=Z,62nm,1.1s
WB0 Warramunga Arr 24.08 230 P P 00 15 06.2 -1.9
WR0 Warramunga Arr 24.08 230 P P 00 15 07.6 -0.5
WR0 IAmb IAmb 00 15 11.1
comp=Z,58nm,1.0s
WR9 Warramunga Arr 24.10 230 P P 00 15 08.6 +0.3
baz=24
WRAB Tennant Creek 24.21 230 P P 00 15 07.1 -2.2
WRAB IAmb IAmb 00 15 10.9
comp=Z,35nm,0.8s
WB2 Warramunga Arr 24.21 230 P P 00 15 08.1 -1.2
WB2 IAmb IAmb 00 15 25.3
comp=Z,40nm,0.6s
WRA Warramunga Arr 24.22 230 P P 00 15 09.2 -0.3
comp=Z,35nm,0.8s,baz=56,slow=10,SNR=43
WRA Warramunga Arr 24.22 230 P P 00 15 07.5 -1.9
ARMA Armidale 25.55 184 P P 00 15 22.1 +0.6
baz=26,SNR=14
ARMA Armidale 25.55 184 P P 00 15 21.0 -0.4
ARMA IAmb IAmb 00 15 24.0
comp=Z,35nm,0.9s
H11S3 WAKE ISLAND Hy 26.40 28 T T 00 44 11.6
baz=208,slow=73,SNR=6.0
H11S2 WAKE ISLAND Hy 26.40 28 T T 00 44 07.3
baz=208,slow=73,SNR=55
H11S1 WAKE ISLAND Hy 26.41 28 T T 00 44 07.4
baz=208,slow=73,SNR=14
LBMI Labuha 26.64 278 P P 00 15 32.8 +1.4
comp=Z,4µmcomp=Z,68nm,1.3s
AS31 Alice Springs 26.85 224 P P 00 15 32.4 -0.8
ASAR Alice Springs 26.85 224 P P 00 15 32.8 -0.4
comp=Z,16nm,0.8s,baz=54,slow=8.7,SNR=62
ASAR pP pP 00 15 54.4 -1.1
comp=Z,13nm,0.9s,baz=44,slow=8.9,SNR=7.1
ASAR LR LR 00 26 29.3
comp=Z,375nm,18.4s,baz=62,slow=37
ASAR Alice Springs 26.85 224 P P 00 15 30.8 -2.4
KNRA Kununurra 26.90 244 P P 00 15 33.0 -0.7
baz=27,SNR=5.9
CMSA Cobar Meteorol 27.66 195 P P 00 15 39.9 -0.4
baz=28,SNR=14
SANI Sanana 27.94 275 P P 00 15 42.7 -0.3
comp=Z,14nm,0.9s
STKA Stephens Creek 29.27 202 P P 00 15 54.0 -0.6
baz=29,SNR=9.1
STKA Stephens Creek 29.27 202 P P 00 15 54.0 -0.6
comp=Z,21nm,0.9s,baz=1.3,slow=8.2,SNR=19
STKA LR LR 00 27 18.0
comp=Z,235nm,20.4s,baz=27,slow=36
SOEI Soe 29.74 259 P P 00 16 00.1 +1.0
comp=Z,73nm,1.4s
FITZ Fitzroy Crossi 30.57 242 P P 00 16 05.5 -0.7
baz=30,SNR=14
FITZ Fitzroy Crossi 30.57 242 P P 00 16 05.6 -0.7
KDI Kendari 31.15 270 P P 00 16 04.7 -6.7
HTT Hallett 31.68 204 P P 00 16 16.0 +0.1
baz=32,SNR=7.2
WRKA Warakurna 31.72 228 P P 00 16 15.2 -1.1
baz=32,SNR=26
BBOO Buckleboo 32.43 209 P P 00 16 21.8 -0.6
baz=32,SNR=9.2
BBOO Buckleboo 32.43 209 P P 00 16 21.1 -1.3
FORT Forrest 35.44 220 P P 00 16 47.8 -0.7
baz=35,SNR=44
FORT Forrest 35.44 220 P P 00 16 48.0 -0.5
PLAI Plampang 36.02 262 P P 00 16 48.8 -4.9
PSA00 Pilbara Seismi 36.92 240 P P 00 17 00.5 -0.8
URZ Urewera 39.45 151 pP pP 00 17 44.9 -0.6
comp=Z,12nm,0.9s,baz=323,slow=6.6,SNR=5.0
KMBL Kambalda 39.97 225 P P 00 17 26.2 -0.5
baz=40,SNR=11
MEEK Meekatharra 40.03 233 P P 00 17 26.2 -1.0
baz=40,SNR=39
THZ Tophouse 40.53 158 P P 00 17 31.6 +0.4
THZ IAmb IAmb 00 17 41.1
comp=Z,12nm,1.1s
FOZ Fox Glacier 41.06 162 P P 00 17 33.3 -2.1
FOZ IAmb IAmb 00 17 44.1
comp=Z,26nm,1.3s
RPZ Rata Peaks 41.61 161 P P 00 17 40.4 +0.5
comp=Z,13nm,0.6s,baz=245,slow=3.0,SNR=7.9
RPZ pP pP 00 18 02.0 -1.9
comp=Z,21nm,0.8s,baz=110,slow=1.9,SNR=4.9
RPZ Rata Peaks 41.61 161 P P 00 17 40.1 +0.2
RPZ IAmb IAmb 00 17 41.8
comp=Z,22nm,0.8s
LBZ Lake Benmore 41.94 162 P P 00 17 41.8 -0.8
LBZ IAmb IAmb 00 17 56.4
comp=Z,20nm,1.3s
WKZ Wanaka 42.01 164 P P 00 17 42.7 -0.5
DCZ Deep Cove 42.12 166 P P 00 17 43.5 -0.4
DCZ IAmb IAmb 00 17 45.1
comp=Z,23nm,1.0s
MLZ Mavora Lakes 42.27 165 P P 00 17 45.0 -0.3
ODZ Otahua Downs 42.68 162 P P 00 17 47.1 -1.4
ODZ IAmb IAmb 00 17 50.1
comp=Z,20nm,1.1s
KLBR Kellerberrin 43.06 227 P P 00 17 50.4 -1.4
baz=43,SNR=24
MORW Morawa 43.15 232 P P 00 17 51.5 -1.2
baz=43,SNR=35
MORW Morawa 43.15 232 P P 00 17 52.1 -0.5
BLDU Ballidu 43.35 229 P P 00 17 53.2 -1.0
baz=43,SNR=17
KSM Kuching 43.95 277 P P 00 17 59.2 -0.1
KSM IAmb IAmb 00 18 01.6
comp=Z,21nm,0.8s
NWAO Narrogin (SRO) 44.12 226 LR LR 00 36 57.4
comp=Z,304nm,18.4s,baz=72,slow=37
NWAO Narrogin (SRO) 44.12 226 P P 00 18 00.6 +0.2
NWAO IAmb IAmb 00 18 04.0
comp=Z,28nm,1.1s
MUN Mundaring 44.39 228 P P 00 18 01.5 -1.0
baz=44,SNR=10
KPJI Karang Pucung 44.72 264 P P 00 18 04.9 -0.5
comp=Z,98nm,0.8s
CISI Cisompet, Garu 45.83 264 P P 00 18 12.7 -1.6
comp=Z,181nm,0.7s
CISI Cisompet, Garu 45.83 264 P P 00 18 13.2 -1.0
LEM Lembang 46.02 265 LR LR 00 42 07.8
comp=Z,305nm,18.1s,baz=76,slow=42
CNJI Cibinong 46.51 265 P P 00 18 17.9 -1.6
comp=Z,3µmcomp=Z,286nm,0.9s
DLV T Lat 48.08 291 P P 00 18 29.6 -2.3
DLV IAmb IAmb 00 18 35.0
comp=Z,19nm,0.9s
KSRS Korea Array 48.49 332 P P 00 18 36.7 +2.2
comp=Z,2.5nm,0.8s,baz=151,slow=7.3,SNR=4.2
MDSI Maura Dua 49.50 268 P P 00 18 40.9 -1.7
comp=Z,28nm,1.2s
NJ2 Nanjing 49.52 320 eP P 00 18 44.1 +1.7
NJ2 pmax pmax
comp=Z,18nm,0.9s
SDSI Sungai Dareh 52.48 273 P P 00 19 04.2 -0.7
comp=Z,3µmcomp=Z,60nm,0.7s
USRK Ussuriysk Ar. 52.61 340 P P 00 19 06.6 +1.3
comp=Z,1.6nm,0.6s,baz=140,slow=4.3,SNR=7.1
USRK pP pP 00 19 31.2 +1.9
comp=Z,5.7nm,0.9s,baz=149,slow=8.7,SNR=5.2
USRK Ussuriysk Ar. 52.61 340 P P 00 19 05.0 -0.2
PDSI Padang 53.45 272 P P 00 19 10.1 -2.0
comp=Z,6µmcomp=Z,38nm,0.7s
KULM Kulim 54.07 280 P P 00 19 14.8 -1.7
GYA Guiyang 55.24 307 ⇑iP P 00 19 26.2 +1.3
GYA pP pwP 00 19 55.2 +0.8
GYA PP PP 00 21 35.9 +6.3
GYA S S 00 27 01.1 +0.2
GYA SS SS 00 30 40.1 -6.7
GYA pmax pmax
comp=Z,10.0nm,0.9s
GYA pmax pmax
comp=Z,210nm,6.0s
RPSI Rantau Prapat 55.38 277 P P 00 19 23.3 -2.7
RPSI IAmb IAmb 00 19 28.0
comp=Z,19nm,1.1s
PSI Prapat 55.40 277 LR LR 00 45 33.9
comp=Z,242nm,18.9s,baz=92,slow=38
PPT2 Papeete2 56.73 108 eS S 00 27 24.3 +3.6
comp=Z,229nm,22.0s
PPT2 eLR LR 00 36 26.5
comp=Z,375nm,32.8s
KLR Kul'dur 57.16 343 P P 00 19 38.4 +0.4
comp=Z,1.6nm,0.6s,baz=139,slow=3.5,SNR=7.4
KLR pP pwP 00 20 05.5 -1.6
comp=Z,6.6nm,1.0s,baz=131,slow=4.3,SNR=7.7
XAN Xi'an 57.36 316 P P 00 19 40.2 +0.4
XAN pmax pmax
comp=Z,19nm,0.8s
XAN pmax pmax
comp=Z,240nm,6.5s
XAN Xi'an 57.36 316 P P 00 19 39.3 -0.5
TBI Tubuai 57.60 115 eS S 00 27 36.0 +4.1
comp=Z,356nm,39.5s
TBI eLR LR 00 36 51.8
comp=Z,354nm,36.0s
PETK Petropavlovsk- 57.80 3 P P 00 19 43.1 +0.7
comp=Z,8.4nm,0.9s,baz=210,slow=11,SNR=3.2
CMAR Chiang Mai Arr 58.83 295 P P 00 19 51.1 +0.8
comp=Z,3.0nm,0.8s,baz=116,slow=5.2,SNR=18
CD2 Chengdu 59.55 310 P P 00 19 55.4 +0.4
CD2 pmax pmax
comp=Z,20nm,0.5s
HHC Hu-ho-hao-te 59.68 324 eP P 00 19 58.7 +2.9
HHC pmax pmax
comp=Z,3.0nm,1.1s
HHC pmax pmax
comp=Z,69nm,5.7s
LZH Lanzhou 61.98 315 ⇑P P 00 20 13.2 +1.6
LZH pP pwP 00 20 42.2 +0.7
LZH sP PcP 00 20 56.1 +4.8
LZH PP PP 00 22 31.2 +1.9
LZH pmax pmax
comp=Z,28nm,1.4s
LZH pmax pmax
comp=Z,130nm,6.2s
MA2 Magadan 64.24 358 P P 00 20 26.3 +0.5
MA2 IAmb IAmb 00 20 30.2
comp=Z,16nm,0.8s
GTA Gaotai 66.38 317 ⇑P P 00 20 41.6 +1.3
GTA pP pwP 00 21 12.3 +1.8
GTA sP sP 00 21 24.0 +7.9
GTA pmax pmax
comp=Z,10.0nm,1.1s
GTA pmax pmax
comp=Z,140nm,4.8s
GTA LR LR
comp=Z,140nm,19.7s
GTA LR LR
comp=Z,100nm,18.7s
GTA LR LR
comp=Z,120nm,18.1s
ULN Ulaanbaatar 66.57 328 P P 00 20 42.5 +1.2
SONM Songino Array 66.90 327 P P 00 20 44.2 +0.8
comp=Z,3.5nm,0.8s,baz=149,slow=5.6,SNR=18
SONM pP PcP 00 21 10.5 -0.7
comp=Z,1.9nm,0.8s,baz=139,slow=3.8,SNR=3.5
SONM Songino Array 66.90 327 P P 00 20 43.9 +0.5
SEY Seymchan 67.57 359 P P 00 20 48.4 +1.3
comp=Z,1.1nm,0.3s,baz=138,slow=7.6,SNR=5.9
LSA Lhasa 69.11 304 IAmb IAmb 00 21 01.7
comp=Z,8.8nm,0.8s
YAK Yakutsk 69.20 348 P P 00 20 58.2 +0.9
TAPN Taplejung 71.31 301 eP P 00 21 12.0 +0.7
comp=Z,100nm,1.0s
ODAN Odare 71.45 300 eP P 00 21 12.7 +0.6
comp=Z,57nm,0.7s
RAMN Ramite 72.16 300 eP P 00 21 16.8 +0.5
JIRN Jiri 72.69 301 eP P 00 21 20.0 +0.4
GUN Gumba 73.03 301 eP P 00 21 22.3 +0.7
comp=Z,82nm,0.7s
BILL Bilibino 73.22 5 P P 00 21 22.6 +1.2
PKI Pulchoki 73.34 300 eP P 00 21 23.5 +0.1
PKIN Phulchoki 73.35 300 eP P 00 21 23.1 -0.3
KKN Kakani 73.51 301 eP P 00 21 24.5 +0.3
DMN Daman 73.61 300 eP P 00 21 25.7 +0.8
GKN Gorkha 74.11 301 eP P 00 21 28.3 +0.6
KOLN Koldanda 74.95 301 eP P 00 21 33.0 +0.4
comp=Z,57nm,0.9s
DANN Dangsing 74.95 301 eP P 00 21 32.9 +0.2
comp=Z,34nm,0.8s
WMQ Urumqi 76.47 317 eP P 00 21 43.2 +2.5
WMQ pP pwP 00 22 11.8 -0.1
WMQ pmax pmax

comp=Z,9.0nm,1.3s
WMQ pmax pmax
comp=Z,85nm,5.1s
WMQ LR LR
comp=Z,760nm,28.8s
WMQ LR LR
comp=Z,860nm,29.2s
WMQ LR LR
comp=Z,120nm,29.2s
TTA Tatalina 77.41 21 P **P 00 21 47.3 +1.7**
HYB Hyderabad 77.49 289 *i* P **P 00 21 46.0 -0.9**
HYB *e* 00 22 15.5
TIXI Tiksi 78.06 352 P **P 00 21 49.3 +0.4**
comp=Z,1.4nm,0.4s,baz=121,slow=7.0,SNR=5.0
IMAR Indian Mountai 80.05 19 P **P 00 22 01.7 +1.8**
RND Reindeer 80.34 23 P **P 00 22 02.3 +0.7**
MCK McKinley 80.48 22 P **P 00 22 02.4 +0.1**
MCK IAmb IAmb 00 22 03.6
comp=Z,15nm,1.2s
MKAR Makanchi Array 81.03 319 P **P 00 22 06.0 +0.4**
comp=Z,1.8nm,0.5s,baz=96,slow=7.1,SNR=16
MKAR pP **pP 00 22 31.3 0.0**
comp=Z,2.8nm,0.8s,baz=105,slow=4.8,SNR=5.3
MKAR Makanchi Array 81.03 319 P **P 00 22 03.9 -1.7**
WRH Wood River Hil 81.19 22 P **P 00 22 05.4 -0.6**
WRH IAmb IAmb 00 22 07.2
comp=Z,16nm,1.4s
MAKZ Makanchi 81.24 319 P **P 00 22 06.8 +0.1**
ZAA0 Zalesovo Array 81.75 326 P **P 00 22 07.7 -1.4**
ZALV Zalesovo Beam 81.75 326 P **P 00 22 08.6 -0.6**
comp=Z,2.9nm,0.6s,baz=111,slow=5.5,SNR=14
ZALV pP **pP 00 22 37.7 +2.9**
comp=Z,3.3nm,0.8s,baz=109,slow=5.0,SNR=4.7
IL31 81.78 22 P **P 00 22 08.6 -0.5**
ILAR Eielson Array 81.78 22 P **P 00 22 08.5 -0.7**
comp=Z,1.9nm,0.8s,baz=256,slow=4.7,SNR=15
ILAR Eielson Array 81.78 22 P **P 00 22 09.2 0.0**
BCAR Beaver Creek A 82.99 24 P **P 00 22 15.3 -0.3**
KSH Kashi 83.74 310 P **P 00 22 22.0 +2.0**
KSH pP pwP 00 22 53.0 +1.3
KSH pmax pmax
comp=Z,9.0nm,0.9s
KSH pmax pmax
comp=Z,400nm,3.6s
BMAR Burnt Mountain 83.91 20 P **P 00 22 21.5 +1.4**
KURK Kurchatov 84.43 322 P **P 00 22 23.3 +0.3**
KURK IAmb IAmb 00 22 24.7
comp=Z,12nm,1.1s
NIL Nilore 84.85 304 P **P 00 22 24.6 -1.0**
NIL IAmb IAmb 00 22 28.1
comp=Z,18nm,0.8s
QSPA South Pole Qui 85.14 180 P **P 00 22 25.9 -0.6**
QSPA IAmb IAmb 00 22 30.0
comp=Z,20nm,1.4s
MAW Mawson 85.95 203 P **P 00 22 30.0 -0.3**
baz=86,SNR=10
MAW Mawson 85.95 203 P **P 00 22 30.0 -0.3**
comp=Z,14nm,0.7s,baz=138,slow=3.5,SNR=13
MAW Mawson 85.95 203 P **P 00 22 30.0 -0.3**
EPYK Eagle Plains 86.29 22 P **P 00 22 31.6 -0.5**
EPYK IAmb IAmb 00 22 34.9
comp=Z,14nm,1.2s
BTK Batken 87.75 310 IAmb IAmb 00 22 42.4
comp=Z,8.8nm,1.1s
INK Inuvik 88.10 21 P **P 00 22 41.3 +0.7**
comp=Z,1.6nm,1.0s,baz=242,slow=5.0,SNR=3.7
INK pP **pwP 00 23 09.3 -2.1**
comp=Z,6.4nm,1.1s,baz=228,slow=6.6,SNR=8.0
INK Inuvik 88.10 21 P **P 00 22 40.5 -0.1**
YBH Yreka Blue Hor 88.29 48 LR LR 00 55 43.5
comp=Z,166nm,21.9s,baz=98,slow=31
KKAR Karatay Array 88.40 313 P **P 00 22 42.3 -0.4**
BRVK Borovoye 89.95 323 P **P 00 22 49.2 -0.4**
BRVK IAmb IAmb 00 22 51.6
comp=Z,7.4nm,1.1s
NVAR Mina Array Bea 91.28 52 P **P 00 22 57.6 +1.1**
comp=Z,0.4nm,0.5s,baz=251,slow=5.6,SNR=2.6
NVAR pP **pP 00 23 23.8 +0.2**
comp=Z,0.9nm,0.6s,baz=248,slow=7.7,SNR=3.3
NVAR LR LR 00 59 29.6
comp=Z,356nm,19.3s,baz=94,slow=32
YKA Yellowknife Ar 94.95 28 P **P 00 23 13.3 +0.8**
comp=Z,1.3nm,1.0s,baz=271,slow=4.8,SNR=8.6
YKA pP **pwP 00 23 42.0 -1.5**
comp=Z,0.4nm,0.9s,baz=96,slow=23,SNR=4.1
ABKAR Akbulak array 96.17 319 P **P 00 23 17.3 -1.1**
ARU Arti 96.92 326 LR LR 01 08 01.9
comp=Z,463nm,21.1s,baz=268,slow=36
AKTO Aktyubinsk 97.41 320 LR LR 01 10 11.6
comp=Z,76nm,20.4s,baz=302,slow=37
GEYT Alibeck 97.46 307 pP pP 00 23 52.7 +1.9
comp=Z,2.3nm,1.1s,baz=116,slow=3.4,SNR=3.7
TXAR Lajitas Array 103.22 61 PKKPbc PKKPbc 00 39 47.8 +1.6
comp=Z,0.4nm,0.7s,baz=298,slow=2.7,SNR=5.5
LPAZ La Paz 133.49 118 PKP **PKPdf 00 29 08.0 -0.1**
comp=Z,0.8nm,0.4s,baz=208,slow=3.5,SNR=4.2
LPAZ La Paz 133.49 118 PKPdf 00 29 06.8 -1.3
CPUP Villa Florida 136.75 137 PKP **PKPdf 00 29 13.2 0.0**
comp=Z,1.7nm,0.9s,baz=5.0,slow=16,SNR=3.2
TAM Tamanrasset 144.57 303 PKPbc 00 29 26.8 +0.4
BDFB Brasilia 150.30 134 PKPbc **PKPbc 00 29 41.4 -1.0**
comp=Z,3.3nm,0.7s,baz=66,slow=2.5,SNR=5.8
BDFB Brasilia 150.30 134 PKPbc 00 29 40.2 -2.2
TOA0 Torodi Ar. Sit 151.31 289 PKPbc 00 29 44.0 -0.7
TORD Torodi Ar. Bea 151.31 289 PKPbc **PKPbc 00 29 43.5 -1.1**
comp=Z,5.5nm,0.7s,baz=54,slow=2.1,SNR=30
TORD pPKPbc **pPKPbc 00 30 14.3 +2.5**
comp=Z,14nm,0.8s,baz=63,slow=2.3,SNR=10
TORD Torodi Ar. Bea 151.31 289 PKPbc 00 29 44.0 -0.6
KIC Kosan Boka 158.64 275 *e*PKP1 **PKPab 00 30 23.7 -0.7**
comp=Z,19nm,1.0s
TIC Toumodi 158.90 276 *e*PKP1 **PKPab 00 30 24.8 -0.8**
LIC Lamto 158.93 275 *e*PKP1 **PKPab 00 30 24.6 -1.1**
comp=Z,13nm,0.8s

*MOS **04** 00:10:57.7±0.8, 52°.82N×171°.65E, h27km, mb4.7/22, Error ellipse: s-maj=7.5km s-min=4.7km az=39.3*
*NEIC **04** 00:10:59.6±2.5, 53°.10N±0°.07×171°.59E±0°.06, h24km±4km, mb4.7/124, ML4.2/11(AEIC), Error ellipse: s-maj=10.9km s-min=4.8km az=167.0*
*AEIC **04** 00:11:00.6±2.8, 53°.24N±0°.10×171°.66E±0°.09, h50km±6km, Error ellipse: s-maj=14.3km s-min=7.3km az=186.0*
*IDC **04** 00:11:01.8±3.3, 52°.94N×171°.62E, h42km±31km, mb4.1/27, mb1 4.3/28, mb1mx4.2/42, mbtmp4.4/28, ML3.9/1, MS3.8/4, Ms1 3.8/4, ms1mx3.2/57, Error ellipse: s-maj=16.8km s-min=10.3km az=162.0*
*KRSC **04** 00:11:01.8±2.0, 52°.78N×170°.79E, h24km±28km, ML4.8*
ISC 04 00:10:59.2±0.4, **52°.82N**±0°.06×**171°.55E**±0°.03, **h27km, n588,** σ1.58/611, **mb4.6**/106, **6C-2D, Near Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SMY Shemya 1.55 92 Pb 00 11 26.3 -0.9
SMY Shemya 1.55 92 Sn 00 11 44.7 +0.5
SMY Shemya 1.55 92 P **Pb 00 11 26.3 -0.9**
SMY 00 11 44.7
BKI Bering 4.07 308 *e*P **Pn 00 12 02.9 +3.3**
BKI *e*S **Sn 00 12 43.6 -2.6**
BKI Bering 4.07 308 P **Pn 00 12 02.9 +3.3**
BKI S **Sn 00 12 43.6 -2.6**
KBTR Krutoberegovo 6.11 307 *e*P **Pn 00 12 29.7 +2.0**
KBTR *e*S **Sn 00 13 34.4 -2.2**
KBTR Krutoberegovo 6.11 307 P **Pn 00 12 29.7 +2.0**
KBTR S **Sn 00 13 34.4 -2.2**
KIMD Kanaga Island 6.96 94 Pn 00 12 42.6 +3.2
KIMD **Sn 00 13 59.7 +2.1**
SPN Mys Shipunski 6.97 277 *e*P **Pn 00 12 40.0 +0.5**
SPN *e*S **Sn 00 13 53.2 -4.6**
SPN Mys Shipunski 6.97 277 P **Pn 00 12 40.0 +0.5**
SPN S **Sn 00 13 53.2 -4.6**
TUMD Tumrok D 6.99 294 *e*P **Pn 00 12 42.4 +2.6**
TUMD *e*S **Sn 00 13 57.3 -1.1**
KZV Kizimen 7.03 294 *e*P **Pn 00 12 41.5 +1.1**
KZV *e*S **Sn 00 13 55.5 -3.9**
KZV Kizimen 7.03 294 P **Pn 00 12 41.5 +1.1**
KZV S **Sn 00 13 55.5 -3.9**
ZLN Zelenaya 7.04 301 *e*P **Pn 00 12 44.1 +3.6**
ZLN *e*S **Sn 00 14 00.2 +0.6**
ZLN Zelenaya 7.04 301 P **Pn 00 12 44.1 +3.6**
ZLN S **Sn 00 14 00.2 +0.6**
BZGR Bezymyannyi-Gr 7.07 301 *e*P **Pn 00 12 43.6 +2.7**
BZGR *e*S **Sn 00 13 58.9 -1.4**
BZGR Bezymyannyi-Gr 7.07 301 P **Pn 00 12 43.6 +2.7**
BZGR S **Sn 00 13 58.9 -1.4**
BDR Baidarnaya 7.07 306 *e*P **Pn 00 12 44.3 +3.4**
BDR *e*S **Sn 00 14 00.4 0.0**
BDR Baidarnaya 7.07 306 P **Pn 00 12 44.3 +3.4**
BDR S **Sn 00 14 00.4 0.0**
CIRR Tsirk 7.11 302 *e*P **Pn 00 12 44.8 +3.3**
CIRR *e*S **Sn 00 14 01.1 -0.2**
CIRR Tsirk 7.11 302 P **Pn 00 12 44.8 +3.3**
CIRR S **Sn 00 14 01.1 -0.2**
LGNR Loginova 7.12 302 *e*P **Pn 00 12 44.9 +3.0**
LGNR *e*S **Sn 00 14 01.1 -0.9**
LGNR Loginova 7.12 302 P **Pn 00 12 44.9 +3.0**
LGNR S **Sn 00 14 01.1 -0.9**
TUMR Tumrok 7.15 295 *e*P **Pn 00 12 45.1 +3.0**
TUMR *e*S **Sn 00 14 02.2 -0.2**
TUMR Tumrok 7.15 295 P **Pn 00 12 42.4 +0.3**
TUMR S **Sn 00 13 57.3 -5.1**
KLY Klyuchi 7.24 303 *e*P **Pn 00 12 45.5 +2.4**
KLY *e*S **Sn 00 14 01.7 -2.6**
KLY Klyuchi 7.24 303 P **Pn 00 12 45.5 +2.4**
KLY S **Sn 00 14 01.7 -2.6**
KRSR Krestovskiy 7.24 302 *e*P **Pn 00 12 45.7 +2.4**
KRSR *e*S **Sn 00 14 02.9 -1.7**
KRSR Krestovskiy 7.24 302 P **Pn 00 12 45.7 +2.4**
KRSR S **Sn 00 14 02.9 -1.7**
KMNR Kamenistaya 7.25 298 *e*P **Pn 00 12 45.4 +2.1**
KMNR Kamenistaya 7.25 298 P **Pn 00 12 45.4 +2.1**
KIRR Kirishev 7.26 300 *e*P **Pn 00 12 46.6 +3.0**
KIRR *e*S **Sn 00 14 03.3 -1.8**
KIRR Kirishev 7.26 300 P **Pn 00 12 46.6 +3.0**
KIRR S **Sn 00 14 03.3 -1.8**
ADK Adak 7.27 93 Pn **Pn 00 12 44.2 +0.7**
ADK Adak 7.27 93 P **Pn 00 12 44.2 +0.7**
KPT Kopyto 7.33 300 *e*P **Pn 00 12 47.4 +3.0**
KPT *e*S **Sn 00 14 05.8 -0.8**
KPT Kopyto 7.33 300 P **Pn 00 12 47.4 +3.0**
KPT S **Sn 00 14 05.8 -0.8**
NLC Nalytchevo 7.38 278 *e*P **Pn 00 12 46.5 +1.5**
NLC Nalytchevo 7.38 278 P **Pn 00 12 46.5 +1.5**
KOZ Kozyrevsk 7.54 300 *e*P **Pn 00 12 50.9 +3.6**
KOZ *e*S **Sn 00 14 12.3 +0.5**
KOZ Kozyrevsk 7.54 300 P **Pn 00 12 50.9 +3.6**
KOZ S **Sn 00 14 12.3 +0.5**
GSTD Great Sitkin T 7.56 91 Pn 00 12 49.1 +1.5
SDLR Sedlovina 7.65 278 *e*P **Pn 00 12 50.5 +1.6**
SDLR Sedlovina 7.65 278 P **Pn 00 12 50.5 +1.6**
UGLR Uglovaya 7.69 278 *e*P **Pn 00 12 51.1 +1.6**
UGLR *e*S **Sn 00 14 12.6 -3.0**
UGLR Uglovaya 7.69 278 P **Pn 00 12 51.1 +1.6**
UGLR S **Sn 00 14 12.6 -3.0**
SMAR Somma 7.70 278 *e*P **Pn 00 12 51.7 +2.0**
SMAR Somma 7.70 278 P **Pn 00 12 51.7 +2.0**
SRDR Sredinnyy 7.72 302 *e*P **Pn 00 12 53.2 +3.4**
SRDR *e*S **Sn 00 14 15.2 -1.0**
SRDR Sredinnyy 7.72 302 P **Pn 00 12 53.2 +3.4**
SRDR S **Sn 00 14 15.2 -1.0**
KRER Koryakskii 7.73 279 *e*P **Pn 00 12 51.8 +1.7**
KRER *e*S **Sn 00 14 13.6 -3.2**
KRER Koryakskii 7.73 279 P **Pn 00 12 51.8 +1.7**
KRER S **Sn 00 14 13.6 -3.2**
AVH Avacha 7.74 278 *e*P **Pn 00 12 51.8 +1.7**
AVH *e*S **Sn 00 14 13.2 -3.6**
AVH Avacha 7.74 278 P **Pn 00 12 51.8 +1.7**
AVH S **Sn 00 14 13.2 -3.6**
DALK Dalny 7.74 277 *e*P **Pn 00 12 51.5 +1.5**
DALK Dalny 7.74 277 P **Pn 00 12 51.5 +1.5**
KRX Arik 7.79 279 *e*P **Pn 00 12 52.9 +2.0**
KRX *e*S **Sn 00 14 14.6 -3.6**
KRX Arik 7.79 279 P **Pn 00 12 52.9 +2.0**
KRX S **Sn 00 14 14.6 -3.6**
KOK Koryaka 7.80 279 *e*P **Pn 00 12 52.7 +1.8**
KOK Koryaka 7.80 279 P **Pn 00 12 52.7 +1.8**
PET Petropavlovsk 7.80 277 *e*P **Pn 00 12 53.1 +2.2**
PET *e*S **Sn 00 14 14.5 -3.7**
PET Petropavlovsk 7.80 277 Pn **Pn 00 12 52.0 +1.2**
PET **Sn 00 14 18.0 -0.2**
PET Petropavlovsk 7.80 277 *e*P **Pn 00 12 52.8 +1.9**
PET *e*S **Sn 00 14 14.1 -4.1**
PET pmax pmax
comp=Z,48nm,0.8s
PET MLR MLR
comp=Z,100nm,14.0s
RUS Russkaya 7.95 272 *e*P **Pn 00 12 54.1 +1.2**
RUS *e*S **Sn 00 14 16.2 -5.6**
RUS Russkaya 7.95 272 P **Pn 00 12 54.1 +1.2**
RUS S **Sn 00 14 16.2 -5.6**
OSSR Ossora 8.00 327 *e*P **Pn 00 12 56.4 +2.8**
OSSR Ossora 8.00 327 P **Pn 00 12 56.4 +2.8**
ESO Esso 8.12 298 *e*P **Pn 00 12 58.2 +2.9**
ESO Esso 8.12 298 P **Pn 00 12 58.2 +2.9**
KRMR Karymshinskiy 8.13 275 *e*P **Pn 00 12 55.8 +0.4**
KRMR *e*S **Sn 00 14 20.3 -6.0**
KRMR Karymshinskiy 8.13 275 P **Pn 00 12 55.8 +0.4**
MTVR Mutnovka 8.14 273 *e*P **Pn 00 12 57.2 +1.5**
MTVR Mutnovka 8.14 273 P **Pn 00 12 57.2 +1.5**
GRL Gorelyy 8.20 273 *e*P **Pn 00 12 58.8 +2.4**
GRL *e*S **Sn 00 14 25.0 -3.1**
GRL Gorelyy 8.20 273 P **Pn 00 12 58.8 +2.4**
GRL S **Sn 00 14 25.0 -3.1**
KDTR Khodutka, Kamc 8.32 268 *e*P **Pn 00 12 59.3 +1.3**
KDTR Khodutka, Kamc 8.32 268 P **Pn 00 12 59.3 +1.3**
PEA0B Petropavlovsk- 8.37 277 Pn **Pn 00 13 01.1 +2.4**
PEA0B **Sn 00 14 29.3 -2.9**
PEA0B Petropavlovsk- 8.37 277 ⇑*i*P **Pn 00 13 01.5 +2.8**
PETK Petropavlovsk- 8.37 277 P **Pn 00 13 00.9 +2.2**
comp=Z,7.2nm,0.3s,baz=91,slow=20,SNR=72
PETK S **Sn 00 14 29.2 -3.1**
comp=Z,10nm,0.3s,baz=88,slow=39,SNR=12
PETK LR LR 00 16 11.5
comp=Z,156nm,20.7s,baz=58,slow=37
PETK Petropavlovsk- 8.37 277 Pn **Pn 00 13 00.9 +2.2**
PETK **Sn 00 14 30.1 -2.2**
PETK Petropavlovsk- 8.37 277 P **Pn 00 13 01.0 +2.2**
KOWE Korovin West 8.66 87 Pn 00 13 04.7 +2.1
APC Apacha 8.71 276 *e*P **Pn 00 13 05.8 +2.5**
APC *e*S **Sn 00 14 38.2 -2.3**
APC Apacha 8.71 276 P **Pn 00 13 05.8 +2.5**
APC S **Sn 00 14 38.2 -2.3**
ATKA Atka Island 8.72 88 Pn **Pn 00 13 05.3 +1.9**
KOFP Korovin Flat P 8.77 88 Pn 00 13 07.3 +3.1
KOFP **Sn 00 14 40.8 -1.1**
PAU Pauzhetka 9.17 267 *e*P **Pn 00 13 11.5 +1.9**
PAU Pauzhetka 9.17 267 P **Pn 00 13 11.5 +1.9**
SKR Severo-Kuril's 9.81 264 *e*P **Pn 00 13 20.4 +2.0**
MSW Makushin Switc 12.98 77 Pn 00 14 03.5 +1.8
UNV Unalaska Valle 13.15 77 Pn **Pn 00 14 00.9 -3.0**
MA2 Magadan 13.36 309 Pn 00 14 07.6 +0.7
MA2 Magadan 13.36 309 P **Pn 00 14 07.6 +0.7**
BILL Bilibino 15.48 353 Pn 00 14 32.0 -3.4
BILL Bilibino 15.48 353 *e*P **P 00 14 40.6 +1.0**
BILL pmax pmax
comp=Z,15nm,0.9s
ANM Nome 16.67 36 Pn 00 14 45.4 -5.2
ANM Nome 16.67 36 P **Pn 00 14 45.4 -5.2**
ANM pmax pmax
comp=Z,7.0nm,0.8s
TTA Tatalina 19.77 47 P **P 00 15 23.6 -3.3**
OHAK Old Harbor 20.48 64 P 00 15 32.1 -2.4
OHAK IAmb IAmb 00 15 35.0
comp=Z,54nm,1.1s
KDAK Kodiak Island 20.84 62 P **P 00 15 38.1 -0.3**
comp=Z,16nm,0.8s,baz=269,slow=3.3,SNR=12
KDAK Kodiak Island 20.84 62 P **P 00 15 37.7 -0.7**
KDAK IAmb IAmb 00 15 46.7
comp=Z,36nm,1.1s
KDAK Kodiak Island 20.84 62 P **P 00 15 37.7 -0.7**
KDAK pmax pmax
comp=Z,36nm,1.1s
RSO Redoubt South 20.84 54 P **P 00 15 37.8 -0.9**
JKA Kamikawa-asahi 20.96 257 P Pn 00 15 42.2 -0.4
ASAJ Asahikawa 20.96 257 P Pn 00 15 42.2 -0.4
comp=Z,7.5nm,0.7s,baz=118,slow=11,SNR=4.6
PPLA Purkeypile 21.46 48 P **P 00 15 41.5 -3.9**
CNPM China Poot 21.54 57 P **P 00 15 46.5 +0.5**
CNPM IAmb IAmb 00 15 56.6
comp=Z,29nm,1.1s
SKT Skwentna 21.61 50 P **P 00 15 47.8 +1.1**
SKT IAmb IAmb 00 15 56.1
comp=Z,17nm,1.0s
IMAR Indian Mountai 21.66 39 P **P 00 15 44.5 -2.8**
BRLK Bradley Lake 21.73 56 P **P 00 15 48.2 +0.2**
BRLK IAmb IAmb 00 15 59.7
comp=Z,21nm,1.0s
ERM Erimo 21.90 252 P **P 00 15 52.4 +2.4**
ERM IAmb IAmb 00 15 56.0
comp=Z,40nm,0.9s
ERM Erimo 21.90 252 P **P 00 15 52.4 +2.4**
ERM pmax pmax
comp=Z,40nm,1.0s
SUA Susitna One 21.91 52 P **P 00 15 48.8 -1.4**
KTH Kantishna Hill 22.15 46 P **P 00 15 49.4 -3.3**
RC01 Rabbit Creek A 22.37 53 P **P 00 15 53.4 -1.5**
TRF Thorofare Moun 22.41 47 P **P 00 15 54.5 -1.1**
TRF IAmb IAmb 00 16 07.9
comp=Z,15nm,0.8s
SEW Seward 22.46 56 P **P 00 15 54.3 -1.6**
SEW IAmb IAmb 00 15 59.7
comp=Z,22nm,1.2s
MLY Manley 22.57 43 P **P 00 15 57.2 +0.2**
GHO Glory Hole Cre 22.81 51 P **P 00 15 56.8 -2.9**
BWN Browne 22.91 45 P **P 00 15 59.5 -1.1**
KNK Knik Glacier 23.00 52 P **P 00 16 00.3 -1.3**
KNK IAmb IAmb 00 16 12.6
comp=Z,16nm,0.8s
SML Sawmill 23.09 51 P **P 00 15 59.0 -3.6**
SML IAmb IAmb 00 16 04.2
comp=Z,14nm,0.9s
WRH Wood River Hil 23.55 45 P **P 00 16 04.8 -2.2**
SCM Sheep Creek Mo 23.57 51 P **P 00 16 07.1 -0.2**
SCM IAmb IAmb 00 16 18.6
comp=Z,10nm,0.7s
SCM Sheep Creek Mo 23.57 51 P **P 00 16 07.1 -0.2**
SCM pmax pmax
comp=Z,10.0nm,0.7s
MDM Murphy Dome 23.59 43 P **P 00 16 06.8 -0.6**
MDM IAmb IAmb 00 16 14.6
comp=Z,16nm,0.9s
GLI Glacier Island 23.64 54 P **P 00 16 05.7 -2.3**
GLI IAmb IAmb 00 16 08.9
comp=Z,16nm,1.1s
DHY Denali Highway 23.66 48 P **P 00 16 07.0 -1.3**
CCB Clear Creek Bu 23.70 44 IAmb IAmb 00 16 16.4
comp=Z,15nm,1.1s
TCOL CIGO, UAF Yank 23.72 44 P **P 00 16 08.7 0.0**
baz=259
COLA College 23.73 44 P **P 00 16 04.5 -4.1**
COLA IAmb IAmb 00 16 16.1
comp=Z,30nm,1.1s
COLA College 23.73 44 P **P 00 16 04.5 -4.1**
COLA pmax pmax
comp=Z,30nm,1.1s
YAK Yakutsk 23.94 309 P **P 00 16 10.5 -0.2**
comp=Z,10nm,0.5s,baz=125,slow=1.9,SNR=4.5
YAK Yakutsk 23.94 309 *e*P **P 00 16 09.6 -1.1**
YAK pmax pmax
comp=Z,13nm,1.0s
YAK pmax pmax
comp=E,7.0nm,1.2s
FID Port Fidalgo 23.94 54 P **P 00 16 08.5 -2.3**
FID IAmb IAmb 00 16 21.7
comp=Z,19nm,1.1s
POKR Poker Flat Res 23.95 43 P **P 00 16 10.8 0.0**
baz=259,SNR=8.9
HDA Harding Lake 24.03 45 P **P 00 16 08.8 -2.7**
HDA Harding Lake 24.03 45 P **P 00 16 11.6 0.0**
baz=261
IL31 24.11 44 P **P 00 16 09.6 -2.7**
ILAR Eielson Array 24.11 44 P **P 00 16 11.0 -1.4**
comp=Z,4.2nm,0.7s,baz=250,slow=7.2,SNR=50
ILAR LR LR 00 26 11.7
comp=Z,137nm,19.6s,baz=318,slow=38
ILAR Eielson Array 24.11 44 P **P 00 16 07.9 -4.4**
ILAR Eielson Array 24.11 44 P **P 00 16 11.0 -1.4**
TOLK Toolik Lake Re 24.13 34 P **P 00 16 12.1 -0.4**
baz=249,SNR=7.4
PAX Paxson 24.52 49 IAmb IAmb 00 16 22.7
comp=Z,15nm,1.0s
RAGM Ragged Mountai 24.84 55 P **P 00 16 17.1 -1.9**
RAGM IAmb IAmb 00 16 22.2
comp=Z,25nm,1.0s
RIDG Independent Ri 24.86 47 P **P 00 16 16.8 -2.4**
RIDG IAmb IAmb 00 16 29.5
comp=Z,15nm,0.8s
KLR Kul'dur 25.06 278 P **P 00 16 22.2 +1.1**
comp=Z,3.2nm,0.7s,baz=60,slow=8.7,SNR=14
KLR Kul'dur 25.06 278 ⇑*i*P **P 00 16 21.7 +0.6**
KLR pmax pmax
comp=Z,4.0nm,0.9s
FYU Fort Yukon 25.13 40 IAmb IAmb 00 16 28.3
comp=Z,22nm,0.9s
GLB Gilahina Butte 25.24 52 IAmb IAmb 00 16 28.6
comp=Z,17nm,1.1s
MENT Mentasta 25.31 49 IAmb IAmb 00 16 34.7
comp=Z,12nm,0.9s
VRDI Verde Repeater 25.41 53 IAmb IAmb 00 16 32.2
comp=Z,11nm,0.9s
BMAR Burnt Mountain 25.57 38 P **P 00 16 25.3 -0.2**
CRQM Cirque 25.58 54 IAmb IAmb 00 16 29.9
comp=Z,18nm,0.9s
MCARA McCarthy VSAT 25.62 52 IAmb IAmb 00 16 30.3
comp=Z,22nm,1.0s
TGL Tana Glacier 25.73 54 IAmb IAmb 00 16 30.6
comp=Z,13nm,1.0s
WAX Waxell Ridge 25.74 55 P **P 00 16 23.8 -3.4**
WAX IAmb IAmb 00 16 34.0
comp=Z,14nm,0.9s
BALM Baldy 25.96 53 IAmb IAmb 00 16 32.6
comp=Z,14nm,1.2s
BCAR Beaver Creek A 26.20 49 P **P 00 16 29.1 -2.2**
BARN Barnard Glacie 26.29 53 IAmb IAmb 00 16 44.0
comp=Z,16nm,1.0s
TIXI Tiksi 26.47 331 P **P 00 16 34.3 +0.8**
comp=Z,3.0nm,0.4s,baz=113,slow=11,SNR=9.4
TIXI Tiksi 26.47 331 P **P 00 16 32.1 -1.4**
TIXI Tiksi 26.47 331 ⇑*i*P **P 00 16 33.9 +0.3**
TIXI pmax pmax
comp=Z,5.0nm,1.0s
EGAK Eagle 26.55 45 IAmb IAmb 00 16 40.5
comp=Z,14nm,0.8s
PCA Pinnacle 27.06 55 P **P 00 16 34.4 -4.8**
MSHR Mys Shultsa 28.70 265 ⇑*i*P **P 00 16 50.5 -3.3**
INK Inuvik 29.83 38 P **P 00 17 03.3 -0.2**
comp=Z,1.4nm,0.3s,baz=258,slow=7.5,SNR=14
INK Inuvik 29.83 38 P **P 00 17 03.6 0.0**
INK Inuvik 29.83 38 P **P 00 17 03.6 0.0**
INK pmax pmax
comp=Z,4.0nm,1.0s
H11N2 WAKE ISLAND Hy 33.23 188 T T 00 53 04.7
baz=5.2,slow=76,SNR=364
H11N3 WAKE ISLAND Hy 33.24 188 T T 00 53 05.6
baz=5.2,slow=76,SNR=634
H11N1 WAKE ISLAND Hy 33.24 188 T T 00 53 06.0
baz=5.2,slow=76,SNR=469
C36M Paulatuk 33.26 36 IAmb IAmb 00 17 40.2
comp=Z,9.7nm,0.8s
C36M Paulatuk 33.26 36 P **P 00 17 33.2 -0.4**
baz=274
H11S1 WAKE ISLAND Hy 34.45 188 T T 00 54 36.7
baz=5.4,slow=76,SNR=1558
H11S3 WAKE ISLAND Hy 34.47 188 T T 00 54 40.5
baz=5.4,slow=76,SNR=1143
H11S2 WAKE ISLAND Hy 34.47 188 T T 00 54 36.8
baz=5.4,slow=76,SNR=738
YKA Yellowknife Ar 38.52 46 P **P 00 18 18.8 0.0**
comp=Z,2.0nm,0.7s,baz=292,slow=8.2,SNR=19
SONM Songino Array 40.62 290 P **P 00 18 37.6 +1.0**
comp=Z,0.9nm,0.5s,baz=60,slow=7.0,SNR=18
SONM Songino Array 40.62 290 P **P 00 18 34.2 -2.4**
SONM Songino Array 40.62 290 P **P 00 18 34.2 -2.4**
SONM pmax pmax
comp=Z,1.0nm,0.6s
RES Resolute Bay 40.87 24 P **P 00 18 36.9 -1.3**
RES Resolute Bay 40.87 24 P **P 00 18 36.9 -1.3**
RES pmax pmax
comp=Z,3.0nm,1.2s
D03D Eldon 40.89 70 P **P 00 18 39.1 +0.4**
baz=303
B05A Bryant 41.06 69 P **P 00 18 40.6 +0.6**
baz=302
D04E Lakebay 41.26 70 P **P 00 18 42.4 +0.6**
baz=303
HHC Hu-ho-hao-te 41.57 278 *e*P **P 00 18 44.5 0.0**
E04D Cinebar 41.72 71 P **P 00 18 46.1 +0.5**
baz=304
H04D Lebanon 42.78 74 P **P 00 18 54.8 +0.6**
baz=306

I03D	Drain, OR	42.90	75	P	P	00 18 56.0	+0.8
	baz=306						
NJ2	Nanjing	42.94	263	eP	P	00 18 56.1	+0.5
K02D	Willamette Mer	43.31	76	P	P	00 18 57.7	-0.9
	baz=307						
I04A	Tendick Farm,	43.40	74	P	P	00 18 59.4	+0.1
	baz=306						
NEW	Newport	43.85	66	P	P	00 19 02.9	+0.1
	baz=304						
J04D	Umpqua Nationa	43.90	75	P	P	00 19 04.0	+0.5
	baz=307						
J05D	Fort Rock, OR	44.39	74	P	P	00 19 08.0	+0.7
	baz=307						
L04D	Klamath Falls	44.40	76	P	P	00 19 08.1	+0.7
	baz=308						
M02C	Callahan	44.58	77	P	P	00 19 09.6	+0.7
	baz=308						
M04C	Macdoel	44.94	76	P	P	00 19 12.5	+0.7
	baz=308						
O02D	Mt. Diablo Mer	45.38	79	P	P	00 19 14.7	-0.4
	baz=309						
O03E	Paynes Creek	45.89	78	P	P	00 19 19.3	+0.1
	baz=309						
MSO	Missoula	46.44	66	P	P	00 19 23.3	-0.1
	baz=306						
WHN	Wuhan	46.73	265	P	P	00 19 19.7	-6.0
EGMT	Eagleton	48.01	62	IAmb	IAmb	00 19 37.6	
	comp=Z,5.8nm,0.6s						
EGMT	Eagleton	48.01	62	P	P	00 19 35.6	-0.1
	baz=307						
SPA0	Spitsbergen Ar	48.38	353	P	P	00 19 37.5	-0.6
FCC	Fort Churchill	49.13	43	IAmb	IAmb	00 19 46.5	
	comp=Z,4.5nm,0.7s						
NVAR	Mina Array Bea	49.17	78	P	P	00 19 45.7	+0.8
	comp=Z,0.8nm,0.5s,baz=292,slow=7.6,SNR=7.7						
LZH	Lanzhou	49.27	278	eP	P	00 19 44.6	-1.0
LZH				pP	pwP	00 19 56.5	-0.1
LZH				sP	sP	00 20 01.7	+5.5
LZH				ePP	PP	00 21 38.5	-0.8
ELK	Elko	49.46	73	P	P	00 19 46.4	-0.7
ELK	Elko	49.46	73	P	P	00 19 46.4	-0.7
ELK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GTA	Gaotai	49.47	285	eP	P	00 19 48.0	+1.0
GTA				pP	pwP	00 20 00.5	+2.4
GTA				sP	sP	00 20 05.7	+8.3
H17A	Grant Village	49.79	67	P	P	00 19 50.5	+0.9
	baz=309						
RLMT	Red Lodge	50.06	65	P	P	00 19 48.4	-3.1
RLMT				IAmb	IAmb	00 19 53.3	
	comp=Z,9.2nm,1.1s						
RLMT				PcP	PcP	00 21 13.6	+2.6
RLMT	Red Lodge	50.06	65	P	P	00 19 51.6	0.0
	baz=309,SNR=6.0						
DAG	Danmarks Havn	50.51	3	iP	P	00 19 53.4	-0.9
	comp=Z,3.8nm,0.9s						
DAG	Danmarks Havn	50.51	3	iP	P	00 19 53.4	-0.9
DAG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DGMT	Dagmar	50.68	59	P	P	00 19 56.2	+0.3
	baz=309						
LAO	LASA Array	50.73	62	P	P	00 19 57.1	+0.7
	baz=309						
R11A	Troy Canyon, C	50.82	76	P	P	00 19 57.4	+0.1
	baz=312,SNR=5.7						
DUG	Dugway, Tooele	51.22	72	P	P	00 20 01.3	+0.9
	baz=311						
PDAR	Pinedale Array	51.40	68	P	P	00 20 01.6	-0.1
	comp=Z,2.9nm,0.7s,baz=306,slow=3.1,SNR=22						
PDAR	Pinedale Array	51.40	68	P	P	00 20 01.7	0.0
MSU	Marysvale	52.71	73	P	P	00 20 11.6	+0.1
MSU	Marysvale	52.71	73	P	P	00 20 11.6	+0.1
HEC	Hector,Ludlow	52.75	80	P	P	00 20 12.5	+0.8
	baz=314						
CD2	Chengdu	52.89	274	P	P	00 20 11.3	-1.4
SUMG	Summit	53.16	11	iP	P	00 20 14.0	-0.5
	comp=Z,32nm,1.1s						
SUMG	Summit	53.16	11	P	P	00 20 14.0	-0.5
SUMG				IAmb	IAmb	00 20 17.7	
	comp=Z,6.9nm,0.8s						
SUMG	Summit	53.16	11	iP	P	00 20 14.0	-0.5
SUMG				pmax	pmax		
	comp=Z,32nm,1.1s						
K22A	Casper	53.17	66	P	P	00 20 14.7	-0.1
	baz=312						
MDND	Maddock	53.44	57	P	P	00 20 16.7	+0.2
	baz=311						
WMQ	Urumqi	53.46	296	eP	P	00 20 19.5	+2.7
RSSD	Black Hills	53.56	63	P	P	00 20 18.2	+0.5
RSSD				IAmb	IAmb	00 20 18.7	
	comp=Z,5.2nm,0.7s						
RSSD	Black Hills	53.56	63	P	P	00 20 18.2	+0.5
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RSSD	Black Hills	53.56	63	P	P	00 20 17.8	+0.1
	baz=312						
KURK	Kurchatov	53.57	308	P	P	00 20 17.2	-0.1
KURK	Kurchatov	53.57	308⇑	iP	P	00 20 16.9	-0.5
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULM	Lac du Bonnet	53.71	53	P	P	00 20 18.4	+0.1
	comp=Z,5.9nm,0.7s,baz=312,slow=7.2,SNR=18						
ULM	Lac du Bonnet	53.71	53⇓	iP	P	00 20 18.3	-0.1
O20A	White River Ci	53.88	69	P	P	00 20 20.1	+0.1
	baz=312						
MK31	Makanchi Array	54.35	302	P	P	00 20 22.8	-0.4
MK31	Makanchi Array	54.35	302	P	P	00 20 22.8	-0.4
MK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR	Makanchi Array	54.35	302	P	P	00 20 22.7	-0.5
	comp=Z,0.3nm,0.4s,baz=47,slow=6.8,SNR=11						
MKAR	Makanchi Array	54.35	302	iP	P	00 20 25.5	+2.3
N23A	Red Feather La	54.66	67	P	P	00 20 26.2	+0.3
	baz=313						
AGMN	Agassiz Nation	55.02	55	P	P	00 20 27.7	-0.2
	baz=312,SNR=9.9						
ARCES	ARCESS Array B	55.46	346	P	P	00 20 30.4	-0.4
	comp=Z,3.3nm,0.7s,baz=40,slow=7.3,SNR=20						
ISCO	Idaho Springs	55.59	68	P	P	00 20 33.5	+0.9
	baz=313,SNR=5.4						
MVCO	Mesa Verde	55.73	72	P	P	00 20 34.4	+0.9
	baz=314						
BRVK	Borovoye	55.80	314	P	P	00 20 33.9	+0.4
BRVK	Borovoye	55.80	314	P	P	00 20 33.9	+0.4
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
S22A	4UR Ranch, Cre	56.31	70	IAmb	IAmb	00 20 51.2	
	comp=Z,4.0nm,0.8s						
S22A	4UR Ranch, Cre	56.31	70	P	P	00 20 38.5	+0.8
	baz=314,SNR=5.7						
Q24A	Divide	56.43	68	P	P	00 20 39.2	+0.6
	baz=314						
OGNE	Ogallala	56.80	65	P	P	00 20 41.5	+0.6
	baz=314						
214A	Organ Pipe Nat	56.87	80	P	P	00 20 42.4	+1.0
	baz=316						
SDCO	Great Sand Dun	57.07	70	P	P	00 20 44.0	+0.9
	baz=314						
EYMN	Ely	57.38	52	P	P	00 20 44.9	0.0
	baz=314,SNR=13						
ECSD	EROS Data Cent	57.76	59	IAmb	IAmb	00 20 48.1	
	comp=Z,4.0nm,0.8s						
ECSD	EROS Data Cent	57.76	59	P	P	00 20 46.9	-0.7
	baz=314,SNR=5.1						
TMCR	Tamitsa	57.90	338	eP	P	00 20 48.2	0.0
TMCR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ARU	Arti	58.05	323	diP	P	00 20 49.7	+0.3
ARU						00 22 54.4	
ARU				S	S	00 28 51.2	+3.2
ARU				SS	SS	00 32 40.9	+2.3
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PRGR	Permogore	58.11	333	eP	P	00 20 49.3	-0.4
PRGR				pmax	pmax		
	comp=Z,20nm,0.8s						
SPMN	Marine on St.	58.66	55	P	P	00 20 54.2	+0.4
	baz=315						
D41A	Chassel	59.41	51	IAmb	IAmb	00 20 59.9	
	comp=Z,7.0nm,0.7s						
COWI	Conover	59.83	53	IAmb	IAmb	00 21 02.7	
	comp=Z,7.5nm,0.8s						
KLMR	Klimovskoe	60.39	335	eP	P	00 21 04.5	-0.9
KLMR					AMP	00 21 07.1	
	comp=Z,29nm,1.5s						
KLMR	Klimovskoe	60.39	335	eP	P	00 21 04.5	-0.9

KLMR				pmax	pmax		
	comp=Z,29nm,1.5s						
SCIA	State Center	60.82	58	P	P	00 21 09.0	+0.3
	baz=316						
E44A	Grand Marais A	60.98	50	P	P	00 21 10.1	+0.4
	baz=318						
MNTX	Cornudas Mount	61.44	74	P	P	00 21 13.9	+0.8
	baz=317						
JFWS	Jewell Farm	61.60	56	P	P	00 21 12.9	-1.1
	baz=317,SNR=6.5						
D46A	Sault St. Mari	61.65	49	P	P	00 21 13.4	-0.9
	baz=318						
F45A	CMU Biological	61.86	51	P	P	00 21 15.7	0.0
	baz=318						
D47A	Chapleau	61.95	48	P	P	00 21 15.5	-0.8
	baz=319						
G45A	Suttons Bay	62.27	51	P	P	00 21 18.0	-0.5
	baz=318,SNR=6.0						
MATQ	Matagami	62.28	43	P	P	00 21 17.3	-1.1
	baz=320						
E47A	Iron Bridge	62.32	49	P	P	00 21 17.9	-0.8
	baz=319,SNR=6.9						
SCHQ	Schefferville	62.34	34	P	P	00 21 18.4	-0.4
	comp=Z,12nm,0.8s,baz=328,slow=7.1,SNR=21						
SCHQ	Schefferville	62.34	34	P	P	00 21 18.6	-0.1
D48A	Paudash Townsh	62.45	48	P	P	00 21 18.5	-1.1
	baz=319						
D49A	Beulah Townshi	62.57	47	P	P	00 21 19.3	-1.1
	baz=319						
E48A	Lockeyer	62.81	48	P	P	00 21 21.3	-0.8
	baz=319						
FINES	FINESS Array B	62.82	342	P	P	00 21 21.7	-0.2
	comp=Z,5.8nm,0.6s,baz=24,slow=7.4,SNR=30						
H46A	Fife Lake	62.86	51	P	P	00 21 22.3	-0.1
	baz=319,SNR=5.3						
GLMI	Grayling	62.92	51	P	P	00 21 23.3	+0.4
	baz=319						
ABKAR	Akbulak array	63.00	317	P	P	00 21 23.3	+0.1
WMOK	Wichita Mounta	63.02	68	P	P	00 21 24.0	+0.4
	baz=317						
G47A	Hillman	63.02	50	P	P	00 21 23.7	+0.2
	baz=319						
LSQQ	Lebel-sur-Quev	63.09	43	P	P	00 21 22.9	-1.0
	baz=321						
F48A	Evansville	63.10	49	P	P	00 21 23.2	-0.7
	baz=319						
I46A	Reed City	63.19	52	P	P	00 21 24.5	-0.1
	baz=319						
SIJI	Sorong	63.20	226	P	P	00 21 26.5	+1.5
	comp=Z,12nm,0.5s,baz=8.4,slow=8.2,SNR=4.1						
H47A	Mio	63.29	51	P	P	00 21 25.2	0.0
	baz=319						
L44A	Lake County Fo	63.31	55	P	P	00 21 25.0	-0.4
	baz=318						
D50A	G1974 Best Tow	63.33	46	P	P	00 21 24.3	-1.1
	baz=320						
F49A	Sandfield	63.41	49	P	P	00 21 25.4	-0.6
	baz=320						
D51A	Lot 18 Range I	63.59	46	P	P	00 21 26.1	-1.1
	baz=320						
H48A	Harrisville	63.62	50	P	P	00 21 27.2	-0.2
	baz=319						
VLDQ	Val d'Or	63.63	44	IAmb	IAmb	00 21 25.9	
	comp=Z,8.8nm,0.9s						
HDIL	Hopedale	63.82	57	P	P	00 21 28.8	0.0
	baz=318,SNR=6.1						
I48A	Sherman Twp	63.84	51	P	P	00 21 29.0	+0.1
	baz=319						
K46A	Dorr	63.97	53	P	P	00 21 29.1	-0.7
	baz=319						
J47A	Sunmer	64.02	52	P	P	00 21 30.0	0.0
	baz=319						
D52A	ZEK Kipawa Sen	64.09	46	P	P	00 21 29.1	-1.5
	baz=321						
TX31	Lajitas Ar. Si	64.18	75	IAmb	IAmb	00 21 32.5	
	comp=Z,3.8nm,0.5s						
TX32	Lajitas Array	64.18	75	IAmb	IAmb	00 21 32.5	
	comp=Z,4.0nm,0.5s						
TXAR	Lajitas Array	64.18	75	P	P	00 21 32.0	+0.5
	comp=Z,2.9nm,0.4s,baz=303,slow=5.2,SNR=75						
TXAR	Lajitas Array	64.18	75	P	P	00 21 31.9	+0.5
F51A	Arnstein	64.24	47	P	P	00 21 29.9	-1.6
	baz=320						
D53A	Lac Vacive, Po	64.32	45	P	P	00 21 31.0	-1.0
	baz=321						
K47A	Vermontville	64.36	53	P	P	00 21 32.2	-0.1
	baz=319						
I49A	Point Hope	64.44	50	P	P	00 21 32.6	-0.2
	baz=320						
J48A	Bridge Port	64.47	52	P	P	00 21 32.5	-0.5
	baz=320						
E52A	Mattawa	64.52	46	P	P	00 21 31.9	-1.4
	baz=321						
F52A	Sundridge	64.61	47	P	P	00 21 32.9	-1.0
	baz=321						
CCM	Cathedral Cave	64.67	60	P	P	00 21 33.6	-0.8
	baz=318						
K48A	Perry	64.69	52	P	P	00 21 34.5	+0.1
	baz=320						
D54A	Lac Fusel, La	64.71	44	P	P	00 21 33.2	-1.4
	baz=322						
L47A	Sherwood	64.79	53	P	P	00 21 34.5	-0.7
	baz=319						
E53A	Dumoine, Ponti	64.88	46	P	P	00 21 34.1	-1.6
	baz=321						
K49A	Clarkson	65.02	52	P	P	00 21 36.7	+0.1
	baz=320,SNR=8.5						
CMAR	Chiang Mai Arr	65.02	268	P	P	00 21 38.0	+1.0
	comp=Z,1.8nm,0.5s,baz=29,slow=6.6,SNR=5.1						
CMAR	Chiang Mai Arr	65.02	268	P	P	00 21 38.0	+1.0
E54A	Lac Daplat, Po	65.05	45	P	P	00 21 35.3	-1.5
	baz=322						
SFIN	Lafayette	65.06	56	P	P	00 21 36.3	-0.6
	baz=319						
U40A	Yellville	65.08	62	P	P	00 21 36.4	-0.7
	baz=318						
L48A	N Adams	65.19	53	P	P	00 21 37.2	-0.6
	baz=320						
H52A	Wyevale	65.25	48	P	P	00 21 37.1	-0.9
	baz=321						
D55A	Sainte-Anne-du	65.32	44	P	P	00 21 37.6	-0.9
	baz=322						
I51A	Listowel	65.38	49	P	P	00 21 38.9	0.0
	baz=321						
N47A	Urbana	65.38	54	P	P	00 21 37.8	-1.2
	baz=320						
L49A	Milan	65.38	52	P	P	00 21 39.1	+0.1
	baz=320						
NB2	NORSAR Subarra	65.41	350	P	P	00 21 38.9	0.0
	comp=Z,4.3nm,0.6s,baz=12,slow=6.5						
NOA	NORSAR Array B	65.41	350	P	P	00 21 38.8	-0.1
	comp=Z,9.1nm,0.8s,baz=14,slow=6.5,SNR=27						
W39A	Magazine	65.44	64	P	P	00 21 38.9	-0.6
	baz=318						
G53A	Haliburton	65.44	47	P	P	00 21 38.4	-1.0
	baz=321						
G54A	Lake Saint Pet	65.46	47	P	P	00 21 38.6	-0.9
	baz=321						
JCT	Junction City	65.57	71	P	P	00 21 40.8	+0.4
	baz=318						
D56A	ZEC Mazanza, M	65.59	43	P	P	00 21 39.3	-1.1
	baz=322						
N48A	Decatur	65.72	54	P	P	00 21 40.4	-0.9
	baz=320						
M49A	Liberty Center	65.77	53	P	P	00 21 40.6	-0.9
	baz=320						
E56A	St. Veronique	65.88	44	P	P	00 21 40.7	-1.5
	baz=322						
H53A	Bobcaygeon	65.89	47	P	P	00 21 41.2	-1.0
	baz=321						
L50A	Kingsville	65.89	52	P	P	00 21 42.3	0.0
	baz=320						
D57A	Chemin Vers le	65.98	43	P	P	00 21 41.6	-1.2
	baz=323						
HFS	Hagfors	66.00	348	LR	LR	00 54 07.6	
	comp=Z,354nm,19.7s,baz=248,slow=39						
J52A	Paris	66.06	50	P	P	00 21 43.2	-0.2
	baz=321						
N49A	Columbus Grove	66.09	53	P	P	00 21 42.9	-0.6
	baz=320						
O48A	Farmland	66.12	55	P	P	00 21 42.7	-1.1
	baz=320						
LATQ	La Tuque	66.14	42	IAmb	IAmb	00 21 43.7	
	comp=Z,4.8nm,0.6s						
LATQ	La Tuque	66.14	42	P	P	00 21 43.0	-0.8
	baz=323						
OBN	Obninsk	66.17	334	eP	P	00 21 43.8	0.0
OBN				e		00 24 12.5	

OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
G55A	Calabogie	66.18	46	P	P	00 21 42.9	-1.2
	baz=322						
M50A	Fremont	66.27	52	P	P	00 21 44.4	-0.3
	baz=320						
D58A	Chemin du LacG	66.33	42	P	P	00 21 43.6	-1.4
	baz=323						
E57A	Chemin Saint G	66.36	44	P	P	00 21 43.7	-1.5
	baz=323						
X40A	Basin Creek Fa	66.49	64	P	P	00 21 46.1	-0.1
	baz=319						
H55A	Tweed	66.53	47	P	P	00 21 45.3	-1.0
	baz=322						
O49A	Covington	66.58	54	P	P	00 21 45.9	-0.8
	baz=320						
P48A	Milroy	66.59	55	P	P	00 21 45.5	-1.3
	baz=320,SNR=6.6						
N50A	Nevada	66.71	53	P	P	00 21 47.4	-0.1
	baz=321						
M51A	Elyria	66.74	52	P	P	00 21 46.8	-0.9
	baz=321						
E58A	La Victoria	66.75	43	P	P	00 21 46.6	-1.1
	baz=323						
D59A	Saint-Raymond	66.83	42	P	P	00 21 47.1	-1.0
	baz=324						
Q48A	North Vernon	66.85	56	P	P	00 21 47.8	-0.6
	baz=320						
P49A	Miami Univ. Ec	66.89	55	P	P	00 21 48.0	-0.7
	baz=320						
H56A	Elgin	66.90	46	P	P	00 21 47.5	-1.2
	baz=322						
O50A	Cable	66.96	54	P	P	00 21 49.0	-0.2
	baz=321						
N51A	Ashland	66.97	52	P	P	00 21 48.4	-0.8
	baz=321						
M52A	Chesterland	66.97	51	P	P	00 21 48.8	-0.4
	baz=321						
G57A	Newington	67.04	45	P	P	00 21 47.9	-1.6
	baz=323						
WCI	Wyandotte Cave	67.10	57	P	P	00 21 50.2	+0.2
WCI	Wyandotte Cave	67.10	57	P	P	00 21 50.2	+0.2
WCI				pmax	pmax		
	comp=Z,11nm,0.6s						
WCI	Wyandotte Cave	67.10	57	P	P	00 21 49.9	-0.2
	baz=320						
L53A	Girard	67.16	50	P	P	00 21 50.5	+0.1
	baz=321						
ACSO	Alum Creek Sta	67.20	53	P	P	00 21 50.9	+0.2
	baz=321						
Q49A	Aurora	67.21	55	P	P	00 21 50.3	-0.4
	baz=320						
J55A	Hilton	67.26	48	P	P	00 21 50.3	-0.6
	baz=322						
D60A	Saint Jean D'O	67.27	41	P	P	00 21 50.0	-1.0
	baz=324						
P50A	Jamestown	67.28	54	P	P	00 21 50.6	-0.6
	baz=321						
D61A	St Aubert, Com	67.33	41	P	P	00 21 50.4	-0.9
	baz=325						
M53A	WI Miller and	67.37	51	P	P	00 21 51.4	-0.3
	baz=321,SNR=13						
F59A	Saint Guilaume	67.37	43	P	P	00 21 51.2	-0.4
	baz=324						
K54A	Basiliko Farm,	67.38	49	P	P	00 21 50.6	-1.1
	baz=322						
N52A	McGinn's Farm,	67.38	52	P	P	00 21 51.1	-0.7
	baz=321						
L54A	Sinclairville	67.38	49	P	P	00 21 51.4	-0.4
	baz=322						
O51A	Pataskala	67.45	53	P	P	00 21 52.0	-0.3
	baz=321						
E60A	Ste Agathe de	67.50	42	P	P	00 21 51.5	-1.0
	baz=324						
K55A	Perry	67.57	48	P	P	00 21 52.3	-0.7
	baz=322						
LONY	Lake Ozonia	67.60	45	P	P	00 21 51.3	-1.8
	baz=323						
R49A	Shelbyville	67.62	56	P	P	00 21 53.3	-0.1
	baz=320						
T47A	Sharon Grove	67.63	58	IAmb	IAmb	00 21 54.3	
	comp=Z,8.4nm,0.8s						
J56A	Wolcott	67.68	47	P	P	00 21 52.5	-1.1
	baz=323						
Q50A	Georgetown	67.79	55	P	P	00 21 54.5	+0.1
	baz=321						
N53A	Lisbon	67.79	51	P	P	00 21 54.4	0.0
	baz=322						
M54A	Oil Creek Stat	67.79	50	P	P	00 21 54.2	-0.2
	baz=322						
G59A	Clarenceville	67.83	44	P	P	00 21 53.0	-1.5
	baz=324						
L55A	Hinsdale	67.83	49	P	P	00 21 54.7	0.0
	baz=322						
E61A	Lac Etchemin	67.84	41	P	P	00 21 53.7	-0.9
	baz=325						
O52A	Adamsville	67.85	53	P	P	00 21 54.3	-0.5
	baz=321,SNR=5.6						
D62A	Allapoint, All	67.87	40	P	P	00 21 54.2	-0.6
D62A	Allapoint, All	67.87	40	P	P	00 21 54.1	-0.6
	baz=325						
WVT	Waverly	67.91	59	P	P	00 21 54.1	-1.1
WVT				IAmb	IAmb	00 21 55.9	
	comp=Z,7.4nm,0.8s						
WVT	Waverly	67.91	59	P	P	00 21 54.1	-1.1
WVT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WVT	Waverly	67.91	59	P	P	00 21 55.2	0.0
	baz=320						
K56A	Middlesex	67.93	48	P	P	00 21 54.7	-0.6
	baz=322						
S49A	Springfield	67.95	56	P	P	00 21 55.3	-0.2
	baz=321						
Q51A	Peebles	67.96	54	P	P	00 21 54.8	-0.7
	baz=321						
H59A	Cadyville	67.96	44	P	P	00 21 54.2	-1.2
	baz=324						
F61A	St Evariste	68.01	42	P	P	00 21 55.1	-0.6
	baz=325						
O53A	New Philadelph	68.04	52	P	P	00 21 55.5	-0.5
	baz=322						
R50A	Paris	68.05	55	P	P	00 21 55.6	-0.4
	baz=321						
N54A	Moraine State	68.07	51	P	P	00 21 55.9	-0.2
	baz=322						
M55A	Ridgway	68.24	50	P	P	00 21 56.9	-0.3
	baz=322						
K57A	Scipio Center	68.26	47	P	P	00 21 56.5	-0.8
	baz=323						
L56A	Greenwood	68.26	48	P	P	00 21 57.0	-0.4
L56A	Greenwood	68.26	48	P	P	00 21 57.2	-0.2
	baz=322						
D63A	Stockholm	68.28	39	P	P	00 21 57.1	-0.2
	baz=326						
J58A	Remsen	68.31	46	P	P	00 21 56.9	-0.7
	baz=323						
OXF	Oxford	68.31	61	P	P	00 21 57.7	0.0
	baz=320						
T49A	Edmonton	68.34	57	IAmb	IAmb	00 21 58.4	
	comp=Z,6.4nm,0.7s						
T49A	Edmonton	68.34	57	P	P	00 21 58.0	+0.1
	baz=321						
R51A	Hillsboro	68.40	55	P	P	00 21 58.3	0.0
	baz=321						
S50A	Richmond	68.47	56	P	P	00 21 58.6	-0.2
	baz=321						
O54A	Avella	68.49	52	P	P	00 21 58.4	-0.4
	baz=322						
M56A	Emporium	68.50	49	P	P	00 21 55.4	-3.4
M56A				IAmb	IAmb	00 22 00.1	
	comp=Z,4.9nm,0.8s						
M56A	Emporium	68.50	49	P	P	00 21 58.1	-0.7
	baz=322						
J59A	Piesco	68.56	46	P	P	00 21 57.8	-1.4
	baz=324						
I59A	Olmsteadville	68.57	45	P	P	00 21 57.9	-1.3
	baz=324						
K58A	Earlville	68.62	47	P	P	00 21 58.6	-1.0
	baz=323						
PLAL	Pickwick Lake	68.66	60	P	P	00 21 59.5	-0.4
U49A	Red Boiling Sp	68.68	58	P	P	00 22 00.0	0.0
	baz=321						
N55A	Marion Center	68.68	50	P	P	00 21 59.6	-0.4
	baz=322						
L57A	Andrews Acres	68.69	48	P	P	00 21 59.9	-0.2
	baz=323						
T50A	Nancy	68.76	57	P	P	00 22 00.3	-0.3
	baz=321,SNR=5.7						

Code	Station	Δ°	AZ°	Op	ISC	Time	Res
H61A	Lyndonville	68.79	43	P	P	00 21 60.0	-0.6
	baz=324						
G62A	West of Eustis	68.81	42	P	P	00 21 59.8	-0.9
	baz=325						
R52A	Catlettsburg	68.84	54	P	P	00 22 00.4	-0.6
	baz=321						
N56A	West Decatur	68.89	50	P	P	00 22 01.3	-0.1
	baz=322						
E64A	Bridgewater	68.89	40	P	P	00 22 00.3	-0.9
	baz=326						
P54A	Burton	68.90	52	P	P	00 22 01.4	0.0
	baz=322						
S51A	Beattyville	68.91	55	P	P	00 22 01.2	-0.3
	baz=321						
BINY	Binghamton	68.92	47	P	P	00 22 00.6	-0.9
	baz=323						
K59A	Cooperstown	68.96	46	P	P	00 22 00.8	-0.9
	baz=324						
Q53A	Leroy	68.98	53	P	P	00 22 01.6	-0.2
	baz=322						
O55A	Ligonier	68.98	51	P	P	00 22 01.4	-0.5
	baz=322						
F63A	Nahmakanta, Br	68.99	41	P	P	00 21 58.9	-2.9
F63A				IAmb	IAmb	00 22 02.7	
	comp=Z,8.8nm,0.9s						
LBNH	Lisbon	69.03	44	P	P	00 22 01.0	-1.1
	baz=325						
H62A	Milan	69.08	43	P	P	00 22 01.2	-1.2
H62A	Milan	69.08	43	P	P	00 22 01.9	-0.5
	baz=325						
M57A	Sunshine Farm,	69.09	49	P	P	00 22 00.5	-2.0
M57A				IAmb	IAmb	00 22 13.8	
	comp=Z,10nm,1.1s						
M57A	Sunshine Farm,	69.09	49	P	P	00 22 02.3	-0.3
	baz=323						
F64A	Sherman	69.15	40	P	P	00 22 01.9	-0.9
F64A				IAmb	IAmb	00 22 12.0	
	comp=Z,8.0nm,1.1s						
R53A	Hurricane	69.18	54	P	P	00 22 02.8	-0.3
	baz=322						
V49A	McMinnville	69.19	58	P	P	00 22 02.8	-0.4
	baz=321						
J60A	Lant Hill Farm	69.21	45	P	P	00 22 02.4	-0.8
	baz=324						
Q54A	Coxs Mills	69.22	53	P	P	00 22 03.2	-0.1
	baz=322						
U50A	Jamestown	69.23	57	P	P	00 22 02.2	-1.2
	baz=321						
G63A	Kingsbury	69.27	42	P	P	00 22 02.9	-0.7
	baz=326						
O56A	Blue Knob Stat	69.28	50	P	P	00 22 03.0	-0.7
O56A	Blue Knob Stat	69.28	50	P	P	00 22 03.4	-0.4
	baz=323						
P55A	Reedsville	69.28	52	P	P	00 22 03.2	-0.6
	baz=322						
SSPA	Standing Stone	69.30	50	P	P	00 22 03.5	-0.4
SSPA	Standing Stone	69.30	50	P	P	00 22 03.6	-0.2
	baz=323						
L59A	Walton	69.35	47	P	P	00 22 03.3	-0.8
L59A	Walton	69.35	47	P	P	00 22 03.0	-1.2
	baz=324						
N57A	Milroy	69.36	49	P	P	00 22 03.7	-0.5
	baz=323						
G64A	Maxfield	69.50	41	P	P	00 22 04.5	-0.4
	baz=326						
W49A	Belvidere	69.50	59	P	P	00 22 04.8	-0.4
	baz=321						
Q55A	Buckhannon	69.57	52	P	P	00 22 05.2	-0.3
	baz=322						
T52A	Hallie	69.63	55	P	P	00 22 06.0	0.0
	baz=322						
V50A	Pikevile	69.67	58	P	P	00 22 05.8	-0.4
	baz=321						
U51A	La Follette	69.68	56	P	P	00 22 06.0	-0.3
	baz=321						
N58A	Sunbury	69.68	49	P	P	00 22 05.8	-0.3
N58A				IAmb	IAmb	00 22 10.3	
	comp=Z,4.1nm,0.8s						
I63A	Otisfield	69.75	43	P	P	00 22 05.6	-0.9
I63A				IAmb	IAmb	00 22 14.2	
	comp=Z,11nm,1.1s						
P56A	Dayton Farm, R	69.76	51	P	P	00 22 06.4	-0.3
	baz=323						
O57A	Amberson	69.76	50	P	P	00 22 06.4	-0.2
	baz=323						
TZTN	Tazewell	69.78	56	P	P	00 22 06.5	-0.4
TZTN				IAmb	IAmb	00 22 19.5	
	comp=Z,6.6nm,0.9s						
TZTN	Tazewell	69.78	56	P	P	00 22 06.4	-0.4
	baz=322						
H64A	Troy	69.81	42	P	P	00 22 06.4	-0.5
	baz=326						
W50A	Signal Mountai	69.93	58	P	P	00 22 07.9	0.0
	baz=321						
T53A	Wise	69.95	55	P	P	00 22 08.4	+0.4
	baz=322						
V51A	Loudon	69.95	57	P	P	00 22 08.2	+0.3
	baz=321						
U52A	Thorn Hill	69.99	56	P	P	00 22 08.0	-0.2
	baz=322						
N59A	State Game Lan	70.05	48	P	P	00 22 07.8	-0.6
	baz=324						
R55A	Marlinton	70.11	53	P	P	00 22 08.5	-0.5
	baz=322						
KBL	Kabul	70.12	301	P	P	00 22 08.8	-0.4
KBL	Kabul	70.12	301	P	P	00 22 08.8	-0.4
KBL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
H65A	Eastbrook	70.16	41	P	P	00 22 08.2	-0.8
	baz=326						
P57A	Homestead Farm	70.16	50	P	P	00 22 08.7	-0.4
	baz=323						
W51A	Cleveland	70.25	58	P	P	00 22 09.3	-0.4
	baz=321						
R56A	Bull Pasture M	70.36	52	P	P	00 22 09.7	-0.8
	baz=323						
T54A	Tazewell	70.36	54	P	P	00 22 10.6	+0.1
	baz=322						
U53A	Fall Branch	70.41	55	P	P	00 22 11.0	+0.3
	baz=322						
LMN	Caledonia Moun	70.52	38	P	P	00 22 10.7	-0.5
LMN				IAmb	IAmb	00 22 12.0	
	comp=Z,8.6nm,0.9s						
U54A	Nelsons Funny	70.67	55	P	P	00 22 12.4	+0.1
U54A	Nelsons Funny	70.67	55	P	P	00 22 11.9	-0.5
	baz=322						
W52A	Murphy	70.72	57	P	P	00 22 12.7	0.0
	baz=322						
Q58A	Fox Den Farm,	70.75	51	P	P	00 22 12.3	-0.4
	baz=323						
P59A	Jarrettsville	70.79	49	P	P	00 22 12.7	-0.3
	baz=324						
BLA	Blacksburg	70.81	53	P	P	00 22 12.5	-0.7
BLA	Blacksburg	70.81	53	P	P	00 22 12.5	-0.7
BLA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BLA	Blacksburg	70.81	53	P	P	00 22 13.0	-0.2
	baz=322						
V53A	Saluda	70.84	56	P	P	00 22 12.7	-0.7
V53A				IAmb	IAmb	00 22 21.6	
	comp=Z,5.4nm,1.1s						
V53A	Saluda	70.84	56	P	P	00 22 13.2	-0.2
	baz=322						
S56A	Natural Bridge	70.86	53	P	P	00 22 13.4	0.0
	baz=323						
R57A	Stanardsville	70.86	52	P	P	00 22 13.5	+0.1
	baz=323						
U55A	TA2, Sparta	71.06	54	P	P	00 22 14.8	0.0
	baz=322						
Y51A	Rockmart	71.07	59	P	P	00 22 14.1	-0.7
	baz=322						
X52A	Dahlonega	71.12	58	P	P	00 22 14.8	-0.3
	baz=322						
Z50A	Ashland	71.12	60	P	P	00 22 14.5	-0.6
	baz=321						
V54A	Nebo	71.19	55	P	P	00 22 15.3	-0.1
	baz=322						
Q59A	Harwood	71.29	50	P	P	00 22 15.3	-0.7
	baz=324						
X53A	Estanollee	71.50	57	P	P	00 22 17.3	0.0
	baz=322						
U56A	King	71.51	54	P	P	00 22 16.7	-0.7
	baz=323						
T57A	Hurt	71.55	53	P	P	00 22 17.1	-0.5
T57A				IAmb	IAmb	00 22 17.9	
	comp=Z,6.3nm,0.7s						
T57A	Hurt	71.55	53	P	P	00 22 17.2	-0.4
	baz=323						
W54A	Cherokee Point	71.61	56	P	P	00 22 17.7	-0.3
	baz=322						
Y52A	Lilburn	71.62	58	P	P	00 22 17.6	-0.5
	baz=322						
R60A	Leonardtown, M	71.80	50	P	P	00 22 17.7	-1.4
	baz=324						
Y53A	Monroe	71.87	58	P	P	00 22 19.2	-0.3
	baz=322						
V56A	Mocksville	71.88	54	P	P	00 22 19.4	-0.2
	baz=323						
T58A	Grand View Acr	71.94	52	P	P	00 22 19.2	-0.7
	baz=323						
X54A	Belton	71.94	57	P	P	00 22 20.2	+0.2
	baz=322						
Z52A	Williamson	71.96	59	P	P	00 22 19.8	-0.3
	baz=322						
KMSC	Kings Mountain	72.00	55	P	P	00 22 20.0	-0.3
	baz=323						
AKASG	Malin Array Be	72.06	336	P	P	00 22 20.7	+0.3
	comp=Z,0.5nm,0.3s,baz=25,slow=6.2,SNR=3.1						
ESK	Eskdalemuir	72.14	357	P	P	00 22 20.8	0.0
ESK				IAmb	IAmb	00 22 23.2	
	comp=Z,11nm,1.1s						
ESK	Eskdalemuir	72.14	357	P	P	00 22 20.8	0.0
ESK				pmax	pmax		
	comp=Z,11nm,1.2s						
Y54A	Tignall	72.32	57	P	P	00 22 22.3	0.0
	baz=322						
Z53A	Monticello	72.33	58	P	P	00 22 22.1	-0.2
	baz=322						
U58A	Oxford	72.37	53	P	P	00 22 21.4	-1.1
	baz=323						
W56A	Indian Trail	72.38	55	P	P	00 22 21.9	-0.6
	baz=323						
X55A	Gracelyn & Ava	72.38	56	P	P	00 22 22.4	-0.1
	baz=323						
T59A	Double "B" Far	72.38	52	P	P	00 22 21.9	-0.7
	baz=324						
Y55A	Saluda	72.68	57	P	P	00 22 24.9	+0.4
	baz=323						
Z54A	Sparta	72.74	58	P	P	00 22 24.6	-0.2
	baz=322						
GEYT	Alibeck	72.80	311	P	P	00 22 26.1	+0.9
	comp=Z,1.6nm,0.9s,baz=108,slow=3.3,SNR=6.1						
V59A	Middlesex	73.02	53	P	P	00 22 25.7	-0.7
	baz=324						
W58A	Raeford	73.13	54	P	P	00 22 27.0	-0.1
	baz=323						
155A	Kite	73.42	58	P	P	00 22 29.3	+0.5
	baz=323						
Z57A	Bowman	73.78	56	P	P	00 22 31.1	+0.2
	baz=323						
W60A	Pink Hill	73.85	53	P	P	00 22 31.4	+0.1
	baz=324						
Y59A	Loris	74.14	54	P	P	00 22 33.5	+0.6
	baz=324						
KBZ	Khabaz	74.18	324	LR	LR	00 58 12.6	
	comp=Z,134nm,22.0s,baz=302,slow=38						
CLL	Collm	74.68	346	eP	P	00 22 36.0	+0.1
CLL	Collm	74.68	346	eP	P	00 22 36.0	+0.1
BRG	Berggiesshubel	74.97	346	ePKP	P	00 22 37.7	+0.2
	comp=Z,3.2nm,0.7s						
BRG	Berggiesshubel	74.97	346	eP	P	00 22 37.7	+0.2
BRG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DPC	Dobruska-Polom	75.09	344	eP	P	00 22 39.3	+1.0
DPC	Dobruska-Polom	75.09	344	eP	P	00 22 39.3	+1.0
TBLG	Delisi	75.23	322	IAmb	IAmb	00 22 41.5	
	comp=Z,5.6nm,0.7s						
KOLS	Kolonicke sedl	75.32	340	eP	P	00 22 40.8	+1.2
KOLS	Kolonicke sedl	75.32	340	eP	P	00 22 40.8	+1.2
PRU	Pruhonice	75.73	345	eP	P	00 22 42.6	+0.7
PRU	Pruhonice	75.73	345	eP	P	00 22 42.6	+0.7
GOPC	GO Pecny, Ondr	75.77	345	eP	P	00 22 42.4	+0.2
GOPC	GO Pecny, Ondr	75.77	345	eP	P	00 22 42.4	+0.2
BUR08	Bucovina Ar. S	75.88	337	IAmb	IAmb	00 22 47.9	
	comp=Z,5.2nm,1.0s						
BURAR	Bucovina Array	75.91	337	P	P	00 22 42.7	-0.4
MEM	Membach	76.22	351	P	P	00 22 45.1	+0.4
MEM				PcP	sP	00 22 55.2	-0.1
VYHS	Vyhne	76.43	342	eP	P	00 22 46.9	+1.0
VYHS	Vyhne	76.43	342	eP	P	00 22 46.9	+1.0
SMOL	Smolenice	76.67	343	eP	P	00 22 48.7	+1.4
SMOL	Smolenice	76.67	343	eP	P	00 22 48.7	+1.4
KHC	Kasperske Hory	76.72	345	eP	P	00 22 47.6	0.0
KHC	Kasperske Hory	76.72	345	⇑iP	P	00 22 48.0	+0.4
KHC				pmax	pmax		
	comp=Z,14nm,1.1s						
GERES	GERESS Array B	76.97	345	P	P	00 22 49.4	+0.3
	comp=Z,2.7nm,0.6s,baz=30,slow=5.3,SNR=24						
GERES	GERESS Array B	76.97	345	P	P	00 22 49.6	+0.5
GERES	GERESS Array B	76.97	345	P	P	00 22 49.6	+0.5
CONA	Conrad Observa	77.51	344	epP	P	00 22 53.4	+1.3
	comp=Z,8.8nm,1.3s,SNR=5.1						
ARSA	Arzberg	78.22	344	epP	P	00 22 58.0	+2.0
	comp=Z,2.4nm,0.7s						
KBA	Koelnbreinsper	78.75	345	epP	P	00 23 00.9	+1.8
	comp=Z,15nm,0.9s						
SOKA	Soboth	78.86	344	epP	P	00 23 01.3	+1.7
	comp=Z,5.4nm,0.8s						
SQTA	Sankt Quirin	78.93	346	epP	P	00 23 01.2	+1.2
	comp=Z,5.9nm,0.8s,SNR=4.1						
OBKA	Obir	79.11	344	eP	P	00 23 01.7	+0.6
	comp=Z,12nm,0.8s						
FETA	Feichten	79.19	347	epP	P	00 23 02.7	+1.1
	comp=Z,3.9nm,0.9s						
WRA	Warramunga Arr	79.33	215	P	P	00 23 02.7	+0.4
	comp=Z,1.9nm,0.6s,baz=30,slow=6.1,SNR=8.2						
061Z	Ochoppi	79.62	61	P	P	00 23 04.2	+0.2
	baz=324						
BRTR	Keskin Array B	80.88	328	P	P	00 23 11.6	+0.8
	comp=Z,1.1nm,0.8s,baz=63,slow=2.0,SNR=4.8						
ASAR	Alice Springs	82.92	214	P	P	00 23 22.2	+0.9
	comp=Z,1.7nm,0.7s,baz=17,slow=4.6,SNR=11						
ASAR	Alice Springs	82.92	214	P	P	00 23 22.5	+1.2
ASAR	Alice Springs	82.92	214	P	P	00 23 22.5	+1.2
ESDC	Sonseca Array	87.80	357	P	P	00 23 44.9	-0.9
	comp=Z,0.6nm,0.7s,baz=356,slow=5.0,SNR=3.4						
STKA	Stephens Creek	88.30	205	P	P	00 23 49.7	+1.9
	comp=Z,3.5nm,1.0s,baz=9.5,slow=6.1,SNR=3.0						

SOME **04** *00:22:24.4, 39.80N×75.87E, h10km*
NNC **04** *00:22:27.3±2.5, 39.90N×75.78E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=17.3km s-min=12.7km az=166.0*
KRNET **04** *00:22:30.4±0.1, 40.04N×75.84E, mb3.2*
ISC 04 00:22:24.5±1.9, 39.81N±0.08×75.87E±0.04, h10km, n41, σ1§56/64, 30C-10D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn	1.62	3	⇑iP	Pg	00 22 56.6	+0.9
	baz=4.0						
NRN				⇑iS	Sb	00 23 16.0	+0.6
	baz=4.0						
ARLS	Aral	2.36	331	⇑iP	Pg	00 23 09.6	-0.2
	baz=28						
ARLS				⇑iS	Sb	00 23 38.0	+1.5
	baz=28						
ULHL	Ulahol	2.45	6	⇑iP	Pg	00 23 10.8	-0.7
	baz=8.0						
ULHL				⇑iS	Sb	00 23 40.1	+1.0
	baz=8.0						
ULHL	Ulahol	2.45	6	P	Pg	00 23 12.0	+0.5
	SNR=12						
KDJ	Kajisay	2.52	23	⇑iP	Pg	00 23 12.0	-0.8
	baz=26						
KDJ				⇑iS	Sb	00 23 42.5	+1.4
	baz=26						
UCH	Uchtor	2.62	337	⇑iP	Pb	00 23 13.2	+1.3
	baz=36						
UCH				⇑iS	Sb	00 23 44.8	+0.5
	baz=36						
UCH	Uchtor	2.62	337	P	Pg	00 23 14.8	-0.1
	SNR=29						
ARSB	Arslanbob	2.67	305	⇑iP	Pg	00 23 15.0	-0.7
	baz=1.0						
ARSB				⇑iS	Sb	00 23 47.5	+2.1
	baz=1.0						
BOOM	Boomskoye usch	2.68	1	⇑iP	Pb	00 23 13.7	+1.1
	baz=2.0						
BOOM				⇑iS	Sb	00 23 45.5	-0.1
	baz=2.0						
AML	Almayashu	2.84	325	⇑eP	Pb	00 23 16.8	+1.2
	baz=23						
AML				⇑iS	Sb	00 23 50.4	-0.2
	baz=23						
AML	Almayashu	2.84	325	P	Pg	00 23 19.3	+0.3
	SNR=12						
KBK	Karagaybulak	2.93	347	⇓iP	Pb	00 23 17.2	+0.3
	baz=46						
KBK				⇓iS	Sb	00 23 51.2	-1.6
	baz=46						
KBK	Karagaybulak	2.93	347	P	Pg	00 23 20.8	+0.2
	SNR=7.5						
AAK	Ala-Archa	3.01	340	⇓iP	Pb	00 23 18.3	0.0
	baz=39						
AAK				⇓iS	Sb	00 23 53.5	-1.6
	baz=39						
AAK	Ala-Archa	3.01	340	P	Pb	00 23 20.1	+1.8
	SNR=7.0						
AAK	Ala-Archa	3.01	340	⇓Pg	Pb	00 23 19.4	+1.1
	4.2nm,0.5s						
AAK				⇓Lg	Lg	00 23 59.1	
	28nm,0.8s						
KST	Kastek	3.23	1	eP	Pg	00 23 24.7	-1.7
	9.2nm,0.3s						
KST				eS	Sg	00 24 07.9	-0.3
	21nm,0.5s						
KST	Kastek	3.23	1	Pg	Pg	00 23 26.6	+0.2
	9.2nm,0.3s						
KST				Lg	Lg	00 24 07.9	
	21nm,0.5s						
EKS2	Erkin-Say	3.26	332	⇑iP	Pb	00 23 22.0	-0.5
	baz=30						
EKS2				⇑iS	Sb	00 23 59.4	-2.8
	baz=30						
ANVS	Anan'yevo	3.26	24	⇑iP	Pb	00 23 22.4	-0.2
	baz=26						
ANVS				⇑iS	Sb	00 24 00.2	-2.3
	baz=26						
IZV	Izvestkoviy	3.27	10	eP	Pg	00 23 25.0	-2.2
	6.1nm,0.6s						
IZV				eS	Sg	00 24 08.6	-1.0
	23nm,0.5s						
IZV	Izvestkoviy	3.27	10	Pg	Pg	00 23 27.0	-0.2
	6.1nm,0.6s						
IZV				Lg	Lg	00 24 08.6	
	23nm,0.5s						
CHMS	Chumysh	3.29	346	⇑iP	Pb	00 23 22.3	-0.8
	baz=45						
CHMS				⇑iS	Sb	00 24 00.1	-3.1
	baz=45						
CHMS	Chumysh	3.29	346	⇑Pg	Pg	00 23 26.4	-1.3
	7.7nm,0.7s						
CHMS				⇓Lg	Lg	00 24 08.5	
	22nm,0.6s						
TNSS	Tian-Shan	3.32	14	eP	Pb	00 23 25.5	+1.7
	9.7nm,0.6s						
TNSS				eS	Sg	00 24 09.5	-1.8
	15nm,0.5s						
TNSS	Tian-Shan	3.32	14	Pg	Pg	00 23 27.7	-0.5
	9.7nm,0.6s						
TNSS				Lg	Lg	00 24 09.5	
	15nm,0.5s						
MTBS	Maitube	3.34	7	eP	Pg	00 23 26.6	-2.0
	5.1nm,0.4s						
MTBS				eS	Sg	00 24 11.1	-0.8
	16nm,0.4s						
MTBS	Maitube	3.34	7	Pg	Pg	00 23 28.4	-0.1
	5.1nm,0.4s						
MTBS				Lg	Lg	00 24 11.1	
	16nm,0.4s						
MDOK	Medeo	3.46	14	eP	Pb	00 23 28.2	+2.2
	39nm,0.7s						
MDOK				eS	Sg	00 24 14.1	-1.7
	32nm,0.9s						
MDOK	Medeo	3.46	14	⇑Pg	Pb	00 23 28.0	+1.9
	8.8nm,1.0s						
MDOK				⇑Lg	Lg	00 24 14.7	
	29nm,0.8s						
MDOK	Medeo	3.46	14	Pg	Pg	00 23 30.2	-0.7
	39nm,0.7s						
MDOK				Lg	Lg	00 24 14.1	
	32nm,0.9s						
MRKS	Merke	3.54	327	eP	Pb	00 23 29.6	+2.3
	5.4nm,0.4s						
MRKS				eS	Sg	00 24 16.7	-1.6
	10.0nm,0.5s						
MRKS	Merke	3.54	327	Pg	Pg	00 23 31.1	-1.3
	5.4nm,0.4s						
MRKS				Lg	Lg	00 24 15.5	
	10.0nm,0.5s						
USP	Ospenovka	3.60	344	⇓iP	Pb	00 23 26.3	-2.0
	baz=43						
USP				⇓iS	Sn	00 24 07.3	+4.2
	baz=43						
BTK	Batken	3.89	275	⇑eP	Pb	00 23 33.1	-0.2
	baz=72						
BTK				⇑iS	Sb	00 24 19.2	-1.3
	baz=72						
KUU	Kurty	4.09	5	eP	Pg	00 23 39.6	+2.9
	1.8nm,0.3s						
KUU				eS	Sg	00 24 33.9	-2.0
	8.4nm,0.7s						
KUU	Kurty	4.09	5	Pg	Pg	00 23 41.7	-1.3
	1.8nm,0.3s						
KUU				Lg	Lg	00 24 33.5	
	8.8nm,0.9s						
CHKK	Chushkaly	4.12	11	eP	Pg	00 23 40.5	-3.0
	1.5nm,0.3s						
CHKK				eS	Sg	00 24 35.3	-1.6
	11nm,0.5s						
CHKK	Chushkaly	4.12	11	Pg	Pg	00 23 42.3	-1.2
	1.5nm,0.3s						
CHKK				Lg	Lg	00 24 35.0	
	11nm,0.5s						
PDGK	Podgornoye	4.44	37	⇑Pg	Pb	00 23 43.8	+1.1
	15nm,1.5s						
PDGK				⇑Lg	Lg	00 24 46.5	
	22nm,0.8s						
KK31	Karatay Array	5.20	311	⇑Pg	Pb	00 23 56.8	+1.3
	1.8nm,0.7s						
KK31				⇓Lg	Lg	00 25 07.3	
	1.6nm,0.5s,baz=129,slow=30,SNR=4.9						

BJI **04** *00:27:02.2±0.0, 7.52S×128.37E, h5km, mB5.1/35, mb4.7/44, Ms4.8/16, Ms7 4.4/14*
IDC **04** *00:27:04.9±0.5, 7.22S×128.21E, h0km, mb4.8/17, mb1 4.8/20, mb1mx4.6/42, mbtmp4.8/20, ML4.3/3, MS3.8/11, Ms1 3.8/11, ms1mx3.5/48, Error ellipse: s-maj=22.6km s-min=12.1km az=88.0*
NEIC **04** *00:27:05.9±2.4, 7.20S±0.06×128.25E±0.06, h10km±1km, mb5.0/51, Error ellipse: s-maj=10.4km s-min=10.1km az=340.0*
DJA **04** *00:27:08.8±0.2, 7°S±1°×12°8E±°, h43km±4km, M4.9/32, mb5.0/32, mB5.5/11, MLv4.7/13, Mw(mB)5.0/11*
MOS **04** *00:27:08.1±0.9, 7.15S×128.21E, h33km, mb5.1/30, Error ellipse: s-maj=15.4km s-min=7.8km az=112.9*
KLM **04** *00:27:14.0, 7.08S×128.21E, h54km, mb5.0*
ISC 04 00:27:09.5±0.3, 7.23S±0.03×128.28E±0.04, h35km, n232, σ1§92/252, mb5.0/59, MS4.2/13, 7C-8D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.08	104	P	Pn	00 27 58.7	+3.0
SAUI	Saumlaki	3.08	104		Pn	00 27 55.4	-0.2
SAUI					Sn	00 28 29.8	-1.5
BNDI	Bandanaira	3.14	31	P	Pn	00 27 54.3	-2.1
BNDI				S	Sn	00 28 30.0	-2.7
AAI	Ambon	3.52	359	P	Pn	00 27 59.7	-2.1
AAI				S	Sn	00 28 36.5	-5.7
MSAI	Masohi	3.91	9	P	Pn	00 28 04.4	-2.7
MSAI				S	Sn	00 28 47.3	-4.6
NLAI	Namlea	4.14	343	P	Pn	00 28 10.6	+0.4
NLAI				S	Sn	00 28 53.4	-4.0
SOEI	Soe	4.70	237	P	Pn	00 28 19.2	+1.2
SOEI	Soe	4.70	237		Pn	00 28 17.4	-0.6
SANI	Sanana	5.63	336	P	Pn	00 28 30.1	-0.7
	0.2nm811nm48nm,1.0s						
SANI				S	Sn	00 29 29.4	-4.9
	0.2nm811nm48nm,1.0s						
FAKI	Fak Fak	5.83	43	P	Pn	00 28 32.6	-0.8
	0.3nm102nm,1.1s						
FAKI				S	Sn	00 29 37.0	-2.1
	0.3nm102nm,1.1s						
FAKI	Fak Fak	5.83	43		Pn	00 28 34.1	+0.7
MTN	Manton Dam	6.24	154	P	Pn	00 28 41.6	+2.5
	baz=6.4,SNR=27						

MTN Manton Dam 6.24 154 Pn 00 28 41.3 +2.1
KDI Kendari 6.51 300 P Pn 00 28 41.0 -1.8
0.2nm11μm56nm,1.0s
LBMI Labuha 6.60 353 P Pn 00 28 45.4 +1.4
0.5nm116nm,0.9s
LBMI S Sn 00 29 55.9 -2.2
0.5nm116nm,0.9s
KDU Kakadu 6.81 143 P Pn 00 28 48.6 +1.7
baz=6.9,SNR=24
SIJI Sorong 6.99 25 Pn Pn 00 28 49.7 +0.4
4.5nm,0.3s,baz=196,slow=18,SNR=5.5
SIJI Sn Sn 00 30 03.4 -4.3
baz=224,slow=22,SNR=3.9
SWI Sorong 6.99 25 P Pn 00 28 48.1 -1.3
0.4nm105nm,0.8s
SWI S Sn 00 30 03.8 -3.9
0.4nm105nm,0.8s
RKPI Ransiki, Papua 8.18 46 P Pn 00 29 05.8 +0.1
35μm181nm,0.9s
KNRA Kununurra 8.40 177 P Pn 00 29 09.7 +0.8
baz=8.5,SNR=31
KNRA Kununurra 8.40 177 Pn 00 29 10.0 +1.2
KNRA Sn 00 30 43.6 +1.1
PLAI Plampang 10.53 261 P Pn 00 29 38.0 +0.1
85nm,0.9s
FITZ Fitzroy Crossi 11.10 193 P Pn 00 29 43.9 -1.9
baz=11,SNR=13
FITZ Fitzroy Crossi 11.10 193 Pn Pn 00 29 43.4 -2.5
2.0nm,0.3s,baz=28,slow=11,SNR=20
FITZ Sn Sn 00 31 43.5 -5.3
1.6nm,0.3s,baz=263,slow=12,SNR=3.5
FITZ LR LR 00 34 32.0
comp=Z,676nm,20.9s,baz=42,slow=40
FITZ Fitzroy Crossi 11.10 193 Pn 00 29 43.9 -1.9
SMPI Sarmi 11.62 64 P Pn 00 29 53.0 0.0
50nm,1.0s
WB0 Warramunga Arr 13.80 155 Pn 00 30 19.5 -3.2
WB0 Sn 00 32 49.7 -5.1
WB8 Warramunga Arr 13.84 155 P Pn 00 30 20.3 -2.9
baz=14
WRAB Tennant Creek 13.93 156 Pn 00 30 21.7 -2.8
WRAB Sn 00 32 53.0 -5.0
WRAB Tennant Creek 13.93 156⇓iP Pn 00 30 22.5 -2.0
WRAB pmax pmax
comp=Z,47nm,1.0s
WRA Warramunga Arr 13.93 156 Pn Pn 00 30 21.1 -3.4
comp=Z,3.0nm,0.3s,baz=322,slow=14,SNR=65
WRA Sn Sn 00 32 51.4 -6.7
comp=Z,2.8nm,0.3s,baz=330,slow=22,SNR=10
WRA LR LR 00 36 11.4
comp=Z,671nm,19.2s,baz=330,slow=39
WRA Warramunga Arr 13.93 156 Pn Pn 00 30 21.0 -3.5
WB2 Warramunga Arr 13.94 156 Pn 00 30 22.6 -2.0
WB2 Sn Sn 00 32 54.9 -3.3
WR0 Warramunga Arr 14.03 155 Pn 00 30 22.8 -3.1
WR0 Sn 00 32 55.6 -4.8
SKMP Bagumbayan, Su 14.16 345 eP Pn 00 30 26.7 -1.0
DAV Davao City (W) 14.46 349 LR LR 00 36 46.5
comp=Z,219nm,20.0s,baz=165,slow=40
KCP Kidapawan 14.50 347⇓eP Pn 00 30 30.6 -1.7
PAGZ Pagadian 15.76 342 eP Pn 00 30 40.9 -8.0
COEN Coen 16.08 116 P P 00 30 58.4 +2.3
baz=16,SNR=9.7
COEN Coen 16.08 116 Pn 00 30 51.8 -1.3
PSA00 Pilbara Seismi 16.42 209 Pn 00 30 53.7 -3.6
PSA00 IAmb IAmb 00 31 01.9
comp=Z,79nm,0.8s
QIS Mount Isa 17.20 142 P Pn 00 31 06.2 -0.9
baz=17,SNR=16
AS31 Alice Springs 17.21 162 Pn 00 31 05.6 -1.7
ASAR Alice Springs 17.21 162 P Pn 00 31 05.5 -1.7
comp=Z,1.2nm,0.3s,baz=332,slow=8.7,SNR=48
ASAR S Sn 00 34 10.9 -6.9
comp=Z,0.9nm,0.3s,baz=332,slow=20,SNR=5.4
ASAR LR LR 00 38 12.2
comp=Z,387nm,19.4s,baz=323,slow=39
ASAR Alice Springs 17.21 162 Pn 00 31 05.8 -1.4
ASAR S Sn 00 34 17.1 -0.6
UGM Wanagama 17.62 267 P Pn 00 31 11.7 -0.7
KKM Kota Kinabalu 17.86 317 P Pn 00 31 14.9 -0.6
SBUM Sibu 18.70 300 P Pn 00 31 25.6 +0.1
SBUM Sibu 18.70 300 P Pn 00 31 27.0 +1.5
PMG Port Moresby 18.80 98 P Pn 00 31 27.7 +0.9
PMG IAmb IAmb 00 31 31.5
comp=Z,133nm,1.1s
PMG S Sn 00 34 51.9 -4.4
PMG Port Moresby 18.80 98 P Pn 00 31 27.7 +0.9
PMG S Sn 00 34 51.9 -4.4
PMG pmax pmax
comp=Z,133nm,1.2s
MTSU Mount Surprise 19.01 126 P Pn 00 31 30.2 +0.9
baz=19,SNR=5.0
KSM Kuching 19.91 295 P P 00 31 37.6 -0.7
KSM IAmb IAmb 00 31 54.1
comp=Z,64nm,1.2s
KSM Kuching 19.91 295 P Pn 00 31 40.0 -0.1
GIRL Giralia 20.44 220 P Pn 00 31 46.5 +0.3
GIRL IAmb IAmb 00 31 50.8
comp=Z,127nm,1.1s
MEEK Meekatharra 21.38 204 P P 00 31 54.6 +0.5
baz=22,SNR=23
FORT Forrest 23.43 180 P P 00 32 17.7 +2.1
baz=24,SNR=7.4
FORT Forrest 23.43 180 P P 00 32 17.0 +1.5
KRVT Keravat (AS076 23.80 84 LR LR 00 42 03.7
comp=Z,112nm,21.0s,baz=299,slow=38
MDSI Maura Dua 24.13 275 P P 00 32 13.3 -9.1
QLP Quilpie 24.51 144 P P 00 32 27.1 +1.5
baz=25,SNR=19
MORW Morawa 24.60 206 P P 00 32 27.8 +1.3
baz=25,SNR=14
MORW Morawa 24.60 206 P P 00 32 27.3 +0.8
KMBL Kambalda 24.75 193 P P 00 32 29.0 +1.2
baz=25,SNR=7.1
BLDU Ballidu 25.67 204 P P 00 32 36.7 +0.6
baz=26,SNR=26
KLBR Kellerberrin 26.15 201 P P 00 32 41.5 +0.9
baz=26,SNR=5.2
BBOO Buckleboo 26.46 165 P P 00 32 44.5 +1.2
baz=27,SNR=8.6
BBOO Buckleboo 26.46 165 P P 00 32 44.7 +1.4
BBOO IAmb IAmb 00 32 48.1
comp=Z,26nm,0.8s
MUN Mundaring 27.07 203 P P 00 32 49.5 +0.7
baz=27,SNR=5.2
RMQ Roma 27.31 137 P P 00 32 53.0 +1.9
baz=28,SNR=6.7
STKA Stephens Creek 27.48 155 P P 00 32 54.0 +1.4
baz=28,SNR=12
STKA Stephens Creek 27.48 155 P P 00 32 53.9 +1.4
comp=Z,31nm,0.8s,baz=322,slow=9.4,SNR=33
STKA LR LR 00 44 38.2
comp=Z,351nm,19.0s,baz=327,slow=38
STKA Stephens Creek 27.48 155 P P 00 32 54.0 +1.4
STKA Stephens Creek 27.48 155 P P 00 32 54.0 +1.4
STKA pmax pmax
comp=Z,7.0nm,0.9s
NWAO Narrogin (SRO) 27.55 200 P P 00 32 53.8 +0.7
baz=28,SNR=7.9
NWAO Narrogin (SRO) 27.55 200 P P 00 32 53.8 +0.7
comp=Z,52nm,1.1s,baz=24,slow=7.5,SNR=12
NWAO Narrogin (SRO) 27.55 200 P P 00 32 53.0 -0.1
NWAO IAmb IAmb 00 32 57.6
comp=Z,38nm,0.9s
NWAO Narrogin (SRO) 27.55 200 P P 00 32 52.7 -0.4
NWAO IAmb IAmb 00 32 57.6
comp=Z,30nm,0.9s
NWAO Narrogin (SRO) 27.55 200 P P 00 32 53.0 -0.1
NWAO pmax pmax
comp=Z,38nm,0.9s
HTT Hallett 27.87 161 P P 00 32 57.7 +1.7
baz=28,SNR=7.0
JRMM Jerantut 28.02 292 P P 00 32 59.0 +1.4
CMSA Cobar Meteorol 29.14 148 P P 00 33 09.1 +1.8
baz=29,SNR=28
IPM Ipoh 29.59 292 P P 00 33 13.0 +1.5
KULM Kulim 30.25 294 P P 00 33 17.1 -0.2
RPSI Rantau Prapat 30.91 288 P P 00 33 23.1 -0.1
PSI Prapat 30.95 288 P P 00 33 23.1 -0.6
comp=Z,72nm,0.9s,baz=134,slow=4.6,SNR=44
PSI Prapat 30.95 288 P P 00 33 23.1 -0.6
PSI pmax pmax
comp=Z,77nm,0.9s
YNG Young 32.71 148 P P 00 33 41.0 +2.3
baz=33,SNR=7.7
LHMI Lhok Sumawe 33.63 291 P P 00 33 46.0 -1.0

LHMI Lhok Sumawe 33.63 291 P P 00 33 46.5 -0.6
JOW Kunigami 33.86 360 P P 00 33 48.0 -0.8
TOO Toolangi 34.01 155 P P 00 33 52.6 +2.5
TOO IAmb IAmb 00 33 54.3
comp=Z,24nm,0.9s
TOO Toolangi 34.01 155 P P 00 33 52.6 +2.5
TOO pmax pmax
comp=Z,24nm,0.9s
CMAR Chiang Mai Arr 38.59 312 P P 00 34 29.8 +0.3
comp=Z,3.1nm,0.8s,baz=143,slow=7.4,SNR=12
CMAR PcP PcP 00 36 43.0 +1.4
comp=Z,1.2nm,0.3s,baz=204,slow=1.8,SNR=7.4
CMAR LR LR 00 51 58.7
comp=Z,76nm,19.0s,baz=320,slow=39
SANVU Saraoutou 38.97 106 P P 00 34 31.2 -1.5
GYA Guiyang 39.52 329⇓iP P 00 34 37.9 +0.7
GYA S S 00 40 41.7 +4.2
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,170nm,4.9s
GYA LR LR
comp=Z,270nm,17.9s
GYA LR LR
comp=Z,240nm,17.1s
NJ2 Nanjing 40.09 348 eP P 00 34 44.3 +2.6
NJ2 pmax pmax
comp=Z,15nm,1.0s
KSRS Korea Array 44.45 360 P P 00 35 18.6 +1.5
comp=Z,4.2nm,0.8s,baz=176,slow=10,SNR=8.1
KSRS LR LR 00 53 11.7
comp=Z,64nm,20.3s,baz=0.0,slow=35
MAJO Matsushiro 44.53 11⇑iP P 00 35 17.8 0.0
MAJO pmax pmax
comp=Z,15nm,0.9s
MAT Matsushiro 44.53 11 P P 00 35 17.6 -0.2
MAT S S 00 41 54.2 +3.1
MJAR Matsushiro Arr 44.53 11 P P 00 35 17.4 -0.4
comp=Z,13nm,0.9s,baz=189,slow=9.2,SNR=16
MJAR LR LR 00 52 16.9
comp=Z,63nm,21.6s,baz=260,slow=34
CD2 Chengdu 44.61 329⇓iP P 00 35 18.6 0.0
CD2 pmax pmax
comp=Z,10.0nm,0.7s
XAN Xi'an 44.96 337 P P 00 35 20.8 -0.6
XAN pP pP 00 35 27.6 -3.1
XAN pmax pmax
comp=Z,5.0nm,1.2s
XAN pmax pmax
comp=Z,280nm,6.7s
XAN Xi'an 44.96 337 P P 00 35 20.1 -1.2
XAN Xi'an 44.96 337 P P 00 35 20.1 -1.2
XAN pmax pmax
comp=Z,10.0nm,1.3s
LZH Lanzhou 48.83 334 ⇓P P 00 35 52.8 +1.1
LZH sP pP 00 35 57.0 -4.2
LZH sS sS 00 43 02.3 -6.8
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,130nm,5.2s
LZH LR LR
comp=Z,440nm,14.3s
LZH LR LR
comp=Z,370nm,14.5s
LZH LR LR
comp=Z,570nm,17.3s
MSHR Mys Shultsa 49.64 3⇑iP P 00 35 55.9 -1.7
HHC Hu-ho-hao-te 50.26 344 eP P 00 36 04.9 +2.5
HHC pmax pmax
comp=Z,20nm,5.5s
LSA Lhasa 51.20 318 P P 00 36 10.7 +0.5
LSA IAmb IAmb 00 36 13.5
comp=Z,15nm,0.9s
LSA Lhasa 51.20 318 P P 00 36 10.7 +0.5
LSA pmax pmax
comp=Z,15nm,0.9s
USRK Ussuriysk Ar. 51.30 3 P P 00 36 10.9 +0.9
comp=Z,6.1nm,0.8s,baz=186,slow=7.2,SNR=8.0
RPZ Rata Peaks 52.10 141 LR LR 00 57 55.2
comp=Z,274nm,21.0s,baz=333,slow=36
RPZ Rata Peaks 52.10 141 P P 00 36 18.0 +1.8
RPZ IAmb IAmb 00 36 19.8
comp=Z,26nm,0.9s
TAPN Taplejung 52.18 313 eP P 00 36 17.7 +0.3
RAMN Ramite 52.77 312 eP P 00 36 21.8 +0.1
GTA Gaotai 53.37 333 ⇑P P 00 36 26.0 +0.2
GTA pP pP 00 36 29.8 -5.5
GTA sP sP 00 36 33.1 -5.9
GTA pmax pmax
comp=Z,12nm,1.0s
GTA pmax pmax
comp=Z,150nm,5.1s
GTA LR LR
comp=Z,120nm,20.9s
GTA LR LR
comp=Z,230nm,20.0s
GTA LR LR
comp=Z,220nm,20.0s
GUN Gumba 53.84 312 eP P 00 36 30.4 +0.8
comp=Z,33nm,0.8s
PKI Pulchoki 53.99 312 eP P 00 36 31.4 +0.6
PKIN Phulchoki 54.01 312 eP P 00 36 31.6 +0.8
KKN Kakani 54.21 312 eP P 00 36 32.8 +0.6
DMN Daman 54.24 312 eP P 00 36 33.1 +0.6
GKN Gorkha 54.80 312 eP P 00 36 36.8 +0.4
HYB Hyderabad 54.90 297 iP P 00 36 35.0 -2.1
KOLN Koldanda 55.45 311 eP P 00 36 41.2 0.0
comp=Z,47nm,1.1s
DANN Dangsing 55.64 312 eP P 00 36 42.5 -0.1
comp=Z,40nm,1.0s
KLR Kul'dur 56.31 3 P P 00 36 47.3 +0.7
comp=Z,3.3nm,1.0s,baz=288,slow=2.9,SNR=7.2
KLR Kul'dur 56.31 3⇓iP P 00 36 47.7 +1.1
KLR pmax pmax
comp=Z,5.0nm,1.0s
ULN Ulaanbaatar 57.98 343 P P 00 36 59.6 +0.9
ULN IAmb IAmb 00 37 02.1
comp=Z,16nm,1.0s
ULN Ulaanbaatar 57.98 343 P P 00 36 59.6 +0.9
ULN pmax pmax
comp=Z,17nm,1.0s
SONM Songino Array 58.14 343 P P 00 37 00.7 +0.9
comp=Z,11nm,0.9s,baz=160,slow=5.8,SNR=48
SONM Songino Array 58.14 343 P P 00 37 00.5 +0.7
SONM Songino Array 58.14 343 P P 00 37 00.5 +0.7
SONM pmax pmax
comp=Z,11nm,1.0s
GRNR Gornyy 58.19 6⇑iP P 00 36 56.5 -3.4
GRNR pmax pmax
comp=Z,4.0nm,1.1s
GRNR MLR MLR
comp=Z,90nm,15.0s
ZAK Zakamensk 61.34 342 eP P 00 37 21.5 -0.2
ZAK pmax pmax
comp=Z,6.0nm,1.0s
TLY Talaya 62.38 343 eP P 00 37 29.6 +1.0
TLY pmax pmax
comp=Z,16nm,1.3s
WMQ Urumqi 62.67 328 eP P 00 37 31.8 +0.9
WMQ pP pP 00 37 37.0 -3.5
WMQ sP sP 00 37 38.8 -5.4
WMQ pmax pmax
comp=Z,16nm,1.3s
WMQ pmax pmax
comp=Z,130nm,5.7s
WMQ LR LR
comp=Z,430nm,29.0s
WMQ LR LR
comp=Z,830nm,29.1s
WMQ LR LR
comp=Z,210nm,28.9s
WMQ Urumqi 62.67 328 P P 00 37 31.7 +0.9
WMQ IAmb IAmb 00 37 33.7
comp=Z,19nm,1.0s
WMQ Urumqi 62.67 328 P P 00 37 31.7 +0.9
WMQ pmax pmax
comp=Z,19nm,1.0s
MOY Mondy 63.17 341 eP P 00 37 35.6 +1.6
MOY pmax pmax
comp=Z,33nm,1.7s
PETK Petropavlovsk- 65.09 19 P P 00 37 47.8 +1.5
comp=Z,14nm,0.9s,baz=201,slow=7.7,SNR=4.2
BOD Bodaibo 65.86 352 eP P 00 37 46.1 -5.2
BOD pmax pmax
comp=Z,14nm,1.4s

NIL Nilore 66.09 312 P P 00 37 52.4 -0.9
NIL IAmb IAmb 00 37 54.3
comp=Z,16nm,0.8s
NIL Nilore 66.09 312 P P 00 37 52.4 -0.9
NIL pmax pmax
comp=Z,16nm,0.8s
KSH Kashi 67.05 318 P P 00 38 00.7 +1.3
KSH PcP PcP 00 38 26.0 -1.6
KSH PP PP 00 40 31.4 +3.8
KSH S S 00 46 46.9 -4.2
KSH pmax pmax
comp=Z,22nm,0.9s
KSH pmax pmax
comp=Z,640nm,6.2s
KSH LR LR
comp=Z,190nm,4.5s
KSH LR LR
comp=Z,190nm,6.3s
KSH LR LR
comp=Z,470nm,7.3s
MK31 Makanchi Array 67.50 328 IAmb IAmb 00 38 03.7
comp=Z,14nm,0.8s
MKAR Makanchi Array 67.50 328 P P 00 38 02.6 +0.6
comp=Z,14nm,0.7s,baz=128,slow=7.8,SNR=162
MKAR Makanchi Array 67.50 328 P P 00 38 02.3 +0.3
MKAR Makanchi Array 67.50 328 iP P 00 38 02.5 +0.5
MKAR pmax pmax
comp=Z,14nm,0.7s
MAKZ Makanchi 67.67 328 P P 00 38 03.6 +0.5
MAKZ IAmb IAmb 00 38 04.7
comp=Z,12nm,0.8s
MAKZ Makanchi 67.67 328 P P 00 38 03.6 +0.5
MAKZ pmax pmax
comp=Z,12nm,0.8s
MA2 Magadan 68.97 12⇑iP P 00 38 11.2 +0.3
MA2 pmax pmax
comp=Z,10.0nm,1.2s
YAK Yakutsk 69.06 1 P P 00 38 12.1 +0.7
comp=Z,9.2nm,0.4s,baz=48,slow=0.8,SNR=7.9
YAK Yakutsk 69.06 1 IAmb IAmb 00 38 12.9
comp=Z,22nm,0.8s
YAK Yakutsk 69.06 1 eP P 00 38 10.7 -0.7
YAK e*PP pwP 00 38 24.0 -0.5
YAK e 00 38 32.4
YAK eS S 00 47 18.7 +4.8
YAK e*SS sS 00 47 37.5 +7.1
YAK pmax pmax
comp=Z,27nm,1.1s
YAK pmax pmax
comp=N,10.0nm,1.3s
YAK pmax pmax
comp=E,2.0nm,1.4s
YAK smax smax
comp=E,138nm,5.2s
YAK smax smax
comp=N,130nm,4.0s
YAK MLR MLR
comp=Z,249nm,25.0s
YAK MLR MLR
comp=N,149nm,28.0s
YAK MLR MLR
comp=E,53nm,19.0s
KBK Karagaybulak 69.35 321 P P 00 38 15.5 +1.6
SNR=5.6
UCH Uchtor 69.40 320 P P 00 38 16.2 +1.6
SNR=8.0
AAK Ala-Archa 69.63 321 P P 00 38 17.2 +1.6
SNR=9.2
AAK Ala-Archa 69.63 321 P P 00 38 17.1 +1.6
AAK Ala-Archa 69.63 321 P P 00 38 17.1 +1.6
AAK pmax pmax
comp=Z,20nm,0.9s
CHMS Chumysh 69.66 321 P P 00 38 15.6 0.0
SNR=5.6
AML Almayashu 69.88 320 P P 00 38 18.5 +1.1
SNR=9.1
ARSB Arslanbob 69.93 319 P P 00 38 17.6 +0.2
ARSB Arslanbob 69.93 319 P P 00 38 17.6 +0.2
ARSB pmax pmax
comp=Z,22nm,0.8s
USP Ospenovka 69.95 321 P P 00 38 18.4 +0.9
SNR=9.3
EKS2 Erkin-Say 70.09 320 P P 00 38 19.5 +1.1
SNR=8.8
BTK Batken 70.77 317 IAmb IAmb 00 38 26.5
comp=Z,9.5nm,1.1s
ZALV Zalesovo Beam 71.05 335 P P 00 38 23.8 0.0
comp=Z,36nm,1.0s,baz=123,slow=4.3,SNR=105
ZALV Zalesovo Beam 71.05 335 P P 00 38 23.4 -0.3
ZALV Zalesovo Beam 71.05 335 P P 00 38 23.4 -0.3
KURK Kurchatov 71.84 329 P P 00 38 29.2 +0.6
KURK Kurchatov 71.84 329c iP P 00 38 29.1 +0.6
KURK pmax pmax
comp=Z,52nm,1.0s
SEY Seymchan 72.36 11 P P 00 38 32.9 +1.5
comp=Z,10nm,1.0s,baz=189,slow=4.7,SNR=13
SEY Seymchan 72.36 11d iP P 00 38 33.0 +1.5
KKAR Karatay Array 72.40 319 P P 00 38 32.1 -0.1
KKAR Karatay Array 72.40 319 P P 00 38 32.1 -0.1
KKAR pmax pmax
comp=Z,9.0nm,1.1s
VNDA Vanda 72.43 173 LR LR 01 09 18.9
comp=Z,129nm,20.4s,baz=170,slow=35
VNDA Vanda 72.43 173 P P 00 38 32.8 +1.1
VNDA IAmb IAmb 00 38 35.0
comp=Z,27nm,1.4s
VNDA Vanda 72.43 173 P P 00 38 32.8 +1.1
VNDA pmax pmax
comp=Z,27nm,1.4s
MAW Mawson 74.11 201 P P 00 38 43.4 +1.6
comp=Z,3.7nm,0.9s,baz=22,slow=8.5,SNR=4.9
MAW Mawson 74.11 201 IAmb IAmb 00 38 44.1
comp=Z,2.9nm,1.1s
MAW Mawson 74.11 201 P P 00 38 43.4 +1.6
MAW pmax pmax
comp=Z,3.0nm,1.1s
BRVK Borovoye 77.43 328 P P 00 39 01.0 0.0
BRVK IAmb IAmb 00 39 02.8
comp=Z,28nm,1.2s
BRVK Borovoye 77.43 328 P P 00 39 01.0 0.0
BRVK pmax pmax
comp=Z,28nm,1.3s
TIXI Tiksi 78.72 0 P P 00 39 07.9 +0.1
comp=Z,6.4nm,0.8s,baz=169,slow=4.3,SNR=14
TIXI Tiksi 78.72 0 P P 00 39 07.7 -0.1
TIXI Tiksi 78.72 0d iP P 00 39 07.7 -0.1
TIXI pmax pmax
comp=Z,7.0nm,1.0s
GEYT Alibeck 79.07 311 P P 00 39 10.8 +0.3
comp=Z,1.6nm,0.8s,baz=147,slow=3.5,SNR=8.2
GEYT Alibeck 79.07 311 P P 00 39 08.8 -1.7
BILL Bilibino 79.73 14 eP P 00 39 12.3 -1.1
BILL e 00 39 20.7
BILL e 00 42 14.9
BILL pmax pmax
comp=Z,1.0nm,1.0s
ABKAR Akbulak array 81.64 322 P P 00 39 23.6 -0.4
SVE Sverdlovsk 84.09 329 eP P 00 39 37.0 +0.5
SVE pmax pmax
comp=Z,28nm,2.0s
ARU Arti 85.01 328 P P 00 39 40.5 -0.6
ARU IAmb IAmb 00 39 43.6
comp=Z,11nm,1.1s
ARU Arti 85.01 328c iP P 00 39 40.9 -0.3
ARU 00 42 55.7
ARU S S 00 50 05.0 -2.7
ARU SS SS 00 55 43.1 +1.7
ARU pmax pmax
comp=Z,15nm,1.3s
RAYN Ar Rayn 86.28 294 P P 00 39 45.9 -2.4
RAYN IAmb IAmb 00 39 49.5
comp=Z,9.3nm,0.9s
RAYN Ar Rayn 86.28 294 P P 00 39 45.9 -2.4
RAYN pmax pmax
comp=Z,9.0nm,0.9s
NVL N'lazarevskaya 91.63 197 eP P 00 40 12.3 -0.3
NVL eS SKSac 00 50 43.0 +0.7
NVL pmax pmax
comp=Z,8.0nm,0.7s
MLY Manley 92.71 25 IAmb IAmb 00 40 26.9
comp=Z,4.8nm,1.1s
DHY Denali Highway 93.83 27 IAmb IAmb 00 40 23.9
comp=Z,4.7nm,0.9s
CCB Clear Creek Bu 93.88 25 IAmb IAmb 00 40 23.3
comp=Z,5.4nm,0.9s
SOC Sochi 93.89 313 eP P 00 40 23.2 -0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOC				e		00 44 07.9	
SOC				eS	SKSac	00 50 57.9	+2.1
SOC				eSSS	SSS	01 01 29.2	
SOC				pmax	pmax		
	comp=Z,44nm,1.1s						
ILAR	Eielson Array	94.28	25	P	P	00 40 23.2	-1.7
	comp=Z,1.4nm,0.9s,baz=263,slow=4.4,SNR=13						
SNAA	Sanae	95.04	194	P	P	00 40 30.0	+1.6
SNAA	Sanae	95.04	194	P	P	00 40 28.8	+0.4
SNAA				IAmb	IAmb	00 40 31.2	
	comp=Z,7.7nm,1.0s						
SNAA	Sanae	95.04	194	P	P	00 40 28.8	+0.4
SNAA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BCAR	Beaver Creek A	96.36	27	P	P	00 40 34.8	+0.4
OBN	Obninsk	96.86	325	eP	P	00 40 36.9	+0.1
OBN				ePPP	PPP	00 46 36.1	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YKA	Yellowknife Ar	108.71	26	PKiKP	PKiKP	00 45 35.1	+0.6
	comp=Z,0.2nm,0.7s,baz=283,slow=1.7,SNR=5.1						
YKA				PKKPbc	PKKPbc	00 56 43.4	-2.5
	comp=Z,0.7nm,0.9s,baz=106,slow=2.9,SNR=7.0						
CLL	Collm	111.30	322	ePKiKP	PKiKP	00 45 38.0	-1.7
CLL	Collm	111.30	322	ePKiKP	PKiKP	00 45 38.0	-1.7
PDAR	Pinedale Array	118.26	45	PKP	PKP	00 45 54.1	+0.4
	comp=Z,0.7nm,0.8s,baz=214,slow=1.1,SNR=6.0						
PDAR	Pinedale Array	118.26	45		PKPdf	00 45 52.7	-1.0
RSSD	Black Hills	121.57	42		PKPdf	00 45 58.8	-1.2
RSSD	Black Hills	121.57	42	PKIKP	PKPdf	00 45 58.8	-1.2
ANMO	Albuquerque	122.81	53		PKPdf	00 46 02.6	0.0
ANMO	Albuquerque	122.81	53	PKIKP	PKPdf	00 46 02.6	0.0
ULM	Lac du Bonnet	123.56	32	PKP	PKiKP	00 46 03.6	+0.1
	comp=Z,2.1nm,0.9s,baz=270,slow=2.0,SNR=3.6						
TXAR	Lajitas Array	126.51	59	PKP	PKiKP	00 46 10.5	+0.3
	comp=Z,0.9nm,0.8s,baz=261,slow=1.2,SNR=9.2						
TXAR	Lajitas Array	126.51	59		PKiKP	00 46 10.8	+0.6
TXAR	Lajitas Array	126.51	59	PKIKP	PKiKP	00 46 10.8	+0.6
TORD	Torodi Ar. Bea	127.18	281	PKP	PKPdf	00 46 11.1	-0.1
	comp=Z,2.8nm,1.0s,baz=56,slow=2.6,SNR=11						
TORD	Torodi Ar. Bea	127.18	281		PKPdf	00 46 10.5	-0.7
LVC	Limon Verde	145.90	151		PKPdf	00 46 45.8	-0.2
LVC	Limon Verde	145.90	151	PKP2	PKPdf	00 46 45.8	-0.2
CPUP	Villa Florida	146.19	171	PKPbc	PKPab	00 46 47.8	+0.2
	comp=Z,6.9nm,0.9s,baz=201,slow=1.8,SNR=13						
CPUP	Villa Florida	146.19	171		PKPdf	00 46 46.1	+0.2
CPUP	Villa Florida	146.19	171	PKP2	PKPdf	00 46 46.1	+0.2
060A	Indiantown	146.43	51		PKiKP	00 46 49.6	-1.0
PB11	IPOC Station P	147.88	147		PKPbc	00 46 53.0	+0.9
MNMC	Minye Minye	148.43	146		PKPbc	00 46 55.4	+0.1
CBCY	The Bluff, Cay	150.09	63		PKPbc	00 46 57.4	-0.1
LPAZ	La Paz	151.54	145	PKPbc	PKiKP	00 47 02.6	+0.4
	comp=Z,3.9nm,0.7s,baz=60,slow=3.5,SNR=13						
BDFB	Brasilia	156.98	189	PKPab	PKPab	00 47 33.9	+1.4
	comp=Z,2.8nm,0.9s,baz=220,slow=1.4,SNR=3.9						

IDC 04 00:30:15.6±5.3, 8°.42S×130°.55E, h0km, mb4.0/5, mb1 4.0/5, mb1mx3.8/45, mbtmp3.9/5, Error ellipse: s-maj=130.5km s-min=75.2km az=3.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USRK	Ussuriysk Ar.	52.38	1	P	P	00 39 28.8	-0.7
	3.8nm,0.6s,baz=164,slow=7.5,SNR=2.4						
SONM	Songino Array	59.95	341	P	P	00 40 24.7	+0.9
	0.4nm,0.8s,baz=159,slow=8.6,SNR=2.5						
MKAR	Makanchi Array	69.70	327	P	P	00 41 26.8	-0.4
	0.7nm,0.6s,baz=127,slow=8.0,SNR=6.9						
ZALV	Zalesovo Beam	73.08	334	P	P	00 41 47.4	-0.1
	1.1nm,0.7s,baz=117,slow=5.0,SNR=4.2						
ILAR	Eielson Array	94.39	25	P	P	00 43 37.1	+0.1
	0.5nm,0.9s,baz=250,slow=5.4,SNR=4.0						

*BJI **04** 00:32:48.6±0.0, 7°.50S×128°.67E, h32km, mB5.1/18, mb4.7/23, Ms4.7/2, Ms7 4.4/5*
*IDC **04** 00:32:48.5±0.6, 7°.20S×128°.29E, h0km, mb4.5/12, mb1 4.6/16, mb1mx4.3/53, mbtmp4.5/16, ML4.5/4, MS3.4/1, Ms1 3.4/1, ms1mx2.8/47, Error ellipse: s-maj=31.5km s-min=13.9km az=78.0*
*NEIC **04** 00:32:49.1±2.3, 7°.19S±0°.06×128°.45E±0°.04, h10km±1km, mb4.6/22, Error ellipse: s-maj=10.8km s-min=6.6km az=170.0*
*DJA **04** 00:32:50.5±0.3, 7°S±3°×12°8E±°, h10km, M4.7/8, mb5.0/8, mB5.6/1, MLv4.5/6, Mw(mB)5.1/1*
ISC 04 00:32:53.1±0.4, 7°.30S±0°.05×128°.38E±0°.06, h35km, n75, σ1°66/77, mb4.5/19, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.98	103	Pn	Pn	00 33 35.9	-2.0
SAUI						00 33 48.8	
NLAI	Namlea	4.23	342	P	Pn	00 33 55.4	+0.3
SOEI	Soe	4.74	239	P	Pn	00 34 03.4	+1.1
SOEI	Soe	4.74	239		Pn	00 34 04.4	+2.1
SANI	Sanana	5.73	335	P	Pn	00 34 13.3	-2.5
	0.2nm47nm,0.7s						
FAKI	Fak Fak	5.81	42	P	Pn	00 34 14.9	-2.0
	0.3nm75nm,0.7s						
FAKI	Fak Fak	5.81	42	Pn	Pn	00 34 17.1	+0.2
MTN	Manton Dam	6.14	154		Pn	00 34 24.9	+3.5
LBMI	Labuha	6.67	352	P	Pn	00 34 27.4	-1.3
	0.2nm59nm,0.8s						
SIJI	Sorong	7.00	24	Pn	Pn	00 34 32.0	-1.3
	3.2nm,0.3s,baz=225,slow=17,SNR=4.0						
SIJI				LR	LR	00 37 27.5	
	comp=Z,313nm,20.3s,baz=348,slow=40						
SWI	Sorong	7.01	24	P	Pn	00 34 31.3	-2.0
	0.2nm62nm,0.6s						
RKPI	Ransiki, Papua	8.15	45	P	Pn	00 34 48.8	-0.2
	133nm,0.8s						
WSI	Waingapu	8.33	253	P	Pn	00 34 53.2	+1.7
KNRA	Kununurra	8.34	177		Pn	00 34 54.1	+2.6
KNRA					Sn	00 36 26.6	+2.1
FITZ	Fitzroy Crossi	11.06	194	Pn	Pn	00 35 28.8	-0.1
	3.4nm,0.3s,baz=40,slow=15,SNR=6.1						
FITZ				Sn	Sn	00 37 28.2	-3.2
	2.1nm,0.3s,baz=320,slow=19,SNR=3.0						
FITZ	Fitzroy Crossi	11.06	194	Pn	Pn	00 35 28.0	-0.9
WB0	Warramunga Arr	13.70	155	Pn	Pn	00 36 04.9	-0.1
WRAB	Tennant Creek	13.83	156	Pn	Pn	00 36 06.8	-0.1
WRAB					Sn	00 38 37.5	-1.7
WRA	Warramunga Arr	13.84	156	Pn	Pn	00 36 06.2	-0.6
	3.5nm,0.3s,baz=324,slow=14,SNR=10						
WRA				Sn	Sn	00 38 31.9	-7.4
	1.9nm,0.3s,baz=339,slow=24,SNR=5.9						
WRA	Warramunga Arr	13.84	156	Pn	Pn	00 36 05.7	-1.2
WB2	Warramunga Arr	13.84	156	Pn	Pn	00 36 06.4	-0.5
WB2					Sn	00 38 36.4	-3.1
WR0	Warramunga Arr	13.93	155	Pn	Pn	00 36 07.9	-0.3
COEN	Coen	15.97	116		Pn	00 36 36.2	+0.9
COEN				IAmb	IAmb	00 36 42.5	
	comp=Z,32nm,0.9s						
PSA00	Pilbara Seismi	16.41	209		Pn	00 36 38.3	-2.5
PSA00				IAmb	IAmb	00 36 47.8	
	comp=Z,29nm,0.8s						
PSA00	Pilbara Seismi	16.41	209	Pn	Pn	00 36 40.2	-0.6
PSA00				IAmb	IAmb	00 36 58.3	
	comp=Z,8.2nm,0.7s						
AS31	Alice Springs	17.12	163	Pn	Pn	00 36 48.4	-1.5
ASAR	Alice Springs	17.12	163	P	Pn	00 36 49.8	-0.1
	comp=Z,1.6nm,0.3s,baz=330,slow=8.7,SNR=11						
ASAR	Alice Springs	17.12	163		Pn	00 36 48.9	-0.9
KKM	Kota Kinabalu	17.97	317		Pn	00 36 58.8	-1.6
SBUM	Sibu	18.81	300	P	P	00 37 08.3	-1.6
KSM	Kuching	20.02	295	P	P	00 37 22.1	-1.1
KSM				IAmb	IAmb	00 37 39.4	
	comp=Z,22nm,1.1s						
GIRL	Giralia	20.45	220	P	P	00 37 28.8	+1.0
GIRL				IAmb	IAmb	00 37 32.5	
	comp=Z,79nm,1.1s						
MORW	Morawa	24.58	207	P	P	00 38 11.9	+1.9
STKA	Stephens Creek	27.39	155	P	P	00 38 38.2	+2.9
	comp=Z,6.7nm,0.7s,baz=324,slow=7.3,SNR=6.4						
STKA	Stephens Creek	27.39	155		P	00 38 35.6	+0.3
NWAO	Narrogin (SRO)	27.52	201	P	P	00 38 38.0	+1.5
	comp=Z,12nm,0.8s,baz=41,slow=6.1,SNR=5.9						
NWAO	Narrogin (SRO)	27.52	201	P	P	00 38 37.6	+1.1
NWAO				IAmb	IAmb	00 38 44.7	
	comp=Z,12nm,0.8s						
NWAO	Narrogin (SRO)	27.52	201	P	P	00 38 37.8	+1.3
NWAO				IAmb	IAmb	00 38 44.7	
	comp=Z,14nm,0.8s						
CMAR	Chiang Mai Arr	38.71	312	P	P	00 40 13.2	-0.9
	comp=Z,0.8nm,0.3s,baz=141,slow=7.3,SNR=5.7						
CMAR				PcP	PcP	00 42 26.9	+1.3
	comp=Z,0.6nm,0.4s,baz=182,slow=2.3,SNR=5.5						
NJ2	Nanjing	40.17	347	eP	P	00 40 27.9	+1.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSRS	Korea Array	44.52	359	P	P	00 41 01.7	+0.4
	comp=Z,2.8nm,0.8s,baz=163,slow=9.1,SNR=4.4						
CD2	Chengdu	44.72	329	P	P	00 41 03.3	+0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	50.35	343	eP	P	00 41 50.1	+3.3
HHC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,62nm,5.6s						
LSA	Lhasa	51.31	318	P	P	00 41 54.2	-0.5
LSA				IAmb	IAmb	00 41 55.4	
	comp=Z,4.1nm,0.7s						
USRK	Ussuriysk Ar.	51.36	3	P	P	00 41 54.6	+0.4
	comp=Z,3.3nm,0.7s,baz=155,slow=7.0,SNR=4.1						
USRK	Ussuriysk Ar.	51.36	3	P	P	00 41 53.5	-0.7
SONM	Songino Array	58.23	343	P	P	00 42 44.2	+0.1
	comp=Z,4.9nm,1.0s,baz=157,slow=7.9,SNR=4.6						
SONM	Songino Array	58.23	343	IAmb	IAmb	00 42 46.0	
	comp=Z,5.0nm,1.0s						
JOSI	Joshimath	60.03	311	IAML		00 44 32.9	
	comp=N,24nm,0.7s						
SMLA	Simla	62.09	311	IAML		00 44 46.7	
	comp=N,11nm,0.5s						
WMQ	Urumqi	62.78	328	eP	P	00 43 16.6	+1.5
WMQ				pmax	pmax		
	comp=N,10.0nm,0.9s						
WMQ				pmax	pmax		
	comp=N,97nm,4.7s						
WMQ				LR	LR		
	comp=N,330nm,29.3s						
DHRM	DHARAMSHALA	63.28	312	eP	P	00 43 17.8	-1.1
NIL	Nilore	66.20	312	P	P	00 43 36.5	-1.2
KSH	Kashi	67.16	318	P	P	00 43 43.3	-0.5
KSH				pP	pP	00 43 51.2	-2.7
KSH				pmax	pmax		
	comp=N,24nm,0.8s						
KSH				pmax	pmax		
	comp=N,300nm,5.1s						
MKAR	Makanchi Array	67.60	328	P	P	00 43 46.3	-0.1
	comp=N,5.2nm,0.7s,baz=136,slow=9.0,SNR=14						
AAK	Ala-Archa	69.74	321	P	P	00 44 00.4	+0.5
	comp=N,8.0nm,0.8s,baz=127,slow=5.4,SNR=18						
AAK	Ala-Archa	69.74	321	IAmb	IAmb	00 44 01.3	
	comp=Z,7.8nm,0.8s						
ARSB	Arslanbob	70.04	319	P	P	00 44 00.4	-1.4
ZALV	Zalesovo Beam	71.15	335	P	P	00 44 07.5	-0.6
	comp=Z,10.0nm,0.8s,baz=119,slow=3.7,SNR=7.1						
KKAR	Karatay Array	72.51	319	P	P	00 44 15.7	-0.8
HRA	Herat	74.87	308	IAmb	IAmb	00 44 33.1	
	comp=Z,1.3nm,0.8s						
GEYT	Alibeck	79.18	311	P	P	00 44 54.8	+0.1
	comp=Z,1.1nm,1.0s,baz=72,slow=9.8,SNR=3.7						
GEYT	Alibeck	79.18	311	IAmb	IAmb	00 45 02.1	
	comp=Z,1.6nm,1.0s						
QSPA	South Pole Qui	82.68	180	P	P	00 45 14.4	+1.4
	comp=Z,3.7nm,1.1s,baz=303,slow=3.9,SNR=3.6						
RAYN	Ar Rayn	86.39	294	P	P	00 45 32.3	-0.2
RAYN				IAmb	IAmb	00 45 33.1	
	comp=Z,4.8nm,1.1s						
PDAR	Pinedale Array	118.24	45	PKP	PKPdf	00 51 37.1	-0.1
	comp=Z,0.5nm,0.9s,baz=193,slow=3.7,SNR=3.4						
PDAR	Pinedale Array	118.24	45		PKPdf	00 51 36.2	-1.1
TXAR	Lajitas Array	126.46	59	PKP	PKiKP	00 51 54.1	+0.3
	comp=Z,0.7nm,0.8s,baz=251,slow=2.3,SNR=4.3						
TORD	Torodi Ar. Bea	127.29	281	PKP	PKPdf	00 51 55.0	-0.1
	comp=Z,1.2nm,1.0s,baz=59,slow=1.0,SNR=4.3						
CPUP	Villa Florida	146.12	171	PKPbc	PKPab	00 52 30.9	0.0
	comp=Z,2.8nm,0.9s,baz=196,slow=1.3,SNR=4.8						
CPUP	Villa Florida	146.12	171		PKPab	00 52 30.7	-0.2
GO01	Chusmiza	148.10	147		PKPbc	00 52 36.8	+0.1
MNMC	Minye Minye	148.32	146	PKPdf	PKPdf	00 52 32.5	-1.1
MNMC					PKiKP	00 52 38.1	-0.6
LPAZ	La Paz	151.43	145	PKPbc	PKiKP	00 52 46.7	+1.4
	comp=Z,1.5nm,0.5s,baz=312,slow=3.3,SNR=7.1						
LPAZ	La Paz	151.43	145	PKPdf	PKPdf	00 52 39.1	0.0
LPAZ					PKiKP	00 52 46.3	+0.7

TAP 04 00:33:09.6, 24°.38N×121°.83E, h65km±1km, ML2.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	Nanau	0.09	301	P	Pn	00 33 19.5	+0.2
	baz=302						
ENA				eS	Sn	00 33 27.2	+0.9
	baz=302						
TWC	Suao	0.23	5	P	Pn	00 33 20.2	+0.3
	baz=7.0						
TWC				eS	Sn	00 33 27.9	+0.7
	baz=7.0						
NACB	Ninganchiao	0.30	226	eP	Pn	00 33 20.5	+0.2
	baz=225						
NACB				eS	Sn	00 33 28.3	+0.3
	baz=225						
EOS1	EOS1	0.32	58	eP	Pn	00 33 21.5	+1.1
	baz=58						
EOS1				eS	Sn	00 33 30.5	+2.2
	baz=58						
ETLH	Xiulin Townshi	0.36	241	eP	Pn	00 33 21.1	+0.2
	baz=241						
ETLH				eS	Sn	00 33 28.9	-0.2
	baz=241						
NDT	Datong Townshi	0.36	308	P	Pn	00 33 21.1	+0.3
	baz=307						
NDT				S	Sn	00 33 29.7	+0.7
	baz=307						
TWD	Chiawan	0.37	215	eP	Pn	00 33 21.1	+0.2
	baz=214						
TWD				eS	Sn	00 33 28.9	-0.1
	baz=214						
TWE	Neicheng	0.37	337	eP	Pn	00 33 21.1	+0.3
	baz=338						
TWE				eS	Sn	00 33 29.5	+0.5
	baz=338						
NNSB	Datong	0.41	277	P	Pn	00 33 21.5	+0.2
	baz=276						
NNSB				eS	Sn	00 33 30.1	+0.3
	baz=276						
NNSH	Datong	0.41	277	eP	Pn	00 33 21.7	+0.4
	baz=276						
NNSH				eS	Sn	00 33 30.1	+0.3
	baz=276						
SLBB	Yuanshan	0.41	335	eP	Pn	00 33 21.6	+0.3
	baz=334						
SLBB				eS	Sn	00 33 30.6	+0.9
	baz=334						
NNS	Nan Shan	0.42	278	P	Pn	00 33 21.8	+0.4
	baz=277						
NNS				S	Sn	00 33 30.6	+0.6
	baz=277						
NWLT	Wulai	0.49	323	eP	Pn	00 33 22.1	0.0
	baz=323						
NWLT				eS	Sn	00 33 30.8	-0.3
	baz=323						
YHNB	Yeheng	0.50	305	eP	Pn	00 33 22.3	+0.2
	baz=304						
YHNB				eS	Sn	00 33 31.2	-0.1
	baz=304						
NSK	Sanguang	0.52	305	eP	Pn	00 33 22.1	-0.2
	baz=304						
NSK				eS	Sn	00 33 31.2	-0.3
	baz=304						
WHF	Hehuan Shan	0.56	246	eP	Pn	00 33 23.5	+0.3
	baz=245						
WHF				eS	Sn	00 33 33.4	+0.4
	baz=245						
TIPB	Shuangxi	0.59	360	P	Pn	00 33 23.5	+0.5
	baz=359						
TIPB				eS	Sn	00 33 33.0	+0.2
	baz=359						
TWT	Tachien	0.61	258	eS	Sn	00 33 34.5	+1.1
	baz=257						
TDCB	Techi	0.62	258	eP	Pn	00 33 23.9	+0.4
	baz=258						
TDCB				eS	Sn	00 33 34.3	+0.6
	baz=258						
ESL	Shilin	0.67	213	eP	Pn	00 33 23.3	-0.6
	baz=211						
ESL				eS	Sn	00 33 33.9	-0.5
	baz=211						
CHGB	Renai	0.68	242	eP	Pn	00 33 24.6	+0.4
	baz=241						
CHGB				eS	Sn	00 33 35.8	+1.0
	baz=241						
OWD	Renai	0.73	235	eP	Pn	00 33 25.1	+0.4
	baz=234						
OWD				eS	Sn	00 33 36.4	+0.5
	baz=234						
LIOB	Emei	0.79	290	eS	Sn	00 33 37.9	+1.1
	baz=289						
NSTT	Nanjuang	0.79	289	eS	Sn	00 33 38.1	+1.2
	baz=288						
TWS1	Kuangyinshan	0.81	333	eS	Sn	00 33 37.2	0.0
	baz=332						
WHP	Taichung City	0.81	263	eP	Pn	00 33 26.7	+1.1
	baz=262						
WHP				eS	Sn	00 33 39.0	+1.6
	baz=262						
VWDT	VWDT	0.89	225	eP	Pn	00 33 26.9	+0.5
	baz=225						
VWDT				eS	Sn	00 33 39.8	+1.0
	baz=225						
EHY	Hungye	0.99	208	eP	Pn	00 33 27.9	+0.1
	baz=207						
SSLB	Suanglung	0.99	234	eP	Pn	00 33 28.8	+1.0
	baz=233						
SSLB				eS	Sn	00 33 43.0	+1.6
	baz=233						
TYC	Yuchr	1.01	242	eP	Pn	00 33 29.3	+1.3
	baz=241						
TYC				eS	Sn	00 33 43.5	+1.9
	baz=241						
YULB	Yu-li	1.10	206	eP	Pn	00 33 28.8	-0.4
	baz=206						

*NIED **04** 00:35:00, 37°.80N×141°.60E, h50km, Mw4.6 Best double couple: M0 1.06000×10^16 NP1:φs20.00000°, δ71.00000°, λ90.00000°. NP2:φs200.00000°, δ19.00000°, λ91.00000°.*
*BJI **04** 00:35:29.3±0.0, 37°.75N×141°.61E, h56km, mB5.0/43, mb5.0/71, Ms4.3/26, Ms7 4.1/27*
*MOS **04** 00:35:29.4±1.1, 37°.87N×141°.60E, h40km, mb5.2/56, Error ellipse: s-maj=6.4km s-min=4.2km az=101.1*
*BGR **04** 00:35:30.6±0.0, 38°.12N×142°.01E, h33km, mb4.8*
*NEIC **04** 00:35:31.9±1.7, 37°.81N±0°.06×141°.7E±0°.1, h52km±5km, mb4.9/124, Error ellipse: s-maj=13.2km s-min=7.2km az=114.0*
*JMA **04** 00:35:31.3, 37°.78N×141°.63E, h48km±1km, M4.7*
JMA Felt II J1.
*IDC **04** 00:35:32.1±0.4, 37°.80N×141°.54E, h50km±3km, mb4.4/44, mb1 4.5/49, mb1mx4.4/70, mbtmp4.6/49, MS3.6/11, Ms1 3.7/11, ms1mx3.4/70, Error ellipse: s-maj=11.0km s-min=8.9km az=119.0*
ISC 04 00:35:31.1±0.4, 37°.81N±0°.04×141°.68E±0°.04, h46km±3km, h46km:pP-P, n456, σ1°30/469, mb4.8/169, MS4.0/10, 60C-32D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.53	342	⇓P	Pn	00 35 40.3	+0.6
JIKH				S	Sn	00 35 50.9	+0.4
JMST	Minamisoumatoc	0.63	262	⇓P	Pn	00 35 43.6	-0.1
JMST				S	Sn	00 35 52.2	-0.6
JIO	Ouri	0.69	338	⇓P	Pn	00 35 45.1	+0.5
JIO				S	Sn	00 35 54.4	+0.1
JMM	Marumori	0.70	275	⇓P	Pn	00 35 44.6	-0.1
JMM				S	Sn	00 35 53.9	-0.6
JFK	Kawauchi	0.78	235	P	Pn	00 35 45.3	-0.4
JFK				S	Sn	00 35 54.8	-1.5
JOU	Okura	0.97	305	⇓P	Pn	00 35 48.5	+0.2
JOU				S	Sn	00 36 01.2	+0.2
ONAJ	Iwakimizuishiy	0.99	225	⇓P	Pn	00 35 48.1	-0.6
ONAJ				eS	Sn	00 35 59.8	-1.8
JKMT	Kesennumamotoy	1.01	351	⇓P	Pn	00 35 49.5	+0.7
JKMT				eS	Sn	00 36 01.9	0.0
JFT	Otama	1.10	255	⇓P	Pn	00 35 50.4	+0.3
JFT				S	Sn	00 36 04.5	+0.3
JMK	Ichinoseki	1.20	343	⇓P	Pn	00 35 52.2	+0.9
JMK				S	Sn	00 36 07.0	+0.6
JYS	Shirataka	1.34	288	⇓P	Pn	00 35 53.6	+0.3
JYK	Kaneyama	1.52	317	⇓P	Pn	00 35 56.4	+0.7
JFY	Yanaizu	1.62	256	⇓P	Pn	00 35 57.4	+0.3
JOM	Ohasama	1.69	350	⇓P	Pn	00 35 59.1	+1.0
JOM				eS	Sn	00 36 20.0	+1.5
JYA	Atsumi	1.73	297	⇓P	Pn	00 35 59.1	+0.4
MJAR	Matsushiro Arr	3.04	246	P	Pn	00 36 17.8	+1.1
	5.4nm,0.3s,baz=69,slow=14,SNR=85						
MJAR				LR	LR	00 37 52.9	
	comp=Z,2μm,19.1s,baz=70,slow=48						
MJAR	Matsushiro Arr	3.04	246		Pn	00 36 17.6	+0.9
MJAR	Matsushiro Arr	3.04	246	P	Pn	00 36 17.6	+0.9
MAJO	Matsushiro	3.05	247		Pn	00 36 18.1	+1.3
MAJO	Matsushiro	3.05	247	d iP	Pn	00 36 17.9	+1.2
MAJO				pmax	pmax		
	comp=Z,113nm,0.7s						
MAT	Matsushiro	3.05	247	P	Pn	00 36 18.0	+1.3
MAT				S	Sn	00 36 56.8	+4.8
MJB9	Matsu-Tunnel	3.05	247		Pn	00 36 18.1	+1.3
ERM	Erimo	4.35	15		Pn	00 36 35.7	+1.1
ERM				Sn	Sn	00 37 19.6	-4.4
ERM	Erimo	4.35	15	d iP	Pn	00 36 35.4	+0.8
ERM				pmax	pmax		
	comp=Z,26nm,0.9s						
INU	Inuyama	4.48	238		Pn	00 36 38.5	+2.1
JHJ2	Mitsune	4.93	198		Pn	00 36 43.6	+1.1
JHJ2				Sn	Sn	00 37 36.8	-1.5
JHJ	Hachijo jima 2	4.93	199	P	Pn	00 36 43.3	+0.7
	comp=Z,52nm,0.3s,baz=142,slow=24,SNR=19						
JHJ				S	Sn	00 37 34.9	-3.5
	comp=Z,402nm,0.3s,baz=259,slow=21,SNR=16						
JHJ				LR	LR	00 38 49.0	
	comp=Z,534nm,21.2s,baz=37,slow=40						
ASAJ	Asahikawa	6.34	6	P	Pn	00 37 02.1	+0.3
	comp=Z,9.5nm,0.3s,baz=219,slow=9.5,SNR=24						
JKA	Kamikawa-asahi	6.34	6		Pn	00 37 02.1	+0.3
NMR	Nemuro--Hokkai	6.35	28	⇓iP	Pn	00 37 00.8	-1.2
NMR				iS	Sn	00 38 07.5	-5.7
GLVR	Golovnino	6.60	25	eP	Pn	00 37 04.7	-0.8
GLVR				eS	Sn	00 38 14.9	-4.4
GLVR				pmax	pmax		
	comp=Z,220nm,0.6s						
GLVR				pmax	pmax		
	comp=E,128nm,0.5s						
GLVR				pmax	pmax		
	comp=N,107nm,0.6s						
GRPR	Tuman	6.91	25	eP	Pn	00 37 08.5	-1.2
GRPR				eS	Sn	00 38 21.5	-5.5
GRPR				pmax	pmax		
	comp=Z,107nm,0.3s						
YUK	Yuzh-Kuril'sk	6.98	26	d iP	Pn	00 37 10.0	-0.6
YUK				iS	Sn	00 38 23.6	-5.0
YUK				pmax	pmax		
	comp=Z,166nm,0.3s						
YUK				pmax	pmax		
	comp=E,60nm,0.2s						
YUK				pmax	pmax		
	comp=N,81nm,0.3s						
YUK				MLR	MLR		
	comp=Z,125nm,14.0s						
SHO	Shikotan	7.20	31	eP	Pn	00 37 11.5	-2.2
SHO				eS	Sn	00 38 26.4	-7.8
SHO				pmax	pmax		
	comp=Z,24nm,0.2s						
TEY	Ternei	8.16	334	⇑eP	Pn	00 37 33.3	+6.5
TEY				pmax	pmax		
	comp=E,50nm,1.1s						
TEY				pmax	pmax		
	comp=N,100nm,0.7s						
TEY				pmax	pmax		
	comp=Z,70nm,1.0s						
KUR	Kuril'sk	8.75	30	P	Pn	00 37 34.2	-0.7
KUR				eS	Sn	00 39 07.5	-4.5
KUR				pmax	pmax		
	comp=Z,64nm,0.4s						
KUR				pmax	pmax		
	comp=N,31nm,0.2s						
KUR				pmax	pmax		
	comp=E,25nm,0.4s						

KUR smax smax
comp=E,198nm,0.6s
KUR smax smax
comp=N,159nm,0.5s
YSS Yuzh-Sakhalins 9.17 5 Pn Pn 00 37 42.6 +1.9
YSS Yuzh-Sakhalins 9.17 5⇑eP Pn 00 37 40.5 -0.2
YSS eS Sn 00 39 24.5 +2.0
YSS pmax pmax
comp=Z,30nm,0.6s
YSS MLR MLR
comp=Z,200nm,17.0s
MSHR Mys Shultsa 9.35 304⇑iP Pn 00 37 43.6 +0.5
USA0B Ussuriysk Arra 9.71 314 P Pn 00 37 49.2 +1.1
USA0B Ussuriysk Arra 9.71 314c iP Pn 00 37 50.6 +2.5
USRK Ussuriysk Ar. 9.71 314 P Pn 00 37 49.5 +1.5
baz=113,slow=12,SNR=39
USRK LR LR 00 41 21.1
comp=Z,566nm,19.0s,baz=127,slow=36
USRK Ussuriysk Ar. 9.71 314 Pn 00 37 50.0 +1.9
USRK Ussuriysk Ar. 9.71 314 Pn 00 37 50.0 +1.9
JNU Nakatsue 9.97 245 P Pn 00 37 54.2 +2.5
comp=Z,1.1nm,0.3s,baz=99,slow=7.1,SNR=9.5
JNU LR LR 00 42 05.0
comp=Z,838nm,20.4s,baz=58,slow=40
JNU Nakatsue 9.97 245 Pn 00 37 52.5 +0.7
KSRS Korea Array 10.91 272 P Pn 00 38 08.5 +3.9
comp=Z,1.0nm,0.3s,baz=85,slow=14,SNR=20
KSRS LR LR 00 42 08.4
comp=Z,380nm,19.6s,baz=66,slow=37
KSAR Wonju Array Be 10.95 272 Pn Pn 00 38 06.2 +1.2
KSAR Wonju Array Be 10.95 272 P Pn 00 38 06.2 +1.2
KS19 Wonju Array Si 10.96 273 Pn 00 38 07.4 +2.3
MDJ Mudanjiang 11.35 311 P Pn 00 38 15.4 +4.9
MDJ pmax pmax
comp=Z,67nm,0.8s
MDJ pmax pmax
comp=Z,350nm,4.9s
MDJ Mudanjiang 11.35 311 Pn 00 38 13.5 +2.9
KLR Kul'dur 13.48 331 P Pn 00 38 40.5 +1.0
comp=Z,0.4nm,0.3s,baz=157,slow=11,SNR=8.4
KLR LR LR 00 43 53.1
comp=Z,328nm,19.4s,baz=137,slow=37
GRNR Gornyy 13.49 346⇑iP Pn 00 38 40.2 +0.6
GRNR pmax pmax
comp=Z,6.0nm,0.9s
GRNR MLR MLR
comp=Z,230nm,16.0s
DL2 Dalian 15.77 280 P P 00 39 12.1 -1.0
DL2 sP sP 00 39 28.8 -0.8
DL2 eS Sn 00 42 07.0 +3.5
DL2 pmax pmax
comp=Z,79nm,0.8s
DL2 pmax pmax
comp=Z,150nm,9.0s
DL2 LR LR
comp=Z,220nm,18.1s
DL2 LR LR
comp=Z,320nm,17.4s
DL2 LR LR
comp=Z,410nm,19.1s
SSE Sheshan 18.16 254 P Pn 00 39 40.0 +0.2
ZEA Zeya 18.78 333 eP P 00 39 45.6 -0.7
ZEA pmax pmax
comp=Z,23nm,1.0s
PETK Petropavlovsk- 18.91 31 LR LR 00 47 24.3
comp=Z,52nm,19.5s,baz=238,slow=38
NJ2 Nanjing 19.55 260 eP P 00 39 53.8 -1.1
NJ2 pmax pmax
comp=Z,22nm,0.9s
TIA Tai'an 19.66 273 P P 00 39 55.4 -0.7
TIA pmax pmax
comp=Z,19nm,0.8s
BJI Beijing 19.95 284 P P 00 39 58.1 -1.0
BJI pmax pmax
comp=Z,15nm,0.7s
BJT Baijiatuau 19.95 284 P P 00 39 57.8 -1.4
BJT IAmb IAmb 00 40 11.7
comp=Z,24nm,0.6s
BJT Baijiatuau 19.95 284 P P 00 39 57.8 -1.4
BJT pmax pmax
comp=Z,24nm,0.6s
YHNB Yeheng 21.69 239 P P 00 40 16.9 -1.2
YHNB IAmb IAmb 00 40 25.8
comp=Z,47nm,1.1s
NACB Ninganchiao 21.87 237 P P 00 40 19.2 -0.8
NACB IAmb IAmb 00 40 32.5
comp=Z,49nm,1.3s
MA2 Magadan 22.55 12 LR LR 00 50 16.6
comp=Z,92nm,20.0s,baz=104,slow=39
MA2 Magadan 22.55 12 P P 00 40 27.6 +0.6
MA2 IAmb IAmb 00 40 29.6
comp=Z,28nm,0.8s
MA2 Magadan 22.55 12⇑iP P 00 40 27.9 +0.9
MA2 pmax pmax
comp=Z,25nm,0.8s
YULB Yu-li 22.61 236 P P 00 40 26.8 -1.1
TPUB Ta-pu 23.11 237 P P 00 40 30.0 -3.1
TPUB IAmb IAmb 00 40 33.4
comp=Z,36nm,0.8s
HHC Hu-ho-hao-te 23.44 287⇓iP P 00 40 34.4 -1.9
HHC pmax pmax
comp=Z,7.0nm,1.1s
WHN Wuhan 23.69 260 P P 00 40 36.6 -2.0
WHN S S 00 44 48.3 -2.0
WHN pmax pmax
comp=Z,76nm,0.6s
WHN LR LR
comp=Z,1μm,22.1s
KNMB Chin-men Tao 23.89 243 P P 00 40 39.2 -1.3
KNMB IAmb IAmb 00 40 39.7
comp=Z,74nm,1.2s
BTO Baotou 24.62 286 eP P 00 40 45.0 -2.2
YAK Yakutsk 25.36 347 P P 00 40 53.7 +0.2
comp=Z,23nm,0.8s,baz=127,slow=1.9,SNR=9.6
YAK Yakutsk 25.36 347 P P 00 40 53.9 +0.4
YAK IAmb IAmb 00 40 54.8
comp=Z,30nm,0.7s
SEY Seymchan 25.99 11 P P 00 41 01.1 +1.9
comp=Z,15nm,0.8s,baz=192,slow=8.7,SNR=17
SEY Seymchan 25.99 11⇑iP P 00 41 01.5 +2.3
XAN Xi'an 26.71 272 P P 00 41 04.4 -1.7
XAN PP PnPn 00 41 52.0 +3.2
XAN PcP PcP 00 44 30.4 +1.7
XAN pmax pmax
comp=Z,33nm,0.7s
XAN pmax pmax
comp=Z,99nm,4.3s
XAN Xi'an 26.71 272 P P 00 41 04.8 -1.4
XAN IAmb IAmb 00 41 10.0
comp=Z,28nm,0.6s
XAN Xi'an 26.71 272 P P 00 41 04.8 -1.4
XAN pmax pmax
comp=Z,28nm,0.6s
BOD Bodaibo 26.99 327 eP P 00 41 08.0 -0.3
BOD pmax pmax
comp=Z,23nm,1.0s
ULN Ulaanbaatar 27.10 303 P P 00 41 09.5 -0.1
ULN Ulaanbaatar 27.10 303 P P 00 41 09.5 -0.1
ULN pmax pmax
comp=Z,10.0nm,0.8s
SONM Songino Array 27.54 303 P P 00 41 13.2 -0.3
comp=Z,10nm,0.8s,baz=99,slow=8.4,SNR=59
SONM Songino Array 27.54 303 P P 00 41 12.8 -0.7
ENH Enshi 27.61 264 P P 00 41 13.3 -1.0
H11N2 WAKE ISLAND Hy 28.38 122 T T 01 11 41.5
baz=315,slow=75,SNR=769
H11N1 WAKE ISLAND Hy 28.38 122 T T 01 11 35.8
baz=315,slow=75,SNR=960
H11N3 WAKE ISLAND Hy 28.39 122 T T 01 11 42.8
baz=315,slow=75,SNR=876
H11S1 WAKE ISLAND Hy 29.11 124 T T 01 12 29.3
baz=317,slow=76,SNR=741
H11S3 WAKE ISLAND Hy 29.11 124 T T 01 12 34.0
baz=317,slow=76,SNR=812
H11S2 WAKE ISLAND Hy 29.13 124 T T 01 12 30.0
baz=317,slow=76,SNR=545
TGY Tagaytay City 29.95 223 LR LR 00 54 09.5
comp=Z,84nm,19.2s,baz=0.5,slow=37
ZAK Zakamensk 29.96 307 eP P 00 41 34.6 -0.4
ZAK pmax pmax
comp=Z,7.0nm,1.0s
TLY Talaya 29.99 310 P P 00 41 35.5 +0.4
comp=Z,4.5nm,0.6s,baz=113,slow=10,SNR=3.4
TLY Talaya 29.99 310 eP P 00 41 35.3 +0.2
TLY pmax pmax
comp=Z,26nm,1.3s
TLY MLR MLR
comp=Z,452nm,15.0s
LZH Lanzhou 30.15 278 eP P 00 41 35.0 -1.9
LZH pP pP 00 41 48.3 -0.6
LZH sP sP 00 41 55.1 +0.8
LZH PP PnPn 00 42 35.9 +0.5
LZH pmax pmax
comp=Z,24nm,1.2s
LZH pmax pmax
comp=Z,97nm,4.9s
LZH LR LR
comp=Z,260nm,12.5s
LZH LR LR
comp=Z,330nm,11.4s
LZH LR LR
comp=Z,370nm,13.0s
GYA Guiyang 31.56 259⇑iP P 00 41 48.2 -1.2
GYA pP sP 00 42 06.0 -0.8
GYA sP pP 00 42 13.1 +12
GYA S S 00 46 42.0 -13
GYA SS SnSn 00 48 39.4 -4.0
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,150nm,5.5s
GYA LR LR
comp=Z,280nm,17.7s
GYA LR LR
comp=Z,200nm,17.9s
GYA LR LR
comp=Z,110nm,17.1s
CD2 Chengdu 31.89 269⇓iP P 00 41 50.7 -1.4
CD2 pmax pmax
comp=Z,20nm,0.9s
GTA Gaotai 32.54 286 ⇑P P 00 41 56.2 -1.7
GTA pP pP 00 42 06.9 -3.0
GTA S S 00 47 11.9 +1.8
GTA sS sS 00 47 30.4 +0.2
GTA pmax pmax
comp=Z,6.0nm,0.7s
GTA pmax pmax
comp=Z,38nm,5.2s
GTA LR LR
comp=Z,190nm,14.6s
GTA LR LR
comp=Z,200nm,14.9s
GTA LR LR
comp=Z,220nm,15.9s
BILL Bilibino 33.23 17⇓eP P 00 42 03.8 +0.5
BILL e 00 43 13.8
BILL pmax pmax
comp=Z,3.0nm,1.1s
TIXI Tiksi 34.55 353 P PcP 00 44 51.3 +2.8
comp=Z,2.6nm,0.4s,baz=158,slow=2.6,SNR=6.0
TIXI Tiksi 34.55 353 P P 00 42 14.3 -0.4
comp=Z,4.5nm,0.5s,baz=131,slow=4.8,SNR=8.3
TIXI Tiksi 34.55 353 P P 00 42 13.9 -0.7
TIXI PcP PcP 00 44 50.3 +1.8
KMI Kunming 35.29 260 P P 00 42 21.3 -0.7
KMI Kunming 35.29 260 P P 00 42 21.3 -0.7
KMI pmax pmax
comp=Z,41nm,0.8s
SLVN Son La 36.44 254 P P 00 42 31.5 -0.1
SLVN IAmb IAmb 00 42 50.2
comp=Z,12nm,0.9s
DLV T Lat 39.27 238 P P 00 42 55.1 -0.6
DLV IAmb IAmb 00 42 57.9
comp=Z,11nm,0.8s
WMQ Urumqi 40.68 296 eP P 00 43 08.0 +1.0
WMQ sP sP 00 43 25.5 +0.8
WMQ pmax pmax
comp=Z,27nm,0.9s
WMQ pmax pmax
comp=Z,31nm,3.7s
WMQ LR LR
comp=Z,340nm,28.9s
WMQ LR LR
comp=Z,520nm,29.0s
WMQ LR LR
comp=Z,170nm,29.9s
ZAA0 Zalesovo Array 41.55 312 IAmb IAmb 00 43 14.7
comp=Z,22nm,0.8s
ZALV Zalesovo Beam 41.55 312 P P 00 43 13.4 -0.5
comp=Z,22nm,0.7s,baz=92,slow=7.2,SNR=79
ZALV PcP PcP 00 45 10.4 0.0
comp=Z,3.5nm,0.6s,baz=109,slow=2.2,SNR=3.6
ZALV Zalesovo Beam 41.55 312 P P 00 43 14.3 +0.4
ZALV Zalesovo Beam 41.55 312 P P 00 43 14.3 +0.4
ZALV 00 45 10.4
CHTO Chiang Mai 41.69 255 P P 00 43 14.0 -1.4
CHTO Chiang Mai 41.69 255 P P 00 43 14.0 -1.4
CHTO pmax pmax
comp=Z,6.0nm,0.7s
CMAR Chiang Mai Arr 41.90 255 P P 00 43 17.2 0.0
comp=Z,3.8nm,0.8s,baz=44,slow=7.2,SNR=19
CMAR LR LR 01 00 43.7
comp=Z,72nm,19.5s,baz=124,slow=36
CMAR Chiang Mai Arr 41.90 255ceP P 00 43 18.1 +0.9
CMAR pmax pmax
comp=Z,4.0nm,0.6s
LSA Lhasa 42.35 274 P P 00 43 21.7 +0.4
LSA IAmb IAmb 00 43 41.0
comp=Z,21nm,1.1s
LSA Lhasa 42.35 274 P P 00 43 21.7 +0.4
LSA pmax pmax
comp=Z,21nm,1.1s
SHL Shillong 43.63 269 P P 00 43 29.6 -1.7
SHL Shillong 43.63 269 P P 00 43 29.6 -1.7
SHL pmax pmax
comp=Z,26nm,0.7s
MK31 Makanchi Array 43.89 301 IAmb IAmb 00 43 34.6
comp=Z,22nm,0.9s
MKAR Makanchi Array 43.89 301 P P 00 43 32.9 -0.1
comp=Z,20nm,0.9s,baz=87,slow=7.6,SNR=90
MAKZ Makanchi 44.10 302 P P 00 43 34.7 0.0
MAKZ IAmb IAmb 00 43 36.4
comp=Z,24nm,0.9s
MAKZ Makanchi 44.10 302 P P 00 43 34.7 0.0
MAKZ pmax pmax
comp=Z,24nm,1.0s
KURK Kurchatov 45.62 308 P P 00 43 46.5 -0.2
KURK Kurchatov 45.62 308c iP P 00 43 46.2 -0.5
KURK pmax pmax
comp=Z,28nm,1.0s
ODAN Odare 46.58 273 eP P 00 43 54.7 -0.1
JIRN Jiri 47.16 275 eP P 00 43 59.4 -0.1
RAMN Ramite 47.16 274 eP P 00 43 59.3 -0.1
comp=Z,66nm,0.9s
GUN Gumba 47.29 275 eP P 00 44 00.4 -0.1
PKI Pulchoki 47.82 275 eP P 00 44 04.1 -0.5
KKN Kakani 47.82 275 eP P 00 44 04.5 0.0
comp=Z,37nm,0.5s
PKIN Phulchoki 47.82 275 eP P 00 44 04.4 -0.2
comp=Z,18nm,0.6s
DMN Daman 48.04 275 eP P 00 44 06.0 -0.2
GKN Gorkha 48.23 276 eP P 00 44 07.4 -0.2
IL31 48.73 33 P P 00 44 11.9 +1.3
ILAR Eielson Array 48.73 33 P P 00 44 10.5 -0.2
comp=Z,1.8nm,0.7s,baz=263,slow=5.7,SNR=23
ILAR Eielson Array 48.73 33 P P 00 44 12.1 +1.4
ILAR Eielson Array 48.73 33 P P 00 44 12.1 +1.4
DANN Dangsing 48.76 277 eP P 00 44 11.8 0.0
comp=Z,213nm,0.8s
KOLN Koldanda 49.15 276 eP P 00 44 14.6 -0.1
comp=Z,70nm,0.9s
BMAR Burnt Mountain 49.55 29 P P 00 44 18.7 +1.6
BVAR Borovoye Array 50.21 312 P P 00 44 22.0 -0.2
comp=Z,3.9nm,0.6s,baz=77,slow=8.0,SNR=21
BVAR PcP PcP 00 45 40.8 +0.1
comp=Z,6.0nm,0.7s,baz=93,slow=3.0,SNR=7.1
BRVK Borovoye 50.26 312 P P 00 44 22.4 -0.1
BRVK IAmb IAmb 00 44 23.6
comp=Z,9.6nm,1.1s
BRVK PcP PcP 00 45 40.5 -0.4
BRVK Borovoye 50.26 312 P P 00 44 22.4 -0.1
BRVK 00 45 40.6
BRVK pmax pmax
comp=Z,10.0nm,1.1s
KSH Kashi 50.28 294 P P 00 44 27.2 +4.1
KSH sP sP 00 44 45.2 +4.2
KSH S S 00 51 36.3 +3.8
KSH sS sS 00 51 56.4 +2.9
KSH pmax pmax
comp=Z,28nm,1.0s
KSH pmax pmax
comp=Z,360nm,3.2s
KSH LR LR
comp=Z,140nm,3.4s
KSH LR LR
comp=Z,130nm,3.5s
KSH LR LR
comp=Z,400nm,6.7s
AAK Ala-Archa 50.31 298 P P 00 44 23.4 +0.1
comp=Z,15nm,0.8s,baz=64,slow=1.6,SNR=17
AAK Ala-Archa 50.31 298 P P 00 44 22.3 -0.9
AAK Ala-Archa 50.31 298⇑iP P 00 44 23.1 -0.2
AAK pmax pmax
comp=Z,14nm,0.8s
BCAR Beaver Creek A 51.14 35 P P 00 44 30.9 +1.9
CTGM Chitina Glacie 51.69 37 P P 00 44 35.0 +1.7
PSI Prapat 52.37 239 P P 00 44 38.9 0.0
comp=Z,5.1nm,0.5s,baz=351,slow=6.8,SNR=5.6
RPSI Rantau Prapat 52.45 239 P P 00 44 38.9 -0.4
EPYK Eagle Plains 52.75 30 IAmb IAmb 00 44 44.1
comp=Z,14nm,0.8s
KKAR Karatay Array 52.92 300 IAmb IAmb 00 44 43.5
comp=Z,11nm,0.9s
INK Inuvik 53.60 27 P P 00 44 48.7 +1.6
comp=Z,5.3nm,0.7s,baz=291,slow=6.1,SNR=31
INK Inuvik 53.60 27 IAmb IAmb 00 44 49.2
comp=Z,5.4nm,0.7s
BTK Batken 53.80 296 IAmb IAmb 00 44 56.5
comp=Z,6.9nm,0.8s
NIL Nilore 54.58 288 P P 00 44 54.4 -0.4
NIL IAmb IAmb 00 44 58.8
comp=Z,11nm,0.7s
NIL Nilore 54.58 288 P P 00 44 54.4 -0.4
NIL pmax pmax
comp=Z,11nm,0.7s
SVE Sverdlovsk 54.71 318⇓eP P 00 44 55.9 +0.5
SVE pmax pmax
comp=Z,34nm,0.9s
ARU Arti 55.92 318 P P 00 45 04.0 -0.1
ARU Arti 55.92 318c iP P 00 45 04.0 -0.1
ARU 00 47 03.8
ARU S S 00 52 48.6 +0.2
ARU SS SS 00 56 32.5 -1.6
ARU pmax pmax
comp=Z,30nm,0.9s
C36M Paulatuk 56.64 25 IAmb IAmb 00 45 10.8
comp=Z,8.8nm,0.6s
KBL Kabul 57.34 291 P P 00 45 14.2 -0.6
KBL Kabul 57.34 291 P P 00 45 14.2 -0.6
KBL pmax pmax
comp=Z,23nm,1.0s
ABKAR Akbulak array 57.60 310 P P 00 45 15.3 -0.8
ABKAR Akbulak array 57.60 310 IAmb IAmb 00 45 18.3
comp=Z,14nm,0.6s
WB0 Warramunga Arr 57.68 188 P P 00 45 16.5 -0.4
WRAB Tennant Creek 57.85 188⇓iP P 00 45 18.1 0.0
WRAB pmax pmax
comp=Z,10.0nm,0.9s
WR0 Warramunga Arr 57.85 188 P P 00 45 17.3 -0.8
WB2 Warramunga Arr 57.86 188 P P 00 45 16.9 -1.2
WRA Warramunga Arr 57.86 188 P P 00 45 17.7 -0.4
comp=Z,13nm,0.8s,baz=6.3,slow=7.5,SNR=18
WRA pP pP 00 45 31.8 +0.8
comp=Z,9.0nm,0.6s,baz=4.6,slow=7.3,SNR=11
WRA Warramunga Arr 57.86 188 i P P 00 45 17.0 -1.2
WRA pmax pmax
comp=Z,10.0nm,0.6s
HYB Hyderabad 58.44 268 i P P 00 45 21.0 -1.5
PRGR Permogore 60.23 327 eP P 00 45 33.7 -0.4
PRGR pmax pmax
comp=Z,24nm,1.0s
ASAR Alice Springs 61.58 188 P P 00 45 43.8 0.0
comp=Z,4.8nm,0.8s,baz=12,slow=6.2,SNR=11
ASAR pP pP 00 45 57.6 +0.9
comp=Z,5.1nm,0.8s,baz=11,slow=6.0,SNR=8.0
ASAR Alice Springs 61.58 188 P P 00 45 43.6 -0.1
RES Resolute Bay 61.80 15 P P 00 45 45.3 +0.7
comp=Z,4.9nm,0.6s,baz=311,slow=7.4,SNR=31
RES Resolute Bay 61.80 15 IAmb IAmb 00 45 46.0
comp=Z,5.2nm,0.7s
TMCR Tamitsa 62.17 331 eP P 00 45 47.1 -0.1
TMCR pmax pmax
comp=Z,22nm,1.1s
HRA Herat 62.40 293 IAmb IAmb 00 45 50.9
comp=Z,9.0nm,0.8s
PSA00 Pilbara Seismi 62.54 203 P P 00 45 49.7 -0.4
PSA00 IAmb IAmb 00 45 50.9
comp=Z,11nm,0.9s
KEV Kevo 62.79 339 P P 00 45 51.4 +0.1
KEV IAmb IAmb 00 46 08.1
comp=Z,14nm,1.0s
KEV Kevo 62.79 339 P P 00 45 51.4 +0.1
KEV pmax pmax
comp=Z,15nm,1.0s
YKA Yellowknife Ar 63.03 30 P P 00 45 53.9 +0.8
comp=Z,2.4nm,0.8s,baz=302,slow=6.8,SNR=31
YKA pP pP 00 46 07.5 +1.6
comp=Z,3.4nm,0.8s,baz=301,slow=6.8,SNR=16
KLMR Klimovskoe 63.21 328 eP P 00 45 52.7 -1.5
KLMR AMP 00 45 57.4
comp=Z,42nm,2.0s
KLMR ePP PP 00 48 10.3 -2.8
KLMR Klimovskoe 63.21 328 eP P 00 45 52.7 -1.5
KLMR e 00 48 10.3
KLMR pmax pmax
comp=Z,42nm,2.0s
ARCES ARCESS Array B 63.35 339 P P 00 45 55.5 +0.5
comp=Z,3.1nm,0.7s,baz=53,slow=7.3,SNR=14
ARE0 ARCESS Array S 63.35 339 P P 00 45 55.5 +0.5
GEYT Alibeck 63.65 299 P P 00 45 57.7 +0.2
comp=Z,7.3nm,0.6s,baz=31,slow=3.5,SNR=23
GEYT Alibeck 63.65 299 P P 00 45 57.7 +0.2
DAG Danmarks Havn 65.02 355 i P P 00 46 06.1 +0.3
comp=Z,7.5nm,0.8s
DAG Danmarks Havn 65.02 355 i P P 00 46 06.1 +0.3
DAG pmax pmax
comp=Z,8.0nm,0.8s
MOS Moscow 66.75 323 eP P 00 46 15.9 -1.4
MOS pmax pmax
comp=Z,37nm,1.2s
VRH Novokhopyorsk 67.15 318 eP P 00 46 18.4 -1.5
VRH pmax pmax
comp=Z,20nm,0.6s
OBN Obninsk 67.60 323 eP P 00 46 22.6 0.0
comp=Z,3.1nm,0.5s,baz=220,slow=23,SNR=5.4
OBN Obninsk 67.60 323 P P 00 46 21.6 -1.1
OBN Obninsk 67.60 323 eP P 00 46 22.4 -0.3
OBN e 00 46 50.6
OBN e 00 48 51.2
OBN pmax pmax
comp=Z,14nm,0.9s
FINES FINESS Array B 68.23 332 P P 00 46 26.5 0.0
comp=Z,18nm,0.7s,baz=44,slow=8.9,SNR=52
VORD Divnogorie 68.56 318 eP P 00 46 27.2 -1.6
VORD pmax pmax
comp=Z,20nm,0.6s
AKT Akhty 68.78 306 eP P 00 46 30.3 -0.2
AKT e*PP pP 00 46 43.0 -0.6
AKT e 00 46 53.8
AKT pmax pmax
comp=Z,30nm,0.6s
GROC Groznyy 69.08 309 eP P 00 46 31.1 -1.1
GROC e*PP pP 00 46 46.7 +1.4
GROC e 00 46 53.6
STKA Stephens Creek 69.33 180 P P 00 46 34.3 +0.7
comp=Z,3.8nm,0.8s,baz=333,slow=4.5,SNR=2.7
STKA pP pP 00 46 48.7 +2.0
comp=Z,3.4nm,0.5s,baz=339,slow=8.6,SNR=2.8
NEW Newport 69.43 44 P P 00 46 35.9 +1.6
comp=Z,2.2nm,0.7s,baz=288,slow=8.9,SNR=4.2
PINE Pine Mountain 69.68 50 IAmb IAmb 00 46 52.8
comp=Z,9.1nm,1.0s
YBH Yreka Blue Hor 69.70 53 P P 00 46 38.4 +2.2
comp=Z,1.4nm,0.8s,baz=348,slow=3.7,SNR=3.7
GOF Gofitskoye 69.73 312⇑eP P 00 46 36.7 +0.5
GOF pmax pmax
comp=Z,37nm,0.8s
VSU Vasula 69.89 330 eP P 00 46 36.5 -0.4
VSU Vasula 69.89 330ceP P 00 46 37.7 +0.8
VSU pmax pmax
comp=Z,61nm,1.7s
SUMG Summit 69.91 0 i P P 00 46 38.1 +0.8
comp=Z,20nm,0.9s
SUMG Summit 69.91 0 P P 00 46 38.3 +1.0
SUMG Summit 69.91 0 i P P 00 46 38.1 +0.8
SUMG pmax pmax

comp=Z,20nm,0.9s
K05A Summer Lake 70.29 51 P P 00 46 41.7 +1.8
ZEI Tsey 70.47 309 eP P 00 46 39.3 -1.7
ZEI pmax pmax
comp=Z,11nm,0.8s
TBLG Delisi 70.54 308 IAmb IAmb 00 46 41.9
comp=Z,14nm,0.8s
KBZ Khabaz 70.56 311 P P 00 46 41.5 +0.3
comp=Z,20nm,0.9s,baz=54,slow=3.8,SNR=30
KBZ Khabaz 70.56 311 c iP P 00 46 41.4 +0.2
KIV Kislovodsk 70.56 311 ⇑P P 00 46 42.1 +0.7
KIV Kislovodsk 70.56 311 P P 00 46 41.9 +0.5
KIV Kislovodsk 70.56 311 eP P 00 46 41.6 +0.2
KIV pmax pmax
comp=Z,158nm,1.1s
SHA1 Shidzhatmaz 70.70 311 ⇓iP P 00 46 43.5 +1.1
WSAR Wadi Sarin 70.87 285 P P 00 46 43.9 +0.4
comp=Z,9.1nm,1.0s,baz=40,slow=2.7,SNR=3.7
BMO Blue Mountains 71.25 48 P P 00 46 46.8 +1.2
BMO Blue Mountains 71.25 48 P P 00 46 46.8 +1.2
BMO pmax pmax
comp=Z,10.0nm,1.5s
GNI Garni 71.41 307 P P 00 46 47.5 +0.8
comp=Z,5.7nm,0.7s,baz=357,slow=4.0,SNR=5.1
GNI Garni 71.41 307 P P 00 46 47.4 +0.6
GNI IAmb IAmb 00 46 56.6
comp=Z,15nm,0.9s
GNI Garni 71.41 307 ⇓iP P 00 46 47.7 +1.0
GNI pmax pmax
comp=Z,36nm,1.2s
AKH Akhalkalaki 71.49 308 ⇑P P 00 46 47.6 +0.4
UOSS Minazif 71.77 288 P P 00 46 49.0 +0.1
UOSS IAmb IAmb 00 46 49.9
comp=Z,26nm,1.1s
IZAR Zarasai 71.87 328 eP P 00 46 48.6 -0.3
IZAR IAmb IAmb 00 46 50.1
comp=Z,6.8nm,0.6s
ISAL Salakas 72.04 327 eP P 00 46 50.3 +0.4
IIGN Ignalina 72.14 327 eP P 00 46 51.2 +0.6
IIGN IAmb IAmb 00 46 51.6
comp=Z,8.4nm,0.6s
NACGM Naroch 72.19 327 e P 00 46 50.0 -0.9
SLIT Slitere, Latvi 72.21 331 eP P 00 46 49.3 -1.6
PABE Paberze 72.99 328 eP P 00 46 55.5 -0.1
PABE IAmb IAmb 00 46 57.0
comp=Z,29nm,0.8s
FCC Fort Churchill 73.22 27 IAmb IAmb 00 46 58.4
comp=Z,11nm,1.1s
NC303 NORSAR Array S 73.36 337 P P 00 46 57.5 -0.2
NC303 IAmb IAmb 00 46 58.5
comp=Z,20nm,1.0s
HFS Hagfors 73.47 336 P P 00 46 58.0 -0.4
comp=Z,17nm,0.9s,baz=58,slow=3.9,SNR=25
HFS Hagfors 73.47 336 P P 00 46 58.0 -0.4
NB201 NORSAR Array S 73.52 337 P P 00 46 59.0 +0.2
EGMT Eagleton 73.55 42 IAmb IAmb 00 47 15.6
comp=Z,10.0nm,0.8s
NB2 NORSAR Subarra 73.55 337 P P 00 46 59.3 +0.4
comp=Z,5.2nm,0.8s,baz=39,slow=6.2
NOA NORSAR Array B 73.55 337 P P 00 46 59.1 +0.2
comp=Z,9.2nm,0.8s,baz=38,slow=5.9,SNR=28
NOA LR LR 01 22 52.5
comp=Z,60nm,18.4s,baz=40,slow=39
DLMT Dillon 73.64 45 IAmb IAmb 00 47 16.6
comp=Z,14nm,1.4s
AKASG Malin Array Be 73.81 322 P P 00 47 00.3 -0.2
comp=Z,12nm,0.5s,baz=46,slow=6.0,SNR=49
AKASG Malin Array Be 73.81 322 P P 00 47 00.2 -0.2
KVN Kaiserville 74.12 53 P P 00 47 03.1 +0.2
KVN IAmb IAmb 00 47 19.9
comp=Z,12nm,1.2s
KVN Kaiserville 74.12 53 P P 00 47 03.1 +0.2
KVN pmax pmax
comp=Z,12nm,1.2s
NVAR Mina Array Bea 74.36 53 P P 00 47 06.0 +1.7
comp=Z,1.6nm,0.7s,baz=290,slow=5.7,SNR=12
NVAR pP PcP 00 47 20.0 +1.1
comp=Z,4.1nm,1.0s,baz=297,slow=6.2,SNR=8.1
NVAR Mina Array Bea 74.36 53 P P 00 47 06.0 +1.7
ELK Elko 74.89 50 P P 00 47 07.9 +0.6
ELK Elko 74.89 50 P P 00 47 07.9 +0.6
ELK pmax pmax
comp=Z,4.0nm,1.3s
SIM Simferopol' 74.92 315 ceP P 00 47 07.2 +0.1
SIM pmax pmax
comp=Z,27nm,0.9s
KONO Kongsberg 75.15 337 P P 00 47 08.6 +0.5
KONO Kongsberg 75.15 337 P P 00 47 08.6 +0.5
KONO pmax pmax
comp=Z,4.0nm,1.0s
H17A Grant Village 75.37 45 P P 00 47 12.3 +2.3
SORM Soroca 75.92 321 ⇑P P 00 47 12.5 -0.3
R11A Troy Canyon, C 76.12 52 P P 00 47 15.7 +1.3
MILM Milestii Mici 76.50 319 ⇑P P 00 47 15.8 -0.3
DUG Dugway, Tooele 76.69 49 P P 00 47 18.6 +1.1
DUG Dugway, Tooele 76.69 49 P P 00 47 18.6 +1.1
DUG pmax pmax
comp=Z,7.0nm,1.1s
BEL Belsk 76.91 327 eP P 00 47 19.5 +1.2
BEL Belsk 76.91 327 eP P 00 47 19.5 +1.2
TCUT Toone Canyon 76.95 48 P P 00 47 18.7 -0.3
IAS Iasi 76.95 320 ⇑P P 00 47 18.7 +0.1
PDAR Pinedale Array 76.97 46 P P 00 47 20.2 +1.1
comp=Z,2.0nm,0.6s,baz=280,slow=2.1,SNR=23
PDAR pP sP 00 47 35.0 -2.6
comp=Z,1.6nm,0.5s,baz=306,slow=0.5,SNR=10
PDAR Pinedale Array 76.97 46 P P 00 47 20.0 +0.8
LEOM Leova 77.08 319 ⇑P P 00 47 19.2 -0.2
PSUT Pine Spring 77.08 51 P P 00 47 20.6 +0.7
MPU Maple Canyon 77.51 49 P P 00 47 22.3 +0.2
SHPR Sheep Range 77.51 53 P P 00 47 22.7 +0.5
SHPR IAmb IAmb 00 47 39.5
comp=Z,7.4nm,1.0s
BIR Birlad 77.54 320 ⇑P P 00 47 22.1 +0.2
KWP Kalwaria Pacla 77.62 324 eP P 00 47 23.5 +1.1
KWP Kalwaria Pacla 77.62 324 eP P 00 47 23.5 +1.1
TLCR 77.64 318 ⇓P P 00 47 22.7 +0.2
GHRR 77.79 319 ⇑P P 00 47 24.5 +1.2
BUR08 Bucovina Ar. S 77.82 322 P P 00 47 23.7 0.0
BUR08 IAmb IAmb 00 47 25.2
comp=Z,12nm,1.0s
BURAR Bucovina Array 77.83 322 ⇓P P 00 47 24.4 +0.7
BURAR Bucovina Array 77.83 322 P P 00 47 23.5 -0.2
BIZ Bicaz 77.86 321 ⇑P P 00 47 24.7 +1.0
TESR Tescani 77.87 320 ⇑P P 00 47 24.2 +0.4
GAZ Gaziantep 77.92 308 IAmb IAmb 00 47 26.3
comp=Z,15nm,0.8s
CCUT Cedar City 78.00 52 P P 00 47 25.0 +0.1
TOPG Topolog 78.08 318 ⇓P P 00 47 25.5 +0.5
PETR Petresti 78.11 319 ⇑P P 00 47 26.1 +1.0
MSU Marysvale 78.12 50 P P 00 47 27.3 +1.6
MSU Marysvale 78.12 50 P P 00 47 27.3 +1.6
ODBI Odobesti 78.17 319 ⇑P P 00 47 25.5 +0.1
VRI Vrincioaia 78.27 320 ⇑P P 00 47 26.8 +0.7
KOLS Kolonicke sedl 78.32 324 eP P 00 47 26.5 +0.3
KOLS pmax pmax
comp=Z,10.0nm,1.3s
KOLS Kolonicke sedl 78.32 324 eP P 00 47 26.5 +0.3
PLOR Plostina 78.32 320 ⇑P P 00 47 26.8 +0.5
RDMU Red Mountain 78.37 47 P P 00 47 27.6 +0.6
P17A Butcher Ranch, 78.39 49 P P 00 47 27.0 0.0
LCMT Little Creek M 78.41 52 P P 00 47 27.9 +0.8
MTPU Mount Pierson 78.42 51 P P 00 47 27.8 +0.4
PFO Pinyon Flats O 78.44 56 P P 00 47 27.0 -0.3
PFO IAmb IAmb 00 47 44.1
comp=Z,15nm,1.4s
PFO Pinyon Flats O 78.44 56 P P 00 47 27.0 -0.3
PFO pmax pmax
comp=Z,15nm,1.4s
XPFO Pion Flat 78.44 56 P P 00 47 27.2 -0.1
XPFO IAmb IAmb 00 47 44.1
comp=Z,13nm,1.3s
GRER 78.47 319 ⇑P P 00 47 27.8 +0.7
BR131 Keskin Array S 78.49 312 P P 00 47 27.9 +0.3
BR131 Keskin Array S 78.49 312 c iP P 00 47 27.7 +0.2
BRTR Keskin Array B 78.50 312 P P 00 47 27.8 +0.2
comp=Z,3.7nm,0.6s,baz=74,slow=3.7,SNR=17
BRTR Keskin Array B 78.50 312 P P 00 47 26.6 -1.0
BISRR Bisoca 78.50 319 ⇑P P 00 47 28.6 +1.3
OJC Ojcow 78.51 326 eP P 00 47 28.1 +0.8
OJC Ojcow 78.51 326 IAmb IAmb 00 47 28.9
comp=Z,22nm,1.1s
OJC Ojcow 78.51 326 eP P 00 47 28.1 +0.8
OZUR 78.59 320 ⇑P P 00 47 29.3 +1.4

ARCR ARCALIA 78.62 322 ⇓P P 00 47 29.4 +1.5
BMR Baia Mare 78.63 323 ⇑P P 00 47 29.1 +1.1
CRVS Cervenica-Dubn 78.72 324 eP P 00 47 29.0 +0.6
CRVS Cervenica-Dubn 78.72 324 eP P 00 47 29.0 +0.6
ULM Lac du Bonnet 78.74 34 P P 00 47 28.7 +0.2
comp=Z,2.9nm,0.8s,baz=325,slow=6.5,SNR=5.8
ULM pP pP 00 47 43.5 +1.7
comp=Z,2.2nm,0.6s,baz=296,slow=6.0,SNR=4.0
SRU San Rafael Swe 78.75 49 P P 00 47 29.4 +0.4
SRU San Rafael Swe 78.75 49 P P 00 47 29.4 +0.4
SRU pmax pmax
comp=Z,11nm,1.2s
TRPA Tarpa 78.76 323 ⇑P P 00 47 29.6 +1.0
PGOR Pogoanele 78.79 319 ⇑P P 00 47 30.4 +1.5
NIE Niedzica 78.87 325 eP P 00 47 30.1 +0.8
NIE Niedzica 78.87 325 eP P 00 47 30.1 +0.8
ISR Istrita 78.88 319 ⇑P P 00 47 30.6 +1.1
DOPR Dopca 78.88 320 ⇑P P 00 47 31.1 +1.7
ICOR Ion Corvin 78.90 318 ⇑P P 00 47 29.9 +0.5
ANTO Ankara 78.90 312 ⇑P P 00 47 30.2 +0.5
ANTO Ankara 78.90 312 P P 00 47 29.1 -0.6
ANTO IAmb IAmb 00 47 31.1
comp=Z,14nm,0.8s
ANTO Ankara 78.90 312 P P 00 47 29.1 -0.6
ANTO pmax pmax
comp=Z,14nm,0.8s
MLR Muntele Rosu 78.93 320 P P 00 47 30.1 +0.3
comp=Z,4.2nm,0.9s,baz=68,slow=5.6,SNR=5.1
RSSD Black Hills 79.11 42 P P 00 47 31.2 +0.2
RSSD Black Hills 79.11 42 P P 00 47 31.2 +0.2
RSSD pmax pmax
comp=Z,4.0nm,0.9s
CJR Cluj-Napoca 79.25 322 ⇑P P 00 47 32.6 +1.1
SULR 79.33 319 ⇑P P 00 47 32.4 +0.6
VOIR 79.42 320 ⇑P P 00 47 33.6 +1.2
MDUB Mudurnu 79.44 313 P P 00 47 30.1 -2.5
BSEG Bad Segeberg 79.46 333 eP P 00 47 33.3 +0.9
comp=Z,12nm,0.9s,baz=37,slow=5.2
OKC Ostrava-Krasne 79.52 327 eP P 00 47 33.8 +1.0
OKC Ostrava-Krasne 79.52 327 eP P 00 47 33.8 +1.0
KSP Ksiaz 79.55 328 eP P 00 47 33.9 +0.9
KSP Ksiaz 79.55 328 eP P 00 47 33.9 +0.9
Y12C Blythe 79.62 55 P P 00 47 34.0 +0.4
Y12C IAmb IAmb 00 47 51.4
comp=Z,19nm,1.4s
ARR Arges 79.68 320 ⇓P P 00 47 35.4 +1.5
MORC Moravsky Berou 79.82 327 eP P 00 47 34.9 +0.4
MORC Moravsky Berou 79.82 327 ⇑P P 00 47 35.4 +0.9
MORC Moravsky Berou 79.82 327 IAmb IAmb 00 47 36.2
comp=Z,13nm,1.0s
DPC Dobruska-Polom 79.91 328 eP P 00 47 35.6 +0.6
DPC Dobruska-Polom 79.91 328 eP P 00 47 35.6 +0.6
HUMR Humele 80.09 320 ⇑P P 00 47 36.0 +0.1
PSZ Piszkesteto 80.15 325 ⇑P P 00 47 37.9 +1.5
PSZ Piszkesteto 80.15 325 IAmb IAmb 00 47 38.3
comp=Z,16nm,1.0s
DEV Deva 80.18 322 ⇑P P 00 47 37.2 +0.7
VYHS Vyhne 80.21 325 eP P 00 47 37.5 +0.9
VYHS pmax pmax
comp=Z,10.0nm,1.0s
VYHS Vyhne 80.21 325 eP P 00 47 37.5 +0.9
COPA Copaceanca 80.24 319 ⇑P P 00 47 36.7 -0.1
N23A Red Feather La 80.24 45 P P 00 47 36.4 -0.8
N23A IAmb IAmb 00 47 54.5
comp=Z,11nm,1.2s
Y14A Wickenburg 80.49 54 IAmb IAmb 00 47 55.9
comp=Z,11nm,1.1s
BRG Berggiesshubel 80.49 329 i P P 00 47 38.6 +0.6
comp=Z,7.1nm,0.8s
BRG Berggiesshubel 80.49 329 eP P 00 47 38.8 +0.7
comp=Z,5.4nm,0.9s,baz=37,slow=5.2
BRG Berggiesshubel 80.49 329 i P P 00 47 38.6 +0.6
BRG pmax pmax
comp=Z,7.0nm,0.8s
PVCC Panska Ves 80.50 329 eP P 00 47 39.3 +1.2
PVCC Panska Ves 80.50 329 eP P 00 47 39.3 +1.2
CLL Collm 80.53 330 eP P 00 47 38.6 +0.4
comp=Z,10nm,0.8s,baz=37,slow=5.2
CLL Collm 80.53 330 ⇓iP P 00 47 37.4 -0.8
comp=Z,15nm,0.9s
CLL Collm 80.53 330 IAmb IAmb 00 47 39.3
comp=Z,14nm,0.9s
CLL Collm 80.53 330 ⇓iP P 00 47 37.4 -0.8
CLL e*SP sP 00 47 56.0 -0.7
CLL pmax pmax
comp=Z,15nm,0.9s
CLL Collm 80.53 330 e(sP) sP 00 47 56.0 -0.7
CLL Collm 80.53 330 epP pP 00 47 53.0 +1.4
RAYN Ar Rayn 80.56 292 P P 00 47 37.0 -1.9
RAYN Ar Rayn 80.56 292 P P 00 47 37.0 -1.9
RAYN pmax pmax
comp=Z,9.0nm,1.1s
VRAC Vranov 80.58 327 eP P 00 47 38.7 +0.1
VRAC Vranov 80.58 327 P P 00 47 39.6 +1.0
comp=Z,7.1nm,0.8s,baz=54,slow=5.6,SNR=8.4
VRAC Vranov 80.58 327 ⇑P P 00 47 39.6 +1.0
GZR Gura Zlata 80.59 321 ⇑P P 00 47 39.1 +0.4
FBE Freiberg 80.69 330 eP P 00 47 39.7 +0.7
comp=Z,11nm,0.9s,baz=37,slow=5.2
NRDL Niedersach Rie 80.69 332 eP P 00 47 39.7 +0.7
comp=Z,5.0nm,0.8s,baz=37,slow=5.2
ELND Elena 80.73 318 ⇑P P 00 47 39.7 +0.2
VLAD Vladila 80.75 319 ⇑P P 00 47 39.9 +0.4
SMOL Smolenice 80.82 326 eP P 00 47 41.2 +1.4
SMOL pmax pmax
comp=Z,7.0nm,0.9s
SMOL Smolenice 80.82 326 eP P 00 47 41.1 +1.3
SOCY Socotra 80.83 278 P P 00 47 37.9 -2.6
KRUC Moravsky 80.86 327 eP P 00 47 40.4 +0.4
GOPC GO Pecny, Ondr 80.89 328 eP P 00 47 40.4 +0.2
GOPC GO Pecny, Ondr 80.89 328 eP P 00 47 40.4 +0.2
PRA Prague 80.91 329 eP P 00 47 40.8 +0.5
PRA Prague 80.91 329 eP P 00 47 40.8 +0.5
PRU Pruhonice 80.93 329 eP P 00 47 40.6 +0.2
PRU epP sP 00 47 57.4 -1.5
PRU Pruhonice 80.93 329 eP P 00 47 40.6 +0.2
PRU e 00 47 57.4
SRO Srobarova 80.95 325 eP P 00 47 41.2 +0.7
SRO pmax pmax
comp=Z,22nm,1.2s
SRO Srobarova 80.95 325 eP P 00 47 41.2 +0.7
MODS Modra-Piesok 80.99 326 eP P 00 47 41.0 +0.2
MODS pmax pmax
comp=Z,22nm,1.4s
MODS Modra-Piesok 80.99 326 eP P 00 47 41.0 +0.2
BZS Buzias 81.00 322 ⇑P P 00 47 41.0 +0.2
TREC Trest 81.07 328 eP P 00 47 41.9 +0.7
TREC Trest 81.07 328 eP P 00 47 41.9 +0.7
PLVB Pleven 81.07 319 ⇑P P 00 47 41.6 +0.3
NEUB Neuenburg 81.08 331 eP P 00 47 41.8 +0.6
comp=Z,13nm,0.9s,baz=37,slow=5.2
CLZ Clausthal 81.12 332 eP P 00 47 42.3 +0.9
comp=Z,9.3nm,0.8s,baz=37,slow=5.2
ASF Jabal al Asfar 81.25 304 P P 00 47 43.2 +0.7
comp=Z,4.8nm,0.9s,baz=5.7,slow=10,SNR=4.2
BAIL Bailesti 81.28 320 ⇑P P 00 47 43.7 +1.4
GUNZ Gunzen 81.53 330 eP P 00 47 44.4 +0.8
baz=37,slow=5.2
WERN Wernitzgruen 81.58 330 eP P 00 47 44.6 +0.8
comp=Z,5.5nm,0.8s,baz=37,slow=5.2
IBBN Ibbenburen 81.69 333 eP P 00 47 45.0 +0.7
comp=Z,14nm,0.8s,baz=37,slow=5.2
MANZ Manzenberg 81.92 330 eP P 00 47 46.3 +0.7
comp=Z,4.6nm,0.9s,baz=37,slow=5.2
CONA Conrad Observa 81.95 327 ePcP P 00 47 47.1 +1.1
comp=Z,16nm,1.7s
KHC Kasperske Hory 81.99 329 eP P 00 47 46.1 0.0
KHC epP sP 00 48 02.7 -1.9
KHC Kasperske Hory 81.99 329 ⇑iP P 00 47 45.8 -0.3
KHC pmax pmax
comp=Z,20nm,0.9s
ROTZ Rotzenmuhle 82.05 330 eP P 00 47 47.3 +1.0
comp=Z,54nm,1.7s,baz=37,slow=5.2
UBBA Unterbreizbach 82.08 331 eP P 00 47 46.6 +0.4
comp=Z,1.6nm,0.7s,baz=37,slow=5.2
GEC2 GERESS Array S 82.16 328 eP P 00 47 47.5 +0.5
comp=Z,4.8nm,0.9s,baz=37,slow=5.2
GERES GERESS Array B 82.16 328 P P 00 47 47.1 +0.1
comp=Z,4.3nm,0.8s,baz=34,slow=5.1,SNR=23
GERES GERESS Array B 82.16 328 P P 00 47 47.0 -0.1
WET Wettzell 82.27 329 eP P 00 47 48.5 +1.0
comp=Z,4.9nm,1.0s,baz=37,slow=5.2
VTS Vitosha 82.33 319 ⇑P P 00 47 49.2 +1.1
VTS Vitosha 82.33 319 IAmb IAmb 00 47 49.9

comp=Z,12nm,0.8s
EKA Eskdalemuir Ar 82.47 341 P P 00 47 49.2 +0.8
comp=Z,1.4nm,0.5s,baz=35,slow=5.2,SNR=6.6
GRF Grafenberg Arr 82.50 330 eP P 00 47 49.6 +0.9
comp=Z,9.9nm,0.9s,baz=37,slow=5.2
ARSA Arzberg 82.61 326 ePcP P 00 47 50.7 +1.3
comp=Z,5.9nm,1.0s
MOA Molln 82.70 327 ePcP P 00 47 51.2 +1.4
comp=Z,9.4nm,1.1s
TNS Taunus Mts 83.14 332 eP P 00 47 52.7 +0.6
comp=Z,3.1nm,0.7s,baz=37,slow=5.2
ECSD EROS Data Cent 83.18 38 P P 00 47 52.8 +0.5
ECSD IAmb IAmb 00 48 07.7
comp=Z,7.1nm,1.0s
SOKA Soboth 83.27 326 ePcP P 00 47 53.1 +0.3
comp=Z,7.8nm,0.7s,SNR=8.9
E38A The Farm, Brul 83.38 34 IAmb IAmb 00 48 08.7
comp=Z,11nm,0.9s
AHRW Bad Neuenahr-A 83.39 333 eP P 00 47 54.0 +0.8
comp=Z,6.4nm,0.8s,baz=37,slow=5.2
RJOB Jochberg 83.41 328 eP P 00 47 54.2 +0.7
comp=Z,11nm,0.8s,baz=37,slow=5.2
OBKA Obir 83.61 326 ePcP P 00 47 55.2 +0.6
comp=Z,4.7nm,0.7s
KBA Koelnbreinsper 83.69 327 ePcP P 00 47 55.8 +0.7
comp=Z,9.9nm,0.7s
FUR Furstenfeldbru 83.69 329 eP P 00 47 55.6 +0.7
comp=Z,14nm,0.8s,baz=37,slow=5.2
ANMO Albuquerque 83.93 50 P P 00 47 57.3 +0.8
ANMO IAmb IAmb 00 48 14.6
comp=Z,13nm,1.2s
ANMO Albuquerque 83.93 50 ⇑iP P 00 47 58.7 +2.1
ANMO pmax pmax
comp=Z,2.0nm,0.9s
BMRD Maredsous 84.40 334 P P 00 47 58.4 -0.1
MOTA Moosalm 84.42 329 ePcP P 00 47 59.6 +0.9
comp=Z,16nm,1.3s
RETA Reutte 84.44 329 ePcP P 00 47 59.1 +0.3
comp=Z,25nm,1.5s
SCHQ Schefferville 84.53 16 P P 00 47 59.7 +0.6
comp=Z,3.1nm,0.7s,baz=349,slow=6.1,SNR=10.0
BFO Black Forest 84.73 331 eP P 00 48 00.3 +0.1
comp=Z,11nm,0.8s,baz=37,slow=5.2
BFO Black Forest 84.73 331 P P 00 48 00.2 +0.1
BFO IAmb IAmb 00 48 01.3
comp=Z,14nm,0.9s
BFO Black Forest 84.73 331 P P 00 48 00.2 +0.1
BFO pmax pmax
comp=Z,14nm,0.9s
DAVA Damuels 84.96 329 ePcP P 00 48 01.9 +0.4
comp=Z,13nm,0.7s
DAVOX Davos/Dischmat 85.37 329 P P 00 48 03.9 +0.2
comp=Z,5.2nm,0.7s,baz=356,slow=10,SNR=4.0
IDI Anoyia 86.61 313 P P 00 48 09.2 -0.6
comp=Z,14nm,0.7s,baz=34,slow=7.3,SNR=10.0
ITM Ithomi 86.94 316 P P 00 48 10.6 -0.6
TX31 Lajitas Ar. Si 89.48 53 IAmb IAmb 00 48 41.0
comp=Z,4.7nm,1.1s
TX32 Lajitas Array 89.48 53 IAmb IAmb 00 48 40.4
comp=Z,8.5nm,1.4s
TXAR Lajitas Array 89.48 53 P P 00 48 24.6 +1.0
comp=Z,1.6nm,0.5s,baz=301,slow=3.0,SNR=28
TXAR pP pP 00 48 39.5 +2.4
comp=Z,1.5nm,0.7s,baz=297,slow=3.4,SNR=8.7
MIAR Mount Ida 91.61 43 P P 00 48 34.7 +1.4
MIAR Mount Ida 91.61 43 P P 00 48 34.7 +1.4
MIAR pmax pmax
comp=Z,10.0nm,1.1s
ESDC Sonseca Array 96.69 334 P P 00 48 56.4 -0.2
comp=Z,0.2nm,0.4s,baz=14,slow=4.0,SNR=4.0
ESDC Sonseca Array 96.69 334 P P 00 48 56.0 -0.5
TORD Torodi Ar. Bea 116.93 315 PKP PKPdf 00 54 10.4 -0.8
comp=Z,0.4nm,0.6s,baz=342,slow=3.6,SNR=4.4
TORD pPKP pPKPdf 00 54 26.0 +0.8
comp=Z,0.4nm,0.7s,baz=23,slow=1.2,SNR=2.7
TORD Torodi Ar. Bea 116.93 315 PKPdf 00 54 09.8 -1.4
DBIC Dimbokro 125.86 317 PKP PKPdf 00 54 28.2 -0.2
comp=Z,1.8nm,0.6s,baz=73,slow=3.6,SNR=6.0
QSPA South Pole Qui 127.55 180 PKP PKiKP 00 54 30.5 -0.1
comp=Z,3.1nm,0.7s,baz=263,slow=1.9,SNR=11
LPAZ La Paz 146.12 59 PKPbc PKPab 00 55 07.7 -0.3
comp=Z,3.3nm,0.7s,baz=320,slow=3.6,SNR=7.3
LPAZ pPKPbc pPKPab 00 55 23.0 +1.3
comp=Z,6.7nm,0.6s,baz=334,slow=2.1,SNR=8.2
LPAZ La Paz 146.12 59 PKPab 00 55 07.9 -0.1
MNMC Minye Minye 147.03 64 PKPab 00 55 10.7 -0.3
PB11 IPOC Station P 147.39 65 PKPab 00 55 11.2 -1.1

IDC 04 00:37:30.0±21.0, 2°.54S×123°.86E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/48, mbtmp3.8/4, Error ellipse: s-maj=462.9km s-min=71.3km az=161.0, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	41.11	18	P	P	00 45 15.8	-0.1
	1.1nm,0.3s,baz=198,slow=10,SNR=4.4						
SONM	Songino Array	52.44	345	P	P	00 46 44.5	-0.1
	0.8nm,0.5s,baz=162,slow=8.6,SNR=5.3						
MKAR	Makanchi Array	61.21	329	P	P	00 47 46.9	+0.1
	0.3nm,0.5s,baz=125,slow=9.0,SNR=5.0						
ZALV	Zalesovo Beam	64.96	336	P	P	00 48 11.3	-0.2
	0.4nm,0.4s,baz=143,slow=6.9,SNR=2.3						

DJA 04 00:38:02.7±0.8, 9°S±4°×11°1E±°, h16km±5km, M3.9/10, MLv3.9/10, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCJI	Pacitan	0.79	340	P	Pg	00 38 18.2	+0.1
PCJI				S	Sb	00 38 28.4	-0.1
PWJI	Pagerwojo	0.98	21	P	Pb	00 38 21.2	-0.1
PWJI				S	Sb	00 38 34.2	+0.3
UGM	Wanagama	1.37	318	P	Pn	00 38 27.0	-0.2
UGM				S	Sn	00 38 44.4	-0.7
NGJI	Ngawi	1.56	0	P	Pb	00 38 31.8	+0.5
GMJI	Gumukmas	2.08	72	P	Pn	00 38 37.0	0.0
GMJI				S	Sn	00 39 01.8	-0.7
SMRI	Semarang	2.13	332	P	Pn	00 38 38.4	+0.8
SMRI				S	Sn	00 39 05.2	+1.4
GRJI	Gresik	2.26	27	P	Pn	00 38 39.9	+0.5
JAGI	Jajag, Banyuwa	2.71	80	P	Pn	00 38 45.4	-0.3
KPJI	Karang Pucung	2.96	302	P	Pn	00 38 50.9	+1.8
KPJI				S	Sn	00 39 24.5	+0.2
CMJI	Cimerak	3.18	291	P	Pn	00 38 51.0	-1.2
CMJI				S	Sn	00 39 25.9	-3.9
CISI	Cisompet, Garu	3.85	291	P	Pn	00 39 00.5	-0.9
CISI				S	Sn	00 39 42.2	-4.2

LDG 04 00:38:05.9±0.1, 42°.17N×1°.59E, h2km, Md3.4/2, Ml3.5/47, Error ellipse: s-maj=1.3km s-min=1.0km az=147.0
MRB 04 00:38:05.6±0.3, 42°.16N×1°.58E, h4km±4km, ML2.8/25, Error ellipse: s-maj=0.9km s-min=0.8km az=225.0
INMG 04 00:38:06.4±1.5, 42°.15N×1°.57E, h5km±3km, ML2.9, Error ellipse: s-maj=2.1km s-min=1.8km az=118.0
SFS 04 00:38:06.0, 42°.15N×1°.58E, h1km, ML3.0, SAINT LLORENA DE MORUNYS (LLEIDA)
MDD 04 00:38:06.2±0.2, 42°.16N×1°.59E, h11km, mbLg3.2/28, Error ellipse: s-maj=1.6km s-min=1.5km az=142.0, PRXIMO MDD EMS: III SANT LLOREN DE MORUNYS.
STR 04 00:38:07.6±0.3, 42°N±3°×°±°, h0km, mb3.9/1, MLv3.4/6
ISC 04 00:38:04.8±0.9, 42°.17N±0.02×1°.61E±0.01, h17km±6km, n220, σ2.03/372, 3C, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CORG	Organya	0.23	285	Pg	Pg	00 38 09.5	-0.6
CORG				Lg	Lg	00 38 12.8	
CORG	Organya	0.23	285	P	Pg	00 38 09.6	-0.6
CORG				S	Sg	00 38 12.9	-1.0
EMIR	Miracle	0.27	194	⇑Pg	Pb	00 38 10.7	-0.5
	27nm,0.1s,SNR=18						
EMIR				Lg	Lg	00 38 15.2	
	3μm,0.3s,SNR=5.0						
EMIR	Miracle	0.27	194	Pg	Pb	00 38 10.7	-0.5
CORI	Orista	0.38	121	Pg	Pb	00 38 13.0	-0.1
CORI				Lg	Lg	00 38 18.7	
	483nm,0.3s						
CORI	Orista	0.38	121	P	Pb	00 38 13.0	-0.1
CORI				S	Sb	00 38 18.8	+0.1
	483nm,0.3s						
CLLI	Llivia	0.41	41	Pg	Pb	00 38 13.9	+0.3

5.6nm,0.3s,SNR=188
CLLI Lg Lg 00 38 20.5
958nm,0.4s,SNR=5.0
CLLI Llivia 0.41 41 P Pb 00 38 13.9 +0.3
CLLI S Sb 00 38 20.4 +0.8
577nm,0.3s
CSOR Sort 0.41 300 ⇑Pg Pg 00 38 13.4 +0.1
33nm,0.3s,SNR=18
CSOR Lg Lg 00 38 19.5
2µm,0.4s,SNR=62
CSOR Sort 0.41 300 P Pg 00 38 13.4 +0.1
CSOR S Sg 00 38 18.8 -0.2
2µm,0.4s
CBRU Bruguera 0.44 75 Pg Pb 00 38 14.3 +0.2
CBRU Lg Lg 00 38 21.4
246nm,0.8s
CBRU Bruguera 0.44 75 P Pb 00 38 14.4 +0.2
CBRU S Sb 00 38 21.4 +1.0
491nm,0.8s
CEST Esterri de Car 0.50 328 Pg Pg 00 38 15.0 0.0
CEST Lg Lg 00 38 22.3
968nm,0.8s
CEST Esterri de Car 0.50 328 P Pg 00 38 15.0 0.0
CEST S Sg 00 38 22.3 +0.5
968nm,0.8s
CTRE Tremp 0.64 284 Pg Pg 00 38 17.3 -0.2
CTRE Lg Lg 00 38 26.1
387nm,0.5s
CTRE Tremp 0.64 284 P Pg 00 38 17.4 -0.2
CTRE S Sg 00 38 26.2 0.0
387nm,0.5s
CAVN Les Avellanes 0.70 246 Pg Pb 00 38 18.4 -0.2
CAVN Lg Lg 00 38 27.8
649nm,0.6s
CAVN Les Avellanes 0.70 246 P Pb 00 38 18.5 -0.2
CAVN S Sb 00 38 27.9 -0.2
1µm,0.6s
CFON Fontmartina 0.74 124 ⇑Pg Pb 00 38 19.8 +0.6
85nm,0.2s,SNR=18
CFON Lg Lg 00 38 29.8
504nm,0.2s,SNR=11
CFON Fontmartina 0.74 124 P Pb 00 38 19.5 +0.3
CFON S Sb 00 38 30.0 +0.9
460nm,0.2s
CBEU Beuda 0.79 84 Pg Pb 00 38 20.9 +0.7
CBEU Lg Lg 00 38 32.2
226nm,0.2s
CBEU Beuda 0.79 84 P Pb 00 38 20.9 +0.7
CBEU S Sb 00 38 32.2 +1.6
226nm,0.2s
FILF Fillols 0.80 61 Pg Pg 00 38 19.5 -1.0
FILF Lg Lg 00 38 30.0
124nm,0.3s
FILF Fillols 0.80 61 P Pg 00 38 19.6 -1.0
FILF S Sg 00 38 30.0 -1.1
124nm,0.3s
FNEB Nbias 0.82 26 Pg Pb 00 38 21.5 +1.0
FNEB Sg Sb 00 38 32.3 +1.0
FNEB Nbias 0.82 26 Pg Pb 00 38 21.3 +0.8
FNEB Lg Lg 00 38 32.6
210nm,0.6s
FNEB Nbias 0.82 26 P Pb 00 38 21.4 +0.8
FNEB S Sb 00 38 32.6 +1.3
210nm,0.6s
FBR Fabra 0.85 153 P Pb 00 38 21.1 0.0
FBR S Sb 00 38 32.9 +0.7
223nm,0.2s
MLS Moulis 0.87 334 Pg Pb 00 38 22.6 +1.1
MLS Sg Sb 00 38 34.5 +1.6
MLS Moulis 0.87 334 Pg Pb 00 38 22.0 +0.5
MLS Lg Lg 00 38 34.4
MLS Moulis 0.87 334 P Pb 00 38 22.0 +0.5
MLS S Sb 00 38 34.4 +1.6
EPOB Poblet 0.91 206 Pg Pb 00 38 22.4 +0.2
2.4nm,0.3s,SNR=76
EPOB Lg Lg 00 38 34.7
196nm,0.1s,SNR=13
EPOB Poblet 0.91 206 P Pg 00 38 22.0 -0.6
EPOB S Sb 00 38 34.8 +0.7
274nm,0.2s
EJON La Jonquera 0.98 73 Pg Pn 00 38 25.0 +1.2
39nm,0.5s,SNR=199
EJON Lg Lg 00 38 39.1
196nm,0.3s,SNR=9.9
EJON La Jonquera 0.98 73 P Pn 00 38 25.0 +1.2
SJAF Saint Jean de 0.99 71 Pg Pn 00 38 25.7 +1.8
SJAF Sg Sn 00 38 39.3 +1.8
SJAF Saint Jean de 0.99 71 Pg Pn 00 38 25.8 +1.8
29nm,0.4s,SNR=7.9
SJAF Lg Lg 00 38 39.2
79nm,0.2s,SNR=7.9
SJAF Saint Jean de 0.99 71 P Pb 00 38 24.5 +1.0
SJAF S Sn 00 38 38.8 +1.3
151nm,0.3s
CCAS Cassa de la Se 1.00 106 Pg Pb 00 38 24.6 +0.9
CCAS Lg Lg 00 38 38.9
361nm,0.3s
CCAS Cassa de la Se 1.00 106 P Pb 00 38 24.6 +0.9
CCAS S Sn 00 38 39.0 +1.1
361nm,0.3s
FESP Espira 1.10 54 P Pb 00 38 26.3 +0.8
FESP S Sn 00 38 42.2 +1.9
48nm,0.4s
CPAL Palau Saverder 1.16 83 Pg Pn 00 38 27.4 +1.2
CPAL Lg Lg 00 38 43.3
119nm,0.4s
CPAL Palau Saverder 1.16 83 P Pn 00 38 27.4 +1.2
CPAL S Sn 00 38 43.3 +1.7
119nm,0.4s
ECHI Chisagues Biel 1.16 296 Pg Pg 00 38 26.6 -0.7
ECHI Sg Sb 00 38 42.3 +1.0
ECHI Chisagues Biel 1.16 296 Pg Pg 00 38 26.5 -0.9
6.9nm,0.3s,SNR=7.9
ECHI Lg Lg 00 38 42.4
98nm,0.3s,SNR=7.9
ECHI Chisagues Biel 1.16 296 P Pg 00 38 26.6 -0.7
ECHI S Sb 00 38 42.5 +1.2
137nm,0.3s
MTLF Montolieu 1.25 21 ePg Pg 00 38 29.1 +0.1
MTLF Montolieu 1.25 21 eP Pg 00 38 30.3 +1.3
MTLF eSg Sb 00 38 45.5 +1.8
182nm,0.3s
MTLF Montolieu 1.25 21 Pg Pg 00 38 29.9 +0.9
MTLF Sg Sn 00 38 46.7 +2.8
MTLF Montolieu 1.25 21 Pg Pg 00 38 29.1 +0.1
MTLF Lg Lg 00 38 45.5
91nm,0.3s
MTLF Montolieu 1.25 21 P Pg 00 38 29.1 +0.1
FMON Montouss 1.25 316 P Pn 00 38 28.4 +0.8
FMON S Sn 00 38 46.1 +2.0
146nm,0.5s
EPF Esparros 1.27 313 ePg Pn 00 38 28.9 +1.1
EPF Esparros 1.27 313 eP Pn 00 38 30.5 +1.1
EPF eSg Sg 00 38 45.5 -0.5
274nm,0.3s
EPF Esparros 1.27 313 Pg Pn 00 38 28.9 +1.1
EPF Lg Lg 00 38 45.5
137nm,0.3s
EPF Esparros 1.27 313 Pg Pn 00 38 28.9 +1.1
PYLO Lourdes 1.54 308 Pg Pg 00 38 35.1 +0.7
PYLO Sg Sg 00 38 56.1 +1.7
PYLO Lourdes 1.54 308 P Pb 00 38 33.0 +0.2
PYLO S Sg 00 38 54.1 -0.3
198nm,0.5s
ERTA Horta de San J 1.55 219 Pg Pb 00 38 33.6 +0.5
4.6nm,0.4s,SNR=127
ERTA Lg Lg 00 38 54.6
247nm,0.2s,SNR=5.0
ERTA Horta de San J 1.55 219 P Pb 00 38 33.1 0.0
ERTA S Sg 00 38 53.7 -1.2
385nm,0.6s
ESAC San Caprasio 1.62 254 Pn Pb 00 38 34.4 +0.2
11nm,0.2s,SNR=7.9
ESAC Pg Pg 00 38 35.9 -0.1
173nm,0.2s,SNR=126
ESAC Lg Lg 00 38 57.1
1µm,0.2s,SNR=29
ESAC San Caprasio 1.62 254 Pn Pb 00 38 34.4 +0.2
CMAS Mas de Barbera 1.74 214 Pg Pb 00 38 35.9 -0.5
CMAS Lg Lg 00 38 58.6
208nm,0.4s
CMAS Mas de Barbera 1.74 214 P Pb 00 38 36.0 -0.5
CMAS S Sb 00 38 58.7 +0.7
208nm,0.4s
ETSF Etsaut 1.76 295 ePg Pg 00 38 37.9 -0.8
ETSF eSn Sn 00 38 56.4 -0.2
ETSF eSg Sb 00 39 00.3 +1.8
222nm,0.4s
ETSF Etsaut 1.76 295 Pg Pg 00 38 37.9 -0.8
ETSF Sn Sn 00 38 56.4 -0.2
ETSF Lg Lg 00 39 00.3
111nm,0.4s
ETSF Etsaut 1.76 295 Pg Pg 00 38 37.9 -0.8
ATE Arette 1.94 299 Pn Pg 00 38 41.4 -0.6
ATE Sn Sg 00 39 06.1 -1.0
ATE Arette 1.94 299 Pg Pg 00 38 41.4 -0.6
36nm,0.2s,SNR=7.9
ATE Lg Lg 00 39 06.8
146nm,0.2s,SNR=7.9
ATE Arette 1.94 299 S Sb 00 39 03.9 +0.5
171nm,0.6s
MONQ Montcuq 2.21 352 Pn Pb 00 38 44.1 -0.3
SJPF Ste Jean 2.29 295 eP Pb 00 38 44.7 -1.1
SJPF Ste Jean 2.29 295 ePg Pg 00 38 47.9 -1.0
SJPF eSn Sn 00 39 09.1 -0.6
157nm,0.3s
SJPF eSg Sg 00 39 17.3 -1.4
157nm,0.3s
SJPF Ste Jean 2.29 295 Pn Pb 00 38 44.7 -1.1
SJPF Pg Pg 00 38 47.9 -1.0
SJPF Sn Sn 00 39 09.1 -0.6
78nm,0.3s
SJPF Lg Lg 00 39 17.3
78nm,0.3s
EMOS Mosqueruela 2.40 222 Pn Pn 00 38 45.9 +2.5
0.2nm,0.5s,SNR=14
EMOS Pg Pg 00 38 49.7 -1.1
12nm,0.6s,SNR=7.9
EMOS Sn Sn 00 39 12.2 -0.2
18nm,0.4s,SNR=7.9
EMOS Lg Lg 00 39 20.5
162nm,0.5s,SNR=7.9
EMOS Mosqueruela 2.40 222 P Pn 00 38 44.9 +1.5
EMOS S Sn 00 39 15.3 +2.8
90nm,0.6s
EARA Aranguren 2.44 285 Pn Pb 00 38 48.4 +0.2
EARA Aranguren 2.44 285 Pg Pg 00 38 50.6 -1.0
15nm,0.6s,SNR=7.9
EARA Lg Lg 00 39 23.1
140nm,0.4s,SNR=7.9
LASF Ste Croix 2.51 40 ePn Pn 00 38 47.2 +2.3
LASF Ste Croix 2.51 40 eP Pb 00 38 48.3 -1.2
LASF eSn Sn 00 39 15.3 +0.2
LASF eSg Sg 00 39 25.2 -0.4
123nm,0.6s
LASF Ste Croix 2.51 40 Pn Pn 00 38 47.2 +2.3
LASF Sn Sn 00 39 15.3 +0.2
LASF Lg Lg 00 39 25.2
62nm,0.6s
EALK Alkurruntz 2.53 295 Pn Pb 00 38 49.7 -0.1
EALK Sn Sb 00 39 20.2 -0.3
EALK Alkurruntz 2.53 295 Pn Pb 00 38 48.6 -1.1
2.1nm,0.6s,SNR=7.9
EALK Pg Pg 00 38 52.7 -0.6
7.3nm,0.4s,SNR=7.9
EALK Lg Lg 00 39 25.9
290nm,0.5s,SNR=7.9
ETOS Mallorca 2.57 159 Pn Pn 00 38 46.8 +1.2
2.3nm,0.5s,SNR=15
ETOS Sn Sn 00 39 17.3 +0.8
3.6nm,0.5s,SNR=7.9
TRBF Trabuc cave 2.58 41 Pn Pn 00 38 49.1 +3.3
TRBF Sn Sn 00 39 20.6 +3.9
CAF Calviac 2.77 7 eP Pn 00 38 51.5 +3.1
CAF Calviac 2.77 7 ePg Pg 00 38 57.7 -0.3
CAF eSn Sn 00 39 21.0 -0.5
48nm,0.4s
CAF eSg Sg 00 39 33.6 -0.3
118nm,0.4s
CAF Calviac 2.77 7 Pn Pn 00 38 51.5 +3.1
CAF Pg Pg 00 38 57.7 -0.3
CAF Sn Sn 00 39 21.0 -0.5
24nm,0.4s
CAF Lg Lg 00 39 33.6
59nm,0.4s
LFF La Frestale 2.84 347 eP Pn 00 38 52.6 +3.3
LFF La Frestale 2.84 347 ePg Pg 00 38 58.1 -1.1
LFF eSn Sn 00 39 22.6 -0.4
43nm,0.4s
LFF eSg Sg 00 39 34.8 -1.2
135nm,0.4s
LFF La Frestale 2.84 347 Pn Pn 00 38 52.6 +3.3
LFF Pg Pg 00 38 58.1 -1.1
LFF Sn Sn 00 39 22.6 -0.4
22nm,0.4s
LFF Lg Lg 00 39 34.8
67nm,0.4s
ETOR Torete 3.07 245 Pn Pn 00 38 55.2 +2.7
11nm,0.2s,SNR=48
ETOR Pg Pg 00 39 02.2 -1.5
10nm,0.7s,SNR=7.9
ETOR Sn Sn 00 39 30.8 +1.9
54nm,0.3s,SNR=7.9
ETOR Lg Lg 00 39 42.9
214nm,0.5s,SNR=7.9
LRVF chteau la Riv 3.11 334 Pn Pn 00 38 57.2 +4.2
RJF Les Rejaudoux 3.13 359 eP Pn 00 38 56.6 +3.2
RJF Les Rejaudoux 3.13 359 ePg Pg 00 39 04.3 -0.5
RJF eSn Sn 00 39 29.2 -1.1
60nm,0.3s
RJF eSg Sg 00 39 44.5 -0.9
60nm,0.3s
RJF Les Rejaudoux 3.13 359 Pn Pn 00 38 56.6 +3.2
RJF Pg Pg 00 39 04.3 -0.5
RJF Sn Sn 00 39 29.2 -1.1
30nm,0.3s
RJF Lg Lg 00 39 44.5
30nm,0.3s
EIBI Ibiza 3.15 184 Pn Pn 00 38 55.1 +1.5
0.5nm,0.3s,SNR=7.9
EIBI Sn Sn 00 39 30.7 0.0
20nm,0.3s,SNR=7.9
LBL Lubilhac 3.28 21 Pn Pn 00 38 58.0 +2.6
RUSF Rustrel 3.34 57 Pn Pn 00 38 59.9 +3.6
ARTF Artigues 3.39 64 Pn Pn 00 39 00.3 +3.4
BSTF la Bastide-des 3.41 59 Pn Pn 00 39 00.8 +3.5
BSTF Sn Sn 00 39 40.7 +3.4
SMRF Simiane la Rot 3.42 57 ePn Pn 00 38 59.9 +2.6
SMRF eSn Sn 00 39 37.9 +0.5
12nm,0.4s
SMRF eSg Sg 00 39 53.7 -0.8
22nm,0.6s
SMRF Simiane la Rot 3.42 57 Pn Pn 00 38 59.9 +2.6
SMRF Sn Sn 00 39 37.9 +0.5
12nm,0.4s
SMRF Lg Lg 00 39 53.7
22nm,0.6s
ASEAF Site Antares, 3.42 78 Pn Pn 00 38 59.4 +2.4
VIVF Saint-Julien-l 3.48 39 ePn Pn 00 39 00.2 +2.0
VIVF Saint-Julien-l 3.48 39 ePg Pg 00 39 10.5 -1.1
VIVF eSn Sn 00 39 37.8 -1.3
VIVF eSg Sg 00 39 55.5 -1.2
22nm,0.3s
VIVF Saint-Julien-l 3.48 39 Pn Pn 00 39 00.2 +2.0
VIVF Pg Pg 00 39 10.5 -1.1
VIVF Sn Sn 00 39 37.8 -1.3
VIVF Lg Lg 00 39 55.5
11nm,0.3s
BLAF les Blancs 3.70 60 Pn Pn 00 39 04.2 +2.9
PYM Petit Puy Mans 3.71 15 Pn Pn 00 39 05.6 +4.1
EBEN2 Beniarda presa 3.75 202 Pn Pn 00 39 03.8 +1.9
2.9nm,0.7s,SNR=7.9
EBEN2 Sn Sn 00 39 46.0 +0.2
6.9nm,0.3s,SNR=7.9
ELAN Lanestosa 3.87 288 Pn Pn 00 39 06.5 +3.0
0.3nm,0.4s,SNR=41
ELAN Sn Sn 00 39 51.4 +2.9
7.6nm,0.4s,SNR=7.9
ELAN Lg Lg 00 40 05.7
25nm,0.4s,SNR=7.9
AFON Font Roja 3.87 206 Pn Pn 00 39 05.7 +2.1
1.9nm,0.2s,SNR=7.4
AFON Sn Sn 00 39 51.3 +2.6
5.1nm,0.4s,SNR=7.9
AFON Lg Lg 00 40 06.9
22nm,0.5s,SNR=7.9
OGDI Digne 3.94 59 Pn Pn 00 39 07.1 +2.6
FRF La Foret Royal 3.95 68 ePn Pn 00 39 06.3 +1.7
FRF eSn Sn 00 39 49.3 -1.2
11nm,0.4s
FRF eSg Sg 00 40 10.6 -1.1
12nm,0.4s
FRF La Foret Royal 3.95 68 Pn Pn 00 39 06.3 +1.7
FRF Sn Sn 00 39 49.3 -1.2
5.5nm,0.4s
FRF Lg Lg 00 40 10.6
6.0nm,0.4s
AGO Saint Agoulin 4.03 15 Pn Pn 00 39 09.0 +3.2
UCM Universidad Co 4.11 245 eP Pn 00 39 08.7 +1.9
UCM eS Sn 00 39 53.2 -1.3
TCF Toulx Ste Croi 4.14 6 ePn Pn 00 39 07.6 +0.4
TCF Toulx Ste Croi 4.14 6 eP Pn 00 39 10.9 +3.7
TCF eSn Sn 00 39 53.5 -1.6
TCF eSg Sg 00 40 17.2 -0.4
30nm,0.3s
TCF Toulx Ste Croi 4.14 6 Pn Pn 00 39 07.6 +0.4
TCF Sn Sn 00 39 53.5 -1.6
TCF Lg Lg 00 40 17.2
15nm,0.3s
ORIF Oris-en-Rattie 4.14 47 eP Pn 00 39 11.0 +3.7
ORIF eSn Sn 00 39 56.1 +0.8
27nm,0.9s
ORIF eSg Sg 00 40 16.4 -1.4
16nm,0.8s
ORIF Oris-en-Rattie 4.14 47 Pn Pn 00 39 11.4 +4.1
ORIF Oris-en-Rattie 4.14 47 Pn Pn 00 39 11.0 +3.7
ORIF Sn Sn 00 39 56.1 +0.8
14nm,0.9s
ORIF Lg Lg 00 40 16.4
8.1nm,0.8s
CALF Calern 4.20 66 Pn Pn 00 39 11.7 +3.5
CALF Sn Sn 00 40 00.3 +3.4
CHIF Chize 4.22 341 Pn Pn 00 39 12.1 +3.8
OGAG Argentiere 4.26 56 Pn Pb 00 39 15.6 -3.7
OGAG Sn Sn 00 40 05.8 +7.6
ETOB Tobarra 4.27 215 Pn Pn 00 39 11.0 +1.9
2.0nm,0.3s,SNR=7.9
ETOB Lg Lg 00 40 21.8
21nm,0.7s,SNR=7.9
GRN Grenoble 4.29 43 Pn Pn 00 39 12.9 +3.6
SURF Saint Ours 4.44 57 Pn Pn 00 39 15.3 +3.8
ISO Isola 4.45 61 Pn Pn 00 39 15.0 +3.4
BGF Bois d'Agland 4.47 11 ePn Pn 00 39 13.0 +1.2
BGF Bois d'Agland 4.47 11 ePg Pg 00 39 29.7 -0.8
BGF eSn Sn 00 40 04.0 +0.6
BGF eSg Sg 00 40 26.3 -2.0
116nm,0.4s
BGF Bois d'Agland 4.47 11 Pn Pn 00 39 13.0 +1.2
BGF Pg Pg 00 39 29.7 -0.8
BGF Sn Sn 00 40 04.0 +0.6
BGF Lg Lg 00 40 26.3
58nm,0.4s
OGSM Saint Maurice 4.53 39 Pn Pn 00 39 15.7 +3.1
MBDF Montbardon 4.54 54 eP Pn 00 39 16.7 +3.9
MBDF eSn Sn 00 40 03.3 -2.0
16nm,0.5s
MBDF Montbardon 4.54 54 Pn Pn 00 39 16.7 +3.9
MBDF Sn Sn 00 40 03.3 -2.0
7.8nm,0.5s
SBF Sospel 4.59 66 ePn Pn 00 39 14.0 +0.5
SBF Sospel 4.59 66 eP Pn 00 39 17.9 +4.4
SBF eSn Sn 00 40 06.3 -0.1
26nm,0.6s
SBF Sospel 4.59 66 Pn Pn 00 39 14.0 +0.5
SBF Sn Sn 00 40 06.3 -0.1
13nm,0.6s
GUD Guadarrama 4.60 252 Pn Pn 00 39 15.6 +2.0
0.6nm,0.4s,SNR=8.7
GUD Sn Sn 00 40 06.6 -0.1
8.7nm,0.3s,SNR=7.9
GUD Lg Lg 00 40 27.6
16nm,0.5s,SNR=7.9
TURF col de Turini 4.60 65 Pn Pn 00 39 16.7 +3.0
TURF Sn Sn 00 40 09.6 +2.8
MFF Saint Martin d 4.60 345 eP Pn 00 39 16.7 +3.1
MFF eSn Sn 00 40 04.0 -2.6
9.1nm,0.3s
MFF eSg Sg 00 40 30.3 -2.3
22nm,0.3s
MFF Saint Martin d 4.60 345 Pn Pn 00 39 17.2 +3.7
MFF Saint Martin d 4.60 345 Pn Pn 00 39 16.7 +3.1
MFF Sn Sn 00 40 04.0 -2.6
4.6nm,0.3s
MFF Lg Lg 00 40 30.3
11nm,0.3s
SAOF Saorge 4.71 65 Pn Pn 00 39 18.7 +3.5
SMF Signal de Mont 4.75 19 eP Pn 00 39 18.7 +3.1
SMF eSn Sn 00 40 10.6 +0.5
SMF eSg Sg 00 40 35.8 -1.4
116nm,1.2s
SMF Signal de Mont 4.75 19 Pn Pn 00 39 18.7 +3.1
SMF Sn Sn 00 40 10.6 +0.5
SMF Lg Lg 00 40 35.8
58nm,1.2s
AVF Avril sur Loir 4.78 14 eP Pn 00 39 19.1 +3.1
AVF Avril sur Loir 4.78 14 ePg Pg 00 39 34.8 -1.6
AVF eSg Sg 00 40 36.3 -1.9
16nm,0.4s
AVF Avril sur Loir 4.78 14 Pn Pn 00 39 19.1 +3.1
AVF Pg Pg 00 39 34.8 -1.6
AVF Lg Lg 00 40 36.3
8.1nm,0.4s
OG35 Corcelles 4.81 35 Pn Pn 00 39 19.7 +3.3
EMUR La Murta 4.85 208 Pn Pn 00 39 18.7 +1.7
0.6nm,0.2s,SNR=7.9
ESDC Sonseca Array 4.91 241 Pn Pn 00 39 18.9 +1.1
2.1nm,0.1s,baz=58,slow=14,SNR=7.9
ESDC Sn Sn 00 40 13.4 -0.8
4.5nm,0.2s,baz=58,slow=24,SNR=7.9
ESDC Lg Lg 00 40 37.5
12nm,0.5s,baz=59,slow=30,SNR=7.9
LPG La Plagne 4.99 46 eP Pn 00 39 23.6 +4.5
LPG eSn Sn 00 40 15.5 -0.9
LPG eSg Sg 00 40 43.3 -1.5
8.1nm,0.6s
LPG La Plagne 4.99 46 Pn Pn 00 39 23.6 +4.5
LPG Sn Sn 00 40 15.5 -0.9
LPG Lg Lg 00 40 43.3
4.1nm,0.6s
LPL La Plagne 4.99 46 eP Pn 00 39 23.3 +4.3
LPL La Plagne 4.99 46 Pn Pn 00 39 23.3 +4.3
SSF Saint Saulge 5.07 15 ePn Pn 00 39 21.8 +1.8
SSF Saint Saulge 5.07 15 ePg Pg 00 39 40.5 -1.4
SSF eSg Sg 00 40 45.7 -1.8
25nm,0.5s
SSF Saint Saulge 5.07 15 Pn Pn 00 39 21.8 +1.8
SSF Pg Pg 00 39 40.5 -1.4
SSF Lg Lg 00 40 45.7
12nm,0.5s
HYF Humbligny 5.15 8 eSn Sn 00 40 19.5 -0.5
HYF eSg Sg 00 40 47.5 -2.5
HYF Humbligny 5.15 8 Sn Sn 00 40 19.5 -0.5
HYF Lg Lg 00 40 47.5
EARI Arriondas 5.15 285 Pn Pn 00 39 24.0 +2.9
0.1nm,0.4s,SNR=7.9
EARI Sn Sn 00 40 19.7 -0.5
1.7nm,0.2s,SNR=7.9
SESP Santiago Espad 5.15 220 Pn Pn 00 39 22.7 +1.4
3.1nm,0.4s,SNR=7.9
SESP Lg Lg 00 40 45.0
8.1nm,0.4s,SNR=7.9
OG02 Monnetier-Morn 5.18 38 Pn Pn 00 39 25.4 +3.9
PAB San Pablo 5.23 242 Pn Pn 00 39 23.2 +1.0
1.4nm,0.5s,SNR=7.9
PAB Sn Sn 00 40 21.2 -0.9
1.7nm,0.3s,SNR=7.9
PAB Lg Lg 00 40 48.7
7.1nm,0.4s,SNR=7.9
LOR Lormes 5.34 17 ePn Pn 00 39 25.2 +1.5
baz=200
LOR Lormes 5.34 17 ePg Pg 00 39 44.8 -2.2
LOR eSg Sg 00 40 54.2 -1.9
11nm,0.3s
LOR Lormes 5.34 17 Pn Pn 00 39 25.2 +1.5
LOR Pg Pg 00 39 44.8 -2.2
LOR Lg Lg 00 40 54.2
5.6nm,0.3s
CABF La Chapelle 5.47 34 eP Pn 00 39 29.2 +3.6
CABF La Chapelle 5.47 34 ePg Pg 00 39 48.1 -1.5
CABF eSg Sg 00 40 57.5 -2.9
42nm,0.7s
CABF La Chapelle 5.47 34 Pn Pn 00 39 29.2 +3.6
CABF Pg Pg 00 39 48.1 -1.5
CABF Lg Lg 00 40 57.5

	21nm,0.7s						
PGF	Pioggiola	5.49	84	ePn	Pn	00 39 26.7	+0.9
PGF				eSn	Sn	00 40 26.8	-1.7
	12nm,0.5s						
PGF	Pioggiola	5.49	84	Pn	Pn	00 39 26.7	+0.9
PGF				Sn	Sn	00 40 26.8	-1.7
	5.8nm,0.5s						
EQES	Quesada	5.66	221	Pn	Pn	00 39 30.4	+2.2
	0.0nm,0.4s,SNR=7.9						
EQES				Lg	Lg	00 41 03.2	
	5.0nm,0.4s,SNR=7.9						
EPLA	Plasencia	6.18	253	Pn	Pn	00 39 35.8	+0.6
	0.9nm,0.5s,SNR=7.9						
EPLA				Sn	Sn	00 40 44.0	-1.5
	1.7nm,0.2s,SNR=7.9						
EPLA				Lg	Lg	00 41 21.1	
	3.6nm,0.4s,SNR=7.9						
EADA	Adamuz	6.20	232	Pn	Pn	00 39 36.7	+1.1
	0.1nm,0.3s,SNR=7.9						
EADA				Sn	Sn	00 40 43.4	-2.7
	0.9nm,0.3s,SNR=7.9						
EADA				Lg	Lg	00 41 16.9	
	SNR=7.9						
ECAL	Calabor	6.22	271	Pn	Pn	00 39 36.9	+1.0
	0.1nm,0.4s,SNR=7.9						
ECAL				Sn	Sn	00 40 45.6	-0.9
	6.7nm,0.3s,SNR=7.9						
ECAL				Lg	Lg	00 41 19.1	
	16nm,0.4s,SNR=7.9						
EBER	Berja	6.31	215	Pn	Pn	00 39 41.9	+4.6
	1.3nm,0.2s,SNR=7.9						
GRR	Gorron	6.45	345	ePn	Pn	00 39 40.1	+1.1
GRR				eSn	Sn	00 40 50.7	-1.4
	13nm,0.5s						
GRR	Gorron	6.45	345	Pn	Pn	00 39 40.1	+1.1
GRR				Sn	Sn	00 40 50.7	-1.4
	6.3nm,0.5s						
SFTF	Sexfontaines	6.50	21	ePn	Pn	00 39 41.2	+1.6
SFTF				eSn	Sn	00 40 51.8	-1.5
SFTF				eSg	Sg	00 41 29.7	-3.5
	34nm,0.7s						
SFTF	Sexfontaines	6.50	21	Pn	Pn	00 39 41.2	+1.6
SFTF				Sn	Sn	00 40 51.8	-1.5
SFTF				Lg	Lg	00 41 29.7	
	34nm,0.7s						
LDF	La Druitiere	6.54	350	ePn	Pn	00 39 41.4	+1.3
LDF				eSn	Sn	00 40 51.5	-2.7
	3.3nm,0.3s						
LDF				eSg	Sg	00 41 30.5	-3.9
	7.7nm,0.5s						
MVO	Moncorvo	6.55	264	ePn	Pn	00 39 42.0	+1.6
MVO				eSn	Sn	00 40 53.9	-0.8
MVO				A	A	00 41 39.0	
	10nm,0.5s						
MVO	Moncorvo	6.55	264	Pn	Pn	00 39 41.7	+1.3
	SNR=7.9						
MVO				Sn	Sn	00 40 52.4	-2.2
	3.2nm,0.4s,SNR=7.9						
MVO				Lg	Lg	00 41 33.0	
	6.0nm,0.4s,SNR=7.9						
EPON	Pontenova	6.55	283	Pn	Pn	00 39 42.3	+2.0
	0.9nm,0.4s,SNR=7.9						
QUIF	Quistinic	6.67	331	eP	Pn	00 39 46.0	+4.2
QUIF				eSn	Sn	00 40 54.8	-2.5
	5.2nm,0.3s						
QUIF	Quistinic	6.67	331	Pn	Pn	00 39 46.0	+4.2
QUIF				Sn	Sn	00 40 54.8	-2.5
	2.6nm,0.3s						
EGOR	Sierra Gorda,	6.71	223	Pn	Pn	00 39 44.7	+2.0
	0.1nm,0.4s,SNR=7.9						
HAU	Haudompre	6.72	28	ePn	Pn	00 39 43.1	+0.4
HAU				eSn	Sn	00 40 56.9	-2.0
HAU				eSg	Sg	00 41 36.9	-3.6
	11nm,0.5s						
HAU	Haudompre	6.72	28	Pn	Pn	00 39 43.1	+0.4
HAU				Sn	Sn	00 40 56.9	-2.0
HAU				Lg	Lg	00 41 36.9	
	5.7nm,0.5s						
FLN	La Foliniere	6.75	348	ePn	Pn	00 39 45.5	+2.5
	baz=168						
FLN	La Foliniere	6.75	348	eP	Pn	00 39 48.2	+5.2
FLN				eSn	Sn	00 40 56.2	-3.3
	2.2nm,0.3s						
FLN				eSg	Sg	00 41 37.2	-4.2
	4.3nm,0.4s						
FLN	La Foliniere	6.75	348	Pn	Pn	00 39 45.5	+2.5
FLN				Sn	Sn	00 40 56.2	-3.3
	1.1nm,0.3s						
FLN				Lg	Lg	00 41 37.2	
	2.2nm,0.4s						
HINF	Hinteralfeld	6.75	32	ePn	Pn	00 39 43.8	+0.7
HINF				eSn	Sn	00 40 57.7	-1.9
HINF				eSg	Sg	00 41 37.6	-3.8
	9.6nm,0.6s						
HINF	Hinteralfeld	6.75	32	Pn	Pn	00 39 43.8	+0.7
HINF				Sn	Sn	00 40 57.7	-1.9
HINF				Lg	Lg	00 41 37.6	
	4.8nm,0.6s						
SGMF	Saint Gilles	6.75	336	eP	Pn	00 39 46.9	+3.8
SGMF				eSn	Sn	00 40 58.3	-1.2
	36nm,0.9s						
SGMF	Saint Gilles	6.75	336	Pn	Pn	00 39 46.9	+3.8
SGMF				Sn	Sn	00 40 58.3	-1.2
	18nm,0.9s						
ECAB	El Cabril	6.77	235	Pn	Pn	00 39 44.7	+1.4
	2.3nm,0.6s,SNR=7.9						
ECAB				Sn	Sn	00 40 58.0	-2.0
	0.8nm,0.3s,SNR=7.9						
ECAB				Lg	Lg	00 41 35.4	
	9.7nm,0.5s,SNR=7.9						
MEZF	Maizieres J'vi	6.78	20	eSn	Sn	00 40 58.2	-1.9
MEZF				eSg	Sg	00 41 38.3	-3.8
	28nm,0.5s						
MEZF	Maizieres J'vi	6.78	20	Sn	Sn	00 40 58.2	-1.9
MEZF				Lg	Lg	00 41 38.3	
	28nm,0.5s						
PAGF	Fort de Pagny	7.01	23	eSg	Sg	00 41 45.2	-4.3
	29nm,0.8s						
ROSF	Rostrenen	7.06	332	eP	Pn	00 39 50.0	+2.7
ROSF				eSn	Sn	00 41 04.9	-2.2
ROSF	Rostrenen	7.06	332	Pn	Pn	00 39 50.0	+2.7
ROSF				Sn	Sn	00 41 04.9	-2.2
EAGO	Agolada(Pontev	7.20	278	Lg	Lg	00 41 52.7	
	2.8nm,0.4s,SNR=7.9						
ELOB	Lobios	7.21	271	Sn	Sn	00 41 07.3	-3.7
	1.6nm,0.2s,SNR=7.9						
ELOB				Lg	Lg	00 41 50.8	
	17nm,0.5s,SNR=7.9						
PCBR	Castelo Branco	7.26	254	ePn	Pn	00 39 51.1	+1.1
PCBR				eSn	Sn	00 41 10.2	-1.8
PCBR				A	A	00 42 04.2	
	4.9nm,0.6s						
PCBR	Castelo Branco	7.26	254	Pn	Pn	00 39 51.1	+1.1
PCBR				Sn	Sn	00 41 10.2	-1.8
	2.5nm,0.6s						
PVIS	Viseu	7.29	262	ePn	Pn	00 39 52.0	+1.5
PVIS	Viseu	7.29	262	Pn	Pn	00 39 52.0	+1.5
PMRV	Marv??o	7.36	251	ePn	Pn	00 39 52.9	+1.4
PMRV				eSn	Sn	00 41 12.9	-1.7
PMRV				A	A	00 42 18.8	
	5.0nm,0.6s						
PMRV	Marv??o	7.36	251	Pn	Pn	00 39 52.9	+1.4
PMRV				Sn	Sn	00 41 12.9	-1.7
	5.0nm,0.6s						
CDF	Champ du Feu	7.41	31	eSg	Sg	00 41 58.6	-3.7
	7.6nm,0.6s						
CDF	Champ du Feu	7.41	31	Lg	Lg	00 41 58.6	
	3.8nm,0.6s						
EBAD	Badajoz	7.41	245	Pn	Pn	00 39 52.9	+0.8
	0.2nm,0.3s,SNR=7.9						
EBAD				Sn	Sn	00 41 12.2	-3.5
	1.5nm,0.2s,SNR=7.9						
EBAD				Lg	Lg	00 41 60.0	
	3.2nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	7.73	238	Sn	Sn	00 41 22.3	-1.4
	0.5nm,0.3s,SNR=7.9						
EMIN				Lg	Lg	00 42 06.9	
	7.0nm,0.6s,SNR=7.9						
BAIF	Baives	8.09	12	ePn	Pn	00 40 03.5	+2.1
BAIF	Baives	8.09	12	Pn	Pn	00 40 03.5	+2.1
VYHS	Vyhne	13.65	57	ePN	Pn	00 41 13.8	-3.7

IDC 04 00:39:51.0±10.0,7.66S×128.05E,h75km±111km,mb3.5/3, mb1 3.7/6,mb1mx3.5/37,mbtmp3.8/6,ML3.7/3,Error ellipse: s-maj=110.2km s-min=56.1km az=48.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.64	193	P	Pn	00 42 21.0	+0.4
	0.4nm,0.3s,baz=18,slow=15,SNR=3.5						
WRA	Warramunga Arr	13.65	154	P	Pn	00 42 59.6	-1.7
	0.6nm,0.3s,baz=330,slow=13,SNR=8.6						
ASAR	Alice Springs	16.88	161	P	P	00 43 43.4	-0.1
	0.2nm,0.3s,baz=336,slow=10,SNR=3.1						
SONM	Songino Array	58.48	343	P	P	00 49 39.6	+0.3
	0.7nm,0.9s,baz=152,slow=6.5,SNR=3.8						
SONM				PcP	PcP	00 50 29.5	+0.3
	0.2nm,0.4s,baz=151,slow=3.3,SNR=3.8						
MKAR	Makanchi Array	67.73	328	P	P	00 50 40.7	+0.1
	0.7nm,0.6s,baz=124,slow=7.7,SNR=6.8						
ZALV	Zalesovo Beam	71.33	335	P	P	00 51 01.5	-1.0
	0.5nm,0.4s,baz=120,slow=5.2,SNR=3.7						

ISN 04 00:42:39.5±0.7,34.35N×45.42E,h6km±4km,ML2.8
TEH 04 00:42:40.2,34.33N×45.52E,h9km,ML2.9
ISC 04 00:42:40.5±1.3,34.35N±0.04×45.53E±0.04,h5km±12km, n14,σ0.86/20,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	Dehrash	0.79	64	ePn	Pg	00 42 55.2	-0.5
IDHR				e		00 43 09.4	
IGHG	Ghaleghazi	0.86	91	ePg	Pg	00 42 57.3	+0.2
IGHG				e		00 42 57.8	
IGHG				eSg	Sb	00 43 10.0	-0.1
IVIS	Veis	1.11	80	ePg	Pg	00 43 01.7	0.0
IVIS				e		00 43 19.7	
IBDR	Badra	1.28	165	ePg	Pg	00 43 05.0	0.0
IBDR				AML	AML	00 43 09.8	
	comp=Z,32nm,0.4s						
IBDR				eSg	Sn	00 43 21.0	-1.6
ILIN	Lien	1.31	64	e		00 43 09.0	
ILIN				ePn	Pg	00 43 05.8	+0.1
KER	Kermanshah	1.33	88	e		00 43 29.7	
KER				ePn	Pb	00 43 05.7	-0.3
IKRK	Kirkuk	1.43	317	ePn	Pb	00 43 07.0	-0.7
IKRK				AML	AML	00 43 10.5	
	comp=Z,64nm,0.4s						
IKRK				eSn	Sg	00 43 27.0	+0.5
BHD	Baghdad	1.44	222	ePn	Pb	00 43 07.0	-0.8
BHD				AML	AML	00 43 10.7	
	comp=Z,3μm,0.4s						
BHD				eSn	Sg	00 43 27.0	+0.3
IKOM	Komasi	1.65	95	ePn	Pb	00 43 11.4	-0.1
IKOM				e		00 43 36.3	
IBZA	Bozab	1.93	86	ePn	Pb	00 43 15.7	-0.7
IBZA				e		00 43 45.7	
IKFM	Kafar-mosalman	2.10	112	ePn	Pb	00 43 17.2	-1.8
IKFM				e		00 43 51.2	
HSAM	Samen	2.55	92	ePn	Pn	00 43 23.9	+1.1
MSL	Mosul	2.84	317	ePn	Pn	00 43 27.0	+0.4
MSL				eSn	Sn	00 44 01.0	-0.2
NSR	Nassriya	3.37	171	ePn	Pn	00 43 35.0	+1.2
NSR				eSn	Sn	00 44 15.0	+0.8

ROM 04 00:42:55.7±0.0,43.391N±0.003×12.492E±0.004, h8km,ML2.2/27,13C-2D,Error ellipse: s-maj=0.3km s-min=0.2km az=40.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	Monte Foce - G	0.06	113	⇑iP	Pg	00 42 57.8	+0.2
ATFO				S	Sg	00 42 59.1	+0.1
ATFO				AML	AML		
	comp=E,5855μm,0.4s						
ATFO				AML	AML		
	comp=N,4995μm,0.4s						
ATVO	AVT- Monte Val	0.06	262	⇑iP	Pg	00 42 57.9	+0.3
ATVO				S	Sg	00 42 59.1	+0.2
ATVO				AML	AML		
	comp=E,3715μm,1.4s						
ATVO				AML	AML		
	comp=N,3755μm,0.3s						
ATPI	Pietralunga -	0.09	312	⇑P	Pg	00 42 58.4	+0.4
ATPI				S	Sg	00 43 00.1	+0.6
ATPI				AML	AML		
	comp=N,2925μm,0.3s						
ATPI				AML	AML		
	comp=E,2620μm,0.4s						
MURB	Monte Urbino	0.13	170	⇓eP	Pg	00 42 59.3	+0.8
MURB				S	Sg	00 43 02.0	+1.4
MURB				AML	AML		
	comp=E,7215μm,1.4s						
MURB				AML	AML		
	comp=N,6295μm,0.9s						
MURB				AML	AML		
	comp=N,6160μm,0.2s						
MURB				AML	AML		
	comp=E,7885μm,0.3s						
PIEI	Pieia	0.15	12	⇑P	Pg	00 42 59.5	+0.6
PIEI				S	Sg	00 43 02.3	+1.2
PIEI				AML	AML		
	comp=N,2570μm,0.2s						
PIEI				AML	AML		
	comp=E,3860μm,0.1s						
CDCA	Citt' di Caste	0.20	290	P	Pg	00 43 00.5	+0.8
CDCA				AML	AML		
	comp=E,1495μm,0.5s						
CDCA				AML	AML		
	comp=N,2590μm,0.5s						
FRON	Frontone	0.21	53	⇑iP	Pg	00 43 00.6	+0.6
FRON				S	Sg	00 43 04.2	+1.3
FRON				AML	AML		
	comp=E,552μm,0.1s						
FRON				AML	AML		
	comp=N,785μm,0.6s						
BADI	Badiali	0.22	303	⇑P	Pg	00 43 00.8	+0.8
BADI				S	Sg	00 43 04.9	+1.8
BADI				AML	AML		
	comp=E,1800μm,0.2s						
BADI				AML	AML		
	comp=E,1805μm,0.2s						
BADI				AML	AML		
	comp=N,3140μm,0.2s						
SSFR	Montelago di S	0.22	78	⇑iP	Pg	00 43 00.7	+0.6
SSFR				AML	AML		
	comp=N,2690μm,0.2s						
SSFR				AML	AML		
	comp=N,2430μm,0.7s						
SSFR				AML	AML		
	comp=E,3200μm,0.2s						
SSFR				AML	AML		
	comp=N,2695μm,0.2s						
SSFR				AML	AML		
	comp=E,2740μm,0.3s						
ATTE	AVT- Monte Tez	0.22	208	P	Pg	00 43 00.8	+0.7
ATTE				S	Sg	00 43 04.2	+1.1
ATTE				AML	AML		
	comp=E,602μm,0.3s						
ATTE				AML	AML		
	comp=N,450μm,0.3s						
FOSV	Fossato di Vic	0.22	116	⇑P	Pg	00 43 00.8	+0.6
FOSV				S	Sg	00 43 04.5	+1.4
FOSV				AML	AML		
	comp=E,419μm,1.4s						
FOSV				AML	AML		
	comp=N,550μm,0.3s						
FOSV				AML	AML		
	comp=E,420μm,1.4s						
NARO	Abbazia di Nar	0.23	16	⇑P	Pg	00 43 00.9	+0.5
NARO				S	Sg	00 43 04.8	+1.3
NARO				AML	AML		
	comp=N,621μm,0.1s						
NARO				AML	AML		
	comp=E,613μm,0.2s						
PE3	Peglio	0.30	1	P	Pg	00 43 02.6	+0.8
PE3				S	Sb	00 43 08.6	-0.1
PE3				AML	AML		
	comp=E,636μm,0.4s						
PE3				AML	AML		
	comp=N,711μm,0.4s						
MPAG	Monte Paganucc	0.31	39	⇑P	Pg	00 43 02.4	+0.6
MPAG				S	Sb	00 43 07.9	-0.9
MPAG				AML	AML		
	comp=N,272μm,0.3s						
MPAG				AML	AML		
	comp=E,237μm,0.3s						
PARC	Parchiule	0.32	324	P	Pg	00 43 02.8	+0.8
PARC				AML	AML		
	comp=N,392μm,1.2s						
PARC				AML	AML		
	comp=E,339μm,0.2s						
SSP9	Sansepolcro	0.32	305	P	Pb	00 43 02.9	-0.8
ARVD	Arcevia	0.34	72	⇑P	Pg	00 43 03.1	+0.6
ARVD				S	Sb	00 43 09.1	-0.6
ARVD				AML	AML		
	comp=N,283μm,0.6s						
ARVD				AML	AML		
	comp=E,308μm,0.1s						
SNTG	Esanatoglia	0.35	112	⇑P	Pg	00 43 03.2	+0.6
SNTG				S	Sb	00 43 09.4	-0.7
SNTG				AML	AML		
	comp=N,1011μm,0.3s						
SNTG				AML	AML		
	comp=E,530μm,0.4s						
FSSB	Fossombrone	0.37	34	⇑P	Pg	00 43 03.5	+0.6
FSSB				S	Sb	00 43 09.9	-0.5
FSSB				AML	AML		
	comp=E,621μm,0.2s						
FSSB				AML	AML		
	comp=N,493μm,0.3s						
ASSB	Assisi San Ben	0.37	161	⇓P	Pg	00 43 03.4	+0.5
ASSB				S	Sb	00 43 09.8	-0.7
ASSB				AML	AML		
	comp=E,320μm,0.5s						
ASSB				AML	AML		
	comp=N,299μm,0.8s						
EL6	Elcito	0.45	98	P	Pg	00 43 05.0	+0.5
EL6				S	Sb	00 43 12.6	-0.2
CRE	Caprese Michel	0.46	300	P	Pg	00 43 05.1	+0.5
CRE				AML	AML		
	comp=N,231μm,1.2s						
CRE				AML	AML		
	comp=E,184μm,1.3s						
CESI	CESI - Serrava	0.49	142	P	Pg	00 43 05.7	+0.5
CESI				S	Sb	00 43 14.0	0.0
CESI				AML	AML		
	comp=E,41μm,0.3s						
CESI				AML	AML		
	comp=N,72μm,0.7s						
CING	Cingoli	0.51	91	P	Pg	00 43 06.1	+0.5
CING				S	Sb	00 43 15.0	+0.4
CING				AML	AML		
	comp=E,152μm,1.1s						
CING				AML	AML		
	comp=N,171μm,0.9s						
MGAB	Montegabbione	0.55	210	P	Pb	00 43 07.1	-0.6
MGAB				AML	AML		
	comp=N,534μm,0.3s						
MGAB				AML	AML		
	comp=E,602μm,0.5s						
MGAB				AML	AML		
	comp=E,594μm,0.5s						
MGAB				AML	AML		
	comp=N,515μm,0.3s						
FDMO	Fiordimonte	0.56	129	P	Pg	00 43 06.9	+0.4
FDMO				S	Sb	00 43 16.3	+0.3
FDMO				AML	AML		
	comp=E,142μm,0.1s						
FDMO				AML	AML		
	comp=N,198μm,1.3s						
MOMA	Monte Martano	0.59	174	P	Pb	00 43 07.8	-0.5
MOMA				AML	AML		
	comp=N,156μm,0.3s						
MOMA				AML	AML		
	comp=E,192μm,0.9s						
NRCA	Norcia	0.72	141	P	Pg	00 43 09.6	0.0
NRCA				AML	AML		
	comp=N,156μm,0.8s						
NRCA				AML	AML		
	comp=E,138μm,1.3s						
LNSS	Leonessa	0.88	153	P	Pg	00 43 12.5	-0.2
LNSS				AML	AML		
	comp=E,91μm,1.5s						
LNSS				AML	AML		
	comp=N,102μm,1.5s						

ROM 04 00:43:26.9±0.1,43.342N±0.004×12.523E±0.005, h9km,Md1.4/8,1C,Error ellipse: s-maj=0.4km s-min=0.4km az=213.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	Monte Foce - G	0.04	55	⇑P	Pg	00 43 28.8	0.0
ATFO				S	Sg	00 43 30.0	-0.2
ATFO				END			
ATFO				END			
MURB	Monte Urbino	0.08	179	P	Pg	00 43 29.5	+0.3
MURB				S	Sg	00 43 31.2	+0.4
MURB				END			
MURB				END			
ATVO	AVT- Monte Val	0.09	295	P	Pg	00 43 29.7	+0.3
ATVO				S	Sg	00 43 31.6	+0.5
ATVO				END			
ATVO				END			
ATPI	Pietralunga -	0.14	321	P	Pg	00 43 30.6	+0.6
ATPI				S	Sg	00 43 33.3	+1.0
ATPI				END			
ATPI				END			
FOSV	Fossato di Vic	0.18	105	P	Pg	00 43 31.4	+0.8
FOSV				S	Sg	00 43 34.8	+1.5
FOSV				END			
FOSV				END			
PIEI	Pieia	0.19	3	P	Pg	00 43 31.8	+0.8
PIEI				S	Sg	00 43 35.2	+1.5
PIEI				END			
PIEI				END			
FRON	Frontone	0.23	40	P	Pg	00 43 32.2	+0.6
FRON				S	Sg	00 43 36.2	+1.5
FRON				END			
FRON				END			
NARO	Abbazia di Nar	0.27	9	P	Pg	00 43 33.0	+0.7
NARO				S	Sb	00 43 37.6	-1.1
NARO				END			
NARO				END			

ROM 04 00:45:21.5±0.2,43.395N±0.004×12.494E±0.007, h7km±1km,ML0.9/3,Error ellipse: s-maj=0.6km s-min=0.4km az=81.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	Monte Foce - G	0.06	116	P	Pg	00 45 23.4	+0.1
ATFO				S	Sg	00 45 24.8	+0.2
ATFO				AML	AML		
	comp=N,103μm,1.1s						
ATFO				AML	AML		
	comp=E,130μm,1.6s						
ATVO	AVT- Monte Val	0.07	259	P	Pg	00 45 23.4	+0.1
ATVO				S	Sg	00 45 24.8	+0.1
ATPI	Pietralunga -	0.09	310	P	Pg	00 45 23.9	+0.3
ATPI				S	Sg	00 45 25.8	+0.6
MURB	Monte Urbino	0.13	170	P	Pg	00 45 24.9	+0.6
MURB				S	Sg	00 45 27.6	+1.3
MURB				AML	AML		
	comp=N,120μm,0.9s						
MURB				AML	AML		
	comp=E,146μm,1.3s						
PIEI	Pieia	0.14	12	P	Pg	00 45 25.2	+0.6
PIEI				S	Sg	00 45 28.2	+1.5
PIEI				AML	AML		
	comp=E,76μm,0.2s						
PIEI				AML	AML		
	comp=N,42μm,0.2s						
FRON	Frontone	0.21	54	P	Pg	00 45 26.2	+0.5
NARO	Abbazia di Nar	0.23	16	P	Pg	00 45 26.5	+0.5

ROM 04 00:46:13.9±0.1,44.199N±0.006×10.126E±0.009,h5km, ML2.1/11,Error ellipse: s-maj=0.8km s-min=0.7km az=234.0
LDG 04 00:46:14.8±0.1,44.15N×10.10E,h4km,Ml2.6/8,Error ellipse: s-maj=3.6km s-min=2.2km az=14.0
GEN 04 00:46:14.4,44.21N×10.12E,h4km,Ml2.0
STR 04 00:46:14.2±1.0,44.°N±6°×1.°0E±°,h0km,MLv2.5/6
ISC 04 00:46:13.8±0.8,44.20N±0.02×10.11E±0.02,h10km±5km, n48,σ1.10/76,4C,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FIVI	Fivizzano	0.04	18	P	Pg	00 46 15.5	-0.2
FIVI				S	Sg	00 46 16.3	-0.8
VLC	Villacollemand	0.20	101	P	Pg	00 46 18.6	+0.5
VLC				S	Sg	00 46 21.7	+0.8
VLC				AML	AML		
	comp=E,492µm,0.7s						
VLC				AML	AML		
	comp=N,444µm,0.8s						
VLC				AML	AML		
	comp=N,432µm,0.8s						
VLC				AML	AML		
	comp=E,470µm,0.7s						
PLMA	Palmaria, Port	0.24	231	⇑P	Pg	00 46 19.5	+0.8
PLMA				S	Sg	00 46 23.2	+1.3
PLMA	Palmaria, Port	0.24	231	END			
PLMA				AML	AML		
	comp=E,826µm,0.2s						
PLMA				AML	AML		
	comp=N,978µm,0.4s						
GRAM	Graiana	0.29	354	⇑iP	Pg	00 46 20.3	+0.6
GRAM				S	Sg	00 46 24.8	+1.0
GRAM				AML	AML		
	comp=E,3135µm,0.2s						
GRAM				AML	AML		
	comp=N,3445µm,0.2s						
GRAM	Graiana	0.29	354	END			
GRAM	Graiana	0.29	354	P	Pg	00 46 20.3	+0.6
GRAM				S	Sg	00 46 24.7	+1.0
ERBM	Eremo	0.31	45	⇑iP	Pb	00 46 20.9	-0.7
ERBM				S	Sb	00 46 25.7	-1.0
ERBM				AML	AML		
	comp=E,824µm,1.0s						
ERBM				AML	AML		
	comp=N,1025µm,1.3s						
ERBM				AML	AML		
	comp=N,1022µm,1.3s						
ERBM				AML	AML		
	comp=E,823µm,1.0s						
ERBM	Eremo	0.31	45	END			
CARD	Cardoso	0.32	123	P	Pg	00 46 20.7	+0.6
CARD				S	Sg	00 46 25.3	+0.9
CARD				AML	AML		
	comp=E,785µm,0.1s						
CARD				AML	AML		
	comp=E,786µm,0.1s						
CARD				AML	AML		
	comp=N,880µm,0.2s						
CARD	Cardoso	0.32	123	P	Pg	00 46 20.7	+0.6
CARD				S	Sg	00 46 25.3	+0.9
BDI	Bagni Di Lucca	0.38	111	⇑P	Pg	00 46 21.8	+0.5
BDI				S	Sg	00 46 27.1	+0.9
BDI				AML	AML		
	comp=E,309µm,0.4s						
BDI				AML	AML		
	comp=N,235µm,1.2s						
BDI				AML	AML		
	comp=E,286µm,0.5s						
BDI				AML	AML		
	comp=N,340µm,0.4s						
BDI				AML	AML		
	comp=N,236µm,1.2s						
BDI				AML	AML		
	comp=E,310µm,0.4s						
MAIM	Mastiano	0.40	136	P	Pg	00 46 22.2	+0.7
MAIM				S	Sg	00 46 27.8	+1.0
MAIM				AML	AML		
	comp=N,402µm,1.2s						
MAIM				AML	AML		
	comp=E,532µm,0.3s						
MAIM	Mastiano	0.40	136	P	Pg	00 46 22.2	+0.7
MAIM				S	Sg	00 46 27.8	+1.0
POPM	Popiglio	0.49	108	P	Pg	00 46 23.8	+0.5
POPM				AML	AML		
	comp=E,552µm,0.8s						
POPM				AML	AML		
	comp=N,462µm,0.1s						
POPM	Popiglio	0.49	108	P	Pg	00 46 23.9	+0.6
POPM				S	Sb	00 46 30.9	-0.9
MTCR	Monte La Croce	0.66	105	P	Pb	00 46 27.4	-0.2
MTCR				S	Sb	00 46 37.2	+0.3
OSSC	Osservatorio P	1.06	129	P	Pn	00 46 35.1	+0.3
OSSC				AML	AML		
	comp=E,108µm,1.1s						
OSSC				AML	AML		
	comp=N,85µm,0.5s						
CSNT	Castellina Chi	1.12	130	P	Pn	00 46 36.2	+0.6
CSNT				AML	AML		
	comp=E,51µm,1.6s						
CSNT				AML	AML		
	comp=N,82µm,0.4s						
TRIF	Trifonti	1.23	152	P	Pg	00 46 37.6	+0.3
TRIF				AML	AML		
	comp=N,52µm,1.2s						
TRIF				AML	AML		
	comp=E,50µm,0.9s						
FROS	Frosini	1.25	142	P	Pg	00 46 38.1	+0.4
FROS				AML	AML		
	comp=N,87µm,1.6s						
FROS				AML	AML		
	comp=E,87µm,1.6s						
PGF	Pioggiola	1.84	207	ePn	Pn	00 46 45.7	+0.2
PGF				eSn	Sn	00 47 06.5	-2.4
	comp=E,14nm,0.4s						
PGF	Pioggiola	1.84	207	P	Pn	00 46 46.3	+0.7
PGF				S	Sn	00 47 07.9	-1.0
SAOF	Saorge	1.85	264	P	Pn	00 46 46.2	+0.5
SAOF				S	Sn	00 47 09.0	-0.2
SBF	Sospel	1.96	261	ePn	Pn	00 46 46.7	-0.5
SBF				eSn	Sn	00 47 10.5	-1.3
	comp=E,26nm,0.4s						
TURF	col de Turini	1.97	264	P	Pn	00 46 48.0	+0.6
TURF				S	Sn	00 47 12.1	-0.2
ESCA	l'Escarene	2.01	260	P	Pn	00 46 48.6	+0.8
ESCA				S	Sn	00 47 13.6	+0.7
CALF	Calern	2.34	260	P	Pn	00 46 53.2	+0.7
CALF				S	Sn	00 47 21.0	-0.4
MBDF	Montbardon	2.45	284	ePn	Pn	00 46 54.3	+0.3
MBDF	Montbardon	2.45	284	ePg	Pg	00 47 00.8	+0.1
MBDF				eSn	Sn	00 47 23.1	-0.9
	comp=E,11nm,0.6s						
MBDF				eSg	Sg	00 47 32.0	-0.4
FRF	La Foret Royal	2.58	257	ePn	Pn	00 46 55.8	+0.1
FRF				eSn	Sn	00 47 24.2	-3.0
	comp=E,9.5nm,0.3s						
LPG	La Plagne	2.72	300	ePn	Pn	00 46 58.8	+1.0
LPG	La Plagne	2.72	300	ePg	Pg	00 47 06.6	+0.7
LPG				eSn	Sn	00 47 30.3	-0.6
	comp=E,6.7nm,0.7s						
LPG				eSg	Sg	00 47 41.8	+0.7
LPL	La Plagne	2.74	300	ePn	Pn	00 47 00.0	+2.0
LPL				eSn	Sn	00 47 31.4	+0.1
	comp=E,6.0nm,0.6s						
FETA	Feichten	2.86	9	Pn	Pb	00 47 05.8	+0.9
	comp=E,0.4nm,0.3s						
BLAF	les Blancs	2.94	267	P	Pn	00 47 02.6	+2.0
BLAF				S	Sn	00 47 36.1	+0.1
ABTA	Abfaltersbach	3.06	33	Pn	Pb	00 47 06.1	-2.3
	comp=E,1.4nm,0.5s						
DAVA	Damuels	3.09	357	ePn	Pb	00 47 07.3	-1.7
	comp=E,3.0nm,0.6s						
DAVA	Damuels	3.09	357	Sn	Sb	00 47 46.0	-0.9
	comp=E,2.5nm,0.3s						
ORIF	Oris-en-Rattie	3.11	285	ePn	Pn	00 47 03.5	+0.5
ORIF				eSn	Sn	00 47 39.1	-1.1
	comp=E,6.9nm,0.6s						
ORIF	Oris-en-Rattie	3.11	285	P	Pn	00 47 05.0	+2.0
SQTA	Sankt Quirin	3.12	14	ePn	Pb	00 47 07.2	-2.2
	comp=E,1.0nm,0.2s						
MOTA	Moosalm	3.22	12	ePn	Pb	00 47 09.4	-1.8
	comp=E,0.8nm,0.2s						
SMRF	Simiane la Rot	3.27	268	ePn	Pn	00 47 06.6	+1.4
SMRF				eSn	Sn	00 47 44.3	0.0
CABF	La Chapelle	3.72	312	ePn	Pn	00 47 14.1	+2.7
HINF	Hinteralfeld	4.27	329	ePn	Pn	00 47 20.2	+1.3
HINF				eSn	Sn	00 48 08.2	-0.6
HAU	Haudompre	4.62	327	ePn	Pn	00 47 25.2	+1.5
HAU				eSn	Sn	00 48 17.9	+0.5
CDF	Champ du Feu	4.65	336	ePn	Pn	00 47 25.6	+1.4

*ROM **04** 00:46:42.2±0.1, 44°.210N±0°.004×10°.103E±0°.007, h8km±1km, Md1.7/3, Error ellipse: s-maj=0.5km s-min=0.4km az=340.0*
*GEN **04** 00:46:42.7, 44°.21N×10°.11E, h4km±2km, Ml2.0*
ISC 04 00:46:42.5±1.1, **44°.20N**±0°.03×**10°.11E**±0°.03, **h10km, n13,** σ0.s77/14, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	Villacollemand	0.20	102	S	Sg	00 46 50.4	+0.7
VLC	Villacollemand	0.20	102	P	Pg	00 46 47.0	+0.2
PLMA	Palmaria, Port	0.24	231	P	Pg	00 46 48.1	+0.7
PLMA	Palmaria, Port	0.24	231	S	Sg	00 46 51.6	+1.0
GRAM	Graiana	0.29	354	P	Pg	00 46 48.7	+0.3
GRAM	Graiana	0.29	354	S	Sg	00 46 53.1	+0.8
GRAM	Graiana	0.29	354	S	Sg	00 46 53.2	+0.8
GRAM	Graiana	0.29	354	P	Pg	00 46 48.8	+0.3
ERBM	Eremo	0.31	45	S	Sb	00 46 54.5	-0.8
ERBM	Eremo	0.31	45	P	Pg	00 46 49.3	+0.6
MAIM	Mastiano	0.40	136	P	Pg	00 46 50.3	0.0
MAIM				S	Sg	00 46 56.2	+0.6
MSSA	Maissana	0.44	285	S	Sb	00 46 58.0	-1.1
MSSA	Maissana	0.44	285	P	Pb	00 46 51.7	-0.7

IDC 04 00:50:47.7±1.7, **7°.17S**×**128°.59E, h0km, mb3.8**/2, **mb1 3.9**/5, **mb1mx3.6**/48, **mbtmp3.8**/5, **ML3.6**/3, **Error ellipse: s-maj=88.3km s-min=25.6km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.24	195	Pn	Pn	00 53 30.1	+0.4
	0.3nm,0.3s,baz=40,slow=11,SNR=3.8						
WRA	Warramunga Arr	13.87	157	Pn	Pn	00 54 05.4	-0.3
	0.3nm,0.3s,baz=335,slow=11,SNR=10						
ASAR	Alice Springs	17.18	163	Pn	Pn	00 54 49.1	-0.2
	0.1nm,0.3s,baz=341,slow=11,SNR=5.3						
MKAR	Makanchi Array	67.61	328	P	P	01 01 46.6	+0.3
	0.5nm,0.6s,baz=129,slow=7.5,SNR=11						
ZALV	Zalesovo Beam	71.12	334	P	P	01 02 07.5	-0.4
	0.6nm,0.5s,baz=133,slow=6.1,SNR=4.4						

*SOME **04** 00:53:24.9, 40°.00N×75°.88E, h5km*
*NNC **04** 00:53:25.4±3.1, 39°.98N×75°.85E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=21.8km s-min=15.0km az=166.0*
*KRNET **04** 00:53:27.6±0.1, 40°.08N×75°.88E, mb3.0*
ISC 04 00:53:30.9±2.2, **40°.11N**±0°.10×**75°.88E**±0°.05, **h10km, n30,** σ**1.s46**/49, **24C-8D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn	1.32	4	⇑iP	Pn	00 53 53.0	-2.7
	baz=3.0						
NRN				⇑iS	Sb	00 54 12.2	-1.0
	baz=3.0						
ARLS	Aral	2.11	326	⇑iP	Pn	00 54 06.3	-0.1
	baz=27						
ARLS				⇑iS	Sn	00 54 34.3	+1.6
	baz=27						
ULHL	Ulahol	2.15	7	⇑iP	Pn	00 54 07.5	+0.5
	baz=7.0						
ULHL				⇑iS	Sb	00 54 36.6	-0.2
	baz=7.0						
KDJ	Kajisay	2.24	26	⇑iP	Pn	00 54 08.7	+0.5
	baz=25						
KDJ				⇑iS	Sb	00 54 38.6	-0.9
	baz=25						
UCH	Uchtor	2.35	334	⇑iP	Pn	00 54 10.6	+0.6
	baz=35						
UCH				⇑iS	Sb	00 54 41.9	-1.0
	baz=35						
BOOM	Boomskoye usch	2.38	1	⇑iP	Pn	00 54 10.5	+0.4
	baz=1.0						
BOOM				⇑iS	Sn	00 54 42.1	+2.7
	baz=1.0						
ARSB	Arslanbob	2.51	300	⇑iP	Pn	00 54 12.2	+0.3
	baz=0.0						
ARSB				⇑iS	Sb	00 54 45.3	-2.0
	baz=0.0						
AML	Almayashu	2.61	321	⇑iP	Pn	00 54 14.1	+0.6
	baz=22						
AML				⇑iS	Sn	00 54 47.7	+2.3
	baz=22						
KBK	Karagaybulak	2.64	345	⇑iP	Pn	00 54 14.4	+0.7
	baz=45						
KBK				⇑iS	Sn	00 54 48.4	+2.6
	baz=45						
AAK	Ala-Archa	2.73	338	⇑iP	Pn	00 54 15.6	+0.7
	baz=38						
AAK				⇑iS	Sn	00 54 50.4	+2.3
	baz=38						
AAK	Ala-Archa	2.73	338	⇓Pg	Pb	00 54 17.5	-2.4
	9.3nm,1.0s						
AAK				⇓Lg	Lg	00 54 55.6	
	19nm,0.7s						
KST	Kastek	2.93	1	eP	Pb	00 54 22.6	-0.7
	12nm,0.4s						
KST				eS	Sg	00 55 04.2	-0.7
	15nm,0.7s						
KST	Kastek	2.93	1	Pg	Pb	00 54 23.2	0.0
	12nm,0.4s						
KST				Lg	Lg	00 55 04.2	
	15nm,0.7s						
EKS2	Erkin-Say	3.00	329	⇑iP	Pn	00 54 19.2	+0.6
	baz=29						
EKS2				⇑iS	Sn	00 54 56.6	+1.9
	baz=29						
CHMS	Chumysh	3.01	344	⇓iP	Pn	00 54 19.3	+0.7
	baz=44						
CHMS				⇓iS	Sn	00 54 56.9	+2.2
	baz=44						
CHMS	Chumysh	3.01	344	⇓Pg	Pn	00 54 19.8	+1.2
	2.6nm,0.8s						
CHMS				⇑Lg	Lg	00 55 04.4	
	16nm,0.6s						
TNSS	Tian-Shan	3.03	15	eP	Pb	00 54 24.3	-0.9
	4.7nm,0.4s						
TNSS				eS	Sg	00 55 07.0	-1.3
	18nm,0.5s						
TNSS	Tian-Shan	3.03	15	Pg	Pb	00 54 24.8	-0.4
	4.7nm,0.4s						
TNSS				Lg	Lg	00 55 07.0	
	18nm,0.5s						
MTBS	Maitube	3.04	8	eP	Pb	00 54 24.6	-0.6
	4.2nm,0.2s						
MTBS				eS	Sg	00 55 07.4	-1.2
	13nm,0.4s						
MTBS	Maitube	3.04	8	Pg	Pb	00 54 25.3	+0.1
	4.2nm,0.2s						
MTBS				Lg	Lg	00 55 07.4	
	13nm,0.4s						
MDOK	Medeo	3.17	16	eP	Pb	00 54 26.7	-0.7
	16nm,0.5s						
MDOK				eS	Sg	00 55 11.1	-1.6
	27nm,1.9s						
MDOK	Medeo	3.17	16	⇑Pg	Pn	00 54 22.6	+1.6
	23nm,1.4s						
MDOK				⇓Lg	Lg	00 55 10.0	
	39nm,1.3s						
MDOK	Medeo	3.17	16	Pg	Pb	00 54 27.4	-0.1
	16nm,0.5s						
MDOK				Lg	Lg	00 55 11.1	
	27nm,1.9s						
MRKS	Merke	3.30	324	eP	Pb	00 54 27.6	-2.0
	3.9nm,0.5s						
MRKS				eS	Sb	00 55 12.7	+2.8
	6.4nm,0.6s						
MRKS	Merke	3.30	324	Pg	Pb	00 54 28.1	-1.5
	3.9nm,0.5s						
MRKS				Lg	Lg	00 55 12.7	
	6.4nm,0.6s						
USP	Ospenovka	3.32	342	⇓iP	Pn	00 54 23.5	+0.6
	baz=42						
USP				⇓iS	Sn	00 55 04.4	+2.0
	baz=42						
KUU	Kurty	3.79	5	eP	Pb	00 54 37.7	-0.2
	1.8nm,0.5s						
KUU				eS	Sg	00 55 30.0	-2.6
	15nm,0.8s						
KUU	Kurty	3.79	5	Pg	Pb	00 54 38.4	+0.5
	1.8nm,0.5s						
KUU				Lg	Lg	00 55 30.0	
	15nm,0.8s						
PDGK	Podgornoye	4.20	39	Pg	Pb	00 54 44.0	-0.9
	3.5nm,1.0s						
PDGK				Lg	Lg	00 55 39.9	
	7.1nm,1.0s						
JBG	Jabagly	4.64	302	Pg	Pb	00 54 51.8	-0.5
	1.9nm,0.3s						
JBG				Lg	Lg	00 55 53.5	
	7.0nm,1.2s						

*IDC **04** 00:53:42.8±0.9, 7°.26S×128°.26E, h0km, mb4.2/6, mb1 4.3/10, mb1mx4.0/49, mbtmp4.2/10, ML4.2/4, MS3.4/1, Ms1 3.4/1, ms1mx2.7/47, Error ellipse: s-maj=52.1km s-min=18.3km az=73.0*
*NEIC **04** 00:53:44.1±2.8, 7°.27S±0°.08×128°.55E±0°.05, h10km±1km, mb4.6/16, Error ellipse: s-maj=13.2km s-min=7.5km az=171.0*
ISC 04 00:53:47.9±0.6, **7°.36S**±0°.06×**128°.49E**±0°.08, **h35km, n39,** σ**1.s57**/41, **mb4.4**/13, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	4.80	240		Pn	00 55 01.6	+3.6
FAKI	Fak Fak	5.79	40	Pn	Pn	00 55 11.0	-0.3
MTN	Manton Dam	6.04	155	Pn	Pn	00 55 20.2	+5.4
SIJI	Sorong	7.02	23	Pn	Pn	00 55 27.0	-1.3
	2.1nm,0.3s,baz=215,slow=8.3,SNR=3.7						
KNRA	Kununurra	8.27	178		Pn	00 55 48.0	+2.6
FITZ	Fitzroy Crossi	11.03	194	Pn	Pn	00 56 22.7	-0.6
	1.3nm,0.3s,baz=43,slow=13,SNR=6.3						
FITZ				Sn	Sn	00 58 22.6	-2.8
	1.3nm,0.3s,baz=22,slow=15,SNR=3.4						
FITZ				LR	LR	01 01 21.7	
	comp=Z,188nm,20.3s,baz=29,slow=42						
FITZ	Fitzroy Crossi	11.03	194		Pn	00 56 22.9	-0.4
WB0	Warramunga Arr	13.60	156		Pn	00 56 58.2	-0.2
WRA	Warramunga Arr	13.73	156	Pn	Pn	00 56 59.8	-0.5
	1.5nm,0.3s,baz=320,slow=14,SNR=10						
WRA				Sn	Sn	00 59 31.5	-0.1
	2.0nm,0.3s,baz=328,slow=23,SNR=6.7						
WRA	Warramunga Arr	13.73	156		Pn	00 57 00.4	+0.2
WB2	Warramunga Arr	13.74	156		Pn	00 56 60.0	-0.3
WR0	Warramunga Arr	13.83	155		Pn	00 57 01.0	-0.6
COEN	Coen	15.84	116	Pn	Pn	00 57 28.4	-0.1
COEN				IAmb	IAmb	00 57 46.7	
	comp=Z,13nm,1.0s						
PSA00	Pilbara Seismi	16.41	210	Pn	Pn	00 57 33.1	-2.6
PSA00				IAmb	IAmb	00 57 38.7	
	comp=Z,19nm,1.1s						
AS31	Alice Springs	17.02	163	P	Pn	00 57 43.5	0.0
ASAR	Alice Springs	17.02	163	P	Pn	00 57 43.2	-0.2
	comp=Z,0.9nm,0.3s,baz=333,slow=10,SNR=14						
ASAR				S	Sn	01 00 49.3	-2.4
	comp=Z,0.4nm,0.3s,baz=338,slow=24,SNR=4.4						
ASAR	Alice Springs	17.02	163	P	P	00 57 45.1	+0.1
SBUM	Sibu	18.94	300		Pn	00 58 07.4	+0.5
RABL	Rabaul	23.76	84	P	P	00 59 00.5	+3.1
BBOO	Buckleboo	26.28	165	P	P	00 59 22.7	+2.6
BBOO				IAmb	IAmb	00 59 27.5	
	comp=Z,43nm,1.4s						
STKA	Stephens Creek	27.28	155	P	P	00 59 31.6	+2.4
	comp=Z,4.2nm,0.8s,baz=330,slow=9.3,SNR=5.5						
STKA	Stephens Creek	27.28	155	P	P	00 59 31.8	+2.6
RPSI	Rantau Prapat	31.15	288	P	P	01 00 02.9	-0.9
RPSI				IAmb	IAmb	01 00 04.1	
	comp=Z,10nm,0.9s						
MCQ	Macquarie Isla	52.98	158	P	P	01 03 00.8	-0.2
SONM	Songino Array	58.32	343	P	P	01 03 38.9	-0.7
	comp=Z,1.4nm,0.8s,baz=158,slow=6.8,SNR=6.4						
SONM	Songino Array	58.32	343	P	P	01 03 40.9	+1.4
KNTN	Kanton	59.70	89	P	P	01 03 48.1	-1.4
MK31	Makanchi Array	67.72	328	P	P	01 04 40.1	-1.8
MK31				IAmb	IAmb	01 04 48.0	
	comp=Z,7.3nm,1.4s						
MKAR	Makanchi Array	67.72	328	P	P	01 04 40.5	-1.3
	comp=Z,1.8nm,0.6s,baz=121,slow=8.3,SNR=26						
MKAR	Makanchi Array	67.72	328	P	P	01 04 41.0	-0.8
MAKZ	Makanchi	67.89	327	P	P	01 04 43.0	0.0
MAKZ				IAmb	IAmb	01 04 48.4	
	comp=Z,4.8nm,1.1s						
ZAA0	Zalesovo Array	71.25	334	P	P	01 05 02.2	-1.3
ZAA0				IAmb	IAmb	01 05 08.6	
	comp=Z,5.2nm,1.0s						
ZALV	Zalesovo Beam	71.25	334	P	P	01 05 01.9	-1.5
	comp=Z,2.1nm,0.6s,baz=135,slow=5.6,SNR=10						
ZALV	Zalesovo Beam	71.25	334	P	P	01 05 01.7	-1.8
KURK	Kurchatov	72.05	329	P	P	01 05 07.4	-1.0
KURK				IAmb	IAmb	01 05 14.7	
	comp=Z,12nm,1.1s						
BVAR	Borovoye Array	77.58	328	P	P	01 05 39.1	-1.2
	comp=Z,1.6nm,0.9s,baz=121,slow=7.7,SNR=9.4						
BRVK	Borovoye	77.65	328	P	P	01 05 41.6	+1.0
BRVK				IAmb	IAmb	01 05 46.6	
	comp=Z,4.1nm,0.9s						
ABKAR	Akbulak array	81.86	322	P	P	01 06 02.9	-0.7
AKTO	Aktyubinsk	83.45	323	P	P	01 06 12.3	+0.5
	comp=Z,0.8nm,0.6s,baz=104,slow=4.2,SNR=2.7						

*HEL **04** 00:56:22.3, 67°.87N×20°.00E, h0km, ML1.5, Explosion*
*UPP **04** 00:56:23.2±0.0, 67°.83N×20°.20E, h0km, ML2.3, Explosion*
ISC 04 00:56:22.5±0.9, **67°.78N**±0°.04×**20°.26E**±0°.04, **h0km, n18,** σ**0.s31**/24, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.17	9	P	Pg	00 56 26.0	+0.2
KUA				S	Sg	00 56 27.8	-0.2
KUA	Kurravaara	0.17	9	i P	Pg	00 56 26.0	+0.2
KUA				i S	Sg	00 56 27.8	-0.2
RATU	Laukkuluspa	0.26	280	P	Pg	00 56 27.8	+0.4
RATU				S	Sg	00 56 30.8	+0.1
RATU	Laukkuluspa	0.26	280	i P	Pg	00 56 27.8	+0.4
RATU				i S	Sg	00 56 30.8	+0.1
DUNU	Dundret	0.67	170	P	Pb	00 56 36.7	-0.3
DUNU	Dundret	0.67	170	i P	Pb	00 56 36.7	-0.3
LANU	Lannavaara	0.70	67	P	Pg	00 56 36.5	+0.6
MASU	Masugnsbyn	0.74	115	P	Pb	00 56 38.0	-0.2
MASU				S	Sb	00 56 48.9	+0.1
MASU	Masugnsbyn	0.74	115	i P	Pb	00 56 38.0	-0.2
MASU				i S	Sb	00 56 48.9	+0.1
KIF	Kilpisjarvi	1.25	9	ePB	Pg	00 56 46.3	0.0
KIF				MSG		00 56 59.4	
	comp=Z,3.1nm,0.2s						
KIF				eSB	Sg	00 57 02.4	0.0
KIF	Kilpisjarvi	1.25	9	eP	Pg	00 56 46.4	+0.1
PAJU	Pajala	1.34	123	P	Pn	00 56 48.5	+0.1
PAJU	Pajala	1.34	123	eP	Pn	00 56 48.5	+0.1
HEF	Hetta	1.42	62	MSG		00 57 06.6	
	comp=Z,3.8nm,0.2s						
HEF	Hetta	1.42	62	eP	Pn	00 56 49.4	-0.2
KALU	Kalix	2.29	146	eP	Pb	00 57 03.8	-0.7
TOF	Tornio	2.34	135	ePB	Pb	00 57 05.0	-0.4
TOF				MSG		00 57 35.4	
	comp=Z,1.6nm,0.2s						
SGF	Sodankyl	2.42	95	ePG	Pb	00 57 07.1	+0.3

*UPP **04** 00:56:42.4±0.1, 67°.86N×20°.19E, h0km, ML2.0, Explosion*
*IDC **04** 00:56:44.1±1.2, 67°.82N×20°.38E, h0km, mb1 3.0/4, mb1mx2.9/49, mbtmp3.0/4, ML2.1/4, Error ellipse: s-maj=26.3km s-min=9.6km az=125.0*
ISC 04 00:56:42.5±1.0, **67°.84N**±0°.05×**20°.23E**±0°.04, **h0km, n9,** σ**0.s88**/12, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	18	P	Pg	00 56 44.8	-0.1
RATU	Laukkuluspa	0.24	268	P	Pg	00 56 47.1	-0.1
RATU				S	Sg	00 56 50.3	0.0
LANU	Lannavaara	0.70	71	P	Pg	00 56 55.8	-0.1
LANU				S	Sg	00 57 05.3	+0.5
MASU	Masugnsbyn	0.78	119	P	Pg	00 56 57.5	+0.1
PAJU	Pajala	1.38	125	P	Pg	00 57 07.9	-1.0
ARCES	ARCESS Array B	2.57	46	Pn	Pn	00 57 26.7	+1.2
	0.8nm,0.3s,baz=225,slow=15,SNR=8.6						
ARCES				Sn	Sb	00 57 60.0	-1.7
	2.7nm,0.3s,baz=229,slow=24,SNR=11						
FINES	FINESS Array B	6.89	156	Pn	Pn	00 58 25.8	+1.2
	0.1nm,0.3s,baz=347,slow=11,SNR=2.6						
NOA	NORSAR Array B	7.85	214	Pn	Pn	00 58 37.8	0.0
	0.0nm,0.3s,baz=24,slow=12,SNR=2.8						
HFS	Hagfors	8.24	203	Pn	Pn	00 58 43.1	-0.1
	0.1nm,0.3s,baz=12,slow=15,SNR=3.5						

*IDC **04** 00:57:47.5±0.9, 6°.16S×147°.93E, h43km±6km, mb3.9/10,* *mb1 4.2/12,mb1mx3.9/42,mbtmp4.2/12,ML4.7/1,MS3.5/3, Ms1 3.5/3,ms1mx2.2/41,Error ellipse: s-maj=33.4km s-min=9.3km az=99.0*

*NEIC **04** 00:57:47.9±2.0,6°.08S±0°.08×147°.8E±0°.1,h44km±7km, mb4.3/19,Error ellipse: s-maj=17.0km s-min=12.1km az=92.0*

ISC 04 00:57:49.1±0.7,6°.15S±0°.06×147°.9E±0°.2,h60km,n43, σ1°48/45,mb4.3/14,Eastern New Guinea region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 3.31 192 P **Pn 00 58 37.5 -0.9**
43nm,0.3s,baz=29,slow=4.0,SNR=26
PMG S **Sn 00 59 15.8 -0.8**
96nm,0.3s,baz=48,slow=23,SNR=11
PMG LR LR 00 59 40.0
comp=Z,162nm,18.9s,baz=47,slow=34
PMG Port Moresby 3.31 192 P **00 58 37.2 -1.2**
PMG Sn **Sn 00 59 15.1 -1.5**
KRVT Keravat (AS076 4.54 66 LR LR 01 00 46.4
comp=Z,373nm,19.4s,baz=249,slow=40
COEN Coen 9.02 210 Pn **Pn 00 59 57.1 +0.4**
WB0 Warramunga Arr 18.83 223 Pn **Pn 01 02 06.1 +0.9**
WB0 IAmb IAmb 01 02 13.3
comp=Z,18nm,1.1s
WR0 Warramunga Arr 18.86 222 P **01 02 05.4 +0.9**
WR0 IAmb IAmb 01 02 18.3
comp=Z,16nm,1.0s
WRAB Tennant Creek 18.97 223 Pn **Pn 01 02 08.1 +1.1**
WRAB IAmb IAmb 01 02 10.8
comp=Z,20nm,1.0s
WB2 Warramunga Arr 18.98 222 P **01 02 06.7 +0.9**
WB2 IAmb IAmb 01 02 09.5
comp=Z,14nm,0.8s
WRA Warramunga Arr 18.99 223 P **P 01 02 05.0 -0.9**
comp=Z,2.2nm,0.3s,baz=67,slow=8.4,SNR=12
WRA Warramunga Arr 18.99 223 P **P 01 02 04.9 -1.0**
EIDS Eidsvold 19.36 171 P **P 01 02 11.0 +1.1**
AS31 Alice Springs 21.99 216 P **P 01 02 38.3 0.0**
AS31 IAmb IAmb 01 02 41.4
comp=Z,6.3nm,0.4s
ASAR Alice Springs 21.99 216 P **P 01 02 38.0 -0.3**
comp=Z,7.1nm,0.5s,baz=52,slow=9.0,SNR=19
ARMA Armidale 24.40 172 P **P 01 03 04.6 +2.5**
ARMA IAmb IAmb 01 03 21.9
comp=Z,15nm,1.1s
FITZ Fitzroy Crossi 24.71 239 P **P 01 03 05.0 +0.1**
comp=Z,23nm,0.6s,baz=55,slow=9.1,SNR=22
FITZ Fitzroy Crossi 24.71 239 P **P 01 03 05.5 +0.5**
LUWI Luwuk 25.53 280 P **P 01 03 09.3 -3.1**
STKA Stephens Creek 26.26 192 P **P 01 03 19.1 +0.4**
comp=Z,5.4nm,0.7s,baz=7.1,slow=14,SNR=8.5
STKA Stephens Creek 26.26 192 P **P 01 03 19.3 +0.5**
PSA00 Pilbara Seismi 31.13 238 P **P 01 04 02.5 +0.2**
MORW Morawa 37.71 229 P **P 01 05 00.2 +1.1**
MJAR Matsushiro Arr 43.42 349 P **P 01 05 48.0 +2.0**
comp=Z,4.7nm,0.8s,baz=174,slow=8.0,SNR=6.5
MJAR Matsushiro Arr 43.42 349 IAmb IAmb 01 05 51.0
comp=Z,2.7nm,1.1s
PSI Prapat 49.66 279 LR LR 01 32 36.9
comp=Z,306nm,18.6s,baz=118,slow=42
USRK Ussuriysk Ar. 52.12 346 P **P 01 06 55.1 +1.9**
comp=Z,1.9nm,0.7s,baz=179,slow=6.1,SNR=5.0
USRK Ussuriysk Ar. 52.12 346 P **P 01 06 55.3 +2.1**
SONM Songino Array 64.95 331 P **P 01 08 23.8 +1.1**
comp=Z,1.0nm,0.8s,baz=136,slow=2.8,SNR=6.4
SONM pP **pP 01 08 37.1 -1.5**
comp=Z,1.4nm,0.9s,baz=156,slow=4.2,SNR=6.0
SONM Songino Array 64.95 331 P **P 01 08 23.8 +1.1**
MK31 Makanchi Array 78.15 320 P **P 01 09 41.9 -0.1**
MKAR Makanchi Array 78.15 320 P **P 01 09 42.0 0.0**
comp=Z,0.3nm,0.4s,baz=98,slow=8.7,SNR=15
MAKZ Makanchi 78.36 320 P **P 01 09 43.1 0.0**
ZALV Zalesovo Beam 79.59 328 P **P 01 09 48.9 -0.7**
comp=Z,1.2nm,0.5s,baz=126,slow=6.2,SNR=6.1
ZALV Zalesovo Beam 79.59 328 P **P 01 09 48.5 -1.2**
QSPA South Pole Qui 83.82 180 P **P 01 10 12.8 +0.9**
QSPA IAmb IAmb 01 10 13.4
comp=Z,3.6nm,0.6s
WRH Wood River Hil 84.69 23 P **P 01 10 15.4 -0.7**
WRH IAmb IAmb 01 10 17.7
comp=Z,3.9nm,1.2s
ILAR Eielson Array 85.28 23 P **P 01 10 18.1 -1.0**
comp=Z,0.5nm,0.7s,baz=254,slow=4.7,SNR=7.5
ILAR pP **pP 01 10 30.7 -5.2**
comp=Z,0.7nm,0.7s,baz=252,slow=4.6,SNR=4.5
ILAR Eielson Array 85.28 23 P **P 01 10 19.4 +0.2**
BVAR Borovoye Array 87.39 324 P **P 01 10 28.5 -1.2**
comp=Z,0.6nm,0.6s,baz=102,slow=7.0,SNR=5.4
BVAR pP **pP 01 10 43.3 -2.9**
comp=Z,0.5nm,0.6s,baz=99,slow=9.5,SNR=3.5
TORD Torodi Ar. Bea 145.95 284 PKPbc **PKPbc 01 17 23.1 0.0**
comp=Z,3.5nm,0.6s,baz=62,slow=3.2,SNR=28
TORD Torodi Ar. Bea 145.95 284 **PKPbc 01 17 23.3 +0.2**
DBIC Dimbokro 152.88 273 PKPbc **PKiKP 01 17 41.9 +1.1**
comp=Z,1.3nm,0.5s,baz=90,slow=5.1,SNR=5.6
DBIC Dimbokro 152.88 273 **PKiKP 01 17 41.3 +0.5**
BDFB Brasilia 153.25 144 PKPbc **PKiKP 01 17 42.8 +1.1**
comp=Z,5.7nm,0.6s,baz=122,slow=0.9,SNR=11

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*IDC **04** 00:59:21.3±10.0,7°.52S×128°.01E,h102km±109km, mb3.9/5,mb1 3.9/7,mb1mx3.5/49,mbtmp4.2/7,ML3.6/1, Error ellipse: s-maj=69.3km s-min=42.7km az=33.0*

ISC 04 00:59:24.2±1.2,7°.69S±0°.09×128°.1E±0°.2,h142km,n7, σ1°92/9,mb4.1/5,Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FITZ Fitzroy Crossi 10.62 193 P **Pn 01 01 51.8 -0.8**
0.3nm,0.3s,baz=35,slow=12,SNR=3.7
FITZ S **Sn 01 03 51.7 +1.7**
0.5nm,0.3s,baz=41,slow=9.3,SNR=1.8
ASAR Alice Springs 16.83 161 P **Pn 01 03 14.0 +2.5**
baz=345,slow=10,SNR=3.3
ASAR S **S 01 06 16.0 -3.3**
0.1nm,0.3s,baz=331,slow=19,SNR=3.1
PSI Prapat 30.93 289 P **P 01 05 27.5 -0.5**
5.2nm,0.8s,baz=96,slow=8.2,SNR=4.0
CMAR Chiang Mai Arr 38.77 312 P **P 01 06 34.5 -0.6**
0.7nm,0.3s,baz=151,slow=5.8,SNR=5.1
SONM Songino Array 58.52 343 P **P 01 09 06.3 +0.6**
1.1nm,0.8s,baz=158,slow=6.0,SNR=4.3
MKAR Makanchi Array 67.79 328 P **P 01 10 07.3 +0.6**
2.1nm,0.7s,baz=128,slow=7.5,SNR=16
ZALV Zalesovo Beam 71.38 335 P **P 01 10 28.2 -0.4**
2.9nm,0.8s,baz=129,slow=4.6,SNR=10

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*NEIC **04** 01:05:30.2±1.6,7°.42S±0°.06×128°.42E±0°.06,h10km±1km, mb5.1/41,Error ellipse: s-maj=9.7km s-min=9.2km az=41.0*

*BJI **04** 01:05:30.0±0.0,7°.40S×128°.40E,h5km,mB5.2/38, mb4.7/49,Ms4.8/24,Ms7 4.5/25*

*IDC **04** 01:05:31.1±0.5,7°.23S×128°.21E,h0km,mb4.6/21, mb1 4.6/24,mb1mx4.5/52,mbtmp4.6/24,ML4.6/2,MS4.2/25, Ms1 4.2/25,ms1mx4.1/42,Error ellipse: s-maj=20.4km s-min=12.3km az=75.0*

*MOS **04** 01:05:31.1±1.1,7°.49S×128°.13E,h24km,mb5.2/28,Error ellipse: s-maj=13.7km s-min=6.7km az=110.8*

*GCMT **04** 01:05:33.2±0.2,7°.09S±0°.01×128°.26E±0°.02,h17km, MW5.1/103,Moment Tensor Solution. s49,c64; s103,c158; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr4.16±.21; Mθθ-5.27±.14; Mφφ1.10±.15; Mrθ-3.39±.34; Mrφ-0.19±.10; Mθφ0.94±.48; Best double couple: Mo5.91300×10^16 NP1:φs73.00000°,δ29.00000°, λ66.00000°. NP2:φs280.00000°,δ64.00000°,λ103.00000°. Principal axes: T 5.4620, Plg68.0000°, Azm216.0000°; N 0.8920, Plg12.0000°, Azm95.0000°; P -6.3640, Plg18.0000°, Azm1.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **04** 01:05:36.0±0.3,7°S±2°×12°8E±°, h48km±9km, M5.0/19, mb5.0/19,mB5.5/13,MLv4.9/13,Mw(mB)5.0/13,Mwp5.2/2*

*KLM **04** 01:05:44.0,7°.45S×128°.26E,h116km,mb5.0*

ISC 04 01:05:34.8±0.3,7°.44S±0°.04×128°.40E±0°.04,h35km,n207, σ1°96/201,mb5.0/61,MS4.2/29,10C-5D,Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SAUI Saumlaki 2.93 101 P Pn 01 06 24.8 +5.9
SAUI Saumlaki 2.93 101 Pn **Pn 01 06 18.3 -0.6**
BNDI Bandanaira 3.26 27 P Pn **01 06 19.7 -3.8**
AAI Ambon 3.73 357 P Pn **01 06 25.0 -4.9**
AAI S Sn 01 07 02.5 -10
MSAI Masohi 4.10 7 P **Pn 01 06 31.6 -3.4**
NLAI Namlea 4.37 343 P **Pn 01 06 35.4 -3.3**
SOEI Soe 4.69 240 P **Pn 01 06 46.2 +3.0**
SOEI Soe 4.69 240 **Pn 01 06 40.9 -2.3**
SOEI Sn **Sn 01 07 34.8 -1.6**
SANI Sanana 5.87 336 P **Pn 01 06 57.4 -1.9**
0.5nm2μm66nm,0.7s
FAKI Fak Fak 5.91 41 P **Pn 01 06 59.1 -0.7**
0.7nm5μm2μm186nm,1.5s
FAKI Fak Fak 5.91 41 **Pn 01 06 57.2 -2.7**
FAKI Sn **Sn 01 08 04.9 -1.5**
MTN Manton Dam 6.01 154 P Pn 01 07 08.3 +7.0
baz=6.0,SNR=15
MTN Manton Dam 6.01 154 **Pn 01 06 59.1 -2.1**
MTN Sn **Sn 01 08 09.3 +0.4**
KMPI Kaimana, Papua 6.48 55 P **Pn 01 07 08.4 +0.7**
1.6nm5μm379nm,1.0s
KDU Kakadu 6.58 143 P Pn 01 07 14.1 +5.0
baz=6.6,SNR=46
LBMI Labuha 6.81 352 P **Pn 01 07 11.0 -1.3**
0.6nm3μm121nm,1.1s
SIJI Sorong 7.13 24 Pn **Pn 01 07 15.9 -0.8**
10nm,0.3s,baz=189,slow=18,SNR=8.9
SWI Sorong 7.13 24 P **Pn 01 07 16.0 -0.6**
0.7nm2μm175nm,0.8s
KNRA Kununurra 8.20 178 P **Pn 01 07 35.3 +4.0**
baz=8.2,SNR=62
KNRA Kununurra 8.20 178 **Pn 01 07 29.9 -1.4**
KNRA Sn **Sn 01 09 02.3 -0.4**
TNTI Ternate 8.22 353 P Pn 01 07 46.4 +15
RKPI Ransiki, Papua 8.24 45 P **Pn 01 07 31.0 -0.9**
16μm129nm,0.8s
LUWI Luwuk 8.47 318 P **Pn 01 07 33.7 -1.4**
7μm95nm,0.6s
LUWI Luwuk 8.47 318 **Pn 01 07 34.1 -1.0**
BAKI Biak 9.88 51 P **Pn 01 07 53.4 -1.0**
4μm191nm,1.3s
PLAI Plampang 10.60 262 P **Pn 01 08 04.4 +0.1**
127nm,1.3s
FITZ Fitzroy Crossi 10.93 194 P **Pn 01 08 10.7 +1.9**
baz=11,SNR=21
FITZ Fitzroy Crossi 10.93 194 Pn **Pn 01 08 10.1 +1.3**
3.1nm,0.3s,baz=30,slow=10,SNR=18
FITZ Sn **Sn 01 10 11.8 +1.9**
4.0nm,0.3s,baz=258,slow=9.0,SNR=5.0
FITZ LR LR 01 13 09.5
comp=Z,3μm,19.7s,baz=20,slow=41
FITZ Fitzroy Crossi 10.93 194 **Pn 01 08 08.2 -0.6**
FITZ **Sn 01 10 12.1 +2.2**
SMPI Sarmi 11.61 63 P **Pn 01 08 17.6 -0.6**
4μm142nm,1.6s
GENI Genyem 12.67 68 P **Pn 01 08 34.2 +1.5**
4μm226nm,1.5s
WB0 Warramunga Arr 13.57 155 **Pn 01 08 44.8 -0.1**
WB0 Sn **Sn 01 11 12.6 -1.9**
WB9 Warramunga Arr 13.59 155 P **Pn 01 08 45.8 +0.7**
baz=14
WRAB Tennant Creek 13.70 156 **Pn 01 08 44.2 -2.5**
WRAB **Sn 01 11 19.0 +1.3**
WRAB Tennant Creek 13.70 156 *c iP* **Pn 01 08 47.7 +1.0**
WRA Warramunga Arr 13.70 156 Pn **Pn 01 08 47.9 +1.2**
2.4nm,0.3s,baz=336,slow=12,SNR=14
WRA Sn **Sn 01 11 14.8 -3.0**
1.9nm,0.3s,baz=328,slow=22,SNR=5.7
WRA LR LR 01 14 37.4
comp=Z,3μm,19.1s,baz=335,slow=39
WRA Warramunga Arr 13.70 156 **Pn 01 08 45.2 -1.5**
WRA **Sn 01 11 16.7 -1.0**
WRA Warramunga Arr 13.70 156 P **Pn 01 08 45.2 -1.5**
WRA 01 11 16.7
WB2 Warramunga Arr 13.71 156 **Pn 01 08 45.5 -1.3**
WB2 **Sn 01 11 17.2 -0.7**
WR0 Warramunga Arr 13.80 155 **Pn 01 08 47.9 -0.2**
WR0 Sn **Sn 01 11 19.9 -0.2**
DAV Davao City (W) 14.68 349 LR LR 01 15 60.0
comp=Z,1μm,18.5s,baz=162,slow=44
KCP Kidapawan 14.72 347⇑*eP* **Pn 01 09 01.7 +1.0**
COEN Coen 15.90 115 P **P 01 09 17.2 -2.1**
baz=16,SNR=8.6
COEN Coen 15.90 115 **Pn 01 09 14.5 -1.5**
COEN IAmb IAmb 01 09 30.3
comp=Z,224nm,1.4s
PSA00 Pilbara Seismi 16.30 210 **Pn 01 09 20.9 -0.2**
PWJI Pagerwojo 16.45 267 P **P 01 09 25.3 -0.2**
comp=Z,33nm,2.3s
NGJI Ngawi 16.79 269 P **P 01 09 30.3 +1.0**
SPMM Sapulut 16.95 315 P **P 01 09 34.0 +2.9**
QIS Mount Isa 16.97 141 P **P 01 09 30.5 -0.7**
baz=17,SNR=9.4
AS31 Alice Springs 16.98 162 P **Pn 01 09 29.3 -0.5**
ASAR Alice Springs 16.98 162 P **P 01 09 31.3 0.0**
comp=Z,0.8nm,0.3s,baz=337,slow=9.6,SNR=18
ASAR S **Sn 01 12 29.9 -7.6**
comp=Z,0.2nm,0.3s,baz=331,slow=15,SNR=3.4
ASAR LR LR 01 16 17.1
comp=Z,2μm,20.8s,baz=331,slow=38
ASAR Alice Springs 16.98 162 P **P 01 09 30.2 -1.2**
ASAR **Sn 01 12 37.7 +0.1**
PCJI Pacitan 17.08 266 P P 01 09 43.5 +11
WRKA Warakurna 17.50 180 P **P 01 09 37.0 -0.1**
baz=18,SNR=29
STKI Sintang 18.45 293 P Pn 01 09 57.2 +9.4
PMG Port Moresby 18.66 97 P **Pn 01 09 54.4 +3.9**
comp=Z,1.4nm,0.3s,baz=286,slow=9.3,SNR=26
PMG Port Moresby 18.66 97 P **P 01 09 47.2 -2.7**
PMG IAmb IAmb 01 09 57.1
comp=Z,200nm,1.2s
PMG Port Moresby 18.66 97 *c iP* **Pn 01 09 54.4 +3.9**
PMG pmax pmax
comp=Z,378nm,1.1s
MTSU Mount Surprise 18.80 126 P **Pn 01 09 56.7 +4.6**
baz=19,SNR=8.8
SBUM Sibu 18.89 301 P **P 01 09 52.4 -0.1**
SBUM Sibu 18.89 301 P **Pn 01 09 56.0 +2.7**
KSM Kuching 20.10 295 P **P 01 10 05.4 -0.2**
KSM IAmb IAmb 01 10 20.9
comp=Z,79nm,1.2s
LEM Lembang 20.63 270 LR LR 01 19 28.8
comp=Z,1μm,19.4s,baz=78,slow=41
MEEK Meekatharra 21.24 205 P **P 01 10 20.5 +2.6**
baz=21,SNR=13
TGY Tagaytay City 22.64 341 LR LR 01 21 27.4
comp=Z,395nm,19.1s,baz=95,slow=43
KRVT Keravat (AS076 23.71 84 LR LR 01 20 38.1
comp=Z,356nm,18.3s,baz=289,slow=38
QLP Quilpie 24.28 144 P **P 01 10 53.6 +4.7**
baz=24,SNR=15
MORW Morawa 24.47 207 P **P 01 10 53.4 +2.8**
baz=24,SNR=8.4
MORW Morawa 24.47 207 P **P 01 10 49.3 -1.3**
BLDU Balldu 25.53 204 P **P 01 11 03.4 +3.2**
baz=26,SNR=12
KLBR Kellerberrin 26.00 201 P **P 01 11 07.5 +3.0**
baz=26,SNR=8.0
STKA Stephens Creek 27.25 155 P **P 01 11 19.4 +3.6**
comp=Z,9.8nm,0.7s,baz=327,slow=9.8,SNR=20
STKA LR LR 01 23 04.5
comp=Z,1μm,20.0s,baz=325,slow=38
STKA Stephens Creek 27.25 155 P **P 01 11 14.3 -1.5**
STKA Stephens Creek 27.25 155 P **P 01 11 14.3 -1.5**
STKA pmax pmax
comp=Z,4.0nm,0.8s
NWAO Narrogin (SRO) 27.40 201 P **P 01 11 20.0 +2.9**
comp=Z,9.0nm,0.6s,baz=25,slow=8.0,SNR=6.7
NWAO Narrogin (SRO) 27.40 201 P **P 01 11 16.0 -1.1**
NWAO IAmb IAmb 01 11 26.0
comp=Z,37nm,1.1s
NWAO Narrogin (SRO) 27.40 201 P **P 01 11 16.0 -1.1**
NWAO pmax pmax
comp=Z,37nm,1.1s
KULM Kulim 30.43 294 P **P 01 11 44.0 -0.3**
RPSI Rantau Prapat 31.08 288 P **P 01 11 48.4 -1.6**
PSI Prapat 31.12 288 P **P 01 11 50.5 0.0**
comp=Z,25nm,1.0s,baz=177,slow=4.9,SNR=16
PSI Prapat 31.12 288 P **P 01 11 48.4 -2.1**
PSI pmax pmax
comp=Z,69nm,1.0s
QIZ Qiongzhong 32.03 325 P **P 01 12 00.7 +2.4**
QIZ S **S 01 17 13.9 +5.9**
QIZ LR LR
comp=Z,380nm,13.6s
QIZ LR LR
comp=Z,310nm,10.9s
QIZ LR LR
comp=Z,440nm,23.7s
JCJ Chichijima 36.84 21 LR LR 01 26 34.1
comp=Z,204nm,21.1s,baz=274,slow=34
SLVN Son La 37.36 320 P **P 01 12 44.2 -0.1**
CMAR Chiang Mai Arr 38.81 312 P **P 01 12 55.3 -1.3**
comp=Z,1.3nm,0.3s,baz=138,slow=7.5,SNR=4.9
CMAR PcP **PcP 01 15 08.4 +0.8**
comp=Z,1.3nm,0.3s,baz=145,slow=3.3,SNR=5.7
CHTO Chiang Mai 39.04 312 P **P 01 12 57.7 -0.8**
CHTO Chiang Mai 39.04 312 P **P 01 12 57.7 -0.8**
CHTO pmax pmax
comp=Z,10.0nm,1.2s
GYA Guiyang 39.75 329 *eP* **P 01 13 04.2 -0.3**
GYA pmax pmax
comp=Z,10.0nm,0.8s
WHN Wuhan 40.10 341 P **P 01 13 11.0 +3.9**
WHN S **S 01 19 06.5 -4.6**
WHN LR LR
comp=Z,2μm,23.7s
NJ2 Nanjing 40.31 347 *eP* P 01 13 13.3 +4.5
NJ2 pmax pmax
comp=Z,14nm,0.9s
JNU Nakatsue 40.40 3 LR LR 01 28 12.2
comp=Z,258nm,20.5s,baz=164,slow=34
KSAR Wonju Array Be 44.65 359 P **P 01 13 42.8 -1.2**
KSAR Wonju Array Be 44.65 359 P **P 01 13 42.8 -1.2**
KSRS Korea Array 44.66 359 P **P 01 13 44.6 +0.5**
comp=Z,3.8nm,0.8s,baz=177,slow=10,SNR=9.5
KSRS LR LR 01 31 06.8
comp=Z,440nm,21.5s,baz=106,slow=35
MAJO Matsushiro 44.71 11 P **P 01 13 43.1 -1.4**
MAJO IAmb IAmb 01 13 50.6
comp=Z,36nm,1.0s
MAJO Matsushiro 44.71 11⇑*iP* **P 01 13 45.8 +1.2**
MAJO pmax pmax
comp=Z,17nm,0.7s
MAT Matsushiro 44.71 11 P **P 01 13 45.1 +0.5**
MAT S **S 01 20 21.4 +2.4**
MJAR Matsushiro Arr 44.71 11 P **P 01 13 43.7 -0.9**
comp=Z,16nm,0.8s,baz=187,slow=9.4,SNR=21
MJAR LR LR 01 30 41.6
comp=Z,319nm,21.6s,baz=50,slow=34
MJAR Matsushiro Arr 44.71 11 P **P 01 13 43.6 -0.9**
MJAR Matsushiro Arr 44.71 11 P **P 01 13 43.6 -1.0**
MJAR pmax pmax
comp=Z,4.0nm,0.8s
MJB9 Matsu-Tunnel 44.71 11 IAmb IAmb 01 13 50.6
comp=Z,36nm,1.0s
CD2 Chengdu 44.84 329⇓*iP* **P 01 13 47.9 +2.1**
CD2 pmax pmax
comp=Z,20nm,1.1s
XAN Xi'an 45.19 337 P **P 01 13 49.9 +1.4**
XAN pmax pmax
comp=Z,5.0nm,1.1s
XAN pmax pmax
comp=Z,240nm,5.7s
XAN Xi'an 45.19 337 IAmb IAmb 01 13 53.9
comp=Z,23nm,1.3s
LZH Lanzhou 49.06 334 *eP* **P 01 14 19.0 +0.2**
LZH sP pP 01 14 24.4 -4.0
LZH *e*S **S 01 21 22.5 +1.0**
LZH SS **SS 01 24 51.2 -1.9**
LZH pmax pmax
comp=Z,39nm,1.3s
LZH pmax pmax
comp=Z,150nm,5.4s
LZH LR LR
comp=Z,440nm,14.7s
LZH LR LR
comp=Z,370nm,15.0s
LZH LR LR
comp=Z,590nm,16.8s
MSVF Nonsavu 49.40 107⇑*iP* **P 01 14 25.0 +3.4**
MSVF pmax pmax
comp=Z,11nm,1.2s
HHC Hu-ho-hao-te 50.48 343 *eP* **P 01 14 33.1 +3.6**
HHC pmax pmax
comp=Z,6.0nm,1.1s
HHC pmax pmax
comp=Z,88nm,5.4s
LSA Lhasa 51.43 318 P **P 01 14 36.1 -1.1**
LSA IAmb IAmb 01 14 44.8
comp=Z,13nm,0.8s
LSA Lhasa 51.43 318 P **P 01 14 36.1 -1.1**
LSA pmax pmax
comp=Z,13nm,0.8s
USA0B Ussuriysk Arra 51.50 3 IAmb IAmb 01 14 58.2
comp=Z,21nm,1.1s
USRK Ussuriysk Ar. 51.50 3 P **P 01 14 37.4 +0.5**
comp=Z,5.7nm,0.7s,baz=171,slow=6.1,SNR=12
USRK LR LR 01 36 24.4
comp=Z,290nm,20.6s,baz=27,slow=36
USRK Ussuriysk Ar. 51.50 3 P **P 01 14 35.9 -0.9**
RPZ Rata Peaks 51.88 141 P P 01 14 44.3 +4.5
comp=Z,11nm,0.6s,baz=2.9,slow=12,SNR=5.9
RPZ LR LR 01 36 42.0
comp=Z,1μm,19.6s,baz=294,slow=36
RPZ Rata Peaks 51.88 141 P **P 01 14 38.6 -1.3**
RPZ IAmb IAmb 01 14 50.0
comp=Z,35nm,1.1s
TEY Ternei 52.75 7⇑*eP* **P 01 14 45.6 -0.6**
TEY pmax pmax
comp=Z,20nm,1.4s
URZ Urewera 53.53 133 LR LR 01 37 01.4
comp=Z,352nm,21.1s,baz=310,slow=35
GTA Gaotai 53.61 333 ⇓P **P 01 14 52.7 -0.1**
GTA pP pP 01 14 57.4 -5.1
GTA sP sP 01 15 00.3 -6.0
GTA S **S 01 22 27.8 +3.7**
GTA pmax pmax
comp=Z,5.0nm,1.3s
GTA pmax pmax
comp=Z,120nm,4.3s
GTA LR LR
comp=Z,190nm,19.4s
GTA LR LR
comp=Z,160nm,20.0s
GTA LR LR
comp=Z,350nm,21.9s
YUK Yuzh-Kuril'sk 53.62 16⇑*iP* **P 01 14 55.6 +3.1**
HYB Hyderabad 55.09 297 *i* P **P 01 15 02.0 -1.8**
KLR Kul'dur 56.51 3 P **P 01 15 14.4 +1.0**
comp=Z,4.3nm,1.1s,baz=185,slow=3.7,SNR=5.9
KLR Kul'dur 56.51 3⇑*iP* **P 01 15 12.8 -0.5**
KLR pmax pmax
comp=Z,17nm,1.6s
ULN Ulaanbaatar 58.20 343 P **P 01 15 25.1 -0.5**
ULN IAmb IAmb 01 15 39.7
comp=Z,26nm,1.3s
ULN Ulaanbaatar 58.20 343 P **P 01 15 25.1 -0.5**
ULN pmax pmax
comp=Z,26nm,1.3s
SONM Songino Array 58.37 343 P **P 01 15 27.2 +0.5**
comp=Z,7.4nm,0.9s,baz=154,slow=8.0,SNR=42
SONM Songino Array 58.37 343 P **P 01 15 26.0 -0.7**
SONM Songino Array 58.37 343 P **P 01 15 26.0 -0.7**
SONM pmax pmax
comp=Z,20nm,1.4s
GRNR Gornyy 58.38 6 *eP* **P 01 15 26.1 -0.5**
GRNR MLR MLR
comp=Z,140nm,14.0s
ZEA Zeya 60.95 359 *eP* **P 01 15 44.2 0.0**
ZEA pmax pmax
comp=Z,32nm,1.8s
ZAK Zakamensk 61.57 342 *eP* **P 01 15 48.6 0.0**
ZAK pmax pmax
comp=Z,8.0nm,1.4s
TLY Talaya 62.61 343 *eP* **P 01 15 53.3 -2.1**
TLY pmax pmax
comp=Z,17nm,1.1s
WMQ Urumqi 62.91 328 *eP* P 01 16 02.4 +4.8
WMQ sP pwP 01 16 09.5 -1.6
WMQ pmax pmax
comp=Z,19nm,1.7s
WMQ pmax pmax
comp=Z,51nm,3.7s
WMQ LR LR
comp=Z,710nm,28.9s
WMQ LR LR
comp=Z,550nm,29.2s
WMQ LR LR
comp=Z,300nm,28.8s
MOY Mondy 63.40 341 *eP* **P 01 16 01.9 +1.1**
MOY pmax pmax

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,68nm,2.0s						
PETK	Petropavlovsk-	65.24	19	LR	LR	01 40 27.5	
	comp=Z,106nm,21.5s,baz=238,slow=32						
BOD	Bodaibo	66.08	352	eP	P	01 16 17.9	-0.1
BOD				pmax	pmax		
	comp=Z,25nm,1.5s						
NIL	Nilore	66.31	312	P	P	01 16 18.8	-1.2
NIL				IAmb	IAmb	01 16 25.5	
	comp=Z,16nm,1.0s						
NIL	Nilore	66.31	312	P	P	01 16 18.8	-1.2
NIL				pmax	pmax		
	comp=Z,16nm,1.0s						
KSH	Kashi	67.28	318	P	P	01 16 27.3	+1.1
KSH				pP	pP	01 16 32.6	-3.6
KSH				PP	PP	01 18 58.6	+3.7
KSH				S	S	01 25 17.4	-1.7
KSH				pmax	pmax		
	comp=Z,57nm,1.7s						
KSH				LR	LR		
	comp=Z,180nm,5.4s						
KSH				LR	LR		
	comp=Z,130nm,5.1s						
KSH				LR	LR		
	comp=Z,260nm,6.9s						
MK31	Makanchi Array	67.73	328	P	P	01 16 28.2	-0.5
MK31	Makanchi Array	67.73	328	P	P	01 16 28.3	-0.5
MK31				pmax	pmax		
	comp=Z,29nm,1.1s						
MKAR	Makanchi Array	67.73	328	P	P	01 16 28.6	-0.2
	comp=Z,11nm,0.8s,baz=129,slow=7.6,SNR=39						
MAKZ	Makanchi	67.91	328	P	P	01 16 28.7	-1.2
MAKZ	Makanchi	67.91	328	P	P	01 16 28.7	-1.2
MAKZ				pmax	pmax		
	comp=Z,32nm,1.2s						
YAK	Yakutsk	69.27	1	eP	P	01 16 39.5	+1.5
YAK				pmax	pmax		
	comp=Z,22nm,1.1s						
YAK				pmax	pmax		
	comp=N,11nm,1.2s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
KBL	Kabul	69.83	311	P	P	01 16 41.4	-1.0
KBL				IAmb	IAmb	01 16 48.8	
	comp=Z,10nm,0.9s						
KBL	Kabul	69.83	311	P	P	01 16 41.4	-1.0
KBL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AAK	Ala-Archa	69.86	321	P	P	01 16 41.0	-1.3
AAK	Ala-Archa	69.86	321	⇓iP	P	01 16 42.9	+0.6
AAK				pmax	pmax		
	comp=Z,13nm,1.3s						
RAR	Rarotonga	70.44	110	LR	LR	01 44 11.7	
	comp=Z,75nm,21.1s,baz=268,slow=33						
BTK	Batken	71.00	317	IAmb	IAmb	01 17 08.4	
	comp=Z,24nm,1.4s						
ZALV	Zalesovo Beam	71.28	335	P	P	01 16 49.7	-0.8
	comp=Z,17nm,0.9s,baz=119,slow=4.2,SNR=40						
ZALV				LR	LR	01 48 25.2	
	comp=Z,133nm,20.6s,baz=84,slow=36						
ZALV	Zalesovo Beam	71.28	335	P	P	01 16 49.4	-1.1
ZALV	Zalesovo Beam	71.28	335	P	P	01 16 49.4	-1.1
KURBB	Kurchatov Arra	72.06	329	P	P	01 16 54.7	-0.5
	comp=Z,13nm,0.8s,baz=131,slow=5.1,SNR=50						
KURK	Kurchatov	72.07	329	P	P	01 16 55.1	-0.2
KURK	Kurchatov	72.07	329	⇓iP	P	01 16 55.4	+0.1
KURK				pmax	pmax		
	comp=Z,48nm,1.0s						
VNDA	Vanda	72.21	173	LR	LR	01 48 41.5	
	comp=Z,507nm,18.7s,baz=351,slow=36						
SEY	Seymchan	72.53	11	P	P	01 16 59.1	+1.3
	comp=Z,2.0nm,0.3s,baz=243,slow=6.8,SNR=4.3						
SEY	Seymchan	72.53	11	⇑iP	P	01 16 59.4	+1.6
MAW	Mawson	73.97	201	LR	LR	01 46 21.9	
	comp=Z,208nm,21.2s,baz=57,slow=33						
BVAR	Borovoye Array	77.59	328	P	P	01 17 27.9	+0.7
	comp=Z,4.1nm,0.9s,baz=135,slow=5.2,SNR=16						
BRVK	Borovoye	77.66	328	P	P	01 17 27.0	-0.6
BRVK				IAmb	IAmb	01 17 34.6	
	comp=Z,35nm,1.2s						
BRVK	Borovoye	77.66	328	P	P	01 17 27.0	-0.6
BRVK				pmax	pmax		
	comp=Z,35nm,1.2s						
TIXI	Tiksi	78.92	0	P	P	01 17 33.8	-0.4
	comp=Z,1.6nm,0.3s,baz=194,slow=5.4,SNR=5.6						
TIXI	Tiksi	78.92	0	P	P	01 17 33.7	-0.5
TIXI	Tiksi	78.92	0	⇑iP	P	01 17 34.1	-0.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GEYT	Alibeck	79.29	311	P	P	01 17 37.4	+0.4
	comp=Z,0.6nm,0.6s,baz=5.5,slow=23,SNR=4.6						
GEYT	Alibeck	79.29	311	P	P	01 17 35.7	-1.3
BILL	Bilibino	79.91	14	eP	P	01 17 40.5	+0.9
BILL				e		01 20 37.5	
BILL				ePPP	PPP	01 22 33.8	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.8s						
QSPA	South Pole Qui	82.54	180	P	P	01 17 56.6	+2.6
	comp=Z,4.8nm,0.9s,baz=331,slow=1.5,SNR=6.6						
QSPA	South Pole Qui	82.54	180	P	P	01 17 54.5	+0.6
QSPA				IAmb	IAmb	01 18 02.6	
	comp=Z,17nm,1.2s						
AKTO	Aktyubinsk	83.45	323	P	P	01 18 01.0	+2.3
	comp=Z,2.7nm,0.7s,baz=108,slow=5.8,SNR=7.5						
AKTO				LR	LR	01 57 54.5	
	comp=Z,106nm,21.0s,baz=119,slow=38						
AKTO	Aktyubinsk	83.45	323	P	P	01 18 01.0	+2.3
GAMB	Gambell	83.93	23	IAmb	IAmb	01 18 08.7	
	comp=Z,18nm,1.3s						
SVE	Sverdlovsk	84.32	329	eP	P	01 18 02.9	-0.1
SVE				pmax	pmax		
	comp=Z,45nm,2.0s						
ARU	Arti	85.24	328	P	P	01 18 08.1	+0.5
	comp=Z,0.4nm,0.3s,baz=102,slow=2.5,SNR=4.9						
ARU	Arti	85.24	328	P	P	01 18 07.2	-0.4
ARU				IAmb	IAmb	01 18 21.3	
	comp=Z,33nm,1.5s						
ARU	Arti	85.24	328	d iP	P	01 18 07.3	-0.4
ARU						01 21 22.9	
ARU				S	S	01 28 31.9	-3.4
ARU				SS	SS	01 34 14.6	+4.4
ARU				pmax	pmax		
	comp=Z,20nm,1.6s						
ARU				MLR	MLR		
	comp=Z,214nm,15.0s						
RAYN	Ar Rayn	86.47	294	P	P	01 18 11.3	-3.3
RAYN	Ar Rayn	86.47	294	P	P	01 18 11.3	-3.3
RAYN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KIV	Kislovodsk	92.03	314	eP	P	01 18 37.5	-2.9
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV				MLR	MLR		
	comp=Z,157nm,20.0s						
RND	Reindeer	93.36	27	IAmb	IAmb	01 18 57.5	
	comp=Z,8.6nm,0.9s						
DHY	Denali Highway	93.96	27	IAmb	IAmb	01 19 00.7	
	comp=Z,20nm,1.5s						
ILAR	Eielson Array	94.42	25	P	P	01 18 50.3	-0.5
	comp=Z,0.4nm,0.7s,baz=259,slow=5.1,SNR=5.1						
ILAR				LR	LR	01 56 03.1	
	comp=Z,67nm,20.6s,baz=284,slow=32						
ILAR	Eielson Array	94.42	25	P	P	01 18 48.0	-2.9
BMAR	Burnt Mountain	95.67	23	P	P	01 18 56.0	-0.5
KLMR	Klimovskoe	95.89	331	eP	P	01 18 52.9	-4.7
KLMR				AMP		01 19 09.0	
	comp=Z,25nm,2.1s						
KLMR	Klimovskoe	95.89	331	eP	P	01 18 52.9	-4.7
KLMR				pmax	pmax		
	comp=Z,25nm,2.1s						
BCAR	Beaver Creek A	96.49	27	P	P	01 18 58.9	-1.5
MMAI	Mount Meron Ar	96.50	302	LR	LR	02 06 54.9	
	comp=Z,38nm,21.9s,baz=355,slow=38						
OBN	Obninsk	97.09	325	LR	LR	02 06 36.5	
	comp=Z,18nm,21.8s,baz=160,slow=38						
OBN	Obninsk	97.09	325	eP	P	01 19 02.8	-0.3
OBN				ePPP	PPP	01 25 03.6	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BOSA	Boshof	97.87	240	LR	LR	01 57 01.5	
	comp=Z,57nm,21.9s,baz=163,slow=32						
CLL	Collm	111.53	322	ePKiKP	PKiKP	01 24 05.0	-0.5
CLL	Collm	111.53	322	ePKiKP	PKiKP	01 24 05.0	-0.5
MNTX	Cornudas Mount	124.53	57	PKiKP	PKiKP	01 24 31.4	0.0
TXAR	Lajitas Array	126.52	59	PKP	PKiKP	01 24 37.1	+1.6
	comp=Z,0.4nm,0.8s,baz=186,slow=1.3,SNR=4.0						
TORD	Torodi Ar. Bea	127.33	281	PKP	PKiKP	01 24 37.6	+0.3
	comp=Z,2.1nm,1.1s,baz=92,slow=2.2,SNR=5.3						
JCT	Junction City	129.46	56		PKPdf	01 24 38.4	-2.2
JCT	Junction City	129.46	56	PKIKP	PKPdf	01 24 38.4	-2.2
CPUP	Villa Florida	145.98	171	PKPbc	PKiKP	01 25 13.5	-1.5
	comp=Z,4.4nm,0.9s,baz=84,slow=3.5,SNR=4.1						
CPUP	Villa Florida	145.98	171	PKPdf	PKPdf	01 25 10.1	-0.8
CPUP	Villa Florida	145.98	171	PKP2	PKPdf	01 25 10.1	-0.8
GO01	Chusmiza	147.97	148		PKPab	01 25 21.1	+0.5
MNMC	Minye Minye	148.20	146	PKPdf	PKPdf	01 25 14.0	-1.1
LPAZ	La Paz	151.31	145	PKPbc	PKiKP	01 25 28.3	+1.3
	comp=Z,1.5nm,0.4s,baz=261,slow=1.8,SNR=11						
LPAZ	La Paz	151.31	145	PKPdf	PKPdf	01 25 18.9	-1.6
LPAZ	La Paz	151.31	145	PKIKP	PKPdf	01 25 18.9	-1.6

*THE **04** 01:14:00.0, 38.°19N×20.°41E, h13km, ML2.3/4, Error ellipse: s-maj=0.9km s-min=0.4km az=230.0*
*ATH **04** 01:14:00.4, 38.°19N×20.°39E, h12km±2km, ML2.5/2, Error ellipse: s-maj=2.5km s-min=1.1km az=321.0*
ISC 04 01:14:00.2±1.9, 38.°19N±0.°03×20.°41E±0.°05, h13km±7km, n16, σ0.s31/29, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	252	P	Pg	01 14 02.3	-0.2
CHV1				S	Sg	01 14 04.0	-0.1
LXR1	Lixouri, Cepha	0.03	67	P	Pg	01 14 02.6	+0.1
KEF3	Kipouria, Keph	0.05	285	P	Pg	01 14 02.5	-0.2
KEF3				S	Sg	01 14 04.4	0.0
ARG2	Argostoli	0.06	101	P	Pg	01 14 02.7	-0.1
ARG2				S	Sg	01 14 04.6	0.0
KEF2	Argostoli. Kep	0.07	112	P	Pg	01 14 02.7	-0.1
KEF2				S	Sg	01 14 04.6	-0.1
KEF4	Livadi, Kephal	0.07	11	P	Pg	01 14 02.9	0.0
KEF4				S	Sg	01 14 05.2	+0.4
KEF1	Kardakata, Kep	0.10	30	P	Pg	01 14 03.2	0.0
KEF1				S	Sg	01 14 05.5	+0.2
VLS	Valsamata	0.14	95	P	Pg	01 14 03.5	-0.3
VLS				S	Sg	01 14 06.2	-0.1
	3μm,0.2s						
VLS	Valsamata	0.14	95	P	Pg	01 14 03.6	-0.2
VLS				S	Sg	01 14 06.6	+0.3
VLS				AML	AML	01 14 06.7	
	comp=N,4320μm,0.2s						
VLS				AML	AML	01 14 06.7	
	comp=E,6783μm,0.1s						
VSK1	VASILIKIADES	0.25	29	P	Pg	01 14 05.1	-0.5
VSK1				S	Sg	01 14 09.3	+0.1
	comp=E,950nm,0.2s						
FSK	Fiskardo	0.29	24	P	Pg	01 14 05.7	-0.6
FSK				S	Sg	01 14 10.6	+0.2
	comp=E,365nm,0.2s						
FSK	Fiskardo	0.29	24	P	Pg	01 14 06.3	0.0
KFL	Anninata	0.31	105	P	Pg	01 14 06.4	-0.2
KFL				S	Sg	01 14 11.0	+0.1
	comp=E,2μm,0.3s						
VLMS	Volimes, Zakyn	0.37	147	P	Pg	01 14 07.5	-0.2
VLMS				S	Sg	01 14 13.5	+0.8
VLMS				AML	AML	01 14 14.1	
	comp=N,2232μm,0.4s						
VLMS				AML	AML	01 14 14.6	
	comp=E,1378μm,0.2s						
EVGI	Lefkada island	0.47	24	P	Pg	01 14 09.2	-0.4
EVGI				S	Sg	01 14 16.3	+0.4
EVGI	Lefkada island	0.47	24	P	Pg	01 14 09.8	+0.3

KRSC 04 01:14:27.6±1.4, 48.°23N×156.°22E, h38km±29km, ML4.2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	3.27	7	eP	Pn	01 15 20.1	+3.9
PAU				eS	Sn	01 15 59.8	+6.1
ASAK	Asacha	4.30	14	eP	Pn	01 15 34.9	+4.5
MTVR	Mutnovka	4.44	16	eP	Pn	01 15 37.0	+4.5
RUS	Russkaya	4.46	18	eP	Pn	01 15 36.8	+4.3
RUS				eS	Sn	01 16 28.9	+5.8
GRL	Gorelyy	4.49	15	eP	Pn	01 15 37.9	+4.8
KRMR	Karymshinskiy	4.77	14	eP	Pn	01 15 40.7	+3.9
UGLR	Uglovaya	5.26	17	eP	Pn	01 15 49.1	+5.5
SDLR	Sedlovina	5.33	17	eP	Pn	01 15 49.7	+5.0

*IDC **04** 01:15:19.9±1.5, 7.°19S×128.°61E, h0km, mb3.8/3, mb1 3.9/6, mb1mx3.6/44, mbtmp3.8/6, ML3.7/3, Error ellipse: s-maj=82.9km s-min=24.6km az=76.0*
ISC 04 01:15:25.1±1.4, 7.°3S±0.°1×128.°4E±0.°3, h35km, n6, σ0.s54/6, mb3.8/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.05	194	Pn	Pn	01 18 00.4	-0.3
	0.3nm,0.3s,baz=24,slow=9.7,SNR=6.0						
WRA	Warramunga Arr	13.79	156	Pn	Pn	01 18 38.1	-0.2
	0.5nm,0.3s,baz=338,slow=12,SNR=4.6						
ASAR	Alice Springs	17.07	163	P	Pn	01 19 21.9	+0.6
	0.2nm,0.3s,baz=335,slow=10,SNR=4.6						
MKAR	Makanchi Array	67.66	328	P	P	01 26 19.1	+0.4
	0.5nm,0.6s,baz=122,slow=7.4,SNR=9.9						
ZALV	Zalesovo Beam	71.20	334	P	P	01 26 39.9	-0.5
	0.5nm,0.5s,baz=152,slow=6.5,SNR=2.9						
KURBB	Kurchatov Arra	71.98	329	P	P	01 26 45.3	+0.1
	0.8nm,0.7s,baz=129,slow=5.0,SNR=12						

*IDC **04** 01:16:08.4±0.8, 7.°20S×128.°36E, h0km, mb4.5/12, mb1 4.6/15, mb1mx4.3/43, mbtmp4.5/15, ML4.3/3, MS3.6/1, Ms1 3.6/1, ms1mx3.0/35, Error ellipse: s-maj=32.9km s-min=17.4km az=74.0*
*NEIC **04** 01:16:09.4±1.3, 7.°25S±0.°05×128.°42E±0.°07, h10km±1km, mb4.6/14, Error ellipse: s-maj=13.8km s-min=5.8km az=120.0*
ISC 04 01:16:12.7±0.5, 7.°29S±0.°05×128.°47E±0.°07, h35km, n53, σ1.s36/59, mb4.5/17, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	4.83	239		Pn	01 17 22.0	-1.0
SOEI				Sn	Sn	01 18 18.6	+0.7
FAKI	Fak Fak	5.74	41		Pn	01 17 35.2	-0.3
MTN	Manton Dam	6.11	155	P	Pn	01 17 45.9	+5.3
	baz=6.5,SNR=5.1						
KDU	Kakadu	6.66	144	P	Pn	01 17 52.7	+4.6
	baz=7.1,SNR=13						
SIJI	Sorong	6.96	24	Pn	Pn	01 17 54.2	+1.9
	2.0nm,0.3s,baz=221,slow=19,SNR=3.2						
SIJI				Sn	Sn	01 19 07.9	-2.4
	2.4nm,0.3s,baz=112,slow=13,SNR=4.2						
KNRA	Kununurra	8.34	178	P	Pn	01 18 14.0	+2.8
	baz=8.6,SNR=11						
KNRA	Kununurra	8.34	178		Pn	01 18 12.8	+1.5
KNRA					Sn	01 19 46.7	+2.4
FITZ	Fitzroy Crossi	11.09	194	P	Pn	01 18 49.2	+0.2
	baz=11,SNR=7.9						
FITZ	Fitzroy Crossi	11.09	194	Pn	Pn	01 18 48.2	-0.8
	1.6nm,0.3s,baz=30,slow=12,SNR=8.4						
FITZ				Sn	Sn	01 20 48.2	-3.6
	1.5nm,0.3s,baz=278,slow=20,SNR=3.2						
FITZ				LR	LR	01 23 36.0	
	comp=Z,282nm,19.0s,baz=54,slow=40						
FITZ	Fitzroy Crossi	11.09	194		Pn	01 18 48.3	-0.7
FITZ					Sn	01 20 53.2	+1.3
WB0	Warramunga Arr	13.67	156		Pn	01 19 24.9	+0.6
WB0					Sn	01 21 54.1	-0.9
WB9	Warramunga Arr	13.69	156	P	Pn	01 19 25.0	+0.5
	baz=14						
WRA	Warramunga Arr	13.81	156	Pn	Pn	01 19 26.2	+0.1
	1.9nm,0.3s,baz=320,slow=14,SNR=12						
WRA				Sn	Sn	01 21 56.0	-2.3
	3.3nm,0.3s,baz=335,slow=22,SNR=8.8						
WRA	Warramunga Arr	13.81	156		Pn	01 19 25.5	-0.6
WB2	Warramunga Arr	13.81	156		Pn	01 19 26.1	-0.1
COEN	Coen	15.89	116	P	P	01 19 56.9	-0.3
	baz=16,SNR=5.0						
QIS	Mount Isa	17.04	142	P	P	01 20 10.1	+0.2
	baz=18,SNR=5.1						
AS31	Alice Springs	17.10	163	P	P	01 20 10.5	-0.1
ASAR	Alice Springs	17.10	163	P	P	01 20 09.7	-0.9
	0.7nm,0.3s,baz=335,slow=8.6,SNR=8.6						
ASAR				S	Sn	01 23 13.7	-4.7
	0.8nm,0.3s,baz=324,slow=20,SNR=6.4						
ASAR	Alice Springs	17.10	163	P	P	01 20 10.2	-0.4
PMG	Port Moresby	18.61	98	P	P	01 20 27.5	+0.2
PMG				IAmb	IAmb	01 20 36.0	
	comp=Z,36nm,1.1s						
SBUM	Sibu	18.88	300	P	P	01 20 28.9	-1.4
MEEK	Meekatharra	21.41	205	P	P	01 20 59.5	+1.8
	baz=22,SNR=4.7						
MORW	Morawa	24.63	207	P	P	01 21 30.5	+0.4
MORW				IAmb	IAmb	01 21 32.9	
	comp=Z,16nm,0.8s						
STKA	Stephens Creek	27.36	155	P	P	01 21 58.0	+3.3
	comp=Z,5.8nm,0.7s,baz=337,slow=7.7,SNR=6.8						
STKA	Stephens Creek	27.36	155	P	P	01 21 56.5	+1.8
RPSI	Rantau Prapat	31.11	288	P	P	01 22 28.0	-0.2
RPSI	Rantau Prapat	31.11	288	P	P	01 22 28.0	-0.2
PSI	Prapat	31.14	288	P	P	01 22 28.0	-0.7
	comp=Z,16nm,1.0s,baz=127,slow=3.6,SNR=7.1						
MJAR	Matsushiro Arr	44.55	11	P	P	01 24 21.5	+0.2
	comp=Z,12nm,0.9s,baz=190,slow=9.4,SNR=13						
MJAR	Matsushiro Arr	44.55	11	P	P	01 24 21.4	+0.1
USRK	Ussuriysk Ar.	51.34	3	P	P	01 25 13.9	+0.2
	comp=Z,2.1nm,0.7s,baz=164,slow=5.8,SNR=4.3						
USRK	Ussuriysk Ar.	51.34	3	P	P	01 25 13.3	-0.4
ULN	Ulaanbaatar	58.08	343	P	P	01 26 02.1	-0.6
ULN				IAmb	IAmb	01 26 07.2	
	comp=Z,3.8nm,0.8s						
SONM	Songino Array	58.25	343	P	P	01 26 04.9	+1.1
	comp=Z,3.1nm,0.9s,baz=164,slow=5.9,SNR=18						
SONM	Songino Array	58.25	343	P	P	01 26 02.7	-1.1
MK31	Makanchi Array	67.64	328	P	P	01 27 06.6	+0.4
MK31				IAmb	IAmb	01 27 07.8	
	comp=Z,4.8nm,0.9s						
MKAR	Makanchi Array	67.64	328	P	P	01 27 06.7	+0.5
	comp=Z,3.6nm,0.6s,baz=128,slow=7.5,SNR=34						
MKAR	Makanchi Array	67.64	328	P	P	01 27 06.5	+0.3
MAKZ	Makanchi	67.82	327	P	P	01 27 07.6	+0.3
MAKZ				IAmb	IAmb	01 27 08.7	
	comp=Z,4.4nm,1.0s						
ZALV	Zalesovo Beam	71.18	334	P	P	01 27 27.9	0.0
	comp=Z,9.3nm,0.9s,baz=114,slow=3.6,SNR=29						
ZALV	Zalesovo Beam	71.18	334	P	P	01 27 28.2	+0.4
KURBB	Kurchatov Arra	71.97	329	P	P	01 27 33.3	+0.6
	comp=Z,8.3nm,0.9s,baz=133,slow=5.1,SNR=42						
KURK	Kurchatov	71.98	329	P	P	01 27 33.2	+0.5
BVAR	Borovoye Array	77.50	328	P	P	01 28 05.1	+0.4
	comp=Z,2.9nm,0.9s,baz=123,slow=5.5,SNR=13						
BRVK	Borovoye	77.57	328	P	P	01 28 05.4	+0.3
BRVK				IAmb	IAmb	01 28 07.4	
	comp=Z,5.3nm,1.1s						
TIXI	Tiksi	78.77	0	P	P	01 28 12.2	+0.8
	comp=Z,2.9nm,0.6s,baz=186,slow=2.7,SNR=5.4						
AKTO	Aktyubinsk	83.38	323	P	P	01 28 36.2	-0.1
	comp=Z,1.5nm,0.8s,baz=93,slow=0.9,SNR=4.3						
ILAR	Eielson Array	94.25	25	P	P	01 29 27.4	-0.7
	comp=Z,0.8nm,0.9s,baz=240,slow=6.0,SNR=4.7						
ILAR	Eielson Array	94.25	25	P	P	01 29 27.8	-0.2
BCAR	Beaver Creek A	96.33	27	P	P	01 29 38.1	+0.5
GO01	Chusmiza	148.06	147		PKiKP	01 35 58.1	0.0
LPAZ	La Paz	151.39	145	PKPdf	PKPdf	01 35 56.4	-2.2

*IDC **04** 01:22:45.8±1.4, 7.°16S×128.°60E, h0km, mb4.2/3, mb1 4.2/6, mb1mx3.9/38, mbtmp4.3/6, ML3.9/3, Error ellipse: s-maj=80.5km s-min=23.7km az=77.0*
*NEIC **04** 01:22:46.8±1.2, 7.°3S±0.°1×128.°48E±0.°06, h10km±1km, mb4.4/10, Error ellipse: s-maj=18.9km s-min=7.3km az=21.0*
ISC 04 01:22:50.4±0.8, 7.°34S±0.°07×128.°55E±0.°09, h35km, n25, σ1.s26/28, mb4.4/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	4.86	240	Pn	Pn	01 24 00.3	-0.9
MTN	Manton Dam	6.03	155	Pn	Pn	01 24 16.6	-0.6
MTN				Sn	Sn	01 25 27.0	+1.9
KNRA	Kununurra	8.29	179	Pn	Pn	01 24 50.5	+2.3
KNRA					Sn	01 26 22.6	+2.0
FITZ	Fitzroy Crossi	11.06	195	Pn	Pn	01 25 28.2	+2.0
	0.5nm,0.3s,baz=15,slow=16,SNR=5.0						
FITZ				Sn	Sn	01 27 26.6	-2.1
	1.4nm,0.3s,baz=113,slow=15,SNR=4.7						
FITZ	Fitzroy Crossi	11.06	195		Pn	01 25 25.9	-0.4
WB0	Warramunga Arr	13.59	156	Pn	Pn	01 26 01.7	+0.8
WRA	Warramunga Arr	13.73	156	Pn	Pn	01 26 04.1	+1.4
	0.6nm,0.3s,baz=336,slow=11,SNR=4.8						
WRA				Sn	Sn	01 28 31.4	-2.7
	0.7nm,0.3s,baz=332,slow=23,SNR=9.7						
WRA	Warramunga Arr	13.73	156		Pn	01 26 03.2	+0.5
WR0	Warramunga Arr	13.83	156		Pn	01 26 03.9	-0.1
COEN	Coen	15.80	116		Pn	01 26 30.5	+0.1
PSA00	Pilbara Seismi	16.46	210	Pn	Pn	01 26 37.0	-1.7
ASAR	Alice Springs	17.03	163	P	Pn	01 26 47.2	-0.3
	0.4nm,0.3s,baz=342,slow=10.0,SNR=7.4						
UGM	Wanagama	17.87	267	P	P	01 26 57.5	+0.6
UGM				IAmb	IAmb	01 26 58.7	
	comp=Z,38nm,1.1s						
RPSI	Rantau Prapat	31.20	288	P	P	01 29 06.4	-0.3
SONM	Songino Array	58.32	343	P	P	01 32 42.6	+0.6
	comp=Z,1.1nm,0.8s,baz=157,slow=7.8,SNR=9.5						
SONM	Songino Array	58.32	343	IAmb	IAmb	01 32 44.2	
	comp=Z,1.4nm,1.0s						
MK31	Makanchi Array	67.73	328	P	P	01 33 44.1	-0.3
MK31				IAmb	IAmb	01 33 47.2	
	comp=Z,2.0nm,1.0s						
MKAR	Makanchi Array	67.73	328	P	P	01 33 44.3	-0.1
	comp=Z,1.8nm,0.7s,baz=125,slow=7.6,SNR=20						
MKAR	Makanchi Array	67.73	328	P	P	01 33 43.1	-1.3
ZAA0	Zalesovo Array	71.26	334	P	P	01 34 05.4	-0.6
ZAA0				IAmb	IAmb	01 34 08.9	
	comp=Z,3.8nm,0.9s						
ZALV	Zalesovo Beam	71.26	334	P	P	01 34 05.5	-0.5
	comp=Z,3.3nm,0.8s,baz=131,slow=4.2,SNR=14						
KURBB	Kurchatov Arra	72.05	329	P	P	01 34 10.9	0.0
KURK	Kurchatov	72.06	329	P	P	01 34 10.4	-0.5
BRVK	Borovoye	77.66	328	P	P	01 34 42.8	-0.5
BRVK				IAmb	IAmb	01 34 44.2	
	comp=Z,3.8nm,1.1s						
ABKAR	Akbulak array	81.88	322	P	P	01 35 06.9	+0.7
ABKAR				IAmb	IAmb	01 35 07.4	
	comp=Z,2.4nm,0.4s						

*IDC **04** 01:25:43.8±2.0, 7.°42S×127.°96E, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.7/34, mbtmp4.0/4, ML3.8/1, Error ellipse: s-maj=237.3km s-min=38.9km az=69.0*
*NEIC **04** 01:25:44.1±0.6, 7.°8S±0.°1×127.°4E±0.°1, h10km±1km, mb4.3/5, Error ellipse: s-maj=25.5km s-min=20.5km az=118.0*
ISC 04 01:25:44.3±1.0, 7.°8S±0.°1×127.°4E±0.°1, h10km, n13, σ0.s65/14, mb4.3/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	3.68	237	Pn	Pn	01 26 41.5	+0.1
SOEI				Sn	Sn	01 27 24.9	-0.1
AS31	Alice Springs	17.01	159		Pn	01 29 42.0	-0.5
ASAR	Alice Springs	17.01	159	P	P	01 29 44.9	+0.5
	0.3nm,0.3s,baz=340,slow=11,SNR=5.0						
ASAR	Alice Springs	17.01	159	P	P	01 29 44.5	+0.2
RPSI	Rantau Prapat	30.25	289	P	P	01 31 55.6	-0.1
SONM	Songino Array	58.38	344	P	P	01 35 40.5	+0.4
	0.8nm,0.9s,baz=158,slow=5.0,SNR=5.2						
SONM	Songino Array	58.38	344	P	P	01 35 39.0	-1.1
MK31	Makanchi Array	67.47	328	P	P	01 36 40.4	0.0
MK31				IAmb	IAmb	01 36 42.6	
	comp=Z,2.0nm,0.9s						
MKAR	Makanchi Array	67.47	328	P	P	01 36 42.0	+1.5
	comp=Z,1.4nm,0.7s,baz=124,slow=8.2,SNR=13						
MKAR	Makanchi Array	67.47	328	P	P	01 36 40.1	-0.4
ZAA0	Zalesovo Array	71.14	335	P	P	01 37 03.5	+0.5
ZAA0				IAmb	IAmb	01 37 03.8	
	comp=Z,2.2nm,0.8s						
ZALV	Zalesovo Beam	71.14	335	P	P	01 37 03.0	0.0
	comp=Z,2.8nm,0.9s,baz=119,slow=4.4,SNR=8.1						
ZALV	Zalesovo Beam	71.14	335	P	P	01 37 02.8	-0.2

*SJA **04** 01:31:58.7±0.6, 33.°91S×73.°75W, h10km, ML4.3, MW4.2*
*NEIC **04** 01:32:13.9±1.0, 33.°79S±0.°04×72.°3W±0.°1, h23km±5km, Error ellipse: s-maj=13.4km s-min=4.9km az=101.0*
*IDC **04** 01:32:14.4±1.0, 33.°66S×72.°02W, h0km, mb4.0/7, mb1 4.1/9, mb1mx3.9/27, mbtmp4.0/9, ML4.0/2, MS3.2/2, Ms1 3.3/2, ms1mx2.9/23, Error ellipse: s-maj=32.9km*

s-min=18.2km az=84.0

GUC 04 01:32:15.8±0.7, 33.°79S×72.°24W, h29km±5km, ML4.0

ISC 04 01:32:15.2±1.4, 33.°78S±0.°03×72.°26W±0.°05, h20km±5km, n48, σ1.s99/69, mb4.1/6, 1C-7D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MT01	Popeta	0.84	96⇓	iP	Pn	01 32 32.1	+0.1
MT01				iS	Sn	01 32 43.7	-0.1
MT01				IAML		01 32 46.6	
	comp=N,7μm,0.2s						
VA01	Torpederas	0.91	34	iP	Pb	01 32 33.2	+0.8
VA01				iS	Sn	01 32 45.9	+0.3
GO05	Huala	1.25	168	iP	Pb	01 32 38.9	+0.6
GO05				iS	Sg	01 32 55.6	-0.4
GO05				IAML		01 33 03.2	
	comp=E,2μm,0.6s						
GO05	Huala	1.25	168		Pn	01 32 36.4	-1.4
GO05				Sn	Sb	01 32 51.9	-2.2
ROC1	El Roble	1.31	53		Pn	01 32 37.1	-1.7
ROC1				Sn	Sb	01 32 53.4	-2.5
ROCH	El Roble	1.32	53⇓	iP	Pb	01 32 39.8	+0.3
ROCH				iS	Sg	01 32 58.4	+0.2
ROCH				IAML		01 33 09.3	
	comp=N,3μm,0.5s						
MT05	Renca	1.33	73	iP	Pb	01 32 40.0	+0.5
MT05				iS	Sg	01 32 58.4	+0.1
MT05				IAML		01 33 06.7	
	comp=E,4μm,0.4s						
ANTU	Antumapu	1.37	82	IAML		01 33 02.6	
	comp=N,7μm,0.3s						
STL	Santa Lucia	1.39	76⇑	iP	Pb	01 32 40.8	+0.2
PEL	Peldehue	1.46	65⇓	iP	Pb	01 32 42.3	+0.5
PEL				iS	Sg	01 33 01.7	-0.9
PEL				IAML		01 33 07.0	
	comp=E,4μm,0.5s						
PEL	Peldehue	1.46	65		Pn	01 32 38.4	-2.2
PEL				Sn	Sn	01 32 57.5	-1.7
MT03	Universidad Ad	1.49	79⇓	iP	Pb	01 32 42.4	+0.1
MT03				iS	Sg	01 33 03.3	-0.1
MT03				IAML		01 33 10.9	
	comp=E,5μm,0.4s						
CLCH	Cerro Calan	1.49	75⇓	iP	Pb	01 32 42.4	+0.1
CLCH				iS	Sg	01 33 02.0	-1.3
BO02	Sierra Bellavi	1.58	130	eP	Pb	01 32 43.9	-0.1
BO02				IAML		01 33 15.3	
	comp=E,4μm,0.4s						
FCH	Farellones	1.70	75⇓	iP	Pb	01 32 46.0	+0.2
FCH				iS	Sg	01 33 09.2	-1.1
LMEL	Las Melosas	1.71	93	iP	Pb	01 32 46.0	-0.2
LMEL				iS	Sg	01 33 08.9	-1.6
LMEL				IAML		01 33 12.3	
	comp=E,2μm,0.5s						
VA03	San Esteban	1.75	55	iP	Pb	01 32 46.2	-0.7
VA03				eS	Sg	01 33 09.7	-2.2
VA03				IAML		01 33 16.6	
	comp=E,5μm,0.5s						
ARCO	CERRO ARCO	2.94	72	iP	Pb	01 33 06.2	-0.9
ARCO				eS	Sg	01 33 49.4	-0.3
ARCO				IAML		01 33 52.3	
	comp=Z,693nm,0.7s						
AAGR	Agrelo	2.95	77	iP	Pb	01 33 05.8	-1.5
AAGR				IAML		01 34 15.8	
	comp=Z,237nm,2.2s						
EDS3	Malargue	3.08	131	iP	Pn	01 33 08.8	-0.7
EDS3				eS	Sg	01 34 03.4	+9.2
ASAL	Salagasta	3.11	68	iP	Pb	01 33 07.8	-2.1
ASAL				eS	Sg	01 33 55.4	+0.3
ASAL				IAML		01 34 03.4	
	comp=Z,398nm,0.9s						
RTLS	Leoncito	3.18	52⇑	iP	Pn	01 33 08.1	+3.6
RTLS				eS	Sg	01 33 59.4	+1.8
RTLS				IAML		01 34 05.7	
	comp=Z,323nm,0.7s						
RTCV	Cerro Valdivia	3.67	60⇑	iP	Pn	01 33 14.9	+3.9
RTCV				eS	Sg	01 34 11.4	-1.8
RTCV				IAML		01 34 19.4	
	comp=Z,259nm,1.1s						
ZON	Zonda	3.75	55	iP	Pn	01 33 16.8	+4.6
ZON				eS	Sg	01 34 15.3	-0.5
ZON				IAML		01 34 26.0	
	comp=Z,133nm,1.4s						
GO04	Tololo Observa	3.81	19		Pn	01 33 12.7	-0.3
GO04				Sn	Sn	01 33 56.3	-1.1
RTLL	Cerro Villicun	4.02	54	iP	Pn	01 33 19.2	+3.3
RTLL				eS	Sg	01 34 19.7	-4.7
RTLL				IAML		01 34 25.2	
	comp=Z,166nm,3.1s						
AMOG	MOGNA	4.26	49	iP	Pn	01 33 22.3	+3.1
AMOG				IAML		01 34 56.4	
	comp=Z,68nm,0.5s						
ACAN	Cantantal	4.52	72	iP	Pn	01 33 26.4	+3.8
ACAN				IAML		01 35 16.7	
	comp=Z,31nm,0.7s						
VCA	Vinchina	6.11	36	iP	Pn	01 33 47.1	+2.4
VCA				eS	Sb	01 35 17.1	+3.2
VCA				IAML		01 35 34.9	
	comp=Z,158nm,0.7s						
GO03	Copiap	6.41	16		Pn	01 33 46.8	-1.9
GO03				Sn	Sn	01 34 59.8	-1.5
PLCA	Paso Flores	7.07	169	Pn	Pn	01 34 00.5	+2.7
	comp=Z,1.1nm,0.3s,baz=358,slow=10,SNR=47						
PLCA				Lg	Lg	01 36 00.7	
	comp=Z,0.1nm,0.3s,baz=336,slow=10,SNR=3.2						
PLCA	Paso Flores	7.07	169		Pn	01 33 56.5	-1.2
PLCA	Paso Flores	7.07	169⇑	iP	Pn	01 34 00.8	+3.1
CYA	Choya	7.68	48	iP	Pn	01 34 05.3	-0.7
PB14	IPOC Station P	9.27	11⇓	iP	Pn	01 34 24.1	-4.0
LVC	Limon Verde	11.51	16	Pn	Pn	01 34 55.8	-3.1
	comp=Z,0.3nm,0.3s,baz=220,slow=16,SNR=2.8						
LVC				Lg	Lg	01 38 04.4	
	comp=Z,0.6nm,0.3s,baz=326,slow=15,SNR=6.4						
LVC				LR	LR	01 39 56.4	
	comp=Z,129nm,19.5s,baz=200,slow=41						
LVC	Limon Verde	11.51	16		Pn	01 34 55.6	-3.3
SIV	San Ignacio	20.39	32	P	P	01 36 51.2	+0.2
	comp=Z,4.6nm,0.7s,baz=229,slow=10,SNR=17						
SIV				LR	LR	01 46 07.1	
	comp=Z,114nm,19.5s,baz=224,slow=41						
BDFB	Brasilia	28.36	56	P	P	01 38 08.2	-0.2
	comp=Z,2.4nm,0.5s,baz=267,slow=6.1,SNR=5.1						
BDFB	Brasilia	28.36	56	P	P	01 38 06.4	-2.0
BDFB				IAmb	IAmb	01 38 11.2	
	comp=Z,2.7nm,0.6s						
SNAA	Sanae	51.85	158	P	P	01 41 24.2	+2.4
	comp=Z,1.6nm,0.7s,baz=273,slow=9.1,SNR=8.9						
SNAA	Sanae	51.85	158	P	P	01 41 20.2	-1.6
SNAA				IAmb	IAmb	01 41 25.0	
	comp=Z,1.8nm,0.7s						
TXAR	Lajitas Array	69.45	331	P	P	01 43 24.5	+2.3
	comp=Z,0.4nm,0.5s,baz=151,slow=7.4,SNR=7.8						
TXAR	Lajitas Array	69.45	331	P	P	01 43 20.0	-2.2
DBIC	Dimbokro	75.28	71	P	P	01 43 58.8	+1.6
	comp=Z,1.9nm,0.6s,baz=221,slow=7.7,SNR=4.2						
DBIC	Dimbokro	75.28	71	P	P	01 43 55.4	-1.9
DBIC				IAmb	IAmb	01 43 59.4	
	comp=Z,2.2nm,0.8s						
PDAR	Pinedale Array	83.49	333	P	P	01 44 44.0	+2.3
	comp=Z,0.2nm,0.6s,baz=166,slow=4.6,SNR=2.3						
TORD	Torodi Ar. Bea	84.31	70	P	P	01 44 47.3	+1.1
	comp=Z,1.8nm,0.7s,baz=271,slow=6.1,SNR=12						

SJA 04 01:36:47.4±0.6, 33.°70S×72.°77W, h35km±12km, ML3.6, MW3.7

GUC 04 01:36:51.5±0.7, 33.°79S×72.°15W, h30km±11km, ML3.6

ISC 04 01:36:50.3±1.7, 33.°74S±0.°04×72.°40W±0.°08, h25km±14km, n29, σ2.s12/45, 9C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA01	Torpederas	0.95	42⇑	iP	Pb	01 37 08.2	+0.1
VA01				eS	Sn	01 37 20.2	-0.4
MT01	Popeta	0.96	98⇓	eP	Pn	01 37 06.6	-1.6
MT01				eS	Sn	01 37 17.2	-3.9
MT01				IAML		01 37 18.9	
	comp=N,9μm,0.3s						
GO05	Huala	1.33	163⇑	iP	Pb	01 37 13.8	-0.7
GO05				eS	Sb	01 37 30.9	-0.2
GO05	Huala	1.33	163	iP	Pb	01 37 13.7	-0.9
GO05				eS	Sb	01 37 33.0	+1.9
ROCH	El Roble	1.39	57⇓	eP	Pb	01 37 14.7	-1.0
ROCH				eS	Sb	01 37 32.8	-0.3
ROCH				IAML		01 37 40.2	
	comp=N,2μm,0.5s						
MT05	Renca	1.43	77	eP	Pn	01 37 14.7	0.0
MT05				IAML		01 37 41.2	
	comp=E,2μm,0.4s						
STL	Santa Lucia	1.50	79⇑	iP	Pn	01 37 15.6	0.0
STL				eS	Sn	01 37 33.1	-1.2
PEL	Peldehue	1.55	68⇑	iP	Pb	01 37 17.0	-1.3
PEL				eS	Sn	01 37 35.4	-0.3
PEL				IAML		01 37 41.7	
	comp=N,2μm,0.4s						
PEL	Peldehue	1.55	68⇑	iP	Pb	01 37 17.1	-1.3
PEL				eS	Sb	01 37 37.5	-0.1
CLCH	Cerro Calan	1.59	78⇑	iP	Pn	01 37 17.2	+0.3
CLCH				eS	Sn	01 37 35.8	-0.9
CLCH				IAML		01 37 45.7	
	comp=E,2μm,0.2s						
MT03	Universidad Ad	1.59	82⇑	iP	Pn	01 37 16.8	-0.1
MT03				eS	Sn	01 37 36.2	-0.6
MT03				IAML		01 37 40.0	
	comp=E,3μm,0.2s						
BO02	Sierra Bellavi	1.70	129	eP	Pn	01 37 18.5	0.0
BO02				eS	Sn	01 37 39.6	+0.1
FCH	Farellones	1.81	78⇑	iP	Pn	01 37 20.8	+0.7
FCH				eS	Sn	01 37 43.1	+0.7
FCH				IAML		01 37 46.7	
	comp=E,1μm,0.2s						
VA03	San Esteban	1.83	58⇑	iP	Pn	01 37 21.1	+0.9
VA03				eS	Sb	01 37 44.1	-1.5
VA03				IAML		01 37 52.2	
	comp=E,2μm,0.4s						
LMEL	Las Melosas	1.83	94⇑	iP	Pn	01 37 20.4	+0.1
LMEL				eS	Sn	01 37 42.6	-0.2
LMEL				IAML		01 37 46.1	
	comp=N,2μm,0.2s						
ARCO	CERRO ARCO	3.04	74	iP	Pb	01 37 42.6	-1.1
ARCO				IAML		01 38 26.6	
	comp=Z,147nm,0.4s						
AAGR	Agrelo	3.06	79	iP	Pb	01 37 40.4	-3.7
ASAL	Salagasta	3.20	70	iP	Pb	01 37 44.5	-1.9
ASAL				eS	Sb	01 38 30.5	+5.4
RTLS	Leoncito	3.25	54	iP	Pb	01 37 43.3	-4.2
RTLS				IAML		01 37 51.1	
	comp=Z,124nm,0.5s						
RTLS				eS	Sb	01 38 31.7	+5.0
RTCV	Cerro Valdivia	3.75	61	iP	Pb	01 37 54.5	-1.3
GO04	Tololo Observa	3.80	21	iP	Pn	01 37 48.0	+0.5
ZON	Zonda	3.82	56	iP	Pb	01 37 52.7	-4.4
ZON				IAML		01 38 57.6	
	comp=Z,32nm,0.5s						
RTLL	Cerro Villicun	4.09	55	iP	Pn	01 37 54.0	+2.7
AMOG	MOGNA	4.33	51	iP	Pn	01 37 57.3	+2.8
ACAN	Cantantal	4.61	73	iP	Pn	01 38 00.9	+2.4
VCA	Vinchina	6.14	37	iP	Pn	01 38 21.6	+2.1
VCA				IAML		01 40 00.6	
	comp=Z,28nm,0.5s						
GO03	Copiap	6.40	17	iP	Pn	01 38 23.4	+0.3
PLCA	Paso Flores	7.14	169	iP	Pn	01 38 35.8	+2.7
PIL	Pilar	7.47	76	iP	Pn	01 38 40.3	+2.7

THE 04 01:41:19.1, 38.°21N×20.°40E, h8km, ML2.5/4, Error ellipse: s-maj=0.8km s-min=0.3km az=230.0

ATH 04 01:41:19.1, 38.°22N×20.°41E, h8km±1km, ML2.5/3, Error ellipse: s-maj=1.7km s-min=0.8km az=259.0

ISC 04 01:41:19.0±1.2, 38.°21N±0.°03×20.°41E±0.°04, h9km±5km, n29, σ0.s37/51, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.03	113	P	Pg	01 41 20.7	+0.1
LXR1				S	Sg	01 41 22.0	+0.3
CHV1	Chavriata, Kef	0.03	215	P	Pg	01 41 20.6	-0.1
KEF3	Kipouria, Keph	0.05	260	P	Pg	01 41 20.8	0.0
KEF3				S	Sg	01 41 22.0	-0.1
KEF4	Livadi, Kephal	0.05	17	P	Pg	01 41 20.6	-0.2
KEF4				S	Sg	01 41 22.2	+0.1
ARG2	Argostoli	0.07	117	P	Pg	01 41 21.2	+0.1
ARG2				S	Sg	01 41 22.7	+0.2
KEF2	Argostoli. Kep	0.08	126	P	Pg	01 41 21.2	+0.1
KEF2				S	Sg	01 41 22.9	+0.2
KEF1	Kardakata, Kep	0.08	37	P	Pg	01 41 21.2	-0.1
KEF1				S	Sg	01 41 22.6	-0.2
VLS	Valsamata	0.15	103	P	Pg	01 41 22.2	-0.1
VLS				S	Sg	01 41 24.5	+0.1
	5μm,0.1s						
VLS	Valsamata	0.15	103	P	Pg	01 41 22.1	-0.1
VLS				S	Sg	01 41 24.5	+0.1
VLS				AML	AML	01 41 24.9	
	comp=N,8626μm,0.1s						
VLS				AML	AML	01 41 24.9	
	comp=E,10815μm,0.1s						
VSK1	VASILIKIADES	0.23	32	P	Pg	01 41 24.1	+0.3
VSK1				S	Sg	01 41 27.6	+0.6
FSK	Fiskardo	0.28	26	P	Pg	01 41 24.6	0.0
FSK				S	Sg	01 41 28.7	+0.4
	comp=E,905nm,0.1s						
FSK	Fiskardo	0.28	26	P	Pg	01 41 24.5	0.0
KFL	Anninata	0.32	109	P	Pg	01 41 25.2	-0.1
VLMS	Volimes, Zakyn	0.39	149	P	Pg	01 41 26.8	+0.1
VLMS				S	Sg	01 41 32.8	+0.9
VLMS				AML	AML	01 41 34.1	
	comp=N,2285μm,0.4s						
VLMS				AML	AML	01 41 34.2	
	comp=E,2609μm,0.2s						
EVGI	Lefkada island	0.45	25	P	Pg	01 41 27.7	-0.1
EVGI				S	Sg	01 41 34.3	+0.4
EVGI	Lefkada island	0.45	25	P	Pg	01 41 27.8	-0.1
EVGI				S	Sg	01 41 34.3	+0.4
MGNA	Meganis	0.54	34	P	Pg	01 41 29.1	-0.3
MGNA				S	Sg	01 41 37.0	+0.5
LKD2	Lefkada island	0.61	19	P	Pg	01 41 30.6	-0.2
LKD2				S	Sg	01 41 39.7	+0.9
LKD2	Lefkada island	0.61	19	P	Pg	01 41 30.4	-0.4
LKD2				S	Sg	01 41 39.2	+0.4
TSLK	Tsoukalades, L	0.64	18	P	Pg	01 41 31.2	-0.3
TSLK				S	Sg	01 41 40.6	+0.7
TSLK	Tsoukalades, L	0.64	18	P	Pg	01 41 31.4	-0.1
PDO	Prodromos	0.72	57	P	Pg	01 41 32.9	-0.1
PDO				S	Sb	01 41 43.3	-0.6
PDO	Prodromos	0.72	57	P	Pg	01 41 32.8	-0.2
PDO				S	Sg	01 41 42.6	+0.2
PDO				AML	AML	01 41 47.0	
	comp=E,559μm,0.4s						
PDO				AML	AML	01 41 52.3	
	comp=N,512μm,0.3s						
RLS	Riolos of Patr	0.85	100	P	Pg	01 41 35.0	-0.4
RLS				S	Sb	01 41 47.8	+0.3
RLS	Riolos of Patr	0.85	100	P	Pg	01 41 35.4	+0.1
PVO	Paravola	0.97	65	P	Pg	01 41 37.6	0.0
PVO				S	Sb	01 41 51.8	+0.9
	comp=N,205nm,0.4s						
PVO	Paravola	0.97	65	P	Pg	01 41 37.5	-0.1
DRO	Drossia	1.06	104	P	Pg	01 41 38.9	-0.5
DRO				S	Sn	01 41 54.8	-0.3
	comp=N,320nm,0.3s						
LAKA	Lakka	1.24	88	P	Pn	01 41 42.2	-0.4

TEH 04 01:42:07.8, 35.°71N×49.°00E, h8km, ML3.6

THR 04 01:42:08.5±0.6, 35.°76N×48.°86E, h39km±6km, ML3.7

ISC 04 01:42:08.8±0.9, 35.°74N±0.°03×49.°02E±0.°03, h10km, n48, σ1.s79/49, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QABG	Abgarm-Qazvin	0.46	94	ePg	Pg	01 42 17.0	-0.9
QABG				eSg	Sg	01 42 24.1	+0.1
HSRG	Sareghieh	0.78	231	ePg	Pg	01 42 22.9	-1.0
IRAZ	Razeghan	0.81	114	ePg	Pg	01 42 23.8	-0.7
IRAZ				eSg	Sg	01 42 35.3	+0.1
IRAZ				e		01 42 38.2	
HAGD	Aghdareh	0.92	174	ePg	Pg	01 42 24.8	-1.8
HAGD				e		01 42 40.5	
ZNJK	Zanjan	0.97	344	ePg	Pg	01 42 26.2	-1.2
ZNJK				eSg	Sg	01 42 39.3	-0.7
ZNJK	Zanjan	0.97	344	ePg	Pg	01 42 26.2	-1.2
IALM	Almabolaq	1.12	219	ePg	Pg	01 42 28.8	-1.6
IGZV	Ghazvin	1.17	56	ePg	Pb	01 42 30.3	-0.9
IGZV				e		01 42 52.5	
IMHD	Mahdasht	1.34	92	ePg	Pn	01 42 33.5	-0.2
IMHD				e		01 42 57.2	
ASAO	Ashtian	1.45	145	ePn	Pn	01 42 35.1	-0.2
QALM	Alamut, Qazvin	1.49	62	ePg	Pn	01 42 36.5	+0.6
QALM				e		01 43 04.2	
SNGE	Sanandaj	1.51	245	ePn	Pn	01 42 33.4	-2.8
SNGE				eSg	Sn	01 42 53.2	-2.7
SNGE				IAML		01 42 54.9	
	comp=N,927nm,0.4s						
SNGE	Sanandaj	1.51	245	ePn	Pn	01 42 33.4	-2.7
HSAM	Samen	1.56	193	ePn	Pn	01 42 36.2	-0.7
HSAM				e		01 42 59.6	
IBZA	Bozab	1.58	217	ePn	Pn	01 42 36.9	-0.3
IBZA				e		01 43 00.7	
CHTH	Charan	1.72	84	ePn	Pn	01 42 40.0	+1.0
CHTH	Charan	1.72	84	ePn	Pn	01 42 40.0	+1.0
BDRS	Dareh Seyedi	1.79	184	ePn	Pn	01 42 40.0	0.0
BDRS				e		01 43 06.1	
IHSB	Hasanabad	1.86	99	ePn	Pn	01 42 42.4	+1.5
ILIN	Lien	1.87	245	ePn	Pn	01 42 42.0	+0.9
ILIN				e		01 43 11.1	
IQOM	Qom	1.90	118	ePn	Pn	01 42 42.5	+0.9
IQOM				e		01 43 18.8	
TEH	Tehran	1.92	89	ePn	Pn	01 42 43.6	+1.9
TEH				e		01 43 14.8	
IKOM	Komasi	1.99	219	ePn	Pn	01 42 43.3	+0.6
KER	Kermanshah	2.06	229	ePn	Pn	01 42 44.5	+1.0
IDOB	Doab	2.07	200	ePn	Pn	01 42 45.3	+1.5
IVIS	Veis	2.15	236	ePn	Pn	01 42 46.0	+1.2
IVIS				e		01 43 27.5	
IKMR	Kamar-syah	2.28	194	ePn	Pn	01 42 48.2	+1.7
IVRN	Varamin	2.33	108	ePn	Pn	01 42 49.1	+1.8
IVRN				e		01 43 37.8	
ISRB	Sarab	2.35	333	ePn	Pn	01 42 49.3	+1.7
ISRB				e		01 43 28.1	
IDHR	Dehrash	2.39	245	ePn	Pn	01 42 50.4	+2.2
IDHR				e		01 42 58.3	
IKFM	Kafar-mosalman	2.41	204	ePn	Pn	01 42 50.3	+2.0
IGHG	Ghaleghazi	2.45	236	e	Pg	01 42 58.6	+2.7
IPRN	Peran	2.74	79	ePn	Pn	01 42 54.5	+1.6
QAM	Ghamsar	2.81	134	ePn	Pn	01 42 57.0	+3.1
MAHB	Mahabad	2.87	292	ePn	Pn	01 42 57.4	+2.7
MAHB				e		01 43 49.3	
IHSH	Hashtrud	2.92	332	ePn	Pn	01 42 47.2	-8.4
IHRS	Heris	3.02	329	ePn	Pn	01 42 59.0	+2.1
KRSH	Karshahi	3.11	124	ePn	Pn	01 42 59.6	+1.5
AHAR	Ahar	3.16	331	ePn	Pn	01 43 01.0	+2.2
IKLH	Kolahrood	3.21	138	ePn	Pn	01 43 02.2	+2.7
ILAS	Lasjerd	3.23	95	ePn	Pn	01 43 01.7	+1.9
IPIR	Pirpir	3.42	152	ePn	Pn	01 43 05.8	+3.3
ISHM	Shahmirzad	3.48	88	ePn	Pn	01 43 06.9	+3.7
JHBN	Jahan bin	3.76	158	ePn	Pn	01 43 10.2	+3.1
ANAR	Anarak	4.65	122	ePn	Pn	01 43 21.3	+2.1
TPRV	Parvadeh(Tabas	6.89	111	ePn	Pn	01 43 52.0	+2.0
TKDS	Koohdasht(Taba	7.00	105	ePn	Pn	01 43 53.5	+1.9

ATH 04 01:44:33.6, 38.°13N×20.°37E, h8km±2km, ML2.6/6, Error ellipse: s-maj=2.7km s-min=1.1km az=283.0

THE 04 01:44:33.8, 38.°16N×20.°37E, h8km, ML2.8/5, Error ellipse: s-maj=1.2km s-min=0.8km az=251.0

ISC 04 01:44:31.2±1.7, 38.°14N±0.°04×20.°25E±0.°08, h14km±5km, n27, σ0.s58/49, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.10	50	P	Pb	01 44 35.9	+0.7
KEF3				S	Sg	01 44 37.3	+0.8
CHV1	Chavriata, Kef	0.12	66	P	Pb	01 44 35.4	+0.1
CHV1				S	Sg	01 44 36.4	-0.4
LXR1	Lixouri, Cepha	0.17	67	P	Pg	01 44 35.7	+0.5
LXR1				S	Sg	01 44 37.1	-0.8
KEF4	Livadi, Kephal	0.19	49	P	Pb	01 44 36.6	+0.1
KEF4				S	Sg	01 44 38.5	0.0
KEF2	Argostoli. Kep	0.19	81	P	Pg	01 44 36.0	+0.4
KEF2				S	Sg	01 44 37.4	-1.2
ARG2	Argostoli	0.20	77	P	Pg	01 44 36.1	+0.4
ARG2				S	Sg	01 44 37.9	-0.8
	28μm,0.2s						
KEF1	Kardakata, Kep	0.23	51	P	Pb	01 44 36.9	-0.3
KEF1				S	Sg	01 44 39.2	-0.4
VLS	Valsamata	0.27	81	P	Pg	01 44 37.3	+0.3
VLS				S	Sg	01 44 39.8	-1.1
	5μm,0.1s						
VLS	Valsamata	0.27	81	P	Pg	01 44 37.2	+0.3
FSK	Fiskardo	0.41	37	P	Pb	01 44 40.8	+0.6
FSK				S	Sg	01 44 45.6	+0.7
FSK				AML	AML	01 44 47.6	
	comp=N,1819μm,0.2s						
FSK				AML	AML	01 44 49.7	
	comp=E,2931μm,0.2s						
VLMS	Volimes, Zakyn	0.42	128	P	Pg	01 44 40.1	+0.5
VLMS				S	Sg	01 44 46.3	+1.1
VLMS				AML	AML	01 44 49.2	
	comp=E,3629μm,0.3s						
VLMS				AML	AML	01 44 50.8	
	comp=N,5410μm,0.3s						
EVGI	Lefkada island	0.58	33	P	Pg	01 44 42.5	-0.2
EVGI				S	Sb	01 44 52.0	+0.6
EVGI	Lefkada island	0.58	33	P	Pb	01 44 43.1	-0.2
EVGI				S	Sb	01 44 51.4	0.0
KRI1	kERI	0.65	136	P	Pn	01 44 45.6	-0.5
KRI1				S	Sn	01 44 55.0	-1.3
	comp=N,1μm,0.3s						
LKD2	Lefkada island	0.73	26	P	Pb	01 44 45.7	-0.1
LKD2				S	Sb	01 44 56.0	+0.3
LKD2	Lefkada island	0.73	26	P	Pn	01 44 46.6	-0.6
LKD2				S	Sb	01 44 56.2	+0.5
LKD2				AML	AML	01 45 09.0	
	comp=N,511μm,0.4s						
LKD2				AML	AML	01 45 09.3	
	comp=E,557μm,0.5s						
TSLK	Tsoukalades, L	0.76	25	P	Pn	01 44 47.4	-0.2
TSLK				S	Sb	01 44 57.6	+1.1
TSLK	Tsoukalades, L	0.76	25	P	Pn	01 44 47.3	-0.4
TSLK				S	Sn	01 44 58.4	-0.5
TSLK				AML	AML	01 45 04.8	
	comp=E,831μm,0.5s						
TSLK				AML	AML	01 45 06.6	
	comp=N,1002μm,0.4s						
PDO	Prodromos	0.87	58	P	Pg	01 44 48.4	+0.3
PDO	Prodromos	0.87	58	P	Pg	01 44 48.4	+0.3
PDO				S	Sb	01 44 59.4	-0.3
PDO				AML	AML	01 45 06.9	
	comp=E,1055μm,0.6s						
PDO				AML	AML	01 45 07.7	
	comp=N,1057μm,0.4s						
RLS	Riolos of Patr	0.97	94	P	Pb	01 44 49.7	-0.1
PVO	Paravola	1.11	64	P	Pg	01 44 53.1	+0.4
PVO				S	Sb	01 45 07.3	+0.6
	comp=N,445nm,0.5s						
PVO	Paravola	1.11	64	P	Pg	01 44 53.1	+0.4
PVO				S	Sg	01 45 07.8	+0.6
PVO				AML	AML	01 45 16.8	
	comp=E,1171μm,0.4s						
PVO				AML	AML	01 45 19.7	
	comp=N,673μm,0.4s						
DRO	Drossia	1.17	99	P	Pb	01 44 53.7	+0.4
DRO				S	Sg	01 45 09.6	+0.6
	comp=N,385nm,0.4s						
DRO	Drossia	1.17	99	P	Pb	01 44 53.7	+0.4
EFP	Efpalio	1.34	77	P	Pg	01 44 57.3	+0.3
LAKA	Lakka	1.37	85	P	Pb	01 44 57.1	+0.4
LAKA				S	Sg	01 45 15.5	+0.1

SOME 04 01:47:07.2, 39.°38N×73.°25E, h5km

BJI 04 01:47:11.9±0.0, 39.°56N×73.°23E, h8km, mB4.5/17, mb4.3/24, ML4.4/7, Ms4.2/17, Ms7 3.9/11

KRNET 04 01:47:12.2±0.1, 39.°25N×73.°46E, mb4.5

IDC 04 01:47:12.4±0.9, 39.°22N×73.°46E, h0km, mb4.2/14, mb1 4.2/22, mb1mx4.0/61, mbtmp4.1/22, ML3.2/8, MS3.7/4, Ms1 3.7/4, ms1mx3.1/37, Error ellipse: s-maj=17.9km s-min=12.3km az=158.0

MOS 04 01:47:16.4±1.2, 39.°29N×73.°45E, h33km, mb4.5/23, Error ellipse: s-maj=7.0km s-min=4.7km az=113.4

MOS Felt (III) at Bardebe, (II) at Nura, Irkeshtam, Sary-Tash.

NNC 04 01:47:19.6±2.0, 39.°71N×73.°59E, h0km, mb4.7, mpv4.3, Error ellipse: s-maj=16.0km s-min=9.8km az=176.0

NEIC 04 01:47:21.1±1.6, 39.°51N±0.°05×73.°35E±0.°08, h66km±8km, mb4.4/24, Error ellipse: s-maj=9.1km s-min=7.1km az=119.0

ISC 04 01:47:14.1±0.7, 39.31N±0.03×73.52E±0.02, h11km±4km, n288, σ2.30/334, mb4.3/46, MS3.6/5, 74C-23D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.91	83	Pg	Pn	01 47 43.8	-3.0
KSH				Sg	Sn	01 48 05.3	-5.7
KSH				smax	smax		
	comp=N,8μm,0.9s						
KSH				smax	smax		
	comp=E,7μm,0.7s						
ARSB	Arslanbob	2.05	349	⇓iP	Pb	01 47 50.4	-1.1
	baz=50						
ARSB				⇓iS	Sg	01 48 19.2	-0.9
	baz=50						
ARSB	Arslanbob	2.05	349		Pn	01 47 49.6	+0.8
ARSB				Sn	Sn	01 48 13.9	-0.6
ARSB	Arslanbob	2.05	349	PN	Pn	01 47 49.6	+0.8
BTK	Batken	2.21	291	⇓iP	Pb	01 47 52.4	-1.8
	baz=92						
BTK				⇓iS	Sg	01 48 22.9	-2.3
	baz=92						
BTK	Batken	2.21	291		Pn	01 47 51.7	+0.8
BTK				Sn	Sn	01 48 18.9	+0.6
ARLS	Aral	2.62	13	⇑iP	Pn	01 47 57.9	+1.3
	baz=14						
ARLS				⇑iS	Sb	01 48 32.9	-0.6
	baz=14						
ARK	Arkit	2.75	335	⇓iP	Pn	01 47 59.6	+1.2
	baz=36						
ARK				⇓iS	Sb	01 48 35.8	-1.4
	baz=36						
AML	Almayashu	2.82	3	⇑iP	Pn	01 48 01.2	+1.6
	baz=3.0						
AML				⇑iS	Sb	01 48 38.1	-1.4
	baz=3.0						
AML	Almayashu	2.82	3	P	Pn	01 48 01.2	+1.6
	SNR=119						
NRN	Naryn	2.84	41	⇑eP	Pn	01 48 00.4	+0.6
	baz=41						
NRN				⇑iS	Sn	01 48 36.2	+1.9
	baz=41						
NRN	Naryn	2.84	41		Pb	01 48 02.7	-2.4
NRN	Naryn	2.84	41	PN	Pb	01 48 02.7	-2.4
UCH	Uchtor	3.01	14	⇓iP	Pn	01 48 03.8	+1.6
	baz=15						
UCH				⇓iS	Sb	01 48 42.2	-2.8
	baz=15						
UCH	Uchtor	3.01	14	P	Pb	01 48 05.5	-2.5
	SNR=47						
EKS2	Erkin-Say	3.35	3	⇑iP	Pn	01 48 08.5	+1.9
	baz=4.0						
EKS2				⇑iS	Sn	01 48 50.3	+3.8
	baz=4.0						
EKS2	Erkin-Say	3.35	3	P	Pb	01 48 10.5	-3.2
	SNR=46						
AAK	Ala-Archa	3.40	12	Pn	Pn	01 48 10.8	+3.5
	9.0nm,0.3s,baz=193,slow=16,SNR=67						
AAK				Lg	Lg	01 48 55.9	
	17nm,0.3s,baz=2.5,slow=17,SNR=8.9						
AAK	Ala-Archa	3.40	12	⇓iP	Pn	01 48 09.3	+1.9
	baz=13						
AAK				⇓iS	Sn	01 48 51.3	+3.5
	baz=13						
AAK	Ala-Archa	3.40	12	P	Pb	01 48 11.1	-3.5
	SNR=14						
AAK	Ala-Archa	3.40	12	Pn	Pn	01 48 10.3	+2.9
	143nm,0.8s						
AAK				Lg	Lg	01 48 56.3	
	578nm,0.8s						
AAK	Ala-Archa	3.40	12		Pn	01 48 09.9	+2.5
AAK				Sn	Sn	01 48 46.8	-1.1
AAK	Ala-Archa	3.40	12	cePN	Pn	01 48 10.4	+3.0
AAK				pmax	pmax		
	comp=Z,79nm,1.0s						
MRKS	Merke	3.44	356	eP	Pn	01 48 10.5	+2.7
	comp=Z,56nm,0.6s						
MRKS				eS	Sb	01 48 56.3	-0.7
	comp=Z,218nm,0.6s						
MRKS	Merke	3.44	356	Pg	Pn	01 48 10.5	+2.7
	comp=Z,56nm,0.6s						
MRKS				Lg	Lg	01 48 56.3	
	comp=Z,218nm,0.6s						
KBK	Karagaybulak	3.51	17	⇑iP	Pn	01 48 10.6	+1.7
	baz=18						
KBK				⇑iS	Sn	01 48 53.7	+3.2
	baz=18						
KBK	Karagaybulak	3.51	17	P	Pb	01 48 14.8	-1.7
	SNR=48						
ULHL	Ulahol	3.59	34	⇓iP	Pn	01 48 11.2	+1.3
	baz=34						
ULHL				⇓iS	Sn	01 48 54.8	+2.4
	baz=34						
ULHL	Ulahol	3.59	34	P	Pb	01 48 19.4	+1.6
	SNR=13						
FRU1	Bishkek	3.59	13	⇑iP	Pn	01 48 11.6	+1.7
	baz=14						
FRU1				⇑iS	Sn	01 48 56.1	+3.7
	baz=14						
FRU1	Bishkek	3.59	13		Pb	01 48 14.2	-3.6
FRU1	Bishkek	3.59	13	PN	Pb	01 48 14.2	-3.6
BOOM	Boomskoye usch	3.67	29	⇑iP	Pn	01 48 12.1	+1.1
	baz=29						
BOOM				⇑iS	Sn	01 48 57.1	+2.7
	baz=29						
CHMS	Chumysh	3.80	14	⇓eP	Pn	01 48 14.4	+1.7
	baz=14						
CHMS				⇓iS	Sn	01 49 00.9	+3.5
	baz=14						
CHMS	Chumysh	3.80	14	P	Pb	01 48 17.5	-3.8
	SNR=9.9						
CHMS	Chumysh	3.80	14	⇓Pn	Pn	01 48 15.9	+3.3
	comp=Z,63nm,0.6s						
CHMS				⇑Lg	Lg	01 49 09.6	
	comp=Z,236nm,0.7s						
JBG	Jabagly	3.84	325	ePN	Pn	01 48 15.7	+2.4
JBG				eS	Sb	01 49 05.2	-3.4
IUG	Iuzhnay	3.88	318	eP	Pn	01 48 15.1	+1.3
	comp=Z,11nm,0.8s						
IUG				eS	Sn	01 49 03.8	+4.4
	comp=Z,822nm,0.9s						
IUG	Iuzhnay	3.88	318	ePN	Pn	01 48 15.1	+1.3
IUG				eS	Sn	01 49 03.8	+4.4
KDJ	Kajisay	3.96	43	⇑iP	Pn	01 48 16.0	+1.0
	baz=43						
KDJ				⇑iS	Sn	01 49 02.8	+1.2
	baz=43						
USP	Ospenovka	4.02	10	⇑iP	Pn	01 48 17.8	+2.1
	baz=11						
USP				⇑iS	Sn	01 49 06.1	+3.2
	baz=11						
USP	Ospenovka	4.02	10	P	Pn	01 48 19.6	+3.9
	SNR=12						
KST	Kastek	4.16	26	eP	Pb	01 48 24.1	-3.4
	comp=Z,70nm,0.9s						
KST				eS	Sb	01 49 19.4	+1.6
	comp=Z,343nm,0.8s						
KST	Kastek	4.16	26	Pg	Pb	01 48 24.1	-3.4
	comp=Z,70nm,0.9s						
KST				Lg	Lg	01 49 19.4	
	comp=Z,343nm,0.8s						
CHM	Chimkent	4.22	317	eP	Pn	01 48 21.8	+3.3
	comp=Z,90nm,0.2s						
CHM				eS	Sb	01 49 15.5	-4.0
	comp=Z,887nm,0.6s						
CHM	Chimkent	4.22	317	ePN	Pn	01 48 21.8	+3.3
CHM				eS	Sb	01 49 15.5	-4.0
DGS	Degeres	4.28	23	eP	Pb	01 48 26.7	-2.8
	comp=Z,50nm,0.6s						
DGS				eS	Sb	01 49 24.1	+2.9
	comp=Z,371nm,0.7s						
DGS	Degeres	4.28	23	Pg	Pb	01 48 26.7	-2.8
	comp=Z,50nm,0.6s						
DGS				Lg	Lg	01 49 24.0	
	comp=Z,371nm,0.7s						
IZV	Izvestkoviy	4.39	31	eP	Pb	01 48 30.8	-0.7
	comp=Z,75nm,1.1s						
IZV				eS	Sg	01 49 31.1	-4.1
	comp=Z,325nm,0.8s						
IZV	Izvestkoviy	4.39	31	Pg	Pb	01 48 30.8	-0.7
	comp=Z,75nm,1.1s						
IZV				Lg	Lg	01 49 31.1	
	comp=Z,325nm,0.8s						
MTBS	Maitube	4.40	29	eP	Pb	01 48 30.6	-0.9
	comp=Z,63nm,0.9s						
MTBS				eS	Sg	01 49 30.3	-5.1
	comp=Z,94nm,0.9s						
MTBS	Maitube	4.40	29	Pg	Pb	01 48 30.6	-0.9
	comp=Z,63nm,0.9s						
MTBS				Lg	Lg	01 49 30.3	
	comp=Z,94nm,0.9s						
MTBS	Maitube	4.40	29	ePN	Pb	01 48 30.6	-0.9
MTBS				eS	Sg	01 49 30.3	-5.1
KK31	Karatay Array	4.42	330	Pn	Pn	01 48 22.5	+1.3
	comp=Z,11nm,0.4s,baz=142,slow=14,SNR=194						
KK31				⇑Pg	Pb	01 48 34.4	+2.7
	comp=Z,76nm,0.8s,baz=138,slow=14,SNR=11						
KK31				⇑Sn	Sn	01 49 14.9	+2.3
	comp=Z,84nm,0.8s,baz=313,slow=42,SNR=4.6						
KK31				⇑Lg	Lg	01 49 29.0	
	comp=Z,239nm,0.9s,baz=143,slow=30,SNR=4.3						
KK31	Karatay Array	4.42	330		Pn	01 48 22.4	+1.3
KK31	Karatay Array	4.42	330	PN	Pn	01 48 22.4	+1.3
KKAR	Karatay Array	4.42	330		Pn	01 48 22.4	+1.3
KKAR	Karatay Array	4.42	330		Pn	01 48 22.6	+1.5
KKAR	Karatay Array	4.42	330	PN	Pn	01 48 22.6	+1.5
TNSS	Tian-Shan	4.53	34	eP	Pb	01 48 33.2	-0.8
	comp=Z,45nm,0.6s						
TNSS				eS	Sg	01 49 35.4	-4.3
	comp=Z,269nm,0.6s						
TNSS	Tian-Shan	4.53	34	Pg	Pb	01 48 33.2	-0.8
	comp=Z,45nm,0.6s						
TNSS				Lg	Lg	01 49 35.4	
	comp=Z,269nm,0.6s						
TNSS	Tian-Shan	4.53	34	ePN	Pb	01 48 33.2	-0.8
TNSS				eS	Sg	01 49 35.4	-4.3
AAA	Alma-Ata	4.66	32	ePN	Pg	01 48 41.7	-1.7
AAA				eS	Sg	01 49 39.4	-4.3
AAA				pmax	pmax		
	comp=Z,45nm,0.3s						
AAA				smax	smax		
	comp=N,300nm,0.8s						
ANVS	Anan'yevo	4.68	41	⇑iP	Pn	01 48 25.8	+0.9
	baz=41						
ANVS				⇑iS	Sn	01 49 20.9	+1.7
	baz=41						
MDOK	Medeo	4.68	34	eP	Pb	01 48 36.0	-0.3
	comp=N,56nm,0.8s						
MDOK				eS	Sg	01 49 39.9	-4.5
	comp=N,222nm,1.1s						
MDOK	Medeo	4.68	34	⇑Pn	Pn	01 48 29.3	+4.4
	comp=N,27nm,0.9s						
MDOK				⇑Pg	Pb	01 48 38.1	+1.8
	comp=N,85nm,0.8s						
MDOK				⇑Lg	Lg	01 49 37.8	
	comp=N,437nm,1.0s						
MDOK	Medeo	4.68	34	Pg	Pb	01 48 36.0	-0.3
	comp=N,56nm,0.8s						
MDOK				Lg	Lg	01 49 39.9	
	comp=N,222nm,1.1s						
MDOK	Medeo	4.68	34	ePN	Pb	01 48 36.0	-0.3
MDOK				eS	Sg	01 49 39.9	-4.5
KNDC	Almaty	4.69	33	⇑Pn	Pn	01 48 29.0	+4.1
	comp=N,52nm,0.9s						
KNDC				⇓Pg	Pb	01 48 39.6	+3.2
	comp=N,177nm,0.8s						
KNDC				⇓Lg	Lg	01 49 38.5	
	comp=N,1μm,0.9s						
KTBS	Karatobe	5.00	27	eP	Pb	01 48 41.6	-0.1
	comp=N,27nm,0.9s						
KTBS				eS	Sg	01 49 49.5	-5.1
	comp=N,371nm,1.1s						
KTBS	Karatobe	5.00	27	Pg	Pb	01 48 41.6	-0.1
	comp=N,27nm,0.9s						
KTBS				Lg	Lg	01 49 49.5	
	comp=N,371nm,1.1s						
KUU	Kurty	5.04	24	eP	Pb	01 48 42.4	0.0
	comp=N,31nm,1.0s						
KUU				eS	Sg	01 49 50.8	-5.2
	comp=N,354nm,1.2s						
KUU	Kurty	5.04	24	Pg	Pb	01 48 42.6	+0.2
	comp=N,31nm,1.0s						
KUU				Lg	Lg	01 49 50.8	
	comp=N,354nm,1.2s						
KUU	Kurty	5.04	24	ePN	Pb	01 48 42.4	0.0
KUU				eS	Sg	01 49 50.8	-5.2
CHKK	Chushkaly	5.23	29	eP	Pb	01 48 45.7	+0.1
	comp=N,14nm,0.6s						
CHKK				eS	Sg	01 49 56.4	-5.7
	comp=N,102nm,1.0s						
CHKK	Chushkaly	5.23	29	Pg	Pb	01 48 45.7	+0.1
	comp=N,14nm,0.6s						
CHKK				Lg	Lg	01 49 55.9	
	comp=N,102nm,1.0s						
CHKK	Chushkaly	5.23	29	ePN	Pb	01 48 45.7	+0.1
CHKK				eS	Sg	01 49 56.4	-5.7
SATY	Saty	5.25	43	eP	Pb	01 48 48.0	+1.9
	comp=N,188nm,1.0s						
SATY				eS	Sg	01 50 00.7	-2.1
	comp=N,200nm,1.0s						
SATY	Saty	5.25	43	Pg	Pb	01 48 48.0	+1.9
	comp=N,188nm,1.0s						
SATY				Lg	Lg	01 50 00.6	
	comp=N,200nm,1.0s						
SATY	Saty	5.25	43	ePN	Pb	01 48 48.0	+1.9
SATY				eS	Sg	01 50 00.7	-2.1
KURS	Kuram	5.45	38	eP	Pb	01 48 49.4	+0.1
	comp=N,34nm,1.3s						
KURS				eS	Sg	01 50 02.9	-6.0
	comp=N,147nm,2.2s						
KURS	Kuram	5.45	38	Pg	Pb	01 48 49.7	+0.4
	comp=N,34nm,1.3s						
KURS				Lg	Lg	01 50 02.9	
	comp=N,147nm,2.2s						
CEP	Cherat	5.63	194	P	Pn	01 48 43.7	+5.8
CHCP	Chirah Chowk	5.65	182	P	Pn	01 48 44.3	+6.2
UZB	Uzynbulak	5.65	46	eP	Pb	01 48 54.1	+1.3
	comp=N,44nm,0.7s						
UZB				eS	Sg	01 50 11.3	-4.1
	comp=N,103nm,0.8s						
UZB	Uzynbulak	5.65	46	Pg	Pb	01 48 54.6	+1.8
	comp=N,44nm,0.7s						
UZB				Lg	Lg	01 50 11.3	
	comp=N,103nm,0.8s						
UZB	Uzynbulak	5.65	46	ePN	Pb	01 48 54.1	+1.3
UZB				eS	Sg	01 50 11.3	-4.1
NIL	Nilore	5.65	182		Pn	01 48 45.4	+7.2
NIL	Nilore	5.65	182	PN	Pn	01 48 45.4	+7.2
KPKS	Kokpek	5.69	41	eP	Pb	01 48 53.6	+0.2
	comp=N,63nm,0.9s						
KPKS				eS	Sg	01 50 10.4	-6.2
	comp=N,204nm,0.8s						
KPKS	Kokpek	5.69	41	ePN	Pb	01 48 53.6	+0.2
KPKS				eS	Sg	01 50 10.4	-6.2
BTLS	Baitai	5.74	4	eP	Pb	01 48 52.6	-1.7
BTLS				eS	Sb	01 50 08.4	+5.4
BTLS	Baitai	5.74	4	Pg	Pb	01 48 52.6	-1.7
BTLS				Lg	Lg	01 50 08.4	
BTLS	Baitai	5.74	4	ePN	Pb	01 48 52.6	-1.7
BTLS				eS	Sb	01 50 08.4	+5.4
KBL	Kabul	5.96	218		Pn	01 48 48.1	+5.6
KBL	Kabul	5.96	218	PN	Pn	01 48 48.1	+5.6
PDGK	Podgornoye	6.03	46	Pg	Pb	01 49 01.5	+2.3
	comp=N,12nm,0.8s						
PDGK				Lg	Lg	01 50 23.6	
	comp=N,53nm,0.9s						
PDGK	Podgornoye	6.03	46	⇑Pn	Pn	01 48 46.6	+3.2
	comp=N,22nm,1.0s						
PDGK				⇑Pg	Pg	01 49 04.7	-4.9
	comp=N,58nm,0.9s						
PDGK				⇓Lg	Lg	01 50 23.2	
	comp=N,108nm,0.8s						
PDGK	Podgornoye	6.03	46	PN	Pn	01 48 46.0	+2.6
THW	Thamme Wali	6.66	193	P	Pn	01 48 57.6	+5.6
JMU	Jammu	6.67	170	eP	Pn	01 48 52.5	+0.4
JMU				eS	Sn	01 50 10.5	+2.3
DJR	Jarkent	6.86	41	Pg	Pb	01 49 16.7	+3.3
	comp=N,11nm,1.3s						
DJR				Lg	Lg	01 50 49.7	
	comp=N,44nm,0.9s						
THN	Thein Dam	7.09	165	eP	Pn	01 49 05.0	+7.1
THN				eS	Sn	01 50 19.0	+0.5
KAPS	Kapalarasan	7.37	34	Pg	Pb	01 49 24.1	+2.0
	comp=N,15nm,0.7s						
KAPS				Lg	Lg	01 51 02.6	
	comp=N,43nm,1.3s						
DHRM	DHARAMSHALA	7.40	161	eP	Pn	01 49 05.0	+2.7
DHRM				eS	Sn	01 50 25.7	-0.7
DHRM				IAML		01 50 38.8	
	comp=E,192nm,0.7s						
DHRM				IAML		01 50 40.4	
	comp=N,119nm,0.8s						
SARP	Sargodha	7.41	186	P	Pn	01 49 07.1	+4.9
SMLA	Simla	8.69	159	eP	Pn	01 49 21.6	+1.8
SMLA				ex	x	01 51 02.2	
SMLA				IAML		01 51 04.2	
	comp=N,52nm,0.5s						
SMLA				IAML		01 51 04.8	
	comp=E,108nm,0.5s						
MAKZ	Makanchi	9.71	37	⇑Pn	Pn	01 49 39.0	+5.2
	comp=E,8.3nm,1.1s						
MAKZ				⇑Lg	Lg	01 52 18.7	
	comp=E,36nm,1.2s						
MAKZ	Makanchi	9.71	37		Pn	01 49 36.5	+2.7
MAKZ	Makanchi	9.71	37	P	Pn	01 49 36.6	+2.7
MK31	Makanchi Array	9.85	38	⇑Pn	Pn	01 49 39.3	+3.5
	comp=E,1.7nm,0.6s,baz=209,slow=12,SNR=18						
MK31				⇓Lg	Lg	01 52 23.6	
	comp=E,22nm,1.0s						
MK31	Makanchi Array	9.85	38		Pn	01 49 39.2	+3.5
MK31	Makanchi Array	9.85	38	P	Pn	01 49 39.2	+3.5
MKAR	Makanchi Array	9.85	38	Pn	Pn	01 49 39.1	+3.4
	comp=E,0.1nm,0.3s,baz=219,slow=12,SNR=13						
MKAR				Lg	Lg	01 52 22.0	
	comp=E,0.2nm,0.3s,baz=232,slow=31,SNR=3.7						
MKAR	Makanchi Array	9.85	38		Pn	01 49 38.3	+2.6
JOSI	Joshimath	10.04	149	eP	Pn	01 49 39.5	+1.0
JOSI				eS	Sn	01 51 26.3	-5.0
JOSI				IAML		01 51 44.3	
	comp=E,163nm,0.7s						
JOSI				IAML		01 51 44.6	
	comp=N,152nm,0.6s						
HRA	Herat	10.28	245		Pn	01 49 42.2	+0.4
AYAN	Aya Nagar	11.21	163	eP	Pn	01 49 56.3	+2.0
KUDL	Kundal	11.41	167	eP	Pn	01 49 50.5	-6.6
KUDL				eS	Sn	01 51 50.5	-14
KUDL				IAML		01 52 03.2	
	comp=E,101nm,0.0s						
KUDL				IAML		01 52 04.0	
	comp=N,48nm,0.6s						
WMQ	Urumqi	11.53	62	eP	Pn	01 50 00.0	+1.2
WMQ				pP		01 50 04.2	
WMQ				PP	PnPn	01 50 13.7	+7.3
WMQ				S	Sn	01 52 11.9	+4.3
WMQ				pmax	pmax		
	comp=N,9.0nm,0.9s						
WMQ				pmax	pmax		
	comp=N,73nm,3.6s						
KURBB	Kurchatov Arra	11.85	16	Pn	Pn	01 50 04.1	+1.1
	comp=N,0.1nm,0.3s,baz=207,slow=12,SNR=7.2						
KURBB				Lg	Lg	01 53 26.1	
	comp=N,0.1nm,0.3s,baz=200,slow=28,SNR=4.7						
KURK	Kurchatov	11.96	16		Pn	01 50 04.0	-0.5
KURK	Kurchatov	11.96	16	eP	Pn	01 50 06.4	+1.9
GEYT	Alibeck	12.13	268	Pn	Pn	01 50 05.1	-1.8
	comp=N,0.5nm,0.3s,baz=81,slow=9.6,SNR=13						
GEYT				Sn	Sn	01 52 21.6	-0.5
	comp=N,0.4nm,0.3s,baz=90,slow=10,SNR=4.0						
GYA0B	ALIBECK ARRAY	12.13	268		Pn	01 50 05.0	-1.9
ABKAR	Akbulak array	13.88	320		Pn	01 50 28.4	-2.4
ABKAR	Akbulak array	13.88	320		Pn	01 50 28.8	-2.0
BVAR	Borovoye Array	13.88	352	Pn	Pn	01 50 29.0	-1.8
	comp=N,0.4nm,0.3s,baz=165,slow=12,SNR=27						
BVAR	Borovoye Array	13.88	352	P	Pn	01 50 29.0	-1.8
BRVK	Borovoye	13.93	352		Pn	01 50 29.4	-2.0
BRVK	Borovoye	13.93	352	P	Pn	01 50 29.4	-2.0
KOLN	Koldanda	14.24	141	eP	Pn	01 50 33.1	-2.9
	comp=N,42nm,0.6s						
GKN	Gorkha	14.58	137	eP	Pn	01 50 38.2	-2.4
	comp=N,39nm,0.5s						
KKN	Kakani	15.09	136	eP	Pn	01 50 44.1	-3.4
	comp=N,21nm,0.5s						
PKIN	Phulchoki	15.32	136	eP	Pn	01 50 48.5	-2.1
	comp=N,23nm,0.6s						
GUN	Gumba	15.32	134	eP	Pn	01 50 48.0	-2.7
PKI	Pulchoki	15.33	136	eP	Pn	01 50 47.7	-3.1
	comp=N,29nm,0.7s						
AKTO	Aktyubinsk	15.60	321	Pn	Pn	01 50 51.6	-2.3
	comp=N,0.2nm,0.3s,baz=139,slow=13,SNR=9.8						
AKTO	Aktyubinsk	15.60	321	⇓Pn	P	01 50 57.6	-0.5
	comp=N,29nm,1.0s						
AKTO				⇑Sn	Sn	01 53 48.1	+1.5
	comp=N,13nm,1.1s						
JIRN	Jiri	15.69	134	eP	Pn	01 50 53.3	-2.3
	comp=N,47nm,0.4s						
BHPL	Bhopal	16.36	167	ex	Pn	01 51 02.7	-1.2
BHPL				ex	Sn	01 54 01.2	-4.3
RAMN	Ramite	16.47	135	eP	Pn	01 51 01.8	-3.7
ZAA0	Zalesovo Array	16.54	24		Pn	01 51 07.0	+1.0
ZALV	Zalesovo Beam	16.54	24	Pn	Pn	01 51 06.7	+0.8
	comp=N,0.4nm,0.3s,baz=216,slow=12,SNR=13						
ZALV	Zalesovo Beam	16.54	24		Pn	01 51 06.5	+0.5
ZALV	Zalesovo Beam	16.54	24	iP	Pn	01 51 07.1	+1.2
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TAPN	Taplejung	16.80	131	eP	Pn	01 51 05.5	-4.2
LSA	Lhasa	17.39	118	P	P	01 51 18.7	+0.2
LSA				pP	pP	01 51 23.0	+0.2
LSA				sP	sP	01 51 28.7	+3.9
LSA				pmax	pmax		
	comp=Z,15nm,1.1s						
LSA				LR	LR		
	comp=Z,380nm,7.1s						
LSA				LR	LR		
	comp=Z,610nm,8.5s						
LSA				LR	LR		
	comp=Z,640nm,7.1s						
SVE	Sverdlovsk	19.47	338	eP	P	01 51 40.8	+0.1
SVE				pmax	pmax		
	comp=Z,25nm,1.2s						
ARU	Arti	19.77	335	P	P	01 51 44.4	+0.3
	comp=Z,0.0nm,0.3s,baz=134,slow=6.5,SNR=12						
ARU	Arti	19.77	335	P	P	01 51 43.3	-0.8
ARU				IAmb	IAmb	01 51 48.5	
	comp=Z,19nm,1.0s						
ARU	Arti	19.77	335	diP	P	01 51 43.8	-0.3
ARU				S	S	01 55 26.9	+0.3
ARU				pmax	pmax		
	comp=Z,17nm,0.9s						
MAK	Makhachkala	19.90	289	eP	P	01 51 43.9	-1.7
MAK				eS	S	01 55 24.8	-4.6
MAK				pmax	pmax		
	comp=Z,104nm,1.8s						
MAK				MLR	MLR		
	comp=Z,116nm,17.0s						
GTA	Gaotai	20.32	81	eP	Pn	01 52 00.1	+7.8
GTA				pP	sP	01 52 04.5	+7.9
GTA				sP	pP	01 52 07.0	+12
GTA	Gaotai	20.32	81	⇑P	Pn	01 51 53.0	+0.7
GTA				pP	sP	01 52 00.3	+3.7
GTA				sP	pP	01 52 04.2	+10
GTA				pmax	pmax		
	comp=Z,14nm,1.0s						
GTA				pmax	pmax		
	comp=Z,86nm,4.3s						
GTA				LR	LR		
	comp=Z,97nm,18.4s						
GTA				LR	LR		
	comp=Z,91nm,19.7s						
WSAR	Wadi Sarin	20.41	223	LR	LR	02 00 38.4	
	comp=Z,65nm,21.5s,baz=84,slow=40						
GROC	Groznyy	21.16	290	ciP	P	01 51 59.2	0.0
GNI	Garni	22.11	281	P	P	01 52 09.1	-0.6
GNI				IAmb	IAmb	01 52 15.7	
	comp=Z,30nm,1.1s						
GNI	Garni	22.11	281	ceP	P	01 52 10.1	+0.4
GNI				pmax	pmax		
	comp=Z,100nm,1.3s						
HYB	Hyderabad	22.25	167	iP	P	01 52 11.0	-0.2
ZEI	Tsey	22.55	288	eP	P	01 52 15.3	+0.9
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NCK	Nalchik	22.77	290	⇑iP	P	01 52 16.3	-0.2
NCK				pmax	pmax		
	comp=Z,26nm,1.0s						
AKH	Akhalkalaki	22.92	285	P	P	01 52 18.2	-0.1
AKH				IAmb	IAmb	01 52 23.2	
	comp=Z,18nm,1.3s						
AKH	Akhalkalaki	22.92	285	P	P	01 52 18.2	-0.1
AKH				pmax	pmax		
	comp=Z,17nm,1.3s						
KBZ	Khabaz	23.27	291	eP	P	01 52 21.2	-0.5
KBZ				pmax	pmax		
	comp=Z,17nm,2.4s						
NEY	Neytrino	23.41	290	eP	P	01 52 20.7	-2.5
KIV	Kislovodsk	23.43	291	P	P	01 52 23.0	-0.4

KIV IAmb IAmb 01 53 00.7
comp=Z,13nm,0.8s
KIV Kislovodsk 23.43 291 P P 01 52 23.0 -0.4
KIV pmax pmax
comp=Z,13nm,0.8s
SHA1 Shidzhatmaz 23.45 291 eP P 01 52 23.0 -0.7
ZAK Zakamensk 23.67 52 eP P 01 52 26.5 +0.8
ZAK pmax pmax
comp=Z,3.0nm,1.1s
VRH Novokhopyorsk 25.14 309 eP P 01 52 38.6 -0.4
VRH pmax pmax
comp=Z,20nm,1.2s
SONM Songino Array 25.14 59 P P 01 52 40.6 +1.2
comp=Z,5.9nm,1.0s,baz=260,slow=7.4,SNR=31
SONM LR LR 02 03 34.6
comp=Z,171nm,18.2s,baz=250,slow=39
SONM Songino Array 25.14 59 P P 01 52 40.7 +1.4
SONM Songino Array 25.14 59 P P 01 52 40.7 +1.4
SONM pmax pmax
comp=Z,4.0nm,1.0s
ULN Ulaanbaatar 25.59 59 P P 01 52 44.6 +1.2
ULN Ulaanbaatar 25.59 59 P P 01 52 44.6 +1.2
ULN pmax pmax
comp=Z,5.0nm,0.9s
VORD Divnogorie 26.56 307 eP P 01 52 51.8 -0.2
VORD pmax pmax
comp=Z,10.0nm,0.8s
PRGR Permogore 28.14 332 eP P 01 53 06.1 +0.2
PRGR pmax pmax
comp=Z,10.0nm,1.0s
RAYN Ar Rayn 28.47 245 P P 01 53 09.6 +0.2
RAYN Ar Rayn 28.47 245 P P 01 53 09.6 +0.2
RAYN pmax pmax
comp=Z,5.0nm,1.2s
OBN Obninsk 29.23 315 eP P 01 53 15.6 -0.1
OBN ePPP PPP 01 54 16.1
OBN pmax pmax
comp=Z,13nm,1.0s
KLMR Klimovskoe 30.11 327 eP P 01 53 22.4 -1.1
KLMR AMP 01 53 29.4
comp=Z,27nm,2.5s
KLMR Klimovskoe 30.11 327 eP P 01 53 22.4 -1.1
KLMR pmax pmax
comp=Z,27nm,2.5s
CMAR Chiang Mai Arr 30.27 126 P P 01 53 28.3 +3.0
comp=Z,0.7nm,0.4s,baz=322,slow=6.9,SNR=3.5
BR131 Keskin Array S 30.59 284 IAmb IAmb 01 53 36.0
comp=Z,9.3nm,1.4s
BR131 Keskin Array S 30.59 284 eP P 01 53 28.9 +0.7
BRTR Keskin Array B 30.59 284 P P 01 53 29.2 +1.0
comp=Z,3.4nm,0.9s,baz=96,slow=6.0,SNR=13
BRTR Keskin Array B 30.59 284 P P 01 53 28.3 +0.1
TMCR Tamitsa 32.44 332 eP P 01 53 44.7 +0.8
TMCR pmax pmax
comp=Z,22nm,1.0s
AKASG Malin Array Be 32.85 305 P P 01 53 47.6 -0.1
comp=Z,2.4nm,0.7s,baz=80,slow=7.3,SNR=15
AKASG Malin Array Be 32.85 305 P P 01 53 46.9 -0.8
AKASG Malin Array Be 32.85 305 ceP P 01 53 47.5 -0.2
AKASG pmax pmax
comp=Z,7.0nm,0.8s
AKBB Malin Array Si 32.85 305 IAmb IAmb 01 53 49.5
comp=Z,12nm,0.9s
AKBB Malin Array Si 32.85 305 d iP P 01 53 47.6 -0.1
AKBB pmax pmax
comp=Z,13nm,0.9s
PBKT Sadao Pong 32.96 126 P P 01 53 50.1 +1.1
PBKT IAmb IAmb 01 53 52.3
comp=Z,3.6nm,0.9s
MILM Milestii Mici 33.13 298 ⇑P P 01 53 50.4 +0.2
SORM Soroca 33.40 300 ⇑P P 01 53 51.9 -0.6
SORM Soroca 33.40 300 ⇑P P 01 53 51.9 -0.6
TOPG Topolog 33.61 294 ⇑P P 01 53 54.7 +0.3
WHN Wuhan 34.36 92 P P 01 54 07.3 +6.2
TESR Tescani 34.65 298 ⇑P P 01 54 03.9 +0.5
VRI Vrincioaia 34.66 296 ⇑P P 01 54 04.5 +0.9
VRI Vrincioaia 34.66 296 ⇑P P 01 54 04.5 +0.9
PLOR Plostina 34.72 296 ⇑P P 01 54 05.5 +1.4
PLOR Plostina 34.72 296 ⇑P P 01 54 05.5 +1.4
BIZ Bicaz 34.98 298 ⇑P P 01 54 06.9 +0.5
MLR Muntele Rosu 35.25 296 ⇑P P 01 54 09.9 +1.2
VSU Vasula 35.31 318 ⇑iP P 01 54 10.5 +1.5
VSU pmax pmax
comp=Z,78nm,2.5s
BURAR Bucovina Array 35.53 300 ⇑P P 01 54 12.1 +1.0
BURAR Bucovina Array 35.53 300 ⇑P P 01 54 12.1 +1.0
DOPR Dopca 35.58 297 ⇑P P 01 54 12.7 +1.2
VOIR 35.88 296 ⇑P P 01 54 15.6 +1.4
VOIR 35.88 296 ⇑P P 01 54 15.6 +1.4
MTUR Matau 35.90 296 ⇑P P 01 54 16.9 +2.6
MTUR Matau 35.90 296 ⇑P P 01 54 16.9 +2.6
ARCR ARCALIA 36.16 299 ⇑P P 01 54 17.7 +1.2
LVV L'vov 36.18 303 eP P 01 54 17.4 +0.8
ARR Arges 36.18 296 ⇑P P 01 54 18.5 +1.8
FINES FINESS Array B 36.34 323 P P 01 54 18.2 +0.4
comp=Z,1.5nm,0.6s,baz=111,slow=9.8,SNR=16
FINES FINESS Array B 36.34 323 P P 01 54 16.3 -1.5
FINES FINESS Array B 36.34 323 ceP P 01 54 18.3 +0.5
FINES pmax pmax
comp=Z,2.0nm,0.6s
LOT Lotru 36.77 296 ⇑P P 01 54 23.4 +1.6
TRPA Tarpa 37.28 301 ⇑P P 01 54 26.8 +0.8
DRGR 37.31 299 ⇑P P 01 54 28.0 +1.7
DRGR 37.31 299 ⇑P P 01 54 28.0 +1.7
KOLS Kolonicke sedl 37.38 302 eP P 01 54 28.3 +1.5
KOLS pmax pmax
comp=Z,6.0nm,1.1s
KOLS Kolonicke sedl 37.38 302 eP P 01 54 28.3 +1.5
GZR Gura Zlata 37.47 296 ⇑P P 01 54 28.9 +1.2
SIRR Siria 38.11 298 ⇓P P 01 54 34.3 +1.3
BZS Buzias 38.24 297 ⇑P P 01 54 35.8 +1.7
BZS Buzias 38.24 297 ⇑P P 01 54 35.8 +1.7
ARCES ARCESS Array B 39.36 336 P P 01 54 44.2 +1.0
comp=Z,6.9nm,1.0s,baz=109,slow=8.7,SNR=6.7
ARCES ARCESS Array B 39.36 336 P P 01 54 43.0 -0.2
ARCES ARCESS Array B 39.36 336 P P 01 54 43.0 -0.2
VYHS Vyhne 39.69 302 eP P 01 54 47.7 +1.5
VYHS pmax pmax
comp=Z,7.0nm,1.3s
VYHS Vyhne 39.69 302 eP PKPPKPdf 02 27 09.3
VYHS Vyhne 39.69 302 eP P 01 54 47.7 +1.5
VYHS ePDIFF PKPPKPdf 02 27 09.3
MORC Moravsky Berou 40.37 304 ⇑P P 01 54 52.5 +0.6
MORC Moravsky Berou 40.37 304 ⇑P P 01 54 52.5 +0.6
VRAC Vranov 41.05 303 ⇑P P 01 54 57.9 +0.5
VRAC Vranov 41.05 303 ⇑P P 01 54 57.9 +0.5
DPC Dobruska-Polom 41.08 305 eP P 01 54 59.7 +1.9
DPC Dobruska-Polom 41.08 305 eP P 01 54 59.7 +1.9
UPC Upice 41.26 305 eP P 01 55 00.8 +1.6
UPC Upice 41.26 305 eP P 01 55 00.8 +1.6
CONA Conrad Observa 41.74 301 epP P 01 55 04.5 +1.2
comp=Z,7.6nm,1.1s
PRU Pruhonice 42.27 305 eP P 01 55 08.9 +1.5
PRU Pruhonice 42.27 305 eP P 01 55 08.9 +1.5
TIXI Tiksi 42.42 23 P P 01 55 06.9 -1.4
TIXI IAmb IAmb 01 55 10.4
comp=Z,3.9nm,0.7s
TIXI Tiksi 42.42 23 ⇑eP P 01 55 08.4 +0.1
TIXI pmax pmax
comp=Z,4.0nm,0.7s
BRG Berggiesshubel 42.52 306 eP P 01 55 10.9 +1.5
comp=Z,13nm,1.4s
BRG Berggiesshubel 42.52 306 eP P 01 55 10.9 +1.5
BRG pmax pmax
comp=Z,13nm,1.4s
SOKA Soboth 42.54 300 epP P 01 55 12.0 +2.2
comp=Z,11nm,1.1s
MOA Molln 42.81 302 eP P 01 55 12.8 +0.9
comp=Z,6.2nm,1.1s
OBKA Obir 42.90 300 epP P 01 55 15.3 +2.6
comp=Z,15nm,1.1s
GERES GERESS Array B 43.00 303 P P 01 55 14.5 +1.0
comp=Z,3.5nm,0.9s,baz=78,slow=7.2,SNR=17
GERES GERESS Array B 43.00 303 P P 01 55 10.5 -3.0
GERES GERESS Array B 43.00 303 P P 01 55 10.5 -3.0
KHC Kasperske Hory 43.03 304 eP P 01 55 13.9 +0.3
KHC Kasperske Hory 43.03 304 P P 01 55 12.1 -1.5
KHC Kasperske Hory 43.03 304 P P 01 55 12.1 -1.5
KHC pmax pmax
comp=Z,3.0nm,1.0s
CLL Collm 43.04 307 eP P 01 55 15.0 +1.4
CLL LmV 02 16 00.0
comp=Z,100nm,20.4s
CLL LmV 03 58 00.0
comp=Z,300nm,18.2s
CLL Collm 43.04 307 eP P 01 55 15.0 +1.4
PSI Prapat 43.07 141 LR LR 02 14 18.4
comp=Z,163nm,18.4s,baz=234,slow=38
NB2 NORSAR Subarra 43.39 321 P P 01 55 16.1 -0.3
comp=Z,6.3nm,0.8s,baz=91,slow=8.6
NOA NORSAR Array B 43.39 321 P P 01 55 16.3 -0.1
comp=Z,5.0nm,0.9s,baz=92,slow=8.0,SNR=11
DAVA Damuels 45.84 302 P P 01 55 36.6 +0.3
comp=Z,12nm,1.4s
TGY Tagaytay City 48.54 108 LR LR 02 19 02.0
comp=Z,168nm,19.4s,baz=328,slow=39
MJAR Matsushiro Arr 50.12 72 P P 01 56 10.0 +0.6
comp=Z,1.4nm,0.3s,baz=300,slow=10.0,SNR=4.2
MJAR Matsushiro Arr 50.12 72 P P 01 56 09.8 +0.4
MJAR Matsushiro Arr 50.12 72 P P 01 56 09.8 +0.4
MJAR pmax pmax
comp=Z,3.0nm,0.9s
BILL Bilibino 55.21 27 eP P 01 56 47.0 +0.4
BILL e 01 58 52.4
BILL pmax pmax
comp=Z,2.0nm,1.0s
ESDC Sonseca Array 57.92 297 P P 01 57 06.4 -0.1
comp=Z,0.6nm,0.5s,baz=57,slow=7.1,SNR=7.0
ESDC Sonseca Array 57.92 297 P P 01 57 05.2 -1.2
TOLK Toolik Lake Re 67.69 16 IAmb IAmb 01 58 20.6
comp=Z,3.5nm,0.9s
TORD Torodi Ar. Bea 67.77 269 P P 01 58 11.7 -0.6
comp=Z,1.4nm,0.6s,baz=44,slow=5.3,SNR=14
TORD Torodi Ar. Bea 67.77 269 P P 01 58 10.9 -1.3
IMAR Indian Mountai 68.89 19 P P 01 58 18.5 0.0
INK Inuvik 70.80 10 P P 01 58 30.5 +0.3
comp=Z,2.1nm,0.7s,baz=346,slow=7.8,SNR=13
INK Inuvik 70.80 10 P P 01 58 29.9 -0.3
INK IAmb IAmb 02 00 45.3
comp=Z,15nm,1.8s
INK Inuvik 70.80 10 P P 01 58 29.9 -0.3
INK pmax pmax
comp=Z,15nm,1.8s
C36M Paulatuk 70.88 7 IAmb IAmb 01 58 40.2
comp=Z,3.8nm,0.7s
ILAR Eielson Array 71.52 17 P P 01 58 34.2 -0.5
comp=Z,1.8nm,1.0s,baz=317,slow=5.1,SNR=12
ILAR Eielson Array 71.52 17 P P 01 58 33.8 -0.9
ILAR Eielson Array 71.52 17 P P 01 58 33.8 -0.9
YKA Yellowknife Ar 78.33 4 P P 01 59 14.0 0.0
comp=Z,2.1nm,0.8s,baz=346,slow=5.5,SNR=31
ASAR Alice Springs 84.28 127 P P 01 59 46.2 +0.1
comp=Z,1.2nm,0.8s,baz=320,slow=4.9,SNR=6.3
ASAR Alice Springs 84.28 127 P P 01 59 45.5 -0.6

ATH 04 01:49:00.3,38.27N×20.42E,h7km±1km,ML2.6/10,Error ellipse: s-maj=1.4km s-min=0.7km az=264.0
THE 04 01:49:00.4,38.26N×20.41E,h10km,ML2.8/11,Error ellipse: s-maj=1.0km s-min=0.3km az=250.0
ISC 04 01:49:00.3±0.9,38.27N±0.02×20.42E±0.03,h8km±5km, n53,σ0.50/84,Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.01 172 P Pg 01 49 01.5 -0.1
KEF4 S Sg 01 49 02.3 -0.2
KEF1 Kardakata, Kep 0.04 72 P Pg 01 49 01.8 -0.1
KEF1 S Sg 01 49 02.8 -0.2
LXR1 Lixouri, Cepha 0.07 170 P Pg 01 49 02.5 +0.4
LXR1 S Sg 01 49 04.2 +0.8
KEF3 Kipouria, Keph 0.09 223 P Pg 01 49 02.7 +0.3
KEF3 S Sg 01 49 03.5 -0.4
CHV1 Chavriata, Kef 0.09 202 P Pg 01 49 02.8 +0.3
CHV1 S Sg 01 49 04.8 +0.9
30μm,0.2s
ARG2 Argostoli 0.10 150 P Pg 01 49 02.9 +0.3
ARG2 S Sg 01 49 04.9 +0.6
KEF2 Argostoli. Kep 0.11 153 P Pg 01 49 03.2 +0.3
KEF2 S Sg 01 49 05.2 +0.6
VLS Valsamata 0.16 124 P Pg 01 49 03.8 +0.2
VLS S Sg 01 49 06.4 +0.6
6μm,0.1s
VLS Valsamata 0.16 124 P Pg 01 49 03.8 +0.2
VLS S Sg 01 49 06.5 +0.6
VLS AML AML 01 49 06.7
comp=N,11708μm,0.2s
VLS AML AML 01 49 07.2
comp=E,12489μm,0.1s
VSK1 VASILIKIADES 0.18 38 P Pg 01 49 04.3 +0.3
VSK1 S Sg 01 49 07.2 +0.6
comp=E,8μm,0.4s
FSK Fiskardo 0.22 30 P Pg 01 49 05.0 +0.2
FSK S Sg 01 49 08.3 +0.5
comp=E,3μm,0.2s
FSK Fiskardo 0.22 30 P Pg 01 49 05.0 +0.2
FSK S Sg 01 49 08.2 +0.5
FSK AML AML 01 49 10.4
comp=N,2818μm,0.2s
FSK AML AML 01 49 10.7
comp=E,8136μm,0.2s
EVGI Lefkada island 0.40 27 P Pg 01 49 08.3 +0.2
EVGI S Sg 01 49 14.7 +1.3
EVGI Lefkada island 0.40 27 P Pg 01 49 08.4 +0.2
EVGI S Sg 01 49 14.1 +0.7
VLMS Volimes, Zakyn 0.43 154 P Pg 01 49 08.8 +0.1
VLMS S Sg 01 49 15.3 +1.0
VLMS AML AML 01 49 16.9
comp=N,3650μm,0.4s
VLMS AML AML 01 49 18.4
comp=E,2761μm,0.2s
MGNA Meganis 0.48 36 P Pg 01 49 09.7 0.0
MGNA S Sg 01 49 17.0 +0.9
MGNA AML AML 01 49 18.6
comp=E,2371μm,0.2s
MGNA AML AML 01 49 18.7
comp=N,3506μm,0.1s
LKD2 Lefkada island 0.55 19 P Pg 01 49 10.9 -0.1
LKD2 S Sb 01 49 20.4 -0.1
LKD2 Lefkada island 0.55 19 P Pg 01 49 10.9 -0.1
LKD2 S Sg 01 49 18.3 0.0
LKD2 AML AML 01 49 21.6
comp=N,503μm,0.2s
LKD2 AML AML 01 49 23.7
comp=E,520μm,0.4s
TSLK Tsoukalades, L 0.59 18 P Pg 01 49 11.5 -0.1
TSLK S Sb 01 49 21.0 -0.4
TSLK Tsoukalades, L 0.59 18 P Pg 01 49 11.6 -0.1
TSLK AML AML 01 49 23.4
comp=E,547μm,0.3s
TSLK AML AML 01 49 23.9
comp=N,658μm,0.5s
AST1 Astakos 0.59 62 P Pg 01 49 11.9 +0.2
AST1 S Sb 01 49 20.9 -0.6
comp=N,2μm,0.2s
KRI1 kERI 0.68 153 P Pg 01 49 13.1 -0.3
KRI1 S Sb 01 49 24.1 +0.1
comp=N,1μm,0.3s
PDO Prodromos 0.68 61 P Pg 01 49 13.5 0.0
PDO S Sb 01 49 24.5 +0.3
PDO Prodromos 0.68 61 P Pg 01 49 13.6 0.0
PDO S Sg 01 49 23.1 +0.7
PDO AML AML 01 49 26.0
comp=E,1675μm,0.4s
PDO AML AML 01 49 26.6
comp=N,1348μm,0.3s
RLS Riolos of Patr 0.85 104 P Pg 01 49 16.1 -0.5
RLS S Sb 01 49 29.5 +0.6
comp=N,210nm,0.5s
RLS Riolos of Patr 0.85 104 P Pg 01 49 16.5 -0.2
RLS S Sg 01 49 28.2 +0.6
RLS AML AML 01 49 31.9
comp=E,354μm,0.5s
RLS AML AML 01 49 33.1
comp=N,394μm,0.2s
PVO Paravola 0.93 68 P Pg 01 49 18.5 +0.2
PVO S Sb 01 49 32.3 +0.9
comp=N,510nm,0.4s
PVO Paravola 0.93 68 P Pg 01 49 18.5 +0.2
PVO AML AML 01 49 39.9
comp=E,1147μm,0.4s
PVO AML AML 01 49 42.3
comp=N,865μm,0.4s
DRO Drossia 1.06 107 P Pg 01 49 20.3 -0.4
DRO S Sn 01 49 36.8 +0.2
comp=N,458nm,0.3s
DRO Drossia 1.06 107 P Pg 01 49 20.3 -0.4
EFP Efpalio 1.18 82 P Pb 01 49 21.8 -1.1
EFP S Sn 01 49 39.2 -0.2
comp=N,190nm,0.3s
EFP Efpalio 1.18 82 P Pb 01 49 22.2 -0.8
ANX Ano Chora 1.22 74 P Pb 01 49 23.5 -0.3
ANX S Sb 01 49 39.8 +0.1
comp=N,595nm,0.5s
ANX Ano Chora 1.22 74 P Pb 01 49 23.3 -0.5
LAKA Lakka 1.23 91 P Pn 01 49 22.9 -0.9
LAKA S Sn 01 49 40.9 +0.3
LAKA Lakka 1.23 91 P Pn 01 49 23.1 -0.8
LAKA S Sg 01 49 40.3 +0.6
LAKA AML AML 01 49 45.1
comp=E,279μm,0.4s
LAKA AML AML 01 49 46.2
comp=N,412μm,0.5s
AMT Artemida-Makis 1.25 125 P Pn 01 49 24.0 -0.3
EVR Evrytania 1.27 59 P Pn 01 49 24.4 -0.1
IGT Igoumenitsa 1.27 357 P Pb 01 49 24.5 0.0
SERG Sergoula 1.29 83 P Pn 01 49 24.7 -0.1
SERG Sergoula 1.29 83 P Pn 01 49 24.6 -0.1
TRIZ Trizonia 1.30 85 P Pn 01 49 23.9 -0.9
KALE Kalithea 1.36 84 P Pn 01 49 24.7 -1.0
KALE Kalithea 1.36 84 P Pn 01 49 25.8 +0.1
KLV Kalavryta, Ach 1.38 99 P Pn 01 49 25.8 -0.2
MAKR Makrakomi, Fth 1.53 60 P Pb 01 49 29.2 +0.2
ITM Ithomi 1.61 132 P Pb 01 49 30.4 +0.1
AGG Agios Georgios 1.67 63 P Pg 01 49 32.6 +0.2
AXAR Agios Charalam 1.82 73 P Pb 01 49 34.0 0.0
PROD Prodromos 1.95 89 P Pb 01 49 36.3 +0.1
LOUT Loutraki 2.03 97 P Pb 01 49 36.7 -0.8
LKR Lokris 2.06 78 P Pb 01 49 37.2 -0.8
VIL2 Platees 2.24 91 P Pb 01 49 40.4 -0.7

IDC 04 01:49:19.8±5.5,6.27S×147.41E,h0km,mb3.8/3, mb1 3.9/5,mb1mx3.6/36,mbtmp3.8/5,ML3.6/1,Error ellipse: s-maj=84.2km s-min=43.7km az=58.0,Eastern New Guinea region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res
PMG Port Moresby 3.12 185 Pn Pn 01 50 10.5 +0.1
2.5nm,0.3s,baz=348,slow=9.3,SNR=5.7
PMG Sn Sn 01 50 49.9 +1.5
3.7nm,0.3s,baz=54,slow=23,SNR=5.8
WRA Warramunga Arr 18.60 222 P P 01 53 38.8 0.0
0.2nm,0.3s,baz=42,slow=12,SNR=5.2
ASAR Alice Springs 21.63 216 P P 01 54 11.7 -0.1
1.4nm,0.5s,baz=51,slow=8.9,SNR=22
FITZ Fitzroy Crossi 24.28 239 P P 01 54 39.8 +0.8
2.4nm,0.7s,baz=72,slow=9.6,SNR=5.0
STKA Stephens Creek 26.05 191 P P 01 54 53.9 -1.1
0.8nm,0.3s,baz=11,slow=13,SNR=3.1

NEIC 04 01:51:00.8±1.6,5.0S±0.1×154.1E±0.1,h115km±7km, mb4.3/5,Error ellipse: s-maj=18.2km s-min=17.0km az=73.0
IDC 04 01:51:02.8±5.3,4.76S×153.78E,h110km±35km,mb3.3/4, mb1 3.6/5,mb1mx3.4/36,mbtmp3.8/5,Error ellipse: s-maj=53.7km s-min=19.8km az=97.0
ISC 04 01:51:00.2±1.3,4.88S±0.09×154.0E±0.1,h105km,n16, σ1.61/20,mb3.5/6,Bougainville-Solomon Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RABL Rabaul 1.99 290 Pn Pn 01 51 34.0 +1.1
RABL Sn Sn 01 52 01.2 +3.4
KRVT Keravat (AS076 2.08 286 P Pn 01 51 33.4 -0.7
48nm,0.3s,baz=184,slow=0.6,SNR=20
KRVT S Sn 01 51 56.7 -3.2
49nm,0.3s,baz=3.2,slow=21,SNR=12
PMG Port Moresby 8.17 236 P Pn 01 52 58.5 +2.5
13nm,0.3s,baz=15,slow=6.9,SNR=8.0
PMG S Sn 01 54 27.5 +0.7
1.4nm,0.3s,baz=102,slow=15,SNR=2.7
PMG Port Moresby 8.17 236 Pn 01 52 56.2 +0.2
PMG Sn 01 54 26.8 -0.1
WB0 Warramunga Arr 24.19 231 P P 01 56 07.0 0.0
WB0 IAmb IAmb 01 56 25.5
comp=Z,7.7nm,1.1s
WRA Warramunga Arr 24.33 230 P P 01 56 09.2 +0.9
comp=Z,1.8nm,0.6s,baz=56,slow=10,SNR=8.0
WRA Warramunga Arr 24.33 230 P P 01 56 07.0 -1.3
ASAR Alice Springs 26.94 224 P P 01 56 32.4 +0.4
comp=Z,0.6nm,0.5s,baz=56,slow=8.5,SNR=5.7
ASAR Alice Springs 26.94 224 P P 01 56 31.8 -0.1
FITZ Fitzroy Crossi 30.71 242 P P 01 57 02.6 -2.8
FITZ IAmb IAmb 01 57 05.6
comp=Z,2.9nm,0.8s
FORT Forrest 35.52 220 P P 01 57 46.6 -0.5
FORT IAmb IAmb 01 57 58.3
comp=Z,45nm,1.0s
SONM Songino Array 67.05 327 P P 02 01 43.2 +0.9
comp=Z,0.3nm,0.6s,baz=126,slow=7.1,SNR=3.4
SONM Songino Array 67.05 327 P P 02 01 42.4 +0.1
MKAR Makanchi Array 81.20 319 P P 02 03 06.0 +1.5
comp=Z,0.2nm,0.5s,baz=100,slow=7.6,SNR=5.7
MKAR Makanchi Array 81.20 319 P P 02 03 04.0 -0.5
TORD Torodi Ar. Bea 151.50 289 PKPbc PKPbc 02 10 43.0 0.0
comp=Z,0.7nm,0.8s,baz=88,slow=2.1,SNR=4.8

GRAL 04 01:53:05.1±0.3,33.75N×35.14E,h14km±2km,MD2.5
GII 04 01:53:06.8±1.4,33.62N×35.26E,h11km±2km,MD1.1/1
ISC 04 01:53:05.4±1.9,33.70N±0.06×35.19E±0.10,h14km±12km, n11,σ0.48/20,Jordan-Syria region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DQRL Deir Qamar 0.32 88 eP Pg 01 53 12.0 0.0
DQRL eS Sg 01 53 17.2 +0.6
BHL Bhannes 0.44 62 eP Pg 01 53 13.6 -0.6
BHL eS Sg 01 53 19.8 -0.4
RCY Rachaya 0.57 110 eP Pg 01 53 16.5 -0.2
RCY eS Sg 01 53 25.0 +0.6
HNTI Hanita 0.61 181 Pg Pb 01 53 18.3 +0.5
HNTI Sg Sg 01 53 25.8 +0.4
NATI Neve Ativ 0.63 133 Pg Pg 01 53 17.3 -0.4
NATI Sg Sg 01 53 25.4 -0.6
KSDI Kefar Szold 0.64 142 Pg Pg 01 53 17.5 -0.3
KSDI Sg Sg 01 53 26.1 -0.2
MMA0B Mount Meron ar 0.70 165 Pg Pg 01 53 18.5 -0.6
KSHT Keshet 0.88 144 Pg Pg 01 53 21.9 -0.6
MMLI Mount Malkishu 1.27 171 Pg Pb 01 53 29.5 +0.4
MMLI Sg Sb 01 53 44.7 -0.5
SLTI Sal'it 1.46 185 Pn Pn 01 53 31.5 +0.3
SLTI Sn Sn 01 53 49.9 -0.2
HMDT Nahal Hemdat 1.47 169 Pn Pn 01 53 31.2 -0.2
HMDT Sn Sb 01 53 51.2 +0.3

SJA 04 01:55:44.4±0.9,33.69S×72.97W,h10km,ML3.7,MW3.4
GUC 04 01:55:50.7±0.6,33.82S×72.24W,h25km±4km,ML3.4
IDC 04 01:55:54.1±7.7,33.76S×72.02W,h33km±63km,mb3.3/2, mb1 3.6/4,mb1mx3.4/20,mbtmp3.5/4,ML3.8/2,MS2.9/1, Ms1 2.9/1,ms1mx2.7/6,Error ellipse: s-maj=56.3km s-min=35.2km az=71.0
ISC 04 01:55:52.0±1.7,33.84S±0.04×72.25W±0.07,h23km±14km, n29,σ1.73/44,9C-2D,Off coast of central Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MT01 Popeta 0.83 92 ⇓eP Pn 01 56 06.8 -1.5
MT01 eS Sn 01 56 18.4 -1.5
VA01 Torpederas 0.95 32 ⇑iP Pn 01 56 08.1 -1.9
VA01 eS Sn 01 56 21.7 -1.2
GO05 Huala 1.20 167 ⇑iP Pb 01 56 13.5 -0.6
GO05 eS Sb 01 56 29.9 +0.7
GO05 Huala 1.20 167 eP Pb 01 56 13.7 -0.4
MT05 Renca 1.34 71 ⇑iP Pn 01 56 15.2 -0.2
MT05 eS Sb 01 56 33.1 0.0
MT05 IAML 01 56 38.2
comp=N,1μm,0.4s
ROC1 El Roble 1.34 51 eP Pn 01 56 14.5 -1.1
ROC1 eS Sn 01 56 33.4 +0.5
ROCH El Roble 1.35 51 ⇑iP Pn 01 56 14.8 -0.9
ROCH eS Sn 01 56 33.5 +0.5
ROCH IAML 01 56 43.9
comp=N,1μm,0.5s
STL Santa Lucia 1.40 74 ⇑iP Pn 01 56 16.2 0.0
STL eS Sb 01 56 35.0 0.0

PEL Peldehue 1.48 63⇓eP Pn 01 56 17.1 -0.2
PEL eS Sb 01 56 37.4 +0.2
PEL IAML 01 56 38.6
comp=N,1μm,0.5s
PEL Peldehue 1.48 63 eP Pn 01 56 17.2 -0.1
PEL eS Sb 01 56 38.0 +0.7
MT03 Universidad Ad 1.49 77⇑iP Pn 01 56 17.4 -0.1
MT03 eS Sb 01 56 38.1 +0.5
MT03 IAML 01 56 40.6
comp=E,2μm,0.4s
CLCH Cerro Calan 1.50 73 eP Pn 01 56 17.3 -0.3
CLCH IAML 01 56 47.5
comp=N,1μm,0.5s
BO02 Sierra Bellavi 1.54 129⇑iP Pb 01 56 18.7 -1.3
BO02 eS Sb 01 56 39.5 +0.4
BO02 IAML 01 56 49.9
comp=E,1μm,0.6s
LMEL Las Melosas 1.70 91⇑iP Pn 01 56 20.8 +0.3
LMEL eS Sb 01 56 44.0 +0.3
LMEL IAML 01 56 48.5
comp=N,835nm,0.2s
FCH Farellones 1.71 73 eP Pn 01 56 20.6 -0.1
FCH IAML 01 56 51.2
comp=E,582nm,0.5s
VA03 San Esteban 1.78 53⇑iP Pn 01 56 21.3 -0.2
VA03 eS Sb 01 56 46.0 +0.1
VA03 IAML 01 56 51.2
comp=E,1μm,0.3s
ARCO CERRO ARCO 2.95 71 eP Pb 01 56 42.5 -1.4
ARCO IAML 01 56 45.3
comp=Z,154nm,0.4s
ARCO eS Sb 01 57 23.8 +4.2
AAGR Agrelo 2.96 76 eP Pb 01 56 42.5 -1.5
ASAL Salagasta 3.12 67 eP Pb 01 56 44.0 -2.8
ASAL eS Sb 01 57 30.9 +6.4
RTLS Leoncito 3.21 52 eP Pn 01 56 44.3 +3.0
RTLS IAML 01 56 51.3
comp=Z,101nm,0.5s
RTLS eS Sb 01 57 31.4 +4.0
RTCV Cerro Valdivia 3.69 59 eP Pn 01 56 49.2 +1.5
AMOG MOGNA 4.29 49 eP Pn 01 56 56.1 +0.1
AGUA GUANDACOL 5.39 37 eP Pn 01 57 12.0 +0.8
VCA Vinchina 6.15 35 eP Pn 01 57 21.5 -0.1
VCA IAML 01 59 09.8
comp=Z,28nm,0.7s
PLCA Paso Flores 7.01 169 Pn Pn 01 57 35.0 +1.6
comp=Z,0.5nm,0.3s,baz=359,slow=11,SNR=20
CPUP Villa Florida 14.92 64 LR LR 02 04 36.8
comp=Z,49nm,19.4s,baz=312,slow=36
LPAZ La Paz 17.86 13 P P 01 59 59.5 -0.8
comp=Z,0.1nm,0.3s,baz=190,slow=4.8,SNR=5.5
TXAR Lajitas Array 69.51 331 P P 02 06 59.6 +0.7
comp=Z,0.1nm,0.5s,baz=154,slow=8.9,SNR=2.7
TORD Torodi Ar. Bea 84.32 70 P P 02 08 22.2 -0.4
comp=Z,0.5nm,0.7s,baz=253,slow=4.4,SNR=3.7

IDC 04 02:03:09.3±4.8, 4.78S×153.64E, h114km±31km, mb3.5/5, mb1 3.7/6, mb1mx3.4/26, mbtmp4.0/6, Error ellipse: s-maj=52.5km s-min=24.3km az=89.0

ISC 04 02:02:59.1±2.5, 4.0S±0.3×154.2E±0.2, h100km, n8, σ1.03/7, mb3.8/5, North of Solomon Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
KRVT Keravat (AS076 2.18 262 P Pn 02 03 38.1 +4.1
39nm,0.3s,baz=195,slow=8.0,SNR=11
KRVT S Sn 02 04 00.8 -0.1
87nm,0.3s,baz=8.0,slow=21,SNR=19
PMG Port Moresby 8.81 232 P Pn 02 05 02.8 -0.8
7.7nm,0.3s,baz=30,slow=11,SNR=4.4
WRA Warramunga Arr 25.02 229 P P 02 08 15.0 +1.0
2.2nm,0.6s,baz=54,slow=9.8,SNR=6.7
ASAR Alice Springs 27.68 223 P P 02 08 38.1 +0.1
0.4nm,0.4s,baz=53,slow=9.5,SNR=4.1
STKA Stephens Creek 30.15 202 P P 02 08 59.5 -0.2
1.6nm,0.7s,baz=24,slow=12,SNR=3.1
FITZ Fitzroy Crossi 31.26 241 P P 02 09 10.8 +1.2
2.8nm,0.9s,baz=51,slow=11,SNR=3.5
MKAR Makanchi Array 80.64 319 P P 02 15 11.2 +10
0.2nm,0.6s,baz=96,slow=7.5,SNR=5.7
TORD Torodi Ar. Bea 151.36 290 PKPbc PKPab 02 22 49.7 -1.0
0.4nm,0.8s,baz=60,slow=1.5,SNR=5.5

WEL 04 02:07:11.7, 40.6S±0.7×175.9E±0.9, h28km±1km, ML3.7/14, MLv3.4/76, Error ellipse: s-maj=0.0km s-min=0.0km az=94.1, North Island

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
PRWZ Pori Road 0.11 48 P Pb 02 07 17.1 +0.3
PRWZ S Sb 02 07 21.5 +1.2
TIWZ Tintock 0.15 174 P Pb 02 07 17.8 -0.5
TIWZ S Sb 02 07 22.0 +1.0
MRZ Mangatainoka R 0.22 261 P Pb 02 07 18.3 +0.3
MRZ S Sb 02 07 23.2 +1.0
POWZ Post Office Ro 0.25 342 P Pb 02 07 18.8 +0.5
POWZ S Sb 02 07 23.4 +0.7
BFZ Birch Farm 0.29 101 P Pb 02 07 19.1 +0.2
BFZ S Sn 02 07 24.9 -0.8
HOWZ Holdsworth Sta 0.38 224 P Pn 02 07 20.9 -0.5
HOWZ S Sn 02 07 27.4 -0.4
CPWZ Castlepoint 0.38 138 P Pn 02 07 21.4 +0.1
CPWZ S Sn 02 07 30.0 +2.3
DVHZ Dannevirke 0.40 35 P Pb 02 07 20.5 0.0
TMWZ Te Maipa 0.48 178 P Pn 02 07 22.4 -0.4
TMWZ S Sn 02 07 31.0 +0.7
ANWZ Angora Road 0.49 70 P Pn 02 07 22.7 -0.2
ANWZ S Sn 02 07 31.0 +0.5
OGWZ Otaki Gorge 0.56 250 P Pn 02 07 23.9 0.0
TSZ Takapari Road 0.57 7 P Pb 02 07 23.4 +0.1
PNHZ Pukenui 0.76 20 P Pn 02 07 26.7 +0.1
KIW Kapiti Island 0.76 252 P Pn 02 07 27.4 +0.7
TRWZ Traveller 0.78 190 P Pn 02 07 26.7 0.0
MSWZ Moikau Station 0.92 210 P Pn 02 07 28.3 -0.5
PXZ Pawanui 0.97 52 P Pn 02 07 29.3 -0.2
PLWZ Palliser 1.05 206 P Pn 02 07 30.0 -0.6
KRHZ Kereru 1.06 22 P Pn 02 07 31.0 +0.3
BHW Baring Head 1.08 224 P Pn 02 07 30.8 -0.2
WAZ Wanganui 1.10 322 P Pb 02 07 33.7 +1.6
KAHZ Kahuranaki 1.14 43 P Pn 02 07 31.8 0.0
BHHZ Black Hill Sta 1.15 8 P Pb 02 07 32.9 -0.1
MOVZ Moawhango 1.22 356 P Pb 02 07 33.9 -0.3
KWHZ Kaweka Forest 1.27 20 P Pn 02 07 34.1 +0.3
MTVZ Mangateitei 1.28 346 P Pb 02 07 35.6 +0.4
TCW Tory Channel 1.34 244 P Pn 02 07 34.7 +0.1
CKHZ Cape Kidnapper 1.34 44 P Pb 02 07 36.2 0.0
MCHZ McNeill Hill 1.34 29 P Pn 02 07 34.9 +0.3
TRVZ Turoa 1.35 349 P Pb 02 07 36.3 -0.2
WHVZ Whangaehu Hut 1.36 351 P Pb 02 07 36.9 +0.2
TUVZ Tukino 1.37 353 P Pb 02 07 36.9 +0.1
DRZ Dome Shelter 1.37 350 P Pb 02 07 37.2 +0.4
FWVZ Far West T-bar 1.39 350 P Pb 02 07 36.9 -0.2
PKVZ Pokaka 1.40 343 P Pb 02 07 36.9 -0.2
NGZ Ngauruhoe 1.46 352 P Pb 02 07 38.0 -0.4
DUWZ D'Urville Isla 1.49 263 P Pn 02 07 37.5 +0.9
WTVZ West Tongariro 1.52 352 P Pb 02 07 38.8 -0.6
BKZ Black Stump Fm 1.54 18 P Pn 02 07 37.4 0.0
KRVZ Karewarewa 1.54 353 P Pb 02 07 39.1 -0.6
TWVZ Taurewa 1.59 348 P Pb 02 07 39.5 -0.9
ARHZ Aropaoanui 1.62 33 P Pn 02 07 38.7 +0.3
LREZ Lake Rotokare 1.62 316 P Pb 02 07 41.7 +0.8
KATZ Kakaramea 1.66 355 P Pb 02 07 40.7 -0.9
TUWZ Tuamarina 1.66 241 P Pn 02 07 37.7 -1.3
NMHZ Naumai 1.69 26 P Pn 02 07 40.2 +0.7
VRZ Vera Road 1.73 330 P Pb 02 07 41.8 -1.0
HATZ Hinemaiaia 1.74 6 P Pn 02 07 40.8 +0.7
RATZ Rangitukua 1.76 358 P Pn 02 07 41.5 +1.1
PREZ Palmer Road 1.83 314 P Pb 02 07 45.0 +0.4
MRHZ Matea Rd 1.84 14 P Pn 02 07 41.7 +0.2
BSWZ Blackbirch Sta 1.85 233 P Pn 02 07 41.2 -0.5
WATZ Wairara 1.92 357 P Pn 02 07 43.4 +0.8
MTHZ Maungataniwha 1.93 23 P Pn 02 07 42.6 0.0
KHEZ Kahui Hut 1.95 313 P Pb 02 07 45.9 -0.7
NMEZ Namu Road 1.95 308 P Pb 02 07 46.7 +0.2
RAHZ Arahi 1.95 29 P Pn 02 07 42.7 -0.3
NNZ Nelson 1.97 252 P Pn 02 07 43.7 +0.4
PKE Pukeiti 2.03 314 P Pb 02 07 48.0 0.0
NBEZ Newall Road No 2.05 311 P Pb 02 07 48.2 0.0
ALRZ Allen Road 2.10 10 P Pn 02 07 45.5 +0.6
KNZ Kokohu 2.12 42 P Pn 02 07 44.2 -1.1
MHGZ Mahia Peninsul 2.15 47 P Pn 02 07 45.3 -0.5
PRRZ Plateau Road 2.16 11 P Pb 02 07 52.6 +2.4
HIZ Hauiti 2.25 339 P Pn 02 07 48.7 +1.6
HRRZ Handcock Road 2.26 8 P Pb 02 07 53.4 +1.5
TLZ Tolley Road 2.31 354 P Pn 02 07 50.2 +2.3
HSRZ Hossack Road 2.33 7 P Pn 02 07 47.6 -0.6
TARZ Mount Tarawera 2.44 12 P Pn 02 07 49.6 -0.2
KHZ Kahutara 2.50 224 P Pn 02 07 48.9 -1.6
THZ Tophouse 2.50 242 P Pn 02 07 50.1 -0.6
QRZ Quartz Range 2.54 264 P Pn 02 07 51.7 +0.6
URZ Urewera 2.55 23 P Pn 02 07 49.9 -1.3
MWZ Matawai 2.63 30 P Pn 02 07 50.9 -1.4
TWGZ Tauwhareparae 2.94 34 P Pn 02 07 55.9 -0.8
RUGZ Raukumara Rang 3.01 28 P Pn 02 07 56.4 -1.2
GVZ Greta Valley S 3.15 221 P Pn 02 07 57.6 -1.9
HAZ Te Kaha 3.23 28 P Pn 02 07 59.8 -0.8
LTZ Lake Taylor 3.45 230 P Pn 02 08 02.5 -1.1
OKCZ Okains Bay 3.73 213 P Pn 02 08 05.1 -2.4
AKCZ Akaroa Harbour 3.92 213 P Pn 02 08 07.6 -2.4
FOZ Fox Glacier 5.36 235 P Pn 02 08 30.1 +0.4
OUZ Omahuta 5.69 341 P Pn 02 08 33.3 -1.0

BJI 04 02:12:37.7±0.0, 7.66S×128.58E, h5km, mB5.1/28, mb4.6/44, Ms4.8/11, Ms7 4.4/11
MOS 04 02:12:42.9±0.9, 7.35S×128.18E, h19km, mb5.0/23, Error ellipse: s-maj=14.5km s-min=7.1km az=107.5
NEIC 04 02:12:42.7±1.9, 7.32S±0.06×128.25E±0.07, h10km±1km, mb4.8/44, Error ellipse: s-maj=11.0km s-min=9.9km az=261.0
IDC 04 02:12:43.4±0.5, 7.20S×128.20E, h0km, mb4.7/15, mb1 4.8/17, mb1mx4.6/29, mbtmp4.7/17, ML4.7/2, MS4.0/14, Ms1 4.0/14, ms1mx3.8/26, Error ellipse: s-maj=22.9km s-min=12.2km az=80.0
GCMT 04 02:12:45.7±0.2, 7.08S±0.02×128.27E±0.03, h18km±1km, MW5.0/92, Moment Tensor Solution. s30,c32; s92,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.90±.20; $M_{\theta\theta}$-2.75±.12; $M_{\phi\phi}$-0.14±.11; $M_{r\theta}$-1.80±.26; $M_{\theta\phi}$0.39±.07; $M_{\phi r}$0.20±.34; Best double couple: $M_0$3.37900×10^{16} NP1:ϕ_s99.00000°, δ29.00000°, λ92.00000°. NP2: ϕ_s277.00000°, δ61.00000°, λ89.00000°. Principal axes: T 3.4270, Plg74.0000°, Azm185.0000°; N -0.0870, Plg1.0000°, Azm278.0000°; P -3.3320, Plg16.0000°, Azm8.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
DJA 04 02:12:47.7±0.2, 7°S±2°×12°8E±°, h43km±5km, M4.7/23, mb5.0/23, mB5.2/9, MLv4.8/12, Mw(mB)4.6/9, Mwp5.0/2

ISC 04 02:12:47.5±0.3, 7.25S±0.03×128.31E±0.04, h35km, n199, σ2.05/211, mb4.8/51, MS3.9/12, 11C-5D, Banda Sea

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
SAUI Saumlaki 3.05 104 P Pn 02 13 31.3 -1.9
SAUI Saumlaki 3.05 104 Pn Pn 02 13 31.6 -1.7
SAUI Sn Sn 02 14 11.0 +2.5
BNDI Bandanaira 3.14 30 P Pn 02 13 32.2 -2.3
BNDI S Sn 02 14 02.8 -8.0
AAI Ambon 3.54 358 P Pn 02 13 35.1 -5.0
AAI S Sn 02 14 13.9 -6.9
MSAI Masohi 3.93 9 P Pn 02 13 43.0 -2.4
MSAI S Sn 02 14 25.3 -5.0
NLAI Namlea 4.17 343 P Pn 02 13 46.3 -2.3
SOEI Soe 4.71 238 P Pn 02 13 57.5 +1.3
SOEI S Sn 02 14 53.8 +4.1
SOEI Soe 4.71 238 Pn 02 13 52.5 -3.7
SOEI Sn Sn 02 14 51.0 +1.3
SANI Sanana 5.66 336 P Pn 02 14 09.1 -0.1
0.2nm830nm48nm,0.6s
FAKI Fak Fak 5.82 43 P Pn 02 14 11.9 +0.5
0.4nm3μm107nm,0.7s
FAKI S Sn 02 15 15.2 -1.8
0.4nm3μm107nm,0.7s
FAKI Fak Fak 5.82 43 Pn 02 14 10.7 -0.7
FAKI Sn Sn 02 15 17.7 +0.7
MTN Manton Dam 6.21 154 P Pn 02 14 19.6 +2.9
baz=6.3,SNR=24
MTN Manton Dam 6.21 154 Pn 02 14 12.8 -3.9
MTN Sn Sn 02 15 23.6 -2.9
LBMI Labuha 6.62 353 P Pn 02 14 20.8 -1.6
0.5nm2μm123nm,1.3s
KDU Kakadu 6.78 143 P Pn 02 14 26.5 +2.0
baz=6.8,SNR=146
SIJI Sorong 6.99 25 Pn Pn 02 14 28.2 +0.7
10nm,0.3s,baz=191,slow=5.3,SNR=8.2
SIJI LR LR 02 16 42.4
comp=Z,946nm,21.0s,baz=187,slow=34
SWI Sorong 7.00 25 P Pn 02 14 25.1 -2.4
0.4nm2μm144nm,0.9s
RKPI Ransiki, Papua 8.17 46 P Pn 02 14 43.8 +0.2
1.0nm94nm,0.6s
LUWI Luwuk 8.28 318 P Pn 02 15 03.3 +18
WSI Waingapu 8.28 253 P Pn 02 14 39.9 -5.3
KNRA Kununurra 8.38 177 P Pn 02 14 48.3 +1.8
baz=8.5,SNR=176
KNRA Kununurra 8.38 177 Pn 02 14 44.5 -2.1
PLAI Plampang 10.55 261 P Pn 02 15 16.8 +0.5
42nm,0.8s
FITZ Fitzroy Crossi 11.09 193 P Pn 02 15 22.1 -1.6
baz=11,SNR=55
FITZ Fitzroy Crossi 11.09 193 Pn Pn 02 15 22.4 -1.3
4.5nm,0.3s,baz=33,slow=12,SNR=53
FITZ Sn Sn 02 17 21.7 -4.8
2.6nm,0.3s,baz=244,slow=12,SNR=4.7
FITZ LR LR 02 20 11.8
comp=Z,2μm,21.1s,baz=24,slow=40
WB0 Warramunga Arr 13.77 155 Pn 02 15 58.6 -1.7
WRAB Tennant Creek 13.90 156 Pn 02 15 59.0 -3.1
WRAB Tennant Creek 13.90 156c iP Pn 02 16 00.8 -1.3
WRAB pmax pmax
comp=Z,18nm,0.8s
WRA Warramunga Arr 13.90 156 Pn Pn 02 16 00.0 -2.1
comp=Z,2.5nm,0.3s,baz=333,slow=11,SNR=81
WRA Sn Sn 02 18 27.4 -8.0
comp=Z,4.5nm,0.3s,baz=328,slow=22,SNR=12
WRA LR LR 02 21 40.4
comp=Z,1μm,21.9s,baz=325,slow=38
WRA Warramunga Arr 13.90 156 Pn 02 15 56.9 -5.2
WB2 Warramunga Arr 13.91 156 Pn 02 15 59.8 -2.4
WR0 Warramunga Arr 14.00 155 Pn 02 16 01.9 -1.6
KCP Kidapawan 14.53 347⇑iP Pn 02 16 09.8 -0.9
COEN Coen 16.05 116 P Pn 02 16 30.3 -0.4
baz=16,SNR=15
COEN Coen 16.05 116 Pn 02 16 27.8 -2.9
COEN IAmb IAmb 02 16 37.1
comp=Z,38nm,0.8s
PSA00 Pilbara Seismi 16.42 209 P Pn 02 16 34.3 -1.0
PSA00 IAmb IAmb 02 16 44.8
comp=Z,45nm,0.8s
QIS Mount Isa 17.16 142 P P 02 16 45.1 -1.0
baz=17,SNR=18
AS31 Alice Springs 17.18 162 P Pn 02 16 42.9 -2.0
ASAR Alice Springs 17.18 162 P Pn 02 16 43.7 -1.2
comp=Z,2.3nm,0.3s,baz=332,slow=8.8,SNR=86
ASAR S Sn 02 19 47.6 -7.5
comp=Z,1.3nm,0.3s,baz=328,slow=16,SNR=6.7
ASAR LR LR 02 23 29.9
comp=Z,800nm,20.6s,baz=333,slow=37
ASAR Alice Springs 17.18 162 Pn 02 16 42.7 -2.2
ASAR Alice Springs 17.18 162 P Pn 02 16 42.7 -2.2
WRKA Warakurna 17.68 180 P P 02 16 50.9 -0.9
baz=18,SNR=18
KKM Kota Kinabalu 17.89 317 Pn 02 16 51.1 -2.8
STKI Sintang 18.30 293 P Pn 02 17 10.2 +11
SBUM Sibu 18.73 300 P P 02 17 01.6 -1.8
PMG Port Moresby 18.77 98 P Pn 02 17 08.6 +4.1
comp=Z,3.0nm,0.3s,baz=261,slow=11,SNR=14
PMG LR LR 02 25 21.8
comp=Z,234nm,19.0s,baz=169,slow=40
PMG Port Moresby 18.77 98 P Pn 02 17 03.5 -0.9
PMG IAmb IAmb 02 17 09.1
comp=Z,48nm,0.8s
PMG Port Moresby 18.77 98⇑iP Pn 02 17 06.8 +2.3
PMG pmax pmax
comp=Z,252nm,1.4s
MTSU Mount Surprise 18.97 126 P Pn 02 17 08.3 +1.4
baz=19,SNR=38
KSM Kuching 19.95 295 P P 02 17 15.3 -1.4
GIRL Giralia 20.44 220 P Pn 02 17 24.7 +0.5
baz=21,SNR=6.5
MEEK Meekatharra 21.37 204 P P 02 17 33.4 +1.4
baz=22,SNR=25
CTA Charters Tower 21.57 128 P P 02 17 38.8 +4.6
comp=Z,16nm,0.7s,baz=304,slow=14,SNR=13
QLP Quilpie 24.47 144 P P 02 18 05.7 +2.4
baz=25,SNR=26
MORW Morawa 24.59 207 P P 02 18 06.6 +2.1
baz=25,SNR=10
MORW Morawa 24.59 207 P P 02 18 03.0 -1.5
KMBL Kambalda 24.73 193 P P 02 18 07.6 +1.9
baz=25,SNR=8.2
BLDU Ballidu 25.66 204 P P 02 18 15.6 +1.5
baz=26,SNR=23
KLBR Kellerberrin 26.14 201 P P 02 18 20.4 +1.9
baz=26,SNR=10
BBOO Buckleboo 26.43 165 P P 02 18 23.6 +2.5
baz=27,SNR=18
BBOO Buckleboo 26.43 165 P P 02 18 18.6 -2.4
BBOO IAmb IAmb 02 18 27.6
comp=Z,15nm,0.7s
MUN Mundaring 27.07 203 P P 02 18 28.5 +1.8
baz=27,SNR=3.6
STKA Stephens Creek 27.45 155 P P 02 18 32.4 +2.1
baz=28,SNR=20
STKA Stephens Creek 27.45 155 P P 02 18 32.2 +1.9
comp=Z,14nm,0.6s,baz=323,slow=9.7,SNR=37
STKA LR LR 02 30 26.4
comp=Z,575nm,18.4s,baz=323,slow=39
STKA Stephens Creek 27.45 155 P P 02 18 28.4 -1.9
STKA Stephens Creek 27.45 155 P P 02 18 28.4 -1.9
STKA pmax pmax
comp=Z,3.0nm,0.7s
SDSI Sungai Dareh 27.53 282 P P 02 18 30.8 -0.3
NWAO Narrogin (SRO) 27.54 200 P P 02 18 32.6 +1.6
baz=28,SNR=7.9
NWAO Narrogin (SRO) 27.54 200 P P 02 18 32.5 +1.4
comp=Z,15nm,0.7s,baz=28,slow=7.7,SNR=10
NWAO Narrogin (SRO) 27.54 200 P P 02 18 27.6 -3.4
NWAO IAmb IAmb 02 18 36.1
comp=Z,25nm,0.8s
NWAO Narrogin (SRO) 27.54 200 P P 02 18 30.0 -1.1
NWAO IAmb IAmb 02 18 36.2
comp=Z,22nm,0.9s
NWAO Narrogin (SRO) 27.54 200 P P 02 18 30.0 -1.1
NWAO pmax pmax
comp=Z,22nm,0.9s
HTT Hallett 27.84 161 P P 02 18 36.2 +2.4
baz=28,SNR=3.2
CMSA Cobar Meteorol 29.11 148 P P 02 18 47.4 +2.4
baz=29,SNR=12
RPSI Rantau Prapat 30.95 288 P P 02 19 00.5 -1.0
PSI Prapat 30.98 288 P P 02 19 01.9 -0.1
comp=Z,29nm,1.0s,baz=154,slow=3.7,SNR=21
PSI Prapat 30.98 288 P P 02 19 00.5 -1.5
PSI pmax pmax
comp=Z,31nm,0.9s
YNG Young 32.68 148 P P 02 19 19.1 +2.5
baz=33,SNR=8.7
TOO Toolangi 33.98 155 P P 02 19 31.8 +3.9
baz=34,SNR=6.2
SLVN Son La 37.16 320 P P 02 19 53.6 -1.8
CMAR Chiang Mai Arr 38.63 312 P P 02 20 08.0 +0.3
comp=Z,1.2nm,0.3s,baz=133,slow=6.6,SNR=6.8
CMAR PcP PcP 02 22 21.6 +1.8
comp=Z,1.3nm,0.3s,baz=167,slow=2.7,SNR=5.0
CMAR LR LR 02 38 16.2
comp=Z,180nm,18.6s,baz=147,slow=40
GYA Guiyang 39.55 329 eP P 02 20 16.9 +1.4
GYA pmax pmax
comp=Z,10.0nm,0.9s
WHN Wuhan 39.90 341 P P 02 20 19.8 +1.7
NJ2 Nanjing 40.11 347 eP P 02 20 22.1 +2.2
NJ2 pmax pmax
comp=Z,8.0nm,0.9s
KSAR Wonju Array Be 44.46 360 P P 02 20 53.8 -1.5
KSAR Wonju Array Be 44.46 360 P P 02 20 53.8 -1.5
KSRS Korea Array 44.48 360 P P 02 20 56.4 +1.1
comp=Z,6.5nm,1.0s,baz=181,slow=11,SNR=11
KSRS LR LR 02 37 39.0
comp=Z,146nm,20.0s,baz=164,slow=34
MJAR Matsushiro Arr 44.54 11 P P 02 20 55.9 -0.1
comp=Z,20nm,1.0s,baz=186,slow=9.7,SNR=20
MJAR LR LR 02 37 32.7
comp=Z,117nm,21.3s,baz=190,slow=34
MJAR Matsushiro Arr 44.54 11 P P 02 20 55.6 -0.3
MJAR Matsushiro Arr 44.54 11 P P 02 20 55.6 -0.3
MJAR pmax pmax
comp=Z,5.0nm,1.1s
MAJO Matsushiro 44.54 11 P P 02 20 54.5 -1.4
MAJO IAmb IAmb 02 21 02.2
comp=Z,23nm,1.0s
MAJO Matsushiro 44.54 11⇓iP P 02 20 56.3 +0.3
MAJO pmax pmax
comp=Z,28nm,1.1s
MAT Matsushiro 44.54 11 P P 02 20 56.5 +0.5
MAT S S 02 27 33.6 +4.3
MJB9 Matsu-Tunnel 44.55 11 IAmb IAmb 02 21 02.2
comp=Z,24nm,1.0s
CD2 Chengdu 44.64 329 P P 02 20 58.3 +1.4
CD2 pmax pmax
comp=Z,10.0nm,0.5s
XAN Xi'an 44.99 337 P P 02 20 59.0 -0.6
XAN pP pP 02 21 08.0 -0.9
XAN pmax pmax
comp=Z,7.0nm,1.3s
XAN pmax pmax
comp=Z,150nm,5.5s
LZH Lanzhou 48.86 334 eP P 02 21 31.0 +1.0
LZH pP pP 02 21 34.5 -4.9
LZH sP pwP 02 21 35.8 -8.0
LZH ePP PP 02 23 25.2 +1.6
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,78nm,6.5s
LZH LR LR
comp=Z,350nm,14.5s
LZH LR LR
comp=Z,360nm,14.2s
LZH LR LR
comp=Z,470nm,17.3s
MSHR Mys Shultsa 49.66 3⇓iP P 02 21 37.5 +1.8
HHC Hu-ho-hao-te 50.28 343 eP P 02 21 43.7 +3.0
HHC pmax pmax
comp=Z,99nm,5.8s
LSA Lhasa 51.24 318 P P 02 21 47.5 -1.0
LSA IAmb IAmb 02 21 56.1
comp=Z,9.4nm,0.7s
LSA Lhasa 51.24 318 P P 02 21 47.5 -1.0
LSA pmax pmax
comp=Z,9.0nm,0.7s
USA0B Ussuriysk Arra 51.32 3⇑iP P 02 21 49.7 +1.5
USRK Ussuriysk Ar. 51.32 3 P P 02 21 49.4 +1.1
comp=Z,3.1nm,0.6s,baz=181,slow=7.1,SNR=6.9
USRK LR LR 02 43 54.4
comp=Z,102nm,19.6s,baz=159,slow=36
USRK Ussuriysk Ar. 51.32 3 P P 02 21 48.2 0.0
USRK Ussuriysk Ar. 51.32 3 P P 02 21 48.3 0.0
MDJ Mudanjiang 51.64 1 IAmb IAmb 02 22 03.9
comp=Z,12nm,1.1s
RPZ Rata Peaks 52.07 141 P P 02 21 55.9 +1.9
comp=Z,7.3nm,0.5s,baz=200,slow=0.8,SNR=4.8
RPZ Rata Peaks 52.07 141 P P 02 21 53.6 -0.4
ODAN Odare 52.17 312 eP P 02 21 56.5 +1.3
TAPN Taplejung 52.22 313 eP P 02 21 56.9 +1.3
RAMN Ramite 52.80 312 eP P 02 22 01.4 +1.5
comp=Z,60nm,1.1s
GTA Gaotai 53.41 333 ⇑P P 02 22 04.4 +0.4
GTA pP pP 02 22 09.1 -4.4
GTA sP pwP 02 22 11.2 -6.7
GTA PcP PcP 02 23 10.1 -0.9
GTA pmax pmax
comp=Z,9.0nm,1.2s
GTA pmax pmax
comp=Z,68nm,4.8s
GTA LR LR
comp=Z,120nm,19.7s
GTA LR LR
comp=Z,140nm,19.4s
JIRN Jiri 53.50 312 eP P 02 22 06.4 +1.2
GUN Gumba 53.87 312 eP P 02 22 09.1 +1.2
comp=Z,32nm,0.7s
DMN Daman 54.27 312 eP P 02 22 11.5 +0.8
HYB Hyderabad 54.93 297 i P P 02 22 14.0 -1.4
KOLN Koldanda 55.48 311 eP P 02 22 20.2 +0.8
comp=Z,55nm,1.2s
DANN Dangsing 55.67 312 eP P 02 22 20.8 -0.1

KLR Kul'dur 56.33 3⇑*i*P P 02 22 24.5 -0.3
KLR pmax pmax
comp=Z,8.0nm,1.2s
ULN Ulaanbaatar 58.01 343 P P 02 22 37.2 +0.3
ULN IAmb IAmb 02 22 40.6
comp=Z,8.3nm,0.9s
ULN Ulaanbaatar 58.01 343 P P 02 22 37.2 +0.3
ULN pmax pmax
comp=Z,8.0nm,0.9s
SONM Songino Array 58.17 343 P P 02 22 38.7 +0.7
comp=Z,8.6nm,1.1s,baz=168,slow=6.2,SNR=32
SONM Songino Array 58.17 343 P P 02 22 38.2 +0.2
SONM Songino Array 58.17 343 P P 02 22 38.2 +0.2
SONM pmax pmax
comp=Z,7.0nm,1.0s
ZAK Zakamensk 61.37 342 *e*P P 02 23 00.0 +0.1
ZAK pmax pmax
comp=Z,3.0nm,0.9s
WMQ Urumqi 62.71 328 *e*P P 02 23 10.3 +1.3
WMQ pP pP 02 23 16.2 -2.5
WMQ pmax pmax
comp=Z,11nm,1.7s
WMQ pmax pmax
comp=Z,79nm,4.3s
WMQ LR LR
comp=Z,770nm,29.2s
WMQ LR LR
comp=Z,1μm,29.1s
WMQ LR LR
comp=Z,220nm,29.3s
MOY Mondy 63.20 341 *e*P P 02 23 13.9 +1.7
MOY pmax pmax
comp=Z,48nm,3.8s
PETK Petropavlovsk- 65.10 19 P P 02 23 26.1 +1.6
comp=Z,4.9nm,0.6s,baz=182,slow=3.5,SNR=12
PETK Petropavlovsk- 65.10 19 P P 02 23 25.1 +0.6
PETK Petropavlovsk- 65.10 19 P P 02 23 25.1 +0.6
BOD Bodaibo 65.89 352 *e*P P 02 23 30.6 +1.2
BOD pmax pmax
comp=Z,17nm,1.5s
NIL Nilore 66.12 312 P P 02 23 31.2 -0.4
NIL Nilore 66.12 312 P P 02 23 31.2 -0.4
NIL pmax pmax
comp=Z,9.0nm,0.7s
KSH Kashi 67.08 318 P P 02 23 39.2 +1.5
KSH PcP PcP 02 24 08.0 +2.3
KSH PP PP 02 26 09.5 +3.6
KSH PcS 02 28 06.6
KSH S S 02 32 33.3 +3.8
KSH SKS SKSac 02 33 31.5 -1.1
KSH pmax pmax
comp=Z,67nm,1.2s
KSH pmax pmax
comp=Z,350nm,3.2s
KSH LR LR
comp=Z,140nm,4.7s
KSH LR LR
comp=Z,80nm,4.2s
KSH LR LR
comp=Z,160nm,6.4s
MK31 Makanchi Array 67.53 328 IAmb IAmb 02 23 42.9
comp=Z,8.0nm,0.8s
MKAR Makanchi Array 67.53 328 P P 02 23 40.9 +0.7
comp=Z,7.3nm,0.6s,baz=126,slow=6.9,SNR=97
MKAR Makanchi Array 67.53 328 P P 02 23 40.6 +0.4
MAKZ Makanchi 67.71 328 P P 02 23 41.5 +0.2
MAKZ IAmb IAmb 02 23 42.6
comp=Z,7.9nm,0.9s
MAKZ Makanchi 67.71 328 P P 02 23 41.5 +0.2
MAKZ pmax pmax
comp=Z,8.0nm,0.9s
MA2 Magadan 68.98 12⇓*i*P P 02 23 50.6 +1.6
MA2 pmax pmax
comp=Z,14nm,1.4s
YAK Yakutsk 69.08 1 *e*P P 02 23 48.0 -1.5
YAK *e**PP pP 02 23 59.8 +0.3
YAK *e* 02 24 08.1
YAK *e*PPP PPP 02 28 04.1
YAK *e*S S 02 32 53.5 +1.3
YAK *e* 02 33 50.4
YAK *e*SS SS 02 37 20.3 +1.4
YAK pmax pmax
comp=Z,17nm,1.1s
YAK pmax pmax
comp=N,9.0nm,1.2s
YAK pmax pmax
comp=E,3.0nm,1.2s
YAK pmax pmax
comp=Z,189nm,4.7s
YAK pmax pmax
comp=E,89nm,5.1s
YAK pmax pmax
comp=N,134nm,4.9s
YAK smax smax
comp=N,109nm,3.8s
YAK smax smax
comp=E,92nm,3.5s
KBL Kabul 69.65 311 P P 02 23 53.4 -0.5
KBL IAmb IAmb 02 23 58.4
comp=Z,4.4nm,0.8s
KBL Kabul 69.65 311 P P 02 23 53.4 -0.5
KBL pmax pmax
comp=Z,4.0nm,0.8s
AAK Ala-Archa 69.66 321 P P 02 23 53.5 -0.3
AAK Ala-Archa 69.66 321⇓*i*P P 02 23 55.3 +1.5
AAK pmax pmax
comp=Z,15nm,1.1s
BTK Batken 70.80 317 IAmb IAmb 02 24 08.1
comp=Z,5.9nm,0.8s
ZALV Zalesovo Beam 71.08 335 P P 02 24 02.1 +0.1
comp=Z,20nm,0.9s,baz=116,slow=3.4,SNR=66
ZALV LR LR 02 57 29.9
comp=Z,46nm,20.1s,baz=118,slow=38
KURK Kurchatov 71.87 329 P P 02 24 07.4 +0.6
KURK Kurchatov 71.87 329*c i*P P 02 24 07.3 +0.5
KURK pmax pmax
comp=Z,50nm,1.2s
SEY Seymchan 72.37 11⇑*i*P P 02 24 10.7 +1.2
VNDA Vanda 72.40 173 P P 02 24 12.0 +2.4
comp=Z,7.0nm,0.9s,baz=336,slow=7.7,SNR=5.7
VNDA LR LR 02 55 44.9
comp=Z,241nm,18.6s,baz=333,slow=36
KKAR Karatay Array 72.43 319 P P 02 24 09.9 -0.5
KKAR Karatay Array 72.43 319 P P 02 24 09.9 -0.5
BRVK Borovoye 77.46 328 P P 02 24 38.6 -0.6
BRVK IAmb IAmb 02 24 49.4
comp=Z,15nm,1.0s
BRVK Borovoye 77.46 328 P P 02 24 38.6 -0.6
BRVK pmax pmax
comp=Z,15nm,1.0s
TIXI Tiksi 78.74 0 P P 02 24 44.8 -1.1
TIXI IAmb IAmb 02 24 52.3
comp=Z,6.8nm,0.8s
TIXI Tiksi 78.74 0⇓*i*P P 02 24 45.8 -0.1
TIXI pmax pmax
comp=Z,7.0nm,1.2s
GEYT Alibeck 79.10 311 P P 02 24 49.3 +0.6
comp=Z,1.1nm,0.8s,baz=199,slow=14,SNR=6.6
GEYT LR LR 03 05 31.8
comp=Z,42nm,20.2s,baz=355,slow=40
GEYT Alibeck 79.10 311 P P 02 24 48.2 -0.5
BILL Bilibino 79.75 14 *e*P P 02 24 52.7 +1.2
BILL *e* 02 25 00.3
BILL *e* 02 27 55.4
BILL pmax pmax
comp=Z,1.0nm,1.0s
ABKAR Akbulak array 81.67 322 P P 02 25 01.8 -0.3
QSPA South Pole Qui 82.72 180 P P 02 25 09.0 +1.4
comp=Z,3.5nm,0.7s,baz=292,slow=4.1,SNR=9.3
QSPA South Pole Qui 82.72 180 P P 02 25 06.6 -1.0
ARU Arti 85.04 328*c i*P P 02 25 19.8 +0.5
ARU 02 28 32.4
ARU S S 02 35 44.3 -1.7
ARU SS SS 02 41 26.0 +6.1
ARU pmax pmax
comp=Z,13nm,1.3s
RAYN Ar Rayn 86.32 294 P P 02 25 25.6 -0.9
RAYN IAmb IAmb 02 25 33.3
comp=Z,5.3nm,1.0s
RAYN Ar Rayn 86.32 294 P P 02 25 25.6 -0.9
RAYN pmax pmax
comp=Z,5.0nm,1.0s
SHA1 Shidzhatmaz 91.83 314⇑*i*P P 02 25 51.6 -0.8
CCB Clear Creek Bu 93.88 25 IAmb IAmb 02 26 01.1
comp=Z,7.9nm,1.2s

ILAR Eielson Array 94.29 25 P P 02 26 01.8 -1.1
comp=Z,1.1nm,1.0s,baz=291,slow=3.7,SNR=6.3
ILAR PP PP 02 29 46.0 -4.1
comp=Z,0.6nm,1.0s,baz=254,slow=8.0,SNR=4.6
ILAR Eielson Array 94.29 25 P P 02 26 02.3 -0.6
ILAR Eielson Array 94.29 25 P P 02 26 02.3 -0.6
PAX Paxson 94.69 27 IAmb IAmb 02 26 06.3
comp=Z,7.5nm,1.1s
SNAA Sanae 95.02 194 P P 02 26 08.2 +1.9
BMAR Burnt Mountain 95.53 23 P P 02 26 09.1 +0.5
OBN Obninsk 96.89 325 *e*P P 02 26 13.9 -1.0
OBN *e* 02 30 11.8
OBN pmax pmax
comp=Z,4.0nm,1.1s
BOSA Boshof 97.89 240 LR LR 03 08 05.9
comp=Z,42nm,18.5s,baz=102,slow=34
YKA Yellowknife Ar 108.71 26 PKiKP PKiKP 02 31 13.6 +1.1
comp=Z,0.1nm,0.5s,baz=286,slow=3.2,SNR=4.7
PDAR Pinedale Array 118.26 45 PKP PKiKP 02 31 32.5 +0.8
comp=Z,0.3nm,0.8s,baz=195,slow=1.8,SNR=3.1
WUAZ Wupatki 118.75 53 PKPdf 02 31 30.6 -2.1
O20A White River Ci 119.98 48 PKPdf 02 31 34.2 -0.8
ANMO Albuquerque 122.80 53 PKPdf 02 31 39.6 -1.0
ANMO Albuquerque 122.80 53*c i*PKIKP PKiKP 02 31 42.4 +1.6
ANMO pmax pmax
comp=Z,9.0nm,2.5s
MNTX Cornudas Mount 124.49 56 PKPdf 02 31 42.9 -0.8
TXAR Lajitas Array 126.49 59 PKP PKiKP 02 31 49.1 +1.0
comp=Z,0.7nm,0.9s,baz=234,slow=1.1,SNR=4.6
TXAR Lajitas Array 126.49 59 PKPdf 02 31 47.1 -0.6
TORD Torodi Ar. Bea 127.21 281 PKP PKiKP 02 31 50.1 +0.3
comp=Z,1.4nm,1.1s,baz=88,slow=1.3,SNR=5.7
TORD Torodi Ar. Bea 127.21 281 PKPdf 02 31 48.2 -1.1
JCT Junction City 129.43 56 PKPdf 02 31 51.5 -1.7
JCT Junction City 129.43 56 PKIKP PKPdf 02 31 51.5 -1.7
CPUP Villa Florida 146.17 171 PKPbc PKPab 02 32 25.9 +0.5
comp=Z,1.5nm,0.5s,baz=207,slow=1.0,SNR=6.6
CPUP Villa Florida 146.17 171 PKP2 PKPab 02 32 26.0 +0.5
JTS Las Juntas de 147.00 82 PKPdf PKPdf 02 32 23.8 -1.8
JTS Las Juntas de 147.00 82 PKIKP PKPdf 02 32 23.8 -1.8
GO01 Chusmiza 148.18 147 PKPab PKPdf 02 32 32.6 -0.4
MNMC Minye Minye 148.40 146 PKPdf PKPdf 02 32 26.5 -1.6
LPAZ La Paz 151.50 145 PKIKP PKiKP 02 32 41.5 +1.4
comp=Z,3.4nm,0.6s,baz=179,slow=2.8,SNR=10
LPAZ La Paz 151.50 145 PKPbc PKPbc 02 32 37.9 -1.8
LPAZ La Paz 151.50 145 PKIKP PKPbc 02 32 37.9 -1.8
LGNH Logne 156.77 59 PKPdf 02 32 38.4 -1.7

THE ***04*** *02:22:48.8, 38°.19N×20°.42E, h14km, ML2.8/7, Error ellipse: s-maj=1.0km s-min=0.5km az=259.0*
ATH ***04*** *02:22:48.2, 38°.17N×20°.41E, h16km, ML2.6/7, Error ellipse: s-maj=1.7km s-min=1.0km az=249.0*
ISC 04 02:22:48.5±1.0, 38°.18N±0°.02×20°.42E±0°.04, h15km±4km, n44, σ0s.38/64, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	**Lixouri, Cepha**	**0.02**	**38**	P	**Pg**	**02 22 51.1**	**0.0**
LXR1				S	**Sg**	**02 22 53.1**	**+0.3**
CHV1	**Chavriata, Kef**	**0.03**	**271**	P	**Pg**	**02 22 51.0**	**-0.1**
CHV1				S	**Sg**	**02 22 52.9**	**0.0**
ARG2	**Argostoli**	**0.05**	**95**	P	**Pg**	**02 22 51.2**	**-0.1**
ARG2				S	**Sg**	**02 22 52.9**	**-0.2**
KEF2	**Argostoli. Kep**	**0.06**	**108**	P	**Pg**	**02 22 51.1**	**-0.2**
KEF2				S	**Sg**	**02 22 52.9**	**-0.2**
KEF3	**Kipouria, Keph**	**0.06**	**290**	P	**Pg**	**02 22 51.2**	**-0.1**
KEF3				S	**Sg**	**02 22 53.3**	**+0.1**
KEF4	**Livadi, Kephal**	**0.07**	**3**	P	**Pg**	**02 22 51.4**	**-0.1**
KEF4				S	**Sg**	**02 22 53.9**	**+0.5**
KEF1	**Kardakata, Kep**	**0.10**	**23**	P	**Pg**	**02 22 51.8**	**0.0**
KEF1				S	**Sg**	**02 22 54.3**	**+0.4**
VLS	**Valsamata**	**0.13**	**92**	P	**Pg**	**02 22 52.0**	**-0.2**
VLS				S	**Sg**	**02 22 54.6**	**0.0**
	28μm,0.1s						
VLS	**Valsamata**	**0.13**	**92**	P	**Pg**	**02 22 52.0**	**-0.2**
VLS				S	**Sg**	**02 22 54.6**	**0.0**
VLS				AML	AML	02 22 54.7	
	comp=N,35432μm,0.2s						
VLS				AML	AML	02 22 54.9	
	comp=E,72160μm,0.1s						
VSK1	**VASILIKIADES**	**0.25**	**27**	P	**Pg**	**02 22 53.9**	**-0.1**
VSK1				S	**Sg**	**02 22 58.5**	**+0.8**
	comp=E,4μm,0.1s						
FSK	**Fiskardo**	**0.30**	**22**	P	**Pg**	**02 22 54.8**	**0.0**
FSK				S	**Sg**	**02 22 59.7**	**+0.7**
	comp=E,1μm,0.3s						
FSK	**Fiskardo**	**0.30**	**22**	P	**Pg**	**02 22 54.8**	**0.0**
FSK				S	**Sg**	**02 22 59.6**	**+0.5**
FSK				AML	AML	02 23 00.7	
	comp=E,3004μm,0.1s						
FSK				AML	AML	02 23 03.2	
	comp=N,2346μm,0.5s						
KFL	**Anninata**	**0.30**	**104**	P	**Pg**	**02 22 54.6**	**-0.1**
KFL				S	**Sg**	**02 22 59.3**	**+0.3**
KFL	**Anninata**	**0.30**	**104**	P	**Pg**	**02 22 54.6**	**-0.1**
KFL				S	**Sg**	**02 22 59.0**	**-0.1**
VLMS	**Volimes, Zakyn**	**0.36**	**148**	P	**Pg**	**02 22 55.6**	**-0.3**
VLMS				S	**Sg**	**02 23 01.4**	**+0.5**
VLMS				AML	AML	02 23 02.0	
	comp=E,7632μm,0.3s						
VLMS				AML	AML	02 23 03.5	
	comp=N,6579μm,0.2s						
EVGI	**Lefkada island**	**0.47**	**23**	P	**Pg**	**02 22 57.6**	**-0.4**
EVGI				S	**Sb**	**02 23 05.4**	**0.0**
EVGI	**Lefkada island**	**0.47**	**23**	P	**Pg**	**02 22 57.7**	**-0.2**
ZAK2	**Zakynthos**	**0.55**	**136**	P	**Pb**	**02 22 59.6**	**-0.2**
ZAK2				S	**Sb**	**02 23 08.2**	**+0.8**
	comp=N,2μm,0.2s						
MGNA	**Meganis**	**0.56**	**32**	P	**Pg**	**02 22 58.7**	**-0.8**
MGNA				AML	AML	02 23 08.7	
	comp=E,659μm,0.1s						
MGNA				AML	AML	02 23 09.3	
	comp=N,640μm,0.1s						
KRI1	**kERI**	**0.61**	**149**	P	**Pg**	**02 22 59.8**	**-0.6**
KRI1				S	**Sb**	**02 23 09.8**	**+0.6**
	comp=N,2μm,0.1s						
LKD2	**Lefkada island**	**0.63**	**17**	P	**Pg**	**02 23 00.8**	**-0.1**
LKD2	**Lefkada island**	**0.63**	**17**	P	**Pg**	**02 23 00.5**	**-0.4**
AST1	**Astakos**	**0.64**	**56**	P	**Pg**	**02 23 00.6**	**-0.4**
AST1				S	**Sb**	**02 23 10.0**	**0.0**
	comp=N,625nm,0.2s						
TSLK	**Tsoukalades, L**	**0.67**	**16**	P	**Pg**	**02 23 01.4**	**-0.2**
TSLK	**Tsoukalades, L**	**0.67**	**16**	P	**Pg**	**02 23 01.4**	**-0.2**
PDO	**Prodromos**	**0.73**	**55**	P	**Pg**	**02 23 02.0**	**-0.7**
PDO	**Prodromos**	**0.73**	**55**	P	**Pg**	**02 23 01.6**	**-1.1**
PDO				AML	AML	02 23 18.0	
	comp=N,917μm,0.4s						
PDO				AML	AML	02 23 19.2	
	comp=E,626μm,0.4s						
RLS	**Riolos of Patr**	**0.83**	**98**	P	**Pg**	**02 23 04.9**	**+0.2**
PVO	**Paravola**	**0.97**	**63**	P	**Pb**	**02 23 06.9**	**-0.1**
PVO				S	**Sg**	**02 23 20.6**	**+0.6**
	comp=E,232nm,0.5s						
PVO	**Paravola**	**0.97**	**63**	P	**Pb**	**02 23 06.9**	**-0.1**
PVO				AML	AML	02 23 23.5	
	comp=E,405μm,0.4s						
PVO				AML	AML	02 23 28.6	
	comp=N,528μm,0.6s						
DRO	**Drossia**	**1.04**	**102**	P	**Pg**	**02 23 09.2**	**+0.5**
EFP	**Efpalio**	**1.19**	**78**	P	**Pn**	**02 23 10.3**	**-0.3**
AMT	**Artemida-Makis**	**1.21**	**122**	P	**Pg**	**02 23 11.9**	**+0.1**
LAKA	**Lakka**	**1.23**	**87**	P	**Pn**	**02 23 10.4**	**-0.8**
ANX	**Ano Chora**	**1.25**	**70**	P	**Pb**	**02 23 11.8**	**-0.1**
ANX	**Ano Chora**	**1.25**	**70**	P	**Pb**	**02 23 11.7**	**-0.1**
ANX				AML	AML	02 23 35.7	
	comp=N,320μm,0.7s						
ANX				AML	AML	02 23 36.8	
	comp=E,287μm,0.6s						
SERG	**Sergoula**	**1.31**	**79**	P	**Pn**	**02 23 12.4**	**+0.1**
TRIZ	**Trizonia**	**1.31**	**82**	P	**Pn**	**02 23 12.4**	**+0.1**
IGT	**Igoumenitsa**	**1.35**	**357**	P	**Pb**	**02 23 13.6**	**+0.1**
KALE	**Kalithea**	**1.37**	**81**	P	**Pn**	**02 23 13.1**	**-0.1**
KLV	**Kalavryta, Ach**	**1.37**	**95**	P	**Pb**	**02 23 14.3**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.58**	**58**	P	**Pg**	**02 23 18.8**	**0.0**
PYL	**PYLOS**	**1.66**	**140**	P	**Pb**	**02 23 18.5**	**-0.3**
AGG	**Agios Georgios**	**1.71**	**60**	P	**Pb**	**02 23 19.4**	**-0.4**

IDC ***04*** *02:54:25.9±6.1, 4°.85S×153°.78E, h99km±41km, mb3.6/5, mb1 3.8/5, mb1mx3.4/43, mbtmp3.9/5, MS3.3/4, Ms1 3.2/4, ms1mx2.8/36, Error ellipse: s-maj=59.7km s-min=21.3km az=90.0*
ISC 04 02:54:26.1±1.5, 4°.9S±0°.2×153°.8E±0°.2, h100km, n10, σ0s.68/8, mb3.6/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.82**	**287**	P	**Pn**	**02 54 56.2**	**-0.2**
	40nm,0.3s,baz=211,slow=3.3,SNR=8.6						
KRVT				S	**Sn**	**02 55 19.7**	**+0.1**
	77nm,0.3s,baz=3.7,slow=22,SNR=15						
KRVT				LR	LR	02 55 52.3	
	comp=Z,330nm,19.4s,baz=125,slow=47						
HNR	**Honiara**	**7.63**	**127**	LR	LR	02 58 48.8	
	comp=Z,105nm,20.9s,baz=318,slow=34						
PMG	**Port Moresby**	**7.97**	**235**	LR	LR	02 59 40.8	
	comp=Z,55nm,20.8s,baz=205,slow=39						
WRA	**Warramunga Arr**	**24.14**	**230**	P	**P**	**02 59 33.2**	**+0.2**
	4.0nm,0.6s,baz=55,slow=10,SNR=23						
ASAR	**Alice Springs**	**26.77**	**224**	P	**P**	**02 59 56.8**	**-0.1**
	0.8nm,0.4s,baz=54,slow=9.0,SNR=22						
STKA	**Stephens Creek**	**29.20**	**202**	P	**P**	**03 00 18.6**	**+0.2**
	1.9nm,0.7s,baz=33,slow=14,SNR=3.5						
STKA				LR	LR	03 13 19.8	
	comp=Z,61nm,18.0s,baz=23,slow=39						
LEM	**Lembang**	**45.94**	**265**	LR	LR	03 25 34.3	
	comp=Z,157nm,18.1s,baz=225,slow=41						
SONM	**Songino Array**	**66.89**	**327**	P	**P**	**03 05 08.5**	**+0.7**
	0.4nm,0.5s,baz=140,slow=5.1,SNR=4.7						
MKAR	**Makanchi Array**	**81.01**	**319**	P	**P**	**03 06 29.9**	**0.0**
	0.3nm,0.5s,baz=95,slow=7.5,SNR=9.7						
TORD	**Torodi Ar. Bea**	**151.25**	**289**	PKPbc	**PKPbc**	**03 14 07.7**	**-1.3**
	0.9nm,0.6s,baz=59,slow=1.9,SNR=15						

IDC ***04*** *03:03:46.1±1.0, 17°.64N×105°.87W, h0km, mb4.0/13, mb1 4.2/16, mb1mx4.1/43, mbtmp4.0/16, ML3.7/3, MS4.3/25, Ms1 4.3/25, ms1mx4.2/33, Error ellipse: s-maj=34.7km s-min=13.3km az=58.0*
GCMT ***04*** *03:03:48.8±0.2, 17°.83N±0°.01×105°.88W±0°.01, h19km, MW5.1/121, Moment Tensor Solution. s64,c76; s121,c197; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.61±.12; Mθθ-3.80±.11; Mφφ4.41±.12; Mrθ-0.36±.23; Mrφ-3.61±.09; Mθφ1.44±.23; Best double couple: M0 5.63200×10^16 NP1: φs294.00000°, δ80.00000°, λ173.00000°. NP2: φs25.00000°, δ83.00000°, λ10.00000°. Principal axes: T 6.0960, Plg12.0000°, Azm250.0000°; N -0.9250, Plg77.0000°, Azm59.0000°; P -5.1680, Plg2.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MEX ***04*** *03:03:48.8±0.5, 17°.81N×105°.94W, h16km±20km, MD4.5*
NEIC ***04*** *03:03:50.0±1.5, 17°.80N±0°.07×105°.75W±0°.09, h30km±5km, Error ellipse: s-maj=13.7km s-min=8.5km az=57.0*
ANF ***04*** *03:03:54.7±0.6, 18°.05N×105°.74W, h30km, Error ellipse: s-maj=9.7km s-min=3.1km az=14.0*
ISC 04 03:03:48.3±0.6, 17°.77N±0°.06×105°.71W±0°.07, h10km, n328, σ1s.74/257, mb4.3/52, MS4.3/26, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.83**	**20**	*e*P	**Pn**	**03 04 17.0**	**-2.9**
CJM				*e*S	**Sn**	**03 04 38.7**	**-4.3**
R15V		**2.15**	**50**		**Pn**	**03 04 22.4**	**-1.9**
R15V		**2.15**	**50**	*e*P	**Pn**	**03 04 22.4**	**-1.9**
R15V				*i* S	**Sn**	**03 04 49.7**	**-1.4**
MMIG	**Aquila**	**2.31**	**77**		**Pn**	**03 04 24.2**	**-2.2**
MMIG	**Aquila**	**2.31**	**77**	*i* P	**Pn**	**03 04 24.2**	**-2.2**
MMIG				*i* S	**Sn**	**03 04 52.6**	**-2.3**
COIG	**Colima**	**2.37**	**54**	*e*P	**Pn**	**03 04 25.7**	**-1.7**
COIG				*e*S	**Sn**	**03 04 54.7**	**-1.9**
EZ5V		**2.62**	**49**		**Pn**	**03 04 30.8**	**-0.2**
EZ5V		**2.62**	**49**	*e*P	**Pn**	**03 04 30.8**	**-0.2**
EZ5V				*e*S	**Sn**	**03 05 02.6**	**-0.5**
ANIG	**Ahuacatlan**	**3.45**	**19**		**Pn**	**03 04 40.3**	**-1.9**
ANIG	**Ahuacatlan**	**3.45**	**19**	*e*P	**Pn**	**03 04 40.3**	**-1.9**
MOIG	**Morelia**	**4.69**	**65**		**Pn**	**03 04 59.3**	**0.0**
H06E		**5.05**	**282**	*i* S	Sn	03 05 52.1	-10
H06E1	**SOCORRO T-PHAS**	**5.05**	**282**	T	T	03 10 01.5	
	SNR=1055						
H06S1	**SOCORRO T**	**5.08**	**282**	T	T	03 10 02.3	
	SNR=298						
H06S		**5.08**	**282**	*e*P	Pn	03 04 58.9	-5.6
H06N1	**SOCORRO T-PHAS**	**5.12**	**283**	T	T	03 10 06.9	
	SNR=32						
ARIG	**Puente Sto Nin**	**5.13**	**84**		**Pn**	**03 05 05.7**	**+0.4**
ARIG	**Puente Sto Nin**	**5.13**	**84**	*e*P	**Pn**	**03 05 05.7**	**+0.4**
CAIG	**El Cayaco**	**5.25**	**97**	*e*P	**Pn**	**03 05 07.5**	**+0.6**
CAIG				*e*S	**Sn**	**03 06 09.5**	**+2.1**
ZAIG	**Zacatecas**	**5.78**	**30**		**Pn**	**03 05 16.1**	**+1.7**
UNM	**Universidad Na**	**6.39**	**75**		**Pn**	**03 05 22.6**	**-0.2**
TLIG	**Tlapa**	**6.82**	**91**		**Pn**	**03 05 28.8**	**+0.2**
LPIG	**La Paz**	**7.62**	**326**	Pn	**Pn**	**03 05 38.9**	**-0.5**
	3.0nm,0.3s,baz=248,slow=6.6,SNR=4.4						
HPIG		**9.12**	**0**		**Pn**	**03 05 60.0**	**-0.2**
CMIG	**Matias Romero**	**10.36**	**92**	Pn	**Pn**	**03 06 19.1**	**+2.0**
	0.1nm,0.3s,baz=277,slow=7.8,SNR=6.0						
SRIG	**Santa Rosalia**	**11.25**	**329**		**Pn**	**03 06 29.8**	**+0.6**
TX31	**Lajitas Ar. Si**	**11.66**	**9**		**Pn**	**03 06 33.1**	**-1.8**
TX32	**Lajitas Array**	**11.66**	**9**		**Pn**	**03 06 34.6**	**-0.3**
TXAR	**Lajitas Array**	**11.66**	**9**	Pn	**Pn**	**03 06 38.7**	**+3.8**
	0.1nm,0.3s,baz=181,slow=14,SNR=24						
TXAR				LR	LR	03 11 05.7	
	comp=Z,2μm,21.7s,baz=0.0,slow=37						
TXAR	**Lajitas Array**	**11.66**	**9**		**Pn**	**03 06 34.3**	**-0.6**
833A	**Chaparral WMA,**	**12.00**	**28**		**Pn**	**03 06 38.7**	**-0.8**
833A	**Chaparral WMA,**	**12.00**	**28**	P	**Pn**	**03 06 42.3**	**+2.8**
	baz=211,SNR=5.5						
HSIG		**12.18**	**338**		**Pn**	**03 06 40.5**	**-1.4**
CCIG	**Comitan**	**13.07**	**95**		**Pn**	**03 06 54.2**	**-0.1**
JCT	**Junction City**	**13.75**	**22**		**Pn**	**03 07 03.1**	**-0.3**
JCT	**Junction City**	**13.75**	**22**	P	**Pn**	**03 07 05.9**	**+2.5**
	baz=205,SNR=8.1						
MNTX	**Cornudas Mount**	**13.87**	**1**		**Pn**	**03 07 04.1**	**-0.9**
MNTX	**Cornudas Mount**	**13.87**	**1**	P	**Pn**	**03 07 07.3**	**+2.3**
	baz=181,SNR=20						
319A	**Douglas**	**13.92**	**347**		**Pn**	**03 07 04.8**	**-1.0**
121A	**Cookes Peak, D**	**14.81**	**353**		**Pn**	**03 07 15.7**	**-2.4**
121A	**Cookes Peak, D**	**14.81**	**353**	P	**Pn**	**03 07 20.4**	**+2.3**
	baz=172						
435B	**Jarrell**	**14.91**	**28**	P	**Pn**	**03 07 21.9**	**+2.7**
	baz=212						
HKT	**Hockley**	**15.11**	**35**		**Pn**	**03 07 21.0**	**-0.8**
TUC	**Tucson**	**15.18**	**343**		**Pn**	**03 07 21.2**	**-1.7**
TUC				IAmb	IAmb	03 07 31.4	
	comp=Z,18nm,1.1s						
TUC	**Tucson**	**15.18**	**343**	P	**Pn**	**03 07 24.8**	**+1.9**
	baz=161						
214A	**Organ Pipe Nat**	**15.51**	**337**	P	**Pn**	**03 07 29.0**	**+1.8**
	baz=154,SNR=16						
ABTX	**Abilene, Hawle**	**15.77**	**19**	IAmb	IAmb	03 07 51.5	
	comp=Z,23nm,1.1s						
ABTX	**Abilene, Hawle**	**15.77**	**19**	P	**P**	**03 07 33.2**	**-1.3**
	baz=202,SNR=16						
WHTX	**Lake Whitney,**	**16.00**	**26**	IAmb	IAmb	03 07 49.0	
	comp=Z,39nm,1.1s						
WHTX	**Lake Whitney,**	**16.00**	**26**	P	**Pn**	**03 07 35.2**	**+1.6**
	baz=210						
Y22D	**IRIS PASSCAL I**	**16.27**	**356**	P	**Pn**	**03 07 39.1**	**+2.0**
	baz=176						
MSTX	**Muleshoe**	**16.34**	**9**	IAmb	IAmb	03 07 49.4	
	comp=Z,22nm,1.1s						
MSTX	**Muleshoe**	**16.34**	**9**	P	**Pn**	**03 07 39.8**	**+1.8**
	baz=190,SNR=17						
TEIG	**Tepich**	**16.67**	**79**	LR	LR	03 14 34.4	
	comp=Z,847nm,20.4s,baz=234,slow=38						
ANMO	**Albuquerque**	**17.12**	**358**	P	**P**	**03 07 51.0**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=171,slow=14,SNR=17						
ANMO				LR	LR	03 14 57.0	
	comp=Z,495nm,18.9s,baz=185,slow=39						
ANMO	**Albuquerque**	**17.12**	**358**	P	**P**	**03 07 49.9**	**+0.3**
ANMO	**Albuquerque**	**17.12**	**358**	P	**P**	**03 07 50.0**	**+0.3**
	baz=178						
NATX	**Nacogdoches**	**17.14**	**34**	IAmb	IAmb	03 07 57.9	
	comp=Z,51nm,1.1s						
NATX	**Nacogdoches**	**17.14**	**34**	P	**P**	**03 07 51.5**	**+1.8**
	baz=219						
441A	**DeRidder**	**17.22**	**39**	IAmb	IAmb	03 07 59.2	
	comp=Z,39nm,1.0s						
GLA	**Glamis**	**17.28**	**333**	P	**P**	**03 07 51.9**	**+0.6**
	baz=149						
X16A	**Lo Mia Camp, P**	**17.35**	**344**	IAmb	IAmb	03 08 09.5	
	comp=Z,26nm,1.1s						
AMTX	**Amarillo**	**17.42**	**11**	IAmb	IAmb	03 08 06.9	

	comp=Z,45nm,1.1s					
AMTX	Amarillo	17.42	11	P	P	03 07 53.5 +0.7
	baz=193					
IKP	In-Ko-Pah, Jac	17.53	330	P	P	03 07 55.2 +1.1
	baz=145,SNR=8.2					
SWSC	Sam W. Stewart	17.63	331	P	P	03 07 56.1 +1.1
	baz=146,SNR=7.5					
W18A	Petrified Fore	17.64	349	P	P	03 07 57.0 +1.5
	baz=167,SNR=12					
Y12C	Blythe	17.76	335	P	P	03 07 57.6 +1.0
	baz=151,SNR=13					
MONP2	Monument Peak	17.88	329	P	P	03 07 59.7 +1.6
	baz=144,SNR=12					
WMOK	Wichita Mounta	17.99	19	P	P	03 07 59.9 +0.8
	baz=202					
BC3	Big Chuckawall	18.07	333	P	P	03 08 01.7 +1.6
	baz=148,SNR=16					
PDMCI	Parker Dam,Lak	18.11	337	P	P	03 08 01.8 +1.5
	baz=153,SNR=12					
TGUH	Tegucigalpa,Un	18.11	99		Pn	03 08 00.9 +0.6
TGUH				IAmb	IAmb	03 08 14.2
	comp=Z,37nm,1.1s					
109C	Camp Elliot, M	18.21	328	P	P	03 08 02.8 +1.2
	baz=143					
IRM	Iron Mountain	18.37	334	P	P	03 08 05.0 +1.7
	baz=150,SNR=18					
WUAZ	Wupatki	18.38	345	IAmb	IAmb	03 08 16.8
	comp=Z,33nm,1.1s					
WUAZ	Wupatki	18.38	345	P	P	03 08 05.2 +1.7
	baz=163,SNR=13					
XPFO	Pion Flat	18.48	331	P	P	03 08 02.7 -2.0
PFO	Pinyon Flats O	18.48	331	P	P	03 08 02.5 -2.2
PFO	Pinyon Flats O	18.48	331	P	Pn	03 08 06.7 +1.9
	baz=146,SNR=6.3					
BELC	Belle Mtn. Jos	18.60	332	P	Pn	03 08 08.8 +2.6
	baz=148,SNR=19					
NEE2	Needles Airpor	18.70	337	P	Pn	03 08 08.6 +1.4
	baz=152					
MURC	Murrieta	18.83	329	P	P	03 08 09.8 +1.4
	baz=144					
SCI2	San Clemente I	19.04	325	P	Pn	03 08 13.5 +2.1
	baz=139					
GMRC	Granite Mounta	19.12	334	P	Pn	03 08 14.1 +1.6
	baz=150,SNR=14					
344A	Westbrook Farm	19.23	42	P	Pn	03 08 15.1 +1.5
344A				IAmb	IAmb	03 08 19.8
	comp=Z,27nm,1.1s					
BBRC	Big Bear Solar	19.24	331	P	Pn	03 08 15.5 +1.5
	baz=146					
CIS	Catalina Islan	19.30	326	P	Pn	03 08 15.5 +1.0
	baz=140					
Z41A	Richland Creek	19.30	35	IAmb	IAmb	03 08 26.4
	comp=Z,34nm,1.0s					
Z41A	Richland Creek	19.30	35	P	Pn	03 08 15.1 +0.7
	baz=220					
T25A	Trinidad	19.32	3	P	P	03 08 15.1 +1.1
	baz=184					
HEC	Hector,Ludlow	19.45	333	P	P	03 08 16.8 +1.6
	baz=148					
U32A	Winter Ranch,	19.46	16	P	P	03 08 13.9 -1.3
U32A				IAmb	IAmb	03 08 25.4
	comp=Z,26nm,1.1s					
MVCO	Mesa Verde	19.52	353	P	P	03 08 17.3 +1.2
	baz=172					
BFSC	Mount Baldy Ra	19.57	329	P	Pn	03 08 18.6 +0.7
	baz=144					
RRX	Edison Barstow	19.78	332	P	P	03 08 20.3 +1.6
	baz=146					
SNCC	San Nicolas Is	19.79	324	P	Pn	03 08 21.7 +1.4
	baz=138					
TUQ	Turquoise Moun	19.80	335	P	P	03 08 20.5 +1.5
	baz=150,SNR=11					
VBMS	Vicksburg	19.88	41	P	P	03 08 19.1 -0.7
VBMS				IAmb	IAmb	03 08 37.3
	comp=Z,23nm,0.8s					
VBMS	Vicksburg	19.88	41	P	Pn	03 08 21.9 +0.6
	baz=228					
SDCO	Great Sand Dun	19.90	0	P	Pn	03 08 22.1 +0.2
	baz=181,SNR=6.5					
MIAR	Mount Ida	19.91	31	P	Pn	03 08 21.9 +0.1
	baz=216					
DECC	Green Verdugo	19.92	328	P	P	03 08 22.2 +2.0
	baz=142					
S22A	4UR Ranch, Cre	19.92	357	IAmb	IAmb	03 08 36.1
	comp=Z,14nm,1.1s					
S22A	4UR Ranch, Cre	19.92	357	P	P	03 08 21.9 +1.4
	baz=177					
GSC	Goldstone, Bar	20.05	333	IAmb	IAmb	03 08 33.3
	comp=Z,16nm,1.1s					
GSC	Goldstone, Bar	20.05	333	P	P	03 08 23.1 +1.3
	baz=148,SNR=6.5					
TUL1	Leonard	20.09	24	IAmb	IAmb	03 08 35.0
	comp=Z,20nm,0.9s					
TUL1	Leonard	20.09	24	P	P	03 08 23.4 +1.3
	baz=209					
X40A	Basin Creek Fa	20.23	32	P	Pn	03 08 25.4 -0.2
	baz=218					
EDW2	Edwards Air Fo	20.25	330	P	P	03 08 25.8 +1.8
	baz=144					
SHOC	Shoshone, Teco	20.34	335	P	P	03 08 26.5 +1.7
	baz=150					
W39A	Magazine	20.34	29	IAmb	IAmb	03 08 39.7
	comp=Z,17nm,1.1s					
W39A	Magazine	20.34	29	P	Pn	03 08 26.6 -0.3
	baz=215,SNR=6.7					
OSI	Osito Audit: C	20.40	328	P	Pn	03 08 27.9 +0.3
	baz=142					
SCZ2	Santa Cruz Isl	20.40	325	P	P	03 08 27.8 +2.3
	baz=139					
SHPR	Sheep Range	20.44	338	P	P	03 08 25.6 -0.4
SHPR				IAmb	IAmb	03 08 35.9
	comp=Z,16nm,1.1s					
LRMC	Laurel Mtn Rad	20.59	331	P	P	03 08 29.3 +1.6
	baz=146					
ACON	Acoyapa	20.66	103	P	P	03 08 29.4 +0.9
ACON				IAmb	IAmb	03 08 33.1
	comp=Z,21nm,1.1s					
UALR	University of	20.71	33	IAmb	IAmb	03 08 41.0
	comp=Z,16nm,0.9s					
ARVC	Arvin	20.86	329	P	P	03 08 32.3 +1.9
	baz=142					
MPMC	Manual Prospec	20.99	333	P	P	03 08 33.1 +1.0
	baz=147,SNR=17					
FURC	Furnace Creek,	21.07	334	P	P	03 08 33.7 +1.1
	baz=149,SNR=7.2					
W41B	Gary Mavity, V	21.07	32	IAmb	IAmb	03 08 51.3
	comp=Z,14nm,1.0s					
W41B	Gary Mavity, V	21.07	32	P	P	03 08 34.2 +1.5
	baz=218					
ISA	Isabella, Lake	21.11	330	P	P	03 08 34.5 +1.3
	baz=144,SNR=8.0					
Q24A	Divide	21.12	1	P	P	03 08 34.0 +0.4
	baz=182					
WHAR	Wooly Hollow	21.14	32	IAmb	IAmb	03 08 41.8
	comp=Z,16nm,1.1s					
HHAR	Hobbs	21.17	27	IAmb	IAmb	03 08 46.5
	comp=Z,15nm,0.9s					
PKM	Mcpherson Peak	21.18	326	P	P	03 08 35.9 +1.8
	baz=140					
TPNV	Topopah Spring	21.24	336	IAmb	IAmb	03 08 45.4
	comp=Z,24nm,1.1s					
TPNV	Topopah Spring	21.24	336	P	P	03 08 36.0 +1.2
	baz=151,SNR=23					
X43A	Marvell	21.29	36	P	P	03 08 35.8 +0.7
	baz=223					
KSCO	Kaye Shedlock'	21.33	7	P	P	03 08 36.5 +0.9
KSCO	Kaye Shedlock'	21.33	7	P	P	03 08 36.3 +0.6
	baz=188					
JTS	Las Juntas de	21.46	108	P	P	03 08 38.4 +1.3
	comp=Z,7.9nm,1.0s,baz=4.1,slow=14,SNR=3.4					
JTS	Las Juntas de	21.46	108	P	P	03 08 37.1 0.0
JTS				IAmb	IAmb	03 08 54.9
	comp=Z,19nm,1.1s					
VES	Vestal, Richgr	21.55	329	P	P	03 08 38.8 +1.0
	baz=143,SNR=8.5					
CWC	Cottonwood Cre	21.57	332	P	P	03 08 39.0 +0.7
	baz=146					
SMMC	Simmler	21.60	327	P	P	03 08 39.4 +0.9
	baz=140					
CBKS	Cedar Bluff	21.60	13	P	P	03 08 39.1 +0.7
	baz=196,SNR=6.0					
U40A	Yellville	21.72	29	IAmb	IAmb	03 08 52.9
	comp=Z,10nm,1.1s					
U40A	Yellville	21.72	29	P	P	03 08 40.3 +0.5
	baz=215					
GRAC	Grapevine Rang	21.73	334	P	P	03 08 41.2 +1.4
	baz=148,SNR=8.8					
ISCO	Idaho Springs	21.95	0	P	P	03 08 42.4 -0.1
	baz=180					
VOG	Valley Oaks Go	22.08	329	P	P	03 08 44.7 +1.2
	baz=143					
OXF	Oxford	22.13	38	P	P	03 08 45.2 +1.1
	baz=226					
TIN	Tinemaha, Big	22.15	333	P	P	03 08 45.8 +1.3
	baz=147					
R11A	Troy Canyon, C	22.24	339	P	P	03 08 46.6 +1.1
	baz=154,SNR=11					
LCAR	Lake Charles	22.32	32	IAmb	IAmb	03 08 58.8
	comp=Z,17nm,1.1s					
O20A	White River Ci	22.39	355	IAmb	IAmb	03 09 03.2
	comp=Z,18nm,0.9s					
O20A	White River Ci	22.39	355	P	P	03 08 47.5 +0.4
	baz=174					
KSU1	Kansas State U	22.68	19	P	P	03 08 50.4 +0.5
	baz=203					
NLU	North Lily Min	22.78	347	P	P	03 08 48.5 -2.7
MLAC	Mammoth, Mammo	22.89	332	P	P	03 08 53.5 +1.0
	baz=146					
OMMB	Old Mammoth Mi	22.95	332	IAmb	IAmb	03 09 11.5
	comp=Z,9.5nm,1.1s					
N23A	Red Feather La	23.04	360	P	P	03 08 54.6 +0.6
	baz=180					
DUG	Dugway, Tooele	23.17	346	IAmb	IAmb	03 09 15.7
	comp=Z,21nm,1.1s					
DUG	Dugway, Tooele	23.17	346	P	P	03 08 56.3 +1.0
	baz=162,SNR=16					
PBMO	Poplar Bluff	23.24	32	IAmb	IAmb	03 09 01.7
	comp=Z,14nm,1.1s					
PLAL	Pickwick Lake	23.25	39	IAmb	IAmb	03 09 03.0
	comp=Z,16nm,1.1s					
OGNE	Ogallala	23.31	7	P	P	03 08 56.4 -0.1
	baz=189					
NVAR	Mina Array Bea	23.34	334	P	P	03 08 57.6 +0.6
	comp=Z,3.5nm,1.0s,baz=156,slow=10.0,SNR=19					
NVAR				LR	LR	03 17 11.9
	comp=Z,579nm,21.3s,baz=172,slow=34					
NVAR	Mina Array Bea	23.34	334	P	P	03 08 55.8 -1.2
PHWY	Pilot Hill	23.45	0	IAmb	IAmb	03 09 15.9
	comp=Z,8.2nm,1.1s					
Z50A	Ashland	23.53	45	P	P	03 09 00.2 +1.5
	baz=234,SNR=8.6					
X48A	Hartselle	23.53	41	IAmb	IAmb	03 09 14.1
	comp=Z,20nm,1.1s					
CCM	Cathedral Cave	23.85	29	P	P	03 09 02.2 +0.4
CCM	Cathedral Cave	23.85	29	P	P	03 09 03.0 +1.2
	baz=216					
WAKR	Walker	23.88	333	IAmb	IAmb	03 09 19.0
	comp=Z,19nm,1.1s					
CMB	Columbia Colle	23.93	330	P	P	03 09 00.7 -2.0
656A	Willston	24.13	57	IAmb	IAmb	03 09 18.4
	comp=Z,15nm,1.1s					
WVT	Waverly	24.18	37	P	P	03 09 05.8 +0.8
	baz=226					
YERR	Yerington	24.20	334	IAmb	IAmb	03 09 08.5
	comp=Z,19nm,1.1s					
TIGA	Tifton	24.22	52	P	P	03 09 06.3 +0.9
	baz=242					
ELK	Elko	24.32	342	P	P	03 09 07.1 +0.6
	comp=Z,4.5nm,0.9s,baz=166,slow=7.1,SNR=19					
ELK	Elko	24.32	342	P	P	03 09 04.9 -1.5
ELK				IAmb	IAmb	03 09 23.0
	comp=Z,7.9nm,1.0s					
061Z	Ochoppi	24.36	66	P	P	03 09 08.9 +2.2
	baz=256					
BGNE	Belgrade	24.43	14	P	P	03 09 06.9 -0.3
	baz=198					
W49A	Belvidere	24.45	41	P	P	03 09 09.2 +1.8
	baz=230,SNR=12					
Y51A	Rockmart	24.48	45	P	P	03 09 08.9 +1.1
	baz=235,SNR=12					
V48A	Smith Brothers	24.51	39	IAmb	IAmb	03 09 21.0
	comp=Z,6.7nm,0.9s					
Z52A	Williamson	24.53	47	P	P	03 09 09.7 +1.6
	baz=237,SNR=15					
DWPF	Disney Wildern	24.57	61	P	P	03 09 07.6 -0.9
DWPF	Disney Wildern	24.57	61	P	P	03 09 10.3 +1.8
	baz=251					
VCNR	Virginia City	24.63	333	IAmb	IAmb	03 09 24.5
	comp=Z,18nm,1.1s					
K22A	Casper	24.81	359	P	P	03 09 11.3 +0.6
	baz=178					
PAHR	Pah Rah Range	24.86	334	IAmb	IAmb	03 09 15.2
	comp=Z,17nm,1.1s					
X51A	Calhoun	25.02	44	P	P	03 09 14.2 +1.7
	baz=234					
V49A	McMinnville	25.09	41	P	P	03 09 15.0 +1.8
	baz=230,SNR=9.4					
W50A	Signal Mountai	25.11	42	P	P	03 09 15.2 +1.8
	baz=232,SNR=15					
PDAR	Pinedale Array	25.13	353	P	P	03 09 14.1 +0.4
	comp=Z,1.0nm,0.7s,baz=163,slow=10,SNR=9.5					
PDAR				LR	LR	03 19 06.6
	comp=Z,1µm,18.4s,baz=164,slow=36					
PDAR	Pinedale Array	25.13	353	P	P	03 09 13.5 -0.2
060A	Indiantown	25.14	64	P	P	03 09 15.9 +2.2
	baz=254					
Y52A	Lilburn	25.15	46	P	P	03 09 15.7 +1.9
	baz=236,SNR=9.4					
154A	Montrose	25.16	50	P	P	03 09 15.4 +1.6
	baz=240					
Z53A	Monticello	25.17	48	P	P	03 09 16.2 +2.3
	baz=238,SNR=11					
GOGA	Godfrey	25.32	48	P	P	03 09 17.8 +2.5
GOGA	Godfrey	25.32	48	P	P	03 09 17.6 +2.4
	baz=238,SNR=12					
AHID	Auburn Hatcher	25.33	351	P	P	03 09 13.6 -1.9
AHID				IAmb	IAmb	03 09 29.5
	comp=Z,5.9nm,0.8s					
BEKR	Beckworth	25.41	333	IAmb	IAmb	03 09 29.1
	comp=Z,6.9nm,1.2s					
W51A	Cleveland	25.44	43	P	P	03 09 18.0 +1.7
	baz=233					
Y53A	Monroe	25.47	47	P	P	03 09 18.0 +1.3
	baz=237					
V50A	Pikevile	25.54	42	P	P	03 09 19.9 +2.6
	baz=231,SNR=13					
155A	Kite	25.63	50	P	P	03 09 19.9 +1.8
	baz=241					
U49A	Red Boiling Sp	25.66	39	P	P	03 09 19.7 +1.4
	baz=229					
Z54A	Sparta	25.67	49	P	P	03 09 20.3 +1.9
	baz=239					
ORV	Oroville	25.67	331	IAmb	IAmb	03 09 38.2
	comp=Z,7.3nm,1.1s					
X52A	Dahlonega	25.68	45	P	P	03 09 20.8 +2.2
	baz=235,SNR=15					
CPCT	Cooper Cave	25.77	43	IAmb	IAmb	03 09 30.6
	comp=Z,15nm,1.2s					
W52A	Murphy	25.94	44	IAmb	IAmb	03 09 35.1
	comp=Z,7.2nm,0.8s					
W52A	Murphy	25.94	44	P	P	03 09 23.3 +2.4
	baz=234,SNR=6.2					
X53A	Estanollee	26.03	46	P	P	03 09 23.9 +2.1
	baz=236					
V51A	Loudon	26.09	42	P	P	03 09 21.9 -0.4
V51A	Loudon	26.09	42	P	P	03 09 23.7 +1.4
	baz=232					
Y54A	Tignall	26.10	48	P	P	03 09 25.7 +3.3
	baz=238					
U50A	Jamestown	26.17	41	P	P	03 09 25.8 +2.8
	baz=231					
Z55A	Blythe	26.17	49	P	P	03 09 27.0 +4.0
	baz=240					
T49A	Edmonton	26.20	39	P	P	03 09 25.7 +2.5
	baz=228					
156A	Sylvania	26.36	51	P	P	03 09 28.7 +3.9
	baz=242					
TKL	Tuckaleechee C	26.38	43	LR	LR	03 22 36.5
	comp=Z,476nm,18.6s,baz=236,slow=42					
O03E	Paynes Creek	26.40	332	P	P	03 09 28.3 +3.1
	baz=143					
W53A	Cullowhee	26.50	45	P	P	03 09 29.5 +3.4
	baz=235					
T50A	Nancy	26.56	40	P	P	03 09 29.0 +2.5
	baz=230					
V52A	Sevierville	26.61	43	P	P	03 09 29.6 +2.7
	baz=234					
U51A	La Follette	26.66	42	P	P	03 09 30.5 +3.1
	baz=232					
X54A	Belton	26.69	47	P	P	03 09 30.8 +3.1
	baz=238					
Y55A	Saluda	26.73	48	P	P	03 09 31.4 +3.3
	baz=239					
157A	Early Branch	26.74	52	P	P	03 09 31.6 +3.4
	baz=243					
S49A	Springfield	26.80	38	P	P	03 09 31.6 +2.9
	baz=228					
H17A	Grant Village	26.85	352	IAmb	IAmb	03 09 47.4
	comp=Z,5.4nm,0.9s					
H17A	Grant Village	26.85	352	P	P	03 09 31.5 +2.2
	baz=170					
WVOR	Wild Horse Val	26.94	339	IAmb	IAmb	03 09 44.2
	comp=Z,5.9nm,1.1s					
V53A	Saluda	27.02	44	P	P	03 09 33.8 +3.0
	baz=235					
TZTN	Tazewell	27.06	42	P	P	03 09 34.0 +3.0
	baz=232					
T51A	Gray	27.07	41	P	P	03 09 34.1 +2.9
	baz=231					
U52A	Thorn Hill	27.09	42	P	P	03 09 33.9 +2.6
	baz=233					
W54A	Cherokee Point	27.11	46	P	P	03 09 33.1 +1.6
	baz=237					
L40A	Anamosa	27.19	24	P	P	03 09 31.0 -1.1
L40A				IAmb	IAmb	03 09 42.0
	comp=Z,13nm,1.1s					
YHH	Holmes Hill	27.28	352	P	P	03 09 30.9 -2.3
N02D	Trinity Center	27.36	331	P	P	03 09 36.7 +2.9
	baz=143					
YHL	Hebgen Lake	27.38	352	P	P	03 09 32.2 -2.0
RLMT	Red Lodge	27.43	355	P	P	03 09 32.9 -1.6
RLMT				IAmb	IAmb	03 09 48.5
	comp=Z,7.3nm,1.1s					
U53A	Fall Branch	27.58	43	P	P	03 09 38.6 +2.9
	baz=234					
X56A	White Oak	27.60	48	P	P	03 09 38.3 +2.4
	baz=240					
M04C	Macdoel	27.62	333	P	P	03 09 38.3 +2.1
	baz=145					
V54A	Nebo	27.66	45	P	P	03 09 39.3 +2.8
	baz=236					
KMSC	Kings Mountain	27.73	47	P	P	03 09 40.4 +3.3
	baz=238					
T52A	Hallie	27.76	42	P	P	03 09 40.0 +2.7
	baz=232					
YBH	Yreka Blue Hor	27.96	332	LR	LR	03 20 12.1
	comp=Z,655nm,19.3s,baz=155,slow=35					
DLMT	Dillon	28.10	350	IAmb	IAmb	03 09 50.5
	comp=Z,6.0nm,1.1s					
R51A	Hillsboro	28.15	39	P	P	03 09 43.4 +2.6
	baz=230					
L04D	Klamath Falls	28.18	333	P	P	03 09 41.6 +0.4
	baz=145					
J05D	Fort Rock, OR	28.63	336	P	P	03 09 45.5 +0.4
	baz=148					
T54A	Tazewell	28.64	43	P	P	03 09 45.9 +0.7
	baz=235					
BMO	Blue Mountains	28.69	343	P	P	03 09 44.3 -1.4
LAO	LASA Array	28.84	359	P	P	03 09 46.9 0.0
	baz=179					
K02D	Willamette Mer	29.16	332	P	P	03 09 50.7 +0.9
	baz=143					
T55A	Pulaski	29.19	44	P	P	03 09 51.8 +1.8
	baz=236					
Q52A	Bidwell	29.36	39	P	P	03 09 52.8 +1.3
	baz=231					
F10A	Beach Ranch, E	29.70	344	IAmb	IAmb	03 10 15.2
	comp=Z,5.7nm,1.1s					
MSO	Missoula	29.76	349	IAmb	IAmb	03 10 10.9
	comp=Z,10nm,1.1s					
MSO	Missoula	29.76	349	P	P	03 09 55.9 +0.8
	baz=164					
I03D	Drain, OR	29.83	334	P	P	03 09 57.6 +2.0
	baz=144					
EGMT	Eagleton	30.35	355	P	P	03 10 01.7 +1.4
	baz=172					
L50A	Kingsville	31.10	34	P	P	03 10 09.0 +2.2
	baz=226					
P55A	Reedsville	31.19	41	P	P	03 10 10.7 +3.0
	baz=234					
NEW	Newport	31.81	345	P	P	03 10 13.8 +0.7
	comp=Z,2.3nm,0.9s,baz=147,slow=12,SNR=4.7					
NEW				LR	LR	03 22 50.6
	comp=Z,664nm,18.7s,baz=155,slow=36					
NEW	Newport	31.81	345	IAmb	IAmb	03 10 27.7
	comp=Z,4.7nm,1.1s					
NEW	Newport	31.81	345	P	P	03 10 13.0 -0.1
	baz=159					
LTY	Liberty	31.88	341	IAmb	IAmb	03 10 30.6
	comp=Z,4.4nm,1.0s					
OTAV	Otavalo	31.98	120	P	P	03 10 13.3 -2.1
I48A	Sherman Twp	32.19	30	P	P	03 10 17.8 +1.4
	baz=222					
EYMN	Ely	32.26	18	P	P	03 10 18.2 +1.1
	baz=206					
D41A	Chassel	32.44	22		pwP	03 10 26.1 +1.4
B08A	Colville Reser	32.47	343	IAmb	IAmb	03 10 24.3
	comp=Z,3.9nm,1.0s					
F45A	CMU Biological	32.51	27	P	P	03 10 19.9 +0.6
	baz=218					
ULM	Lac du Bonnet	33.35	12	P	P	03 10 26.0 -0.5
	comp=Z,0.4nm,0.3s,baz=203,slow=9.0,SNR=3.2					
ULM				LR	LR	03 24 16.2
	comp=Z,626nm,20.7s,baz=198,slow=37					
SDV	Santo Domingo	35.20	100	P	P	03 10 42.2 -1.0
FFC	Flin Flon	36.99	4	P	P	03 10 55.7 -2.1
FFC				IAmb	IAmb	03 11 05.0
	comp=Z,6.8nm,1.1s					
BBB	Bella Bella	38.60	338	LR	LR	03 26 33.0
	comp=Z,258nm,18.9s,baz=166,slow=35					
H62A	Milan	39.37	40	P	P	03 11 19.9 +1.9
	baz=239					
I63A	Otisfield	39.45	41	P	P	03 11 20.0 +1.3
	baz=240					
F60A	Warwick	39.65	37	P	P	03 11 21.5 +1.2
	baz=236					
FCC	Fort Churchill	41.81	9	P	P	03 11 36.9 -1.1
FCC				IAmb	IAmb	03 11 51.7
	comp=Z,7.2nm,1.0s					
D62A	Allapoint, All	41.94	38	P	P	03 11 40.4 +1.2
	baz=239					
TAOE	Nuku Hiva Isla	43.09	235	eLR	LR	03 23 19.8
	comp=Z,1µm,25.9s					
YKA	Yellowknife Ar	45.10	354	P	P	03 12 03.5 -0.9
	comp=Z,1.8nm,0.9s,baz=170,slow=7.1,SNR=25					
YKA				LR	LR	03 31 45.4
	comp=Z,792nm,19.4s,baz=0.0,slow=37					
SCHQ	Schefferville	47.42	30	P	P	03 12 23.9 +1.1
	comp=Z,0.9nm,0.7s,baz=239,slow=15,SNR=3.4					
SCHQ	Schefferville	47.42	30	P	P	03 12 22.9 0.0
SCHQ				IAmb	IAmb	03 12 35.5
	comp=Z,3.9nm,1.1s					
SAML	Samuel	49.69	119	P	P	03 12 38.8 -2.1
LPAZ	La Paz	50.16	130	P	P	03 12 44.1 -1.0
	comp=Z,2.5nm,0.8s,baz=325,slow=8.0,SNR=7.3					
LPAZ				LR	LR	03 31 24.8
	comp=Z,320nm,21.1s,baz=316,slow=33					
LPAZ	La Paz	50.16	130	P	P	03 12 44.1 -1.0
LPAZ				IAmb	IAmb	03 12 48.5
	comp=Z,3.8nm,0.9s					
GLB	Gilahina Butte	51.21	338	IAmb	IAmb	03 13 07.5
	comp=Z,9.3nm,1.2s					
BCAR	Beaver Creek A	51.62	340	P	P	03 12 53.2 -1.6
EPYK	Eagle Plains	52.64	345	IAmb	IAmb	03 13 16.6
	comp=Z,5.3nm,1.1s					
EPYK	Eagle Plains	52.64	345	P	P	03 13 03.7 +1.4
	baz=142					
INK	Inuvik	53.49	348	LR	LR	03 37 01.1
	comp=Z,499nm,19.2s,baz=127,slow=37					
RND	Reindeer	54.28	338	IAmb	IAmb	03 13 23.0
	comp=Z,5.7nm,1.0s					
IL31		54.44	340		pwP	03 13 21.1 -0.6
IL31				IAmb	IAmb	03 13 28.9
	comp=Z,4.5nm,0.9s					
ILAR	Eielson Array	54.44	340	P	P	03 13 14.7 -0.9
	comp=Z,2.9nm,1.0s,baz=142,slow=5.7,SNR=14					
ILAR	Eielson Array	54.44	340	P	P	03 13 14.1 -1.4
TRF	Thorofare Moun	54.83	337	P	P	03 13 16.9 -1.7
POKR	Poker Flat Res	54.84	340	P	P	03 13 19.7 +1.2
	baz=129					
BMAR	Burnt Mountain	55.51	343	P	P	03 13 22.7 -0.6
PPT	Papeete	55.64	233	LR	LR	03 30 33.9
	comp=Z,298nm,21.9s,baz=50,slow=29					
PPT2	Papeete2	55.66	233	eS	S	03 20 57.9 -14
	comp=Z,243nm,27.8s					
PPT2				eLR	LR	03 29 17.5
	comp=Z,1µm,25.8s,baz=50					
TOLK	Toolik Lake Re	57.72	343	P	P	03 13 39.5 +0.5
	baz=129					
TBI	Tubuai	59.13	228	eS	S	03 21 43.5 -14
	comp=Z,406nm,27.5s					
TBI				eLR	LR	03 30 52.0
	comp=Z,1µm,28.0s,baz=48					

CPUP Villa Florida 64.27 132 P P 03 14 23.1 -1.0
comp=Z,4.7nm,1.2s,baz=276,slow=9.0,SNR=3.6
CPUP LR LR 03 41 37.2
comp=Z,136nm,18.3s,baz=258,slow=35
CPUP Villa Florida 64.27 132 P P 03 14 22.9 -1.2
CPUP IAmb IAmb 03 14 29.9
comp=Z,1.9nm,0.8s
BDFB Brasilia 65.84 117 P P 03 14 34.7 +0.1
comp=Z,3.6nm,0.9s,baz=358,slow=2.9,SNR=4.4
BDFB Brasilia 65.84 117 P P 03 14 33.1 -1.5
PLCA Paso Flores 66.75 152 P P 03 14 39.3 -0.6
comp=Z,2.0nm,0.9s,baz=349,slow=5.8,SNR=4.3
PLCA LR LR 03 37 39.8
comp=Z,415nm,18.6s,baz=354,slow=30
PLCA Paso Flores 66.75 152 IAmb IAmb 03 14 46.6
comp=Z,1.7nm,0.8s
PETK Petropavlovsk- 79.85 323 LR LR 03 44 40.6
comp=Z,102nm,18.4s,baz=61,slow=31
ARCES ARCESS Array B 86.38 15 LR LR 03 57 05.8
comp=Z,204nm,18.3s,baz=320,slow=37
NOA NORSAR Array B 86.84 26 LR LR 03 55 37.6
comp=Z,65nm,20.3s,baz=305,slow=36
ESDC Sonseca Array 87.53 49 LR LR 03 54 14.7
comp=Z,81nm,20.4s,baz=0.0,slow=34
FINES FINESS Array B 92.24 21 LR LR 03 57 47.5
comp=Z,258nm,19.5s,baz=312,slow=35
DZM Mont Dzumac 94.59 248 eLR LR 03 47 16.0
comp=Z,1μm,26.5s
GERES GERESS Array B 94.67 35 LR LR 03 59 10.4
comp=Z,126nm,21.2s,baz=299,slow=35
DBIC Dimbokro 98.24 80 LR LR 03 56 53.4
comp=Z,144nm,21.6s,baz=268,slow=32
KEST Kesra 98.74 48 LR LR 03 59 13.0
comp=Z,104nm,20.3s,baz=232,slow=34
MJAR Matsushiro Arr 99.06 313 LR LR 03 53 54.0
comp=Z,63nm,21.4s,baz=270,slow=30
PSI Prapat 148.25 308 PKPbc PKPdf 03 23 35.7 +3.1
comp=Z,6.3nm,0.7s,baz=275,slow=3.0,SNR=6.4
RPSI Rantau Prapat 148.32 308 PKPdf PKPdf 03 23 29.9 -2.6
RPSI Rantau Prapat 148.32 308 PKPdf 03 23 35.7 +3.2

NEIC 04 03:15:29.2±1.3,53°.91N±0°.07×155°.97W±0°.10,h19km±6km, Error ellipse: s-maj=10.2km s-min=7.7km az=148.0
AEIC 04 03:15:30.4±1.7,53°.98N±0°.06×156°.03W±0°.09,h26km±5km, ML3.4/20,mb3.9/2(NEIC),Error ellipse: s-maj=9.4km s-min=7.8km az=165.0
IDC 04 03:15:32.7±1.3,53°.76N×154°.74W,h0km,mb3.3/6, mb1 3.8/9,mb1mx3.4/58,mbtmp3.5/9,ML3.9/3,Error ellipse: s-maj=25.6km s-min=20.2km az=40.0
ISC 04 03:15:31.3±0.9,53°.98N±0°.08×155°.95W±0°.05,h35km,n48, σ1§12/50,mb3.4/7,South of Alaska

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHIR Chirikof Islan 1.86 6 Pn 03 16 00.5 -0.2
CHIR Sn 03 16 24.5 +1.6
CNBA Chernabura Isl 2.29 293 Pn 03 16 05.5 -1.1
CNBA Sn 03 16 32.4 -1.1
VNSG Veniaminof 6 2.81 321 Pn 03 16 14.1 +0.4
VNSG Sn 03 16 48.0 +1.6
VNHG Veniaminof 1 2.91 322 Pn 03 16 15.9 +0.7
SDPT Sand Point 2.97 299 Pn 03 16 15.0 -0.8
SDPT Sn 03 16 50.4 +0.2
VNWF Veniaminof 8 3.01 318 Pn 03 16 17.5 +0.9
PVV Pavlof Volcano 3.67 295 Pn 03 16 25.4 -0.1
PVV Sn 03 17 08.0 +0.5
PS4A Pavlof South-4 3.69 294 Pn 03 16 25.9 0.0
PLK3 Peulik 3 3.72 357 Pn 03 16 27.9 +1.6
DT1 Dutton Round H 3.86 290 Pn 03 16 27.3 -0.8
DT1 Sn 03 17 11.5 -0.6
ANCK Angle Creek 4.24 3 Pn 03 16 34.1 +0.7
KDAK Kodiak Island 4.26 25 Pn Pn 03 16 33.1 -0.5
3.4nm,0.3s,baz=153,slow=4.4,SNR=49
KDAK Sn Sn 03 17 18.7 -3.3
6.6nm,0.3s,baz=175,slow=23,SNR=19
KDAK Kodiak Island 4.26 25 Pn 03 16 32.9 -0.7
KDAK Sn 03 17 22.5 +0.5
KABU Katmai Buttres 4.32 5 Pn 03 16 35.7 +1.2
FALS False Pass 4.45 284 Pn 03 16 35.9 -0.3
KAHC Katmai Hardscr 4.71 6 Pn 03 16 40.5 +0.6
GHO Glory Hole Cre 8.66 23 Pn 03 17 34.8 +0.8
SCM Sheep Creek Mo 9.11 27 Pn 03 17 40.8 +0.7
GLB Gilahina Butte 9.89 36 Pn 03 17 51.4 +0.5
RND Reindeer 10.14 18 Pn 03 17 54.6 +0.3
DHY Denali Highway 10.15 23 Pn 03 17 55.1 +0.6
DHY Sn 03 19 45.5 -1.6
BALM Baldy 10.16 40 Pn 03 17 54.7 +0.1
PCA Pinnacle 10.51 48 Pn 03 17 59.5 +0.2
PAX Paxson 10.54 27 Pn 03 18 00.5 +0.7
WRH Wood River Hil 11.26 18 Pn 03 18 08.3 -1.2
HDA Harding Lake 11.42 20 Pn 03 18 12.1 +0.4
CCB Clear Creek Bu 11.47 18 Pn 03 18 11.4 -0.9
IL31 11.75 19 Pn 03 18 16.4 +0.1
ILAR Eielson Array 11.75 19 Pn Pn 03 18 16.0 -0.2
1.3nm,0.3s,baz=218,slow=13,SNR=67
ILAR Sn Sn 03 20 22.2 -3.8
0.2nm,0.3s,baz=208,slow=24,SNR=5.2
ILAR Eielson Array 11.75 19 Pn 03 18 16.1 -0.2
INK Inuvik 17.81 28 P P 03 19 39.1 +2.6
0.3nm,0.3s,baz=222,slow=11,SNR=13
INK Inuvik 17.81 28 P Pn 03 19 36.7 +0.7
INK IAmb IAmb 03 19 43.0
comp=Z,1.6nm,0.6s
YKA Yellowknife Ar 22.99 52 P P 03 20 33.0 +0.4
comp=Z,0.2nm,0.5s,baz=262,slow=10,SNR=4.7
NVAR Mina Array Bea 29.91 106 P P 03 21 36.4 +0.5
comp=Z,0.5nm,0.7s,baz=309,slow=7.5,SNR=3.7
NVAR Mina Array Bea 29.91 106 P P 03 21 35.2 -0.7
PDAR Pinedale Array 32.23 91 P P 03 21 56.0 -0.3
comp=Z,0.1nm,0.4s,baz=306,slow=5.4,SNR=4.0
PDAR Pinedale Array 32.23 91 P P 03 21 55.8 -0.5
TIXI Tiksi 35.59 328 P P 03 22 24.3 -0.5
TIXI IAmb IAmb 03 22 28.2
comp=Z,2.5nm,0.4s
H11N2 WAKE ISLAND Hy 44.42 234 T T 04 12 37.6
baz=28,slow=76,SNR=12
H11N3 WAKE ISLAND Hy 44.42 234 T T 04 12 37.8
baz=28,slow=76,SNR=7.9
H11N1 WAKE ISLAND Hy 44.43 234 T T 04 12 39.5
baz=28,slow=76,SNR=7.9
TXAR Lajitas Array 44.86 102 P P 03 23 42.7 +0.5
comp=Z,0.7nm,0.6s,baz=310,slow=5.4,SNR=8.5
TXAR Lajitas Array 44.86 102 P P 03 23 42.5 +0.3
H11S1 WAKE ISLAND Hy 45.56 234 T T 04 14 01.7
baz=28,slow=76,SNR=8.7
H11S2 WAKE ISLAND Hy 45.57 234 T T 04 14 06.8
baz=28,slow=76,SNR=7.3
H11S3 WAKE ISLAND Hy 45.58 234 T T 04 14 12.2
baz=28,slow=76,SNR=6.0
SONM Songino Array 57.09 307 P P 03 25 24.9 +11
comp=Z,0.3nm,0.7s,baz=51,slow=5.3,SNR=3.1
MKAR Makanchi Array 68.12 321 P P 03 26 38.4 +11
comp=Z,0.2nm,0.8s,baz=25,slow=5.0,SNR=2.5

IDC 04 03:26:07.1±48.0,18°.49S×174°.36W,h0km,mb4.2/3, mb1 4.4/3,mb1mx3.5/46,mbtmp4.2/3,Error ellipse: s-maj=918.0km s-min=179.1km az=82.0,Tonga Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STKA Stephens Creek 41.75 243 P P 03 33 58.4 +0.1
1.0nm,0.4s,baz=90,slow=13,SNR=3.8
WRA Warramunga Arr 48.31 259 P P 03 34 50.6 -0.1
1.2nm,0.3s,baz=98,slow=7.1,SNR=9.4
ASAR Alice Springs 48.34 254 P P 03 34 50.6 -0.3
3.0nm,0.6s,baz=87,slow=8.5,SNR=24

IDC 04 03:27:25.5±10.0,7°.60S×128°.40E,h100km±116km, mb3.0/1,mb1 3.3/4,mb1mx2.8/41,mbtmp3.5/3,ML3.5/3, Error ellipse: s-maj=75.5km s-min=49.5km az=31.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FITZ Fitzroy Crossi 10.77 194 P Pn 03 29 57.2 +0.5
0.2nm,0.3s,baz=19,slow=18,SNR=3.8
FITZ S Sn 03 31 56.2 +0.8
0.3nm,0.3s,baz=120,slow=20,SNR=2.8
WRA Warramunga Arr 13.55 155 P Pn 03 30 32.2 -1.6
0.3nm,0.3s,baz=323,slow=14,SNR=7.3
WRA S Sn 03 33 03.3 +0.4
0.3nm,0.3s,baz=335,slow=22,SNR=7.2
ASAR Alice Springs 16.82 162 P P 03 31 16.0 +0.4
0.2nm,0.3s,baz=341,slow=11,SNR=12
MKAR Makanchi Array 67.87 328 P P 03 38 13.2 0.0
0.3nm,0.7s,baz=123,slow=7.9,SNR=4.1

TAP 04 03:43:44.9,23°.15N×121°.37E,h19km,ML2.5,1D,C, Taiwan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHKT Chengkung 0.05 180 iP Pg 03 43 48.9 +0.7
baz=171
CHKT S Sg 03 43 51.3 +0.8
baz=171
FULB Fuli 0.08 308 iP Pg 03 43 48.9 +0.4
baz=307
FULB S Sg 03 43 51.9 +0.9
baz=307
TWF1 Yuli 0.21 343 iP Pg 03 43 50.7 +0.6
baz=344
YULB Yu-li 0.25 346 P Pg 03 43 51.2 +0.5
baz=345
ELDTW Lidau 0.32 277 ⇓iP Pb 03 43 52.0 -0.1
baz=277
HGSD Ruisui 0.35 9 eP Pb 03 43 52.8 +0.2
baz=9.0
EHY Hungye 0.36 354 eP Pb 03 43 52.8 0.0
baz=354
EHY eS Sb 03 43 58.8 +0.7
baz=354
TWGBT Beinan 0.42 219 eP Pb 03 43 54.1 +0.2
baz=218
TWGBT eS Sb 03 44 00.3 +0.4
baz=218
TWG Pinlang 0.42 220 P Pb 03 43 54.0 +0.1
baz=218
TWG eS Sb 03 44 00.4 +0.5
baz=218
YUS Yu-Shan 0.51 312 eP Pb 03 43 55.6 +0.1
baz=311
EGFH Guangfu 0.52 6 eP Pb 03 43 55.4 0.0
baz=6.0
EGFH eS Sb 03 44 02.9 +0.3
baz=6.0
STYT Tauyuan 0.56 272 eP Pg 03 43 56.4 +0.3
baz=271
STYT eS Sb 03 44 03.9 +0.2
baz=271
ALS Alishan 0.63 305 P Pg 03 43 57.9 +0.4
baz=305
ALS eS Sg 03 44 07.4 +1.4
baz=305
VWDT VWDT 0.64 341 eP Pg 03 43 57.8 +0.3
baz=341
VWDT eS Sg 03 44 06.3 +0.2
baz=341
ESL Shilin 0.67 5 eP Pn 03 43 58.7 -0.6
baz=6.0
ESL eS Sg 03 44 06.9 -0.1
baz=6.0
SLGT Liugui 0.68 257 eP Pg 03 43 58.7 +0.4
baz=256
SLGT eS Sg 03 44 07.6 +0.2
baz=256
TPUB Ta-pu 0.69 283 eP Pn 03 43 59.3 -0.4
baz=282
TPUB eS Sn 03 44 09.2 -0.8
baz=282
WTP Ta-pu 0.70 278 eP Pn 03 43 59.5 -0.4
baz=277
CHN4 Tsaushan 0.74 286 eP Pn 03 44 00.2 -0.2
baz=285
CHN4 eS Sn 03 44 10.3 -0.8
baz=285
SSLB Suanglung 0.74 329 eP Pg 03 43 59.4 0.0
baz=329
CHN1 Nanshi 0.77 273 eP Pn 03 44 01.0 +0.2
baz=272
CHN1 eS Sn 03 44 11.4 -0.5
baz=272
CHN5 Tsauling 0.77 305 eP Pn 03 44 00.7 -0.2
baz=305
SNST Tainan City 0.80 275 eP Pg 03 44 00.9 +0.3
baz=275
SNST eS Sn 03 44 12.4 -0.2
baz=275
OWD Renai 0.82 348 eP Pb 03 44 00.7 0.0
baz=347
SMLT Sun Moon Lake 0.85 330 eP Pg 03 44 01.6 +0.1
baz=330
MASBT Mashibuluo 0.86 232 eP Pb 03 44 01.1 -0.2
baz=231
TYC Yuchr 0.89 328 eP Pn 03 44 02.5 +0.2
baz=328
TYC eS Sn 03 44 15.0 +0.3
baz=328
WJS Zhushan 0.89 319 eP Pn 03 44 02.6 +0.2
baz=318
WJS eS Sn 03 44 15.6 +0.7
baz=318
CHGB Renai 0.93 349 eP Pg 03 44 02.9 -0.1
baz=349
CHY Chiayi 0.93 292 eP Pg 03 44 03.4 +0.4
baz=292
CHY eS Sn 03 44 16.6 +0.8
baz=292
WHF Hehuan Shan 1.00 355 eP Pb 03 44 03.7 -0.1
baz=355
WHF eS Sn 03 44 18.1 0.0
baz=355
SCZT Fangliau 1.03 222 eP Pg 03 44 05.0 0.0
baz=221
NACB Ninganchiao 1.04 12 eP Pb 03 44 04.1 -0.2
baz=11
NACB eS Sg 03 44 19.6 +0.7
baz=11
TDCB Techi 1.12 350 eP Pb 03 44 06.0 +0.3
baz=350
WHP Taichung City 1.19 341 eP Pg 03 44 08.4 +0.4
baz=341
WHP eS Sg 03 44 25.1 +1.6
baz=341
NNSB Datong 1.27 1 eP Pn 03 44 07.9 0.0
NNSH Datong 1.27 1 eP Pn 03 44 07.5 -0.3
YHNB Yeheng 1.52 0 eP Pb 03 44 12.1 -0.4
NWLT Wulai 1.63 4 eP Pn 03 44 12.8 +0.2
baz=4.0

TAP 04 03:43:48.7,23°.16N×121°.33E,h21km±1km,ML2.6,C, Taiwan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FULB Fuli 0.05 319 P Pb 03 43 53.0 +0.4
baz=319
FULB S Sb 03 43 55.9 +0.8
baz=319
CHKT Chengkung 0.07 151 eP Pb 03 43 52.7 +0.2
baz=147
CHKT eS Sb 03 43 55.4 +0.3
baz=147
TWF1 Yuli 0.19 351 eP Pb 03 43 54.5 -0.1
baz=353
TWF1 eS Sb 03 43 58.4 -0.4
baz=353
TWF1 Yuli 0.19 351 S Pb 03 43 54.5 -0.1
baz=344
YULB Yu-li 0.23 353 eP Pb 03 43 54.8 0.0
baz=352
YULB eS Sb 03 43 59.3 +0.3
baz=352
YULB Yu-li 0.23 353 eS Pb 03 43 55.0 +0.2
baz=345
ELDTW Lidau 0.29 276 P Pb 03 43 55.8 +0.4
baz=275
ELDTW eS Sb 03 44 00.5 +0.5
baz=275
STYT Tauyuan 0.53 270 eP Pb 03 44 00.2 +0.9
baz=270
STYT eS Sb 03 44 07.5 +0.9
baz=270
VWDT VWDT 0.61 344 eS Sb 03 44 10.3 +1.1
baz=343

IDC 04 03:58:50.6±1.1,7°.33S×128°.26E,h0km,mb4.1/4, mb1 4.1/7,mb1mx3.9/38,mbtmp4.0/7,ML3.8/3,MS3.5/1, Ms1 3.5/1,ms1mx2.7/41,Error ellipse: s-maj=87.3km s-min=19.8km az=72.0
NEIC 04 03:58:51.3±1.6,7°.40S±0°.07×128°.2E±0°.1,h10km±1km, mb4.1/7,Error ellipse: s-maj=20.2km s-min=11.3km az=265.0
ISC 04 03:58:55.0±0.9,7°.39S±0°.08×128°.3E±0°.1,h35km,n25, σ1§07/27,mb4.2/7,Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SOEI Soe 4.58 239 Pn Pn 04 00 01.1 -0.9
MTN Manton Dam 6.12 153 Pn Pn 04 00 23.1 +0.1
KNRA Kununurra 8.25 177 Pn 04 00 50.9 -1.3
KNRA Sn 04 02 27.0 +2.7
FITZ Fitzroy Crossi 10.94 193 Pn Pn 04 01 30.1 +1.0
0.4nm,0.3s,baz=18,slow=8.4,SNR=11
FITZ Sn Sn 04 03 30.1 -0.3
0.2nm,0.3s,baz=120,slow=22,SNR=3.0
FITZ Fitzroy Crossi 10.94 193 Pn 04 01 29.5 +0.3
FITZ Sn 04 03 30.4 0.0
WB0 Warramunga Arr 13.67 155 Pn 04 02 05.8 -0.7
WRA Warramunga Arr 13.80 155 Pn Pn 04 02 07.4 -1.0
0.6nm,0.3s,baz=341,slow=12,SNR=6.1
WRA Warramunga Arr 13.80 155 Pn 04 02 07.0 -1.4
WR0 Warramunga Arr 13.90 155 Pn Pn 04 02 08.6 -1.1
AS31 Alice Springs 17.07 162 P Pn 04 02 50.4 -0.7
ASAR Alice Springs 17.07 162 P Pn 04 02 50.6 -0.5
0.3nm,0.3s,baz=334,slow=10,SNR=11
ASAR Alice Springs 17.07 162 Pn Pn 04 02 49.7 -1.4
BBOO Buckleboo 26.31 165 P P 04 04 26.3 -1.2
BBOO IAmb IAmb 04 04 30.2
comp=Z,7.0nm,0.8s
STKA Stephens Creek 27.36 155 P P 04 04 38.7 +1.7
comp=Z,3.4nm,0.9s,baz=321,slow=13,SNR=3.0
STKA Stephens Creek 27.36 155 P P 04 04 37.4 +0.4
STKA IAmb IAmb 04 04 42.3
comp=Z,0.9nm,0.9s
JHJ Hachijo jima 2 41.75 15 LR LR 04 21 58.8
comp=Z,74nm,21.5s,baz=130,slow=33
SONM Songino Array 58.28 343 P P 04 08 47.8 +1.4
comp=Z,1.3nm,0.9s,baz=162,slow=7.4,SNR=8.1
SONM Songino Array 58.28 343 P P 04 08 45.9 -0.4
MK31 Makanchi Array 67.61 328 P P 04 09 48.7 +0.4
MK31 IAmb IAmb 04 09 49.9
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 67.61 328 P P 04 09 49.2 +0.9
comp=Z,1.7nm,0.7s,baz=130,slow=7.5,SNR=14
MKAR Makanchi Array 67.61 328 P P 04 09 48.3 0.0
ZAA0 Zalesovo Array 71.17 335 P P 04 10 10.4 +0.3
ZAA0 IAmb IAmb 04 10 14.7
comp=Z,3.0nm,0.8s
ZALV Zalesovo Beam 71.17 335 P P 04 10 09.8 -0.3
comp=Z,1.7nm,0.7s,baz=114,slow=3.7,SNR=9.5
ZALV Zalesovo Beam 71.17 335 P P 04 10 09.4 -0.7
KURK Kurchatov 71.95 329 P P 04 10 14.3 -0.6

IDC 04 03:58:55.3±3.2,4°.83S×153°.91E,h90km±23km,mb4.1/11, mb1 4.4/12,mb1mx4.0/42,mbtmp4.5/12,MS3.5/15, Ms1 3.5/15,ms1mx3.3/39,Error ellipse: s-maj=28.0km s-min=14.5km az=96.0
NEIC 04 03:58:55.8±1.4,4°.97S±0°.08×153°.99E±0°.10,h108km±6km, mb4.6/27,Error ellipse: s-maj=13.9km s-min=11.9km az=102.0
GCMT 04 03:58:56.8±0.2,5°.03S±0°.02×153°.77E±0°.02,h98km±3km, MW4.9/92,Moment Tensor Solution. s40,c42; s92,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.97±.10; $M_{\theta\theta}$-0.32±.14; $M_{\phi\phi}$-1.65±.14; $M_{r\theta}$-1.24±.07; $M_{\theta\phi}$0.90±.15; $M_{\phi r}$1.45±.08; Best double couple: $M_0$2.79300×10^{16} NP1:ϕ_s163.00000°,δ25.00000°,λ108.00000°. NP2: ϕ_s324.00000°,δ67.00000°,λ82.00000°. Principal axes: T 2.7550, Plg67.0000°, Azm219.0000°; N 0.0740, Plg7.0000°, Azm327.0000°; P -2.8300, Plg21.0000°, Azm60.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
DJA 04 03:58:59.2±2.2,5°S±7°×15°4E±1°6,h134km±16km, M4.7/13,mb4.8/13,mB5.2/3,Mw(mB)4.6/3
BJI 04 03:59:00.0±0.0,4°.90S×153°.60E,h138km,mB5.0/14, mb4.8/25
ISC 04 03:58:56.3±0.5,4°.92S±0°.06×153°.92E±0°.08,h105km,n108, σ1§48/95,mb4.5/25,1C-1D,New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RABL Rabaul 1.89 292 Pn Pn 03 59 26.6 -1.2
RABL Sn Sn 03 59 51.9 +0.1
KRVT Keravat (AS076 1.98 288 P Pn 03 59 28.0 -0.8
199nm,0.3s,baz=130,slow=0.8,SNR=78
KRVT S Sn 03 59 50.9 -2.9
546nm,0.3s,baz=7.6,slow=21,SNR=45
KRVT LR LR 04 00 23.3
comp=Z,2μm,18.3s,baz=106,slow=45
HNR Honiara 7.47 127 LR LR 04 03 35.3
comp=Z,657nm,21.4s,baz=288,slow=37
HNR Honiara 7.47 127 P Pn 04 00 56.0 +13
PMG Port Moresby 8.06 236 P Pn 04 00 52.1 +1.5
25nm,0.3s,baz=51,slow=7.8,SNR=32
PMG S Sn 04 02 20.5 +0.4
9.2nm,0.3s,baz=28,slow=20,SNR=8.4
PMG LR LR 04 04 10.6
comp=Z,261nm,18.7s,baz=56,slow=39
PMG Port Moresby 8.06 236 Pn 04 00 51.8 +1.2
PMG Sn 04 02 21.5 +1.4
PATS Pohnpei 12.47 21 Pn Pn 04 01 50.2 +0.1
COEN Coen 13.89 229 P P 04 02 11.9 -1.6
baz=14,SNR=4.3
COEN Coen 13.89 229 Pn P 04 02 10.6 -2.9
CTA Charters Tower 16.83 206 P P 04 02 50.3 +4.3
0.3nm,0.3s,baz=39,slow=12,SNR=4.0
GUMO Guam 20.46 334 LR LR 04 11 41.6
comp=Z,69nm,19.4s,baz=144,slow=38
EIDS Eidsvold 20.52 187 P Pn 04 03 29.0 -0.4
baz=21,SNR=3.5
EIDS Eidsvold 20.52 187 P P 04 03 24.9 -1.4
EIDS IAmb IAmb 04 03 29.5
comp=Z,23nm,1.1s
QIS Mount Isa 20.87 221 P Pn 04 03 32.1 -1.5
baz=21,SNR=3.4
RMQ Roma 22.01 192 P P 04 03 44.4 +2.2
baz=22,SNR=7.8
KDU Kakadu 22.54 249 P P 04 03 47.4 -0.5
baz=23,SNR=4.9
SIJI Sorong 22.98 279 LR LR 04 11 42.5
comp=Z,84nm,21.5s,baz=160,slow=33
QLP Quilpie 23.45 202 P P 04 03 57.5 +1.1
baz=24,SNR=8.8
WR0 Warramunga Arr 24.07 230 P P 04 04 01.9 -0.2
WR0 IAmb IAmb 04 04 04.5
comp=Z,28nm,1.1s
WB0 Warramunga Arr 24.07 231 P P 04 04 00.9 -1.2
WB0 IAmb IAmb 04 04 08.4
comp=Z,19nm,1.1s
WB9 Warramunga Arr 24.10 230 P P 04 04 03.7 +1.3
baz=24
WRA Warramunga Arr 24.22 230 P P 04 04 04.4 +1.0
comp=Z,10nm,0.6s,baz=53,slow=9.8,SNR=9.9
WRA Warramunga Arr 24.22 230 P P 04 04 02.6 -0.9
ARMA Armidale 25.46 185 P P 04 04 17.0 +2.3
baz=26,SNR=4.9
ARMA Armidale 25.46 185 P P 04 04 13.1 -1.6
ARMA IAmb IAmb 04 04 18.0
comp=Z,26nm,1.1s
H11S3 WAKE ISLAND Hy 26.45 28 T T 04 31 45.8
baz=205,slow=74,SNR=11
H11S2 WAKE ISLAND Hy 26.45 28 T T 04 31 46.7
baz=205,slow=74
H11S1 WAKE ISLAND Hy 26.47 28 T T 04 32 25.3
baz=205
AS31 Alice Springs 26.83 224 P P 04 04 27.6 +0.5
ASAR Alice Springs 26.83 224 P P 04 04 27.8 +0.6
comp=Z,2.8nm,0.4s,baz=55,slow=9.2,SNR=27
ASAR LR LR 04 15 35.4
comp=Z,182nm,18.5s,baz=76,slow=37
ASAR Alice Springs 26.83 224 P P 04 04 26.2 -0.9
STKA Stephens Creek 29.21 202 P P 04 04 49.0 +0.9
baz=29,SNR=4.9
STKA Stephens Creek 29.21 202 P P 04 04 49.2 +1.1
comp=Z,12nm,1.1s,baz=42,slow=15,SNR=6.7
STKA LR LR 04 16 13.1

comp=Z,118nm,19.2s,baz=20,slow=35
STKA Stephens Creek 29.21 202 P P 04 04 47.2 -0.9
FITZ Fitzroy Crossi 30.59 242 P P 04 05 00.6 +0.1
baz=31,SNR=3.0
FITZ Fitzroy Crossi 30.59 242 P P 04 05 00.6 +0.1
comp=Z,5.1nm,0.4s,baz=286,slow=23,SNR=4.3
FITZ Fitzroy Crossi 30.59 242 P P 04 04 59.9 -0.6
FITZ IAmb IAmb 04 05 00.8
comp=Z,11nm,0.8s
HTT Hallett 31.62 204 P P 04 05 11.0 +1.5
baz=32,SNR=5.3
WRKA Warakurna 31.71 228 P P 04 05 10.4 +0.1
baz=32,SNR=12
BBOO Buckleboo 32.38 209 P P 04 05 14.9 -1.2
AFI Afiamalu 34.96 107 LR LR 04 16 40.8
comp=Z,78nm,19.0s,baz=188,slow=30
FORT Forrest 35.41 220 P P 04 05 43.2 +0.8
baz=36,SNR=19
FORT Forrest 35.41 220 P P 04 05 41.6 -0.7
PSA00 Pilbara Seismi 36.94 240 P P 04 05 53.8 -1.6
KMBL Kambalda 39.95 225 P P 04 06 21.2 +0.6
baz=40,SNR=6.5
MEEK Meekatharra 40.03 234 P P 04 06 21.7 +0.4
baz=40,SNR=8.6
BSWZ Blackbirch Sta 40.75 157 P P 04 06 24.4 -2.5
KLBR Kellerberrin 43.05 228 P P 04 06 45.7 -0.2
baz=43,SNR=9.4
MORW Morawa 43.15 232 P P 04 06 46.9 +0.2
baz=43,SNR=8.4
MORW Morawa 43.15 232 P P 04 06 46.5 -0.2
BLDU Ballidu 43.35 229 P P 04 06 48.4 +0.1
baz=43,SNR=16
JNU Nakatsue 43.69 332 LR LR 04 22 16.2
comp=Z,39nm,21.8s,baz=138,slow=32
MJAR Matsushiro Arr 43.78 342 LR LR 04 24 08.2
comp=Z,38nm,19.6s,baz=255,slow=35
MUN Mundaring 44.38 228 P P 04 06 57.0 +0.4
baz=44,SNR=4.8
DLV T Lat 48.18 291 P P 04 07 26.9 +0.1
DLV IAmb IAmb 04 07 32.1
comp=Z,8.2nm,1.1s
KSRS Korea Array 48.61 332 LR LR 04 27 42.9
comp=Z,22nm,18.2s,baz=140,slow=36
ASAJ Asahikawa 49.86 349 LR LR 04 24 23.3
comp=Z,44nm,21.2s,baz=254,slow=31
WHN Wuhan 51.71 316 P P 04 07 56.8 +3.8
KULM Kulim 54.16 280 P P 04 08 10.2 -1.1
ENH Enshi 55.05 312 P P 04 08 16.9 -0.6
XAN Xi'an 57.48 316 P P 04 08 34.8 +0.1
XAN pmax pmax
comp=Z,10.0nm,1.2s
XAN pmax pmax
comp=Z,130nm,5.3s
XAN Xi'an 57.48 316 P P 04 08 34.8 +0.1
XAN IAmb IAmb 04 08 35.5
comp=Z,7.2nm,0.8s
PETK Petropavlovsk- 57.89 3 LR LR 04 29 48.0
comp=Z,25nm,20.5s,baz=238,slow=32
CMAR Chiang Mai Arr 58.94 295 P P 04 08 46.8 +1.7
comp=Z,1.4nm,0.4s,baz=116,slow=5.0,SNR=8.7
LZH Lanzhou 62.09 315 ⇓P P 04 09 08.5 +2.1
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,89nm,6.2s
GTA Gaotai 66.50 317 ⇑P P 04 09 36.4 +1.3
GTA pmax pmax
comp=Z,9.0nm,1.1s
GTA pmax pmax
comp=Z,120nm,4.6s
GTA LR LR
comp=Z,91nm,19.7s
GTA LR LR
comp=Z,160nm,18.7s
GTA LR LR
comp=Z,76nm,19.0s
ULN Ulaanbaatar 66.69 328 P P 04 09 35.9 -0.2
ULN IAmb IAmb 04 09 38.4
comp=Z,4.4nm,1.1s
SONM Songino Array 67.02 327 P P 04 09 38.9 +0.7
comp=Z,1.8nm,0.8s,baz=136,slow=5.3,SNR=8.1
SONM Songino Array 67.02 327 P P 04 09 38.0 -0.3
SHL Shillong 67.33 300 IAmb IAmb 04 09 42.3
comp=Z,16nm,1.1s
TAPN Taplejung 71.42 301 eP P 04 10 06.9 +0.9
comp=Z,47nm,1.2s
ODAN Odare 71.56 300 eP P 04 10 07.8 +1.0
comp=Z,49nm,0.9s
RAMN Ramite 72.27 300 eP P 04 10 11.8 +0.7
JIRN Jiri 72.81 301 eP P 04 10 15.5 +1.1
GUN Gumba 73.14 301 eP P 04 10 17.1 +0.8
comp=Z,34nm,0.8s
PKI Pulchoki 73.45 300 eP P 04 10 18.7 +0.6
PKIN Phulchoki 73.46 300 eP P 04 10 18.7 +0.6
KKN Kakani 73.62 301 eP P 04 10 19.9 +0.9
DMN Daman 73.72 300 eP P 04 10 20.5 +0.9
comp=Z,81nm,1.2s
GKN Gorkha 74.22 301 eP P 04 10 23.2 +0.8
KOLN Koldanda 75.06 300 eP P 04 10 27.7 +0.4
comp=Z,52nm,1.1s
DANN Dangsing 75.06 301 eP P 04 10 27.8 +0.4
comp=Z,25nm,0.8s
RDOG Red Dog Mine 78.80 15 IAmb IAmb 04 10 50.1
comp=Z,5.7nm,1.2s
IMAR Indian Mountai 80.12 19 P P 04 10 54.6 +0.3
MCK McKinley 80.54 22 IAmb IAmb 04 10 58.0
comp=Z,5.2nm,0.9s
MKAR Makanchi Array 81.15 319 P P 04 11 00.8 +0.5
comp=Z,2.2nm,0.8s,baz=94,slow=8.5,SNR=11
MKAR Makanchi Array 81.15 319 P P 04 10 59.5 -0.8
MAKZ Makanchi 81.36 319 P P 04 11 00.7 -0.8
ILAR Eielson Array 81.85 22 P P 04 11 03.3 -0.3
comp=Z,1.6nm,0.9s,baz=254,slow=5.4,SNR=13
ILAR Eielson Array 81.85 22 P P 04 11 03.0 -0.6
ZALV Zalesovo Beam 81.87 326 P P 04 11 03.8 -0.1
comp=Z,0.7nm,0.4s,baz=104,slow=6.1,SNR=3.9
ZALV Zalesovo Beam 81.87 326 P P 04 11 03.6 -0.2
KSH Kashi 83.86 310 P P 04 11 17.5 +2.8
KSH pP sP 04 11 52.0 +0.8
KSH sP pwP 04 12 08.0 +22
KSH PP PP 04 14 34.3 +4.8
KSH S S 04 21 24.8 -5.1
KSH sS sS 04 22 26.8 +11
KSH SS SS 04 27 01.6 +1.7
KSH pmax pmax
comp=Z,110nm,2.3s
BMAR Burnt Mountain 83.97 20 P P 04 11 14.3 -0.3
NIL Nilore 84.96 304 P P 04 11 18.8 -1.5
NIL IAmb IAmb 04 11 21.8
comp=Z,14nm,0.9s
MAW Mawson 85.89 203 P P 04 11 25.2 +1.1
comp=Z,13nm,1.0s,baz=91,slow=9.4,SNR=5.3
MAW Mawson 85.89 203 P P 04 11 23.2 -0.9
EPYK Eagle Plains 86.35 22 IAmb IAmb 04 11 28.7
comp=Z,6.9nm,0.9s
PFO Pinyon Flats O 92.37 57 LR LR 04 44 35.7
comp=Z,27nm,21.7s,baz=246,slow=30
ELK Elko 93.81 50 LR LR 04 45 17.0
comp=Z,48nm,22.0s,baz=260,slow=30
YKA Yellowknife Ar 95.01 28 P P 04 12 08.0 +1.2
comp=Z,0.5nm,0.9s,baz=266,slow=5.0,SNR=6.6
YKA pP pP 04 12 34.4 +0.9
comp=Z,1.0nm,1.2s,baz=281,slow=4.4,SNR=3.3
PDAR Pinedale Array 98.10 48 LR LR 04 48 54.7
comp=Z,35nm,21.8s,baz=271,slow=31
BDFB Brasilia 150.19 134 PKPbc PKPbc 04 18 36.2 0.0
comp=Z,1.5nm,0.5s,baz=206,slow=4.8,SNR=3.4
BDFB Brasilia 150.19 134 PKPdf PKPdf 04 18 29.4 -1.7
TORD Torodi Ar. Bea 151.40 288 PKPbc PKPbc 04 18 38.8 -0.2
comp=Z,1.3nm,0.4s,baz=77,slow=2.0,SNR=28
TORD PKPab PKPab 04 18 47.7 +0.2
comp=Z,4.7nm,1.1s,baz=74,slow=4.5,SNR=14
TORD Torodi Ar. Bea 151.40 288 PKPbc PKPbc 04 18 37.3 -1.7
DBIC Dimbokro 158.81 276 PKPab PKPab 04 19 19.8 +0.5
comp=Z,2.4nm,0.7s,baz=131,slow=4.1,SNR=5.0
DBIC Dimbokro 158.81 276 PKPab 04 19 16.3 -2.9

MAN 04 04:07:18.6, 2°.69N×127°.81E, h134km, mb5.1, ML4.1, MS4.2
IDC 04 04:07:20.9±3.0, 3°.16N×128°.36E, h90km±31km, mb3.7/16, mb1 3.8/17, mb1mx3.7/48, mbtmp4.0/17, Error ellipse: s-maj=26.6km s-min=14.3km az=81.0
NEIC 04 04:07:21.8±1.2, 3°.15N±0°.10×128°.39E±0°.09, h105km±9km, mb4.3/6, Error ellipse: s-maj=14.3km s-min=12.6km az=208.0
DJA 04 04:07:23.9±0.8, 3°N±10°×12°8E±°, h127km±9km, M4.6/8, mB5.2/3, mb4.8/6, MLv4.5/8, Mw(mB)4.6/3
ISC 04 04:07:21.4±0.5, 3°.15N±0°.05×128°.34E±0°.08, h100km, n45, σ1§13/50, mb4.1/17, 1D, North of Halmahera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TNTI Ternate 2.55 202 P Pn 04 08 02.3 +1.1
TNTI Ternate 2.55 202 Pn 04 08 02.5 +1.3
TNTI Sn Sn 04 08 32.5 +0.7
DDMP Don Marcelino, 3.94 318 eP Pn 04 08 18.4 -1.4
DDMP eS Sn 04 09 06.3 +1.3
SWI Sorong 4.94 144 P Pn 04 08 34.4 +1.1
SWI S Sn 04 09 26.7 -2.6
SIJI Sorong 4.95 144 P Pn 04 08 34.6 +1.2
17nm,0.3s,baz=109,slow=12,SNR=33
SIJI S Sn 04 09 27.8 -1.8
5.7nm,0.3s,baz=192,slow=24,SNR=7.0
KCP Kidapawan 5.02 320 ⇓iP Pn 04 08 34.2 -0.3
KCP iS Sn 04 09 17.1 -14
SKMP Bagumbayan, Su 5.05 312 eP Pn 04 08 33.6 -1.3
SKMP eS Sn 04 09 29.9 -2.2
SANI Sanana 5.67 205 P Pn 04 08 41.4 -1.9
0.2nm2μm26nm,0.7s
BUKP Musuan 5.72 325 eP Pn 04 08 43.9 -0.1
BUKP eS Sn 04 09 50.2 +1.8
PAGZ Pagadian 6.79 314 eP Pn 04 08 56.2 -2.3
MRSI Marisa 6.92 248 P Pn 04 09 00.2 -0.1
272nm,0.9s
LUWI Luwuk 6.95 233 P Pn 04 08 58.6 -2.1
0.6nm7μm67nm,0.7s
LUWI Luwuk 6.95 233 Pn 04 09 00.6 0.0
FAKI Fak Fak 7.18 147 P Pn 04 09 04.8 +1.0
0.6nm38nm,0.7s
GUIM Jordan 9.37 323 eP Pn 04 09 32.6 -1.0
PBKI Pangkalan Bun 17.65 251 P Pn 04 11 32.8 +12
FITZ Fitzroy Crossi 21.28 187 P P 04 12 01.6 +1.7
2.5nm,0.8s,baz=348,slow=9.3,SNR=1.3
WRA Warramunga Arr 23.69 166 P P 04 12 24.6 +0.4
1.3nm,0.5s,baz=345,slow=9.9,SNR=2.6
ASAR Alice Springs 27.20 169 P P 04 12 56.1 +0.2
0.2nm,0.3s,baz=356,slow=8.5,SNR=1.4
ASAR Alice Springs 27.20 169 P P 04 12 55.8 -0.1
CMAR Chiang Mai Arr 32.55 300 P P 04 13 44.2 +0.9
1.8nm,0.6s,baz=122,slow=7.9,SNR=8.8
KSRS Korea Array 34.15 359 P P 04 13 57.2 +0.3
2.1nm,0.7s,baz=176,slow=9.7,SNR=5.5
MJAR Matsushiro Arr 34.46 14 P P 04 13 59.0 -0.7
2.7nm,0.7s,baz=186,slow=8.5,SNR=5.0
STKA Stephens Creek 37.04 161 P P 04 14 22.8 +1.0
0.6nm,0.3s,baz=346,slow=17,SNR=1.2
STKA Stephens Creek 37.04 161 P P 04 14 21.8 0.0
STKA IAmb IAmb 04 14 42.8
comp=Z,10.0nm,2.0s
USRK Ussuriysk Ar. 41.01 4 P P 04 14 55.9 +1.2
comp=Z,5.8nm,0.6s,baz=180,slow=7.3,SNR=12
USRK Ussuriysk Ar. 41.01 4 P P 04 14 54.5 -0.1
KLR Kul'dur 46.01 3 P P 04 15 35.3 +0.6
comp=Z,1.3nm,0.6s,baz=206,slow=4.5,SNR=6.7
SONM Songino Array 48.37 340 P P 04 15 53.3 0.0
comp=Z,0.9nm,0.7s,baz=152,slow=8.5,SNR=8.9
SONM Songino Array 48.37 340 P P 04 15 52.6 -0.7
PETK Petropavlovsk- 55.38 21 P P 04 16 47.1 +2.1
comp=Z,8.7nm,1.1s,baz=264,slow=1.3,SNR=4.2
PETK Petropavlovsk- 55.38 21 P P 04 16 44.4 -0.6
MK31 Makanchi Array 58.95 325 P P 04 17 10.3 -0.1
MKAR Makanchi Array 58.95 325 P P 04 17 11.1 +0.7
comp=Z,1.6nm,0.7s,baz=123,slow=8.0,SNR=20
MKAR Makanchi Array 58.95 325 P P 04 17 10.4 +0.1
MAKZ Makanchi 59.14 325 P P 04 17 11.8 +0.1
ZALV Zalesovo Beam 61.84 333 P P 04 17 28.7 -1.2
comp=Z,1.0nm,0.8s,baz=98,slow=11,SNR=4.0
ZALV Zalesovo Beam 61.84 333 P P 04 17 29.5 -0.3
KURBB Kurchatov Arra 63.10 327 P P 04 17 38.2 0.0
comp=Z,1.5nm,0.6s,baz=122,slow=6.0,SNR=20
KURK Kurchatov 63.10 327 P P 04 17 38.0 -0.3
KURK IAmb IAmb 04 17 39.5
comp=Z,2.8nm,0.8s
TIXI Tiksi 68.41 0 P P 04 18 12.1 +0.1
comp=Z,1.7nm,0.4s,baz=188,slow=3.6,SNR=4.4
TIXI Tiksi 68.41 0 P P 04 18 11.7 -0.3
TIXI IAmb IAmb 04 20 16.5
comp=Z,6.4nm,1.4s
ILAR Eielson Array 84.94 25 P P 04 19 45.1 -0.1
comp=Z,0.3nm,1.0s,baz=258,slow=4.5,SNR=1.5
TORD Torodi Ar. Bea 124.63 288 PKP PKPdf 04 26 11.2 +0.9
comp=Z,0.7nm,0.7s,baz=49,slow=3.4,SNR=3.7
TORD Torodi Ar. Bea 124.63 288 PKPdf PKPdf 04 26 09.4 -0.9

IDC 04 04:12:17.7±1.0, 14°.83S×166°.91E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.7/42, mbtmp3.8/8, ML4.0/1, Error ellipse: s-maj=32.6km s-min=25.0km az=124.0
NEIC 04 04:12:22.7±1.2, 15°.01S±0°.09×166°.97E±0°.08, h37km±14km, mb4.1/2, Error ellipse: s-maj=13.3km s-min=10.5km az=218.0
ISC 04 04:12:24.4±0.8, 15°.11S±0°.08×167°.1E±0°.2, h57km, n15, σ1§45/18, mb3.8/7, Vanuatu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 0.36 163 Pn Pn 04 12 31.7 -3.0
SANVU Sn Sn 04 12 40.4 -1.7
DZM Mont Dzumac 6.96 185 Pn Pn 04 14 04.7 +0.8
2.4nm,0.3s,baz=195,slow=18,SNR=7.6
DZM Sn Sn 04 15 21.2 -0.5
0.8nm,0.3s,baz=293,slow=19,SNR=1.2
DZM Mont Dzumac 6.96 185 Pn 04 14 04.2 +0.3
DZM Sn 04 15 21.2 -0.5
NOUC Port Laguerre 7.00 186 Pn Pn 04 14 04.2 -0.2
CTA Charters Tower 20.47 253 P P 04 16 56.6 -1.0
1.3nm,0.3s,baz=84,slow=9.2,SNR=1.5
URZ Urewera 24.70 161 P P 04 17 43.6 +3.4
2.2nm,0.5s,baz=328,slow=9.5,SNR=1.7
URZ Urewera 24.70 161 P P 04 17 41.7 +1.5
URZ IAmb IAmb 04 17 50.9
comp=Z,7.1nm,1.2s
BKZ Black Stump Fm 25.35 163 P P 04 17 47.2 +1.0
BKZ IAmb IAmb 04 17 52.0
comp=Z,6.0nm,1.1s
WRA Warramunga Arr 31.57 256 P P 04 18 42.1 +0.3
comp=Z,0.5nm,0.7s,baz=89,slow=9.5,SNR=0.7
ASAR Alice Springs 32.38 250 P P 04 18 47.7 -1.2
comp=Z,0.3nm,0.4s,baz=74,slow=9.1,SNR=4.4
ILAR Eielson Array 86.93 18 P P 04 25 03.2 +0.4
comp=Z,0.5nm,0.5s,baz=236,slow=4.8,SNR=16
ILAR Eielson Array 86.93 18 P P 04 25 03.1 +0.3
MKAR Makanchi Array 97.36 316 P P 04 25 51.6 0.0
comp=Z,0.3nm,0.9s,baz=105,slow=5.7,SNR=1.1
YKA Yellowknife Ar 97.96 27 P P 04 25 54.2 +0.3
comp=Z,0.1nm,0.5s,baz=257,slow=4.7,SNR=4.8
ARCES ARCESS Array B 120.57 345 PKP PKiKP 04 31 10.1 +0.8
comp=Z,1.6nm,0.9s,baz=52,slow=1.6,SNR=9.3

IDC 04 04:16:09.2±1.1, 48°.84N×124°.47E, h0km, mb3.6/11, mb1 3.8/14, mb1mx3.5/45, mbtmp3.6/14, ML3.4/3, MS2.3/1, Ms1 2.3/1, ms1mx2.1/50, Error ellipse: s-maj=28.7km s-min=13.2km az=5.0
BJI 04 04:16:10.5±0.0, 48°.92N×124°.42E, h6km, mb3.9/5, ML4.3/9, Ms3.9/1, Ms7 3.6/1
ISC 04 04:16:10.8±0.6, 48°.84N±0°.08×124°.46E±0°.06, h10km, n20, σ1§41/21, mb3.6/10, Northeastern China

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KLR Kul'dur 4.81 83 Pn Pn 04 17 23.2 0.0
5.8nm,0.3s,baz=265,slow=13,SNR=98
KLR Sn Sn 04 18 17.9 -1.1
11nm,0.3s,baz=291,slow=20,SNR=5.5
KLR Lg Lg 04 18 41.7
26nm,0.3s,baz=160,slow=13,SNR=8.3
KLR LR LR 04 19 37.3
comp=Z,37nm,20.8s,baz=282,slow=43
MDJ Mudanjiang 5.51 138 Pn Pn 04 17 32.9 +0.1
MDJ Sg Sg 04 19 07.5 0.0
MDJ smax smax
comp=N,110nm,0.7s
MDJ smax smax
comp=E,140nm,0.5s
USRK Ussuriysk Ar. 6.97 129 Pn Pn 04 17 53.8 +0.9
baz=315,slow=14,SNR=27
USRK Lg Lg 04 19 48.5
baz=318,slow=31,SNR=12
SONM Songino Array 12.07 272 Pn Pn 04 19 00.8 -2.0
0.2nm,0.3s,baz=87,slow=13,SNR=10
SONM Sn Sn 04 21 14.4 -3.0
0.2nm,0.3s,baz=74,slow=22,SNR=3.6
SONM Lg Lg 04 22 29.4
1.0nm,0.3s,baz=85,slow=28,SNR=6.7
WHN Wuhan 19.83 207 P P 04 20 39.1 -2.5
GTA Gaotai 19.97 251 eP P 04 20 45.9 +2.7
GTA pP sP 04 20 51.1 +3.6
GTA sP pP 04 20 53.9 +7.7
GTA pmax pmax
comp=Z,2.0nm,1.6s
SEY Seymchan 20.84 37 P P 04 20 53.4 +1.1
4.8nm,0.6s,baz=233,slow=9.0,SNR=5.7
WMQ Urumqi 25.70 273 eP P 04 21 43.3 +2.3
MKAR Makanchi Array 28.13 282 P P 04 22 03.8 +0.9
0.2nm,0.7s,baz=77,slow=8.1,SNR=2.0
KURBB Kurchatov Arra 29.38 291 P P 04 22 15.5 +1.7
0.1nm,0.3s,baz=85,slow=9.2,SNR=2.1
KSH Kashi 35.46 273 P P 04 23 14.7 +7.3
KSH pmax pmax
comp=Z,500nm,3.1s
ILAR Eielson Array 46.77 36 P P 04 24 39.9 +0.1
0.2nm,0.5s,baz=283,slow=7.5,SNR=6.0
INK Inuvik 49.78 28 P P 04 25 02.8 -0.1
1.0nm,1.0s,baz=302,slow=5.0,SNR=2.3
FINES FINESS Array B 52.26 323 P P 04 25 21.7 0.0
3.9nm,1.1s,baz=313,slow=36,SNR=1.9
NOA NORSAR Array B 58.07 328 P P 04 26 03.1 -0.6
0.4nm,0.6s,baz=47,slow=7.7,SNR=4.2
YKA Yellowknife Ar 59.52 28 P P 04 26 13.2 -0.5
0.3nm,0.7s,baz=318,slow=6.9,SNR=6.6
BRTR Keskin Array B 61.93 299 P P 04 26 30.4 -0.2
0.4nm,0.6s,baz=41,slow=10,SNR=1.4
NVAR Mina Array Bea 76.87 46 P P 04 28 03.2 0.0
0.7nm,0.9s,baz=298,slow=6.4,SNR=4.5
PDAR Pinedale Array 77.17 38 P P 04 28 03.9 -0.9
0.2nm,0.8s,baz=352,slow=5.5,SNR=2.1
LPAZ La Paz 145.94 22 PKPbc PKPdf 04 35 50.8 0.0
1.3nm,0.9s,baz=23,slow=10,SNR=4.5

MAN 04 04:20:27.5, 10°.05N×124°.11E, h6km, mb4.0, ML2.8, MS2.4, Leyte

THE 04 04:31:00.4, 38°.15N×20°.39E, h12km, ML2.6/11, Error ellipse: s-maj=0.8km s-min=0.4km az=256.0
ATH 04 04:31:00.1, 38°.17N×20°.40E, h13km±1km, ML2.5/4, Error ellipse: s-maj=2.1km s-min=1.1km az=251.0
ISC 04 04:30:59.9±1.3, 38°.16N±0°.03×20°.39E±0°.05, h14km±5km, n28, σ0§47/50, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.03 350 P Pg 04 31 02.6 +0.1
CHV1 S Sg 04 31 04.3 +0.1
16μm,0.1s
KEF3 Kipouria, Keph 0.06 326 P Pg 04 31 02.5 -0.2
KEF3 S Sg 04 31 04.1 -0.4
LXR1 Lixouri, Cepha 0.06 43 P Pg 04 31 02.9 +0.2
LXR1 S Sg 04 31 04.9 +0.4
24μm,0.2s
KEF2 Argostoli. Kep 0.08 84 P Pg 04 31 02.7 -0.1
KEF2 S Sg 04 31 04.4 -0.5
ARG2 Argostoli 0.08 75 P Pg 04 31 03.0 +0.1
ARG2 S Sg 04 31 04.8 -0.1
17μm,0.1s
KEF4 Livadi, Kephal 0.10 16 P Pg 04 31 03.5 +0.3
KEF4 S Sg 04 31 05.2 -0.1
KEF1 Kardakata, Kep 0.14 29 P Pg 04 31 03.5 -0.1
KEF1 S Sg 04 31 05.2 -0.8
VLS Valsamata 0.16 83 P Pg 04 31 04.0 +0.1
VLS S Sg 04 31 06.7 +0.1
4μm,0.1s
VLS Valsamata 0.16 83 P Pg 04 31 03.8 -0.2
VLS S Sg 04 31 06.2 -0.4
VLS AML AML 04 31 06.8
comp=E,9737μm,0.1s
VLS AML AML 04 31 06.9
comp=N,4589μm,0.1s
VSK1 VASILIKIADES 0.29 29 P Pg 04 31 06.4 +0.4
VSK1 S Sb 04 31 11.2 -0.3
comp=N,2μm,0.2s
KFL Anninata 0.32 99 P Pg 04 31 06.7 +0.1
KFL S Sg 04 31 11.5 +0.5
comp=N,2μm,0.2s
KFL Anninata 0.32 99 P Pg 04 31 06.6 +0.1
KFL S Sg 04 31 11.7 +0.6
KFL AML AML 04 31 12.8
comp=N,3653μm,0.3s
KFL AML AML 04 31 13.0
comp=E,3652μm,0.3s
FSK Fiskardo 0.33 25 P Pg 04 31 07.1 +0.4
FSK S Sb 04 31 12.6 -0.1
comp=E,932nm,0.3s
FSK Fiskardo 0.33 25 P Pg 04 31 07.1 +0.4
FSK S Sg 04 31 11.9 +0.6
FSK AML AML 04 31 12.8
comp=E,2588μm,0.2s
FSK AML AML 04 31 12.9
comp=N,1124μm,0.3s
VLMS Volimes, Zakyn 0.35 142 P Pg 04 31 07.4 +0.2
VLMS S Sg 04 31 12.4 +0.3
VLMS AML AML 04 31 13.7
comp=E,1738μm,0.3s
VLMS AML AML 04 31 16.6
comp=N,2019μm,0.3s
EVGI Lefkada island 0.51 24 P Pg 04 31 10.2 +0.2
EVGI S Sb 04 31 17.8 0.0
EVGI Lefkada island 0.51 24 P Pg 04 31 10.1 +0.1
EVGI S Sg 04 31 16.2 -0.6
MGNA Meganis 0.59 32 P Pg 04 31 10.9 -0.6
KRI1 kERI 0.60 145 P Pg 04 31 11.4 -0.3
KRI1 S Sb 04 31 20.9 +0.5
comp=N,488nm,0.2s
LKD2 Lefkada island 0.67 19 P Pg 04 31 12.9 0.0
LKD2 S Sb 04 31 23.0 +0.6
comp=N,108nm,0.4s
LKD2 Lefkada island 0.67 19 P Pg 04 31 12.5 -0.4
AST1 Astakos 0.67 55 P Pg 04 31 13.2 +0.2
AST1 S Sb 04 31 23.0 +0.5
comp=N,325nm,0.3s
TSLK Tsoukalades, L 0.70 17 P Pg 04 31 13.8 +0.3
TSLK S Sb 04 31 23.9 +0.6
comp=N,235nm,0.8s
TSLK Tsoukalades, L 0.70 17 P Pg 04 31 13.4 -0.1
PDO Prodromos 0.77 55 P Pg 04 31 14.8 0.0
PDO S Sb 04 31 26.7 +1.5
PDO Prodromos 0.77 55 P Pg 04 31 13.9 -0.9
RLS Riolos of Patr 0.86 96 P Pg 04 31 15.3 -1.2
PVO Paravola 1.00 63 P Pb 04 31 18.7 -0.3

IDC 04 04:31:41.7±2.9, 36°.16N×71°.10E, h199km±25km, mb3.3/11, mb1 3.4/17, mb1mx3.1/51, mbtmp3.9/17, Error ellipse: s-maj=21.9km s-min=15.6km az=4.0
NNC 04 04:31:48.9±2.4, 36°.95N×71°.16E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=21.9km s-min=17.1km az=132.0
ISC 04 04:31:43.8±0.6, 36°.48N±0°.06×71°.10E±0°.08, h200km, n39, σ2§03/39, mb3.5/10, 4C-2D, Afghanistan-Tajikistan border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CEP Cherat 2.73 166 P Pn 04 32 35.4 +4.9
CEP S Sn 04 33 12.0 +5.2
CHCP Chirah Chowk 3.32 147 P Pn 04 32 41.6 +4.2
THW Thamme Wali 3.71 172 P Pn 04 32 46.1 +4.0
SARP Sargodha 4.73 164 P Pn 04 32 57.3 +2.6
AML Almayashu 5.99 19 P Pn 04 33 14.0 +2.8
SNR=134
UCH Uchtor 6.32 24 P Pn 04 33 18.7 +3.1
SNR=17
KZA Kyzart 6.45 29 P Pn 04 33 19.5 +2.3
SNR=7.0
EKS2 Erkin-Say 6.51 18 P Pn 04 33 21.0 +3.3
SNR=15
KK31 Karatay Array 6.63 356 ⇑Pn Pn 04 33 21.7 +2.6
6.1nm,0.4s,baz=180,slow=12,SNR=120
KK31 ⇑Sn Sn 04 34 33.9 -1.0
16nm,0.4s,baz=177,slow=24,SNR=7.1

AAK Ala-Archa 6.69 22 P Pn 04 33 22.8 +2.8
4.1nm,0.3s,baz=148,slow=3.9,SNR=50
AAK S Sn 04 34 33.1 -3.2
1.4nm,0.3s,baz=186,slow=13,SNR=3.6
AAK Ala-Archa 6.69 22 P Pn 04 33 23.6 +3.6
SNR=13
AAK Ala-Archa 6.69 22 ⇓Pn Pn 04 33 21.9 +1.9
3.9nm,0.3s
AAK Sn Sn 04 34 36.0 -0.3
43nm,1.1s
ULHL Ulahol 7.00 33 P Pn 04 33 26.4 +2.3
SNR=5.3
CHMS Chumysh 7.09 22 ⇓Pn Pn 04 33 28.3 +3.1
7.9nm,1.1s
CHMS ⇑Sn Sn 04 34 44.3 -1.4
20nm,1.1s
GEYT Alibeck 10.46 282 P Pn 04 34 08.9 0.0
0.3nm,0.3s,baz=120,slow=8.5,SNR=2.5
MKAR Makanchi Array 13.26 36 P Pn 04 34 44.8 +0.4
0.8nm,0.3s,baz=215,slow=6.4,SNR=20
KKN Kakani 14.79 122 eP P 04 35 03.8 -0.8
22nm,0.5s
PKIN Phulchoki 15.01 122 eP P 04 35 06.0 -1.1
12nm,0.4s
PKI Pulchoki 15.02 122 eP P 04 35 06.3 -1.0
14nm,0.4s
KURBB Kurchatov Arra 15.12 18 P P 04 35 08.5 +0.8
0.1nm,0.3s,baz=207,slow=11,SNR=9.4
GUN Gumba 15.13 120 eP P 04 35 08.1 -0.4
12nm,0.5s
JIRN Jiri 15.50 120 eP P 04 35 12.9 +0.2
28nm,0.4s
RAMN Ramite 16.23 121 eP Pn 04 35 20.9 -0.3
14nm,0.6s
BVAR Borovoye Array 16.55 358 P Pn 04 35 25.3 +0.8
0.7nm,0.3s,baz=166,slow=11,SNR=14
TAPN Taplejung 16.76 118 eP Pn 04 35 28.4 +0.8
12nm,0.6s
ODAN Odare 16.84 120 eP Pn 04 35 27.7 -0.7
10.0nm,0.6s
AKTO Aktyubinsk 16.84 330 P Pn 04 35 28.5 +0.6
1.6nm,0.3s,baz=132,slow=11,SNR=22
AKTO Aktyubinsk 16.84 330 ⇑Pn Pn 04 35 39.6 +12
8.7nm,0.8s
ZALV Zalesovo Beam 19.90 24 P P 04 35 59.5 -0.3
3.8nm,0.4s,baz=218,slow=12,SNR=12
ARU Arti 21.68 341 P P 04 36 20.1 +1.5
1.2nm,0.3s,baz=155,slow=3.7,SNR=4.7
SONM Songino Array 28.28 55 P P 04 37 18.8 +0.2
0.6nm,0.8s,baz=244,slow=9.6,SNR=7.1
FINES FINESS Array B 37.55 326 P P 04 38 38.6 +0.3
0.9nm,0.4s,baz=121,slow=10.0,SNR=13
ARCES ARCESS Array B 41.20 338 P P 04 39 08.9 +0.5
1.2nm,0.4s,baz=117,slow=8.2,SNR=18
NOA NORSAR Array B 44.45 323 P P 04 39 34.1 -0.5
0.8nm,0.7s,baz=102,slow=7.2,SNR=4.0
TORD Torodi Ar. Bea 65.80 269 P P 04 42 05.2 -2.6
0.4nm,0.4s,baz=52,slow=5.4,SNR=8.1
INK Inuvik 73.91 9 P P 04 42 56.0 -0.3
0.6nm,0.6s,baz=329,slow=5.3,SNR=5.1
YKA Yellowknife Ar 81.27 3 P P 04 43 36.4 -0.7
0.3nm,0.6s,baz=343,slow=5.2,SNR=7.0
WRA Warramunga Arr 81.91 122 P P 04 43 38.7 -2.4
0.9nm,0.9s,baz=324,slow=4.6,SNR=3.1
ASAR Alice Springs 84.17 125 P P 04 43 50.3 -2.4
0.6nm,1.0s,baz=313,slow=4.8,SNR=4.6

IDC 04 04:52:01.6±3.8, 4.76S×153.62E, h119km±26km, mb3.3/6, mb1 3.6/7, mb1mx3.4/30, mbtmp3.8/7, Error ellipse: s-maj=43.1km s-min=18.9km az=104.0
ISC 04 04:51:57.7±1.8, 4.7S±0.1×153.9E±0.2, h100km, n9, σ1.03/8, mb3.5/6, New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRVT Keravat (AS076 1.95 281 P Pn 04 52 30.4 +0.8
40nm,0.3s,baz=190,slow=1.3,SNR=20
KRVT S Sn 04 52 53.0 -0.9
51nm,0.3s,baz=146,slow=22,SNR=11
KRVT LR LR 04 53 26.1
comp=Z,70nm,20.6s,baz=158,slow=51
PMG Port Moresby 8.20 235 P Pn 04 53 54.7 +0.8
11nm,0.3s,baz=25,slow=23,SNR=8.0
PMG S Sn 04 55 25.0 +0.1
2.5nm,0.3s,baz=315,slow=12,SNR=3.5
WRA Warramunga Arr 24.37 230 P P 04 57 06.1 -0.6
1.6nm,0.6s,baz=53,slow=9.8,SNR=5.7
ASAR Alice Springs 27.00 224 P P 04 57 29.4 -1.1
0.8nm,0.5s,baz=54,slow=8.9,SNR=12
SONM Songino Array 66.85 327 P P 05 02 41.5 +2.4
0.3nm,0.5s,baz=132,slow=6.5,SNR=2.5
MKAR Makanchi Array 80.99 319 P P 05 04 02.3 +0.8
0.2nm,0.6s,baz=93,slow=7.5,SNR=5.0
ZALV Zalesovo Beam 81.70 326 P P 05 04 06.0 +1.0
0.3nm,0.3s,baz=116,slow=3.4,SNR=2.2
NVAR Mina Array Bea 91.13 52 P P 05 04 55.5 +3.6
0.2nm,0.7s,baz=286,slow=6.5,SNR=1.6
TORD Torodi Ar. Bea 151.35 289 PKPbc PKiKP 05 11 40.3 -1.0
0.7nm,0.7s,baz=57,slow=2.3,SNR=4.1

IDC 04 05:11:12.5±0.9, 53.79N×163.03W, h0km, mb4.0/21, mb1 4.2/23, mb1mx4.0/47, mbtmp4.0/23, ML3.5/2, MS3.7/11, Ms1 3.7/11, ms1mx3.3/44, Error ellipse: s-maj=24.2km s-min=12.2km az=9.0
AEIC 04 05:11:15.4±2.0, 53.56N±0.04×162.88W±0.06, h35km±3km, mb4.5/30(NEIC), Error ellipse: s-maj=5.7km s-min=4.7km az=222.0
NEIC 04 05:11:15.2±2.0, 53.57N±0.04×162.87W±0.06, h25km±3km, Error ellipse: s-maj=5.7km s-min=4.9km az=49.0
ISC 04 05:11:15.4±2.6, 53.60N±0.09×162.82W±0.04, h26km±17km, n119, σ1.16/118, mb4.3/34, MS3.6/11, South of Alaska

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FALS False Pass 1.30 345 Pn 05 11 37.5 -0.5
FALS Sb 05 11 56.0 +0.5
SSBA Shishaldin 1.40 327 Pn 05 11 39.2 -0.2
SSBA Sb 05 11 58.4 0.0
WEBT Westdahl Beart 1.51 312 Pn 05 11 40.8 -0.1
BALA Baldy Mountain 1.59 1 Pn 05 11 43.0 +1.0
AKSA Akutan Strait 1.79 289 Pn 05 11 44.3 -0.4
AKSA Sn 05 12 07.2 +0.8
AKUT Akutan 1.83 288 Pn 05 11 45.1 -0.1
AKUT Sn 05 12 08.0 +0.5
AKBBA Akutan Broad B 1.91 286 Pn 05 11 45.8 -0.5
AKBBA Sn 05 12 09.2 -0.4
AKLV Akutan Long Va 1.94 288 Pn 05 11 46.4 -0.4
AKMO Akutan Morgan 1.96 286 Pn 05 11 46.6 -0.4
AKGG Akutan Green G 1.97 289 Pn 05 11 47.1 0.0
AKGG Sn 05 12 12.1 +1.0
AKRB Akutan Reef Bi 2.00 287 Pn 05 11 47.7 +0.2
BLHA Black Hill 2.15 11 Pn 05 11 50.9 +1.3
UNV Unalaska Valle 2.21 278 Pn 05 11 49.7 -0.7
SDPT Sand Point 2.22 37 Pn 05 11 51.5 +0.9
SDPT Sn 05 12 18.0 +0.8
CNBA Chernabura Isl 2.25 56 Pn 05 11 52.4 +1.4
MTBL Makushin Table 2.32 281 Pn 05 11 52.0 -0.1
MREP Makushin Rep't 2.34 277 Pn 05 11 52.5 +0.1
MSW Makushin Switc 2.38 279 Pn 05 11 52.2 -0.5
MSW Sn 05 12 20.4 -0.6
MCIR Makushin Cirqu 2.44 280 Pn 05 11 54.0 +0.3
OKTU Okmok Mt. Tuli 3.13 268 Pn 05 12 03.5 +0.4
OKSP Okmok Steeple 3.29 266 Pn 05 12 04.8 -0.5
OKSP Sn 05 12 41.2 -2.5
OHAK Old Harbor 6.53 52 Pn Pn 05 12 49.2 -0.5
KDAK Kodiak Island 7.14 50 Pn Pn 05 12 57.3 -0.8
0.9nm,0.3s,baz=184,slow=5.0,SNR=19
KDAK Sn Sn 05 14 14.1 -4.1
0.9nm,0.3s,baz=293,slow=4.7,SNR=2.7
CNPM China Poot 8.72 42 Pn Pn 05 13 21.4 +1.7
RSO Redoubt South 8.79 35 Pn Pn 05 13 19.2 -1.7
KIWB Kanaga Island 8.88 264 Pn Pn 05 13 21.2 -0.7
TTA Tatalina 10.01 18 Pn Pn 05 13 37.4 -0.1
SUA Susitna One 10.19 35 Pn Pn 05 13 39.8 -0.2
SKT Skwentna 10.32 31 Pn Pn 05 13 42.7 +1.0
ANM Nome 11.07 354 Pn 05 13 52.3 +0.4
HIN Hinchinbrook I 11.18 46 Pn Pn 05 13 52.8 -0.6
EYAK Cordova Ski Ar 11.58 46 Pn Pn 05 13 57.2 -1.6
TRF Thorofare Moun 11.82 28 Pn 05 14 01.9 -0.4
RAGM Ragged Mountai 11.97 48 Pn Pn 05 14 05.4 +1.1
BPAW Bear Paw Mtn. 12.15 25 Pn Pn 05 14 07.4 +0.8
DHY Denali Highway 12.45 34 Pn 05 14 07.9 -3.0
CRQM Cirque 12.82 48 Pn Pn 05 14 14.6 -1.4
GLB Gilahina Butte 12.84 45 Pn 05 14 15.4 -0.7
VRDI Verde Repeater 12.89 46 Pn Pn 05 14 16.5 -0.5
TGL Tana Glacier 12.95 48 Pn Pn 05 14 19.2 +1.4
MLY Manley 12.98 23 Pn 05 14 19.3 +1.2
PAX Paxson 13.04 37 Pn 05 14 18.2 -0.7
BALM Baldy 13.29 48 Pn Pn 05 14 21.8 -0.5
CTGM Chitina Glacie 13.71 49 Pn 05 14 29.6 +1.5
ILAR Eielson Array 13.80 30 Pn Pn 05 14 26.5 -2.6
0.2nm,0.3s,baz=220,slow=13,SNR=7.9
ILAR Eielson Array 13.80 30 Pn 05 14 27.6 -1.5
BCAR Beaver Creek A 14.48 41 Pn 05 14 37.3 -1.2
TOLK Toolik Lake Re 16.32 17 P P 05 15 05.7 +0.4
BMAR Burnt Mountain 16.41 25 P Pn 05 15 04.8 +1.1
WHY Whitehorse 16.63 54 P P 05 15 09.2 +0.4
INK Inuvik 20.17 32 P P 05 15 46.4 -1.1
2.6nm,0.6s,baz=213,slow=12,SNR=28
INK Inuvik 20.17 32 P P 05 15 46.3 -1.2
PETK Petropavlovsk- 23.37 285 P P 05 16 20.8 -0.9
1.8nm,0.4s,baz=82,slow=14,SNR=11
PETK LR LR 05 25 26.0
comp=Z,129nm,19.6s,baz=60,slow=37
SEY Seymchan 24.84 310 P P 05 16 34.7 -0.6
0.9nm,0.2s,baz=149,slow=10.0,SNR=4.2
YKA Yellowknife Ar 26.41 51 P P 05 16 50.7 +1.2
1.2nm,0.6s,baz=266,slow=8.9,SNR=22
YKA LR LR 05 28 32.9
comp=Z,137nm,20.0s,baz=0.0,slow=39
C09A Chrisman Ranch 28.43 83 P P 05 17 08.8 +1.0
YBH Yreka Blue Hor 29.11 98 P P 05 17 16.9 +3.0
2.9nm,0.8s,baz=296,slow=9.2,SNR=8.2
K05A Summer Lake 29.59 94 P P 05 17 18.3 0.0
K05A IAmb IAmb 05 17 27.8
comp=Z,17nm,1.3s
I07A Izee 29.63 91 P P 05 17 17.3 -1.3
PAHR Pah Rah Range 32.35 98 P P 05 17 43.8 +1.1
PAHR IAmb IAmb 05 17 46.2
comp=Z,8.7nm,1.1s
RES Resolute Bay 33.52 26 P P 05 17 52.4 +0.1
TIXI Tiksi 33.76 328 P P 05 17 53.6 -0.8
comp=Z,0.9nm,0.3s,baz=45,slow=5.7,SNR=3.5
NVAR Mina Array Bea 33.82 98 P P 05 17 58.4 +2.8
comp=Z,4.0nm,0.7s,baz=298,slow=8.9,SNR=35
NVAR Mina Array Bea 33.82 98 P P 05 17 55.9 +0.4
ELK Elko 34.15 92 P P 05 17 59.5 +1.0
R11A Troy Canyon, C 35.48 96 P P 05 18 09.8 -0.1
R11A IAmb IAmb 05 18 13.2
comp=Z,6.6nm,1.1s
DUG Dugway, Tooele 35.94 91 P P 05 18 13.4 -0.3
DUG IAmb IAmb 05 18 17.1
comp=Z,8.4nm,0.9s
TPNV Topopah Spring 36.02 98 P P 05 18 14.6 +0.1
PDAR Pinedale Array 36.31 85 P P 05 18 18.6 +1.5
comp=Z,0.3nm,0.5s,baz=280,slow=5.3,SNR=4.2
CCUT Cedar City 37.32 95 P P 05 18 25.0 -0.7
MSU Marysvale 37.39 93 P P 05 18 25.3 -1.0
SRU San Rafael Swe 37.99 91 P P 05 18 30.4 -0.9
KNB Kanab 38.00 95 P P 05 18 31.6 +0.3
W13A Hualapai Mount 38.68 98 P P 05 18 35.8 -1.3
O20A White River Ci 38.70 88 P P 05 18 38.3 +1.1
O20A IAmb IAmb 05 18 39.8
comp=Z,7.6nm,0.8s
U15A North Rim 38.71 95 P P 05 18 36.0 -1.5
U15A IAmb IAmb 05 18 41.0
comp=Z,10nm,1.1s
WUAZ Wupatki 39.87 96 P P 05 18 45.5 -1.5
WUAZ IAmb IAmb 05 18 50.4
comp=Z,8.3nm,0.9s
ULM Lac du Bonnet 40.05 67 P P 05 18 48.6 +0.5
comp=Z,3.3nm,0.7s,baz=303,slow=8.7,SNR=10
ULM LR LR 05 35 21.2
comp=Z,82nm,19.1s,baz=18,slow=36
ULM Lac du Bonnet 40.05 67 IAmb IAmb 05 18 49.8
comp=Z,4.6nm,0.8s
H11N2 WAKE ISLAND Hy 41.04 226 T T 06 03 06.3
baz=26,slow=76,SNR=39
H11N3 WAKE ISLAND Hy 41.05 226 T T 06 03 06.1
baz=26,slow=76,SNR=37
H11N1 WAKE ISLAND Hy 41.06 226 T T 06 02 59.7
baz=26,slow=76,SNR=30
H11S1 WAKE ISLAND Hy 42.21 226 T T 06 04 14.9
baz=26,slow=76,SNR=51
H11S2 WAKE ISLAND Hy 42.22 226 T T 06 04 30.9
baz=26,slow=76,SNR=30
H11S3 WAKE ISLAND Hy 42.22 226 T T 06 04 11.0
baz=26,slow=76,SNR=39
USRK Ussuriysk Ar. 42.46 285 LR LR 05 36 05.7
comp=Z,64nm,19.5s,baz=87,slow=35
EYMN Ely 43.72 67 P P 05 19 19.0 +0.9
EYMN IAmb IAmb 05 19 19.6
comp=Z,5.5nm,0.8s
MNTX Cornudas Mount 46.11 95 P P 05 19 37.8 +0.5
MNTX IAmb IAmb 05 19 40.4
comp=Z,4.8nm,0.8s
SUMG Summit 48.37 19 P P 05 19 55.8 +1.0
TX31 Lajitas Ar. Si 48.83 95 P P 05 19 59.3 +0.7
TX31 IAmb IAmb 05 20 01.3
comp=Z,4.8nm,0.8s
TX32 Lajitas Array 48.83 95 P P 05 19 57.7 -0.9
TX32 IAmb IAmb 05 20 01.2
comp=Z,5.0nm,0.8s
TXAR Lajitas Array 48.83 95 P P 05 20 00.2 +1.6
comp=Z,3.9nm,0.6s,baz=302,slow=5.5,SNR=44
TXAR Lajitas Array 48.83 95 P P 05 19 58.3 -0.4
HDIL Hopedale 49.54 74 P P 05 20 04.2 +0.4
P43A Skaggs, Pawnee 50.02 75 P P 05 20 07.5 +0.1
SCHQ Schefferville 51.76 47 P P 05 20 20.4 +0.1
comp=Z,1.4nm,0.6s,baz=333,slow=9.0,SNR=2.3
WVT Waverly 53.39 77 P P 05 20 32.0 -0.6
SONM Songino Array 53.99 304 P P 05 20 37.3 +0.2
comp=Z,1.4nm,0.8s,baz=31,slow=6.3,SNR=10
ARCES ARCESS Array B 57.02 357 P P 05 20 57.3 -1.1
comp=Z,1.6nm,0.8s,baz=5.8,slow=7.6,SNR=10
ZALV Zalesovo Beam 59.09 320 P P 05 21 12.6 -0.5
comp=Z,0.4nm,0.3s,baz=27,slow=8.1,SNR=3.4
ZALV LR LR 05 48 30.8
comp=Z,70nm,18.2s,baz=34,slow=38
KURK Kurchatov 63.98 322 P P 05 21 46.5 +0.5
KURK IAmb IAmb 05 21 48.9
comp=Z,7.3nm,1.3s
FINES FINESS Array B 65.08 355 P P 05 21 52.4 -0.7
comp=Z,2.9nm,1.0s,baz=251,slow=34,SNR=1.9
FINES LR LR 05 51 11.2
comp=Z,38nm,18.8s,baz=30,slow=37
NOA NORSAR Array B 65.61 3 LR LR 05 52 13.2
comp=Z,22nm,18.2s,baz=235,slow=38
MK31 Makanchi Array 65.72 317 P P 05 21 57.4 -0.2
MKAR Makanchi Array 65.72 317 P P 05 21 57.0 -0.5
comp=Z,0.6nm,0.4s,baz=41,slow=7.3,SNR=15
MKAR LR LR 05 54 52.4
comp=Z,38nm,18.4s,baz=14,slow=40
ABKAR Akbulak array 71.34 332 P P 05 22 33.2 +0.7
KK31 Karatay Array 73.38 322 P P 05 22 45.1 +0.3
KK31 IAmb IAmb 05 22 56.1
comp=Z,6.5nm,1.5s
KKAR Karatay Array 73.38 322 P P 05 22 45.0 +0.2
KKAR Karatay Array 73.38 322 P P 05 22 45.1 +0.2
KKAR IAmb IAmb 05 22 56.1
comp=Z,6.5nm,1.5s
KSH Kashi 74.33 317 P P 05 22 55.3 +4.7
RAR Rarotonga 74.55 177 LR LR 05 47 46.7
comp=Z,146nm,20.6s,baz=86,slow=29
AKASG Malin Array Be 75.58 352 P P 05 22 56.5 -0.9
comp=Z,0.7nm,0.3s,baz=13,slow=5.6,SNR=5.7
KHC Kasperske Hory 77.59 2 eP P 05 23 09.5 +0.6
GERES GERESS Array B 77.88 2 P P 05 23 10.8 +0.2
comp=Z,0.7nm,0.6s,baz=5.7,slow=4.0,SNR=6.4
VYHS Vyhne 78.27 359 eP P 05 23 11.1 -1.6
CMAR Chiang Mai Arr 80.12 288 P P 05 23 22.8 -0.4
comp=Z,0.6nm,0.3s,baz=20,slow=5.1,SNR=6.2
CMAR LR LR 06 01 59.1
comp=Z,30nm,18.5s,baz=240,slow=38
GEYT Alibeck 82.21 328 P P 05 23 34.2 +0.1
comp=Z,1.1nm,0.7s,baz=338,slow=3.4,SNR=3.3
BRTR Keskin Array B 85.97 347 P P 05 23 53.8 +0.5
comp=Z,1.1nm,0.8s,baz=55,slow=1.4,SNR=4.8
PSI Prapat 92.67 278 LR LR 06 09 06.8
comp=Z,133nm,18.6s,baz=224,slow=38

JMA 04 05:12:59.3±0.1, 24.46N×122.76E, h93km±1km, M3.4
TAP 04 05:13:00.0, 24.48N×122.75E, h85km, ML3.8, C
ISC 04 05:12:58.6±1.3, 24.51N±0.03×122.78E±0.02, h99km±7km, n102, σ1.15/187, Taiwan region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JYNG Yonagunijimaku 0.16 111 P Pn 05 13 12.7 +0.1
JYNG S Sn 05 13 22.4 -0.6
YOJ Yonaguni jima 0.21 103 iP Pn 05 13 12.9 +0.2
baz=92
YOJ S Sn 05 13 22.0 -1.2
baz=92
YOJ Yonaguni jima 0.21 103 P Pn 05 13 12.9 +0.2
YOJ eS Sn 05 13 22.8 -0.5
EOS1 EOS1 0.60 274 P Pn 05 13 15.5 +0.5
baz=277
EOS1 S Sn 05 13 27.6 +0.4
baz=277
TWC Suao 0.85 277 P Pn 05 13 17.8 +0.3
baz=279
TWC S Sn 05 13 30.5 -1.1
baz=279
TWB1 Santiao Chiao 0.88 305 eP Pn 05 13 17.4 -0.3
baz=307
TWB1 eS Sn 05 13 30.9 -1.1
baz=307
IRIF Iriomote-Funau 0.88 101 P Pn 05 13 18.2 +0.5
IRIF S Sn 05 13 31.8 -0.2
NTC Toucheng 0.93 292 eP Pn 05 13 18.9 +0.7
baz=294
NTC eS Sn 05 13 32.2 -0.8
baz=294
ENA Nanau 0.95 265 P Pn 05 13 19.3 +0.9
baz=266
ENA eS Sn 05 13 33.4 +0.1
baz=266
ILA Ilan 0.97 285 eP Pn 05 13 19.4 +0.8
baz=287
ILA eS Sn 05 13 33.9 +0.1
baz=287
TIPB Shuangxi 0.98 298 eP Pn 05 13 19.4 +0.5
baz=300
TIPB eS Sn 05 13 33.4 -0.7
baz=300
TWE Neicheng 1.04 282 P Pn 05 13 20.1 +0.8
baz=283
TWE S Sn 05 13 34.7 -0.3
baz=283
HATJ Hateruma jima 1.04 116 P Pn 05 13 20.4 +1.0
HATJ eS Sn 05 13 35.3 +0.3
NWF Wu-fen Shan 1.07 302 eP Pn 05 13 20.8 +1.0
baz=303
NWF eS Sn 05 13 35.1 -0.7
baz=303
WFSB Wu-fen Shan 1.07 302 eP Pn 05 13 20.8 +1.1
baz=303
WFSB eS Sn 05 13 35.2 -0.4
baz=303
SLBB Yuanshan 1.07 283 eP Pn 05 13 20.7 +0.9
baz=285
ENTT Nioudou 1.11 277 eP Pn 05 13 21.3 +1.1
baz=278
ENTT eS Sn 05 13 37.2 +0.7
baz=278
NACB Ninganchiao 1.13 253 P Pn 05 13 20.7 +0.3
baz=253
NACB S Sn 05 13 36.3 -0.7
baz=253
JKRS Kuro-shima 1.15 103 P Pn 05 13 21.6 +0.9
JKRS S Sn 05 13 37.5 +0.2
NDT Datong Townshi 1.16 275 P Pn 05 13 22.0 +1.3
baz=276
NDT eS Sn 05 13 37.8 +0.3
baz=276
TWD Chiawan 1.16 249 eP Pn 05 13 21.1 +0.3
baz=249
TWD eS Sn 05 13 36.8 -0.7
baz=249
TWA Mucha 1.19 294 eP Pn 05 13 21.1 0.0
baz=295
TWA eS Sn 05 13 37.7 -0.3
baz=295
NWLT Wulai 1.19 283 eP Pn 05 13 22.1 +1.0
baz=284
NWLT eS Sn 05 13 37.9 -0.3
baz=284
HWA Hwalien 1.20 244 eP Pn 05 13 21.7 +0.5
baz=244
HWA eS Sn 05 13 38.4 +0.2
baz=244
ETLH Xiulin Townshi 1.22 256 eP Pn 05 13 22.0 +0.4
baz=256
ETLH eS Sn 05 13 38.3 -0.6
baz=256
NHDH Xindian Distri 1.23 292 eP Pn 05 13 22.6 +1.1
baz=293
NHDH eS Sn 05 13 38.4 -0.5
baz=293
ENLB Shoufeng 1.23 241 eP Pn 05 13 21.3 -0.3
baz=241
ENLB eS Sn 05 13 38.0 -1.0
baz=241
JIJ Ishigaki jima 1.25 96 P Pn 05 13 22.2 +0.4
JIJ S Sn 05 13 38.5 -0.8
TATO Taipei 1.26 292 P Pn 05 13 22.8 +0.8
baz=293
TATO eS Sn 05 13 38.6 -1.0
baz=293
YM01 YM01 1.27 300 eP Pn 05 13 23.1 +1.0
baz=301
YM01 eS Sn 05 13 40.0 +0.2
baz=301
YM08 YM08 1.28 302 eP Pn 05 13 23.2 +1.0
baz=303
YM08 eS Sn 05 13 39.0 -1.0
baz=303
NNSB Datong 1.28 267 eP Pn 05 13 23.1 +0.8
baz=267
NNSH Datong 1.28 267 eP Pn 05 13 23.0 +0.7
baz=267
NNSH eS Sn 05 13 39.9 -0.2
baz=267
YM10 YM10 1.28 300 eP Pn 05 13 23.4 +1.2
baz=301
YM10 eS Sn 05 13 40.7 +0.6
baz=301
YM05 YM05 1.28 301 eP Pn 05 13 23.1 +0.8
baz=302
YM05 eS Sn 05 13 40.0 -0.1
baz=302
NNS Nan Shan 1.28 267 eP Pn 05 13 23.1 +0.7
baz=268
NNS eS Sn 05 13 39.9 -0.4
baz=268
YHNB Yeheng 1.29 277 P Pn 05 13 23.5 +1.1
baz=278
YHNB S Sn 05 13 40.4 +0.1
baz=278
YM04 YM04 1.30 300 eP Pn 05 13 23.2 +0.7
baz=301
YM04 eS Sn 05 13 40.0 -0.4
baz=301
NSK Sanguang 1.31 278 P Pn 05 13 23.7 +1.2
baz=278
NSK eS Sn 05 13 40.8 +0.1
baz=278
TWS1 Kuangyinshan 1.37 296 eP Pn 05 13 24.4 +1.1
baz=297
TWS1 eS Sn 05 13 42.0 +0.1
baz=297
JISG Ishigakijimahi 1.40 86 P Pn 05 13 24.2 +0.7
JISG S Sn 05 13 42.0 -0.4
ESL Shilin 1.41 241 eP Pn 05 13 23.6 -0.2
baz=240
ESL eS Sn 05 13 42.1 -0.7
baz=240
WHF Hehuan Shan 1.43 256 P Pn 05 13 25.0 +0.6
baz=256
WHF eS Sn 05 13 43.5 -0.4
baz=256
WLTB Daxi 1.43 284 eP Pn 05 13 24.2 +0.2
baz=285
WLTB eS Sn 05 13 44.5 +1.3
baz=285
EGFH Guangfu 1.49 236 eP Pn 05 13 25.1 +0.4
baz=236
EGFH eS Sn 05 13 44.0 -0.6
baz=236
TDCB Techi 1.50 261 eP Pn 05 13 26.4 +1.4
baz=261

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TDCB				eS	Sn	05 13 44.7	-0.3
	baz=261						
NCU	National Centr	1.52	288	eP	Pn	05 13 26.5	+1.5
	baz=288						
NCU				eS	Sn	05 13 46.1	+0.9
	baz=288						
NCUH	Zhongli	1.52	288	eP	Pn	05 13 26.0	+0.9
	baz=288						
NCUH				eS	Sn	05 13 45.5	+0.3
	baz=288						
CHGB	Renai	1.53	253	P	Pn	05 13 26.6	+1.1
	baz=253						
CHGB				S	Sn	05 13 45.6	-0.2
	baz=253						
OWD	Renai	1.57	250	eP	Pn	05 13 26.5	+0.7
	baz=249						
OWD				eS	Sn	05 13 45.3	-1.1
	baz=249						
HGSD	Ruisui	1.60	231	P	Pn	05 13 26.4	+0.3
	baz=230						
HGSD				S	Sn	05 13 45.6	-1.4
	baz=230						
LIOB	Emei	1.61	275	eP	Pn	05 13 27.5	+1.2
	baz=276						
LIOB				eS	Sn	05 13 47.4	+0.1
	baz=276						
NSTT	Nanjuang	1.62	275	eP	Pn	05 13 27.8	+1.4
	baz=275						
NSTT				eS	Sn	05 13 47.7	+0.2
	baz=275						
SBCB	Hsinchu	1.66	280	eP	Pn	05 13 27.6	+0.8
	baz=280						
SBCB				eS	Sn	05 13 48.0	-0.2
	baz=280						
EHY	Hungye	1.67	233	eP	Pn	05 13 27.0	+0.1
	baz=233						
VWDT	VWDT	1.68	244	P	Pn	05 13 28.0	+1.0
	baz=243						
VWDT				eS	Sn	05 13 48.2	-0.4
	baz=243						
WHP	Taichung City	1.69	263	eP	Pn	05 13 29.4	+2.2
	baz=263						
WHP				eS	Sn	05 13 49.9	+0.9
	baz=263						
JTJ	Tarama	1.75	85	P	Pn	05 13 29.0	+1.0
JTJ				S	Sn	05 13 51.2	+0.9
YULB	Yu-li	1.75	231	P	Pn	05 13 28.3	+0.2
	baz=230						
YULB				eS	Sn	05 13 49.3	-1.1
	baz=230						
DPDB	Guoxing	1.76	255	eP	Pn	05 13 29.9	+1.8
	baz=255						
DPDB				eS	Sn	05 13 52.0	+1.4
	baz=255						
TWF1	Yuli	1.78	230	eP	Pn	05 13 28.7	+0.3
	baz=229						
TWF1				eS	Sn	05 13 49.1	-1.9
	baz=229						
NMLH	Miaoli	1.81	271	eP	Pn	05 13 30.1	+1.4
	baz=271						
NMLH				eS	Sn	05 13 51.2	-0.5
	baz=271						
SSLB	Suanglung	1.82	247	eP	Pn	05 13 29.9	+1.0
	baz=247						
SSLB				eS	Sn	05 13 52.2	+0.3
	baz=247						
NSY	Sanyi	1.84	268	eP	Pn	05 13 30.6	+1.5
	baz=267						
NSY				eS	Sn	05 13 52.5	0.0
	baz=267						
TYC	Yuchr	1.86	251	eP	Pn	05 13 30.8	+1.5
	baz=251						
TYC				eS	Sn	05 13 54.1	+1.4
	baz=251						
FULB	Fuli	1.89	227	eP	Pn	05 13 29.7	-0.1
	baz=226						
FULB				eS	Sn	05 13 52.5	-1.0
	baz=226						
CHKT	Chengkung	1.91	223	eP	Pn	05 13 29.9	-0.1
	baz=222						
CHKT				eS	Sn	05 13 52.0	-1.9
	baz=222						
WHYT	Xinyi Township	1.94	246	eP	Pn	05 13 32.5	+2.0
	baz=245						
WHYT				eS	Sn	05 13 56.2	+1.5
	baz=245						
TCU	Taichung	1.95	260	eS	Sn	05 13 55.9	+0.9
	baz=259						
YUS	Yu-Shan	1.96	239	eP	Pn	05 13 32.4	+1.3
	baz=238						
YUS				eS	Sn	05 13 55.2	-0.6
	baz=238						
WDJ	Dajia District	1.96	266	eS	Sn	05 13 54.7	-0.3
	baz=266						
WJS	Zhushan	2.00	250	eP	Pn	05 13 33.5	+2.3
	baz=250						
WJS				eS	Sn	05 13 58.0	+2.1
	baz=250						
ALS	Alishan	2.06	242	eP	Pn	05 13 34.1	+1.8
	baz=241						
ALS				eS	Sn	05 13 58.7	+0.8
	baz=241						
ELDTW	Lidau	2.08	231	eP	Pn	05 13 32.8	+0.4
	baz=230						
ELDTW				eS	Sn	05 13 57.5	-0.6
	baz=230						
CHN5	Tsauling	2.13	245	eP	Pn	05 13 34.9	+2.0
	baz=245						
CHN5				eS	Sn	05 14 01.2	+2.2
	baz=245						
TWH	Lutao	2.15	214	eP	Pn	05 13 33.3	+0.1
	baz=212						
TWH				eS	Sn	05 13 58.4	-1.1
	baz=212						
JIRB	Irabujima	2.20	81	eS	Sn	05 14 00.0	-0.6
WDLH	Douliu	2.21	249	eP	Pn	05 13 35.5	+1.7
	baz=248						
WDLH				eS	Sn	05 14 02.5	+1.7
	baz=248						
JIKM	Ikemajima	2.28	79	eS	Sn	05 14 02.8	+0.3
STYT	Tauyuan	2.29	235	eP	Pn	05 13 36.8	+1.8
	baz=234						
TWGBT	Beinan	2.29	223	eP	Pn	05 13 35.1	+0.1
	baz=222						
TWGBT				eS	Sn	05 14 02.2	-0.7
	baz=222						
TWG	Pinlang	2.30	223	eP	Pn	05 13 35.1	0.0
	baz=222						
TWG				eS	Sn	05 14 01.1	-1.8
	baz=222						
TPUB	Ta-pu	2.31	239	eP	Pn	05 13 37.2	+2.0
	baz=238						
TPUB				eS	Sn	05 14 04.6	+1.4
	baz=238						
CHN4	Tsaushan	2.31	241	eP	Pn	05 13 37.5	+2.3
	baz=240						
CHN4				eS	Sn	05 14 04.1	+0.8
	baz=240						
CHN2	Minshiung	2.32	246	eP	Pn	05 13 37.8	+2.4
	baz=245						
CHN1	Nanshi	2.45	238	eP	Pn	05 13 39.3	+2.2
	baz=237						
CHN1				eS	Sn	05 14 08.8	+2.2
	baz=237						
SGST	Jiashian	2.46	235	eP	Pn	05 13 39.0	+1.7
	baz=234						
SGST				eS	Sn	05 14 08.4	+1.6
	baz=234						
SLGT	Liugui	2.47	233	eP	Pn	05 13 39.5	+2.2
	baz=232						
SLGT				eS	Sn	05 14 09.3	+2.2
	baz=232						
ECL	Taimali	2.54	222	eP	Pn	05 13 38.3	+0.1
	baz=221						
ECL				eS	Sn	05 14 07.2	-1.3
	baz=221						
SSD	Sandimen	2.64	229	eP	Pn	05 13 41.6	+2.1
	baz=228						
LAY	Lan-yu	2.71	205	eP	Pn	05 13 39.9	-0.6
	baz=204						
LAY				eS	Sn	05 14 09.5	-3.1
	baz=204						
MASBT	Mashibuluo	2.73	227	eP	Pn	05 13 42.3	+1.6
	baz=226						
EAST	Anshuo	2.76	220	eP	Pn	05 13 40.4	-0.8
	baz=219						
PTTC	Pingtan	2.91	290	eP	Pn	05 13 42.5	-0.6
	baz=290						
PTTC				eS	Sn	05 14 15.1	-2.2
	baz=290						
SCZT	Fangliau	2.91	223	eP	Pn	05 13 44.9	+1.8
	baz=222						
VWUC	VWUC	3.07	280	eP	Pn	05 13 44.6	-0.7
	baz=279						
VWUC				eS	Sn	05 14 18.7	-2.5
	baz=279						
PHUB	P'eng-hu	3.10	252	eS	Sn	05 14 20.0	-1.9
	baz=251						
PTMZ	Houxiangcun	3.37	280	eP	Pn	05 13 48.9	-0.4
	baz=279						
PTMZ				eS	Sn	05 14 25.4	-3.0
	baz=279						
LYJJ	Jianjiangzhen	3.40	307	eP	Pn	05 13 49.8	+0.1
	baz=307						
MHZQ	Yeshan	3.75	296	eP	Pn	05 13 54.0	-0.4
	baz=295						
KNMB	Chin-men Tao	4.00	270	eP	Pn	05 13 57.4	-0.4
	baz=269						
AXDP	Jialang	4.39	276	eP	Pn	05 14 03.7	+0.7
	baz=275						
AXDP				eS	Sn	05 14 49.3	-3.8
	baz=275						

IDC 04 05:25:43.7±2.3, 6°.19S×147°.77E, h52km±21km, mb3.7/10, mb1 4.0/12, mb1mx3.8/32, mbtmp4.0/12, ML4.3/1, MS3.3/3, Ms1 3.3/3, ms1mx2.9/35, Error ellipse: s-maj=27.9km s-min=11.8km az=106.0

NEIC 04 05:25:44.0±1.2, 6°.18S±0°.07×147°.8E±0°.2, h53km±8km, mb4.1/9, Error ellipse: s-maj=27.9km s-min=9.2km az=98.0

ISC 04 05:25:44.4±0.7, 6°.19S±0°.06×147°.8E±0°.2, h60km, n33, σ0s.84/34, mb3.9/10, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.27	191	P	Pn	05 26 32.6	-0.6
	25nm,0.3s,baz=43,slow=3.8,SNR=17						
PMG				S	Sn	05 27 10.1	-0.7
	60nm,0.3s,baz=49,slow=24,SNR=11						
MANU	Manus Island	4.14	354	Pn	Pn	05 26 44.5	-0.6
KRVT	Keravat (AS076	4.59	66	LR	LR	05 28 41.2	
	comp=Z,255nm,19.0s,baz=211,slow=38						
COEN	Coen	8.97	210	Pn	Pn	05 27 51.0	-0.3
WB0	Warramunga Arr	18.77	223	P	P	05 29 59.4	+0.4
WB0				IAmb	IAmb	05 30 08.8	
	comp=Z,9.9nm,1.1s						
WR0	Warramunga Arr	18.81	222	P	P	05 29 59.1	-0.2
WR0				IAmb	IAmb	05 30 12.1	
	comp=Z,23nm,1.4s						
WRA	Warramunga Arr	18.93	223	P	P	05 30 00.0	-0.6
	comp=Z,1.1nm,0.3s,baz=16,slow=33,SNR=9.5						
WRA				LR	LR	05 38 01.5	
	comp=Z,110nm,18.3s,baz=30,slow=39						
WRA	Warramunga Arr	18.93	223	P	P	05 29 59.7	-0.9
EIDS	Eidsvold	19.33	171	P	P	05 30 04.7	-0.2
EIDS				IAmb	IAmb	05 30 17.1	
	comp=Z,18nm,1.3s						
KNRA	Kununurra	20.93	242	P	P	05 30 22.3	-0.1
AS31	Alice Springs	21.93	216	P	P	05 30 33.0	-0.1
ASAR	Alice Springs	21.94	216	P	P	05 30 33.0	-0.1
	comp=Z,3.4nm,0.5s,baz=51,slow=9.1,SNR=69						
ASAR				S	S	05 34 32.9	+0.7
	comp=Z,1.8nm,0.9s,baz=35,slow=19,SNR=5.6						
ASAR	Alice Springs	21.94	216	P	P	05 30 32.8	-0.3
FITZ	Fitzroy Crossi	24.66	239	P	P	05 30 59.6	-0.1
	comp=Z,9.0nm,0.6s,baz=60,slow=8.8,SNR=23						
FITZ				LR	LR	05 39 43.4	
	comp=Z,56nm,21.4s,baz=22,slow=34						
FITZ	Fitzroy Crossi	24.66	239	P	P	05 31 00.6	+0.9
FITZ				IAmb	IAmb	05 31 05.1	
	comp=Z,26nm,1.4s						
STKA	Stephens Creek	26.21	192	P	P	05 31 14.8	+1.1
	comp=Z,3.0nm,0.7s,baz=337,slow=10.0,SNR=7.7						
STKA	Stephens Creek	26.21	192	P	P	05 31 14.4	+0.7
STKA				IAmb	IAmb	05 31 27.1	
	comp=Z,4.6nm,1.4s						
MJAR	Matsushiro Arr	43.45	349	P	P	05 33 42.7	+1.1
	comp=Z,1.9nm,0.7s,baz=163,slow=8.0,SNR=4.9						
PETK	Petropavlovsk-	59.66	7	P	P	05 35 43.8	+1.5
	comp=Z,1.6nm,0.5s,baz=171,slow=8.4,SNR=5.9						
PETK	Petropavlovsk-	59.66	7	P	P	05 35 43.1	+0.8
SONM	Songino Array	64.96	331	P	P	05 36 18.2	+0.1
	comp=Z,0.5nm,0.6s,baz=146,slow=5.2,SNR=4.7						
SONM	Songino Array	64.96	331	P	P	05 36 16.4	-1.6
MKAR	Makanchi Array	78.16	320	P	P	05 37 36.9	-0.5
	comp=Z,0.2nm,0.4s,baz=97,slow=8.1,SNR=6.8						
ZALV	Zalesovo Beam	79.60	328	P	P	05 37 43.9	-1.1
	comp=Z,0.4nm,0.5s,baz=79,slow=7.5,SNR=2.6						
QSPA	South Pole Qui	83.78	180	P	P	05 38 07.8	+0.7
	comp=Z,1.8nm,0.6s,baz=295,slow=1.2,SNR=24						
QSPA	South Pole Qui	83.78	180	P	P	05 38 07.5	+0.4
ILAR	Eielson Array	85.33	23	P	P	05 38 13.6	-1.1
	comp=Z,0.4nm,0.6s,baz=245,slow=4.9,SNR=6.7						
PLCA	Paso Flores	121.52	146	PKP	PKPdf	05 44 29.7	-2.0
	comp=Z,2.8nm,1.2s,baz=203,slow=6.7,SNR=3.1						
LPAZ	La Paz	138.00	123	PKP	PKPdf	05 45 04.6	+0.4
	comp=Z,1.1nm,0.9s,baz=194,slow=5.5,SNR=3.8						
TORD	Torodi Ar. Bea	145.92	284	PKPbc	PKPbc	05 45 18.5	+0.2
	comp=Z,2.9nm,0.7s,baz=66,slow=2.8,SNR=16						
TORD	Torodi Ar. Bea	145.92	284		PKPbc	05 45 18.7	+0.4
DBIC	Dimbokro	152.84	273	PKPbc	PKiKP	05 45 36.5	+0.4
	comp=Z,0.9nm,0.5s,baz=244,slow=1.2,SNR=4.2						
BDFB	Brasilia	153.24	144	PKPbc	PKiKP	05 45 37.9	+1.0
	comp=Z,2.6nm,0.5s,baz=200,slow=3.3,SNR=6.6						

NEIC 04 05:28:35.0±1.3, 24°.78S±0°.07×179°.5W±0°.3, h491km±17km, mb4.8/14, Error ellipse: s-maj=34.0km s-min=8.7km az=96.0

IDC 04 05:28:35.4±2.9, 24°.79S×179°.60W, h482km±33km, mb3.6/5, mb1 3.8/7, mb1mx3.3/33, mbtmp4.6/7, Error ellipse: s-maj=25.7km s-min=22.2km az=108.0

ISC 04 05:28:36.0±0.8, 24°.78S±0°.09×179°.5W±0°.2, h500km, n50, σ1s.32/50, mb4.4/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OUZ	Omahuta	12.01	208	P	P	05 31 14.4	-0.1
KUZ	Kuaotunu	12.62	198	P	P	05 31 22.8	+1.9
MXZ	Matakaoa Point	12.89	188	P	P	05 31 23.0	-0.7
MXZ	Matakaoa Point	12.89	188	P	P	05 31 26.1	+2.4
MBAZ	Motutapu North	12.89	201	P	P	05 31 26.0	+2.3
AFI	Afiamalu	13.02	35	P	P	05 31 25.8	+0.2
	4.3nm,0.3s,baz=36,slow=8.2,SNR=5.9						
AFI	Afiamalu	13.02	35	P	P	05 31 24.8	-0.8
MKAZ	Moumakai	13.12	199	P	P	05 31 28.0	+1.9
HAZ	Te Kaha	13.15	190	P	P	05 31 26.7	+0.2
PKGZ	Pakihiroa	13.24	188	P	P	05 31 31.4	+3.9
RUGZ	Raukumara Rang	13.37	190	P	P	05 31 28.7	-0.3
PUZ	Puketiti	13.39	188	P	P	05 31 32.3	+3.2
KMRZ	Kaimai	13.60	196	P	P	05 31 33.3	+2.0
URZ	Urewera	13.75	191	P	P	05 31 30.5	-2.4
	1.1nm,0.3s,baz=156,slow=20,SNR=4.2						
URZ				S	S	05 33 57.8	-0.9
	1.4nm,0.3s,baz=185,slow=22,SNR=12						
URZ	Urewera	13.75	191	P		05 31 31.0	-1.9
URZ					S	05 33 59.1	+0.4
URZ	Urewera	13.75	191	P	P	05 31 32.4	-0.5
MWZ	Matawai	13.75	190	P	P	05 31 33.8	+0.8
RIGZ	Rimuhau	14.08	189	P	P	05 31 38.2	+1.8
HIZ	Hauiti	14.52	198	P	P	05 31 41.2	+0.3
HIZ	Hauiti	14.52	198	P	P	05 31 43.8	+2.9
BKZ	Black Stump Fm	14.75	192	P	P	05 31 42.3	-1.1
MSWZ	Moikau Station	17.17	194	P	P	05 32 06.7	-1.7
BHW	Baring Head	17.24	194	P	P	05 32 08.5	-0.5
PLWZ	Palliser	17.31	193	P	P	05 32 08.7	-1.1
NNZ	Nelson	17.44	198	P	P	05 32 09.6	-1.4
NNZ				IAmb	IAmb	05 32 12.9	
	comp=Z,35nm,1.0s						
BSWZ	Blackbirch Sta	17.77	196	P	P	05 32 14.6	+0.6
THZ	Tophouse	18.08	199	P	P	05 32 16.2	-0.8
KHZ	Kahutara	18.52	196	P	P	05 32 19.9	-0.9
KHZ				IAmb	IAmb	05 32 21.7	
	comp=Z,29nm,1.1s						
LTZ	Lake Taylor	19.20	199	P	P	05 32 26.7	-0.5
OXZ	Oxford	19.77	199	P	P	05 32 32.2	-0.1
RPZ	Rata Peaks	20.42	200	P	P	05 32 38.8	+0.6
	comp=Z,15nm,0.5s,baz=305,slow=1.7,SNR=18						
RPZ	Rata Peaks	20.42	200	P	P	05 32 38.9	+0.6
RPZ				IAmb	IAmb	05 32 40.5	
	comp=Z,16nm,0.5s						
FOZ	Fox Glacier	20.67	202	P	P	05 32 39.5	-0.9
FOZ				IAmb	IAmb	05 32 46.6	
	comp=Z,12nm,0.9s						
LBZ	Lake Benmore	21.30	201	P	P	05 32 45.4	-0.8
LBZ				IAmb	IAmb	05 33 03.2	
	comp=Z,16nm,1.0s						
WKZ	Wanaka	22.08	202	P	P	05 32 52.5	-0.7
WKZ				IAmb	IAmb	05 33 09.1	
	comp=Z,30nm,1.1s						
MLZ	Mavora Lakes	22.86	203	P	P	05 33 00.4	+0.1
CTA	Charters Tower	31.96	271	P	P	05 34 20.6	+0.3
	comp=Z,8.2nm,0.4s,baz=96,slow=11,SNR=12						
ASAR	Alice Springs	42.37	261	P	P	05 35 45.5	-0.4
	comp=Z,1.0nm,0.4s,baz=94,slow=7.2,SNR=16						
WR0	Warramunga Arr	42.64	267	P	P	05 35 47.4	-0.6
WB0	Warramunga Arr	42.82	267	P	P	05 35 48.7	-0.8
WRA	Warramunga Arr	42.83	267	P	P	05 35 48.3	-1.3
	comp=Z,5.1nm,0.5s,baz=104,slow=8.1,SNR=8.0						
WRA	Warramunga Arr	42.83	267	P	P	05 35 48.4	-1.1
KNRA	Kununurra	49.16	270	P	P	05 36 37.6	-0.3
MJAR	Matsushiro Arr	72.88	325	P	P	05 39 14.8	+1.1
	comp=Z,0.7nm,0.3s,baz=144,slow=8.3,SNR=1.9						
MKAR	Makanchi Array	113.09	312	PKiKP	PKiKP	05 46 16.5	+0.6
	comp=Z,0.2nm,0.7s,baz=41,slow=1.6						
FINES	FINESS Array B	139.42	341	PKhKP	PKPpre	05 46 59.9	
	comp=Z,1.4nm,0.8s,baz=66,slow=2.3,SNR=5.5						
NOA	NORSAR Array B	143.01	351	PKP	PKPdf	05 47 10.6	-1.4
	comp=Z,0.5nm,0.6s,baz=16,slow=5.0,SNR=3.4						
AKASG	Malin Array Be	145.96	327	PKPbc	PKPab	05 47 19.6	-1.1
	comp=Z,1.2nm,0.4s,baz=46,slow=4.6,SNR=11						
BRTR	Keskin Array B	148.48	306	PKPbc	PKiKP	05 47 27.2	-0.2
	comp=Z,0.6nm,0.6s,baz=156,slow=3.7,SNR=3.7						
CLL	Collm	151.82	343	ePKPbc	PKiKP	05 47 36.0	+2.3
CLL				LmH		07 05 00.0	
	comp=Z,300nm,19.5s						

ANF 04 05:31:18.5±0.2, 35°.05N×119°.11W, h17km±1km, ML3.6/34, Error ellipse: s-maj=1.4km s-min=1.1km az=95.0

NEIC 04 05:31:18.9±2.0, 35°.04N±0°.02×119°.13W±0°.03, h15km±4km, Error ellipse: s-maj=4.4km s-min=1.6km az=135.0

PAS 04 05:31:19.3±2.1, 35°.03N±0°.02×119°.12W±0°.04, h13km±4km, ML3.6/241, Error ellipse: s-maj=5.0km s-min=1.5km az=114.0

SCEDC 04 05:31:19.3, 35°.03N×119°.12W, h13km

ISC 04 05:31:18.3±0.9, 35°.02N±0°.02×119°.11W±0°.02, h16km±7km, n119, σ1s.24/156, Central California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABL	Mount Abel	0.19	209		Pg	05 31 23.2	+0.1
MPI	Mount Pinos, F	0.21	189		Pg	05 31 27.0	+3.6
ARVC	Arvin	0.25	64		Pg	05 31 25.0	+1.1
ARVC	Arvin	0.25	64	P	Pg	05 31 25.0	+1.1
	baz=247,SNR=637						
ARVC				S	Sg	05 31 28.3	+0.6
	baz=247						
BCW	Bitter Crk WRg	0.26	253		Pb	05 31 24.6	-0.2
BCW					Sb	05 31 29.3	+0.2
TJR	Tejon Ranch	0.30	88		Pb	05 31 25.3	0.0
TJR					Sb	05 31 30.1	0.0
BAKC	Calstate	0.33	0		Pb	05 31 25.4	-0.4
MAGC	SCE Magundon P	0.38	24		Pb	05 31 26.6	0.0
THC	Tehachapi Micr	0.38	106		Pb	05 31 26.6	-0.2
TEJ	El Tejon	0.40	58		Pb	05 31 26.9	-0.2
TEJ					Sb	05 31 32.8	-0.2
OSI	Osito Audit: C	0.51	142		Pb	05 31 28.6	-0.4
OSI				Sg	Sb	05 31 36.2	+0.1
OSI	Osito Audit: C	0.51	142	P	Pb	05 31 28.7	-0.2
	baz=322,SNR=89						
OSI				S	Sb	05 31 35.5	-0.6
	baz=322						
PYR	Pyramid	0.54	146		Pb	05 31 29.2	-0.3
BTPC	Burnt Peak	0.55	127		Pb	05 31 29.7	0.0
BTPC					Sb	05 31 37.5	+0.1
CRGC	Crocker Grade	0.55	294		Pb	05 31 30.0	+0.3
PKM	Mcpherson Peak	0.59	258		Sb	05 31 38.7	0.0
PKM	Mcpherson Peak	0.59	258	P	Pb	05 31 30.4	-0.1
	baz=76,SNR=95						
PKM				S	Sb	05 31 38.6	-0.1
	baz=76						
WOFM	Oak Flat	0.61	32		Pb	05 31 30.1	-0.5
CARC	Carrizo Plain	0.67	296		Sb	05 31 41.5	+0.7
ALPC	Antelope	0.74	116		Pb	05 31 33.2	+0.3
ALPC					Sb	05 31 43.5	+0.5
SBC	Santa Barbara	0.76	221		Pn	05 31 34.0	-0.4
SBC	Santa Barbara	0.76	221	P	Pn	05 31 34.0	-0.4
	baz=40,SNR=22						
LEOC	Leona Valley	0.77	120		Sb	05 31 44.1	+0.7
SMMC	Simmler	0.79	292		Sb	05 31 44.4	+0.3
SMMC	Simmler	0.79	292	P	Pb	05 31 33.4	-0.2
	baz=112,SNR=67						
SMMC				S	Sb	05 31 44.0	0.0
	baz=112						
VES	Vestal, Richgr	0.82	1		Pb	05 31 33.7	-0.5
VES					Sb	05 31 44.9	-0.2
VES	Vestal, Richgr	0.82	1	P	Pb	05 31 33.7	-0.5
	baz=182,SNR=196						
VES				S	Sb	05 31 44.8	-0.3
	baz=182						
ISA	Isabella, Lake	0.83	39	Pg	Pb	05 31 34.1	-0.2
ISA					Sb	05 31 44.8	-0.4
ISA	Isabella, Lake	0.83	39	P	Pb	05 31 33.9	-0.4
	baz=220,SNR=187						
ISA				S	Sb	05 31 45.0	-0.2
	baz=220						
WASM	Alta Sierra Ca	0.85	32		Pb	05 31 34.3	-0.5
IR2C	Iron Canyon	0.86	137		Pb	05 31 34.8	-0.1
SYP	Santa Ynez Pea	0.87	236		Pn	05 31 35.6	-0.3
BLG	Laguna Peak, P	0.91	178		Pn	05 31 36.2	-0.2
BLG					Sb	05 31 48.1	+0.6
BLG	Laguna Peak, P	0.91	178	P	Pn	05 31 36.2	-0.2
	baz=358,SNR=27						
BLG				S	Sb	05 31 48.8	+1.3
	baz=358						
AGOC	Agoura	0.91	162		Pb	05 31 35.8	+0.1
WHFM	Hanning Flat	0.92	42		Pb	05 31 35.7	-0.2
EDW2	Edwards Air Fo	0.93	98		Pn	05 31 36.1	-0.5
EDW2					Sb	05 31 48.1	+0.1
EDW2	Edwards Air Fo	0.93	98	P	Pn	05 31 36.1	-0.5
	baz=279,SNR=151						
EDW2				S	Sb	05 31 48.6	+0.6
	baz=279						
WORM	Onyx Ranch	0.98	46		Pn	05 31 36.9	-0.6
DECC	Green Verdugo	0.99	140		Pn	05 31 37.8	+0.1
DECC	Green Verdugo	0.99	140	P	Pn	05 31 37.7	+0.1
	baz=320,SNR=23						
DECC				S	Sn	05 31 51.8	+0.5
	baz=320						
LRRC	Littlerock Res	1.01	119		Pn	05 31 37.9	+0.1
DJJ	Donna J Jenkin	1.06	149		Sn	05 31 52.8	0.0
DJJ	Donna J Jenkin	1.06	149		Pn	05 31 38.4	0.0
DTP	Desert Tortois	1.06	76		Pn	05 31 38.6	0.0
SBB	Saddle Back Bu	1.10	107		Pn	05 31 39.3	+0.1
SBB					Sb	05 31 53.8	+0.6
SCZ2	Santa Cruz Isl	1.11	203		Pn	05 31 39.3	+0.1
SCZ2	Santa Cruz Isl	1.11	203	P	Pn	05 31 39.3	+0.1
	baz=22,SNR=39						
SCZ2				S	Sn	05 31 54.5	+0.4
	baz=22						
GR2C	Griffith Obs.	1.12	143		Pn	05 31 39.5	+0.2
CHFC	Chilao Flat St	1.12	127		Pb	05 31 39.2	-0.2
CHFC					Sb	05 31 54.1	+0.3
PASC	Pasadena Art C	1.14	138		Pn	05 31 39.4	-0.1
PASC	Pasadena Art C	1.14	138		Pn	05 31 39.9	+0.4
PASC				Sg	Sn	05 31 55.5	+0.7
MWC	Mount Wilson	1.17	132		Pn	05 31 40.2	0.0
MWC	Mount Wilson	1.17	132		Pn	05 31 40.7	+0.5
MWC				Sn	Sn	05 31 57.0	+1.0
PAGB	Antelope Grade	1.17	308		Pn	05 31 40.6	+0.5
HOLC	Holcomb Ridge	1.18	118		Pn	05 31 40.7	+0.5
WCHM	Chimney Peak	1.21	44		Pn	05 31 40.9	+0.1
XTL	Crystal Lake,	1.25	125		Pn	05 31 41.7	+0.4
LRMC	Laurel Mtn Rad	1.25	68	Pb	Pn	05 31 41.7	+0.4
	baz=249,SNR=77						
LRMC				S	Sb	05 31 57.8	+0.2
	baz=249						
GVRC	Garvey Reservo	1.26	140		Pg	05 31 42.5	-0.1
HYS	Haystack Butte	1.27	96		Pg	05 31 41.5	-1.3
RCTC	Rector, Farmer	1.29	355		Pn	05 31 41.4	-0.3
VOG	Valley Oaks Go	1.32	350		Pn	05 31 41.7	-0.3
VOG	Valley Oaks Go	1.32	350	P	Pn	05 31 41.7	-0.3
	baz=170,SNR=26						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VOG				S	Sb	05 31 58.3	-1.1
	baz=170						
BSM	San Miguel Isl	1.42	227		Pg	05 31 44.4	-1.2
BFSC	Mount Baldy Ra	1.43	123	Pb	Pg	05 31 44.6	-1.2
	baz=304,SNR=72						
BFSC				S	Sg	05 32 03.3	-1.0
	baz=304						
FMP	Fort Macarthur	1.46	152	P	Pb	05 31 44.7	-0.5
	baz=333						
FMP				S	Sg	05 32 04.5	-1.0
	baz=333						
CWC	Cottonwood Cre	1.65	30	Pb	Pg	05 31 48.4	-1.6
	baz=211						
CWC				Sb	Sg	05 32 09.6	-1.9
	baz=211						
MPMC	Manual Prospec	1.68	51	Pb	Pb	05 31 48.1	-0.9
	baz=232,SNR=178						
CIS	Catalina Islan	1.71	160	P	Pn	05 31 47.8	+0.3
	baz=341,SNR=15						
CIS				S	Sn	05 32 09.9	+0.9
	baz=341						
DAC	Darwin (Calif)	1.76	44		Pg	05 31 53.2	+1.0
SNCC	San Nicolas Is	1.80	191	Pn	Pn	05 31 49.3	+0.6
SNCC	San Nicolas Is	1.80	191	P	Pn	05 31 49.0	+0.4
	baz=11						
SNCC				S	Sn	05 32 12.0	+0.9
	baz=11						
PMPB	Monarch Peak	1.83	311		Pn	05 31 50.1	+1.0
SME	Santa Rosa Min	1.88	129		Pn	05 31 50.4	+0.7
GSC	Goldstone, Bar	1.91	81	P	Pn	05 31 50.3	+0.1
	baz=262,SNR=34						
BBRC	Big Bear Solar	1.95	112	P	Pn	05 31 51.5	+0.5
	baz=294,SNR=14						
BBRC				Sb	Sg	05 32 20.3	-0.9
	baz=294						
SCI2	San Clemente I	2.08	167	P	Pn	05 31 53.0	+0.4
	baz=347						
SCI2				S	Sn	05 32 20.2	+2.1
	baz=347						
MURC	Murrieta	2.12	131	P	Pn	05 31 53.7	+0.6
	baz=312,SNR=32						
MURC				S	Sn	05 32 20.8	+1.6
	baz=312						
TIN	Tinemaha, Big	2.15	19	Pb	Pb	05 31 57.1	+0.1
	baz=200						
TIN				Sb	Sg	05 32 24.8	-2.8
	baz=200						
SAO	San Andreas Ge	2.58	313	Pn	Pn	05 31 59.6	+0.2
OMMB	Old Mammoth Mi	2.59	2		Pb	05 32 02.1	-2.5
PFO	Pinyon Flats O	2.60	122		Pn	05 32 00.8	+1.0
PFO	Pinyon Flats O	2.60	122	P	Pn	05 32 00.8	+1.0
	baz=304,SNR=21						
PFO				S	Sn	05 32 32.3	+1.2
	baz=304						
XPFO	Pion Flat	2.60	122		Pn	05 32 00.8	+0.9
TPFO	Pinon Flats	2.61	122	P	Pn	05 32 00.8	+0.9
	baz=304,SNR=19						
TPFO				Sb	Sg	05 32 39.6	-2.6
	baz=304						
MLAC	Mammoth, Mammo	2.62	5	Sb	Sb	05 32 37.5	+0.5
	baz=185						
109C	Camp Elliot, M	2.70	141		Pn	05 32 01.4	+0.4
109C	Camp Elliot, M	2.70	141	P	Pn	05 32 01.5	+0.5
	baz=323						
109C				S	Sn	05 32 33.3	0.0
	baz=323						
BELC	Belle Mtn. Jos	2.76	111	P	Pn	05 32 02.5	+0.5
	baz=293,SNR=9.0						
GMRC	Granite Mounta	2.84	94	P	Pn	05 32 03.6	+0.5
	baz=276						
TPNV	Topopah Spring	3.02	49		Pn	05 32 07.1	+1.5
MONP2	Monument Peak	3.08	133	P	Pn	05 32 07.6	+1.2
	baz=314,SNR=9.3						
MONP2				S	Sn	05 32 44.4	+1.4
	baz=314						
BAR	Barrett	3.09	138		Pn	05 32 07.2	+0.8
CMB	Columbia Colle	3.18	341		Pn	05 32 09.7	+2.0
BC3	Big Chuckawall	3.31	113	P	Pn	05 32 09.6	0.0
	baz=295,SNR=7.5						
IRM	Iron Mountain	3.38	104	P	Pn	05 32 10.3	-0.1
	baz=286						
NVAR	Mina Array Bea	3.47	10	Pn	Pn	05 32 15.0	+3.2
WAKR	Walker	3.49	356		Pn	05 32 14.6	+2.5
NV11	Mina Array Sit	3.49	12	Pn	Pb	05 32 16.3	-3.6
SHPR	Sheep Range	3.54	64	Pn	Pn	05 32 14.0	+1.3
RYN	Ryan	3.63	7	Pn	Pb	05 32 18.1	-4.2
YERR	Yerington	3.96	358	Pn	Pn	05 32 20.9	+2.3
Y12C	Blythe	4.00	107	Pn	Pn	05 32 18.1	-0.8
GLA	Glamis	4.06	118	Pn	Pn	05 32 20.2	+0.4
GLA	Glamis	4.06	118	P	Pn	05 32 19.9	+0.1
	baz=300						
PNTR	Pine Nut	4.08	355		Pn	05 32 23.4	+3.1
KVN	Kaiserville	4.11	11	Pn	Pb	05 32 25.4	-5.0
RUBR	Rubicon Trail	4.11	349	Pn	Pn	05 32 24.4	+3.7
AFDM	Forest Hills D	4.20	340		Pn	05 32 24.8	+3.1
W13A	Hualapai Mount	4.28	87		Pn	05 32 23.8	+0.8
VCNR	Virginia City	4.29	354	Pn	Pn	05 32 26.7	+3.6
R11A	Troy Canyon, C	4.37	39	Pn	Pn	05 32 27.5	+3.4
PAHR	Pah Rah Range	4.69	357	Pn	Pn	05 32 31.4	+2.9
ORV	Oroville	4.92	338		Pn	05 32 33.9	+2.4
BEKR	Beckworth	4.94	349	Pn	Pn	05 32 36.6	+4.5
KNB	Kanab	5.47	67	Pn	Pn	05 32 41.6	+2.3
U15A	North Rim	5.72	74	Pn	Pn	05 32 43.8	+1.0
X16A	Lo Mia Camp, P	6.34	93	Pn	Pn	05 32 52.8	+1.5

MEX 04 05:31:19.7±0.5, 14.46N×91.96W, h96km±24km, MD3.6
GCG 04 05:31:20.9±0.5, 14.20N×91.80W, h29km±12km, MD3.5
ISC 04 05:31:19.9±2.5, 14.3N±0.2×91.9W±0.1, h67km, n5, σ0s35/9, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.48	41	eP	Pn	05 31 32.5	0.0
STG3				eS	Sn	05 31 41.5	-0.3
THIG		0.67	328	eP	Pn	05 31 34.0	-0.2
THIG				eS	Sn	05 31 45.4	+0.7
FUG	Fuego 3	1.03	84	eP	Pn	05 31 38.6	-0.1
FUG				eS	Sn	05 31 53.1	+0.3
IXG	Ixpaco	1.42	97	eP	Pn	05 31 44.0	+0.1
IXG				eS	Sn	05 32 01.7	-0.2
PCIG		1.86	317	eP	Pn	05 31 49.4	-0.2

IDC 04 05:41:24.6±0.8, 57.90S×25.00W, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.9/24, mbtmp4.0/7, ML4.5/1, MS3.4/8, Ms1 3.3/8, ms1mx3.2/20, Error ellipse: s-maj=31.0km s-min=22.8km az=70.0
NEIC 04 05:41:30.9±0.3, 58.0S±0.1×25.2W±0.2, h46km±8km, mb4.0/4, Error ellipse: s-maj=25.2km s-min=12.3km az=216.0
ISC 04 05:41:29.8±0.7, 58.1S±0.1×25.0W±0.1, h40km, n28, σ2s01/21, mb4.1/6, MS3.4/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	7.47	296	Pn	Pn	05 43 15.4	-0.6
VNA1	Neumayer--Stat	14.44	157	P	Pn	05 44 52.4	+1.3
VNA3	Neumayer Olymp	14.66	160	P	Pn	05 44 54.9	+0.8
VNA2	Neumayer--Watz	14.84	157	P	Pn	05 44 57.4	+0.9
	baz=333,slow=15						
SNAA	Sanae	16.38	155	P	Pn	05 45 17.9	+1.5
SNAA	Sanae	16.38	155	Pn	Pn	05 45 18.3	+1.9
	1.8nm,0.3s,baz=314,slow=14,SNR=89						
SNAA				Sn	Sn	05 48 08.3	-8.5
	0.1nm,0.3s,baz=301,slow=16,SNR=2.6						
SNAA				LR	LR	05 49 25.5	
	comp=Z,51nm,21.2s,baz=297,slow=29						
SNAA	Sanae	16.38	155		Pn	05 45 18.7	+2.3
SNAA					Sn	05 48 10.1	-6.6
PMSA	Palmer Station	19.56	234	LR	LR	05 52 15.0	
	comp=Z,107nm,18.4s,baz=118,slow=33						
QSPA	South Pole Qui	32.15	180	P	P	05 47 55.9	+2.7
	1.0nm,0.6s,baz=264,slow=2.9,SNR=8.0						
QSPA	South Pole Qui	32.15	180	P	P	05 47 55.5	+2.2
QSPA				IAmb	IAmb	05 48 14.1	
	comp=Z,1.5nm,0.8s						
PLCA	Paso Flores	33.56	281	P	P	05 48 05.2	-0.5
	comp=Z,2.0nm,1.0s,baz=274,slow=6.0,SNR=3.7						
PLCA				LR	LR	06 00 52.8	
	comp=Z,56nm,18.2s,baz=166,slow=35						
PLCA	Paso Flores	33.56	281	IAmb	IAmb	05 48 17.0	
	comp=Z,3.6nm,1.1s						
MAW	Mawson	37.79	141	LR	LR	06 02 52.2	
	comp=Z,73nm,18.9s,baz=242,slow=34						
CPUP	Villa Florida	39.06	310	P	P	05 48 51.8	-0.8
	comp=Z,1.0nm,0.6s,baz=170,slow=8.6,SNR=4.0						
CFA	Coronel Fontan	39.48	293	LR	LR	06 05 15.1	
	comp=Z,70nm,21.2s,baz=174,slow=36						
BOSA	Boshof	45.38	72	LR	LR	06 04 30.8	
	comp=Z,45nm,21.1s,baz=189,slow=31						
BDFB	Brasilia	45.74	328	P	P	05 49 46.9	-0.2
	comp=Z,1.1nm,0.5s,baz=174,slow=16,SNR=3.0						
BDFB				LR	LR	06 09 07.6	
	comp=Z,24nm,18.8s,baz=38,slow=36						
H10S2	ASCENSION HYDR	49.66	13	T	T	06 44 51.2	
	baz=188,slow=74,SNR=4.7						
H10S3	ASCENSION HYDR	49.67	13	T	T	06 44 53.6	
	baz=32,slow=74,SNR=3.9						
DBIC	Dimbokro	66.57	22	P	P	05 52 14.9	-0.7
	comp=Z,1.8nm,0.9s,baz=167,slow=5.4,SNR=3.5						
TOA0	Torodi Ar. Sit	74.29	27	P	P	05 53 03.0	+0.4
TORD	Torodi Ar. Bea	74.29	27	P	P	05 53 03.0	+0.3
	comp=Z,2.3nm,0.8s,baz=198,slow=6.3,SNR=11						
ASAR	Alice Springs	96.67	161	LR	LR	06 38 44.3	
	comp=Z,36nm,18.3s,baz=302,slow=36						
FINES	FINESS Array B	125.64	27	PKP	PKPdf	06 00 25.0	-0.2
	comp=Z,0.9nm,0.6s,baz=104,slow=0.8,SNR=4.7						
YKA	Yellowknife Ar	138.49	316	PKP	PKPdf	06 00 49.5	+0.1
	comp=Z,1.0nm,0.9s,baz=132,slow=2.2,SNR=8.4						
SONM	Songino Array	149.62	88	PKPbc	PKPbc	06 01 14.2	+0.2
	comp=Z,1.7nm,0.8s,baz=238,slow=3.6,SNR=9.5						
ILAR	Eielson Array	152.36	308	PKPbc	PKPbc	06 01 19.9	+0.2
	comp=Z,1.7nm,0.9s,baz=142,slow=2.7,SNR=12						
ILAR	Eielson Array	152.36	308		PKPbc	06 01 19.6	-0.1

IDC 04 05:46:02.0±5.4, 4.83S×153.57E, h121km±34km, mb3.2/5, mb1 3.4/6, mb1mx3.1/38, mbtmp3.7/6, Error ellipse: s-maj=62.2km s-min=19.7km az=100.0
ISC 04 05:45:59.8±1.7, 4.8S±0.2×153.8E±0.2, h105km, n8, σ1s22/9, mb3.4/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.80	286	P	Pn	05 46 30.5	+0.5
	25nm,0.3s,baz=70,slow=2.0,SNR=6.8						
KRVT				S	Sn	05 46 53.1	0.0
	19nm,0.3s,baz=348,slow=21,SNR=10						
KRVT				LR	LR	05 47 26.0	
	comp=Z,68nm,19.3s,baz=70,slow=52						
PMG	Port Moresby	7.99	235	P	Pn	05 47 55.0	+1.8
	2.0nm,0.3s,baz=13,slow=11,SNR=4.6						
PMG				S	Sn	05 49 20.7	-1.2
	1.3nm,0.3s,baz=312,slow=19,SNR=1.4						
WRA	Warramunga Arr	24.16	230	P	P	05 51 05.7	-0.8
	1.1nm,0.7s,baz=56,slow=10,SNR=3.2						
ASAR	Alice Springs	26.80	224	P	P	05 51 29.5	-0.8
	0.6nm,0.6s,baz=54,slow=8.7,SNR=9.0						
SONM	Songino Array	66.84	327	P	P	05 56 41.3	+0.7
	0.2nm,0.6s,baz=150,slow=6.0,SNR=2.2						
MKAR	Makanchi Array	80.96	319	P	P	05 58 02.9	0.0
	0.2nm,0.5s,baz=91,slow=7.1,SNR=4.1						
ZALV	Zalesovo Beam	81.69	326	P	P	05 58 06.6	+0.1
	0.3nm,0.3s,baz=93,slow=5.1,SNR=1.9						
TORD	Torodi Ar. Bea	151.22	289	PKPbc	PKPbc	06 05 40.5	-1.5
	0.7nm,0.8s,baz=94,slow=1.7,SNR=3.6						

IDC 04 05:53:51.6±5.7, 30.44S×179.66W, h0km, mb4.0/2, mb1 4.3/2, mb1mx3.5/46, mbtmp4.0/2, Error ellipse: s-maj=357.5km s-min=74.5km az=168.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.67	268	P	P	06 01 42.3	+0.1
	1.0nm,0.5s,baz=107,slow=7.5,SNR=11						
WRA	Warramunga Arr	42.67	273	P	P	06 01 49.8	-0.5
	0.9nm,0.3s,baz=111,slow=8.0,SNR=5.3						
FINES	FINESS Array B	144.67	339	PKP	PKPdf	06 13 29.0	-0.6
	0.5nm,0.3s,baz=63,slow=5.1,SNR=4.3						

IDC 04 05:54:33.8±1.3, 7.21S×128.48E, h0km, mb3.8/4, mb1 3.8/7, mb1mx3.5/38, mbtmp3.7/7, ML4.3/3, Error ellipse: s-maj=66.6km s-min=24.7km az=79.0
ISC 04 05:54:38.4±0.9, 7.34S±0.08×128.5E±0.2, h35km, n7, σ1s32/9, mb3.8/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.05	194	Pn	Pn	05 57 15.0	+0.9
	0.2nm,0.3s,baz=343,slow=16,SNR=1.6						
FITZ				Sn	Sn	05 59 15.1	-1.4
	0.1nm,0.3s,baz=85,slow=16,SNR=1.2						
WRA	Warramunga Arr	13.73	156	Pn	Pn	05 57 50.8	0.0
	0.3nm,0.3s,baz=192,slow=33,SNR=5.0						
WRA				Sn	Sn	06 00 20.9	-1.2
	0.1nm,0.3s,baz=325,slow=22,SNR=3.1						
ASAR	Alice Springs	17.03	163	P	Pn	05 58 36.1	+2.1
	0.1nm,0.3s,baz=346,slow=12,SNR=8.3						
SONM	Songino Array	58.32	343	P	P	06 04 29.0	-1.0
	0.3nm,0.7s,baz=152,slow=6.5,SNR=2.3						
PETK	Petropavlovsk-	65.11	19	P	P	06 05 15.6	+0.1
	4.2nm,1.0s,baz=205,slow=6.4,SNR=1.8						
MKAR	Makanchi Array	67.72	328	P	P	06 05 32.0	-0.4
	0.3nm,0.6s,baz=140,slow=6.2,SNR=5.4						
ZALV	Zalesovo Beam	71.25	334	P	P	06 05 54.6	+0.6
	1.0nm,0.7s,baz=109,slow=3.5,SNR=4.4						

NNC 04 05:58:44.5±3.4, 54.19N×86.37E, h0km, mb3.6, mpv2.3, 6C-2D, Error ellipse: s-maj=40.3km s-min=16.4km az=177.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	0.95	256	⇓P	Pg	05 59 02.5	-0.1
	0.2nm,0.3s						
ZAA0				⇑S	Sg	05 59 15.8	+0.9
	6.7nm,0.9s						
KURBB	Kurchatov Arra	5.98	236	⇑Pn	Pn	06 00 16.3	+2.1
	1.5nm,0.7s						
KURBB				⇑Sn	Sn	06 01 27.0	+3.6
	2.6nm,0.6s						
KURBB				⇑Lg	Lg	06 01 54.7	
	3.9nm,0.6s						
MK31	Makanchi Array	7.85	201	⇑Pn	Pn	06 00 40.5	+0.6
	baz=24,slow=13,SNR=27						
MK31				⇑Sn	Sn	06 02 09.2	-0.2
	0.7nm,0.8s,baz=24,slow=27,SNR=2.7						
MK31				⇓Lg	Lg	06 02 55.5	
	0.9nm,0.7s,baz=24,slow=27						

SKHL 04 05:59:45.5±0.5, 46.56N×153.21E, h78km±7km, mb4.5/3
IDC 04 05:59:47.5±3.0, 46.80N×152.76E, h60km±26km, mb3.4/15, mb1 3.7/18, mb1mx3.5/49, mbtmp3.8/18, ML3.0/3, Error ellipse: s-maj=24.3km s-min=13.7km az=153.0
NEIC 04 05:59:48.5±1.0, 47.0N±0.2×152.7E±0.3, h63km±11km, mb4.1/1, Error ellipse: s-maj=33.9km s-min=5.8km az=132.0
ISC 04 05:59:46.9±0.7, 46.8N±0.1×152.90E±0.09, h56km, n42, σ1s52/40, mb3.8/15, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.82	248	i P	Pn	06 00 45.8	+2.7
KUR				AMB	AMB	06 00 50.0	
	71nm,0.5s						
KUR				eS	Sn	06 01 31.4	+4.6
KUR				A	A	06 01 40.0	
	129nm,0.3s						
KUR				A	A	06 01 40.0	
	70nm,0.3s						
SKR	Severo-Kuril's	4.47	27	eP	Pn	06 00 52.0	+0.1
SKR				AMB	AMB	06 00 54.0	
	83nm,1.0s						
SKR				eS	Sn	06 01 41.5	-1.1
SKR				A	A	06 02 06.0	
	94nm,0.9s						
SKR				A	A	06 02 06.0	
	113nm,0.9s						
SHO	Shikotan	5.16	238	eP	Pn	06 01 02.3	+0.8
SHO				AMB	AMB	06 01 12.0	
	19nm,0.5s						
SHO				AMB	AMB	06 01 12.0	
	25nm,0.5s						
SHO				eS	Sn	06 01 58.0	-1.7
SHO				A	A	06 02 13.0	
	26nm,0.7s						
SHO				A	A	06 02 13.0	
	55nm,0.7s						
PAU	Pauzhetka	5.37	27	erx	rx	06 02 03.0	
YUK	Yuzh-Kuril'sk	5.65	244	eS	Sn	06 02 11.0	-0.7
NMR	Nemuro--Hokkai	6.10	239	i P	Pn	06 01 13.0	-1.4
NMR				eS	Sn	06 02 19.0	-3.8
PEA0B	Petropavlovsk-	7.07	24	Pn	Pn	06 01 27.0	-0.6
PETK	Petropavlovsk-	7.07	24	P	Pn	06 01 27.8	+0.1
	0.3nm,0.3s,baz=169,slow=14,SNR=2.1						
PETK				S	Sn	06 02 48.9	+2.4
	baz=194,slow=17,SNR=1.2						
JKA	Kamikawa-asahi	7.71	254		Pn	06 01 36.4	0.0
ASAJ	Asahikawa	7.71	254	P	Pn	06 01 36.4	0.0
	0.8nm,0.3s,baz=63,slow=16,SNR=3.7						
ERM	Erimo	8.43	239	Pn	Pn	06 01 47.5	+1.2
USRK	Ussuriysk Ar.	14.88	268	P	Pn	06 03 13.6	-0.2
	baz=76,slow=11,SNR=5.0						
KROS	Kirovskiy	18.08	305	eP	Pn	06 03 56.2	+2.3
KROS				AMB	AMB	06 03 58.4	
	4.0nm,0.4s						
H11N2	WAKE ISLAND Hy	29.30	152	T	T	06 37 17.0	
	baz=340,slow=76,SNR=59						
H11N1	WAKE ISLAND Hy	29.31	152	T	T	06 37 13.0	
	baz=340,slow=76,SNR=39						
H11N3	WAKE ISLAND Hy	29.31	152	T	T	06 37 21.1	
	baz=340,slow=76,SNR=26						
H11S1	WAKE ISLAND Hy	30.38	153	T	T	06 38 46.9	
	baz=341,slow=76,SNR=54						
H11S3	WAKE ISLAND Hy	30.39	153	T	T	06 38 28.9	
	baz=341,slow=76,SNR=77						
H11S2	WAKE ISLAND Hy	30.40	153	T	T	06 38 30.8	
	baz=341,slow=76,SNR=49						
SONM	Songino Array	31.19	289	P	P	06 05 57.9	-2.6
	0.6nm,1.1s,baz=76,slow=6.1,SNR=2.1						
ILAR	Eielson Array	36.63	39	P	P	06 06 48.1	+0.7
	0.1nm,0.4s,baz=85,slow=11,SNR=2.1						
BMAR	Burnt Mountain	37.59	34	P	P	06 06 57.5	+1.9
BCAR	Beaver Creek A	38.99	41	P	P	06 07 07.3	-0.1
INK	Inuvik	41.72	32	P	P	06 07 30.1	+0.3
	0.9nm,0.5s,baz=302,slow=6.3,SNR=8.6						
INK	Inuvik	41.72	32	P	P	06 07 30.2	+0.5
INK				IAmb	IAmb	06 07 38.4	
	comp=Z,4.7nm,1.4s						
ZALV	Zalesovo Beam	42.48	306	P	P	06 07 33.8	-2.3
	comp=Z,0.5nm,0.5s,baz=81,slow=12,SNR=1.9						
MKAR	Makanchi Array	46.80	297	P	P	06 08 10.1	-0.6
	comp=Z,0.3nm,0.7s,baz=61,slow=7.8,SNR=5.4						
MKAR	Makanchi Array	46.80	297	P	P	06 08 09.6	-1.1
YKA	Yellowknife Ar	51.01	37	P	P	06 08 43.2	+0.6
	comp=Z,0.8nm,0.8s,baz=297,slow=7.3,SNR=9.1						
CMAR	Chiang Mai Arr	52.23	256	P	P	06 08 53.6	+1.3
	comp=Z,0.9nm,0.3s,baz=36,slow=6.7,SNR=1.6						
ARCES	ARCESS Array B	57.79	341	P	P	06 09 31.8	+0.1
	comp=Z,3.8nm,1.0s,baz=35,slow=8.0,SNR=2.0						
ABKAR	Akbulak array	58.30	310	P	P	06 09 35.1	-0.5
NVAR	Mina Array Bea	62.56	62	P	P	06 10 04.3	-0.8
	comp=Z,0.3nm,0.7s,baz=286,slow=7.4,SNR=2.2						
FINES	FINESS Array B	63.97	335	P	P	06 10 13.7	0.0
	comp=Z,1.0nm,0.4s,baz=36,slow=7.0,SNR=11						
FINES	FINESS Array B	63.97	335	P	P	06 10 13.1	-0.6
PDAR	Pinedale Array	64.86	54	P	P	06 10 20.4	+0.2
	comp=Z,0.4nm,0.8s,baz=281,slow=3.9,SNR=3.8						
NB2	NORSAR Subarra	68.17	341	P	P	06 10 40.8	+0.1
	comp=Z,0.8nm,0.6s,baz=27,slow=6.2						
NOA	NORSAR Array B	68.17	341	P	P	06 10 40.9	+0.2
	comp=Z,1.2nm,0.6s,baz=27,slow=6.3,SNR=5.4						
AKASG	Malin Array Be	71.45	326	P	P	06 11 00.7	-0.3
	comp=Z,1.3nm,0.4s,baz=36,slow=5.3,SNR=5.5						
ASAR	Alice Springs	72.17	198	P	P	06 11 05.7	+0.1
	comp=Z,0.4nm,0.7s,baz=4,slow=6.1,SNR=1.7						
TXAR	Lajitas Array	77.62	60	P	P	06 11 37.5	+0.2
	comp=Z,0.5nm,0.5s,baz=301,slow=4.8,SNR=12						
PLCA	Paso Flores	148.36	95	PKPbc	PKPbc	06 19 27.2	+0.7
	comp=Z,0.9nm,0.8s,baz=259,slow=5.2,SNR=1.5						

VAO 04 06:02:15.3±2.3, 17.93S×70.46W, h218km±9km, mb4.0
IDC 04 06:02:22.9±1.1, 18.49S×69.08W, h131km±9km, mb3.7/10, mb1 3.7/14, mb1mx3.6/31, mbtmp4.0/14, MS1.7/1, Ms1 1.7/1, ms1mx1.7/23, Error ellipse: s-maj=18.0km s-min=9.2km az=99.0
GUC 04 06:02:22.7±0.7, 18.45S×69.37W, h118km±4km, ML3.8
ISC 04 06:02:21.8±0.6, 18.43S±0.04×69.29W±0.06, h123km±6km, n38, σ1s47/48, 6C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.23	295	⇑i P	Pn	06 02 40.5	+0.9
PB16				i S	Sn	06 02 53.8	+0.8
MNMC	Minye Minye	0.76	202	⇑i P	Pn	06 02 43.0	+0.8
MNMC				i S	Sn	06 02 58.6	+0.9
MNMC					IAML	06 02 59.4	
	comp=N,8μm,0.2s						
AP01	Chacalluta	1.00	273	⇑i P	Pn	06 02 44.3	+0.2
AP01				i S	Sn	06 03 00.2	-0.7
GO01	Chusmiza	1.24	176	⇓i P	Pn	06 02 48.6	+1.5
GO01				i S	Sn	06 03 08.2	+2.1
GO01					IAML	06 03 09.0	
	comp=N,2μm,0.4s						
PB11	IPOC Station P	1.37	195	⇑i P	Pn	06 02 48.6	+0.5
PB11				i S	Sn	06 03 08.5	+0.3
PB11					IAML	06 03 11.3	
	comp=E,1μm,0.3s						
PSGC	Pisagua	1.40	214	⇑i P	Pn	06 02 48.3	-0.2
PSGC				i S	Sn	06 03 08.1	-0.6
PSGC					IAML	06 03 09.8	
	comp=N,2μm,0.5s						
PB08	IPOC Station P	1.71	176	⇑i P	Pn	06 02 53.7	+1.4
PB08				i S	Sn	06 03 16.9	+1.4
TA01	Diego Aracena	2.29	201	⇓i P	Pn	06 02 58.5	-0.5
LPAZ	La Paz	2.40	28	eP	Pn	06 03 03.3	+2.2
	comp=N,24nm,0.3s,baz=214,slow=2.1,SNR=780						
LPAZ				S	Sn	06 03 32.7	+1.6
	comp=N,1.7nm,0.3s,baz=72,slow=21,SNR=1.3						
LPAZ	La Paz	2.40	28	eP	Pn	06 03 03.3	+2.2
PATCX	Punta Patache	2.51	199	eP	Pn	06 03 02.4	+0.4
PB01	IPOC Station P	2.61	184	IAML		06 03 42.0	
	comp=N,214nm,0.3s						
PB02	IPOC Station P	2.93	191	eP	Pn	06 03 07.8	+0.4
PB02				IAML		06 03 51.3	
	comp=E,401nm,0.5s						
LVC	Limon Verde	4.17	175	P	Pn	06 03 25.9	+1.8
	comp=E,1.8nm,0.3s,baz=29,slow=8.9,SNR=24						
LVC				S	Sn	06 04 10.8	-1.5
	comp=E,4.1nm,0.3s,baz=308,slow=23,SNR=5.6						
LVC				LR	LR	06 05 23.7	
	comp=E,11nm,21.8s,baz=174,slow=44						
LVC	Limon Verde	4.17	175	eP	Pn	06 03 28.6	+4.5
SIV	San Ignacio	8.22	74	P	Pn	06 04 16.9	-1.5
	comp=E,1.2nm,0.3s,baz=268,slow=11,SNR=29						
SIV				S	Sn	06 05 45.3	-4.3
	comp=E,0.3nm,0.3s,baz=344,slow=22,SNR=8.5						
AQDB	Aquidauana	12.98	101	eP	P	06 05 27.8	+0.3
SALV	Santo Antonio	13.24	81	eP	Pn	06 05 26.7	+1.6
CPUP	Villa Florida	13.57	128	P	Pn	06 05 27.8	-1.5
	comp=E,0.1nm,0.3s,baz=318,slow=12,SNR=4.7						
CLDB	Colider	15.06	62	eP	Pn	06 05 46.9	-1.4
C2SB	Chapadao do Su	15.60	94	eP	P	06 05 56.1	-0.1
TRCB	Terra Rica	16.19	108	eP	P	06 06 03.6	+0.5
PTGB	Pitanga	17.19	114	eP	Pn	06 06 14.6	-0.1
ITAB	Concordia	18.07	122	eP	P	06 06 23.5	-0.3
PLTB	Pedras Altas	19.41	136	eP	P	06 06 37.7	-0.8
IPMB	Ipameri, GO	20.03	92	eP	P	06 06 44.1	-1.2
BDFB	Brasilia	20.53	85	P	P	06 06 49.2	-1.5
	comp=E,11nm,0.6s,baz=263,slow=8.9,SNR=21						
RCLB	Rio Claro- Sao	20.77	105	eP	P	06 06 51.3	-1.9
PLCA	Paso Flores	22.25	183	P	P	06 07 09.6	+0.9
	comp=E,1.2nm,0.7s,baz=46,slow=12,SNR=3.4						
PMSA	Palmer Station	46.45	177	P	P	06 10 36.0	+0.2
	comp=E,22nm,1.1s,baz=315,slow=4.3,SNR=2.3						
DBIC	Dimbokro	68.24	75	P	P	06 13 08.9	-0.9
	comp=E,3.8nm,0.6s,baz=208,slow=6.6,SNR=8.7						
PDAR	Pinedale Array	71.28	330	P	P	06 13 28.7	+0.6
	comp=E,0.1nm,0.5s,baz=69,slow=30,SNR=2.0						
ULM	Lac du Bonnet	72.30	342	P	P	06 13 33.0	-0.6
	comp=E,0.9nm,0.5s,baz=160,slow=7.3,SNR=3.1						
NVAR	Mina Array Bea	72.87	322	P	P	06 13 39.0	+1.4
	comp=E,0.2nm,0.5s,baz=170,slow=6.0,SNR=3.2						
TORD	Torodi Ar. Bea	76.69	71	P	P	06 13 58.7	-1.1
	comp=E,1.4nm,0.4s,baz=248,slow=5.5,SNR=18						
ESDC	Sonseca Array	83.91	45	P	P	06 14 38.8	+0.7

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
	comp=E,0.1nm,0.3s,baz=286,slow=5.2,SNR=2.1						
YKA	Yellowknife Ar	88.19	341	P	P	06 14 58.5	+0.1
	comp=E,2.2nm,0.9s,baz=134,slow=4.5,SNR=3.5						
YKA				pP	pP	06 15 31.7	+0.1
	comp=E,0.4nm,0.5s,baz=134,slow=4.7,SNR=5.2						
SONM	Songino Array	150.46	6	PKPbc	PKiKP	06 21 59.9	+0.1
	comp=E,0.2nm,0.4s,baz=321,slow=1.1,SNR=2.6						

IDC 04 06:08:09.4±2.4, 5°.16S×154°.85E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.3/43, mbtmp3.6/5, ML4.1/1, Error ellipse: s-maj=58.9km s-min=33.9km az=105.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.94	287	Pn	Pn	06 08 57.3	-0.2
	26nm,0.3s,baz=44,slow=1.2,SNR=9.4						
KRVT				Sn	Sn	06 09 19.8	-14
	54nm,0.3s,baz=6.3,slow=21,SNR=11						
PMG	Port Moresby	8.72	241	Pn	Pn	06 10 20.6	+3.7
	5.5nm,0.3s,baz=13,slow=13,SNR=4.7						
PMG				Sn	Sn	06 11 50.9	-5.1
	2.6nm,0.3s,baz=12,slow=20,SNR=3.5						
WRA	Warramunga Arr	24.78	232	P	P	06 13 33.4	+0.1
	1.4nm,0.7s,baz=54,slow=9.8,SNR=4.8						
ASAR	Alice Springs	27.31	226	P	P	06 13 56.5	+0.4
	0.3nm,0.6s,baz=53,slow=8.7,SNR=4.4						
SONM	Songino Array	67.73	327	P	P	06 19 10.5	+1.5
	0.2nm,0.7s,baz=149,slow=5.9,SNR=2.0						
MKAR	Makanchi Array	81.94	319	P	P	06 20 30.7	-0.5
	0.1nm,0.5s,baz=105,slow=8.0,SNR=2.0						
TORD	Torodi Ar. Bea	152.36	289	PKPbc	PKPbc	06 28 07.1	-1.5
	0.4nm,0.6s,baz=82,slow=2.7,SNR=2.2						

IDC 04 06:37:04.6±1.3, 28°.96N×43°.32W, h0km, mb3.6/7, mb1 3.9/7, mb1mx3.5/39, mbtmp3.6/7, Error ellipse: s-maj=72.5km s-min=22.0km az=26.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase Op	Phase ID ISC	Time h m s	Res ISC
DBIC	Dimbokro	42.51	114	P	P	06 45 02.4	+0.3
	2.6nm,1.0s,baz=264,slow=8.0,SNR=3.0						
TORD	Torodi Ar. Bea	44.58	101	P	P	06 45 17.9	-0.8
	0.4nm,0.5s,baz=302,slow=9.2,SNR=3.1						
H10N2	ASCENSION HYDR	45.94	138	T	T	07 34 15.1	
	baz=323,slow=75,SNR=93						
H10N3	ASCENSION HYDR	45.94	138	T	T	07 34 08.2	
	baz=323,slow=75,SNR=90						
H10N1	ASCENSION HYDR	45.96	138	T	T	07 34 16.8	
	baz=323,slow=75,SNR=100						
H10S3	ASCENSION HYDR	46.74	139	T	T	07 35 24.9	
	baz=322,slow=74,SNR=52						
H10S2	ASCENSION HYDR	46.76	139	T	T	07 35 28.3	
	baz=258,slow=74,SNR=73						
TXAR	Lajitas Array	52.16	286	P	P	06 46 18.2	+0.9
	0.6nm,0.8s,baz=96,slow=10,SNR=6.1						
PDAR	Pinedale Array	54.13	304	P	P	06 46 31.6	-0.2
	1.0nm,0.9s,baz=87,slow=10,SNR=6.2						
YKA	Yellowknife Ar	56.14	328	P	P	06 46 44.5	-1.1
	0.9nm,1.1s,baz=98,slow=6.9,SNR=4.1						
NVAR	Mina Array Bea	61.54	300	P	P	06 47 22.6	-1.3
	0.4nm,0.9s,baz=81,slow=5.7,SNR=2.8						
ILAR	Eielson Array	69.69	334	P	P	06 48 17.2	+1.4
	0.6nm,1.1s,baz=99,slow=5.6,SNR=4.0						

*IDC **04** 06:40:11.1±0.6, 28°.48N×43°.70W, h0km, mb4.3/25, mb1 4.5/25, mb1mx4.4/39, mbtmp4.3/25, MS4.0/47, Ms1 4.0/47, ms1mx4.0/51, Error ellipse: s-maj=15.6km s-min=12.8km az=178.0*

*MOS **04** 06:40:11.6±0.9, 28°.49N×43°.67W, h13km, mb5.0/47, Error ellipse: s-maj=8.4km s-min=7.1km az=52.4*

*NEIC **04** 06:40:12.8±1.5, 28°.5N±0°.1×43°.6W±0°.1, h10km±1km, mb4.9/220, Error ellipse: s-maj=19.1km s-min=16.4km az=148.0*

*GCMT **04** 06:40:14.8±0.2, 28°.65N±0°.02×43°.67W±0°.01, h12km, MW5.0/112, Moment Tensor Solution. s39,c48; s112,c174; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.07±.07; $M_{\theta\theta}$0.06±.08; $M_{\phi\phi}$3.01±.05; $M_{r\theta}$0.60±.28; $M_{\theta\phi}$0.83±.06; $M_{\phi r}$-0.85±.20; Best double couple: $M_0$3.32000×10^{16} NP1:ϕ_s208.00000°, δ41.00000°, λ-68.00000°. NP2:ϕ_s1.00000°, δ53.00000°, λ-107.00000°. Principal axes: T 3.3000, Plg6.0000°, Azm103.0000°; N 0.0390, Plg14.0000°, Azm12.0000°; P -3.3410, Plg75.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 06:40:13.2±0.4, 28°.49N±0°.07×43°.62W±0°.06, h12km, n589, σ0§83/513, mb4.8/148, MS4.1/51, 18C, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase Op	Phase ID ISC	Time h m s	Res ISC
BBSR	BB Station	18.57	287	P	Pn	06 44 30.5	+0.3
MTP	Monte Pirata	22.61	248	P	P	06 45 15.9	+2.1
SJG	San Juan	23.09	248	LR	LR	06 52 24.9	
	comp=Z,388nm,21.7s,baz=69,slow=32						
DRLN	Deer Lake	23.31	337	P	P	06 45 20.3	-0.5
DRLN				IAmb	IAmb	06 45 29.0	
	comp=Z,35nm,1.1s						
MDP	Montagnes des	24.79	202	LR	LR	06 53 05.3	
	comp=Z,157nm,19.0s,baz=15,slow=31						
M66A	Nantucket	25.09	307	P	P	06 45 37.8	+0.2
	baz=112						
H65A	Eastbrook	25.40	316	P	P	06 45 40.8	+0.4
	baz=121						
L64A	Middleborough	25.84	308	P	P	06 45 44.2	-0.2
	baz=113						
G64A	Maxfield	26.00	317	P	P	06 45 46.2	+0.4
	baz=122						
F64A	Sherman	26.08	318	P	P	06 45 46.4	-0.1
	baz=123						
E64A	Bridgewater	26.09	320	P	P	06 45 47.4	+0.8
	baz=125						
PKME	Peaks-Kenny Pk	26.33	316	P	P	06 45 49.2	+0.4
	baz=121						
L63A	North Scituate	26.35	308	P	P	06 45 49.0	0.0
	baz=112						
E63A	Oxbow	26.43	319	P	P	06 45 51.2	+1.5
E63A				IAmb	IAmb	06 45 55.7	
	comp=Z,27nm,1.2s						
E63A	Oxbow	26.43	319	P	P	06 45 50.4	+0.7
	baz=124						
F63A	Nahmakanta, Br	26.44	317	P	P	06 45 50.9	+1.0
	baz=122						
G63A	Kingsbury	26.45	316	P	P	06 45 50.8	+0.9
	baz=120						
H63A	New Sharon	26.49	315	P	P	06 45 51.2	+1.0
	baz=119						
I63A	Otisfield	26.55	313	P	P	06 45 52.1	+1.3
	baz=117						
D63A	Stockholm	26.61	321	P	P	06 45 52.0	+0.7
	baz=126						
SDDR	Presa de Saban	26.98	256	P	P	06 45 57.5	+2.5
H62A	Milan	27.16	314	P	P	06 45 56.6	+0.3
	baz=117						
D62A	Allapoint, All	27.16	320	P	P	06 45 57.2	+0.9
	baz=124						
F61A	St Evariste	27.72	316	P	P	06 46 02.4	+1.1
	baz=120						
D61A	St Aubert, Com	27.88	319	P	P	06 46 03.1	+0.4
	baz=123						
G60A	Masonville	28.14	314	P	P	06 46 06.1	+0.9
	baz=116						
D60A	Saint Jean D'O	28.15	318	P	P	06 46 05.9	+0.7
	baz=121						
H59A	Cadyville	28.82	312	P	P	06 46 12.3	+1.1
	baz=114						
U60A	Pendleton	29.28	294	P	P	06 46 16.1	+0.8
	baz=96						
LONY	Lake Ozonia	29.40	312	P	P	06 46 17.6	+1.3
	baz=113						
J58A	Remsen	29.41	309	P	P	06 46 17.3	+0.9
	baz=110						
K58A	Earlville	29.47	307	P	P	06 46 17.5	+0.5
	baz=108						
LATQ	La Tuque	29.48	318	P	P	06 46 17.7	+0.7
	baz=120						
BINY	Binghamton	29.54	306	P	P	06 46 19.4	+1.8
	baz=107						
J57A	Williamstown	29.92	309	P	P	06 46 20.2	-0.7
	baz=109						
D57A	Chemin Vers le	29.97	316	P	P	06 46 22.4	+1.0
	baz=118						
Y60A	Bolivia	29.99	289	P	P	06 46 22.2	+0.6
	baz=91						
Q58A	Fox Den Farm,	30.03	299	P	P	06 46 21.1	-0.9
	baz=100						
R58B	Mineral	30.03	297	P	P	06 46 23.0	+1.0
	baz=98						
V59A	Middlesex	30.09	293	P	P	06 46 22.8	+0.3
	baz=94						
M57A	Sunshine Farm,	30.12	304	P	P	06 46 22.9	+0.1
	baz=105						
U58A	Oxford	30.39	294	P	P	06 46 25.7	+0.6
	baz=95						
T58A	Grand View Acr	30.43	295	P	P	06 46 26.6	+1.1
	baz=96						
D56A	ZEC Mazanza, M	30.52	316	P	P	06 46 26.7	+0.5
	baz=116						
SSPA	Standing Stone	30.52	302	P	P	06 46 27.4	+1.1
	baz=103						
R57A	Stanardsville	30.58	298	P	P	06 46 27.5	+0.6
	baz=98						
Q57A	Strasburg	30.61	299	P	P	06 46 28.0	+1.0
	baz=100						
L56A	Greenwood	30.64	305	P	P	06 46 28.5	+1.1
	baz=106						
S57A	Dark Hollow, R	30.85	297	P	P	06 46 29.7	+0.5
	baz=97						
N56A	West Decatur	30.88	303	P	P	06 46 29.9	+0.4
	baz=103						
D55A	Sainte-Anne-du	30.94	315	P	P	06 46 30.7	+0.7
	baz=116						
T57A	Hurt	31.00	295	P	P	06 46 31.2	+0.6
	baz=96						
P56A	Dayton Farm, R	31.01	300	P	P	06 46 31.4	+0.8
	baz=100						
U57A	Blanch	31.02	294	P	P	06 46 31.2	+0.5
	baz=94						
J55A	Hilton	31.14	307	P	P	06 46 33.2	+1.6
	baz=107						
Q56A	Snyder Ridge,	31.20	299	P	P	06 46 33.5	+1.1
	baz=99						
SCHQ	Schefferville	31.23	334	P	P	06 46 32.2	-0.1
	comp=Z,2.4nm,0.9s,baz=111,slow=8.6,SNR=3.1						
SCHQ				LR	LR	06 58 26.6	
	comp=Z,312nm,18.4s,baz=119,slow=35						
R56A	Bull Pasture M	31.28	298	P	P	06 46 34.0	+0.9
	baz=98						
L55A	Hinsdale	31.28	305	P	P	06 46 34.4	+1.3
	baz=105						
V57A	Coltrane Farms	31.34	293	P	P	06 46 34.1	+0.6
	baz=93						
M55A	Ridgway	31.35	304	P	P	06 46 34.7	+1.0
	baz=103						
W57A	Gilead	31.48	291	P	P	06 46 35.5	+0.7
	baz=92						
O55A	Ligonier	31.49	301	P	P	06 46 35.6	+0.7
	baz=101						
X57A	Johnson Farm,	31.55	290	P	P	06 46 36.0	+0.6
	baz=91						
T56A	Rocky Mt	31.63	295	P	P	06 46 36.0	-0.1
	baz=95						
D54A	Lac Fusel, La	31.73	315	P	P	06 46 37.7	+0.7
	baz=114						
P55A	Reedsville	31.77	300	P	P	06 46 38.4	+1.0
	baz=99						
E54A	Lac Daplat, Po	31.78	313	P	P	06 46 38.2	+0.9
	baz=113						
MCWV	Mont Chateau	31.81	300	P	P	06 46 38.3	+0.7
	baz=99						
U56A	King	31.86	294	P	P	06 46 38.3	+0.2
	baz=94						
Q55A	Buckhannon	31.89	299	P	P	06 46 38.8	+0.4
	baz=98						
V56A	Mocksville	31.92	293	P	P	06 46 38.8	+0.1
	baz=93						
BLA	Blacksburg	31.95	295	P	P	06 46 40.0	+1.0
	baz=95						
W56A	Indian Trail	31.97	291	P	P	06 46 40.3	+1.3
	baz=92						
G54A	Lake Saint Pet	32.00	311	P	P	06 46 40.5	+1.2
	baz=110						
SDV	Santo Domingo	32.03	238	P	P	06 46 39.3	-0.7
SDV				IAmb	IAmb	06 46 47.8	
	comp=Z,19nm,1.1s						
H53A	Bobcaygeon	32.06	310	P	P	06 46 40.2	+0.4
	baz=108						
Z57A	Bowman	32.07	288	P	P	06 46 40.1	+0.1
	baz=89						
E53A	Dumoine, Ponti	32.07	313	P	P	06 46 40.1	+0.2
	baz=112						
N54A	Moraine State	32.15	302	P	P	06 46 41.5	+0.9
	baz=101						
P54A	Burton	32.28	300	P	P	06 46 42.4	+0.5
	baz=99						
O54A	Avella	32.30	301	P	P	06 46 42.7	+0.8
	baz=100						
X56A	White Oak	32.33	290	P	P	06 46 43.6	+1.4
	baz=90						
157A	Early Branch	32.34	287	P	P	06 46 43.9	+1.5
	baz=88						
U55A	TA2, Sparta	32.40	294	P	P	06 46 44.1	+1.1
	baz=94						
V55A	Taylorsville	32.51	293	P	P	06 46 45.0	+1.1
	baz=92						
KMSC	Kings Mountain	32.58	291	P	P	06 46 45.5	+1.0
	baz=91						
Z56A	Williston	32.62	288	P	P	06 46 45.8	+1.0
	baz=88						
E52A	Mattawa	32.68	312	P	P	06 46 46.4	+1.2
	baz=111						
LSQQ	Lebel-sur-Quev	32.75	318	P	P	06 46 46.7	+1.0
	baz=117						
M53A	WI Miller and	32.75	303	P	P	06 46 47.0	+1.1
	baz=101						
N53A	Lisbon	32.75	302	P	P	06 46 46.7	+0.8
	baz=100						
D52A	ZEK Kipawa Sen	32.77	314	P	P	06 46 46.9	+0.9
	baz=112						
X55A	Gracelyn & Ava	32.82	290	P	P	06 46 46.9	+0.3
	baz=90						
O53A	New Philadelph	32.94	301	P	P	06 46 47.9	+0.3
	baz=99						
P53A	Whipple	32.96	299	P	P	06 46 48.5	+0.8
	baz=98						
Y55A	Saluda	33.02	289	P	P	06 46 49.3	+1.0
	baz=89						
V54A	Nebo	33.10	293	P	P	06 46 49.7	+0.6
	baz=92						
Z55A	Blythe	33.27	288	P	P	06 46 50.9	+0.4
	baz=88						
M52A	Chesterland	33.27	303	P	P	06 46 51.1	+0.6
	baz=101						
W54A	Cherokee Point	33.28	291	P	P	06 46 50.6	0.0
	baz=91						
F51A	Arnstein	33.38	311	P	P	06 46 53.4	+2.1
	baz=109						
MATQ	Matagami	33.45	319	P	P	06 46 51.8	-0.1
	baz=117						
I51A	Listowel	33.53	307	P	P	06 46 53.2	+0.6
	baz=105						
Q52A	Bidwell	33.57	298	P	P	06 46 52.9	-0.2
	baz=96						
155A	Kite	33.58	287	P	P	06 46 53.4	+0.3
	baz=87						
Y54A	Tignall	33.71	289	P	P	06 46 54.8	+0.5
	baz=88,SNR=7.0						
V53A	Saluda	33.80	292	P	P	06 46 56.0	+0.8
	baz=91						
M51A	Elyria	33.84	303	P	P	06 46 56.3	+0.8
	baz=100						
Z54A	Sparta	33.86	288	P	P	06 46 56.4	+0.8
	baz=87						
N51A	Ashland	33.92	302	P	P	06 46 56.9	+0.8
	baz=99						
O51A	Pataskala	33.98	300	P	P	06 46 57.1	+0.5
	baz=98						
W53A	Cullowhee	34.08	291	P	P	06 46 58.5	+0.8
	baz=90,SNR=9.6						
154A	Montrose	34.12	287	P	P	06 46 58.9	+1.0
	baz=86						
X53A	Estanollee	34.20	290	P	P	06 46 59.1	+0.5
	baz=89						
P51A	Williamsport	34.24	299	P	P	06 46 59.4	+0.5
	baz=96						
U52A	Thorn Hill	34.27	294	P	P	06 46 59.4	+0.2
	baz=92						
ACSO	Alum Creek Sta	34.27	300	P	P	06 47 00.2	+1.0
ACSO	Alum Creek Sta	34.27	300	P	P	06 46 59.8	+0.6
	baz=98						
GOGA	Godfrey	34.37	288	P	P	06 47 01.2	+1.1
GOGA	Godfrey	34.37	288	P	P	06 47 01.2	+1.1
GOGA				pmax	pmax		
	comp=Z,25nm,1.2s						
GOGA	Godfrey	34.37	288	P	P	06 47 00.7	+0.6
	baz=87						
Q51A	Peebles	34.42	298	P	P	06 47 00.8	+0.3
Q51A				IAmb	IAmb	06 47 07.4	
	comp=Z,18nm,1.0s						
Q51A	Peebles	34.42	298	P	P	06 47 00.8	+0.3
	baz=96						
TZTN	Tazewell	34.42	294	P	P	06 47 01.1	+0.6
	baz=92						
L50A	Kingsville	34.43	304	P	P	06 47 01.0	+0.5
	baz=100						
ESDC	Sonseca Array	34.44	61	P	P	06 47 00.2	-0.5
	comp=Z,1.4nm,0.8s,baz=272,slow=8.8,SNR=5.0						
ESDC				LR	LR	06 58 01.0	
	comp=Z,194nm,19.6s,baz=280,slow=31						
ESDC	Sonseca Array	34.44	61	P	P	06 46 59.4	-1.3
V52A	Sevierville	34.44	293	P	P	06 47 01.3	+0.6
	baz=91						
Y53A	Monroe	34.45	289	P	P	06 47 01.6	+0.8
	baz=88						
Z53A	Monticello	34.47	288	P	P	06 47 01.4	+0.4
	baz=87						
N50A	Nevada	34.48	301	P	P	06 47 01.4	+0.5
	baz=98						
M50A	Fremont	34.49	302	P	P	06 47 01.8	+0.7
	baz=99						
S51A	Beattyville	34.50	296	P	P	06 47 01.8	+0.6
	baz=94						
R51A	Hillsboro	34.54	297	P	P	06 47 02.4	+0.9
	baz=94						
TKL	Tuckaleechee C	34.58	292	P	P	06 47 02.5	+0.6
TKL	Tuckaleechee C	34.58	292	P	P	06 47 02.5	+0.6
TKL				pmax	pmax		
	comp=Z,36nm,1.3s						
X52A	Dahlonega	34.69	290	P	P	06 47 03.7	+0.8
	baz=89						
W52A	Murphy	34.71	291	P	P	06 47 03.9	+0.9
W52A	Murphy	34.71	291	P	P	06 47 03.4	+0.4
	baz=90						
O50A	Cable	34.75	300	P	P	06 47 03.7	+0.4
	baz=97						
D49A	Beulah Townshi	34.76	313	P	P	06 47 03.0	-0.3
	baz=109						
I49A	Point Hope	34.83	307	P	P	06 47 04.6	+0.7
	baz=103						
P50A	Jamestown	34.83	299	P	P	06 47 04.1	+0.2
	baz=96						
Y52A	Lilburn	34.85	289	P	P	06 47 04.7	+0.4
	baz=88						
D48A	Paudash Townsh	35.02	313	P	P	06 47 06.2	+0.7
	baz=109						
E48A	Lockeyer	35.04	311	P	P	06 47 06.5	+0.7
	baz=107						
V51A	Loudon	35.05	293	P	P	06 47 06.9	+1.0
V51A	Loudon	35.05	293	P	P	06 47 06.6	+0.6
	baz=90						
R50A	Paris	35.12	297	P	P	06 47 07.3	+0.8
	baz=94						
L49A	Milan	35.14	304	P	P	06 47 07.5	+0.8
	baz=100						
S50A	Richmond	35.14	296	P	P	06 47 07.5	+0.7
	baz=93						
F48A	Evansville	35.15	310	P	P	06 47 05.5	-1.2
	baz=106						
Z52A	Williamson	35.18	288	P	P	06 47 07.6	+0.5
	baz=87						
M49A	Liberty Center	35.20	302	P	P	06 47 07.3	+0.2
	baz=99						
N49A	Columbus Grove	35.27	301	P	P	06 47 07.9	+0.1
	baz=98						
O49A	Covington	35.30	300	P	P	06 47 07.7	-0.3
	baz=97						
J48A	Bridge Port	35.37	306	P	P	06 47 08.7	+0.1
	baz=101						
W51A	Cleveland	35.39	291	P	P	06 47 09.3	+0.4
	baz=89						
U50A	Jamestown	35.46	294	P	P	06 47 09.5	0.0
	baz=91						
T50A	Nancy	35.47	295	P	P	06 47 09.5	-0.1
	baz=92						
X51A	Calhoun	35.48	290	P	P	06 47 09.8	+0.1
	baz=88						
I48A	Sherman Twp	35.50	307	P	P	06 47 09.9	+0.2
	baz=103						
K48A	Perry	35.52	305	P	P	06 47 09.9	0.0
	baz=100						
P49A	Miami Univ. Ec	35.52	299	P	P	06 47 09.7	-0.3
	baz=95						
L48A	N Adams	35.61	303	P	P	06 47 10.2	-0.4
	baz=99						
Q49A	Aurora	35.62	298	P	P	06 47 10.9	+0.1
	baz=94						
V50A	Pikevile	35.66	292	P	P	06 47 11.3	+0.1
	baz=90						
Y51A	Rockmart	35.68	289	P	P	06 47 12.0	+0.6
	baz=87						
M48A	Edgerton	35.75	302	P	P	06 47 12.9	+1.0
M48A	Edgerton	35.75	302	P	P	06 47 12.4	+0.5
	baz=98						
E47A	Iron Bridge	35.77	311	P	P	06 47 11.4	-0.6
	baz=106						
D47A	Chapleau	35.82	312	P	P	06 47 12.3	-0.2
	baz=107						
RUSC	La Rusia	35.83	237	P	P	06 47 14.5	+1.2
G47A	Hillman	35.83	309	P	P	06 47 12.5	0.0
	baz=104						
W50A	Signal Mountai	35.84	292	P	P	06 47 12.7	-0.1
	baz=89						
S49A	Springfield	35.85	296	P	P	06 47 12.7	-0.2
	baz=92						
N48A	Decatur	35.90	301	P	P	06 47 13.2	0.0
	baz=97						
O48A	Farmland	35.93	300	P	P	06 47 13.9	+0.4
	baz=96						
H47A	Mio	35.94	308	P	P	06 47 13.6	+0.1
	baz=103						
T49A	Edmonton	36.02	295	P	P	06 47 15.4	+1.1
	baz=92						
I47A	Gladwin	36.03	307	P	P	06 47 14.8	+0.5
	baz=102						
P48A	Milroy	36.06	299	P	P	06 47 14.6	0.0
	baz=95						
J47A	Sumner	36.10	305	P	P	06 47 15.1	+0.2
	baz=100						
K47A	Vermontville	36.14	304	P	P	06 47 15.8	+0.6
	baz=100						
U49A	Red Boiling Sp	36.21	294	P	P	06 47 16.9	+1.0
	baz=90						
Q48A	North Vernon	36.26	298	P	P	06 47 16.8	+0.5
	baz=94						
V49A	McMinnville	36.31	293	P	P	06 47 17.3	+0.5
	baz=89						
D46A	Sault St. Mari	36.39	311	P	P	06 47 17.7	+0.4
	baz=106						
N47A	Urbana	36.41	301	P	P	06 47 17.5	-0.1
N47A				IAmb	IAmb	06 47 25.1	
	comp=Z,30nm,1.4s						
N47A	Urbana	36.41	301	P	P	06 47 17.6	+0.1
	baz=96						
M47A	Cromwell	36.41	302	P	P	06 47 18.0	+0.5
	baz=97						
Z50A	Ashland	36.44	288	P	P	06 47 17.9	+0.1
	baz=86						
H46A	Fife Lake	36.62	307	P	P	06 47 19.7	+0.4
	baz=102						
W49A	Belvidere	36.62	291	P	P	06 47 19.5	+0.1
	baz=88						
CLTN	Cedars of Leba	36.66	293	P	P	06 47 20.1	+0.4
CLTN				IAmb	IAmb	06 47 27.4	
	comp=Z,25nm,1.0s						
WCI	Wyandotte Cave	36.66	297	P	P	06 47 20.5	+0.7
	baz=92						
Y49A	Blount Mountai	36.80	289	P	P	06 47 22.0	+1.0
L46A	Eue Claire	36.99	303	P	P	06 47 23.6	+1.2
	baz=98						
V48A	Smith Brothers	37.06	292	IAmb	IAmb	06 47 30.3	
	comp=Z,36nm,1.4s						
H45A	Beulah	37.23	307	P	P	06 47 24.4	-0.1
	baz=101						
X48A	Hartselle	37.29	290	P	P	06 47 25.6	+0.5
X48A				IAmb	IAmb	06 47 32.4	

comp=Z,29nm,1.4s
SFIN Lafayette 37.42 300 P P 06 47 26.1 0.0
SFIN IAmb IAmb 06 47 32.7
comp=Z,27nm,1.1s
SFIN Lafayette 37.42 300 P P 06 47 26.3 +0.2
baz=95
ROSC El Rosal 37.44 237 LR LR 07 02 20.3
comp=Z,282nm,21.6s,baz=38,slow=36
WVT Waverly 37.87 293 P P 06 47 30.0 0.0
WVT IAmb IAmb 06 47 36.9
comp=Z,20nm,1.1s
WVT Waverly 37.87 293 P P 06 47 30.0 0.0
WVT pmax pmax
comp=Z,20nm,1.1s
WVT Waverly 37.87 293 P P 06 47 30.3 +0.3
baz=89
PLAL Pickwick Lake 38.11 291 IAmb IAmb 06 47 39.7
comp=Z,25nm,1.0s
L44A Lake County Fo 38.20 303 P P 06 47 32.9 +0.1
L44A IAmb IAmb 06 47 35.2
comp=Z,37nm,1.3s
L44A Lake County Fo 38.20 303 P P 06 47 32.8 +0.1
baz=96
O44A Mansfield 38.45 300 P P 06 47 35.5 +0.6
O44A IAmb IAmb 06 47 37.8
comp=Z,19nm,0.9s
FRB Frobisher Bay 38.73 343 P P 06 47 36.3 -0.5
comp=Z,6.8nm,0.9s,baz=141,slow=8.2,SNR=12
S44A Carbondale 38.99 296 P P 06 47 40.6 +1.2
S44A IAmb IAmb 06 47 41.2
comp=Z,28nm,1.3s
HDIL Hopedale 39.10 300 P P 06 47 40.6 +0.3
baz=93
P43A Skaggs, Pawnee 39.23 299 P P 06 47 41.1 -0.3
OXF Oxford 39.24 291 P P 06 47 41.8 +0.3
OXF Oxford 39.24 291 P P 06 47 41.8 +0.3
OXF pmax pmax
comp=Z,77nm,1.2s
OXF Oxford 39.24 291 P P 06 47 41.9 +0.4
baz=86
L42A Oliver, Polo 39.49 302 P P 06 47 42.7 -0.9
PEBM Pemiscott Bayo 39.52 293 P P 06 47 44.6 +0.8
GNAR Gosnell 39.65 293 P P 06 47 46.4 +1.5
PBMO Poplar Bluff 39.95 294 IAmb IAmb 06 47 55.4
comp=Z,19nm,0.9s
JFWS Jewell Farm 40.00 304 P P 06 47 47.8 0.0
baz=96
VBMS Vicksburg 40.39 287 P P 06 47 51.8 +0.7
baz=83
X43A Marvell 40.45 291 P P 06 47 52.1 +0.5
baz=85
LCAR Lake Charles 40.56 293 IAmb IAmb 06 47 59.5
comp=Z,34nm,1.4s
CCM Cathedral Cave 40.56 296 P P 06 47 52.9 +0.4
CCM Cathedral Cave 40.56 296 P P 06 47 52.9 +0.4
CCM pmax pmax
comp=Z,15nm,1.1s
CCM Cathedral Cave 40.56 296 P P 06 47 52.6 +0.1
baz=89
L40A Anamosa 40.65 302 IAmb IAmb 06 48 00.3
comp=Z,51nm,1.5s
TEIG Tepich 41.31 269 LR LR 07 02 26.4
comp=Z,523nm,21.9s,baz=140,slow=32
W41B Gary Mavity, V 41.52 292 IAmb IAmb 06 48 07.3
comp=Z,25nm,1.1s
W41B Gary Mavity, V 41.52 292 P P 06 48 00.4 +0.1
baz=85,SNR=10
WHAR Wooly Hollow 41.54 292 IAmb IAmb 06 48 07.2
comp=Z,31nm,1.1s
EYMN Ely 41.56 311 P P 06 48 00.5 -0.1
EYMN Ely 41.56 311 P P 06 48 00.6 -0.1
baz=100
SAML Samuel 41.74 210 P P 06 48 02.0 -0.4
SAML Samuel 41.74 210 P P 06 48 02.0 -0.4
SAML pmax pmax
comp=Z,10.0nm,1.1s
U40A Yellville 41.92 294 IAmb IAmb 06 48 10.0
comp=Z,22nm,1.1s
U40A Yellville 41.92 294 P P 06 48 03.5 -0.2
baz=86,SNR=12
X40A Basin Creek Fa 42.06 291 IAmb IAmb 06 48 11.7
comp=Z,29nm,1.2s
X40A Basin Creek Fa 42.06 291 P P 06 48 04.6 -0.2
baz=84,SNR=8.9
SPMN Marine on St. 42.06 307 P P 06 48 04.9 +0.2
baz=96
SCIA State Center 42.12 302 IAmb IAmb 06 48 08.5
comp=Z,28nm,1.1s
SCIA State Center 42.12 302 P P 06 48 05.6 +0.3
baz=92
Z41A Richland Creek 42.17 289 P P 06 48 06.2 +0.4
baz=83
DBIC Dimbokro 42.57 113 P P 06 48 08.9 -0.2
comp=Z,2.5nm,0.7s,baz=281,slow=7.6,SNR=4.8
DBIC LR LR 07 04 02.1
comp=Z,693nm,18.1s,baz=269,slow=34
MIAR Mount Ida 42.66 291 P P 06 48 10.5 +0.8
MIAR Mount Ida 42.66 291 P P 06 48 10.5 +0.8
MIAR pmax pmax
comp=Z,15nm,1.0s
MIAR Mount Ida 42.66 291 P P 06 48 10.1 +0.3
baz=84
JTS Las Juntas de 42.72 253 *i* P P 06 48 10.3 -0.1
JTS pmax pmax
comp=Z,5.0nm,1.1s
W39A Magazine 42.77 292 P P 06 48 10.3 -0.3
W39A IAmb IAmb 06 48 17.7
comp=Z,29nm,1.1s
W39A Magazine 42.77 292 P P 06 48 10.8 +0.2
baz=84,SNR=9.2
HHAR Hobbs 42.80 294 P P 06 48 10.3 -0.6
TGUH Tegucigalpa,Un 42.89 260 P P 06 48 10.3 -1.7
TGUH IAmb IAmb 06 48 20.7
comp=Z,32nm,1.1s
OTAV Otavalo 43.57 236 P P 06 48 17.9 0.0
OTAV Otavalo 43.57 236 P P 06 48 17.9 0.0
OTAV pmax pmax
comp=Z,12nm,1.2s
NATX Nacogdoches 43.94 287 P P 06 48 20.0 -0.1
baz=80
BDFB Brasilia 44.08 186 LR LR 07 05 21.4
comp=Z,137nm,18.9s,baz=308,slow=34
SUMG Summit 44.22 2 *i* P P 06 48 22.0 -0.2
comp=Z,61nm,1.0s
SUMG Summit 44.22 2 P P 06 48 22.1 -0.2
SUMG IAmb IAmb 06 48 24.6
comp=Z,27nm,1.0s
SUMG Summit 44.22 2 P P 06 48 22.1 -0.2
SUMG pmax pmax
comp=Z,27nm,1.0s
TUL1 Leonard 44.33 293 P P 06 48 22.7 -0.4
baz=84,SNR=14
TAM Tamanrasset 44.43 86 P P 06 48 25.9 +1.6
TAM Tamanrasset 44.43 86 P P 06 48 25.9 +1.6
TAM pmax pmax
comp=Z,9.0nm,1.1s
AGMN Agassiz Nation 44.51 311 P P 06 48 24.2 -0.2
ECSD EROS Data Cent 44.69 305 P P 06 48 25.6 -0.4
ECSD EROS Data Cent 44.69 305 P P 06 48 25.6 -0.4
baz=92
KSU1 Kansas State U 44.73 298 P P 06 48 26.1 -0.3
baz=87
TOA0 Torodi Ar. Sit 44.75 100 P P 06 48 26.6 -0.2
TOA0 IAmb IAmb 06 48 33.3
comp=Z,13nm,0.9s
TORD Torodi Ar. Bea 44.75 100 P P 06 48 26.6 -0.2
comp=Z,5.5nm,0.8s,baz=301,slow=7.4,SNR=30
TORD LR LR 07 05 19.5
comp=Z,712nm,20.9s,baz=310,slow=34
TORD Torodi Ar. Bea 44.75 100 P P 06 48 25.5 -1.3
ULM Lac du Bonnet 44.78 314 P P 06 48 24.9 -1.7
comp=Z,7.1nm,1.0s,baz=83,slow=7.2,SNR=10
ULM LR LR 07 06 53.4
comp=Z,100nm,19.6s,baz=116,slow=36
ULM Lac du Bonnet 44.78 314 *i* P P 06 48 25.7 -0.9
KEST Kesra 44.99 67 P P 06 48 29.0 +0.4
comp=Z,10nm,1.0s,baz=221,slow=5.0,SNR=6.9
KEST LR LR 07 04 21.7
comp=Z,282nm,21.2s,baz=286,slow=32
KEST Kesra 44.99 67 P P 06 48 29.8 +1.2
KEST IAmb IAmb 06 48 42.0
comp=Z,27nm,1.3s
DAVA Damuels 45.25 50 *e*pP P 06 48 32.4 +1.8
comp=Z,8.6nm,0.8s
HKT Hockley 45.26 285 P P 06 48 31.0 +0.4
HKT IAmb IAmb 06 48 38.4
comp=Z,18nm,1.2s
HKT Hockley 45.26 285 P P 06 48 31.0 +0.4
HKT pmax pmax
comp=Z,18nm,1.3s
FNO Franklin 45.70 293 P P 06 48 34.6 +0.5
OKCFA Oklahoma City 45.72 293 P P 06 48 34.6 +0.3
H10N2 ASCENSION HYDR 45.77 138 T T 07 37 25.1
baz=323,slow=75,SNR=388
H10N3 ASCENSION HYDR 45.77 138 T T 07 37 25.3
baz=323,slow=75,SNR=181
H10N1 ASCENSION HYDR 45.79 138 T T 07 37 21.5
baz=323,slow=75,SNR=332
FETA Feichten 45.81 51 *e*pP P 06 48 35.5 +0.5
comp=Z,5.8nm,1.3s
FCC Fort Churchill 45.81 326 P P 06 48 34.0 -0.6
FCC IAmb IAmb 06 48 36.1
comp=Z,19nm,1.0s
FCC Fort Churchill 45.81 326 P P 06 48 34.0 -0.6
FCC pmax pmax
comp=Z,19nm,1.0s
BGNE Belgrade 45.82 301 P P 06 48 34.5 -0.6
BGNE Belgrade 45.82 301 P P 06 48 34.7 -0.3
baz=88
RETA Reutte 45.86 50 pP P 06 48 36.9 +1.6
comp=Z,6.7nm,0.8s
OSSC Osservatorio P 46.04 56 P P 06 48 37.5 +0.8
X34A Smith Ranch, M 46.14 292 P P 06 48 38.2 +0.6
SQTA Sankt Quirin 46.15 51 *e*pP P 06 48 39.1 +1.5
comp=Z,5.6nm,0.6s
WHTX Lake Whitney, 46.24 288 P P 06 48 38.4 0.0
WHTX Lake Whitney, 46.24 288 P P 06 48 39.1 +0.6
baz=80,SNR=5.7
WATA Walderalm 46.40 50 pP P 06 48 40.4 +0.7
comp=Z,15nm,1.2s
H10S3 ASCENSION HYDR 46.57 139 T T 07 38 16.9
baz=322,slow=74,SNR=204
435B Jarrell 46.58 287 P P 06 48 41.3 +0.2
H10S2 ASCENSION HYDR 46.58 139 T T 07 38 21.4
baz=258,slow=74,SNR=439
U32A Winter Ranch, 46.86 294 P P 06 48 43.5 +0.3
WMOK Wichita Mounta 46.89 292 P P 06 48 43.0 -0.5
WMOK Wichita Mounta 46.89 292 P P 06 48 43.0 -0.5
WMOK pmax pmax
comp=Z,43nm,1.4s
WMOK Wichita Mounta 46.89 292 P P 06 48 43.0 -0.5
baz=82,SNR=22
MDND Maddock 46.96 310 P P 06 48 43.6 -0.3
MDND Maddock 46.96 310 P P 06 48 43.0 -0.9
baz=94
ABTA Abfaltersbach 47.01 51 *e*pP P 06 48 45.4 +1.0
comp=Z,9.6nm,0.9s
CBKS Cedar Bluff 47.19 298 P P 06 48 44.7 -1.1
baz=85,SNR=5.4
KHC Kasperske Hory 47.85 48 *e*P P 06 48 50.5 -0.3
KHC Kasperske Hory 47.85 48 *e*P P 06 48 50.5 -0.3
GERES GERESS Array B 47.92 49 P P 06 48 51.3 -0.1
comp=Z,2.1nm,0.9s,baz=280,slow=7.9,SNR=8.8
GERES LR LR 07 05 00.9
comp=Z,132nm,21.1s,baz=262,slow=31
ABTX Abilene, Hawle 47.95 290 P P 06 48 51.2 -0.6
ABTX Abilene, Hawle 47.95 290 P P 06 48 51.5 -0.3
baz=79,SNR=15
BRG Berggiesshubel 48.22 46 *e*P P 06 48 56.3 +2.7
comp=Z,4.7nm,1.1s
BRG Berggiesshubel 48.22 46 *e*P P 06 48 56.3 +2.7
BRG pmax pmax
comp=Z,5.0nm,1.1s
CMIG Matias Romero 48.29 268 LR LR 07 08 52.9
comp=Z,229nm,18.8s,baz=76,slow=36
OBKA Obir 48.41 52 *e*pP P 06 48 55.4 +0.2
comp=Z,8.9nm,0.7s
JCT Junction City 48.51 287 P P 06 48 56.0 -0.2
baz=78,SNR=12
NB2 NORSAR Subarra 48.60 32 P P 06 48 57.7 +1.3
comp=Z,2.3nm,1.0s,baz=254,slow=7.9
NOA NORSAR Array B 48.60 32 P P 06 48 56.8 +0.4
comp=Z,1.3nm,0.9s,baz=254,slow=7.8,SNR=2.8
NOA LR LR 07 06 48.2
comp=Z,41nm,18.3s,baz=250,slow=33
SOKA Soboth 48.74 51 pP P 06 48 59.5 +1.7
comp=Z,11nm,1.3s
OGNE Ogallala 48.77 301 P P 06 48 58.2 +0.1
baz=86
ATAH Atahualpa 48.78 229 LR LR 07 09 34.7
comp=Z,129nm,21.6s,baz=122,slow=36
ARSA Arzberg 49.09 51 pP P 06 49 00.8 +0.4
comp=Z,8.5nm,0.9s
FFC Flin Flon 49.12 319 P P 06 49 00.3 -0.2
FFC IAmb IAmb 06 49 01.5
comp=Z,14nm,1.2s
FFC Flin Flon 49.12 319 P P 06 49 00.3 -0.2
FFC pmax pmax
comp=Z,14nm,1.2s
AMTX Amarillo 49.23 293 P P 06 49 02.3 +0.6
baz=80
KSCO Kaye Shedlock' 49.41 298 IAmb IAmb 06 49 06.1
comp=Z,24nm,1.3s
KSCO Kaye Shedlock' 49.41 298 P P 06 49 03.2 +0.2
baz=84
DPC Dobruska-Polom 49.70 47 *e*P P 06 49 06.2 +1.2
DPC Dobruska-Polom 49.70 47 *e*P P 06 49 06.2 +1.2
DAG Danmarks Havn 49.79 7 *i* P P 06 49 05.8 +0.6
comp=Z,18nm,1.2s
DAG Danmarks Havn 49.79 7 *i* P P 06 49 05.8 +0.6
DAG pmax pmax
comp=Z,19nm,1.2s
RSSD Black Hills 50.04 305 P P 06 49 07.9 0.0
baz=87
MODS Modra-Piesok 50.27 49 *e*P P 06 49 10.0 +0.6
MODS pmax pmax
comp=Z,20nm,1.3s
MODS Modra-Piesok 50.27 49 *e*P P 06 49 10.0 +0.6
MSTX Muleshoe 50.28 292 P P 06 49 09.4 -0.3
baz=79,SNR=10
LPAZ La Paz 50.44 211 P P 06 49 11.1 -0.5
comp=Z,7.3nm,0.8s,baz=12,slow=6.7,SNR=14
LPAZ LR LR 07 09 31.7
comp=Z,182nm,19.4s,baz=20,slow=35
LPAZ La Paz 50.44 211 P P 06 49 10.7 -0.9
LPAZ La Paz 50.44 211 P P 06 49 10.7 -0.9
T25A Trinidad 51.05 296 IAmb IAmb 06 49 22.8
comp=Z,13nm,1.0s
T25A Trinidad 51.05 296 P P 06 49 16.1 +0.4
baz=81,SNR=9.0
Q24A Divide 51.36 299 IAmb IAmb 06 49 26.4
comp=Z,22nm,1.1s
Q24A Divide 51.36 299 P P 06 49 18.2 +0.1
baz=82,SNR=5.8
LAO LASA Array 51.46 309 P P 06 49 17.9 -0.5
baz=88
ISCO Idaho Springs 51.61 300 P P 06 49 20.0 +0.1
baz=82
N23A Red Feather La 51.72 301 P P 06 49 21.2 +0.5
baz=83
SDCO Great Sand Dun 51.82 297 P P 06 49 21.8 +0.4
baz=81,SNR=5.7
K22A Casper 51.96 304 IAmb IAmb 06 49 28.4
comp=Z,11nm,1.0s
K22A Casper 51.96 304 P P 06 49 22.2 -0.2
baz=84
TX32 Lajitas Array 52.04 286 P P 06 49 22.0 -1.1
TXAR Lajitas Array 52.04 286 P P 06 49 22.6 -0.4
comp=Z,2.3nm,0.9s,baz=94,slow=6.9,SNR=14
TXAR LR LR 07 11 53.3
comp=Z,107nm,18.6s,baz=0.0,slow=37
TXAR Lajitas Array 52.04 286 P P 06 49 22.4 -0.6
TXAR Lajitas Array 52.04 286 P P 06 49 22.4 -0.6
RES Resolute Bay 52.85 345 P P 06 49 28.9 +0.8
RES IAmb IAmb 06 49 29.3
comp=Z,18nm,1.4s
RES Resolute Bay 52.85 345 P P 06 49 29.0 +0.8
RES pmax pmax
comp=Z,18nm,1.5s
S22A 4UR Ranch, Cre 52.85 297 P P 06 49 30.0 +0.8
baz=80
MNTX Cornudas Mount 52.90 290 P P 06 49 29.3 +0.1
baz=76
ANMO Albuquerque 53.08 294 LR LR 07 09 56.0
comp=Z,434nm,20.5s,baz=86,slow=34
ANMO Albuquerque 53.08 294 P P 06 49 31.7 +1.0
ANMO IAmb IAmb 06 49 39.0
comp=Z,28nm,1.4s
ANMO Albuquerque 53.08 294 P P 06 49 31.7 +1.0
ANMO pmax pmax
comp=Z,28nm,1.4s
ANMO Albuquerque 53.08 294 P P 06 49 31.1 +0.4
baz=78
SIRR Siria 53.34 52 ⇑P P 06 49 33.6 +1.4
BZS Buzias 53.36 53 ⇑P P 06 49 34.4 +2.0
BZS Buzias 53.36 53 ⇑P P 06 49 34.4 +2.0
O20A White River Ci 53.56 301 P P 06 49 34.6 +0.4
O20A IAmb IAmb 06 49 35.8
comp=Z,14nm,1.1s
O20A White River Ci 53.56 301 P P 06 49 34.3 +0.1
baz=81
RLMT Red Lodge 53.69 307 P P 06 49 35.0 -0.1
RLMT Red Lodge 53.69 307 P P 06 49 34.8 -0.3
baz=84,SNR=9.5
EGMT Eagleton 53.78 310 P P 06 49 34.8 -0.8
EGMT Eagleton 53.78 310 P P 06 49 35.6 0.0
baz=86,SNR=14
GCMT Greycliff 53.91 308 P P 06 49 36.2 -0.4
PB11 IPOC Station P 54.17 211 P P 06 49 36.1 -2.6
PD31 Pinedale Array 54.17 304 IAmb IAmb 06 49 40.6
comp=Z,16nm,0.8s
PDAR Pinedale Array 54.17 304 P P 06 49 38.1 -0.5
comp=Z,11nm,0.8s,baz=88,slow=8.1,SNR=69
PDAR LR LR 07 10 47.9
comp=Z,619nm,21.1s,baz=92,slow=34
PDAR Pinedale Array 54.17 304 P P 06 49 37.7 -1.0
GZR Gura Zlata 54.19 53 ⇑P P 06 49 39.4 +0.8
GZR Gura Zlata 54.19 53 ⇑P P 06 49 39.4 +0.8
NOR Nord 54.21 5 ⇑*i*P P 06 49 38.6 +0.5
comp=Z,18nm,1.2s
NOR Nord 54.21 5 ⇑*i*P P 06 49 38.6 +0.5
NOR pmax pmax
comp=Z,18nm,1.2s
YNE Yellowstone No 54.22 307 P P 06 49 37.2 -1.9
MVCO Mesa Verde 54.26 297 P P 06 49 39.3 -0.1
MVCO IAmb IAmb 06 49 46.9
comp=Z,11nm,0.9s
MVCO Mesa Verde 54.26 297 P P 06 49 39.9 +0.4
baz=79,SNR=8.2
RDMU Red Mountain 54.50 301 P P 06 49 41.6 +0.5
LKWY Lake 54.55 306 P P 06 49 42.9 +1.4
LKWY IAmb IAmb 06 49 49.6
comp=Z,14nm,1.0s
LKWY Lake 54.55 306 P P 06 49 42.9 +1.4
LKWY pmax pmax
comp=Z,14nm,1.0s
121A Cookes Peak, D 54.69 291 P P 06 49 43.4 +0.8
121A IAmb IAmb 06 49 50.8
comp=Z,27nm,1.4s
121A Cookes Peak, D 54.69 291 P P 06 49 43.2 +0.7
baz=76
H17A Grant Village 54.70 306 P P 06 49 43.8 +1.2
H17A IAmb IAmb 06 49 45.6
comp=Z,15nm,1.4s
H17A Grant Village 54.70 306 P P 06 49 43.6 +1.1
baz=83
YNR Norris Junctio 54.73 306 P P 06 49 43.7 +1.0
FLWY Flagg Ranch 54.82 306 IAmb IAmb 06 49 44.8
comp=Z,12nm,1.0s
YPP Pitchstone Pla 54.88 306 P P 06 49 44.0 +0.1
MOOW Moose Ponds 54.90 305 P P 06 49 43.7 -0.3
YMR Madison River 54.94 306 P P 06 49 44.7 +0.4
IMW Indian Meadow 55.02 306 P P 06 49 45.0 +0.1
IMW IAmb IAmb 06 49 46.2
comp=Z,21nm,1.1s
REDW Red Top Meadow 55.03 305 IAmb IAmb 06 49 46.0
comp=Z,16nm,1.2s
TPAW Teton Pass 55.08 305 P P 06 49 44.2 -1.1
TPAW IAmb IAmb 06 49 50.9
comp=Z,20nm,1.1s
FXWY Fox Creek 55.12 305 P P 06 49 44.9 -0.7
FXWY IAmb IAmb 06 49 52.5
comp=Z,9.1nm,1.0s
AHID Auburn Hatcher 55.30 304 IAmb IAmb 06 49 53.0
comp=Z,17nm,1.1s
ARR Arges 55.50 53 ⇑P P 06 49 49.6 +1.6
BUR08 Bucovina Ar. S 55.62 50 P P 06 49 50.4 +1.4
BUR08 IAmb IAmb 06 50 04.0
comp=Z,17nm,1.4s
BURAR Bucovina Array 55.64 50 ⇑P P 06 49 51.1 +2.0
BURAR Bucovina Array 55.64 50 P P 06 49 47.6 -1.4
BURAR Bucovina Array 55.64 50 ⇑P P 06 49 51.1 +2.0
W18A Petrified Fore 55.67 295 P P 06 49 49.4 -0.2
W18A IAmb IAmb 06 49 57.2
comp=Z,16nm,1.1s
W18A Petrified Fore 55.67 295 P P 06 49 50.0 +0.4
baz=77
FINES FINESS Array B 55.74 33 P P 06 49 49.2 -0.2
comp=Z,3.8nm,0.9s,baz=245,slow=4.0,SNR=5.3
FINES LR LR 07 10 30.9
comp=Z,70nm,18.3s,baz=244,slow=33
DOPR Dopca 55.95 52 ⇑P P 06 49 53.2 +1.9
VSU Vasula 56.00 37 *i* P P 06 49 52.1 +0.8
VSU pmax pmax
comp=Z,37nm,1.0s
DLMT Dillon 56.00 307 IAmb IAmb 06 49 54.3
comp=Z,12nm,1.1s
CPUP Villa Florida 56.08 195 P P 06 49 51.5 -0.7
comp=Z,1.6nm,1.0s,baz=39,slow=13,SNR=2.5
CPUP LR LR 07 13 46.1
comp=Z,54nm,18.8s,baz=12,slow=36
CPUP Villa Florida 56.08 195 P P 06 49 51.5 -0.7
CPUP pmax pmax
comp=Z,10.0nm,1.4s
319A Douglas 56.21 290 IAmb IAmb 06 50 00.9
comp=Z,11nm,1.1s
BIZ Bicaz 56.31 51 ⇑P P 06 49 55.7 +1.9
ARCES ARCESS Array B 56.32 23 P P 06 49 51.9 -1.6
comp=Z,5.5nm,0.9s,baz=312,slow=13,SNR=4.1
ARCES LR LR 07 09 02.3
comp=Z,50nm,19.7s,baz=271,slow=31
YKA Yellowknife Ar 56.39 328 P P 06 49 53.2 -0.8
comp=Z,4.6nm,0.9s,baz=90,slow=7.2,SNR=43
YKA LR LR 07 14 03.5
comp=Z,523nm,18.1s,baz=0.0,slow=36
MLR Muntele Rosu 56.40 52 ⇑P P 06 49 56.5 +1.9
NLU North Lily Min 56.49 301 P P 06 49 55.7 +0.2
MSO Missoula 56.73 309 P P 06 49 57.1 +0.1
baz=82
MSU Marysvale 56.85 299 P P 06 49 58.0 -0.1
MSU Marysvale 56.85 299 P P 06 49 58.0 -0.1
WUAZ Wupatki 56.88 296 P P 06 49 59.2 +1.0
baz=77,SNR=10
BISRR Bisoca 56.92 52 ⇑P P 06 49 59.7 +1.5
MTPU Mount Pierson 56.96 299 P P 06 49 59.5 +0.5
DUG Dugway, Tooele 57.00 301 P P 06 49 59.2 +0.2
DUG IAmb IAmb 06 50 07.1
comp=Z,17nm,0.9s
DUG Dugway, Tooele 57.00 301 P P 06 49 59.2 +0.2
DUG pmax pmax
comp=Z,17nm,0.9s
DUG Dugway, Tooele 57.00 301 P P 06 49 59.3 +0.3
baz=79,SNR=7.9
TCRU Three Creeks R 57.04 299 P P 06 50 00.1 +0.7
X16A Lo Mia Camp, P 57.20 294 P P 06 50 00.5 0.0
X16A IAmb IAmb 06 50 04.6
comp=Z,13nm,1.4s
TUC Tucson 57.20 292 P P 06 49 59.7 -0.7
TUC IAmb IAmb 06 50 08.4
comp=Z,11nm,1.4s
TUC Tucson 57.20 292 P P 06 49 59.7 -0.7
TUC pmax pmax
comp=Z,11nm,1.4s
TUC Tucson 57.20 292 P P 06 50 00.1 -0.3
baz=75
U15A North Rim 57.40 297 P P 06 50 02.8 +0.7
U15A IAmb IAmb 06 50 10.2
comp=Z,8.7nm,0.9s
SORM Soroca 57.67 49 ⇑P P 06 50 02.2 -1.1
SORM Soroca 57.67 49 ⇑P P 06 50 02.2 -1.1
KNB Kanab 57.68 298 P P 06 50 03.5 -0.4
KNB Kanab 57.68 298 P P 06 50 03.5 -0.4
KNB pmax pmax
comp=Z,12nm,1.4s
SZCU Shurtz Canyon 57.75 298 P P 06 50 04.0 -0.4
AKASG Malin Array Be 57.90 46 P P 06 50 04.5 -0.5
comp=Z,5.1nm,0.8s,baz=278,slow=5.9,SNR=12
AKASG LR LR 07 12 21.1
comp=Z,151nm,20.3s,baz=260,slow=33
AKASG Malin Array Be 57.90 46 IAmb IAmb 06 50 07.2
comp=Z,2.5nm,1.1s
AKASG Malin Array Be 57.90 46 P P 06 50 04.5 -0.5
AKASG pmax pmax
comp=Z,3.0nm,1.1s
AKBB Malin Array Si 57.90 46 P P 06 50 05.0 +0.1
AKBB IAmb IAmb 06 50 07.5
comp=Z,8.8nm,1.0s
AKBB Malin Array Si 57.90 46 P P 06 50 05.1 +0.1

AKBB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MFID	**Camas Ranch**	**58.60**	**306**	IAmb	IAmb	06 50 11.3	
	comp=Z,17nm,1.0s						
NEW	**Newport**	**58.66**	**311**	P	**P**	**06 50 10.0**	**-0.3**
	baz=81,SNR=15						
214A	**Organ Pipe Nat**	**58.95**	**292**	IAmb	IAmb	06 50 20.7	
	comp=Z,12nm,1.1s						
214A	**Organ Pipe Nat**	**58.95**	**292**	P	**P**	**06 50 12.9**	**+0.2**
	baz=74						
W13A	**Hualapai Mount**	**58.98**	**296**	IAmb	IAmb	06 50 20.7	
	comp=Z,8.2nm,1.2s						
APA	**Apatity**	**59.06**	**26⇑**	*i*P	P	06 50 17.8	+5.0
APA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,900nm,14.0s						
BMO	**Blue Mountains**	**59.37**	**308**	IAmb	IAmb	06 50 21.2	
	comp=Z,7.6nm,1.1s						
PDMCI	**Parker Dam,Lak**	**59.39**	**295**	P	**P**	**06 50 16.1**	**+0.5**
	baz=75						
R11A	**Troy Canyon, C**	**59.50**	**300**	P	**P**	**06 50 16.9**	**+0.4**
	baz=76,SNR=7.2						
Y12C	**Blythe**	**59.84**	**294**	P	**P**	**06 50 19.0**	**+0.3**
	baz=74						
IRM	**Iron Mountain**	**60.23**	**295**	P	**P**	**06 50 22.1**	**+0.7**
	baz=74						
E08A	**Dider Farm, El**	**60.26**	**310**	IAmb	IAmb	06 50 22.5	
	comp=Z,9.3nm,1.1s						
GLA	**Glamis**	**60.28**	**294**	IAmb	IAmb	06 50 30.2	
	comp=Z,8.9nm,1.1s						
GLA	**Glamis**	**60.28**	**294**	P	**P**	**06 50 22.1**	**+0.3**
	baz=74						
C36M	**Paulatuk**	**60.30**	**336**	P	**P**	**06 50 20.7**	**-0.5**
	baz=88						
TPNV	**Topopah Spring**	**60.36**	**298**	IAmb	IAmb	06 50 23.9	
	comp=Z,13nm,1.2s						
TPNV	**Topopah Spring**	**60.36**	**298**	P	**P**	**06 50 22.8**	**+0.4**
	baz=75,SNR=8.0						
GMRC	**Granite Mounta**	**60.47**	**296**	P	**P**	**06 50 23.6**	**+0.4**
	baz=74,SNR=6.0						
TUQ	**Turquoise Moun**	**60.50**	**297**	P	**P**	**06 50 23.9**	**+0.5**
	baz=74						
J08A	**Circle Bar Ran**	**60.50**	**306**	IAmb	IAmb	06 50 24.6	
	comp=Z,16nm,1.1s						
HAWA	**Hanford**	**60.60**	**310**	IAmb	IAmb	06 50 24.8	
	comp=Z,15nm,1.0s						
BC3	**Big Chuckawall**	**60.61**	**295**	P	**P**	**06 50 24.4**	**+0.2**
	baz=74						
BELC	**Belle Mtn. Jos**	**60.95**	**295**	P	**P**	**06 50 26.9**	**+0.4**
	baz=74						
FURC	**Furnace Creek,**	**60.96**	**298**	P	**P**	**06 50 26.9**	**+0.7**
	baz=75						
I07A	**Izee**	**61.07**	**307**	IAmb	IAmb	06 50 28.2	
	comp=Z,8.4nm,1.1s						
LTY	**Liberty**	**61.19**	**311**	IAmb	IAmb	06 50 37.7	
	comp=Z,18nm,1.2s						
C06D	**Leavenworth**	**61.21**	**312**	P	**P**	**06 50 28.3**	**+0.5**
	baz=78						
GSC	**Goldstone, Bar**	**61.23**	**297**	P	**P**	**06 50 28.4**	**+0.1**
	baz=74						
KVN	**Kaiserville**	**61.24**	**301**	IAmb	IAmb	06 50 35.4	
	comp=Z,15nm,1.3s						
LLLB	**Lillooet**	**61.32**	**315**	IAmb	IAmb	06 50 34.4	
	comp=Z,12nm,1.2s						
IKP	**In-Ko-Pah, Jac**	**61.43**	**294**	P	**P**	**06 50 30.1**	**+0.5**
	baz=73						
NV11	**Mina Array Sit**	**61.44**	**300**	IAmb	IAmb	06 50 40.5	
	comp=Z,9.8nm,1.2s						
NVAR	**Mina Array Bea**	**61.55**	**301**	P	**P**	**06 50 30.5**	**-0.1**
	comp=Z,2.7nm,0.7s,baz=80,slow=6.8,SNR=18						
NVAR				LR	LR	07 16 41.8	
	comp=Z,515nm,18.6s,baz=55,slow=36						
NVAR	**Mina Array Bea**	**61.55**	**301**	P	**P**	**06 50 29.8**	**-0.8**
MPMC	**Manual Prospec**	**61.56**	**298**	P	**P**	**06 50 31.4**	**+0.7**
	baz=74						
DAC	**Darwin (Calif)**	**61.58**	**298**	IAmb	IAmb	06 50 41.6	
	comp=Z,10nm,1.3s						
RYN	**Ryan**	**61.66**	**301**	IAmb	IAmb	06 50 32.1	
	comp=Z,6.3nm,0.9s						
OBN	**Obninsk**	**61.67**	**40**	LR	LR	07 14 12.1	
	comp=Z,32nm,20.9s,baz=215,slow=33						
OBN	**Obninsk**	**61.67**	**40**	*e*P	**P**	**06 50 30.8**	**0.0**
OBN				*e*		06 51 12.0	
OBN				*e*		06 52 43.2	
OBN				pmax	pmax		
	comp=Z,13nm,0.8s						
TIN	**Tinemaha, Big**	**61.86**	**299**	P	**P**	**06 50 33.3**	**+0.7**
	baz=74						
CWC	**Cottonwood Cre**	**61.91**	**298**	P	**P**	**06 50 32.8**	**-0.2**
	baz=74						
MURC	**Murrieta**	**62.02**	**295**	P	**P**	**06 50 34.1**	**+0.5**
	baz=73						
F05D	**White Salmon**	**62.02**	**309**	P	**P**	**06 50 34.0**	**+0.6**
	baz=77						
G05D	**Wamic, OR**	**62.07**	**309**	P	**P**	**06 50 34.5**	**+0.8**
	baz=77						
MOD	**Modoc Plateau**	**62.15**	**305**	IAmb	IAmb	06 50 37.1	
	comp=Z,13nm,1.0s						
109C	**Camp Elliot, M**	**62.16**	**294**	P	**P**	**06 50 34.7**	**+0.3**
	baz=73						
EDW2	**Edwards Air Fo**	**62.28**	**297**	P	**P**	**06 50 36.1**	**+0.7**
	baz=73						
I05D	**Terrebonne, OR**	**62.30**	**308**	P	**P**	**06 50 36.0**	**+0.7**
	baz=76,SNR=5.1						
VCNR	**Virginia City**	**62.34**	**302**	IAmb	IAmb	06 50 36.6	
	comp=Z,12nm,1.0s						
K05A	**Summer Lake**	**62.37**	**306**	P	**P**	**06 50 36.7**	**+0.7**
ISA	**Isabella, Lake**	**62.43**	**298**	IAmb	IAmb	06 50 44.1	
	comp=Z,14nm,1.2s						
ISA	**Isabella, Lake**	**62.43**	**298**	P	**P**	**06 50 36.6**	**+0.3**
	baz=73						
J05D	**Fort Rock, OR**	**62.48**	**306**	P	**P**	**06 50 36.7**	**0.0**
	baz=76,SNR=7.5						
BEKR	**Beckworth**	**62.71**	**303**	IAmb	IAmb	06 50 45.1	
	comp=Z,7.0nm,1.1s						
J04D	**Umpqua Nationa**	**63.11**	**307**	P	**P**	**06 50 41.2**	**+0.3**
	baz=75						
BR131	**Keskin Array S**	**63.14**	**57**	P	**P**	**06 50 42.1**	**+1.0**
BR131	**Keskin Array S**	**63.14**	**57**	P	**P**	**06 50 42.2**	**+1.0**
BR131				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BRTR	**Keskin Array B**	**63.14**	**57**	P	**P**	**06 50 41.8**	**+0.7**
	comp=Z,2.8nm,0.8s,baz=260,slow=5.3,SNR=11						
BRTR				LR	LR	07 15 00.5	
	comp=Z,78nm,21.8s,baz=246,slow=33						
BRTR	**Keskin Array B**	**63.14**	**57**	P	**P**	**06 50 41.2**	**+0.1**
I04A	**Tendick Farm,**	**63.18**	**307**	P	**P**	**06 50 41.0**	**-0.1**
	baz=75						
H04D	**Lebanon**	**63.22**	**308**	P	**P**	**06 50 40.4**	**-1.0**
	baz=76						
CMB	**Columbia Colle**	**63.23**	**301**	P	**P**	**06 50 41.7**	**+0.1**
CMB				IAmb	IAmb	06 50 49.5	
	comp=Z,11nm,1.2s						
CMB	**Columbia Colle**	**63.23**	**301**	P	**P**	**06 50 41.7**	**+0.1**
CMB				pmax	pmax		
	comp=Z,11nm,1.3s						
M04C	**Macdoel**	**63.29**	**305**	P	**P**	**06 50 42.2**	**+0.1**
	baz=75						
G03D	**McMinnville, O**	**63.41**	**309**	P	**P**	**06 50 42.9**	**+0.3**
	baz=76						
L04D	**Klamath Falls**	**63.51**	**306**	P	**P**	**06 50 43.4**	**-0.1**
	baz=75						
ORV	**Oroville**	**63.65**	**302**	P	**P**	**06 50 43.9**	**-0.4**
ORV				IAmb	IAmb	06 50 45.4	
	comp=Z,16nm,1.2s						
ORV	**Oroville**	**63.65**	**302**	P	**P**	**06 50 43.9**	**-0.4**
ORV				pmax	pmax		
	comp=Z,16nm,1.3s						
O03E	**Paynes Creek**	**63.66**	**303**	P	**P**	**06 50 44.1**	**-0.4**
	baz=74,SNR=5.6						
INK	**Inuvik**	**63.83**	**336**	IAmb	IAmb	06 50 45.8	
	comp=Z,10nm,1.1s						
VORD	**Divnogorie**	**64.13**	**44**	*e*P	**P**	**06 50 47.6**	**+0.4**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
N02D	**Trinity Center**	**64.14**	**304**	P	**P**	**06 50 47.1**	**-0.5**
	baz=74						
CFA	**Coronel Fontan**	**64.19**	**203**	LR	LR	07 18 36.1	
	comp=Z,135nm,20.9s,baz=18,slow=36						
K02D	**Willamette Mer**	**64.35**	**306**	P	**P**	**06 50 48.7**	**-0.3**
	baz=74						
J01E	**Myrtle Point**	**64.41**	**307**	P	**P**	**06 50 48.9**	**-0.4**
	baz=74						
O02D	**Mt. Diablo Mer**	**64.42**	**303**	P	**P**	**06 50 48.9**	**-0.5**
	baz=73						
L02E	**Cave Junction**	**64.45**	**306**	P	**P**	**06 50 48.8**	**-0.7**
	baz=74						

PRGR	**Permogore**	**65.01**	**32**	*e*P	**P**	**06 50 51.5**	**-1.3**
PRGR				pmax	pmax		
	comp=Z,16nm,1.4s						
EPYK	**Eagle Plains**	**65.47**	**334**	P	**P**	**06 50 55.0**	**-0.8**
	baz=75						
VRH	**Novokhopyorsk**	**65.55**	**44**	*e*P	**P**	**06 50 56.9**	**+0.4**
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
KIRV	**Kirov**	**67.68**	**34**	LR	LR	07 19 21.3	
	comp=Z,83nm,18.8s,baz=166,slow=35						
BMAR	**Burnt Mountain**	**68.09**	**336**	P	**P**	**06 51 12.7**	**+0.2**
KIV	**Kislovodsk**	**68.33**	**51**	*e*P	**P**	**06 51 14.1**	**-0.4**
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
SHA1	**Shidzhatmaz**	**68.39**	**51**	*i* P	**P**	**06 51 15.0**	**0.0**
KBZ	**Khabaz**	**68.55**	**51**	P	**P**	**06 51 17.5**	**+1.8**
	comp=Z,6.8nm,0.9s,baz=274,slow=1.2,SNR=9.2						
KBZ				LR	LR	07 20 38.5	
	comp=Z,60nm,19.6s,baz=299,slow=35						
KBZ	**Khabaz**	**68.55**	**51**	*i* P	**P**	**06 51 16.4**	**+0.7**
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BCAR	**Beaver Creek A**	**68.56**	**331**	P	**P**	**06 51 15.0**	**-0.5**
PYA1	**Pyatigorsk**	**68.58**	**51**	*i* P	**P**	**06 51 17.5**	**+1.5**
NEY	**Neytrino**	**68.59**	**52**	*i* P	**P**	**06 51 16.6**	**+0.4**
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NCK	**Nalchik**	**69.11**	**51**	*i* P	**P**	**06 51 20.6**	**+1.3**
NCK				pmax	pmax		
	comp=Z,11nm,0.8s						
BARN	**Barnard Glacie**	**69.22**	**329**	P	**P**	**06 51 20.0**	**+0.2**
TOLK	**Toolik Lake Re**	**69.33**	**338**	P	**P**	**06 51 20.9**	**+0.7**
TOLK				IAmb	IAmb	06 51 22.2	
	comp=Z,16nm,1.3s						
TOLK	**Toolik Lake Re**	**69.33**	**338**	P	**P**	**06 51 20.2**	**0.0**
	baz=65,SNR=5.3						
ZEI	**Tsey**	**69.56**	**52**	*e*P	**P**	**06 51 22.0**	**-0.3**
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
IL31		**69.99**	**334**	IAmb	IAmb	06 51 25.5	
	comp=Z,14nm,1.1s						
ILAR	**Eielson Array**	**69.99**	**334**	P	**P**	**06 51 24.5**	**+0.2**
	comp=Z,6.9nm,1.0s,baz=69,slow=4.5,SNR=34						
ILAR				LR	LR	07 22 46.9	
	comp=Z,171nm,18.8s,baz=81,slow=36						
ILAR	**Eielson Array**	**69.99**	**334**	P	**P**	**06 51 23.8**	**-0.5**
ILAR	**Eielson Array**	**69.99**	**334**	P	**P**	**06 51 23.8**	**-0.5**
GLB	**Gilahina Butte**	**70.04**	**330**	IAmb	IAmb	06 51 25.8	
	comp=Z,13nm,1.1s						
POKR	**Poker Plat Res**	**70.06**	**334**	P	**P**	**06 51 24.7**	**0.0**
	baz=65						
HDA	**Harding Lake**	**70.16**	**333**	P	**P**	**06 51 25.5**	**+0.1**
	baz=66						
COLD	**Coldfoot**	**70.16**	**337**	IAmb	IAmb	06 51 27.7	
	comp=Z,8.8nm,1.3s						
GNI	**Garni**	**71.09**	**54**	LR	LR	07 23 03.1	
	comp=Z,48nm,19.2s,baz=290,slow=36						
GNI	**Garni**	**71.09**	**54**	*i* P	**P**	**06 51 32.3**	**+0.6**
GNI				pmax	pmax		
	comp=Z,25nm,1.1s						
H09W1	**TRISTAN DA CUN**	**71.55**	**154**	T	T	08 09 45.1	
	SNR=7.7						
IMAR	**Indian Mountai**	**72.00**	**336**	P	**P**	**06 51 36.9**	**+0.5**
ARU	**Arti**	**73.06**	**35**	LR	LR	07 23 11.8	
	comp=Z,112nm,18.2s,baz=278,slow=35						
ARU	**Arti**	**73.06**	**35*c***	*i*P	**P**	**06 51 43.4**	**+0.5**
ARU				S	**S**	**07 01 10.3**	**+0.5**
ARU				SS	**SS**	**07 05 45.3**	**-4.6**
ARU				pmax	pmax		
	comp=Z,18nm,1.7s						
PLCA	**Paso Flores**	**73.27**	**201**	P	**P**	**06 51 43.5**	**-0.7**
	comp=Z,4.8nm,1.2s,baz=64,slow=4.9,SNR=3.2						
PLCA				LR	LR	07 25 28.6	
	comp=Z,87nm,18.0s,baz=76,slow=37						
AKTO	**Aktyubinsk**	**75.45**	**40**	LR	LR	07 24 28.0	
	comp=Z,100nm,18.2s,baz=301,slow=35						
TSUM	**Tsumeb**	**75.79**	**121**	LR	LR	07 18 05.5	
	comp=Z,118nm,20.6s,baz=110,slow=30						
ABKAR	**Akbulak array**	**77.10**	**41**	P	**P**	**06 52 07.2**	**+0.8**
TIXI	**Tiksi**	**80.00**	**2**	LR	LR	07 23 28.5	
	comp=Z,38nm,19.7s,baz=331,slow=32						
TIXI	**Tiksi**	**80.00**	**2**	P	**P**	**06 52 21.8**	**-0.1**
TIXI	**Tiksi**	**80.00**	**2**	*i* P	**P**	**06 52 22.5**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BRVK	**Borovoye**	**80.61**	**34**	P	**P**	**06 52 26.3**	**+0.7**
BRVK	**Borovoye**	**80.61**	**34**	P	**P**	**06 52 26.3**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BILL	**Bilibino**	**81.22**	**349**	*e*P	**P**	**06 52 28.1**	**-0.4**
BILL				*e*		06 52 33.8	
BILL				*e*		06 55 31.3	
BILL				*e*PPP	PPP	06 57 22.5	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GEYT	**Alibeck**	**81.44**	**52**	P	**P**	**06 52 32.1**	**+1.7**
	comp=Z,2.3nm,0.8s,baz=251,slow=9.0,SNR=4.5						
GEYT				LR	LR	07 27 56.5	
	comp=Z,34nm,21.6s,baz=335,slow=35						
KMBO	**Kilima Mbogo**	**82.51**	**95**	LR	LR	07 28 49.6	
	comp=Z,550nm,19.4s,baz=276,slow=35						
LBTB	**Lobatse**	**85.19**	**122**	LR	LR	07 24 02.1	
	comp=Z,131nm,19.9s,baz=311,slow=31						
SUR	**Sutherland**	**86.07**	**130**	LR	LR	07 24 06.9	
	comp=Z,132nm,21.8s,baz=308,slow=31						
KURK	**Kurchatov**	**86.11**	**33**	P	**P**	**06 52 54.2**	**+0.2**
KURK				IAmb	IAmb	06 52 57.3	
	comp=Z,7.7nm,1.1s						
KURK	**Kurchatov**	**86.11**	**33**	P	**P**	**06 52 54.2**	**+0.2**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ZAA0	**Zalesovo Array**	**86.60**	**28**	P	**P**	**06 52 57.1**	**+0.9**
ZAA0				IAmb	IAmb	06 53 09.0	
	comp=Z,7.4nm,1.4s						
ZALV	**Zalesovo Beam**	**86.60**	**28**	P	**P**	**06 52 56.6**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=293,slow=7.6,SNR=4.3						
ZALV				LR	LR	07 30 32.5	
	comp=Z,40nm,20.4s,baz=311,slow=35						
ZALV	**Zalesovo Beam**	**86.60**	**28**	P	**P**	**06 52 56.7**	**+0.4**
ZALV	**Zalesovo Beam**	**86.60**	**28**	P	**P**	**06 52 56.7**	**+0.4**
BOSA	**Boshof**	**86.97**	**125**	LR	LR	07 26 55.5	
	comp=Z,101nm,18.7s,baz=334,slow=32						
WSAR	**Wadi Sarin**	**89.18**	**64**	LR	LR	07 34 47.7	
	comp=Z,71nm,20.0s,baz=317,slow=37						
AAK	**Ala-Archa**	**89.19**	**41**	LR	LR	07 33 15.5	
	comp=Z,96nm,19.4s,baz=315,slow=36						
AAK	**Ala-Archa**	**89.19**	**41**	*i* P	**P**	**06 53 08.9**	**-0.2**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YAK	**Yakutsk**	**89.64**	**3**	*i* P	**P**	**06 53 09.8**	**-0.8**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MK31	**Makanchi Array**	**90.57**	**34**	*i* P	**P**	**06 53 13.9**	**-1.4**
MKAR	**Makanchi Array**	**90.57**	**34**	P	**P**	**06 53 15.1**	**-0.2**
	comp=Z,2.2nm,1.0s,baz=325,slow=2.9,SNR=11						
MKAR				LR	LR	07 31 56.5	
	comp=Z,96nm,21.0s,baz=286,slow=34						
MKAR	**Makanchi Array**	**90.57**	**34**	P	**P**	**06 53 13.3**	**-2.0**
MKAR	**Makanchi Array**	**90.57**	**34**	*i* P	**P**	**06 53 15.8**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSH	**Kashi**	**92.03**	**42**	P	**P**	**06 53 19.2**	**-3.2**
WMQ	**Urumqi**	**95.35**	**33**	*e*P	**P**	**06 53 39.0**	**+1.5**
PETK	**Petropavlovsk-**	**96.64**	**347**	LR	LR	07 38 33.6	
	comp=Z,30nm,19.6s,baz=61,slow=36						
LZH	**Lanzhou**	**108.83**	**27**	*e*Pdif	**Pdif**	**06 54 36.7**	**-1.3**
PPT2	**Papeete2**	**111.92**	**261**	*e*LR	LR	07 31 58.8	
	comp=Z,115nm,26.0s						
TBI	**Tubuai**	**114.07**	**256**	*e*LR	LR	07 32 59.8	
	comp=Z,117nm,31.2s						
WHN	**Wuhan**	**117.64**	**21**	PKP	**PKPdf**	**06 58 57.4**	**-2.2**
DZM	**Mont Dzumac**	**152.12**	**276**	*e*LR	LR	07 50 48.5	
	comp=Z,225nm,32.2s						

*IDC **04** 06:40:52.0±1.6, 38.°34N×20.°41E, h0^{km}, mb3.6/4, mb1 3.6/5, mb1mx3.2/40, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=34.4km s-min=27.7km az=111.0*
*THE **04** 06:40:53.5, 38.°26N×20.°41E, h13^{km}, ML3.6/22, Error ellipse: s-maj=1.3km s-min=0.5km az=266.0*
*ATH **04** 06:40:53.1, 38.°26N×20.°43E, h14^{km}±1^{km}, ML3.6/7, Error ellipse: s-maj=1.9km s-min=0.9km az=260.0*
*BEO **04** 06:40:55.2±0.9, 38.°17N×20.°10E, h23^{km}±5^{km}, ML3.5/7*
ISC 04 06:40:53.6±0.7**, 38.°25N**±0.°02×**20.°44E**±0.°03**, h11**^{km}±4^{km}**,**
n75, σ1^{s}10/115**, mb3.8**/4**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.01**	**305**	P	**Pg**	**06 40 55.4**	**-0.1**
KEF4				S	**Sg**	**06 40 57.7**	**+0.8**
KEF1	**Kardakata, Kep**	**0.04**	**43**	P	**Pg**	**06 40 55.4**	**-0.3**
KEF1				S	**Sg**	**06 40 57.2**	**+0.1**
LXR1	**Lixouri, Cepha**	**0.05**	**180**	P	**Pg**	**06 40 55.8**	**+0.1**
LXR1				S	**Sg**	**06 40 58.4**	**+1.1**
	158µm,0.2s						
CHV1	**Chavriata, Kef**	**0.08**	**214**	P	**Pg**	**06 40 56.1**	**+0.1**
CHV1				S	**Sg**	**06 40 59.0**	**+1.2**
	95µm,0.2s						
ARG2	**Argostoli**	**0.08**	**151**	P	**Pg**	**06 40 55.9**	**-0.1**
ARG2				S	**Sg**	**06 40 58.6**	**+0.8**
	156µm,0.1s						
KEF3	**Kipouria, Keph**	**0.09**	**236**	P	**Pg**	**06 40 56.3**	**+0.2**
KEF3				S	**Sg**	**06 40 58.7**	**+0.7**
KEF2	**Argostoli. Kep**	**0.09**	**156**	P	**Pg**	**06 40 56.1**	**-0.1**
KEF2				S	**Sg**	**06 40 58.7**	**+0.6**
VLS	**Valsamata**	**0.14**	**121**	P	**Pg**	**06 40 56.5**	**-0.4**
VLS				S	**Sg**	**06 40 59.6**	**+0.4**
	52µm,0.2s						
VLS	**Valsamata**	**0.14**	**121**	P	**Pg**	**06 40 56.5**	**-0.4**
VLS				S	**Sg**	**06 40 59.7**	**+0.4**
VLS				AML	AML	06 41 00.3	
VLS				AML	AML	06 41 00.3	
	comp=E,93154µm,0.1s						
VSK1	**VASILIKIADES**	**0.19**	**32**	P	**Pg**	**06 40 57.4**	**-0.3**
VSK1				S	**Sg**	**06 41 01.1**	**+0.6**
	comp=E,73µm,0.3s						
FSK	**Fiskardo**	**0.23**	**25**	P	**Pg**	**06 40 58.1**	**-0.3**
FSK				S	**Sg**	**06 41 02.4**	**+0.7**
	comp=E,21µm,0.3s						
FSK	**Fiskardo**	**0.23**	**25**	P	**Pg**	**06 40 58.2**	**-0.3**
EVGI	**Lefkada island**	**0.41**	**25**	P	**Pg**	**06 41 01.2**	**-0.4**
EVGI				S	**Sb**	**06 41 08.5**	**-0.5**
EVGI	**Lefkada island**	**0.41**	**25**	P	**Pg**	**06 41 01.2**	**-0.4**
VLMS	**Volimes, Zakyn**	**0.41**	**155**	P	**Pg**	**06 41 01.5**	**-0.2**
VLMS				S	**Sg**	**06 41 08.2**	**+0.9**
VLMS				AML	AML	06 41 10.7	
	comp=E,24704µm,0.3s						
VLMS				AML	AML	06 41 11.3	
	comp=N,30870µm,0.3s						
MGNA	**Meganis**	**0.49**	**34**	P	**Pg**	**06 41 02.4**	**-0.8**
MGNA				S	**Sg**	**06 41 10.0**	**+0.3**
MGNA				AML	AML	06 41 11.5	
	comp=E,43554µm,0.4s						
MGNA				AML	AML	06 41 11.6	
	comp=N,38724µm,0.3s						
LKD2	**Lefkada island**	**0.56**	**18**	P	**Pg**	**06 41 04.8**	**+0.2**
LKD2	**Lefkada island**	**0.56**	**18**	P	**Pg**	**06 41 04.0**	**-0.6**
LKD2				S	**Sg**	**06 41 11.6**	**-0.4**
LKD2				AML	AML	06 41 16.7	
	comp=E,5710µm,0.2s						
LKD2				AML	AML	06 41 18.4	
	comp=N,7392µm,0.3s						
ZAK2	**Zakynthos**	**0.59**	**142**	P	**Pb**	**06 41 05.9**	**+0.1**
ZAK2				S	**Sn**	**06 41 16.2**	**-1.2**
	comp=N,28µm,0.4s						
AST1	**Astakos**	**0.59**	**60**	P	**Pg**	**06 41 04.4**	**-0.6**
AST1				S	**Sb**	**06 41 14.0**	**-0.2**
	comp=N,12µm,0.2s						
TSLK	**Tsoukalades, L**	**0.60**	**16**	P	**Pg**	**06 41 05.2**	**0.0**
TSLK	**Tsoukalades, L**	**0.60**	**16**	P	**Pg**	**06 41 04.8**	**-0.4**
KRI1	**kERI**	**0.66**	**153**	P	**Pg**	**06 41 05.6**	**-0.7**
KRI1				S	**Sb**	**06 41 16.6**	**+0.4**
	comp=N,15µm,0.3s						
PDO	**Prodromos**	**0.68**	**59**	P	**Pg**	**06 41 06.1**	**-0.7**
PDO				S	**Sb**	**06 41 17.6**	**+0.7**
	comp=N,6µm,0.4s						
PDO	**Prodromos**	**0.68**	**59**	P	**Pg**	**06 41 06.0**	**-0.7**
PDO				S	**Sg**	**06 41 16.2**	**+0.5**
PDO				AML	AML	06 41 20.2	
	comp=N,8725µm,0.3s						
PDO				AML	AML	06 41 25.5	
	comp=E,7767µm,0.5s						
RLS	**Riolos of Patr**	**0.83**	**103**	P	**Pg**	**06 41 09.6**	**0.0**
RLS				S	**Sb**	**06 41 21.8**	**+0.6**
	comp=E,2µm,0.4s						
RLS	**Riolos of Patr**	**0.83**	**103**	P	**Pg**	**06 41 09.6**	**0.0**
RLS				S	**Sg**	**06 41 21.1**	**+0.6**
RLS				AML	AML	06 41 25.9	
	comp=E,2754µm,0.4s						
RLS				AML	AML	06 41 29.1	
	comp=N,5072µm,0.4s						
PVO	**Paravola**	**0.93**	**66**	P	**Pb**	**06 41 10.5**	**-1.2**
PVO				S	**Sg**	**06 41 24.3**	**+0.7**
	comp=N,3µm,0.4s						
PVO	**Paravola**	**0.93**	**66**	P	**Pb**	**06 41 11.1**	**-0.6**
PVO				AML	AML	06 41 32.5	
	comp=E,5556µm,0.5s						
PVO				AML	AML	06 41 32.6	
	comp=N,8122µm,0.4s						
DRO	**Drossia**	**1.05**	**106**	P	**Pb**	**06 41 12.6**	**-1.1**
DRO				S	**Sn**	**06 41 30.6**	**+1.8**
	comp=N,4µm,0.4s						
DRO	**Drossia**	**1.05**	**106**	P	**Pb**	**06 41 13.0**	**-0.7**
UPR	**University Cam**	**1.06**	**88**	P	**Pg**	**06 41 15.2**	**+1.2**
EFP	**Efpalio**	**1.17**	**81**	P	**Pn**	**06 41 13.5**	**-2.3**
EFP				S	**Sg**	**06 41 34.1**	**+2.9**
	comp=N,2µm,0.4s						
LAKA	**Lakka**	**1.21**	**90**	P	**Pn**	**06 41 16.2**	**-0.3**
LAKA				S	**Sg**	**06 41 34.4**	**+1.8**
	comp=N,2µm,0.4s						
ANX	**Ano Chora**	**1.21**	**73**	P	**Pn**	**06 41 16.3**	**-0.2**
ANX				S	**Sg**	**06 41 34.6**	**+1.9**
	comp=N,5µm,0.6s						
ANX	**Ano Chora**	**1.21**	**73**	P	**Pn**	**06 41 16.4**	**-0.2**
AMT	**Artemida-Makis**	**1.23**	**125**	P	**Pn**	**06 41 16.2**	**-0.6**
EVR	**Evrytania**	**1.26**	**58**	P	**Pn**	**06 41 16.9**	**-0.3**
IGT	**Igoumenitsa**	**1.28**	**356**	P	**Pg**	**06 41 17.7**	**-0.5**
IGT				S	**Sg**	**06 41 35.6**	**+0.7**
	comp=N,948nm,0.5s						
IGT	**Igoumenitsa**	**1.28**	**356**	*e*Pg	**Pg**	**06 41 21.0**	**+2.8**
IGT				*e*Sg	**Sg**	**06 41 38.1**	**+3.2**
SERG	**Sergoula**	**1.28**	**82**	P	**Pn**	**06 41 17.3**	**-0.1**
SERG				S	**Sg**	**06 41 36.3**	**+1.4**
	comp=N,2µm,0.4s						
SERG	**Sergoula**	**1.28**	**82**	P	**Pn**	**06 41 17.3**	**-0.1**
TRIZ	**Trizonia**	**1.29**	**84**	P	**Pn**	**06 41 17.1**	**-0.4**
TRIZ	**Trizonia**	**1.29**	**84**	P	**Pn**	**06 41 17.3**	**-0.2**
ALIK	**Aliki, Aigiali**	**1.32**	**89**	P	**Pn**	**06 41 18.0**	**+0.1**
ALIK				S	**Sg**	**06 41 38.0**	**+2.0**
KALE	**Kalithea**	**1.35**	**83**	P	**Pn**	**06 41 18.0**	**-0.3**
KALE				S	**Sg**	**06 41 38.9**	**+2.0**
	comp=N,1µm,0.4s						
KLV	**Kalavryta, Ach**	**1.37**	**98**	P	**Pn**	**06 41 18.4**	**-0.2**
KLV				S	**Sg**	**06 41 39.3**	**+1.8**
	comp=N,765nm,0.5s						
JAN	**Janina**	**1.44**	**13**	P	**Pg**	**06 41 21.2**	**0.0**
JAN				S	**Sg**	**06 41 40.1**	**+0.1**
	comp=N,978nm,0.5s						
ITM	**Ithomi**	**1.59**	**132**	P	**Pb**	**06 41 22.7**	**-0.3**
AGG	**Agios Georgios**	**1.67**	**62**	P	**Pb**	**06 41 23.9**	**-0.4**
THL	**Klokotos Trika**	**1.80**	**43**	P	**Pb**	**06 41 26.7**	**+0.2**
KPRO	**Kipourio**	**1.85**	**23**	P	**Pb**	**06 41 27.6**	**+0.2**
KPRO				S	**Sb**	**06 41 50.2**	**-0.3**
	comp=N,692nm,0.8s						
LKR	**Lokris**	**2.05**	**78**	P	**Pb**	**06 41 30.2**	**-0.6**
DID	**Didima**	**2.34**	**108**	P	**Pb**	**06 41 34.4**	**-1.3**
FNA	**Florina**	**2.63**	**16**	*e*Pn	**Pb**	**06 41 38.5**	**-2.3**
OHR	**Ohrid**	**2.87**	**5**	*e*Pn	**Pb**	**06 41 44.9**	**+0.1**
TIR	**Tirane**	**3.12**	**352**	*e*Pn	**Pn**	**06 41 44.6**	**+1.9**
VAY	**Valandovo**	**3.48**	**28**	*e*Pn	**Pn**	**06 41 50.9**	**+3.3**
VAY	**Valandovo**	**3.48**	**28**	*e*Pn	**Pb**	**06 41 55.4**	**+0.3**
STIP	**Stip**	**3.69**	**21**	*e*Pn	**Pb**	**06 41 57.1**	**-1.7**
PDG	**Podgorica**	**4.27**	**348**	*e*Pn	**Pn**	**06 41 58.6**	**+0.1**
PDG				*e*Sn	**Sn**	**06 42 48.1**	**-0.2**
TREB	**Trebinje**	**4.74**	**341**	*e*Pn	**Pn**	**06 42 04.0**	**-0.9**
TREB				*e*Sn	**Sn**	**06 42 57.1**	**-2.7**
VTS	**Vitosha**	**4.86**	**25**	*e*Pn	**Pn**	**06 42 08.9**	**+2.2**
SELS	**Selova**	**4.99**	**6**	*e*Pn	**Pn**	**06 42 10.2**	**+1.8**
SJES	**Sjenica**	**5.02**	**356**	*e*Pn	**Pn**	**06 42 10.0**	**+1.1**
STON	**Ston**	**5.07**	**337**	*e*Sn	**Sn**	**06 43 05.5**	**-2.3**
IVAS	**Ivanjica**	**5.33**	**358**	*e*Pn	**Pn**	**06 42 13.2**	**+0.2**
IVAS				*e*Sn	**Sn**	**06 43 13.4**	**-1.0**
GRUS	**Gruza**	**5.64**	**2**	*e*Pn	**Pn**	**06 42 18.6**	**+1.4**
GRUS				*e*Sn	**Sn**	**06 43 21.9**	**0.0**
DIVS	**Divibare**	**5.85**	**357**	*e*Pn	**Pn**	**06 42 21.4**	**+1.1**
DIVS				*e*Sn	**Sn**	**06 43 25.7**	**-1.7**
TRUS	**Trudelj**	**5.97**	**360**	*e*Sn	**Sn**	**06 43 28.5**	**-1.6**
GERES	**GERESS Array B**	**11.66**	**337**	Pn	**Pn**	**06 43 39.1**	**-0.8**

comp=N,0.1nm,0.3s,baz=161,slow=12,SNR=1.9
FINES FINESS Array B 23.48 7 P P **06 46 03.3 +0.3**
comp=N,3.4nm,1.0s,baz=178,slow=9.7,SNR=2.5
TORD Torodi Ar. Bea 30.05 219 P P **06 47 03.4 +0.7**
comp=N,0.3nm,0.7s,baz=32,slow=18,SNR=2.1
MKAR Makanchi Array 45.32 58 P P **06 49 11.2 -0.3**
comp=N,0.4nm,0.5s,baz=278,slow=7.3,SNR=9.0
ZALV Zalesovo Beam 45.69 48 P P **06 49 13.5 -0.7**
comp=N,0.7nm,0.5s,baz=297,slow=6.6,SNR=1.8

IDC 04 06:50:42.7±2.4, 5.99S×130.23E, h0km, mb3.4/1, mb1 4.1/4, mb1mx3.7/28, mbtmp3.9/4, ML4.2/3, Error ellipse: s-maj=93.9km s-min=30.0km az=77.0
DJA 04 06:50:57.0±1.0, 6˚S±5˚×13˚0E±˚, h146km±17km, M4.3/6, mB5.2/1, mb4.3/2, MLv4.3/6, Mw(mB)4.6/1
ISC 04 06:50:57.1±1.0, 6.15S±0.05×130.38E±0.09, h124km, n23, σ2§58/19, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BNDI Bandanaira 1.69 344 P Pn **06 51 28.5 +1.5**
SAUI Saumlaki 2.04 153 P Pn **06 51 31.9 +0.6**
SAUI S Sn **06 51 59.9 +2.5**
MSAI Masohi 3.14 333 P Pn **06 51 46.2 +0.8**
FAKI Fak Fak 3.71 30 P Pn **06 51 54.0 +1.1**
FAKI S Sn **06 52 35.6 -0.6**
KMPI Kaimana, Papua 4.13 53 P Pn **06 51 58.8 +0.3**
KMPI S Sn **06 52 47.4 +1.2**
RKPI Ransiki, Papua 5.97 40 P Pn **06 52 23.7 +0.5**
FITZ Fitzroy Crossi 12.74 201 Pn Pn 06 53 47.4 -6.5
0.9nm,0.3s,baz=23,slow=9.6,SNR=36
FITZ Sn Sn 06 55 56.1 -18
WRA Warramunga Arr 14.24 165 Pn Pn 06 54 06.3 -7.0
1.4nm,0.3s,baz=346,slow=13,SNR=20
ASAR Alice Springs 17.74 169 P P **06 54 54.4 -1.2**
0.9nm,0.3s,baz=344,slow=10,SNR=40
ASAR S S 06 58 00.7 -13
0.1nm,0.3s,baz=356,slow=26,SNR=2.0
OGWZ Otaki Gorge 52.78 138 P P **07 00 02.1 +2.6**
MRZ Mangatainoka R 52.98 137 P P **06 59 56.7 -4.3**
POWZ Post Office Ro 52.98 137 P P **06 59 56.8 -4.3**
HOWZ Holdsworth Sta 53.05 138 P P **06 59 59.6 -2.0**
PRWZ Pori Road 53.20 137 P P 06 59 55.7 -6.9
DVHZ Dannevirke 53.21 137 P P **06 59 59.3 -3.5**
TIWZ Tintock 53.24 137 P P 06 59 55.8 -7.2
HAZ Te Kaha 53.25 133 P P 07 00 09.6 +6.5
RUGZ Raukumara Rang 53.26 134 P P 07 00 11.4 +8.1
TMWZ Te Maipa 53.40 138 P P **07 00 00.7 -3.5**
BFZ Birch Farm 53.44 137 P P 06 59 57.5 -6.9
MXZ Matakaoa Point 53.55 133 P P **07 00 07.3 +2.0**
WMGZ Waiomatatini S 53.73 133 P P **07 00 10.5 +3.9**
MKAR Makanchi Array 67.73 326 P P **07 01 40.8 -0.5**
0.2nm,0.4s,baz=124,slow=7.3,SNR=2.3

NEIC 04 06:55:44.5±1.6, 18.1S±0.1×175.30W±0.09, h196km±6km, mb5.0/56, Error ellipse: s-maj=15.5km s-min=12.2km az=149.0
IDC 04 06:55:46.0±1.4, 18.11S×175.34W, h208km±15km, mb4.0/12, mb1 4.2/14, mb1mx3.9/36, mbtmp4.6/14, MS3.0/1, Ms1 3.0/1, ms1mx2.6/26, Error ellipse: s-maj=21.0km s-min=10.0km az=127.0
ISC 04 06:55:44.9±0.4, 18.14S±0.07×175.21W±0.06, h200km, n118, σ1§62/117, mb4.9/40, 1D, Tonga Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NIUE Niue 5.09 101 P Pn **06 57 04.3 +3.8**
baz=5.0,SNR=35
NIUE Niue 5.09 101 Pn Pn **06 57 04.2 +3.8**
AFI Afiamalu 5.34 39 P Pn **06 57 05.1 +1.3**
20nm,0.3s,baz=174,slow=1.1,SNR=27
AFI S Sn **06 58 05.7 -0.4**
62nm,0.3s,baz=171,slow=19,SNR=9.5
AFI Afiamalu 5.34 39 Pn Pn **06 57 05.3 +1.5**
AFI Sn **06 58 02.4 -3.7**
MSVF Nonsavu 6.43 273 Pn **06 57 19.6 +1.8**
RAO Raoul Island 11.34 192 LR LR 07 01 23.3
comp=Z,87nm,20.8s,baz=108,slow=30
DZM Mont Dzumac 17.67 254 eP Pn **06 59 39.8 +0.6**
181nm,1.1s
DZM Mont Dzumac 17.67 254 P Pn **06 59 37.8 -1.4**
1.6nm,0.3s,baz=84,slow=18,SNR=12
NOUC Port Laguerre 17.80 254 P P **06 59 39.0 +0.4**
NOUC IAmb IAmb 06 59 45.6
comp=Z,40nm,0.8s
OUZ Omahuta 19.71 208 P P **06 59 59.1 0.0**
URZ Urewera 21.14 197 P P **07 00 14.7 +0.5**
comp=Z,19nm,0.7s,baz=241,slow=4.9,SNR=21
URZ Urewera 21.14 197 P P **07 00 14.9 +0.6**
URZ IAmb IAmb 07 00 17.0
comp=Z,24nm,0.8s
HIZ Hauiti 22.07 201 P P **07 00 25.3 +1.6**
HIZ IAmb IAmb 07 00 27.6
comp=Z,42nm,1.0s
BKZ Black Stump Fm 22.16 197 P P **07 00 25.4 +0.8**
PPT2 Papeete2 24.40 93 eS S **07 04 45.2 -5.0**
comp=Z,182nm,26.5s
TBI Tubuai 24.61 107 eS S **07 04 46.0 -7.4**
comp=Z,136nm,28.2s
PLWZ Palliser 24.74 197 P P **07 00 49.1 +1.2**
QRZ Quartz Range 24.95 202 P P **07 00 51.0 +1.2**
QRZ IAmb IAmb 07 00 56.7
comp=Z,44nm,1.0s
NNZ Nelson 25.00 201 P P **07 00 50.9 +0.7**
BSWZ Blackbirch Sta 25.29 199 P P **07 00 55.6 +2.8**
THZ Tophouse 25.65 201 P P **07 00 57.3 +1.1**
KHZ Kahutara 26.03 199 P P **07 00 60.0 +0.5**
KHZ IAmb IAmb 07 01 15.4
comp=Z,19nm,0.9s
LTZ Lake Taylor 26.77 201 P P **07 01 04.6 -1.6**
LTZ IAmb IAmb 07 01 09.2
comp=Z,14nm,0.8s
OXZ Oxford 27.33 201 P P **07 01 10.9 -0.2**
OXZ IAmb IAmb 07 01 17.5
comp=Z,31nm,0.8s
MQZ McQueen's Vall 27.47 199 P P **07 01 13.4 +1.1**
MQZ IAmb IAmb 07 01 13.8
comp=Z,35nm,1.1s
RPZ Rata Peaks 28.01 202 P P **07 01 16.8 -0.4**
comp=Z,3.8nm,0.4s,baz=334,slow=5.5,SNR=3.3
RPZ Rata Peaks 28.01 202 P P **07 01 16.8 -0.4**
FOZ Fox Glacier 28.30 203 P P **07 01 19.5 -0.2**
WKZ Wanaka 29.70 203 P P **07 01 32.5 +0.3**
WKZ IAmb IAmb 07 01 38.8
comp=Z,39nm,1.2s
MLZ Mavora Lakes 30.50 203 P P **07 01 39.8 +0.6**
MLZ IAmb IAmb 07 01 58.4
comp=Z,35nm,1.4s
WHZ Wether Hill Ro 31.01 203 P P **07 01 43.9 +0.3**
EIDS Eidsvold 32.06 251 P P **07 01 53.9 +0.8**
baz=32,SNR=4.4
EIDS Eidsvold 32.06 251 P P **07 01 52.2 -0.9**
EIDS IAmb IAmb 07 01 53.6
comp=Z,31nm,1.2s
ARMA Armidale 32.49 242 P P **07 01 57.4 +0.5**
baz=33,SNR=11
ARMA Armidale 32.49 242 P P **07 01 57.1 +0.2**
ARMA IAmb IAmb 07 01 58.5
comp=Z,14nm,0.8s
RMQ Roma 34.27 249 P P **07 02 13.0 +0.8**
baz=34,SNR=4.2
CMSA Cobar Meteorol 37.71 242 P P **07 02 41.1 -0.2**
baz=38,SNR=13
QLP Quilpie 38.31 250 P P **07 02 45.7 -0.7**
baz=38,SNR=27
MTSU Mount Surprise 38.41 263 P P **07 02 46.5 -0.8**
baz=39,SNR=7.2
TOO Toolangi 39.42 232 P P **07 02 55.5 0.0**
COEN Coen 40.15 270 P P **07 03 01.6 -0.2**
baz=40,SNR=5.7
COEN Coen 40.15 270 P P **07 03 01.7 0.0**
STKA Stephens Creek 41.20 242 P P **07 03 10.3 +0.2**
baz=41,SNR=8.5
STKA Stephens Creek 41.20 242 P P **07 03 09.8 -0.4**
comp=Z,19nm,1.0s,baz=79,slow=9.1,SNR=11
STKA Stephens Creek 41.20 242 P P **07 03 09.8 -0.4**
KKH Kailua Kona 42.02 28 PcP **07 05 07.9 -0.1**
HTT Hallett 43.67 240 P P **07 03 29.8 -0.2**
baz=44,SNR=6.9
BBOO Buckleboo 45.97 242 P P **07 03 47.6 -0.6**
baz=46,SNR=16
BBOO Buckleboo 45.97 242 P P **07 03 47.8 -0.4**
BBOO IAmb IAmb 07 03 48.5
comp=Z,58nm,0.9s
WR0 Warramunga Arr 47.40 259 P P **07 03 58.5 -0.9**
WB0 Warramunga Arr 47.55 260 IAmb IAmb 07 04 00.8
comp=Z,31nm,0.7s
WB2 Warramunga Arr 47.57 259 IAmb IAmb 07 04 01.0
comp=Z,28nm,0.6s
WRAB Tennant Creek 47.58 259 P P **07 04 00.2 -0.6**
WRAB IAmb IAmb 07 04 00.5
comp=Z,22nm,0.8s
WRA Warramunga Arr 47.59 259 P P **07 03 59.7 -1.2**
comp=Z,17nm,0.5s,baz=97,slow=6.7,SNR=79
WRA Warramunga Arr 47.59 259 P P **07 03 59.4 -1.5**
AS31 Alice Springs 47.66 254 IAmb IAmb 07 04 02.0
comp=Z,47nm,0.8s
ASAR Alice Springs 47.66 254 P P **07 04 00.8 -0.7**
comp=Z,183nm,0.7s,baz=90,slow=8.2,SNR=1316
ASAR S S 07 10 35.7 -6.4
comp=Z,1.3nm,0.8s,baz=91,slow=15,SNR=7.3
ASAR Alice Springs 47.66 254 P P **07 04 00.1 -1.3**
KDU Kakadu 50.60 268 P P **07 04 23.0 -0.8**
baz=51,SNR=14
MTN Manton Dam 51.84 268 P P **07 04 31.5 -1.4**
baz=52,SNR=5.9
FORT Forrest 52.66 245 P P **07 04 38.1 -0.8**
baz=53,SNR=9.4
WRKA Warakurna 52.67 252 P P **07 04 38.3 -0.8**
baz=53,SNR=49
KNRA Kununurra 53.49 264 P P **07 04 44.4 -0.7**
baz=54,SNR=9.8
FITZ Fitzroy Crossi 55.99 260 P P **07 05 02.4 -0.6**
baz=56,SNR=8.4
FITZ Fitzroy Crossi 55.99 260 IAmb IAmb 07 05 04.5
comp=Z,19nm,1.1s
PSAD2 Pilbara Seismi 60.68 255 P P **07 05 34.6 -0.9**
PSAD2 IAmb IAmb 07 05 35.2
comp=Z,20nm,0.8s
PSAC2 Pilbara Seismi 60.75 255 P P **07 05 34.1 -1.8**
PSAC2 IAmb IAmb 07 05 35.8
comp=Z,32nm,0.8s
PSAB3 Pilbara Seismi 60.78 255 P P **07 05 34.9 -1.3**
PSAB3 IAmb IAmb 07 05 36.0
comp=Z,34nm,0.8s
PSAB2 Pilbara Seismi 60.79 255 P P **07 05 35.3 -0.9**
PSAB2 IAmb IAmb 07 05 36.0
comp=Z,30nm,0.8s
PSAA3 Pilbara Seismi 60.79 255 P P **07 05 35.2 -1.0**
PSA00 Pilbara Seismi 60.80 255 P P **07 05 35.2 -1.1**
PSA00 IAmb IAmb 07 05 36.1
comp=Z,34nm,0.9s
PSAA2 Pilbara Seismi 60.80 255 P P **07 05 35.1 -1.1**
PSAA2 IAmb IAmb 07 05 36.1
comp=Z,33nm,0.9s
PSAA1 Pilbara Seismi 60.80 255 P P **07 05 35.2 -1.1**
PSAA1 IAmb IAmb 07 05 36.1
comp=Z,30nm,0.8s
PSAC3 Pilbara Seismi 60.81 255 P P **07 05 35.4 -0.9**
PSAB1 Pilbara Seismi 60.82 255 P P **07 05 35.7 -0.7**
PSAB1 IAmb IAmb 07 05 36.2
comp=Z,31nm,0.8s
PSAD1 Pilbara Seismi 60.83 255 P P **07 05 35.6 -0.9**
PSAD1 IAmb IAmb 07 05 36.3
comp=Z,25nm,0.8s
PSAC1 Pilbara Seismi 60.84 255 P P **07 05 35.2 -1.3**
PSAC1 IAmb IAmb 07 05 36.8
comp=Z,40nm,1.0s
PSAD3 Pilbara Seismi 60.85 255 P P **07 05 35.7 -0.9**
MEEK Meekatharra 61.20 249 P P **07 05 37.6 -1.3**
baz=61,SNR=4.5
KLBR Kellerberrin 61.45 243 P P **07 05 39.6 -0.9**
baz=62,SNR=5.5
BLDU Ballidu 62.43 244 P P **07 05 45.9 -1.1**
baz=63,SNR=5.9
MORW Morawa 63.18 246 P P **07 05 51.5 -0.4**
GIRL Giralia 65.74 253 P P **07 06 09.3 +0.6**
baz=66,SNR=4.0
GIRL Giralia 65.74 253 P P **07 06 08.4 -0.2**
MJAR Matsushiro Arr 69.95 321 P P **07 06 34.1 -0.5**
comp=Z,6.1nm,0.7s,baz=160,slow=6.1,SNR=10
QSPA South Pole Qui 71.92 180 P P **07 06 47.0 +0.8**
UGM Wanagama 72.68 267 P P **07 06 50.8 -0.7**
TPUB Ta-pu 74.97 301 P P **07 07 04.6 +0.1**
KSRS Korea Array 76.93 317 P P **07 07 16.4 +1.2**
comp=Z,6.0nm,1.0s,baz=137,slow=6.3,SNR=9.3
KSAR Wonju Array Be 76.94 317 P P **07 07 15.8 +0.5**
NVAR Mina Array Bea 77.51 42 P P **07 07 19.1 +0.3**
comp=Z,0.9nm,0.7s,baz=223,slow=7.8,SNR=4.3
NJ2 Nanjing 80.46 308 eP P **07 07 36.9 +2.3**
SUA Susitna One 81.71 12 P P **07 07 42.0 +1.3**
EYAK Cordova Ski Ar 81.94 14 P P **07 07 45.3 +3.5**
WHN Wuhan 83.22 305 P P **07 07 51.6 +2.6**
TXAR Lajitas Array 83.56 56 P P **07 07 51.9 +0.9**
comp=Z,0.4nm,0.8s,baz=204,slow=8.0,SNR=3.9
TRF Thorofare Moun 83.62 11 P P **07 07 50.2 -0.4**
ILAR Eielson Array 85.46 12 P P **07 07 59.4 -0.2**
comp=Z,0.7nm,0.6s,baz=221,slow=5.2,SNR=12
ILAR Eielson Array 85.46 12 P P **07 07 59.2 -0.3**
RPSI Rantau Prapat 86.91 274 P P **07 08 07.7 -0.1**
RPSI IAmb IAmb 07 08 08.5
comp=Z,25nm,0.9s
PSI Prapat 86.94 274 P P **07 08 07.8 -0.3**
comp=Z,19nm,0.8s,baz=129,slow=1.1,SNR=14
XAN Xi'an 88.84 306 P P **07 08 17.9 +1.4**
XAN pP PcP 07 08 30.5 +13
HHC Hu-ho-hao-te 89.63 313 eP P **07 08 22.3 +2.2**
VNA3 Neumayer Olymp 90.29 175 P P **07 08 21.7 -0.9**
VNA2 Neumayer--Watz 90.77 176 P P **07 08 25.1 +0.3**
baz=208,slow=2.0
CD2 Chengdu 91.77 302 P P **07 08 31.4 +1.2**
CMAR Chiang Mai Arr 91.84 289 P P **07 08 32.1 +1.4**
comp=Z,1.6nm,0.3s,baz=110,slow=4.6,SNR=9.4
LZH Lanzhou 93.46 307 ⇓P P **07 08 39.0 +0.9**
LZH pP sP 07 09 45.1 -2.4
LZH sP pwP 07 10 14.3 +45
LZH PP PP **07 12 30.2 +4.7**
SONM Songino Array 95.73 318 P P **07 08 46.3 -1.9**
comp=Z,0.7nm,1.0s,baz=110,slow=6.5,SNR=3.5
ARCES ARCESS Array B 127.05 351 PKP PKPdf **07 14 24.0 -0.5**
comp=Z,0.7nm,0.4s,baz=12,slow=1.1,SNR=7.1
FINES FINESS Array B 134.20 346 PKP PKiKP **07 14 38.8 -0.8**
comp=Z,0.3nm,0.4s,baz=108,slow=12,SNR=5.1
BURAR Bucovina Array 146.18 335 PKPbc **07 15 01.9 +0.2**
CLL Collm 146.27 351 ePKPbc PKPab **07 15 02.0 -0.8**
BR131 Keskin Array S 147.07 317 PKPbc **07 15 04.2 -0.4**
BRTR Keskin Array B 147.07 317 PKPbc PKPbc **07 15 04.5 -0.1**
comp=Z,4.1nm,1.0s,baz=142,slow=3.8,SNR=9.1
BRTR Keskin Array B 147.07 317 PKPbc **07 15 04.0 -0.5**
GERES GERESS Array B 148.53 349 PKPbc PKPbc **07 15 07.6 -0.4**
comp=Z,1.2nm,0.8s,baz=98,slow=4.7,SNR=4.8
GERES GERESS Array B 148.53 349 PKPbc **07 15 07.3 -0.8**

GCG 04 06:59:54.2±0.6, 13.18N×89.25W, h0km±10km, MD4.1
SNET 04 06:59:55.9±1.1, 13.14N×89.24W, h55km±8km, ML4.3
UCR 04 06:59:56.1±1.2, 13.15N×89.24W, h55km±9km, ML4.3, mb4.1(NEIC)
NEIC 04 06:59:57.0±3.0, 13.21N±0.08×89.19W±0.07, h69km±3km, mb4.1/18, Md4.3(SNET), Error ellipse: s-maj=14.4km s-min=7.2km az=217.0
IDC 04 06:59:57.5±2.0, 13.26N×89.16W, h85km±18km, mb3.5/10, mb1 3.8/14, mb1mx3.6/38, mbtmp3.9/14, Error ellipse: s-maj=30.2km s-min=13.4km az=41.0
INET 04 06:59:57.2, 13.14N×89.17W, h28km, ML3.8
ISC 04 06:59:55.7±0.9, 13.19N±0.06×89.19W±0.04, h63km±6km, n101, σ1§54/128, mb4.0/16, 3D, El Salvador

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SNET Serv Nac Est T 0.50 355 eP Pn **07 00 08.3 +0.3**
SNET eS Sn **07 00 17.8 +0.8**
SNET IAML 07 00 18.7
comp=Z,16μm,0.2s
SNET Serv Nac Est T 0.50 355 Pn **07 00 08.1 +0.1**
SNET Serv Nac Est T 0.50 355 eP Pn **07 00 08.3 +0.3**
SNET eS Sn **07 00 17.8 +0.8**
SNET IAML 07 00 18.7
comp=Z,16μm,0.2s
AEIL Aeropuerto Ilo 0.51 8 eP Pn **07 00 08.8 +0.7**
AEIL eS Sn **07 00 18.5 +1.4**
AEIL Aeropuerto Ilo 0.51 8 eP Pn **07 00 08.8 +0.7**
AEIL eS Sn **07 00 18.5 +1.4**
OPAM Oficina de Pla 0.52 359 eP Pn **07 00 08.8 +0.5**
OPAM eS Sn **07 00 18.6 +1.3**
OPAM Oficina de Pla 0.52 359 eP Pn **07 00 08.8 +0.5**
OPAM eS Sn **07 00 18.6 +1.3**
COEG Centro de Oper 0.52 35 eP Pn **07 00 08.6 +0.3**
COEG eS Sn **07 00 18.3 +0.9**
COEG IAML 07 00 19.0
comp=Z,15μm,0.5s
COEG Centro de Oper 0.52 35 eP Pn **07 00 08.6 +0.3**
COEG eS Sn **07 00 18.3 +0.9**
COEG IAML 07 00 19.0
comp=Z,15μm,0.5s
UDBS Universidad Do 0.52 3 eS Sn **07 00 18.6 +1.3**
UDBS IAML 07 00 22.6
comp=Z,14μm,0.2s
UDBS Universidad Do 0.52 3 eS Sn **07 00 18.6 +1.3**
UDBS IAML 07 00 22.6
comp=Z,14μm,0.2s
UEES Universidad Ev 0.53 354 IAML 07 00 19.6
comp=Z,19μm,0.2s
UEES Universidad Ev 0.53 354 IAML 07 00 19.6
comp=Z,19μm,0.2s
UESS Universidad de 0.53 359 IAML 07 00 21.6
comp=Z,16μm,0.1s
UESS Universidad de 0.53 359 IAML 07 00 21.6
comp=Z,16μm,0.1s
BOQS Boqueron 0.55 351 ⇓iP Pn **07 00 09.2 +0.5**
LFU La Fuente 0.56 7 ⇓iP Pn **07 00 09.6 +0.9**
LFU La Fuente 0.56 7 ⇓iP Pn **07 00 09.6 +0.9**
LBRS Las Brisas 0.56 14 iP Pn **07 00 09.5 +0.8**
PAVA Las Pavas 0.57 25 eP Pn **07 00 09.7 +0.8**
PAVA eS Sn **07 00 20.2 +1.7**
PAVA IAML 07 00 21.8
comp=Z,16μm,0.4s
PAVA Las Pavas 0.57 25 eP Pn **07 00 09.7 +0.8**
PAVA eS Sn **07 00 20.2 +1.7**
PAVA IAML 07 00 21.8
comp=Z,16μm,0.4s
UESV Universidad de 0.59 41 eP Pn **07 00 09.6 +0.6**
UESV eS Sn **07 00 19.8 +1.2**
UESV IAML 07 00 25.3
comp=Z,6μm,0.5s
UESV Universidad de 0.59 41 eP Pn **07 00 09.6 +0.6**
UESV eS Sn **07 00 19.8 +1.2**
UESV IAML 07 00 25.3
comp=Z,6μm,0.5s
ALJI Alcalda de J 0.62 77 eP Pn **07 00 09.9 +0.7**
ALJI eS Sn **07 00 21.0 +2.0**
ALJI Alcalda de J 0.62 77 eP Pn **07 00 09.9 +0.7**
ALJI eS Sn **07 00 21.0 +2.0**
COEB Comit de Eme 0.71 64 eP Pn **07 00 11.0 +0.7**
COEB eS Sn **07 00 22.7 +1.6**
COEB IAML 07 00 24.0
comp=Z,9μm,0.4s
COEB Comit de Eme 0.71 64 eP Pn **07 00 11.0 +0.7**
COEB eS Sn **07 00 22.7 +1.6**
COEB IAML 07 00 24.0
comp=Z,9μm,0.4s
TECA Tecapa 0.73 65 eP Pn **07 00 11.3 +0.6**
TECA Tecapa 0.73 65 eP Pn **07 00 11.3 +0.6**
CEVE Cerro Verde 0.76 326 eP Pn **07 00 11.5 +0.3**
CEVE eS Sn **07 00 23.5 +1.0**
CEVE Cerro Verde 0.76 326 eP Pn **07 00 11.5 +0.3**
CEVE eS Sn **07 00 23.5 +1.0**
SBLS San Blas 0.77 327 eP Pn **07 00 11.5 +0.2**
SBLS San Blas 0.77 327 eP Pn **07 00 11.5 +0.2**
SNJE San Jose 0.79 329 eP Pn **07 00 11.8 +0.3**
SNJE San Jose 0.79 329 eP Pn **07 00 11.8 +0.3**
UNIC Universidad Ca 0.86 336 eP Pn **07 00 13.0 +0.7**
UNIC Universidad Ca 0.86 336 eP Pn **07 00 13.0 +0.7**
PACA Pacayal 0.89 72 eP Pn **07 00 14.1 +1.5**
PACA eS Sn **07 00 27.6 +2.6**
PACA Pacayal 0.89 72 eP Pn **07 00 14.1 +1.5**
PACA eS Sn **07 00 27.6 +2.6**
LCY Lacayo 0.90 75 eP Pn **07 00 14.0 +1.3**
LCY Lacayo 0.90 75 eP Pn **07 00 14.0 +1.3**
JUCU Jucuar¡n 0.92 86 eP Pn **07 00 13.3 +0.4**
JUCU eS Sn **07 00 26.7 +1.1**
JUCU Jucuar¡n 0.92 86 eP Pn **07 00 13.3 +0.4**
JUCU eS Sn **07 00 26.7 +1.1**
LLGN La Laguna 1.00 14 eP Pn **07 00 15.0 +1.0**
LLGN eS Sn **07 00 30.5 +3.1**
LLGN La Laguna 1.00 14 eP Pn **07 00 15.0 +1.0**
LLGN eS Sn **07 00 30.5 +3.1**
FAGO Alcalda de S 1.17 64 eP Pn **07 00 16.9 +0.8**
FAGO eS Sn **07 00 33.3 +2.1**
FAGO Alcalda de S 1.17 64 eP Pn **07 00 16.9 +0.8**
FAGO eS Sn **07 00 33.3 +2.1**
MTO3 Montecristo 1.21 352 eP Pn **07 00 17.9 +1.0**
MTO3 eS Sn **07 00 34.4 +1.7**
MTO3 Montecristo 1.21 352 eP Pn **07 00 17.9 +1.0**
MTO3 eS Sn **07 00 34.4 +1.7**
CNCH Conchagua 1.32 86 eP Pn **07 00 19.2 +1.0**
CNCH eS Sn **07 00 38.1 +3.0**
CNCH Conchagua 1.32 86 eP Pn **07 00 19.2 +1.0**
CNCH eS Sn **07 00 38.1 +3.0**
IXG Ixpaco 1.56 309 eP Pn **07 00 22.6 +1.1**
NBG Las Nubes 1.79 321 eP Pn **07 00 26.8 +2.1**
PCG Pacaya 1.83 311 eP Pn **07 00 27.2 +2.1**
MRL Marmol 1.94 346 eP Pn **07 00 29.1 +2.4**
FUG Fuego 3 2.04 308 eP Pn **07 00 29.5 +1.5**
FUG eS Sn **07 00 57.4 +5.0**
TGUH Tegucigalpa,Un 2.05 65 Pn **07 00 29.4 +1.3**
ERG Entre ros, C 2.63 299 eP Pn **07 00 37.9 +2.1**
ESTN Estel 2.75 91 Pn **07 00 38.5 +1.0**
STG3 Santiaguito 3, 2.76 303 eP Pn **07 00 39.7 +1.8**
ACON Acoyapa 4.10 107 Pn **07 00 57.9 +2.0**
CCIG Comitan 4.20 317 Pn **07 01 00.1 +2.7**
JTS Las Juntas de 5.05 124 P Pn **07 01 11.3 +2.3**
comp=Z,2.7nm,0.3s,baz=13,slow=18,SNR=14
JTS S Sn **07 02 05.8 -0.2**
baz=28,slow=22,SNR=0.9
JTS Las Juntas de 5.05 124 Pn **07 01 11.7 +2.7**
HDC Heredia 5.89 122 Pn **07 01 24.6 +4.0**
CMIG Matias Romero 6.73 306 P Pn **07 01 33.1 +1.1**
comp=Z,1.3nm,0.3s,baz=148,slow=13,SNR=28
CMIG S Sn **07 02 47.6 +0.4**
comp=Z,2.7nm,0.3s,baz=110,slow=16,SNR=2.9
TEIG Tepich 7.05 7 P Pn **07 01 38.1 +1.7**
comp=Z,6.9nm,0.3s,baz=138,slow=1.3,SNR=55
TEIG Tepich 7.05 7 Pn **07 01 38.9 +2.6**
FLOC Florencia 17.68 130 P P **07 03 59.0 +1.1**
SDV Santo Domingo 18.70 101 P P **07 04 09.2 -0.2**
comp=Z,0.5nm,0.3s,baz=242,slow=3.4,SNR=14
SDV Santo Domingo 18.70 101 P P **07 04 09.3 -0.2**
SDV IAmb IAmb 07 04 28.1
comp=Z,5.2nm,0.7s
TXAR Lajitas Array 20.94 322 P Pn 07 04 35.0 -1.7
comp=Z,1.7nm,0.5s,baz=143,slow=9.5,SNR=45
TXAR Lajitas Array 20.94 322 P Pn 07 04 35.8 -0.9
TX31 Lajitas Ar. Si 20.95 322 P Pn 07 04 35.6 -1.2
TX32 Lajitas Array 20.95 322 P Pn 07 04 35.9 -0.9
MIAR Mount Ida 21.63 350 P P **07 04 43.6 +2.8**
MIAR IAmb IAmb 07 05 02.4
comp=Z,12nm,1.3s
LCAR Lake Charles 22.85 356 P P **07 04 55.2 +1.4**
LCAR IAmb IAmb 07 04 57.0
comp=Z,4.2nm,0.7s
TKL Tuckaleechee C 22.90 11 P P **07 04 56.1 +1.8**
comp=Z,1.1nm,0.4s,baz=190,slow=12,SNR=1.8
FNO Franklin 23.19 343 P P **07 04 59.0 +1.8**
S22A 4UR Ranch, Cre 29.08 330 P P **07 05 50.6 0.0**
ECSD EROS Data Cent 31.10 350 P P **07 06 08.3 +0.2**
ECSD IAmb IAmb 07 06 16.3
comp=Z,3.8nm,1.3s
PDAR Pinedale Array 34.34 333 P P **07 06 35.5 -1.1**
comp=Z,0.4nm,0.7s,baz=124,slow=12,SNR=5.2
PDAR PcP PcP **07 09 09.5 -2.1**
comp=Z,0.4nm,0.6s,baz=126,slow=2.6,SNR=4.0
EYMN Ely 34.70 357 P P **07 06 38.2 -1.3**
EYMN IAmb IAmb 07 06 39.2
comp=Z,2.5nm,0.8s
REDW Red Top Meadow 35.39 332 P P **07 06 45.9 +0.2**
MOOW Moose Ponds 35.64 333 P P **07 06 47.7 -0.2**
LPAZ La Paz 35.93 144 P P **07 06 50.6 -0.4**
comp=Z,0.9nm,0.7s,baz=50,slow=6.3,SNR=3.5
NVAR Mina Array Bea 36.04 319 P P **07 06 49.8 -1.5**
comp=Z,0.2nm,0.4s,baz=134,slow=7.7,SNR=0.5
NVAR PcP PcP **07 09 17.2 +0.6**
comp=Z,0.7nm,0.7s,baz=124,slow=3.9,SNR=5.8
ULM Lac du Bonnet 37.36 353 P P **07 07 00.3 -1.9**
comp=Z,1.3nm,0.5s,baz=182,slow=7.6,SNR=5.2
EGMT Eagleton 38.72 338 P P **07 07 15.1 +1.4**
SCHQ Schefferville 45.08 18 P P **07 08 03.8 -1.7**
comp=Z,1.6nm,0.8s,baz=226,slow=11,SNR=4.3

SCHQ	**Schefferville**	**45.08**	**18**	IAmb	IAmb	07 08 03.9	
	comp=Z,6.5nm,1.2s						
YKA	**Yellowknife Ar**	**52.47**	**345**	P	**P**	**07 09 00.8**	**-1.1**
	comp=Z,2.6nm,0.8s,baz=146,slow=7.4,SNR=48						
RES	**Resolute Bay**	**61.57**	**358**	P	**P**	**07 10 05.0**	**-1.0**
INK	**Inuvik**	**62.00**	**343**	P	**P**	**07 10 08.6**	**-0.4**
INK				IAmb	IAmb	07 10 09.4	
	comp=Z,1.6nm,0.8s						
ILAR	**Eielson Array**	**64.67**	**336**	P	**P**	**07 10 25.5**	**-1.2**
	comp=Z,0.5nm,0.9s,baz=170,slow=4.4,SNR=8.2						
TOLK	**Toolik Lake Re**	**67.22**	**340**	P	**P**	**07 10 42.7**	**-0.4**
TOLK				IAmb	IAmb	07 10 59.8	
	comp=Z,4.4nm,1.5s						
ESDC	**Sonseca Array**	**78.07**	**52**	P	**P**	**07 11 46.5**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=284,slow=12,SNR=4.1						
ARCES	**ARCESS Array B**	**86.04**	**19**	P	**P**	**07 12 29.1**	**-0.1**
	comp=Z,5.5nm,1.0s,baz=323,slow=15,SNR=2.6						
KSH	**Kashi**	**125.77**	**14**	PKP	**PKPdf**	**07 18 49.3**	**-1.6**
KSH				sPKP		07 19 23.4	
KSH				PP	**PP**	**07 20 45.6**	**+3.2**
ASAR	**Alice Springs**	**137.96**	**249**	PKP	**PKPdf**	**07 19 12.6**	**-1.6**
	comp=Z,0.3nm,0.8s,baz=108,slow=3.0,SNR=2.3						
CMAR	**Chiang Mai Arr**	**147.55**	**346**	PKPbc	**PKPdf**	**07 19 31.1**	**0.0**
	comp=Z,0.8nm,0.3s,baz=351,slow=3.2,SNR=5.6						

*ASRS **04** 07:08:41.8±0.5, 50°N±2°×7°9E±°, h9km±3km, MLh3.5/6, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*NNC **04** 07:08:41.4±0.7, 50°.07N×78°.77E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=7.5km s-min=3.5km az=67.0, Suspected Mining explosion.*
ISC 04 07:08:41.9±0.7**, 50°.05N**±0°.04×**78°.72E**±0°.04**, h0km, n23, σ1.92**/42**, 6C-9D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.58**	**348**	⇑P	**Pg**	**07 08 52.7**	**-0.4**
	27nm,0.3s						
KURBB				⇓S	**Sg**	**07 09 01.5**	**+0.9**
	342nm,0.6s						
KURK	**Kurchatov**	**0.67**	**354**	P	**Pg**	**07 08 54.2**	**-0.5**
KURK				S	**Sg**	**07 09 01.3**	**-2.0**
KURK	**Kurchatov**	**0.67**	**354**	⇑P	**Pg**	**07 08 54.2**	**-0.5**
	10nm,0.3s						
KURK				⇓S	**Sg**	**07 09 02.8**	**-0.4**
	98nm,1.0s						
SEM	**Semipalatinsk**	**1.04**	**70**	P	**Pg**	**07 09 01.2**	**-0.7**
	9.4nm,0.2s						
SEM				S	**Sg**	**07 09 16.3**	**+0.9**
	59nm,0.2s						
BRZS	**Berezniki**	**3.90**	**271**	Pg	**Pb**	**07 09 52.5**	**+1.0**
	15nm,0.2s						
BRZS				Lg	Lg	07 10 44.1	
	17nm,0.6s						
MAKZ	**Makanchi**	**3.91**	**145**	P	**Pn**	**07 09 43.5**	**+0.4**
MAKZ	**Makanchi**	**3.91**	**145**	⇑Pn	**Pn**	**07 09 43.2**	**+0.1**
	0.9nm,0.7s						
MAKZ				⇑Pg	**Pb**	**07 09 50.4**	**-1.2**
	2.3nm,0.4s						
MAKZ				⇓Lg	Lg	07 10 45.8	
	6.4nm,0.6s						
MK31	**Makanchi Array**	**4.04**	**143**	⇓Pn	**Pn**	**07 09 45.2**	**+0.2**
	0.5nm,0.2s,baz=13,slow=3.6,SNR=137						
MK31				⇑Pg	**Pb**	**07 09 53.2**	**-0.6**
	2.1nm,0.4s,baz=321,slow=14,SNR=8.7						
MK31				⇓Lg	Lg	07 10 47.7	
	7.8nm,0.5s,baz=330,slow=28,SNR=11						
MKAR	**Makanchi Array**	**4.04**	**143**	P	**Pn**	**07 09 45.3**	**+0.4**
MKAR				S	**Sn**	**07 10 35.1**	**+2.2**
KAPS	**Kapalarasan**	**4.79**	**175**	Pg	**Pb**	**07 10 06.4**	**-0.4**
	3.0nm,0.4s						
KAPS				Lg	Lg	07 11 09.0	
	7.9nm,0.5s						
BSTK	**Bystrovka, Nov**	**5.12**	**27**	P	**Pn**	**07 10 04.1**	**+4.3**
BSTK				S	**Sn**	**07 10 58.0**	**-1.6**
DGZ	**Jazzator, Alta**	**5.64**	**90**	P	**Pn**	**07 10 08.4**	**+1.3**
DGZ				S	**Sn**	**07 11 14.3**	**+1.6**
CHBI	**Chibit, Altay**	**5.65**	**84**	P	**Pn**	**07 10 08.0**	**+0.8**
CHBI				S	**Sn**	**07 11 13.5**	**+0.7**
ELT	**Eltsovka**	**5.67**	**53**	P	**Pn**	**07 10 08.0**	**+0.6**
ELT				S	**Sn**	**07 11 13.1**	**-0.1**
ARTR	**Artybash**	**5.69**	**69**	P	**Pn**	**07 10 08.3**	**+0.8**
ARTR				S	**Sn**	**07 11 13.7**	**+0.2**
AKAR	**Aktash**	**5.72**	**84**	P	**Pn**	**07 10 09.8**	**+1.6**
AKAR				S	**Sn**	**07 11 15.4**	**+0.8**
ULGR	**Ulagan, Altay**	**5.94**	**81**	P	**Pn**	**07 10 12.9**	**+1.7**
ULGR				S	**Sn**	**07 11 22.0**	**+1.9**
BRVK	**Borovoye**	**6.06**	**303**	P	**Pn**	**07 10 12.4**	**-0.3**
BRVK				S	**Sn**	**07 11 21.0**	**-1.7**
BRVK	**Borovoye**	**6.06**	**303**	⇓Pn	**Pn**	**07 10 12.7**	**0.0**
	5.5nm,1.4s						
BRVK				⇓Sn	**Sn**	**07 11 25.2**	**+2.5**
	3.1nm,0.7s						
BRVK				⇑Lg	Lg	07 11 58.2	
	2.9nm,0.6s						
TASR	**Tashtagol**	**6.34**	**61**	P	**Pn**	**07 10 17.8**	**+1.2**
TASR				S	**Sn**	**07 11 29.0**	**-0.6**
VEH	**Verkhnyaya Baz**	**7.89**	**62**	S	**Sn**	**07 12 03.4**	**-4.5**
KK31	**Karatay Array**	**8.96**	**222**	Pn	**Pn**	**07 10 54.6**	**+2.1**
	0.3nm,0.4s,baz=31,slow=13,SNR=13						
KK31				⇓Sn	**Sn**	**07 12 37.3**	**+3.2**
	1.0nm,0.7s						
KK31				⇓Lg	Lg	07 13 28.2	
	1.0nm,0.5s						
KKAR	**Karatay Array**	**8.96**	**222**	P	**Pn**	**07 10 47.9**	**-4.6**
KKAR				S	**Sn**	**07 12 29.1**	**-4.9**

*IDC **04** 07:12:09.4±0.8, 59°.76S×27°.63W, h130km±7km, mb3.9/9, mb1 3.9/11, mb1mx3.7/26, mbtmp4.3/11, Error ellipse: s-maj=17.9km s-min=15.4km az=49.0*
*NEIC **04** 07:12:11.7±1.3, 59°.8S±0°.1×27°.6W±0°.3, h155km±6km, mb4.4/20, Error ellipse: s-maj=21.1km s-min=15.9km az=223.0*
ISC 04 07:12:05.7±0.5**, 59°.63S**±0°.08×**27°.41W**±0°.09**, h100km, n44, σ1.44**/49**, mb4.3**/14**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.59**	**152**	P	**P**	**07 15 19.4**	**+0.1**
VNA3	**Neumayer Olymp**	**13.71**	**155**	P	**Pn**	**07 15 17.1**	**+1.7**
VNA2	**Neumayer--Watz**	**13.99**	**152**	P	**P**	**07 15 23.9**	**+0.1**
	baz=317,slow=14						
SNAA	**Sanae**	**15.59**	**151**	P	**P**	**07 15 43.1**	**+1.5**
SNAA	**Sanae**	**15.59**	**151**	P	**P**	**07 15 41.8**	**+0.2**
	0.4nm,0.3s,baz=293,slow=12,SNR=19						
SNAA				S	**Sn**	**07 18 30.3**	**-1.2**
	0.1nm,0.3s,baz=356,slow=11,SNR=4.9						
SNAA	**Sanae**	**15.59**	**151**	P	**P**	**07 15 42.6**	**+1.0**
SNAA					**Sn**	**07 18 33.0**	**+1.6**
PMSA	**Palmer Station**	**17.65**	**237**	P	**Pn**	**07 16 05.0**	**+0.2**
	1.3nm,0.3s,baz=350,slow=20,SNR=7.2						
PMSA	**Palmer Station**	**17.65**	**237**	P	**Pn**	**07 16 04.1**	**-0.7**
PMSA				IAmb	IAmb	07 16 07.1	
	comp=Z,17nm,0.9s						
EFI	**East Falkland**	**18.89**	**281**	P	**Pn**	**07 16 19.4**	**-0.3**
EFI				IAmb	IAmb	07 16 24.1	
	comp=Z,44nm,1.2s						
USHA	**Ushuaia**	**22.44**	**264**	P	**P**	**07 16 56.2**	**+0.3**
	comp=Z,10nm,0.9s,baz=132,slow=7.9,SNR=6.4						
GO09	**Cerro Castillo**	**26.35**	**268**	P	**P**	**07 17 30.7**	**-1.3**
QSPA	**South Pole Qui**	**30.61**	**180**	P	**P**	**07 18 11.5**	**+1.5**
	comp=Z,1.6nm,0.9s,baz=233,slow=2.1,SNR=6.9						
QSPA	**South Pole Qui**	**30.61**	**180**	P	**P**	**07 18 10.7**	**+0.7**
PLCA	**Paso Flores**	**32.69**	**286**	P	**P**	**07 18 27.9**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=140,slow=12,SNR=4.3						
PLCA	**Paso Flores**	**32.69**	**286**	P	**P**	**07 18 27.7**	**-0.5**
PLCA				IAmb	IAmb	07 18 28.8	
	comp=Z,9.9nm,1.2s						
GO05	**Huala**	**37.88**	**290**	P	**P**	**07 19 12.4**	**-0.3**
PEL	**Peldehue**	**38.82**	**293**	P	**P**	**07 19 21.4**	**+0.7**
CFA	**Coronel Fontan**	**38.99**	**298**	P	**P**	**07 19 22.3**	**+0.3**
	comp=Z,3.3nm,0.7s,baz=162,slow=8.1,SNR=12						
CPUP	**Villa Florida**	**39.17**	**315**	P	**P**	**07 19 24.9**	**+1.3**
	comp=Z,5.6nm,0.9s,baz=155,slow=8.4,SNR=11						
CPUP	**Villa Florida**	**39.17**	**315**	P	**P**	**07 19 24.4**	**+0.9**
CPUP				IAmb	IAmb	07 19 26.1	
	comp=Z,6.6nm,0.9s						
GO02	**Mina Guanaco**	**45.13**	**301**	P	**P**	**07 20 13.3**	**+1.0**
GO02				IAmb	IAmb	07 20 25.4	
	comp=Z,16nm,1.2s						
GO01	**Chusmiza**	**49.82**	**305**	P	**P**	**07 20 50.8**	**+2.0**
GO01				IAmb	IAmb	07 20 51.1	
	comp=Z,11nm,1.4s						
MNMC	**Minye Minye**	**50.46**	**305**	P	**P**	**07 20 55.2**	**+1.8**
MNMC				IAmb	IAmb	07 21 00.0	
	comp=Z,6.1nm,1.0s						
LPAZ	**La Paz**	**52.41**	**308**	P	**P**	**07 21 09.7**	**+1.3**
DBIC	**Dimbokro**	**68.48**	**24**	P	**P**	**07 22 58.8**	**+1.9**
	comp=Z,0.8nm,0.4s,baz=162,slow=3.2,SNR=2.9						
DBIC	**Dimbokro**	**68.48**	**24**	P	**P**	**07 22 58.4**	**+1.5**
DBIC				IAmb	IAmb	07 22 59.4	
	comp=Z,7.4nm,1.5s						
TOA0	**Torodi Ar. Sit**	**76.24**	**29**	P	**P**	**07 23 44.9**	**+1.9**
TOA0				IAmb	IAmb	07 23 45.9	
	comp=Z,4.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**76.24**	**29**	P	**P**	**07 23 45.0**	**+2.1**
	comp=Z,4.0nm,0.6s,baz=199,slow=6.4,SNR=38						
TORD				pP	**sP**	**07 24 15.3**	**-3.4**
	comp=Z,0.4nm,0.3s,baz=198,slow=6.6,SNR=2.1						
TORD	**Torodi Ar. Bea**	**76.24**	**29**	P	**P**	**07 23 44.5**	**+1.5**
SDV	**Santo Domingo**	**76.48**	**316**	P	**P**	**07 23 44.1**	**-0.5**
SDV				IAmb	IAmb	07 23 45.2	
	comp=Z,4.6nm,0.8s						
MSEY	**Mahe Island**	**82.39**	**86**	P	**P**	**07 24 14.3**	**-2.3**
STKA	**Stephens Creek**	**88.38**	**171**	P	**P**	**07 24 44.2**	**-1.9**
	comp=Z,1.8nm,0.6s,baz=220,slow=5.3,SNR=3.2						
STKA	**Stephens Creek**	**88.38**	**171**	P	**P**	**07 24 44.4**	**-1.7**
ASAR	**Alice Springs**	**95.60**	**163**	P	**P**	**07 25 18.2**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=180,slow=3.7,SNR=5.5						
ASAR	**Alice Springs**	**95.60**	**163**	P	**P**	**07 25 18.7**	**-0.9**
CMAR	**Chiang Mai Arr**	**123.85**	**113**	PKP	**PKPdf**	**07 30 51.8**	**+0.1**
	comp=Z,1.1nm,0.3s,baz=223,slow=2.6,SNR=4.5						
YKA	**Yellowknife Ar**	**138.70**	**315**	PKP	**PKPdf**	**07 31 16.7**	**-1.5**
	comp=Z,0.6nm,0.8s,baz=131,slow=2.2,SNR=8.7						
ZALV	**Zalesovo Beam**	**143.93**	**68**	PKP	**PKPab**	**07 31 25.5**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=256,slow=6.0,SNR=4.6						
ZALV				pPKP	**sPKPdf**	**07 32 01.2**	**-3.7**
	comp=Z,1.3nm,0.5s,baz=244,slow=4.0,SNR=2.5						
ZALV	**Zalesovo Beam**	**143.93**	**68**		**PKPab**	**07 31 25.6**	**+0.2**
INK	**Inuvik**	**148.43**	**317**	PKPbc	**PKPbc**	**07 31 37.9**	**-0.8**
	comp=Z,1.9nm,0.6s,baz=78,slow=1.9,SNR=21						
SONM	**Songino Array**	**150.86**	**93**	PKPbc	**PKPbc**	**07 31 45.7**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=222,slow=2.8,SNR=16						
SONM				pPKPbc	**pPKPab**	**07 32 21.3**	**+2.2**
	comp=Z,0.4nm,0.6s,baz=215,slow=3.7,SNR=3.0						
SONM	**Songino Array**	**150.86**	**93**		**PKPbc**	**07 31 45.8**	**+0.3**
ILAR	**Eielson Array**	**152.29**	**307**	PKPbc	**PKPbc**	**07 31 47.0**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=158,slow=1.7,SNR=13						
ILAR	**Eielson Array**	**152.29**	**307**		**PKPbc**	**07 31 47.0**	**-1.1**

*ASRS **04** 07:13:47.6, 53°.70N×91°.06E, M1.7, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
NNC 04 07:13:53.0±4.3**, 53°.66N×90°.71E, h0km, mb3.5, mpv3.2, 7C-3D, Error ellipse: s-maj=32.6km s-min=24.8km az=55.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.51**	**277**	⇑Pg	Pb	07 14 56.6	+0.7
	1.0nm,0.8s						
ZAA0				⇑Lg	Lg	07 15 45.1	
	4.8nm,0.9s						
KURK	**Kurchatov**	**8.00**	**253**	⇑Pn	Pn	07 15 50.8	+0.5
	2.2nm,1.2s						
KURK				⇓Sn	Sn	07 17 22.1	+0.7
	4.1nm,1.1s						
KURK				⇑Lg	Lg	07 18 04.7	
	12nm,1.4s						
KURBB	**Kurchatov Arra**	**8.09**	**253**	⇓Pn	Pn	07 15 49.5	-2.1
	6.5nm,1.4s,baz=64,slow=15						
KURBB				⇑Sn	Sn	07 17 25.6	+1.9
	8.3nm,0.8s						
KURBB				⇑Lg	Lg	07 18 10.4	
	20nm,1.0s,baz=69,slow=28						
MK31	**Makanchi Array**	**8.74**	**221**	Pn	Pn	07 16 02.2	+1.6
	0.8nm,0.7s,baz=33,slow=11,SNR=17						
MK31				⇑Sn	Sn	07 17 42.1	+2.4
	3.3nm,1.1s						
MK31				⇓Lg	Lg	07 18 27.8	
	5.6nm,1.2s,baz=7.0,slow=38,SNR=3.7						

*IDC **04** 07:56:32.2±0.7, 7°.22S×128°.22E, h0km, mb4.2/12, mb1 4.3/17, mb1mx4.1/48, mbtmp4.2/17, ML4.1/4, MS3.3/4, Ms1 3.4/4, ms1mx3.0/32, Error ellipse: s-maj=25.1km s-min=14.6km az=66.0*
*NEIC **04** 07:56:33.5±1.5, 7°.17S±0°.06×128°.41E±0°.06, h10km±1km, mb4.4/25, Error ellipse: s-maj=10.5km s-min=9.5km az=105.0*
*DJA **04** 07:56:33.7±0.2, 7°S±2°×12°8E±°, h10km, M4.4/15, mb4.6/15, mB4.8/1, MLv4.2/8, Mw(mB)4.1/1*
ISC 04 07:56:36.8±0.4**, 7°.23S**±0°.04×**128°.35E**±0°.05**, h35km, n74, σ1.75**/82**, mb4.4**/20**, MS3.1**/3**, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.02**	**105**	Pn	**Pn**	**07 57 21.9**	**-0.3**
BNDI	**Bandanaira**	**3.10**	**30**	P	**Pn**	**07 57 23.4**	**+0.1**
AAI	**Ambon**	**3.52**	**357**	P	**Pn**	**07 57 25.1**	**-4.0**
MSAI	**Masohi**	**3.90**	**9**	P	Pn	07 57 30.3	-4.0
NLAI	**Namlea**	**4.15**	**342**	P	**Pn**	**07 57 37.4**	**-0.4**
SOEI	**Soe**	**4.76**	**238**	P	**Pn**	**07 57 46.0**	**-0.2**
SOEI	**Soe**	**4.76**	**238**		**Pn**	**07 57 48.3**	**+2.1**
SOEI				Sn	**Sn**	**07 58 44.1**	**+3.8**
FAKI	**Fak Fak**	**5.78**	**42**	P	**Pn**	**07 57 59.3**	**-0.8**
	0.2nm64nm,0.8s						
FAKI	**Fak Fak**	**5.78**	**42**		**Pn**	**07 58 00.3**	**+0.2**
FAKI				Sn	**Sn**	**07 59 05.1**	**-0.1**
MTN	**Manton Dam**	**6.22**	**154**	Pn	**Pn**	**07 58 09.3**	**+3.1**
MTN				Sn	**Sn**	**07 59 18.6**	**+2.5**
SIJI	**Sorong**	**6.95**	**25**	Pn	**Pn**	**07 58 15.5**	**-0.8**
	3.2nm,0.3s,baz=158,slow=2.2,SNR=3.5						
SIJI				Sn	**Sn**	**07 59 29.2**	**-5.0**
	0.6nm,0.3s,baz=266,slow=24,SNR=1.0						
SWI	**Sorong**	**6.95**	**25**	P	**Pn**	**07 58 15.5**	**-0.8**
	0.2nm57nm,0.8s						
RKPI	**Ransiki, Papua**	**8.12**	**46**	P	**Pn**	**07 58 32.7**	**+0.3**
	86nm,0.8s						
KNRA	**Kununurra**	**8.41**	**177**		**Pn**	**07 58 37.9**	**+1.6**
KNRA				Sn	**Sn**	**08 00 10.5**	**+0.5**
FITZ	**Fitzroy Crossi**	**11.12**	**193**	Pn	**Pn**	**07 59 12.6**	**-0.9**
	1.2nm,0.3s,baz=27,slow=12,SNR=14						
FITZ				Sn	**Sn**	**08 01 11.7**	**-5.1**
	1.6nm,0.3s,baz=261,slow=21,SNR=5.4						
FITZ				LR	LR	08 04 12.6	
	comp=Z,282nm,20.1s,baz=3.0,slow=42						
FITZ	**Fitzroy Crossi**	**11.12**	**193**		**Pn**	**07 59 13.0**	**-0.5**
FITZ				Sn	**Sn**	**08 01 15.0**	**-1.7**
WB0	**Warramunga Arr**	**13.78**	**155**		**Pn**	**07 59 49.0**	**-0.8**
WB0				Sn	**Sn**	**08 02 19.3**	**-2.4**
WRAB	**Tennant Creek**	**13.91**	**156**		**Pn**	**07 59 51.2**	**-0.4**
WRAB				Sn	**Sn**	**08 02 22.6**	**-2.2**
WRA	**Warramunga Arr**	**13.91**	**156**	Pn	**Pn**	**07 59 50.6**	**-1.1**
	0.9nm,0.3s,baz=322,slow=13,SNR=27						
WRA				Sn	**Sn**	**08 02 17.0**	**-7.9**
	0.6nm,0.3s,baz=328,slow=23,SNR=4.6						
WRA	**Warramunga Arr**	**13.91**	**156**		**Pn**	**07 59 51.4**	**-0.3**
WB2	**Warramunga Arr**	**13.92**	**156**		**Pn**	**07 59 51.0**	**-0.7**
WB2				Sn	**Sn**	**08 02 23.6**	**-1.5**
WR0	**Warramunga Arr**	**14.01**	**155**		**Pn**	**07 59 51.7**	**-1.3**
COEN	**Coen**	**16.03**	**116**	Pn	**Pn**	**08 00 19.2**	**-0.6**
COEN				IAmb	IAmb	08 00 32.5	
	comp=Z,19nm,0.8s						
PSA00	**Pilbara Seismi**	**16.46**	**209**		**P**	**08 00 26.2**	**-1.4**
PSA00				IAmb	IAmb	08 00 31.6	
	comp=Z,23nm,1.1s						
AS31	**Alice Springs**	**17.19**	**163**		**P**	**08 00 34.7**	**-1.1**
ASAR	**Alice Springs**	**17.20**	**163**	P	**Pn**	**08 00 33.7**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=334,slow=9.1,SNR=26						
ASAR				S	**Sn**	**08 03 41.0**	**-3.9**
	comp=Z,0.3nm,0.3s,baz=327,slow=20,SNR=4.6						
ASAR	**Alice Springs**	**17.20**	**163**	P	**P**	**08 00 35.1**	**-0.7**
KKM	**Kota Kinabalu**	**17.90**	**317**		**Pn**	**08 00 43.5**	**+0.2**
KKM				IAmb	IAmb	08 00 51.7	
	comp=Z,22nm,1.1s						
PMG	**Port Moresby**	**18.74**	**98**	P	**Pn**	**08 00 55.7**	**+2.3**
	comp=Z,0.7nm,0.3s,baz=284,slow=7.2,SNR=2.2						
PMG	**Port Moresby**	**18.74**	**98**	P	**P**	**08 00 52.9**	**+0.1**
PMG				IAmb	IAmb	08 01 05.6	
	comp=Z,26nm,1.1s						
SBUM	**Sibu**	**18.75**	**300**	P	**Pn**	**08 00 53.7**	**+0.1**
KSM	**Kuching**	**19.97**	**295**	P	**P**	**08 01 06.7**	**+0.4**
CTA	**Charters Tower**	**21.56**	**128**	P	**P**	**08 01 26.3**	**+2.8**
	comp=Z,9.5nm,1.2s,baz=295,slow=17,SNR=2.7						
MORW	**Morawa**	**24.63**	**207**	P	**P**	**08 01 55.0**	**+0.8**
BBOO	**Buckleboo**	**26.45**	**165**	P	**P**	**08 02 10.6**	**0.0**
STKA	**Stephens Creek**	**27.46**	**155**	P	**P**	**08 02 19.7**	**0.0**
	comp=Z,2.5nm,0.8s,baz=302,slow=15,SNR=2.2						
STKA	**Stephens Creek**	**27.46**	**155**	P	**P**	**08 02 19.6**	**-0.2**
KULM	**Kulim**	**30.31**	**293**	P	**P**	**08 02 45.3**	**0.0**
KULM				IAmb	IAmb	08 02 55.4	
	comp=Z,8.1nm,1.0s						
RPSI	**Rantau Prapat**	**30.98**	**288**	P	**P**	**08 02 50.7**	**-0.4**
RPSI	**Rantau Prapat**	**30.98**	**288**	P	**P**	**08 02 50.3**	**-0.9**
PSI	**Prapat**	**31.01**	**288**	P	**P**	**08 02 50.3**	**-1.3**
	comp=Z,9.2nm,0.9s,baz=223,slow=7.8,SNR=5.7						
CMAR	**Chiang Mai Arr**	**38.64**	**312**	LR	LR	08 24 18.6	
	comp=Z,30nm,18.2s,baz=180,slow=43						
KSRS	**Korea Array**	**44.45**	**360**	LR	LR	08 22 37.8	
	comp=Z,49nm,19.0s,baz=168,slow=35						
MJAR	**Matsushiro Arr**	**44.51**	**11**	P	**P**	**08 04 45.5**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=183,slow=8.0,SNR=2.8						
MJAR				LR	LR	08 23 40.0	
	comp=Z,24nm,19.3s,baz=270,slow=37						
GTA	**Gaotai**	**53.40**	**333**	⇓P	**P**	**08 05 54.3**	**+1.0**
GTA				pP	pP	08 06 00.2	-3.0
GTA				sP	pwP	08 06 03.5	-2.4
GTA				PcP	PP	08 08 27.7	+34
KLR	**Kul'dur**	**56.30**	**3**	P	**P**	**08 06 14.1**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=153,slow=6.6,SNR=2.5						
ULN	**Ulaanbaatar**	**57.99**	**343**	P	**P**	**08 06 26.3**	**+0.1**
ULN				IAmb	IAmb	08 06 40.1	
	comp=Z,2.7nm,0.8s						
SONM	**Songino Array**	**58.15**	**343**	P	**P**	**08 06 28.3**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=167,slow=8.0,SNR=8.0						
SONM	**Songino Array**	**58.15**	**343**	P	**P**	**08 06 27.7**	**+0.5**
KSH	**Kashi**	**67.09**	**318**	P	**P**	**08 07 28.4**	**+1.3**
KSH				pP	pP	08 07 34.1	-3.1
MK31	**Makanchi Array**	**67.53**	**328**	IAmb	IAmb	08 07 37.0	
	comp=Z,3.1nm,0.8s						
MKAR	**Makanchi Array**	**67.53**	**328**	P	**P**	**08 07 30.2**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=126,slow=8.4,SNR=21						
MKAR	**Makanchi Array**	**67.53**	**328**	P	**P**	**08 07 29.9**	**+0.3**
MAKZ	**Makanchi**	**67.70**	**327**	P	**P**	**08 07 31.1**	**+0.4**
MAKZ				IAmb	IAmb	08 07 38.0	
	comp=Z,2.9nm,0.8s						
AAK	**Ala-Archa**	**69.67**	**321**	P	**P**	**08 07 44.1**	**+0.9**
	comp=Z,3.8nm,0.9s,baz=181,slow=5.4,SNR=7.1						
AAK	**Ala-Archa**	**69.67**	**321**	P	**P**	**08 07 43.6**	**+0.4**
AAK				IAmb	IAmb	08 07 51.7	
	comp=Z,3.7nm,0.8s						
ZAA0	**Zalesovo Array**	**71.07**	**335**	P	**P**	**08 07 51.6**	**+0.3**
ZALV	**Zalesovo Beam**	**71.07**	**335**	P	**P**	**08 07 51.4**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=132,slow=3.9,SNR=12						
ZALV	**Zalesovo Beam**	**71.07**	**335**	P	**P**	**08 07 51.6**	**+0.3**
KURK	**Kurchatov**	**71.87**	**329**	P	**P**	**08 07 56.6**	**+0.5**
KK31	**Karatay Array**	**72.44**	**319**	P	**P**	**08 08 00.1**	**+0.3**
KK31				IAmb	IAmb	08 08 01.4	
	comp=Z,6.9nm,1.4s						
KKAR	**Karatay Array**	**72.44**	**319**	P	**P**	**08 07 59.8**	**0.0**
HRA	**Herat**	**74.81**	**308**	P	**P**	**08 08 14.2**	**+0.1**
BVAR	**Borovoye Array**	**77.39**	**328**	P	**P**	**08 08 29.3**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=139,slow=7.9,SNR=9.9						
BRVK	**Borovoye**	**77.46**	**328**	P	**P**	**08 08 29.0**	**+0.4**
BRVK				IAmb	IAmb	08 08 36.7	
	comp=Z,3.3nm,0.7s						
TIXI	**Tiksi**	**78.71**	**0**	P	**P**	**08 08 35.8**	**+0.7**
	comp=Z,1.6nm,0.3s,baz=84,slow=5.1,SNR=3.7						
GEYT	**Alibeck**	**79.11**	**311**	P	**P**	**08 08 37.9**	**-0.2**
ABKAR	**Akbulak array**	**81.67**	**322**	P	**P**	**08 08 52.1**	**+0.6**
QSPA	**South Pole Qui**	**82.75**	**180**	P	**P**	**08 08 58.0**	**+0.9**
QSPA				IAmb	IAmb	08 09 07.2	
	comp=Z,3.4nm,0.9s						
GAMB	**Gambell**	**83.75**	**23**	P	**P**	**08 09 02.4**	**+0.4**
GAMB				IAmb	IAmb	08 09 14.1	
	comp=Z,4.1nm,1.2s						
ILAR	**Eielson Array**	**94.25**	**25**	P	**P**	**08 09 51.4**	**-0.8**
	comp=Z,0.5nm,1.0s,baz=238,slow=4.7,SNR=3.1						
ILAR	**Eielson Array**	**94.25**	**25**	P	**P**	**08 09 52.9**	**+0.8**
TORD	**Torodi Ar. Bea**	**127.25**	**281**	PKP	**PKPdf**	**08 15 38.2**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=114,slow=1.2,SNR=3.5						
CPUP	**Villa Florida**	**146.19**	**171**	PKPbc	**PKiKP**	**08 16 15.8**	**-1.7**
	comp=Z,0.5nm,0.5s,baz=157,slow=2.7,SNR=1.9						

IDC 04 08:05:42.0±1.3**, 18°.85N×146°.61E, h0km, mb3.6**/7**, mb1 3.8**/7**, mb1mx3.5**/44**, mbtmp3.6**/7**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/33**, Error ellipse: s-maj=42.7km s-min=32.0km az=85.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**19.03**	**88**	T	T	08 31 17.8	
	baz=274,slow=74,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**19.04**	**88**	T	T	08 31 17.2	
	baz=274,slow=74,SNR=5.4						
H11S2	**WAKE ISLAND Hy**	**19.04**	**88**	T	T	08 31 17.6	
	baz=274,slow=74,SNR=4.7						
TGY	**Tagaytay City**	**25.06**	**263**	LR	LR	08 20 21.0	
	comp=Z,74nm,19.5s,baz=235,slow=35						
KLR	**Kul'dur**	**32.58**	**342**	P	P	08 12 17.0	+1.9
	0.5nm,0.5s,baz=187,slow=8.1,SNR=2.0						
ASAR	**Alice Springs**	**44.04**	**197**	P	P	08 13 52.1	+0.3
	0.6nm,1.1s,baz=17,slow=6.8,SNR=1.5						
KURBB	**Kurchatov Arra**	**61.78**	**318**	P	P	08 16 02.3	-0.2
	0.3nm,0.4s,baz=91,slow=7.5,SNR=7.2						
BVAR	**Borovoye Array**	**66.91**	**320**	P	P	08 16 36.1	0.0
	0.8nm,0.5s,baz=100,slow=7.1,SNR=6.9						
YKA	**Yellowknife Ar**	**77.45**	**28**	P	P	08 17 38.6	-0.4
	0.2nm,0.7s,baz=288,slow=5.7,SNR=2.6						
NVAR	**Mina Array Bea**	**82.36**	**52**	P	P	08 18 06.9	+0.4
	0.3nm,0.7s,baz=270,slow=5.2,SNR=3.7						
FINES	**FINESS Array B**	**87.10**	**336**	P	P	08 18 28.2	-1.4
	1.0nm,0.7s,baz=92,slow=5.7,SNR=4.9						

*UCR **04** 08:06:03.2±2.5, 6°.60N×82°.40W, h0km±177km, MD4.2*
*UPA **04** 08:06:06.0±1.3, 6°.65N×82°.35W, h19km±23km, MW4.0*
ISC 04 08:06:03.8±2.3**, 6°.7N**±0°.1×**82°.35W**±0°.05**, h10km, n32, σ1.29**/40**, 1D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMAL	**Guarumal, Vera**	**1.56**	**45**	*i* P	**Pb**	**08 06 32.0**	**-0.7**
GMAL				*e*S	**Sb**	**08 06 51.6**	**-0.9**
CACAO	**El Cacao, Vera**	**1.62**	**65**	⇓*i*P	**Pb**	**08 06 32.4**	**-1.5**
CACAO				*e*S	**Sn**	**08 06 52.5**	**-1.0**
CHIR3	**Chiriqui UPA,**	**1.72**	**1**	*e*S	**Sn**	**08 06 56.0**	**+0.1**
BCO2	**Palmira**	**2.05**	**355**	*e*P	**Pb**	**08 06 39.9**	**-1.4**
BCO2				*e*S	**Sn**	**08 07 05.2**	**+0.9**
PTJ1	**Puerto Jimnez**	**2.09**	**333**	*e*P	**Pn**	**08 06 38.2**	**-0.7**
BRU2	**Volcan**	**2.15**	**351**	*e*P	**Pn**	**08 06 40.7**	**+0.9**
BRU2				*e*S	**Sn**	**08 07 07.5**	**+0.8**
BRU2	**Volcan**	**2.15**	**351**	*e*P	**Pb**	**08 06 40.9**	**-2.0**
EDSV	**San Vito**	**2.23**	**344**	*e*P	**Pn**	**08 06 41.6**	**+0.6**
CHGR2	**Aguacate**	**2.27**	**5**	*e*P	**Pb**	**08 06 43.1**	**-1.8**
CHGR2				*e*S	**Sn**	**08 07 10.3**	**+0.8**
AZU	**Azuero**	**2.34**	**61**	*e*P	**Pn**	**08 06 43.2**	**+0.8**
AZU				*e*S	**Sn**	**08 07 11.3**	**+0.1**
AZU	**Azuero**	**2.34**	**61**	*e*P	**Pn**	**08 06 43.0**	**+0.7**
EDPN	**Palmar Norte**	**2.54**	**334**	*e*P	**Pn**	**08 06 45.0**	**0.0**
EDBA	**Buenos Aires**	**2.65**	**340**	*e*P	**Pn**	**08 06 47.8**	**+1.1**
PNME	**Penonome**	**2.70**	**48**	*e*P	**Pn**	**08 06 48.9**	**+1.6**
EDLM	**Las Mercedes**	**2.88**	**335**	*e*P	**Pn**	**08 06 50.7**	**+0.9**
EDDO	**Dominical**	**2.98**	**330**	*e*P	**Pn**	**08 06 51.0**	**-0.2**
ZANG	**Zanguenga, Cho**	**3.35**	**47**	*e*P	**Pn**	**08 06 58.4**	**+2.1**
LCR2	**La Lucha 2**	**3.47**	**332**	*e*P	**Pn**	**08 06 58.5**	**+0.4**
UPA	**Univ. de Panam**	**3.62**	**50**	*e*P	**Pn**	**08 07 01.6**	**+1.7**
UPA				*e*S	**Sn**	**08 07 43.4**	**+0.7**
CVTR	**Volcan Turrial**	**3.62**	**337**	*e*P	**Pn**	**08 07 01.7**	**+1.4**
HDC	**Heredia**	**3.75**	**332**	*e*P	**Pn**	**08 07 02.9**	**+1.0**
HDC				*e*S	**Sn**	**08 07 47.5**	**+1.2**
HDC	**Heredia**	**3.75**	**332**	*e*P	**Pn**	**08 07 02.9**	**+1.0**
SRA1	**San Ramn**	**4.00**	**328**	*e*P	**Pn**	**08 07 06.4**	**+1.0**
FORC	**Fortuna**	**4.42**	**329**	*i* P	**Pn**	**08 07 12.9**	**+1.9**
JTS	**Las Juntas de**	**4.43**	**325**	*e*P	**Pn**	**08 07 11.6**	**+0.4**
ARE1	**Arenal 1**	**4.44**	**328**	*e*P	**Pn**	**08 07 14.0**	**+2.7**
GUAI	**GUAI**	**4.76**	**319**	*i* P	**Pn**	**08 07 16.2**	**+0.6**
CUI	**Cuipilapa**	**4.85**	**325**	*e*P	**Pn**	**08 07 18.3**	**+1.3**
HORNC	**Hornillas**	**4.90**	**325**	*i* P	**Pn**	**08 07 19.1**	**+1.4**
NY14	**Universidad de**	**5.06**	**322**	*i* P	**Pn**	**08 07 22.0**	**+2.2**
BUEV	**Buena Vista**	**5.10**	**324**	*e*P	**Pn**	**08 07 21.9**	**+1.4**
GB1A	**Borinquen Arri**	**5.11**	**324**	*i* P	**Pn**	**08 07 22.2**	**+1.6**

*NCEDC **04** 08:13:41.4±1.3, 36°.708N±0°.008×121°.34W±0°.01,* *h4km±3km, Md2.0/64, Error ellipse: s-maj=1.3km s-min=1.0km az=48.0*

NEIC 04 08:13:41.9±0.9, 36.696N±0.009×121.375W±0.009, h6km±4km, Error ellipse: s-maj=1.3km s-min=1.0km az=182.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCGM	Cienega Road	0.03	63		Pg	08 13 42.2	-0.9
BVYM	Vineyard	0.06	330		Pg	08 13 43.0	-0.5
BSLM	Silva Ranch	0.08	15		Pg	08 13 43.9	+0.1
BLRM	Lewis Ranch	0.09	110		Pg	08 13 43.3	-0.5
SAO	San Andreas Ge	0.09	319	Pg	Pg	08 13 43.0	-0.6
SAO				Sg	Sg	08 13 45.0	-0.3
BHRM	Hodges Ranch	0.09	70		Pg	08 13 43.7	-0.2
FRP	Fremont Peak	0.11	302		Pg	08 13 43.9	-0.3
BSRM	Salinas Radio	0.12	256		Pg	08 13 44.3	-0.1
HJSM	John Smith Roa	0.14	27		Pg	08 13 44.6	-0.1
BJCM	Johnson Can.	0.15	185		Pg	08 13 44.6	-0.3
BEHM	Elkhorn Ranch	0.16	101		Pg	08 13 45.4	+0.2
HLTM	Lone Tree Road	0.20	16		Pg	08 13 45.9	+0.1
HBTM	San Juan Bauti	0.21	317		Pg	08 13 46.1	+0.1
BEMM	Emmet	0.23	99		Pg	08 13 46.4	0.0
BPCNC	Pine Canyon	0.24	239		Pg	08 13 46.8	+0.3
OCR	O'Connell Ranc	0.24	334		Pg	08 13 47.4	+0.7
HTUM	Tustin Road	0.25	301		Pg	08 13 46.7	-0.1
ANZ	Anzar Road	0.26	317		Pg	08 13 46.7	-0.2
BPIM	Pinnacles	0.27	141		Pg	08 13 46.5	-0.5
BAVM	Antelope Valle	0.28	100		Pg	08 13 47.5	+0.1
HFEM	San Felipe	0.29	356		Pg	08 13 47.9	+0.3
HERM	Elkhorn Road	0.29	291		Pg	08 13 47.7	+0.2
BBGB	Big Mountain B	0.29	113		Pg	08 13 48.1	+0.4
BSGM	Shirttail Gulc	0.30	161		Pg	08 13 47.1	-0.5
BBNM	San Benito	0.30	128		Pg	08 13 47.9	+0.1
BSMM	Soledad Missio	0.32	188		Pg	08 13 48.0	0.0
PACP	Pacheco Peak	0.32	13		Pg	08 13 48.3	+0.2
HCOM	Corn Cob Canyo	0.33	306		Pg	08 13 48.4	+0.1
HAST	Hastings Reser	0.34	205		Pg	08 13 48.4	-0.1
HAST					Sg	08 13 53.4	+0.5
CDC	Canada Road	0.34	345		Pg	08 13 49.0	+0.5
HPCM	Pacheco Lake	0.37	12		Pg	08 13 49.2	+0.1
LRV	Little Rabbit	0.40	133		Pg	08 13 49.4	-0.1
SLD	San Luis Dam	0.40	18		Pg	08 13 49.5	-0.1
HLPM	Lions Peak	0.40	329		Pg	08 13 50.0	+0.3
JELB	Ellicott, Sant	0.43	303		Pg	08 13 50.5	+0.3
HSPM	Sheep	0.43	345		Pg	08 13 50.7	+0.4
HMOM	Monterey	0.45	258		Pg	08 13 50.5	0.0
BRMM	Rolling Bench	0.46	72		Pg	08 13 51.6	+0.7
BMSM	Mercy Hot Spri	0.47	94		Pg	08 13 51.1	+0.2
JTGM	Trout Gulch Ro	0.52	310		Pg	08 13 52.6	+0.6
JLAB	Laurel Hill	0.54	328		Pg	08 13 52.9	+0.6
JHLM	Holstrom Ranch	0.55	318		Pg	08 13 52.9	+0.4
BAPM	Anderson Peak	0.56	203		Pg	08 13 52.6	-0.1
BPOM	Post Ranch	0.56	214		Pg	08 13 52.6	-0.1
JRGM	Rodeo Gulch Ro	0.58	306		Pg	08 13 52.8	-0.3
AMC	Almaden	0.60	321		Pg	08 13 53.6	+0.2
JSTM	Santa Teresa H	0.61	327		Pg	08 13 53.9	+0.2
JUMM	Mount Umunhum	0.62	318		Pg	08 13 54.1	+0.2
PCCM	Crazy Canyon	0.63	164		Pg	08 13 53.7	-0.2
ARN	Arnold Ranch	0.66	349		Pg	08 13 54.7	+0.1
PMPB	Monarch Peak	0.67	136		Pg	08 13 54.2	-0.5
MHC	Mount Hamilton	0.68	342		Pg	08 13 55.4	+0.5
PSAM	San Ardo	0.78	149		Pg	08 13 56.1	-0.6
PAPM	Alder Peak	0.78	179		Pg	08 13 56.6	-0.3
PHSB	Hesperia Broad	0.91	163		Pg	08 13 58.6	-0.7
PANM	San Antonio Re	0.99	157		Pg	08 14 00.4	-0.4
PKD	Bear Valley Ra	1.01	138		Pg	08 14 00.4	-0.8
PVCM	Vineyard Canyo	1.03	138		Pg	08 14 00.7	-0.9
PPO	Portuguese Can	1.03	143		Pg	08 14 01.1	-0.5
PSTM	Stockdale Moun	1.04	137		Pg	08 14 00.7	-1.0
RAMR	Ramage Ranch	1.13	159		Pg	08 14 02.3	-1.4
PAGB	Antelope Grade	1.32	136	Pn	Pn	08 14 05.4	-1.5
CMB	Columbia Colle	1.55	30	Pn	Pn	08 14 08.6	-1.5
CMB				Sn	Sn	08 14 28.3	-2.2

IDC 04 08:14:31.8±2.1, 7.36S×127.95E, h0km, mb3.5/1, mb1 3.7/4, mb1mx3.4/45, mbtmp3.6/4, ML3.5/3, Error ellipse: s-maj=103.2km s-min=28.4km az=72.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.91	192	Pn	Pn	08 17 10.7	+1.3
	0.2nm,0.3s,baz=59,slow=22,SNR=1.6						
FITZ				Sn	Sn	08 19 09.7	-2.5
	0.2nm,0.3s,baz=124,slow=12,SNR=2.7						
WRA	Warramunga Arr	13.96	154	Pn	Pn	08 17 49.3	-1.8
	0.3nm,0.3s,baz=323,slow=13,SNR=7.8						
WRA				Sn	Sn	08 20 20.9	-6.1
	0.2nm,0.3s,baz=277,slow=40,SNR=2.4						
ASAR	Alice Springs	17.20	161	P	Pn	08 18 33.9	+0.2
	0.1nm,0.3s,baz=342,slow=11,SNR=11						
MKAR	Makanchi Array	67.42	328	P	P	08 25 29.3	0.0
	0.3nm,0.6s,baz=126,slow=7.9,SNR=5.3						

THE 04 08:19:11.6, 38.23N×20.39E, h13km±1km, ML2.4/6, Error ellipse: s-maj=1.3km s-min=0.5km az=208.0

ATH 04 08:19:11.5, 38.24N×20.36E, h14km±2km, ML2.5/2, Error ellipse: s-maj=2.2km s-min=1.5km az=264.0

ISC 04 08:19:11.7±1.9, 38.24N±0.03×20.39E±0.06, h13km±7km, n16, σ0.29/30, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.04	49	P	Pg	08 19 14.1	0.0
KEF4				S	Sg	08 19 16.0	+0.2
KEF3	Kipouria, Keph	0.05	227	P	Pg	08 19 14.1	-0.1
KEF3				S	Sg	08 19 15.9	0.0
LXR1	Lixouri, Cepha	0.05	132	P	Pg	08 19 14.2	0.0
LXR1				S	Sg	08 19 16.2	+0.3
	17µm,0.2s						
CHV1	Chavriata, Kef	0.05	188	P	Pg	08 19 14.1	-0.1
CHV1				S	Sg	08 19 15.6	-0.3
	8µm,0.1s						
KEF1	Kardakata, Kep	0.08	56	P	Pg	08 19 14.5	0.0
KEF1				S	Sg	08 19 16.5	+0.2
ARG2	Argostoli	0.10	126	P	Pg	08 19 14.6	0.0
ARG2				S	Sg	08 19 16.6	-0.1
	8µm,0.1s						
KEF2	Argostoli. Kep	0.10	132	P	Pg	08 19 14.7	0.0
KEF2				S	Sg	08 19 16.9	0.0
VLS	Valsamata	0.17	110	P	Pg	08 19 15.5	-0.2
VLS				S	Sg	08 19 18.5	+0.1
	2µm,0.1s						
VLS	Valsamata	0.17	110	P	Pg	08 19 15.5	-0.2
VLS				S	Sg	08 19 18.4	+0.1
VLS				AML	AML	08 19 18.6	
	comp=N,4676µm,0.1s						
VLS				AML	AML	08 19 19.0	
	comp=E,4336µm,0.1s						
VSK1	VASILIKIADES	0.22	38	P	Pg	08 19 16.1	-0.5
VSK1				S	Sg	08 19 20.4	+0.5
FSK	Fiskardo	0.26	31	P	Pg	08 19 16.8	-0.4
FSK				S	Sg	08 19 21.2	+0.2
	comp=E,252nm,0.3s						
FSK	Fiskardo	0.26	31	P	Pg	08 19 16.9	-0.4
FSK				S	Sg	08 19 21.1	+0.2
KFL	Anninata	0.34	112	P	Pg	08 19 18.4	-0.2
VLMS	Volimes, Zakyn	0.42	149	P	Pg	08 19 19.8	-0.2
VLMS				S	Sg	08 19 26.4	+0.7
VLMS				AML	AML	08 19 28.5	
	comp=N,1406µm,0.2s						
VLMS				AML	AML	08 19 29.0	
	comp=E,1120µm,0.2s						
LKD2	Lefkada island	0.59	21	P	Pg	08 19 23.5	+0.2
LKD2				S	Sg	08 19 31.6	+0.4
	comp=E,70nm,0.5s						
PDO	Prodromos	0.72	59	P	Pg	08 19 25.5	-0.3

NEIC 04 08:20:46.9±1.5, 3.0S±0.1×139.50E±0.09, h10km±1km, mb4.2/7, Error ellipse: s-maj=19.9km s-min=14.1km az=26.0

DJA 04 08:20:48.3±0.9, 3°S±4°×14°0E±°, h67km±10km, M4.7/6, mb4.5/3, MLv4.7/6

IDC 04 08:20:55.7±2.6, 3.01S×139.36E, h80km±22km, mb3.6/10, mb1 3.8/13, mb1mx3.7/39, mbtmp4.0/13, MS3.2/8, Ms1 3.2/8, ms1mx3.0/26, Error ellipse: s-maj=20.8km s-min=11.5km az=89.0

ISC 04 08:20:50.5±0.6, 3.01S±0.05×139.68E±0.05, h46km, n47, σ1.97/48, mb4.0/11, MS3.4/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	Genyem	0.64	50	P	Pn	08 21 01.9	-1.3
GENI				S	Sn	08 21 11.6	-0.8
WAMI	Wamena	1.30	228	P	Pn	08 21 13.4	+1.1
WAMI				S	Sn	08 21 32.5	+4.0
SMPI	Sarmi	1.40	316	P	Pn	08 21 12.8	-0.8
SMPI				S	Sn	08 21 34.2	+3.3
SRPI	Serui, Papua	3.62	288	P	Pn	08 21 43.4	-0.7
SRPI				S	Sn	08 22 26.1	+0.5
BAKI	Biak	4.00	297	P	Pn	08 21 49.8	+0.5
RKPI	Ransiki, Papua	5.70	285	P	Pn	08 22 13.2	+0.6
	0.9nm60nm,0.8s						
FAKI	Fak Fak	7.42	270	P	Pn	08 22 37.0	+0.7
	0.2nm55nm,1.1s						
FAKI	Fak Fak	7.42	270	Pn	Pn	08 22 32.6	-3.7
FAKI				Sn	Sn	08 23 57.7	-1.6
SIJI	Sorong	8.68	284	P	Pn	08 22 54.6	+1.1
	3.6nm,0.3s,baz=165,slow=22,SNR=6.7						
SIJI				S	Sn	08 24 25.9	-4.2
	0.7nm,0.3s,baz=266,slow=22,SNR=2.5						
SIJI				LR	LR	08 27 03.1	
	comp=Z,112nm,19.4s,baz=28,slow=44						
PMG	Port Moresby	9.78	131	P	Pn	08 23 16.7	+8.1
	0.5nm,0.3s,baz=307,slow=12,SNR=5.0						
PMG				LR	LR	08 28 16.0	
	comp=Z,171nm,18.1s,baz=308,slow=44						
PMG	Port Moresby	9.78	131		Pn	08 23 10.1	+1.5
COEN	Coen	11.42	163	Pn	Pn	08 23 33.1	+2.1
KRVT	Keravat (AS076	12.39	96	LR	LR	08 28 21.2	
	comp=Z,96nm,21.4s,baz=229,slow=35						
MTN	Manton Dam	12.93	220	Pn	Pn	08 23 49.9	-1.8
DAV	Davao City (W)	17.27	305	LR	LR	08 31 19.6	
	comp=Z,28nm,20.5s,baz=150,slow=37						
GUMO	Guam	17.27	17	LR	LR	08 31 57.3	
	comp=Z,101nm,18.1s,baz=189,slow=38						
WRAB	Tennant Creek	17.61	197		Pn	08 24 51.0	-1.7
WRAB				IAmb	IAmb	08 24 59.9	
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	17.62	197	P	P	08 24 54.4	+1.0
	comp=Z,0.9nm,0.3s,baz=19,slow=12,SNR=9.8						
WRA				S	Sn	08 27 59.8	-8.6
	baz=16,slow=22,SNR=3.3						
FITZ	Fitzroy Crossi	20.36	222	P	P	08 25 24.0	+0.8
	comp=Z,9.8nm,0.9s,baz=95,slow=7.0,SNR=5.6						
FITZ	Fitzroy Crossi	20.36	222		P	08 25 22.3	-1.0
FITZ				IAmb	IAmb	08 25 28.6	
	comp=Z,11nm,0.9s						
AS31	Alice Springs	21.29	195	P	P	08 25 33.9	+0.6
ASAR	Alice Springs	21.29	195	P	P	08 25 35.6	+2.4
	comp=Z,5.0nm,0.7s,baz=26,slow=10,SNR=21						
ASAR				S	S	08 29 27.0	-0.5
	comp=Z,1.3nm,0.8s,baz=11,slow=26,SNR=2.5						
STKA	Stephens Creek	28.77	177	LR	LR	08 39 20.6	
	comp=Z,107nm,21.7s,baz=23,slow=38						
WHN	Wuhan	41.20	326	P	P	08 28 29.4	-1.5
KSRS	Korea Array	41.71	346	LR	LR	08 44 05.8	
	comp=Z,30nm,20.7s,baz=200,slow=33						
CMAR	Chiang Mai Arr	45.43	300	P	P	08 29 05.5	+0.3
	comp=Z,1.0nm,0.3s,baz=119,slow=6.9,SNR=5.4						
CHTO	Chiang Mai	45.57	300	P	P	08 29 06.1	-0.2
CHTO				IAmb	IAmb	08 29 09.6	
	comp=Z,1.9nm,0.7s						
USRK	Ussuriysk Ar.	47.50	352	P	P	08 29 21.9	+1.0
KLR	Kul'dur	52.48	353	P	P	08 30 00.4	+1.7
	comp=Z,1.2nm,0.6s,baz=192,slow=7.2,SNR=6.5						
SONM	Songino Array	58.40	334	P	P	08 30 42.9	+1.4
	comp=Z,0.2nm,0.5s,baz=152,slow=6.5,SNR=2.9						
SONM				LR	LR	08 58 48.1	
	comp=Z,29nm,18.1s,baz=306,slow=39						
SONM	Songino Array	58.40	334	P	P	08 30 42.1	+0.6
MKAR	Makanchi Array	70.61	322	P	P	08 32 02.5	+1.3
	comp=Z,0.7nm,0.6s,baz=100,slow=7.8,SNR=8.8						
MKAR	Makanchi Array	70.61	322	P	P	08 32 01.0	-0.2
MAKZ	Makanchi	70.81	322	P	P	08 32 02.5	+0.1
MAKZ				IAmb	IAmb	08 32 10.1	
	comp=Z,2.5nm,1.1s						
NIL	Nilore	72.28	307	P	P	08 32 12.2	+0.7
ZALV	Zalesovo Beam	72.68	330	P	P	08 32 13.5	+0.1
	comp=Z,0.4nm,0.4s,baz=113,slow=7.0,SNR=1.4						
ZALV	Zalesovo Beam	72.68	330	P	P	08 32 13.7	+0.3
KURBB	Kurchatov Arra	74.53	325	P	P	08 32 24.1	-0.2
	comp=Z,0.3nm,0.7s,baz=133,slow=5.3,SNR=2.6						
BVAR	Borovoye Array	80.11	325	P	P	08 32 55.0	-0.5
	comp=Z,0.5nm,0.5s,baz=76,slow=6.1,SNR=2.7						
ILAR	Eielson Array	85.70	24	P	P	08 33 24.8	+0.5
	comp=Z,0.9nm,0.7s,baz=254,slow=4.2,SNR=11						
TORD	Torodi Ar. Bea	137.27	286	PKhKP	PKPpre	08 40 05.9	
	comp=Z,0.4nm,0.8s,baz=133,slow=1.6,SNR=2.7						
KIC	Kosan Boka	144.39	277	ePKP1	PKPdf	08 40 23.1	+0.3
	comp=Z,12nm,0.8s						
DBIC	Dimbokro	144.49	277	PKP	PKPdf	08 40 22.5	-0.4
	comp=Z,5.6nm,0.7s,baz=82,slow=3.3,SNR=11						
DBIC	Dimbokro	144.49	277		PKPdf	08 40 22.8	-0.1
TIC	Toumodi	144.65	277	ePKP1	PKPdf	08 40 23.9	+0.6
LIC	Lamto	144.69	276	ePKP1	PKPdf	08 40 24.0	+0.7
	comp=Z,7.3nm,0.5s						
LPAZ	La Paz	146.49	126	PKPbc	PKiKP	08 40 31.0	-0.5
	comp=Z,1.2nm,0.8s,baz=85,slow=2.0,SNR=4.5						

NIC 04 08:21:21.7±0.0, 34.61N×31.98E, h42km±3km, Md3.6/4, Ml3.5/4

ISK 04 08:21:22.7, 34.78N×32.10E, h12km, ML2.9/12

GII 04 08:21:24.9±0.0, 34.42N×32.39E, h10km±2km, MD2.8/1

HLW 04 08:21:24.9, 34.23N×32.01E, h10km±25km, Md3.1, Ml3.5

ISC 04 08:21:20.7±1.3, 34.55N±0.03×31.95E±0.06, h30km±12km, n35, σ1.66/58, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NATA	Nata	0.56	66	P	Pb	08 21 32.6	+0.4
NATA				S	Sn	08 21 41.1	+0.1
NATA				AML	AML	08 21 41.8	
	25nm,0.4s						
NATA				AML	AML	08 21 41.8	
	25nm,0.4s						
NATA				AML	AML	08 21 42.9	
	22nm,0.3s						
NATA				AML	AML	08 21 42.9	
	22nm,0.3s						
AKMS	Akamas	0.56	34	P	Pb	08 21 32.8	+0.6
AKMS				S	Sb	08 21 40.9	+0.8
AKMS				AML	AML	08 21 41.3	
	23nm,0.3s						
AKMS				AML	AML	08 21 41.3	
	23nm,0.3s						
AKMS				AML	AML	08 21 41.8	
	13nm,0.2s						
AKMS				AML	AML	08 21 41.8	
	13nm,0.2s						
AKMS				AMd		08 22 40.0	
AKMS				AMd		08 22 40.0	
SZAC	Souni	0.80	75	P	Pb	08 21 36.1	0.0
SZAC				S	Sn	08 21 47.0	+0.1
SZAC				AML	AML	08 21 47.7	
	7.4nm,0.6s						
SZAC				AML	AML	08 21 47.7	
	7.4nm,0.6s						
SZAC				AML	AML	08 21 49.5	
	4.8nm,0.3s						
SZAC				AML	AML	08 21 49.5	
	4.8nm,0.3s						
SZAC				AMd		08 22 46.7	
SZAC				AMd		08 22 46.7	
ALFC	Alefka	0.81	41	P	Pb	08 21 36.1	-0.2
ALFC				S	Sb	08 21 46.5	-0.4
ALFC				AML	AML	08 21 48.8	
	3.7nm,0.2s						
ALFC				AML	AML	08 21 48.8	
	3.7nm,0.2s						
ALFC				AMd		08 23 08.1	
ALFC				AMd		08 23 08.1	
LEF	Lefka	0.96	54	PG	Pn	08 21 37.1	-1.1
LEF				SG	Sb	08 21 46.9	-4.3
ASGA	Asgata	1.10	77	P	Pn	08 21 40.2	+0.1
ASGA				AMd		08 22 42.4	
CSS	Mathiatis	1.21	70	PG	Pn	08 21 42.4	+0.7
CSS				SG	Sn	08 21 57.3	+0.2
CSS	Mathiatis	1.21	70	P	Pn	08 21 42.2	+0.5
CSS	Mathiatis	1.21	70	Pg	Pn	08 21 42.0	+0.3
AKIN	Akıncılar- Kıb	1.33	69	PN	Pb	08 21 45.4	+0.3
GAZI	Gazipasa	1.71	10	PN	Pn	08 21 49.3	+0.8
GAZI				SN	Sn	08 22 09.1	-0.3
TEKE	Tekeli-Mersin	1.85	31	PN	Pn	08 21 51.2	+0.7
TEKE				SN	Sn	08 22 12.4	-0.5
EREN	Erenkoy	2.07	61	PN	Pn	08 21 55.7	+2.2
AKKU	Akkuyu-Mersin	2.07	39	PN	Pn	08 21 54.6	+1.1
AKKU				SN	Sn	08 22 18.0	-0.3
BERE	Bereket-Mersin	2.07	30	PN	Pn	08 21 54.5	+0.8
BERE				SN	Sn	08 22 17.8	-0.8
IKL	Isikli	2.20	40	PN	Pn	08 21 56.4	+1.1
IKL				SN	Sn	08 22 20.9	-0.7
TEVE	Tevekalti-Mers	2.24	33	PN	Pn	08 21 56.9	+1.0
TEVE				SN	Sn	08 22 22.3	-0.4
KEBE	Keben-Mersin	2.38	37	PN	Pn	08 21 59.3	+1.5
KEBE				SN	Sn	08 22 25.4	-0.6
HDMB	Hadim	2.45	10	PN	Pn	08 22 00.1	+1.2
KIZK	Mersin	2.63	42	PN	Pn	08 22 02.7	+1.5
KIZK				SN	Sn	08 22 31.7	-0.4
KSDI	Kefar Szold	3.37	113	Pn	Pn	08 22 12.4	+1.0
KSDI				Sn	Sn	08 22 48.1	-2.3
NATI	Neve Ativ	3.40	111	Pn	Pn	08 22 12.7	+0.9
NATI				Sn	Sn	08 22 49.1	-2.0
MMLI	Mount Malkishu	3.59	125	Pn	Pn	08 22 15.0	+0.6
MMLI				Sn	Sn	08 22 56.5	+0.7
HMDT	Nahal Hemdat	3.77	126	Pn	Pn	08 22 17.6	+0.7
HMDT				Sn	Sn	08 22 59.1	-1.1
RSH		3.88	157	P	Pn	08 22 20.1	+1.7
	baz=155						
DSI	Dead Sea	4.14	135	Pn	Pn	08 22 26.1	+4.1
KZIT	Kziot	4.18	150	Pn	Pn	08 22 25.0	+2.5
KZIT				Sn	Sn	08 23 09.9	-0.5
KOT	Kottamia	4.61	181	P	Pn	08 22 27.3	-1.2
	baz=183						
KOT				AMP		08 23 00.0	
	baz=183						
KOT				S	Sn	08 23 19.0	-2.1
	baz=183						
PRNI	Paran	4.92	147	Pn	Pn	08 22 35.0	+2.3
HSAF	As Saff	4.93	184	P	Pn	08 22 34.7	+1.9
	baz=185						
GLL	Jalalah	4.96	182	P	Pn	08 22 35.7	+2.4
	baz=184						
MBRI	Mt Berech	5.37	151	Pn	Pn	08 22 42.2	+3.3
EIL	Elat	5.49	152	P	Pn	08 22 43.9	+3.3
	baz=150						
EIL				S	Sn	08 23 40.0	-2.7
	baz=150						
EIL	Elat	5.49	152	Pn	Pn	08 22 43.5	+2.9
EIL				Sn	Sn	08 23 42.7	0.0
NBNS	Bani Suef	5.94	186	P	Pn	08 22 47.1	+0.4
	baz=187						
NBNS				S	Sn	08 23 50.5	-3.1
	baz=187						

IDC 04 08:30:10.4±4.3, 4.77S×153.60E, h122km±30km, mb3.1/4, mb1 3.5/5, mb1mx3.2/30, mbtmp3.7/5, Error ellipse: s-maj=50.7km s-min=19.9km az=108.0

ISC 04 08:30:08.3±1.3, 4.8S±0.1×153.8E±0.1, h105km, n7, σ0.79/9, mb3.2/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.82	285	P	Pn	08 30 39.2	+0.4
	24nm,0.3s,baz=154,slow=0.9,SNR=8.6						
KRVT				S	Sn	08 31 02.0	0.0
	23nm,0.3s,baz=14,slow=20,SNR=12						
PMG	Port Moresby	8.01	235	P	Pn	08 32 02.9	+0.9
	6.3nm,0.3s,baz=1.0,slow=12,SNR=8.6						
PMG				S	Sn	08 33 30.9	-0.2
	0.9nm,0.3s,baz=220,slow=14,SNR=1.6						
WRA	Warramunga Arr	24.19	230	P	P	08 35 14.7	-0.5
	1.1nm,0.7s,baz=56,slow=10,SNR=4.7						
ASAR	Alice Springs	26.82	224	P	P	08 35 38.3	-0.7
	0.3nm,0.4s,baz=55,slow=8.9,SNR=12						
MKAR	Makanchi Array	80.97	319	P	P	08 42 11.1	-0.3
	0.2nm,0.5s,baz=95,slow=8.3,SNR=5.3						
ILAR	Eielson Array	81.79	22	P	P	08 42 16.0	+0.8
	0.3nm,1.1s,baz=226,slow=8.6,SNR=1.6						
TORD	Torodi Ar. Bea	151.24	289	PKPbc	PKPbc	08 49 49.5	-1.1
	0.4nm,0.6s,baz=82,slow=3.1,SNR=3.2						

NEIC 04 08:35:21.5±1.9, 50.62N±0.10×139.2W±0.2, h10km±2km, mb3.8/4, Mwr4.3(OTT), Error ellipse: s-maj=18.7km s-min=14.5km az=232.0

PGC 04 08:35:26.1±1.3, 50.96N×138.93W, h10km, MLSn3.6/4, Mw4.3/4, 549km Wsw of Sandspit, Bc West Of Vancouver Island

ISC 04 08:35:21.4±1.6, 50.67N±0.09×139.05W±0.08, h10km, n63, σ2.03/76, West of Vancouver Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIB	Van Inlet	4.78	55	Pn	Pn	08 36 33.7	+0.2
VIB				Sn	Sn	08 37 24.8	-4.3
VIB	Van Inlet	4.78	55	Pn	Pn	08 36 33.7	+0.2
VIB				Sn	Sn	08 37 24.8	-4.3
DIB	Dawson Inlet,	4.79	56	Pn	Pn	08 36 33.5	-0.1
DIB				Sn	Sn	08 37 25.3	-3.8
DIB	Dawson Inlet,	4.79	56	Pn	Pn	08 36 33.4	-0.1
DIB				Sn	Sn	08 37 26.2	-2.9
MOBC	Moresby Island	5.04	58	Pn	Pn	08 36 37.4	+0.5
MOBC				Sn	Sn	08 37 32.6	-2.6
MOBC	Moresby Island	5.04	58	Pn	Pn	08 36 37.4	+0.5
MOBC				Sn	Sn	08 37 32.6	-2.6
HG3B	Hotspring	5.11	65	Pn	Pn	08 36 39.5	+1.6
HG3B				Sn	Sn	08 37 34.5	-2.3
HG3B	Hotspring	5.11	65	Pn	Pn	08 36 39.5	+1.6
HG3B				Sn	Sn	08 37 34.5	-2.3
CRAG	Craig	5.99	34	Pn	Pn	08 36 51.3	+1.4
CRAG				Sn	Sn	08 37 59.6	+1.1
RUBB	Prince Rupert	6.50	52	Pn	Pn	08 36 59.6	+2.7
RUBB	Prince Rupert	6.50	52	Pn	Pn	08 36 59.6	+2.7
SIT	Sitka	6.77	18	Pn	Pn	08 37 01.9	+1.3
SIT				Sn	Sn	08 38 18.2	+0.5
WRAK	Wrangell Islan	7.01	32	Pn	Pn	08 37 06.4	+2.5
DHAK	Deception Hill	8.46	3	Pn	Pn	08 37 25.8	+1.9
DHAK				Sn	Sn	08 38 57.4	-1.8
PLBC	Pleasant Camp	8.94	9	Pn	Pn	08 37 33.4	+3.0
PLBC				Sn	Sn	08 39 08.3	-2.8
PLBC	Pleasant Camp	8.94	9	Pn	Pn	08 37 33.4	+3.0
PLBC				Sn	Sn	08 39 08.3	-2.8
PNL	Peninsula	9.02	359	Pn	Pn	08 37 33.4	+1.8
PNL	Peninsula	9.02	359	Pn	Pn	08 37 33.4	+1.8
PCA	Pinnacle	9.47	356	Pn	Pn	08 37 39.6	+1.8
PCA	Pinnacle	9.47	356	Pn	Pn	08 37 39.2	+1.4
MESA	MESA	9.67	351	Pn	Pn	08 37 41.2	+0.6
MESA	MESA	9.67	351	Pn	Pn	08 37 41.0	+0.4
MESA	MESA	9.67	351	Pn	Pn	08 37 41.2	+0.6
SUCK	Suckling Hills	9.80	346	Pn	Pn	08 37 43.5	+1.3
YUK7	Dusty Glacier	9.90	3	Pn	Pn	08 37 47.5	+3.8
YUK7	Dusty Glacier	9.90	3	Pn	Pn	08 37 47.5	+3.8
WAX	Waxell Ridge	10.04	349	Pn	Pn	08 37 45.9	+0.4
HMT	Hamilton	10.13	345	Pn	Pn	08 37 47.2	+0.5
GRNC	Granite Creek	10.20	352	Pn	Pn	08 37 49.0	+1.2
GRNC	Granite Creek	10.20	352	Pn	Pn	08 37 49.0	+1.2
HYT	Haines Junctio	10.22	4	Pn	Pn	08 37 51.7	+3.6
HYT	Haines Junctio	10.22	4	Pn	Pn	08 37 51.7	+3.6
RAGM	Ragged Mountai	10.24	344	Pn	Pn	08 37 48.7	+0.4
WHY	Whitehorse	10.28	12	Pn	Pn	08 37 52.8	+3.8
WHY				Sn	Sn	08 39 41.8	-2.4
WHY	Whitehorse	10.28	12	Pn	Pn	08 37 52.2	+3.3
WHY				Sn	Sn	08 39 43.4	-0.8
TGL	Tana Glacier	10.33	350	Pn	Pn	08 37 50.0	+0.4
CRQM	Cirque	10.37	349	Pn	Pn	08 37 50.0	-0.2
CTGM	Chitina Glacie	10.40	354	Pn	Pn	08 37 51.8	+1.3
BALM	Baldy	10.55	351	Pn	Pn	08 37 53.4	+0.7
EYAK	Cordova Ski Ar	10.60	342	Pn	Pn	08 37 53.2	+0.2
FID	Port Fidalgo	10.93	340	Pn	Pn	08 37 57.7	0.0
GLB	Gilahina Butte	11.12	348	Pn	Pn	08 38 01.1	+0.8
CNPM	China Poot	11.27	327	Pn	Pn	08 37 58.5	-3.9
BRLK	Bradley Lake	11.33	328	Pn	Pn	08 37 59.8	-3.3
PMR	Palmer	12.29	337	Pn	Pn	08 38 15.6	-0.5
GHO	Glory Hole Cre	12.39	338	Pn	Pn	08 38 17.4	-0.4
SUA	Susitna One	12.61	334	Pn	Pn	08 38 19.5	-1.3
PAX	Paxson	12.81	347	Pn	Pn	08 38 24.6	+1.1
SKT	Skwentna	13.25	334	Pn	Pn	08 38 28.6	-0.8
DAWY	Dawson	13.44	359	Pn	Pn	08 38 35.6	+3.7
RND	Reindeer	13.81	341	Pn	Pn	08 38 37.6	+0.5
MCK	McKinley	14.12	342	Pn	Pn	08 38 42.0	+0.7

TRF	Thorofare Moun	14.16	339	Pn	Pn	08 38 42.5	+0.5
EGAK	Eagle	14.19	356		Pn	08 38 45.0	+2.9
KTH	Kantishna Hill	14.40	338	Pn	Pn	08 38 45.0	-0.1
IL31		14.73	347	Pn	Pn	08 38 50.0	+0.5
BPAW	Bear Paw Mtn.	14.88	339	Pn	Pn	08 38 51.9	+0.2
TTA	Tatalina	15.33	330	Pn	Pn	08 38 54.4	-3.3
TTA				IAmb	IAmb	08 38 60.0	
	comp=Z,3.6nm,1.3s						
MOD	Modoc Plateau	15.61	117	Pn	Pn	08 39 02.2	+0.7
MLY	Manley	15.64	341	Pn	Pn	08 39 01.3	-0.4
HOPS	Hopland Field	16.23	130	Pn	Pn	08 39 09.6	+0.3
IMAR	Indian Mountai	17.11	339	Pn	Pn	08 39 19.6	-0.6
RUBR	Rubicon Trail	17.67	124		Pn	08 39 29.1	+1.3
RUBR				IAmb	IAmb	08 39 37.1	
	comp=Z,13nm,0.9s						

IDC 04 08:56:29.9±2.0,5°.02S×150°.87E,h57km±31km,mb3.4/4, mb1 3.7/5,mb1mx3.3/41,mbtmp3.7/5,ML1.9/1,MS2.2/1, Ms1 2.2/1,ms1mx2.1/17,Error ellipse: s-maj=72.0km s-min=10.9km az=135.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.35	58	P	Pn	08 56 50.6	-2.0
	250nm,0.3s,baz=189,slow=1.3,SNR=85						
KRVT				S	Sn	08 57 09.9	+0.4
	79nm,0.3s,baz=129,slow=16,SNR=5.8						
PMG	Port Moresby	5.70	220	P	Pn	08 57 53.2	+1.0
	2.4nm,0.3s,baz=30,slow=9.3,SNR=4.9						
PMG				S	Sn	08 58 56.5	+0.2
	1.5nm,0.3s,baz=167,slow=14,SNR=1.8						
PMG				LR	LR	08 59 34.1	
	comp=Z,23nm,19.1s,baz=172,slow=32						
WRA	Warramunga Arr	21.88	226	P	P	09 01 19.6	+1.2
	1.0nm,0.5s,baz=53,slow=9.8,SNR=6.1						
ASAR	Alice Springs	24.72	220	P	P	09 01 45.6	-0.6
	1.0nm,0.6s,baz=59,slow=9.2,SNR=11						
FITZ	Fitzroy Crossi	27.87	240	P	P	09 02 15.1	+0.5
	3.0nm,0.5s,baz=56,slow=14,SNR=11						
MKAR	Makanchi Array	79.23	319	P	P	09 08 28.2	-1.0
	0.1nm,0.4s,baz=94,slow=7.6,SNR=1.4						
TORD	Torodi Ar. Bea	148.54	287	PKPbc	PKPbc	09 16 11.4	-0.2
	1.4nm,0.6s,baz=70,slow=2.6,SNR=6.7						

ATH 04 09:02:35.8,38°.20N×20°.44E,h11km±1km,ML2.6/3,Error ellipse: s-maj=2.6km s-min=1.3km az=247.0
THE 04 09:02:36.7,38°.20N×20°.44E,h4km±1km,ML2.3/7,Error ellipse: s-maj=1.1km s-min=0.4km az=217.0
ISC 04 09:02:36.2±1.1,38°.19N±0°.04×20°.43E±0°.04,h7km±5km, n24,σ0s54/37,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.01	23	P	Pg	09 02 37.2	-0.3
LXR1				S	Sg	09 02 37.9	-0.5
CHV1	Chavriata, Kef	0.04	260	P	Pg	09 02 37.8	+0.1
CHV1				S	Sg	09 02 39.2	+0.5
	45µm,0.3s						
ARG2	Argostoli	0.04	106	P	Pg	09 02 37.8	+0.1
ARG2				S	Sg	09 02 38.7	-0.1
KEF2	Argostoli. Kep	0.05	121	P	Pg	09 02 38.0	+0.2
KEF2				S	Sg	09 02 39.2	+0.3
KEF4	Livadi, Kephal	0.07	354	P	Pg	09 02 38.0	0.0
KEF4				S	Sg	09 02 39.8	+0.5
KEF3	Kipouria, Keph	0.07	280	P	Pg	09 02 38.0	0.0
KEF1	Kardakata, Kep	0.09	19	P	Pg	09 02 38.2	-0.1
KEF1				S	Sg	09 02 39.9	+0.1
VLS	Valsamata	0.12	96	P	Pg	09 02 38.9	+0.1
VLS				S	Sg	09 02 41.1	+0.3
	6µm,0.2s						
VLS	Valsamata	0.12	96	P	Pg	09 02 39.0	+0.1
VLS				S	Sg	09 02 41.0	+0.3
VLS				AML	AML	09 02 41.5	
	comp=N,14810µm,0.2s						
VLS				AML	AML	09 02 42.5	
	comp=E,12594µm,0.1s						
VSK1	VASILIKIADES	0.24	25	P	Pg	09 02 41.1	+0.1
VSK1				S	Sg	09 02 44.9	+0.7
FSK	Fiskardo	0.29	21	P	Pg	09 02 41.9	+0.1
FSK				S	Sg	09 02 46.4	+0.7
	comp=E,510nm,0.3s						
LKD2	Lefkada island	0.62	16	P	Pg	09 02 47.8	-0.4
LKD2				S	Sg	09 02 56.9	+0.6
	comp=E,150nm,0.5s						
TSLK	Tsoukalades, L	0.66	15	P	Pg	09 02 48.4	-0.5
PDO	Prodromos	0.72	55	P	Pg	09 02 49.8	-0.2
PDO				S	Sb	09 03 01.1	+0.1
	comp=E,568nm,0.5s						
PDO	Prodromos	0.72	55	P	Pg	09 02 49.6	-0.4
PDO				AML	AML	09 03 04.6	
	comp=E,713µm,0.5s						
PDO				AML	AML	09 03 11.2	
	comp=N,871µm,0.4s						
RLS	Riolos of Patr	0.83	99	P	Pg	09 02 52.3	+0.3
PVO	Paravola	0.96	63	P	Pg	09 02 54.7	+0.1
PVO	Paravola	0.96	63	AML	AML	09 03 11.7	
	comp=E,754µm,0.4s						
PVO				AML	AML	09 03 16.5	
	comp=N,598µm,0.6s						
DRO	Drossia	1.04	103	P	Pb	09 02 56.4	0.0
EFP	Efpalio	1.18	78	P	Pg	09 02 58.6	-0.3
EFP				S	Sn	09 03 16.3	+0.9
	comp=N,132nm,0.5s						
LAKA	Lakka	1.22	87	P	Pg	09 02 58.9	-0.7
LAKA				S	Sn	09 03 18.0	+1.6
	comp=N,98nm,0.4s						
LAKA	Lakka	1.22	87	P	Pg	09 02 58.8	-0.7
SERG	Sergoula	1.30	80	P	Pn	09 02 59.8	-0.9
TRIZ	Trizonia	1.30	82	P	Pn	09 02 59.7	-1.1

IDC 04 09:17:07.6±1.5,27°.13N×52°.64E,h0km,mb3.8/12, mb1 3.9/16,mb1mx3.7/43,mbtmp3.8/16,ML3.5/4,MS3.2/4, Ms1 3.3/4,ms1mx2.7/50,Error ellipse: s-maj=30.2km s-min=21.0km az=2.0
TEH 04 09:17:12.1,27°.28N×52°.79E,h14km,ML3.7
NEIC 04 09:17:13.9±1.5,27°.15N±0°.04×52°.77E±0°.06,h42km±10km, Error ellipse: s-maj=9.0km s-min=4.3km az=53.0
OMAN 04 09:17:15.6±1.6,27°.13N×52°.80E,h35km±41km,ml3.7/7, Error ellipse: s-maj=27.6km s-min=14.6km az=48.0
ISC 04 09:17:10.0±0.5,27°.20N±0°.04×52°.71E±0°.05,h10km,n57, σ1s48/63,mb3.8/12,MS3.1/4,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHRM	Jahrom	1.51	31	Pn	Pg	09 17 38.8	-0.2
JHRM	Jahrom	1.51	31	ePg	Pg	09 17 38.3	-0.7
JHRM				eSg	Sg	09 17 58.8	+0.1
JHRM				e		09 18 07.7	
LAR1	LAR	1.56	72	ePg	Pg	09 17 39.4	-0.5
GHB	Gharebagh	2.17	356	ePn	Pb	09 17 49.0	-0.7
GHB				e		09 18 41.3	
SHI	Shiraz	2.44	356	Pn	Pb	09 17 54.5	+0.4
SHI	Shiraz	2.44	356	ePn	Pb	09 17 53.5	-0.6
IKAZ	Kazeroun	2.68	344	Pn	Pn	09 17 55.2	+1.7
IKAZ	Kazeroun	2.68	344	ePn	Pn	09 17 55.6	+2.1
IKAZ				e		09 18 52.4	
NAZ	Nazwa, Dubai	3.45	129	S	Sn	09 18 47.0	+2.1
	SNR=9.1						
BANOM	Banah	3.46	111	P	Pn	09 18 05.2	+1.1
	SNR=9.3						
BANOM				S	Sn	09 18 45.1	0.0
NIAN	Nian	3.69	83	ePn	Pn	09 18 09.9	+2.8
NIAN				e		09 19 15.2	
MDH	Madha	3.74	120	P	Pn	09 18 09.4	+1.5
MDH				S	Sn	09 18 49.9	-2.1
UOSS	Minazif	3.87	125	Pn	Pn	09 18 10.8	+1.2
UOSS				Sn	Sn	09 18 52.9	-2.2
UOSS	Minazif	3.87	125	P	Pn	09 18 10.6	+1.1
UOSS				S	Sn	09 18 53.4	-1.7
HATD	Hatta, Dubai	3.89	127	P	Pn	09 18 11.7	+1.8
HATD				S	Sn	09 18 55.8	+0.3
	SNR=7.3						
KLNJ	Kolanjah	3.92	346	ePn	Pn	09 18 10.8	+0.2
ASHO	Ashiyiah	3.92	129	P	Pn	09 18 12.1	+1.7
ASHO				S	Sn	09 18 56.4	-0.2
	SNR=6.4						
IMEH	Mehriz	4.50	21	ePn	Pn	09 18 20.7	+2.3
TVBK	TV Kerman	4.52	51	ePn	Pn	09 18 20.6	+1.8
TVBK				e		09 18 21.5	
KHGB	Koh Gabri	4.58	45	ePn	Pn	09 18 20.7	+1.1
KHGB				e		09 19 22.3	
IRAM	Ramesheh	4.60	357	ePn	Pn	09 18 21.0	+1.1
SOHO	SOHO	4.61	131	S	Sn	09 19 15.0	+1.6
	SNR=6.1						
ISAD	Sadrabad	4.77	10	ePn	Pn	09 18 24.2	+1.9
CHMN	Cheshme madani	5.01	57	Pn	Pn	09 18 28.2	+2.6
CHMN	Cheshme madani	5.01	57	ePn	Pn	09 18 27.4	+1.8
CHMN				e		09 18 29.3	
IBAF	Bafgh	5.04	29	ePn	Pn	09 18 27.2	+1.4
ICHK	Chekchek	5.24	16	ePn	Pn	09 18 30.2	+1.6
HOQ	Hoqain	5.51	130	P	Pn	09 18 33.5	+1.4
	SNR=16						
HOQ				S	Sn	09 19 33.7	-1.9
	SNR=6.2						
BSY	Bisya	6.03	136	P	Pn	09 18 42.0	+2.7
	SNR=6.2						
WSAR	Wadi Sarin	6.66	125	Pn	Pn	09 18 48.7	+0.8
	1.2nm,0.3s,baz=310,slow=8.5,SNR=8.3						
WSAR				Sn	Sn	09 20 00.6	-3.4
	1.1nm,0.3s,baz=139,slow=18,SNR=2.9						
RAYN	Ar Rayn	7.47	242		Pn	09 19 01.3	+2.2
RAYN				Sn	Sn	09 20 23.0	-1.0
MHTO	MHTO	7.83	141	P	Pn	09 19 06.0	+1.9
	SNR=20						
MHTO				S	Sn	09 20 32.0	-0.9
	SNR=8.1						
GEYT	Alibeck	11.63	22	Pn	Pn	09 19 57.4	+1.4
	0.3nm,0.3s,baz=194,slow=12,SNR=2.8						
ASF	Jabal al Asfar	14.60	294	Pn	Pn	09 20 34.5	-2.4
	0.3nm,0.3s,baz=13,slow=3.8,SNR=6.2						
KBZ	Khabaz	18.30	337	P	Pn	09 21 25.0	+1.1
	0.1nm,0.3s,baz=143,slow=14,SNR=1.9						
BTK	Batken	19.75	45	P	P	09 21 40.2	+0.1
BTK				IAmb	IAmb	09 21 41.3	
	comp=Z,5.9nm,0.6s						
BRTR	Keskin Array B	20.17	313	P	P	09 21 45.2	+0.4
	comp=Z,2.3nm,0.6s,baz=131,slow=13,SNR=16						
BRTR	Keskin Array B	20.17	313	P	P	09 21 45.5	+0.7
BR131	Keskin Array S	20.18	313	P	P	09 21 46.9	+2.0
BR131				IAmb	IAmb	09 21 52.6	
	comp=Z,4.7nm,1.1s						
ABKAR	Akbulak array	22.72	12	P	P	09 22 11.1	-0.8
AKTO	Aktyubinsk	23.55	9	P	P	09 22 20.7	+0.2
	comp=Z,0.6nm,0.5s,baz=200,slow=13,SNR=2.2						
BVAR	Borovoye Array	28.96	22	P	P	09 23 08.4	-1.1
	comp=Z,1.0nm,0.6s,baz=243,slow=33,SNR=7.2						
AKASG	Malin Array Be	29.50	329	P	P	09 23 13.9	-0.3
	comp=Z,0.2nm,0.3s,baz=123,slow=7.1,SNR=1.5						
MKAR	Makanchi Array	30.40	42	P	P	09 23 22.1	-0.2
	comp=Z,0.5nm,0.6s,baz=227,slow=9.6,SNR=2.8						
KIRV	Kirov	31.45	357	LR	LR	09 40 31.4	
	comp=Z,45nm,19.0s,baz=190,slow=44						
KMBO	Kilima Mbogo	31.85	210	LR	LR	09 38 12.2	
	comp=Z,35nm,20.6s,baz=80,slow=40						
ZALV	Zalesovo Beam	35.64	33	P	P	09 24 07.4	-0.6
	comp=Z,1.3nm,0.6s,baz=247,slow=9.9,SNR=6.4						
FIA1	FINESS Array S	38.62	340	P	P	09 24 33.6	+0.5
FIA1				IAmb	IAmb	09 24 49.9	
	comp=Z,14nm,1.4s						
FINES	FINESS Array B	38.62	340	P	P	09 24 33.1	0.0
	comp=Z,2.0nm,0.7s,baz=125,slow=10.0,SNR=6.6						
FINES	FINESS Array B	38.62	340	P	P	09 24 33.2	+0.1
CMAR	Chiang Mai Arr	43.30	92	LR	LR	09 47 25.5	
	comp=Z,24nm,21.2s,baz=115,slow=42						
NOA	NORSAR Array B	43.79	332	P	P	09 25 14.7	-1.0
	comp=Z,0.5nm,0.7s,baz=122,slow=8.3,SNR=1.7						
SONM	Songino Array	46.26	49	P	P	09 25 35.7	-0.1
	comp=Z,0.6nm,0.4s,baz=237,slow=10,SNR=2.4						
ESDC	Sonseca Array	48.18	300	LR	LR	09 48 15.5	
	comp=Z,28nm,18.8s,baz=310,slow=39						
TORD	Torodi Ar. Bea	49.56	264	P	P	09 26 00.1	-1.5
	comp=Z,0.7nm,0.8s,baz=66,slow=5.6,SNR=2.3						
SCHQ	Schefferville	83.29	330	P	P	09 29 34.8	-2.1
	comp=Z,3.9nm,1.0s,baz=195,slow=3.9,SNR=3.7						
YKA	Yellowknife Ar	90.04	354	P	P	09 30 09.3	-0.3
	comp=Z,0.4nm,0.6s,baz=5.1,slow=5.1,SNR=14						

IDC 04 09:36:39.4±2.2,7°.47S×127°.82E,h0km,mb3.1/1, mb1 3.6/4,mb1mx3.4/49,mbtmp3.4/4,ML3.4/3,Error ellipse: s-maj=85.6km s-min=27.8km az=77.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.78	191	Pn	Pn	09 39 16.9	+1.8
	0.2nm,0.3s,baz=19,slow=15,SNR=2.2						
FITZ				Sn	Sn	09 41 16.9	+0.3
	0.1nm,0.3s,baz=251,slow=18,SNR=1.5						
WRA	Warramunga Arr	13.92	154	Pn	Pn	09 39 56.8	-1.3
	0.2nm,0.3s,baz=323,slow=14,SNR=4.9						
WRA				Sn	Sn	09 42 23.0	-11
	0.1nm,0.3s,baz=322,slow=24,SNR=1.0						
ASAR	Alice Springs	17.13	161	Pn	Pn	09 40 40.2	-0.2
	0.1nm,0.3s,baz=334,slow=9.6,SNR=6.2						
MKAR	Makanchi Array	67.45	328	P	P	09 47 37.0	-0.1
	0.2nm,0.9s,baz=138,slow=8.2,SNR=1.5						

IDC 04 09:41:06.2±5.7,4°.83S×153°.72E,h112km±37km,mb3.3/6, mb1 3.5/7,mb1mx3.3/51,mbtmp3.8/7,Error ellipse: s-maj=59.9km s-min=19.3km az=99.0
ISC 04 09:41:04.3±1.3,4°.8S±0°.1×153°.9E±0°.1,h100km,n9, σ0s59/11,mb3.4/6,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.92	286	P	Pn	09 41 36.3	+0.4
	18nm,0.3s,baz=123,slow=4.1,SNR=7.8						
KRVT				S	Sn	09 41 59.4	-0.5
	21nm,0.3s,baz=70,slow=21,SNR=5.9						
PMG	Port Moresby	8.06	235	P	Pn	09 42 59.4	+0.6
	1.8nm,0.3s,baz=105,slow=16,SNR=4.5						
PMG				S	Sn	09 44 28.1	-0.3
	1.4nm,0.3s,baz=273,slow=18,SNR=1.8						
WRA	Warramunga Arr	24.23	230	P	P	09 46 12.2	+0.1
	0.9nm,0.6s,baz=54,slow=10.0,SNR=7.3						
ASAR	Alice Springs	26.86	224	P	P	09 46 35.2	-0.6
	0.4nm,0.4s,baz=54,slow=9.0,SNR=11						
SONM	Songino Array	66.93	327	P	P	09 51 46.5	+0.2
	0.2nm,0.5s,baz=146,slow=7.1,SNR=1.6						
MKAR	Makanchi Array	81.06	319	P	P	09 53 08.7	+0.2
	0.1nm,0.5s,baz=94,slow=7.0,SNR=4.5						
ZALV	Zalesovo Beam	81.78	326	P	P	09 53 12.5	+0.5
	0.5nm,0.3s,baz=135,slow=6.0,SNR=1.0						
BVAR	Borovoye Array	89.91	323	P	P	09 53 52.0	-0.2
	0.7nm,0.8s,baz=79,slow=7.5,SNR=3.4						
TORD	Torodi Ar. Bea	151.34	289	PKPbc	PKPbc	10 00 46.3	-1.1
	0.4nm,0.6s,baz=112,slow=1.6,SNR=3.0						

NIED 04 09:49:00,38°.40N×142°.10E,h50km,Mw3.8 Best double couple: $M_0$5.15000×10[14] NP1:ϕ_s83.00000°,δ48.00000°, λ110.00000°. NP2:ϕ_s235.00000°,δ46.00000°,λ69.00000°.
JMA 04 09:49:02.8±0.1,38°.43N×142°.03E,h46km±1km,M3.9
JMA Felt I J1.
IDC 04 09:49:03.4±2.6,38°.41N×142°.22E,h53km±24km,mb3.3/11, mb1 3.5/13,mb1mx3.4/47,mbtmp3.5/13,ML3.2/2,MS2.3/1, Ms1 2.3/1,ms1mx2.0/35,Error ellipse: s-maj=25.3km s-min=10.9km az=119.0
ISC 04 09:49:02.3±0.7,38°.39N±0°.04×142°.11E±0°.06,h41km,n35, σ1s42/43,mb3.5/11,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.51	262	P	Pn	09 49 13.2	0.0
JIKH				S	Sn	09 49 20.3	-0.7
JIO	Ouri	0.60	277	P	Pn	09 49 14.3	-0.1
JIO				S	Sn	09 49 22.1	-1.0
JKMT	Kesennumamotoy	0.65	311	P	Pn	09 49 14.9	-0.3
JKMT				S	Sn	09 49 23.4	-0.9
OFUJ	Ofunato	0.77	334	P	Pn	09 49 16.6	-0.2
OFUJ				eS	Sn	09 49 26.3	-1.0
JMK	Ichinoseki	0.90	309	P	Pn	09 49 18.2	-0.3
JMK				eS	Sn	09 49 29.1	-1.1
JOU	Okura	1.14	269	P	Pn	09 49 21.7	-0.1
JOU				eS	Sn	09 49 35.5	-0.7
JMM	Marumori	1.16	244	P	Pn	09 49 21.7	-0.4
JMM				eS	Sn	09 49 35.9	-0.8
JOM	Ohasama	1.26	330	P	Pn	09 49 23.5	+0.1
JOM				eS	Sn	09 49 39.0	-0.2
JFK	Kawauchi	1.41	224	P	Pn	09 49 25.6	0.0
JFK				S	Sn	09 49 42.3	-0.7
JYK	Kaneyama	1.47	292	P	Pn	09 49 26.4	+0.1
JYK				eS	Sn	09 49 44.3	0.0
JRG	Rokugo	1.53	312	P	Pn	09 49 27.3	+0.1
JYS	Shirataka	1.62	265	S	Sn	09 49 47.9	-0.1
JFT	Otama	1.65	239	P	Pn	09 49 29.4	+0.6
JFT				S	Sn	09 49 49.2	+0.4
MJAR	Matsushiro Arr	3.61	241	P	Pn	09 49 58.2	+2.5
	0.4nm,0.3s,baz=311,slow=26,SNR=9.9						
MJAR				S	Sn	09 50 40.7	+3.6
	0.4nm,0.3s,baz=110,slow=8.0,SNR=4.5						
MJAR				LR	LR	09 51 39.1	
	comp=Z,44nm,21.8s,baz=110,slow=42						
MAT	Matsushiro	3.61	241	P	Pn	09 49 57.8	+2.1
MAT				S	Sn	09 50 32.9	-4.2
ASAJ	Asahikawa	5.74	4	P	Pn	09 50 26.1	+1.2
	1.2nm,0.3s,baz=177,slow=6.7,SNR=5.4						
ASAJ				S	Sn	09 51 29.0	-0.5
	0.3nm,0.3s,baz=170,slow=30,SNR=1.9						
USRK	Ussuriysk Ar.	9.57	311	P	Pn	09 51 21.8	+4.3
	baz=122,slow=13,SNR=9.2						
SEY	Seymchan	25.36	11	P	P	09 54 26.0	+0.8
	1.2nm,0.8s,baz=96,slow=6.5,SNR=3.7						
SONM	Songino Array	27.52	302	P	P	09 54 46.3	+1.3
	0.2nm,0.4s,baz=94,slow=7.5,SNR=2.0						
H11N2	WAKE ISLAND Hy	28.40	124	T	T	10 25 07.7	
	baz=316,slow=75,SNR=76						
H11N1	WAKE ISLAND Hy	28.41	124	T	T	10 25 14.0	
	baz=316,slow=75,SNR=48						
H11N3	WAKE ISLAND Hy	28.42	124	T	T	10 25 08.9	
	baz=316,slow=75,SNR=70						
H11S1	WAKE ISLAND Hy	29.17	126	T	T	10 26 05.7	
	baz=318,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	29.17	126	T	T	10 26 05.6	
	baz=318,slow=76,SNR=26						
H11S2	WAKE ISLAND Hy	29.18	126	T	T	10 26 06.8	
	baz=318,slow=76,SNR=23						
TGY	Tagaytay City	30.60	224	P	P	09 55 13.2	+0.6
	307nm,0.4s,baz=284,slow=5.3,SNR=4.3						
ZALV	Zalesovo Beam	41.42	311	P	P	09 56 43.7	-0.9
	0.5nm,0.4s,baz=89,slow=7.8,SNR=2.5						
MKAR	Makanchi Array	43.88	301	P	P	09 57 02.9	-1.8
	0.2nm,0.6s,baz=19,slow=27,SNR=2.7						
ILAR	Eielson Array	48.06	33	P	P	09 57 36.4	-0.9
	0.3nm,0.7s,baz=256,slow=7.9,SNR=4.2						
WRA	Warramunga Arr	58.48	189	P	P	09 58 53.5	-0.7
	0.6nm,0.4s,baz=6.7,slow=7.2,SNR=6.9						
ASAR	Alice Springs	62.20	189	P	P	09 59 19.1	-0.6
	0.5nm,0.8s,baz=3.0,slow=5.9,SNR=5.5						
YKA	Yellowknife Ar	62.36	31	P	P	09 59 20.4	+0.1
	0.3nm,0.8s,baz=304,slow=6.5,SNR=4.4						
PDAR	Pinedale Array	76.33	46	P	P	10 00 45.8	-1.5
	0.3nm,0.5s,baz=79,slow=1.5,SNR=6.8						
BRTR	Keskin Array B	78.37	312	P	P	10 01 00.2	+1.5
	0.4nm,0.8s,baz=19,slow=5.2,SNR=1.2						
TXAR	Lajitas Array	88.86	53	P	P	10 01 52.6	+0.1
	0.2nm,0.6s,baz=270,slow=2.6,SNR=4.7						

IDC 04 09:55:48.3±1.0,50°.94N×73°.65E,h0km,mb3.3/2, mb1 3.3/7,mb1mx3.2/42,mbtmp3.1/7,ML2.5/5,Error ellipse: s-maj=23.1km s-min=10.0km az=16.0
NNC 04 09:55:49.2±0.7,50°.77N×73°.85E,h0km,mb3.8,mpv3.6, Error ellipse: s-maj=9.0km s-min=5.0km az=37.0, Suspected Mining explosion.
ISC 04 09:55:47.3±0.7,50°.93N±0°.05×73°.65E±0°.06,h0km,n22, σ1s89/24,4C-8D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BVAR	Borovoye Array	2.91	317	Pn	Pn	09 56 36.4	+1.6
	1.5nm,0.3s,baz=124,slow=16,SNR=29						
BVAR				Lg	Lg	09 57 14.2	
	1.6nm,0.3s,baz=129,slow=21,SNR=8.2						
BRVK	Borovoye	2.98	317	⇓Pn	Pb	09 56 40.8	-0.4
	5.2nm,0.6s						
BRVK				⇓Sn	Sb	09 57 20.0	+1.9
	88nm,0.7s						
KURBB	Kurchatov Arra	3.11	94	Pn	Pn	09 56 38.7	+1.1
	0.2nm,0.3s,baz=279,slow=13,SNR=24						
KURBB				Lg	Lg	09 57 24.1	
	0.9nm,0.3s,baz=270,slow=31,SNR=10						
KURBB	Kurchatov Arra	3.11	94	⇑Pn	Pn	09 56 38.4	+0.8
	15nm,0.5s						
KURBB				⇓Lg	Lg	09 57 24.0	
	107nm,0.7s						
KURK	Kurchatov	3.16	92	⇑Pn	Pn	09 56 38.8	+0.6
	9.0nm,0.7s						
KURK				⇓Lg	Lg	09 57 25.4	
	72nm,0.8s						
SEM	Semipalatinsk	4.23	95	Pg	Pb	09 57 00.6	-2.1
	3.2nm,0.1s						
SEM				Lg	Lg	09 58 01.5	
	35nm,0.4s						
MAKZ	Makanchi	6.87	124	⇓Sn	Sn	09 58 46.2	-1.9
	3.9nm,0.8s						
MAKZ				⇓Lg	Lg	09 59 21.3	
	11nm,0.8s						
MK31	Makanchi Array	7.04	123	⇑Pn	Pn	09 57 32.4	+0.8
	1.2nm,0.5s,baz=302,slow=13,SNR=3.4						
MK31				⇓Lg	Lg	09 59 26.8	
	13nm,0.7s,baz=309,slow=30,SNR=3.6						
MKAR	Makanchi Array	7.04	123	Pn	Pn	09 57 32.0	+0.4
	0.1nm,0.3s,baz=297,slow=13,SNR=3.0						
MKAR				Lg	Lg	09 59 27.1	
	0.7nm,0.3s,baz=312,slow=26,SNR=6.5						
KRBS	Karabastau	7.37	168	Pg	Pb	09 57 55.4	-0.6
	2.9nm,1.6s						
KRBS				Lg	Lg	09 59 36.8	
	4.3nm,0.6s						
CHKK	Chushkaly	7.43	161	Pg	Pb	09 57 58.2	+1.1
	0.9nm,0.1s						
CHKK				Lg	Lg	09 59 40.7	
	9.8nm,0.4s						
ZALV	Zalesovo Beam	7.47	62	Pn	Pn	09 57 37.7	+0.4
	0.1nm,0.3s,baz=252,slow=14,SNR=3.9						
ZALV				Sn	Sn	09 59 03.2	+0.5
	0.4nm,0.3s,baz=247,slow=22,SNR=5.1						
ZALV				Lg	Lg	09 59 45.6	
	0.2nm,0.3s,baz=270,slow=30,SNR=1.8						
KTBS	Karatobe	7.51	163	Pg	Pb	09 58 00.6	+2.1
	3.5nm,1.3s						
KTBS				Lg	Lg	09 59 44.8	
	36nm,0.8s						
DJR	Jarkent	7.79	146	Pg	Pb	09 58 07.3	+4.0
	0.6nm,0.1s						
DJR				Lg	Lg	09 59 56.1	
	11nm,0.8s						
DGS	Degeres	7.83	169	Pg	Pb	09 58 05.1	+1.2
	3.8nm,1.3s						
DGS				Lg	Lg	09 59 52.0	
	17nm,0.8s						
KK31	Karatay Array	8.12	196	Pn	Pn	09 57 45.8	-0.6
	0.7nm,0.7s,baz=357,slow=10.0,SNR=4.6						
KK31				⇓Sn	Sn	09 59 22.1	+3.4
	0.6nm,0.5s						
KK31				⇑Lg	Lg	10 00 04.4	
	3.9nm,0.7s,baz=12,slow=25,SNR=3.6						
ZSN	Zaisan	8.13	111	Pg	Pb	09 58 09.7	+0.8
	3.9nm,0.2s						
ZSN				Lg	Lg	10 00 00.4	
	12nm,0.9s						
AAK	Ala-Archa	8.32	176	Sn	Sn	09 59 19.4	-4.5
	0.2nm,0.3s,baz=233,slow=18,SNR=1.8						
AAK				Lg	Lg	10 00 10.1	
	0.2nm,0.3s,baz=45,slow=15,SNR=4.9						
AKTO	Aktyubinsk	9.94	273	Pn	Pn	09 58 10.2	-1.1
	0.3nm,0.3s,baz=86,slow=11,SNR=5.1						
AKTO				Lg	Lg	10 01 03.5	
	0.1nm,0.3s,baz=209,slow=11,SNR=5.4						
ARU	Arti	10.50	307	Lg	Lg	10 01 25.1	
	0.0nm,0.3s,baz=343,slow=24,SNR=3.9						
ILAR	Eielson Array	60.43	19	P	P	10 05 57.9	-0.1
	0.3nm,0.7s,baz=324,slow=5.3,SNR=4.3						
YKA	Yellowknife Ar	66.73	4	P	P	10 06 39.3	-0.4
	0.3nm,0.9s,baz=352,slow=6.9,SNR=4.3						

SJA 04 10:11:05.2±0.9,23°.50S×67°.21W,h186km±7km,ML3.4, MW3.3
GUC 04 10:11:07.0±0.7,23°.65S×67°.60W,h194km±9km,ML3.7
ISC 04 10:11:05.4±2.0,23°.59S±0°.05×67°.26W±0°.04, h185km±19km,n27,σ1s11/46,3C-3D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	Humahuaca	1.74	78	iP	Pn	10 11 40.6	+0.1

LVC Limon Verde 1.81 302 iP Pn 10 11 42.2 +1.0
LVC eS Sn 10 12 09.0 +0.1
LVC Limon Verde 1.81 302 eP Pn 10 11 42.0 +0.8
LVC iS Sn 10 12 08.9 +0.1
SLA San Lorenzo 1.96 126 iP Pn 10 11 43.5 +0.9
SLA iS Sn 10 12 11.9 +0.5
PB15 IPOC Station P 2.07 280⇑iP Pn 10 11 44.5 +0.8
PB15 eS Sn 10 12 12.3 -1.2
PB15 IPOC Station P 2.07 280 eP Pn 10 11 44.6 +0.8
PB15 eS Sn 10 12 13.3 -0.2
AZAP Zapla 2.10 108 iP Pn 10 11 43.5 -0.6
YJA Yavi 2.13 49 iP Pn 10 11 45.1 +0.4
YJA iS Sn 10 12 13.7 -1.5
PB06 IPOC Station P 2.31 292⇓eP Pn 10 11 47.2 +0.9
PB06 eS Sn 10 12 17.5 -0.7
PB06 IAML 10 12 19.4
comp=N,372nm,0.1s
PB06 IPOC Station P 2.31 292 eP Pn 10 11 47.2 +0.9
PB06 iS Sn 10 12 17.8 -0.3
PB06 IAML 10 12 20.2
comp=Z,147nm,0.6s
PB09 IPOC Station P 2.56 314 eP Pn 10 11 50.8 +1.6
PB09 eS Sn 10 12 24.7 +1.3
PB09 IAML 10 12 27.1
comp=E,90nm,0.4s
PB09 IPOC Station P 2.56 314 eP Pn 10 11 50.9 +1.6
PB09 iS Sn 10 12 25.6 +2.2
PB09 IAML 10 12 26.0
comp=Z,50nm,0.2s
GO02 Mina Guanaco 2.64 233 eP Pn 10 11 50.6 +0.3
GO02 eS Sn 10 12 24.1 -1.3
GO02 IAML 10 12 28.1
comp=E,126nm,0.6s
PB03 IPOC Station P 2.77 303⇓eP Pn 10 11 52.5 +0.8
PB03 eS Sn 10 12 26.7 -1.0
PB03 IAML 10 12 27.9
comp=N,216nm,0.2s
PB03 IPOC Station P 2.77 303 eP Pn 10 11 52.4 +0.8
PB03 eS Sn 10 12 26.5 -1.2
PB05 IPOC Station P 2.81 285⇑iP Pn 10 11 52.5 +0.4
PB05 eS Sn 10 12 26.7 -1.8
PB05 IAML 10 12 27.4
comp=E,112nm,0.2s
PB05 IPOC Station P 2.81 285 eP Pn 10 11 52.5 +0.4
PB05 iS Sn 10 12 26.6 -1.8
PB04 IPOC Station P 2.94 295⇓eP Pn 10 11 54.7 +0.9
PB04 eS Sn 10 12 30.1 -1.4
PB04 IAML 10 12 35.3
comp=N,174nm,0.3s
PB04 IPOC Station P 2.94 295 eP Pn 10 11 54.5 +0.7
PB04 iS Sn 10 12 30.1 -1.4
PB04 IAML 10 12 35.5
comp=Z,121nm,0.1s
PB10 IPOC Station P 3.03 271 iP Pn 10 11 55.2 +0.6
PB07 IPOC Station P 3.06 307⇑iP Pn 10 11 55.8 +0.6
PB07 eS Sn 10 12 32.5 -1.4
PB07 IAML 10 12 34.2
comp=E,194nm,0.2s
PB07 IPOC Station P 3.06 307 eP Pn 10 11 55.8 +0.6
PB07 iS Sn 10 12 32.5 -1.4
PB01 IPOC Station P 3.27 320 IAML 10 12 40.5
comp=E,90nm,0.1s
PB01 IPOC Station P 3.27 320 eP Pn 10 11 58.6 +0.9
PB01 iS Sn 10 12 37.1 -1.4
PB02 IPOC Station P 3.33 312 IAML 10 12 44.8
comp=N,143nm,0.2s
PB02 IPOC Station P 3.33 312 eP Pn 10 11 58.9 +0.5
PB02 iS Sn 10 12 38.0 -1.7
CYA Choya 5.01 165 iP Pn 10 12 20.8 +1.3

IDC **04** *10:28:57.2±4.8, 36.°02N×70.°60E, h187km±32km, mb3.2/4, mb1 3.2/8, mb1mx2.9/34, mbtmp3.7/8, Error ellipse: s-maj=68.0km s-min=24.2km az=149.0*
NNC **04** *10:28:59.4±8.8, 36.°87N×70.°11E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=74.1km s-min=57.1km az=154.0*
ISC 04 10:29:01.9±1.7,**36.°6N**±0.°2×**70.°4E**±0.°1,**h204km, n12, σ2§21/16, mb3.6/3, 5C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
KK31	Karatay Array	6.49	1	⇑Pn	Pn	10 30 33.5	-2.0
	3.9nm,0.6s,baz=179,slow=13,SNR=37						
KK31				⇓Sn	S	10 31 47.4	-2.2
	3.2nm,0.3s,baz=189,slow=26,SNR=7.6						
AAK	Ala-Archa	6.79	26	P	Pn	10 30 40.9	+1.3
	1.1nm,0.3s,baz=160,slow=13,SNR=15						
AAK				S	S	10 31 56.9	-0.1
	1.1nm,0.3s,baz=317,slow=19,SNR=21						
AAK	Ala-Archa	6.79	26	⇑Pn	Pn	10 30 40.8	+1.3
	5.3nm,0.9s						
AAK				⇑Sn	S	10 31 56.0	-1.0
	16nm,0.6s						
CHMS	Chumysh	7.20	26	⇓Pn	Pn	10 30 42.0	-2.7
	6.5nm,1.4s						
CHMS				⇑Sn	S	10 32 04.8	-1.6
	12nm,0.9s						
GEYT	Alibeck	9.90	281	P	Pn	10 31 18.8	-1.1
	0.3nm,0.3s,baz=91,slow=12,SNR=1.4						
MKAR	Makanchi Array	13.48	37	P	P	10 32 07.1	-0.5
	0.1nm,0.3s,baz=224,slow=10,SNR=11						
BVAR	Borovoye Array	16.42	360	P	P	10 32 41.9	+1.1
	0.2nm,0.3s,baz=161,slow=6.3,SNR=2.8						
AKTO	Aktyubinsk	16.46	331	⇑Pn	Pn	10 32 46.5	+5.1
	4.4nm,0.8s						
ZALV	Zalesovo Beam	20.02	25	P	P	10 33 19.9	+0.9
	1.4nm,0.4s,baz=217,slow=12,SNR=6.5						
FINES	FINESS Array B	37.14	326	P	P	10 35 54.6	+1.9
	1.6nm,0.9s,baz=108,slow=12,SNR=1.7						
ARCES	ARCESS Array B	40.87	338	P	P	10 36 25.3	+1.8
	1.8nm,0.7s,baz=101,slow=6.3,SNR=5.0						
TORD	Torodi Ar. Bea	65.26	268	P	P	10 39 19.9	-2.2
	0.2nm,0.6s,baz=33,slow=5.5,SNR=1.5						

IDC **04** *10:40:42.3±1.5, 37.°81N×20.°82E, h0km, mb3.8/5, mb1 3.8/5, mb1mx3.5/31, mbtmp3.8/5, Error ellipse: s-maj=55.0km s-min=28.1km az=125.0*
ATH **04** *10:40:44.9, 38.°28N×20.°39E, h14km±1km, ML3.2/7, Error ellipse: s-maj=1.5km s-min=0.9km az=266.0*
THE **04** *10:40:45.2, 38.°28N×20.°37E, h11km, ML3.4/13, Error ellipse: s-maj=0.9km s-min=0.3km az=244.0*
BEO **04** *10:40:49.2±1.1, 38.°31N×20.°27E, h33km±5km, ML3.2/5*
ISC 04 10:40:45.2±0.7,**38.°27N**±0.°02×**20.°41E**±0.°03,**h13km**±4km, **n62**, σ1§**04**/90, **mb3.8/5, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
KEF4	Livadi, Kephal	0.01	128	P	Pg	10 40 47.3	-0.2
KEF4				S	Sg	10 40 48.9	-0.1
KEF1	Kardakata, Kep	0.05	77	P	Pg	10 40 47.5	-0.1
KEF1				S	Sg	10 40 49.2	-0.2
LXR1	Lixouri, Cepha	0.07	161	P	Pg	10 40 48.0	+0.2
LXR1				S	Sg	10 40 50.1	+0.4
KEF3	Kipouria, Keph	0.08	218	P	Pg	10 40 47.8	-0.1
KEF3				S	Sg	10 40 49.8	-0.1
CHV1	Chavriata, Kef	0.09	195	P	Pg	10 40 48.0	0.0
CHV1				S	Sg	10 40 50.2	+0.2
	83µm,0.3s						
ARG2	Argostoli	0.11	145	P	Pg	10 40 48.5	+0.3
ARG2				S	Sg	10 40 50.6	+0.2
	55µm,0.2s						
KEF2	Argostoli. Kep	0.12	149	P	Pg	10 40 48.6	+0.2
KEF2				S	Sg	10 40 50.8	+0.1
VLS	Valsamata	0.17	122	P	Pg	10 40 49.2	+0.1
VLS				S	Sg	10 40 52.4	+0.5
	31µm,0.2s						
VLS	Valsamata	0.17	122	P	Pg	10 40 49.2	+0.1
VLS				S	Sg	10 40 52.4	+0.5
VLS				AML	AML	10 40 52.5	
	comp=E,53009µm,0.1s						
VLS				AML	AML	10 40 52.5	
	comp=N,71397µm,0.3s						
VSK1	VASILIKIADES	0.19	40	P	Pg	10 40 49.5	0.0
VSK1				S	Sg	10 40 52.5	+0.1
FSK	Fiskardo	0.23	32	P	Pg	10 40 50.1	0.0
FSK				S	Sg	10 40 53.6	+0.2
	comp=N,15µm,0.2s						
FSK	Fiskardo	0.23	32	P	Pg	10 40 50.1	0.0
FSK				S	Sg	10 40 53.6	+0.2
FSK				AML	AML	10 40 54.2	
	comp=N,19372µm,0.3s						
FSK				AML	AML	10 40 54.6	
	comp=E,39263µm,0.1s						
EVGI	Lefkada island	0.40	29	P	Pg	10 40 53.1	-0.2
EVGI				S	Sb	10 40 59.5	-0.9
EVGI	Lefkada island	0.40	29	P	Pg	10 40 53.1	-0.2
VLMS	Volimes, Zakyn	0.44	153	P	Pg	10 40 54.1	+0.2
VLMS				S	Sb	10 41 01.1	-0.3
VLMS				AML	AML	10 41 02.2	
	comp=N,29027µm,0.5s						
VLMS				AML	AML	10 41 03.2	
	comp=E,22750µm,0.3s						
MGNA	Meganis	0.49	37	P	Pg	10 40 54.5	-0.4
MGNA				S	Sg	10 41 01.3	-0.2
LKD2	Lefkada island	0.56	20	P	Pg	10 40 55.8	-0.4
LKD2				S	Sg	10 41 03.8	+0.2
	comp=E,902nm,0.3s						
LKD2	Lefkada island	0.56	20	P	Pg	10 40 55.5	-0.6
TSLK	Tsoukalades, L	0.59	19	P	Pg	10 40 56.3	-0.4
TSLK				AML	AML	10 41 12.7	
	comp=E,1590µm,0.3s						
TSLK				AML	AML	10 41 13.8	
	comp=N,2272µm,0.6s						
AST1	Astakos	0.60	63	P	Pg	10 40 57.0	0.0
AST1				S	Sb	10 41 06.0	0.0
	comp=N,5µm,0.2s						
KRI1	kERI	0.68	152	P	Pg	10 40 58.2	-0.3
KRI1				S	Sb	10 41 09.8	+1.4
	comp=N,8µm,0.2s						
PDO	Prodromos	0.69	61	P	Pg	10 40 58.4	-0.3
PDO				S	Sb	10 41 10.0	+1.3
	comp=N,3µm,0.3s						
PDO	Prodromos	0.69	61	P	Pg	10 40 58.4	-0.3
PDO				S	Sg	10 41 08.1	+0.3
PDO				AML	AML	10 41 13.7	
	comp=E,4199µm,0.4s						
PDO				AML	AML	10 41 13.7	
	comp=N,4796µm,0.3s						
RLS	Riolos of Patr	0.86	104	P	Pb	10 41 02.0	0.0
RLS				S	Sn	10 41 14.8	-0.7
	comp=N,562nm,0.3s						
RLS	Riolos of Patr	0.86	104	P	Pg	10 41 01.9	0.0
RLS				AML	AML	10 41 18.4	
	comp=E,1160µm,0.3s						
RLS				AML	AML	10 41 23.8	
	comp=N,1416µm,0.4s						
PVO	Paravola	0.94	68	P	Pg	10 41 03.1	-0.4
PVO				S	Sn	10 41 18.3	+0.7
	comp=N,2µm,0.3s						
PVO	Paravola	0.94	68	P	Pb	10 41 03.5	0.0
DRO	Drossia	1.07	107	P	Pb	10 41 05.5	-0.3
DRO	Drossia	1.07	107	P	Pb	10 41 05.4	-0.3
EFP	Efpalio	1.19	82	P	Pn	10 41 07.1	-0.5
EFP				S	Sn	10 41 24.7	+1.1
	comp=N,680nm,0.5s						
EFP	Efpalio	1.19	82	P	Pn	10 41 06.9	-0.7
ANX	Ano Chora	1.23	74	P	Pn	10 41 08.0	-0.3
ANX				S	Sn	10 41 26.6	+1.8
	comp=N,1µm,0.4s						
ANX	Ano Chora	1.23	74	P	Pn	10 41 07.9	-0.3
LAKA	Lakka	1.23	91	P	Pn	10 41 08.1	-0.2
LAKA	Lakka	1.23	91	P	Pn	10 41 08.1	-0.2
AMT	Artemida-Makis	1.26	125	P	Pb	10 41 09.1	+0.1
IGT	Igoumenitsa	1.27	357	P	Pn	10 41 08.8	+0.1
IGT	Igoumenitsa	1.27	357	ePg	Pg	10 41 12.0	+2.4
IGT				eSg	Sg	10 41 28.1	+2.0
IGT	Igoumenitsa	1.27	357	P	Pn	10 41 08.7	0.0
EVR	Evrytania	1.27	59	P	Pn	10 41 08.9	0.0
EVR	Evrytania	1.27	59	P	Pn	10 41 08.6	-0.2
SERG	Sergoula	1.30	83	P	Pn	10 41 09.1	-0.1
SERG	Sergoula	1.30	83	P	Pn	10 41 08.9	-0.4
TRIZ	Trizonia	1.31	85	P	Pn	10 41 08.3	-1.0
TRIZ	Trizonia	1.31	85	P	Pn	10 41 09.0	-0.3
KALE	Kalithea	1.37	84	P	Pn	10 41 09.7	-0.4
KLV	Kalavryta, Ach	1.39	99	P	Pn	10 41 10.7	+0.3
KLV				S	Sg	10 41 30.6	+0.6
	comp=N,240nm,0.4s						
KLV	Kalavryta, Ach	1.39	99	P	Pn	10 41 10.6	+0.1
KLV				AML	AML	10 41 37.6	
	comp=N,571µm,0.4s						
KLV				AML	AML	10 41 39.4	
	comp=E,460µm,0.6s						
AGG	Agios Georgios	1.68	63	P	Pb	10 41 16.0	-0.1
PYL	PYLOS	1.73	142	P	Pn	10 41 15.9	+0.9
VIL2	Platees	2.25	91	P	Pn	10 41 24.9	-0.9
FNA	Florina	2.62	16	ePn	Pn	10 41 29.3	+1.9
TREB	Trebinje	4.71	341	ePn	Pn	10 41 57.6	+1.5
TREB				eSn	Sn	10 42 47.5	-3.1
SJES	Sjenica	5.00	356	eSn	Sn	10 42 55.7	-2.1
IVAS	Ivanjica	5.31	358	ePn	Pn	10 42 04.0	-0.3
DIVS	Divibare	5.83	357	ePn	Pn	10 42 13.5	+1.9
DIVS				eSn	Sn	10 43 15.2	-3.2
TRUS	Trudelj	5.95	360	eSn	Sn	10 43 18.9	-2.2
FINES	FINESS Array B	23.47	7	P	P	10 45 57.4	+3.1
	comp=E,2.2nm,0.8s,baz=185,slow=13,SNR=3.1						
TORD	Torodi Ar. Bea	30.04	219	P	P	10 46 51.8	-2.4
	comp=E,0.5nm,0.8s,baz=21,slow=11,SNR=2.2						
ARCES	ARCESS Array B	31.45	3	P	P	10 47 08.9	+2.9
	comp=E,3.0nm,0.9s,baz=202,slow=12,SNR=2.4						
MKAR	Makanchi Array	45.33	58	P	P	10 49 02.0	-0.9
	comp=E,0.2nm,0.4s,baz=272,slow=6.9,SNR=6.8						
ZALV	Zalesovo Beam	45.70	48	P	P	10 49 04.5	-1.2
	comp=E,0.8nm,0.4s,baz=277,slow=7.6,SNR=4.0						

SGS 04 10:43:20, 15.°27N×43.°18E, h8km, Ml3.7, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
JAZS2	Jazan	1.49	355	P	Pn	10 43 45.3	-1.7
FRSS	Farasan al Kab	1.78	325	P	Pn	10 43 49.5	-1.5
FRSS				S	Sn	10 44 11.8	-2.1
JAZS	Jizan	1.81	352	P	Pn	10 43 49.7	-1.7
JAZS				S	Sn	10 44 13.4	-1.2
BESHS	BESHS	2.11	351	P	Pn	10 43 54.4	-1.3
DJNS	Zahran al Janu	2.44	8	P	Pn	10 43 60.0	-0.5
NJRNS	Najran	2.56	22	P	Pn	10 44 00.6	-1.4
DRBS	Ad Darb	2.68	342	P	Pn	10 44 02.5	-0.9

MOS **04** *10:44:18.0±0.9, 3.°07S×137.°57E, h36km, mb5.0/19, Error ellipse: s-maj=14.3km s-min=7.1km az=115.9*
BJI **04** *10:44:20.0±0.0, 3.°20S×137.°70E, h63km, mB5.1/32, mb4.8/48, Ms4.7/10, Ms7 4.4/9*
KLM **04** *10:44:21.0, 2.°99S×137.°92E, h53km, mb4.8*
NEIC **04** *10:44:22.3±1.9, 3.°20S±0.°07×137.°55E±0.°06, h65km±4km, mb4.9/64, Error ellipse: s-maj=11.2km s-min=8.1km az=219.0*
DJA **04** *10:44:22.1±0.2, 3.°S±3.°×13.°8E±.°, h64km±6km, M4.8/19, mb4.9/19, mB5.3/11, MLv5.0/8, Mw(mB)4.7/11*
IDC **04** *10:44:22.2±0.7, 3.°08S×137.°61E, h58km±6km, mb4.3/10, mb1 4.5/13, mb1mx4.3/25, mbtmp4.7/13, MS3.6/15, Ms1 3.6/15, ms1mx3.3/38, Error ellipse: s-maj=18.5km s-min=12.1km az=57.0*
ISC 04 10:44:21.2±0.3,**3.°22S**±0.°04×**137.°61E**±0.°04,**h54km, n202,** σ1§**83**/214, **mb4.8**/55, **MS3.7**/12, **2C, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
SMPI	Sarmi	1.64	42	P	Pn	10 44 45.8	-1.9
SMPI				S	Sn	10 45 02.1	-5.6
GENI	Genyem	2.63	76	P	Pn	10 45 01.4	+0.3
GENI				S	Sn	10 45 31.2	-0.6
RKPI	Ransiki, Papua	3.83	296	P	Pn	10 45 19.3	+1.7
RKPI				S	Sn	10 46 01.7	+0.3
KMPI	Kaimana, Papua	3.93	263	P	Pn	10 45 21.9	+3.0
KMPI				S	Sn	10 46 12.7	+8.9
FAKI	Fak Fak	5.37	273	P	Pn	10 45 40.2	+1.5
	1.2nm2µm100nm,1.0s						
FAKI				S	Sn	10 46 38.8	-0.4
	1.2nm2µm100nm,1.0s						
FAKI	Fak Fak	5.37	273		Pn	10 45 39.7	+1.0
FAKI				Sn	Sn	10 46 39.7	+0.5
MMPI	Merauke	5.90	152	P	Pn	10 45 50.6	+4.6
	0.1nm72nm4.6nm,0.5s						
MMPI				S	Sn	10 46 56.7	+4.5
	0.1nm72nm4.6nm,0.5s						
SIJI	Sorong	6.76	290	P	Pn	10 45 59.0	+1.2
	34nm,0.3s,baz=66,slow=11,SNR=93						
SIJI				S	Sn	10 47 10.8	-2.7
	4.0nm,0.3s,baz=340,slow=22,SNR=1.3						
SIJI				LR	LR	10 49 15.3	
	comp=Z,510nm,19.8s,baz=294,slow=44						
SWI	Sorong	6.77	290	P	Pn	10 45 59.5	+1.6
	1.2nm3µm342nm,0.6s						
SAUI	Saumlaki	7.86	233	Pn	Pn	10 46 09.8	-3.2
SAUI				Sn	Sn	10 47 40.6	0.0
AAI	Ambon	9.41	267	P	Pn	10 46 32.1	-2.1
	2µm60nm,0.9s						
LBMI	Labuha	10.43	284	P	Pn	10 46 48.7	+0.6
	79nm,0.9s						
NLAI	Namlea	10.50	270	P	Pn	10 46 46.1	-2.9
PMG	Port Moresby	11.30	123	P	Pn	10 47 03.0	+2.9
	1.2nm,0.3s,baz=307,slow=4.7,SNR=7.3						
PMG				LR	LR	10 51 49.9	
	comp=Z,162nm,19.0s,baz=332,slow=39						
PMG	Port Moresby	11.30	123		Pn	10 47 00.5	+0.5
PMG	Port Moresby	11.30	123	P	Pn	10 47 00.5	+0.5
MTN	Manton Dam	11.51	213		Pn	10 47 04.7	+1.8
MTN				Sn	Sn	10 49 09.3	-0.7
SANI	Sanana	11.67	275	P	Pn	10 47 04.7	-0.4
	62nm,0.7s						
COEN	Coen	12.00	153		Pn	10 47 11.2	+1.7
COEN				Sn	Sn	10 49 20.6	-1.4
SOEI	Soe	14.76	243	P	P	10 47 49.6	-2.2
	2µm122nm,0.7s						
SOEI	Soe	14.76	243	Pn	Pn	10 47 46.6	-0.3
KNRA	Kununurra	15.14	215		Pn	10 47 53.4	+1.6
DAV	Davao City (W)	15.77	310	LR	LR	10 53 08.1	
	comp=Z,52nm,21.6s,baz=153,slow=34						
WB0	Warramunga Arr	16.74	191		Pn	10 48 12.4	+0.2
WB0				IAmb	IAmb	10 48 22.2	
	comp=Z,88nm,1.0s						
WR0	Warramunga Arr	16.91	190		P	10 48 14.8	-0.7
WR0				IAmb	IAmb	10 48 21.5	
	comp=Z,69nm,1.1s						
WRAB	Tennant Creek	16.91	191		Pn	10 48 14.4	+0.1
WRAB				IAmb	IAmb	10 48 20.5	
	comp=Z,76nm,0.7s						
WRAB	Tennant Creek	16.91	191	P	Pn	10 48 14.4	+0.1
WRAB				pmax	pmax		
	comp=Z,76nm,0.7s						
WB2	Warramunga Arr	16.92	191		Pn	10 48 14.6	+0.2
WB2				IAmb	IAmb	10 48 20.6	
	comp=Z,74nm,0.7s						
WRA	Warramunga Arr	16.93	191	P	Pn	10 48 14.5	0.0
	comp=Z,0.7nm,0.3s,baz=11,slow=11,SNR=31						
WRA				S	Sn	10 51 13.2	-8.6
	comp=Z,1.7nm,0.3s,baz=8.6,slow=22,SNR=10						
WRA				LR	LR	10 55 18.1	
	comp=Z,427nm,18.6s,baz=15,slow=38						
WRA	Warramunga Arr	16.93	191		Pn	10 48 12.7	-1.8
WRA					Sn	10 51 15.8	-6.0
GUMO	Guam	18.19	23	LR	LR	10 54 19.0	
	comp=Z,259nm,20.6s,baz=214,slow=33						
CTA	Charters Tower	18.77	154	P	Pn	10 48 40.8	+3.9
	comp=Z,0.7nm,0.3s,baz=328,slow=11,SNR=8.7						
FITZ	Fitzroy Crossi	18.88	218	P	Pn	10 48 39.8	+1.5
	comp=Z,6.5nm,0.3s,baz=44,slow=12,SNR=30						
FITZ				S	Sn	10 52 00.3	-8.6
	comp=Z,7.3nm,0.3s,baz=162,slow=8.2,SNR=15						
FITZ				LR	LR	10 56 01.5	
	comp=Z,231nm,21.7s,baz=26,slow=37						
FITZ	Fitzroy Crossi	18.88	218		Pn	10 48 38.8	+0.5
FITZ				IAmb	IAmb	10 48 45.0	
	comp=Z,41nm,0.6s						
FITZ					Sn	10 51 59.3	-10
AS31	Alice Springs	20.64	190	P	Pn	10 48 59.3	+0.1
AS31				IAmb	IAmb	10 49 13.9	
	comp=Z,30nm,0.8s						
ASAR	Alice Springs	20.64	190	P	Pn	10 48 59.1	0.0
	comp=Z,28nm,0.4s,baz=14,slow=10,SNR=296						
ASAR				S	S	10 52 44.6	+0.3
	comp=Z,18nm,0.9s,baz=7.5,slow=28,SNR=5.9						
ASAR				LR	LR	10 57 42.7	
	comp=Z,342nm,18.2s,baz=6.0,slow=38						
ASAR	Alice Springs	20.64	190	P	Pn	10 48 58.4	-0.8
ASAR					S	10 52 45.2	+1.0
ASAR	Alice Springs	20.64	190	P	Pn	10 48 58.4	-0.8
ASAR				S	S	10 52 45.2	+1.0
SPMM	Sapulut	22.55	290	P	P	10 49 19.0	+2.0
KKM	Kota Kinabalu	23.27	293	P	P	10 49 25.6	+1.2
KKM				IAmb	IAmb	10 49 27.1	
	comp=Z,54nm,1.0s						
TGY	Tagaytay City	23.87	317	P	P	10 49 29.2	-0.7
	comp=Z,172nm,0.4s,baz=217,slow=2.4,SNR=6.8						
JAGI	Jajag, Banyuwa	23.91	256	P	P	10 49 29.9	-0.4
JAGI				IAmb	IAmb	10 49 32.0	
	comp=Z,90nm,1.4s						
PSA00	Pilbara Seismi	25.12	222	P	P	10 49 42.3	+1.1
PSA00	Pilbara Seismi	25.12	222	P	P	10 49 42.4	+1.1
PSA00				IAmb	IAmb	10 49 46.0	
	comp=Z,5.4nm,0.7s						
SBUM	Sibu	26.00	282	P	P	10 49 49.2	0.0
SBUM	Sibu	26.00	282	P	P	10 49 51.0	+1.7
STKA	Stephens Creek	28.75	173	P	P	10 50 14.8	+1.0
	comp=Z,4.5nm,0.7s,baz=340,slow=8.3,SNR=13						
STKA				LR	LR	11 01 38.0	
	comp=Z,113nm,21.0s,baz=0.7,slow=36						
STKA	Stephens Creek	28.75	173	P	P	10 50 14.8	+1.0
STKA	Stephens Creek	28.75	173	eP	P	10 50 15.3	+1.6
FORT	Forrest	28.86	197	P	P	10 50 14.1	-0.6
FORT				IAmb	IAmb	10 50 23.4	
	comp=Z,26nm,0.8s						
BBOO	Buckleboo	29.47	183	P	P	10 50 20.3	+0.1
BBOO				IAmb	IAmb	10 50 28.6	
	comp=Z,28nm,1.4s						
GIRL	Giralia	29.77	228	P	P	10 50 22.7	-0.2
ARMA	Armidale	30.13	155	P	P	10 50 26.0	-0.1
TPUB	Ta-pu	31.13	329	P	P	10 50 33.5	-1.4
YHNB	Yeheng	31.90	331	P	P	10 50 41.9	+0.2
DLV	T Lat	32.64	298	P	P	10 50 48.5	0.0
DLV				IAmb	IAmb	10 50 49.4	
	comp=Z,15nm,0.9s						
MORW	Morawa	32.88	216	P	P	10 50 50.6	+0.4
QIZ	Qiongzhong	35.15	310	P	P	10 51 09.5	-0.5
NWAO	Narrogin (SRO)	35.18	211	P	P	10 51 11.3	+1.2
NWAO				IAmb	IAmb	10 51 14.5	
	comp=Z,28nm,1.2s						
NWAO	Narrogin (SRO)	35.18	211	P	P	10 51 11.3	+1.2
NWAO				IAmb	IAmb	10 51 12.1	
	comp=Z,35nm,1.5s						
NWAO	Narrogin (SRO)	35.18	211	P	P	10 51 11.3	+1.2
NWAO				pmax	pmax		
	comp=Z,35nm,1.5s						
JNU	Nakatsue	36.70	351	LR	LR	11 04 11.1	
	comp=Z,78nm,20.8s,baz=155,slow=32						
UBPT	Khong Chiam	36.75	301	P	P	10 51 24.1	+0.4
SSE	Sheshan	37.55	337	P	P	10 51 30.6	+0.4
KULM	Kulim	37.88	283	P	P	10 51 33.3	-0.1
KULM				IAmb	IAmb	10 51 43.1	
	comp=Z,11nm,1.2s						
RPSI	Rantau Prapat	39.12	278	P	P	10 51 43.2	-0.6
PSI	Prapat	39.13	278	P	P	10 51 43.2	-0.8
PSI				pmax	pmax		
	comp=Z,23nm,0.9s						
NJ2	Nanjing	39.34	334	eP	P	10 51 47.1	+1.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WHN	Wuhan	40.26	328	P	P	10 51 55.1	+2.1
SLVN	Son La	41.05	308	P	P	10 51 58.4	-1.3
SLVN				IAmb	IAmb	10 52 01.7	
	comp=Z,20nm,1.0s						
PBKT	Sadao Pong	41.20	300	P	P	10 51 58.1	-2.8
PBKT				IAmb	IAmb	10 52 02.4	
	comp=Z,16nm,1.2s						
KSRS	Korea Array	41.46	348	LR	LR	11 07 12.0	
	comp=Z,30nm,21.8s,baz=155,slow=33						
LHMI	Lhok Sumawe	41.48	282	P	P	10 52 02.4	-0.9
ENH	Enshi	42.80	323	P	P	10 52 12.8	-1.0
CM31	Chiang Mai Arr	43.75	301	P	P	10 52 22.3	+0.6
CMAR	Chiang Mai Arr	43.75	301	P	P	10 52 22.6	+1.0
	comp=Z,22nm,0.8s,baz=123,slow=6.5,SNR=127						
CHTO	Chiang Mai	43.90	301	P	P	10 52 23.4	+0.5
CHTO				IAmb	IAmb	10 52 24.5	
	comp=Z,26nm,0.8s						
CHTO	Chiang Mai	43.90	301	P	P	10 52 23.4	+0.5
CHTO				pmax	pmax		
	comp=Z,27nm,0.9s						
XAN	Xi'an	45.88	326	P	P	10 52 37.9	-0.5
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,150nm,5.0s						
XAN	Xi'an	45.88	326	P	P	10 52 38.2	-0.2
XAN	Xi'an	45.88	326	P	P	10 52 38.2	-0.2
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						

CD2 Chengdu 46.83 319 P P 10 52 45.9 -0.1
CD2 pmax pmax
comp=Z,20nm,0.5s
BJT Baijiatuau 47.32 338 P P 10 52 49.4 -0.1
BJT Baijiatuau 47.32 338 P P 10 52 49.4 -0.1
BJT pmax pmax
comp=Z,6.0nm,0.8s
USRK Ussuriysk Ar. 47.48 355 P P 10 52 50.5 -0.1
comp=Z,2.2nm,0.6s,baz=181,slow=7.2,SNR=9.0
USRK Ussuriysk Ar. 47.48 355 P P 10 52 49.3 -1.3
USRK Ussuriysk Ar. 47.48 355 P P 10 52 49.3 -1.3
MDJ Mudanjiang 48.16 352 P P 10 52 55.7 -0.3
MDJ IAmb IAmb 10 52 57.0
comp=Z,20nm,1.0s
HHC Hu-ho-hao-te 49.90 334 eP P 10 53 12.2 +2.7
HHC pmax pmax
comp=Z,3.0nm,1.1s
HHC pmax pmax
comp=Z,26nm,5.8s
LZH Lanzhou 50.24 324 eP P 10 53 13.2 +1.0
LZH pP sP 10 53 29.8 -3.1
LZH sP pP 10 53 37.5 +11
LZH ePP PP 10 55 10.4 +2.3
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,110nm,6.6s
LZH LR LR
comp=Z,350nm,14.0s
LZH LR LR
comp=Z,370nm,14.2s
LZH LR LR
comp=Z,470nm,17.0s
BKZ Black Stump Fm 50.26 141 P P 10 53 12.3 +0.1
BKZ IAmb IAmb 10 53 13.8
comp=Z,17nm,1.2s
KLR Kul'dur 52.49 355 i P P 10 53 28.0 -0.6
KLR pmax pmax
comp=Z,5.0nm,0.5s
SHL Shillong 52.73 306 P P 10 53 30.8 -0.3
SHL Shillong 52.73 306 P P 10 53 30.8 -0.3
SHL pmax pmax
comp=Z,29nm,1.0s
GTA Gaotai 54.84 324 ⇑P P 10 53 46.4 +0.2
GTA pP pP 10 53 58.5 -2.3
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,54nm,5.2s
GTA LR LR
comp=Z,91nm,19.4s
GTA LR LR
comp=Z,96nm,21.0s
TAPN Taplejung 56.87 306 eP P 10 54 01.9 +0.7
ODAN Odare 56.94 305 eP P 10 54 02.4 +0.9
ZEA Zeya 57.41 353 eP P 10 54 19.6 +16
RAMN Ramite 57.62 305 eP P 10 54 07.2 +0.8
comp=Z,57nm,0.8s
SONM Songino Array 57.72 336 P P 10 54 06.7 +0.2
comp=Z,2.0nm,0.6s,baz=155,slow=8.6,SNR=18
SONM LR LR 11 18 56.4
comp=Z,47nm,20.5s,baz=92,slow=36
SONM Songino Array 57.72 336 P P 10 54 06.5 -0.1
SONM Songino Array 57.72 336 P P 10 54 06.5 -0.1
SONM pmax pmax
comp=Z,2.0nm,0.6s
JIRN Jiri 58.23 305 eP P 10 54 11.6 +0.8
comp=Z,53nm,0.7s
GUN Gumba 58.58 305 eP P 10 54 14.0 +0.8
comp=Z,60nm,0.8s
PETK Petropavlovsk- 58.61 14 LR LR 11 18 01.9
comp=Z,19nm,20.3s,baz=240,slow=34
PKI Pulchoki 58.84 305 eP P 10 54 15.3 +0.3
comp=Z,24nm,0.9s
PKIN Phulchoki 58.85 305 eP P 10 54 15.2 +0.2
KKN Kakani 59.02 305 eP P 10 54 16.7 +0.6
DMN Daman 59.10 305 eP P 10 54 17.4 +0.7
GKN Gorkha 59.63 305 eP P 10 54 21.0 +0.7
comp=Z,93nm,0.8s
KOLN Koldanda 60.40 304 eP P 10 54 26.3 +0.7
comp=Z,72nm,0.9s
DANN Dangsing 60.48 305 eP P 10 54 26.8 +0.6
comp=Z,50nm,0.8s
ZAK Zakamensk 60.99 336 eP P 10 54 28.6 -0.4
ZAK pmax pmax
comp=Z,4.0nm,1.3s
TLY Talaya 61.84 337 P P 10 54 35.3 +0.6
TLY Talaya 61.84 337 eP P 10 54 35.0 +0.3
TLY pmax pmax
comp=Z,3.0nm,0.5s
TLY MLR MLR
comp=Z,129nm,9.0s
WMQ Urumqi 64.73 322 eP P 10 54 54.4 +0.4
WMQ pmax pmax
comp=Z,11nm,0.7s
WMQ pmax pmax
comp=Z,110nm,4.1s
WMQ LR LR
comp=Z,200nm,29.1s
WMQ LR LR
comp=Z,1μm,28.9s
YAK Yakutsk 65.35 356 i P P 10 54 56.6 -0.9
YAK pmax pmax
comp=Z,6.0nm,0.6s
SEY Seymchan 66.92 7 i P P 10 55 08.4 +0.8
MK31 Makanchi Array 69.53 323 P P 10 55 22.7 -1.6
MK31 Makanchi Array 69.53 323 P P 10 55 22.7 -1.6
MK31 pmax pmax
comp=Z,10.0nm,1.4s
MKAR Makanchi Array 69.53 323 P P 10 55 24.4 +0.1
comp=Z,3.0nm,0.6s,baz=107,slow=8.0,SNR=48
MKAR pP pP 10 55 40.4 +1.0
comp=Z,2.2nm,0.6s,baz=115,slow=7.1,SNR=7.4
MKAR Makanchi Array 69.53 323 P P 10 55 23.8 -0.5
MKAR Makanchi Array 69.53 323 P P 10 55 23.8 -0.5
MAKZ Makanchi 69.72 323 P P 10 55 25.4 -0.1
MAKZ IAmb IAmb 10 55 26.7
comp=Z,13nm,1.2s
MAKZ Makanchi 69.72 323 P P 10 55 25.4 -0.1
MAKZ pmax pmax
comp=Z,13nm,1.3s
KSH Kashi 70.64 314 P P 10 55 33.2 +1.8
KSH pP pP 10 55 48.6 +2.0
KSH PP PP 10 58 15.5 +7.0
KSH S S 11 04 39.6 -2.1
KSH sS sS 11 05 08.7 +1.5
KSH pmax pmax
comp=Z,22nm,1.1s
KSH pmax pmax
comp=Z,290nm,6.6s
KSH LR LR
comp=Z,120nm,3.4s
KSH LR LR
comp=Z,75nm,4.4s
KSH LR LR
comp=Z,260nm,7.2s
NIL Nilore 70.76 307 P P 10 55 32.5 +0.4
NIL Nilore 70.76 307 P P 10 55 32.5 +0.4
NIL pmax pmax
comp=Z,24nm,0.7s
ZAA0 Zalesovo Array 71.83 330 P P 10 55 38.0 -0.1
ZALV Zalesovo Beam 71.83 330 P P 10 55 37.2 -0.9
comp=Z,3.1nm,0.7s,baz=118,slow=6.4,SNR=13
ZALV pP pP 10 55 53.9 +0.7
comp=Z,2.0nm,0.7s,baz=118,slow=5.0,SNR=3.5
ZALV Zalesovo Beam 71.83 330 P P 10 55 37.6 -0.5
ZALV Zalesovo Beam 71.83 330 P P 10 55 37.6 -0.5
AAK Ala-Archa 72.81 316 i P P 10 55 44.5 0.0
AAK pmax pmax
comp=Z,11nm,1.3s
ARSB Arslanbob 73.41 315 P P 10 55 46.8 -1.2
ARSB IAmb IAmb 10 55 49.5
comp=Z,17nm,1.0s
ARSB Arslanbob 73.41 315 P P 10 55 46.8 -1.2
ARSB pmax pmax
comp=Z,17nm,1.0s
KURK Kurchatov 73.51 325 P P 10 55 46.7 -1.4
KURK IAmb IAmb 10 55 49.8
comp=Z,13nm,1.4s
KURK Kurchatov 73.51 325 i P P 10 55 47.5 -0.6
KURK pmax pmax
comp=Z,12nm,1.9s
BILL Bilibino 73.87 11 eP P 10 55 50.2 +0.3
BILL e 10 56 05.3
BILL pmax pmax
comp=Z,1.0nm,0.8s
KBL Kabul 74.36 307 P P 10 55 53.5 -0.2
KBL IAmb IAmb 10 55 54.2
comp=Z,8.3nm,0.8s
KBL Kabul 74.36 307 P P 10 55 53.5 -0.2
KBL pmax pmax
comp=Z,8.0nm,0.8s
TIXI Tiksi 74.95 357 P P 10 55 56.3 +0.2
TIXI Tiksi 74.95 357 i P P 10 55 55.8 -0.3
TIXI pmax pmax
comp=Z,1.0nm,0.8s
VNDA Vanda 75.37 175 P P 10 55 59.5 +1.1
comp=Z,10.0nm,0.9s,baz=12,slow=6.1,SNR=5.0
VNDA LR LR 11 28 51.3
comp=Z,94nm,19.6s,baz=338,slow=35
VNDA Vanda 75.37 175 P P 10 55 59.6 +1.1
VNDA IAmb IAmb 10 56 01.2
comp=Z,21nm,1.2s
VNDA Vanda 75.37 175 P P 10 55 59.6 +1.1
VNDA pmax pmax
comp=Z,21nm,1.2s
KK31 Karatay Array 75.73 316 P P 10 56 01.0 -0.2
KK31 Karatay Array 75.73 316 P P 10 56 01.0 -0.2
KK31 pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 75.73 316 P P 10 56 01.0 -0.2
KKAR Karatay Array 75.73 316 P P 10 56 01.3 +0.1
KKAR IAmb IAmb 10 56 02.1
comp=Z,5.9nm,0.8s
KKAR Karatay Array 75.73 316 P P 10 56 01.3 +0.1
KKAR pmax pmax
comp=Z,6.0nm,0.8s
BRVK Borovoye 79.18 325 P P 10 56 20.5 +0.3
BRVK IAmb IAmb 10 56 20.9
comp=Z,7.1nm,0.7s
BRVK Borovoye 79.18 325 P P 10 56 20.5 +0.3
BRVK pmax pmax
comp=Z,7.0nm,0.7s
MAW Mawson 81.24 202 LR LR 11 28 15.1
comp=Z,82nm,21.3s,baz=62,slow=32
GEYT Alibeck 83.70 309 P P 10 56 45.0 +0.5
comp=Z,2.1nm,0.8s,baz=81,slow=2.0,SNR=6.8
PPLA Purkeypile 83.95 26 P P 10 56 44.0 -1.5
PPLA IAmb IAmb 10 56 45.4
comp=Z,14nm,1.3s
IMAR Indian Mountai 84.38 23 P P 10 56 47.3 -0.1
ABKAR Akbulak array 84.40 320 P P 10 56 47.5 -0.4
SOCY Socotra 84.45 283 P P 10 56 47.6 -1.3
SOCY IAmb IAmb 10 56 49.7
comp=Z,6.8nm,1.0s
KTH Kantishna Hill 84.71 25 P P 10 56 48.6 -0.6
KTH IAmb IAmb 10 56 48.7
comp=Z,17nm,1.5s
KNK Knik Glacier 85.18 28 P P 10 56 50.6 -0.9
MLY Manley 85.24 24 P P 10 56 50.8 -1.0
MCK McKinley 85.61 25 P P 10 56 54.2 +0.6
MCK IAmb IAmb 10 57 12.5
comp=Z,8.5nm,0.8s
MCK McKinley 85.61 25 P P 10 56 54.2 +0.6
MCK pmax pmax
comp=Z,8.0nm,0.8s
CCB Clear Creek Bu 86.33 25 P P 10 56 56.6 -0.5
CCB IAmb IAmb 10 57 15.9
comp=Z,6.3nm,0.9s
ARU Arti 86.62 327c i P P 10 56 57.6 -1.1
ARU S S 11 07 18.5 -13
ARU SS SS 11 13 13.5 +0.2
ARU pmax pmax
comp=Z,29nm,3.9s
QSPA South Pole Qui 86.73 180 P P 10 57 00.1 +0.9
ILAR Eielson Array 86.75 25 P P 10 56 57.9 -1.3
comp=Z,1.2nm,0.7s,baz=274,slow=4.2,SNR=13
ILAR pP pP 10 57 15.0 +0.3
comp=Z,1.5nm,0.9s,baz=255,slow=5.8,SNR=5.9
ILAR Eielson Array 86.75 25 P P 10 56 58.1 -1.1
ILAR Eielson Array 86.75 25 P P 10 56 58.1 -1.1
TOLK Toolik Lake Re 86.78 21 P P 10 56 59.9 +0.6
TOLK IAmb IAmb 10 57 19.1
comp=Z,8.2nm,0.9s
FYU Fort Yukon 87.84 23 P P 10 57 05.0 +0.7
BMAR Burnt Mountain 88.28 22 P P 10 57 07.3 +0.8
BCAR Beaver Creek A 88.59 27 P P 10 57 07.7 -0.4
OBN Obninsk 98.95 325 eP P 10 57 53.8 -1.9
OBN e 11 01 57.1
OBN ePPP PPP 11 04 03.7
OBN pmax pmax
comp=Z,5.0nm,1.0s
YBH Yreka Blue Hor 99.36 48 LR LR 11 33 36.8
comp=Z,27nm,21.7s,baz=302,slow=30
YKA Yellowknife Ar 101.01 27 P Pdif 10 58 04.3 -0.5
comp=Z,0.2nm,0.7s,baz=293,slow=4.8,SNR=3.6
YKA pP pP 10 58 22.0 +1.5
comp=Z,0.5nm,0.8s,baz=286,slow=5.1,SNR=6.3
MODS Modra-Piesok 112.20 322 eP Pdif 10 58 54.2 -0.7
MODS Modra-Piesok 112.20 322 ePDIFF Pdif 10 58 54.2 -0.7
GERES GERESS Array B 114.20 323 PKP PKiKP 11 02 55.0 +0.1
comp=Z,0.3nm,0.4s,baz=90,slow=4.9,SNR=2.6
GERES GERESS Array B 114.20 323 PKiKP 11 02 54.8 0.0
GERES GERESS Array B 114.20 323 i PKIKP PKPdf 11 02 54.8 -0.1
TXAR Lajitas Array 116.50 59 PKP PKPdf 11 02 59.8 -0.1
comp=Z,0.2nm,0.6s,baz=180,slow=3.1,SNR=6.2
TXAR Lajitas Array 116.50 59 PKPdf 11 02 59.4 -0.5
TXAR Lajitas Array 116.50 59 PKIKP PKPdf 11 02 59.4 -0.5
JCT Junction City 119.50 57 PKiKP 11 03 05.7 +0.1
JCT Junction City 119.50 57 PKIKP PKiKP 11 03 05.7 +0.1
PLCA Paso Flores 129.25 152 PKP PKiKP 11 03 26.1 +1.4
comp=Z,2.0nm,0.7s,baz=277,slow=4.8,SNR=6.3
PLCA Paso Flores 129.25 152 PKiKP 11 03 25.3 +0.6
PLCA Paso Flores 129.25 152 PKIKP PKiKP 11 03 25.3 +0.6
TORD Torodi Ar. Bea 135.34 285 PKP PKPdf 11 03 36.0 -0.1
comp=Z,1.5nm,0.8s,baz=77,slow=1.6,SNR=6.6
DBIC Dimbokro 142.46 277 PKhKP PKPpre 11 03 45.2
comp=Z,2.5nm,0.7s,baz=106,slow=3.8,SNR=5.8
DBIC Dimbokro 142.46 277 PKPpre 11 03 44.9
DBIC Dimbokro 142.46 277 PKIKP PKPpre 11 03 44.9
CPUP Villa Florida 147.26 155 PKPbc PKPbc 11 03 58.8 -0.6
comp=Z,8.1nm,1.1s,baz=222,slow=3.6,SNR=9.0
CPUP Villa Florida 147.26 155 PKPbc PKPbc 11 03 59.8 +0.4
CPUP Villa Florida 147.26 155 PKP2 PKPbc 11 03 59.8 +0.4
LPAZ La Paz 148.01 128 PKPbc PKPbc 11 04 01.8 -0.7
comp=Z,6.3nm,0.9s,baz=232,slow=1.4,SNR=16
LPAZ La Paz 148.01 128 PKPbc PKPbc 11 04 01.5 -1.0
LPAZ La Paz 148.01 128 PKP2 PKPbc 11 04 01.5 -1.0
RUSC La Rusia 149.29 84 PKPbc 11 04 05.5 -0.2
SDV Santo Domingo 151.37 77 PKP PKPdf 11 04 04.2 0.0
comp=Z,11nm,0.8s,baz=30,slow=2.5,SNR=4.9
SDV PKPbc PKiKP 11 04 10.7 -0.1
comp=Z,9.1nm,0.7s,baz=262,slow=2.0,SNR=9.9
SDV Santo Domingo 151.37 77 PKPdf PKPdf 11 04 04.0 -0.2
SDV PKPbc PKiKP 11 04 10.6 -0.2
SDV PKPab PKPab 11 04 17.1 -1.4

IDC 04 10:47:18.0±34.0, 22°.10S×68°.28E, h0km, mb3.9/3, mb1 3.9/3, mb1mx3.6/42, mbtmp3.9/3, MS3.7/8, Ms1 3.7/8, ms1mx3.3/48, Error ellipse: s-maj=889.8km s-min=270.7km az=31.0, Mid-Indian Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
H08S1 Diego Carcia H 14.92 16 T T 11 05 54.9
baz=193,slow=75,SNR=20
H08S2 Diego Garcia H 14.93 16 T T 11 05 56.7
baz=193,slow=75,SNR=25
H08S3 Diego Garcia H 14.94 16 T T 11 05 54.0
baz=193,slow=75,SNR=39
KMBO Kilima Mbogo 36.69 300 LR LR 11 06 25.8
comp=Z,50nm,18.7s,baz=84,slow=31
BOSA Boshof 39.26 251 LR LR 11 07 57.5
comp=Z,85nm,20.4s,baz=36,slow=32
CMAR Chiang Mai Arr 50.24 39 LR LR 11 15 52.4
comp=Z,75nm,18.5s,baz=225,slow=34
FITZ Fitzroy Crossi 53.76 97 LR LR 11 17 28.6
comp=Z,74nm,18.0s,baz=277,slow=34
ASAR Alice Springs 59.98 105 LR LR 11 20 04.7
comp=Z,82nm,20.6s,baz=324,slow=33
STKA Stephens Creek 64.97 116 LR LR 11 22 41.0
comp=Z,79nm,18.4s,baz=194,slow=33
MKAR Makanchi Array 69.72 10 P P 10 58 29.6 0.0
1.1nm,0.8s,baz=190,slow=6.0,SNR=5.0
DBIC Dimbokro 77.05 283 LR LR 11 30 47.0
comp=Z,33nm,20.4s,baz=80,slow=34
ZALV Zalesovo Beam 77.06 10 P P 10 59 12.7 +0.1
1.1nm,0.5s,baz=213,slow=5.1,SNR=4.3
SONM Songino Array 77.57 25 P P 10 59 15.9 0.0
0.4nm,0.7s,baz=190,slow=4.1,SNR=3.6
KRVT Keravat (AS076 82.61 92 LR LR 11 33 56.3
comp=Z,55nm,19.2s,baz=129,slow=34

IDC 04 11:00:21.1±1.8, 21°.29S×178°.87W, h535km±19km, mb3.4/15, mb1 3.6/16, mb1mx3.4/46, mbtmp4.2/16, Error ellipse: s-maj=19.7km s-min=11.9km az=141.0
NEIC 04 11:00:22.1±2.3, 21°.3S±0°.1×178°.9W±0°.1, h558km±7km, mb4.6/43, Error ellipse: s-maj=18.3km s-min=13.4km az=124.0
ISC 04 11:00:21.9±0.4, 21°.31S±0°.07×178°.86W±0°.07, h550km, n87, σ1.39/88, mb4.3/32, Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSVF Nonsavu 4.60 320 P P 11 01 52.2 +3.5
RAO Raoul Island 7.95 174 P P 11 02 18.5 -0.5
RAO S S 11 03 56.1 +1.0
NIUE Niue 8.68 77 P P 11 02 27.9 +1.4
AFI Afiamalu 9.99 44 P P 11 02 39.2 -0.8
3.1nm,0.3s,baz=165,slow=22,SNR=2.1
AFI S S 11 04 27.7 -5.6
1.4nm,0.3s,baz=73,slow=24,SNR=2.4
AFI Afiamalu 9.99 44 P P 11 02 39.1 -0.8
AFI S 11 04 31.2 -2.0
NOUC Port Laguerre 13.82 264 P P 11 03 19.8 +0.6
OUZ Omahuta 15.36 204 P P 11 03 34.2 -0.7
OUZ IAmb IAmb 11 03 39.6
comp=Z,23nm,1.3s
URZ Urewera 17.24 191 P P 11 03 49.7 -2.9
comp=Z,3.7nm,0.3s,baz=284,slow=3.6,SNR=10
URZ Urewera 17.24 191 P P 11 03 50.0 -2.7
URZ IAmb IAmb 11 03 52.1
comp=Z,15nm,0.9s
HIZ Hauiti 17.98 196 P P 11 04 00.2 +0.8
BKZ Black Stump Fm 18.23 192 P P 11 03 59.2 -2.7
BKZ IAmb IAmb 11 04 05.4
comp=Z,21nm,1.3s
KNTN Kanton 19.70 22 P P 11 04 15.1 -0.3
BHW Baring Head 20.72 193 P P 11 04 24.9 +0.5
QRZ Quartz Range 20.78 199 P P 11 04 24.2 -0.7
NNZ Nelson 20.90 197 P P 11 04 25.4 -0.6
BSWZ Blackbirch Sta 21.25 195 P P 11 04 28.9 -0.2
THZ Tophouse 21.54 197 P P 11 04 30.8 -1.0
KHZ Kahutara 21.99 195 P P 11 04 34.5 -1.1
LTZ Lake Taylor 22.66 197 P P 11 04 39.5 -2.3
LTZ IAmb IAmb 11 04 47.5
comp=Z,18nm,1.1s
OXZ Oxford 23.23 197 P P 11 04 45.3 -1.5
OXZ IAmb IAmb 11 05 03.2
comp=Z,35nm,1.4s
MQZ McQueen's Vall 23.42 196 P P 11 04 46.6 -1.9
RPZ Rata Peaks 23.86 198 P P 11 04 51.7 -0.8
RPZ IAmb IAmb 11 04 59.1
comp=Z,15nm,1.2s
FOZ Fox Glacier 24.08 200 P P 11 04 52.5 -1.8
FOZ IAmb IAmb 11 04 53.2
comp=Z,19nm,1.3s
WKZ Wanaka 25.50 200 P P 11 05 05.8 -1.1
MLZ Mavora Lakes 26.27 201 P P 11 05 13.8 +0.1
MLZ IAmb IAmb 11 05 29.5
comp=Z,29nm,1.4s
WHZ Wether Hill Ro 26.79 201 P P 11 05 19.0 +0.8
WHZ IAmb IAmb 11 05 19.6
comp=Z,12nm,0.7s
CTA Charters Tower 32.62 266 P P 11 06 09.1 +0.1
comp=Z,2.1nm,0.4s,baz=87,slow=11,SNR=5.8
STKA Stephens Creek 36.72 245 P P 11 06 43.4 +0.4
comp=Z,3.4nm,0.8s,baz=76,slow=12,SNR=2.8
STKA Stephens Creek 36.72 245 P P 11 06 40.5 -2.5
BBOO Buckleboo 41.47 244 P P 11 07 20.4 -0.9
BBOO IAmb IAmb 11 07 37.8
comp=Z,44nm,1.4s
WR0 Warramunga Arr 43.51 263 P P 11 07 36.5 -0.9
WR0 IAmb IAmb 11 07 44.6
comp=Z,13nm,1.4s
ASAR Alice Springs 43.56 258 P P 11 07 37.6 -0.1
comp=Z,3.2nm,0.6s,baz=99,slow=7.8,SNR=37
ASAR PcP PcP 11 09 13.2 0.0
comp=Z,0.7nm,0.6s,baz=91,slow=4.8,SNR=5.3
ASAR ScP ScP 11 12 14.0 +1.4
comp=Z,0.5nm,0.8s,baz=95,slow=4.2,SNR=3.5
ASAR S S 11 13 24.0 -3.4
comp=Z,0.9nm,0.9s,baz=99,slow=15,SNR=5.1
ASAR Alice Springs 43.56 258 P P 11 07 37.1 -0.7
WB0 Warramunga Arr 43.68 263 P P 11 07 38.5 -0.3
WB2 Warramunga Arr 43.69 263 P P 11 07 38.5 -0.3
WB2 IAmb IAmb 11 07 49.6
comp=Z,19nm,1.4s
WRA Warramunga Arr 43.70 263 P P 11 07 38.2 -0.7
comp=Z,2.8nm,0.8s,baz=95,slow=7.7,SNR=23
WRA Warramunga Arr 43.70 263 P P 11 07 37.0 -1.9
FITZ Fitzroy Crossi 52.13 263 P P 11 08 42.1 +0.3
PSA00 Pilbara Seismi 56.71 258 P P 11 09 13.1 -0.9
QSPA South Pole Qui 68.76 180 P P 11 10 31.7 +0.8
comp=Z,2.9nm,0.7s,baz=23,slow=1.0,SNR=22
QSPA South Pole Qui 68.76 180 P P 11 10 31.4 +0.5
KKM Kota Kinabalu 69.20 286 P P 11 10 34.8 +0.3
KKM IAmb IAmb 11 10 50.8
comp=Z,14nm,1.1s
MJAR Matsushiro Arr 70.39 324 P P 11 10 41.5 +0.6
comp=Z,3.5nm,0.6s,baz=127,slow=5.6,SNR=9.5
JNU Nakatsue 72.32 317 P P 11 10 51.0 -1.4
JNU IAmb IAmb 11 11 02.6
comp=Z,25nm,1.3s
YOJ Yonaguni jima 72.55 306 P P 11 10 53.7 -0.1
ADK Adak 72.91 1 P P 11 10 56.2 +1.0
ADK IAmb IAmb 11 11 07.3
comp=Z,27nm,0.9s
YULB Yu-li 73.28 304 P P 11 10 56.3 -1.7
YULB IAmb IAmb 11 11 01.3
comp=Z,26nm,1.1s
TPUB Ta-pu 73.75 304 P P 11 10 59.6 -1.1
SSLB Suanglung 73.76 304 P P 11 10 59.9 -0.9
SSLB IAmb IAmb 11 11 10.1
comp=Z,13nm,1.0s
PETK Petropavlovsk- 76.85 346 P P 11 11 17.9 +0.7
comp=Z,6.6nm,0.9s,baz=188,slow=4.5,SNR=7.8
PETK Petropavlovsk- 76.85 346 P P 11 11 17.7 +0.4
USRK Ussuriysk Ar. 79.19 326 P P 11 11 30.8 +0.8
comp=Z,1.3nm,0.6s,baz=138,slow=2.8,SNR=4.9
USRK Ussuriysk Ar. 79.19 326 P P 11 11 28.4 -1.5
PNTR Pine Nut 81.72 43 P P 11 11 44.3 +0.8
YERR Yerington 81.89 43 P P 11 11 45.1 +0.7
NVAR Mina Array Bea 82.17 44 P P 11 11 47.5 +1.6
comp=Z,0.5nm,0.6s,baz=227,slow=8.2,SNR=6.1
NVAR Mina Array Bea 82.17 44 P P 11 11 44.9 -1.0
NV11 Mina Array Sit 82.26 44 P P 11 11 47.3 +1.0
I07A Izee 84.72 39 P P 11 12 00.1 +1.8
BARN Barnard Glacie 87.39 17 P P 11 12 12.0 +1.3
BARN IAmb IAmb 11 12 12.8
comp=Z,6.9nm,0.8s
TRF Thorofare Moun 87.41 12 P P 11 12 10.2 -0.4
TRF IAmb IAmb 11 12 11.8
comp=Z,10nm,0.8s
RND Reindeer 87.67 13 P P 11 12 12.0 +0.2
RND IAmb IAmb 11 12 13.1
comp=Z,8.8nm,0.7s
TXAR Lajitas Array 88.17 58 P P 11 12 15.7 +0.7
comp=Z,0.2nm,0.8s,baz=235,slow=4.1,SNR=3.8
IL31 89.28 13 P P 11 12 18.9 -0.2
IL31 IAmb IAmb 11 12 20.8
comp=Z,5.8nm,1.4s
ILAR Eielson Array 89.28 13 P P 11 12 19.4 +0.2
comp=Z,1.1nm,0.3s,baz=217,slow=5.3,SNR=38
CMAR Chiang Mai Arr 89.63 290 P P 11 12 23.5 +1.6
comp=Z,0.9nm,0.3s,baz=138,slow=3.5,SNR=7.8
PDAR Pinedale Array 90.10 44 P P 11 12 25.2 +1.4
comp=Z,0.5nm,0.8s,baz=211,slow=3.2,SNR=5.3
INK Inuvik 95.27 15 P P 11 12 46.5 0.0
comp=Z,0.3nm,0.5s,baz=194,slow=3.4,SNR=4.7
INK Inuvik 95.27 15 P P 11 12 46.7 +0.2
YKA Yellowknife Ar 97.58 25 P Pdif 11 12 57.2 +0.2
comp=Z,0.1nm,0.5s,baz=241,slow=4.5,SNR=4.2
MKAR Makanchi Array 111.17 313 PKiKP PKiKP 11 17 52.0 -1.3
comp=Z,0.2nm,0.4s,baz=152,slow=0.8,SNR=3.3
MKAR Makanchi Array 111.17 313 PKiKP 11 17 52.3 -1.0
BVAR Borovoye Array 119.18 320 PKP PKPdf 11 18 07.9 -0.5
comp=Z,1.2nm,0.4s,baz=120,slow=2.9,SNR=14
SPITS Spitsbergen Ar 122.62 356 PKP PKPdf 11 18 14.4 0.0
comp=Z,3.2nm,0.6s,baz=108,slow=5.4,SNR=7.7
ARCES ARCESS Array B 129.57 349 PKP PKPdf 11 18 27.6 -0.2
comp=Z,2.3nm,0.4s,baz=343,slow=1.6,SNR=4.7

ARCES	ARCESS Array B	129.57	349		PKPdf	11 18 27.9	0.0
FINES	FINESS Array B	136.32	343	PKhKP	PKPpre	11 18 33.2	
	comp=Z,1.6nm,0.8s,baz=359,slow=17,SNR=2.2						
FINES	FINESS Array B	136.32	343	PKPdf	PKPdf	11 18 38.8	-1.9
HFS	Hagfors	140.21	350	PKhKP	PKPpre	11 18 41.2	
	comp=Z,1.7nm,0.3s,baz=54,slow=2.6,SNR=17						
AKASG	Malin Array Be	143.32	330	PKP	PKPab	11 18 51.5	-0.3
	comp=Z,1.8nm,0.5s,baz=43,slow=4.4,SNR=30						
AKBB	Malin Array Si	143.32	330		PKPab	11 18 51.7	-0.1
EKA	Eskdalemuir Ar	145.88	4	PKPbc	PKPdf	11 18 59.4	+1.4
	comp=Z,2.5nm,0.6s,baz=355,slow=3.2,SNR=6.5						
BRTR	Keskin Array B	146.78	311	PKPbc	PKPbc	11 19 02.7	-0.2
	comp=Z,1.2nm,0.5s,baz=137,slow=5.5,SNR=7.4						
BRTR	Keskin Array B	146.78	311		PKPdf	11 19 01.7	+1.6
CLL	Collm	148.66	346	*i* PKPbc	PKPbc	11 19 07.9	+0.8
GERES	GERESS Array B	150.75	343	PKPbc	PKPbc	11 19 12.5	+0.2
	comp=Z,1.9nm,0.6s,baz=29,slow=3.0,SNR=13						
GERES	GERESS Array B	150.75	343		PKPbc	11 19 12.4	0.0

UCR ***04*** *11:06:57.6±2.1, 6°.75N×82°.78W, h24km±55km*
UPA ***04*** *11:06:59.5±1.9, 6°.94N×82°.62W, h14km±19km, MW4.5*
ISC 04 11:06:56.7±3.5, **6°.9N**±0°.1×**82°.62W**±0°.07, **h3**km±25km, **n26**, σ1s08/34, **2C, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBAR3	San Bartolo, C	1.42	349	*e*P	Pg	11 07 30.0	+6.1
PEDE3	Pedregal, Chir	1.47	8⇑	*e*P	Pn	11 07 12.8	-11
DVD	David	1.52	6	*e*P	Pn	11 07 24.3	-0.4
DVD				*e*S	Sn	11 07 43.4	-1.6
NANC3	Nancito, Chiri	1.58	34⇑	*e*P	Pb	11 07 26.3	-0.3
GMAL	Guarumal, Vera	1.61	59	*e*P	Pb	11 07 26.9	-0.2
GMAL				*e*S	Sn	11 07 47.5	+0.1
GMAL	Guarumal, Vera	1.61	59	*e*P	Pn	11 07 26.3	+0.2
BCO2	Palmira	1.79	3	*e*P	Pn	11 07 29.0	+0.3
BCO2				*e*S	Sn	11 07 51.5	-0.5
CACAO	El Cacao, Vera	1.80	76	*e*P	Pn	11 07 28.7	+0.1
CACAO				*e*S	Sn	11 07 49.7	-2.2
BRU2	Volcan	1.87	358	*e*P	Pn	11 07 30.0	+0.4
BRU2				*e*S	Sn	11 07 51.9	-2.0
BRU2	Volcan	1.87	358	*e*P	Pn	11 07 29.8	+0.1
PONU3	Ponuga, Veragu	1.89	59	*e*P	Pn	11 07 28.7	-1.2
EDSV	San Vito	1.92	350	*e*P	Pn	11 07 30.6	+0.2
EDSV				*e*S	Sn	11 07 55.4	+0.2
STIA3	Santiago, Vera	2.01	54	*e*P	Pb	11 07 33.0	-1.0
CHGR2	Aguacate	2.06	13	*e*P	Pn	11 07 32.6	+0.4
CHGR2				*e*S	Sn	11 07 58.5	0.0
OCU3	Ocu, Herrera	2.10	61	*e*P	Pn	11 07 34.0	+1.3
SFRA3	San Francisco,	2.10	51	*e*P	Pn	11 07 34.1	+1.3
AZU	Azuero	2.48	69	*e*P	Pn	11 07 39.4	+1.4
AZU				*e*S	Sn	11 08 08.6	-0.3
AZU	Azuero	2.48	69	*e*P	Pn	11 07 39.1	+1.1
CNI2	El Empalme, Bo	2.50	3	*e*P	Pn	11 07 39.0	+0.8
CNI2				*e*S	Sn	11 08 11.0	+1.8
EDLM	Las Mercedes	2.54	338	*e*P	Pn	11 07 38.5	-0.3
LCR2	La Lucha 2	3.12	334	*e*P	Pn	11 07 47.0	-0.1
HDC	Heredia	3.40	334	*e*P	Pn	11 07 51.4	+0.6
HDC				*e*S	Sn	11 08 33.0	+1.2
BCIP	Isla Barro Col	3.55	51	*e*P	Pn	11 07 55.3	+2.6
JTS	Las Juntas de	4.07	326	*e*P	Pn	11 07 60.0	+0.1
ARE1	Arenal 1	4.09	330	*i* P	Pn	11 08 01.1	+0.9
CUI	Cuipilapa	4.49	326	*e*P	Pn	11 08 06.1	+0.5

IDC ***04*** *11:08:17.4±1.0, 38°.32N×20°.37E, h0km, mb3.6/12, mb1 3.7/15, mb1mx3.6/50, mbtmp3.6/15, ML3.7/3, Error ellipse: s-maj=19.6km s-min=15.5km az=74.0*
PDG ***04*** *11:08:18.7±0.4, 38°.15N×20°.31E, h12km, ML3.9/13, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*
ATH ***04*** *11:08:19.2, 38°.15N×20°.41E, h14km±1km, ML3.4/6, Error ellipse: s-maj=1.9km s-min=1.0km az=256.0*
NEIC ***04*** *11:08:19.4±3.3, 38°.18N±0°.04×20°.33E±0°.05, h10km±3km, Error ellipse: s-maj=6.6km s-min=5.3km az=211.0*
THE ***04*** *11:08:19.4, 38°.15N×20°.38E, h12km, ML3.9/10, Error ellipse: s-maj=0.8km s-min=0.6km az=267.0*
BEO ***04*** *11:08:20.2±0.7, 38°.03N×20°.12E, h33km±4km, ML3.5/13*
ISC 04 11:08:19.1±0.6, **38°.16N**±0°.02×**20°.38E**±0°.02, **h13**km±3km, **n172**, σ1s32/235, **mb3.8**/16, **2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	3	P	Pg	11 08 21.7	+0.2
CHV1				S	Sg	11 08 23.3	+0.2
	603µm,0.3s						
KEF3	Kipouria, Keph	0.05	330	P	Pg	11 08 22.0	+0.3
KEF3				S	Sg	11 08 23.7	+0.3
LXR1	Lixouri, Cepha	0.06	48	P	Pg	11 08 22.1	+0.4
LXR1				S	Sg	11 08 23.8	+0.2
	905µm,0.4s						
KEF2	Argostoli. Kep	0.09	86	P	Pg	11 08 22.1	+0.1
KEF2				S	Sg	11 08 23.8	-0.2
ARG2	Argostoli	0.09	77	P	Pg	11 08 22.2	+0.2
ARG2				S	Sg	11 08 23.7	-0.3
	531µm,0.2s						
KEF4	Livadi, Kephal	0.10	20	P	Pg	11 08 22.5	+0.4
KEF4				S	Sg	11 08 24.9	+0.6
KEF1	Kardakata, Kep	0.14	31	P	Pg	11 08 22.7	+0.1
KEF1				S	Sg	11 08 25.3	+0.3
VLS	Valsamata	0.17	84	P	Pg	11 08 23.1	0.0
VLS				S	Sg	11 08 25.9	+0.1
	52µm,0.1s						
VLS	Valsamata	0.17	84	P	Pg	11 08 23.1	0.0
VLS				S	Sg	11 08 25.6	-0.2
VLS				AML	AML	11 08 26.0	
VLS				AML	AML	11 08 26.1	
VSK1	VASILIKIADES	0.29	30	P	Pg	11 08 25.4	+0.3
VSK1				S	Sb	11 08 30.4	-0.4
	20µm,0.2s						
FSK	Fiskardo	0.33	26	P	Pg	11 08 26.3	+0.4
FSK				S	Sb	11 08 31.6	-0.5
	14µm,0.3s						
VLMS	Volimes, Zakyn	0.36	142	P	Pg	11 08 26.6	+0.2
VLMS				S	Sg	11 08 31.6	+0.3
VLMS				AML	AML	11 08 37.2	
	comp=E,19815µm,0.3s						
VLMS				AML	AML	11 08 39.2	
	comp=N,29982µm,0.4s						
EVGI	Lefkada island	0.51	25	P	Pg	11 08 29.3	+0.2
EVGI				S	Sg	11 08 36.4	+0.5
EVGI	Lefkada island	0.51	25	P	Pg	11 08 29.3	+0.2
EVGI				S	Sg	11 08 36.1	+0.2
MGNA	Meganis	0.59	33	P	Pg	11 08 30.5	-0.2
MGNA				S	Sb	11 08 39.1	-0.5
MGNA				AML	AML	11 08 40.4	
	comp=N,6924µm,0.2s						
MGNA				AML	AML	11 08 40.5	
	comp=E,5813µm,0.2s						
KRI1	kERI	0.60	145	P	Pg	11 08 30.7	-0.2
LKD2	Lefkada island	0.67	19	P	Pg	11 08 31.7	-0.4
LKD2	Lefkada island	0.67	19	P	Pg	11 08 31.7	-0.4
LKD2				AML	AML	11 08 48.1	
	comp=N,3901µm,0.7s						
LKD2				AML	AML	11 08 49.9	
	comp=E,4936µm,0.3s						
AST1	Astakos	0.68	55	P	Pg	11 08 32.0	-0.3
AST1				S	Sb	11 08 42.8	+0.9
	comp=E,9µm,0.4s						
TSLK	Tsoukalades, L	0.70	18	P	Pg	11 08 32.7	0.0
TSLK	Tsoukalades, L	0.70	18	P	Pg	11 08 32.8	+0.1
PDO	Prodromos	0.77	55	P	Pg	11 08 33.9	-0.1
PDO	Prodromos	0.77	55	P	Pg	11 08 33.9	-0.1
PDO				S	Sb	11 08 44.8	+0.2
PDO				AML	AML	11 08 52.7	
	comp=N,16005µm,0.4s						
PDO				AML	AML	11 08 53.1	
	comp=E,8742µm,0.4s						
RLS	Riolos of Patr	0.86	96	P	Pg	11 08 35.2	-0.6
RLS	Riolos of Patr	0.86	96	P	Pg	11 08 35.2	-0.6
RLS				AML	AML	11 08 54.2	
	comp=E,4046µm,0.6s						
RLS				AML	AML	11 08 56.0	
	comp=N,3195µm,0.4s						
PVO	Paravola	1.01	63	P	Pg	11 08 38.6	0.0
PVO				S	Sn	11 08 54.5	+1.6
	comp=N,6µm,0.4s						
PVO	Paravola	1.01	63	P	Pg	11 08 38.6	0.0
DRO	Drossia	1.07	101	P	Pb	11 08 39.2	-0.3
DRO	Drossia	1.07	101	P	Pb	11 08 39.1	-0.3
UPR	University Cam	1.11	83	P	Pb	11 08 40.3	0.0
AMT	Artemida-Makis	1.22	120	P	Pb	11 08 42.1	0.0
EFP	Efpalio	1.23	77	P	Pn	11 08 41.4	-0.5
LAKA	Lakka	1.26	86	P	Pn	11 08 42.1	-0.3
LAKA				S	Sg	11 09 01.1	+1.3
	comp=N,702nm,0.5s						
LAKA	Lakka	1.26	86	P	Pn	11 08 42.2	-0.2
ANX	Ano Chora	1.29	70	P	Pb	11 08 43.0	-0.2
ANX	Ano Chora	1.29	70	P	Pn	11 08 42.5	-0.3
SERG	Sergoula	1.34	79	P	Pn	11 08 43.3	-0.2
SERG	Sergoula	1.34	79	P	Pn	11 08 43.3	-0.2
TRIZ	Trizonia	1.35	81	P	Pn	11 08 43.5	-0.1
TRIZ	Trizonia	1.35	81	P	Pn	11 08 43.5	-0.1
EVR	Evrytania	1.35	56	P	Pn	11 08 43.6	-0.1
EVR	Evrytania	1.35	56	P	Pb	11 08 44.1	-0.2
ALIK	Aliki, Aigiali	1.37	85	P	Pb	11 08 44.2	-0.3
IGT	Igoumenitsa	1.37	358	P	Pg	11 08 45.1	-0.4
IGT				S	Sg	11 09 03.5	+0.2
	comp=N,570nm,0.3s						
IGT	Igoumenitsa	1.37	358	*e*Pg	Pg	11 08 48.6	+3.1
IGT				*e*Sg	Sg	11 09 07.6	+4.3
KLV	Kalavryta, Ach	1.40	94	P	Pn	11 08 44.6	+0.2
KLV	Kalavryta, Ach	1.40	94	P	Pn	11 08 44.5	+0.2
KALE	Kalithea	1.40	80	P	Pn	11 08 44.4	0.0
JAN	Janina	1.54	14	P	Pg	11 08 48.1	-0.6
ITM	Ithomi	1.57	128	P	Pb	11 08 48.0	0.0
ITM	Ithomi	1.57	128		Pb	11 08 48.0	0.0
ITM					Sg	11 09 09.0	-0.6
MAKR	Makrakomi, Fth	1.62	58	P	Pb	11 08 48.9	+0.1
PYL	PYLOS	1.66	139	P	Pb	11 08 48.7	-0.8
SRN	Sarande	1.74	350	P	Pb	11 08 50.2	-0.7
AGG	Agios Georgios	1.75	60	P	Pb	11 08 51.3	+0.2
AGG	Agios Georgios	1.75	60		Pg	11 08 52.5	-0.2
AGG					Sg	11 09 16.6	+1.0
THL	Klokotos Trika	1.90	42	P	Pb	11 08 53.7	+0.2
KPRO	Kipourio	1.95	23	P	Pb	11 08 53.8	-0.7
LTK	Loutraki	2.05	93	P	Pb	11 08 55.2	-0.9
LOUT	Loutraki	2.06	94	P	Pb	11 08 54.9	-1.3
LKR	Lokris	2.12	76	P	Pb	11 08 56.4	-0.8
PENT	Pentalofos	2.12	16	P	Pb	11 08 56.8	-0.6
NEST	Nestorio	2.31	13	P	Pb	11 09 00.5	-0.2
VILL	Villia	2.31	89	P	Pb	11 08 58.7	-1.9
DID	Didima	2.35	105	P	Pb	11 08 59.6	-1.7
SCTE	Santa Cesarea	2.42	323	Pn	Pn	11 08 59.0	+0.7
SCTE				Sn	Sn	11 09 28.9	+1.1
NEO	Neokhori	2.50	62	P	Pb	11 09 01.9	-2.0
LIT	Litokhoron	2.54	40	P	Pn	11 09 02.1	+2.1
LIT	Litokhoron	2.54	40		Pn	11 08 58.8	-1.2
MRKA	Markates	2.58	77	P	Pn	11 09 02.2	+1.7
VLY	Voula,Athens	2.71	95	P	Pn	11 09 04.1	+1.8
FNA	Florina	2.73	16	P	Pn	11 09 04.6	+1.9
FNA	Florina	2.73	16	*e*Pn	Pn	11 09 05.1	+2.4
FNA				*e*Sn	Sb	11 09 39.0	-2.2
FNA	Florina	2.73	16		Pn	11 09 04.9	+2.2
KTHR	Kythira	2.83	131	P	Pn	11 09 06.4	+2.5
OHR	Ohrid	2.97	6	*e*Pn	Pn	11 09 08.1	+2.2
TIP	Timpagrande	3.01	291	P	Pn	11 09 06.4	-0.1
TIP				S	Sn	11 09 41.4	-1.1
TIP	Timpagrande	3.01	291		Pn	11 09 07.9	+1.4
TIP				Sn	Sn	11 09 43.5	+1.0
PAIG	Paliouri	3.12	54	P	Pn	11 09 09.5	+1.6
TIR	Tirane	3.21	353		Pn	11 09 11.6	+2.5
TIR				Sn	Sn	11 09 47.2	0.0
PLG	Polygyros	3.25	46	P	Pn	11 09 11.1	+1.4
CEL	Celeste	3.54	273	Pn	Pn	11 09 13.2	-0.4
CEL				Sn	Sn	11 09 54.5	-0.8
OUR	Ouranopolis	3.54	51	P	Pn	11 09 15.7	+2.0
KNT	Kendrikon	3.57	32	P	Pn	11 09 15.5	+1.3
VAY	Valandovo	3.58	27	*e*Pn	Pn	11 09 16.3	+2.1
VAY				*e*Sn	Sn	11 09 58.5	+2.1
VAY	Valandovo	3.58	27	*e*Pn	Pb	11 09 18.5	-3.7
STIP	Stip	3.79	21	*e*Pn	Pn	11 09 21.3	+4.1
SRS	Serrai	3.86	39	P	Pn	11 09 20.0	+2.0
SRS	Serrai	3.86	39	*e*Pn	Pn	11 09 20.1	+2.0
SKO	Skopje	3.89	12	*e*Pn	Pn	11 09 20.2	+1.6
ULC	Ulcinj	3.90	347	*e*Pn	Pn	11 09 18.4	-0.2
ULC				*e*Sn	Sn	11 10 05.3	+1.0
DRME	Dracevica, Mon	4.12	348	*e*Pn	Pn	11 09 22.5	+0.8
DRME				*e*Sn	Sn	11 10 11.5	+1.7
BUM	Brajici-Budva	4.29	345	*e*Pn	Pn	11 09 24.7	+0.6
BUM				*e*Sn	Sn	11 10 15.8	+1.8
ACER	Acerenza	4.32	309		Pn	11 09 25.8	+1.3
ACER				Sn	Sn	11 10 13.7	-1.0
PDG	Podgorica	4.35	349	*e*Pn	Pn	11 09 25.8	+0.9
PDG				*e*Sn	Sn	11 10 14.0	-1.4
PDG	Podgorica	4.35	349	Pn	Pn	11 09 25.8	+0.9
PDG					Sn	11 10 16.5	+1.1
TTG	Podgorica	4.35	349	*e*Pn	Pn	11 09 25.6	+0.8
TTG				*e*Sn	Sn	11 10 16.7	+1.3
SANT	Santorini	4.43	112	Pn	Pn	11 09 27.5	+1.6
SANT				Sn	Sn	11 10 17.1	-0.3
PVY	Plav	4.44	356⇓	*i*Pn	Pn	11 09 27.3	+1.1
PVY				*e*Sn	Sn	11 10 19.8	+2.0
HCY	Herceg Novi	4.52	342	*e*Pn	Pn	11 09 26.9	-0.3
HCY				*e*Sn	Sn	11 10 19.3	-0.2
CEME	Cevo	4.52	346⇓	*i*Pn	Pn	11 09 27.3	0.0
CEME				*e*Sn	Sn	11 10 19.5	-0.2
BOSS	Bosilegrad	4.62	20	*e*Pn	Pn	11 09 30.4	+1.9
IDI	Anoyia	4.62	127	Pn	Pn	11 09 29.3	+0.7
	comp=N,0.6nm,0.3s,baz=33,slow=21,SNR=1.2						
IDI				Sn	Sn	11 10 23.8	+1.7
	comp=N,2.5nm,0.3s,baz=315,slow=23,SNR=10						
IVA	Berane	4.72	356	*e*Pn	Pn	11 09 31.3	+1.3
IVA				*e*Sn	Sn	11 10 26.6	+1.9
NKME	Niksic	4.73	347	*e*Pn	Pn	11 09 30.7	+0.6
NKME				*e*Sn	Sn	11 10 26.0	+1.2
KOME	Kolasin	4.73	352	*e*Pn	Pn	11 09 31.3	+1.1
KOME				*e*Sn	Sn	11 10 26.8	+1.9
VAE	Valguarnera	4.77	264	Sn	Sn	11 10 28.9	+3.0
	comp=N,2.0nm,0.3s,baz=160,slow=11,SNR=3.1						
BARS	Barje	4.78	13	*e*Pn	Pn	11 09 31.9	+1.2
BARS				*e*Sn	Sn	11 10 25.4	-0.5
TREB	Trebinje	4.81	342	*e*Pn	Pn	11 09 30.6	-0.5
TREB				*e*Sn	Sn	11 10 25.5	-1.2
BRY	Bratogost	4.94	344	*e*Pn	Pn	11 09 32.7	-0.4
BRY				*e*Sn	Sn	11 10 31.0	+0.9
VTS	Vitosha	4.96	25	*e*Pn	Pn	11 09 35.0	+1.7
VTS				*e*Sn	Sn	11 10 30.8	+0.2
VTS	Vitosha	4.96	25	Pn	Pn	11 09 34.5	+1.2
VTS				Sn	Sn	11 10 31.6	+1.0
SGRT	San Giovanni R	5.06	317	Pn	Pn	11 09 35.2	+0.6
SGRT				Sn	Sn	11 10 31.8	-1.2
SELS	Selova	5.09	6	*e*Pn	Pn	11 09 35.2	+0.2
SELS				*e*Sn	Sn	11 10 33.9	+0.4
SJES	Sjenica	5.11	357	*e*Pn	Pn	11 09 36.7	+1.4
SJES				*e*Sn	Sn	11 10 33.0	-1.2
STON	Ston	5.13	337	*e*Sn	Sn	11 10 31.4	-3.1
UPM	Unac-Piva	5.16	348	*e*Pn	Pn	11 09 36.8	+0.6
UPM				*e*Sn	Sn	11 10 36.8	+1.2
ALN	Alexandroupoli	5.16	56	Pn	Pn	11 09 37.9	+1.9
PLE	Pljevlja	5.22	352	*e*Pn	Pn	11 09 38.2	+1.3
PLE				*e*Sn	Sn	11 10 38.0	+1.0
WDD	Wied Dalam	5.23	245	Pn	Pn	11 09 37.2	+0.3
WDD				Sn	Sn	11 10 35.3	-1.7
PAOL	Paolisi	5.33	304	Pn	Pn	11 09 39.2	+0.9
ZAPS	Zavoj	5.39	18	*e*Pn	Pn	11 09 41.5	+2.4
IVAS	Ivanjica	5.41	358	*e*Pn	Pn	11 09 39.5	0.0
IVAS				*e*Sn	Sn	11 10 40.8	-0.9
CLTB	Caltabellotta	5.70	266	Pn	Pn	11 09 45.9	+2.4
GRUS	Gruza	5.73	2	*e*Pn	Pn	11 09 43.6	-0.2
BBLS	Lazići	5.75	353	*e*Sn	Sn	11 10 48.6	-1.3
DIVS	Divibare	5.94	357	*e*Pn	Pn	11 09 47.1	+0.3
DIVS				*e*Sn	Sn	11 10 52.5	-2.2
KARP	Karpathos	6.03	114	Pn	Pn	11 09 50.8	+2.8
KARP				Sn	Sn	11 10 56.4	-0.5
TRUS	Trudelj	6.06	0	*e*Pn	Pn	11 09 49.5	+1.2
TRUS				*e*Sn	Sn	11 10 56.2	-1.3
INTR	Introdacqua	6.28	310		Pn	11 09 53.9	+2.5
FRGS	Fruska Gora	7.01	357	*e*Pn	Pn	11 10 00.0	-1.3
FRGS				*e*Sn	Sn	11 11 16.9	-3.9
NRCA	Norcia	7.24	312		Pn	11 10 06.5	+1.9
NRCA				Sn	Sn	11 11 26.8	+0.1
MURB	Monte Urbino	7.84	313	Pn	Pn	11 10 16.5	+3.6
MURB				Sn	Sn	11 11 40.4	-1.2
MLR	Muntele Rosu	8.42	28	Pn	Pn	11 10 26.9	+6.1
	comp=N,0.1nm,0.3s,baz=293,slow=23,SNR=2.1						
SOKA	Soboth	9.38	337	*e*Pn	Pn	11 10 33.8	-0.2
	comp=N,3.0nm,0.3s						
OBKA	Obir	9.39	335	*e*Pn	Pn	11 10 34.5	+0.4
	comp=N,2.4nm,0.2s						
TEOL	Teolo	9.70	321	Pn	Pn	11 10 38.2	0.0
STAL	STALIGIAL	9.89	327	Pn	Pn	11 10 40.8	-0.1
CTI	Castel Tesino	10.20	323	Pn	Pn	11 10 45.6	+0.4
KBA	Koelnbreinsper	10.31	332	*e*Pn	Pn	11 10 47.0	+0.3
	comp=N,2.0nm,0.5s						
BRTR	Keskin Array B	10.45	77	Pn	Pn	11 10 47.1	-1.5
	comp=N,0.0nm,0.3s,baz=294,slow=14,SNR=1.8						
MOA	Molln	10.66	337	*e*Pn	Pn	11 10 52.1	+0.7
	comp=N,1.2nm,0.2s						
GERES	GERESS Array B	11.72	338	Pn	Pn	11 11 04.0	-2.1
	comp=N,0.3nm,0.3s,baz=157,slow=14,SNR=5.8						
GERES				Sn	Sn	11 13 11.1	-5.6
	comp=N,0.4nm,0.3s,baz=154,slow=24,SNR=5.7						
AKASG	Malin Array Be	14.03	24	Pn	Pn	11 11 36.2	-1.1
	comp=N,0.7nm,0.3s,baz=207,slow=13,SNR=2.8						
HFS	Hagfors	22.40	351	P	P	11 13 15.5	-1.5
	comp=N,2.1nm,0.5s,baz=153,slow=10.0,SNR=11						
FINES	FINESS Array B	23.58	7	P	P	11 13 27.5	-1.5
	comp=N,1.6nm,0.5s,baz=160,slow=6.1,SNR=12						
FINES	FINESS Array B	23.58	7	P	P	11 13 28.3	-0.8
FIA1	FINESS Array S	23.58	7	P	P	11 13 28.5	-0.6
FIA1				IAmb	IAmb	11 13 31.6	
	comp=Z,21nm,1.5s						
NB2	NORSAR Subarra	23.61	349	P	P	11 13 29.5	0.0
	comp=Z,4.4nm,1.1s,baz=162,slow=9.3						
NOA	NORSAR Array B	23.61	349	P	P	11 13 28.9	-0.7
	comp=Z,0.7nm,0.6s,baz=163,slow=10,SNR=4.5						
NC303	NORSAR Array S	23.77	349	P	P	11 13 30.6	-0.4
TORD	Torodi Ar. Bea	29.95	219	P	P	11 14 27.1	+0.2
	comp=Z,0.2nm,0.6s,baz=38,slow=10.0,SNR=1.7						
ABKAR	Akbulak array	30.34	56	P	P	11 14 31.4	+1.2
ARCES	ARCESS Array B	31.56	3	P	P	11 14 40.0	-0.8
	comp=Z,0.8nm,0.7s,baz=189,slow=12,SNR=6.0						
BVAR	Borovoye Array	37.22	50	P	P	11 15 29.5	-0.4
	comp=Z,0.3nm,0.4s,baz=273,slow=7.9,SNR=4.5						
KK31	Karatay Array	37.91	66	P	P	11 15 37.0	+1.1
KKAR	Karatay Array	37.91	66	P	P	11 15 36.3	+0.4
KKAR	Karatay Array	37.91	66	P	P	11 15 34.7	-1.2
KKAR				IAmb	IAmb	11 15 46.5	
	comp=Z,4.7nm,1.4s						
DBIC	Dimbokro	38.80	223	P	P	11 15 46.3	+2.7
	comp=Z,0.6nm,0.5s,baz=45,slow=8.6,SNR=1.3						
KURBB	Kurchatov Arra	42.33	53	P	P	11 16 11.8	-0.6
	comp=Z,0.5nm,0.6s,baz=281,slow=8.8,SNR=2.3						
MK31	Makanchi Array	45.41	58	P	P	11 16 36.7	-0.5
MKAR	Makanchi Array	45.41	58	P	P	11 16 36.8	-0.5
	comp=Z,0.8nm,0.4s,baz=274,slow=7.2,SNR=37						
MKAR	Makanchi Array	45.41	58	P	P	11 16 36.5	-0.8
ZAA0	Zalesovo Array	45.79	48	P	P	11 16 40.0	-0.1
ZAA0				IAmb	IAmb	11 16 40.2	
	comp=Z,2.9nm,0.5s						
ZALV	Zalesovo Beam	45.79	48	P	P	11 16 39.6	-0.5
	comp=Z,2.5nm,0.4s,baz=269,slow=8.9,SNR=9.2						
ZALV	Zalesovo Beam	45.79	48	P	P	11 16 40.0	-0.2
NRS	Narsarsuaq	45.99	322	P	P	11 16 39.5	-2.1
SONM	Songino Array	60.55	51	P	P	11 18 28.8	-0.3
	comp=Z,0.3nm,0.5s,baz=282,slow=8.8,SNR=4.6						
YKA	Yellowknife Ar	73.37	340	P	P	11 19 51.0	+0.8
	comp=Z,0.1nm,0.5s,baz=32,slow=5.5,SNR=2.5						
IMAR	Indian Mountai	76.09	358	P	P	11 20 07.1	+1.2
EGAK	Eagle	76.38	352	P	P	11 20 06.3	-1.2
EGAK				IAmb	IAmb	11 20 08.6	
	comp=Z,7.0nm,1.5s						
MENT	Mentasta	78.44	353	P	P	11 20 17.9	-1.2

IDC ***04*** *11:09:52.7±3.5, 4°.85S×153°.86E, h98km±25km, mb3.8/14, mb1 4.0/14, mb1mx3.8/39, mbtmp4.2/14, MS3.0/2, Ms1 3.0/2, ms1mx2.7/32, Error ellipse: s-maj=32.6km s-min=14.1km az=103.0*
NEIC ***04*** *11:09:52.7±2.3, 4°.72S±0°.06×153°.82E±0°.05, h101km±7km, mb4.5/27, Error ellipse: s-maj=9.4km s-min=5.6km az=139.0*
ISC 04 11:09:53.3±0.5, **4°.73S**±0°.06×**153°.80E**±0°.07, **h100**km, **n61**, σ**1s38**/58, **mb4.3**/25, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.72	288	Pn	Pn	11 10 22.8	+0.5
RABL				Sn	Sn	11 10 44.5	+0.2
KRVT	Keravat (AS076	1.82	283	P	Pn	11 10 24.1	+0.6
	48nm,0.3s,baz=198,slow=0.5,SNR=25						
KRVT				S	Sn	11 10 48.0	+1.4
	42nm,0.3s,baz=21,slow=4.2,SNR=7.4						
HNR	Honiara	7.68	128	P	Pn	11 11 47.9	+5.4
	4.6nm,0.3s,baz=256,slow=4.7,SNR=2.0						
HNR	Honiara	7.68	128	P	Pn	11 11 27.0	-15
HNR	Honiara	7.68	128		Pn	11 11 44.7	+2.3
HNR				Sn	Sn	11 13 07.3	-0.6
PMG	Port Moresby	8.06	234	P	Pn	11 11 50.1	+2.5
	15nm,0.3s,baz=53,slow=7.4,SNR=24						
PMG				S	Sn	11 13 17.7	+0.4
	baz=175,slow=22,SNR=0.8						
PMG	Port Moresby	8.06	234		Pn	11 11 50.3	+2.6
PMG					Sn	11 13 16.8	-0.4
CTA	Charters Tower	16.94	205	P	P	11 13 46.5	+1.8
	0.2nm,0.3s,baz=42,slow=18,SNR=2.3						
GUMO	Guam	20.25	334	LR	LR	11 22 57.6	
	comp=Z,11nm,18.3s,baz=189,slow=38						
WB0	Warramunga Arr	24.10	230	P	P	11 14 59.9	+0.1
WB0				IAmb	IAmb	11 15 01.0	
	comp=Z,10nm,0.7s						
WR0	Warramunga Arr	24.10	229	P	P	11 14 57.7	-2.1
WR0				IAmb	IAmb	11 14 58.8	
	comp=Z,14nm,1.3s						
WB2	Warramunga Arr	24.23	230	P	P	11 15 01.8	+0.8
WB2				IAmb	IAmb	11 15 03.9	
	comp=Z,21nm,1.3s						
WRA	Warramunga Arr	24.24	230	P	P	11 15 01.1	0.0
	comp=Z,6.9nm,0.7s,baz=54,slow=9.9,SNR=30						
WRA	Warramunga Arr	24.24	230	P	P	11 15 00.5	-0.6
ARMA	Armidale	25.63	184	P	P	11 15 13.7	0.0
ARMA				IAmb	IAmb	11 15 14.6	
	comp=Z,7.6nm,0.8s						
H11S3	WAKE ISLAND Hy	26.34	28	T	T	11 42 43.1	
	baz=208,slow=74,SNR=2.5						
H11S2	WAKE ISLAND Hy	26.35	29	T	T	11 42 43.1	
	baz=0.5,slow=74,SNR=2.9						
H11S1	WAKE ISLAND Hy	26.36	28	T	T	11 42 42.6	
AS31	Alice Springs	26.88	224	P	P	11 15 25.6	+0.7
ASAR	Alice Springs	26.88	224	P	P	11 15 24.6	-0.4
	comp=Z,1.5nm,0.4s,baz=55,slow=8.8,SNR=26						
ASAR	Alice Springs	26.88	224	P	P	11 15 23.3	-1.7
KNRA	Kununurra	26.90	244	P	P	11 15 21.1	-4.1
KNRA				IAmb	IAmb	11 15 34.3	
	comp=Z,48nm,1.4s						
LHI	Lord Howe Isla	27.11	170	P	P	11 15 26.7	-0.1
LHI				IAmb	IAmb	11 15 34.2	
	comp=Z,39nm,1.1s						
STKA	Stephens Creek	29.33	202	P	P	11 15 45.1	-1.5
	comp=Z,3.7nm,0.7s,baz=38,slow=15,SNR=6.0						
STKA	Stephens Creek	29.33	202	P	P	11 15 45.5	-1.1
FITZ	Fitzroy Crossi	30.57	242	P	P	11 15 56.9	-0.9
	comp=Z,3.3nm,0.5s,baz=54,slow=7.0,SNR=11						
FITZ	Fitzroy Crossi	30.57	242	P	P	11 15 56.5	-1.2
FITZ				IAmb	IAmb	11 15 58.8	
	comp=Z,10nm,1.2s						
BBOO	Buckleboo	32.48	209	P	P	11 16 13.6	-0.8
BBOO				IAmb	IAmb	11 16 16.6	
	comp=Z,11nm,1.0s						
FORT	Forrest	35.48	220	P	P	11 16 39.9	-0.5
PSA00	Pilbara Seismi	36.93	240	P	P	11 16 51.9	-0.9
PSA00				IAmb	IAmb	11 16 52.7	
	comp=Z,16nm,1.1s						
TAU	Tasmania Unive	38.45	188	P	P	11 17 06.0	+0.7
LTZ	Lake Taylor	41.29	159	P	P	11 17 27.8	-1.1
MLZ	Mavora Lakes	42.37	165	P	P	11 17 36.6	-1.0
MORW	Morawa	43.17	232	P	P	11 17 43.2	-1.1
JNU	Nakatsue	43.47	332	LR	LR	11 35 08.3	
	comp=Z,53nm,18.8s,baz=272,slow=35						
USRK	Ussuriysk Ar.	52.51	340	P	P	11 18 56.7	+0.6
ENH	Enshi	54.84	312	P	P	11 19 12.5	-0.9
PETK	Petropavlovsk-	57.72	3	P	P	11 19 35.6	+2.2
	comp=Z,2.5nm,0.8s,baz=174,slow=8.0,SNR=4.1						
CMAR	Chiang Mai Arr	58.75	295	P	P	11 19 43.2	+1.9
	comp=Z,0.5nm,0.3s,baz=125,slow=4.8,SNR=5.1						
SONM	Songino Array	66.80	327	P	P	11 20 35.2	+0.8
	comp=Z,0.4nm,0.5s,baz=146,slow=5.3,SNR=6.8						
SONM	Songino Array	66.80	327	P	P	11 20 34.8	+0.5
SUA	Susitna One	78.49	24	P	P	11 21 43.9	+0.6
SUA				IAmb	IAmb	11 21 57.9	
	comp=Z,7.3nm,1.3s						
KNK	Knik Glacier	79.39	24	P	P	11 21 43.9	-4.2
KNK				IAmb	IAmb	11 22 01.2	
	comp=Z,19nm,1.5s						
MK31	Makanchi Array	80.93	319	P	P	11 21 57.7	+1.0
MKAR	Makanchi Array	80.93	319	P	P	11 21 57.3	+0.6

comp=Z,0.6nm,0.5s,baz=94,slow=7.9,SNR=14
MKAR Makanchi Array 80.93 319 P P 11 21 55.3 -1.4
MAKZ Makanchi 81.14 319 P P 11 21 58.5 +0.6
ZALV Zalesovo Beam 81.65 326 P P 11 21 59.9 -0.3
comp=Z,0.9nm,0.6s,baz=116,slow=5.6,SNR=1.7
ZALV Zalesovo Beam 81.65 326 P P 11 21 59.5 -0.8
IL31 81.72 22 P P 11 21 59.2 -1.2
ILAR Eielson Array 81.72 22 P P 11 22 00.1 -0.3
comp=Z,0.6nm,0.8s,baz=256,slow=4.4,SNR=7.1
ILAR Eielson Array 81.72 22 P P 11 21 59.3 -1.1
KURK Kurchatov 84.33 322 P P 11 22 14.7 +0.5
KURK IAmb IAmb 11 22 15.3
comp=Z,4.2nm,1.1s
KURBB Kurchatov Arra 84.36 322 P P 11 22 13.6 -0.7
comp=Z,1.4nm,1.0s,baz=104,slow=3.8,SNR=8.1
MAW Mawson 86.02 203 P P 11 22 21.0 -1.3
comp=Z,3.3nm,0.7s,baz=131,slow=11,SNR=3.6
MAW Mawson 86.02 203 P P 11 22 21.1 -1.2
MAW IAmb IAmb 11 22 24.0
comp=Z,4.9nm,1.5s
INK Inuvik 88.03 21 P P 11 22 32.2 +0.2
comp=Z,0.9nm,0.9s,baz=209,slow=3.3,SNR=2.4
INK Inuvik 88.03 21 P P 11 22 32.4 +0.5
BVAR Borovoye Array 89.78 323 P P 11 22 39.3 -1.3
comp=Z,1.9nm,0.8s,baz=104,slow=6.3,SNR=12
TORD Torodi Ar. Bea 151.23 289 PKPbc PKPbc 11 29 35.0 -1.1
comp=Z,1.9nm,0.7s,baz=68,slow=2.5,SNR=9.3
DBIC Dimbokro 158.68 276 PKPbc PKPdf 11 29 58.5 +18
comp=Z,0.6nm,0.4s,baz=27,slow=12,SNR=4.1

IDC 04 11:10:17.5±3.5, 4.°94S×153.°95E, h87km±26km, mb4.0/16, mb1 4.2/17, mb1mx3.9/41, mbtmp4.3/17, MS2.9/1, Ms1 2.9/1, ms1mx2.6/30, Error ellipse: s-maj=29.4km s-min=15.2km az=102.0
NEIC 04 11:10:18.2±1.8, 4.°88S±0.°07×153.°97E±0.°09, h91km±8km, mb4.6/21, Error ellipse: s-maj=14.5km s-min=7.2km az=121.0
ISC 04 11:10:20.0±0.7, 4.°83S±0.°07×153.°84E±0.°09, h105km, n48, σ1.°17/53, mb4.4/25, New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RABL Rabaul 1.79 291 Pn Pn 11 10 50.4 +0.1
RABL Sn Sn 11 11 13.4 +0.2
KRVT Keravat (AS076 1.89 286 P Pn 11 10 51.2 -0.1
183nm,0.3s,baz=19,slow=22,SNR=11
KRVT S Sn 11 11 14.4 -0.9
242nm,0.3s,baz=187,slow=22,SNR=5.9
PMG Port Moresby 8.04 235 P Pn 11 12 15.0 +0.9
25nm,0.3s,baz=39,slow=10,SNR=12
PMG S Sn 11 13 44.4 +1.1
12nm,0.3s,baz=27,slow=21,SNR=5.3
PMG LR LR 11 15 53.9
comp=Z,74nm,18.1s,baz=342,slow=42
PMG Port Moresby 8.04 235 Pn 11 12 16.4 +2.3
PMG Sn 11 13 43.5 +0.2
COEN Coen 13.88 229 Pn Pn 11 13 31.5 -0.9
SIJI Sorong 22.89 279 P P 11 15 15.9 +0.9
20nm,1.0s,baz=22,slow=18,SNR=4.1
WR0 Warramunga Arr 24.07 230 P P 11 15 27.6 +1.7
WR0 IAmb IAmb 11 15 28.1
comp=Z,12nm,0.8s
WB0 Warramunga Arr 24.07 230 P P 11 15 27.0 +1.1
WB0 IAmb IAmb 11 15 27.6
comp=Z,16nm,0.8s
WRAB Tennant Creek 24.20 230 P P 11 15 24.1 -2.8
WRAB IAmb IAmb 11 15 29.2
comp=Z,20nm,0.7s
WB2 Warramunga Arr 24.20 230 P P 11 15 27.7 +0.6
WB2 IAmb IAmb 11 15 28.9
comp=Z,16nm,0.7s
WRA Warramunga Arr 24.21 230 P P 11 15 27.5 +0.3
comp=Z,15nm,0.7s,baz=54,slow=9.8,SNR=23
WRA Warramunga Arr 24.21 230 P P 11 15 25.5 -1.6
ARMA Armidale 25.53 184 P P 11 15 39.0 -0.2
ARMA IAmb IAmb 11 15 53.5
comp=Z,34nm,1.4s
ASAR Alice Springs 26.84 224 P P 11 15 49.7 -1.2
comp=Z,5.8nm,0.9s,baz=52,slow=13,SNR=5.4
ASAR Alice Springs 26.84 224 P P 11 15 49.1 -1.8
STKA Stephens Creek 29.25 202 P P 11 16 10.6 -1.7
comp=Z,4.7nm,0.6s,baz=31,slow=14,SNR=9.3
STKA Stephens Creek 29.25 202 P P 11 16 10.9 -1.3
SOEI Soe 29.73 259 P P 11 16 16.4 -0.4
SOEI IAmb IAmb 11 16 26.0
comp=Z,15nm,0.8s
FITZ Fitzroy Crossi 30.56 242 P P 11 16 23.7 -0.3
comp=Z,11nm,1.0s,baz=59,slow=8.0,SNR=8.2
FITZ Fitzroy Crossi 30.56 242 P P 11 16 23.8 -0.1
FITZ IAmb IAmb 11 16 29.4
comp=Z,12nm,0.9s
BBOO Buckleboo 32.41 209 P P 11 16 39.6 -0.4
FORT Forrest 35.43 220 P P 11 17 05.5 -0.7
PSA00 Pilbara Seismi 36.91 240 P P 11 17 18.7 -0.3
MORW Morawa 43.14 232 P P 11 18 10.7 +0.3
ENH Enshi 54.94 312 P P 11 19 41.2 +0.8
ENH IAmb IAmb 11 19 42.5
comp=Z,16nm,1.1s
PETK Petropavlovsk- 57.82 3 P P 11 20 01.9 +1.5
comp=Z,6.5nm,1.0s,baz=145,slow=7.3,SNR=6.6
PETK Petropavlovsk- 57.82 3 P P 11 20 02.3 +2.0
CMAR Chiang Mai Arr 58.83 295 P P 11 20 08.8 +0.6
comp=Z,0.7nm,0.3s,baz=106,slow=4.7,SNR=6.4
SONM Songino Array 66.91 327 P P 11 21 02.2 +0.9
comp=Z,1.2nm,0.8s,baz=143,slow=7.2,SNR=6.0
SONM Songino Array 66.91 327 P P 11 21 02.6 +1.3
MK31 Makanchi Array 81.04 319 P P 11 22 24.4 +0.9
MKAR Makanchi Array 81.04 319 P P 11 22 24.2 +0.7
comp=Z,1.6nm,0.9s,baz=112,slow=4.3,SNR=8.7
MKAR Makanchi Array 81.04 319 P P 11 22 24.1 +0.6
MAKZ Makanchi 81.25 319 P P 11 22 25.3 +0.7
ZALV Zalesovo Beam 81.76 326 P P 11 22 26.9 -0.2
comp=Z,1.3nm,0.7s,baz=106,slow=5.4,SNR=4.0
ZALV Zalesovo Beam 81.76 326 P P 11 22 27.3 +0.2
ILAR Eielson Array 81.80 22 P P 11 22 25.9 -1.1
comp=Z,0.2nm,0.6s,baz=136,slow=18,SNR=4.2
ILAR Eielson Array 81.80 22 P P 11 22 26.8 -0.3
DOT Dot Lake 82.34 23 P P 11 22 27.4 -2.6
DOT IAmb IAmb 11 22 42.5
comp=Z,6.9nm,1.1s
KURK Kurchatov 84.44 322 P P 11 22 41.1 +0.2
KURK IAmb IAmb 11 22 42.4
comp=Z,4.3nm,1.1s
KURBB Kurchatov Arra 84.47 322 P P 11 22 40.9 -0.2
comp=Z,1.5nm,0.9s,baz=105,slow=4.2,SNR=9.2
MAW Mawson 85.94 203 P P 11 22 46.8 -1.3
comp=Z,5.4nm,0.7s,baz=108,slow=9.7,SNR=5.2
MAW Mawson 85.94 203 P P 11 22 48.7 +0.6
MAW IAmb IAmb 11 22 49.9
comp=Z,6.5nm,1.4s
INK Inuvik 88.12 21 P P 11 22 56.4 -2.1
comp=Z,1.3nm,1.0s,baz=167,slow=13,SNR=2.8
INK Inuvik 88.12 21 P P 11 22 57.1 -1.4
BVAR Borovoye Array 89.89 323 P P 11 23 07.1 -0.2
comp=Z,2.7nm,0.8s,baz=102,slow=6.2,SNR=12
YKA Yellowknife Ar 94.97 28 P P 11 23 31.1 +0.6
comp=Z,0.4nm,0.9s,baz=267,slow=5.2,SNR=5.0
TORD Torodi Ar. Bea 151.30 289 PKPbc PKPbc 11 30 01.2 -1.2
comp=Z,2.1nm,0.7s,baz=85,slow=1.9,SNR=7.3
TORD pPKPbc pPKPbc 11 30 31.4 +1.8
comp=Z,1.2nm,0.6s,baz=70,slow=3.0,SNR=2.6

NEIC 04 11:23:08.2±1.7, 5.°01S±0.°09×154.°08E±0.°05, h86km±7km, mb4.2/13, Error ellipse: s-maj=13.8km s-min=6.9km az=186.0
IDC 04 11:23:11.0±3.8, 4.°84S×153.°79E, h104km±27km, mb3.7/9, mb1 3.9/10, mb1mx3.6/44, mbtmp4.1/10, Error ellipse: s-maj=36.8km s-min=14.6km az=102.0
ISC 04 11:23:09.8±0.7, 4.°91S±0.°07×154.°00E±0.°08, h105km, n31, σ1.°62/35, mb4.0/15, Bougainville-Solomon Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RABL Rabaul 1.97 291 Pn Pn 11 23 41.2 -0.9
RABL Sn Sn 11 24 06.3 -0.6
KRVT Keravat (AS076 2.06 287 P Pn 11 23 42.2 -1.1
90nm,0.3s,baz=128,slow=1.3,SNR=55
KRVT S Sn 11 24 05.0 -3.9
122nm,0.3s,baz=21,slow=20,SNR=28
MANU Manus Island 7.21 293 Pn Pn 11 24 51.1 -1.5
HNR Honiara 7.42 128 Pn Pn 11 24 51.6 -3.8
HNR Sn Sn 11 26 13.4 -4.5
PMG Port Moresby 8.12 236 P Pn 11 25 06.4 +1.4
11nm,0.3s,baz=32,slow=8.2,SNR=21
PMG S Sn 11 26 34.2 -1.0
3.8nm,0.3s,baz=83,slow=13,SNR=4.3
PMG Port Moresby 8.12 236 Pn 11 25 07.6 +2.5
PMG Sn 11 26 34.1 -1.1
WR0 Warramunga Arr 24.14 230 P P 11 28 16.6 +0.5
WR0 IAmb IAmb 11 28 31.1
comp=Z,10nm,1.4s
WB0 Warramunga Arr 24.14 231 P P 11 28 17.7 +1.4
WB0 IAmb IAmb 11 28 18.4
comp=Z,23nm,1.5s
WRAB Tennant Creek 24.27 230 P P 11 28 18.1 +0.7
WRAB IAmb IAmb 11 28 28.3
comp=Z,13nm,1.4s
WB2 Warramunga Arr 24.27 230 P P 11 28 18.9 +1.5
WB2 IAmb IAmb 11 28 29.5
comp=Z,7.3nm,1.4s
WRA Warramunga Arr 24.28 230 P P 11 28 19.0 +1.5
comp=Z,4.0nm,0.6s,baz=54,slow=9.9,SNR=19
WRA Warramunga Arr 24.28 230 P P 11 28 17.0 -0.5
AS31 Alice Springs 26.89 224 P P 11 28 42.2 +1.1
ASAR Alice Springs 26.89 224 P P 11 28 40.6 -0.5
comp=Z,1.8nm,0.9s,baz=55,slow=8.9,SNR=23
ASAR Alice Springs 26.89 224 P P 11 28 41.5 +0.3
STKA Stephens Creek 29.24 202 P P 11 29 02.9 +1.0
comp=Z,2.6nm,0.7s,baz=55,slow=17,SNR=3.3
STKA Stephens Creek 29.24 202 P P 11 28 59.0 -2.9
FITZ Fitzroy Crossi 30.66 242 P P 11 29 14.3 -0.3
comp=Z,2.0nm,0.5s,baz=76,slow=5.8,SNR=6.9
FITZ Fitzroy Crossi 30.66 242 P P 11 29 14.0 -0.6
FITZ IAmb IAmb 11 29 16.0
comp=Z,13nm,1.2s
FORT Forrest 35.47 220 P P 11 29 56.4 +0.1
PSA00 Pilbara Seismi 37.01 240 P P 11 30 09.1 -0.5
PSA00 IAmb IAmb 11 30 10.3
comp=Z,5.4nm,0.8s
MORW Morawa 43.21 232 P P 11 31 00.6 -0.1
PETK Petropavlovsk- 57.89 3 P P 11 32 52.0 +1.5
comp=Z,3.6nm,0.9s,baz=147,slow=14,SNR=4.1
SONM Songino Array 67.06 327 P P 11 33 53.3 +1.4
comp=Z,0.3nm,0.4s,baz=141,slow=6.4,SNR=6.2
SONM Songino Array 67.06 327 P P 11 33 53.5 +1.5
IMAR Indian Mountai 80.09 19 P P 11 35 10.2 +2.4
MKAR Makanchi Array 81.20 319 P P 11 35 14.9 +0.8
comp=Z,0.3nm,0.5s,baz=93,slow=8.2,SNR=8.0
ILAR Eielson Array 81.81 22 P P 11 35 17.1 +0.2
comp=Z,0.4nm,0.8s,baz=245,slow=4.4,SNR=4.5
ZALV Zalesovo Beam 81.91 326 P P 11 35 17.9 +0.3
comp=Z,0.3nm,0.3s,baz=126,slow=9.3,SNR=3.1
QSPA South Pole Qui 85.05 180 P P 11 35 33.3 -0.3
QSPA IAmb IAmb 11 35 41.4
comp=Z,0.9nm,1.0s
TORD Torodi Ar. Bea 151.48 289 PKPbc PKPbc 11 42 52.4 -0.3
comp=Z,1.0nm,0.7s,baz=48,slow=2.2,SNR=6.8

IDC 04 11:28:15.8±4.9, 4.°51S×153.°51E, h138km±30km, mb3.0/3, mb1 3.3/4, mb1mx3.0/40, mbtmp3.6/4, Error ellipse: s-maj=66.4km s-min=24.7km az=106.0
ISC 04 11:28:09.9±1.8, 4.°6S±0.°2×154.°0E±0.°2, h100km, n6, σ1.°45/7, mb3.0/3, New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRVT Keravat (AS076 1.95 278 P Pn 11 28 43.3 +1.6
19nm,0.3s,baz=57,slow=1.2,SNR=6.4
KRVT S Sn 11 29 06.3 +0.2
17nm,0.3s,baz=12,slow=19,SNR=11
PMG Port Moresby 8.27 234 P Pn 11 30 08.4 +1.3
2.7nm,0.3s,baz=42,slow=11,SNR=4.8
PMG S Sn 11 31 36.9 -1.9
1.0nm,0.3s,baz=230,slow=13,SNR=1.9
WRA Warramunga Arr 24.45 230 P P 11 33 20.2 +0.7
1.1nm,0.6s,baz=54,slow=10.0,SNR=5.1
ASAR Alice Springs 27.08 224 P P 11 33 43.1 -0.2
0.2nm,0.4s,baz=55,slow=8.9,SNR=11
MKAR Makanchi Array 80.93 319 P P 11 40 11.9 -1.4
0.2nm,0.8s,baz=122,slow=7.1,SNR=1.1
TORD Torodi Ar. Bea 151.33 289 PKPbc PKiKP 11 47 54.3 +0.8
0.4nm,0.7s,baz=40,slow=1.7,SNR=1.9

IDC 04 11:30:06.5±1.6, 0.°85S×147.°10E, h0km, mb3.7/8, mb1 4.0/8, mb1mx3.8/36, mbtmp3.8/8, Error ellipse: s-maj=55.7km s-min=21.1km az=105.0
NEIC 04 11:30:08.4±0.9, 0.°80S±0.°08×147.°5E±0.°1, h35km±2km, mb4.2/6, Error ellipse: s-maj=20.7km s-min=4.5km az=119.0
ISC 04 11:30:11.0±0.9, 0.°95S±0.°08×147.°2E±0.°2, h35km, n22, σ0.°83/17, mb3.9/11, Admiralty Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MANU Manus Island 1.10 170 Pn Pn 11 30 29.4 -0.6
MANU Sn Sn 11 30 44.2 +0.2
WB0 Warramunga Arr 22.50 213 P P 11 35 08.8 +1.1
WR0 Warramunga Arr 22.58 212 P P 11 35 09.3 +0.7
WR0 IAmb IAmb 11 35 16.1
comp=Z,13nm,1.1s
WB2 Warramunga Arr 22.66 213 P P 11 35 09.6 +0.1
WB2 IAmb IAmb 11 35 27.5
comp=Z,5.3nm,0.8s
WRA Warramunga Arr 22.67 213 P P 11 35 09.6 0.0
comp=Z,2.8nm,0.5s,baz=37,slow=9.5,SNR=25
WRA Warramunga Arr 22.67 213 P P 11 35 09.9 +0.4
AS31 Alice Springs 25.99 209 P P 11 35 40.6 -0.2
ASAR Alice Springs 25.99 209 P P 11 35 42.2 +1.4
comp=Z,1.3nm,0.7s,baz=31,slow=8.7,SNR=18
FITZ Fitzroy Crossi 27.16 230 P P 11 35 51.5 +0.2
FITZ IAmb IAmb 11 35 53.9
comp=Z,7.1nm,1.1s
H11S3 WAKE ISLAND Hy 27.23 44 T T 12 04 21.3
baz=228,slow=75,SNR=36
H11S2 WAKE ISLAND Hy 27.24 44 T T 12 04 22.0
baz=226,slow=75,SNR=45
H11S1 WAKE ISLAND Hy 27.25 44 T T 12 04 23.7
baz=228,slow=75,SNR=44
H11N1 WAKE ISLAND Hy 28.21 42 T T 12 05 28.5
baz=225,slow=76,SNR=53
H11N3 WAKE ISLAND Hy 28.23 42 T T 12 05 36.5
baz=225,slow=76,SNR=44
H11N2 WAKE ISLAND Hy 28.23 42 T T 12 05 37.5
baz=225,slow=76,SNR=62
CMAR Chiang Mai Arr 51.17 295 P P 11 39 11.2 -0.1
comp=Z,0.5nm,0.3s,baz=90,slow=3.6,SNR=1.3
PETK Petropavlovsk- 54.59 8 P P 11 39 36.0 +0.2
comp=Z,1.8nm,0.8s,baz=159,slow=7.4,SNR=0.9
SONM Songino Array 60.14 330 P P 11 40 15.7 +0.4
comp=Z,0.3nm,0.6s,baz=133,slow=4.4,SNR=3.8
MKAR Makanchi Array 73.76 320 P P 11 41 41.7 -0.1
comp=Z,0.5nm,0.8s,baz=99,slow=8.9,SNR=2.9
MKAR Makanchi Array 73.76 320 P P 11 41 39.7 -2.1
ZALV Zalesovo Beam 74.88 327 P P 11 41 47.5 -0.6
comp=Z,0.4nm,0.5s,baz=102,slow=6.1,SNR=1.8
ILAR Eielson Array 80.81 23 P P 11 42 21.4 +0.5
comp=Z,0.2nm,0.6s,baz=251,slow=5.6,SNR=1.5

NIED 04 11:30:00, 36.°60N×141.°70E, h29km, Mw3.8 Best double couple: Mo4.78000×10^14 NP1:φs310.00000°, δ50.00000°, λ-111.00000°. NP2:φs161.00000°, δ44.00000°, λ-67.00000°.
IDC 04 11:30:33.8±1.0, 36.°51N×141.°88E, h0km, mb3.6/6, mb1 3.8/9, mb1mx3.6/51, mbtmp3.7/9, ML3.6/3, Error ellipse: s-maj=23.8km s-min=19.6km az=85.0
JMA 04 11:30:38.6±0.1, 36.°55N×141.°68E, h62km±4km, M3.8
NEIC 04 11:30:38.3±1.9, 36.°51N±0.°06×142.°0E±0.°1, h37km±9km, mb4.5/2, Error ellipse: s-maj=12.5km s-min=8.8km az=111.0
ISC 04 11:30:35.2±3.2, 36.°54N±0.°04×141.°89E±0.°05, h12km±20km, n39, σ1.°35/52, mb3.5/7, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ONAJ Iwakimizuishiy 1.04 303 P Pn 11 30 55.3 -0.4
ONAJ S Sn 11 31 08.1 -2.1
JHO Hitachi 1.07 274 P Pb 11 30 55.2 -0.4
JHO S Sb 11 31 07.7 -1.8
JHYU Hitachinakayam 1.07 260 P Pb 11 30 55.7 +0.1
JHYU S Sb 11 31 08.7 -0.8
JFK Kawauchi 1.16 316 P Pn 11 30 57.0 -0.3
JFFD Fukushimafurud 1.20 298 P Pb 11 30 57.3 -0.6
JFT Otama 1.58 309 P Pb 11 31 04.1 -0.3
JMM Marumori 1.59 327 P Pn 11 31 03.2 0.0
JIO Ouri 1.96 348 P Pn 11 31 08.9 +0.6
JIO eS Sn 11 31 32.0 -0.9
JAG Ashikaga 1.97 268 P Pn 11 31 08.3 -0.1
BSO1 Boso 1 2.02 202 P Pn 11 31 10.8 +2.2
JOU Okura 2.07 332 P Pb 11 31 11.6 -1.2
JRY Ryogami san 2.47 259 P Pn 11 31 15.5 +0.2
JRY S Sn 11 31 42.9 -2.5
MJAR Matsushiro Arr 2.96 271 Pn Pn 11 31 23.4 +1.2
7.7nm,0.3s,baz=111,slow=10.0,SNR=167
MJAR Sn Sn 11 31 57.5 -0.1
2.5nm,0.3s,baz=106,slow=13,SNR=8.6
MJAR Matsushiro Arr 2.96 271 Pn 11 31 23.1 +1.0
MJAR Sn 11 31 58.1 +0.5
MAJO Matsushiro 2.96 271 Pn 11 31 24.0 +1.9
MAJO Sn Sn 11 31 59.1 +1.5
MAT Matsushiro 2.96 271 P Pn 11 31 23.8 +1.7
MAT S Sn 11 31 56.1 -1.6
MJB9 Matsu-Tunnel 2.97 271 Pn 11 31 24.0 +1.8
MJB9 Sn Sn 11 31 59.4 +1.7
JHJ2 Mitsune 3.82 207 Pn Pn 11 31 36.4 +2.6
JHJ2 Sn Sn 11 32 15.8 -2.8
JHJ Hachijo jima 2 3.82 208 Pn Pn 11 31 35.1 +1.2
26nm,0.3s,baz=74,slow=14,SNR=1.7
JHJ Sn Sn 11 32 16.3 -2.4
65nm,0.3s,baz=38,slow=20,SNR=7.7
INU Inuyama 4.13 255 Pn 11 31 40.8 +2.7
ERM Erimo 5.56 10 Pn Pn 11 31 58.0 +0.3
ERM Sn Sn 11 33 01.1 -0.5
ASAJ Asahikawa 7.59 4 Pn Pn 11 32 26.7 +1.1
0.6nm,0.3s,baz=168,slow=12,SNR=2.8
JKA Kamikawa-asahi 7.59 4 Pn 11 32 26.7 +1.1
SONM Songino Array 28.38 305 P P 11 36 29.4 0.0
0.6nm,0.8s,baz=113,slow=10.0,SNR=5.7
SONM Songino Array 28.38 305 P P 11 36 30.0 +0.6
ZALV Zalesovo Beam 42.53 313 P P 11 38 30.8 +0.4
0.6nm,0.6s,baz=103,slow=6.4,SNR=2.3
ZALV Zalesovo Beam 42.53 313 P P 11 38 30.5 +0.1
MKAR Makanchi Array 44.71 303 P P 11 38 47.9 -0.2
0.2nm,0.5s,baz=79,slow=7.7,SNR=5.1
MKAR Makanchi Array 44.71 303 P P 11 38 47.6 -0.5
IMAR Indian Mountai 46.89 30 P P 11 39 06.2 +1.2
WB0 Warramunga Arr 56.44 188 P P 11 40 16.9 +0.1
WR0 Warramunga Arr 56.62 188 P P 11 40 16.8 -1.3
WB2 Warramunga Arr 56.62 188 P P 11 40 17.0 -1.1
WB2 IAmb IAmb 11 40 19.8
comp=Z,6.4nm,1.1s
WRA Warramunga Arr 56.62 189 P P 11 40 17.8 -0.3
comp=Z,1.7nm,0.9s,baz=6.6,slow=7.4,SNR=5.2
ABKAR Akbulak array 58.55 310 P P 11 40 31.2 -0.3
ASAR Alice Springs 60.35 188 P P 11 40 44.1 0.0
comp=Z,0.9nm,0.8s,baz=9.3,slow=6.4,SNR=8.1
ASAR Alice Springs 60.35 188 P P 11 40 42.5 -1.6
YKA Yellowknife Ar 64.05 30 P P 11 41 09.5 +1.0
comp=Z,0.2nm,0.6s,baz=301,slow=6.6,SNR=5.9
LPAZ La Paz 146.61 61 PKPbc PKPdf 11 50 18.1 +1.7
comp=Z,1.5nm,0.8s,baz=148,slow=2.4,SNR=3.8

IDC 04 11:44:27.5±1.5, 21.°45S×71.°97W, h0km, mb3.5/4, mb1 4.0/7, mb1mx3.7/34, mbtmp3.7/7, ML4.1/3, Error ellipse: s-maj=41.2km s-min=26.7km az=13.0
SJA 04 11:44:30.0±1.1, 21.°48S×71.°63W, h10km, ML3.3, MW3.2
GUC 04 11:44:31.3±0.8, 21.°45S×71.°73W, h11km±999km, ML3.7
ISC 04 11:44:28.1±2.1, 21.°50S±0.°03×71.°73W±0.°07, h5km±12km, n41, σ1.°42/54, mb3.6/4, 8C, Off coast of northern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PATCX Punta Patache 1.62 66 ⇑iP Pb 11 44 58.8 +0.3
PATCX iS Sg 11 45 19.4 -0.8
PATCX IAML 11 45 20.6
comp=N,618nm,0.2s
PATCX Punta Patache 1.62 66 iP Pb 11 44 58.9 +0.3
PATCX iS Sg 11 45 19.4 -0.8
PATCX IAML 11 45 21.0
comp=Z,299nm,0.4s
PB04 IPOC Station P 1.69 120 ⇑iP Pg 11 45 00.9 +0.4
PB04 eS Sg 11 45 22.6 +0.1
PB04 IAML 11 45 24.1
comp=N,2μm,0.2s
PB04 IPOC Station P 1.69 120 eP Pg 11 45 00.9 +0.4
PB04 iS Sg 11 45 22.8 +0.4
PB02 IPOC Station P 1.72 84 ⇑iP Pg 11 45 01.1 0.0
PB02 iS Sg 11 45 23.3 -0.1
PB02 IPOC Station P 1.72 84 iP Pg 11 45 01.2 0.0
PB02 iS Sg 11 45 23.3 -0.1
PB02 IAML 11 45 24.4
comp=Z,768nm,0.3s
TA01 Diego Aracena 1.72 58 ⇑iP Pb 11 44 59.7 -0.5
PB07 IPOC Station P 1.73 98 ⇑iP Pg 11 45 01.5 +0.2
PB07 eS Sg 11 45 23.8 0.0
PB07 IAML 11 45 24.7
comp=N,877nm,0.1s
PB07 IPOC Station P 1.73 98 iP Pg 11 45 01.6 +0.2
PB07 iS Sg 11 45 23.9 0.0
PB07 IAML 11 45 25.0
comp=Z,401nm,0.3s
PB03 IPOC Station P 1.92 107 ⇑iP Pb 11 45 04.3 +0.6
PB03 IAML 11 45 36.0
comp=E,411nm,0.2s
PB03 IPOC Station P 1.92 107 iP Pb 11 45 04.4 +0.6
PB03 iS Sg 11 45 28.8 -1.1
PB03 IAML 11 45 31.4
comp=Z,629nm,0.1s
PB05 IPOC Station P 1.96 134 iP Pb 11 45 03.9 -0.4
PB05 iS Sb 11 45 28.0 -1.1
PB05 IAML 11 45 29.1
comp=Z,760nm,0.3s
PB01 IPOC Station P 2.14 78 ⇑iP Pb 11 45 07.2 -0.3
PB01 IPOC Station P 2.14 78 iP Pb 11 45 07.3 -0.2
PB01 iS Sb 11 45 34.1 -0.2
PB01 IAML 11 45 35.3
comp=Z,209nm,0.1s
PB10 IPOC Station P 2.28 152 IAML 11 45 35.1
comp=E,522nm,0.2s
PB10 IPOC Station P 2.28 152 iP Pn 11 45 07.3 +0.8
PB10 iS Sn 11 45 34.1 -0.9
PB10 IAML 11 45 34.9
comp=Z,292nm,0.3s
PB09 IPOC Station P 2.33 98 ⇑iP Pb 11 45 11.2 +0.4
PB09 IPOC Station P 2.33 98 eP Pb 11 45 11.3 +0.4
PB09 iS Sg 11 45 40.9 -2.3
PB09 IAML 11 45 42.5
comp=Z,322nm,0.3s
PB06 IPOC Station P 2.33 121 IAML 11 45 39.4
comp=E,1μm,0.3s
PB06 IPOC Station P 2.33 121 eP Pb 11 45 10.1 -0.8
PB06 iS Sb 11 45 39.0 -1.1
PB06 IAML 11 45 39.1
comp=Z,608nm,0.2s
PSGCX Pisagua 2.42 39 iP Pn 11 45 08.3 -0.1
PSGCX eS Sn 11 45 36.4 -2.1
PSGCX IAML 11 45 40.6
comp=Z,105nm,0.2s
PB11 IPOC Station P 2.60 49 IAML 11 45 43.5
comp=N,1μm,0.2s
PB11 IPOC Station P 2.60 49 iP Pn 11 45 12.2 +1.2
PB11 iS Sn 11 45 42.9 -0.2
PB11 IAML 11 45 43.9
comp=Z,322nm,0.3s
PB15 IPOC Station P 2.70 130 iP Pn 11 45 15.0 +2.6
PB15 eS Sb 11 45 48.2 -2.4
PB08 IPOC Station P 2.76 61 IAML 11 45 51.4
comp=N,313nm,0.6s
PB08 IPOC Station P 2.76 61 eP Pb 11 45 15.8 +2.4
PB08 iS Sb 11 45 49.5 -3.1
PB08 IAML 11 45 51.5
comp=Z,127nm,0.3s
LVC Limon Verde 2.84 113 Pn Pb 11 45 18.5 -1.1
comp=Z,19nm,0.3s,baz=300,slow=9.3,SNR=76
LVC Sn Sb 11 45 52.9 -1.9
comp=Z,41nm,0.3s,baz=94,slow=15,SNR=12
LVC Limon Verde 2.84 113 iP Pb 11 45 18.5 -1.1
LVC iS Sb 11 45 53.5 -1.4
LVC IAML 11 45 54.8
comp=Z,81nm,0.2s
MNMC Minye Minye 3.09 41 IAML 11 45 57.8
comp=N,504nm,0.2s
PB14 IPOC Station P 3.35 159 iP Pn 11 45 21.6 +0.2

PB14				IAML		11 46 22.1	
	comp=Z,34nm,0.3s						
YJA	**Yavi**	**5.81**	**98**	*e*P	Pb	11 46 03.7	-6.6
YJA				IAML		11 48 14.5	
	comp=Z,3.1nm,3.1s						
HJA	**Humahuaca**	**6.09**	**107**	*i* P	Pn	11 46 06.6	+7.3
HJA				IAML		11 48 06.5	
	comp=Z,3.8nm,2.3s						
LPAZ	**La Paz**	**6.20**	**34**	Pn	**Pn**	**11 46 03.9**	**+2.9**
	comp=Z,1.5nm,0.3s,baz=264,slow=5.3,SNR=25						
LPAZ				Sn	**Sn**	**11 47 16.3**	**+3.7**
	comp=Z,0.0nm,0.3s,baz=194,slow=15,SNR=1.0						
AZAP	**Zapla**	**6.72**	**115**	*e*P	Pn	11 46 14.3	+6.6
AZAP				IAML		11 48 11.0	
	comp=Z,4.7nm,2.7s						
ASTB	**Santa Barbara**	**7.15**	**111**	*e*P	**Pn**	**11 46 17.8**	**+4.3**
SIV	**San Ignacio**	**11.48**	**63**	Pn	**Pn**	**11 47 13.4**	**+0.5**
	comp=Z,2.1nm,0.3s,baz=257,slow=9.3,SNR=30						
PDAR	**Pinedale Array**	**72.83**	**332**	P	**P**	**11 55 58.1**	**0.0**
	comp=Z,0.1nm,0.6s,baz=200,slow=12,SNR=2.0						
NVAR	**Mina Array Bea**	**73.90**	**324**	P	**P**	**11 56 04.2**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=151,slow=6.4,SNR=4.0						
TORD	**Torodi Ar. Bea**	**79.84**	**72**	P	**P**	**11 56 39.0**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=241,slow=5.0,SNR=4.4						
YKA	**Yellowknife Ar**	**90.33**	**342**	P	**P**	**11 57 28.1**	**-1.7**
	comp=Z,0.2nm,0.5s,baz=141,slow=4.4,SNR=6.2						
MKAR	**Makanchi Array**	**147.13**	**34**	PKPbc	**PKPbc**	**12 04 12.4**	**0.0**
	comp=Z,1.0nm,0.7s,baz=321,slow=3.0,SNR=10						

*IDC **04** 11:46:41.9±1.7, 33.°67S×71.°99W, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.6/32, mbtmp3.6/5, ML3.8/2, MS3.5/1, Ms1 3.5/1, ms1mx2.9/17, Error ellipse: s-maj=57.0km s-min=31.1km az=88.0*

*SJA **04** 11:46:42.0±0.6, 33.°77S×72.°28W, h14km±6km, ML3.6, MW3.6*

*GUC **04** 11:46:43.4±0.8, 33.°79S×72.°22W, h30km±5km, ML3.6*

ISC 04 11:46:41.7±1.9**, 33.°77S**±0.°04×**72.°30W**±0.°06**, h6**km±11km**, n33,** σ1.°22/47**, 1C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MT01	**Popeta**	**0.88**	**96**	⇓*i*P	**Pg**	**11 46 59.3**	**+0.6**
MT01				*i* S	**Sb**	**11 47 10.8**	**-0.7**
MT01				IAML		11 47 14.2	
	comp=N,4μm,0.3s						
VA01	**Torpederas**	**0.93**	**36**	*e*P	**Pb**	**11 47 00.4**	**+0.2**
VA01				*e*S	**Sb**	**11 47 13.0**	**+0.2**
GO05	**Huala**	**1.27**	**166**	*e*P	**Pn**	**11 47 06.1**	**0.0**
GO05				*e*S	**Sb**	**11 47 22.9**	**+0.1**
GO05				IAML		11 47 26.3	
	comp=E,1μm,0.6s						
GO05	**Huala**	**1.27**	**166**	*e*P	**Pn**	**11 47 06.3**	**+0.2**
GO05				*i* S	**Sb**	**11 47 23.4**	**+0.6**
ROC1	**El Roble**	**1.34**	**54**	*e*P	**Pn**	**11 47 07.1**	**-0.2**
ROC1				*i* S	**Sn**	**11 47 27.4**	**+1.9**
ROCH	**El Roble**	**1.35**	**54**	*e*P	**Pn**	**11 47 07.2**	**-0.1**
ROCH				*e*S	**Sn**	**11 47 25.6**	**0.0**
ROCH				IAML		11 47 29.6	
	comp=N,2μm,0.3s						
MT05	**Renca**	**1.36**	**74**	*e*P	**Pn**	**11 47 07.2**	**-0.2**
MT05				*e*S	**Sg**	**11 47 27.0**	**+1.5**
ANTU	**Antumapu**	**1.41**	**82**	*e*P	**Pb**	**11 47 09.0**	**+0.5**
ANTU				*e*S	**Sg**	**11 47 26.6**	**-0.4**
STL	**Santa Lucia**	**1.43**	**77**	*e*P	**Pn**	**11 47 08.3**	**0.0**
STL				*e*S	**Sn**	**11 47 26.6**	**-0.8**
STL				IAML		11 47 36.9	
	comp=E,1μm,0.5s						
PEL	**Peldehue**	**1.49**	**66**	⇓*e*P	**Pn**	**11 47 09.3**	**+0.1**
PEL				*e*S	**Sb**	**11 47 28.6**	**-0.5**
PEL				IAML		11 47 34.8	
	comp=E,2μm,0.5s						
PEL	**Peldehue**	**1.49**	**66**	*e*P	**Pn**	**11 47 09.6**	**+0.5**
PEL				*i* S	**Sg**	**11 47 30.6**	**+0.9**
CLCH	**Cerro Calan**	**1.52**	**76**	*e*P	**Pn**	**11 47 09.9**	**+0.3**
CLCH				*e*S	**Sg**	**11 47 29.6**	**-1.0**
CLCH				IAML		11 47 36.7	
	comp=N,2μm,0.4s						
MT03	**Universidad Ad**	**1.52**	**80**	*e*P	**Pn**	**11 47 09.8**	**+0.2**
MT03				*e*S	**Sb**	**11 47 29.6**	**-0.5**
MT03				IAML		11 47 36.2	
	comp=E,2μm,0.3s						
BO02	**Sierra Bellavi**	**1.62**	**129**	*e*P	**Pn**	**11 47 11.1**	**+0.1**
BO02				IAML		11 47 41.1	
	comp=E,2μm,0.5s						
FCH	**Farellones**	**1.74**	**76**	*i* P	**Pn**	**11 47 13.3**	**+0.5**
FCH				IAML		11 47 43.7	
	comp=E,968nm,0.4s						
LMEL	**Las Melosas**	**1.75**	**93**	⇑*e*P	**Pn**	**11 47 13.3**	**+0.5**
LMEL				*e*S	**Sb**	**11 47 36.1**	**-0.6**
LMEL				IAML		11 47 42.8	
	comp=N,1μm,0.4s						
VA03	**San Esteban**	**1.78**	**56**	IAML		11 47 43.9	
	comp=E,2μm,0.4s						
ARCO	**CERRO ARCO**	**2.97**	**73**	*e*P	**Pb**	**11 47 33.4**	**-1.8**
ARCO				IAML		11 47 39.0	
	comp=Z,217nm,0.4s						
AAGR	**Agrelo**	**2.99**	**78**	*e*P	**Pb**	**11 47 33.2**	**-2.2**
ASAL	**Salagasta**	**3.14**	**69**	*e*P	**Pb**	**11 47 36.9**	**-1.1**
RTLS	**Leoncito**	**3.21**	**53**	*e*P	**Pb**	**11 47 36.5**	**-2.8**
RTLS				IAML		11 47 43.9	
	comp=Z,176nm,0.4s						
RTLS				*i* S	**Sg**	**11 48 23.9**	**-0.9**
GO04	**Tololo Observa**	**3.81**	**20**	*i* P	**Pn**	**11 47 40.9**	**-0.3**
RTLL	**Cerro Villicun**	**4.05**	**54**	*i* P	**Pn**	**11 47 46.7**	**+2.4**
RTLL				*i* S	**Sb**	**11 48 45.1**	**+2.3**
RTLL				IAML		11 48 56.3	
	comp=Z,70nm,0.5s						
AMOG	**MOGNA**	**4.29**	**50**	*e*P	**Pn**	**11 47 49.6**	**+2.0**
ACAN	**Cantantal**	**4.55**	**72**	*e*P	**Pn**	**11 47 53.8**	**+2.6**
VCA	**Vinchina**	**6.13**	**36**	*i* P	**Pn**	**11 48 14.6**	**+1.6**
PLCA	**Paso Flores**	**7.08**	**169**	Pn	**Pn**	**11 48 28.1**	**+2.0**
	comp=Z,0.7nm,0.3s,baz=354,slow=12,SNR=22						
PLCA				Lg	Lg	11 50 18.7	
	comp=Z,0.1nm,0.3s,baz=70,slow=23,SNR=2.1						
LPAZ	**La Paz**	**17.81**	**13**	P	**Pn**	**11 50 50.2**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=148,slow=13,SNR=2.1						
SIV	**San Ignacio**	**20.40**	**33**	P	**P**	**11 51 18.5**	**-1.1**
	comp=Z,1.0nm,0.4s,baz=258,slow=11,SNR=3.2						
RPN	**Rapa Nui**	**32.48**	**272**	LR	LR	12 02 08.7	
	comp=Z,71nm,19.0s,baz=113,slow=28						
TXAR	**Lajitas Array**	**69.43**	**331**	P	**P**	**11 57 52.1**	**+1.3**
	comp=Z,0.1nm,0.6s,baz=154,slow=7.3,SNR=2.8						
TORD	**Torodi Ar. Bea**	**84.34**	**70**	P	**P**	**11 59 14.5**	**-0.6**
	comp=Z,1.2nm,1.1s,baz=262,slow=2.4,SNR=2.8						
MKAR	**Makanchi Array**	**156.78**	**48**	PKPab	**PKPab**	**12 07 06.7**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=304,slow=3.4,SNR=6.2						

*SJA **04** 11:53:27.4±1.2, 33.°77S×72.°29W, h13km±8km, ML4.2, MW4.6*

*NEIC **04** 11:53:28.9±2.6, 33.°75S±0.°04×72.°27W±0.°08, h19km±2km, Error ellipse: s-maj=10.4km s-min=4.7km az=110.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}6.09; $M_{\theta\theta}$-2.12; $M_{\phi\phi}$-3.96; $M_{r\theta}$-0.74; $M_{\theta\phi}$1.46; $M_{\phi r}$-7.61; Fault plane solution: $M_0 9.45000\times10^{15}$ NP1: ϕ_s178.02000°, δ72.95000°, λ100.08000°. NP2: ϕ_s326.79000°, δ19.73000°, λ60.28000°. Principal axes: T 10.3287, Plg61.0000°, Azm103.0000°; N -2.1239, Plg10.0000°, Azm355.0000°; P -8.2048, Plg27.0000°, Azm260.0000°;*

*GUC **04** 11:53:28.5±0.6, 33.°79S×72.°24W, h24km±7km, ML4.3*

*VAO **04** 11:53:29.8±3.1, 33.°72S×72.°06W, h17km±25km, mb4.8*

*IDC **04** 11:53:30.9±0.5, 33.°68S×72.°11W, h28km±3km, mb4.1/15, mb1 4.2/18, mb1mx4.2/27, mbtmp4.3/18, ML4.2/3, MS4.0/11, Ms1 4.0/11, ms1mx3.7/29, Error ellipse: s-maj=21.2km s-min=11.8km az=82.0*

ISC 04 11:53:29.1±0.5**, 33.°76S**±0.°03×**72.°27W**±0.°04**, h20**km±1km**, n162,** σ1.°53/192**, mb4.8**/32**, MS4.1**/10**, 2C-7D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MT01	**Popeta**	**0.86**	**97**	⇓*i*P	**Pb**	**11 53 44.9**	**-0.4**
MT01				*i* S	**Sg**	**11 53 56.5**	**-0.7**
MT01				IAML		11 53 59.1	
	comp=N,20μm,0.3s						
VA01	**Torpederas**	**0.91**	**35**	⇓*i*P	**Pg**	**11 53 45.8**	**-0.9**
VA01				*i* S	**Sn**	**11 53 59.1**	**-0.1**
RCDM	**Rinconada Maip**	**1.25**	**78**	IAML		11 54 11.2	
	comp=N,6μm,0.3s						
GO05	**Huala**	**1.27**	**167**	⇑*e*P	**Pn**	**11 53 51.6**	**-0.3**
GO05				IAML		11 54 18.2	
	comp=E,5μm,0.2s						
GO05	**Huala**	**1.27**	**167**		**Pn**	**11 53 51.6**	**-0.3**
GO05					**Sb**	**11 54 08.6**	**+0.1**
GO05	**Huala**	**1.27**	**167**	*i* P	**Pn**	**11 53 51.9**	**0.0**
GO05				*i* S	**Sb**	**11 54 08.7**	**+0.2**
ROC1	**El Roble**	**1.31**	**54**		**Pb**	**11 53 52.7**	**-0.6**
ROC1					**Sg**	**11 54 09.7**	**-2.1**
ROC1	**El Roble**	**1.31**	**54**	*e*P	**Pb**	**11 53 52.5**	**-0.8**
ROC1				*i* S	**Sg**	**11 54 11.6**	**-0.2**
ROCH	**El Roble**	**1.32**	**54**	⇓*i*P	**Pb**	**11 53 52.6**	**-0.7**
ROCH				*i* S	**Sg**	**11 54 11.5**	**-0.4**
ROCH				IAML		11 54 14.7	
	comp=N,9μm,0.4s						
MT05	**Renca**	**1.33**	**74**	*i* P	**Pb**	**11 53 52.8**	**-0.7**
MT05				*i* S	**Sg**	**11 54 10.7**	**-1.7**
MT05				IAML		11 54 16.1	
	comp=N,8μm,0.3s						
MT05				*e*		11 54 26.5	
ANTU	**Antumapu**	**1.38**	**82**	*i* P	**Pg**	**11 53 54.6**	**-1.2**
ANTU				*i* S	**Sg**	**11 54 12.2**	**-1.6**
ANTU				IAML		11 54 16.1	
	comp=N,10μm,0.5s						
STL	**Santa Lucia**	**1.40**	**77**	IAML		11 54 20.9	
	comp=E,5μm,0.6s						
PEL	**Peldehue**	**1.46**	**65**	⇓*i*P	**Pb**	**11 53 55.1**	**-0.6**
PEL				*i* S	**Sg**	**11 54 14.8**	**-1.7**
PEL				IAML		11 54 20.3	
	comp=N,7μm,0.4s						
PEL	**Peldehue**	**1.46**	**65**		**Pb**	**11 53 55.2**	**-0.6**
PEL				Sn	**Sg**	**11 54 14.6**	**-1.9**
PEL	**Peldehue**	**1.46**	**65**	*e*P	**Pb**	**11 53 55.3**	**-0.5**
PEL				*i* S	**Sg**	**11 54 15.9**	**-0.5**
CLCH	**Cerro Calan**	**1.49**	**76**	⇓*e*P	**Pb**	**11 53 55.2**	**-1.1**
CLCH				IAML		11 54 26.3	
	comp=E,8μm,0.5s						
MT03	**Universidad Ad**	**1.49**	**80**	*i* P	**Pb**	**11 53 55.5**	**-0.8**
MT03				*i* S	**Sg**	**11 54 15.9**	**-1.5**
MT03				IAML		11 54 23.7	
	comp=N,12μm,0.4s						
BO02	**Sierra Bellavi**	**1.60**	**130**	⇓*e*P	**Pn**	**11 53 56.6**	**+0.2**
BO02				IAML		11 54 24.9	
	comp=E,8μm,0.3s						
FCH	**Farellones**	**1.71**	**76**	*i* P	**Pb**	**11 53 58.8**	**-1.3**
FCH				*i* S	**Sg**	**11 54 22.6**	**-1.8**
FCH				IAML		11 54 25.1	
	comp=N,5μm,0.2s						
LMEL	**Las Melosas**	**1.72**	**93**	⇓*i*P	**Pb**	**11 53 58.7**	**-1.6**
LMEL				*i* S	**Sg**	**11 54 22.6**	**-2.2**
LMEL				IAML		11 54 27.0	
	comp=N,6μm,0.3s						
VA03	**San Esteban**	**1.75**	**56**	IAML		11 54 29.6	
	comp=E,8μm,0.4s						
COIS	**El Sosneado**	**2.59**	**122**	*e*P	**Pb**	**11 54 13.0**	**-1.9**
CO02	**Combarbal**	**2.77**	**23**	⇑*e*P	**Pn**	**11 54 12.0**	**-0.5**
CO02				IAML		11 54 46.5	
	comp=E,4μm,0.4s						
LAMA	**Las Malvinas**	**2.79**	**116**	*e*P	**Pb**	**11 54 16.1**	**-2.2**
CCHI	**Chillan**	**2.84**	**177**	*e*P	**Pn**	**11 54 14.7**	**+1.4**
CCHI				IAML		11 55 19.3	
	comp=N,2μm,0.5s						
CCHI	**Chillan**	**2.84**	**177**	*e*P	**Pn**	**11 54 15.3**	**+2.0**
PUMA	**Malargue**	**2.90**	**127**	*e*P	**Pb**	**11 54 18.2**	**-2.0**
PUMA				*i* S	Sg	11 55 00.7	-1.6
ARCO	**CERRO ARCO**	**2.94**	**73**	*e*P	**Pb**	**11 54 18.2**	**-2.8**
ARCO				*i* S	**Sb**	**11 54 56.8**	**+0.1**
ARCO				IAML		11 55 05.3	
	comp=Z,684nm,0.7s						
AAGR	**Agrelo**	**2.96**	**78**	*i* P	**Pb**	**11 54 18.4**	**-2.8**
MORA	**Malargue**	**3.09**	**120**	*e*P	**Pn**	**11 54 19.6**	**+2.7**
EDS3	**Malargue**	**3.10**	**131**	*e*P	**Pb**	**11 54 20.7**	**-3.0**
ASAL	**Salagasta**	**3.11**	**69**	*i* P	**Pb**	**11 54 20.8**	**-3.0**
BI03	**Tigo**	**3.13**	**191**	*e*P	**Pn**	**11 54 16.9**	**-0.5**
BI03				IAML		11 55 19.6	
	comp=N,2μm,0.4s						
RTLS	**Leoncito**	**3.18**	**53**	*e*P	**Pb**	**11 54 21.2**	**-3.9**
RTLS				IAML		11 54 29.4	
	comp=Z,767nm,0.5s						
RTCV	**Cerro Valdivia**	**3.67**	**60**	*e*P	**Pn**	**11 54 27.2**	**+2.4**
RTCV				*i* S	**Sb**	**11 55 20.1**	**+2.6**
ZON	**Zonda**	**3.75**	**55**	*i* P	Pb	11 54 29.8	-4.9
ZON				*i* S	**Sb**	**11 55 22.1**	**+2.3**
ZON				IAML		11 55 36.5	
	comp=Z,293nm,0.6s						
GO04	**Tololo Observa**	**3.79**	**20**		**Pn**	**11 54 26.0**	**-0.7**
GO04				Sn	**Sn**	**11 55 09.5**	**-1.4**
RTLL	**Cerro Villicun**	**4.02**	**54**	*e*P	**Pn**	**11 54 31.7**	**+2.0**
RTLL				*i* S	**Sb**	**11 55 25.7**	**-1.9**
RTLL				IAML		11 55 49.1	
	comp=Z,345nm,0.5s						
AMOG	**MOGNA**	**4.26**	**50**	*e*P	**Pn**	**11 54 34.8**	**+1.8**
ACAN	**Cantantal**	**4.52**	**72**	*i* P	**Pn**	**11 54 38.6**	**+2.0**
VCA	**Vinchina**	**6.10**	**36**	*e*P	**Pn**	**11 54 59.4**	**+1.0**
GO03	**Copiap**	**6.39**	**16**		**Pn**	**11 55 00.4**	**-2.0**
GO03				Sn	**Sn**	**11 56 12.6**	**-2.2**
GO03	**Copiap**	**6.39**	**16**	*i* P	**Pn**	**11 55 01.3**	**-1.1**
PLCA	**Paso Flores**	**7.09**	**169**	Pn	**Pn**	**11 55 13.5**	**+1.7**
	comp=Z,2.5nm,0.3s,baz=358,slow=12,SNR=75						
PLCA				Lg	Lg	11 57 01.6	
	baz=81,slow=20,SNR=1.2						
PLCA				LR	LR	11 58 28.8	
	comp=Z,548nm,19.2s,baz=13,slow=42						
PLCA	**Paso Flores**	**7.09**	**169**	*e*P	**Pn**	**11 55 13.0**	**+1.1**
PLCA	**Paso Flores**	**7.09**	**169**		**Pn**	**11 55 12.9**	**+1.1**
PLCA				Sn	**Sn**	**11 56 28.7**	**-3.2**
PLCA	**Paso Flores**	**7.09**	**169**	*i* P	**Pn**	**11 55 13.5**	**+1.7**
CYA	**Choya**	**7.67**	**48**	*i* P	**Pn**	**11 55 18.1**	**-1.8**
GO02	**Mina Guanaco**	**8.88**	**16**	Pn	**Pn**	**11 55 35.9**	**-0.8**
GO02				Sn	**Sn**	**11 57 15.7**	**-0.7**
LVC	**Limon Verde**	**11.50**	**16**	LR	LR	12 00 40.4	
	comp=Z,610nm,19.6s,baz=204,slow=38						
CPUP	**Villa Florida**	**14.90**	**64**	Pn	**Pn**	**11 56 59.4**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=254,slow=17,SNR=1.7						
CPUP				Sn	**Sn**	**11 59 46.4**	**+3.1**
	comp=Z,0.1nm,0.3s,baz=244,slow=11,SNR=1.8						
CPUP				Lg	Lg	12 00 59.2	
	comp=Z,0.1nm,0.3s,baz=306,slow=19,SNR=1.9						
CPUP				LR	LR	12 03 05.8	
	comp=Z,807nm,19.4s,baz=246,slow=39						
CPUP	**Villa Florida**	**14.90**	**64**	P	**Pn**	**11 56 58.8**	**+0.1**
LPAZ	**La Paz**	**17.80**	**13**	P	**P**	**11 57 36.8**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=180,slow=8.8,SNR=21						
LPAZ	**La Paz**	**17.80**	**13**	*e*P	**Pn**	**11 57 35.9**	**-0.4**
LPAZ	**La Paz**	**17.80**	**13**		**P**	**11 57 36.7**	**-0.4**
PTGB	**Pitanga**	**19.78**	**68**	*e*P	**P**	**11 57 58.3**	**0.0**
SIV	**San Ignacio**	**20.38**	**32**	P	**P**	**11 58 03.9**	**-0.8**
	comp=Z,12nm,0.8s,baz=221,slow=11,SNR=25						
TRCB	**Terra Rica**	**20.42**	**63**	*e*P	**P**	**11 58 05.0**	**-0.3**
EFI	**East Falkland**	**20.66**	**154**	P	**P**	**11 58 07.2**	**-0.2**
EFI				IAmb	IAmb	11 58 17.2	
	comp=Z,26nm,0.7s						
USHA	**Ushuaia**	**21.24**	**174**	P	**P**	**11 58 14.8**	**+1.2**
	comp=Z,9.0nm,0.9s,baz=171,slow=17,SNR=4.9						
NNA	**Nana**	**22.07**	**348**	P	**P**	**11 58 22.9**	**-0.1**
	comp=Z,3.7nm,0.4s,baz=173,slow=16,SNR=1.7						
PCMB	**Pacaembu**	**22.15**	**62**	*e*P	**P**	**11 58 22.2**	**-1.6**
FRTB	**Fartura**	**22.44**	**68**	*e*P	**P**	**11 58 24.4**	**-2.5**
SPB	**Sao Paulo**	**23.98**	**71**	*e*P	**P**	**11 58 42.2**	**-0.2**
VAO	**Valinhos**	**24.65**	**71**	*e*P	**P**	**11 58 48.0**	**-0.7**
ARAG	**Araguaiana, MT**	**25.77**	**51**	*e*P	**P**	**11 58 58.6**	**-0.2**
SAML	**Samuel**	**26.08**	**21**	*e*P	**P**	**11 59 01.6**	**+0.1**
SAML	**Samuel**	**26.08**	**21**	P	**P**	**11 59 01.7**	**+0.2**
IPMB	**Ipameri, GO**	**26.65**	**60**	*e*P	**P**	**11 59 06.8**	**0.0**
CLDB	**Colider**	**27.33**	**37**	*e*P	**P**	**11 59 11.7**	**-1.1**
BSCB	**Bom Sucesso**	**27.43**	**69**	*e*P	**P**	**11 59 13.3**	**-0.6**
BDFB	**Brasilia**	**28.36**	**56**	P	**P**	**11 59 20.6**	**-1.7**
	comp=Z,8.4nm,1.0s,baz=227,slow=6.0,SNR=6.3						
BDFB				LR	LR	12 11 35.0	
	comp=Z,515nm,18.4s,baz=239,slow=38						
BDFB	**Brasilia**	**28.36**	**56**	P	**P**	**11 59 21.8**	**-0.4**
VNA3	**Neumayer Olymp**	**49.65**	**158**	P	**P**	**12 02 20.3**	**+1.3**
VNA2	**Neumayer--Watz**	**50.30**	**157**	P	**P**	**12 02 25.3**	**+1.3**
	baz=286,slow=8.3						
MLPR	**Magueyes Islan**	**51.68**	**6**	P	**P**	**12 02 33.7**	**-1.1**
OBIP	**Obispado Ponce**	**51.80**	**7**	P	**P**	**12 02 34.5**	**-1.1**
SNAA	**Sanae**	**51.88**	**158**	P	**P**	**12 02 37.0**	**+1.2**
SNAA	**Sanae**	**51.88**	**158**	P	**P**	**12 02 36.9**	**+1.1**
	comp=Z,7.8nm,0.9s,baz=279,slow=6.4,SNR=13						
SNAA				pP	**sP**	**12 02 44.7**	**+0.9**
	comp=Z,16nm,1.1s,baz=285,slow=6.3,SNR=11						
SNAA	**Sanae**	**51.88**	**158**	P	**P**	**12 02 36.7**	**+0.8**
SNAA				IAmb	IAmb	12 02 46.1	
	comp=Z,16nm,1.0s						
QSPA	**South Pole Qui**	**56.47**	**180**	P	**P**	**12 03 10.7**	**+1.2**
	comp=Z,8.3nm,1.0s,baz=360,slow=1.3,SNR=15						
QSPA				pP	**sP**	**12 03 18.9**	**+1.5**
	comp=Z,7.1nm,0.9s,baz=108,slow=1.7,SNR=8.2						
QSPA	**South Pole Qui**	**56.47**	**180**	P	**P**	**12 03 10.7**	**+1.2**
QSPA				IAmb	IAmb	12 03 12.8	
	comp=Z,11nm,1.1s						
TBI	**Tubuai**	**67.18**	**256**	*e*LR	LR	12 24 40.2	
	comp=Z,196nm,27.0s,baz=118						
JCT	**Junction City**	**68.99**	**335**	P	**P**	**12 04 33.8**	**+0.7**
TX31	**Lajitas Ar. Si**	**69.43**	**331**	P	**P**	**12 04 32.5**	**-3.5**
TX32	**Lajitas Array**	**69.43**	**331**	P	**P**	**12 04 33.5**	**-2.4**
TXAR	**Lajitas Array**	**69.43**	**331**	P	**P**	**12 04 37.0**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=152,slow=8.4,SNR=16						
TXAR				pP	**sP**	**12 04 44.8**	**+0.8**
	comp=Z,2.1nm,0.7s,baz=149,slow=8.8,SNR=14						
TXAR				LR	LR	12 30 54.8	
	comp=Z,101nm,18.0s,baz=0.0,slow=32						
TXAR	**Lajitas Array**	**69.43**	**331**	P	**P**	**12 04 36.7**	**+0.7**
WHTX	**Lake Whitney,**	**69.58**	**337**	P	**P**	**12 04 35.0**	**-1.7**
W50A	**Signal Mountai**	**69.68**	**349**	P	**P**	**12 04 35.2**	**-2.1**
W50A				IAmb	IAmb	12 04 47.5	
	comp=Z,13nm,1.1s						
SWET	**Sewanee**	**69.80**	**348**	P	**P**	**12 04 38.9**	**+0.9**
PLAL	**Pickwick Lake**	**69.97**	**346**	P	**P**	**12 04 39.0**	**0.0**
PLAL				IAmb	IAmb	12 04 49.0	
	comp=Z,15nm,1.2s						
PPT2	**Papeete2**	**70.08**	**262**	*e*S	**S**	**12 13 58.6**	**+8.1**
	comp=Z,66nm,23.0s						
PPT2	**Papeete2**	**70.08**	**262**	*e*LR	LR	12 25 58.1	
	comp=Z,152nm,28.0s						
PPT	**Papeete**	**70.09**	**262**	LR	LR	12 28 40.3	
	comp=Z,79nm,20.4s,baz=100,slow=30						
V48A	**Smith Brothers**	**70.47**	**347**	P	**P**	**12 04 41.0**	**-1.1**
ABTX	**Abilene, Hawle**	**70.89**	**336**	P	**P**	**12 04 44.2**	**-0.5**
ABTX				IAmb	IAmb	12 04 56.2	
	comp=Z,6.5nm,0.8s						
WVT	**Waverly**	**71.04**	**347**	P	**P**	**12 04 44.8**	**-0.7**
W39A	**Magazine**	**71.50**	**342**	P	**P**	**12 04 49.0**	**+0.7**
LCAR	**Lake Charles**	**71.68**	**344**	P	**P**	**12 04 49.3**	**0.0**
LCAR				IAmb	IAmb	12 05 00.3	
	comp=Z,11nm,0.9s						
PBMO	**Poplar Bluff**	**72.20**	**345**	P	**P**	**12 04 52.3**	**-0.1**
PBMO				IAmb	IAmb	12 05 03.0	
	comp=Z,8.9nm,0.9s						
MNTX	**Cornudas Mount**	**72.21**	**331**	P	**P**	**12 04 52.5**	**-0.2**
U40A	**Yellville**	**72.36**	**343**	P	**P**	**12 04 53.5**	**0.0**
U40A				IAmb	IAmb	12 05 04.7	
	comp=Z,8.0nm,0.9s						
WMOK	**Wichita Mounta**	**72.53**	**337**	P	**P**	**12 04 54.7**	**+0.1**
HHAR	**Hobbs**	**72.56**	**342**	P	**P**	**12 04 55.2**	**+0.4**
TUL1	**Leonard**	**72.72**	**340**	P	**P**	**12 04 55.9**	**+0.3**
TUL1				IAmb	IAmb	12 05 05.3	
	comp=Z,7.3nm,0.9s						
S44A	**Carbondale**	**72.83**	**346**	P	**P**	**12 04 56.2**	**0.0**
S44A				IAmb	IAmb	12 05 06.2	
	comp=Z,22nm,1.4s						
MSTX	**Muleshoe**	**73.21**	**334**	P	**P**	**12 04 58.9**	**+0.1**
MSTX				IAmb	IAmb	12 05 08.7	
	comp=Z,8.7nm,1.0s						
MAW	**Mawson**	**73.46**	**164**	P	**P**	**12 05 00.3**	**+0.6**
	comp=Z,7.2nm,0.9s,baz=314,slow=3.6,SNR=3.6						
MAW				LR	LR	12 38 57.6	
	comp=Z,180nm,18.7s,baz=240,slow=37						
CCM	**Cathedral Cave**	**73.60**	**344**	P	**P**	**12 05 01.2**	**+0.5**
CCM				IAmb	IAmb	12 05 12.8	
	comp=Z,12nm,0.8s						
AMTX	**Amarillo**	**73.64**	**335**	P	**P**	**12 04 58.9**	**-2.3**
AMTX				IAmb	IAmb	12 05 12.1	
	comp=Z,11nm,1.1s						
121A	**Cookes Peak, D**	**73.94**	**329**	P	**P**	**12 05 05.0**	**+1.8**
LIC	**Lamto**	**74.88**	**72**	*e*P	**P**	**12 05 07.6**	**-1.3**
	comp=Z,10nm,0.8s						
TIC	**Toumodi**	**75.14**	**71**	*e*P	**P**	**12 05 08.8**	**-1.6**
KIC	**Kosan Boka**	**75.19**	**72**	*e*P	**P**	**12 05 10.6**	**-0.1**
	comp=Z,28nm,1.1s						
DBIC	**Dimbokro**	**75.29**	**71**	P	**P**	**12 05 11.2**	**0.0**
	comp=Z,4.6nm,0.8s,baz=185,slow=9.7,SNR=6.6						
DBIC				LR	LR	12 38 37.1	
	comp=Z,87nm,18.1s,baz=204,slow=36						
DBIC	**Dimbokro**	**75.29**	**71**	P	**P**	**12 05 11.2**	**0.0**
DBIC				IAmb	IAmb	12 05 20.4	
	comp=Z,11nm,0.9s						
X16A	**Lo Mia Camp, P**	**77.13**	**328**	P	**P**	**12 05 23.3**	**+1.9**
L40A	**Anamosa**	**77.44**	**346**	P	**P**	**12 05 19.8**	**-2.9**
L40A				IAmb	IAmb	12 05 34.0	
	comp=Z,12nm,0.8s						
ECSD	**EROS Data Cent**	**80.26**	**342**	P	**P**	**12 05 37.5**	**-0.8**
ECSD				IAmb	IAmb	12 05 49.9	
	comp=Z,5.9nm,0.8s						
BOSA	**Boshof**	**80.35**	**118**	P	**P**	**12 05 39.7**	**+0.2**
	comp=Z,4.1nm,1.0s,baz=256,slow=13,SNR=3.4						
MSU	**Marysvale**	**80.89**	**329**	P	**P**	**12 05 40.9**	**-1.1**
LBTB	**Lobatse**	**82.58**	**115**	P	**P**	**12 05 51.5**	**+0.2**
LBTB				IAmb	IAmb	12 06 03.3	
	comp=Z,9.9nm,1.1s						
PDAR	**Pinedale Array**	**83.46**	**333**	P	**P**	**12 05 55.8**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=149,slow=13,SNR=4.5						
PDAR				LR	LR	12 39 35.2	
	comp=Z,90nm,18.0s,baz=174,slow=33						
PDAR	**Pinedale Array**	**83.46**	**333**	P	**P**	**12 05 56.9**	**+1.5**
NVAR	**Mina Array Bea**	**83.58**	**325**	P	**P**	**12 05 56.6**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=152,slow=5.8,SNR=6.0						
NVAR	**Mina Array Bea**	**83.58**	**325**	P	**P**	**12 05 56.8**	**+0.7**
TOA0	**Torodi Ar. Sit**	**84.31**	**70**	P	**P**	**12 05 59.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**84.31**	**70**	P	**P**	**12 05 59.9**	**-0.2**
	comp=Z,5.9nm,0.9s,baz=257,slow=4.4,SNR=25						
TORD				pP	**sP**	**12 06 07.8**	**-0.5**
	comp=Z,9.5nm,0.8s,baz=261,slow=4.4,SNR=21						
TORD	**Torodi Ar. Bea**	**84.31**	**70**	P	**P**	**12 05 59.9**	**-0.2**
FLWY	**Flagg Ranch**	**85.02**	**333**	P	**P**	**12 06 04.8**	**+1.6**
FLWY				IAmb	IAmb	12 06 13.4	
	comp=Z,5.0nm,1.1s						
ULM	**Lac du Bonnet**	**86.22**	**345**	P	**P**	**12 06 08.4**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=179,slow=6.4,SNR=3.3						
J08A	**Circle Bar Ran**	**87.59**	**328**	P	**P**	**12 06 17.6**	**+1.8**
J08A				IAmb	IAmb	12 06 24.0	
	comp=Z,9.4nm,1.1s						
SCHQ	**Schefferville**	**88.36**	**3**	P	**P**	**12 06 18.0**	**-1.0**
	comp=Z,1.7nm,0.9s,baz=148,slow=9.5,SNR=2.6						
SCHQ				pP	**sP**	**12 06 27.4**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=196,slow=4.1,SNR=3.8						
NEW	**Newport**	**90.97**	**332**	LR	LR	12 42 03.8	
	comp=Z,26nm,21.2s,baz=119,slow=32						
BBB	**Bella Bella**	**98.51**	**329**	LR	LR	12 47 19.0	
	comp=Z,28nm,18.2s,baz=186,slow=33						
YKA	**Yellowknife Ar**	**101.77**	**341**	P	**Pdif**	**12 07 20.6**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=139,slow=3.2,SNR=2.6						
MODS	**Modra-Piesok**	**114.07**	**47**	*e*PDIFF	**Pdif**	**12 08 18.0**	**+2.9**
AKASG	**Malin Array Be**	**122.17**	**47**	PKP	**PKPdf**	**12 12 20.8**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=238,slow=1.7,SNR=2.1						
AKASG	**Malin Array Be**	**122.17**	**47**	PKPdf	**PKPdf**	**12 12 21.5**	**-0.5**
AKTO	**Aktyubinsk**	**140.33**	**50**	PKP	**PKPdf**	**12 12 56.0**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=277,slow=6.3,SNR=4.1						
ABKAR	**Akbulak array**	**141.69**	**52**	PKPdf	**PKPdf**	**12 13 53.7**	**-5.0**
BRVK	**Borovoye**	**147.17**	**43**		**PKPdf**	**12 13 08.9**	**+0.8**
BVAR	**Borovoye Array**	**147.24**	**43**	PKPbc	**PKPdf**	**12 13 08.9**	**+0.7**
	comp=Z,2.1nm,0.7s,baz=294,slow=4.6,SNR=8.5						
BVAR				pPKPbc	**sPKPab**	**12 13 21.0**	**+0.4**
	comp=Z,2.7nm,0.6s,baz=300,slow=3.3,SNR=9.2						
SBUM	**Sibu**	**148.57**	**189**		**PKPdf**	**12 13 12.7**	**+1.0**
KK31	**Karatay Array**	**149.60**	**61**		**PKPbc**	**12 13 16.0**	**-1.1**
KKAR	**Karatay Array**	**149.60**	**61**		**PKPbc**	**12 13 15.6**	**-1.5**
KKAR	**Karatay Array**	**149.60**	**61**		**PKPbc**	**12 13 15.1**	**-2.0**
BTK	**Batken**	**149.98**	**67**		**PKPbc**	**12 13 16.9**	**-1.3**
NIL	**Nilore**	**151.40**	**80**		**PKPbc**	**12 13 20.7**	**-1.0**
KURK	**Kurchatov**	**152.84**	**43**	PKPdf	**PKPdf**	**12 13 16.3**	**-0.8**
KURK					**PKiKP**	**12 13 24.5**	**0.0**
KURK					**PKPab**	**12 13 35.3**	**-0.1**
ZAA0	**Zalesovo Array**	**154.13**	**32**		**PKPdf**	**12 13 16.3**	**-2.5**
ZAA0				PKPab	**PKPab**	**12 13 41.9**	**+1.2**
ZALV	**Zalesovo Beam**	**154.13**	**32**	PKP	**PKPdf**	**12 13 18.1**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=267,slow=3.0,SNR=4.9						
ZALV				PKPbc	**PKiKP**	**12 13 27.0**	**0.0**
	comp=Z,2.5nm,0.6s,baz=292,slow=4.1,SNR=14						
ZALV	**Zalesovo Beam**	**154.13**	**32**		**PKPdf**	**12 13 17.6**	**-1.2**
MK31	**Makanchi Array**	**156.75**	**48**	PKPdf	**PKPdf**	**12 13 20.2**	**-2.5**
MK31					**PKPab**	**12 13 50.7**	**-1.5**
MKAR	**Makanchi Array**	**156.75**	**48**	PKP	**PKPdf**	**12 13 23.6**	**+0.9**
	comp=Z,0.8nm,1.0s,baz=304,slow=2.6,SNR=5.0						
MKAR				PKPab	**PKPab**	**12 13 52.4**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=296,slow=4.0,SNR=9.9						
MKAR	**Makanchi Array**	**156.75**	**48**		**PKPdf**	**12 13 22.1**	**-0.6**
MKAR					**PKPab**	**12 13 52.3**	**+0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CMAR	**Chiang Mai Arr**	**162.85**	**151**	PKP	**PKPdf**	**12 13 31.0**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=252,slow=2.7,SNR=7.2						
CMAR				pPKP	**sPKPdf**	**12 13 41.1**	**+2.3**
	comp=Z,0.5nm,0.4s,baz=217,slow=1.8,SNR=3.1						
SONM	**Songino Array**	**165.91**	**4**	PKPab	**PKPab**	**12 14 33.2**	**+1.0**
	comp=Z,0.3nm,0.8s,baz=48,slow=2.3,SNR=4.4						
SONM				pPKPab	**sPKPab**	**12 14 41.4**	**+0.9**
	comp=Z,1.3nm,0.9s,baz=333,slow=3.7,SNR=7.1						
SONM	**Songino Array**	**165.91**	**4**		**PKPab**	**12 14 32.2**	**0.0**
GTA	**Gaotai**	**171.50**	**46**	ePKP	**PKPdf**	**12 13 37.4**	**+1.1**
GTA				pPKP	sPKPdf	12 13 47.9	+3.2
GTA				sPKP		12 13 51.9	
GTA				PKPab	**PKPab**	**12 14 58.1**	**+0.8**
CD2	**Chengdu**	**175.60**	**129**	PKP	**PKPdf**	**12 13 36.2**	**-1.8**

GUC **04** *12:15:07.1±0.7, 33.79S×72.24W, h44km±4km, ML3.6*
SJA **04** *12:15:08.0±0.9, 33.86S×71.95W, h3km±12km, ML3.5, MW3.5*
ISC 04 12:15:06.6±1.6,**33.77S**±0.03×**72.28W**±0.06,**h7km**±11km, **n30,σ1.33**/42,**4C-5D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MT01	**Popeta**	**0.86**	**97**	⇓iP	**Pg**	**12 15 22.3**	**-0.9**
MT01				iS	**Sb**	**12 15 35.5**	**-0.3**
MT01				IAML		12 15 36.4	
	comp=N,5µm,0.2s						
VA01	**Torpederas**	**0.91**	**36**	⇓iP	**Pg**	**12 15 24.8**	**+0.7**
VA01				iS	**Sg**	**12 15 37.8**	**+1.8**
GO05	**Huala**	**1.27**	**167**	⇑iP	**Pb**	**12 15 30.9**	**-0.1**
GO05				iS	**Sb**	**12 15 46.9**	**-0.7**
GO05				IAML		12 15 50.8	
	comp=E,845nm,0.3s						
GO05	**Huala**	**1.27**	**167**	eP	**Pb**	**12 15 30.9**	**-0.1**
GO05				eS	**Sb**	**12 15 47.0**	**-0.6**
ROC1	**El Roble**	**1.32**	**54**	eP	**Pg**	**12 15 31.3**	**-0.7**
ROC1				eS	**Sg**	**12 15 48.2**	**-0.2**
ROCH	**El Roble**	**1.33**	**54**	eP	**Pn**	**12 15 30.8**	**-1.0**
MT05	**Renca**	**1.34**	**74**	eP	**Pn**	**12 15 31.8**	**-0.1**
MT05				iS	**Sn**	**12 15 49.9**	**-0.1**
MT05				IAML		12 15 54.8	
	comp=E,2µm,0.4s						
ANTU	**Antumapu**	**1.39**	**82**	IAML		12 15 54.7	
	comp=N,2µm,0.3s						
PEL	**Peldehue**	**1.47**	**65**	⇑iP	**Pn**	**12 15 32.4**	**-1.2**
PEL				iS	**Sb**	**12 15 52.6**	**-0.7**
PEL				IAML		12 15 59.1	
	comp=E,1µm,0.5s						
PEL	**Peldehue**	**1.47**	**65**	iP	**Pn**	**12 15 32.7**	**-0.9**
PEL				iS	**Sg**	**12 15 54.4**	**+0.5**
CLCH	**Cerro Calan**	**1.50**	**76**	⇑iP	**Pn**	**12 15 34.6**	**+0.5**
CLCH				iS	**Sg**	**12 15 54.6**	**-0.3**
CLCH				IAML		12 16 04.5	
	comp=N,1µm,0.6s						
MT03	**Universidad Ad**	**1.50**	**80**	eP	**Pn**	**12 15 33.4**	**-0.7**
MT03				IAML		12 16 02.3	
	comp=N,3µm,0.2s						
BO02	**Sierra Bellavi**	**1.61**	**130**	⇓iP	**Pn**	**12 15 34.7**	**-0.9**
FCH	**Farellones**	**1.72**	**76**	⇑iP	**Pn**	**12 15 36.7**	**-0.6**
FCH				iS	**Sn**	**12 15 59.9**	**+0.2**
FCH				IAML		12 16 04.0	
	comp=E,1µm,0.2s						
LMEL	**Las Melosas**	**1.73**	**93**	⇓iP	**Pn**	**12 15 36.7**	**-0.7**
LMEL				IAML		12 16 08.1	
	comp=N,983nm,0.3s						
VA03	**San Esteban**	**1.76**	**56**	⇓iP	**Pn**	**12 15 37.1**	**-0.5**
VA03				IAML		12 16 09.6	
	comp=E,2µm,0.2s						
COIS	**El Sosneado**	**2.59**	**122**	eP	**Pb**	**12 15 52.1**	**-1.3**
COIS				eS	**Sg**	**12 16 32.3**	**+2.4**
LAMA	**Las Malvinas**	**2.79**	**116**	iP	**Pb**	**12 15 55.9**	**-1.0**
PUMA	**Malargue**	**2.90**	**127**	eP	**Pb**	**12 15 57.4**	**-1.3**
ARCO	**CERRO ARCO**	**2.95**	**73**	eP	**Pb**	**12 15 58.1**	**-1.5**
ARCO				IAML		12 16 44.5	
	comp=Z,126nm,0.5s						
AAGR	**Agrelo**	**2.97**	**78**	eP	**Pb**	**12 15 59.5**	**-0.4**
MORA	**Malargue**	**3.10**	**120**	eP	**Pb**	**12 15 58.4**	**+2.4**
ASAL	**Salagasta**	**3.12**	**69**	eP	**Pn**	**12 16 02.1**	**-0.3**
RTLS	**Leoncito**	**3.19**	**53**	eP	**Pn**	**12 16 00.2**	**+2.7**
RTLS				IAML		12 16 08.5	
	comp=Z,115nm,0.4s						
RTCV	**Cerro Valdivia**	**3.68**	**60**	eP	**Pn**	**12 16 07.0**	**+3.0**
GO04	**Tololo Observa**	**3.80**	**20**	eP	**Pn**	**12 16 04.5**	**-1.3**
GO04				eS	**Sg**	**12 17 07.7**	**-0.9**
RTLL	**Cerro Villicun**	**4.03**	**54**	iP	**Pn**	**12 16 11.4**	**+2.6**
RTLL				iS	**Sb**	**12 17 07.5**	**+0.6**
RTLL				IAML		12 17 20.7	
	comp=Z,45nm,0.5s						
AMOG	**MOGNA**	**4.27**	**50**	eP	**Pn**	**12 16 12.9**	**+0.8**
ACAN	**Cantantal**	**4.53**	**72**	iP	**Pn**	**12 16 18.2**	**+2.6**
VCA	**Vinchina**	**6.11**	**36**	eP	**Pn**	**12 16 39.2**	**+1.7**
VCA				IAML		12 18 27.1	
	comp=Z,32nm,0.7s						

THE **04** *12:16:34.3, 38.25N×20.38E, h12km, ML3.4/9, Error ellipse: s-maj=0.8km s-min=0.3km az=258.0*
ATH **04** *12:16:34.3, 38.24N×20.38E, h12km±1km, ML3.0/14, Error ellipse: s-maj=1.5km s-min=0.7km az=255.0*
ISC 04 12:16:34.2±1.0,**38.25N**±0.02×**20.38E**±0.04,**h13km**±4km, **n50,σ0.41**/83,**Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.04**	**74**	P	**Pg**	**12 16 36.5**	**-0.1**
KEF4				S	**Sg**	**12 16 38.0**	**-0.3**
KEF3	**Kipouria, Keph**	**0.05**	**208**	P	**Pg**	**12 16 36.8**	**+0.1**
KEF3				S	**Sg**	**12 16 38.6**	**+0.2**
CHV1	**Chavriata, Kef**	**0.06**	**177**	P	**Pg**	**12 16 36.9**	**+0.1**
CHV1				S	**Sg**	**12 16 38.8**	**+0.2**
	81µm,0.4s						
LXR1	**Lixouri, Cepha**	**0.07**	**134**	P	**Pg**	**12 16 36.9**	**+0.1**
LXR1				S	**Sg**	**12 16 38.8**	**+0.1**
KEF1	**Kardakata, Kep**	**0.08**	**67**	P	**Pg**	**12 16 36.8**	**-0.2**
KEF1				S	**Sg**	**12 16 38.4**	**-0.5**
ARG2	**Argostoli**	**0.11**	**128**	P	**Pg**	**12 16 37.4**	**+0.1**
ARG2				S	**Sg**	**12 16 39.4**	**-0.1**
	44µm,0.2s						
KEF2	**Argostoli. Kep**	**0.12**	**134**	P	**Pg**	**12 16 37.5**	**0.0**
KEF2				S	**Sg**	**12 16 39.7**	**0.0**
VLS	**Valsamata**	**0.18**	**113**	P	**Pg**	**12 16 38.2**	**-0.2**
VLS				S	**Sg**	**12 16 41.1**	**-0.2**
	13µm,0.3s						
VLS	**Valsamata**	**0.18**	**113**	P	**Pg**	**12 16 38.2**	**-0.2**
VLS				S	**Sg**	**12 16 41.1**	**-0.2**
VLS				AML	AML	12 16 41.4	
	comp=E,15552µm,0.1s						
VLS				AML	AML	12 16 41.4	
	comp=N,31350µm,0.4s						
VSK1	**VASILIKIADES**	**0.22**	**42**	P	**Pg**	**12 16 39.0**	**0.0**
VSK1				S	**Sg**	**12 16 42.2**	**-0.1**
	comp=N,21µm,0.2s						
FSK	**Fiskardo**	**0.26**	**34**	P	**Pg**	**12 16 39.8**	**+0.1**
FSK				S	**Sg**	**12 16 43.7**	**+0.4**
	comp=N,13µm,0.2s						
FSK	**Fiskardo**	**0.26**	**34**	P	**Pg**	**12 16 39.8**	**+0.1**
FSK				S	**Sg**	**12 16 43.9**	**+0.5**
FSK				AML	AML	12 16 44.0	
	comp=N,19560µm,0.3s						
FSK				AML	AML	12 16 44.3	
	comp=E,32367µm,0.2s						
EVGI	**Lefkada island**	**0.43**	**30**	P	**Pg**	**12 16 42.8**	**0.0**
EVGI				S	**Sb**	**12 16 49.7**	**-0.4**
EVGI	**Lefkada island**	**0.43**	**30**	P	**Pg**	**12 16 42.8**	**0.0**
EVGI				S	**Sb**	**12 16 49.8**	**-0.4**
VLMS	**Volimes, Zakyn**	**0.43**	**149**	P	**Pg**	**12 16 42.9**	**+0.1**
VLMS				S	**Sg**	**12 16 49.0**	**+0.4**
VLMS				AML	AML	12 16 50.5	
	comp=N,11553µm,0.3s						
VLMS				AML	AML	12 16 52.0	
	comp=E,8250µm,0.4s						
MGNA	**Meganis**	**0.52**	**38**	P	**Pg**	**12 16 44.1**	**-0.4**
MGNA				S	**Sg**	**12 16 51.7**	**+0.3**
MGNA				AML	AML	12 16 52.8	
	comp=N,3190µm,0.2s						
MGNA				AML	AML	12 16 52.9	
	comp=E,3227µm,0.1s						
LKD2	**Lefkada island**	**0.58**	**22**	P	**Pg**	**12 16 45.2**	**-0.4**
LKD2				S	**Sg**	**12 16 53.6**	**+0.2**
LKD2	**Lefkada island**	**0.58**	**22**	P	**Pg**	**12 16 45.3**	**-0.4**
LKD2				S	**Sg**	**12 16 53.4**	**-0.1**
LKD2				AML	AML	12 16 54.7	
	comp=N,1414µm,0.4s						
LKD2				AML	AML	12 17 03.8	
	comp=E,1712µm,0.5s						
TSLK	**Tsoukalades, L**	**0.62**	**21**	P	**Pg**	**12 16 45.9**	**-0.4**
TSLK				S	**Sb**	**12 16 55.1**	**-0.3**
	comp=E,930nm,0.5s						
TSLK	**Tsoukalades, L**	**0.62**	**21**	P	**Pg**	**12 16 46.0**	**-0.3**
TSLK				S	**Sb**	**12 16 55.4**	**0.0**
TSLK				AML	AML	12 17 04.2	
	comp=E,1913µm,0.6s						
TSLK				AML	AML	12 17 04.6	
	comp=N,1730µm,0.4s						
AST1	**Astakos**	**0.63**	**62**	P	**Pg**	**12 16 46.4**	**-0.1**
AST1				S	**Sb**	**12 16 56.1**	**+0.3**
	comp=N,3µm,0.3s						
KRI1	**kERI**	**0.68**	**149**	P	**Pg**	**12 16 46.9**	**-0.5**
KRI1				S	**Sb**	**12 16 57.6**	**+0.4**
PDO	**Prodromos**	**0.72**	**61**	P	**Pg**	**12 16 47.8**	**-0.5**
PDO				S	**Sb**	**12 16 58.6**	**+0.1**
	comp=N,3µm,0.5s						
PDO	**Prodromos**	**0.72**	**61**	P	**Pg**	**12 16 48.0**	**-0.3**
PDO				S	**Sb**	**12 16 58.3**	**-0.2**
PDO				AML	AML	12 17 00.3	
	comp=E,5271µm,0.6s						
PDO				AML	AML	12 17 06.0	
	comp=N,5126µm,0.4s						
RLS	**Riolos of Patr**	**0.88**	**102**	P	**Pg**	**12 16 50.0**	**-1.2**
RLS				S	**Sb**	**12 17 03.7**	**+0.8**
	comp=N,485nm,0.7s						
RLS	**Riolos of Patr**	**0.88**	**102**	P	**Pg**	**12 16 50.1**	**-1.1**
PVO	**Paravola**	**0.97**	**67**	P	**Pb**	**12 16 52.9**	**-0.1**
PVO	**Paravola**	**0.97**	**67**	P	**Pb**	**12 16 52.8**	**-0.1**
PVO				S	**Sb**	**12 17 06.5**	**+0.8**
PVO				AML	AML	12 17 09.7	
	comp=N,3953µm,0.3s						
PVO				AML	AML	12 17 09.8	
	comp=E,5360µm,0.3s						
DRO	**Drossia**	**1.09**	**105**	P	**Pb**	**12 16 54.5**	**-0.5**
DRO	**Drossia**	**1.09**	**105**	P	**Pb**	**12 16 54.9**	**-0.1**
DRO				S	**Sn**	**12 17 10.0**	**-0.2**
DRO				AML	AML	12 17 18.6	
	comp=E,2493µm,0.7s						
DRO				AML	AML	12 17 19.6	
	comp=N,1766µm,0.5s						
EFP	**Efpalio**	**1.22**	**81**	P	**Pn**	**12 16 56.4**	**-0.5**
EFP	**Efpalio**	**1.22**	**81**	P	**Pn**	**12 16 56.5**	**-0.3**
EFP				S	**Sg**	**12 17 14.1**	**+0.7**
EFP				AML	AML	12 17 21.1	
	comp=E,1032µm,0.4s						
EFP				AML	AML	12 17 28.7	
	comp=N,998µm,0.6s						
ANX	**Ano Chora**	**1.26**	**74**	P	**Pn**	**12 16 57.5**	**-0.1**
ANX				S	**Sb**	**12 17 14.3**	**+0.2**
ANX	**Ano Chora**	**1.26**	**74**	P	**Pn**	**12 16 57.5**	**-0.1**
ANX				S	**Sg**	**12 17 15.3**	**+0.4**
ANX				AML	AML	12 17 23.0	
	comp=E,2081µm,0.6s						
ANX				AML	AML	12 17 26.6	
	comp=N,1440µm,0.6s						
LAKA	**Lakka**	**1.26**	**90**	P	**Pn**	**12 16 57.2**	**-0.3**
LAKA	**Lakka**	**1.26**	**90**	P	**Pn**	**12 16 57.2**	**-0.3**
LAKA				S	**Sg**	**12 17 15.9**	**+1.0**
LAKA				AML	AML	12 17 21.8	
	comp=E,518µm,0.5s						
LAKA				AML	AML	12 17 22.2	
	comp=N,642µm,0.5s						
IGT	**Igoumenitsa**	**1.28**	**358**	P	**Pb**	**12 16 58.3**	**0.0**
EVR	**Evrytania**	**1.30**	**59**	P	**Pg**	**12 16 59.9**	**+0.5**
SERG	**Sergoula**	**1.33**	**82**	P	**Pn**	**12 16 58.2**	**-0.3**
SERG	**Sergoula**	**1.33**	**82**	P	**Pn**	**12 16 58.3**	**-0.2**
TRIZ	**Trizonia**	**1.34**	**84**	P	**Pn**	**12 16 58.4**	**-0.2**
TRIZ	**Trizonia**	**1.34**	**84**	P	**Pn**	**12 16 58.8**	**+0.2**
KALE	**Kalithea**	**1.39**	**84**	P	**Pn**	**12 16 59.0**	**-0.4**
KALE	**Kalithea**	**1.39**	**84**	P	**Pb**	**12 17 00.0**	**-0.1**
KALE				AML	AML	12 17 26.1	
	comp=N,697µm,0.5s						
KALE				AML	AML	12 17 26.8	
	comp=E,602µm,0.7s						
KLV	**Kalavryta, Ach**	**1.41**	**98**	P	**Pn**	**12 16 59.8**	**+0.1**
KLV	**Kalavryta, Ach**	**1.41**	**98**	P	**Pn**	**12 17 00.0**	**+0.3**
KLV				S	**Sg**	**12 17 21.0**	**+1.3**
MAKR	**Makrakomi, Fth**	**1.57**	**60**	P	**Pb**	**12 17 03.7**	**+0.5**
AGG	**Agios Georgios**	**1.71**	**63**	P	**Pg**	**12 17 06.6**	**-0.6**
AGG				S	**Sg**	**12 17 29.8**	**+0.4**
AGG				AML	AML	12 17 36.8	
	comp=N,415µm,0.4s						
AGG				AML	AML	12 17 37.6	
	comp=E,389µm,0.4s						
THL	**Klokotos Trika**	**1.83**	**44**	P	**Pb**	**12 17 08.0**	**+0.4**
KPRO	**Kipourio**	**1.87**	**24**	P	**Pb**	**12 17 08.6**	**+0.3**

IDC **04** *12:17:48.0±2.3, 14.74S×75.49W, h0km, mb3.3/2, mb1 3.7/6, mb1mx3.6/30, mbtmp3.6/6, ML3.7/4, MS2.6/2, Ms1 2.7/2, ms1mx2.5/14, Error ellipse: s-maj=73.3km s-min=20.7km az=44.0*
ISC 04 12:17:51.8±1.4,**14.9S**±0.1×**75.5W**±0.2,**h28km, n7, σ2.71**/9, **Near coast of Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.21**	**336**	Pn	**Pn**	**12 18 37.3**	**-3.2**
	99nm,0.3s,baz=138,slow=14,SNR=81						
NNA				Sn	**Sn**	**12 19 17.1**	**-0.8**
	156nm,0.3s,baz=171,slow=7.6,SNR=19						
NNA				LR	LR	12 19 41.0	
	comp=Z,54nm,19.4s,baz=92,slow=37						
LPAZ	**La Paz**	**7.22**	**102**	Pn	**Pn**	**12 19 36.6**	**+0.4**
	0.3nm,0.3s,baz=277,slow=8.1,SNR=4.4						
LPAZ				LR	LR	12 22 36.4	
	comp=Z,83nm,19.8s,baz=306,slow=40						
ATAH	**Atahualpa**	**8.26**	**340**	Pn	**Pn**	**12 19 50.9**	**+0.7**
	0.8nm,0.3s,baz=69,slow=5.5,SNR=4.4						
ATAH				Sn	**Sn**	**12 21 28.1**	**+5.3**
	0.3nm,0.3s,baz=90,slow=20,SNR=3.1						
LVC	**Limon Verde**	**9.86**	**142**	Pn	**Pn**	**12 20 13.8**	**+1.8**
	1.2nm,0.3s,baz=323,slow=10,SNR=4.4						
SIV	**San Ignacio**	**13.95**	**96**	Pn	**Pn**	**12 21 06.9**	**-0.9**
	0.1nm,0.3s,baz=267,slow=17,SNR=3.2						
TXAR	**Lajitas Array**	**51.74**	**328**	P	**P**	**12 26 56.1**	**-0.9**
	0.1nm,0.5s,baz=143,slow=9.1,SNR=4.0						
TORD	**Torodi Ar. Bea**	**81.32**	**74**	P	**P**	**12 30 06.4**	**0.0**
	0.3nm,0.5s,baz=239,slow=5.8,SNR=2.3						

IDC **04** *12:17:52.1±1.7, 7.21S×128.30E, h0km, mb3.9/2, mb1 3.8/5, mb1mx3.6/39, mbtmp3.7/5, ML3.4/3, Error ellipse: s-maj=103.6km s-min=25.2km az=75.0*
NEIC **04** *12:17:52.1±1.6, 7.35S±0.03×128.50E±0.08, h10km±1km, mb4.3/1, Error ellipse: s-maj=13.4km s-min=5.6km az=265.0*
ISC 04 12:17:56.3±0.9,**7.36S**±0.06×**128.55E**±0.08,**h35km, n17, σ1.52**/24,**mb4.0**/3,**Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**4.86**	**240**	Pn	**Pn**	**12 19 08.7**	**+1.6**
SOEI				Sn	**Sn**	**12 20 03.0**	**+0.7**
FAKI	**Fak Fak**	**5.75**	**40**	Pn	**Pn**	**12 19 19.5**	**+0.3**
FAKI				Sn	**Sn**	**12 20 24.3**	**+0.3**
MTN	**Manton Dam**	**6.01**	**155**	Pn	**Pn**	**12 19 21.6**	**-1.6**
MTN				Sn	**Sn**	**12 20 31.0**	**+0.6**
KNRA	**Kununurra**	**8.26**	**179**	Pn	**Pn**	**12 19 51.8**	**-2.0**
FITZ	**Fitzroy Crossi**	**11.04**	**195**	Pn	**Pn**	**12 20 33.7**	**+1.8**
	0.2nm,0.3s,baz=14,slow=12,SNR=2.8						
FITZ				Sn	**Sn**	**12 22 32.2**	**-1.9**
	0.6nm,0.3s,baz=270,slow=21,SNR=4.5						
FITZ	**Fitzroy Crossi**	**11.04**	**195**		**Pn**	**12 20 31.7**	**-0.1**
FITZ					**Sn**	**12 22 33.2**	**-0.9**
WB0	**Warramunga Arr**	**13.57**	**156**	Pn	**Pn**	**12 21 09.6**	**+3.2**
WRA	**Warramunga Arr**	**13.71**	**156**	Pn	**Pn**	**12 21 10.3**	**+1.9**
	0.2nm,0.3s,baz=327,slow=13,SNR=7.7						
WRA				Sn	**Sn**	**12 23 41.5**	**+2.1**
	0.5nm,0.3s,baz=328,slow=21,SNR=7.3						
WRA	**Warramunga Arr**	**13.71**	**156**		**Pn**	**12 21 06.7**	**-1.6**
WRA					**Sn**	**12 23 37.8**	**-1.6**
WB2	**Warramunga Arr**	**13.71**	**156**	Pn	**Pn**	**12 21 07.6**	**-0.7**
WR0	**Warramunga Arr**	**13.80**	**156**	Pn	**Pn**	**12 21 07.9**	**-1.7**
ASAR	**Alice Springs**	**17.00**	**163**	P	**P**	**12 21 54.3**	**+1.1**
	0.2nm,0.3s,baz=331,slow=8.9,SNR=8.4						
MKAR	**Makanchi Array**	**67.75**	**328**	P	**P**	**12 28 50.0**	**-0.5**
	1.0nm,0.7s,baz=117,slow=7.3,SNR=3.8						
MKAR	**Makanchi Array**	**67.75**	**328**	P	**P**	**12 28 49.3**	**-1.2**
ZAA0	**Zalesovo Array**	**71.28**	**334**	P	**P**	**12 29 11.0**	**-1.0**
ZAA0				IAmb	IAmb	12 29 13.6	
	comp=Z,1.4nm,0.6s						
ZALV	**Zalesovo Beam**	**71.28**	**334**	P	**P**	**12 29 11.8**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=122,slow=7.0,SNR=2.8						
ZALV	**Zalesovo Beam**	**71.28**	**334**	P	**P**	**12 29 11.3**	**-0.8**

MAN **04** *12:18:30.8, 19.33N×121.08E, h1km, mb5.6, ML4.6, MS4.9*
MAN INTENSITY II - CALAYAN CAGAYAN; PASUQUIN ILOCOS NORTE.
BJI **04** *12:18:32.7±0.0, 19.34N×121.00E, h16km, mB4.9/43, mb4.5/54, ML4.3/3, Ms4.5/57, Ms7 4.4/52*
IDC **04** *12:18:32.1±4.2, 19.14N×121.23E, h21km±26km, mb4.2/21, mb1 4.4/23, mb1mx4.2/44, mbtmp4.2/23, ML4.0/2, MS4.1/32, Ms1 4.2/32, ms1mx4.0/54, Error ellipse: s-maj=18.9km s-min=11.9km az=72.0*
KLM **04** *12:18:35.0, 19.44N×121.14E, h30km, mb4.7*
GCMT **04** *12:18:35.2±0.2, 19.34N±0.01×120.87E±0.02, h35km, MW5.0/80, Moment Tensor Solution. s60,c82; s80,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.14±.17; $M_{\theta\theta}$-1.21±.11; $M_{\phi\phi}$-1.93±.12; $M_{r\theta}$-1.22±.12; $M_{\theta\phi}$-2.79±.08; $M_{\phi r}$-2.22±.14; Best double couple: $M_0$4.55400×10^{16} NP1:ϕ_s55.00000°, δ30.00000°, λ111.00000°. NP2: ϕ_s212.00000°, δ62.00000°, λ79.00000°. Principal axes: T 3.9810, Plg70.0000°, Azm97.0000°; N 1.1460, Plg10.0000°, Azm217.0000°; P -5.1270, Plg17.0000°, Azm310.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC **04** *12:18:36.2±2.8, 19.37N±0.05×121.04E±0.08, h50km±5km, mb4.8/69 Error ellipse: s-maj=10.6km s-min=7.9km az=87.0*
ISC 04 12:18:35.0±0.4,**19.31N**±0.03×**121.09E**±0.04,**h37km**±1km, **n201,σ2.06**/214,**mb4.7**/53,**MS4.2**/36,**10C-8D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**1.40**	**36**	eP	**Pn**	**12 18 56.9**	**-1.0**
BBP				eS	**Sn**	**12 19 18.9**	**+3.9**
BBP	**Basco**	**1.40**	**36**	⇓eP	**Pn**	**12 18 58.7**	**+0.8**
BBP				iS	**Sn**	**12 19 15.9**	**+0.9**
SGCP	**Mt. Cagua**	**1.40**	**139**	eP	**Pn**	**12 18 56.7**	**-1.2**
APYP	**Conner**	**1.45**	**174**	eP	**Pn**	**12 18 57.3**	**-1.3**
APYP				eS	**Sn**	**12 19 13.3**	**-3.0**
SIPP	**Brgy, Tapao**	**1.50**	**204**	⇓eP	**Pn**	**12 18 58.6**	**-0.8**
SIPP				iS	**Sn**	**12 19 24.0**	**+6.3**
CAUP	**Cauayan**	**2.45**	**163**	eP	**Pn**	**12 19 14.1**	**+1.7**
CAUP				eS	Sn	12 19 51.0	+10
PALP	**Palanan**	**2.57**	**150**	eP	**Pn**	**12 19 14.3**	**+0.2**
PALP				eS	**Sn**	**12 19 48.7**	**+4.6**
BOLP	**Bolinao**	**3.12**	**201**	eP	**Pn**	**12 19 21.6**	**0.0**
BOLP				eS	Sn	12 20 09.7	+12
SMPP	**San Manuel, Pa**	**3.17**	**187**	eP	**Pn**	**12 19 21.7**	**-0.6**
SMPP				eS	**Sn**	**12 20 03.9**	**+5.1**
TWG	**Pinlang**	**3.50**	**360**		**Pn**	**12 19 26.2**	**-0.6**
TWG				Sn	**Sn**	**12 20 06.0**	**-0.9**
BALP	**Baler**	**3.58**	**172**	eP	**Pn**	**12 19 28.5**	**+0.6**
BALP				eS	**Sn**	**12 20 13.1**	**+4.2**
PCPH	**Palayan**	**3.73**	**180**	⇑eP	**Pn**	**12 19 31.6**	**+1.7**
TPUB	**Ta-pu**	**4.00**	**354**		**Pn**	**12 19 32.8**	**-0.9**
TPUB				Sn	**Sn**	**12 20 17.1**	**-2.2**
YULB	**Yu-li**	**4.07**	**3**		**Pn**	**12 19 33.3**	**-1.4**
YULB				Sn	**Sn**	**12 20 19.4**	**-1.7**
SSLB	**Suanglung**	**4.46**	**358**		**Pn**	**12 19 39.6**	**-0.4**
SSLB				Sn	**Sn**	**12 20 27.5**	**-3.3**
POLP	**Polilio Island**	**4.63**	**170**	eP	**Pn**	**12 19 43.2**	**+0.9**
POLP				eS	**Sn**	**12 20 39.5**	**+4.7**
NACB	**Ninganchiao**	**4.86**	**5**		**Pn**	**12 19 45.6**	**0.0**
NACB				Sn	**Sn**	**12 20 39.1**	**-1.6**
TGY	**Tagaytay City**	**5.18**	**182**	Pn	**Pn**	**12 19 52.8**	**+2.8**
	6.9nm,0.3s,baz=333,slow=11,SNR=8.5						
TGY				LR	LR	12 22 15.8	
	comp=Z,3µm,18.4s,baz=345,slow=45						
LQP	**Lukban**	**5.18**	**175**	⇓eP	**Pn**	**12 19 52.1**	**+1.8**
YHNB	**Yeheng**	**5.34**	**3**		**Pn**	**12 19 53.4**	**+1.1**
YHNB				Sn	**Sn**	**12 20 52.6**	**0.0**
GQP	**Guinayangan**	**5.53**	**166**	⇓eP	**Pn**	**12 19 55.4**	**+0.6**
LUBP	**Lubang**	**5.60**	**188**	eP	**Pn**	**12 19 56.1**	**+0.3**
TATO	**Taipei**	**5.65**	**4**		**Pn**	**12 19 57.1**	**+0.7**
TATO				Sn	**Sn**	**12 20 57.8**	**-2.3**
KNMB	**Chin-men Tao**	**5.71**	**334**		**Pn**	**12 19 55.3**	**-1.9**
KNMB				Sn	**Sn**	**12 20 56.7**	**-4.8**
BOAC	**Boac**	**5.86**	**173**	eP	**Pn**	**12 20 03.0**	**+3.7**
PVCP	**Virac**	**6.39**	**152**	eP	**Pn**	**12 20 05.8**	**-0.9**
PVCP				eS	**Sn**	**12 21 16.6**	**-1.8**
OTRP	**Odiongan**	**6.96**	**172**	eP	**Pn**	**12 20 15.5**	**+1.0**
HKPS	**Hong Kong Po S**	**7.14**	**296**		**Pn**	**12 20 14.9**	**-2.0**
CNP	**Catarman**	**7.58**	**153**	eP	**Pn**	**12 20 24.1**	**+1.1**
CNP				eS	**Sn**	**12 21 49.9**	**+2.2**
ENPP	**El Nido**	**8.21**	**192**	eP	**Pn**	**12 20 30.2**	**-1.4**
GUMP	**Jordan**	**8.75**	**170**	eP	**Pn**	**12 20 41.9**	**+2.8**
JOW	**Kunigami**	**9.99**	**40**	Pn	**Pn**	**12 20 56.4**	**+0.5**
QIZ	**Qiongzhong**	**10.63**	**270**	P	**Pn**	**12 21 02.2**	**-2.6**
QIZ				S	**Sn**	**12 22 55.6**	**-7.1**
QIZ				pmax	pmax		
	comp=Z,29nm,0.7s						
QIZ				LR	LR		
	comp=N,1µm,13.7s						
QIZ				LR	LR		
	comp=E,1µm,18.7s						
QIZ				LR	LR		
	comp=Z,2µm,14.7s						
WHN	**Wuhan**	**12.74**	**333**	P	**Pn**	**12 21 31.9**	**-1.7**
WHN				LR	LR		
	comp=N,3µm,14.0s						
WHN				LR	LR		
	comp=E,2µm,12.9s						
WHN				LR	LR		
	comp=Z,4µm,20.7s						
NJ2	**Nanjing**	**12.85**	**351**	eP	**Pn**	**12 21 36.0**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DAV	**Davao City (W)**	**12.92**	**160**	LR	LR	12 27 17.2	
	comp=Z,3µm,19.5s,baz=24,slow=41						
DLV	**T Lat**	**14.17**	**241**		**Pn**	**12 21 53.4**	**0.0**
GYA	**Guiyang**	**15.07**	**301**	⇓iP	**Pn**	**12 22 04.4**	**-1.0**
GYA				PP	**pwP**	**12 22 21.1**	**-1.2**
GYA				S	**Sn**	**12 24 45.1**	**-6.2**
GYA				SS	**S**	**12 25 07.1**	**-0.6**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,110nm,4.9s						
GYA				LR	LR		
	comp=N,900nm,14.1s						
GYA				LR	LR		
	comp=E,1µm,12.2s						
GYA				LR	LR		
	comp=Z,2µm,13.8s						
ENH	**Enshi**	**15.16**	**318**	Pn	**Pn**	**12 22 06.8**	**+0.4**
ENH				IAmb	IAmb	12 22 09.0	
	comp=Z,109nm,1.5s						
SPMM	**Sapulut**	**15.20**	**198**	P	**P**	**12 22 11.0**	**-0.6**
UBPT	**Khong Chiam**	**15.44**	**257**		**Pn**	**12 22 09.7**	**-0.5**
SLVN	**Son La**	**16.25**	**280**		**Pn**	**12 22 19.7**	**-0.8**
JNU	**Nakatsue**	**16.31**	**31**	Pn	**Pn**	**12 22 22.1**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=173,slow=8.4,SNR=5.2						
JNU				LR	LR	12 28 36.1	
	comp=Z,213nm,21.7s,baz=207,slow=37						
JNU	**Nakatsue**	**16.31**	**31**	Pn	**Pn**	**12 22 20.2**	**-1.0**
JNU				IAmb	IAmb	12 22 39.9	
	comp=Z,76nm,1.1s						
XAN	**Xi'an**	**18.24**	**326**	P	**Pn**	**12 22 46.6**	**+1.4**
XAN				pP	pP	12 22 54.5	+0.2
XAN				PP	**sP**	**12 23 02.9**	**+5.2**
XAN				S	**Sn**	**12 26 05.7**	**-2.2**
XAN				pmax	pmax		
	comp=Z,17nm,1.4s						
XAN				pmax	pmax		
	comp=Z,270nm,5.5s						
XAN				LR	LR		
	comp=Z,970nm,14.6s						
XAN				LR	LR		
	comp=Z,460nm,14.2s						
XAN				LR	LR		
	comp=Z,970nm,14.7s						
XAN	**Xi'an**	**18.24**	**326**	P	**Pn**	**12 22 45.8**	**+0.6**
SBUM	**Sibu**	**18.87**	**208**	P	**Pn**	**12 22 52.9**	**-0.1**
SBUM	**Sibu**	**18.87**	**208**	P	**P**	**12 22 52.0**	**-0.2**

KSAR Wonju Array Be 19.02 17 P P 12 22 53.9 +0.3
KSRS Korea Array 19.04 17 P P 12 22 54.0 +0.1
comp=Z,0.9nm,0.3s,baz=196,slow=11,SNR=15
KSRS LR LR 12 31 18.0
comp=Z,639nm,19.7s,baz=199,slow=40
KS19 Wonju Array Si 19.07 17 P P 12 22 54.2 0.0
KS19 IAmb IAmb 12 23 34.1
comp=Z,150nm,1.9s
PBKT Sadao Pong 19.34 265 P P 12 22 57.5 +0.2
CD2 Chengdu 19.46 310 ⇓iP Pn 12 23 00.0 0.0
CD2 S Sn 12 26 41.6 +4.2
CD2 pmax pmax
comp=Z,70nm,1.0s
CD2 pmax pmax
comp=Z,880nm,4.1s
CD2 LR LR
comp=Z,2μm,15.8s
CD2 LR LR
comp=Z,3μm,12.4s
CD2 LR LR
comp=Z,4μm,14.8s
KSM Kuching 20.63 212 P P 12 23 10.9 -0.5
KSM IAmb IAmb 12 23 16.0
comp=Z,30nm,0.9s
KSM Kuching 20.63 212 P P 12 23 12.0 +0.6
JCJ Chichijima 20.86 64 LR LR 12 29 40.8
comp=Z,405nm,21.3s,baz=252,slow=32
CHTO Chiang Mai 20.94 272 P P 12 23 15.1 +0.3
CM31 Chiang Mai Arr 20.97 271 P P 12 23 16.0 +0.9
CMAR Chiang Mai Arr 20.97 271 P P 12 23 15.7 +0.5
comp=Z,5.9nm,0.9s,baz=73,slow=9.3,SNR=42
CMAR PcP PcP 12 27 22.7 +0.8
comp=Z,2.7nm,0.8s,baz=61,slow=0.7,SNR=10
CMAR LR LR 12 31 27.2
comp=Z,274nm,18.8s,baz=80,slow=37
BJT Baijiatuau 21.07 349 P P 12 23 16.5 +0.6
INU Inuyama 21.29 38 P P 12 23 16.5 -1.9
INU IAmb IAmb 12 23 46.7
comp=Z,56nm,1.2s
STKI Sintang 21.32 207 P P 12 23 18.1 -0.7
SNY Shenyang 22.55 5 ⇑P P 12 23 29.8 -2.0
SNY S S 12 27 38.3 +1.7
SNY pmax pmax
comp=Z,8.0nm,0.7s
SNY pmax pmax
comp=Z,200nm,2.9s
SNY LR LR
comp=Z,550nm,15.0s
SNY LR LR
comp=Z,360nm,16.4s
SNY LR LR
comp=Z,700nm,23.1s
LZH Lanzhou 22.58 321 ⇓P P 12 23 32.8 +0.4
LZH pP pP 12 23 41.3 -0.3
LZH sP sP 12 23 45.9 +0.9
LZH eS S 12 27 35.0 -2.6
LZH sS Sn 12 27 46.3 -6.2
LZH SS SnSn 12 28 18.6 +10
LZH pmax pmax
comp=Z,28nm,1.1s
LZH pmax pmax
comp=Z,320nm,4.9s
LZH LR LR
comp=Z,950nm,12.5s
LZH LR LR
comp=Z,780nm,12.4s
LZH LR LR
comp=Z,1μm,16.3s
MAJO Matsushiro 22.82 38 P P 12 23 36.6 +1.9
MAJO IAmb IAmb 12 23 45.6
comp=Z,104nm,1.9s
MJAR Matsushiro Arr 22.82 38 P P 12 23 34.4 -0.4
comp=Z,4.4nm,1.0s,baz=229,slow=13,SNR=6.1
MJAR LR LR 12 33 21.5
comp=Z,94nm,18.8s,baz=240,slow=39
MJAR Matsushiro Arr 22.82 38 P P 12 23 36.4 +1.6
HHC Hu-ho-hao-te 22.97 341 ⇓iP P 12 23 40.0 +3.7
HHC pmax pmax
comp=Z,140nm,5.7s
HHC LR LR
comp=Z,700nm,15.6s
HHC LR LR
comp=Z,310nm,16.2s
HHC LR LR
comp=Z,890nm,17.3s
BTO Baotou 23.25 338 eP P 12 23 41.6 +2.4
GUMO Guam 23.49 100 LR LR 12 30 45.9
comp=Z,704nm,21.8s,baz=278,slow=32
JRMM Jerantut 23.77 232 P P 12 23 45.0 +0.7
MYKOM Kota Tinggi 24.25 226 P P 12 23 49.1 +0.4
MYKOM Kota Tinggi 24.25 226 P P 12 23 49.0 +0.3
KULM Kulim 24.31 238 P P 12 23 49.2 0.0
KULM IAmb IAmb 12 24 08.4
comp=Z,25nm,1.1s
KULM Kulim 24.31 238 P P 12 23 50.0 +0.7
IPM Ipoh 24.50 236 P P 12 23 49.9 -1.2
IPM IAmb IAmb 12 23 52.2
comp=Z,16nm,0.9s
IPM Ipoh 24.50 236 P P 12 23 51.0 -0.1
USRK Ussuriysk Ar. 26.44 18 LR LR 12 35 00.5
comp=Z,309nm,20.8s,baz=188,slow=37
GTA Gaotai 27.17 322 ⇑P P 12 24 16.7 +1.5
GTA pP pwP 12 24 28.1 +0.6
GTA S S 12 28 57.3 +5.8
GTA pmax pmax
comp=Z,4.0nm,1.1s
GTA pmax pmax
comp=Z,140nm,5.1s
GTA LR LR
comp=Z,290nm,17.8s
GTA LR LR
comp=Z,470nm,17.8s
GTA LR LR
comp=Z,570nm,16.8s
PSI Prapat 27.18 236 LR LR 12 33 54.6
comp=Z,496nm,19.7s,baz=59,slow=34
LEM Lembang 29.17 208 LR LR 12 38 40.4
comp=Z,192nm,18.8s,baz=41,slow=42
ASAJ Asahikawa 30.58 31 LR LR 12 37 38.1
comp=Z,355nm,20.4s,baz=230,slow=37
ULN Ulaanbaatar 30.69 341 P P 12 24 44.8 -1.5
SONM Songino Array 30.86 341 P P 12 24 48.6 +0.7
comp=Z,1.5nm,0.7s,baz=159,slow=10,SNR=13
SONM pP pP 12 24 58.3 +0.9
comp=Z,3.3nm,0.9s,baz=154,slow=9.3,SNR=11
SONM PcP PcP 12 27 44.3 +0.2
comp=Z,0.8nm,0.9s,baz=172,slow=2.9,SNR=3.6
SONM pPcP 12 27 54.8
comp=Z,1.7nm,1.0s,baz=165,slow=5.4,SNR=4.0
SONM ScP ScP 12 31 24.6 +0.5
comp=Z,0.8nm,1.0s,baz=149,slow=3.1,SNR=3.8
SONM LR LR 12 38 33.0
comp=Z,777nm,18.1s,baz=176,slow=39
SONM Songino Array 30.86 341 P P 12 24 47.4 -0.4
KLR Kul'dur 31.06 14 LR LR 12 38 44.1
comp=Z,594nm,20.5s,baz=192,slow=39
WMQ Urumqi 37.11 319 eP P 12 25 43.9 +1.9
WMQ pmax pmax
comp=Z,7.0nm,0.7s
WMQ pmax pmax
comp=Z,97nm,3.9s
WMQ LR LR
comp=Z,410nm,15.7s
WMQ LR LR
comp=Z,550nm,17.1s
WMQ LR LR
comp=Z,490nm,18.5s
FITZ Fitzroy Crossi 37.44 173 P P 12 25 42.3 -2.6
KRVT Keravat (AS076 38.44 124 LR LR 12 38 43.6
comp=Z,677nm,21.1s,baz=318,slow=32
PSA00 Pilbara Seismi 40.65 182 P P 12 26 09.5 -2.2
PSA00 IAmb IAmb 12 26 10.3
comp=Z,18nm,0.8s
WB0 Warramunga Arr 40.97 161 P P 12 26 11.7 -2.6
WB0 IAmb IAmb 12 27 11.0
comp=Z,55nm,1.9s
WRAB Tennant Creek 41.11 161 P P 12 26 11.8 -3.7
WRAB IAmb IAmb 12 26 28.7
comp=Z,54nm,1.9s
WRA Warramunga Arr 41.11 161 P P 12 26 11.6 -4.0
comp=Z,2.6nm,0.6s,baz=225,slow=9.2,SNR=18
WRA LR LR 12 43 48.1
comp=Z,127nm,21.5s,baz=340,slow=37
WRA Warramunga Arr 41.11 161 P P 12 26 14.8 -0.8
WB2 Warramunga Arr 41.12 161 P P 12 26 11.9 -3.7
WR0 Warramunga Arr 41.19 161 P P 12 26 11.8 -4.4
WR0 IAmb IAmb 12 27 19.7
comp=Z,56nm,1.9s
MK31 Makanchi Array 41.88 320 P P 12 26 22.7 +1.0
MKAR Makanchi Array 41.88 320 P P 12 26 22.9 +1.2
comp=Z,5.0nm,0.7s,baz=116,slow=9.8,SNR=58
MKAR PcP PcP 12 28 17.1 +0.1
comp=Z,1.4nm,0.8s,baz=99,slow=5.2,SNR=2.4
MKAR pPcP 12 28 28.7
comp=Z,2.7nm,0.9s,baz=116,slow=5.5,SNR=3.9
MKAR LR LR 12 44 49.9
comp=Z,250nm,20.9s,baz=97,slow=38
MKAR Makanchi Array 41.88 320 P P 12 26 20.7 -1.0
MAKZ Makanchi 42.08 320 P P 12 26 24.9 +1.6
H11S3 WAKE ISLAND Hy 43.05 83 T T 13 12 13.8
baz=275,slow=75,SNR=71
H11S1 WAKE ISLAND Hy 43.06 83 T T 13 12 16.0
baz=275,slow=75,SNR=47
H11S2 WAKE ISLAND Hy 43.07 83 T T 13 12 16.4
baz=275,slow=75,SNR=39
H11N1 WAKE ISLAND Hy 43.07 82 T T 13 12 09.8
baz=278,slow=75,SNR=176
H11N2 WAKE ISLAND Hy 43.07 81 T T 13 12 17.8
baz=278,slow=75,SNR=130
H11N3 WAKE ISLAND Hy 43.09 82 T T 13 12 21.4
baz=278,slow=75,SNR=106
KSH Kashi 43.63 307 P P 12 26 40.1 +4.0
KSH sP pP 12 26 48.4 +2.3
KSH PcP PcP 12 28 26.0 +2.9
KSH PcS PcS 12 32 16.7 +0.7
KSH S S 12 33 10.6 +7.2
KSH sS sS 12 33 20.0 -1.0
KSH pmax pmax
comp=Z,110nm,2.3s
KSH pmax pmax
comp=Z,320nm,4.0s
KSH LR LR
comp=Z,170nm,4.0s
KSH LR LR
comp=Z,190nm,4.0s
KSH LR LR
comp=Z,290nm,16.2s
PETK Petropavlovsk- 44.00 31 P P 12 26 38.6 -0.1
comp=Z,4.8nm,0.8s,baz=212,slow=6.8,SNR=9.1
PETK LR LR 12 45 22.2
comp=Z,148nm,20.6s,baz=238,slow=36
ZAA0 Zalesovo Array 44.34 330 P P 12 26 41.9 +0.5
ZALV Zalesovo Beam 44.34 330 P P 12 26 41.7 +0.3
comp=Z,3.7nm,0.6s,baz=117,slow=8.3,SNR=22
ZALV LR LR 12 46 22.0
comp=Z,473nm,18.8s,baz=123,slow=38
AS31 Alice Springs 44.51 163 P P 12 26 40.7 -2.4
ASAR Alice Springs 44.51 163 P P 12 26 40.1 -2.9
comp=Z,2.2nm,0.3s,baz=340,slow=6.8,SNR=26
ASAR PcP PcP 12 28 25.5 -0.6
comp=Z,1.9nm,0.9s,baz=357,slow=2.8,SNR=4.9
NIL Nilore 44.76 299 P P 12 26 45.9 +0.8
NIL IAmb IAmb 12 26 47.3
comp=Z,22nm,0.8s
KURK Kurchatov 45.85 323 P P 12 26 53.8 +0.4
KURK IAmb IAmb 12 27 04.9
comp=Z,13nm,1.1s
KURBB Kurchatov Arra 45.85 323 P P 12 26 54.4 +1.0
comp=Z,7.2nm,0.6s,baz=121,slow=7.7,SNR=48
BTK Batken 47.62 307 P P 12 27 08.1 +0.5
BTK IAmb IAmb 12 27 37.0
comp=Z,14nm,1.4s
HNR Honiara 47.77 123 LR LR 12 47 09.4
comp=Z,307nm,18.0s,baz=305,slow=36
KBL Kabul 48.32 299 P P 12 27 11.8 -1.5
KBL IAmb IAmb 12 27 24.7
comp=Z,8.2nm,0.9s
MORW Morawa 48.34 186 P P 12 27 11.1 -1.9
KK31 Karatay Array 48.47 311 P P 12 27 15.5 +1.5
KK31 IAmb IAmb 12 27 29.1
comp=Z,11nm,1.1s
KKAR Karatay Array 48.47 311 P P 12 27 15.3 +1.3
KKAR Karatay Array 48.47 311 P P 12 27 15.6 +1.6
KKAR IAmb IAmb 12 27 29.1
comp=Z,11nm,1.1s
BRVK Borovoye 51.52 323 P P 12 27 37.4 +0.5
NWAO Narrogin (SRO) 52.07 184 P P 12 27 39.8 -1.5
comp=Z,15nm,0.6s,baz=11,slow=6.8,SNR=14
NWAO Narrogin (SRO) 52.07 184 P P 12 27 39.5 -1.7
TIXI Tiksi 52.54 3 P P 12 27 43.8 -0.5
TIXI IAmb IAmb 12 27 54.2
comp=Z,5.7nm,0.8s
BBOO Buckleboo 53.77 164 P P 12 27 52.4 -1.3
STKA Stephens Creek 54.56 159 P P 12 27 57.5 -2.0
comp=Z,3.0nm,0.6s,baz=346,slow=6.8,SNR=9.4
BILL Bilibino 56.29 19 P P 12 28 11.2 -0.4
BILL IAmb IAmb 12 28 30.1
comp=Z,6.5nm,1.0s
ABKAR Akbulak array 56.84 317 P P 12 28 16.4 +0.6
GEYT Alibeck 57.28 303 P P 12 28 20.4 +1.3
comp=Z,1.6nm,0.6s,baz=134,slow=4.3,SNR=4.8
GEYT Alibeck 57.28 303 P P 12 28 18.5 -0.6
ARU Arti 58.98 325 P P 12 28 31.3 +0.6
DZM Mont Dzumac 60.47 131 eLR LR 12 46 40.7
comp=Z,532nm,22.1s
DZM Mont Dzumac 60.47 131 LR LR 12 51 00.7
comp=Z,397nm,19.6s,baz=301,slow=32
GAMB Gambell 62.80 27 P P 12 28 56.1 -0.3
GAMB IAmb IAmb 12 29 28.0
comp=Z,18nm,1.8s
SOCY Socotra 64.64 275 P P 12 29 08.2 -1.4
SOCY IAmb IAmb 12 29 22.4
comp=Z,21nm,1.4s
KBZ Khabaz 68.50 310 P P 12 29 34.2 +0.5
comp=Z,3.4nm,0.9s,baz=146,slow=7.5,SNR=6.4
KBZ LR LR 13 03 37.5
comp=Z,260nm,18.3s,baz=64,slow=39
KLMR Klimovskoe 69.25 329 eP P 12 29 35.3 -2.6
KLMR AMP 12 29 46.6
comp=Z,32nm,1.9s
RAYN Ar Rayn 69.74 289 P P 12 29 41.5 -0.3
RAYN IAmb IAmb 12 29 43.0
comp=Z,6.1nm,0.9s
TOLK Toolik Lake Re 71.95 23 P P 12 29 55.3 +0.9
TOLK IAmb IAmb 12 30 11.4
comp=Z,6.6nm,0.9s
GHO Glory Hole Cre 73.19 30 P P 12 30 02.4 +0.5
OUZ Omahuta 73.62 137 P P 12 30 05.1 +0.4
AFI Afiamalu 73.87 111 LR LR 12 55 48.6
comp=Z,106nm,20.1s,baz=294,slow=30
SCM Sheep Creek Mo 73.92 30 P P 12 30 06.3 0.0
BMAR Burnt Mountain 74.00 24 P P 12 30 07.5 +0.9
ARCES ARCESS Array B 74.02 339 P P 12 30 07.0 +0.4
comp=Z,3.3nm,0.8s,baz=82,slow=9.2,SNR=8.8
ARCES LR LR 13 06 41.1
comp=Z,166nm,19.1s,baz=120,slow=39
ARCES ARCESS Array B 74.02 339 P P 12 30 06.5 0.0
GLI Glacier Island 74.21 31 P P 12 30 07.6 -0.3
FINES FINESS Array B 75.61 330 P P 12 30 16.2 +0.4
comp=Z,2.4nm,0.8s,baz=134,slow=5.5,SNR=4.4
FINES LR LR 13 06 15.1
comp=Z,217nm,18.1s,baz=82,slow=38
FINES FINESS Array B 75.61 330 P P 12 30 14.6 -1.2
BRTR Keskin Array B 76.02 307 P P 12 30 18.6 -0.3
comp=Z,0.7nm,0.5s,baz=130,slow=3.0,SNR=4.9
BRTR LR LR 13 09 19.2
comp=Z,56nm,19.0s,baz=24,slow=40
BRTR Keskin Array B 76.02 307 P P 12 30 18.4 -0.5
BCAR Beaver Creek A 76.16 28 P P 12 30 18.6 -0.4
AKASG Malin Array Be 76.46 319 P P 12 30 20.3 -0.6
comp=Z,0.8nm,0.4s,baz=62,slow=5.6,SNR=5.7
AKASG LR LR 13 06 10.7
comp=Z,133nm,18.8s,baz=75,slow=37
AKASG Malin Array Be 76.46 319 P P 12 30 20.8 -0.1
QRZ Quartz Range 76.54 142 P P 12 30 21.6 +0.2
CTGM Chitina Glacie 76.93 30 P P 12 30 24.0 +0.4
CTGM IAmb IAmb 12 30 40.6
comp=Z,9.1nm,1.0s
RPZ Rata Peaks 77.63 145 P P 12 30 26.6 -0.9
URZ Urewera 77.71 138 LR LR 13 02 41.7
comp=Z,85nm,20.5s,baz=325,slow=34
INK Inuvik 77.76 22 P P 12 30 27.8 -0.1
INK IAmb IAmb 12 30 29.3
comp=Z,13nm,1.2s
BKZ Black Stump Fm 77.87 139 P P 12 30 28.8 -0.1
TESR Tescani 79.21 315 ⇑P P 12 30 35.9 -0.4
VRI Vrincioaia 79.34 315 ⇑P P 12 30 36.4 -0.7
ELL Elmali 79.62 305 P P 12 30 39.4 +0.5
BURAR Bucovina Array 79.83 317 ⇑P P 12 30 40.3 +0.6
BURAR Bucovina Array 79.83 317 P P 12 30 39.7 -0.1
BUR08 Bucovina Ar. S 79.83 317 P P 12 30 39.6 -0.2
BUR08 IAmb IAmb 12 30 55.7
comp=Z,14nm,1.4s
MLR Muntele Rosu 79.98 315 ⇑P P 12 30 41.2 +0.5
WHY Whitehorse 80.02 29 P P 12 30 41.2 +0.6
WHY IAmb IAmb 12 30 42.4
comp=Z,11nm,1.3s
C36M Paulatuk 80.41 19 P P 12 30 41.4 -1.0
C36M IAmb IAmb 12 30 42.8
comp=Z,19nm,1.1s
DAG Danmarks Havn 81.15 351 iP P 12 30 45.0 -1.2
KOLS Kolonicke sedl 81.28 319 eP P 12 30 49.0 +1.6
DRGR 81.71 317 ⇑P P 12 30 50.5 +0.7
CRVS Cervenica-Dubn 81.79 319 eP P 12 30 50.6 +0.4
NOA NORSAR Array B 82.48 333 P P 12 30 53.4 -0.2
comp=Z,2.0nm,0.9s,baz=64,slow=5.2,SNR=3.8
NOA LR LR 13 10 44.3
comp=Z,447nm,18.9s,baz=65,slow=38
VTS Vitosha 82.73 313 ⇑P P 12 30 56.2 +0.8
RES Resolute Bay 83.47 9 P P 12 30 58.5 +0.1
RES IAmb IAmb 12 30 59.5
comp=Z,14nm,1.0s
VYHS Vyhne 83.56 319 eP P 12 31 00.9 +1.5
KMBO Kilima Mbogo 84.55 267 P P 12 31 06.0 +0.7
comp=Z,3.1nm,0.8s,baz=31,slow=4.3,SNR=7.6
KMBO Kilima Mbogo 84.55 267 P P 12 31 06.1 +0.7
KMBO IAmb IAmb 12 31 08.2
comp=Z,6.7nm,0.9s
MODS Modra-Piesok 84.57 319 eP P 12 31 04.1 -0.4
VRAC Vranov 84.62 320 ⇑P P 12 31 05.8 +1.0
BRG Berggiesshubel 85.53 323 e(P) P 12 31 18.1 +8.8
comp=Z,9.5nm,1.5s
GERES GERESS Array B 86.54 321 P P 12 31 15.6 +1.1
comp=Z,0.6nm,0.5s,baz=81,slow=8.2,SNR=5.2
GERES pP pP 12 31 25.1 -0.1
comp=Z,1.0nm,0.8s,baz=38,slow=6.8,SNR=2.7
GERES LR LR 13 10 43.8
comp=Z,102nm,19.6s,baz=72,slow=36
GERES GERESS Array B 86.54 321 P P 12 31 10.1 -4.4
SUMG Summit 87.32 354 iP P 12 31 19.1 +1.0
YKA Yellowknife Ar 87.48 23 P P 12 31 18.0 -0.6
comp=Z,12nm,0.9s,baz=311,slow=4.7,SNR=130
PPT Papeete 95.06 107 LR LR 13 05 11.6
comp=Z,76nm,21.4s,baz=287,slow=30
PPT2 Papeete2 95.06 107 eS S 12 43 07.3 -0.1
comp=Z,66nm,25.8s
PPT2 Papeete2 95.06 107 eLR LR 13 02 41.0
comp=Z,208nm,25.0s
PINE Pine Mountain 95.40 40 P P 12 31 55.0 -1.0
TBI Tubuai 96.96 112 eS S 12 43 23.5 +0.1
comp=Z,66nm,33.8s
TBI Tubuai 96.96 112 eLR LR 13 03 26.9
comp=Z,146nm,25.8s
J08A Circle Bar Ran 97.13 39 P Pdif 12 32 03.7 -0.1
FFC Flin Flon 97.61 24 P P 12 32 04.7 -0.8
FFC IAmb IAmb 12 32 08.2
comp=Z,3.7nm,1.1s
VNDA Vanda 99.51 172 LR LR 13 20 59.5
comp=Z,89nm,18.0s,baz=316,slow=38
NVAR Mina Array Bea 100.03 43 P Pdif 12 32 18.1 +1.1
comp=Z,0.5nm,0.7s,baz=268,slow=6.7,SNR=4.4
NVAR Mina Array Bea 100.03 43 Pdif 12 32 15.3 -1.8
TXAR Lajitas Array 115.18 43 PKP PKiKP 12 37 13.0 -0.2
comp=Z,1.3nm,0.8s,baz=270,slow=0.9,SNR=16
TXAR Lajitas Array 115.18 43 PKiKP 12 37 11.5 -1.7

UCR 04 12:31:28.1±1.2, 9.40N×84.33W, h24km±3km, MD3.8
UPA 04 12:31:28.1±0.4, 9.45N×84.35W, h9km±3km, MW3.6
ISC 04 12:31:26.5±1.6, 9.34N±0.05×84.37W±0.05, h14km±11km, n23, σ0.81/37, 1C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDDO	Dominical	0.51	100	iP	Pg	12 31 37.5	+1.0
EDDO				iS	Sb	12 31 45.2	+0.8
LCR2	La Lucha 2	0.54	42	eP	Pg	12 31 37.6	+0.4
LCR2				eS	Sb	12 31 45.1	-0.4
SJS	Escuela Geolog	0.67	28	eP	Pg	12 31 39.8	+0.2
SJS				eS	Sb	12 31 49.3	0.0
HDC	Heredia	0.70	21	eP	Pg	12 31 40.2	0.0
HDC				eS	Sb	12 31 49.7	-0.5
HDC	Heredia	0.70	21	eP	Pg	12 31 40.4	+0.2
HDC				eS	Sb	12 31 49.9	-0.4
SRA1	San Ramn	0.75	351	eP	Pb	12 31 41.5	+0.1
SRA1				eS	Sb	12 31 51.6	+0.1
CVTR	Volcan Turrial	0.90	42	eP	Pg	12 31 43.9	-0.2
CVTR				eS	Sb	12 31 56.2	-0.1
EDPN	Palmar Norte	0.98	113	eP	Pb	12 31 45.2	0.0
JTS	Las Juntas de	1.10	329	⇑iP	Pb	12 31 47.2	-0.3
JTS				eS	Sb	12 32 01.7	-0.1
JTS	Las Juntas de	1.10	329	eP	Pb	12 31 46.9	-0.6
CASO	Castillo	1.14	342	iP	Pb	12 31 48.2	0.0
CASO				iS	Sn	12 32 03.2	-0.5
FORC	Fortuna	1.16	345	iP	Pb	12 31 48.2	-0.1
FORC				iS	Sn	12 32 04.8	+0.8
ARE1	Arenal 1	1.16	343	eP	Pn	12 31 48.8	+0.3
GUAI	GUAI	1.46	309	iP	Pn	12 31 51.8	-0.6
CUI	Cuipilapa	1.52	329	iP	Pn	12 31 53.7	+0.3
CUI				iS	Sn	12 32 13.1	0.0
COLC	Colonia	1.55	328	iP	Pn	12 31 54.1	+0.3
GUAB	Guayabo de Bag	1.60	328	iP	Pn	12 31 55.4	+0.9
NY14	Universidad de	1.73	319	iP	Pn	12 31 56.3	+0.1
BRU2	Volcan	1.74	108	eP	Pn	12 31 56.3	-0.3
BRU2				eS	Sb	12 32 21.5	+1.3
BRU2	Volcan	1.74	108	eP	Pn	12 31 57.0	+0.4
BCO2	Palmira	1.92	109	eP	Pn	12 31 58.7	-0.3
BCO2				eS	Sb	12 32 26.3	+0.9
CHGR2	Aguacate	2.23	100	eP	Pn	12 32 01.6	-1.5
CHGR2				eS	Sn	12 32 32.5	+1.9
CACAO	El Cacao, Vera	4.00	120	eP	Pb	12 32 34.1	-2.7

ATH 04 12:46:14.7, 38.17N×20.40E, h6km±2km, ML2.6/8, Error ellipse: s-maj=2.3km s-min=0.8km az=258.0
THE 04 12:46:14.9, 38.16N×20.43E, h5km, ML2.7/7, Error ellipse: s-maj=1.0km s-min=0.5km az=235.0
ISC 04 12:46:15.0±1.1, 38.17N±0.03×20.43E±0.03, h5km±5km, n26, σ0.44/50, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.03	12	P	Pg	12 46 15.9	-0.1
LXR1				S	Sg	12 46 17.0	+0.3
CHV1	Chavriata, Kef	0.04	284	P	Pg	12 46 16.1	0.0
CHV1				S	Sg	12 46 17.2	+0.3
	99μm,0.3s						
ARG2	Argostoli	0.04	84	P	Pg	12 46 16.2	0.0
ARG2				S	Sg	12 46 17.4	+0.4
	43μm,0.1s						
KEF2	Argostoli. Kep	0.04	101	P	Pg	12 46 16.1	-0.1
KEF2				S	Sg	12 46 17.2	+0.2
KEF3	Kipouria, Keph	0.07	294	P	Pg	12 46 16.4	-0.3
KEF3				S	Sg	12 46 18.0	+0.3
KEF4	Livadi, Kephal	0.08	356	P	Pg	12 46 16.9	+0.1
KEF4				S	Sg	12 46 18.6	+0.5
KEF1	Kardakata, Kep	0.11	17	P	Pg	12 46 17.1	-0.1
KEF1				S	Sg	12 46 19.2	+0.4
VLS	Valsamata	0.12	88	P	Pg	12 46 17.3	-0.2
VLS				S	Sg	12 46 19.4	+0.1
	7μm,0.2s						
VLS	Valsamata	0.12	88	P	Pg	12 46 17.3	-0.2
VLS				S	Sg	12 46 19.6	+0.3
VSK1	VASILIKIADES	0.26	24	P	Pg	12 46 20.2	+0.2
VSK1				S	Sg	12 46 24.4	+1.0
	3μm,0.2s						
FSK	Fiskardo	0.30	20	P	Pg	12 46 20.9	0.0
FSK				S	Sg	12 46 25.7	+0.8
	1μm,0.2s						
FSK	Fiskardo	0.30	20	P	Pg	12 46 20.7	-0.2
FSK				S	Sg	12 46 25.6	+0.8
FSK				AML	AML	12 46 26.1	
	comp=N,1773μm,0.2s						
FSK				AML	AML	12 46 26.7	
	comp=E,2508μm,0.2s						
VLMS	Volimes, Zakyn	0.35	148	P	Pg	12 46 22.0	+0.3
VLMS				S	Sg	12 46 27.2	+0.8
VLMS				AML	AML	12 46 35.0	
	comp=E,2806μm,0.3s						
VLMS				AML	AML	12 46 36.6	
	comp=N,4595μm,0.3s						
EVGI	Lefkada island	0.48	22	P	Pg	12 46 24.0	-0.3
EVGI				S	Sg	12 46 31.5	+0.9
EVGI	Lefkada island	0.48	22	P	Pg	12 46 23.9	-0.3

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVGI				S	Sg	12 46 31.4	+0.9
MGNA	Meganis	0.56	30	P	Pg	12 46 25.2	-0.5
MGNA				S	Sg	12 46 33.7	+0.6
MGNA				AML	AML	12 46 34.5	
	comp=E,1039µm,0.3s						
MGNA				AML	AML	12 46 34.7	
	comp=N,1014µm,0.2s						
AST1	Astakos	0.63	54	P	Pg	12 46 27.3	+0.1
AST1				S	Sg	12 46 36.1	+0.7
	comp=N,810nm,0.4s						
LKD2	Lefkada island	0.64	16	P	Pg	12 46 27.3	0.0
LKD2				S	Sg	12 46 36.2	+0.6
TSLK	Tsoukalades, L	0.67	15	P	Pg	12 46 27.6	-0.3
TSLK				S	Sg	12 46 36.7	0.0
TSLK				AML	AML	12 46 44.7	
	comp=E,595µm,0.6s						
TSLK				AML	AML	12 46 47.7	
	comp=N,407µm,0.4s						
PDO	Prodromos	0.73	54	P	Pg	12 46 28.4	-0.5
PDO				S	Sb	12 46 40.0	-0.5
PDO				AML	AML	12 46 49.5	
	comp=E,1029µm,0.7s						
PDO				AML	AML	12 46 50.1	
	comp=N,949µm,0.3s						
RLS	Riolos of Patr	0.82	98	P	Pg	12 46 30.9	+0.1
RLS				S	Sg	12 46 42.0	+0.5
	comp=N,208nm,0.6s						
RLS	Riolos of Patr	0.82	98	P	Pg	12 46 30.7	-0.1
PVO	Paravola	0.97	62	P	Pg	12 46 33.4	-0.2
PVO	Paravola	0.97	62	P	Pg	12 46 33.0	-0.5
PVO				S	Sb	12 46 47.6	+0.2
PVO				AML	AML	12 46 51.7	
	comp=E,1056µm,0.5s						
PVO				AML	AML	12 46 59.9	
	comp=N,871µm,0.7s						
DRO	Drossia	1.03	102	P	Pb	12 46 35.0	-0.4
DRO				S	Sb	12 46 49.2	-0.1
DRO				AML	AML	12 46 58.2	
	comp=N,570µm,0.6s						
DRO				AML	AML	12 46 59.6	
	comp=E,719µm,0.4s						
ANX	Ano Chora	1.24	70	P	Pg	12 46 38.9	+0.1
ANX				S	Sn	12 46 56.2	-0.2
ANX				AML	AML	12 47 03.3	
	comp=E,560µm,0.6s						
ANX				AML	AML	12 47 03.5	
	comp=N,681µm,0.6s						

IDC 04 12:46:47.2±3.1, 12°.55S×167°.88E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/31, mbtmp4.0/4, Error ellipse: s-maj=112.7km s-min=40.9km az=138.0
NEIC 04 12:47:06.1±2.9, 11°.6S±0°.1×165°.3E±0°.2, h10km±2km, mb4.4/6, Error ellipse: s-maj=26.8km s-min=19.7km az=71.0
ISC 04 12:47:08.8±2.2, 11°.8S±0°.2×165°.5E±0°.2, h35km, n15, σ1s.63/14, mb4.2/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	4.02	156	Pn	Pn	12 48 10.7	+2.7
SANVU				Sn	Sn	12 48 50.8	-3.1
NOUC	Port Laguerre	10.30	176	Pn	Pn	12 49 35.1	+0.8
EIDS	Eidsvold	19.19	223	P	Pn	12 51 31.1	+0.3
EIDS				IAmb	IAmb	12 51 40.2	
	comp=Z,13nm,1.1s						
WR0	Warramunga Arr	30.81	251	P	P	12 53 22.1	+0.5
WR0				IAmb	IAmb	12 53 35.6	
	comp=Z,6.8nm,1.4s						
WB0	Warramunga Arr	30.91	251	P	P	12 53 23.6	+1.1
WB0				IAmb	IAmb	12 53 31.1	
	comp=Z,11nm,1.4s						
WB2	Warramunga Arr	30.98	251	P	P	12 53 24.0	+0.9
WRA	Warramunga Arr	30.99	251	P	P	12 53 24.0	+0.8
	comp=Z,1.0nm,0.4s,baz=86,slow=8.7,SNR=5.1						
AS31	Alice Springs	32.23	244	P	P	12 53 33.6	-0.5
ASAR	Alice Springs	32.24	244	P	P	12 53 33.5	-0.7
	comp=Z,1.3nm,0.4s,baz=69,slow=10,SNR=49						
ASAR	Alice Springs	32.24	244	P	P	12 53 33.5	-0.7
FITZ	Fitzroy Crossi	38.94	256	P	P	12 54 33.2	+1.5
FITZ				IAmb	IAmb	12 54 34.1	
	comp=Z,13nm,1.4s						
CMAR	Chiang Mai Arr	72.16	294	P	P	12 58 28.9	-1.6
	comp=Z,0.6nm,0.7s,baz=117,slow=4.1,SNR=4.5						
CMAR	Chiang Mai Arr	72.16	294	P	P	12 58 28.9	-1.6
MKAR	Makanchi Array	93.86	317	P	P	13 00 16.1	-6.6
	comp=Z,0.4nm,0.8s,baz=100,slow=6.5,SNR=4.3						
ARCES	ARCESS Array B	116.96	345	PKP	PKPdf	13 05 36.1	-13
	comp=Z,0.7nm,0.4s,baz=72,slow=2.0,SNR=16						

IDC 04 13:02:10.7±2.0, 1°.39N×125°.94E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/23, mbtmp3.3/3, Error ellipse: s-maj=182.7km s-min=25.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.75	159	P	P	13 07 13.1	-1.6
	0.6nm,0.6s,baz=337,slow=11,SNR=6.3						
ASAR	Alice Springs	26.08	163	P	P	13 07 47.4	+1.1
	0.2nm,0.4s,baz=345,slow=10,SNR=7.1						
MKAR	Makanchi Array	59.03	326	P	P	13 12 12.4	-0.1
	0.1nm,0.4s,baz=125,slow=7.7,SNR=4.5						

DNK 04 13:05:56.0±1.1, 56°.10N×15°.60E, h12km±22km, Explosion
Hypocentre not reviewed by the ISC
UPP 04 13:05:56.8±0.3, 56°.23N×15°.44E, h0km, ML1.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VXJU	Vaexsjoe	0.75	339	P	Pg	13 06 10.8	-0.3
VXJU				S	Sg	13 06 20.8	0.0
VXJU	Vaexsjoe	0.75	339	P		13 06 10.8	
VXJU				S		13 06 20.8	
DEL	Delary	0.91	286	P	Pg	13 06 13.8	-0.4
DEL				S	Sg	13 06 26.6	+0.7
OSKU	Oskarshamn	1.03	20	P	Pg	13 06 15.8	-0.8
OSKU				S	Sg	13 06 29.4	-0.7
OSKU	Oskarshamn	1.03	20	P		13 06 15.8	
OSKU				S		13 06 29.4	
LUNU	Lund	1.27	243	P	Pg	13 06 20.3	-0.9
EKSU	Eksjoe	1.35	357	P	Pg	13 06 21.9	-0.8
EKSU	Eksjoe	1.35	357	P		13 06 21.9	
ASPU	Aespoe	1.35	28	P	Pg	13 06 21.9	-0.8
ASPU	Aespoe	1.35	28	P		13 06 21.9	
BJUU	Bjuv	1.36	264	P	Pg	13 06 21.7	-1.2
BYXU	Byxelkrok	1.37	38	P	Pg	13 06 22.5	-0.6
BYXU	Byxelkrok	1.37	38	P		13 06 22.5	
GNOU	Gnosjoe	1.41	320	P	Pn	13 06 23.1	-0.6
GNOU	Gnosjoe	1.41	320	P		13 06 23.1	
VSTU	Vaestervik	1.56	22	P	Pn	13 06 25.3	-0.4
VSTU	Vaestervik	1.56	22	P		13 06 25.3	

BER 04 13:06:30.2±0.5, 60°.88N×11°.48E, h0km, ML1.0, Suspected explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NC602	NORSAR Array S	0.14	168	eP	Pg	13 06 32.7	-0.2
NC602				eS	Sg	13 06 35.0	+0.2
NC602				IAML		13 06 37.5	
	comp=Z,33nm,0.6s						
NB201	NORSAR Array S	0.20	332	eP	Pg	13 06 33.5	-0.4
NB201				eS	Sg	13 06 36.5	+0.1
NB201				IAML		13 06 39.7	
	comp=Z,31nm,0.7s						
NAO01	NORSAR Array S	0.29	264	eP	Pg	13 06 35.3	-0.5
NAO01				eS	Sg	13 06 39.1	-0.5
NC303	NORSAR Array S	0.35	351	eP	Pg	13 06 36.5	-0.4
NC303				eS	Sg	13 06 41.0	-0.5
NC303				IAML		13 06 46.9	
	comp=Z,20nm,0.8s						
NBO00	NORSAR Array S	0.38	295	eP	Pg	13 06 37.1	-0.3
NBO00				eS	Sg	13 06 42.2	0.0
NBO00				IAML		13 06 48.0	
	comp=Z,5.9nm,0.8s						
NC204	NORSAR Array S	0.53	319	eP	Pg	13 06 39.8	-0.6
NC204				eS	Sg	13 06 47.0	-0.2
NC204				IAML		13 06 53.2	
	comp=Z,11nm,1.0s						

ATH 04 13:06:50.5, 38°.25N×20°.43E, h12km±1km, ML2.9/6, Error ellipse: s-maj=1.8km s-min=0.8km az=260.0
THE 04 13:06:50.7, 38°.25N×20°.42E, h12km, ML3.1/4, Error ellipse: s-maj=1.1km s-min=0.4km az=267.0
ISC 04 13:06:50.5±0.9, 38°.25N±0°.02×20°.43E±0°.04, h13km±5km, n33, σ0s.31/53, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.01	325	P	Pg	13 06 52.6	-0.2
KEF4				S	Sg	13 06 54.1	-0.2
KEF1	Kardakata, Kep	0.04	45	P	Pg	13 06 52.7	-0.2
KEF1				S	Sg	13 06 53.9	-0.6
LXR1	Lixouri, Cepha	0.05	175	P	Pg	13 06 52.9	0.0
LXR1				S	Sg	13 06 54.7	+0.1
CHV1	Chavriata, Kef	0.08	212	P	Pg	13 06 53.2	+0.1
CHV1				S	Sg	13 06 55.1	+0.1
KEF3	Kipouria, Keph	0.08	236	P	Pg	13 06 53.2	0.0
KEF3				S	Sg	13 06 55.3	+0.1
ARG2	Argostoli	0.08	148	P	Pg	13 06 53.2	0.0
KEF2	Argostoli. Kep	0.09	153	P	Pg	13 06 53.4	0.0
KEF2				S	Sg	13 06 55.5	+0.1
VLS	Valsamata	0.14	120	P	Pg	13 06 54.0	0.0
VLS				S	Sg	13 06 56.6	0.0
	31µm,0.1s						
VLS	Valsamata	0.14	120	P	Pg	13 06 54.0	0.0
VLS				S	Sg	13 06 56.5	0.0
VLS				AML	AML	13 06 56.7	
	comp=E,72077µm,0.2s						
VLS				AML	AML	13 06 56.7	
	comp=N,50587µm,0.2s						
VSK1	VASILIKIADES	0.19	33	P	Pg	13 06 55.0	+0.2
VSK1				S	Sg	13 06 58.6	+0.8
	comp=N,6µm,0.3s						
FSK	Fiskardo	0.23	26	P	Pg	13 06 55.7	+0.2
FSK				S	Sg	13 06 59.5	+0.6
	comp=N,3µm,0.3s						
FSK	Fiskardo	0.23	26	P	Pg	13 06 55.7	+0.2
FSK				S	Sg	13 06 59.1	+0.2
FSK				AML	AML	13 07 00.4	
	comp=E,8020µm,0.2s						
FSK				AML	AML	13 07 01.4	
	comp=N,3386µm,0.4s						
EVGI	Lefkada island	0.41	25	P	Pg	13 06 58.8	+0.1
EVGI				S	Sb	13 07 05.5	-0.4
EVGI	Lefkada island	0.41	25	P	Pg	13 06 58.9	+0.1
EVGI				S	Sb	13 07 05.5	-0.4
VLMS	Volimes, Zakyn	0.41	154	P	Pg	13 06 58.8	+0.1
VLMS				S	Sb	13 07 05.6	-0.3
VLMS				AML	AML	13 07 07.6	
	comp=E,7670µm,0.4s						
VLMS				AML	AML	13 07 07.9	
	comp=N,10973µm,0.3s						
MGNA	Meganis	0.49	34	P	Pg	13 07 00.2	-0.1
MGNA				S	Sg	13 07 06.4	-0.4
MGNA				AML	AML	13 07 08.3	
	comp=N,3834µm,0.2s						
MGNA				AML	AML	13 07 08.4	
	comp=E,3476µm,0.2s						
LKD2	Lefkada island	0.57	18	P	Pg	13 07 01.6	-0.1
LKD2	Lefkada island	0.57	18	P	Pg	13 07 00.8	-0.9
LKD2				S	Sb	13 07 10.4	0.0
TSLK	Tsoukalades, L	0.60	17	P	Pg	13 07 02.1	-0.2
TSLK	Tsoukalades, L	0.60	17	P	Pg	13 07 02.2	-0.1
TSLK				S	Sg	13 07 10.6	+0.4
KRI1	kERI	0.66	152	P	Pg	13 07 02.9	-0.4
KRI1				S	Sb	13 07 13.8	+0.8
	comp=E,2µm,0.2s						
PDO	Prodromos	0.69	59	P	Pg	13 07 03.7	-0.1
PDO	Prodromos	0.69	59	P	Pg	13 07 03.7	-0.1
PDO				S	Sg	13 07 13.2	+0.4
PDO				AML	AML	13 07 17.8	
	comp=E,1033µm,0.4s						
PDO				AML	AML	13 07 27.1	
	comp=N,1180µm,0.3s						
RLS	Riolos of Patr	0.84	103	P	Pg	13 07 06.8	+0.1
RLS				S	Sg	13 07 17.9	+0.2
PVO	Paravola	0.93	66	P	Pb	13 07 08.6	0.0
PVO	Paravola	0.93	66	P	Pb	13 07 08.6	0.0
PVO				AML	AML	13 07 25.2	
	comp=E,935µm,0.3s						
PVO				AML	AML	13 07 35.0	
	comp=N,725µm,0.7s						
DRO	Drossia	1.05	106	P	Pb	13 07 10.3	-0.3
DRO	Drossia	1.05	106	P	Pb	13 07 10.6	0.0
LAKA	Lakka	1.22	90	P	Pn	13 07 12.8	-0.5
AMT	Artemida-Makis	1.24	125	P	Pg	13 07 14.1	-0.2
IGT	Igoumenitsa	1.28	357	P	Pb	13 07 14.9	+0.3
KLV	Kalavryta, Ach	1.37	98	P	Pn	13 07 15.6	+0.2
ITM	Ithomi	1.59	132	P	Pb	13 07 20.0	+0.2

THE 04 13:14:46.6, 38°.28N×20°.40E, h11km±1km, ML2.6/12, Error ellipse: s-maj=1.1km s-min=0.4km az=251.0
ATH 04 13:14:46.1, 38°.28N×20°.39E, h13km±1km, ML2.7/4, Error ellipse: s-maj=1.9km s-min=1.0km az=262.0
ISC 04 13:14:45.8±1.0, 38°.27N±0°.02×20°.37E±0°.05, h16km±3km, n47, σ0s.48/67, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.05	109	P	Pg	13 14 48.7	0.0
KEF4				S	Sg	13 14 50.3	-0.4
KEF3	Kipouria, Keph	0.07	193	P	Pg	13 14 48.4	-0.5
KEF3				S	Sg	13 14 51.3	+0.4
KEF1	Kardakata, Kep	0.08	87	P	Pg	13 14 48.6	-0.3
KEF1				S	Sg	13 14 50.1	-0.9
CHV1	Chavriata, Kef	0.09	173	P	Pg	13 14 48.5	-0.6
CHV1				S	Sb	13 14 52.0	+0.8
	14µm,0.1s						
LXR1	Lixouri, Cepha	0.09	143	P	Pb	13 14 49.4	+0.3
LXR1				S	Sb	13 14 51.6	+0.4
	34µm,0.2s						
ARG2	Argostoli	0.13	135	P	Pb	13 14 49.7	-0.2
ARG2				S	Sg	13 14 52.0	0.0
	36µm,0.1s						
KEF2	Argostoli. Kep	0.14	139	P	Pb	13 14 49.9	-0.2
KEF2				S	Sg	13 14 52.3	0.0
VLS	Valsamata	0.20	119	P	Pb	13 14 50.1	-0.4
VLS				S	Sg	13 14 53.3	-0.4
	7µm,0.1s						
VLS	Valsamata	0.20	119	P	Pg	13 14 50.3	-0.2
VLS				S	Sg	13 14 53.1	-0.6
VLS				AML	AML	13 14 53.3	
	comp=E,20927µm,0.1s						
VLS				AML	AML	13 14 53.4	
	comp=N,6553µm,0.1s						
VSK1	VASILIKIADES	0.20	49	P	Pg	13 14 50.6	0.0
VSK1				S	Sg	13 14 53.3	-0.6
	comp=N,3µm,0.2s						
FSK	Fiskardo	0.24	39	P	Pb	13 14 51.3	-0.5
FSK				S	Sg	13 14 54.3	-0.5
	comp=N,1µm,0.1s						
FSK	Fiskardo	0.24	39	P	Pb	13 14 51.3	-0.5
FSK				S	Sg	13 14 54.8	0.0
FSK				AML	AML	13 14 55.0	
	comp=N,2628µm,0.2s						
FSK				AML	AML	13 14 55.2	
	comp=E,3159µm,0.1s						
EVGI	Lefkada island	0.41	33	P	Pb	13 14 54.4	-0.3
EVGI				S	Sb	13 15 00.2	-0.6
EVGI	Lefkada island	0.41	33	P	Pb	13 14 54.2	-0.6
VLMS	Volimes, Zakyn	0.46	150	P	Pb	13 14 55.3	-0.2
VLMS				S	Sg	13 15 01.9	+0.7
VLMS				AML	AML	13 15 04.1	
	comp=E,5321µm,0.2s						
VLMS				AML	AML	13 15 05.0	
	comp=N,4289µm,0.2s						
MGNA	Meganis	0.51	41	P	Pg	13 14 55.5	-0.3
LKD2	Lefkada island	0.56	24	P	Pb	13 14 57.3	0.0
LKD2	Lefkada island	0.56	24	P	Pb	13 14 56.8	-0.5
TSLK	Tsoukalades, L	0.59	22	P	Pb	13 14 58.1	+0.3
TSLK	Tsoukalades, L	0.59	22	P	Pb	13 14 57.6	-0.2
AST1	Astakos	0.63	64	P	Pg	13 14 57.9	-0.2
AST1				S	Sb	13 15 07.0	+0.1
	comp=N,525nm,0.2s						
KRI1	kERI	0.71	150	P	Pb	13 14 59.3	-0.4
KRI1				S	Sn	13 15 10.8	-0.8
	comp=N,980nm,0.1s						
PDO	Prodromos	0.72	63	P	Pb	13 14 59.5	-0.4
PDO				S	Sg	13 15 10.4	+1.1
	comp=N,472nm,0.3s						
PDO	Prodromos	0.72	63	P	Pb	13 14 59.5	-0.4
PDO				AML	AML	13 15 12.1	
	comp=N,768µm,0.3s						
PDO				AML	AML	13 15 12.5	
	comp=E,568µm,0.4s						
RLS	Riolos of Patr	0.89	104	P	Pb	13 15 02.4	-0.4
RLS	Riolos of Patr	0.89	104	P	Pb	13 15 02.3	-0.6
PVO	Paravola	0.97	69	P	Pn	13 15 04.4	-0.3
PVO				S	Sn	13 15 18.9	+0.7
	comp=E,155nm,0.4s						
PVO	Paravola	0.97	69	P	Pb	13 15 04.3	0.0
DRO	Drossia	1.11	106	P	Pn	13 15 06.4	-0.2
DRO	Drossia	1.11	106	P	Pn	13 15 06.2	-0.4
EFP	Efpalio	1.22	82	P	Pn	13 15 08.1	0.0
EFP	Efpalio	1.22	82	P	Pn	13 15 07.9	-0.2
IGT	Igoumenitsa	1.26	359	P	Pg	13 15 11.0	+1.0
ANX	Ano Chora	1.26	75	P	Pb	13 15 09.1	-0.1
LAKA	Lakka	1.27	91	P	Pb	13 15 09.1	-0.2
LAKA				S	Sg	13 15 27.9	+1.1
	comp=E,58nm,1.0s						
LAKA	Lakka	1.27	91	P	Pn	13 15 08.9	+0.1
AMT	Artemida-Makis	1.29	124	P	Pg	13 15 11.6	+0.9
SERG	Sergoula	1.33	83	P	Pn	13 15 09.9	+0.1
TRIZ	Trizonia	1.34	86	P	Pn	13 15 09.9	+0.1
TRIZ	Trizonia	1.34	86	P	Pn	13 15 10.0	+0.1
KALE	Kalithea	1.40	85	P	Pn	13 15 10.8	+0.1
KLV	Kalavryta, Ach	1.42	99	P	Pb	13 15 11.6	-0.4
KLV				S	Sg	13 15 31.5	-0.2
	comp=E,48nm,0.6s						
MAKR	Makrakomi, Fth	1.57	61	P	Pg	13 15 16.4	+0.5
MAKR	Makrakomi, Fth	1.57	61	P	Pg	13 15 15.5	-0.4
ITM	Ithomi	1.65	131	P	Pb	13 15 16.4	+0.6
AGG	Agios Georgios	1.71	63	P	Pb	13 15 17.5	+0.7
PYL	PYLOS	1.76	141	P	Pb	13 15 17.2	-0.4

MEX 04 13:21:47.9±0.6, 32°.28N×114°.96W, h16km±999km, MD3.8
NEIC 04 13:21:47.1±1.2, 32°.16N±0°.02×115°.14W±0°.03, h20km±7km, Error ellipse: s-maj=4.0km s-min=2.9km az=96.0
PAS 04 13:21:48.3±1.5, 32°.18N±0°.02×115°.17W±0°.03, h19km±3km, ML3.0/38, ML3.1(ECX), Error ellipse: s-maj=3.9km s-min=3.1km az=98.0
ECX 04 13:21:48.5±0.9, 32°.15N×115°.21W, h3km±3km, MD2.9, ML3.1
ISC 04 13:21:46.3±1.1, 32°.16N±0°.02×115°.18W±0°.03, h10km±10km, n45, σ0s.52/66, 2D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.28	338	eP	Pb	13 21 54.1	+0.6
CPBX				eS	Sb	13 21 58.4	+0.2
CPBX				IAML		13 22 00.0	
	comp=N,6µm,0.1s						
CPBX				⇓e		13 22 00.0	
CPBX	Cerro Prieto	0.28	338		Pb	13 21 54.1	+0.6
CPBX					Sb	13 21 58.5	+0.2
UABX	UABC, Campus M	0.52	335		Sn	13 22 07.5	-1.3
ESJX	Sierra Juarez	0.67	257	eP	Pb	13 22 00.9	+0.7
ESJX				eS	Sg	13 22 09.0	+0.8
ESJX	Sierra Juarez	0.67	257		Pb	13 22 00.9	+0.7
ESJX					Sb	13 22 09.8	+0.2
ECBX	El Chinero	0.69	171	eP	Pb	13 22 00.8	+0.4
ECBX				eS	Sb	13 22 10.9	+0.9
SNR	Schaffner Ranc	0.73	343		Pn	13 22 02.3	-0.5
WESC	Westside Schoo	0.76	322		Pn	13 22 02.6	-0.5
ERMX	Rumorosa	0.82	299	eP	Pb	13 22 02.7	-0.1
ERMX				eS	Sb	13 22 14.1	+0.1
ERMX				IAML		13 22 14.4	
	comp=N,762nm,0.2s						
RMX	La Rumorosa	0.88	300		Pg	13 22 03.1	-0.3
RMX					Sg	13 22 13.9	-1.0
IKP	In-Ko-Pah, Jac	0.93	302	eP	Pb	13 22 04.5	+0.2
IKP	In-Ko-Pah, Jac	0.93	302		Pb	13 22 04.6	+0.1
IKP					Sb	13 22 16.9	0.0
GLA	Glamis	0.94	18		Pg	13 22 04.1	-0.3
GLA					Sg	13 22 16.4	-0.3
GLA	Glamis	0.94	18	Pg	Pg	13 22 04.0	-0.5
CRR	Carrizo Plain	0.99	318		Pn	13 22 06.0	-0.2
SPIG	San Pedro Mart	1.14	193		Pn	13 22 08.1	-0.2
SPIG					Sn	13 22 24.3	0.0
SPIG	San Pedro Mart	1.14	193	eP	Pn	13 22 08.1	-0.2
SPIG				i S	Sn	13 22 24.4	0.0
SPX	San Pedro Mart	1.14	192	eP	Pb	13 22 08.1	-0.3
SPX				IAML		13 22 24.9	
	comp=E,190nm,0.4s						
SPX				⇓e		13 22 24.9	
SPX	San Pedro Mart	1.14	192		Pb	13 22 08.1	-0.3
SPX					Sn	13 22 24.3	-0.2
SPX	San Pedro Mart	1.14	192		Pb	13 22 08.1	-0.3
SPX					Sb	13 22 22.6	-0.8
SPX	San Pedro Mart	1.14	192	i P	Pb	13 22 08.1	-0.3
SPX				i S	Sb	13 22 22.6	-0.8
SFX	San Felipe	1.15	166		Pg	13 22 09.1	+0.6
CBX	Cerro Bola	1.27	277	eP	Pn	13 22 09.9	-0.3
CBX				eS	Sn	13 22 27.6	+0.2
CBX				IAML		13 22 28.6	
	comp=N,529nm,0.2s						
CBX				IAML		13 22 28.7	
	comp=E,773nm,0.3s						
CBX				e		13 22 28.7	
CBX	Cerro Bola	1.27	277		Pn	13 22 09.9	-0.3
CBX					Sn	13 22 27.6	+0.2
CBX	Cerro Bola	1.27	277		Pn	13 22 09.9	-0.3
CBX					Sb	13 22 27.2	+0.4
CBX	Cerro Bola	1.27	277	i P	Pn	13 22 09.9	-0.3
CBX				eS	Sb	13 22 27.2	+0.4
MONP2	Monument Peak	1.28	305	eP	Pg	13 22 11.0	0.0
MONP2	Monument Peak	1.28	305		Pg	13 22 10.5	0.0
MONP2					Sn	13 22 27.7	-0.1
CCX	Cicese	1.29	257		Pb	13 22 10.9	+0.2
TJIG	Tijuana	1.30	283		Pn	13 22 09.8	-0.7
TJIG					Sb	13 22 27.8	+0.3
TJIG	Tijuana	1.30	283	i P	Pn	13 22 09.8	-0.7
TJIG				i S	Sb	13 22 27.8	+0.3
BAR	Barrett	1.37	293	eP	Pn	13 22 11.1	-0.3
BAR	Barrett	1.37	293		Pn	13 22 11.2	-0.3
OLP	Otay Lakes Par	1.55	287		Pn	13 22 14.0	+0.1
Y12C	Blythe	1.68	19		Pn	13 22 16.0	+0.2
HWB	Hans Werner Br	1.73	300		Sb	13 22 41.0	+0.9
109C	Camp Elliot, M	1.78	295		Pn	13 22 17.0	-0.1
XPFO	Pion Flat	1.80	324		Pn	13 22 16.7	-0.9
PFO	Pinyon Flats O	1.81	324		Pn	13 22 16.7	-0.9
214A	Organ Pipe Nat	2.02	95		Pn	13 22 19.3	-1.2
Y14A	Wickenburg	2.55	45	Pn	Pn	13 22 28.2	+0.4
W13A	Hualapai Mount	3.13	20	Pn	Pn	13 22 35.9	+0.1
TUC	Tucson	3.73	86	Pn	Pn	13 22 44.1	+0.1
X16A	Lo Mia Camp, P	3.86	53	Pn	Pn	13 22 46.5	+0.6
WUAZ	Wupatki	4.61	42	Pn	Pn	13 22 57.3	+1.1

NEIC 04 13:45:45.4±0.7, 6°.15S±0°.08×149°.1E±0°.1, h68km±11km, mb4.6/11, Error ellipse: s-maj=18.7km s-min=8.4km az=122.0
IDC 04 13:45:46.3±2.5, 6°.21S×149°.13E, h73km±35km, mb3.8/4, mb1 4.1/7, mb1mx3.6/41, mbtmp4.2/7, ML4.5/2, MS2.8/1, Ms1 2.8/1, ms1mx2.4/28, Error ellipse: s-maj=77.7km s-min=13.7km az=130.0
ISC 04 13:45:45.2±0.8, 6°.1S±0°.1×149°.1E±0°.1, h60km, n24, σ0s.77/25, mb3.8/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.45	59	P	Pn	13 46 36.8	+0.2
	27nm,0.3s,baz=318,slow=0.8,SNR=23						
RABL	Rabaul	3.63	58	Pn	Pn	13 46 39.2	+0.2
PMG	Port Moresby	3.77	210	P	Pn	13 46 41.9	+1.0
	7.1nm,0.3s,baz=26,slow=11,SNR=39						
PMG				S	Sn	13 47 25.3	+1.2
	24nm,0.3s,baz=48,slow=23,SNR=14						
PMG				LR	LR	13 48 21.8	
	comp=Z,144nm,21.1s,baz=72,slow=42						
PMG	Port Moresby	3.77	210		Pn	13 46 41.0	+0.1
PMG					Sn	13 47 24.7	+0.6
COEN	Coen	9.71	216	Pn	Pn	13 48 01.8	-0.5
MTN	Manton Dam	18.90	248	Pn	Pn	13 50 03.3	+1.0
MTN				IAmb	IAmb	13 50 10.0	
	comp=Z,63nm,1.4s						
EIDS	Eidsvold	19.23	174	Pn	Pn	13 50 05.2	-0.9
EIDS				IAmb	IAmb	13 50 50.8	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
	comp=Z,46nm,1.6s						
WB0	**Warramunga Arr**	**19.68**	**225**	P	**P**	**13 50 09.5**	**-0.2**
WR0	**Warramunga Arr**	**19.71**	**224**	P	**P**	**13 50 09.9**	**0.0**
WR0				IAmb	IAmb	13 50 59.1	
	comp=Z,56nm,1.8s						
WRAB	**Tennant Creek**	**19.83**	**225**	P	**P**	**13 50 11.1**	**0.0**
WRAB				IAmb	IAmb	13 50 11.7	
	comp=Z,14nm,0.6s						
WB2	**Warramunga Arr**	**19.83**	**225**	P	**P**	**13 50 10.8**	**-0.4**
WB2				IAmb	IAmb	13 50 11.8	
	comp=Z,17nm,0.6s						
WRA	**Warramunga Arr**	**19.84**	**225**	P	**P**	**13 50 11.2**	**-0.1**
	comp=Z,1.8nm,0.3s,baz=51,slow=11,SNR=99						
WRA	**Warramunga Arr**	**19.84**	**225**	P	**P**	**13 50 10.1**	**-1.2**
KNRA	**Kununurra**	**22.07**	**243**	P	**P**	**13 50 34.7**	**-0.6**
TNTI	**Ternate**	**22.73**	**287**	P	**P**	**13 50 41.9**	**-0.6**
AS31	**Alice Springs**	**22.74**	**218**	P	**P**	**13 50 41.8**	**-0.7**
ASAR	**Alice Springs**	**22.74**	**218**	P	**P**	**13 50 42.4**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=58,slow=9.0,SNR=68						
ASAR	**Alice Springs**	**22.74**	**218**	P	**P**	**13 50 42.2**	**-0.4**
FITZ	**Fitzroy Crossi**	**25.77**	**240**	P	**P**	**13 51 10.2**	**-0.5**
	comp=Z,2.6nm,0.5s,baz=69,slow=15,SNR=5.9						
FITZ	**Fitzroy Crossi**	**25.77**	**240**	IAmb	IAmb	13 51 23.4	
	comp=Z,54nm,1.9s						
PETK	**Petropavlovsk-**	**59.46**	**6**	P	**P**	**13 55 43.5**	**+1.8**
	comp=Z,2.9nm,0.9s,baz=172,slow=8.3,SNR=7.3						
MKAR	**Makanchi Array**	**78.91**	**320**	P	**P**	**13 57 41.6**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=99,slow=7.4,SNR=3.8						
ILAR	**Eielson Array**	**84.79**	**23**	P	**P**	**13 58 11.9**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=246,slow=4.9,SNR=7.6						
TORD	**Torodi Ar. Bea**	**147.12**	**285**	PKPbc	**PKPbc**	**14 05 22.1**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=90,slow=2.8,SNR=5.1						

*ATH **04** 13:45:59.1,38.°24N×20.°40E,h14km±1km,ML2.7/3,Error ellipse: s-maj=2.1km s-min=0.9km az=263.0*
*THE **04** 13:45:59.3,38.°25N×20.°41E,h13km,ML3.0/7,Error ellipse: s-maj=0.9km s-min=0.3km az=171.0*
ISC 04 13:45:59.2±1.2,**38.°24N**±0.°03×**20.°40E**±0.°06,**h14**km±5km, **n24**,σ**0.°19**/39,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.02**	**52**	P	**Pg**	**13 46 01.6**	**-0.1**
KEF4				S	**Sg**	**13 46 03.3**	**0.0**
LXR1	**Lixouri, Cepha**	**0.05**	**145**	P	**Pg**	**13 46 01.9**	**+0.1**
LXR1				S	**Sg**	**13 46 03.7**	**+0.1**
	44μm,0.1s						
KEF3	**Kipouria, Keph**	**0.06**	**226**	P	**Pg**	**13 46 01.7**	**-0.1**
KEF3				S	**Sg**	**13 46 03.8**	**+0.1**
CHV1	**Chavriata, Kef**	**0.06**	**194**	P	**Pg**	**13 46 01.8**	**-0.1**
CHV1				S	**Sg**	**13 46 03.8**	**+0.1**
	19μm,0.2s						
KEF1	**Kardakata, Kep**	**0.07**	**58**	P	**Pg**	**13 46 01.8**	**-0.1**
KEF1				S	**Sg**	**13 46 03.8**	**0.0**
ARG2	**Argostoli**	**0.09**	**133**	P	**Pg**	**13 46 02.1**	**-0.1**
ARG2				S	**Sg**	**13 46 04.3**	**+0.1**
	27μm,0.1s						
KEF2	**Argostoli. Kep**	**0.10**	**139**	P	**Pg**	**13 46 02.3**	**0.0**
KEF2				S	**Sg**	**13 46 04.3**	**-0.1**
VLS	**Valsamata**	**0.16**	**114**	P	**Pg**	**13 46 03.0**	**-0.2**
VLS				S	**Sg**	**13 46 05.8**	**0.0**
	8μm,0.1s						
VLS	**Valsamata**	**0.16**	**114**	P	**Pg**	**13 46 03.0**	**-0.2**
VLS				S	**Sg**	**13 46 05.9**	**+0.1**
VLS				AML	AML	13 46 06.2	
	comp=E,19122μm,0.1s						
VLS				AML	AML	13 46 06.2	
	comp=N,12574μm,0.1s						
VSK1	**VASILIKIADES**	**0.21**	**38**	P	**Pg**	**13 46 03.8**	**-0.1**
VSK1				S	**Sg**	**13 46 07.2**	**+0.1**
	comp=N,2μm,0.1s						
FSK	**Fiskardo**	**0.25**	**30**	P	**Pg**	**13 46 04.5**	**0.0**
FSK				S	**Sg**	**13 46 08.3**	**+0.1**
	comp=N,2μm,0.1s						
FSK	**Fiskardo**	**0.25**	**30**	P	**Pg**	**13 46 04.5**	**0.0**
FSK				S	**Sg**	**13 46 08.6**	**+0.4**
FSK				AML	AML	13 46 08.9	
	comp=N,2811μm,0.2s						
FSK				AML	AML	13 46 09.0	
	comp=E,5244μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.42**	**150**	P	**Pg**	**13 46 07.5**	**-0.1**
VLMS				S	**Sg**	**13 46 13.7**	**+0.5**
VLMS				AML	AML	13 46 15.0	
	comp=E,2158μm,0.1s						
VLMS				AML	AML	13 46 16.3	
	comp=N,1943μm,0.1s						
EVGI	**Lefkada island**	**0.43**	**28**	P	**Pg**	**13 46 07.5**	**-0.2**
EVGI				S	**Sg**	**13 46 14.0**	**+0.5**
	comp=N,375nm,0.1s						
EVGI	**Lefkada island**	**0.43**	**28**	P	**Pg**	**13 46 07.8**	**+0.1**
EVGI				S	**Sg**	**13 46 13.7**	**+0.2**
MGNA	**Meganis**	**0.51**	**37**	P	**Pg**	**13 46 09.0**	**-0.3**
LKD2	**Lefkada island**	**0.58**	**20**	P	**Pg**	**13 46 10.0**	**-0.5**
TSLK	**Tsoukalades, L**	**0.61**	**19**	P	**Pg**	**13 46 11.1**	**-0.1**
RLS	**Riolos of Patr**	**0.86**	**102**	P	**Pb**	**13 46 15.8**	**0.0**
EFP	**Efpalio**	**1.20**	**81**	P	**Pb**	**13 46 21.6**	**0.0**
LAKA	**Lakka**	**1.24**	**90**	P	**Pn**	**13 46 22.2**	**0.0**
ANX	**Ano Chora**	**1.24**	**73**	P	**Pb**	**13 46 22.4**	**0.0**
EVR	**Evrytania**	**1.29**	**58**	P	**Pb**	**13 46 23.3**	**0.0**
KALE	**Kalithea**	**1.38**	**83**	P	**Pb**	**13 46 24.6**	**-0.2**

*MAN **04** 13:49:46.6,9.°01N×126.°62E,h47km,mb5.1,ML4.1,MS4.2*
MAN INTENSITY II - TANDAG SURIGAO DEL SUR.
*IDC **04** 13:49:51.8±2.2,8.°81N×126.°48E,h99km±22km,mb3.7/12, mb1 3.8/13,mb1mx3.6/47,mbtmp4.0/13,MS3.2/4, Ms1 3.3/4,ms1mx2.7/39,Error ellipse: s-maj=24.4km s-min=14.9km az=78.0*
*NEIC **04** 13:49:51.0±2.3,8.°90N±0.°08×126.°5E±0.°1,h86km±7km, mb4.6/40,Error ellipse: s-maj=15.8km s-min=11.1km az=85.0*
ISC 04 13:49:47.6±1.0,**8.°93N**±0.°04×**126.°65E**±0.°06,**h55**km±10km, **n99**,σ**1.°43**/102,**mb4.5**/26,**MS3.5**/3,**5C-2D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.02**	**272**	eP	**Pn**	**13 50 03.7**	**-2.1**
BUTP				eS	**Sn**	**13 50 18.7**	**-0.5**
BUKP	**Musuan**	**1.89**	**237**	eP	**Pn**	**13 50 17.2**	**-0.4**
BUKP				eS	**Sn**	**13 50 43.4**	**+3.0**
CGP	**Cagayan de Oro**	**1.99**	**256**⇑	iP	**Pn**	**13 50 18.4**	**-0.6**
CGP				iS	**Sn**	**13 50 42.0**	**-0.7**
MATI	**Mati**	**2.01**	**191**	eP	**Pn**	**13 50 17.3**	**-1.9**
DAV	**Davao City (W)**	**2.13**	**210**	P	**Pn**	**13 50 24.3**	**+3.4**
	63nm,0.3s,baz=52,slow=18,SNR=5.7						
DAV				LR	LR	13 51 26.5	
	comp=Z,400nm,20.9s,baz=24,slow=49						
MSLP	**Maasin**	**2.14**	**304**	eP	**Pn**	**13 50 21.0**	**+0.1**
MSLP				eS	**Sn**	**13 50 50.2**	**+3.9**
KCP	**Kidapawan**	**2.46**	**219**⇑	eP	**Pn**	**13 50 26.0**	**+0.6**
TBP	**Tagbilaran**	**2.86**	**286**⇑	eP	**Pn**	**13 50 31.3**	**+0.5**
TBP				eS	**Sn**	**13 51 03.7**	**-0.3**
OCLP	**Ormoc**	**2.92**	**316**	eP	**Pn**	**13 50 31.7**	**+0.1**
CTBH	**Cotabato--PC H**	**2.93**	**235**⇓	eP	**Pn**	**13 50 32.1**	**+0.4**
DDMP	**Don Marcelino,**	**2.96**	**198**	eP	**Pn**	**13 50 33.6**	**+1.4**
DDMP				eS	**Sn**	**13 51 09.1**	**+2.6**
LLP	**Lapu-Lapu**	**2.99**	**298**⇑	iP	**Pn**	**13 50 33.1**	**+0.5**
LLP				iS	**Sn**	**13 51 08.0**	**+0.8**
DCPH	**Dipolog City**	**3.28**	**264**⇓	iP	**Pn**	**13 50 36.6**	**0.0**
DCPH				iS	**Sn**	**13 51 14.3**	**-0.1**
PAGZ	**Pagadian**	**3.41**	**252**	eP	**Pn**	**13 50 37.5**	**-0.9**
PAGZ				eS	**Sn**	**13 51 18.9**	**+1.3**
CNP	**Catarman**	**4.06**	**331**	eP	**Pn**	**13 50 46.1**	**-1.1**
CNP				eS	**Sn**	**13 51 30.3**	**-3.3**
GUIM	**Jordan**	**4.35**	**293**	eP	**Pn**	**13 50 50.5**	**-0.7**
GUIM				eS	**Sn**	**13 51 39.9**	**-0.7**
RCP	**Roxas**	**4.65**	**305**⇑	eP	**Pn**	**13 50 56.2**	**+0.8**
PVCP	**Virac**	**5.25**	**332**	eP	**Pn**	**13 51 02.5**	**-1.0**
PVCP				eS	**Sn**	**13 51 59.1**	**-3.6**
OTRP	**Odiongan**	**5.69**	**307**	eP	**Pn**	**13 51 09.9**	**+0.3**
CUYO	**Cuyo Island**	**5.87**	**289**	eP	**Pn**	**13 51 12.2**	**+0.1**
ENPP	**El Nido**	**7.47**	**288**	eP	**Pn**	**13 51 33.0**	**-1.1**
TGY	**Tagaytay City**	**7.60**	**313**	LR	LR	13 54 50.3	
	comp=Z,82nm,21.0s,baz=84,slow=40						
SMPP	**San Manuel, Pa**	**9.24**	**322**	eP	**Pn**	**13 51 57.8**	**-0.6**
SIJI	**Sorong**	**10.77**	**154**	P	**Pn**	**13 52 21.3**	**+2.1**
	1.8nm,0.3s,baz=257,slow=22,SNR=5.6						
SIJI				S	**Sn**	**13 54 12.8**	**-5.5**
	0.8nm,0.3s,baz=214,slow=22,SNR=3.3						
FAKI	**Fak Fak**	**13.03**	**154**	Pn	**Pn**	**13 52 50.3**	**+0.2**
TPUB	**Ta-pu**	**15.41**	**339**	Pn	**Pn**	**13 53 22.3**	**+0.6**
TPUB				IAmb	IAmb	13 53 48.4	
	comp=Z,64nm,1.4s						
YOJ	**Yonaguni jima**	**15.83**	**348**	P	**P**	**13 53 32.3**	**+2.4**
JOW	**Kunigami**	**17.87**	**5**	P	**P**	**13 53 54.6**	**+2.1**
JOW				IAmb	IAmb	13 54 21.9	
	comp=Z,59nm,1.2s						
DLV	**T Lat**	**18.11**	**281**	P	**P**	**13 53 54.7**	**-0.8**
GUMO	**Guam**	**18.45**	**74**	P	**Pn**	**13 53 59.8**	**+0.2**
SOEI	**Soe**	**18.71**	**187**	P	**P**	**13 54 01.1**	**-0.9**
SOEI				IAmb	IAmb	13 54 35.2	
	comp=Z,71nm,1.4s						
MTN	**Manton Dam**	**22.09**	**168**	P	**P**	**13 54 37.8**	**-0.6**
MTN				IAmb	IAmb	13 55 10.4	
	comp=Z,60nm,1.4s						
MYKOM	**Kota Tinggi**	**23.77**	**254**	P	**P**	**13 54 53.1**	**-2.3**
MYKOM				IAmb	IAmb	13 55 22.7	
	comp=Z,22nm,1.4s						
KNRA	**Kununurra**	**24.54**	**175**	P	**P**	**13 55 02.3**	**0.0**
PSI	**Prapat**	**28.23**	**259**	LR	LR	14 09 00.6	
	comp=Z,104nm,18.8s,baz=158,slow=41						
KSRS	**Korea Array**	**28.42**	**2**	LR	LR	14 09 28.9	
	comp=Z,24nm,18.3s,baz=230,slow=41						
CMAR	**Chiang Mai Arr**	**28.50**	**292**	P	**P**	**13 55 38.0**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=100,slow=7.7,SNR=4.3						
WB0	**Warramunga Arr**	**29.52**	**165**	P	**P**	**13 55 45.9**	**-1.1**
WB0				IAmb	IAmb	13 56 24.2	
	comp=Z,19nm,1.4s						
WRA	**Warramunga Arr**	**29.67**	**165**	P	**P**	**13 55 47.2**	**-1.2**
	comp=Z,1.1nm,0.3s,baz=341,slow=6.0,SNR=5.9						
WRA	**Warramunga Arr**	**29.67**	**165**	P	**P**	**13 55 46.8**	**-1.6**
WR0	**Warramunga Arr**	**29.74**	**165**	P	**P**	**13 55 48.1**	**-0.9**
WR0				IAmb	IAmb	13 56 18.4	
	comp=Z,21nm,1.4s						
ASAR	**Alice Springs**	**33.16**	**168**	P	**P**	**13 56 18.6**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=349,slow=6.5,SNR=9.8						
ASAR				PcP	**PcP**	**13 58 59.5**	**-1.7**
	comp=Z,0.3nm,0.7s,baz=341,slow=6.3,SNR=5.0						
USA0B	**Ussuriysk Arra**	**35.44**	**7**	P	**P**	**13 56 39.5**	**+0.9**
USRK	**Ussuriysk Ar.**	**35.44**	**7**	P	**P**	**13 56 39.5**	**+0.9**
	comp=Z,2.1nm,0.7s,baz=180,slow=8.6,SNR=4.9						
ASAJ	**Asahikawa**	**37.70**	**19**	P	**P**	**13 56 59.2**	**+1.4**
	comp=Z,6.4nm,0.7s,baz=232,slow=9.4,SNR=8.1						
JKA	**Kamikawa-asahi**	**37.70**	**19**	P	**P**	**13 56 59.2**	**+1.4**
MORW	**Morawa**	**39.14**	**195**	P	**P**	**13 57 09.2**	**-0.9**
MORW				IAmb	IAmb	13 57 48.1	
	comp=Z,15nm,1.1s						
FORT	**Forrest**	**39.51**	**178**	P	**P**	**13 57 13.2**	**+0.2**
H11S3	**WAKE ISLAND Hy**	**39.96**	**72**	T	T	14 40 21.2	
	baz=262,slow=75,SNR=129						
H11S1	**WAKE ISLAND Hy**	**39.97**	**72**	T	T	14 40 16.4	
	baz=262,slow=75,SNR=114						
H11S2	**WAKE ISLAND Hy**	**39.97**	**72**	T	T	14 40 22.6	
	baz=262,slow=75,SNR=89						
H11N1	**WAKE ISLAND Hy**	**40.33**	**70**	T	T	14 41 03.1	
	baz=266,slow=74,SNR=43						
H11N2	**WAKE ISLAND Hy**	**40.34**	**70**	T	T	14 40 58.5	
	baz=266,slow=74,SNR=45						
H11N3	**WAKE ISLAND Hy**	**40.35**	**70**	T	T	14 41 04.5	
	baz=266,slow=74,SNR=45						
KLR	**Kul'dur**	**40.40**	**5**	P	**P**	**13 57 20.8**	**+0.5**
	comp=Z,1.6nm,0.5s,baz=183,slow=6.7,SNR=7.9						
ODAN	**Odare**	**41.18**	**301**	eP	**P**	**13 57 26.4**	**-1.0**
	comp=Z,11nm,0.6s						
JIRN	**Jiri**	**42.44**	**301**	eP	**P**	**13 57 37.2**	**-0.6**
BBOO	**Buckleboo**	**42.47**	**168**	P	**P**	**13 57 37.2**	**-0.2**
NWAO	**Narrogin (SRO)**	**42.58**	**192**	P	**P**	**13 57 38.4**	**+0.1**
NWAO	**Narrogin (SRO)**	**42.58**	**192**	P	**P**	**13 57 38.6**	**+0.2**
NWAO				IAmb	IAmb	13 59 05.6	
	comp=Z,16nm,1.1s						
GUN	**Gumba**	**42.78**	**302**	eP	**P**	**13 57 39.9**	**-0.7**
STKA	**Stephens Creek**	**43.02**	**161**	P	**P**	**13 57 41.4**	**-0.5**
KOLN	**Koldanda**	**44.66**	**301**	eP	**P**	**13 57 54.7**	**-0.9**
DANN	**Dangsing**	**44.70**	**301**	eP	**P**	**13 57 54.9**	**-1.0**
	comp=Z,9.8nm,0.6s						
PEA0B	**Petropavlovsk-**	**50.70**	**24**	P	**P**	**13 58 43.3**	**+1.7**
PETK	**Petropavlovsk-**	**50.70**	**24**	P	**P**	**13 58 43.0**	**+1.3**
	comp=Z,11nm,1.1s,baz=209,slow=5.6,SNR=10						
PETK	**Petropavlovsk-**	**50.70**	**24**	P	**P**	**13 58 43.2**	**+1.6**
YAK	**Yakutsk**	**53.05**	**2**	P	**P**	**13 58 59.2**	**+0.3**
YAK				IAmb	IAmb	13 59 18.5	
	comp=Z,3.5nm,0.7s						
MK31	**Makanchi Array**	**53.32**	**323**	P	**P**	**13 59 00.2**	**-1.0**
MKAR	**Makanchi Array**	**53.32**	**323**	P	**P**	**13 59 00.1**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=124,slow=7.7,SNR=12						
MAKZ	**Makanchi**	**53.51**	**323**	P	**P**	**13 59 01.7**	**-1.0**
KURK	**Kurchatov**	**57.38**	**326**	P	**P**	**13 59 29.2**	**-1.2**
KURK	**Kurchatov**	**57.38**	**326**	IAmb	IAmb	13 59 49.9	
	comp=Z,7.2nm,1.5s						
KURBB	**Kurchatov Arra**	**57.38**	**326**	P	**P**	**13 59 29.2**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=126,slow=6.7,SNR=10						
KKAR	**Karatay Array**	**59.46**	**315**	P	**P**	**13 59 44.6**	**-0.5**
KKAR	**Karatay Array**	**59.46**	**315**	P	**P**	**13 59 44.8**	**-0.2**
KKAR				IAmb	IAmb	14 00 04.9	
	comp=Z,5.6nm,1.4s						
RPZ	**Rata Peaks**	**66.07**	**146**	P	**P**	**14 00 30.4**	**+1.4**
BKZ	**Black Stump Fm**	**66.52**	**140**	P	**P**	**14 00 32.2**	**+0.3**
PLWZ	**Palliser**	**67.15**	**142**	P	**P**	**14 00 34.7**	**-1.2**
ABKAR	**Akbulak array**	**68.13**	**320**	P	**P**	**14 00 40.7**	**-1.3**
UNV	**Unalaska Valle**	**69.24**	**36**	P	**P**	**14 00 49.8**	**+1.1**
GAMB	**Gambell**	**69.72**	**25**	P	**P**	**14 00 52.9**	**+1.4**
ANM	**Nome**	**72.59**	**25**	P	**P**	**14 01 09.4**	**+0.5**
IMAR	**Indian Mountai**	**77.66**	**24**	P	**P**	**14 01 39.7**	**+1.6**
PPLA	**Purkeypile**	**78.07**	**28**	P	**P**	**14 01 42.6**	**+2.0**
SUA	**Susitna One**	**78.67**	**29**	P	**P**	**14 01 44.5**	**+0.6**
MLY	**Manley**	**78.84**	**25**	P	**P**	**14 01 46.1**	**+1.4**
TRF	**Thorofare Moun**	**78.96**	**27**	P	**P**	**14 01 46.6**	**+1.0**
TRF				IAmb	IAmb	14 02 53.3	
	comp=Z,13nm,1.4s						
SEW	**Seward**	**79.27**	**30**	P	**P**	**14 01 48.1**	**+1.1**
PMR	**Palmer**	**79.45**	**29**	P	**P**	**14 01 48.5**	**+0.5**
PMR				IAmb	IAmb	14 02 41.3	
	comp=Z,18nm,1.5s						
TOLK	**Toolik Lake Re**	**79.47**	**22**	P	**P**	**14 01 49.4**	**+1.4**
TOLK				IAmb	IAmb	14 01 50.6	
	comp=Z,3.4nm,0.8s						
GHO	**Glory Hole Cre**	**79.55**	**29**	P	**P**	**14 01 49.6**	**+0.9**
MCK	**McKinley**	**79.58**	**27**	P	**P**	**14 01 49.5**	**+0.8**
MCK				IAmb	IAmb	14 01 55.1	
	comp=Z,11nm,1.4s						
RND	**Reindeer**	**79.61**	**27**	P	**P**	**14 01 49.9**	**+1.0**
RND				IAmb	IAmb	14 04 48.6	
	comp=Z,6.3nm,1.2s						
ILAR	**Eielson Array**	**80.47**	**26**	P	**P**	**14 01 53.4**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=266,slow=4.4,SNR=12						
ILAR	**Eielson Array**	**80.47**	**26**	P	**P**	**14 01 53.0**	**-0.4**
ARCES	**ARCESS Array B**	**85.57**	**340**	P	**P**	**14 02 19.2**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=72,slow=6.7,SNR=3.0						
VNDA	**Vanda**	**88.56**	**173**	LR	LR	14 41 18.7	
	comp=Z,32nm,20.0s,baz=190,slow=35						
YKA	**Yellowknife Ar**	**94.82**	**24**	P	**P**	**14 03 04.2**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=300,slow=4.7,SNR=21						

*ATH **04** 13:51:24.9,38.°15N×20.°42E,h9km±2km,ML2.5/7,Error ellipse: s-maj=3.3km s-min=1.1km az=267.0*
*THE **04** 13:51:25.0,38.°14N×20.°40E,h6km±2km,ML2.2/9,Error ellipse: s-maj=2.1km s-min=0.8km az=266.0*
ISC 04 13:51:24.6±1.1,**38.°13N**±0.°03×**20.°41E**±0.°04,**h8**km±5km, **n27**,σ**0.°51**/45,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.06**	**335**	P	**Pg**	**13 51 26.5**	**0.0**
CHV1				S	**Sg**	**13 51 28.0**	**+0.2**
KEF2	**Argostoli. Kep**	**0.07**	**58**	P	**Pg**	**13 51 26.6**	**0.0**
ARG2	**Argostoli**	**0.08**	**50**	P	**Pg**	**13 51 26.7**	**0.0**
ARG2				S	**Sg**	**13 51 28.2**	**+0.1**
KEF3	**Kipouria, Keph**	**0.09**	**325**	P	**Pg**	**13 51 27.1**	**+0.2**
KEF3				S	**Sg**	**13 51 28.8**	**+0.3**
VLS	**Valsamata**	**0.15**	**71**	P	**Pg**	**13 51 27.7**	**-0.1**
VLS				S	**Sg**	**13 51 30.2**	**+0.2**
	12μm,0.1s						
VLS	**Valsamata**	**0.15**	**71**	P	**Pg**	**13 51 27.7**	**-0.1**
VLS				S	**Sg**	**13 51 30.0**	**0.0**
VLS				AML	AML	13 51 30.3	
	comp=E,33183μm,0.2s						
VLS				AML	AML	13 51 30.4	
	comp=N,12084μm,0.2s						
KEF1	**Kardakata, Kep**	**0.15**	**17**	P	**Pg**	**13 51 27.8**	**-0.1**
KEF1				S	**Sg**	**13 51 30.2**	**+0.1**
VSK1	**VASILIKIADES**	**0.30**	**23**	P	**Pg**	**13 51 31.4**	**+0.8**
VSK1				S	**Sg**	**13 51 35.9**	**+1.2**
	comp=N,685nm,0.2s						
VLMS	**Volimes, Zakyn**	**0.32**	**142**	P	**Pg**	**13 51 31.3**	**+0.4**
VLMS				S	**Sb**	**13 51 36.9**	**-0.9**
VLMS				AML	AML	13 51 37.8	
	comp=E,3531μm,0.1s						
VLMS				AML	AML	13 51 43.7	
	comp=N,2251μm,0.3s						
FSK	**Fiskardo**	**0.35**	**19**	P	**Pg**	**13 51 31.7**	**+0.2**
FSK				S	**Sg**	**13 51 37.0**	**+0.9**
	comp=N,350nm,0.3s						
FSK	**Fiskardo**	**0.35**	**19**	P	**Pg**	**13 51 31.6**	**+0.2**
FSK				S	**Sg**	**13 51 36.6**	**+0.4**
EVGI	**Lefkada island**	**0.53**	**21**	P	**Pg**	**13 51 34.5**	**-0.3**
EVGI				S	**Sb**	**13 51 42.8**	**-1.0**
KRI1	**kERI**	**0.56**	**145**	P	**Pg**	**13 51 35.4**	**-0.1**
KRI1				S	**Sb**	**13 51 44.8**	**-0.1**
	comp=N,475nm,0.3s						
MGNA	**Meganis**	**0.60**	**29**	P	**Pg**	**13 51 35.7**	**-0.5**
MGNA				S	**Sg**	**13 51 44.5**	**+0.3**
MGNA				AML	AML	13 51 45.3	
	comp=N,502μm,0.1s						
MGNA				AML	AML	13 51 45.7	
	comp=E,834μm,0.5s						
LKD2	**Lefkada island**	**0.69**	**16**	P	**Pg**	**13 51 37.6**	**-0.2**
LKD2				S	**Sg**	**13 51 46.9**	**+0.1**
	comp=E,125nm,0.5s						
TSLK	**Tsoukalades, L**	**0.72**	**15**	P	**Pb**	**13 51 39.6**	**+0.2**
TSLK				S	**Sb**	**13 51 48.9**	**-0.5**
	comp=E,150nm,0.5s						
PDO	**Prodromos**	**0.77**	**52**	P	**Pg**	**13 51 38.9**	**-0.5**
PDO				S	**Sb**	**13 51 51.0**	**+0.3**
	comp=E,385nm,0.4s						
PDO	**Prodromos**	**0.77**	**52**	P	**Pg**	**13 51 38.8**	**-0.5**
PDO				AML	AML	13 51 51.4	
	comp=E,486μm,0.5s						
PDO				AML	AML	13 51 54.1	
	comp=N,637μm,0.3s						
RLS	**Riolos of Patr**	**0.83**	**95**	P	**Pg**	**13 51 40.9**	**+0.3**
RLS				S	**Sb**	**13 51 53.9**	**+1.3**
	comp=N,115nm,0.4s						
RLS	**Riolos of Patr**	**0.83**	**95**	P	**Pg**	**13 51 40.9**	**+0.3**
PVO	**Paravola**	**1.00**	**61**	P	**Pg**	**13 51 43.7**	**-0.1**
PVO				S	**Sn**	**13 51 59.9**	**+0.8**
	comp=N,330nm,0.3s						
PVO	**Paravola**	**1.00**	**61**	P	**Pg**	**13 51 43.7**	**-0.1**
PVO				AML	AML	13 52 00.6	
	comp=E,683μm,0.3s						
PVO				AML	AML	13 52 05.8	
	comp=N,606μm,0.4s						
DRO	**Drossia**	**1.04**	**99**	P	**Pg**	**13 51 44.8**	**+0.2**
DRO				AML	AML	13 52 09.7	
	comp=E,533μm,0.8s						
DRO				AML	AML	13 52 10.3	
	comp=N,524μm,0.6s						
EFP	**Efpalio**	**1.21**	**75**	P	**Pb**	**13 51 47.0**	**-0.8**
LAKA	**Lakka**	**1.24**	**84**	P	**Pb**	**13 51 47.5**	**-0.7**
ANX	**Ano Chora**	**1.27**	**68**	P	**Pg**	**13 51 49.2**	**+0.2**
ANX				AML	AML	13 52 13.1	
	comp=N,434μm,0.7s						
ANX				AML	AML	13 52 14.1	
	comp=E,209μm,0.6s						
KLV	**Kalavryta, Ach**	**1.37**	**93**	P	**Pn**	**13 51 49.8**	**-0.2**

*IDC **04** 13:54:38.9±3.9,4.°83S×153.°85E,h98km±27km,mb3.6/9, mb1 3.9/10,mb1mx3.6/47,mbtmp4.0/10,MS2.7/1, Ms1 2.7/1,ms1mx2.3/28,Error ellipse: s-maj=36.4km s-min=15.8km az=98.0*
*NEIC **04** 13:54:39.2±1.3,4.°8S±0.°1×153.°9E±0.°1,h103km±8km, mb4.8/16,Error ellipse: s-maj=16.9km s-min=15.1km az=46.0*
ISC 04 13:54:39.8±0.8,**4.°83S**±0.°08×**153.°8E**±0.°1,**h105**km,**n39**, σ**0.°73**/40,**mb4.2**/16,**1D,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.78**	**291**	Pn	**Pn**	**13 55 10.1**	**+0.3**
RABL				Sn	**Sn**	**13 55 32.3**	**-0.5**
KRVT	**Keravat (AS076**	**1.88**	**286**	P	**Pn**	**13 55 11.0**	**0.0**
	68nm,0.3s,baz=176,slow=0.7,SNR=107						
KRVT				S	**Sn**	**13 55 33.7**	**-1.1**
	84nm,0.3s,baz=287,slow=3.1,SNR=22						
KRVT				LR	LR	13 56 06.1	
	comp=Z,163nm,18.4s,baz=185,slow=46						
PMG	**Port Moresby**	**8.03**	**235**	P	**Pn**	**13 56 35.0**	**+1.2**
	8.6nm,0.3s,baz=32,slow=5.7,SNR=27						
PMG				S	**Sn**	**13 58 02.8**	**-0.2**
	2.0nm,0.3s,baz=200,slow=11,SNR=2.7						
PMG				LR	LR	13 59 41.0	
	comp=Z,46nm,18.6s,baz=78,slow=38						
WR0	**Warramunga Arr**	**24.06**	**230**	P	**P**	**13 59 45.8**	**+0.3**
WR0				IAmb	IAmb	13 59 51.1	
	comp=Z,49nm,1.8s						
WB0	**Warramunga Arr**	**24.06**	**230**	P	**P**	**13 59 45.9**	**+0.4**
WRAB	**Tennant Creek**	**24.19**	**230**	P	**P**	**13 59 47.1**	**+0.4**
WRAB				IAmb	IAmb	14 00 28.1	
	comp=Z,72nm,2.0s						
WB2	**Warramunga Arr**	**24.19**	**230**	P	**P**	**13 59 47.4**	**+0.6**
WB2				IAmb	IAmb	14 00 35.2	
	comp=Z,56nm,1.8s						
WRA	**Warramunga Arr**	**24.20**	**230**	P	**P**	**13 59 46.8**	**0.0**
	comp=Z,5.2nm,0.7s,baz=54,slow=9.8,SNR=15						
WRA	**Warramunga Arr**	**24.20**	**230**	P	**P**	**13 59 46.4**	**-0.4**
ARMA	**Armidale**	**25.53**	**184**	P	**P**	**13 59 58.5**	**-0.3**
ARMA				IAmb	IAmb	14 00 25.0	
	comp=Z,112nm,2.0s						
AS31	**Alice Springs**	**26.83**	**224**	P	**P**	**14 00 10.5**	**-0.1**
ASAR	**Alice Springs**	**26.83**	**224**	P	**P**	**14 00 10.3**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=54,slow=8.9,SNR=39						
ASAR	**Alice Springs**	**26.83**	**224**	P	**P**	**14 00 10.6**	**0.0**
KNRA	**Kununurra**	**26.88**	**245**	P	**P**	**14 00 10.8**	**-0.3**
STKA	**Stephens Creek**	**29.25**	**202**	P	**P**	**14 00 31.6**	**-0.4**
	comp=Z,2.0nm,0.6s,baz=27,slow=14,SNR=3.6						
STKA	**Stephens Creek**	**29.25**	**202**	IAmb	IAmb	14 00 36.1	
	comp=Z,7.7nm,1.9s						
FITZ	**Fitzroy Crossi**	**30.55**	**242**	P	**P**	**14 00 43.1**	**-0.5**
	comp=Z,2.9nm,0.5s,baz=62,slow=8.3,SNR=7.4						
FITZ	**Fitzroy Crossi**	**30.55**	**242**	IAmb	IAmb	14 01 13.6	
	comp=Z,14nm,1.2s						
FORT	**Forrest**	**35.42**	**220**	P	**P**	**14 01 25.4**	**-0.5**
PSA00	**Pilbara Seismi**	**36.90**	**240**	P	**P**	**14 01 37.7**	**-0.9**
PSA00				IAmb	IAmb	14 01 43.4	
	comp=Z,22nm,1.1s						
MORW	**Morawa**	**43.13**	**232**	P	**P**	**14 02 29.0**	**-1.1**
MORW				IAmb	IAmb	14 03 23.0	
	comp=Z,45nm,1.7s						
USA0B	**Ussuriysk Arra**	**52.62**	**340**	P	**P**	**14 03 44.0**	**+1.1**
USRK	**Ussuriysk Ar.**	**52.62**	**340**	P	**P**	**14 03 44.0**	**+1.1**
CMAR	**Chiang Mai Arr**	**58.82**	**295**	P	**P**	**14 04 29.1**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=114,slow=5.0,SNR=5.2						
HIA	**Hailar**	**61.49**	**335**	P	**P**	**14 04 44.5**	**-1.0**
HIA				IAmb	IAmb	14 06 15.1	
	comp=Z,8.9nm,0.5s						
SONM	**Songino Array**	**66.91**	**327**	P	**P**	**14 05 21.8**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=144,slow=7.3,SNR=5.0						
TAPN	**Taplejung**	**71.31**	**301**	eP	**P**	**14 05 49.8**	**+0.9**
ODAN	**Odare**	**71.45**	**300**	eP	**P**	**14 05 50.4**	**+0.8**
	comp=Z,20nm,0.8s						
JIRN	**Jiri**	**72.69**	**301**	eP	**P**	**14 05 58.1**	**+0.9**
GUN	**Gumba**	**73.02**	**301**	eP	**P**	**14 06 00.0**	**+0.9**
	comp=Z,14nm,0.7s						
PKI	**Pulchoki**	**73.34**	**300**	eP	**P**	**14 06 01.4**	**+0.4**
KKN	**Kakani**	**73.50**	**301**	eP	**P**	**14 06 02.6**	**+0.8**
	comp=Z,7.6nm,0.2s						
DMN	**Daman**	**73.61**	**300**	eP	**P**	**14 06 03.3**	**+0.8**
GKN	**Gorkha**	**74.11**	**301**	eP	**P**	**14 06 05.7**	**+0.4**
MKAR	**Makanchi Array**	**81.03**	**319**	P	**P**	**14 06 43.3**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=96,slow=8.0,SNR=7						
ZALV	**Zalesovo Beam**	**81.75**	**326**	P	**P**	**14 06 46.2**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=116,slow=6.8,SNR=3.9						
ILAR	**Eielson Array**	**81.81**	**22**	P	**P**	**14 06 46.0**	**-0.8**
	comp=Z,0.1nm,0.6s,baz=249,slow=4.7,SNR=4.7						
SYO	**Syowa Base**	**93.98**	**199**⇓	iP	**P**	**14 07 45.8**	**+0.2**
TORD	**Torodi Ar. Bea**	**151.29**	**289**	PKPbc	**PKPbc**	**14 14 21.1**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=69,slow=2.6,SNR=6.1						

IDC 04 14:00:20.6±1.8,**8.°00S**×**126.°57E**,**h0**km,**mb3.8**/2, **mb1 3.8**/5,**mb1mx3.5**/34,**mbtmp3.6**/5,**ML3.5**/3,**MS3.8**/2, **Ms1 3.7**/2,**ms1mx2.8**/28,**Error ellipse: s-maj=95.4km s-min=27.1km az=67.0,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.08**	**185**	Pn	Pn	14 02 46.4	-0.3
	0.5nm,0.3s,baz=316,slow=8.3,SNR=25						
FITZ				Sn	Sn	14 04 33.9	-6.7

0.0nm,0.3s,baz=72,slow=20,SNR=2.0
WRA Warramunga Arr 14.06 148 Pn Pn 14 03 39.2 -2.0
0.2nm,0.3s,baz=330,slow=13,SNR=8.4
WRA Sn Sn 14 06 06.1 -12
0.1nm,0.3s,baz=332,slow=22,SNR=2.4
ASAR Alice Springs 17.09 157 P Pn 14 04 21.7 +0.5
0.1nm,0.3s,baz=327,slow=10.0,SNR=7.1
TGY Tagaytay City 22.66 346 LR LR 14 14 56.5
comp=Z,371nm,20.0s,baz=12,slow=39
STKA Stephens Creek 27.57 152 P P 14 06 10.1 +0.6
3.2nm,1.0s,baz=325,slow=18,SNR=3.2
MKAR Makanchi Array 67.25 329 P P 14 11 16.9 -0.1
0.4nm,0.8s,baz=128,slow=7.9,SNR=3.1
KBZ Khabaz 90.92 314 LR LR 15 01 56.5
comp=Z,24nm,18.5s,baz=30,slow=41

IDC 04 14:01:50.1±8.4, 20.18N×120.46E, h104km±82km, mb3.2/9, mb1 3.4/10, mb1mx3.2/49, mbtmp3.6/10, ML3.2/1, Error ellipse: s-maj=34.4km s-min=17.8km az=71.0, Philippine Islands region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KSRS Korea Array 18.40 19 P Pn 14 05 58.5 +0.3
0.1nm,0.3s,baz=206,slow=10,SNR=2.1
CMAR Chiang Mai Arr 20.38 269 P Pn 14 06 20.6 -1.0
0.2nm,0.4s,baz=79,slow=9.5,SNR=1.6
SONM Songino Array 29.85 341 P P 14 07 45.7 -1.9
1.3nm,1.1s,baz=148,slow=8.7,SNR=4.9
MKAR Makanchi Array 40.83 320 P P 14 09 21.2 -0.2
0.5nm,0.8s,baz=113,slow=8.8,SNR=4.8
WRA Warramunga Arr 42.13 160 P P 14 09 31.1 -1.2
0.9nm,0.9s,baz=343,slow=8.8,SNR=3.1
ZALV Zalesovo Beam 43.29 330 P P 14 09 40.1 -1.1
0.7nm,0.6s,baz=101,slow=7.7,SNR=4.2
KURBB Kurchatov Arra 44.80 323 P P 14 09 53.5 +0.2
1.3nm,0.6s,baz=126,slow=7.7,SNR=6.7
ASAR Alice Springs 45.51 163 P P 14 09 59.4 0.0
0.6nm,0.8s,baz=352,slow=7.9,SNR=4.8
ILAR Eielson Array 73.07 27 P P 14 13 08.6 0.0
0.4nm,0.8s,baz=289,slow=5.5,SNR=3.4
YKA Yellowknife Ar 86.91 22 P P 14 14 24.1 +1.1
0.4nm,0.8s,baz=312,slow=4.9,SNR=10.0

ATH 04 14:02:31.9, 38.22N×20.40E, h12km±1km, ML2.6/5, Error ellipse: s-maj=2.4km s-min=1.3km az=258.0
THE 04 14:02:32.5, 38.21N×20.42E, h9km, ML2.6/4, Error ellipse: s-maj=1.0km s-min=0.4km az=267.0
ISC 04 14:02:31.8±1.1, 38.22N±0.03×20.40E±0.05, h12km±5km, n34, σ0.42/48, Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
LXR1 Lixouri, Cepha 0.03 123 P Pg 14 02 34.1 +0.1
LXR1 S Sg 14 02 35.8 +0.2
CHV1 Chavriata, Kef 0.04 204 P Pg 14 02 34.1 0.0
CHV1 S Sg 14 02 35.7 0.0
KEF4 Livadi, Kephal 0.04 25 P Pg 14 02 34.2 +0.1
KEF4 S Sg 14 02 35.7 -0.1
KEF3 Kipouria, Keph 0.04 249 P Pg 14 02 34.2 +0.1
ARG2 Argostoli 0.08 121 P Pg 14 02 34.5 +0.1
ARG2 S Sg 14 02 36.3 0.0
KEF1 Kardakata, Kep 0.08 43 P Pg 14 02 34.4 0.0
KEF1 S Sg 14 02 36.2 -0.2
KEF2 Argostoli. Kep 0.09 129 P Pg 14 02 34.6 +0.1
KEF2 S Sg 14 02 36.3 -0.3
VLS Valsamata 0.15 106 P Pg 14 02 35.5 0.0
VLS S Sg 14 02 38.0 -0.1
16μm,0.1s
VLS Valsamata 0.15 106 P Pg 14 02 35.5 0.0
VLS S Sg 14 02 38.0 -0.1
VLS AML AML 14 02 38.2
comp=N,11361μm,0.1s
VLS AML AML 14 02 38.2
comp=E,47531μm,0.1s
VSK1 VASILIKIADES 0.23 34 P Pg 14 02 37.1 +0.4
VSK1 S Sg 14 02 40.7 +0.7
comp=E,3μm,0.4s
FSK Fiskardo 0.27 28 P Pg 14 02 37.9 +0.4
FSK S Sg 14 02 41.8 +0.6
comp=E,1μm,0.6s
FSK Fiskardo 0.27 28 P Pg 14 02 37.8 +0.4
FSK S Sg 14 02 41.3 +0.1
FSK AML AML 14 02 42.6
comp=N,2601μm,0.6s
FSK AML AML 14 02 47.3
comp=E,2028μm,0.5s
VLMS Volimes, Zakyn 0.40 149 P Pg 14 02 40.1 +0.3
VLMS S Sb 14 02 46.6 -0.2
VLMS AML AML 14 02 47.7
comp=E,4191μm,0.2s
VLMS AML AML 14 02 48.7
comp=N,3850μm,0.2s
EVGI Lefkada island 0.45 26 P Pg 14 02 40.8 +0.1
EVGI S Sb 14 02 48.0 -0.3
EVGI Lefkada island 0.45 26 P Pg 14 02 40.8 +0.1
MGNA Meganis 0.53 35 P Pg 14 02 42.2 -0.1
LKD2 Lefkada island 0.60 19 P Pg 14 02 43.8 +0.2
TSLK Tsoukalades, L 0.64 18 P Pg 14 02 42.6 -1.6
KRI1 kERI 0.65 149 P Pg 14 02 44.3 -0.1
KRI1 S Sg 14 02 53.7 +0.8
comp=N,865nm,0.2s
PDO Prodromos 0.72 58 P Pg 14 02 45.8 -0.1
PDO Prodromos 0.72 58 P Pg 14 02 45.7 -0.1
RLS Riolos of Patr 0.85 101 P Pg 14 02 47.9 -0.4
PVO Paravola 0.97 65 P Pg 14 02 50.6 +0.1
PVO Paravola 0.97 65 P Pg 14 02 50.5 +0.1
PVO AML AML 14 03 12.3
comp=E,592μm,0.4s
PVO AML AML 14 03 12.3
comp=N,465μm,0.3s
DRO Drossia 1.07 104 P Pb 14 02 51.9 -0.3
DRO Drossia 1.07 104 P Pb 14 02 51.7 -0.5
DRO AML AML 14 03 12.0
comp=E,628μm,0.3s
DRO AML AML 14 03 16.7
comp=N,683μm,0.6s
EFP Efpalio 1.20 80 P Pb 14 02 53.4 -1.0
LAKA Lakka 1.24 89 P Pn 14 02 54.8 -0.2
ANX Ano Chora 1.25 72 P Pn 14 02 55.7 +0.6
ANX Ano Chora 1.25 72 P Pn 14 02 55.7 +0.6
SERG Sergoula 1.32 81 P Pn 14 02 56.2 +0.2
KALE Kalithea 1.38 82 P Pb 14 02 58.1 +0.6
KLV Kalavryta, Ach 1.39 97 P Pn 14 02 57.5 +0.5
KLV Kalavryta, Ach 1.39 97 P Pn 14 02 57.3 +0.3

NEIC 04 14:08:17.1±1.4, 37.14N±0.05×97.79W±0.06, h5km±2km, mb_Lg3.3/93, Error ellipse: s-maj=8.1km s-min=7.2km az=328.0
ANF 04 14:08:18.1±0.5, 37.11N×97.79W, h5km, ML4.1/12, Error ellipse: s-maj=6.7km s-min=5.5km az=65.0
IDC 04 14:08:18.5±1.8, 37.29N×98.17W, h0km, mb3.2/2, mb1 3.6/5, mb1mx3.4/44, mbtmp3.5/5, ML4.0/2, Error ellipse: s-maj=36.9km s-min=11.3km az=104.0
ISC 04 14:08:16.4±1.8, 37.14N±0.04×97.78W±0.04, h0km±14km, n93, σ0.85/84, Kansas

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
U32A Winter Ranch, 1.25 233 Pg 14 08 39.8 -0.4
U32A Sg Sg 14 08 55.9 -0.5
ADOK Arcadia Dam 1.52 168 Pn Pn 14 08 44.9 0.0
OKCFA Oklahoma City 1.75 171 Pn 14 08 48.2 +0.3
OKCFA IAmb_Lg 14 09 16.2
comp=Z,176nm,0.7s
OKCSW OKLAHOMA CITY 1.76 171 Pn Pn 14 08 48.5 +0.4
FNO Franklin 1.91 171 Pn 14 08 51.1 +1.0
TUL1 Leonard 2.02 127 Pn 14 08 52.4 +0.8
TUL1 Leonard 2.02 127 P Pn 14 08 53.0 +1.3
baz=308
TUL1 S Sb 14 09 19.7 +0.2
baz=308
W35A Tecumseh 2.12 160 Pn 14 08 53.1 +0.1
KSU1 Kansas State U 2.16 25 P Pn 14 08 55.0 +1.4
baz=206
KSU1 S Sb 14 09 24.6 +1.0
baz=206
CBKS Cedar Bluff 2.28 318 Pn 14 08 56.0 +0.8
CBKS IAmb_Lg 14 09 31.2
comp=Z,152nm,0.8s
CBKS Cedar Bluff 2.28 318 P Pn 14 08 56.9 +1.7
baz=136
CBKS S Sb 14 09 27.2 +0.2
baz=136
WMOK Wichita Mounta 2.54 199 Pn 14 08 59.0 +0.2
WMOK Wichita Mounta 2.54 199 P Pn 14 09 00.1 +1.3
baz=18
WMOK S Sn 14 09 30.5 +0.1
baz=18
X34A Smith Ranch, M 2.54 181 Pn 14 08 59.0 +0.3
X34A IAmb_Lg 14 09 44.3
comp=Z,97nm,0.9s
HHAR Hobbs 3.20 104 Pn 14 09 08.5 +0.6
HHAR IAmb_Lg 14 10 06.3
comp=Z,118nm,0.8s
W39A Magazine 3.77 120 Pn 14 09 15.9 +0.2
W39A IAmb_Lg 14 10 26.8
comp=Z,104nm,0.9s
W39A Magazine 3.77 120 Pb Pb 14 09 24.7 +0.9
baz=302
W39A S Sn 14 10 02.7 +2.0
baz=302
AMTX Amarillo 3.89 236 Pn 14 09 18.2 +0.8
AMTX IAmb_Lg 14 10 29.1
comp=Z,62nm,0.8s
AMTX Amarillo 3.89 236 Pb Pb 14 09 26.9 +1.1
baz=53
U40A Yellville 4.03 100 Pn 14 09 19.8 +0.5
U40A Yellville 4.03 100 P Pn 14 09 20.2 +0.9
baz=283
KSCO Kaye Shedlock' 4.26 297 Pn 14 09 23.1 +0.5
KSCO IAmb_Lg 14 10 39.0
comp=Z,99nm,0.7s
KSCO Kaye Shedlock' 4.26 297 P Pn 14 09 23.3 +0.8
baz=114
BGNE Belgrade 4.27 356 Pn 14 09 22.9 +0.3
BGNE IAmb_Lg 14 10 41.8
comp=Z,87nm,0.7s
BGNE Belgrade 4.27 356 P Pn 14 09 23.8 +1.2
baz=176
MIAR Mount Ida 4.28 126 Pn 14 09 23.6 +0.8
MIAR IAmb_Lg 14 10 34.6
comp=Z,54nm,0.7s
MIAR Mount Ida 4.28 126 P Pn 14 09 23.6 +0.8
baz=309
ABTX Abilene, Hawle 4.76 199 Pn Pn 14 09 29.6 +0.2
ABTX Abilene, Hawle 4.76 199 P Pn 14 09 30.1 +0.7
baz=18
WHAR Wooly Hollow 4.81 111 Pn 14 09 30.3 +0.3
X40A Basin Creek Fa 4.81 122 Pn 14 09 29.8 -0.2
X40A IAmb_Lg 14 10 55.1
comp=Z,52nm,0.7s
X40A Basin Creek Fa 4.81 122 P Pn 14 09 30.7 +0.7
baz=305
W41B Gary Mavity, V 4.88 112 Pn 14 09 30.9 -0.1
W41B IAmb_Lg 14 10 52.3
comp=Z,83nm,0.7s
UALR University of 5.00 117 Pn Pn 14 09 33.0 +0.4
UALR IAmb_Lg 14 11 01.6
comp=Z,44nm,0.8s
OGNE Ogallala 5.04 320 Pn 14 09 34.5 +1.3
OGNE IAmb_Lg 14 11 08.8
comp=Z,74nm,0.9s
WLAR White Oak Lake 5.14 131 Pn Pn 14 09 35.9 +1.4
WLAR IAmb_Lg 14 11 06.6
comp=Z,48nm,0.9s
WHTX Lake Whitney, 5.15 177 Pn 14 09 34.4 -0.2
WHTX IAmb_Lg 14 10 08.9
comp=Z,42nm,1.1s
MSTX Muleshoe 5.16 234 Pn Pn 14 09 36.1 +1.2
CCM Cathedral Cave 5.26 78 Pn Pn 14 09 36.6 +0.3
CCM IAmb_Lg 14 11 06.2
comp=Z,64nm,0.8s
T25A Trinidad 5.30 272 Pn Pn 14 09 37.2 +0.2
T25A IAmb_Lg 14 11 06.7
comp=Z,62nm,0.8s
LCAR Lake Charles 5.43 99 Pn Pn 14 09 38.9 +0.3
LCAR Sn 14 10 38.4 -3.4
LCAR IAmb_Lg 14 11 17.9
comp=Z,37nm,0.8s
Z41A Richland Creek 5.62 132 Pn Pn 14 09 41.4 +0.2
Z41A IAmb_Lg 14 11 22.8
comp=Z,41nm,0.9s
PBMO Poplar Bluff 5.89 91 Pn Pn 14 09 45.0 +0.2
PBMO IAmb_Lg 14 11 23.7
comp=Z,69nm,0.7s
SCIA State Center 5.92 35 Pn Pn 14 09 45.8 +0.5
SCIA IAmb_Lg 14 11 41.5
comp=Z,38nm,0.7s
Q24A Divide 6.10 290 Pn Pn 14 09 48.1 +0.2
SDCO Great Sand Dun 6.18 278 Pn 14 09 50.5 +1.4
435B Jarrell 6.35 179 Pn Pn 14 09 50.5 -0.7
435B IAmb_Lg 14 11 47.5
comp=Z,61nm,1.0s
N41A Harden Midland 6.46 54 Pn 14 09 53.6 +1.0
N41A IAmb_Lg 14 11 51.7
comp=Z,43nm,0.8s
ECSD EROS Data Cent 6.64 7 Pn 14 09 55.0 -0.1
ISCO Idaho Springs 6.70 296 Pn 14 09 56.4 +0.2
ISCO IAmb_Lg 14 12 06.9
comp=Z,34nm,1.0s
S44A Carbondale 6.80 83 Pn Pn 14 09 58.0 +0.6
143A Socs Landing, 6.86 128 IAmb_Lg 14 12 06.3
comp=Z,28nm,0.8s
JCT Junction City 6.86 195 Pn Pn 14 09 57.6 -0.6
JCT IAmb_Lg 14 12 09.5
comp=Z,34nm,0.9s
L40A Anamosa 7.05 44 Pn 14 10 00.7 -0.1
OXF Oxford 7.29 109 Pn Pn 14 10 04.6 +0.6
SUSD Miller 7.35 353 IAmb_Lg 14 12 20.8
comp=Z,51nm,0.8s
ANMO Albuquerque 7.37 255 Pg Pn 14 10 15.4 +10
comp=Z,0.4nm,0.3s,baz=88,slow=15,SNR=6.5
ANMO Lg Lg 14 12 04.4
comp=Z,0.9nm,0.3s,baz=341,slow=18,SNR=2.2
N23A Red Feather La 7.38 303 Pn 14 10 06.4 +0.8
HDIL Hopedale 7.44 60 Pn 14 10 05.5 -0.6
SMCO Snowmass 7.53 288 Pn Pn 14 10 07.3 -0.4
O44A Mansfield 7.88 65 IAmb_Lg 14 12 31.4
comp=Z,45nm,0.7s
L42A Oliver, Polo 7.92 50 Pn 14 10 12.3 -0.5
L42A IAmb_Lg 14 12 32.7
comp=Z,28nm,0.9s
Y22D IRIS PASSCAL I 8.05 250 IAmb_Lg 14 12 41.4
comp=Z,39nm,0.9s
WVT Waverly 8.06 94 Pn Pn 14 10 15.2 +0.6
WVT IAmb_Lg 14 12 32.2
comp=Z,23nm,0.8s
PLAL Pickwick Lake 8.14 102 Pn Pn 14 10 14.9 -0.9
PLAL IAmb_Lg 14 12 34.4
comp=Z,22nm,0.8s
JFWS Jewell Farm 8.15 43 Pn Pn 14 10 15.6 -0.3
MNTX Cornudas Mount 8.30 231 Pn Pn 14 10 18.1 0.0
RSSD Black Hills 8.44 328 Pn 14 10 18.9 -1.2
T47A Sharon Grove 8.53 88 Pn Pn 14 10 22.1 +1.0
T47A IAmb_Lg 14 12 57.6
comp=Z,45nm,1.0s
RWWY Rawlins 8.60 305 Pn Pn 14 10 22.9 +0.7
M44A Midewin, Midew 8.65 58 IAmb_Lg 14 12 57.8
comp=Z,39nm,1.1s
I40A Norwalk 8.66 37 Pn Pn 14 10 22.9 0.0
K22A Casper 8.68 312 IAmb_Lg 14 13 01.4
comp=Z,32nm,1.1s
SPMN Marine on St. 8.90 23 IAmb_Lg 14 13 01.1
comp=Z,21nm,1.1s
SFIN Lafayette 8.94 66 IAmb_Lg 14 13 02.1
comp=Z,33nm,0.8s
K43A Burlington 9.13 50 IAmb_Lg 14 13 09.0
comp=Z,33nm,0.8s
WCI Wyandotte Cave 9.17 80 IAmb_Lg 14 13 05.5
comp=Z,48nm,0.8s
TXAR Lajitas Array 9.22 214 Pn Pn 14 10 30.0 -0.6
comp=Z,0.3nm,0.3s,baz=27,slow=10,SNR=18
TXAR Pg 14 11 04.2
comp=Z,0.3nm,0.3s,baz=25,slow=12,SNR=4.3
TXAR Lg Lg 14 13 03.5
comp=Z,0.5nm,0.3s,baz=298,slow=35,SNR=1.6
TX31 Lajitas Ar. Si 9.22 214 Pn 14 10 30.6 -0.1
TX32 Lajitas Array 9.22 214 Pn 14 10 30.1 -0.5
I42A Draeger Farm, 9.53 42 Pn Pn 14 10 34.6 -0.2
I42A IAmb_Lg 14 13 28.4
comp=Z,24nm,1.2s
T49A Edmonton 9.78 87 IAmb_Lg 14 13 31.7
comp=Z,19nm,0.8s
Y49A Blount Mountai 9.83 106 IAmb_Lg 14 13 28.8
comp=Z,18nm,1.0s
P48A Milroy 9.98 73 IAmb_Lg 14 13 32.1
comp=Z,34nm,0.9s
PD31 Pinedale Array 10.64 305 Pn Pn 14 10 50.2 0.0
PDAR Pinedale Array 10.64 305 Pn Pn 14 10 49.0 -1.3
comp=Z,0.2nm,0.3s,baz=103,slow=16,SNR=6.0
PDAR Pg 14 11 33.6
comp=Z,0.3nm,0.3s,baz=110,slow=18,SNR=9.0
PDAR Lg Lg 14 13 47.0
comp=Z,0.4nm,0.3s,baz=111,slow=37,SNR=1.5
PDAR Pinedale Array 10.64 305 Pn Pn 14 10 49.0 -1.3
N49A Columbus Grove 11.22 66 Pn Pn 14 10 57.6 -0.4
TKL Tuckaleechee C 11.38 93 Lg Lg 14 14 08.8
comp=Z,0.5nm,0.3s,baz=164,slow=19,SNR=3.4
NLU North Lily Min 11.54 288 Pn Pn 14 11 02.1 -0.5
ULM Lac du Bonnet 13.17 5 Pn Pn 14 11 20.8 -3.7
comp=Z,0.3nm,0.3s,baz=209,slow=11,SNR=2.3
ULM Sn Sn 14 13 39.1 -13
comp=Z,0.4nm,0.3s,baz=130,slow=15,SNR=2.6
ULM Lg Lg 14 15 05.2
comp=Z,0.2nm,0.3s,baz=108,slow=18,SNR=1.9
YKA Yellowknife Ar 27.42 343 P P 14 14 02.6 -0.8
comp=Z,0.1nm,0.4s,baz=140,slow=7.5,SNR=1.6
ILAR Eielson Array 39.88 330 P P 14 15 52.0 +0.5
comp=Z,0.5nm,0.6s,baz=106,slow=7.3,SNR=7.2

BJI 04 14:11:13.0±0.0, 18.90N×121.50E, h10km, mB4.7/15, mb4.3/21, Ms4.0/6, Ms7 3.7/6
MAN 04 14:11:20.1, 19.25N×121.10E, h21km, mb5.4, ML4.4, MS4.7
MAN INTENSITY I - CALAYAN CAGAYAN.
NEIC 04 14:11:24.1±2.2, 19.43N±0.06×121.2E±0.1, h49km±7km, mb4.4/19, Error ellipse: s-maj=14.8km s-min=9.1km az=83.0
IDC 04 14:11:24.8±2.5, 19.36N×121.25E, h59km±26km, mb3.7/16, mb1 3.9/18, mb1mx3.8/42, mbtmp4.0/18, ML4.1/3, MS3.4/6, Ms1 3.5/6, ms1mx3.0/45, Error ellipse: s-maj=19.4km s-min=14.7km az=98.0
ISC 04 14:11:18.9±3.9, 19.33N±0.03×121.05E±0.06, h9km±25km, n76, σ1.84/76, mb4.2/26, MS3.5/4, 3D, Philippine Islands region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
BBP Basco 1.40 38 eP Pn 14 11 44.2 -0.5
BBP eS Sn 14 12 04.0 +0.8
SGCP Mt. Cagua 1.44 139 eP Pn 14 11 43.3 -1.8
SGCP eS Sn 14 12 01.8 -2.4
APYP Conner 1.48 173 eP Pn 14 11 44.1 -1.5
APYP eS Sn 14 12 02.6 -2.5
SIPP Brgy, Tapao 1.51 202⇓eP Pn 14 11 44.6 -1.5
SIPP eS Sn 14 12 03.7 -2.2
CAUP Cauayan 2.49 163 eP Pn 14 12 01.9 +2.3
CAUP eS Sb 14 12 34.4 -0.2
PALP Palanan 2.61 150 eP Pn 14 12 02.9 +1.6
PALP eS Sn 14 12 34.5 +1.4
BOLP Bolinao 3.13 200 eP Pn 14 12 09.4 +1.0
BOLP eS Sb 14 12 51.1 -1.9
SMPP San Manuel, Pa 3.19 186 eP Pn 14 12 10.7 +1.5
SMPP eS Sn 14 12 49.6 +2.3
TWG Pinlang 3.47 0 Pn 14 12 12.3 -0.8
BALP Baler 3.61 172 eP Pn 14 12 17.2 +2.2
BALP eS Sn 14 13 01.1 +3.3
SCZP Santa Cruz 3.70 197 eP Pn 14 12 18.2 +1.9
PCPH Palayan 3.75 179⇓eP Pn 14 12 21.1 +4.1
TPUB Ta-pu 3.97 354 Pn 14 12 20.3 +0.3
YULB Yu-li 4.05 3 Pn 14 12 20.6 -0.5
SSLB Suanglung 4.43 359 Pn 14 12 27.6 +1.2
NACB Ninganchiao 4.84 6 Pn 14 12 32.9 +0.9
TGY Tagaytay City 5.20 181 P Pn 14 12 41.3 +4.3
20nm,0.3s,baz=126,slow=8.9,SNR=1.3
TGY S Sn 14 13 41.2 +4.0
30nm,0.3s,baz=184,slow=13,SNR=1.2
LQP Lukban 5.21 175⇓eP Pn 14 12 30.5 -6.8
YHNB Yeheng 5.32 3 Pn 14 12 40.6 +2.0
LUBP Lubang 5.62 188 eP Pn 14 12 45.8 +3.1
LUBP eS Sb 14 14 01.2 -3.5
TATO Taipei 5.63 4 Pn Pn 14 12 45.3 +2.5
KNMB Chin-men Tao 5.67 335 Pn Pn 14 12 41.7 -1.6
HKPS Hong Kong Po S 7.09 296 Pn Pn 14 13 01.5 -1.4
QIZ Qiongzhong 10.59 270 Pn Pn 14 13 49.1 -1.8
DAV Davao City (W) 12.96 160 LR LR 14 19 58.9
comp=Z,213nm,20.8s,baz=335,slow=40
JNU Nakatsue 16.31 31 P Pn 14 15 09.1 +0.8
0.2nm,0.3s,baz=148,slow=9.5,SNR=1.8
JNU Nakatsue 16.31 31 IAmb IAmb 14 15 41.9
comp=Z,64nm,1.4s
XAN Xi'an 18.19 326 P P 14 15 34.6 +2.6
KSRS Korea Array 19.03 17 P P 14 15 41.1 0.0
comp=Z,1.0nm,0.3s,baz=197,slow=11,SNR=23
KSRS LR LR 14 23 36.4
comp=Z,117nm,18.5s,baz=186,slow=39
KS19 Wonju Array Si 19.06 17 P P 14 15 41.1 -0.4
CHTO Chiang Mai 20.90 272 P P 14 16 01.1 -0.6
CM31 Chiang Mai Arr 20.93 271 P P 14 16 01.1 -1.0
CMAR Chiang Mai Arr 20.93 271 P P 14 16 03.2 +1.1
comp=Z,1.5nm,0.9s,baz=79,slow=8.8,SNR=13
BJT Baijiatuau 21.04 350 P P 14 16 03.9 +0.9
BJT IAmb IAmb 14 16 09.7
comp=Z,15nm,0.7s
LZH Lanzhou 22.53 321 eP P 14 16 19.5 +0.1
LZH pP pP 14 16 23.1 +1.7
LZH sP sP 14 16 24.6 +2.4
LZH pmax pmax
comp=Z,17nm,1.3s
MJAR Matsushiro Arr 22.82 38 P P 14 16 20.0 -2.2
comp=Z,0.9nm,0.6s,baz=194,slow=6.3,SNR=3.8
GUMO Guam 23.54 100 LR LR 14 25 04.2
comp=Z,44nm,19.6s,baz=241,slow=35
USRK Ussuriysk Ar. 26.43 18 P P 14 16 59.0 +3.0
comp=Z,2.7nm,0.8s,baz=219,slow=8.6,SNR=4.1
GTA Gaotai 27.13 322 eP P 14 17 03.8 +1.3
GTA pP sP 14 17 08.5 +3.2
GTA sP pwP 14 17 10.9 +3.4
ULN Ulaanbaatar 30.65 341 P P 14 17 34.5 +0.7
SONM Songino Array 30.83 341 P P 14 17 36.0 +0.7
comp=Z,1.3nm,0.7s,baz=163,slow=10,SNR=12
KRVT Keravat (AS076 38.48 124 LR LR 14 31 27.1
comp=Z,87nm,20.5s,baz=318,slow=31
MK31 Makanchi Array 41.84 320 P P 14 19 10.3 +1.1
MK31 IAmb IAmb 14 19 11.5
comp=Z,6.8nm,1.1s
MKAR Makanchi Array 41.84 320 P P 14 19 10.5 +1.3
comp=Z,3.7nm,0.6s,baz=111,slow=8.5,SNR=50
MKAR PcP PcP 14 21 04.5 -0.6
comp=Z,0.5nm,0.7s,baz=101,slow=6.0,SNR=2.5
MAKZ Makanchi 42.03 320 P P 14 19 11.8 +1.0
MAKZ IAmb IAmb 14 19 13.1
comp=Z,5.6nm,1.1s
H11S3 WAKE ISLAND Hy 43.09 83 T T 15 04 58.8
baz=277,slow=74,SNR=17
H11S1 WAKE ISLAND Hy 43.10 83 T T 15 04 59.8
baz=277,slow=74,SNR=8.3
H11S2 WAKE ISLAND Hy 43.11 83 T T 15 05 01.7
baz=277,slow=74,SNR=5.7
H11N1 WAKE ISLAND Hy 43.11 82 T T 15 05 15.5
baz=277,slow=75,SNR=48
H11N2 WAKE ISLAND Hy 43.11 82 T T 15 05 10.4
baz=277,slow=75,SNR=44
H11N3 WAKE ISLAND Hy 43.13 82 T T 15 05 03.4
baz=277,slow=75,SNR=30
KSH Kashi 43.58 307 P P 14 19 27.5 +3.9
KSH PcP PcP 14 21 14.7 +3.5
KSH pmax pmax
comp=Z,5.0nm,0.7s
KSH pmax pmax
comp=Z,120nm,5.5s
KSH LR LR
comp=Z,81nm,6.8s
KSH LR LR
comp=Z,160nm,5.4s
KSH LR LR
comp=Z,100nm,8.5s
PETK Petropavlovsk- 44.00 31 P P 14 19 25.6 -1.0
comp=Z,2.3nm,0.8s,baz=232,slow=6.0,SNR=5.3
ZAA0 Zalesovo Array 44.30 330 P P 14 19 28.5 -0.5
ZAA0 IAmb IAmb 14 19 30.4
comp=Z,4.8nm,0.8s
ZALV Zalesovo Beam 44.30 330 P P 14 19 29.4 +0.5
comp=Z,4.3nm,0.7s,baz=117,slow=7.9,SNR=18
ZALV LR LR 14 39 03.4
comp=Z,44nm,19.2s,baz=82,slow=37
ASAR Alice Springs 44.54 163 P P 14 19 29.8 -1.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,1.2nm,0.5s,baz=342,slow=6.7,SNR=12						
NIL	**Nilore**	**44.71**	**299**	P	**P**	**14 19 32.7**	**+0.1**
NIL				IAmb	IAmb	14 19 34.0	
	comp=Z,12nm,1.0s						
KURK	**Kurchatov**	**45.80**	**323**	P	**P**	**14 19 41.6**	**+0.7**
KBL	**Kabul**	**48.27**	**299**	P	**P**	**14 19 58.8**	**-2.0**
KBL				IAmb	IAmb	14 20 02.6	
	comp=Z,4.9nm,0.7s						
KKAR	**Karatay Array**	**48.42**	**311**	P	**P**	**14 20 02.7**	**+1.1**
KKAR				IAmb	IAmb	14 20 03.8	
	comp=Z,5.2nm,1.0s						
BRVK	**Borovoye**	**51.47**	**323**	P	**P**	**14 20 24.9**	**+0.3**
BRVK				IAmb	IAmb	14 20 26.7	
	comp=Z,3.3nm,0.8s						
ABKAR	**Akbulak array**	**56.80**	**317**	P	**P**	**14 21 03.8**	**+0.3**
GEYT	**Alibeck**	**57.23**	**303**	P	**P**	**14 21 07.8**	**+1.0**
	comp=Z,1.3nm,0.5s,baz=147,slow=3.5,SNR=4.8						
GEYT	**Alibeck**	**57.23**	**303**	IAmb	IAmb	14 21 09.2	
	comp=Z,1.9nm,0.9s						
ARU	**Arti**	**58.94**	**325**	P	**P**	**14 21 18.3**	**0.0**
KBZ	**Khabaz**	**68.45**	**310**	P	**P**	**14 22 21.1**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=178,slow=2.4,SNR=3.6						
ILAR	**Eielson Array**	**73.58**	**27**	P	**P**	**14 22 50.5**	**-1.7**
	comp=Z,0.4nm,0.8s,baz=268,slow=4.2,SNR=5.0						
ARCES	**ARCESS Array B**	**73.98**	**339**	P	**P**	**14 22 53.0**	**-1.5**
	comp=Z,2.6nm,0.9s,baz=66,slow=9.4,SNR=6.5						
FINES	**FINESS Array B**	**75.56**	**330**	P	**P**	**14 23 03.0**	**-0.7**
	comp=Z,2.9nm,0.8s,baz=90,slow=2.9,SNR=5.0						
BRTR	**Keskin Array B**	**75.97**	**307**	P	**P**	**14 23 07.4**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=32,slow=3.7,SNR=1.9						
AKASG	**Malin Array Be**	**76.42**	**319**	P	**P**	**14 23 07.8**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=63,slow=5.9,SNR=6.3						
NOA	**NORSAR Array B**	**82.44**	**332**	LR	LR	15 03 56.3	
	comp=Z,39nm,19.4s,baz=215,slow=38						
VYHS	**Vyhne**	**83.52**	**319**	eP	**P**	**14 23 46.0**	**-1.3**
GERES	**GERESS Array B**	**86.50**	**321**	P	**P**	**14 24 01.8**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=76,slow=5.6,SNR=4.1						
YKA	**Yellowknife Ar**	**87.47**	**23**	P	**P**	**14 24 06.2**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=309,slow=4.7,SNR=49						
TXAR	**Lajitas Array**	**115.19**	**43**	PKP	**PKiKP**	**14 30 00.4**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=180,slow=0.8,SNR=4.2						

*NEIC **04** 14:14:04.1±1.4, 5°.7S±0°.2×150°.2E±0°.2, h28km±10km, mb4.7/12, Error ellipse: s-maj=35.1km s-min=4.9km az=139.0*
*IDC **04** 14:14:19.4±3.9, 6°.18S×149°.15E, h68km±36km, mb3.7/8, mb1 4.0/10, mb1mx3.8/25, mbtmp4.1/10, ML4.8/1, MS3.2/5, Ms1 3.2/5, ms1mx2.8/34, Error ellipse: s-maj=47.7km s-min=22.6km az=115.0*
ISC 04 14:14:18.5±1.0, 6°.1S±0°.1×149°.1E±0°.2, h60km, n28, σ0.91/27, mb3.9/9, New Britain region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.78**	**211**	P	**Pn**	**14 15 15.3**	**+1.0**
	19nm,0.3s,baz=28,slow=9.2,SNR=50						
PMG				S	**Sn**	**14 15 59.2**	**+1.7**
	32nm,0.3s,baz=241,slow=22,SNR=14						
PMG				LR	LR	14 16 54.8	
	comp=Z,283nm,21.4s,baz=94,slow=41						
PMG	**Port Moresby**	**3.78**	**211**		**Pn**	**14 15 14.2**	**-0.2**
COEN	**Coen**	**9.72**	**217**	Pn	**Pn**	**14 16 35.0**	**-0.8**
HNR	**Honiara**	**11.22**	**108**	LR	LR	14 20 20.8	
	comp=Z,74nm,19.6s,baz=346,slow=32						
SAUI	**Saumlaki**	**17.77**	**263**	P	**P**	**14 18 22.6**	**+0.6**
MTN	**Manton Dam**	**18.94**	**248**	P	**Pn**	**14 18 35.5**	**-0.5**
MTN				IAmb	IAmb	14 18 53.2	
	comp=Z,61nm,1.4s						
WB0	**Warramunga Arr**	**19.71**	**225**	P	**P**	**14 18 42.7**	**-0.5**
WR0	**Warramunga Arr**	**19.73**	**225**	P	**P**	**14 18 42.7**	**-0.7**
WRAB	**Tennant Creek**	**19.85**	**225**	P	**P**	**14 18 44.0**	**-0.7**
WRAB				IAmb	IAmb	14 18 45.0	
	comp=Z,21nm,0.7s						
WB2	**Warramunga Arr**	**19.85**	**225**	P	**P**	**14 18 44.2**	**-0.5**
WB2				IAmb	IAmb	14 18 45.1	
	comp=Z,24nm,0.6s						
WRA	**Warramunga Arr**	**19.86**	**225**	P	**P**	**14 18 44.4**	**-0.5**
	comp=Z,2.8nm,0.3s,baz=52,slow=11,SNR=74						
WRA				LR	LR	14 26 55.8	
	comp=Z,39nm,18.1s,baz=260,slow=38						
WRA	**Warramunga Arr**	**19.86**	**225**	P	**P**	**14 18 43.0**	**-1.8**
KNRA	**Kununurra**	**22.10**	**243**	P	**P**	**14 19 08.1**	**-0.9**
AS31	**Alice Springs**	**22.75**	**218**	P	**P**	**14 19 14.9**	**-1.1**
ASAR	**Alice Springs**	**22.76**	**218**	P	**P**	**14 19 15.1**	**-0.9**
	comp=Z,3.7nm,0.6s,baz=59,slow=9.2,SNR=59						
ASAR				LR	LR	14 28 11.4	
	comp=Z,78nm,18.9s,baz=8.5,slow=37						
ASAR	**Alice Springs**	**22.76**	**218**	P	**P**	**14 19 15.6**	**-0.4**
ARMA	**Armidale**	**24.27**	**175**	pP	**P**	**14 19 30.6**	**+0.4**
FITZ	**Fitzroy Crossi**	**25.80**	**241**	P	**P**	**14 19 43.6**	**-0.6**
	comp=Z,9.1nm,0.9s,baz=62,slow=8.2,SNR=7.7						
FITZ	**Fitzroy Crossi**	**25.80**	**241**	P	**P**	**14 19 43.1**	**-1.1**
FITZ				IAmb	IAmb	14 19 44.9	
	comp=Z,20nm,1.2s						
STKA	**Stephens Creek**	**26.55**	**194**	P	**P**	**14 19 51.2**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=350,slow=13,SNR=3.1						
STKA				LR	LR	14 30 46.5	
	comp=Z,75nm,18.6s,baz=22,slow=37						
FORT	**Forrest**	**31.49**	**216**	P	**P**	**14 20 34.1**	**-0.6**
PETK	**Petropavlovsk-**	**59.47**	**6**	P	**P**	**14 24 15.5**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=163,slow=7.3,SNR=12						
ULN	**Ulaanbaatar**	**65.26**	**330**	P	P	14 24 44.4	-10
ULN				IAmb	IAmb	14 24 46.9	
	comp=Z,2.7nm,0.5s						
SONM	**Songino Array**	**65.56**	**330**	P	**P**	**14 24 57.7**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=130,slow=6.8,SNR=4.5						
MKAR	**Makanchi Array**	**78.95**	**320**	P	**P**	**14 26 16.1**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=94,slow=9.1,SNR=9.1						
ZALV	**Zalesovo Beam**	**80.26**	**327**	P	**P**	**14 26 22.0**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=94,slow=9.1,SNR=2.6						
ILAR	**Eielson Array**	**84.79**	**23**	P	**P**	**14 26 45.3**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=248,slow=4.4,SNR=9.4						
TORD	**Torodi Ar. Bea**	**147.16**	**285**	PKPbc	**PKPab**	**14 33 57.3**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=98,slow=3.3,SNR=6.2						

IDC 04 14:27:42.0±1.7, 9°.32S×125°.41E, h0km, mb3.6/1, mb1 3.7/4, mb1mx3.5/39, mbtmp3.6/4, ML3.4/3, Error ellipse: s-maj=100.9km s-min=26.2km az=66.0, Timor region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**8.72**	**179**	Pn	Pn	14 29 51.2	+1.6
	0.5nm,0.3s,baz=353,slow=11,SNR=12						
FITZ				Sn	Sn	14 31 23.6	-5.2
	1.0nm,0.3s,baz=181,slow=22,SNR=8.0						
WRA	**Warramunga Arr**	**13.63**	**142**	Pn	Pn	14 30 56.2	-0.7
	0.1nm,0.3s,baz=313,slow=12,SNR=8.9						
WRA				Sn	Sn	14 33 17.8	-11
	0.3nm,0.3s,baz=319,slow=24,SNR=8.0						
ASAR	**Alice Springs**	**16.41**	**151**	Pn	Pn	14 31 32.6	-1.4
	0.2nm,0.3s,baz=320,slow=11,SNR=19						
ASAR				Sn	Sn	14 34 26.5	-10
	0.1nm,0.3s,baz=310,slow=20,SNR=5.8						
MKAR	**Makanchi Array**	**67.79**	**330**	P	P	14 38 41.8	0.0
	0.4nm,0.5s,baz=131,slow=7.7,SNR=13						

*IDC **04** 14:34:39.1±2.5, 12°.07N×143°.97E, h74km±24km, mb3.0/6, mb1 3.2/6, mb1mx3.1/42, mbtmp3.3/6, Error ellipse: s-maj=42.5km s-min=19.1km az=106.0*
ISC 04 14:34:34.1±1.0, 12°.1N±0°.1×143°.9E±0°.2, h26km, n7, σ1.15/8, mb3.5/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.80**	**33**	P	**Pb**	**14 35 06.2**	**-0.1**
	21nm,0.3s,baz=166,slow=2.8,SNR=14						
GUMO				S	**Sb**	**14 35 29.4**	**+0.9**
	58nm,0.3s,baz=153,slow=23,SNR=24						
WRA	**Warramunga Arr**	**33.17**	**197**	P	**P**	**14 41 08.6**	**0.0**
	0.7nm,0.8s,baz=18,slow=9.9,SNR=2.4						
ASAR	**Alice Springs**	**36.83**	**195**	P	**P**	**14 41 41.1**	**+0.9**
	0.2nm,0.9s,baz=35,slow=11,SNR=1.0						
SONM	**Songino Array**	**47.41**	**326**	P	**P**	**14 43 06.9**	**+0.4**
	0.3nm,0.5s,baz=139,slow=8.7,SNR=4.3						
MKAR	**Makanchi Array**	**61.90**	**317**	P	**P**	**14 44 51.4**	**-0.1**
	0.2nm,0.4s,baz=92,slow=9.4,SNR=4.4						
ILAR	**Eielson Array**	**70.35**	**25**	P	**P**	**14 45 43.3**	**-2.1**
	0.1nm,0.5s,baz=263,slow=5.4,SNR=2.4						
YKA	**Yellowknife Ar**	**84.65**	**27**	P	**P**	**14 47 06.0**	**+0.8**
	0.1nm,0.4s,baz=287,slow=5.3,SNR=2.4						

*THE **04** 14:40:57.6, 38°.27N×20°.41E, h9km±1km, ML2.7/3, Error ellipse: s-maj=1.0km s-min=0.3km az=240.0*
*ATH **04** 14:40:57.3, 38°.27N×20°.40E, h10km±1km, ML2.8/2, Error ellipse: s-maj=2.1km s-min=0.9km az=221.0*
ISC 04 14:40:57.1±1.1, 38°.26N±0°.03×20°.42E±0°.05, h13km±6km, n26, σ0.30/43, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.01**	**144**	P	**Pg**	**14 40 59.1**	**-0.2**
KEF4				S	**Sg**	**14 41 00.5**	**-0.3**
KEF1	**Kardakata, Kep**	**0.04**	**69**	P	**Pg**	**14 40 59.3**	**-0.2**
KEF1				S	**Sg**	**14 41 00.6**	**-0.5**
LXR1	**Lixouri, Cepha**	**0.06**	**167**	P	**Pg**	**14 40 59.7**	**+0.1**
LXR1				S	**Sg**	**14 41 01.6**	**+0.2**
KEF3	**Kipouria, Keph**	**0.08**	**224**	P	**Pg**	**14 40 59.9**	**0.0**
KEF3				S	**Sg**	**14 41 01.8**	**0.0**
CHV1	**Chavriata, Kef**	**0.09**	**201**	P	**Pg**	**14 40 59.9**	**0.0**
CHV1				S	**Sg**	**14 41 01.8**	**0.0**
ARG2	**Argostoli**	**0.10**	**148**	P	**Pg**	**14 41 00.1**	**+0.1**
ARG2				S	**Sg**	**14 41 02.2**	**+0.1**
KEF2	**Argostoli. Kep**	**0.11**	**151**	P	**Pg**	**14 41 00.3**	**+0.1**
KEF2				S	**Sg**	**14 41 02.4**	**+0.1**
VLS	**Valsamata**	**0.16**	**123**	P	**Pg**	**14 41 00.9**	**0.0**
VLS				S	**Sg**	**14 41 03.7**	**+0.2**
	6μm,0.2s						
VLS	**Valsamata**	**0.16**	**123**	P	**Pg**	**14 41 00.9**	**0.0**
VLS				S	**Sg**	**14 41 03.7**	**+0.2**
VLS				AML	AML	14 41 04.0	
	comp=E,9740μm,0.1s						
VLS				AML	AML	14 41 04.1	
	comp=N,11614μm,0.1s						
VSK1	**VASILIKIADES**	**0.18**	**38**	P	**Pg**	**14 41 01.5**	**+0.2**
VSK1				S	**Sg**	**14 41 04.6**	**+0.4**
	comp=N,3μm,0.1s						
FSK	**Fiskardo**	**0.23**	**30**	P	**Pg**	**14 41 02.2**	**+0.2**
FSK				S	**Sg**	**14 41 05.9**	**+0.6**
	comp=N,3μm,0.1s						
FSK	**Fiskardo**	**0.23**	**30**	P	**Pg**	**14 41 02.2**	**+0.2**
FSK				S	**Sg**	**14 41 05.8**	**+0.6**
FSK				AML	AML	14 41 06.4	
	comp=E,10328μm,0.1s						
FSK				AML	AML	14 41 06.5	
	comp=N,2556μm,0.1s						
EVGI	**Lefkada island**	**0.40**	**27**	P	**Pg**	**14 41 05.3**	**+0.1**
EVGI				S	**Sb**	**14 41 11.3**	**-1.0**
EVGI	**Lefkada island**	**0.40**	**27**	P	**Pg**	**14 41 05.1**	**-0.1**
EVGI				S	**Sg**	**14 41 11.1**	**+0.5**
MGNA	**Meganis**	**0.49**	**36**	P	**Pg**	**14 41 06.7**	**-0.1**
MGNA				S	**Sg**	**14 41 12.8**	**-0.5**
LKD2	**Lefkada island**	**0.56**	**19**	P	**Pg**	**14 41 07.8**	**-0.3**
LKD2	**Lefkada island**	**0.56**	**19**	P	**Pg**	**14 41 07.8**	**-0.3**
LKD2				S	**Sb**	**14 41 16.4**	**-0.4**
TSLK	**Tsoukalades, L**	**0.59**	**18**	P	**Pg**	**14 41 08.6**	**-0.1**
TSLK	**Tsoukalades, L**	**0.59**	**18**	P	**Pg**	**14 41 08.6**	**-0.1**
TSLK				S	**Sb**	**14 41 17.7**	**0.0**
PDO	**Prodromos**	**0.69**	**61**	P	**Pg**	**14 41 10.4**	**-0.1**
PDO	**Prodromos**	**0.69**	**61**	P	**Pg**	**14 41 10.3**	**-0.1**
RLS	**Riolos of Patr**	**0.85**	**104**	P	**Pg**	**14 41 13.4**	**-0.2**
PVO	**Paravola**	**0.94**	**68**	P	**Pb**	**14 41 15.3**	**0.0**
PVO	**Paravola**	**0.94**	**68**	P	**Pb**	**14 41 15.3**	**0.0**
DRO	**Drossia**	**1.06**	**107**	P	**Pn**	**14 41 18.2**	**+0.4**
DRO	**Drossia**	**1.06**	**107**	P	**Pg**	**14 41 17.4**	**-0.2**

ISC 04 14:48:29.9±2.5, 48°.2N±0°.1×17°.09E±0°.07, h0km, n5, σ0.66/10, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MODS	**Modra-Piesok**	**0.26**	**29**	ePG	**Pg**	**14 48 34.3**	**-0.5**
MODS				eSG	**Sg**	**14 48 38.7**	**+0.5**
MODS				eLG	Lg	14 48 43.1	
JAVC	**Velka Javorina**	**0.81**	**28**	ePG	**Pn**	**14 48 48.0**	**-0.6**
JAVC				eSG	**Sb**	**14 48 59.5**	**+1.1**
KRUC	**Moravsky**	**1.02**	**333**	ePG	**Pg**	**14 48 49.9**	**+0.4**
KRUC				eSG	**Sg**	**14 49 02.4**	**-0.4**
VRAC	**Vranov**	**1.21**	**344**	ePG	**Pg**	**14 48 53.3**	**+0.3**
VRAC				eSG	**Sg**	**14 49 08.2**	**-0.5**
VYHS	**Vyhne**	**1.22**	**73**	ePG	**Pn**	**14 48 54.4**	**+0.2**
VYHS				eSG	**Sn**	**14 49 10.9**	**-0.4**

IDC 04 14:51:04.2±2.5, 6°.96S×145°.20E, h0km, mb3.6/1, mb1 3.6/4, mb1mx3.4/37, mbtmp3.4/4, ML3.3/2, Error ellipse: s-maj=53.6km s-min=26.0km az=49.0, New Guinea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.11**	**141**	Pn	Pn	14 51 54.7	+0.1
	2.2nm,0.3s,baz=16,slow=3.1,SNR=12						
PMG				Sn	Sn	14 52 32.4	0.0
	2.4nm,0.3s,baz=344,slow=20,SNR=6.0						
WRA	**Warramunga Arr**	**16.66**	**218**	Pn	Pn	14 54 58.2	-1.1
	0.1nm,0.3s,baz=36,slow=12,SNR=6.1						
ASAR	**Alice Springs**	**19.84**	**212**	P	P	14 55 37.5	+0.6
	0.1nm,0.3s,baz=41,slow=9.7,SNR=23						
CMAR	**Chiang Mai Arr**	**52.15**	**300**	P	P	15 00 16.8	-0.1
	0.5nm,0.7s,baz=121,slow=6.5,SNR=5.9						

*IDC **04** 14:51:34.8±2.2, 18°.86S×169°.23E, h231km±22km, mb3.6/13, mb1 3.8/14, mb1mx3.6/38, mbtmp4.2/14, Error ellipse: s-maj=22.2km s-min=18.4km az=164.0*
*NEIC **04** 14:51:34.5±1.5, 18°.76S±0°.07×169°.2E±0°.1, h229km±5km, mb4.7/22, Error ellipse: s-maj=20.3km s-min=10.7km az=92.0*
ISC 04 14:51:36.5±0.6, 18°.82S±0°.07×169°.1E±0°.1, h250km, n63, σ1.18/62, mb4.1/18, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**3.82**	**331**		**Pn**	**14 52 34.9**	**-3.5**
DZM	**Mont Dzumac**	**4.09**	**217**	P	**Pn**	**14 52 39.7**	**-1.8**
	13nm,0.3s,baz=33,slow=3.3,SNR=43						
DZM				S	**S**	**14 53 30.2**	**-2.9**
	baz=117,slow=20,SNR=0.9						
DZM	**Mont Dzumac**	**4.09**	**217**		**Pn**	**14 52 39.5**	**-2.0**
NOUC	**Port Laguerre**	**4.20**	**219**		**Pn**	**14 52 40.9**	**-1.8**
OUZ	**Omahuta**	**16.81**	**167**		**Pn**	**14 55 17.1**	**-1.0**
OUZ				IAmb	IAmb	14 55 19.6	
	comp=Z,14nm,0.8s						
URZ	**Urewera**	**20.58**	**162**	P	**P**	**14 55 55.9**	**-0.8**
	comp=Z,6.4nm,0.9s,baz=304,slow=3.6,SNR=1.7						
URZ	**Urewera**	**20.58**	**162**	P	**P**	**14 55 56.1**	**-0.6**
URZ				IAmb	IAmb	14 56 11.2	
	comp=Z,49nm,1.6s						
PREZ	**Palmer Road**	**20.91**	**169**	P	Pn	14 56 22.5	+16
LREZ	**Lake Rotokare**	**21.07**	**169**	P	P	14 56 21.2	+20
BKZ	**Black Stump Fm**	**21.26**	**164**	P	**P**	**14 56 03.5**	**-0.1**
BKZ				IAmb	IAmb	14 56 14.6	
	comp=Z,46nm,1.6s						
QRZ	**Quartz Range**	**22.12**	**173**	P	**P**	**14 56 12.1**	**+0.5**
QRZ	**Quartz Range**	**22.12**	**173**	P	**P**	**14 56 13.8**	**+2.2**
OGWZ	**Otaki Gorge**	**22.53**	**168**	P	**P**	**14 56 15.3**	**+0.1**
NNZ	**Nelson**	**22.62**	**172**	P	**P**	**14 56 17.2**	**+1.2**
HOWZ	**Holdsworth Sta**	**22.68**	**167**	P	**P**	**14 56 16.0**	**-0.6**
CAW	**Cannon Point**	**22.79**	**168**	P	**P**	**14 56 17.6**	**0.0**
TUWZ	**Tuamarina**	**22.91**	**171**	P	**P**	**14 56 18.9**	**+0.2**
SNZO	**South Karori**	**22.92**	**169**	P	**P**	**14 56 19.0**	**+0.2**
MTW	**Mount Morrison**	**22.92**	**168**	P	**P**	**14 56 18.4**	**-0.4**
BHW	**Baring Head**	**23.04**	**169**	P	**P**	**14 56 20.3**	**+0.4**
BHW	**Baring Head**	**23.04**	**169**	P	**P**	**14 56 20.1**	**+0.2**
THZ	**Tophouse**	**23.09**	**173**	P	**P**	**14 56 21.3**	**+0.9**
THZ				IAmb	IAmb	14 56 56.6	
	comp=Z,61nm,1.5s						
THZ	**Tophouse**	**23.09**	**173**	P	**P**	**14 56 21.3**	**+0.9**
MSWZ	**Moikau Station**	**23.12**	**168**	P	**P**	**14 56 20.6**	**-0.1**
MSWZ	**Moikau Station**	**23.12**	**168**	P	**P**	**14 56 20.5**	**-0.1**
PAWZ	**Paruwai Farm**	**23.12**	**168**	P	**P**	**14 56 20.5**	**-0.2**
PLWZ	**Palliser**	**23.27**	**168**	P	**P**	**14 56 21.6**	**-0.4**
PLWZ	**Palliser**	**23.27**	**168**	P	**P**	**14 56 21.8**	**-0.2**
LTZ	**Lake Taylor**	**24.03**	**174**	P	**P**	**14 56 29.4**	**+0.4**
TOO	**Toolangi**	**27.84**	**223**	P	**P**	**14 57 05.8**	**+2.7**
STKA	**Stephens Creek**	**27.97**	**237**	P	**P**	**14 57 05.8**	**+1.5**
	comp=Z,1.7nm,0.3s,baz=3.5,slow=12,SNR=3.4						
STKA	**Stephens Creek**	**27.97**	**237**	P	**P**	**14 57 05.5**	**+1.2**
WR0	**Warramunga Arr**	**32.60**	**262**	P	**P**	**14 57 44.9**	**-0.2**
WR0				IAmb	IAmb	14 58 39.7	
	comp=Z,39nm,1.7s						
BBOO	**Buckleboo**	**32.71**	**238**	P	**P**	**14 57 46.8**	**+0.9**
WB0	**Warramunga Arr**	**32.76**	**263**	P	**P**	**14 57 46.1**	**-0.4**
WB0				IAmb	IAmb	14 58 25.8	
	comp=Z,37nm,1.8s						
WB2	**Warramunga Arr**	**32.78**	**262**	P	**P**	**14 57 46.4**	**-0.2**
WB2				IAmb	IAmb	14 57 56.4	
	comp=Z,41nm,1.8s						
WRAB	**Tennant Creek**	**32.78**	**262**	P	**P**	**14 57 46.4**	**-0.3**
WRAB				IAmb	IAmb	14 57 56.1	
	comp=Z,51nm,1.9s						
WRA	**Warramunga Arr**	**32.79**	**262**	P	**P**	**14 57 46.6**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=90,slow=8.6,SNR=9.4						
WRA	**Warramunga Arr**	**32.79**	**262**	P	**P**	**14 57 46.6**	**-0.2**
AS31	**Alice Springs**	**33.12**	**255**	P	**P**	**14 57 50.0**	**+0.4**
ASAR	**Alice Springs**	**33.12**	**255**	P	**P**	**14 57 50.0**	**+0.4**
	comp=Z,6.1nm,0.5s,baz=82,slow=8.7,SNR=131						
ASAR	**Alice Springs**	**33.12**	**255**	P	**P**	**14 57 49.4**	**-0.2**
MJAR	**Matsushiro Arr**	**62.33**	**332**	P	**P**	**15 01 32.6**	**0.0**
	comp=Z,0.9nm,0.6s,baz=192,slow=4.8,SNR=1.9						
JKA	**Kamikawa-asahi**	**67.17**	**340**	P	**P**	**15 02 04.9**	**+1.3**
ASAJ	**Asahikawa**	**67.17**	**340**	P	**P**	**15 02 04.9**	**+1.3**
	comp=Z,1.5nm,0.5s,baz=219,slow=8.9,SNR=7.1						
PETK	**Petropavlovsk-**	**72.31**	**353**	P	**P**	**15 02 35.5**	**+0.8**
	comp=Z,3.4nm,0.6s,baz=154,slow=7.1,SNR=14						
LHMI	**Lhok Sumawe**	**74.94**	**281**	P	**P**	**15 02 50.7**	**-0.2**
KLR	**Kul'dur**	**75.45**	**336**	P	**P**	**15 02 54.0**	**+1.1**
	comp=Z,0.6nm,0.2s,baz=353,slow=4.7,SNR=4.4						
CMAR	**Chiang Mai Arr**	**78.23**	**294**	P	**P**	**15 03 11.2**	**+2.1**
	comp=Z,0.6nm,0.7s,baz=122,slow=4.8,SNR=5.3						
ULN	**Ulaanbaatar**	**86.46**	**323**	P	**P**	**15 03 51.8**	**+0.6**
BILL	**Bilibino**	**86.64**	**359**	P	**P**	**15 03 51.1**	**-0.2**
SONM	**Songino Array**	**86.82**	**323**	P	**P**	**15 03 53.8**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=155,slow=6.1,SNR=15						
SONM	**Songino Array**	**86.82**	**323**	P	**P**	**15 03 53.1**	**+0.3**
NVAR	**Mina Array Bea**	**88.61**	**49**	P	**P**	**15 04 01.3**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=198,slow=5.6,SNR=4.1						
NVAR	**Mina Array Bea**	**88.61**	**49**	P	**P**	**15 04 00.5**	**-1.2**
ILAR	**Eielson Array**	**89.87**	**17**	P	**P**	**15 04 05.0**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=237,slow=5.1,SNR=18						
ILAR	**Eielson Array**	**89.87**	**17**	P	**P**	**15 04 04.8**	**-1.8**
TXAR	**Lajitas Array**	**96.67**	**61**	P	**P**	**15 04 40.0**	**+1.2**
	comp=Z,0.2nm,0.8s,baz=212,slow=6.4,SNR=3.0						
YKA	**Yellowknife Ar**	**100.35**	**27**	P	**Pdif**	**15 04 54.8**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=256,slow=4.6,SNR=8.8						
MKAR	**Makanchi Array**	**101.36**	**316**	P	**Pdif**	**15 05 01.1**	**+1.9**
	comp=Z,0.2nm,0.5s,baz=92,slow=6.4,SNR=6.9						
MKAR	**Makanchi Array**	**101.36**	**316**		**Pdif**	**15 04 58.4**	**-0.8**
ARCES	**ARCESS Array B**	**124.64**	**345**	PKP	**PKPdf**	**15 10 04.8**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=74,slow=2.3,SNR=21						
GERES	**GERESS Array B**	**144.07**	**332**	PKP	**PKPdf**	**15 10 41.1**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=32,slow=5.2,SNR=8.7						

IDC 04 14:51:55.8±1.2, 20°.18N×120°.54E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/43, mbtmp3.5/5, MS2.6/1, Ms1 2.8/1, ms1mx2.4/35, Error ellipse: s-maj=80.9km s-min=23.7km az=69.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.46**	**269**	LR	LR	15 03 58.0	
	comp=Z,16nm,18.9s,baz=125,slow=35						
SONM	**Songino Array**	**29.87**	**341**	P	P	14 58 04.8	-0.3
	0.6nm,0.8s,baz=151,slow=6.8,SNR=4.5						
MKAR	**Makanchi Array**	**40.88**	**319**	P	P	14 59 39.5	-0.2
	0.4nm,0.8s,baz=108,slow=8.0,SNR=3.6						
WRA	**Warramunga Arr**	**42.10**	**160**	P	P	14 59 49.6	-0.2
	0.9nm,0.8s,baz=344,slow=9.3,SNR=1.7						
ASAR	**Alice Springs**	**45.49**	**163**	P	P	15 00 16.9	-0.1
	0.5nm,0.9s,baz=354,slow=7.4,SNR=1.4						
YKA	**Yellowknife Ar**	**86.87**	**22**	P	P	15 04 42.4	+0.3
	0.4nm,0.8s,baz=313,slow=4.6,SNR=5.9						

*ATH **04** 15:01:21.6, 38°.21N×20°.35E, h9km±2km, ML2.9/5, Error ellipse: s-maj=3.1km s-min=1.1km az=79.0*
*THE **04** 15:01:22.5, 38°.21N×20°.40E, h7km, ML3.1/3, Error ellipse: s-maj=0.7km s-min=0.4km az=263.0*
ISC 04 15:01:22.1±1.3, 38°.21N±0°.03×20°.40E±0°.05, h8km±5km, n32, σ0.55/48, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.03**	**202**	P	**Pg**	**15 01 23.7**	**+0.1**
CHV1				S	**Sg**	**15 01 24.9**	**+0.2**
LXR1	**Lixouri, Cepha**	**0.04**	**104**	P	**Pg**	**15 01 23.7**	**0.0**
LXR1				S	**Sg**	**15 01 24.9**	**+0.1**
KEF4	**Livadi, Kephal**	**0.05**	**25**	P	**Pg**	**15 01 23.8**	**-0.1**
KEF4				S	**Sg**	**15 01 24.9**	**-0.3**
ARG2	**Argostoli**	**0.08**	**113**	P	**Pg**	**15 01 24.5**	**+0.3**
ARG2				S	**Sg**	**15 01 25.9**	**+0.2**
KEF2	**Argostoli. Kep**	**0.09**	**121**	P	**Pg**	**15 01 24.6**	**+0.3**
KEF2				S	**Sg**	**15 01 26.2**	**+0.4**
KEF1	**Kardakata, Kep**	**0.09**	**41**	P	**Pg**	**15 01 24.3**	**-0.1**
KEF1				S	**Sg**	**15 01 25.9**	**-0.1**
VLS	**Valsamata**	**0.16**	**102**	P	**Pg**	**15 01 25.6**	**+0.1**
VLS				S	**Sg**	**15 01 28.2**	**+0.5**
	12μm,0.2s						
VLS	**Valsamata**	**0.16**	**102**	P	**Pg**	**15 01 25.5**	**+0.1**
VLS				S	**Sg**	**15 01 28.3**	**+0.5**
VLS				AML	AML	15 01 28.4	
	comp=N,21372μm,0.2s						
VLS				AML	AML	15 01 28.6	
	comp=E,21293μm,0.1s						
VSK1	**VASILIKIADES**	**0.24**	**34**	P	**Pg**	**15 01 27.1**	**+0.2**
VSK1				S	**Sg**	**15 01 30.9**	**+0.7**
	comp=E,10μm,0.3s						
FSK	**Fiskardo**	**0.28**	**28**	P	**Pg**	**15 01 27.8**	**+0.1**
FSK				S	**Sg**	**15 01 32.0**	**+0.5**
	comp=E,2μm,0.6s						
FSK	**Fiskardo**	**0.28**	**28**	P	**Pg**	**15 01 27.9**	**+0.1**
FSK				S	**Sg**	**15 01 32.5**	**+1.0**
FSK				AML	AML	15 01 35.3	
	comp=E,5333μm,0.4s						
FSK				AML	AML	15 01 37.9	
	comp=N,3219μm,0.5s						
VLMS	**Volimes, Zakyn**	**0.39**	**147**	P	**Pg**	**15 01 30.0**	**+0.2**
VLMS				S	**Sg**	**15 01 36.2**	**+1.2**
VLMS				AML	AML	15 01 41.5	
	comp=N,9400μm,0.4s						
VLMS				AML	AML	15 01 42.1	
	comp=E,6114μm,0.2s						
EVGI	**Lefkada island**	**0.46**	**26**	P	**Pg**	**15 01 31.1**	**+0.1**
EVGI				S	**Sg**	**15 01 38.1**	**+1.0**
EVGI	**Lefkada island**	**0.46**	**26**	P	**Pg**	**15 01 31.1**	**+0.1**
EVGI				S	**Sg**	**15 01 38.3**	**+1.2**
MGNA	**Meganis**	**0.54**	**35**	P	**Pg**	**15 01 32.4**	**-0.2**
MGNA				S	**Sg**	**15 01 41.0**	**+1.2**
MGNA				AML	AML	15 01 41.3	
	comp=E,4237μm,0.4s						
MGNA				AML	AML	15 01 41.5	
	comp=N,3565μm,0.4s						
LKD2	**Lefkada island**	**0.61**	**20**	P	**Pg**	**15 01 33.2**	**-0.8**
LKD2				AML	AML	15 01 49.1	
	comp=N,935μm,0.6s						
LKD2				AML	AML	15 01 50.0	
	comp=E,871μm,0.4s						
TSLK	**Tsoukalades, L**	**0.65**	**18**	P	**Pg**	**15 01 34.3**	**-0.3**
TSLK				S	**Sg**	**15 01 43.3**	**+0.2**
PDO	**Prodromos**	**0.73**	**58**	P	**Pg**	**15 01 36.2**	**0.0**
PDO	**Prodromos**	**0.73**	**58**	P	**Pg**	**15 01 36.1**	**0.0**
RLS	**Riolos of Patr**	**0.86**	**100**	P	**Pg**	**15 01 37.4**	**-1.2**
PVO	**Paravola**	**0.98**	**65**	P	**Pg**	**15 01 41.0**	**+0.1**
PVO	**Paravola**	**0.98**	**65**	P	**Pg**	**15 01 40.9**	**0.0**
DRO	**Drossia**	**1.07**	**103**	P	**Pg**	**15 01 42.2**	**-0.4**
LAKA	**Lakka**	**1.25**	**88**	P	**Pn**	**15 01 44.9**	**-0.9**
ANX	**Ano Chora**	**1.26**	**72**	P	**Pn**	**15 01 45.2**	**-0.8**
ANX	**Ano Chora**	**1.26**	**72**	P	**Pn**	**15 01 45.5**	**-0.6**
IGT	**Igoumenitsa**	**1.32**	**358**	P	**Pn**	**15 01 46.8**	**-0.1**
TRIZ	**Trizonia**	**1.33**	**83**	P	**Pn**	**15 01 46.4**	**-0.5**
KALE	**Kalithea**	**1.38**	**82**	P	**Pn**	**15 01 47.1**	**-0.7**
KALE	**Kalithea**	**1.38**	**82**	P	**Pn**	**15 01 47.3**	**-0.4**
KLV	**Kalavryta, Ach**	**1.39**	**96**	P	**Pn**	**15 01 48.0**	**+0.1**
KLV	**Kalavryta, Ach**	**1.39**	**96**	P	**Pn**	**15 01 47.8**	**-0.1**

*IDC **04** 15:02:37.9±0.8, 10°.46N×126°.05E, h0km, mb3.9/11, mb1 4.0/11, mb1mx3.8/38, mbtmp3.8/11, MS3.3/9, Ms1 3.3/9, ms1mx3.0/43, Error ellipse: s-maj=32.6km s-min=17.8km az=75.0*
*NEIC **04** 15:02:44.9±1.3, 10°.5N±0°.1×125°.9E±0°.2, h51km±9km, mb4.7/24, Error ellipse: s-maj=27.5km s-min=16.4km az=81.0*

MAN 04 15:02:45.6,10.52N×125.89E,h62km,mb5.3,ML4.2,MS4.4

ISC 04 15:02:47.0±1.2,10.47N±0.04×125.93E±0.08,h71km±12km,n77,σ1.19/71,mb4.4/22,4C-3D,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
MSLP	Maasin	1.10	253	eP	Pn	15 03 04.8	-2.1
MSLP				eS	Sn	15 03 21.1	-0.5
OCLP	Ormoc	1.42	294	eP	Pn	15 03 09.9	-1.1
OCLP				eS	Sn	15 03 32.8	+3.8
BUTP	Butuan	1.52	191	eP	Pn	15 03 10.9	-1.4
LLP	Lapu-Lapu	1.94	266⇓	eP	Pn	15 03 17.3	-0.6
LLP				eS	Sn	15 03 41.5	+0.2
TBP	Tagbilaran	2.17	249⇑	eP	Pn	15 03 21.4	+0.3
TBP				eS	Sn	15 03 28.5	-19
CGP	Cagayan de Oro	2.34	211⇓	eP	Pn	15 03 23.5	+0.2
CGP				eS	Sn	15 03 51.2	+0.2
CNP	Catarman	2.38	329	eP	Pn	15 03 22.5	-1.3
CNP				eS	Sn	15 03 56.5	+4.5
BUKP	Musuan	2.71	198	eP	Pn	15 03 29.1	+0.8
BUKP				eS	Sn	15 04 02.7	+2.6
DCPH	Dipolog City	3.15	234⇓	iP	Pn	15 03 33.8	-0.5
DCPH				iS	Sn	15 04 11.8	+1.0
GUIM	Jordan	3.29	273	eP	Pn	15 03 35.0	-1.1
GUIM				eS	Sn	15 04 13.0	-1.1
RCP	Roxas	3.31	290⇑	eP	Pn	15 03 37.0	+0.6
DAV	Davao City (W)	3.39	186	LR	LR	15 05 27.4	
	comp=Z,538nm,19.2s,baz=62,slow=50						
MATI	Mati	3.51	175	eP	Pn	15 03 42.1	+2.8
MATI				eS	Sn	15 04 29.7	+10
KCP	Kidapawan	3.53	194⇑	eP	Pn	15 03 42.7	+3.0
PVCP	Virac	3.56	331	eP	Pn	15 03 37.1	-2.8
PAGZ	Pagadian	3.62	224	eP	Pn	15 03 39.6	-1.0
PAGZ				eS	Sn	15 04 23.4	+1.2
CTBH	Cotabato--PC H	3.63	207⇑	iP	Pn	15 03 41.6	+0.8
OTRP	Odiongan	4.27	297	eP	Pn	15 03 49.2	-0.4
DDMP	Don Marcelino,	4.34	183	eP	Pn	15 03 52.1	+1.5
CUYO	Cuyo Island	4.84	275	eP	Pn	15 03 57.1	-0.3
BOAC	Boac	4.98	307	eP	Pn	15 03 59.7	+0.4
TGY	Tagaytay City	6.07	307	LR	LR	15 07 04.0	
	comp=Z,267nm,18.1s,baz=240,slow=43						
ENPP	El Nido	6.43	277	eP	Pn	15 04 18.3	-0.8
CAUP	Cauayan	7.57	329	eP	Pn	15 04 33.3	-1.5
SMPP	San Manuel, Pa	7.62	318	eP	Pn	15 04 34.7	-0.7
JOW	Kunigami	16.43	7	P	P	15 06 33.8	-1.0
JOW				IAmb	IAmb	15 07 30.4	
	comp=Z,58nm,1.1s						
MTN	Manton Dam	23.73	167	P	P	15 07 52.5	-0.4
KNRA	Kununurra	26.12	174	P	P	15 08 14.7	+0.1
KSRS	Korea Array	26.93	4	LR	LR	15 20 32.9	
	comp=Z,40nm,18.3s,baz=210,slow=40						
CMAR	Chiang Mai Arr	27.28	290	P	P	15 08 25.9	+0.8
	comp=Z,1.0nm,0.8s,baz=100,slow=7.6,SNR=9.9						
CMAR				LR	LR	15 18 19.1	
	comp=Z,24nm,18.6s,baz=130,slow=34						
MJAR	Matsushiro Arr	28.24	21	LR	LR	15 19 37.6	
	comp=Z,33nm,19.2s,baz=260,slow=36						
FITZ	Fitzroy Crossi	28.38	181	P	P	15 08 34.1	-0.7
FITZ				IAmb	IAmb	15 09 28.2	
	comp=Z,16nm,1.3s						
WB0	Warramunga Arr	31.18	164	P	P	15 08 58.7	-0.8
WB0				IAmb	IAmb	15 09 49.1	
	comp=Z,20nm,1.4s						
WRAB	Tennant Creek	31.32	165	P	P	15 08 59.7	-1.1
WRAB				IAmb	IAmb	15 09 09.8	
	comp=Z,19nm,1.3s						
WRA	Warramunga Arr	31.33	165	P	P	15 09 00.2	-0.8
	comp=Z,0.2nm,0.5s,baz=211,slow=5.6,SNR=5.5						
WRA	Warramunga Arr	31.33	165	P	P	15 09 00.6	-0.3
WB2	Warramunga Arr	31.33	165	P	P	15 09 00.1	-0.9
USA0B	Ussuriysk Arra	34.02	8	P	P	15 09 23.6	-0.5
USRK	Ussuriysk Ar.	34.02	8	P	P	15 09 23.9	-0.2
	comp=Z,1.5nm,0.7s,baz=182,slow=9.7,SNR=4.4						
AS31	Alice Springs	34.81	167	P	P	15 09 30.5	-0.8
ASAR	Alice Springs	34.81	167	P	P	15 09 30.5	-0.7
	comp=Z,0.3nm,0.3s,baz=349,slow=7.2,SNR=23						
KLR	Kul'dur	38.95	6	P	P	15 10 06.6	+0.5
	comp=Z,1.1nm,0.6s,baz=165,slow=3.3,SNR=6.4						
KLR				LR	LR	15 25 17.1	
	comp=Z,34nm,20.8s,baz=182,slow=35						
H11S3	WAKE ISLAND Hy	40.19	74	T	T	15 53 08.8	
	baz=237,slow=76,SNR=8.3						
H11S1	WAKE ISLAND Hy	40.20	74	T	T	15 53 08.8	
	baz=237,slow=76,SNR=6.3						
H11S2	WAKE ISLAND Hy	40.21	74	T	T	15 53 08.8	
	baz=237,slow=76,SNR=9.0						
H11N1	WAKE ISLAND Hy	40.52	72	T	T	15 53 31.5	
	baz=264,slow=74,SNR=22						
H11N2	WAKE ISLAND Hy	40.52	72	T	T	15 53 34.8	
	baz=264,slow=74,SNR=26						
H11N3	WAKE ISLAND Hy	40.53	72	T	T	15 53 42.0	
	baz=264,slow=74,SNR=23						
SONM	Songino Array	40.72	340	P	P	15 10 21.9	+0.9
	comp=Z,0.4nm,0.8s,baz=168,slow=9.6,SNR=2.9						
FORT	Forrest	41.06	177	P	P	15 10 23.9	+0.1
BBOO	Buckleboo	44.10	168	P	P	15 10 48.5	+0.1
BBOO				IAmb	IAmb	15 11 43.4	
	comp=Z,38nm,1.4s						
PETK	Petropavlovsk-	49.60	25	LR	LR	15 30 48.6	
	comp=Z,18nm,21.2s,baz=237,slow=34						
YAK	Yakutsk	51.55	2	P	P	15 11 45.7	+0.2
YAK				IAmb	IAmb	15 11 47.3	
	comp=Z,7.4nm,0.8s						
MK31	Makanchi Array	51.67	323	P	P	15 11 46.7	-0.1
MKAR	Makanchi Array	51.67	323	P	P	15 11 47.1	+0.4
	comp=Z,1.9nm,0.8s,baz=122,slow=8.1,SNR=22						
MKAR	Makanchi Array	51.67	323	P	P	15 11 46.5	-0.2
MAKZ	Makanchi	51.86	323	P	P	15 11 47.8	-0.4
ZAA0	Zalesovo Array	54.29	331	P	P	15 12 04.4	-1.6
ZALV	Zalesovo Beam	54.29	331	P	P	15 12 05.1	-0.8
	comp=Z,1.1nm,0.6s,baz=116,slow=8.8,SNR=5.2						
ZALV	Zalesovo Beam	54.29	331	P	P	15 12 04.8	-1.1
KURK	Kurchatov	55.72	326	P	P	15 12 15.9	-0.4
KKAR	Karatay Array	57.87	315	P	P	15 12 31.0	-0.7
KKAR	Karatay Array	57.87	315	P	P	15 12 31.5	-0.2
KKAR				IAmb	IAmb	15 14 09.6	
	comp=Z,12nm,1.6s						
TIXI	Tiksi	61.16	1	P	P	15 12 53.9	+0.1
TIXI				IAmb	IAmb	15 12 55.0	
	comp=Z,4.5nm,1.1s						
ABKAR	Akbulak array	66.51	319	P	P	15 13 28.3	-1.0
IMAR	Indian Mountai	76.57	25	P	P	15 14 30.5	+1.0
TOLK	Toolik Lake Re	78.32	22	P	P	15 14 40.9	+1.6
TOLK				IAmb	IAmb	15 16 35.2	
	comp=Z,21nm,1.9s						
MCK	McKinley	78.54	27	P	P	15 14 41.1	+0.6
MCK				IAmb	IAmb	15 14 59.2	
	comp=Z,27nm,1.8s						
DHY	Denali Highway	79.25	28	P	P	15 14 46.0	+1.4
DHY				IAmb	IAmb	15 15 41.8	
	comp=Z,19nm,1.8s						
ILAR	Eielson Array	79.41	26	P	P	15 14 44.6	-0.7
	comp=Z,0.8nm,0.8s,baz=235,slow=5.2,SNR=8.6						
ILAR	Eielson Array	79.41	26	P	P	15 14 45.7	+0.4
RAR	Rarotonga	79.43	114	LR	LR	15 42 57.4	
	comp=Z,131nm,21.8s,baz=7.0,slow=30						
FINES	FINESS Array B	85.56	332	P	P	15 15 17.0	-0.3
	comp=Z,1.2nm,0.8s,baz=89,slow=2.5,SNR=4.5						
FINES	FINESS Array B	85.56	332	P	P	15 15 16.6	-0.7
C36M	Paulatuk	87.17	19	P	P	15 15 25.5	+0.5
C36M				IAmb	IAmb	15 15 26.9	
	comp=Z,3.1nm,0.7s						
NOA	NORSAR Array B	92.44	334	LR	LR	15 59 16.1	
	comp=Z,11nm,19.5s,baz=260,slow=37						
YKA	Yellowknife Ar	93.72	24	P	P	15 15 56.6	+0.8
	comp=Z,0.8nm,0.7s,baz=300,slow=4.8,SNR=16						

IDC 04 15:08:03.3±1.2,28.34N×104.67E,h0km,mb3.4/4,mb1 3.5/6,mb1mx3.3/37,mbtmp3.3/6,ML3.3/2,MS3.5/1,Ms1 3.5/1,ms1mx2.6/36,Error ellipse: s-maj=53.1km s-min=21.6km az=69.0

ISC 04 15:08:08.1±1.1,28.4N±0.1×104.6E±0.2,h35km,n7,σ1.12/6,mb3.5/4,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.16	209	Pn	Pn	15 10 45.1	-0.1
	0.1nm,0.3s,baz=56,slow=13,SNR=1.1						
SONM	Songino Array	19.49	4	P	Pn	15 12 34.1	+0.7
	0.1nm,0.3s,baz=188,slow=9.7,SNR=2.5						
MKAR	Makanchi Array	25.39	322	P	P	15 13 33.2	+1.2
	0.3nm,0.7s,baz=127,slow=11,SNR=4.1						
PSI	Prapat	26.00	193	LR	LR	15 23 39.6	
	comp=Z,95nm,18.0s,baz=285,slow=36						
ZALV	Zalesovo Beam	29.39	336	P	P	15 14 06.5	-1.3
	0.6nm,0.7s,baz=123,slow=10,SNR=2.1						
WRA	Warramunga Arr	55.95	146	P	P	15 17 42.8	-0.3
	0.4nm,0.6s,baz=325,slow=10,SNR=5.5						
ASAR	Alice Springs	58.92	148	P	P	15 18 04.3	+0.4
	0.3nm,0.7s,baz=338,slow=7.0,SNR=2.4						

IDC 04 15:15:41.5±49.0,37.66N×19.77E,h0km,mb3.6/3,mb1 3.6/3,mb1mx3.2/39,mbtmp3.6/3,Error ellipse: s-maj=941.4km s-min=72.6km az=42.0

ATH 04 15:15:49.5,38.15N×20.41E,h16km±1km,ML3.0/6,Error ellipse: s-maj=2.5km s-min=1.1km az=255.0

BEO 04 15:15:49.7±1.2,38.04N×20.01E,h17km±7km,ML3.3/6

THE 04 15:15:50.1,38.17N×20.39E,h12km,ML3.4/11,Error ellipse: s-maj=1.2km s-min=0.5km az=261.0

ISC 04 15:15:49.5±0.8,38.13N±0.03×20.41E±0.04,h15km±4km,n65,σ0.88/90,mb3.5/3,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.06	334	P	Pg	15 15 52.3	0.0
CHV1				S	Sg	15 15 54.0	-0.1
	256µm,0.2s						
KEF2	Argostoli. Kep	0.07	60	P	Pg	15 15 52.4	+0.1
KEF2				S	Sg	15 15 54.0	-0.3
LXR1	Lixouri, Cepha	0.07	15	P	Pg	15 15 52.4	0.0
LXR1				S	Sg	15 15 54.4	+0.1
	147µm,0.2s						
ARG2	Argostoli	0.07	51	P	Pg	15 15 52.5	+0.1
ARG2				S	Sg	15 15 54.1	-0.3
	102µm,0.1s						
KEF4	Livadi, Kephal	0.13	4	P	Pg	15 15 53.0	0.0
KEF4				S	Sg	15 15 55.4	0.0
VLS	Valsamata	0.15	72	P	Pg	15 15 53.4	+0.1
VLS				S	Sg	15 15 55.9	0.0
	24µm,0.1s						
VLS	Valsamata	0.15	72	P	Pg	15 15 53.4	+0.1
VLS				S	Sg	15 15 55.9	0.0
VLS				AML	AML	15 15 56.0	
	comp=N,59896µm,0.1s						
VLS				AML	AML	15 15 56.1	
	comp=E,35995µm,0.1s						
KEF1	Kardakata, Kep	0.15	17	P	Pg	15 15 53.3	-0.1
KEF1				S	Sg	15 15 55.7	-0.2
VSK1	VASILIKIADES	0.30	23	P	Pg	15 15 55.8	0.0
VSK1				S	Sg	15 16 00.0	-0.1
	comp=E,14µm,0.2s						
VLMS	Volimes, Zakyn	0.32	142	P	Pb	15 15 56.9	-0.1
VLMS				S	Sb	15 16 02.5	+0.5
VLMS				AML	AML	15 16 02.9	
	comp=E,14921µm,0.2s						
VLMS				AML	AML	15 16 03.1	
	comp=N,10553µm,0.1s						
FSK	Fiskardo	0.35	20	P	Pg	15 15 56.5	-0.1
FSK				S	Sg	15 16 01.9	+0.4
	comp=N,6µm,0.3s						
FSK	Fiskardo	0.35	20	P	Pg	15 15 56.6	-0.1
FSK				AML	AML	15 16 02.0	
	comp=N,9411µm,0.4s						
FSK				S	Sb	15 16 02.1	-0.7
FSK				AML	AML	15 16 02.3	
	comp=E,13522µm,0.2s						
ZAK2	Zakynthos	0.52	132	P	Pb	15 16 00.4	+0.2
ZAK2				S	Sn	15 16 09.9	-1.0
	comp=E,8µm,0.3s						
EVGI	Lefkada island	0.52	21	P	Pg	15 15 59.5	-0.4
EVGI				S	Sg	15 16 06.9	0.0
EVGI	Lefkada island	0.52	21	P	Pg	15 15 59.6	-0.3
EVGI				S	Sg	15 16 06.1	-0.8
KRI1	kERI	0.57	146	P	Pg	15 16 00.8	+0.2
KRI1				S	Sn	15 16 11.4	-0.8
	comp=E,3µm,0.3s						
MGNA	Meganis	0.60	29	P	Pg	15 16 00.8	-0.5
MGNA				S	Sb	15 16 09.6	-0.4
MGNA				AML	AML	15 16 10.3	
	comp=E,1583µm,0.2s						
MGNA				AML	AML	15 16 13.3	
	comp=N,1582µm,0.2s						
AST1	Astakos	0.67	52	P	Pg	15 16 02.4	-0.2
LKD2	Lefkada island	0.68	16	P	Pg	15 16 02.4	-0.5
LKD2	Lefkada island	0.68	16	P	Pg	15 16 02.3	-0.6
LKD2				S	Sg	15 16 11.1	-0.8
LKD2				AML	AML	15 16 20.5	
	comp=E,1407µm,0.2s						
LKD2				AML	AML	15 16 23.5	
	comp=N,1320µm,0.5s						
TSLK	Tsoukalades, L	0.72	15	P	Pg	15 16 02.9	-0.6
TSLK	Tsoukalades, L	0.72	15	P	Pg	15 16 02.6	-0.9
PDO	Prodromos	0.76	52	P	Pg	15 16 04.1	-0.3
PDO	Prodromos	0.76	52	P	Pg	15 16 04.1	-0.3
RLS	Riolos of Patr	0.83	95	P	Pg	15 16 05.4	-0.3
RLS	Riolos of Patr	0.83	95	P	Pg	15 16 05.4	-0.3
RLS				AML	AML	15 16 21.5	
	comp=E,1432µm,0.3s						
RLS				AML	AML	15 16 26.4	
	comp=N,1160µm,0.6s						
PVO	Paravola	1.00	61	P	Pb	15 16 08.7	+0.2
PVO				S	Sn	15 16 24.7	+1.8
	comp=N,2µm,0.3s						
PVO	Paravola	1.00	61	P	Pb	15 16 08.7	+0.2
AMT	Artemida-Makis	1.19	120	P	Pg	15 16 12.7	+0.3
EFP	Efpalio	1.21	75	P	Pn	15 16 11.8	-0.1
EFP				S	Sb	15 16 27.9	+0.3
	comp=N,355nm,0.5s						
EFP	Efpalio	1.21	75	P	Pn	15 16 11.3	-0.6
LAKA	Lakka	1.24	85	P	Pn	15 16 12.6	+0.3
ANX	Ano Chora	1.27	68	P	Pb	15 16 13.3	+0.1
SERG	Sergoula	1.32	77	P	Pn	15 16 13.7	+0.2
SERG	Sergoula	1.32	77	P	Pn	15 16 13.5	0.0
TRIZ	Trizonia	1.33	79	P	Pn	15 16 13.8	+0.3
TRIZ	Trizonia	1.33	79	P	Pn	15 16 13.6	+0.1
ALIK	Aliki, Aigiali	1.34	84	P	Pb	15 16 14.8	+0.4
EVR	Evrytania	1.35	54	P	Pn	15 16 14.6	+0.1
EVR	Evrytania	1.35	54	P	Pn	15 16 14.0	+0.1
KLV	Kalavryta, Ach	1.37	93	P	Pb	15 16 15.0	0.0
KLV	Kalavryta, Ach	1.37	93	P	Pb	15 16 14.9	0.0
KALE	Kalithea	1.38	79	P	Pn	15 16 14.6	+0.2
KALE	Kalithea	1.38	79	P	Pn	15 16 14.5	+0.2
IGT	Igoumenitsa	1.40	357	P	Pb	15 16 15.1	-0.3
IGT				S	Sb	15 16 33.3	+0.2
	comp=N,182nm,0.4s						
IGT	Igoumenitsa	1.40	357	eP	Pg	15 16 17.6	+1.2
IGT				eSg	Sg	15 16 37.7	+3.0
IGT	Igoumenitsa	1.40	357	P	Pn	15 16 14.9	+0.3
ITM	Ithomi	1.53	128	P	Pb	15 16 18.6	+1.0
MAKR	Makrakomi, Fth	1.61	56	P	Pb	15 16 19.1	+0.2
PYL	PYLOS	1.62	139	P	Pb	15 16 19.1	0.0
AGG	Agios Georgios	1.75	59	P	Pb	15 16 21.7	+0.4
AGG	Agios Georgios	1.75	59	P	Pg	15 16 22.3	-0.7
LTK	Loutraki	2.02	92	P	Pb	15 16 25.5	-0.4
VIL2	Platees	2.25	87	P	Pb	15 16 29.0	-0.9
FNA	Florina	2.75	15	eP	Pn	15 16 32.1	-1.1
PDG	Podgorica	4.38	349	eSn	Sn	15 17 45.4	-0.9
BARS	Barje	4.80	12	eP	Pn	15 17 02.6	+1.3
BARS				eSn	Sn	15 17 59.2	+2.6
TREB	Trebinje	4.84	342	eP	Pn	15 17 01.8	-0.1
TREB				eSn	Sn	15 17 55.2	-2.5
VTS	Vitosha	4.97	25	eP	Pn	15 17 07.4	+3.6
SJES	Sjenica	5.13	356	eSn	Sn	15 18 06.3	+1.2
DIVS	Divibare	5.97	357	eP	Pn	15 17 18.6	+1.2
DIVS				eSn	Sn	15 18 22.9	-2.7
TRUS	Trudelj	6.09	360	eP	Pn	15 17 20.0	+1.1
FINES	FINESS Array B	23.60	7	P	P	15 20 58.8	-0.8
	comp=N,1.2nm,0.7s,baz=169,slow=9.6,SNR=1.9						
MKAR	Makanchi Array	45.40	58	P	P	15 24 07.0	-0.5
	comp=N,0.2nm,0.4s,baz=272,slow=7.4,SNR=8.2						
ZALV	Zalesovo Beam	45.78	48	P	P	15 24 10.1	-0.2
	comp=N,0.7nm,0.4s,baz=276,slow=9.6,SNR=3.2						

IDC 04 15:16:35.6±4.5,21.64S×169.62E,h0km,mb3.5/3,mb1 3.7/4,mb1mx3.5/33,mbtmp3.5/3,ML3.6/1,Error ellipse: s-maj=207.0km s-min=29.7km az=157.0,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.98	261	Pn	Pn	15 17 25.5	+1.1
	8.1nm,0.3s,baz=117,slow=15,SNR=43						
DZM				Sn	Sn	15 18 00.7	-0.2
	8.6nm,0.3s,baz=215,slow=23,SNR=8.4						
ASAR	Alice Springs	32.97	260	P	P	15 23 12.3	-0.2
	0.4nm,1.0s,baz=86,slow=9.4,SNR=1.6						
WRA	Warramunga Arr	32.99	266	P	P	15 23 11.4	-1.2
	0.5nm,0.8s,baz=102,slow=7.0,SNR=1.7						
ILAR	Eielson Array	92.40	17	P	P	15 29 46.2	-1.6
	0.4nm,1.0s,baz=218,slow=8.0,SNR=2.9						
GERES	GERESS Array B	146.75	331	PKPbc	PKPab	15 36 20.8	-0.1
	0.5nm,0.5s,baz=26,slow=3.4,SNR=4.5						

IDC 04 15:18:24.1±3.9,3.01S×151.39E,h124km±40km,mb2.9/3,mb1 3.3/4,mb1mx3.0/37,mbtmp3.4/4,Error ellipse: s-maj=65.0km s-min=21.9km az=139.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.43	154	P	Pn	15 18 49.1	-2.0
	11nm,0.3s,baz=227,slow=1.6,SNR=13						
KRVT				S	Sn	15 19 11.8	+0.2
	15nm,0.3s,baz=19,slow=21,SNR=13						
PMG	Port Moresby	7.62	213	P	Pn	15 20 13.5	+1.0
	2.6nm,0.3s,baz=26,slow=10,SNR=12						
PMG				S	Sn	15 21 37.7	+0.4
	0.1nm,0.3s,baz=27,slow=23,SNR=1.9						
WRA	Warramunga Arr	23.67	223	P	P	15 23 25.6	+1.0
	0.8nm,0.6s,baz=53,slow=9.5,SNR=3.3						
ASAR	Alice Springs	26.60	218	P	P	15 23 50.1	-1.0
	0.3nm,0.7s,baz=55,slow=8.9,SNR=5.6						
ILAR	Eielson Array	81.05	22	P	P	15 30 25.6	+0.5
	0.2nm,0.9s,baz=214,slow=3.1,SNR=1.3						

IDC 04 15:20:22.2±0.9,14.62N×124.71E,h0km,mb3.9/9,mb1 4.1/10,mb1mx3.8/40,mbtmp4.0/10,ML4.4/1,MS3.1/5,Ms1 3.2/5,ms1mx2.8/49,Error ellipse: s-maj=26.3km s-min=18.2km az=75.0

NEIC 04 15:20:28.5±1.1,14.6N±0.1×124.6E±0.1,h48km±10km,mb4.5/12,Error ellipse: s-maj=19.3km s-min=17.3km az=188.0

ISC 04 15:20:27.2±0.7,14.6N±0.1×124.50E±0.09,h35km,n27,σ1.41/23,mb4.1/14,MS3.1/4,1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCP	Roxas	3.43	210⇑	eP	Pn	15 21 25.0	+6.7
TGY	Tagaytay City	3.49	263	Pn	Pn	15 21 21.8	+2.8
	28nm,0.3s,baz=158,slow=11,SNR=1.1						
TGY				Sn	Sn	15 21 54.5	-4.6
	104nm,0.3s,baz=326,slow=16,SNR=3.9						
DAV	Davao City (W)	7.51	172	LR	LR	15 24 54.3	
	comp=Z,72nm,20.8s,baz=296,slow=36						
LUWI	Luwuk	15.59	186	P	P	15 24 07.7	-0.6
LUWI				IAmb	IAmb	15 24 56.4	
	comp=Z,48nm,1.1s						
PBKT	Sadao Pong	22.76	278	P	P	15 25 27.9	+1.2
KSRS	Korea Array	23.01	7	LR	LR	15 33 18.4	
	comp=Z,36nm,19.1s,baz=186,slow=34						
CMAR	Chiang Mai Arr	24.80	283	P	P	15 25 47.5	+1.3
	comp=Z,2.5nm,1.0s,baz=94,slow=7.7,SNR=17						
CMAR				LR	LR	15 36 37.9	
	comp=Z,87nm,18.0s,baz=262,slow=39						
MJAR	Matsushiro Arr	25.09	27	LR	LR	15 34 13.3	
	comp=Z,32nm,18.4s,baz=200,slow=33						
USRK	Ussuriysk Ar.	30.23	11	P	P	15 26 34.1	-0.4
	comp=Z,1.3nm,0.8s,baz=213,slow=7.7,SNR=4.4						
WRA	Warramunga Arr	35.62	164	P	P	15 27 21.8	-0.1
	comp=Z,1.1nm,0.9s,baz=343,slow=9.8,SNR=3.7						
WB2	Warramunga Arr	35.62	164	P	P	15 27 20.9	-0.9
WB2				IAmb	IAmb	15 27 22.0	
	comp=Z,40nm,1.8s						
WR0	Warramunga Arr	35.69	164	P	P	15 27 22.6	+0.2
ULN	Ulaanbaatar	36.23	340	P	P	15 27 26.8	-0.2
ULN				IAmb	IAmb	15 27 45.9	
	comp=Z,4.8nm,1.2s						
SONM	Songino Array	36.43	339	P	P	15 27 29.6	+0.9
	comp=Z,1.6nm,0.8s,baz=159,slow=9.9,SNR=14						
AS31	Alice Springs	39.08	166	P	P	15 27 51.8	+0.6
ASAR	Alice Springs	39.08	166	P	P	15 27 51.5	+0.4
	comp=Z,2.6nm,0.7s,baz=352,slow=7.1,SNR=33						
ASAR	Alice Springs	39.08	166	P	P	15 27 51.7	+0.5
PETK	Petropavlovsk-	46.55	27	P	P	15 28 50.5	-0.8
	comp=Z,7.3nm,1.0s,baz=107,slow=4.7,SNR=5.0						
YAK	Yakutsk	47.56	3	P	P	15 28 59.2	+0.2
YAK				IAmb	IAmb	15 30 03.2	
	comp=Z,21nm,2.0s						
MK31	Makanchi Array	47.61	321	P	P	15 29 00.4	+0.7
MK31				IAmb	IAmb	15 29 21.3	
	comp=Z,7.2nm,1.9s						
MKAR	Makanchi Array	47.61	321	P	P	15 29 00.6	+0.8
	comp=Z,0.8nm,0.7s,baz=114,slow=7.5,SNR=11						
MKAR	Makanchi Array	47.61	321	P	P	15 29 00.7	+1.0
ZALV	Zalesovo Beam	50.07	331	P	P	15 29 17.5	-0.9
	comp=Z,0.3nm,0.3s,baz=116,slow=9.9,SNR=1.9						
KURK	Kurchatov	51.59	324	P	P	15 29 29.7	-0.2
KURK				IAmb	IAmb	15 29 33.8	
	comp=Z,3.1nm,0.9s						
RES	Resolute Bay	87.60	10	P	P	15 33 11.3	-0.1
IDI	Anoyia	89.35	306	LR	LR	16 19 26.6	
	comp=Z,14nm,18.9s,baz=243,slow=40						
YKA	Yellowknife Ar	90.55	23	P	P	15 33 24.7	-0.8
	comp=Z,0.5nm,0.8s,baz=298,slow=4.6,SNR=7.9						

IDC 04 15:32:00.9±18.0,16.73S×172.67W,h0km,mb4.4/5,mb1 4.5/5,mb1mx3.9/36,mbtmp4.4/5,Error ellipse: s-maj=346.8km s-min=150.0km az=78.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	39.05	259	P	P	15 39 29.6	-0.3
	2.8nm,0.3s,baz=97,slow=8.1,SNR=5.5						
STKA	Stephens Creek	44.00	241	P	P	15 40 11.1	+0.8
	2.4nm,0.5s,baz=74,slow=8.5,SNR=10						
WRA	Warramunga Arr	50.24	258	P	P	15 40 58.2	-1.0
	1.7nm,0.4s,baz=99,slow=6.6,SNR=30						
ASAR	Alice Springs	50.38	253	P	P	15 40 60.0	-0.3
	5.6nm,0.4s,baz=93,slow=7.6,SNR=170						
FITZ	Fitzroy Crossi	58.63	259	P	P	15 42 01.0	+0.7
	1.0nm,0.5s,baz=108,slow=13,SNR=1.2						

IDC 04 15:34:36.4±5.0,4.79S×153.52E,h124km±31km,mb2.9/3,mb1 3.3/4,mb1mx3.0/35,mbtmp3.5/4,Error ellipse: s-maj=60.5km s-min=23.8km az=104.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.57	288	P	Pn	15 35 04.0	-0.8
	25nm,0.3s,baz=134,slow=1.1,SNR=22						
KRVT				S	Sn	15 35 26.6	+0.1
	26nm,0.3s,baz=139,slow=16,SNR=4.7						
PMG	Port Moresby	7.81	234	P	Pn	15 36 29.1	+1.8
	3.6nm,0.3s,baz=39,slow=6.3,SNR=15						
PMG				S	Sn	15 37 55.3	+1.1
	0.7nm,0.3s,baz=148,slow=23,SNR=1.4						
WRA	Warramunga Arr	24.00	229	P	P	15 39 40.2	+0.3
	0.8nm,0.6s,baz=55,slow=10.0,SNR=6.8						
ASAR	Alice Springs	26.65	223	P	P	15 40 03.5	-0.3
	0.2nm,0.3s,baz=55,slow=8.8,SNR=15						
MKAR	Makanchi Array	80.79	319	P	P	15 46 36.3	-0.1
	0.1nm,0.5s,baz=94,slow=7.2,SNR=1.4						

NNC 04 15:48:10.9±2.2,36.88N×71.12E,h0km,mb5.2,mpv5.4,Error ellipse: s-maj=21.3km s-min=12.4km az=156.0

MOS 04 15:48:14.1±1.0,36.58N×71.50E,h140km,mb4.6/29,Error ellipse: s-maj=6.1km s-min=4.2km az=88.3

BJI 04 15:48:14.0±0.0,36.62N×71.46E,h137km,mB4.7/31,mb4.8/46

NEIC 04 15:48:15.2±1.6,36.59N±0.05×71.41E±0.07,h140km±4km,mb4.7/65,Error ellipse: s-maj=9.1km s-min=7.4km az=119.0

IDC 04 15:48:15.2±2.3,36.52N×71.58E,h138km±28km,mb4.0/28,mb1 4.1/33,mb1mx4.0/48,mbtmp4.5/33,MS2.8/1,Ms1 2.8/1,ms1mx2.3/49,Error ellipse: s-maj=12.3km s-min=8.8km az=94.0

ISC 04 15:48:15.8±0.3,36.56N±0.04×71.43E±0.03,h150km,n262,σ2.31/285,mb4.5/75,13C-16D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.76	172	P	Pn	15 48 59.7	-0.5
CEP				S	Sn	15 49 34.0	-0.5
KBL	Kabul	2.80	225		Pn	15 49 00.2	-0.6
KBL	Kabul	2.80	225	PN	Pn	15 49 00.2	-0.6
CHCP	Chirah Chowk	3.26	152	P	Pn	15 49 06.3	-0.2
NIL	Nilore	3.26	152	P	Pn	15 49 06.4	-0.1
NIL	Nilore	3.26	152	PN	Pn	15 49 06.4	-0.1
BTK	Batken	3.53	352		Pn	15 49 09.7	-0.2
BTK	Batken	3.53	352	PN	Pn	15 49 09.7	-0.2
THW	Thamme Wali	3.76	176	P	Pn	15 49 12.1	-0.9
KSH	Kashi	4.65	49	P	Pn	15 49 19.1	-5.5
KSH				sP		15 49 48.4	
KSH				S	Sn	15 50 04.6	-14
SARP	Sargodha	4.74	167	P	Pn	15 49 23.9	-1.8
JMU	Jammu	4.78	142	eP	Pn	15 49 19.0	-7.3
JMU				eS	Sn	15 50 11.0	-10
ARSB	Arslanbob	4.91	14		Pn	15 49 26.2	-1.9
ARSB	Arslanbob	4.91	14	PN	Pn	15 49 26.2	-1.9
TAS	Tashkent	5.04	341		Pn	15 49 28.2	-1.4
TAS	Tashkent	5.04	341	PN	Pn	15 49 28.3	-1.4
AML	Almayashu	5.84	17	P	Pn	15 49 39.4	-1.2
	SNR=1663						
DHRM	DHARAMSHALA	5.89	135	eP	Pn	15 49 39.8	-1.4
DHRM				eS	Sn	15 50 42.3	-5.6
DHRM				IAML		15 51 08.1	
	comp=E,508nm,0.2s						
DHRM				IAML		15 51 08.7	
	comp=N,310nm,0.2s						
NRN	Naryn	6.03	35		Pn	15 49 40.7	-2.4
NRN	Naryn	6.03	35	PN	Pn	15 49 40.7	-2.4
UCH	Uchtor	6.14	22	P	Pn	15 49 43.7	-1.1
	SNR=494						
KZA	Kyzart	6.26	27	P	Pn	15 49 44.8	-1.4
	SNR=130						
EKS2	Erkin-Say	6.36	16	P	Pn	15 49 46.0	-1.3
	SNR=69						
AAK	Ala-Archa	6.52	20	P	Pn	15 49 48.5	-0.9
	comp=N,109nm,0.3s,baz=167,slow=6.4,SNR=1019						
AAK				S	Sn	15 50 59.2	-3.6
	comp=N,42nm,0.3s,baz=251,slow=23,SNR=13						
AAK	Ala-Archa	6.52	20	P	Pn	15 49 48.6	-0.9
	SNR=305						
AAK	Ala-Archa	6.52	20	⇑P	Pn	15 49 45.9	-3.5
	comp=N,159nm,0.4s						
AAK				⇓S	Sn	15 50 59.0	-3.7
	comp=N,394nm,0.7s						
KK31	Karatay Array	6.58	354	⇓P	Pn	15 49 46.5	-3.6
	comp=N,394nm,0.5s,baz=182,slow=13,SNR=2923						
KK31				⇓S	Sn	15 50 59.0	-5.0
	comp=N,307nm,0.4s						
KK31	Karatay Array	6.58	354		Pn	15 49 48.8	-1.3
KK31	Karatay Array	6.58	354	PN	Pn	15 49 48.8	-1.3
KKAR	Karatay Array	6.58	354		Pn	15 49 48.7	-1.3
KKAR	Karatay Array	6.58	354		Pn	15 49 48.6	-1.5
KKAR	Karatay Array	6.58	354	PN	Pn	15 49 48.6	-1.5
KBK	Karagaybulak	6.67	23	P	Pn	15 49 50.6	-0.9
	SNR=70						
FRU1	Bishkek	6.71	21		Pn	15 49 51.2	-0.7
FRU1	Bishkek	6.71	21	PN	Pn	15 49 51.2	-0.7
ULHL	Ulahol	6.79	32	P	Pn	15 49 52.0	-1.2
	SNR=52						
BOOM	Boomskoye usch	6.87	29		Pn	15 49 53.0	-1.2
BOOM	Boomskoye usch	6.87	29	PN	Pn	15 49 53.0	-1.2
CHMS	Chumysh	6.92	21	P	Pn	15 49 53.5	-1.2
	SNR=242						
CHMS	Chumysh	6.92	21	⇓P	Pn	15 49 53.4	-1.3
	comp=N,298nm,0.8s						
CHMS				⇑S	Sn	15 51 06.9	-5.4
	comp=N,216nm,0.7s						
USP	Ospenovka	7.10	18	P	Pn	15 49 55.4	-1.8
	SNR=133						
KDJ	Kajisay	7.13	37	Pn	Pn	15 49 56.7	-0.9
KDJ	Kajisay	7.13	37	PN	Pn	15 49 56.7	-0.9
SMLA	Simla	7.22	137	eP	Pn	15 49 56.5	-2.1
SMLA				eS	Sn	15 51 11.7	-7.7
SMLA				IAML		15 51 17.5	
	comp=E,528nm,0.1s						
SMLA				IAML		15 51 18.2	
	comp=N,791nm,0.3s						
HRA	Herat	7.80	257		Pn	15 50 06.0	-0.7
MDOK	Medeo	7.88	31	⇓P	Pn	15 50 06.3	-1.3
	comp=N,69nm,0.7s						
MDOK				S	Sn	15 51 33.9	-1.7
	comp=N,49nm,0.9s						
KNDC	Almaty	7.89	31	⇓P	Pn	15 50 07.2	-0.5
	comp=N,65nm,0.6s						
KNDC				⇑S	Sn	15 51 35.5	-0.2
	comp=N,243nm,1.4s						
PRZ	Przheval'sk	8.00	40		Pn	15 50 08.6	-0.7
PRZ	Przheval'sk	8.00	40	PN	Pn	15 50 08.6	-0.7
JOSI	Joshimath	9.04	129	eP	Pn	15 50 21.6	-1.7
JOSI				IAML		15 52 01.0	
	comp=E,475nm,0.7s						
JOSI				IAML		15 52 01.1	
	comp=N,500nm,0.7s						
PDGK	Podgornoye	9.16	40	⇑P	Pn	15 50 23.3	-1.4
	comp=N,20nm,0.7s						
PDGK				⇓S	Sn	15 52 10.0	+3.6
	comp=N,87nm,0.8s						
PDGK	Podgornoye	9.16	40	P	Pn	15 50 22.8	-1.9
KALG	Kalgarh	9.34	137	eP	Pn	15 50 18.0	-9.0
KALG				eS	Sn	15 51 53.8	-17
AYAN	Aya Nagar	9.38	148	ex	Pn	15 50 26.6	-0.9
SONA	Sohna	9.56	148	eP	Pn	15 50 29.1	-0.9
SONA				eS	Sn	15 52 05.2	-11
ASHT	Ashkhabad	10.49	281	Pn	Pn	15 50 40.8	-1.4
ASHT	Ashkhabad	10.49	281	P	Pn	15 50 40.8	-1.4
GEYT	Alibeck	10.70	281	P	Pn	15 50 42.8	-2.3
	comp=N,21nm,0.3s,baz=107,slow=11,SNR=151						
GEYT				S	Sn	15 52 37.4	-5.9
	comp=N,8.9nm,0.3s,baz=118,slow=19,SNR=3.5						
GEYT				LR	LR	15 56 16.8	
	comp=N,48nm,20.7s,baz=100,slow=44						
GEYT	Alibeck	10.70	281		Pn	15 50 41.8	-3.3
GYA0B	ALIBECK ARRAY	10.70	281	⇓P	Pn	15 50 42.3	-2.7
GYA0B				⇑S	Sn	15 52 38.2	-5.2
GYA0B	ALIBECK ARRAY	10.70	281		Pn	15 50 41.6	-3.5
MAKZ	Makanchi	12.91	34	⇑P	Pn	15 51 11.2	-2.4
	comp=N,28nm,0.9s						
MAKZ	Makanchi	12.91	34		Pn	15 51 11.3	-2.4
MAKZ	Makanchi	12.91	34	P	Pn	15 51 11.3	-2.4
MK31	Makanchi Array	13.04	35	⇓P	Pn	15 51 12.8	-1.4
	comp=N,14nm,0.8s						
MK31	Makanchi Array	13.04	35		Pn	15 51 12.7	-2.6
MK31	Makanchi Array	13.04	35	P	Pn	15 51 13.2	-2.2
MKAR	Makanchi Array	13.04	35	P	Pn	15 51 13.4	-2.0
	comp=N,0.7nm,0.3s,baz=222,slow=13,SNR=107						
MKAR	Makanchi Array	13.04	35		Pn	15 51 12.8	-2.6
DANN	Dangsing	13.23	125	eP	Pn	15 51 14.0	-4.2
	comp=N,213nm,0.4s						
KOLN	Koldanda	13.52	127	eP	Pn	15 51 17.9	-3.9
	comp=N,159nm,0.4s						
GKN	Gorkha	14.04	124	eP	Pn	15 51 24.9	-3.5
	comp=N,353nm,0.4s						
WMQ	Urumqi	14.38	55	eP	P	15 51 34.8	-0.2
WMQ				S	Sn	15 54 06.1	-5.7
WMQ				pmax	pmax		
	comp=N,19nm,0.7s						
WMQ				pmax	pmax		
	comp=N,53nm,3.7s						
WMQ				LR	LR		
	comp=N,330nm,28.8s						
WMQ				LR	LR		
	comp=N,450nm,29.1s						
WMQ				LR	LR		
	comp=N,82nm,29.3s						
WMQ	Urumqi	14.38	55		Pn	15 51 30.6	-1.7
WMQ	Urumqi	14.38	55	P	Pn	15 51 30.7	-1.7
KKN	Kakani	14.62	123	eP	Pn	15 51 31.4	-4.2
	comp=N,184nm,0.7s						
DMN	Daman	14.62	124	eP	Pn	15 51 32.4	-3.3
	comp=N,78nm,0.3s						
PKIN	Phulchoki	14.83	123	eP	Pn	15 51 34.8	-3.6
	comp=N,130nm,0.4s						
PKI	Pulchoki	14.84	123	eP	Pn	15 51 34.8	-3.8
	comp=N,87nm,0.3s						
GUN	Gumba	14.95	121	eP	Pn	15 51 35.9	-4.0
	comp=N,95nm,0.3s						
KURBB	Kurchatov Arra	14.96	18	P	Pn	15 51 35.7	-3.8
	comp=N,0.2nm,0.3s,baz=209,slow=12,SNR=26						
KURBB				S	Sn	15 54 27.3	+1.9
	baz=200,slow=20,SNR=4.3						
KURBB	Kurchatov Arra	14.96	18	⇓P	P	15 51 41.2	-0.1
	comp=N,34nm,0.7s						
KURK	Kurchatov	15.07	18	⇑P	P	15 51 41.7	-0.8
	comp=N,21nm,0.8s						
KURK	Kurchatov	15.07	18	P	P	15 51 42.5	0.0
KURK				IAmb	IAmb	15 51 45.0	
	comp=Z,20nm,0.8s						
KURK	Kurchatov	15.07	18		Sn	15 54 27.3	-0.7
KURK	Kurchatov	15.07	18	P	P	15 51 42.5	0.0
KURK						15 54 27.3	
KURK				pmax	pmax		
	comp=Z,20nm,0.8s						
AB31	Akbulak array	15.20	330	⇑P	Pn	15 51 42.0	-0.5
	comp=Z,12nm,0.5s,baz=138,slow=13,SNR=211						
AB31				S	Sn	15 54 26.6	-4.7
	comp=Z,62nm,0.8s,baz=143,slow=24,SNR=20						
AB31	Akbulak array	15.20	330	eP	Pn	15 51 40.9	-1.6
ABKAR	Akbulak array	15.20	330		Pn	15 51 39.8	-2.7
JIRN	Jiri	15.32	121	eP	Pn	15 51 40.8	-3.7
	comp=Z,416nm,0.4s						
RAMN	Ramite	16.05	122	eP	Pn	15 51 49.8	-3.6
	comp=Z,117nm,0.4s						
BVAR	Borovoye Array	16.48	358	P	Pn	15 51 56.4	-1.7
	comp=Z,1.3nm,0.3s,baz=163,slow=11,SNR=52						
BVAR				S	S	15 54 51.4	-10
	comp=Z,1.1nm,0.3s,baz=164,slow=18,SNR=4.2						
BRVK	Borovoye	16.52	358	⇓P	P	15 51 56.7	-1.8
	comp=Z,25nm,1.0s						
BRVK				⇑S	S	15 54 58.5	-3.5
	comp=Z,11nm,0.9s						
BRVK	Borovoye	16.52	358		P	15 51 56.7	-1.8
BRVK				IAmb	IAmb	15 52 01.6	
	comp=Z,20nm,0.8s						
BRVK	Borovoye	16.52	358	P	P	15 51 56.7	-1.8
BRVK				pmax	pmax		
	comp=Z,20nm,0.9s						
ODAN	Odare	16.65	121	eP	P	15 51 57.4	-3.1
	comp=Z,131nm,0.4s						
AKTO	Aktyubinsk	16.91	329	P	Pn	15 52 03.2	-0.1
	comp=Z,3.2nm,0.3s,baz=138,slow=10,SNR=81						
AKTO				S	S	15 55 01.1	-10
	comp=Z,3.2nm,0.3s,baz=151,slow=17,SNR=7.5						
AKTO	Aktyubinsk	16.91	329	⇓P	Pn	15 52 03.1	-0.2
	comp=Z,26nm,0.7s						
AKTO				⇑S	S	15 55 06.2	-4.9
	comp=Z,43nm,0.7s						
WSAR	Wadi Sarin	17.28	223	P	P	15 52 07.5	+0.4
	comp=Z,1.8nm,0.3s,baz=72,slow=6.3,SNR=12						
UOSS	Minazif	17.45	233	P	P	15 52 08.8	-0.2
UOSS				IAmb	IAmb	15 52 49.0	
	comp=Z,115nm,1.8s						
LSA	Lhasa	17.86	107	P	Pn	15 52 15.6	+0.2
LSA				pP	P	15 52 22.0	+8.0
LSA				pmax	pmax		
	comp=Z,200nm,1.1s						
LSA	Lhasa	17.86	107		Pn	15 52 14.3	-1.1
LSA				IAmb	IAmb	15 52 18.0	
	comp=Z,39nm,0.8s						
LSA	Lhasa	17.86	107	P	Pn	15 52 14.3	-1.1
LSA				pmax	pmax		
	comp=Z,39nm,0.8s						
AKT	Akhty	19.04	292	eP	Pn	15 52 29.1	+0.4
AKT				eS	Sn	15 56 01.1	-2.3
AKT				pmax	pmax		
	comp=Z,43nm,0.3s						
ZAA0	Zalesovo Array	19.72	24	⇑P	Pn	15 52 37.0	+0.5
	comp=Z,2.7nm,0.5s						
ZAA0	Zalesovo Array	19.72	24	P	P	15 52 33.6	+0.2
ZAA0				IAmb	IAmb	15 52 35.0	
	comp=Z,44nm,1.0s						
ZALV	Zalesovo Beam	19.72	24	P	P	15 52 33.6	+0.2
	comp=Z,14nm,0.3s,baz=208,slow=11,SNR=208						
GNBR	Gunib	19.73	295	⇓iP	Pn	15 52 36.5	-0.3
HYB	Hyderabad	20.08	160	iP	P	15 52 37.0	-0.7
HYB				eS	Sn	15 56 26.0	-2.4
BTLR	Botlikh	20.32	295	iP	Pn	15 52 43.1	-0.6
SHL	Shillong	20.62	116	P	P	15 52 44.2	+0.7
SHL	Shillong	20.62	116	P	P	15 52 44.2	+0.7
SHL				pmax	pmax		
	comp=Z,62nm,0.4s						
GROC	Groznyy	20.71	297	eP	P	15 52 44.5	+0.3
GROC				e*SP	pP	15 53 17.9	+7.1
GROC				e		15 56 47.2	
GROC				e*SS	sS	15 57 02.1	-11
GROC				pmax	pmax		
	comp=Z,35nm,0.8s						
GNI	Garni	21.20	288	P	P	15 52 52.9	+3.2
	comp=Z,14nm,0.8s,baz=1.8,slow=2.3,SNR=11						
GNI	Garni	21.20	288	P	P	15 52 49.5	-0.2
GNI				IAmb	IAmb	15 52 54.2	
	comp=Z,28nm,1.1s						
GNI	Garni	21.20	288	ceP	P	15 52 52.7	+3.0
GNI				pmax	pmax		
	comp=Z,57nm,1.1s						
TBLG	Delisi	21.30	292	P	P	15 52 49.7	-0.8
TBLG				IAmb	IAmb	15 52 54.6	
	comp=Z,27nm,0.5s						
TBLG	Delisi	21.30	292	P	P	15 52 49.7	-0.8
TBLG				pmax	pmax		
	comp=Z,27nm,0.5s						
SVE	Sverdlovsk	21.53	344	eP	P	15 52 53.9	+1.1
SVE				eS	S	15 56 48.1	+6.2
SVE				pmax	pmax		
	comp=Z,22nm,0.8s						
ARU	Arti	21.69	340	P	P	15 52 55.9	+1.4
	comp=Z,3.9nm,0.4s,baz=149,slow=10.0,SNR=21						
ARU	Arti	21.69	340	P	P	15 52 54.2	-0.3
ARU	Arti	21.69	340	d iP	P	15 52 55.3	+0.8
ARU						15 53 23.1	
ARU				S	S	15 56 49.0	+4.4
ARU				pmax	pmax		
	comp=Z,41nm,1.8s						
ZEI	Tsey	22.03	295	eP	P	15 53 00.9	+2.6
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKH	Akhalkalaki	22.20	291	P	P	15 52 59.3	-0.8
AKH				IAmb	IAmb	15 53 05.8	
	comp=Z,50nm,1.7s						
AKH	Akhalkalaki	22.20	291	P	P	15 52 59.3	-0.8
AKH				pmax	pmax		
	comp=Z,50nm,1.7s						
NCK	Nalchik	22.35	297	iP	P	15 53 02.6	+1.3
NCK				pmax	pmax		
	comp=Z,12nm,0.4s						
GTA	Gaotai	22.52	74	⇓P	P	15 53 04.6	+1.5
GTA				sP	sP	15 53 50.0	-1.1
GTA				ScP	ScP	16 00 21.7	+6.8
GTA				pmax	pmax		
	comp=Z,47nm,0.5s						
GTA				pmax	pmax		
	comp=Z,180nm,4.9s						
GTA				LR	LR		
	comp=Z,74nm,14.9s						
GTA				LR	LR		
	comp=Z,100nm,13.3s						
GTA				LR	LR		
	comp=Z,68nm,13.0s						
KBZ	Khabaz	22.88	297	P	P	15 53 07.8	+1.6
	comp=Z,3.2nm,0.8s,baz=113,slow=8.0,SNR=5.4						
NEY	Neytrino	22.94	296	iP	P	15 53 10.9	+3.8
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KIV	Kislovodsk	23.07	298	eP	P	15 53 10.5	+2.4
KIV				eS	S	15 57 13.0	+5.4
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
VRH	Novokhopyorsk	25.72	314	eP	P	15 53 32.2	+0.3
VRH				pmax	pmax		
	comp=Z,30nm,1.4s						
MOY	Mondy	25.82	45	eP	P	15 53 35.1	+2.1
RAYN	Ar Rayn	25.84	247	P	P	15 53 32.4	-1.0
RAYN	Ar Rayn	25.84	247	P	P	15 53 32.4	-1.0
LZH	Lanzhou	26.06	81	⇓P	P	15 53 40.8	+5.4
LZH				pP	pP	15 54 09.4	+1.4
LZH				sP	sP	15 54 25.7	-0.3
LZH				PP	PnPn	15 54 29.0	+5.9
LZH				pmax	pmax		
	comp=Z,29nm,1.2s						
LZH				pmax	pmax		
	comp=Z,81nm,4.6s						
KIRV	Kirov	26.34	334	P	P	15 53 39.6	+2.2
	comp=Z,16nm,0.6s,baz=128,slow=2.4,SNR=9.1						
VSR	Storozhevoye	27.22	313	eP	P	15 53 45.6	+0.3
VSR				pmax	pmax		
	comp=Z,9.0nm,1.6s						
TLY	Talaya	27.35	46	P	P	15 53 46.9	+0.3
TLY	Talaya	27.35	46	iP	P	15 53 47.9	+1.3
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CD2	Chengdu	27.39	92	P	P	15 53 48.5	+1.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SONM	Songino Array	28.02	55	P	P	15 53 54.4	+1.7
	comp=Z,4.2nm,0.6s,baz=260,slow=9.6,SNR=33						
SONM	Songino Array	28.02	55	P	P	15 53 53.0	+0.3
SOCY	Socotra	28.90	217	P	P	15 53 59.2	-1.5
SOCY				IAmb	IAmb	15 54 00.7	
	comp=Z,38nm,1.7s						
KMI	Kunming	29.07	104	P	P	15 54 02.7	+0.3
KMI				IAmb	IAmb	15 54 04.1	
	comp=Z,31nm,1.6s						
KMI	Kunming	29.07	104	P	P	15 54 02.7	+0.3
KMI				pmax	pmax		
	comp=Z,31nm,1.6s						
BRTR	Keskin Array B	29.75	288	P	P	15 54 10.8	+2.7
	comp=Z,1.0nm,0.6s,baz=106,slow=9.9,SNR=8.0						
CHTO	Chiang Mai	29.94	119	P	P	15 54 10.7	+0.8
CHTO	Chiang Mai	29.94	119	P	P	15 54 10.7	+0.8
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN	Obninsk	30.12	319	eP	P	15 54 12.8	+1.8
OBN				e*PP	pP	15 54 40.8	-2.7
OBN				e		15 54 58.1	
OBN				e		15 55 14.4	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CM31	Chiang Mai Arr	30.18	119	P	P	15 54 11.3	-0.7
CMAR	Chiang Mai Arr	30.18	119	P	P	15 54 13.0	+1.1
	comp=Z,1.8nm,0.6s,baz=300,slow=9.0,SNR=20						
XAN	Xi'an	30.58	83	P	P	15 54 16.2	+0.8
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC	Hu-ho-hao-te	31.42	70	eP	P	15 54 23.0	+0.2
HHC				pmax	pmax		
	comp=Z,48nm,5.6s						
KLMR	Klimovskoe	31.60	330	eP	P	15 54 24.7	+0.8
KLMR				AMP		15 54 26.3	
	comp=Z,10.0nm,0.8s						
KLMR	Klimovskoe	31.60	330	eP	P	15 54 24.7	+0.8
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SLVN	Son La	32.03	109	P	P	15 54 28.8	+0.6
ENH	Enshi	32.23	90	P	P	15 54 30.1	+0.3
PBKT	Sadao Pong	32.87	119	P	P	15 54 36.0	+0.5
PBKT				IAmb	IAmb	15 54 37.8	
	comp=Z,7.7nm,0.6s						
ELL	Elmali	33.12	283	P	P	15 54 38.1	+0.4
ELL	Elmali	33.12	283	P	P	15 54 38.1	+0.4
ELL				pmax	pmax		
	comp=Z,29nm,0.6s						
AKASG	Malin Array Be	33.18	309	P	P	15 54 39.4	+1.5
	comp=Z,1.4nm,0.6s,baz=81,slow=7.0,SNR=17						
AKASG	Malin Array Be	33.18	309	P	P	15 54 39.0	+1.1
AKBB	Malin Array Si	33.18	309	P	P	15 54 38.0	+0.2
AKBB	Malin Array Si	33.18	309	P	P	15 54 38.0	+0.2
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BJT	Baijiatuau	35.01	70	P	P	15 54 55.1	+1.3
BJT				IAmb	IAmb	15 54 56.4	
	comp=Z,8.1nm,0.7s						
BJT	Baijiatuau	35.01	70	P	P	15 54 55.1	+1.3
BJT				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MLR	Muntele Rosu	35.05	299	P	P	15 54 53.5	-0.8
MLR				IAmb	IAmb	15 55 33.3	
	comp=Z,50nm,2.0s						
MLR	Muntele Rosu	35.05	299	P	P	15 54 53.5	-0.8
MLR				pmax	pmax		
	comp=Z,50nm,2.0s						
BOD	Bodaibo	35.09	39	eP	P	15 54 54.8	+0.6
BOD				pmax	pmax		
	comp=Z,5.0nm,2.1s						
ATD	Arta Tunnel	35.83	233	P	P	15 55 01.1	0.0
ATD				IAmb	IAmb	15 55 44.0	
	comp=Z,33nm,1.5s						
WHN	Wuhan	36.04	87	P	P	15 54 59.3	-3.4
UBPT	Khong Chiam	36.94	116	P	P	15 55 10.7	+0.2
UBPT				IAmb	IAmb	15 55 11.6	
	comp=Z,11nm,0.8s						
FIA1	FINESS Array	37.63	326	P	P	15 55 17.2	+1.6
FIA1				IAmb	IAmb	15 55 26.9	
	comp=Z,41nm,1.7s						
FINES	FINESS Array B	37.63	326	P	P	15 55 17.5	+1.8
	comp=Z,4.1nm,0.6s,baz=120,slow=8.5,SNR=30						
FINES	FINESS Array B	37.63	326	P	P	15 55 17.2	+1.6
NJ2	Nanjing	39.12	82	eP	P	15 55 27.8	-0.8
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
KEV	Kevo	40.88	338	P	P	15 55 44.5	+2.0
KEV	Kevo	40.88	338	P	P	15 55 44.5	+2.0
KEV				pmax	pmax		
	comp=Z,128nm,1.8s						
ARCES	ARCESS Array B	41.22	337	P	P	15 55 47.3	+1.9
	comp=Z,7.1nm,0.6s,baz=119,slow=9.4,SNR=41						
ARCES	ARCESS Array B	41.22	337	P	P	15 55 47.1	+1.7
ARE0	ARCESS Array S	41.22	337	P	P	15 55 47.1	+1.7
IPM	Ipoh	41.92	133	P	P	15 55 52.1	+0.4
IPM				IAmb	IAmb	15 56 48.2	
	comp=Z,20nm,1.5s						
YAK	Yakutsk	43.72	35	P	P	15 56 05.8	+0.3
	comp=Z,5.1nm,0.4s,baz=211,slow=1.5,SNR=13						
YAK	Yakutsk	43.72	35	P	P	15 56 05.3	-0.3
YAK				IAmb	IAmb	15 56 07.5	
	comp=Z,14nm,0.8s						
YAK	Yakutsk	43.72	35	eP	P	15 56 05.4	-0.2
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
NC405	NORSAR Array S	44.31	323	P	P	15 56 11.5	+1.2
NC602	NORSAR Array S	44.36	323	P	P	15 56 11.6	+0.9
KS19	Wonju Array Si	44.48	71	P	P	15 56 13.4	+1.4
NC303	NORSAR Array S	44.48	323	P	P	15 56 13.4	+1.7
NC303				IAmb	IAmb	15 56 14.7	
	comp=Z,33nm,0.9s						
NB201	NORSAR Array S	44.51	323	P	P	15 56 12.8	+0.9
KSAR	Wonju Array Be	44.51	71	P	P	15 56 12.7	+0.5
KSAR	Wonju Array Be	44.51	71	P	P	15 56 12.7	+0.5
KSRS	Korea Array	44.53	71	P	P	15 56 12.4	0.0
	comp=Z,3.6nm,0.6s,baz=275,slow=6.6,SNR=19						
NB2	NORSAR Subarra	44.54	323	P	P	15 56 13.5	+1.2
	comp=Z,5.3nm,0.5s,baz=95,slow=7.9						
NOA	NORSAR Array B	44.54	323	P	P	15 56 13.4	+1.2
	comp=Z,8.2nm,0.7s,baz=96,slow=7.8,SNR=31						
NAO01	NORSAR Array S	44.69	323	P	P	15 56 13.4	0.0
NBO00	NORSAR Array S	44.75	323	P	P	15 56 14.9	+1.1
NC204	NORSAR Array S	44.78	323	P	P	15 56 14.8	+0.7
KLR	Kul'dur	44.83	54	P	P	15 56 15.3	+0.7
	comp=Z,4.2nm,0.5s,baz=287,slow=7.4,SNR=30						
KLR	Kul'dur	44.83	54	iP	P	15 56 15.1	+0.5
KLR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KONO	Kongsberg	45.26	321	P	P	15 56 18.0	+0.2
KONO	Kongsberg	45.26	321	P	P	15 56 18.0	+0.2
KONO				pmax	pmax		
	comp=Z,105nm,1.8s						
TIXI	Tiksi	45.59	22	P	P	15 56 21.0	+0.7
	comp=Z,11nm,0.3s,baz=271,slow=5.1,SNR=57						
TIXI	Tiksi	45.59	22	P	P	15 56 20.1	-0.2
TIXI				IAmb	IAmb	15 56 21.5	
	comp=Z,12nm,0.8s						
TIXI	Tiksi	45.59	22	ceP	P	15 56 20.9	+0.6
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
USRK	Ussuriysk Ar.	45.84	61	P	P	15 56 22.4	-0.2
	comp=Z,1.7nm,0.6s,baz=274,slow=8.1,SNR=9.5						
KMBO	Kilima Mbogo	49.12	228	P	P	15 56 49.6	+1.0
	comp=Z,2.7nm,0.5s,baz=29,slow=13,SNR=8.9						
KMBO	Kilima Mbogo	49.12	228	P	P	15 56 49.1	+0.5
KMBO	Kilima Mbogo	49.12	228	iP	P	15 56 50.5	+1.9
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KEST	Kesra	49.34	289	P	P	15 56 51.9	+2.0
	comp=Z,1.9nm,0.5s,baz=270,slow=1.0,SNR=3.7						
KEST	Kesra	49.34	289	IAmb	IAmb	15 58 23.9	
	comp=Z,20nm,1.5s						
KSM	Kuching	50.08	125	P	P	15 56 56.7	+1.2
YSS	Yuzh-Sakhalins	52.51	55	eP	P	15 57 14.0	+0.8
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ESK	Eskdalemuir	52.51	316	P	P	15 57 15.0	+1.8
ESK	Eskdalemuir	52.51	316	P	P	15 57 15.0	+1.8
ESK				pmax	pmax		

comp=Z,130nm,1.7s
MJB9 Matsu-Tunnel 52.60 69 P P 15 57 14.5 +0.3
MAJO Matsushiro 52.61 69 P P 15 57 14.5 +0.3
MAJO IAmb IAmb 15 57 48.9
comp=Z,42nm,1.5s
MAJO Matsushiro 52.61 69 P P 15 57 14.5 +0.3
MAJO pmax pmax
comp=Z,42nm,1.5s
MAT Matsushiro 52.61 69 P P 15 57 13.6 -0.6
MAT S S 16 04 36.0 +6.2
MJAR Matsushiro Arr 52.61 69 P P 15 57 13.6 -0.6
comp=Z,2.8nm,0.6s,baz=290,slow=9.4,SNR=8.6
MJAR Matsushiro Arr 52.61 69 P P 15 57 14.8 +0.6
MJAR Matsushiro Arr 52.61 69 P P 15 57 14.8 +0.6
MJAR pmax pmax
comp=Z,5.0nm,1.3s
NOR Nord 53.81 350 *i* P P 15 57 24.2 +1.9
comp=Z,3.4nm,0.7s
NOR Nord 53.81 350 *i* P P 15 57 24.2 +1.9
NOR pmax pmax
comp=Z,3.0nm,0.7s
MA2 Magadan 54.10 38 LR LR 16 21 44.4
comp=Z,1μm,20.1s,baz=46,slow=37
SEY Seymchan 54.18 34 *i* P P 15 57 25.9 +0.7
DAG Danmarks Havn 54.77 344 *i* P P 15 57 31.2 +1.9
comp=Z,12nm,0.7s
DAG Danmarks Havn 54.77 344 *i* P P 15 57 31.2 +1.9
DAG pmax pmax
comp=Z,12nm,0.7s
ESDC Sonseca Array 57.74 298 P P 15 57 51.3 +0.3
comp=Z,0.7nm,0.5s,baz=54,slow=8.0,SNR=5.6
BILL Bilibino 58.40 26 P P 15 57 55.9 +0.9
BILL IAmb IAmb 15 57 56.7
comp=Z,5.4nm,0.6s
BILL Bilibino 58.40 26 *e*P P 15 57 55.9 +0.9
BILL *e**PP pP 15 58 24.6 -6.7
BILL pmax pmax
comp=Z,4.0nm,0.4s
PETK Petropavlovsk- 59.69 44 P P 15 58 04.3 +0.2
comp=Z,3.2nm,0.9s,baz=268,slow=10,SNR=4.8
SUMG Summit 61.12 341 *i* P P 15 58 16.4 +2.4
comp=Z,34nm,0.7s
SUMG Summit 61.12 341 P P 15 58 16.1 +2.1
SUMG IAmb IAmb 15 58 18.0
comp=Z,15nm,0.7s
SUMG Summit 61.12 341 *i* P P 15 58 16.4 +2.4
SUMG pmax pmax
comp=Z,34nm,0.7s
TOA0 Torodi Ar. Sit 66.06 269 P P 15 58 45.5 -1.4
TOA0 IAmb IAmb 15 58 46.5
comp=Z,6.8nm,1.1s
TORD Torodi Ar. Bea 66.06 269 P P 15 58 45.7 -1.1
comp=Z,3.2nm,0.5s,baz=48,slow=6.2,SNR=45
TORD Torodi Ar. Bea 66.06 269 P P 15 58 45.5 -1.3
ANM Nome 69.85 23 P P 15 59 10.9 +1.2
ANM Nome 69.85 23 P P 15 59 10.9 +1.2
TOLK Toolik Lake Re 70.78 15 P P 15 59 16.3 +0.9
TOLK IAmb IAmb 15 59 17.3
comp=Z,9.7nm,0.6s
COLD Coldfoot 71.82 16 P P 15 59 22.2 +0.7
IMAR Indian Mountai 72.01 18 P P 15 59 22.7 0.0
BMAR Burnt Mountain 72.80 14 P P 15 59 28.6 +1.2
MLY Manley 73.52 17 P P 15 59 32.5 +0.8
MLY IAmb IAmb 15 59 48.3
comp=Z,24nm,1.9s
C36M Paulatuk 73.79 6 P P 15 59 33.2 +0.1
C36M IAmb IAmb 15 59 34.3
comp=Z,14nm,1.0s
INK Inuvik 73.79 9 P P 15 59 34.0 +1.0
comp=Z,2.2nm,0.4s,baz=356,slow=8.0,SNR=5.4
INK Inuvik 73.79 9 P P 15 59 34.1 +1.0
INK Inuvik 73.79 9 P P 15 59 34.1 +1.0
INK pmax pmax
comp=Z,4.0nm,0.8s
BPAW Bear Paw Mtn. 74.23 18 P P 15 59 36.1 +0.3
BPAW IAmb IAmb 16 00 58.5
comp=Z,34nm,2.0s
IL31 74.63 16 P P 15 59 37.8 -0.2
ILAR Eielson Array 74.63 16 P P 15 59 38.0 0.0
comp=Z,2.1nm,0.8s,baz=315,slow=4.9,SNR=26
ILAR PP PP 16 02 25.8 -0.4
comp=Z,0.4nm,0.9s,baz=323,slow=9.8,SNR=4.5
ILAR Eielson Array 74.63 16 P P 15 59 37.7 -0.4
KTH Kantishna Hill 74.70 18 P P 15 59 39.2 +0.6
KTH IAmb IAmb 15 59 40.5
comp=Z,8.7nm,0.7s
BCAR Beaver Creek A 77.22 15 P P 15 59 53.7 +0.9
BOSA Boshof 78.01 220 P P 15 59 57.5 -0.2
comp=Z,2.2nm,0.7s,baz=293,slow=2.3,SNR=4.1
BOSA Boshof 78.01 220 IAmb IAmb 16 00 19.0
comp=Z,18nm,1.4s
KDAK Kodiak Island 79.01 22 P P 16 00 03.1 +0.4
comp=Z,8.6nm,0.8s,baz=20,slow=2.4,SNR=6.9
YKA Yellowknife Ar 81.17 3 P P 16 00 15.1 +0.9
comp=Z,5.2nm,0.6s,baz=348,slow=5.4,SNR=72
WRA Warramunga Arr 81.73 122 P P 16 00 17.3 -0.4
comp=Z,1.2nm,0.4s,baz=325,slow=4.8,SNR=30
WRA Warramunga Arr 81.73 122 *i* P P 16 00 17.7 0.0
WRA pmax pmax
comp=Z,1.0nm,0.4s
ASAR Alice Springs 84.00 125 P P 16 00 29.1 -0.4
comp=Z,1.9nm,0.7s,baz=312,slow=5.2,SNR=29

IDC 04 16:06:05.7±5.2, 4°.59S×153°.64E, h129km±36km, mb3.0/2, mb1 3.3/3, mb1mx2.9/42, mbtmp3.5/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/10, Error ellipse: s-maj=66.1km s-min=30.9km az=110.0, New Ireland region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res
KRVT Keravat (AS076 1.63 280 P Pn 16 06 34.7 -0.5
8.7nm,0.3s,baz=145,slow=1.5,SNR=8.4
KRVT S Sn 16 06 57.9 +0.2
7.1nm,0.3s,baz=21,slow=20,SNR=7.9
PMG Port Moresby 8.02 233 P Pn 16 08 00.4 +1.0
1.1nm,0.3s,baz=77,slow=14,SNR=5.2
PMG S Sn 16 09 29.2 +0.7
0.2nm,0.3s,baz=118,slow=20,SNR=1.6
WRA Warramunga Arr 24.21 229 P P 16 11 10.4 -0.2
0.9nm,0.8s,baz=54,slow=10.0,SNR=4.8
WRA LR LR 16 22 31.7
comp=Z,30nm,18.9s,baz=350,slow=41
ASAR Alice Springs 26.87 223 P P 16 11 34.2 -0.4
0.2nm,0.5s,baz=55,slow=9.0,SNR=8.5
TORD Torodi Ar. Bea 151.03 289 PKPbc PKiKP 16 25 44.8 -0.2
0.3nm,0.7s,baz=83,slow=1.5,SNR=2.6

PDG 04 16:11:03.4±0.5, 38°.29N×20°.26E, h12km±1km, ML3.8/14, Error ellipse: s-maj=0.9km s-min=1.3km az=0.0
THE 04 16:11:04.4, 38°.29N×20°.36E, h13km, ML3.6/14, Error ellipse: s-maj=0.9km s-min=0.4km az=282.0
ATH 04 16:11:04.1, 38°.28N×20°.37E, h15km±1km, ML3.5/7, Error ellipse: s-maj=1.7km s-min=0.9km az=268.0
BEO 04 16:11:05.8±0.6, 38°.45N×20°.26E, h0km, ML3.6/10
IDC 04 16:11:08.2±2.2, 38°.34N×20°.53E, h46km±24km, mb3.4/6, mb1 3.5/10, mb1mx3.2/47, mbtmp3.5/10, ML3.4/4, Error ellipse: s-maj=25.7km s-min=15.9km az=65.0
ISC 04 16:11:04.2±0.7, 38°.29N±0°.02×20°.35E±0°.03, h14km±4km, n126, σ1s.18/180, mb3.6/6, 10C-4D, Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res
KEF4 Livadi, Kephal 0.07 116 P Pg 16 11 06.8 -0.1
KEF4 S Sg 16 11 08.6 -0.2
KEF3 Kipouria, Keph 0.08 180 P Pg 16 11 07.2 +0.1
KEF3 S Sg 16 11 09.3 +0.2
KEF1 Kardakata, Kep 0.10 95 P Pg 16 11 07.0 -0.3
KEF1 S Sg 16 11 08.9 -0.4
CHV1 Chavriata, Kef 0.11 166 P Pg 16 11 07.4 0.0
CHV1 S Sg 16 11 09.9 +0.4
175μm,0.2s
LXR1 Lixouri, Cepha 0.11 141 P Pg 16 11 07.4 0.0
LXR1 S Sg 16 11 09.8 +0.2
250μm,0.4s
ARG2 Argostoli 0.15 135 P Pg 16 11 07.9 -0.1
ARG2 S Sg 16 11 10.3 -0.3
121μm,0.1s
KEF2 Argostoli. Kep 0.16 138 P Pg 16 11 08.0 -0.1
KEF2 S Sg 16 11 10.6 -0.2
VSK1 VASILIKIADES 0.21 54 P Pg 16 11 08.8 -0.1
VSK1 S Sg 16 11 12.0 -0.1
VLS Valsamata 0.22 120 P Pg 16 11 08.7 -0.3
VLS S Sg 16 11 11.9 -0.5
44μm,0.1s
VLS Valsamata 0.22 120 P Pg 16 11 08.7 -0.3
VLS S Sg 16 11 11.8 -0.5
VLS AML AML 16 11 12.1
comp=E,76775μm,0.1s
VLS AML AML 16 11 12.7
comp=N,96354μm,0.2s
FSK Fiskardo 0.24 44 P Pg 16 11 09.4 0.0
FSK S Sg 16 11 13.1 +0.2
comp=N,30μm,0.3s
FSK Fiskardo 0.24 44 P Pg 16 11 09.4 0.0
FSK S Sg 16 11 13.1 +0.2
FSK AML AML 16 11 13.5
comp=N,57214μm,0.4s
FSK AML AML 16 11 13.6
comp=E,63085μm,0.2s
EVGI Lefkada island 0.41 36 P Pg 16 11 12.4 -0.1
EVGI S Sg 16 11 17.9 -0.1
EVGI Lefkada island 0.41 36 P Pg 16 11 12.3 -0.1
EVGI S Sg 16 11 18.6 +0.5
VLMS Volimes, Zakyn 0.48 149 P Pg 16 11 13.3 -0.3
VLMS S Sg 16 11 19.9 -0.2
VLMS AML AML 16 11 21.7
comp=E,12696μm,0.1s
VLMS AML AML 16 11 26.9
comp=N,11830μm,0.3s
MGNA Meganis 0.51 43 P Pg 16 11 13.6 -0.6
MGNA S Sg 16 11 21.6 +0.6
MGNA AML AML 16 11 22.2
comp=E,5760μm,0.2s
MGNA AML AML 16 11 22.9
comp=N,5156μm,0.1s
LKD2 Lefkada island 0.56 26 P Pg 16 11 15.0 -0.1
LKD2 Lefkada island 0.56 26 P Pg 16 11 14.6 -0.6
LKD2 AML AML 16 11 30.4
comp=E,4791μm,0.3s
LKD2 AML AML 16 11 33.3
comp=N,4617μm,0.4s
AST1 Astakos 0.64 66 P Pg 16 11 16.2 -0.4
AST1 S Sb 16 11 25.9 +0.1
comp=N,6μm,0.4s
KRI1 kERI 0.72 149 P Pg 16 11 17.6 -0.7
PDO Prodromos 0.73 64 P Pg 16 11 17.6 -0.7
PDO S Sb 16 11 28.9 +0.5
comp=N,6μm,0.5s
PDO Prodromos 0.73 64 P Pg 16 11 17.7 -0.6
PDO AML AML 16 11 32.3
comp=E,8906μm,0.6s
PDO AML AML 16 11 37.1
comp=N,7424μm,0.4s
RLS Riolos of Patr 0.91 104 P Pb 16 11 20.3 -1.4
RLS Riolos of Patr 0.91 104 P Pb 16 11 20.4 -1.3
PVO Paravola 0.98 70 P Pb 16 11 22.7 -0.2
PVO S Sn 16 11 37.0 -0.2
comp=N,3μm,0.5s
PVO Paravola 0.98 70 P Pb 16 11 22.4 -0.5
PVO AML AML 16 11 42.7
comp=E,5444μm,0.5s
PVO AML AML 16 11 46.0
comp=N,5311μm,0.5s
DRO Drossia 1.12 107 P Pb 16 11 24.4 -1.0
DRO S Sn 16 11 42.8 +2.0
comp=N,2μm,0.9s
DRO Drossia 1.12 107 P Pb 16 11 24.3 -1.1
EFP Efpalio 1.23 83 P Pn 16 11 26.0 -1.0
IGT Igoumenitsa 1.24 359 P Pb 16 11 27.8 +0.4
IGT S Sn 16 11 43.9 +0.2
comp=N,1μm,0.4s
IGT Igoumenitsa 1.24 359 *e*Pn Pg 16 11 28.9 +0.8
IGT *e*Sn Sb 16 11 41.0 -2.3
IGT Igoumenitsa 1.24 359 P Pb 16 11 27.5 +0.1
ANX Ano Chora 1.27 76 P Pn 16 11 27.1 -0.5
ANX S Sg 16 11 46.1 +0.9
comp=N,2μm,0.5s
ANX Ano Chora 1.27 76 P Pn 16 11 27.7 +0.1
LAKA Lakka 1.28 92 P Pn 16 11 27.3 -0.4
LAKA S Sg 16 11 45.6 0.0
comp=N,580nm,0.7s
EVR Evrytania 1.30 61 P Pg 16 11 29.4 +0.1
EVR S Sb 16 11 44.9 -0.3
comp=N,892nm,0.6s
AMT Artemida-Makis 1.31 125 P Pg 16 11 30.1 +0.7
AMT Artemida-Makis 1.31 125 P Pg 16 11 29.9 +0.5
SERG Sergoula 1.35 84 P Pn 16 11 28.1 -0.5
TRIZ Trizonia 1.36 86 P Pn 16 11 28.3 -0.4
TRIZ Trizonia 1.36 86 P Pn 16 11 28.3 -0.4
ALIK Aliki, Aigiali 1.39 91 P Pn 16 11 29.2 +0.1
KALE Kalithea 1.41 85 P Pn 16 11 29.1 -0.4
JAN Janina 1.42 16 P Pg 16 11 31.5 0.0
JAN Janina 1.42 16 P Pg 16 11 32.3 +0.7
KLV Kalavryta, Ach 1.44 99 P Pn 16 11 30.0 +0.1
KLV Kalavryta, Ach 1.44 99 P Pn 16 11 30.0 +0.1
KASA Kassiopi 1.49 348 P Pg 16 11 32.5 -0.4
MAKR Makrakomi, Fth 1.57 62 P Pb 16 11 33.6 +0.5
SRN Sarande 1.61 350 P Pb 16 11 33.5 -0.2
SRN S Sb 16 11 53.9 0.0
comp=N,512nm,0.5s
ITM Ithomi 1.67 131 P Pb 16 11 35.2 +0.5
ITM Ithomi 1.67 131 P Pb 16 11 34.8 +0.1
AGG Agios Georgios 1.72 64 P Pb 16 11 35.9 +0.4
PYL PYLOS 1.78 141 P Pb 16 11 35.7 -0.8
PYL PYLOS 1.78 141 P Pn 16 11 35.5 +1.1
THL Klokotos Trika 1.82 45 P Pb 16 11 37.5 +0.2
KPRO Kipourio 1.84 25 P Pb 16 11 35.4 0.0
PENT Pentalofos 2.00 18 P Pb 16 11 40.0 0.0
PROD Prodromos 2.01 90 P Pb 16 11 39.9 -0.6
LTK Loutraki 2.08 96 P Pb 16 11 40.3 -1.4
LKR Lokris 2.11 79 P Pb 16 11 41.0 -1.2
NEST Nestorio 2.19 14 P Pb 16 11 42.5 -1.2
DID Didima 2.41 108 P Pn 16 11 45.4 +2.2
LIT Litokhoron 2.46 42 P Pn 16 11 45.3 +1.4
NEO Neokhori 2.47 65 P Pn 16 11 46.1 +1.2
FNA Florina 2.62 17 P Pn 16 11 47.7 +1.6
FNA Florina 2.62 17 *e*Pn Pn 16 11 47.7 +1.6
OHR Ohrid 2.84 7 *e*Pn Pn 16 11 51.6 +2.4
TIP Timpagrande 2.95 289 ⇑P Pn 16 11 51.1 +0.5
TIP ⇑S Sn 16 12 26.6 +0.8
TIR Tirane 3.08 353 *e*Pn Pn 16 11 52.8 +0.4
TIR Tirane 3.08 353 ⇓P Pn 16 11 53.8 +1.5
TIR ⇑S Sn 16 12 30.6 +1.6
GRG Griva 3.10 30 P Pn 16 11 53.7 +1.0
PLG Polygyros 3.18 48 P Pn 16 11 54.7 +0.9
PHP Peshkopia 3.40 1 P Pn 16 11 58.5 +1.7
KNT Kendrikon 3.48 34 P Pn 16 11 59.6 +1.7
VAY Valandovo 3.48 29 *e*Pn Pn 16 12 00.7 +2.8
MATE Matera 3.68 311 ⇑P Pn 16 12 01.6 +1.1
MATE ⇑S Sn 16 12 42.3 -1.3
STIP Stip 3.68 22 *e*Pn Pn 16 12 04.4 +3.7
ULC Ulcinj 3.77 347 *e*Pn Pn 16 12 02.2 +0.3
ULC *e*Sn Sn 16 12 46.4 +0.4
SRS Serrai 3.77 40 *e*Pn Pn 16 12 04.7 +2.8
SRS *e*Sn Sn 16 12 46.4 +0.2
DRME Dracevica, Mon 4.00 347 *e*Pn Pn 16 12 05.5 +0.5
DRME *e*Sn Sn 16 12 52.9 +1.3
BUM Brajici-Budva 4.16 345 *e*Pn Pn 16 12 07.4 +0.1
BUM *e*Sn Sn 16 12 54.9 -0.8
PDG Podgorica 4.22 349 *e*Pn Pn 16 12 09.5 +1.5
PDG *e*Sn Sn 16 12 56.0 -1.1
PDG Podgorica 4.22 349 ⇓P Pn 16 12 08.8 +0.7
PDG ⇑S Sn 16 12 56.3 -0.8
TTG Podgorica 4.22 349 *e*Pn Pn 16 12 08.8 +0.7
TTG *e*Sn Sn 16 12 58.6 +1.5
PVY Plav 4.31 356 *e*Pn Pn 16 12 10.0 +0.6
PVY *e*Sn Sn 16 13 00.7 +1.1
HCY Herceg Novi 4.39 342 ⇑*i*Pn Pn 16 12 10.1 -0.3
HCY *e*Sn Sn 16 13 00.1 -1.2
CEME Cevo 4.39 346 *e*Pn Pn 16 12 10.6 +0.1
CEME *e*Sn Sn 16 13 01.6 +0.1
BOSS Bosilegrad 4.51 20 *e*Pn Pn 16 12 13.1 +1.1
IVA Berane 4.59 356 *e*Pn Pn 16 12 14.2 +0.9
IVA *e*Sn Sn 16 13 07.9 +1.5
NKME Niksic 4.60 347 ⇓*i*Pn Pn 16 12 13.8 +0.5
NKME *e*Sn Sn 16 13 07.4 +0.9
KOME Kolasin 4.60 352 *e*Pn Pn 16 12 13.9 +0.5
KOME *e*Sn Sn 16 13 07.4 +0.7
NKY Niksic 4.64 348 *e*Pn Pn 16 12 14.4 +0.5
NKY *e*Sn Sn 16 13 06.7 -0.9
BARS Barje 4.66 13 *e*Pn Pn 16 12 14.6 +0.5
BARS *e*Sn Sn 16 13 07.3 -0.7
TREB Trebinje 4.68 342 *e*Pn Pn 16 12 13.7 -0.7
TREB *e*Sn Sn 16 13 06.1 -2.3
IDI Anoyia 4.72 128 P Pn 16 12 17.0 +2.1
comp=N,0.2nm,0.3s,baz=299,slow=6.5,SNR=1.4
IDI S Sn 16 13 07.4 -2.1
comp=N,0.6nm,0.3s,baz=349,slow=19,SNR=1.9
BRY Bratogost 4.81 344 *e*Pn Pn 16 12 16.4 +0.1
BRY *e*Sn Sn 16 13 10.9 -1.0
VTS Vitosha 4.85 26 *e*Sn Sn 16 13 11.6 -1.4
VTS Vitosha 4.85 26 ⇑P Pn 16 12 18.6 +1.7
SELS Selova 4.96 7 *e*Pn Pn 16 12 18.1 -0.2
SELS *e*Sn Sn 16 13 14.3 -1.1
SJES Sjenica 4.98 357 *e*Pn Pn 16 12 19.7 +1.1
SJES *e*Sn Sn 16 13 13.9 -2.0
UPM Unac-Piva 5.03 348 *e*Pn Pn 16 12 19.8 +0.4
UPM *e*Sn Sn 16 13 17.8 +0.4
PLE Pljevlja 5.09 352 *e*Pn Pn 16 12 20.6 +0.5
PLE *e*Sn Sn 16 13 18.8 +0.1
ZAPS Zavoj 5.28 18 *e*Pn Pn 16 12 24.4 +1.8
IVAS Ivanjica 5.29 358 *e*Pn Pn 16 12 22.8 0.0
IVAS *e*Sn Sn 16 13 22.8 -0.7
GRUS Gruza 5.60 3 *e*Sn Sn 16 13 30.1 -1.1
BBLS Lazići 5.62 353 *e*Sn Sn 16 13 30.8 -0.9
DIVS Divibare 5.81 357 *e*Pn Pn 16 12 29.8 -0.2
DIVS *e*Sn Sn 16 13 32.9 -3.6
TRUS Trudelj 5.93 0 *e*Pn Pn 16 12 32.0 +0.4
TRUS *e*Sn Sn 16 13 36.7 -2.6
FRGS Fruska Gora 6.88 357 *e*Sn Sn 16 13 57.7 -4.9
VOIR 7.96 25 ⇓P Pn 16 13 01.3 +1.9
MLR Muntele Rosu 8.32 28 P Pn 16 13 06.0 +1.6
comp=N,0.1nm,0.3s,baz=168,slow=8.1,SNR=3.5
MLR Muntele Rosu 8.32 28 ⇑P Pn 16 13 07.8 +3.4
VRI Vrincioaia 8.93 30 ⇑P Pn 16 13 14.9 +2.1
SOKA Soboth 9.26 337 *e*Pn Pn 16 13 16.9 -0.4
comp=N,1.0nm,0.2s
OBKA Obir 9.27 334 *e*Pn Pn 16 13 18.2 +0.8
comp=N,0.6nm,0.2s
VYHS Vyhne 10.26 354 *e*PN Pn 16 13 23.2 -7.7
VYHS *e*SN Sn 16 15 22.8 -2.9
MOA Molln 10.54 337 *e*Pn Pn 16 13 36.1 +1.4
comp=N,0.8nm,0.3s
GERES GERESS Array B 11.60 338 P Pn 16 13 49.5 +0.3
comp=N,0.2nm,0.3s,baz=163,slow=12,SNR=5.0
AKASG Malin Array Be 13.92 24 P Pn 16 14 22.8 +1.9
comp=N,0.3nm,0.3s,baz=212,slow=9.4,SNR=1.9
HFS Hagfors 22.27 351 P P 16 16 01.6 +1.0
comp=N,3.0nm,0.9s,baz=165,slow=12,SNR=4.7
FINES FINESS Array B 23.45 7 P P 16 16 11.8 -1.0
comp=N,1.8nm,0.7s,baz=199,slow=9.5,SNR=8.1
TORD Torodi Ar. Bea 30.03 219 P P 16 17 14.6 +1.8
comp=N,0.5nm,0.7s,baz=20,slow=12,SNR=3.2
MKAR Makanchi Array 45.36 58 P P 16 19 20.6 -1.3
comp=N,0.3nm,0.5s,baz=272,slow=7.7,SNR=9.0
ZALV Zalesovo Beam 45.72 48 P P 16 19 23.8 -0.8
comp=N,1.9nm,0.5s,baz=275,slow=8.9,SNR=10
YKA Yellowknife Ar 73.24 340 P P 16 22 33.3 -1.1
comp=N,0.1nm,0.6s,baz=30,slow=5.3,SNR=1.3

ATH 04 16:16:45.3, 38°.17N×20°.42E, h15km±1km, ML2.9/11, Error ellipse: s-maj=2.2km s-min=1.2km az=258.0
THE 04 16:16:45.5, 38°.16N×20°.40E, h13km, ML3.2/5, Error ellipse: s-maj=1.0km s-min=0.6km az=266.0
ISC 04 16:16:45.4±1.0, 38°.16N±0°.03×20°.41E±0°.05, h14km±5km, n40, σ0s.31/57, Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res
CHV1 Chavriata, Kef 0.03 314 P Pg 16 16 47.8 -0.1
CHV1 S Sg 16 16 49.8 +0.2
LXR1 Lixouri, Cepha 0.05 26 P Pg 16 16 48.0 0.0
LXR1 S Sg 16 16 49.8 +0.1
KEF2 Argostoli. Kep 0.06 84 P Pg 16 16 48.0 0.0
KEF2 S Sg 16 16 49.5 -0.4
ARG2 Argostoli 0.06 72 P Pg 16 16 48.0 -0.1
ARG2 S Sg 16 16 49.7 -0.2
KEF3 Kipouria, Keph 0.07 311 P Pg 16 16 48.1 -0.1
KEF3 S Sg 16 16 50.1 0.0
KEF4 Livadi, Kephal 0.10 5 P Pg 16 16 48.5 0.0
KEF4 S Sg 16 16 50.7 +0.1
KEF1 Kardakata, Kep 0.13 21 P Pg 16 16 48.7 -0.1
KEF1 S Sg 16 16 51.1 -0.1
VLS Valsamata 0.14 83 P Pg 16 16 48.9 -0.1
VLS S Sg 16 16 51.6 +0.1
23μm,0.1s
VLS Valsamata 0.14 83 P Pg 16 16 48.9 -0.1
VLS S Sg 16 16 51.5 0.0
VLS AML AML 16 16 51.7
comp=N,56628μm,0.2s
VLS AML AML 16 16 52.1
comp=E,39778μm,0.1s
VSK1 VASILIKIADES 0.28 25 P Pg 16 16 51.2 0.0
VSK1 S Sb 16 16 56.2 -0.5
comp=E,13μm,0.3s
KFL Anninata 0.30 99 P Pg 16 16 51.7 +0.1
FSK Fiskardo 0.32 21 P Pg 16 16 52.0 0.0
FSK S Sg 16 16 57.2 +0.7
comp=E,4μm,0.2s
FSK Fiskardo 0.32 21 P Pg 16 16 52.0 0.0
FSK S Sg 16 16 56.2 -0.3
FSK AML AML 16 16 57.5
comp=N,6335μm,0.2s
FSK AML AML 16 16 57.6
comp=E,7613μm,0.3s
VLMS Volimes, Zakyn 0.34 145 P Pg 16 16 52.8 +0.4
VLMS S Sb 16 16 58.4 -0.2
VLMS AML AML 16 16 59.6
comp=E,19015μm,0.2s
VLMS AML AML 16 17 00.1
comp=N,12886μm,0.2s
EVGI Lefkada island 0.50 22 P Pg 16 16 54.9 -0.3
EVGI Lefkada island 0.50 22 P Pg 16 16 55.0 -0.3
EVGI S Sg 16 17 02.5 +0.5
MGNA Meganis 0.58 31 P Pg 16 16 56.3 -0.4
MGNA AML AML 16 17 05.8
comp=E,2114μm,0.2s
MGNA AML AML 16 17 05.9
comp=N,1362μm,0.2s
KRI1 kERI 0.59 147 P Pg 16 16 56.5 -0.4
KRI1 S Sb 16 17 06.3 +0.6
comp=N,3μm,0.2s
AST1 Astakos 0.66 54 P Pg 16 16 57.8 -0.4
AST1 S Sb 16 17 08.3 +0.8
comp=N,2μm,0.4s
LKD2 Lefkada island 0.66 17 P Pg 16 16 57.9 -0.4
LKD2 Lefkada island 0.66 17 P Pg 16 16 57.8 -0.4
LKD2 S Sg 16 17 07.0 0.0
LKD2 AML AML 16 17 14.7
comp=E,1118μm,0.3s
LKD2 AML AML 16 17 17.3
comp=N,748μm,0.2s
PDO Prodromos 0.75 54 P Pg 16 16 59.7 -0.2
PDO Prodromos 0.75 54 P Pg 16 16 59.7 -0.2
PDO AML AML 16 17 18.2
comp=N,1951μm,0.3s
PDO AML AML 16 17 18.6
comp=E,2411μm,0.3s
RLS Riolos of Patr 0.84 97 P Pg 16 17 01.2 -0.4
RLS Riolos of Patr 0.84 97 P Pg 16 17 01.2 -0.4
RLS AML AML 16 17 16.8
comp=N,1091μm,0.3s
RLS AML AML 16 17 17.4
comp=E,749μm,0.5s
PVO Paravola 0.99 62 P Pb 16 17 04.2 0.0
PVO Paravola 0.99 62 P Pb 16 17 04.3 +0.1
PVO AML AML 16 17 20.9
comp=E,4609μm,0.3s
PVO AML AML 16 17 21.1
comp=N,2014μm,0.3s
DRO Drossia 1.04 101 P Pb 16 17 05.1 -0.1
DRO Drossia 1.04 101 P Pb 16 17 05.1 -0.1
DRO AML AML 16 17 27.3
comp=E,1329μm,0.4s
DRO AML AML 16 17 36.0
comp=N,1524μm,0.5s
EFP Efpalio 1.21 77 P Pn 16 17 07.3 -0.5
EFP AML AML 16 17 32.4
comp=E,897μm,0.4s
EFP AML AML 16 17 34.3
comp=N,775μm,0.4s
LAKA Lakka 1.24 86 P Pn 16 17 08.1 -0.2
ANX Ano Chora 1.26 69 P Pn 16 17 08.4 -0.2
SERG Sergoula 1.32 78 P Pn 16 17 09.1 -0.3
SERG AML AML 16 17 34.7
comp=E,546μm,0.4s
SERG AML AML 16 17 36.1

	comp=N,668µm,0.6s						
TRIZ	Trizonia	1.32	81	P	Pn	16 17 09.3	-0.1
EVR	Evrytania	1.33	55	P	Pg	16 17 11.4	+0.4
KLV	Kalavryta, Ach	1.38	94	P	Pn	16 17 10.5	+0.3
KALE	Kalithea	1.38	80	P	Pn	16 17 10.2	-0.1
ITM	Ithomi	1.55	129	P	Pg	16 17 14.9	-0.2
AGG	Agios Georgios	1.73	60	P	Pb	16 17 17.3	+0.3
PROD	Prodromos	1.96	86	P	Pb	16 17 21.3	+0.4

IDC 04 16:29:49.7±1.9, 40°52S×175°40E, h0km, mb3.5/2, mb1 3.6/4, mb1mx3.5/21, mbtmp3.4/3, ML2.7/2, Error ellipse: s-maj=48.9km s-min=23.9km az=135.0
WEL 04 16:29:54.0, 40°7S±0°7×175°6E±°, h27km±1km, ML3.9/13, MLv3.6/98, Error ellipse: s-maj=0.0km s-min=0.0km az=98.4
ISC 04 16:29:53.7±1.0, 40°75S±0°02×175°62E±0°03, h34km±2km, n118, σ1°45/127, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRZ	Mangatainoka R	0.10	343	P	Pb	16 29 58.9	-0.8
MRZ				S	Sb	16 30 02.6	-1.2
HOWZ	Holdsworth Sta	0.16	208	P	Pb	16 30 00.5	+0.3
HOWZ				S	Sb	16 30 05.2	+0.5
TIWZ	Tintock	0.21	96	P	Pb	16 30 00.9	+0.2
TIWZ				S	Sb	16 30 06.4	+1.0
PRWZ	Pori Road	0.34	54	P	Pb	16 30 02.0	-0.1
PRWZ				S	Sb	16 30 08.4	+0.6
OGWZ	Otaki Gorge	0.34	259	P	Pb	16 30 02.3	+0.1
POWZ	Post Office Ro	0.38	18	P	Pb	16 30 01.9	-0.8
POWZ				S	Sb	16 30 07.7	-1.1
TMWZ	Te Maipa	0.41	149	P	Pb	16 30 04.5	+1.2
TMWZ				S	Sb	16 30 12.8	+3.2
MTW	Mount Morrison	0.41	192	P	Pn	16 30 04.2	+0.9
CPWZ	Castlepoint	0.47	109	P	Pn	16 30 05.5	+1.5
BFZ	Birch Farm	0.48	82	P	Pn	16 30 04.8	+0.5
BFZ				S	Sn	16 30 13.2	+1.6
CAW	Cannon Point	0.55	229	P	Pb	16 30 06.0	+0.8
KIW	Kapiti Island	0.55	258	P	Pn	16 30 05.6	+0.6
OHWZ	Ohakea	0.59	337	P	Pn	16 30 05.8	+0.2
DVHZ	Dannevirke	0.62	43	P	Pn	16 30 06.0	-0.1
PAWZ	Paruwai Farm	0.64	193	P	Pb	16 30 07.6	+0.9
TRWZ	Traveller	0.65	175	P	Pb	16 30 07.9	+1.1
MSWZ	Moikau Station	0.72	203	P	Pb	16 30 08.5	+0.6
ANWZ	Angora Road	0.72	66	P	Pb	16 30 08.2	+0.3
TSZ	Takapari Road	0.74	21	P	Pn	16 30 07.5	-0.3
PLWZ	Palliser	0.86	198	P	Pb	16 30 10.4	+0.1
BHW	Baring Head	0.86	220	P	Pb	16 30 10.5	+0.2
PRHZ	Porangahau	0.92	58	P	Pb	16 30 10.5	+0.3
WPHZ	Waipukurau	0.93	43	P	Pn	16 30 11.0	+0.6
PNHZ	Pukenui	0.95	28	P	Pn	16 30 11.0	+0.3
WAZ	Wanganui	1.11	334	P	Pb	16 30 14.6	+0.1
TCW	Tory Channel	1.11	245	P	Pn	16 30 13.9	+1.1
PXZ	Pawanui	1.20	53	P	Pn	16 30 14.0	0.0
KRHZ	Kereru	1.25	28	P	Pn	16 30 15.2	+0.4
DUWZ	D'Urville Isla	1.29	267	P	Pn	16 30 16.4	+1.1
BHHZ	Black Hill Sta	1.31	15	P	Pn	16 30 16.3	+0.6
MOVZ	Moawhango	1.35	5	P	Pn	16 30 17.4	+1.2
KAHZ	Kahuranaki	1.36	46	P	Pn	16 30 16.4	+0.1
MTVZ	Mangateitei	1.37	355	P	Pn	16 30 18.0	+1.5
TUWZ	Tuamarina	1.43	241	P	Pn	16 30 17.9	+0.6
CMWZ	Cape Campbell	1.45	226	P	Pb	16 30 19.4	-0.8
TRVZ	Turoa	1.45	358	P	Pn	16 30 19.3	+1.5
KWHZ	Kaweka Forest	1.47	25	P	Pn	16 30 18.7	+0.9
WHVZ	Whangaehu Hut	1.47	359	P	Pn	16 30 19.5	+1.5
PKVZ	Pokaka	1.48	352	P	Pn	16 30 19.5	+1.5
DRZ	Dome Shelter	1.48	358	P	Pn	16 30 19.9	+1.7
TUVZ	Tukino	1.48	1	P	Pn	16 30 19.7	+1.6
FWVZ	Far West T-bar	1.50	358	P	Pn	16 30 19.8	+1.4
MCHZ	McNeill Hill	1.55	33	P	Pn	16 30 19.1	+0.3
CKHZ	Cape Kidnapper	1.57	46	P	Pn	16 30 18.7	-0.4
NGZ	Ngauruhoe	1.58	360	P	Pn	16 30 21.0	+1.6
LREZ	Lake Rotokare	1.59	324	P	Pb	16 30 21.9	-0.7
BSWZ	Blackbirch Sta	1.62	233	P	Pb	16 30 20.7	+0.7
WTVZ	West Tongariro	1.64	359	P	Pn	16 30 21.9	+1.7
KRVZ	Karewarewa	1.66	1	P	Pn	16 30 22.5	+2.0
TWVZ	Taurewa	1.69	355	P	Pn	16 30 22.4	+1.5
BKZ	Black Stump Fm	1.72	23	P	Pn	16 30 21.3	-0.1
NNZ	Nelson	1.75	254	P	Pn	16 30 22.8	+1.1
VRZ	Vera Road	1.76	338	P	Pn	16 30 23.5	+1.8
RITZ	Rihia Road	1.79	6	P	Pb	16 30 24.6	-1.2
PREZ	Palmer Road	1.80	321	P	Pb	16 30 25.2	-0.9
ARHZ	Aropaoanui	1.83	36	P	Pn	16 30 22.8	+0.1
RATZ	Rangitukua	1.89	4	P	Pn	16 30 26.1	+2.5
NMEZ	Namu Road	1.89	315	P	Pb	16 30 26.5	-1.1
NMHZ	Naumai	1.89	29	P	Pn	16 30 25.8	+2.1
HATZ	Hinemaiaia	1.90	11	P	Pb	16 30 27.1	-0.7
DREZ	Durham Road	1.90	325	P	Pn	16 30 26.5	+2.8
KHEZ	Kahui Hut	1.91	319	P	Pn	16 30 26.7	+2.8
MHEZ	Mangahewa	1.95	329	P	Pb	16 30 27.4	-1.2
PKE	Pukeiti	2.00	321	P	Pn	16 30 28.1	+3.0
NBEZ	Newall Road No	2.00	317	P	Pb	16 30 28.2	-1.3
MRHZ	Matea Rd	2.02	18	P	Pb	16 30 25.2	-0.2
WATZ	Wairara	2.05	3	P	Pn	16 30 26.8	+1.0
MTHZ	Maungataniwha	2.12	27	P	Pn	16 30 27.3	+0.5
RAHZ	Arahi	2.16	32	P	Pn	16 30 27.0	-0.3
ALRZ	Allen Road	2.26	15	P	Pn	16 30 30.3	+1.6
KUTZ	Kaahu Road	2.27	4	P	Pb	16 30 35.9	+1.9
KHZ	Kahutara	2.28	222	P	Pn	16 30 28.7	-0.2
THZ	Tophouse	2.28	243	P	Pn	16 30 29.3	+0.3
HIZ	Hauiti	2.31	345	P	Pn	16 30 31.3	+1.9
PRRZ	Plateau Road	2.33	15	P	Pb	16 30 36.3	+1.2
QRZ	Quartz Range	2.34	267	P	Pn	16 30 30.3	+0.5
KNZ	Kokohu	2.35	43	P	Pn	16 30 28.7	-1.2
SNGZ	Shannon Statio	2.38	35	P	Pn	16 30 30.1	-0.2
MHGZ	Mahia Peninsul	2.38	49	P	Pn	16 30 29.4	-0.9
RTZ	Ruatahuna	2.38	27	P	Pn	16 30 30.2	-0.2
HRRZ	Handcock Road	2.42	13	P	Pb	16 30 38.2	+1.7
TLZ	Tolley Road	2.42	359	P	Pn	16 30 33.3	+2.3
MUGZ	Murupara	2.44	22	P	Pn	16 30 31.6	+0.5
RRRZ	Republican Roa	2.51	16	P	Pb	16 30 39.3	+1.1
PRGZ	Paritu Road	2.53	44	P	Pn	16 30 31.5	-0.9
RIGZ	Rimuhau	2.63	40	P	Pn	16 30 32.7	-1.1
RAGZ	Rawiri	2.65	32	P	Pn	16 30 32.9	-1.2
URZ	Urewera	2.75	25	Pn	Pn	16 30 33.7	-1.6
	1.4nm,0.3s,baz=245,slow=4.8,SNR=12						
URZ				Sn	Sn	16 31 05.3	-2.0
	3.4nm,0.3s,baz=24,slow=12,SNR=5.4						
URZ	Urewera	2.75	25	P	Pn	16 30 33.9	-1.5
MWZ	Matawai	2.83	32	P	Pn	16 30 35.0	-1.6
TKGZ	Te Karaka	2.88	37	P	Pn	16 30 36.1	-1.2
KMRZ	Kaimai	2.92	5	P	Pb	16 30 43.2	-1.8
GVZ	Greta Valley S	2.93	220	P	Pn	16 30 37.5	-0.4
TOZ	Tahuroa Road	3.02	358	P	Pn	16 30 41.9	+2.8
DSZ	Denniston Nort	3.04	250	P	Pn	16 30 39.6	+0.2
RUGZ	Raukumara Rang	3.21	31	P	Pn	16 30 41.7	-0.2
LTZ	Lake Taylor	3.22	230	P	Pn	16 30 41.3	-0.5
HAZ	Te Kaha	3.43	30	P	Pn	16 30 45.1	+0.3
OKCZ	Okains Bay	3.52	212	P	Pn	16 30 45.0	-1.0
WMGZ	Waiomatatini S	3.65	37	P	Pn	16 30 46.1	-1.7
MKAZ	Moumakai	3.66	354	P	Pn	16 30 50.5	+2.6
MQZ	McQueen's Vall	3.68	216	P	Pn	16 30 46.6	-1.5
INZ	Inchbonnie	3.69	236	P	Pn	16 30 47.9	-0.4
OXZ	Oxford	3.70	225	P	Pn	16 30 47.9	-0.6
AKCZ	Akaroa Harbour	3.71	212	P	Pn	16 30 47.5	-1.0
AWAZ	Awhitu Peninsu	3.76	348	P	Pn	16 30 52.4	+3.1
WIAZ	Waiheke Island	3.97	354	P	Pn	16 30 55.6	+3.4
KUZ	Kuaotunu	4.00	1	P	Pn	16 30 57.0	+4.4
MBAZ	Motutapu North	4.02	352	P	Pn	16 30 56.0	+3.2
ABAZ	Army Bay	4.19	351	P	Pn	16 30 58.5	+3.3
RPZ	Rata Peaks	4.50	227	Pn	Pn	16 30 59.3	-0.1
	0.4nm,0.3s,baz=320,slow=1.3,SNR=7.3						
RPZ				Sn	Sn	16 31 47.3	-3.2
	2.2nm,0.3s,baz=280,slow=24,SNR=11						
RPZ	Rata Peaks	4.50	227	P	Pn	16 30 59.1	-0.3
WCZ	Waipu Caves	4.91	348	P	Pn	16 31 07.7	+2.6
FOZ	Fox Glacier	5.13	235	P	Pn	16 31 08.1	0.0
ODZ	Otahua Downs	5.63	219	P	Pn	16 31 14.3	-0.7
ASAR	Alice Springs	38.78	283	P	P	16 37 13.8	-1.3
	0.2nm,0.7s,baz=120,slow=6.8,SNR=6.0						
WRA	Warramunga Arr	40.75	288	P	P	16 37 30.8	-0.7
	0.5nm,0.3s,baz=125,slow=8.2,SNR=11						
TORD	Torodi Ar. Bea	151.99	193	PKPbc	PKiKP	16 49 47.5	+1.5
	0.1nm,0.5s,baz=224,slow=4.0,SNR=1.3						

IDC 04 16:43:25.3±1.1, 1°27S×126°59E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/41, mbtmp3.7/6, ML4.0/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/40, Error ellipse: s-maj=46.3km s-min=20.6km az=65.0
DJA 04 16:43:28.1±0.2, 1°S±2°×12°7E±°, h10km, M4.0/14, mB4.7/2, mb4.6/5, MLv4.0/14, MLv3.9/5, Mw(mB)4.0/2
NEIC 04 16:43:30.8±2.2, 1°18S±0°07×126°83E±0°07, h47km±8km, mb4.4/13, Error ellipse: s-maj=10.9km s-min=10.1km az=178.0
ISC 04 16:43:29.9±0.6, 1°11S±0°05×126°85E±0°05, h34km, n37, σ1°38/39, mb4.1/7, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	0.80	54	P	Pn	16 43 43.1	-1.7
LBMI				S	Sn	16 43 53.7	-1.8
SANI	Sanana	1.27	223	P	Pn	16 43 50.7	-0.6
SANI				S	Sb	16 44 10.9	+1.4
TNTI	Ternate	1.94	15	P	Pn	16 44 01.1	+0.7
TNTI	Ternate	1.94	15	Pn	Pn	16 44 01.7	+1.2
NLAI	Namlea	2.13	173	P	Pn	16 44 02.8	-0.4
AAI	Ambon	2.89	152	P	Pn	16 44 14.9	+1.3
MSAI	Masohi	3.04	137	P	Pn	16 44 17.6	+1.9
LUWI	Luwuk	4.08	271	P	Pn	16 44 31.1	+1.2
LUWI	Luwuk	4.08	271	Pn	Pn	16 44 31.1	+1.2
SWI	Sorong	4.41	87	P	Pn	16 44 33.8	-0.8
SIJI	Sorong	4.42	87	Pn	Pn	16 44 37.6	+2.9
	6.1nm,0.3s,baz=249,slow=23,SNR=26						
SIJI				Sn	Sn	16 45 28.4	+3.4
	baz=209,slow=22,SNR=1.9						
BNDI	Bandanaira	4.56	138	P	Pn	16 44 36.6	0.0
MRSI	Marisa	5.16	288	P	Pn	16 44 45.5	+0.7
	590nm21nm,0.5s						
FAKI	Fak Fak	5.69	109	P	Pn	16 44 51.1	-1.0
	0.2nm32nm,0.6s						
FAKI	Fak Fak	5.69	109		Pn	16 44 51.8	-0.2
TTSI	Tana Toraja	7.29	255	P	Pn	16 45 15.0	+1.0
	671nm42nm,0.6s						
FITZ	Fitzroy Crossi	16.93	184	P	Pn	16 47 25.0	+0.7
FITZ				IAmb	IAmb	16 47 49.2	
	comp=Z,31nm,1.6s						
WB0	Warramunga Arr	19.96	159	P	P	16 47 57.2	-2.2
WB0				IAmb	IAmb	16 48 01.3	
	comp=Z,66nm,1.9s						
CISI	Cisompet, Garu	20.02	251	P	P	16 47 57.9	-2.3
WRA	Warramunga Arr	20.10	159	P	P	16 47 59.2	-1.7
	comp=Z,0.7nm,0.5s,baz=340,slow=11,SNR=10						
WB2	Warramunga Arr	20.11	159	P	P	16 47 59.4	-1.6
WB2				IAmb	IAmb	16 48 03.3	
	comp=Z,21nm,1.5s						
WR0	Warramunga Arr	20.19	159	P	P	16 48 00.6	-1.3
WR0				IAmb	IAmb	16 48 20.2	
	comp=Z,52nm,1.7s						
COEN	Coen	20.59	129	P	P	16 48 06.1	-0.1
PMG	Port Moresby	21.82	113	LR	LR	16 59 24.2	
	comp=Z,61nm,19.2s,baz=276,slow=44						
AS31	Alice Springs	23.45	164	P	P	16 48 34.7	-1.7
ASAR	Alice Springs	23.45	164	P	P	16 48 35.6	-0.8
	comp=Z,1.0nm,0.5s,baz=346,slow=12,SNR=36						
ASAR	Alice Springs	23.45	164	P	P	16 48 35.0	-1.4
STKA	Stephens Creek	33.62	157	P	P	16 50 07.9	+0.6
	comp=Z,1.7nm,0.6s,baz=357,slow=8.0,SNR=3.4						
USRK	Ussuriysk Ar.	45.34	5	P	P	16 51 44.9	+0.1
SONM	Songino Array	51.91	343	P	P	16 52 35.9	+0.5
	comp=Z,0.5nm,0.7s,baz=148,slow=8.2,SNR=4.7						
MKAR	Makanchi Array	61.61	327	P	P	16 53 45.2	+1.0
	comp=Z,0.5nm,0.4s,baz=126,slow=7.3,SNR=1.8						
MKAR	Makanchi Array	61.61	327	P	P	16 53 44.6	+0.4
MAKZ	Makanchi	61.79	327	P	P	16 53 45.9	+0.5
MAKZ				IAmb	IAmb	16 54 28.0	
	comp=Z,13nm,2.0s						
BRVK	Borovoye	71.51	328	P	P	16 54 45.9	-1.3
BRVK				IAmb	IAmb	16 54 58.5	
	comp=Z,11nm,1.7s						
TIXI	Tiksi	72.64	1	P	P	16 54 53.6	0.0
TIXI				IAmb	IAmb	16 54 54.1	
	comp=Z,2.0nm,0.6s						
ABKAR	Akbulak array	75.97	322	P	P	16 55 13.6	+0.1
TORD	Torodi Ar. Bea	124.41	285	PKP	PKiKP	17 02 26.9	0.0
	comp=Z,0.5nm,0.7s,baz=147,slow=3.5,SNR=3.2						

IDC 04 17:05:09.2±7.5, 16°23S×179°75W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/33, mbtmp3.7/3, Error ellipse: s-maj=332.6km s-min=39.9km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.70	258	P	P	17 13 16.6	+0.2
	0.8nm,0.7s,baz=91,slow=7.3,SNR=5.2						
ASAR	Alice Springs	44.03	253	P	P	17 13 18.7	-0.4
	1.6nm,0.6s,baz=87,slow=9.0,SNR=34						
ILAR	Eielson Array	84.56	14	P	P	17 17 43.9	0.0
	0.3nm,1.0s,baz=224,slow=5.0,SNR=1.5						

IDC 04 17:10:24.6±0.8, 50°00N×179°33E, h0km, mb3.7/16, mb1 4.0/20, mb1mx3.9/39, mbtmp3.8/20, ML4.6/3, Error ellipse: s-maj=23.9km s-min=14.6km az=177.0
NEIC 04 17:10:30.4±2.1, 50°31N±0°08×179°69E±0°08, h31km±4km, Error ellipse: s-maj=12.7km s-min=4.6km az=150.0
AEIC 04 17:10:31.4±3.9, 50°2N±0°1×179°9E±0°1, h21km±5km, mb4.2/30(NEIC), Error ellipse: s-maj=16.4km s-min=9.1km az=168.0
ISC 04 17:10:29.8±0.7, 50°18N±0°09×179°49E±0°05, h35km, n82, σ1°62/89, mb3.9/26, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAEA	Gareloi East	1.96	34		Pn	17 11 01.2	+0.8
GAEA					Sn	17 11 24.6	+0.8
TASE	Tanaga Southea	2.28	42		Pn	17 11 05.7	+0.8
TAFP	Tanaga Falls P	2.35	42		Pn	17 11 06.2	+0.3
TAFP					Sn	17 11 34.9	+1.4
KIMD	Kanaga Island	2.61	51		Pn	17 11 09.8	+0.4
KIMD					Sn	17 11 41.0	+1.2
KIWB	Kanaga Island	2.71	50		Pn	17 11 11.3	+0.6
KIKV	Kanaga Island	2.71	50		Pn	17 11 11.5	+0.7
KICM	Kanaga Island	2.73	49		Pn	17 11 11.9	+0.9
ADK	Adak	2.96	53		Pn	17 11 14.6	+0.4
ADAG	Mount Adagdak	3.06	52		Pn	17 11 16.8	+1.3
GSTD	Great Sitkin T	3.33	54		Pn	17 11 20.2	+0.8
GSTD					Sn	17 11 58.0	+0.2
GSMY	Great Sitkin M	3.37	55		Pn	17 11 20.9	+1.0
GSTR	Great Sitkin T	3.40	54	Pn	Pn	17 11 19.8	-0.5
SMY	Shemya	4.23	309	Pn	Pn	17 11 33.4	+1.7
ATKA	Atka Island	4.46	61		Pn	17 11 35.0	+0.2
ATKA	Atka Island	4.46	61		Sn	17 12 24.8	-0.7
UNV	Unalaska Valle	9.39	62	Pn	Pn	17 12 40.4	-1.9
AKUT	Akutan	9.88	61		Pn	17 12 43.6	-5.6
FALS	False Pass	11.41	59	Pn	Pn	17 13 04.6	-5.5
CNBA	Chernabura Isl	13.55	62	Pn	Pn	17 13 37.4	-1.8
PEA0B	Petropavlovsk-	13.83	291	Pn	Pn	17 13 45.3	+2.2
PETK	Petropavlovsk-	13.83	291	Pn	Pn	17 13 42.6	-0.5
	0.4nm,0.3s,baz=101,slow=20,SNR=16						
PETK				Sn	Sn	17 16 09.2	-6.0
	0.1nm,0.3s,baz=84,slow=25,SNR=1.4						
PETK	Petropavlovsk-	13.83	291	Pn	Pn	17 13 45.9	+2.8
GAMB	Gambell	14.43	16		Pn	17 13 51.8	+0.6
ANM	Nome	16.50	23	Pn	Pn	17 14 19.1	+0.9
OHAK	Old Harbor	17.51	56	Pn	Pn	17 14 29.7	-1.1
KDAK	Kodiak Island	18.00	54	P	P	17 14 37.6	+0.5
	0.5nm,0.3s,baz=174,slow=2.2,SNR=8.8						
KDAK	Kodiak Island	18.00	54	Pn	Pn	17 14 34.7	-2.1
MA2	Magadan	18.87	311	P	Pn	17 14 47.2	-0.3
	0.7nm,0.3s,baz=145,slow=16,SNR=1.8						
BILL	Bilibino	19.07	345	P	P	17 14 46.1	-2.8
SEY	Seymchan	19.46	321	P	P	17 14 54.3	-0.1
	0.3nm,0.3s,baz=123,slow=11,SNR=14						
SKT	Skwentna	19.82	42		Pn	17 14 58.1	-0.8
SKT				IAmb	IAmb	17 15 20.5	
	comp=Z,11nm,1.0s						
PPLA	Purkeypile	19.93	40		P	17 14 57.8	-0.6
PPLA				IAmb	IAmb	17 15 19.5	
	comp=Z,8.6nm,1.0s						
SUA	Susitna One	19.98	44		P	17 14 56.1	-2.8
SUA				IAmb	IAmb	17 15 26.3	
	comp=Z,24nm,1.4s						
SEW	Seward	20.15	49		P	17 15 00.1	-0.6
KTH	Kantishna Hill	20.74	39	P	P	17 15 07.8	+0.6
KTH				IAmb	IAmb	17 15 11.9	
	comp=Z,6.3nm,0.9s						
GHO	Glory Hole Cre	20.90	44	P	P	17 15 07.1	-1.8
GHO				IAmb	IAmb	17 15 24.4	
	comp=Z,7.8nm,1.0s						
TRF	Thorofare Moun	20.95	39	P	P	17 15 09.0	-0.5
TRF				IAmb	IAmb	17 15 25.1	
	comp=Z,13nm,1.2s						
BPAW	Bear Paw Mtn.	20.97	37	P	P	17 15 08.1	-1.4
IMAR	Indian Mountai	20.97	31	P	P	17 15 08.5	-1.0
SML	Sawmill	21.18	44	P	P	17 15 11.0	-0.8
SML				IAmb	IAmb	17 15 21.0	
	comp=Z,20nm,1.4s						
MLY	Manley	21.51	35	P	P	17 15 13.4	-1.9
RND	Reindeer	21.52	40	P	P	17 15 13.4	-2.1
RND				IAmb	IAmb	17 15 31.1	
	comp=Z,12nm,1.3s						
MCK	McKinley	21.62	39	P	P	17 15 14.0	-2.5
MCK				IAmb	IAmb	17 15 35.5	
	comp=Z,8.7nm,1.4s						
MCK					S	17 19 11.4	-2.4
SCM	Sheep Creek Mo	21.64	45	P	P	17 15 14.0	-2.7
DHY	Denali Highway	22.02	42	P	P	17 15 20.3	-0.6
DHY				IAmb	IAmb	17 15 33.8	
	comp=Z,6.7nm,0.7s						
CCB	Clear Creek Bu	22.45	38	P	P	17 15 24.4	-0.9
ILAR	Eielson Array	22.86	38	P	P	17 15 30.8	+1.1
	comp=Z,0.2nm,0.5s,baz=237,slow=8.7,SNR=7.6						
GLB	Gilahina Butte	23.16	47	P	P	17 15 31.5	-1.3
GLB				IAmb	IAmb	17 15 45.2	
	comp=Z,9.3nm,1.2s						
VRDI	Verde Repeater	23.29	48	P	P	17 15 33.0	-1.3
VRDI				IAmb	IAmb	17 16 03.2	
	comp=Z,5.8nm,1.0s						
CRQM	Cirque	23.35	49	P	P	17 15 34.9	+0.1
CRQM				IAmb	IAmb	17 16 00.3	
	comp=Z,11nm,1.1s						
TGL	Tana Glacier	23.50	49	P	P	17 15 36.4	+0.2
TOLK	Toolik Lake Re	23.84	28	P	P	17 15 38.8	-0.5
MESA	MESA	23.84	50	P	P	17 15 39.1	-0.5
BARN	Barnard Glacie	24.11	48	P	P	17 15 41.3	-0.8
BARN				IAmb	IAmb	17 16 15.7	
	comp=Z,9.2nm,1.2s						
FYU	Fort Yukon	24.23	34	P	P	17 15 42.2	-0.6
FYU				IAmb	IAmb	17 16 12.1	
	comp=Z,16nm,1.5s						
CTGM	Chitina Glacie	24.26	49	P	P	17 15 42.1	-1.2
CTGM				IAmb	IAmb	17 15 50.4	
	comp=Z,13nm,1.2s						
BCAR	Beaver Creek A	24.45	43	P	P	17 15 44.7	-0.3
PCA	Pinnacle	24.68	51	P	P	17 15 42.0	-5.0
BMAR	Burnt Mountain	24.84	33	P	P	17 15 49.1	+0.7
INK	Inuvik	29.07	34	P	P	17 16 29.3	+3.0
	comp=Z,0.4nm,0.4s,baz=246,slow=4.3,SNR=1.9						
INK	Inuvik	29.07	34	P	P	17 16 25.8	-0.5
YKA	Yellowknife Ar	36.85	45	P	P	17 17 36.1	+1.9
	comp=Z,1.1nm,0.5s,baz=279,slow=9.1,SNR=19						
YKA				PcP	PcP	17 19 56.3	+1.1
	comp=Z,0.3nm,0.5s,baz=286,slow=3.4,SNR=5.1						
NVAR	Mina Array Bea	44.80	80	P	P	17 18 41.6	+1.3
	comp=Z,0.9nm,0.7s,baz=293,slow=7.6,SNR=8.0						
NVAR	Mina Array Bea	44.80	80	P	P	17 18 40.3	0.0
SONM	Songino Array	46.21	297	P	P	17 18 50.4	-0.8
	comp=Z,0.5nm,0.8s,baz=59,slow=8.9,SNR=3.8						
PDAR	Pinedale Array	47.73	70	P	P	17 19 04.0	+0.7
	comp=Z,0.5nm,0.4s,baz=294,slow=2.6,SNR=8.3						
PDAR	Pinedale Array	47.73	70	P	P	17 19 03.5	+0.3
ZALV	Zalesovo Beam	54.06	313	P	P	17 19 50.5	+0.1
	comp=Z,0.3nm,0.3s,baz=90,slow=7.2,SNR=1.9						
WMQ	Urumqi	59.07	303	eP	P	17 20 30.5	+4.2
MKAR	Makanchi Array	59.92	308	P	P	17 20 31.6	-0.5
	comp=Z,0.2nm,0.4s,baz=55,slow=6.0,SNR=7.9						
MKAR	Makanchi Array	59.92	308	P	P	17 20 30.8	-1.2
TXAR	Lajitas Array	59.93	79	P	P	17 20 33.3	+0.9
	comp=Z,0.5nm,0.5s,baz=342,slow=5.7,SNR=7.5						
TXAR				PcP	PcP	17 21 19.2	+0.8
	comp=Z,0.6nm,0.7s,baz=284,slow=3.6,SNR=4.3						
TXAR	Lajitas Array	59.93	79	P	P	17 20 28.8	-3.6
TXAR					PcP	17 21 18.6	+0.1
FINES	FINESS Array B	66.71	346	P	P	17 21 16.8	+0.2
	comp=Z,0.7nm,0.6s,baz=0.0,slow=3.8,SNR=4.2						
FINES	FINESS Array B	66.71	346	P	P	17 21 17.1	+0.5
NOA	NORSAR Array B	68.73	354	P	P	17 21 30.2	+0.8
	comp=Z,0.4nm,0.6s,baz=18,slow=2.8,SNR=1.6						
CMAR	Chiang Mai Arr	70.04	275	P	P	17 21 38.4	+0.3
	comp=Z,0.3nm,0.6s,baz=16,slow=6.8,SNR=3.2						
AKASG	Malin Array Be	76.34	341	P	P	17 22 15.7	+0.9
	comp=Z,0.2nm,0.4s,baz=22,slow=5.3,SNR=3.0						
KBZ	Khabaz	79.11	330	P	P	17 22 32.8	+2.5
	comp=Z,1.4nm,0.8s,baz=127,slow=5.1,SNR=3.5						
WRA	Warramunga Arr	80.39	223	P	P	17 22 36.4	-1.1
	comp=Z,0.6nm,0.7s,baz=25,slow=9.9,SNR=2.1						
ASAR	Alice Springs	83.86	221	P	P	17 22 55.1	-0.5
	comp=Z,0.5nm,0.8s,baz=28,slow=4.9,SNR=4.5						
QSPA	South Pole Qui	139.93	180	PKP	PKiKP	17 29 54.4	-0.9
	comp=Z,1.0nm,0.8s,baz=311,slow=4.4,SNR=3.4						

IDC 04 17:15:09.8±2.2, 5°48S×128°75E, h0km, mb3.3/1, mb1 3.6/3, mb1mx3.4/23, mbtmp3.4/3, ML3.3/2, MS3.3/1, Ms1 3.5/1, ms1mx2.8/9, Error ellipse: s-maj=172.5km s-min=30.1km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.37	160	Pn	Pn	17 18 50.3	+2.1
	0.1nm,0.3s,baz=339,slow=12,SNR=1.8						
ASAR	Alice Springs	18.75	165	P	P	17 19 29.6	-0.9
	0.3nm,0.3s,baz=344,slow=11,SNR=14						
CMAR	Chiang Mai Arr	37.81	310	LR	LR	17 39 20.4	
	comp=Z,38nm,18.7s,baz=244,slow=38						
MKAR	Makanchi Array	66.28	327	P	P	17 26 00.1	0.0
	0.1nm,0.4s,baz=134,slow=8.2,SNR=6.6						

UCR 04 17:25:16.1±1.3, 10°28N×84°45W, h93km±4km, MD3.7, 3C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FORC	Fortuna	0.28	311	iP	Pn	17 25 29.7	-0.1
FORC				iS	Sn	17 25 40.8	+0.7
CASO	Castillo	0.32	299	iS	Sn	17 25 41.5	+1.1
ARE1	Arenal 1	0.32	305	⇑iP	Pn	17 25 30.3	+0.3
ARE1				eS	Sn	17 25 41.4	+1.0
HDC	Heredia	0.43	130	eP	Pn	17 25 30.6	-0.3
HDC				eS	Sn	17 25 42.5	+0.7
JTS	Las Juntas de	0.49	271	⇑eP	Pn	17 25 30.9	-0.2
JTS				eS	Sn	17 25 42.1	-0.3
LCR2	La Lucha 2	0.69	140	⇑eP	Pn	17 25 33.0	-0.1
LCR2				eS	Sn	17 25 46.5	+0.8
CVTR	Volcan Turrial	0.73	111	eP	Pn	17 25 33.3	-0.4
CVTR				eS	Sn	17 25 46.8	+0.1
CUI	Cuipilapa	0.79	298	iP	Pn	17 25 34.0	+0.1
CUI				iS	Sn	17 25 47.4	+0.2
COLC	Colonia	0.83	297	iS	Sn	17 25 47.9	0.0
GUAI	GUAI	1.04	270	iP	Pn	17 25 37.0	+0.5
GUAI				iS	Sn	17 25 52.0	+0.2
EDDO	Dominical	1.17	150	eP	Pn	17 25 38.3	+0.3
ACON	Acoyapa	1.82	337	eP	Pn	17 25 46.1	-0.1

IDC 04 17:32:26.4±1.2, 12°36N×144°04E, h0km, mb3.8/6, mb1 4.1/6, mb1mx3.6/41, mbtmp3.8/6, MS3.5/1, Ms1 3.5/1, ms1mx2.5/45, Error ellipse: s-maj=49.7km s-min=32.8km az=111.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	22.66	72	T	T	18 01 02.4	
	SNR=4.2						
H11S1	WAKE ISLAND Hy	22.67	72	T	T	18 01 00.7	
H11S2	WAKE ISLAND Hy	22.67	72	T	T	18 01 00.7	
H11N1	WAKE ISLAND Hy	23.13	69	T	T	18 01 43.5	
	baz=255,slow=75,SNR=6.0						
H11N2	WAKE ISLAND Hy	23.14	69	T	T	18 01 43.6	
	baz=255,slow=75,SNR=4.9						
H11N3	WAKE ISLAND Hy	23.15	69	T	T	18 01 38.1	
	baz=255,slow=75,SNR=5.0						
WRA	Warramunga Arr	33.49	197	P	P	17 39 07.2	-0.4
	0.7nm,1.0s,baz=19,slow=9.6,SNR=1.4						
RAO	Raoul Island	55.31	139	LR	LR	18 00 32.2	
	comp=Z,50nm,21.9s,baz=185,slow=30						
MKAR	Makanchi Array	61.81	317	P	P	17 42 48.1	+0.9
	0.4nm,0.7s,baz=95,slow=8.6,SNR=4.6						
ILAR	Eielson Array	70.02	25	P	P	17 43 38.6	-1.1
	0.4nm,0.8s,baz=248,slow=6.3,SNR=6.2						
YKA	Yellowknife Ar	84.32	27	P	P	17 45 00.1	+0.1
	0.6nm,0.8s,baz=288,slow=5.5,SNR=7.5						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVAR	Mina Array Bea	88.32	51	P	P	17 45 22.3	+1.7
	0.4nm,0.6s,baz=263,slow=5.7,SNR=4.2						
FINES	FINESS Array B	91.93	335	P	P	17 45 35.4	-1.2
	2.4nm,1.0s,baz=117,slow=6.6,SNR=3.5						

*NEIC **04** 17:43:11.6±2.2, 28.32S×0.09×179.3W±0.1, h402km±5km, mb4.5/35, Error ellipse: s-maj=15.6km s-min=12.0km az=124.0*
*IDC **04** 17:43:13.8±1.1, 28.22S×179.36W, h415km±11km, mb3.6/14, mb1 3.8/15, mb1mx3.7/37, mbtmp4.4/15, Error ellipse: s-maj=16.5km s-min=11.7km az=164.0*
ISC 04 17:43:11.9±0.4, **28.35S**±0.05×**179.25W**±0.07, **h400**km, **n168**, σ**1.79**/183, **mb4.3**/28, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RIZ	Raoul Island	1.46	128	P	Pn	17 44 08.5	+3.6
RIZ				S	S	17 44 49.4	+1.8
RAO	Raoul Island	1.47	128	P	Pn	17 44 08.3	+3.4
	362nm,0.3s,baz=339,slow=1.9,SNR=22						
RAO				S	S	17 44 46.0	-1.7
	324nm,0.3s,baz=77,slow=20,SNR=6.0						
RAO	Raoul Island	1.47	128		Pn	17 44 08.1	+3.3
GLKZ	Green Lake	1.48	128	P	Pn	17 44 08.0	+3.1
GLKZ				S	S	17 44 49.4	+1.7
OUZ	Omahuta	9.16	220	Pn	Pn	17 45 24.1	+4.1
MXZ	Matakaoa Point	9.41	192		Pn	17 45 23.6	+0.7
MXZ	Matakaoa Point	9.41	192	P	Pn	17 45 24.6	+1.7
MXZ				S	S	17 47 04.8	-5.7
WMGZ	Waiomatatini S	9.64	191	P	Pn	17 45 27.4	+1.8
WMGZ				S	S	17 47 11.7	-3.5
HAZ	Te Kaha	9.70	194	P	Pn	17 45 27.3	+1.0
HAZ				S	S	17 47 13.8	-2.7
PKGZ	Pakihiroa	9.77	193	P	Pn	17 45 30.1	+2.9
PKGZ				S	S	17 47 14.4	-3.6
PUZ	Puketiti	9.91	191	P	Pn	17 45 30.6	+1.8
PUZ				S	S	17 47 16.4	-4.5
RUGZ	Raukumara Rang	9.93	194	P	Pn	17 45 30.5	+1.5
RUGZ				S	S	17 47 17.1	-4.3
TWGZ	Tauwhareparae	10.07	193	P	Pn	17 45 31.4	+0.8
TWGZ				S	S	17 47 22.1	-2.0
MWZ	Matawai	10.31	194	P	Pn	17 45 34.9	+1.5
MWZ				S	S	17 47 24.4	-4.6
MWZ	Matawai	10.31	194	P	S	17 47 27.3	-1.8
URZ	Urewera	10.34	196	P	P	17 45 32.9	-0.2
	5.6nm,0.3s,baz=266,slow=2.3,SNR=29						
URZ				S	S	17 47 26.5	-3.0
	3.8nm,0.3s,baz=244,slow=23,SNR=14						
URZ	Urewera	10.34	196	P	P	17 45 33.2	+0.2
URZ					S	17 47 28.8	-0.7
URZ	Urewera	10.34	196	P	P	17 45 33.6	+0.6
URZ				S	S	17 47 26.8	-2.7
TKGZ	Te Karaka	10.35	193	P	S	17 47 26.0	-3.6
RIGZ	Rimuhau	10.62	193	P	Pn	17 45 38.0	+1.0
RIGZ				S	S	17 47 31.4	-4.0
RIGZ	Rimuhau	10.62	193	P	S	17 47 32.9	-2.5
MUGZ	Murupara	10.63	197	P	P	17 45 37.1	+0.8
MUGZ				S	S	17 47 33.0	-2.5
PRGZ	Paritu Road	10.81	192	P	S	17 47 34.1	-5.0
WPRZ	Whakapapatarin	10.84	199	P	P	17 45 32.0	-6.6
MSVF	Nonsavu	10.86	346	P	P	17 45 38.5	-0.7
KNZ	Kokohu	10.95	193	P	S	17 47 38.9	-2.9
MTHZ	Maungataniwha	10.97	196	P	Pn	17 45 42.5	+1.4
MTHZ	Maungataniwha	10.97	196	P	S	17 47 41.3	-1.1
RAHZ	Arahi	10.97	195	P	Pn	17 45 42.4	+1.4
RAHZ	Arahi	10.97	195	P	S	17 47 40.1	-2.3
MHGZ	Mahia Peninsul	11.03	192	P	S	17 47 39.9	-3.7
MRHZ	Matea Rd	11.06	198	P	P	17 45 42.1	+1.0
WHHZ	Waihua	11.09	194	P	S	17 47 43.5	-1.3
HIZ	Hauiti	11.26	204		P	17 45 43.8	+0.5
HIZ	Hauiti	11.26	204	P	Pn	17 45 49.9	+5.5
ARHZ	Aropaoanui	11.32	195	P	S	17 47 48.1	-1.4
BKZ	Black Stump Fm	11.35	197		P	17 45 44.5	+0.1
BKZ					S	17 47 48.0	-2.2
BKZ	Black Stump Fm	11.35	197	P	S	17 47 51.3	+1.1
MCHZ	McNeill Hill	11.56	196	P	S	17 47 54.6	+0.2
CKHZ	Cape Kidnapper	11.68	194	P	S	17 47 56.2	-0.5
BHHZ	Black Hill Sta	11.77	198	P	P	17 45 49.6	+0.6
BHHZ	Black Hill Sta	11.77	198	P	S	17 47 58.6	0.0
KRHZ	Kereru	11.83	197	P	P	17 45 49.9	+0.3
KRHZ	Kereru	11.83	197	P	S	17 47 58.0	-1.9
KAHZ	Kahuranaki	11.85	195	P	Pn	17 45 51.5	+0.2
KAHZ	Kahuranaki	11.85	195	P	S	17 47 55.7	-4.7
PXZ	Pawanui	12.08	194	P	Pn	17 45 53.9	+0.1
PNHZ	Pukenui	12.13	197	P	P	17 45 50.8	-2.1
NIUE	Niue	12.57	45		P	17 45 58.0	0.0
ANWZ	Angora Road	12.58	195	P	S	17 48 15.7	+0.7
BFZ	Birch Farm	12.85	196	P	S	17 48 19.8	-0.5
HOWZ	Holdsworth Sta	13.23	198	P	S	17 48 26.7	-1.4
OGWZ	Otaki Gorge	13.25	199	P	S	17 48 26.6	-1.9
TMWZ	Te Maipa	13.33	196	P	S	17 48 29.4	-0.8
PAWZ	Paruwai Farm	13.71	197	P	S	17 48 35.1	-2.7
MSWZ	Moikau Station	13.79	198	P	S	17 48 34.8	-4.5
TCW	Tory Channel	13.88	201	P	S	17 48 39.5	-1.6
BHW	Baring Head	13.88	199	P	P	17 46 14.0	+2.0
PLWZ	Palliser	13.93	197	P	P	17 46 13.2	+0.5
QRZ	Quartz Range	14.16	206	P	P	17 46 16.4	+1.3
NNZ	Nelson	14.18	203	P	P	17 46 12.1	-3.2
TUWZ	Tuamarina	14.18	201	P	P	17 46 14.4	-0.9
TUWZ	Tuamarina	14.18	201	P	S	17 48 45.0	-2.2
DZM	Mont Dzumac	14.37	293	P	P	17 46 19.3	+1.5
	4.3nm,0.3s,baz=124,slow=9.2,SNR=39						
CMWZ	Cape Campbell	14.39	200	P	S	17 48 52.2	+0.9
NOUC	Port Laguerre	14.47	292	P	P	17 46 20.5	+1.7
THZ	Tophouse	14.83	204	P	P	17 46 20.5	-2.0
THZ	Tophouse	14.83	204	P	S	17 48 59.9	-0.2
KHZ	Kahutara	15.21	201	P	P	17 46 25.1	-1.3
KHZ	Kahutara	15.21	201	P	S	17 48 56.2	-11
AFI	Afiamalu	15.96	27	P	P	17 46 33.0	-2.0
AFI				IAmb	IAmb	17 46 39.0	
	comp=Z,30nm,0.8s						
OXZ	Oxford	16.51	203	P	P	17 46 39.1	-1.3
OXZ				IAmb	IAmb	17 46 48.3	
	comp=Z,38nm,1.5s						
RPZ	Rata Peaks	17.20	204	P	P	17 46 47.5	-0.3
RPZ				IAmb	IAmb	17 46 49.4	
	comp=Z,39nm,1.4s						
FOZ	Fox Glacier	17.52	207	P	P	17 46 50.6	-0.5
FOZ				IAmb	IAmb	17 47 00.5	
	comp=Z,19nm,1.2s						
RAR	Rarotonga	19.05	72	P	P	17 47 05.4	-2.0
EIDS	Eidsvold	26.60	269	P	P	17 48 15.1	-0.8
EIDS				IAmb	IAmb	17 48 32.7	
	comp=Z,36nm,1.6s						
TAU	Tasmania Unive	30.58	233	P	P	17 48 52.8	+2.2
TAU				IAmb	IAmb	17 49 05.6	
	comp=Z,40nm,1.4s						
TOO	Toolangi	30.83	244	P	P	17 48 54.8	+1.9
STKA	Stephens Creek	33.93	254	P	P	17 49 20.4	+0.9
	comp=Z,3.5nm,0.5s,baz=99,slow=12,SNR=16						
STKA	Stephens Creek	33.93	254	P	P	17 49 20.0	+0.5
XMAS	Kiritimati	36.77	38	P	P	17 49 43.9	+0.4
XMAS				IAmb	IAmb	17 49 59.3	
	comp=Z,31nm,0.9s						
COEN	Coen	37.68	284	P	P	17 49 51.4	+0.3
COEN				IAmb	IAmb	17 50 07.9	
	comp=Z,25nm,1.4s						
BBOO	Buckleboo	38.52	252	P	P	17 49 57.0	-0.9
BBOO				IAmb	IAmb	17 50 13.5	
	comp=Z,26nm,1.3s						
AS31	Alice Springs	42.16	265	P	P	17 50 26.8	-0.7
ASAR	Alice Springs	42.16	265	P	P	17 50 26.9	-0.5
	comp=Z,3.5nm,0.5s,baz=100,slow=6.8,SNR=62						
ASAR				S	S	17 56 16.2	-0.9
	comp=Z,1.4nm,1.1s,baz=102,slow=17,SNR=4.5						
ASAR	Alice Springs	42.16	265	P	P	17 50 26.6	-0.9
WR0	Warramunga Arr	42.77	271	P	P	17 50 31.4	-0.9
WB2	Warramunga Arr	42.95	271	P	P	17 50 33.1	-0.6
WB2				IAmb	IAmb	17 50 34.7	
	comp=Z,33nm,1.4s						
WRAB	Tennant Creek	42.95	271	P	P	17 50 32.7	-1.0
WRAB				IAmb	IAmb	17 50 35.2	
	comp=Z,28nm,1.4s						
WRA	Warramunga Arr	42.96	271	P	P	17 50 32.9	-0.9
	comp=Z,3.6nm,0.4s,baz=104,slow=8.5,SNR=59						
WRA				S	S	17 56 27.3	-1.4
	comp=Z,1.7nm,1.0s,baz=105,slow=14,SNR=5.0						
WRA	Warramunga Arr	42.96	271	P	P	17 50 32.3	-1.5
WRA					S	17 56 28.0	-0.7
WB0	Warramunga Arr	42.97	271	P	P	17 50 33.1	-0.8
FORT	Forrest	45.55	254	P	P	17 50 53.0	-0.9
FORT				IAmb	IAmb	17 50 54.3	
	comp=Z,44nm,1.4s						
MTN	Manton Dam	48.60	278	P	P	17 51 16.5	-0.9
MTN				IAmb	IAmb	17 51 29.3	
	comp=Z,66nm,1.4s						
KNRA	Kununurra	49.48	273	P	P	17 51 23.6	-0.3
FITZ	Fitzroy Crossi	51.29	269	P	P	17 51 36.7	-0.6
FITZ				IAmb	IAmb	17 51 39.4	
	comp=Z,13nm,0.9s						
MORW	Morawa	56.09	253	P	P	17 52 10.0	-1.4
QSPA	South Pole Qui	61.75	180	P	P	17 52 51.6	+2.2
	comp=Z,1.9nm,0.6s,baz=13,slow=0.7,SNR=18						
QSPA	South Pole Qui	61.75	180	P	P	17 52 51.4	+2.0
MAW	Mawson	73.83	201	P	P	17 54 04.8	+1.2
MJAR	Matsushiro Arr	75.94	326	P	P	17 54 14.8	-1.1
	comp=Z,2.9nm,0.7s,baz=132,slow=5.6,SNR=5.2						
MJAR	Matsushiro Arr	75.94	326	P	P	17 54 15.0	-1.0
MAJO	Matsushiro	75.94	326	P	P	17 54 15.8	-0.1
MAJO				IAmb	IAmb	17 54 31.1	
	comp=Z,25nm,1.2s						
MJB9	Matsu-Tunnel	75.95	326	P	P	17 54 15.8	-0.2
TPUB	Ta-pu	77.42	305	P	P	17 54 22.2	-2.2
SSLB	Suanglung	77.48	306	P	P	17 54 22.9	-1.9
ADK	Adak	79.92	2	P	P	17 54 36.5	-0.7
JKA	Kamikawa-asahi	80.12	333	P	P	17 54 39.0	+0.6
ASAJ	Asahikawa	80.13	333	P	P	17 54 39.0	+0.6
	comp=Z,5.2nm,0.8s,baz=182,slow=5.8,SNR=5.8						
SNAA	Sanae	80.22	179	P	P	17 54 39.2	+0.3
SNAA	Sanae	80.22	179	P	P	17 54 39.1	+0.3
VNA3	Neumayer Olymp	80.41	177	P	P	17 54 40.3	+0.5
VNA2	Neumayer--Watz	80.83	177	P	P	17 54 42.8	+0.9
	baz=185,slow=6.1						
VNA1	Neumayer--Stat	81.07	177	P	P	17 54 42.4	-0.7
KSRS	Korea Array	82.08	320	P	P	17 54 49.1	+0.4
	comp=Z,2.1nm,0.9s,baz=147,slow=3.7,SNR=3.7						
PEA0B	Petropavlovsk-	83.57	346	P	P	17 54 56.1	+0.1
PETK	Petropavlovsk-	83.57	346	P	P	17 54 55.8	-0.2
	comp=Z,4.9nm,0.7s,baz=122,slow=8.2,SNR=22						
PETK	Petropavlovsk-	83.57	346	P	P	17 54 55.9	-0.1
LPIG	La Paz	84.40	59	P	P	17 55 01.9	+1.1
	comp=Z,44nm,0.3s,baz=288,slow=3.2,SNR=3.4						
GSI	Gunungsitoli	84.60	274	P	P	17 55 02.9	+0.8
GSI				IAmb	IAmb	17 55 10.7	
	comp=Z,14nm,0.9s						
UBPT	Khong Chiam	84.70	290	P	P	17 55 02.6	+0.1
USRK	Ussuriysk Ar.	84.86	327	P	P	17 55 02.8	+0.2
	comp=Z,1.5nm,0.7s,baz=247,slow=7.4,SNR=3.6						
USRK	Ussuriysk Ar.	84.86	327	P	P	17 55 02.6	0.0
NVAR	Mina Array Bea	87.49	43	P	P	17 55 16.7	+1.0
	comp=Z,1.5nm,0.7s,baz=222,slow=8.6,SNR=12						
NVAR	Mina Array Bea	87.49	43	P	P	17 55 15.6	-0.2
KLR	Kul'dur	88.72	330	P	P	17 55 21.4	+0.5
	comp=Z,2.0nm,0.7s,baz=97,slow=4.3,SNR=7.4						
PINE	Pine Mountain	89.45	38	P	P	17 55 25.5	+0.7
PINE				IAmb	IAmb	17 55 27.0	
	comp=Z,5.1nm,0.9s						
CMAR	Chiang Mai Arr	91.69	290	P	P	17 55 36.5	+1.1
	comp=Z,0.3nm,0.5s,baz=139,slow=4.3,SNR=4.6						
SEY	Seymchan	93.75	347	P	P	17 55 43.1	-0.7
	comp=Z,1.2nm,0.9s,baz=74,slow=22,SNR=4.6						
PDAR	Pinedale Array	95.41	44	P	P	17 55 52.3	+0.1
	comp=Z,0.3nm,0.7s,baz=207,slow=1.8,SNR=2.7						
PDAR	Pinedale Array	95.41	44	P	P	17 55 52.4	+0.2
MK31	Makanchi Array	115.62	311		PKPdf	18 01 05.7	-1.4
MKAR	Makanchi Array	115.62	311	PKP	PKPdf	18 01 05.8	-1.2
	comp=Z,0.4nm,0.5s,baz=179,slow=0.9,SNR=12						
MKAR	Makanchi Array	115.62	311		PKPdf	18 01 05.4	-1.6
ZALV	Zalesovo Beam	115.78	319	PKP	PKPdf	18 01 05.6	-1.5
	comp=Z,0.2nm,0.3s,baz=354,slow=6.1,SNR=3.0						
ZALV	Zalesovo Beam	115.78	319		PKPdf	18 01 05.0	-2.1
KURK	Kurchatov	118.84	315		PKPdf	18 01 11.4	-1.6
KURBB	Kurchatov Arra	118.88	315	PKP	PKPdf	18 01 12.0	-1.1
	comp=Z,1.2nm,0.6s,baz=114,slow=1.9,SNR=13						
KKAR	Karatay Array	123.02	305		PKPdf	18 01 20.4	-1.0
BVAR	Borovoye Array	124.18	317	PKP	PKPdf	18 01 22.6	-0.7
	comp=Z,2.2nm,0.6s,baz=128,slow=2.4,SNR=14						
ARU	Arti	130.82	322	PKP	PKPdf	18 01 35.2	-0.6
	comp=Z,0.8nm,0.5s,baz=328,slow=5.2,SNR=5.3						
ARU	Arti	130.82	322		PKPdf	18 01 34.9	-1.0
AKTO	Aktyubinsk	131.91	314	PKP	PKPdf	18 01 37.4	-0.7
	comp=Z,0.7nm,0.7s,baz=37,slow=7.3,SNR=3.7						
ARCES	ARCESS Array B	136.36	348	PKP	PKPdf	18 01 44.8	-1.1
	comp=Z,2.8nm,0.8s,baz=68,slow=2.4,SNR=11						
FIA1	FINESS Array S	142.85	340		PKPpre	18 01 53.7	
FINES	FINESS Array B	142.85	340	PKhKP	PKPpre	18 01 54.0	
	comp=Z,2.1nm,0.4s,baz=46,slow=3.8,SNR=25						
FINES	FINESS Array B	142.85	340		PKPpre	18 01 53.9	
KBZ	Khabaz	143.05	306	PKP	PKPab	18 01 56.3	+0.6
	comp=Z,2.4nm,0.9s,baz=16,slow=0.4,SNR=6.6						
NC303	NORSAR Array S	146.37	351		PKPdf	18 02 05.1	+1.2
NB2	NORSAR Subarra	146.57	351	PKP	PKPdf	18 02 05.8	+1.5
	comp=Z,2.2nm,0.5s,baz=12,slow=2.9						
NOA	NORSAR Array B	146.57	351	PKPbc	PKPdf	18 02 05.5	+1.2
	comp=Z,4.1nm,0.6s,baz=15,slow=4.5,SNR=13						
NC602	NORSAR Array S	146.81	350		PKPdf	18 02 06.0	+1.3
KONO	Kongsberg	148.13	351		PKPdf	18 02 09.9	+3.1
AKASG	Malin Array Be	149.01	324	PKPbc	PKPdf	18 02 12.1	+3.6
	comp=Z,6.8nm,0.5s,baz=46,slow=3.4,SNR=45						
AKASG	Malin Array Be	149.01	324		PKPbc	18 02 12.3	-0.8
AKBB	Malin Array Si	149.01	324		PKPbc	18 02 12.5	-0.6
BR131	Keskin Array S	150.63	301		PKPbc	18 02 16.7	-0.9
BRTR	Keskin Array B	150.63	301	PKPbc	PKPbc	18 02 16.9	-0.7
	comp=Z,1.1nm,0.4s,baz=151,slow=4.0,SNR=9.9						
BRTR	Keskin Array B	150.63	301		PKPbc	18 02 16.7	-0.9
CSS	Mathiatis	151.58	292		PKPbc	18 02 19.1	-0.7
BUR08	Bucovina Ar. S	152.95	322		PKPdf	18 02 15.6	+0.8
BURAR	Bucovina Array	152.96	322		PKPbc	18 02 22.7	+0.3
CLL	Collm	155.28	341	*i* PKPab	PKPab	18 02 44.8	-0.4
GERES	GERESS Array B	157.23	338	PKPab	PKPab	18 02 53.3	-0.6
	comp=Z,0.6nm,0.6s,baz=36,slow=5.3,SNR=3.8						
GERES	GERESS Array B	157.23	338		PKPab	18 02 53.0	-0.9
FUORN	Ofenpass-Fuorn	160.29	340		PKPab	18 03 07.3	-0.1
TORD	Torodi Ar. Bea	164.85	184	PKP	PKPdf	18 02 28.9	-0.5
	comp=Z,0.6nm,0.7s,baz=180,slow=1.8,SNR=3.7						
TORD				PKPab	PKPab	18 03 27.8	+0.1
	comp=Z,0.4nm,0.4s,baz=172,slow=4.3,SNR=5.8						
TORD	Torodi Ar. Bea	164.85	184		PKPdf	18 02 28.7	-0.7
TORD					PKPab	18 03 27.9	+0.2

*IDC **04** 17:46:14.0±4.5, 2.62N×127.46E, h186km±53km, mb3.1/5, mb1 3.2/6, mb1mx2.9/48, mbtmp3.6/6, Error ellipse: s-maj=121.2km s-min=18.2km az=68.0*
*MAN **04** 17:46:17.2, 3.26N×128.51E, h16km, mb4.9, ML3.8, MS3.8*
*DJA **04** 17:46:23.8±0.4, 1°N±3°×12°7E±°, h10km, M3.5/4, MLv3.5/4*
ISC 04 17:45:54.2±0.8, **2.41N**±0.05×**127.54E**±0.10, **h10**km, **n14**, σ**3.01**/17, **mb3.6**/5, **1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.64	186	P	Sg	17 47 01.8	+15
LBMI	Labuha	3.03	181	P	Pg	17 46 53.0	+0.8
LBMI				S	Sn	17 47 16.8	-1.7
DDMP	Don Marcelino,	4.10	334	*e*P	Pg	17 47 20.2	+7.4
DDMP				*e*S	Sg	17 48 09.7	+3.6
MATI	Mati	4.69	344	*e*P	Pg	17 47 23.0	-1.1
MATI				*e*S	Sb	17 48 14.3	+1.2
SANI	Sanana	4.69	199	P	Pg	17 47 20.1	-4.1
SWI	Sorong	4.94	131	P	Pg	17 47 28.8	0.0
SIJI	Sorong	4.94	131	P	Pg	17 47 29.4	+0.4
	2.1nm,0.3s,baz=307,slow=17,SNR=9.7						
SKMP	Bagumbayan, Su	5.06	324	*e*P	Pg	17 47 34.0	+2.8
SKMP				*e*S	Sg	17 48 35.0	-1.9
KCP	Kidapawan	5.18	332	⇓*e*P	Pg	17 47 33.9	+0.3
WRA	Warramunga Arr	23.19	164	P	P	17 51 07.2	+5.8
	0.5nm,0.3s,baz=340,slow=9.6,SNR=4.8						
ASAR	Alice Springs	26.65	167	P	P	17 51 38.1	+4.7
	0.2nm,0.3s,baz=345,slow=7.2,SNR=5.8						
ASAR				PcP	PcP	17 54 53.7	-3.7
	0.3nm,0.4s,baz=4.5,slow=2.0,SNR=4.6						
MKAR	Makanchi Array	59.10	325	P	P	17 55 53.9	-1.0
	0.1nm,0.3s,baz=113,slow=6.8,SNR=8.6						
KURBB	Kurchatov Arra	63.28	327	P	P	17 56 21.1	-2.0
	0.4nm,0.6s,baz=125,slow=5.9,SNR=5.3						
BVAR	Borovoye Array	68.86	327	P	P	17 56 57.0	-2.0
	0.3nm,0.4s,baz=104,slow=6.3,SNR=4.3						

*PDG **04** 17:49:16.8±0.2, 38.17N×20.30E, h15km, ML3.8/14, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*ATH **04** 17:49:17.5, 38.16N×20.39E, h16km±1km, ML3.6/12, Error ellipse: s-maj=1.7km s-min=1.0km az=254.0*
*BEO **04** 17:49:17.0±0.8, 38.11N×20.12E, h5km±4km, ML3.6/9*
*THE **04** 17:49:17.3, 38.15N×20.35E, h14km, ML3.8/5, Error ellipse: s-maj=1.2km s-min=0.4km az=270.0*
*IDC **04** 17:49:21.2±1.4, 38.87N×21.01E, h0km, mb3.5/8, mb1 3.6/9, mb1mx3.4/43, mbtmp3.5/9, ML3.6/1, Error ellipse: s-maj=27.0km s-min=23.8km az=47.0*
ISC 04 17:49:17.4±0.8, **38.15N**±0.03×**20.37E**±0.03, **h15**km±4km, **n108**, σ**1.00**/150, **mb3.5**/8, **6C-8D, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.04	21	P	Pg	17 49 20.1	-0.1
CHV1				S	Sg	17 49 21.8	-0.2
KEF3	Kipouria, Keph	0.06	347	P	Pg	17 49 20.4	+0.1
KEF3				S	Sg	17 49 22.3	+0.1
LXR1	Lixouri, Cepha	0.08	48	P	Pg	17 49 20.4	-0.1
LXR1				S	Sg	17 49 22.4	-0.1
KEF2	Argostoli. Kep	0.10	80	P	Pg	17 49 20.5	-0.2
KEF2				S	Sg	17 49 22.4	-0.5
ARG2	Argostoli	0.10	72	P	Pg	17 49 20.5	-0.2
KEF4	Livadi, Kephal	0.12	23	P	Pg	17 49 20.9	-0.1
KEF4				S	Sg	17 49 23.4	+0.1
KEF1	Kardakata, Kep	0.15	33	P	Pg	17 49 21.3	-0.1
KEF1				S	Sg	17 49 23.7	-0.4
VLS	Valsamata	0.18	80	P	Pg	17 49 21.4	-0.4
VLS	Valsamata	0.18	80	P	Pg	17 49 21.5	-0.3
VLS				S	Sg	17 49 24.1	-0.6
VLS				AML	AML	17 49 24.3	
	comp=E,82980µm,0.2s						
VLS				AML	AML	17 49 25.8	
	comp=N,50950µm,0.3s						
VSK1	VASILIKIADES	0.30	31	P	Pg	17 49 23.7	-0.1
VSK1				S	Sg	17 49 28.6	+0.4
	comp=N,57µm,0.3s						
FSK	Fiskardo	0.35	27	P	Pg	17 49 24.6	0.0
FSK				S	Sb	17 49 29.9	-0.7
	comp=N,22µm,0.3s						
FSK	Fiskardo	0.35	27	P	Pg	17 49 24.5	0.0
FSK				S	Sg	17 49 29.7	+0.2
FSK				AML	AML	17 49 30.4	
	comp=E,57987µm,0.2s						
FSK				AML	AML	17 49 30.5	
	comp=N,31446µm,0.4s						
VLMS	Volimes, Zakyn	0.36	139	P	Pg	17 49 25.0	+0.3
VLMS				S	Sb	17 49 30.9	0.0
VLMS				AML	AML	17 49 31.5	
	comp=N,74245µm,0.4s						
VLMS				AML	AML	17 49 31.8	
	comp=E,42717µm,0.2s						
EVGI	Lefkada island	0.53	26	P	Pg	17 49 27.5	-0.3
EVGI				S	Sb	17 49 35.9	+0.2
EVGI	Lefkada island	0.53	26	P	Pg	17 49 27.5	-0.3
EVGI				S	Sb	17 49 35.5	-0.1
ZAK2	Zakynthos	0.56	130	P	Pg	17 49 28.5	+0.2
KRI1	kERI	0.60	143	P	Pg	17 49 28.8	-0.4
KRI1				S	Sb	17 49 38.5	+0.6
	comp=E,11µm,0.4s						
MGNA	Meganis	0.61	33	P	Pg	17 49 28.8	-0.5
MGNA				AML	AML	17 49 38.5	
	comp=E,17136µm,0.4s						
MGNA				AML	AML	17 49 38.7	
	comp=N,12030µm,0.3s						
LKD2	Lefkada island	0.68	20	P	Pg	17 49 30.1	-0.6
LKD2	Lefkada island	0.68	20	P	Pg	17 49 30.1	-0.6
LKD2				AML	AML	17 49 47.5	
	comp=E,5773µm,0.3s						
LKD2				AML	AML	17 49 50.1	
	comp=N,4084µm,0.4s						
AST1	Astakos	0.69	55	P	Pg	17 49 30.4	-0.5
AST1				S	Sb	17 49 41.1	+0.6
	comp=N,8µm,0.3s						
PDO	Prodromos	0.79	55	P	Pg	17 49 32.1	-0.6
PDO				S	Sn	17 49 44.2	-1.2
	comp=N,7µm,0.3s						
PDO	Prodromos	0.79	55	P	Pg	17 49 32.2	-0.6
PDO				AML	AML	17 49 49.8	
	comp=N,10495µm,0.4s						
PDO				AML	AML	17 49 51.4	
	comp=E,9724µm,0.4s						
RLS	Riolos of Patr	0.87	96	P	Pb	17 49 33.6	-0.7
RLS	Riolos of Patr	0.87	96	P	Pb	17 49 33.5	-0.7
PVO	Paravola	1.03	62	P	Pb	17 49 36.7	-0.1
PVO	Paravola	1.03	62	P	Pb	17 49 36.9	+0.1
PVO				AML	AML	17 49 53.7	
	comp=N,6010µm,0.3s						
PVO				AML	AML	17 49 53.9	
	comp=E,14075µm,0.3s						
DRO	Drossia	1.08	100	P	Pb	17 49 37.4	-0.3
DRO	Drossia	1.08	100	P	Pb	17 49 37.5	-0.3
DRO				AML	AML	17 50 02.2	
	comp=N,5198µm,0.5s						
DRO				AML	AML	17 50 02.2	
	comp=E,8317µm,0.5s						
AMT	Artemida-Makis	1.23	120	P	Pb	17 49 40.3	0.0
AMT				AML	AML	17 50 10.9	
	comp=E,4804µm,1.2s						
AMT				AML	AML	17 50 11.2	
	comp=N,3642µm,0.9s						
LAKA	Lakka	1.27	85	P	Pn	17 49 40.6	0.0
ANX	Ano Chora	1.30	70	P	Pn	17 49 41.2	+0.1
ANX				AML	AML	17 50 06.2	
	comp=N,8650µm,0.6s						
ANX				AML	AML	17 50 07.2	
	comp=E,3056µm,0.5s						
SERG	Sergoula	1.36	78	P	Pn	17 49 41.5	-0.3
SERG				AML	AML	17 50 07.5	
	comp=E,2365µm,0.7s						
SERG				AML	AML	17 50 08.4	
	comp=N,2955µm,0.5s						
TRIZ	Trizonia	1.36	80	P	Pn	17 49 41.7	-0.1
EVR	Evrytania	1.37	55	P	Pn	17 49 42.0	0.0
IGT	Igoumenitsa	1.38	359	*e*Pn	Pg	17 49 44.3	+0.3
IGT				*e*Sn	Sg	17 50 01.7	-0.3
IGT	Igoumenitsa	1.38	359	P	Pb	17 49 43.0	+0.1
IGT				AML	AML	17 50 06.9	
	comp=N,1349µm,0.4s						
IGT				AML	AML	17 50 11.7	
	comp=E,969µm,0.4s						
KALE	Kalithea	1.42	80	P	Pn	17 49 42.7	0.0
ITM	Ithomi	1.57	127	P	Pb	17 49 46.0	-0.2
MAKR	Makrakomi, Fth	1.63	57	P	Pb	17 49 46.9	-0.3
AGG	Agios Georgios	1.77	60	P	Pb	17 49 50.8	-0.6
AXAR	Agios Charalam	1.90	70	P	Pb	17 49 52.2	+0.4
PROD	Prodromos	2.00	86	P	Pb	17 49 52.8	-0.7
FNA	Florina	2.75	16	*e*Pn	Pn	17 50 03.2	+2.4
OHR	Ohrid	2.98	6	*e*Pn	Pn	17 50 03.3	-0.8
TIP	Timpagrande	3.00	291	⇑P	Pn	17 50 06.2	+1.7
TIP				⇑S	Sn	17 50 41.0	+0.8
TIR	Tirane	3.22	353	⇑P	Pn	17 50 09.6	+2.2
TIR				⇓S	Sn	17 50 46.4	+1.0
VAY	Valandovo	3.60	28	*e*Pn	Pn	17 50 10.8	+1.8
MATE	Matera	3.78	313	⇓P	Pn	17 50 16.2	+1.2
MATE				⇓S	Sn	17 50 58.1	-1.0
STIP	Stip	3.81	21	*e*Pn	Pn	17 50 12.3	-3.1
SRS	Serrai	3.87	39	*e*Pn	Pn	17 50 18.4	+2.0
ULC	Ulcinj	3.91	348	*e*Pn	Pn	17 50 17.0	+0.2
ULC				*e*Sn	Sn	17 51 02.9	+0.5
DRME	Dracevica, Mon	4.13	348	*e*Pn	Pn	17 50 20.3	+0.4
DRME	Dracevica, Mon	4.13	348	*e*Pn	Pn	17 50 20.4	+0.5
DRME				*e*Sn	Sn	17 51 08.6	+0.6
BUM	Brajici-Budva	4.30	345	*e*Pn	Pn	17 50 22.5	+0.3
BUM				*e*Sn	Sn	17 51 12.3	+0.2
PDG	Podgorica	4.36	349	*e*Pn	Pn	17 50 23.8	+0.8
PDG				*e*Sn	Sn	17 51 14.3	+0.8
PDG	Podgorica	4.36	349	⇑P	Pn	17 50 24.1	+1.1
PDG				⇓S	Sn	17 51 14.2	+0.8
PDG	Podgorica	4.36	349	*e*Pn	Pn	17 50 23.3	+0.3
TTG	Podgorica	4.36	349	*e*Pn	Pn	17 50 23.3	+0.3
TTG				*e*Sn	Sn	17 51 14.3	+0.8
PVY	Plav	4.45	356	⇓*i*Pn	Pn	17 50 25.3	+0.9
PVY				*e*Sn	Sn	17 51 16.8	+0.8
HCY	Herceg Novi	4.53	342	*e*Pn	Pn	17 50 22.7	-2.6
HCY	Herceg Novi	4.53	342	*e*Pn	Pn	17 50 25.3	0.0
HCY				*e*Sn	Sn	17 51 17.8	+0.2
CEME	Cevo	4.53	346	*e*Pn	Pn	17 50 25.4	0.0
CEME				*e*Sn	Sn	17 51 17.6	-0.2
BOSS	Bosilegrad	4.63	20	*e*Pn	Pn	17 50 29.8	+3.0
IVA	Berane	4.73	356	*e*Pn	Pn	17 50 29.0	+0.8
IVA				*e*Sn	Sn	17 51 23.7	+0.9
NKME	Niksic	4.74	347	*e*Pn	Pn	17 50 28.6	+0.3
NKME				*e*Sn	Sn	17 51 23.3	+0.4
KOME	Kolasin	4.74	352	*e*Pn	Pn	17 50 29.4	+1.0
KOME				*e*Sn	Sn	17 51 23.7	+0.6
NKY	Niksic	4.78	348	*e*Pn	Pn	17 50 29.0	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
NKY				eSn	Sn	17 51 24.0	+0.1
BARS	Barje	4.79	13	ePn	Pn	17 50 30.7	+1.7
BARS				eSn	Sn	17 51 25.3	+1.1
TREB	Trebinje	4.82	342	ePn	Pn	17 50 29.2	0.0
TREB				eSn	Sn	17 51 23.6	-1.2
TREB	Trebinje	4.82	342	ePn	Pn	17 50 29.3	0.0
BRY	Bratogost	4.95	344	ePn	Pn	17 50 29.7	-1.5
BRY	Bratogost	4.95	344	ePn	Pn	17 50 31.2	0.0
BRY				eSn	Sn	17 51 28.4	+0.2
VTS	Vitosha	4.97	25	ePn	Pn	17 50 32.7	+1.1
VTS				eSn	Sn	17 51 31.1	+2.2
VTS	Vitosha	4.97	25	⇓P	Pn	17 50 34.2	+2.6
VTS				⇓S	Sn	17 51 30.6	+1.7
SELS	Selova	5.10	6	ePn	Pn	17 50 33.3	+0.1
SJES	Sjenica	5.12	357	eSn	Sn	17 51 33.4	+1.1
STON	Ston	5.14	338	ePn	Pn	17 50 32.2	-1.5
UPM	Unac-Pivata	5.17	348	ePn	Pn	17 50 35.0	+0.7
UPM				eSn	Sn	17 51 33.8	0.0
PLE	Pljevlja	5.23	352	ePn	Pn	17 50 35.6	+0.5
PLE				eSn	Sn	17 51 35.3	+0.2
IVAS	Ivanjica	5.43	358	ePn	Pn	17 50 38.2	+0.5
IVAS				eSn	Sn	17 51 40.0	+0.1
GRUS	Gruza	5.74	3	ePn	Pn	17 50 43.7	+1.7
GRUS				eSn	Sn	17 51 48.1	+0.5
BBLS	Lazići	5.76	353	eSn	Sn	17 51 48.1	0.0
BBLS	Lazići	5.76	353	ePn	Pn	17 50 43.7	+1.4
DIVS	Divibare	5.95	357	ePn	Pn	17 50 45.7	+0.7
DIVS				eSn	Sn	17 51 52.2	-0.7
DIVS	Divibare	5.95	357	ePn	Pn	17 50 44.2	-0.8
HAPS	Han Pijesak,Bl	6.03	350	ePn	Pn	17 50 45.3	-0.7
TRUS	Trudelj	6.07	0	eSn	Sn	17 51 56.0	+0.3
BLY	Banja Luka	7.01	341	ePn	Pn	17 51 02.5	+3.0
FRGS	Fruska Gora	7.02	357	eSn	Sn	17 52 15.9	-3.1
FRGS	Fruska Gora	7.02	357	ePn	Pn	17 50 58.4	-1.1
VOIR		8.08	24	⇑P	Pn	17 51 16.4	+2.3
MORH	Mrgy, Hungar	8.16	352	ePn	Pn	17 51 15.7	+0.5
MLR	Muntele Rosu	8.44	28	⇓P	Pn	17 51 20.7	+1.6
CRES	Cresnjev	8.50	336	ePn	Pn	17 51 19.2	-0.6
VRI	Vrincioaia	9.05	30	⇑P	Pn	17 51 29.7	+2.4
SOKA	Soboth	9.39	337	ePn	Pn	17 51 31.9	-0.2
	comp=E,1.4nm,0.2s						
OBKA	Obir	9.40	335	ePn	Pn	17 51 33.2	+1.0
	comp=E,1.2nm,0.3s						
MOA	Molln	10.67	337	ePn	Pn	17 51 51.0	+1.4
	comp=E,1.2nm,0.2s						
GERES	GERESS Array B	11.73	338	Pn	Pn	17 52 04.5	+0.3
	comp=E,0.2nm,0.3s,baz=155,slow=13,SNR=5.1						
FINES	FINESS Array B	23.59	7	P	P	17 54 25.9	-1.3
	comp=E,0.6nm,0.6s,baz=171,slow=9.7,SNR=7.5						
NOA	NORSAR Array B	23.62	349	P	P	17 54 28.0	+0.4
	comp=E,0.4nm,0.5s,baz=159,slow=9.1,SNR=2.0						
TORD	Torodi Ar. Bea	29.93	219	P	P	17 55 39.0	+14
	comp=E,0.1nm,0.3s,baz=14,slow=6.2,SNR=2.0						
ARCES	ARCESS Array B	31.57	3	P	P	17 55 38.7	-0.2
	comp=E,1.3nm,0.9s,baz=189,slow=11,SNR=5.1						
KURBB	Kurchatov Arra	42.35	53	P	P	17 57 10.0	-0.5
	comp=E,0.4nm,0.5s,baz=280,slow=8.8,SNR=5.5						
MKAR	Makanchi Array	45.42	58	P	P	17 57 35.1	-0.3
	comp=E,0.5nm,0.4s,baz=272,slow=7.5,SNR=22						
ZALV	Zalesovo Beam	45.80	48	P	P	17 57 38.0	-0.2
	comp=E,1.4nm,0.4s,baz=269,slow=8.4,SNR=6.6						
SONM	Songino Array	60.57	51	P	P	17 59 26.4	-0.8
	comp=E,0.3nm,0.6s,baz=286,slow=9.6,SNR=2.1						

IDC 04 18:02:34.9±1.8, 31°.89S×177°.97W, h0km, mb3.7/2, mb1 4.1/4, mb1mx3.8/26, mbtmp3.9/4, ML3.8/2, Error ellipse: s-maj=51.8km s-min=24.0km az=118.0

NEIC 04 18:02:35.9±0.8, 31°.96S±0°.10×178°.0W±0°.2, h10km±2km, mb4.6/4, Error ellipse: s-maj=26.6km s-min=9.9km az=113.0

ISC 04 18:02:37.3±1.4, 31°.97S±0°.09×178°.0W±0°.2, h24km, n16, σ0.83/20, mb4.2/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
RAO	Raoul Island	2.71	1	Pn	Pn	18 03 18.9	-0.5
	59nm,0.3s,baz=90,slow=20,SNR=4.9						
RAO				Sn	Sn	18 03 50.6	-0.9
	76nm,0.3s,baz=108,slow=19,SNR=2.7						
RAO	Raoul Island	2.71	1		Pn	18 03 19.3	-0.1
MXZ	Matakaoa Point	6.35	208	Pn	Pn	18 04 10.9	+1.4
URZ	Urewera	7.44	211	Pn	Pn	18 04 24.9	+0.5
	0.5nm,0.3s,baz=36,slow=14,SNR=4.6						
URZ				Sn	Sn	18 05 46.7	-1.4
	2.1nm,0.3s,baz=45,slow=19,SNR=5.7						
URZ	Urewera	7.44	211		Pn	18 04 24.5	+0.1
URZ					Sn	18 05 47.9	-0.2
OUZ	Omahuta	7.73	243	Pn	Pn	18 04 28.1	-0.2
MSWZ	Moikau Station	10.87	208	Pn	Pn	18 05 10.4	-1.0
AS31	Alice Springs	43.06	269	P	P	18 10 36.1	+0.6
ASAR	Alice Springs	43.06	269	P	P	18 10 37.4	+1.8
	0.4nm,0.5s,baz=112,slow=7.6,SNR=14						
ASAR	Alice Springs	43.06	269	P	P	18 10 36.2	+0.7
WR0	Warramunga Arr	44.01	274	P	P	18 10 43.1	-0.1
WR0				IAmb	IAmb	18 10 46.2	
	comp=Z,15nm,1.5s						
WB2	Warramunga Arr	44.18	274	P	P	18 10 44.6	+0.1
WB2				IAmb	IAmb	18 11 01.7	
	comp=Z,12nm,1.3s						
WRA	Warramunga Arr	44.19	274	P	P	18 10 45.2	+0.6
	comp=Z,1.0nm,0.5s,baz=113,slow=7.7,SNR=8.9						
WB0	Warramunga Arr	44.22	274	P	P	18 10 44.4	-0.5
FINES	FINESS Array B	146.62	339	PKPbc	PKPab	18 22 16.9	-0.3
	comp=Z,0.7nm,0.4s,baz=60,slow=4.2,SNR=14						
HFS	Hagfors	150.78	348	PKPbc	PKiKP	18 22 27.6	0.0
	comp=Z,0.7nm,0.6s,baz=87,slow=3.0,SNR=3.1						
HFS				PKPab	PKPab	18 22 34.8	+0.7
	comp=Z,2.1nm,0.8s,baz=45,slow=4.9,SNR=4.0						

GCG 04 18:03:55.3±0.4, 13°.85N×92°.44W, h138km±24km, MD4.5

IDC 04 18:03:58.8±1.2, 14°.05N×91°.54W, h0km, mb4.1/7, mb1 4.2/10, mb1mx3.9/41, mbtmp4.0/10, ML3.6/3, MS3.5/9, Ms1 3.5/9, ms1mx3.1/40, Error ellipse: s-maj=48.5km s-min=16.2km az=43.0

MEX 04 18:04:01.3±0.8, 13°.65N×92°.06W, h16km±60km, MD4.4

NEIC 04 18:04:05.9±2.0, 14°.05N±0°.09×91°.78W±0°.07, h48km±8km, mb4.3/53, Md4.3/15(MEX), Error ellipse: s-maj=15.1km s-min=7.5km az=213.0

ISC 04 18:04:04.9±0.7, 13°.87N±0°.08×92°.04W±0°.07, h54km, n104, σ1.78/103, mb4.3/23, MS3.5/8, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
ERG	Entre ros, C	0.73	39	eP	Pn	18 04 19.3	+0.1
STG3	Santiaguito 3,	0.95	28	eP	Pn	18 04 21.7	-0.6
THIG		1.06	348		Pn	18 04 20.5	-3.0
THIG		1.06	348	eP	Pn	18 04 21.0	-2.5
THIG				iS	Sn	18 04 35.5	-1.8
FUG	Fuego 3	1.30	63	eP	Pn	18 04 26.3	-0.6
PCG	Pacaya	1.48	69	eP	Pn	18 04 29.3	-0.2
IXG	Ixpaco	1.58	79	eP	Pn	18 04 30.3	-0.5
NBG	Las Nubes	1.79	66	eS	Sn	18 05 02.3	+6.8
PCIG		2.15	328		Pn	18 04 35.9	-2.6
PCIG					Sn	18 05 00.9	-3.1
PCIG		2.15	328	eP	Pn	18 04 35.9	-2.6
PCIG				eS	Sn	18 05 00.9	-3.1
CCIG	Comitan	2.40	358		Pn	18 04 42.3	+0.3
CCIG	Comitan	2.40	358		Pn	18 04 43.5	+1.5
CCIG	Comitan	2.40	358	eP	Pn	18 04 43.5	+1.5
CCIG				iS	Sn	18 05 12.2	+1.8
SNET	Serv Nac Est T	2.73	93	Pn	Pn	18 04 44.1	-2.3
TGIG		3.08	340		Pn	18 04 49.8	-1.3
TGIG		3.08	340	eP	Pn	18 04 49.8	-1.3
TGIG				eS	Sn	18 05 24.6	-2.2
CMIG	Matias Romero	4.22	320	Pn	Pn	18 05 05.2	-1.5
	2.2nm,0.3s,baz=143,slow=9.8,SNR=12						
CMIG				Sn	Sn	18 05 56.3	+1.6
	10nm,0.3s,baz=126,slow=6.1,SNR=5.7						
CMIG				Lg	Lg	18 06 10.0	
	18nm,0.3s,baz=240,slow=22,SNR=7.8						
CMIG	Matias Romero	4.22	320		Pn	18 05 04.5	-2.3
CMIG	Matias Romero	4.22	320	eP	Pn	18 05 04.5	-2.3
TGUH	Tegucigalpa,Un	4.63	87		Pn	18 05 07.2	-5.3
ESTN	Estel	5.57	97		Pn	18 05 21.5	-3.8
ACON	Acoyapa	6.95	105	Pn	Pn	18 05 42.9	-1.4
TLIG	Tlapa	7.28	301	Pn	Pn	18 05 51.1	+2.3
JTS	Las Juntas de	7.79	116	Pn	Pn	18 05 48.4	-7.3
	0.9nm,0.3s,baz=288,slow=19,SNR=1.9						
JTS				Lg	Lg	18 07 54.9	
	0.3nm,0.3s,baz=17,slow=10,SNR=6.8						
JTS	Las Juntas de	7.79	116		Pn	18 05 52.9	-2.9
H06E1	SOCORRO T-PHAS	18.77	288	T	T	18 27 36.1	
	SNR=12						
TX32	Lajitas Array	18.79	327	P		18 08 21.1	+1.1
TXAR	Lajitas Array	18.79	327	P	Pn	18 08 22.2	+1.3
	0.1nm,0.3s,baz=152,slow=7.5,SNR=27						
TXAR				LR	LR	18 16 27.7	
	comp=Z,30nm,18.1s,baz=0.0,slow=40						
TXAR	Lajitas Array	18.79	327	P	Pn	18 08 22.4	+1.4
TX31	Lajitas Ar. Si	18.79	327	P	Pn	18 08 22.5	+1.6
H06S1	SOCORRO T	18.79	287	T	T	18 27 33.6	
	SNR=19						
OTAV	Otavalo	19.09	134	P	Pn	18 08 26.0	+1.0
TIGA	Tifton	19.13	23	P	P	18 08 21.7	-1.9
Z41A	Richland Creek	19.32	358	P	P	18 08 24.7	-1.0
Z41A				IAmb	IAmb	18 08 48.7	
	comp=Z,11nm,0.7s						
ROSC	El Rosal	19.63	116	P	P	18 08 29.0	-0.6
ROSC				IAmb	IAmb	18 08 46.4	
	comp=Z,15nm,1.2s						
ABTX	Abilene, Hawle	19.92	341	P	P	18 08 32.7	+0.4
LPIG	La Paz	20.03	303	LR	LR	18 16 34.3	
	comp=Z,90nm,19.8s,baz=198,slow=37						
RUSC	La Rusia	20.27	111	P	P	18 08 36.8	+0.1
FLOC	Florencia	20.29	126	P	P	18 08 37.1	+0.7
X37A	Clayton	20.85	352	P	P	18 08 42.9	+0.6
X37A				IAmb	IAmb	18 08 52.5	
	comp=Z,16nm,1.4s						
X48A	Hartselle	20.99	12	P	P	18 08 42.3	-1.4
X48A				IAmb	IAmb	18 08 53.3	
	comp=Z,12nm,1.2s						
FPAL	Fort Paine	21.39	15	P	P	18 08 46.3	-1.8
MNTX	Cornudas Mount	21.56	328	P	P	18 08 51.8	+1.9
MNTX				IAmb	IAmb	18 08 54.1	
	comp=Z,8.5nm,1.1s						
W35A	Tecumseh	21.64	349	P	P	18 08 51.0	+0.3
WMOK	Wichita Mounta	21.66	345	P	P	18 08 50.9	0.0
MSTX	Muleshoe	22.26	336	P	P	18 08 57.8	+0.3
MSTX				IAmb	IAmb	18 09 21.3	
	comp=Z,13nm,1.3s						
WVT	Waverly	22.49	9	P	P	18 08 58.5	-1.4
AMTX	Amarillo	22.67	339	P	P	18 09 01.2	-0.6
AMTX				IAmb	IAmb	18 09 03.2	
	comp=Z,16nm,1.2s						
TKL	Tuckaleechee C	22.94	17	LR	LR	18 19 12.0	
	comp=Z,180nm,19.6s,baz=196,slow=40						
T47A	Sharon Grove	23.44	10	P	P	18 09 08.2	-1.3
T47A				IAmb	IAmb	18 09 09.7	
	comp=Z,10nm,1.0s						
121A	Cookes Peak, D	23.50	325	P	P	18 09 12.9	+2.6
319A	Douglas	23.54	321	P	P	18 09 11.6	+1.0
319A				IAmb	IAmb	18 09 15.3	
	comp=Z,12nm,1.1s						
S44A	Carbondale	23.86	5	P	P	18 09 12.4	-0.8
S44A				IAmb	IAmb	18 09 14.9	
	comp=Z,16nm,0.9s						
T49A	Edmonton	23.86	13	P	P	18 09 13.0	-0.3
T49A				IAmb	IAmb	18 09 24.7	
	comp=Z,12nm,1.4s						
CCM	Cathedral Cave	24.10	2	P	P	18 09 14.1	-1.4
MPR	Mayaguez	24.31	76	P	P	18 09 14.8	-2.8
MLPR	Magueyes Islan	24.37	77	P	P	18 09 17.2	-0.9
ANMO	Albuquerque	24.70	331	P	P	18 09 22.5	+1.3
	comp=Z,1.6nm,0.5s,baz=148,slow=14,SNR=4.1						
ANMO	Albuquerque	24.70	331	P	P	18 09 22.3	+1.1
ATAH	Atahualpa	24.88	146	LR	LR	18 17 16.1	
	comp=Z,59nm,18.7s,baz=344,slow=32						
OLIL	Olney	25.01	7	P	P	18 09 22.8	-1.0
OLIL				IAmb	IAmb	18 09 26.8	
	comp=Z,23nm,1.2s						
SJG	San Juan	25.23	77	LR	LR	18 20 20.9	
	comp=Z,105nm,18.6s,baz=124,slow=40						
CBYP	Canovanas	25.52	77	P	P	18 09 24.8	-3.9
T25A	Trinidad	25.67	337	P	P	18 09 32.2	+2.1
T25A				IAmb	IAmb	18 09 35.4	
	comp=Z,16nm,1.6s						
X16A	Lo Mia Camp, P	26.96	323	P	P	18 09 41.8	+0.1
MVCO	Mesa Verde	27.50	331	P	P	18 09 48.9	+2.3
MVCO				IAmb	IAmb	18 09 50.4	
	comp=Z,13nm,1.2s						
PFO	Pinyon Flats O	29.63	316	LR	LR	18 23 35.2	
	comp=Z,69nm,19.4s,baz=114,slow=39						
SRU	San Rafael Swe	29.98	330	P	P	18 10 10.3	+1.8
Q16A	Castle Valley	30.14	329	P	P	18 10 11.7	+1.7
SZCU	Shurtz Canyon	30.16	325	P	P	18 10 11.8	+1.7
CCUT	Cedar City	30.28	325	P	P	18 10 14.2	+3.0
MSU	Marysvale	30.34	328	P	P	18 10 14.9	+3.1
P17A	Butcher Ranch,	30.36	331	P	P	18 10 13.0	+1.1
DUG	Dugway, Tooele	31.93	329	P	P	18 10 25.6	-0.1
DUG				IAmb	IAmb	18 10 29.8	
	comp=Z,9.6nm,1.6s						
TCUT	Toone Canyon	31.98	332		P	18 10 27.5	+1.3
BGU	Big Grassy Mou	32.59	330	P	P	18 10 34.0	+2.4
REDW	Red Top Meadow	33.55	335	P	P	18 10 40.7	+0.8
NV11	Mina Array Sit	33.66	321	P	P	18 10 44.3	+3.5
NV11				IAmb	IAmb	18 10 45.3	
	comp=Z,4.5nm,1.1s						
TPAW	Teton Pass	33.69	335	P	P	18 10 42.3	+1.1
TPAW				IAmb	IAmb	18 10 44.1	
	comp=Z,5.3nm,1.2s						
NVAR	Mina Array Bea	33.75	321	P	P	18 10 44.6	+2.9
	comp=Z,1.9nm,0.8s,baz=140,slow=9.1,SNR=15						
NVAR				PcP	PcP	18 13 22.3	+2.0
	comp=Z,0.1nm,0.4s,baz=125,slow=4.5,SNR=2.7						
NVAR				LR	LR	18 26 21.0	
	comp=Z,110nm,19.0s,baz=178,slow=40						
NVAR	Mina Array Bea	33.75	321	P	P	18 10 44.3	+2.6
KVN	Kaiserville	34.03	322	P	P	18 10 46.6	+2.5
KVN				IAmb	IAmb	18 10 50.8	
	comp=Z,2.8nm,1.0s						
YHB	Horse Butte	34.84	336	P	P	18 10 52.1	+1.1
MCMT	McKenzie Canyo	35.58	334	P	P	18 10 59.0	+1.6
J08A	Circle Bar Ran	37.13	327	P	P	18 11 12.5	+1.9
F10A	Beach Ranch, E	38.41	331	P	P	18 11 22.3	+1.0
F10A				IAmb	IAmb	18 11 28.0	
	comp=Z,6.0nm,0.9s						
SIV	San Ignacio	42.63	133	P	P	18 11 55.4	-0.9
	comp=Z,1.8nm,0.9s,baz=303,slow=8.8,SNR=8.3						
SCHQ	Schefferville	45.36	20	P	P	18 12 15.9	-1.8
	comp=Z,4.8nm,0.9s,baz=219,slow=8.2,SNR=8.6						
SCHQ				PcP	PcP	18 13 56.3	-0.1
	comp=Z,1.5nm,0.7s,baz=194,slow=4.2,SNR=2.8						
SCHQ				LR	LR	18 33 02.5	
	comp=Z,172nm,18.2s,baz=332,slow=39						
SCHQ	Schefferville	45.36	20	P	P	18 12 16.3	-1.4
SCHQ				IAmb	IAmb	18 12 17.9	
	comp=Z,8.1nm,1.1s						
YKA	Yellowknife Ar	51.15	347	P	P	18 13 02.5	+0.4
	comp=Z,1.0nm,0.7s,baz=150,slow=7.6,SNR=16						
YKA				PcP	PcP	18 14 18.1	+1.0
	comp=Z,0.9nm,0.9s,baz=152,slow=3.3,SNR=10						
BCAR	Beaver Creek A	60.14	336	P	P	18 14 09.0	+2.2
INK	Inuvik	60.56	344	P	P	18 14 10.3	+0.9
INK				IAmb	IAmb	18 14 12.3	
	comp=Z,5.8nm,1.1s						
PRP	Porcupine Dome	62.79	338	P	P	18 14 25.8	+1.1
ILAR	Eielson Array	62.95	337	P	P	18 14 26.6	+1.1
	comp=Z,3.1nm,1.1s,baz=126,slow=5.0,SNR=18						
ILAR	Eielson Array	62.95	337	P	P	18 14 26.4	+0.8
BMAR	Burnt Mountain	63.40	341	P	P	18 14 29.8	+1.1
NOA	NORSAR Array B	84.28	28	LR	LR	18 52 50.1	
	comp=Z,20nm,18.7s,baz=305,slow=35						
ARCES	ARCESS Array B	86.27	18	P	P	18 16 41.2	+0.7
	comp=Z,1.5nm,0.8s,baz=308,slow=4.4,SNR=3.3						
ARCES	ARCESS Array B	86.27	18	P	P	18 16 41.7	+1.1
TIXI	Tiksi	90.38	348	P	P	18 17 00.1	+0.1
SUW	Suwalki	92.98	32	P	P	18 17 13.0	+0.6
KSH	Kashi	125.73	11	PKP	PKPdf	18 22 57.2	-3.9
KSH				PP	PP	18 24 53.7	+1.5
LZH	Lanzhou	128.10	344	ePKP	PKPdf	18 23 05.4	-0.4
LZH				pPKP	pPKPdf	18 23 23.5	+1.6
LZH				sPKP		18 23 31.2	
CMAR	Chiang Mai Arr	146.10	341	PKPbc	PKPbc	18 23 41.0	+1.1
	comp=Z,4.2nm,0.8s,baz=340,slow=3.7,SNR=30						

IASPEI 04 18:19:32.9±0.8, 38°.35N±0°.01×21°.97E±0°.02, h10km±4km, mb3.9/12, MS3.1/4, Error ellipse: s-maj=2.2km s-min=2.1km az=100.5, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009

IDC 04 18:19:32.1±0.8, 38°.41N×22°.09E, h0km, mb3.8/13, mb1 3.9/17, mb1mx3.7/43, mbtmp3.8/17, ML3.3/4, MS3.2/6, Ms1 3.2/6, ms1mx2.8/45, Error ellipse: s-maj=17.9km s-min=16.5km az=45.0

ATH 04 18:19:32.7, 38°.34N×21°.98E, h12km±1km, ML3.5/17, Error ellipse: s-maj=1.1km s-min=0.5km az=324.0

THE 04 18:19:33.2, 38°.34N×21°.97E, h8km±1km, ML3.4/22, Error ellipse: s-maj=1.4km s-min=0.4km az=85.0

BEO 04 18:19:34.1±0.9, 38°.19N×22°.08E, h15km, ML3.5/6

ISC 04 18:19:33.2±0.7, 38°.34N±0°.01×22°.00E±0°.01, h9km±3km, n149, σ1.17/198, mb3.9/12, MS3.1/4, 8C-3D, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
TRIZ	Trizonia	0.07	67	P	Pg	18 19 35.1	-0.1
TRIZ				S	Sg	18 19 37.1	+0.4
	100µm,0.3s						
TRIZ	Trizonia	0.07	67	P	Pg	18 19 35.1	-0.1
TRIZ				S	Sg	18 19 37.0	+0.3
SERG	Sergoula	0.09	33	P	Pg	18 19 35.3	-0.2
SERG				S	Sg	18 19 37.0	-0.2
	69µm,0.2s						
SERG	Sergoula	0.09	33	P	Pg	18 19 35.3	-0.2
SERG				S	Sg	18 19 37.0	-0.2
SERG				AML	AML	18 19 37.7	
SERG				AML	AML	18 19 37.9	
LAKA	Lakka	0.10	188	P	Pg	18 19 35.2	-0.5
LAKA				S	Sg	18 19 38.0	+0.5
	19µm,0.7s						
LAKA	Lakka	0.10	188	P	Pg	18 19 35.3	-0.5
LAKA				S	Sg	18 19 37.6	+0.1
LAKA				AML	AML	18 19 38.9	
	comp=E,46277µm,0.6s						
LAKA				AML	AML	18 19 42.3	
	comp=N,32237µm,0.7s						
EFP	Efpalio	0.11	321	P	Pg	18 19 35.2	-0.7
EFP				S	Sg	18 19 37.1	-0.6
	comp=N,223µm,0.3s						
EFP	Efpalio	0.11	321	P	Pg	18 19 35.2	-0.7
EFP				S	Sg	18 19 37.2	-0.5
EFP				AML	AML	18 19 37.4	
EFP				AML	AML	18 19 37.5	
ALIK	Aliki, Aigiali	0.12	131	P	Pg	18 19 36.1	+0.1
ALIK				S	Sg	18 19 39.8	+1.9
KALE	Kalithea	0.12	65	P	Pg	18 19 36.1	0.0
KALE				S	Sg	18 19 38.7	+0.6
	comp=N,20µm,0.4s						
KALE	Kalithea	0.12	65	P	Pg	18 19 36.1	0.0
KALE				S	Sg	18 19 38.5	+0.4
KALE				AML	AML	18 19 39.0	
	comp=E,35971µm,0.5s						
KALE				AML	AML	18 19 40.8	
	comp=N,48750µm,0.2s						
UPR	University Cam	0.17	251	P	Pg	18 19 36.2	-0.7
UPR				S	Sg	18 19 38.8	-0.6
UPR	University Cam	0.17	251	P	Pg	18 19 36.3	-0.5
UPR				S	Sg	18 19 39.4	0.0
ANX	Ano Chora	0.26	347	P	Pg	18 19 37.9	-0.6
ANX				S	Sg	18 19 41.2	-0.8
	comp=N,37µm,0.5s						
ANX	Ano Chora	0.26	347	P	Pg	18 19 38.0	-0.5
ANX				S	Sg	18 19 42.3	+0.3
ANX				AML	AML	18 19 42.6	
	comp=N,69859µm,0.3s						
ANX				AML	AML	18 19 44.5	
	comp=E,74123µm,0.6s						
KLV	Kalavryta, Ach	0.32	158	P	Pg	18 19 39.2	-0.3
KLV				S	Sg	18 19 43.9	+0.1
	comp=E,3µm,0.2s						
KLV	Kalavryta, Ach	0.32	158	P	Pg	18 19 39.2	-0.3
KLV				S	Sg	18 19 44.5	+0.7
DLFA	Delphi	0.42	70	P	Pg	18 19 40.8	-0.5
DLFA				S	Sb	18 19 48.0	-1.2
DLFA				AML	AML	18 19 51.8	
	comp=E,8955µm,0.3s						
DLFA				AML	AML	18 19 53.6	
	comp=N,8476µm,0.6s						
DRO	Drossia	0.45	210	P	Pg	18 19 41.3	-0.6
DRO				S	Sg	18 19 47.6	-0.2
	comp=N,12µm,0.4s						
DRO	Drossia	0.45	210	P	Pg	18 19 41.4	-0.6
DRO				S	Sg	18 19 48.4	+0.6
DRO				AML	AML	18 19 51.2	
	comp=E,28077µm,0.4s						
DRO				AML	AML	18 19 53.9	
	comp=N,20825µm,0.3s						
PVO	Paravola	0.46	307	P	Pg	18 19 41.4	-0.8
PVO	Paravola	0.46	307	P	Pg	18 19 41.4	-0.8
PVO				S	Sg	18 19 48.5	+0.3
PVO				AML	AML	18 19 52.5	
	comp=N,10533µm,0.8s						
PVO				AML	AML	18 20 00.6	
	comp=E,11807µm,0.8s						
RLS	Riolos of Patr	0.50	236	P	Pg	18 19 42.3	-0.7
RLS				S	Sg	18 19 49.4	-0.2
	comp=E,5µm,0.5s						
RLS	Riolos of Patr	0.50	236	P	Pg	18 19 42.3	-0.7
RLS				S	Sg	18 19 50.0	+0.5
RLS				AML	AML	18 19 50.2	
	comp=E,8707µm,0.6s						
RLS				AML	AML	18 19 52.4	
	comp=N,11313µm,0.5s						
EVR	Evrytania	0.59	346	P	Pg	18 19 44.0	-0.8
EVR				S	Sb	18 19 54.2	-0.2
	comp=N,8µm,0.5s						
EVR	Evrytania	0.59	346	P	Pg	18 19 44.0	-0.8
EVR				S	Sg	18 19 53.2	+0.6
EVR				AML	AML	18 19 56.6	
	comp=N,18555µm,0.5s						
EVR				AML	AML	18 19 58.3	
	comp=E,13336µm,0.5s						
AXAR	Agios Charalam	0.67	50	P	Pb	18 19 45.7	-1.4
AXAR				S	Sb	18 19 55.7	-0.9
AXAR				AML	AML	18 19 59.7	
	comp=E,16316µm,0.3s						
AXAR				AML	AML	18 20 03.8	
	comp=N,26246µm,0.6s						
MAKR	Makrakomi, Fth	0.68	9	P	Pg	18 19 45.6	-0.8
MAKR				S	Sb	18 19 57.4	+0.5
	comp=N,6µm,0.4s						
MAKR	Makrakomi, Fth	0.68	9	P	Pg	18 19 46.0	-0.3
MAKR				S	Sg	18 19 55.7	+0.4
MAKR				AML	AML	18 19 58.7	
	comp=E,16981µm,0.4s						
MAKR				AML	AML	18 20 00.9	
	comp=N,8389µm,0.4s						
PDO	Prodromos	0.69	292	P	Pg	18 19 45.4	-1.1
PDO				S	Sg	18 19 56.3	+0.8
	comp=N,7µm,0.3s						
PDO	Prodromos	0.69	292	P	Pg	18 19 45.5	-1.0
PDO				S	Sg	18 19 55.5	0.0
PDO				AML	AML	18 20 00.2	
	comp=E,10488µm,0.4s						
PDO				AML	AML	18 20 01.4	
	comp=N,8853µm,0.3s						
PROD	Prodromos	0.72	96	P	Pb	18 19 46.9	-1.0
PROD	Prodromos	0.72	96	P	Pb	18 19 46.9	-1.0
PROD				S	Sb	18 19 56.1	-1.7
AGG	Agios Georgios	0.73	21	P	Pb	18 19 46.2	-1.1
AGG				S	Sb	18 19 58.2	-0.1
	comp=N,2µm,0.4s						
AGG	Agios Georgios	0.73	21	P	Pb	18 19 46.1	-1.1
AGG				S	Sb	18 19 57.9	-0.4
AGG				AML	AML	18 19 59.6	
	comp=E,4321µm,0.4s						
AGG				AML	AML	18 20 00.9	
	comp=N,4611µm,0.5s						
AST1	Astakos	0.74	286	P	Pg	18 19 46.5	-1.0
AST1				S	Sg	18 19 58.6	+1.5
	comp=N,5µm,0.5s						
LTK	Loutraki	0.83	112	P	Pb	18 19 49.0	-0.8
LTK	Loutraki	0.83	112	P	Pb	18 19 49.0	-0.8
AMT	Artemida-Makis	0.84	196	P	Pg	18 19 48.4	-0.9
AMT				S	Sb	18 20 02.2	+0.9
	comp=N,3µm,0.4s						
AMT	Artemida-Makis	0.84	196	P	Pg	18 19 48.6	-0.7
AMT				S	Sg	18 19 59.5	-0.7
AMT				AML	AML	18 20 09.8	
	comp=E,5720µm,0.4s						
AMT				AML	AML	18 20 09.9	
	comp=N,6399µm,0.4s						
LKR	Lokris	0.85	68	P	Pb	18 19 48.7	-1.3
LKR	Lokris	0.85	68	P	Pb	18 19 48.8	-1.3

LKR S Sn 18 20 02.1 -1.8
LKR AML AML 18 20 05.4
comp=E,5032µm,0.2s
LKR AML AML 18 20 05.5
comp=N,3487µm,0.2s
LOUT Loutraki 0.85 114 P Pn 18 19 50.4 -1.0
LOUT Loutraki 0.85 114 P Pn 18 19 50.3 -1.0
MGNA Meganis 1.00 289 P Pb 18 19 50.9 -1.7
VIL2 Platees 1.01 97 P Pn 18 19 53.3 -0.3
VLX Vlachokerasia 1.01 162 P Pg 18 19 51.6 -1.1
VLX S Sn 18 20 08.3 +0.2
comp=N,3µm,0.7s
VLX Vlachokerasia 1.01 162 P Pg 18 19 51.6 -1.1
VILL Villia 1.05 99 P Pn 18 19 53.9 -0.3
EVGI Lefkada island 1.09 285 P Pb 18 19 51.8 -2.4
FSK Fiskardo 1.13 277 P Pn 18 19 53.0 -2.2
LKD2 Lefkada island 1.14 294 P Pn 18 19 53.7 -1.7
LKD2 Lefkada island 1.14 294 P Pn 18 19 53.8 -1.6
VLMS Volimes, Zakyn 1.15 247 P Pn 18 19 53.8 -1.7
KRI1 kERI 1.15 234 P Pn 18 19 53.9 -1.6
ITM Ithomi 1.16 183 P Pb 18 19 53.9 -1.5
ITM S Sn 18 20 12.6 +1.0
comp=N,932nm,0.7s
ITM Ithomi 1.16 183 P Pb 18 19 54.0 -1.4
THL Klokotos Trika 1.22 1 P Pn 18 19 55.5 -1.0
THL S Sg 18 20 12.9 +0.4
comp=N,858nm,0.7s
THL Klokotos Trika 1.22 1 P Pn 18 19 55.5 -1.0
THL S Sg 18 20 13.0 +0.4
THL AML AML 18 20 14.5
comp=E,1964µm,0.7s
THL AML AML 18 20 18.4
comp=N,1432µm,0.7s
KLMT Kalamata 1.28 178 P Pn 18 19 56.5 -0.7
KLMT S Sg 18 20 15.5 +1.2
comp=N,1µm,0.8s
DID Didima 1.29 130 P Pg 18 19 57.1 -0.8
DID S Sg 18 20 15.6 +1.0
comp=N,1µm,0.7s
DID Didima 1.29 130 P Pg 18 19 57.3 -0.6
MRKA Markates 1.30 73 P Pg 18 19 56.8 -1.4
MRKA Markates 1.30 73 P Pg 18 19 57.6 -0.6
KRND KRANIDI 1.32 136 P Pg 18 19 57.7 -0.8
KRND KRANIDI 1.32 136 P Pg 18 19 58.1 -0.4
NEO Neokhori 1.36 44 P Pb 18 19 57.9 -1.0
NEO Neokhori 1.36 44 P Pb 18 19 58.1 -0.8
XOR Xorichti 1.39 42 P Pb 18 19 58.4 -0.9
XOR Xorichti 1.39 42 P Pb 18 19 58.5 -0.8
ATH Athens Observa 1.41 105 P Pg 18 19 59.5 -0.7
ATH S Sg 18 20 18.7 +0.3
comp=N,788nm,0.6s
ATH Athens Observa 1.41 105 P Pg 18 19 59.3 -0.9
SKIA Skiathos 1.42 54 P Pb 18 19 58.8 -1.0
PYL PYLOS 1.46 188 P Pn 18 19 59.3 -0.4
PYL PYLOS 1.46 188 P Pn 18 19 59.2 -0.5
ATHU Athens Univers 1.46 104 P Pg 18 20 00.1 -1.1
ATHU Athens Univers 1.46 104 P Pg 18 20 00.1 -1.1
VLY Voula,Athens 1.50 108 P Pg 18 20 00.6 -1.4
VLY Voula,Athens 1.50 108 P Pg 18 20 00.5 -1.4
PTL Penteli 1.50 101 P Pb 18 20 00.1 -1.1
PTL Penteli 1.50 101 P Pg 18 20 00.7 -1.3
EREA Eretria 1.52 86 P Pb 18 20 00.3 -1.3
JAN Janina 1.59 326 P Pb 18 20 03.1 +0.3
KPRO Kipourio 1.69 343 P Pb 18 20 03.9 -0.6
KPRO Kipourio 1.69 343 P Pb 18 20 03.7 -0.7
AOS Alonnisos 1.69 60 P Pb 18 20 03.0 -1.5
IGT Igoumenitsa 1.76 313 eP Pn 18 20 05.8 +0.1
IGT Igoumenitsa 1.76 313 P Pb 18 20 05.4 -0.2
VLI Veliai 1.78 155 P Pb 18 20 05.1 -1.0
VLI Veliai 1.78 155 P Pb 18 20 05.1 -1.0
LIT Litokhoron 1.80 12 P Pn 18 20 04.6 +0.1
LIT Litokhoron 1.80 12 P Pn 18 20 04.6 +0.1
KARY Karystos 1.95 98 P Pb 18 20 07.5 -1.4
PENT Pentalofos 1.97 341 P Pb 18 20 08.2 -1.1
KZN Kozani 1.97 355 P Pn 18 20 07.5 +0.6
KZN S Sn 18 20 31.5 -0.3
comp=N,425nm,0.5s
KTI Kastanea 2.05 3 P Pn 18 20 08.9 +0.9
FNA Florina 2.49 349 P Pn 18 20 14.7 +0.8
FNA Florina 2.49 349 eP Pb 18 20 16.1 -2.0
GRG Griva 2.63 7 P Pn 18 20 16.7 +0.8
SOH Sokhos 2.69 23 P Pn 18 20 17.2 +0.5
KNT Kendrikon 2.90 14 P Pn 18 20 20.4 +0.8
OHR Ohrid 2.92 342 eP Pb 18 20 23.6 -1.9
VAY Valandovo 3.01 8 eP Pn 18 20 23.5 +2.4
VAY Valandovo 3.01 8 eP Pb 18 20 24.2 -2.8
SRS Serrai 3.04 23 eP Pn 18 20 22.8 +1.4
STIP Stip 3.35 2 eP Pn 18 20 28.5 +2.7
TIR Tirane 3.42 332 ⇑P Pn 18 20 28.1 +1.4
MMB Musomiste 3.51 22 eP Pn 18 20 28.2 +0.3
KKB Krupnik 3.62 13 eP Pb 18 20 33.6 -3.8
IDI Anoyia 3.83 142 Pn Pn 18 20 33.1 +0.7
comp=N,1.5nm,0.3s,baz=321,slow=11,SNR=9.7
IDI Sn Sn 18 21 18.4 +0.8
comp=N,1.2nm,0.3s,baz=330,slow=20,SNR=2.8
RZN Rozhen 3.94 31 eP Pn 18 20 37.2 +3.1
BOSS Bosilegrad 4.17 5 eP Pn 18 20 38.4 +1.4
TIP Timpagrande 4.18 283 ⇑P Pn 18 20 39.1 +1.9
TIP ⇑S Sn 18 21 28.7 +2.5
VTS Vitosha 4.38 12 eP Pn 18 20 41.6 +1.6
VTS eSn Sn 18 21 31.3 +0.1
VTS Vitosha 4.38 12 ⇑P Pn 18 20 42.6 +2.6
VTS ⇑S Sn 18 21 32.1 +1.0
VTS Vitosha 4.38 12 eP Pn 18 20 41.4 +1.4
BARS Barje 4.47 358 eP Pn 18 20 44.1 +2.9
MATE Matera 4.70 301 ⇓P Pn 18 20 45.8 +1.6
SELS Selova 4.92 353 eP Pn 18 20 49.1 +1.8
ZAPS Zavoj 4.95 5 eP Pn 18 20 50.4 +2.6
ZAGS Zajecar 5.47 2 eP Pn 18 20 56.5 +1.6
GRUS Gruza 5.63 351 eP Pn 18 20 58.6 +1.6
GRUS eSn Sn 18 22 02.6 +0.8
BBLS Lazići 5.86 341 eSn Sn 18 22 08.7 +1.1
DIVS Divibare 5.95 346 eP Pn 18 21 02.9 +1.4
DIVS eSn Sn 18 22 10.5 +0.7
TRUS Trudelj 6.00 349 eP Pn 18 21 04.4 +2.3
GZR Gura Zlata 7.07 4 ⇓P Pn 18 21 18.7 +1.8
VOIR 7.45 17 ⇑P Pn 18 21 24.0 +1.9
MLR Muntele Rosu 7.73 21 Pn Pn 18 21 25.7 -0.2
comp=N,0.2nm,0.3s,baz=214,slow=7.3,SNR=3.2
MLR LR LR 18 25 20.8
comp=N,166nm,18.8s,baz=128,slow=46
DOPR Dopca 8.03 17 ⇑P Pn 18 21 32.2 +2.2
VRI Vrincioaia 8.30 24 ⇑P Pn 18 21 34.9 +1.2
BRTR Keskin Array B 9.17 78 Pn Pn 18 21 45.6 -0.1
comp=N,0.2nm,0.3s,baz=266,slow=12,SNR=6.4
BURAR Bucovina Array 9.56 13 ⇓P Pn 18 21 54.4 +3.3
VYHS Vyhne 10.41 348 ePN Pn 18 21 56.9 -5.7
GERES GERESS Array B 12.09 333 LR LR 18 27 41.5
comp=N,94nm,19.6s,baz=123,slow=41
MMAI Mount Meron Ar 12.12 112 Pn Pn 18 22 25.8 -0.3
comp=N,0.2nm,0.3s,baz=303,slow=12,SNR=2.5
ESDC Sonseca Array 20.20 282 P P 18 24 09.1 +0.8
comp=N,1.0nm,0.7s,baz=80,slow=12,SNR=3.9
HFS Hagfors 22.44 349 P P 18 24 31.8 -0.4
comp=N,2.0nm,0.5s,baz=165,slow=12,SNR=14
FINES FINESS Array B 23.27 5 P P 18 24 39.6 -1.1
comp=N,1.4nm,0.9s,baz=188,slow=27,SNR=3.4
FINES LR LR 18 34 36.4
comp=N,58nm,21.9s,baz=280,slow=39
NOA NORSAR Array B 23.71 347 P P 18 24 44.5 -0.7
comp=N,1.5nm,0.7s,baz=154,slow=9.6,SNR=8.4
NOA LR LR 18 34 08.9
comp=N,25nm,19.8s,baz=270,slow=37
EKA Eskdalemuir Ar 23.98 323 P P 18 24 48.0 +0.2
comp=N,3.7nm,0.6s,baz=119,slow=11,SNR=9.9
TORD Torodi Ar. Bea 30.90 221 P P 18 25 51.0 +0.8
comp=N,1.4nm,0.8s,baz=28,slow=9.9,SNR=9.1
ARCES ARCESS Array B 31.31 2 P P 18 25 53.2 -0.2
comp=N,1.6nm,0.8s,baz=179,slow=8.1,SNR=4.7
ARCES LR LR 18 38 04.6
comp=N,55nm,21.9s,baz=185,slow=36
MKAR Makanchi Array 44.23 59 P P 18 27 42.4 -0.3
comp=N,1.1nm,0.6s,baz=274,slow=7.2,SNR=35
MKAR PcP PcP 18 29 27.9 +0.7
comp=N,0.3nm,0.9s,baz=282,slow=2.8,SNR=2.3
ZALV Zalesovo Beam 44.72 48 P P 18 27 45.9 -0.5
comp=N,0.8nm,0.5s,baz=272,slow=9.8,SNR=4.5
SONM Songino Array 59.45 51 P P 18 29 35.9 -0.5
comp=N,0.6nm,1.0s,baz=286,slow=6.0,SNR=4.0
YKA Yellowknife Ar 73.63 341 P P 18 31 07.5 +1.0
comp=N,0.4nm,0.7s,baz=31,slow=4.9,SNR=7.3
ULM Lac du Bonnet 76.25 324 P P 18 31 21.5 -0.4
comp=N,2.1nm,0.8s,baz=61,slow=6.7,SNR=4.8

LEM Lembang 90.76 98 LR LR 19 16 08.9
comp=N,31nm,21.9s,baz=48,slow=38
TXAR Lajitas Array 95.69 315 P P 18 33 00.8 +1.0
comp=N,0.3nm,0.7s,baz=30,slow=7.3,SNR=3.5

IDC 04 18:19:33.0±1.1, 19°.47S×71°.01W, h0km, mb3.7/4, mb1 4.0/8, mb1mx3.8/26, mbtmp3.8/8, ML3.8/2, Error ellipse: s-maj=22.4km s-min=15.5km az=83.0
GUC 04 18:19:34.7±0.6, 19°.40S×71°.05W, h32km±2km, ML4.1
NEIC 04 18:19:35.3±1.8, 19°.53S±0°.07×71°.0W±0°.1, h18km±3km, mb4.4/3, Mwr3.9/16, ML3.9(GUC), Error ellipse: s-maj=16.8km s-min=8.5km az=109.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.63; $M_{\theta\theta}$-4.58; $M_{\phi\phi}$3.95; $M_{r\theta}$2.94; $M_{\theta\phi}$2.11; $M_{\phi r}$-7.66; Fault plane solution: $M_0$9.50000×10^{14} NP1:ϕ_s151.56000°, δ88.38000°, λ120.29000°. NP2:ϕ_s244.33000°, δ30.33000°, λ3.22000°. Principal axes: T 10.1333, Plg39.0000°, Azm89.0000°; N -1.4239, Plg30.0000°, Azm331.0000°; P -8.7094, Plg36.0000°, Azm215.0000°;
ISC 04 18:19:34.1±2.7, 19°.46S±0°.04×71°.03W±0°.07, h9km±16km, n49, σ1°.03/50, mb3.9/4, 5C-3D, Off coast of northern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PSGC Pisagua 0.87 99 ⇑iP Pb 18 19 51.1 -0.3
PSGC iS Sb 18 20 02.8 -0.4
AP01 Chacalluta 1.27 31 eP Pn 18 19 56.9 -1.2
AP01 eS Sb 18 20 13.0 -1.6
AP01 IAML 18 20 25.4
comp=E,5µm,0.5s
PB11 IPOC Station P 1.33 103 ⇑iP Pn 18 19 58.8 -0.3
PB11 iS Sg 18 20 16.9 -0.1
PB11 IAML 18 20 21.4
comp=N,7µm,0.4s
PB11 IPOC Station P 1.33 103 Pn 18 19 58.7 -0.4
TA01 Diego Aracena 1.36 144 ⇓iP Pb 18 19 59.8 +0.1
TA01 iS Sb 18 20 17.3 +0.1
TA01 IAML 18 20 24.8
comp=E,6µm,0.7s
MNMC Minye Minye 1.40 77 ⇑iP Pn 18 19 59.7 -0.4
MNMC iS Sb 18 20 18.2 -0.4
MNMC IAML 18 20 21.6
comp=E,8µm,0.4s
MNMC Minye Minye 1.40 77 Pn 18 19 59.6 -0.5
PATCX Punta Patache 1.58 149 ⇓iP Pb 18 20 03.0 -0.7
PATCX IAML 18 20 35.5
comp=E,3µm,0.5s
GO01 Chusmiza 1.74 97 ⇑iP Pb 18 20 06.1 -0.5
GO01 iS Sg 18 20 30.1 -0.2
GO01 Chusmiza 1.74 97 Pb 18 20 05.8 -0.8
PB16 IPOC Station P 1.83 52 iP Pn 18 20 06.7 +0.4
PB16 iS Sb 18 20 30.8 -0.6
PB16 IAML 18 20 34.6
comp=N,1µm,0.7s
PB08 IPOC Station P 1.89 111 ⇑iP Pb 18 20 08.1 -1.0
PB08 iS Sb 18 20 33.4 +0.4
PB08 IAML 18 20 39.1
comp=N,1µm,0.5s
PB02 IPOC Station P 2.13 150 ⇓iP Pn 18 20 10.8 +0.7
PB01 IPOC Station P 2.14 138 eP Pn 18 20 11.0 +0.9
PB01 IAML 18 20 48.9
comp=E,2µm,0.5s
PB01 IPOC Station P 2.14 138 Pn 18 20 10.7 +0.5
PB07 IPOC Station P 2.49 155 IAML 18 21 03.4
comp=N,1µm,0.7s
PB03 IPOC Station P 2.84 155 IAML 18 21 09.0
comp=E,544nm,0.4s
PB09 IPOC Station P 2.86 144 eP Pn 18 20 21.9 +1.7
PB09 IAML 18 21 11.1
comp=E,952nm,0.6s
PB04 IPOC Station P 2.97 164 IAML 18 21 24.8
comp=N,779nm,0.7s
PB04 IPOC Station P 2.97 164 Pn 18 20 21.3 -0.4
LVC Limon Verde 3.71 148 Pn Pn 18 20 33.7 +1.7
comp=N,9.8nm,0.3s,baz=326,slow=11,SNR=14
LVC Sn Sn 18 21 17.0 +1.0
comp=N,26nm,0.3s,baz=97,slow=17,SNR=6.1
LVC Lg Lg 18 21 28.8
comp=N,19nm,0.3s,baz=179,slow=20,SNR=7.0
LVC Limon Verde 3.71 148 Pn 18 20 31.5 -0.4
PB10 IPOC Station P 4.05 174 Pn 18 20 35.4 -1.1
LPAZ La Paz 4.20 42 Pn Pn 18 20 39.2 +0.3
comp=N,0.1nm,0.3s,baz=215,slow=12,SNR=3.4
LPAZ Pg Pb 18 20 50.1 +1.6
comp=N,3.2nm,0.3s,baz=201,slow=7.0,SNR=34
LPAZ Lg Lg 18 21 48.9
comp=N,0.4nm,0.3s,baz=66,slow=20,SNR=1.6
LPAZ La Paz 4.20 42 Pb 18 20 43.6 -4.9
GO02 Mina Guanaco 5.83 167 Pn 18 21 00.7 -0.4
GO03 Copiap 8.13 175 Pn Pn 18 21 31.1 -1.4
SIV San Ignacio 10.10 72 Pn Pn 18 21 59.4 -0.1
comp=N,0.8nm,0.3s,baz=277,slow=8.8,SNR=13
GO04 Tololo Observa 10.66 179 Pn Pn 18 22 05.2 -2.2
SAML Samuel 12.92 37 Pn Pn 18 22 38.7 +0.6
CPUP Villa Florida 14.35 121 Pn Pn 18 22 58.0 +0.4
baz=302,slow=12,SNR=9.6
CPUP Villa Florida 14.35 121 Pn 18 22 57.8 +0.2
PLCA Paso Flores 21.20 179 P P 18 24 21.5 +1.3
comp=N,2.4nm,0.6s,baz=28,slow=11,SNR=6.4
PLCA Paso Flores 21.20 179 P P 18 24 22.2 +2.0
PLCA IAmb IAmb 18 24 40.6
comp=Z,27nm,1.6s
RUSC La Rusia 25.28 355 P P 18 25 03.0 +1.4
TXAR Lajitas Array 57.83 326 P P 18 29 27.0 +0.7
comp=Z,0.1nm,0.5s,baz=123,slow=6.6,SNR=2.5
TORD Torodi Ar. Bea 78.58 72 P P 18 31 35.1 -1.6
comp=Z,1.6nm,0.8s,baz=248,slow=5.3,SNR=7.3
TORD Torodi Ar. Bea 78.58 72 P P 18 31 34.8 -1.9
YKA Yellowknife Ar 88.62 341 P P 18 32 27.2 0.0
comp=Z,0.4nm,0.7s,baz=142,slow=4.6,SNR=6.6
H11S2 WAKE ISLAND Hyl 25.62 279 T T 20 57 49.5
baz=101,slow=75,SNR=4.7
H11S1 WAKE ISLAND Hyl 25.63 279 T T 20 57 51.7
baz=101,slow=75,SNR=5.7
H11S3 WAKE ISLAND Hyl 25.64 279 T T 20 57 55.4
baz=101,slow=75,SNR=7.7
H11N3 WAKE ISLAND Hyl 25.66 281 T T 20 57 48.5
baz=104,slow=74,SNR=4.2
H11N2 WAKE ISLAND Hyl 25.67 281 T T 20 57 49.6
baz=104,slow=74,SNR=7.8
H11N1 WAKE ISLAND Hyl 25.67 281 T T 20 57 52.2
baz=104
MKAR Makanchi Array 145.08 33 PKPbc PKPdf 18 39 11.4 -0.7
comp=Z,0.8nm,1.0s,baz=325,slow=3.4,SNR=4.7
MKAR Makanchi Array 145.08 33 PKPdf 18 39 11.2 -0.9
SONM Songino Array 151.62 4 PKPbc PKiKP 18 39 29.7 +0.2
comp=Z,0.3nm,0.6s,baz=342,slow=2.3,SNR=3.2
LZH Lanzhou 162.84 14 ePKP PKPdf 18 39 35.7 -1.7
LZH pPKP pPKPdf 18 39 42.3 +2.9
LZH sPKP 18 39 44.8
LZH PKP PKPab 18 40 27.6 +1.4

VAO 04 18:27:52.9±1.1, 19°.24S×71°.16W, h10km, mb4.2
NEIC 04 18:27:53.0±2.2, 19°.53S±0°.05×71°.03W±0°.07, h16km±4km, mb4.6/12, Mwr4.1/16, ML3.9(GUC), Error ellipse: s-maj=9.8km s-min=7.8km az=91.0
GUC 04 18:27:53.1±0.7, 19°.43S×71°.05W, h35km±2km, ML3.9
NEIC 04 18:27:53.1, 19°.51S×71°.02W, h17km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.56; $M_{\theta\theta}$-0.38; $M_{\phi\phi}$-0.18; $M_{r\theta}$0.40; $M_{\theta\phi}$1.10; $M_{\phi r}$-1.61; Fault plane solution: $M_0$2.05000×10^{15} NP1:ϕ_s272.53000°, δ30.86000°, λ19.32000°. NP2:ϕ_s165.78000°, δ80.23000°, λ119.42000°. Principal axes: T 1.9140, Plg47.0000°, Azm106.0000°; N 0.2500, Plg29.0000°, Azm340.0000°; P -2.1640, Plg29.0000°, Azm232.0000°;
IDC 04 18:27:54.5±3.0, 19°.43S×70°.85W, h20km±18km, mb4.0/8, mb1 4.0/13, mb1mx3.9/36, mbtmp4.0/13, ML3.8/4, MS3.4/7, Ms1 3.3/7, ms1mx3.1/34 Error ellipse: s-maj=21.9km s-min=13.2km az=75.0
ISC 04 18:27:51.2±1.7, 19°.46S±0°.04×71°.01W±0°.05, h2km±10km, n81, σ1°.59/82, mb4.4/10, MS3.4/3, 5C-7D, Off coast of northern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PSGC Pisagua 0.84 99 ⇓iP Pb 18 28 09.3 +0.7
PSGC iS Sb 18 28 21.2 +0.7
PSGC IAML 18 28 24.7
comp=N,2µm,0.2s
AP01 Chacalluta 1.26 30 ⇓iP Pg 18 28 15.2 -0.1
AP01 iS Sg 18 28 31.3 -0.3
AP01 IAML 18 28 44.0
comp=E,7µm,0.6s
PB11 IPOC Station P 1.31 103 ⇓iP Pn 18 28 17.2 +0.6
PB11 iS Sb 18 28 35.1 +1.2
PB11 IAML 18 28 39.9
comp=N,4µm,0.6s
PB11 IPOC Station P 1.31 103 Pn 18 28 17.1 +0.4
TA01 Diego Aracena 1.34 145 ⇑iP Pn 18 28 18.2 +1.2
TA01 iS Sn 18 28 35.4 0.0
TA01 IAML 18 28 43.6
comp=E,4µm,0.7s
MNMC Minye Minye 1.38 76 ⇓iP Pn 18 28 18.0 +0.3
MNMC iS Sg 18 28 36.9 +1.5
MNMC IAML 18 28 50.1
comp=E,8µm,0.7s
MNMC Minye Minye 1.38 76 Pn 18 28 17.9 +0.3
PATCX Punta Patache 1.57 149 ⇑iP Pn 18 28 21.0 +0.9
PATCX iS Sn 18 28 40.7 -0.4
PATCX IAML 18 28 53.5
comp=E,2µm,0.5s
GO01 Chusmiza 1.72 97 ⇑iP Pb 18 28 24.2 +0.4
GO01 iS Sb 18 28 47.8 +1.7
GO01 IAML 18 28 51.1
comp=N,2µm,0.3s
GO01 Chusmiza 1.72 97 Pb 18 28 24.3 +0.4
PB16 IPOC Station P 1.81 52 ⇓iP Pb 18 28 24.9 -0.5
PB16 iS Sg 18 28 48.9 -0.5
PB16 IAML 18 28 59.5
comp=N,1µm,0.6s
PB08 IPOC Station P 1.87 111 ⇑iP Pn 18 28 26.3 +1.8
PB08 iS Sb 18 28 51.6 +1.3
PB08 IAML 18 29 01.8
comp=N,648nm,0.4s
PB02 IPOC Station P 2.12 151 ⇓iP Pn 18 28 29.0 +1.2
PB02 iS Sn 18 28 54.3 -0.4
PB02 IAML 18 29 09.9
comp=E,2µm,0.7s
PB01 IPOC Station P 2.12 138 ⇑iP Pn 18 28 29.1 +1.4
PB01 iS Sn 18 28 55.7 +0.9
PB01 IAML 18 29 07.5
comp=E,827nm,0.6s
PB01 IPOC Station P 2.12 138 Pn 18 28 29.1 +1.4
PB07 IPOC Station P 2.48 155 ⇓iP Pn 18 28 33.7 +0.9
PB07 IAML 18 29 28.9
comp=E,850nm,0.4s
PB03 IPOC Station P 2.83 156 IAML 18 29 28.1
comp=E,360nm,0.4s
PB09 IPOC Station P 2.85 145 IAML 18 29 33.4
comp=E,1µm,0.7s
PB04 IPOC Station P 2.97 164 IAML 18 29 43.1
comp=N,552nm,0.6s
PB04 IPOC Station P 2.97 164 Pn 18 28 39.5 +0.1
LVC Limon Verde 3.69 148 Pn Pn 18 28 51.1 +1.5
comp=N,4.3nm,0.3s,baz=308,slow=10,SNR=13
LVC Pg Pb 18 28 59.9 +2.5
comp=N,9.7nm,0.3s,baz=350,slow=12,SNR=27
LVC Sn Sn 18 29 34.6 +0.7
comp=N,18nm,0.3s,baz=126,slow=19,SNR=6.5
LVC Lg Lg 18 29 50.5
comp=N,20nm,0.3s,baz=61,slow=22,SNR=8.6
LVC Limon Verde 3.69 148 eP Pn 18 28 54.5 +4.9
LVC Limon Verde 3.69 148 Pn 18 28 50.4 +0.7
PB10 IPOC Station P 4.05 174 Pn 18 28 53.5 -0.7
LPAZ La Paz 4.18 41 Pn Pn 18 28 57.8 +1.3
comp=N,0.2nm,0.3s,baz=206,slow=9.4,SNR=6.3
LPAZ Pg Pg 18 29 08.8 -2.6
comp=N,4.0nm,0.3s,baz=212,slow=15,SNR=50
LPAZ Lg Lg 18 30 04.6
comp=N,1.4nm,0.3s,baz=7.1,slow=8.1,SNR=1.3
LPAZ LR LR 18 30 22.6
comp=N,99nm,20.8s,baz=238,slow=36
LPAZ La Paz 4.18 41 eP Pn 18 28 56.7 +0.2
LPAZ La Paz 4.18 41 Pn 18 28 59.8 +3.3
GO02 Mina Guanaco 5.82 167 Pn 18 29 18.8 -0.1
GO03 Copiap 8.12 175 Pn Pn 18 29 48.5 -1.7
GO03 Sn 18 31 18.0 -4.7
NNA Nana 9.31 322 Pn Pn 18 30 09.0 +2.4
comp=N,1.4nm,0.3s,baz=232,slow=17,SNR=1.8
NNA Sn Sn 18 31 53.9 +1.8
comp=N,2.6nm,0.3s,baz=106,slow=18,SNR=3.9
NNA Nana 9.31 322 Pn Pn 18 30 07.3 +0.7
SIV San Ignacio 10.08 72 Pn Pn 18 30 17.5 +0.4
comp=N,0.7nm,0.3s,baz=274,slow=8.4,SNR=14
SIV LR LR 18 34 56.8
comp=N,306nm,20.7s,baz=220,slow=43
GO04 Tololo Observa 10.66 179 Pn Pn 18 30 23.2 -2.0
SAML Samuel 12.91 37 eP Pn 18 30 54.3 -1.4
SAML Samuel 12.91 37 Pn 18 30 53.7 -2.1
ATAH Atahualpa 14.20 329 LR LR 18 36 40.6
comp=N,67nm,20.5s,baz=79,slow=37
CPUP Villa Florida 14.33 121 Pn Pn 18 31 14.4 -0.8
comp=N,0.1nm,0.3s,baz=311,slow=19,SNR=2.2
CPUP LR LR 18 37 56.5
comp=N,96nm,18.5s,baz=296,slow=42
CPUP Villa Florida 14.33 121 P P 18 31 19.7 -2.7
SALV Santo Antonio 15.02 79 eP P 18 31 27.4 +2.8
CLDB Colider 16.97 62 eP P 18 31 49.7 -0.3
TRQA Tornquist 20.12 159 eP Pn 18 32 29.2 +0.9
FRTB Fartura 20.33 105 eP Pn 18 32 31.2 +0.4
PLCA Paso Flores 21.20 179 P P 18 32 39.9 +1.7
comp=N,3.8nm,1.0s,baz=21,slow=18,SNR=3.3
PLCA Paso Flores 21.20 179 P P 18 32 38.5 +0.3
PLCA IAmb IAmb 18 32 47.1
comp=Z,12nm,1.2s
FLOC Florencia 21.41 347 P P 18 32 40.8 +0.3
IPMB Ipameri, GO 21.64 90 eP P 18 32 46.1 +3.1
RCLB Rio Claro- Sao 22.12 102 eP P 18 32 49.8 +1.6
BDFB Brasilia 22.25 84 LR LR 18 43 09.6
comp=Z,82nm,18.7s,baz=323,slow=41
BDFB Brasilia 22.25 84 P P 18 32 48.0 -1.7
TUMC Tumaco 22.47 339 P P 18 32 52.9 +1.1
RUSC La Rusia 25.28 355 P P 18 33 19.3 -0.3
PCRV Puerto La Cruz 30.11 13 LR LR 18 47 16.8
comp=Z,396nm,18.7s,baz=39
MDP Montagnes des 30.38 38 LR LR 18 47 12.5
comp=Z,82nm,19.6s,baz=228,slow=38
SDDR Presa de Saban 38.21 360 P P 18 35 14.8 +2.3
SDDR IAmb IAmb 18 35 20.4
comp=Z,39nm,1.4s
TXAR Lajitas Array 57.85 326 P P 18 37 44.5 0.0
comp=Z,0.8nm,0.6s,baz=127,slow=15,SNR=8.6
TXAR Lajitas Array 57.85 326 P P 18 37 44.8 +0.2
DBIC Dimbokro 70.08 75 P P 18 39 04.0 -1.4
comp=Z,2.0nm,0.7s,baz=211,slow=4.1,SNR=5.4
DBIC Dimbokro 70.08 75 P P 18 39 04.2 -1.1
DBIC IAmb IAmb 18 39 17.8
comp=Z,7.7nm,1.4s
NVAR Mina Array Bea 72.69 323 P P 18 39 23.8 +2.9
comp=Z,0.5nm,0.8s,baz=172,slow=7.3,SNR=2.1
TOA0 Torodi Ar. Sit 78.56 72 P P 18 39 53.0 -1.7
TOA0 IAmb IAmb 18 39 55.4
comp=Z,3.7nm,0.8s
TORD Torodi Ar. Bea 78.56 72 P P 18 39 53.2 -1.5
comp=Z,4.7nm,0.9s,baz=255,slow=5.0,SNR=17
TORD Torodi Ar. Bea 78.56 72 P P 18 39 52.8 -2.0
SUR Sutherland 81.31 121 P P 18 40 10.0 +0.3
comp=Z,2.8nm,0.8s,baz=219,slow=6.5,SNR=2.4
SUR Sutherland 81.31 121 P P 18 40 09.2 -0.5
TSUM Tsumeb 82.52 108 P P 18 40 16.5 +0.3
comp=Z,1.4nm,0.7s,baz=214,slow=3.9,SNR=4.8
YKA Yellowknife Ar 88.63 341 P P 18 40 45.2 -0.1
comp=Z,1.7nm,0.7s,baz=138,slow=4.7,SNR=40
H11S2 WAKE ISLAND Hyl 25.64 279 T T 21 06 10.2
baz=101,slow=74,SNR=7.3
H11S1 WAKE ISLAND Hyl 25.65 279 T T 21 06 10.5
baz=101,slow=74,SNR=5.0
H11S3 WAKE ISLAND Hyl 25.66 279 T T 21 06 11.5
baz=101,slow=74,SNR=4.3
H11N3 WAKE ISLAND Hyl 25.68 281 T T 21 06 09.8
baz=106
H11N2 WAKE ISLAND Hyl 25.69 281 T T 21 06 11.9
baz=106
H11N1 WAKE ISLAND Hyl 25.69 281 T T 21 06 10.2
baz=106
ZALV Zalesovo Beam 140.90 23 PKP PKPdf 18 47 23.3 +0.7
comp=Z,0.7nm,0.6s,baz=318,slow=2.0,SNR=4.4
ZALV Zalesovo Beam 140.90 23 PKPdf 18 47 22.8 +0.2
MK31 Makanchi Array 145.07 33 PKPbc 18 47 29.1 -0.5
MKAR Makanchi Array 145.07 33 PKP PKPab 18 47 29.4 -0.2
comp=Z,1.5nm,0.8s,baz=336,slow=2.7,SNR=15
MKAR Makanchi Array 145.07 33 PKPbc 18 47 28.9 -0.7

KSH	**Kashi**	**145.28**	**48**	PKP	**PKPbc**	**18 47 24.6**	**-6.1**
KSH				PP	**PP**	**18 50 49.7**	**-0.4**
SONM	**Songino Array**	**151.62**	**4**	PKPbc	**PKiKP**	**18 47 47.7**	**0.0**
	comp=Z,0.9nm,0.7s,baz=323,slow=1.5,SNR=9.1						
SONM	**Songino Array**	**151.62**	**4**		**PKPbc**	**18 47 46.7**	**-0.5**
CMAR	**Chiang Mai Arr**	**170.44**	**94**	PKPab	**PKPab**	**18 49 18.6**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=266,slow=6.8,SNR=6.8						

JMA 04 18:34:20.3±0.1, 24.08N×123.58E, h18km±2km, M1.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.21**	**96**	P	Pb	18 34 25.1	-0.2
HATJ				S	Sg	18 34 28.8	0.0
IRIF	**Iriomote-Funau**	**0.29**	**28**	P	Pg	18 34 26.4	-0.3
IRIF				eS	Sg	18 34 30.8	-0.2
JKRS	**Kuro-shima**	**0.42**	**68**	P	Pg	18 34 28.8	-0.2
JKRS				S	Sb	18 34 35.5	+0.2
JIJ	**Ishigaki jima**	**0.59**	**61**	P	Pg	18 34 31.3	-0.7
JIJ				S	Sg	18 34 39.4	-0.5
JISG	**Ishigakijimahi**	**0.84**	**53**	P	Pb	18 34 35.6	-0.7
JISG				eS	Sb	18 34 47.0	-0.2
JTJ	**Tarama**	**1.17**	**61**	P	Pn	18 34 41.4	-0.3
JTJ				S	Sn	18 34 57.3	+0.1

TAP 04 18:35:07.6, 24.85N×122.18E, h10km, ML2.3, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.23**	**313**	*i* P	Pg	18 35 12.5	+0.1
	baz=313						
TWB1				*i* S	Sg	18 35 16.7	+1.1
	baz=313						
EOS1	**EOS1**	**0.30**	**188**	*e*P	Pg	18 35 14.2	+0.6
	baz=188						
EOS1				*e*S	Sb	18 35 19.9	-0.2
	baz=188						
TIPB	**Shuangxi**	**0.34**	**291**	*e*P	Pb	18 35 15.7	-0.1
	baz=290						
TIPB				*e*S	Sb	18 35 21.4	+0.1
	baz=290						
TWC	**Suao**	**0.38**	**231**	P	Pg	18 35 15.7	+0.6
	baz=230						
TWC				S	Sb	18 35 22.0	-0.4
	baz=230						
ILA	**Ilan**	**0.40**	**258**	*e*P	Pb	18 35 16.3	-0.4
	baz=257						
NWF	**Wu-fen Shan**	**0.42**	**302**	*e*P	Pb	18 35 17.4	+0.3
	baz=301						
NWF				S	Sb	18 35 23.7	+0.1
	baz=301						
WFSB	**Wu-fen Shan**	**0.42**	**302**	*e*P	Pb	18 35 17.4	+0.3
	baz=301						
WFSB				*i* S	Sb	18 35 23.5	0.0
	baz=301						
TWE	**Neicheng**	**0.48**	**255**	*e*P	Pb	18 35 17.9	-0.2
	baz=253						
TWE				*e*S	Sb	18 35 25.2	0.0
	baz=253						
TWA	**Mucha**	**0.55**	**284**	*e*P	Pb	18 35 19.7	+0.3
	baz=283						
TWA				*e*S	Sb	18 35 28.2	+0.8
	baz=283						
ENA	**Nanau**	**0.58**	**223**	*e*P	Pb	18 35 19.8	+0.1
	baz=222						
ENTT	**Nioudou**	**0.59**	**250**	*e*P	Pb	18 35 20.2	+0.2
	baz=248						
ENTT				*e*S	Sb	18 35 29.3	+0.8
	baz=248						
NWLT	**Wulai**	**0.62**	**263**	*e*P	Pb	18 35 21.3	+0.8
	baz=263						
NWLT				*e*S	Sb	18 35 30.3	+1.1
	baz=263						

IDC 04 18:36:31.9±1.3, 0.72S×21.34W, h0km, mb3.9/6, mb1 4.1/8, mb1mx3.8/38, mbtmp4.0/8, ML4.4/2, MS3.5/7, Ms1 3.5/7, ms1mx3.1/41, Error ellipse: s-maj=35.2km s-min=30.7km az=139.0

NEIC 04 18:36:33.8±2.0, 0.73S±0.09×21.27W±0.10, h11km±4km, mb4.7/15, Error ellipse: s-maj=16.8km s-min=8.4km az=49.0

ISC 04 18:36:33.2±0.6, 0.82S±0.09×21.31W±0.08, h10km, n41, σ1s54/36, mb4.4/10, MS3.6/6, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	**ASCENSION HYDR**	**9.73**	**136**	Pn	**Pn**	**18 38 53.7**	**+0.6**
	baz=314,slow=13,SNR=43						
H10N3				T	T	18 48 39.2	
	baz=315,slow=74,SNR=22						
H10N2	**ASCENSION HYDR**	**9.73**	**136**	Pn	**Pn**	**18 38 54.3**	**+1.3**
	baz=314,slow=13,SNR=25						
H10N2				T	T	18 48 40.5	
	baz=315,slow=74,SNR=440						
H10N1	**ASCENSION HYDR**	**9.75**	**136**	Pn	**Pn**	**18 38 54.5**	**+1.2**
	baz=314,slow=13,SNR=47						
H10N1				T	T	18 48 42.0	
	baz=315,slow=74,SNR=468						
ASCN	**Ascension**	**9.89**	**136**	Pn	**Pn**	**18 38 55.6**	**+0.1**
H10S3	**ASCENSION HYDR**	**10.44**	**141**	Pn	**Pn**	**18 39 05.2**	**+2.4**
H10S3				T	T	18 49 36.4	
	baz=321,slow=74,SNR=360						
H10S2	**ASCENSION HYDR**	**10.46**	**141**	Pn	**Pn**	**18 39 05.4**	**+2.4**
H10S2				T	T	18 49 37.8	
	baz=259,slow=74,SNR=548						
RCBR	**Riachuelo**	**15.39**	**251**	Pn	**Pn**	**18 40 09.7**	**-1.0**
	4.7nm,0.3s,baz=82,slow=14,SNR=24						
RCBR	**Riachuelo**	**15.39**	**251**		**Pn**	**18 40 08.6**	**-2.1**
RCBR				IAmb	IAmb	18 40 12.3	
	comp=Z,17nm,0.8s						
SACV	**Santiago Islan**	**15.85**	**352**	Pn	**Pn**	**18 40 15.4**	**-1.3**
SACV				IAmb	IAmb	18 40 17.9	
	comp=Z,86nm,1.1s						
LIC	**Lamto**	**17.69**	**66**	*e*P	**P**	**18 40 41.2**	**+0.4**
	comp=Z,26nm,1.1s						
TIC	**Toumodi**	**17.87**	**65**	*e*P	**Pn**	**18 40 41.8**	**-0.3**
KIC	**Kosan Boka**	**18.01**	**66**	*e*P	**P**	**18 40 43.8**	**-0.5**
	comp=Z,26nm,1.1s						
DBIC	**Dimbokro**	**18.02**	**65**	P	**Pn**	**18 40 43.2**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=230,slow=16,SNR=8.1						
DBIC				LR	LR	18 45 08.2	
	comp=Z,49nm,21.8s,baz=224,slow=29						
DBIC	**Dimbokro**	**18.02**	**65**	P	**Pn**	**18 40 43.9**	**-0.1**
SHEL	**Horse Pasture**	**21.49**	**135**	P	**Pn**	**18 41 18.5**	**-3.9**
SHEL				IAmb	IAmb	18 41 38.2	
	comp=Z,68nm,1.1s						
TOA0	**Torodi Ar. Sit**	**26.70**	**58**	P	**P**	**18 42 11.7**	**-1.2**
TORD	**Torodi Ar. Bea**	**26.70**	**58**	P	**P**	**18 42 11.5**	**-1.4**
	comp=Z,6.1nm,0.9s,baz=238,slow=8.3,SNR=16						
TORD				LR	LR	18 51 16.1	
	comp=Z,75nm,19.1s,baz=295,slow=33						
TORD	**Torodi Ar. Bea**	**26.70**	**58**	P	**P**	**18 42 11.2**	**-1.7**
BDFB	**Brasilia**	**30.19**	**239**	LR	LR	18 54 18.2	
	comp=Z,118nm,18.0s,baz=341,slow=35						
PMOZ	**Porto Moniz, M**	**33.69**	**6**	P	**P**	**18 43 16.4**	**+1.8**
TAM	**Tamanrasset**	**35.12**	**46**	P	**P**	**18 43 27.6**	**+0.4**
TAM				IAmb	IAmb	18 43 28.9	
	comp=Z,6.0nm,0.9s						
SAML	**Samuel**	**42.46**	**258**	P	**P**	**18 44 29.8**	**+0.9**
CPUP	**Villa Florida**	**42.94**	**231**	LR	LR	19 02 00.1	
	comp=Z,26nm,18.1s,baz=50,slow=36						
KEST	**Kesra**	**46.24**	**35**	LR	LR	19 04 43.0	
	comp=Z,93nm,19.2s,baz=310,slow=37						
CUPR	**Culebra, Puert**	**47.22**	**296**	P	**P**	**18 45 07.8**	**+1.1**
MTP	**Monte Pirata**	**47.40**	**296**	P	**P**	**18 45 10.5**	**+2.4**
LPAZ	**La Paz**	**48.62**	**249**	LR	LR	19 05 44.0	
	comp=Z,58nm,18.2s,baz=92,slow=36						
LBTB	**Lobatse**	**51.26**	**122**	P	**P**	**18 45 38.6**	**+0.9**
	comp=Z,2.5nm,0.9s,baz=276,slow=10,SNR=3.3						
LBTB	**Lobatse**	**51.26**	**122**	P	**P**	**18 45 38.2**	**+0.5**
LBTB				IAmb	IAmb	18 45 44.2	
	comp=Z,19nm,1.6s						
GERES	**GERESS Array B**	**57.97**	**27**	P	**P**	**18 46 26.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=205,slow=5.9,SNR=3.5						
GERES	**GERESS Array B**	**57.97**	**27**	P	**P**	**18 46 26.2**	**+0.2**
KMBO	**Kilima Mbogo**	**58.55**	**91**	LR	LR	19 10 34.0	
	comp=Z,222nm,21.1s,baz=298,slow=35						
BRTR	**Keskin Array B**	**64.29**	**44**	P	**P**	**18 47 10.8**	**+1.7**
	comp=Z,0.8nm,0.9s,baz=246,slow=6.1,SNR=2.7						
BRTR	**Keskin Array B**	**64.29**	**44**	P	**P**	**18 47 09.4**	**+0.2**
JSC	**Jenkinsville**	**66.01**	**308**	P	**P**	**18 47 21.5**	**+1.3**
JSC				IAmb	IAmb	18 47 23.7	
	comp=Z,12nm,1.0s						
PAULI	**Pauline**	**66.61**	**309**	P	**P**	**18 47 24.1**	**-0.1**
AKASG	**Malin Array Be**	**66.84**	**32**	P	**P**	**18 47 25.3**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=241,slow=7.6,SNR=3.1						
AKASG	**Malin Array Be**	**66.84**	**32**	P	**P**	**18 47 25.1**	**-0.1**
LCAR	**Lake Charles**	**74.29**	**308**	P	**P**	**18 48 07.0**	**-4.0**
LCAR				IAmb	IAmb	18 48 19.2	
	comp=Z,14nm,1.7s						
YKA	**Yellowknife Ar**	**92.25**	**332**	P	**P**	**18 49 42.1**	**-1.1**
	comp=Z,0.2nm,0.8s,baz=89,slow=5.6,SNR=3.3						
ASAR	**Alice Springs**	**145.76**	**137**	PKPbc	**PKPbc**	**18 56 13.7**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=195,slow=2.5,SNR=5.1						

KRSC 04 18:40:48.5±1.7, 52.70N×156.64E, h288km±15km, ML3.7, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APC	**Apacha**	**0.39**	**53**	*e*P	Pn	18 41 25.8	+0.4
ASAK	**Asacha**	**0.83**	**112**	*e*P	Pn	18 41 27.8	+0.9
GRL	**Gorelyy**	**0.89**	**99**	*e*P	Pn	18 41 28.7	+1.5
KRMR	**Karymshinskiy**	**0.92**	**81**	*e*P	Pn	18 41 27.7	+0.6
MTVR	**Mutnovka**	**0.96**	**102**	*e*P	Pn	18 41 28.5	+0.9
RUS	**Russkaya**	**1.17**	**102**	*e*P	Pn	18 41 28.8	+0.4
RUS				*e*S	S	18 41 59.2	-0.9
KDTR	**Khodutka, Kamc**	**1.25**	**135**	*e*P	Pn	18 41 28.6	-0.3
DALK	**Dalny**	**1.32**	**74**	*e*P	Pn	18 41 30.1	+0.8
DALK				*e*S	S	18 42 01.3	-0.3
KOK	**Koryaka**	**1.35**	**63**	*e*P	Pn	18 41 31.1	+1.6
KRX	**Arik**	**1.38**	**60**	*e*P	Pn	18 41 31.9	+2.1
KRX				*e*S	S	18 42 04.3	+1.7
AVH	**Avacha**	**1.39**	**65**	*e*P	Pn	18 41 31.4	+1.6
UGLR	**Uglovaya**	**1.42**	**68**	*e*P	Pn	18 41 31.5	+1.5
SMAR	**Somma**	**1.43**	**66**	*e*P	Pn	18 41 31.8	+1.6
SDLR	**Sedlovina**	**1.48**	**66**	*e*P	Pn	18 41 31.6	+1.2
SKR	**Severo-Kuril's**	**2.04**	**189**	*e*S	S	18 42 12.8	+1.7
SPN	**Mys Shipunski**	**2.09**	**77**	*e*P	Pn	18 41 35.0	+0.1
SPN				*e*S	S	18 42 09.6	-2.1
KZV	**Kizimen**	**3.25**	**40**	*e*P	Pn	18 41 48.3	+2.3
KBTR	**Krutoberegovo**	**5.04**	**43**	*e*P	Pn	18 42 06.4	+0.5

KLM 04 18:49:10.0, 13.28N×144.11E, h53km, mb5.7

BJI 04 18:49:14.1±0.0, 13.35N×144.36E, h132km, mB5.3/59, mb5.5/72

MOS 04 18:49:15.4±0.9, 13.45N×144.13E, h134km, mb4.9/20, Error ellipse: s-maj=7.5km s-min=4.6km az=105.4

NEIC 04 18:49:15.1±1.7, 13.36N±0.07×144.13E±0.08, h121km±1km, mb5.2/305, Mwb5.2/17, Mwc5.3(GCMT), Error ellipse: s-maj=13.6km s-min=10.8km az=300.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-4.86; $M_{\theta\theta}$-1.01; $M_{\phi\phi}$5.88; $M_{r\theta}$-0.59; $M_{r\phi}$0.74; $M_{\theta\phi}$-6.76; Fault plane solution: $M_0$8.73000×10^{16} NP1:ϕ_s5.11000°, δ70.73000°, λ-90.80000°. NP2:ϕ_s187.52000°, δ19.29000°, λ-87.72000°. Principal axes: T 9.2265, Plg26.0000°, Azm96.0000°; N -1.0895, Plg1.0000°, Azm5.0000°; P -8.1370, Plg64.0000°, Azm274.0000°;

IDC 04 18:49:16.2±0.3, 13.33N×144.16E, h127km±2km, mb4.6/29, mb1 4.7/31, mb1mx4.6/36, mbtmp5.0/31, MS3.9/20, Ms1 3.9/20, ms1mx3.7/56 Error ellipse: s-maj=8.1km s-min=6.7km az=75.0

NEIC 04 18:49:18, 13.22N×144.16E, h133km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-6.78; $M_{\theta\theta}$1.30; $M_{\phi\phi}$5.48; $M_{r\theta}$-0.53; $M_{r\phi}$2.50; $M_{\theta\phi}$-6.23; Fault plane solution: $M_0$9.18000×10^{16} NP1:ϕ_s216.00000°, δ25.00000°, λ-68.00000°. NP2:ϕ_s12.00000°, δ67.00000°, λ-100.00000°. Principal axes: T 8.9188, Plg21.0000°, Azm110.0000°; N 0.4933, Plg9.0000°, Azm16.0000°; P -9.4121, Plg67.0000°, Azm263.0000°;

GCMT 04 18:49:18.1±0.2, 13.25N±0.01×144.17E±0.01, h129km±1km, MW5.2/114, Moment Tensor Solution. s84,c120; s114,c206; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.59±.01; $M_{\theta\theta}$0.08±.02; $M_{\phi\phi}$0.51±.02; $M_{r\theta}$-0.06±.01; $M_{r\phi}$0.26±.02; $M_{\theta\phi}$-0.59±.01; Best double couple: $M_0$0.85400×10^{17} NP1:ϕ_s219.00000°, δ25.00000°, λ-65.00000°. NP2:ϕ_s12.00000°, δ67.00000°, λ-101.00000°. Principal axes: T 0.8580, Plg22.0000°, Azm110.0000°; N -0.0070, Plg10.0000°, Azm16.0000°; P -0.8510, Plg66.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

DJA 04 18:49:19.2±0.9, 13°N±3°×144°E±°, h153km±9km, M5.2/94, mb5.4/94, mB5.7/55, Mw(mB)5.2/55, Mwp5.3/3

ISC 04 18:49:16.5±0.3, 13.38N±0.03×144.20E±0.04, h135km±2km, h135km:pP-P, n836, σ1s17/965, mb5.2/257, 6C-15D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.69**	**72**	P	**Pn**	**18 49 37.7**	**+0.4**
	3μm,0.3s,baz=354,slow=22,SNR=1550						
GUMO				S	**Sn**	**18 49 52.6**	**-0.5**
	3μm,0.3s,baz=299,slow=13,SNR=9.4						
GUMO	**Guam**	**0.69**	**72**	Pn	**Pn**	**18 49 37.5**	**+0.1**
ANA2	**Anatahan**	**3.29**	**26**		**Pn**	**18 50 09.2**	**+2.1**
SARN	**Sarigan**	**3.64**	**25**		**Pn**	**18 50 14.4**	**+2.7**
PATS	**Pohnpei**	**15.33**	**114**	P	**P**	**18 52 47.5**	**-0.1**
MANU	**Manus Island**	**15.64**	**168**	P	**P**	**18 52 50.7**	**-0.3**
SMPI	**Sarmi**	**16.21**	**200**	P	**P**	**18 52 58.2**	**+0.9**
	3μm290nm,1.8s						
GENI	**Genyem**	**16.36**	**194**	P	**P**	**18 52 59.2**	**+0.2**
	4μm406nm,1.0s						
RKPI	**Ransiki, Papua**	**17.82**	**215**	P	**Pn**	**18 53 15.7**	**-0.5**
	2μm167nm,0.9s						
WAMI	**Wamena**	**17.99**	**198**	P	**Pn**	**18 53 21.2**	**+3.0**
	2μm202nm,1.1s						
BUTP	**Butuan**	**18.74**	**258**	*e*P	**Pn**	**18 53 28.0**	**+0.9**
MATI	**Mati**	**18.77**	**252**	*e*P	**P**	**18 53 25.0**	**-0.5**
CNP	**Catarman**	**19.06**	**270**	*e*P	**Pn**	**18 53 30.8**	**-0.1**
SIJI	**Sorong**	**19.10**	**223**	P	**Pn**	**18 53 30.6**	**-0.7**
	9.4nm,0.3s,baz=28,slow=12,SNR=46						
SIJI				PcP	**PcP**	**18 57 49.1**	**+1.1**
	0.3nm,0.3s,baz=352,slow=3.3,SNR=3.7						
SWI	**Sorong**	**19.10**	**223**	P	**Pn**	**18 53 30.8**	**-0.5**
	2μm7μm854nm,1.0s						
RABL	**Rabaul**	**19.16**	**155**	P	**P**	**18 53 29.7**	**0.0**
RABL				IAmb	IAmb	18 53 36.1	
	comp=Z,273nm,1.0s						
MSLP	**Maasin**	**19.20**	**262**	*e*P	**Pn**	**18 53 32.0**	**-0.5**
OCLP	**Ormoc**	**19.29**	**265**	*e*P	**Pn**	**18 53 33.1**	**-0.4**
DAV	**Davao City (W)**	**19.36**	**253**	P	**Pn**	**18 53 33.3**	**-1.1**
	comp=Z,48nm,0.3s,baz=87,slow=2.9,SNR=13						
DAV	**Davao City (W)**	**19.36**	**253**	⇓*i*P	**P**	**18 53 32.2**	**+0.3**
DAV	**Davao City (W)**	**19.36**	**253**	P	**Pn**	**18 53 33.2**	**-1.1**
PVCP	**Virac**	**19.50**	**273**	*e*P	**P**	**18 53 34.0**	**+0.7**
BUKP	**Musuan**	**19.58**	**256**	*e*P	**Pn**	**18 53 35.6**	**-1.3**
DDMP	**Don Marcelino,**	**19.59**	**250**	*e*P	**P**	**18 53 33.5**	**-0.8**
CGP	**Cagayan de Oro**	**19.76**	**258**	*e*P	**P**	**18 53 36.6**	**+0.4**
KCP	**Kidapawan**	**19.83**	**253**	⇓*i*P	**P**	**18 53 37.6**	**+0.6**
KMPI	**Kaimana, Papua**	**19.88**	**212**	P	**Pn**	**18 53 39.6**	**-0.7**
	comp=Z,5μmcomp=Z,495nm,0.9s						
JOW	**Kunigami**	**20.04**	**314**	P	**P**	**18 53 40.4**	**+1.3**
	comp=Z,9.7nm,0.4s,baz=144,slow=12,SNR=9.0						
JOW	**Kunigami**	**20.04**	**314**	P	**P**	**18 53 38.0**	**-1.1**
JOW				IAmb	IAmb	18 53 45.0	
	comp=Z,109nm,0.9s						
JHJ2	**Mitsune**	**20.05**	**349**	P	**P**	**18 53 38.7**	**-0.4**
FAKI	**Fak Fak**	**20.07**	**217**	P	**P**	**18 53 40.7**	**+1.2**
	comp=Z,2μmcomp=Z,6μmcomp=Z,735nm,0.9s						
FAKI	**Fak Fak**	**20.07**	**217**	P	**P**	**18 53 40.2**	**+0.7**
CTBH	**Cotabato--PC H**	**20.55**	**255**	⇓*i*P	**P**	**18 53 45.1**	**+0.4**
TNTI	**Ternate**	**20.85**	**234**	P	**P**	**18 53 46.3**	**-1.6**
	comp=Z,2μmcomp=Z,232nm,0.9s						
TNTI	**Ternate**	**20.85**	**234**	P	**P**	**18 53 46.4**	**-1.4**
TNTI				IAmb	IAmb	18 53 51.7	
	comp=Z,165nm,0.8s						
RCP	**Roxas**	**21.02**	**267**	⇓*e*P	**P**	**18 53 50.5**	**+0.7**
PAGZ	**Pagadian**	**21.18**	**257**	*e*P	**P**	**18 53 51.1**	**-0.3**
GUIM	**Jordan**	**21.31**	**265**	*e*P	**P**	**18 53 52.8**	**0.0**
PALP	**Palanan**	**21.32**	**283**	*e*P	**P**	**18 53 54.7**	**+1.7**
LBMI	**Labuha**	**21.63**	**231**	P	**P**	**18 53 55.9**	**-0.3**
	comp=Z,3μmcomp=Z,455nm,0.9s						
OTRP	**Odiongan**	**21.64**	**270**	*e*P	**P**	**18 53 57.0**	**+0.6**
BOAC	**Boac**	**21.75**	**273**	*e*P	**P**	**18 53 58.6**	**+1.2**
SGCP	**Mt. Cagua**	**21.85**	**286**	*e*P	**P**	**18 53 59.4**	**+0.9**
CAUP	**Cauayan**	**21.88**	**282**	*e*P	**P**	**18 54 00.8**	**+1.9**
BALP	**Baler**	**22.02**	**279**	*e*P	**P**	**18 54 00.7**	**+0.4**
BALP	**Baler**	**22.02**	**279**	*e*P	**P**	**18 54 00.9**	**+0.6**
MSAI	**Masohi**	**22.49**	**223**	P	**P**	**18 54 06.3**	**+1.3**
	comp=Z,2μmcomp=Z,234nm,0.9s						
APYP	**Conner**	**22.55**	**284**	*e*P	**P**	**18 54 05.9**	**+0.4**
TGY	**Tagaytay City**	**22.61**	**275**	P	**P**	**18 54 07.5**	**+1.4**
	comp=Z,697nm,0.8s,baz=100,slow=0.5,SNR=70						
TGY				pP	**pP**	**18 54 31.1**	**+0.7**
	comp=Z,114nm,0.3s,baz=75,slow=12,SNR=1.9						
H11N1	**WAKE ISLAND Hy**	**22.63**	**71**	T	T	19 18 07.0	
	baz=255,slow=75,SNR=23						
H11N2	**WAKE ISLAND Hy**	**22.64**	**71**	T	T	19 18 06.8	
	baz=255,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**22.65**	**71**	T	T	19 18 01.5	
	baz=255,slow=75,SNR=18						
BNDI	**Bandanaira**	**22.75**	**220**	P	**P**	**18 54 06.9**	**-0.6**
	comp=Z,6μmcomp=Z,543nm,1.0s						
CUYO	**Cuyo Island**	**22.80**	**266**	*e*P	**P**	**18 54 08.0**	**0.0**
INU	**Inuyama**	**22.82**	**345**	P	**P**	**18 54 07.7**	**-0.2**
INU				IAmb	IAmb	18 54 11.1	
	comp=Z,97nm,1.2s						
PMG	**Port Moresby**	**22.82**	**172**	P	**P**	**18 54 08.5**	**+0.4**
	comp=Z,46nm,1.0s,baz=332,slow=7.9,SNR=13						
PMG				PcP	**PcP**	**18 57 53.5**	**-1.5**
	comp=Z,24nm,1.1s,baz=22,slow=4.1,SNR=3.7						
PMG	**Port Moresby**	**22.82**	**172**	P	**P**	**18 54 08.2**	**+0.1**
PMG	**Port Moresby**	**22.82**	**172**	*ce*P	**P**	**18 54 08.2**	**+0.1**
PMG				pmax	pmax		
	comp=Z,152nm,1.0s						
YOJ	**Yonaguni jima**	**22.84**	**302**	P	**P**	**18 54 06.9**	**-1.4**
YOJ	**Yonaguni jima**	**22.84**	**302**	P	**P**	**18 54 06.9**	**-1.4**
YOJ				pmax	pmax		
	comp=Z,1μm,1.8s						
SMPP	**San Manuel, Pa**	**22.91**	**280**	*e*P	**P**	**18 54 07.8**	**-1.2**
SMPP	**San Manuel, Pa**	**22.91**	**280**	*e*P	**P**	**18 54 08.0**	**-1.0**
JNU	**Nakatsue**	**23.11**	**330**	P	**P**	**18 54 11.9**	**+1.2**
	comp=Z,74nm,0.9s,baz=162,slow=2.0,SNR=27						
JNU				ScP	**ScP**	**19 01 20.9**	**0.0**
	comp=Z,18nm,1.0s,baz=112,slow=5.3,SNR=4.7						
JNU	**Nakatsue**	**23.11**	**330**	P	**P**	**18 54 10.9**	**+0.2**
JNU				IAmb	IAmb	18 54 13.2	
	comp=Z,203nm,1.2s						
AAI	**Ambon**	**23.23**	**224**	P	**P**	**18 54 11.9**	**-0.1**
	comp=Z,6μmcomp=Z,742nm,1.2s						
SZP	**Santa**	**23.25**	**283**	P	**P**	**18 54 12.9**	**+0.8**
SZP				IAmb	IAmb	18 54 22.1	
	comp=Z,181nm,0.8s						
LUBP	**Lubang**	**23.29**	**274**	*e*P	**P**	**18 54 11.7**	**-0.8**
BUSP	**Coron**	**23.45**	**269**	*e*P	**P**	**18 54 14.3**	**+0.4**
SCZP	**Santa Cruz**	**23.62**	**279**	*e*P	**P**	**18 54 16.6**	**+1.0**
BOLP	**Bolinao**	**23.66**	**280**	*e*P	**P**	**18 54 14.2**	**-1.6**
NLAI	**Namlea**	**23.68**	**227**	P	**P**	**18 54 20.1**	**+4.1**
	comp=Z,93nm,1.0s						
MJAR	**Matsushiro Arr**	**23.69**	**348**	P	**P**	**18 54 15.5**	**-0.4**
	comp=Z,51nm,0.9s,baz=168,slow=10,SNR=41						
MJAR				pP	**pP**	**18 54 43.2**	**+1.6**
	comp=Z,26nm,1.0s,baz=167,slow=10.0,SNR=4.4						
MJAR	**Matsushiro Arr**	**23.69**	**348**	P	**P**	**18 54 16.9**	**+1.0**
MAJO	**Matsushiro**	**23.69**	**348**	P	**P**	**18 54 15.1**	**-0.8**
MAJO				IAmb	IAmb	18 54 18.7	
	comp=Z,219nm,1.5s						
MAJO	**Matsushiro**	**23.69**	**348**	P	**P**	**18 54 15.1**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,219nm,1.5s						
MAT	**Matsushiro**	**23.69**	**348**	P	**P**	**18 54 15.4**	**-0.5**
MAT				S	**S**	**18 58 21.0**	**+0.1**
MJB9	**Matsu-Tunnel**	**23.69**	**348**	P	**P**	**18 54 15.1**	**-0.9**
MJB9				IAmb	IAmb	18 54 18.6	
	comp=Z,222nm,1.5s						
SANI	**Sanana**	**23.69**	**231**	P	**P**	**18 54 13.4**	**-2.8**
	comp=Z,2μmcomp=Z,193nm,1.1s						
YULB	**Yu-li**	**23.87**	**298**	P	**P**	**18 54 17.1**	**-0.7**
YULB				IAmb	IAmb	18 54 20.2	
	comp=Z,275nm,1.3s						
TWG	**Pinlang**	**23.88**	**296**	P	**P**	**18 54 17.0**	**-0.7**
NACB	**Ninganchiao**	**23.91**	**300**	P	**P**	**18 54 16.4**	**-1.6**
NACB				IAmb	IAmb	18 54 20.0	
	comp=Z,72nm,0.9s						
YHNB	**Yeheng**	**24.28**	**301**	P	**P**	**18 54 20.1**	**-1.4**
YHNB				IAmb	IAmb	18 54 31.4	
	comp=Z,64nm,0.9s						
ENPP	**El Nido**	**24.30**	**268**	*e*P	**P**	**18 54 21.3**	**-0.4**
SSLB	**Suanglung**	**24.31**	**299**	P	**P**	**18 54 21.2**	**-0.6**
TATO	**Taipei**	**24.31**	**302**	P	**P**	**18 54 21.0**	**-0.7**
TPUB	**Ta-pu**	**24.42**	**297**	P	**P**	**18 54 22.2**	**-0.5**
TPUB				IAmb	IAmb	18 54 24.8	
	comp=Z,124nm,0.8s						
SAUI	**Saumlaki**	**24.79**	**212**	P	**P**	**18 54 29.8**	**+3.7**
	comp=Z,634nm,1.1s						
SAUI	**Saumlaki**	**24.79**	**212**	P	**P**	**18 54 26.0**	**-0.1**
LUWI	**Luwuk**	**25.62**	**238**	P	**P**	**18 54 33.2**	**-0.5**
	comp=Z,6μmcomp=Z,664nm,0.8s						
LUWI	**Luwuk**	**25.62**	**238**	P	**P**	**18 54 32.3**	**-1.4**
BATP	**Bataraza**	**26.29**	**263**	*e*P	**P**	**18 54 40.0**	**+0.2**
KNMB	**Chin-men Tao**	**26.74**	**298**	P	**P**	**18 54 43.3**	**-0.4**
KNMB				IAmb	IAmb	18 54 43.9	
	comp=Z,216nm,1.6s						
COEN	**Coen**	**27.18**	**182**	P	**P**	**18 54 47.5**	**0.0**
COEN				IAmb	IAmb	18 55 26.2	
	comp=Z,144nm,1.8s						
TJN	**Taejon**	**27.44**	**330**	*ce*P	**P**	**18 54 50.0**	**+0.3**
KDI	**Kendari**	**27.49**	**233**	P	**P**	**18 54 51.6**	**+1.2**
	comp=Z,2μmcomp=Z,106nm,1.3s						
SSE	**Sheshan**	**27.55**	**314**	P	**P**	**18 54 51.0**	**+0.2**
SSE				IAmb	IAmb	18 54 53.0	
	comp=Z,65nm,1.2s						
KSRS	**Korea Array**	**28.04**	**332**	P	**P**	**18 54 55.5**	**+0.5**
	comp=Z,10nm,0.5s,baz=141,slow=9.6,SNR=49						
KSRS				pP	**pP**	**18 55 23.5**	**+0.9**
	comp=Z,6.5nm,0.9s,baz=141,slow=9.5,SNR=2.5						
KSRS				PcP	**PcP**	**18 58 06.9**	**+0.4**
	comp=Z,2.5nm,1.0s,baz=159,slow=3.9,SNR=5.4						
KSRS				ScP	**ScP**	**19 01 36.2**	**+1.2**
	comp=Z,2.8nm,0.9s,baz=177,slow=2.3,SNR=6.3						
KSAR	**Wonju Array Be**	**28.04**	**332**	P	**P**	**18 54 54.4**	**-0.7**
KSAR					**PcP**	**18 58 07.2**	**+0.7**
KSAR	**Wonju Array Be**	**28.04**	**332**	P	**P**	**18 54 54.4**	**-0.7**
KS19	**Wonju Array Si**	**28.10**	**332**	P	**P**	**18 54 54.9**	**-0.7**
KS19				IAmb	IAmb	18 55 09.9	
	comp=Z,162nm,2.0s						
KKM	**Kota Kinabalu**	**28.51**	**258**	P	**P**	**18 54 59.8**	**+0.2**
KKM				IAmb	IAmb	18 55 05.7	
	comp=Z,48nm,0.9s						
ERM	**Erimo**	**28.55**	**358**	P	**P**	**18 54 59.2**	**-0.3**
ERM	**Erimo**	**28.55**	**358**	P	**P**	**18 54 59.2**	**-0.3**
ERM				pmax	pmax		
	comp=Z,299nm,1.9s						
SPMM	**Sapulut**	**28.68**	**255**	P	**P**	**18 55 01.0**	**-0.1**
MTN	**Manton Dam**	**29.09**	**207**	P	**P**	**18 55 03.7**	**-0.9**
MTN				IAmb	IAmb	18 55 05.6	
	comp=Z,106nm,1.3s						
NJ2	**Nanjing**	**29.74**	**313**	*e*P	**P**	**18 55 10.4**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,19nm,0.7s						
HKPS	**Hong Kong Po S**	**29.90**	**291**	P	**P**	**18 55 10.4**	**-1.4**
SOEI	**Soe**	**30.33**	**222**	P	**P**	**18 55 15.1**	**-0.6**
	comp=Z,2μmcomp=Z,186nm,1.1s						
SOEI	**Soe**	**30.33**	**222**	P	**P**	**18 55 13.2**	**-2.5**
SOEI					**PcP**	**18 58 14.6**	**+1.8**
YUK	**Yuzh-Kuril'sk**	**30.59**	**2**	*e*P	**P**	**18 55 18.1**	**+0.6**
YUK				S	**S**	**19 00 08.8**	**-0.7**
YUK				pmax	pmax		
	comp=Z,398nm,1.1s						
ASAJ	**Asahikawa**	**30.66**	**358**	PcP	**PcP**	**18 58 14.5**	**+1.4**
	comp=Z,8.8nm,0.8s,baz=230,slow=6.0,SNR=4.9						
ASAJ				LR	LR	19 06 48.6	
	comp=Z,139nm,21.9s,baz=188,slow=34						
JKA	**Kamikawa-asahi**	**30.66**	**358**		**PcP**	**18 58 14.5**	**+1.4**
VLA	**Vladivostok**	**31.48**	**343**	*i* P	**P**	**18 55 26.0**	**+0.6**
VLA				pmax	pmax		
	comp=Z,57nm,1.2s						
DL2	**Dalian**	**32.33**	**326**	⇓*i*P	**P**	**18 55 34.2**	**+1.3**
DL2				sP	**sP**	**18 56 20.8**	**+4.8**
DL2				S	**S**	**19 00 41.0**	**+4.2**
DL2				pmax	pmax		
	comp=Z,91nm,1.0s						
DL2				pmax	pmax		
	comp=Z,230nm,3.6s						
WHN	**Wuhan**	**32.38**	**307**	⇓P	**P**	**18 55 34.9**	**+1.4**
WHN				pmax	pmax		
	comp=Z,200nm,1.0s						
WHN				LR	LR		
	comp=Z,990nm,14.2s						
USA0B	**Ussuriysk Arra**	**32.45**	**344**	P	**P**	**18 55 34.3**	**+0.4**
USA0B				IAmb	IAmb	18 55 36.4	

comp=Z,76nm,1.8s
USA0B Ussuriysk Arra 32.45 344 P P 18 55 34.3 +0.4
USA0B pmax pmax
comp=Z,77nm,1.8s
USRK Ussuriysk Ar. 32.45 344 P P 18 55 34.7 +0.8
comp=Z,7.9nm,0.7s,baz=154,slow=9.2,SNR=13
USRK pP pP 18 56 01.8 0.0
comp=Z,4.8nm,0.9s,baz=150,slow=12,SNR=2.6
USRK PcP PcP 18 58 20.4 +2.5
comp=Z,2.4nm,0.7s,baz=185,slow=7.1,SNR=3.4
USRK Ussuriysk Ar. 32.45 344 P P 18 55 34.1 +0.2
KNRA Kununurra 32.66 208 P P 18 55 35.8 -0.1
TIA Tai'an 33.28 318 P P 18 55 41.9 +0.7
TIA pmax pmax
comp=Z,28nm,0.9s
QIZ Qiongzhong 33.43 284 P P 18 55 42.6 -0.1
QIZ S S 19 00 52.8 -1.6
QIZ pmax pmax
comp=Z,48nm,1.8s
QIZ LR LR
comp=Z,140nm,8.4s
QIZ LR LR
comp=Z,250nm,12.1s
QIZ LR LR
comp=Z,300nm,9.5s
QIZ Qiongzhong 33.43 284 P P 18 55 44.1 +1.4
QIZ IAmb IAmb 18 55 45.6
comp=Z,69nm,1.1s
SBUM Sibu 33.43 254 P P 18 55 43.3 +0.5
SBUM PcP 18 58 21.5 +0.3
SBUM Sibu 33.43 254 P P 18 55 44.0 +1.2
YSS Yuzh-Sakhalins 33.49 358 P P 18 55 43.1 +0.2
YSS IAmb IAmb 18 55 43.9
comp=Z,28nm,0.6s
YSS Yuzh-Sakhalins 33.49 358 eP P 18 55 43.4 +0.5
YSS e*PP pP 18 56 10.9 0.0
YSS e*SP sP 18 56 23.5 -2.4
YSS e 18 58 22.2
YSS eS S 19 00 51.0 -3.6
YSS pmax pmax
comp=Z,30nm,1.0s
YSS MLR MLR
comp=Z,300nm,16.0s
MDJ Mudanjiang 33.54 341 P P 18 55 44.3 +1.0
MDJ pP pP 18 56 13.4 +2.0
MDJ sP sP 18 56 29.0 +2.5
MDJ S S 19 00 57.3 +1.9
MDJ sS sS 19 01 48.6 +4.0
MDJ PcS PcS 19 02 07.6 +0.8
MDJ pmax pmax
comp=Z,26nm,1.1s
MDJ pmax pmax
comp=Z,400nm,4.3s
MDJ LR LR
comp=Z,550nm,24.2s
MDJ LR LR
comp=Z,490nm,23.6s
MDJ LR LR
comp=Z,460nm,24.1s
MDJ Mudanjiang 33.54 341 P P 18 55 43.0 -0.3
MDJ IAmb IAmb 18 55 46.1
comp=Z,34nm,1.2s
PLAI Plampang 34.28 231 P P 18 55 49.8 -0.3
comp=Z,57nm,0.9s
WB0 Warramunga Arr 34.32 197 P P 18 55 50.2 -0.2
WR0 Warramunga Arr 34.46 196 P P 18 55 51.5 0.0
WRAB Tennant Creek 34.49 197 P P 18 55 51.2 -0.6
WRAB Tennant Creek 34.49 197 ceP P 18 55 52.1 +0.3
WRAB pmax pmax
comp=Z,227nm,0.8s
WB2 Warramunga Arr 34.50 197 P P 18 55 51.9 0.0
WRA Warramunga Arr 34.50 197 P P 18 55 52.2 +0.3
comp=Z,143nm,0.8s,baz=16,slow=9.5,SNR=122
WRA PcP PcP 18 58 25.3 +1.2
comp=Z,23nm,0.7s,baz=6.5,slow=3.0,SNR=12
WRA S S 19 01 08.1 -2.7
comp=Z,3.1nm,1.0s,baz=14,slow=16,SNR=4.0
WRA ScP ScP 19 01 56.7 -0.2
comp=Z,3.7nm,0.8s,baz=11,slow=3.3,SNR=5.6
WRA PKiKP PKiKP 19 05 45.8 -1.4
comp=Z,1.3nm,0.5s,baz=322,slow=1.3,SNR=17
WRA Warramunga Arr 34.50 197 P P 18 55 51.4 -0.5
WRA PcP 18 58 24.4 +0.3
WRA ScP 19 01 57.5 +0.5
DLV T Lat 34.86 272 P P 18 55 55.2 -0.1
DLV IAmb IAmb 18 55 57.6
comp=Z,105nm,1.2s
STKI Sintang 35.01 250 P P 18 55 56.7 +0.3
comp=Z,5µmcomp=Z,176nm,0.8s
KSM Kuching 35.56 253 P P 18 56 00.8 -0.3
KSM PcP 18 58 27.8 +0.4
KSM Kuching 35.56 253 P P 18 56 01.0 -0.2
SRBI Singaraja 35.82 235 P P 18 56 04.3 +1.0
comp=Z,152nm,1.0s
ENH Enshi 36.16 303 P P 18 56 07.2 +1.1
DNP Denpasar 36.17 234 P P 18 56 06.7 +0.4
comp=Z,12µmcomp=Z,1µm,0.9s
BJT Baijiatuau 36.20 322 P P 18 56 06.0 -0.3
BJT Baijiatuau 36.20 322 P P 18 56 06.0 -0.3
BJT pmax pmax
comp=Z,89nm,0.9s
BJI Beijing 36.21 322 P P 18 56 07.1 +0.8
BJI S S 19 01 34.9 -1.6
BJI pmax pmax
comp=Z,100nm,0.9s
BJI LR LR
comp=Z,380nm,20.6s
BJI LR LR
comp=Z,340nm,17.2s
BJI LR LR
comp=Z,670nm,72.6s
FITZ Fitzroy Crossi 36.24 211 PcP PcP 18 58 30.6 +1.4
comp=Z,35nm,0.6s,baz=15,slow=3.6,SNR=15
FITZ Fitzroy Crossi 36.24 211 P P 18 56 06.7 -0.1
FITZ PcP 18 58 30.3 +1.1
IGBI Denpasar 36.31 234 P P 18 56 06.7 -0.8
comp=Z,3µmcomp=Z,427nm,0.9s
JAGI Jajag, Banyuwa 36.90 236 P P 18 56 11.5 -1.0
comp=Z,209nm,0.9s
JAGI Jajag, Banyuwa 36.90 236 P P 18 56 11.4 -1.0
KLR Kul'dur 37.20 346 PcP PcP 18 58 32.7 +1.1
comp=Z,6.3nm,0.9s,baz=200,slow=6.6,SNR=3.2
KLR ScP ScP 19 02 04.8 -1.5
comp=Z,2.8nm,0.7s,baz=215,slow=4.4,SNR=6.9
KLR Kul'dur 37.20 346 d iP P 18 56 15.0 +0.5
KLR pmax pmax
comp=Z,27nm,0.8s
GRJI Gresik 37.40 239 P P 18 56 18.1 +1.4
comp=Z,1µmcomp=Z,134nm,0.9s
TYV Tymovskoe 37.41 358 eP P 18 56 17.2 +0.9
TYV pmax pmax
comp=Z,27nm,0.8s
GYA Guiyang 37.47 296 ⇓iP P 18 56 19.2 +1.9
GYA sP sP 18 57 01.6 +0.8
GYA PP PnPn 18 57 52.0 +4.0
GYA PcP PcP 18 58 34.7 +1.6
GYA ScP ScP 19 02 09.0 +1.0
GYA pmax pmax
comp=Z,70nm,1.0s
GYA pmax pmax
comp=Z,440nm,5.5s
UBPT Khong Chiam 37.54 278 P P 18 56 17.7 -0.2
GRNR Gornyy 37.83 352 ⇓iP P 18 56 20.8 +1.0
GRNR eS S 19 02 03.6 +2.8
GRNR pmax pmax
comp=Z,20nm,0.6s
GRNR smax smax
comp=N,1.0nm,0.9s
GRNR MLR MLR
comp=Z,80nm,19.0s
XAN Xi'an 38.02 309 P P 18 56 22.4 +0.6
XAN pP pwP 18 56 54.4 -0.8
XAN PP PP 18 57 52.6 +1.2
XAN S S 19 02 00.2 -4.0
XAN ScS ScS 19 06 20.1 +0.5
XAN pmax pmax
comp=Z,72nm,0.8s
XAN pmax pmax
comp=Z,230nm,4.9s
XAN Xi'an 38.02 309 P P 18 56 22.4 +0.6
XAN IAmb IAmb 18 56 23.6
comp=Z,58nm,0.8s
XAN Xi'an 38.02 309 P P 18 56 22.4 +0.6
XAN pmax pmax
comp=Z,58nm,0.8s

AS31 Alice Springs 38.17 195 P P 18 56 23.1 +0.1
AS31 IAmb IAmb 18 56 25.1
comp=Z,12nm,0.5s
ASAR Alice Springs 38.17 195 P P 18 56 23.4 +0.3
comp=Z,17nm,0.7s,baz=17,slow=9.8,SNR=187
ASAR pP pP 18 56 51.3 -0.4
comp=Z,3.6nm,0.6s,baz=348,slow=5.8,SNR=1.8
ASAR PP PP 18 57 53.6 +0.4
comp=Z,7.9nm,0.8s,baz=21,slow=12,SNR=4.2
ASAR PcP PcP 18 58 36.1 +1.1
comp=Z,17nm,0.8s,baz=19,slow=4.2,SNR=12
ASAR S S 19 02 03.8 -2.7
comp=Z,1.5nm,0.8s,baz=17,slow=19,SNR=4.8
ASAR PKiKP PKiKP 19 05 49.7 -0.4
comp=Z,1.0nm,0.7s,baz=0.5,slow=1.5,SNR=7.2
ASAR Alice Springs 38.17 195 P P 18 56 22.9 -0.1
ASAR PP 18 57 50.6 -2.6
ASAR PcP 18 58 35.8 +0.7
NGJI Ngawi 38.49 240 P P 18 56 32.4 +6.5
comp=Z,103nm,0.8s
EIDS Eidsvold 39.09 170 P P 18 56 30.5 -0.1
EIDS IAmb IAmb 18 56 32.1
comp=Z,20nm,0.7s
PCJI Pacitan 39.17 239 P P 18 56 31.7 +0.1
comp=Z,335nm,1.0s
SLVN Son La 39.18 287 P P 18 56 31.0 -0.6
SLVN IAmb IAmb 18 56 34.5
comp=Z,66nm,1.0s
HHC Hu-ho-hao-te 39.51 320 ⇓iP P 18 56 35.6 +1.4
HHC pmax pmax
comp=Z,22nm,1.1s
HHC pmax pmax
comp=Z,110nm,5.6s
UGM Wanagama 39.57 240 P P 18 56 34.1 -0.8
TPI Tanjungpandan 39.65 249 P P 18 56 35.9 +0.4
comp=Z,1µmcomp=Z,117nm,0.8s
BTO Baotou 40.36 319 eP P 18 56 42.0 +0.8
KPJI Karang Pucung 40.62 242 P P 18 56 43.7 +0.2
comp=Z,77nm,1.3s
KMI Kunming 40.69 293 P P 18 56 45.6 +1.3
KMI Kunming 40.69 293 P P 18 56 45.6 +1.3
KMI pmax pmax
comp=Z,146nm,1.3s
CD2 Chengdu 41.05 302 ⇓iP P 18 56 47.6 +0.6
CD2 S S 19 02 56.9 +7.2
CD2 pmax pmax
comp=Z,920nm,3.9s
CD2 LR LR
comp=Z,810nm,10.7s
CD2 LR LR
comp=Z,730nm,9.2s
CD2 LR LR
comp=Z,630nm,15.1s
HIA Hailar 41.06 336 P P 18 56 47.1 +0.3
HIA IAmb IAmb 18 56 49.0
comp=Z,29nm,0.8s
HIA Hailar 41.06 336 P P 18 56 47.1 +0.3
HIA pmax pmax
comp=Z,29nm,0.8s
PEA0B Petropavlovsk- 41.07 12 P P 18 56 45.8 -0.9
PEA0B IAmb IAmb 18 57 28.8
comp=Z,93nm,1.6s
PEA0B Petropavlovsk- 41.07 12 P P 18 56 45.8 -0.9
PEA0B pmax pmax
comp=Z,93nm,1.6s
PETK Petropavlovsk- 41.07 12 P P 18 56 46.6 0.0
comp=Z,6.4nm,1.1s,baz=164,slow=6.2,SNR=4.1
PETK PcP PcP 18 58 46.5 +2.7
comp=Z,8.2nm,0.9s,baz=194,slow=5.5,SNR=3.9
PETK ScP ScP 19 02 19.8 -1.4
comp=Z,4.7nm,0.9s,baz=270,slow=1.5,SNR=3.6
DZM Mont Dzumac 41.44 148 eP P 18 56 52.2 +2.0
comp=Z,43nm,0.9s
DZM Mont Dzumac 41.44 148 eLR LR 19 08 27.2
comp=Z,469nm,33.8s
DZM Mont Dzumac 41.44 148 PcP PcP 18 58 48.4 +2.8
baz=275,slow=11
DZM LR LR 19 14 18.1
comp=Z,276nm,18.1s,baz=354,slow=36
DZM Mont Dzumac 41.44 148 P P 18 56 51.3 +1.1
DZM IAmb IAmb 18 57 46.5
comp=Z,108nm,1.7s
LEM Lembang 41.51 243 P P 18 56 50.4 -0.5
comp=Z,58nm,0.9s,baz=5.2,slow=11,SNR=5.9
MYKOM Kota Tinggi 41.54 257 P P 18 56 51.9 +0.8
MYKOM Kota Tinggi 41.54 257 P P 18 56 52.0 +0.9
CISI Cisompet, Garu 41.69 242 P P 18 56 49.6 -2.8
CISI IAmb IAmb 18 56 51.2
comp=Z,116nm,1.2s
CISI PcP 18 58 46.3 -0.4
PBKT Sadao Pong 41.83 280 P P 18 56 54.9 +1.6
KGM Kluang 41.98 258 P P 18 56 55.0 +0.3
PSAD1 Pilbara Seismi 42.08 215 PcP PcP 18 58 48.3 +0.6
PSAC2 Pilbara Seismi 42.12 215 P P 18 56 55.9 +0.2
PSAC2 PcP PcP 18 58 48.1 +0.3
PSA00 Pilbara Seismi 42.16 215 P P 18 56 56.4 +0.4
PSA00 PcP PcP 18 58 48.4 +0.5
PSA00 Pilbara Seismi 42.16 215 P P 18 56 55.7 -0.3
PSA00 IAmb IAmb 18 56 57.4
comp=Z,182nm,0.8s
PSA00 PP PP 18 58 35.1 -1.4
PSA00 PcP PcP 18 58 47.6 -0.3
JRMM Jerantut 42.25 261 P P 18 56 57.0 +0.1
ZEA Zeya 42.44 345 eP P 18 56 58.6 +0.8
ZEA e 18 57 30.4
ZEA pmax pmax
comp=Z,29nm,1.0s
LZH Lanzhou 42.65 309 ⇓iP P 18 57 01.8 +1.8
LZH sP sP 18 57 44.5 +0.5
LZH S S 19 03 14.1 +0.8
LZH sS sS 19 04 07.8 +4.0
LZH SS SS 19 06 21.7 -7.0
LZH pmax pmax
comp=Z,160nm,1.1s
LZH pmax pmax
comp=Z,510nm,5.2s
LZH LR LR
comp=Z,410nm,13.2s
LZH LR LR
comp=Z,330nm,13.6s
LZH LR LR
comp=Z,530nm,15.7s
KLSI 43.10 248 P P 18 57 03.4 -0.3
comp=Z,896nmcomp=Z,64nm,0.8s
IPM Ipoh 43.49 262 P P 18 57 07.3 +0.4
IPM IAmb IAmb 18 57 08.6
comp=Z,75nm,1.1s
IPM PcP 18 58 52.9 +0.2
IPM Ipoh 43.49 262 P P 18 57 08.0 +1.1
MDSI Maura Dua 43.52 249 P P 18 57 06.4 -0.6
comp=Z,1µmcomp=Z,116nm,1.2s
KULM Kulim 43.66 264 P P 18 57 09.1 +0.9
KULM Kulim 43.66 264 P P 18 57 09.0 +0.8
KASI Kota Agung 43.67 247 P P 18 57 07.7 -0.6
comp=Z,95nm,0.8s
CHTO Chiang Mai 43.73 283 P P 18 57 09.2 +0.5
CHTO PP PcP 18 58 53.8 +0.4
CM31 Chiang Mai Arr 43.73 283 P P 18 57 09.8 +1.1
CM31 IAmb IAmb 18 57 10.8
comp=Z,54nm,0.7s
CM31 Chiang Mai Arr 43.73 283 P P 18 57 10.1 +1.4
CM31 P P 18 57 10.1 +1.4
SNR=38
CMAR Chiang Mai Arr 43.73 283 P P 18 57 10.2 +1.4
comp=Z,43nm,0.7s,baz=83,slow=6.2,SNR=319
CMAR PcP PcP 18 58 55.1 +1.7
comp=Z,6.6nm,0.8s,baz=94,slow=2.4,SNR=10
CMAR ScP ScP 19 02 33.1 +0.5
comp=Z,0.8nm,0.8s,baz=89,slow=2.1,SNR=4.8
CMAR PKiKP PKiKP 19 05 54.4 -0.7
comp=Z,0.2nm,0.7s,baz=246,slow=1.8,SNR=3.7
CMAR LR LR 19 13 27.9
comp=Z,103nm,21.6s,baz=90,slow=33
CMAR PKPPKP P'P'df 19 28 54.4 -4.0
comp=Z,0.8nm,1.1s,baz=283,slow=3.7,SNR=4.6
LWLI Liwa 43.84 248 P P 18 57 09.1 -0.7
comp=Z,104nm,0.7s
ARMA Armidale 44.12 171 P P 18 57 12.3 +0.5
ARMA IAmb IAmb 18 57 13.9
comp=Z,30nm,0.8s
MNAI Manna 44.58 249 P 18 57 14.8 -0.7
KSI Kapahiang 44.63 251 P P 18 57 15.4 -0.6
comp=Z,163nm,0.7s
BKNI Bangkinang 44.67 257 P P 18 57 17.8 +1.5
comp=Z,86nm,1.1s

STKA Stephens Creek 45.06 183 P P 18 57 19.2 +0.2
comp=Z,76nm,0.7s,baz=354,slow=8.3,SNR=116
STKA PcP PcP 18 58 57.6 +0.1
comp=Z,8.1nm,0.6s,baz=352,slow=7.4,SNR=3.3
STKA Stephens Creek 45.06 183 P P 18 57 19.2 +0.2
KRJI Kerinci 45.09 253 P P 18 57 20.1 +0.4
comp=Z,3µmcomp=Z,244nm,1.1s
MSVF Nonsavu 45.51 132 P P 18 57 25.2 +2.3
MSVF Nonsavu 45.51 132 P P 18 57 25.2 +2.3
MSVF pmax pmax
comp=Z,29nm,1.2s
PDSI Padang 45.62 255 P P 18 57 22.4 -1.4
comp=Z,35nm,0.7s
SMY Shemya 45.93 25 P P 18 57 23.9 -1.7
SMY Shemya 45.93 25 P P 18 57 23.9 -1.7
SMY pmax pmax
comp=Z,295nm,1.7s
PSI Prapat 45.96 261 P P 18 57 26.7 +0.1
comp=Z,42nm,0.9s,baz=86,slow=3.2,SNR=24
PSI pP pP 18 57 56.1 -0.1
comp=Z,7.5nm,0.8s,baz=98,slow=4.8,SNR=1.7
PSI PcP PcP 18 59 01.2 -0.1
comp=Z,13nm,0.7s,baz=154,slow=4.1,SNR=5.2
RPSI Rantau Prapat 45.98 261 P P 18 57 25.8 -0.8
RPSI IAmb IAmb 18 57 27.8
comp=Z,82nm,1.2s
RPSI PcP PcP 18 58 59.5 -1.7
RPSI Rantau Prapat 45.98 261 P pwP 18 57 56.1 -4.7
ULN Ulaanbaatar 46.19 326 P P 18 57 28.4 +0.5
ULN IAmb IAmb 18 57 30.5
comp=Z,49nm,1.0s
ULN Ulaanbaatar 46.19 326 P P 18 57 28.4 +0.5
ULN pmax pmax
comp=Z,49nm,1.0s
GIRL Giralia 46.30 220 P P 18 57 30.1 +1.2
GIRL PcP PcP 18 59 03.6 +1.5
MA2 Magadan 46.38 5 P P 18 57 29.6 +0.6
MA2 Magadan 46.38 5 ceP P 18 57 29.0 0.0
MA2 pmax pmax
comp=Z,5.0nm,0.7s
SONM Songino Array 46.53 325 P P 18 57 31.5 +0.9
comp=Z,34nm,1.1s,baz=147,slow=7.8,SNR=131
SONM pP pP 18 58 00.9 +0.7
comp=Z,3.5nm,0.8s,baz=140,slow=11,SNR=1.6
SONM PcP PcP 18 59 03.2 +0.5
comp=Z,1.3nm,0.5s,baz=127,slow=3.8,SNR=3.5
SONM ScP ScP 19 02 43.2 -0.6
comp=Z,1.0nm,0.7s,baz=137,slow=4.4,SNR=4.2
SONM PKiKP PKiKP 19 05 57.3 +0.1
comp=Z,0.5nm,0.8s,baz=130,slow=2.3,SNR=3.0
SONM Songino Array 46.53 325 P P 18 57 31.3 +0.7
SONM PcP PcP 18 59 02.9 +0.2
SONM ScP ScP 19 02 42.8 -1.0
FORT Forrest 46.56 199 P P 18 57 31.4 +0.6
BBOO Buckleboo 46.58 189 P P 18 57 30.6 -0.4
BBOO IAmb IAmb 18 57 31.8
comp=Z,72nm,0.7s
GTA Gaotai 46.83 312 ⇓P P 18 57 34.2 +1.1
GTA pP pP 18 57 59.0 -3.6
GTA PP PP 18 59 28.0 +3.3
GTA ScP ScP 19 02 46.2 +1.0
GTA S S 19 04 16.4 +2.9
GTA sS sS 19 05 07.8 +3.1
GTA pmax pmax
comp=Z,100nm,0.8s
GTA pmax pmax
comp=Z,310nm,4.6s
GTA LR LR
comp=Z,230nm,19.0s
GTA LR LR
comp=Z,140nm,19.0s
GTA LR LR
comp=Z,230nm,18.7s
SISI Saibi 47.05 255 P P 18 57 34.2 -0.7
comp=Z,1µmcomp=Z,124nm,0.8s
LHMI Lhok Sumawe 47.26 265 P P 18 57 38.7 +2.1
comp=Z,3µmcomp=Z,245nm,1.0s
LHMI Lhok Sumawe 47.26 265 P P 18 57 38.0 +1.4
GSI Gunungsitoli 47.67 259 P P 18 57 38.5 -1.3
GSI PcP 18 59 07.9 +0.6
MLSI Meulaboh, Aceh 48.01 264 P P 18 57 46.9 +4.5
comp=Z,62nm,1.1s
SNSI Sinabang, Aceh 48.56 261 P P 18 57 48.6 +2.0
comp=Z,5µmcomp=Z,419nm,0.5s
CAN Canberra 48.64 175 P P 18 57 47.9 +1.0
CAN IAmb IAmb 18 57 49.5
comp=Z,51nm,1.2s
CAN Canberra 48.64 175 P P 18 57 47.9 +1.0
CAN pmax pmax
comp=Z,51nm,1.2s
SIMRM Sittwe 49.44 285 P P 18 57 53.5 +0.3
ADK Adak 49.58 31 P P 18 57 53.3 -0.4
ADK Adak 49.58 31 P P 18 57 53.3 -0.4
ADK pmax pmax
comp=Z,282nm,2.0s
ZAK Zakamensk 49.65 327 eP P 18 57 55.1 +0.6
ZAK e 18 58 30.8
ZAK pmax pmax
comp=Z,25nm,1.3s
ZAK pmax pmax
comp=Z,17nm,1.2s
YAK Yakutsk 49.69 351 P P 18 57 52.9 -1.5
YAK IAmb IAmb 18 58 27.5
comp=Z,72nm,1.0s
YAK Yakutsk 49.69 351 eP P 18 57 53.6 -0.8
YAK e*PP pP 18 58 25.0 +0.6
YAK e 18 59 12.4
YAK eS S 19 04 52.6 -0.1
YAK e 19 07 31.8
YAK eSS SS 19 08 23.1 -3.5
YAK pmax pmax
comp=Z,29nm,0.9s
YAK pmax pmax
comp=N,18nm,1.3s
YAK pmax pmax
comp=E,5.0nm,1.4s
YAK pmax pmax
comp=Z,101nm,4.0s
YAK pmax pmax
comp=E,60nm,4.1s
YAK smax smax
comp=N,194nm,4.7s
YAK smax smax
comp=E,97nm,4.7s
TEZP TEZPUR 49.76 294 eP P 18 57 55.9 +0.3
TEZP IAmb IAmb 18 57 59.5
comp=Z,115nm,1.0s
SEY Seymchan 49.83 5 iP P 18 57 54.6 -0.9
BOD Bodaibo 49.88 339 eP P 18 57 56.3 +0.3
BOD pmax pmax
comp=Z,12nm,2.5s
TLY Talaya 50.19 328 P P 18 57 59.6 +1.2
comp=Z,6.0nm,0.7s,baz=144,slow=5.2,SNR=23
TLY Talaya 50.19 328 P P 18 57 58.9 +0.4
TLY IAmb IAmb 18 58 00.9
comp=Z,64nm,1.6s
TLY Talaya 50.19 328 P P 18 57 52.9 -5.6
TLY Talaya 50.19 328 eP P 18 57 59.1 +0.7
TLY eS S 19 04 55.0 -5.0
TLY pmax pmax
comp=Z,85nm,1.5s
TLY MLR MLR
comp=Z,383nm,17.0s
PBA Port Blair 50.19 274 P P 18 57 57.8 -1.1
PBA IAmb IAmb 18 57 59.2
comp=Z,35nm,0.8s
IRK Irkutsk 50.20 329 eP P 18 57 57.9 -0.5
IRK pmax pmax
comp=Z,47nm,2.2s
MORW Morawa 50.21 213 P P 18 57 58.9 +0.1
SHL Shillong 50.51 292 eP P 18 58 01.3 -0.1
SHL IAmb IAmb 18 58 03.7
comp=Z,66nm,0.6s
SHL Shillong 50.51 292 P P 18 58 01.5 +0.1
SHL Shillong 50.51 292 P P 18 58 01.8 +0.3
SHL Shillong 50.51 292 P P 18 58 01.5 +0.1
SHL pmax pmax
comp=Z,116nm,0.8s
TOO Toolangi 50.69 179 P P 18 58 04.2 +1.9
TOO Toolangi 50.69 179 P P 18 58 04.2 +1.9
TOO pmax pmax
comp=Z,150nm,0.9s
ATKA Atka Island 51.02 32 P P 18 58 03.4 -1.1
AFI Afiamalu 51.34 120 LR LR 19 17 47.3
comp=Z,190nm,18.2s,baz=194,slow=33

LSA	Lhasa	51.51	297	P	P	18 58 11.1	+1.8
LSA	Lhasa	51.51	297	P	P	18 58 10.6	+1.3
LSA	Lhasa	51.51	297	P	P	18 58 11.0	+1.8
LSA	Lhasa	51.51	297	P	P	18 58 10.6	+1.3
LSA				pmax	pmax		
	comp=Z,79nm,0.8s						
MOY	Mondy	51.56	327	eP	P	18 58 09.5	+0.7
MOY				pmax	pmax		
	comp=Z,63nm,1.8s						
NWAO	Narrogin (SRO)	52.76	209	P	P	18 58 17.6	-0.2
	baz=39,slow=7.3						
NWAO				PcP	PcP	18 59 26.2	+0.7
	comp=Z,22nm,0.7s,baz=20,slow=7.2,SNR=4.8						
NWAO	Narrogin (SRO)	52.76	209	P	P	18 58 17.5	-0.2
NWAO				IAmb	IAmb	18 58 18.2	
	comp=Z,35nm,0.8s						
NWAO				PcP	PcP	18 59 26.0	+0.5
NWAO	Narrogin (SRO)	52.76	209	P	P	18 58 17.5	-0.3
NWAO				IAmb	IAmb	18 58 18.2	
	comp=Z,28nm,0.8s						
NWAO				PcP	PcP	18 59 25.6	+0.1
GTK	Tadong	53.55	294	eP	P	18 58 24.6	+0.7
GTK				IAmb	IAmb	18 58 25.6	
	comp=Z,115nm,0.2s						
TAPN	Taplejung	54.34	294	eP	P	18 58 30.1	+0.3
	comp=Z,173nm,1.0s						
ODAN	Odare	54.60	293	eP	P	18 58 31.8	+0.1
	comp=Z,294nm,1.3s						
RAMN	Ramite	55.31	294	eP	P	18 58 36.9	+0.1
	comp=Z,123nm,0.9s						
JIRN	Jiri	55.70	294	eP	P	18 58 40.0	+0.3
	comp=Z,127nm,0.6s						
OUZ	Omahuta	55.79	151	P	P	18 58 42.6	+3.0
OUZ				IAmb	IAmb	18 58 44.1	
	comp=Z,31nm,0.8s						
UNV	Unalaska Valle	55.86	33	P	P	18 58 38.2	-1.6
BOK	Bokaro	55.91	290	eP	P	18 58 41.8	+1.0
BOK				IAmb	IAmb	18 58 43.3	
	comp=Z,55nm,0.6s						
RAO	Raoul Island	55.98	140	LR	LR	19 19 00.1	
	comp=Z,147nm,21.4s,baz=5.0,slow=32						
GUN	Gumba	55.99	295	eP	P	18 58 42.1	+0.4
	comp=Z,303nm,0.9s						
BWNR	Bhubaneshwar	56.08	286	eP	P	18 58 42.8	+0.7
BWNR				IAmb	IAmb	18 58 44.1	
	comp=Z,44nm,0.8s						
TAU	Tasmania Unive	56.08	177	P	P	18 58 42.3	+0.8
TAU				IAmb	IAmb	18 58 44.7	
	comp=Z,46nm,1.1s						
TAU				PcP	PcP	18 59 35.5	-2.5
AKUT	Akutan	56.38	33	P	P	18 58 43.1	-0.5
PKI	Pulchoki	56.39	294	eP	P	18 58 44.5	-0.1
PKIN	Phulchoki	56.40	294	eP	P	18 58 44.3	-0.3
BILL	Bilibino	56.48	10	P	P	18 58 43.9	-0.2
BILL	Bilibino	56.48	10	d iP	P	18 58 43.8	-0.2
BILL				e		18 59 42.9	
BILL				e		19 00 48.0	
BILL				pmax	pmax		
	comp=Z,14nm,1.0s						
KKN	Kakani	56.51	295	eP	P	18 58 45.3	0.0
	comp=Z,110nm,1.0s						
DMN	Daman	56.66	294	eP	P	18 58 46.7	+0.3
	comp=Z,99nm,0.9s						
WMQ	Urumqi	56.81	314	eP	P	18 58 48.6	+1.6
WMQ				pP	pwP	18 59 23.2	+0.9
WMQ				PcP	PcP	18 59 42.5	+1.3
WMQ				pmax	pmax		
	comp=Z,45nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,300nm,3.7s						
WMQ				LR	LR		
	comp=Z,500nm,28.8s						
WMQ				LR	LR		
	comp=Z,640nm,28.9s						
WMQ				LR	LR		
	comp=Z,130nm,22.1s						
WMQ	Urumqi	56.81	314	P	P	18 58 48.2	+1.3
WMQ	Urumqi	56.81	314	P	P	18 58 48.2	+1.3
WMQ				pmax	pmax		
	comp=Z,74nm,0.9s						
GKN	Gorkha	57.09	295	eP	P	18 58 49.6	+0.3
	comp=Z,92nm,0.7s						
DANN	Dangsing	57.87	295	eP	P	18 58 55.2	+0.2
	comp=Z,407nm,0.9s						
FALS	False Pass	57.92	33	P	P	18 58 55.1	+0.7
HMH	Humu'ula Sheep	57.93	75	P	P	18 58 57.2	+1.8
AIN	Ainahou	57.97	75	P	P	18 58 58.2	+2.6
KOLN	Koldanda	58.00	294	eP	P	18 58 56.0	+0.3
	comp=Z,204nm,0.9s						
MLH	Mauna Loa	58.03	75	P	P	18 58 58.0	+2.0
RIM	Rim	58.14	75	P	P	18 58 55.1	-1.6
NPOC	North of Pu'u	58.29	75	P	P	18 58 56.4	-1.3
GAMB	Gambell	58.91	21	P	P	18 59 01.1	0.0
TIXI	Tiksi	58.98	354	P	P	18 59 01.1	-0.4
TIXI	Tiksi	58.98	354	ceP	P	18 58 59.9	-1.6
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.4s						
HIZ	Hauiti	59.05	152	P	P	18 59 04.3	+1.9
HIZ				IAmb	IAmb	18 59 08.1	
	comp=Z,30nm,1.0s						
SDPT	Sand Point	59.67	33	P	P	18 59 05.8	-0.7
URZ	Urewera	59.91	150	P	P	18 59 09.2	+0.9
URZ				IAmb	IAmb	18 59 10.0	
	comp=Z,22nm,0.7s						
MXZ	Matakaoa Point	59.95	149	P	P	18 59 09.4	+0.9
QRZ	Quartz Range	59.97	155	P	P	18 59 09.6	+0.9
QRZ				IAmb	IAmb	18 59 11.8	
	comp=Z,44nm,0.9s						
BKZ	Black Stump Fm	60.33	151	P	P	18 59 11.9	+0.7
BKZ				IAmb	IAmb	18 59 12.8	
	comp=Z,24nm,0.7s						
THZ	Tophouse	60.92	156	P	P	18 59 15.0	-0.2
THZ				IAmb	IAmb	18 59 16.8	
	comp=Z,82nm,1.6s						
MK31	Makanchi Array	61.19	316	P	P	18 59 18.0	+1.0
MK31				IAmb	IAmb	18 59 19.1	
	comp=Z,29nm,0.8s						
MK31	Makanchi Array	61.19	316	P	P	18 59 18.0	+1.0
MK31				pmax	pmax		
	comp=Z,29nm,0.9s						
MKAR	Makanchi Array	61.19	316	P	P	18 59 18.2	+1.1
	comp=Z,29nm,0.8s,baz=95,slow=8.6,SNR=269						
MKAR				pP	pP	18 59 47.8	-0.3
	comp=Z,13nm,1.0s,baz=83,slow=10,SNR=3.2						
MKAR				S	S	19 07 27.6	+1.5
	comp=Z,1.0nm,1.1s,baz=94,slow=12,SNR=3.8						
MKAR				PKP2bc		19 28 40.1	
	comp=Z,0.9nm,0.8s,baz=281,slow=2.5,SNR=7.5						
MKAR	Makanchi Array	61.19	316	P	P	18 59 17.3	+0.3
SNZO	South Karori	61.28	154	P	P	18 59 17.8	+0.3
MAKZ	Makanchi	61.41	316	P	P	18 59 19.1	+0.6
MAKZ				IAmb	IAmb	18 59 20.6	
	comp=Z,52nm,0.8s						
MAKZ	Makanchi	61.41	316	P	P	18 59 19.3	+0.8
ZAA0	Zalesovo Array	61.42	325	P	P	18 59 17.4	-1.0
ZAA0				IAmb	IAmb	18 59 56.8	
	comp=Z,25nm,1.2s						
ZAA0				PcP	PcP	18 59 58.8	-0.4
ZALV	Zalesovo Beam	61.42	325	P	P	18 59 18.2	-0.2
	comp=Z,1.8nm,0.4s,baz=106,slow=5.3,SNR=19						
ZALV				pP	pP	18 59 48.8	-0.8
	comp=Z,3.3nm,0.8s,baz=101,slow=7.5,SNR=2.5						
ZALV				LR	LR	19 27 30.0	
	comp=Z,136nm,19.9s,baz=105,slow=37						
ZALV				PKPPKP	P'P'df	19 28 31.9	+0.2
	comp=Z,1.1nm,0.9s,baz=264,slow=1.3,SNR=3.8						
ZALV	Zalesovo Beam	61.42	325	P	P	18 59 17.4	-0.9
BHW	Baring Head	61.43	154	P	P	18 59 19.3	+0.7
LTZ	Lake Taylor	61.53	157	P	P	18 59 19.6	+0.3
LTZ				IAmb	IAmb	18 59 21.5	
	comp=Z,25nm,0.7s						
ANM	Nome	61.64	22	P	P	18 59 19.7	+0.1
ANM	Nome	61.64	22	P	P	18 59 19.7	+0.1
ANM				pmax	pmax		
	comp=Z,7.0nm,0.7s						
RPZ	Rata Peaks	61.88	158	LR	LR	19 23 02.4	
	comp=Z,246nm,20.8s,baz=338,slow=33						
RPZ	Rata Peaks	61.88	158	P	P	18 59 21.9	+0.3
RPZ				IAmb	IAmb	18 59 24.2	
	comp=Z,37nm,0.7s						
OXZ	Oxford	61.91	157	P	P	18 59 21.0	-0.7
DCZ	Deep Cove	62.14	162	P	P	18 59 24.0	+0.8
DCZ				IAmb	IAmb	18 59 25.1	
	comp=Z,39nm,0.7s						
LBZ	Lake Benmore	62.16	159	P	P	18 59 23.9	+0.5
LBZ				IAmb	IAmb	18 59 25.1	
	comp=Z,61nm,1.2s						
NGP	Nagpur	62.34	287	eP	P	18 59 25.3	+0.2
MLZ	Mavora Lakes	62.35	161	P	P	18 59 25.4	+0.8
MLZ				IAmb	IAmb	18 59 33.5	
	comp=Z,49nm,1.1s						
PDGK	Podgornoye	62.58	312	P	P	18 59 26.6	+0.1
PALK	Pallekele	62.63	271	P	P	18 59 27.3	+0.1
PALK				IAmb	IAmb	18 59 28.8	
	comp=Z,31nm,1.1s						
PALK	Pallekele	62.63	271	P	P	18 59 27.3	+0.1
PALK				pmax	pmax		
	comp=Z,31nm,1.2s						
DDI	Dehra Dun	62.88	297	eP	P	18 59 29.2	+0.5
HYB	Hyderabad	63.16	283	i P	P	18 59 30.0	-0.7
HYB	Hyderabad	63.16	283	eP	P	18 59 31.2	+0.5
HYB				IAmb	IAmb	18 59 32.9	
SMLA	Simla	63.65	298	eP	P	18 59 34.0	+0.4
KDJ	Kajisay	64.13	310	P	P	18 59 37.7	+0.8
KDJ	Kajisay	64.13	310	P	P	18 59 37.7	+0.8
KDJ				pmax	pmax		
	comp=Z,498nm,1.9s						
RDOG	Red Dog Mine	64.30	19	P	P	18 59 37.0	-0.2
RDOG				IAmb	IAmb	18 59 38.8	
	comp=Z,30nm,1.5s						
KURK	Kurchatov	64.33	320	P	P	18 59 37.7	+0.1
KURK	Kurchatov	64.33	320	P	P	18 59 38.2	+0.5
KURK				*PP	pP	19 00 09.8	+0.6
KURBB	Kurchatov Arra	64.37	320	P	P	18 59 38.1	+0.2
	comp=Z,42nm,0.8s,baz=103,slow=6.6,SNR=283						
KURBB				pP	pP	19 00 09.8	+0.3
	comp=Z,18nm,0.9s,baz=102,slow=6.6,SNR=3.6						
KURBB				PKiKP	PKiKP	19 06 18.0	+0.5
	comp=Z,0.3nm,0.7s,baz=102,slow=1.2,SNR=3.7						
DHRM	DHARAMSHALA	64.38	299	eP	P	18 59 38.4	-0.3
DHRM				IAmb	IAmb	18 59 42.9	
	comp=Z,70nm,1.2s						
KDAK	Kodiak Island	64.59	32	P	P	18 59 39.3	0.0
KDAK	Kodiak Island	64.59	32	P	P	18 59 39.3	0.0
KDAK				pmax	pmax		
	comp=Z,217nm,1.8s						
TTA	Tatalina	64.63	26	P	P	18 59 39.6	+0.1
TTA	Tatalina	64.63	26	P	P	18 59 39.6	+0.1
RAR	Rarotonga	64.87	121	LR	LR	19 22 52.9	
	comp=Z,129nm,21.6s,baz=301,slow=31						
RAR	Rarotonga	64.87	121	P	P	18 59 40.7	-0.9
RAR				IAmb	IAmb	19 00 02.5	
	comp=Z,115nm,1.6s						
RAR	Rarotonga	64.87	121	P	P	18 59 40.7	-0.9
RAR				pmax	pmax		
	comp=Z,115nm,1.6s						
NRN	Naryn	64.96	310	P	P	18 59 41.9	-0.5
NRN				IAmb	IAmb	18 59 44.4	
	comp=Z,29nm,1.1s						
NRN	Naryn	64.96	310	P	P	18 59 41.9	-0.5
NRN				pmax	pmax		
	comp=Z,29nm,1.1s						
KZA	Kyzart	65.56	310	P	P	18 59 48.1	+1.8
	SNR=6.6						
CNPM	China Poot	65.74	30	P	P	18 59 46.0	-0.7
KBK	Karagaybulak	65.82	311	P	P	18 59 48.6	+0.8
	SNR=9.9						
BRLK	Bradley Lake	65.98	30	P	P	18 59 47.9	-0.4
BRLK				IAmb	IAmb	19 00 11.0	
	comp=Z,103nm,1.6s						
CHMS	Chumysh	65.99	311	P	P	18 59 49.3	+0.6
	SNR=9.9						
TRD	Trivandrum	66.03	273	eP	P	18 59 50.2	+0.8
UCH	Uchtor	66.12	310	P	P	18 59 51.0	+1.0
	SNR=19						
AAK	Ala-Archa	66.16	311	P	P	18 59 50.1	+0.2
	comp=Z,6.3nm,0.8s,baz=103,slow=6.1,SNR=17						
AAK	Ala-Archa	66.16	311	P	P	18 59 50.6	+0.7
	SNR=5.9						
AAK	Ala-Archa	66.16	311	P	P	18 59 50.2	+0.3
AAK				IAmb	IAmb	19 00 28.9	
	comp=Z,42nm,1.5s						
AAK	Ala-Archa	66.16	311	ceP	P	18 59 49.1	-0.8
AAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
PPLA	Purkeypile	66.27	27	P	P	18 59 48.9	-1.2
PPLA				IAmb	IAmb	19 00 58.1	
	comp=Z,50nm,1.7s						
SKT	Skwentna	66.29	28	P	P	18 59 49.0	-1.2
SKT				IAmb	IAmb	18 59 49.5	
	comp=Z,47nm,1.9s						
SUA	Susitna One	66.50	28	P	P	18 59 50.6	-1.1
SUA				IAmb	IAmb	19 00 54.9	
	comp=Z,84nm,2.0s						
IMAR	Indian Mountai	66.64	23	P	P	18 59 52.2	-0.1
AML	Almayashu	66.72	310	P	P	18 59 55.1	+1.3
	SNR=16						
SEW	Seward	66.76	30	P	P	18 59 52.5	-0.6
SEW				IAmb	IAmb	19 01 56.5	
	comp=Z,109nm,1.6s						
RC01	Rabbit Creek A	66.87	29	P	P	18 59 52.9	-1.0
RC01				IAmb	IAmb	18 59 55.0	
	comp=Z,25nm,1.1s						
NIL	Nilore	66.93	301	P	P	18 59 54.7	-0.1
NIL	Nilore	66.93	301	P	P	18 59 54.7	-0.1
NIL				pmax	pmax		
	comp=Z,194nm,0.8s						
KTH	Kantishna Hill	67.01	26	P	P	18 59 53.7	-1.1
BPAW	Bear Paw Mtn.	67.14	26	P	P	18 59 54.1	-1.5
ARSB	Arslanbob	67.22	309	P	P	18 59 57.2	+0.6
ARSB	Arslanbob	67.22	309	P	P	18 59 57.2	+0.6
TRF	Thorofare Moun	67.25	26	P	P	18 59 55.0	-1.4
TRF				IAmb	IAmb	19 00 43.6	
	comp=Z,50nm,1.8s						
GHO	Glory Hole Cre	67.42	28	P	P	18 59 56.5	-1.0
MLY	Manley	67.52	25	P	P	18 59 57.2	-0.7
KNK	Knik Glacier	67.55	29	P	P	18 59 57.7	-0.5
KNK				IAmb	IAmb	19 00 11.2	
	comp=Z,42nm,1.4s						
SML	Sawmill	67.70	28	P	P	18 59 58.5	-0.6
SML				IAmb	IAmb	19 01 04.5	
	comp=Z,39nm,1.2s						
BWN	Browne	67.81	26	P	P	18 59 59.2	-0.5
BWN				IAmb	IAmb	19 00 00.6	
	comp=Z,30nm,1.0s						
RND	Reindeer	67.86	27	P	P	18 59 59.1	-1.1
RND				IAmb	IAmb	19 01 11.1	
	comp=Z,45nm,1.9s						
RND	Reindeer	67.86	27	P	P	18 59 59.1	-1.1
RND				pmax	pmax		
	comp=Z,45nm,1.9s						
SCM	Sheep Creek Mo	68.17	28	P	P	19 00 01.4	-0.7
SCM				IAmb	IAmb	19 00 03.2	
	comp=Z,26nm,1.0s						
SCM	Sheep Creek Mo	68.17	28	P	P	19 00 01.4	-0.7
SCM				pmax	pmax		
	comp=Z,26nm,1.0s						
HIN	Hinchinbrook I	68.26	30	P	P	19 00 03.9	+1.2
FID	Port Fidalgo	68.34	30	P	P	19 00 02.9	-0.2
FID				IAmb	IAmb	19 02 01.0	
	comp=Z,95nm,1.9s						
COLD	Coldfoot	68.39	22	P	P	19 00 02.5	-0.8
DHY	Denali Highway	68.43	27	P	P	19 00 04.5	+0.7
WRH	Wood River Hil	68.46	26	P	P	19 00 02.9	-0.9
CCB	Clear Creek Bu	68.62	25	P	P	19 00 03.6	-1.2
EYAK	Cordova Ski Ar	68.66	30	P	P	19 00 05.3	+0.3
EYAK				IAmb	IAmb	19 02 30.5	
	comp=Z,146nm,2.0s						
TCOL	CIGO, UAF Yank	68.66	25	P	P	19 00 03.5	-1.4
	baz=256						
BTK	Batken	68.84	308	P	P	19 00 06.3	-0.4
BTK				IAmb	IAmb	19 00 07.8	
	comp=Z,18nm,0.8s						
BTK	Batken	68.84	308	P	P	19 00 06.3	-0.4
BTK				pmax	pmax		
	comp=Z,18nm,0.8s						
POKR	Poker Plat Res	68.89	25	P	P	19 00 05.3	-1.1
	baz=256						
HDA	Harding Lake	68.93	26	P	P	19 00 05.8	-0.9
HDA	Harding Lake	68.93	26	P	P	19 00 05.4	-1.3
	baz=257						
IL31		69.04	25	P	P	19 00 05.7	-1.5
IL31				IAmb	IAmb	19 00 06.8	
	comp=Z,54nm,2.0s						
ILAR	Eielson Array	69.04	25	P	P	19 00 06.0	-1.3
	comp=Z,4.5nm,0.7s,baz=250,slow=5.9,SNR=51						
ILAR				pP	pP	19 00 38.0	-1.2
	comp=Z,2.9nm,0.8s,baz=258,slow=5.1,SNR=2.8						
ILAR				PKPPKP	P'P'df	19 28 13.7	-4.9
	comp=Z,2.1nm,1.1s,baz=181,slow=0.5,SNR=5.0						
ILAR				LR	LR	19 29 13.6	
	comp=Z,61nm,19.9s,baz=262,slow=35						
ILAR	Eielson Array	69.04	25	P	P	19 00 05.8	-1.5
ILAR					P'P'df	19 28 12.7	-5.9
ILAR	Eielson Array	69.04	25	P	P	19 00 05.8	-1.5
TOLK	Toolik Lake Re	69.05	21	P	P	19 00 06.3	-1.0
TOLK	Toolik Lake Re	69.05	21	P	P	19 00 07.3	-0.1
	baz=253						
KK31	Karatay Array	69.10	311	P	P	19 00 07.8	-0.4
KK31				IAmb	IAmb	19 00 09.7	
	comp=Z,20nm,0.8s						
KK31	Karatay Array	69.10	311	i P	P	19 00 08.1	-0.1
KKAR	Karatay Array	69.10	311	P	P	19 00 08.2	0.0
KKAR	Karatay Array	69.10	311	P	P	19 00 08.0	-0.1
KKAR				IAmb	IAmb	19 00 09.7	
	comp=Z,20nm,0.8s						
KKAR	Karatay Array	69.10	311	P	P	19 00 08.2	0.0
KKAR				pmax	pmax		
	comp=Z,20nm,0.9s						
RAGM	Ragged Mountai	69.15	30	P	P	19 00 08.5	+0.3
RAGM				IAmb	IAmb	19 00 43.0	
	comp=Z,52nm,1.4s						
PAX	Paxson	69.26	27	P	P	19 00 08.4	-0.4
PAX	Paxson	69.26	27	P	P	19 00 08.4	-0.4
PAX				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SUCK	Suckling Hills	69.54	31	P	P	19 00 11.6	+1.0
GLB	Gilahina Butte	69.75	29	P	P	19 00 11.6	-0.2
BRVK	Borovoye	69.76	322	P	P	19 00 11.6	-0.4
BRVK				IAmb	IAmb	19 00 50.8	
	comp=Z,42nm,1.0s						
BRVK	Borovoye	69.76	322	P	P	19 00 11.6	-0.4
VRDI	Verde Repeater	69.88	29	P	P	19 00 13.0	+0.1
CRQM	Cirque	69.96	30	P	P	19 00 13.2	-0.1
CRQM				IAmb	IAmb	19 00 26.7	
	comp=Z,72nm,1.8s						
DOT	Dot Lake	70.01	27	P	P	19 00 13.4	0.0
WAX	Waxell Ridge	70.06	30	P	P	19 00 13.6	-0.1
SCRK	Sand Creek	70.11	26	P	P	19 00 14.2	+0.2
MCARA	McCarthy VSAT	70.11	29	P	P	19 00 13.1	-0.9
TGL	Tana Glacier	70.11	30	P	P	19 00 14.3	+0.2
BALM	Baldy	70.39	30	P	P	19 00 15.8	+0.1
KBL	Kabul	70.39	302	P	P	19 00 15.7	-0.8
KBL				IAmb	IAmb	19 00 18.2	
	comp=Z,58nm,0.9s						
KBL	Kabul	70.39	302	P	P	19 00 15.7	-0.8
KBL				pmax	pmax		
	comp=Z,58nm,0.9s						
MESA	MESA	70.46	31	P	P	19 00 15.4	-1.0
MESA				IAmb	IAmb	19 00 37.5	
	comp=Z,66nm,1.6s						
BMAR	Burnt Mountain	70.55	23	P	P	19 00 16.9	+0.3
BARN	Barnard Glacie	70.72	30	P	P	19 00 17.3	-0.6
CTGM	Chitina Glacie	70.86	30	P	P	19 00 19.0	+0.3
BCAR	Beaver Creek A	70.93	28	P	P	19 00 18.7	-0.3
KAAM	Kaadhehdhoo	71.61	266	P	P	19 00 23.1	-0.8
KAAM				IAmb	IAmb	19 00 28.8	
	comp=Z,47nm,0.9s						
PPT	Papeete	72.22	114	LR	LR	19 25 42.0	
	comp=Z,286nm,20.0s,baz=286,slow=30						
PPT2	Papeete2	72.23	114	eS	S	19 09 41.5	+1.6
	comp=Z,197nm,28.8s						
PPT2	Papeete2	72.23	114	eLR	LR	19 22 41.6	
	comp=Z,249nm,21.2s						
DHAK	Deception Hill	72.25	32	P	P	19 00 28.1	+1.1
DHAK				IAmb	IAmb	19 02 34.1	
	comp=Z,90nm,1.5s						
HYT	Haines Junctio	72.72	30	P	P	19 00 30.7	+0.9
PMOR	Pomariorio Ree	72.87	110	eP	P	19 00 33.0	+1.7
	comp=Z,26nm,1.0s						
EPYK	Eagle Plains	73.46	24	P	P	19 00 34.0	+0.1
EPYK	Eagle Plains	73.46	24	P	P	19 00 33.9	0.0
	baz=266						
WHY	Whitehorse	74.00	30	P	P	19 00 37.3	+0.1
JIS	Juneau Island	74.22	33	P	P	19 00 39.2	+0.8
TBI	Tubuai	74.43	119	eS	S	19 10 06.1	+1.7
	comp=Z,377nm,28.0s						
TBI	Tubuai	74.43	119	eLR	LR	19 23 39.6	
	comp=Z,145nm,23.0s						
INK	Inuvik	74.81	22	P	P	19 00 41.1	-0.5
INK	Inuvik	74.81	22	P	P	19 00 41.1	-0.5
INK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SVE	Sverdlovsk	75.40	326	eP	P	19 00 45.7	+0.4
DIB	Dawson Inlet,	75.42	38	P	P	19 00 45.6	+0.2
DIB				IAmb	IAmb	19 01 59.6	
	comp=Z,100nm,1.8s						
HRA	Herat	76.00	302	P	P	19 00 49.7	+0.3
HRA				IAmb	IAmb	19 00 51.1	
	comp=Z,32nm,0.8s						
HRA				pP	pP	19 01 20.9	-0.9
ABKAR	Akbulak array	76.26	318	P	P	19 00 49.8	-0.5
ABKAR				pP	pP	19 01 22.1	-0.7
ABKAR	Akbulak array	76.26	318	P	P	19 00 49.5	-0.8
ABKAR				pP	pP	19 01 20.9	-2.0
ABKAR				IAmb	IAmb	19 01 28.7	
	comp=Z,23nm,1.1s						
ARU	Arti	76.57	325	P	P	19 00 51.7	-0.2
ARU				pP	pP	19 01 21.9	-2.5
ARU				IAmb	IAmb	19 01 30.3	
	comp=Z,39nm,1.2s						
ARU	Arti	76.57	325	d iP	P	19 00 51.9	0.0
ARU				*PP	pwP	19 01 27.1	-1.6
ARU				S	S	19 10 27.6	+0.7
ARU				SS	SS	19 15 23.4	-1.1
ARU				pmax	pmax		
	comp=Z,23nm,1.8s						
AKTO	Aktyubinsk	77.40	319	LR	LR	19 39 53.8	
	comp=Z,12nm,18.1s,baz=86,slow=39						
C36M	Paulatuk	78.20	21	P	P	19 00 59.6	-1.1
ASHT	Ashkhabad	78.64	306	P	P	19 01 03.6	-0.3
ASHT				IAmb	IAmb	19 01 06.2	
	comp=Z,50nm,0.8s						
ASHT	Ashkhabad	78.64	306	P	P	19 01 03.6	-0.3
ASHT				pmax	pmax		
	comp=Z,50nm,0.8s						
GEYT	Alibeck	78.86	306	P	P	19 01 05.6	+0.6
	comp=Z,14nm,0.8s,baz=104,slow=0.6,SNR=54						
GEYT				pP	pP	19 01 37.5	-0.3
	comp=Z,6.4nm,0.9s,baz=51,slow=3.0,SNR=2.2						
GEYT				PP	PP	19 04 08.2	+2.9
	comp=Z,6.5nm,1.0s,baz=102,slow=6.7,SNR=4.8						
GEYT				LR	LR	19 37 51.6	
	comp=Z,41nm,21.4s,baz=25,slow=37						
GEYT	Alibeck	78.86	306	P	P	19 01 05.2	+0.2
GEYT				pP	pP	19 01 36.7	-1.0
GEYT					PP	19 04 05.7	+0.4
GYA0B	ALIBECK ARRAY	78.86	306	P	P	19 01 05.1	+0.1
GYA0B				pP	pP	19 01 36.9	-0.9
WBK	Wadi Bani Khal	80.64	291	P	P	19 01 15.0	+0.1
WSAR	Wadi Sarin	80.83	292	P	P	19 01 16.1	+0.2
	comp=Z,11nm,0.7s,baz=141,slow=8.1,SNR=7.3						
WSAR	Wadi Sarin	80.83	292	P	P	19 01 15.7	-0.2
BIDO	Bidbid	81.23	292	P	P	19 01 18.0	0.0
MHTO	MHTO	81.86	290	P	P	19 01 21.1	-0.2
	SNR=7.4						
HOQ	Hoqain	81.96	292	P	P	19 01 21.8	0.0
	SNR=5.3						
D03D	Eldon	82.08	43	P	P	19 01 22.4	+0.4
	baz=281						
KEBM	Edson Butte	82.10	48	P	P	19 01 22.9	+0.6
KEBM				IAmb	IAmb	19 03 53.4	
	comp=Z,78nm,1.5s						
I02D	Swisshome	82.21	47	P	P	19 01 22.5	-0.3
	baz=281						
KBO	Bosley Butte	82.30	49	P	P	19 01 25.1	+1.7
KBO				IAmb	IAmb	19 02 50.2	
	comp=Z,57nm,1.5s						
J01E	Myrtle Point	82.33	48	P	P	19 01 23.1	-0.3
	baz=281						
PRGR	Permogore	82.37	332	eP	P	19 01 19.5	-3.7
PRGR				e*PP	pP	19 01 53.5	-2.6
PRGR				pmax	pmax		
	comp=Z,28nm,0.8s						
DQM	DQM	82.46	289	P	P	19 01 24.5	0.0
B05A	Bryant	82.59	42	P	P	19 01 25.4	+0.8
	baz=282						
K02D	Willamette Mer	82.61	48	P	P	19 01 25.9	+0.9
	baz=281						
E04D	Cinebar	82.62	44	P	P	19 01 25.2	+0.4
	baz=282						
I03D	Drain, OR	82.64	47	P	P	19 01 25.4	+0.4
	baz=281						
KRMB	Red Mountain	82.67	49	P	P	19 01 26.9	+1.5

KRMB IAmb IAmb 19 03 14.9
comp=Z,49nm,1.8s
UOSS Minazif 82.69 294 P P 19 01 24.9 -0.7
UOSS IAmb IAmb 19 02 11.6
comp=Z,79nm,1.6s
JCC Jacoby Creek, 82.71 50 P P 19 01 25.8 +0.4
JCC IAmb IAmb 19 01 35.7
comp=Z,84nm,1.6s
L02E Cave Junction 82.76 48 P P 19 01 26.1 +0.4
baz=282
H04D Lebanon 82.91 46 P P 19 01 26.6 +0.3
baz=282
KHMM Horse Mountain 82.92 50 P P 19 01 27.8 +1.1
KHMM IAmb IAmb 19 01 29.5
comp=Z,17nm,0.8s
KMRM Mail Ridge 83.07 50 P P 19 01 29.3 +1.9
KMRM IAmb IAmb 19 02 06.5
comp=Z,29nm,1.3s
HUMO Hull Mountain 83.14 48 P P 19 01 28.4 +0.7
HUMO pP 19 02 01.8 +0.8
CASY Casey 83.25 193 P P 19 01 27.3 -0.2
KCPM Cahto Peak 83.27 51 P P 19 01 30.2 +1.7
KCPM IAmb IAmb 19 01 31.2
comp=Z,150nm,2.0s
I04A Tendick Farm, 83.29 47 P P 19 01 29.1 +0.7
baz=282
YKA Yellowknife Ar 83.35 27 P P 19 01 28.1 -0.1
comp=Z,4.6nm,0.7s,baz=287,slow=5.5,SNR=66
YKA PKiKP PKiKP 19 06 44.6 -0.3
comp=Z,0.4nm,0.6s,baz=294,slow=1.5,SNR=4.8
YKA PKPPKP P'P'df 19 27 52.5 -0.6
comp=Z,0.9nm,1.0s,baz=103,slow=2.3,SNR=6.0
YKA LR LR 19 36 17.5
comp=Z,52nm,21.9s,baz=0.0,slow=34
C06D Leavenworth 83.45 42 P P 19 01 29.4 +0.3
baz=283
M02C Callahan 83.47 49 P P 19 01 31.1 +1.7
baz=282,SNR=8.1
YBH Yreka Blue Hor 83.50 49 P P 19 01 30.6 +1.0
YBH Yreka Blue Hor 83.50 49 P P 19 01 30.6 +1.0
YBH pmax pmax
comp=Z,13nm,0.8s
F05D White Salmon 83.51 45 P P 19 01 30.3 +0.9
baz=282
J04D Umpqua Nationa 83.62 47 P P 19 01 31.0 +0.7
baz=282
N02D Trinity Center 83.66 50 P P 19 01 31.2 +0.8
baz=282
L04D Klamath Falls 83.70 48 P P 19 01 31.5 +0.8
baz=282,SNR=6.2
LTY Liberty 83.74 43 P P 19 01 31.2 +0.5
LTY IAmb IAmb 19 01 32.3
comp=Z,56nm,2.0s
G05D Wamic, OR 83.75 45 P P 19 01 31.6 +0.9
baz=283
O02D Mt. Diablo Mer 83.77 50 P P 19 01 32.1 +1.1
baz=282
WDC Whiskeytown Da 83.87 50 P P 19 01 32.1 +0.8
WDC pP 19 02 05.0 +0.3
WDC Whiskeytown Da 83.87 50 P P 19 01 32.2 +0.8
WDC pmax pmax
comp=Z,8.0nm,1.0s
I05D Terrebonne, OR 83.93 46 P P 19 01 32.0 +0.4
baz=283
K04D Chiloquin, OR 84.01 48 P P 19 01 32.5 +0.3
baz=283
M04C Macdoel 84.13 49 P P 19 01 33.7 +0.8
baz=283
MCCM Marconi Confer 84.13 52 P P 19 01 33.0 +0.3
MCCM IAmb IAmb 19 02 11.1
comp=Z,77nm,1.2s
J05D Fort Rock, OR 84.23 47 P P 19 01 33.9 +0.6
baz=283
PINE Pine Mountain 84.33 46 P P 19 01 34.8 +0.9
PINE IAmb IAmb 19 01 36.3
comp=Z,20nm,0.8s
PINE pP pP 19 02 07.5 +0.2
B08A Colville Reser 84.37 42 P P 19 01 33.7 -0.1
E07A Sunnyside 84.44 44 P P 19 01 34.6 +0.4
O03E Paynes Creek 84.48 50 P P 19 01 35.2 +0.6
baz=283
K05A Summer Lake 84.60 48 P P 19 01 35.5 +0.2
HAWA Hanford 84.70 44 P P 19 01 36.0 +0.6
ORV Oroville 84.87 51 P P 19 01 36.8 +0.3
ORV pP pP 19 02 09.5 -0.4
RES Resolute Bay 84.91 13 P P 19 01 36.2 +0.3
RES Resolute Bay 84.91 13 P P 19 01 36.2 +0.3
RES pmax pmax
comp=Z,8.0nm,0.8s
C09A Chrisman Ranch 85.19 42 P P 19 01 38.2 +0.3
MOD Modoc Plateau 85.22 48 P P 19 01 38.8 +0.4
I07A Izee 85.27 46 P P 19 01 38.9 +0.4
AFDM Forest Hills D 85.41 51 P P 19 01 39.7 +0.5
KLMR Klimovskoe 85.43 332 eP P 19 01 30.5 -8.2
KLMR AMP 19 01 33.3
comp=Z,26nm,1.8s
KLMR Klimovskoe 85.43 332 eP P 19 01 30.4 -8.3
KLMR pmax pmax
comp=Z,26nm,1.8s
E09A Wood Farm, Sta 85.60 43 P P 19 01 40.1 +0.2
BEKR Beckworth 85.66 50 P P 19 01 41.7 +1.2
BEKR IAmb IAmb 19 01 42.4
comp=Z,13nm,0.7s
NEW Newport 85.82 41 P P 19 01 41.4 +0.4
NEW Newport 85.82 41 P P 19 01 41.4 +0.4
NEW pmax pmax
comp=Z,14nm,0.8s
NEW Newport 85.82 41 P P 19 01 41.5 +0.4
baz=285
CMB Columbia Colle 86.07 52 P P 19 01 42.7 +0.2
CMB Columbia Colle 86.07 52 P P 19 01 42.7 +0.2
CMB pmax pmax
comp=Z,6.0nm,0.7s
J08A Circle Bar Ran 86.17 46 P P 19 01 43.5 +0.5
WVOR Wild Horse Val 86.29 47 P P 19 01 43.6 0.0
WVOR Wild Horse Val 86.29 47 P P 19 01 43.6 0.0
WVOR pmax pmax
comp=Z,8.0nm,1.0s
F10A Beach Ranch, E 86.36 44 P P 19 01 44.1 +0.3
WHFO Wadi Hawf 86.37 287 P P 19 01 43.1 -1.2
SNR=5.8
PNTR Pine Nut 86.41 51 P P 19 01 44.8 +0.4
PAHR Pah Rah Range 86.42 50 P P 19 01 44.8 +0.5
KEV Kevo 86.52 342 P P 19 01 44.8 +0.9
KEV Kevo 86.52 342 P P 19 01 44.8 +0.9
BMO Blue Mountains 86.60 45 P P 19 01 45.6 +0.6
BMO IAmb IAmb 19 01 46.9
comp=Z,22nm,1.1s
BMO pP pP 19 02 17.1 -1.5
BMO Blue Mountains 86.60 45 P P 19 01 45.6 +0.6
BMO *PP pP 19 02 17.1 -1.5
BMO pmax pmax
comp=Z,22nm,1.1s
WAKR Walker 86.68 51 P P 19 01 46.3 +0.6
WAKR IAmb IAmb 19 01 49.5
comp=Z,31nm,1.7s
WAKR pP pP 19 02 16.2 -3.0
YERR Yerington 86.71 51 P P 19 01 46.3 +0.5
YERR IAmb IAmb 19 01 48.1
comp=Z,60nm,1.9s
ABTO Aybut 86.93 287 P P 19 01 46.9 -0.1
SNR=17
ABTO P PcP 19 01 48.0 -1.2
SNR=6.6
SMMC Simmler 87.03 55 P P 19 01 48.3 +1.0
baz=284
ARCES ARCESS Array B 87.08 342 P P 19 01 46.8 +0.1
comp=Z,1.5nm,0.6s,baz=81,slow=10.0,SNR=6.7
ARCES PKKPbc PKKPbc 19 19 38.2 -2.4
comp=Z,1.4nm,0.7s,baz=273,slow=2.2,SNR=5.6
ARCES LR LR 19 43 27.0
comp=Z,61nm,19.9s,baz=66,slow=37
OMMB Old Mammoth Mi 87.24 52 P P 19 01 48.7 +0.2
PKM Mcpherson Peak 87.28 55 P P 19 01 49.9 +1.3
baz=284
VRH Novokhopyorsk 87.34 322 eP P 19 01 49.0 +0.7
VRH pmax pmax
comp=Z,10.0nm,0.9s
RYN Ryan 87.34 51 P P 19 01 49.6 +0.8
RYN IAmb IAmb 19 01 51.3
comp=Z,24nm,1.4s
MLAC Mammoth, Mammo 87.36 52 P P 19 01 50.5 +1.5
baz=285
SOCY Socotra 87.44 282 P P 19 01 48.5 -1.1
SOCY IAmb IAmb 19 01 49.8
comp=Z,48nm,1.3s
KVN Kaiserville 87.55 51 P P 19 01 50.8 +0.9
KVN IAmb IAmb 19 01 52.2
comp=Z,23nm,1.2s
KVN Kaiserville 87.55 51 P P 19 01 50.8 +0.9
KVN pmax pmax
comp=Z,23nm,1.2s
NVAR Mina Array Bea 87.56 51 P P 19 01 51.2 +1.3
comp=Z,8.8nm,0.8s,baz=267,slow=5.6,SNR=51
NVAR pP pP 19 02 21.9 -1.6
comp=Z,3.1nm,0.7s,baz=258,slow=5.5,SNR=3.0
NVAR PKiKP PKiKP 19 06 55.5 +2.7
comp=Z,0.3nm,0.6s,baz=258,slow=2.5,SNR=3.0
NVAR PKKPbc PKKPbc 19 19 39.0 +0.3
comp=Z,1.2nm,0.7s,baz=156,slow=2.7,SNR=8.6
NVAR Mina Array Bea 87.56 51 P P 19 01 50.4 +0.4
NVAR pP 19 02 21.1 -2.4
WALA Waterton Lakes 87.64 40 P P 19 01 51.2 +1.2
WALA IAmb IAmb 19 02 04.8
comp=Z,55nm,1.9s
NV11 Mina Array Sit 87.67 51 P P 19 01 50.7 +0.3
JTMT Jette 87.80 41 P P 19 01 50.3 -0.4
JTMT IAmb IAmb 19 03 37.1
comp=Z,20nm,1.2s
TIN Tinemaha, Big 87.97 53 P P 19 01 52.9 +1.1
baz=285
MFID Camas Ranch 88.02 46 P P 19 01 52.2 +0.4
MFID IAmb IAmb 19 01 54.1
comp=Z,37nm,1.1s
MOS Moscow 88.13 327 eP P 19 01 50.4 -1.5
MOS e 19 02 26.3
MOS pmax pmax
comp=Z,37nm,1.1s
ISA Isabella, Lake 88.15 54 P P 19 01 53.5 +1.0
baz=285
CWC Cottonwood Cre 88.25 53 P P 19 01 54.4 +1.2
baz=285
ZEI Tsey 88.42 314 eP P 19 01 53.4 -0.5
ZEI pmax pmax
comp=Z,4.0nm,0.7s
DECC Green Verdugo 88.62 55 P P 19 01 55.7 +0.9
baz=285
DAC Darwin (Calif) 88.67 53 P P 19 01 57.1 +1.9
DAC IAmb IAmb 19 02 00.4
comp=Z,19nm,1.2s
DAC Darwin (Calif) 88.67 53 P P 19 01 57.1 +1.9
DAC pmax pmax
comp=Z,19nm,1.3s
EDW2 Edwards Air Fo 88.73 55 P P 19 01 56.6 +1.3
baz=285
CIS Catalina Islan 88.78 56 P P 19 01 57.0 +1.5
baz=285
MPMC Manual Prospec 88.81 53 P P 19 01 57.2 +1.3
baz=286,SNR=12
LRMC Laurel Mtn Rad 88.82 54 P P 19 01 57.1 +1.3
baz=286,SNR=8.6
KBZ Khabaz 88.85 315 P P 19 01 54.5 -1.0
comp=Z,2.7nm,0.8s,baz=73,slow=11,SNR=3.1
KBZ LR LR 19 43 50.4
comp=Z,57nm,21.0s,baz=54,slow=37
VSR Storozhevoye 88.86 323 eP P 19 01 51.2 -4.2
VSR pmax pmax
comp=Z,5.0nm,0.8s
OBN Obninsk 88.92 327 LR LR 19 42 53.1
comp=Z,36nm,20.0s,baz=359,slow=36
OBN Obninsk 88.92 327 eP P 19 01 55.5 -0.1
OBN e*PP pP 19 02 30.2 +1.2
OBN e*SP sP 19 02 44.4 +1.6
OBN e 19 05 27.0
OBN pmax pmax
comp=Z,6.0nm,1.1s
KIV Kislovodsk 88.93 315 eP P 19 01 55.4 -0.7
KIV pmax pmax
comp=Z,14nm,1.0s
KIV MLR MLR
comp=Z,194nm,20.0s
NEY Neytrino 89.11 314 i P P 19 01 57.2 +0.1
NEY pmax pmax
comp=Z,1.0nm,0.9s
BFSC Mount Baldy Ra 89.17 55 P P 19 01 58.8 +1.3
baz=286
FURC Furnace Creek, 89.19 53 P P 19 01 58.7 +1.4
baz=286,SNR=7.7
ELK Elko 89.20 48 P P 19 01 58.3 +0.6
ELK IAmb IAmb 19 02 00.0
comp=Z,17nm,1.0s
ELK Elko 89.20 48 P P 19 01 58.3 +0.6
ELK pmax pmax
comp=Z,17nm,1.0s
TPNV Topopah Spring 89.53 52 P P 19 01 59.5 +1.3
TPNV IAmb IAmb 19 02 01.6
comp=Z,18nm,0.9s
TPNV pP pP 19 02 32.4 -0.5
TPNV Topopah Spring 89.53 52 P P 19 02 00.4 +1.2
baz=286,SNR=16
GSC Goldstone, Bar 89.55 54 P P 19 01 59.9 +0.7
GSC IAmb IAmb 19 02 01.7
comp=Z,42nm,1.4s
GSC Goldstone, Bar 89.55 54 P P 19 01 59.9 +0.7
GSC pmax pmax
comp=Z,42nm,1.5s
GSC Goldstone, Bar 89.55 54 P P 19 02 00.5 +1.3
baz=286,SNR=7.5
LRM Limekiln Ridge 89.59 43 P P 19 01 58.5 -0.8
LRM pP 19 02 32.1 -1.0
R11A Troy Canyon, C 89.64 51 P P 19 01 59.5 -0.1
R11A IAmb IAmb 19 02 02.3
comp=Z,26nm,1.6s
R11A pP pP 19 02 32.4 -1.0
R11A Troy Canyon, C 89.64 51 P P 19 02 00.9 +1.2
baz=287
MCMT McKenzie Canyo 89.64 44 P P 19 02 00.1 +0.5
MURC Murrieta 89.71 56 P P 19 02 01.3 +1.4
baz=286
SHOC Shoshone, Teco 89.80 53 P P 19 02 01.6 +1.3
baz=286
109C Camp Elliot, M 89.97 56 P P 19 02 02.4 +1.3
baz=286
HEC Hector,Ludlow 90.06 54 P P 19 02 02.7 +1.1
baz=286,SNR=7.5
TUQ Turquoise Moun 90.21 54 P P 19 02 03.8 +1.4
baz=287,SNR=9.7
PFO Pinyon Flats O 90.30 55 P P 19 02 02.8 0.0
PFO IAmb IAmb 19 02 05.2
comp=Z,28nm,1.1s
PFO Pinyon Flats O 90.30 55 P P 19 02 02.8 0.0
PFO pmax pmax
comp=Z,28nm,1.2s
PFO Pinyon Flats O 90.30 55 P P 19 02 03.6 +0.9
baz=286,SNR=7.2
XPFO Pion Flat 90.30 55 P P 19 02 02.7 0.0
XPFO IAmb IAmb 19 02 05.2
comp=Z,28nm,1.1s
BAR Barrett 90.38 56 P P 19 02 03.6 +0.5
BAR IAmb IAmb 19 02 05.4
comp=Z,40nm,1.4s
SHPR Sheep Range 90.50 52 P P 19 02 04.1 +0.4
SHPR IAmb IAmb 19 02 06.5
comp=Z,12nm,1.0s
MONP2 Monument Peak 90.53 56 P P 19 02 05.0 +1.1
baz=286,SNR=8.2
BELC Belle Mtn. Jos 90.56 55 P P 19 02 04.9 +1.0
baz=287,SNR=7.4
QLMT Earthquake Lak 90.59 44 P P 19 02 04.1 +0.1
GMRC Granite Mounta 90.60 54 P P 19 02 05.6 +1.4
baz=287,SNR=10
BGU Big Grassy Mou 90.75 48 P P 19 02 05.0 +0.3
YHL Hebgen Lake 90.75 43 P P 19 02 05.1 +0.2
YHB Horse Butte 90.78 44 P P 19 02 05.2 +0.3
IKP In-Ko-Pah, Jac 90.85 56 P P 19 02 06.6 +1.3
baz=286
PSUT Pine Spring 90.88 50 P P 19 02 06.2 +0.7
PSUT pP pP 19 02 37.6 -1.6
YMR Madison River 90.96 44 P P 19 02 06.3 +0.6
YHH Holmes Hill 91.00 43 P P 19 02 06.0 0.0
SWSC Sam W. Stewart 91.01 56 P P 19 02 07.1 +1.2
baz=287,SNR=5.4
FINES FINESS Array B 91.08 335 P P 19 02 04.9 -0.6
comp=Z,3.9nm,1.0s,baz=111,slow=10,SNR=13
FINES pP pP 19 02 37.7 -1.2
comp=Z,3.8nm,0.8s,baz=82,slow=4.0,SNR=2.8
FINES LR LR 19 46 49.7
comp=Z,58nm,18.2s,baz=44,slow=38
FINES FINESS Array B 91.08 335 P P 19 02 03.1 -2.4
BC3 Big Chuckawall 91.09 55 P P 19 02 07.7 +1.3
baz=287,SNR=15
DUG Dugway, Tooele 91.13 48 P P 19 02 06.3 -0.2
DUG IAmb IAmb 19 02 08.8
comp=Z,17nm,1.2s
DUG Dugway, Tooele 91.13 48 P P 19 02 06.3 -0.2
DUG pmax pmax
comp=Z,17nm,1.2s
DUG Dugway, Tooele 91.13 48 P P 19 02 07.3 +0.7
baz=289
YNR Norris Junctio 91.14 44 P P 19 02 07.0 +0.5
IRM Iron Mountain 91.19 55 P P 19 02 08.1 +1.3
baz=287,SNR=16
YPP Pitchstone Pla 91.20 44 P P 19 02 07.3 +0.4
IMW Indian Meadow 91.24 44 P P 19 02 07.6 +0.5
YUF Upper Falls 91.25 43 P P 19 02 08.0 +0.9
FXWY Fox Creek 91.27 45 P P 19 02 07.3 +0.1
VNDA Vanda 91.30 176 P P 19 02 07.2 +1.0
comp=Z,11nm,0.9s,baz=307,slow=3.7,SNR=4.2
H17A Grant Village 91.31 44 P P 19 02 08.6 +1.2
H17A IAmb IAmb 19 02 11.5
comp=Z,18nm,1.1s
H17A Grant Village 91.31 44 P P 19 02 09.9 +2.5
baz=290
FLWY Flagg Ranch 91.34 44 P P 19 02 08.6 +1.1
FLWY IAmb IAmb 19 02 10.3
comp=Z,17nm,0.9s
TPAW Teton Pass 91.37 45 P P 19 02 07.5 -0.3
TPAW IAmb IAmb 19 03 22.5
comp=Z,13nm,0.6s
LKWY Lake 91.38 44 P P 19 02 08.1 +0.4
LKWY IAmb IAmb 19 02 11.7
comp=Z,15nm,1.1s
LKWY Lake 91.38 44 P P 19 02 08.1 +0.4
LKWY pmax pmax
comp=Z,15nm,1.1s
MOOW Moose Ponds 91.42 44 P P 19 02 08.3 +0.4
NEE2 Needles Airpor 91.43 54 P P 19 02 09.3 +1.5
baz=287
GCMT Greycliff 91.43 42 P P 19 02 09.0 +1.2
YMP Mirror Lake Pl 91.48 43 P P 19 02 09.8 +1.6
YNE Yellowstone No 91.48 43 P P 19 02 08.2 +0.1
AHID Auburn Hatcher 91.51 45 P P 19 02 08.8 +0.5
AHID IAmb IAmb 19 02 10.4
comp=Z,14nm,1.0s
AHID pP pP 19 02 41.7 -0.4
CCUT Cedar City 91.55 51 P P 19 02 09.7 +1.1
CCUT pP pP 19 02 41.1 -1.3
NLU North Lily Min 91.75 48 P P 19 02 09.7 +0.2
GLA Glamis 91.77 56 P P 19 02 10.7 +1.2
GLA IAmb IAmb 19 02 12.2
comp=Z,31nm,1.1s
GLA Glamis 91.77 56 P P 19 02 10.7 +1.2
GLA pmax pmax
comp=Z,31nm,1.1s
GLA Glamis 91.77 56 P P 19 02 11.0 +1.5
baz=287,SNR=6.8
Y12C Blythe 91.80 55 P P 19 02 10.4 +0.9
Y12C IAmb IAmb 19 02 12.3
comp=Z,25nm,1.1s
Y12C Blythe 91.80 55 P P 19 02 11.1 +1.5
baz=287,SNR=5.8
LCMT Little Creek M 91.81 51 P P 19 02 10.9 +1.2
TCUT Toone Canyon 91.84 47 P P 19 02 09.7 -0.3
W13A Hualapai Mount 91.90 53 P P 19 02 10.4 +0.2
RLMT Red Lodge 91.93 43 P P 19 02 10.3 +0.1
RLMT Red Lodge 91.93 43 P P 19 02 11.6 +1.4
baz=291
PDMCI Parker Dam,Lak 91.94 54 P P 19 02 11.5 +1.3
baz=288,SNR=6.8
JLU Jordanelle 91.98 48 P P 19 02 11.2 +0.6
KNB Kanab 92.13 51 P P 19 02 12.4 +1.1
KNB pP pP 19 02 43.5 -1.5
KNB Kanab 92.13 51 P P 19 02 12.4 +1.1
KNB *PP pP 19 02 43.5 -1.5
KNB pmax pmax
comp=Z,17nm,1.1s
MSU Marysvale 92.14 50 P P 19 02 12.4 +1.1
MSU pP pP 19 02 43.7 -1.4
MSU Marysvale 92.14 50 P P 19 02 12.4 +1.1
MSU *PP pP 19 02 43.7 -1.4
FFC Flin Flon 92.34 32 P P 19 02 11.4 -0.1
FFC Flin Flon 92.34 32 P P 19 02 11.5 -0.1
FFC pmax pmax
comp=Z,7.0nm,1.2s
RAYN Ar Rayn 92.51 295 P P 19 02 11.0 -2.1
RAYN Ar Rayn 92.51 295 P P 19 02 11.0 -2.1
PD31 Pinedale Array 92.58 45 P P 19 02 12.8 -0.4
PDAR Pinedale Array 92.58 45 P P 19 02 13.3 +0.1
comp=Z,1.5nm,0.7s,baz=259,slow=1.9,SNR=10
PDAR pP pP 19 02 44.9 -2.1
comp=Z,0.5nm,0.6s,baz=191,slow=3.7,SNR=2.1
PDAR LR LR 19 36 50.8
comp=Z,54nm,21.5s,baz=288,slow=31
PDAR Pinedale Array 92.58 45 P P 19 02 13.1 -0.2
TMUT Trail Mountain 92.59 49 P P 19 02 12.7 -0.8
U15A North Rim 92.72 52 P P 19 02 14.0 -0.1
Q16A Castle Valley 92.75 49 P P 19 02 14.8 +0.7
Y14A Wickenburg 92.95 54 P P 19 02 14.6 -0.4
Y14A IAmb IAmb 19 02 17.5
comp=Z,15nm,1.0s
SRU San Rafael Swe 93.16 49 P P 19 02 16.2 +0.2
SRU San Rafael Swe 93.16 49 P P 19 02 16.2 +0.2
SRU pmax pmax
comp=Z,5.0nm,0.9s
LAO LASA Array 93.31 41 P P 19 02 16.4 +0.1
LAO IAmb IAmb 19 02 30.1
comp=Z,20nm,0.9s
LAO LASA Array 93.31 41 P P 19 02 17.0 +0.6
baz=293
WUAZ Wupatki 93.72 52 P P 19 02 19.1 +0.5
WUAZ IAmb IAmb 19 02 21.3
comp=Z,9.4nm,0.9s
WUAZ Wupatki 93.72 52 P P 19 02 20.1 +1.5
baz=289
214A Organ Pipe Nat 93.72 56 P P 19 02 19.7 +1.3
214A IAmb IAmb 19 02 21.3
comp=Z,20nm,1.1s
214A Organ Pipe Nat 93.72 56 P P 19 02 19.8 +1.3
baz=288,SNR=7.5
DGMT Dagmar 93.84 38 P P 19 02 18.4 -0.3
baz=295
X16A Lo Mia Camp, P 94.03 53 P P 19 02 20.7 +0.6
X16A IAmb IAmb 19 02 23.2
comp=Z,16nm,1.7s
FCC Fort Churchill 94.04 26 P P 19 02 18.3 -0.9
FCC IAmb IAmb 19 02 19.7
comp=Z,14nm,1.4s
FCC Fort Churchill 94.04 26 P P 19 02 18.3 -0.9
FCC pmax pmax
comp=Z,14nm,1.5s
O20A White River Ci 94.44 47 P P 19 02 22.4 +0.5
baz=292
K22A Casper 94.69 44 P P 19 02 22.3 -0.6
K22A IAmb IAmb 19 02 25.6
comp=Z,12nm,1.2s
K22A Casper 94.69 44 P P 19 02 23.2 +0.3
baz=293
AKASG Malin Array Be 94.81 325 P P 19 02 22.0 -1.0
comp=Z,0.2nm,0.2s,baz=54,slow=4.8,SNR=3.5
AKASG Malin Array Be 94.81 325 P P 19 02 22.0 -1.0
TUC Tucson 95.23 55 P P 19 02 26.0 +0.5
TUC IAmb IAmb 19 02 28.4
comp=Z,13nm,1.3s
TUC Tucson 95.23 55 P P 19 02 26.0 +0.5
TUC pmax pmax
comp=Z,13nm,1.3s
TUC Tucson 95.23 55 P P 19 02 25.8 +0.3
baz=289
MVCO Mesa Verde 95.32 50 P P 19 02 25.1 -0.8
baz=291
SMCO Snowmass 95.71 48 P P 19 02 28.1 +0.2
RSSD Black Hills 95.76 42 P P 19 02 27.4 -0.5
baz=295
N23A Red Feather La 95.78 46 P P 19 02 27.8 -0.2
baz=293
S22A 4UR Ranch, Cre 96.36 49 P P 19 02 29.7 -1.1
baz=292
ISCO Idaho Springs 96.44 47 P P 19 02 30.7 -0.4
baz=293
BRTR Keskin Array B 96.73 313 P P 19 02 30.4 -1.8
comp=Z,1.0nm,0.8s,baz=60,slow=5.8,SNR=5.5
BRTR pP pP 19 03 03.4 -2.4
comp=Z,0.7nm,0.7s,baz=66,slow=3.5,SNR=2.4
BRTR PP PP 19 06 19.6 -8.8
comp=Z,1.4nm,0.9s,baz=95,slow=9.2,SNR=5.0
BRTR Keskin Array B 96.73 313 P P 19 02 29.8 -2.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BRTR	Keskin Array B	96.73	313	P	P	19 02 29.8	-2.4
HFS	Hagfors	96.74	337	LR	LR	19 50 08.4	
	comp=Z,114nm,18.1s,baz=2.0,slow=38						
SDCO	Great Sand Dun	97.33	49	P	P	19 02 34.1	-1.0
	baz=293						
ANMO	Albuquerque	97.69	51	P	P	19 02 35.9	-0.8
	baz=292						
ULM	Lac du Bonnet	97.78	34	P	P	19 02 36.2	-0.3
	comp=Z,2.0nm,0.8s,baz=239,slow=1.8,SNR=3.9						
ULM				LR	LR	19 46 02.9	
	comp=Z,89nm,19.2s,baz=350,slow=35						
ULM	Lac du Bonnet	97.78	34	P	P	19 02 35.6	-0.9
ULM				IAmb	IAmb	19 02 54.5	
	comp=Z,13nm,1.6s						
T25A	Trinidad	98.36	49	P	P	19 02 39.5	-0.2
	baz=294						
MAW	Mawson	98.98	203	P	Pdif	19 02 41.3	0.0
	comp=Z,5.9nm,0.8s,baz=22,slow=2.6,SNR=5.1						
MAW				PP	PP	19 06 43.7	-1.3
	comp=Z,5.9nm,0.9s,baz=96,slow=12,SNR=3.6						
MAW	Mawson	98.98	203	P	P	19 02 40.9	-0.4
MAW				IAmb	IAmb	19 04 42.5	
	comp=Z,13nm,1.9s						
MNTX	Cornudas Mount	99.74	54	P	Pdif	19 02 44.7	-1.0
	baz=292						
VYHS	Vyhne	101.71	326	eP	Pdif	19 02 54.8	+0.7
VYHS	Vyhne	101.71	326	ePDIFF	Pdif	19 02 54.8	+0.7
TXAR	Lajitas Array	102.01	56	Pdiff	Pdif	19 02 56.5	+0.6
	comp=Z,0.8nm,0.9s,baz=238,slow=7.2,SNR=4.3						
TXAR				PKKPbc	PKKPbc	19 18 58.5	-1.6
	comp=Z,1.8nm,0.8s,baz=125,slow=6.3,SNR=9.9						
TXAR	Lajitas Array	102.01	56		Pdif	19 02 55.1	-0.9
TXAR					PKKPbc	19 18 58.0	-2.1
TXAR	Lajitas Array	102.01	56	P	Pdif	19 02 55.1	-0.9
CLL	Collm	102.91	331	ePdif	Pdif	19 02 58.0	-1.3
CLL	Collm	102.91	331	eP	Pdif	19 02 58.0	-1.3
U40A	Yellville	106.95	45	P	PKiKP	19 07 26.2	-0.6
	baz=302						
D48A	Paudash Townsh	107.04	31	P	PKiKP	19 07 26.2	-0.4
	baz=313						
CCM	Cathedral Cave	107.14	43	P	PKiKP	19 07 26.8	-0.2
	baz=303						
MIAR	Mount Ida	107.37	47	P	PKiKP	19 07 27.5	-0.1
	baz=301						
D50A	G1974 Best Tow	108.02	30	P	PKiKP	19 07 27.9	-0.6
	baz=315						
L48A	N Adams	109.07	36	P	PKiKP	19 07 30.4	-0.2
	baz=310						
E53A	Dumoine, Ponti	109.63	29	P	PKiKP	19 07 31.6	+0.1
	baz=317						
P48A	Milroy	110.03	39	P	PKiKP	19 07 32.2	-0.3
	baz=308						
Q48A	North Vernon	110.17	39	P	PKiKP	19 07 32.6	-0.1
	baz=308						
D55A	Sainte-Anne-du	110.17	28	P	PKiKP	19 07 32.1	-0.4
	baz=319						
OXF	Oxford	110.31	45	P	PKiKP	19 07 33.0	-0.1
	baz=304						
D56A	ZEC Mazanza, M	110.47	27	P	PKiKP	19 07 32.3	-0.8
	baz=319						
WVT	Waverly	110.48	43	P	PKiKP	19 07 32.9	-0.5
	baz=305						
D57A	Chemin Vers le	110.88	27	P	PKiKP	19 07 33.9	+0.1
	baz=320						
H55A	Tweed	111.19	30	P	PKiKP	19 07 33.6	-0.9
	baz=316						
E57A	Chemin Saint G	111.23	27	P	PKiKP	19 07 34.5	-0.1
	baz=320						
T49A	Edmonton	111.40	41	P	PKiKP	19 07 34.8	-0.3
	baz=307						
G57A	Newington	111.84	29	P	PKiKP	19 07 35.5	-0.1
	baz=319						
T50A	Nancy	111.89	41	P	PKiKP	19 07 35.4	-0.6
	baz=308						
W49A	Belvidere	112.10	43	P	PKiKP	19 07 36.1	-0.4
	baz=306						
U50A	Jamestown	112.25	41	P	PKiKP	19 07 35.8	-1.0
	baz=308						
I57A	Carthage	112.38	30	P	PKiKP	19 07 35.7	-1.1
	baz=318						
V50A	Pikevile	112.54	42	P	PKiKP	19 07 36.6	-0.7
	baz=307						
W50A	Signal Mountai	112.68	42	P	PKiKP	19 07 37.2	-0.5
	baz=307						
E61A	Lac Etchemin	112.80	25	P	PKiKP	19 07 37.1	-0.4
	baz=323						
U51A	La Follette	112.80	41	P	PKiKP	19 07 36.8	-1.0
	baz=308						
K58A	Earlville	113.25	31	P	PKiKP	19 07 38.4	-0.2
	baz=317						
J59A	Piesco	113.29	30	P	PKiKP	19 07 38.1	-0.5
	baz=319						
X51A	Calhoun	113.36	43	P	PKiKP	19 07 38.5	-0.4
	baz=307						
V52A	Sevierville	113.40	41	P	PKiKP	19 07 38.2	-0.8
	baz=308						
Z50A	Ashland	113.42	44	P	PKiKP	19 07 38.5	-0.6
	baz=306						
I60A	Shoreham	113.58	29	P	PKiKP	19 07 38.3	-0.8
	baz=320						
L59A	Walton	113.97	31	P	PKiKP	19 07 39.4	-0.5
	baz=318						
W53A	Cullowhee	114.10	41	P	PKPdf	19 07 39.7	-0.7
	baz=308						
F64A	Sherman	114.13	24	P	PKPdf	19 07 39.1	-1.0
	baz=325						
PKME	Peaks-Kenny Pk	114.23	25	P	PKiKP	19 07 40.0	-0.3
	baz=324						
Y52A	Lilburn	114.31	43	P	PKPdf	19 07 40.6	-0.1
	baz=307						
X53A	Estanollee	114.42	42	P	PKiKP	19 07 40.7	-0.3
	baz=308						
Z52A	Williamson	114.47	44	P	PKiKP	19 07 41.1	0.0
	baz=307						
GOGA	Godfrey	114.97	43	P	PKPdf	19 07 42.2	+0.1
	baz=308						
Z53A	Monticello	114.98	43	P	PKiKP	19 07 42.0	-0.1
	baz=308						
J63A	Strafford	115.04	28	P	PKiKP	19 07 41.1	-0.7
	baz=322						
H65A	Eastbrook	115.13	25	P	PKiKP	19 07 41.7	-0.3
	baz=325						
Y54A	Tignall	115.21	42	P	PKiKP	19 07 41.9	-0.6
	baz=308						
K63A	Dunstable	115.29	28	P	PKiKP	19 07 41.4	-0.9
	baz=321						
HRV	Adam Dziewonsk	115.42	29	P	PKiKP	19 07 42.6	0.0
	baz=321						
Z54A	Sparta	115.50	43	P	PKiKP	19 07 42.9	-0.1
	baz=308						
S58A	Poland Farm, P	115.62	36	P	PKiKP	19 07 42.8	-0.3
	baz=314						
Y55A	Saluda	115.70	42	P	PKiKP	19 07 43.4	0.0
	baz=309						
M63A	Gales Ferry	116.04	30	P	PKPdf	19 07 43.6	-0.3
	baz=320						
L64A	Middleborough	116.20	29	P	PKPdf	19 07 44.0	-0.2
	baz=322						
V58A	Windy Hill, Pi	116.22	38		PKPdf	19 07 41.4	-3.0
156A	Sylvania	116.74	43	P	PKPdf	19 07 45.6	+0.2
	baz=309						
SNAA	Sanae	118.45	191	PKPdf	PKPdf	19 07 47.6	0.0
SNAA	Sanae	118.45	191		PKPdf	19 07 47.0	-0.6
SNAA	Sanae	118.45	191	PKIKP	PKPdf	19 07 47.1	-0.6
ESDC	Sonseca Array	119.47	332	PKP	PKPdf	19 07 49.7	-0.9
	comp=Z,0.2nm,0.3s,baz=21,slow=2.3,SNR=3.5						
VNA2	Neumayer--Watz	119.90	190	PKPdf	PKiKP	19 07 51.0	+0.5
	baz=154,slow=0.8						
VNA3	Neumayer Olymp	120.01	189	PKPdf	PKiKP	19 07 50.8	+0.2
VNA1	Neumayer--Stat	120.29	190	PKPdf	PKiKP	19 07 51.8	+0.6
LBTB	Lobatse	121.29	249		PKPdf	19 07 54.4	-0.1
LBTB	Lobatse	121.29	249	PKIKP	PKPdf	19 07 54.4	-0.1
BOSA	Boshof	121.58	245	PKP	PKiKP	19 07 55.3	+0.2
	comp=Z,8.7nm,0.7s,baz=56,slow=0.5,SNR=19						
BOSA	Boshof	121.58	245		PKiKP	19 07 55.5	+0.4
JTS	Las Juntas de	125.85	67	PKP	PKPdf	19 08 03.2	-0.2
	comp=Z,2.0nm,0.4s,baz=270,slow=19,SNR=4.6						
JTS	Las Juntas de	125.85	67		PKPdf	19 08 03.0	-0.4
JTS	Las Juntas de	125.85	67	PKIKP	PKPdf	19 08 03.0	-0.4
TSUM	Tsumeb	128.59	249		PKPdf	19 08 09.1	-0.2
TOA0	Torodi Ar. Sit	134.44	304	PKPpre	PKPpre	19 08 04.2	
TOA0					PKPdf	19 08 19.2	-0.5
TOA0					SKPbc	19 11 35.7	-1.6
TORD	Torodi Ar. Bea	134.44	304	PKhKP	PKPpre	19 08 09.2	
	comp=Z,0.7nm,0.8s,baz=28,slow=3.4,SNR=2.8						
TORD				PKP	PKiKP	19 08 20.9	-0.2
	comp=Z,4.7nm,0.8s,baz=42,slow=3.0,SNR=9.3						
TORD				PP	PP	19 10 51.3	-1.7
	comp=Z,1.9nm,0.7s,baz=53,slow=5.4,SNR=5.1						
TORD				SKPbc	SKPbc	19 11 37.3	+0.1
	comp=Z,4.4nm,0.8s,baz=41,slow=3.2,SNR=11						
TORD	Torodi Ar. Bea	134.44	304	PKPpre	PKPpre	19 08 05.2	
TORD					PKPdf	19 08 18.1	-1.6
TORD				PP	PP	19 10 49.8	-3.1
TORD					SKPbc	19 11 35.9	-1.3
SJG	San Juan	136.70	44	SKPbc	SKPbc	19 11 42.9	-1.2
	comp=Z,14nm,0.8s,baz=76,slow=3.6,SNR=3.2						
ATAH	Atahualpa	137.68	86	PKhKP	PKPpre	19 08 20.4	
	comp=Z,6.7nm,0.8s,baz=78,slow=19,SNR=3.5						
ATAH				PKP	PKiKP	19 08 28.7	+0.4
	comp=Z,8.3nm,0.8s,baz=229,slow=4.9,SNR=5.7						
ROSC	El Rosal	137.69	67	PKP	PKPdf	19 08 27.3	+1.0
	comp=Z,14nm,0.7s,baz=272,slow=17,SNR=3.6						
ROSC	El Rosal	137.69	67		PKPdf	19 08 26.7	+0.4
FLOC	Florencia	137.78	72		PKPdf	19 08 26.1	+0.1
FLOC				SKPbc	SKPbc	19 11 48.2	+0.7
RUSC	La Rusia	138.32	65		PKPdf	19 08 27.1	-0.5
RUSC				SKPbc	SKPbc	19 11 48.5	-1.1
SDV	Santo Domingo	138.95	59	SKPbc	SKPbc	19 11 51.7	+0.7
	comp=Z,5.9nm,1.1s,baz=292,slow=6.0,SNR=5.0						
SDV	Santo Domingo	138.95	59		PKPpre	19 08 18.9	
SDV				PKPdf	PKPdf	19 08 28.0	-0.3
SDV				SKPbc	SKPbc	19 11 46.7	-4.3
PLCA	Paso Flores	139.21	138	PKP	PKiKP	19 08 29.8	-0.4
	comp=Z,8.9nm,1.0s,baz=282,slow=3.0,SNR=6.8						
PLCA				SKPbc	SKiKP	19 11 52.5	-1.4
	comp=Z,6.1nm,0.9s,baz=237,slow=5.3,SNR=5.8						
PLCA	Paso Flores	139.21	138		PKPdf	19 08 28.5	+0.6
PLCA	Paso Flores	139.21	138	PKIKP	PKPdf	19 08 28.5	+0.6
PEL	Peldehue	142.64	128		PKPdf	19 08 31.5	-2.8
PEL	Peldehue	142.64	128	PKIKP	PKPdf	19 08 31.5	-2.8
DBIC	Dimbokro	143.38	301	PKhKP	PKPpre	19 08 32.1	
	comp=Z,12nm,0.7s,baz=54,slow=5.9,SNR=22						
DBIC	Dimbokro	143.38	301		PKPpre	19 08 31.6	
DBIC	Dimbokro	143.38	301	PKHKP	PKPpre	19 08 31.6	
KIC	Kosan Boka	143.45	301	ePKIKP	PKPbc	19 08 33.8	0.0
	comp=Z,1.4nm,0.2s						
TIC	Toumodi	143.53	301	ePKIKP	PKPab	19 08 33.4	+0.4
GO04	Tololo Observa	143.64	123		PKPab	19 08 33.5	+0.2
LIC	Lamto	143.76	301	ePKIKP	PKPab	19 08 33.6	-0.3
	comp=Z,146nm,0.9s						
GO03	Copiap	144.92	119		PKPdf	19 08 38.5	+0.1
CFA	Coronel Fontan	145.16	127	PKPbc	PKPab	19 08 39.5	+0.8
CFA				pPKP	pPKPab	19 09 11.8	-1.6
CFA				SKPbc	SKiKP	19 12 06.7	+0.3
GO02	Mina Guanaco	146.12	115		PKPab	19 08 42.7	-0.1
PB04	IPOC Station P	146.18	110		PKPbc	19 08 41.7	-0.4
PB11	IPOC Station P	146.98	106		PKPdf	19 08 42.1	-0.1
PB01	IPOC Station P	146.98	108		PKPdf	19 08 40.8	-1.3
MNMC	Minye Minye	147.09	105		PKPdf	19 08 41.4	-1.2
LVC	Limon Verde	147.26	111	PKPbc	PKPab	19 08 47.2	-0.3
	comp=Z,28nm,0.7s,baz=275,slow=3.8,SNR=12						
LVC	Limon Verde	147.26	111		PKPdf	19 08 43.1	+0.2
LVC	Limon Verde	147.26	111	PKIKP	PKPdf	19 08 43.1	+0.2
GO01	Chusmiza	147.42	106		PKPdf	19 08 43.3	-0.1
LPAZ	La Paz	148.63	99	PKP	PKPdf	19 08 46.8	+1.2
	comp=Z,30nm,0.7s,baz=284,slow=2.0,SNR=53						
LPAZ				PKPbc	PKiKP	19 08 51.5	+0.6
	comp=Z,30nm,0.7s,baz=278,slow=2.9,SNR=55						
LPAZ	La Paz	148.63	99		PKPdf	19 08 45.8	+0.2
LPAZ	La Paz	148.63	99	PKIKP	PKPdf	19 08 45.8	+0.2
SAML	Samuel	152.79	84		PKPdf	19 08 51.7	+0.4
SAML	Samuel	152.79	84	PKIKP	PKPdf	19 08 51.7	+0.4
MDP	Montagnes des	155.17	43	PKP	PKPdf	19 08 55.5	+0.7
	comp=Z,4.5nm,0.8s,baz=310,slow=16						
MDP				PKPbc	PKPab	19 09 04.7	-15
	baz=292,slow=1.7						
SIV	San Ignacio	155.42	99	PKP	PKPdf	19 08 56.3	+1.3
	comp=Z,2.5nm,0.8s,baz=236,slow=3.9,SNR=13						
SIV				PKPbc	PKPab	19 09 05.3	-16
	comp=Z,5.0nm,0.9s,baz=333,slow=0.8,SNR=4.7						
CPUP	Villa Florida	156.05	126	PKP	PKPdf	19 08 56.8	+1.3
	comp=Z,2.6nm,0.8s,baz=37,slow=3.9,SNR=4.1						
CPUP				PKPab	PKPab	19 09 25.6	+2.1
	comp=Z,9.8nm,0.9s,baz=268,slow=4.5,SNR=12						
CPUP	Villa Florida	156.05	126	PKPdf	PKPdf	19 08 55.3	-0.2
CPUP					PKPab	19 09 23.9	+0.5
BDFB	Brasilia	167.96	102	PKP	PKPdf	19 09 09.1	+1.1
	comp=Z,4.1nm,0.7s,baz=22,slow=5.4,SNR=4.8						
BDFB				PKPab	PKPab	19 10 17.2	+1.1
	comp=Z,5.0nm,0.7s,baz=257,slow=3.9,SNR=4.9						
BDFB	Brasilia	167.96	102		PKPdf	19 09 08.0	0.0
BDFB					PKPab	19 10 17.3	+1.1
BDFB	Brasilia	167.96	102	PKIKP	PKPdf	19 09 08.0	0.0

*IDC **04** 19:01:56.0±1.3, 11°.86S×165°.24E, h0km, mb3.8/6, mb1 4.1/8, mb1mx3.8/46, mbtmp3.9/8, ML3.9/2, Error ellipse: s-maj=37.4km s-min=25.8km az=136.0*

ISC 04 19:02:01.5±1.0, **11°.9S**±0°.1×**165°.1E**±0°.1, **h35**km, **n8**, σ**1s.30**/9, **mb3.8**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.61	295	Pn	Pn	19 03 21.9	-0.6
	14nm,0.3s,baz=129,slow=9.0,SNR=5.7						
HNR				Sn	Sn	19 04 24.5	-1.3
	3.4nm,0.3s,baz=168,slow=19,SNR=2.6						
DZM	Mont Dzumac	10.21	173	Pn	Pn	19 04 24.9	-0.8
	0.2nm,0.3s,baz=324,slow=19,SNR=2.9						
WRA	Warramunga Arr	30.60	251	P	P	19 08 13.4	+1.0
	1.0nm,0.4s,baz=79,slow=8.8,SNR=11						
ASAR	Alice Springs	31.85	244	P	P	19 08 23.4	0.0
	0.7nm,0.7s,baz=71,slow=9.6,SNR=9.2						
CMAR	Chiang Mai Arr	71.86	294	P	P	19 13 23.8	+2.4
	0.6nm,1.0s,baz=106,slow=5.7,SNR=4.0						
SONM	Songino Array	78.96	324	P	P	19 14 01.9	+0.1
	0.4nm,0.9s,baz=132,slow=4.3,SNR=2.3						
ILAR	Eielson Array	84.51	19	P	P	19 14 29.9	-0.6
	0.8nm,0.8s,baz=234,slow=4.9,SNR=9.7						
YKA	Yellowknife Ar	96.01	27	P	P	19 15 24.2	-0.5
	0.3nm,0.8s,baz=257,slow=4.9,SNR=5.7						

IDC 04 19:04:22.6±3.6, **4°.62S**×**125°.52E**, **h460**km±55km, **mb2.6**/2, **mb1 3.0**/5, **mb1mx2.7**/49, **mbtmp3.7**/5, **Error ellipse: s-maj=57.5km s-min=16.9km az=84.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.84	57	P	P	19 06 05.7	-0.3
	1.1nm,0.3s,baz=207,slow=4.5,SNR=4.7						
SIJI				S	S	19 07 32.1	+1.6
	0.7nm,0.3s,baz=12,slow=23,SNR=3.6						
FITZ	Fitzroy Crossi	13.40	180	P	P	19 07 15.8	-0.7
	0.4nm,0.3s,baz=344,slow=7.6,SNR=17						
WRA	Warramunga Arr	17.49	151	P	P	19 07 59.0	-0.9
	0.4nm,0.3s,baz=332,slow=10,SNR=26						
ASAR	Alice Springs	20.59	158	P	P	19 08 29.5	+0.6
	0.7nm,0.6s,baz=351,slow=16,SNR=12						
MKAR	Makanchi Array	63.84	328	P	P	19 14 08.7	-0.1
	0.4nm,0.9s,baz=130,slow=5.8,SNR=3.1						

*IDC **04** 19:06:48.8±2.6, 7°.47S×128°.51E, h146km±26km, mb3.5/9, mb1 3.5/13, mb1mx3.3/51, mbtmp4.0/13, Error ellipse: s-maj=22.3km s-min=14.8km az=63.0*

*NEIC **04** 19:06:48.8±2.6, 7°.50S±0°.07×128°.61E±0°.06, h152km±7km, mb4.6/29, Error ellipse: s-maj=10.4km s-min=8.4km az=151.0*

ISC 04 19:06:48.4±0.4, **7°.52S**±0°.04×**128°.66E**±0°.06, **h151**km, **n67**, σ**1s.62**/70, **mb4.2**/20, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.66	100	Pn	Pn	19 07 35.0	+3.5
SOEI	Soe	4.88	243		Pn	19 08 02.0	+1.7
FAKI	Fak Fak	5.80	38	Pn	Pn	19 08 13.1	+0.6
FAKI				Sn	Sn	19 09 14.2	-4.2
MTN	Manton Dam	5.83	155		Pn	19 08 14.6	+1.8
SIJI	Sorong	7.10	22	P	Pn	19 08 30.9	+1.0
	1.4nm,0.3s,baz=221,slow=22,SNR=13						
SIJI				S	Sn	19 09 47.5	-1.9
	1.6nm,0.3s,baz=252,slow=20,SNR=6.5						
KNRA	Kununurra	8.11	179	Pn	Pn	19 08 43.6	+0.4
KNRA					Sn	19 10 09.7	-4.0
TNTI	Ternate	8.34	351	Pn	Pn	19 08 45.6	-0.7
FITZ	Fitzroy Crossi	10.92	195	P	Pn	19 09 21.6	+1.1
	0.7nm,0.3s,baz=360,slow=9.2,SNR=11						
FITZ				S	Sn	19 11 12.7	-8.7
	1.3nm,0.3s,baz=307,slow=20,SNR=3.9						
FITZ	Fitzroy Crossi	10.92	195		Pn	19 09 20.2	-0.3
BKB	Balikpapan	13.27	297	Pn	Pn	19 09 50.0	-1.0
WB0	Warramunga Arr	13.39	156	Pn	Pn	19 09 52.0	-0.6
WRAB	Tennant Creek	13.52	156	Pn	Pn	19 09 52.9	-1.4
WRA	Warramunga Arr	13.52	157	P	Pn	19 09 53.0	-1.3
	1.1nm,0.3s,baz=24,slow=19,SNR=25						
WRA				S	Sn	19 12 11.6	-13
	1.8nm,0.3s,baz=332,slow=23,SNR=11						
WRA	Warramunga Arr	13.52	157	P	Pn	19 09 54.1	-0.3
WB2	Warramunga Arr	13.53	156	Pn	Pn	19 09 51.8	-2.6
WR0	Warramunga Arr	13.62	156	Pn	Pn	19 09 54.0	-1.5
JAGI	Jajag, Banyuwa	14.39	265	Pn	Pn	19 10 04.0	-1.3
DAV	Davao City (W)	14.81	348		P	19 10 11.7	-0.9
COEN	Coen	15.63	115		P	19 10 23.4	+1.7
COEN				IAmb	IAmb	19 10 58.5	
	comp=Z,62nm,1.8s						
PSA00	Pilbara Seismi	16.36	210	P	Pn	19 10 29.5	0.0
PSA00				IAmb	IAmb	19 10 58.1	
	comp=Z,28nm,1.3s						
AS31	Alice Springs	16.83	163	P	P	19 10 35.5	+0.6
ASAR	Alice Springs	16.83	163	P	Pn	19 10 37.7	+2.5
	comp=Z,0.4nm,0.3s,baz=335,slow=9.7,SNR=31						
ASAR				S	S	19 13 35.8	-6.6
	comp=Z,0.6nm,0.3s,baz=349,slow=27,SNR=7.1						
ASAR	Alice Springs	16.83	163	P	P	19 10 35.6	+0.8
ASAR					S	19 13 33.1	-9.2
UGM	Wanagama	17.97	268	P	Pn	19 10 48.6	-0.4
PMG	Port Moresby	18.40	97	P	P	19 10 53.2	+1.2
	comp=Z,0.4nm,0.3s,baz=276,slow=10,SNR=2.1						
PMG	Port Moresby	18.40	97	P	P	19 10 53.0	+0.9
PMG				IAmb	IAmb	19 10 59.4	
	comp=Z,8.5nm,0.8s						
KSM	Kuching	20.37	295	P	Pn	19 11 14.2	-3.0
MORW	Morawa	24.51	207	P	P	19 11 55.1	+1.2
MORW				IAmb	IAmb	19 11 59.7	
	comp=Z,29nm,1.4s						
BBOO	Buckleboo	26.09	166	P	P	19 12 10.0	+1.9
BBOO				IAmb	IAmb	19 12 41.5	
	comp=Z,81nm,1.8s						
STKA	Stephens Creek	27.07	155	P	P	19 12 18.2	+1.3
	comp=Z,1.2nm,0.5s,baz=335,slow=7.5,SNR=5.5						
STKA	Stephens Creek	27.07	155	P	P	19 12 17.1	+0.2
HNR	Honiara	31.00	96	P	P	19 12 54.4	+2.4
	comp=Z,31nm,0.5s,baz=222,slow=14						
HNR	Honiara	31.00	96	P	P	19 12 52.9	+0.9
YULB	Yu-li	31.55	347	P	P	19 12 54.5	-2.1
TPUB	Ta-pu	31.62	346	P	P	19 12 55.7	-1.5
NACB	Ninganchiao	32.24	348	P	P	19 13 03.8	+1.2
TOO	Toolangi	33.59	155	P	P	19 13 13.3	-1.0
TOO				IAmb	IAmb	19 13 35.0	
	comp=Z,45nm,1.6s						
CMAR	Chiang Mai Arr	39.06	312	P	P	19 13 59.6	-1.3
	comp=Z,0.3nm,0.5s,baz=140,slow=7.1,SNR=3.8						
ENH	Enshi	41.84	335	P	P	19 14 23.2	-0.4
ENH				IAmb	IAmb	19 14 45.4	
	comp=Z,27nm,1.8s						
KSAR	Wonju Array Be	44.73	359	P	P	19 14 46.8	+0.2
MJB9	Matsu-Tunnel	44.74	11	P	P	19 14 46.8	+0.1
MJB9				IAmb	IAmb	19 15 01.5	
	comp=Z,46nm,1.6s						
TARA	Tarawa	45.03	81	P	P	19 14 48.3	-1.1
XAN	Xi'an	45.37	337	P	P	19 14 49.9	-1.9
FUNA	Funafuti	50.03	95	P	P	19 15 26.6	-1.4
USRK	Ussuriysk Ar.	51.56	3	P	P	19 15 38.7	-0.2
	comp=Z,0.8nm,0.2s,baz=179,slow=7.2,SNR=3.6						
USRK	Ussuriysk Ar.	51.56	3	P	P	19 15 39.2	+0.3
ULN	Ulaanbaatar	58.36	343	P	P	19 16 27.8	-0.1
ULN				IAmb	IAmb	19 17 06.1	
	comp=Z,5.7nm,1.7s						
SONM	Songino Array	58.52	343	P	P	19 16 29.8	+0.8
	comp=Z,0.9nm,0.6s,baz=161,slow=7.3,SNR=9.6						
SONM	Songino Array	58.52	343	P	P	19 16 30.2	+1.3
WMQ	Urumqi	63.11	328	P	P	19 17 01.5	+1.5
WMQ				IAmb	IAmb	19 17 02.0	
	comp=Z,3.9nm,0.5s						
PETK	Petropavlovsk-	65.23	19	P	P	19 17 14.9	+1.4
	comp=Z,1.5nm,0.7s,baz=169,slow=4.2,SNR=4.1						
MK31	Makanchi Array	67.94	328	P	P	19 17 31.4	+0.5
MKAR	Makanchi Array	67.94	328	P	P	19 17 31.7	+0.8
	comp=Z,0.8nm,0.4s,baz=116,slow=8.8,SNR=40						
MKAR	Makanchi Array	67.94	328	P	P	19 17 31.2	+0.3
MAKZ	Makanchi	68.11	327	P	P	19 17 32.7	+0.7
MAKZ				IAmb	IAmb	19 17 51.9	
	comp=Z,8.4nm,1.8s						
ZAA0	Zalesovo Array	71.46	334	P	P	19 17 52.2	-0.1
ZALV	Zalesovo Beam	71.46	334	P	P	19 17 52.0	-0.3
	comp=Z,1.3nm,0.5s,baz=145,slow=5.6,SNR=6.3						
ZALV	Zalesovo Beam	71.46	334	P	P	19 17 52.2	-0.1
VNDA	Vanda	72.10	173	P	P	19 17 57.5	+1.8
VNDA				IAmb	IAmb	19 18 30.3	
	comp=Z,47nm,1.8s						
KURK	Kurchatov	72.27	329	P	P	19 17 57.7	+0.6
KURK				IAmb	IAmb	19 17 58.5	
	comp=Z,4.1nm,1.1s						
KKAR	Karatay Array	72.86	319	P	P	19 18 00.8	0.0
BVAR	Borovoye Array	77.80	328	P	P	19 18 29.4	+0.6
	comp=Z,0.7nm,0.5s,baz=120,slow=8.5,SNR=5.8						
ABKAR	Akbulak array	82.09	322	P	P	19 18 52.0	0.0
GAMB	Gambell	83.90	23	P	P	19 19 02.4	+1.5
ARU	Arti	85.44	328	P	P	19 19 09.1	+0.2
	comp=Z,0.2nm,0.3s,baz=66,slow=8.9,SNR=3.1						
ARU	Arti	85.44	328	P	P	19 19 09.0	+0.2
ARU				IAmb	IAmb	19 19 15.8	
	comp=Z,12nm,1.6s						
TORD	Torodi Ar. Bea	127.60	281	PKP	PKiKP	19 25 37.6	+0.4
	comp=Z,0.6nm,1.0s,baz=113,slow=2.2,SNR=2.7						

*IDC **04** 19:12:17.0±3.0, 32°.95S×178°.27W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.7/37, mbtmp3.6/3, ML3.0/1, Error ellipse: s-maj=75.4km s-min=46.4km az=129.0*

*NEIC **04** 19:12:22.3±1.5, 33°.1S±0°.2×178°.3W±0°.2, h35km±2km, mb4.8/5, Error ellipse: s-maj=35.7km s-min=21.8km az=124.0*

ISC 04 19:12:21.9±1.7, **33°.0S**±0°.1×**178°.3W**±0°.3, **h32**km, **n16**, σ**0s.95**/17, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.41	214	Pn	Pn	19 13 53.7	-0.3
	0.3nm,0.3s,baz=11,slow=19,SNR=3.5						
URZ				Sn	Sn	19 15 06.4	+0.4
	2.2nm,0.3s,baz=114,slow=20,SNR=7.0						
URZ	Urewera	6.41	214		Pn	19 13 53.9	-0.1
BKZ	Black Stump Fm	7.42	213	Pn	Pn	19 14 06.0	-2.0
MSWZ	Moikau Station	9.81	210	Pn	Pn	19 14 38.6	-2.1
THZ	Tophouse	11.16	216	Pn	Pn	19 14 59.1	-0.1
KHZ	Kahutara	11.37	212	Pn	Pn	19 15 01.7	-0.2
ASAR	Alice Springs	42.78	270	P	P	19 20 16.9	+0.2
	0.4nm,0.6s,baz=110,slow=7.9,SNR=6.1						
ASAR	Alice Springs	42.78	270	P	P	19 20 17.3	+0.6
WR0	Warramunga Arr	43.84	275	P	P	19 20 25.3	+0.1
WR0				IAmb	IAmb	19 20 45.2	
	comp=Z,22nm,1.4s						
WB2	Warramunga Arr	44.00	275	P	P	19 20 26.1	-0.4
WB2				IAmb	IAmb	19 20 42.8	
	comp=Z,34nm,1.6s						
WRA	Warramunga Arr	44.01	275	P	P	19 20 26.3	-0.3
	comp=Z,0.6nm,0.4s,baz=116,slow=7.5,SNR=11						
WB0	Warramunga Arr	44.05	275	P	P	19 20 26.9	-0.1
FORT	Forrest	45.18	258	P	P	19 20 36.6	+0.8
VNDA	Vanda	45.45	186	P	P	19 20 38.6	+1.3
FINES	FINESS Array B	147.52	338	PKPbc	PKPbc	19 32 01.3	-0.6
	comp=Z,2.8nm,0.9s,baz=72,slow=4.5,SNR=3.6						
FINES	FINESS Array B	147.52	338		PKPbc	19 32 01.1	-0.8

IDC 04 19:21:09.4±2.9, **6°.71S**×**129°.74E**, **h75**km±39km, **mb2.8**/1, **mb1 3.4**/5, **mb1mx3.1**/34, **mbtmp3.5**/5, **ML3.5**/4, **Error ellipse: s-maj=69.0km s-min=23.0km az=91.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.99	15	P	Pn	19 22 35.7	+0.2
	1.4nm,0.3s,baz=212,slow=17,SNR=14						
SIJI				S	Sn	19 23 38.3	-4.5
	1.2nm,0.3s,baz=246,slow=23,SNR=8.3						
FITZ	Fitzroy Crossi	12.01	199	P	Pn	19 23 59.1	+1.4
	0.2nm,0.3s,baz=16,slow=12,SNR=7.3						
FITZ				S	Sn	19 26 03.9	-6.0
	0.2nm,0.3s,baz=27,slow=18,SNR=3.0						

WRA Warramunga Arr 13.89 162 P Pn 19 24 21.6 -1.3
0.3nm,0.3s,baz=339,slow=14,SNR=12
WRA S Sn 19 26 50.5 -5.3
0.3nm,0.3s,baz=349,slow=25,SNR=8.8
ASAR Alice Springs 17.33 167 P Pn 19 25 06.3 -0.2
0.2nm,0.3s,baz=345,slow=13,SNR=16
ASAR S Sn 19 28 12.6 -6.4
0.1nm,0.3s,baz=349,slow=29,SNR=3.6
MKAR Makanchi Array 67.84 327 P P 19 31 59.5 -0.2
0.1nm,0.7s,baz=126,slow=5.3,SNR=2.3

SJA 04 19:25:31.2±0.8, 30.°68S×72.°10W, h10km, ML3.4, MW3.2
GUC 04 19:25:37.0±0.4, 30.°94S×71.°56W, h48km±4km, ML3.6
ISC 04 19:25:32.2±2.0, 30.°92S±0.°06×72.°0W±0.°1, h8km±17km, n23, σ2§06/30, 3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
CO02	Combarbal	0.93	108	⇓P	Pb	19 25 49.7	-1.0
CO02				iS	Sb	19 25 59.4	-3.9
CO02				IAML		19 26 00.1	
	comp=N,7μm,0.1s						
LSCH	La Serena	1.22	34	iP	Pg	19 25 56.6	+1.0
LSCH				iS	Sg	19 26 11.7	+0.3
GO04	Tololo Observa	1.30	55	⇓iP	Pn	19 25 56.6	-0.4
GO04				iS	Sb	19 26 11.6	-2.4
GO04				IAML		19 26 18.3	
	comp=N,3μm,0.3s						
ROCH	El Roble	2.22	157	eP	Pn	19 26 10.8	+1.2
ROCH				IAML		19 26 44.4	
	comp=N,439nm,0.5s						
VA03	San Esteban	2.23	146	eP	Pn	19 26 10.9	+1.3
VA03				iS	Sn	19 26 36.0	-1.3
VA03				IAML		19 26 41.2	
	comp=E,640nm,0.3s						
PEL	Peldehue	2.49	153	eP	Pn	19 26 14.7	+1.5
PEL				IAML		19 26 54.1	
	comp=E,211nm,0.3s						
RTLS	Leoncito	2.50	111	⇑iP	Pb	19 26 16.3	-1.3
RTLS				eS	Sn	19 26 47.4	+3.1
RTLS				IAML		19 26 49.4	
	comp=Z,190nm,0.4s						
MT05	Renca	2.69	156	IAML		19 27 03.5	
	comp=E,465nm,0.4s						
FCH	Farellones	2.81	149	eP	Pn	19 26 19.6	+1.7
FCH				IAML		19 27 02.3	
	comp=N,133nm,0.3s						
MT03	Universidad Ad	2.87	154	eP	Pn	19 26 20.2	+1.8
MT03				eS	Sn	19 26 53.4	+0.2
MT03				IAML		19 27 07.5	
	comp=N,414nm,0.4s						
ZON	Zonda	2.94	103	iP	Pb	19 26 22.9	-2.0
ZON				eS	Sb	19 27 00.0	-1.0
ZON				IAML		19 27 14.3	
	comp=Z,61nm,0.6s						
AMOG	MOGNA	3.04	91	iP	Pn	19 26 23.6	+2.9
RTLL	Cerro Villicun	3.08	98	iP	Pn	19 26 23.6	+2.3
RTLL				eS	Sb	19 27 03.7	-1.3
RTCV	Cerro Valdivia	3.13	108	iP	Pn	19 26 25.3	+3.4
RTCV				eS	Sb	19 27 05.2	-1.3
ASAL	Salagasta	3.19	122	iP	Pb	19 26 26.8	-2.4
ASAL				⇓eS	Sb	19 27 09.7	+1.4
ARCO	CERRO ARCO	3.26	127	iP	Pb	19 26 28.2	-2.2
ARCO				IAML		19 27 19.8	
	comp=Z,108nm,0.7s						
AAGR	Agrelo	3.47	129	iP	Pb	19 26 31.7	-2.3
ACAN	Cantantal	4.35	109	iP	Pn	19 26 40.4	+1.7
ACLC	CERRO LA CRUZ	4.64	73	iP	Pn	19 26 45.2	+2.3
APLL	PUNTA DE LOS L	4.77	85	iP	Pn	19 26 46.0	+1.5
APLL				IAML		19 27 49.0	
	comp=Z,26nm,0.4s						
CYA	Choya	5.96	67	iP	Pn	19 27 02.1	+1.3
CYA				IAML		19 28 20.2	
	comp=Z,18nm,0.8s						
ALOL	LOMAS DE OLMED	10.06	47	iP	Pn	19 27 53.8	-3.4
TRQA	Tornquist	10.92	133	iP	Pn	19 28 18.6	+10

VIE 04 19:32:25.8±1.4, 51.°39N×16.°16E, h0km, mb2.3/4, ml2.6/5, Error ellipse: s-maj=16.3km s-min=5.6km az=36.0 68 km WNW of Wroclaw Suspected Mining induced.
IPEC 04 19:32:25.1±0.3, 51.°45N×16.°28E, h3km±1km, ML1.9/3, Error ellipse: s-maj=2.0km s-min=0.8km az=24.0
IDC 04 19:32:26.6±1.2, 51.°38N×16.°10E, h0km, mb1 3.1/3, mb1mx2.9/35, mbtmp2.9/3, ML2.5/3, Error ellipse: s-maj=26.5km s-min=10.4km az=130.0
ISC 04 19:32:24.2±0.9, 51.°46N±0.°04×16.°24E±0.°03, h0km, n32, σ1§13/63, Poland

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.62	177	iPg	Pg	19 32 37.0	+0.9
KSP				iSg	Sg	19 32 44.5	+0.4
CHVC	Chvalec	0.88	188	ePG	Pg	19 32 41.9	+0.8
CHVC				eSG	Sg	19 32 52.5	0.0
OSTC	Ostas	0.91	181	ePG	Pg	19 32 42.5	+0.9
OSTC				eSG	Sg	19 32 53.3	0.0
	comp=Z,51nm,0.9s						
UPC	Upice	0.97	189	ePG	Pg	19 32 43.2	+0.5
UPC				eSG	Sg	19 32 55.6	+0.4
	comp=Z,81nm,0.4s						
DPC	Dobruska-Polom	1.11	177	ePG	Pg	19 32 45.9	+0.4
DPC				eSG	Sg	19 33 00.2	+0.2
	comp=Z,31nm,0.5s						
PVCC	Panska Ves	1.41	229	ePG	Pn	19 32 51.6	+0.5
PVCC				eSG	Sg	19 33 09.7	+0.2
	comp=Z,100nm,0.3s						
KRLC	Kraliky	1.43	166	ePG	Pg	19 32 51.9	+0.3
KRLC				eSG	Sg	19 33 10.2	+0.1
	comp=Z,19nm,0.3s						
BRG	Berggiesshubel	1.56	249	PN	Pn	19 32 53.4	+0.2
BRG				PG	Pb	19 32 54.4	+0.4
BRG				SG	Sn	19 33 14.3	+0.1
	36nm,0.3s						
GOPC	GO Pecny, Ondr	1.81	211	ePG	Pn	19 32 57.0	+0.4
GOPC				eSG	Sb	19 33 21.6	+0.3
	comp=Z,18nm,0.5s						
PRA	Prague	1.81	220	eSG	Sb	19 33 22.5	+0.3
	comp=Z,16nm,0.8s						
PRU	Pruhonice	1.83	217	ePG	Pb	19 32 58.4	-0.1
PRU				eSG	Sn	19 33 21.7	+1.0
	comp=Z,19nm,0.3s						
MORC	Moravsky Berou	1.88	153	ePN	Pn	19 32 57.7	+0.1
MORC				eSG	Sb	19 33 23.4	0.0
MORC	Moravsky Berou	1.88	153	ePn	Pn	19 32 57.6	0.0
	baz=335						
MORC				eSg	Sb	19 33 23.4	0.0
	9.2nm,0.4s,baz=335						
OKC	Ostrava-Krasne	2.03	143	ePG	Pg	19 33 02.9	-0.1
OKC				eSG	Sg	19 33 29.3	0.0
	comp=Z,23nm,0.7s						
CLL	Collm	2.04	267	ePg	Pb	19 33 02.0	0.0
CLL				eSg	Sb	19 33 29.0	+1.1
	comp=Z,10.0nm,0.4s						
VRAC	Vranov	2.17	174	ePN	Pn	19 33 01.5	-0.1
VRAC				eSG	Sb	19 33 31.9	+0.2
VRAC	Vranov	2.17	174	ePn	Pn	19 33 01.4	-0.1
	baz=355						
VRAC				eSg	Sb	19 33 31.8	+0.1
	comp=Z,8.0nm,0.3s,baz=355						
TREC	Trest	2.22	193	ePG	Pb	19 33 05.6	+0.4
TREC				eSG	Sb	19 33 34.1	+0.8
	comp=Z,14nm,0.3s						
PBCC	Pribram	2.28	220	ePG	Pb	19 33 06.7	+0.4
PBCC				eSG	Sb	19 33 36.7	+1.7
KRUC	Moravsky	2.41	178	ePN	Pn	19 33 05.8	+1.0
KRUC				eSG	Sg	19 33 40.5	-1.0
KRUC	Moravsky	2.41	178	ePn	Pn	19 33 05.8	+1.0
	baz=358						
KRUC				eSg	Sg	19 33 40.4	-1.0
	comp=Z,5.5nm,0.3s,baz=358						
OJC	Ojcow	2.57	118	ePg	Pg	19 33 14.2	+0.7
OJC				eSg	Sg	19 33 49.2	+2.4
NKC	Novy Kostel	2.70	244	ePN	Pn	19 33 09.5	+0.6
NKC				eSG	Sg	19 33 50.6	-0.4
	comp=Z,18nm,0.3s						
KHC	Kasperske Hory	2.89	217	ePN	Pn	19 33 12.0	+0.5
KHC				ePG	Pb	19 33 17.4	+0.7
KHC				eSN	Sn	19 33 46.5	-0.5
KHC				eSG	Sg	19 33 55.2	+2.6
	comp=Z,9.4nm,0.3s						
GERES	GERESS Array B	3.09	213	Pn	Pn	19 33 14.8	+0.5
	comp=Z,0.4nm,0.3s,baz=34,slow=14,SNR=9.7						
GERES				Pg	Pb	19 33 20.9	+0.9
	comp=Z,3.7nm,0.3s,baz=28,slow=17,SNR=54						
GERES				Sn	Sn	19 33 45.8	-6.1
	comp=Z,1.0nm,0.3s,baz=24,slow=24,SNR=6.1						
GERES				Lg	Lg	19 34 00.6	
	comp=Z,2.9nm,0.3s,baz=33,slow=27,SNR=8.0						
MODS	Modra-Piesok	3.16	167	ePG	Pg	19 33 25.6	+0.8
MODS				eSG	Sg	19 34 06.4	+0.6
VYHS	Vyhne	3.41	150	ePN	Pn	19 33 18.7	+0.1
VYHS				eSG	Sg	19 34 12.6	-1.1
CONA	Conrad Observa	3.55	184	ePn	Pn	19 33 22.0	+1.4
	comp=Z,6.0nm,0.3s						
CONA				Sg	Sg	19 34 17.6	-0.5
	comp=Z,5.6nm,0.4s						
MOA	Molln	3.84	200	ePn	Pn	19 33 25.0	+0.5
	comp=Z,0.9nm,0.2s						
ARSA	Arzberg	4.24	187	Pg	Pg	19 33 43.5	-2.0
	comp=Z,0.9nm,0.3s						
AKASG	Malin Array Be	8.21	90	Pn	Pn	19 34 24.7	+0.2
	comp=Z,0.4nm,0.3s,baz=280,slow=12,SNR=2.9						
FINES	FINESS Array B	11.37	25	Pn	Pn	19 35 06.5	-1.2
	comp=Z,0.1nm,0.3s,baz=209,slow=14,SNR=4.4						

IDC 04 19:39:39.3±6.7, 1.°25N×124.°93E, h104km±72km, mb3.4/3, mb1 3.6/5, mb1mx3.1/53, mbtmp3.8/5, ML3.8/2, Error ellipse: s-maj=78.7km s-min=22.6km az=73.0
NEIC 04 19:39:42.3±1.5, 1.°4N±0.°1×125.°20E±0.°09, h140km±13km, mb4.3/8, Error ellipse: s-maj=18.5km s-min=12.0km az=166.0
ISC 04 19:39:43.1±0.9, 1.°33N±0.°10×125.°21E±0.°07, h154km, n20, σ1§14/21, mb3.9/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.22	104		Pn	19 40 18.9	-2.2
LUWI	Luwuk	3.39	226	Pn	Pn	19 40 33.4	-2.3
LUWI					Sn	19 41 18.6	+2.2
SIJI	Sorong	6.43	110	P	Pn	19 41 15.8	+0.1
	0.7nm,0.3s,baz=334,slow=18,SNR=4.2						
SAUI	Saumlaki	11.06	147	Pn	Pn	19 42 17.6	+0.4
SBUM	Sibu	13.03	275	P	P	19 42 48.4	+1.1
FITZ	Fitzroy Crossi	19.31	179	P	P	19 43 56.1	-0.3
	0.4nm,0.3s,baz=3.0,slow=11,SNR=7.6						
FITZ	Fitzroy Crossi	19.31	179	P	P	19 43 56.0	-0.5
FITZ				IAmb	IAmb	19 43 57.0	
	comp=Z,22nm,1.4s						
DLV	T Lat	19.66	303		Pn	19 44 02.8	-0.8
DLV				IAmb	IAmb	19 44 10.8	
	comp=Z,22nm,1.6s						
WB0	Warramunga Arr	22.82	157	P	P	19 44 33.3	+0.4
WB0				IAmb	IAmb	19 44 52.9	
	comp=Z,19nm,1.6s						
WRAB	Tennant Creek	22.95	157	P	P	19 44 35.1	+0.9
WRA	Warramunga Arr	22.96	158	P	P	19 44 34.7	+0.4
	comp=Z,1.8nm,0.5s,baz=338,slow=11,SNR=21						
WB2	Warramunga Arr	22.96	157	P	P	19 44 34.9	+0.6
WR0	Warramunga Arr	23.05	157	P	P	19 44 36.1	+1.0
WR0				IAmb	IAmb	19 44 46.7	
	comp=Z,25nm,1.6s						
AS31	Alice Springs	26.24	162	P	P	19 45 05.2	+1.1
ASAR	Alice Springs	26.24	162	P	P	19 45 05.5	+1.4
	comp=Z,1.0nm,0.3s,baz=337,slow=9.3,SNR=17						
ASAR	Alice Springs	26.24	162	P	P	19 45 04.8	+0.7
LHMI	Lhok Sumawe	28.48	278	P	P	19 45 24.2	+0.1
MK31	Makanchi Array	58.69	327	P	P	19 49 24.4	-0.1
MKAR	Makanchi Array	58.69	327	P	P	19 49 24.9	+0.4
	comp=Z,0.1nm,0.3s,baz=122,slow=8.1,SNR=5.2						
MKAR	Makanchi Array	58.69	327	P	P	19 49 24.6	+0.1

IDC 04 19:40:05.0±2.0, 28.°35N×99.°21E, h0km, mb3.3/4, mb1 3.4/5, mb1mx3.2/71, mbtmp3.3/5, Error ellipse: s-maj=55.8km s-min=23.3km az=85.0
ISC 04 19:40:06.8±1.5, 28.°4N±0.°1×99.°2E±0.°4, h10km, n7, σ0§80/7, mb3.4/5, 1C-2D, Yunnan

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.88	181	Pn	Pn	19 42 28.9	-0.1
	baz=358,slow=12,SNR=7.8						
CMAR				Pg		19 43 07.4	
	0.0nm,0.3s,baz=357,slow=18,SNR=8.0						
CMAR				Lg	Lg	19 45 15.8	
	0.0nm,0.3s,baz=358,slow=28,SNR=4.9						
SONM	Songino Array	20.22	14	P	P	19 44 42.4	+0.4
	0.4nm,0.8s,baz=195,slow=8.5,SNR=3.6						
MK31	Makanchi Array	22.64	329	Pg	P	19 45 07.0	-1.0
	1.2nm,0.8s,baz=165,slow=15,SNR=13						
MK31				⇑Lg	Lg	19 46 12.7	
	1.1nm,0.7s,baz=164,slow=11,SNR=13						
MKAR	Makanchi Array	22.64	329	P	P	19 45 08.0	0.0
	0.7nm,0.7s,baz=132,slow=12,SNR=10						
MAKZ	Makanchi	22.80	328	⇓Pg	P	19 45 09.9	+0.3
	3.0nm,1.5s						
MAKZ				⇓Lg	Lg	19 46 12.8	
	2.5nm,1.4s						
AAK	Ala-Archa	24.50	312	P	P	19 45 27.2	+0.8
	1.4nm,0.8s,baz=149,slow=5.9,SNR=4.1						
KURBB	Kurchatov Arra	27.16	331	P	P	19 45 49.3	-0.8
	0.4nm,0.5s,baz=141,slow=9.2,SNR=5.0						

ATH 04 19:41:08.2, 38.°28N×20.°39E, h12km±1km, ML2.7/3, Error ellipse: s-maj=2.1km s-min=0.8km az=267.0
THE 04 19:41:08.4, 38.°28N×20.°38E, h12km±1km, ML2.6/4, Error ellipse: s-maj=1.2km s-min=0.3km az=156.0
ISC 04 19:41:08.1±1.7, 38.°28N±0.°03×20.°38E±0.°06, h13km±7km, n21, σ0§26/38, Greece

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.04	125	P	Pg	19 41 10.4	-0.1
KEF4				S	Sg	19 41 12.0	-0.3
KEF1	Kardakata, Kep	0.07	93	P	Pg	19 41 10.6	-0.2
KEF1				S	Sg	19 41 12.5	-0.2
KEF3	Kipouria, Keph	0.08	200	P	Pg	19 41 10.9	-0.1
KEF3				S	Sg	19 41 12.8	-0.1
LXR1	Lixouri, Cepha	0.09	152	P	Pg	19 41 11.2	+0.1
LXR1				S	Sg	19 41 13.5	+0.4
CHV1	Chavriata, Kef	0.10	181	P	Pg	19 41 11.1	0.0
CHV1				S	Sg	19 41 13.3	+0.1
ARG2	Argostoli	0.13	141	P	Pg	19 41 11.6	0.0
ARG2				S	Sg	19 41 14.1	+0.2
KEF2	Argostoli. Kep	0.14	145	P	Pg	19 41 11.8	+0.1
KEF2				S	Sg	19 41 14.0	-0.2
VSK1	VASILIKIADES	0.19	48	P	Pg	19 41 12.6	+0.1
VSK1				S	Sg	19 41 15.7	+0.2
	4μm,0.1s						
VLS	Valsamata	0.19	122	P	Pg	19 41 12.5	-0.1
VLS				S	Sg	19 41 15.7	+0.2
	11μm,0.1s						
VLS	Valsamata	0.19	122	P	Pg	19 41 12.4	-0.1
VLS				S	Sg	19 41 15.3	-0.2
VLS				AML	AML	19 41 15.9	
	comp=N,15126μm,0.2s						
VLS				AML	AML	19 41 16.1	
	comp=E,26772μm,0.1s						
FSK	Fiskardo	0.23	38	P	Pg	19 41 13.2	+0.1
FSK				S	Sg	19 41 16.8	+0.4
	comp=E,1μm,0.2s						
FSK	Fiskardo	0.23	38	P	Pg	19 41 13.2	+0.1
FSK				S	Sg	19 41 16.3	-0.2
FSK				AML	AML	19 41 17.3	
	comp=N,2432μm,0.3s						
FSK				AML	AML	19 41 17.3	
	comp=E,3550μm,0.2s						
EVGI	Lefkada island	0.40	32	P	Pg	19 41 16.2	0.0
EVGI				S	Sg	19 41 22.1	+0.5
EVGI	Lefkada island	0.40	32	P	Pg	19 41 16.1	-0.1
EVGI				S	Sg	19 41 21.9	+0.2
VLMS	Volimes, Zakyn	0.46	151	P	Pg	19 41 17.1	-0.2
VLMS				S	Sg	19 41 24.0	+0.6
VLMS				AML	AML	19 41 25.4	
	comp=E,2008μm,0.1s						
VLMS				AML	AML	19 41 27.7	
	comp=N,1794μm,0.2s						
MGNA	Meganis	0.49	40	P	Pg	19 41 17.7	-0.1
MGNA				S	Sg	19 41 24.6	+0.1
LKD2	Lefkada island	0.55	23	P	Pg	19 41 18.8	-0.2
LKD2	Lefkada island	0.55	23	P	Pg	19 41 18.5	-0.5
AST1	Astakos	0.61	65	P	Pg	19 41 20.3	+0.2
AST1				S	Sb	19 41 29.3	+0.1
	comp=N,500nm,0.1s						
PDO	Prodromos	0.70	63	P	Pg	19 41 21.2	-0.6
RLS	Riolos of Patr	0.88	104	P	Pg	19 41 24.8	-0.4

MOS 04 19:42:10.1±1.2, 38.°35N×20.°25E, h14km, mb4.8/17, Error ellipse: s-maj=6.1km s-min=3.7km az=63.7
IDC 04 19:42:10.3±0.5, 38.°36N×20.°40E, h0km, mb4.3/30, mb1 4.3/45, mb1mx4.3/66, mbtmp4.3/45, ML3.9/14, MS3.3/10, Ms1 3.3/10, ms1mx3.1/63, Error ellipse: s-maj=10.9km s-min=9.5km az=166.0
NEIC 04 19:42:11.2, 38.°31N×20.°33E, h13km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr-1.45; Mθθ-0.53; Mφφ1.98; Mrθ-0.55; Mθφ0.49; Mφr1.37; Fault plane solution: Mo2.36000×10^15 NP1:φs37.66000°, δ33.44000°, λ-44.95000°. NP2:φs167.46000°, δ67.09000°, λ-115.05000°. Principal axes: T 2.4882, Plg18.0000°, Azm276.0000°; N -0.2739, Plg23.0000°, Azm178.0000°; P -2.2142, Plg60.0000°, Azm41.0000°;
NEIC 04 19:42:11.1±2.5, 38.°31N±0.°03×20.°33E±0.°06, h8km±4km Error ellipse: s-maj=6.6km s-min=4.6km az=80.0
MED_RC 04 19:42:12.0±0.5, 38.°29N×20.°27E, h18km±1km, MW4.4/10, Moment Tensor Solution.Mantle waves: s10,c12; Duration: 1§0 Moment tensor: Scale 10^15 Nm; Mrr4.68±.98; Mθθ-0.64±.55; Mφφ-4.04±.55; Mrθ-0.93±.78; Mθφ0.50±.39; Mφr-0.54±.45; Best double couple: Mo4.51000×10^15 NP1:φs342.00000°, δ43.00000°, λ75.00000°. NP2:φs182.00000°, δ49.00000°, λ104.00000°. Principal axes: T 4.8800, Plg79.0000°, Azm158.0000°; N -0.7500, Plg10.0000°, Azm353.0000°; P -4.1300, Plg3.0000°, Azm263.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.
THE 04 19:42:12.3, 38.°29N×20.°34E, h12km, ML4.2/13 Error ellipse: s-maj=1.1km s-min=0.4km az=270.0
ATH 04 19:42:12.1, 38.°28N×20.°37E, h16km±1km, ML4.2/8, Error ellipse: s-maj=1.7km s-min=0.9km az=233.0
BEO 04 19:42:12.1±0.6, 38.°21N×20.°20E, h17km±4km, ML4.3/10
PDG 04 19:42:13.2±0.3, 38.°46N×20.°31E, h12km±1km, ML4.4/14, Error ellipse: s-maj=1.9km s-min=0.8km az=90.0
BGR 04 19:42:15.6±0.8, 38.°41N×20.°40E, h15km, Error ellipse: s-maj=23.3km s-min=11.1km az=56.0
ISC 04 19:42:12.0±0.6, 38.°31N±0.°02×20.°37E±0.°02, h16km±3km, n470, σ1§81/576, mb4.5/62, 23C-16D, Greece

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.07	143	P	Pg	19 42 14.9	-0.2
KEF1	Kardakata, Kep	0.08	113	P	Pg	19 42 15.1	-0.2
KEF3	Kipouria, Keph	0.11	190	P	Pg	19 42 15.5	0.0
LXR1	Lixouri, Cepha	0.12	155	P	Pg	19 42 15.6	0.0
LXR1				S	Sg	19 42 17.9	-0.1
CHV1	Chavriata, Kef	0.13	177	P	Pg	19 42 15.2	-0.5
CHV1				S	Sg	19 42 18.2	+0.1
ARG2	Argostoli	0.16	146	P	Pg	19 42 16.2	0.0
ARG2				S	Sg	19 42 18.4	-0.5
KEF2	Argostoli. Kep	0.17	148	P	Pg	19 42 16.2	-0.1
KEF2				S	Sg	19 42 18.7	-0.5
VSK1	VASILIKIADES	0.18	57	P	Pb	19 42 16.8	-0.2
VSK1				S	Sg	19 42 19.8	+0.4
FSK	Fiskardo	0.21	45	P	Pb	19 42 17.5	0.0
FSK				S	Sb	19 42 21.2	0.0
	125μm,0.6s						
FSK	Fiskardo	0.21	45	P	Pb	19 42 17.5	0.0
FSK				S	Sb	19 42 21.1	0.0
FSK				AML	AML	19 42 21.7	
FSK				AML	AML	19 42 21.8	
VLS	Valsamata	0.22	128	P	Pg	19 42 16.9	-0.1
VLS				S	Sg	19 42 20.2	-0.2
	314μm,0.3s						
VLS	Valsamata	0.22	128	P	Pg	19 42 16.7	-0.3
VLS				S	Sg	19 42 20.2	-0.2
VLS				AML	AML	19 42 20.3	
VLS				AML	AML	19 42 20.4	
EVGI	Lefkada island	0.38	36	P	Pb	19 42 20.4	0.0
EVGI				S	Sb	19 42 26.7	+0.6
EVGI	Lefkada island	0.38	36	P	Pb	19 42 20.5	0.0
MGNA	Meganis	0.48	44	P	Pb	19 42 21.8	+0.2
MGNA				S	Sb	19 42 29.2	+0.3
MGNA				AML	AML	19 42 33.0	
	comp=N,21996μm,0.3s						
MGNA				AML	AML	19 42 37.5	
	comp=E,32467μm,0.6s						
VLMS	Volimes, Zakyn	0.49	152	P	Pg	19 42 21.4	-0.4
VLMS				S	Sg	19 42 28.7	+0.3
VLMS				AML	AML	19 42 29.8	
VLMS				AML	AML	19 42 30.6	
LKD2	Lefkada island	0.53	25	P	Pb	19 42 22.8	-0.1
LKD2	Lefkada island	0.53	25	P	Pb	19 42 22.8	-0.1
LKD2				AML	AML	19 42 38.0	
	comp=E,16108μm,0.7s						
LKD2				AML	AML	19 42 41.5	
	comp=N,36054μm,0.7s						
AST1	Astakos	0.61	68	P	Pg	19 42 23.7	-0.3
ZAK2	Zakynthos	0.67	141	P	Pg	19 42 24.7	-0.4
ZAK2				S	Sb	19 42 35.4	+1.1
	comp=N,114μm,0.6s						
PDO	Prodromos	0.70	65	P	Pg	19 42 25.6	-0.1
PDO	Prodromos	0.70	65	P	Pg	19 42 25.7	-0.1
PDO				AML	AML	19 42 40.4	
	comp=E,49820μm,0.6s						
PDO				AML	AML	19 42 41.1	
	comp=N,35718μm,0.7s						
KRI1	kERI	0.74	151	P	Pg	19 42 25.7	-0.7
KRI1				S	Sb	19 42 36.9	+0.6
	comp=N,42μm,0.5s						
RLS	Riolos of Patr	0.90	106	P	Pb	19 42 28.9	-0.3
RLS				S	Sn	19 42 43.7	+1.0
	comp=N,8μm,0.6s						
RLS	Riolos of Patr	0.90	106	P	Pb	19 42 28.7	-0.5
PVO	Paravola	0.95	71	P	Pn	19 42 30.8	0.0
PVO				S	Sn	19 42 46.1	+2.0
	comp=N,15μm,0.5s						
PVO	Paravola	0.95	71	P	Pb	19 42 30.6	+0.1
PVO				AML	AML	19 42 54.0	
	comp=N,25844μm,0.6s						
PVO				AML	AML	19 42 54.5	
	comp=E,33134μm,0.5s						
UPR	University Cam	1.11	91	P	Pb	19 42 32.8	-0.1
DRO	Drossia	1.11	108	P	Pb	19 42 32.1	-0.9
EFP	Efpalio	1.21	84	P	Pb	19 42 36.2	+0.8
IGT	Igoumenitsa	1.22	359	P	Pb	19 42 35.9	+0.3
IGT				S	Sg	19 42 52.9	+1.4
	comp=E,6μm,0.5s						
IGT	Igoumenitsa	1.22	359	ePg	Pg	19 42 37.2	+1.6
IGT				eSg	Sg	19 42 53.6	+2.1
IGT	Igoumenitsa	1.22	359	P	Pb	19 42 35.8	+0.3
ANX	Ano Chora	1.25	76	P	Pg	19 42 36.5	+0.4
ANX	Ano Chora	1.25	76	P	Pb	19 42 35.5	+0.2
LAKA	Lakka	1.27	93	P	Pg	19 42 36.5	+0.1
LAKA	Lakka	1.27	93	P	Pn	19 42 35.3	+0.2
EVR	Evrytania	1.28	61	P	Pg	19 42 36.9	+0.2
EVR	Evrytania	1.28	61	P	Pb	19 42 35.6	-0.2
AMT	Artemida-Makis	1.31	126	P	Pb	19 42 36.6	+0.3
AMT	Artemida-Makis	1.31	126	P	Pg	19 42 37.3	0.0
SERG	Sergoula	1.33	85	P	Pg	19 42 37.5	-0.1
SERG				S	Sg	19 42 56.4	+1.5
	comp=E,7μm,0.6s						
KALE	Kalithea	1.39	86	P	Pg	19 42 37.5	-0.2
KALE				S	Sg	19 42 57.0	0.0
	comp=E,6μm,0.7s						
JAN	Janina	1.39	15	P	Pg	19 42 39.4	+0.5
KLV	Kalavryta, Ach	1.43	100	P	Pg	19 42 38.5	+0.2
KLV				S	Sg	19 42 59.3	+1.2
	comp=E,5μm,0.9s						
KLV	Kalavryta, Ach	1.43	100	P	Pb	19 42 38.1	-0.2
KLV				AML	AML	19 43 11.1	
	comp=E,9671μm,1.1s						
KLV				AML	AML	19 43 18.0	
	comp=N,9309μm,0.8s						
KASA	Kassiopi	1.47	347	P	Pg	19 42 40.0	-0.4
MAKR	Makrakomi, Fth	1.54	62	P	Pg	19 42 41.6	-0.1
SRN	Sarande	1.59	350	P	Pb	19 42 41.3	+0.2
ITM	Ithomi	1.67	132	P	Pb	19 42 41.8	-0.7
ITM				S	Sn	19 43 02.3	+0.5
	comp=N,3μm,0.8s						
ITM	Ithomi	1.67	132		Pb	19 42 42.6	+0.2
AGG	Agios Georgios	1.69	65	P	Pb	19 42 43.2	+0.4
AGG	Agios Georgios	1.69	65	P	Pb	19 42 43.5	+0.7

AGG Agios Georgios 1.69 65 Pb 19 42 43.4 +0.7
AGG Agios Georgios 1.69 65 P Pb 19 42 43.4 +0.6
PYL PYLOS 1.78 142 P Pb 19 42 43.9 -0.4
PYL PYLOS 1.78 142 P Pn 19 42 43.0 +0.8
THL Klokotos Trika 1.79 45 P Pb 19 42 45.3 +0.8
THL S Sb 19 43 06.4 -0.3
comp=N,4µm,0.8s
KPRO Kipourio 1.81 25 P Pg 19 42 46.0 -0.9
KPRO Kipourio 1.81 25 P Pb 19 42 45.7 +0.8
TPE Tepelena 2.00 352 P Pb 19 42 47.4 -0.7
LTK Loutraki 2.06 97 P Pb 19 42 48.3 -0.9
LOUT Loutraki 2.08 98 P Pb 19 42 48.2 -1.1
LKR Lokris 2.09 80 P Pb 19 42 49.0 -0.6
NEST Nestorio 2.17 14 P Pb 19 42 51.3 +0.4
KZN Kozani 2.27 28 P Pb 19 42 51.9 -0.8
SCTE Santa Cesarea 2.30 321 Pn 19 42 50.7 +1.4
VILL Villia 2.32 93 P Pb 19 42 51.9 -1.6
KRND KRANIDI 2.39 112 P Pb 19 42 53.1 -1.5
KRND S Sb 19 43 22.9 -0.9
comp=N,3µm,1.1s
LIT Litokhoron 2.43 42 P Pb 19 42 54.1 -1.3
LIT Litokhoron 2.43 42 Pb 19 42 53.3 -2.1
LIT Litokhoron 2.43 42 P Pb 19 42 53.3 -2.1
KTI Kastanea 2.48 32 P Pb 19 42 55.1 -1.2
MRKA Markates 2.55 80 P Pb 19 42 55.2 -2.3
MRKA Markates 2.55 80 P Pn 19 42 55.1 +2.3
FNA Florina 2.59 17 P Pb 19 42 55.8 -2.3
FNA Florina 2.59 17 ePn Pb 19 42 56.1 -2.0
FNA Florina 2.59 17 Pb 19 42 55.8 -2.3
FNA Florina 2.59 17 P Pb 19 42 55.8 -2.3
VLY Voula,Athens 2.74 99 P Pb 19 42 57.4 +2.1
PTL Penteli 2.76 94 P Pb 19 42 57.9 +2.2
OHR Ohrid 2.82 7 iPn Pb 19 42 59.9 -2.1
TIP Timpagrande 2.96 288 ⇓P Pn 19 42 59.9 +1.5
TIP ⇑S Sn 19 43 34.7 +1.1
TIP Timpagrande 2.96 288 Pn 19 42 59.4 +1.0
PAIG Paliouri 3.04 57 P Pn 19 43 01.0 +1.6
TIR Tirane 3.06 353 P Pn 19 43 02.2 +2.5
TIR Tirane 3.06 353 ePn Pn 19 43 02.3 +2.5
TIR Tirane 3.06 353 ⇓P Pn 19 43 02.1 +2.5
TIR ⇑S Sb 19 43 40.2 -3.0
TIR Tirane 3.06 353 Pn 19 43 01.6 +1.9
TIR Tirane 3.06 353 P Pn 19 43 01.7 +1.9
PLG Polygyros 3.15 48 P Pn 19 43 03.4 +2.4
TAR1 Taranto 3.26 314 ePn Pn 19 43 04.2 +1.7
TAR1 Sn Sn 19 43 42.7 +1.8
SOH Sokhos 3.41 42 P Pn 19 43 06.9 +2.3
VAY Valandovo 3.45 29 ePn Pn 19 43 07.0 +1.9
VAY Valandovo 3.45 29 iPn Pn 19 43 07.0 +1.9
CEL Celeste 3.52 271 Pn 19 43 06.8 +0.6
STIP Stip 3.66 22 iPn Pn 19 43 11.6 +3.6
MATE Matera 3.67 311 ⇑P Pn 19 43 09.6 +1.4
MATE ⇑S Sn 19 43 52.3 +1.1
SRS Serrai 3.74 41 ePn Pn 19 43 11.0 +1.8
SKO Skopje 3.75 12 ePn Pn 19 43 11.3 +2.1
SKO Skopje 3.75 12 iPn Pn 19 43 11.2 +1.9
ULC Ulcinj 3.75 347 ePn Pn 19 43 10.0 +0.7
ULC eSn Sn 19 43 53.5 +0.4
SG1 Sgolgore (BA) 3.81 313 ePn Pn 19 43 12.0 +1.9
BAI Bari 3.88 317 ePn Pn 19 43 12.5 +1.5
DRME Dracevica, Mon 3.98 347 ePn Pn 19 43 13.6 +1.2
DRME Dracevica, Mon 3.98 347 ePn Pn 19 43 13.4 +1.0
DRME eSn Sn 19 43 59.2 +0.5
KKB Krupnik 4.12 29 eP Pn 19 43 16.4 +2.1
BUM Brajici-Budva 4.14 345 ePn Pn 19 43 15.4 +0.7
BUM iSn Sn 19 44 03.0 +0.2
MMB Musomiste 4.17 37 eP Pn 19 43 16.8 +1.8
PDG Podgorica 4.20 349 ePn Pn 19 43 16.8 +1.3
PDG eSn Sn 19 44 05.6 +1.4
PDG Podgorica 4.20 349 ⇑P Pn 19 43 16.8 +1.3
PDG Podgorica 4.20 349 ePn Pn 19 43 16.3 +0.9
PDG Podgorica 4.20 349 Pn 19 43 16.0 +0.6
TTG Podgorica 4.20 349 ⇓iPn Pn 19 43 16.7 +1.3
TTG eSn Sn 19 44 04.1 -0.1
ACER Acerenza 4.22 307 Pn 19 43 17.0 +1.2
APE Apeiranthos 4.28 105 ⇑P Pn 19 43 18.2 +1.7
APE Apeiranthos 4.28 105 iP Pn 19 43 18.9 +2.4
PVY Plav 4.29 356 ePn Pn 19 43 17.8 +1.0
PVY iSn Sn 19 44 06.8 +0.2
HCY Herceg Novi 4.37 341 ePn Pn 19 43 17.4 -0.4
HCY Herceg Novi 4.37 341 ePn Pn 19 43 18.1 +0.3
HCY eSn Sn 19 44 08.5 +0.1
CEME Cevo 4.37 346 ePn Pn 19 43 18.3 +0.4
CEME iSn Sn 19 44 08.3 -0.2
BOSS Bosilegrad 4.48 20 ePn Pn 19 43 21.1 +1.8
SANT Santorini 4.49 114 Pn 19 43 21.4 +2.0
IVA Berane 4.57 356 ePn Pn 19 43 22.2 +1.6
IVA eSn Sn 19 44 13.9 +0.5
NKME Niksic 4.58 347 ePn Pn 19 43 21.0 +0.3
NKME eSn Sn 19 44 13.7 +0.1
KOME Kolasin 4.58 352 ePn Pn 19 43 22.1 +1.3
KOME eSn Sn 19 44 13.9 +0.2
NKY Niksic 4.62 347 ⇓iPn Pn 19 43 22.2 +0.9
NKY iSn Sn 19 44 14.8 +0.2
BARS Barje 4.63 13 ePn Pn 19 43 22.8 +1.4
BARS eSn Sn 19 44 15.8 +1.0
TREB Trebinje 4.66 341 ePn Pn 19 43 21.7 -0.1
TREB eSn Sn 19 44 14.4 -1.2
TREB Trebinje 4.66 341 ePn Pn 19 43 21.3 -0.5
IDI Anoyia 4.72 128 Pn Pn 19 43 23.8 +1.2
comp=N,1.4nm,0.3s,baz=258,slow=11,SNR=10
IDI Sn Sn 19 44 20.3 +3.3
comp=N,9.1nm,0.3s,baz=343,slow=6.8,SNR=8.0
IDI LR LR 19 45 47.2
comp=N,218nm,19.7s,baz=283,slow=46
RZN Rozhen 4.74 43 eP Pn 19 43 25.3 +2.2
VAE Valguarnera 4.79 262 Pn Pn 19 43 25.1 +1.5
comp=N,6.4nm,0.3s,baz=156,slow=15,SNR=12
VAE Sn Sn 19 44 22.1 +3.4
comp=N,6.5nm,0.3s,baz=102,slow=6.7,SNR=4.2
BRY Bratogost 4.79 344 ePn Pn 19 43 23.6 -0.1
BRY Bratogost 4.79 344 ⇓iPn Pn 19 43 24.1 +0.4
BRY iSn Sn 19 44 18.8 -0.2
VTS Vitosha 4.82 26 ePn Pn 19 43 26.3 +2.2
VTS Vitosha 4.82 26 ⇑P Pn 19 43 26.3 +2.2
VTS Vitosha 4.82 26 eP Pn 19 43 26.0 +1.9
VTS Vitosha 4.82 26 Pn 19 43 26.1 +1.9
VTS Vitosha 4.82 26 P Pn 19 43 26.1 +1.9
SELS Selova 4.94 6 ePn Pn 19 43 26.1 +0.5
SELS eSn Sn 19 44 22.4 +0.1
SGRT San Giovanni R 4.94 316 Pn 19 43 26.8 +1.1
SJES Sjenica 4.95 357 ePn Pn 19 43 27.4 +1.5
SJES eSn Sn 19 44 24.0 +1.1
STON Ston 4.99 337 ePn Pn 19 43 26.8 +0.6
UPM Unac-Piva 5.01 348 ePn Pn 19 43 27.8 +1.0
UPM Unac-Piva 5.01 348 ⇓iPn Pn 19 43 27.8 +1.0
UPM eSn Sn 19 44 24.7 +0.2
PLE Pljevlja 5.07 352 ePn Pn 19 43 28.6 +1.1
PLE iSn Sn 19 44 25.7 -0.1
ALN Alexandroupoli 5.08 58 Pn 19 43 29.3 +1.7
ALN Alexandroupoli 5.08 58 P Pn 19 43 29.3 +1.7
KDZ Kurdzhali 5.11 48 eP Pn 19 43 29.6 +1.6
PAOL Paolisi 5.24 303 Pn 19 43 30.6 +0.8
ZAPS Zavoj 5.25 18 ePn Pn 19 43 32.5 +2.7
IVAS Ivanjica 5.26 358 ePn Pn 19 43 30.6 +0.5
IVAS eSn Sn 19 44 30.5 +0.1
WDD Wied Dalam 5.29 244 Pn 19 43 30.9 +0.5
WDD Sn 19 44 29.7 -1.3
RUDO Rudo 5.36 352 ePn Pn 19 43 32.2 +0.9
BOVS Bovan 5.41 10 ePn Pn 19 43 32.9 +0.8
BOVS eSn Sn 19 44 34.9 +0.8
DIM Dimitrovgrad 5.44 45 eP Pn 19 43 35.3 +2.9
GRUS Gruza 5.58 3 ePn Pn 19 43 35.0 +0.6
GRUS eSn Sn 19 44 39.3 +1.2
CORL Corleone 5.59 268 Pn 19 43 34.0 -0.6
BBLS Lazići 5.60 353 ePn Pn 19 43 36.1 +1.4
BBLS eSn Sn 19 44 39.2 +0.5
BBLS Lazići 5.60 353 ePn Pn 19 43 35.4 +0.7
ZAGS Zajecar 5.67 14 ePn Pn 19 43 36.1 +0.5
CLTB Caltabellotta 5.70 265 Pn 19 43 36.9 +0.7
DIVS Divibare 5.79 357 ePn Pn 19 43 37.4 +0.1
DIVS eSn Sn 19 44 42.5 -0.9
DIVS Divibare 5.79 357 ePn Pn 19 43 37.3 0.0
HAPS Han Pijesak,BI 5.87 350 ePn Pn 19 43 38.0 -0.5
TRUS Trudelj 5.91 0 ePn Pn 19 43 39.2 +0.3
TRUS eSn Sn 19 44 45.2 -1.0
PLVB Pleven 6.01 31 ⇑P Pn 19 43 43.0 +2.8
KARP Karpathos 6.10 115 Pn 19 43 41.7 +0.1
INTR Introdacqua 6.18 309 Pn 19 43 45.7 +3.0
ELND Elena 6.23 40 ⇑P Pn 19 43 45.0 +1.7

TEKS Tekeris 6.26 354 ePn Pn 19 43 44.2 +0.4
TEKS eSn Sn 19 44 53.6 -1.5
TEKS Tekeris 6.26 354 ePn Pn 19 43 43.5 -0.3
MGRS Mrkonjic Grad 6.58 339 ePn Pn 19 43 49.4 +1.2
AQU L'Aquila 6.68 309 ePn Pn 19 43 52.9 +3.3
AQU L'Aquila 6.68 309 Pn 19 43 48.4 -1.2
AQU L'Aquila 6.68 309 P Pn 19 43 48.4 -1.2
FRGS Fruska Gora 6.85 357 ePn Pn 19 43 51.1 -0.8
FRGS Fruska Gora 6.85 357 ePn Pn 19 43 50.4 -1.5
BLY Banja Luka 6.86 341 ⇓P Pn 19 43 53.4 +1.4
BLY Banja Luka 6.86 341 ePn Pn 19 43 52.9 +0.9
BLY Banja Luka 6.86 341 Pn 19 43 51.1 -0.9
HUMR Humele 7.11 28 ⇓P Pn 19 43 57.7 +2.3
NRCA Norcia 7.13 312 Pn 19 43 57.0 +1.1
GZR Gura Zlata 7.30 13 ⇓P Pn 19 43 59.3 +1.2
BZS Buzias 7.36 7 ⇓P Pn 19 44 01.2 +2.4
ELL Elmali 7.74 99 Pn 19 44 04.6 +0.5
ELL Elmali 7.74 99 P Pn 19 44 04.6 +0.5
MURB Monte Urbino 7.74 312 Pn 19 44 05.3 +1.2
MTUR Matau 7.75 25 ⇓P Pn 19 44 07.6 +3.4
VOIR 7.93 25 ⇓P Pn 19 44 09.3 +2.7
MORH Mrgy, Hungar 8.00 351 ePn Pn 19 44 06.4 -1.2
SIRR Siria 8.01 6 ⇓P Pn 19 44 09.4 +1.7
BOJS Bojanci 8.14 334 ePn Pn 19 44 10.5 +1.0
BOJS eSn Sn 19 45 37.5 -3.5
ISR Istrita 8.22 32 ⇑P Pn 19 44 14.4 +3.7
MLR Muntele Rosu 8.29 28 Pn Pn 19 44 14.4 +2.8
comp=N,0.9nm,0.3s,baz=278,slow=16,SNR=22
MLR LR LR 19 48 11.4
comp=N,532nm,20.0s,baz=149,slow=44
MLR Muntele Rosu 8.29 28 ⇑P Pn 19 44 14.9 +3.2
MLR Muntele Rosu 8.29 28 Pn 19 44 11.3 -0.4
CRES Cresnjev 8.35 336 ePn Pn 19 44 12.9 +0.5
CRES eSn Sn 19 45 41.9 -4.5
CRES Cresnjev 8.35 336 ePn Pn 19 44 12.4 0.0
DOPR Dopca 8.51 24 ⇑P Pn 19 44 16.4 +1.8
VISS Visnje 8.54 333 ePn Pn 19 44 16.5 +1.5
VISS eSn Sn 19 45 47.5 -3.5
BEHE Becsehely 8.58 343 ePn Pn 19 44 15.4 -0.1
BISRR Bisoca 8.63 31 ⇑P Pn 19 44 20.1 +3.7
OSSC Osservatorio P 8.65 310 Pn 19 44 15.4 -1.1
MDUB Mudurnu 8.65 72 Pn 19 44 17.1 +0.4
OZUR 8.75 26 ⇓P Pn 19 44 20.8 +2.8
LJU Ljubljana 8.86 333 ePn Pn 19 44 20.2 +0.8
PLOR Plostina 8.86 30 ⇑P Pn 19 44 22.9 +3.5
VRI Vrincioaia 8.90 30 ⇑P Pn 19 44 22.6 +2.6
PERS Pernice 9.18 337 ePn Pn 19 44 23.8 0.0
KEST Kesra 9.19 257 Pn Pn 19 44 24.8 +0.8
comp=N,1.7nm,0.3s,baz=39,slow=7.8,SNR=26
KEST Sn Sn 19 46 04.7 -2.3
comp=N,0.3nm,0.3s,baz=72,slow=20,SNR=2.7
KEST LR LR 19 48 41.4
comp=N,133nm,18.5s,baz=213,slow=42
KEST Kesra 9.19 257 Pn 19 44 23.7 -0.3
SOKA Soboth 9.24 336 ePn Pn 19 44 24.8 +0.1
comp=N,20nm,0.3s,SNR=52
SOKA eSn Sn 19 46 03.1 -5.3
comp=N,8.2nm,0.5s
OBKA Obir 9.25 334 ePn Pn 19 44 26.4 +1.6
OBKA eSn Sn 19 46 04.2 -4.4
OBKA Obir 9.25 334 ePn Pn 19 44 26.1 +1.3
comp=N,7.0nm,0.3s,SNR=10
OBKA Sn Sn 19 46 04.5 -4.2
comp=N,41nm,0.5s
ZCCA Zocca 9.29 313 Pn 19 44 27.1 +1.8
TEOL Teolo 9.57 320 Pn 19 44 28.7 -0.5
PSZ Piszkesteto 9.61 358 Pn 19 44 30.2 +0.5
PSZ Piszkesteto 9.61 358 P Pn 19 44 30.2 +0.5
ARSA Arzberg 9.62 340 ePn Pn 19 44 30.0 +0.2
ARSA eSn Sn 19 46 11.9 -5.6
ARSA Arzberg 9.62 340 ePn Pn 19 44 29.7 -0.1
comp=N,3.7nm,0.3s,SNR=4.3
SRO Srobarova 9.62 352 eSN Pn 19 46 15.0 -2.4
MYKA Terra Mystica 9.68 331 ePn Pn 19 44 30.8 0.0
comp=N,3.3nm,0.3s
MYKA Sn Sn 19 46 15.1 -4.0
comp=N,11nm,0.4s
STAL STALIGIAL 9.76 327 Pn 19 44 31.3 -0.5
TRPA Tarpa 9.94 8 ⇓P Pn 19 44 35.6 +1.5
BURAR Bucovina Array 9.95 19 ⇓P Pn 19 44 36.4 +2.0
BUR08 Bucovina Ar. S 9.97 19 Pn 19 44 34.6 -0.1
CTI Castel Tesino 10.08 323 Pn 19 44 35.9 -0.3
CTI Castel Tesino 10.08 323 P Pn 19 44 35.9 -0.3
MSSA Maissana 10.13 310 Pn 19 44 36.2 -0.7
CONA Conrad Observa 10.16 343 ePn Pn 19 44 40.1 +2.9
comp=N,1.0nm,0.3s
KBA Koelnbreinsper 10.17 332 ePn Pn 19 44 38.3 +0.9
KBA eSn Sn 19 46 24.2 -7.0
KBA Koelnbreinsper 10.17 332 ePn Pn 19 44 38.4 +1.0
comp=N,1.8nm,0.3s
KBA Sn Sn 19 46 27.4 -3.9
comp=N,27nm,0.8s
ABTA Abfaltersbach 10.23 328 ePn Pn 19 44 38.6 +0.4
comp=N,3.6nm,0.3s,SNR=6.8
ABTA Sn Sn 19 46 28.7 -3.9
comp=N,34nm,0.7s
VYHS Vyhne 10.24 354 eP Pn 19 44 38.8 +0.5
VYHS e 19 46 27.6
VYHS Vyhne 10.24 354 ePN Pn 19 44 38.8 +0.5
VYHS eSN Sn 19 46 27.6 -5.1
MODS Modra-Piesok 10.31 348 eSN Sn 19 46 27.9 -6.5
SALO Salr 10.34 318 Pn 19 44 39.4 -0.3
SALO Sn 19 46 31.4 -3.9
BR131 Keskin Array S 10.42 78 Pn 19 44 42.7 +1.8
BR131 Keskin Array S 10.42 78 iP Pn 19 44 44.8 +3.9
BRTR Keskin Array B 10.42 78 Pn Pn 19 44 45.1 +4.2
comp=N,0.2nm,0.3s,baz=262,slow=12,SNR=14
BRTR Keskin Array B 10.42 78 Pn 19 44 42.7 +1.8
MOA Molln 10.52 337 ePn Pn 19 44 42.8 +0.5
MOA eSn Sn 19 46 36.3 -3.4
MOA Molln 10.52 337 ePn Pn 19 44 42.7 +0.5
comp=N,9.0nm,0.3s,SNR=20
MOA eSn Sn 19 46 36.5 -3.2
comp=N,9.5nm,0.5s
CRVS Cervenica-Dubn 10.62 4 eP Pn 19 44 42.7 -0.7
CRVS Cervenica-Dubn 10.62 4 ePN Pn 19 44 42.7 -0.7
KOLS Kolonicke sedl 10.71 7 eP Pn 19 44 46.2 +1.5
KOLS Kolonicke sedl 10.71 7 ePN Pn 19 44 46.2 +1.5
RJOB Jochberg 10.93 332 ePn Pn 19 44 48.9 +1.1
RJOB eSn Sn 19 46 46.8 -2.8
WATA Walderalm 11.09 327 ePn Pn 19 44 52.1 +2.1
comp=N,10nm,0.4s,SNR=13
WATA Sn Sn 19 46 51.6 -2.0
comp=N,9.1nm,0.4s
SQTA Sankt Quirin 11.16 326 ePn Pn 19 44 53.9 +2.9
comp=N,3.6nm,0.4s
SQTA Sn Sn 19 46 53.1 -2.3
comp=N,17nm,0.5s
FUORN Ofenpass-Fuorn 11.16 321 Pn 19 44 52.2 +1.1
FUORN Sn 19 46 52.3 -3.3
FETA Feichten 11.22 324 ePn Pn 19 44 54.0 +2.1
comp=N,2.7nm,0.4s
FETA Sn Sn 19 46 52.8 -4.3
comp=N,8.3nm,0.6s
MOTA Moosalm 11.30 326 ePn Pn 19 44 54.9 +2.0
comp=N,6.0nm,0.4s,SNR=7.6
MOTA Sn Sn 19 46 57.7 -1.2
comp=N,23nm,0.7s
VRAC Vranov 11.32 347 Pn Pn 19 44 53.8 +0.7
comp=N,0.2nm,0.3s,baz=153,slow=6.8,SNR=2.7
DAVOX Davos/Dischmat 11.46 321 Sn Sn 19 46 57.7 -5.1
RETA Reutte 11.56 326 ePn Pn 19 44 58.2 +1.8
comp=N,2.8nm,0.5s
RETA Sn Sn 19 47 03.9 -1.2
comp=N,16nm,0.7s
GEC2 GERESS Array S 11.58 338 ePn Pn 19 44 56.6 -0.2
GEC2 eSn Sn 19 47 00.7 -5.0
GEC2 GERESS Array S 11.58 338 Pn 19 44 56.1 -0.6
GERES GERESS Array B 11.58 338 Pn Pn 19 44 56.3 -0.4
comp=N,1.4nm,0.3s,baz=153,slow=13,SNR=35
GERES Sn Sn 19 46 59.7 -6.1
comp=N,0.7nm,0.3s,baz=153,slow=24,SNR=5.1
GERES LR LR 19 51 04.3
comp=N,165nm,19.8s,baz=161,slow=46
GERES GERESS Array B 11.58 338 Pn 19 44 55.6 -1.1
DAVA Damuels 11.81 323 eSn Sn 19 47 06.6 -5.0
KHC Kasperske Hory 11.87 338 ePn Pn 19 45 00.0 -0.6
KHC eSn Sn 19 47 06.4 -6.4
KHC Kasperske Hory 11.87 338 ePN Pn 19 44 59.9 -0.8
KHC eSN Sn 19 47 06.7 -6.1
KHC Kasperske Hory 11.87 338 Pn 19 44 59.6 -1.1
KHC Kasperske Hory 11.87 338 eP Pn 19 44 59.9 -0.8
KHC e 19 47 06.7

PLONS Plons/SG 11.89 321 ePn Pn 19 45 00.8 -0.2
PLONS eSn Sn 19 47 08.2 -5.2
WET Wettzell 12.10 336 ePn Pn 19 45 05.4 +1.7
WET eSn Sn 19 47 12.8 -5.5
SENIN Lac Senin/Sane 12.57 314 Pn 19 45 10.6 +0.2
SENIN Sn 19 47 27.0 -3.0
SLE Schleitheim 12.82 321 eSn Sn 19 47 31.0 -4.9
BALST Balsthal 12.94 318 ePn Pn 19 45 16.9 +1.5
BALST eSn Sn 19 47 30.3 -8.7
MANZ Manzenberg 13.08 336 ePn Pn 19 45 18.7 +1.6
BFO Black Forest 13.29 323 ePn Pn 19 45 22.6 +2.6
BFO eSn Sn 19 47 40.6 -6.9
MMAI Mount Meron Ar 13.31 109 Pn Pn 19 45 19.4 -1.0
comp=N,0.9nm,0.3s,baz=317,slow=10,SNR=4.5
MMAI Sn Sn 19 47 41.1 -7.0
comp=N,0.8nm,0.3s,baz=293,slow=26,SNR=3.1
MMAI LR LR 19 52 51.5
comp=N,52nm,19.3s,baz=345,slow=48
BRG Berggiesshubel 13.36 342 e(P) P 19 45 33.6 +3.2
comp=N,4.9nm,0.9s
BRG Berggiesshubel 13.36 342 eP P 19 45 33.6 +3.2
BRG pmax pmax
comp=Z,5.0nm,0.9s
ECH Echery 13.79 320 Pn 19 45 26.6 -0.2
ECH Sn 19 47 53.9 -5.7
ECH Echery 13.79 320 P Pn 19 45 26.6 -0.2
ECH 19 47 53.9
MOX Moxa 13.81 336 ePn Pn 19 45 28.1 +1.1
AKASG Malin Array Be 13.89 24 Pn Pn 19 45 28.1 0.0
comp=Z,0.9nm,0.3s,baz=212,slow=11,SNR=7.9
AKASG Malin Array Be 13.89 24 Pn 19 45 27.7 -0.4
AKASG Malin Array Be 13.89 24 iP Pn 19 45 28.7 +0.6
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 13.89 24 Pn 19 45 27.0 -1.1
AKBB Malin Array Si 13.89 24 P Pn 19 45 27.0 -1.1
CLL Collm 14.00 341 eP P 19 45 35.0 -2.5
ANN Anapa 14.31 58 eP P 19 45 32.4 -1.5
ANN pmax pmax
comp=Z,68nm,1.4s
ASF Jabal al Asfar 14.82 109 Pn Pn 19 45 41.2 +0.1
comp=Z,0.1nm,0.3s,baz=309,slow=14,SNR=2.9
EIL Elat 14.84 121 Pn Pn 19 45 40.4 -0.8
comp=Z,0.3nm,0.3s,baz=328,slow=15,SNR=5.1
EIL Sn Sn 19 48 13.3 -12
comp=Z,0.2nm,0.3s,baz=225,slow=20,SNR=2.9
WLF Walferdange 15.25 323 PnPn P 19 45 55.2 +3.7
WLF Walferdange 15.25 323 P 19 45 49.2 -2.2
WLF IAmb IAmb 19 45 57.0
comp=Z,24nm,0.8s
WLF Walferdange 15.25 323 P P 19 45 49.2 -2.2
WLF pmax pmax
comp=Z,24nm,0.8s
SOC Sochi 15.53 64 eP P 19 45 54.2 -0.3
SOC e 19 48 46.9
SOC pmax pmax
comp=Z,32nm,0.8s
SUW Suwalki 15.82 6 Pn Pn 19 45 55.2 +1.2
SUW Suwalki 15.82 6 P Pn 19 45 55.2 +1.2
SUW pmax pmax
comp=Z,62nm,1.0s
MEM Membach 15.97 325 PnPn P 19 46 04.9 +5.5
BMRD Maredsous 16.34 322 PnPn P 19 46 09.4 +5.9
MICGM Minsk 16.99 15 e Pn 19 46 06.0 -2.8
MNK Minsk 16.99 15 eP Pn 19 46 06.0 -2.8
NACGM Naroch 17.16 13 e P 19 46 12.0 -0.5
PABE Paberze 17.37 7 eP Pn 19 46 13.0 -0.6
PABE IAmb IAmb 19 46 14.7
comp=Z,41nm,0.9s
IIGN Ignalina 17.50 11 eP Pn 19 46 15.4 +0.2
IIGN IAmb IAmb 19 46 18.2
comp=Z,15nm,0.9s
NEY Neytrino 17.61 67 eP P 19 46 19.6 +1.7
SHA1 Shidzhatmaz 17.65 65 iP P 19 46 19.7 +1.4
ISAL Salakas 17.70 11 eP Pn 19 46 16.6 -1.1
ISAL IAmb IAmb 19 46 20.4
comp=Z,11nm,0.9s
KIV Kislovodsk 17.71 64 P P 19 46 19.8 +1.0
KIV Kislovodsk 17.71 64 eP P 19 46 19.8 +1.0
KIV pmax pmax
comp=Z,64nm,1.0s
KIV MLR MLR
comp=Z,122nm,14.0s
KVAR Kislovodsk Arr 17.71 64 Pn P 19 46 21.3 +2.4
baz=270,slow=20,SNR=8.8
KBZ Khabaz 17.82 65 Pn P 19 46 21.6 +1.7
comp=Z,0.4nm,0.3s,baz=299,slow=7.1,SNR=28
KBZ Khabaz 17.82 65 iP P 19 46 21.8 +1.9
IZAR Zarasai 17.89 11 eP Pn 19 46 17.5 -2.5
PYA1 Pyatigorsk 18.02 64 iP P 19 46 23.6 +1.4
PYA1 pmax pmax
comp=Z,1.0nm,0.9s
GOF Gofitskoye 18.19 61⇑eP P 19 46 25.9 +1.8
NCK Nalchik 18.28 66 iP P 19 46 27.4 +2.4
NCK pmax pmax
comp=Z,13nm,0.8s
ZEI Tsey 18.41 69 eP P 19 46 28.2 +1.4
ZEI pmax pmax
comp=Z,16nm,0.6s
VSR Storozhevoye 18.49 40 eP P 19 46 27.1 -0.2
TBLG Delisi 18.95 72 P Pn 19 46 33.5 +0.4
TBLG Delisi 18.95 72 P Pn 19 46 33.5 +0.4
TBLG pmax pmax
comp=Z,28nm,1.3s
ESDC Sonseca Array 18.96 282 P Pn 19 46 33.5 +0.3
comp=Z,0.3nm,0.3s,baz=73,slow=11,SNR=7.3
ESDC Sonseca Array 18.96 282 P P 19 46 32.8 +0.3
GNI Garni 18.96 77 P Pn 19 46 34.6 +1.3
comp=Z,1.6nm,0.3s,baz=311,slow=2.0,SNR=41
GNI LR LR 19 54 00.3
comp=Z,78nm,18.5s,baz=284,slow=38
GNI Garni 18.96 77 P Pn 19 46 34.0 +0.7
GNI Garni 18.96 77ceP Pn 19 46 34.0 +0.7
GNI pmax pmax
comp=Z,380nm,1.7s
VRH Novokhopyorsk 19.81 43 eP P 19 46 42.3 +0.6
GROC Groznyy 19.84 68 iP Pn 19 46 43.9 +0.2
GROC pmax pmax
comp=Z,24nm,0.9s
TAM Tamanrasset 20.03 224 P P 19 46 44.9 +0.5
TAM Tamanrasset 20.03 224 P P 19 46 44.9 +0.5
TAM pmax pmax
comp=Z,9.0nm,1.3s
OBN Obninsk 20.06 28 P P 19 46 43.8 -0.6
comp=Z,2.5nm,0.4s,baz=260,slow=18,SNR=4.4
OBN LR LR 19 54 27.3
comp=Z,33nm,19.5s,baz=131,slow=37
OBN Obninsk 20.06 28 P P 19 46 43.3 -1.0
OBN IAmb IAmb 19 46 49.5
comp=Z,55nm,1.5s
OBN Obninsk 20.06 28 eP P 19 46 42.6 -1.8
OBN ePPP PPP 19 47 04.8
OBN e 19 50 56.1
OBN pmax pmax
comp=Z,43nm,1.7s
OBN MLR MLR
comp=Z,139nm,16.0s
VSU Vasula 20.59 10 eP P 19 46 51.0 +1.0
VSU Vasula 20.59 10ceP P 19 46 50.3 +0.3
VSU pmax pmax
comp=Z,509nm,1.7s
MOS Moscow 20.93 28 eP P 19 46 52.3 -1.5
MOS pmax pmax
comp=Z,52nm,1.2s
MDT Midelt 21.02 262 P P 19 46 55.6 +0.5
comp=Z,4.4nm,0.9s,baz=73,slow=13,SNR=2.4
AKT Akhty 21.19 73 eP P 19 46 58.4 +1.5
AKT e 19 47 18.6
AKT pmax pmax
comp=Z,44nm,0.9s
HFS Hagfors 22.25 351 P P 19 47 08.1 +0.1
comp=Z,18nm,0.7s,baz=161,slow=9.4,SNR=37
PUL Pulkovo 22.40 13ceP P 19 47 08.5 -1.0
PUL pmax pmax
comp=Z,124nm,0.9s
EKA Eskdalemuir Ar 23.25 325 P P 19 47 18.8 +0.3
comp=Z,5.0nm,0.8s,baz=126,slow=9.6,SNR=6.3
NAO01 NORSAR Array S 23.33 348 P P 19 47 18.7 -0.6
FINES FINESS Array B 23.43 7 P P 19 47 19.7 -0.5
comp=Z,12nm,0.7s,baz=168,slow=9.2,SNR=53
FINES LR LR 19 57 30.8
comp=Z,130nm,18.4s,baz=175,slow=39
FINES FINESS Array B 23.43 7 P P 19 47 19.1 -1.1
FIA1 FINESS Array S 23.43 7 P P 19 47 19.3 -0.9

FIA1 IAmb IAmb 19 47 21.9
comp=Z,18nm,0.9s
NC405 NORSAR Array S 23.46 349 P P 19 47 19.8 -0.8
NB2 NORSAR Subarra 23.46 349 P P 19 47 21.2 +0.6
comp=Z,14nm,1.1s,baz=158,slow=9.3
NOA NORSAR Array B 23.46 349 P P 19 47 20.6 0.0
comp=Z,4.6nm,0.8s,baz=157,slow=9.7,SNR=7.3
NBO00 NORSAR Array S 23.52 348 P P 19 47 20.3 -0.9
KLMR Klimovskoe 25.56 22 eP P 19 47 37.3 -2.6
KLMR AMP 19 47 42.8
comp=Z,39nm,1.4s
KLMR Klimovskoe 25.56 22 eP P 19 47 37.2 -2.6
KLMR pmax pmax
comp=Z,39nm,1.4s
RAYN Ar Rayn 26.01 117 P P 19 47 45.2 +0.8
RAYN Ar Rayn 26.01 117 P P 19 47 45.2 +0.8
RAYN pmax pmax
comp=Z,9.0nm,1.1s
KIRV Kirov 27.61 33 P P 19 47 57.8 -0.6
comp=Z,15nm,0.6s,baz=270,slow=2.3,SNR=7.0
KIRV LR LR 19 59 57.2
comp=Z,147nm,20.0s,baz=259,slow=39
TMCR Tamitsa 27.95 16 eP P 19 48 02.6 +1.3
TMCR pmax pmax
comp=Z,9.0nm,0.9s
PRGR Permogore 28.09 26 eP P 19 48 01.9 -0.8
PRGR pmax pmax
comp=Z,16nm,0.8s
AKTO Aktyubinsk 29.19 53 P P 19 48 12.1 -0.5
comp=Z,1.3nm,0.4s,baz=259,slow=9.7,SNR=8.2
GEYT Alibeck 29.56 79 P P 19 48 16.6 +0.5
comp=Z,3.8nm,0.5s,baz=280,slow=8.8,SNR=31
GEYT Alibeck 29.56 79 P P 19 48 16.4 +0.3
GYA0B ALIBECK ARRAY 29.56 79 P P 19 48 15.9 -0.2
GYA0B IAmb IAmb 19 48 17.5
comp=Z,6.1nm,0.6s
TOA0 Torodi Ar. Sit 30.06 219 P P 19 48 20.8 +0.2
TOA0 IAmb IAmb 19 48 25.3
comp=Z,5.7nm,0.8s
TORD Torodi Ar. Bea 30.06 219 P P 19 48 21.5 +0.9
comp=Z,5.7nm,0.7s,baz=31,slow=9.3,SNR=20
TORD Torodi Ar. Bea 30.06 219 P P 19 48 20.8 +0.2
ARU Arti 31.04 42 P P 19 48 28.5 -0.3
comp=Z,1.2nm,0.4s,baz=295,slow=8.3,SNR=5.4
ARU Arti 31.04 42 P P 19 48 27.9 -0.9
ARU IAmb IAmb 19 48 30.8
comp=Z,9.1nm,1.2s
ARU Arti 31.04 42c iP P 19 48 28.5 -0.3
ARU 19 49 29.7
ARU S S 19 53 35.3 +2.2
ARU SS SnSn 19 55 14.6 +0.7
ARU pmax pmax
comp=Z,9.0nm,1.3s
ARCES ARCESS Array B 31.41 3 P P 19 48 32.0 0.0
comp=Z,1.8nm,0.7s,baz=192,slow=11,SNR=11
ARCES PcP PcP 19 51 24.7 -0.3
comp=Z,2.6nm,0.9s,baz=165,slow=3.7,SNR=5.4
ARCES ARCESS Array B 31.41 3 P P 19 48 32.2 +0.2
SVE Sverdlovsk 32.25 42 eP P 19 48 39.8 +0.3
SVE pmax pmax
comp=Z,16nm,0.7s
HRA Herat 33.74 84 P P 19 48 53.1 0.0
BRVK Borovoye 37.06 50 P P 19 49 20.7 -0.4
BRVK IAmb IAmb 19 49 22.7
comp=Z,9.5nm,1.2s
BRVK Borovoye 37.06 50 P P 19 49 20.7 -0.4
BRVK pmax pmax
comp=Z,9.0nm,1.3s
BVAR Borovoye Array 37.12 50 P P 19 49 22.3 +0.6
comp=Z,1.6nm,0.6s,baz=273,slow=6.7,SNR=12
BVAR PP PP 19 50 46.0 -0.2
comp=Z,2.3nm,0.7s,baz=270,slow=8.7,SNR=4.7
KK31 Karatay Array 37.85 66 P P 19 49 27.2 -0.8
KK31 IAmb IAmb 19 49 30.5
comp=Z,7.8nm,0.6s
KK31 Karatay Array 37.85 66 P P 19 49 27.2 -0.8
KK31 pmax pmax
comp=Z,8.0nm,0.6s
KKAR Karatay Array 37.85 66 P P 19 49 27.2 -0.8
KKAR Karatay Array 37.85 66 P P 19 49 27.8 -0.2
KKAR IAmb IAmb 19 49 30.5
comp=Z,7.8nm,0.7s
KKAR Karatay Array 37.85 66 P P 19 49 27.2 -0.8
KKAR pmax pmax
comp=Z,8.0nm,0.6s
BTK Batken 38.72 71 P P 19 49 35.0 -0.4
BTK Batken 38.72 71 P P 19 49 35.0 -0.4
BTK pmax pmax
comp=Z,6.0nm,1.0s
DBIC Dimbokro 38.91 222 P P 19 49 37.9 +0.8
comp=Z,6.2nm,0.7s,baz=16,slow=9.0,SNR=12
DBIC LR LR 20 06 40.1
comp=Z,86nm,18.8s,baz=2.5,slow=38
DBIC Dimbokro 38.91 222 P P 19 49 37.2 +0.1
TIC Toumodi 39.02 223 eP P 19 49 41.6 +3.6
KIC Kosan Boka 39.11 222 eP P 19 49 39.8 +1.0
comp=Z,4.1nm,0.8s
LIC Lamto 39.38 222 eP P 19 49 42.1 +1.1
comp=Z,7.2nm,0.4s
SPITS Spitsbergen Ar 40.01 359 P P 19 49 45.9 +0.2
comp=Z,5.5nm,0.8s,baz=180,slow=9.5,SNR=4.2
AAK Ala-Archa 40.81 66 P P 19 49 53.2 +0.4
comp=Z,4.1nm,0.9s,baz=234,slow=4.0,SNR=8.2
AAK Ala-Archa 40.81 66 P P 19 49 53.4 +0.5
AAK IAmb IAmb 19 50 01.2
comp=Z,16nm,1.6s
AAK Ala-Archa 40.81 66c eP P 19 49 52.1 -0.8
AAK pmax pmax
comp=Z,3.0nm,0.8s
FRU1 Bishkek 40.87 66 P P 19 49 53.6 +0.4
FRU1 IAmb IAmb 19 49 54.9
comp=Z,10.0nm,0.7s
FRU1 Bishkek 40.87 66 P P 19 49 53.7 +0.4
FRU1 pmax pmax
comp=Z,10.0nm,0.7s
KURBB Kurchatov Arra 42.24 54 P P 19 50 04.0 -0.3
comp=Z,2.7nm,0.7s,baz=281,slow=9.0,SNR=18
KURBB PP PP 19 51 40.4 -1.6
comp=Z,0.8nm,0.7s,baz=278,slow=11,SNR=3.4
KURBB PcP PcP 19 51 59.8 +1.8
comp=Z,1.5nm,0.8s,baz=283,slow=3.8,SNR=5.1
KURK Kurchatov 42.29 53 P P 19 50 04.1 -0.6
KURK Kurchatov 42.29 53c eP P 19 50 03.6 -1.1
KURK pmax pmax
comp=Z,13nm,2.5s
NIL Nilore 42.56 80 P P 19 50 07.2 0.0
NIL IAmb IAmb 19 50 08.6
comp=Z,7.8nm,0.7s
NIL Nilore 42.56 80 P P 19 50 07.2 0.0
NIL pmax pmax
comp=Z,8.0nm,0.7s
KSH Kashi 42.69 70 P P 19 50 06.4 -1.9
KSH sP pP 19 50 13.4 +0.1
KSH PP PP 19 51 44.7 -2.5
KSH S S 19 56 28.1 -3.0
KSH sS pS 19 56 37.6 +0.7
KSH Kashi 42.69 70 ScS ScS 20 00 07.7 -1.4
MAKZ Makanchi 45.12 59 P P 19 50 27.1 -0.4
MAKZ PcP PcP 19 52 07.6 -0.3
MAKZ Makanchi 45.12 59 P P 19 50 27.1 -0.4
MAKZ 19 52 07.6
MAKZ pmax pmax
comp=Z,2.0nm,0.8s
MK31 Makanchi Array 45.33 58 P P 19 50 28.7 -0.6
MK31 IAmb IAmb 19 50 29.8
comp=Z,3.4nm,0.7s
MK31 Makanchi Array 45.33 58 P P 19 50 28.7 -0.6
MK31 pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 45.33 58 P P 19 50 29.0 -0.2
comp=Z,3.4nm,0.4s,baz=272,slow=8.1,SNR=90
MKAR PcP PcP 19 52 09.4 +0.8
comp=Z,1.2nm,0.8s,baz=292,slow=4.5,SNR=2.8
MKAR Makanchi Array 45.33 58 P P 19 50 28.7 -0.6
MKAR PcP PcP 19 52 08.9 +0.2
MKAR Makanchi Array 45.33 58 P P 19 50 28.7 -0.6
MKAR 19 52 08.9
ZAA0 Zalesovo Array 45.69 48 P P 19 50 31.4 -0.5
ZALV Zalesovo Beam 45.69 48 P P 19 50 31.9 0.0
comp=Z,19nm,0.5s,baz=273,slow=8.7,SNR=94
ZALV PP PP 19 52 15.9 -2.8
comp=Z,2.4nm,0.6s,baz=276,slow=10,SNR=3.7
ZALV Zalesovo Beam 45.69 48 P P 19 50 31.6 -0.4
ZALV PP PP 19 52 16.2 -2.5
WMQ Urumqi 49.80 61 eP P 19 51 04.4 +0.4
WMQ pP pP 19 51 07.1 -1.8
DANN Dangsing 52.97 81 eP P 19 51 27.7 -0.6
comp=Z,22nm,0.8s
GKN Gorkha 53.81 81 eP P 19 51 33.2 -1.1
comp=Z,9.8nm,0.7s
DMN Daman 54.37 81 eP P 19 51 37.8 -0.7
comp=Z,7.6nm,0.6s
PKI Pulchoki 54.62 81 eP P 19 51 40.0 -0.4
GUN Gumba 54.82 80 eP P 19 51 41.3 -0.6
JIRN Jiri 55.19 80 eP P 19 51 44.8 +0.2
comp=Z,6.6nm,0.4s
ODAN Odare 56.51 80 eP P 19 51 52.5 -1.4
TAPN Taplejung 56.51 80 eP P 19 51 53.3 -0.7
TLY Talaya 57.28 47 P P 19 52 00.1 +1.3
comp=Z,2.7nm,0.6s,baz=270,slow=6.7,SNR=4.4
TLY Talaya 57.28 47 P P 19 51 59.4 +0.7
TLY IAmb IAmb 19 52 01.1
comp=Z,7.6nm,1.0s
TLY Talaya 57.28 47 eP P 19 52 00.1 +1.3
TLY pmax pmax
comp=Z,31nm,1.5s
TLY MLR MLR
comp=Z,116nm,6.0s
LSA Lhasa 58.02 76 P P 19 52 04.7 -0.1
LSA IAmb IAmb 19 52 06.2
comp=Z,4.3nm,0.7s
LSA Lhasa 58.02 76 P P 19 52 04.7 -0.1
LSA pmax pmax
comp=Z,4.0nm,0.7s
SCHQ Schefferville 58.28 317 P P 19 52 06.8 +1.1
comp=Z,1.2nm,0.4s,baz=49,slow=1.6,SNR=7.9
SCHQ Schefferville 58.28 317 P P 19 52 06.7 +0.9
SCHQ IAmb IAmb 19 52 27.0
comp=Z,6.7nm,1.4s
TIXI Tiksi 59.57 20 P P 19 52 15.2 +0.9
TIXI IAmb IAmb 19 52 16.6
comp=Z,4.1nm,1.1s
TIXI Tiksi 59.57 20 iP P 19 52 13.6 -0.7
TIXI pmax pmax
comp=Z,3.0nm,1.0s
GTA Gaotai 59.86 62 ⇑P P 19 52 16.8 -0.3
GTA pP pP 19 52 21.7 -0.4
GTA sP sP 19 52 24.0 -0.3
BOD Bodaibo 60.34 38 eP P 19 52 19.7 -0.2
BOD pmax pmax
comp=Z,5.0nm,1.0s
SONM Songino Array 60.46 51 P P 19 52 21.3 +0.2
comp=Z,3.0nm,0.9s,baz=288,slow=8.5,SNR=23
SONM PcP PcP 19 53 06.2 +0.5
comp=Z,1.7nm,0.9s,baz=268,slow=5.2,SNR=4.5
SONM PP PP 19 54 36.2 +2.1
comp=Z,0.5nm,0.8s,baz=286,slow=11,SNR=2.7
SONM Songino Array 60.46 51 P P 19 52 20.9 -0.2
SONM PcP PcP 19 53 05.3 -0.4
ULN Ulaanbaatar 60.85 50 P P 19 52 23.8 +0.1
ULN IAmb IAmb 19 52 25.0
comp=Z,4.2nm,0.9s
ULN Ulaanbaatar 60.85 50 P P 19 52 23.8 +0.1
ULN pmax pmax
comp=Z,4.0nm,1.0s
LZH Lanzhou 64.25 63 eP P 19 52 45.7 -0.9
LZH pP pP 19 52 48.8 -3.1
LZH sP sP 19 52 50.6 -3.3
LZH ePP PP 19 55 08.5 +0.8
YAK Yakutsk 65.05 29 P P 19 52 51.1 -0.1
YAK Yakutsk 65.05 29 P P 19 52 51.1 -0.1
YAK pmax pmax
comp=Z,11nm,0.7s
BOSA Boshof 66.73 175 P P 19 53 05.6 +3.1
comp=Z,1.5nm,0.7s,baz=359,slow=1.5,SNR=5.0
BOSA Boshof 66.73 175 P P 19 53 04.6 +2.1
CD2 Chengdu 66.83 68 P P 19 53 01.4 -1.9
HHC Hu-ho-hao-te 67.06 55 eP P 19 53 03.9 -0.7
HIA Hailar 67.51 44 P P 19 53 08.1 +0.9
HIA Hailar 67.51 44 P P 19 53 08.1 +0.9
HIA pmax pmax
comp=Z,13nm,1.2s
XAN Xi'an 68.87 63 P P 19 53 16.5 +0.5
XAN pP sP 19 53 26.0 +3.0
CHTO Chiang Mai 69.78 82 P P 19 53 21.2 -0.7
CHTO IAmb IAmb 19 53 22.4
comp=Z,3.4nm,0.8s
CHTO Chiang Mai 69.78 82 P P 19 53 21.2 -0.7
CHTO pmax pmax
comp=Z,3.0nm,0.8s
CMAR Chiang Mai Arr 69.99 82 P P 19 53 22.9 -0.1
comp=Z,2.8nm,0.8s,baz=304,slow=7.9,SNR=31
CMAR Chiang Mai Arr 69.99 82 P P 19 53 23.0 -0.1
BILL Bilibino 70.91 13 eP P 19 53 26.1 -1.9
BILL e 19 53 44.7
BILL e 19 56 05.9
BILL ePPP PPP 19 57 50.9
BILL pmax pmax
comp=Z,4.0nm,1.3s
PBKT Sadao Pong 72.65 82 P P 19 53 38.4 -0.8
YKA Yellowknife Ar 73.22 340 P P 19 53 42.6 +0.7
comp=Z,0.4nm,0.6s,baz=36,slow=5.2,SNR=8.0
KLR Kul'dur 73.84 39 iP P 19 53 46.4 +0.6
KLR pmax pmax
comp=Z,10.0nm,0.9s
MA2 Magadan 74.22 24 iP P 19 53 48.0 +0.2
MA2 pmax pmax
comp=Z,5.0nm,1.0s
WHN Wuhan 74.63 63 P P 19 53 44.7 -5.9
ULM Lac du Bonnet 75.52 324 P P 19 53 56.6 +1.1
comp=Z,2.2nm,0.7s,baz=12,slow=5.6,SNR=5.4
ULM Lac du Bonnet 75.52 324 P P 19 53 55.9 +0.4
ULM IAmb IAmb 19 54 16.1
comp=Z,8.5nm,1.2s
IMAR Indian Mountai 75.94 358 P P 19 53 58.9 +1.3
ILAR Eielson Array 76.77 354 P P 19 54 04.5 +2.2
comp=Z,1.0nm,0.9s,baz=47.8,slow=4.6,SNR=10
ILAR Eielson Array 76.77 354 P P 19 54 03.5 +1.2
ILAR Eielson Array 76.77 354 P P 19 54 03.5 +1.2
NJ2 Nanjing 76.85 60 eP P 19 54 04.4 +1.1
USRK Ussuriysk Ar. 77.26 43 P P 19 54 05.6 +0.1
comp=Z,5.4nm,0.8s,baz=312,slow=5.0,SNR=10
USRK Ussuriysk Ar. 77.26 43 P P 19 54 05.3 -0.2
BCAR Beaver Creek A 77.96 352 P P 19 54 10.4 +1.3
KSRS Korea Array 79.33 51 P P 19 54 17.2 +0.2
comp=Z,3.7nm,1.0s,baz=314,slow=4.1,SNR=5.8
YSS Yuzh-Sakhalins 80.73 36 P P 19 54 25.6 +1.2
YSS Yuzh-Sakhalins 80.73 36 eP P 19 54 26.0 +1.6
YSS pmax pmax
comp=Z,20nm,0.9s
LCAR Lake Charles 82.64 311 P P 19 54 35.1 +0.4
LCAR IAmb IAmb 19 54 44.5
comp=Z,5.0nm,0.8s
MAJO Matsushiro 85.97 46 iP P 19 54 51.0 -0.7
MAJO pmax pmax
comp=Z,15nm,1.2s
MJAR Matsushiro Arr 85.98 46 P P 19 54 51.6 -0.1
comp=Z,4.8nm,0.9s,baz=321,slow=5.6,SNR=5.0
MJAR Matsushiro Arr 85.98 46 P P 19 54 52.2 +0.5
MJAR Matsushiro Arr 85.98 46 P P 19 54 52.2 +0.5
MJAR pmax pmax
comp=Z,7.0nm,1.3s
WRA Warramunga Arr 120.66 92 PKP PKPdf 20 01 03.2 -0.3
comp=Z,0.5nm,0.6s,baz=321,slow=1.8,SNR=5.0
ASAR Alice Springs 122.30 96 PKP PKiKP 20 01 06.7 -0.1
comp=Z,0.3nm,0.4s,baz=300,slow=1.5,SNR=3.9
ASAR Alice Springs 122.30 96 PKP PKPdf 20 01 06.5 0.0

DDA 04 19:42:14.5,37.03N×27.46E,h9km±1km,ML1.2,Turkey

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BDRM Kayabasi 0.04 340 iP Pg 19 42 16.7 +0.4
BDRM iS Sg 19 42 17.7 +0.1
DAT Datca 0.32 163 iP Pg 19 42 20.7 -0.1
DAT IAML 19 42 28.0
comp=N,20nm,0.2s
GCAM G?zelcaml? 0.69 345 iP Pg 19 42 28.2 +0.4
GCAM IAML 19 42 39.0
comp=N,28nm,1.0s
GCAM IAML 19 42 42.0
comp=E,18nm,0.5s
AYDN Tasoluk 0.71 28 iP Pg 19 42 28.5 +0.2
AYDN iS Sg 19 42 37.8 +0.2
AYDN IAML 19 42 41.0
comp=E,13nm,0.6s
TURN Turunc 0.93 99 iP Pg 19 42 27.9 -4.4
TURN iS Sg 19 42 37.7 -6.7
TURN IAML 19 42 40.0
comp=N,12nm,0.8s
TURN IAML 19 42 41.0
comp=E,14nm,0.2s
DALY Dalyan (Mula) 0.98 102 iP Pn 19 42 35.3 +0.9

BJI 04 19:42:17.2±0.0, 30.06N×85.62E, h7km, mb3.7/3, ML3.2/1, Ms3.2/1, Ms7 3.0/1
IDC 04 19:42:23.6±5.7, 30.31N×85.69E, h52km±53km, mb3.4/13, mb1 3.5/14, mb1mx3.3/68, mbtmp3.7/14, ML3.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/37, Error ellipse: s-maj=29.7km s-min=17.7km az=44.0
ISC 04 19:42:18.2±0.8, 30.2N±0.1×85.52E±0.08, h10km, n20, σ1§49/20, mb3.6/13, Xizang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LSA Lhasa 4.91 94 Pg Pb 19 43 42.9 -1.6
LSA Sn Sn 19 44 30.0 +0.4
LSA smax smax
comp=N,29nm,1.5s
LSA smax smax
comp=E,30nm,1.1s
WMQ Urumqi 13.74 7 eP Pn 19 45 31.7 -1.4
GTA Gaotai 14.92 48 eP Pn 19 45 53.2 +3.9
GTA pP P 19 45 58.6 +3.6
GTA sP 19 46 01.4
GTA pmax pmax
comp=Z,2.0nm,1.2s
GTA LR LR
comp=E,84nm,14.6s
GTA LR LR
comp=Z,68nm,14.6s
AAK Ala-Archa 15.27 328 P P 19 46 00.5 +1.6
0.1nm,0.3s,baz=152,slow=9.8,SNR=6.1
MKAR Makanchi Array 16.79 352 P Pn 19 46 13.1 -0.3
0.2nm,0.3s,baz=169,slow=12,SNR=10
CMAR Chiang Mai Arr 16.88 131 P Pn 19 46 15.6 +1.0
0.2nm,0.3s,baz=310,slow=11,SNR=48
KURBB Kurchatov Arra 21.10 348 P P 19 47 01.9 -0.8
3.9nm,0.8s,baz=164,slow=10,SNR=19
ZALV Zalesovo Beam 23.77 359 P P 19 47 29.8 -0.9
1.3nm,0.7s,baz=176,slow=11,SNR=6.7
SONM Songino Array 23.84 36 P P 19 47 30.7 -1.0
1.1nm,0.9s,baz=225,slow=10,SNR=7.3
GEYT Alibeck 23.93 296 P P 19 47 34.8 +2.3
0.6nm,0.6s,baz=94,slow=5.8,SNR=5.2
WHN Wuhan 24.86 82 P P 19 47 31.1 -10
TLY Talaya 25.35 27 P P 19 47 43.9 -1.3
3.3nm,0.6s,baz=156,slow=10.0,SNR=2.8
TLY LR LR 19 58 02.0
comp=Z,50nm,18.3s,baz=88,slow=37
BVAR Borovoye Array 25.39 338 P P 19 47 46.0 +0.5
0.4nm,0.6s,baz=153,slow=14,SNR=2.9
AKASG Malin Array Be 46.26 313 P P 19 50 42.9 -0.7
0.3nm,0.5s,baz=79,slow=7.2,SNR=4.1
FINES FINESS Array B 49.46 327 P P 19 51 07.2 -1.0
1.5nm,0.7s,baz=109,slow=7.5,SNR=4.5
HFS Hagfors 55.39 325 P P 19 51 52.3 0.0
1.7nm,0.8s,baz=91,slow=10,SNR=4.1
WRA Warramunga Arr 68.47 130 P P 19 53 20.3 -0.5
1.7nm,1.1s,baz=322,slow=6.3,SNR=3.7
ASAR Alice Springs 70.86 133 P P 19 53 35.9 +0.4
0.4nm,0.8s,baz=312,slow=5.8,SNR=2.9
TORD Torodi Ar. Bea 78.25 278 P P 19 54 18.6 -0.1
0.1nm,0.5s,baz=35,slow=7.8,SNR=3.6
YKA Yellowknife Ar 86.26 9 P P 19 54 58.4 -1.4
0.2nm,0.6s,baz=335,slow=5.1,SNR=2.6

IDC 04 19:52:02.1±4.8, 5.02S×153.91E, h120km±39km, mb3.7/10, mb1 3.9/11, mb1mx3.6/45, mbtmp4.2/11, Error ellipse: s-maj=38.1km s-min=18.6km az=104.0
NEIC 04 19:52:03.0±2.3, 4.90S±0.08×153.72E±0.07, h124km±6km, mb4.7/31, Error ellipse: s-maj=12.1km s-min=8.6km az=208.0
ISC 04 19:52:01.1±0.5, 4.88S±0.07×153.76E±0.08, h105km, n66, σ1§12/67, mb4.5/23, New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RABL Rabaul 1.73 293 Pn Pn 19 52 33.0 +2.5
HNR Honiara 7.63 127 Pn Pn 19 53 51.8 +2.2
PMG Port Moresby 7.94 235 P Pn 19 53 55.8 +2.0
11nm,0.3s,baz=53,slow=9.0,SNR=29
PMG S Sn 19 55 23.6 +1.5
3.8nm,0.3s,baz=55,slow=16,SNR=3.8
PATS Pohnpei 12.49 21 Pn Pn 19 54 53.8 -1.5
COEN Coen 13.79 228 P 19 55 15.4 -1.8
FAKI Fak Fak 21.54 274 P P 19 56 43.2 +1.0
FAKI IAmb IAmb 19 57 20.5
comp=Z,41nm,1.1s
MTN Manton Dam 23.69 249 P P 19 57 03.9 +0.3
MTN IAmb IAmb 19 57 18.5
comp=Z,78nm,1.4s
WB0 Warramunga Arr 23.97 230 P P 19 57 06.9 +0.9
WB0 IAmb IAmb 19 57 08.5
comp=Z,22nm,1.4s
WR0 Warramunga Arr 23.97 230 P P 19 57 05.1 -0.9
WR0 IAmb IAmb 19 57 42.5
comp=Z,28nm,1.8s
WRAB Tennant Creek 24.10 230 P P 19 57 07.6 +0.5
WRAB IAmb IAmb 19 57 31.5
comp=Z,26nm,1.4s
WB2 Warramunga Arr 24.11 230 P P 19 57 07.7 +0.5
WB2 IAmb IAmb 19 57 38.5
comp=Z,40nm,1.6s
WRA Warramunga Arr 24.11 230 P P 19 57 07.8 +0.5
comp=Z,5.3nm,0.6s,baz=54,slow=10.0,SNR=36
WRA Warramunga Arr 24.11 230 P P 19 57 05.8 -1.5
ARMA Armidale 25.48 184 P P 19 57 18.7 -1.1
ARMA IAmb IAmb 19 57 42.6
comp=Z,18nm,1.1s
AS31 Alice Springs 26.74 224 P P 19 57 29.5 -1.6
ASAR Alice Springs 26.74 224 P P 19 57 31.4 +0.3
comp=Z,1.1nm,0.4s,baz=55,slow=8.9,SNR=29
ASAR Alice Springs 26.74 224 P P 19 57 30.9 -0.2
KNRA Kununurra 26.79 245 P P 19 57 32.5 +0.9
WAKE Wake Island 27.16 28 P P 19 57 34.1 -0.7
STKA Stephens Creek 29.18 202 P P 19 57 51.0 -1.6
comp=Z,2.2nm,0.6s,baz=29,slow=14,SNR=6.3
STKA Stephens Creek 29.18 202 P P 19 57 52.1 -0.5
FITZ Fitzroy Crossi 30.46 242 P P 19 58 03.9 -0.3
comp=Z,3.4nm,0.6s,baz=64,slow=4.9,SNR=11
FITZ Fitzroy Crossi 30.46 242 P P 19 58 03.7 -0.4
FITZ IAmb IAmb 19 58 09.6
comp=Z,27nm,1.6s
BBOO Buckleboo 32.33 209 P P 19 58 19.6 -0.8
FORT Forrest 35.34 220 P P 19 58 46.2 -0.2
PSA00 Pilbara Seismi 36.81 240 P P 19 58 58.9 -0.3
PSA00 IAmb IAmb 19 59 22.3
comp=Z,26nm,1.3s
PSA00 Pilbara Seismi 36.81 240 P P 19 58 58.3 -0.9
PSA00 IAmb IAmb 19 59 29.2
comp=Z,3.5nm,0.8s
HIZ Hauiti 38.59 153 P P 19 59 12.6 -1.3
HIZ IAmb IAmb 19 59 28.9
comp=Z,31nm,1.3s
BHW Baring Head 40.99 156 P P 19 59 35.1 +1.4
CMWZ Cape Campbell 41.01 157 P P 19 59 36.1 +2.2
MORW Morawa 43.04 232 P P 19 59 50.1 -0.5
MORW IAmb IAmb 19 59 51.0
comp=Z,8.3nm,0.6s
CISI Cisompet, Garu 45.73 264 P P 20 00 10.4 -2.0
USA0B Ussuriysk Arra 52.63 340 P P 20 01 04.5 +0.1
USRK Ussuriysk Ar. 52.63 340 P P 20 01 04.0 -0.3
KULM Kulim 53.99 280 P P 20 01 13.6 -1.3
KULM IAmb IAmb 20 01 15.0
comp=Z,23nm,1.5s
ENH Enshi 54.91 312 P P 20 01 22.3 +1.0
GSI Gunungsitoli 56.46 275 P P 20 01 31.0 -1.6
XAN Xi'an 57.34 316 P P 20 01 38.2 -0.3
XAN IAmb IAmb 20 01 39.2
comp=Z,3.3nm,0.6s
PETK Petropavlovsk- 57.87 3 P P 20 01 42.8 +1.1
comp=Z,6.0nm,1.0s,baz=187,slow=10.0,SNR=3.7
PETK Petropavlovsk- 57.87 3 P P 20 01 42.5 +0.8
CMAR Chiang Mai Arr 58.77 295 P P 20 01 49.8 +1.1
comp=Z,0.5nm,0.7s,baz=108,slow=5.5,SNR=6.0
SONM Songino Array 66.90 327 P P 20 02 42.9 +0.6
comp=Z,0.5nm,0.5s,baz=142,slow=6.3,SNR=8.1
SONM Songino Array 66.90 327 P P 20 02 42.8 +0.6
ODAN Odare 71.40 300 eP P 20 03 11.5 +0.8
comp=Z,14nm,0.7s

RAMN	**Ramite**	**72.11**	**300**	*e*P	**P**	**20 03 15.6**	**+0.7**
JIRN	**Jiri**	**72.65**	**301**	*e*P	**P**	**20 03 19.6**	**+1.4**
GUN	**Gumba**	**72.98**	**301**	*e*P	**P**	**20 03 20.8**	**+0.6**
	comp=Z,15nm,0.7s						
PKI	**Pulchoki**	**73.29**	**301**	*e*P	**P**	**20 03 22.3**	**+0.3**
	comp=Z,2.9nm,0.4s						
PKIN	**Phulchoki**	**73.30**	**301**	*e*P	**P**	**20 03 22.4**	**+0.4**
	comp=Z,3.5nm,0.5s						
KKN	**Kakani**	**73.46**	**301**	*e*P	**P**	**20 03 23.5**	**+0.7**
	comp=Z,10nm,0.7s						
DMN	**Daman**	**73.56**	**300**	*e*P	**P**	**20 03 24.2**	**+0.7**
	comp=Z,14nm,0.9s						
GKN	**Gorkha**	**74.06**	**301**	*e*P	**P**	**20 03 26.9**	**+0.6**
	comp=Z,5.0nm,0.4s						
DANN	**Dangsing**	**74.90**	**301**	*e*P	**P**	**20 03 31.3**	**0.0**
	comp=Z,6.9nm,0.7s						
ANM	**Nome**	**75.57**	**17**	P	**P**	**20 03 36.4**	**+2.4**
ANM				IAmb	IAmb	20 03 43.4	
	comp=Z,14nm,1.8s						
IMAR	**Indian Mountai**	**80.14**	**19**	P	**P**	**20 03 59.4**	**+0.1**
MLY	**Manley**	**80.62**	**21**	P	**P**	**20 04 02.3**	**+0.4**
MK31	**Makanchi Array**	**81.01**	**319**	P	**P**	**20 04 04.1**	**-0.3**
MKAR	**Makanchi Array**	**81.01**	**319**	P	**P**	**20 04 04.6**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=97,slow=7.9,SNR=10						
MKAR	**Makanchi Array**	**81.01**	**319**	P	**P**	**20 04 03.3**	**-1.1**
MAKZ	**Makanchi**	**81.22**	**319**	P	**P**	**20 04 04.6**	**-0.9**
ILAR	**Eielson Array**	**81.88**	**22**	P	**P**	**20 04 07.8**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=242,slow=4.9,SNR=6.4						
ILAR	**Eielson Array**	**81.88**	**22**	P	**P**	**20 04 07.2**	**-1.3**
MAW	**Mawson**	**85.86**	**203**	P	**P**	**20 04 28.0**	**-0.7**
	comp=Z,3.5nm,0.7s,baz=93,slow=10.0,SNR=3.9						
MAW	**Mawson**	**85.86**	**203**	P	**P**	**20 04 28.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**151.24**	**288**	PKPbc	**PKPbc**	**20 11 42.3**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=65,slow=1.9,SNR=11						
TORD	**Torodi Ar. Bea**	**151.24**	**288**		**PKPbc**	**20 11 42.0**	**-1.4**

*THE **04** 19:55:24.8, 38.16N×20.36E, h6km, ML3.5/13, Error ellipse: s-maj=0.8km s-min=0.4km az=265.0*
*ATH **04** 19:55:25.0, 38.16N×20.43E, h11km±1km, ML3.4/14, Error ellipse: s-maj=2.7km s-min=1.0km az=253.0*
*BEO **04** 19:55:25.5±0.7, 38.05N×20.13E, h21km±4km, ML3.6/8*
*IDC **04** 19:55:26.9±6.1, 38.17N×20.38E, h26km±45km, mb3.7/7, mb1 3.6/13, mb1mx3.4/56, mbtmp3.6/13, ML3.1/6, Error ellipse: s-maj=19.4km s-min=17.7km az=130.0*
ISC 04 19:55:24.4±0.8, **38.16N**±0.02×**20.37E**±0.03, **h9**km±4km, **n95**, σ1.53/133, **mb3.9**/7, **11C-2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.02**	**26**	P	**Pg**	**19 55 26.2**	**+0.2**
CHV1				S	**Sg**	**19 55 27.1**	**0.0**
LXR1	**Lixouri, Cepha**	**0.07**	**56**	P	**Pg**	**19 55 26.5**	**+0.1**
LXR1				S	**Sg**	**19 55 27.9**	**+0.1**
KEF2	**Argostoli. Kep**	**0.09**	**89**	P	**Pg**	**19 55 26.9**	**+0.2**
KEF2				S	**Sg**	**19 55 28.4**	**0.0**
ARG2	**Argostoli**	**0.09**	**81**	P	**Pg**	**19 55 26.9**	**+0.2**
ARG2				S	**Sg**	**19 55 28.7**	**+0.3**
	200µm,0.3s						
KEF4	**Livadi, Kephal**	**0.10**	**25**	P	**Pg**	**19 55 27.6**	**+0.7**
KEF4				S	**Sg**	**19 55 29.5**	**+0.8**
KEF1	**Kardakata, Kep**	**0.14**	**35**	P	**Pg**	**19 55 28.1**	**+0.6**
KEF1				S	**Sg**	**19 55 30.2**	**+0.6**
VLS	**Valsamata**	**0.17**	**86**	P	**Pg**	**19 55 28.0**	**0.0**
VLS				S	**Sg**	**19 55 30.7**	**+0.1**
VLS	**Valsamata**	**0.17**	**86**	P	**Pg**	**19 55 28.1**	**0.0**
VLS				S	**Sg**	**19 55 30.6**	**+0.1**
VLS				AML	AML	19 55 30.9	
	comp=N,79458µm,0.2s						
VLS				AML	AML	19 55 31.0	
	comp=E,77723µm,0.1s						
VSK1	**VASILIKIADES**	**0.29**	**32**	P	**Pg**	**19 55 30.6**	**+0.5**
VSK1				S	**Sg**	**19 55 34.7**	**+0.7**
	comp=E,35µm,0.2s						
FSK	**Fiskardo**	**0.33**	**27**	P	**Pg**	**19 55 31.5**	**+0.6**
FSK				S	**Sg**	**19 55 36.2**	**+0.9**
	comp=E,11µm,0.3s						
FSK	**Fiskardo**	**0.33**	**27**	P	**Pg**	**19 55 31.5**	**+0.6**
FSK				S	**Sg**	**19 55 36.4**	**+1.0**
FSK				AML	AML	19 55 38.2	
	comp=E,27154µm,0.2s						
FSK				AML	AML	19 55 41.0	
	comp=N,16322µm,0.3s						
VLMS	**Volimes, Zakyn**	**0.37**	**141**	P	**Pg**	**19 55 31.9**	**+0.3**
VLMS				S	**Sb**	**19 55 37.7**	**-1.3**
VLMS				AML	AML	19 55 41.7	
	comp=N,38241µm,0.4s						
VLMS				AML	AML	19 55 43.1	
	comp=E,23177µm,0.3s						
EVGI	**Lefkada island**	**0.51**	**26**	P	**Pg**	**19 55 34.6**	**+0.4**
EVGI				S	**Sb**	**19 55 42.8**	**-0.2**
EVGI	**Lefkada island**	**0.51**	**26**	P	**Pg**	**19 55 34.8**	**+0.5**
EVGI				S	**Sb**	**19 55 42.3**	**-0.7**
MGNA	**Meganis**	**0.59**	**34**	P	**Pg**	**19 55 36.0**	**+0.1**
MGNA				S	**Sb**	**19 55 44.1**	**-1.3**
MGNA				AML	AML	19 55 45.5	
	comp=N,15916µm,0.3s						
MGNA				AML	AML	19 55 45.7	
	comp=E,22861µm,0.3s						
KRI1	**kERI**	**0.61**	**145**	P	**Pg**	**19 55 36.1**	**-0.1**
KRI1				S	**Sb**	**19 55 46.1**	**+0.1**
	comp=E,9µm,0.5s						
LKD2	**Lefkada island**	**0.66**	**20**	P	**Pg**	**19 55 37.3**	**+0.1**
LKD2				S	**Sb**	**19 55 47.3**	**-0.2**
	comp=E,2µm,0.3s						
LKD2	**Lefkada island**	**0.66**	**20**	P	**Pg**	**19 55 37.2**	**0.0**
LKD2				AML	AML	19 55 55.6	
	comp=N,3743µm,0.3s						
LKD2				AML	AML	19 56 00.2	
	comp=E,4322µm,0.6s						
AST1	**Astakos**	**0.68**	**56**	P	**Pb**	**19 55 37.6**	**-0.8**
AST1				S	**Sn**	**19 55 48.0**	**-2.8**
	comp=E,6µm,0.4s						
PDO	**Prodromos**	**0.77**	**56**	P	**Pg**	**19 55 39.0**	**-0.2**
PDO				S	**Sn**	**19 55 50.9**	**-2.3**
	comp=E,7µm,0.4s						
PDO	**Prodromos**	**0.77**	**56**	P	**Pb**	**19 55 39.3**	**-0.7**
PDO				AML	AML	19 55 58.1	
	comp=E,7448µm,0.4s						
PDO				AML	AML	19 56 03.2	
	comp=N,11267µm,0.4s						
RLS	**Riolos of Patr**	**0.87**	**97**	P	**Pb**	**19 55 40.8**	**-0.8**
RLS				S	**Sn**	**19 55 54.4**	**-1.2**
	comp=N,1µm,0.5s						
RLS	**Riolos of Patr**	**0.87**	**97**	P	**Pb**	**19 55 40.8**	**-0.8**
RLS				AML	AML	19 55 57.0	
	comp=N,2755µm,0.4s						
RLS				AML	AML	19 56 03.4	
	comp=E,2087µm,0.5s						
PVO	**Paravola**	**1.01**	**63**	P	**Pn**	**19 55 43.8**	**-1.0**
PVO				S	**Sn**	**19 55 59.9**	**+0.8**
	comp=E,3µm,0.8s						
PVO	**Paravola**	**1.01**	**63**	P	**Pn**	**19 55 44.0**	**-0.8**
DRO	**Drossia**	**1.08**	**101**	P	**Pn**	**19 55 44.6**	**-1.1**
DRO				S	**Sn**	**19 56 00.7**	**-0.1**
	comp=E,3µm,0.3s						
DRO	**Drossia**	**1.08**	**101**	P	**Pn**	**19 55 44.8**	**-0.3**
DRO				AML	AML	19 56 09.5	
	comp=E,6654µm,0.3s						
DRO				AML	AML	19 56 11.0	
	comp=N,6550µm,0.4s						
UPR	**University Cam**	**1.12**	**83**	P	**Pg**	**19 55 45.9**	**0.0**
AMT	**Artemida-Makis**	**1.23**	**120**	P	**Pg**	**19 55 48.2**	**+0.2**
AMT	**Artemida-Makis**	**1.23**	**120**	P	**Pg**	**19 55 48.2**	**+0.2**
AMT				AML	AML	19 56 12.8	
	comp=E,4737µm,0.7s						
AMT				AML	AML	19 56 16.0	
	comp=N,4190µm,0.5s						
EFP	**Efpalio**	**1.24**	**77**	P	**Pb**	**19 55 46.9**	**-1.0**
EFP				AML	AML	19 56 16.3	
	comp=N,2796µm,0.5s						
EFP				AML	AML	19 56 19.0	
	comp=E,2478µm,0.7s						
LAKA	**Lakka**	**1.27**	**86**	P	**Pb**	**19 55 47.7**	**-0.8**
LAKA				S	**Sg**	**19 56 06.9**	**+1.7**
	comp=E,1µm,0.8s						
LAKA	**Lakka**	**1.27**	**86**	P	**Pb**	**19 55 47.8**	**-0.7**
LAKA				AML	AML	19 56 14.2	
	comp=N,2654µm,0.6s						
LAKA				AML	AML	19 56 15.5	
	comp=E,2035µm,1.1s						
ANX	**Ano Chora**	**1.29**	**70**	P	**Pg**	**19 55 48.4**	**-0.7**
ANX	**Ano Chora**	**1.29**	**70**	P	**Pg**	**19 55 48.5**	**-0.7**
ANX				AML	AML	19 56 14.9	
	comp=E,4472µm,0.6s						
ANX				AML	AML	19 56 15.1	
	comp=N,5368µm,0.5s						
SERG	**Sergoula**	**1.35**	**79**	P	**Pb**	**19 55 48.9**	**-0.9**
SERG	**Sergoula**	**1.35**	**79**	P	**Pb**	**19 55 48.9**	**-0.9**
TRIZ	**Trizonia**	**1.35**	**81**	P	**Pb**	**19 55 48.8**	**-1.1**
TRIZ	**Trizonia**	**1.35**	**81**	P	**Pb**	**19 55 49.1**	**-0.8**
EVR	**Evrytania**	**1.36**	**56**	P	**Pg**	**19 55 49.8**	**-0.6**
IGT	**Igoumenitsa**	**1.37**	**359**	P	**Pb**	**19 55 50.1**	**0.0**
IGT	**Igoumenitsa**	**1.37**	**359**	*e*Pg	**Pg**	**19 55 52.7**	**+2.1**
IGT				*e*Sg	**Sg**	**19 56 12.9**	**+4.6**
IGT	**Igoumenitsa**	**1.37**	**359**	P	**Pb**	**19 55 50.3**	**+0.2**
KLV	**Kalavryta, Ach**	**1.41**	**94**	P	**Pb**	**19 55 50.5**	**-0.4**
KLV				S	**Sg**	**19 56 10.6**	**+0.9**
	comp=N,752nm,0.5s						
KLV	**Kalavryta, Ach**	**1.41**	**94**	P	**Pb**	**19 55 50.5**	**-0.4**
KALE	**Kalithea**	**1.41**	**80**	P	**Pb**	**19 55 49.8**	**-1.1**
KALE				S	**Sg**	**19 56 10.3**	**+0.5**
	comp=N,890nm,0.7s						
KALE	**Kalithea**	**1.41**	**80**	P	**Pb**	**19 55 49.9**	**-1.1**
KALE				AML	AML	19 56 21.1	
	comp=E,1455µm,0.8s						
KALE				AML	AML	19 56 26.0	
	comp=N,2168µm,0.7s						
JAN	**Janina**	**1.54**	**14**	P	**Pg**	**19 55 54.6**	**+0.7**
JAN				AML	AML	19 56 19.4	
	comp=E,1355µm,0.4s						
JAN				AML	AML	19 56 23.9	
	comp=N,1371µm,0.4s						
ITM	**Ithomi**	**1.58**	**128**	P	**Pb**	**19 55 53.4**	**-0.4**
AGG	**Agios Georgios**	**1.76**	**60**	P	**Pg**	**19 55 57.3**	**-0.7**
FNA	**Florina**	**2.73**	**16**	*e*Pn	**Pb**	**19 56 15.8**	**-2.5**
OHR	**Ohrid**	**2.96**	**6**	*e*Pn	**Pb**	**19 56 15.8**	**-1.5**
TIP	**Timpagrande**	**3.00**	**291**	⇑P	**Pn**	**19 56 13.6**	**+1.5**
TIP				⇑S	**Sn**	**19 56 47.4**	**-0.9**
TIR	**Tirane**	**3.20**	**353**	*e*Pn	**Pn**	**19 56 16.7**	**+1.8**
TIR	**Tirane**	**3.20**	**353**	⇑P	**Pn**	**19 56 12.1**	**-2.7**
TIR				⇑S	**Sn**	**19 56 45.9**	**-7.3**
VAY	**Valandovo**	**3.58**	**28**	*e*Pn	**Pb**	**19 56 24.1**	**-3.7**
MATE	**Matera**	**3.77**	**312**	⇓P	**Pn**	**19 56 21.4**	**-1.3**
MATE				⇑S	**Sn**	**19 56 59.8**	**-7.3**
STIP	**Stip**	**3.79**	**21**	*e*Pn	**Pn**	**19 56 26.6**	**+3.6**
APE	**Apeiranthos**	**4.24**	**103**	P	**Pb**	**19 56 39.7**	**+0.6**
PDG	**Podgorica**	**4.35**	**349**	*e*Pn	**Pn**	**19 56 31.7**	**+1.2**
PDG				*e*Sn	**Sn**	**19 57 21.9**	**+0.6**
PDG	**Podgorica**	**4.35**	**349**	⇑P	**Pn**	**19 56 28.2**	**-2.3**
SANT	**Santorini**	**4.44**	**112**	P	**Pb**	**19 56 44.4**	**+2.0**
IDI	**Anoyia**	**4.63**	**127**	Pn	**Pn**	**19 56 36.8**	**+2.3**
	comp=N,0.3nm,0.3s,baz=318,slow=15,SNR=3.2						
IDI				Sn	**Sn**	**19 57 27.3**	**-1.1**
	comp=N,1.7nm,0.3s,baz=286,slow=19,SNR=4.1						
VAE	**Valguarnera**	**4.77**	**264**	Pn	**Pn**	**19 56 38.1**	**+1.7**
	comp=N,1.0nm,0.3s,baz=61,slow=19,SNR=2.3						
BARS	**Barje**	**4.78**	**13**	*e*Pn	**Pn**	**19 56 37.7**	**+1.2**
TREB	**Trebinje**	**4.80**	**342**	*e*Pn	**Pn**	**19 56 37.1**	**+0.3**
TREB				*e*Sn	**Sn**	**19 57 30.9**	**-1.7**
VTS	**Vitosha**	**4.96**	**25**	*e*Pn	**Pn**	**19 56 41.6**	**+2.5**
VTS				*e*Sn	**Sn**	**19 57 37.1**	**+0.5**
VTS	**Vitosha**	**4.96**	**25**	⇑P	**Pn**	**19 56 40.1**	**+1.0**
VTS				⇑S	**Sn**	**19 57 34.9**	**-1.7**
SELS	**Selova**	**5.08**	**6**	*e*Sn	**Sn**	**19 57 40.3**	**+0.8**
SJES	**Sjenica**	**5.10**	**357**	*e*Pn	**Pn**	**19 56 42.5**	**+1.5**
SJES				*e*Sn	**Sn**	**19 57 40.6**	**+0.5**
ZAPS	**Zavoj**	**5.39**	**18**	*e*Pn	**Pn**	**19 56 46.3**	**+1.4**
IVAS	**Ivanjica**	**5.41**	**358**	*e*Pn	**Pn**	**19 56 45.4**	**+0.2**
IVAS				*e*Sn	**Sn**	**19 57 46.8**	**-0.8**
GRUS	**Gruza**	**5.72**	**3**	*e*Pn	**Pn**	**19 56 50.4**	**+0.9**
GRUS				*e*Sn	**Sn**	**19 57 54.6**	**-0.7**
ZAGS	**Zajecar**	**5.82**	**13**	*e*Pn	**Pn**	**19 56 51.9**	**+1.2**
DIVS	**Divibare**	**5.94**	**357**	*e*Pn	**Pn**	**19 56 52.6**	**+0.1**
DIVS				*e*Sn	**Sn**	**19 57 59.7**	**-0.9**
TRUS	**Trudelj**	**6.05**	**0**	*e*Pn	**Pn**	**19 56 55.9**	**+1.9**
FRGS	**Fruska Gora**	**7.00**	**357**	*e*Pn	**Pn**	**19 57 07.2**	**+0.2**
FRGS				*e*Sn	**Sn**	**19 58 23.6**	**-3.1**
VOIR		**8.06**	**24**	⇑P	**Pn**	**19 57 21.7**	**0.0**
MLR	**Muntele Rosu**	**8.42**	**28**	Pn	**Pn**	**19 57 27.1**	**+0.5**
	comp=N,0.1nm,0.3s,baz=221,slow=20,SNR=2.7						
MLR	**Muntele Rosu**	**8.42**	**28**	⇑P	**Pn**	**19 57 27.4**	**+0.8**
VRI	**Vrincioaia**	**9.03**	**30**	⇓P	**Pn**	**19 57 36.7**	**+1.9**
SOKA	**Soboth**	**9.38**	**337**	*e*Pn	**Pn**	**19 57 39.6**	**-0.1**
	comp=N,0.6nm,0.3s						
OBKA	**Obir**	**9.38**	**335**	*e*Pn	**Pn**	**19 57 40.7**	**+0.9**
	comp=N,0.4nm,0.1s						
PSZ	**Piszkesteto**	**9.76**	**358**	⇑P	**Pn**	**19 57 43.7**	**-1.2**
BRTR	**Keskin Array B**	**10.45**	**77**	Pn	Pn	19 57 59.2	+4.6
	comp=N,0.1nm,0.3s,baz=260,slow=12,SNR=3.0						
MOA	**Molln**	**10.66**	**337**	*e*Pn	**Pn**	**19 57 59.0**	**+1.8**
	comp=N,0.6nm,0.2s						
GERES	**GERESS Array B**	**11.72**	**338**	Pn	**Pn**	**19 58 12.0**	**+0.3**
	comp=N,0.1nm,0.3s,baz=159,slow=14,SNR=3.7						
AKASG	**Malin Array Be**	**14.03**	**24**	Pn	**Pn**	**19 58 44.4**	**+1.3**
	comp=N,0.2nm,0.3s,baz=206,slow=12,SNR=3.3						
HFS	**Hagfors**	**22.39**	**351**	P	**P**	**20 00 24.9**	**+2.1**
	comp=N,3.8nm,0.9s,baz=148,slow=12,SNR=4.6						
FINES	**FINESS Array B**	**23.57**	**7**	P	**P**	**20 00 34.8**	**-0.2**
	comp=N,2.2nm,0.8s,baz=177,slow=11,SNR=7.0						
TORD	**Torodi Ar. Bea**	**29.95**	**219**	P	**P**	**20 01 33.0**	**+0.1**
	comp=N,0.7nm,0.9s,baz=20,slow=9.5,SNR=3.2						
ARCES	**ARCESS Array B**	**31.55**	**3**	P	**P**	**20 01 47.8**	**+1.1**
	comp=N,3.2nm,1.0s,baz=210,slow=10,SNR=3.7						
MKAR	**Makanchi Array**	**45.41**	**58**	P	**P**	**20 03 42.6**	**-0.6**
	comp=N,0.8nm,0.5s,baz=282,slow=5.6,SNR=28						
ZALV	**Zalesovo Beam**	**45.79**	**48**	P	**P**	**20 03 46.1**	**0.0**
	comp=N,1.7nm,0.4s,baz=281,slow=9.8,SNR=8.9						
CMAR	**Chiang Mai Arr**	**70.01**	**82**	P	**P**	**20 06 35.8**	**-0.9**
	comp=N,0.2nm,0.7s,baz=264,slow=4.4,SNR=3.6						

*DJA **04** 19:56:18.2±1.4, 3°N±3°×12°8E±°, h22km±14km, M4.7/10, mB5.0/2, mb4.8/4, MLv4.7/10, MLv4.7/4, Mw(mB)4.2/2*
*IDC **04** 19:56:20.6±0.6, 2.76N×128.25E, h57km±6km, mb3.9/19, mb1 4.0/19, mb1mx3.8/51, mbtmp4.1/19, MS3.0/3, Ms1 3.0/3, ms1mx2.7/29, Error ellipse: s-maj=18.9km s-min=9.0km az=73.0*
*NEIC **04** 19:56:35.0±2.5, 1.4N±0.1×127.73E±0.07, h111km±7km, mb4.4/24, Error ellipse: s-maj=19.8km s-min=5.5km az=204.0*
ISC 04 19:56:20.1±0.4, **2.72N**±0.05×**128.13E**±0.07, **h51**km, **n79**, σ**1.94**/69, **mb4.4**/27, **2C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.08**	**201**	P	**Pn**	**19 56 53.5**	**+1.0**
TNTI	**Ternate**	**2.08**	**201**		**Pn**	**19 56 53.7**	**+1.2**
LBMI	**Labuha**	**3.39**	**191**	P	**Pn**	**19 57 12.3**	**+1.7**
DDMP	**Don Marcelino,**	**4.14**	**324**	*e*P	**Pn**	**19 57 19.6**	**-1.1**
MATI	**Mati**	**4.59**	**336**	*e*P	**Pn**	**19 57 29.4**	**+2.4**
GSPH	**General Santos**	**4.61**	**317**	⇑*i*P	**Pn**	**19 57 27.1**	**-0.2**
KMSI	**Cibinong**	**4.66**	**243**	P	**Pn**	**19 57 28.6**	**+0.7**
SWI	**Sorong**	**4.74**	**139**	P	**Pn**	**19 57 30.1**	**+1.1**
SIJI	**Sorong**	**4.75**	**139**	P	**Pn**	**19 57 30.7**	**+1.5**
	39nm,0.3s,baz=332,slow=12,SNR=115						
SIJI				S	**Sn**	**19 58 23.2**	**+0.2**
	10nm,0.3s,baz=253,slow=19,SNR=3.9						
DAV	**Davao City (W)**	**5.01**	**330**	P	**Pn**	**19 57 37.6**	**+4.8**
	66nm,0.3s,baz=246,slow=10.0,SNR=3.2						
DAV				S	**Sn**	**19 58 38.0**	**+8.5**
	28nm,0.3s,baz=240,slow=15,SNR=3.7						
DAV				LR	LR	19 59 05.8	
	comp=Z,56nm,19.0s,baz=131,slow=33						
SANI	**Sanana**	**5.20**	**204**	P	**Pn**	**19 57 36.2**	**+0.9**
	0.2nm860nm50nm,0.7s						
SKMP	**Bagumbayan, Su**	**5.20**	**317**	*e*P	**Pn**	**19 57 35.2**	**-0.1**
SKMP				*e*S	**Sn**	**19 58 33.2**	**-0.8**
KCP	**Kidapawan**	**5.23**	**325**	⇓*e*P	**Pn**	**19 57 38.5**	**+2.7**
KCP				*e*S	**Sn**	**19 58 31.0**	**-3.8**
CTBH	**Cotabato--PC H**	**5.91**	**319**	⇑*e*P	**Pn**	**19 57 45.4**	**+0.2**
BUKP	**Musuan**	**5.97**	**329**	*e*P	**Pn**	**19 57 47.5**	**+1.6**
NLAI	**Namlea**	**6.01**	**190**	P	Pn	19 57 50.0	+3.6
	0.2nm51nm,0.9s						
LUWI	**Luwuk**	**6.53**	**235**	Pn	**Pn**	**19 57 55.6**	**+2.0**
PAGZ	**Pagadian**	**6.95**	**317**	*e*P	**Pn**	**19 57 58.2**	**-1.1**
FAKI	**Fak Fak**	**6.95**	**144**	P	**Pn**	**19 58 01.3**	**+1.9**
FAKI	**Fak Fak**	**6.95**	**144**		**Pn**	**19 58 01.1**	**+1.7**
KKM	**Kota Kinabalu**	**12.33**	**286**		**Pn**	**19 59 14.9**	**+1.8**
TGY	**Tagaytay City**	**13.36**	**328**	LR	LR	20 05 12.9	
	comp=Z,114nm,20.3s,baz=180,slow=40						
MTN	**Manton Dam**	**15.75**	**169**		**P**	**19 59 59.2**	**-2.6**
SBUM	**Sibu**	**15.89**	**269**		**P**	**20 00 05.1**	**+1.7**
SBUM				IAmb	IAmb	20 00 06.3	
	comp=Z,15nm,0.8s						
JAGI	**Jajag, Banyuwa**	**17.82**	**231**	P	**Pn**	**20 00 22.8**	**-1.8**
KSM	**Kuching**	**17.85**	**266**	P	**P**	**20 00 26.2**	**+1.1**
KNRA	**Kununurra**	**18.29**	**178**	P	**P**	**20 00 25.9**	**-4.0**
KNRA				IAmb	IAmb	20 00 32.1	
	comp=Z,52nm,1.2s						
UGM	**Wanagama**	**20.49**	**239**	P	**P**	**20 00 53.5**	**-0.5**
FITZ	**Fitzroy Crossi**	**20.83**	**187**	P	Pn	20 00 57.8	-2.7
	comp=Z,10nm,1.2s,baz=6.7,slow=12,SNR=4.1						
FITZ	**Fitzroy Crossi**	**20.83**	**187**	P	**P**	**20 00 54.6**	**-3.0**
FITZ				IAmb	IAmb	20 01 07.4	
	comp=Z,24nm,1.4s						
DLV	**T Lat**	**21.51**	**296**	P	P	20 01 18.9	+14
DLV				IAmb	IAmb	20 01 23.4	
	comp=Z,14nm,1.0s						
COEN	**Coen**	**22.30**	**138**	P	**P**	**20 01 15.4**	**+2.0**
COEN				IAmb	IAmb	20 01 42.9	
	comp=Z,14nm,0.8s						
CISI	**Cisompet, Garu**	**22.69**	**243**	P	**P**	**20 01 18.3**	**+0.6**
WB0	**Warramunga Arr**	**23.18**	**165**	P	**P**	**20 01 22.1**	**-0.4**
WB0				IAmb	IAmb	20 01 25.1	
	comp=Z,22nm,0.7s						
WRAB	**Tennant Creek**	**23.32**	**165**	P	**P**	**20 01 20.1**	**-3.9**
WRAB				IAmb	IAmb	20 01 24.7	
	comp=Z,18nm,0.9s						
WRA	**Warramunga Arr**	**23.33**	**165**	P	**P**	**20 01 23.9**	**-0.1**
	comp=Z,17nm,0.8s,baz=345,slow=10,SNR=58						
WRA	**Warramunga Arr**	**23.33**	**165**	P	**P**	**20 01 22.0**	**-2.0**
WB2	**Warramunga Arr**	**23.34**	**165**	P	**P**	**20 01 24.1**	**+0.1**
WB2				IAmb	IAmb	20 01 34.3	
	comp=Z,34nm,1.1s						
WR0	**Warramunga Arr**	**23.40**	**165**	P	**P**	**20 01 24.4**	**-0.2**
WR0				IAmb	IAmb	20 01 27.3	
	comp=Z,42nm,1.4s						
AS31	**Alice Springs**	**26.82**	**168**	P	**P**	**20 01 56.5**	**+0.6**
ASAR	**Alice Springs**	**26.82**	**168**	P	**P**	**20 01 55.5**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=358,slow=8.0,SNR=17						
ASAR				PcP	**PcP**	**20 05 17.6**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=359,slow=2.1,SNR=3.2						
ASAR	**Alice Springs**	**26.82**	**168**	P	**P**	**20 01 56.2**	**+0.4**
PBKT	**Sadao Pong**	**30.04**	**299**	P	P	20 02 35.1	+11
CM31	**Chiang Mai Arr**	**32.58**	**301**	P	P	20 02 58.5	+12
CMAR	**Chiang Mai Arr**	**32.58**	**301**	P	**P**	**20 02 47.3**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=119,slow=7.6,SNR=5.5						
CMAR				pP	**pwP**	**20 03 02.2**	**-1.6**
	comp=Z,2.2nm,0.8s,baz=118,slow=7.1,SNR=9.6						
CHTO	**Chiang Mai**	**32.73**	**301**	P	P	20 03 00.5	+12
CHTO				IAmb	IAmb	20 03 06.2	
	comp=Z,4.1nm,0.8s						
KSRS	**Korea Array**	**34.57**	**360**	P	**P**	**20 03 03.6**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=179,slow=9.2,SNR=4.1						
MJAR	**Matsushiro Arr**	**34.92**	**14**	P	**P**	**20 03 05.1**	**-1.9**
	comp=Z,1.7nm,0.8s,baz=190,slow=8.8,SNR=3.8						
MJAR				pP	**pP**	**20 03 19.3**	**+0.2**
	comp=Z,3.3nm,0.7s,baz=182,slow=9.0,SNR=4.6						
RMQ	**Roma**	**35.22**	**147**	P	**P**	**20 03 10.7**	**+1.0**
	baz=22,SNR=34						
STKA	**Stephens Creek**	**36.71**	**161**	P	**P**	**20 03 22.4**	**0.0**
	comp=Z,5.4nm,0.5s,baz=335,slow=9.3,SNR=21						
STKA	**Stephens Creek**	**36.71**	**161**	P	**P**	**20 03 22.3**	**0.0**
NWAO	**Narrogin (SRO)**	**36.92**	**195**	P	**P**	**20 03 23.7**	**-0.4**
	comp=Z,6.8nm,0.7s,baz=32,slow=7.8,SNR=6.3						
H11S3	**WAKE ISLAND Hy**	**40.88**	**65**	T	T	20 47 24.8	
	baz=252,slow=75,SNR=24						
H11S2	**WAKE ISLAND Hy**	**40.89**	**65**	T	T	20 47 09.5	
	baz=252,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**40.90**	**65**	T	T	20 47 20.0	
	baz=252,slow=75,SNR=10						
H11N1	**WAKE ISLAND Hy**	**41.45**	**63**	T	T	20 47 55.7	
	baz=250,slow=75,SNR=12						
USRK	**Ussuriysk Ar.**	**41.45**	**4**	P	**P**	**20 04 01.4**	**-0.4**
	comp=Z,2.1nm,0.4s,baz=177,slow=7.8,SNR=19						
USRK				pP	**pP**	**20 04 16.2**	**+2.0**
	comp=Z,3.3nm,0.8s,baz=200,slow=11,SNR=4.1						
H11N2	**WAKE ISLAND Hy**	**41.46**	**63**	T	T	20 47 56.8	
	baz=250,slow=75,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	**41.47**	**63**	T	T	20 47 57.0	
	baz=250,slow=75,SNR=12						
SHL	**Shillong**	**41.59**	**306**	P	P	20 04 14.8	+11
ASAJ	**Asahikawa**	**43.17**	**15**	P	**P**	**20 04 15.6**	**-0.2**
	comp=Z,2.5nm,0.4s,baz=231,slow=8.2,SNR=11						
GTA	**Gaotai**	**44.68**	**328**	*e*P	**P**	**20 04 29.2**	**+1.0**
GTA				pP	pP	20 04 36.7	-4.0
GTA				sP	pwP	20 04 40.2	-5.2
SONM	**Songino Array**	**48.70**	**341**	P	**P**	**20 04 59.4**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=151,slow=9.1,SNR=3.4						
PETK	**Petropavlovsk-**	**55.85**	**21**	P	**P**	**20 05 51.9**	**-0.4**
	comp=Z,4.4nm,0.9s,baz=192,slow=6.5,SNR=6.2						
PETK				pP	**pwP**	**20 06 07.3**	**-2.7**
	comp=Z,6.2nm,0.7s,baz=188,slow=5.3,SNR=4.0						
MKAR	**Makanchi Array**	**59.18**	**325**	P	**P**	**20 06 15.9**	**0.0**
	comp=Z,2.7nm,0.6s,baz=113,slow=7.8,SNR=39						
KSH	**Kashi**	**59.74**	**315**	P	P	20 06 37.7	+18
RAO	**Raoul Island**	**60.61**	**126**	LR	LR	20 31 18.4	
	comp=Z,27nm,21.6s,baz=108,slow=35						
ZALV	**Zalesovo Beam**	**62.12**	**333**	P	**P**	**20 06 35.2**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=144,slow=7.5,SNR=3.9						
ZALV				pP	**pwP**	**20 06 51.5**	**-1.9**
	comp=Z,1.1nm,0.6s,baz=135,slow=7.0,SNR=4.3						
KK31	**Karatay Array**	**64.92**	**317**	P	P	20 07 07.8	+13
KK31				IAmb	IAmb	20 07 10.7	
	comp=Z,4.1nm,0.8s						
KKAR	**Karatay Array**	**64.92**	**317**	P	P	20 07 07.0	+13
KKAR				IAmb	IAmb	20 07 10.6	
	comp=Z,4.1nm,0.8s						
CASY	**Casey**	**69.99**	**187**	P	**P**	**20 07 25.7**	**-0.3**
GEYT	**Alibeck**	**72.61**	**309**	P	**P**	**20 07 43.9**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=79,slow=7.5,SNR=2.5						
GEYT	**Alibeck**	**72.61**	**309**	P	P	20 07 53.7	+11
ABKAR	**Akbulak array**	**73.81**	**321**	P	P	20 08 03.6	+14
ILAR	**Eielson Array**	**85.41**	**25**	P	**P**	**20 08 51.2**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=253,slow=5.2,SNR=4.8						
INK	**Inuvik**	**90.58**	**22**	P	**P**	**20 09 14.2**	**-2.3**
	comp=Z,0.7nm,1.0s,baz=261,slow=2.3,SNR=3.5						
ARCES	**ARCESS Array B**	**91.87**	**340**	P	**P**	**20 09 23.0**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=80,slow=5.7,SNR=5.9						
QSPA	**South Pole Qui**	**92.63**	**180**	P	**P**	**20 09 26.7**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=6.1,slow=1.0						
TORD	**Torodi Ar. Bea**	**124.56**	**288**	PKP	**PKiKP**	**20 15 14.5**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=117,slow=1.6,SNR=3.8						

*MOS **04** 19:58:21.7±0.8, 4.85S×153.84E, h101km, mb4.7/11, Error ellipse: s-maj=11.2km s-min=8.1km az=93.8*
*DJA **04** 19:58:23.3±0.5, 5°S±3°×15°4E±°, h93km±5km, M5.2/37, mb4.9/37, mB5.8/6, MLv5.3/2, Mw(mB)5.3/6*
*GCMT **04** 19:58:23.5±0.2, 4.91S±0.02×153.67E±0.02, h92km±3km, MW5.0/82, Moment Tensor Solution. s41,c46; s82,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.52±.11; $M_{\theta\theta}$-1.19±.12; $M_{\phi\phi}$-1.33±.13; $M_{r\theta}$-0.72±.08; $M_{\theta\phi}$1.85±.12; $M_{\phi r}$1.53±.09; Best double couple: $M_0$3.29800×10^{16} NP1:ϕ_s123.00000°,δ32.00000°,λ68.00000°. NP2: ϕ_s327.00000°,δ61.00000°,λ103.00000°. Principal axes: T 3.0560, Plg71.0000°, Azm266.0000°; N 0.4850, Plg11.0000°, Azm141.0000°; P -3.5410, Plg15.0000°, Azm48.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **04** 19:58:24.4±0.6, 4.91S×153.83E, h110km±5km, mb4.2/21, mb1 4.3/24, mb1mx4.1/46, mbtmp4.6/24, MS3.5/13, Ms1 3.5/13, ms1mx3.3/36 Error ellipse: s-maj=12.2km s-min=9.9km az=94.0*
*NEIC **04** 19:58:24.5±1.9, 4.94S±0.07×153.78E±0.02, h114km±5km, mb4.9/103, Error ellipse: s-maj=10.5km s-min=1.6km az=188.0*
*BJI **04** 19:58:25.9±0.0, 4.31S×153.69E, h107km, mB5.1/31, mb4.9/48*
ISC 04 19:58:24.6±0.4, **4.91S**±0.04×**153.81E**±0.05, **h112**km±3km, **h112**km**:pP-P, n257,** σ**1.00**/282, **mb4.9**/93, **9C, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.79**	**294**	Pn	**Pn**	**19 58 52.9**	**-2.2**
RABL				Sn	**Sn**	**19 59 18.9**	**+0.7**
MANU	**Manus Island**	**7.03**	**294**		**Pn**	**20 00 03.4**	**-1.6**
HNR	**Honiara**	**7.56**	**127**	P	**Pn**	**20 00 13.6**	**+1.4**
	7.8nm,0.3s,baz=252,slow=15,SNR=2.3						
HNR				S	**Sn**	**20 01 38.1**	**+1.7**
	36nm,0.3s,baz=306,slow=19,SNR=5.8						
HNR	**Honiara**	**7.56**	**127**	P	**Pn**	**20 00 15.0**	**+2.8**
HNR	**Honiara**	**7.56**	**127**	Pn	**Pn**	**20 00 10.4**	**-1.8**
HNR					**Sn**	**20 01 34.6**	**-1.8**
HNR	**Honiara**	**7.56**	**127**	P	**Pn**	**20 00 10.4**	**-1.8**

HNR 20 01 34.6
PMG Port Moresby 7.96 236 P Pn 20 00 17.8 +0.2
59nm,0.3s,baz=38,slow=5.1,SNR=103
PMG S Sn 20 01 46.8 +0.7
15nm,0.3s,baz=63,slow=18,SNR=4.9
PMG LR LR 20 03 35.0
comp=Z,402nm,18.9s,baz=86,slow=39
PMG Port Moresby 7.96 236 Pn 20 00 16.3 -1.3
PMG Sn Sn 20 01 42.5 -3.7
PMG Port Moresby 7.96 236 eP Pn 20 00 17.7 +0.1
PMG pmax pmax
comp=Z,2µm,1.7s
PATS Pohnpei 12.51 21 Pn Pn 20 01 16.8 -1.9
JAY Jayapura 13.29 280 P Pn 20 01 29.0 0.0
comp=Z,16nm,1.0s
COEN Coen 13.80 229 Pn 20 01 36.9 +1.3
MTSU Mount Surprise 16.09 214 P P 20 02 06.4 +0.8
baz=16,SNR=4.1
CTA Charters Tower 16.78 205 P P 20 02 14.1 +0.8
comp=Z,0.1nm,0.3s,baz=13,slow=15,SNR=3.3
SANVU Saraoutou 16.82 129 Pn 20 02 13.2 -0.3
SANVU IAmb IAmb 20 02 19.2
comp=Z,61nm,1.3s
TARA Tarawa 20.09 72 P P 20 02 50.5 +1.1
EIDS Eidsvold 20.51 187 P P 20 02 55.1 +1.2
baz=20,SNR=5.1
EIDS Eidsvold 20.51 187 P P 20 02 54.1 +0.2
QIS Mount Isa 20.80 220 P P 20 02 57.1 0.0
baz=21,SNR=6.0
NOUC Port Laguerre 20.94 146 P P 20 02 58.1 -0.5
DZM Mont Dzumac 20.99 145 eP P 20 02 59.0 -0.2
comp=Z,14nm,0.7s
DZM eLR LR 20 08 08.4
comp=Z,433nm,31.6s
DZM Mont Dzumac 20.99 145 P P 20 02 58.5 -0.7
comp=Z,4.5nm,0.5s,baz=322,slow=12,SNR=6.1
DZM Mont Dzumac 20.99 145 P P 20 02 58.5 -0.7
DZM IAmb IAmb 20 03 18.6
comp=Z,108nm,1.7s
FAKI Fak Fak 21.60 274 P P 20 03 04.7 -1.1
FAKI IAmb IAmb 20 03 36.1
comp=Z,86nm,1.3s
KDU Kakadu 22.44 248 P P 20 03 13.9 -0.6
baz=22,SNR=9.3
SIJI Sorong 22.86 279 P P 20 03 17.9 -0.9
comp=Z,22nm,1.0s,baz=80,slow=6.9,SNR=5.9
SWI Sorong 22.87 279 P P 20 03 17.6 -1.2
comp=Z,34nm,1.0s
QLP Quilpie 23.41 202 P P 20 03 24.0 +0.3
baz=24,SNR=18
MTN Manton Dam 23.73 249 P P 20 03 25.9 -0.8
baz=24,SNR=3.7
MTN Manton Dam 23.73 249 P P 20 03 26.2 -0.5
MTN IAmb IAmb 20 04 01.5
comp=Z,88nm,1.4s
WR0 Warramunga Arr 23.99 230 P P 20 03 29.1 +0.1
WR0 IAmb IAmb 20 03 30.8
comp=Z,47nm,0.9s
WB0 Warramunga Arr 23.99 230 P P 20 03 29.5 +0.5
WB0 IAmb IAmb 20 03 30.8
comp=Z,51nm,1.1s
WRAB Tennant Creek 24.12 230 P P 20 03 29.9 -0.2
WRAB IAmb IAmb 20 03 32.0
comp=Z,38nm,0.9s
WRAB Tennant Creek 24.12 230 ceP P 20 03 29.8 -0.4
WRAB pmax pmax
comp=Z,43nm,0.9s
WB2 Warramunga Arr 24.12 230 P P 20 03 29.8 -0.4
WB2 IAmb IAmb 20 03 32.1
comp=Z,34nm,1.0s
WRA Warramunga Arr 24.13 230 P P 20 03 30.3 0.0
comp=Z,24nm,0.8s,baz=54,slow=10,SNR=25
WRA PcP PcP 20 07 08.4 -0.3
comp=Z,1.3nm,0.7s,baz=46,slow=1.7,SNR=3.5
WRA Warramunga Arr 24.13 230 P P 20 03 29.4 -0.9
WRA Warramunga Arr 24.13 230 i P P 20 03 31.6 +1.3
WRA pmax pmax
comp=Z,27nm,0.8s
ARMA Armidale 25.45 184 P P 20 03 42.7 +0.4
baz=26,SNR=7.7
ARMA Armidale 25.45 184 P P 20 03 42.9 +0.6
ARMA IAmb IAmb 20 04 44.3
comp=Z,23nm,0.8s
H11S3 WAKE ISLAND Hy 26.50 28 T T 20 32 28.1
baz=208,slow=74
H11S2 WAKE ISLAND Hy 26.51 28 T T 20 32 32.7
baz=208,slow=74
H11S1 WAKE ISLAND Hy 26.52 28 T T 20 32 20.4
baz=208
AS31 Alice Springs 26.75 224 P P 20 03 53.8 -0.3
ASAR Alice Springs 26.75 224 P P 20 03 54.0 0.0
comp=Z,8.0nm,1.0s,baz=56,slow=8.7,SNR=21
ASAR pP pP 20 04 19.1 +1.6
comp=Z,5.2nm,0.9s,baz=52,slow=8.9,SNR=3.3
ASAR ScP ScP 20 10 48.0 +3.4
comp=Z,1.1nm,0.8s,baz=53,slow=3.6,SNR=5.6
ASAR Alice Springs 26.75 224 P P 20 03 52.8 -1.3
ASAR Alice Springs 26.75 224 P P 20 03 52.8 -1.3
KNRA Kununurra 26.83 245 P P 20 03 54.3 -0.4
baz=27,SNR=5.6
KNRA Kununurra 26.83 245 P P 20 03 54.8 +0.1
KNRA IAmb IAmb 20 04 29.9
comp=Z,69nm,1.2s
LHI Lord Howe Isla 26.92 170 P P 20 03 55.6 +0.3
LHI IAmb IAmb 20 04 05.3
comp=Z,42nm,1.0s
CMSA Cobar Meteorol 27.56 195 P P 20 04 01.1 0.0
baz=28,SNR=10
STKA Stephens Creek 29.16 202 P P 20 04 15.4 0.0
baz=29,SNR=12
STKA Stephens Creek 29.16 202 P P 20 04 15.3 -0.1
comp=Z,12nm,0.6s,baz=9.0,slow=8.0,SNR=14
STKA LR LR 20 17 06.4
comp=Z,93nm,18.4s,baz=24,slow=38
STKA Stephens Creek 29.16 202 P P 20 04 14.6 -0.8
STKA Stephens Creek 29.16 202 P P 20 04 14.6 -0.8
STKA pmax pmax
comp=Z,3.0nm,0.8s
FITZ Fitzroy Crossi 30.49 242 P P 20 04 26.8 -0.4
baz=30,SNR=14
FITZ Fitzroy Crossi 30.49 242 P P 20 04 26.9 -0.4
comp=Z,12nm,0.7s,baz=56,slow=8.8,SNR=18
FITZ LR LR 20 17 34.7
comp=Z,109nm,19.4s,baz=63,slow=38
FITZ Fitzroy Crossi 30.49 242 P P 20 04 26.3 -0.9
FITZ IAmb IAmb 20 04 27.9
comp=Z,54nm,1.4s
KDI Kendari 31.11 270 P P 20 04 36.6 +3.8
comp=Z,114nm,1.5s
HTT Hallett 31.58 204 P P 20 04 37.0 +0.3
baz=32,SNR=13
WRKA Warakurna 31.62 228 P P 20 04 36.5 -0.7
baz=32,SNR=11
MILA Mila 32.27 187 P P 20 04 43.0 +0.3
baz=32,SNR=8.4
BBOO Buckleboo 32.33 209 P P 20 04 42.5 -0.7
BBOO IAmb IAmb 20 05 43.8
comp=Z,26nm,1.1s
TOO Toolangi 33.38 192 P P 20 04 53.7 +1.3
TOO IAmb IAmb 20 05 16.1
comp=Z,40nm,1.6s
TOO Toolangi 33.38 192 P P 20 04 53.7 +1.3
TOO pmax pmax
comp=Z,40nm,1.6s
FORT Forrest 35.34 220 P P 20 05 08.3 -1.0
baz=35,SNR=16
FORT Forrest 35.34 220 P P 20 05 09.1 -0.2
PSA00 Pilbara Seismi 36.84 240 P P 20 05 21.3 -1.0
PSA00 IAmb IAmb 20 05 22.9
comp=Z,32nm,1.0s
TAU Tasmania Unive 38.27 188 P P 20 05 35.0 +1.1
TAU Tasmania Unive 38.27 188 P P 20 05 35.0 +1.1
TAU pmax pmax
comp=Z,66nm,1.4s
KKM Kota Kinabalu 39.08 286 P P 20 05 41.5 +0.3
KKM IAmb IAmb 20 05 42.3
comp=Z,27nm,1.1s
MXZ Matakaoa Point 39.45 149 P P 20 05 45.2 +1.3
MEEK Meekatharra 39.94 233 P P 20 05 47.0 -1.1
baz=40,SNR=9.9
THZ Tophouse 40.46 158 P P 20 05 52.2 0.0
TUWZ Tuamarina 40.58 157 P P 20 05 52.4 -0.8
SNZO South Karori 40.78 156 P P 20 05 54.5 -0.3
FOZ Fox Glacier 40.98 162 P P 20 05 56.1 -0.2
FOZ IAmb IAmb 20 05 59.0
comp=Z,18nm,0.9s

LTZ Lake Taylor 41.12 159 P P 20 05 57.9 +0.3
LTZ IAmb IAmb 20 06 15.8
comp=Z,57nm,1.6s
OXZ Oxford 41.51 160 P P 20 05 59.8 -1.0
RPZ Rata Peaks 41.53 161 P P 20 06 00.9 -0.1
comp=Z,20nm,0.6s,baz=13,slow=5.1,SNR=7.1
RPZ Rata Peaks 41.53 161 IAmb IAmb 20 06 02.0
comp=Z,28nm,1.0s
LBZ Lake Benmore 41.86 162 P P 20 06 02.5 -1.2
WKZ Wanaka 41.93 164 P P 20 06 02.6 -1.6
DCZ Deep Cove 42.04 166 P P 20 06 03.9 -1.1
MQZ McQueen's Vall 42.06 160 P P 20 06 04.3 -0.9
GIRL Giralia 42.09 241 P P 20 06 06.5 +0.7
MLZ Mavora Lakes 42.19 165 P P 20 06 05.9 -0.4
MLZ IAmb IAmb 20 06 07.3
comp=Z,33nm,0.9s
SBUM Sibu 42.19 279 P P 20 06 05.7 -1.0
PYZ Puysegur Point 42.59 167 P P 20 06 08.3 -1.2
ODZ Otahua Downs 42.60 162 P P 20 06 09.1 -0.5
ODZ IAmb IAmb 20 07 30.1
comp=Z,45nm,1.3s
WHZ Wether Hill Ro 42.63 165 P P 20 06 09.4 -0.5
TPUB Ta-pu 42.84 312 P P 20 06 11.1 -0.8
SSLB Suanglung 42.90 313 P P 20 06 13.7 +1.4
KLBR Kellerberrin 42.96 227 P P 20 06 12.1 -0.7
baz=43,SNR=13
MORW Morawa 43.06 232 P P 20 06 13.4 -0.2
baz=43,SNR=13
MORW Morawa 43.06 232 P P 20 06 13.2 -0.4
BLDU Ballidu 43.26 229 P P 20 06 14.6 -0.6
baz=43,SNR=13
JNU Nakatsue 43.63 332 P P 20 06 18.0 -0.1
comp=Z,11nm,0.8s,baz=142,slow=3.5,SNR=5.2
JNU Nakatsue 43.63 332 P P 20 06 17.2 -0.9
JNU IAmb IAmb 20 07 37.1
comp=Z,40nm,1.3s
MAJO Matsushiro 43.75 342 P P 20 06 19.2 +0.2
MAJO IAmb IAmb 20 06 45.7
comp=Z,28nm,1.4s
MAJO Matsushiro 43.75 342 P P 20 06 19.2 +0.2
MAJO pmax pmax
comp=Z,28nm,1.4s
MJB9 Matsu-Tunnel 43.75 342 P P 20 06 19.2 +0.2
MJB9 IAmb IAmb 20 06 45.7
comp=Z,26nm,1.4s
KSM Kuching 43.92 277 P P 20 06 20.1 -0.6
KSM IAmb IAmb 20 06 22.1
comp=Z,14nm,0.9s
KSM PcP PcP 20 08 04.7 -0.3
MUN Mundaring 44.30 228 P P 20 06 23.0 -0.4
baz=44,SNR=3.4
KPJI Karang Pucung 44.67 265 P P 20 06 38.3 +12
CISI Cisompet, Garu 45.78 264 P P 20 06 35.0 -0.5
comp=Z,180nm,0.8s
CISI Cisompet, Garu 45.78 264 P P 20 06 34.0 -1.5
CNJI Cibinong 46.46 265 P P 20 06 40.5 -0.3
comp=Z,2µmcomp=Z,206nm,1.0s
DLV T Lat 48.08 291 P P 20 06 52.8 -0.7
DLV IAmb IAmb 20 06 55.5
comp=Z,28nm,1.0s
KSRS Korea Array 48.56 332 P P 20 06 56.9 +0.3
comp=Z,2.8nm,0.8s,baz=153,slow=10,SNR=6.7
MDSI Maura Dua 49.46 268 P P 20 07 03.5 -0.4
comp=Z,26nm,1.5s
NJ2 Nanjing 49.57 320 eP P 20 07 05.0 +0.6
NJ2 pmax pmax
comp=Z,6.0nm,0.9s
ASAJ Asahikawa 49.84 349 LR LR 20 25 39.4
comp=Z,36nm,20.2s,baz=162,slow=33
USRK Ussuriysk Ar. 52.69 340 P P 20 07 27.9 +0.4
comp=Z,1.9nm,0.7s,baz=146,slow=4.7,SNR=7.6
USRK Ussuriysk Ar. 52.69 340 P P 20 07 27.7 +0.2
USRK Ussuriysk Ar. 52.69 340 P P 20 07 27.7 +0.2
PDSI Padang 53.41 273 P P 20 07 32.6 -0.8
comp=Z,838nmcomp=Z,19nm,0.8s
IPM Ipoh 53.54 279 P P 20 07 34.1 -0.3
IPM PcP PcP 20 08 39.9 +0.1
IPM IAmb IAmb 20 08 41.7
comp=Z,13nm,0.9s
KULM Kulim 54.05 280 P P 20 07 36.8 -1.2
KULM IAmb IAmb 20 07 38.9
comp=Z,27nm,1.1s
ENH Enshi 54.97 312 P P 20 07 43.8 -0.7
GYA Guiyang 55.26 307 eP P 20 07 48.2 +1.5
GYA pmax pmax
comp=Z,10.0nm,0.8s
RPSI Rantau Prapat 55.35 277 P P 20 07 45.3 -2.1
PSI Prapat 55.37 277 P P 20 07 45.3 -2.4
PSI pmax pmax
comp=Z,58nm,1.8s
PBKT Sadao Pong 56.42 293 P P 20 07 55.6 +0.7
PBKT PcP PcP 20 08 51.2 +0.4
GSI Gunungsitoli 56.51 275 P P 20 07 54.0 -1.8
BJT Baijiatuau 56.54 326 P P 20 07 54.2 -1.2
BJT IAmb IAmb 20 09 42.0
comp=Z,16nm,1.8s
BJT Baijiatuau 56.54 326 P P 20 07 54.2 -1.2
BJT pmax pmax
comp=Z,16nm,1.8s
PPT Papeete 56.73 108 LR LR 20 28 12.7
comp=Z,32nm,20.9s,baz=276,slow=32
PPT2 Papeete2 56.73 108 eLR LR 20 24 38.1
comp=Z,124nm,34.0s
KLR Kul'dur 57.24 343 LR LR 20 29 21.8
comp=Z,27nm,20.1s,baz=188,slow=32
KLR Kul'dur 57.24 343 i P P 20 07 59.7 -0.5
KLR pmax pmax
comp=Z,3.0nm,0.9s
XAN Xi'an 57.40 316 P P 20 08 01.9 +0.2
XAN pmax pmax
comp=Z,17nm,0.9s
XAN Xi'an 57.40 316 P P 20 08 01.3 -0.4
XAN IAmb IAmb 20 08 02.9
comp=Z,12nm,0.7s
XAN Xi'an 57.40 316 P P 20 08 01.3 -0.4
XAN pmax pmax
comp=Z,13nm,0.7s
LHMI Lhok Sumawe 57.67 279 P P 20 08 02.8 -1.1
PEA0B Petropavlovsk- 57.90 3 P P 20 08 05.7 +1.0
PEA0B Petropavlovsk- 57.90 3 P P 20 08 05.7 +1.0
PEA0B pmax pmax
comp=Z,133nm,1.8s
PETK Petropavlovsk- 57.90 3 P P 20 08 05.5 +0.7
comp=Z,8.0nm,0.9s,baz=163,slow=7.2,SNR=7.2
PETK LR LR 20 28 24.3
comp=Z,14nm,20.0s,baz=240,slow=31
PETK Petropavlovsk- 57.90 3 P P 20 08 05.7 +1.0
PETK Petropavlovsk- 57.90 3 P P 20 08 05.7 +1.0
MLSI Meulaboh, Aceh 58.06 278 P P 20 08 06.4 -0.2
comp=Z,123nm,1.0s
CMAR Chiang Mai Arr 58.84 295 P P 20 08 13.2 +1.2
comp=Z,3.0nm,0.9s,baz=115,slow=5.1,SNR=28
CMAR LR LR 20 33 51.6
comp=Z,49nm,18.1s,baz=228,slow=36
CHTO Chiang Mai 58.94 295 P P 20 08 12.6 -0.1
CHTO Chiang Mai 58.94 295 P P 20 08 12.6 -0.1
CHTO pmax pmax
comp=Z,9.0nm,1.4s
CD2 Chengdu 59.58 310 ⇑ i P P 20 08 17.7 +0.8
CD2 pmax pmax
comp=Z,70nm,0.8s
HHC Hu-ho-hao-te 59.73 324 eP P 20 08 20.6 +2.8
HHC pmax pmax
comp=Z,48nm,5.5s
LZH Lanzhou 62.01 315 ⇑P P 20 08 34.8 +1.4
LZH pP pwP 20 09 03.4 -1.7
LZH sP PcP 20 09 17.5 +4.5
LZH PP PP 20 10 55.1 +3.8
LZH pmax pmax
comp=Z,31nm,1.3s
LZH pmax pmax
comp=Z,110nm,6.6s
MA2 Magadan 64.33 358 P P 20 08 47.5 -0.6
MA2 IAmb IAmb 20 08 50.8
comp=Z,15nm,0.8s
MA2 Magadan 64.33 358 ceP P 20 08 47.4 -0.6
MA2 pmax pmax
comp=Z,14nm,0.7s
GTA Gaotai 66.42 317 ⇑P P 20 09 03.5 +1.4
GTA pP PcP 20 09 30.2 -0.8
GTA sP sP 20 09 42.6 +2.5
GTA pmax pmax
comp=Z,18nm,1.1s
GTA pmax pmax
comp=Z,210nm,5.6s

GTA LR LR
comp=Z,97nm,17.5s
GTA LR LR
comp=Z,110nm,18.4s
ULN Ulaanbaatar 66.63 328 P P 20 09 03.1 -0.2
ULN PcP PcP 20 09 31.6 -0.1
ULN Ulaanbaatar 66.63 328 P P 20 09 03.1 -0.2
ULN 20 09 31.6
ULN pmax pmax
comp=Z,7.0nm,0.9s
SONM Songino Array 66.96 327 P P 20 09 05.9 +0.5
comp=Z,4.2nm,0.9s,baz=145,slow=6.2,SNR=21
SONM Songino Array 66.96 327 P P 20 09 05.7 +0.3
SONM Songino Array 66.96 327 P P 20 09 05.7 +0.3
SONM pmax pmax
comp=Z,5.0nm,1.0s
SHL Shillong 67.23 300 P P 20 09 07.5 -0.1
SHL IAmb IAmb 20 09 09.2
comp=Z,24nm,1.1s
SHL PcP PcP 20 09 34.3 -0.4
SEY Seymchan 67.67 359 i P P 20 09 09.8 +0.5
LSA Lhasa 69.13 304 P P 20 09 20.2 +0.4
LSA pP pP 20 09 47.0 +0.7
YAK Yakutsk 69.29 348 P P 20 09 20.2 +0.8
YAK Yakutsk 69.29 348 P P 20 09 20.2 +0.8
YAK pmax pmax
comp=Z,9.0nm,0.8s
BOD Bodaibo 70.26 339 eP P 20 09 25.2 -0.3
BOD pmax pmax
comp=Z,5.0nm,1.0s
TLY Talaya 70.68 330 P P 20 09 28.7 +0.5
TLY Talaya 70.68 330 eP P 20 09 28.5 +0.3
TLY pmax pmax
comp=Z,9.0nm,0.9s
TAPN Taplejung 71.33 301 eP P 20 09 33.8 +0.8
comp=Z,57nm,1.0s
ODAN Odare 71.47 300 eP P 20 09 34.4 +0.6
comp=Z,90nm,0.9s
RAMN Ramite 72.17 300 eP P 20 09 38.9 +0.9
comp=Z,14nm,0.7s
JIRN Jiri 72.71 301 eP P 20 09 42.1 +0.8
GUN Gumba 73.04 301 eP P 20 09 43.9 +0.7
comp=Z,71nm,0.8s
GAMB Gambell 73.22 15 P P 20 09 42.9 -0.2
GAMB pP pP 20 10 10.9 +0.4
GAMB IAmb IAmb 20 10 13.3
comp=Z,24nm,1.6s
BILL Bilibino 73.32 5 P P 20 09 43.4 -0.2
BILL pP pP 20 10 10.3 -0.3
BILL Bilibino 73.32 5 eP P 20 09 43.7 +0.1
BILL e*PP pP 20 10 10.9 +0.2
BILL pmax pmax
comp=Z,8.0nm,0.8s
PKI Pulchoki 73.36 301 eP P 20 09 45.5 +0.4
PKIN Phulchoki 73.37 301 eP P 20 09 45.3 +0.2
KKN Kakani 73.52 301 eP P 20 09 46.5 +0.6
DMN Daman 73.62 300 eP P 20 09 47.4 +0.8
comp=Z,92nm,1.0s
GKN Gorkha 74.13 301 eP P 20 09 49.9 +0.5
KOLN Koldanda 74.96 300 eP P 20 09 54.5 +0.3
comp=Z,71nm,1.0s
DANN Dangsing 74.96 301 eP P 20 09 54.6 +0.2
comp=Z,49nm,0.9s
ANM Nome 75.59 17 P P 20 09 56.8 +0.1
ANM pP pwP 20 10 25.9 -1.4
WMQ Urumqi 76.51 317 eP P 20 10 04.0 +1.4
WMQ pmax pmax
comp=Z,9.0nm,1.1s
WMQ pmax pmax
comp=Z,130nm,4.5s
WMQ LR LR
comp=Z,590nm,28.9s
WMQ LR LR
comp=Z,530nm,29.1s
CNPM China Poot 77.39 25 P P 20 10 08.0 +1.0
TIXI Tiksi 78.14 352 P P 20 10 10.5 -0.5
TIXI pP pP 20 10 39.3 +1.2
TIXI Tiksi 78.14 352 ceP P 20 10 12.2 +1.2
TIXI pmax pmax
comp=Z,7.0nm,2.5s
SUA Susitna One 78.65 24 P P 20 10 14.5 +0.3
SUA IAmb IAmb 20 10 26.7
comp=Z,42nm,1.8s
RC01 Rabbit Creek A 78.86 24 P P 20 10 16.3 +1.1
RC01 IAmb IAmb 20 11 44.4
comp=Z,47nm,1.8s
GHO Glory Hole Cre 79.56 24 P P 20 10 17.9 -1.1
GHO IAmb IAmb 20 10 21.3
comp=Z,35nm,1.5s
KTH Kantishna Hill 79.74 22 P P 20 10 19.7 -0.3
KTH IAmb IAmb 20 10 31.8
comp=Z,40nm,1.8s
SML Sawmill 79.81 24 P P 20 10 20.8 +0.4
SML IAmb IAmb 20 10 51.0
comp=Z,60nm,1.6s
GLI Glacier Island 79.86 25 P P 20 10 20.1 -0.5
GLI IAmb IAmb 20 12 54.9
comp=Z,40nm,1.4s
TRF Thorofare Moun 79.92 22 P P 20 10 21.1 0.0
TRF IAmb IAmb 20 11 41.9
comp=Z,29nm,1.6s
FID Port Fidalgo 80.06 26 P P 20 10 21.9 +0.2
IMAR Indian Mountai 80.16 19 P P 20 10 21.9 -0.2
RND Reindeer 80.44 23 P P 20 10 23.7 0.0
RND Reindeer 80.44 23 P P 20 10 23.7 0.0
RND pmax pmax
comp=Z,10.0nm,1.0s
MCK McKinley 80.58 22 P P 20 10 23.6 -0.8
MCK IAmb IAmb 20 10 25.8
comp=Z,13nm,1.0s
MCK pP 20 10 50.9 -1.2
MCK McKinley 80.58 22 P P 20 10 23.6 -0.8
MCK *PP pP 20 10 50.9 -1.2
MCK pmax pmax
comp=Z,13nm,1.0s
MLY Manley 80.63 21 P P 20 10 24.1 -0.6
DHY Denali Highway 80.85 23 P P 20 10 27.5 +1.5
MK31 Makanchi Array 81.07 319 P P 20 10 27.2 -0.2
MK31 pP pP 20 10 55.0 +0.4
MK31 Makanchi Array 81.07 319 P P 20 10 27.2 -0.2
MK31 *PP pP 20 10 55.0 +0.4
MK31 pmax pmax
comp=Z,6.0nm,1.0s
MKAR Makanchi Array 81.07 319 P P 20 10 27.9 +0.4
comp=Z,6.7nm,1.0s,baz=103,slow=5.0,SNR=30
MKAR pP pP 20 10 54.1 -0.5
comp=Z,0.9nm,0.6s,baz=97,slow=7.9,SNR=1.6
MKAR Makanchi Array 81.07 319 P P 20 10 27.5 +0.1
MAKZ Makanchi 81.28 319 P P 20 10 28.4 -0.1
MAKZ Makanchi 81.28 319 P P 20 10 28.4 -0.1
MAKZ pmax pmax
comp=Z,10.0nm,1.0s
CRQM Cirque 81.51 26 P P 20 10 29.8 +0.2
CRQM IAmb IAmb 20 12 18.8
comp=Z,48nm,1.6s
GLB Gilahina Butte 81.53 25 P P 20 10 30.2 +0.6
GLB IAmb IAmb 20 10 59.9
comp=Z,21nm,1.4s
ZAA0 Zalesovo Array 81.81 326 P P 20 10 30.2 -0.8
ZALV Zalesovo Beam 81.81 326 P P 20 10 30.5 -0.6
comp=Z,2.9nm,0.7s,baz=114,slow=5.2,SNR=13
ZALV LR LR 20 48 23.3
comp=Z,14nm,18.6s,baz=85,slow=37
ZALV Zalesovo Beam 81.81 326 P P 20 10 29.7 -1.4
ZALV Zalesovo Beam 81.81 326 i P P 20 10 30.7 -0.4
ZALV pmax pmax
comp=Z,3.0nm,0.7s
IL31 81.89 22 P P 20 10 29.8 -1.4
ILAR Eielson Array 81.89 22 P P 20 10 29.9 -1.4
comp=Z,2.8nm,0.9s,baz=253,slow=5.2,SNR=19
ILAR pP pP 20 10 58.7 -0.3
comp=Z,1.3nm,0.9s,baz=258,slow=5.5,SNR=4.1
ILAR Eielson Array 81.89 22 P P 20 10 29.7 -1.6
ILAR pP 20 10 59.2 +0.2
BARN Barnard Glacie 82.30 26 P P 20 10 33.9 +0.2
CTGM Chitina Glacie 82.40 26 P P 20 10 35.4 +1.2
CTGM IAmb IAmb 20 12 40.7
comp=Z,41nm,1.8s
BCAR Beaver Creek A 83.09 24 P P 20 10 36.9 -0.8
BMAR Burnt Mountain 84.01 20 P P 20 10 42.1 -0.1
KURK Kurchatov 84.48 322 P P 20 10 44.7 -0.2
KURK IAmb IAmb 20 10 46.0
comp=Z,15nm,1.1s
KURK Kurchatov 84.48 322 ceP P 20 10 44.8 -0.1

KURK				pmax	pmax		
	comp=Z,18nm,1.2s						
QSPA	South Pole Qui	85.05	180	P	P	20 10 48.0	+0.4
	comp=Z,4.5nm,0.7s,baz=89,slow=2.5,SNR=15						
QSPA	South Pole Qui	85.05	180	P	P	20 10 47.8	+0.2
AAK	Ala-Archa	85.47	313	P	P	20 10 50.3	0.0
AAK					pP	20 11 17.7	0.0
AAK	Ala-Archa	85.47	313	eP	P	20 10 50.2	-0.1
AAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
EPYK	Eagle Plains	86.39	22	P	P	20 10 54.0	-0.1
EPYK					pP	20 11 21.6	-0.5
EPYK				IAmb	IAmb	20 11 23.6	
	comp=Z,26nm,1.4s						
BTK	Batken	87.78	310	P	P	20 11 01.0	-0.5
BTK					pP	20 11 29.9	+0.8
BTK				IAmb	IAmb	20 11 32.7	
	comp=Z,23nm,1.3s						
BTK	Batken	87.78	310	P	P	20 11 01.0	-0.5
BTK				*PP	pP	20 11 29.9	+0.8
BTK				pmax	pmax		
	comp=Z,23nm,1.3s						
INK	Inuvik	88.20	21	P	P	20 11 02.6	0.0
	comp=Z,2.3nm,1.0s,baz=232,slow=4.3,SNR=8.5						
INK	Inuvik	88.20	21	P	P	20 11 01.9	-0.8
INK					pP	20 11 28.7	-2.0
INK				IAmb	IAmb	20 11 32.2	
	comp=Z,14nm,1.6s						
KKAR	Karatay Array	88.44	313	P	P	20 11 03.0	-1.4
KKAR				pP	pP	20 11 31.3	-0.7
KBL	Kabul	88.45	305	P	P	20 11 03.3	-1.6
KBL	Kabul	88.45	305	P	P	20 11 03.3	-1.6
KBL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	Borovoye	90.00	323	P	P	20 11 10.3	-1.2
BRVK				IAmb	IAmb	20 11 11.7	
	comp=Z,11nm,1.1s						
BRVK	Borovoye	90.00	323	P	P	20 11 10.3	-1.2
BRVK				pmax	pmax		
	comp=Z,11nm,1.1s						
NVAR	Mina Array Bea	91.37	52	P	P	20 11 19.4	+0.9
	comp=Z,0.5nm,0.7s,baz=251,slow=6.6,SNR=4.7						
NVAR				LR	LR	20 44 14.9	
	comp=Z,38nm,21.1s,baz=274,slow=30						
NVAR	Mina Array Bea	91.37	52	P	P	20 11 17.7	-0.8
HRA	Herat	94.03	304	P	P	20 11 30.1	-0.8
HRA				IAmb	IAmb	20 11 30.8	
	comp=Z,3.9nm,1.0s						
YKA	Yellowknife Ar	95.06	28	P	P	20 11 34.7	+0.1
	comp=Z,1.2nm,0.9s,baz=268,slow=4.6,SNR=10						
YKA				pP	pP	20 12 02.9	+0.3
	comp=Z,0.3nm,0.8s,baz=263,slow=4.6,SNR=2.6						
YKA				LR	LR	20 50 07.4	
	comp=Z,27nm,20.9s,baz=0.0,slow=33						
AKTO	Aktyubinsk	97.45	320	LR	LR	20 55 30.2	
	comp=Z,19nm,20.1s,baz=41,slow=35						
GEYT	Alibeck	97.48	307	P	P	20 11 45.8	-0.4
	comp=Z,0.9nm,0.9s,baz=82,slow=4.3,SNR=4.4						
GEYT	Alibeck	97.48	307	P	P	20 11 44.9	-1.3
PDAR	Pinedale Array	98.18	48	LR	LR	20 48 22.3	
	comp=Z,40nm,21.9s,baz=284,slow=30						
OBN	Obninsk	109.37	327	iP	Pdif	20 12 38.3	-0.3
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CLL	Collm	123.43	332	ePKPdf	PKiKP	20 17 10.0	+1.1
TAM	Tamanrasset	144.58	303		PKPbc	20 17 48.2	+0.2
TAM	Tamanrasset	144.58	303	PKIKP	PKPbc	20 17 48.2	+0.2
BDFB	Brasilia	150.27	134	PKPbc	PKPbc	20 18 01.5	-2.3
	comp=Z,2.0nm,0.4s,baz=243,slow=2.3,SNR=5.0						
BDFB	Brasilia	150.27	134		PKPbc	20 18 01.8	-2.1
BDFB	Brasilia	150.27	134	PKIKP	PKPbc	20 18 01.8	-2.1
TOA0	Torodi Ar. Sit	151.30	288		PKPbc	20 18 04.5	-1.6
TORD	Torodi Ar. Bea	151.30	288	PKPbc	PKPbc	20 18 05.7	-0.5
	comp=Z,3.9nm,0.7s,baz=53,slow=2.2,SNR=31						
TORD				PKPab	PKPab	20 18 14.7	+0.2
	comp=Z,8.9nm,1.0s,baz=71,slow=4.5,SNR=17						
TORD				pPKPbc	pPKPbc	20 18 37.0	+2.0
	comp=Z,4.8nm,0.8s,baz=68,slow=2.5,SNR=5.1						
TORD	Torodi Ar. Bea	151.30	288		PKPbc	20 18 05.0	-1.2
TORD					PKPab	20 18 14.2	-0.3
TORD					pPKPbc	20 18 36.3	+1.4
KIC	Kosan Boka	158.60	275	ePKP2	PKPab	20 18 45.4	-0.4
	comp=Z,20nm,1.0s						
DBIC	Dimbokro	158.70	276	PKPab	PKPab	20 18 46.4	+0.2
	comp=Z,3.8nm,0.8s,baz=71,slow=7.0,SNR=6.1						
DBIC	Dimbokro	158.70	276		PKPab	20 18 45.4	-0.8
DBIC	Dimbokro	158.70	276	PKP2	PKPab	20 18 45.4	-0.8
TIC	Toumodi	158.87	276	ePKP2	PKPab	20 18 46.6	-0.4
LIC	Lamto	158.90	275	ePKP2	PKPab	20 18 46.6	-0.5
	comp=Z,20nm,1.0s						

*IDC **04** 20:13:25.4±10.0, 16°.75N×105°.09W, h0km, mb3.4/4, mb1 3.8/5, mb1mx3.6/45, mbtmp3.4/5, ML2.9/1, MS2.8/2, Ms1 2.8/2, ms1mx2.6/19, Error ellipse: s-maj=186.7km s-min=101.4km az=140.0*

*NEIC **04** 20:13:29.4±1.9, 16°.7N±0°.1×105°.0W±0°.1, h51km±9km, mb4.1/45, Error ellipse: s-maj=19.5km s-min=18.0km az=185.0*

ISC 04 20:13:27.8±2.3, **16°.6N**±0°.2×**105°.1W**±0°.1, **h35km, n58, σ0s.93**/55, **mb4.0**/10, **Off coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOIG	Morelia	4.84	50	Pn	Pn	20 14 37.6	-0.8
H06E1	SOCORRO T-PHAS	5.95	292	T	T	20 19 47.4	
	SNR=49						
H06S1	SOCORRO T	5.96	292	T	T	20 19 58.3	
	SNR=17						
CMIG	Matias Romero	9.81	86	LR	LR	20 19 16.5	
	comp=Z,41nm,20.3s,baz=354,slow=36						
CCIG	Comitan	12.46	90	Pn	Pn	20 16 23.8	+0.9
TX31	Lajitas Ar. Si	12.76	6		Pn	20 16 27.3	+0.5
TX32	Lajitas Array	12.76	6	Pn	Pn	20 16 27.3	+0.4
TXAR	Lajitas Array	12.76	6	Pn	Pn	20 16 27.7	+0.8
	0.0nm,0.3s,baz=185,slow=12,SNR=5.8						
TXAR				LR	LR	20 20 54.6	
	comp=Z,72nm,20.6s,baz=0.0,slow=36						
TXAR	Lajitas Array	12.76	6		Pn	20 16 27.1	+0.2
MNTX	Cornudas Mount	15.05	359	Pn	Pn	20 16 57.3	-0.6
319A	Douglas	15.21	346	Pn	Pn	20 16 58.7	-1.3
HKT	Hockley	15.79	31	Pn	Pn	20 17 08.2	+0.7
214A	Organ Pipe Nat	16.82	337	P	P	20 17 21.7	-0.8
TGUH	Tegucigalpa,Un	17.40	96	P	Pn	20 17 25.6	-2.5
TGUH				IAmb	IAmb	20 17 38.1	
	comp=Z,10nm,0.7s						
MSTX	Muleshoe	17.44	7	P	Pn	20 17 27.4	-1.1
MSTX				IAmb	IAmb	20 17 33.3	
	comp=Z,29nm,1.8s						
X16A	Lo Mia Camp, P	18.64	343	P	P	20 17 40.5	-2.2
Y14A	Wickenburg	18.68	339	P	P	20 17 41.8	-1.3
W18A	Petrified Fore	18.91	348	P	P	20 17 45.5	-0.2
W18A				IAmb	IAmb	20 17 47.5	
	comp=Z,27nm,1.9s						
T25A	Trinidad	20.48	2	P	P	20 18 02.2	-0.6
T25A				IAmb	IAmb	20 18 28.0	
	comp=Z,19nm,1.9s						
MIAR	Mount Ida	20.67	28	P	P	20 18 05.2	+0.6
MIAR				IAmb	IAmb	20 18 10.6	
	comp=Z,12nm,1.6s						
MVCO	Mesa Verde	20.76	352	P	P	20 18 06.6	+0.7
MVCO				IAmb	IAmb	20 18 16.6	
	comp=Z,9.1nm,1.4s						
U15A	North Rim	20.77	344	P	P	20 18 05.2	-0.8
U15A				IAmb	IAmb	20 18 28.9	
	comp=Z,18nm,1.9s						
X40A	Basin Creek Fa	20.96	29	P	P	20 18 06.7	-1.1
X40A				IAmb	IAmb	20 18 17.7	
	comp=Z,15nm,1.8s						
SDCO	Great Sand Dun	21.08	359	P	P	20 18 09.0	-0.4
GSC	Goldstone, Bar	21.36	333	P	P	20 18 12.1	-0.1
GSC				IAmb	IAmb	20 18 44.1	
	comp=Z,13nm,1.6s						
KNB	Kanab	21.46	343	P	P	20 18 13.7	+0.3
LCMT	Little Creek M	21.58	342	P	P	20 18 13.2	-1.4
PKCU	Pink Cliffs	21.73	344	P	P	20 18 15.9	-0.5
SHPR	Sheep Range	21.75	338	P	P	20 18 15.9	-0.6
HHAR	Hobbs	21.99	25	P	P	20 18 19.6	+0.7
SZCU	Shurtz Canyon	22.08	343	P	P	20 18 20.0	-0.1
CCUT	Cedar City	22.12	342	P	P	20 18 20.1	-0.4
MTPU	Mount Pierson	22.26	345	P	P	20 18 22.1	0.0
Q24A	Divide	22.30	360	P	P	20 18 21.4	-1.0
ISA	Isabella, Lake	22.42	330	P	P	20 18 23.3	-0.3
TPNV	Topopah Spring	22.55	336	P	P	20 18 24.4	-0.6
TPNV				IAmb	IAmb	20 18 39.9	
	comp=Z,16nm,1.9s						
SMCO	Snowmass	22.57	356	P	P	20 18 24.9	-0.6
SMCO				IAmb	IAmb	20 18 42.1	
	comp=Z,17nm,2.0s						
MSU	Marysvale	22.71	346	P	P	20 18 26.4	-0.3
Q16A	Castle Valley	22.87	348	P	P	20 18 28.7	+0.2
SRU	San Rafael Swe	22.94	349	P	P	20 18 29.5	+0.4
PSUT	Pine Spring	23.17	342	P	P	20 18 31.8	+0.3
TMUT	Trail Mountain	23.25	348	P	P	20 18 32.8	+0.5
P17A	Butcher Ranch,	23.33	349	P	P	20 18 33.7	+0.7
R11A	Troy Canyon, C	23.55	339	P	P	20 18 35.0	-0.2
R11A				IAmb	IAmb	20 18 42.3	
	comp=Z,8.3nm,1.7s						
O20A	White River Ci	23.62	354	P	P	20 18 34.7	-1.1
RDMU	Red Mountain	24.21	352	P	P	20 18 42.2	+0.8
OMMB	Old Mammoth Mi	24.26	332	P	P	20 18 41.9	-0.2
DUG	Dugway, Tooele	24.46	346	P	P	20 18 43.4	-0.1
NV11	Mina Array Sit	24.59	335	P	P	20 18 45.6	+0.8
NVAR	Mina Array Bea	24.65	335	P	P	20 18 47.0	+1.5
	comp=Z,0.5nm,0.8s,baz=164,slow=10,SNR=5.1						
NVAR	Mina Array Bea	24.65	335	P	P	20 18 45.8	+0.3
ELK	Elko	25.62	342	P	P	20 18 55.7	+1.5
	comp=Z,1.4nm,0.8s,baz=166,slow=6.3,SNR=4.3						
ELK	Elko	25.62	342	P	P	20 18 55.3	+1.1
ELK				IAmb	IAmb	20 19 04.4	
	comp=Z,8.2nm,1.6s						
PNTR	Pine Nut	25.75	333	P	P	20 18 56.9	+1.5
PNTR				IAmb	IAmb	20 18 59.3	
	comp=Z,4.0nm,0.8s						
PDAR	Pinedale Array	26.37	353	P	P	20 19 01.7	+0.7
	comp=Z,0.8nm,1.0s,baz=157,slow=4.8,SNR=4.2						
PDAR	Pinedale Array	26.37	353	P	P	20 19 01.5	+0.5
BEKR	Beckworth	26.72	333	P	P	20 19 02.8	-1.4
BEKR				IAmb	IAmb	20 19 12.7	
	comp=Z,11nm,1.5s						
YKA	Yellowknife Ar	46.34	354	P	P	20 21 51.6	+1.6
	comp=Z,0.5nm,0.9s,baz=169,slow=7.5,SNR=5.3						

*NEIC **04** 20:19:02.0±1.5, 1°.9S±0°.1×152°.1E±0°.2, h11km±5km, mb5.1/16, Error ellipse: s-maj=27.8km s-min=11.7km az=122.0*

*IDC **04** 20:19:12.9±4.8, 1°.94S×151°.90E, h92km±44km, mb3.7/10, mb1 3.9/11, mb1mx3.7/37, mbtmp4.1/11, MS3.2/2, Ms1 3.2/2, ms1mx2.7/43, Error ellipse: s-maj=28.3km s-min=19.3km az=107.0*

ISC 04 20:19:05.8±0.5, **1°.92S**±0°.08×**152°.06E**±0°.08, **h35km, n41, σ1s.12**/39, **mb4.7**/18, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	4.69	268		Pn	20 20 11.3	-2.9
PMG	Port Moresby	8.89	213	P	Pn	20 21 19.1	+7.2
	0.7nm,0.3s,baz=30,slow=12,SNR=4.6						
PMG	Port Moresby	8.89	213		Pn	20 21 10.5	-1.4
PATS	Pohnpei	10.71	36	Pn	Pn	20 21 34.1	-2.7
HNR	Honiara	10.83	134	LR	LR	20 25 49.3	
	comp=Z,91nm,21.9s,baz=293,slow=36						
HNR	Honiara	10.83	134	Pn	Pn	20 21 37.8	-0.7
KWAJ	Kwajalein Atol	18.81	55	P	P	20 23 20.5	-2.2
FAKI	Fak Fak	19.81	267		P	20 23 33.2	-0.4
SIJI	Sorong	20.81	273	P	P	20 23 45.0	+0.6
	11nm,0.7s,baz=45,slow=7.1,SNR=5.4						
MTN	Manton Dam	23.39	241	P	P	20 24 10.7	-1.0
MTN				IAmb	IAmb	20 24 29.2	
	comp=Z,56nm,1.1s						
WB0	Warramunga Arr	24.76	223	P	P	20 24 24.5	+0.1
WB0				IAmb	IAmb	20 24 26.6	
	comp=Z,45nm,1.2s						
WR0	Warramunga Arr	24.79	222	P	P	20 24 24.5	-0.2
WR0				IAmb	IAmb	20 24 25.5	
	comp=Z,18nm,0.6s						
WRAB	Tennant Creek	24.90	223	P	P	20 24 25.5	-0.3
WRAB				IAmb	IAmb	20 24 26.8	
	comp=Z,38nm,0.7s						
WB2	Warramunga Arr	24.91	223	P	P	20 24 25.8	0.0
WB2				IAmb	IAmb	20 24 26.9	
	comp=Z,36nm,0.6s						
WRA	Warramunga Arr	24.92	223	P	P	20 24 26.2	+0.3
	comp=Z,22nm,0.6s,baz=47,slow=10,SNR=152						
WRA				LR	LR	20 34 52.3	
	comp=Z,75nm,18.1s,baz=5.0,slow=38						
WRA	Warramunga Arr	24.92	223	P	P	20 24 25.2	-0.7
KNRA	Kununurra	26.72	238	P	P	20 24 43.5	+1.2
KNRA				IAmb	IAmb	20 24 44.5	
	comp=Z,26nm,0.7s						
AS31	Alice Springs	27.86	218	P	P	20 24 52.1	-0.4
ASAR	Alice Springs	27.86	218	P	P	20 24 52.6	+0.2
	comp=Z,9.7nm,0.8s,baz=53,slow=8.1,SNR=94						
ASAR	Alice Springs	27.86	218	P	P	20 24 52.2	-0.3
SOEI	Soe	28.70	253	P	P	20 25 01.5	+1.4
SOEI				IAmb	IAmb	20 25 51.8	
	comp=Z,61nm,1.4s						
FITZ	Fitzroy Crossi	30.50	236	P	P	20 25 15.4	-0.5
FITZ				IAmb	IAmb	20 26 17.5	
	comp=Z,36nm,1.7s						
STKA	Stephens Creek	31.39	197	P	P	20 25 24.2	+0.7
	comp=Z,4.6nm,0.8s,baz=33,slow=14,SNR=7.6						
STKA	Stephens Creek	31.39	197	P	P	20 25 23.6	+0.1
BBOO	Buckleboo	34.21	204	P	P	20 25 47.7	-0.5
MSWZ	Moikau Station	44.53	155	P	P	20 27 13.7	-0.5
PETK	Petropavlovsk-	55.03	4	P	P	20 28 34.1	+0.2
	comp=Z,1.8nm,0.7s,baz=160,slow=6.0,SNR=2.9						
PETK	Petropavlovsk-	55.03	4	P	P	20 28 33.9	0.0
CMAR	Chiang Mai Arr	56.02	294	P	P	20 28 41.9	+0.3
	comp=Z,0.4nm,0.7s,baz=108,slow=5.4,SNR=5.2						
SONM	Songino Array	63.51	327	P	P	20 29 33.7	+0.9
	comp=Z,0.3nm,0.7s,baz=156,slow=4.5,SNR=3.4						
SONM	Songino Array	63.51	327	P	P	20 29 33.4	+0.6
CNPM	China Poot	75.46	26	P	P	20 30 47.6	+1.4
MKAR	Makanchi Array	77.68	319	P	P	20 30 59.3	+0.3
	comp=Z,0.4nm,0.9s,baz=123,slow=4.0,SNR=3.3						
MKAR	Makanchi Array	77.68	319	P	P	20 30 59.1	0.0
ILAR	Eielson Array	79.79	22	P	P	20 31 10.0	-0.2
	comp=Z,1.0nm,0.7s,baz=244,slow=5.8,SNR=17						
ILAR	Eielson Array	79.79	22	P	P	20 31 10.6	+0.4
BCAR	Beaver Creek A	81.12	25	P	P	20 31 19.1	+1.7
NVAR	Mina Array Bea	90.90	52	P	P	20 32 09.0	+2.4
	comp=Z,0.5nm,0.8s,baz=256,slow=6.4,SNR=3.6						
YKA	Yellowknife Ar	93.24	28	P	P	20 32 17.8	+1.3
	comp=Z,1.2nm,0.8s,baz=272,slow=5.0,SNR=15						
TORD	Torodi Ar. Bea	148.62	292	PKPbc	PKPbc	20 38 50.4	0.0
	comp=Z,1.1nm,1.0s,baz=48,slow=2.1,SNR=4.1						
TORD	Torodi Ar. Bea	148.62	292		PKPdf	20 38 48.0	+1.4

IDC 04 20:22:58.3±9.8, **4°.79S**×**153°.27E, h159**km±67km, **mb2.7**/3, **mb1 3.1**/4, **mb1mx2.9**/40, **mbtmp3.4**/4, **Error ellipse: s-maj=108.5km s-min=38.3km az=102.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.61	233	P	Pn	20 24 46.7	+0.2
	3.5nm,0.3s,baz=221,slow=20,SNR=8.0						
PMG				S	Sn	20 26 11.6	0.0
	0.7nm,0.3s,baz=219,slow=18,SNR=1.7						
WRA	Warramunga Arr	23.81	229	P	P	20 27 57.5	+0.7
	0.2nm,0.4s,baz=55,slow=10,SNR=3.1						
ASAR	Alice Springs	26.48	223	P	P	20 28 20.7	-0.3
	0.2nm,0.4s,baz=57,slow=8.7,SNR=4.8						
MKAR	Makanchi Array	80.63	319	P	P	20 34 53.6	+0.1
	0.1nm,0.4s,baz=93,slow=7.2,SNR=2.1						
TORD	Torodi Ar. Bea	150.75	288	PKPbc	PKPbc	20 42 32.2	-0.7
	0.3nm,0.7s,baz=95,slow=1.7,SNR=3.3						

*IDC **04** 20:24:22.0±8.5, 17°.17N×105°.61W, h0km, mb3.3/4, mb1 3.8/5, mb1mx3.6/35, mbtmp3.4/5, ML3.5/1, MS3.3/1, Ms1 3.3/1, ms1mx2.9/13, Error ellipse: s-maj=163.9km s-min=87.7km az=134.0*

*NEIC **04** 20:24:24.9±1.8, 17°.1N±0°.2×105°.4W±0°.1, h31km±10km, mb4.1/59, Error ellipse: s-maj=26.1km s-min=16.0km az=219.0*

ISC 04 20:24:24.9±1.7, **17°.0N**±0°.2×**105°.4W**±0°.1, **h35km, n80, σ1s.16**/73, **mb4.0**/19, **Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H06E1	SOCORRO T-PHAS	5.54	289	T	T	20 30 34.0	
	SNR=14						
H06S1	SOCORRO T	5.55	289	T	T	20 30 44.8	
	SNR=36						
H06N1	SOCORRO T-PHAS	5.62	290	T	T	20 30 39.3	
	SNR=5.0						
HPIG		9.86	359	Pn	Pn	20 26 43.6	-0.8
TX31	Lajitas Ar. Si	12.35	7	Pn	Pn	20 27 15.6	-2.8
TX32	Lajitas Array	12.35	7	Pn	Pn	20 27 15.9	-2.5
TXAR	Lajitas Array	12.35	7	Pn	Pn	20 27 19.5	+1.1
	0.1nm,0.3s,baz=182,slow=11,SNR=5.2						
TXAR				LR	LR	20 31 55.2	
	comp=Z,134nm,18.7s,baz=0.0,slow=37						
TXAR	Lajitas Array	12.35	7		Pn	20 27 16.2	-2.2
833A	Chaparral WMA,	12.53	25	Pn	Pn	20 27 23.1	+2.4
KVTX	Kingsville	12.56	32	Pn	Pn	20 27 23.4	+2.2
CCIG	Comitan	12.73	91	Pn	Pn	20 27 21.7	-2.1
HSIG		12.98	338	Pn	Pn	20 27 25.6	-1.2
JCT	Junction City	14.33	20	Pn	Pn	20 27 47.2	+1.8
MNTX	Cornudas Mount	14.61	0	Pn	Pn	20 27 46.7	-2.3
319A	Douglas	14.71	347		Pn	20 27 50.1	-0.6
TUC	Tucson	15.98	343	P	Pn	20 28 05.4	-1.7
214A	Organ Pipe Nat	16.31	337	P	Pn	20 28 10.8	-0.6
MSTX	Muleshoe	17.04	7	Pn	Pn	20 28 19.7	-0.8
MSTX				IAmb	IAmb	20 28 48.1	
	comp=Z,9.3nm,1.1s						
ANMO	Albuquerque	17.87	357	P	P	20 28 31.1	-0.2
X18A	Snowflake	17.90	348	P	Pn	20 28 30.1	-1.2
GLA	Glamis	18.08	334	P	P	20 28 32.6	-0.9
AMTX	Amarillo	18.09	10	P	P	20 28 33.4	-0.3
X16A	Lo Mia Camp, P	18.14	344	P	P	20 28 33.5	-0.9
Y14A	Wickenburg	18.17	339	P	P	20 28 34.1	-0.4
W18A	Petrified Fore	18.43	349	P	Pn	20 28 37.2	-0.6
W18A				IAmb	IAmb	20 28 53.6	
	comp=Z,12nm,1.4s						
Y12C	Blythe	18.56	335	P	Pn	20 28 38.5	-0.7
342A	Flagon Creek P	18.58	37	P	Pn	20 28 40.7	+1.2
W13A	Hualapai Mount	19.53	339	P	Pn	20 28 50.4	-0.6
U15A	North Rim	20.27	344	P	P	20 28 57.2	-0.5
U15A				IAmb	IAmb	20 29 01.9	
	comp=Z,6.1nm,1.2s						
TUL1	Leonard	20.66	23	P	Pn	20 29 04.0	-0.1
S22A	4UR Ranch, Cre	20.68	357	P	Pn	20 29 03.4	-1.3
S22A				IAmb	IAmb	20 29 52.7	
	comp=Z,12nm,1.6s						
X40A	Basin Creek Fa	20.71	31	P	Pn	20 29 03.9	-0.8
X40A				IAmb	IAmb	20 29 57.0	
	comp=Z,21nm,2.0s						
GSC	Goldstone, Bar	20.85	333	P	P	20 29 03.1	-0.7
GSC				IAmb	IAmb	20 30 01.9	
	comp=Z,27nm,1.9s						
JTS	Las Juntas de	20.96	106	P	P	20 29 05.9	+0.8
JTS				IAmb	IAmb	20 29 45.6	
	comp=Z,18nm,1.4s						
KNB	Kanab	20.96	343	P	P	20 29 05.5	+0.3
LCMT	Little Creek M	21.08	342	P	P	20 29 06.8	+0.4
OSI	Osito Audit: C	21.19	328	P	P	20 29 07.3	-0.1
PKCU	Pink Cliffs	21.23	345	P	P	20 29 05.5	-2.7
SHPR	Sheep Range	21.24	338	P	P	20 29 07.6	-0.5
SHPR				IAmb	IAmb	20 29 09.4	
	comp=Z,4.9nm,1.1s						
SZCU	Shurtz Canyon	21.58	343	P	P	20 29 09.9	-1.8
MTPU	Mount Pierson	21.77	345	P	P	20 29 14.5	+0.5
DAC	Darwin (Calif)	22.01	333	P	P	20 29 18.4	+1.9
DAC				IAmb	IAmb	20 29 31.5	
	comp=Z,20nm,1.6s						
TPNV	Topopah Spring	22.04	336	P	P	20 29 16.8	+0.1
TPNV				IAmb	IAmb	20 29 37.4	
	comp=Z,7.9nm,1.3s						
MSU	Marysvale	22.21	346	P	P	20 29 18.4	-0.2
PSUT	Pine Spring	22.67	343	P	P	20 29 23.6	+0.2
ISCO	Idaho Springs	22.69	360		S	20 33 30.0	0.0
P17A	Butcher Ranch,	22.84	349	P	P	20 29 26.1	+0.9
R11A	Troy Canyon, C	23.04	339	P	P	20 29 27.4	+0.1
R11A				IAmb	IAmb	20 29 45.8	
	comp=Z,8.3nm,1.8s						
FSCY	Frank Sound, G	23.12	81	P	P	20 29 29.5	+1.4
O20A	White River Ci	23.16	354	P	P	20 29 29.9	+1.5
O20A				IAmb	IAmb	20 30 08.7	
	comp=Z,6.3nm,1.1s						
RDMU	Red Mountain	23.73	352	P	P	20 29 34.2	0.0
OMMB	Old Mammoth Mi	23.75	332	P	P	20 29 33.5	-0.8
OMMB				IAmb	IAmb	20 29 43.0	
	comp=Z,12nm,1.5s						
N23A	Red Feather La	23.79	359	P	P	20 29 34.1	-0.5
N23A				IAmb	IAmb	20 30 17.9	
	comp=Z,18nm,1.9s						
X48A	Hartselle	23.90	40	P	P	20 29 35.1	-0.3
X48A				IAmb	IAmb	20 30 17.7	
	comp=Z,12nm,1.4s						
Y49A	Blount Mountai	23.91	42	P	P	20 29 34.0	-1.6
DUG	Dugway, Tooele	23.96	346	P	P	20 29 36.5	+0.3
DUG				IAmb	IAmb	20 29 38.7	
	comp=Z,9.0nm,1.4s						
NV11	Mina Array Sit	24.08	335	P	P	20 29 36.9	-0.3
NV11				IAmb	IAmb	20 30 03.8	
	comp=Z,9.7nm,1.6s						
NVAR	Mina Array Bea	24.13	335	P	P	20 29 37.7	-0.1
	comp=Z,0.8nm,1.0s,baz=152,slow=8.1,SNR=5.0						
NVAR	Mina Array Bea	24.13	335	P	P	20 29 37.2	-0.7
YERR	Yerington	24.99	334	P	P	20 29 45.6	-0.1
YERR				IAmb	IAmb	20 29 54.4	
	comp=Z,4.8nm,1.0s						
ELK	Elko	25.12	342	P	P	20 29 47.2	+0.4
PAHR	Pah Rah Range	25.66	335	P	P	20 29 51.3	-0.4
PAHR				IAmb	IAmb	20 30 01.4	
	comp=Z,2.6nm,0.8s						
AFDM	Forest Hills D	25.73	331	P	P	20 29 51.8	-0.3
AFDM				IAmb	IAmb	20 30 37.8	
	comp=Z,9.6nm,1.7s						
PD31	Pinedale Array	25.90	353	P	P	20 29 53.1	-0.8
PD31				IAmb	IAmb	20 30 09.8	
	comp=Z,7.4nm,1.9s						
PDAR	Pinedale Array	25.90	353	P	P	20 29 55.0	+1.1
	comp=Z,0.7nm,0.9s,baz=156,slow=7.5,SNR=4.2						
PDAR	Pinedale Array	25.90	353	P	P	20 29 54.1	+0.2
FXWY	Fox Creek	26.95	351	P	P	20 30 03.7	+0.3
MOOW	Moose Ponds	27.02	351	P	P	20 30 04.4	+0.5
MOOW				IAmb	IAmb	20 30 09.4	
	comp=Z,4.3nm,1.4s						
RSSD	Black Hills	27.03	2	P	P	20 30 03.5	-0.6
RSSD				IAmb	IAmb	20 30 48.2	
	comp=Z,11nm,1.8s						
V53A	Saluda	27.35	43	P	P	20 30 07.4	+0.6
TZTN	Tazewell	27.42	41	P	P	20 30 06.5	-0.9
T52A	Hallie	28.13	40	P	P	20 30 13.6	-0.2
YHL	Hebgen Lake	28.16	351	P	P	20 30 14.4	+0.1
U56A	King	29.35	44	P	P	20 30 23.9	-0.7
T57A	Hurt	30.46	44	P	P	20 30 34.3	-0.1
P53A	Whipple	30.61	38	P	P	20 30 37.2	+1.5
Q54A	Coxs Mills	30.63	40	P	P	20 30 34.0	-1.9
R55A	Marlinton	30.64	41	P	P	20 30 31.4	-4.7
YKA	Yellowknife Ar	45.87	354	P	P	20 32 44.4	+0.8
	comp=Z,0.5nm,0.9s,baz=167,slow=7.3,SNR=6.4						
ILAR	Eielson Array	55.24	340	P	P	20 33 55.2	+1.0
	comp=Z,0.4nm,0.9s,baz=147,slow=7.5,SNR=3.7						

*IDC **04** 20:47:31.8±5.9, 38°.15N×75°.77E, h106km±46km, mb3.3/3, mb1 3.3/8, mb1mx3.0/55, mbtmp3.6/8, Error ellipse: s-maj=48.1km s-min=27.3km az=6.0*

*NNC **04** 20:47:33.7±6.2, 38°.43N×75°.49E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=54.7km s-min=44.7km az=90.0*

ISC 04 20:47:30.0±0.7, **38°.05N**±0°.05×**76°.05E**±0°.09, **h100km, n35, σ1s.93**/41, **mb3.2**/3, **5C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZA	Kyzart	4.07	352	P	Pn	20 48 31.8	+1.3
	SNR=13						
ULHL	Ulahol	4.19	2	P	Pn	20 48 34.0	+2.0
	SNR=13						
UCH	Uchtor	4.33	345	P	Pn	20 48 36.1	+2.0
	SNR=21						
AML	Almayashu	4.45	337	P	Pn	20 48 36.7	+1.0
	SNR=41						
KBK	Karagaybulak	4.67	350	P	Pn	20 48 41.2	+2.8
	SNR=15						
AAK	Ala-Archa	4.73	346	P	Pn	20 48 40.5	+1.4
	1.1nm,0.3s,baz=156,slow=7.7,SNR=24						
AAK				S	Sn	20 49 31.5	-1.4
	1.3nm,0.3s,baz=76,slow=2.8,SNR=4.2						
AAK	Ala-Archa	4.73	346	P	Pn	20 48 41.9	+2.7
	SNR=9.2						
AAK	Ala-Archa	4.73	346	Pn	Pn	20 48 40.7	+1.5
	4.6nm,0.8s						
AAK				⇓Pg		20 48 51.9	
	7.8nm,0.8s						

AAK				⇑Sn	Sn	20 49 32.5	-0.4
	14nm,1.1s						
AAK				⇓Lg	Lg	20 49 51.4	
	9.3nm,0.9s						
EKS2	Erkin-Say	4.92	340	P	Pn	20 48 43.6	+1.9
	SNR=9.3						
CHCP	Chirah Chowk	4.93	208	P	Pn	20 48 44.9	+3.0
CHMS	Chumysh	5.04	349	⇑Pn	Pn	20 48 43.5	+0.3
	3.8nm,0.8s						
CHMS				⇑Pg		20 48 57.3	
	4.3nm,0.7s						
CHMS				⇑Lg	Lg	20 50 01.8	
	4.3nm,0.6s						
CEP	Cherat	5.39	220	P	Pn	20 48 49.9	+1.7
DHRM	DHARAMSHALA	5.79	178	eP	Pn	20 48 56.1	+2.4
DHRM				eS	Sn	20 49 58.8	-0.2
DHRM				IAML		20 50 03.7	
	comp=N,139nm,0.2s						
DHRM				IAML		20 50 04.2	
	comp=E,116nm,0.1s						
THW	Thamme Wali	6.32	215	P	Pn	20 49 01.5	+0.9
KK31	Karatay Array	6.57	322	Pn	Pn	20 49 03.6	-0.5
	comp=E,0.5nm,0.2s,baz=128,slow=12,SNR=14						
KK31				⇑Sn	Sn	20 50 11.9	-5.5
	comp=E,2.7nm,0.3s,baz=134,slow=22,SNR=3.9						
SMLA	Simla	6.97	172	eP	Pn	20 49 12.0	+2.5
SMLA				eS	Sn	20 50 25.1	-2.1
SMLA				IAML		20 50 31.9	
	comp=N,84nm,0.2s						
SMLA				IAML		20 50 32.0	
	comp=E,88nm,0.3s						
JOSI	Joshimath	8.02	158	eP	Pn	20 49 26.8	+2.8
JOSI				eS	Sn	20 50 50.0	-3.2
JOSI				IAML		20 50 54.7	
	comp=N,45nm,0.5s						
JOSI				IAML		20 50 54.8	
	comp=E,64nm,0.8s						
MKAR	Makanchi Array	9.87	26	P	Pn	20 49 50.1	+1.2
	comp=E,0.1nm,0.3s,baz=208,slow=16,SNR=10						
MKAR				S	Sn	20 51 36.3	-1.5
	comp=E,0.0nm,0.3s,baz=197,slow=20,SNR=2.8						
KUDL	Kundal	9.89	178	eP	Pn	20 49 40.7	-8.5
KUDL				eS	Sn	20 51 25.4	-13
DANN	Dangsing	11.63	144	eP	Pn	20 50 11.9	-1.1
	comp=E,16nm,0.4s						
KOLN	Koldanda	12.05	146	eP	Pn	20 50 17.9	-0.7
	comp=E,6.8nm,0.2s						
GKN	Gorkha	12.34	142	eP	Pn	20 50 21.3	-1.0
	comp=E,15nm,0.2s						
KURBB	Kurchatov Arra	12.69	7	P	Pn	20 50 25.4	-1.3
	comp=E,0.0nm,0.3s,baz=196,slow=13,SNR=3.3						
KKN	Kakani	12.83	140	eP	Pn	20 50 27.2	-1.7
DMN	Daman	12.89	141	eP	Pn	20 50 29.0	-0.8
	comp=E,5.9nm,0.4s						
GUN	Gumba	13.04	138	eP	Pn	20 50 31.2	-0.6
PKIN	Phulchoki	13.07	140	eP	Pn	20 50 30.1	-1.9
	comp=E,3.7nm,0.4s						
PKI	Pulchoki	13.08	140	eP	Pn	20 50 31.3	-0.9
	comp=E,2.9nm,0.2s						
JIRN	Jiri	13.41	138	eP	Pn	20 50 35.8	-0.8
	comp=E,8.6nm,0.3s						
TAPN	Taplejung	14.49	134	eP	Pn	20 50 49.2	-1.3
	comp=E,2.0nm,0.3s						
BVAR	Borovoye Array	15.48	347	P	Pn	20 51 02.9	+0.3
	comp=E,0.1nm,0.3s,baz=158,slow=14,SNR=6.5						
ZALV	Zalesovo Beam	17.00	18	P	P	20 51 22.7	+1.1
	comp=E,0.3nm,0.3s,baz=221,slow=14,SNR=5.8						
SONM	Songino Array	24.13	56	P	P	20 52 39.2	+2.6
	comp=E,0.5nm,0.5s,baz=260,slow=11,SNR=6.9						
ARCES	ARCESS Array B	41.32	336	P	P	20 55 05.3	0.0
	comp=E,2.7nm,1.0s,baz=106,slow=9.5,SNR=3.9						
TORD	Torodi Ar. Bea	69.75	271	P	P	20 58 28.9	-0.8
	comp=E,0.3nm,0.7s,baz=56,slow=6.0,SNR=3.1						

IDC ***04*** *20:56:17.6±5.5, 4.89S×153.87E, h120km±44km, mb3.5/11, mb1 3.7/12, mb1mx3.5/47, mbtmp4.0/12, MS2.9/2, Ms1 2.9/2, ms1mx2.5/22, Error ellipse: s-maj=43.3km s-min=22.0km az=100.0*
NEIC ***04*** *20:56:17.1±1.5, 4.8S±0.1×153.69E±0.08, h113km±8km, mb4.5/14, Error ellipse: s-maj=15.1km s-min=12.1km az=188.0*
ISC 04 20:56:16.2±0.6, **4.75S**±0.08×**153.73E**±0.09, **h100**km, **n46**, σ1.19/47, **mb4.0**/15, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.66	290	Pn	Pn	20 56 45.6	+1.1
HNR	Honiara	7.72	127	Pn	Pn	20 58 08.5	+2.5
PMG	Port Moresby	7.99	234	P	Pn	20 58 12.0	+2.3
	3.6nm,0.3s,baz=26,slow=11,SNR=18						
PMG				S	Sn	20 59 39.8	+1.4
	0.6nm,0.3s,baz=90,slow=20,SNR=3.2						
PMG				LR	LR	21 01 41.9	
	comp=Z,76nm,18.4s,baz=68,slow=40						
PMG	Port Moresby	7.99	234		Pn	20 58 09.9	+0.2
PMG					Sn	20 59 38.3	-0.2
GUMO	Guam	20.23	334	LR	LR	21 06 28.5	
	comp=Z,36nm,21.8s,baz=166,slow=30						
EIDS	Eidsvold	20.66	187	P	P	21 00 47.9	-0.1
EIDS				IAmb	IAmb	21 01 14.2	
	comp=Z,41nm,1.6s						
WB0	Warramunga Arr	24.03	230	P	P	21 01 22.8	+0.7
WB0				IAmb	IAmb	21 01 58.6	
	comp=Z,19nm,1.4s						
WR0	Warramunga Arr	24.03	229	P	P	21 01 22.2	0.0
WR0				IAmb	IAmb	21 01 24.6	
	comp=Z,4.8nm,0.8s						
WB2	Warramunga Arr	24.17	230	P	P	21 01 24.1	+0.8
WRA	Warramunga Arr	24.18	230	P	P	21 01 23.7	+0.3
	comp=Z,4.5nm,0.6s,baz=54,slow=9.9,SNR=25						
WRA	Warramunga Arr	24.18	230	P	P	21 01 20.3	-3.2
ARMA	Armidale	25.61	184	P	P	21 01 35.4	-1.0
AS31	Alice Springs	26.82	224	P	P	21 01 46.6	-0.7
ASAR	Alice Springs	26.82	224	P	P	21 01 47.0	-0.4
	comp=Z,1.0nm,0.4s,baz=54,slow=9.0,SNR=30						
ASAR	Alice Springs	26.82	224	P	P	21 01 45.2	-2.1
KNRA	Kununurra	26.83	244	P	P	21 01 47.2	-0.3
KNRA				IAmb	IAmb	21 02 03.6	
	comp=Z,50nm,1.3s						
STKA	Stephens Creek	29.29	201	P	P	21 02 08.3	-0.9
	comp=Z,1.7nm,0.5s,baz=12,slow=13,SNR=5.7						
STKA	Stephens Creek	29.29	201	P	P	21 02 07.4	-1.8
FITZ	Fitzroy Crossi	30.50	242	P	P	21 02 19.2	-0.8
	comp=Z,2.5nm,0.6s,baz=27,slow=5.8,SNR=6.4						
FITZ	Fitzroy Crossi	30.50	242	P	P	21 02 19.0	-1.1
FITZ				IAmb	IAmb	21 02 31.9	
	comp=Z,21nm,1.5s						
FORT	Forrest	35.42	220	P	P	21 03 01.9	-0.8
JOHN	Johnston Islan	42.12	59	P	P	21 03 58.4	-0.5
MORW	Morawa	43.10	232	P	P	21 04 05.8	-0.9
MORW				IAmb	IAmb	21 04 06.6	
	comp=Z,8.6nm,0.7s						
CMAR	Chiang Mai Arr	58.70	295	P	P	21 06 05.3	+1.4
	comp=Z,0.2nm,0.5s,baz=116,slow=6.1,SNR=4.5						
SONM	Songino Array	66.78	327	P	P	21 06 58.2	+1.0
	comp=Z,0.4nm,0.6s,baz=138,slow=7.1,SNR=4.9						
SONM	Songino Array	66.78	327	P	P	21 06 57.9	+0.8
ODAN	Odare	71.32	300	eP	P	21 07 27.1	+1.3
	comp=Z,9.1nm,0.7s						
JIRN	Jiri	72.56	301	eP	P	21 07 34.3	+0.9
	comp=Z,3.8nm,0.4s						
GUN	Gumba	72.89	301	eP	P	21 07 36.4	+1.1
	comp=Z,8.1nm,0.7s						
PKI	Pulchoki	73.21	300	eP	P	21 07 37.9	+0.7
	comp=Z,2.6nm,0.5s						
PKIN	Phulchoki	73.22	300	eP	P	21 07 37.9	+0.8
	comp=Z,2.1nm,0.4s						
KKN	Kakani	73.37	301	eP	P	21 07 38.9	+0.9
DMN	Daman	73.48	300	eP	P	21 07 39.7	+1.1
GKN	Gorkha	73.98	301	eP	P	21 07 42.4	+1.0
KOLN	Koldanda	74.81	300	eP	P	21 07 47.1	+0.8
DANN	Dangsing	74.81	301	eP	P	21 07 46.8	+0.3
	comp=Z,11nm,0.9s						
MKAR	Makanchi Array	80.90	319	P	P	21 08 20.0	+0.5
	comp=Z,0.4nm,0.5s,baz=94,slow=7.5,SNR=12						
MKAR	Makanchi Array	80.90	319	P	P	21 08 19.7	+0.2
ZALV	Zalesovo Beam	81.63	326	P	P	21 08 23.2	+0.1
	comp=Z,0.4nm,0.6s,baz=107,slow=5.0,SNR=3.3						
ZALV	Zalesovo Beam	81.63	326	P	P	21 08 23.0	-0.1
ILAR	Eielson Array	81.77	22	P	P	21 08 22.9	-0.7
	comp=Z,0.2nm,0.4s,baz=246,slow=5.3,SNR=4.5						
ILAR	Eielson Array	81.77	22	P	P	21 08 21.9	-1.7
KURBB	Kurchatov Arra	84.33	322	P	P	21 08 35.9	-1.3
	comp=Z,0.4nm,0.5s,baz=112,slow=4.0,SNR=3.8						
BVAR	Borovoye Array	89.76	323	P	P	21 09 02.6	-0.8
	comp=Z,1.0nm,0.8s,baz=107,slow=5.0,SNR=6.1						
TORD	Torodi Ar. Bea	151.17	289	PKPbc	PKPbc	21 15 57.7	-1.2
	comp=Z,0.6nm,0.4s,baz=95,slow=2.1,SNR=13						
TORD	Torodi Ar. Bea	151.17	289		PKPbc	21 15 57.2	-1.7

NEIC ***04*** *20:56:50.4±2.3, 15.90N±0.05×94.33W±0.04, h82km±8km, Error ellipse: s-maj=6.9km s-min=5.0km az=161.0*
MEX ***04*** *20:56:51.5±0.7, 15.87N×94.35W, h84km±15km, MD4.3*
IDC ***04*** *20:56:53.6±4.2, 16.33N×93.99W, h83km±15km, mb3.5/8, mb1 3.6/9, mb1mx3.4/44, mbtmp3.8/9, Error ellipse: s-maj=68.1km s-min=25.2km az=13.0*
ISC 04 20:56:49.9±0.9, **15.85N**±0.06×**94.35W**±0.03, **h80**km±9km, **n47**, σ1.76/63, **mb4.0**/10, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.10	97		Pn	20 57 10.7	+0.6
PCIG					Sn	20 57 25.6	+0.3
PCIG		1.10	97	eP	Pn	20 57 10.7	+0.6
PCIG				eS	Sn	20 57 25.6	+0.3
CMIG	Matias Romero	1.34	338	P	Pn	20 57 13.6	+0.5
	53nm,0.3s,baz=166,slow=8.2,SNR=95						
CMIG				S	Sn	20 57 30.4	-0.3
	401nm,0.3s,baz=7.1,slow=16,SNR=85						
CMIG				LR	LR	20 57 46.9	
	comp=Z,123nm,18.5s,baz=147,slow=47						
CMIG	Matias Romero	1.34	338	eP	Pn	20 57 13.7	+0.5
CMIG				eS	Sn	20 57 30.6	-0.1
TGIG		1.50	52		Pn	20 57 14.9	-0.4
TGIG					Sn	20 57 33.8	-0.6
TGIG		1.50	52	eP	Pn	20 57 14.9	-0.4
TGIG				iS	Sn	20 57 33.8	-0.6
HUIG	Huatulco	1.69	268		Pn	20 57 17.9	+0.2
HUIG					Sn	20 57 37.6	-1.2
HUIG	Huatulco	1.69	268	eP	Pn	20 57 17.9	+0.2
HUIG				iS	Sn	20 57 37.6	-1.2
CCIG	Comitan	2.17	78		Pn	20 57 24.3	+0.1
CCIG	Comitan	2.17	78		Pn	20 57 24.3	+0.1
CCIG					Sn	20 57 50.6	+0.2
CCIG	Comitan	2.17	78	eP	Pn	20 57 24.3	+0.1
CCIG				iS	Sn	20 57 50.6	+0.2
VHO	Vista Hermosa	2.59	298	eP	Pn	20 57 31.7	+1.8
VHO				eS	Sn	20 57 59.5	-1.1
PEIG	Puerto Escondi	2.69	274	eP	Pn	20 57 31.4	+0.3
PEIG				eS	Sn	20 58 01.1	-1.7
YOIG	Yosondua	3.23	289	eP	Pn	20 57 40.7	+2.1
PNIG	Pinotepa	3.67	279		Pn	20 57 45.3	+0.9
PNIG					Sn	20 58 21.8	-4.7
PNIG	Pinotepa	3.67	279	eP	Pn	20 57 45.3	+0.9
PNIG				eS	Sn	20 58 21.8	-4.7
HLIG	Huajuapan de L	3.85	301	eP	Pn	20 57 49.3	+2.4
FTIG	Fresnillo de T	4.16	300	eP	Pn	20 57 54.1	+2.9
TLIG	Tlapa	4.39	294	Pn	Pn	20 57 57.3	+3.1
TLIG					Sn	20 58 43.5	-0.6
TGUH	Tegucigalpa,Un	7.07	104	Pn	Pn	20 58 31.8	+1.0
TEIG	Tepich	7.24	52	P	Pn	20 58 30.9	-2.1
	35nm,0.3s,baz=319,slow=0.6,SNR=42						
TEIG				S	Sn	20 59 47.3	-6.4
	9.5nm,0.3s,baz=319,slow=16,SNR=9.4						
TEIG	Tepich	7.24	52		Pn	20 58 31.1	-1.8
833A	Chaparral WMA,	13.27	340	Pn	Pn	20 59 56.9	+2.0
435B	Jarrell	15.16	349	Pn	Pn	21 00 20.7	+1.1
435B				IAmb	IAmb	21 00 26.5	
	comp=Z,16nm,0.7s						
TX31	Lajitas Ar. Si	15.93	329	Pn	Pn	21 00 30.2	+0.8
TXAR	Lajitas Array	15.93	329	P	P	21 00 31.4	-0.1
	comp=Z,0.1nm,0.3s,baz=147,slow=14,SNR=6.7						
TXAR	Lajitas Array	15.93	329	P	Pn	21 00 30.4	+1.0
WHTX	Lake Whitney,	16.32	351	P	P	21 00 36.0	+0.3
WHTX				IAmb	IAmb	21 01 02.1	
	comp=Z,8.9nm,0.8s						
MIAR	Mount Ida	18.64	2	P	P	21 01 01.1	-0.1
MIAR				IAmb	IAmb	21 01 01.8	
	comp=Z,4.3nm,0.6s						
X37A	Clayton	18.69	357	P	Pn	21 01 02.1	-0.8
X37A				IAmb	IAmb	21 01 09.0	
	comp=Z,5.5nm,0.7s						
WMOK	Wichita Mounta	19.23	349	P	Pn	21 01 08.7	-0.7
MSTX	Muleshoe	19.58	339	P	P	21 01 10.3	-1.3
MSTX				IAmb	IAmb	21 01 16.0	
	comp=Z,10nm,0.8s						
AMTX	Amarillo	20.07	342	P	Pn	21 01 18.1	-1.2
HHAR	Hobbs	20.36	1	P	P	21 01 18.9	-1.0
HHAR				IAmb	IAmb	21 01 55.1	
	comp=Z,6.1nm,0.6s						
U40A	Yellville	20.47	3	P	P	21 01 20.3	-0.8
ANMO	Albuquerque	21.90	332	P	P	21 01 38.8	+2.1
	comp=Z,0.7nm,0.4s,baz=160,slow=12,SNR=3.1						
T25A	Trinidad	23.01	339	P	P	21 01 50.3	+2.0
T25A				IAmb	IAmb	21 01 52.7	
	comp=Z,13nm,1.4s						
ULM	Lac du Bonnet	34.34	358	P	P	21 03 26.9	-1.9
	comp=Z,1.7nm,0.5s,baz=169,slow=12,SNR=5.1						
ULM	Lac du Bonnet	34.34	358	P	P	21 03 26.6	-2.2
ULM				IAmb	IAmb	21 03 28.0	
	comp=Z,7.7nm,1.3s						
FFC	Flin Flon	39.25	353	P	P	21 04 10.0	-0.4
FFC				IAmb	IAmb	21 04 11.4	
	comp=Z,2.4nm,0.6s						
YKA	Yellowknife Ar	48.73	348	P	P	21 05 25.9	-0.2
	comp=Z,0.6nm,0.6s,baz=154,slow=7.3,SNR=7.6						
FRB	Frobisher Bay	51.07	14	P	P	21 05 42.1	-1.6
	comp=Z,1.2nm,0.6s,baz=204,slow=12,SNR=4.0						
INK	Inuvik	58.04	344	P	P	21 06 35.0	+0.9
	comp=Z,0.6nm,0.5s,baz=88,slow=3.7,SNR=5.5						
RES	Resolute Bay	58.84	360	P	P	21 06 38.9	-0.8
	comp=Z,0.6nm,0.8s,baz=186,slow=10,SNR=3.4						
ILAR	Eielson Array	60.26	337	P	P	21 06 52.6	+3.1
	comp=Z,0.3nm,0.7s,baz=148,slow=5.4,SNR=5.3						
ARCES	ARCESS Array B	85.10	18	P	P	21 09 17.4	+0.8
	comp=Z,2.3nm,0.7s,baz=300,slow=5.5,SNR=10.0						
ARCES	ARCESS Array B	85.10	18	P	P	21 09 17.8	+1.2

THE ***04*** *21:02:05.8, 38.15N×20.41E, h13km, ML2.7/4, Error ellipse: s-maj=1.3km s-min=0.8km az=251.0*
ATH ***04*** *21:02:05.5, 38.14N×20.36E, h13km±1km, ML2.8/5, Error ellipse: s-maj=1.8km s-min=1.1km az=253.0*
ISC 04 21:02:05.2±1.3, **38.14N**±0.04×**20.39E**±0.05, **h14**km±5km, **n29**, σ0.33/49, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.04	354	P	Pg	21 02 07.8	-0.2
CHV1				S	Sg	21 02 09.8	0.0
KEF3	Kipouria, Keph	0.07	334	P	Pg	21 02 08.1	-0.2
KEF3				S	Sg	21 02 10.4	+0.2
LXR1	Lixouri, Cepha	0.07	34	P	Pg	21 02 08.4	+0.1
LXR1				S	Sg	21 02 10.4	+0.2
KEF2	Argostoli. Kep	0.08	73	P	Pg	21 02 08.4	+0.1
KEF2				S	Sg	21 02 10.4	0.0
ARG2	Argostoli	0.09	65	P	Pg	21 02 08.6	+0.2
ARG2				S	Sg	21 02 10.3	-0.1
KEF4	Livadi, Kephal	0.12	14	P	Pg	21 02 08.9	+0.1
KEF4				S	Sg	21 02 11.4	+0.2
KEF1	Kardakata, Kep	0.15	26	P	Pg	21 02 08.6	-0.7
KEF1				S	Sg	21 02 11.8	0.0
VLS	Valsamata	0.16	77	P	Pg	21 02 09.2	-0.3
VLS				S	Sg	21 02 12.3	+0.2
	4µm,0.3s						
VLS	Valsamata	0.16	77	P	Pg	21 02 09.3	-0.1
VLS				S	Sg	21 02 12.4	+0.2
VLS				AML	AML	21 02 12.4	
	comp=E,6355µm,0.1s						
VLS				AML	AML	21 02 12.4	
	comp=N,9256µm,0.2s						
VSK1	VASILIKIADES	0.30	27	P	Pg	21 02 11.7	-0.1
VSK1				S	Sg	21 02 16.6	+0.6
KFL	Anninata	0.32	96	P	Pg	21 02 12.2	+0.2
KFL	Anninata	0.32	96	P	Pg	21 02 12.3	+0.2
VLMS	Volimes, Zakyn	0.34	140	P	Pg	21 02 12.6	+0.1
VLMS				S	Sb	21 02 18.6	-0.1
VLMS				AML	AML	21 02 19.7	
	comp=E,4091µm,0.2s						
VLMS				AML	AML	21 02 20.7	
	comp=N,2853µm,0.3s						
FSK	Fiskardo	0.35	23	P	Pg	21 02 12.6	0.0
FSK				S	Sg	21 02 18.0	+0.7
	comp=N,3µm,0.1s						
FSK	Fiskardo	0.35	23	P	Pg	21 02 12.6	0.0
FSK				S	Sg	21 02 17.9	+0.7
FSK				AML	AML	21 02 18.4	
	comp=N,4598µm,0.2s						
FSK				AML	AML	21 02 18.4	
	comp=E,8810µm,0.2s						
EVGI	Lefkada island	0.52	24	P	Pg	21 02 15.4	-0.4
EVGI				S	Sg	21 02 23.4	+0.6
EVGI	Lefkada island	0.52	24	P	Pg	21 02 15.8	-0.1
EVGI				S	Sb	21 02 23.8	-0.1
MGNA	Meganis	0.60	32	P	Pg	21 02 17.2	-0.1
MGNA				S	Sg	21 02 25.6	+0.2
MGNA				AML	AML	21 02 26.6	
	comp=E,2099µm,0.1s						
MGNA				AML	AML	21 02 26.7	
	comp=N,950µm,0.2s						
LKD2	Lefkada island	0.68	18	P	Pg	21 02 18.4	-0.4
LKD2				S	Sg	21 02 27.7	-0.1
	comp=N,288nm,0.2s						
LKD2	Lefkada island	0.68	18	P	Pg	21 02 18.4	-0.4
PDO	Prodromos	0.78	54	P	Pg	21 02 20.4	-0.1
PDO				S	Sg	21 02 30.6	-0.1
	comp=N,722nm,0.4s						
PDO	Prodromos	0.78	54	P	Pg	21 02 20.0	-0.5
RLS	Riolos of Patr	0.86	95	P	Pg	21 02 21.6	-0.4
RLS	Riolos of Patr	0.86	95	P	Pg	21 02 21.6	-0.4
PVO	Paravola	1.01	62	P	Pb	21 02 24.8	0.0
PVO	Paravola	1.01	62	P	Pb	21 02 24.7	-0.2
PVO				S	Sn	21 02 39.8	+0.4
PVO				AML	AML	21 02 41.9	
	comp=E,1353µm,0.3s						
PVO				AML	AML	21 02 46.6	
	comp=N,533µm,0.6s						
IGT	Igoumenitsa	1.39	358	P	Pg	21 02 31.9	-0.3
IGT				S	Sg	21 02 51.1	+0.8
AGG	Agios Georgios	1.76	59	P	Pg	21 02 39.0	-0.2
THL	Klokotos Trika	1.91	41	P	Pb	21 02 39.8	-0.2

IDC ***04*** *21:09:50.6±1.3, 50.56N×98.04E, h0km, mb1 2.8/4, mb1mx2.8/45, mbtmp2.8/4, ML2.3/4, Error ellipse: s-maj=32.2km s-min=11.6km az=169.0*
ASRS ***04*** *21:09:52.9±0.4, 51°N±4°×9°8E±°, h10km, MLv4.1/18, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
ISC 04 21:09:49.4±0.8, **50.65N**±0.05×**97.93E**±0.02, **h10**km, **n28**, σ**3.02**/48, **Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TDJR	Todzha	2.09	328	P	Pg	21 10 28.1	-1.4
TDJR				S	Sg	21 10 56.8	+0.2
MOY	Mondy	2.18	61	P	Pg	21 10 30.4	-0.8
MOY				S	Sg	21 10 58.5	-0.9
ORL	Orlik	2.23	31	P	Pb	21 10 29.9	+0.1
ORL				S	Sg	21 10 59.8	-1.1
KZLR	Kyzyl	2.43	297	P	Pb	21 10 32.2	-1.0
KZLR				S	Sb	21 11 02.8	-0.4
ARS	Arshan	3.09	64	P	Pb	21 10 42.8	-1.8
ARS				S	Sg	21 11 25.4	-3.3
ARDR	Aradan	3.41	306	P	Pn	21 10 45.4	+2.8
ARDR				S	Sb	21 11 31.2	-0.2
ZAK	Zakamensk	3.42	92	P	Pb	21 10 47.1	-3.0
ZAK				S	Sb	21 11 33.5	+1.7
TLY	Talaya	3.74	72	Pn	Pn	21 10 50.2	+3.0
	0.0nm,0.3s,baz=299,slow=10,SNR=2.6						
TLY				Pg	Pb	21 10 56.3	+0.8
	0.1nm,0.3s,baz=244,slow=16,SNR=22						
TLY				Lg	Lg	21 11 47.5	
	0.2nm,0.3s,baz=44,slow=18,SNR=23						
TLY	Talaya	3.74	72	P	Pb	21 10 54.6	-0.9
TLY				Sg	Sg	21 11 46.7	-2.8
IRK	Irkutsk	4.27	66	P	Pb	21 11 04.9	+0.3
IRK				S	Sb	21 11 59.1	+2.9
DJOS	Djoyskaya Sosn	4.59	300	P	Pb	21 11 06.3	-3.8
DJOS				S	Sb	21 12 07.6	+2.2
CERR	Cheremushki	4.61	301	P	Pb	21 11 10.7	+0.4
CERR				S	Sb	21 12 07.9	+2.1
ORY	Orie	4.69	340	P	Pb	21 11 12.2	+0.7
ORY				S	Sb	21 12 06.6	-1.4
DJO	Djoy, Khakassi	4.69	300	P	Pb	21 11 11.7	+0.1
DJO				S	Sb	21 12 07.6	-0.5
MINR	Mina	4.82	333	P	Pb	21 11 14.1	+0.2
MINR				S	Sb	21 12 10.3	-1.6
TEL	Teeli	4.92	277	P	Pb	21 11 03.7	+0.4
TEL				S	Sb	21 12 16.5	+1.8
VEH	Verkhnyaya Baz	5.38	302	P	Pb	21 11 19.2	-4.3
VEH				S	Sn	21 12 15.1	+3.3
CUR	Chagan-Uzun	6.16	269	P	Pb	21 11 29.1	-7.6
CUR				S	Sn	21 12 27.0	-3.9
SONM	Songino Array	6.22	114	Pn	Pn	21 11 21.9	+0.6
	0.4nm,0.3s,baz=298,slow=15,SNR=19						
SONM				Pg	Pb	21 11 41.5	+3.8
	1.1nm,0.3s,baz=299,slow=18,SNR=10						
SONM				Lg	Lg	21 13 05.8	
	7.8nm,0.3s,baz=298,slow=28,SNR=15						
GZLN	Zheleznogorsk	6.25	338	Sg	Sg	21 13 06.6	-3.4
ULGR	Ulagan, Altay	6.34	274	Pn	Pn	21 11 23.2	+0.2
ULGR				Pg	Pb	21 11 44.3	+4.3
ULGR				Sg	Sb	21 13 03.1	+7.3
ULN	Ulaanbaatar	6.59	112	Sg	Sg	21 13 18.4	-2.4
CHBI	Chibit, Altay	6.67	271	Pn	Pn	21 11 25.0	-2.4
CHBI				Pg	Pg	21 11 51.5	+6.2
CHBI				Sg	Sg	21 13 23.1	-0.1
ARTR	Artybash	6.79	284	Sg	Sg	21 13 18.6	-8.6
DGZ	Jazzator, Alta	6.81	266	Sg	Sg	21 13 20.1	-7.8
ZALV	Zalesovo Beam	8.69	297	Pn	Pn	21 11 58.6	+3.6
	0.1nm,0.3s,baz=96,slow=15,SNR=2.5						
ZALV				Pg	Pg	21 12 23.9	-12
	0.2nm,0.3s,baz=109,slow=15,SNR=3.2						
ZALV				Lg	Lg	21 14 16.9	
	0.7nm,0.3s,baz=109,slow=23,SNR=7.6						
MKAR	Makanchi Array	11.03	256	Pn	Pn	21 12 30.5	+3.4
	0.0nm,0.3s,baz=70,slow=12,SNR=2.8						
MKAR				Pg		21 13 10.2	
	0.1nm,0.3s,baz=63,slow=15,SNR=5.1						
MKAR				Lg	Lg	21 15 31.2	
	0.1nm,0.3s,baz=58,slow=32,SNR=2.9						
KURBB	Kurchatov Arra	12.32	277	Lg	Lg	21 16 15.3	
	0.0nm,0.3s,baz=86,slow=34,SNR=4.7						

NEIC ***04*** *21:25:03.5±2.6, 16.49N±0.05×94.95W±0.05, h92km±9km, Error ellipse: s-maj=7.5km s-min=6.4km az=162.0*
MEX ***04*** *21:25:04.9±0.8, 16.46N×94.99W, h88km±8km, MD4.1*
ISC 04 21:25:03.1±0.9, **16.44N**±0.05×**94.97W**±0.03, **h93**km±10km, **n27**, σ1.71/46, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.65	7		Pn	21 25 19.4	-0.1
CMIG					Sn	21 25 30.3	-1.4
CMIG	Matias Romero	0.65	7	iP	Pn	21 25 19.4	-0.1
CMIG				iS	Sn	21 25 30.6	-1.1
HUIG	Huatulco	1.28	239		Pn	21 25 26.0	-0.4
HUIG					Sn	21 25 43.7	-0.3
HUIG	Huatulco	1.28	239	iP	Pn	21 25 26.0	-0.4
HUIG				eS	Sn	21 25 43.7	-0.3
OXBJ	Oaxaca	1.79	290		Pn	21 25 35.3	+2.4
OXBJ					Sn	21 25 57.5	+1.9
OXBJ	Oaxaca	1.79	290	eP	Pn	21 25 35.3	+2.4
OXBJ				eS	Sn	21 25 57.5	+1.9
TGIG		1.80	79		Pn	21 25 33.3	+0.4
TGIG					Sn	21 25 55.3	-0.3
TGIG		1.80	79	eP	Pn	21 25 33.3	+0.4
TGIG				iS	Sn	21 25 55.3	-0.3
PCIG		1.84	113		Pn	21 25 34.4	+1.1
PCIG					Sn	21 25 56.9	+0.6
PCIG		1.84	113	eP	Pn	21 25 34.4	+1.1
PCIG				eS	Sn	21 25 56.9	+0.6
PEIG	Puerto Escondi	2.14	258	eP	Pn	21 25 37.1	-0.2
PEIG				iS	Sn	21 26 01.5	-1.9
YOIG	Yosondua	2.50	280	eP	Pn	21 25 44.2	+1.8
YOIG				iS	Sn	21 26 14.8	+2.4
CCIG	Comitan	2.72	93		Pn	21 25 45.7	+0.5
CCIG					Sn	21 26 12.6	-4.9
CCIG	Comitan	2.72	93		Pn	21 25 45.9	+0.7
CCIG					Sn	21 26 15.2	-2.3
CCIG	Comitan	2.72	93	eP	Pn	21 25 45.9	+0.7
CCIG				iS	Sn	21 26 18.3	+0.7
THIG		3.02	120		Sn	21 26 25.0	+0.6
THIG		3.02	120	eS	Sn	21 26 25.0	+0.6
PNIG	Pinotepa	3.03	269		Pn	21 25 49.7	+0.6
PNIG					Sn	21 26 23.2	-1.5

PNIG Pinotepa 3.03 269 eP Pn 21 25 49.7 +0.6
PNIG eS Sn 21 26 23.2 -1.5
HLIG Huajuapan de L 3.04 297 eP Pn 21 25 52.4 +3.0
HLIG eS Sn 21 26 24.8 -0.4
TLIG Tlapa 3.62 288 Pn 21 25 59.6 +2.5
TEIG Tepich 7.39 58 Pn 21 26 47.3 -0.9
ZAIG Zacatecas 9.53 313 Pn Pn 21 27 21.2 +3.5
ZAIG Sn 21 28 59.3 -3.9
435B Jarrell 14.47 351 Pn Pn 21 28 22.5 -0.9
MIAR Mount Ida 18.07 4 P Pn 21 29 08.0 0.0
MIAR IAmb IAmb 21 29 09.2
comp=Z,7.4nm,1.4s
X48A Hartselle 19.29 20 P P 21 29 19.4 -1.2
X48A IAmb IAmb 21 29 22.0
comp=Z,14nm,0.7s
S44A Carbondale 21.76 12 P P 21 29 45.7 -1.4
S44A IAmb IAmb 21 29 47.7
comp=Z,13nm,0.8s

SNET 04 21:34:12.0±0.8, 13.°01N×88.°82W, h55km±13km, ML3.7
UCR 04 21:34:12.2±0.8, 13.°01N×88.°82W, h54km±14km, ML3.7
ISC 04 21:34:12.2±2.4, 13.°0N±0.°1×88.°82W±0.°06, h55km, n33, σ0§31/37, 4C-12D, Off coast of central America

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ALJI Alcalda de J 0.42 35⇑iP Pn 21 34 23.0 0.0
ALJI IAML 21 34 32.6
comp=Z,5μm,0.2s
ALJI Alcalda de J 0.42 35⇑iP Pn 21 34 23.0 0.0
ALJI IAML 21 34 32.6
comp=Z,5μm,0.2s
COEB Comit de Eme 0.59 29⇓eP Pn 21 34 24.8 -0.2
COEB eS Sn 21 34 34.8 +0.6
COEB IAML 21 34 38.8
comp=Z,2μm,0.3s
COEB Comit de Eme 0.59 29⇓eP Pn 21 34 24.8 -0.2
COEB eS Sn 21 34 34.8 +0.6
COEB IAML 21 34 38.8
comp=Z,2μm,0.3s
TECA Tecapa 0.60 31⇓iP Pn 21 34 25.1 -0.1
TECA Tecapa 0.60 31⇓iP Pn 21 34 25.1 -0.1
JUCU Jucuar¡n 0.62 64⇑iP Pn 21 34 24.9 -0.4
JUCU eS Sn 21 34 34.8 0.0
JUCU IAML 21 34 38.1
comp=Z,5μm,0.2s
JUCU Jucuar¡n 0.62 64⇑iP Pn 21 34 24.9 -0.4
JUCU eS Sn 21 34 34.8 0.0
JUCU IAML 21 34 38.1
comp=Z,5μm,0.2s
COEG Centro de Oper 0.64 355 eP Pn 21 34 25.0 -0.5
COEG IAML 21 34 38.6
comp=Z,3μm,0.4s
COEG Centro de Oper 0.64 355 eP Pn 21 34 25.0 -0.5
COEG IAML 21 34 38.6
comp=Z,3μm,0.4s
LCY Lacayo 0.68 49 eP Pn 21 34 26.0 -0.1
LCY Lacayo 0.68 49 eP Pn 21 34 26.0 -0.1
LFRS El Faro 0.68 340 eP Pn 21 34 25.4 -0.7
PACA Pacayal 0.69 45⇓eP Pn 21 34 26.1 -0.1
PACA Pacayal 0.69 45⇓eP Pn 21 34 26.1 -0.1
PAVA Las Pavas 0.74 351⇓eP Pn 21 34 26.5 -0.3
PAVA IAML 21 34 39.4
comp=Z,2μm,0.2s
PAVA Las Pavas 0.74 351⇓eP Pn 21 34 26.5 -0.3
PAVA IAML 21 34 39.4
comp=Z,2μm,0.2s
LBRS Las Brisas 0.79 344 eP Pn 21 34 27.3 -0.1
LFU La Fuente 0.82 340 eP Pn 21 34 27.6 -0.2
LFU La Fuente 0.82 340 eP Pn 21 34 27.6 -0.2
BOQS Boqueron 0.88 329 eP Pn 21 34 28.3 -0.4
LCND La Caada 0.96 70 iP Pn 21 34 29.8 +0.1
LCND IAML 21 34 47.4
comp=Z,1μm,0.3s
LCND La Caada 0.96 70 iP Pn 21 34 29.8 +0.1
LCND IAML 21 34 47.4
comp=Z,1μm,0.3s
CNCH Conchagua 1.01 73⇓eP Pn 21 34 30.0 -0.3
CNCH IAML 21 34 48.5
comp=Z,2μm,0.3s
CNCH Conchagua 1.01 73⇓eP Pn 21 34 30.0 -0.3
CNCH IAML 21 34 48.5
comp=Z,2μm,0.3s
CEVE Cerro Verde 1.15 317 eP Pn 21 34 32.5 +0.1
CEVE Cerro Verde 1.15 317 eP Pn 21 34 32.5 +0.1
SBLS San Blas 1.16 318 eP Pn 21 34 32.5 +0.1
SBLS San Blas 1.16 318 eP Pn 21 34 32.5 +0.1
SNJE San Jose 1.17 319 eP Pn 21 34 32.5 -0.1
SNJE San Jose 1.17 319 eP Pn 21 34 32.5 -0.1
MTO3 Montecristo 1.51 340⇓iP Pn 21 34 36.8 -0.3
MTO3 Montecristo 1.51 340⇓iP Pn 21 34 36.8 -0.3

ATH 04 21:37:55.4, 38.°27N×20.°40E, h13km, ML3.1/8, Error ellipse: s-maj=2.1km s-min=1.0km az=274.0
THE 04 21:37:55.5, 38.°27N×20.°36E, h11km±1km, ML3.4/12, Error ellipse: s-maj=1.2km s-min=0.5km az=255.0
ISC 04 21:37:55.7±1.0, 38.°27N±0.°02×20.°41E±0.°05, h11km±5km, n46, σ0§55/70, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.02 133 P Pg 21 37 57.5 -0.1
KEF4 S Sg 21 37 58.8 0.0
KEF1 Kardakata, Kep 0.05 84 P Pg 21 37 57.7 -0.1
KEF1 S Sg 21 37 59.2 -0.1
LXR1 Lixouri, Cepha 0.08 160 P Pg 21 37 58.1 +0.1
LXR1 S Sg 21 38 00.1 +0.4
KEF3 Kipouria, Keph 0.08 213 P Pg 21 37 58.0 -0.1
KEF3 S Sg 21 37 59.9 +0.1
CHV1 Chavriata, Kef 0.09 191 P Pg 21 37 58.2 0.0
CHV1 S Sg 21 38 00.3 +0.3
93μm,0.3s
ARG2 Argostoli 0.11 145 P Pg 21 37 58.6 +0.1
ARG2 S Sg 21 38 00.7 +0.2
40μm,0.1s
KEF2 Argostoli. Kep 0.12 149 P Pg 21 37 58.8 +0.1
KEF2 S Sg 21 38 01.0 +0.2
VLS Valsamata 0.17 123 P Pg 21 37 59.4 -0.1
VLS S Sg 21 38 02.4 +0.2
22μm,0.1s
VLS Valsamata 0.17 123 P Pg 21 37 59.4 -0.1
VLS S Sg 21 38 02.3 +0.2
VLS AML AML 21 38 02.6
comp=N,39197μm,0.1s
VLS AML AML 21 38 02.9
comp=E,46140μm,0.1s
VSK1 VASILIKIADES 0.18 43 P Pg 21 37 59.8 +0.1
VSK1 S Sg 21 38 03.0 +0.5
comp=E,20μm,0.1s
FSK Fiskardo 0.22 34 P Pg 21 38 00.5 +0.1
FSK S Sg 21 38 04.5 +1.0
comp=E,9μm,0.1s
FSK Fiskardo 0.22 34 P Pg 21 38 00.5 +0.1
FSK S Sg 21 38 04.3 +0.7
FSK AML AML 21 38 04.8
comp=E,25967μm,0.1s
FSK AML AML 21 38 05.3
comp=N,7742μm,0.2s
KFL Anninata 0.34 118 P Pg 21 38 02.4 -0.1
KFL S Sg 21 38 08.3 +1.2
EVGI Lefkada island 0.40 29 P Pg 21 38 03.5 -0.1
EVGI S Sg 21 38 09.7 +0.8
EVGI Lefkada island 0.40 29 P Pg 21 38 03.5 -0.1
EVGI S Sg 21 38 09.3 +0.4
VLMS Volimes, Zakyn 0.45 153 P Pg 21 38 04.4 0.0
VLMS S Sg 21 38 11.1 +0.8
VLMS AML AML 21 38 12.4
comp=N,36257μm,0.4s
VLMS AML AML 21 38 13.3
comp=E,19123μm,0.3s
MGNA Meganis 0.49 38 P Pg 21 38 04.9 -0.3
MGNA S Sg 21 38 11.9 +0.1
MGNA AML AML 21 38 13.7
comp=E,2796μm,0.1s
MGNA AML AML 21 38 14.1
comp=N,2515μm,0.1s
LKD2 Lefkada island 0.55 21 P Pg 21 38 06.2 -0.3
LKD2 Lefkada island 0.55 21 P Pg 21 38 06.2 -0.3
AST1 Astakos 0.60 63 P Pg 21 38 07.2 -0.2
AST1 S Sb 21 38 16.8 0.0
comp=N,3μm,0.2s
ZAK2 Zakynthos 0.62 141 P Pg 21 38 07.8 +0.1
ZAK2 S Sb 21 38 18.2 +0.9
comp=N,15μm,0.4s
KRI1 kERI 0.69 152 P Pg 21 38 08.3 -0.8
KRI1 S Sb 21 38 19.4 +0.1
comp=N,5μm,0.3s
PDO Prodromos 0.69 62 P Pg 21 38 08.8 -0.3
PDO S Sb 21 38 20.4 +1.0
comp=N,3μm,0.4s
PDO Prodromos 0.69 62 P Pg 21 38 08.9 -0.2
PDO AML AML 21 38 23.3
comp=E,3269μm,0.6s
PDO AML AML 21 38 24.0
comp=N,3723μm,0.5s
RLS Riolos of Patr 0.86 104 P Pg 21 38 11.8 -0.6
RLS S Sb 21 38 24.6 +0.3
comp=N,485nm,0.5s
RLS Riolos of Patr 0.86 104 P Pg 21 38 11.7 -0.6
PVO Paravola 0.94 68 P Pg 21 38 13.8 -0.1
PVO S Sn 21 38 28.9 +0.4
comp=N,922nm,0.4s
PVO Paravola 0.94 68 P Pg 21 38 13.8 -0.1
PVO AML AML 21 38 30.6
comp=E,2222μm,0.3s
PVO AML AML 21 38 32.9
comp=N,1398μm,0.6s
DRO Drossia 1.08 107 P Pb 21 38 15.5 -0.9
DRO S Sn 21 38 33.1 +1.3
comp=N,988nm,0.5s
DRO Drossia 1.08 107 P Pb 21 38 15.6 -0.8
DRO AML AML 21 38 40.5
comp=E,2132μm,0.4s
DRO AML AML 21 38 44.1
comp=N,1968μm,0.6s
EFP Efpalio 1.19 82 P Pn 21 38 17.0 -1.3
EFP Efpalio 1.19 82 P Pn 21 38 17.2 -1.1
ANX Ano Chora 1.23 74 P Pn 21 38 18.5 -0.6
LAKA Lakka 1.24 91 P Pn 21 38 18.3 -0.7
LAKA Lakka 1.24 91 P Pn 21 38 18.0 -1.0
LAKA AML AML 21 38 41.7
comp=E,621μm,0.4s
LAKA AML AML 21 38 43.0
comp=N,725μm,0.5s
AMT Artemida-Makis 1.27 125 P Pb 21 38 19.7 +0.1
SERG Sergoula 1.31 83 P Pn 21 38 19.3 -0.7
SERG Sergoula 1.31 83 P Pn 21 38 19.3 -0.7
KLV Kalavryta, Ach 1.40 99 P Pn 21 38 21.1 -0.2
KLV Kalavryta, Ach 1.40 99 P Pn 21 38 21.0 -0.2
ITM Ithomi 1.63 132 P Pb 21 38 25.4 -0.4
AGG Agios Georgios 1.68 63 P Pb 21 38 26.8 +0.1
PYL PYLOS 1.74 142 P Pn 21 38 26.3 +0.5
PROD Prodromos 1.96 90 P Pb 21 38 31.4 -0.2
LTK Loutraki 2.04 96 P Pb 21 38 31.8 -1.0
VIL2 Platees 2.25 91 P Pb 21 38 35.5 -1.0

IDC 04 21:41:44.1±1.3, 17.°92S×178.°55W, h544km±15km, mb3.7/18, mb1 3.9/20, mb1mx3.8/42, mbtmp4.6/20, Error ellipse: s-maj=18.2km s-min=9.6km az=142.0
NEIC 04 21:41:44.9±1.9, 17.°9S±0.°1×178.°5W±0.°1, h561km±7km, mb4.3/67, Error ellipse: s-maj=20.5km s-min=15.3km az=134.0
BGR 04 21:41:44.2±0.0, 18.°43S×177.°91W, h560km
ISC 04 21:41:46.2±0.4, 17.°92S±0.°08×178.°44W±0.°08, h579km, n183, σ1§16/164, mb4.3/46, 20C-6D, Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSVF Nonsavu 3.35 273 P P 21 43 05.3 -0.6
AFI Afiamalu 7.55 59 P P 21 43 38.8 -1.9
16nm,0.3s,baz=316,slow=1.8,SNR=16
AFI S S 21 45 10.2 -4.2
2.5nm,0.3s,baz=288,slow=20,SNR=2.6
AFI Afiamalu 7.55 59 P P 21 43 38.2 -2.5
AFI S S 21 45 14.5 +0.2
FUNA Funafuti 9.62 346 P P 21 43 57.2 -3.6
RAO Raoul Island 11.29 178 P P 21 44 16.1 -1.5
DZM Mont Dzumac 14.79 251 P P 21 44 50.7 -2.5
1.9nm,0.3s,baz=109,slow=24,SNR=12
NOUC Port Laguerre 14.93 251 P P 21 44 52.4 -2.0
OUZ Omahuta 18.63 201 P P 21 45 30.6 +2.3
URZ Urewera 20.64 190 P P 21 45 44.4 -2.0
19nm,0.6s,baz=23,slow=5.1,SNR=13
URZ Urewera 20.64 190 P P 21 45 45.7 -0.8
KHZ Kahutara 25.36 194 P P 21 46 27.2 -1.1
LTZ Lake Taylor 26.01 196 P P 21 46 33.1 -1.2
OXZ Oxford 26.58 196 P P 21 46 38.6 -0.6
LBZ Lake Benmore 28.07 197 P P 21 46 50.7 -1.5
WKZ Wanaka 28.81 199 P P 21 46 57.9 -0.8
MLZ Mavora Lakes 29.58 199 P P 21 47 06.0 +0.8
ARMA Armidale 29.91 240 P P 21 47 08.5 +0.1
TOO Toolangi 37.14 231 P P 21 48 08.9 0.0
STKA Stephens Creek 38.60 241 P P 21 48 21.2 +0.5
8.9nm,0.5s,baz=94,slow=11,SNR=24
STKA Stephens Creek 38.60 241 P P 21 48 20.6 -0.2
WRA Warramunga Ar 44.60 260 P P 21 49 07.4 -0.8
1.1nm,0.3s,baz=91,slow=6.8,SNR=9.3
WRA PcP PcP 21 50 38.9 +0.5
0.9nm,0.6s,baz=93,slow=3.6,SNR=2.8
AS31 Alice Springs 44.76 254 P P 21 49 08.4 -0.9
ASAR Alice Springs 44.76 254 P P 21 49 09.1 -0.4
15nm,0.5s,baz=89,slow=8.3,SNR=250
ASAR PcP PcP 21 50 39.3 +0.3
1.2nm,0.5s,baz=106,slow=3.8,SNR=6.2
ASAR ScP ScP 21 53 39.5 +2.9
0.8nm,0.9s,baz=98,slow=3.9,SNR=4.0
ASAR S S 21 55 01.4 -3.8
1.5nm,1.0s,baz=95,slow=16,SNR=5.8
ASAR Alice Springs 44.76 254 P P 21 49 08.0 -1.4
MJAR Matsushiro Arr 67.90 323 P P 21 51 47.4 -0.5
4.1nm,0.6s,baz=144,slow=6.1,SNR=12
MAT Matsushiro 67.90 323 P P 21 51 47.6 -0.3
PETK Petropavlovsk- 73.68 345 P P 21 52 21.6 +0.1
6.1nm,0.6s,baz=134,slow=8.2,SNR=14
PETK Petropavlovsk- 73.68 345 P P 21 52 21.8 +0.3
USRK Ussuriysk Ar. 76.61 326 P P 21 52 39.4 +1.5
1.5nm,0.6s,baz=137,slow=5.2,SNR=7.1
ISA Isabella, Lake 77.85 46 P P 21 52 45.0 +0.1
ISA IAmb IAmb 21 52 48.1
comp=Z,8.1nm,0.9s
CMB Columbia Colle 77.87 43 IAmb IAmb 21 52 47.7
comp=Z,10nm,1.1s
YBH Yreka Blue Hor 78.55 39 P P 21 52 50.7 +2.1
comp=Z,5.8nm,0.8s,baz=146,slow=0.8,SNR=19
YBH Yreka Blue Hor 78.55 39 P P 21 52 49.0 +0.3
WAKR Walker 78.75 43 IAmb IAmb 21 52 53.1
comp=Z,8.3nm,0.9s
PNTR Pine Nut 78.97 43 IAmb IAmb 21 52 54.1
comp=Z,15nm,0.8s
YERR Yerington 79.14 43 IAmb IAmb 21 52 54.4
comp=Z,8.8nm,0.6s
NVAR Mina Array Bea 79.45 44 P P 21 52 55.6 +2.0
comp=Z,4.7nm,0.7s,baz=224,slow=8.7,SNR=19
NVAR Mina Array Bea 79.45 44 P P 21 52 54.8 +1.2
NV11 Mina Array Sit 79.55 44 IAmb IAmb 21 52 57.0
comp=Z,10nm,1.1s
MOD Modoc Plateau 80.11 40 IAmb IAmb 21 52 59.7
comp=Z,7.9nm,0.7s
WHN Wuhan 80.59 306 P P 21 53 05.2 +5.8
PINE Pine Mountain 80.82 38 IAmb IAmb 21 53 03.8
comp=Z,11nm,0.9s
WVOR Wild Horse Val 81.44 40 IAmb IAmb 21 53 06.7
comp=Z,11nm,1.1s
GAMB Gambell 81.60 3 IAmb IAmb 21 53 05.3
comp=Z,5.4nm,0.6s
TUC Tucson 81.73 52 P P 21 53 06.6 +1.2
TUC IAmb IAmb 21 53 09.4
comp=Z,8.5nm,1.2s
I07A Izee 81.83 39 IAmb IAmb 21 53 08.6
comp=Z,8.4nm,0.8s
J08A Circle Bar Ran 82.05 40 IAmb IAmb 21 53 09.6
comp=Z,12nm,1.2s
X16A Lo Mia Camp, P 82.21 50 IAmb IAmb 21 53 11.6
comp=Z,8.2nm,0.9s
319A Douglas 82.46 54 IAmb IAmb 21 53 13.1
comp=Z,9.3nm,0.8s
ELK Elko 82.69 43 P P 21 53 11.8 +1.6
comp=Z,4.0nm,0.9s,baz=245,slow=4.0,SNR=13
LTY Liberty 83.00 35 IAmb IAmb 21 53 13.7
comp=Z,10nm,1.1s
HAWA Hanford 83.13 37 IAmb IAmb 21 53 14.8
comp=Z,12nm,1.1s
HPIG 83.46 59 P P 21 53 14.7 +0.4
BMO Blue Mountains 83.57 39 P P 21 53 15.0 +0.7
MFID Camas Ranch 83.70 41 IAmb IAmb 21 53 17.9
comp=Z,6.1nm,1.1s
BJT Baijiatuau 83.76 315 P P 21 53 14.2 -1.0
D08A Wollman Farm, 83.86 36 IAmb IAmb 21 53 18.2
comp=Z,7.8nm,1.0s
BARN Barnard Glacie 84.05 17 IAmb IAmb 21 53 17.7
comp=Z,6.4nm,0.8s
F10A Beach Ranch, E 84.23 38 IAmb IAmb 21 53 20.3
comp=Z,9.7nm,0.8s
B08A Colville Reser 84.37 35 IAmb IAmb 21 53 19.9
comp=Z,5.6nm,0.8s
MCK McKinley 84.56 13 IAmb IAmb 21 53 19.5
comp=Z,10nm,1.0s
WRH Wood River Hil 85.39 13 IAmb IAmb 21 53 24.2
comp=Z,10.0nm,1.0s
CCB Clear Creek Bu 85.60 13 IAmb IAmb 21 53 25.5
comp=Z,5.6nm,0.9s
BCAR Beaver Creek A 85.67 16 P P 21 53 23.1 -1.0
IMAR Indian Mountai 85.70 10 P P 21 53 24.1 0.0
ILAR Eielson Array 85.91 13 P P 21 53 24.7 -0.4
comp=Z,1.9nm,0.4s,baz=224,slow=4.9,SNR=38
ILAR Eielson Array 85.91 13 P P 21 53 25.3 +0.2
TX31 Lajitas Ar. Si 86.03 58 IAmb IAmb 21 53 30.7
comp=Z,7.4nm,0.9s
TX32 Lajitas Array 86.03 58 IAmb IAmb 21 53 30.7
comp=Z,7.5nm,0.9s
TXAR Lajitas Array 86.03 58 P P 21 53 29.6 +3.0
comp=Z,5.2nm,0.7s,baz=218,slow=6.2,SNR=47
TXAR Lajitas Array 86.03 58 P P 21 53 28.9 +2.3
ANMO Albuquerque 86.13 52 P P 21 53 28.8 +1.7
comp=Z,2.5nm,1.0s,baz=221,slow=5.4,SNR=4.5
XAN Xi'an 86.24 307 P P 21 53 28.7 +1.2
XAN pP PcP 21 53 36.8 +7.7
FXWY Fox Creek 86.84 42 IAmb IAmb 21 53 34.3
comp=Z,4.9nm,1.0s
LRM Limekiln Ridge 87.00 40 P P 21 53 31.9 +0.9
QLMT Earthquake Lak 87.15 41 P P 21 53 33.1 +1.4
HHC Hu-ho-hao-te 87.26 314 eP P 21 53 36.1 +3.9
PDAR Pinedale Array 87.38 43 P P 21 53 34.3 +1.4
comp=Z,2.6nm,0.5s,baz=218,slow=3.8,SNR=21
H17A Grant Village 87.48 42 IAmb IAmb 21 53 37.4
comp=Z,6.8nm,0.8s
BMAR Burnt Mountain 88.68 12 P P 21 53 38.0 -0.1
CMAR Chiang Mai Arr 88.86 290 P P 21 53 41.5 +1.6
comp=Z,1.1nm,0.8s,baz=97,slow=3.6,SNR=6.8
SNAA Sanae 90.59 179 P P 21 53 47.9 +0.8
VNA3 Neumayer Olymp 90.73 176 P P 21 53 48.9 +1.2
LZH Lanzhou 90.87 308 ⇓iP P 21 53 50.7 +1.6
LZH pP pP 21 55 55.6 +0.4
LZH sP sP 21 56 51.2 -1.8
LZH PP PP 21 57 39.8 +3.8
INK Inuvik 91.90 15 P P 21 53 53.2 +0.3
comp=Z,4.4nm,0.9s,baz=213,slow=3.2,SNR=11
INK Inuvik 91.90 15 P P 21 53 53.0 +0.2
SONM Songino Array 93.54 319 P P 21 54 01.6 +0.5
comp=Z,0.4nm,0.7s,baz=134,slow=4.7,SNR=4.2
YKA Yellowknife Ar 94.36 25 P P 21 54 04.6 +0.4
comp=Z,1.2nm,0.7s,baz=244,slow=4.7,SNR=18
ZALV Zalesovo Beam 108.22 322 PKiKP PKiKP 21 59 08.2 -0.7
comp=Z,0.5nm,0.5s,baz=241,slow=1.5,SNR=3.6
MKAR Makanchi Array 109.12 314 PKiKP PKiKP 21 59 10.3 -0.6
comp=Z,0.6nm,0.5s,baz=75,slow=1.6,SNR=21
ARCES ARCESS Array B 126.32 350 PKP PKPdf 21 59 43.2 +0.1
comp=Z,2.8nm,0.7s,baz=13,slow=1.2,SNR=12
GEYT Alibeck 127.02 304 PKP PKiKP 21 59 46.1 +0.1
comp=Z,1.0nm,0.8s,baz=299,slow=1.5,SNR=4.6
GEYT Alibeck 127.02 304 PKPdf 21 59 45.0 -0.5
FINES FINESS Array B 133.19 344 PKP PKPdf 21 59 56.5 +0.2
comp=Z,2.5nm,0.9s,baz=95,slow=2.1,SNR=5.0
AKASG Malin Array Be 140.56 332 PKhKP PKPpre 22 00 03.9
comp=Z,0.8nm,0.5s,baz=44,slow=4.5,SNR=5.8
AKASG PKP PKiKP 22 00 12.7 -0.3
comp=Z,0.7nm,0.4s,baz=29,slow=3.2,SNR=4.8
SORM Soroca 142.78 330 ⇑P PKPdf 22 00 12.6 -1.7
BSEG Bad Segeberg 143.42 351 ePKPbc PKPdf 22 00 14.6 -0.6
baz=15,slow=2.8
KWP Kalwaria Pacla 144.07 336 ePKP PKPdf 22 00 16.8 +0.3
KWP Kalwaria Pacla 144.07 336 PKPdf 22 00 16.4 -0.2
RUE Ruedersdorf 144.20 347 ePKPbc PKPab 22 00 17.3 +0.6
baz=15,slow=2.8
PRAR RASCA 144.34 331 ⇓P PKPab 22 00 17.1 -0.4
BUR08 Bucovina Ar. S 144.59 332 PKPdf PKPab 22 00 18.3 -0.3
BURAR Bucovina Array 144.61 332 ⇑P PKPab 22 00 19.5 +0.9
BURAR Bucovina Array 144.61 332 PKPab 22 00 18.8 +0.2
BIZ Bicaz 144.70 330 ⇑P PKPab 22 00 19.4 +0.6
TESR Tescani 144.75 330 ⇑P PKPab 22 00 19.1 0.0
BR131 Keskin Array S 144.77 315 PKPdf 22 00 18.0 -0.2
BRTR Keskin Array B 144.77 315 PKP PKPbc 22 00 18.6 -0.1
comp=Z,4.0nm,0.8s,baz=136,slow=2.9,SNR=26
BRTR Keskin Array B 144.77 315 PKPbc 22 00 18.2 -0.5
KOLS Kolonicke sedl 144.80 336 ePKP PKPab 22 00 19.4 +0.2
TOPG Topolog 145.00 326 ⇑P PKPab 22 00 20.1 +0.1
ODBI Odobesti 145.08 328 ⇓P PKPab 22 00 20.1 -0.2
KSP Ksiaz 145.11 344 ePKP PKPab 22 00 20.4 +0.1
NIE Niedzica 145.12 338 ePKP PKPab 22 00 20.5 +0.1
CRVS Cervenica-Dubn 145.13 337 ePKP PKPab 22 00 20.5 0.0
VRI Vrincioaia 145.17 329 ⇑P PKPab 22 00 20.5 -0.3
PLOR Plostina 145.22 329 ⇑P PKPab 22 00 20.4 -0.5
BMR Baia Mare 145.31 334 ⇑P PKPab 22 00 21.3 +0.2
IBBN Ibbenburen 145.34 353 ePKPbc PKPab 22 00 20.8 -0.3
baz=15,slow=2.8
TRPA Tarpa 145.34 335 ⇑P PKPab 22 00 20.7 -0.5
HARR Harsova 145.36 326 ⇑P PKPab 22 00 21.7 +0.2
OSTC Ostas 145.39 343 ePKP PKPab 22 00 21.8 +0.4
CHVC Chvalec 145.41 344 ePKP PKPab 22 00 21.3 -0.2
CLL Collm 145.47 347 ePKPbc PKPab 22 00 20.9 -0.7
baz=15,slow=2.8
CLL Collm 145.47 347 i PKPbc PKPab 22 00 20.9 -0.7
comp=Z,23nm,1.0s
UPC Upice 145.49 344 ePKP PKPab 22 00 21.4 -0.4
DPC Dobruska-Polom 145.55 343 ePKP PKPab 22 00 21.6 -0.5
KRLC Kraliky 145.67 343 ePKP PKPab 22 00 21.7 -0.9
BRG Berggiesshubel 145.67 346 ePKP PKPab 22 00 21.6 -0.9
comp=Z,7.3nm,0.8s
BRG Berggiesshubel 145.67 346 ePKPbc PKPbc 22 00 20.4 -0.4
baz=15,slow=2.8
DOPR Dopca 145.75 330 ⇓P PKPab 22 00 22.5 -0.5
FBE Freiberg 145.76 347 ePKPbc PKPab 22 00 22.3 -0.5
baz=15,slow=2.8
GTTG Gottingen 145.79 351 ePKPbc PKPbc 22 00 21.6 +0.5
baz=15,slow=2.8
MLR Muntele Rosu 145.82 329 ⇑P PKPab 22 00 22.7 -0.8
MLR ⇑P PKiKP 22 00 23.6 -0.6
MLR Muntele Rosu 145.82 329 PKPbc 22 00 21.7 +0.1
PVCC Panska Ves 145.84 345 ePKP PKPab 22 00 22.5 -0.7
CJR Cluj-Napoca 146.01 332 ⇑P PKPab 22 00 23.2 -0.9
PRA Prague 146.30 345 ePKP PKiKP 22 00 23.6 -1.2
VOIR 146.30 330 ⇓P PKiKP 22 00 23.8 -1.3
DRGR 146.33 333 ⇑P PKiKP 22 00 23.8 +0.9
PRU Pruhonice 146.35 345 ePKP PKPbc 22 00 23.6 +0.9
PRU ex x 22 00 26.2
GOPC GO Pecny, Ondr 146.35 345 ePKP PKPbc 22 00 23.6 +0.8
MOX Moxa 146.37 348 ePKPbc PKiKP 22 00 24.1 -0.9
baz=15,slow=2.8
VRAC Vranov 146.41 342 ePKP PKiKP 22 00 24.7 -0.4
VRAC Vranov 146.41 342 ⇓P PKPab 22 00 27.1 +1.5
VYHS Vyhne 146.42 339 ePKP PKiKP 22 00 24.2 -1.0
VYHS e 22 00 26.6
TANN Tannenbergstha 146.42 347 ePKPbc PKiKP 22 00 24.0 -1.2
baz=15,slow=2.8
UBBA Unterbreizbach 146.49 350 ePKPbc PKPbc 22 00 23.8 +0.9
baz=15,slow=2.8
GUNZ Gunzen 146.50 347 ePKPbc PKiKP 22 00 24.5 -0.8
baz=15,slow=2.8
PSZ Piszkesteto 146.53 337 PKPbc 22 00 23.0 -0.4
ARR Arges 146.55 330 ⇑P PKiKP 22 00 25.1 -0.5
WERN Wernitzgruen 146.56 347 ePKPbc PKiKP 22 00 24.4 -1.1
baz=15,slow=2.8
KRUC Moravsky 146.69 342 ePKP PKPbc 22 00 24.4 +0.7
MANZ Manzenberg 146.90 348 ePKPbc PKPbc 22 00 25.5 -0.6
baz=15,slow=2.8
MODS Modra-Piesok 147.03 341 ePKP PKPbc 22 00 25.1 +0.4
ROTZ Rotzenmuhle 147.09 347 ePKPbc PKiKP 22 00 25.7 -0.8
baz=15,slow=2.8
SIRR Siria 147.19 334 ⇑P PKiKP 22 00 26.0 -0.8
TNS Taunus Mts 147.30 352 ePKPbc PKiKP 22 00 26.6 -0.4
baz=15,slow=2.8
KHC Kasperske Hory 147.38 345 ePKP PKiKP 22 00 26.4 -0.8
KHC ex x 22 00 29.3
GZR Gura Zlata 147.39 332 ⇑P PKPbc 22 00 26.2 +0.4
GEC2 GERESS Array S 147.61 345 PKPbc PKiKP 22 00 27.0 -0.7
baz=15,slow=2.8
GERES GERESS Array B 147.61 345 PKPbc PKiKP 22 00 27.0 -0.7
comp=Z,6.5nm,0.7s,baz=25,slow=3.2,SNR=49

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GERES	GERESS Array B	147.61	345		PKPbc	22 00 26.6	+0.3
BZS	Buzias	147.73	333	⇑P	PKPbc	22 00 26.9	+0.4
CONA	Conrad Observa	147.86	342	ePKiKP	PKiKP	22 00 28.0	-0.3
	comp=Z,4.6nm,0.6s,SNR=7.5						
PLVB	Pleven	147.99	327	⇑P	PKiKP	22 00 27.7	-0.8
FUR	Furstenfeldbru	148.81	347	ePKPbc	PKiKP	22 00 30.4	+0.2
	baz=15,slow=2.8						
FUR				ePKPab	PKPab	22 00 36.3	+1.0
	baz=15,slow=2.8						
RJOB	Jochberg	148.87	345	ePKPbc	PKiKP	22 00 30.2	-0.1
	baz=15,slow=2.8						
RJOB				ePKPab	PKPab	22 00 37.3	+1.6
	baz=15,slow=2.8						
BFO	Black Forest	149.17	351	ePKPbc	PKPbc	22 00 30.1	0.0
	baz=15,slow=2.8						
BFO				ePKPab	PKPab	22 00 37.3	+0.5
	baz=15,slow=2.8						
VTS	Vitosha	149.25	328	⇑P	PKiKP	22 00 31.2	-0.2
KBA	Koelnbreinsper	149.34	344	ePKiKP	PKPbc	22 00 30.7	+0.1
	comp=Z,3.4nm,0.5s,SNR=4.6						
UBR	Ueberruh	149.50	349	ePKPbc	PKiKP	22 00 32.2	+0.6
	baz=15,slow=2.8						
WATA	Walderalm	149.53	347	i PKiKP	PKiKP	22 00 31.4	-0.4
RETA	Reutte	149.56	348	ePKiKP	PKiKP	22 00 31.8	0.0
	comp=Z,2.8nm,0.5s						
MOTA	Moosalm	149.62	347	ePKiKP	PKiKP	22 00 31.8	-0.2
	comp=Z,5.0nm,0.9s,SNR=4.3						
SQTA	Sankt Quirin	149.72	347	ePKiKP	PKiKP	22 00 32.3	+0.1
	comp=Z,9.2nm,0.6s,SNR=7.2						
ABTA	Abfaltersbach	149.86	345	ePKiKP	PKiKP	22 00 31.9	+0.1
	comp=Z,9.1nm,0.7s,SNR=7.9						
DAVA	Damuels	149.92	349	ePKiKP	PKiKP	22 00 32.7	+0.1
	comp=Z,16nm,1.2s						
FETA	Feichten	150.01	347	ePKiKP	PKiKP	22 00 33.0	+0.2
	comp=Z,5.6nm,0.8s						
FUORN	Ofenpass-Fuorn	150.49	348		PKiKP	22 00 34.6	+0.6
FNA	Florina	151.54	327		PKiKP	22 00 35.7	-0.3
ESDC	Sonseca Array	157.80	11	PKPab	PKPab	22 01 14.2	+0.3
	comp=Z,0.4nm,0.5s,baz=338,slow=3.5,SNR=3.1						
TORD	Torodi Ar. Bea	175.25	182	PKPab	PKPab	22 02 32.3	+0.9
	comp=Z,0.3nm,0.6s,baz=186,slow=4.1,SNR=4.1						

*IDC **04** 21:47:14.2±2.1, 17.̊38S×69.̊85W, h140km±15km, mb3.4/4, mb1 3.6/6, mb1mx3.2/43, mbtmp3.9/6, Error ellipse: s-maj=34.6km s-min=11.5km az=108.0*

ISC 04 21:47:11.8±1.2, 17.̊34S±0.̊08×70.̊1W±0.̊1, h117km, n8, σ1.̊65/10, mb3.7/4, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	2.15	61	P	Pn	21 47 49.9	+2.2
	22nm,0.3s,baz=290,slow=5.0,SNR=336						
LPAZ				S	Sn	21 48 16.1	+1.1
	5.6nm,0.3s,baz=233,slow=5.6,SNR=11						
LPAZ				LR	LR	21 48 47.6	
	comp=Z,35nm,21.3s,baz=39,slow=47						
LVC	Limon Verde	5.36	168	P	Pn	21 48 31.9	+2.0
	0.8nm,0.3s,baz=8.7,slow=13,SNR=6.2						
LVC				S	Sn	21 49 30.8	+0.1
	2.4nm,0.3s,baz=109,slow=23,SNR=20						
SIV	San Ignacio	8.75	82	P	Pn	21 49 14.4	-1.2
	3.9nm,0.3s,baz=276,slow=12,SNR=72						
BDFB	Brasilia	21.24	89	P	P	21 51 48.6	-0.3
	1.6nm,0.3s,baz=256,slow=8.3,SNR=3.2						
PLCA	Paso Flores	23.31	181	P	P	21 52 11.3	+1.8
	1.8nm,0.8s,baz=17,slow=12,SNR=3.4						
TORD	Torodi Ar. Bea	77.07	72	P	P	21 58 50.7	-2.0
	1.3nm,0.6s,baz=257,slow=5.3,SNR=14						
YKA	Yellowknife Ar	86.91	341	P	P	21 59 42.7	-0.4
	0.2nm,0.4s,baz=135,slow=4.4,SNR=6.4						
SONM	Songino Array	149.45	5	PKPbc	PKPbc	22 06 47.2	-0.2
	0.2nm,0.5s,baz=325,slow=2.3,SNR=2.8						

*ATH **04** 22:06:07.3, 38.̊27N×20.̊38E, h10km±1km, ML3.1/3, Error ellipse: s-maj=2.4km s-min=1.1km az=269.0*
*THE **04** 22:06:08.0, 38.̊28N×20.̊39E, h3km±7km, ML2.8/15, Error ellipse: s-maj=7.8km s-min=0.5km az=209.0*

ISC 04 22:06:07.0±1.1, 38.̊26N±0.̊02×20.̊35E±0.̊05, h10km±5km, n32, σ0.̊80/52, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.06	182	P	Pg	22 06 09.5	+0.5
KEF3				S	Sg	22 06 11.2	+0.8
KEF4	Livadi, Kephal	0.06	90	P	Pg	22 06 09.1	+0.1
KEF4				S	Sg	22 06 10.5	0.0
CHV1	Chavriata, Kef	0.08	162	P	Pg	22 06 09.6	+0.4
CHV1				S	Sg	22 06 11.6	+0.8
	35μm,0.3s						
LXR1	Lixouri, Cepha	0.09	130	P	Pg	22 06 09.6	+0.2
LXR1				S	Sg	22 06 11.4	+0.3
	75μm,0.3s						
KEF1	Kardakata, Kep	0.10	78	P	Pg	22 06 09.3	-0.2
KEF1				S	Sg	22 06 10.9	-0.3
ARG2	Argostoli	0.13	126	P	Pg	22 06 10.2	+0.2
ARG2				S	Sg	22 06 12.1	-0.1
	58μm,0.1s						
KEF2	Argostoli. Kep	0.14	131	P	Pg	22 06 10.5	+0.3
KEF2				S	Sg	22 06 12.4	0.0
VLS	Valsamata	0.20	113	P	Pg	22 06 10.9	-0.4
VLS				S	Sg	22 06 13.9	-0.3
	16μm,0.1s						
VLS	Valsamata	0.20	113	P	Pg	22 06 11.1	-0.2
VLS				AML	AML	22 06 14.1	
	comp=E,34564μm,0.1s						
VLS				AML	AML	22 06 14.1	
	comp=N,29164μm,0.2s						
VSK1	VASILIKIADES	0.23	48	P	Pg	22 06 11.5	-0.2
VSK1				S	Sg	22 06 14.8	0.0
	comp=N,4μm,0.1s						
FSK	Fiskardo	0.26	39	P	Pg	22 06 12.3	0.0
FSK				S	Sg	22 06 16.2	+0.3
	comp=N,3μm,0.3s						
FSK	Fiskardo	0.26	39	P	Pg	22 06 12.3	0.0
FSK				S	Sg	22 06 16.2	+0.3
FSK				AML	AML	22 06 16.7	
	comp=N,4585μm,0.5s						
FSK				AML	AML	22 06 16.7	
	comp=E,6593μm,0.1s						
EVGI	Lefkada island	0.43	33	P	Pg	22 06 15.3	-0.3
EVGI				S	Sg	22 06 21.8	+0.5
	comp=E,412nm,0.2s						
EVGI	Lefkada island	0.43	33	P	Pg	22 06 15.3	-0.3
VLMS	Volimes, Zakyn	0.45	147	P	Pg	22 06 15.9	0.0
VLMS				S	Sb	22 06 23.1	-0.9
VLMS				AML	AML	22 06 24.6	
	comp=E,6015μm,0.2s						
VLMS				AML	AML	22 06 25.0	
	comp=N,7484μm,0.3s						
MGNA	Meganis	0.53	41	P	Pg	22 06 16.9	-0.4
LKD2	Lefkada island	0.58	24	P	Pg	22 06 18.2	-0.1
LKD2				S	Sg	22 06 26.2	+0.2
	comp=N,195nm,0.4s						
LKD2	Lefkada island	0.58	24	P	Pg	22 06 18.3	-0.1
AST1	Astakos	0.65	64	P	Pg	22 06 19.0	-0.5
AST1				S	Sg	22 06 28.5	+0.5
	comp=N,1μm,0.4s						
KRI1	kERI	0.70	148	P	Pn	22 06 22.9	-0.1
KRI1				S	Sb	22 06 31.1	+0.1
	comp=N,2μm,0.2s						
PDO	Prodromos	0.74	62	P	Pb	22 06 20.6	-1.4
PDO				S	Sb	22 06 30.9	-1.2
	comp=N,1μm,0.4s						
RLS	Riolos of Patr	0.90	102	P	Pb	22 06 23.1	-1.7
PVO	Paravola	0.99	68	P	Pb	22 06 25.6	-0.7
PVO				S	Sg	22 06 41.3	+2.4
	comp=N,532nm,0.4s						
IGT	Igoumenitsa	1.27	359	P	Pg	22 06 31.8	+0.3
ANX	Ano Chora	1.28	74	P	Pg	22 06 32.4	+0.8
ANX				S	Sb	22 06 49.7	+1.9
	comp=N,292nm,0.6s						
AMT	Artemida-Makis	1.30	124	P	Pg	22 06 33.6	+1.7
SERG	Sergoula	1.35	83	P	Pb	22 06 33.2	+0.8
SERG				S	Sb	22 06 50.8	+1.0
	comp=N,155nm,0.4s						
TRIZ	Trizonia	1.36	85	P	Pn	22 06 31.7	-0.4
KLV	Kalavryta, Ach	1.44	98	P	Pn	22 06 32.0	-1.2
KLV				S	Sb	22 06 52.9	+0.6
	comp=N,65nm,0.7s						
MAKR	Makrakomi, Fth	1.58	61	P	Pg	22 06 38.0	+0.6
ITM	Ithomi	1.65	130	P	Pb	22 06 36.9	-0.6
THL	Klokotos Trika	1.84	44	P	Pb	22 06 42.2	+1.4

IDC 04 22:14:59.7±1.7, 1.̊29S×126.̊75E, h0km, mb3.1/2, mb1 3.6/5, mb1mx3.4/41, mbtmp3.4/5, ML3.1/2, Error ellipse: s-maj=43.2km s-min=28.3km az=68.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.53	85	Pn	Pn	22 16 11.3	+1.7
	baz=282,slow=19						
SIJI				Sn	Sn	22 17 00.6	-2.5
	0.7nm,0.3s,baz=211,slow=19,SNR=2.2						
FITZ	Fitzroy Crossi	16.74	184	Pn	Pn	22 18 55.0	-0.8
	0.1nm,0.3s,baz=19,slow=18,SNR=2.7						
WRA	Warramunga Arr	19.97	159	P	P	22 19 33.6	-0.1
	0.0nm,0.3s,baz=343,slow=11,SNR=1.8						
ASAR	Alice Springs	23.30	163	P	P	22 20 09.3	-0.1
	0.7nm,0.3s,baz=346,slow=13,SNR=2.9						
MKAR	Makanchi Array	61.70	327	P	P	22 25 19.5	-0.3
	0.1nm,0.4s,baz=109,slow=5.9,SNR=1.7						

*IDC **04** 22:17:02.6±4.0, 36.̊45N×140.̊12E, h80km±30km, mb3.1/3, mb1 3.4/4, mb1mx3.0/43, mbtmp3.6/4, Error ellipse: s-maj=47.2km s-min=10.0km az=58.0*
*JMA **04** 22:17:03.9±0.1, 36.̊34N×139.̊96E, h76km±1km, M2.9*

ISC 04 22:17:03.4±0.9, 36.̊34N±0.̊04×139.̊94E±0.̊05, h80km±7km, n15, σ0.̊95/26, mb3.5/3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.23	117	P	Pn	22 17 15.2	-0.1
JYT				eS	Sn	22 17 23.8	-0.3
JAG	Ashikaga	0.40	283	P	Pn	22 17 16.5	+0.2
JAG				eS	Sn	22 17 25.9	0.0
JKT	Katashina	0.70	308	P	Pn	22 17 19.5	+0.3
JKT				eS	Sn	22 17 31.6	+0.8
JRY	Ryogami san	0.90	249	P	Pn	22 17 21.8	+0.6
JRY				eS	Sn	22 17 34.9	+0.4
JFY	Yanaizu	1.08	350	P	Pn	22 17 23.7	+0.2
JHK	Hiroka	1.17	321	P	Pn	22 17 25.1	+0.6
JHK				eS	Sn	22 17 41.3	+0.9
JFT	Otama	1.22	15	P	Pn	22 17 25.6	+0.4
JFT				eS	Sn	22 17 42.5	+1.0
JFK	Kawauchi	1.27	36	P	Pn	22 17 26.5	+0.7
JOD2	Odawara 2	1.27	213	P	Pn	22 17 26.0	+0.2
JOD2				eS	Sn	22 17 42.2	-0.5
MJAR	Matsushiro Arr	1.41	279	P	Pn	22 17 28.0	+0.5
	2.1nm,0.3s,baz=87,slow=17,SNR=89						
MJAR				S	Sn	22 17 47.3	+1.6
	1.1nm,0.3s,baz=251,slow=41,SNR=6.7						
MAT	Matsushiro	1.41	279	P	Pn	22 17 28.2	+0.7
MAT				S	Sn	22 17 44.9	-0.9
JHJ	Hachijo jima 2	3.21	182	P	Pn	22 17 52.0	+0.4
	22nm,0.3s,baz=68,slow=19,SNR=2.4						
JHJ				S	Sn	22 18 31.9	+3.1
	26nm,0.3s,baz=128,slow=19,SNR=2.3						
ZALV	Zalesovo Beam	41.51	313	P	P	22 24 41.7	-0.7
	0.4nm,0.5s,baz=79,slow=9.0,SNR=3.4						
ZALV				PcP	PcP	22 26 38.7	+0.2
	0.3nm,0.4s,baz=107,slow=3.5,SNR=2.6						
MKAR	Makanchi Array	43.49	303	P	P	22 24 58.1	-0.5
	0.2nm,0.6s,baz=101,slow=7.0,SNR=3.6						
WRA	Warramunga Arr	56.22	186	P	P	22 26 34.3	-1.0
	0.3nm,0.7s,baz=0.6,slow=5.0,SNR=3.4						

*IDC **04** 22:23:48.7±1.0, 2.̊14S×128.̊10E, h0km, mb3.9/5, mb1 4.1/8, mb1mx3.8/37, mbtmp4.0/8, ML3.8/3, MS3.3/1, Ms1 3.3/1, ms1mx2.6/31, Error ellipse: s-maj=38.4km s-min=17.5km az=75.0*

ISC 04 22:23:52.8±0.9, 2.̊31S±0.̊07×128.̊2E±0.̊1, h32km, n9, σ2.̊20/11, mb4.0/5, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	3.34	65	Pn	Pn	22 24 43.2	+0.4
	9.0nm,0.3s,baz=260,slow=23,SNR=95						
SIJI				Sn	Sn	22 25 20.9	-0.6
	25nm,0.3s,baz=256,slow=23,SNR=21						
FITZ	Fitzroy Crossi	15.90	189	Pn	P	22 27 37.5	-0.1
	0.1nm,0.3s,baz=171,slow=6.3,SNR=2.2						
WRA	Warramunga Arr	18.51	162	P	Pn	22 28 08.7	+1.7
	0.4nm,0.3s,baz=334,slow=9.6,SNR=15						
WRA				S	Sn	22 31 29.4	-3.6
	0.1nm,0.3s,baz=355,slow=24,SNR=3.3						
PMG	Port Moresby	20.09	111	LR	LR	22 37 47.1	
	comp=Z,81nm,18.2s,baz=274,slow=41						
ASAR	Alice Springs	21.93	166	P	P	22 28 45.9	+2.1
	4.5nm,0.4s,baz=344,slow=11,SNR=54						
ASAR				S	S	22 32 41.1	-3.3
	0.8nm,0.6s,baz=348,slow=17,SNR=5.3						
STKA	Stephens Creek	31.99	158	P	P	22 30 18.4	+2.2
	0.8nm,0.4s,baz=320,slow=11,SNR=4.2						
USRK	Ussuriysk Ar.	46.42	4	P	P	22 32 16.1	-0.3
	1.8nm,0.7s,baz=174,slow=6.3,SNR=5.8						
SONM	Songino Array	53.47	342	P	P	22 33 09.1	-1.0
	0.3nm,0.5s,baz=160,slow=8.2,SNR=3.4						
MKAR	Makanchi Array	63.37	326	P	P	22 34 18.3	-0.8
	0.8nm,0.6s,baz=115,slow=8.4,SNR=12						

*TEH **04** 22:42:59.4, 28.̊35N×57.̊36E, h14km, ML3.7*
*IDC **04** 22:43:03.8±2.5, 28.̊09N×57.̊28E, h71km±32km, mb3.2/9, mb1 3.2/11, mb1mx3.1/48, mbtmp3.5/11, ML3.2/2, Error ellipse: s-maj=22.2km s-min=16.8km az=99.0*
*OMAN **04** 22:43:04.8±0.3, 28.̊01N×57.̊43E, h27km±76km, ml3.9/4, Error ellipse: s-maj=8.7km s-min=4.1km az=326.0*

ISC 04 22:42:58.5±0.7, 28.̊29N±0.̊04×57.̊34E±0.̊06, h10km, n24, σ1.̊36/24, mb3.3/8, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.47	137	e		22 43 40.2	
KHNJ				ePg	Pb	22 43 08.9	-0.1
NIAN	Nian	0.85	212	ePg	Pb	22 43 15.6	+0.1
NIAN				e		22 43 55.5	
GENO	Geno	1.36	230	ePg	Pg	22 43 25.6	+0.9
NGRK	Negar Kerman	1.45	339	ePn	Pn	22 43 25.2	0.0
NGRK				e		22 44 07.6	
CHMN	Cheshme madani	1.57	6	ePn	Pn	22 43 26.9	0.0
CHMN				e		22 44 10.0	
TVBK	TV Kerman	1.76	343	ePn	Pn	22 43 30.3	+0.8
TVBK				e		22 43 58.7	
KHGB	Koh Gabri	2.21	340	ePn	Pn	22 43 37.1	+1.6
KHGB				e		22 44 36.9	
BANOM	Banah	2.54	202	P	Pn	22 43 41.1	+1.3
	SNR=11						
SZD1	Zahaedan-tmp	3.31	68	ePn	Pn	22 43 52.9	+2.3
NHDN	Nehbandan	3.88	37	ePn	Pn	22 43 59.4	+0.9
AJN	Ajban	4.27	210	P	Pn	22 44 05.6	+1.9
WSAR	Wadi Sarin	5.16	167	P	Pn	22 44 16.6	+0.7
	2.4nm,0.3s,baz=339,slow=4.3,SNR=50						
WSAR				S	Sn	22 45 12.6	-3.1
	5.3nm,0.3s,baz=107,slow=23,SNR=8.8						
WSAR	Wadi Sarin	5.16	167	P	Pn	22 44 16.5	+0.5
	SNR=50						
IRAM	Ramesheh	5.55	310	ePn	Pn	22 44 23.3	+1.9
GEYT	Alibeck	9.63	4	P	Pn	22 45 23.3	+6.0
	0.1nm,0.3s,baz=156,slow=11,SNR=4.3						
AAK	Ala-Archa	19.95	40	P	P	22 47 32.4	+1.5
	1.0nm,0.6s,baz=164,slow=7.5,SNR=4.9						
AKTO	Aktyubinsk	22.12	1	P	P	22 47 55.0	+0.9
	1.0nm,0.5s,baz=182,slow=7.5,SNR=5.8						
BRTR	Keskin Array B	22.65	306	P	P	22 47 59.7	-0.3
	0.7nm,1.0s,baz=104,slow=6.1,SNR=2.7						
BVAR	Borovoye Array	26.53	18	P	P	22 48 36.4	+0.1
	0.4nm,0.6s,baz=198,slow=8.9,SNR=5.1						
MKAR	Makanchi Array	26.88	40	P	P	22 48 40.0	+0.5
	0.5nm,0.8s,baz=224,slow=9.6,SNR=5.8						
KURBB	Kurchatov Arra	27.48	30	P	P	22 48 45.2	+0.5
	0.4nm,0.8s,baz=227,slow=8.4,SNR=4.2						
ZALV	Zalesovo Beam	32.57	30	P	P	22 49 29.4	-0.4
	0.7nm,0.3s,baz=247,slow=11,SNR=7.1						
SONM	Songino Array	42.46	49	P	P	22 50 53.2	-0.6
	0.2nm,0.6s,baz=260,slow=8.3,SNR=4.6						
TORD	Torodi Ar. Bea	53.75	266	P	P	22 52 19.1	-2.3
	0.5nm,0.7s,baz=59,slow=7.6,SNR=3.9						

*IDC **04** 22:43:26.1±2.7, 28.̊27N×57.̊22E, h61km±26km, mb3.5/16, mb1 3.7/18, mb1mx3.5/47, mbtmp3.8/18, ML3.6/2, MS2.8/6, Ms1 2.8/6, ms1mx2.6/42, Error ellipse: s-maj=17.4km s-min=14.8km az=116.0*

ISC 04 22:43:22.2±0.6, 28.̊20N±0.̊07×57.̊2E±0.̊1, h24km, n20, σ1.̊45/19, mb3.8/15, MS2.9/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	5.11	165	P	Pn	22 44 40.1	+2.8
	4.6nm,0.3s,baz=14,slow=14,SNR=11						
WSAR				S	Sn	22 45 34.2	-1.4
	7.6nm,0.3s,baz=88,slow=22,SNR=10						
WSAR				LR	LR	22 47 24.3	
	comp=Z,49nm,19.5s,baz=28,slow=46						
GEYT	Alibeck	9.73	4	P	Pn	22 45 44.4	+3.7
	0.3nm,0.3s,baz=191,slow=12,SNR=7.3						
GEYT				LR	LR	22 50 33.6	
	comp=Z,32nm,18.8s,baz=155,slow=44						
MMAI	Mount Meron Ar	19.34	290	LR	LR	22 57 04.2	
	comp=Z,26nm,18.3s,baz=35,slow=42						
AAK	Ala-Archa	20.11	40	P	P	22 47 54.1	-0.2
	2.2nm,0.7s,baz=177,slow=5.3,SNR=8.0						
AAK				LR	LR	22 55 36.0	
	comp=Z,53nm,20.4s,baz=336,slow=36						
ATD	Arta Tunnel	21.34	222	LR	LR	22 58 16.8	
	comp=Z,34nm,19.7s,baz=312,slow=42						
AKTO	Aktyubinsk	22.21	1	P	P	22 48 16.8	0.0
	2.7nm,0.4s,baz=180,slow=6.3,SNR=14						
AKTO				LR	LR	22 57 38.4	
	comp=Z,54nm,19.7s,baz=280,slow=38						
BRTR	Keskin Array B	22.59	307	P	P	22 48 21.9	+0.9
	1.0nm,0.8s,baz=127,slow=8.2,SNR=5.7						
BVAR	Borovoye Array	26.66	18	P	P	22 48 58.5	-0.5
	1.2nm,0.7s,baz=202,slow=9.1,SNR=7.5						
MKAR	Makanchi Array	27.04	40	P	P	22 49 01.3	-1.2
	0.7nm,0.7s,baz=230,slow=8.9,SNR=7.3						
KURBB	Kurchatov Arra	27.62	30	P	P	22 49 06.7	-1.0
	0.8nm,0.9s,baz=231,slow=8.4,SNR=6.5						
ZALV	Zalesovo Beam	32.72	30	P	P	22 49 51.5	-1.1
	1.7nm,0.3s,baz=239,slow=9.6,SNR=11						
GERES	GERESS Array B	39.10	314	P	P	22 50 46.8	-0.8
	0.6nm,0.8s,baz=130,slow=9.1,SNR=3.5						
FINES	FINESS Array B	39.16	337	P	P	22 50 46.5	-1.2
	2.3nm,0.9s,baz=125,slow=9.6,SNR=5.5						
SONM	Songino Array	42.62	49	P	P	22 51 15.3	-1.4
	0.8nm,0.8s,baz=263,slow=8.5,SNR=7.4						
ARCES	ARCESS Array B	45.23	345	P	P	22 51 37.0	-0.1
	1.7nm,0.9s,baz=134,slow=6.4,SNR=3.6						
TORD	Torodi Ar. Bea	53.60	266	P	P	22 52 41.0	-0.7
	1.1nm,0.5s,baz=63,slow=7.6,SNR=12						
BOSA	Boshof	64.24	211	P	P	22 53 55.8	+0.3
	1.5nm,0.9s,baz=5.3,slow=7.6,SNR=4.9						
WRA	Warramunga Arr	88.56	113	P	P	22 56 13.2	-0.1
	0.3nm,0.4s,baz=312,slow=4.1,SNR=2.3						
YKA	Yellowknife Ar	89.38	356	P	P	22 56 15.4	-1.1
	0.4nm,0.7s,baz=2.2,slow=4.6,SNR=7.1						
ASAR	Alice Springs	90.11	117	P	P	22 56 20.1	-0.4
	0.2nm,0.6s,baz=309,slow=4.8,SNR=5.8						

*IDC **04** 22:49:00.9±0.6, 38.̊43N×22.̊03E, h0km, mb4.2/24, mb1 4.2/32, mb1mx4.1/46, mbtmp4.1/32, ML3.6/7, MS3.3/12, Ms1 3.3/12, ms1mx3.1/40, Error ellipse: s-maj=12.6km s-min=11.3km az=174.0*
*THE **04** 22:49:01.9, 38.̊33N×21.̊96E, h10km±1km, ML3.9/18, Error ellipse: s-maj=1.2km s-min=0.5km az=83.0*
*IASPEI **04** 22:49:01.8±0.8, 38.̊34N±0.̊01×21.̊96E±0.̊02, h11km±4km, mb4.4/42, MS3.3/9, Error ellipse: s-maj=2.2km s-min=2.1km az=83.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*ATH **04** 22:49:01.5, 38.̊34N×21.̊97E, h11km±1km, ML3.8/23, Error ellipse: s-maj=1.4km s-min=0.6km az=1.0*
*PDG **04** 22:49:01.9±0.6, 38.̊35N×21.̊98E, h9km, ML3.9/14, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*MED_RC **04** 22:49:01.0±1.9, 38.̊15N×21.̊97E, h15km±1km, MW4.3/13, Moment Tensor Solution. Mantle waves: s13,c17; Duration: 1.̊0 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.94±.59; $M_{\theta\theta}$3.11±.38; $M_{\phi\phi}$-0.17±.33; $M_{r\theta}$-0.71±.41; $M_{r\phi}$-1.02±.23; $M_{\theta\phi}$0.31±.47; Best double couple: $M_0$3.27000×10^{15} NP1:ϕ_s284.00000°, δ38.00000°, λ-94.00000°. NP2:ϕ_s108.00000°, δ52.00000°, λ-87.00000°. Principal axes: T 3.4900, Plg7.0000°, Azm196.0000°; N -0.4500, Plg2.0000°, Azm286.0000°; P -3.0400, Plg83.0000°, Azm35.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
*MOS **04** 22:49:01.6±1.0, 38.̊32N×21.̊94E, h18km, mb4.7/11 Error ellipse: s-maj=6.7km s-min=4.2km az=78.9*
*NEIC **04** 22:49:02.3±1.7, 38.̊35N±0.̊05×21.̊99E±0.̊07, h9km±3km, Error ellipse: s-maj=8.0km s-min=7.4km az=220.0*
*BEO **04** 22:49:04.7±0.7, 38.̊35N×21.̊95E, h17km, ML3.8/7*

ISC 04 22:49:02.4±0.6, 38.̊33N±0.̊01×21.̊97E±0.̊01, h10km±3km, n446, σ1.̊43/511, mb4.4/42, MS3.3/9, 28C-10D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	Trizonia	0.09	67	P	Pg	22 49 04.0	-0.8
TRIZ				S	Sg	22 49 06.2	-0.4
	249μm,0.5s						
TRIZ	Trizonia	0.09	67	P	Pg	22 49 04.1	-0.8
TRIZ				S	Sg	22 49 05.4	-1.2
TRIZ	Trizonia	0.09	67		Pg	22 49 04.0	-0.8
TRIZ					Sg	22 49 06.2	-0.4
LAKA	Lakka	0.09	177	P	Pg	22 49 04.2	-0.7
LAKA				S	Pg	22 49 06.0	+1.0
	62μm,0.7s						
LAKA	Lakka	0.09	177	P	Pg	22 49 04.2	-0.7
LAKA				S	Sg	22 49 05.7	-1.1
LAKA				AML	AML	22 49 07.9	
LAKA				AML	AML	22 49 10.3	
	comp=N,97791μm,0.8s						
LAKA	Lakka	0.09	177		Pg	22 49 06.0	+1.0
SERG	Sergoula	0.10	39	P	Pg	22 49 04.3	-0.8
SERG				S	Pg	22 49 05.9	+0.8
	comp=N,179μm,0.3s						
SERG	Sergoula	0.10	39	P	Pg	22 49 04.4	-0.7
SERG				S	Sg	22 49 06.5	-0.6
SERG				AML	AML	22 49 07.2	
SERG				AML	AML	22 49 08.8	
SERG	Sergoula	0.10	39		Pg	22 49 05.9	+0.8
EFP	Efpalio	0.11	331	P	Pg	22 49 04.3	-0.9
EFP				S	Sg	22 49 06.4	-0.8
	comp=N,365μm,0.3s						
EFP	Efpalio	0.11	331	P	Pg	22 49 04.4	-0.7
EFP				S	Sg	22 49 06.3	-0.9
EFP				AML	AML	22 49 06.8	
EFP				AML	AML	22 49 06.9	
EFP	Efpalio	0.11	331		Pg	22 49 04.3	-0.9
EFP					Sg	22 49 06.4	-0.8
ALIK	Aliki, Aigiali	0.13	123	P	Pg	22 49 05.2	-0.2
ALIK				S	Sg	22 49 08.4	+0.8
ALIK	Aliki, Aigiali	0.13	123		Pg	22 49 05.2	-0.2
ALIK					Sg	22 49 08.4	+0.8
KALE	Kalithea	0.14	66	P	Pg	22 49 05.2	-0.6
KALE	Kalithea	0.14	66	P	Pg	22 49 05.2	-0.6
KALE				S	Sg	22 49 06.7	-1.4
KALE				AML	AML	22 49 10.8	
KALE				AML	AML	22 49 12.4	
KALE	Kalithea	0.14	66		Pg	22 49 05.2	-0.6
UPR	University Cam	0.15	252	P	Pg	22 49 05.2	-0.6
UPR				S	Sg	22 49 08.3	+0.1
UPR	University Cam	0.15	252	P	Pg	22 49 05.4	-0.4
UPR				S	Sg	22 49 08.4	+0.2
UPR	University Cam	0.15	252		Pg	22 49 05.2	-0.6
UPR					Sg	22 49 08.3	+0.1
ANX	Ano Chora	0.26	351	P	Pg	22 49 07.1	-0.7
ANX				S	Sg	22 49 11.6	+0.1
	comp=N,83μm,0.6s						
ANX	Ano Chora	0.26	351	P	Pg	22 49 07.2	-0.6
ANX				S	Sg	22 49 10.2	-1.3
ANX				AML	AML	22 49 15.9	
ANX				AML	AML	22 49 17.6	
ANX	Ano Chora	0.26	351		Pg	22 49 07.1	-0.7
KLV	Kalavryta, Ach	0.32	154	P	Pg	22 49 08.1	-0.7
KLV				S	Sg	22 49 14.2	+1.1
	comp=N,8μm,0.3s						
KLV	Kalavryta, Ach	0.32	154	P	Pg	22 49 08.2	-0.6
KLV				S	Sg	22 49 13.1	0.0
KLV				AML	AML	22 49 15.1	
	comp=E,16239μm,0.3s						

KLV				AML	AML	22 49 19.2	
	comp=N,15441µm,0.4s						
KLV	Kalavryta, Ach	0.32	154		Pg	22 49 07.7	-1.1
DRO	Drossia	0.43	209	P	Pg	22 49 10.4	-0.5
DRO				S	Sg	22 49 15.1	-1.5
	comp=N,39µm,0.5s						
DRO	Drossia	0.43	209	P	Pg	22 49 10.0	-0.8
DRO				S	Sg	22 49 16.2	-0.4
DRO				AML	AML	22 49 20.4	
	comp=E,89614µm,0.4s						
DRO				AML	AML	22 49 21.7	
	comp=N,67595µm,0.6s						
DLFA	Delphi	0.44	70	P	Pg	22 49 09.9	-1.1
DLFA				S	Sg	22 49 16.5	-0.3
DLFA				AML	AML	22 49 21.4	
	comp=E,21641µm,0.7s						
DLFA				AML	AML	22 49 21.8	
	comp=N,32016µm,0.7s						
PVO	Paravola	0.45	309	P	Pg	22 49 10.6	-0.6
PVO				S	Sg	22 49 15.9	-1.3
	comp=N,11µm,0.7s						
PVO	Paravola	0.45	309	P	Pg	22 49 10.8	-0.5
RLS	Riolos of Patr	0.48	236	P	Pg	22 49 11.3	-0.5
RLS				S	Sg	22 49 18.7	+0.5
	comp=N,13µm,0.5s						
RLS	Riolos of Patr	0.48	236	P	Pg	22 49 11.3	-0.5
RLS				S	Sg	22 49 18.1	-0.1
RLS				AML	AML	22 49 19.6	
	comp=E,27208µm,0.5s						
RLS				AML	AML	22 49 21.6	
	comp=N,25938µm,0.6s						
EVR	Evrytania	0.60	348	P	Pg	22 49 13.0	-1.0
EVR				S	Sg	22 49 22.6	+0.7
	comp=N,21µm,0.7s						
EVR	Evrytania	0.60	348	P	Pg	22 49 13.1	-0.9
EVR				S	Sg	22 49 21.8	-0.1
EVR				AML	AML	22 49 25.8	
	comp=E,38815µm,0.7s						
EVR				AML	AML	22 49 26.2	
	comp=N,43103µm,0.7s						
PDO	Prodromos	0.68	294	P	Pg	22 49 14.2	-1.2
PDO				S	Sg	22 49 23.8	-0.5
	comp=N,14µm,0.3s						
PDO	Prodromos	0.68	294	P	Pg	22 49 15.5	0.0
AXAR	Agios Charalam	0.69	51	P	Pg	22 49 15.0	-0.8
AXAR				AML	AML	22 49 29.5	
	comp=E,69891µm,0.3s						
AXAR				AML	AML	22 49 33.2	
	comp=N,54192µm,0.5s						
MAKR	Makrakomi, Fth	0.69	10	P	Pg	22 49 14.8	-1.0
MAKR				S	Sb	22 49 26.7	+0.6
	comp=N,16µm,0.6s						
MAKR	Makrakomi, Fth	0.69	10	P	Pg	22 49 15.1	-0.7
MAKR				AML	AML	22 49 27.9	
	comp=E,44615µm,0.6s						
MAKR				AML	AML	22 49 29.9	
	comp=N,19149µm,0.4s						
AST1	Astakos	0.72	287	P	Pg	22 49 15.7	-0.7
AST1				S	Sb	22 49 27.5	+0.5
	comp=N,11µm,0.4s						
PROD	Prodromos	0.73	95	P	Pg	22 49 15.8	-0.8
PROD	Prodromos	0.73	95	P	Pg	22 49 15.7	-0.9
PROD				S	Sg	22 49 26.2	+0.1
PROD				AML	AML	22 49 32.7	
	comp=E,12939µm,0.6s						
PROD				AML	AML	22 49 32.9	
	comp=N,11664µm,0.4s						
AGG	Agios Georgios	0.74	22	P	Pg	22 49 15.1	-1.7
AGG	Agios Georgios	0.74	22	P	Pg	22 49 15.4	-1.4
AGG				S	Sg	22 49 26.0	-0.6
AGG				AML	AML	22 49 30.4	
	comp=N,9766µm,0.5s						
AGG				AML	AML	22 49 38.1	
	comp=E,9091µm,0.7s						
AGG	Agios Georgios	0.74	22	P	Pg	22 49 15.3	-1.5
AGG	Agios Georgios	0.74	22		Pg	22 49 15.1	-1.7
AGG	Agios Georgios	0.74	22	P	Pg	22 49 15.1	-1.7
AMT	Artemida-Makis	0.82	195	P	Pg	22 49 17.6	-0.7
AMT				S	Sg	22 49 28.5	-0.6
	comp=E,8µm,0.5s						
AMT	Artemida-Makis	0.82	195	P	Pg	22 49 17.5	-0.8
AMT				AML	AML	22 49 35.4	
	comp=E,13949µm,0.3s						
AMT				AML	AML	22 49 36.7	
	comp=N,15736µm,0.5s						
LTK	Loutraki	0.84	111	P	Pg	22 49 18.0	-0.6
LTK	Loutraki	0.84	111	P	Pg	22 49 18.1	-0.6
LOUT	Loutraki	0.86	113	P	Pg	22 49 18.5	-0.5
LOUT	Loutraki	0.86	113	P	Pg	22 49 18.5	-0.5
LKR	Lokris	0.87	68	P	Pg	22 49 17.5	-1.6
LKR	Lokris	0.87	68	P	Pg	22 49 18.3	-0.8
LKR				AML	AML	22 49 35.8	
	comp=E,8622µm,0.5s						
LKR				AML	AML	22 49 36.1	
	comp=N,10852µm,0.5s						
MGNA	Meganis	0.98	290	P	Pg	22 49 19.8	-1.5
MGNA				AML	AML	22 49 38.7	
	comp=N,5813µm,0.8s						
MGNA				AML	AML	22 49 47.2	
	comp=E,5656µm,0.6s						
VLX	Vlachokerasia	1.01	161	P	Pg	22 49 20.4	-1.5
VLX	Vlachokerasia	1.01	161	P	Pg	22 49 20.6	-1.2
VIL2	Platees	1.03	96	P	Pn	22 49 22.7	-0.1
VILL	Villia	1.07	99	P	Pb	22 49 22.7	-0.2
EVGI	Lefkada island	1.07	286	P	Pb	22 49 21.2	-1.8
EVGI	Lefkada island	1.07	286	P	Pb	22 49 21.6	-1.4
VLS	Valsamata	1.10	262	P	Pb	22 49 21.8	-1.7
VLS	Valsamata	1.10	262	P	Pb	22 49 22.0	-1.5
VLS				AML	AML	22 49 43.6	
	comp=N,13432µm,0.4s						
VLS				AML	AML	22 49 44.0	
	comp=E,7556µm,0.4s						
FSK	Fiskardo	1.12	277	P	Pb	22 49 21.6	-2.1
FSK	Fiskardo	1.12	277	P	Pb	22 49 21.5	-2.2
LKD2	Lefkada island	1.13	294	P	Pb	22 49 23.0	-0.9
LKD2	Lefkada island	1.13	294	P	Pb	22 49 23.1	-0.9
VLMS	Volimes, Zakyn	1.13	247	P	Pb	22 49 22.8	-1.2
VLMS				AML	AML	22 49 47.0	
	comp=E,11698µm,0.3s						
VLMS				AML	AML	22 49 48.4	
	comp=N,28126µm,0.7s						
KRI1	kERI	1.13	234	P	Pb	22 49 22.7	-1.3
ITM	Ithomi	1.15	182	P	Pb	22 49 23.1	-1.2
ITM				S	Sn	22 49 40.5	+0.2
ITM	Ithomi	1.15	182	P	Pb	22 49 23.1	-1.2
ITM				AML	AML	22 49 45.9	
	comp=N,5357µm,0.5s						
ITM				AML	AML	22 49 56.9	
	comp=E,6190µm,0.9s						
ITM	Ithomi	1.15	182	eP	Pb	22 49 22.9	-1.4
ITM	Ithomi	1.15	182	Pn	Pb	22 49 22.9	-1.4
KEF2	Argostoli. Kep	1.18	262	P	Pb	22 49 23.2	-1.6
KEF1	Kardakata, Kep	1.18	268	P	Pb	22 49 23.3	-1.6
THL	Klokotos Trika	1.23	1	P	Pn	22 49 24.3	-1.3
THL				S	Sn	22 49 43.3	+1.0
	comp=E,2µm,0.9s						
THL	Klokotos Trika	1.23	1	P	Pn	22 49 24.8	-0.8
THL				AML	AML	22 49 49.8	
	comp=E,4357µm,1.0s						
THL				AML	AML	22 49 51.2	
	comp=N,2832µm,0.6s						
KLMT	Kalamata	1.27	177	P	Pn	22 49 25.3	-0.8
KLMT				S	Sb	22 49 41.4	-1.3
	comp=N,3µm,1.1s						
KEF3	Kipouria, Keph	1.28	265	P	Pn	22 49 24.1	-2.2
DID	Didima	1.30	129	P	Pn	22 49 25.8	-0.7
DID				S	Sb	22 49 43.5	0.0
	comp=N,4µm,0.6s						
DID	Didima	1.30	129	P	Pn	22 49 26.3	-0.2
MRKA	Markates	1.32	73	P	Pn	22 49 26.3	-0.5
MRKA	Markates	1.32	73	P	Pn	22 49 26.3	-0.5
KRND	KRANIDI	1.33	135	P	Pn	22 49 26.5	-0.4
KRND	KRANIDI	1.33	135	P	Pn	22 49 26.6	-0.4
LRSO	Larissa Observ	1.38	14	P	Pn	22 49 27.7	+0.1
NEO	Neokhori	1.38	45	P	Pn	22 49 27.5	-0.2
NEO				S	Sn	22 49 44.7	-1.3
NEO	Neokhori	1.38	45	P	Pn	22 49 26.9	-0.7
XOR	Xorichti	1.41	42	P	Pn	22 49 27.1	-0.9
XOR	Xorichti	1.41	42	P	Pn	22 49 27.6	-0.4
ATH	Athens Observa	1.42	104	P	Pn	22 49 28.3	+0.1
ATH				S	Sn	22 49 44.9	-2.0
	comp=N,2µm,0.5s						
ATH	Athens Observa	1.42	104	P	Pn	22 49 28.3	+0.1
SKIA	Skiathos	1.44	54	P	Pn	22 49 28.1	-0.3
SKIA	Skiathos	1.44	54	P	Pn	22 49 28.1	-0.3
PYL	PYLOS	1.45	187	P	Pn	22 49 28.2	-0.3
PYL	PYLOS	1.45	187	P	Pn	22 49 28.4	-0.2
ATHU	Athens Univers	1.47	104	P	Pn	22 49 28.9	0.0
ATHU	Athens Univers	1.47	104	P	Pn	22 49 29.0	0.0
VLY	Voula,Athens	1.52	108	P	Pn	22 49 29.6	+0.1
VLY	Voula,Athens	1.52	108	P	Pn	22 49 29.7	+0.2
VLY				AML	AML	22 49 58.9	
	comp=E,2811µm,0.4s						
VLY				AML	AML	22 50 05.0	
	comp=N,2993µm,0.6s						
PTL	Penteli	1.52	100	P	Pn	22 49 29.4	-0.2
PTL	Penteli	1.52	100	P	Pn	22 49 29.7	+0.1
YDRA	Hydra	1.54	129	P	Pn	22 49 30.2	+0.5
EREA	Eretria	1.54	86	P	Pn	22 49 28.0	-1.9
JAN	Janina	1.59	327	P	Pb	22 49 32.0	+0.2
JAN	Janina	1.59	327	P	Pg	22 49 32.8	0.0
KPRO	Kipourio	1.69	344	P	Pn	22 49 32.4	+0.4
AOS	Alonnisos	1.71	60	P	Pn	22 49 31.5	-0.6
AOS	Alonnisos	1.71	60	eP	Pn	22 49 31.6	-0.6
IGT	Igoumenitsa	1.75	314	ePg	Pg	22 49 35.5	-0.5
VLI	Veliai	1.78	154	P	Pn	22 49 33.5	+0.3
VLI	Veliai	1.78	154	P	Pn	22 49 34.0	+0.8
VLI				AML	AML	22 50 05.0	
	comp=N,3591µm,0.7s						
VLI				AML	AML	22 50 08.5	
	comp=E,4621µm,1.5s						
LIT	Litokhoron	1.81	13	P	Pn	22 49 33.8	+0.2
LIT	Litokhoron	1.81	13		Pn	22 49 33.5	-0.1
LIT	Litokhoron	1.81	13	P	Pn	22 49 33.5	-0.1
KARY	Karystos	1.96	98	P	Pn	22 49 35.9	+0.2
KZN	Kozani	1.98	356	P	Pn	22 49 36.8	+0.8
KTI	Kastanea	2.06	3	P	Pn	22 49 38.1	+0.9
PAIG	Paliouri	2.07	39	P	Pn	22 49 36.3	-0.9
KTHA	Kythira Island	2.25	157	eP	Pb	22 49 41.9	-1.1
PLG	Polygyros	2.34	29	P	Pn	22 49 40.1	-0.8
THE	Thessaloniki	2.42	18	P	Pn	22 49 41.4	-0.6
HORT	Hortiatis	2.42	21	P	Pn	22 49 41.5	-0.6
FNA	Florina	2.49	350	P	Pn	22 49 44.0	+1.0
FNA	Florina	2.49	350	ePn	Pn	22 49 44.6	+1.6
FNA	Florina	2.49	350	eP	Pn	22 49 44.2	+1.2
FNA	Florina	2.49	350		Pn	22 49 44.0	+1.0
FNA	Florina	2.49	350	P	Pn	22 49 44.0	+1.0
OUR	Ouranopolis	2.54	37	P	Pn	22 49 43.1	-0.4
OUR	Ouranopolis	2.54	37	eP	Pn	22 49 42.9	-0.6
GRG	Griva	2.64	7	P	Pn	22 49 45.2	+0.2
SOH	Sokhos	2.71	23	P	Pn	22 49 46.1	+0.2
KNT	Kendrikon	2.92	14	P	Pn	22 49 49.1	+0.3
OHR	Ohrid	2.92	342	i Pn	Pb	22 49 52.1	-2.4
VAY	Valandovo	3.02	9	ePn	Pn	22 49 51.8	+1.6
VAY	Valandovo	3.02	9	i Pn	Pn	22 49 51.1	+0.9
SRS	Serrai	3.05	24	P	Pn	22 49 49.9	-0.7
SRS	Serrai	3.05	24	ePn	Pn	22 49 51.0	+0.4
APE	Apeiranthos	3.09	113	⇓P	Pn	22 49 51.7	+0.5
APE				⇓S	Sn	22 50 29.6	+1.4
APE	Apeiranthos	3.09	113	eP	Pn	22 49 51.7	+0.5
APE	Apeiranthos	3.09	113	i P	Pn	22 49 51.5	+0.3
RODP	Rodopos	3.11	152	eP	Pn	22 49 52.8	+1.3
SIGR	SIGRI	3.16	73	eP	Pn	22 49 52.2	+0.1
CHOS	Chios island	3.21	88	P	Pn	22 49 53.4	+0.5
CHOS	Chios island	3.21	88	eP	Pn	22 49 53.6	+0.7
SCTE	Santa Cesarea	3.23	304	Pn	Pn	22 49 52.0	-1.1
IMMV	Iera Moni Meta	3.29	150	eP	Pn	22 49 55.2	+1.3
NVR	Nevrokopi	3.35	25	P	Pn	22 49 55.1	+0.4
SANT	Santorini	3.40	124	⇓P	Pn	22 49 54.0	-1.4
SANT	Santorini	3.40	124		Pn	22 49 56.0	+0.5
TIR	Tirane	3.42	332	ePn	Pn	22 49 57.1	+1.4
TIR	Tirane	3.42	332	⇓S	Sb	22 50 42.2	-2.5
TIR	Tirane	3.42	332	Pn	Pn	22 49 57.3	+1.6
TIR	Tirane	3.42	332	P	Pn	22 49 57.3	+1.6
MMB	Musomiste	3.52	22	eP	Pn	22 49 57.6	+0.5
KKB	Krupnik	3.63	13	eP	Pn	22 50 00.3	+1.7
SKO	Skopje	3.66	354	ePn	Pn	22 49 58.8	-0.2
IDI	Anoyia	3.83	142	Pn	Pn	22 50 01.9	+0.4
	comp=E,2.8nm,0.3s,baz=179,slow=16,SNR=20						
IDI				Sn	Sn	22 50 43.2	-3.4
	comp=E,5.0nm,0.3s,baz=66,slow=20,SNR=2.7						
IDI	Anoyia	3.83	142	eP	Pn	22 50 01.9	+0.4
GVD	Gavdhos	3.88	153	eP	Pn	22 50 06.3	+4.3
SMG	Samos	3.89	98	P	Pn	22 50 02.9	+0.7
RDO	Rodhopi	3.93	43	eP	Pn	22 50 02.0	-0.7
RZN	Rozhen	3.96	31	eP	Pn	22 50 04.8	+1.5
BLCB	Balcova	3.98	88	eP	Pn	22 50 04.1	+0.6
GELI	Tayfur-Gelibol	4.05	58	eP	Pn	22 50 04.2	-0.2
ALN	Alexandroupoli	4.06	50	Pn	Pn	22 50 03.8	-0.6
ALN	Alexandroupoli	4.06	50	P	Pn	22 50 03.8	-0.6
TIP	Timpagrande	4.16	283	⇓P	Pn	22 50 07.0	+1.0
TIP				⇑S	Sn	22 50 55.4	+0.7
TIP	Timpagrande	4.16	283		Pn	22 50 07.1	+1.2
BOSS	Bosilegrad	4.18	5	ePn	Pn	22 50 06.8	+0.7
ULC	Ulcinj	4.19	331	ePn	Pn	22 50 07.6	+1.3
ULC				eSn	Sn	22 50 56.8	+1.6
LPK	Lapseki	4.23	60	eP	Pn	22 50 07.4	+0.5
KDZ	Kurdzhali	4.24	38	eP	Pn	22 50 05.9	-1.1
PLD	Plovdiv	4.31	28	ePn	Pn	22 50 09.7	+1.8
PLD	Plovdiv	4.31	28	eP	Pn	22 50 10.4	+2.5
VTS	Vitosha	4.39	12	ePn	Pn	22 50 09.8	+0.6
VTS				eSn	Sn	22 50 58.2	-2.2
VTS	Vitosha	4.39	12	⇓P	Pn	22 50 10.4	+1.3
VTS				⇑S	Sn	22 51 02.1	+1.8
VTS	Vitosha	4.39	12	eP	Pn	22 50 10.8	+1.6
VTS	Vitosha	4.39	12		Pn	22 50 09.8	+0.6
VTS	Vitosha	4.39	12	P	Pn	22 50 09.8	+0.6
DRME	Dracevica, Mon	4.40	332	ePn	Pn	22 50 10.4	+1.3
DRME	Dracevica, Mon	4.40	332	ePn	Pn	22 50 10.5	+1.3
DRME				eSn	Sn	22 51 02.3	+1.8
BODT	Bodrum	4.42	105	eP	Pn	22 50 10.9	+1.5
BARS	Barje	4.48	359	ePn	Pn	22 50 12.3	+2.0
PVY	Plav	4.53	341	ePn	Pn	22 50 11.8	+0.8
PVY				eSn	Sn	22 51 04.8	+1.1
PDG	Podgorica	4.59	334	ePn	Pn	22 50 12.4	+0.7
PDG				eSn	Sn	22 51 02.9	-2.2
PDG	Podgorica	4.59	334	⇑P	Pn	22 50 13.6	+1.8
PDG	Podgorica	4.59	334	ePn	Pn	22 50 13.1	+1.4
PDG	Podgorica	4.59	334		Pn	22 50 12.9	+1.2
TTG	Podgorica	4.59	334	ePn	Pn	22 50 12.6	+0.9
TTG				eSn	Sn	22 51 06.7	+1.6
BUM	Brajici-Budva	4.61	330	ePn	Pn	22 50 13.2	+1.1
BUM				eSn	Sn	22 51 07.1	+1.4
AYDB	Zeytinkoy-Aydi	4.68	93	eP	Pn	22 50 14.5	+1.3
MATE	Matera	4.69	301	⇑P	Pn	22 50 14.0	+1.0
DAT	Datca	4.73	108	eP	Pn	22 50 16.3	+2.4
CEL	Celeste	4.78	271	Pn	Pn	22 50 12.9	-1.6
SG1	Sgolgore (BA)	4.80	303	ePn	Pn	22 50 15.2	+0.6
IVA	Berane	4.80	341	ePn	Pn	22 50 15.9	+1.1
IVA				eSn	Sn	22 51 11.4	+0.9
BAI	Bari	4.81	307	ePn	Pn	22 50 15.4	+0.7
CEME	Cevo	4.81	332	ePn	Pn	22 50 15.7	+0.8
CEME				eSn	Sn	22 51 11.7	+1.0
KOME	Kolasin	4.89	338	⇑i Pn	Pn	22 50 17.2	+1.3
KOME				eSn	Sn	22 51 14.6	+2.1
HCY	Herceg Novi	4.89	328	ePn	Pn	22 50 16.2	+0.3
HCY	Herceg Novi	4.89	328	⇑i Pn	Pn	22 50 16.3	+0.3
HCY				eSn	Sn	22 51 14.0	+1.4
SELS	Selova	4.93	353	ePn	Pn	22 50 18.4	+2.0
ZAPS	Zavoj	4.96	6	ePn	Pn	22 50 18.0	+1.1
NKME	Niksic	4.99	334	ePn	Pn	22 50 18.7	+1.4
NKME				eSn	Sn	22 51 16.6	+1.5
KARP	Karpathos	5.00	122	eP	Pn	22 50 19.9	+2.5
KARP	Karpathos	5.00	122		Pn	22 50 20.5	+3.1
NKY	Niksic	5.02	334	ePn	Pn	22 50 18.0	+0.2
NKY				eSn	Sn	22 51 16.8	+1.0
YER	Yerkesik	5.14	101	eP	Pn	22 50 21.7	+2.3
SJES	Sjenica	5.15	344	ePn	Pn	22 50 21.9	+2.3
MANT	Manisa	5.17	86		Pn	22 50 20.0	0.0
TREB	Trebinje	5.18	329	ePn	Pn	22 50 20.1	+0.3
TREB				eSn	Sn	22 51 17.7	-1.9
TREB	Trebinje	5.18	329	ePn	Pn	22 50 19.5	-0.3
BRY	Bratogost	5.26	331	ePn	Pn	22 50 19.2	-1.9
BRY	Bratogost	5.26	331	ePn	Pn	22 50 22.0	+0.9
BRY				eSn	Sn	22 51 23.1	+1.3
ACER	Acerenza	5.26	300		Pn	22 50 22.1	+1.0
BOVS	Bovan	5.30	358	ePn	Pn	22 50 22.8	+1.3
BLKB	Belogradchik	5.31	6	⇑S	Sn	22 51 24.7	+1.7
ARG	Arkhangelos	5.34	111	eP	Pn	22 50 27.1	+5.0
PLE	Pljevlja	5.36	339	ePn	Pn	22 50 23.4	+0.9
PLE				eSn	Sn	22 51 25.6	+1.2
UPM	Unac-Piva	5.39	335	ePn	Pn	22 50 24.7	+1.7
UPM	Unac-Piva	5.39	335	ePn	Pn	22 50 23.8	+0.8
UPM				eSn	Sn	22 51 26.2	+1.0
IVAS	Ivanjica	5.42	346	ePn	Pn	22 50 24.7	+1.5
PLVB	Pleven	5.43	21	⇑P	Pn	22 50 26.0	+2.6
ELND	Elena	5.47	32	⇑P	Pn	22 50 25.6	+1.7
ZAGS	Zajecar	5.48	2	ePn	Pn	22 50 23.8	-0.2
STON	Ston	5.58	326	ePn	Pn	22 50 24.9	-0.4
GRUS	Gruza	5.63	351	ePn	Pn	22 50 27.7	+1.6
RUDO	Rudo	5.64	340	ePn	Pn	22 50 26.3	+0.1
SZH	Strazhica	5.77	30	eP	Pn	22 50 29.3	+1.3
BBLS	Lazići	5.86	341	ePn	Pn	22 50 30.1	+0.8
BBLS	Lazići	5.86	341	ePn	Pn	22 50 30.5	+1.2
FETY	Fethiye	5.90	104	eP	Pn	22 50 34.0	+4.2
TVSB	Tavsanli	5.95	77	eP	Pn	22 50 32.2	+1.7
DIVS	Divibare	5.95	346	ePn	Pn	22 50 31.1	+0.5
DIVS				eSn	Sn	22 51 36.5	-2.3
DIVS	Divibare	5.95	346	ePn	Pn	22 50 31.5	+0.9
TRUS	Trudelj	6.00	349	ePn	Pn	22 50 32.4	+1.2
VAE	Valguarnera	6.04	264	Pn	Pn	22 50 34.7	+2.9
	comp=E,0.4nm,0.3s,baz=7.3,slow=23,SNR=3.8						
VAE				Sn	Sn	22 51 42.1	+1.2
	comp=E,0.7nm,0.3s,baz=168,slow=19,SNR=2.5						
HAPS	Han Pijesak,BI	6.18	339	ePn	Pn	22 50 33.2	-0.6
COPA	Copaceanca	6.29	22	⇑P	Pn	22 50 37.9	+2.8
PAOL	Paolisi	6.32	298		Pn	22 50 36.6	+1.1
BASM	Basmaki-Afyon	6.38	91	eP	Pn	22 50 38.7	+2.2
ELL	Elmali	6.50	102	eP	Pn	22 50 42.9	+4.7
ELL	Elmali	6.50	102		Pn	22 50 38.9	+0.8
ELL	Elmali	6.50	102	P	Pn	22 50 38.9	+0.8
SHUT	Suhut-Afyon	6.74	85	eP	Pn	22 50 45.6	+4.2
ISP	Isparta	6.76	92		Pn	22 50 40.3	-1.4
ISP	Isparta	6.76	92	P	Pn	22 50 40.3	-1.4
KORT	Korkueli	6.78	99	eP	Pn	22 50 46.5	+4.5
CORL	Corleone	6.85	269	Pn	Pn	22 50 42.2	-0.6
SRCK	Saricakaya, Es	6.94	73	eP	Pn	22 50 45.9	+1.9
CLTB	Caltabellotta	6.96	266		Pn	22 50 44.5	+0.1
FRGS	Fruska Gora	7.01	347	ePn	Pn	22 50 45.4	+0.4
FRGS				eSn	Sn	22 52 03.2	-1.5
FRGS	Fruska Gora	7.01	347	ePn	Pn	22 50 44.6	-0.4
GZR	Gura Zlata	7.08	5	⇑P	Pn	22 50 49.1	+3.1
MGRS	Mrkonjic Grad	7.10	330	ePn	Pn	22 50 45.6	-0.7
INTR	Introdacqua	7.19	303		Pn	22 50 49.7	+2.2
ICOR	Ion Corvin	7.26	35	⇑P	Pn	22 50 50.8	+2.4
BZS	Buzias	7.28	358	⇓P	Pn	22 50 50.9	+2.1
ARR	Arges	7.30	15	⇑P	Pn	22 50 50.7	+1.6
BLY	Banja Luka	7.35	332	⇑P	Pn	22 50 50.7	+1.0
BLY	Banja Luka	7.35	332	ePn	Pn	22 50 50.8	+1.2
BLY	Banja Luka	7.35	332		Pn	22 50 49.7	+0.1
MDUB	Mudurnu	7.46	70		Pn	22 50 51.2	0.0
VOIR		7.46	17	⇑P	Pn	22 50 52.9	+1.6
ISR	Istrita	7.59	25	⇑P	Pn	22 50 55.0	+2.0
AQU	L'Aquila	7.68	304	ePn	Pn	22 50 56.8	+2.6
AQU	L'Aquila	7.68	304	Pn	Pn	22 50 54.7	+0.5
AQU	L'Aquila	7.68	304	P	Pn	22 50 54.7	+0.5
MLR	Muntele Rosu	7.74	21	Pn	Pn	22 50 55.3	+0.2
	comp=E,0.2nm,0.3s,baz=195,slow=4.3,SNR=16						
MLR				LR	LR	22 54 06.3	
	comp=E,246nm,21.6s,baz=194,slow=40						
MLR	Muntele Rosu	7.74	21	⇑P	Pn	22 50 57.2	+2.1
SIRR	Siria	7.93	358	⇑P	Pn	22 50 59.4	+1.7
BISRR	Bisoca	8.03	25	⇑P	Pn	22 51 00.9	+1.8
DOPR	Dopca	8.04	17	⇑P	Pn	22 51 02.0	+2.9
NRCA	Norcia	8.10	307		Pn	22 51 02.0	+1.9
TOPG	Topolog	8.11	34	⇑P	Pn	22 51 00.9	+0.9
MORH	Mrgy, Hungar	8.25	344	ePn	Pn	22 51 00.1	-1.9
OZUR		8.26	19	⇓P	Pn	22 51 04.6	+2.5
PLOR	Plostina	8.28	23	⇑P	Pn	22 51 05.1	+2.6
VRI	Vrincioaia	8.32	24	⇑P	Pn	22 51 05.6	+2.7
MURB	Monte Urbino	8.69	307	Pn	Pn	22 51 10.2	+2.1
TESR	Tescani	8.87	21	⇑P	Pn	22 51 12.6	+2.1
CRES	Cresnjev	8.92	329	ePn	Pn	22 51 10.6	-0.6
BIZ	Bicaz	9.12	18	⇓P	Pn	22 51 17.0	+3.0
BR131	Keskin Array S	9.19	78		Pn	22 51 16.7	+1.8
BR131	Keskin Array S	9.19	78	i P	Pn	22 51 16.8	+1.8
BRTR	Keskin Array B	9.19	78	Pn	Pn	22 51 17.6	+2.6
	comp=E,0.4nm,0.3s,baz=253,slow=13,SNR=15						
BRTR				LR	LR	22 55 34.5	
	comp=E,45nm,18.8s,baz=232,slow=43						
BRTR	Keskin Array B	9.19	78		Pn	22 51 14.4	-0.6
LJU	Ljubljana	9.48	327	ePn	Pn	22 51 18.6	-0.3
BURAR	Bucovina Array	9.58	13	⇑P	Pn	22 51 23.0	+2.7
BURAR	Bucovina Array	9.58	13		Pn	22 51 20.7	+0.4
BUR08	Bucovina Ar. S	9.60	13		Pn	22 51 20.2	-0.4
OSSC	Osservatorio P	9.63	306	Pn	Pn	22 51 23.2	+2.3
PSZ	Piszkesteto	9.70	352	⇑P	Pn	22 51 24.7	+2.7
PSZ	Piszkesteto	9.70	352		Pn	22 51 22.5	+0.5
PSZ	Piszkesteto	9.70	352	P	Pn	22 51 22.5	+0.5
SOKA	Soboth	9.78	331	ePn	Pn	22 51 22.7	-0.4
	comp=E,3.9nm,0.5s						
TRPA	Tarpa	9.80	2	⇑P	Pn	22 51 24.6	+1.3
OBKA	Obir	9.84	329	Pn	Pn	22 51 25.8	+1.9
	comp=E,2.1nm,0.3s						
TEOL	Teolo	10.40	316	Pn	Pn	22 51 31.0	-0.5
VYHS	Vyhne	10.41	348	eP	Pn	22 51 35.9	+4.3
VYHS				e		22 53 35.3	
VYHS	Vyhne	10.41	348	ePN	Pn	22 51 35.9	+4.3
VYHS				eSN	Sn	22 53 35.3	+7.1
CRVS	Cervenica-Dubn	10.57	358	eP	Pn	22 51 36.9	+3.1
CRVS	Cervenica-Dubn	10.57	358	ePN	Pn	22 51 36.9	+3.1
KOLS	Kolonicke sedl	10.60	1	eP	Pn	22 51 40.8	+6.6
KOLS	Kolonicke sedl	10.60	1	ePN	Pn	22 51 40.8	+6.6
MODS	Modra-Piesok	10.60	343	eP	Pn	22 51 37.3	+3.1
MODS	Modra-Piesok	10.60	343	ePN	Pn	22 51 37.3	+3.1
KBA	Koelnbreinsper	10.80	327	ePn	Pn	22 51 38.3	+1.3
	comp=E,0.8nm,0.4s						
CTI	Castel Tesino	10.86	319	Pn	Pn	22 51 38.3	+0.4
CTI	Castel Tesino	10.86	319	P	Pn	22 51 38.3	+0.4
ABTA	Abfaltersbach	10.92	323	Pn	Pn	22 51 38.3	-0.4
	comp=E,3.5nm,0.5s						
MOA	Molln	11.05	332	ePn	Pn	22 51 42.5	+2.1
	comp=E,1.0nm,0.3s						
VRAC	Vranov	11.64	342	Pn	Pn	22 51 48.2	-0.2
	comp=E,0.2nm,0.3s,baz=194,slow=10,SNR=6.2						
VRAC	Vranov	11.64	342	⇓P	Pn	22 51 49.5	+1.1
WATA	Walderalm	11.79	323	Pn	Pn	22 51 52.9	+2.3
	comp=E,3.2nm,0.3s						
SQTA	Sankt Quirin	11.88	322	Pn	Pn	22 51 52.4	+0.5
	comp=E,2.0nm,0.3s						
FETA	Feichten	11.98	320	Pn	Pn	22 51 57.3	+4.0
	comp=E,1.2nm,0.5s						
MOTA	Moosalm	12.02	322	Pn	Pn	22 51 53.7	-0.1
	comp=E,3.8nm,0.8s						
GERES	GERESS Array B	12.09	333	Pn	Pn	22 51 54.9	+0.2
	comp=E,0.1nm,0.3s,baz=154,slow=14,SNR=4.4						
GERES				LR	LR	22 57 31.0	
	comp=E,299nm,20.2s,baz=144,slow=42						
GERES	GERESS Array B	12.09	333		Pn	22 51 53.4	-1.2
MMAI	Mount Meron Ar	12.14	112	Pn	Pn	22 51 54.5	-0.9
	comp=E,0.7nm,0.3s,baz=318,slow=11,SNR=7.3						
KHC	Kasperske Hory	12.38	333	ePN	Pn	22 51 59.9	+1.4
KHC	Kasperske Hory	12.38	333	P	Pn	22 52 00.0	+1.4
AKASG	Malin Array Be	13.40	20	Pn	Pn	22 52 10.5	-1.9
	comp=E,0.2nm,0.3s,baz=203,slow=11,SNR=3.2						
AKASG	Malin Array Be	13.40	20	i P	Pn	22 52 15.8	+3.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	Malin Array Si	13.40	20	i P	Pn	22 52 11.8	-0.6
SENIN	Lac Senin/Sane	13.48	311	Pn	Pn	22 52 15.7	+1.8
SENIN				Sn	Sn	22 54 39.1	-4.6
BRG	Berggiesshubel	13.77	338	eP	Pn	22 52 17.2	-0.3
	comp=Z,38nm,2.0s						
BRG	Berggiesshubel	13.77	338	eP	Pn	22 52 17.2	-0.3
BRG				pmax	pmax		
	comp=Z,38nm,2.0s						
CLL	Collm	14.44	337	ePP	P	22 52 34.0	+0.5
	comp=Z,13nm,1.0s						
CLL	Collm	14.44	337	eP	P	22 52 34.0	+0.5
KIV	Kislovodsk	16.57	64	eP	P	22 52 56.3	-1.0
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KBZ	Khabaz	16.67	64	i P	P	22 52 58.5	+0.2
NCK	Nalchik	17.12	66	i P	Pn	22 53 02.2	+0.5
VORD	Divnogorie	17.59	39	eP	P	22 53 09.6	+1.2
VORD				pmax	pmax		
	comp=Z,4.0nm,0.7s						
VSR	Storozhevoye	17.69	38	eP	P	22 53 09.7	+0.2
VSR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GNI	Garni	17.73	77	i P	P	22 53 10.4	+0.2
GNI				pmax	pmax		
	comp=Z,16nm,1.0s						
VRH	Novokhopyorsk	18.95	41	eP	Pn	22 53 26.1	+2.0
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						

OBN Obninsk 19.47 26 eP Pn 22 53 30.2 -0.1
OBN pmax pmax
comp=Z,5.0nm,0.9s
ESBB Sonseca Array 20.18 282 P P 22 53 36.6 -0.4
ESDC Sonseca Array 20.18 282 P P 22 53 37.5 +0.4
comp=Z,4.4nm,0.8s,baz=78,slow=11,SNR=12
VSU Vasula 20.38 7 i P Pn 22 53 40.1 -0.9
VSU pmax pmax
comp=Z,51nm,0.9s
PAB San Pablo 20.49 282 P P 22 53 39.5 -0.9
PAB IAmb IAmb 22 53 45.3
comp=Z,19nm,1.1s
PAB San Pablo 20.49 282 P P 22 53 39.5 -0.9
PAB pmax pmax
comp=Z,19nm,1.2s
HFS Hagfors 22.45 349 P P 22 53 59.5 -1.6
comp=Z,12nm,0.8s,baz=155,slow=11,SNR=18
KONO Kongsberg 22.75 344 P P 22 54 03.7 -0.8
KONO Kongsberg 22.75 344 i P P 22 54 03.8 -0.6
KONO pmax pmax
comp=Z,38nm,1.1s
OSL Oslo 22.78 345 eP P 22 54 04.8 +0.2
FINES FINESS Array B 23.28 5 P P 22 54 07.7 -2.2
comp=Z,2.7nm,0.7s,baz=182,slow=11,SNR=6.5
FINES PcP PcP 22 57 57.0 +0.1
comp=Z,2.5nm,0.9s,baz=151,slow=4.4,SNR=4.7
FINES LR LR 23 02 57.3
comp=Z,97nm,20.9s,baz=229,slow=36
FINES FINESS Array B 23.28 5 P P 22 54 10.0 +0.2
FINES FINESS Array B 23.28 5 P P 22 54 10.0 +0.2
FINES 22 57 57.0
NC602 NORSAR Array S 23.37 347 eP P 22 54 10.2 -0.5
NC602 NORSAR Array S 23.37 347 P P 22 54 10.1 -0.7
NAO01 NORSAR Array S 23.59 346 P P 22 54 12.9 -0.1
NC405 NORSAR Array S 23.69 348 P P 22 54 13.8 -0.2
NB201 NORSAR Array S 23.70 347 P P 22 54 14.2 +0.1
NB2 NORSAR Subarra 23.71 347 P P 22 54 13.1 -1.1
comp=Z,8.9nm,0.9s,baz=159,slow=9.3
NB2 NORSAR Subarra 23.71 347 P P 22 54 13.1 -1.1
baz=159,slow=9.3
NOA NORSAR Array B 23.71 347 P P 22 54 12.9 -1.2
comp=Z,4.9nm,0.6s,baz=168,slow=9.5,SNR=24
NOA LR LR 23 05 43.2
comp=Z,32nm,20.2s,baz=255,slow=42
NBO00 NORSAR Array S 23.78 346 P P 22 54 14.7 -0.2
NC303 NORSAR Array S 23.86 347 P P 22 54 15.7 +0.1
SKAR Skarslia 23.97 343 eP P 22 54 17.4 +0.8
EKA Eskdalemuir Ar 23.98 323 P P 22 54 16.2 -0.5
comp=Z,17nm,0.8s,baz=121,slow=11,SNR=24
ESK Eskdalemuir 23.99 323 P P 22 54 17.1 +0.3
ESK Eskdalemuir 23.99 323 P P 22 54 17.1 +0.3
ESK pmax pmax
comp=Z,35nm,0.9s
NC204 NORSAR Array S 24.01 347 P P 22 54 17.3 +0.2
DOMB Dombas 25.04 346 eP P 22 54 26.5 +0.1
KLMR Klimovskoe 25.09 20 eP P 22 54 26.0 -0.8
KLMR AMP 22 54 34.0
comp=Z,20nm,1.0s
KLMR Klimovskoe 25.09 20 eP P 22 54 26.0 -0.8
KLMR pmax pmax
comp=Z,20nm,1.0s
KIRV Kirov 26.91 32 P P 22 54 42.0 -1.3
comp=Z,12nm,0.9s,baz=259,slow=10,SNR=5.1
KIRV Kirov 26.91 32 P P 22 54 42.0 -1.3
PRGR Permogore 27.54 24 eP P 22 54 48.8 -0.1
PRGR pmax pmax
comp=Z,14nm,1.6s
GEYT Alibeck 28.32 79 P P 22 54 55.9 -0.4
comp=Z,0.5nm,0.6s,baz=254,slow=8.5,SNR=3.6
ABKAR Akbulak array 29.21 56 P P 22 55 04.3 +0.3
ARU Arti 30.19 41 P P 22 55 11.7 -0.8
comp=Z,0.5nm,0.5s,baz=76,slow=10,SNR=3.8
ARU Arti 30.19 41 IAmb IAmb 22 55 29.4
comp=Z,5.0nm,1.1s
ARU Arti 30.19 41c i P P 22 55 12.0 -0.5
ARU 22 56 10.8
ARU S S 23 00 15.3 +3.8
ARU SS SnSn 23 01 49.1 +4.5
ARU pmax pmax
comp=Z,8.0nm,1.3s
KTK1 Kautokeino 30.75 1 eP P 22 55 18.3 +1.0
TOA0 Torodi Ar. Sit 30.88 221 P P 22 55 20.1 +1.1
TOA0 IAmb IAmb 22 55 21.1
comp=Z,4.3nm,0.8s
TORD Torodi Ar. Bea 30.88 221 P P 22 55 20.1 +1.1
comp=Z,4.7nm,0.8s,baz=30,slow=9.3,SNR=30
TORD LR LR 23 07 53.2
comp=Z,35nm,18.6s,baz=15,slow=36
TORD Torodi Ar. Bea 30.88 221 P P 22 55 19.8 +0.8
ARCES ARCESS Array B 31.32 2 P P 22 55 20.9 -1.4
comp=Z,2.3nm,0.7s,baz=182,slow=6.1,SNR=10
ARCES LR LR 23 09 05.1
comp=Z,103nm,18.4s,baz=159,slow=39
ARCES ARCESS Array B 31.32 2 P P 22 55 21.0 -1.4
SVE Sverdlovsk 31.40 41 eP P 22 55 24.0 +0.8
SVE pmax pmax
comp=Z,11nm,1.2s
TRO Tromso 31.41 358 eP P 22 55 24.1 +1.1
BRVK Borovoye 36.08 50 eP P 22 56 05.3 +1.3
BVAR Borovoye Array 36.14 50 P P 22 56 03.9 -0.6
comp=Z,1.3nm,0.8s,baz=273,slow=6.8,SNR=7.6
KK31 Karatay Array 36.69 67 P P 22 56 09.8 +0.5
KK31 IAmb IAmb 22 56 12.5
comp=Z,3.1nm,0.6s
KK31 Karatay Array 36.69 67 P P 22 56 09.8 +0.5
KK31 pmax pmax
comp=Z,3.0nm,0.6s
KKAR Karatay Array 36.69 67 P P 22 56 09.8 +0.5
KKAR Karatay Array 36.69 67 P P 22 56 09.8 +0.5
AAK Ala-Archa 39.65 67 P P 22 56 34.7 +0.3
comp=Z,1.3nm,0.5s,baz=278,slow=18,SNR=7.4
AAK Ala-Archa 39.65 67 IAmb IAmb 22 56 43.7
comp=Z,4.7nm,1.0s
AAK Ala-Archa 39.65 67 i P P 22 56 35.1 +0.7
AAK pmax pmax
comp=Z,5.0nm,1.2s
DBIC Dimbokro 39.79 224 P P 22 56 36.2 +0.6
comp=Z,3.6nm,0.8s,baz=338,slow=5.3,SNR=6.8
DBIC LR LR 23 14 29.1
comp=Z,40nm,18.4s,baz=10,slow=38
DBIC Dimbokro 39.79 224 IAmb IAmb 22 56 38.1
comp=Z,5.1nm,1.1s
TIC Toumodi 39.90 225 eP P 22 56 39.1 +2.5
KIC Kosan Boka 39.98 224 eP P 22 56 38.2 +0.9
comp=Z,9.0nm,0.9s
LIC Lamto 40.26 224 eP P 22 56 40.4 +0.9
comp=Z,6.4nm,0.3s
KURBB Kurchatov Arra 41.22 54 P P 22 56 46.4 -0.7
comp=Z,3.7nm,0.8s,baz=281,slow=8.8,SNR=22
KURBB PcP PcP 22 58 46.3 +0.4
comp=Z,0.6nm,0.9s,baz=294,slow=3.7,SNR=3.7
KURK Kurchatov 41.27 54 P P 22 56 46.3 -1.2
KURK Kurchatov 41.27 54 eP P 22 56 46.4 -1.1
KURK pmax pmax
comp=Z,6.0nm,1.1s
KSH Kashi 41.49 71 P P 22 56 48.7 -1.0
KSH PcP PcP 22 58 48.2 +1.0
KSH S S 23 03 01.7 -3.5
KSH SS SS 23 06 04.2 -5.2
MAKZ Makanchi 44.03 59 P P 22 57 10.2 +0.1
MAKZ Makanchi 44.03 59 P P 22 57 10.2 +0.1
MAKZ pmax pmax
comp=Z,3.0nm,0.9s
MK31 Makanchi Array 44.25 59 IAmb IAmb 22 57 13.8
comp=Z,4.0nm,0.6s
MK31 Makanchi Array 44.25 59 i P P 22 57 11.0 -0.8
MKAR Makanchi Array 44.25 59 P P 22 57 11.4 -0.4
comp=Z,4.3nm,0.6s,baz=277,slow=7.4,SNR=125
MKAR PcP PP 22 58 55.4 +0.6
comp=Z,0.6nm,0.8s,baz=300,slow=3.2,SNR=2.7
MKAR ScP ScP 23 02 48.3 +0.2
comp=Z,0.3nm,0.7s,baz=259,slow=3.5,SNR=4.0
MKAR LR LR 23 20 33.7
comp=Z,24nm,18.0s,baz=303,slow=43
MKAR Makanchi Array 44.25 59 P P 22 57 11.7 0.0
ZAA0 Zalesovo Array 44.74 48 IAmb IAmb 22 57 17.2
comp=Z,8.2nm,1.1s
ZALV Zalesovo Beam 44.74 48 P P 22 57 15.0 -0.5
comp=Z,4.2nm,0.7s,baz=270,slow=7.4,SNR=16
ZALV LR LR 23 19 20.9
comp=Z,39nm,18.4s,baz=44,slow=41
WMQ Urumqi 48.68 61 eP P 22 57 48.8 +2.1
LSZ Lusaka 53.64 173 LR LR 23 22 37.7
comp=Z,67nm,18.0s,baz=164,slow=38
TLY Talaya 56.34 48 LR LR 23 23 46.9
comp=Z,27nm,20.6s,baz=307,slow=37
TLY Talaya 56.34 48 eP P 22 58 43.4 +0.1
TLY pmax pmax
comp=Z,10.0nm,1.4s
GTA Gaotai 58.74 62 eP P 22 59 01.8 +1.3
GTA pP sP 22 59 06.5 +1.1
GTA sP pP 22 59 09.0 +4.9
SCHQ Schefferville 59.12 318 P P 22 59 02.8 +0.1
comp=Z,4.0nm,0.6s,baz=49,slow=6.3,SNR=17
SCHQ Schefferville 59.12 318 P P 22 59 03.4 +0.7
SCHQ IAmb IAmb 22 59 06.6
comp=Z,5.2nm,0.8s
SHL Shillong 59.40 80 P P 22 59 06.0 +0.7
SHL IAmb IAmb 22 59 09.3
comp=Z,2.5nm,0.4s
SHL Shillong 59.40 80 P P 22 59 06.0 +0.7
SHL pmax pmax
comp=Z,3.0nm,0.4s
SONM Songino Array 59.47 51 P P 22 59 04.7 -0.8
comp=Z,2.1nm,0.8s,baz=280,slow=7.3,SNR=12
SONM Songino Array 59.47 51 P P 22 59 04.6 -0.9
ULN Ulaanbaatar 59.86 51 P P 22 59 08.0 -0.2
ULN IAmb IAmb 22 59 10.1
comp=Z,2.5nm,0.9s
ULN Ulaanbaatar 59.86 51 P P 22 59 08.0 -0.2
ULN pmax pmax
comp=Z,3.0nm,1.0s
LZH Lanzhou 63.11 64 eP P 22 59 31.5 +1.2
LZH pP pP 22 59 34.7 +0.8
LZH sP sP 22 59 36.5 +1.3
LZH ePP PP 23 01 51.6 +2.8
HHC Hu-ho-hao-te 66.00 56 eP P 22 59 50.2 +1.1
XAN Xi'an 67.73 64 P P 23 00 01.5 +1.3
XAN pP sP 23 00 07.5 +2.4
CMAR Chiang Mai Arr 68.73 83 P P 23 00 03.8 -2.8
comp=Z,0.6nm,0.3s,baz=298,slow=5.7,SNR=5.0
CMAR Chiang Mai Arr 68.73 83 i P P 23 00 06.9 +0.3
CMAR pmax pmax
comp=Z,1.0nm,0.3s
BILL Bilibino 70.61 13 eP P 23 00 17.0 -0.3
BILL e 23 02 56.9
BILL pmax pmax
comp=Z,1.0nm,1.0s
WHN Wuhan 73.49 64 P P 23 00 31.1 -4.1
YKA Yellowknife Ar 73.63 341 P P 23 00 35.7 +0.2
comp=Z,1.8nm,1.0s,baz=32,slow=5.6,SNR=14
D41A Chassel 74.80 318 P P 23 00 44.2 +1.6
COWI Conover 75.73 318 P P 23 00 48.0 -0.1
ULM Lac du Bonnet 76.25 324 P P 23 00 51.6 +0.7
comp=Z,5.8nm,0.8s,baz=46,slow=6.1,SNR=15
ULM Lac du Bonnet 76.25 324 P P 23 00 51.0 +0.1
ULM IAmb IAmb 23 00 52.9
comp=Z,7.1nm,0.9s
ILAR Eielson Array 76.86 355 P P 23 00 54.6 +0.5
comp=Z,0.4nm,0.9s,baz=5.6,slow=4.2,SNR=4.1
KSRS Korea Array 78.34 51 P P 23 01 01.7 -1.1
comp=Z,1.5nm,0.6s,baz=308,slow=4.8,SNR=4.2
L40A Anamosa 79.54 316 P P 23 01 08.6 -0.7
ECSD EROS Data Cent 81.22 320 P P 23 01 17.3 -1.1
ECSD IAmb IAmb 23 01 20.3
comp=Z,4.6nm,0.9s
PDAR Pinedale Array 88.06 327 P P 23 01 53.1 -0.1
comp=Z,0.3nm,0.6s,baz=51,slow=7.1,SNR=2.9
TXAR Lajitas Array 95.69 315 P P 23 02 28.4 -0.2
comp=Z,0.7nm,0.8s,baz=86,slow=5.1,SNR=5.6
WRA Warramunga Arr 119.40 93 PKP PKPdf 23 07 51.3 -1.0
comp=Z,0.6nm,0.8s,baz=298,slow=2.1,SNR=2.5

ATH 04 22:54:36.2, 38.26N×20.42E, h9km±1km, ML2.5/12, Error ellipse: s-maj=2.2km s-min=0.9km az=265.0
THE 04 22:54:36.4, 38.26N×20.41E, h9km, ML2.5/4, Error ellipse: s-maj=1.0km s-min=0.4km az=270.0
ISC 04 22:54:36.1±1.0, 38.26N±0.02×20.42E±0.04, h10km±5km, n42, σ0§42/59, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

KEF4 Livadi, Kephal 0.01 95 P Pg 22 54 37.7 -0.1
KEF4 S Sg 22 54 38.8 -0.1
KEF1 Kardakata, Kep 0.05 66 P Pg 22 54 37.9 -0.1
KEF1 S Sg 22 54 39.2 -0.1
LXR1 Lixouri, Cepha 0.06 163 P Pg 22 54 38.4 +0.3
LXR1 S Sg 22 54 40.0 +0.4
KEF3 Kipouria, Keph 0.08 224 P Pg 22 54 38.4 +0.1
KEF3 S Sg 22 54 39.8 -0.1
CHV1 Chavriata, Kef 0.08 200 P Pg 22 54 38.5 +0.2
CHV1 S Sg 22 54 40.4 +0.4
ARG2 Argostoli 0.10 145 P Pg 22 54 38.9 +0.3
ARG2 S Sg 22 54 40.9 +0.5
KEF2 Argostoli. Kep 0.11 149 P Pg 22 54 39.1 +0.3
KEF2 S Sg 22 54 40.7 +0.1
VLS Valsamata 0.16 121 P Pg 22 54 39.7 +0.2
VLS S Sg 22 54 42.5 +0.5
11μm,0.1s
VLS Valsamata 0.16 121 P Pg 22 54 39.7 +0.2
VLS S Sg 22 54 42.4 +0.5
VLS AML AML 22 54 42.8
comp=E,22130μm,0.1s
VLS AML AML 22 54 42.9
comp=N,22736μm,0.1s
VSK1 VASILIKIADES 0.19 38 P Pg 22 54 40.3 +0.2
VSK1 S Sg 22 54 43.5 +0.7
comp=N,5μm,0.3s
FSK Fiskardo 0.23 30 P Pg 22 54 41.0 +0.2
FSK S Sg 22 54 44.6 +0.6
comp=N,888nm,0.2s
FSK Fiskardo 0.23 30 P Pg 22 54 41.1 +0.2
FSK S Sg 22 54 44.6 +0.6
FSK AML AML 22 54 48.0
comp=E,2379μm,0.4s
FSK AML AML 22 54 48.0
comp=N,1920μm,0.5s
KFL Anninata 0.33 117 P Pg 22 54 42.9 +0.3
EVGI Lefkada island 0.41 27 P Pg 22 54 44.2 +0.1
EVGI S Sg 22 54 50.4 +0.9
EVGI Lefkada island 0.41 27 P Pg 22 54 44.2 +0.1
EVGI S Sg 22 54 50.6 +1.1
VLMS Volimes, Zakyn 0.43 153 P Pg 22 54 44.6 +0.1
VLMS S Sg 22 54 51.3 +1.2
VLMS AML AML 22 54 53.6
comp=E,4584μm,0.3s
VLMS AML AML 22 54 53.9
comp=N,4115μm,0.5s
MGNA Meganis 0.49 36 P Pg 22 54 45.6 -0.1
MGNA S Sg 22 54 52.3 +0.1
MGNA AML AML 22 54 54.7
comp=N,960μm,0.4s
MGNA AML AML 22 54 58.2
comp=E,910μm,0.4s
LKD2 Lefkada island 0.56 20 P Pg 22 54 46.8 -0.2
LKD2 S Sb 22 54 55.7 -0.5
comp=E,202nm,0.4s
LKD2 Lefkada island 0.56 20 P Pg 22 54 46.7 -0.3
LKD2 AML AML 22 55 05.3
comp=E,540μm,0.7s
LKD2 AML AML 22 55 05.6
comp=N,479μm,0.3s
AST1 Astakos 0.60 62 P Pg 22 54 47.5 -0.2
KRI1 kERI 0.68 152 P Pg 22 54 48.5 -0.6
PDO Prodromos 0.69 60 P Pg 22 54 49.4 0.0
PDO Prodromos 0.69 60 P Pg 22 54 49.5 0.0
RLS Riolos of Patr 0.85 103 P Pg 22 54 52.5 0.0
RLS Riolos of Patr 0.85 103 P Pg 22 54 52.5 0.0
RLS AML AML 22 55 09.4
comp=E,584μm,0.3s
RLS AML AML 22 55 09.4
comp=N,353μm,0.2s
PVO Paravola 0.94 67 P Pg 22 54 54.3 +0.1
PVO Paravola 0.94 67 P Pg 22 54 54.4 +0.1
PVO AML AML 22 55 13.3
comp=E,548μm,0.4s
PVO AML AML 22 55 13.4
comp=N,520μm,0.3s
DRO Drossia 1.07 106 P Pg 22 54 56.5 0.0
DRO Drossia 1.07 106 P Pg 22 54 56.6 0.0
DRO AML AML 22 55 21.5
comp=E,1177μm,0.3s
DRO AML AML 22 55 21.9
comp=N,655μm,0.5s
EFP Efpalio 1.18 81 P Pb 22 54 58.0 -0.7
EFP AML AML 22 55 22.9
comp=N,394μm,0.6s
EFP AML AML 22 55 23.3
comp=E,467μm,0.5s
ANX Ano Chora 1.23 74 P Pb 22 54 59.1 -0.4
LAKA Lakka 1.23 90 P Pn 22 54 58.8 -0.6
LAKA Lakka 1.23 90 P Pn 22 54 58.9 -0.6
LAKA AML AML 22 55 19.5
comp=N,237μm,0.3s
LAKA AML AML 22 55 22.0
comp=E,265μm,0.4s
AMT Artemida-Makis 1.25 125 P Pn 22 55 00.1 +0.4
IGT Igoumenitsa 1.27 357 P Pg 22 55 01.1 +0.6
SERG Sergoula 1.30 83 P Pn 22 55 00.4 +0.1
SERG Sergoula 1.30 83 P Pn 22 55 00.9 +0.5
SERG AML AML 22 55 25.9
comp=E,249μm,0.5s
SERG AML AML 22 55 27.2
comp=N,340μm,0.6s
TRIZ Trizonia 1.31 85 P Pn 22 55 00.1 -0.3
KALE Kalithea 1.36 84 P Pn 22 55 01.9 +0.6
KALE AML AML 22 55 26.9
comp=N,262μm,0.5s
KALE AML AML 22 55 29.8
comp=E,176μm,0.5s
KLV Kalavryta, Ach 1.38 98 P Pn 22 55 01.7 +0.2
KLV Kalavryta, Ach 1.38 98 P Pn 22 55 01.7 +0.2
AGG Agios Georgios 1.68 62 P Pg 22 55 08.2 -0.1

IDC 04 22:56:52.3±1.9, 2.33S×140.76E, h0km, mb3.1/2, mb1 3.6/4, mb1mx3.4/23, mbtmp3.4/4, ML2.9/2, Error ellipse: s-maj=59.1km s-min=27.2km az=76.0, Near north coast of Irian Jaya

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

PMG Port Moresby 9.48 138 Pn Pn 22 59 10.6 +0.4
2.2nm,0.3s,baz=260,slow=18,SNR=4.0
WRA Warramunga Arr 18.60 199 P P 23 01 10.4 -0.9
0.1nm,0.3s,baz=23,slow=12,SNR=2.6
ASAR Alice Springs 22.23 197 P P 23 01 50.6 -0.1
0.5nm,0.7s,baz=23,slow=11,SNR=5.5
MKAR Makanchi Array 70.75 322 P P 23 08 10.7 +0.2
0.1nm,0.7s,baz=99,slow=4.5,SNR=2.1

IDC 04 22:58:54.0±6.3, 6.21S×148.20E, h63km±73km, mb3.3/3, mb1 3.5/5, mb1mx3.3/24, mbtmp3.6/5, ML3.6/1, Error ellipse: s-maj=113.3km s-min=39.7km az=115.0, New Britain region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

PMG Port Moresby 3.34 198 P Pn 22 59 44.6 +0.7
7.0nm,0.3s,baz=43,slow=3.6,SNR=10
PMG S Sn 23 00 22.9 +0.5
2.3nm,0.3s,baz=342,slow=20,SNR=3.0
WRA Warramunga Arr 19.18 223 P P 23 03 11.5 -1.2
0.2nm,0.3s,baz=49,slow=10,SNR=8.0
ASAR Alice Springs 22.15 217 P P 23 03 45.3 +0.5
0.8nm,0.5s,baz=50,slow=9.4,SNR=15
FITZ Fitzroy Crossi 24.98 240 P P 23 04 12.6 +0.5
2.4nm,0.6s,baz=67,slow=11,SNR=3.7
MKAR Makanchi Array 78.42 320 P P 23 10 48.0 -0.1
0.2nm,0.7s,baz=114,slow=7.0,SNR=3.4

OSPL 04 23:11:16.2±1.3, 18.54N×68.70W, h80km, ML2.9
NEIC 04 23:11:20.0±1.4, 19.4N±0.2×68.8W±0.1, h53km±69km, Error ellipse: s-maj=34.7km s-min=7.6km az=199.0
RSPR 04 23:11:20.5, 19.49N×68.73W, h33km±17km, MD3.5/8
ISC 04 23:11:20.1±1.2, 19.15N±0.07×68.92W±0.03, h35km, n48, σ1§88/59, 15C, North Atlantic Ocean

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

DR12 Loma Pena Alta 0.57 231 Pn 23 11 32.7 +0.9
PCDR Punta Cana, DR 0.81 141⇑eP Pn 23 11 35.7 +0.7
PCDR eS Sn 23 11 49.9 +4.1
PCDR Punta Cana, DR 0.81 141⇑eP Pn 23 11 36.2 +1.2
PCDR Punta Cana, DR 0.81 141 Pn 23 11 36.2 +1.2
PCDR Sn 23 11 49.9 +4.1
SDD Santo Domingo 1.17 234 i P Pn 23 11 36.8 -3.1
SDD eS Sn 23 11 50.8 -3.8
SDD IAML 23 11 54.9
comp=Z,62nm,0.6s
BON1 Bonao 1.42 262 eS Sn 23 12 01.2 +0.5
BANI BANI 1.56 241 Pn 23 11 41.7 -3.8
SC01 Santiago de lo 1.73 279 i P Pn 23 11 48.2 +0.5
SC01 eS Sn 23 12 13.0 +4.4
SC01 IAML 23 12 19.2
comp=Z,117nm,0.3s
SC01 Santiago de lo 1.73 279 Sn 23 12 14.9 +6.3
AGPR Aguadilla, PR 1.84 111⇑eP Pn 23 11 48.9 -0.2
AGPR Aguadilla, PR 1.84 111 Pn 23 11 48.9 -0.2
MPR Mayaguez 1.93 119 Sn 23 12 16.4 +3.0
CRPR Cabo Rojo, PR 2.06 123⇑eP Pn 23 11 52.7 +0.6
CRPR Cabo Rojo, PR 2.06 123 eS Sn 23 12 18.2 +1.6
CRPR Cabo Rojo, PR 2.06 123 Pn 23 11 52.7 +0.6
CRPR Sn 23 12 18.2 +1.6
MLPR Magueyes Islan 2.13 123⇑eP Pn 23 11 53.9 +0.8
MLPR Magueyes Islan 2.13 123 Sn 23 12 17.9 -0.5
MLPR Magueyes Islan 2.13 123 Pn 23 11 53.9 +0.8
AOPR Arecibo Observ 2.20 111⇑eP Pn 23 11 53.6 -0.5
AOPR Arecibo Observ 2.20 111 eS Sn 23 12 19.2 -1.0
AOPR Arecibo Observ 2.20 111 Pn 23 11 53.6 -0.5
AOPR Sn 23 12 19.2 -1.0
SDDR Presa de Saban 2.25 266 i P Pn 23 11 53.5 -1.4
SDDR eS Sn 23 12 22.1 +0.6
SDDR IAML 23 12 25.4
comp=Z,54nm,0.3s
SDDR Presa de Saban 2.25 266 Pn 23 11 53.4 -1.4
EMPR Esperanza - Ma 2.36 106⇑eP Pn 23 11 55.2 -1.1
EMPR Esperanza - Ma 2.36 106 Pn 23 11 55.2 -1.1
OBIP Obispado Ponce 2.45 116⇑eP Pn 23 11 57.6 0.0
OBIP Obispado Ponce 2.45 116 eS Sn 23 12 26.6 +0.2
OBIP Obispado Ponce 2.45 116 Pn 23 11 57.6 0.0
OBIP Sn 23 12 26.6 +0.2
CELP Cerrillos 2.46 115⇑eP Pn 23 11 57.7 -0.1
CELP Cerrillos 2.46 115 Pn 23 11 57.7 -0.1
GCPR Guaynabo City 2.81 107⇑eP Pn 23 12 01.6 -1.0
GCPR Guaynabo City 2.81 107 eS Sn 23 12 33.2 -2.0
GCPR Guaynabo City 2.81 107 Pn 23 12 01.6 -1.0
GCPR Sn 23 12 33.2 -2.0
SJG San Juan 2.82 111 Pn Pn 23 12 00.2 -2.4
SJG Sn 23 12 35.1 -0.3
IGPR InterUniversit 2.91 113⇑eP Pn 23 12 03.9 0.0
IGPR InterUniversit 2.91 113 eS Sn 23 12 37.1 -0.6
IGPR InterUniversit 2.91 113 Sn 23 12 37.1 -0.6
CBYP Canovanas 3.03 106⇑eP Pn 23 12 04.4 -1.2
CBYP Canovanas 3.03 106 Sn 23 12 43.1 +2.4
CBYP Canovanas 3.03 106 Pn 23 12 04.4 -1.2
HUMP Col San Antoni 3.08 109 eS Sn 23 12 40.7 -1.1
HUMP Col San Antoni 3.08 109⇑eP Pn 23 12 05.3 -0.9
HUMP Col San Antoni 3.08 109 Pn 23 12 05.3 -0.9
HUMP Sn 23 12 40.7 -1.1
GRTK Grand Turk 3.14 319 Pn Pn 23 12 06.6 -0.4
MTP Monte Pirata 3.36 108⇑eP Pn 23 12 09.1 -0.9
MTP Monte Pirata 3.36 108 Pn 23 12 09.1 -0.9
CUPR Culebra, Puert 3.54 103⇑eP Pn 23 12 11.1 -1.5
CUPR Culebra, Puert 3.54 103 Pn 23 12 11.1 -1.5

ATH 04 23:17:34.1, 38.24N×20.38E, h16km±1km, ML2.7/5, Error ellipse: s-maj=2.2km s-min=1.1km az=259.0
THE 04 23:17:34.3, 38.24N×20.35E, h12km, ML2.8/12, Error ellipse: s-maj=1.2km s-min=0.6km az=252.0
ISC 04 23:17:34.3±1.1, 38.24N±0.03×20.38E±0.05, h15km±5km, n43, σ0§34/63, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

KEF3 Kipouria, Keph 0.04 215 P Pg 23 17 36.8 -0.2
KEF3 S Sg 23 17 38.7 0.0
KEF4 Livadi, Kephal 0.04 60 P Pg 23 17 36.9 -0.1
KEF4 S Sg 23 17 38.9 +0.1
CHV1 Chavriata, Kef 0.05 177 P Pg 23 17 36.9 -0.1
CHV1 S Sg 23 17 39.0 +0.1
45μm,0.3s
LXR1 Lixouri, Cepha 0.06 128 P Pg 23 17 37.1 0.0
LXR1 S Sg 23 17 39.4 +0.5
63μm,0.1s
KEF1 Kardakata, Kep 0.08 61 P Pg 23 17 37.3 -0.1
KEF1 S Sg 23 17 39.4 +0.1

ARG2	**Argostoli**	**0.10**	**124**	P	**Pg**	**23 17 37.5**	**0.0**
ARG2				S	**Sg**	**23 17 39.7**	**0.0**
	27μm,0.1s						
KEF2	**Argostoli. Kep**	**0.11**	**130**	P	**Pg**	**23 17 37.7**	**0.0**
KEF2				S	**Sg**	**23 17 40.0**	**+0.2**
VLS	**Valsamata**	**0.18**	**110**	P	**Pg**	**23 17 38.4**	**-0.2**
VLS				S	**Sg**	**23 17 41.7**	**+0.3**
	7μm,0.1s						
VLS	**Valsamata**	**0.18**	**110**	P	**Pg**	**23 17 38.4**	**-0.2**
VLS				S	**Sg**	**23 17 41.5**	**+0.1**
VLS				AML	AML	23 17 41.7	
	comp=N,12221μm,0.1s						
VLS				AML	AML	23 17 41.9	
	comp=E,14239μm,0.1s						
VSK1	**VASILIKIADES**	**0.23**	**40**	P	**Pg**	**23 17 39.2**	**-0.1**
VSK1				S	**Sg**	**23 17 43.2**	**+0.5**
	comp=E,2μm,0.1s						
FSK	**Fiskardo**	**0.27**	**33**	P	**Pg**	**23 17 40.0**	**0.0**
FSK				S	**Sg**	**23 17 44.2**	**+0.4**
	comp=E,1μm,0.2s						
FSK	**Fiskardo**	**0.27**	**33**	P	**Pg**	**23 17 40.0**	**0.0**
FSK				S	**Sg**	**23 17 44.3**	**+0.5**
FSK				AML	AML	23 17 44.6	
	comp=E,3454μm,0.2s						
FSK				AML	AML	23 17 44.8	
	comp=N,1849μm,0.2s						
KFL	**Anninata**	**0.35**	**111**	P	**Pg**	**23 17 41.2**	**-0.1**
KFL				S	**Sg**	**23 17 46.6**	**+0.4**
	comp=N,2μm,0.3s						
KFL	**Anninata**	**0.35**	**111**	P	**Pg**	**23 17 41.3**	**-0.1**
KFL				S	**Sg**	**23 17 46.3**	**+0.1**
KFL				AML	AML	23 17 47.3	
	comp=E,4996μm,0.4s						
KFL				AML	AML	23 17 47.4	
	comp=N,3436μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.42**	**148**	P	**Pg**	**23 17 42.7**	**0.0**
VLMS				S	**Sg**	**23 17 48.6**	**0.0**
VLMS				AML	AML	23 17 50.3	
	comp=E,1887μm,0.3s						
VLMS				AML	AML	23 17 51.4	
	comp=N,3159μm,0.3s						
EVGI	**Lefkada island**	**0.44**	**30**	P	**Pg**	**23 17 42.8**	**-0.3**
EVGI				S	**Sg**	**23 17 48.9**	**-0.2**
	comp=N,298nm,0.1s						
EVGI	**Lefkada island**	**0.44**	**30**	P	**Pg**	**23 17 42.8**	**-0.3**
MGNA	**Meganis**	**0.53**	**38**	P	**Pg**	**23 17 44.2**	**-0.5**
LKD2	**Lefkada island**	**0.59**	**22**	P	**Pg**	**23 17 45.8**	**-0.1**
PDO	**Prodromos**	**0.73**	**60**	P	**Pg**	**23 17 48.2**	**-0.2**
PDO				S	**Sn**	**23 18 00.7**	**-0.2**
	comp=N,435nm,0.3s						
PDO	**Prodromos**	**0.73**	**60**	P	**Pg**	**23 17 48.2**	**-0.2**
RLS	**Riolos of Patr**	**0.88**	**101**	P	**Pb**	**23 17 50.9**	**-0.3**
RLS				S	**Sn**	**23 18 04.4**	**-0.1**
	comp=N,112nm,0.5s						
RLS	**Riolos of Patr**	**0.88**	**101**	P	**Pb**	**23 17 50.8**	**-0.4**
PVO	**Paravola**	**0.98**	**67**	P	**Pg**	**23 17 52.9**	**-0.3**
PVO				S	**Sn**	**23 18 08.2**	**+1.2**
	comp=N,205nm,0.6s						
PVO	**Paravola**	**0.98**	**67**	P	**Pg**	**23 17 52.9**	**-0.3**
PVO				AML	AML	23 18 12.8	
	comp=E,479μm,0.6s						
PVO				AML	AML	23 18 15.5	
	comp=N,326μm,0.2s						
DRO	**Drossia**	**1.09**	**105**	P	**Pg**	**23 17 55.1**	**-0.2**
DRO	**Drossia**	**1.09**	**105**	P	**Pg**	**23 17 55.4**	**+0.1**
EFP	**Efpalio**	**1.22**	**81**	P	**Pn**	**23 17 56.3**	**-0.4**
EFP	**Efpalio**	**1.22**	**81**	P	**Pn**	**23 17 56.3**	**-0.4**
ANX	**Ano Chora**	**1.26**	**73**	P	**Pb**	**23 17 57.9**	**+0.1**
AMT	**Artemida-Makis**	**1.27**	**123**	P	**Pg**	**23 17 59.4**	**+0.8**
IGT	**Igoumenitsa**	**1.29**	**358**	P	**Pg**	**23 17 59.4**	**+0.2**
EVR	**Evrytania**	**1.31**	**58**	P	**Pg**	**23 17 59.8**	**+0.3**
EVR	**Evrytania**	**1.31**	**58**	P	**Pb**	**23 17 58.3**	**-0.4**
SERG	**Sergoula**	**1.33**	**82**	P	**Pg**	**23 18 00.1**	**+0.2**
SERG	**Sergoula**	**1.33**	**82**	P	**Pb**	**23 17 59.2**	**+0.3**
TRIZ	**Trizonia**	**1.34**	**84**	P	**Pn**	**23 17 58.2**	**-0.2**
KALE	**Kalithea**	**1.39**	**83**	P	**Pg**	**23 18 00.5**	**-0.6**
KLV	**Kalavryta, Ach**	**1.41**	**97**	P	**Pb**	**23 17 59.7**	**-0.6**
KLV				S	**Sg**	**23 18 20.1**	**+0.3**
	comp=N,40nm,0.6s						
KLV	**Kalavryta, Ach**	**1.41**	**97**	P	**Pb**	**23 17 59.8**	**-0.6**
MAKR	**Makrakomi, Fth**	**1.58**	**60**	P	**Pb**	**23 18 03.6**	**+0.5**
ITM	**Ithomi**	**1.62**	**130**	P	**Pb**	**23 18 04.1**	**+0.3**
AGG	**Agios Georgios**	**1.72**	**62**	P	**Pb**	**23 18 06.1**	**+0.2**

*SSNC **04** 23:51:37.9±0.6, 19°.41N×77°.95W, h5km, MD3.0, ML2.0, MW2.5*

*JSN **04** 23:51:39.8±0.5, 19°.42N×77°.89W, h12km±6km, MD3.1*

ISC 04 23:51:37.5±4.1**, 19°.47N**±0°.04×**77°.87W**±0°.09**, h12km**±29km**, n6,** σ**0s.40**/11**, 3D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMGC	**Las Mercedes**	**1.01**	**54**	*i* P	**Pb**	**23 51 56.7**	**-0.2**
LMGC				*i* S	**Sb**	**23 52 10.3**	**+0.2**
LMGC				IAML		23 52 11.8	
	comp=N,101nm,0.1s						
LMGC				IAML		23 52 11.9	
	comp=E,64nm,0.1s						
BBJ	**Bamboo Saint A**	**1.22**	**152**	⇓*i* P	**Pn**	**23 52 00.9**	**+0.5**
BBJ				*i* S	**Sb**	**23 52 16.2**	**-0.1**
MCJ	**Malvern**	**1.54**	**173**	*i* P	**Pb**	**23 52 05.0**	**0.0**
MCJ				⇓*i* S	**Sn**	**23 52 24.4**	**-0.6**
STH	**Stony Hill**	**1.71**	**144**	*i* P	**Pn**	**23 52 07.8**	**+0.6**
CCCC	**Cccc**	**1.73**	**3**	*i* P	**Pn**	**23 52 07.4**	**0.0**
CCCC				*i* S	**Sn**	**23 52 29.6**	**+0.3**
RCC	**Rio Carpintero**	**2.12**	**75**	⇓*i* P	**Pn**	**23 52 12.6**	**-0.1**
RCC				*i* S	**Sn**	**23 52 38.8**	**-0.1**
RCC				IAML		23 52 40.8	
	comp=E,3.3nm,0.2s						
RCC				IAML		23 52 41.0	
	comp=N,3.7nm,0.2s						

*IDC **04** 23:54:00.1±1.1, 45°.84N×106°.93W, h0km, mb1 3.7/3, mb1mx3.3/43, mbtmp3.4/3, ML2.7/3, Error ellipse: s-maj=26.6km s-min=8.6km az=126.0*

*NEIC **04** 23:54:04.1±1.7, 46°.24N±0°.06×106°.83W±0°.08, h0km±2km, ML3.3/56, Error ellipse: s-maj=10.2km s-min=9.5km az=321.0*

ISC 04 23:54:04.0±1.0**, 46°.28N**±0°.07×**106°.90W**±0°.05**, h0km, n51,** σ**1s.54**/49**, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAO	**LASA Array**	**0.62**	**49**	Pg	**Pg**	**23 54 16.8**	**+0.9**
GCMT	**Greycliff**	**1.99**	**257**	Pn	**Pn**	**23 54 36.0**	**-3.1**
RLMT	**Red Lodge**	**2.02**	**236**	Pn	Pn	23 54 35.0	-4.7
RLMT				IAML		23 55 05.5	
	240nm,0.5s						
YNE	**Yellowstone No**	**2.53**	**241**	Pn	**Pn**	**23 54 42.9**	**-3.7**
EGMT	**Eagleton**	**2.61**	**313**	Pn	**Pn**	**23 54 47.9**	**+0.3**
EGMT				IAML		23 55 38.4	
	153nm,0.6s						
YMP	**Mirror Lake Pl**	**2.76**	**237**	Pn	**Pn**	**23 54 47.3**	**-2.6**
DGMT	**Dagmar**	**2.86**	**39**	Pn	**Pn**	**23 54 52.1**	**+1.2**
RSSD	**Black Hills**	**2.96**	**136**	Pn	**Pn**	**23 54 53.0**	**+0.6**
RSSD				IAML		23 55 25.8	
	72nm,0.7s						
RSSD				IAML		23 55 29.6	
	74nm,0.6s						
YUF	**Upper Falls**	**2.99**	**240**		**Pn**	**23 54 52.4**	**-0.4**
LKWY	**Lake**	**3.00**	**236**	Pn	**Pn**	**23 54 52.3**	**-0.8**
LKWY				IAML		23 55 45.1	
	58nm,1.1s						
YNR	**Norris Junctio**	**3.08**	**241**	Pn	**Pn**	**23 54 53.8**	**-0.4**
YNM	**Yellowstone No**	**3.09**	**241**	Pn	**Pn**	**23 54 54.3**	**0.0**
YHH	**Holmes Hill**	**3.15**	**243**		**Pn**	**23 54 55.4**	**+0.1**
H17A	**Grant Village**	**3.21**	**235**	Pn	**Pn**	**23 54 56.6**	**+0.7**
YMR	**Madison River**	**3.28**	**242**		**Pn**	**23 54 56.8**	**-0.1**
YHL	**Hebgen Lake**	**3.33**	**246**		**Pn**	**23 54 58.1**	**+0.5**
YHB	**Horse Butte**	**3.39**	**245**		**Pn**	**23 54 59.0**	**+0.7**
YPP	**Pitchstone Pla**	**3.41**	**235**		**Pn**	**23 54 59.2**	**+0.4**
FLWY	**Flagg Ranch**	**3.47**	**232**	Pn	**Pn**	**23 54 59.7**	**+0.1**
FLWY				IAML		23 55 55.2	
	63nm,1.0s						
FLWY				IAML		23 56 20.7	
	75nm,1.0s						
QLMT	**Earthquake Lak**	**3.50**	**247**		**Pn**	**23 54 59.8**	**-0.1**
MOOW	**Moose Ponds**	**3.72**	**228**		**Pn**	**23 55 03.3**	**+0.4**
IMW	**Indian Meadow**	**3.72**	**232**	Pn	**Pn**	**23 55 02.9**	**-0.2**
IMW				IAML		23 55 56.2	
	54nm,0.9s						
LRM	**Limekiln Ridge**	**3.89**	**265**	Pn	**Pn**	**23 55 04.5**	**-0.8**
SNOW	**Snow King Moun**	**3.93**	**226**	Pn	**Pn**	**23 55 05.8**	**-0.1**
SNOW				IAML		23 56 09.7	
	36nm,1.0s						
SNOW				IAML		23 56 16.3	
	37nm,1.1s						
FXWY	**Fox Creek**	**3.95**	**229**		**Pn**	**23 55 06.6**	**+0.5**
PD31	**Pinedale Array**	**4.00**	**209**	Pn	**Pn**	**23 55 07.1**	**+0.4**
PDAR	**Pinedale Array**	**4.00**	**209**	Pg	**Pn**	**23 55 06.9**	**+0.1**
	3.9nm,0.3s,baz=41,slow=19,SNR=16						
PDAR				Lg	Lg	23 55 53.6	
	6.5nm,0.3s,baz=34,slow=29,SNR=11						
TPAW	**Teton Pass**	**4.01**	**227**	Pn	**Pn**	**23 55 07.2**	**+0.3**
TPAW				IAML		23 56 10.2	
	39nm,0.9s						
REDW	**Red Top Meadow**	**4.05**	**225**		**Pn**	**23 55 08.4**	**+0.9**
REDW				IAML		23 55 33.9	
	29nm,1.1s						
REDW				IAML		23 56 19.9	
	36nm,1.8s						
DLMT	**Dillon**	**4.09**	**259**	Pn	**Pn**	**23 55 08.3**	**+0.4**
DLMT				IAML		23 56 18.6	
	27nm,0.9s						
DLMT				IAML		23 56 26.0	
	38nm,1.2s						
MCMT	**McKenzie Canyo**	**4.42**	**253**	Pn	**Pn**	**23 55 12.9**	**+0.2**
RWWY	**Rawlins**	**4.60**	**183**		**Pn**	**23 55 14.4**	**-0.6**
AHID	**Auburn Hatcher**	**4.62**	**222**		**Pn**	**23 55 15.2**	**-0.1**
AHID				IAML		23 56 45.0	
	comp=E,21nm,1.0s						
AHID				IAML		23 56 51.9	
	comp=N,21nm,1.9s						
MSO	**Missoula**	**4.89**	**279**	Pn	**Pn**	**23 55 19.1**	**+0.2**
MSO					**Pg**	**23 55 38.8**	**+1.1**
MSO				IAML		23 56 53.6	
	comp=N,25nm,1.1s						
RDMU	**Red Mountain**	**6.03**	**200**	Pn	**Pn**	**23 55 32.8**	**-1.9**
TCUT	**Toone Canyon**	**6.11**	**214**	Pn	**Pn**	**23 55 36.2**	**+0.4**
O20A	**White River Ci**	**6.22**	**190**	Pn	**Pn**	**23 55 34.7**	**-2.6**
JLU	**Jordanelle**	**6.57**	**212**	Pn	**Pn**	**23 55 41.5**	**-0.6**
CTU	**Camp Tracy**	**6.61**	**214**	Pn	**Pn**	**23 55 42.5**	**0.0**
SMCO	**Snowmass**	**7.10**	**180**	Pn	**Pn**	**23 55 45.9**	**-3.6**
MPU	**Maple Canyon**	**7.16**	**211**	Pn	**Pn**	**23 55 50.4**	**+0.3**
F10A	**Beach Ranch, E**	**7.18**	**271**	Pn	**Pn**	**23 55 52.3**	**+1.9**
NEW	**Newport**	**7.23**	**290**	Lg	Lg	23 57 50.8	
	comp=N,0.4nm,0.3s,baz=49,slow=22,SNR=3.5						
P17A	**Butcher Ranch,**	**7.37**	**204**	Pn	**Pn**	**23 55 50.9**	**-2.1**
SRU	**San Rafael Swe**	**7.65**	**202**	Pn	**Pn**	**23 55 59.9**	**+3.1**
TMUT	**Trail Mountain**	**7.67**	**206**	Pn	**Pn**	**23 55 55.3**	**-1.9**
ECSD	**EROS Data Cent**	**7.72**	**106**	Pn	**Pn**	**23 55 59.8**	**+2.1**
AGMN	**Agassiz Nation**	**7.77**	**71**	Pn	**Pn**	**23 56 01.1**	**+2.8**
ULM	**Lac du Bonnet**	**8.36**	**58**	Pn	**Pn**	**23 56 04.3**	**-2.0**
	comp=N,0.6nm,0.3s,baz=239,slow=13,SNR=6.5						
ULM				Pg	Pb	23 56 36.5	+7.0
	comp=N,0.6nm,0.3s,baz=247,slow=14,SNR=4.3						
ULM				Lg	Lg	23 58 25.0	
	comp=N,0.8nm,0.3s,baz=335,slow=19,SNR=3.7						
YKA	**Yellowknife Ar**	**16.83**	**348**	Pn	**Pn**	**23 57 57.7**	**-3.1**
	comp=N,0.0nm,0.3s,baz=162,slow=13,SNR=6.1						
YKA				Lg	Lg	00 02 55.0	
	comp=N,0.0nm,0.3s,baz=158,slow=26,SNR=3.7						
TXAR	**Lajitas Array**	**17.11**	**170**	Pn	Pn	23 57 56.5	-8.1
	comp=N,0.0nm,0.3s,baz=351,slow=15,SNR=2.7						

BEO 04 23:58:00.7±0.8**, 38°.05N**×**20°.10E, h24**km±4km**, ML3.6**/9**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**1.50**	**7**	*e*Pg	Pb	23 58 28.4	+0.6
IGT				*e*Sg	Sb	23 58 47.8	+1.4
FNA	**Florina**	**2.91**	**20**	*e*Pn	Pn	23 58 46.1	+0.6
TIR	**Tirane**	**3.30**	**357**	*e*Pn	Pn	23 58 51.8	+0.9
VAY	**Valandovo**	**3.79**	**29**	*e*Pn	Pn	23 58 58.2	+0.6
SRS	**Serrai**	**4.09**	**40**	*e*Pn	Pn	23 59 00.6	-1.1
PDG	**Podgorica**	**4.43**	**352**	*e*Pn	Pn	23 59 06.5	+0.2
PDG				*e*Sn	Sn	23 59 56.2	-0.9
BOSS	**Bosilegrad**	**4.80**	**22**	*e*Pn	Pn	23 59 11.4	-0.2
TREB	**Trebinje**	**4.85**	**345**	*e*Sn	Sn	00 00 06.6	-1.0
TREB	**Trebinje**	**4.85**	**345**	*e*Pn	Pn	23 59 11.2	-1.0
BARS	**Barje**	**4.94**	**15**	*e*Sn	Sn	00 00 08.4	-1.5
BARS	**Barje**	**4.94**	**15**	*e*Pn	Pn	23 59 12.5	-0.9
STON	**Ston**	**5.16**	**340**	*e*Sn	Sn	00 00 12.4	-2.6
STON	**Ston**	**5.16**	**340**	*e*Pn	Pn	23 59 16.2	-0.1
VTS	**Vitosha**	**5.16**	**27**	*e*Sn	Sn	00 00 12.2	-3.2
VTS	**Vitosha**	**5.16**	**27**	*e*Pn	Pn	23 59 17.0	+0.5
SJES	**Sjenica**	**5.21**	**359**	*e*Sn	Sn	00 00 14.9	-1.7
SJES	**Sjenica**	**5.21**	**359**	*e*Pn	Pn	23 59 18.2	+1.0
SELS	**Selova**	**5.23**	**8**	*e*Pn	Pn	23 59 16.3	-1.1
IVAS	**Ivanjica**	**5.53**	**0**	*e*Sn	Sn	00 00 22.5	-1.8
IVAS	**Ivanjica**	**5.53**	**0**	*e*Pn	Pn	23 59 20.4	-1.1
DIVS	**Divibare**	**6.05**	**359**	*e*Sn	Sn	00 00 32.6	-4.6
DIVS	**Divibare**	**6.05**	**359**	*e*Pn	Pn	23 59 27.6	-1.1

*IDC **04** 23:58:51.2±0.8, 52°.12N×169°.53W, h0km, mb4.0/19, mb1 4.1/21, mb1mx3.9/50, mbtmp3.9/21, ML3.4/2, MS3.3/5, Ms1 3.4/5, ms1mx2.9/35, Error ellipse: s-maj=23.7km s-min=15.3km az=171.0*

*AEIC **04** 23:58:53.8±1.6, 52°.01N±0°.09×169°.49W±0°.10, h14km±4km, ML3.2/12, Error ellipse: s-maj=14.9km s-min=4.6km az=148.0*

*NEIC **04** 23:58:56.0±1.3, 52°.05N±0°.04×169°.49W±0°.09, h34km±5km, Error ellipse: s-maj=9.5km s-min=3.9km az=123.0*

ISC 04 23:58:55.6±0.7**, 52°.06N**±0°.10×**169°.45W**±0°.06**, h30km, n43,** σ**1s.14**/44**, mb4.0**/19**, MS3.4**/4**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.98**	**21**		**Pn**	**23 59 13.0**	**-0.3**
NIKH					**Sb**	**23 59 28.1**	**+1.4**
OKSP	**Okmok Steeple**	**1.39**	**30**		**Pn**	**23 59 18.4**	**-0.5**
OKFG	**Magazine Ridge**	**1.64**	**34**		**Pn**	**23 59 22.7**	**+0.3**
OKFG					**Sn**	**23 59 44.2**	**+1.7**
MREP	**Makushin Rep't**	**2.40**	**42**		**Pn**	**23 59 33.4**	**+0.6**
MSW	**Makushin Switc**	**2.46**	**40**		**Pn**	**23 59 34.8**	**+1.2**
UNV	**Unalaska Valle**	**2.52**	**44**		**Pn**	**23 59 34.6**	**+0.2**
MTBL	**Makushin Table**	**2.54**	**40**		**Pn**	**23 59 36.1**	**+1.3**
ATKA	**Atka Island**	**2.93**	**275**	Pn	**Pn**	**23 59 39.5**	**-0.5**
AKUT	**Akutan**	**3.04**	**45**	Pn	**Pn**	**23 59 42.4**	**+0.9**
GSTD	**Great Sitkin T**	**4.13**	**273**		**Pn**	**23 59 56.9**	**+0.2**
GSTD					**Sn**	**00 00 44.9**	**+0.9**
ADK	**Adak**	**4.48**	**271**	Pn	**Pn**	**00 00 00.4**	**-0.9**
KIWB	**Kanaga Island**	**4.77**	**271**	Pn	**Pn**	**00 00 05.2**	**-0.2**
KDAK	**Kodiak Island**	**11.25**	**53**	Pn	**Pn**	**00 01 32.7**	**-1.4**
	0.3nm,0.3s,baz=217,slow=5.1,SNR=3.5						
KDAK				Sn	**Sn**	**00 03 33.8**	**-4.9**
	0.2nm,0.3s,baz=76,slow=19,SNR=1.9						
BPAW	**Bear Paw Mtn.**	**15.44**	**31**	P	**P**	**00 02 35.2**	**0.0**
ILAR	**Eielson Array**	**17.24**	**34**	P	**Pn**	**00 02 52.2**	**-1.5**
	0.0nm,0.3s,baz=229,slow=10,SNR=3.2						
PETK	**Petropavlovsk-**	**19.90**	**286**	P	**P**	**00 03 24.3**	**0.0**
	1.8nm,0.3s,baz=91,slow=13,SNR=44						
PETK				LR	LR	00 11 51.9	
	comp=Z,52nm,18.9s,baz=60,slow=39						
SEY	**Seymchan**	**22.85**	**313**	P	**P**	**00 03 55.5**	**-0.4**
	2.3nm,0.8s,baz=82,slow=8.9,SNR=5.4						
INK	**Inuvik**	**23.63**	**33**	P	**P**	**00 04 02.2**	**-1.4**
	0.9nm,0.5s,baz=274,slow=3.0,SNR=6.4						
YKA	**Yellowknife Ar**	**30.48**	**48**	P	**P**	**00 05 05.5**	**+0.1**
	0.2nm,0.5s,baz=275,slow=8.1,SNR=5.6						
YKA				LR	LR	00 19 26.5	
	comp=Z,108nm,18.3s,baz=0.0,slow=40						
H11S1	**WAKE ISLAND Hy**	**38.37**	**218**	T	T	00 47 24.9	
	baz=23,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**38.38**	**218**	T	T	00 47 26.1	
	baz=23,slow=76,SNR=4.5						
H11S3	**WAKE ISLAND Hy**	**38.38**	**218**	T	T	00 47 26.6	
	baz=23,slow=76,SNR=4.4						
PDAR	**Pinedale Array**	**40.51**	**79**	P	**P**	**00 06 33.4**	**+1.5**
	1.0nm,0.9s,baz=295,slow=4.6,SNR=6.5						
PDAR				LR	LR	00 21 58.8	
	comp=Z,37nm,20.1s,baz=33,slow=34						
PDAR	**Pinedale Array**	**40.51**	**79**	P	**P**	**00 06 32.9**	**+1.0**
KSRS	**Korea Array**	**45.39**	**277**	P	**P**	**00 07 11.1**	**0.0**
	2.6nm,0.8s,baz=52,slow=8.5,SNR=5.9						
KSRS				LR	LR	00 24 55.5	
	comp=Z,23nm,21.4s,baz=100,slow=34						
SONM	**Songino Array**	**51.42**	**301**	P	**P**	**00 07 56.9**	**-0.7**
	1.5nm,1.0s,baz=62,slow=6.7,SNR=6.6						
TXAR	**Lajitas Array**	**52.80**	**89**	P	**P**	**00 08 08.6**	**+0.6**
	1.7nm,0.9s,baz=301,slow=5.4,SNR=11						
TXAR	**Lajitas Array**	**52.80**	**89**	P	**P**	**00 08 08.8**	**+0.8**
ZALV	**Zalesovo Beam**	**57.62**	**318**	PcP	**PcP**	**00 09 36.3**	**+1.1**
	0.8nm,0.7s,baz=46,slow=4.2,SNR=3.1						
ARCES	**ARCESS Array B**	**58.22**	**354**	P	**P**	**00 08 45.9**	**-0.4**
	3.8nm,1.0s,baz=19,slow=6.7,SNR=2.9						
ARCES				LR	LR	00 37 58.0	
	comp=Z,49nm,18.2s,baz=241,slow=40						
KURK	**Kurchatov**	**62.57**	**318**	P	**P**	**00 09 16.5**	**+0.2**
KURBB	**Kurchatov Arra**	**62.68**	**318**	P	**P**	**00 09 16.5**	**-0.5**
	1.7nm,0.6s,baz=44,slow=7.3,SNR=12						
MKAR	**Makanchi Array**	**63.98**	**313**	P	**P**	**00 09 24.7**	**-1.1**
	0.4nm,0.6s,baz=52,slow=6.9,SNR=9.7						
FINES	**FINESS Array B**	**66.17**	**352**	P	**P**	**00 09 39.1**	**-0.5**
	1.1nm,0.6s,baz=14,slow=8.6,SNR=7.3						
NOA	**NORSAR Array B**	**67.25**	**360**	P	**P**	**00 09 46.3**	**-0.3**
	0.7nm,0.8s,baz=2.0,slow=6.2,SNR=3.3						
AAK	**Ala-Archa**	**70.69**	**315**	P	**P**	**00 10 09.0**	**+0.6**
	2.7nm,0.7s,baz=15,slow=2.0,SNR=9.4						
AKASG	**Malin Array Be**	**76.40**	**348**	P	**P**	**00 10 41.2**	**-0.4**
	0.4nm,0.4s,baz=9.8,slow=4.5,SNR=4.4						
CMAR	**Chiang Mai Arr**	**76.64**	**283**	P	**P**	**00 10 43.7**	**+0.3**
	1.3nm,0.3s,baz=25,slow=5.0,SNR=5.9						
KBZ	**Khabaz**	**80.58**	**337**	P	**P**	**00 11 05.9**	**+1.2**
	1.3nm,0.8s,baz=7.1,slow=8.1,SNR=3.1						
GEYT	**Alibeck**	**81.25**	**324**	P	**P**	**00 11 09.2**	**+0.6**
	1.8nm,0.8s,baz=306,slow=3.5,SNR=6.3						
WRA	**Warramunga Arr**	**86.77**	**232**	P	**P**	**00 11 36.0**	**-0.7**
	0.8nm,0.9s,baz=44,slow=5.8,SNR=2.9						
ASAR	**Alice Springs**	**90.16**	**230**	P	**P**	**00 11 53.0**	**+0.3**
	2.0nm,0.8s,baz=32,slow=3.5,SNR=10						
ASAR	**Alice Springs**	**90.16**	**230**	P	**P**	**00 11 52.4**	**-0.3**

*THE **04** 23:59:55.8, 38°.73N×22°.73E, h8km±2km, ML1.8/11, Error ellipse: s-maj=2.1km s-min=0.5km az=313.0*

ATH 04 23:59:55.6, 38°.72N×**22°.73E, h16**km±4km**, ML1.8**/5**, Error ellipse: s-maj=4.6km s-min=0.8km az=67.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKR	**Lokris**	**0.22**	**108**	P	Pg	00 00 00.2	-0.4
LKR				S	Sg	00 00 04.1	+0.1
	848nm,0.1s						
LKR	**Lokris**	**0.22**	**108**	P	Pg	00 00 00.2	-0.4
LKR				S	Sg	00 00 03.9	-0.1
LKR				AML	AML	00 00 04.5	
	comp=N,1517μm,0.2s						
LKR				AML	AML	00 00 05.7	
	comp=E,1799μm,0.1s						
AGG	**Agios Georgios**	**0.44**	**314**	P	Pg	00 00 04.1	-0.3
AGG				S	Sg	00 00 10.1	-0.3
	comp=E,80nm,0.4s						
AGG	**Agios Georgios**	**0.44**	**314**	P	Pg	00 00 04.0	-0.4
AGG				S	Sb	00 00 11.1	-0.2
AGG				AML	AML	00 00 12.1	
	comp=E,190μm,0.6s						
AGG				AML	AML	00 00 12.6	
	comp=N,134μm,0.2s						
PROD	**Prodromos**	**0.48**	**164**	P	Pg	00 00 04.5	-0.7
PROD				S	Sb	00 00 12.8	+0.4
PROD	**Prodromos**	**0.48**	**164**	P	Pg	00 00 04.7	-0.5
PROD				S	Sb	00 00 12.8	+0.3
PROD				AML	AML	00 00 13.4	
	comp=N,338μm,0.2s						
PROD				AML	AML	00 00 15.8	
	comp=E,309μm,0.2s						
MAKR	**Makrakomi, Fth**	**0.55**	**302**	P	Pg	00 00 06.7	+0.1
KALE	**Kalithea**	**0.57**	**235**	P	Pg	00 00 06.2	-0.7
KALE				S	Sb	00 00 15.2	+0.1
	comp=E,168nm,0.5s						
SERG	**Sergoula**	**0.61**	**240**	P	Pg	00 00 07.0	-0.7
SERG				S	Sb	00 00 16.3	0.0
	comp=E,138nm,0.3s						
SERG	**Sergoula**	**0.61**	**240**	P	Pg	00 00 07.0	-0.7
SERG				S	Sb	00 00 16.5	+0.2
SERG				AML	AML	00 00 18.8	
	comp=N,283μm,0.3s						
SERG				AML	AML	00 00 19.1	
	comp=E,254μm,0.3s						
TRIZ	**Trizonia**	**0.63**	**236**	P	Pg	00 00 07.3	-0.6
TRIZ	**Trizonia**	**0.63**	**236**	P	Pg	00 00 07.3	-0.6
TRIZ				S	Sb	00 00 17.2	+0.5
ANX	**Ano Chora**	**0.65**	**259**	P	Pg	00 00 08.0	-0.4
ANX				S	Sb	00 00 17.4	0.0
	comp=E,90nm,0.3s						
ANX	**Ano Chora**	**0.65**	**259**	P	Pg	00 00 08.0	-0.4
ANX				S	Sb	00 00 17.3	-0.1
ANX				AML	AML	00 00 21.5	
	comp=N,174μm,0.4s						
ANX				AML	AML	00 00 23.6	
	comp=E,205μm,0.7s						
MRKA	**Markates**	**0.67**	**91**	P	Pb	00 00 08.8	-0.1
MRKA				S	Sb	00 00 18.6	+0.7
ALIK	**Aliki, Aigiali**	**0.67**	**227**	P	Pb	00 00 09.2	+0.3
ALIK				S	Sb	00 00 18.5	+0.6
NEO	**Neokhori**	**0.70**	**33**	P	Pb	00 00 09.7	+0.2
NEO				S	Sb	00 00 19.1	+0.3
EFP	**Efpalio**	**0.71**	**246**	P	Pg	00 00 08.8	-0.7
EFP				S	Sb	00 00 20.0	+0.9
	comp=E,72nm,0.3s						
EFP	**Efpalio**	**0.71**	**246**	P	Pg	00 00 08.9	-0.6
EFP				S	Sb	00 00 20.3	+1.1
VILL	**Villia**	**0.72**	**141**	P	Pg	00 00 09.5	-0.1
VILL				S	Sb	00 00 19.5	+0.2
	comp=E,75nm,0.4s						
LTK	**Loutraki**	**0.72**	**165**	P	Pg	00 00 09.4	-0.3
LTK				S	Sn	00 00 20.6	-1.2
	comp=E,72nm,0.4s						
LTK	**Loutraki**	**0.72**	**165**	P	Pg	00 00 09.6	-0.1
XOR	**Xorichti**	**0.74**	**29**	P	Pg	00 00 09.8	-0.2
XOR				S	Sb	00 00 20.0	+0.1
XOR	**Xorichti**	**0.74**	**29**	P	Pg	00 00 09.7	-0.3
XOR				S	Sg	00 00 19.8	0.0
EVR	**Evrytania**	**0.75**	**285**	P	Pb	00 00 10.7	+0.4
LOUT	**Loutraki**	**0.76**	**165**	P	Pg	00 00 10.1	-0.2
LOUT				S	Sn	00 00 21.6	-1.1
	comp=E,70nm,0.3s						
KLV	**Kalavryta, Ach**	**0.82**	**214**	P	Pg	00 00 11.8	+0.3
KLV	**Kalavryta, Ach**	**0.82**	**214**	P	Pg	00 00 11.7	+0.2
EREA	**Eretria**	**0.98**	**107**	P	Pb	00 00 13.7	-0.6
EREA				S	Sg	00 00 27.4	-0.2
	comp=E,52nm,0.5s						
EREA	**Eretria**	**0.98**	**107**	P	Pb	00 00 13.0	-1.3
AOS	**Alonnisos**	**1.00**	**63**	P	Pn	00 00 14.9	-0.1
THL	**Klokotos Trika**	**1.01**	**327**	P	Pb	00 00 14.3	-0.5
DRO	**Drossia**	**1.11**	**227**	P	Pb	00 00 16.2	-0.2
PTL	**Penteli**	**1.11**	**127**	P	Pg	00 00 17.6	+0.5
PTL	**Penteli**	**1.11**	**127**	P	Pn	00 00 16.5	0.0
ATHU	**Athens Univers**	**1.12**	**132**	P	Pg	00 00 17.5	+0.3
ATHU				S	Sg	00 00 32.7	+0.9
ATHU	**Athens Univers**	**1.12**	**132**	P	Pg	00 00 17.9	+0.8
ATHU				S	Sg	00 00 32.7	+0.9
VLY	**Voula,Athens**	**1.20**	**136**	P	Pg	00 00 18.9	+0.1
VLY				S	Sg	00 00 35.2	+0.7
	comp=E,38nm,0.4s						
VLY	**Voula,Athens**	**1.20**	**136**	P	Pg	00 00 18.9	+0.1
DID	**Didima**	**1.27**	**162**	P	Pb	00 00 19.4	+0.1
KRND	**KRANIDI**	**1.37**	**166**	P	Pb	00 00 21.1	+0.2

*IDC **05** 00:14:28.6±21.0, 11°.41N×85°.52W, h0km, mb3.2/4, mb1 3.7/4, mb1mx3.5/22, mbtmp3.2/4, Error ellipse: s-maj=428.4km s-min=106.8km az=173.0*

*UCR **05** 00:14:33.5±1.7, 11°.07N×86°.35W, h1km±10km, MD4.0, MW3.9*

*INET **05** 00:14:34.4, 10°.96N×86°.32W, h11km, ML3.6*

ISC 05 00:14:32.3±1.9**, 11°.06N**±0°.08×**86°.40W**±0°.07**, h5**km±12km**, n25,** σ**0s.78**/33**, mb3.2**/4**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.94**	**116**	*i* P	**Pb**	**00 14 51.2**	**+0.1**
GBS3	**Finca Las Img**	**0.96**	**106**	*i* P	**Pb**	**00 14 51.5**	**-0.1**
LAPC	**Finca la Perla**	**0.99**	**107**	*i* P	**Pg**	**00 14 51.4**	**+0.2**
LAPC				*i* S	**Sb**	**00 15 05.7**	**+0.4**
GB1A	**Borinquen Arri**	**1.01**	**104**	*i* P	**Pn**	**00 14 53.5**	**+0.2**
BUAI	**Buenos Aires**	**1.06**	**100**	*i* P	**Pb**	**00 14 53.5**	**+0.3**
BUAI				*i* S	**Sb**	**00 15 08.0**	**+0.6**
GPS1	**Guardaparques**	**1.06**	**105**	*i* P	**Pb**	**00 14 53.2**	**-0.1**
GPS1				*i* S	**Sb**	**00 15 08.0**	**+0.3**
GPS2	**Hotel Rincn d**	**1.07**	**106**	*i* P	**Pb**	**00 14 53.6**	**+0.2**
GPS2				*i* S	**Sb**	**00 15 08.3**	**+0.6**
GUAI	**GUAI**	**1.17**	**132**	*i* P	**Pg**	**00 14 54.2**	**-0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUAB	Guayabo de Bag	1.20	107	iP	Pg	00 14 54.6	-0.7
GUAB				iS	Sb	00 15 11.9	+0.5
MESS	Mesas	1.22	105	iP	Pg	00 14 55.7	0.0
COLC	Colonia	1.23	108	iP	Pg	00 14 55.6	-0.4
COLC				iS	Sn	00 15 13.0	-0.4
HORNC	Hornillas	1.24	106	iP	Pg	00 14 55.9	-0.3
HORNC				iS	Sb	00 15 13.0	+0.2
PLVR	Palo Verde	1.25	124	eP	Pg	00 14 56.6	+0.4
PLVR				eS	Sn	00 15 15.3	+1.4
CUI	Cuipilapa	1.27	108	iP	Pg	00 14 56.3	-0.5
CUI				eS	Sn	00 15 14.5	+0.1
ACON	Acoyapa	1.50	53	eP	Pn	00 14 60.0	0.0
JTS	Las Juntas de	1.61	118	eP	Pn	00 15 01.3	-0.2
ARE1	Arenal 1	1.75	110	eP	Pb	00 15 05.0	0.0
CRIN	San Cristobal	1.75	339	eP	Pn	00 15 04.9	+1.4
MATN	Matagalpa	1.92	14	eP	Pn	00 15 06.8	+1.0
ESTN	Estel	2.03	1	eP	Pn	00 15 08.4	+1.1
LCR2	La Lucha 2	2.69	119	eP	Pn	00 15 18.2	+1.7
TXAR	Lajitas Array	24.30	321	P	P	00 19 49.7	-1.4
	0.6nm,0.7s,baz=138,slow=9.3,SNR=9.2						
PDAR	Pinedale Array	37.48	332	P	P	00 21 45.4	-1.8
	0.2nm,0.6s,baz=141,slow=10,SNR=2.1						
NVAR	Mina Array Bea	39.42	319	P	P	00 22 04.0	+0.3
	0.1nm,0.3s,baz=121,slow=8.5,SNR=2.4						
YKA	Yellowknife Ar	55.22	345	P	P	00 24 02.1	-3.9
	0.2nm,0.6s,baz=148,slow=6.7,SNR=3.0						

IDC 05 00:17:22.4±2.8, 54°.36N×163°.01E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.2/40, mbtmp3.4/4, ML2.8/1, Error ellipse: s-maj=91.1km s-min=23.4km az=155.0
KRSC 05 00:17:23.0±1.1, 54°.23N×163°.10E, h41km±24km, ML3.8
ISC 05 00:17:22.2±3.6, 54°.33N±0°.05×163°.00E±0°.07, h2km±23km, n34, σ1.16/43, mb3.1/3, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KZV	Kizimen	1.75	298	eP	Pn	00 17 54.5	+0.7
KZV				eS	Sn	00 18 16.6	-0.2
KBTR	Krutoberegovo	1.89	357	eP	Pn	00 17 55.4	-0.1
KBTR				eS	Sn	00 18 19.9	0.0
TUMR	Tumrok	1.91	301	eP	Pn	00 17 57.3	+1.4
TUMR				eS	Sb	00 18 21.5	-0.7
KII	Karymskiy	2.10	264	eP	Pn	00 17 59.0	+0.4
KII				eS	Sn	00 18 24.6	-0.7
ZLN	Zelenaya	2.11	324	eP	Pb	00 18 00.8	-0.5
ZLN				eS	Sb	00 18 27.9	-0.1
KMNR	Kamenistaya	2.14	313	eP	Pn	00 18 00.7	+1.6
KMNR				eS	Sb	00 18 27.7	-1.1
KIRR	Kirishev	2.23	318	eP	Pn	00 18 02.1	+1.8
KPT	Kopyto	2.29	317	eP	Pn	00 18 02.8	+1.7
KRSR	Krestovskiy	2.35	325	eP	Pn	00 18 03.1	+1.1
KLY	Klyuchi	2.40	327	eP	Pn	00 18 02.8	+0.3
KLY				eS	Sn	00 18 31.2	-1.3
NLC	Nalytchevo	2.46	243	eP	Pn	00 18 03.6	+0.3
NLC				eS	Sn	00 18 32.4	-1.5
BDR	Baidarnaya	2.47	336	eP	Pb	00 18 06.3	-1.0
KOZ	Kozyrevsk	2.49	315	eP	Pn	00 18 06.2	+2.4
SRKR	Sorokina	2.56	337	eP	Pn	00 18 06.4	+1.7
KRER	Koryakskii	2.72	250	eP	Pn	00 18 08.0	+0.9
UGLR	Uglovaya	2.72	247	eP	Pn	00 18 08.1	+1.1
SRDR	Sredinnyy	2.74	318	eP	Pn	00 18 09.2	+2.0
AVH	Avacha	2.74	249	eP	Pn	00 18 08.5	+1.2
KRX	Arik	2.75	251	eP	Pn	00 18 08.4	+0.9
KOK	Koryaka	2.79	250	eP	Pn	00 18 08.7	+0.8
DALK	Dalny	2.84	245	eP	Pn	00 18 09.3	+0.8
DALK				eS	Sn	00 18 42.4	-0.8
ESO	Esso	2.94	305	eP	Pn	00 18 11.5	+1.5
KRMR	Karymshinskiy	3.27	245	eP	Pn	00 18 15.3	+0.9
KRMR				eS	Sn	00 18 52.9	-0.9
RUS	Russkaya	3.29	237	eP	Pn	00 18 15.2	+0.5
PETK	Petropavlovsk-	3.38	251	Pn	Pn	00 18 17.3	+1.3
	4.6nm,0.3s,baz=79,slow=15,SNR=40						
PETK				Sn	Sn	00 18 57.4	+0.9
	2.7nm,0.3s,baz=72,slow=21,SNR=5.0						
MTVR	Mutnovka	3.42	239	eP	Pn	00 18 17.6	+0.9
GRL	Gorelyy	3.44	241	eP	Pn	00 18 17.7	+0.8
ASAK	Asacha	3.62	240	eP	Pn	00 18 21.1	+1.7
ASAK				eS	Sn	00 19 03.3	+0.6
ILAR	Eielson Array	26.71	47	P	P	00 23 03.8	+1.3
	0.4nm,1.0s,baz=278,slow=6.9,SNR=3.3						
H11N2	WAKE ISLAND Hy	34.66	174	T	T	01 01 37.7	
	baz=355,slow=76,SNR=6.8						
H11N3	WAKE ISLAND Hy	34.68	174	T	T	01 01 38.1	
	baz=355,slow=76,SNR=4.3						
H11N1	WAKE ISLAND Hy	34.68	174	T	T	01 01 40.1	
	baz=355,slow=76,SNR=4.3						
YKA	Yellowknife Ar	41.08	44	P	P	00 25 06.0	-0.8
	0.2nm,0.7s,baz=287,slow=7.1,SNR=2.9						
FINES	FINESS Array B	59.66	338	P	P	00 27 27.4	+0.2
	1.3nm,0.8s,baz=38,slow=7.5,SNR=5.0						

SNET 05 00:17:35.8±0.8, 13°.31N×90°.27W, h29km±99km, ML2.9
GCG 05 00:17:37.0±0.5, 13°.60N×90°.66W, h20km±10km, MD3.2
ISC 05 00:17:34.3±2.9, 13°.5N±0°.1×90°.47W±0°.06, h5km±15km, n9, σ1.23/16, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	0.54	54	eP	Pg	00 17 41.8	-2.9
FAME				eS	Sg	00 17 50.8	-1.0
IXG	Ixpaco	0.64	2	eP	Pb	00 17 49.1	+0.9
CEVE	Cerro Verde	0.87	70	eP	Pg	00 17 52.0	+0.9
CEVE				eS	Sb	00 18 04.7	+0.5
CEVE					IAML	00 18 06.2	
	comp=Z,441nm,0.2s						
PCG	Pacaya	0.87	351	eP	Pg	00 17 52.3	+1.2
PCG				eS	Sb	00 18 04.5	+0.3
SBLS	San Blas	0.88	69	eP	Pg	00 17 51.7	+0.5
SBLS				eS	Sg	00 18 03.9	+1.3
RTR	El Retiro	0.88	65	eP	Pg	00 17 52.3	+1.1
RTR				eS	Sb	00 18 04.6	+0.3
SNJE	San Jose	0.90	68	eP	Pg	00 17 51.9	+0.2
SNJE				eS	Sb	00 18 05.1	+0.1
FUG	Fuego 3	0.98	338	eP	Pg	00 17 53.5	+0.2
FUG				eS	Sg	00 18 05.7	-0.4
STG3	Santiaguito 3,	1.59	318	eP	Pn	00 18 02.0	-1.4

IDC 05 00:23:08.8±1.2, 15°.22N×88°.59W, h0km, mb3.8/5, mb1 4.1/10, mb1mx3.8/33, mbtmp3.9/10, ML3.7/5, MS3.3/5, Ms1 3.3/5, ms1mx2.9/38, Error ellipse: s-maj=30.2km s-min=19.9km az=70.0
GCG 05 00:23:08.9±0.8, 15°.15N×88°.31W, h50km±881km, MD4.6
NEIC 05 00:23:09.9±1.9, 15°.10N±0°.05×88°.62W±0°.05, h10km±2km, mb4.1/20, Error ellipse: s-maj=8.5km s-min=6.4km az=225.0
UCR 05 00:23:10.0±1.0, 15°.13N×88°.61W, h12km±4km, ML4.2, mb4.1(NEIC)
SNET 05 00:23:10.2±0.9, 15°.15N×88°.62W, h14km±2km, ML4.3
INET 05 00:23:11.7, 15°.25N×88°.89W, h10km, ML4.5
ISC 05 00:23:09.4±1.3, 15°.12N±0°.03×88°.61W±0°.03, h9km±9km, n88, σ1.13/105, mb4.0/7, 1D, Honduras

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LLGN	La Laguna	1.01	199	eP	Pg	00 23 28.4	-0.4
LLGN				eS	Sn	00 23 43.8	-0.4
LLGN	La Laguna	1.01	199	eP	Pg	00 23 28.4	-0.4
LLGN				eS	Sn	00 23 43.8	-0.4
MTO3	Montecristo	1.02	225	eP	Pg	00 23 28.6	-0.5
MTO3				eS	Sb	00 23 44.2	+1.2
MTO3	Montecristo	1.02	225	eP	Pg	00 23 28.6	-0.5
MTO3				eS	Sb	00 23 44.2	+1.2
MRL	Marmol	1.04	268	⇓iP	Pg	00 23 29.0	-0.4
PAVA	Las Pavas	1.44	193	eP	Pn	00 23 35.5	-0.2
PAVA				eS	Sg	00 23 55.9	+0.3
PAVA				IAML		00 23 58.6	
	comp=Z,6µm,0.4s						
PAVA	Las Pavas	1.44	193	eP	Pn	00 23 35.5	-0.2
PAVA				eS	Sg	00 23 55.9	+0.3
PAVA				IAML		00 23 58.6	
	comp=Z,6µm,0.4s						
LBRS	Las Brisas	1.44	197	eP	Pn	00 23 35.4	-0.3
LFU	La Fuente	1.45	200	eP	Pn	00 23 36.0	+0.2
LFU				eS	Sb	00 23 55.9	+0.7
LFU	La Fuente	1.45	200	eP	Pn	00 23 36.0	+0.2
LFU				eS	Sb	00 23 55.9	+0.7
UNIC	Universidad Ca	1.45	219	eP	Pn	00 23 35.8	-0.1
UNIC				eS	Sn	00 23 55.6	+0.5
UNIC				IAML		00 23 58.1	
	comp=Z,3µm,0.4s						
UNIC	Universidad Ca	1.45	219	eP	Pn	00 23 35.8	-0.1
UNIC				eS	Sn	00 23 55.6	+0.5
UNIC				IAML		00 23 58.1	
	comp=Z,3µm,0.4s						
FAGO	Alcalda de S	1.50	161	eP	Pn	00 23 35.8	-0.7
FAGO	Alcalda de S	1.50	161	eP	Pn	00 23 35.8	-0.7
COEG	Centro de Oper	1.52	190	eP	Pn	00 23 36.5	-0.3
COEG	Centro de Oper	1.52	190	eP	Pn	00 23 36.5	-0.3
BOQS	Boqueron	1.52	205	eP	Pn	00 23 37.1	+0.1
BOQS				eS	Sg	00 23 58.7	+0.2
SNET	Serv Nac Est T	1.55	203	eP	Pn	00 23 37.4	+0.2
SNET				IAML		00 24 10.1	
	comp=Z,2µm,0.4s						
SNET	Serv Nac Est T	1.55	203		Pn	00 23 37.2	0.0
SNET	Serv Nac Est T	1.55	203	eP	Pn	00 23 37.4	+0.2
SNET				IAML		00 24 10.1	
	comp=Z,2µm,0.4s						
LFRS	El Faro	1.55	196	eP	Pn	00 23 36.7	-0.6
SNJE	San Jose	1.58	218	eP	Pn	00 23 38.3	+0.5
SNJE				eS	Sg	00 23 59.9	-0.2
SNJE	San Jose	1.58	218	eP	Pn	00 23 38.3	+0.5
SNJE				eS	Sg	00 23 59.9	-0.2
RTR	El Retiro	1.58	220	eP	Pn	00 23 38.4	+0.7
RTR	El Retiro	1.58	220	eP	Pn	00 23 38.4	+0.7
SBLS	San Blas	1.61	218	eP	Pn	00 23 38.8	+0.6
SBLS				eS	Sb	00 24 00.3	+0.3
SBLS	San Blas	1.61	218	eP	Pn	00 23 38.8	+0.6
SBLS				eS	Sb	00 24 00.3	+0.3
COEB	Comit de Eme	1.61	177	eP	Pn	00 23 38.5	+0.3
COEB	Comit de Eme	1.61	177	eP	Pn	00 23 38.5	+0.3
CEVE	Cerro Verde	1.62	218	eP	Pn	00 23 39.1	+0.8
CEVE				eS	Sb	00 24 00.9	+0.7
CEVE				IAML		00 24 08.0	
	comp=Z,6µm,0.4s						
CEVE	Cerro Verde	1.62	218	eP	Pn	00 23 39.1	+0.8
CEVE				eS	Sb	00 24 00.9	+0.7
CEVE				IAML		00 24 08.0	
	comp=Z,6µm,0.4s						
TECA	Tecapa	1.62	176	eP	Pn	00 23 38.0	-0.3
TECA				eS	Sb	00 24 01.0	+0.8
TECA	Tecapa	1.62	176	eP	Pn	00 23 38.0	-0.3
TECA				eS	Sb	00 24 01.0	+0.8
PACA	Pacayal	1.67	170	eP	Pn	00 23 38.8	-0.1
PACA	Pacayal	1.67	170	eP	Pn	00 23 38.8	-0.1
TGUH	Tegucigalpa,Un	1.67	129	eP	Pn	00 23 38.7	-0.2
TGUH				eS	Sn	00 24 01.2	+0.6
TGUH	Tegucigalpa,Un	1.67	129	Pn	Pn	00 23 38.9	-0.1
TGUH	Tegucigalpa,Un	1.67	129	eP	Pn	00 23 38.7	-0.2
TGUH				eS	Sn	00 24 01.2	+0.6
BLLM	Bellamira	1.71	168	eP	Pn	00 23 39.2	-0.2
BLLM	Bellamira	1.71	168	eP	Pn	00 23 39.2	-0.2
NBG	Las Nubes	1.76	253	eP	Pb	00 23 41.4	-0.6
NBG				eS	Sg	00 24 07.7	+1.5
FAME	Alcaldia de Sa	1.86	227	eP	Pn	00 23 36.8	-4.7
FAME				eS	Sn	00 24 01.2	-3.9
FAME	Alcaldia de Sa	1.86	227	eP	Pn	00 23 36.8	-4.7
FAME				eS	Sn	00 24 01.2	-3.9
IXG	Ixpaco	2.01	242	eP	Pn	00 23 44.8	+1.1
PCG	Pacaya	2.06	250	eP	Pb	00 23 46.3	-0.9
FUG	Fuego 3	2.26	253	eP	Pb	00 23 49.4	-1.1
STG3	Santiaguito 3,	2.89	262	eP	Pn	00 23 57.4	+1.6
ESTN	Estel	2.96	132		Pn	00 23 58.0	+1.3
CCIG	Comitan	3.59	289		Pn	00 24 06.4	+1.0
ACON	Acoyapa	4.58	133		Pn	00 24 18.7	-0.1
TEIG	Tepich	5.09	4	Pn	Pn	00 24 25.5	-0.4
	comp=Z,8.3nm,0.3s,baz=232,slow=20,SNR=51						
TEIG				Sn	Sn	00 25 21.9	-2.9
	comp=Z,6.7nm,0.3s,baz=135,slow=1.4,SNR=4.2						
TEIG				Lg	Lg	00 25 46.9	
	comp=Z,3.2nm,0.3s,baz=138,slow=0.6,SNR=2.8						
TEIG	Tepich	5.09	4		Pn	00 24 26.0	+0.2
JTS	Las Juntas de	5.98	143	Pn	Pn	00 24 41.3	+3.1
	comp=Z,0.5nm,0.3s,baz=336,slow=20,SNR=2.5						
JTS	Las Juntas de	5.98	143	Pn	Pn	00 24 40.3	+2.1
CMIG	Matias Romero	6.34	289	Pn	Pn	00 24 43.0	-0.1
	comp=Z,1.8nm,0.3s,baz=122,slow=9.6,SNR=12						
CMIG				Sn	Sn	00 25 46.4	-9.3
	comp=Z,1.5nm,0.3s,baz=117,slow=11,SNR=2.2						
CMIG				Lg	Lg	00 26 25.8	
	comp=Z,1.0nm,0.3s,baz=46,slow=18,SNR=3.8						
HDC	Heredia	6.72	139	Pn	Pn	00 24 49.7	+1.3
TLIG	Tlapa	9.86	286	Pn	Pn	00 25 32.4	+0.8
ROSC	El Rosal	17.38	125	LR	LR	00 34 09.2	
	comp=Z,96nm,18.3s,baz=302,slow=38						
ROSC	El Rosal	17.38	125		Pn	00 27 11.2	-1.4
ROSC				IAmb	IAmb	00 27 21.2	
	comp=Z,11nm,1.1s						
FLOC	Florencia	18.56	135	P	P	00 27 24.8	-1.9
WHTX	Lake Whitney,	18.63	336	P	P	00 27 24.6	-2.8
WHTX				IAmb	IAmb	00 27 39.3	
	comp=Z,34nm,1.5s						
SDV	Santo Domingo	18.64	107	Pn	Pn	00 27 29.5	+1.5
	comp=Z,0.3nm,0.3s,baz=299,slow=2.2,SNR=8.8						
SDV				LR	LR	00 34 25.3	
	comp=Z,48nm,21.4s,baz=332,slow=36						
SDV	Santo Domingo	18.64	107	P	P	00 27 25.8	-1.9
SDV				IAmb	IAmb	00 27 32.8	
	comp=Z,8.8nm,0.8s						
TXAR	Lajitas Array	19.83	318	Pn	Pn	00 27 43.8	+1.7
	comp=Z,0.2nm,0.3s,baz=135,slow=8.0,SNR=19						
TXAR	Lajitas Array	19.83	318	P	P	00 27 41.9	-0.3
TX31	Lajitas Ar. Si	19.83	318	P	P	00 27 41.1	+0.5
TX32	Lajitas Array	19.83	318	P	P	00 27 40.8	+0.2
TX32				IAmb	IAmb	00 27 46.7	
	comp=Z,8.3nm,1.2s						
MIAR	Mount Ida	19.85	348	P	P	00 27 41.7	-0.6
MIAR				IAmb	IAmb	00 27 45.7	
	comp=Z,6.4nm,0.9s						
ABTX	Abilene, Hawle	20.11	332	P	Pn	00 27 45.7	+0.3
ABTX				IAmb	IAmb	00 27 47.5	
	comp=Z,11nm,1.1s						
TKL	Tuckaleechee C	20.91	11	P	Pn	00 27 53.4	-1.2
	comp=Z,4.8nm,0.9s,baz=198,slow=13,SNR=2.7						
U40A	Yellville	21.49	351	P	P	00 28 00.6	+2.2
WMOK	Wichita Mounta	21.57	337	P	P	00 28 00.6	+1.2
WMOK				IAmb	IAmb	00 28 04.0	
	comp=Z,7.7nm,1.3s						
PBMO	Poplar Bluff	21.63	356	P	P	00 28 01.7	+1.8
PBMO				IAmb	IAmb	00 28 05.1	
	comp=Z,5.6nm,0.6s						
TUL1	Leonard	21.68	344	P	P	00 28 03.3	+2.8
TUL1				IAmb	IAmb	00 28 09.6	
	comp=Z,7.9nm,0.9s						
SJG	San Juan	21.72	79	LR	LR	00 36 52.5	
	comp=Z,32nm,18.7s,baz=280,slow=38						
LPIG	La Paz	22.28	297	LR	LR	00 37 10.2	
	comp=Z,83nm,21.5s,baz=180,slow=38						
MNTX	Cornudas Mount	22.52	320	P	P	00 28 08.7	-0.8
AMTX	Amarillo	22.93	331	P	P	00 28 15.0	+1.1
SCHQ	Schefferville	43.08	18	P	P	00 31 09.4	-0.3
	comp=Z,3.1nm,0.8s,baz=232,slow=9.5,SNR=5.8						
SCHQ	Schefferville	43.08	18	IAmb	IAmb	00 31 13.0	
	comp=Z,16nm,1.6s						
YKA	Yellowknife Ar	50.75	345	P	P	00 32 09.9	+0.4
	comp=Z,1.2nm,0.7s,baz=144,slow=7.7,SNR=12						
YKA				PcP	PcP	00 33 26.2	-0.2
	comp=Z,0.3nm,0.8s,baz=157,slow=3.4,SNR=3.7						
CRQM	Cirque	59.93	332	P	P	00 33 17.4	+1.5
ILAR	Eielson Array	63.14	336	P	P	00 33 37.8	+0.5
	comp=Z,0.4nm,0.7s,baz=160,slow=4.6,SNR=5.9						
BMAR	Burnt Mountain	63.40	339	P	P	00 33 39.8	+0.8
ARCES	ARCESS Array B	84.04	19	LR	LR	01 11 42.3	
	comp=Z,55nm,18.7s,baz=267,slow=35						
TORD	Torodi Ar. Bea	86.93	77	P	P	00 35 54.4	-1.1
	comp=Z,0.4nm,0.8s,baz=284,slow=5.8,SNR=2.6						
ASAR	Alice Springs	139.13	251	PKP	PKPdf	00 42 37.5	0.0
	comp=Z,0.4nm,0.6s,baz=75,slow=1.1,SNR=4.3						
CMAR	Chiang Mai Arr	145.81	347	PKPbc	PKPbc	00 42 49.9	-0.1
	comp=Z,0.9nm,0.3s,baz=351,slow=2.8,SNR=4.2						

IDC 05 00:24:35.6±2.1, 12°.98N×89°.47W, h0km, mb3.6/6, mb1 3.9/7, mb1mx3.7/30, mbtmp3.6/7, ML3.7/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/32, Error ellipse: s-maj=73.3km s-min=22.1km az=38.0
SNET 05 00:24:38.4±0.9, 12°.57N×89°.99W, h13km±9km, ML3.4
ISC 05 00:24:35.1±3.3, 12°.41N±0°.07×89°.95W±0°.08, h9km±19km, n18, σ1.37/21, mb3.5/6, Off coast of central America

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEVE	Cerro Verde	1.45	13	eP	Pn	00 25 01.9	+0.2
CEVE				eS	Sn	00 25 20.1	-0.9
SBLS	San Blas	1.46	13	eP	Pn	00 25 01.9	+0.1
SBLS				eS	Sg	00 25 21.3	-0.8
RTR	El Retiro	1.51	11	eP	Pn	00 25 02.9	+0.4
LFU	La Fuente	1.56	31	eP	Pn	00 25 04.2	+1.0
COEG	Centro de Oper	1.59	41	eP	Pn	00 25 04.4	+0.9
COEG				eS	Sn	00 25 24.8	+0.5
PAVA	Las Pavas	1.63	37	eP	Pn	00 25 05.9	+1.8
PAVA				eS	Sb	00 25 26.8	+0.6
PAVA				IAML		00 25 33.0	
	comp=Z,550nm,0.3s						
PACA	Pacayal	1.90	56	eP	Pn	00 25 10.0	+2.1
MTO3	Montecristo	2.06	16	eP	Pn	00 25 11.1	+1.0
MTO3				eS	Sb	00 25 36.8	-1.9
JTS	Las Juntas de	5.33	113	Pn	Pn	00 25 55.5	+0.5
	comp=Z,2.8nm,0.3s,baz=0.0,slow=22,SNR=6.6						
JTS				Sn	Sn	00 26 53.9	-2.7
	comp=Z,1.0nm,0.3s,baz=335,slow=19,SNR=2.4						
TXAR	Lajitas Array	21.13	325	P	P	00 29 21.4	+0.9
	comp=Z,1.3nm,0.8s,baz=151,slow=11,SNR=5.2						
NVAR	Mina Array Bea	36.16	321	P	P	00 31 38.5	+0.4
	comp=Z,0.4nm,0.6s,baz=131,slow=8.8,SNR=4.1						
ULM	Lac du Bonnet	38.05	354	LR	LR	00 47 39.3	
	comp=Z,44nm,19.3s,baz=16,slow=37						
SCHQ	Schefferville	46.05	18	P	P	00 32 55.0	-4.1
	comp=Z,1.1nm,0.6s,baz=207,slow=7.4,SNR=5.2						
BDFB	Brasilia	49.99	123	LR	LR	00 54 12.9	
	comp=Z,27nm,18.7s,baz=5.8,slow=36						
YKA	Yellowknife Ar	53.03	346	P	P	00 33 51.4	-0.9
	comp=Z,0.3nm,0.7s,baz=144,slow=7.4,SNR=2.8						
ILAR	Eielson Array	65.08	337	P	P	00 35 15.2	-0.6
	comp=Z,0.2nm,0.4s,baz=149,slow=5.8,SNR=4.9						
TORD	Torodi Ar. Bea	88.80	77	P	P	00 37 29.7	-0.5
	comp=Z,0.4nm,0.8s,baz=306,slow=4.4,SNR=3.0						
CMAR	Chiang Mai Arr	148.10	344	PKPbc	PKPdf	00 44 21.5	+2.4
	comp=Z,0.8nm,0.3s,baz=351,slow=4.6,SNR=5.6						

THE 05 00:33:44.9, 38°.27N×20°.38E, h12km, ML3.2/15, Error ellipse: s-maj=0.7km s-min=0.3km az=261.0
ATH 05 00:33:45.2, 38°.28N×20°.44E, h7km±2km, ML3.0/16, Error ellipse: s-maj=2.5km s-min=1.0km az=259.0
ISC 05 00:33:45.1±0.9, 38°.28N±0°.02×20°.43E±0°.03, h8km±5km, n61, σ0.72/87, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.02	187	P	Pg	00 33 46.4	0.0
KEF4				S	Sg	00 33 47.4	-0.1
KEF1	Kardakata, Kep	0.03	95	P	Pg	00 33 46.3	-0.2
KEF1				S	Sg	00 33 47.3	-0.3
LXR1	Lixouri, Cepha	0.08	174	P	Pg	00 33 47.5	+0.4
LXR1				S	Sg	00 33 49.1	+0.6
	145µm,0.3s						
KEF3	Kipouria, Keph	0.10	219	P	Pg	00 33 47.7	+0.4
KEF3				S	Sg	00 33 49.7	+0.7
CHV1	Chavriata, Kef	0.10	200	P	Pg	00 33 47.9	+0.5
CHV1				S	Sg	00 33 50.1	+1.0
	151µm,0.2s						
ARG2	Argostoli	0.11	155	P	Pg	00 33 48.1	+0.5
ARG2				S	Sg	00 33 50.4	+1.1
	39µm,0.2s						
KEF2	Argostoli. Kep	0.12	158	P	Pg	00 33 48.2	+0.4
KEF2				S	Sg	00 33 49.6	0.0
VLS	Valsamata	0.16	129	P	Pg	00 33 48.8	+0.3
VLS				S	Sg	00 33 51.7	+0.9
	22µm,0.2s						
VLS	Valsamata	0.16	129	P	Pg	00 33 48.8	+0.3
VLS				S	Sg	00 33 51.5	+0.7
VLS				AML	AML	00 33 51.9	
	comp=N,60600µm,0.2s						
VLS				AML	AML	00 33 52.1	
	comp=E,28067µm,0.1s						
VSK1	VASILIKIADES	0.17	40	P	Pg	00 33 49.0	+0.5
VSK1				S	Sg	00 33 52.1	+1.2
	comp=E,15µm,0.4s						
FSK	Fiskardo	0.21	31	P	Pg	00 33 49.6	+0.4
FSK				S	Sg	00 33 53.9	+1.8
	comp=E,4µm,0.4s						
FSK	Fiskardo	0.21	31	P	Pg	00 33 49.7	+0.4
FSK				AML	AML	00 33 56.1	
	comp=N,8530µm,0.4s						
FSK				AML	AML	00 33 59.4	
	comp=E,8433µm,0.5s						
KFL	Anninata	0.33	121	P	Pg	00 33 52.0	+0.4
KFL				S	Sg	00 33 57.3	+1.3
	comp=E,8µm,0.3s						
KFL	Anninata	0.33	121	P	Pg	00 33 52.0	+0.4
KFL				S	Sg	00 33 57.1	+1.2
KFL				AML	AML	00 33 58.9	
	comp=E,17177µm,0.3s						
KFL				AML	AML	00 33 59.4	
	comp=N,17577µm,0.3s						
EVGI	Lefkada island	0.38	28	P	Pg	00 33 52.9	+0.3
EVGI				S	Sb	00 33 59.4	-0.9
EVGI	Lefkada island	0.38	28	P	Pg	00 33 52.9	+0.3
VLMS	Volimes, Zakyn	0.44	155	P	Pg	00 33 54.1	+0.4
VLMS				S	Sg	00 33 59.6	+0.1
VLMS				AML	AML	00 34 04.0	
	comp=N,10024µm,0.3s						
VLMS				AML	AML	00 34 09.0	
	comp=E,7853µm,0.4s						
MGNA	Meganis	0.47	37	P	Pg	00 33 54.3	+0.1
MGNA				AML	AML	00 34 02.8	
	comp=E,3455µm,0.4s						
MGNA				AML	AML	00 34 02.9	
	comp=N,3535µm,0.4s						
LKD2	Lefkada island	0.54	20	P	Pg	00 33 55.4	-0.1
LKD2				S	Sg	00 34 03.6	+1.0
	comp=N,922nm,0.6s						
LKD2	Lefkada island	0.54	20	P	Pg	00 33 55.5	-0.1
LKD2				AML	AML	00 34 12.7	
	comp=N,1952µm,0.8s						
LKD2				AML	AML	00 34 14.5	
	comp=E,1661µm,0.5s						
AST1	Astakos	0.58	63	P	Pg	00 33 56.6	+0.3
AST1				S	Sb	00 34 06.4	+0.5
	comp=E,4µm,0.3s						
PDO	Prodromos	0.67	62	P	Pg	00 33 58.3	+0.3
PDO				S	Sb	00 34 08.7	+0.1
	comp=E,3µm,0.4s						
PDO	Prodromos	0.67	62	P	Pg	00 33 58.3	+0.3
PDO				S	Sg	00 34 08.0	+1.2
PDO				AML	AML	00 34 10.4	
	comp=E,5227µm,0.4s						
PDO				AML	AML	00 34 14.3	
	comp=N,4703µm,0.3s						
KRI1	kERI	0.69	153	P	Pg	00 33 58.1	-0.3
KRI1				S	Sg	00 34 08.0	+0.7
	comp=N,2µm,0.2s						
RLS	Riolos of Patr	0.85	105	P	Pg	00 34 01.2	-0.1
RLS				S	Sb	00 34 14.6	+1.0
	comp=N,740nm,0.4s						
RLS	Riolos of Patr	0.85	105	P	Pg	00 34 01.3	-0.1
RLS				AML	AML	00 34 22.1	
	comp=N,1527µm,0.4s						
RLS				AML	AML	00 34 22.3	
	comp=E,1414µm,0.4s						
PVO	Paravola	0.93	68	P	Pg	00 34 03.1	+0.2
PVO				S	Sn	00 34 17.7	-0.2
	comp=E,938nm,0.4s						
PVO	Paravola	0.93	68	P	Pg	00 34 03.1	+0.2
PVO				AML	AML	00 34 23.6	
	comp=N,1783µm,0.5s						
PVO				AML	AML	00 34 25.3	
	comp=E,2666µm,0.4s						
DRO	Drossia	1.06	108	P	Pg	00 34 05.1	-0.4
DRO				S	Sn	00 34 21.5	+0.2
	comp=E,1µm,0.5s						
DRO	Drossia	1.06	108	P	Pg	00 34 04.7	-0.8
DRO				AML	AML	00 34 29.8	
	comp=E,3025µm,0.4s						
DRO				AML	AML	00 34 31.5	
	comp=N,2329µm,0.6s						
EFP	Efpalio	1.17	82	P	Pb	00 34 06.2	-1.4
EFP	Efpalio	1.17	82	P	Pb	00 34 06.7	-0.8
EFP				AML	AML	00 34 32.8	
	comp=N,1656µm,0.5s						
EFP				AML	AML	00 34 37.5	
	comp=E,1166µm,0.5s						
ANX	Ano Chora	1.21	75	P	Pn	00 34 07.7	-0.8
ANX	Ano Chora	1.21	75	P	Pn	00 34 07.7	-0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ANX				AML	AML	00 34 33.1	
	comp=N,3590µm,0.7s						
ANX				AML	AML	00 34 33.5	
	comp=E,2593µm,0.7s						
LAKA	Lakka	1.22	91	P	Pn	00 34 07.6	-0.9
LAKA	Lakka	1.22	91	P	Pn	00 34 07.8	-0.7
LAKA				AML	AML	00 34 28.2	
	comp=N,1269µm,0.4s						
LAKA				AML	AML	00 34 29.3	
	comp=E,1078µm,0.4s						
IGT	Igoumenitsa	1.25	357	P	Pn	00 34 07.5	-1.4
IGT				S	Sb	00 34 24.6	-0.7
	comp=E,182nm,0.5s						
EVR	Evrytania	1.25	59	P	Pn	00 34 07.9	-1.1
EVR	Evrytania	1.25	59	P	Pn	00 34 08.3	-0.7
EVR				AML	AML	00 34 34.1	
	comp=N,646µm,0.7s						
EVR				AML	AML	00 34 37.1	
	comp=E,560µm,0.5s						
AMT	Artemida-Makis	1.26	126	P	Pn	00 34 08.7	-0.3
AMT	Artemida-Makis	1.26	126	P	Pn	00 34 08.9	-0.1
SERG	Sergoula	1.29	84	P	Pn	00 34 08.2	-1.2
SERG	Sergoula	1.29	84	P	Pn	00 34 08.1	-1.3
TRIZ	Trizonia	1.30	86	P	Pn	00 34 08.6	-0.9
TRIZ	Trizonia	1.30	86	P	Pn	00 34 08.6	-0.9
ALIK	Aliki, Aigiali	1.32	90	P	Pn	00 34 09.4	-0.5
KALE	Kalithea	1.35	85	P	Pn	00 34 09.8	-0.6
KALE	Kalithea	1.35	85	P	Pn	00 34 09.7	-0.6
KALE				AML	AML	00 34 37.1	
	comp=E,576µm,0.8s						
KALE				AML	AML	00 34 45.5	
	comp=N,866µm,0.7s						
KLV	Kalavryta, Ach	1.38	99	P	Pn	00 34 10.3	-0.4
KLV	Kalavryta, Ach	1.38	99	P	Pn	00 34 10.5	-0.2
KLV				AML	AML	00 34 34.5	
	comp=N,786µm,0.5s						
KLV				AML	AML	00 34 39.1	
	comp=E,513µm,0.8s						
JAN	Janina	1.41	13	P	Pb	00 34 11.8	+0.1
JAN				S	Sg	00 34 31.9	+1.4
MAKR	Makrakomi, Fth	1.52	61	P	Pb	00 34 13.2	-0.4
ITM	Ithomi	1.62	132	P	Pn	00 34 14.3	+0.3
ITM				S	Sg	00 34 36.6	-0.5
SRN	Sarande	1.63	348	P	Pg	00 34 17.4	+1.1
AGG	Agios Georgios	1.66	63	P	Pb	00 34 16.1	+0.1
THL	Klokotos Trika	1.78	44	P	Pb	00 34 18.6	+0.6
VLX	Vlachokerasia	1.79	120	P	Pb	00 34 18.9	+0.7
PROD	Prodromos	1.95	90	P	Pb	00 34 21.1	+0.3
LOUT	Loutraki	2.03	98	P	Pb	00 34 21.6	-0.6
DID	Didima	2.35	108	P	Pn	00 34 24.0	-0.1
LIT	Litokhoron	2.42	41	P	Pb	00 34 27.6	-1.3

IDC 05 00:39:36.3±1.2, 11.60N×140.61E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/40, mbtmp3.6/4, MS2.9/2, Ms1 2.9/2, ms1mx2.6/31, Error ellipse: s-maj=59.3km s-min=29.4km az=81.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
						h m s	ISC
GUMO	Guam	4.60	64	LR	LR	00 42 26.8	
	comp=Z,80nm,18.7s,baz=172,slow=37						
PMG	Port Moresby	21.86	162	LR	LR	00 51 28.9	
	comp=Z,50nm,20.6s,baz=146,slow=33						
ASAR	Alice Springs	35.66	191	P	P	00 46 36.1	-0.3
	0.4nm,0.5s,baz=16,slow=13,SNR=5.5						
SONM	Songino Array	46.09	328	P	P	00 48 01.7	-0.6
	0.2nm,0.4s,baz=114,slow=8.4,SNR=2.3						
ZALV	Zalesovo Beam	60.87	326	P	P	00 49 51.0	+0.4
	0.6nm,0.5s,baz=110,slow=8.7,SNR=2.2						
YKA	Yellowknife Ar	86.51	27	P	P	00 52 20.8	-0.2
	0.4nm,0.6s,baz=288,slow=5.0,SNR=4.6						
LPAZ	La Paz	151.73	103	PKPbc	PKPbc	00 59 34.8	+0.1
	1.3nm,0.5s,baz=287,slow=2.8,SNR=6.6						

NIED 05 00:41:00, 36.80N×141.80E, h35km, Mw3.9 Best double couple: $M_0$9.28000×10^14 NP1: ϕ_s15.00000°, δ67.00000°, λ87.00000°. NP2: ϕ_s203.00000°, δ23.00000°, λ97.00000°.
JMA 05 00:41:09.7±0.3, 36.76N×141.80E, h46km, M3.9
NEIC 05 00:41:11.0±1.4, 36.68N±0.08×141.91E±0.1, h40km±6km, mb4.1/5, Error ellipse: s-maj=13.6km s-min=11.6km az=114.0
IDC 05 00:41:13.2±3.2, 36.51N×141.81E, h62km±28km, mb3.5/8, mb1 3.7/12, mb1mx3.5/45, mbtmp3.9/12, ML3.2/4, MS2.9/6, Ms1 3.0/6, ms1mx2.8/29, Error ellipse: s-maj=26.8km s-min=16.5km az=63.0
ISC 05 00:41:08.4±1.0, 36.69N±0.07×141.91E±0.08, h19km, n43, σ1.17/38, mb4.0/10, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
						h m s	ISC
ONAJ	Iwakimizuishiy	0.98	295	P	Pb	00 41 25.5	-1.3
JFK	Kawauchi	1.06	310	P	Pb	00 41 26.7	-1.6
JHO	Hitachi	1.08	266	P	Pn	00 41 27.1	-1.4
JHYU	Hitachinakayam	1.12	252	P	Pn	00 41 28.4	-0.6
JHYU				eS	Sb	00 41 43.0	-0.3
JFFD	Fukushimafurud	1.15	291	P	Pn	00 41 27.8	-1.7
JMM	Marumori	1.47	323	P	Pn	00 41 33.0	-0.9
JFT	Otama	1.50	304	P	Pn	00 41 34.1	-0.2
JIO	Ouri	1.81	346	P	Pn	00 41 38.2	-0.4
JFY	Yanaizu	1.90	293	P	Pn	00 41 39.8	0.0
JOU	Okura	1.94	330	P	Pn	00 41 40.6	+0.2
JAG	Ashikaga	1.99	263	P	Pn	00 41 40.7	-0.4
JKT	Katashina	2.14	273	P	Pn	00 41 43.4	+0.3
MJAR	Matsushiro Arr	2.98	268	P	Pn	00 41 55.6	+1.0
	5.2nm,0.3s,baz=99,slow=10,SNR=53						
MJAR				S	Sn	00 42 30.4	+0.5
	0.9nm,0.3s,baz=74,slow=18,SNR=7.5						
MJAR				LR	LR	00 43 18.0	
	comp=Z,235nm,18.4s,baz=75,slow=44						
MJAR	Matsushiro Arr	2.98	268		Pn	00 41 55.1	+0.5
MAJO	Matsushiro	2.98	268		Pn	00 41 55.6	+1.0
MAT	Matsushiro	2.98	268	P	Pn	00 41 55.9	+1.2
MAT				S	Sn	00 42 30.0	+0.1
MJB9	Matsu-Tunnel	2.98	268		Pn	00 41 55.5	+0.8
JHJ	Hachijo jima 2	3.97	207	P	Pn	00 42 10.1	+1.8
	23nm,0.3s,baz=327,slow=22,SNR=6.1						
JHJ				S	Sn	00 42 52.0	-2.2
	28nm,0.3s,baz=105,slow=20,SNR=2.1						
INU	Inuyama	4.18	253		Pn	00 42 13.5	+2.3
ERM	Erimo	5.40	10	Pn	Pn	00 42 29.0	+1.0
USRK	Ussuriysk Ar.	10.64	318	P	Pn	00 43 44.8	+5.0
	baz=130,slow=14,SNR=5.1						
USRK				LR	LR	00 48 03.5	
	comp=Z,40nm,20.1s,baz=157,slow=38						
KSRS	Korea Array	11.20	278	P	Pn	00 43 51.3	+3.9
	0.2nm,0.3s,baz=93,slow=14,SNR=2.9						
KSRS				LR	LR	00 47 58.1	
	comp=Z,68nm,18.4s,baz=87,slow=36						
PETK	Petropavlovsk-	19.79	29	LR	LR	00 53 57.5	
	comp=Z,22nm,20.6s,baz=62,slow=38						
H11N2	WAKE ISLAND Hy	27.63	121	T	T	01 16 11.7	
	baz=313,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	27.64	121	T	T	01 16 12.2	
	baz=313,slow=75,SNR=18						
H11N3	WAKE ISLAND Hy	27.65	121	T	T	01 16 12.8	
	baz=313,slow=75,SNR=23						
SONM	Songino Array	28.30	304	P	P	00 47 00.6	-0.2
	2.0nm,0.7s,baz=105,slow=9.2,SNR=16						
SONM	Songino Array	28.30	304	IAmb	IAmb	00 47 02.0	
	comp=Z,1.7nm,0.8s						
H11S1	WAKE ISLAND Hy	28.34	123	T	T	01 17 05.4	
	baz=315,slow=75,SNR=14						
H11S3	WAKE ISLAND Hy	28.34	123	T	T	01 17 04.9	
	baz=315,slow=75,SNR=18						
H11S2	WAKE ISLAND Hy	28.36	123	T	T	01 17 04.3	
	baz=315,slow=75,SNR=12						
CMAR	Chiang Mai Arr	41.80	256	LR	LR	01 09 02.0	
	comp=Z,24nm,18.1s,baz=315,slow=40						
ZALV	Zalesovo Beam	42.44	313	P	P	00 49 02.2	+0.5
	comp=Z,1.4nm,0.5s,baz=98,slow=6.8,SNR=9.0						
ZALV				PcP	PcP	00 50 53.3	-1.2
	comp=Z,0.4nm,0.4s,baz=100,slow=4.4,SNR=3.1						
ZALV	Zalesovo Beam	42.44	313	P	P	00 49 02.0	+0.2
MK31	Makanchi Array	44.63	302	P	P	00 49 19.3	-0.3
MK31				IAmb	IAmb	00 49 30.3	
	comp=Z,2.4nm,1.1s						
MKAR	Makanchi Array	44.63	302	P	P	00 49 19.7	+0.1
	comp=Z,1.0nm,0.8s,baz=88,slow=9.1,SNR=13						
MKAR	Makanchi Array	44.63	302	P	P	00 49 19.5	-0.1
KURK	Kurchatov	46.45	308	P	P	00 49 33.6	-0.3
KURK				IAmb	IAmb	00 49 45.9	
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	49.57	32	P	P	00 49 58.2	+0.4
	comp=Z,0.2nm,0.8s,baz=267,slow=6.9,SNR=2.6						
ILAR				LR	LR	01 11 04.3	
	comp=Z,17nm,21.9s,baz=63,slow=36						
GEYT	Alibeck	64.35	299	P	P	00 51 43.3	+0.3
	comp=Z,0.9nm,0.8s,baz=74,slow=7.7,SNR=4.0						
FINES	FINESS Array B	69.30	332	P	P	00 52 14.7	+0.6
	comp=Z,1.1nm,0.8s,baz=44,slow=10,SNR=3.5						
AKASG	Malin Array Be	74.81	323	P	P	00 52 46.9	-0.3
	comp=Z,0.5nm,0.4s,baz=46,slow=5.7,SNR=4.6						
GERES	GERESS Array B	83.21	328	P	P	00 53 33.9	+0.4
	comp=Z,0.4nm,0.8s,baz=57,slow=4.9,SNR=3.6						

IDC 05 00:57:23.9±1.5, 60.20N×153.05W, h110km±28km, mb3.1/1, mb1 3.2/5, mb1mx2.9/37, mbtmp3.5/5, Error ellipse: s-maj=38.8km s-min=10.8km az=109.0
NEIC 05 00:57:24.9±1.4, 60.13N±0.04×153.16W±0.06, h142km±4km, Error ellipse: s-maj=6.5km s-min=3.4km az=207.0
AEIC 05 00:57:25.9±1.0, 60.15N±0.04×153.21W±0.07, h140km±4km, ML3.2/111, Error ellipse: s-maj=6.5km s-min=4.7km az=184.0
ISC 05 00:57:25.0±1.0, 60.16N±0.04×153.16W±0.04, h144km±6km, n119, σ0.97/135, Southern Alaska

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
						h m s	ISC
ILW	Iliamna West	0.10	172		Pn	00 57 44.2	-0.4
ILW					Sn	00 57 58.8	-0.7
IVE	Iliamna Volcan	0.16	152		Pn	00 57 44.2	-0.4
ILS	Iliamna Low So	0.20	166		Pn	00 57 44.2	-0.5
RED	Redoubt Volcan	0.33	36		Pn	00 57 44.7	-0.4
RED					Sn	00 57 59.5	-0.8
RSO	Redoubt South	0.37	33		Pn	00 57 44.8	-0.5
RDWB	Redoubt West	0.37	26		Pn	00 57 45.0	-0.3
RDWB					Sn	00 57 59.7	-1.1
RDJH	Redoubt Jeurge	0.47	22		Pn	00 57 45.4	-0.2
RDJH					Sn	00 58 00.7	-0.8
DFR	Drift River	0.50	28		Pn	00 57 45.4	-0.3
DFR					Sn	00 58 00.9	-0.7
AUL	Augustine Lava	0.79	190		Pn	00 57 47.5	0.0
AUL					Sn	00 58 04.2	-0.4
AU22	Augustine Moun	0.79	187		Pn	00 57 47.4	-0.1
AU22					Sn	00 58 04.1	-0.5
AUW	Augustine West	0.80	191		Pn	00 57 47.5	-0.1
AUP	Augustine Pinn	0.81	189		Pn	00 57 47.8	0.0
HOM	Homer	0.91	122		Pn	00 57 48.8	+0.4
HOM					Sn	00 58 06.8	+0.6
CKL	Chakachamna La	1.12	21		Pn	00 57 50.6	+0.2
CNPM	China Poot	1.16	122		Pn	00 57 50.7	0.0
CNPM					Sn	00 58 09.7	-0.5
CAPN	Captain Cook N	1.17	57		Pn	00 57 52.5	+1.8
SPBG	Spurr Blockage	1.18	19		Pn	00 57 51.3	+0.5
SPBG					Sn	00 58 10.9	+0.3
BRLK	Bradley Lake	1.21	108		Pn	00 57 51.1	0.0
BRLK					Sn	00 58 10.8	-0.3
SPCG	Spurr Capps Gl	1.27	26		Pn	00 57 52.0	+0.2
BRSE	Bradley Lake S	1.29	108		Pn	00 57 52.1	+0.2
BRSE					Sn	00 58 11.8	-0.7
FOSS	Fourpeaked Sta	1.39	192		Pn	00 57 52.5	-0.5
SLKM	Skilak Lake	1.51	75		Pn	00 57 54.0	-0.2
SLKM					Sn	00 58 15.2	-1.2
SUA	Susitna One	1.77	41		Pn	00 57 57.4	+0.3
KAHG	Katmai Hook Gl	1.81	204		Pn	00 57 57.3	-0.3
KARR	Katmai Rainbow	1.84	206		Pn	00 57 57.7	-0.2
SEW	Seward	1.86	90		Pn	00 57 58.0	0.0
RC01	Rabbit Creek A	1.93	59		Pn	00 57 59.2	+0.4
RC01					Sn	00 58 25.0	+0.1
SKT	Skwentna	2.00	23		Pn	00 57 59.9	+0.2
KCG	Knife Ck. Glac	2.11	209		Pn	00 58 00.6	-0.4
KABU	Katmai Buttres	2.18	211		Pn	00 58 01.7	-0.3
ANCK	Angle Creek	2.30	212		Pn	00 58 02.9	-0.4
KDAK	Kodiak Island	2.40	173	P	Pn	00 58 02.9	-1.6
	6.0nm,0.3s,baz=16,slow=7.1,SNR=84						
KDAK				S	Sn	00 58 32.3	-2.5
	24nm,0.3s,baz=305,slow=23,SNR=55						
KDAK	Kodiak Island	2.40	173		Sn	00 58 32.0	-2.9
PMR	Palmer	2.44	52	Pn	Pn	00 58 06.2	+1.2
PMR	Palmer	2.44	52		Sn	00 58 34.0	-1.9
PWL	Port Wells	2.49	71		Pn	00 58 04.4	-1.2
GHO	Glory Hole Cre	2.63	50		Pn	00 58 06.6	-0.8
KNK	Knik Glacier	2.63	59		Pn	00 58 06.5	-0.9
PPLA	Purkeypile	2.79	9		Pn	00 58 09.8	+0.3
SML	Sawmill	2.88	53		Pn	00 58 09.5	-1.0
PLK2	Peulik 2	2.90	216		Pn	00 58 10.9	+0.1
OHAK	Old Harbor	2.94	181		Pn	00 58 09.2	-2.1
PLK3	Peulik 3	2.95	214		Pn	00 58 11.2	-0.2
TT01	Tatalina	3.08	335		Pn	00 58 12.4	-0.6
GLI	Glacier Island	3.09	74		Sn	00 58 48.1	-2.3
GLI	Glacier Island	3.09	74		Pn	00 58 11.5	-1.6
TTA	Tatalina	3.10	335		Pn	00 58 12.6	-0.8
HUR	Hurricane	3.30	29		Pn	00 58 15.4	-0.4
SCM	Sheep Creek Mo	3.30	57	Sn	Sn	00 58 54.4	-1.1
SCM	Sheep Creek Mo	3.30	57		Pn	00 58 15.3	-0.7
HIN	Hinchinbrook I	3.33	83		Pn	00 58 15.3	-1.0
JPK	Jack Peak	3.36	72		Pn	00 58 15.5	-1.2
FID	Port Fidalgo	3.37	77		Pn	00 58 14.8	-1.8
FID	Port Fidalgo	3.37	77		Sn	00 58 54.1	-2.7
WAT1	Susitna Watana	3.48	37		Pn	00 58 17.7	-0.5
MID	Middleton Isla	3.52	99		Pn	00 58 18.9	+0.2
WAT2	Susitna Watana	3.57	36		Pn	00 58 19.0	-0.4
WAT6	Susitna Watana	3.57	45		Pn	00 58 18.9	-0.6
KTH	Kantishna Hill	3.57	16		Pn	00 58 19.2	-0.2
TRF	Thorofare Moun	3.58	21		Pn	00 58 19.5	-0.1
EYAK	Cordova Ski Ar	3.71	81		Pn	00 58 21.2	+0.1
CHUM	Lake Minchumin	3.76	6		Pn	00 58 21.9	+0.1
RND	Reindeer	3.85	30		Pn	00 58 22.8	-0.3
DHY	Denali Highway	4.03	41		Pn	00 58 25.1	-0.3
BPAW	Bear Paw Mtn.	4.09	14		Pn	00 58 25.6	-0.5
MCK	McKinley	4.11	27		Pn	00 58 26.5	+0.2
GOAT	Goat Mountain	4.21	81		Pn	00 58 26.9	-0.9
RAGM	Ragged Mountai	4.23	83		Sn	00 59 17.0	-0.2
BWN	Browne	4.39	22		Pn	00 58 30.9	+0.9
HMT	Hamilton	4.44	84	Pn	Pn	00 58 31.0	+0.2
PAX	Paxson	4.64	49		Pn	00 58 32.8	-0.7
BERG	Berg Lake	4.72	83		Pn	00 58 34.2	-0.2
GLB	Gilahina Butte	4.76	70		Pn	00 58 34.5	-0.5
NEA	Nenana	4.83	21		Pn	00 58 36.0	+0.1
VRDI	Verde Repeater	4.89	73		Sn	00 59 31.9	-1.0
VRDI	Verde Repeater	4.89	73		Pn	00 58 36.4	-0.6
WRH	Wood River Hil	4.94	26		Pn	00 58 36.5	-0.7
KHIT	Khitrov Hills	4.94	82		Pn	00 58 37.4	-0.1
CRQM	Cirque	5.00	79		Pn	00 58 38.8	+0.5
MLY	Manley	5.02	12		Pn	00 58 37.6	-0.8
MCARA	McCarthy VSAT	5.12	72		Sn	00 59 39.2	+1.1
MCARA	McCarthy VSAT	5.12	72		Pn	00 58 40.4	+0.6
CCB	Clear Creek Bu	5.15	27		Pn	00 58 39.5	-0.6
TGL	Tana Glacier	5.15	79		Pn	00 58 40.5	+0.2
KULT	Kultieth River	5.21	84		Pn	00 58 41.2	+0.2
RIDG	Independent Ri	5.32	44		Pn	00 58 42.4	-0.1
MDM	Murphy Dome	5.33	23		Pn	00 58 42.1	-0.5
PTPK	Patty Peak	5.36	74		Pn	00 58 43.4	+0.3
KIAG	Kiagna River	5.39	77		Pn	00 58 43.9	+0.4
BALM	Baldy	5.41	76		Pn	00 58 44.3	+0.7
IL31		5.47	29		Pn	00 58 43.7	-0.6
ILAR	Eielson Array	5.47	29	P	Pn	00 58 44.0	-0.4
	3.8nm,0.3s,baz=213,slow=15,SNR=226						
ILAR				S	Sn	00 59 41.6	-4.8
	1.8nm,0.3s,baz=212,slow=20,SNR=11						
ILAR	Eielson Array	5.47	29		Pn	00 58 43.4	-1.0
DOT	Dot Lake	5.55	47	Pn	Pn	00 58 45.2	-0.2
MESA	MESA	5.60	85		Pn	00 58 46.9	+0.5
POKR	Poker Plat Res	5.64	25		Pn	00 58 46.3	-0.3
GRNC	Granite Creek	5.68	79		Pn	00 58 48.2	+0.8
BARN	Barnard Glacie	5.74	76		Pn	00 58 49.3	+1.2
SCRK	Sand Creek	5.77	44		Pn	00 58 47.9	-0.6
IM03		5.86	358		Pn	00 58 49.6	+0.2
IMAR	Indian Mountai	5.86	358		Pn	00 58 49.4	-0.1
CTGM	Chitina Glacie	5.89	77		Pn	00 58 51.2	+1.1
RKAV	Rock Avalanche	5.89	83		Pn	00 58 51.3	+1.1
PS06	TAPS Pump Stn6	5.93	14		Pn	00 58 50.8	+0.4
BCAR	Beaver Creek A	6.16	57	Pn	Pn	00 58 55.5	+1.9
YUK2	White River	6.22	69		Pn	00 58 55.5	+1.1
YUK3	Moose Creek	6.40	70		Pn	00 58 58.2	+1.2
PRP	Porcupine Dome	6.42	30		Pn	00 58 56.9	-0.2
PCA	Pinnacle	6.45	85		Pn	00 58 58.4	+0.8
PNL	Peninsula	6.94	88		Pn	00 59 04.4	+0.3
COLD	Coldfoot	7.22	9		Pn	00 59 08.6	+0.8
FYU	Fort Yukon	7.35	26	Pn	Pn	00 59 08.5	-0.9
DAWY	Dawson	7.55	53	Pn	Pn	00 59 11.6	-0.6
DHAK	Deception Hill	7.66	92	Pn	Pn	00 59 14.8	+1.2
BMAR	Burnt Mountain	8.22	24		Pn	00 59 20.0	-1.1
TOLK	Toolik Lake Re	8.66	9		Pn	00 59 27.5	+0.6
INK	Inuvik	11.76	38	P	Pn	01 00 08.3	+0.4
	0.2nm,0.3s,baz=230,slow=12,SNR=5.0						
YKA	Yellowknife Ar	18.46	66	P	Pn	01 01 30.8	-0.3
	0.1nm,0.3s,baz=278,slow=10,SNR=5.6						
SONM	Songino Array	54.63	306	P	P	01 06 40.5	+2.2
	0.4nm,0.7s,baz=45,slow=4.3,SNR=3.3						

ATH 05 00:59:13.4, 40.95N×24.61E, h16km±2km, ML2.3/7, Error ellipse: s-maj=2.4km s-min=0.8km az=348.0
THE 05 00:59:14.0, 40.92N×24.59E, h10km±1km, ML2.1/9, Error ellipse: s-maj=1.7km s-min=0.9km az=47.0
BEO 05 00:59:15.8±1.0, 42.93N×25.80E, h15km±4km, ML2.1/5
ISC 05 00:59:13.4±0.8, 40.95N±0.02×24.61E±0.02, h15km±5km, n34, σ0.73/57, Aegean Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
						h m s	ISC
KAVA	Kavala	0.09	305	P	Pg	00 59 16.8	+0.2
KAVA				S	Sg	00 59 18.8	+0.1
	6µm,0.1s						
KAVA	Kavala	0.09	305	P	Pg	00 59 16.8	+0.2
KAVA				S	Sg	00 59 18.7	+0.1
KAVA				AML	AML	00 59 18.8	
	comp=E,6683µm,0.1s						
KAVA				AML	AML	00 59 18.9	
	comp=N,15410µm,0.1s						
KVLA	Kavala	0.17	268	P	Pg	00 59 17.9	+0.3
KVLA				S	Sg	00 59 20.3	-0.1
KVLA				AML	AML	00 59 20.9	
	comp=E,3904µm,0.1s						
KVLA				AML	AML	00 59 20.9	
	comp=N,4597µm,0.1s						
THAS	Thassos island	0.35	166	P	Pg	00 59 20.6	+0.1
THAS				S	Sg	00 59 24.8	-0.6
	comp=N,265nm,0.3s						
THAS	Thassos island	0.35	166	P	Pg	00 59 20.4	-0.1
THAS				S	Sg	00 59 25.3	-0.1
THAS				AML	AML	00 59 26.2	
	comp=E,630µm,0.3s						
THAS				AML	AML	00 59 26.8	
	comp=N,422µm,0.3s						
NVR	Nevrokopi	0.70	306	P	Pg	00 59 26.8	-0.3
NVR				S	Sg	00 59 36.3	0.0
	comp=N,152nm,0.2s						
NVR	Nevrokopi	0.70	306	P	Pg	00 59 26.7	-0.3
NVR				S	Sg	00 59 36.2	0.0
NVR				AML	AML	00 59 39.8	
	comp=E,288µm,0.2s						
NVR				AML	AML	00 59 40.4	
	comp=N,318µm,0.3s						
RDO	Rodhopi	0.73	74	P	Pg	00 59 27.5	-0.1
RDO	Rodhopi	0.73	74	P	Pg	00 59 27.5	-0.1
RDO				S	Sg	00 59 37.9	+0.7
RDO				AML	AML	00 59 40.0	
	comp=E,375µm,0.2s						
RDO				AML	AML	00 59 40.1	
	comp=N,286µm,0.2s						
OUR	Ouranopolis	0.78	218	P	Pg	00 59 28.8	+0.3
OUR				S	Sg	00 59 38.6	-0.1
	comp=N,502nm,0.4s						
OUR	Ouranopolis	0.78	218	P	Pg	00 59 28.8	+0.3
OUR				S	Sg	00 59 38.7	0.0
OUR				AML	AML	00 59 40.5	
	comp=E,868µm,0.3s						
OUR				AML	AML	00 59 40.9	
	comp=N,1143µm,0.5s						
SRS	Serrai	0.79	283	P	Pg	00 59 28.8	0.0
SRS				S	Sb	00 59 40.1	+0.7
	comp=N,82nm,0.2s						
SRS	Serrai	0.79	283	P	Pg	00 59 28.7	0.0
SRS				S	Sg	00 59 39.2	0.0
SMTH	Samothraki Isl	0.84	124	P	Pb	00 59 30.3	+0.6
SMTH	Samothraki Isl	0.84	124	P	Pb	00 59 29.9	+0.1
SOH	Sokhos	0.96	263	P	Pb	00 59 31.1	-0.7
SOH				S	Sg	00 59 45.4	+0.8
	comp=N,85nm,0.4s						
SOH	Sokhos	0.96	263	P	Pb	00 59 31.1	-0.7
SOH				S	Sg	00 59 45.0	+0.4
PLG	Polygyros	1.05	238	P	Pb	00 59 33.8	+0.4
PLG				S	Sb	00 59 47.5	+0.6
	comp=N,265nm,0.4s						
PLG	Polygyros	1.05	238	P	Pb	00 59 33.8	+0.4
PLG				S	Sb	00 59 47.6	+0.6
PLG				AML	AML	00 59 49.8	
	comp=N,364µm,0.4s						
PLG				AML	AML	00 59 49.9	
	comp=E,696µm,0.4s						
ALN	Alexandroupoli	1.09	92	P	Pb	00 59 33.8	-0.1
ALN				S	Sg	00 59 49.1	+0.5
PLD	Plovdiv	1.16	3	ePg	Pg	00 59 36.3	+0.5
PLD				eSg	Sg	00 59 53.2	+2.2
HORT	Hortiatis	1.20	254	P	Pb	00 59 36.6	+0.8
HORT				S	Sg	00 59 53.2	+1.0
	comp=E,52nm,0.3s						
HORT	Hortiatis	1.20	254	P	Pb	00 59 36.7	+0.8
PAIG	Paliouri	1.24	215	P	Pn	00 59 35.2	-1.0
PAIG	Paliouri	1.24	215	P	Pn	00 59 35.5	-0.6
KNT	Kendrikon	1.31	280	P	Pn	00 59 37.9	+0.7
KNT				S	Sb	00 59 54.7	+0.3
	comp=E,38nm,0.2s						
KNT	Kendrikon	1.31	280	P	Pn	00 59 37.6	+0.4
VAY	Valandovo	1.59	284	ePn	Pn	00 59 40.3	-0.7
VTS	Vitosha	1.96	329	ePg	Pb	00 59 50.2	+1.3
VTS				eSg	Sg	01 00 17.3	+0.7
STIP	Stip	1.98	293	ePn	Pn	00 59 45.2	-1.1
BOSS	Bosilegrad	2.23	315	ePn	Pg	00 59 55.6	-0.5
BOSS				eSn	Sg	01 00 25.2	+0.3
ZAPS	Zavoj	2.75	328	ePn	Pn	00 59 54.2	-2.8
ZAPS				eSg	Sn	01 00 30.5	+0.5
BARS	Barje	2.80	313	ePn	Pb	01 00 01.9	-1.3
BARS				eSn	Sb	01 00 37.3	0.0
ZAGS	Zajecar	3.36	329	ePn	Pn	01 00 00.0	-5.4

HEL 05 01:02:12.5±0.1, 67.83N×20.25E, h0km, ML1.5, ML2.3(UPP), Explosion
UPP 05 01:02:12.1±0.1, 67.82N×20.20E, h0km, ML2.3, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
						h m s	ISC
KUA	Kurravaara	0.14	22	P	Pg	01 02 15.0	+0.2
KUA				S	Sg	01 02 17.1	+0.5
KUA	Kurravaara	0.14	22	i P	Pg	01 02 15.0	+0.2
KUA				i S	Sg	01 02 17.1	+0.5
RATU	Laukkuluspa	0.23	270	P	Pg	01 02 16.7	+0.2
RATU	Laukkuluspa	0.23	270	i P	Pg	01 02 16.7	+0.2
LANU	Lannavaara	0.71	71	P	Pg	01 02 25.7	-0.1
LANU	Lannavaara	0.71	71	ePB	Pg	01 02 25.6	-0.2
DUNU	Dundret	0.72	168	P	Pg	01 02 25.6	-0.3
DUNU	Dundret	0.72	168	i P	Pg	01 02 25.6	-0.3
KIF	Kilpisjarvi	1.21	10	ePB	Pg	01 02 35.3	+0.1
KIF				MSG		01 02 50.7	
	comp=Z,4.4nm,0.2s						
KIF				eSB	Sg	01 02 51.2	+0.4
KIF	Kilpisjarvi	1.21	10	eP	Pg	01 02 34.6	-0.6
PAJU	Pajala	1.38	124	P	Pg	01 02 37.4	-1.1
PAJU	Pajala	1.38	124	eP	Pg	01 02 37.4	-1.1
HEF	Hetta	1.43	64	ePG	Pn	01 02 38.4	-0.8
	baz=241						
HEF				MSG		01 02 54.3	
	comp=Z,2.5nm,0.2s						
HEF	Hetta	1.43	64	eP	Pn	01 02 37.8	-1.4
ERTU	Ertsjaerv	1.49	148	P	Pn	01 02 39.4	-0.8
ERTU	Ertsjaerv	1.49	148	ePG	Pn	01 02 39.6	-0.5
HARU	Harads	1.70	169	P	Pn	01 02 43.0	+0.2
HARU	Harads	1.70	169	eP	Pn	01 02 43.0	+0.2
TOF	Tornio	2.39	135	ePB	Pn	01 02 53.8	+1.4
TOF				MSG		01 03 21.5	
	comp=Z,2.3nm,0.2s						
TOF				eSG	Sb	01 03 26.0	+0.2
SGF	Sodankyl	2.45	96	ePG	Pb	01 02 55.6	-1.4
	baz=282						
SGF				eSG	Sb	01 03 28.1	+0.4
RNF	Rovaniemi	2.57	116	ePB	Pn	01 02 57.0	+2.0
RNF				eSG	Sb	01 03 30.3	-0.8
ARE0	ARCESS Array S	2.59	46	ePB	Pn	01 02 56.8	+1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARE0				eSG	Sb	01 03 31.4	-0.3

UPP 05 01:02:20.3±0.1, 67.83N×20.19E, h0km, ML1.8, Explosion
ISC 05 01:02:20.0±1.6, 67.79N±0.06×20.25E±0.04, h0km, n4, σ0s22/6, Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.17	11	P	Pg	01 02 23.2	0.0
KUA				S	Sg	01 02 25.2	-0.2
RATU	Laukkuluspa	0.25	279	P	Pg	01 02 24.9	+0.1
RATU				S	Sg	01 02 28.1	0.0
LANU	Lannavaara	0.71	67	P	Pg	01 02 33.8	+0.3
PAJU	Pajala	1.35	123	P	Pg	01 02 45.7	-0.1

NIED 05 01:11:00, 33.40N×141.00E, h56km, Mw3.8 Best double couple: M0 6.55000×10^14 NP1:φs314.00000°, δ68.00000°, λ44.00000°. NP2:φs205.00000°, δ50.00000°, λ151.00000°.
JMA 05 01:11:40.7±0.1, 33.36N×140.99E, h53km, M3.9
NEIC 05 01:11:41.3±2.0, 33.23N±0.08×140.9E±0.1, h70km±9km, mb4.7/7, Error ellipse: s-maj=12.9km s-min=10.6km az=70.0
IDC 05 01:11:42.1±2.6, 33.28N×140.90E, h55km±21km, mb3.7/4, mb1 4.0/7, mb1mx3.5/37, mbtmp4.0/7, ML2.8/2, Error ellipse: s-maj=30.2km s-min=12.5km az=81.0
ISC 05 01:11:40.4±1.2, 33.26N±0.04×141.07E±0.07, h51km±13km, n42, σ1s21/54, mb4.6/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.06	262	P	Pn	01 11 59.0	+0.1
JHJ2				S	Sn	01 12 12.5	-0.2
JHJ2	Mitsune	1.06	262		Pn	01 11 58.4	-0.6
JHJ2				Sn	Sn	01 12 12.9	+0.2
JHCJ	Hachijojimakas	1.08	260	P	Pn	01 11 59.0	-0.2
JHCJ				S	Sn	01 12 11.8	-1.4
JHJ	Hachijo jima 2	1.09	263	P	Pn	01 11 59.0	-0.3
	949nm,0.3s,baz=151,slow=20,SNR=213						
JHJ				S	Sn	01 12 12.1	-1.3
	1µm,0.3s,baz=90,slow=20,SNR=37						
JAOM	Aogashimamukai	1.36	234	P	Pn	01 12 03.6	+0.7
JAOM				eS	Sn	01 12 20.3	+0.5
JMKN	Mikurajimanish	1.39	297	P	Pn	01 12 02.7	-0.6
JMKN				eS	Sn	01 12 18.9	-1.6
BSO1	Boso 1	1.39	357	P	Pn	01 12 02.9	0.0
BSO1				S	Sn	01 12 20.6	+0.7
BSO3	Boso 3	1.61	343	P	Pn	01 12 05.7	-0.4
BSO3				S	Sn	01 12 25.7	+0.2
JIM2	Oshima 3	1.99	317	P	Pn	01 12 10.7	-0.9
JIZS	Izushimoda	2.33	309	P	Pn	01 12 16.3	+0.1
JIZS				eS	Sn	01 12 42.3	-1.3
JOD2	Odawara 2	2.58	321	P	Pn	01 12 19.1	-0.6
JOD2				S	Sn	01 12 46.7	-3.3
JFNN	Fujinakano	2.76	315	P	Pn	01 12 22.9	+0.8
TK02	Tokai 2	2.85	285	P	Pn	01 12 23.9	+0.8
TK02				S	Sn	01 12 56.6	+0.5
TK04	Tokai 4	2.89	294	P	Pn	01 12 24.7	+1.0
TK04				S	Sn	01 12 57.1	-0.1
JRY	Ryogami san	3.28	328	P	Pn	01 12 29.2	-0.1
MJAR	Matsushiro Arr	4.03	325	P	Pn	01 12 40.8	+1.2
	1.8nm,0.3s,baz=157,slow=12,SNR=40						
MJAR				S	Sn	01 13 24.1	-1.4
	0.6nm,0.3s,baz=160,slow=14,SNR=4.1						
MJAR	Matsushiro Arr	4.03	325		Pn	01 12 39.8	+0.2
MJAR					Sn	01 13 25.0	-0.5
MAJO	Matsushiro	4.03	325		Pn	01 12 39.8	+0.2
MAJO				Sn	Sn	01 13 25.4	-0.1
MAT	Matsushiro	4.03	325	P	Pn	01 12 41.1	+1.5
MAT				S	Sn	01 13 24.3	-1.2
MJB9	Matsu-Tunnel	4.04	325		Pn	01 12 39.7	+0.1
MJB9				Sn	Sn	01 13 27.1	+1.5
JCJ	Chichijima	6.22	171	P	Pn	01 13 10.9	+1.4
	16nm,0.3s,baz=287,slow=20,SNR=3.9						
JCJ				S	Sn	01 14 15.2	-4.2
	4.6nm,0.3s,baz=281,slow=16,SNR=1.9						
ERM	Erimo	8.89	10	Pn	Pn	01 13 45.7	-0.4
USRK	Ussuriysk Ar.	13.01	330	P	Pn	01 14 44.6	+2.3
	baz=163,slow=15,SNR=3.1						
SARN	Sarigan	17.03	164	Pn	Pn	01 15 33.7	-1.2
SARN				IAmb	IAmb	01 15 34.3	
	comp=Z,53nm,1.2s						
H11N2	WAKE ISLAND Hy	26.67	114	T	T	01 46 12.1	
	baz=306,slow=75,SNR=76						
H11N1	WAKE ISLAND Hy	26.67	114	T	T	01 46 13.2	
	baz=306,slow=75,SNR=46						
H11N3	WAKE ISLAND Hy	26.68	114	T	T	01 46 11.0	
	baz=306,slow=75,SNR=54						
H11S3	WAKE ISLAND Hy	27.24	116	T	T	01 46 53.3	
	baz=307,slow=75,SNR=2.7						
H11S1	WAKE ISLAND Hy	27.24	116	T	T	01 46 52.7	
	baz=307,slow=75,SNR=3.3						
H11S2	WAKE ISLAND Hy	27.26	116	T	T	01 46 56.1	
	baz=307,slow=75,SNR=2.4						
MKAR	Makanchi Array	45.97	305	P	P	01 19 58.8	+0.5
	comp=Z,0.2nm,0.5s,baz=85,slow=10.0,SNR=6.2						
MKAR	Makanchi Array	45.97	305	P	P	01 19 56.6	-1.7
MAKZ	Makanchi	46.19	305	P	P	01 19 58.3	-1.7
WB0	Warramunga Arr	53.11	188	P	P	01 20 53.8	+1.0
WB0				IAmb	IAmb	01 20 54.7	
	comp=Z,6.6nm,0.6s						
WR0	Warramunga Arr	53.29	188	P	P	01 20 54.4	+0.3
WRA	Warramunga Arr	53.29	188	P	P	01 20 55.4	+1.2
	comp=Z,4.4nm,0.5s,baz=5.3,slow=7.7,SNR=14						
WRA	Warramunga Arr	53.29	188	P	P	01 20 53.6	-0.5
AS31	Alice Springs	57.02	188	P	P	01 21 21.5	+0.5
AS31				IAmb	IAmb	01 21 24.8	
	comp=Z,2.5nm,0.4s						
ASAR	Alice Springs	57.02	188	P	P	01 21 22.4	+1.5
	comp=Z,2.3nm,0.4s,baz=5.9,slow=6.9,SNR=29						
ASAR	Alice Springs	57.02	188	P	P	01 21 21.1	+0.1
AKASG	Malin Array Be	77.11	323	P	P	01 23 28.8	+0.6
	comp=Z,0.2nm,0.5s,baz=51,slow=5.7,SNR=3.3						
AKASG	Malin Array Be	77.11	323	P	P	01 23 27.4	-0.7

ATH 05 01:21:47.5, 38.17N×20.27E, h4km±1km, ML2.6/4, Error ellipse: s-maj=2.0km s-min=1.3km az=72.0
THE 05 01:21:48.1, 38.17N×20.32E, h0km, ML2.7/6, Error ellipse: s-maj=0.8km s-min=0.4km az=242.0
ISC 05 01:21:48.2±1.9, 38.18N±0.03×20.32E±0.08, h5km±7km, n21, σ0s55/40, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.04	45	P	Pg	01 21 49.4	+0.1
KEF3				S	Sg	01 21 50.2	+0.1
CHV1	Chavriata, Kef	0.05	82	P	Pg	01 21 49.3	-0.2
CHV1				S	Sg	01 21 50.0	-0.4
LXR1	Lixouri, Cepha	0.10	76	P	Pg	01 21 50.3	0.0
KEF4	Livadi, Kephal	0.12	47	P	Pg	01 21 50.7	+0.1
KEF4				S	Sg	01 21 52.4	+0.2
ARG2	Argostoli	0.14	89	P	Pg	01 21 51.0	+0.1
ARG2				S	Sg	01 21 53.1	+0.4
	18µm,0.5s						
KEF2	Argostoli. Kep	0.14	95	P	Pg	01 21 51.0	+0.1
KEF2				S	Sg	01 21 53.2	+0.5
KEF1	Kardakata, Kep	0.16	50	P	Pg	01 21 51.3	0.0
KEF1				S	Sg	01 21 53.9	+0.4
VLS	Valsamata	0.22	90	P	Pg	01 21 52.2	-0.2
VLS				S	Sg	01 21 55.1	-0.2
	4µm,0.3s						
VLS	Valsamata	0.22	90	P	Pg	01 21 52.2	-0.2
VLS				S	Sg	01 21 55.2	+0.2
VLS				AML	AML	01 21 55.8	
	comp=E,5891µm,0.2s						
VLS				AML	AML	01 21 56.1	
	comp=N,8611µm,0.5s						
VSK1	VASILIKIADES	0.30	40	P	Pg	01 21 54.2	+0.1
VSK1				S	Sg	01 21 58.9	+0.8
	comp=N,2µm,0.3s						
FSK	Fiskardo	0.34	35	P	Pg	01 21 54.9	+0.1
FSK				S	Sg	01 21 59.9	+0.6
	comp=N,780nm,0.3s						
FSK	Fiskardo	0.34	35	P	Pg	01 21 54.6	-0.3
FSK				S	Sg	01 22 00.2	+0.8
FSK				AML	AML	01 22 00.9	
	comp=E,1880µm,0.1s						
FSK				AML	AML	01 22 01.1	
	comp=N,1196µm,0.4s						
KFL	Anninata	0.38	100	P	Pg	01 21 55.2	-0.3
KFL				S	Sg	01 22 01.1	+0.6
	comp=N,2µm,0.4s						
KFL	Anninata	0.38	100	P	Pg	01 21 54.9	-0.6
KFL				S	Sg	01 22 01.5	+1.0
KFL				AML	AML	01 22 03.3	
	comp=E,3033µm,0.3s						
KFL				AML	AML	01 22 05.9	
	comp=N,3301µm,0.5s						
VLMS	Volimes, Zakyn	0.41	137	P	Pg	01 21 55.9	-0.1
VLMS				S	Sg	01 22 02.6	+1.3
VLMS				AML	AML	01 22 07.7	
	comp=E,1906µm,0.3s						
VLMS				AML	AML	01 22 08.5	
	comp=N,2272µm,0.2s						
EVGI	Lefkada island	0.52	31	P	Pg	01 21 58.1	-0.1
EVGI				S	Sg	01 22 05.8	+0.9
EVGI	Lefkada island	0.52	31	P	Pg	01 21 58.0	-0.1
EVGI				S	Sg	01 22 06.2	+1.2
MGNA	Meganis	0.61	38	P	Pg	01 21 59.2	-0.7
MGNA				S	Sg	01 22 08.2	+0.4
KRI1	kERI	0.65	142	P	Pg	01 22 00.2	-0.4
KRI1				S	Sg	01 22 09.7	+0.6
	comp=N,805nm,0.4s						
LKD2	Lefkada island	0.67	24	P	Pg	01 22 00.6	-0.5
LKD2				S	Sb	01 22 11.1	-0.9
LKD2	Lefkada island	0.67	24	P	Pg	01 22 00.5	-0.5

NNC 05 01:22:15.8±10.0, 37.19N×70.71E, h0km, mb3.8, mpv3.4, 2C-3D, Error ellipse: s-maj=102.7km s-min=56.2km az=159.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.91	359	P	Pn	01 23 46.6	+2.0
	1.1nm,0.2s,baz=180,slow=13,SNR=46						
KK31				⇓S	Sn	01 24 57.0	+4.0
	0.6nm,0.4s,baz=182,slow=23,SNR=4.9						
AAK	Ala-Archa	6.17	27	⇓P	Pn	01 23 47.4	-0.9
	1.3nm,0.3s						
AAK				⇑S	Sn	01 24 59.2	-0.4
	2.3nm,0.8s						
CHMS	Chumysh	6.58	27	⇓P	Pn	01 23 47.3	-6.5
	0.7nm,0.2s						
CHMS				⇑S	Sn	01 24 58.0	-12
	1.8nm,0.3s						
AB31	Akbulak array	14.37	330	P	Pn	01 25 39.1	-1.2

IDC 05 01:26:09.3±16.0, 37.88N×20.28E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.3/28, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=316.8km s-min=33.1km az=36.0
ATH 05 01:26:14.4, 38.19N×20.42E, h13km±1km, ML3.2/8, Error ellipse: s-maj=2.3km s-min=1.1km az=261.0
THE 05 01:26:14.5, 38.19N×20.39E, h12km, ML3.4/5, Error ellipse: s-maj=1.0km s-min=0.7km az=248.0
BEO 05 01:26:17.0±1.0, 38.16N×20.03E, h24km±6km, ML3.1/5
ISC 05 01:26:14.0±0.8, 38.17N±0.03×20.39E±0.04, h13km±4km, n50, σ1s33/67, mb3.5/3, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.01	320	P	Pg	01 26 16.6	+0.3
CHV1				S	Sg	01 26 17.8	-0.1
LXR1	Lixouri, Cepha	0.04	51	P	Pg	01 26 16.9	+0.4
LXR1				S	Sg	01 26 18.6	+0.4
KEF3	Kipouria, Keph	0.05	311	P	Pg	01 26 16.9	+0.4
KEF3				S	Sg	01 26 18.3	+0.1
KEF2	Argostoli. Kep	0.07	95	P	Pg	01 26 17.1	+0.4
KEF2				S	Sg	01 26 18.5	-0.2
ARG2	Argostoli	0.07	85	P	Pg	01 26 17.1	+0.4
ARG2				S	Sg	01 26 18.8	+0.2
	192µm,0.1s						
KEF4	Livadi, Kephal	0.09	16	P	Pg	01 26 17.4	+0.5
KEF4				S	Sg	01 26 19.4	+0.4
KEF1	Kardakata, Kep	0.12	30	P	Pg	01 26 16.8	-0.5
KEF1				S	Sg	01 26 19.6	0.0
VLS	Valsamata	0.15	88	P	Pg	01 26 18.1	+0.4
VLS				S	Sg	01 26 20.7	+0.3
	39µm,0.1s						
VLS	Valsamata	0.15	88	P	Pg	01 26 18.1	+0.4
VLS				S	Sg	01 26 20.5	+0.1
VLS				AML	AML	01 26 20.9	
	comp=E,76541µm,0.1s						
VLS				AML	AML	01 26 21.0	
	comp=N,78074µm,0.2s						
KFL	Anninata	0.32	101	P	Pg	01 26 20.9	+0.4
KFL				S	Sg	01 26 25.8	+0.9
	comp=N,9µm,0.2s						
VLMS	Volimes, Zakyn	0.36	144	P	Pb	01 26 21.9	-0.4
VLMS				S	Sb	01 26 27.3	-0.6
VLMS				AML	AML	01 26 28.4	
	comp=N,20020µm,0.7s						
VLMS				AML	AML	01 26 29.9	
	comp=E,12162µm,0.4s						
EVGI	Lefkada island	0.49	25	P	Pg	01 26 23.4	-0.3
EVGI	Lefkada island	0.49	25	P	Pg	01 26 23.2	-0.5
MGNA	Meganis	0.57	33	P	Pg	01 26 25.6	+0.3
MGNA				AML	AML	01 26 35.6	
	comp=N,5818µm,0.2s						
MGNA				AML	AML	01 26 36.2	
	comp=E,5727µm,0.2s						
KRI1	kERI	0.61	147	P	Pg	01 26 25.8	-0.1
KRI1				S	Sb	01 26 36.0	+1.1
	comp=E,5µm,0.4s						
PDO	Prodromos	0.75	55	P	Pg	01 26 28.8	+0.2
PDO	Prodromos	0.75	55	P	Pg	01 26 28.7	+0.1
PDO				AML	AML	01 26 45.0	
	comp=E,3039µm,0.3s						
PDO				AML	AML	01 26 45.4	
	comp=N,4229µm,0.3s						
RLS	Riolos of Patr	0.85	97	P	Pg	01 26 30.4	-0.1
PVO	Paravola	0.99	63	P	Pg	01 26 33.5	+0.3
PVO	Paravola	0.99	63	P	Pb	01 26 33.4	+0.3
PVO				AML	AML	01 26 50.3	
	comp=E,5734µm,0.3s						
PVO				AML	AML	01 26 54.2	
	comp=N,2491µm,0.3s						
DRO	Drossia	1.06	102	P	Pb	01 26 34.1	-0.1
UPR	University Cam	1.10	84	P	Pn	01 26 35.4	+0.3
EFP	Efpalio	1.22	77	P	Pn	01 26 36.7	+0.1
EFP				AML	AML	01 27 02.2	
	comp=E,1494µm,0.4s						
EFP				AML	AML	01 27 03.8	
	comp=N,1405µm,0.6s						
AMT	Artemida-Makis	1.22	121	P	Pb	01 26 37.1	+0.2
LAKA	Lakka	1.25	86	P	Pn	01 26 37.4	+0.3
LAKA				S	Sg	01 26 55.5	+1.2
	comp=N,175nm,0.5s						
LAKA	Lakka	1.25	86	P	Pn	01 26 37.5	+0.3
LAKA				AML	AML	01 27 03.4	
	comp=E,731µm,0.5s						
LAKA				AML	AML	01 27 04.7	
	comp=N,677µm,0.5s						
ANX	Ano Chora	1.27	70	P	Pn	01 26 37.6	+0.1
SERG	Sergoula	1.33	79	P	Pn	01 26 38.8	+0.5
IGT	Igoumenitsa	1.36	358	ePg	Pg	01 26 42.8	+2.7
IGT				eSg	Sg	01 27 00.7	+2.9
KALE	Kalithea	1.39	80	P	Pn	01 26 39.4	+0.2
KALE				AML	AML	01 27 11.6	
	comp=E,666µm,0.5s						
KALE				AML	AML	01 27 15.7	
	comp=N,758µm,0.5s						
KLV	Kalavryta, Ach	1.39	95	P	Pb	01 26 39.9	0.0
ITM	Ithomi	1.57	129	P	Pb	01 26 43.0	+0.2
VLX	Vlachokerasia	1.77	116	P	Pb	01 26 47.3	-0.6
VIL2	Platees	2.27	88	P	Pb	01 26 54.2	-0.6
FNA	Florina	2.72	16	ePn	Pn	01 27 00.5	-1.9
TIR	Tirane	3.20	353	ePn	Pn	01 27 06.4	+2.5
VAY	Valandovo	3.56	27	ePn	Pb	01 27 13.3	-3.3
STIP	Stip	3.78	21	ePn	Pb	01 27 17.7	-2.8
SRS	Serrai	3.84	39	ePn	Pn	01 27 16.0	+3.3
PDG	Podgorica	4.34	349	ePn	Pn	01 27 21.1	+1.5
PDG				eSn	Sn	01 28 10.0	0.0
BARS	Barje	4.76	13	ePn	Pn	01 27 29.3	+3.9
TREB	Trebinje	4.80	342	ePn	Pn	01 27 25.8	-0.1
TREB				eSn	Sn	01 28 18.1	-3.3
SELS	Selova	5.07	6	ePn	Pn	01 27 32.2	+2.5
STON	Ston	5.12	337	ePn	Pn	01 27 30.6	+0.3
IVAS	Ivanjica	5.40	358	ePn	Pn	01 27 36.8	+2.6
DIVS	Divibare	5.93	357	ePn	Pn	01 27 41.8	+0.3
DIVS				eSn	Sn	01 28 48.1	-1.2
GERES	GERESS Array B	11.72	338	Pn	Pn	01 29 01.8	+1.0
	comp=N,0.1nm,0.3s,baz=162,slow=14,SNR=3.3						
FINES	FINESS Array B	23.56	7	P	P	01 31 25.0	+1.1
	comp=N,1.5nm,0.9s,baz=197,slow=11,SNR=3.3						
MKAR	Makanchi Array	45.39	58	P	P	01 34 31.4	-0.7
	comp=N,0.3nm,0.5s,baz=276,slow=6.5,SNR=12						
ZALV	Zalesovo Beam	45.77	48	P	P	01 34 33.3	-1.6
	comp=N,0.7nm,0.4s,baz=280,slow=8.2,SNR=2.5						

IDC 05 01:36:54.9±0.9, 38.18N×20.18E, h0km, mb3.7/9, mb1 3.7/18, mb1mx3.6/47, mbtmp3.6/18, ML3.1/8, MS3.2/2, Ms1 3.3/2, ms1mx2.6/58, Error ellipse: s-maj=17.0km s-min=14.9km az=160.0
PDG 05 01:36:55.6±0.2, 38.16N×20.24E, h12km, ML3.8/14, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0
THE 05 01:36:56.5, 38.18N×20.30E, h0km, ML3.7/13, Error ellipse: s-maj=1.0km s-min=0.4km az=250.0
ATH 05 01:36:56.6, 38.19N×20.34E, h11km±2km, ML3.5/12, Error ellipse: s-maj=3.4km s-min=1.3km az=76.0
BEO 05 01:36:58.3±0.8, 38.10N×20.01E, h25km±4km, ML3.6/8
ISC 05 01:36:56.2±0.9, 38.17N±0.02×20.30E±0.03, h6km±5km, n130, σ1s52/177, mb3.8/9, 12C-3D, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.07	78	P	Pg	01 36 57.9	0.0
CHV1				S	Sg	01 36 58.9	-0.2
	1171µm,0.4s						
LXR1	Lixouri, Cepha	0.12	74	P	Pg	01 36 58.9	+0.2
LXR1				S	Sg	01 37 00.7	+0.3
	379µm,0.4s						
KEF4	Livadi, Kephal	0.13	49	P	Pg	01 36 59.3	+0.3
KEF4				S	Sg	01 37 00.9	0.0
KEF2	Argostoli. Kep	0.15	91	P	Pg	01 36 59.7	+0.4
KEF2				S	Sg	01 37 01.8	+0.4
ARG2	Argostoli	0.15	86	P	Pg	01 36 59.6	+0.3
ARG2				S	Sg	01 37 01.6	+0.2
	128µm,0.4s						
KEF1	Kardakata, Kep	0.17	52	P	Pg	01 36 59.9	+0.2
KEF1				S	Sg	01 37 02.4	+0.3
VLS	Valsamata	0.23	88	P	Pg	01 37 00.8	0.0
VLS				S	Sg	01 37 04.1	+0.2
	44µm,0.3s						
VLS	Valsamata	0.23	88	P	Pg	01 37 00.9	+0.2
VLS				S	Sg	01 37 04.1	+0.2
VLS				AML	AML	01 37 04.4	
VLS				AML	AML	01 37 04.5	
	comp=E,64009µm,0.2s						
VSK1	VASILIKIADES	0.32	41	P	Pg	01 37 02.6	+0.2
VSK1				S	Sg	01 37 06.8	+0.1
	comp=E,22µm,0.2s						
FSK	Fiskardo	0.36	36	P	Pg	01 37 03.3	+0.1
FSK				S	Sg	01 37 08.7	+0.8
	comp=E,19µm,0.4s						
FSK	Fiskardo	0.36	36	P	Pg	01 37 03.3	+0.1
FSK				S	Sg	01 37 08.1	+0.2
FSK				AML	AML	01 37 09.8	
	comp=N,32992µm,0.5s						
FSK				AML	AML	01 37 09.9	
	comp=E,44656µm,0.3s						
VLMS	Volimes, Zakyn	0.41	135	P	Pg	01 37 04.6	+0.4
VLMS				S	Sg	01 37 10.6	+1.0
VLMS				AML	AML	01 37 12.1	
	comp=E,36350µm,0.2s						
VLMS				AML	AML	01 37 12.2	
	comp=N,36183µm,0.2s						
EVGI	Lefkada island	0.53	32	P	Pg	01 37 06.4	0.0
EVGI				S	Sg	01 37 14.3	+0.9
EVGI	Lefkada island	0.53	32	P	Pg	01 37 06.5	0.0
ZAK2	Zakynthos	0.61	128	P	Pg	01 37 08.3	+0.4
ZAK2				S	Sb	01 37 17.9	-0.1
	comp=N,26µm,0.5s						
MGNA	Meganis	0.62	39	P	Pg	01 37 08.0	-0.2
MGNA				AML	AML	01 37 17.6	
	comp=N,5889µm,0.6s						
MGNA				AML	AML	01 37 20.4	
	comp=E,9234µm,0.4s						
KRI1	kERI	0.65	141	P	Pg	01 37 08.5	-0.2
KRI1				S	Sb	01 37 19.2	-0.1
	comp=E,10µm,0.3s						
LKD2	Lefkada island	0.68	25	P	Pg	01 37 08.9	-0.4
LKD2				S	Sg	01 37 18.9	+0.7
	comp=E,4µm,0.7s						
LKD2	Lefkada island	0.68	25	P	Pg	01 37 08.9	-0.4
LKD2				AML	AML	01 37 26.6	
	comp=E,6213µm,0.7s						
LKD2				AML	AML	01 37 26.9	
	comp=N,8160µm,0.7s						
AST1	Astakos	0.73	59	P	Pg	01 37 09.9	-0.3
AST1				S	Sb	01 37 21.0	-0.4
	comp=N,4µm,0.5s						
PDO	Prodromos	0.82	58	P	Pg	01 37 11.5	-0.4
PDO				S	Sb	01 37 23.9	-0.2
	comp=N,5µm,0.4s						
PDO	Prodromos	0.82	58	P	Pg	01 37 11.6	-0.3
PDO				AML	AML	01 37 27.0	
	comp=E,5717µm,0.3s						
PDO				AML	AML	01 37 29.2	
	comp=N,6980µm,0.5s						
RLS	Riolos of Patr	0.93	97	P	Pg	01 37 13.7	-0.4
RLS				S	Sb	01 37 27.2	0.0
	comp=N,2µm,0.7s						
RLS	Riolos of Patr	0.93	97	P	Pg	01 37 13.6	-0.4
RLS				AML	AML	01 37 35.5	
	comp=E,2309µm,0.7s						
RLS				AML	AML	01 37 37.2	
	comp=N,3813µm,0.6s						
PVO	Paravola	1.06	65	P	Pg	01 37 16.3	-0.3
PVO	Paravola	1.06	65	P	Pg	01 37 16.3	-0.3
PVO				AML	AML	01 37 38.8	
	comp=E,5884µm,0.6s						
PVO				AML	AML	01 37 39.9	
	comp=N,6703µm,0.6s						
DRO	Drossia	1.14	101	P	Pg	01 37 17.4	-0.6
DRO	Drossia	1.14	101	P	Pg	01 37 17.4	-0.6
UPR	University Cam	1.18	84	P	Pn	01 37 19.1	-0.1
AMT	Artemida-Makis	1.29	119	P	Pn	01 37 19.9	-0.8
EFP	Efpalio	1.29	78	P	Pn	01 37 19.7	-1.0
EFP				AML	AML	01 37 46.9	
	comp=E,3359µm,0.7s						
EFP				AML	AML	01 37 51.2	
	comp=N,3441µm,0.6s						
LAKA	Lakka	1.33	86	P	Pn	01 37 20.7	-0.5
LAKA				AML	AML	01 37 41.9	
	comp=N,2446µm,0.4s						
LAKA				AML	AML	01 37 52.0	
	comp=E,2280µm,0.7s						
ANX	Ano Chora	1.34	71	P	Pb	01 37 21.7	-0.1
IGT	Igoumenitsa	1.36	1	P	Pn	01 37 21.4	-0.3
IGT				S	Sg	01 37 41.7	+1.7
	comp=E,895nm,0.9s						
IGT	Igoumenitsa	1.36	1	ePg	Pg	01 37 25.9	+3.6
IGT				eSg	Sg	01 37 43.9	+3.9
EVR	Evrytania	1.40	57	P	Pn	01 37 21.7	-0.6
SERG	Sergoula	1.41	79	P	Pn	01 37 21.8	-0.5
SERG				AML	AML	01 37 48.9	
SERG				AML	AML	01 37 51.0	
	comp=N,3213µm,0.6s						
	comp=E,2028µm,0.4s						
KALE	Kalithea	1.47	81	P	Pn	01 37 22.8	-0.4
KALE				AML	AML	01 37 52.9	
	comp=N,2471µm,0.7s						
KALE				AML	AML	01 38 00.6	
	comp=E,1650µm,0.9s						
FNA	Florina	2.74	17	ePn	Pn	01 37 42.9	+2.2
TIP	Timpagrande	2.95	291	⇑P	Pn	01 37 44.7	+1.2
TIP				⇑S	Sn	01 38 20.2	+1.0
OHR	Ohrid	2.96	7	ePn	Pb	01 37 46.7	-2.7
TIR	Tirane	3.19	354	ePn	Pn	01 37 48.8	+1.9
TIR	Tirane	3.19	354	⇑P	Pn	01 37 48.7	+1.8
TIR				⇑S	Sn	01 38 27.8	+2.6
TAR1	Taranto	3.31	316	ePn	Pb	01 37 51.9	-3.4
VAY	Valandovo	3.60	28	ePn	Pn	01 37 55.8	+3.3
VAY	Valandovo	3.60	28	ePn	Pn	01 37 55.5	+3.0
MATE	Matera	3.72	313	⇑P	Pn	01 37 56.1	+1.9
STIP	Stip	3.81	22	ePn	Pn	01 37 59.2	+3.9
SG1	Sgolgore (BA)	3.87	315	ePn	Pn	01 37 57.7	+1.6
ULC	Ulcinj	3.88	348	ePn	Pn	01 37 56.1	-0.2
ULC				eSn	Sn	01 38 42.6	+0.5
SRS	Serrai	3.89	40	ePn	Pn	01 37 58.9	+2.4
BAI	Bari	3.94	319	ePn	Pn	01 37 58.5	+1.3
DRME	Dracevica, Mon	4.10	348	ePn	Pn	01 37 59.6	+0.2
DRME	Dracevica, Mon	4.10	348	⇑iPn	Pn	01 37 59.2	-0.2

DRME eSn Sn 01 38 48.0 +0.4
BUM Brajici-Budva 4.26 346 ePn Pn 01 38 01.4 -0.3
BUM eSn Sn 01 38 52.1 +0.4
PDG Podgorica 4.33 350 ePn Pn 01 38 02.7 +0.2
PDG eSn Sn 01 38 52.3 -0.9
PDG Podgorica 4.33 350 ⇓P Pn 01 38 04.5 +2.0
PDG Podgorica 4.33 350 ePn Pn 01 38 01.9 -0.6
TTG Podgorica 4.33 350 ⇓/Pn Pn 01 38 02.5 0.0
TTG eSn Sn 01 38 53.8 +0.6
PVY Plav 4.43 357 ePn Pn 01 38 04.2 +0.2
PVY eSn Sn 01 38 56.2 +0.3
HCY Herceg Novi 4.49 343 ePn Pn 01 38 03.7 -1.0
HCY Herceg Novi 4.49 343 ePn Pn 01 38 04.4 -0.3
HCY eSn Sn 01 38 56.8 -0.4
CEME Cevo 4.50 347 ePn Pn 01 38 04.3 -0.6
CEME eSn Sn 01 38 57.2 -0.3
BOSS Bosilegrad 4.63 20 ePn Pn 01 38 05.8 +2.3
IDI Anoyia 4.68 127 Pn Pn 01 38 08.8 +1.4
comp=E,0.3nm,0.3s,baz=335,slow=16,SNR=8.1
IDI Sn Sn 01 39 00.9 -1.0
comp=E,1.4nm,0.3s,baz=285,slow=20,SNR=4.4
NKME Niksic 4.71 348 ⇑/Pn Pn 01 38 07.5 -0.2
NKME eSn Sn 01 39 02.7 +0.1
IVA Berane 4.71 356 ePn Pn 01 38 08.1 +0.3
IVA eSn Sn 01 39 02.4 -0.3
VAE Valguarnera 4.71 263 Pn Pn 01 38 08.1 +0.3
comp=E,0.3nm,0.3s,baz=159,slow=14,SNR=3.3
VAE Sn Sn 01 39 02.0 -0.7
comp=E,1.0nm,0.3s,baz=21,slow=8.6,SNR=2.4
KOME Kolasin 4.71 353 ePn Pn 01 38 07.9 0.0
KOME eSn Sn 01 39 02.5 -0.4
NKY Niksic 4.74 348 ePn Pn 01 38 08.7 +0.4
NKY eSn Sn 01 39 03.9 +0.3
TREB Trebinje 4.78 343 ePn Pn 01 38 08.4 -0.3
TREB eSn Sn 01 39 02.3 -2.0
TREB Trebinje 4.78 343 ePn Pn 01 38 07.9 -0.8
BARS Barje 4.78 14 ePn Pn 01 38 09.3 +0.5
BRY Bratogost 4.91 345 ePn Pn 01 38 09.4 -1.2
BRY Bratogost 4.91 345 ePn Pn 01 38 10.3 -0.3
BRY eSn Sn 01 39 07.6 -0.2
VTS Vitosha 4.98 26 ePn Pn 01 38 13.4 +1.9
VTS eSn Sn 01 39 09.7 +0.3
VTS Vitosha 4.98 26 ⇑P Pn 01 38 15.1 +3.5
SELS Selova 5.08 7 ePn Pn 01 38 13.7 +0.8
SJES Sjenica 5.09 357 ePn Pn 01 38 14.4 +1.3
SJES eSn Sn 01 39 11.7 -0.5
UPM Unac-Piva 5.14 349 ePn Pn 01 38 14.5 +0.7
UPM Unac-Piva 5.14 349 ePn Pn 01 38 14.4 +0.7
UPM eSn Sn 01 39 13.4 -0.1
PLE Pljevlja 5.20 353 ePn Pn 01 38 14.9 +0.3
PLE eSn Sn 01 39 14.9 0.0
IVAS Ivanjica 5.40 359 ePn Pn 01 38 17.7 +0.4
IVAS eSn Sn 01 39 19.1 -0.7
RUDO Rudo 5.49 353 ePn Pn 01 38 20.7 +2.3
GRUS Gruza 5.72 3 eSn Sn 01 39 26.4 -1.2
BBLS Lazići 5.73 354 ePn Pn 01 38 22.7 +0.9
ZAGS Zajecar 5.83 14 ePn Pn 01 38 24.8 +1.8
DIVS Divibare 5.93 358 ePn Pn 01 38 24.7 +0.2
DIVS eSn Sn 01 39 29.3 -3.5
DIVS Divibare 5.93 358 ePn Pn 01 38 23.6 -0.9
HAPS Han Pijesak,Bl 6.00 351 ePn Pn 01 38 24.5 -1.0
TRUS Trudelj 6.05 1 ePn Pn 01 38 28.0 +1.9
PLVB Pleven 6.16 31 ⇑P Pn 01 38 30.0 +2.4
ELND Elena 6.38 40 ⇓P Pn 01 38 33.4 +2.8
MGRS Mrkonjic Grad 6.69 340 ePn Pn 01 38 35.9 +0.9
BLY Banja Luka 6.98 341 ePn Pn 01 38 38.7 -0.1
FRGS Fruska Gora 6.99 357 ePn Pn 01 38 37.7 -1.4
FRGS eSn Sn 01 39 54.8 -4.1
FRGS Fruska Gora 6.99 357 ePn Pn 01 38 37.4 -1.7
GZR Gura Zlata 7.45 14 ⇑P Pn 01 38 47.2 +1.7
VOIR 8.08 25 ⇑P Pn 01 38 56.5 +2.4
MORH Mrgy, Hungar 8.13 352 ePn Pn 01 38 54.1 -0.6
MLR Muntele Rosu 8.44 28 Pn Pn 01 39 01.6 +2.5
comp=E,0.1nm,0.3s,baz=165,slow=20,SNR=2.0
MLR Muntele Rosu 8.44 28 ⇑P Pn 01 39 02.5 +3.4
CRES Cresnjev 8.46 336 ePn Pn 01 38 59.4 +0.3
LJU Ljubljana 8.96 333 ePn Pn 01 39 06.1 +0.1
KEST Kesra 9.10 258 Pn Pn 01 39 05.2 -2.8
comp=E,0.1nm,0.3s,baz=108,slow=16,SNR=1.8
SOKA Soboth 9.35 337 ePn Pn 01 39 10.4 -1.0
comp=E,4.5nm,0.4s
OBKA Obir 9.35 335 Pn Pn 01 39 12.7 +1.2
comp=E,5.0nm,0.5s
ARSA Arzberg 9.73 340 ePn Pn 01 39 17.0 +0.4
comp=E,1.5nm,0.3s
KBA Koelnbreinsper 10.27 332 ePn Pn 01 39 26.1 +2.0
comp=E,1.7nm,0.4s
ABTA Abfaltersbach 10.32 329 Pn Pn 01 39 26.8 +2.1
comp=E,0.9nm,0.4s
VYHS Vyhne 10.38 355 ePN Pn 01 39 25.3 -0.1
VYHS eSN Sn 01 41 14.6 -7.4
BRTR Keskin Array B 10.51 77 Pn Pn 01 39 30.1 +2.7
comp=E,0.0nm,0.3s,baz=261,slow=12,SNR=2.3
MOA Molln 10.63 337 ePn Pn 01 39 30.5 +1.5
comp=E,2.0nm,0.3s
MOTA Moosalm 11.38 327 Pn Pn 01 39 42.9 +3.6
comp=E,2.2nm,0.5s
GERES GERESS Array B 11.69 338 Pn Pn 01 39 43.7 +0.2
comp=E,0.2nm,0.3s,baz=160,slow=14,SNR=6.5
GERES Sn Sn 01 41 43.6 -11
comp=E,0.1nm,0.3s,baz=146,slow=21,SNR=2.9
KHC Kasperske Hory 11.98 338 ePn Pn 01 39 47.5 +0.1
KHC eSN Sn 01 41 56.2 -5.2
MMAI Mount Meron Ar 13.32 108 Pn Pn 01 40 07.0 +1.1
comp=E,0.1nm,0.3s,baz=292,slow=12,SNR=2.5
AKASG Malin Array Be 14.04 24 Pn Pn 01 40 16.9 +1.4
comp=E,0.3nm,0.3s,baz=213,slow=10,SNR=3.8
KBZ Khabaz 17.93 65 P P 01 41 08.1 +1.5
comp=E,0.0nm,0.3s,baz=268,slow=13,SNR=3.1
HFS Hagfors 22.38 351 P P 01 41 54.5 -0.3
comp=E,2.3nm,0.6s,baz=165,slow=12,SNR=8.5
FINES FINESS Array B 23.58 7 P P 01 42 06.3 -0.9
comp=E,2.9nm,0.9s,baz=184,slow=9.0,SNR=5.4
NB2 NORSAR Subarra 23.59 349 P P 01 42 07.6 +0.2
comp=Z,0.7nm,0.7s,baz=159,slow=9.3
NOA NORSAR Array B 23.59 349 P P 01 42 06.4 -1.0
comp=Z,1.0nm,0.8s,baz=161,slow=9.2,SNR=3.0
NOA LR LR 01 52 33.5
comp=Z,32nm,18.5s,baz=230,slow=40
KIRV Kirov 27.76 33 LR LR 01 56 19.3
comp=Z,88nm,18.6s,baz=158,slow=42
GEYT Alibeck 29.65 79 P P 01 43 03.9 +1.4
comp=Z,0.4nm,0.5s,baz=275,slow=7.1,SNR=2.5
TORD Torodi Ar. Bea 29.91 219 P P 01 43 05.1 +0.2
comp=Z,1.4nm,0.9s,baz=26,slow=10.0,SNR=7.5
ARCES ARCESS Array B 31.55 3 P P 01 43 18.0 -0.9
comp=Z,1.9nm,1.0s,baz=190,slow=10,SNR=4.7
MKAR Makanchi Array 45.46 58 P P 01 45 15.2 -0.7
comp=Z,0.3nm,0.4s,baz=279,slow=7.2,SNR=9.1
ZALV Zalesovo Beam 45.83 48 P P 01 45 18.1 -0.6
comp=Z,1.4nm,0.4s,baz=276,slow=8.9,SNR=5.7
SONM Songino Array 60.60 50 P P 01 47 05.8 -1.8
comp=Z,0.5nm,0.8s,baz=284,slow=5.8,SNR=3.6

IDC 05 01:47:20.6±2.1, 6°44S×69°35E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/46, mbtmp3.7/6, Error ellipse: s-maj=57.0km s-min=22.2km az=45.0
NEIC 05 01:47:23.3±0.7, 6°3S±0°2×69°5E±0°1, h16km±6km, mb4.2/2, Error ellipse: s-maj=27.3km s-min=14.5km az=215.0
ISC 05 01:47:22.9±1.4, 6°3S±0°2×69°5E±0°1, h10km, n22, σ0°77/23, mb3.8/7, Chagos Archipelago region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

H08N3 Diego Garcia H 1.47 94 Pn Pb 01 47 49.7 -0.5
baz=255,slow=17
H08N3 T T 01 50 00.2
baz=233
H08N2 Diego Garcia H 1.48 93 Pn Pn 01 47 49.7 +0.4
baz=255,slow=17
H08N2 T T 01 50 02.7
baz=233
H08N1 Diego Carcia H 1.49 94 Pn Pb 01 47 50.0 -0.5
baz=255,slow=17
H08N1 T T 01 50 05.9
baz=233
DGAR Diego Garcia 3.13 112 Pn Pn 01 48 12.1 -0.3
DGAR Sn Sn 01 48 50.3 +0.4
H08S1 Diego Carcia H 3.25 115 Pn Pn 01 48 14.8 +1.1
baz=308,slow=14,SNR=23
H08S3 Diego Garcia H 3.25 115 Pn Pn 01 48 14.3 +0.6
baz=308,slow=14,SNR=67
H08S2 Diego Garcia H 3.26 115 Pn Pn 01 48 14.5 +0.6
baz=308,slow=14,SNR=14
MK31 Makanchi Array 54.02 11 P P 01 56 47.5 +0.1
MK31 IAmb IAmb 01 56 48.5
comp=Z,3.9nm,1.7s
MKAR Makanchi Array 54.02 11 P P 01 56 48.0 +0.6
comp=Z,0.5nm,0.6s,baz=199,slow=7.6,SNR=7.6
MKAR Makanchi Array 54.02 11 P P 01 56 47.0 -0.4
ABKAR Akbulak array 55.91 352 P P 01 57 00.5 -0.4
KURK Kurchatov 57.28 7 P P 01 57 09.7 -1.0
AKTO Aktyubinsk 57.33 351 P P 01 57 10.7 -0.4
comp=Z,1.2nm,0.7s,baz=142,slow=7.5,SNR=4.4
ZALV Zalesovo Beam 61.34 10 P P 01 57 39.0 +0.3
comp=Z,0.2nm,0.3s,baz=202,slow=11,SNR=3.2
ZALV Zalesovo Beam 61.34 10 P P 01 57 38.7 0.0
SONM Songino Array 62.88 27 P P 01 57 51.3 +2.0
comp=Z,0.8nm,0.8s,baz=210,slow=6.8,SNR=6.5
SONM Songino Array 62.88 27 P P 01 57 49.4 0.0
ASAR Alice Springs 64.07 113 P P 01 57 57.1 -0.6
comp=Z,0.5nm,0.9s,baz=289,slow=5.8,SNR=3.9
ASAR Alice Springs 64.07 113 P P 01 57 56.1 -1.6
WRA Warramunga Arr 64.24 109 P P 01 57 58.6 -0.3
comp=Z,0.5nm,0.7s,baz=280,slow=9.3,SNR=3.5
NVAR Mina Array Bea 147.19 11 PKPbc PKPbc 02 07 07.1 -0.1
comp=Z,0.3nm,0.7s,baz=262,slow=0.6,SNR=4.0
NVAR Mina Array Bea 147.19 11 PKPdf 02 07 05.7 +0.7

IDC 05 01:54:41.2±6.6, 20°29N×120°49E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/50, mbtmp3.5/5, MS3.2/1, Ms1 3.2/1, ms1mx2.5/34, Error ellipse: s-maj=176.5km s-min=55.5km az=18.0, Philippine Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

SONM Songino Array 29.76 341 P P 02 00 49.6 0.0
0.5nm,0.8s,baz=156,slow=8.2,SNR=4.0
PMG Port Moresby 39.49 136 LR LR 02 18 44.4
comp=Z,29nm,19.6s,baz=18,slow=36
MKAR Makanchi Array 40.77 319 P P 02 02 23.9 -0.2
0.1nm,0.5s,baz=113,slow=9.1,SNR=2.6
ZALV Zalesovo Beam 43.22 330 P P 02 02 43.7 -0.3
0.5nm,0.6s,baz=111,slow=7.9,SNR=3.2
KURBB Kurchatov Arra 44.74 323 P P 02 02 56.3 +0.1
0.9nm,0.7s,baz=124,slow=7.6,SNR=7.6
YKA Yellowknife Ar 86.80 22 P P 02 07 27.2 0.0
0.4nm,0.8s,baz=311,slow=4.8,SNR=8.3

ISK 05 01:56:43.9, 41°37N×28°62E, h15km, ML3.8/36
NEIC 05 01:56:44.5±1.3, 41°39N±0°03×28°64E±0°03, h16km±6km, Error ellipse: s-maj=4.0km s-min=3.5km az=197.0
DDA 05 01:56:44.9, 41°29N×28°62E, h13km±2km, MW3.6
SOF 05 01:56:44.4, 41°42N×28°64E, h26km, MD3.4
ISC 05 01:56:44.4±0.8, 41°37N±0°02×28°63E±0°02, h17km±5km, n191, σ0°98/233, 30C-11D, Turkey

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

CTKS Kestanelik-??a 0.16 216 PG Pg 01 56 48.5 -0.1
CTKS SG Sg 01 56 51.2 -0.2
CTKS Kestanelik-??a 0.16 216 Pg Pg 01 56 48.4 -0.2
CTKS Sg Sg 01 56 51.0 -0.4
ELBA Catalca 0.27 215 i P Pg 01 56 50.2 -0.1
ELBA i S Sg 01 56 53.2 -1.1
KLYT Kilyos 0.33 110 PG Pg 01 56 51.5 +0.2
KLYT SG Sg 01 56 56.5 +0.4
KLYT Kilyos 0.33 110 Pg Pg 01 56 51.5 +0.2
KLYT Sg Sg 01 56 56.5 +0.4
SLVT Silivri 0.34 247 PG Pg 01 56 52.0 +0.4
SLVT SG Sg 01 56 56.9 +0.4
SLVT Silivri 0.34 247 Pg Pg 01 56 52.0 +0.4
SLVT Sg Sg 01 56 57.4 +0.9
AVCI Avcilar-stanb 0.38 169 PG Pg 01 56 52.2 +0.1
AVCI SG Sg 01 56 57.5 +0.1
YKBL Yakuplu-Istanb 0.38 176 PG Pg 01 56 52.4 +0.3
YKBL SG Sg 01 56 58.3 +0.9
YKBL Yakuplu-Istanb 0.38 176 Pg Pg 01 56 52.4 +0.3
SB02 Marmara Sea 0.42 199 PG Pg 01 56 53.3 +0.3
HVHR Bakirkoy-Istan 0.43 158 PG Pg 01 56 53.4 +0.4
HVHR Bakirkoy-Istan 0.43 158 Pg Pg 01 56 53.5 +0.4
ISK Istanbul-Kandi 0.44 133 PG Pg 01 56 53.3 0.0
ISK Istanbul-Kandi 0.44 133 Pg Pg 01 56 53.3 0.0
KAVV Kandilli-Istan 0.44 133 PG Pg 01 56 53.3 -0.1
KAVV Kandilli-Istan 0.44 133 Pg Pg 01 56 53.3 -0.1
BOTS Marmara Eregli 0.62 233 PG Pg 01 56 56.7 +0.1
BOTS Marmara Eregli 0.62 233 Pg Pg 01 56 56.7 +0.1
BUY Buyukada 0.63 144 i P Pg 01 56 56.7 -0.2
BUY i S Sg 01 57 04.4 -0.8
BUY IAML 01 57 06.0
comp=Z,2µm,0.3s
CRLT Corlu 0.71 251 PG Pb 01 56 58.8 +0.4
CRLT Corlu 0.71 251 Pg Pb 01 56 58.9 +0.4
SILT Sile 0.79 105 PG Pb 01 56 59.5 -0.3
SILT Sile 0.79 105 Pg Pb 01 56 59.3 -0.4
LAFA Gebze-Kocaeli 0.82 138 PG Pb 01 57 00.2 +0.1
LAFA Gebze-Kocaeli 0.82 138 Pg Pb 01 57 00.3 +0.1
ARMT Armutlu 0.82 168 PG Pb 01 57 00.2 0.0
ARMT Armutlu 0.82 168 Pg Pb 01 57 00.2 0.0
YLVH Yalova 0.87 140 PG Pb 01 57 01.8 +0.4
YLVH Yalova 0.87 140 Pg Pb 01 57 01.9 +0.5
PHSR Pinarhisar 0.87 288 PG Pb 01 57 00.8 -0.3
PHSR Pinarhisar 0.87 288 Pg Pb 01 57 00.8 -0.3
HRT Hereke 0.95 124 PG Pb 01 57 02.4 -0.1
HRTX Hereke-Izmit 0.97 125 Pg Pb 01 57 02.5 -0.3
YLV Yalova 0.98 145 PG Pb 01 57 02.7 -0.2
YLV Yalova 0.98 145 Pg Pb 01 57 02.8 -0.2
MDNY Mudanya-Bursa 1.01 169 PG Pb 01 57 03.7 +0.2
MDNY Mudanya-Bursa 1.01 169 Pb 01 57 03.7 +0.2
MRMT Marmara Adasi 1.09 226 PN Pb 01 57 04.3 -0.6
MRMT Marmara Adasi 1.09 226 Pn Pb 01 57 04.3 -0.6
KCTX Karacabey (Bur 1.12 191 Pn Pb 01 57 05.3 -0.1
EDC Edincik 1.17 210 PN Pb 01 57 06.1 0.0
EDC Edincik 1.17 210 Pn Pb 01 57 06.1 0.0
IGD Bursa 1.18 158 i P Pn 01 57 05.9 -0.3
IGD i S Sb 01 57 21.5 +0.1
IGD IAML 01 57 22.0
comp=E,625nm,0.2s
IGD IAML 01 57 22.0
comp=N,593nm,0.6s
IGD IAML 01 57 24.0
comp=Z,439nm,0.6s
KAND Kocaeli-Kandir 1.21 102 i P Pn 01 57 06.8 +0.2
KAND i S Sb 01 57 22.5 +0.3
KIRK Kırklareli 1.22 290 i P Pn 01 57 06.3 -0.5
KIRK i S Sb 01 57 22.4 -0.2
KIRK IAML 01 57 25.0
comp=Z,600nm,0.2s
KIRK IAML 01 57 25.0
comp=N,1µm,0.2s
ADVT Abdulvahap 1.25 138 PN Pn 01 57 07.6 +0.4
ADVT Abdulvahap 1.25 138 Pn Pb 01 57 07.9 +0.3
ULDT Uludag 1.28 162 i P Pn 01 57 07.7 -0.1
ULDT i S Sb 01 57 23.8 -0.7
ULDT IAML 01 57 26.0
comp=N,910nm,0.4s
ULDT IAML 01 57 26.0
comp=E,826nm,0.6s
SART Tekirdag 1.29 239 i P Pn 01 57 08.3 +0.5
SART i S Sb 01 57 24.2 -0.4
SART IAML 01 57 26.0
comp=N,536nm,0.4s
SART IAML 01 57 27.0
comp=E,599nm,0.5s
RKY Sarkoy-Tekirda 1.29 239 PN Pn 01 57 08.3 +0.5
RKY Sarkoy-Tekirda 1.29 239 Pn Pb 01 57 08.5 +0.2
KNL Balıkesir 1.38 218 i P Pn 01 57 08.8 -0.1
KNL i S Sn 01 57 26.6 -0.1
KNL IAML 01 57 29.0
comp=N,498nm,0.6s
KRBG Karabiga-Canak 1.40 227 PN Pn 01 57 08.9 -0.3
KRBG Karabiga-Canak 1.40 227 Pn Pn 01 57 08.9 -0.3
SAUV Serdivan-Sakar 1.43 115 PN Pb 01 57 10.4 -0.2
SAUV Serdivan-Sakar 1.43 115 Pn Pb 01 57 10.4 -0.2
SPNC Sapanca-Adapaz 1.44 118 PN Pb 01 57 10.9 +0.1
SPNC Sapanca-Adapaz 1.44 118 Pn Pb 01 57 11.1 +0.3
CAVI Cavuskoy 1.48 141 PN Pb 01 57 10.9 +0.5
CAVI Cavuskoy 1.48 141 Pn Pb 01 57 11.8 +0.3
EDRB Edirne 1.49 289 PN Pn 01 57 10.3 -0.2
EDRB Edirne 1.49 289 Pn Pn 01 57 10.6 +0.1
GONE Gonen-Balikesi 1.50 209 PN Pn 01 57 10.5 -0.1
GONE Gonen-Balikesi 1.50 209 Pn Pn 01 57 11.3 +0.7
UKOP Uzunkopru-Edir 1.52 262 PN Pn 01 57 11.2 +0.3
UKOP Uzunkopru-Edir 1.52 262 Pn Pn 01 57 11.2 +0.3
GEYV SAKARYA_Geyve 1.54 124 i P Pb 01 57 12.5 0.0
GEYV IAML 01 57 35.0
comp=E,452nm,0.2s
GEYV IAML 01 57 36.0
comp=N,503nm,0.5s
GEYV IAML 01 57 41.0
comp=Z,325nm,0.4s
KESN Edirne-Kesan 1.57 251 i P Pb 01 57 13.4 +0.1
KESN i S Sb 01 57 33.5 +0.5
GULT Gulveren 1.71 122 PN Pb 01 57 14.8 -0.5
GULT Gulveren 1.71 122 Pn Pb 01 57 14.9 -0.5
ERIK Erikli-Kesan 1.75 247 PN Pb 01 57 13.5 -0.4
ERIK Erikli-Kesan 1.75 247 Pn Pb 01 57 16.4 +0.4
SAHE Sakarya_HENDEK 1.76 106 i P Pn 01 57 14.6 +0.5
SAHE i S Sb 01 57 38.0 0.0
SAHE IAML 01 57 39.0
comp=E,515nm,0.2s
SAHE IAML 01 57 41.0
comp=N,306nm,0.6s
SAHE IAML 01 57 44.0
comp=Z,301nm,0.3s
DURS Dursunbey 1.77 184 i P Pn 01 57 14.7 +0.4
DURS i S Sn 01 57 35.7 -0.8
DURS IAML 01 57 41.0
comp=Z,347nm,0.5s
DURS IAML 01 57 41.0
comp=E,714nm,0.4s
DURS IAML 01 57 42.0
comp=N,572nm,0.6s
BALY Balya 1.80 206 i P Pn 01 57 15.6 +0.9
BALY IAML 01 57 42.0
comp=E,171nm,0.3s
BALY IAML 01 57 42.0
comp=N,360nm,0.3s
BALY IAML 01 57 50.0
comp=Z,154nm,0.4s
BALB Balikesir 1.81 199 Pn Pn 01 57 15.3 +0.4
JMB Yambol 1.88 306 i P Pn 01 57 16.9 +1.0
GELI Tayfur-Gelibol 1.90 240 PN Pn 01 57 16.5 +0.4
GELI Tayfur-Gelibol 1.90 240 Pn Pn 01 57 17.4 +1.3
BTAS Taskesti 1.96 113 i P Pn 01 57 18.2 +1.2
BTAS IAML 01 57 49.0
comp=N,364nm,0.6s
BTAS IAML 01 57 54.0
comp=E,348nm,0.3s
ROIA ROIAK 1.96 332 i P Pn 01 57 17.2 +0.2
ALN Alexandroupoli 2.01 257 PN Pn 01 57 17.8 +0.2
ALN Alexandroupoli 2.01 257 Pn 01 57 17.6 +0.1
ALN Sn Sn 01 57 42.4 +0.2
SRCK Saricakaya, Es 2.01 130 PN Pn 01 57 18.3 +0.7
SRCK Saricakaya, Es 2.01 130 Pn Pn 01 57 18.6 +1.0
SRCK Saricakaya, Es 2.01 130 i P Pn 01 57 18.2 +0.5
SRCK IAML 01 57 50.0
comp=N,364nm,0.7s
SRCK IAML 01 57 55.0
comp=E,294nm,0.6s
TVSB Tavsanli 2.02 161 Pn Pn 01 57 18.3 +0.5
BORA Eskisehir 2.03 136 i P Pn 01 57 18.5 +0.5
BORA IAML 01 57 51.0
comp=E,238nm,0.2s
PRD Provadia 2.05 334 i P Pn 01 57 17.8 -0.3
STEP BALIKESIR_Sava 2.10 200 i P Pn 01 57 19.2 +0.3
STEP IAML 01 57 52.0
comp=N,205nm,0.4s
STEP IAML 01 57 56.0
comp=Z,229nm,0.3s
STEP IAML 01 57 57.0
comp=E,279nm,0.7s
MDUB Mudurnu 2.14 114 PN Pn 01 57 20.7 +1.2
MDUB Mudurnu 2.14 114 Pn Pn 01 57 20.2 +0.7
MDUB Sn Sn 01 57 45.9 +0.2
YIGI Dzce 2.17 100 i P Pn 01 57 20.8 +1.1
YIGI IAML 01 57 57.0
comp=N,216nm,0.6s
YIGI IAML 01 57 57.0
comp=E,211nm,0.5s
YIGI IAML 01 57 58.0
comp=Z,149nm,0.5s
BAYC CANAKKALE_Bayr 2.27 225 i P Pn 01 57 21.0 -0.2
BAYC i S Sb 01 57 53.0 +0.2
BAYC IAML 01 57 57.0
comp=N,130nm,0.5s
BAYC IAML 01 58 00.0
comp=E,113nm,0.4s
SIMA Simav-Kutahya 2.29 173 Pn Pn 01 57 23.1 +1.5
DEMI Demirci 2.32 178 i P Pn 01 57 22.3 +0.3
DEMI IAML 01 57 59.0
comp=Z,220nm,0.3s
DEMI IAML 01 57 59.0
comp=N,441nm,0.3s
DEMI IAML 01 57 59.0
comp=E,425nm,0.5s
EZN Ezine 2.33 230 Pn Pn 01 57 23.9 +1.9
RDO Rodhopi 2.34 266 PN Pn 01 57 21.9 -0.2
GDZ Gediz 2.37 164 i P Pn 01 57 23.2 +0.6
DIM Dimitrovgrad 2.42 287 i P Pn 01 57 23.3 +0.1
BOZC Bozcaada 2.48 233 i P Pn 01 57 24.3 +0.2
YUVA Yuva-Kibriscik 2.51 112 PN Pn 01 57 26.1 +1.5
YUVA Yuva-Kibriscik 2.51 112 Pn Pn 01 57 26.1 +1.5
AYVA Ayvalik 2.53 216 i P Pn 01 57 22.6 -2.1
AYVA IAML 01 58 05.0
comp=Z,167nm,0.3s
AYVA IAML 01 58 08.0
comp=E,192nm,0.5s
AUKIR Kırka- Seyitga 2.54 145 i P Pn 01 57 25.9 +0.9
AUKIR IAML 01 57 57.0
comp=N,126nm,0.3s
AKHS Akhisar 2.56 194 i P Pn 01 57 25.0 -0.2
ELND Elena 2.58 308 ⇑P Pn 01 57 26.3 +0.9
ELND ⇑S Sg 01 58 10.5 +3.2
KIBS BOLU 2.62 110 i P Pn 01 57 27.4 +1.3
KIBS IAML 01 58 22.0
comp=E,128nm,0.8s
BCAM Yenicaga 2.65 101 i P Pn 01 57 28.4 +1.8
BCAM IAML 01 58 09.0
comp=N,113nm,0.5s
BCAM IAML 01 58 10.0
comp=E,126nm,0.6s
USAK Uak-Merkez 2.66 173 i P Pn 01 57 27.6 +1.0
ZEDA zmir-Bergama 2.67 207 i P Pn 01 57 26.5 -0.2
RAZG Razgrad 2.70 325 ⇓P Pn 01 57 29.2 +2.1
RAZG ⇑S Sg 01 58 08.5 -2.8
CIFT Cifteler, Eski 2.73 136 Pn Pn 01 57 28.0 +0.4
CIFT Cifteler, Eski 2.73 136 i P Pn 01 57 28.5 +0.9
CIFT IAML 01 58 03.0
comp=E,140nm,0.4s
CIFT IAML 01 58 06.0
comp=N,110nm,0.3s
BTIN Bartın 2.73 83 i P Pn 01 57 27.7 +0.2
SZH Strazhica 2.76 314 i P Pn 01 57 27.9 0.0
ICOR Ion Corvin 2.82 348 ⇑P Pn 01 57 30.1 +1.3
ICOR ⇑S Sb 01 58 08.3 -0.2
MANT Manisa 2.87 181 Pn 01 57 28.9 -0.7
MANT Sn Sn 01 58 03.9 0.0
MANT Manisa 2.87 181 i P Pn 01 57 29.8 +0.1
SVRH Sivrihisar-ESK 2.92 130 Pn Pn 01 57 30.9 +0.6
AUSIV SIVRIHISAR 2.94 130 i P Pn 01 57 30.8 +0.3
KBUK KARABUK-Merkez 3.01 91 i P Pn 01 57 32.7 +1.3
CMDR Camlidere-ANKA 3.04 105 i P Pn 01 57 33.4 +1.5
CMDR IAML 01 58 10.0
comp=Z,63nm,0.3s
CMDR IAML 01 58 26.0
comp=N,112nm,0.5s
CMDR IAML 01 58 29.0
comp=E,96nm,0.6s
KHAL Karahalli 3.06 167 i P Pn 01 57 32.6 +0.4
PVL Pavlikeni 3.07 308 i P Pn 01 57 33.4 +1.3
KZIL AFYON_Kizioren 3.31 159 i P Pn 01 57 36.5 +0.9
HARR Harsova 3.36 351 ⇓P Pn 01 57 37.7 +1.5
ANTO Ankara 3.50 114 Pn Pn 01 57 38.4 +0.2
BR231 Keskin MP Arra 3.50 114 Pn 01 57 38.1 -0.2
BR231 Sn Sn 01 58 19.4 0.0
TOPG Topolog 3.52 357 ⇑P Pn 01 57 38.2 -0.1
PELI Kastamonı-Ara 3.53 90 i P Pn 01 57 39.2 +0.7
PLVB Pleven 3.59 306 ⇑P Pn 01 57 40.1 +0.8
PLVB ⇓S Sn 01 58 23.2 +1.8
ELDT Eldivan 3.74 102 i P Pn 01 57 42.8 +1.2
SULR 3.74 333 ⇑P Pn 01 57 42.8 +1.4
BAGO Egridir - ISPA 3.76 153 i P Pn 01 57 44.1 +2.4
TLCR 3.82 2 ⇑P Pn 01 57 43.0 +0.5

TLCR				⇓S	Sn	01 58 26.5	-0.5
ISP	**Isparta**	**3.83**	**157**	Pn	**Pn**	**01 57 42.9**	**+0.2**
ILGA	**Ilgaz**	**3.85**	**93**		**Pn**	**01 57 43.1**	**0.0**
ILGA	**Ilgaz**	**3.85**	**93**	*i* P	**Pn**	**01 57 44.7**	**+1.6**
BBAL	**Bala**	**3.88**	**116**	*i* P	**Pn**	**01 57 44.3**	**+0.8**
TAVA	**DENIZLI_Tavas**	**3.90**	**177**	*i* P	**Pn**	**01 57 43.8**	**+0.1**
KKUL	**Konya-Kulu**	**3.94**	**122**	*i* P	**Pn**	**01 57 45.7**	**+1.4**
DOGA	**KONYA_Doganhis**	**4.01**	**143**	*i* P	**Pn**	**01 57 45.9**	**+0.6**
BZK	**Bozkurt**	**4.07**	**80**	⇑S	**Sn**	**01 58 33.4**	**+0.3**
VLAD	**Vladila**	**4.08**	**312**	⇑P	**Pn**	**01 57 46.9**	**+0.9**
GIUM	**Giurgiulesti**	**4.13**	**356**	⇑P	**Pn**	**01 57 46.3**	**-0.4**
GIUM				⇓S	**Sn**	**01 58 35.7**	**+1.1**
HUMR	**Humele**	**4.14**	**321**	⇑P	**Pn**	**01 57 47.7**	**+0.7**
BR131	**Keskin Array S**	**4.15**	**112**		**Pn**	**01 57 48.1**	**+0.9**
BRTR	**Keskin Array B**	**4.15**	**112**		**Pn**	**01 57 46.7**	**-0.5**
NEGR	**Negresti**	**4.20**	**353**	⇓P	**Pn**	**01 57 48.7**	**+1.0**
NEGR				⇑S	**Sn**	**01 58 36.1**	**-0.3**
VTS	**Vitosha**	**4.21**	**289**	⇑P	**Pn**	**01 57 48.5**	**+0.5**
VTS				⇑S	**Sn**	**01 58 36.2**	**-0.7**
VTS	**Vitosha**	**4.21**	**289**		**Pn**	**01 57 48.2**	**+0.2**
DELI	**KIRIKKALE**	**4.25**	**107**	*i* P	**Pn**	**01 57 49.6**	**+1.2**
TUDR		**4.29**	**351**	⇓S	**Sn**	**01 58 38.9**	**+0.4**
BISRR	**Bisoca**	**4.41**	**342**	⇓P	**Pn**	**01 57 50.9**	**+0.3**
KAGI	**orum-Kargı**	**4.41**	**91**	*i* P	**Pn**	**01 57 50.1**	**-0.6**
TURN	**Turunc**	**4.49**	**180**	*i* P	**Pn**	**01 57 53.3**	**+1.7**
ODBI	**Odobesti**	**4.54**	**346**	⇑S	**Sn**	**01 58 46.6**	**+1.8**
MLR	**Muntele Rosu**	**4.56**	**336**	⇑P	**Pn**	**01 57 53.0**	**+0.2**
MLR	**Muntele Rosu**	**4.56**	**336**	Pn	**Pn**	**01 57 53.4**	**+0.6**
VARL	**Varlezi**	**4.57**	**353**	⇑S	**Sn**	**01 58 46.9**	**+1.5**
KMER	**Konya-Meram**	**4.61**	**140**	*i* P	**Pn**	**01 57 54.1**	**+0.6**
KMER				*i* S	**Sn**	**01 58 46.3**	**-0.4**
KIRS	**Kırehir-Merke**	**4.62**	**117**	*i* P	**Pn**	**01 57 54.2**	**+0.7**
KIRS				*i* S	**Sn**	**01 58 44.2**	**-2.6**
VRI	**Vrincioaia**	**4.71**	**344**	⇑P	**Pn**	**01 57 55.7**	**+1.0**
VRI				⇑S	**Sn**	**01 58 49.5**	**+0.6**
CDAG	**Cicekdag**	**4.71**	**110**	*i* P	**Pn**	**01 57 55.5**	**+0.7**
CDAG				*i* S	**Sn**	**01 58 48.8**	**-0.3**
BAIL	**Bailesti**	**4.71**	**306**	⇓P	**Pn**	**01 57 54.9**	**+0.2**
CTAK	**Corum_Osmancik**	**4.72**	**97**	*i* P	**Pn**	**01 57 56.0**	**+1.0**
ELL	**Elmali**	**4.72**	**167**	Pn	**Pn**	**01 57 55.0**	**+0.1**
VOIR		**4.83**	**329**	⇑P	**Pn**	**01 57 58.0**	**+1.5**
STIP	**Stip**	**4.85**	**276**	*e*Pn	**Pn**	**01 57 56.4**	**-0.2**
SEVA	**Sevastopol**	**4.87**	**48**	⇑P	**Pn**	**01 57 56.9**	**-0.1**
SEVA				⇓S	**Sn**	**01 58 50.9**	**-2.1**
ARR	**Arges**	**4.95**	**325**	⇑P	**Pn**	**01 57 58.7**	**+0.6**
COAL	**Corum-Alaca**	**4.95**	**101**	*i* P	**Pn**	**01 57 59.0**	**+0.9**
COAL				*i* S	**Sn**	**01 58 57.8**	**+2.8**
BIR	**Birlad**	**4.95**	**352**	⇑P	**Pn**	**01 57 58.1**	**+0.1**
KEPZ	**Antalya-Kepez**	**5.02**	**152**	*i* P	**Pn**	**01 58 00.6**	**+1.5**
PUNG	**Punghina**	**5.10**	**307**	⇑P	**Pn**	**01 58 00.1**	**0.0**
DOPR	**Dopca**	**5.17**	**334**	⇑P	**Pn**	**01 58 01.7**	**+0.7**
HAVZ	**Havza**	**5.35**	**91**	*i* P	**Pn**	**01 58 04.4**	**+0.8**
SIRC	**Yozgat**	**5.38**	**110**	*i* P	**Pn**	**01 58 04.8**	**+0.8**
SIRC				*i* S	**Sn**	**01 59 02.2**	**-3.4**
AVNS	**Nevsehir-Avano**	**5.41**	**116**	*i* P	**Pn**	**01 58 06.1**	**+1.7**
AVNS				*i* S	**Sn**	**01 59 04.3**	**-2.1**
ERMK	**Ermenek**	**5.78**	**143**	*i* P	**Pn**	**01 58 10.3**	**+0.7**
ERMK				*i* S	**Sn**	**01 59 14.7**	**-0.9**
GZR	**Gura Zlata**	**5.87**	**315**	⇑P	**Pn**	**01 58 10.4**	**-0.2**
CUSAR	**Sarkisla-SIVAS**	**6.13**	**106**	*i* P	**Pn**	**01 58 16.2**	**+1.8**
ERBA	**Erbaa**	**6.18**	**94**	*i* P	**Pn**	**01 58 16.0**	**+1.0**
GULN	**MERSIN_Gulnar**	**6.44**	**142**	*i* P	**Pn**	**01 58 15.4**	**-3.1**
CUALT	**Altinyayla-SIV**	**6.55**	**106**	*i* P	**Pn**	**01 58 22.0**	**+1.8**
BURAR	**Bucovina Array**	**6.71**	**340**	⇑P	**Pn**	**01 58 23.1**	**+0.8**
BURAR	**Bucovina Array**	**6.71**	**340**		**Pn**	**01 58 23.3**	**+1.0**
BUR08	**Bucovina Ar. S**	**6.74**	**340**		**Pn**	**01 58 23.7**	**+1.0**
SORM	**Soroca**	**6.77**	**358**	⇓P	**Pn**	**01 58 22.3**	**-0.7**
SORM				⇑S	**Sn**	**01 59 34.7**	**-5.0**

*IDC **05** 02:00:00.8±1.3, 27.°47N×53.°71E, h0km, mb3.5/8, mb1 3.6/9, mb1mx3.4/52, mbtmp3.6/9, ML3.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/41, Error ellipse: s-maj=26.4km s-min=22.0km az=6.0*

*TEH **05** 02:00:02.0, 27.°44N×53.°69E, h8km, ML3.5*

*THR **05** 02:00:05.0±0.3, 27.°45N×54.°07E, h15km, ML3.6*

*OMAN **05** 02:00:08.2±0.2, 27.°23N×53.°54E, h120km, ml3.1/1, Error ellipse: s-maj=6.4km s-min=3.8km az=20.0*

ISC 05 02:00:04.1±0.7, 27.°48N±0.°05×53.°79E±0.°05, h16km, n34, σ1§65/39, mb3.6/7, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.55**	**70**	*e*Pg	**Pg**	**02 00 14.7**	**-0.4**
LAR1				*e*		02 00 46.3	
JHRM	**Jahrom**	**1.04**	**350**	*e*Pg	**Pb**	**02 00 22.6**	**-1.2**
JHRM				*e*		02 00 43.1	
ISRV	**Sarvestan**	**1.99**	**343**	*e*Pn	**Pn**	**02 00 38.8**	**+1.4**
ISRV				*e*Sg	**Sg**	**02 01 08.8**	**+0.6**
ISRV				*e*		02 01 16.5	
BNDS	**Bandar-Abbas**	**2.12**	**92**	*e*Pg	**Pn**	**02 00 39.2**	**+0.3**
BNDS	**Bandar-Abbas**	**2.12**	**92**	*e*Pg	**Pn**	**02 00 39.3**	**+0.3**
GENO	**Geno**	**2.12**	**92**	*e*Pn	**Pn**	**02 00 40.1**	**+1.1**
GENO				*e*		02 01 18.6	
GHB	**Gharebagh**	**2.19**	**330**	*e*Pn	**Pn**	**02 00 41.0**	**+0.8**
AHBU	**AHRAM**	**2.60**	**303**	*e*Pg	**Pg**	**02 00 55.9**	**+2.0**
IKAZ	**Kazeroun**	**2.86**	**324**	*e*Pn	**Pn**	**02 00 49.8**	**+0.4**
IKAZ				*e*		02 01 45.8	
UOSS	**Minazif**	**3.33**	**139**	P	**Pn**	**02 00 57.2**	**+1.7**
UOSS				S	**Sn**	**02 01 37.2**	**+2.4**
ASHO	**Ashiyiah**	**3.45**	**143**	P	**Pn**	**02 00 59.4**	**+2.2**
	SNR=18						
ASHO				S	**Sn**	**02 01 41.1**	**+3.2**
KRBR	**Kerman**	**3.61**	**46**	*e*Pn	**Pn**	**02 01 00.7**	**+1.0**
KRBR				IAML		02 02 11.8	
	comp=E,31nm,0.6s						
KRBR	**Kerman**	**3.61**	**46**	*e*Pn	**Pn**	**02 01 00.7**	**+1.0**
TVBK	**TV Kerman**	**3.61**	**46**	*e*		02 01 19.3	
TVBK				*e*Pn	**Pn**	**02 01 02.7**	**+3.0**
KHGB	**Koh Gabri**	**3.73**	**39**	*e*Pn	**Pn**	**02 01 03.8**	**+2.6**
IMEH	**Mehriz**	**3.96**	**10**	*e*Pn	**Pn**	**02 01 06.7**	**+2.2**
CHMN	**Cheshme madani**	**4.06**	**53**	*e*Pn	**Pn**	**02 01 08.5**	**+2.6**
IBAF	**Bafgh**	**4.38**	**20**	*e*Pn	**Pn**	**02 01 11.8**	**+1.7**
ICHK	**Chekchek**	**4.78**	**6**	*e*Pn	**Pn**	**02 01 17.1**	**+1.4**
BSY	**Bisya**	**5.64**	**146**	P	**Pn**	**02 01 29.5**	**+2.2**
	SNR=6.9						
BSY				S	**Sn**	**02 02 32.5**	**+0.8**
SMDO	**Samad**	**5.85**	**138**	P	**Pn**	**02 01 32.8**	**+2.5**
	SNR=5.9						
SMDO				S	**Sn**	**02 02 39.3**	**+2.2**
WSAR	**Wadi Sarin**	**6.08**	**133**	Pn	**Pn**	**02 01 33.4**	**0.0**
	comp=E,0.6nm,0.3s,baz=279,slow=10,SNR=6.2						
WSAR				Sn	**Sn**	**02 02 42.8**	**+0.1**
	comp=E,0.7nm,0.3s,baz=40,slow=18,SNR=3.2						
GHVR	**GHOM**	**7.30**	**344**	IAML		02 03 13.9	
	comp=N,8.4nm,0.6s						
GHVR				IAML		02 03 25.0	
	comp=E,7.3nm,0.7s						
MHTO	**MHTO**	**7.50**	**149**	P	**Pn**	**02 01 54.0**	**+1.1**
	SNR=15						
MHTO				S	**Sn**	**02 03 15.4**	**-2.3**
WHFO	**Wadi Hawf**	**9.51**	**180**	P	**Pn**	**02 02 19.8**	**-0.7**
	SNR=11						
BRTR	**Keskin Array B**	**20.70**	**311**	P	**P**	**02 04 42.8**	**-1.0**
	comp=E,0.3nm,0.8s,baz=130,slow=8.9,SNR=3.1						
AAK	**Ala-Archa**	**22.63**	**43**	LR	LR	02 15 31.1	
	comp=E,54nm,18.4s,baz=288,slow=41						
AKTO	**Aktyubinsk**	**23.15**	**7**	P	**P**	**02 05 09.1**	**-0.6**
	comp=E,0.9nm,0.6s,baz=168,slow=10,SNR=4.4						
BVAR	**Borovoye Array**	**28.35**	**21**	P	**P**	**02 05 56.1**	**-1.1**
	comp=E,0.7nm,0.7s,baz=213,slow=12,SNR=4.0						
MKAR	**Makanchi Array**	**29.55**	**42**	P	**P**	**02 06 07.8**	**-0.2**
	comp=E,0.4nm,0.6s,baz=235,slow=11,SNR=5.9						
ZALV	**Zalesovo Beam**	**34.89**	**32**	P	**P**	**02 06 54.2**	**-0.4**
	comp=E,0.9nm,0.4s,baz=252,slow=9.1,SNR=5.7						
FINES	**FINESS Array B**	**38.70**	**339**	P	**P**	**02 07 25.7**	**-1.2**
	comp=E,1.0nm,0.8s,baz=154,slow=14,SNR=4.7						
SONM	**Songino Array**	**45.36**	**49**	P	**P**	**02 08 21.5**	**-0.2**
	comp=E,0.5nm,0.6s,baz=270,slow=10,SNR=5.4						
TORD	**Torodi Ar. Bea**	**50.55**	**265**	P	**P**	**02 09 00.6**	**-1.5**
	comp=E,0.5nm,0.6s,baz=63,slow=7.8,SNR=9.1						

*UCR **05** 02:14:22.8±1.7, 13.°24N×91.°00W, h36km±13km, ML3.7, mb4.1(NEIC)*

*NEIC **05** 02:14:22.8±1.5, 13.°18N±0.°08×91.°02W±0.°06, h45km±10km, mb4.1/16, Md4.1/14(MEX), Error ellipse: s-maj=12.7km s-min=5.3km az=211.0*

*SNET **05** 02:14:22.3±1.3, 13.°35N×90.°94W, h15km±6km, ML3.8*

*IDC **05** 02:14:25.6±2.3, 13.°57N×90.°57W, h43km±21km, mb3.7/10, mb1 3.9/13, mb1mx3.7/36, mbtmp3.9/13, ML4.0/3, MS3.4/5, Ms1 3.4/5, ms1mx2.9/34, Error ellipse: s-maj=35.6km s-min=13.3km az=40.0*

*GCG **05** 02:14:25.9±1.0, 13.°50N×91.°06W, h26km±7km, MD4.3*

ISC 05 02:14:22.4±1.2, 13.°16N±0.°07×91.°01W±0.°05, h40km±12km, n79, σ1§20/89, mb4.1/13, MS3.2/4, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**1.14**	**29**	⇓*i* P	**Pn**	**02 14 42.4**	**+0.2**
PCG	**Pacaya**	**1.28**	**18**	*e*P	**Pn**	**02 14 44.5**	**+0.4**
FUG	**Fuego 3**	**1.29**	**7**	*e*P	**Pn**	**02 14 44.5**	**+0.3**
CEVE	**Cerro Verde**	**1.50**	**64**	*e*P	**Pn**	**02 14 46.8**	**-0.3**
CEVE				*e*S	**Sn**	**02 15 06.6**	**+1.0**
CEVE				IAML		02 15 19.6	
	comp=Z,3μm,0.3s						
CEVE	**Cerro Verde**	**1.50**	**64**	*e*P	**Pn**	**02 14 46.8**	**-0.3**
CEVE				*e*S	**Sn**	**02 15 06.6**	**+1.0**
CEVE				IAML		02 15 19.6	
	comp=Z,3μm,0.3s						
SBLS	**San Blas**	**1.51**	**63**	*e*P	**Pn**	**02 14 46.8**	**-0.3**
SBLS	**San Blas**	**1.51**	**63**	*e*P	**Pn**	**02 14 46.8**	**-0.3**
RTR	**El Retiro**	**1.51**	**61**	*e*P	**Pn**	**02 14 47.3**	**0.0**
RTR	**El Retiro**	**1.51**	**61**	*e*P	**Pn**	**02 14 47.3**	**0.0**
SNJE	**San Jose**	**1.53**	**63**	*e*P	**Pn**	**02 14 47.1**	**-0.4**
SNJE	**San Jose**	**1.53**	**63**	*e*P	**Pn**	**02 14 47.1**	**-0.4**
NBG	**Las Nubes**	**1.56**	**24**	*e*P	**Pn**	**02 14 49.6**	**+1.7**
NBG				*e*S	**Sn**	**02 15 06.8**	**-0.2**
STG3	**Santiaguito 3,**	**1.63**	**341**	*e*P	**Pn**	**02 14 48.6**	**-0.3**
BOQS	**Boqueron**	**1.77**	**71**	*e*P	**Pn**	**02 14 51.0**	**+0.2**
SNET	**Serv Nac Est T**	**1.81**	**73**	Pn	**Pn**	**02 14 51.3**	**+0.2**
SNET				Sn	**Sn**	**02 15 12.1**	**-0.8**
LFU	**La Fuente**	**1.93**	**72**	*e*P	**Pn**	**02 14 53.6**	**+0.7**
LFU	**La Fuente**	**1.93**	**72**	*e*P	**Pn**	**02 14 53.6**	**+0.7**
LFRS	**El Faro**	**1.95**	**76**	*e*P	**Pn**	**02 14 53.6**	**+0.4**
LBRS	**Las Brisas**	**2.00**	**73**	*e*P	**Pn**	**02 14 54.3**	**+0.6**
MTO3	**Montecristo**	**2.02**	**52**	*e*P	**Pn**	**02 14 54.9**	**+0.6**
MTO3				*e*S	**Sn**	**02 15 17.9**	**-0.4**
MTO3	**Montecristo**	**2.02**	**52**	*e*P	**Pn**	**02 14 54.9**	**+0.6**
MTO3				*e*S	**Sn**	**02 15 17.9**	**-0.4**
PAVA	**Las Pavas**	**2.09**	**75**	*e*P	**Pn**	**02 14 55.9**	**+0.8**
PAVA				*e*S	**Sn**	**02 15 21.6**	**+1.7**
PAVA				IAML		02 15 32.2	
	comp=Z,524nm,0.4s						
PAVA	**Las Pavas**	**2.09**	**75**	*e*P	**Pn**	**02 14 55.9**	**+0.8**
PAVA				*e*S	**Sn**	**02 15 21.6**	**+1.7**
PAVA				IAML		02 15 32.2	
	comp=Z,524nm,0.4s						
COEG	**Centro de Oper**	**2.12**	**77**	*e*P	**Pn**	**02 14 55.6**	**+0.1**
COEG				IAML		02 15 37.1	
	comp=Z,724nm,0.6s						
COEG	**Centro de Oper**	**2.12**	**77**	*e*P	**Pn**	**02 14 55.6**	**+0.1**
COEG				IAML		02 15 37.1	
	comp=Z,724nm,0.6s						
TECA	**Tecapa**	**2.46**	**82**	*e*P	**Pn**	**02 15 01.0**	**+0.7**
TECA	**Tecapa**	**2.46**	**82**	*e*P	**Pn**	**02 15 01.0**	**+0.7**
LCND	**La Caada**	**3.04**	**87**	*e*P	**Pn**	**02 15 08.3**	**+0.3**
LCND				IAML		02 16 03.6	
	comp=Z,225nm,0.5s						
LCND	**La Caada**	**3.04**	**87**	*e*P	**Pn**	**02 15 08.3**	**+0.3**
LCND				IAML		02 16 03.6	
	comp=Z,225nm,0.5s						
CNCH	**Conchagua**	**3.09**	**88**	*e*P	**Pn**	**02 15 09.1**	**+0.2**
CNCH	**Conchagua**	**3.09**	**88**	*e*P	**Pn**	**02 15 09.1**	**+0.2**
CCIG	**Comitan**	**3.29**	**341**	Pn	**Pn**	**02 15 12.5**	**+0.9**
PCIG		**3.31**	**320**		**Pn**	**02 15 11.3**	**-0.5**
PCIG					**Sn**	**02 15 49.1**	**-0.9**
TGUH	**Tegucigalpa,Un**	**3.74**	**76**	Pn	**Pn**	**02 15 18.6**	**+0.8**
ESTN	**Estel**	**4.52**	**90**	Pn	**Pn**	**02 15 28.9**	**+0.3**
CMIG	**Matias Romero**	**5.41**	**317**	P	**Pn**	**02 15 42.4**	**+1.8**
	comp=Z,3.2nm,0.3s,baz=130,slow=9.0,SNR=16						
CMIG				S	**Sn**	**02 16 45.5**	**+3.9**
	comp=Z,3.0nm,0.3s,baz=141,slow=4.9,SNR=3.7						
CMIG	**Matias Romero**	**5.41**	**317**		**Pn**	**02 15 40.8**	**+0.1**
HUIG	**Huatulco**	**5.58**	**298**		**Pn**	**02 15 42.7**	**-0.3**
JTS	**Las Juntas de**	**6.58**	**115**	P	**Pn**	**02 15 58.7**	**+1.9**
	comp=Z,1.4nm,0.3s,baz=12,slow=21,SNR=7.0						
JTS				S	**Sn**	**02 17 07.6**	**-3.1**
	baz=323,slow=20,SNR=1.4						
JTS	**Las Juntas de**	**6.58**	**115**	Pn	**Pn**	**02 15 58.5**	**+1.8**
TEIG	**Tepich**	**7.50**	**20**	P	**Pn**	**02 16 10.8**	**+1.5**
	comp=Z,7.8nm,0.3s,baz=173,slow=5.7,SNR=26						
TEIG				LR	LR	02 19 34.6	
	comp=Z,506nm,18.2s,baz=318,slow=44						
TEIG	**Tepich**	**7.50**	**20**	Pn	**Pn**	**02 16 09.7**	**+0.4**
TUMC	**Tumaco**	**16.57**	**132**	Pn	**Pn**	**02 18 12.4**	**+0.3**
656A	**Willston**	**17.94**	**25**		**Pn**	**02 18 27.6**	**-1.3**
656A				IAmb	IAmb	02 18 45.6	
	comp=Z,11nm,0.7s						
553A	**Crawfordville**	**18.00**	**19**	P	**Pn**	**02 18 29.1**	**-0.6**
TXAR	**Lajitas Array**	**19.92**	**326**	P	**Pn**	**02 18 54.1**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=150,slow=12,SNR=18						
TXAR	**Lajitas Array**	**19.92**	**326**	P	**P**	**02 18 50.2**	**-0.8**
TX31	**Lajitas Ar. Si**	**19.93**	**326**	P	**P**	**02 18 51.8**	**+0.8**
TX32	**Lajitas Array**	**19.93**	**326**	P	**Pn**	**02 18 52.0**	**-1.0**
H06E1	**SOCORRO T-PHAS**	**19.94**	**289**	T	T	02 39 12.4	
	SNR=19						
SDV	**Santo Domingo**	**20.44**	**100**	P	**P**	**02 18 56.1**	**-0.7**
	comp=Z,3.3nm,0.6s,baz=314,slow=6.1,SNR=5.3						
SDV	**Santo Domingo**	**20.44**	**100**	P	**P**	**02 18 56.8**	**-0.1**
SDV				IAmb	IAmb	02 19 04.9	
	comp=Z,6.0nm,0.8s						
Z50A	**Ashland**	**20.53**	**12**	P	**P**	**02 18 56.5**	**-0.9**
Z50A				IAmb	IAmb	02 19 03.7	
	comp=Z,5.2nm,0.9s						
LPIG	**La Paz**	**21.25**	**304**	LR	LR	02 27 28.1	
	comp=Z,50nm,20.1s,baz=218,slow=37						
MNTX	**Cornudas Mount**	**22.69**	**327**	P	**P**	**02 19 18.5**	**-2.2**
TKL	**Tuckaleechee C**	**23.33**	**15**	P	**P**	**02 19 26.9**	**-0.2**
	comp=Z,2.8nm,0.7s,baz=174,slow=12,SNR=4.7						
TKL				LR	LR	02 29 16.5	
	comp=Z,135nm,19.6s,baz=178,slow=39						
TKL	**Tuckaleechee C**	**23.33**	**15**	P	**P**	**02 19 27.1**	**0.0**
TKL				IAmb	IAmb	02 19 33.9	
	comp=Z,4.8nm,0.9s						
NNA	**Nana**	**28.67**	**150**	LR	LR	02 29 58.2	
	comp=Z,35nm,21.3s,baz=65,slow=32						
MTPU	**Mount Pierson**	**31.13**	**327**	P	**P**	**02 20 37.1**	**-0.7**
E38A	**The Farm, Brul**	**33.34**	**359**	P	**P**	**02 20 55.9**	**-0.7**
E38A				IAmb	IAmb	02 21 06.8	
	comp=Z,2.6nm,1.0s						
NVAR	**Mina Array Bea**	**34.92**	**321**	P	**P**	**02 21 15.1**	**+4.3**
	comp=Z,1.5nm,0.6s,baz=130,slow=8.0,SNR=15						
NVAR				PcP	**PcP**	**02 23 46.2**	**+3.3**
	comp=Z,0.9nm,1.0s,baz=141,slow=5.0,SNR=3.8						
NVAR				LR	LR	02 35 56.5	
	comp=Z,70nm,18.5s,baz=267,slow=37						
NVAR	**Mina Array Bea**	**34.92**	**321**	P	**P**	**02 21 12.1**	**+1.3**
ULM	**Lac du Bonnet**	**37.20**	**355**	P	**P**	**02 21 27.9**	**-1.9**
	comp=Z,2.3nm,0.6s,baz=169,slow=9.0,SNR=7.5						
ULM	**Lac du Bonnet**	**37.20**	**355**	P	**P**	**02 21 27.9**	**-1.9**
ULM				IAmb	IAmb	02 21 29.5	
	comp=Z,2.9nm,0.8s						
J08A	**Circle Bar Ran**	**38.26**	**327**	P	**P**	**02 21 39.1**	**+0.1**
J08A				IAmb	IAmb	02 21 43.3	
	comp=Z,3.8nm,1.0s						
F10A	**Beach Ranch, E**	**39.50**	**331**	P	**P**	**02 21 49.5**	**+0.2**
SIV	**San Ignacio**	**41.42**	**133**	P	**P**	**02 22 06.7**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=331,slow=10,SNR=5.3						
SCHQ	**Schefferville**	**45.68**	**19**	P	**P**	**02 22 37.6**	**-1.6**
	comp=Z,2.3nm,0.6s,baz=236,slow=9.1,SNR=7.1						
SCHQ	**Schefferville**	**45.68**	**19**	P	**P**	**02 22 37.9**	**-1.4**
SCHQ				IAmb	IAmb	02 22 40.4	
	comp=Z,3.4nm,1.1s						
YKA	**Yellowknife Ar**	**52.06**	**346**	P	**P**	**02 23 27.4**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=146,slow=7.5,SNR=5.9						
YKA				PcP	**PcP**	**02 24 41.1**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=157,slow=3.6,SNR=2.9						
RES	**Resolute Bay**	**61.55**	**359**	P	**P**	**02 24 34.0**	**-1.1**
ILAR	**Eielson Array**	**63.98**	**337**	P	**P**	**02 24 52.3**	**+0.8**
	comp=Z,1.0nm,1.0s,baz=140,slow=4.0,SNR=6.3						
ILAR	**Eielson Array**	**63.98**	**337**	P	**P**	**02 24 51.7**	**+0.2**
TIC	**Toumodi**	**84.62**	**84**	*e*PKP2	**P**	**02 26 53.5**	**+0.9**
LIC	**Lamto**	**84.71**	**85**	*e*PKP2	**P**	**02 26 53.5**	**+0.5**
	comp=Z,1.1nm,0.3s						
DBIC	**Dimbokro**	**84.78**	**84**	P	**P**	**02 26 54.3**	**+0.9**
	comp=Z,2.5nm,0.6s,baz=267,slow=4.8,SNR=5.8						
KIC	**Kosan Boka**	**84.95**	**85**	*e*PKP2	**P**	**02 26 54.7**	**+0.4**
	comp=Z,4.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**89.63**	**77**	P	**P**	**02 27 15.8**	**-1.1**
	comp=Z,0.4nm,0.9s,baz=308,slow=7.1,SNR=3.3						
CMAR	**Chiang Mai Arr**	**147.08**	**342**	PKPbc	**PKPab**	**02 34 03.7**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=340,slow=3.6,SNR=7.4						

REN 05 02:35:26.4±0.9, 36.°27N±0.°03×115.°39W±0.°03, h10km±1km, ML1.7, Error ellipse: s-maj=4.3km s-min=3.5km az=163.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHPR	**Sheep Range**	**0.30**	**39**	Pg	Pg	02 35 32.1	-0.4
SHPR				Sg	Sg	02 35 36.1	-0.6
TPNV	**Topopah Spring**	**0.96**	**315**		Pg	02 35 44.9	-0.1
TPNV				Sg	Sg	02 35 56.8	-0.8
ICU	**Indian Springs**	**1.47**	**53**		Pn	02 35 53.1	-0.1
GSC	**Goldstone, Bar**	**1.50**	**230**		Pn	02 35 53.3	-0.2
W13A	**Hualapai Mount**	**1.70**	**133**		Pn	02 35 56.0	-0.3
LCMT	**Little Creek M**	**1.88**	**66**		Pn	02 35 58.4	-0.4
R11A	**Troy Canyon, C**	**2.08**	**356**	Pn	Pn	02 36 01.2	-0.3
R11A				Sn	Sn	02 36 26.4	-1.2
U15A	**North Rim**	**2.51**	**86**	Pn	Pn	02 36 06.8	-0.7
U15A				Sn	Sn	02 36 36.6	-1.7
PSUT	**Pine Spring**	**2.57**	**28**	Pn	Pn	02 36 07.3	-0.9
PSUT				Sn	Sn	02 36 38.7	-1.0
Y14A	**Wickenburg**	**3.04**	**139**	Pn	Pn	02 36 14.4	-0.2
Y14A				Sn	Sn	02 36 51.2	0.0

*KRSC **05** 02:38:52.5±1.0, 53.°48N×160.°79E, h52km±15km, ML5.0, FELT [II] at GMS Kronoki, Petropavlovsk.*

*MOS **05** 02:38:54.9±0.9, 53.°56N×160.°47E, h67km, mb4.8/28, Error ellipse: s-maj=6.7km s-min=3.5km az=83.1*

MOS Felt (II) at Petropavlovsk-Kamchatskiy.

*NEIC **05** 02:38:56.3±1.6, 53.°55N±0.°09×160.°4E±0.°1, h66km±6km, mb4.6/119, Error ellipse: s-maj=15.0km s-min=8.9km az=139.0*

*IDC **05** 02:38:58.4±1.2, 53.°72N×160.°30E, h78km±10km, mb4.1/33, mb1 4.3/37, mb1mx4.3/43, mbtmp4.5/37, MS3.6/14, Ms1 3.6/14, ms1mx3.4/39, Error ellipse: s-maj=12.4km s-min=8.6km az=148.0*

*BGR **05** 02:39:06.9±0.0, 54.°84N×160.°30E, h70km, mb4.9*

ISC 05 02:38:54.8±0.6, 53.°55N±0.°03×160.°58E±0.°04, h53km±5km, n390, σ1§37/407, mb4.7/134, MS3.7/12, 30C-9D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.56**	**217**	*e*P	**Pn**	**02 39 06.6**	**-0.3**
SPN				*e*S	**Sn**	**02 39 14.8**	**-0.8**
SPN	**Mys Shipunski**	**0.56**	**217**	PN	**Pn**	**02 39 06.6**	**-0.3**
SPN				S	**Sn**	**02 39 14.8**	**-0.8**
NLC	**Nalytchevo**	**0.83**	**244**	*e*P	**Pn**	**02 39 10.6**	**+0.4**
NLC				*e*S	**Sn**	**02 39 22.4**	**+0.8**
NLC	**Nalytchevo**	**0.83**	**244**	PN	**Pn**	**02 39 10.6**	**+0.4**
NLC				S	**Sn**	**02 39 22.4**	**+0.8**
KII	**Karymskiy**	**0.83**	**307**	*e*P	**Pn**	**02 39 11.1**	**+0.7**
KII	**Karymskiy**	**0.83**	**307**	PN	**Pn**	**02 39 11.1**	**+0.7**
SDLR	**Sedlovina**	**1.05**	**256**	*e*P	**Pn**	**02 39 14.2**	**+0.9**
SDLR	**Sedlovina**	**1.05**	**256**	PN	**Pn**	**02 39 14.2**	**+0.9**
SMAR	**Somma**	**1.10**	**256**	*e*P	**Pn**	**02 39 14.9**	**+0.8**
SMAR				*e*S	**Sn**	**02 39 28.1**	**-0.3**
SMAR	**Somma**	**1.10**	**256**	PN	**Pn**	**02 39 14.9**	**+0.8**
SMAR				S	**Sn**	**02 39 28.1**	**-0.3**
UGLR	**Uglovaya**	**1.10**	**253**	*e*P	**Pn**	**02 39 15.1**	**+1.1**
UGLR	**Uglovaya**	**1.10**	**253**	PN	**Pn**	**02 39 15.1**	**+1.1**
KRER	**Koryakskii**	**1.12**	**258**	*e*P	**Pn**	**02 39 15.6**	**+1.2**
KRER	**Koryakskii**	**1.12**	**258**	PN	**Pn**	**02 39 15.6**	**+1.2**
AVH	**Avacha**	**1.14**	**256**	*e*P	**Pn**	**02 39 15.6**	**+1.1**
AVH	**Avacha**	**1.14**	**256**	PN	**Pn**	**02 39 15.6**	**+1.1**
KRX	**Arik**	**1.17**	**262**	*e*P	**Pn**	**02 39 15.9**	**+1.0**
KRX	**Arik**	**1.17**	**262**	PN	**Pn**	**02 39 15.9**	**+1.0**
KOK	**Koryaka**	**1.19**	**258**	*e*P	**Pn**	**02 39 16.2**	**+1.0**
KOK	**Koryaka**	**1.19**	**258**	PN	**Pn**	**02 39 16.2**	**+1.0**
DALK	**Dalny**	**1.21**	**246**	*e*P	**Pn**	**02 39 16.0**	**+0.7**
DALK				*e*S	**Sn**	**02 39 31.6**	**+0.9**
DALK	**Dalny**	**1.21**	**246**	PN	**Pn**	**02 39 16.0**	**+0.7**
DALK				S	**Sn**	**02 39 31.6**	**+0.9**
PET	**Petropavlovsk**	**1.27**	**246**	*e*P	**Pn**	**02 39 16.9**	**+0.8**
PET				*e*S	**Sn**	**02 39 33.3**	**+1.2**
PET	**Petropavlovsk**	**1.27**	**246**		**Pn**	**02 39 16.7**	**+0.6**
PET				Sn	**Sn**	**02 39 31.4**	**-0.7**
PET	**Petropavlovsk**	**1.27**	**246**	PN	**Pn**	**02 39 16.9**	**+0.8**
PET				S	**Sn**	**02 39 33.3**	**+1.2**
KZV	**Kizimen**	**1.58**	**354**	*e*P	**Pn**	**02 39 21.5**	**+1.0**
KZV				*e*S	**Sn**	**02 39 41.3**	**+1.4**
KZV	**Kizimen**	**1.58**	**354**	PN	**Pn**	**02 39 21.5**	**+1.0**
KZV				S	**Sn**	**02 39 41.3**	**+1.4**
KRMR	**Karymshinskiy**	**1.64**	**245**	*e*P	**Pn**	**02 39 22.1**	**+0.9**
KRMR				*e*S	**Sn**	**02 39 42.6**	**+1.5**
KRMR	**Karymshinskiy**	**1.64**	**245**	PN	**Pn**	**02 39 22.1**	**+0.9**
KRMR				S	**Sn**	**02 39 42.6**	**+1.5**
TUMD	**Tumrok D**	**1.67**	**356**	*e*P	**Pn**	**02 39 22.3**	**+0.7**
TUMD				*e*S	**Sn**	**02 39 42.2**	**+0.4**
RUS	**Russkaya**	**1.67**	**229**	*e*P	**Pn**	**02 39 22.1**	**+0.5**
RUS				*e*S	**Sn**	**02 39 42.3**	**+0.3**
RUS	**Russkaya**	**1.67**	**229**	PN	**Pn**	**02 39 22.1**	**+0.5**
RUS				S	**Sn**	**02 39 42.3**	**+0.3**
TUMR	**Tumrok**	**1.76**	**352**	*e*P	**Pn**	**02 39 24.6**	**+1.7**
TUMR				*e*S	**Sn**	**02 39 46.6**	**+2.4**
TUMR	**Tumrok**	**1.76**	**352**	PN	**Pn**	**02 39 22.3**	**-0.6**
TUMR				S	**Sn**	**02 39 42.2**	**-2.0**
PEA0B	**Petropavlovsk-**	**1.78**	**257**		**Pn**	**02 39 23.5**	**+0.4**
PEA0B				Sn	**Sn**	**02 39 44.4**	**-0.2**
PEA0B	**Petropavlovsk-**	**1.78**	**257**	*d i*PN	**Pn**	**02 39 24.6**	**+1.5**
PETK	**Petropavlovsk-**	**1.78**	**257**	P	**Pn**	**02 39 25.0**	**+1.9**
	192nm,0.3s,baz=82,slow=21,SNR=1847						
PETK				S	**Sn**	**02 39 47.0**	**+2.3**
	167nm,0.3s,baz=91,slow=20,SNR=13						
PETK				LR	LR	02 40 18.2	
	comp=Z,1μm,20.8s,baz=69,slow=48						
PETK	**Petropavlovsk-**	**1.78**	**257**		**Pn**	**02 39 23.4**	**+0.3**
PETK				Sn	**Sn**	**02 39 45.3**	**+0.7**
PETK	**Petropavlovsk-**	**1.78**	**257**	PN	**Pn**	**02 39 25.0**	**+1.9**
PETK				S	**Sn**	**02 39 47.0**	**+2.3**
MTVR	**Mutnovka**	**1.80**	**235**	*e*P	**Pn**	**02 39 24.4**	**+0.9**
MTVR	**Mutnovka**	**1.80**	**235**	PN	**Pn**	**02 39 24.4**	**+0.9**
GRL	**Gorelyy**	**1.81**	**238**	*e*P	**Pn**	**02 39 25.0**	**+1.4**
GRL				*e*S	**Sn**	**02 39 47.6**	**+2.1**
GRL	**Gorelyy**	**1.81**	**238**	PN	**Pn**	**02 39 25.0**	**+1.4**
GRL				S	**Sn**	**02 39 47.6**	**+2.1**
ASAK	**Asacha**	**2.00**	**235**	*e*P	**Pn**	**02 39 27.7**	**+1.6**
ASAK				*e*S	**Sn**	**02 39 53.0**	**+3.1**
ASAK	**Asacha**	**2.00**	**235**	PN	**Pn**	**02 39 27.7**	**+1.6**
ASAK				S	**Sn**	**02 39 53.0**	**+3.1**
APC	**Apacha**	**2.15**	**255**	*e*P	**Pn**	**02 39 30.3**	**+2.2**
APC				*e*S	**Sn**	**02 39 58.5**	**+5.0**
APC	**Apacha**	**2.15**	**255**	PN	**Pn**	**02 39 30.3**	**+2.2**
KMNR	**Kamenistaya**	**2.23**	**355**	*e*P	**Pn**	**02 39 31.4**	**+2.1**
KMNR	**Kamenistaya**	**2.23**	**355**	PN	**Pn**	**02 39 31.4**	**+2.1**
KDTR	**Khodutka, Kamc**	**2.31**	**222**	*e*P	**Pn**	**02 39 31.3**	**+1.0**
KDTR				*e*S	**Sn**	**02 40 00.2**	**+2.7**
KDTR	**Khodutka, Kamc**	**2.31**	**222**	PN	**Pn**	**02 39 31.3**	**+1.0**
KDTR				S	**Sn**	**02 40 00.2**	**+2.7**
KIRR	**Kirishev**	**2.42**	**357**	*e*P	**Pn**	**02 39 33.9**	**+2.0**
KIRR				*e*S	**Sn**	**02 40 02.9**	**+2.5**
KIRR	**Kirishev**	**2.42**	**357**	PN	**Pn**	**02 39 33.9**	**+2.0**
KIRR				S	**Sn**	**02 40 02.9**	**+2.5**
KPT	**Kopyto**	**2.44**	**355**	*e*P	**Pn**	**02 39 33.8**	**+1.7**
KPT	**Kopyto**	**2.44**	**355**	PN	**Pn**	**02 39 33.8**	**+1.7**
ZLN	**Zelenaya**	**2.48**	**3**	*e*P	**Pn**	**02 39 35.2**	**+2.4**
ZLN	**Zelenaya**	**2.48**	**3**	PN	**Pn**	**02 39 35.2**	**+2.4**
LGNR	**Loginova**	**2.54**	**1**	*e*P	**Pn**	**02 39 36.8**	**+3.0**
LGNR	**Loginova**	**2.54**	**1**	PN	**Pn**	**02 39 36.8**	**+3.0**
KOZ	**Kozyrevsk**	**2.55**	**351**	*e*P	**Pn**	**02 39 35.5**	**+1.8**
KOZ	**Kozyrevsk**	**2.55**	**351**	PN	**Pn**	**02 39 35.5**	**+1.8**
CIRR	**Tsirk**	**2.58**	**2**	*e*P	**Pn**	**02 39 36.5**	**+2.4**
CIRR	**Tsirk**	**2.58**	**2**	PN	**Pn**	**02 39 36.5**	**+2.4**
ESO	**Esso**	**2.62**	**336**	*e*P	**Pn**	**02 39 36.1**	**+1.5**
ESO	**Esso**	**2.62**	**336**	PN	**Pn**	**02 39 36.1**	**+1.5**
KRSR	**Krestovskiy**	**2.68**	**360**	*e*P	**Pn**	**02 39 37.3**	**+1.8**
KRSR	**Krestovskiy**	**2.68**	**360**	PN	**Pn**	**02 39 37.3**	**+1.8**
KLY	**Klyuchi**	**2.77**	**1**	*e*P	**Pn**	**02 39 38.8**	**+2.1**
KLY				*e*S	**Sn**	**02 40 10.9**	**+2.0**
KLY	**Klyuchi**	**2.77**	**1**	PN	**Pn**	**02 39 38.8**	**+2.1**
KLY				S	**Sn**	**02 40 10.9**	**+2.0**
SRDR	**Sredinnyy**	**2.82**	**350**	*e*P	**Pn**	**02 39 39.0**	**+1.6**
SRDR	**Sredinnyy**	**2.82**	**350**	PN	**Pn**	**02 39 39.0**	**+1.6**
KBTR	**Krutoberegovo**	**2.97**	**25**	*e*P	**Pn**	**02 39 40.7**	**+1.4**
KBTR	**Krutoberegovo**	**2.97**	**25**	PN	**Pn**	**02 39 40.7**	**+1.4**
BDR	**Baidarnaya**	**3.05**	**7**	*e*P	**Pn**	**02 39 42.9**	**+2.3**
BDR				*e*S	**Sn**	**02 40 19.3**	**+3.5**
BDR	**Baidarnaya**	**3.05**	**7**	PN	**Pn**	**02 39 42.9**	**+2.3**

BDR				S	Sn	02 40 19.3	+3.5
SMKR	Semkarok	3.09	9	eP	Pn	02 39 43.2	+2.2
SMKR	Semkarok	3.09	9	PN	Pn	02 39 43.2	+2.2
PAU	Pauzhetka	3.10	229	eP	Pn	02 39 43.8	+2.6
PAU	Pauzhetka	3.10	229	PN	Pn	02 39 43.8	+2.6
SRKR	Sorokina	3.13	6	eP	Pn	02 39 43.6	+1.9
SRKR	Sorokina	3.13	6	PN	Pn	02 39 43.6	+1.9
BKI	Bering	3.56	60	eP	Pn	02 39 47.3	-0.2
BKI				eS	Sn	02 40 24.2	-4.1
BKI	Bering	3.56	60	PN	Pn	02 39 47.3	-0.2
SKR	Severo-Kuril's	3.97	226	eP	Pn	02 39 55.7	+2.6
SKR				eS	Sn	02 40 40.3	+2.0
SKR	Severo-Kuril's	3.97	226	ePN	Pn	02 39 55.5	+2.4
SKR				eS	Sn	02 40 40.4	+2.1
SKR				pmax	pmax		
	comp=Z,55nm,0.5s						
SKR				pmax	pmax		
	comp=Z,500nm,6.2s						
SKR				smax	smax		
	comp=E,433nm,0.5s						
SKR				smax	smax		
	comp=N,519nm,0.6s						
MA2	Magadan	8.11	322	P	Pn	02 40 51.5	+1.8
	comp=N,1.2nm,0.3s,baz=132,slow=9.3,SNR=11						
MA2				LR	LR	02 44 30.1	
	comp=N,232nm,19.6s,baz=122,slow=42						
MA2	Magadan	8.11	322		Pn	02 40 50.7	+1.0
MA2	Magadan	8.11	322⇑	ePN	Pn	02 40 51.2	+1.5
SEY	Seymchan	10.35	339	P	Pn	02 41 21.5	+1.3
	comp=N,0.1nm,0.3s,baz=143,slow=20,SNR=2.8						
BILL	Bilibino	14.79	8⇓	eP	Pn	02 42 21.4	+0.9
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,99nm,18.0s						
YAK	Yakutsk	18.37	310	P	P	02 43 04.9	+0.2
	comp=Z,1.0nm,0.3s,baz=146,slow=10.4,SNR=37						
YAK	Yakutsk	18.37	310	P	P	02 43 04.4	-0.3
YAK	Yakutsk	18.37	310d	iP	P	02 43 04.8	0.0
YAK				eS	Sn	02 46 28.8	-0.5
YAK				pmax	pmax		
	comp=Z,78nm,0.6s						
YAK				pmax	pmax		
	comp=N,8.0nm,0.7s						
YAK				pmax	pmax		
	comp=E,25nm,0.7s						
YAK				smax	smax		
	comp=N,67nm,3.5s						
YAK				smax	smax		
	comp=E,34nm,3.4s						
KLR	Kul'dur	18.44	268	P	Pn	02 43 06.2	0.0
	comp=E,0.6nm,0.3s,baz=67,slow=9.2,SNR=14						
KLR				LR	LR	02 49 54.4	
	comp=E,114nm,18.8s,baz=52,slow=36						
KLR	Kul'dur	18.44	268	iP	Pn	02 43 06.1	-0.1
KLR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ANM	Nome	20.40	44	P	Pn	02 43 29.0	-0.5
ANM	Nome	20.40	44	P	Pn	02 43 29.0	-0.5
ANM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
USRK	Ussuriysk Ar.	20.87	255	P	P	02 43 33.6	+1.4
	comp=Z,2.4nm,0.6s,baz=52,slow=14,SNR=3.7						
USRK				LR	LR	02 51 32.5	
	comp=Z,90nm,18.9s,baz=31,slow=36						
RDOG	Red Dog Mine	22.50	36	P	P	02 43 50.9	+1.4
RDOG				IAmb	IAmb	02 43 52.7	
	comp=Z,17nm,1.0s						
TIXI	Tiksi	22.80	335	P	P	02 43 50.8	-1.7
	comp=Z,3.7nm,0.4s,baz=120,slow=10,SNR=4.2						
TIXI				PcP	PcP	02 47 41.6	-0.2
	comp=Z,3.2nm,0.6s,baz=65,slow=1.8,SNR=5.4						
TIXI	Tiksi	22.80	335	P	P	02 43 53.1	+0.6
TIXI	Tiksi	22.80	335c	eP	P	02 43 52.0	-0.5
TIXI				pmax	pmax		
	comp=Z,12nm,1.3s						
MJB9	Matsu-Tunnel	23.05	232	P	P	02 43 54.4	-1.0
MJB9				IAmb	IAmb	02 44 04.1	
	comp=Z,32nm,0.8s						
MAJO	Matsushiro	23.06	232	P	P	02 43 54.7	-0.7
MAJO				IAmb	IAmb	02 44 04.1	
	comp=Z,32nm,0.8s						
MAJO	Matsushiro	23.06	232⇑	eP	P	02 43 56.4	+0.9
MAJO				pmax	pmax		
	comp=Z,25nm,0.9s						
MAT	Matsushiro	23.06	232	P	P	02 43 56.2	+0.7
MJAR	Matsushiro Arr	23.06	232	P	P	02 43 56.6	+1.1
	comp=Z,21nm,0.8s,baz=26,slow=11,SNR=23						
MJAR				LR	LR	02 53 20.8	
	comp=Z,64nm,20.1s,baz=45,slow=37						
MJAR	Matsushiro Arr	23.06	232	P	P	02 43 54.8	-0.7
MJAR	Matsushiro Arr	23.06	232	P	P	02 43 54.8	-0.7
MJAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TTA	Tatalina	24.24	50	P	P	02 44 06.9	+0.5
TTA	Tatalina	24.24	50	P	P	02 44 06.9	+0.5
TTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
IMAR	Indian Mountai	25.47	43	P	P	02 44 17.8	+0.4
IMAR					PcP	02 47 48.5	+0.8
HIA	Hailar	25.57	277	P	P	02 44 17.7	-0.9
HIA	Hailar	25.57	277	P	P	02 44 17.7	-0.9
HIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BOD	Bodaibo	26.18	298	eP	P	02 44 22.7	-1.3
BOD				pmax	pmax		
	comp=Z,23nm,1.0s						
KDAK	Kodiak Island	26.33	62	P	P	02 44 26.3	+1.1
	comp=Z,9.2nm,0.9s,baz=293,slow=7.7,SNR=3.4						
MLY	Manley	26.65	45	P	P	02 44 28.7	+0.5
MLY					PcP	02 47 51.9	+1.4
TOLK	Toolik Lake Re	27.43	37	P	P	02 44 36.2	+1.1
KSRS	Korea Array	27.66	248	P	P	02 44 37.7	+0.3
	comp=Z,2.2nm,0.8s,baz=37,slow=9.6,SNR=6.2						
KSRS				LR	LR	02 54 39.7	
	comp=Z,68nm,20.2s,baz=40,slow=34						
CCB	Clear Creek Bu	27.90	46	P	P	02 44 40.1	+0.8
HDA	Harding Lake	28.28	47	P	P	02 44 43.2	+0.5
HDA				IAmb	IAmb	02 45 02.2	
	comp=Z,11nm,0.8s						
IL31		28.29	46	P	P	02 44 42.9	+0.2
ILAR	Eielson Array	28.29	46	P	P	02 44 42.9	+0.1
	comp=Z,2.3nm,0.8s,baz=264,slow=8.1,SNR=28						
ILAR				PcP	PcP	02 47 54.2	-0.2
	comp=Z,0.7nm,0.6s,baz=282,slow=3.4,SNR=10						
ILAR	Eielson Array	28.29	46	P	P	02 44 43.4	+0.6
ILAR					PcP	02 47 54.3	-0.2
BMAR	Burnt Mountain	29.21	40	P	P	02 44 52.1	+1.2
BMAR					PcP	02 47 58.1	+1.4
BCAR	Beaver Creek A	30.70	49	P	P	02 45 04.6	+0.4
BCAR					PcP	02 48 02.0	+1.4
INK	Inuvik	33.33	38	P	P	02 45 27.3	+0.2
	comp=Z,3.5nm,0.7s,baz=285,slow=7.4,SNR=19						
INK				PcP	PcP	02 48 08.6	+0.9
	comp=Z,2.3nm,0.7s,baz=311,slow=5.6,SNR=9.4						
INK	Inuvik	33.33	38	P	P	02 45 28.4	+1.3
INK					PcP	02 48 08.5	+0.9
TLY	Talaya	33.84	290	LR	LR	03 00 25.8	
	comp=Z,134nm,18.6s,baz=70,slow=38						
TLY	Talaya	33.84	290	iP	P	02 45 32.2	+0.5
TLY				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM	Songino Array	34.08	283	P	P	02 45 33.7	-0.3
	comp=Z,2.9nm,0.8s,baz=61,slow=8.4,SNR=23						
SONM				PcP	PcP	02 48 11.2	+0.8
	comp=Z,2.9nm,0.7s,baz=86,slow=1.6,SNR=15						
SONM				LR	LR	02 59 34.2	
	comp=Z,133nm,20.6s,baz=20,slow=36						
SONM	Songino Array	34.08	283	P	P	02 45 34.3	+0.3
SONM					PcP	02 48 10.4	+0.1
SONM	Songino Array	34.08	283	P	P	02 45 34.3	+0.3
SONM						02 48 10.4	
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
H11N2	WAKE ISLAND Hy	34.10	169	T	T	03 21 56.1	
	baz=354,slow=76,SNR=1035						
H11N3	WAKE ISLAND Hy	34.12	169	T	T	03 21 57.3	
	baz=354,slow=76,SNR=1120						
H11N1	WAKE ISLAND Hy	34.12	169	T	T	03 21 57.3	
	baz=354,slow=76,SNR=1595						
H11S1	WAKE ISLAND Hy	35.29	170	T	T	03 23 23.7	
	baz=352,slow=76,SNR=43						
H11S3	WAKE ISLAND Hy	35.30	170	T	T	03 23 22.5	
	baz=352,slow=76,SNR=118						
H11S2	WAKE ISLAND Hy	35.31	170	T	T	03 23 24.0	
	baz=352,slow=76,SNR=32						
C36M	Paulatuk	36.51	35	P	P	02 45 55.6	+1.2
C36M				IAmb	IAmb	02 45 56.3	
	comp=Z,14nm,0.8s						
YKA	Yellowknife Ar	42.63	43	P	P	02 46 46.6	+1.2
	comp=Z,4.2nm,0.7s,baz=298,slow=8.1,SNR=48						
YKA				PcP	PcP	02 48 37.4	+0.9
	comp=Z,0.7nm,0.7s,baz=304,slow=3.6,SNR=6.0						
ZAA0	Zalesovo Array	42.78	302	P	P	02 46 44.8	-1.9
ZALV	Zalesovo Beam	42.78	302	P	P	02 46 45.2	-1.5
	comp=Z,3.0nm,0.7s,baz=56,slow=7.5,SNR=14						
ZALV				PcP	PcP	02 48 37.1	0.0
	comp=Z,1.1nm,0.6s,baz=74,slow=2.9,SNR=3.6						
ZALV				LR	LR	03 05 28.4	
	comp=Z,98nm,19.3s,baz=33,slow=37						
ZALV	Zalesovo Beam	42.78	302	P	P	02 46 45.5	-1.2
ZALV					PcP	02 48 36.0	-1.1
ZALV	Zalesovo Beam	42.78	302	P	P	02 46 45.5	-1.2
ZALV						02 48 36.1	
RES	Resolute Bay	42.80	22	P	P	02 46 47.6	+1.0
RES	Resolute Bay	42.80	22	P	P	02 46 47.6	+1.0
RES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA	Gaotai	42.85	276 ⇑	P	P	02 46 47.6	0.0
GTA				pP	pP	02 46 52.0	-9.4
GTA				sP	sP	02 46 54.6	-13
KURK	Kurchatov	47.74	302	P	P	02 47 24.3	-1.7
KURK				IAmb	IAmb	02 47 26.4	
	comp=Z,8.5nm,0.8s						
KURK	Kurchatov	47.74	302c	iP	P	02 47 24.0	-2.0
KURK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
B08A	Colville Reser	48.21	62	P	P	02 47 30.4	+0.7
B08A				IAmb	IAmb	02 47 31.9	
	comp=Z,3.0nm,0.7s						
MK31	Makanchi Array	48.22	296	P	P	02 47 28.2	-1.7
MK31	Makanchi Array	48.22	296	P	P	02 47 28.2	-1.7
MK31				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MKAR	Makanchi Array	48.22	296	P	P	02 47 28.0	-1.8
	comp=Z,1.9nm,0.5s,baz=56,slow=6.6,SNR=52						
MKAR				PcP	PcP	02 48 55.7	-0.5
	comp=Z,0.7nm,0.6s,baz=55,slow=5.7,SNR=2.7						
MKAR	Makanchi Array	48.22	296	P	P	02 47 28.1	-1.8
MKAR					PcP	02 48 56.3	+0.1
MKAR	Makanchi Array	48.22	296	P	P	02 47 28.1	-1.8
MKAR						02 48 56.3	
MAKZ	Makanchi	48.38	296	P	P	02 47 29.0	-2.1
MAKZ				IAmb	IAmb	02 47 31.1	
	comp=Z,5.0nm,0.9s						
MAKZ	Makanchi	48.38	296	P	P	02 47 29.0	-2.1
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DAG	Danmarks Havn	49.95	360	iP	P	02 47 42.5	-0.1
	comp=Z,5.9nm,0.8s						
DAG	Danmarks Havn	49.95	360	iP	P	02 47 42.5	-0.1
DAG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRVK	Borovoye	50.37	308	P	P	02 47 44.2	-1.8
BRVK				IAmb	IAmb	02 47 46.1	
	comp=Z,4.5nm,0.7s						
BRVK	Borovoye	50.37	308	P	P	02 47 44.2	-1.8
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WALA	Waterton Lakes	50.57	58	IAmb	IAmb	02 47 51.1	
	comp=Z,3.0nm,0.7s						
HAMF	Hammerfest	52.32	343	eP	P	02 48 00.8	+0.4
FCC	Fort Churchill	52.95	39	P	P	02 48 05.9	+0.7
FCC				IAmb	IAmb	02 48 06.9	
	comp=Z,5.5nm,0.7s						
FCC	Fort Churchill	52.95	39	P	P	02 48 05.9	+0.7
FCC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARCES	ARCESS Array B	52.95	342	P	P	02 48 04.2	-0.9
	comp=Z,4.4nm,0.6s,baz=42,slow=9.3,SNR=20						
ARCES	ARCESS Array B	52.95	342	P	P	02 48 04.4	-0.7
ARCES	ARCESS Array B	52.95	342	P	P	02 48 04.4	-0.7
ARE0	ARCESS Array S	52.95	342	eP	P	02 48 04.9	-0.2
ARU	Arti	53.26	317	P	P	02 48 05.3	-2.3
	comp=Z,1.9nm,0.3s,baz=4.7,slow=4.4,SNR=7.1						
ARU	Arti	53.26	317	P	P	02 48 06.1	-1.5
ARU				IAmb	IAmb	02 48 06.8	
	comp=Z,5.8nm,0.5s						
ARU	Arti	53.26	317c	iP	P	02 48 06.0	-1.6
ARU				S	S	02 55 30.6	-4.0
ARU				SS	SS	02 59 06.1	-7.9
ARU				pmax	pmax		
	comp=Z,12nm,1.5s						
SUMG	Summit	53.48	7	iP	P	02 48 10.0	+0.6
	comp=Z,67nm,1.0s						
SUMG	Summit	53.48	7	P	P	02 48 09.7	+0.3
SUMG	Summit	53.48	7	P	P	02 48 09.7	+0.3
SUMG				pmax	pmax		
	comp=Z,38nm,1.1s						
KTK1	Kautokeino	53.81	342	eP	P	02 48 11.1	-0.4
TRO	Tromso	54.00	344	eP	P	02 48 12.4	-0.4
PRGR	Permogore	54.21	328	eP	P	02 48 13.1	-1.3
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TMCR	Tamitsa	54.51	333	eP	P	02 48 17.0	+0.5
TMCR				pmax	pmax		
	comp=Z,11nm,1.0s						
WAKR	Walker	54.62	71	P	P	02 48 18.6	+0.6
WAKR				IAmb	IAmb	02 48 21.7	
	comp=Z,3.2nm,0.8s						
KVN	Kaiserville	55.00	70	IAmb	IAmb	02 48 23.9	
	comp=Z,3.1nm,0.7s						
RYN	Ryan	55.05	71	IAmb	IAmb	02 48 24.6	
	comp=Z,3.4nm,0.8s						
AAK	Ala-Archa	55.14	296ce	P	P	02 48 19.8	-1.8
AAK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
KIRV	Kirov	55.20	323	P	P	02 48 20.2	-1.4
	comp=Z,7.6nm,0.6s,baz=33,slow=4.6,SNR=3.6						
NVAR	Mina Array Bea	55.32	71	P	P	02 48 25.5	+2.4
	comp=Z,2.0nm,0.7s,baz=296,slow=7.1,SNR=20						
NVAR	Mina Array Bea	55.32	71	P	P	02 48 24.0	+0.9
H17A	Grant Village	55.38	61	IAmb	IAmb	02 48 27.7	
	comp=Z,4.9nm,1.1s						
RLMT	Red Lodge	55.56	59	IAmb	IAmb	02 48 27.7	
	comp=Z,5.9nm,0.9s						
LAO	LASA Array	56.01	56	IAmb	IAmb	02 48 32.3	
	comp=Z,5.2nm,0.8s						
STEI	Steigen	56.12	345	eP	P	02 48 27.6	-0.5
LOF	Lofoten	56.19	346	eP	P	02 48 28.7	+0.1
KLMR	Klimovskoe	56.70	330	eP	P	02 48 29.8	-2.6
KLMR				AMP		02 48 33.8	
	comp=Z,7.0nm,0.5s						
KLMR	Klimovskoe	56.70	330	eP	P	02 48 29.7	-2.6
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KKAR	Karatay Array	56.92	299	P	P	02 48 32.7	-1.5
KKAR	Karatay Array	56.92	299	IAmb	IAmb	02 48 36.1	
	comp=Z,1.4nm,0.8s						
KKAR	Karatay Array	56.92	299	P	P	02 48 32.7	-1.5
PD31	Pinedale Array	57.05	61	IAmb	IAmb	02 48 38.1	
	comp=Z,4.6nm,1.1s						
PDAR	Pinedale Array	57.05	61	P	P	02 48 37.2	+1.8
	comp=Z,3.0nm,0.9s,baz=321,slow=3.2,SNR=16						
PDAR	Pinedale Array	57.05	61	P	P	02 48 36.3	+0.9
DUG	Dugway, Tooele	57.12	66	IAmb	IAmb	02 48 39.1	
	comp=Z,3.3nm,1.0s						
ABKAR	Akbulak array	57.72	310	P	P	02 48 38.2	-1.5
AKTO	Aktyubinsk	57.73	312	P	P	02 48 38.3	-1.5
	comp=Z,1.8nm,0.5s,baz=74,slow=10,SNR=13						
AKTO				PcP	PcP	02 49 31.1	-0.9
	comp=Z,2.1nm,0.5s,baz=45,slow=3.5,SNR=6.0						
MOR8	Moi Rana	57.87	344	eP	P	02 48 39.0	-1.5
ULM	Lac du Bonnet	58.30	47	P	P	02 48 43.6	-0.1
	comp=Z,3.6nm,0.4s,baz=317,slow=6.5,SNR=12						
ULM				PcP	PcP	02 49 34.6	+0.3
	comp=Z,1.3nm,0.6s,baz=355,slow=6.2,SNR=2.9						
ULM	Lac du Bonnet	58.30	47	P	P	02 48 45.1	+1.3
ULM					PcP	02 49 34.9	+0.6
ULM	Lac du Bonnet	58.30	47	iP	P	02 48 44.3	+0.6
CMAR	Chiang Mai Arr	58.56	258	P	P	02 48 47.0	+1.1
	comp=Z,1.3nm,0.4s,baz=24,slow=7.0,SNR=6.5						
CMAR				LR	LR	03 17 22.7	
	comp=Z,34nm,18.6s,baz=230,slow=39						
RSSD	Black Hills	58.91	57	P	P	02 48 49.6	+1.2
RSSD	Black Hills	58.91	57	P	P	02 48 49.6	+1.2
RSSD				pmax	pmax		
	comp=Z,12nm,0.8s						
BTK	Batken	58.92	296	IAmb	IAmb	02 48 50.3	
	comp=Z,5.0nm,0.8s						
NSS	Namsos	59.79	345	eP	P	02 48 54.0	+0.3
FIA1	FINESS Array S	59.82	337	P	P	02 48 53.1	-0.9
FINES	FINESS Array B	59.82	337	P	P	02 48 53.8	-0.2
	comp=Z,12nm,0.7s,baz=37,slow=8.4,SNR=67						
FINES				LR	LR	03 17 35.5	
	comp=Z,43nm,18.1s,baz=249,slow=39						
FINES	FINESS Array B	59.82	337	P	P	02 48 53.1	-1.0
FINES	FINESS Array B	59.82	337	P	P	02 48 53.1	-1.0
N23A	Red Feather La	60.27	61	IAmb	IAmb	02 49 00.8	
	comp=Z,5.0nm,0.9s						
SMCO	Snowmass	60.98	63	IAmb	IAmb	02 49 06.1	
	comp=Z,2.7nm,0.9s						
GLA	Glamis	61.13	73	IAmb	IAmb	02 49 06.3	
	comp=Z,6.0nm,0.7s						
ISCO	Idaho Springs	61.24	61	IAmb	IAmb	02 49 07.8	
	comp=Z,5.3nm,1.1s						
EYMN	Ely	61.93	46	IAmb	IAmb	02 49 09.8	
	comp=Z,5.0nm,0.7s						
NIL	Nilore	62.24	290	P	P	02 49 10.1	-0.9
NIL				IAmb	IAmb	02 49 13.3	
	comp=Z,9.6nm,0.8s						
NIL	Nilore	62.24	290	P	P	02 49 10.1	-0.9
NIL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSU	Vasula	62.27	335	iP	P	02 49 10.3	-0.3
VSU				pmax	pmax		
	comp=Z,48nm,0.7s						
OBN	Obninsk	62.29	327⇓	eP	P	02 49 09.8	-1.0
OBN				e		02 51 31.5	
OBN				eS	S	02 57 36.9	+4.3
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MOL	Molde	62.30	346	eP	P	02 49 11.3	+0.5
DOMB	Dombas	62.58	345	eP	P	02 49 12.8	0.0
AKN	Aaknes	62.75	346	eP	P	02 49 14.8	+0.9
ECSD	EROS Data Cent	62.81	53	IAmb	IAmb	02 49 16.4	
	comp=Z,4.4nm,0.8s						
E38A	The Farm, Brul	62.94	47	IAmb	IAmb	02 49 17.8	
	comp=Z,7.3nm,0.9s						
NC303	NORSAR Array S	62.99	344	eP	P	02 49 15.6	+0.2
NC303	NORSAR Array S	62.99	344	IAmb	IAmb	02 49 19.6	
	comp=Z,10nm,1.0s						
NB201	NORSAR Array S	63.17	344	P	P	02 49 16.6	0.0
NB2	NORSAR Subarra	63.19	344	P	P	02 49 16.5	-0.3
	comp=Z,4.6nm,0.5s,baz=23,slow=6.9						
NB2	NORSAR Subarra	63.19	344	P	P	02 49 16.5	-0.3
	baz=23,slow=6.9						
NOA	NORSAR Array B	63.19	344	P	P	02 49 17.0	+0.2
	comp=Z,9.3nm,0.7s,baz=21,slow=6.7,SNR=42						
SKAR	Skarslia	63.99	345	eP	P	02 49 22.9	+0.7
COWI	Conover	64.38	46	IAmb	IAmb	02 49 25.8	
	comp=Z,3.7nm,0.7s						
ANMO	Albuquerque	64.39	65	P	P	02 49 26.3	+0.9
ANMO	Albuquerque	64.39	65ce	P	P	02 49 26.7	+1.3
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KONO	Kongsberg	64.77	344	eP	P	02 49 27.8	+0.6
ODD1	Odda	64.98	346	eP	P	02 49 28.5	-0.1
SCHQ	Schefferville	65.11	28	P	P	02 49 29.5	0.0
	comp=Z,4.8nm,0.7s,baz=345,slow=5.2,SNR=18						
SCHQ	Schefferville	65.11	28	P	P	02 49 29.7	+0.2
SCHQ				IAmb	IAmb	02 49 30.5	
	comp=Z,5.4nm,0.8s						
E44A	Grand Marais A	65.33	44	IAmb	IAmb	02 49 32.3	
	comp=Z,9.5nm,0.8s						
BLS5	Blasjo	65.47	346	eP	P	02 49 31.3	-0.5
GEYT	Alibeck	67.09	303	P	P	02 49 40.8	-1.6
	comp=Z,2.4nm,0.6s,baz=56,slow=3.7,SNR=6.9						
GEYT				LR	LR	03 21 21.3	
	comp=Z,81nm,21.4s,baz=265,slow=38						
GEYT	Alibeck	67.09	303	P	P	02 49 40.1	-2.3
MSTX	Muleshoe	67.12	64	IAmb	IAmb	02 49 44.9	
	comp=Z,6.8nm,0.8s						
L42A	Oliver, Polo	67.38	49	IAmb	IAmb	02 49 44.9	
	comp=Z,7.3nm,0.7s						
VLDQ	Val d'Or	67.43	38	P	P	02 49 43.1	-1.3
VLDQ				IAmb	IAmb	02 49 44.0	
	comp=Z,7.8nm,0.9s						
AKASG	Malin Array Be	68.38	329	P	P	02 49 49.1	-1.1
	comp=Z,6.7nm,0.5s,baz=29,slow=6.4,SNR=28						
AKASG				LR	LR	03 22 32.1	
	comp=Z,116nm,18.5s,baz=285,slow=38						
WMOK	Wichita Mounta	68.63	60	P	P	02 49 53.3	+1.1
WMOK				IAmb	IAmb	02 49 54.2	
	comp=Z,7.2nm,0.8s						
WMOK	Wichita Mounta	68.63	60	P	P	02 49 53.3	+1.1
WMOK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KIV	Kislovodsk	69.31	317	eP	P	02 49 55.1	-1.2
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
KBZ	Khabaz	69.41	317	P	P	02 49 56.4	-0.4
	comp=Z,3.4nm,0.8s,baz=81,slow=3.0,SNR=7.5						
KBZ				LR	LR	03 25 01.1	
	comp=Z,79nm,18.0s,baz=325,slow=40						
HHAR	Hobbs	69.88	56	IAmb	IAmb	02 50 00.8	
	comp=Z,9.9nm,0.6s						
BSEG	Bad Segeberg	70.08	342	eP	P	02 50 01.9	+1.2
	comp=Z,9.4nm,0.8s,baz=18,slow=6.0						
TXAR	Lajitas Array	70.19	67	P	P	02 50 03.6	+1.6
	comp=Z,4.6nm,0.8s,baz=298,slow=4.7,SNR=44						
TXAR	Lajitas Array	70.19	67	P	P	02 50 02.8	+0.8
TXAR	Lajitas Array	70.19	67	P	P	02 50 02.8	+0.8
U40A	Yellville	70.35	55	IAmb	IAmb	02 50 04.3	
	comp=Z,8.4nm,0.9s						
RUE	Ruedersdorf	70.77	339	eP	P	02 50 05.8	+0.8
	comp=Z,20nm,0.6s,baz=18,slow=6.0						
SORM	Soroca	70.91	328 ⇑	P	P	02 50 04.9	-1.0
SORM	Soroca	70.91	328 ⇑	P	P	02 50 04.9	-1.0
PBMO	Poplar Bluff	71.19	53	IAmb	IAmb	02 50 09.0	
	comp=Z,7.4nm,0.8s						
MIAR	Mount Ida	71.43	57	IAmb	IAmb	02 50 11.0	
	comp=Z,4.7nm,0.7s						
OJC	Ojcow	71.46	335	IAmb	IAmb	02 50 11.3	
	comp=Z,8.4nm,1.1s						
NRDL	Niedersach Rie	71.49	341	eP	P	02 50 10.1	+0.8
	comp=Z,8.0nm,0.8s,baz=18,slow=6.0						
W41B	Gary Mavity, V	71.59	56	IAmb	IAmb	02 50 12.2	
	comp=Z,7.2nm,0.8s						
ASSE	Asse, Remlinge	71.73	341	eP	P	02 50 11.8	+1.1
	comp=Z,8.8nm,0.9s,baz=18,slow=6.0						
KOLS	Kolonicke sedl	71.98	333	eP	P	02 50 12.5	+0.1
KOLS	Kolonicke sedl	71.98	333	eP	P	02 50 12.5	+0.1
CLL	Collm	72.03	339	eP	P	02 50 13.0	+0.4
	comp=Z,10nm,0.8s,baz=18,slow=6.0						
CLL	Collm	72.03	339	iP	P	02 50 12.7	+0.1
	comp=Z,19nm,1.0s						
CLL	Collm	72.03	339	iP	P	02 50 12.7	+0.1
CLL				pmax	pmax		
	comp=Z,19nm,1.0s						
CLZ	Clausthal	72.06	341	eP	P	02 50 14.1	+1.3
	comp=Z,18nm,0.9s,baz=18,slow=6.0						
IBBN	Ibbenburen	72.10	343	eP	P	02 50 14.4	+1.4
	comp=Z,13nm,0.8s,baz=18,slow=6.0						
DPC	Dobruska-Polom	72.19	337	eP	P	02 50 14.7	+1.0
DPC	Dobruska-Polom	72.19	337	eP	P	02 50 14.7	+1.0
CRVS	Cervenica-Dubn	72.23	333	eP	P	02 50 14.3	+0.4
CRVS	Cervenica-Dubn	72.23	333	eP	P	02 50 14.3	+0.4
BRG	Berggiesshubel	72.24	339	iPKP	P	02 50 14.6	+0.7
	comp=Z,15nm,1.4s						
BRG	Berggiesshubel	72.24	339	eP	P	02 50 14.9	+1.0
	comp=Z,5.1nm,1.0s,baz=18,slow=6.0						
BRG	Berggiesshubel	72.24	339	iP	P	02 50 14.6	+0.7
BRG				pmax	pmax		
	comp=Z,15nm,1.4s						
BUR08	Bucovina Ar. S	72.31	330	IAmb	IAmb	02 50 15.7	
	comp=Z,8.2nm,0.8s						
FBE	Freiberg	72.32	339	eP	P	02 50 15.5	+1.1
	comp=Z,7.5nm,0.9s,baz=18,slow=6.0						
BURAR	Bucovina Array	72.33	330 ⇑	P	P	02 50 14.3	-0.3
BURAR	Bucovina Array	72.33	330 ⇑	P	P	02 50 14.3	-0.3
KRLC	Kraliky	72.34	336	eP	P	02 50 15.4	+0.8
KRLC	Kraliky	72.34	336	eP	P	02 50 15.4	+0.8
NEUB	Neuenburg	72.38	340	eP	P	02 50 15.6	+0.9
	comp=Z,8.6nm,0.7s,baz=18,slow=6.0						
GTTG	Gottingen	72.42	341	eP	P	02 50 16.1	+1.2
	comp=Z,7.9nm,0.8s,baz=18,slow=6.0						
MORC	Moravsky Berou	72.43	336 ⇑	P	P	02 50 16.1	+0.9
MORC	Moravsky Berou	72.43	336 ⇑	P	P	02 50 16.1	+0.9
T47A	Sharon Grove	72.59	51	IAmb	IAmb	02 50 18.1	
	comp=Z,7.7nm,0.7s						
TRPA	Tarpa	72.64	332 ⇓	P	P	02 50 16.9	+0.6
BIZ	Bicaz	72.67	329 ⇓	P	P	02 50 16.6	+0.1
TESR	Tescani	72.88	329 ⇑	P	P	02 50 17.2	-0.6
PRA	Prague	72.89	338	eP	P	02 50 19.0	+1.3
PRA	Prague	72.89	338	eP	P	02 50 19.0	+1.3

PRU Pruhonice 72.94 338 eP P 02 50 18.5 +0.4
PRU ex x 02 50 29.4
PRU Pruhonice 72.94 338 eP P 02 50 18.5 +0.4
PRU e 02 50 29.4
WVT Waverly 72.95 52 P P 02 50 19.2 +0.9
WVT IAmb IAmb 02 50 19.9
comp=Z,4.7nm,0.7s
WVT Waverly 72.95 52 P P 02 50 19.2 +0.9
WVT pmax pmax
comp=Z,5.0nm,0.7s
MOX Moxa 72.95 340 eP P 02 50 19.0 +0.9
comp=Z,7.6nm,0.9s,baz=18,slow=6.0
GOPC GO Pecny, Ondr 72.95 338 eP P 02 50 19.2 +1.0
GOPC GO Pecny, Ondr 72.95 338 eP P 02 50 19.2 +1.0
TANN Tannenbergstha 72.99 339 eP P 02 50 19.2 +0.8
comp=Z,3.3nm,0.8s,baz=18,slow=6.0
BUG Bochum--Univer 73.02 343 eP P 02 50 18.8 +0.3
comp=Z,15nm,0.9s,baz=18,slow=6.0
GHRR 73.05 328 ⇑P P 02 50 18.1 -0.6
ARCR ARCALIA 73.06 330 ⇑P P 02 50 19.2 +0.3
GUNZ Gunzen 73.07 339 eP P 02 50 20.0 +1.1
comp=Z,5.2nm,0.8s,baz=18,slow=6.0
VRAC Vranov 73.10 336 ⇑P P 02 50 20.6 +1.6
VRAC Vranov 73.10 336 ⇑P P 02 50 20.6 +1.6
UBBA Unterbreizbach 73.11 341 eP P 02 50 19.9 +1.0
comp=Z,4.0nm,0.8s,baz=18,slow=6.0
WERN Wernitzgruen 73.13 339 eP P 02 50 20.3 +1.1
comp=Z,8.7nm,0.8s,baz=18,slow=6.0
NKC Novy Kostel 73.17 339 eP P 02 50 20.0 +0.6
NKC Novy Kostel 73.17 339 eP P 02 50 20.0 +0.6
VYHS Vyhne 73.30 335 eP P 02 50 20.7 +0.5
VYHS Vyhne 73.30 335 eP P 02 50 20.7 +0.5
PBCC Pribram 73.35 338 eP P 02 50 21.6 +1.1
MANZ Manzenberg 73.47 339 eP P 02 50 20.7 -0.6
comp=Z,5.5nm,1.0s,baz=18,slow=6.0
OZUR 73.52 329 ⇑P P 02 50 21.8 +0.2
ROTZ Rotzenmuhle 73.66 339 eP P 02 50 23.5 +1.2
comp=Z,5.4nm,0.9s,baz=18,slow=6.0
CLTN Cedars of Leba 73.68 51 IAmb IAmb 02 50 24.4
comp=Z,3.8nm,0.7s
PLAL Pickwick Lake 73.76 53 IAmb IAmb 02 50 25.0
comp=Z,12nm,1.1s
MODS Modra-Piesok 73.80 335 eP P 02 50 22.4 -0.8
MODS Modra-Piesok 73.80 335 eP P 02 50 22.4 -0.8
DRGR 73.80 331 ⇑P P 02 50 23.2 -0.1
DRGR 73.80 331 ⇑P P 02 50 23.2 -0.1
GRF Grafenberg Arr 73.94 340 eP P 02 50 25.0 +1.0
comp=Z,13nm,0.7s,baz=18,slow=6.0
KHC Kasperske Hory 73.96 338 eP P 02 50 24.8 +0.7
KHC epP sP 02 50 44.1 -0.7
KHC Kasperske Hory 73.96 338 IAmb IAmb 02 50 26.1
comp=Z,4.4nm,0.9s
KHC Kasperske Hory 73.96 338 eP P 02 50 24.8 +0.7
KHC e 02 50 44.1
TNS Taunus Mts 73.97 342 eP P 02 50 25.0 +0.8
comp=Z,8.3nm,0.7s,baz=18,slow=6.0
MLR Muntele Rosu 74.01 329 ⇑P P 02 50 25.3 +0.7
MLR Muntele Rosu 74.01 329 ⇑P P 02 50 25.3 +0.7
WET Wettzell 74.10 339 eP P 02 50 26.1 +1.2
comp=Z,7.9nm,0.8s,baz=18,slow=6.0
GEC2 GERESS Array S 74.20 338 eP P 02 50 26.4 +0.8
comp=Z,4.2nm,0.8s,baz=18,slow=6.0
GEC2 GERESS Array S 74.20 338 IAmb IAmb 02 50 26.9
comp=Z,5.1nm,0.7s
GERES GERESS Array B 74.20 338 P P 02 50 26.4 +0.8
comp=Z,4.2nm,0.6s,baz=36,slow=5.3,SNR=26
GERES GERESS Array B 74.20 338 P P 02 50 25.9 +0.2
GERES GERESS Array B 74.20 338 P P 02 50 25.9 +0.2
VOIR 74.34 329 ⇑P P 02 50 26.1 -0.3
VOIR 74.34 329 ⇑P P 02 50 26.1 -0.3
ARR Arges 74.53 329 ⇑P P 02 50 27.7 +0.1
CONA Conrad Observa 74.56 336 eP P 02 50 29.1 +1.4
comp=Z,5.8nm,0.8s
SIRR Siria 74.58 332 ⇓P P 02 50 28.4 +0.6
BZS Buzias 75.19 332 ⇓P P 02 50 31.2 0.0
BZS Buzias 75.19 332 ⇓P P 02 50 31.2 0.0
ARSA Arzberg 75.28 336 eP P 02 50 33.2 +1.4
comp=Z,5.4nm,0.7s
FUR Furstenfeldbru 75.37 339 eP P 02 50 33.3 +1.0
comp=Z,13nm,0.9s,baz=18,slow=6.0
RJOB Jochberg 75.45 338 eP P 02 50 34.4 +1.6
comp=Z,6.0nm,0.7s,baz=18,slow=6.0
SOKA Soboth 75.93 336 eP P 02 50 36.5 +0.8
comp=Z,6.4nm,0.6s
KBA Koelnbreinsper 75.95 338 eP P 02 50 37.3 +1.5
comp=Z,21nm,0.7s,SNR=8.7
UBR Ueberruh 76.08 340 eP P 02 50 37.3 +0.9
comp=Z,8.7nm,0.8s,baz=18,slow=6.0
WATA Walderalm 76.10 339 eP P 02 50 37.5 +0.9
comp=Z,9.1nm,1.0s
RETA Reutte 76.13 339 eP P 02 50 37.5 +0.8
comp=Z,10.0nm,0.8s
ECH Echery 76.14 342 IAmb IAmb 02 50 45.0
comp=Z,8.1nm,1.0s
MOTA Moosalm 76.19 339 eP P 02 50 38.0 +0.8
comp=Z,13nm,0.8s
OBKA Obir 76.20 337 eP P 02 50 38.3 +1.1
comp=Z,7.9nm,0.8s
SQTA Sankt Quirin 76.28 339 eP P 02 50 38.8 +1.2
comp=Z,14nm,0.7s,SNR=6.0
PLVB Pleven 76.32 329 ⇑P P 02 50 37.9 +0.2
ABTA Abfaltersbach 76.45 338 eP P 02 50 39.3 +0.8
comp=Z,19nm,0.9s,SNR=5.0
BRTR Keskin Array B 76.46 321 P P 02 50 38.5 -0.3
comp=Z,1.2nm,0.8s,baz=27,slow=3.3,SNR=6.5
BRTR LR LR 03 27 35.8
comp=Z,34nm,19.0s,baz=310,slow=38
FETA Feichten 76.58 339 eP P 02 50 40.5 +1.1
comp=Z,7.5nm,0.8s
WRA Warramunga Arr 76.61 205 P P 02 50 40.2 +0.7
comp=Z,4.7nm,0.9s,baz=24,slow=6.5,SNR=13
WRA Warramunga Arr 76.61 205 iP P 02 50 39.4 -0.1
WRA pmax pmax
comp=Z,5.0nm,0.9s
FUORN Ofenpass-Fuorn 77.06 339 P P 02 50 42.2 0.0
VTS Vitosha 77.44 329 ⇑P P 02 50 44.7 +0.4
VTS Vitosha 77.44 329 IAmb IAmb 02 50 45.3
comp=Z,7.9nm,0.7s
VTS Vitosha 77.44 329 ⇑P P 02 50 44.7 +0.4
PALK Pallekele 78.17 266 P P 02 50 47.7 -0.9
PALK Pallekele 78.17 266 P P 02 50 47.7 -0.9
PALK pmax pmax
comp=Z,18nm,0.9s
ZCCA Zocca 79.06 338 P P 02 50 53.8 +0.8
OSSC Osservatorio P 79.79 338 IAmb IAmb 02 50 58.2
comp=Z,8.1nm,0.7s
ASAR Alice Springs 80.29 205 P P 02 51 01.2 +1.5
comp=Z,3.8nm,0.7s,baz=16,slow=5.9,SNR=31
ASAR Alice Springs 80.29 205 P P 02 51 00.2 +0.4
ASAR Alice Springs 80.29 205 P P 02 51 00.2 +0.4
RAYN Ar Rayn 85.05 303 P P 02 51 24.2 -0.6
RAYN IAmb IAmb 02 51 25.5
comp=Z,4.6nm,0.8s
RAYN Ar Rayn 85.05 303 P P 02 51 24.2 -0.6
RAYN pmax pmax
comp=Z,5.0nm,0.8s
ESDC Sonseca Array 86.20 348 P P 02 51 30.0 -0.3
comp=Z,4.1nm,0.8s,baz=1.5,slow=4.8,SNR=9.8
ESDC Sonseca Array 86.20 348 P P 02 51 30.1 -0.1
STKA Stephens Creek 86.65 196 P P 02 51 32.9 +0.7
comp=Z,3.9nm,0.8s,baz=13,slow=6.0,SNR=6.0
KEST Kesra 87.66 337 P P 02 51 36.8 -0.6
comp=Z,2.2nm,0.5s,baz=278,slow=1.0,SNR=12
KEST Kesra 87.66 337 IAmb IAmb 02 51 53.8
comp=Z,5.3nm,0.9s
TORD Torodi Ar. Bea 111.16 338 PKiKP PKiKP 02 57 22.7 +0.2
comp=Z,0.4nm,0.5s,baz=353,slow=1.7,SNR=6.2
TORD PP PP 02 57 59.3 -1.9
comp=Z,0.7nm,0.7s,baz=14,slow=8.1,SNR=4.1
DBIC Dimbokro 118.76 343 PKP PKPdf 02 57 36.2 -0.9
comp=Z,1.9nm,0.8s,baz=324,slow=8.7,SNR=3.2
PLCA Paso Flores 143.72 91 PKP PKPbc 02 58 21.2 +0.3
comp=Z,2.6nm,1.0s,baz=301,slow=7.3,SNR=4.9

IDC 05 02:52:09.2±2.5, 30°.29N×85°.60E, h0km, mb3.6/5, mb1 3.9/7, mb1mx3.4/42, mbtmp3.7/7, ML4.8/1, Error ellipse: s-maj=57.7km s-min=34.0km az=47.0, Xizang

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	16.68	352	Pn	Pn	02 56 04.0	-0.3
	0.1nm,0.3s,baz=168,slow=12,SNR=7.9						
CMAR	Chiang Mai Arr	16.91	131	Pn	Pn	02 56 07.6	+0.3
	1.4nm,0.3s,baz=309,slow=12,SNR=16						
KURBB	Kurchatov Arra	20.99	347	P	P	02 56 54.0	0.0
	1.2nm,0.6s,baz=164,slow=10,SNR=7.6						
ZALV	Zalesovo Beam	23.65	359	P	P	02 57 22.0	0.0
	0.4nm,0.4s,baz=188,slow=8.5,SNR=4.1						
SONM	Songino Array	23.70	37	P	P	02 57 22.6	-0.2
	0.2nm,0.5s,baz=234,slow=9.3,SNR=3.7						
FINES	FINESS Array B	49.39	327	P	P	03 01 00.2	-0.1
	2.2nm,0.9s,baz=122,slow=9.4,SNR=3.5						
ARCES	ARCESS Array B	51.58	337	P	P	03 01 16.5	-0.2
	2.5nm,1.0s,baz=97,slow=7.4,SNR=2.9						

IDC 05 03:13:45.9±3.0, 33°.03S×178°.40W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.7/26, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=73.9km s-min=36.2km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
URZ	Urewera	6.37	214	Pn	Pn	03 15 21.0	0.0
	1.6nm,0.3s,baz=329,slow=18,SNR=12						
URZ				Sn	Sn	03 16 34.8	+0.3
	1.6nm,0.3s,baz=301,slow=17,SNR=6.9						
ASAR	Alice Springs	42.70	270	P	P	03 21 44.7	-0.1
	0.5nm,0.7s,baz=109,slow=7.6,SNR=4.7						
WRA	Warramunga Arr	43.92	275	P	P	03 21 54.6	-0.1
	0.4nm,0.3s,baz=115,slow=7.8,SNR=6.0						
FINES	FINESS Array B	147.47	338	PKPbc	PKPbc	03 33 30.2	-0.8
	1.1nm,0.6s,baz=72,slow=4.5,SNR=6.7						

IDC 05 03:19:29.7±0.5, 23°.08N×80°.79W, h0km, mb4.1/17, mb1 4.3/20, mb1mx4.2/37, mbtmp4.2/20, ML3.6/3, MS3.4/17, Ms1 3.4/17, ms1mx3.3/39, Error ellipse: s-maj=19.6km s-min=12.0km az=66.0

NEIC 05 03:19:29.8±1.9, 23°.09N±0°.04×80°.89W±0°.03, h14km±4km, mb4.3/159, Error ellipse: s-maj=6.6km s-min=3.2km az=144.0

SSNC 05 03:19:32.5±1.3, 23°.28N×80°.64W, h7km±23km, MD3.9, MS3.9, MW4.1

ISC 05 03:19:28.3±1.3, 23°.13N±0°.03×80°.87W±0°.04, h3km±8km, n535, σ1§43/488, mb4.3/60, MS3.5/11, Cuba region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MGV	Manicaragua	1.30	141	ePg	Pg	03 19 54.3	+0.9
MGV				eSg	Sn	03 20 11.0	-0.3
SOR	Soroa	2.00	261	eP	Pg	03 20 06.6	0.0
SOR				eS	Sg	03 20 33.8	+1.2
061Z	Ochoppi	2.73	359		Pb	03 20 15.1	-2.6
061Z				Sn	Sn	03 20 47.1	+0.7
061Z	Ochoppi	2.73	359	P	Pn	03 20 12.0	-1.0
	baz=178,SNR=18						
CCCC	Cccc	3.46	123	eS	Sb	03 21 09.6	-3.0
CCCC				IVMs_BB	IVMs_BB	03 21 39.2	
	comp=N,2μm,4.2s						
CCCC				IVMs_BB	IVMs_BB	03 21 43.2	
	comp=E,628nm,1.7s						
CBCY	The Bluff, Cay	3.53	163		Pn	03 20 23.0	-1.0
CBCY				Sn	Sn	03 21 04.4	-1.8
FSCY	Frank Sound, G	3.81	184		Pn	03 20 28.1	+0.3
FSCY				Sn	Sn	03 21 11.0	-2.1
LMGC	Las Mercedes	4.71	130	eP	Pn	03 20 41.8	+1.5
LMGC				IVMs_BB	IVMs_BB	03 22 07.0	
	comp=N,1μm,4.7s						
LMGC				IVMs_BB	IVMs_BB	03 22 17.4	
	comp=E,1μm,3.2s						
DWPF	Disney Wildern	4.99	354	eP	Pn	03 20 46.6	+2.6
DWPF				eS	Sn	03 21 37.4	-4.8
DWPF				IVMs_BB	IVMs_BB	03 22 12.7	
	comp=E,7μm,2.1s						
DWPF				IVMs_BB	IVMs_BB	03 22 14.6	
	comp=E,6μm,2.1s						
DWPF	Disney Wildern	4.99	354		Pn	03 20 45.7	+1.7
DWPF				Sn	Sn	03 21 42.5	+0.3
DWPF	Disney Wildern	4.99	354	P	Pn	03 20 43.8	-0.2
	baz=174						
RCC	Rio Carpintero	5.74	122	eP	Pn	03 20 53.6	-0.8
RCC				eS	Sn	03 21 56.5	-4.2
RCC				IVMs_BB	IVMs_BB	03 22 43.7	
	comp=N,1μm,5.7s						
RCC				IVMs_BB	IVMs_BB	03 22 44.9	
	comp=E,426nm,3.8s						
MTDJ	Mount Denham	5.79	147		Pn	03 20 53.9	-1.4
MTDJ				Sn	Sn	03 22 01.1	-1.1
MOAC	Moa	6.01	113	eP	Pn	03 20 50.0	-8.1
MOAC				eS	Sn	03 21 52.8	-15
GTMO	Guantanamo	6.13	119	eP	Pn	03 20 54.1	-5.7
GTMO				eS	Sn	03 22 09.3	-1.2
656A	Willston	6.39	347		Pn	03 21 04.4	+1.0
656A				Sn	Sn	03 22 15.5	-1.3
TEIG	Tepich	7.47	249	Pn	Pn	03 21 19.2	+1.0
	comp=E,3.1nm,0.3s,baz=338,slow=7.7,SNR=16						
TEIG				Sn	Sn	03 22 43.9	+0.4
	comp=E,38nm,0.3s,baz=142,slow=22,SNR=9.3						
TEIG				LR	LR	03 24 18.3	
	comp=E,211nm,20.7s,baz=31,slow=38						
TEIG	Tepich	7.47	249		Pn	03 21 17.9	-0.3
TEIG				Sn	Sn	03 22 42.2	-1.3
456A	Hilliard	7.64	352	Pn	Pn	03 21 22.0	+1.6
553A	Crawfordville	7.72	336		Pn	03 21 22.2	+0.7
TIGA	Tifton	8.62	344		Pn	03 21 35.1	+1.1
TIGA	Tifton	8.62	344	P	Pn	03 21 34.2	+0.2
	baz=163						
451A	Vernon	8.63	331	Pn	Pn	03 21 34.0	-0.1
257A	Skidaway Islan	8.81	359	Pn	Pn	03 21 37.6	+1.1
156A	Sylvania	9.51	357	P	Pn	03 21 46.7	+0.6
	baz=176						
155A	Kite	9.56	352	P	Pn	03 21 48.4	+1.5
	baz=171						
158A	Hollywood	9.59	3	P	Pn	03 21 48.4	+1.2
	baz=184						
154A	Montrose	9.65	349	Pn	Pn	03 21 50.1	+2.0
154A	Montrose	9.65	349	P	Pn	03 21 48.8	+0.7
	baz=167						
BRAL	Brewton	9.72	327	Pn	Pn	03 21 49.7	+0.8
BRAL	Brewton	9.72	327	P	Pn	03 21 49.8	+0.9
	baz=144						
SDDR	Presa de Saban	9.85	113	Pn	Pn	03 21 51.7	+0.8
250A	Grady	10.03	333		Pn	03 21 52.8	-0.5
Z55A	Blythe	10.12	354	P	Pn	03 21 54.9	+0.4
	baz=173						
Z57A	Bowman	10.13	1	P	Pn	03 21 55.6	+0.9
	baz=181						
Z54A	Sparta	10.22	351	P	Pn	03 21 56.4	+0.5
	baz=170						
Z53A	Monticello	10.39	347	P	Pn	03 21 58.7	+0.5
	baz=166						
GOGA	Godfrey	10.50	348		Pn	03 21 59.2	-0.5
GOGA	Godfrey	10.50	348	P	Pn	03 21 59.6	-0.1
	baz=166						
Z52A	Williamson	10.50	343	P	Pn	03 21 60.0	+0.2
	baz=162						
Y58A	Scranton	10.79	5	P	Pn	03 22 04.0	+0.3
	baz=186						
Y55A	Saluda	10.80	356	P	Pn	03 22 04.1	+0.2
	baz=175						
Y54A	Tignall	10.81	352	P	Pn	03 22 04.6	+0.6
	baz=171						
Z51A	Franklin	10.84	340		Pn	03 22 05.7	+1.4
Y57A	Sumter	10.86	2	P	Pn	03 22 05.3	+0.7
	baz=182						
TGUH	Tegucigalpa,Un	10.87	215		Pn	03 22 05.8	+0.8
Y53A	Monroe	10.95	348	P	Pn	03 22 05.9	0.0
	baz=166						
Y59A	Loris	10.96	9	P	Pn	03 22 06.3	+0.3
	baz=190						
Z50A	Ashland	11.03	337		Pn	03 22 06.7	-0.3
Z50A	Ashland	11.03	337	P	Pn	03 22 06.6	-0.3
	baz=155						
Y52A	Lilburn	11.06	346		Pn	03 22 08.3	+0.9
Y52A	Lilburn	11.06	346	P	Pn	03 22 06.7	-0.7
	baz=164						
JSC	Jenkinsville	11.12	358		Pn	03 22 06.5	-1.7
HODGE	Hodges	11.13	354		Pn	03 22 06.8	-1.5
X57A	Johnson Farm,	11.31	3	P	Pn	03 22 10.5	-0.3
	baz=183						
X55A	Gracelyn & Ava	11.32	357	P	Pn	03 22 10.7	-0.3
	baz=176						
X56A	White Oak	11.32	359	P	Pn	03 22 09.9	-1.1
	baz=179						
Y51A	Rockmart	11.35	342	P	Pn	03 22 11.0	-0.3
	baz=160						
X54A	Belton	11.45	354	P	Pn	03 22 11.9	-0.9
	baz=173						
X58A	Rowland	11.46	6	P	Pn	03 22 10.9	-1.9
	baz=187						
X53A	Estanollee	11.53	350	P	Pn	03 22 13.2	-0.7
	baz=168						
X59A	McDuffie Farm,	11.57	9	P	Pn	03 22 14.3	0.0
	baz=190						
X52A	Dahlonega	11.74	348	P	Pn	03 22 16.3	-0.3
	baz=166						
Y49A	Blount Mountai	11.74	337		Pn	03 22 15.8	-0.9
X51A	Calhoun	11.92	344		Pn	03 22 20.7	+1.5
X51A	Calhoun	11.92	344	P	Pn	03 22 19.2	+0.1
	baz=162						
W58A	Raeford	11.94	7	P	Pn	03 22 17.6	-1.7
	baz=187						
BG3	Lake Jocassee	11.96	352		Pn	03 22 20.4	+0.7
W56A	Indian Trail	11.97	1	P	Pn	03 22 18.8	-1.0
	baz=181						
W54A	Cherokee Point	11.97	355	P	Pn	03 22 18.8	-1.0
	baz=174						
KMSC	Kings Mountain	11.98	358		Pn	03 22 18.9	-1.0
KMSC	Kings Mountain	11.98	358	P	Pn	03 22 19.6	-0.4
	baz=178						
W57A	Gilead	12.01	3	P	Pn	03 22 19.3	-1.0
	baz=184						
FPAL	Fort Paine	12.10	341		Pn	03 22 23.2	+1.5
W53A	Cullowhee	12.16	351	P	Pn	03 22 21.6	-1.0
	baz=170						
W59A	Clinton	12.18	9	P	Pn	03 22 20.7	-2.0
	baz=190						
W52A	Murphy	12.22	348	P	Pn	03 22 22.5	-0.8
	baz=166						
W51A	Cleveland	12.46	345	P	Pn	03 22 26.0	-0.5
	baz=163						
X48A	Hartselle	12.51	336		Pn	03 22 28.2	+1.0
CCIG	Comitan	12.61	239		Pn	03 22 26.8	-1.9
CCIG					Sn	03 24 50.0	+0.1
V53A	Saluda	12.61	353	P	Pn	03 22 28.2	-0.5
	baz=172						
W50A	Signal Mountai	12.64	343	P	Pn	03 22 28.6	-0.4
	baz=161						
V54A	Nebo	12.64	356	P	Pn	03 22 27.7	-1.3
	baz=175						
V56A	Mocksville	12.64	1	P	Pn	03 22 28.1	-1.0
	baz=181						
CPCT	Cooper Cave	12.68	346		Pn	03 22 28.9	-0.7
V55A	Taylorsville	12.68	359		Pn	03 22 28.9	-0.7
V55A	Taylorsville	12.68	359	P	Pn	03 22 27.9	-1.7
	baz=178						
V58A	Windy Hill, Pi	12.71	6		Pn	03 22 27.8	-2.1
V58A	Windy Hill, Pi	12.71	6	P	Pn	03 22 28.0	-2.0
	baz=187						
TKL	Tuckaleechee C	12.74	349	Pn	Pn	03 22 29.7	-0.6
	comp=E,0.6nm,0.3s,baz=167,slow=14,SNR=7.8						
TKL				Sn	Sn	03 24 44.6	-8.1
	comp=E,1.4nm,0.3s,baz=101,slow=19,SNR=2.3						
TKL				Lg	Lg	03 26 07.4	
	comp=E,0.7nm,0.3s,baz=260,slow=19,SNR=3.2						
TKL				LR	LR	03 27 26.8	
	comp=E,212nm,19.4s,baz=165,slow=37						
TKL	Tuckaleechee C	12.74	349		Pn	03 22 29.0	-1.4
V57A	Coltrane Farms	12.75	4	P	Pn	03 22 28.8	-1.7
	baz=184						
V59A	Middlesex	12.80	10	P	Pn	03 22 29.3	-1.8
	baz=191						
W49A	Belvidere	12.84	340	P	Pn	03 22 31.5	-0.2
	baz=157,SNR=9.8						
V52A	Sevierville	12.89	350	P	Pn	03 22 32.1	-0.3
	baz=168						
V51A	Loudon	12.99	347	P	Pn	03 22 32.9	-0.8
	baz=165						
V50A	Pikevile	13.03	345	P	Pn	03 22 34.2	-0.1
	baz=162						
V61A	Roper	13.16	15	P	Pn	03 22 35.0	-1.0
	baz=197						
U56A	King	13.18	2	P	Pn	03 22 35.8	-0.6
	baz=182						
U53A	Fall Branch	13.27	354	P	Pn	03 22 37.1	-0.6
	baz=173						
U57A	Blanch	13.32	5	P	Pn	03 22 37.6	-0.7
	baz=186						
U55A	TA2, Sparta	13.33	359	P	Pn	03 22 38.1	-0.4
	baz=179						
V49A	McMinnville	13.33	342	P	Pn	03 22 37.8	-0.7
	baz=159						
JTS	Las Juntas de	13.35	198	Pn	P	03 22 46.5	-2.1
	comp=E,0.3nm,0.3s,baz=47,slow=16,SNR=2.1						
JTS				LR	LR	03 27 53.6	
	comp=E,98nm,18.1s,baz=72,slow=38						
JTS	Las Juntas de	13.35	198		Pn	03 22 39.4	+0.6
U54A	Nelsons Funny	13.37	357	P	Pn	03 22 37.0	-2.1
	baz=176						
U58A	Oxford	13.37	8	P	Pn	03 22 37.0	-2.0
	baz=189						
U52A	Thorn Hill	13.39	351	P	Pn	03 22 37.5	-1.8
	baz=170						
U59A	Littleton	13.45	11	P	Pn	03 22 37.2	-2.7
	baz=192						
U51A	La Follette	13.48	349	P	Pn	03 22 38.8	-1.8
	baz=167						
TZTN	Tazewell	13.57	351	P	Pn	03 22 39.8	-1.9
	baz=169						
OXF	Oxford	13.58	329	P	Pn	03 22 40.7	-1.1
	baz=144						
U60A	Pendleton	13.68	13	P	Pn	03 22 41.9	-1.3
	baz=194						
U50A	Jamestown	13.68	346	P	Pn	03 22 42.3	-0.9
	baz=164						
U61A	Possum Corner	13.70	15	P	Pn	03 22 41.0	-2.4
	baz=197						
T56A	Rocky Mt	13.87	3	P	Pn	03 22 44.0	-1.9
	baz=183						
T53A	Wise	13.88	354	P	Pn	03 22 44.0	-2.1
	baz=173						
T57A	Hurt	13.89	5	P	Pn	03 22 44.1	-2.0
	baz=186						
T54A	Tazewell	13.90	358	P	Pn	03 22 44.7	-1.5
	baz=177						
T58A	Grand View Acr	13.92	8	P	Pn	03 22 43.3	-3.2
	baz=189						
U49A	Red Boiling Sp	14.00	343	P	Pn	03 22 45.8	-1.7
	baz=161						
T51A	Gray	14.04	350	P	Pn	03 22 46.9	-1.3
	baz=168						
T52A	Hallie	14.05	353	P	Pn	03 22 47.3	-1.0
	baz=172						
T59A	Double "B" Far	14.09	11	P	Pn	03 22 46.6	-2.2
	baz=192						
T50A	Nancy	14.26	347	P	Pn	03 22 50.2	-0.9
	baz=165						
WVT	Waverly	14.29	337		Pn	03 22 51.2	-0.3
WVT	Waverly	14.29	337	P	Pn	03 22 50.4	-1.1
	baz=153						
T60A	Surry	14.41	13	P	Pn	03 22 51.8	-1.4
	baz=195						
CMIG	Matias Romero	14.46	248	Pn	P	03 23 02.7	+1.8
	comp=E,0.7nm,0.3s,baz=67,slow=8.6,SNR=10						
CMIG				Sn	Sn	03 25 29.1	-5.9
	comp=E,1.2nm,0.3s,baz=199,slow=17,SNR=7.0						
CMIG				LR	LR	03 29 26.4	
	comp=E,124nm,18.1s,baz=52,slow=41						
T49A	Edmonton	14.50	345	P	Pn	03 22 53.0	-1.4
	baz=162						
S56A	Natural Bridge	14.54	4	P	Pn	03 22 54.3	-0.8
	baz=185						
S55A	Lewisburg	14.60	1	P	Pn	03 22 54.8	-1.0
	baz=181						
S54A	Dingess, Beckl	14.63	359	P	Pn	03 22 54.7	-1.5
	baz=178						
S58A	Poland Farm, P	14.64	9	P	Pn	03 22 54.0	-2.3
	baz=190						
S51A	Beattyville	14.65	351	P	Pn	03 22 54.9	-1.5
	baz=170						
S57A	Dark Hollow, R	14.68	6		Pn	03 22 54.7	-2.1
S57A	Dark Hollow, R	14.68	6	P	Pn	03 22 55.1	-1.7
	baz=187						
S50A	Richmond	14.82	349	P	Pn	03 22 57.6	-1.2
	baz=167						
S59A	Mechanicsville	14.90	11	P	Pn	03 22 57.5	-2.4
	baz=193						
R58B	Mineral	15.01	9	P	Pn	03 22 59.1	-2.2
	baz=190						
WLAR	White Oak Lake	15.04	317	P	P	03 23 13.0	+5.7
WLAR				IAmb	IAmb	03 23 16.8	
	comp=Z,18nm,1.0s						
R55A	Marlinton	15.12	2	IAmb	IAmb	03 23 16.8	
	comp=Z,19nm,0.9s						
R53A	Hurricane	15.18	357	P	Pn	03 23 01.9	-1.8
	baz=176						

R57A	Stanardsville	15.25	7	P	Pn	03 23 01.4	-3.1
	baz=188						
R56A	Bull Pasture M	15.28	4	P	Pn	03 23 02.9	-2.2
	baz=185						
R51A	Hillsboro	15.30	352	P	Pn	03 23 03.2	-2.0
	baz=170						
R58A	Rapidan	15.32	9	P	Pn	03 23 03.1	-2.4
	baz=190						
R59A	King George, V	15.36	11	P	Pn	03 23 03.3	-2.7
	baz=193						
X40A	Basin Creek Fa	15.41	320		Pn	03 23 04.8	-1.9
X40A	Basin Creek Fa	15.41	320	P	Pn	03 23 04.6	-2.1
	baz=134						
R60A	Leonardtown, M	15.53	13	P	Pn	03 23 05.1	-3.1
	baz=195						
R49A	Shelbyville	15.56	347	IAmb	IAmb	03 23 18.9	
	comp=Z,13nm,0.8s						
R49A	Shelbyville	15.56	347	P	Pn	03 23 06.0	-2.5
	baz=165						
W41B	Gary Mavity, V	15.57	323	P	Pn	03 23 06.9	-1.9
	baz=137						
Q53A	Leroy	15.69	358	P	Pn	03 23 09.2	-1.1
	baz=178						
WCI	Wyandotte Cave	15.75	344	P	Pn	03 23 10.0	-1.2
	baz=161						
Q54A	Coxs Mills	15.81	0	P	Pn	03 23 10.4	-1.4
	baz=180						
Q52A	Bidwell	15.83	356	P	Pn	03 23 10.1	-2.0
	baz=175						
Q55A	Buckhannon	15.83	2	P	Pn	03 23 10.9	-1.3
	baz=182						
MIAR	Mount Ida	15.90	318		Pn	03 23 12.5	-0.5
MIAR	Mount Ida	15.90	318	P	Pn	03 23 11.6	-1.4
	baz=132,SNR=5.5						
Q56A	Snyder Ridge,	15.93	5		P	03 23 15.3	-1.8
Q56A				IAmb	IAmb	03 23 24.3	
	comp=Z,28nm,1.3s						
Q56A	Snyder Ridge,	15.93	5	P	Pn	03 23 11.3	-2.1
	baz=186						
Q51A	Peebles	15.99	353	IAmb	IAmb	03 23 24.4	
	comp=Z,17nm,0.7s						
Q51A	Peebles	15.99	353	P	Pn	03 23 11.6	-2.6
	baz=172						
Q57A	Strasburg	15.99	7	P	Pn	03 23 11.4	-2.8
	baz=188						
Q58A	Fox Den Farm,	16.00	9	P	Pn	03 23 11.6	-2.6
	baz=190						
Q59A	Harwood	16.09	12	P	Pn	03 23 13.4	-2.1
	baz=194						
Q49A	Aurora	16.20	349	P	Pn	03 23 15.5	-1.3
	baz=166						
S44A	Carbondale	16.21	336	IAmb	IAmb	03 23 25.2	
	comp=Z,16nm,0.7s						
Q48A	North Vernon	16.29	346	P	Pn	03 23 16.7	-1.3
	baz=164						
P53A	Whipple	16.31	359	IAmb	IAmb	03 23 26.8	
	comp=Z,21nm,0.8s						
P53A	Whipple	16.31	359	P	Pn	03 23 17.4	-0.9
	baz=178						
P55A	Reedsville	16.35	3	P	Pn	03 23 17.4	-1.4
	baz=183						
Q60A	Greensboro	16.39	14	P	Pn	03 23 17.8	-1.5
	baz=196						
P51A	Williamsport	16.41	354	P	Pn	03 23 18.6	-1.0
	baz=173						
P56A	Dayton Farm, R	16.42	6	P	Pn	03 23 18.6	-1.1
	baz=186						
P54A	Burton	16.43	1	P	Pn	03 23 17.6	-2.2
	baz=181						
W39A	Magazine	16.47	320	P	Pn	03 23 18.6	-1.7
	baz=133						
P57A	Homestead Farm	16.48	8	IAmb	IAmb	03 23 28.7	
	comp=Z,22nm,0.8s						
P57A	Homestead Farm	16.48	8	P	Pn	03 23 18.7	-1.8
	baz=189						
P52A	Corning	16.49	357	P	Pn	03 23 19.5	-1.1
	baz=176						
MCWV	Mont Chateau	16.50	3	P	Pn	03 23 19.3	-1.4
	baz=183						
SDMD	Soldier's Deli	16.59	11	Pn	Pn	03 23 20.3	-1.5
P50A	Jamestown	16.62	352	P	Pn	03 23 22.6	+0.4
	baz=170						
P49A	Miami Univ. Ec	16.68	350	P	Pn	03 23 23.0	0.0
	baz=167						
435B	Jarrell	16.73	301	P	Pn	03 23 23.2	-0.5
	baz=113						
OLIL	Olney	16.74	340	IAmb	IAmb	03 23 32.5	
	comp=Z,19nm,0.8s						
P48A	Milroy	16.74	348	P	Pn	03 23 22.9	-0.9
	baz=165						
U40A	Yellville	16.77	324	P	Pn	03 23 23.7	-0.6
	baz=138						
P59A	Jarrettsville	16.86	12	P	Pn	03 23 24.4	-0.8
	baz=194						
O52A	Adamsville	16.96	357	P	Pn	03 23 26.3	-0.2
	baz=177						
O54A	Avella	17.01	1	P	Pn	03 23 26.7	-0.4
	baz=181						
O53A	New Philadelph	17.07	359	P	Pn	03 23 27.4	-0.6
	baz=179						
O55A	Ligonier	17.08	4	P	P	03 23 28.6	-1.3
	baz=185						
O50A	Cable	17.13	353	P	P	03 23 29.6	-0.8
	baz=171						
WHTX	Lake Whitney,	17.14	305	P	P	03 23 30.9	+0.3
WHTX	Lake Whitney,	17.14	305	P	Pn	03 23 28.5	-0.3
	baz=117						
ACSO	Alum Creek Sta	17.15	355	P	P	03 23 29.2	-1.4
	baz=173						
O56A	Blue Knob Stat	17.20	6	P	P	03 23 35.5	+4.3
O56A				IAmb	IAmb	03 23 37.1	
	comp=Z,24nm,1.2s						
O56A	Blue Knob Stat	17.20	6	P	P	03 23 29.8	-1.5
	baz=187						
SDV	Santo Domingo	17.23	144	P	P	03 23 32.7	+0.8
	comp=Z,0.3nm,0.3s,baz=310,slow=10,SNR=8.5						
SDV				LR	LR	03 31 01.4	
	comp=Z,50nm,18.3s,baz=248,slow=40						
SDV	Santo Domingo	17.23	144	P	P	03 23 31.0	-0.8
O57A	Amberson	17.25	8	P	P	03 23 30.5	-1.3
	baz=190						
MVL	Millersville	17.25	12	Pn	Pn	03 23 28.4	-1.8
O49A	Covington	17.26	351	P	P	03 23 30.7	-1.2
	baz=169						
O58A	Lewisberry	17.27	10	P	P	03 23 30.6	-1.4
	baz=192						
P61A	Hammonton	17.28	16	P	P	03 23 30.6	-1.5
	baz=199						
P46A	Rosedale	17.30	343	P	Pn	03 23 30.7	0.0
CCM	Cathedral Cave	17.33	331		Pn	03 23 31.2	0.0
CCM	Cathedral Cave	17.33	331	P	P	03 23 31.4	-1.3
	baz=146						
O48A	Farmland	17.46	349	P	P	03 23 32.8	-1.2
	baz=167						
833A	Chaparral WMA,	17.47	291	IAmb	IAmb	03 23 38.5	
	comp=Z,22nm,0.8s						
833A	Chaparral WMA,	17.47	291	P	Pn	03 23 32.5	-0.5
	baz=103						
O59A	Robesonia	17.58	12	P	Pn	03 23 33.1	-1.2
	baz=194						
N53A	Lisbon	17.63	0	P	P	03 23 35.1	-0.9
	baz=180						
SSPA	Standing Stone	17.64	8	P	P	03 23 35.8	-0.2
	baz=189						
N52A	McGinn's Farm,	17.65	358	P	P	03 23 36.8	+0.7
	baz=177						
N55A	Marion Center	17.67	5	P	P	03 23 36.6	+0.2
	baz=186						
N50A	Nevada	17.70	354	P	Pn	03 23 34.7	-1.0
	baz=173						
O61A	Allentown	17.74	16	P	Pn	03 23 35.6	-0.7
	baz=199						
N51A	Ashland	17.78	356	P	Pn	03 23 36.4	-0.4
	baz=175						
N54A	Moraine State	17.80	2	P	Pn	03 23 36.6	-0.4
	baz=182						
N56A	West Decatur	17.87	6	P	P	03 23 38.0	-0.6
	baz=188						
N49A	Columbus Grove	17.96	352	P	P	03 23 39.5	-0.1
	baz=170						
SFIN	Lafayette	17.99	344	P	Pn	03 23 38.8	-0.5
SFIN	Lafayette	17.99	344	P	P	03 23 40.0	+0.1
	baz=161						
N58A	Sunbury	18.00	10	P	P	03 23 40.6	+0.6
	baz=192						
N48A	Decatur	18.02	350	P	P	03 23 40.7	+0.4
	baz=167						
O44A	Mansfield	18.15	341	IAmb	IAmb	03 23 47.9	
	comp=Z,17nm,0.7s						
N47A	Urbana	18.16	348	P	P	03 23 42.1	+0.3
	baz=166						
TUL1	Leonard	18.16	318	P	Pn	03 23 38.9	-2.6
TUL1				IAmb	IAmb	03 23 53.7	
	comp=Z,42nm,1.5s						
TUL1	Leonard	18.16	318	P	P	03 23 42.2	+0.3
	baz=130						
M51A	Elyria	18.18	357	P	P	03 23 42.7	+0.6
	baz=176						
N59A	State Game Lan	18.25	12	P	P	03 23 43.0	+0.2
	baz=195						
M53A	WI Miller and	18.26	0	P	P	03 23 43.2	+0.3
	baz=180						
BRNJ	Basking Ridge	18.29	15	IAmb	IAmb	03 23 43.3	
	comp=Z,25nm,1.1s						
M50A	Fremont	18.31	355	IAmb	IAmb	03 23 49.7	
	comp=Z,20nm,1.1s						
M50A	Fremont	18.31	355	P	P	03 23 44.4	+0.9
	baz=174						
N60A	Cedar Hill Far	18.34	14	P	P	03 23 44.0	+0.1
	baz=197						
M54A	Oil Creek Stat	18.36	3	P	P	03 23 44.6	+0.6
	baz=183						
M55A	Ridgway	18.37	5		P	03 23 44.5	+0.3
M55A	Ridgway	18.37	5	P	P	03 23 44.1	-0.1
	baz=186						
JCT	Junction City	18.41	297	P	P	03 23 41.6	-3.0
JCT	Junction City	18.41	297	P	Pn	03 23 45.0	+0.4
	baz=109,SNR=5.5						
N61A	South Mountain	18.42	16	P	P	03 23 43.6	-1.1
	baz=199						
M57A	Sunshine Farm,	18.43	9	P	Pn	03 23 44.3	-0.4
	baz=191						
M56A	Emporium	18.44	6	P	Pn	03 23 45.4	+0.5
	baz=188						
M49A	Liberty Center	18.48	353	P	Pn	03 23 45.9	+0.6
	baz=171						
M58A	Price's Panora	18.56	10	P	Pn	03 23 46.7	+0.3
	baz=193						
M47A	Cromwell	18.61	349	P	Pn	03 23 46.7	-0.3
	baz=166						
X34A	Smith Ranch, M	18.72	311	IAmb	IAmb	03 23 59.0	
	comp=Z,14nm,0.8s						
HDIL	Hopedale	18.77	340	P	Pn	03 23 49.1	+0.1
	baz=155						
L53A	Girard	18.78	1	P	Pn	03 23 48.1	-0.9
	baz=182						
N62A	Caumsett State	18.81	18	P	Pn	03 23 49.6	+0.2
	baz=201						
M60A	Port Jervis	18.89	15	P	Pn	03 23 50.9	+0.6
	baz=198						
M59A	Waymart	18.92	13	P	Pn	03 23 50.9	+0.2
	baz=195						
L50A	Kingsville	18.93	356	P	Pn	03 23 50.5	-0.4
	baz=174						
ERPA	Erie	18.95	2	P	Pn	03 23 51.3	+0.2
	baz=182						
L48A	N Adams	19.00	352	P	Pn	03 23 51.2	-0.5
	baz=170						
ABTX	Abilene, Hawle	19.08	304	P	Pn	03 23 52.1	-0.7
	baz=115						
L49A	Milan	19.08	353	P	Pn	03 23 53.0	+0.3
	baz=172						
M61A	Granite Spring	19.09	17	P	Pn	03 23 52.3	-0.4
	baz=200						
L54A	Sinclairville	19.10	4	P	Pn	03 23 52.4	-0.5
	baz=184						
L55A	Hinsdale	19.11	6	P	Pn	03 23 52.4	-0.7
	baz=187						
L57A	Andrews Acres	19.12	9	P	Pn	03 23 52.5	-0.7
	baz=191						
L47A	Sherwood	19.14	350	P	Pn	03 23 54.1	+0.7
	baz=168						
N63A	Mattituck	19.14	20	P	Pn	03 23 53.2	-0.2
	baz=204						
L56A	Greenwood	19.16	8	P	Pn	03 23 53.5	-0.2
	baz=189						
M44A	Midewin, Midew	19.18	343	IAmb	IAmb	03 23 58.5	
	comp=Z,17nm,1.1s						
ROSC	El Rosal	19.25	160	LR	LR	03 32 02.5	
	comp=Z,117nm,18.9s,baz=183,slow=39						
WVNY	West Valley, N	19.32	5	IAmb	IAmb	03 24 01.7	
	comp=Z,22nm,1.1s						
L58A	Harry Jones Me	19.32	11	P	Pn	03 23 55.0	-0.6
	baz=194						
L46A	Eue Claire	19.37	348	P	Pn	03 23 56.1	-0.1
	baz=165						
WMOK	Wichita Mounta	19.45	310	P	P	03 23 54.0	-2.1
WMOK	Wichita Mounta	19.45	310	P	Pn	03 23 57.2	0.0
	baz=122,SNR=12						
BINY	Binghamton	19.45	11	P	Pn	03 23 57.1	0.0
	baz=194						
K52A	Tillsonburg	19.60	0	P	Pn	03 23 58.5	-0.4
	baz=180						
L59A	Walton	19.62	13	IAmb	IAmb	03 24 04.7	
	comp=Z,15nm,0.9s						
L59A	Walton	19.62	13	P	Pn	03 23 59.2	0.0
	baz=196						
K55A	Perry	19.68	6	P	Pn	03 23 59.8	-0.1
	baz=188						
K56A	Middlesex	19.74	8	P	Pn	03 24 00.4	-0.2
	baz=190						
K47A	Vermontville	19.79	351	P	Pn	03 24 00.8	-0.4
	baz=169,SNR=6.0						
K48A	Perry	19.81	353	P	Pn	03 24 00.4	-0.9
	baz=171						
K57A	Scipio Center	19.88	9	P	Pn	03 24 01.8	-0.4
	baz=192						
L44A	Lake County Fo	19.89	344	P	Pn	03 24 01.7	-0.6
	baz=160						
K46A	Dorr	19.93	349	P	Pn	03 24 02.8	0.0
	baz=166						
L61A	Hillsdale 1, H	19.97	16	P	Pn	03 24 02.9	-0.4
	baz=200						
ZAIG	Zacatecas	19.99	273	P	P	03 24 01.9	-0.5
ZAIG				IAmb	IAmb	03 24 08.5	
	comp=Z,12nm,1.0s						
J52A	Paris	20.06	1	P	Pn	03 24 04.0	-0.4
	baz=181						
J54A	Appleton	20.18	5	P	Pn	03 24 05.4	-0.3
	baz=186						
L42A	Oliver, Polo	20.21	341	IAmb	IAmb	03 24 11.0	
	comp=Z,14nm,0.8s						
K59A	Cooperstown	20.22	13	P	Pn	03 24 05.8	-0.5
	baz=196						
L63A	North Scituate	20.22	20	P	Pn	03 24 05.0	-1.3
	baz=205						
J48A	Bridge Port	20.26	354	P	P	03 24 03.3	-1.5
J48A				IAmb	IAmb	03 24 15.7	
	comp=Z,19nm,0.9s						
J48A	Bridge Port	20.26	354	P	P	03 24 04.4	-0.4
	baz=172						
J49A	Marlette	20.27	355	P	P	03 24 04.7	-0.1
	baz=174						
J47A	Sunmer	20.32	352	P	Pn	03 24 05.9	-1.6
	baz=169						
J56A	Wolcott	20.37	8	P	Pn	03 24 07.6	-0.4
	baz=190						
QUA2	Belchertown	20.38	18	IAmb	IAmb	03 24 13.3	
	comp=Z,19nm,1.2s						
K43A	Burlington	20.49	344	P	P	03 24 06.9	-0.3
K43A				IAmb	IAmb	03 24 15.4	
	comp=Z,20nm,0.9s						
K61A	Williamstown	20.49	16	P	Pn	03 24 08.2	-1.2
	baz=200						
I51A	Listowel	20.62	360	P	Pn	03 24 09.8	-1.2
	baz=180						
J57A	Williamstown	20.63	10	IAmb	IAmb	03 24 13.4	
	comp=Z,15nm,0.8s						
J57A	Williamstown	20.63	10	P	Pn	03 24 10.2	-0.8
	baz=193						
J58A	Remsen	20.70	12	P	Pn	03 24 10.6	-1.3
	baz=194						
K62A	Royalston	20.77	18	P	Pn	03 24 11.7	-1.0
	baz=203						
L40A	Anamosa	20.77	338	IAmb	IAmb	03 24 19.9	
	comp=Z,15nm,0.9s						
KSU1	Kansas State U	20.81	324	P	Pn	03 24 12.4	-0.8
	baz=135						
I49A	Point Hope	20.82	356	P	Pn	03 24 11.8	-1.4
	baz=175,SNR=5.8						
J59A	Piesco	20.95	13	P	Pn	03 24 14.7	-0.2
	baz=196						
J60A	Lant Hill Farm	20.99	15	P	P	03 24 14.4	+1.7
	baz=199						
I47A	Gladwin	21.05	353	IAmb	IAmb	03 24 20.0	
	comp=Z,20nm,0.9s						
I47A	Gladwin	21.05	353	P	P	03 24 14.9	+1.6
	baz=170						
I58A	Old Forge	21.08	12	P	P	03 24 15.0	+1.3
	baz=195						
I46A	Reed City	21.10	351	P	P	03 24 15.4	+1.5
	baz=168						
I48A	Sherman Twp	21.13	354	P	P	03 24 15.4	+1.2
	baz=173						
I57A	Carthage	21.20	10	P	P	03 24 15.7	+0.8
	baz=193						
I55A	Frankford	21.20	6	P	P	03 24 15.9	+1.0
	baz=188						
JFWS	Jewell Farm	21.21	341	P	P	03 24 16.2	+1.1
	baz=155,SNR=13						
TXAR	Lajitas Array	21.35	292	P	P	03 24 20.1	+3.3
	comp=Z,7.6nm,0.8s,baz=111,slow=6.9,SNR=38						
TXAR				S	S	03 28 12.4	-2.2
	comp=Z,0.8nm,0.7s,baz=97,slow=22,SNR=5.7						
TXAR	Lajitas Array	21.35	292	P	P	03 24 16.1	-0.7
TX31	Lajitas Ar. Si	21.35	292	P	P	03 24 16.9	+0.1
TX31				IAmb	IAmb	03 24 24.0	
	comp=Z,15nm,1.1s						
TX32	Lajitas Array	21.35	292	IAmb	IAmb	03 24 24.0	
	comp=Z,15nm,1.1s						
J62A	Henniker	21.40	18	P	P	03 24 17.9	+0.7
	baz=203						
I59A	Olmsteadville	21.41	14	P	P	03 24 18.5	+1.3
	baz=198						
H53A	Bobcaygeon	21.47	4	P	P	03 24 19.0	+1.1
	baz=186,SNR=8.9						
H52A	Wyevale	21.48	2	P	P	03 24 19.1	+1.2
	baz=182						
DELO	Deloro Mine	21.50	6	IAmb	IAmb	03 24 22.4	
	comp=Z,9.4nm,0.8s						
H55A	Tweed	21.58	7	P	P	03 24 19.7	+0.7
	baz=189,SNR=6.1						
I60A	Shoreham	21.59	15	P	P	03 24 20.6	+1.5
	baz=199						
H47A	Mio	21.59	354	P	P	03 24 21.2	+2.0
	baz=172						
AMTX	Amarillo	21.60	307	P	P	03 24 17.3	-2.2
AMTX	Amarillo	21.60	307	P	P	03 24 19.5	+0.1
	baz=117						
H48A	Harrisville	21.61	355	IAmb	IAmb	03 24 23.4	
	comp=Z,16nm,0.9s						
H48A	Harrisville	21.61	355	P	P	03 24 20.3	+0.9
	baz=174						
SADO	Sadowa	21.63	3	P	P	03 24 21.7	+2.1
	comp=Z,16nm,0.8s,baz=259,slow=11,SNR=22						
SADO				LR	LR	03 32 53.1	
	comp=Z,166nm,18.9s,baz=182,slow=37						
SADO	Sadowa	21.63	3	IAmb	IAmb	03 24 24.4	
	comp=Z,15nm,0.8s						
H46A	Fife Lake	21.65	352	P	P	03 24 21.0	+1.2
	baz=169						
J63A	Strafford	21.67	20	P	P	03 24 21.3	+1.3
	baz=205						
HNH	Hanover	21.71	17	IAmb	IAmb	03 24 27.2	
	comp=Z,18nm,1.0s						
H56A	Elgin	21.74	9	P	P	03 24 21.7	+1.0
	baz=191						
H57A	Richville	21.75	11	P	P	03 24 21.7	+0.8
	baz=194						
H45A	Beulah	21.86	350	P	P	03 24 23.3	+1.2
	baz=167						
GLMI	Grayling	21.86	353	P	P	03 24 22.6	+0.6
GLMI	Grayling	21.86	353	P	P	03 24 22.9	+0.9
	baz=171						
H58A	Gabriels	21.93	13	P	P	03 24 23.6	+0.8
	baz=196						
I61A	Oroboro, Fairl	21.94	17	P	P	03 24 23.1	+0.2
	baz=202						
FLOC	Florencia	22.01	166	P	P	03 24 23.0	-0.9
G53A	Haliburton	22.02	4	P	P	03 24 24.4	+0.7
	baz=185,SNR=5.6						
MSTX	Muleshoe	22.02	304	IAmb	IAmb	03 24 29.4	
	comp=Z,13nm,0.8s						
MSTX	Muleshoe	22.02	304	P	P	03 24 24.6	+0.6
	baz=114,SNR=8.0						
LONY	Lake Ozonia	22.05	12	IAmb	IAmb	03 24 29.9	
	comp=Z,14nm,1.1s						
LONY	Lake Ozonia	22.05	12	P	P	03 24 25.8	+1.7
	baz=195						
G47A	Hillman	22.13	354	P	P	03 24 26.3	+1.4
	baz=173,SNR=18						
G45A	Suttons Bay	22.21	351	P	P	03 24 26.7	+0.9
G45A	Suttons Bay	22.21	351	P	P	03 24 27.1	+1.3
	baz=168,SNR=6.8						
I40A	Norwalk	22.21	341	IAmb	IAmb	03 24 31.1	
	comp=Z,17nm,1.1s						
H59A	Cadyville	22.26	14	P	P	03 24 27.2	+0.9
	baz=198						
G55A	Calabogie	22.33	8	P	P	03 24 27.9	+0.8
	baz=190,SNR=5.7						
G54A	Lake Saint Pet	22.33	5	P	P	03 24 28.5	+1.4
	baz=187						
CBKS	Cedar Bluff	22.43	319	P	P	03 24 29.1	+0.8
CBKS	Cedar Bluff	22.43	319	P	P	03 24 29.4	+1.1
	baz=129						
G57A	Newington	22.44	11	P	P	03 24 29.0	+0.7
	baz=194						
H61A	Lyndonville	22.58	17	P	P	03 24 30.0	+0.2
	baz=202						
F49A	Sandfield	22.60	358	P	P	03 24 31.9	+1.9
	baz=177,SNR=5.5						
F52A	Sundridge	22.65	3	P	P	03 24 31.6	+1.1
	baz=184						
G58A	Ormstown	22.66	13	P	P	03 24 31.0	+0.4
	baz=196						
F48A	Evansville	22.69	357	P	P	03 24 32.0	+1.1
	baz=176						
F51A	Arnstein	22.76	2	P	P	03 24 32.2	+0.6
	baz=182,SNR=7.2						
HPIG		22.77	285	IAmb	IAmb	03 24 37.7	
	comp=Z,10nm,0.8s						
F45A	CMU Biological	22.82	352	P	P	03 24 33.0	+0.7
	baz=169,SNR=9.9						
OTAV	Otavalo	22.88	174	P	P	03 24 33.1	-0.4
ALGO	Algonquin Park	22.89	5	P	P	03 24 34.2	+1.2
	baz=187						
E52A	Mattawa	23.17	4	P	P	03 24 37.6	+1.6
	baz=185						
BGNE	Belgrade	23.28	326	P	P	03 24 38.8	+1.6
	baz=136						
E48A	Lockeyer	23.32	358	P	P	03 24 38.5	+1.0
	baz=177,SNR=7.0						
MNTX	Cornudas Mount	23.34	297	IAmb	IAmb	03 24 42.5	
	comp=Z,12nm,1.2s						
MNTX	Cornudas Mount	23.34	297	P	P	03 24 38.9	+1.1
	baz=105,SNR=9.6						
E53A	Dumoine, Ponti	23.34	6	P	P	03 24 38.8	+1.1
	baz=187						
E47A	Iron Bridge	23.35	356	P	P	03 24 39.1	+1.3
	baz=174,SNR=6.8						
G40A	Rib Lake	23.36	343	IAmb	IAmb	03 24 42.8	
	comp=Z,9.8nm,0.8s						
E54A	Lac Daplat, Po	23.44	6	P	P	03 24 40.5	+1.8
	baz=188,SNR=14						
E44A	Grand Marais A	23.79	351	P	P	03 24 43.0	+0.9
	baz=168						
E56A	St. Veronique	23.83	10	P	P	03 24 43.1	+0.6
	baz=193						
D46A	Sault St. Mari	23.85	355	P	P	03 24 43.6	+0.9
	baz=173,SNR=13						
D52A	ZEK Kipawa Sen	23.88	4	P	P	03 24 43.8	+0.8
	baz=186						
COWI	Conover	23.88	346	IAmb	IAmb	03 24 54.3	
	comp=Z,7.3nm,0.8s						
D51A	Lot 18 Range I	23.94	3	P	P	03 24 44.5	+1.0
	baz=183						
D47A	Chapleau	23.94	356	P	P	03 24 44.7	+1.1
	baz=175						
D50A	G1974 Best Tow	24.00	2	P	P	03 24 45.5	+1.4
	baz=182						
D48A	Paudash Townsh	24.00	358	P	P	03 24 45.2	+1.1
	baz=178						
D53A	Lac Vacive, Po	24.03	5	IAmb	IAmb	03 24 52.4	
	comp=Z,8.9nm,1.0s						
D53A	Lac Vacive, Po	24.03	5	P	P	03 24 44.8	+0.3
	baz=187						
D54A	Lac Fusel, La	24.21	7	P	P	03 24 47.6	+1.5
	baz=189,SNR=7.6						
D55A	Sainte-Anne-du	24.23	9	P	P	03 24 47.3	+1.1
	baz=192,SNR=7.7						
ECSD	EROS Data Cent	24.31	331	P	P	03 24 47.9	+0.8
ECSD				IAmb	IAmb	03 24 53.1	
	comp=Z,7.4nm,0.7s						
ECSD	EROS Data Cent	24.31	331	P	P	03 24 48.2	+1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=143,SNR=10						
KSCO	Kaye Shedlock'	24.36	316	P	P	03 24 49.3	+1.6
	baz=124						
D56A	ZEC Mazanza, M	24.37	10	P	P	03 24 48.7	+1.1
	baz=194,SNR=6.9						
E60A	Ste Agathe de	24.41	16	P	P	03 24 49.8	+1.9
	baz=201						
F63A	Nahmakanta, Br	24.47	20	P	P	03 24 48.0	-0.5
F63A				IAmb	IAmb	03 24 54.3	
	comp=Z,12nm,1.0s						
F63A	Nahmakanta, Br	24.47	20	P	P	03 24 49.8	+1.3
	baz=207						
T25A	Trinidad	24.60	310	P	P	03 24 49.8	-0.2
T25A	Trinidad	24.60	310	P	P	03 24 52.3	+2.3
	baz=118,SNR=18						
D58A	Chemin du LacG	24.76	13	P	P	03 24 52.7	+1.6
	baz=198						
E38A	The Farm, Brul	24.96	342	IAmb	IAmb	03 24 56.4	
	comp=Z,7.1nm,0.9s						
D60A	Saint Jean D'O	25.05	16	P	P	03 24 55.9	+2.3
	baz=202						
VLDQ	Val d'Or	25.08	5	P	P	03 24 55.6	+1.7
ANMO	Albuquerque	25.21	304	P	P	03 24 58.5	+3.0
	comp=Z,4.4nm,1.0s,baz=131,slow=12,SNR=8.7						
ANMO				LR	LR	03 36 13.2	
	comp=Z,24nm,19.9s,baz=93,slow=40						
ANMO	Albuquerque	25.21	304	P	P	03 24 53.4	-2.1
ANMO				IAmb	IAmb	03 25 03.5	
	comp=Z,6.0nm,1.1s						
ANMO	Albuquerque	25.21	304	P	P	03 24 58.0	+2.5
	baz=111						
D61A	St Aubert, Com	25.51	17	P	P	03 24 59.7	+1.9
	baz=203						
121A	Cookes Peak, D	25.52	297	P	P	03 24 59.6	+1.2
121A	Cookes Peak, D	25.52	297	P	P	03 25 00.3	+1.9
	baz=105,SNR=14						
SDCO	Great Sand Dun	25.65	310	P	P	03 25 00.2	+0.5
SDCO	Great Sand Dun	25.65	310	P	P	03 25 01.5	+1.9
	baz=118,SNR=10						
SUSD	Miller	25.93	329	P	P	03 25 04.0	+2.2
	baz=139						
Q24A	Divide	26.00	313	P	P	03 25 04.1	+1.3
	baz=120						
LSQQ	Lebel-sur-Quev	26.06	6	P	P	03 25 04.5	+1.7
	baz=188						
EYMN	Ely	26.18	344	P	P	03 25 03.9	0.0
EYMN	Ely	26.18	344	P	P	03 25 05.3	+1.3
	baz=157,SNR=7.1						
319A	Douglas	26.50	294	IAmb	IAmb	03 25 19.7	
	comp=Z,9.1nm,0.8s						
S22A	4UR Ranch, Cre	26.59	309	P	P	03 25 09.1	+0.9
	baz=116						
MATQ	Matagami	26.70	5	P	P	03 25 10.4	+1.8
	baz=186						
ISCO	Idaho Springs	26.73	314	IAmb	IAmb	03 25 22.4	
	comp=Z,8.4nm,1.2s						
N23A	Red Feather La	27.52	316	P	P	03 25 17.7	+1.2
	baz=122						
X18A	Snowflake	27.80	301	IAmb	IAmb	03 25 24.0	
	comp=Z,7.6nm,1.2s						
TUC	Tucson	27.94	296	P	P	03 25 18.8	-1.3
TUC	Tucson	27.94	296	P	P	03 25 21.5	+1.4
	baz=102						
WUAZ	Wupatki	29.20	302	IAmb	IAmb	03 25 36.1	
	comp=Z,4.1nm,0.9s						
WUAZ	Wupatki	29.20	302	P	P	03 25 32.0	+0.6
	baz=107						
ULM	Lac du Bonnet	29.51	340	P	P	03 25 36.6	+2.9
	comp=Z,1.5nm,0.6s,baz=174,slow=12,SNR=5.1						
ULM				LR	LR	03 37 15.0	
	comp=Z,183nm,19.4s,baz=161,slow=36						
214A	Organ Pipe Nat	29.57	294	IAmb	IAmb	03 25 39.6	
	comp=Z,4.5nm,0.9s						
214A	Organ Pipe Nat	29.57	294	P	P	03 25 36.2	+1.6
	baz=99,SNR=5.7						
Y14A	Wickenburg	30.10	298	IAmb	IAmb	03 25 44.2	
	comp=Z,7.7nm,1.1s						
PDAR	Pinedale Array	30.80	316	P	P	03 25 47.7	+2.1
	comp=Z,1.0nm,0.7s,baz=123,slow=10,SNR=11						
PDAR				PcP	PcP	03 28 44.3	+1.4
	comp=Z,0.8nm,0.8s,baz=119,slow=5.2,SNR=5.0						
PDAR				ScP	ScP	03 32 29.0	+2.5
	comp=Z,0.4nm,0.6s,baz=104,slow=3.8,SNR=4.2						
PDAR				LR	LR	03 38 43.5	
	comp=Z,94nm,18.4s,baz=65,slow=37						
PDAR	Pinedale Array	30.80	316	P	P	03 25 44.4	-1.1
PDAR					PcP	03 28 43.1	+0.2
W13A	Hualapai Mount	31.07	300	IAmb	IAmb	03 25 53.4	
	comp=Z,4.3nm,1.0s						
Y12C	Blythe	31.30	297	P	P	03 25 49.8	+0.1
	baz=101						
GLA	Glamis	31.43	296	P	P	03 25 52.0	+1.0
	baz=100						
RLMT	Red Lodge	31.88	320	IAmb	IAmb	03 25 58.6	
	comp=Z,5.3nm,0.9s						
RLMT	Red Lodge	31.88	320	P	P	03 25 55.9	+0.9
	baz=124,SNR=6.2						
IRM	Iron Mountain	31.89	298	P	P	03 25 57.0	+2.0
	baz=101,SNR=12						
REDW	Red Top Meadow	31.92	316	P	P	03 25 56.7	+1.3
BC3	Big Chuckawall	32.05	297	P	P	03 25 57.4	+0.9
	baz=100						
TPAW	Teton Pass	32.05	317	IAmb	IAmb	03 26 08.0	
	comp=Z,6.6nm,1.1s						
FXWY	Fox Creek	32.17	317	IAmb	IAmb	03 26 01.1	
	comp=Z,4.1nm,0.8s						
SWSC	Sam W. Stewart	32.22	295	P	P	03 25 58.9	+1.1
	baz=99						
YNE	Yellowstone No	32.26	320	P	P	03 25 59.3	+0.9
H17A	Grant Village	32.27	318	P	P	03 25 59.3	+0.8
	baz=121						
SHPR	Sheep Range	32.42	302	IAmb	IAmb	03 26 07.1	
	comp=Z,4.2nm,1.0s						
GMRC	Granite Mounta	32.43	299	P	P	03 26 00.7	+0.9
	baz=102						
BELC	Belle Mtn. Jos	32.55	297	P	P	03 26 01.7	+0.8
	baz=100						
MONP2	Monument Peak	32.73	295	P	P	03 26 04.2	+1.7
	baz=98						
TUQ	Turquoise Moun	32.77	300	P	P	03 26 04.2	+1.3
	baz=102,SNR=6.7						
YHB	Horse Butte	32.84	318	P	P	03 26 02.4	-1.0
PFO	Pinyon Flats O	32.87	297	P	P	03 26 08.0	+4.3
	comp=Z,3.8nm,0.8s,baz=63,slow=6.8,SNR=3.5						
PFO	Pinyon Flats O	32.87	297	P	P	03 26 03.3	-0.3
PFO				IAmb	IAmb	03 26 09.7	
	comp=Z,5.4nm,1.0s						
PFO	Pinyon Flats O	32.87	297	P	P	03 26 02.2	-1.5
	baz=99						
YHL	Hebgen Lake	32.88	319	P	P	03 26 02.6	-1.2
R11A	Troy Canyon, C	33.25	305	P	P	03 26 06.5	-0.5
	baz=107						
SCHQ	Schefferville	33.36	15	P	P	03 26 09.8	+2.3
	comp=Z,2.5nm,0.9s,baz=196,slow=8.7,SNR=4.4						
SCHQ				PcP	PcP	03 28 50.8	+1.5
	comp=Z,1.6nm,0.8s,baz=249,slow=3.7,SNR=3.5						
SCHQ				LR	LR	03 39 07.9	
	comp=Z,178nm,21.2s,baz=343,slow=35						
SCHQ	Schefferville	33.36	15	P	P	03 26 07.0	-0.5
SCHQ				IAmb	IAmb	03 26 21.1	
	comp=Z,6.9nm,1.4s						
TPNV	Topopah Spring	33.38	303	IAmb	IAmb	03 26 21.1	
	comp=Z,5.3nm,1.1s						
TPNV	Topopah Spring	33.38	303	P	P	03 26 08.0	-0.2
	baz=104						
GSC	Goldstone, Bar	33.45	299	P	P	03 26 08.9	+0.2
	baz=101						
MURC	Murrieta	33.47	296	P	P	03 26 09.1	+0.3
	baz=98						
ELK	Elko	33.77	310	IAmb	IAmb	03 26 15.5	
	comp=Z,4.5nm,0.9s						
EGMT	Eagleton	33.84	324	P	P	03 26 12.2	+0.2
	baz=127						
MCMT	McKenzie Canyo	33.90	317	P	P	03 26 12.4	-0.3
BFSC	Mount Baldy Ra	33.95	297	P	P	03 26 13.4	+0.3
	baz=99						
DLMT	Dillon	34.00	318	P	P	03 26 13.7	+0.2
MPMC	Manual Prospec	34.15	301	P	P	03 26 15.3	+0.4
	baz=102						
LRMC	Laurel Mtn Rad	34.19	300	P	P	03 26 16.0	+0.8
	baz=101						
EDW2	Edwards Air Fo	34.33	298	P	P	03 26 17.5	+1.1
	baz=100,SNR=7.4						
CWC	Cottonwood Cre	34.70	301	P	P	03 26 20.5	+0.9
	baz=102						
ARVC	Arvin	35.05	299	P	P	03 26 22.5	0.0
	baz=100						
FFC	Flin Flon	35.28	339	P	P	03 26 24.1	-0.1
FFC				IAmb	IAmb	03 26 33.0	
	comp=Z,5.9nm,1.4s						
NVAR	Mina Array Bea	35.33	304	P	P	03 26 28.1	+3.0
	comp=Z,1.4nm,0.8s,baz=110,slow=8.2,SNR=9.4						
NVAR				PcP	PcP	03 28 58.0	+2.5
	comp=Z,1.0nm,0.8s,baz=151,slow=2.5,SNR=5.4						
NVAR	Mina Array Bea	35.33	304	P	P	03 26 24.7	-0.4
KVN	Kaiserville	35.34	305	P	P	03 26 25.2	+0.1
KVN				IAmb	IAmb	03 26 29.5	
	comp=Z,5.7nm,0.9s						
VES	Vestal, Richgr	35.38	300	P	P	03 26 26.9	+1.6
	baz=100						
PKM	Mcpherson Peak	35.81	298	P	P	03 26 29.9	+0.7
	baz=98						
YERR	Yerington	36.18	305	P	P	03 26 31.4	-1.0
SAML	Samuel	36.28	150	P	P	03 26 32.4	-0.7
SAML				IAmb	IAmb	03 26 38.6	
	comp=Z,7.3nm,1.2s						
WVOR	Wild Horse Val	36.75	311	P	P	03 26 36.6	-0.5
WVOR				IAmb	IAmb	03 26 43.1	
	comp=Z,8.1nm,1.1s						
FCC	Fort Churchill	36.83	349	P	P	03 26 36.8	-0.6
FCC				IAmb	IAmb	03 26 42.7	
	comp=Z,3.5nm,0.8s						
J08A	Circle Bar Ran	36.95	312	P	P	03 26 38.9	+0.1
J08A				IAmb	IAmb	03 26 42.2	
	comp=Z,9.4nm,1.1s						
MOD	Modoc Plateau	37.75	309	IAmb	IAmb	03 26 53.0	
	comp=Z,5.6nm,1.3s						
NEW	Newport	38.13	320	P	P	03 26 48.1	-0.5
NEW				IAmb	IAmb	03 26 51.7	
	comp=Z,5.6nm,0.9s						
NEW	Newport	38.13	320	P	P	03 26 49.4	+0.8
	baz=118,SNR=5.0						
C09A	Chrisman Ranch	38.60	319	P	P	03 26 53.0	+0.4
C09A				IAmb	IAmb	03 26 55.7	
	comp=Z,5.4nm,0.8s						
J05D	Fort Rock, OR	38.83	311	P	P	03 26 54.7	0.0
	baz=108						
O02D	Mt. Diablo Mer	39.12	306	P	P	03 26 57.5	+0.3
	baz=103						
J04D	Umpqua Nationa	39.42	311	P	P	03 27 00.1	+0.3
	baz=107						
YBH	Yreka Blue Hor	39.44	308	LR	LR	03 44 43.4	
	comp=Z,26nm,18.8s,baz=68,slow=38						
B08A	Colville Reser	39.49	319	IAmb	IAmb	03 27 02.9	
	comp=Z,8.4nm,1.1s						
LON	Longmire	40.38	316	P	P	03 27 06.4	-1.1
LPAZ	La Paz	41.11	161	P	P	03 27 15.6	+1.3
	comp=Z,3.6nm,0.9s,baz=311,slow=4.3,SNR=8.6						
LPAZ				LR	LR	03 45 46.8	
	comp=Z,56nm,19.3s,baz=2.0,slow=38						
LPAZ	La Paz	41.11	161	P	P	03 27 12.9	-1.5
LPAZ				IAmb	IAmb	03 27 20.1	
	comp=Z,7.4nm,1.1s						
MNMC	Minye Minye	43.42	164	P	P	03 27 31.6	-1.2
SIV	San Ignacio	43.44	152	P	P	03 27 33.7	+1.0
	comp=Z,5.9nm,0.9s,baz=342,slow=7.7,SNR=23						
PB11	IPOC Station P	44.01	165	P	P	03 27 36.9	-0.6
YKA	Yellowknife Ar	45.46	339	P	P	03 27 50.0	+1.6
	comp=Z,2.4nm,0.9s,baz=132,slow=8.6,SNR=27						
YKA				PcP	PcP	03 29 29.1	+1.8
	comp=Z,1.3nm,0.9s,baz=131,slow=3.7,SNR=7.5						
RES	Resolute Bay	52.13	355	LR	LR	03 49 35.1	
	comp=Z,50nm,21.2s,baz=271,slow=35						
RES	Resolute Bay	52.13	355	IAmb	IAmb	03 28 44.1	
	comp=Z,4.9nm,1.1s						
C36M	Paulatuk	52.90	342	P	P	03 28 45.3	+0.2
	baz=128						
CPUP	Villa Florida	54.19	154	LR	LR	03 54 16.6	
	comp=Z,52nm,18.7s,baz=24,slow=39						
INK	Inuvik	55.24	339	P	P	03 29 04.6	+2.4
	comp=Z,3.3nm,1.1s,baz=108,slow=6.1,SNR=7.8						
INK	Inuvik	55.24	339	P	P	03 29 04.7	+2.4
BCAR	Beaver Creek A	56.53	332	P	P	03 29 11.9	+0.2
BCAR					PcP	03 30 08.1	-0.2
ILAR	Eielson Array	59.12	333	P	P	03 29 31.8	+1.9
	comp=Z,2.1nm,0.8s,baz=105,slow=5.6,SNR=18						
ILAR				LR	LR	03 58 25.7	
	comp=Z,24nm,21.3s,baz=89,slow=40						
ILAR	Eielson Array	59.12	333	P	P	03 29 29.7	-0.1
KTH	Kantishna Hill	60.67	331	P	P	03 29 41.3	+0.7
MLY	Manley	60.78	333	P	P	03 29 41.8	+0.5
TOLK	Toolik Lake Re	60.93	337	P	P	03 29 42.1	-0.1
	baz=101						
IMAR	Indian Mountai	62.14	334	P	P	03 29 51.3	+0.9
PLCA	Paso Flores	64.25	171	P	P	03 30 05.5	+0.8
	comp=Z,2.6nm,1.0s,baz=4.0,slow=8.8,SNR=4.4						
PLCA	Paso Flores	64.25	171	P	P	03 30 04.8	+0.1
NOA	NORSAR Array B	71.04	31	LR	LR	04 01 00.9	
	comp=Z,29nm,18.8s,baz=275,slow=35						
ARCES	ARCESS Array B	74.08	21	P	P	03 31 06.4	+1.1
	comp=Z,2.8nm,0.8s,baz=298,slow=3.8,SNR=5.9						
ARCES	ARCESS Array B	74.08	21	P	P	03 31 05.2	-0.1
TIC	Toumodi	74.43	89	eP	P	03 31 11.7	+3.4
LIC	Lamto	74.58	90	eP	P	03 31 11.2	+2.0
	comp=Z,9.4nm,0.4s						
KIC	Kosan Boka	74.79	90	eP	P	03 31 13.2	+2.8
	comp=Z,6.4nm,0.9s						
TORD	Torodi Ar. Bea	78.21	81	P	P	03 31 32.6	+2.8
	comp=Z,0.3nm,0.6s,baz=278,slow=5.8,SNR=2.5						
TORD	Torodi Ar. Bea	78.21	81	P	P	03 31 28.4	-1.4
AKASG	Malin Array Be	84.24	37	P	P	03 32 03.5	+2.3
	comp=Z,0.1nm,0.3s,baz=274,slow=4.9,SNR=3.9						
AKASG	Malin Array Be	84.24	37	P	P	03 32 01.3	0.0
LZH	Lanzhou	120.94	356	ePKP	PKiKP	03 38 23.5	+0.6
LZH				pPKP	sPKPdf	03 38 27.6	+3.3
LZH				sPKP		03 38 29.2	
WRA	Warramunga Arr	147.15	269	PKP	PKPbc	03 39 11.6	-2.0
	comp=Z,8.4nm,0.8s,baz=78,slow=3.2,SNR=5.9						
WRA				PKPbc	PKiKP	03 39 15.1	-0.9
	comp=Z,8.2nm,0.6s,baz=77,slow=3.6,SNR=19						
WRA	Warramunga Arr	147.15	269	PKPdf	PKPdf	03 39 11.1	-0.3
ASAR	Alice Springs	148.13	262	PKP	PKPbc	03 39 14.5	-1.7
	comp=Z,12nm,0.8s,baz=80,slow=2.3,SNR=60						
ASAR				PKPbc	PKPab	03 39 17.6	-1.5
	comp=Z,12nm,0.8s,baz=78,slow=2.2,SNR=63						
ASAR	Alice Springs	148.13	262	PKPdf	PKPdf	03 39 12.3	-0.7

WEL 05 03:37:33.6, 40°.6S±0°.7×17°.6E±°, h26km±1km, M3.3/19, ML3.6/19, MLv3.3/19, Error ellipse: s-maj=0.0km s-min=0.0km az=88.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRWZ	Pori Road	0.11	47	P	Pb	03 37 39.0	+0.4
PRWZ				S	Sb	03 37 43.4	+1.6
TIWZ	Tintock	0.15	175	P	Pb	03 37 39.4	+0.4
TIWZ				S	Sb	03 37 43.8	+1.2
MRZ	Mangatainoka R	0.22	261	P	Pb	03 37 40.2	+0.4
MRZ				S	Sb	03 37 44.5	+0.6
POWZ	Post Office Ro	0.25	342	P	Pb	03 37 40.5	+0.4
BFZ	Birch Farm	0.29	101	P	Pb	03 37 41.0	+0.4
BFZ				S	Sb	03 37 46.3	+0.9
CPWZ	Castlepoint	0.38	138	P	Pn	03 37 43.2	-0.1
CPWZ				S	Sn	03 37 51.5	+1.7
HOWZ	Holdsworth Sta	0.38	225	P	Pb	03 37 42.5	+0.5
HOWZ				S	Sb	03 37 48.8	+1.1
DVHZ	Dannevirke	0.40	35	P	Pb	03 37 42.5	+0.2
DVHZ				S	Sb	03 37 49.0	+0.8
TMWZ	Te Maipa	0.48	178	P	Pn	03 37 44.4	-0.5
TMWZ				S	Sn	03 37 52.4	0.0
ANWZ	Angora Road	0.49	70	P	Pb	03 37 44.3	+0.6
ANWZ				S	Sn	03 37 52.4	-0.2
OGWZ	Otaki Gorge	0.56	250	P	Pn	03 37 45.6	-0.3
TSZ	Takapari Road	0.57	7	P	Pb	03 37 45.4	+0.2
TSZ				S	Sb	03 37 53.4	+0.5
OHWZ	Ohakea	0.60	315	P	Pn	03 37 46.9	+0.5
MTW	Mount Morrison	0.60	208	P	Pb	03 37 46.0	+0.4
PRHZ	Porangahau	0.69	59	P	Pb	03 37 47.2	+0.2
WPHZ	Waipukurau	0.71	38	P	Pn	03 37 48.1	+0.1
PNHZ	Pukenui	0.76	20	P	Pn	03 37 48.6	0.0
PNHZ				S	Sn	03 37 59.5	+0.3
KIW	Kapiti Island	0.77	252	P	Pn	03 37 49.1	+0.4
KIW				S	Sn	03 37 59.9	+0.5
CAW	Cannon Point	0.78	232	P	Pn	03 37 48.9	+0.1
TRWZ	Traveller	0.78	190	P	Pb	03 37 48.5	-0.2
PAWZ	Paruwai Farm	0.82	204	P	Pb	03 37 49.2	-0.2
MSWZ	Moikau Station	0.92	211	P	Pn	03 37 50.1	-0.7
PXZ	Pawanui	0.96	52	P	Pn	03 37 50.9	-0.5
PLWZ	Palliser	1.05	206	P	Pn	03 37 51.8	-0.9
KRHZ	Kereru	1.05	21	P	Pn	03 37 52.9	+0.1
BHW	Baring Head	1.09	224	P	Pn	03 37 52.6	-0.5
WAZ	Wanganui	1.10	322	P	Pb	03 37 55.4	+1.4
KAHZ	Kahuranaki	1.13	43	P	Pn	03 37 53.6	-0.2
BHHZ	Black Hill Sta	1.15	8	P	Pb	03 37 54.9	+0.1
MOVZ	Moawhango	1.22	356	P	Pb	03 37 55.8	-0.3
KWHZ	Kaweka Forest	1.27	20	P	Pn	03 37 56.0	+0.2
MTVZ	Mangateitei	1.28	346	P	Pb	03 37 57.2	+0.2
CKHZ	Cape Kidnapper	1.34	44	P	Pn	03 37 55.8	-0.8
MCHZ	McNeill Hill	1.34	29	P	Pn	03 37 56.7	+0.1
TCW	Tory Channel	1.34	244	P	Pn	03 37 56.5	-0.1
TRVZ	Turoa	1.35	349	P	Pb	03 37 58.4	0.0
WHVZ	Whangaehu Hut	1.36	351	P	Pb	03 37 58.7	+0.1
TUVZ	Tukino	1.37	353	P	Pb	03 37 58.8	+0.1
DRZ	Dome Shelter	1.37	350	P	Pb	03 37 59.2	+0.4
FWVZ	Far West T-bar	1.39	350	P	Pb	03 37 58.9	-0.2
PKVZ	Pokaka	1.40	343	P	Pb	03 37 59.0	-0.1
NGZ	Ngauruhoe	1.46	352	P	Pb	03 37 60.0	-0.3
DUWZ	D'Urville Isla	1.49	263	P	Pn	03 37 59.2	+0.5
WTVZ	West Tongariro	1.52	352	P	Pb	03 38 00.6	-0.7
BKZ	Black Stump Fm	1.54	18	P	Pn	03 37 59.9	+0.5
KRVZ	Karewarewa	1.54	353	P	Pb	03 38 01.0	-0.6
TWVZ	Taurewa	1.59	348	P	Pb	03 38 01.4	-0.9
ARHZ	Aropaoanui	1.61	33	P	Pn	03 38 00.5	+0.1
LREZ	Lake Rotokare	1.62	316	P	Pn	03 38 03.4	+0.5
RITZ	Rihia Road	1.65	360	P	Pn	03 38 03.0	-0.3
KATZ	Kakaramea	1.66	355	P	Pb	03 38 03.2	-0.4
TUWZ	Tuamarina	1.66	241	P	Pn	03 38 00.6	-0.5
NMHZ	Naumai	1.69	26	P	Pn	03 38 02.0	+0.5
VRZ	Vera Road	1.73	330	P	Pn	03 38 04.5	-0.1
PREZ	Palmer Road	1.84	314	P	Pn	03 38 06.7	+0.1
MRHZ	Matea Rd	1.84	13	P	Pn	03 38 03.6	0.0
BSWZ	Blackbirch Sta	1.86	234	P	Pn	03 38 03.0	-0.7
WATZ	Wairara	1.92	357	P	Pn	03 38 05.3	+0.7
MTHZ	Maungataniwha	1.92	23	P	Pn	03 38 05.1	+0.5
RAHZ	Arahi	1.95	29	P	Pn	03 38 05.0	0.0
KHEZ	Kahui Hut	1.95	312	P	Pn	03 38 07.7	-0.9
NMEZ	Namu Road	1.95	308	P	Pb	03 38 08.6	+0.1
NNZ	Nelson	1.98	252	P	Pn	03 38 09.1	+0.2
PKE	Pukeiti	2.04	314	P	Pn	03 38 09.5	-0.4
NBEZ	Newall Road No	2.05	311	P	Pb	03 38 10.1	0.0
KNZ	Kokohu	2.12	41	P	Pn	03 38 06.0	-1.3
MHGZ	Mahia Peninsul	2.15	47	P	Pn	03 38 06.3	-1.5
SNGZ	Shannon Statio	2.16	32	P	Pn	03 38 07.9	-0.1
HIZ	Hauiti	2.25	339	P	Pn	03 38 10.5	+1.4
PRGZ	Paritu Road	2.30	43	P	Pn	03 38 08.3	-1.6
RIGZ	Rimuhau	2.41	38	P	Pn	03 38 10.0	-1.3
THZ	Tophouse	2.51	242	P	Pn	03 38 12.1	-0.7
QRZ	Quartz Range	2.55	264	P	Pn	03 38 13.3	+0.1
MWZ	Matawai	2.62	30	P	Pn	03 38 12.7	-1.7
RUGZ	Raukumara Rang	3.00	28	P	Pn	03 38 18.2	-1.4
PKGZ	Pakihiroa	3.23	33	P	Pn	03 38 21.2	-1.4
HAZ	Te Kaha	3.23	28	P	Pn	03 38 21.9	-0.7
WMGZ	Waiomatatini S	3.43	36	P	Pn	03 38 23.4	-2.0
LTZ	Lake Taylor	3.45	230	P	Pn	03 38 24.9	-0.7
JCZ	Jackson Bay	6.28	234	P	Pn	03 39 07.9	+3.3

PRU 05 03:38:35.4±0.0, 49°.99N×18°.64E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.35	245	ePG	Pg	03 38 42.5	+0.4
OKC				eSG	Sg	03 38 47.4	+0.7
	comp=Z,10nm,0.5s						
MORC	Moravsky Berou	0.74	254	ePG	Pg	03 38 49.8	+0.2
MORC				eSG	Sg	03 38 58.5	-0.7
VRAC	Vranov	1.50	244	ePG	Pn	03 39 03.0	-0.5
VRAC				eSG	Sg	03 39 22.2	-1.2
VYHS	Vyhne	1.50	175	ePG	Pn	03 39 03.8	+0.2
VYHS				eSG	Sn	03 39 25.2	+1.3
DPC	Dobruska-Polom	1.53	284	ePG	Pn	03 39 04.7	0.0
DPC				eSG	Sg	03 39 23.5	-1.1
KRUC	Moravsky	1.73	238	ePN	Pn	03 39 06.9	+0.1
KRUC				eSG	Sn	03 39 29.4	-0.2
CHVC	Chvalec	1.76	291	ePG	Pn	03 39 07.2	0.0
CHVC				eSG	Sg	03 39 32.2	+0.2
STHS	Stebnicka Huta	1.79	108	ePN	Pg	03 39 10.3	+0.7
KHC	Kasperske Hory	3.41	257	eSG	Sg	03 40 24.1	-0.7

UCR 05 03:40:20.3±2.8, 5°.85N×79°.60W, h38km±999km, MW3.8
RSNC 05 03:40:20.9±0.8, 5°.77N×79°.19W, h40km±8km, ML2.7
ISC 05 03:40:17.8±1.5, 5°.70N±0°.07×79°.42W±0°.06, h35km, n23, σ1§75/35, 2C-1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOLC	Bahia Solano	2.07	75⇓	iP	Pn	03 40 49.2	-0.9
SOLC				eS	Sn	03 41 11.4	-3.3
SOLC				i		03 41 12.8	
	comp=Z,92nm,0.3s						
PTAC	Punta Ardita,	2.15	48	eP	Pn	03 40 50.3	-0.9
PTAC				ePg	Pn	03 40 50.9	-0.3
PIZC	Pizarro, Choco	2.18	110⇑	eP	Pn	03 40 51.4	-0.2
PIZC				eS	Sn	03 41 15.2	-2.2
PIZC				i		03 41 18.9	
	comp=Z,101nm,0.3s						
AZU	Azuero	2.24	338	eP	Pn	03 40 51.8	-0.8
AZU				eS	Sn	03 41 18.3	-0.7
AZU	Azuero	2.24	338	eP	Pn	03 40 51.7	-0.8
AZU				eS	Sn	03 41 18.2	-0.7
GMAL	Guarumal, Vera	2.73	319⇑	eP	Pn	03 40 59.2	+0.1
UPD2	Meteti	3.15	26	eP	Pn	03 41 06.5	+1.5
PLMC	San Jos del P	3.22	104	eP	Pn	03 41 06.7	+0.6
PLMC				eS	Sn	03 41 39.8	-3.5
UPA	Univ. de Panam	3.26	358	eP	Pn	03 41 07.3	+0.8
UPA				eS	Sn	03 41 41.7	-2.4
UPA	Univ. de Panam	3.26	358	eP	Pn	03 41 07.3	+0.8
UPA				eS	Sn	03 41 42.4	-1.7
ZANG	Zanguenga, Cho	3.26	352	eP	Pn	03 41 07.9	+1.3
CBOC	Ciudad Bolivar	3.39	87	eP	Pn	03 41 08.0	-0.5
CBOC				i		03 41 54.6	
	comp=Z,7.1nm,0.1s						
DBBC	Dabeiba	3.45	68	eP	Pn	03 41 10.5	+1.3
BCIP	Isla Barro Col	3.47	353	eP	Pn	03 41 10.6	+1.3
BCIP				eS	Sn	03 41 50.9	+1.7
BCIP	Isla Barro Col	3.47	353	eP	Pn	03 41 10.8	+1.5
YOTC	Yotoco, Valle	3.51	119	eP	Pn	03 41 10.5	+0.4
YOTC				eS	Sn	03 41 48.1	-2.3
YOTC				i		03 41 51.0	
	comp=Z,12nm,0.2s						
HELC	Santa Helena	3.90	83	eP	Pn	03 41 16.6	+0.9
HELC				eS	Sn	03 42 00.9	+0.5
HELC				i		03 42 07.8	
	comp=Z,9.3nm,0.4s						
GUY2C	Guyana, Caldas	4.06	97	eP	Pn	03 41 20.9	+2.8
UREC	San Jos de Ur	4.36	62	eP	Pn	03 41 24.0	+2.3
BRU2	Volcan	4.47	314	eP	Pn	03 41 23.8	+0.5
ORTC	Ortega, Tolima	4.52	113	eP	Pn	03 41 26.8	+2.9
ORTC				eS	Sn	03 42 18.4	+3.0
ORTC				i		03 42 22.2	
	comp=Z,17nm,0.2s						
DRK0	Durika	5.19	313	eP	Pn	03 41 34.0	+0.8
OCAC	Ocana	6.56	67	eP	Pn	03 41 54.3	+2.3

IDC 05 03:41:14.9±0.7, 13°.45N×121°.64E, h0km, mb3.9/13, mb1 4.1/13, mb1mx3.9/45, mbtmp3.9/13, MS3.5/2, Ms1 3.5/2, ms1mx2.9/39, Error ellipse: s-maj=25.8km s-min=9.6km az=50.0
NEIC 05 03:41:16.6±1.8, 13°.4N±0°.1×121°.5E±0°.2, h22km±6km, mb4.4/13, Error ellipse: s-maj=25.4km s-min=9.9km az=60.0
MAN 05 03:41:17.2, 13°.45N×121°.48E, h10km, mb5.1, ML4.0, MS4.1
MAN INTENSITY IV - GASAN MARINDUQUE; INTENSITY III - LIPA BATANGAS; INTENSITY II - BATANGAS CITY; SAN PABLO LAGUNA; LUCBAN QUEZON.
ISC 05 03:41:17.4±0.5, 13°.46N±0°.03×121°.43E±0°.03, h21km±2km, n57, σ1§74/65, mb4.2/19, 1C-4D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOAC	Boac	0.40	90	eP	Pb	03 41 25.5	-0.2
BOAC				eS	Sb	03 41 31.4	+0.1
LQP	Lukban	0.66	9⇓	eP	Pb	03 41 29.4	-0.9
TGY	Tagaytay City	0.80	323	Pg	Pn	03 41 33.7	+0.2
	918nm,0.3s,baz=180,slow=20,SNR=141						
TGY				Lg	Lg	03 41 45.2	

	3μm,0.3s,baz=61,slow=19,SNR=28						
TGY	**Tagaytay City**	**0.80**	**323**	eP	Pb	**03 41 33.3**	**+0.7**
TGY				iS	Sb	**03 41 38.0**	**-4.9**
GQP	**Guinayangan**	**1.08**	**66**⇓	eP	Pn	**03 41 36.4**	**-0.9**
GQP				eS	Sn	**03 41 53.1**	**+1.7**
LUBP	**Lubang**	**1.18**	**283**	eP	Pb	**03 41 39.2**	**+0.1**
LUBP				eS	Sn	**03 41 57.3**	**+3.1**
OTRP	**Odiongan**	**1.23**	**152**	eP	Pn	**03 41 38.4**	**-1.0**
OTRP				eS	Sn	**03 41 59.2**	**+3.8**
POLP	**Polilio Island**	**1.35**	**21**	eP	Pn	**03 41 40.7**	**-0.3**
BUSP	**Coron**	**1.88**	**220**	eP	Pb	**03 41 50.5**	**-0.6**
BUSP				eS	Sb	**03 42 14.3**	**+0.1**
PCPH	**Palayan**	**2.11**	**351**⇓	iP	Pn	**03 41 52.6**	**+1.1**
PCPH				iS	Sb	**03 42 19.6**	**-1.2**
BALP	**Baler**	**2.27**	**4**	eP	Pn	**03 41 55.2**	**+1.6**
BALP				eS	Sb	**03 42 25.5**	**+0.1**
RCP	**Roxas**	**2.28**	**146**⇓	eP	Pn	**03 41 54.7**	**+0.9**
CUYO	**Cuyo Island**	**2.63**	**189**	eP	Pn	**03 41 59.6**	**+1.0**
PVCP	**Virac**	**2.65**	**87**	eP	Pn	**03 41 58.3**	**-0.6**
PVCP				eS	Sb	**03 42 39.7**	**+3.4**
JAP	**San Jose, Anti**	**2.74**	**169**⇑	eP	Pb	**03 42 03.5**	**-2.3**
JAP				eS	Sb	03 42 54.3	+15
SMPP	**San Manuel, Pa**	**2.77**	**345**	eP	Pn	**03 42 01.9**	**+1.3**
ENPP	**El Nido**	**2.98**	**221**	eP	Pn	**03 42 05.9**	**+2.5**
GUIM	**Jordan**	**3.04**	**158**	eP	Pn	**03 42 06.2**	**+2.4**
CNP	**Catarman**	**3.29**	**106**	eP	Pb	**03 42 16.1**	**+1.0**
CAUP	**Cauayan**	**3.48**	**6**	eP	Pn	**03 42 11.6**	**+1.3**
LUWI	**Luwuk**	**14.47**	**175**		Pn	**03 44 38.6**	**-2.5**
JNU	**Nakatsue**	**21.39**	**22**	P	P	**03 46 02.3**	**-1.4**
JNU				IAmb	IAmb	03 46 09.0	
	comp=Z,7.3nm,1.0s						
CMAR	**Chiang Mai Arr**	**22.18**	**286**	P	**P**	**03 46 16.0**	**+3.7**
	comp=Z,2.4nm,0.7s,baz=94,slow=7.9,SNR=9.3						
CMAR				LR	LR	03 55 22.9	
	comp=Z,41nm,19.1s,baz=90,slow=38						
KSAR	**Wonju Array Be**	**24.57**	**12**	P	**P**	**03 46 34.1**	**-1.7**
MTN	**Manton Dam**	**27.85**	**159**	P	**P**	**03 47 04.0**	**-1.6**
MTN				IAmb	IAmb	03 47 05.1	
	comp=Z,12nm,0.8s						
KNRA	**Kununurra**	**29.84**	**166**	P	**P**	**03 47 23.0**	**-0.4**
USRK	**Ussuriysk Ar.**	**31.94**	**14**	P	**P**	**03 47 43.1**	**+1.5**
	comp=Z,2.8nm,0.7s,baz=213,slow=9.8,SNR=7.0						
USRK	**Ussuriysk Ar.**	**31.94**	**14**	P	**P**	**03 47 41.4**	**-0.3**
LSA	**Lhasa**	**32.33**	**305**	P	**P**	**03 47 44.0**	**-1.9**
LSA				IAmb	IAmb	03 47 58.6	
	comp=Z,4.3nm,0.9s						
WB0	**Warramunga Arr**	**35.40**	**159**	P	**P**	**03 48 09.9**	**-2.1**
WB0				IAmb	IAmb	03 48 13.3	
	comp=Z,4.7nm,1.0s						
WRA	**Warramunga Arr**	**35.54**	**159**	P	**P**	**03 48 12.6**	**-0.6**
	comp=Z,2.3nm,0.5s,baz=332,slow=10,SNR=14						
WRA	**Warramunga Arr**	**35.54**	**159**	P	**P**	**03 48 12.1**	**-1.1**
WR0	**Warramunga Arr**	**35.63**	**159**	P	**P**	**03 48 12.0**	**-2.0**
WR0				IAmb	IAmb	03 48 16.2	
	comp=Z,5.5nm,1.1s						
SONM	**Songino Array**	**36.49**	**343**	P	**P**	**03 48 23.2**	**+2.0**
	comp=Z,0.9nm,0.9s,baz=150,slow=8.2,SNR=5.6						
SONM	**Songino Array**	**36.49**	**343**	P	**P**	**03 48 20.9**	**-0.3**
AS31	**Alice Springs**	**38.86**	**162**	P	**P**	**03 48 40.9**	**-0.5**
ASAR	**Alice Springs**	**38.86**	**162**	P	**P**	**03 48 41.5**	**+0.1**
	comp=Z,4.2nm,0.6s,baz=342,slow=7.9,SNR=38						
ASAR	**Alice Springs**	**38.86**	**162**	P	**P**	**03 48 40.5**	**-0.9**
CTA	**Charters Tower**	**41.33**	**143**	LR	LR	04 08 58.5	
	comp=Z,135nm,18.2s,baz=268,slow=40						
MKAR	**Makanchi Array**	**46.65**	**323**	P	**P**	**03 49 45.6**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=145,slow=8.5,SNR=3.7						
MKAR	**Makanchi Array**	**46.65**	**323**	P	**P**	**03 49 44.0**	**-0.3**
BBOO	**Buckleboo**	**48.09**	**163**	P	**P**	**03 49 53.1**	**-2.6**
STKA	**Stephens Creek**	**49.05**	**157**	P	**P**	**03 50 03.2**	**+0.2**
	comp=Z,4.0nm,0.7s,baz=347,slow=8.6,SNR=6.4						
STKA	**Stephens Creek**	**49.05**	**157**	P	**P**	**03 50 01.5**	**-1.5**
ZALV	**Zalesovo Beam**	**49.60**	**332**	P	**P**	**03 50 08.9**	**+1.9**
	comp=Z,0.4nm,0.5s,baz=140,slow=4.9,SNR=2.8						
ZALV	**Zalesovo Beam**	**49.60**	**332**	P	**P**	**03 50 08.2**	**+1.2**
KURK	**Kurchatov**	**50.78**	**326**	P	**P**	**03 50 16.4**	**+0.4**
KURK				IAmb	IAmb	03 50 30.0	
	comp=Z,5.1nm,0.8s						
GEYT	**Alibeck**	**60.85**	**306**	P	**P**	**03 51 31.3**	**+2.8**
	comp=Z,0.3nm,0.3s,baz=143,slow=5.0,SNR=2.2						
GEYT	**Alibeck**	**60.85**	**306**	P	**P**	**03 51 28.7**	**+0.2**
ABKAR	**Akbulak array**	**61.38**	**319**	P	**P**	**03 51 31.1**	**-0.8**
ILAR	**Eielson Array**	**78.65**	**26**	P	**P**	**03 53 18.1**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=249,slow=5.1,SNR=3.8						
ILAR	**Eielson Array**	**78.65**	**26**	P	**P**	**03 53 17.0**	**-0.7**
ARCES	**ARCESS Array B**	**79.56**	**339**	P	**P**	**03 53 23.6**	**+1.1**
	comp=Z,2.6nm,0.9s,baz=27,slow=8.2,SNR=4.1						
ARCES	**ARCESS Array B**	**79.56**	**339**	P	**P**	**03 53 23.2**	**+0.7**
FINES	**FINESS Array B**	**80.84**	**331**	P	**P**	**03 53 29.5**	**0.0**
	comp=Z,1.9nm,1.0s,baz=38,slow=2.5,SNR=2.8						
FINES	**FINESS Array B**	**80.84**	**331**	P	**P**	**03 53 25.8**	**-3.7**
YKA	**Yellowknife Ar**	**92.72**	**23**	P	**P**	**03 54 27.9**	**+0.1**
	comp=Z,0.1nm,0.7s,baz=304,slow=4.9,SNR=2.3						

BJI **05** *03:47:18.1±0.0, 13.°10N×145.°45E, h15km, mB5.1/23, mb4.5/32, Ms4.6/15, Ms7 4.3/15*
MOS **05** *03:47:19.3±1.1, 13.°10N×145.°27E, h24km, mb4.8/23, Error ellipse: s-maj=13.9km s-min=7.3km az=109.7*
NEIC **05** *03:47:21.9±1.4, 13.°09N±0.°08×145.°33E±0.°08, h36km±1km, mb4.7/66, Error ellipse: s-maj=13.2km s-min=8.5km az=47.0*
IDC **05** *03:47:22.7±2.3, 13.°16N×145.°28E, h30km±15km, mb4.1/20, mb1 4.3/21, mb1mx4.1/46, mbtmp4.3/21, ML4.5/1, MS4.0/22, Ms1 4.0/22, ms1mx3.9/33, Error ellipse: s-maj=16.3km s-min=10.4km az=77.0*
GCMT **05** *03:47:24.9±0.4, 13.°04N±0.°02×145.°40E±0.°02, h34km±2km, MW4.9/90, Moment Tensor Solution. s16,c18; s90,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr0.82±.19; Mθθ1.27±.12; Mφφ-2.09±.13; Mrθ-1.06±.14; Mθφ-0.97±.10; Mφr2.22±.19; Best double couple: Mo3.20800×10^{16} NP1:φs235.00000°, δ37.00000°, λ164.00000°. NP2: φs338.00000°, δ81.00000°, λ54.00000°. Principal axes: T 3.0970, Plg43.0000°, Azm214.0000°; N 0.2240, Plg35.0000°, Azm344.0000°; P -3.3180, Plg27.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA **05** *03:47:40.6±2.7, 13°N±12°×14°5E±1°2, h176km±23km, M4.9/13, mb4.8/13, mB5.5/5, Mw(mB)5.0/5*
ISC 05 03:47:23.3±0.6, **13.°13N**±0.°05×**145.°25E**±0.°07, **h37km**±2km, **n224**, σ1s**26**/190, **mb4.6**/76, **MS4.1**/29, **7C-2D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.59**	**321**	Pn	**Pn**	**03 47 34.9**	**-0.4**
	1μm,0.3s,baz=123,slow=7.0,SNR=316						
GUMO				Sn	**Sn**	**03 47 43.9**	**+0.2**
	1μm,0.3s,baz=114,slow=20,SNR=20						
ANA2	**Anatahan**	**3.23**	**8**	Pn	**Pn**	**03 48 10.7**	**-0.8**
SARN	**Sarigan**	**3.59**	**8**		**Pn**	**03 48 15.1**	**-1.3**
PATS	**Pohnpei**	**14.30**	**115**		Pn	03 50 39.5	-3.7
JAY	**Jayapura**	**16.18**	**197**	P	**P**	**03 51 12.5**	**+1.7**
	26nm,1.1s						
GENI	**Genyem**	**16.41**	**198**	P	**P**	**03 51 17.8**	**+4.5**
	2μm81nm,1.7s						
SIJI	**Sorong**	**19.64**	**226**	P	**Pn**	**03 51 51.5**	**+1.0**
	1.3nm,0.3s,baz=64,slow=7.9,SNR=14						
SIJI				LR	LR	03 59 09.9	
	comp=Z,838nm,18.0s,baz=57,slow=36						
MSLP	**Maasin**	**20.19**	**264**	eP	**P**	**03 51 54.2**	**-0.7**
DAV	**Davao City (W)**	**20.27**	**255**	LR	LR	03 58 31.7	
	comp=Z,531nm,20.8s,baz=115,slow=33						
OCLP	**Ormoc**	**20.29**	**266**	eP	**P**	**03 51 56.1**	**+0.1**
FAKI	**Fak Fak**	**20.51**	**220**	P	Pn	03 52 00.6	-0.2
	2μm222nm,1.0s						
FAKI	**Fak Fak**	**20.51**	**220**	P	**P**	**03 51 58.2**	**-0.2**
BUKP	**Musuan**	**20.52**	**257**	eP	**P**	**03 51 59.1**	**+0.6**
KCP	**Kidapawan**	**20.75**	**255**⇓	iP	**P**	**03 52 01.7**	**+0.6**
H11S3	**WAKE ISLAND Hy**	**21.30**	**73**	T	T	04 14 32.9	
	baz=260,slow=74,SNR=21						
H11S1	**WAKE ISLAND Hy**	**21.31**	**73**	T	T	04 14 29.4	
	baz=260,slow=74,SNR=19						
H11S2	**WAKE ISLAND Hy**	**21.31**	**73**	T	T	04 14 44.4	
	baz=260						
H11N1	**WAKE ISLAND Hy**	**21.75**	**70**	T	T	04 15 03.8	
	baz=257,slow=74,SNR=34						
H11N2	**WAKE ISLAND Hy**	**21.76**	**70**	T	T	04 15 11.3	
	baz=257,slow=74,SNR=26						
H11N3	**WAKE ISLAND Hy**	**21.77**	**70**	T	T	04 15 12.6	
	baz=257,slow=74,SNR=34						
PMG	**Port Moresby**	**22.47**	**175**	P	**P**	**03 52 19.7**	**+0.3**
	13nm,0.6s,baz=351,slow=9.9,SNR=6.6						
PMG				LR	LR	04 01 05.4	
	comp=Z,141nm,20.0s,baz=345,slow=37						
PMG	**Port Moresby**	**22.47**	**175**	P	**P**	**03 52 17.3**	**-2.0**
PMG				IAmb	IAmb	03 52 31.2	
	comp=Z,18nm,0.9s						
PMG	**Port Moresby**	**22.47**	**175**	iP	**P**	**03 52 18.3**	**-1.1**
PMG				pmax	pmax		
	comp=Z,73nm,1.1s						
TGY	**Tagaytay City**	**23.65**	**275**	P	**P**	**03 52 32.4**	**+0.9**
	comp=Z,128nm,0.3s,baz=157,slow=4.9,SNR=8.8						
TGY				LR	LR	04 00 56.6	
	comp=Z,449nm,19.7s,baz=42,slow=34						
JNU	**Nakatsue**	**23.84**	**329**	P	**P**	**03 52 33.8**	**+0.7**
	comp=Z,19nm,1.0s,baz=196,slow=7.4,SNR=3.5						
JNU	**Nakatsue**	**23.84**	**329**	P	**P**	**03 52 31.6**	**-1.5**
JNU				IAmb	IAmb	03 52 47.7	
	comp=Z,42nm,1.1s						
MJAR	**Matsushiro Arr**	**24.16**	**346**	P	**P**	**03 52 36.1**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=154,slow=8.7,SNR=4.4						
MJAR				LR	LR	04 00 57.5	
	comp=Z,403nm,21.8s,baz=170,slow=34						
MJAR	**Matsushiro Arr**	**24.16**	**346**	P	**P**	**03 52 34.8**	**-1.2**
MAJO	**Matsushiro**	**24.16**	**346**	iP	**P**	**03 52 35.8**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MAT	**Matsushiro**	**24.16**	**346**	P	**P**	**03 52 38.4**	**+2.4**
LUWI	**Luwuk**	**26.37**	**239**	P	**P**	**03 52 56.1**	**-0.1**
	comp=Z,4μmcomp=Z,125nm,0.7s						
HNR	**Honiara**	**26.74**	**146**	LR	LR	04 02 36.2	
	comp=Z,246nm,19.8s,baz=330,slow=34						
KSRS	**Korea Array**	**28.75**	**330**	P	**P**	**03 53 17.4**	**+0.1**
	comp=Z,3.7nm,0.9s,baz=142,slow=10,SNR=7.4						
KSRS				PcP	**PcP**	**03 56 29.0**	**+2.0**
	comp=Z,2.0nm,1.0s,baz=98,slow=2.8,SNR=4.3						
NJ2	**Nanjing**	**30.66**	**312**	eP	**P**	**03 53 36.0**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SOEI	**Soe**	**30.84**	**224**	P	**P**	**03 53 37.4**	**+1.2**
	comp=Z,87nm,0.9s						
SOEI	**Soe**	**30.84**	**224**	P	**P**	**03 53 35.4**	**-0.8**
USRK	**Ussuriysk Ar.**	**32.99**	**342**	LR	LR	04 07 12.3	
	comp=Z,211nm,18.5s,baz=138,slow=36						
WHN	**Wuhan**	**33.36**	**306**	P	P	03 54 11.0	+13
YSS	**Yuzh-Sakhalins**	**33.79**	**357**	iP	**P**	**03 54 01.3**	**-0.2**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SBUM	**Sibu**	**34.35**	**255**	P	**P**	**03 54 06.0**	**-0.9**
WB0	**Warramunga Arr**	**34.39**	**198**	P	**P**	**03 54 07.0**	**-0.1**
WB0				IAmb	IAmb	03 54 15.5	
	comp=Z,17nm,1.1s						
WRAB	**Tennant Creek**	**34.56**	**198**	ceP	**P**	**03 54 06.7**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,56nm,2.5s						
WB2	**Warramunga Arr**	**34.57**	**198**	P	**P**	**03 54 04.6**	**-4.0**
WRA	**Warramunga Arr**	**34.57**	**198**	P	**P**	**03 54 08.9**	**+0.3**
	comp=Z,4.7nm,0.6s,baz=23,slow=9.7,SNR=11						
WRA				LR	LR	04 09 11.2	
	comp=Z,160nm,20.3s,baz=20,slow=38						
WRA	**Warramunga Arr**	**34.57**	**198**	P	**P**	**03 54 06.8**	**-1.8**
KSM	**Kuching**	**36.48**	**254**	P	**P**	**03 54 24.1**	**-1.1**
FITZ	**Fitzroy Crossi**	**36.56**	**212**	P	**P**	**03 54 26.4**	**+0.6**
	comp=Z,4.3nm,0.8s,baz=36,slow=8.7						
FITZ	**Fitzroy Crossi**	**36.56**	**212**	P	**P**	**03 54 24.6**	**-1.1**
FITZ				IAmb	IAmb	03 54 38.6	
	comp=Z,12nm,1.1s						
KLR	**Kul'dur**	**37.69**	**346**	iP	**P**	**03 54 34.2**	**-0.7**
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GMJI	**Gumukmas**	**38.08**	**238**	P	**P**	**03 54 39.6**	**+0.9**
	comp=Z,57nm,1.0s						
AS31	**Alice Springs**	**38.21**	**197**	P	**P**	**03 54 39.3**	**-0.5**
ASAR	**Alice Springs**	**38.21**	**197**	P	**P**	**03 54 39.9**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=14,slow=12,SNR=20						
ASAR				LR	LR	04 11 37.3	
	comp=Z,191nm,20.9s,baz=6.5,slow=38						
ASAR	**Alice Springs**	**38.21**	**197**	P	**P**	**03 54 37.8**	**-1.9**
XAN	**Xi'an**	**38.97**	**309**	P	**P**	**03 54 48.8**	**+2.7**
XAN				pP	pP	03 54 57.7	+1.5
XAN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**40.36**	**319**	eP	**P**	**03 54 59.4**	**+1.8**
HHC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,69nm,5.5s						
DZM	**Mont Dzumac**	**40.69**	**149**	eLR	LR	04 06 14.8	
	comp=Z,242nm,22.4s						
CD2	**Chengdu**	**42.05**	**302**	P	**P**	**03 55 12.0**	**+0.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PSA00	**Pilbara Seismi**	**42.56**	**216**	P	**P**	**03 55 15.2**	**-0.4**
PBKT	**Sadao Pong**	**42.88**	**280**	P	**P**	**03 55 17.8**	**-0.6**
PBKT				IAmb	IAmb	03 55 20.4	
	comp=Z,11nm,0.8s						
ZEA	**Zeya**	**42.95**	**344**	eP	P	03 55 27.3	+8.8
ZEA				pmax	pmax		
	comp=Z,48nm,1.6s						
LZH	**Lanzhou**	**43.60**	**309**	eP	**P**	**03 55 27.5**	**+3.3**
LZH				pP	pP	03 55 33.6	-0.9
LZH				sP	pwP	03 55 36.6	-0.2
LZH				PP	**PcP**	**03 57 10.1**	**-1.3**
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				pmax	pmax		
	comp=Z,75nm,5.2s						
LZH				LR	LR		
	comp=Z,320nm,14.0s						
LZH				LR	LR		
	comp=Z,310nm,14.3s						
LZH				LR	LR		
	comp=Z,380nm,16.8s						
LAMP	**Lampang**	**44.13**	**283**	P	**P**	**03 55 29.4**	**+0.9**
CM35	**Chiang Mai Arr**	**44.58**	**283**	P	**P**	**03 55 31.2**	**-0.9**
MSVF	**Nonsavu**	**44.59**	**133**	iP	**P**	**03 55 32.3**	**+0.1**
MSVF				pmax	pmax		
	comp=Z,17nm,1.3s						
CM36	**Chiang Mai Arr**	**44.64**	**283**	P	**P**	**03 55 33.9**	**+1.3**
CM09	**Chiang Mai Arr**	**44.74**	**283**	P	**P**	**03 55 32.8**	**-0.5**
CM04	**Chiang Mai Arr**	**44.75**	**283**	P	**P**	**03 55 33.0**	**-0.5**
CM01	**Chiang Mai Arr**	**44.77**	**283**	P	**P**	**03 55 33.2**	**-0.4**
CMMT	**Chiang Mai**	**44.78**	**284**	P	P	03 55 28.7	-5.0
CM02	**Chiang Mai Arr**	**44.78**	**283**	P	**P**	**03 55 33.2**	**-0.5**
CM05	**Chiang Mai Arr**	**44.78**	**283**	P	**P**	**03 55 33.9**	**+0.1**
CHTO	**Chiang Mai**	**44.78**	**284**	P	**P**	**03 55 31.4**	**-2.4**
CHTO				IAmb	IAmb	03 55 43.6	
	comp=Z,7.4nm,0.5s						
CHTO	**Chiang Mai**	**44.78**	**284**	P	**P**	**03 55 31.4**	**-2.4**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CM31	**Chiang Mai Arr**	**44.78**	**283**	P	**P**	**03 55 33.5**	**-0.2**
CM31				IAmb	IAmb	03 55 52.6	
	comp=Z,17nm,1.1s						
CM31	**Chiang Mai Arr**	**44.78**	**283**	P	**P**	**03 55 32.7**	**-1.0**
CMAR	**Chiang Mai Arr**	**44.78**	**283**	P	**P**	**03 55 34.1**	**+0.4**
	comp=Z,2.9nm,0.6s,baz=86,slow=6.1,SNR=14						
CMAR				LR	LR	04 13 03.4	
	comp=Z,162nm,20.1s,baz=86,slow=34						
CMAR	**Chiang Mai Arr**	**44.78**	**283**	ceP	**P**	**03 55 33.7**	**0.0**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CM13	**Chiang Mai Arr**	**44.82**	**283**	P	**P**	**03 55 32.6**	**-1.4**
CM32	**Chiang Mai Arr**	**44.87**	**283**	P	**P**	**03 55 30.9**	**-3.5**
STKA	**Stephens Creek**	**44.88**	**184**	P	**P**	**03 55 34.1**	**-0.1**
	comp=Z,4.2nm,0.8s,baz=359,slow=7.7,SNR=8.3						
STKA				LR	LR	04 15 19.8	
	comp=Z,224nm,19.0s,baz=10,slow=37						
STKA	**Stephens Creek**	**44.88**	**184**	P	**P**	**03 55 34.2**	**-0.1**
STKA	**Stephens Creek**	**44.88**	**184**	P	**P**	**03 55 34.2**	**0.0**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MHMT	**Maesarieng**	**45.75**	**283**	P	**P**	**03 55 41.8**	**+0.4**
BBOO	**Buckleboo**	**46.51**	**191**	P	**P**	**03 55 45.6**	**-1.4**
MA2	**Magadan**	**46.55**	**4**	iP	**P**	**03 55 47.0**	**0.0**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	**Songino Array**	**47.32**	**325**	P	**P**	**03 55 53.8**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=120,slow=5.9,SNR=8.8						
SONM				ScP	**ScP**	**04 01 16.2**	**+0.8**
	comp=Z,1.2nm,0.9s,baz=143,slow=4.2,SNR=5.7						
SONM	**Songino Array**	**47.32**	**325**	P	**P**	**03 55 52.9**	**-0.6**
SONM					**ScP**	**04 01 14.6**	**-0.7**
GTA	**Gaotai**	**47.76**	**312**	eP	**P**	**03 55 59.4**	**+2.4**
GTA				pP	pP	03 56 05.5	-1.7
GTA				sP	pwP	03 56 09.2	-0.9
GTA				PcP	**PcP**	**03 57 26.8**	**+1.1**
GTA				S	**S**	**04 02 50.3**	**-0.8**
GTA				ScS	**ScS**	**04 05 46.4**	**-1.5**
GTA				pmax	pmax		
	comp=Z,180nm,5.4s						
GTA				LR	LR		
	comp=Z,130nm,18.4s						
GTA				LR	LR		
	comp=Z,160nm,19.4s						
GTA				LR	LR		
	comp=Z,190nm,19.4s						
SEY	**Seymchan**	**49.99**	**4**	iP	**P**	**03 56 14.0**	**+0.5**
YAK	**Yakutsk**	**50.10**	**351**	iP	**P**	**03 56 14.7**	**+0.3**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ZAK	**Zakamensk**	**50.43**	**326**	eP	P	03 56 22.3	+5.1
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TLY	**Talaya**	**50.94**	**328**	eP	P	03 56 27.7	+6.7
TLY				pmax	pmax		
	comp=Z,12nm,1.0s						
TLY				MLR	MLR		
	comp=Z,353nm,14.0s						
BILL	**Bilibino**	**56.55**	**9**	P	**P**	**03 57 01.0**	**-0.7**
BILL	**Bilibino**	**56.55**	**9**	ceP	**P**	**03 57 02.2**	**+0.5**
BILL				e		03 59 12.4	
BILL				eS	**S**	**04 04 49.9**	**-0.7**
BILL				eSS	**SS**	**04 08 39.9**	**+1.7**
BILL				pmax	pmax		
	comp=Z,12nm,2.5s						
WMQ	**Urumqi**	**57.73**	**314**	eP	**P**	**03 57 13.8**	**+3.3**
WMQ				pP	pP	03 57 19.8	-1.0
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,190nm,6.9s						
WMQ				LR	LR		
	comp=Z,170nm,26.5s						
WMQ				LR	LR		
	comp=Z,170nm,22.1s						
RPZ	**Rata Peaks**	**61.28**	**159**	LR	LR	04 23 05.5	
	comp=Z,134nm,18.3s,baz=328,slow=35						
MK31	**Makanchi Array**	**62.08**	**316**	iP	**P**	**03 57 38.9**	**-1.4**
MKAR	**Makanchi Array**	**62.08**	**316**	P	**P**	**03 57 39.2**	**-1.1**
	comp=Z,1.1nm,0.4s,baz=91,slow=8.4,SNR=19						
MKAR	**Makanchi Array**	**62.08**	**316**	ceP	**P**	**03 57 41.2**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**62.22**	**324**	P	**P**	**03 57 41.7**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=109,slow=13,SNR=5.1						
ZALV				LR	LR	04 25 15.0	
	comp=Z,90nm,21.9s,baz=108,slow=36						
ZALV	**Zalesovo Beam**	**62.22**	**324**	P	**P**	**03 57 40.7**	**-0.3**
ZALV					**PcP**	**03 58 19.8**	**-0.9**
MAKZ	**Makanchi**	**62.30**	**316**	P	**P**	**03 57 40.8**	**-1.0**
MAKZ	**Makanchi**	**62.30**	**316**	P	**P**	**03 57 40.8**	**-1.0**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KDAK	**Kodiak Island**	**64.26**	**32**	P	**P**	**03 57 54.9**	**+0.4**
	comp=Z,7.0nm,0.9s,baz=233,slow=5.1,SNR=3.7						
KDAK	**Kodiak Island**	**64.26**	**32**	P	**P**	**03 57 53.5**	**-1.0**
KURK	**Kurchatov**	**65.18**	**320**	P	**P**	**03 57 59.3**	**-1.3**
KURK				IAmb	IAmb	03 58 15.4	
	comp=Z,7.6nm,1.1s						
KURK	**Kurchatov**	**65.18**	**320**	ceP	**P**	**03 57 58.7**	**-1.9**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KTH	**Kantishna Hill**	**66.78**	**26**	P	**P**	**03 58 11.1**	**+0.2**
BPAW	**Bear Paw Mtn.**	**66.93**	**25**	P	**P**	**03 58 11.8**	**+0.1**
BPAW				IAmb	IAmb	03 58 29.8	
	comp=Z,6.7nm,0.9s						
MLY	**Manley**	**67.32**	**24**	IAmb	IAmb	03 58 30.1	
	comp=Z,12nm,1.2s						
NIL	**Nilore**	**67.94**	**301**	P	**P**	**03 58 17.2**	**-1.4**
NIL				IAmb	IAmb	03 58 33.1	
	comp=Z,6.3nm,0.8s						
NIL	**Nilore**	**67.94**	**301**	P	**P**	**03 58 17.3**	**-1.4**
NIL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WRH	**Wood River Hil**	**68.25**	**25**	P	**P**	**03 58 19.9**	**-0.1**
WRH				IAmb	IAmb	03 58 33.8	
	comp=Z,6.9nm,0.9s						
TCOL	**CIGO, UAF Yank**	**68.45**	**25**	P	**P**	**03 58 22.5**	**+1.4**
	baz=254						
POKR	**Poker Plat Res**	**68.69**	**25**	P	**P**	**03 58 24.8**	**+2.1**
	baz=255						
HDA	**Harding Lake**	**68.71**	**26**	P	**P**	**03 58 24.2**	**+1.3**
	baz=256						
ILAR	**Eielson Array**	**68.83**	**25**	P	**P**	**03 58 22.6**	**-1.0**
	comp=Z,1.6nm,0.5s,baz=251,slow=5.2,SNR=26						
ILAR	**Eielson Array**	**68.83**	**25**	P	**P**	**03 58 22.2**	**-1.4**
TOLK	**Toolik Lake Re**	**68.91**	**21**	P	**P**	**03 58 25.3**	**+1.2**
	baz=251						
PAX	**Paxson**	**69.01**	**27**	IAmb	IAmb	03 58 33.6	
	comp=Z,6.6nm,1.0s						
GLB	**Gilahina Butte**	**69.47**	**29**	IAmb	IAmb	03 58 28.9	
	comp=Z,7.0nm,1.2s						
BMAR	**Burnt Mountain**	**70.38**	**23**	P	**P**	**03 58 33.6**	**+0.5**
CTGM	**Chitina Glacie**	**70.57**	**30**	IAmb	IAmb	03 58 43.1	
	comp=Z,12nm,1.0s						
BRVK	**Borovoye**	**70.58**	**322**	P	**P**	**03 58 34.2**	**-0.4**
BRVK	**Borovoye**	**70.58**	**322**	P	**P**	**03 58 34.2**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BCAR	**Beaver Creek A**	**70.68**	**27**	P	**P**	**03 58 34.7**	**-0.3**
PPT	**Papeete**	**71.18**	**114**	LR	LR	04 22 30.6	
	comp=Z,208nm,20.0s,baz=278,slow=30						
PPT2	**Papeete2**	**71.19**	**114**	eLR	LR	04 20 15.9	
	comp=Z,404nm,25.8s						
EPYK	**Eagle Plains**	**73.26**	**24**	IAmb	IAmb	03 59 01.3	
	comp=Z,8.4nm,1.1s						
EPYK	**Eagle Plains**	**73.26**	**24**	P	**P**	**03 58 51.1**	**+0.6**
	baz=264						
TBI	**Tubuai**	**73.42**	**119**	eLR	LR	04 21 08.1	
	comp=Z,153nm,33.5s						
ABKAR	**Akbulak array**	**77.13**	**318**	P	**P**	**03 59 11.6**	**-1.5**
TAOE	**Nuku Hiva Isla**	**77.22**	**102**	eLR	LR	04 23 07.8	
	comp=Z,261nm,23.9s						
ARU	**Arti**	**77.36**	**325**d	iP	P	03 59 07.2	-6.9
ARU				pmax	pmax		
	comp=Z,9.0nm,1.6s						
C36M	**Paulatuk**	**78.06**	**21**	P	**P**	**03 59 16.9**	**-0.9**
	baz=275						
GEYT	**Alibeck**	**79.83**	**307**	P	**P**	**03 59 29.4**	**+1.2**
	comp=Z,1.1nm,0.5s,baz=126,slow=2.5,SNR=3.2						
GEYT	**Alibeck**	**79.83**	**307**	P	**P**	**03 59 27.0**	**-1.2**
KIRV	**Kirov**	**81.93**	**328**	iP	**P**	**03 59 38.4**	**-0.5**
L02E	**Cave Junction**	**82.16**	**49**	P	**P**	**03 59 42.3**	**+1.8**
	baz=280						
I04A	**Tendick Farm,**	**82.71**	**47**	P	**P**	**03 59 44.4**	**+1.0**
	baz=281						
M02C	**Callahan**	**82.85**	**49**	P	**P**	**03 59 45.9**	**+1.7**
	baz=281						
YBH	**Yreka Blue Hor**	**82.89**	**49**	IAmb	IAmb	04 00 04.7	
	comp=Z,7.3nm,1.1s						
J04D	**Umpqua Nationa**	**83.03**	**47**	P	**P**	**03 59 46.5**	**+1.2**
	baz=281						
N02D	**Trinity Center**	**83.04**	**50**	P	**P**	**03 59 46.8**	**+1.5**
	baz=281						
PRGR	**Permogore**	**83.08**	**332**	eP	**P**	**03 59 43.7**	**-1.1**
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
L04D	**Klamath Falls**	**83.09**	**48**	P	**P**	**03 59 46.6**	**+1.0**
	baz=281						
YKA	**Yellowknife Ar**	**83.10**	**27**	P	**P**	**03 59 45.1**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=284,slow=5.2,SNR=21						
O02D	**Mt. Diablo Mer**	**83.14**	**50**	P	**P**	**03 59 47.2**	**+1.5**
	baz=281						
G05D	**Wamic, OR**	**83.19**	**45**	P	**P**	**03 59 46.9**	**+1.0**
	baz=282						
LTY	**Liberty**	**83.22**	**43**	P	**P**	**03 59 44.3**	**-1.7**
LTY				IAmb	IAmb	04 00 01.9	
	comp=Z,7.8nm,1.1s						
WDC	**Whiskeytown Da**	**83.24**	**50**	P	**P**	**03 59 45.0**	**-1.1**
WDC				IAmb	IAmb	04 00 03.1	
	comp=Z,5.9nm,1.0s						
WDC	**Whiskeytown Da**	**83.24**	**50**	P	**P**	**03 59 45.0**	**-1.1**
WDC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
I05D	**Terrebonne, OR**	**83.36**	**46**	P	**P**	**03 59 47.8**	**+1.0**
	baz=282						
K04D	**Chiloquin, OR**	**83.41**	**48**	P	**P**	**03 59 47.4**	**+0.2**
	baz=282						
M04C	**Macdoel**	**83.52**	**49**	P	**P**	**03 59 47.9**	**+0.2**
	baz=282						

J05D Fort Rock, OR 83.65 47 P **P** 03 59 48.6 +0.2
baz=282
PINE Pine Mountain 83.76 47 P **P** 03 59 48.2 -0.8
O03E Paynes Creek 83.85 50 P **P** 03 59 50.0 +0.6
baz=282
E07A Sunnyside 83.92 44 P **P** 03 59 48.8 -0.7
E07A IAmb IAmb 04 00 06.8
comp=Z,9.8nm,1.0s
MOD Modoc Plateau 84.62 48 IAmb IAmb 04 00 09.8
comp=Z,6.8nm,0.9s
BEKR Beckworth 85.03 50 IAmb IAmb 04 00 12.3
comp=Z,4.9nm,0.8s
NEW Newport 85.33 42 P **P** 03 59 57.6 +1.0
baz=284
CMB Columbia Colle 85.41 52 IAmb IAmb 04 00 00.5
comp=Z,4.3nm,1.1s
WVOR Wild Horse Val 85.70 48 pP 04 00 07.1 -2.3
BMO Blue Mountains 86.05 45 IAmb IAmb 04 00 16.5
comp=Z,7.1nm,0.9s
KLMR Klimovskoe 86.13 332 *e*P **P** 03 59 59.8 -0.5
KLMR AMP 04 00 04.3
comp=Z,25nm,2.3s
KLMR Klimovskoe 86.13 332 *e*P **P** 03 59 59.7 -0.5
KLMR pmax pmax
comp=Z,25nm,2.3s
NVAR Mina Array Bea 86.92 51 P **P** 04 00 06.0 +1.1
comp=Z,1.3nm,0.9s,baz=260,slow=6.2,SNR=9.2
NVAR Mina Array Bea 86.92 51 P **P** 04 00 04.4 -0.5
KVN Kaiserville 86.92 51 IAmb IAmb 04 00 21.6
comp=Z,4.7nm,1.1s
VES Vestal, Richgr 86.94 54 P **P** 04 00 05.1 +0.3
baz=284
NV11 Mina Array Sit 87.03 51 IAmb IAmb 04 00 17.6
comp=Z,3.3nm,1.0s
CWC Cottonwood Cre 87.58 53 P **P** 04 00 08.6 +0.5
baz=284
ARCES ARCESS Array B 87.64 342 P **P** 04 00 08.0 +0.5
comp=Z,3.9nm,0.9s,baz=69,slow=5.2,SNR=4.4
ARCES LR LR 04 43 03.8
comp=Z,106nm,20.1s,baz=47,slow=38
ARCES ARCESS Array B 87.64 342 P **P** 04 00 06.7 -0.8
MPMC Manual Prospec 88.14 54 P **P** 04 00 12.2 +1.4
baz=285
GSC Goldstone, Bar 88.87 54 P **P** 04 00 15.8 +1.6
baz=285
TPNV Topopah Spring 88.87 52 IAmb IAmb 04 00 32.7
comp=Z,3.1nm,0.9s
TPNV Topopah Spring 88.87 52 P **P** 04 00 15.6 +1.4
baz=286
R11A Troy Canyon, C 89.00 51 IAmb IAmb 04 00 33.1
comp=Z,2.6nm,1.0s
R11A Troy Canyon, C 89.00 51 P **P** 04 00 16.3 +1.5
baz=286
SHOC Shoshone, Teco 89.13 53 P **P** 04 00 16.2 +1.0
baz=286
HEC Hector,Ludlow 89.37 54 P **P** 04 00 17.5 +1.0
baz=286
TUQ Turquoise Moun 89.53 54 P **P** 04 00 18.8 +1.6
baz=286
KBZ Khabaz 89.75 315 LR LR 04 43 53.9
comp=Z,58nm,19.1s,baz=50,slow=38
MONP2 Monument Peak 89.81 56 P **P** 04 00 20.2 +1.4
baz=286
KIV Kislovodsk 89.83 315 *e*P **P** 04 00 17.2 -1.2
KIV pmax pmax
comp=Z,11nm,1.1s
BELC Belle Mtn. Jos 89.86 55 P **P** 04 00 19.9 +1.1
baz=286
GMRC Granite Mounta 89.91 54 P **P** 04 00 20.2 +1.1
baz=286
BC3 Big Chuckawall 90.39 55 P **P** 04 00 22.9 +1.6
baz=286
IRM Iron Mountain 90.50 55 P **P** 04 00 23.4 +1.7
baz=286
DUG Dugway, Tooele 90.53 49 IAmb IAmb 04 00 38.5
comp=Z,4.7nm,0.9s
DUG Dugway, Tooele 90.53 49 P **P** 04 00 23.3 +1.4
baz=288
FXWY Fox Creek 90.72 45 P **P** 04 00 22.2 -0.6
H17A Grant Village 90.78 44 P **P** 04 00 25.5 +2.4
baz=289
Y12C Blythe 91.11 55 P **P** 04 00 26.0 +1.5
baz=286
PDMCI Parker Dam,Lak 91.25 54 P **P** 04 00 27.3 +2.2
baz=287
RLMT Red Lodge 91.42 43 P **P** 04 00 25.4 -0.6
RLMT IAmb IAmb 04 00 42.4
comp=Z,4.5nm,1.0s
RLMT Red Lodge 91.42 43 P **P** 04 00 27.7 +1.7
baz=290
FINES FINESS Array B 91.74 335 P **P** 04 00 24.7 -2.1
comp=Z,2.1nm,0.7s,baz=86,slow=5.4,SNR=7.8
FINES LR LR 04 43 22.8
comp=Z,101nm,18.9s,baz=242,slow=37
FINES FINESS Array B 91.74 335 P **P** 04 00 25.1 -1.7
FINES FINESS Array B 91.74 335 *e*P **P** 04 00 26.2 -0.6
FINES pmax pmax
comp=Z,1.0nm,0.6s
PDAR Pinedale Array 92.02 45 P **P** 04 00 30.5 +1.7
comp=Z,0.2nm,0.5s,baz=260,slow=1.6,SNR=3.5
PDAR LR LR 04 35 02.1
comp=Z,132nm,21.4s,baz=310,slow=31
PDAR Pinedale Array 92.02 45 P **P** 04 00 27.6 -1.3
Y14A Wickenburg 92.26 55 IAmb IAmb 04 00 50.0
comp=Z,3.8nm,1.0s
LAO LASA Array 92.83 41 P **P** 04 00 33.4 +1.1
baz=292
WUAZ Wupatki 93.06 53 P **P** 04 00 34.4 +0.7
baz=288
AKASG Malin Array Be 95.61 325 LR LR 04 45 41.3
comp=Z,192nm,21.1s,baz=280,slow=37
ULM Lac du Bonnet 97.41 35 LR LR 04 41 34.3
comp=Z,57nm,19.4s,baz=318,slow=33
NOA NORSAR Array B 97.61 339 LR LR 04 47 03.2
comp=Z,74nm,20.9s,baz=55,slow=37
BRTR Keskin Array B 97.65 314 P **P** 04 00 53.5 -1.1
comp=Z,0.6nm,0.9s,baz=50,slow=6.7,SNR=4.5
BRTR LR LR 04 50 00.7
comp=Z,37nm,18.1s,baz=12,slow=38
BRTR Keskin Array B 97.65 314 P **P** 04 00 52.9 -1.7
BRTR Keskin Array B 97.65 314 *e*P Pdif 04 00 55.0 +0.4
BRTR pmax pmax
comp=Z,1.0nm,0.9s
VYHS Vyhne 102.49 327 *e*P **Pdif** 04 01 16.2 +0.5
VYHS Vyhne 102.49 327 *e*PDIFF **Pdif** 04 01 16.1 +0.4
CLL Collm 103.62 331 *e*P **Pdif** 04 01 21.0 +0.3
CLL pmax pmax
comp=Z,116nm,2.5s
TORD Torodi Ar. Bea 135.43 304 PKP **PKPdf** 04 06 40.8 +0.5
comp=Z,1.0nm,0.6s,baz=41,slow=1.9,SNR=11
TORD SKPbc **SKPbc** 04 10 08.9 +0.2
comp=Z,1.3nm,0.9s,baz=30,slow=4.2,SNR=5.5
TORD Torodi Ar. Bea 135.43 304 **PKPdf** 04 06 39.7 -0.6
SDV Santo Domingo 138.19 60 **PKPdf** 04 06 44.6 -1.1
DBIC Dimbokro 144.38 302 PKP PKPbc 04 06 54.9 -0.1
comp=Z,8.1nm,0.6s,baz=47,slow=4.3,SNR=23
KIC Kosan Boka 144.46 301 *e*PKP1 **PKPab** 04 06 54.8 -0.2
comp=Z,12nm,0.7s
TIC Toumodi 144.53 302 *e*PKP1 **PKPab** 04 06 55.0 -0.3
LIC Lamto 144.77 301 *e*PKP1 **PKPab** 04 06 55.9 -0.2
comp=Z,26nm,0.6s
LPAZ La Paz 147.58 100 PKPbc **PKPbc** 04 07 05.1 -0.2
comp=Z,1.2nm,0.8s,baz=231,slow=6.5,SNR=3.0

IDC 05 03:50:40.8±2.7, 32°.58S×178°.28W, h0km, mb4.2/3, mb1 4.3/4, mb1mx3.9/32, mbtmp4.1/4, ML3.9/1, Error ellipse: s-maj=59.6km s-min=35.1km az=117.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	6.81	212	Pn	Pn	03 52 22.6	+0.7
	2.2nm,0.3s,baz=21,slow=2.0,SNR=13						
URZ				Sn	Sn	03 53 39.7	-0.4
	2.4nm,0.3s,baz=264,slow=21,SNR=12						
CTA	**Charters Tower**	33.98	283	P	P	03 57 26.3	0.0
	5.3nm,1.1s,baz=108,slow=6.4,SNR=2.4						
ASAR	**Alice Springs**	42.80	269	P	P	03 58 40.5	-0.1
	0.8nm,0.4s,baz=108,slow=7.6,SNR=10						
WRA	**Warramunga Arr**	43.99	275	P	P	03 58 50.0	-0.2
	1.5nm,0.4s,baz=116,slow=7.5,SNR=2.5						
FINES	**FINESS Array B**	147.09	339	PKPbc	PKPbc	04 10 24.0	-0.9
	1.4nm,0.6s,baz=49,slow=4.2,SNR=15						

SOF 05 03:54:17.3, 42°.17N×23°.58E, h10km, MD2.8
SKO 05 03:54:18.6, 42°.19N×23°.52E, h3km
BEO 05 03:54:19.9±0.3, 42°.21N×23°.49E, h9km±2km, ML2.8/7
ISC 05 03:54:17.3±1.2, 42°.13N±0°.02×23°.51E±0°.02, h3km±11km, n50, σ1§39/63, 13C-9D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	0.41	230	*i* P	**Pg**	**03 54 26.8**	**+1.5**
VTS	**Vitosha**	0.52	337	*e*Pg	**Pg**	**03 54 27.5**	**+0.1**
VTS				*e*Sg	**Sg**	**03 54 34.3**	**+0.1**
VTS	**Vitosha**	0.52	337	⇓P	**Pg**	**03 54 27.6**	**+0.2**
VTS				⇑S	**Sg**	**03 54 34.4**	**+0.1**
VTS	**Vitosha**	0.52	337	*i* P	**Pg**	**03 54 27.5**	**+0.1**
MMB	**Musomiste**	0.57	163	*i* P	**Pb**	**03 54 30.2**	**+0.3**
PGB	**Panagyurishte**	0.64	49	*i* P	**Pb**	**03 54 28.9**	**-0.7**
BOSS	**Bosilegrad**	0.84	296	*e*Pg	**Pg**	**03 54 34.4**	**+0.9**
BOSS				*e*Sg	**Sb**	**03 54 46.5**	**+0.1**
PLD	**Plovdiv**	0.89	91	*e*Pg	**Pn**	**03 54 37.4**	**+0.7**
PLD	**Plovdiv**	0.89	91	*i* P	**Pb**	**03 54 34.2**	**-1.2**
RZN	**Rozhen**	1.01	116	*i* P	**Pb**	**03 54 36.5**	**-1.0**
SRS	**Serrai**	1.02	176	*e*Pg	**Pn**	**03 54 39.8**	**+1.3**
SRS				*e*Sg	**Sn**	**03 54 54.1**	**+0.8**
VAY	**Valandovo**	1.07	221	*e*Pg	**Pn**	**03 54 39.3**	**+0.1**
VAY				*e*Sg	**Sn**	**03 54 56.9**	**+2.3**
VAY	**Valandovo**	1.07	221	*i* Pg	**Pg**	**03 54 39.1**	**+1.2**
VAY				*i* Sg	**Sn**	**03 54 55.1**	**+0.5**
VAY				*e*Lg	Lg	03 54 57.7	
	comp=E,304nm,0.3s						
STIP	**Stip**	1.08	246	*i* Pg	**Pb**	**03 54 34.7**	**-3.9**
STIP				*i* Sg	**Sb**	**03 54 47.8**	**-5.3**
STIP				*e*Lg	Lg	03 54 48.0	
	comp=N,145nm,0.2s						
ZAPS	**Zavoj**	1.31	331	*e*Pg	**Pg**	**03 54 43.5**	**+1.1**
ZAPS				*e*Sg	**Sg**	**03 54 59.5**	**+0.1**
BARS	**Barje**	1.43	299	*e*Pg	**Pg**	**03 54 45.0**	**+0.4**
BARS				*e*Sg	**Sg**	**03 55 03.8**	**+0.7**
PLVB	**Pleven**	1.50	33	⇓P	**Pg**	**03 54 45.9**	**-0.1**
PLVB				⇓S	**Sg**	**03 55 07.1**	**+1.7**
KDZ	**Kurdzhali**	1.50	108	*i* P	**Pb**	**03 54 44.4**	**-1.5**
DIM	**Dimitrovgrad**	1.51	93	*i* P	**Pg**	**03 54 45.8**	**-0.4**
SKO	**Skopje**	1.55	265	*i* Pg	**Pn**	**03 54 45.1**	**-0.7**
SKO				*e*Sg	**Sn**	**03 55 06.7**	**+0.3**
SKO				*e*Lg	Lg	03 55 13.7	
	comp=N,2.8nm,0.3s						
BAIL	**Bailesti**	1.89	356	⇑P	**Pb**	**03 54 51.9**	**-0.5**
BAIL				⇑S	**Sb**	**03 55 15.8**	**-0.6**
ZAGS	**Zajecar**	1.92	331	*e*Pg	**Pb**	**03 54 52.8**	**-0.2**
ZAGS				*e*Sg	**Sg**	**03 55 17.6**	**-1.4**
ELND	**Elena**	1.92	65	⇑P	**Pb**	**03 54 51.7**	**-1.3**
VLAD	**Vladila**	1.98	19	⇑P	**Pb**	**03 54 52.2**	**-1.7**
BOVS	**Bovan**	2.00	319	*e*Pg	**Pb**	**03 54 54.2**	**-0.1**
SELS	**Selova**	2.07	302	*e*Pn	**Pn**	**03 54 53.5**	**+0.5**
FNA	**Florina**	2.09	231	*e*Pn	**Pb**	**03 54 55.6**	**-0.4**
SZH	**Strazhica**	2.12	57	*i* P	**Pb**	**03 54 54.9**	**-1.4**
PUNG	**Punghina**	2.18	349	⇓P	**Pb**	**03 54 56.4**	**-1.1**
COPA	**Copaceanca**	2.36	31	⇓P	**Pb**	**03 54 59.1**	**-1.3**
HUMR	**Humele**	2.62	24	⇓P	**Pn**	**03 55 01.1**	**+0.5**
RAZG	**Razgrad**	2.63	56	⇑P	**Pb**	**03 55 03.6**	**-1.5**
DJES	**Djerdap**	2.63	344	*e*Pn	**Pn**	**03 55 01.8**	**+1.1**
KUBS	**Kucevo**	2.64	330	*e*Pn	**Pn**	**03 55 01.3**	**+0.5**
GRUS	**Gruza**	2.70	312	*e*Pn	**Pn**	**03 55 02.6**	**+1.1**
IVAS	**Ivanjica**	2.86	301	*e*Pn	**Pn**	**03 55 04.5**	**+0.7**
TRUS	**Trudelj**	3.08	314	*e*Pn	**Pn**	**03 55 08.7**	**+1.8**
DIVS	**Divibare**	3.24	309	*e*Pn	**Pn**	**03 55 10.0**	**+0.9**
GZR	**Gura Zlata**	3.30	351	⇑P	**Pn**	**03 55 10.5**	**+0.6**
LOT	**Lotru**	3.32	3	⇑P	**Pn**	**03 55 11.9**	**+1.6**
ARR	**Arges**	3.33	14	⇑P	**Pn**	**03 55 10.7**	**+0.4**
VOIR		3.49	18	⇓P	**Pn**	**03 55 13.7**	**+1.2**
TEKS	**Tekeris**	3.77	311	*e*Pn	**Pn**	**03 55 17.8**	**+1.4**
MLR	**Muntele Rosu**	3.79	27	⇓P	**Pn**	**03 55 18.5**	**+1.8**
HARR	**Harsova**	4.11	50	⇑P	**Pn**	**03 55 22.6**	**+1.6**
OZUR		4.29	22	⇓P	**Pn**	**03 55 25.1**	**+1.6**
PLOR	**Plostina**	4.35	30	⇑P	**Pn**	**03 55 26.0**	**+1.7**
VRI	**Vrincioaia**	4.39	31	⇑P	**Pn**	**03 55 27.0**	**+2.0**
BURAR	**Bucovina Array**	5.61	12	⇑P	**Pn**	**03 55 43.0**	**+1.3**
VYHS	**Vyhne**	7.16	334	*e*PN	**Pn**	**03 56 03.8**	**+0.9**

NAO 05 04:29:44.9±1.5, 67°.65N×33°.74E, ML2.7
HEL 05 04:29:44.1±0.4, 67°.61N×34°.09E, h0km, ML2.0, Explosion
ISC 05 04:29:46.7±1.4, 67°.69N±0°.04×33°.43E±0°.07, h0km, n25, σ1§17/45, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APZ9	**Apatity**	0.12	184	Pg	**Pg**	**04 29 48.8**	**-0.2**
APZ9				Lg	Lg	04 29 51.1	
APZ9	**Apatity**	0.12	184	Pg	**Pg**	**04 29 48.8**	**-0.2**
APZ9				Sg	**Sg**	**04 29 51.1**	**+0.7**
APA0	**Apatity Array**	0.18	245	Pg	**Pg**	**04 29 49.7**	**-0.5**
	baz=79,slow=18						
APA0				Lg	Lg	04 29 54.0	
	baz=83,slow=37						
APA0	**Apatity Array**	0.18	245	Pg	**Pg**	**04 29 49.7**	**-0.5**
	baz=79,slow=18						
APA0				Sg	**Sg**	**04 29 54.0**	**+1.5**
	baz=83,slow=37						
VRF	**Varrio**	1.46	274	PG	**Pg**	**04 30 14.5**	**-0.1**
VRF				SG	**Sn**	**04 30 34.5**	**+0.5**
VRF				MSG		04 30 35.4	
	comp=Z,11nm,0.2s						
KU6	**Riekki**	2.18	222	PG	**Pn**	**04 30 24.8**	**+0.7**
	baz=43						
KU6				MSG		04 30 52.0	
	comp=Z,7.4nm,0.2s						
KU6				SG	**Sb**	**04 30 55.1**	**+0.7**
MSF	**Maaselka**	2.49	226	PG	**Pb**	**04 30 30.7**	**-1.5**
MSF				SG	**Sb**	**04 31 04.0**	**+0.6**
SGF	**Sodankyl**	2.66	268	PG	**Pb**	**04 30 35.0**	**-0.2**
SGF				SN	**Sb**	**04 31 06.5**	**-1.7**
RNF	**Rovaniemi**	3.09	253	PN	**Pn**	**04 30 37.3**	**+0.7**
	baz=67						
RNF				SN	**Sn**	**04 31 15.8**	**+1.5**
KEV	**Kevo**	3.13	315	Pn	**Pn**	**04 30 38.2**	**+1.0**
KEV				Sn	**Sn**	**04 31 15.7**	**+0.5**
KEV				Lg	Lg	04 31 23.4	
KEV	**Kevo**	3.13	315	PN	**Pn**	**04 30 37.6**	**+0.4**
	baz=126						
KEV				SN	**Sn**	**04 31 16.6**	**+1.4**
KEV	**Kevo**	3.13	315	*e*P	**Pn**	**04 30 38.1**	**+1.0**
KEV				*e*S	**Sn**	**04 31 15.4**	**+0.1**
ARA0	**ARCESS Array S**	3.44	306	Pn	**Pn**	**04 30 41.0**	**-0.6**
	baz=122,slow=16						
ARA0				Sn	**Sn**	**04 31 23.6**	**+0.6**
	baz=123,slow=28						
ARA0				Lg	Lg	04 31 34.4	
	baz=116,slow=37						
ARA0	**ARCESS Array S**	3.44	306	Pn	**Pn**	**04 30 41.0**	**-0.6**
	baz=122,slow=16						
ARA0				Sn	**Sn**	**04 31 23.6**	**+0.6**
	baz=123,slow=28						
ARE0	**ARCESS Array S**	3.44	306	PN	**Pn**	**04 30 40.5**	**-1.1**
ARE0				SN	**Sn**	**04 31 25.1**	**+2.1**
HEF	**Hetta**	3.74	286	Pn	**Pn**	**04 30 46.3**	**+0.7**
HEF				Sn	**Sn**	**04 31 30.7**	**+0.4**
HEF				Lg	Lg	04 31 44.0	
HEF	**Hetta**	3.74	286	PN	**Pn**	**04 30 46.1**	**+0.5**
	baz=99						
HEF				SN	**Sn**	**04 31 32.1**	**+1.8**
HEF	**Hetta**	3.74	286	Pn	**Pn**	**04 30 46.3**	**+0.7**
HEF				Sn	**Sn**	**04 31 30.7**	**+0.4**
TOF	**Tornio**	3.94	250	PG	**Pb**	**04 30 58.2**	**+1.4**
TOF				SN	**Sn**	**04 31 35.1**	**+0.1**
OUL	**Oulu**	4.00	233	PB	**Pb**	**04 30 54.8**	**-3.1**
OUL				SG	**Sn**	**04 31 55.1**	**+0.1**
KTK1	**Kautokeino**	4.00	294	*e*P	**Pn**	**04 30 50.0**	**+0.8**
KTK1				*e*S	**Sn**	**04 31 32.9**	**-3.9**
KTK1				IAML		04 31 52.7	
	comp=Z,7.5nm,0.4s						
LANU	**Lannavaara**	4.34	280	SN	**Sn**	**04 31 44.4**	**-0.7**
KIF	**Kilpisjarvi**	4.86	292	Pn	**Pn**	**04 31 01.3**	**+0.4**
KIF				Sn	**Sn**	**04 31 57.2**	**-0.6**
KIF				Lg	Lg	04 32 15.8	
KIF	**Kilpisjarvi**	4.86	292	Pn	**Pn**	**04 31 01.3**	**+0.4**
KIF				Sn	**Sn**	**04 31 57.2**	**-0.6**
FIA0	**FINESS Array S**	7.01	210	Lg	Lg	04 33 23.7	
	baz=14,slow=37						

IDC 05 04:31:42.4±2.1, 6°.77S×128°.81E, h0km, mb3.1/1, mb1 3.4/3, mb1mx3.2/38, mbtmp3.2/3, ML3.4/2, Error ellipse: s-maj=156.3km s-min=31.3km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	14.15	158	Pn	Pn	04 35 04.9	+0.5
	0.2nm,0.3s,baz=341,slow=13,SNR=3.5						
WRA				Sn	Sn	04 37 26.4	-16
	0.2nm,0.3s,baz=331,slow=23,SNR=4.1						
ASAR	**Alice Springs**	17.50	164	P	Pn	04 35 47.7	-0.4
	0.1nm,0.3s,baz=338,slow=10,SNR=7.3						
MKAR	**Makanchi Array**	67.39	327	P	P	04 42 39.7	0.0
	0.1nm,0.5s,baz=123,slow=5.3,SNR=3.4						

INET 05 04:43:34.4, 11°.26N×86°.98W, h7km, ML2.6
UCR 05 04:43:32.7±2.7, 11°.62N×86°.76W, h12km±31km, MD4.0, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBS3	**Finca Las Img**	1.52	123	*i* P	Pn	04 44 00.2	+0.4
ESTN	**Estel**	1.52	14	*e*P	Pb	04 44 00.7	-0.3
MATN	**Matagalpa**	1.54	32	*e*P	Pn	04 43 59.3	-0.8
NY14	**Universidad de**	1.54	129	*i* P	Pb	04 44 01.1	0.0
NY14				*i* S	Sg	04 44 22.2	-0.1
LAPC	**Finca la Perla**	1.55	123	*i* P	Pn	04 43 59.7	-0.4
GB1A	**Borinquen Arri**	1.55	121	*e*P	Pn	04 44 00.6	+0.4
GB1A				*e*S	Sb	04 44 21.3	+0.3
BUEV	**Buena Vista**	1.55	121	*i* P	Pn	04 44 00.3	+0.1
BUEV				*i* S	Sb	04 44 21.4	+0.3
MESS	**Mesas**	1.76	119	*i* P	Pn	04 44 02.0	-1.1
GUAI	**GUAI**	1.81	137	*i* P	Pn	04 44 04.5	+0.8
GUAI				*i* S	Sn	04 44 26.8	+0.1
CUI	**Cuipilapa**	1.83	121	*e*P	Pn	04 44 03.0	-1.1
CUI				*e*S	Sn	04 44 27.0	-0.2
JTS	**Las Juntas de**	2.21	126	*e*P	Pn	04 44 07.6	-1.6

VAO 05 04:53:16.5±1.1, 21°.61S×70°.49W, h204km±6km, mb3.8
SJA 05 04:53:28.0±1.1, 21°.53S×68°.72W, h133km±6km, ML3.5, MW3.4
IDC 05 04:53:29.2±1.0, 21°.57S×68°.40W, h115km±14km, mb3.4/3, mb1 3.4/5, mb1mx3.2/32, mbtmp3.7/5, Error ellipse: s-maj=34.4km s-min=20.3km az=121.0
GUC 05 04:53:30.0±0.7, 21°.52S×68°.68W, h108km±6km, ML3.6
ISC 05 04:53:28.6±0.7, 21°.52S±0°.03×68°.65W±0°.06, h128km±7km, n53, σ1§12/79, 9C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	0.61	243	⇑*i*P	**Pn**	**04 53 48.6**	**+0.2**
PB09				IAML		04 54 05.6	
	comp=E,1μm,0.3s						
PB09	**IPOC Station P**	0.61	243	*i* P	**Pn**	**04 53 48.8**	**+0.4**
PB09				IAML		04 53 49.0	
	comp=Z,2μm,0.2s						
PB09				*i* Sg	**Sn**	**04 54 03.5**	**+0.1**
PB01	**IPOC Station P**	0.91	301	⇑*i*P	**Pn**	**04 53 50.6**	**-0.1**
PB01				*e*S	**Sn**	**04 54 05.6**	**-1.7**
PB01				IAML		04 54 07.8	
	comp=E,3μm,0.3s						
LVC	**Limon Verde**	1.11	192	⇓*e*P	**Pn**	**04 53 53.1**	**+0.2**
LVC				*e*S	**Sn**	**04 54 10.3**	**-0.9**
LVC	**Limon Verde**	1.11	192	P	**Pn**	**04 53 53.0**	**+0.2**
	comp=E,59nm,0.3s,baz=8.5,slow=6.8,SNR=763						
LVC				S	**Sn**	**04 54 10.4**	**-0.9**
	comp=E,70nm,0.3s,baz=346,slow=16,SNR=51						
LVC	**Limon Verde**	1.11	192	*e*P	**Pn**	**04 53 53.0**	**+0.2**
LVC	**Limon Verde**	1.11	192	*e*P	**Pn**	**04 53 53.0**	**+0.2**
LVC				*e*S	**Sn**	**04 54 11.0**	**-0.3**
PB03	**IPOC Station P**	1.15	242	⇑*i*P	**Pn**	**04 53 53.1**	**+0.1**
PB03				*e*S	**Sn**	**04 54 11.1**	**-0.4**
PB03				IAML		04 54 12.5	
	comp=N,1μm,0.1s						
PB03	**IPOC Station P**	1.15	242	*e*P	**Pn**	**04 53 53.0**	**+0.1**
PB03				*e*S	**Sn**	**04 54 11.5**	**-0.1**
PB07	**IPOC Station P**	1.17	259	⇑*i*P	**Pn**	**04 53 53.4**	**+0.2**
PB07				*e*S	**Sn**	**04 54 10.8**	**-1.0**
PB07				IAML		04 54 12.4	
	comp=N,2μm,0.4s						
PB07	**IPOC Station P**	1.17	259	*e*P	**Pn**	**04 53 53.4**	**+0.2**
PB07				*e*S	**Sn**	**04 54 11.5**	**-0.3**
PB02	**IPOC Station P**	1.17	279	⇑*i*P	**Pn**	**04 53 53.3**	**+0.1**
PB02				*e*S	**Sn**	**04 54 10.6**	**-1.2**
PB02				IAML		04 54 12.4	
	comp=N,3μm,0.3s						
PB02	**IPOC Station P**	1.17	279	*e*P	**Pn**	**04 53 53.4**	**+0.1**
PB02				*e*S	**Sn**	**04 54 11.8**	**-0.1**
PB08	**IPOC Station P**	1.45	341	⇑*i*P	**Pn**	**04 53 57.4**	**+0.9**
PB08				*e*S	**Sn**	**04 54 17.9**	**+0.4**
PB08				IAML		04 54 19.8	
	comp=E,718nm,0.3s						
PB08	**IPOC Station P**	1.45	341	*e*P	**Pn**	**04 53 57.4**	**+0.9**
PB08				*e*S	**Sn**	**04 54 18.4**	**+0.9**
PB06	**IPOC Station P**	1.46	216	⇑*i*P	**Pn**	**04 53 56.6**	**+0.3**
PB06				*e*S	**Sn**	**04 54 17.4**	**0.0**
PB06				IAML		04 54 18.9	
	comp=E,1μm,0.4s						
PB06	**IPOC Station P**	1.46	216	*i* P	**Pn**	**04 53 56.6**	**+0.3**
PB06				*e*S	**Sn**	**04 54 17.1**	**-0.2**
PB06				IAML		04 54 18.5	
	comp=Z,768nm,0.3s						
PATCX	**Punta Patache**	1.56	296	⇑*i*P	**Pn**	**04 53 57.6**	**+0.3**
PATCX				*e*S	**Sn**	**04 54 19.0**	**-0.3**
PATCX				IAML		04 54 20.4	
	comp=E,1μm,0.1s						
PATCX	**Punta Patache**	1.56	296	*e*P	**Pn**	**04 53 57.9**	**+0.5**
PATCX				*e*S	**Sn**	**04 54 19.3**	**0.0**
PB04	**IPOC Station P**	1.61	239	⇑*i*P	**Pn**	**04 53 58.0**	**0.0**
PB04				*e*S	**Sn**	**04 54 19.6**	**-0.8**
PB04				IAML		04 54 24.2	
	comp=E,573nm,0.2s						
PB04	**IPOC Station P**	1.61	239	*i* P	**Pn**	**04 53 58.1**	**+0.1**
PB04				*e*S	**Sn**	**04 54 19.5**	**-0.9**
PB04				IAML		04 54 21.9	
	comp=Z,477nm,0.2s						
TA01	**Diego Aracena**	1.71	303	IAML		04 54 22.4	
	comp=E,833nm,0.2s						
PB15	**IPOC Station P**	1.84	204	*i* P	**Pn**	**04 54 01.2**	**+0.4**
PB15				*e*S	**Sn**	**04 54 25.7**	**+0.2**
GO01	**Chusmiza**	1.91	345	*e*P	**Pn**	**04 54 02.6**	**+0.8**
GO01				IAML		04 54 30.6	
	comp=E,724nm,0.2s						
PB05	**IPOC Station P**	1.96	227	*i* P	**Pn**	**04 54 02.0**	**-0.1**
PB05				*e*S	**Sn**	**04 54 26.4**	**-1.3**
PB11	**IPOC Station P**	1.98	332	*e*P	**Pn**	**04 54 02.5**	**+0.1**
PB11				*e*S	**Sn**	**04 54 28.1**	**-0.3**
PB11				IAML		04 54 29.9	
	comp=N,931nm,0.5s						
PB11	**IPOC Station P**	1.98	332	*e*P	**Pn**	**04 54 02.5**	**+0.1**
PB11				*e*S	**Sn**	**04 54 28.3**	**-0.1**
PSGCX	**Pisagua**	2.35	324	*e*P	**Pn**	**04 54 06.3**	**-0.7**
PSGCX				*e*S	**Sn**	**04 54 36.3**	**-0.1**
MNMC	**Minye Minye**	2.53	339	IAML		04 54 43.5	
	comp=E,490nm,0.2s						
MNMCX	**Minye Minye**	2.53	339	*e*P	**Pn**	**04 54 10.0**	**+0.6**
MNMCX				*e*S	**Sn**	**04 54 39.9**	**-0.9**
PB10	**IPOC Station P**	2.65	221	*i* P	**Pn**	**04 54 11.2**	**+0.5**
PB10				*e*S	**Sn**	**04 54 39.6**	**-3.5**
PB10				IAML		04 54 41.8	
	comp=Z,73nm,0.4s						
PB16	**IPOC Station P**	3.27	346	*e*P	**Pn**	**04 54 22.3**	**+3.1**
PB16				*e*S	**Sn**	**04 54 54.4**	**-3.8**
PB14	**IPOC Station P**	3.49	207	*i* P	**Pn**	**04 54 21.8**	**-0.1**
PB14				*e*S	Sn	04 54 53.7	-9.4
PB14				IAML		04 55 01.2	
	comp=Z,52nm,0.4s						
LPAZ	**La Paz**	5.22	6	P	**Pn**	**04 54 47.7**	**+2.4**
	comp=Z,0.4nm,0.3s,baz=197,slow=11,SNR=6.2						
LPAZ				S	**Sn**	**04 55 41.9**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=193,slow=14,SNR=4.0						
SIV	**San Ignacio**	9.04	54	P	**Pn**	**04 55 32.7**	**-3.5**
	comp=Z,0.9nm,0.3s,baz=250,slow=11,SNR=30						
SIV				S	Sn	04 57 07.1	-9.3
	comp=Z,0.1nm,0.3s,baz=278,slow=16,SNR=4.6						
SALV	**Santo Antonio**	13.49	68	*e*P	**P**	**04 56 39.6**	**0.0**
PP1B	**Ponte de Pedra**	13.55	76	*e*P	**P**	**04 56 41.4**	**+1.0**
TRCB	**Terra Rica**	14.90	98	*e*P	**P**	**04 56 56.4**	**+1.1**
C2SB	**Chapadao do Su**	15.10	82	*e*P	**P**	**04 56 59.2**	**+1.7**
PTGB	**Pitanga**	15.59	105	*e*P	**P**	**04 57 04.3**	**+1.3**
ITAB	**Concordia**	16.09	114	*e*P	**P**	**04 57 09.0**	**+0.6**

PCMB	Pacaembu	16.18	94	eP	P	04 57 10.1	+0.6
CLDB	Colider	16.25	51	eP	Pn	04 57 09.4	-0.2
CPSB	Cacapava Do Su	16.28	126	eP	Pn	04 57 08.1	-1.8
BB19B	Bebedouro	18.76	92	eP	P	04 57 38.6	+0.7
IPMB	Ipameri, GO	19.56	83	eP	P	04 57 46.9	+0.4
RCLB	Rio Claro- Sao	19.61	97	eP	P	04 57 47.0	-0.2
SPB	Sao Paulo	19.71	100	eP	P	04 57 48.5	+0.5
VAO	Valinhos	20.13	98	eP	P	04 57 52.5	-0.2
BDFB	Brasilia	20.41	77	P	P	04 57 55.3	-0.5
	comp=Z,2.4nm,0.5s,baz=254,slow=10,SNR=5.2						
TORD	Torodi Ar. Bea	77.14	70	P	P	05 05 09.0	+0.5
	comp=Z,0.8nm,0.7s,baz=254,slow=5.1,SNR=6.6						
YKA	Yellowknife Ar	91.28	341	P	P	05 06 20.1	+1.1
	comp=Z,0.2nm,0.8s,baz=133,slow=4.5,SNR=5.7						
MKAR	Makanchi Array	145.51	36	PKPbc	PKiKP	05 12 55.2	-0.3
	comp=Z,0.1nm,0.6s,baz=325,slow=5.9,SNR=4.0						

*NEIC **05** 04:57:09.5±1.6, 6°.73N×0°.06×73°.02W±0°.06, h160km±5km, Error ellipse: s-maj=9.7km s-min=7.8km az=115.0*

*IDC **05** 04:57:10.3±0.4, 6°.74N×72°.99W, h161km±4km, mb3.5/15, mb1 3.8/20, mb1mx3.6/41, mbtmp4.1/20, Error ellipse: s-maj=9.9km s-min=6.8km az=123.0*

*RSNC **05** 04:57:11.0±0.8, 6°.80N×73°.14W, h154km±4km, ML4.3, Mw4.1, Fault plane solution: NP1:φs28.00000°, δ39.00000°, λ-8.00000°.*

ISC 05 04:57:09.8±0.4, 6°.81N±0°.03×73°.08W±0°.03, h160km±3km, h160km:pP-P, n103, σ1.22/155, mb3.9/19, 5C-14D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.23	205	⇓iP	Pn	04 57 31.8	+0.1
BARC				eS	Sn	04 57 47.1	-1.2
PAMC	Pamplona, Colo	0.65	35	⇑iP	Pn	04 57 34.7	+1.0
PAMC				i		04 57 55.8	
	comp=Z,1µm,0.4s						
RUSC	La Rusia	0.91	180	⇓iP	Pn	04 57 35.7	+0.3
RUSC				eS	Sn	04 57 54.3	-0.7
RUSC				i		04 57 55.6	
	comp=Z,4µm,0.4s						
RUSC	La Rusia	0.91	180		Pn	04 57 33.6	-1.8
RUSC				Sn	Sn	04 57 52.1	-2.9
TAMC	Tame, Arauca	1.33	106	⇑iP	Pn	04 57 40.0	+1.5
TAMC				eS	Sn	04 58 01.1	+0.6
TAMC				i		04 58 06.2	
	comp=Z,892nm,1.0s						
PTBC	PUERTO BERRIO,	1.39	259	⇓eP	Pn	04 57 38.2	-0.8
PTBC				i		04 58 05.6	
	comp=Z,3µm,0.6s						
OCAC	Ocana	1.44	351	⇑iP	Pn	04 57 39.9	+0.2
OCAC				eS	Sn	04 58 02.4	-0.4
OCAC				i		04 58 08.8	
	comp=Z,2µm,0.3s						
SPBC	San Pablo de B	1.51	221	⇓iP	Pn	04 57 40.6	+0.2
SPBC				eS	Sn	04 58 02.1	-1.7
SPBC				i		04 58 05.5	
	comp=Z,5µm,0.3s						
CTAU	Tausa, Cundina	1.86	211	eP	Pn	04 57 46.5	+2.0
CTAU				i		04 58 15.9	
	comp=Z,3µm,0.4s						
ZARC	Zaragoza, Cauc	1.89	291	eP	Pn	04 57 44.1	-0.2
ZARC				eS	Sn	04 58 09.7	-1.2
ZARC				i		04 58 16.9	
	comp=Z,2µm,0.2s						
NORC	Norcasia	2.16	235	eP	Pn	04 57 47.5	0.0
NORC				eS	Sn	04 58 15.4	-1.2
NORC				i		04 58 23.6	
	comp=Z,1µm,0.2s						
SMLC	San Martn de	2.21	334	⇓eP	Pn	04 57 47.9	-0.1
SMLC				eS	Sn	04 58 17.7	+0.1
SMLC				i		04 58 25.6	
	comp=Z,1µm,0.4s						
CHIC	Chingaza	2.26	197	⇓iP	Pn	04 57 49.5	+0.5
CHIC				eS	Sn	04 58 18.6	-0.6
CHIC				i		04 58 27.2	
	comp=Z,1µm,0.4s						
ROSC	El Rosal	2.31	212	P	Pn	04 57 51.4	+1.9
	comp=Z,284nm,0.3s,baz=89,slow=3.9,SNR=428						
ROSC				S	Sn	04 58 20.8	+0.6
	comp=Z,242nm,0.3s,baz=47,slow=16,SNR=11						
ROSC	El Rosal	2.31	212	⇓iP	Pn	04 57 51.4	+1.9
ROSC				eS	Sn	04 58 20.5	+0.3
ROSC				i		04 58 29.6	
	comp=Z,3µm,0.5s						
ROSC	El Rosal	2.31	212		Pn	04 57 49.9	+0.3
ROSC					Sn	04 58 20.1	-0.1
HELC	Santa Helena	2.51	256	eP	Pn	04 57 51.7	-0.2
HELC				i		04 58 30.5	
	comp=Z,1µm,0.3s						
UREC	San Jos de Ur	2.61	291	eP	Pn	04 57 51.6	-1.1
UREC				eS	Sn	04 58 22.1	-3.9
UREC				i		04 58 34.4	
	comp=Z,964nm,0.4s						
VILC	Villavicencio,	2.74	193	⇓iP	Pn	04 57 54.8	+0.2
VILC				i		04 58 39.7	
	comp=Z,1µm,0.5s						
PTGC	Puerto Gaitan,	2.75	160	⇓iP	Pn	04 57 54.7	+0.1
PTGC				i		04 58 31.4	
	comp=Z,516nm,0.4s						
GUY2C	Guyana, Caldas	2.76	235	eP	Pn	04 57 55.6	+0.5
GUY2C				eS	Sn	04 58 32.3	+2.2
GUY2C				i		04 58 38.8	
	comp=Z,1µm,0.3s						
CBOC	Ciudad Bolivar	3.06	252	⇑eP	Pn	04 57 59.3	+0.8
CBOC				eS	Sn	04 58 36.1	-0.1
CBOC				i		04 58 52.0	
	comp=Z,451nm,0.6s						
DBBC	Dabeiba	3.11	274	⇑eP	Pn	04 57 59.2	+0.1
DBBC				i		04 58 39.5	
	comp=Z,750nm,0.4s						
CODC	Agustn Codazz	3.13	353	eP	Pn	04 57 59.2	0.0
CODC				eS	Sn	04 58 36.8	-0.8
CODC				i		04 58 48.1	
	comp=Z,427nm,0.4s						
SDV	Santo Domingo	3.19	49	P	Pn	04 58 01.1	+0.9
	comp=Z,106nm,0.3s,baz=223,slow=5.3,SNR=652						
SDV				S	Sn	04 58 39.5	+0.3
	comp=Z,83nm,0.3s,baz=282,slow=14,SNR=21						
SDV	Santo Domingo	3.19	49	eP	Pn	04 58 01.1	+0.9
SDV				eS	Sn	04 58 39.7	+0.5
SDV				i		04 58 42.8	
	comp=Z,256nm,0.5s						
SDV	Santo Domingo	3.19	49		Pn	04 58 00.2	+0.1
SDV				Sn	Sn	04 58 38.5	-0.7
PRAC	Prado	3.56	210	⇓eP	Pn	04 58 04.4	-0.4
PRAC				i		04 58 53.0	
	comp=Z,1µm,0.7s						
ELOV	Elorza	3.58	87	eP	Pn	04 58 05.7	+0.8
ORTC	Ortega, Tolima	3.59	217	⇓eP	Pn	04 58 05.3	+0.1
ORTC				i		04 58 54.2	
	comp=Z,923nm,0.5s						
PLMC	San Jos del P	3.70	240	eP	Pn	04 58 07.3	+0.7
PLMC				eS	Sn	04 58 50.1	-0.6
PLMC				i		04 58 53.0	
	comp=Z,351nm,0.2s						
SJCC	San Jacinto, C	3.71	326	⇓iP	Pn	04 58 05.5	-1.2
SJCC				i		04 59 01.7	
	comp=Z,403nm,0.5s						
LCBC	Los crdobas,	3.84	302	eP	Pn	04 58 07.6	-0.7
LCBC				eS	Sn	04 58 52.0	-1.8
LCBC				i		04 58 56.6	
	comp=Z,546nm,0.5s						
GUVC	San Jose del G	4.26	174	eP	Pn	04 58 13.2	-0.6
GUVC				eS	Sn	04 59 03.2	-0.4
GUVC				i		04 59 08.5	
	comp=Z,456nm,0.2s						
YOTC	Yotoco, Valle	4.29	229	eP	Pn	04 58 14.1	-0.2
YOTC				eS	Sn	04 59 04.5	0.0
YOTC				i		04 59 16.2	
	comp=Z,102nm,0.7s						
SMRC	Santa Marta, M	4.48	345	eP	Pn	04 58 16.8	+0.2
SMRC				eS	Sn	04 59 04.7	-4.0
SMRC				i		04 59 10.3	
	comp=Z,264nm,0.8s						
PIZC	Pizarro, Choco	4.63	247	eP	Pn	04 58 20.3	+1.7
PIZC				eS	Sn	04 59 12.3	0.0
PIZC				i		04 59 24.2	
	comp=Z,131nm,0.5s						
MACC	Macarena, Meta	4.69	189	⇓iP	Pn	04 58 18.3	-1.2
MACC				i		04 59 16.1	
	comp=Z,170nm,0.4s						
PTAC	Punta Ardita,	4.71	274	eP	Pn	04 58 18.9	-0.6
PTAC				eS	Sn	04 59 11.8	-2.2
PTAC				i		04 59 25.6	
	comp=Z,392nm,0.2s						
BETC	Betania	4.72	210	eP	Pn	04 58 19.4	-0.5
DABV	Dabajuro	4.75	30	eP	Pn	04 58 20.6	+0.4
URIC	Uribia, Colomb	4.98	12		Pn	04 58 22.2	-1.0
FLOC	Florencia	5.79	206	⇓iP	Pn	04 58 33.5	-0.4
FLOC				eS	Sn	04 59 34.9	-4.9
FLOC				i		04 59 46.0	
	comp=Z,112nm,1.3s						
FLOC	Florencia	5.79	206		Pn	04 58 33.1	-0.8
FLOC				Sn	Sn	04 59 37.6	-2.2
GCUF	Volcan Galeras	6.99	218	eP	Pn	04 58 51.7	+1.5
GCUF				eS	Sn	05 00 08.1	-0.9
GCUF				i		05 00 22.4	
	comp=Z,25nm,0.7s						
OTAV	Otavalo	8.44	220		Pn	04 59 07.2	-2.4
PCRV	Puerto La Cruz	9.00	68	P	Pn	04 59 16.8	+0.3
	comp=Z,2.6nm,0.3s,baz=210,slow=8.0,SNR=9.7						
PLCV	Puerto La Cruz	9.04	68		Pn	04 59 16.8	-0.2
MTDJ	Mount Denham	12.15	339		Pn	04 59 59.4	+1.4
JTS	Las Juntas de	12.24	287	P	P	05 00 07.0	+2.2
	comp=Z,1.0nm,0.3s,baz=135,slow=14,SNR=5.4						
JTS	Las Juntas de	12.24	287		Pn	04 59 58.0	-1.1
SJG	San Juan	13.11	30	P	Pn	05 00 10.2	0.0
	comp=Z,1.7nm,0.3s,baz=201,slow=19,SNR=5.9						
SJG	San Juan	13.11	30	P	Pn	05 00 08.3	-1.9
SAML	Samuel	18.50	148	P	P	05 01 12.4	-1.6
SAML				IAmb	IAmb	05 01 14.8	
	comp=Z,8.3nm,0.8s						
TEIG	Tepich	19.88	314	P	P	05 01 30.8	+1.9
	comp=Z,1.7nm,0.3s,baz=109,slow=5.9,SNR=11						
TEIG	Tepich	19.88	314	P	P	05 01 29.6	+0.8
TEIG				IAmb	IAmb	05 01 34.2	
	comp=Z,14nm,1.1s						
LPAZ	La Paz	23.46	168	P	P	05 02 05.3	-0.5
	comp=Z,1.0nm,0.3s,baz=333,slow=8.7,SNR=4.6						
LPAZ				pP	pP	05 02 37.0	+0.6
	comp=Z,6.7nm,0.8s,baz=349,slow=15,SNR=7.2						
LPAZ	La Paz	23.46	168	P	P	05 02 01.2	-4.5
SIV	San Ignacio	25.58	152	P	P	05 02 23.2	-1.1
	comp=Z,1.8nm,0.8s,baz=348,slow=8.9,SNR=10						
SIV				pP	pP	05 02 57.0	-1.2
	comp=Z,2.7nm,0.9s,baz=319,slow=8.0,SNR=4.3						
V48A	Smith Brothers	31.44	338	P	P	05 03 16.6	+0.5
BDFB	Brasilia	33.38	132	P	P	05 03 33.6	+0.2
	comp=Z,4.5nm,0.7s,baz=305,slow=12,SNR=6.5						
BDFB	Brasilia	33.38	132	P	P	05 03 31.7	-1.6
BDFB				IAmb	IAmb	05 03 34.1	
	comp=Z,6.6nm,1.1s						
P51A	Williamsport	33.75	346	P	P	05 03 36.7	+0.5
U40A	Yellville	34.53	331	P	P	05 03 43.5	+0.5
U40A					pP	05 04 19.1	+2.1
CCM	Cathedral Cave	35.20	335	P	P	05 03 48.4	-0.3
CCM				IAmb	IAmb	05 03 50.7	
	comp=Z,6.1nm,0.7s						
TXAR	Lajitas Array	36.50	312	P	P	05 04 01.2	+1.1
	comp=Z,0.4nm,0.5s,baz=125,slow=9.5,SNR=10						
TXAR				pP	pP	05 04 34.8	+0.4
	comp=Z,0.4nm,0.6s,baz=129,slow=9.0,SNR=3.3						
TXAR				PcP	PcP	05 06 22.2	+1.7
	comp=Z,0.7nm,0.6s,baz=142,slow=6.0,SNR=7.8						
TXAR	Lajitas Array	36.50	312	P	P	05 04 00.4	+0.4
TXAR					pP	05 04 34.1	-0.2
TXAR					PcP	05 06 20.6	+0.2
WUAZ	Wupatki	45.26	315	P	P	05 05 12.2	+0.5
WUAZ				IAmb	IAmb	05 05 15.3	
	comp=Z,3.8nm,1.0s						
ULM	Lac du Bonnet	47.31	340	P	P	05 05 27.9	+0.6
	comp=Z,1.4nm,0.5s,baz=155,slow=6.7,SNR=4.5						
ULM	Lac du Bonnet	47.31	340	P	P	05 05 27.6	+0.3
PDAR	Pinedale Array	48.11	324	P	P	05 05 34.4	+0.5
	comp=Z,0.3nm,0.6s,baz=118,slow=9.9,SNR=3.8						
PDAR				pP	pP	05 06 11.1	+1.3
	comp=Z,0.3nm,0.6s,baz=123,slow=8.0,SNR=2.8						
PDAR				PcP	PcP	05 06 59.4	+0.4
	comp=Z,0.2nm,0.4s,baz=112,slow=6.6,SNR=4.1						
PDAR	Pinedale Array	48.11	324	P	P	05 05 32.9	-1.0
PDAR					pP	05 06 09.6	-0.2
PDAR					PcP	05 06 59.0	0.0
SCHQ	Schefferville	48.15	5	P	P	05 05 34.8	+1.1
	comp=Z,2.6nm,0.5s,baz=212,slow=7.2,SNR=5.9						
SCHQ	Schefferville	48.15	5	P	P	05 05 33.9	+0.2
SCHQ				IAmb	IAmb	05 05 35.5	
	comp=Z,1.4nm,0.4s						
NVAR	Mina Array Bea	51.52	315	P	P	05 06 01.0	+1.3
	comp=Z,0.5nm,0.7s,baz=136,slow=8.8,SNR=3.9						
NVAR				pP	pP	05 06 37.0	+0.9
	comp=Z,0.5nm,0.8s,baz=128,slow=7.3,SNR=2.4						
NVAR				PcP	PcP	05 07 12.5	+0.9
	comp=Z,0.3nm,0.5s,baz=133,slow=5.0,SNR=3.3						
NVAR	Mina Array Bea	51.52	315	P	P	05 05 59.9	+0.3
NVAR					pP	05 06 36.4	+0.4
NVAR					PcP	05 07 10.7	-0.9
YKA	Yellowknife Ar	63.29	340	P	P	05 07 22.1	+0.8
	comp=Z,1.5nm,0.6s,baz=134,slow=6.6,SNR=45						
YKA				pP	pP	05 08 00.2	+1.1
	comp=Z,1.9nm,0.9s,baz=130,slow=7.1,SNR=4.9						
TIC	Toumodi	67.54	86	eP	P	05 07 48.0	-1.6
LIC	Lamto	67.56	86	eP	P	05 07 48.7	-1.0
	comp=Z,12nm,0.7s						
DBIC	Dimbokro	67.70	86	P	P	05 07 49.7	-0.8
	comp=Z,4.0nm,0.7s,baz=263,slow=5.1,SNR=8.5						
DBIC	Dimbokro	67.70	86	P	P	05 07 49.0	-1.5
DBIC				IAmb	IAmb	05 07 50.6	
	comp=Z,3.7nm,0.7s						
KIC	Kosan Boka	67.84	86	eP	P	05 07 50.4	-1.0
	comp=Z,15nm,0.8s						
INK	Inuvik	73.06	340	P	P	05 08 22.8	+0.8
	comp=Z,1.0nm,0.6s,baz=85,slow=4.5,SNR=6.5						
INK	Inuvik	73.06	340	P	P	05 08 22.8	+0.8
INK				pP	pP	05 09 01.5	+0.5
TORD	Torodi Ar. Bea	73.70	78	P	P	05 08 25.6	-1.2
	comp=Z,0.5nm,0.4s,baz=283,slow=6.0,SNR=6.2						
TORD				pP	pP	05 09 07.3	+0.6
	comp=Z,0.5nm,0.8s,baz=284,slow=5.8,SNR=2.5						
TORD	Torodi Ar. Bea	73.70	78	P	P	05 08 25.1	-1.7
TORD					pP	05 09 05.2	-1.5
ILAR	Eielson Array	76.99	335	P	P	05 08 45.4	+0.7
	comp=Z,0.3nm,0.7s,baz=114,slow=3.7,SNR=4.9						
ILAR	Eielson Array	76.99	335	P	P	05 08 45.0	+0.3
NOA	NORSAR Array B	81.32	29	P	P	05 09 09.3	+1.0
	comp=Z,0.8nm,0.8s,baz=269,slow=5.3,SNR=3.1						
ARCES	ARCESS Array B	86.67	20	P	P	05 09 35.4	+0.2
	comp=Z,4.2nm,1.1s,baz=20,slow=3.9,SNR=5.2						
ZALV	Zalesovo Beam	116.67	14	PKP	PKiKP	05 15 35.2	+0.1
	comp=Z,0.4nm,0.3s,baz=349,slow=3.0,SNR=4.5						
ZALV	Zalesovo Beam	116.67	14		PKPdf	05 15 34.1	-0.9
MKAR	Makanchi Array	122.32	20	PKP	PKPdf	05 15 46.1	-0.1
	comp=Z,0.4nm,0.4s,baz=303,slow=2.4,SNR=15						
MKAR	Makanchi Array	122.32	20		PKPdf	05 15 45.9	-0.3
SONM	Songino Array	125.59	0	PKP	PKiKP	05 15 53.2	+0.2
	comp=Z,0.5nm,0.5s,baz=320,slow=1.3,SNR=6.1						
SONM	Songino Array	125.59	0		PKPdf	05 15 52.2	-0.3
STKA	Stephens Creek	139.17	228	PKP	PKPdf	05 16 18.1	-0.2
	comp=Z,1.0nm,0.3s,baz=84,slow=9.2,SNR=3.0						
STKA	Stephens Creek	139.17	228		PKPdf	05 16 17.4	-1.0
ASAR	Alice Springs	149.13	234	PKP	PKPdf	05 16 36.1	+0.2
	comp=Z,6.2nm,0.7s,baz=116,slow=3.8,SNR=23						
ASAR				PKPbc	PKPbc	05 16 39.8	-0.5
	comp=Z,5.2nm,0.7s,baz=116,slow=1.6,SNR=8.5						
ASAR	Alice Springs	149.13	234		PKPdf	05 16 35.1	-0.8
WRA	Warramunga Arr	150.36	241	PKP	PKPdf	05 16 38.2	+0.2
	comp=Z,2.7nm,0.6s,baz=105,slow=2.8,SNR=4.7						
WRA				PKPbc	PKPbc	05 16 42.9	-0.4
	comp=Z,4.1nm,0.5s,baz=107,slow=2.9,SNR=36						
WRA				pPKPbc	pPKPbc	05 17 24.7	-0.9
	comp=Z,1.3nm,0.5s,baz=105,slow=3.1,SNR=2.6						
WRA	Warramunga Arr	150.36	241		PKPdf	05 16 36.0	-1.9
CMAR	Chiang Mai Arr	153.69	17	PKPbc	PKiKP	05 16 51.1	+0.2
	comp=Z,1.5nm,0.6s,baz=332,slow=3.6,SNR=5.4						

IDC 05 05:15:24.0±2.2, 6°.97S×128°.68E, h0km, mb3.4/1, mb1 3.6/3, mb1mx3.3/23, mbtmp3.4/3, ML3.4/2, Error ellipse: s-maj=146.0km s-min=32.7km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.01	157	Pn	Pn	05 18 43.6	-0.4
	0.2nm,0.3s,baz=336,slow=11,SNR=5.3						
WRA				Sn	Sn	05 21 12.8	-7.6
	0.2nm,0.3s,baz=318,slow=24,SNR=4.5						
ASAR	Alice Springs	17.34	164	P	Pn	05 19 28.0	+0.3
	0.1nm,0.3s,baz=340,slow=10,SNR=8.8						
ASAR				S	Sn	05 22 32.6	-8.8
	0.2nm,0.3s,baz=312,slow=21,SNR=6.4						
MKAR	Makanchi Array	67.49	327	P	P	05 26 21.9	0.0
	0.3nm,0.7s,baz=130,slow=7.1,SNR=4.0						

*NIC **05** 05:26:48.9±0.0, 35°.51N×31°.36E, h4km±4km, Md3.1/1, Ml3.1/2*

*DDA **05** 05:26:52.5, 35°.40N×31°.52E, h6km±3km, ML2.2*

*ISK **05** 05:26:55.3, 35°.42N×31°.74E, h10km, ML2.5/10*

ISC 05 05:26:52.9±1.4, 35°.43N±0°.04×31°.58E±0°.04, h4km±11km, n27, σ0.96/40, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMS	Akamas	0.74	123	P	Pg	05 27 07.3	+0.2
AKMS				S	Sb	05 27 20.4	+1.5
AKMS				AML	AML	05 27 20.6	
	3.7nm,0.4s						
AKMS				AML	AML	05 27 20.6	
	3.7nm,0.4s						
AKMS				AML	AML	05 27 21.2	
	1.4nm,0.3s						
AKMS				AML	AML	05 27 21.2	
	1.4nm,0.3s						
ALFC	Alefka	0.87	108	P	Pg	05 27 09.6	-0.1
ALFC				S	Sn	05 27 25.3	0.0
ALFC				AMd		05 28 07.8	
ALFC				AMd		05 28 07.8	
GAZI	Gazipasa	1.00	36	PG	Pn	05 27 13.7	-0.1
GAZI				SG	Sb	05 27 27.2	+0.7
GAZI	Gazipasa	1.00	36	iP	Pn	05 27 13.7	-0.1
GAZI				iS	Sn	05 27 28.2	-0.2
GAZI				IAML		05 27 29.0	
	comp=N,93nm,0.8s						
GAZI				IAML		05 27 33.0	
	comp=E,52nm,0.4s						
NATA	Nata	1.04	128	P	Pb	05 27 13.5	0.0
NATA				S	Sn	05 27 30.3	+1.1
NATA				AML	AML	05 27 30.5	
	comp=E,1.2nm,0.3s						
NATA				AML	AML	05 27 30.5	
	comp=E,1.2nm,0.3s						
NATA				AML	AML	05 27 30.8	
	comp=E,1.4nm,0.4s						
NATA				AML	AML	05 27 30.8	
	comp=E,1.4nm,0.4s						
LEF	Lefka	1.11	106	PG	Pg	05 27 14.1	-0.2
LEF	Lefka	1.11	106	iP	Pg	05 27 13.6	-0.7
LEF				iS	Sg	05 27 29.1	+0.4
LEF				IAML		05 27 33.0	
	comp=E,80nm,0.4s						
LEF				IAML		05 27 34.0	
	comp=N,107nm,0.7s						
SZAC	Souni	1.26	122	P	Pn	05 27 15.7	-1.6
AKUM	Antalya-Kumluc	1.35	312	iP	Pg	05 27 18.4	-0.4
AKUM				iS	Sn	05 27 36.9	0.0
AKUM				IAML		05 27 41.0	
	comp=N,75nm,1.3s						
AKUM				IAML		05 27 41.0	
	comp=E,39nm,0.5s						
TEKE	Tekeli-Mersin	1.44	60	PN	Pb	05 27 20.5	+0.2
KEPZ	Antalya-Kepez	1.47	1	iP	Pn	05 27 19.7	-0.6
KEPZ				iS	Sg	05 27 40.6	+0.4
KEPZ				IAML		05 27 47.0	
	comp=E,26nm,0.7s						
KEPZ				IAML		05 27 49.0	
	comp=N,22nm,0.7s						
CSS	Mathiatis	1.50	107	PN	Pn	05 27 21.1	+0.4
ASGA	Asgata	1.51	115	P	Pn	05 27 19.5	-1.2
BERE	Bereket-Mersin	1.62	55	PN	Pb	05 27 23.2	-0.3
ERMK	Ermenek	1.62	41	iP	Pg	05 27 24.1	0.0
ERMK				iS	Sg	05 27 47.8	+2.7
ERMK				IAML		05 27 54.0	
	comp=E,35nm,0.3s						
ERMK				IAML		05 27 58.0	
	comp=N,41nm,0.3s						
HDMB	Hadim	1.70	25	PN	Pb	05 27 25.1	+0.2
AKKU	Akkuyu-Mersin	1.76	65	PN	Pn	05 27 24.9	+0.7
GULN	MERSIN_Gulnar	1.77	64	iP	Pn	05 27 24.0	-0.3
GULN				iS	Sn	05 27 48.2	+1.0
GULN				IAML		05 27 57.0	
	comp=N,14nm,0.6s						
GULN				IAML		05 28 02.0	
	comp=E,16nm,0.6s						
TEVE	Tevekalti-Mers	1.82	56	PN	Pb	05 27 26.1	-0.7
KORT	Korkueli	1.86	328	PN	Pg	05 27 29.2	+0.6
IKL	Isikli	1.89	64	PN	Pb	05 27 27.1	-0.9
KEBE	Keben-Mersin	2.01	59	PN	Pn	05 27 28.7	+1.0
KMER	Konya-Meram	2.42	15	iP	Pb	05 27 37.4	+0.2
KMER				iS	Sg	05 28 09.6	-1.1
KMER				IAML		05 28 16.0	
	comp=E,24nm,0.5s						
KMER				IAML		05 28 16.0	
	comp=N,15nm,0.5s						
GOLH	Golhisar	2.44	319	iP	Pn	05 27 34.2	+0.6
DOGA	KONYA_Doganhis	2.68	1	iP	Pb	05 27 41.0	-0.5
DOGA				iS	Sb	05 28 14.0	-0.7
DOGA				IAML		05 28 24.0	
	comp=N,12nm,0.6s						
DOGA				IAML		05 28 26.0	
	comp=E,7.3nm,0.6s						
KERG	Konya-Eregli	2.85	45	iP	Pb	05 27 42.9	-1.6
KERG				iS	Sb	05 28 19.0	-0.9
KERG				IAML		05 28 24.0	
	comp=N,10nm,0.3s						
KERG				IAML		05 28 24.0	
	comp=E,15nm,0.5s						
GULE	Gulek	3.18	53	iP	Pb	05 27 47.6	-2.4

*ASRS **05** 05:29:53.9, 54°.22N×87°.26E, M1.6, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 05 05:29:58.6±3.7, 54°.08N×87°.04E, h0km, mb3.6, mpv3.2, 2C-7D, Error ellipse: s-maj=36.8km s-min=24.8km az=164.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	Kurchatov	6.16	240	⇓Pn	Pn	05 31 29.7	-1.0
	1.7nm,0.8s						
KURK				⇓Sn	Sn	05 32 42.8	+1.0
	2.5nm,0.9s						
KURK				⇑Lg	Lg	05 33 17.6	
	20nm,1.4s						
KURBB	Kurchatov Arra	6.26	240	⇓Pn	Pn	05 31 32.9	+0.8
	4.6nm,1.1s						
KURBB				⇓Sn	Sn	05 32 44.7	+0.5
	3.8nm,0.6s						
KURBB				⇓Lg	Lg	05 33 19.2	
	20nm,1.1s						
MK31	Makanchi Array	7.90	204	⇓Pn	Pn	05 31 56.1	+1.4
	0.7nm,0.8s,baz=27,slow=14,SNR=12						
MK31				⇓Sn	Sn	05 33 24.5	-0.2
	1.4nm,0.9s,baz=32,slow=28,SNR=3.4						
MK31				⇑Lg	Lg	05 34 11.2	
	3.5nm,0.8s,baz=45,slow=34,SNR=3.6						

*IDC **05** 06:13:38.9±3.5, 32°.06N×140°.78E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.4/33, mbtmp3.4/5, ML2.3/1, Error ellipse: s-maj=132.7km s-min=17.0km az=67.0*

*JMA **05** 06:13:38.5±0.1, 32°.51N×141°.50E, h82km, M3.3*

ISC 05 06:13:40.6±1.3, 32°.50N±0°.08×141°.5E±0°.1, h31km, n12, σ1.86/15, mb3.6/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.51	294	P	Pn	06 14 04.8	-0.7
JHJ	Hachijo jima 2	1.54	294	Pn	Pn	06 14 05.0	-0.9
	41nm,0.3s,baz=307,slow=20,SNR=8.1						
JHJ				Sn	Sn	06 14 22.5	-2.3
	51nm,0.3s,baz=108,slow=20,SNR=5.0						
BSO1	Boso 1	2.18	350	P	Pn	06 14 13.6	-0.7
BSO1				eS	Sn	06 14 40.2	+0.2
BSO3	Boso 3	2.43	341	eS	Sn	06 14 45.5	-0.9
JOD2	Odawara 2	3.39	325	eS	Sn	06 15 09.9	-0.6
JHU	Hanno	3.80	332	eS	Sn	06 15 19.2	-1.4
MJAR	Matsushiro Arr	4.84	327	Pn	Pn	06 14 54.5	+3.2
	0.1nm,0.3s,baz=150,slow=12,SNR=3.4						
JFT	Otama	5.09	350	P	Pn	06 14 53.9	-0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
JFT				eS	Sn	06 15 48.7	-3.7
SONM	Songino Array	30.55	310	P	P	06 19 53.2	+1.9
	0.5nm,0.6s,baz=107,slow=8.2,SNR=4.0						
MKAR	Makanchi Array	46.67	306	P	P	06 22 07.5	+1.2
	0.4nm,0.5s,baz=88,slow=9.8,SNR=19						
WRA	Warramunga Arr	52.59	188	P	P	06 22 50.5	-1.0
	0.4nm,0.4s,baz=6.9,slow=7.6,SNR=4.7						
ASAR	Alice Springs	56.32	188	P	P	06 23 17.7	-0.9
	0.3nm,0.8s,baz=5.5,slow=6.0,SNR=2.9						

ATH 05 06:17:51.9, 35.17N×23.65E, h17km±3km, ML3.4/6, Error ellipse: s-maj=3.6km s-min=1.1km az=57.0
THE 05 06:17:52.4, 35.16N×23.67E, h0km±1km, ML3.6/7, Error ellipse: s-maj=2.3km s-min=0.7km az=251.0
ISC 05 06:17:52.3±1.2, 35.15N±0.04×23.65E±0.04, h14km±7km, n29, σ0.67/43, Crete

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.09	18	P	Pg	06 17 55.4	+0.1
IMMV	Iera Moni Meta	0.41	41	P	Pg	06 18 00.3	-0.2
IMMV				S	Sg	06 18 06.3	+0.2
	8μm,0.4s						
IMMV	Iera Moni Meta	0.41	41	P	Pg	06 18 00.3	-0.2
IMMV				S	Sg	06 18 06.0	-0.1
IMMV				AML	AML	06 18 07.0	
	comp=E,18119μm,0.5s						
IMMV				AML	AML	06 18 07.3	
	comp=N,12954μm,0.3s						
RODP	Rodopos	0.42	12	P	Pg	06 18 00.4	-0.3
RODP				S	Sb	06 18 07.8	+0.1
GVDS	Gavdos	0.47	130	P	Pg	06 18 01.1	-0.5
GVDS				S	Sb	06 18 09.0	-0.2
	comp=N,16μm,0.2s						
GVD	Gavdhos	0.47	131	P	Pg	06 18 01.4	-0.2
GVD				S	Sb	06 18 09.2	0.0
	comp=N,17μm,0.2s						
GVD	Gavdhos	0.47	131	P	Pg	06 18 01.3	-0.2
GVD				S	Sb	06 18 09.1	-0.1
GVD				AML	AML	06 18 11.0	
	comp=N,26400μm,0.3s						
GVD				AML	AML	06 18 11.2	
	comp=E,42286μm,0.2s						
CHAN	Chania	0.49	41	P	Pg	06 18 01.8	-0.1
CHAN				S	Sg	06 18 08.4	0.0
	comp=E,1μm,0.3s						
VAM	Vamos	0.52	60	P	Pg	06 18 02.0	-0.4
VAM				S	Sb	06 18 10.0	-0.5
	comp=E,5μm,0.3s						
VAM	Vamos	0.52	60	P	Pg	06 18 02.1	-0.4
VAM				S	Sg	06 18 09.4	0.0
VAM				AML	AML	06 18 11.9	
	comp=E,11910μm,0.3s						
VAM				AML	AML	06 18 11.9	
	comp=N,8922μm,0.3s						
PRNS	Prines Rethymn	0.73	73	P	Pg	06 18 04.6	-1.8
ANKY	Antikythira Is	0.77	338	P	Pg	06 18 06.6	-0.6
ANKY	Antikythira Is	0.77	338	P	Pg	06 18 06.6	-0.6
ANKY				S	Sg	06 18 16.5	-0.9
ANKY				AML	AML	06 18 21.5	
	comp=N,1450μm,0.5s						
ANKY				AML	AML	06 18 27.0	
	comp=E,2472μm,0.8s						
SIVA	Sivas	0.96	98	P	Pg	06 18 09.9	-0.9
SIVA				S	Sn	06 18 25.4	+0.7
	comp=E,3μm,0.2s						
SIVA	Sivas	0.96	98	P	Pg	06 18 10.1	-0.7
SIVA				S	Sb	06 18 24.2	+1.0
SIVA				AML	AML	06 18 28.7	
	comp=E,7537μm,0.3s						
SIVA				AML	AML	06 18 29.4	
	comp=N,4799μm,0.2s						
IDI	Anoyia	1.02	82	P	Pg	06 18 10.6	-1.5
KTHA	Kythira Island	1.20	337	P	Pb	06 18 14.4	-0.5
KTHA	Kythira Island	1.20	337	P	Pb	06 18 14.6	-0.3
KTHA				S	Sb	06 18 30.8	+0.4
KTHA				AML	AML	06 18 37.4	
	comp=N,1636μm,0.6s						
KTHA				AML	AML	06 18 38.8	
	comp=E,2432μm,0.5s						
KTHR	Kythira	1.23	335	P	Pb	06 18 14.8	-0.5
LAST	Lasithi	1.50	89	P	Pn	06 18 18.9	+0.1
LAST	Lasithi	1.50	89	P	Pn	06 18 19.1	+0.3
NPS	Neapolis	1.61	85	P	Pn	06 18 22.2	+0.4
MHLO	Agia Marina, M	1.65	21	P	Pb	06 18 22.2	-0.3
MHLO				S	Sg	06 18 44.3	-1.2
	comp=E,1μm,0.4s						
MHLO	Agia Marina, M	1.65	21	P	Pb	06 18 22.2	-0.3
VLI	Veliai	1.67	340	P	Pb	06 18 22.4	-0.4
VLI	Veliai	1.67	340	P	Pb	06 18 22.5	-0.4
THR3	Thira Island,	1.90	48	P	Pn	06 18 25.6	+1.4
IOSP	Ios island	2.06	40	P	Pn	06 18 27.4	+1.0
DID	Didima	2.38	352	P	Pn	06 18 31.9	+1.1

IDC 05 06:23:33.6±4.1, 4.64S×154.03E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/28, mbtmp3.5/3, Error ellipse: s-maj=148.3km s-min=36.1km az=110.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.48	230	P	P	06 28 55.0	+0.3
	0.5nm,0.5s,baz=54,slow=9.7,SNR=4.9						
ASAR	Alice Springs	27.10	224	P	P	06 29 18.4	0.0
	0.3nm,0.4s,baz=56,slow=9.0,SNR=6.5						
MKAR	Makanchi Array	81.02	319	P	P	06 35 50.9	+0.4
	0.4nm,0.9s,baz=94,slow=5.8,SNR=3.2						
TORD	Torodi Ar. Bea	151.42	289	PKPbc	PKPbc	06 43 29.8	-0.8
	0.2nm,0.4s,baz=48,slow=3.5,SNR=3.9						

IDC 05 06:29:26.6±7.4, 18.79S×169.22E, h200km±77km, mb3.5/2, mb1 3.6/3, mb1mx3.2/24, mbtmp3.9/3, Error ellipse: s-maj=134.2km s-min=43.5km az=164.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.18	218	P	Pn	06 30 31.4	+0.8
	2.1nm,0.3s,baz=64,slow=18,SNR=14						
DZM				S	Sn	06 31 20.8	-0.2
	1.1nm,0.3s,baz=128,slow=19,SNR=2.1						
WRA	Warramunga Arr	32.89	262	P	P	06 35 41.9	-0.3
	0.3nm,0.3s,baz=82,slow=6.0,SNR=6.1						
ASAR	Alice Springs	33.22	255	P	P	06 35 45.1	+0.2
	3.1nm,0.4s,baz=82,slow=8.8,SNR=67						
ARCES	ARCESS Array B	124.63	345	PKP	PKPdf	06 48 01.1	-0.5
	1.4nm,0.8s,baz=82,slow=1.4,SNR=3.7						

IDC 05 06:43:16.5±2.2, 5.99S×147.66E, h0km, mb3.8/4, mb1 4.0/6, mb1mx3.7/28, mbtmp3.8/6, ML3.2/2, Error ellipse: s-maj=63.2km s-min=26.0km az=94.0
ISC 05 06:43:26.0±2.3, 6.3S±0.1×147.7E±0.4, h77km, n7, σ1.14/8, mb3.7/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.15	189	Pn	Pn	06 44 12.5	-0.8
	27nm,0.3s,baz=4.1,slow=8.2,SNR=52						
PMG				Sn	Sn	06 44 49.7	-0.1
	17nm,0.3s,baz=30,slow=20,SNR=3.3						
WRA	Warramunga Arr	18.76	222	P	Pn	06 47 39.1	-1.2
	0.3nm,0.3s,baz=44,slow=12,SNR=5.8						
ASAR	Alice Springs	21.77	216	P	P	06 48 12.2	+0.6
	2.3nm,0.5s,baz=53,slow=9.0,SNR=46						
FITZ	Fitzroy Crossi	24.49	239	P	P	06 48 39.3	+1.2
	1.3nm,0.4s,baz=52,slow=11,SNR=4.6						
STKA	Stephens Creek	26.09	192	P	P	06 48 54.1	+1.5
	1.2nm,0.4s,baz=9.4,slow=10,SNR=3.9						
MKAR	Makanchi Array	78.13	320	P	P	06 55 16.3	-0.5
	0.2nm,0.4s,baz=107,slow=5.0,SNR=5.1						
TORD	Torodi Ar. Bea	145.80	284	PKPbc	PKPab	07 02 57.6	-0.3
	1.4nm,0.7s,baz=74,slow=3.3,SNR=7.6						

IDC 05 06:50:39.5±2.0, 5.98S×130.09E, h0km, mb3.2/1, mb1 3.6/4, mb1mx3.4/35, mbtmp3.4/4, ML3.5/3, Error ellipse: s-maj=79.6km s-min=27.8km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.80	199	Pn	Pn	06 53 43.8	+0.8
	0.3nm,0.3s,baz=27,slow=10,SNR=7.5						
FITZ				Sn	Sn	06 55 51.6	-15
	0.2nm,0.3s,baz=247,slow=15,SNR=3.5						
WRA	Warramunga Arr	14.48	164	Pn	Pn	06 54 06.1	+0.2
	0.2nm,0.3s,baz=343,slow=10,SNR=11						
WRA				Sn	Sn	06 56 29.4	-18
	baz=338,slow=22,SNR=2.0						
ASAR	Alice Springs	17.96	169	P	Pn	06 54 50.1	-0.8
	0.1nm,0.3s,baz=350,slow=10,SNR=9.6						
ASAR				S	Sn	06 57 54.0	-18
	0.0nm,0.3s,baz=356,slow=26,SNR=3.0						
MKAR	Makanchi Array	67.43	327	P	P	07 01 37.1	0.0
	0.1nm,0.4s,baz=112,slow=8.8,SNR=2.6						

THE 05 06:56:35.8, 38.18N×20.38E, h10km±1km, ML2.6/2, Error ellipse: s-maj=1.5km s-min=0.8km az=233.0
ATH 05 06:56:36.1, 38.18N×20.39E, h9km±2km, ML2.6/2, Error ellipse: s-maj=2.4km s-min=1.2km az=274.0
ISC 05 06:56:35.9±1.9, 38.18N±0.04×20.39E±0.06, h11km±7km, n16, σ0.37/29, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.01	321	P	Pg	06 56 37.8	0.0
CHV1				S	Sg	06 56 38.6	-0.4
KEF3	Kipouria, Keph	0.04	309	P	Pg	06 56 38.0	0.0
KEF3				S	Sg	06 56 39.6	+0.2
LXR1	Lixouri, Cepha	0.05	61	P	Pg	06 56 38.1	+0.1
LXR1				S	Sg	06 56 39.8	+0.3
ARG2	Argostoli	0.08	90	P	Pg	06 56 38.4	+0.1
ARG2				S	Sg	06 56 39.5	-0.5
KEF2	Argostoli. Kep	0.08	99	P	Pg	06 56 38.3	-0.1
KEF2				S	Sg	06 56 39.8	-0.3
KEF1	Kardakata, Kep	0.12	34	P	Pg	06 56 39.2	+0.3
KEF1				S	Sg	06 56 40.8	-0.1
VLS	Valsamata	0.16	90	P	Pg	06 56 39.4	-0.1
VLS				S	Sg	06 56 42.1	+0.1
	4μm,0.1s						
VLS	Valsamata	0.16	90	P	Pg	06 56 39.4	-0.1
VLS				S	Sg	06 56 42.1	+0.1
VLS				AML	AML	06 56 42.2	
	comp=E,9285μm,0.2s						
VLS				AML	AML	06 56 42.3	
	comp=N,7866μm,0.2s						
VSK1	VASILIKIADES	0.27	31	P	Pg	06 56 41.4	-0.1
VSK1				S	Sg	06 56 45.8	+0.7
KFL	Anninata	0.32	102	P	Pg	06 56 42.2	-0.2
KFL				S	Sg	06 56 47.3	+0.5
	comp=N,1μm,0.4s						
VLMS	Volimes, Zakyn	0.37	144	P	Pg	06 56 43.3	-0.1
VLMS				S	Sg	06 56 48.7	+0.4
VLMS				AML	AML	06 56 50.4	
	comp=N,2082μm,0.5s						
VLMS				AML	AML	06 56 51.1	
	comp=E,1703μm,0.1s						
EVGI	Lefkada island	0.49	25	P	Pg	06 56 44.7	-0.8
EVGI				S	Sg	06 56 52.2	+0.2
EVGI	Lefkada island	0.49	25	P	Pg	06 56 45.2	-0.3
MGNA	Meganis	0.57	34	P	Pg	06 56 47.1	0.0
MGNA				S	Sg	06 56 55.4	+0.7
PDO	Prodromos	0.75	56	P	Pg	06 56 50.2	-0.4
PVO	Paravola	1.00	64	P	Pg	06 56 54.9	-0.2

MOS 05 07:02:41.3±0.9, 52.35N×154.11E, h480km, mb4.0/3, Error ellipse: s-maj=17.5km s-min=9.2km az=72.4
KRSC 05 07:02:43.2±2.3, 52.28N×155.07E, h490km±30km, ML4.2
IDC 05 07:02:43.8±0.8, 52.75N×153.45E, h437km±10km, mb3.1/11, mb1 3.1/15, mb1mx2.9/46, mbtmp3.8/15, Error ellipse: s-maj=23.3km s-min=13.4km az=156.0
ISC 05 07:02:42.4±0.6, 52.51N±0.06×153.78E±0.07, h450km, n55, σ2.47/64, mb3.5/13, 3C-5D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.34	141	eS	S	07 04 37.5	+1.9
SKR	Severo-Kuril's	2.34	141	⇑iPN	P	07 03 45.2	+0.3
PEA0B	Petropavlovsk-	2.46	74	d iPN	P	07 03 46.1	+0.6
PETK	Petropavlovsk-	2.46	74	P	P	07 03 46.1	+0.6
	1.2nm,0.3s,baz=257,slow=2.0,SNR=15						
PETK				S	S	07 04 38.1	+1.2
	0.2nm,0.3s,baz=249,slow=18,SNR=2.9						
ASAK	Asacha	2.53	91	eP	P	07 03 47.2	+1.1
ASAK				eS	S	07 04 37.5	-0.5
ASAK	Asacha	2.53	91	PN	P	07 03 47.2	+1.1
ASAK				S	S	07 04 37.5	-0.5
MTVR	Mutnovka	2.69	89	eP	P	07 03 46.5	-0.8
MTVR	Mutnovka	2.69	89	PN	P	07 03 46.5	-0.8
RUS	Russkaya	2.90	90	eP	P	07 03 48.8	+0.3
RUS				eS	S	07 04 40.3	-2.1
RUS	Russkaya	2.90	90	PN	P	07 03 48.8	+0.3
RUS				S	S	07 04 40.3	-2.1
PET	Petropavlovsk	3.01	78	eS	S	07 04 42.7	-1.1
KRX	Arik	3.07	72	eP	P	07 03 51.3	+1.3
KRX	Arik	3.07	72	PN	P	07 03 51.3	+1.3
UGLR	Uglovaya	3.14	75	eP	P	07 03 52.3	+1.8
UGLR	Uglovaya	3.14	75	PN	P	07 03 52.3	+1.8
SDLR	Sedlovina	3.19	74	eP	P	07 03 51.9	+1.1
SDLR	Sedlovina	3.19	74	PN	P	07 03 51.9	+1.1
SPN	Mys Shipunski	3.84	79	eS	S	07 04 50.3	-5.7
ESO	Esso	4.48	38	eP	P	07 04 02.9	+1.3
ESO	Esso	4.48	38	PN	P	07 04 02.9	+1.3
TUMR	Tumrok	4.68	51	eP	P	07 04 06.6	+3.0
TUMR	Tumrok	4.68	51	PN	P	07 04 05.5	+1.9
TUMD	Tumrok D	4.76	53	eP	P	07 04 05.5	+1.2
KMNR	Kamenistaya	5.00	47	eP	P	07 04 08.4	+1.8
KMNR	Kamenistaya	5.00	47	PN	P	07 04 08.4	+1.8
SRDR	Sredinnyy	5.15	40	eP	P	07 04 09.3	+1.2
SRDR	Sredinnyy	5.15	40	PN	P	07 04 09.3	+1.2
SRKR	Sorokina	5.97	43	eP	P	07 04 19.2	+3.0
SRKR	Sorokina	5.97	43	PN	P	07 04 19.2	+3.0
KBTR	Krutoberegovo	6.45	51	eP	P	07 04 20.7	-0.4
KBTR				eS	S	07 05 36.4	-5.6
KBTR	Krutoberegovo	6.45	51	PN	P	07 04 20.7	-0.4
KBTR				S	S	07 05 36.4	-5.6
YSS	Yuzh-Sakhalins	9.04	236	ePN	P	07 04 51.7	+2.7
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SHO	Shikotan	9.81	211	ePN	P	07 04 56.4	-1.0
SHO				eS	S	07 06 41.3	-7.2
SHO				pmax	pmax		
	comp=Z,29nm,0.2s						
SEY	Seymchan	10.47	356	P	P	07 05 05.0	+0.7
	comp=Z,0.2nm,0.3s,baz=207,slow=16,SNR=5.4						
NMR	Nemuro--Hokkai	10.62	214	ePN	P	07 05 04.6	-1.5
NMR				eS	S	07 06 58.7	-5.9
ERM	Erimo	12.72	219	⇑ePN	P	07 05 30.9	+1.9
KLR	Kul'dur	14.28	265	P	P	07 05 46.6	+1.0
	comp=Z,0.1nm,0.3s,baz=40,slow=12,SNR=3.7						
KLR	Kul'dur	14.28	265	⇓eP	P	07 05 47.2	+1.6
BILL	Bilibino	16.70	16	⇓eP	P	07 06 11.2	+0.2
BILL				eS	S	07 08 53.5	-10
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MJAR	Matsushiro Arr	19.38	221	P	P	07 06 41.0	+3.0
	comp=Z,0.1nm,0.3s,baz=10,slow=7.4,SNR=4.2						
TIXI	Tiksi	22.13	339	P	P	07 07 02.8	+0.3
	comp=Z,2.1nm,0.3s,baz=145,slow=8.5,SNR=5.4						
TIXI	Tiksi	22.13	339	⇓eP	P	07 07 02.4	-0.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ILAR	Eielson Array	31.93	44	P	P	07 08 31.8	+2.9
	comp=Z,0.2nm,0.4s,baz=255,slow=7.7,SNR=4.6						
INK	Inuvik	36.65	36	P	P	07 09 10.5	+1.9
	comp=Z,0.8nm,0.4s,baz=291,slow=8.9,SNR=9.9						
KURK	Kurchatov	44.72	299	deP	P	07 10 13.8	+0.2
KURK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MKAR	Makanchi Array	44.89	293	P	P	07 10 15.4	+0.4
	comp=Z,0.5nm,0.5s,baz=62,slow=7.0,SNR=10						
YKA	Yellowknife Ar	46.13	40	P	P	07 10 26.2	+1.9
	comp=Z,0.6nm,0.6s,baz=303,slow=7.4,SNR=13						
ARU	Arti	51.15	315	d iP	P	07 11 01.7	-0.2
ARU				S	S	07 17 44.3	-0.6
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES	ARCESS Array B	52.57	340	P	P	07 11 11.4	-0.6
	comp=Z,2.8nm,1.0s,baz=38,slow=6.1,SNR=3.5						
FINES	FINESS Array B	59.03	334	P	P	07 11 56.9	-0.2
	comp=Z,1.1nm,0.5s,baz=34,slow=7.5,SNR=12						
PDAR	Pinedale Array	61.10	57	P	P	07 12 14.2	+2.6
	comp=Z,0.1nm,0.3s,baz=296,slow=2.0,SNR=3.9						
NB2	NORSAR Subarra	62.92	341	P	P	07 12 22.5	-0.4
	comp=Z,0.7nm,0.6s,baz=23,slow=6.9						
NOA	NORSAR Array B	62.92	341	P	P	07 12 22.9	+0.1
	comp=Z,0.8nm,0.6s,baz=24,slow=6.7,SNR=3.8						
GEYT	Alibeck	64.10	299	P	P	07 12 32.1	+1.2
	comp=Z,0.8nm,0.5s,baz=64,slow=3.4,SNR=2.9						
AKASG	Malin Array Be	67.02	325	P	P	07 12 48.6	-0.4
	comp=Z,1.8nm,0.5s,baz=34,slow=6.9,SNR=5.5						

IDC 05 07:21:15.7±0.8, 28.82S×178.95W, h295km±16km, mb3.4/4, mb1 3.5/5, mb1mx3.3/33, mbtmp4.1/5, Error ellipse: s-maj=50.7km s-min=25.8km az=137.0
ISC 05 07:21:16.5±1.1, 29.0S±0.2×178.9W±0.1, h300km, n8, σ1.03/8, mb3.5/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.90	108	P	Pn	07 21 57.4	+1.0
	142nm,0.3s,baz=97,slow=23,SNR=14						
RAO				S	S	07 22 27.2	-0.9
	207nm,0.3s,baz=33,slow=18,SNR=7.3						
URZ	Urewera	9.84	199	P	Pn	07 23 32.4	-0.1
	2.1nm,0.3s,baz=261,slow=5.4,SNR=16						
DZM	Mont Dzumac	14.90	294	P	Pn	07 24 34.4	+0.5
	0.9nm,0.3s,baz=304,slow=20,SNR=6.5						
STKA	Stephens Creek	34.06	255	P	P	07 27 34.1	+0.8
	0.6nm,0.4s,baz=108,slow=14,SNR=3.1						
ASAR	Alice Springs	42.42	266	P	P	07 28 41.9	-0.7
	1.4nm,0.5s,baz=96,slow=6.9,SNR=33						
WRA	Warramunga Arr	43.27	271	P	P	07 28 48.1	-1.3
	1.6nm,0.6s,baz=108,slow=7.4,SNR=11						
PETK	Petropavlovsk-	84.24	346	P	P	07 33 13.9	-0.4
	2.6nm,0.8s,baz=116,slow=6.6,SNR=2.5						
FINES	FINESS Array B	143.54	340	PKP	PKPab	07 40 11.5	-0.7
	1.3nm,0.7s,baz=41,slow=3.6,SNR=9.1						

IDC 05 08:00:26.5±31.0, 20.79S×178.18W, h0km, mb4.3/4, mb1 4.4/4, mb1mx3.8/41, mbtmp4.3/4, Error ellipse: s-maj=584.7km s-min=140.9km az=89.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.51	244	P	P	08 07 42.5	+0.2
	2.8nm,0.5s,baz=94,slow=10.0,SNR=8.7						
ASAR	Alice Springs	44.29	257	P	P	08 08 38.1	-0.2
	3.3nm,0.7s,baz=101,slow=7.9,SNR=40						
WRA	Warramunga Arr	44.39	262	P	P	08 08 39.3	+0.1
	1.0nm,0.4s,baz=97,slow=7.7,SNR=15						
FITZ	Fitzroy Crossi	52.82	263	P	P	08 09 43.6	-0.5
	1.0nm,0.3s,baz=110,slow=6.6,SNR=6.9						

NIED 05 08:05:00, 32.60N×137.80E, h420km, Mw4.2 Best double couple: $M_0$2.47000×10[15] NP1:φs60.00000°, δ63.00000°, λ-135.00000°. NP2:φs306.00000°, δ50.00000°, λ-36.00000°.
NEIC 05 08:05:00.8±1.4, 32.34N±0.08×137.7E±0.1, h401km±4km, mb4.2/33, Error ellipse: s-maj=13.1km s-min=12.1km az=88.0
JMA 05 08:05:00.8±0.4, 32.58N×137.78E, h421km±4km, M3.9
IDC 05 08:05:01.8±0.5, 32.48N×137.67E, h404km±5km, mb3.4/21, mb1 3.6/26, mb1mx3.4/49, mbtmp4.2/26, Error ellipse: s-maj=10.6km s-min=9.8km az=74.0
ISC 05 08:05:01.1±0.7, 32.43N±0.07×137.72E±0.06, h404km±5km, n113, σ1.15/125, mb4.0/34, 8C, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TK01	Tokai 1	1.34	355	P	P	08 05 55.1	+1.6
TTO1	TONANKAI O.B.S	1.43	327	P	P	08 05 55.8	+1.9
TTO2	TONANKAI O.B.S	1.43	336	P	P	08 05 55.8	+1.9
TTO3	TONANKAI O.B.S	1.46	349	P	P	08 05 56.1	+1.9
TK02	Tokai 2	1.52	1	P	P	08 05 55.9	+1.5
JHJ	Hachijo jima 2	1.87	68	P	P	08 05 57.0	+0.5
	58nm,0.3s,baz=313,slow=20,SNR=18						
JHJ				S	S	08 06 43.4	+2.0
	127nm,0.3s,baz=236,slow=23,SNR=11						
JHJ2	Mitsune	1.89	68	P	P	08 05 57.6	+0.9
JHJ2	Mitsune	1.89	68	Pn	P	08 05 57.9	+1.2
JIE	Ise	2.14	337	⇑P	P	08 05 59.3	+1.2
JIE				eS	S	08 06 44.6	+0.2
JTNC	Tanabenakahech	2.25	309	⇑P	P	08 05 59.7	+0.8
JTNC				eS	S	08 06 45.3	-0.5
JWY	Kouya	2.52	316	⇑P	P	08 06 02.1	+1.2
JWY				S	S	08 06 49.4	0.0
INU	Inuyama	2.97	349		P	08 06 04.6	+0.4
JOD2	Odawara 2	3.05	22	P	P	08 06 05.0	+0.2
JOD2				eS	S	08 06 55.0	-1.7
JAI	Aioi	3.06	297	⇑P	P	08 06 06.0	+1.1
JAI				S	S	08 06 56.3	-0.6
JWT	Wachi	3.44	327	⇑P	P	08 06 09.1	+1.0
JWT				eS	S	08 07 02.7	0.0
JMN	Monobe	3.48	293	⇑P	P	08 06 09.9	+1.4
BSO1	Boso 1	3.51	50	P	P	08 06 07.0	-1.1
JRY	Ryogami san	3.71	15	⇑P	P	08 06 10.8	+0.3
JRY				S	S	08 07 05.6	-1.6
MJAR	Matsushiro Arr	4.12	5	P	P	08 06 14.2	-0.1
	8.3nm,0.3s,baz=172,slow=9.8,SNR=304						
MJAR				S	S	08 07 12.9	-1.3
	0.6nm,0.3s,baz=344,slow=26,SNR=6.3						
MJAR	Matsushiro Arr	4.12	5	P	P	08 06 16.9	+2.5
MAJO	Matsushiro	4.13	5		P	08 06 14.6	+0.3
MAT	Matsushiro	4.13	5	P	P	08 06 14.3	0.0
MAT				eS	S	08 07 10.8	-3.4
MAT	Matsushiro	4.13	5	P	P	08 06 14.3	0.0
MAT				S	S	08 07 10.6	-3.6
MJB9	Matsu-Tunnel	4.13	5		P	08 06 14.7	+0.3
JTO	Tosashimizu	4.17	277	P	P	08 06 16.1	+1.3
JHS	Saijyo	4.62	305	P	P	08 06 20.2	+1.1
JNU	Nakatsue	5.80	279	P	P	08 06 33.0	+1.6
	1.3nm,0.3s,baz=36,slow=4.9,SNR=8.5						
JNU	Nakatsue	5.80	279		P	08 06 32.7	+1.2
JCJ	Chichijima	6.58	143	P	P	08 06 38.0	-2.8
	46nm,0.3s,baz=280,slow=21,SNR=9.0						
JCJ				S	S	08 07 54.2	-6.9
	65nm,0.3s,baz=262,slow=23,SNR=11						
KSRS	Korea Array	9.48	305	P	P	08 07 13.8	+1.1
	0.6nm,0.3s,baz=115,slow=12,SNR=8.9						
KSRS				S	S	08 09 05.1	+4.0
	0.2nm,0.3s,baz=124,slow=18,SNR=5.1						
ERM	Erimo	10.50	23		P	08 07 24.6	+0.6
USA0B	Ussuriysk Arra	12.58	341	P	P	08 07 48.1	+1.2
USRK	Ussuriysk Ar.	12.58	341	P	P	08 07 47.5	+0.6
	baz=152,slow=8.5,SNR=19						
USRK	Ussuriysk Ar.	12.58	341	P	P	08 07 46.2	-0.7
YSS	Yuzh-Sakhalins	15.01	13	P	P	08 08 14.4	+1.0
YULB	Yu-li	17.06	242	P	P	08 08 33.3	-2.4
YULB				IAmb	IAmb	08 08 43.6	
	comp=Z,40nm,1.4s						
SSLB	Suanglung	17.10	244	P	P	08 08 34.9	-1.2
SSLB				IAmb	IAmb	08 08 38.8	
	comp=Z,31nm,1.4s						
KLR	Kul'dur	17.37	347	P	P	08 08 37.9	-0.7
	comp=Z,0.7nm,0.3s,baz=164,slow=9.2,SNR=26						
TPUB	Ta-pu	17.62	243	P	P	08 08 40.0	-1.6
KNMB	Chin-men Tao	18.74	250	P	P	08 08 50.6	-2.7
BJT	Baijiatuau	18.94	300	P	P	08 08 54.0	-1.2
BJT				IAmb	IAmb	08 08 57.7	
	comp=Z,7.1nm,0.5s						
WHN	Wuhan	20.02	271	P	P	08 09 05.2	-0.2
WHN				sP	sP	08 10 44.3	-11
WHN				S	S	08 12 22.8	-2.2
XAN	Xi'an	24.11	282	P	P	08 09 41.7	-0.9
XAN				sP	sP	08 11 36.2	-3.9
XAN				PcP	PcP	08 13 09.1	-1.8
XAN				S	S	08 14 24.8	+54
XAN	Xi'an	24.11	282	P	P	08 09 42.1	-0.5
ENH	Enshi	24.18	272	P	P	08 09 40.6	-2.6
ENH				IAmb	IAmb	08 09 43.0	
	comp=Z,19nm,1.2s						
ULN	Ulaanbaatar	27.83	313	P	P	08 10 16.3	+0.7
ULN				IAmb	IAmb	08 10 16.9	
	comp=Z,5.8nm,0.6s						
SONM	Songino Array	28.23	312	P	P	08 10 18.9	-0.1
	comp=Z,1.7nm,0.4s,baz=121,slow=8.3,SNR=33						
SONM	Songino Array	28.23	312	P	P	08 10 19.1	+0.1
GTA	Gaotai	31.31	294	⇑P	P	08 10 45.8	-0.3
GTA				PcP	PcP	08 13 29.7	+1.0
PBKT	Sadao Pong	36.77	253	P	P	08 11 32.5	+0.1

PBKT IAmb IAmb 08 11 33.7
comp=Z,11nm,0.9s
CMAR Chiang Mai Arr 37.46 258 P P 08 11 38.6 +0.4
comp=Z,3.1nm,0.7s,baz=49,slow=7.5,SNR=14
ZAA0 Zalesovo Array 42.95 316 P P 08 12 21.9 -0.2
ZALV Zalesovo Beam 42.95 316 P P 08 12 21.9 -0.2
comp=Z,3.5nm,0.4s,baz=83,slow=7.8,SNR=16
ZALV PcP **PcP 08 14 04.0 -0.1**
comp=Z,2.5nm,0.5s,baz=98,slow=3.5,SNR=9.2
ZALV Zalesovo Beam 42.95 316 P P 08 12 21.7 -0.4
TAPN Taplejung 43.34 277 *e*P P 08 12 26.1 +0.1
comp=Z,15nm,0.4s
ODAN Odare 43.77 276 *e*P P 08 12 29.2 -0.1
comp=Z,26nm,0.6s
MK31 Makanchi Array 44.16 306 IAmb IAmb 08 12 32.6
comp=Z,4.9nm,0.8s
MKAR Makanchi Array 44.16 306 P P 08 12 31.8 0.0
comp=Z,7.0nm,0.7s,baz=86,slow=9.9,SNR=90
MKAR PcP **PcP 08 14 08.6 +0.1**
comp=Z,0.8nm,0.6s,baz=88,slow=3.9,SNR=5.2
MKAR ScP **ScP 08 17 21.8 +0.7**
comp=Z,0.1nm,0.5s,baz=98,slow=0.6,SNR=3.4
MAKZ Makanchi 44.37 306 P P 08 12 33.6 +0.1
MAKZ IAmb IAmb 08 12 34.0
comp=Z,6.1nm,0.5s
RAMN Ramite 44.41 277 *e*P P 08 12 34.2 -0.1
comp=Z,37nm,0.7s
JIRN Jiri 44.51 278 *e*P P 08 12 35.7 +0.4
comp=Z,86nm,0.7s
GUN Gumba 44.69 278 *e*P P 08 12 36.9 +0.3
comp=Z,32nm,0.7s
PKI Pulchoki 45.20 278 *e*P P 08 12 40.3 -0.2
KKN Kakani 45.23 278 *e*P P 08 12 41.2 +0.5
DMN Daman 45.44 278 *e*P P 08 12 42.0 -0.3
DANN Dangsing 46.32 280 *e*P P 08 12 49.5 +0.4
comp=Z,19nm,0.5s
KURK Kurchatov 46.53 311 P P 08 12 49.6 -0.4
KURK IAmb IAmb 08 12 50.5
comp=Z,8.7nm,0.8s
KOLN Koldanda 46.64 279 *e*P P 08 12 51.7 +0.2
comp=Z,6.1nm,0.4s
BRVK Borovoye 51.59 315 P P 08 13 28.0 +0.2
BRVK IAmb IAmb 08 13 28.5
comp=Z,8.9nm,1.3s
WB0 Warramunga Arr 51.99 184 P P 08 13 30.9 -0.2
IMAR Indian Mountai 52.15 29 P P 08 13 30.6 -1.1
WRA Warramunga Arr 52.17 184 P P 08 13 32.8 +0.4
comp=Z,2.2nm,0.6s,baz=270,slow=1.6,SNR=12
WRA Warramunga Arr 52.17 184 IAmb IAmb 08 13 33.4
comp=Z,0.3nm,0.8s
WR0 Warramunga Arr 52.18 184 P P 08 13 32.8 +0.3
KDAK Kodiak Island 52.57 39 P P 08 13 35.6 +0.7
comp=Z,4.5nm,0.8s,baz=270,slow=2.0,SNR=7.7
PPLA Purkeypile 52.68 33 P P 08 13 35.8 +0.1
PPLA IAmb IAmb 08 13 50.9
comp=Z,18nm,1.4s
KK31 Karatay Array 52.90 302 IAmb IAmb 08 13 38.4
comp=Z,7.5nm,0.8s
KKAR Karatay Array 52.90 302 P P 08 13 37.2 -0.3
KKAR Karatay Array 52.90 302 IAmb IAmb 08 13 38.4
comp=Z,7.5nm,0.8s
SUA Susitna One 53.36 35 P P 08 13 41.2 +0.5
RND Reindeer 54.19 32 P P 08 13 47.6 +1.1
ILAR Eielson Array 55.00 30 P P 08 13 52.5 +0.3
comp=Z,0.3nm,0.5s,baz=257,slow=5.7,SNR=7.0
ASAR Alice Springs 55.90 184 P P 08 13 59.8 +0.8
comp=Z,0.8nm,0.5s,baz=16,slow=11,SNR=18
ASAR Alice Springs 55.90 184 P P 08 13 59.0 0.0
ABKAR Akbulak array 58.64 311 P P 08 14 17.2 -0.3
INK Inuvik 59.85 25 P P 08 14 26.6 +1.1
comp=Z,0.9nm,0.8s,baz=310,slow=4.6,SNR=3.7
GEYT Alibeck 63.43 300 P P 08 14 50.3 +0.7
comp=Z,0.6nm,0.6s,baz=48,slow=2.1,SNR=3.5
ARCES ARCESS Array B 67.23 339 P P 08 15 12.9 -0.2
comp=Z,3.4nm,0.6s,baz=64,slow=9.0,SNR=20
ARCES ARCESS Array B 67.23 339 P P 08 15 13.6 +0.5
ARE0 ARCESS Array S 67.23 339 P P 08 15 13.8 +0.7
RES Resolute Bay 67.79 13 P P 08 15 17.1 +0.7
comp=Z,1.0nm,0.5s,baz=302,slow=7.2,SNR=9.0
RES Resolute Bay 67.79 13 IAmb IAmb 08 15 17.6
comp=Z,1.2nm,0.7s
YKA Yellowknife Ar 69.30 28 P P 08 15 26.3 +0.4
comp=Z,0.5nm,0.5s,baz=298,slow=6.2,SNR=6.0
FIA1 FINESS Array S 71.45 332 P P 08 15 38.9 +0.2
FINES FINESS Array B 71.45 332 P P 08 15 38.8 +0.1
comp=Z,4.0nm,0.5s,baz=62,slow=5.5,SNR=46
AKASG Malin Array Be 76.04 322 P P 08 16 05.0 -0.2
comp=Z,2.9nm,0.4s,baz=51,slow=6.2,SNR=14
AKASG Malin Array Be 76.04 322 IAmb IAmb 08 16 05.5
comp=Z,1.3nm,0.6s
AKBB Malin Array Si 76.04 322 P P 08 16 05.2 -0.1
AKBB IAmb IAmb 08 16 05.8
comp=Z,6.4nm,0.8s
NC405 NORSAR Array S 76.99 336 P P 08 16 10.7 +0.4
NC204 NORSAR Array S 77.20 337 P P 08 16 11.6 0.0
NB2 NORSAR Subarra 77.21 336 P P 08 16 11.6 0.0
comp=Z,1.4nm,0.6s,baz=44,slow=5.3
NOA NORSAR Array B 77.21 336 P P 08 16 11.4 -0.2
comp=Z,2.3nm,0.7s,baz=44,slow=5.5,SNR=9.0
SOCY Socotra 78.33 277 P P 08 16 17.1 -1.5
SOCY IAmb IAmb 08 16 17.6
comp=Z,4.7nm,0.8s
RAYN Ar Rayn 79.53 291 P P 08 16 25.2 +0.3
RAYN IAmb IAmb 08 16 26.0
comp=Z,7.1nm,0.8s
BRTR Keskin Array B 79.57 310 P P 08 16 25.5 +0.6
comp=Z,2.8nm,0.7s,baz=110,slow=4.4,SNR=16
BRTR Keskin Array B 79.57 310 P P 08 16 25.1 +0.2
BURAR Bucovina Array 79.98 321 P P 08 16 27.3 +0.4
NVAR Mina Array Bea 80.22 51 P P 08 16 30.1 +1.6
comp=Z,0.3nm,0.7s,baz=282,slow=5.4,SNR=3.1
VYHS Vyhne 82.72 324 *e*P P 08 16 41.9 +0.9
PDAR Pinedale Array 83.08 43 P P 08 16 42.7 -0.5
comp=Z,0.5nm,0.8s,baz=270,slow=3.0,SNR=4.1
CLL Collm 83.51 329 *i* P P 08 16 44.6 -0.2
GERES GERESS Array B 84.95 327 P P 08 16 51.9 -0.3
comp=Z,0.6nm,0.6s,baz=20,slow=4.3,SNR=3.8
TXAR Lajitas Array 95.37 50 P P 08 17 42.4 +1.3
comp=Z,0.2nm,0.8s,baz=270,slow=1.3,SNR=4.2

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*IDC **05** 08:18:30.9±2.8, 6°.00S×147°.69E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.5/39, mbtmp3.6/5, ML3.6/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/34, Error ellipse: s-maj=81.8km s-min=26.9km az=100.0*
ISC 05 08:18:38.7±3.1, **6°.35S**±0°.1×**148°.0E**±0°.6, **h77km**, **n7**, σ**6**°**0**/7, **mb3.6**/3, **New Britain region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 3.19 195 Pn **Pn 08 19 26.6 -0.1**
8.7nm,0.3s,baz=3.5,slow=7.4,SNR=11
PMG Sn **Sn 08 20 03.9 +0.2**
7.4nm,0.3s,baz=16,slow=11,SNR=3.6
WRA Warramunga Arr 18.98 223 P P 08 22 53.2 -1.0
0.2nm,0.3s,baz=46,slow=12,SNR=6.4
ASAR Alice Springs 21.96 217 P P 08 23 26.6 +0.2
1.4nm,0.5s,baz=53,slow=9.0,SNR=37
FITZ Fitzroy Crossi 24.78 240 P P 08 23 54.1 +0.6
1.8nm,0.5s,baz=49,slow=11,SNR=3.7
NWAO Narrogin (SRO) 38.99 223 LR LR 08 43 05.3
comp=Z,80nm,21.9s,baz=305,slow=38
MKAR Makanchi Array 78.38 320 P P 08 30 30.9 0.0
0.1nm,0.3s,baz=97,slow=7.3,SNR=3.4
TORD Torodi Ar. Bea 146.15 284 PKPbc **PKPab 08 38 12.0 0.0**
0.6nm,0.5s,baz=86,slow=3.9,SNR=5.0

IDC 05 08:22:30.0±3.7, **19°.48S**×**177°.47W**, **h364**km±37km, **mb3.1**/8, **mb1 3.4**/9, **mb1mx3.2**/48, **mbtmp3.9**/9, **Error ellipse: s-maj=22.2km s-min=13.5km az=115.0**, **Fiji Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
URZ Urewera 19.30 193 P P 08 26 29.4 -0.5
1.0nm,0.3s,baz=295,slow=6.9,SNR=8.5
URZ S S 08 29 47.6 +0.1
0.5nm,0.3s,baz=65,slow=23,SNR=5.9
STKA Stephens Creek 38.69 243 P P 08 29 21.0 +0.6
0.9nm,0.5s,baz=117,slow=11,SNR=4.2
WRA Warramunga Arr 45.25 261 P P 08 30 12.6 -0.4
0.4nm,0.3s,baz=97,slow=7.0,SNR=2.8
ASAR Alice Springs 45.25 256 P P 08 30 12.8 -0.2
5.9nm,0.6s,baz=92,slow=8.3,SNR=84
QSPA South Pole Qui 70.58 180 P P 08 33 07.0 +0.5
1.1nm,0.8s,baz=64,slow=1.8,SNR=5.1
NVAR Mina Array Bea 79.94 43 P P 08 34 00.1 +0.3
0.8nm,0.7s,baz=222,slow=8.2,SNR=6.2
TXAR Lajitas Array 86.08 57 P P 08 34 31.9 +0.8
0.4nm,0.7s,baz=212,slow=6.2,SNR=4.1
ILAR Eielson Array 87.22 13 P P 08 34 34.0 -1.5
0.1nm,0.4s,baz=210,slow=5.2,SNR=3.7
PDAR Pinedale Array 87.88 43 P P 08 34 39.4 -0.1
0.2nm,0.7s,baz=101,slow=1.5,SNR=3.7
GERES GERESS Array B 149.35 345 PKPbc PKPbc 08 41 36.3 -0.2
0.3nm,0.4s,baz=95,slow=2.9,SNR=3.7

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*IDC **05** 08:32:43.1±0.8, 52°.11N×169°.49W, h0km, mb4.1/21, mb1 4.3/24, mb1mx4.1/55, mbtmp4.1/24, ML3.8/3, MS3.3/2, Ms1 3.4/2, ms1mx2.8/48, Error ellipse: s-maj=21.9km s-min=13.2km az=170.0*
*MOS **05** 08:32:46.7±1.1, 52°.12N×169°.51W, h33km, mb4.6/13, Error ellipse: s-maj=12.4km s-min=8.0km az=99.0*
*NEIC **05** 08:32:47.6±1.6, 52°.09N±0°.05×169°.51W±0°.09, h28km±5km, Error ellipse: s-maj=9.7km s-min=4.4km az=133.0*
*AEIC **05** 08:32:47.4±1.5, 52°.1N±0°.1×169°.5W±0°.1, h31km±5km, ML3.6/20, mb4.2/37(NEIC), Error ellipse: s-maj=16.1km s-min=6.7km az=155.0*
ISC 05 08:32:48.2±0.6, **52°.08N**±0°.08×**169°.47W**±0°.05, **h30**km, **n151**, σ**1**°**00**/152, **mb4.4**/42, **7C-10D**, **Fox Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NIKH Nikolski High 0.97 23 Pn 08 33 05.3 -0.4
NIKH Nikolski High 0.97 23 Sg **Sb 08 33 19.4 +0.6**
OKSP Okmok Steeple 1.38 31 Pn 08 33 11.0 -0.3
OKSP **Sb 08 33 29.8 -0.7**
OKTU Okmok Mt. Tuli 1.57 33 Pn 08 33 14.1 +0.1
OKFG Magazine Ridge 1.63 35 Pn 08 33 14.9 +0.1
OKFG **Sb 08 33 36.7 -1.1**
MREP Makushin Rep't 2.39 43 Pn 08 33 25.5 +0.2
MSW Makushin Switc 2.45 40 Pn 08 33 26.6 +0.4
UNV Unalaska Valle 2.52 44 Pn 08 33 26.9 0.0
UNV Unalaska Valle 2.52 44 Sn 08 33 57.9 +1.3
MTBL Makushin Table 2.53 41 Pn 08 33 28.0 +0.7
AKRB Akutan Reef Bi 2.90 44 Pn 08 33 34.0 +1.8
ATKA Atka Island 2.91 274 Pn **Pn 08 33 31.6 -0.8**
ATKA Atka Island 2.91 274 Sn 08 34 07.5 +1.2
AKUT Akutan 3.03 46 Pn **Pn 08 33 34.7 +0.7**
GSTD Great Sitkin T 4.12 272 Pn 08 33 49.3 +0.2
GSTD **Sn 08 34 37.9 +1.7**
ADAG Mount Adagdak 4.40 271 Pn 08 33 53.7 +0.8
ADK Adak 4.46 270 Pn 08 33 53.5 -0.2
ADK Adak 4.46 270 Sn **Sn 08 34 45.5 +1.0**
ADK Adak 4.46 270 P **Pn 08 33 53.5 -0.2**
ADK 08 34 45.5
KIWB Kanaga Island 4.75 270 Pn **Pn 08 33 57.0 -0.7**
SDPT Sand Point 6.26 55 Pn **Pn 08 34 19.4 +1.0**
OHAK Old Harbor 10.69 55 Pn **Pn 08 35 17.7 -1.3**
KDAK Kodiak Island 11.25 53 Pn **Pn 08 35 26.9 +0.2**
0.6nm,0.3s,baz=247,slow=8.6,SNR=8.7
KDAK Kodiak Island 11.25 53 Pn **Pn 08 35 26.4 -0.3**
KDAK Kodiak Island 11.25 53 P **Pn 08 35 26.4 -0.3**
GAMB Gambell 11.79 355 Pn 08 35 35.2 +1.3
RSO Redoubt South 12.49 41 Pn **Pn 08 35 43.9 +0.1**
CNPM China Poot 12.65 47 Pn **Pn 08 35 45.1 -0.7**
BRLK Bradley Lake 12.92 46 Pn **Pn 08 35 49.8 +0.3**
SEW Seward 13.71 46 Pn **Pn 08 35 59.5 -0.8**
SUA Susitna One 13.86 40 Pn **Pn 08 36 02.8 +0.3**
RC01 Rabbit Creek A 14.07 42 Pn **Pn 08 36 05.9 +0.7**
PPLA Purkeypile 14.21 34 Pn **Pn 08 36 08.8 +1.5**
GHO Glory Hole Cre 14.76 41 Pn **Pn 08 36 13.9 -0.7**
KNK Knik Glacier 14.77 43 Pn **Pn 08 36 12.9 -1.8**
SML Sawmill 15.02 41 Pn **Pn 08 36 18.3 +0.2**
SML IAmb IAmb 08 36 24.1
comp=Z,48nm,1.7s
KTH Kantishna Hill 15.08 33 Pn **Pn 08 36 19.0 +0.1**
HIN Hinchinbrook I 15.17 48 Pn **Pn 08 36 18.6 -1.5**
TRF Thorofare Moun 15.23 34 Pn **Pn 08 36 20.9 -0.1**
FID Port Fidalgo 15.32 47 Pn **Pn 08 36 19.9 -2.1**
FID IAmb IAmb 08 36 36.9
comp=Z,20nm,1.2s
BPAW Bear Paw Mtn. 15.43 32 Pn 08 36 23.6 +0.3
BPAW IAmb IAmb 08 36 39.1
comp=Z,8.2nm,0.8s
SCM Sheep Creek Mo 15.45 42 Pn **Pn 08 36 21.9 -1.8**
SCM IAmb IAmb 08 36 38.7
comp=Z,31nm,1.4s
SCM Sheep Creek Mo 15.45 42 P **Pn 08 36 21.9 -1.8**
SCM pmax pmax
comp=Z,31nm,1.4s
EYAK Cordova Ski Ar 15.57 48 Pn **Pn 08 36 23.1 -2.2**
EYAK IAmb IAmb 08 37 07.7
comp=Z,12nm,1.0s
IMAR Indian Mountai 16.04 24 P 08 36 33.8 -0.6
DHY Denali Highway 16.07 38 Pn 08 36 32.7 +0.9
MLY Manley 16.15 29 P 08 36 35.1 -0.6
HMT Hamilton 16.19 49 Pn **Pn 08 36 32.6 -0.6**
HMT IAmb IAmb 08 36 41.9
comp=Z,37nm,1.2s
GLB Gilahina Butte 16.79 46 Pn **Pn 08 36 38.0 -2.8**
CRQM Cirque 16.85 49 Pn **Pn 08 36 41.6 -0.2**
CRQM IAmb IAmb 08 37 30.1
comp=Z,17nm,1.1s
VRDI Verde Repeater 16.87 47 Pn **Pn 08 36 40.3 -1.7**
VRDI IAmb IAmb 08 37 20.9
comp=Z,48nm,2.0s
WAX Waxell Ridge 16.89 50 P **Pn 08 36 42.1 +0.1**
WAX IAmb IAmb 08 37 05.1
comp=Z,17nm,0.9s
TGL Tana Glacier 17.00 49 P **Pn 08 36 43.6 +0.2**
TGL IAmb IAmb 08 37 35.3
comp=Z,21nm,1.3s
MCARA McCarthy VSAT 17.12 47 P **Pn 08 36 45.4 +0.5**
ILAR Eielson Array 17.23 34 P **Pn 08 36 44.9 -1.4**
comp=Z,0.1nm,0.3s,baz=223,slow=9.4,SNR=7.4
BALM Baldy 17.31 48 P **Pn 08 36 47.0 -0.4**
BARN Barnard Glacie 17.63 49 P **P 08 36 51.8 -0.4**
BARN IAmb IAmb 08 37 19.9
comp=Z,51nm,2.0s
CTGM Chitina Glacie 17.76 49 P **P 08 36 53.8 +0.2**
CTGM IAmb IAmb 08 37 23.0
comp=Z,15nm,1.2s
PCA Pinnacle 18.04 52 P **P 08 36 57.6 +1.0**
PCA IAmb IAmb 08 37 45.7
comp=Z,16nm,0.8s
BMAR Burnt Mountain 19.61 29 P **P 08 37 13.4 -0.3**
DAWY Dawson 19.69 41 P **P 08 37 13.2 -1.5**
BILL Bilibino 19.83 333⇑*e*P **Pn 08 37 17.8 +0.1**
BILL pmax pmax
comp=Z,11nm,1.7s
BILL MLR MLR
comp=Z,123nm,17.0s
PEA0B Petropavlovsk- 19.88 286 P **P 08 37 16.5 -0.2**
PEA0B Petropavlovsk- 19.88 286⇑*i*P **P 08 37 16.0 -0.7**
PETK Petropavlovsk- 19.88 286 P **P 08 37 16.6 -0.1**
comp=Z,5.3nm,0.3s,baz=88,slow=13,SNR=112
WHY Whitehorse 20.77 52 P Pn 08 37 28.1 -0.8
WHY IAmb IAmb 08 37 44.0
comp=Z,9.9nm,0.8s
EPYK Eagle Plains 21.67 36 P **P 08 37 35.5 -0.5**
EPYK IAmb IAmb 08 37 44.3
comp=Z,7.2nm,0.8s
SEY Seymchan 22.82 313 P **P 08 37 47.5 -0.8**
comp=Z,4.1nm,0.8s,baz=83,slow=11,SNR=15
SEY Seymchan 22.82 313⇓*i*P **P 08 37 47.7 -0.5**
MA2 Magadan 23.25 304⇓*e*P **P 08 37 53.3 +0.6**
MA2 pmax pmax
comp=Z,17nm,1.7s
INK Inuvik 23.62 33 P **P 08 37 56.1 0.0**
comp=Z,1.4nm,0.7s,baz=241,slow=6.6,SNR=7.1
INK Inuvik 23.62 33 P **P 08 37 55.6 -0.5**
INK Inuvik 23.62 33 P **P 08 37 55.7 -0.5**
INK pmax pmax
comp=Z,6.0nm,1.3s
YKA Yellowknife Ar 30.48 48 P **P 08 38 58.4 +0.5**
comp=Z,0.5nm,0.7s,baz=273,slow=8.4,SNR=9.1
YKA LR LR 08 53 10.2
comp=Z,122nm,18.8s,baz=0.0,slow=40
TIXI Tiksi 32.95 329 P **P 08 39 19.0 -0.5**
comp=Z,0.8nm,0.3s,baz=0.0,slow=4.0,SNR=3.4
TIXI Tiksi 32.95 329⇓*i*P **P 08 39 19.0 -0.5**
TIXI pmax pmax
comp=Z,5.0nm,1.7s
YAK Yakutsk 33.31 311⇓*e*P **P 08 39 22.6 -0.2**
YAK pmax pmax
comp=Z,5.0nm,0.5s
KLR Kul'dur 36.49 290 P **P 08 39 48.7 -1.6**
comp=Z,2.5nm,0.6s,baz=75,slow=5.3,SNR=11
KLR Kul'dur 36.49 290⇑*e*P **P 08 39 47.6 -2.8**
KLR pmax pmax
comp=Z,5.0nm,1.2s
H11S1 WAKE ISLAND Hy 38.38 218 T T 09 21 24.3
baz=23,slow=76,SNR=24
H11S2 WAKE ISLAND Hy 38.39 218 T T 09 21 17.1
baz=23,slow=76,SNR=14
H11S3 WAKE ISLAND Hy 38.39 218 T T 09 21 20.3
baz=23,slow=76,SNR=7.8
VLA Vladivostok 39.55 281⇑*e*P **P 08 40 17.1 +0.9**
VLA pmax pmax
comp=Z,86nm,1.8s
PDAR Pinedale Array 40.52 79 P **P 08 40 24.6 0.0**
comp=Z,1.2nm,0.9s,baz=283,slow=3.1,SNR=8.3
PDAR Pinedale Array 40.52 79 P **P 08 40 25.1 +0.5**
FCC Fort Churchill 41.17 50 P **P 08 40 31.6 +2.2**
FCC IAmb IAmb 08 40 43.0
comp=Z,8.3nm,0.9s
FCC Fort Churchill 41.17 50 P **P 08 40 31.6 +2.2**
FCC pmax pmax
comp=Z,8.0nm,1.0s
BOD Bodaibo 42.12 309 *e*P **P 08 40 35.5 -1.7**
BOD pmax pmax
comp=Z,5.0nm,0.8s
KSRS Korea Array 45.38 277 P **P 08 41 03.3 -0.3**
comp=Z,5.1nm,0.8s,baz=53,slow=7.7,SNR=18
KSRS LR LR 09 03 29.6
comp=Z,16nm,18.1s,baz=320,slow=41
NOR Nord 45.76 5 *i* P **P 08 41 06.1 0.0**
NOR Nord 45.76 5 *i* P **P 08 41 06.1 0.0**
TJN Taejon 46.41 276⇓*e*P **P 08 41 11.0 -0.7**
SPITS Spitsbergen Ar 49.95 358 P **P 08 41 37.7 -0.9**
comp=Z,12nm,1.1s,baz=53,slow=7.4,SNR=4.2
DAG Danmarks Havn 50.08 8 *i* P **P 08 41 39.0 -0.6**
comp=Z,4.0nm,0.8s
DAG Danmarks Havn 50.08 8 *i* P **P 08 41 39.0 -0.6**
DAG pmax pmax
comp=Z,4.0nm,0.8s
TLY Talaya 50.46 306 *e*P **P 08 41 42.5 -0.3**
TLY pmax pmax
comp=Z,12nm,0.6s
SUMG Summit 51.07 17 *i* P **P 08 41 48.0 +0.4**
comp=Z,25nm,1.1s
SUMG Summit 51.07 17 *i* P **P 08 41 48.0 +0.4**
SUMG pmax pmax
comp=Z,25nm,1.1s
SONM Songino Array 51.39 301 P **P 08 41 49.8 -0.2**
comp=Z,2.8nm,1.1s,baz=82,slow=4.6,SNR=12
TX31 Lajitas Ar. Si 52.82 89 P **P 08 42 01.1 +0.4**
TX31 IAmb IAmb 08 42 13.8
comp=Z,5.5nm,0.9s
TX32 Lajitas Array 52.82 89 P **P 08 42 00.8 +0.1**
TX32 IAmb IAmb 08 42 13.8
comp=Z,5.6nm,0.9s
TXAR Lajitas Array 52.82 89 P **P 08 42 00.4 -0.4**
comp=Z,1.7nm,0.8s,baz=296,slow=5.7,SNR=17
TXAR Lajitas Array 52.82 89 P **P 08 42 00.7 -0.1**
TXAR Lajitas Array 52.82 89 P **P 08 42 00.7 -0.1**
HHC Hu-ho-hao-te 52.96 291 *e*P **P 08 42 02.2 +0.5**
ZALV Zalesovo Beam 57.59 318 P **P 08 42 34.1 -0.6**
comp=Z,0.6nm,0.5s,baz=68,slow=5.7,SNR=4.3
143A Socs Landing, 57.95 77 P **P 08 42 36.2 -1.3**
ARCES ARCESS Array B 58.20 354 P **P 08 42 37.7 -1.1**
comp=Z,1.8nm,0.8s,baz=342,slow=6.4,SNR=5.2
WHN Wuhan 58.33 280 P **P 08 42 40.5 +0.3**
XAN Xi'an 59.12 287 P **P 08 42 45.7 0.0**
XAN pP pwP 08 43 15.1 +17
XAN PcP **PcP 08 43 37.7 +3.5**
XAN S S 08 50 32.8 -18
XAN ScS ScS 08 52 20.4 -13
XAN Xi'an 59.12 287 P **P 08 42 46.3 +0.5**
XAN Xi'an 59.12 287 P **P 08 42 46.3 +0.5**
XAN pmax pmax
comp=Z,8.0nm,1.0s
GTA Gaotai 60.55 297 *e*P **P 08 42 55.5 -0.1**
GTA pP pP 08 43 01.0 -2.9
GTA sP sP 08 43 04.0 -3.0
LZH Lanzhou 60.64 292 *e*P **P 08 42 55.3 -1.0**
LZH pP pP 08 43 04.9 +0.4
LZH sP pwP 08 43 08.8 +0.1
LZH *e*PP **PP 08 45 10.6 +0.9**
KURK Kurchatov 62.55 318 P **P 08 43 08.3 -0.4**
KURK Kurchatov 62.55 318*d i*P **P 08 43 08.2 -0.5**
KURK pmax pmax
comp=Z,6.0nm,0.8s
WMQ Urumqi 63.66 308 *e*P **P 08 43 19.0 +2.7**
MK31 Makanchi Array 63.96 313 IAmb IAmb 08 43 18.3
comp=Z,1.2nm,0.9s
MK31 Makanchi Array 63.96 313⇓*e*P **P 08 43 17.2 -1.0**
MKAR Makanchi Array 63.96 313 P **P 08 43 16.5 -1.6**
comp=Z,0.6nm,0.4s,baz=47,slow=6.5,SNR=16
MKAR Makanchi Array 63.96 313 P **P 08 43 17.3 -0.8**
MKAR Makanchi Array 63.96 313 *i* P **P 08 43 17.1 -1.1**
MKAR pmax pmax
comp=Z,1.0nm,0.4s
ARU Arti 64.85 333*d i*P **P 08 43 22.6 -1.2**
ARU 08 45 42.8
ARU S **S 08 52 01.2 -1.3**
ARU pmax pmax
comp=Z,6.0nm,0.9s
KIRV Kirov 65.25 339⇑*i*P **P 08 43 26.7 +0.4**
FIA1 FINESS Array S 66.14 352 P **P 08 43 31.8 -0.3**
FINES FINESS Array B 66.14 352 P **P 08 43 31.8 -0.3**
comp=Z,4.0nm,0.7s,baz=15,slow=7.9,SNR=10
NB2 NORSAR Subarra 67.23 360 P **P 08 43 38.6 -0.5**
comp=Z,1.0nm,0.7s,baz=3.1,slow=6.5
NOA NORSAR Array B 67.23 360 P **P 08 43 37.1 -2.0**
comp=Z,1.8nm,0.8s,baz=1.4,slow=6.5,SNR=6.7
VSU Vasula 69.03 351⇑*e*P **P 08 43 50.9 +0.6**
ABKAR Akbulak array 70.64 328 P **P 08 44 00.1 -0.3**
AAK Ala-Archa 70.66 315 P **P 08 43 59.8 -1.0**
AAK Ala-Archa 70.66 315*de*P **P 08 44 01.2 +0.4**
AAK pmax pmax
comp=Z,4.0nm,0.7s
KK31 Karatay Array 71.96 318 P **P 08 44 08.3 -0.1**
KK31 Karatay Array 71.96 318 P **P 08 44 08.4 -0.1**
KK31 pmax pmax
comp=Z,6.0nm,0.9s
KKAR Karatay Array 71.96 318 P **P 08 44 08.3 -0.2**
KKAR Karatay Array 71.96 318 P **P 08 44 08.3 -0.2**
KKAR pmax pmax
comp=Z,6.0nm,0.9s
AKASG Malin Array Be 76.37 348 P **P 08 44 32.7 -1.3**
comp=Z,1.2nm,0.7s,baz=13,slow=5.3,SNR=5.1
AKASG Malin Array Be 76.37 348 *i* P **P 08 44 33.4 -0.7**
AKASG pmax pmax
comp=Z,1.0nm,0.7s
CMAR Chiang Mai Arr 76.62 283 P **P 08 44 36.7 +0.7**
comp=Z,0.7nm,0.3s,baz=40,slow=6.3,SNR=5.9
CMAR Chiang Mai Arr 76.62 283 *i* P **P 08 44 36.5 +0.5**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
KHC Kasperske Hory 79.13 358⇓*e*P **P 08 44 49.7 +0.2**
KHC pmax pmax
comp=Z,25nm,1.7s
GOF Gofitskoye 79.26 337⇑*e*P **P 08 44 51.7 +1.4**
GOF pmax pmax
comp=Z,26nm,0.8s
VYHS Vyhne 79.55 354 *e*P **P 08 44 52.9 +1.1**
VYHS Vyhne 79.55 354 *e*P **P 08 44 52.9 +1.1**
KIV Kislovodsk 80.39 337 *e*P **P 08 44 57.4 +0.9**
KIV pmax pmax
comp=Z,23nm,1.0s
KBZ Khabaz 80.55 337 P **P 08 44 58.5 +1.2**
comp=Z,1.6nm,0.7s,baz=52,slow=5.9,SNR=4.3
GEYT Alibeck 81.22 324 P **P 08 45 00.7 -0.3**
comp=Z,1.4nm,0.7s,baz=306,slow=2.8,SNR=5.3
WRA Warramunga Arr 86.78 232 P **P 08 45 28.1 -1.2**
comp=Z,0.6nm,0.3s,baz=37,slow=5.4,SNR=5.0
ASAR Alice Springs 90.16 230 P **P 08 45 45.0 -0.3**
comp=Z,3.7nm,0.8s,baz=35,slow=4.7,SNR=20
ASAR Alice Springs 90.16 230 P **P 08 45 44.4 -0.9**
ASAR Alice Springs 90.16 230 P **P 08 45 44.4 -0.9**

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*MOS **05** 08:32:51.4±0.9, 29°.17N×139°.48E, h403km, mb4.0/8, Error ellipse: s-maj=16.1km s-min=7.5km az=103.4*
*IDC **05** 08:32:53.0±0.7, 29°.23N×139°.52E, h404km±7km, mb3.4/18, mb1 3.5/23, mb1mx3.3/51, mbtmp4.2/23, Error ellipse: s-maj=14.2km s-min=7.6km az=75.0*
*NEIC **05** 08:32:53.5±1.1, 29°.17N±0°.09×139°.4E±0°.1, h408km±7km,*

mb4.3/17, Error ellipse: s-maj=16.9km s-min=12.1km az=76.0
*JMA **05** 08:32:53.2±0.1, 29.39N×139.99E, h426km, M4.0*
ISC 05 08:32:53.8±0.4, 29.26N±0.05×139.49E±0.07, h414km, n90, σ1.63/106, mb3.8/33, 4C-6D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.21	132	P	P	08 33 58.7	-1.1
CBIJ				eS	S	08 34 50.7	-2.6
JCJ	Chichijima	3.21	132	P	P	08 33 58.8	-1.0
	37nm,0.3s,baz=282,slow=23,SNR=11						
JCJ				S	S	08 34 50.0	-3.3
	324nm,0.3s,baz=282,slow=23,SNR=27						
JHH2	Haha-jima-NKT2	3.54	137	P	P	08 34 01.6	-0.9
JHH2				eS	S	08 34 55.8	-2.6
BSO1	Boso 1	5.52	13	P	P	08 34 20.0	-0.9
BSO1				eS	S	08 35 28.9	-3.5
BSO3	Boso 3	5.59	9	P	P	08 34 22.0	+0.1
BSO3				eS	S	08 35 31.8	-2.4
JKN2	Miekihoku	5.67	332	P	P	08 34 25.5	+2.5
BSO4	Boso 4	5.76	7	P	P	08 34 23.2	-0.6
BSO4				eS	S	08 35 34.4	-3.3
JOD2	Odawara 2	5.99	357	P	P	08 34 26.7	+0.2
JOD2				eS	S	08 35 40.0	-2.6
INU	Inuyama	6.42	342		P	08 34 32.8	+1.8
JHU	Hanno	6.57	359	P	P	08 34 31.9	-1.4
JHU				eS	S	08 35 47.9	-6.1
JRY	Ryogami san	6.75	356	P	P	08 34 34.7	-0.6
JRY				eS	S	08 35 52.7	-5.0
MJAR	Matsushiro Arr	7.34	352	P	P	08 34 40.3	-1.5
	0.3nm,0.3s,baz=170,slow=11,SNR=21						
MJAR				S	S	08 36 08.1	-1.4
	0.1nm,0.3s,baz=215,slow=16,SNR=5.7						
MJAR	Matsushiro Arr	7.34	352	P	P	08 34 42.5	+0.8
MAJO	Matsushiro	7.34	352	P	P	08 34 41.0	-0.7
MAJO	Matsushiro	7.34	352	P	P	08 34 41.1	-0.7
MAT	Matsushiro	7.34	352	P	P	08 34 40.5	-1.2
MAT				S	S	08 36 04.8	-4.7
MJB9	Matsu-Tunnel	7.34	352	P	P	08 34 41.2	-0.6
JHS	Saijyo	7.87	318	P	P	08 34 49.4	+1.8
JNU	Nakatsue	8.32	300	P	P	08 34 53.7	+1.2
	0.5nm,0.3s,baz=50,slow=5.3,SNR=6.1						
JNU	Nakatsue	8.32	300	P	P	08 34 52.9	+0.4
KSRS	Korea Array	12.65	313	P	P	08 35 41.5	+1.3
	0.7nm,0.3s,baz=130,slow=11,SNR=20						
ERM	Erimo	13.07	12	P	P	08 35 45.2	+0.6
ERM	Erimo	13.07	12	P	P	08 35 45.2	+0.6
USA0B	Ussuriysk Arra	16.06	340	P	P	08 36 17.9	+0.9
USA0B	Ussuriysk Arra	16.06	340	P	P	08 36 17.9	+0.9
USA0B				pmax	pmax		
	comp=Z,34nm,0.7s						
USRK	Ussuriysk Ar.	16.06	340	P	P	08 36 17.8	+0.8
	baz=141,slow=10,SNR=146						
USRK	Ussuriysk Ar.	16.06	340	P	P	08 36 17.6	+0.5
YULB	Yu-li	17.32	255	P	P	08 36 29.6	-1.1
YULB				IAmb	IAmb	08 36 34.9	
	comp=Z,14nm,0.9s						
YSS	Yuzh-Sakhalins	17.85	7	eP	P	08 36 37.9	+2.0
KLR	Kul'dur	20.80	346	P	P	08 37 05.3	+1.0
	comp=Z,6.3nm,0.6s,baz=170,slow=8.1,SNR=28						
KLR	Kul'dur	20.80	346⇑	eP	P	08 37 05.1	+0.7
KLR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ENH	Enshi	26.03	280	P	P	08 37 51.0	-0.8
ENH				IAmb	IAmb	08 37 52.5	
	comp=Z,12nm,0.7s						
XAN	Xi'an	26.40	288	P	P	08 37 55.2	+0.2
XAN				IAmb	IAmb	08 37 55.6	
	comp=Z,3.8nm,0.6s						
XAN	Xi'an	26.40	288	P	P	08 37 55.2	+0.2
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MA2	Magadan	31.27	11⇓	eP	P	08 38 37.8	+0.6
MA2				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SONM	Songino Array	31.51	315	P	P	08 38 40.2	+0.6
	comp=Z,0.4nm,0.4s,baz=127,slow=9.1,SNR=7.7						
SONM				PcP	PcP	08 41 20.0	-0.7
	comp=Z,0.4nm,0.5s,baz=124,slow=2.0,SNR=4.8						
SEY	Seymchan	34.70	10⇓	eP	P	08 39 07.4	+0.9
CMAR	Chiang Mai Arr	38.44	263	P	P	08 39 39.3	+1.1
	comp=Z,0.8nm,0.3s,baz=92,slow=4.3,SNR=4.5						
BILL	Bilibino	41.92	15⇓	eP	P	08 40 06.8	+1.1
BILL				e*PP	pwP	08 41 29.3	+2.0
BILL				e		08 41 57.3	
BILL				eS	S	08 45 58.9	+6.6
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MTN	Manton Dam	42.63	192	P	P	08 40 11.7	-0.3
MTN				IAmb	IAmb	08 40 19.1	
	comp=Z,46nm,1.4s						
TIXI	Tiksi	42.84	355⇓	eP	P	08 40 12.7	-0.1
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
TAPN	Taplejung	45.33	281	eP	P	08 40 33.5	+0.1
	comp=Z,4.3nm,0.4s						
ODAN	Odare	45.73	280	eP	P	08 40 36.8	+0.4
	comp=Z,14nm,0.5s						
ZALV	Zalesovo Beam	46.30	318	P	P	08 40 39.9	-0.1
	comp=Z,0.5nm,0.3s,baz=89,slow=8.0,SNR=3.0						
ZALV				PcP	PcP	08 42 06.9	-0.5
	comp=Z,1.2nm,0.5s,baz=126,slow=5.1,SNR=4.8						
ZALV				ScP	ScP	08 45 18.7	-1.8
	comp=Z,0.2nm,0.2s,baz=114,slow=5.4,SNR=3.6						
RAMN	Ramite	46.39	281	eP	P	08 40 41.4	-0.1
	comp=Z,7.6nm,0.4s						
JIRN	Jiri	46.55	282	eP	P	08 40 43.4	+0.5
	comp=Z,35nm,0.7s						
GUN	Gumba	46.75	282	eP	P	08 40 44.8	+0.4
PKIN	Phulchoki	47.25	282	eP	P	08 40 47.8	-0.3
	comp=Z,5.9nm,0.4s						
MK31	Makanchi Array	47.27	308	P	P	08 40 47.0	-0.7
MK31	Makanchi Array	47.27	308	P	P	08 40 47.0	-0.7
MK31				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MKAR	Makanchi Array	47.27	308	P	P	08 40 47.5	-0.2
	comp=Z,0.4nm,0.3s,baz=88,slow=10,SNR=17						
MKAR				PcP	PcP	08 42 10.8	-0.3
	comp=Z,0.8nm,0.6s,baz=84,slow=8.9,SNR=9.0						
DANN	Dangsing	48.44	283	eP	P	08 40 57.7	+0.6
	comp=Z,24nm,0.9s						
KOLN	Koldanda	48.73	283	eP	P	08 40 59.5	+0.3
FITZ	Fitzroy Crossi	48.95	198	P	P	08 41 01.0	+0.5
	comp=Z,5.6nm,0.6s,baz=27,slow=6.7,SNR=5.8						
FITZ	Fitzroy Crossi	48.95	198	P	P	08 41 00.7	+0.2
FITZ				IAmb	IAmb	08 41 01.6	
	comp=Z,6.2nm,0.7s						
WB0	Warramunga Arr	48.99	186	P	P	08 41 00.4	-0.5
WB0				IAmb	IAmb	08 41 01.1	
	comp=Z,12nm,0.5s						
WR0	Warramunga Arr	49.17	186	P	P	08 41 01.8	-0.4
WR0				IAmb	IAmb	08 41 02.2	
	comp=Z,12nm,0.5s						
WRA	Warramunga Arr	49.17	186	P	P	08 41 01.7	-0.4
	comp=Z,9.7nm,0.5s,baz=3.5,slow=7.8,SNR=44						
WRA				PcP	PcP	08 42 18.4	+0.2
	comp=Z,1.4nm,0.5s,baz=359,slow=4.2,SNR=3.1						
WRA	Warramunga Arr	49.17	186	P	P	08 41 01.8	-0.4
KURK	Kurchatov	49.77	313⇓	eP	P	08 41 07.0	+0.7
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AS31	Alice Springs	52.90	186	IAmb	IAmb	08 41 31.0	
	comp=Z,2.1nm,0.5s						
ASAR	Alice Springs	52.90	186	P	P	08 41 29.0	-0.5
	comp=Z,2.5nm,0.6s,baz=15,slow=12,SNR=32						
ASAR				PcP	PcP	08 42 32.6	+0.5
	comp=Z,0.4nm,0.7s,baz=32,slow=5.5,SNR=3.1						
ASAR	Alice Springs	52.90	186	P	P	08 41 28.7	-0.8
FRU1	Bishkek	52.95	303	P	P	08 41 27.8	-2.1
FRU1	Bishkek	52.95	303	P	P	08 41 27.8	-2.1
FRU1				pmax	pmax		
	comp=Z,76nm,0.5s						
AAK	Ala-Archa	53.08	303⇓	eP	P	08 41 31.7	+0.9
AAK				pmax	pmax		
	comp=Z,8.0nm,1.9s						
RSO	Redoubt South	54.10	34	P	P	08 41 43.3	+5.4
ILAR	Eielson Array	56.98	29	P	P	08 41 58.5	+0.8
	comp=Z,0.2nm,0.5s,baz=283,slow=9.8,SNR=5.6						
STKA	Stephens Creek	60.84	178	P	P	08 42 24.0	-0.3
	comp=Z,0.8nm,0.6s,baz=2.1,slow=9.5,SNR=3.1						
STKA	Stephens Creek	60.84	178	IAmb	IAmb	08 42 32.1	
	comp=Z,0.6nm,1.1s						
STKA	Stephens Creek	60.84	178	P	P	08 42 24.0	-0.3
ARU	Arti	61.26	321	c iP	P	08 42 26.3	-0.5
ARU				S	S	08 50 11.7	-1.7
ARU				SS	SS	08 54 18.7	-3.0
ARU				pmax	pmax		
	comp=Z,9.0nm,2.0s						
INK	Inuvik	62.06	25	P	P	08 42 32.1	+0.3
	comp=Z,0.5nm,0.3s,baz=269,slow=3.7,SNR=9.8						
INK	Inuvik	62.06	25	IAmb	IAmb	08 42 32.5	
	comp=Z,1.2nm,0.5s						
NWAO	Narrogin (SRO)	65.35	201	P	P	08 42 53.4	-0.1
	comp=Z,4.6nm,0.6s,baz=27,slow=7.6,SNR=11						
NWAO	Narrogin (SRO)	65.35	201	IAmb	IAmb	08 42 54.3	
	comp=Z,11nm,0.7s						
ARCES	ARCESS Array B	70.71	340	P	P	08 43 26.6	+0.6
	comp=Z,2.7nm,1.0s,baz=82,slow=9.3,SNR=7.4						
KBZ	Khabaz	74.80	312	P	P	08 43 50.6	+0.5
	comp=Z,2.4nm,0.7s,baz=69,slow=5.1,SNR=7.6						
KBZ	Khabaz	74.80	312⇑	eP	P	08 43 50.1	0.0
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	FINESS Array B	74.95	333	P	P	08 43 50.4	-0.2
	comp=Z,1.1nm,0.4s,baz=61,slow=4.5,SNR=7.3						
AKASG	Malin Array Be	79.47	323	P	P	08 44 15.0	-0.6
	comp=Z,0.9nm,0.5s,baz=46,slow=5.1,SNR=6.9						
AKASG	Malin Array Be	79.47	323	P	P	08 44 15.0	-0.6
NB2	NORSAR Subarra	80.71	337	P	P	08 44 21.3	-0.8
	comp=Z,0.4nm,0.4s,baz=45,slow=5.3						
NVAR	Mina Array Bea	81.03	51	P	P	08 44 25.2	+0.8
	comp=Z,0.5nm,0.5s,baz=287,slow=5.6,SNR=6.5						
BRTR	Keskin Array B	82.79	312	P	P	08 44 33.1	-0.3
	comp=Z,1.3nm,0.7s,baz=102,slow=3.9,SNR=6.9						
BRTR	Keskin Array B	82.79	312	eP	P	08 44 33.6	+0.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KHC	Kasperske Hory	88.28	328⇑	eP	P	08 45 01.4	+1.7
KHC				pmax	pmax		
	comp=Z,28nm,1.7s						
KMBO	Kilima Mbogo	101.23	275	i P	Pdif	08 45 59.2	-0.2
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.2s						
LPAZ	La Paz	151.53	69	PKPbc	PKiKP	08 52 02.1	+0.5
	comp=Z,1.6nm,0.6s,baz=223,slow=2.6,SNR=9.5						
PLCA	Paso Flores	152.99	123	PKPbc	PKiKP	08 52 03.4	+0.2
	comp=Z,1.1nm,0.6s,baz=261,slow=3.7,SNR=4.1						

IDC 05 08:34:58.8±1.4, 6.77S×129.48E, h0km, mb3.8/3, mb1 3.9/6, mb1mx3.7/33, mbtmp3.9/6, ML3.3/3, Error ellipse: s-maj=61.8km s-min=26.1km az=58.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.92	161	Pn	Pn	08 38 17.3	-0.1
	0.1nm,0.3s,baz=339,slow=16,SNR=3.5						
ASAR	Alice Springs	17.33	166	P	P	08 39 03.1	-0.7
	0.1nm,0.3s,baz=331,slow=9.5,SNR=7.5						
PMG	Port Moresby	17.70	100	P	Pn	08 39 06.2	-0.7
	3.7nm,0.3s,baz=251,slow=18,SNR=8.5						
SONM	Songino Array	58.06	342	P	P	08 44 55.0	+1.1
	0.8nm,0.9s,baz=167,slow=8.9,SNR=3.7						
MKAR	Makanchi Array	67.75	327	P	P	08 45 57.7	-0.6
	0.5nm,0.6s,baz=127,slow=8.3,SNR=5.6						
ZALV	Zalesovo Beam	71.15	334	P	P	08 46 18.9	-0.2
	0.6nm,0.4s,baz=130,slow=4.3,SNR=5.2						

IDC 05 08:55:48.5±1.6, 24.18N×141.55E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.4/59, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=67.8km s-min=21.8km az=92.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	2.96	11	Pn	Pn	08 56 37.2	+0.4
	15nm,0.3s,baz=274,slow=22,SNR=3.4						
JCJ				Sn	Sn	08 57 13.5	+0.4
	41nm,0.3s,baz=307,slow=23,SNR=7.4						
WRA	Warramunga Arr	44.41	190	P	P	09 04 01.5	+0.3
	2.8nm,0.8s,baz=12,slow=8.5,SNR=5.3						
ASAR	Alice Springs	48.13	189	P	P	09 04 29.9	-0.6
	0.7nm,0.8s,baz=12,slow=9.7,SNR=5.2						
MKAR	Makanchi Array	51.92	311	P	P	09 04 59.0	-0.2
	0.2nm,0.4s,baz=88,slow=8.8,SNR=6.0						

IDC 05 08:58:39.0±2.8, 9.06N×123.92E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.4/53, mbtmp3.7/3, MS3.5/1, Ms1 3.5/1, ms1mx2.6/34, Error ellipse: s-maj=278.8km s-min=27.1km az=64.0, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.59	160	P	P	09 04 54.4	-0.4
	2.6nm,0.8s,baz=339,slow=11,SNR=4.9						
ASAR	Alice Springs	33.96	163	P	P	09 05 24.6	+0.3
	0.4nm,0.6s,baz=338,slow=7.7,SNR=5.3						
TLY	Talaya	45.63	342	LR	LR	09 27 29.5	
	comp=Z,51nm,19.3s,baz=332,slow=38						
MKAR	Makanchi Array	51.62	324	P	P	09 07 47.2	-0.1
	0.4nm,0.5s,baz=114,slow=7.8,SNR=6.5						

*THE **05** 09:06:59.8, 38.23N×20.46E, h13km±1km, ML3.9/7, Error ellipse: s-maj=1.3km s-min=0.5km az=257.0*
*BEO **05** 09:06:59.4±0.9, 38.08N×20.07E, h26km±7km, ML3.6/7*
*ATH **05** 09:06:59.1, 38.22N×20.46E, h17km±1km, ML3.5/14, Error ellipse: s-maj=1.4km s-min=0.7km az=256.0*
*IDC **05** 09:07:03.9±2.8, 38.24N×20.43E, h52km±31km, mb3.5/5, mb1 3.5/7, mb1mx3.2/39, mbtmp3.7/7, ML3.5/2, Error ellipse: s-maj=23.6km s-min=17.0km az=60.0*
ISC 05 09:06:59.5±0.7, 38.23N±0.02×20.45E±0.03, h16km±4km, n96, σ1.15/132, mb3.7/5, 6C-1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.03	205	P	Pg	09 07 02.3	+0.1
LXR1				S	Sg	09 07 04.5	+0.4
KEF4	Livadi, Kephal	0.04	321	P	Pg	09 07 02.4	+0.1
KEF4				S	Sg	09 07 04.3	+0.1
KEF1	Kardakata, Kep	0.05	15	P	Pg	09 07 02.4	0.0
ARGA	Argostoli. Kep	0.06	159	P	Pg	09 07 02.2	-0.2
ARGA				S	Sg	09 07 04.1	-0.2
ARG2	Argostoli	0.06	152	P	Pg	09 07 02.2	-0.2
ARG2				S	Sg	09 07 04.1	-0.2
KEF2	Argostoli. Kep	0.07	158	P	Pg	09 07 02.3	-0.2
KEF2				S	Sg	09 07 04.3	-0.2
CHV1	Chavriata, Kef	0.07	232	P	Pg	09 07 02.6	0.0
CHV1				S	Sg	09 07 04.9	+0.3
KEF3	Kipouria, Keph	0.09	253	P	Pg	09 07 02.7	0.0
KEF3				S	Sg	09 07 04.8	0.0
VLS	Valsamata	0.12	116	P	Pg	09 07 02.8	-0.3
VLS				S	Sg	09 07 05.2	-0.2
	99μm,0.2s						
VLS	Valsamata	0.12	116	P	Pg	09 07 02.8	-0.3
VLS				S	Sg	09 07 05.0	-0.5
VLS				AML	AML	09 07 05.3	
VLS				AML	AML	09 07 05.7	
VSK1	VASILIKIADES	0.20	26	P	Pg	09 07 04.3	+0.1
VSK1				S	Sg	09 07 07.1	-0.3
	86μm,0.1s						
FSK	Fiskardo	0.25	20	P	Pg	09 07 05.1	+0.2
FSK				S	Sg	09 07 09.2	+0.6
	44μm,0.2s						
FSK	Fiskardo	0.25	20	P	Pg	09 07 05.1	+0.2
FSK				S	Sg	09 07 09.0	+0.3
FSK				AML	AML	09 07 09.8	
	comp=N,68243μm,0.4s						
FSK				AML	AML	09 07 10.2	
VLMS	Volimes, Zakyn	0.39	155	P	Pg	09 07 07.0	-0.4
VLMS				S	Sg	09 07 12.6	-0.1
VLMS				AML	AML	09 07 15.5	
	comp=E,34155μm,0.2s						
VLMS				AML	AML	09 07 16.8	
	comp=N,40986μm,0.3s						
EVGI	Lefkada island	0.42	22	P	Pg	09 07 08.0	-0.1
EVGI				S	Sb	09 07 14.8	0.0
EVGI	Lefkada island	0.42	22	P	Pg	09 07 07.9	-0.1
EVGI				S	Sg	09 07 14.4	+0.6
MGNA	Meganis	0.50	32	P	Pg	09 07 09.1	-0.4
MGNA				S	Sg	09 07 16.0	-0.2
MGNA				AML	AML	09 07 18.3	
	comp=N,15010μm,0.1s						
MGNA				AML	AML	09 07 18.5	
	comp=E,16090μm,0.1s						
ZAK2	Zakynthos	0.56	141	P	Pg	09 07 10.3	-0.3
ZAK2				S	Sb	09 07 19.3	+0.5
	comp=E,30μm,0.3s						
LKD2	Lefkada island	0.58	16	P	Pg	09 07 10.4	-0.6
LKD2	Lefkada island	0.58	16	P	Pg	09 07 10.5	-0.5
LKD2				S	Sg	09 07 18.8	+0.1
LKD2				AML	AML	09 07 26.1	
	comp=N,7786μm,0.3s						
LKD2				AML	AML	09 07 27.9	
	comp=E,9588μm,0.4s						
AST1	Astakos	0.59	58	P	Pg	09 07 10.7	-0.4
AST1				S	Sb	09 07 19.7	+0.2
	comp=E,10μm,0.3s						
PDO	Prodromos	0.68	57	P	Pg	09 07 12.3	-0.5
PDO	Prodromos	0.68	57	P	Pg	09 07 12.6	-0.3
PDO				S	Sg	09 07 21.7	-0.1
PDO				AML	AML	09 07 30.4	
	comp=N,11921μm,0.5s						
PDO				AML	AML	09 07 31.3	
	comp=E,8895μm,0.4s						
RLS	Riolos of Patr	0.82	102	P	Pb	09 07 14.4	-0.9
RLS				S	Sn	09 07 27.6	-0.5
	comp=E,2μm,0.4s						
RLS	Riolos of Patr	0.82	102	P	Pb	09 07 14.4	-0.9
RLS				S	Sg	09 07 26.6	+0.5
RLS				AML	AML	09 07 35.4	
	comp=N,4703μm,0.4s						
RLS				AML	AML	09 07 35.5	
	comp=E,3886μm,0.4s						
PVO	Paravola	0.93	65	P	Pb	09 07 17.1	-0.1
PVO				S	Sn	09 07 31.6	+0.8
	comp=E,4μm,0.4s						
PVO	Paravola	0.93	65	P	Pb	09 07 17.2	-0.1
PVO				S	Sb	09 07 29.7	+0.4
PVO				AML	AML	09 07 37.5	
	comp=E,9110μm,0.5s						
PVO				AML	AML	09 07 37.9	
	comp=N,6410μm,0.3s						
DRO	Drossia	1.03	105	P	Pb	09 07 18.6	-0.3
DRO				S	Sg	09 07 32.9	+0.1
DRO				AML	AML	09 07 42.6	
	comp=N,8710μm,0.6s						
DRO				AML	AML	09 07 47.0	
	comp=E,7931μm,0.3s						
EFP	Efpalio	1.16	80	P	Pb	09 07 21.3	+0.2
EFP				S	Sg	09 07 37.6	+0.6
EFP				AML	AML	09 07 43.8	
	comp=E,5881μm,0.7s						
EFP				AML	AML	09 07 45.8	
	comp=N,3483μm,0.5s						
LAKA	Lakka	1.20	89	P	Pn	09 07 21.4	-0.3
LAKA				S	Sg	09 07 38.2	-0.1
LAKA				AML	AML	09 07 45.9	
	comp=N,1298μm,0.5s						
LAKA				AML	AML	09 07 47.1	
	comp=E,1759μm,0.6s						
ANX	Ano Chora	1.21	72	P	Pn	09 07 21.8	0.0
ANX	Ano Chora	1.21	72	P	Pn	09 07 22.2	+0.2
AMT	Artemida-Makis	1.21	125	P	Pn	09 07 21.0	-0.8
AMT				S	Sn	09 07 38.3	+0.3
AMT				AML	AML	09 07 44.6	
	comp=N,3451μm,0.5s						
AMT				AML	AML	09 07 49.3	
	comp=E,2656μm,0.6s						
EVR	Evrytania	1.27	57	P	Pb	09 07 23.2	+0.2
EVR				S	Sg	09 07 40.2	-0.2
EVR				AML	AML	09 07 54.8	
	comp=N,1782μm,0.7s						
EVR				AML	AML	09 07 54.9	
	comp=E,1732μm,0.9s						
SERG	Sergoula	1.27	81	P	Pn	09 07 22.8	+0.1
TRIZ	Trizonia	1.28	83	P	Pn	09 07 22.5	-0.2
IGT	Igoumenitsa	1.31	356	P	Pn	09 07 23.4	+0.3
IGT	Igoumenitsa	1.31	356	ePg	Pg	09 07 26.1	+1.5
IGT	Igoumenitsa	1.31	356	P	Pb	09 07 23.8	+0.2
IGT				S	Sg	09 07 42.3	+0.7
IGT				AML	AML	09 07 46.1	
	comp=E,2354μm,0.6s						
IGT				AML	AML	09 07 48.3	
	comp=N,2175μm,0.4s						
KALE	Kalithea	1.34	82	P	Pn	09 07 23.7	+0.1
KLV	Kalavryta, Ach	1.35	97	P	Pn	09 07 24.0	+0.3
KLV	Kalavryta, Ach	1.35	97	P	Pn	09 07 24.0	+0.3
KLV				S	Sg	09 07 42.5	-0.6
JAN	Janina	1.46	12	P	Pb	09 07 27.2	+0.9
ITM	Ithomi	1.57	131	P	Pb	09 07 28.8	+0.7
PYL	PYLOS	1.68	142	P	Pb	09 07 28.7	+0.5
VLX	Vlachokerasia	1.75	119	P	Pb	09 07 30.5	-0.8
FNA	Florina	2.65	15	ePn	Pn	09 07 44.3	+2.7
OHR	Ohrid	2.89	5	i Pn	Pb	09 07 49.6	-1.1
TIP	Timpagrande	3.04	289	⇑P	Pn	09 07 48.2	+1.2
TIR	Tirane	3.15	352	ePn	Pn	09 07 49.4	+1.0
TIR	Tirane	3.15	352	⇑P	Pn	09 07 50.8	+2.4
VAY	Valandovo	3.49	27	ePn	Pn	09 07 56.0	+2.9
VAY	Valandovo	3.49	27	i Pn	Pg	09 08 04.0	-2.4
STIP	Stip	3.71	20	i Pn	Pb	09 08 01.0	-3.6
SRS	Serrai	3.77	39	ePn	Pn	09 08 00.7	+3.8
MATE	Matera	3.78	311	⇑P	Pn	09 07 57.8	+0.8
DRME	Dracevica, Mon	4.07	347	ePn	Pn	09 08 01.2	+0.1
APE	Apeiranthos	4.19	104	⇓P	Pb	09 08 08.6	-4.3
PDG	Podgorica	4.30	348	ePn	Pn	09 08 05.1	+0.9
PDG				eSn	Sn	09 08 53.9	0.0
PDG	Podgorica	4.30	348	⇑P	Pn	09 08 05.7	+1.5
PDG	Podgorica	4.30	348	ePn	Pn	09 08 04.0	-0.2
HCY	Herceg Novi	4.47	341	ePn	Pn	09 08 02.4	-4.2
BOSS	Bosilegrad	4.54	19	ePn	Pn	09 08 09.9	+2.4
IDI	Anoyia	4.61	128	P	Pn	09 08 11.1	+2.4
	comp=N,0.8nm,0.3s,baz=323,slow=8.8,SNR=6.3						
IDI				S	Sn	09 09 05.0	+3.0
	comp=N,4.5nm,0.3s,baz=338,slow=23,SNR=9.7						
TREB	Trebinje	4.76	341	ePn	Pn	09 08 10.0	-0.6
TREB				eSn	Sn	09 09 03.6	-1.9
TREB	Trebinje	4.76	341	ePn	Pn	09 08 09.8	-0.8
VTS	Vitosha	4.87	25	ePn	Pn	09 08 14.5	+2.3
VTS	Vitosha	4.87	25	⇑P	Pn	09 08 18.0	+5.7
BRY	Bratogost	4.89	343	ePn	Pn	09 08 12.3	-0.2
SELS	Selova	5.01	6	ePn	Pn	09 08 14.0	0.0
SJES	Sjenica	5.04	356	ePn	Pn	09 08 16.0	+1.5
SJES				eSn	Sn	09 09 13.0	+0.5
STON	Ston	5.09	337	ePn	Pn	09 08 13.9	-1.2
UPM	Unac-Piva	5.11	347	ePn	Pn	09 08 15.8	+0.3
ZAPS	Zavoj	5.30	17	ePn	Pn	09 08 19.3	+1.2
IVAS	Ivanjica	5.35	358	ePn	Pn	09 08 18.5	-0.2
IVAS				eSn	Sn	09 09 18.1	-1.9
GRUS	Gruza	5.66	2	ePn	Pn	09 08 23.7	+0.8
GRUS				eSn	Sn	09 09 26.9	-0.6
BBLS	Lazići	5.69	352	ePn	Pn	09 08 22.9	-0.5
BBLS				eSn	Sn	09 09 26.8	-1.6
BBLS	Lazići	5.69	352	ePn	Pn	09 08 22.3	-1.1
ZAGS	Zajecar	5.74	13	ePn	Pn	09 08 25.0	+1.0
DIVS	Divibare	5.88	357	ePn	Pn	09 08 25.5	-0.5
DIVS				eSn	Sn	09 09 31.4	-1.6
DIVS	Divibare	5.88	357	ePn	Pn	09 08 25.7	-0.3
MGRS	Mrkonjic Grad	6.68	339	ePn	Pn	09 08 38.0	+1.0
BLY	Banja Luka	6.96	340	ePn	Pb	09 08 54.1	-5.9
VOIR		7.98	24	⇑P	Pn	09 09 00.4	+5.6
MLR	Muntele Rosu	8.33	28	P	Pn	09 09 09.7	+10
	comp=N,0.5nm,0.3s,baz=282,slow=11,SNR=4.4						
CRES	Cresnjev	8.45	336	ePn	Pn	09 09 00.0	-1.2
CRES				ePn	Pn	09 09 00.2	-1.0
SOKA	Soboth	9.34	336	ePn	Pn	09 09 12.8	-0.7
	comp=N,3.6nm,0.5s						
OBKA	Obir	9.36	334	ePn	Pn	09 09 14.4	+0.7
	comp=N,1.7nm,0.2s						
KBA	Koelnbreinsper	10.27	332	Pn	Pn	09 09 27.4	+1.0
	comp=N,0.8nm,0.2s						
MOA	Molln	10.62	337	Pn	Pn	09 09 31.9	+0.9
	comp=N,2.2nm,0.5s						
GERES	GERESS Array B	11.68	337	P	Pn	09 09 46.6	+1.0
	comp=N,0.2nm,0.3s,baz=159,slow=15,SNR=4.1						
HFS	Hagfors	22.34	351	P	P	09 11 57.6	+1.2
	comp=N,1.0nm,0.5s,baz=164,slow=12,SNR=5.0						
FINES	FINESS Array B	23.50	7	P	P	09 12 09.2	+0.8
	comp=N,1.5nm,0.7s,baz=187,slow=9.8,SNR=5.4						
TORD	Torodi Ar. Bea	30.04	219	P	P	09 13 07.9	+0.1
	comp=N,0.4nm,0.5s,baz=29,slow=9.9,SNR=3.2						
MKAR	Makanchi Array	45.32	58	P	P	09 15 16.4	-0.2
	comp=N,0.4nm,0.4s,baz=276,slow=7.6,SNR=16						
ZALV	Zalesovo Beam	45.70	48	P	P	09 15 18.9	-0.5
	comp=N,1.1nm,0.5s,baz=270,slow=8.7,SNR=4.4						

*NCEDC **05** 09:08:06.3±2.3, 37.63N±0.01×119.03W±0.01, h5km±3km,* *Mwr3.1/2, Error ellipse: s-maj=2.0km s-min=1.5km az=149.0, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}-2.01; $M_{\theta\theta}$0.85; $M_{\phi\phi}$1.16; $M_{r\theta}$-0.40; $M_{\theta\phi}$3.57; $M_{\phi r}$-2.85;*

*ANF **05** 09:08:06.4±1.1, 37.60N×119.05W, h6km±5km, ML2.8/15 Error ellipse: s-maj=10.9km s-min=4.9km az=127.0*

ISC 05 09:08:06.3±0.8, 37.62N±0.01×119.04W±0.02, h3km±5km, n167, σ0.83/184, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
MMPM	Mammoth Pass	0.01	132		Pg	09 08 07.5	+0.1
MLIM	Lincoln Peak	0.03	43		Pg	09 08 07.6	+0.2
MRDM	Red Cones	0.03	216		Pg	09 08 07.8	+0.5
OMMB	Old Mammoth Mi	0.03	100		Pg	09 08 07.4	0.0
OMMB				Sg	Sg	09 08 08.1	-0.1
MINS	Minaret Summit	0.04	335		Pg	09 08 07.7	+0.2
MDYM	Dry Creek	0.04	29		Pg	09 08 07.8	+0.2
MMLB	Mammoth Lakes	0.06	50		Pg	09 08 08.0	+0.2
MEMM	East Mammoth H	0.09	59		Pg	09 08 08.4	+0.2
MLCM	Laurel Creek C	0.10	94		Pg	09 08 08.5	+0.2
MCSM	Casa Diablo Ho	0.11	71		Pg	09 08 08.8	+0.2
MCBM	Casa Benchmark	0.12	77		Pg	09 08 09.0	+0.3
LMCR	Lookout Mounta	0.13	34		Pg	09 08 09.4	+0.5
MCMM	Convict Lake	0.13	94		Pg	09 08 09.1	+0.2
MLAC	Mammoth, Mammo	0.16	86		Pg	09 08 09.9	+0.4
MLAC	Mammoth, Mammo	0.16	86	P	Pg	09 08 10.0	+0.4
	baz=270						
MDRNC	Doe Ridge	0.16	83		Pg	09 08 09.9	+0.4
MCVM	Convict Lake	0.17	100		Pg	09 08 09.8	+0.1
MLHM	Little Hot Cre	0.19	71		Pg	09 08 10.4	+0.4
RCCR	Rock Creek Can	0.28	117		Pg	09 08 11.9	+0.1
ORC	Owens River	0.30	87		Pg	09 08 12.5	+0.3
WMD		0.36	119		Pg	09 08 13.4	+0.2
KCC	Kaiser Creek	0.37	217		Pg	09 08 13.9	+0.5
KCC					Sg	09 08 18.9	+0.8
SCHCA	Scheelite	0.38	133		Pg	09 08 13.8	+0.1
BENR	Benton	0.38	75		Pg	09 08 13.8	+0.1
MRCM	Red Rock Canyo	0.43	82		Pg	09 08 14.7	+0.2
LUL	Lundy Lake	0.45	346		Pg	09 08 14.9	0.0
MTUM	Tungsten Hills	0.46	125		Pg	09 08 15.4	+0.2
MCDM	Chidago Canyon	0.48	98		Pg	09 08 15.9	+0.4
MFBM	Five Bridges	0.52	111		Pg	09 08 16.8	+0.5
MLNR	Milner Canyon	0.55	92		Pg	09 08 17.2	+0.4
MMIM	Miami Mountain	0.59	251		Pg	09 08 18.1	+0.4
POCCA	Poleta Canyon	0.66	113		Pg	09 08 18.9	+0.1
LHV	Little Huntoon	0.76	34		Pg	09 08 20.9	+0.1
LHV					Sg	09 08 31.2	+0.5
FRI	Friant	0.82	221		Pg	09 08 22.2	+0.2
MHDM	Hidden Dam	0.84	234		Pg	09 08 22.7	+0.3
TIN	Tinemaha, Big	0.86	131		Pg	09 08 22.9	+0.2
TIN	Tinemaha, Big	0.86	131	P	Pg	09 08 22.9	+0.2
	baz=312						
HELL	Mitchell Peak,	0.94	179		Pg	09 08 24.2	0.0
WAKR	Walker	0.94	341		Pg	09 08 24.2	0.0
WAKR				Sg	Sg	09 08 36.6	+0.2
NVAR	Mina Array Bea	1.00	35		Pg	09 08 24.7	-0.7
NVAR				Sg	Sg	09 08 38.0	-0.3
NV11	Mina Array Sit	1.07	40		Pg	09 08 26.6	-0.3
NV11				Sg	Sg	09 08 40.2	-0.5
RYN	Ryan	1.09	22		Pg	09 08 27.0	-0.2
RYN				Sg	Sg	09 08 41.5	+0.3
MYLM	Yosemite Lake	1.12	258		Pg	09 08 27.6	-0.1
CMB	Columbia Colle	1.15	292	Pg	Pg	09 08 27.4	-0.8
CMB				Sg	Sg	09 08 42.9	-0.2
MCUB	Copperopolis B	1.30	286		Pn	09 08 30.1	-1.2
VOG	Valley Oaks Go	1.32	192	S	Sn	09 08 49.6	-0.1
	baz=12						
MRHM	Rocky Hill	1.33	182		Pn	09 08 30.8	-0.9
YERR	Yerington	1.37	353		Pn	09 08 32.0	-0.6
CWC	Cottonwood Cre	1.41	147		Pn	09 08 32.5	-0.4
CWC	Cottonwood Cre	1.41	147	P	Pn	09 08 32.6	-0.3
	baz=328						
CWC				S	Sb	09 08 50.8	-0.8
	baz=328						
SPG2	Springville 2	1.43	171		Pn	09 08 32.9	-0.2
GNO	Genoa	1.46	334		Pb	09 08 33.9	-0.2
GRAC	Grapevine Rang	1.47	114	Pb	Pg	09 08 34.4	-0.1
	baz=296						
MNHB	New Hogan Dam	1.50	291		Pn	09 08 33.6	-0.4
PWMM	Westland Maint	1.51	219		Pb	09 08 35.3	+0.1
PNTR	Pine Nut	1.53	343		Pb	09 08 35.1	-0.3
KVN	Kaiserville	1.61	27		Pn	09 08 36.1	+0.3
BRMM	Rolling Bench	1.62	242		Pb	09 08 37.1	+0.2
SCKWR	San Luis Creek	1.67	256		Pg	09 08 38.1	-0.2
RUBR	Rubicon Trail	1.68	329		Pb	09 08 37.6	-0.3
BMSM	Mercy Hot Spri	1.70	236		Pb	09 08 37.9	-0.2
PARM	Anticline Ridg	1.72	218		Pg	09 08 38.9	-0.4
VCNR	Virginia City	1.74	344		Pb	09 08 38.6	-0.4
ASMM	Slate Mountain	1.77	313		Pb	09 08 38.6	-0.8
TAHR	Tahoe	1.77	330		Pb	09 08 39.4	-0.1
DAC	Darwin (Calif)	1.77	139		Pb	09 08 41.1	+0.9
VES	Vestal, Richgr	1.77	181		Pb	09 08 38.9	-0.4
VES	Vestal, Richgr	1.77	181	Pb	Pb	09 08 39.0	-0.4
	baz=1.5						
VES				S	Sb	09 09 01.9	-0.2
	baz=1.5						
PKEM	Kettleman Hill	1.77	209		Pb	09 08 39.7	+0.3
SFJWR	San Luis Fatjo	1.79	252		Pb	09 08 39.4	-0.4
SLD	San Luis Dam	1.82	253		Pb	09 08 39.7	-0.5
AASM	Arroyo Seco	1.82	297		Pb	09 08 39.5	-0.8
MPK	Martis Peak	1.85	335		Pb	09 08 40.5	-0.3
BAVM	Antelope Valle	1.86	239		Pb	09 08 40.5	-0.4
HPCM	Pacheco Lake	1.87	253		Pb	09 08 40.4	-0.6
HPCM					Sg	09 09 06.0	-0.3
PACP	Pacheco Peak	1.89	252		Pb	09 08 40.8	-0.6
WCHM	Chimney Peak	1.90	156		Pb	09 08 41.3	-0.4
BEMM	Emmet	1.90	240		Pb	09 08 41.1	-0.5
BBGB	Big Mountain B	1.91	238		Pb	09 08 41.6	-0.1
WASM	Alta Sierra Ca	1.92	168		Pb	09 08 41.7	-0.2
VPEM	Volcano Peak E	1.93	149		Pb	09 08 42.3	+0.1
BEHM	Elkhorn Ranch	1.95	241		Pb	09 08 42.1	-0.3
HLTM	Lone Tree Road	1.95	249		Pb	09 08 41.7	-0.7
CMMM	Mount Mocho	1.96	266		Pb	09 08 41.6	-1.0
BBNM	San Benito	1.97	236		Pb	09 08 42.9	+0.2
HJSM	John Smith Roa	1.97	247		Pb	09 08 42.4	-0.5
CTM	Castle Mountai	1.98	212		Pb	09 08 42.7	-0.3
LRV	Little Rabbit	1.98	234		Pb	09 08 42.7	-0.2
BHRM	Hodges Ranch	1.99	244		Pb	09 08 42.6	-0.4
HFEM	San Felipe	1.99	252		Pb	09 08 42.2	-0.9
PMPB	Monarch Peak	1.99	226		Pb	09 08 42.7	-0.4
MPMC	Manual Prospec	1.99	141	Pb	Pb	09 08 42.9	-0.4
	baz=322						
ARN	Arnold Ranch	2.00	263		Pb	09 08 42.2	-1.1
DONR	Donner Summit	2.00	330		Pb	09 08 42.6	-0.9
ISA	Isabella, Lake	2.00	167	Pn	Pb	09 08 43.1	-0.2
ISA				Sn	Sb	09 09 09.4	+0.7
ISA	Isabella, Lake	2.00	167	Pb	Pb	09 08 43.2	-0.2
	baz=347						
ISA				Sb	Sg	09 09 10.0	-0.7
	baz=347						
VPK	Verdi Peak	2.01	337		Pb	09 08 44.2	+0.6
AFDM	Forest Hills D	2.02	312		Pb	09 08 42.8	-0.8
AFDM					Sb	09 09 09.2	0.0
BLRM	Lewis Ranch	2.02	243		Pb	09 08 44.1	+0.5
WORM	Onyx Ranch	2.02	161		Pb	09 08 43.5	-0.1
BSLM	Silva Ranch	2.03	246		Pb	09 08 43.1	-0.6
HSPM	Sheep	2.04	256		Pb	09 08 43.4	-0.6
BPIM	Pinnacles	2.04	237		Pb	09 08 43.3	-0.7
BCGM	Cienega Road	2.05	244		Pb	09 08 43.7	-0.4
IND	Independence	2.06	332		Pb	09 08 44.8	+0.3
PMRM	Maxey Ranch	2.07	208		Pb	09 08 43.5	-0.9
BJOM	Mount Johnson	2.07	242		Pb	09 08 44.0	-0.4
TOW	Tower One	2.08	150		Pg	09 08 45.4	-0.6
BVYM	Vineyard	2.08	246		Pb	09 08 43.8	-0.9
FURC	Furnace Creek,	2.09	123	Pb	Pb	09 08 44.7	0.0
	baz=305						
MHC	Mount Hamilton	2.09	263		Pb	09 08 43.8	-1.1
KBF	Kyburz Flat	2.10	334		Pb	09 08 45.4	+0.3
PAHR	Pah Rah Range	2.10	353		Pn	09 08 43.2	+0.7
SAO	San Andreas Ge	2.10	247	Pn	Pb	09 08 43.9	-1.1
SAO					Pn	09 08 44.0	+1.7
SAO				Sn	Sn	09 09 09.7	+0.7
PEAR	Peavine Mounta	2.11	340		Pb	09 08 45.5	+0.1
PCMM	Cholame Hills	2.12	212		Pb	09 08 44.3	-1.0
PKLM	Kerr Lake	2.12	210		Pb	09 08 44.2	-1.0
FRP	Fremont Peak	2.14	247		Pn	09 08 44.1	+1.2
BSGM	Shirttail Gulc	2.14	237		Pb	09 08 44.8	-0.9
HLPM	Lions Peak	2.15	255		Pb	09 08 44.8	-1.0
HBTM	San Juan Bauti	2.15	250		Pb	09 08 45.6	-0.1
SCZ	Santa Cruz	2.15	242		Pb	09 08 44.3	-1.4
WENL	Wente Vineyard	2.16	271		Pb	09 08 45.2	-0.7
BJCM	Johnson Can.	2.16	241		Pb	09 08 44.5	+1.3
TRAM	Private Proper	2.18	207		Pb	09 08 44.9	-1.4
CMOB	Morgan Territo	2.20	276		Pb	09 08 45.2	-1.5
JSTM	Santa Teresa H	2.23	260		Pn	09 08 45.5	+1.4
BSMM	Soledad Missio	2.27	238		Pb	09 08 46.4	-1.6
JHLM	Holstrom Ranch	2.28	258		Pn	09 08 46.3	+1.2
PCCM	Crazy Canyon	2.29	229		Pb	09 08 46.9	-1.3
BPCNC	Pine Canyon	2.32	244		Pn	09 08 46.5	+1.3
JUMM	Mount Umunhum	2.32	260		Pn	09 08 46.7	+1.3
TSCN	Private Proper	2.32	207		Pb	09 08 47.2	-1.6
TPNV	Topopah Spring	2.32	106		Pn	09 08 45.6	+0.1
JTGM	Trout Gulch Ro	2.34	256		Pb	09 08 47.5	-1.5
HAST	Hastings Reser	2.36	239		Pn	09 08 47.2	+1.4
CARC	Carrizo Plain	2.40	196		Pb	09 08 48.2	-1.9
LRMC	Laurel Mtn Rad	2.40	152	Pb	Pb	09 08 50.4	+0.3
	baz=334						
LRMC				Sb	Sg	09 09 22.1	-1.2
	baz=334						
TEJ	El Tejon	2.40	173		Pb	09 08 49.4	-0.7
BGC	Bolinger Road	2.41	276		Pn	09 08 48.2	+1.6
PHSB	Hesperia Broad	2.41	223		Pb	09 08 48.5	-1.8
JSGM	Saratoga Golf	2.42	263		Pn	09 08 48.2	+1.6
SMMC	Simmler	2.42	199		Pn	09 08 48.4	+1.6
NADM	Allendale	2.46	291		Pb	09 08 50.2	-0.9
RAMR	Ramage Ranch	2.47	217		Pb	09 08 49.2	-2.0
ARVC	Arvin	2.49	176		Pb	09 08 50.9	-0.7
ARVC	Arvin	2.49	176	Pb	Pb	09 08 51.1	-0.5
	baz=356						
JFP	Foothills Park	2.52	265		Pn	09 08 49.2	+1.1
BAPM	Anderson Peak	2.54	236		Pn	09 08 49.7	+1.3
NDHM	Dunnigan Hills	2.54	298		Pb	09 08 52.3	-0.1
BKS	Berkeley--Byer	2.55	277		Pn	09 08 49.9	+1.4
BPOM	Post Ranch	2.59	238		Pn	09 08 50.5	+1.5
ORV	Oroville	2.73	316		Pn	09 08 50.9	0.0
SHOC	Shoshone, Teco	2.81	127	Pb	Pb	09 08 57.5	+0.5
	baz=309						
R11A	Troy Canyon, C	2.83	74	Pn	Pn	09 08 52.2	-0.3
R11A	Troy Canyon, C	2.83	74	Pb	Pb	09 08 57.6	+0.1
	baz=256						
EDW2	Edwards Air Fo	2.86	162	Pb	Pb	09 08 58.5	+0.6
	baz=343						
GSC	Goldstone, Bar	2.93	141	Pn	Pn	09 08 52.6	-1.2
MGL	Magalia	2.95	319		Pb	09 08 57.9	-1.6
SHPR	Sheep Range	3.30	109	Pn	Pn	09 08 58.4	-0.6
TUQ	Turquoise Moun	3.32	130	P	Pn	09 08 59.7	+0.5
	baz=312						
HOPS	Hopland Field	3.46	295	Pn	Pn	09 09 03.3	+2.3
MWC	Mount Wilson	3.48	166	Pn	Pn	09 09 03.5	+2.1
WDC	Whiskeytown Da	4.02	318	Pn	Pn	09 09 07.8	-0.9
PFO	Pinyon Flats O	4.52	152	Pn	Pn	09 09 15.1	-0.5
XPFO	Pion Flat	4.52	151	Pn	Pn	09 09 15.0	-0.7
YBH	Yreka Blue Hor	4.99	327	Pn	Pn	09 09 25.8	+3.6

*ASRS **05** 09:57:06.9, 53.85N×88.13E, M1.7, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 05 09:57:14.7±2.7, 53.57N×87.70E, h0km, mb3.8, mpv3.5, 5C-3D, Error ellipse: s-maj=25.4km s-min=17.3km az=177.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
KURK	Kurchatov	6.28	247	⇓Pn	Pn	09 58 48.7	+0.2
	4.2nm,1.1s						
KURK				⇑Sn	Sn	10 00 01.0	+0.2
	1.5nm,0.8s						
KURK				⇑Lg	Lg	10 00 35.6	
	18nm,1.1s						
KURBB	Kurchatov Arra	6.38	246	⇑Pn	Pn	09 58 49.9	0.0
	2.7nm,0.3s						
KURBB				⇓Sn	Sn	10 00 04.7	+1.4
	8.3nm,0.8s						
KURBB				⇓Lg	Lg	10 00 39.5	
	12nm,0.9s						
MK31	Makanchi Array	7.62	209	⇑Pn	Pn	09 59 06.9	-0.1
	0.8nm,0.7s,baz=30,slow=13,SNR=25						
MK31				Sn	Sn	10 00 36.7	+2.7
	1.2nm,0.7s,baz=32,slow=25,SNR=5.7						
MK31				⇑Lg	Lg	10 01 13.3	
	9.0nm,1.0s,baz=288,slow=29,SNR=3.1						

*DJA **05** 10:08:09.8±0.5, 6°S±4°×12°9E±°, h288km±7km, M4.5/11, mB5.5/6, mb4.6/7, MLv4.2/11, Mw(mB)4.9/6*

*IDC **05** 10:08:18.6±2.4, 5.25S×129.20E, h229km±35km, mb3.3/1, mb1 3.8/5, mb1mx3.3/38, mbtmp4.4/5, MS2.8/1, Ms1 2.8/1, ms1mx2.3/14, Error ellipse: s-maj=59.2km s-min=14.0km az=88.0*

*NEIC **05** 10:08:18.8±1.3, 5.37S±0.06×129.2E±0.2, h232km±15km, mb4.4/9, Error ellipse: s-maj=28.2km s-min=7.6km az=98.0*

ISC 05 10:08:19.0±0.8, 5.39S±0.05×129.37E±0.07, h250km, n30, σ1.83/38, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
BNDI	Bandanaira	1.01	32	P	Pn	10 08 53.0	-1.1
BNDI				S	S	10 09 22.1	+0.3
MSAI	Masohi	2.08	348	P	Pn	10 09 01.1	-1.1
NLAI	Namlea	3.12	313	P	Pn	10 09 13.5	+0.7
SAUI	Saumlaki	3.21	143	P	Pn	10 09 00.7	-13
SAUI				S	S	10 09 52.2	-5.0
SAUI	Saumlaki	3.21	143	Pn	Pn	10 09 14.2	+0.5
SAUI				S	S	10 09 57.8	+0.7
FAKI	Fak Fak	3.78	50	P	Pn	10 09 19.4	-0.9
FAKI	Fak Fak	3.78	50	Pn	Pn	10 09 21.4	+1.2
FAKI					S	10 10 08.8	-0.1
SANI	Sanana	4.74	314	P	Pn	10 09 29.7	-1.9
	0.5nm1μm110nm,0.8s						
SIJI	Sorong	4.88	23	P	Pn	10 09 33.2	-0.1
	7.0nm,0.3s,baz=230,slow=22,SNR=28						
SIJI				S	S	10 10 28.7	-3.9
	11nm,0.3s,baz=257,slow=24,SNR=16						
SWI	Sorong	4.88	23	P	Pn	10 09 31.6	-1.7
	0.6nm2μm36nm,0.5s						
LBMI	Labuha	5.08	338	P	Pn	10 09 34.4	-1.4
	0.3nm3μm72nm,0.7s						
RKPI	Ransiki, Papua	6.16	51	P	S	10 11 00.2	-1.0
MTN	Manton Dam	7.60	167		Pn	10 10 08.5	+1.1
MTN					S	10 11 33.1	-1.3
KNRA	Kununurra	10.24	183	Pn	Pn	10 10 40.8	+0.2
KNRA				S	S	10 12 30.2	-5.4
FITZ	Fitzroy Crossi	13.14	196	P	P	10 11 18.6	+0.3
	1.1nm,0.3s,baz=27,slow=8.7,SNR=13						
FITZ				S	S	10 13 44.6	+1.8
	0.2nm,0.3s,baz=218,slow=23,SNR=3.2						
WB0	Warramunga Arr	15.10	162	P	Pn	10 11 42.0	+1.5
WRAB	Tennant Creek	15.24	162	P	Pn	10 11 43.9	+1.7
WRAB				IAmb	IAmb	10 11 44.4	
	comp=Z,9.9nm,0.8s						
WRA	Warramunga Arr	15.25	162	P	Pn	10 11 43.9	+1.7
	comp=Z,2.1nm,0.3s,baz=342,slow=12,SNR=16						
WRA				S	S	10 14 28.0	-2.1
	comp=Z,0.1nm,0.3s,baz=62,slow=24,SNR=2.7						
WRA	Warramunga Arr	15.25	162	P	Pn	10 11 43.5	+1.2
WR0	Warramunga Arr	15.33	161		Pn	10 11 44.9	+1.7
WR0				IAmb	IAmb	10 11 47.0	
	comp=Z,12nm,1.1s						
PSA00	Pilbara Seismi	18.54	209	P	P	10 12 18.1	+0.5
PSA00				IAmb	IAmb	10 12 31.9	
	comp=Z,20nm,1.3s						
AS31	Alice Springs	18.68	167	P	Pn	10 12 22.3	-0.4
ASAR	Alice Springs	18.68	167	P	Pn	10 12 22.2	-0.5
	comp=Z,2.6nm,0.3s,baz=349,slow=12,SNR=132						
ASAR				S	S	10 15 38.0	-0.5
	comp=Z,0.1nm,0.3s,baz=350,slow=24,SNR=5.9						
ASAR	Alice Springs	18.68	167	P	Pn	10 12 22.4	-0.3
BBOO	Buckleboo	27.98	168	P	P	10 13 48.8	+2.0
BBOO				IAmb	IAmb	10 14 01.1	
	comp=Z,12nm,1.2s						
KSRS	Korea Array	42.65	358	LR	LR	10 32 16.3	
	comp=Z,13nm,20.9s,baz=280,slow=34						
MK31	Makanchi Array	66.55	327	P	P	10 18 42.8	+0.5
MKAR	Makanchi Array	66.55	327	P	P	10 18 42.6	+0.4
	comp=Z,0.5nm,0.4s,baz=116,slow=8.0,SNR=13						
MKAR	Makanchi Array	66.55	327	P	P	10 18 42.8	+0.5
KURK	Kurchatov	70.83	329	P	P	10 19 10.1	+1.5

ATH 05 10:19:31.7, 38.35N×21.96E, h7km±3km, ML1.8/4, Error ellipse: s-maj=3.4km s-min=0.8km az=75.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
EFP	Efpalio	0.09	332	P	Pg	10 19 33.8	-0.1
EFP				S	Sg	10 19 35.4	+0.1
EFP				AML	AML	10 19 35.8	
	comp=E,2126μm,0.2s						
EFP				AML	AML	10 19 35.9	
	comp=N,2716μm,0.2s						
TRIZ	Trizonia	0.09	80	P	Pg	10 19 33.9	0.0
TRIZ				S	Sg	10 19 35.7	+0.3
SERG	Sergoula	0.10	51	P	Pg	10 19 34.0	-0.1
SERG				S	Sg	10 19 36.1	+0.3
SERG				AML	AML	10 19 36.5	
	comp=N,1722μm,0.2s						
SERG				AML	AML	10 19 36.8	
	comp=E,1424μm,0.2s						
LAKA	Lakka	0.11	171	P	Pg	10 19 34.1	-0.1
LAKA				S	Sg	10 19 36.2	+0.3
KALE	Kalithea	0.15	74	P	Pg	10 19 34.8	-0.1
KALE				S	Sg	10 19 37.4	+0.4
KALE				AML	AML	10 19 38.4	
	comp=N,565μm,0.2s						
KALE				AML	AML	10 19 39.1	
	comp=E,618μm,0.3s						
ANX	Ano Chora	0.24	353	P	Pg	10 19 36.5	-0.1
ANX				S	Sg	10 19 40.4	+0.4
ANX				AML	AML	10 19 41.1	
	comp=E,680μm,0.3s						
ANX				AML	AML	10 19 41.2	
	comp=N,742μm,0.3s						
KLV	Kalavryta, Ach	0.34	153	P	Pg	10 19 38.0	-0.4
KLV				S	Sg	10 19 44.1	+1.2
DRO	Drossia	0.44	206	P	Pg	10 19 40.2	-0.1
DRO				S	Sg	10 19 47.0	+0.9
EVR	Evrytania	0.58	348	P	Pg	10 19 42.6	-0.3
EVR				S	Sb	10 19 51.7	-1.0

*THE **05** 10:20:10.6, 38.25N×20.40E, h11km, ML3.3/8, Error ellipse: s-maj=1.2km s-min=0.4km az=265.0*

*ATH **05** 10:20:10.6, 38.25N×20.40E, h10km±1km, ML3.3/3, Error ellipse: s-maj=2.0km s-min=0.8km az=251.0*

ISC 05 10:20:10.7±1.2, 38.25N±0.02×20.42E±0.04, h10km±5km, n27, σ0.42/50, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
KEF4	Livadi, Kephal	0.01	15	P	Pg	10 20 12.3	-0.1
KEF4				S	Sg	10 20 13.3	-0.3
KEF1	Kardakata, Kep	0.05	55	P	Pg	10 20 12.5	-0.1
KEF1				S	Sg	10 20 13.8	-0.3
LXR1	Lixouri, Cepha	0.05	166	P	Pg	10 20 12.8	+0.1
LXR1				S	Sg	10 20 14.6	+0.5
CHV1	Chavriata, Kef	0.07	205	P	Pg	10 20 13.0	+0.1
CHV1				S	Sg	10 20 14.9	+0.4
	48μm,0.3s						
KEF3	Kipouria, Keph	0.08	230	P	Pg	10 20 13.0	+0.1
KEF3				S	Sg	10 20 14.6	0.0
ARGA	Argostoli. Kep	0.09	149	P	Pg	10 20 13.2	+0.1
ARGA				S	Sg	10 20 14.8	0.0
ARG2	Argostoli	0.09	145	P	Pg	10 20 13.2	+0.1
ARG2				S	Sg	10 20 15.1	+0.3
	41μm,0.3s						
KEF2	Argostoli. Kep	0.10	149	P	Pg	10 20 13.4	+0.1
KEF2				S	Sg	10 20 15.3	+0.2
VLS	Valsamata	0.15	119	P	Pg	10 20 14.0	-0.1
VLS				S	Sg	10 20 16.7	+0.3
	14μm,0.2s						
VLS	Valsamata	0.15	119	P	Pg	10 20 14.0	0.0
VLS				S	Sg	10 20 16.4	0.0
VLS				AML	AML	10 20 17.0	
	comp=E,20506μm,0.1s						
VLS				AML	AML	10 20 17.0	
	comp=N,34337μm,0.3s						
VSK1	VASILIKIADES	0.19	35	P	Pg	10 20 14.8	0.0
VSK1				S	Sg	10 20 17.9	+0.3
	comp=N,21μm,0.2s						
FSK	Fiskardo	0.23	28	P	Pg	10 20 15.5	0.0
FSK				S	Sg	10 20 19.4	+0.6
	comp=N,10μm,0.1s						
FSK	Fiskardo	0.23	28	P	Pg	10 20 15.6	0.0
FSK				S	Sg	10 20 19.2	+0.4
FSK				AML	AML	10 20 19.6	
	comp=N,7996μm,0.2s						
FSK				AML	AML	10 20 19.9	
	comp=E,31727μm,0.1s						
EVGI	Lefkada island	0.41	26	P	Pg	10 20 18.6	-0.2
EVGI				S	Sg	10 20 25.4	+1.1
EVGI	Lefkada island	0.41	26	P	Pg	10 20 18.6	-0.2
EVGI				S	Sg	10 20 25.3	+1.0
VLMS	Volimes, Zakyn	0.42	153	P	Pg	10 20 18.8	-0.1
VLMS				S	Sg	10 20 25.5	+1.0
VLMS				AML	AML	10 20 26.4	
	comp=E,9403μm,0.3s						
VLMS				AML	AML	10 20 26.6	
	comp=N,11890μm,0.4s						
MGNA	Meganis	0.50	36	P	Pg	10 20 20.1	-0.3
MGNA				S	Sg	10 20 27.5	+0.5
LKD2	Lefkada island	0.57	19	P	Pg	10 20 21.2	-0.6
LKD2				S	Sb	10 20 30.2	-0.7
AST1	Astakos	0.60	61	P	Pg	10 20 22.1	-0.2
AST1				S	Sb	10 20 31.8	0.0
	comp=N,2μm,0.3s						
KRI1	kERI	0.67	152	P	Pg	10 20 23.1	-0.5
KRI1				S	Sb	10 20 33.9	+0.2
	comp=N,1μm,0.3s						
PDO	Prodromos	0.69	60	P	Pg	10 20 24.0	-0.1
PDO				S	Sb	10 20 34.8	+0.3
	comp=N,2μm,0.4s						
PDO	Prodromos	0.69	60	P	Pg	10 20 24.0	0.0
PDO				S	Sb	10 20 34.5	0.0
RLS	Riolos of Patr	0.85	103	P	Pg	10 20 26.4	-0.6
RLS	Riolos of Patr	0.85	103	P	Pg	10 20 26.3	-0.7
PVO	Paravola	0.94	67	P	Pg	10 20 28.6	-0.2
PVO	Paravola	0.94	67	P	Pg	10 20 28.7	-0.1
PVO				S	Sb	10 20 42.4	+0.8
DRO	Drossia	1.06	106	P	Pb	10 20 30.8	-0.3

*THE **05** 10:40:10.3, 38.20N×20.41E, h14km, ML3.3/8, Error ellipse: s-maj=0.8km s-min=0.3km az=266.0*

*ATH **05** 10:40:10.4, 38.21N×20.40E, h14km±1km, ML2.9/4, Error ellipse: s-maj=1.9km s-min=1.0km az=257.0*

ISC 05 10:40:10.1±1.2, 38.20N±0.03×20.41E±0.05, h15km±5km, n25, σ0.27/45, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
CHV1	Chavriata, Kef	0.02	233	P	Pg	10 40 12.8	-0.1
CHV1				S	Sg	10 40 14.8	+0.1
	39μm,0.2s						
LXR1	Lixouri, Cepha	0.03	84	P	Pg	10 40 12.9	0.0
LXR1				S	Sg	10 40 14.8	+0.1
	29μm,0.2s						
KEF3	Kipouria, Keph	0.05	277	P	Pg	10 40 13.0	0.0
KEF3				S	Sg	10 40 14.8	-0.1
ARGA	Argostoli. Kep	0.06	110	P	Pg	10 40 13.0	-0.1
ARGA				S	Sg	10 40 14.8	-0.2
KEF4	Livadi, Kephal	0.06	14	P	Pg	10 40 13.0	-0.1
KEF4				S	Sg	10 40 14.9	-0.1
ARG2	Argostoli	0.07	107	P	Pg	10 40 13.1	0.0
ARG2				S	Sg	10 40 15.0	-0.1
	40μm,0.1s						
KEF2	Argostoli. Kep	0.07	117	P	Pg	10 40 13.2	0.0
KEF2				S	Sg	10 40 15.1	-0.1
KEF1	Kardakata, Kep	0.10	33	P	Pg	10 40 13.3	-0.2
KEF1				S	Sg	10 40 15.3	-0.3
VLS	Valsamata	0.15	98	P	Pg	10 40 13.9	-0.2
VLS				S	Sg	10 40 16.7	0.0
	32μm,0.1s						
VLS	Valsamata	0.15	98	P	Pg	10 40 13.9	-0.2
VLS				S	Sg	10 40 16.6	0.0
VLS				AML	AML	10 40 16.7	
	comp=N,61500μm,0.1s						
VLS				AML	AML	10 40 17.1	
	comp=E,61971μm,0.1s						
VSK1	VASILIKIADES	0.24	30	P	Pg	10 40 15.5	-0.1
VSK1				S	Sg	10 40 19.7	+0.4
	comp=E,9μm,0.1s						
FSK	Fiskardo	0.29	25	P	Pg	10 40 16.2	-0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK				S	Sg	10 40 20.7	+0.2
	comp=E,4µm,0.1s						
FSK	Fiskardo	0.29	25	P	Pg	10 40 16.2	-0.1
FSK				S	Sg	10 40 20.9	+0.4
VLMS	Volimes, Zakyn	0.38	148	P	Pg	10 40 17.9	0.0
VLMS				S	Sb	10 40 24.2	0.0
VLMS				AML	AML	10 40 25.1	
	comp=N,8471µm,0.2s						
VLMS				AML	AML	10 40 25.7	
	comp=E,7634µm,0.1s						
EVGI	Lefkada island	0.47	25	P	Pg	10 40 19.1	-0.3
EVGI				S	Sg	10 40 26.2	+0.4
EVGI	Lefkada island	0.47	25	P	Pg	10 40 19.2	-0.3
EVGI				S	Sg	10 40 26.2	+0.4
MGNA	Meganis	0.55	33	P	Pg	10 40 20.6	-0.5
MGNA				S	Sg	10 40 28.5	+0.2
LKD2	Lefkada island	0.62	18	P	Pg	10 40 22.0	-0.4
LKD2				S	Sb	10 40 31.3	0.0
LKD2	Lefkada island	0.62	18	P	Pg	10 40 22.1	-0.4
LKD2				AML	AML	10 40 37.7	
	comp=E,942µm,0.2s						
LKD2				AML	AML	10 40 38.5	
	comp=N,688µm,0.3s						
KRI1	kERI	0.63	149	P	Pg	10 40 22.0	-0.4
KRI1				S	Sb	10 40 31.7	+0.4
	comp=N,2µm,0.1s						
PDO	Prodromos	0.73	57	P	Pg	10 40 23.9	-0.5
PDO				S	Sb	10 40 34.9	+0.6
	comp=N,882nm,0.3s						
PDO	Prodromos	0.73	57	P	Pg	10 40 23.9	-0.5
PDO				AML	AML	10 40 43.0	
	comp=E,898µm,0.4s						
PDO				AML	AML	10 40 45.9	
	comp=N,1312µm,0.4s						
RLS	Riolos of Patr	0.85	99	P	Pg	10 40 26.7	+0.1
PVO	Paravola	0.97	64	P	Pb	10 40 28.7	0.0
PVO	Paravola	0.97	64	P	Pb	10 40 28.5	-0.1

IDC 05 10:45:28.9±5.0, 20.83N×123.70E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/30, mbtmp3.3/3, Error ellipse: s-maj=348.3km s-min=28.2km az=62.0
JMA 05 10:45:33.7±0.7, 20.98N×121.79E, h0km, M3.7
ISC 05 10:45:33.3±3.2, 20.5N±0.2×121.9E±0.7, h35km, n9, σ0.43/11, mb3.3/3, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	3.97	26	eS	Sn	10 47 16.7	-0.4
IRIF	Iriomote-Funau	4.19	23	P	Pn	10 46 34.8	0.0
JKRS	Kuro-shima	4.22	27	P	Pn	10 46 35.6	+0.5
JKRS				eS	Sn	10 47 22.9	-0.2
JIJ	Ishigaki jima	4.38	27	P	Pn	10 46 37.6	+0.2
JIJ				S	Sn	10 47 27.1	-0.2
JISG	Ishigakijimahi	4.65	28	P	Pn	10 46 41.4	+0.3
JISG				eS	Sn	10 47 33.2	-0.7
JTJ	Tarama	4.88	31	S	Sn	10 47 39.8	+0.3
MKAR	Makanchi Array	41.52	319	P	P	10 53 24.7	+7.4
	0.2nm,0.6s,baz=108,slow=7.9,SNR=4.5						
WRA	Warramunga Arr	41.96	162	P	P	10 53 20.6	-0.4
	0.5nm,0.8s,baz=348,slow=8.7,SNR=7.3						
ASAR	Alice Springs	45.39	165	P	P	10 53 48.9	+0.2
	0.2nm,0.4s,baz=344,slow=6.8,SNR=6.4						

DSN 05 10:59:41.5±1.1, 26.36N×58.04E, h10km, ML3.9/5, Error ellipse: s-maj=15.9km s-min=6.4km az=8.0
TEH 05 10:59:43.3, 26.71N×57.76E, h8km, ML3.5
OMAN 05 10:59:44.3±0.6, 26.67N×58.00E, h41km±10km, ml3.6/8, Error ellipse: s-maj=15.9km s-min=9.9km az=247.0
ISC 05 10:59:43.1±2.1, 26.63N±0.03×57.80E±0.06, h10km±15km, n35, σ1.62/44, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	Jask	0.98	182	ePg	Pb	11 00 04.1	+1.9
NIAN	Nian	1.27	317	e		11 00 29.3	
NIAN				ePg	Pn	11 00 07.0	+0.2
KHNJ	Kahnooj	1.32	356	eSg	Sn	11 00 24.5	-0.8
KHNJ				ePg	Pb	11 00 06.3	-1.7
BANOM	Banah	1.52	243	eP	Pn	11 00 10.1	-0.2
	SNR=98						
BANOM				S	Sg	11 00 32.1	+0.2
BANOM	Banah	1.52	243	P	Pn	11 00 10.4	+0.1
	SNR=24						
BANOM				S	Sg	11 00 32.3	+0.4
BANOM	Banah	1.52	243	ePn	Pn	11 00 10.4	+0.1
SHME	Shamm	1.59	249	eP	Pn	11 00 12.0	+0.6
	SNR=22						
SHME	Shamm	1.59	249	ePn	Pn	11 00 12.2	+0.8
GENO	Geno	1.64	298	ePn	Pb	11 00 12.8	-0.8
GENO				eSg	Sg	11 00 36.5	+0.5
GENO				e		11 00 43.9	
MDH	Madha	1.89	226	eP	Pn	11 00 13.8	-1.6
	SNR=7.1						
MDH	Madha	1.89	226	P	Pn	11 00 14.0	-1.4
MDH				S	Sn	11 00 37.3	-1.9
MDH	Madha	1.89	226	ePn	Pn	11 00 13.8	-1.6
UOSS	Minazif	2.21	221	P	Pn	11 00 17.6	-2.2
UOSS	Minazif	2.21	221	ePn	Pn	11 00 19.3	-0.5
HATD	Hatta, Dubai	2.34	220	ePn	Pn	11 00 21.9	+0.3
ASHO	Ashiyiah	2.49	219	eP	Pn	11 00 22.4	-1.3
	SNR=8.3						
ASHO	Ashiyiah	2.49	219	P	Pn	11 00 23.7	-0.1
	SNR=8.0						
ASHO				S	Sn	11 00 57.2	+3.0
ASHO	Ashiyiah	2.49	219	ePn	Pn	11 00 23.6	-0.1
NAZ	Nazwa, Dubai	2.52	230	P	Pn	11 00 22.8	-1.3
NAZ	Nazwa, Dubai	2.52	230	P	Pn	11 00 26.7	+2.6
NAZ	Nazwa, Dubai	2.52	230	ePn	Pn	11 00 24.1	0.0
SOHO	SOHO	2.73	205	ePn	Pn	11 00 25.0	-2.0
FAQ	Al Faqa, Dubai	2.73	227	ePn	Pn	11 00 27.0	0.0
BIDO	Bidbid	3.10	174	ePn	Pn	11 00 30.8	-1.3
CHMN	Cheshme madani	3.23	356	ePn	Pb	11 00 37.4	-3.4
CHMN				e		11 00 44.5	
ARQ	Araqi	3.47	200	P	Pn	11 00 38.6	+1.4
	SNR=15						
ARQ				S	Sn	11 01 20.3	+1.9
SMDO	Samad	3.56	176	P	Pn	11 00 38.5	+0.1
	SNR=8.5						
SMDO				S	Sn	11 01 19.9	-0.7
KHGB	Koh Gabri	3.91	343	ePn	Pn	11 00 45.6	+2.2
KHGB				e		11 02 05.8	
WBK	Wadi Bani Khal	4.14	165	P	Pn	11 00 45.4	-0.9
WBK				S	Sn	11 01 32.5	-2.3
NHDN	Nehbandan	5.14	22	ePn	Pn	11 01 02.3	+2.0
IBAF	Bafgh	5.32	339	ePn	Pn	11 01 06.6	+3.9
IKOO	Kooshah	5.87	10	ePn	Pn	11 01 12.3	+1.9
ITEG	Tejag	6.30	7	ePn	Pn	11 01 17.9	+1.6
KLNJ	Kolanjah	6.98	310	ePn	Pn	11 01 26.0	+0.3
IRAM	Ramesheh	7.00	319	ePn	Pn	11 01 27.0	+1.1

IDC 05 11:02:19.4±3.2, 32.33S×178.20W, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.7/24, mbtmp3.8/3, ML3.1/1, Error ellipse: s-maj=70.9km s-min=36.6km az=113.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.04	212	Pn	Pn	11 04 03.2	-0.5
	0.3nm,0.3s,baz=56,slow=18,SNR=2.6						
URZ				Sn	Sn	11 05 23.4	-1.1
	2.6nm,0.3s,baz=173,slow=23,SNR=14						
ASAR	Alice Springs	42.87	269	P	P	11 10 19.7	0.0
	0.7nm,0.7s,baz=106,slow=7.6,SNR=13						
WRA	Warramunga Arr	44.03	274	P	P	11 10 29.0	0.0
	0.9nm,0.3s,baz=113,slow=8.1,SNR=38						
FINES	FINESS Array B	146.89	339	PKPbc	PKPbc	11 22 02.0	-0.9
	0.6nm,0.5s,baz=46,slow=4.0,SNR=4.5						

SJA 05 11:16:03.8±0.9, 24.01S×67.01W, h202km±7km, ML3.6, MW3.4
GUC 05 11:16:05.7±0.4, 23.99S×67.48W, h216km±10km, ML3.9
ISC 05 11:16:04.0±2.6, 24.01S±0.06×67.06W±0.05, h199km±24km, n26, σ1.07/42, 7C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.58	117	iP	Pn	11 16 39.1	+0.6
SLA				iS	Sn	11 17 04.8	-0.6
HJA	Humahuaca	1.71	62	iP	Pn	11 16 40.4	+0.4
AZAP	Zapla	1.83	97	iP	Pn	11 16 41.1	+0.1
LVC	Limon Verde	2.20	309	iP	Pn	11 16 46.3	+1.3
LVC				eS	Sn	11 17 16.9	+0.1
YJA	Yavi	2.31	38	eP	Pn	11 16 46.9	+0.6
YJA				iS	Sn	11 17 19.3	+0.1
PB15	IPOC Station P	2.35	289	⇑iP	Pn	11 16 47.2	+0.7
PB15				eS	Sn	11 17 18.4	-1.1
PB15	IPOC Station P	2.35	289	iP	Pn	11 16 47.7	+1.2
PB15				iS	Sn	11 17 20.2	+0.8
GO02	Mina Guanaco	2.58	243	⇑iP	Pn	11 16 49.8	+0.8
GO02				eS	Sn	11 17 23.8	-0.2
GO02				IAML		11 17 24.6	
	comp=N,328nm,0.2s						
PB06	IPOC Station P	2.65	299	⇑iP	Pn	11 16 50.3	+0.6
PB06				eS	Sn	11 17 24.4	-1.0
PB06				IAML		11 17 27.6	
	comp=E,393nm,0.1s						
PB06	IPOC Station P	2.65	299	iP	Pn	11 16 51.0	+1.2
PB06				eS	Sn	11 17 24.8	-0.5
PB06				IAML		11 17 27.1	
	comp=Z,196nm,0.3s						
PB09	IPOC Station P	2.99	317	eP	Pn	11 16 55.2	+1.5
PB09				iS	Sn	11 17 32.5	+0.1
PB09				IAML		11 17 35.6	
	comp=N,85nm,0.2s						
PB09	IPOC Station P	2.99	317	iP	Pn	11 16 55.5	+1.8
PB09				IAML		11 17 37.8	
	comp=Z,76nm,0.5s						
PB05	IPOC Station P	3.11	291	⇑iP	Pn	11 16 55.6	+0.5
PB05				eS	Sn	11 17 33.0	-1.9
PB05	IPOC Station P	3.11	291	eP	Pn	11 16 55.9	+0.8
PB05				iS	Sn	11 17 33.8	-1.1
PB14	IPOC Station P	3.11	258	iP	Pn	11 16 56.2	+0.9
PB03	IPOC Station P	3.16	308	⇑iP	Pn	11 16 56.5	+0.7
PB03				eS	Sn	11 17 34.6	-1.5
PB03				IAML		11 17 36.8	
	comp=E,212nm,0.2s						
PB03	IPOC Station P	3.16	308	eP	Pn	11 16 56.7	+1.0
PB03				iS	Sn	11 17 34.8	-1.3
PB10	IPOC Station P	3.24	278	IAML		11 17 46.6	
	comp=N,32nm,0.3s						
PB10	IPOC Station P	3.24	278	iP	Pn	11 16 57.5	+1.0
PB04	IPOC Station P	3.30	300	⇑iP	Pn	11 16 58.1	+0.7
PB04				eS	Sn	11 17 37.3	-1.8
PB04				IAML		11 17 42.7	
	comp=N,223nm,0.5s						
PB04	IPOC Station P	3.30	300	eP	Pn	11 16 58.3	+0.9
PB04				iS	Sn	11 17 37.8	-1.3
PB07	IPOC Station P	3.46	311	⇑iP	Pn	11 16 60.0	+0.6
PB07				IAML		11 17 42.9	
	comp=N,189nm,0.3s						
PB07	IPOC Station P	3.46	311	eP	Pn	11 17 00.1	+0.7
PB07				iS	Sn	11 17 40.6	-2.1
PB01	IPOC Station P	3.71	322	eP	Pn	11 17 03.0	+0.6
PB01				IAML		11 17 47.6	
	comp=E,114nm,0.3s						
PB02	IPOC Station P	3.75	315	eP	Pn	11 17 03.2	+0.4
PB02				eS	Sn	11 17 47.2	-1.6
PB02				IAML		11 17 49.0	
	comp=E,152nm,0.4s						
APLL	PUNTA DE LOS L	6.38	176	iP	Pn	11 17 35.8	-0.4

DDA 05 11:17:32.6, 38.43N×43.18E, h7km±2km, ML2.0
ISK 05 11:17:32.8, 38.53N×43.16E, h8km, ML2.5/5
ISC 05 11:17:33.0±0.9, 38.48N±0.03×43.18E±0.03, h14km±7km, n17, σ0.57/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	Van	0.18	75	iP	Pg	11 17 37.3	-0.2
TVAN				iS	Sg	11 17 40.8	+0.3
TVAN				IAML		11 17 41.0	
	comp=E,1µm,0.2s						
TVAN				IAML		11 17 41.0	
	comp=N,2µm,0.4s						
VANB	Van	0.20	55	PG	Pg	11 17 37.2	-0.4
VANB				SG	Sg	11 17 40.4	-0.4
AKDM	Akdamar-Van	0.22	226	PG	Pg	11 17 38.2	+0.2
AKDM				SG	Sg	11 17 42.1	+0.7
ADCV	BITLIS_Adilcev	0.48	313	iP	Pb	11 17 43.0	-0.3
ADCV				iS	Sb	11 17 51.7	+1.3
ADCV				IAML		11 17 53.0	
	comp=E,158nm,0.5s						
ADCV				IAML		11 17 53.0	
	comp=N,115nm,0.4s						
VMUR	Van-Muradiye	0.59	31	iP	Pg	11 17 44.9	+0.2
VMUR				iS	Sb	11 17 54.0	+0.5
VMUR				IAML		11 17 56.0	
	comp=E,133nm,0.5s						
VMUR				IAML		11 17 56.0	
	comp=N,198nm,0.4s						
BASK	Baskale_VAN	0.78	123	iP	Pg	11 17 47.2	-0.9
BASK				iS	Sg	11 17 58.1	-0.3
BASK				IAML		11 18 02.0	
	comp=N,54nm,0.5s						
BASK				IAML		11 18 02.0	
	comp=E,65nm,0.6s						
MLAZ	Malazgirt-MUS	0.82	323	PG	Pg	11 17 48.1	-0.9
BLIS	Bitlis-Merkez	0.84	266	iP	Pg	11 17 48.9	-0.4
BLIS				iS	Sg	11 17 59.2	-1.1
BLIS				IAML		11 18 02.0	
	comp=N,53nm,0.3s						
CLDR	Caldiran	0.88	41	PG	Pg	11 17 49.8	-0.2
CLDR				SG	Sg	11 18 01.8	+0.2
CLDR	Caldiran	0.88	41	iP	Pg	11 17 49.8	-0.2
CLDR				iS	Sg	11 18 01.7	+0.2
CLDR				IAML		11 18 05.0	
	comp=N,34nm,0.6s						
AGRB	Hanur-Agry	1.10	352	PG	Pb	11 17 53.5	-0.4
SRTM	Siirt_Merkez	1.10	244	iP	Pb	11 17 53.2	-0.7
SRTM				iS	Sn	11 18 09.3	+0.1
SRTM				IAML		11 18 14.0	
	comp=N,37nm,0.5s						
SRTM				IAML		11 18 17.0	
	comp=E,25nm,0.5s						
SIRT	Sirnak	1.14	211	PN	Pg	11 17 55.5	+0.5
CUKT	Cukurca	1.28	165	PN	Pg	11 17 58.0	+0.4
MUSM	Mu-Merkez	1.33	281	iP	Pn	11 17 57.1	-0.1
MUSM				iS	Sb	11 18 14.2	-0.5
EATA	Eleskirt	1.48	339	iP	Pb	11 18 00.6	+0.2
EATA				iS	Sg	11 18 21.2	+0.6
EATA				IAML		11 18 24.0	
	comp=N,21nm,0.8s						
EATA				IAML		11 18 27.0	
	comp=E,18nm,0.4s						
HOMI	Horasan	1.85	328	iP	Pb	11 18 07.1	+0.5
HOMI				iS	Sb	11 18 30.2	+0.5
HOMI				IAML		11 18 37.0	
	comp=E,15nm,0.8s						
HOMI				IAML		11 18 40.0	
	comp=N,17nm,0.6s						

TAP 05 11:18:11.9, 24.38N×121.46E, h9km±1km, ML1.0, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	Datong	0.09	305	P	Pg	11 18 14.8	+0.4
	baz=305						
NNSB				S	Sg	11 18 16.2	+0.1
	baz=305						
NNSH	Datong	0.09	305	P	Pg	11 18 14.7	+0.3
	baz=303						
NNSH				S	Sg	11 18 16.2	+0.1
	baz=303						
NNS	Nan Shan	0.10	307	P	Pg	11 18 14.9	+0.4
	baz=309						
NNS				S	Sg	11 18 16.7	+0.2
	baz=309						
ETLH	Xiulin Townshi	0.17	174	P	Pg	11 18 16.4	+0.8
	baz=174						
ETLH				S	Sg	11 18 18.9	+0.8
	baz=174						
NDT	Datong Townshi	0.23	11	P	Pg	11 18 16.9	+0.3
	baz=12						
NACB	Ninganchiao	0.23	149	eP	Pg	11 18 17.5	+0.8
	baz=150						
NACB				eS	Sg	11 18 20.8	+0.8
	baz=150						
ENTT	Nioudou	0.28	20	P	Pg	11 18 18.0	+0.4
	baz=17						
ENTT				eS	Sg	11 18 21.5	+0.2
	baz=17						
WHF	Hehuan Shan	0.29	218	eP	Pg	11 18 18.3	+0.3
	baz=207						
WHF				eS	Sg	11 18 22.5	+0.6
	baz=207						

TAP 05 11:18:11.9, 24.68N×121.13E, h9km, ML1.9, 3C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIOB	Emei	0.11	252	⇑iP	Pg	11 18 15.1	+0.6
	baz=251						
LIOB				iS	Sg	11 18 17.5	+1.2
	baz=251						
NSTT	Nanjuang	0.13	247	⇑iP	Pg	11 18 15.4	+0.6
	baz=245						
NSTT				iS	Sg	11 18 18.0	+1.2
	baz=245						
SBCB	Hsinchu	0.17	311	eP	Pg	11 18 16.1	+0.5
	baz=310						
SBCB				eS	Sg	11 18 19.7	+1.6
	baz=310						
HSN	Hsinchu	0.19	310	eP	Pg	11 18 16.1	+0.3
	baz=324						
HSN				eS	Sg	11 18 19.6	+1.0
	baz=324						
WLTB	Daxi	0.20	33	P	Pg	11 18 17.2	+1.0
	baz=33						
WLTB				S	Sg	11 18 21.0	+2.0
	baz=33						
YHNB	Yeheng	0.23	93	⇑P	Pg	11 18 17.4	+0.9
	baz=92						
YHNB				S	Sg	11 18 21.3	+1.6
	baz=92						
NCUH	Zhongli	0.29	10	eP	Pb	11 18 18.6	-0.8
	baz=10.0						
NNS	Nan Shan	0.33	137	eP	Pb	11 18 19.5	-0.5
	baz=136						
NNS				eS	Sb	11 18 25.3	-0.1
	baz=136						
NHW	Xinwu Township	0.33	347	eP	Pb	11 18 19.8	-0.3
	baz=347						
NMLH	Miaoli	0.34	245	eP	Pb	11 18 20.5	+0.3
	baz=245						
NNSB	Datong	0.34	137	eP	Pb	11 18 20.0	-0.3
	baz=137						
NNSB				eS	Sb	11 18 25.1	-0.8
	baz=137						
NNSH	Datong	0.34	137	eP	Pb	11 18 19.7	-0.6
	baz=137						
NNSH				eS	Sb	11 18 24.7	-1.1
	baz=137						
NWLT	Wulai	0.35	74	eP	Pg	11 18 19.2	+0.3
	baz=74						
NDT	Datong Townshi	0.36	102	eP	Pb	11 18 20.0	-0.5
	baz=102						
NDT				eS	Sb	11 18 25.5	-0.8
	baz=102						
NDT	Datong Townshi	0.36	102	S	Pb	11 18 20.0	-0.5
	baz=12						
NSY	Sanyi	0.43	232	eP	Pb	11 18 21.8	+0.1
	baz=230						
TDCB	Techi	0.43	176	eP	Pb	11 18 21.2	-0.5
	baz=176						
WHP	Taichung City	0.43	203	eP	Pb	11 18 21.4	-0.4
	baz=202						
NHDH	Xindian Distri	0.46	52	eP	Pb	11 18 21.9	-0.2
	baz=51						
TWE	Neicheng	0.49	85	eP	Pb	11 18 22.8	0.0
	baz=85						
CHGB	Renai	0.62	176	eP	Pb	11 18 25.1	0.0
	baz=176						

NIED 05 11:24:00, 36.00N×138.10E, h240km, Mw3.9 Best double couple: Mo7.17000×10^14 NP1:φs287.00000°, δ70.00000°, λ151.00000°. NP2:φs28.00000°, δ63.00000°, λ23.00000°.
IDC 05 11:24:07.6±0.5, 36.07N×137.95E, h212km±4km, mb3.2/7, mb1 3.4/11, mb1mx3.2/43, mbtmp3.9/11, Error ellipse: s-maj=22.5km s-min=9.2km az=71.0
JMA 05 11:24:07.8±0.1, 36.04N×138.06E, h218km±1km, M3.6
ISC 05 11:24:07.8±0.7, 36.10N±0.06×137.99E±0.09, h216km±6km, n23, σ0.48/31, mb3.5/7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNT	Takato	0.25	152	P	Pn	11 24 36.1	-0.2
JNT				S	S	11 24 58.5	0.0
MAT	Matsushiro	0.48	21	P	Pn	11 24 36.9	+0.2
MAT				S	S	11 24 59.2	-0.1
MAT	Matsushiro	0.48	21	P	Pn	11 24 36.9	+0.2
MAT				S	S	11 24 58.9	-0.4
MJAR	Matsushiro Arr	0.48	21	P	Pn	11 24 37.0	+0.3
	17nm,0.3s,baz=200,slow=4.4,SNR=798						
MJAR				S	S	11 24 59.2	-0.2
	0.9nm,0.3s,baz=146,slow=6.9,SNR=6.7						
JRY	Ryogami san	0.74	96	P	Pn	11 24 37.8	0.0
JRY				S	S	11 25 01.5	+0.5
JYN	Shimob	0.75	143	P	Pn	11 24 37.9	0.0
JYN				S	S	11 25 01.5	+0.3
JYTA	Yamagatataniai	1.14	244	P	Pn	11 24 40.2	+0.1
JOD2	Odawara 2	1.22	133	S	S	11 25 06.6	+0.4
JSD	Sado	1.95	6	P	Pn	11 24 47.3	+0.4
JIE	Ise	2.00	212	P	Pn	11 24 47.9	+0.3
JNS	Sasagawa	2.02	31	P	Pn	11 24 48.2	+0.6
TK02	Tokai 2	2.15	185	P	Pn	11 24 49.4	+0.5
JHJ	Hachijo jima 2	3.32	153	P	Pn	11 25 01.4	-0.6
	43nm,0.3s,baz=336,slow=23,SNR=7.6						
JHJ				S	S	11 25 45.1	+0.9
	29nm,0.3s,baz=73,slow=19,SNR=6.6						
JNU	Nakatsue	6.58	245	P	Pn	11 25 43.2	+0.4
	0.2nm,0.3s,baz=113,slow=3.5,SNR=3.7						
USRK	Ussuriysk Ar.	9.30	332	P	Pn	11 26 18.1	+0.4
	baz=153,slow=17,SNR=5.5						
KLR	Kul'dur	13.90	343	P	Pn	11 27 14.9	-0.8
	2.2nm,0.3s,baz=150,slow=9.7,SNR=76						
SONM	Songino Array	26.07	307	P	P	11 29 20.9	-0.7
	0.4nm,0.5s,baz=108,slow=12,SNR=3.6						
ZALV	Zalesovo Beam	40.53	313	P	P	11 31 25.8	+0.1
	0.7nm,0.5s,baz=115,slow=5.9,SNR=3.5						
MKAR	Makanchi Array	42.29	302	P	P	11 31 40.4	+0.2
	0.3nm,0.6s,baz=78,slow=8.9,SNR=4.6						
MKAR				ScP	ScP	11 36 59.5	0.0
	0.2nm,0.7s,baz=90,slow=5.8,SNR=2.8						
ILAR	Eielson Array	51.75	32	P	P	11 32 53.6	+0.7
	0.2nm,0.5s,baz=271,slow=4.9,SNR=5.2						
WRA	Warramunga Arr	55.84	184	P	P	11 33 22.1	-0.9
	2.1nm,0.3s,baz=360,slow=7.4,SNR=98						
ASAR	Alice Springs	59.57	184	P	P	11 33 48.6	-0.3
	0.5nm,0.5s,baz=19,slow=12,SNR=11						
FINES	FINESS Array B	68.34	331	P	P	11 34 45.8	+0.4
	1.1nm,0.3s,baz=59,slow=6.7,SNR=13						

INET 05 11:32:19.2, 11.36N×86.77W, h23km, ML3.1
UCR 05 11:32:23.8±1.2, 11.72N×87.05W, h50km±53km, ML2.9, MW3.6
SNET 05 11:32:24.9±0.9, 11.99N×87.08W, h112km±61km, ML3.0
ISC 05 11:32:24.4±1.4, 11.74N±0.07×87.02W±0.07, h49km, n20, σ0.59/27, 2C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGN	Cerro Negro	0.82	23	eP	Pn	11 32 39.9	0.0
CRIN	San Cristobal	0.96	358	eP	Pn	11 32 41.3	-0.4
ESTN	Estel	1.50	25	eP	Pn	11 32 49.1	+0.1
MATN	Matagalpa	1.60	42	eP	Pn	11 32 49.8	-0.6
CNCH	Conchagua	1.73	333	⇑eP	Pn	11 32 52.0	-0.1
CNCH				eS	Sn	11 33 13.6	+0.6
CNCH	Conchagua	1.73	333	⇑eP	Pn	11 32 52.0	-0.1
CNCH				eS	Sn	11 33 13.6	+0.6
LCND	La Caada	1.78	332	eP	Pn	11 32 52.5	-0.2
LCND				eS	Sn	11 33 14.1	-0.2
LCND				IAML		11 33 17.6	
	comp=Z,189nm,0.5s						
LCND	La Caada	1.78	332	eP	Pn	11 32 52.5	-0.2
LCND				eS	Sn	11 33 14.1	-0.2
LCND				IAML		11 33 17.6	
	comp=Z,189nm,0.5s						
GB1A	Borinquen Arri	1.83	120	eP	Pn	11 32 52.8	-0.8

JUCU Jucuar¡n 1.93 322 eP Pn 11 32 54.2 -0.6
JUCU IAML 11 32 55.2
comp=Z,80nm,0.2s
JUCU eS Sn 11 33 18.5 +0.6
JUCU Jucuar¡n 1.93 322 eP Pn 11 32 54.2 -0.6
JUCU IAML 11 32 55.2
comp=Z,80nm,0.2s
JUCU eS Sn 11 33 18.5 +0.6
CUI Cuipilapa 2.11 120 eP Pn 11 32 56.7 -0.7
PACA Pacayal 2.14 324 eP Pn 11 32 57.7 -0.1
PACA Pacayal 2.14 324 eP Pn 11 32 57.7 -0.1
PLVR Palo Verde 2.14 130 eP Pn 11 32 57.5 -0.3
TECA Tecapa 2.27 321 eP Pn 11 32 60.0 +0.3
TECA Tecapa 2.27 321 eP Pn 11 32 60.0 +0.3
JTS Las Juntas de 2.49 125 eP Pn 11 33 02.2 -0.2
ARE1 Arenal 1 2.59 119 eP Pn 11 33 05.6 +1.7
LFRS El Faro 2.74 314 eP Pn 11 33 06.2 +0.2
LFRS eS Sn 11 33 36.9 -1.0

IDC 05 11:37:11.1±2.3, 1.°95N×127.°45E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/29, mbtmp3.5/3, Error ellipse: s-maj=188.5km s-min=24.9km az=67.0
DJA 05 11:37:21.9±1.2, 2.°N±5.°×12.°7E±.°, h39km±30km, M3.9/7, MLv3.9/7
ISC 05 11:37:17.7±1.6, 1.°9N±0.°2×126.°9E±0.°1, h35km, n7, σ2°56/8, mb3.6/3, Northern Molucca Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TNTI Ternate 1.23 157 P Pn 11 37 39.9 +1.5
TNTI S Sn 11 37 54.8 +1.0
LBMI Labuha 2.60 166 P Pn 11 37 58.8 +1.5
KMSI Cibinong 3.19 245 P Pn 11 38 06.1 +0.8
MRSI Marisa 5.14 254 P Pn 11 38 33.3 +1.1
WRA Warramunga Arr 22.92 162 P P 11 42 14.0 -4.7
0.6nm,0.4s,baz=342,slow=11,SNR=8.4
ASAR Alice Springs 26.32 165 P P 11 42 48.9 -1.5
0.9nm,0.5s,baz=346,slow=12,SNR=9.6
MKAR Makanchi Array 59.13 326 P P 11 47 15.6 +0.7
0.2nm,0.4s,baz=121,slow=7.0,SNR=7.5

VAO 05 11:50:35.5±0.7, 21.°64S×72.°11W, h10km, mb4.9
MOS 05 11:51:04.6±1.4, 21.°26S×69.°35W, h39km, mb4.9/6, Error ellipse: s-maj=14.7km s-min=9.6km az=105.8
NEIC 05 11:51:04.9±1.9, 21.°37S±0.°05×69.°43W±0.°09, h38km±4km, Error ellipse: s-maj=12.1km s-min=6.7km az=84.0
SJA 05 11:51:05.0±1.1, 21.°39S×69.°56W, h38km±1km, ML5.0, MW4.8
GUC 05 11:51:05.4±0.7, 21.°39S×69.°51W, h46km±1km, ML5.2
IDC 05 11:51:05.7±0.4, 21.°30S×69.°37W, h39km±3km, mb4.4/19, mb1 4.4/25, mb1mx4.4/38, mbtmp4.5/25, ML4.3/6, MS3.9/14, Ms1 3.9/14, ms1mx3.8/23, Error ellipse: s-maj=15.3km s-min=9.4km az=61.0
BJI 05 11:51:07.0±0.0, 21.°40S×69.°50W, h37km, mB5.4/2, Ms5.0/4, Ms7 4.9/3
GCMT 05 11:51:07.0±0.3, 21.°48S±0.°02×69.°58W±0.°03, h39km, MW5.0/61, Moment Tensor Solution. s29,c33; s61,c75; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.26±.25; Mθθ-3.49±.14; Mφφ0.22±.17; Mrθ0.12±.10; Mrφ-0.04±.09; Mθr-2.32±.17; Best double couple: M0 4.00500×10^16 NP1: φs244.00000°, δ51.00000°, λ52.00000°. NP2: φs115.00000°, δ53.00000°, λ127.00000°. Principal axes: T 4.5170, Plg62.0000°, Azm88.0000°; N -1.0280, Plg28.0000°, Azm271.0000°; P -3.4920, Plg1.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 05 11:51:04.7±0.3, 21.°40S±0.°02×69.°53W±0.°03, h36km±1km, h36km:pP-P, n640, σ1°31/735, mb4.9/70, MS4.0/15, 10C-17D, Northern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PB02 IPOC Station P 0.35 283 ⇑iP Pn 11 51 14.3 +1.0
PB02 iS Sn 11 51 21.2 +1.4
PB02 IPOC Station P 0.35 283 iP Pn 11 51 14.4 +1.1
PB02 iS Sn 11 51 21.2 +1.4
PB01 IPOC Station P 0.36 7 ⇑iP Pn 11 51 14.1 +0.6
PB01 eS Sn 11 51 20.5 +0.6
PB01 IAML 11 51 21.1
comp=E,380μm,0.2s
PB01 IPOC Station P 0.36 7 Pn 11 51 13.2 -0.2
PB01 Sn 11 51 19.6 -0.3
PB01 IPOC Station P 0.36 7 eP Pn 11 51 14.2 +0.8
PB01 iS Sn 11 51 20.4 +0.6
PB07 IPOC Station P 0.46 225 ⇓iP Pn 11 51 16.0 +1.1
PB07 eS Sn 11 51 23.6 +1.5
PB07 IAML 11 51 24.4
comp=N,142μm,0.2s
PB07 IPOC Station P 0.46 225 eP Pn 11 51 16.1 +1.2
PB07 eS Sn 11 51 23.9 +1.8
PB09 IPOC Station P 0.48 145 eP Pn 11 51 16.2 +1.0
PB09 iS Sn 11 51 24.1 +1.6
PB09 IAML 11 51 25.5
comp=N,130μm,0.5s
PB09 IPOC Station P 0.48 145 iP Pn 11 51 16.4 +1.2
PB09 iS Sn 11 51 24.3 +1.9
PB09 IAML 11 51 25.9
comp=Z,168μm,0.4s
PB03 IPOC Station P 0.68 198 ⇓iP Pn 11 51 19.0 +1.0
PB03 iS Sn 11 51 28.9 +1.5
PB03 IAML 11 51 29.6
comp=E,83μm,0.3s
PB03 IPOC Station P 0.68 198 iP Pn 11 51 19.2 +1.2
PB03 eS Sn 11 51 28.8 +1.4
PATCX Punta Patache 0.82 315 ⇓iP Pn 11 51 20.9 +1.0
PATCX iS Sn 11 51 32.4 +1.6
PATCX IAML 11 51 33.3
comp=N,303μm,0.3s
PATCX Punta Patache 0.82 315 eP Pn 11 51 21.0 +1.2
PATCX iS Sn 11 51 32.6 +1.8
TA01 Diego Aracena 1.03 324 ⇓iP Pn 11 51 23.7 +1.1
TA01 IAML 11 51 38.6
comp=E,233μm,0.3s
PB04 IPOC Station P 1.09 212 ⇓iP Pn 11 51 25.1 +1.4
PB04 iS Sn 11 51 40.1 +2.5
PB04 IAML 11 51 41.6
comp=E,116μm,0.3s
PB04 IPOC Station P 1.09 212 Pn 11 51 24.3 +0.7
PB04 IPOC Station P 1.09 212 iP Pn 11 51 25.2 +1.6
PB04 eS Sn 11 51 40.1 +2.5
PB04 IAML 11 51 40.9
comp=Z,65μm,0.3s
PB06 IPOC Station P 1.30 182 iP Pn 11 51 28.3 +1.8
PB06 eS Sn 11 51 45.4 +2.7
PB06 IAML 11 51 46.2
comp=E,39μm,0.2s
PB06 IPOC Station P 1.30 182 iP Pn 11 51 28.5 +2.0
PB06 eS Sn 11 51 45.5 +2.7
PB06 IAML 11 51 50.2
comp=Z,20μm,0.4s
PB08 IPOC Station P 1.30 16 ⇓iP Pn 11 51 28.2 +1.5
PB08 iS Sn 11 51 45.8 +2.6
PB08 ⇑i 11 51 47.4
PB08 IAML 11 51 47.4
comp=E,43μm,0.2s
LVC Limon Verde 1.33 154 ⇓iP Pn 11 51 29.7 +2.5
LVC eS Sn 11 51 47.1 +3.2
LVC Limon Verde 1.33 154 Pn Pn 11 51 30.4 +3.2
comp=E,3μm,0.3s,baz=2.4,slow=11,SNR=9588
LVC Sn Sn 11 51 48.1 +4.2
comp=E,6μm,0.3s,baz=209,slow=22,SNR=73
LVC LR LR 11 52 12.6
comp=E,7μm,18.7s,baz=14,slow=48
LVC Limon Verde 1.33 154 Pn 11 51 28.5 +1.3
LVC Sn 11 51 44.8 +0.9
LVC Limon Verde 1.33 154 P Pn 11 51 28.5 +1.3
LVC 11 51 44.8
LVC Limon Verde 1.33 154 iP Pn 11 51 30.0 +2.8
LVC eS Sn 11 51 48.1 +4.2
PB05 IPOC Station P 1.57 203 ⇓iP Pn 11 51 31.8 +1.6
PB05 eS Sn 11 51 52.8 +3.4
PB05 IAML 11 51 53.8
comp=E,43μm,0.3s
PB05 IPOC Station P 1.57 203 eP Pn 11 51 32.0 +1.8
PB05 eS Sn 11 51 52.9 +3.4
PB11 IPOC Station P 1.64 356 iP Pn 11 51 32.6 +1.5
PB11 eS Sn 11 51 53.8 +2.8
PB11 IAML 11 51 55.3
comp=E,61μm,0.3s
PB11 IPOC Station P 1.64 356 Pn 11 51 32.0 +0.9
PB11 Sn Sn 11 51 53.6 +2.6
PB11 IPOC Station P 1.64 356 eP Pn 11 51 32.8 +1.7
PB11 iS Sn 11 51 54.1 +3.1
GO01 Chusmiza 1.75 11 ⇑iP Pn 11 51 35.1 +2.1
GO01 eS Sn 11 51 57.5 +3.2
GO01 IAML 11 51 58.9
comp=N,92μm,0.3s
GO01 Chusmiza 1.75 11 Pn 11 51 35.4 +2.4
GO01 Sn Sn 11 51 57.3 +3.0
PB15 IPOC Station P 1.80 178 ⇓iP Pn 11 51 35.9 +2.5
PB15 eS Sn 11 51 59.0 +3.8
PB15 IPOC Station P 1.80 178 eP Pn 11 51 36.1 +2.7
PB15 eS Sn 11 51 59.9 +4.8
PSGC Pisagua 1.88 343 iP Pn 11 51 35.5 +1.1
PSGC iS Sn 11 51 58.7 +1.8
PSGC IAML 11 52 09.9
comp=E,18μm,0.3s
PSGCX Pisagua 1.88 343 eP Pn 11 51 35.8 +1.3
PSGCX eS Sn 11 51 58.6 +1.7
MNMC Minye Minye 2.26 359 ⇓iP Pn 11 51 42.0 +2.1
MNMC Minye Minye 2.26 359 Pn 11 51 43.3 +3.5
MNMC Minye Minye 2.26 359 eP Pn 11 51 42.1 +2.2
MNMCX eS Sn 11 52 11.6 +4.9
PB10 IPOC Station P 2.30 204 Pn 11 51 42.5 +2.3
PB10 IPOC Station P 2.30 204 iP Pn 11 51 42.0 +1.9
PB10 eS Sn 11 52 19.6 +12
PB10 IAML 11 52 24.7
comp=Z,3μm,0.3s
PB16 IPOC Station P 3.05 0 eP Pn 11 51 54.3 +3.3
PB16 iS Sn 11 52 33.1 +6.6
PB14 IPOC Station P 3.31 194 iP Pn 11 51 55.7 +1.4
PB14 iS Sn 11 52 47.9 +15
PB14 IAML 11 52 52.5
comp=Z,2μm,0.3s
GO02 Mina Guanaco 3.74 181 Pn 11 52 03.8 +3.5
YJA Yavi 3.81 102 iP Pn 11 52 07.1 +5.7
HJA Humahuaca 4.22 116 eP Pn 11 52 12.5 +5.6
SLA San Lorenzo 4.97 132 iP Pn 11 52 23.0 +6.0
AZAP Zapla 4.99 125 eP Pn 11 52 21.8 +4.5
LPAZ La Paz 5.26 15 Pn Pn 11 52 26.4 +5.0
comp=Z,8.0nm,0.3s,baz=200,slow=6.5,SNR=112
LPAZ LR LR 11 54 54.7
comp=Z,3μm,21.3s,baz=180,slow=45
LPAZ La Paz 5.26 15 Pn 11 52 26.9 +5.5
LPAZ La Paz 5.26 15 P Pn 11 52 26.9 +5.5
LPAZ La Paz 5.26 15 iP Pn 11 52 26.5 +5.1
ASTB Santa Barbara 5.33 119 eP Pn 11 52 26.1 +4.1
GO03 Copiap 6.20 186 Pn 11 52 34.2 +0.4
GO03 Copiap 6.20 186 iP Pn 11 52 34.0 +0.2
CYA Choya 7.78 155 iP Pn 11 52 59.1 +3.6
AGUA GUANDACOL 8.11 174 eP Pn 11 53 01.8 +1.8
ACLC CERRO LA CRUZ 8.32 164 iP Pn 11 53 05.3 +2.2
AROD Rodeo 8.73 180 iP Pn 11 53 10.1 +1.4
ACDV Cuesta del Vie 8.74 178 eP Pn 11 53 10.2 +1.4
GO04 Tololo Observa 8.81 187 Pn 11 53 08.6 -1.2
ACCO Cerro Coronel 9.16 177 eP Pn 11 53 15.5 +0.9
APLL PUNTA DE LOS L 9.36 164 eP Pn 11 53 17.6 +0.5
AMOG MOGNA 9.54 175 eP Pn 11 53 19.3 -0.4
SIV San Ignacio 9.65 58 Pn Pn 11 53 21.4 +0.1
comp=Z,6.7nm,0.3s,baz=267,slow=9.4,SNR=85
RTLL Cerro Villicun 9.93 175 iP Pn 11 53 24.8 -0.2
CFA Coronel Fontan 10.23 174 Pn Pn 11 53 28.9 -0.1
comp=Z,3.6nm,0.3s,baz=226,slow=18,SNR=23
CFA Sn Sn 11 55 21.5 -1.0
comp=Z,3.2nm,0.3s,baz=197,slow=17,SNR=2.1
CFA LR LR 11 57 35.1
comp=Z,897nm,19.6s,baz=358,slow=38
CFA Coronel Fontan 10.23 174 iP Pn 11 53 28.8 -0.3
ACAN Cantantal 11.03 170 eP Pn 11 53 40.0 -0.1
ASAL Salagasta 11.16 177 eP Pn 11 53 42.2 +0.3
ROC1 El Roble 11.60 186 Pn 11 53 47.4 -0.6
AAGR Agrelo 11.65 177 iP Pn 11 53 49.7 +1.0
NNA Nana 11.69 322 Pn 11 53 50.5 +1.4
comp=Z,2.2nm,0.3s,baz=176,slow=13,SNR=2.9
NNA Sn Sn 11 55 54.9 -3.4
comp=Z,2.8nm,0.3s,baz=266,slow=15,SNR=2.7
NNA LR LR 11 58 35.6
comp=Z,301nm,18.8s,baz=163,slow=38
NNA Nana 11.69 322 Pn 11 53 49.2 +0.2
CPUP Villa Florida 12.20 116 Pn Pn 11 53 56.5 +0.6
comp=Z,0.2nm,0.3s,baz=313,slow=12,SNR=6.5
CPUP LR LR 11 59 15.5
comp=Z,539nm,19.7s,baz=295,slow=40
CPUP Villa Florida 12.20 116 Pn Pn 11 53 56.8 +0.8
CPUP Villa Florida 12.20 116 P Pn 11 53 56.8 +0.8
SAML Samuel 13.81 27 eP Pn 11 54 11.9 -6.1
SAML Samuel 13.81 27 Pn 11 54 15.7 -2.4
SAML Samuel 13.81 27 P Pn 11 54 15.7 -2.4
ITQB Itaqui 14.26 128 eP Pn 11 54 22.1 -2.0
TRCB Terra Rica 15.72 98 eP Pn 11 54 45.1 +1.5
C2SB Chapadao do Su 15.90 83 eP Pn 11 54 50.2 +1.0
PTGB Pitanga 16.41 105 eP Pn 11 54 54.2 -0.7
ATAH Atahualpa 16.57 328 Pn Pn 11 54 55.8 +1.0
comp=Z,0.4nm,0.3s,baz=153,slow=11,SNR=2.1
CLDB Colider 16.83 54 eP Pn 11 54 57.7 0.0
ITAB Concordia 16.89 114 eP Pn 11 54 58.7 +0.3
PCMB Pacaembu 17.01 94 eP Pn 11 55 00.3 +0.4
CPSB Cacapava Do Su 17.02 125 eP Pn 11 54 56.2 -3.8
PLTB Pedras Altas 17.57 129 eP Pn 11 55 01.3 -5.6
PLTB eS S 11 58 40.6 +12
ARAG Araguaiana, MT 17.73 74 eP Pn 11 55 09.2 +0.3
ITRB Iturama 18.04 88 eP Pn 11 55 12.4 -0.3
FRTB Fartura 18.57 100 eP P 11 55 18.3 -0.5
CNLB Canela 18.61 119 eP P 11 55 15.5 -3.7
PLCA Paso Flores 19.29 182 P Pn 11 55 27.9 +0.1
comp=Z,0.4nm,0.3s,baz=19,slow=8.0,SNR=9.5
PLCA Paso Flores 19.29 182 P P 11 55 27.2 +0.7
PLCA Paso Flores 19.29 182 P P 11 55 27.3 +0.7
PLCA pmax pmax
comp=Z,36nm,1.3s
BB19B Bebedouro 19.59 93 eP P 11 55 29.3 -0.6
IPMB Ipameri, GO 20.36 84 eP P 11 55 37.1 -1.2
RCLB Rio Claro- Sao 20.44 97 eP P 11 55 37.8 -1.4
SPB Sao Paulo 20.54 100 eP P 11 55 39.4 -0.7
SPB Sao Paulo 20.54 100 P P 11 55 39.7 -0.5
VAO Valinhos 20.95 99 eP P 11 55 43.0 -1.8
BDFB Brasilia 21.18 78 P P 11 55 45.7 -1.7
comp=Z,25nm,0.5s,baz=249,slow=9.9,SNR=33
BDFB LR LR 12 05 00.7
comp=Z,352nm,21.8s,baz=267,slow=40
BDFB Brasilia 21.18 78 P P 11 55 46.5 -0.8
BDFB IAmb IAmb 11 55 48.1
comp=Z,29nm,0.5s
BDFB Brasilia 21.18 78 P P 11 55 46.6 -0.8
BDFB pmax pmax
comp=Z,29nm,0.5s
PARB Paraibuna 22.19 99 eP P 11 55 55.4 -2.7
PEXB Peixe 22.31 69 eP P 11 55 56.6 -2.7
BSCB Bom Sucesso 23.08 94 eP P 11 56 03.9 -3.7
OTAV Otavalo 23.20 337 P P 11 56 08.1 -1.0
OTAV Otavalo 23.20 337 P P 11 56 08.1 -1.0
OTAV pmax pmax
comp=Z,13nm,1.4s
FLOC Florencia 23.61 345 eP P 11 56 24.7 +12
FLOC Florencia 23.61 345 P P 11 56 13.9 +1.2
VAS01 Vassouras-RJ 24.23 97 eP P 11 56 14.5 -3.9
BBAC Balboa, Cauca 24.47 341 eP P 11 56 34.7 +14
BETC Betania 24.62 346 eP P 11 56 37.3 +15
PRAC Prado 25.50 348 eP P 11 56 41.3 +11
VILC Villavicencio, 25.68 350 eP P 11 56 43.3 +12
ORTC Ortega, Tolima 25.77 347 eP P 11 56 40.7 +8.3
YOTC Yotoco, Valle 26.10 344 eP P 11 56 37.3 +1.9
CHIC Chingaza 26.20 350 eP P 11 56 50.0 +13
CHIC eP sP 11 56 51.3 -0.2
CHIC eP sP 11 56 51.3 -0.2
ROSC El Rosal 26.50 349 P P 11 56 35.7 -3.6
SJMB Sao Joao De Ma 26.75 89 eP P 11 56 36.5 -4.7
PLMC San Jos del P 26.97 345 eP P 11 56 42.0 -1.3
BSFB Barra de Sao F 27.04 90 eP P 11 56 39.6 -4.3
GUY2C Guyana, Caldas 27.07 347 eP P 11 56 45.3 +0.7
SPBC San Pablo de B 27.25 350 eP P 11 56 58.6 +13
NORC Norcasia 27.30 348 eP P 11 56 48.0 +1.7
RUSC La Rusia 27.35 352 eP P 11 56 46.6 -0.5
RUSC La Rusia 27.35 352 P P 11 56 47.4 +0.2
TAMC Tame, Arauca 27.75 355 eP P 11 57 01.9 +12
CBOC Ciudad Bolivar 27.83 346 eP P 11 57 01.3 +10
CBOC eP pP 11 57 03.3 +1.7
CBOC eP sP 11 57 04.6 -1.4
HELC Santa Helena 28.05 347 eP P 11 56 51.3 -1.9
BARC Barichara 28.05 352 eP P 11 56 54.6 +1.5
PTBC PUERTO BERRIO, 28.18 350 eP P 11 56 52.0 -2.1
PAYG Puerto Ayora 28.89 313 P P 11 56 59.5 -0.8
PAYG IAmb IAmb 11 57 14.5
comp=Z,32nm,1.1s
ZARC Zaragoza, Cauc 29.19 349 eP P 11 57 01.9 -1.0
SOCV Socops 29.53 357 eP P 11 57 02.6 -3.4
SDV Santo Domingo 30.12 358 P P 11 57 10.1 -1.3
comp=Z,5.1nm,0.9s,baz=228,slow=6.9,SNR=5.9
SDV Santo Domingo 30.12 358 P P 11 57 10.0 -1.5
SDV IAmb IAmb 11 57 26.4
comp=Z,23nm,1.1s
SMLC San Martn de 30.34 351 eP P 11 57 09.2 -4.0
MDP Montagnes des 31.11 34 P P 11 57 18.6 -1.5
comp=Z,10nm,0.9s,baz=219,slow=6.5,SNR=3.7
SJCC San Jacinto, C 31.59 349 eP P 11 57 24.5 +0.2
TOSP Speyside 33.68 16 P P 11 57 41.6 -0.8
NBMO Morrinhos-CE 33.84 62 eP P 11 57 38.7 -5.3
SVB Belmont 35.40 14 P P 11 57 57.1 -0.3
RCBR Riachuelo 36.05 69 P P 11 58 01.6 -1.5
comp=Z,12nm,0.7s,baz=239,slow=10,SNR=6.8
RCBR Riachuelo 36.05 69 eP P 11 57 57.9 -5.2
RCBR Riachuelo 36.05 69 P P 11 58 02.7 -0.4
RCBR IAmb IAmb 11 58 03.5
comp=Z,24nm,1.1s
RCBR Riachuelo 36.05 69 P P 11 58 02.7 -0.4
RCBR pmax pmax
comp=Z,24nm,1.1s
OBIP Obispado Ponce 39.31 4 P P 11 58 29.6 -0.8
TGUH Tegucigalpa,Un 39.31 332 P P 11 58 30.9 +0.2
TGUH IAmb IAmb 11 58 33.0
comp=Z,26nm,1.1s
MTP Monte Pirata 39.45 6 P P 11 58 30.4 -1.2
MTP IAmb IAmb 11 58 45.4
comp=Z,22nm,0.9s
HUMP Col San Antoni 39.47 6 P P 11 58 28.6 -3.1
HUMP IAmb IAmb 11 58 47.5
comp=Z,52nm,1.5s
CBYP Canovanas 39.59 5 P P 11 58 30.6 -2.2
APG El Apazote 41.60 329 P P 11 58 50.2 +0.5
comp=Z,2.3nm,0.6s,baz=99,slow=8.7,SNR=4.0
TEIG Tepich 45.25 335 P P 11 59 19.3 +0.4
comp=Z,7.4nm,0.4s,baz=49,slow=24,SNR=18
TEIG Tepich 45.25 335 P P 11 59 17.7 -1.1
CMIG Matias Romero 45.62 325 P P 11 59 22.8 +1.0
comp=Z,5.1nm,1.1s,baz=127,slow=7.0,SNR=5.7
TLIG Tlapa 48.05 322 P P 11 59 39.7 -1.3
TLIG IAmb IAmb 11 59 54.7
comp=Z,9.0nm,0.7s
ZAIG Zacatecas 54.45 322 P P 12 00 27.7 -1.4
ZAIG IAmb IAmb 12 00 43.0
comp=Z,15nm,0.9s
GOGA Godfrey 56.10 346 P P 12 00 40.5 0.0
baz=164
Z52A Williamson 56.11 345 P P 12 00 40.5 0.0
baz=163
JSC Jenkinsville 56.49 348 P P 12 00 42.1 -1.1
JSC IAmb IAmb 12 00 48.9
comp=Z,16nm,1.5s
JSC Jenkinsville 56.49 348 P P 12 00 42.1 -1.1
JSC pmax pmax
comp=Z,16nm,1.5s
Z50A Ashland 56.56 344 P P 12 00 43.4 -0.4
Z50A IAmb IAmb 12 01 01.7
comp=Z,14nm,1.1s
Z50A Ashland 56.56 344 P P 12 00 43.6 -0.1
baz=162
X56A White Oak 56.65 349 P P 12 00 44.8 +0.5
baz=167
Y52A Lilburn 56.67 346 P P 12 00 44.5 0.0
baz=164
X55A Gracelyn & Ava 56.74 348 P P 12 00 45.1 +0.2
baz=167
W58A Raeford 56.86 350 P P 12 00 46.4 +0.5
baz=169
Y51A Rockmart 56.95 345 P P 12 00 46.6 0.0
baz=163
X54A Belton 56.96 347 P P 12 00 46.8 +0.2
baz=166
HKT Hockley 56.98 333 P P 12 00 45.7 -1.0
HKT pP 12 00 58.4 +0.7
HKT Hockley 56.98 333 P P 12 00 45.7 -1.0
HKT *PP pP 12 00 58.4 +0.7
HKT pmax pmax
comp=Z,10.0nm,1.1s
W57A Gilead 57.11 350 P P 12 00 48.0 +0.4
baz=168
W56A Indian Trail 57.20 349 P P 12 00 48.6 +0.4
baz=168
833A Chaparral WMA, 57.23 329 P P 12 00 49.3 +0.7
833A pP 12 01 00.2 +0.6
833A IAmb IAmb 12 01 01.2
comp=Z,25nm,1.1s
833A Chaparral WMA, 57.23 329 P P 12 00 49.3 +0.7
baz=147
V61A Roper 57.27 353 P P 12 00 48.3 -0.4
V61A Roper 57.27 353 P P 12 00 49.5 +0.8
baz=172
V60A Jim Taylor Roa 57.32 353 P P 12 00 50.6 +1.5
baz=172
KMSC Kings Mountain 57.34 349 P P 12 00 49.8 +0.6
baz=167
W54A Cherokee Point 57.45 348 P P 12 00 50.6 +0.6
baz=166
V59A Middlesex 57.45 352 P P 12 00 50.9 +0.9
baz=170
X51A Calhoun 57.53 345 P P 12 00 50.6 0.0
baz=163
V58A Windy Hill, Pi 57.60 351 P P 12 00 51.6 +0.6
baz=170
W53A Cullowhee 57.73 347 P P 12 00 52.3 +0.2
baz=165
U61A Possum Corner 57.79 353 P P 12 00 51.9 -0.4
baz=172
V57A Coltrane Farms 57.80 350 P P 12 00 52.5 +0.1
baz=169
W52A Murphy 57.82 346 P P 12 00 52.9 +0.2
baz=164
V56A Mocksville 57.84 349 P P 12 00 53.4 +0.6
baz=168
U59A Littleton 57.97 352 P P 12 00 53.6 0.0
baz=171
X48A Hartselle 57.99 343 P P 12 00 53.5 -0.3
X48A IAmb IAmb 12 00 54.2
comp=Z,11nm,1.1s
V55A Taylorsville 58.01 349 P P 12 00 54.3 +0.4
V55A IAmb IAmb 12 01 12.7
comp=Z,15nm,1.1s
V55A Taylorsville 58.01 349 P P 12 00 54.6 +0.7
baz=167
V54A Nebo 58.07 348 P P 12 00 54.4 0.0
baz=166
W51A Cleveland 58.08 345 P P 12 00 54.4 0.0
baz=163
U58A Oxford 58.11 351 P P 12 00 54.5 -0.1
baz=170
V53A Saluda 58.14 347 P P 12 00 54.2 -0.7
baz=166
W50A Signal Mountai 58.25 345 P P 12 00 55.1 -0.5
baz=163
U57A Blanch 58.26 351 P P 12 00 55.8 +0.1
baz=169
U56A King 58.34 350 P P 12 00 57.2 +1.0
baz=168
435B Jarrell 58.46 332 P P 12 00 57.7 +0.4
435B pP pP 12 01 08.9 +0.6
435B IAmb IAmb 12 01 09.5
comp=Z,12nm,0.8s
V52A Sevierville 58.47 347 P P 12 00 56.8 -0.3
baz=165
T59A Double "B" Far 58.55 352 P P 12 00 57.1 -0.5
T59A Double "B" Far 58.55 352 P P 12 00 57.9 +0.3
baz=171
V51A Loudon 58.60 346 P P 12 00 58.1 0.0
baz=164
U55A TA2, Sparta 58.61 349 P P 12 00 58.4 +0.2
baz=168
V50A Pikevile 58.65 345 P P 12 00 58.1 -0.2
baz=163
T58A Grand View Acr 58.65 352 P P 12 00 58.8 +0.5
baz=170
U53A Fall Branch 58.76 348 P P 12 00 59.5 +0.3
baz=166
U54A Nelsons Funny 58.77 348 P P 12 00 59.3 0.0
baz=167

T57A	Hurt	58.80	351	P	P	12 01 00.0	+0.6
	baz=170						
V49A	McMinnville	58.93	344	P	P	12 00 59.9	-0.5
	baz=162						
T56A	Rocky Mt	58.95	350	P	P	12 01 01.1	+0.6
	baz=169						
TZTN	Tazewell	59.13	347	P	P	12 01 01.4	-0.3
	baz=165						
T55A	Pulaski	59.16	350	P	P	12 01 02.8	+0.8
	baz=168						
BLA	Blacksburg	59.20	350	P	P	12 01 02.6	+0.4
	baz=168						
JCT	Junction City	59.22	330	P	P	12 01 02.8	+0.2
JCT					pP	12 01 14.0	+0.4
JCT				IAmb	IAmb	12 01 14.8	
	comp=Z,14nm,1.0s						
JCT	Junction City	59.22	330	P	P	12 01 02.8	+0.2
	baz=147						
S58A	Poland Farm, P	59.24	352	P	P	12 01 02.9	+0.5
	baz=171						
T54A	Tazewell	59.25	349	P	P	12 01 02.5	-0.1
	baz=167						
U50A	Jamestown	59.30	346	P	P	12 01 02.8	-0.1
	baz=164						
T53A	Wise	59.35	348	P	P	12 01 03.4	+0.1
	baz=166						
HPIG		59.44	322	P	P	12 01 05.7	+1.4
HPIG					pP	12 01 16.5	+1.1
S57A	Dark Hollow, R	59.51	351	P	P	12 01 04.2	-0.1
S57A				pP	pP	12 01 16.2	+0.8
S57A	Dark Hollow, R	59.51	351	P	P	12 01 04.8	+0.4
	baz=170						
S56A	Natural Bridge	59.52	351	P	P	12 01 05.0	+0.6
	baz=169						
T52A	Hallie	59.56	348	P	P	12 01 04.9	+0.1
	baz=166						
R58B	Mineral	59.57	352	P	P	12 01 04.8	+0.2
R58B	Mineral	59.57	352	P	P	12 01 05.4	+0.7
	baz=171						
S55A	Lewisburg	59.76	350	P	P	12 01 06.6	+0.5
	baz=168						
WVT	Waverly	59.78	343	P	P	12 01 04.7	-1.5
WVT					pP	12 01 16.3	-1.0
WVT				IAmb	IAmb	12 01 16.9	
	comp=Z,6.7nm,0.7s						
WVT	Waverly	59.78	343	P	P	12 01 04.7	-1.5
WVT				*PP	pP	12 01 16.3	-1.0
WVT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WVT	Waverly	59.78	343	P	P	12 01 05.4	-0.8
	baz=160						
T50A	Nancy	59.88	346	P	P	12 01 06.3	-0.6
	baz=164						
R58A	Rapidan	59.91	352	P	P	12 01 07.9	+0.8
	baz=171						
S54A	Dingess, Beckl	59.92	349	P	P	12 01 07.4	+0.2
	baz=167						
S53A	Williamson	59.95	348	P	P	12 01 07.3	-0.1
	baz=166						
R57A	Stanardsville	59.98	352	P	P	12 01 08.3	+0.8
	baz=170						
T49A	Edmonton	60.12	345	P	P	12 01 07.5	-1.0
T49A				IAmb	IAmb	12 01 09.0	
	comp=Z,18nm,1.1s						
T49A					pP	12 01 19.0	-0.6
T49A	Edmonton	60.12	345	P	P	12 01 07.7	-0.9
	baz=163,SNR=5.2						
MIAR	Mount Ida	60.15	337	P	P	12 01 08.8	0.0
MIAR					pP	12 01 20.0	+0.1
MIAR	Mount Ida	60.15	337	P	P	12 01 09.1	+0.2
	baz=154						
R55A	Marlinton	60.19	350	P	P	12 01 09.9	+0.8
	baz=169						
TXAR	Lajitas Array	60.22	326	P	P	12 01 09.7	+0.1
	comp=Z,1.2nm,0.6s,baz=153,slow=8.4,SNR=13						
TXAR				pP	pP	12 01 21.2	+0.7
	comp=Z,3.4nm,1.0s,baz=142,slow=10,SNR=10						
TXAR				LR	LR	12 27 39.9	
	comp=Z,39nm,18.2s,baz=0.0,slow=36						
TXAR	Lajitas Array	60.22	326	P	P	12 01 08.3	-1.2
TXAR					pP	12 01 20.3	-0.2
TX31	Lajitas Ar. Si	60.22	326	P	P	12 01 08.8	-0.7
TX31				pP	pP	12 01 20.2	-0.4
W41B	Gary Mavity, V	60.25	339	P	P	12 01 09.2	-0.3
	baz=156						
VNA3	Neumayer Olymp	60.35	161	P	P	12 01 11.0	+1.2
T47A	Sharon Grove	60.40	344	P	P	12 01 09.7	-0.7
T47A				IAmb	IAmb	12 01 10.8	
	comp=Z,24nm,1.1s						
T47A					pP	12 01 20.9	-0.6
S50A	Richmond	60.41	346	P	P	12 01 10.6	+0.1
	baz=164						
Q58A	Fox Den Farm,	60.51	353	P	P	12 01 11.2	0.0
	baz=171						
R53A	Hurricane	60.55	349	P	P	12 01 11.5	+0.1
	baz=167						
VNA1	Neumayer--Stat	60.57	160	P	P	12 01 11.4	+0.2
Q57A	Strasburg	60.69	352	P	P	12 01 13.5	+1.1
	baz=171,SNR=5.2						
S49A	Springfield	60.71	346	P	P	12 01 12.3	-0.2
	baz=163						
LCAR	Lake Charles	60.71	340	P	P	12 01 12.0	-0.5
LCAR				pP	pP	12 01 23.2	-0.4
Q56A	Snyder Ridge,	60.80	351	P	P	12 01 14.4	+1.2
Q56A				pP	pP	12 01 25.5	+1.2
Q56A				sP	sP	12 01 30.0	+1.4
Q56A	Snyder Ridge,	60.80	351	P	P	12 01 14.1	+1.0
	baz=170,SNR=7.0						
W39A	Magazine	60.81	337	P	P	12 01 13.4	+0.1
W39A				IAmb	IAmb	12 01 25.7	
	comp=Z,10.0nm,0.8s						
W39A	Magazine	60.81	337	P	P	12 01 13.8	+0.5
	baz=154						
R51A	Hillsboro	60.83	347	P	P	12 01 13.8	+0.4
	baz=165						
Q55A	Buckhannon	60.89	351	P	P	12 01 14.9	+1.1
	baz=169						
VNA2	Neumayer--Watz	60.94	161	P	P	12 01 14.9	+1.1
	baz=285,slow=8.3						
ABTX	Abilene, Hawle	60.95	331	P	P	12 01 14.6	+0.3
ABTX					pP	12 01 26.0	+0.6
ABTX	Abilene, Hawle	60.95	331	P	P	12 01 14.8	+0.4
	baz=148						
R50A	Paris	60.97	347	P	P	12 01 14.2	-0.1
R50A				IAmb	IAmb	12 01 15.4	
	comp=Z,18nm,1.2s						
R50A	Paris	60.97	347	P	P	12 01 14.7	+0.4
	baz=164						
Q53A	Leroy	60.99	349	P	P	12 01 15.2	+0.8
	baz=167						
Q54A	Coxs Mills	60.99	350	P	P	12 01 14.4	0.0
	baz=168						
P58A	Pank, Wackersv	61.01	353	P	P	12 01 15.5	+1.0
	baz=172						
P59A	Jarrettsville	61.03	354	P	P	12 01 15.8	+1.1
	baz=173						
P57A	Homestead Farm	61.08	353	P	P	12 01 16.1	+1.1
	baz=171						
PBMO	Poplar Bluff	61.14	341	P	P	12 01 14.9	-0.5
PBMO					pP	12 01 25.9	-0.7
PBMO				IAmb	IAmb	12 01 26.6	
	comp=Z,9.8nm,0.6s						
R49A	Shelbyville	61.17	346	P	P	12 01 15.6	-0.1
	baz=163						
P56A	Dayton Farm, R	61.21	352	P	P	12 01 16.7	+0.8
	baz=170						
Q52A	Bidwell	61.22	349	P	P	12 01 15.8	-0.1
	baz=166						
P55A	Reedsville	61.35	351	P	P	12 01 17.5	+0.6
	baz=169						
WCI	Wyandotte Cave	61.37	345	P	P	12 01 16.3	-0.7
	baz=162						
Q50A	Georgetown	61.44	347	P	P	12 01 17.3	-0.2
	baz=165						
USIN	University of	61.46	344	P	P	12 01 16.8	-0.8
USIN				pP	pP	12 01 27.9	-0.8
Q51A	Peebles	61.49	348	P	P	12 01 17.5	-0.3
	baz=165						
MCWV	Mont Chateau	61.50	351	P	P	12 01 18.6	+0.7
MCWV				pP	pP	12 01 29.8	+0.8
MCWV				IAmb	IAmb	12 01 30.4	
	comp=Z,12nm,0.7s						
MCWV	Mont Chateau	61.50	351	P	P	12 01 18.3	+0.5
	baz=169						
U40A	Yellville	61.53	339	P	P	12 01 17.4	-0.7
U40A				IAmb	IAmb	12 01 18.7	
	comp=Z,12nm,1.1s						
U40A					pP	12 01 29.1	-0.2
U40A	Yellville	61.53	339	P	P	12 01 18.0	-0.2
	baz=155						
P54A	Burton	61.54	350	P	P	12 01 18.4	+0.2
	baz=168,SNR=5.2						
P53A	Whipple	61.58	350		pP	12 01 29.9	+0.4
P53A	Whipple	61.58	350	P	P	12 01 18.4	0.0
	baz=168						
O58A	Lewisberry	61.59	354	P	P	12 01 18.9	+0.4
	baz=172						
S44A	Carbondale	61.64	342	P	P	12 01 18.3	-0.5
S44A					pP	12 01 29.7	-0.3
O59A	Robesonia	61.70	354	P	P	12 01 19.7	+0.5
	baz=173						
O57A	Amberson	61.76	353	P	P	12 01 20.3	+0.7
	baz=172						
Q49A	Aurora	61.79	346	P	P	12 01 19.4	-0.4
	baz=164						
HHAR	Hobbs	61.84	338	P	P	12 01 19.3	-1.0
HHAR					pP	12 01 31.3	-0.1
HHAR				IAmb	IAmb	12 01 31.9	
	comp=Z,24nm,1.3s						
P52A	Corning	61.85	349	P	P	12 01 19.9	-0.4
	baz=167						
X34A	Smith Ranch, M	61.85	334	P	P	12 01 20.2	-0.2
X34A					pP	12 01 31.9	+0.5
X34A				IAmb	IAmb	12 01 32.6	
	comp=Z,16nm,0.9s						
P51A	Williamsport	61.87	348	P	P	12 01 19.7	-0.6
P51A				pP	pP	12 01 30.9	-0.5
P51A				IAmb	IAmb	12 01 31.9	
	comp=Z,22nm,1.2s						
Q48A	North Vernon	61.90	346	P	P	12 01 20.2	-0.4
	baz=163						
O56A	Blue Knob Stat	61.92	352	P	P	12 01 20.9	+0.1
O56A					pP	12 01 32.0	+0.1
O56A	Blue Knob Stat	61.92	352	P	P	12 01 21.1	+0.3
	baz=170,SNR=5.2						
W35A	Tecumseh	61.94	335	P	P	12 01 20.4	-0.6
W35A				pP	pP	12 01 31.7	-0.3
O55A	Ligonier	61.96	352	P	P	12 01 21.6	+0.6
	baz=170						
MGMO	Mountain Grove	62.06	340	P	P	12 01 21.1	-0.6
MGMO					pP	12 01 32.0	-0.9
MGMO				IAmb	IAmb	12 01 32.8	
	comp=Z,11nm,1.1s						
P50A	Jamestown	62.14	348	P	P	12 01 22.2	+0.1
	baz=165						
N60A	Cedar Hill Far	62.17	355	P	P	12 01 22.7	+0.4
	baz=174						
TUL1	Leonard	62.19	336	P	P	12 01 22.8	+0.2
TUL1					pP	12 01 33.9	+0.2
TUL1	Leonard	62.19	336	P	P	12 01 22.6	0.0
	baz=152						
SSPA	Standing Stone	62.20	353	P	P	12 01 23.2	+0.6
	baz=171						
PAL	Palisades	62.22	356	P	P	12 01 22.7	+0.1
	baz=175						
P49A	Miami Univ. Ec	62.26	347	P	P	12 01 22.7	-0.3
	baz=164						
N59A	State Game Lan	62.27	355	P	P	12 01 23.3	+0.2
	baz=174						
N58A	Sunbury	62.28	354	P	P	12 01 23.4	+0.3
	baz=172						
N57A	Milroy	62.28	353	P	P	12 01 23.6	+0.5
	baz=172						
N55A	Marion Center	62.48	352	P	P	12 01 25.0	+0.5
	baz=170,SNR=6.9						
M61A	Granite Spring	62.52	356	P	P	12 01 24.9	+0.3
	baz=176						
SNAA	Sanae	62.56	161	P	P	12 01 25.8	+1.0
SNAA	Sanae	62.56	161	P	P	12 01 25.5	+0.8
	comp=Z,8.2nm,0.6s,baz=279,slow=6.4,SNR=45						
SNAA				pP	pP	12 01 37.1	+1.1
	comp=Z,7.3nm,0.7s,baz=280,slow=9.7,SNR=7.6						
SNAA	Sanae	62.56	161	P	P	12 01 24.9	+0.1
SNAA				IAmb	IAmb	12 01 26.6	
	comp=Z,12nm,0.8s						
SNAA					pP	12 01 36.5	+0.6
SNAA	Sanae	62.56	161 c	iP	P	12 01 25.3	+0.5
CCM	Cathedral Cave	62.56	341	P	P	12 01 24.5	-0.5
CCM					pP	12 01 35.7	-0.4
CCM				IAmb	IAmb	12 01 37.0	
	comp=Z,8.4nm,0.8s						
CCM	Cathedral Cave	62.56	341	P	P	12 01 24.7	-0.3
	baz=157						
ACSO	Alum Creek Sta	62.58	348	P	P	12 01 24.6	-0.5
ACSO					pP	12 01 35.8	-0.4
ACSO				IAmb	IAmb	12 01 37.2	
	comp=Z,21nm,1.1s						
ACSO	Alum Creek Sta	62.58	348	P	P	12 01 25.0	-0.1
	baz=166						
M62A	Hamden	62.60	357	P	P	12 01 25.7	+0.6
	baz=176						
N53A	Lisbon	62.77	350	P	P	12 01 27.4	+1.0
	baz=168						
M58A	Price's Panora	62.78	354	P	P	12 01 27.5	+1.0
	baz=173						
N54A	Moraine State	62.80	351	P	P	12 01 27.0	+0.4
N54A	Moraine State	62.80	351	P	P	12 01 27.0	+0.4
	baz=169						
O49A	Covington	62.81	347	P	P	12 01 26.3	-0.3
	baz=165						
M57A	Sunshine Farm,	62.81	354	P	P	12 01 27.3	+0.6
	baz=172						
M59A	Waymart	62.86	355	P	P	12 01 27.5	+0.5
	baz=174						
N52A	McGinn's Farm,	62.92	350	P	P	12 01 27.8	+0.4
	baz=167						
L63A	North Scituate	62.97	358	P	P	12 01 28.2	+0.6
	baz=178						
MNTX	Cornudas Mount	62.99	326	P	P	12 01 28.1	0.0
MNTX					pP	12 01 39.1	0.0
MNTX				IAmb	IAmb	12 01 40.0	
	comp=Z,8.9nm,0.9s						
MNTX	Cornudas Mount	62.99	326	P	P	12 01 27.8	-0.2
	baz=142,SNR=5.1						
L64A	Middleborough	63.03	359	P	P	12 01 28.4	+0.4
	baz=179						
O48A	Farmland	63.05	347	P	P	12 01 28.1	-0.1
	baz=164						
M56A	Emporium	63.08	353	P	P	12 01 28.7	+0.2
	baz=171						
M55A	Ridgway	63.13	352	P	P	12 01 28.8	0.0
	baz=170						
N50A	Nevada	63.14	348	P	P	12 01 28.3	-0.5
	baz=166						
L60A	Shokan	63.22	356	P	P	12 01 29.5	+0.2
	baz=175						
M54A	Oil Creek Stat	63.29	351	P	P	12 01 29.3	-0.5
M54A					pP	12 01 40.9	0.0
M54A	Oil Creek Stat	63.29	351	P	P	12 01 30.1	+0.2
	baz=170						
M53A	WI Miller and	63.37	351	P	P	12 01 30.7	+0.3
	baz=168						
L58A	Harry Jones Me	63.40	355	P	P	12 01 31.1	+0.6
	baz=173,SNR=5.6						
L57A	Andrews Acres	63.44	354	P	P	12 01 31.8	+0.9
	baz=172						
L59A	Walton	63.48	355	P	P	12 01 31.8	+0.7
	baz=174						
N49A	Columbus Grove	63.48	348	P	P	12 01 30.3	-0.8
N49A					pP	12 01 41.7	-0.5
N49A	Columbus Grove	63.48	348	P	P	12 01 30.8	-0.2
	baz=165						
MSTX	Muleshoe	63.51	329	P	P	12 01 31.7	+0.1
MSTX					pP	12 01 42.6	-0.1
MSTX	Muleshoe	63.51	329	P	P	12 01 31.5	-0.1
	baz=145,SNR=5.5						
P43A	Skaggs, Pawnee	63.53	343	P	P	12 01 30.7	-0.8
P43A					pP	12 01 41.9	-0.7
P43A				IAmb	IAmb	12 01 42.3	
	comp=Z,26nm,1.1s						
BINY	Binghamton	63.56	355	P	P	12 01 32.5	+0.8
BINY					pP	12 01 43.5	+0.8
BINY	Binghamton	63.56	355	P	P	12 01 31.9	+0.3
	baz=173						
N48A	Decatur	63.59	347	P	P	12 01 30.9	-0.9
	baz=164						
L61B	Northampton	63.60	357	P	P	12 01 31.4	-0.4
	baz=177						
SFIN	Lafayette	63.60	345	P	P	12 01 31.3	-0.6
SFIN					pP	12 01 41.6	-1.4
SFIN	Lafayette	63.60	345	P	P	12 01 30.9	-1.0
	baz=162						
HRV	Adam Dziewonsk	63.61	358	P	P	12 01 32.3	+0.4
	baz=178						
L56A	Greenwood	63.65	353	P	P	12 01 32.8	+0.6
	baz=172						
L55A	Hinsdale	63.80	353	P	P	12 01 34.1	+0.9
	baz=171						
L53A	Girard	63.81	351	P	P	12 01 33.7	+0.5
	baz=169						
K61A	Williamstown	63.84	357	P	P	12 01 34.4	+1.0
	baz=176						
ERPA	Erie	63.93	351	P	P	12 01 32.5	-1.6
ERPA					pP	12 01 45.3	+0.1
ERPA	Erie	63.93	351	P	P	12 01 34.6	+0.6
	baz=169						
L54A	Sinclairville	63.96	352	P	P	12 01 34.5	+0.2
	baz=170						
M49A	Liberty Center	63.97	348	P	P	12 01 33.6	-0.7
	baz=165						
K59A	Cooperstown	64.04	356	P	P	12 01 35.2	+0.5
	baz=174,SNR=7.7						
K58A	Earlville	64.09	355	P	P	12 01 34.3	-0.8
K58A					pP	12 01 44.7	-1.5
K58A				IAmb	IAmb	12 01 53.5	
	comp=Z,15nm,0.8s						
K58A	Earlville	64.09	355	P	P	12 01 35.2	+0.1
	baz=174						
K57A	Scipio Center	64.14	354	P	P	12 01 35.2	-0.2
	baz=173						
K56A	Middlesex	64.18	354	P	P	12 01 35.9	+0.2
	baz=172						
J62A	Henniker	64.34	358	P	P	12 01 37.1	+0.4
	baz=178						
J58A	Remsen	64.66	355	P	P	12 01 39.7	+1.0
	baz=174						
J59A	Piesco	64.70	356	P	P	12 01 39.4	+0.3
J59A					pP	12 01 51.0	+0.8
J59A				IAmb	IAmb	12 01 52.5	
	comp=Z,26nm,1.1s						
J59A	Piesco	64.70	356	P	P	12 01 39.7	+0.6
	baz=175,SNR=6.0						
319A	Douglas	64.86	323	P	P	12 01 41.5	+1.0
319A				pP	pP	12 01 53.5	+1.9
319A				IAmb	IAmb	12 01 54.2	
	comp=Z,17nm,0.9s						
J54A	Appleton	64.90	353	P	P	12 01 41.0	+0.8
	baz=171						
121A	Cookes Peak, D	64.91	325	P	P	12 01 40.9	0.0
121A					pP	12 01 53.8	+1.8
121A				IAmb	IAmb	12 01 54.8	
	comp=Z,11nm,1.1s						
121A	Cookes Peak, D	64.91	325	P	P	12 01 42.3	+1.4
	baz=141						
I58A	Old Forge	64.96	356	P	P	12 01 41.1	+0.4
	baz=174						
I62A	Tamworth	64.97	359	P	P	12 01 41.2	+0.4
	baz=178						
I59A	Olmsteadville	65.00	357	P	P	12 01 41.7	+0.7
	baz=176						
I60A	Shoreham	65.01	357	P	P	12 01 41.6	+0.6
	baz=176						
I61A	Oroboro, Fairl	65.06	358	P	P	12 01 41.5	+0.2
	baz=177						
J52A	Paris	65.10	351	P	P	12 01 41.3	-0.3
	baz=169						
I57A	Carthage	65.26	355	P	P	12 01 42.9	+0.3
	baz=174						
K48A	Perry	65.28	348	P	P	12 01 42.0	-0.8
	baz=165						
KSU1	Kansas State U	65.31	337	P	P	12 01 42.5	-0.5
	baz=152						
K47A	Vermontville	65.33	348	P	P	12 01 42.4	-0.7
	baz=164						
H58A	Gabriels	65.63	356	P	P	12 01 45.4	+0.3
	baz=175						
H60A	Morristown	65.70	358	P	P	12 01 45.7	+0.2
	baz=177						
H64A	Troy	65.72	0	P	P	12 01 45.8	+0.2
	baz=180						
I55A	Frankford	65.72	354	P	P	12 01 45.9	+0.3
	baz=172						
I51A	Listowel	65.73	351	P	P	12 01 45.2	-0.6
	baz=168						
H57A	Richville	65.76	355	P	P	12 01 46.3	+0.4
	baz=174						
H59A	Cadyville	65.83	357	P	P	12 01 46.7	+0.3
	baz=176						
H56A	Elgin	65.96	355	P	P	12 01 47.6	+0.4
	baz=173						
FRNY	Flat Rock	66.02	357	P	P	12 01 47.4	-0.2
FRNY					pP	12 01 58.9	+0.1
FRNY				IAmb	IAmb	12 02 00.1	
	comp=Z,20nm,1.3s						
ANMO	Albuquerque	66.10	327	P	P	12 01 49.5	+1.0
ANMO				pP	pP	12 02 01.1	+1.4
ANMO	Albuquerque	66.10	327	P	P	12 01 49.5	+1.0
ANMO				*PP	pP	12 02 01.1	+1.4
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ANMO	Albuquerque	66.10	327	P	P	12 01 49.6	+1.0
	baz=142						
G63A	Kingsbury	66.19	360	P	P	12 01 49.8	+1.1
	baz=180						
G59A	Clarenceville	66.24	357	P	P	12 01 50.2	+1.3
	baz=176						
CBKS	Cedar Bluff	66.25	335	P	P	12 01 50.0	+0.8
CBKS					pP	12 02 01.1	+0.7
CBKS	Cedar Bluff	66.25	335	P	P	12 01 50.3	+1.0
	baz=149						
G62A	West of Eustis	66.30	359	P	P	12 01 50.2	+0.9
	baz=179						
G65A	Princeton	66.30	2	P	P	12 01 49.8	+0.5
	baz=182						
G58A	Ormstown	66.36	357	P	P	12 01 50.1	+0.5
	baz=175						
G61A	St-Isidore-de-	66.39	358	P	P	12 01 50.5	+0.6
	baz=178						
H52A	Wyevale	66.40	352	P	P	12 01 49.7	-0.3
	baz=170						
TUC	Tucson	66.40	322	P	P	12 01 52.2	+1.9
TUC				pP	pP	12 02 03.3	+1.7
TUC	Tucson	66.40	322	P	P	12 01 52.3	+1.9
TUC				*PP	pP	12 02 03.3	+1.7
TUC				pmax	pmax		
	comp=Z,11nm,1.4s						
TUC	Tucson	66.40	322	P	P	12 01 51.2	+0.8
	baz=138						
I48A	Sherman Twp	66.55	349	P	P	12 01 50.5	-0.4
	baz=166						
I46A	Reed City	66.64	348	P	P	12 01 50.9	-0.6
	baz=164						
G55A	Calabogie	66.66	354	P	P	12 01 51.5	0.0
	baz=173						
G53A	Haliburton	66.72	353	P	P	12 01 52.1	0.0
	baz=171						
F64A	Sherman	66.95	1	P	P	12 01 53.7	+0.2
	baz=181						
F60A	Warwick	67.08	358	P	P	12 01 54.7	+0.4
	baz=178						
214A	Organ Pipe Nat	67.32	321	P	P	12 01 57.2	+1.1
214A					pP	12 02 09.0	+1.6
214A	Organ Pipe Nat	67.32	321	P	P	12 01 58.0	+1.8
	baz=136,SNR=9.7						
TRQ	Mont Tremblant	67.45	356	P	P	12 01 56.5	-0.2
TRQ					pP	12 02 08.1	+0.2
F52A	Sundridge	67.46	353	P	P	12 01 57.1	+0.4
	baz=170						
ALGO	Algonquin Park	67.48	354	P	P	12 01 57.0	+0.2
	baz=171						
E63A	Oxbow	67.51	1	P	P	12 01 57.6	+0.7
	baz=181						
E64A	Bridgewater	67.52	1	P	P	12 01 57.5	+0.4
	baz=182						
E61A	Lac Etchemin	67.52	359	P	P	12 01 57.6	+0.5
	baz=179						
G47A	Hillman	67.53	349	P	P	12 01 57.4	+0.2
	baz=166						
E58A	La Victoria	67.54	357	P	P	12 01 57.7	+0.5
	baz=176						
E57A	Chemin Saint G	67.62	357	P	P	12 01 57.8	0.0
	baz=175						
F51A	Arnstein	67.67	352	P	P	12 01 57.6	-0.4
	baz=170						
F49A	Sandfield	67.80	351	P	P	12 01 58.7	-0.2
	baz=168						
E56A	St. Veronique	67.81	356	P	P	12 01 59.0	+0.2
	baz=174						
E53A	Dumoine, Ponti	67.86	354	P	P	12 01 59.1	-0.1

baz=172
E54A Lac Daplat, Po 67.87 354 P P 12 01 59.1 -0.2
baz=172
SDCO Great Sand Dun 67.87 330 P P 12 02 00.8 +1.0
SDCO pP pP 12 02 12.3 +1.3
SDCO IAmb IAmb 12 02 13.3
comp=Z,20nm,1.3s
SDCO Great Sand Dun 67.87 330 P P 12 02 00.9 +1.1
baz=144,SNR=11
BGNE Belgrade 67.90 337 P P 12 01 59.8 +0.2
BGNE pP 12 02 11.0 +0.1
BGNE Belgrade 67.90 337 P P 12 01 59.6 0.0
baz=151
F48A Evansville 67.96 350 P P 12 01 59.0 -0.8
baz=167
D63A Stockholm 68.13 1 P P 12 02 01.3 +0.4
baz=181
D62A Allapoint, All 68.16 0 P P 12 02 01.3 +0.2
baz=180
D57A Chemin Vers le 68.21 357 P P 12 02 01.7 +0.3
baz=176
D58A Chemin du LacG 68.24 358 P P 12 02 02.0 +0.4
baz=177
D61A St Aubert, Com 68.28 360 P P 12 02 02.3 +0.4
baz=179
D56A ZEC Mazanza, M 68.29 356 P P 12 02 01.7 -0.2
baz=175
D55A Sainte-Anne-du 68.31 356 P P 12 02 02.2 +0.2
baz=174
F45A CMU Biological 68.33 348 P P 12 02 01.5 -0.7
baz=164
X16A Lo Mia Camp, P 68.33 324 P P 12 02 04.7 +2.0
X16A pP 12 02 15.9 +2.0
S22A 4UR Ranch, Cre 68.50 329 P P 12 02 04.9 +1.1
S22A 4UR Ranch, Cre 68.50 329 P P 12 02 02.4 -1.4
baz=143
E48A Lockeyer 68.52 351 P P 12 02 02.4 -1.0
baz=167
LATQ La Tuque 68.53 358 P P 12 02 03.9 +0.6
baz=177
D52A ZEK Kipawa Sen 68.53 353 P P 12 02 03.9 +0.5
baz=171
D54A Lac Fusel, La 68.53 355 P P 12 02 03.1 -0.3
baz=173
D53A Lac Vacive, Po 68.56 354 P P 12 02 03.3 -0.3
D53A IAmb IAmb 12 02 15.6
comp=Z,8.6nm,0.8s
D53A Lac Vacive, Po 68.56 354 P P 12 02 03.8 +0.3
baz=172
E47A Iron Bridge 68.67 350 P P 12 02 04.8 +0.5
baz=166
Q24A Divide 68.69 331 P P 12 02 06.0 +1.0
Q24A pP pP 12 02 17.5 +1.2
Q24A IAmb IAmb 12 02 18.2
comp=Z,14nm,1.1s
Q24A Divide 68.69 331 P P 12 02 05.1 +0.1
baz=144
D51A Lot 18 Range I 68.75 353 P P 12 02 05.0 +0.3
baz=170
QSPA South Pole Qui 68.79 180 P P 12 02 06.8 +1.7
QSPA pP pP 12 02 18.6 +2.2
QSPA IAmb IAmb 12 02 18.9
comp=Z,20nm,1.2s
D50A G1974 Best Tow 68.88 352 P P 12 02 06.2 +0.6
baz=170
MVCO Mesa Verde 68.90 327 P P 12 02 07.7 +1.5
MVCO pP 12 02 18.5 +1.0
MVCO IAmb IAmb 12 02 19.7
comp=Z,12nm,1.0s
MVCO Mesa Verde 68.90 327 P P 12 02 07.5 +1.2
baz=141,SNR=5.2
LIC Lamto 68.92 74 eP P 12 02 05.5 -1.1
comp=Z,23nm,0.7s
TIC Toumodi 69.11 74 eP P 12 02 06.9 -0.9
WUAZ Wupatki 69.11 324 P P 12 02 08.8 +1.3
baz=138
D48A Paudash Townsh 69.15 351 P P 12 02 07.0 -0.2
baz=168
D49A Beulah Townshi 69.18 351 P P 12 02 07.3 -0.1
baz=168
D47A Chapleau 69.23 350 P P 12 02 07.6 -0.1
baz=166
KIC Kosan Boka 69.23 74 eP P 12 02 07.0 -1.5
comp=Z,30nm,0.7s
DBIC Dimbokro 69.26 74 P P 12 02 08.1 -0.6
comp=Z,26nm,0.9s,baz=219,slow=6.3,SNR=35
DBIC LR LR 12 30 41.8
comp=Z,74nm,21.6s,baz=306,slow=34
DBIC Dimbokro 69.26 74 P P 12 02 08.0 -0.7
DBIC Dimbokro 69.26 74 P P 12 02 08.0 -0.7
DBIC pmax pmax
comp=Z,38nm,1.1s
ECSD EROS Data Cent 69.42 339 P P 12 02 09.0 -0.1
ECSD EROS Data Cent 69.42 339 P P 12 02 09.1 +0.1
baz=153
VLDQ Val d'Or 69.56 354 P P 12 02 09.5 -0.2
VLDQ pP 12 02 21.4 +0.4
VLDQ IAmb IAmb 12 02 22.2
comp=Z,22nm,1.3s
ISCO Idaho Springs 69.58 331 P P 12 02 11.1 +0.6
ISCO pP 12 02 22.6 +0.8
Y12C Blythe 69.61 321 P P 12 02 11.9 +1.6
Y12C pP 12 02 23.3 +1.7
Y12C Blythe 69.61 321 P P 12 02 11.5 +1.1
baz=136
PDMCI Parker Dam,Lak 69.78 322 P P 12 02 12.6 +1.2
baz=136
IKP In-Ko-Pah, Jac 69.78 319 P P 12 02 13.0 +1.4
baz=134
BC3 Big Chuckawall 70.09 320 P P 12 02 15.3 +1.8
baz=135,SNR=6.9
MONP2 Monument Peak 70.14 319 P P 12 02 15.2 +1.2
baz=134
IRM Iron Mountain 70.26 321 P P 12 02 15.9 +1.5
baz=135,SNR=7.7
LSQQ Lebel-sur-Quev 70.45 355 P P 12 02 15.3 0.0
baz=173
N23A Red Feather La 70.61 332 P P 12 02 17.6 +0.8
baz=144
BELC Belle Mtn. Jos 70.65 320 P P 12 02 18.3 +1.3
baz=134
PFO Pinyon Flats O 70.66 320⇓eP P 12 02 18.4 +1.4
PFO pmax pmax
comp=Z,7.0nm,0.9s
PFO Pinyon Flats O 70.66 320 P P 12 02 18.3 +1.4
baz=134
GMRC Granite Mounta 71.00 321 P P 12 02 21.0 +2.0
baz=135,SNR=10.0
O20A White River Ci 71.06 330 P P 12 02 20.8 +1.4
baz=142,SNR=5.2
MATQ Matagami 71.21 354 P P 12 02 18.9 -0.9
baz=172
LCMT Little Creek M 71.23 324 P P 12 02 20.1 -0.3
LCMT pP 12 02 33.8 +2.1
SRU San Rafael Swe 71.38 327 P P 12 02 22.1 +0.7
SRU pP pP 12 02 34.2 +1.6
BBRC Big Bear Solar 71.38 320 P P 12 02 23.5 +2.0
baz=134
HEC Hector,Ludlow 71.43 321 P P 12 02 23.7 +2.1
baz=134,SNR=6.5
TUQ Turquoise Moun 71.61 321 P P 12 02 24.6 +1.9
baz=135
CCUT Cedar City 71.69 325 P P 12 02 25.7 +2.4
CCUT sP 12 02 37.4 -1.5
CIS Catalina Islan 71.71 318 P P 12 02 24.9 +1.6
baz=132
P17A Butcher Ranch, 71.76 328 P P 12 02 24.6 +1.0
P17A pP pP 12 02 36.5 +1.6
MSU Marysvale 71.77 326 P P 12 02 25.7 +1.9
MSU Marysvale 71.77 326 P P 12 02 25.7 +1.9
EYMN Ely 71.79 345 P P 12 02 22.7 -0.7
EYMN Ely 71.79 345 P P 12 02 22.7 -0.7
baz=159
BFSC Mount Baldy Ra 71.81 320 P P 12 02 25.8 +1.8
baz=133
GSC Goldstone, Bar 72.03 321 P P 12 02 26.9 +1.7
baz=134
SHOC Shoshone, Teco 72.14 322 P P 12 02 27.9 +2.1
baz=135
K22A Casper 72.29 332 P P 12 02 27.8 +1.1
baz=144
EDW2 Edwards Air Fo 72.45 320 P P 12 02 29.1 +1.4
baz=133
RSSD Black Hills 72.46 335 P P 12 02 29.2 +1.5
baz=146
BLG Laguna Peak, P 72.58 319 P P 12 02 30.0 +1.5
baz=132
LRMC Laurel Mtn Rad 72.67 320 P P 12 02 30.4 +1.2
baz=134
TPNV Topopah Spring 72.86 322 P P 12 02 32.3 +2.1
baz=135,SNR=5.8
FURC Furnace Creek, 72.88 322 P P 12 02 31.8 +1.8
baz=134,SNR=6.7
MPMC Manual Prospec 72.96 321 P P 12 02 32.2 +1.3
baz=134
TBI Tubuai 72.98 251 eS S 12 11 54.8 -1.0
comp=Z,46nm,27.8s
TBI Tubuai 72.98 251 eLR LR 12 24 49.0
comp=Z,119nm,26.2s
ISA Isabella, Lake 73.27 320 P P 12 02 34.5 +1.9
ISA pP 12 02 45.8 +1.9
ISA Isabella, Lake 73.27 320 P P 12 02 34.5 +1.9
ISA *PP pP 12 02 45.8 +1.9
ISA pmax pmax
comp=Z,9.0nm,1.0s
ISA Isabella, Lake 73.27 320 P P 12 02 34.3 +1.8
baz=133
AGMN Agassiz Nation 73.28 342 P P 12 02 31.9 -0.4
AGMN pP 12 02 43.4 -0.2
DUG Dugway, Tooele 73.36 327 P P 12 02 34.8 +1.7
baz=138,SNR=5.3
R11A Troy Canyon, C 73.48 324 P P 12 02 35.8 +1.9
baz=136,SNR=6.5
GRAC Grapevine Rang 73.53 322 P P 12 02 36.1 +2.1
baz=134
PKM Mcpherson Peak 73.56 319 P P 12 02 36.6 +2.1
baz=132
CWC Cottonwood Cre 73.57 321 P P 12 02 36.0 +1.6
baz=133
PDAR Pinedale Array 73.74 330 P P 12 02 35.9 +0.5
comp=Z,0.4nm,0.5s,baz=120,slow=5.3,SNR=6.6
PDAR pP pP 12 02 48.0 +1.3
comp=Z,0.8nm,0.7s,baz=142,slow=5.6,SNR=5.4
PDAR LR LR 12 36 56.9
comp=Z,61nm,19.2s,baz=118,slow=37
PDAR Pinedale Array 73.74 330 P P 12 02 35.3 -0.1
PDAR pP 12 02 47.6 +0.9
VES Vestal, Richgr 73.76 320 P P 12 02 37.0 +1.7
baz=133
SMMC Simmler 73.96 319 P P 12 02 38.2 +1.6
baz=132
AHID Auburn Hatcher 74.45 330 P P 12 02 40.3 +0.8
AHID pP 12 02 50.8 0.0
PPT2 Papeete2 74.77 257 eS S 12 12 13.9 -2.5
comp=Z,41nm,23.5s
PPT2 Papeete2 74.77 257 eLR LR 12 25 38.9
comp=Z,136nm,27.0s
PPT Papeete 74.78 257 LR LR 12 27 44.9
comp=Z,53nm,21.4s,baz=20,slow=29
REDW Red Top Meadow 74.80 330 P P 12 02 41.7 +0.2
ULM Lac du Bonnet 75.05 343 P P 12 02 42.1 -0.4
comp=Z,1.8nm,0.6s,baz=171,slow=5.0,SNR=6.2
ULM LR LR 12 40 11.3
comp=Z,67nm,18.1s,baz=140,slow=39
NVAR Mina Array Bea 75.06 322 P P 12 02 44.5 +1.3
comp=Z,2.2nm,0.9s,baz=150,slow=7.2,SNR=15
NVAR pP PcP 12 02 56.3 -0.4
comp=Z,2.8nm,0.9s,baz=162,slow=6.7,SNR=12
FXWY Fox Creek 75.09 330 P P 12 02 43.0 -0.2
FLWY Flagg Ranch 75.28 331 P P 12 02 44.1 -0.2
FLWY IAmb IAmb 12 02 58.3
comp=Z,14nm,1.1s
LAO LASA Array 75.45 335 P P 12 02 46.3 +1.3
LAO IAmb IAmb 12 02 58.2
comp=Z,21nm,1.3s
LAO LASA Array 75.45 335 P P 12 02 46.5 +1.5
baz=145
RLMT Red Lodge 75.45 332 P P 12 02 46.3 +1.0
baz=142,SNR=5.7
YNE Yellowstone No 75.69 332 P P 12 02 47.7 +1.1
YNE pP pP 12 02 58.8 +0.8
SCHQ Schefferville 75.96 2 P P 12 02 47.2 -0.4
comp=Z,4.4nm,0.9s,baz=163,slow=7.5,SNR=6.6
SCHQ pP pP 12 02 59.2 +0.2
comp=Z,7.9nm,1.0s,baz=134,slow=4.1,SNR=7.0
SCHQ LR LR 12 39 14.1
comp=Z,53nm,18.1s,baz=16,slow=38
SCHQ Schefferville 75.96 2 P P 12 02 46.4 -1.2
SCHQ pP 12 02 58.8 -0.2
SCHQ IAmb IAmb 12 02 59.9
comp=Z,13nm,1.1s
TOA0 Torodi Ar. Sit 77.87 71 P P 12 02 57.9 -1.4
TOA0 IAmb IAmb 12 02 59.4
comp=Z,13nm,0.8s
TORD Torodi Ar. Bea 77.87 71 P P 12 02 58.3 -1.0
comp=Z,10nm,0.7s,baz=253,slow=5.1,SNR=59
TORD pP pP 12 03 11.2 +0.5
comp=Z,5.7nm,0.6s,baz=249,slow=5.4,SNR=7.8
TORD LR LR 12 35 05.7
comp=Z,301nm,20.1s,baz=185,slow=34
TORD Torodi Ar. Bea 77.87 71 P P 12 02 58.2 -1.1
EGMT Eagleton 77.95 334 P P 12 02 60.0 +0.9
baz=142
O03E Paynes Creek 78.32 322 P P 12 03 02.2 +0.9
baz=131
O02D Mt. Diablo Mer 78.81 321 P P 12 03 05.0 +0.9
baz=131
MSO Missoula 78.85 331 P P 12 03 05.9 +1.7
baz=138
N02D Trinity Center 79.28 322 P P 12 03 07.7 +1.1
baz=131
M04C Macdoel 79.32 323 P P 12 03 08.4 +1.5
baz=132
L04D Klamath Falls 79.87 323 P P 12 03 10.9 +1.0
baz=131
J05D Fort Rock, OR 79.98 324 P P 12 03 11.9 +1.4
baz=132
J04D Umpqua Nationa 80.43 324 P P 12 03 14.2 +1.3
baz=132
L02E Cave Junction 80.56 322 P P 12 03 15.1 +1.7
baz=130
I05D Terrebonne, OR 80.75 325 P P 12 03 16.0 +1.6
baz=132,SNR=6.4
K02D Willamette Mer 80.94 323 P P 12 03 17.3 +1.7
baz=130
I04A Tendick Farm, 80.96 324 P P 12 03 16.4 +0.8
baz=131
G05D Wamic, OR 81.34 326 P P 12 03 19.2 +1.7
baz=132
FCC Fort Churchill 82.41 347 P P 12 03 22.4 -0.3
FCC pP 12 03 34.2 0.0
FCC Fort Churchill 82.41 347 P P 12 03 22.4 -0.3
FCC *PP pP 12 03 34.2 0.0
FCC pmax pmax
comp=Z,7.0nm,1.0s
BOSA Boshof 84.01 118 P P 12 03 31.6 -0.5
comp=Z,6.6nm,0.8s,baz=249,slow=4.3,SNR=8.3
BOSA LR LR 12 37 38.2
comp=Z,82nm,19.8s,baz=222,slow=33
MAW Mawson 84.59 163 P P 12 03 34.4 +0.3
comp=Z,3.5nm,0.6s,baz=169,slow=4.2,SNR=7.5
MAW LR LR 12 42 44.9
comp=Z,86nm,18.4s,baz=238,slow=37
ESDC Sonseca Array 86.17 45 P P 12 03 42.8 +0.4
comp=Z,3.2nm,0.8s,baz=248,slow=6.6,SNR=7.9
ESDC Sonseca Array 86.17 45 P P 12 03 42.1 -0.3
YKA Yellowknife Ar 90.90 341 P P 12 04 04.4 +0.2
comp=Z,3.3nm,0.8s,baz=137,slow=4.5,SNR=69
YKA pP pP 12 04 16.0 +0.2
comp=Z,5.3nm,0.8s,baz=137,slow=4.5,SNR=23
KHC Kasperske Hory 101.55 42⇓eP Pdif 12 04 54.7 +1.7
KHC pmax pmax
comp=Z,4.0nm,0.5s
DZM Mont Dzumac 110.37 235 eLR LR 12 42 05.9
comp=Z,132nm,28.2s
KIV Kislovodsk 120.36 51 ePKiKP PKiKP 12 09 53.1 +0.6
KIV pmax pmax
comp=Z,17nm,1.1s
KBZ Khabaz 120.51 51 PKP PKPdf 12 09 52.7 +0.2
comp=Z,2.1nm,1.0s,baz=219,slow=3.7,SNR=5.5
BILL Bilibino 122.22 338⇑iPKIKP PKiKP 12 09 55.7 +0.4
BILL e 12 11 39.6
BILL e 12 16 46.4
BILL pmax pmax
comp=Z,7.0nm,1.9s
BILL MLR MLR
comp=Z,80nm,21.0s
H11S2 WAKE ISLAND Hy 127.29 277 T T 14 30 01.5
baz=104,slow=74
H11S1 WAKE ISLAND Hy 127.30 277 T T 14 30 02.8
baz=104,slow=74
H11S3 WAKE ISLAND Hy 127.31 277 T T 14 30 02.8
baz=104,slow=74
H11N3 WAKE ISLAND Hy 127.37 279 T T 14 30 10.0
baz=103,slow=75
H11N2 WAKE ISLAND Hy 127.38 279 T T 14 30 11.0
baz=103,slow=75
H11N1 WAKE ISLAND Hy 127.39 279 T T 14 30 11.3
baz=103,slow=75
ARU Arti 128.39 34⇑ePKIKP PKPdf 12 10 06.5 -0.8
TIXI Tiksi 128.62 353⇑ePKIKP PKPdf 12 10 05.9 -1.4
ASAR Alice Springs 129.73 208 PKP PKPdf 12 10 11.1 +0.2
comp=Z,1.8nm,0.9s,baz=131,slow=1.5,SNR=12
ASAR pPKP pPKPdf 12 10 23.1 +0.2
comp=Z,1.5nm,0.8s,baz=156,slow=2.0,SNR=6.9
ASAR Alice Springs 129.73 208 PKPdf 12 10 10.6 -0.4
ASAR Alice Springs 129.73 208 PKIKP PKPdf 12 10 10.6 -0.4
SEY Seymchan 129.78 337⇓iPKIKP PKiKP 12 10 10.7 +0.2
ABKAR Akbulak array 131.47 42 PKiKP 12 10 14.4 +0.1
WRA Warramunga Arr 132.74 211 PKP PKPdf 12 10 17.0 +0.3
comp=Z,1.6nm,0.7s,baz=152,slow=1.7,SNR=14
WRA pPKP pPKPdf 12 10 28.9 +0.2
comp=Z,1.1nm,0.7s,baz=145,slow=1.6,SNR=3.3
WRA Warramunga Arr 132.74 211 PKPdf 12 10 16.0 -0.7
WRA Warramunga Arr 132.74 211 PKIKP PKPdf 12 10 16.0 -0.7
YAK Yakutsk 137.29 347⇓ePKIKP PKPdf 12 10 24.3 +0.5
KURK Kurchatov 141.56 33 PKPdf 12 10 31.5 -0.5
KURK Kurchatov 141.56 33⇑ePKIKP PKPdf 12 10 32.5 +0.5
ZAA0 Zalesovo Array 142.11 25 PKPdf 12 10 30.5 -2.3
ZALV Zalesovo Beam 142.11 25 PKP PKPdf 12 10 30.7 -2.1
comp=Z,2.0nm,0.6s,baz=292,slow=3.1,SNR=10.0
ZALV pPKP pPKPdf 12 10 45.8 +1.0
comp=Z,2.4nm,0.6s,baz=305,slow=2.7,SNR=4.3
ZALV Zalesovo Beam 142.11 25 PKPdf 12 10 30.2 -2.6
ZALV Zalesovo Beam 142.11 25 PKIKP PKPdf 12 10 30.3 -2.6
AAK Ala-Archa 143.26 46⇑ePKIKP PKPdf 12 10 34.6 -0.9
BOD Bodaibo 143.53 357 ePKIKP PKPbc 12 10 32.4 -0.2
BOD pmax pmax
comp=Z,10.0nm,1.8s
NRN Naryn 144.77 48 PKPdf 12 10 38.9 +0.5
NRN Naryn 144.77 48 PKIKP PKPdf 12 10 38.9 +0.5
NIL Nilore 145.00 62 PKPbc 12 10 37.9 -0.1
NIL Nilore 145.00 62 PKIKP PKPbc 12 10 37.9 -0.1
ZEA Zeya 145.27 342 ePKIKP PKPdf 12 10 38.8 +0.4
ZEA pmax pmax
comp=Z,64nm,1.2s
MAKZ Makanchi 145.71 36 PKPbc 12 10 40.1 +0.3
MAKZ Makanchi 145.71 36 PKIKP PKPbc 12 10 40.1 +0.3
MK31 Makanchi Array 145.89 35 PKPdf 12 10 39.2 -0.6
MK31 Makanchi Array 145.89 35 PKP2 PKPdf 12 10 39.2 -0.6
MKAR Makanchi Array 145.89 35 PKPbc PKPbc 12 10 40.4 -0.1
comp=Z,8.8nm,1.0s,baz=316,slow=2.5,SNR=43
MKAR pPKPbc pPKPab 12 10 53.0 +0.3
comp=Z,5.0nm,0.7s,baz=316,slow=3.0,SNR=14
MKAR Makanchi Array 145.89 35 PKPdf 12 10 40.1 +0.4
MKAR Makanchi Array 145.89 35 PKIKP PKPdf 12 10 40.2 +0.4
KLR Kul'dur 147.48 334⇓ePKIKP PKPdf 12 10 43.1 +0.8
MOY Mondy 148.90 11 ePKP2 PKiKP 12 10 49.6 -0.4
MOY pmax pmax
comp=Z,28nm,1.4s
TLY Talaya 149.31 8 PKPdf 12 10 45.3 0.0
TLY Talaya 149.31 8⇓ePKIKP PKPdf 12 10 47.0 +1.8
ZAK Zakamensk 150.53 9 ePKIKP PKiKP 12 10 53.5 +0.1
ZAK pmax pmax
comp=Z,4.0nm,1.4s
WMQ Urumqi 150.72 35 ePKPbc PKPdf 12 10 48.2 +0.4
USRK Ussuriysk Ar. 151.11 327 PKPbc PKiKP 12 10 55.0 +0.3
comp=Z,4.3nm,0.7s,baz=12,slow=2.0,SNR=9.7
USRK pPKPbc pPKPbc 12 11 06.7 +0.7
comp=Z,10nm,0.9s,baz=2.4,slow=2.5,SNR=10
USRK Ussuriysk Ar. 151.11 327 PKiKP 12 10 55.0 +0.3
MJAR Matsushiro Arr 151.55 308 PKPbc PKPbc 12 10 55.7 +0.2
comp=Z,3.7nm,0.8s,baz=91,slow=1.3,SNR=7.5
MJAR pPKPbc pPKPbc 12 11 07.5 +0.2
comp=Z,3.4nm,0.7s,baz=171,slow=1.5,SNR=5.1
MAT Matsushiro 151.56 308 PKP PKiKP 12 10 55.8 -0.1
SONM Songino Array 153.42 6 PKP PKiKP 12 10 52.0 +0.2
comp=Z,1.6nm,1.1s,baz=284,slow=1.1,SNR=6.9
SONM PKPbc PKiKP 12 10 59.8 +0.3
comp=Z,1.6nm,0.8s,baz=306,slow=1.3,SNR=11
SONM PKPab PKPab 12 11 11.7 +0.2
comp=Z,3.2nm,0.8s,baz=311,slow=1.6,SNR=13
ULN Ulaanbaatar 153.45 5 PKPab 12 11 12.1 +0.4
ULN Ulaanbaatar 153.45 5 PKP2 PKPab 12 11 12.1 +0.4
KSRS Korea Array 157.99 320 PKPab PKPab 12 11 32.1 +0.9
comp=Z,1.6nm,0.9s,baz=45,slow=4.9,SNR=4.8
KSAR Wonju Array Be 158.02 320 PKPdf 12 10 57.8 -0.2
KSAR Wonju Array Be 158.02 320 PKIKP PKPdf 12 10 57.8 -0.2
GTA Gaotai 159.86 25 ⇓PKP PKPdf 12 11 01.5 +1.1
GTA pPKP pPKPdf 12 11 08.7 -3.6
GTA sPKP 12 11 13.4
GTA PKPab PKPab 12 11 39.6 +0.1
GTA LR LR
comp=Z,110nm,17.1s
GTA LR LR
comp=Z,140nm,17.1s
HHC Hu-ho-hao-te 160.59 357 ePKP PKPdf 12 11 00.0 -1.1
LZH Lanzhou 164.26 20 ePKP PKPdf 12 11 03.5 -1.5
LZH pPKP pPKPdf 12 11 14.3 -2.6
LZH sPKP 12 11 18.0
LZH LR LR
comp=Z,130nm,18.1s
LZH LR LR
comp=Z,150nm,20.2s
NJ2 Nanjing 167.02 327 ePKP PKPdf 12 11 06.7 -0.4
CMAR Chiang Mai Arr 168.77 103 PKP PKPdf 12 11 09.0 +0.3
comp=Z,0.3nm,0.3s,baz=229,slow=0.8,SNR=4.8
CD2 Chengdu 168.78 31 PKP PKPdf 12 11 07.0 -1.5
WHN Wuhan 170.25 340 PKP PKPdf 12 11 14.5 +5.3

THE ***05*** *11:58:50.1, 38.23N × 20.38E, h17km, ML3.3/7, Error ellipse: s-maj=1.1km s-min=0.4km az=274.0*
ATH ***05*** *11:58:50.2, 38.22N × 20.38E, h16km, ML2.9/9, Error ellipse: s-maj=1.3km s-min=0.9km az=262.0*
ISC 05 11:58:50.5±1.0, 38.23N±0.02 × 20.39E±0.04, h16km±4km, n43, σ0.45/65, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.04	37	P	Pg	11 58 53.3	-0.2
KEF4				S	Sg	11 58 55.5	+0.1
KEF3	Kipouria, Keph	0.04	238	P	Pg	11 58 53.2	-0.3
KEF3				S	Sg	11 58 55.3	-0.1
CHV1	Chavriata, Kef	0.04	192	P	Pg	11 58 53.2	-0.2
CHV1				S	Sg	11 58 55.4	+0.1
LXR1	Lixouri, Cepha	0.04	125	P	Pg	11 58 53.3	-0.1
LXR1				S	Sg	11 58 55.6	+0.3
KEF1	Kardakata, Kep	0.08	50	P	Pg	11 58 53.5	-0.2
KEF1				S	Sg	11 58 55.7	-0.2
ARG2	Argostoli	0.09	122	P	Pg	11 58 53.6	-0.2
ARG2				S	Sg	11 58 55.9	0.0
KEF2	Argostoli. Kep	0.10	129	P	Pg	11 58 53.7	-0.2
KEF2				S	Sg	11 58 55.7	-0.4
VLS	Valsamata	0.16	107	P	Pg	11 58 54.4	-0.4
VLS				S	Sg	11 58 57.5	-0.1
	21μm,0.1s						
VLS	Valsamata	0.16	107	P	Pg	11 58 54.4	-0.4
VLS				S	Sg	11 58 57.4	-0.1
VLS				AML	AML	11 58 57.6	
	comp=N,29783μm,0.1s						
VLS				AML	AML	11 58 58.0	
	comp=E,48957μm,0.1s						
VSK1	VASILIKIADES	0.23	36	P	Pg	11 58 55.4	-0.3
VSK1				S	Sg	11 58 59.1	-0.2
	comp=E,13μm,0.2s						
FSK	Fiskardo	0.27	30	P	Pg	11 58 56.1	-0.3
FSK				S	Sg	11 59 00.5	+0.1
	comp=E,5μm,0.3s						
FSK	Fiskardo	0.27	30	P	Pg	11 58 56.2	-0.3
FSK				S	Sg	11 59 00.7	+0.3
FSK				AML	AML	11 59 01.0	
	comp=E,13850μm,0.2s						
FSK				AML	AML	11 59 01.7	
	comp=N,4466μm,0.1s						
VLMS	Volimes, Zakyn	0.41	148	P	Pg	11 58 58.3	-0.6
VLMS				S	Sg	11 59 04.9	+0.4
VLMS				AML	AML	11 59 05.8	
	comp=N,17233μm,0.4s						
VLMS				AML	AML	11 59 06.1	
	comp=E,23628μm,0.2s						
EVGI	Lefkada island	0.45	28	P	Pg	11 58 59.0	-0.5
EVGI				S	Sb	11 59 06.2	-0.3
EVGI	Lefkada island	0.45	28	P	Pg	11 58 59.0	-0.5
EVGI				S	Sb	11 59 06.2	-0.3
MGNA	Meganis	0.53	36	P	Pg	11 59 00.5	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MGNA				S	Sg	11 59 08.7	+0.5
MGNA				AML	AML	11 59 09.5	
	comp=E,3297μm,0.1s						
MGNA				AML	AML	11 59 09.6	
	comp=N,2236μm,0.2s						
LKD2	Lefkada island	0.60	20	P	Pg	11 59 01.4	-1.0
LKD2				S	Sg	11 59 10.5	+0.1
	comp=N,718nm,0.8s						
LKD2	Lefkada island	0.60	20	P	Pg	11 59 01.7	-0.7
LKD2				AML	AML	11 59 17.5	
	comp=N,1070μm,0.2s						
LKD2				AML	AML	11 59 19.0	
	comp=E,1317μm,0.4s						
AST1	Astakos	0.63	60	P	Pg	11 59 02.5	-0.5
AST1				S	Sb	11 59 12.5	+0.7
	comp=E,3μm,0.2s						
KRI1	kERI	0.66	149	P	Pg	11 59 02.5	-0.9
KRI1				S	Sg	11 59 12.4	+0.3
	comp=E,3μm,0.2s						
PDO	Prodromos	0.72	59	P	Pg	11 59 04.3	-0.4
PDO				S	Sb	11 59 14.6	+0.1
	comp=E,2μm,0.4s						
PDO	Prodromos	0.72	59	P	Pg	11 59 04.3	-0.4
PDO				S	Sb	11 59 14.6	+0.1
PDO				AML	AML	11 59 18.8	
	comp=E,2282μm,0.3s						
PDO				AML	AML	11 59 20.9	
	comp=N,2498μm,0.7s						
RLS	Riolos of Patr	0.86	101	P	Pb	11 59 06.3	-0.8
RLS				AML	AML	11 59 24.2	
	comp=N,789μm,0.4s						
RLS				AML	AML	11 59 24.5	
	comp=E,739μm,0.7s						
PVO	Paravola	0.97	66	P	Pb	11 59 08.9	-0.1
PVO	Paravola	0.97	66	P	Pb	11 59 09.1	+0.1
PVO				S	Sg	11 59 22.6	+0.5
PVO				AML	AML	11 59 29.5	
	comp=N,1760μm,0.4s						
PVO				AML	AML	11 59 29.9	
	comp=E,1591μm,0.3s						
DRO	Drossia	1.07	104	P	Pb	11 59 10.5	-0.2
EFP	Efpalio	1.21	80	P	Pg	11 59 13.7	-0.1
LAKA	Lakka	1.25	89	P	Pn	11 59 13.2	-0.2
AMT	Artemida-Makis	1.25	123	P	Pb	11 59 14.5	+0.7
ANX	Ano Chora	1.25	73	P	Pn	11 59 13.9	+0.4
IGT	Igoumenitsa	1.31	358	P	Pb	11 59 15.0	+0.3
IGT				AML	AML	11 59 38.3	
	comp=E,385μm,0.3s						
IGT				AML	AML	11 59 40.1	
	comp=N,440μm,0.4s						
EVR	Evrytania	1.31	58	P	Pb	11 59 15.1	+0.3
SERG	Sergoula	1.32	81	P	Pb	11 59 15.7	+0.7
TRIZ	Trizonia	1.33	83	P	Pb	11 59 15.2	+0.1
KALE	Kalithea	1.38	83	P	Pb	11 59 16.8	+0.7
KLV	Kalavryta, Ach	1.40	97	P	Pn	11 59 15.9	+0.5
JAN	Janina	1.47	14	P	Pg	11 59 18.6	-0.3
KASA	Kassiopi	1.56	347	P	Pb	11 59 19.8	+0.8
MAKR	Makrakomi, Fth	1.57	59	P	Pb	11 59 20.2	+0.9
ITM	Ithomi	1.60	130	P	Pb	11 59 19.8	0.0
AGG	Agios Georgios	1.71	62	P	Pb	11 59 21.8	+0.1
AXAR	Agios Charalam	1.86	72	P	Pb	11 59 23.4	-0.8
PENT	Pentalofos	2.05	16	P	Pb	11 59 26.5	-0.9

ATH 05 12:02:21.5,38.18N×20.40E,h9km±1km,ML2.6/3,Error ellipse: s-maj=2.1km s-min=1.1km az=248.0
THE 05 12:02:21.3,38.16N×20.40E,h10km,ML2.4/5,Error ellipse: s-maj=0.9km s-min=0.4km az=262.0
ISC 05 12:02:21.3±1.5,38.17N±0.03×20.40E±0.05,h10km±5km, n23,σ0.40/41,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	301	P	Pg	12 02 23.1	0.0
CHV1				S	Sg	12 02 24.3	-0.1
LXR1	Lixouri, Cepha	0.04	47	P	Pg	12 02 23.4	+0.2
LXR1				S	Sg	12 02 24.9	+0.3
KEF3	Kipouria, Keph	0.05	305	P	Pg	12 02 23.4	+0.1
KEF3				S	Sg	12 02 24.7	-0.2
ARGA	Argostoli. Kep	0.06	87	P	Pg	12 02 23.6	+0.2
ARGA				S	Sg	12 02 24.7	-0.2
ARG2	Argostoli	0.07	86	P	Pg	12 02 23.7	+0.2
ARG2				S	Sg	12 02 24.8	-0.3
KEF2	Argostoli. Kep	0.07	97	P	Pg	12 02 23.7	+0.2
KEF2				S	Sg	12 02 24.6	-0.5
KEF4	Livadi, Kephal	0.09	12	P	Pg	12 02 23.8	+0.1
KEF4				S	Sg	12 02 25.4	-0.1
KEF1	Kardakata, Kep	0.12	28	P	Pg	12 02 24.2	+0.1
KEF1				S	Sg	12 02 25.7	-0.5
VLS	Valsamata	0.15	89	P	Pg	12 02 24.8	+0.2
VLS				S	Sg	12 02 27.4	+0.4
	15μm,0.1s						
VLS	Valsamata	0.15	89	P	Pg	12 02 24.8	+0.2
VLS				S	Sg	12 02 27.1	+0.1
VLS				AML	AML	12 02 27.6	
	comp=N,20532μm,0.2s						
VLS				AML	AML	12 02 27.6	
	comp=E,38373μm,0.1s						
VSK1	VASILIKIADES	0.27	29	P	Pg	12 02 26.8	+0.1
VSK1				S	Sg	12 02 31.3	+0.9
	comp=E,3μm,0.3s						
FSK	Fiskardo	0.31	24	P	Pg	12 02 27.5	0.0
FSK				S	Sg	12 02 32.0	+0.3
	comp=E,588nm,0.1s						
FSK	Fiskardo	0.31	24	P	Pg	12 02 27.6	0.0
FSK				S	Sg	12 02 31.2	-0.6
FSK				AML	AML	12 02 32.7	
	comp=N,704μm,0.2s						
FSK				AML	AML	12 02 33.4	
	comp=E,1622μm,0.1s						
VLMS	Volimes, Zakyn	0.36	145	P	Pg	12 02 28.7	+0.2
VLMS				S	Sg	12 02 34.3	+1.1
VLMS				AML	AML	12 02 36.0	
	comp=E,2886μm,0.1s						
VLMS				AML	AML	12 02 38.5	
	comp=N,2209μm,0.2s						
EVGI	Lefkada island	0.49	24	P	Pg	12 02 30.7	-0.1
EVGI				S	Sg	12 02 38.1	+0.8
EVGI	Lefkada island	0.49	24	P	Pg	12 02 30.7	-0.1
EVGI				S	Sg	12 02 37.9	+0.6
MGNA	Meganis	0.57	32	P	Pg	12 02 32.0	-0.3
KRI1	kERI	0.61	147	P	Pg	12 02 32.5	-0.5
KRI1				S	Sg	12 02 41.5	+0.5
	comp=N,662nm,0.2s						
LKD2	Lefkada island	0.65	18	P	Pg	12 02 33.9	+0.1
LKD2				S	Sb	12 02 43.5	-0.2
	comp=N,115nm,0.6s						
LKD2	Lefkada island	0.65	18	P	Pg	12 02 33.8	0.0
PDO	Prodromos	0.75	55	P	Pg	12 02 35.6	-0.1
RLS	Riolos of Patr	0.85	98	P	Pg	12 02 37.0	-0.6
DRO	Drossia	1.06	102	P	Pg	12 02 41.1	-0.5

BUC 05 12:04:03.3±0.6,45.91N×22.67E,h2km±2km,ml1.2/4, 8C-8D,Error ellipse: s-maj=5.7km s-min=1.6km az=55.0, Romania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DEV	Deva	0.17	98	⇑P	Pg	12 04 06.0	-0.5
DEV				⇓S	Sg	12 04 09.0	+0.3
DEV	Deva	0.17	98	⇑P	Pg	12 04 06.0	-0.5
DEV				⇓S	Sg	12 04 09.0	+0.3
DRGR		0.89	2	⇓P	Pb	12 04 20.9	-0.5
DRGR				⇑S	Sg	12 04 32.5	+0.7
DRGR		0.89	2	⇓P	Pb	12 04 20.9	-0.5
DRGR				⇑S	Sg	12 04 32.5	+0.7
LOT	Lotru	0.90	120	⇑P	Pg	12 04 20.4	-0.1
LOT				⇓S	Sb	12 04 33.3	-0.8
LOT	Lotru	0.90	120	⇑P	Pg	12 04 20.4	-0.1
LOT				⇓S	Sb	12 04 33.3	-0.8
VOIR		1.73	105	⇑P	Pn	12 04 34.6	+0.1
VOIR				⇓S	Sb	12 04 58.1	0.0
VOIR		1.73	105	⇑P	Pn	12 04 34.6	+0.1
VOIR				⇓S	Sb	12 04 58.1	0.0

BEO 05 12:04:13.4±0.3,44.16N×22.12E,h0km,ML1.5/8,Mining explosion.,Romania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZAGS	Zajecar	0.36	167	ePg	Pg	12 04 19.7	-0.5
ZAGS				eSg	Sg	12 04 24.6	-0.2
KUBS	Kucevo	0.41	308	ePg	Pg	12 04 19.7	-1.5
KUBS				eSg	Sg	12 04 27.4	+0.9
ZAPS	Zavoj	0.96	157	ePg	Pg	12 04 31.1	-0.7
ZAPS				eSg	Sg	12 04 43.6	-0.6
GRUS	Gruza	1.05	255	ePg	Pg	12 04 33.8	+0.2
GRUS				eSg	Sg	12 04 47.8	+0.6
SELS	Selova	1.19	218	ePg	Pg	12 04 35.3	-0.9
SELS				eSg	Sg	12 04 52.1	+0.5
BEO	Beograd	1.35	299	ePg	Pg	12 04 37.4	-1.8
BEO				eSg	Sg	12 04 55.6	-1.1
BARS	Barje	1.36	190	ePg	Pg	12 04 38.7	-0.8
BARS				eSg	Sg	12 04 57.1	0.0
BZS	Buzias	1.50	346	ePg	Pn	12 04 39.5	-2.1
BZS	Buzias	1.50	346	ePg	Pn	12 04 40.7	-0.9
BZS				eSg	Sg	12 05 01.5	-0.1
DIVS	Divibare	1.54	268	ePg	Pn	12 04 40.8	-1.4
DIVS				eSg	Sg	12 05 02.0	-0.8
IVAS	Ivanjica	1.54	248	ePg	Pn	12 04 41.2	-1.0
IVAS				eSg	Sg	12 05 02.7	-0.2
SJES	Sjenica	1.80	241	ePg	Pn	12 04 45.2	-0.6
SJES				eSg	Sb	12 05 10.3	-0.1

THE 05 12:07:34.8,38.24N×20.40E,h14km,ML2.8/7,Error ellipse: s-maj=1.1km s-min=0.4km az=266.0
ATH 05 12:07:34.5,38.23N×20.37E,h17km±1km,ML3.1/3,Error ellipse: s-maj=2.4km s-min=1.1km az=250.0
ISC 05 12:07:34.6±1.3,38.23N±0.03×20.38E±0.06,h17km±5km, n23,σ0.46/45,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.04	225	P	Pg	12 07 37.6	-0.1
KEF3				S	Sg	12 07 39.5	-0.4
KEF4	Livadi, Kephal	0.04	50	P	Pg	12 07 37.7	-0.1
KEF4				S	Sg	12 07 39.5	-0.4
CHV1	Chavriata, Kef	0.05	182	P	Pg	12 07 37.7	-0.1
CHV1				S	Sg	12 07 39.7	-0.1
LXR1	Lixouri, Cepha	0.05	125	P	Pg	12 07 37.8	0.0
LXR1				S	Sg	12 07 39.9	0.0
KEF1	Kardakata, Kep	0.08	56	P	Pg	12 07 38.0	-0.1
KEF1				S	Sg	12 07 40.0	-0.3
ARGA	Argostoli. Kep	0.09	126	P	Pg	12 07 38.0	-0.1
ARGA				S	Sg	12 07 40.1	-0.3
ARG2	Argostoli	0.10	123	P	Pg	12 07 38.1	-0.1
ARG2				S	Sg	12 07 40.0	-0.5
KEF2	Argostoli. Kep	0.10	129	P	Pb	12 07 38.2	0.0
KEF2				S	Sg	12 07 40.2	-0.5
VLS	Valsamata	0.17	108	P	Pg	12 07 38.9	-0.2
VLS				S	Sg	12 07 42.0	-0.1
	10μm,0.2s						
VLS	Valsamata	0.17	108	P	Pg	12 07 38.9	-0.2
VLS				S	Sg	12 07 41.7	-0.4
VLS				AML	AML	12 07 42.1	
	comp=E,24116μm,0.2s						
VLS				AML	AML	12 07 42.1	
	comp=N,12993μm,0.1s						
VSK1	VASILIKIADES	0.23	39	P	Pg	12 07 39.9	0.0
VSK1				S	Sg	12 07 43.2	-0.4
	comp=N,7μm,0.2s						
FSK	Fiskardo	0.27	32	P	Pg	12 07 40.6	0.0
FSK				S	Sb	12 07 45.0	-0.2
	comp=N,3μm,0.3s						
FSK	Fiskardo	0.27	32	P	Pg	12 07 40.6	0.0
FSK				S	Sg	12 07 44.4	-0.2
FSK				AML	AML	12 07 45.4	
	comp=E,7964μm,0.2s						
FSK				AML	AML	12 07 45.6	
	comp=N,2642μm,0.3s						
VLMS	Volimes, Zakyn	0.42	148	P	Pg	12 07 42.7	-0.5
VLMS				S	Sg	12 07 48.4	-0.5
VLMS				AML	AML	12 07 50.3	
	comp=N,8027μm,0.2s						
VLMS				AML	AML	12 07 50.6	
	comp=E,11383μm,0.2s						
EVGI	Lefkada island	0.44	29	P	Pg	12 07 43.5	-0.2
EVGI				S	Sb	12 07 50.6	+0.3
EVGI	Lefkada island	0.44	29	P	Pg	12 07 43.5	-0.2
EVGI				S	Sg	12 07 49.6	-0.1
MGNA	Meganis	0.53	37	P	Pg	12 07 44.6	-0.6
LKD2	Lefkada island	0.60	21	P	Pg	12 07 46.0	-0.5
LKD2				S	Sb	12 07 55.6	+0.8
	comp=E,338nm,0.5s						
LKD2	Lefkada island	0.60	21	P	Pg	12 07 45.9	-0.6
LKD2				S	Sb	12 07 55.4	+0.6
AST1	Astakos	0.64	61	P	Pg	12 07 46.6	-0.6
AST1				S	Sb	12 07 56.7	+0.9
	comp=E,1μm,0.3s						
KRI1	kERI	0.66	149	P	Pg	12 07 47.1	-0.6
KRI1				S	Sb	12 07 57.8	+1.2
	comp=E,1μm,0.1s						
PDO	Prodromos	0.73	59	P	Pg	12 07 48.8	-0.1
PDO				S	Sb	12 07 59.1	+0.6
	comp=E,772nm,0.3s						
PDO	Prodromos	0.73	59	P	Pg	12 07 48.6	-0.3
PDO				S	Sb	12 07 59.5	+1.0

ATH 05 12:16:10.2,38.24N×20.37E,h16km±1km,ML3.1/4,Error ellipse: s-maj=2.2km s-min=1.1km az=261.0
THE 05 12:16:10.2,38.21N×20.37E,h17km,ML3.0/10,Error ellipse: s-maj=1.0km s-min=0.4km az=271.0
ISC 05 12:16:09.9±1.0,38.22N±0.02×20.38E±0.05,h18km±3km, n32,σ0.38/55,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.03	234	P	Pg	12 16 13.0	-0.1
KEF3				S	Sg	12 16 15.1	-0.1
CHV1	Chavriata, Kef	0.04	175	P	Pg	12 16 13.3	+0.2
CHV1				S	Sg	12 16 15.5	+0.3
LXR1	Lixouri, Cepha	0.05	112	P	Pg	12 16 13.3	+0.1
LXR1				S	Sg	12 16 15.7	+0.4
KEF4	Livadi, Kephal	0.05	44	P	Pg	12 16 13.4	+0.2
KEF4				S	Sg	12 16 15.4	0.0
ARGA	Argostoli. Kep	0.09	118	P	Pg	12 16 13.6	+0.2
ARGA				S	Sg	12 16 15.5	-0.3
KEF1	Kardakata, Kep	0.09	52	P	Pg	12 16 13.6	+0.1
KEF1				S	Sg	12 16 15.7	-0.2
ARG2	Argostoli	0.10	115	P	Pg	12 16 13.7	+0.2
ARG2				S	Sg	12 16 15.9	0.0
KEF2	Argostoli. Kep	0.10	122	P	Pg	12 16 13.7	+0.2
KEF2				S	Sg	12 16 15.8	-0.3
VLS	Valsamata	0.17	104	P	Pg	12 16 14.5	0.0
VLS				S	Sg	12 16 17.5	-0.1
	13μm,0.4s						
VLS	Valsamata	0.17	104	P	Pb	12 16 14.4	+0.2
VLS				S	Sb	12 16 17.0	0.0
VLS				AML	AML	12 16 17.6	
	comp=E,27736μm,0.2s						
VLS				AML	AML	12 16 17.7	
	comp=N,17766μm,0.3s						
VSK1	VASILIKIADES	0.24	38	P	Pb	12 16 15.5	-0.1
VSK1				S	Sg	12 16 19.5	+0.2
	comp=N,11μm,0.3s						
FSK	Fiskardo	0.28	31	P	Pg	12 16 16.2	+0.1
FSK				S	Sb	12 16 20.7	0.0
	comp=N,4μm,0.3s						
FSK	Fiskardo	0.28	31	P	Pg	12 16 16.3	+0.1
FSK				S	Sg	12 16 20.1	-0.2
FSK				AML	AML	12 16 21.0	
	comp=N,3702μm,0.3s						
FSK				AML	AML	12 16 21.1	
	comp=E,10448μm,0.3s						
VLMS	Volimes, Zakyn	0.41	147	P	Pg	12 16 18.2	-0.2
VLMS				S	Sb	12 16 24.8	+0.2
VLMS				AML	AML	12 16 26.2	
	comp=E,23585μm,0.2s						
VLMS				AML	AML	12 16 27.2	
	comp=N,18294μm,0.2s						
EVGI	Lefkada island	0.46	29	P	Pg	12 16 19.1	-0.1
EVGI	Lefkada island	0.46	29	P	Pg	12 16 19.2	-0.1
EVGI				S	Sg	12 16 25.1	-0.4
MGNA	Meganis	0.54	37	P	Pg	12 16 20.3	-0.4
LKD2	Lefkada island	0.61	21	P	Pb	12 16 21.6	-0.4
LKD2				S	Sb	12 16 31.7	+1.4
	comp=N,712nm,0.4s						
LKD2	Lefkada island	0.61	21	P	Pb	12 16 21.6	-0.4
LKD2				S	Sg	12 16 30.0	-0.2
LKD2				AML	AML	12 16 37.5	
	comp=E,1475μm,0.2s						
LKD2				AML	AML	12 16 38.2	
	comp=N,1192μm,0.2s						
AST1	Astakos	0.65	60	P	Pb	12 16 22.2	-0.4
AST1				S	Sg	12 16 32.2	+0.9
	comp=N,3μm,0.2s						
KRI1	kERI	0.66	148	P	Pb	12 16 22.3	-0.5
KRI1				S	Sg	12 16 32.3	+0.7
	comp=N,3μm,0.3s						
PDO	Prodromos	0.74	59	P	Pb	12 16 24.4	+0.1
PDO				S	Sn	12 16 35.8	-0.4
	comp=N,2μm,0.4s						
PDO	Prodromos	0.74	59	P	Pb	12 16 24.4	+0.1
RLS	Riolos of Patr	0.87	100	P	Pb	12 16 26.2	-0.3
RLS				S	Sn	12 16 39.3	-0.3
	comp=N,355nm,0.6s						
PVO	Paravola	0.98	66	P	Pn	12 16 28.9	0.0
PVO				S	Sn	12 16 42.7	+0.4
	comp=N,878nm,0.4s						
PVO	Paravola	0.98	66	P	Pn	12 16 28.8	0.0
DRO	Drossia	1.08	104	P	Pb	12 16 30.2	0.0
ANX	Ano Chora	1.27	72	P	Pn	12 16 31.8	-1.0
IGT	Igoumenitsa	1.31	358	P	Pn	12 16 33.8	+0.4
IGT				S	Sb	12 16 50.8	+0.3
	comp=N,190nm,0.3s						
SERG	Sergoula	1.33	81	P	Pn	12 16 33.4	-0.3
TRIZ	Trizonia	1.34	83	P	Pn	12 16 33.8	+0.1
KALE	Kalithea	1.40	82	P	Pn	12 16 34.7	+0.1

IDC 05 12:17:00.7±2.1,7.89S×126.97E,h0km,mb3.4/1, mb1 3.4/3,mb1mx3.2/25,mbtmp3.2/3,ML3.3/1,Error ellipse: s-maj=228.2km s-min=32.9km az=62.0,Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.95	150	Pn	Pn	12 20 18.3	-1.5
	0.2nm,0.3s,baz=326,slow=14,SNR=10						
WRA				Sn	Sn	12 22 46.1	-9.4
	0.2nm,0.3s,baz=326,slow=20,SNR=6.0						
ASAR	Alice Springs	17.04	158	P	P	12 21 01.9	-0.6
	baz=334,slow=11,SNR=3.3						
ASAR				S	Sn	12 24 05.1	-5.6
	0.1nm,0.3s,baz=340,slow=27,SNR=3.3						
MKAR	Makanchi Array	67.36	328	P	P	12 27 57.8	0.0
	0.3nm,0.6s,baz=125,slow=6.4,SNR=4.8						

IDC 05 12:26:36.7±0.8,21.23S×67.52W,h172km±10km,mb3.6/3, mb1 3.7/8,mb1mx3.5/29,mbtmp4.1/8,Error ellipse: s-maj=18.0km s-min=11.5km az=107.0
SJA 05 12:26:36.2±1.0,21.26S×67.70W,h196km±7km,ML3.8, MW3.6
GUC 05 12:26:37.4±0.7,21.24S×67.88W,h188km±6km,ML4.1
ISC 05 12:26:36.9±0.8,21.28S±0.04×67.66W±0.04,h183km±7km, n56,σ1.42/88,10C-4D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.56	251	⇑iP	Pn	12 27 10.9	+1.0
PB09	IPOC Station P	1.56	251	iP	Pn	12 27 11.0	+1.1
PB09				eS	Sn	12 27 36.6	+1.1
PB09				IAML		12 27 38.7	
	comp=Z,295nm,0.4s						
PB01	IPOC Station P	1.73	278	⇑iP	Pn	12 27 11.3	-0.2
PB01				iS	Sn	12 27 37.0	-1.2
PB01				IAML		12 27 38.8	
	comp=N,2μm,0.3s						
PB01	IPOC Station P	1.73	278	eP	Pn	12 27 11.4	0.0
PB01				iS	Sn	12 27 38.2	0.0
LVC	Limon Verde	1.76	221	eP	Pn	12 27 12.8	+0.7
LVC				eS	Sn	12 27 40.0	+0.6
LVC	Limon Verde	1.76	221	P	Pn	12 27 12.7	+0.6
	comp=N,87nm,0.3s,baz=253,slow=14,SNR=255						
LVC				S	Sn	12 27 39.8	+0.4
	comp=N,47nm,0.3s,baz=245,slow=20,SNR=22						
LVC	Limon Verde	1.76	221	iP	Pn	12 27 12.9	+0.8
LVC				iS	Sn	12 27 40.4	+0.9
PB08	IPOC Station P	1.81	309	⇓iP	Pn	12 27 13.1	+0.6
PB08				iS	Sn	12 27 39.9	-0.3
PB08	IPOC Station P	1.81	309	iP	Pn	12 27 13.2	+0.6
PB08				eS	Sn	12 27 39.9	-0.3
PB02	IPOC Station P	2.09	269	⇑iP	Pn	12 27 15.3	0.0
PB02				iS	Sn	12 27 43.8	-1.2
PB02				IAML		12 27 46.4	
	comp=E,2μm,0.2s						
PB02	IPOC Station P	2.09	269	eP	Pn	12 27 15.6	+0.3
PB02				iS	Sn	12 27 44.1	-1.0
PB03	IPOC Station P	2.09	248	⇑iP	Pn	12 27 15.6	+0.2
PB03				iS	Sn	12 27 44.2	-1.1
PB03				IAML		12 27 45.2	
	comp=E,952nm,0.1s						
PB03	IPOC Station P	2.09	248	iP	Pn	12 27 16.0	+0.6
PB03				eS	Sn	12 27 44.5	-0.8
PB07	IPOC Station P	2.12	258	⇑iP	Pn	12 27 16.0	+0.2
PB07				iS	Sn	12 27 44.8	-1.0
PB07				IAML		12 27 45.7	
	comp=E,1μm,0.3s						
PB07	IPOC Station P	2.12	258	iP	Pn	12 27 16.1	+0.4
PB07				iS	Sn	12 27 44.9	-1.0
GO01	Chusmiza	2.16	318	⇓eP	Pn	12 27 16.5	0.0
GO01				iS	Sn	12 27 46.7	-0.4
GO01				IAML		12 27 51.5	
	comp=N,567nm,0.1s						
YJA	Yavi	2.18	114	iP	Pn	12 27 17.0	+0.3
YJA				eS	Sn	12 27 46.2	-1.3
PB06	IPOC Station P	2.27	231	⇑iP	Pn	12 27 18.0	+0.6
PB06				eS	Sn	12 27 49.1	+0.3
PB06				IAML		12 27 50.1	
	comp=E,752nm,0.2s						
PB06	IPOC Station P	2.27	231	eP	Pn	12 27 18.1	+0.7
PB06				iS	Sn	12 27 48.8	-0.1
PATCX	Punta Patache	2.38	281	⇑iP	Pn	12 27 18.5	0.0
PATCX				iS	Sn	12 27 49.2	-1.6
PATCX				IAML		12 27 50.9	
	comp=N,2μm,0.3s						
PATCX	Punta Patache	2.38	281	eP	Pn	12 27 18.5	0.0
PATCX				eS	Sn	12 27 49.3	-1.4
PB11	IPOC Station P	2.41	309	⇓iP	Pn	12 27 18.6	-0.4
PB11				IAML		12 27 52.7	
	comp=E,1μm,0.2s						
PB11	IPOC Station P	2.41	309	iP	Pn	12 27 18.6	-0.4
PB11				eS	Sn	12 27 49.7	-1.9
TA01	Diego Aracena	2.47	286	⇑iP	Pn	12 27 18.8	-0.6
TA01				iS	Sn	12 27 50.0	-2.4
TA01				IAML		12 27 51.0	
	comp=E,1μm,0.2s						
PB04	IPOC Station P	2.54	245	⇑iP	Pn	12 27 20.8	+0.3
PB04				IAML		12 27 55.0	
	comp=N,402nm,0.1s						
PB04	IPOC Station P	2.54	245	iP	Pn	12 27 20.8	+0.3
PB04				eS	Sn	12 27 53.0	-1.4
PB04				IAML		12 27 57.0	
	comp=Z,379nm,0.2s						
PB15	IPOC Station P	2.55	221	⇑iP	Pn	12 27 21.5	+0.9
PB15				iS	Sn	12 27 55.5	+0.8
PB15	IPOC Station P	2.55	221	eP	Pn	12 27 21.6	+0.9
PB15				iS	Sn	12 27 55.6	+1.0
MNMC	Minye Minye	2.81	319	⇓iP	Pn	12 27 23.9	+0.1
MNMC				IAML		12 28 06.6	
	comp=N,600nm,0.4s						
MNMCX	Minye Minye	2.81	319	iP	Pn	12 27 24.0	+0.2
MNMCX				iS	Sn	12 27 59.2	-1.1
HJA	Humahuaca	2.83	133	iP	Pn	12 27 25.1	+1.1
HJA				IAML		12 27 25.5	
	comp=Z,226nm,0.2s						
HJA				iS	Sn	12 28 01.1	+0.3
PB05	IPOC Station P	2.83	236	iP	Pn	12 27 24.4	+0.6
PB05				eS	Sn	12 27 59.2	-1.2
PSGC	Pisagua	2.86	306	IAML		12 28 00.1	
	comp=N,374nm,0.7s						
PSGCX	Pisagua	2.86	306	eP	Pn	12 27 23.0	-1.2
PSGCX				iS	Sn	12 27 57.8	-3.1
PB16	IPOC Station P	3.41	329	IAML		12 28 14.7	
	comp=E,111nm,0.4s						
PB16	IPOC Station P	3.41	329	iP	Pn	12 27 32.1	+0.7
PB16				iS	Sn	12 28 13.0	-0.8
PB10	IPOC Station P	3.48	230	IAML		12 28 14.2	
	comp=E,123nm,0.3s						
PB10	IPOC Station P	3.48	230	iP	Pn	12 27 31.6	0.0
AZAP	Zapla	3.78	141	eP	Pn	12 27 35.6	0.0
AZAP				IAML		12 27 36.8	
	comp=Z,117nm,0.2s						

AZAP i S Sn 12 28 21.2 -0.3
SLA San Lorenzo 3.95 150 i P **Pn 12 27 39.3 +1.6**
PB14 IPOC Station P 4.18 217 eP **Pn 12 27 41.1 +0.3**
LPAZ La Paz 4.99 355 P **Pn 12 27 51.9 +0.5**
comp=Z,2.7nm,0.3s,baz=132,slow=5.5,SNR=49
LPAZ S **Sn 12 28 48.2 -1.7**
comp=Z,0.5nm,0.3s,baz=334,slow=16,SNR=4.2
LPAZ La Paz 4.99 355 i P **Pn 12 27 52.0 +0.5**
LPAZ i S **Sn 12 28 47.6 -2.3**
GO03 Copiap 6.71 200 i P **Pn 12 28 11.5 -1.8**
GO03 eS **Sn 12 29 25.9 -3.5**
VCA Vinchina 7.44 184 i P **Pn 12 28 24.4 +1.4**
ACLC CERRO LA CRUZ 8.13 176 i P **Pn 12 28 33.3 +1.2**
SIV San Ignacio 8.16 51 P **Pn 12 28 28.8 -3.7**
comp=Z,9.6nm,0.3s,baz=260,slow=10,SNR=147
SIV S Sn 12 29 54.1 -10
comp=Z,0.5nm,0.3s,baz=297,slow=23,SNR=5.8
ACDV Cuesta del Vie 8.95 188 i P **Pn 12 28 43.5 +0.7**
GO04 Tololo Observa 9.29 197 i P **Pn 12 28 45.2 -2.2**
CFA Coronel Fontan 10.29 183 P **Pn 12 29 00.6 +0.4**
comp=Z,0.6nm,0.3s,baz=28,slow=15,SNR=7.6
CFA S **Sn 12 30 47.1 -7.8**
comp=Z,0.5nm,0.3s,baz=150,slow=20,SNR=5.5
CPUP Villa Florida 10.70 120 P **Pn 12 29 06.0 +0.4**
comp=Z,0.4nm,0.3s,baz=307,slow=12,SNR=7.4
BDFB Brasilia 19.45 77 P **P 12 30 49.9 +0.1**
comp=Z,1.0nm,0.3s,baz=254,slow=11,SNR=4.9
PDAR Pinedale Array 74.51 329 P **P 12 37 57.2 +1.6**
comp=Z,0.2nm,0.6s,baz=131,slow=11,SNR=5.4
TORD Torodi Ar. Bea 76.18 70 P **P 12 38 05.4 0.0**
comp=Z,4.4nm,0.5s,baz=253,slow=5.4,SNR=64
YKA Yellowknife Ar 91.38 340 P **P 12 39 22.6 +1.1**
comp=Z,0.4nm,0.5s,baz=134,slow=4.4,SNR=15
MKAR Makanchi Array 144.77 37 PKP **PKPab 12 45 51.4 +0.1**
comp=Z,0.6nm,1.0s,baz=304,slow=3.4,SNR=4.4

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*IDC **05** 12:32:17.4±1.0, 22.°85N×101.°19E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.4/55, mbtmp3.6/7, ML3.7/1, MS3.4/4, Ms1 3.4/4, ms1mx2.9/51, Error ellipse: s-maj=37.2km s-min=17.1km az=77.0*
*BJI **05** 12:32:20.0±0.0, 22.°80N×101.°01E, h7km, mb3.6/4, ML3.9/7, Ms3.7/4, Ms7 3.6/4*
ISC 05 12:32:18.9±0.6, **22.°76N**±0.°05×**101.°21E**±0.°07, **h10km, n28,** σ**2.°08**/29, **mb3.8**/7, **MS3.9**/4, **Myanmar-China border region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CMMT Chiang Mai 4.46 209 P **Pn 12 33 27.5 +0.7**
LAMP Lampang 4.47 200 P **Pn 12 33 27.4 +0.5**
CM09 Chiang Mai Arr 4.77 206 P **Pn 12 33 30.2 -0.8**
CMAR Chiang Mai Arr 4.78 207 Pn **Pn 12 33 30.9 -0.2**
0.7nm,0.3s,baz=12,slow=13,SNR=6.2
CMAR Pg **Pg 12 33 47.6 -2.9**
3.6nm,0.3s,baz=16,slow=16,SNR=56
CMAR Sn **Sn 12 34 24.0 -2.6**
2.4nm,0.3s,baz=0.6,slow=15,SNR=6.2
CMAR Lg Lg 12 34 47.0
2.6nm,0.3s,baz=26,slow=29,SNR=7.6
CMAR LR LR 12 35 02.2
comp=Z,93nm,19.7s,baz=90,slow=34
CM15 Chiang Mai Arr 4.79 207 P **Pn 12 33 31.1 -0.2**
CM02 Chiang Mai Arr 4.80 207 P **Pn 12 33 31.2 -0.1**
CM01 Chiang Mai Arr 4.81 206 P **Pn 12 33 30.9 -0.6**
CM04 Chiang Mai Arr 4.82 206 P **Pn 12 33 32.0 +0.4**
CM13 Chiang Mai Arr 4.83 207 P **Pn 12 33 32.0 +0.2**
CM05 Chiang Mai Arr 4.83 206 P **Pn 12 33 32.1 +0.4**
CM05 S **Sb 12 34 46.9 +4.9**
UTTA Uttaradit 5.03 187 P **Pn 12 33 32.4 -2.1**
MHMT Maesarieng 5.50 215 P **Pg 12 34 02.1 -2.2**
PHIT Phitsanulok 5.60 188 P **Pg 12 34 04.3 -1.9**
GYA Guiyang 6.18 52 ePn Pn 12 33 58.3 +7.9
GYA Sn **Sb 12 35 16.3 -4.5**
GYA Sg **Sg 12 35 36.8 -0.6**
GYA smax smax
comp=N,30nm,1.3s
GYA smax smax
comp=E,20nm,1.0s
SKNT Sakolnakorn 6.32 155 P **Pn 12 33 55.1 +2.8**
LSA Lhasa 11.36 310 P **Pn 12 35 02.6 +0.8**
WHN Wuhan 14.07 54 P **P 12 35 48.1 +1.9**
GTA Gaotai 16.64 356 eP **P 12 36 19.3 +4.5**
GTA pP sP 12 36 23.6 +4.1
GTA sP pP 12 36 26.2 +8.2
GTA pmax pmax
comp=Z,2.0nm,1.4s
WMQ Urumqi 23.78 335 eP **P 12 37 31.0 -0.8**
WMQ pmax pmax
comp=Z,7.0nm,0.7s
WMQ LR LR
comp=N,200nm,11.3s
WMQ LR LR
comp=E,200nm,9.5s
WMQ LR LR
comp=Z,250nm,11.7s
SONM Songino Array 25.36 8 P **P 12 37 46.1 -0.2**
0.1nm,0.3s,baz=199,slow=5.5,SNR=2.4
KSRS Korea Array 27.24 51 LR LR 12 50 32.4
comp=Z,20nm,18.4s,baz=280,slow=40
MKAR Makanchi Array 28.42 332 P **P 12 38 13.5 -0.2**
1.7nm,0.8s,baz=145,slow=10.0,SNR=9.7
KURBB Kurchatov Arra 32.96 333 P **P 12 38 52.2 -1.5**
0.4nm,0.4s,baz=141,slow=10,SNR=2.9
ZALV Zalesovo Beam 33.51 342 P **P 12 38 57.4 -1.0**
0.3nm,0.3s,baz=160,slow=11,SNR=2.6
ARU Arti 45.81 328 LR LR 12 59 51.5
comp=Z,104nm,21.1s,baz=282,slow=36
WRA Warramunga Arr 53.37 140 P **P 12 41 39.3 +0.5**
1.0nm,0.8s,baz=331,slow=8.0,SNR=5.2
ASAR Alice Springs 56.04 143 P **P 12 41 58.8 +0.6**
0.6nm,0.7s,baz=323,slow=7.1,SNR=6.5
ASF Jabal al Asfar 57.10 294 LR LR 13 11 20.3
comp=Z,219nm,21.4s,baz=266,slow=41

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*IDC **05** 12:50:02.4±1.2, 24.°55N×141.°33E, h163km±11km, mb3.4/10, mb1 3.6/11, mb1mx3.3/36, mbtmp3.9/11, Error ellipse: s-maj=22.1km s-min=11.7km az=102.0*
*NEIC **05** 12:50:03.3±1.1, 24.°51N±0.°09×141.°3E±0.°1, h167km±8km, mb4.2/15, Error ellipse: s-maj=20.2km s-min=5.7km az=125.0*
ISC 05 12:50:01.2±0.7, **24.°44N**±0.°08×**141.°3E**±0.°1, **h148km, n31,** σ**1.°01**/32, **mb3.8**/14, **Volcano Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JCJ Chichijima 2.75 16 P **Pn 12 50 47.8 +2.4**
44nm,0.3s,baz=83,slow=23,SNR=12
JCJ S **Sn 12 51 19.7 +0.1**
123nm,0.3s,baz=262,slow=23,SNR=20
KSRS Korea Array 17.32 322 P **Pn 12 53 56.1 +2.2**
0.2nm,0.3s,baz=137,slow=12,SNR=7.9
SSLB Suanglung 18.62 272 P **Pn 12 54 10.2 +0.6**
SSLB IAmb IAmb 12 54 23.2
comp=Z,30nm,1.4s
MTN Manton Dam 38.37 196 P **P 12 57 08.9 +0.8**
CMAR Chiang Mai Arr 39.80 270 P **P 12 57 20.5 +0.4**
comp=Z,0.6nm,0.7s,baz=68,slow=6.9,SNR=4.7
WB0 Warramunga Arr 44.45 189 P **P 12 57 58.4 +0.7**
WB0 IAmb IAmb 12 57 58.8
comp=Z,7.5nm,0.6s
WR0 Warramunga Arr 44.62 189 P **P 12 57 59.7 +0.7**
WR0 IAmb IAmb 12 58 00.2
comp=Z,8.3nm,0.6s
WRAB Tennant Creek 44.62 189 P **P 12 57 59.7 +0.7**
WB2 Warramunga Arr 44.63 189 P **P 12 57 59.8 +0.7**
WRA Warramunga Arr 44.64 189 P **P 12 57 59.6 +0.5**
comp=Z,9.8nm,0.4s,baz=7.9,slow=8.5,SNR=174
WRA Warramunga Arr 44.64 189 P **P 12 57 59.7 +0.6**
FITZ Fitzroy Crossi 44.96 201 P **P 12 58 01.7 0.0**
comp=Z,2.9nm,0.6s,baz=40,slow=10.0,SNR=5.7
FITZ Fitzroy Crossi 44.96 201 P **P 12 58 01.7 0.0**
FITZ IAmb IAmb 12 58 07.1
comp=Z,11nm,1.4s
AS31 Alice Springs 48.36 189 P **P 12 58 28.2 +0.1**
AS31 IAmb IAmb 12 58 29.7
comp=Z,1.1nm,0.6s
ASAR Alice Springs 48.36 189 P **P 12 58 28.1 -0.1**
comp=Z,0.9nm,0.5s,baz=13,slow=14,SNR=33
ASAR Alice Springs 48.36 189 P **P 12 58 28.2 +0.1**
MK31 Makanchi Array 51.61 311 P **P 12 58 51.9 -0.6**
MKAR Makanchi Array 51.61 311 P **P 12 58 51.4 -1.1**
comp=Z,0.6nm,0.4s,baz=88,slow=9.5,SNR=29
MKAR Makanchi Array 51.61 311 P **P 12 58 51.8 -0.7**
STKA Stephens Creek 56.00 180 P **P 12 59 24.6 +0.3**
comp=Z,2.1nm,0.5s,baz=0.2,slow=7.7,SNR=8.2
STKA Stephens Creek 56.00 180 P **P 12 59 25.0 +0.7**
FORT Forrest 56.36 194 P **P 12 59 27.5 +0.6**
BBOO Buckleboo 57.15 185 P **P 12 59 33.9 +1.5**
SCM Sheep Creek Mo 59.96 31 P **P 12 59 52.2 +0.5**
ILAR Eielson Array 60.40 28 P **P 12 59 53.4 -1.2**
comp=Z,0.5nm,0.8s,baz=248,slow=6.3,SNR=5.0
INK Inuvik 65.75 24 P **P 13 00 28.8 -0.9**
comp=Z,0.5nm,0.5s,baz=299,slow=6.7,SNR=5.9
INK Inuvik 65.75 24 P **P 13 00 29.0 -0.7**
INK IAmb IAmb 13 00 46.5
comp=Z,2.3nm,1.2s
ABKAR Akbulak array 66.42 315 P **P 13 00 33.0 -1.4**
YKA Yellowknife Ar 74.83 28 P **P 13 01 23.9 -1.2**
comp=Z,0.3nm,0.6s,baz=295,slow=5.8,SNR=4.9
FINES FINESS Array B 79.99 334 P **P 13 01 51.8 -2.0**
comp=Z,1.5nm,1.0s,baz=77,slow=7.3,SNR=2.4
NVAR Mina Array Bea 82.76 51 P **P 13 02 09.1 -0.1**
comp=Z,0.3nm,0.6s,baz=294,slow=4.4,SNR=3.2

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*ECX **05** 12:51:19.9±0.7, 31.°18N×115.°88W, h5km±2km, MD3.0, ML3.2*
*MEX **05** 12:51:20.5±0.4, 31.°01N×115.°89W, h24km±93km, MD3.7*
ISC 05 12:51:18.5±1.0, **31.°20N**±0.°04×**115.°85W**±0.°05, **h15km**±11km, **n16,** σ**0.°33**/29, **5C-5D, Baja California**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SPIG San Pedro Mart 0.36 115 eP **Pb 12 51 27.0 +0.1**
SPIG eS **Sb 12 51 32.6 0.0**
SPIG San Pedro Mart 0.36 115 i P **Pb 12 51 27.4 +0.5**
SPIG i S **Sb 12 51 32.7 +0.1**
SPX San Pedro Mart 0.37 116⇑eP **Pb 12 51 27.4 +0.4**
SPX eS **Sb 12 51 32.7 -0.1**
SPX IAML 12 51 33.0
comp=E,2μm,0.1s
SPX e 12 51 33.0
SPX San Pedro Mart 0.37 116 eP **Pb 12 51 26.9 -0.1**
SPX i S **Sb 12 51 32.6 -0.1**
SVX San Vicente 0.37 291⇑eP **Pg 12 51 26.4 +0.4**
SVX eS **Sg 12 51 30.9 -0.2**
SQX San Quintin 0.62 182⇓eP **Pg 12 51 30.4 -0.3**
SQX eS **Sg 12 51 38.7 -0.2**
ECBX El Chinero 0.74 68⇑eP **Pn 12 51 34.5 +0.1**
ECBX eS **Sn 12 51 44.6 -0.7**
ESJX Sierra Juarez 0.81 354⇓eP **Pb 12 51 34.7 +0.2**
ESJX eS **Sb 12 51 45.8 +0.5**
SFX San Felipe 0.87 100⇑eP **Pn 12 51 36.9 +0.6**
SFX eS **Sn 12 51 48.4 -0.3**
CCX Cicese 0.96 314 eP **Pg 12 51 37.1 -0.1**
CCX eS **Sg 12 51 50.0 +0.2**
CBX Cerro Bola 1.31 328⇓eP **Pn 12 51 42.7 +0.3**
CBX eS **Sg 12 52 00.6 -0.3**
CBX IAML 12 52 05.6
comp=N,682nm,0.5s
CBX Cerro Bola 1.31 328 eP **Pn 12 51 42.7 +0.3**
CBX i S **Sb 12 51 59.6 0.0**
ERMX Rumorosa 1.36 354 eP **Pg 12 51 44.6 -0.2**
ERMX ⇓e 12 52 05.5
ERMX IAML 12 52 05.5
comp=N,242nm,0.2s
ERMX IAML 12 52 07.1
comp=E,430nm,0.3s
ERMX ⇑e 12 52 07.1
TJIG Tijuana 1.42 331⇓eP **Pb 12 51 44.4 -0.3**
TJIG Tijuana 1.42 331 i P **Pb 12 51 44.4 -0.3**
TJIG eS **Sn 12 52 02.5 +0.2**
SDRC San Diego Road 1.79 329 eP **Pb 12 51 50.9 -0.2**

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*THE **05** 12:56:10.6, 38.°14N×20.°42E, h8km, ML3.2/11, Error ellipse: s-maj=0.9km s-min=0.4km az=268.0*
*ATH **05** 12:56:10.6, 38.°14N×20.°43E, h7km±2km, ML3.0/5, Error ellipse: s-maj=2.1km s-min=0.9km az=255.0*
*IDC **05** 12:56:12.6±3.3, 38.°56N×20.°92E, h0km, mb3.7/2, mb1 3.6/4, mb1mx3.3/37, mbtmp3.5/4, ML3.1/2, Error ellipse: s-maj=72.4km s-min=22.4km az=49.0*
ISC 05 12:56:10.8±0.8, **38.°16N**±0.°02×**20.°44E**±0.°03, **h7km**±4km, **n43,** σ**0.°76**/73, **Greece**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ARGA Argostoli. Kep 0.04 57 P **Pg 12 56 12.2 0.0**
ARGA S **Sg 12 56 13.2 0.0**
KEF2 Argostoli. Kep 0.04 78 P **Pg 12 56 12.2 -0.1**
KEF2 S **Sg 12 56 13.1 -0.2**
ARG2 Argostoli 0.04 61 P **Pg 12 56 12.3 0.0**
ARG2 S **Sg 12 56 13.6 +0.2**
LXR1 Lixouri, Cepha 0.04 357 P **Pg 12 56 12.4 +0.1**
LXR1 S **Sg 12 56 13.9 +0.5**
CHV1 Chavriata, Kef 0.05 299 P **Pg 12 56 12.3 -0.1**
CHV1 S **Sg 12 56 13.6 0.0**
KEF3 Kipouria, Keph 0.09 302 P **Pg 12 56 12.8 -0.1**
KEF3 S **Sg 12 56 14.4 +0.1**
KEF4 Livadi, Kephal 0.10 353 P **Pg 12 56 13.4 +0.3**
KEF4 S **Sg 12 56 15.3 +0.6**
VLS Valsamata 0.12 81 P **Pg 12 56 13.4 0.0**
VLS S **Sg 12 56 15.6 +0.4**
15μm,0.2s
VLS Valsamata 0.12 81 P **Pg 12 56 13.4 0.0**
VLS S **Sg 12 56 15.4 +0.2**
VLS AML AML 12 56 16.3
comp=N,28266μm,0.2s
VLS AML AML 12 56 16.4
comp=E,28295μm,0.1s
KEF1 Kardakata, Kep 0.12 11 P **Pg 12 56 13.7 +0.2**
KEF1 S **Sg 12 56 15.6 +0.3**
VSK1 VASILIKIADES 0.27 21 P **Pg 12 56 16.2 0.0**
VSK1 S **Sg 12 56 20.9 +1.1**
comp=E,16μm,0.5s
FSK Fiskardo 0.32 18 P **Pg 12 56 17.0 0.0**
FSK S **Sg 12 56 22.5 +1.2**
comp=E,6μm,0.3s
FSK Fiskardo 0.32 18 P **Pg 12 56 17.2 +0.2**
FSK S **Sg 12 56 22.2 +0.9**
FSK AML AML 12 56 23.3
comp=E,15424μm,0.2s
FSK AML AML 12 56 24.2
comp=N,7514μm,0.3s
VLMS Volimes, Zakyn 0.33 148 P **Pg 12 56 17.2 -0.1**
EVGI Lefkada island 0.49 20 P **Pg 12 56 20.2 -0.2**
EVGI S **Sg 12 56 28.1 +1.3**
EVGI Lefkada island 0.49 20 P **Pg 12 56 20.3 -0.1**
EVGI S **Sg 12 56 27.7 +0.9**
MGNA Meganis 0.57 29 P **Pg 12 56 21.3 -0.5**
MGNA S **Sg 12 56 29.7 +0.4**
KRI1 kERI 0.58 149 P **Pg 12 56 21.3 -0.7**
KRI1 S **Sg 12 56 30.1 +0.6**
comp=N,2μm,0.4s
AST1 Astakos 0.64 53 P **Pg 12 56 23.1 0.0**
AST1 S **Sg 12 56 32.4 +0.9**
comp=N,4μm,0.5s
LKD2 Lefkada island 0.65 15 P **Pg 12 56 22.8 -0.6**
LKD2 S **Sg 12 56 32.7 +0.7**
comp=N,2μm,0.6s
LKD2 Lefkada island 0.65 15 P **Pg 12 56 22.9 -0.5**
LKD2 S **Sg 12 56 32.8 +0.9**
LKD2 AML AML 12 56 41.2
comp=N,3411μm,0.6s
LKD2 AML AML 12 56 43.0
comp=E,2872μm,0.6s
PDO Prodromos 0.73 53 P **Pg 12 56 24.6 -0.3**
PDO S **Sb 12 56 36.5 +0.4**
comp=E,3μm,0.3s
PDO Prodromos 0.73 53 P **Pg 12 56 24.7 -0.3**
PDO S **Sb 12 56 36.1 0.0**
PDO AML AML 12 56 42.2
comp=N,3349μm,0.3s
PDO AML AML 12 56 43.9
comp=E,4201μm,0.4s
RLS Riolos of Patr 0.81 97 P **Pg 12 56 25.9 -0.6**
RLS S **Sb 12 56 38.4 -0.1**
comp=E,508nm,0.6s
RLS Riolos of Patr 0.81 97 P **Pg 12 56 26.2 -0.3**
RLS S **Sb 12 56 38.5 0.0**
RLS AML AML 12 56 46.2
comp=N,888μm,0.5s
RLS AML AML 12 56 46.5
comp=E,884μm,0.4s
PVO Paravola 0.97 61 P **Pg 12 56 29.2 -0.2**
PVO S **Sg 12 56 42.6 +0.6**
comp=E,2μm,0.4s
PVO Paravola 0.97 61 P **Pg 12 56 29.4 0.0**
PVO S **Sb 12 56 43.2 +0.3**
DRO Drossia 1.02 101 P **Pg 12 56 30.1 -0.4**
DRO Drossia 1.02 101 P **Pg 12 56 29.8 -0.6**
DRO S **Sg 12 56 43.5 -0.2**
AMT Artemida-Makis 1.18 121 P **Pg 12 56 33.3 -0.2**
EFP Efpalio 1.18 76 P **Pg 12 56 32.7 -0.9**
LAKA Lakka 1.21 86 P **Pg 12 56 33.2 -1.0**
ANX Ano Chora 1.24 69 P **Pn 12 56 32.9 -1.8**
ANX S **Sn 12 56 52.0 +0.3**
comp=E,725nm,1.0s
ANX Ano Chora 1.24 69 P **Pg 12 56 35.0 +0.4**
EVR Evrytania 1.31 54 P **Pn 12 56 35.0 -0.7**
EVR Evrytania 1.31 54 P **Pn 12 56 35.2 -0.5**
KLV Kalavryta, Ach 1.35 94 P **Pn 12 56 35.6 -0.6**
IGT Igoumenitsa 1.38 357 P **Pn 12 56 35.9 -0.6**
IGT S **Sb 12 56 54.0 -0.7**
comp=E,385nm,0.6s
OHR Ohrid 2.96 5 ePn **Pn 12 56 57.5 -0.8**
IDI Anoyia 4.58 127 Pn **Pn 12 57 23.3 +2.8**
comp=E,0.1nm,0.3s,baz=290,slow=15,SNR=2.1
IDI Sn **Sn 12 58 16.5 +2.4**
comp=E,1.2nm,0.3s,baz=316,slow=23,SNR=7.7
GERES GERESS Array B 11.74 338 Pn **Pn 12 58 59.7 +0.9**
comp=E,0.1nm,0.3s,baz=151,slow=16,SNR=2.5
MKAR Makanchi Array 45.37 58 P **P 13 04 28.3 -1.4**
comp=E,0.4nm,0.6s,baz=283,slow=7.1,SNR=6.7
ZALV Zalesovo Beam 45.75 48 P **P 13 04 30.8 -1.8**
comp=E,1.0nm,0.5s,baz=265,slow=7.2,SNR=5.3

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*ECX **05** 13:02:31.5±0.6, 31.°18N×115.°88W, h6km±3km, MD2.6, ML2.8*
*MEX **05** 13:02:32.0±0.4, 31.°03N×115.°88W, h13km±2km, MD3.6*
ISC 05 13:02:29.8±1.1, **31.°13N**±0.°04×**115.°92W**±0.°04, **h23km**±10km, **n14,** σ**0.°56**/27, **5C-5D, Baja California**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SVX San Vicente 0.35 306⇑eP **Pb 13 02 38.0 +0.6**
SVX eS **Sb 13 02 42.4 -0.2**
SPIG San Pedro Mart 0.40 101⇓eP **Pb 13 02 38.5 0.0**
SPIG eS **Sb 13 02 44.0 -0.4**
SPIG San Pedro Mart 0.40 101 i P **Pb 13 02 38.9 +0.4**
SPIG i S **Sb 13 02 44.2 -0.2**
SPX San Pedro Mart 0.40 103⇑eP **Pb 13 02 38.9 +0.4**
SPX eS **Sb 13 02 44.0 -0.4**
SPX ⇓e 13 02 45.3
SPX IAML 13 02 45.3
comp=N,826nm,0.3s
SPX San Pedro Mart 0.40 103 eP **Pb 13 02 38.5 0.0**
SPX i S **Sb 13 02 44.0 -0.4**
SQX San Quintin 0.55 176⇓eP **Pn 13 02 41.9 -0.3**
SQX eS **Sn 13 02 50.2 -0.3**
ECBX El Chinero 0.82 65⇑eP **Pg 13 02 45.9 0.0**
ECBX eS **Sn 13 02 56.2 -1.1**
ESJX Sierra Juarez 0.88 358⇓eP **Pb 13 02 46.2 -0.3**
ESJX eS **Sb 13 02 57.1 -0.7**
SFX San Felipe 0.92 95⇑eP **Pb 13 02 48.4 +1.3**
SFX eS **Sn 13 03 00.5 +0.7**
CCX Cicese 0.98 320 eP **Pb 13 02 48.6 +0.6**
CCX eS **Sn 13 03 01.2 +0.1**
CBX Cerro Bola 1.34 332 eP **Pb 13 02 54.3 -0.1**
CBX ⇓e 13 03 17.1
CBX IAML 13 03 17.1
comp=N,211nm,0.4s
CBX Cerro Bola 1.34 332 eP **Pb 13 02 54.2 -0.1**
CBX i S **Sb 13 03 11.6 +0.4**
ERMX Rumorosa 1.43 356 eP **Pb 13 02 56.2 +0.4**
ERMX eS **Sb 13 03 14.6 +1.0**
ERMX ⇑e 13 03 18.6
ERMX IAML 13 03 18.6
comp=E,145nm,0.2s
TJIG Tijuana 1.45 334 eP **Pb 13 02 56.0 -0.2**
TJIG eS **Sb 13 03 14.1 -0.2**

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*THE **05** 13:02:45.2, 38.°26N×20.°35E, h11km, ML2.7/12, Error ellipse: s-maj=1.1km s-min=0.4km az=268.0*
*ATH **05** 13:02:45.3, 38.°26N×20.°38E, h12km±1km, ML3.0/2, Error ellipse: s-maj=2.2km s-min=1.0km az=248.0*
ISC 05 13:02:45.5±1.1, **38.°26N**±0.°02×**20.°38E**±0.°05, **h12km**±5km, **n27,** σ**0.°38**/48, **Greece**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.04 86 P **Pg 13 02 47.5 -0.2**
KEF4 S **Sg 13 02 49.1 -0.2**
KEF3 Kipouria, Keph 0.06 205 P **Pg 13 02 47.7 -0.1**
KEF3 S **Sg 13 02 49.4 -0.1**
CHV1 Chavriata, Kef 0.07 178 P **Pg 13 02 47.8 -0.1**
CHV1 S **Sg 13 02 49.9 +0.1**
46μm,0.2s
LXR1 Lixouri, Cepha 0.07 140 P **Pg 13 02 47.9 0.0**
LXR1 S **Sg 13 02 50.0 +0.2**
62μm,0.2s
ARGA Argostoli. Kep 0.11 135 P **Pg 13 02 48.3 -0.1**
ARGA S **Sg 13 02 50.5 0.0**
ARG2 Argostoli 0.12 132 P **Pg 13 02 48.2 -0.3**
ARG2 S **Sg 13 02 50.6 -0.1**
KEF2 Argostoli. Kep 0.12 137 P **Pg 13 02 48.5 -0.1**
KEF2 S **Sg 13 02 50.8 -0.1**
VLS Valsamata 0.18 115 P **Pg 13 02 49.2 -0.4**
VLS S **Sg 13 02 52.4 0.0**
10μm,0.1s
VLS Valsamata 0.18 115 P **Pg 13 02 49.2 -0.4**
VLS S **Sg 13 02 52.3 0.0**
VLS AML AML 13 02 52.4
comp=N,19324μm,0.2s
VLS AML AML 13 02 52.5
comp=E,17219μm,0.1s
VSK1 VASILIKIADES 0.21 43 P **Pg 13 02 49.8 -0.2**
VSK1 S **Sg 13 02 53.4 +0.2**
comp=E,2μm,0.2s
FSK Fiskardo 0.25 35 P **Pg 13 02 50.5 -0.2**
FSK S **Sg 13 02 53.9 -0.3**
comp=E,988nm,0.3s
FSK Fiskardo 0.25 35 P **Pg 13 02 50.4 -0.2**
FSK S **Sg 13 02 54.1 -0.1**
EVGI Lefkada island 0.42 31 P **Pg 13 02 53.5 -0.4**
EVGI S **Sg 13 03 00.3 +0.7**
comp=E,200nm,0.1s
EVGI Lefkada island 0.42 31 P **Pg 13 02 53.5 -0.4**
EVGI S **Sg 13 02 59.6 0.0**
VLMS Volimes, Zakyn 0.44 149 P **Pg 13 02 53.7 -0.4**
VLMS S **Sg 13 03 00.7 +0.7**
VLMS AML AML 13 03 02.0
comp=E,2396μm,0.2s
VLMS AML AML 13 03 03.1
comp=N,5416μm,0.4s
MGNA Meganis 0.52 39 P **Pg 13 02 55.6 +0.1**
LKD2 Lefkada island 0.58 22 P **Pg 13 02 55.9 -0.8**
LKD2 Lefkada island 0.58 22 P **Pg 13 02 56.3 -0.4**
ZAK2 Zakynthos 0.62 138 P **Pg 13 02 57.1 +0.1**
ZAK2 S **Sb 13 03 06.7 -0.2**
comp=N,2μm,0.4s
AST1 Astakos 0.63 63 P **Pg 13 02 57.7 0.0**
AST1 S **Sb 13 03 07.3 +0.2**
comp=N,445nm,0.3s
KRI1 kERI 0.69 150 P **Pg 13 02 57.7 -1.1**
KRI1 S **Sb 13 03 08.7 -0.1**
comp=N,905nm,0.3s
PDO Prodromos 0.72 61 P **Pg 13 02 58.8 -0.6**
PDO S **Sb 13 03 10.0 +0.3**
comp=N,395nm,0.5s
PDO Prodromos 0.72 61 P **Pg 13 02 58.8 -0.6**
PVO Paravola 0.97 68 P **Pg 13 03 03.7 -0.5**
PVO S **Sn 13 03 18.8 +0.2**
comp=N,288nm,0.4s
PVO Paravola 0.97 68 P **Pg 13 03 03.6 -0.5**
IGT Igoumenitsa 1.28 358 P **Pg 13 03 09.5 -0.5**
IGT S **Sg 13 03 27.0 +0.4**
comp=N,48nm,0.3s
ITM Ithomi 1.63 131 P **Pn 13 03 14.3 +0.3**

KRSC 05 13:19:29.1±1.7, **49.°93N×157.°55E, h14km**±34km, **ML3.7, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.19	310	eP	Pn	13 19 51.1	-0.2
PAU	Pauzhetka	1.61	343	eP	Pb	13 19 58.9	+0.3
ASAK	Asacha	2.47	5	eP	Pb	13 20 11.5	-1.8
RUS	Russkaya	2.58	13	eP	Pn	13 20 10.9	+0.5
RUS				eS	Sn	13 20 42.5	+1.0
MTVR	Mutnovka	2.59	9	eP	Pn	13 20 12.8	+2.2
GRL	Gorelyy	2.65	7	eP	Pn	13 20 13.1	+1.7
GRL				eS	Sb	13 20 46.1	-2.6
KRMR	Karymshinskiy	2.93	7	eP	Pn	13 20 17.8	+2.6
KRMR				eS	Sb	13 20 54.3	-2.3
DALK	Dalny	3.20	13	eP	Pn	13 20 22.1	+3.3
DALK				eS	Sb	13 21 01.5	-2.9
UGLR	Uglovaya	3.38	13	eP	Pn	13 20 24.5	+3.0
AVH	Avacha	3.42	12	eP	Pn	13 20 25.6	+3.6
SDLR	Sedlovina	3.46	13	eP	Pn	13 20 25.6	+3.1
TUMR	Tumrok	5.59	15	eP	Pn	13 20 56.7	+4.9

MEX 05 13:27:32.6±0.5, 14.39N×92.57W, h57km±15km, MD3.7
GCG 05 13:27:32.6±0.3, 14.43N×92.46W, h5km±12km, MD3.7
ISC 05 13:27:33.4±2.3, 14.6N±0.1×92.6W±0.1, h53km±19km, n8, σ1s48/13, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.46	44	i P	Pn	13 27 43.9	-0.5
THIG				i S	Sn	13 27 53.2	+0.7
STG3	Santiaguito 3,	1.00	82	eP	Pn	13 27 51.4	-0.1
STG3				eS	Sn	13 28 04.2	-0.6
PCIG		1.28	332	eP	Pn	13 27 55.5	+0.6
PCIG				i S	Sn	13 28 11.9	+0.9
FUG	Fuego 3	1.70	94	eP	Pn	13 28 01.1	+0.2
FUG				eS	Sn	13 28 21.3	-0.4
CCIG	Comitan	1.76	15	eP	Pn	13 28 02.3	+0.6
CCIG				eS	Sn	13 28 24.6	+1.5
PCG	Pacaya	1.94	95	eP	Pn	13 28 04.8	+0.6
IXG	Ixpaco	2.13	101	eP	Pn	13 28 06.9	+0.2
TGIG		2.25	347	i P	Pn	13 28 16.4	+8.1
TGIG				eS	Sn	13 28 31.2	-3.8

NEIC 05 13:53:54.4±1.8, 3.62N±0.09×124.70E±0.06, h321km±8km, mb4.5/18, Error ellipse: s-maj=15.0km s-min=5.2km az=208.0
IDC 05 13:53:55.4±3.2, 3.56N×124.67E, h329km±31km, mb3.2/6, mb1 3.4/6, mb1mx3.0/39, mbtmp3.9/6, Error ellipse: s-maj=57.6km s-min=15.1km az=68.0
DJA 05 13:53:55.7±0.9, 4°N±7°×12°4E±°, h291km±6km, M4.6/9, mB5.3/2, mb4.7/5, MLv4.6/9, Mw(mB)4.7/2
ISC 05 13:53:55.4±0.5, 3.52N±0.06×124.61E±0.08, h331km, n45, σ1s27/49, 1D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	2.99	192	P	Pn	13 54 51.8	-1.5
KCP	Kidapawan	3.50	8	⇓i P	Pn	13 54 58.9	+0.5
KCP				i S	S	13 55 52.1	+3.2
TNTI	Ternate	3.88	135	P	Pn	13 55 00.8	-1.3
TNTI	Ternate	3.88	135	Pn	Pn	13 55 00.5	-1.7
MRSI	Marisa	4.03	221	P	Pn	13 54 59.6	-4.1
LUWI	Luwuk	4.88	202	Pn	Pn	13 55 12.7	-0.3
LBMI	Labuha	5.04	145	P	Pn	13 55 13.5	-1.2
	2.6nm4μm257nm,0.5s						
SANI	Sanana	5.70	166	P	Pn	13 55 19.1	-3.1
NLAI	Namlea	7.16	160	P	Pn	13 55 40.0	+0.6
	1.0nm34nm,0.7s						
MSAI	Masohi	8.07	148	P	Pn	13 55 51.6	+1.3
KKM	Kota Kinabalu	8.73	287	Pn	Pn	13 55 58.0	-0.3
FAKI	Fak Fak	9.96	130	Pn	Pn	13 56 12.1	-0.9
SBUM	Sibu	12.41	265	P	P	13 56 45.5	+2.9
KSM	Kuching	14.43	262		Pn	13 57 06.3	-0.1
JAGI	Jajag, Banyuwa	15.83	221	P	P	13 57 22.1	-0.5
MTN	Manton Dam	17.50	158	P	P	13 57 39.2	+1.0
KNRA	Kununurra	19.51	168	P	P	13 58 01.3	+1.7
KNRA				IAmb	IAmb	13 58 44.5	
	comp=Z,96nm,1.8s						
TPUB	Ta-pu	20.04	349	P	P	13 58 04.5	-0.5
FITZ	Fitzroy Crossi	21.50	177	P	P	13 58 18.8	+0.1
	comp=Z,2.5nm,0.4s,baz=352,slow=7.2,SNR=9.9						
FITZ	Fitzroy Crossi	21.50	177	IAmb	IAmb	13 58 50.0	
	comp=Z,13nm,1.2s						
WRAB	Tennant Creek	25.19	158	P	P	13 58 51.9	-0.1
WRAB				IAmb	IAmb	13 58 54.6	
	comp=Z,19nm,1.4s						
WRA	Warramunga Arr	25.20	158	P	P	13 58 52.1	0.0
	comp=Z,0.5nm,0.4s,baz=342,slow=12,SNR=8.8						
WRA	Warramunga Arr	25.20	158	IAmb	IAmb	13 58 53.1	
	comp=Z,0.2nm,0.8s						
WB2	Warramunga Arr	25.20	158	P	P	13 58 52.3	+0.1
WB2				IAmb	IAmb	13 59 45.7	
	comp=Z,56nm,2.0s						
PSA00	Pilbara Seismi	25.37	190	P	P	13 58 53.3	-0.3
PSA00				IAmb	IAmb	13 59 41.8	
	comp=Z,49nm,1.4s						
AS31	Alice Springs	28.50	162	P	P	13 59 21.3	-0.1
ASAR	Alice Springs	28.50	162	P	P	13 59 21.8	+0.4
	comp=Z,0.7nm,0.6s,baz=339,slow=7.3,SNR=22						
ASAR				PcP	PcP	14 02 24.2	+0.3
	comp=Z,0.6nm,0.8s,baz=352,slow=2.8,SNR=5.1						
ASAR	Alice Springs	28.50	162	P	P	13 59 21.1	-0.3
ASAR					PcP	14 02 24.4	+0.5
MORW	Morawa	33.42	194	P	P	14 00 03.2	-0.9
MORW				IAmb	IAmb	14 01 23.5	
	comp=Z,35nm,1.4s						
KSAR	Wonju Array Be	33.90	5	P	P	14 00 06.0	-2.1
KS19	Wonju Array Si	33.96	5	P	P	14 00 06.8	-1.9
KS19				IAmb	IAmb	14 01 18.1	
	comp=Z,67nm,1.9s						
NWAO	Narrogin (SRO)	36.91	190	P	P	14 00 33.7	+0.1
BBOO	Buckleboo	37.72	164	P	P	14 00 41.0	+0.6
BBOO				IAmb	IAmb	14 00 46.0	
	comp=Z,37nm,1.6s						
STKA	Stephens Creek	38.73	157	P	P	14 00 49.3	+0.6
	comp=Z,0.9nm,0.4s,baz=339,slow=14,SNR=6.4						
SONM	Songino Array	46.86	343	PcP	PcP	14 03 20.5	+0.2
	comp=Z,0.3nm,0.4s,baz=147,slow=3.5,SNR=4.7						
SONM	Songino Array	46.86	343		PcP	14 03 20.2	-0.1
PETK	Petropavlovsk-	56.44	23	P	P	14 03 03.3	-0.2
MK31	Makanchi Array	56.54	326	P	P	14 03 04.7	+0.4
MKAR	Makanchi Array	56.54	326	P	P	14 03 04.6	+0.3
	comp=Z,1.4nm,0.4s,baz=122,slow=8.0,SNR=57						
MKAR				PcP	PcP	14 03 55.8	-0.8
	comp=Z,0.4nm,0.6s,baz=108,slow=4.2,SNR=4.2						
MKAR				ScP	ScP	14 07 23.9	+0.2
	comp=Z,0.3nm,0.8s,baz=108,slow=5.4,SNR=2.7						
MKAR	Makanchi Array	56.54	326		PcP	14 03 56.5	-0.2
MKAR					ScP	14 07 24.0	+0.2
MAKZ	Makanchi	56.72	326	P	P	14 03 05.8	+0.2
MAKZ				IAmb	IAmb	14 04 29.7	
	comp=Z,7.6nm,1.8s						
KURK	Kurchatov	60.80	328	P	P	14 03 33.1	-0.1
ABKAR	Akbulak array	70.98	321	P	P	14 04 37.1	-0.6
ILAR	Eielson Array	86.20	25	P	P	14 05 59.1	-0.7
	comp=Z,0.2nm,0.5s,baz=254,slow=4.5,SNR=4.1						
TORD	Torodi Ar. Bea	120.97	287	PKP	PKPdf	14 12 09.4	-0.5
	comp=Z,0.3nm,0.4s,baz=86,slow=1.9,SNR=4.0						

IDC 05 14:11:39.9±2.1, 1.26N×125.18E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/28, mbtmp3.4/3, Error ellipse: s-maj=195.2km s-min=27.4km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.91	157	P	P	14 16 45.0	-0.6
	0.6nm,0.4s,baz=335,slow=10,SNR=13						
ASAR	Alice Springs	26.19	162	P	P	14 17 16.9	+0.4
	0.3nm,0.4s,baz=346,slow=13,SNR=17						
MKAR	Makanchi Array	58.73	327	P	P	14 21 39.7	0.0
	0.2nm,0.8s,baz=134,slow=8.9,SNR=1.4						

IDC 05 14:30:38.8±4.3, 40.48N×144.38E, h0km, mb3.6/3, mb1 3.7/7, mb1mx3.4/44, mbtmp3.7/7, ML2.5/4, Error ellipse: s-maj=75.8km s-min=36.2km az=131.0
JMA 05 14:30:59.2±0.1, 40.36N×142.10E, h51km±1km, M3.7
JMA Felt II J1.
ISC 05 14:30:58.1±1.7, 40.39N±0.05×142.2E±0.1, h53km±10km, n22, σ1s02/24, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	0.40	242	P	Pn	14 31 08.8	+0.4
JKEN				eS	Sn	14 31 15.2	-0.5
JANG	Nango	0.50	268	P	Pn	14 31 09.8	+0.3
JANG				S	Sn	14 31 17.2	-0.5
JTH	Tanohata	0.51	207	P	Pn	14 31 10.0	+0.4
JTH				S	Sn	14 31 17.8	-0.1
JKZ	Kuzumaki	0.76	238	P	Pn	14 31 13.2	+0.4
JKZ				S	Sn	14 31 22.9	-0.5
JARK	Aomorirokkasho	0.86	316	P	Pn	14 31 14.6	+0.5
JARK				S	Sn	14 31 25.6	-0.2
JTM	Tenmabayashi	0.92	296	P	Pn	14 31 15.2	+0.3
JTM				S	Sn	14 31 26.7	-0.5
JOM	Ohasama	1.14	216	P	Pn	14 31 18.4	+0.7
JOM				S	Sn	14 31 32.3	0.0
JAH	Hinai	1.19	261	P	Pn	14 31 18.9	+0.5
JAH				S	Sn	14 31 33.2	-0.3
JOT	Ohata	1.30	320	P	Pn	14 31 20.5	+0.6
JOT				eS	Sn	14 31 36.3	+0.1
JRG	Rokugo	1.54	230	P	Pn	14 31 24.1	+0.9
MJAR	Matsushiro Arr	4.94	220	Pn	Pn	14 32 11.9	+2.1
	0.1nm,0.3s,baz=29,slow=14,SNR=7.0						
USRK	Ussuriysk Ar.	8.45	300	Pn	Pn	14 33 00.9	+3.2
	baz=104,slow=14,SNR=5.0						
KSRS	Korea Array	11.48	260	Pn	Pn	14 33 45.4	+6.2
	0.1nm,0.3s,baz=67,slow=14,SNR=2.3						
SONM	Songino Array	26.55	298	P	P	14 36 31.4	+0.3
	0.1nm,0.3s,baz=98,slow=10,SNR=3.5						
H11N2	WAKE ISLAND Hy	29.53	127	T	T	15 07 53.1	
	baz=318,slow=75,SNR=23						
H11N1	WAKE ISLAND Hy	29.54	127	T	T	15 07 52.5	
	baz=318,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	29.55	127	T	T	15 07 49.3	
	baz=318,slow=75,SNR=24						
H11S1	WAKE ISLAND Hy	30.35	129	T	T	15 08 54.2	
H11S3	WAKE ISLAND Hy	30.35	129	T	T	15 08 54.2	
H11S2	WAKE ISLAND Hy	30.36	129	T	T	15 08 54.2	
ZALV	Zalesovo Beam	40.16	309	P	P	14 38 27.2	-1.5
	0.9nm,0.4s,baz=86,slow=9.5,SNR=4.4						
MKAR	Makanchi Array	42.91	299	P	P	14 38 50.9	-0.5
	0.3nm,0.5s,baz=85,slow=11,SNR=12						

KRNET 05 14:37:07.1±0.1, 41.25N×72.01E, h15km, mb2.1
SOME 05 14:37:08.4, 41.28N×72.02E, h5km
NNC 05 14:37:09.8±2.7, 41.34N×72.03E, h0km, mb2.9, mpv2.6, Error ellipse: s-maj=22.6km s-min=8.1km az=169.0
ISC 05 14:37:07.1±1.6, 41.24N±0.05×72.01E±0.03, h0km±13km, n13, σ0s60/26, 12C-3D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	Arkit	0.56	356	⇓i P	Pg	14 37 17.1	-0.7
	baz=58						
ARK				⇓i S	Sg	14 37 24.7	-0.3
	baz=58						
ARSB	Arslanbob	0.73	83	⇑i P	Pg	14 37 21.1	-0.1
	baz=84						
ARSB				⇑i S	Sg	14 37 31.3	+0.6
	baz=84						
BTK	Batken	1.49	218	⇑i P	Pn	14 37 34.8	-0.4
	baz=18						
BTK				⇑i S	Sn	14 37 54.9	-0.5
	baz=18						
AML	Almayashu	1.54	54	⇑i P	Pn	14 37 36.2	0.0
	baz=55						
AML				⇑i S	Sn	14 37 56.5	-0.6
	baz=55						
JBG	Jabagly	1.61	318	P	Pb	14 37 38.2	+0.3
	2.7nm,0.2s						
JBG				S	Sg	14 37 59.6	+0.7
	10nm,0.4s						
IUG	Iuzhnay	1.74	302	eP	Pb	14 37 40.2	+0.2
	0.5nm,0.2s						
IUG				eS	Sb	14 38 03.0	+0.6
	24nm,0.3s						
IUG	Iuzhnay	1.74	302	P	Pb	14 37 40.2	+0.2
	0.5nm,0.2s						
IUG				S	Sb	14 38 03.0	+0.6
	22nm,0.2s						
MRKS	Merke	1.75	31	eP	Pb	14 37 40.0	-0.1
	2.5nm,0.2s						
MRKS				eS	Sb	14 38 02.9	+0.1
	6.1nm,0.1s						
MRKS	Merke	1.75	31	P	Pb	14 37 40.0	-0.1
	2.5nm,0.2s						
MRKS				S	Sb	14 38 02.9	+0.1
	6.1nm,0.1s						
ARLS	Aral	1.84	70	⇑i P	Pn	14 37 41.2	+1.1
	baz=70						
ARLS				⇑i S	Sb	14 38 06.0	+0.7
	baz=70						
EKS2	Erkin-Say	1.93	42	⇑i P	Pb	14 37 42.8	-0.5
	baz=43						
EKS2				⇑i S	Sb	14 38 08.0	0.0
	baz=43						
UCH	Uchtor	2.11	61	⇑i P	Pn	14 37 45.1	+1.0
	baz=62						
UCH				⇑i S	Sb	14 38 12.5	-1.0
	baz=62						
KK31	Karatay Array	2.17	330	⇓Pn	Pb	14 37 46.4	-0.8
	0.7nm,0.3s,baz=141,slow=16,SNR=11						
KK31				Sn	Sb	14 38 14.9	+0.3
	0.7nm,0.2s,baz=135,slow=25,SNR=10						

IDC 05 14:40:53.9±3.6, 31.09S×177.68W, h0km, mb3.3/2, mb1 3.5/2, mb1mx3.4/30, mbtmp3.3/2, Error ellipse: s-maj=85.2km s-min=37.2km az=121.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.84	354	Pn	Pn	14 41 27.0	+0.2
	84nm,0.3s,baz=89,slow=18,SNR=5.5						
RAO				Sn	Sn	14 41 41.0	-10
	282nm,0.3s,baz=68,slow=22,SNR=11						
ASAR	Alice Springs	43.35	268	P	P	14 48 58.2	+0.1
	0.2nm,0.7s,baz=104,slow=6.8,SNR=1.4						
WRA	Warramunga Arr	44.40	273	P	P	14 49 06.2	-0.4
	0.5nm,0.6s,baz=113,slow=7.5,SNR=4.6						
FINES	FINESS Array B	145.89	340	PKPbc	PKPdf	15 00 33.6	-0.3
	0.9nm,0.4s,baz=62,slow=4.8,SNR=8.7						

IDC 05 14:49:49.0±2.2, 8.84S×127.72E, h0km, mb3.2/1, mb1 3.7/4, mb1mx3.4/27, mbtmp3.5/4, ML3.6/3, Error ellipse: s-maj=88.2km s-min=29.8km az=72.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.43	192	Pn	Pn	14 52 07.1	+1.0
	0.5nm,0.3s,baz=9.1,slow=16,SNR=12						
FITZ				Sn	Sn	14 53 46.7	-6.2
	0.5nm,0.3s,baz=96,slow=18,SNR=1.8						
WRA	Warramunga Arr	12.77	151	Pn	Pn	14 52 51.8	-0.2
	0.3nm,0.3s,baz=322,slow=13,SNR=8.0						
WRA				Sn	Sn	14 55 07.1	-7.8
	0.2nm,0.3s,baz=318,slow=25,SNR=1.8						
ASAR	Alice Springs	15.89	159	Pn	Pn	14 53 33.1	-1.1
	0.2nm,0.3s,baz=330,slow=9.6,SNR=16						
ASAR				Sn	Sn	14 56 19.6	-12
	0.0nm,0.3s,baz=331,slow=17,SNR=1.9						
MKAR	Makanchi Array	68.55	328	P	P	15 00 53.5	0.0
	0.1nm,0.6s,baz=142,slow=7.2,SNR=1.9						

JMA 05 15:03:58.1±0.6, 31.06N×138.63E, h432km, M3.2
IDC 05 15:04:00.2±1.8, 31.23N×138.14E, h425km±10km, mb2.7/7, mb1 2.9/10, mb1mx2.8/35, mbtmp3.5/10, Error ellipse: s-maj=39.5km s-min=17.7km az=163.0
ISC 05 15:03:59.5±0.9, 31.15N±0.09×138.5E±0.1, h450km, n20, σ2s34/24, mb3.1/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.23	28	P	P	15 05 02.1	+0.9
	6.9nm,0.3s,baz=240,slow=20,SNR=1.7						
JHJ				S	S	15 05 49.2	-2.3
	7.4nm,0.3s,baz=74,slow=19,SNR=2.2						
JIE	Ise	3.58	335	P	P	15 05 10.6	-0.3
JTNC	Tanabenakahech	3.62	318	P	P	15 05 10.0	-1.3
BSO3	Boso 3	4.00	24	P	P	15 05 13.0	-1.2
BSO3				eS	S	15 06 12.8	-2.4
BSO1	Boso 1	4.06	30	P	P	15 05 13.6	-0.8
BSO1				eS	S	15 06 13.7	-1.8
JOD2	Odawara 2	4.13	6	P	P	15 05 14.1	-1.5
JNY	Yasuok	4.23	353	P	P	15 05 16.2	-0.4
JHU	Hanno	4.73	7	P	P	15 05 20.2	-0.9
JHU				eS	S	15 06 23.5	-4.3
JRY	Ryogami san	4.86	4	P	P	15 05 22.2	-0.2
JCJ	Chichijima	5.16	141	S	S	15 06 31.0	-4.5
	53nm,0.3s,baz=288,slow=22,SNR=9.9						
JAG	Ashikaga	5.32	8	P	P	15 05 25.3	-1.5
JAG				eS	S	15 06 32.9	-5.2
MJAR	Matsushiro Arr	5.38	357	P	P	15 05 26.6	-0.9
	0.1nm,0.3s,baz=169,slow=10,SNR=8.3						
KSRS	Korea Array	10.78	309	P	P	15 06 23.4	-1.5
	0.3nm,0.3s,baz=124,slow=9.8,SNR=3.7						
SONM	Songino Array	29.59	313	P	P	15 09 26.8	+0.5
	0.2nm,0.4s,baz=110,slow=7.3,SNR=2.6						
CMAR	Chiang Mai Arr	37.89	260	P	P	15 10 36.4	-0.5
	0.8nm,0.7s,baz=54,slow=7.1,SNR=8.9						
MKAR	Makanchi Array	45.46	307	P	P	15 11 36.8	+0.1
	0.1nm,0.4s,baz=85,slow=10,SNR=7.7						
ILAR	Eielson Array	55.76	30	P	P	15 12 54.7	+2.8
	0.2nm,0.6s,baz=293,slow=4.7,SNR=2.3						
YKA	Yellowknife Ar	70.10	28	P	P	15 14 28.3	+3.5
	0.3nm,0.5s,baz=295,slow=6.4,SNR=4.8						
FINES	FINESS Array B	72.89	332	P	P	15 14 42.3	+1.0
	0.4nm,0.5s,baz=202,slow=35,SNR=1.3						
NVAR	Mina Array Bea	80.49	51	P	P	15 15 28.9	+5.0
	0.3nm,0.5s,baz=289,slow=5.5,SNR=4.5						

IDC 05 15:04:04.5±0.5, 21.33S×174.51W, h0km, mb4.7/23, mb1 4.9/25, mb1mx4.8/35, mbtmp4.7/25, ML5.0/2, MS4.7/23, Ms1 4.7/23, ms1mx4.6/32, Error ellipse: s-maj=17.5km s-min=14.0km az=113.0
BJI 05 15:04:04.9±0.2, 21.01S×174.03W, h12km, mB5.6/26, mb5.1/45, Ms5.3/25, Ms7 5.0/23
NEIC 05 15:04:04.9±1.9, 21.24S±0.06×174.19W±0.06, h10km±1km, mb5.3/127, Error ellipse: s-maj=13.0km s-min=2.7km az=139.0
MOS 05 15:04:05.8±1.6, 21.36S×174.29W, h20km, mb5.4/31, Error ellipse: s-maj=9.7km s-min=8.6km az=78.5
BGR 05 15:04:05.4±0.0, 21.87S×174.97W, h10km
GCMT 05 15:04:09.9±0.2, 21.55S±0.02×173.82W±0.01, h24km, MW5.2/110, Moment Tensor Solution. s68,c109; s110,c166; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr5.73±.18; Mθθ-0.93±.11; Mφφ-4.80±.11; Mrθ1.82±.16; Mrφ-1.68±.06; Mθφ3.36±.14; Best double couple: M0 6.76100×10^16 NP1:φs197.00000°, δ28.00000°, λ83.00000°. NP2:φs25.00000°, δ62.00000°, λ94.00000°. Principal axes: T 6.9280, Plg73.0000°, Azm304.0000°; N -0.3340, Plg3.0000°, Azm203.0000°; P -6.5940, Plg17.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 05 15:04:04.8±0.6, 21.40S±0.05×174.09W±0.05, h11km±3km, h11km:pP-P, n536, σ1s65/535, mb5.3/116, MS4.8/31, 38C-23D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	4.54	60	P	Pn	15 05 09.3	-4.2
	baz=4.4,SNR=98						
NIUE	Niue	4.54	60	Pn	Pn	15 05 09.5	-3.9
AFI	Afiamalu	7.77	17	Pn	Pn	15 05 55.0	-2.9
	27nm,0.3s,baz=208,slow=0.7,SNR=41						
AFI				Sn	Sn	15 07 14.8	-11
	5.0nm,0.3s,baz=196,slow=22,SNR=1.4						
AFI				LR	LR	15 09 00.9	
	comp=Z,4μm,19.5s,baz=194,slow=38						
AFI	Afiamalu	7.77	17	Pn	Pn	15 05 54.8	-3.1
MSVF	Nonsavu	8.26	295	Pn	Pn	15 06 07.0	+2.4
MSVF	Nonsavu	8.26	295	P	Pn	15 06 07.0	+2.4
RAO	Raoul Island	8.55	203	Pn	Pn	15 06 07.9	-0.5
	58nm,0.3s,baz=183,slow=22,SNR=5.9						
RAO				Sn	Sn	15 07 37.3	-7.7
	8.4nm,0.3s,baz=252,slow=22,SNR=1.8						
RAO				LR	LR	15 08 49.4	
	comp=Z,667nm,18.2s,baz=44,slow=34						
RAO	Raoul Island	8.55	203		Pn	15 06 08.0	-0.5
RAO	Raoul Island	8.55	203	P	Pn	15 06 08.0	-0.5
GLKZ	Green Lake	8.56	203	P	Pn	15 06 06.9	-1.7
GLKZ				S	Sn	15 07 37.2	-8.0
RAR	Rarotonga	13.35	92	Pn	Pn	15 07 10.0	-4.3
	36nm,0.3s,baz=226,slow=4.9,SNR=53						
RAR				Sn	Sn	15 09 26.9	-16
	5.7nm,0.3s,baz=78,slow=19,SNR=3.0						
RAR	Rarotonga	13.35	92	Pn	Pn	15 07 09.9	-4.4
FUNA	Funafuti	14.34	332	Pn	Pn	15 07 25.6	-2.3
HAZ	Te Kaha	17.75	202	P	Pn	15 08 12.8	+1.0
HAZ				S	Sn	15 11 13.7	-16
DZM	Mont Dzumac	18.10	264	eP	P	15 08 17.0	+0.3
	160nm,1.2s						
DZM				eLR	LR	15 12 28.2	
	comp=Z,3μm,21.4s						
DZM	Mont Dzumac	18.10	264	P	P	15 08 17.1	+0.4
	1.3nm,0.3s,baz=82,slow=19,SNR=13						
URZ	Urewera	18.44	202	P	Pn	15 08 21.6	+1.3
	1.5nm,0.3s,baz=87,slow=3.6,SNR=13						
URZ				S	Sn	15 11 29.9	-16
	0.7nm,0.3s,baz=55,slow=11,SNR=1.9						
URZ	Urewera	18.44	202	P	P	15 08 19.5	-0.7
KNTN	Kanton	18.66	7	P	P	15 08 21.5	-1.3
SANVU	Saraoutou	18.70	285	P	P	15 08 21.2	-2.1
BKZ	Black Stump Fm	19.46	202	P	P	15 08 31.3	-0.2
BKZ	Black Stump Fm	19.46	202	P	Pn	15 08 33.0	+0.2
HIZ	Hauiti	19.53	207	P	P	15 08 32.9	+0.7
HIZ	Hauiti	19.53	207	P	Pn	15 08 36.0	+2.5
KAHZ	Kahuranaki	19.89	201	P	P	15 08 38.3	+0.5
BHHZ	Black Hill Sta	19.90	203	P	P	15 08 36.7	+0.4
VRZ	Vera Road	20.09	206	P	Pn	15 08 45.2	+5.1
PXZ	Pawanui	20.11	201	P	Pn	15 08 40.8	+0.4
PXZ				S	S	15 12 07.2	-17
TSZ	Takapari Road	20.44	202	P	Pn	15 08 47.0	+2.7
TSZ				S	S	15 12 16.1	-15
BFZ	Birch Farm	20.90	201	P	P	15 08 48.3	+1.1
BFZ				S	S	15 12 22.6	-17
MRZ	Mangatainoka R	21.11	202	P	P	15 08 47.9	-1.5
MRZ				S	S	15 12 24.9	-19
HOWZ	Holdsworth Sta	21.34	202	S	S	15 12 29.2	-20
TMWZ	Te Maipa	21.40	201	P	P	15 08 54.8	+2.3
MSWZ	Moikau Station	21.90	202	P	P	15 08 57.8	0.0
SNZO	South Karori	22.00	203	P	P	15 08 59.8	+0.9
TCW	Tory Channel	22.07	204	P	P	15 08 57.8	-1.9
QRZ	Quartz Range	22.45	207	P	P	15 09 04.0	+0.3
QRZ	Quartz Range	22.45	207	P	P	15 09 07.4	+3.7
BSWZ	Blackbirch Sta	22.66	204	P	P	15 09 03.8	-2.2
TBI	Tubuai	22.85	100	eP	P	15 09 07.7	-0.5
	275nm,1.4s						
TBI				eS	S	15 13 11.6	-6.1
	277nm,22.3s						
TBI				eLQ	LQ	15 13 26.5	
	1μm,24.8s						
TBI				eLR	LR	15 14 36.4	
	comp=Z,3μm,26.5s,baz=276						
TBI	Tubuai	22.85	100	eT	T	15 32 31.1	
	5.8nm,0.4s						
THZ	Tophouse	23.07	205	P	P	15 09 08.8	-1.6
KHZ	Kahutara	23.39	204	P	P	15 09 13.4	0.0
KHZ	Kahutara	23.39	204	P	P	15 09 14.2	+0.7
PAE	Paea	23.39	85	eP	P	15 09 13.5	-0.2
	10nm,1.0s						
PAE	Paea	23.39	85	eT	T	15 33 11.6	
	6.0nm,0.3s						
PPT2	Papeete2	23.41	85	eP	P	15 09 14.0	0.0
	86nm,1.4s						
PPT2				eS	S	15 13 22.2	-5.1
	367nm,23.8s						
PPT2				eLQ	LQ	15 13 35.7	
	2μm,25.2s						
PPT2				eLR	LR	15 14 51.4	
	comp=Z,2μm,23.5s,baz=255						
PPT2	Papeete2	23.41	85	eT	T	15 33 13.9	
	6.4nm,0.4s						
PPT	Papeete	23.41	85	P	P	15 09 14.9	+0.9
	29nm,0.9s,baz=134,slow=8.3,SNR=4.2						
PPT				LR	LR	15 17 14.5	

comp=Z,2μm,18.1s,baz=252,slow=33
DSZ Denniston Nort 23.51 207 P P 15 09 17.7 +2.9
TIAR Tiarei 23.63 85 eP P 15 09 15.7 -0.4
27nm,0.9s
TVO Taravao 23.67 86 eP P 15 09 16.2 -0.3
25nm,1.1s
TVO Taravao 23.67 86 eT T 15 33 32.8
1.6nm,0.4s
LTZ Lake Taylor 24.19 205 P P 15 09 18.4 -2.8
MEH Mehetia 24.75 86 eT T 15 34 53.8
12nm,0.3s
MQZ McQueen's Vall 24.83 203 P P 15 09 26.0 -1.0
MQZ IAmb IAmb 15 10 11.3
comp=Z,103nm,1.6s
RPZ Rata Peaks 25.45 206 P P 15 09 33.2 +0.6
comp=Z,23nm,0.8s,baz=30,slow=4.4,SNR=9.8
RPZ Rata Peaks 25.45 206 P P 15 09 32.2 -0.4
RPZ IAmb IAmb 15 09 35.8
comp=Z,129nm,1.7s
FOZ Fox Glacier 25.82 208 P P 15 09 36.8 +0.8
TARA Tarawa 25.94 329 P P 15 09 36.3 -0.9
ODZ Otahua Downs 26.72 205 P P 15 09 45.5 +1.3
ODZ IAmb IAmb 15 09 53.5
comp=Z,108nm,1.7s
MLZ Mavora Lakes 28.02 207 P P 15 09 56.0 +0.2
MLZ IAmb IAmb 15 10 44.8
comp=Z,55nm,1.2s
WHZ Wether Hill Ro 28.51 207 P P 15 10 00.0 -0.1
WHZ IAmb IAmb 15 10 11.4
comp=Z,41nm,0.8s
ARMA Armidale 32.02 247 P P 15 10 31.3 -0.1
ARMA IAmb IAmb 15 10 40.9
comp=Z,46nm,1.3s
EIDS Eidsvold 32.16 256 P P 15 10 32.4 -0.2
EIDS IAmb IAmb 15 10 47.7
comp=Z,76nm,1.9s
TAOE Nuku Hiva Isla 34.97 74 eLR LR 15 20 19.8
comp=Z,1μm,25.4s
CAN Canberra 35.10 239 P P 15 10 57.1 -1.2
CAN IAmb IAmb 15 11 31.9
comp=Z,54nm,1.6s
CAN Canberra 35.10 239 P P 15 10 57.1 -1.2
CAN pmax pmax
comp=Z,54nm,1.6s
CMSA Cobar Meteorol 37.21 246 P P 15 11 15.1 -1.2
baz=37,SNR=9.4
QLP Quilpie 38.30 254 P P 15 11 24.8 -0.8
baz=38,SNR=3.9
MOO Moorlands 38.55 228 P P 15 11 28.4 +1.0
baz=39,SNR=4.8
PMG Port Moresby 39.10 282 deP P 15 11 31.7 -0.7
PMG pmax pmax
comp=Z,48nm,0.7s
MTSU Mount Surprise 39.20 267 P P 15 11 32.3 -0.9
baz=39,SNR=5.8
STKA Stephens Creek 40.72 246 P P 15 11 43.9 -1.8
baz=41,SNR=12
STKA Stephens Creek 40.72 246 P P 15 11 43.1 -2.5
comp=Z,9.8nm,1.0s,baz=90,slow=11,SNR=15
STKA LR LR 15 27 40.6
comp=Z,1μm,18.1s,baz=80,slow=35
STKA Stephens Creek 40.72 246 P P 15 11 43.3 -2.4
STKA Stephens Creek 40.72 246 P P 15 11 43.3 -2.4
STKA pmax pmax
comp=Z,5.0nm,1.0s
COEN Coen 41.28 273 P P 15 11 48.1 -2.4
baz=41,SNR=4.9
COEN Coen 41.28 273 P P 15 11 48.8 -1.6
HTT Hallett 43.07 244 P P 15 12 03.0 -2.0
baz=43,SNR=9.4
BBOO Buckleboo 45.44 245 P P 15 12 22.3 -1.6
baz=46,SNR=10
BBOO Buckleboo 45.44 245 P P 15 12 21.3 -2.6
BBOO IAmb IAmb 15 12 29.6
comp=Z,27nm,0.9s
AS31 Alice Springs 47.87 257 P P 15 12 41.0 -2.1
ASAR Alice Springs 47.87 257 P P 15 12 40.8 -2.3
comp=Z,12nm,0.7s,baz=96,slow=7.9,SNR=65
ASAR LR LR 15 32 28.8
comp=Z,2μm,18.2s,baz=93,slow=36
ASAR Alice Springs 47.87 257 P P 15 12 40.6 -2.6
WR0 Warramunga Arr 47.91 262 P P 15 12 41.0 -2.3
WR0 IAmb IAmb 15 12 49.2
comp=Z,35nm,1.2s
WB0 Warramunga Arr 48.08 262 P P 15 12 42.1 -2.6
WB0 IAmb IAmb 15 12 50.5
comp=Z,36nm,1.1s
WB2 Warramunga Arr 48.08 262 P P 15 12 42.5 -2.2
WB2 IAmb IAmb 15 12 50.7
comp=Z,38nm,1.0s
WRAB Tennant Creek 48.09 262 diP P 15 12 42.2 -2.6
WRAB pmax pmax
comp=Z,30nm,1.3s
WRA Warramunga Arr 48.09 262 P P 15 12 42.2 -2.6
comp=Z,6.9nm,0.6s,baz=96,slow=7.9,SNR=46
WRA LR LR 15 32 32.8
comp=Z,1μm,18.4s,baz=120,slow=36
WRA Warramunga Arr 48.09 262 P P 15 12 42.4 -2.5
WRA Warramunga Arr 48.09 262 P P 15 12 42.4 -2.5
WRA pmax pmax
comp=Z,2.0nm,1.1s
KDU Kakadu 51.62 271 P P 15 13 10.0 -1.7
baz=52,SNR=3.9
FORT Forrest 52.30 247 P P 15 13 14.5 -2.1
WRKA Warakurna 52.74 254 P P 15 13 17.6 -2.4
baz=53,SNR=30
MTN Manton Dam 52.82 270 P P 15 13 17.9 -2.7
MTN IAmb IAmb 15 13 45.7
comp=Z,82nm,1.4s
KNRA Kununurra 54.24 266 P P 15 13 28.6 -2.5
baz=54,SNR=3.1
KNRA Kununurra 54.24 266 P P 15 13 28.4 -2.5
KNRA IAmb IAmb 15 14 00.3
comp=Z,69nm,1.5s
FITZ Fitzroy Crossi 56.52 262 P P 15 13 46.4 -1.1
baz=57,SNR=5.1
FITZ Fitzroy Crossi 56.52 262 P P 15 13 45.9 -1.6
FITZ IAmb IAmb 15 13 53.4
comp=Z,55nm,1.6s
SIJI Sorong 57.00 284 P P 15 13 49.5 -1.5
comp=Z,39nm,0.7s,baz=92,slow=2.7,SNR=8.6
VNDA Vanda 57.37 186 P P 15 13 55.3 +2.7
comp=Z,11nm,1.1s,baz=18,slow=6.7,SNR=6.2
VNDA Vanda 57.37 186 P P 15 13 53.5 +0.9
VNDA IAmb IAmb 15 14 10.1
comp=Z,84nm,1.7s
AAI Ambon 58.67 279 P P 15 14 00.8 -1.9
comp=Z,34nm,1.2s
RPN Rapa Nui 58.75 109 LR LR 15 35 15.3
comp=Z,1μm,18.1s,baz=264,slow=32
SOEI Soe 60.17 271 P P 15 14 12.1 -1.1
KLBR Kellerberrin 60.99 245 P P 15 14 19.6 +1.2
baz=61,SNR=4.9
PSA00 Pilbara Seismi 61.02 257 P P 15 14 17.0 -1.8
MEEK Meekatharra 61.07 251 P P 15 14 18.6 -0.5
baz=61,SNR=4.8
BLDU Ballidu 62.02 246 P P 15 14 25.8 +0.4
baz=62,SNR=6.4
MORW Morawa 62.86 247 P P 15 14 30.6 -0.5
baz=63,SNR=5.1
CASY Casey 64.73 206 P P 15 14 43.7 +1.0
CASY IAmb IAmb 15 14 51.0
comp=Z,34nm,1.1s
GIRL Giralia 65.82 254 P P 15 14 49.7 -0.8
baz=66,SNR=3.5
KCP Kidapawan 65.98 288 ⇑eP P 15 14 50.0 -1.8
QSPA South Pole Qui 68.68 180 P P 15 15 10.3 +2.2
QSPA IAmb IAmb 15 15 13.5
comp=Z,26nm,1.1s
MJAR Matsushiro Arr 73.14 322 P P 15 15 35.4 -0.1
comp=Z,8.4nm,0.8s,baz=149,slow=5.9,SNR=16
MJAR LR LR 15 47 28.9
comp=Z,252nm,18.3s,baz=110,slow=36
MJAR Matsushiro Arr 73.14 322 IAmb IAmb 15 15 43.0
comp=Z,7.1nm,1.3s
MAJO Matsushiro 73.14 322 ⇑eP P 15 15 35.7 +0.3
MAJO pmax pmax
comp=Z,33nm,1.3s
MAT Matsushiro 73.14 322 P P 15 15 35.5 +0.1
MAT eS S 15 25 01.8 -1.4
SNCC San Nicolas Is 75.24 45 P P 15 15 50.3 +2.6
baz=232
JNU Nakatsue 75.47 315 P P 15 15 47.6 -1.4
comp=Z,3.3nm,0.6s,baz=221,slow=24,SNR=2.1
JNU Nakatsue 75.47 315 IAmb IAmb 15 15 57.8
comp=Z,28nm,1.2s

SCZ2 Santa Cruz Isl 75.63 44 P P 15 15 51.9 +1.9
baz=232
SCI2 San Clemente I 75.72 46 P P 15 15 53.1 +2.6
baz=232
CIS Catalina Islan 76.07 45 P P 15 15 55.0 +2.5
baz=232
BLG Laguna Peak, P 76.07 44 P P 15 15 53.8 +1.3
baz=232
PKM Mcpherson Peak 76.07 43 P P 15 15 54.1 +1.4
baz=231
LPIG La Paz 76.77 57 LR LR 15 45 15.4
comp=Z,773nm,18.0s,baz=230,slow=32
ARVC Arvin 76.85 44 P P 15 15 59.8 +2.9
baz=232
MURC Murrieta 77.00 46 P P 15 16 00.6 +2.8
baz=233
BFSC Mount Baldy Ra 77.07 45 P P 15 16 00.4 +2.1
baz=233
MONP2 Monument Peak 77.10 47 P P 15 16 00.9 +2.3
baz=234
KSM Kuching 77.15 277 P P 15 15 58.0 -1.1
KSM IAmb IAmb 15 16 08.3
comp=Z,27nm,1.1s
IKP In-Ko-Pah, Jac 77.17 47 P P 15 16 01.9 +3.1
baz=234
EDW2 Edwards Air Fo 77.24 44 P P 15 16 02.9 +3.8
baz=232
ISA Isabella, Lake 77.41 44 P P 15 16 02.3 +2.2
baz=232
PFO Pinyon Flats O 77.50 46 LR LR 15 43 52.7
comp=Z,223nm,19.1s,baz=238,slow=31
PFO Pinyon Flats O 77.50 46 P P 15 16 02.8 +2.1
baz=234
SWSC Sam W. Stewart 77.56 47 P P 15 16 03.7 +2.9
baz=234
O02D Mt. Diablo Mer 77.69 38 P P 15 16 04.2 +2.7
baz=228,SNR=12
CMB Columbia Colle 77.70 41 P P 15 16 01.7 +0.1
CMB IAmb IAmb 15 16 18.4
comp=Z,26nm,1.2s
CMB Columbia Colle 77.70 41 P P 15 16 01.7 +0.1
CMB pmax pmax
comp=Z,26nm,1.3s
LRMC Laurel Mtn Rad 77.81 44 P P 15 16 04.5 +2.1
baz=233
AFDM Forest Hills D 77.94 40 P P 15 16 02.4 -0.5
ORV Oroville 78.02 39 P P 15 16 03.5 +0.2
ORV IAmb IAmb 15 16 20.3
comp=Z,57nm,1.9s
ORV Oroville 78.02 39 P P 15 16 03.5 +0.2
ORV pmax pmax
comp=Z,57nm,1.9s
BELC Belle Mtn. Jos 78.04 46 P P 15 16 07.0 +3.3
baz=234
WDC Whiskeytown Da 78.09 38 P P 15 16 03.6 -0.1
WDC Whiskeytown Da 78.09 38 P P 15 16 03.6 -0.1
WDC pmax pmax
comp=Z,22nm,1.2s
PETK Petropavlovsk- 78.13 343 P P 15 16 03.5 -0.1
comp=Z,4.9nm,0.6s,baz=129,slow=5.3,SNR=6.9
PETK LR LR 15 42 57.5
comp=Z,430nm,21.2s,baz=226,slow=30
CWC Cottonwood Cre 78.14 43 P P 15 16 06.7 +2.4
baz=232
BC3 Big Chuckawall 78.20 47 P P 15 16 06.7 +2.1
baz=234
N02D Trinity Center 78.27 37 P P 15 16 06.7 +2.0
baz=228
GSC Goldstone, Bar 78.27 45 P P 15 16 05.5 +0.6
baz=233
GLA Glamis 78.28 47 P P 15 16 06.8 +1.8
baz=235
MPMC Manual Prospec 78.28 44 P P 15 16 06.5 +1.4
baz=233
HEC Hector,Ludlow 78.30 45 P P 15 16 06.6 +1.5
baz=234
O03E Paynes Creek 78.33 38 P P 15 16 06.1 +1.0
baz=229
DAC Darwin (Calif) 78.35 43 P P 15 16 05.3 -0.2
DAC IAmb IAmb 15 16 29.7
comp=Z,35nm,1.7s
DAC Darwin (Calif) 78.35 43 P P 15 16 05.3 -0.2
DAC pmax pmax
comp=Z,35nm,1.7s
YSS Yuzh-Sakhalins 78.38 331 ⇓eP P 15 16 06.9 +1.8
YSS e 15 16 12.3
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=Z,500nm,18.0s
MLAC Mammoth, Mammo 78.40 42 P P 15 16 07.5 +1.7
baz=232
M02C Callahan 78.46 37 P P 15 16 08.0 +2.2
baz=228,SNR=8.5
L02E Cave Junction 78.56 36 P P 15 16 10.6 +4.3
baz=227
IRM Iron Mountain 78.70 46 P P 15 16 10.7 +3.4
baz=235
GMRC Granite Mounta 78.72 46 P P 15 16 11.8 +4.3
baz=234
YBH Yreka Blue Hor 78.77 37 LR LR 15 44 07.1
comp=Z,650nm,20.6s,baz=230,slow=30
PNTR Pine Nut 78.85 40 P P 15 16 08.5 +0.3
BEKR Beckworth 78.89 39 P P 15 16 08.1 -0.3
Y12C Blythe 78.89 47 P P 15 16 12.1 +3.8
baz=235
K02D Willamette Mer 78.90 35 P P 15 16 11.8 +3.6
baz=227
TUQ Turquoise Moun 78.93 45 P P 15 16 11.7 +3.0
baz=234
FURC Furnace Creek, 78.93 44 P P 15 16 11.7 +3.3
baz=233
214A Organ Pipe Nat 79.07 49 P P 15 16 09.1 -0.3
214A Organ Pipe Nat 79.07 49 P P 15 16 12.4 +3.0
baz=236
J01E Myrtle Point 79.07 35 P P 15 16 11.2 +2.2
baz=227
RYN Ryan 79.21 41 P P 15 16 10.6 +0.5
HUMO Hull Mountain 79.22 36 P P 15 16 10.6 +0.7
NVAR Mina Array Bea 79.22 41 P P 15 16 12.8 +2.6
comp=Z,11nm,0.9s,baz=223,slow=8.5,SNR=42
NVAR Mina Array Bea 79.22 41 P P 15 16 10.4 +0.1
M04C Macdoel 79.29 37 P P 15 16 12.2 +1.8
baz=229,SNR=7.5
NV11 Mina Array Sit 79.32 41 P P 15 16 10.5 -0.2
NV11 IAmb IAmb 15 16 26.9
comp=Z,68nm,1.6s
L04D Klamath Falls 79.32 36 P P 15 16 12.3 +1.7
baz=228,SNR=7.3
PAHR Pah Rah Range 79.37 40 P P 15 16 11.1 +0.2
PDMCI Parker Dam,Lak 79.47 47 P P 15 16 13.3 +1.9
baz=235
TPNV Topopah Spring 79.62 44 P P 15 16 13.6 +1.2
TPNV Topopah Spring 79.62 44 P P 15 16 13.6 +1.2
TPNV pmax pmax
comp=Z,18nm,1.3s
TPNV Topopah Spring 79.62 44 P P 15 16 14.1 +1.7
baz=233
KVN Kaiserville 79.73 41 P P 15 16 14.1 +1.1
KVN Kaiserville 79.73 41 P P 15 16 14.1 +1.1
TJN Taejon 79.73 316 ⇑eP P 15 16 14.4 +1.6
I03D Drain, OR 79.75 35 P P 15 16 15.8 +3.1
baz=227
I02D Swisshome 79.76 34 P P 15 16 14.6 +1.8
baz=227
KSRS Korea Array 80.01 317 P P 15 16 15.9 +1.7
comp=Z,5.9nm,0.8s,baz=133,slow=5.8,SNR=17
KSRS LR LR 15 46 12.8
comp=Z,159nm,19.9s,baz=136,slow=32
KSRS Korea Array 80.01 317 P P 15 16 16.0 +1.7
KSAR Wonju Array Be 80.03 317 P P 15 16 14.1 -0.3
KSAR Wonju Array Be 80.03 317 P P 15 16 14.1 -0.3
SHPR Sheep Range 80.06 44 P P 15 16 16.0 +1.2
W13A Hualapai Mount 80.09 46 P P 15 16 15.8 +0.7
J04D Umpqua Nationa 80.11 36 P P 15 16 16.9 +1.9
baz=228,SNR=8.4
MOD Modoc Plateau 80.23 38 P P 15 16 16.5 +0.9
I04A Tendick Farm, 80.31 35 P P 15 16 16.9 +1.1
baz=228
K05A Summer Lake 80.44 37 P P 15 16 17.4 +0.7
K05A IAmb IAmb 15 16 33.9
comp=Z,48nm,1.1s
J05D Fort Rock, OR 80.61 36 P P 15 16 19.7 +2.1
baz=229,SNR=28
H04D Lebanon 80.63 34 P P 15 16 19.6 +2.1
baz=228
TUC Tucson 80.70 50 P P 15 16 18.4 +0.2

TUC Tucson 80.70 50 P P 15 16 18.4 +0.2
TUC pmax pmax
comp=Z,19nm,1.4s
TUC Tucson 80.70 50 P P 15 16 21.2 +3.0
baz=238
G03D McMinnville, O 80.82 34 P P 15 16 21.8 +3.4
baz=227
R11A Troy Canyon, C 80.87 43 P P 15 16 19.6 +0.5
R11A Troy Canyon, C 80.87 43 P P 15 16 20.9 +1.7
baz=234
PINE Pine Mountain 81.11 36 P P 15 16 20.5 +0.2
PINE IAmb IAmb 15 16 27.6
comp=Z,30nm,1.0s
I05D Terrebonne, OR 81.25 35 P P 15 16 22.6 +1.7
baz=229
TYV Tymovskoe 81.40 334 eP P 15 16 21.2 -0.2
TYV pmax pmax
comp=Z,16nm,1.2s
WVOR Wild Horse Val 81.53 38 P P 15 16 22.1 -0.4
WVOR Wild Horse Val 81.53 38 P P 15 16 22.1 -0.4
WVOR pmax pmax
comp=Z,25nm,1.4s
F04D Rainier, OR 81.55 33 P P 15 16 24.1 +1.8
baz=227
F04A Amboy 81.75 34 P P 15 16 23.3 0.0
F04A IAmb IAmb 15 16 30.1
comp=Z,30nm,1.1s
USA0B Ussuriysk Arra 81.80 324 P P 15 16 23.3 -0.3
USA0B Ussuriysk Arra 81.80 324 P P 15 16 23.3 -0.3
USA0B pmax pmax
comp=Z,107nm,2.0s
USRK Ussuriysk Ar. 81.80 324 P P 15 16 24.9 +1.2
comp=Z,2.5nm,0.6s,baz=102,slow=3.3,SNR=12
USRK LR LR 15 49 44.9
comp=Z,573nm,19.3s,baz=127,slow=34
USRK Ussuriysk Ar. 81.80 324 P P 15 16 23.2 -0.4
G05D Wamic, OR 81.86 35 P P 15 16 25.8 +1.7
baz=229
KNB Kanab 81.89 45 P P 15 16 24.5 -0.1
KNB Kanab 81.89 45 P P 15 16 24.5 -0.1
KNB pmax pmax
comp=Z,48nm,1.5s
MAW Mawson 81.93 199 P P 15 16 26.9 +2.9
baz=82,SNR=8.4
MAW Mawson 81.93 199 P P 15 16 26.5 +2.5
comp=Z,5.1nm,0.6s,baz=140,slow=8.9,SNR=14
MAW LR LR 15 51 32.5
comp=Z,704nm,18.8s,baz=82,slow=35
MAW Mawson 81.93 199 P P 15 16 25.8 +1.7
WUAZ Wupatki 82.03 47 P P 15 16 27.6 +2.3
baz=237
SZCU Shurtz Canyon 82.04 45 P P 15 16 25.9 +0.5
I07A Izee 82.09 36 P P 15 16 25.9 +0.6
E04D Cinebar 82.09 33 P P 15 16 27.3 +2.1
baz=228
F05D White Salmon 82.21 34 P P 15 16 27.9 +2.1
baz=228
G06A Carlson Farm, 82.22 35 P P 15 16 25.8 -0.1
LON Longmire 82.61 33 P P 15 16 27.4 -0.5
LON Longmire 82.61 33 P P 15 16 27.5 -0.5
LON pmax pmax
comp=Z,19nm,1.3s
MTPU Mount Pierson 82.88 45 P P 15 16 29.3 -0.7
W18A Petrified Fore 82.94 48 P P 15 16 32.0 +1.9
baz=238
121A Cookes Peak, D 82.98 51 P P 15 16 32.5 +2.1
baz=239
BRLK Bradley Lake 83.07 12 P P 15 16 29.4 -0.6
BRLK IAmb IAmb 15 16 32.8
comp=Z,36nm,1.0s
NJ2 Nanjing 83.29 308 eP P 15 16 31.9 +0.2
NJ2 pmax pmax
comp=Z,24nm,1.2s
MDJ Mudanjiang 83.39 323 P P 15 16 32.7 +0.8
MDJ pmax pmax
comp=Z,32nm,2.2s
MDJ pmax pmax
comp=Z,590nm,6.9s
MDJ Mudanjiang 83.39 323 P P 15 16 29.8 -2.1
B05A Bryant 83.48 32 P P 15 16 33.2 +0.9
baz=228
A04D Lummi Island 83.49 31 P P 15 16 34.5 +2.2
baz=227
E07A Sunnyside 83.50 34 P P 15 16 30.7 -1.8
E07A IAmb IAmb 15 16 39.6
comp=Z,31nm,1.0s
LTY Liberty 83.53 33 P P 15 16 30.8 -1.9
LTY IAmb IAmb 15 16 39.3
comp=Z,19nm,1.1s
HAWA Hanford 83.56 35 P P 15 16 32.8 0.0
HAWA IAmb IAmb 15 16 45.0
comp=Z,33nm,1.2s
DUG Dugway, Tooele 83.69 43 P P 15 16 35.9 +2.0
baz=235
MFID Camas Ranch 83.76 39 P P 15 16 33.5 -0.5
MFID IAmb IAmb 15 16 40.7
comp=Z,29nm,1.4s
BMO Blue Mountains 83.79 37 P P 15 16 34.8 +0.7
BMO IAmb IAmb 15 16 50.0
comp=Z,22nm,1.3s
BMO Blue Mountains 83.79 37 P P 15 16 34.8 +0.7
BMO pmax pmax
comp=Z,23nm,1.3s
C06D Leavenworth 83.86 33 P P 15 16 36.3 +2.0
baz=229
GRNR Gornyy 84.02 331 eP P 15 16 30.5 -4.6
TMUT Trail Mountain 84.22 44 P P 15 16 36.8 0.0
MNTX Cornudas Mount 84.33 53 P P 15 16 38.1 +1.0
baz=241
E09A Wood Farm, Sta 84.37 35 P P 15 16 36.6 -0.3
E09A IAmb IAmb 15 16 43.4
comp=Z,19nm,1.1s
TXAR Lajitas Array 84.50 56 P P 15 16 41.8 +3.7
comp=Z,1.3nm,0.8s,baz=201,slow=10,SNR=4.9
TXAR LR LR 15 50 09.6
comp=Z,221nm,18.0s,baz=0.0,slow=33
TXAR Lajitas Array 84.50 56 P P 15 16 39.2 +1.0
TXAR Lajitas Array 84.50 56 P P 15 16 39.2 +1.0
RC01 Rabbit Creek A 84.52 12 P P 15 16 37.1 -0.2
RC01 IAmb IAmb 15 16 45.0
comp=Z,38nm,1.2s
F10A Beach Ranch, E 84.53 36 P P 15 16 37.9 0.0
F10A IAmb IAmb 15 16 48.7
comp=Z,27nm,1.1s
SRU San Rafael Swe 84.56 44 P P 15 16 38.2 0.0
SRU San Rafael Swe 84.56 44 P P 15 16 38.3 0.0
SRU pmax pmax
comp=Z,43nm,1.5s
QIZ Qiongzhong 84.56 293 P P 15 16 37.4 -1.1
QIZ S S 15 27 01.9 -3.9
QIZ LR LR
comp=Z,240nm,7.7s
QIZ LR LR
comp=Z,200nm,3.7s
QIZ LR LR
comp=Z,350nm,15.2s
P17A Butcher Ranch, 84.62 44 P P 15 16 37.2 -1.4
SUA Susitna One 84.68 11 P P 15 16 38.0 -0.3
SUA IAmb IAmb 15 16 45.5
comp=Z,20nm,0.8s
GLI Glacier Island 84.85 13 P P 15 16 38.4 -0.6
MVCO Mesa Verde 84.89 47 P P 15 16 41.0 +0.8
baz=238
GAMB Gambell 84.91 1 P P 15 16 39.2 +0.1
DL2 Dalian 84.92 315 P P 15 16 39.5 -0.3
DL2 S S 15 27 07.4 -1.1
DL2 pmax pmax
comp=Z,23nm,1.2s
DL2 pmax pmax
comp=Z,240nm,5.6s
DL2 LR LR
comp=Z,280nm,15.8s
DL2 LR LR
comp=Z,380nm,18.2s
DL2 LR LR
comp=Z,370nm,16.1s
B08A Colville Reser 84.93 33 P P 15 16 39.6 -0.2
KNK Knik Glacier 85.06 12 P P 15 16 40.5 +0.4
KNK IAmb IAmb 15 16 47.0
comp=Z,22nm,0.9s
PMR Palmer 85.10 12 P P 15 16 40.5 +0.3
PMR Palmer 85.10 12 P P 15 16 40.5 +0.3
PMR pmax pmax
comp=Z,59nm,1.6s
C09A Chrisman Ranch 85.12 34 P P 15 16 40.6 -0.1

C09A IAmb IAmb 15 16 47.3
comp=Z,28nm,1.3s
ANMO Albuquerque 85.16 50 P P 15 16 42.4 +1.0
ANMO Albuquerque 85.16 50⇑eP P 15 16 43.4 +2.0
ANMO pmax pmax
comp=Z,7.0nm,1.1s
ANMO Albuquerque 85.16 50 P P 15 16 43.5 +2.1
baz=240
KLR Kul'dur 85.19 328 P P 15 16 42.0 +1.0
comp=Z,1.5nm,0.8s,baz=89,slow=1.8,SNR=4.2
KLR LR LR 15 48 21.2
comp=Z,364nm,21.0s,baz=131,slow=31
KLR Kul'dur 85.19 328⇓eP P 15 16 42.5 +1.5
KLR pmax pmax
comp=Z,30nm,2.8s
TTA Tatalina 85.25 8 P P 15 16 41.0 -0.1
TTA Tatalina 85.25 8 P P 15 16 41.0 -0.1
GHO Glory Hole Cre 85.30 12 P P 15 16 41.2 -0.1
MA2 Magadan 85.67 343⇓eP P 15 16 44.1 +1.0
MA2 pmax pmax
comp=Z,9.0nm,0.9s
WHN Wuhan 85.94 305 ⇓P P 15 16 46.3 +1.2
WHN S S 15 27 19.7 +0.8
WHN pmax pmax
comp=Z,230nm,1.8s
WHN LR LR
comp=Z,880nm,15.2s
ANM Nome 85.95 4 P P 15 16 44.5 +0.1
ANM IAmb IAmb 15 17 08.4
comp=Z,32nm,1.8s
ANM Nome 85.95 4 P P 15 16 44.5 +0.1
ANM pmax pmax
comp=Z,32nm,1.8s
VRDI Verde Repeater 85.96 14 P P 15 16 44.5 -0.3
VRDI IAmb IAmb 15 17 04.5
comp=Z,32nm,1.3s
PLCA Paso Flores 85.99 132 P P 15 16 47.6 +2.2
comp=Z,4.2nm,1.0s,baz=48,slow=4.3,SNR=3.5
PLCA LR LR 15 48 44.3
comp=Z,398nm,18.5s,baz=288,slow=31
PLCA Paso Flores 85.99 132 IAmb IAmb 15 17 15.2
comp=Z,56nm,1.9s
NEW Newport 86.01 34 P P 15 16 47.4 +2.3
baz=232
BALM Baldy 86.05 15 P P 15 16 45.2 +0.1
BALM IAmb IAmb 15 16 51.8
comp=Z,24nm,1.1s
GLB Gilahina Butte 86.07 14 P P 15 16 45.6 +0.4
MCARA McCarthy VSAT 86.20 14 P P 15 16 45.6 -0.1
MCARA IAmb IAmb 15 16 52.5
comp=Z,36nm,1.2s
CTGM Chitina Glacie 86.24 15 P P 15 16 46.6 +0.5
CTGM IAmb IAmb 15 16 54.8
comp=Z,32nm,1.2s
BARN Barnard Glacie 86.24 15 P P 15 16 46.7 +0.5
BARN IAmb IAmb 15 16 53.0
comp=Z,32nm,1.0s
S22A 4UR Ranch, Cre 86.31 47 P P 15 16 49.5 +2.3
baz=240
O20A White River Ci 86.59 44 P P 15 16 51.3 +2.8
baz=238
TIA Tai'an 86.60 311 P P 15 16 48.2 -0.1
TIA pmax pmax
comp=Z,20nm,1.4s
KTH Kantishna Hill 86.60 10 P P 15 16 47.7 -0.1
KTH IAmb IAmb 15 16 49.6
comp=Z,25nm,1.2s
TRF Thorofare Moun 86.61 10 P P 15 16 48.6 +0.6
SYO Syowa Base 86.62 192⇑eP P 15 16 49.6 +1.7
SYO Syowa Base 86.62 192⇓ePcP PcP 15 16 51.6 +1.3
RND Reindeer 86.82 11 P P 15 16 50.4 +1.5
RND Reindeer 86.82 11 P P 15 16 50.4 +1.5
RND pmax pmax
comp=Z,81nm,1.2s
MSO Missoula 86.86 37 P P 15 16 51.3 +1.8
baz=234
IPM Ipoh 86.86 276 P P 15 16 50.2 0.0
IPM IAmb IAmb 15 16 57.4
comp=Z,24nm,0.9s
VNA3 Neumayer Olymp 86.97 175 P P 15 16 51.8 +2.1
SNAA Sanae 86.98 177 P P 15 16 52.0 +2.2
SNAA Sanae 86.98 177 P P 15 16 50.0 +0.2
SNAA IAmb IAmb 15 16 57.2
comp=Z,19nm,1.1s
SNAA Sanae 86.98 177⇑eP P 15 16 51.4 +1.7
PAX Paxson 87.07 13 P P 15 16 50.1 0.0
PAX Paxson 87.07 13 P P 15 16 50.1 0.0
PAX pmax pmax
comp=Z,14nm,1.1s
BPAW Bear Paw Mtn. 87.10 10 P P 15 16 49.8 -0.3
BPAW IAmb IAmb 15 17 03.0
comp=Z,20nm,1.2s
MCK McKinley 87.11 11 P P 15 16 50.3 +0.1
MCK McKinley 87.11 11 P P 15 16 50.3 +0.1
MCK pmax pmax
comp=Z,47nm,1.0s
PDAR Pinedale Array 87.15 42 P P 15 16 52.7 +1.5
comp=Z,1.6nm,0.8s,baz=238,slow=2.8,SNR=12
PDAR LR LR 15 53 48.4
comp=Z,302nm,18.3s,baz=246,slow=34
PDAR Pinedale Array 87.15 42 P P 15 16 50.2 -1.0
SDCO Great Sand Dun 87.22 48 P P 15 16 53.0 +1.3
baz=240
MSTX Muleshoe 87.35 52 P P 15 16 53.0 +0.8
baz=242
833A Chaparral WMA, 87.39 58 P P 15 16 52.5 +0.2
baz=244
MENT Mentasta 87.41 13 P P 15 16 51.8 +0.1
MENT IAmb IAmb 15 17 04.4
comp=Z,18nm,1.0s
VNA2 Neumayer--Watz 87.45 176 P P 15 16 54.4 +2.5
baz=184,slow=2.3
KULM Kulim 87.51 277 P P 15 16 52.4 -0.9
VNA1 Neumayer--Stat 87.66 175 P P 15 16 55.8 +2.9
WHY Whitehorse 87.71 18 P P 15 16 53.3 0.0
RIDG Independent Ri 87.89 13 P P 15 16 54.1 +0.2
RIDG IAmb IAmb 15 17 00.5
comp=Z,21nm,1.1s
WRH Wood River Hil 87.94 11 P P 15 16 54.4 +0.3
BCAR Beaver Creek A 87.95 14 P P 15 16 53.3 -1.0
MLY Manley 88.01 10 P P 15 16 53.9 -0.6
MLY IAmb IAmb 15 17 00.2
comp=Z,28nm,1.4s
HDA Harding Lake 88.09 11 P P 15 16 55.1 +0.3
HDA IAmb IAmb 15 17 01.7
comp=Z,15nm,0.8s
HDA Harding Lake 88.09 11 P P 15 16 55.7 +0.9
baz=205,SNR=10
SEY Seymchan 88.12 345⇓eP P 15 16 55.9 +0.9
CCB Clear Creek Bu 88.15 11 P P 15 16 55.3 +0.2
RPSI Rantau Prapat 88.17 274 P P 15 16 56.0 -0.4
RPSI IAmb IAmb 15 17 02.8
comp=Z,20nm,1.0s
RPSI Rantau Prapat 88.17 274 P P 15 16 56.4 0.0
PSI Prapat 88.20 274 P P 15 16 56.4 -0.3
comp=Z,7.1nm,0.6s,baz=177,slow=4.7,SNR=11
TCOL CIGO, UAF Yank 88.34 11 P P 15 16 56.9 +0.9
baz=204
COLA College 88.35 11 P P 15 16 56.2 +0.2
COLA College 88.35 11 P P 15 16 56.2 +0.2
COLA pmax pmax
comp=Z,50nm,1.3s
MDM Murphy Dome 88.36 11 P P 15 16 55.4 -0.7
IL31 88.43 11 P P 15 16 56.1 -0.3
ILAR Eielson Array 88.43 11 P P 15 16 57.8 +1.4
comp=Z,6.7nm,0.9s,baz=221,slow=5.3,SNR=30
RLMT Red Lodge 88.60 40 P P 15 16 59.5 +1.5
baz=238
POKR Poker Plat Res 88.64 11 P P 15 16 58.5 +1.1
baz=205,SNR=5.9
ABTX Abilene, Hawle 89.07 54 P P 15 17 01.8 +1.5
baz=244
BJT Baijiatuau 89.11 314 P P 15 17 00.3 +0.1
BJT Baijiatuau 89.11 314 P P 15 17 00.3 +0.1
BJT pmax pmax
comp=Z,62nm,1.8s
BJI Beijing 89.12 314 P P 15 17 01.0 +0.8
BJI pmax pmax
comp=Z,14nm,2.2s
PRP Porcupine Dome 89.35 11 P P 15 17 01.5 +0.6
DAWY Dawson 89.36 14 P P 15 17 01.9 +1.0
DAWY IAmb IAmb 15 17 08.7
comp=Z,36nm,1.4s
EGAK Eagle 89.58 13 P P 15 17 02.6 +0.8
EGAK IAmb IAmb 15 17 20.2
comp=Z,30nm,1.4s
ENH Enshi 89.58 303 P P 15 17 02.6 -0.1
KSCO Kaye Shedlock' 89.81 48 P P 15 17 04.9 +1.2
baz=242
ZEA Zeya 90.22 330 eP P 15 17 07.1 +2.0
ZEA pmax pmax
comp=N,37nm,1.4s
ZEA pmax pmax
comp=Z,37nm,1.4s
GYA Guiyang 90.28 298 P P 15 17 08.4 +2.2
GYA PP PP 15 20 44.8 +4.4
GYA SKS SKSac 15 27 39.0 +1.2
GYA S ScS 15 28 05.7 +1.1
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,5.6s
BILL Bilibino 90.34 353 P P 15 17 05.4 +0.1
BILL Bilibino 90.34 353⇑eP P 15 17 06.4 +1.1
BILL e 15 20 46.0
BILL pmax pmax
comp=Z,13nm,1.3s
LAO LASA Array 91.23 40 P P 15 17 10.5 +0.4
baz=240
RSSD Black Hills 91.30 43 P P 15 17 12.1 +1.4
baz=241
TOLK Toolik Lake Re 91.54 9 P P 15 17 11.8 +0.8
TOLK IAmb IAmb 15 17 18.4
comp=Z,31nm,1.6s
TOLK Toolik Lake Re 91.54 9 P P 15 17 12.3 +1.4
baz=203
XAN Xi'an 91.60 306 P P 15 17 13.0 +1.0
XAN sP pwP 15 17 19.5 -1.1
XAN PP PP 15 20 51.3 +0.6
XAN S S 15 28 02.0 -10
XAN pmax pmax
comp=Z,28nm,1.5s
XAN pmax pmax
comp=Z,250nm,5.7s
XAN LR LR
comp=Z,350nm,6.5s
XAN LR LR
comp=Z,160nm,6.3s
XAN LR LR
comp=Z,150nm,8.8s
XAN Xi'an 91.60 306 P P 15 17 12.7 +0.6
XAN Xi'an 91.60 306 P P 15 17 12.7 +0.6
XAN pmax pmax
comp=Z,45nm,1.3s
EPYK Eagle Plains 91.92 14 P P 15 17 13.1 +0.3
EPYK IAmb IAmb 15 17 15.9
comp=Z,34nm,1.5s
EPYK Eagle Plains 91.92 14 P P 15 17 14.2 +1.4
baz=215,SNR=6.7
HHC Hu-ho-hao-te 92.61 313 i P P 15 17 18.5 +1.8
HHC pmax pmax
comp=Z,6.0nm,1.2s
HHC pmax pmax
comp=Z,63nm,5.6s
CMAR Chiang Mai Arr 93.86 288 P P 15 17 23.8 +1.0
comp=Z,3.7nm,0.7s,baz=116,slow=3.0,SNR=33
CMAR LR LR 15 58 46.1
comp=Z,119nm,18.8s,baz=95,slow=35
CHTO Chiang Mai 93.99 289 P P 15 17 22.8 -0.6
CHTO Chiang Mai 93.99 289 P P 15 17 22.8 -0.6
CHTO pmax pmax
comp=Z,39nm,1.6s
KSU1 Kansas State U 94.05 50 P P 15 17 25.7 +2.5
baz=246
YAK Yakutsk 94.34 337⇓iP P 15 17 24.0 +0.1
YAK pmax pmax
comp=Z,11nm,1.3s
CD2 Chengdu 94.36 301 P P 15 17 25.0 +0.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s
W39A Magazine 94.57 54 P P 15 17 27.4 +1.8
baz=247
YKA Yellowknife Ar 95.83 24 P P 15 17 32.8 +2.1
comp=Z,2.6nm,1.1s,baz=237,slow=4.4,SNR=15
ECSD EROS Data Cent 95.94 45 P P 15 17 31.6 -0.1
ECSD IAmb IAmb 15 17 37.4
comp=Z,15nm,1.2s
ECSD EROS Data Cent 95.94 45 P P 15 17 32.6 +0.9
baz=246
LPAZ La Paz 98.34 111 P Pdif 15 17 48.6 +4.6
comp=Z,2.9nm,1.2s,baz=207,slow=3.3,SNR=3.6
LPAZ LR LR 15 55 19.0
comp=Z,543nm,18.3s,baz=247,slow=31
SONM Songino Array 98.85 318 P Pdif 15 17 45.8 +0.8
comp=Z,0.4nm,1.0s,baz=126,slow=4.2,SNR=4.3
SONM LR LR 16 01 48.3
comp=Z,142nm,18.2s,baz=94,slow=35
ULM Lac du Bonnet 98.97 40 LR LR 15 58 32.2
comp=Z,651nm,19.2s,baz=254,slow=33
GTA Gaotai 100.38 308 eP Pdif 15 17 53.8 +1.8
GTA pP pwP 15 18 03.3 +2.8
GTA sP sP 15 18 07.1 +12
GTA SKS 15 28 32.2
GTA pmax pmax
comp=Z,2.0nm,1.5s
GTA LR LR
comp=Z,110nm,19.4s
GTA LR LR
comp=Z,270nm,18.7s
Q55A Buckhannon 106.15 54 P PKiKP 15 22 30.2 +0.8
baz=256
R56A Bull Pasture M 106.52 55 P PKiKP 15 22 33.0 +2.9
baz=256
WMQ Urumqi 110.28 310 ePKP PKiKP 15 22 36.9 -0.1
WMQ LR LR
comp=Z,200nm,28.7s
WMQ LR LR
comp=Z,200nm,24.5s
ZALV Zalesovo Beam 113.49 321 PKiKP PKiKP 15 22 42.1 -0.5
comp=Z,0.6nm,0.4s,baz=135,slow=1.6,SNR=3.7
MKAR Makanchi Array 114.48 313 PKP PKPdf 15 22 44.8 -0.1
comp=Z,0.4nm,0.5s,baz=167,slow=0.9,SNR=11
MKAR PKKPbc PKKPab 15 33 30.7 +2.0
comp=Z,0.8nm,1.0s,baz=263,slow=2.1,SNR=3.9
MKAR Makanchi Array 114.48 313 PKPdf 15 22 44.3 -0.5
KURK Kurchatov 117.13 317⇓iPKIKP PKPdf 15 22 48.9 -0.8
BRVK Borovoye 122.17 320 PKiKP 15 23 00.1 +0.6
BRVK Borovoye 122.17 320 PKIKP PKiKP 15 23 00.1 +0.6
KKAR Karatay Array 122.66 308 PKiKP 15 23 01.0 +0.1
KKAR Karatay Array 122.66 308 PKIKP PKiKP 15 23 01.0 +0.1
KBL Kabul 123.53 298 PKiKP 15 23 03.5 +0.4
KBL Kabul 123.53 298 PKIKP PKiKP 15 23 03.5 +0.4
BOSA Boshof 126.89 201 PKP PKiKP 15 23 11.2 +1.3
comp=Z,5.3nm,1.0s,baz=121,slow=21,SNR=2.4
ARU Arti 128.00 326 i PKIKP PKiKP 15 23 11.2 +0.2
ARU 15 30 22.5
ARU SP SP 15 35 11.4 -6.3
ABKAR Akbulak array 129.25 317 PKiKP 15 23 13.6 -0.1
ARCES ARCESS Array B 130.42 351 PKP PKiKP 15 23 16.1 +0.5
comp=Z,1.7nm,0.6s,baz=27,slow=1.4,SNR=13
KIRV Kirov 131.53 331⇓ePKIKP PKiKP 15 23 19.5 +1.5
GEYT Alibeck 132.35 302 PKP PKiKP 15 23 20.9 +0.5
comp=Z,1.4nm,0.7s,baz=225,slow=1.9,SNR=4.0
FINES FINESS Array B 137.60 346 PKP PKPdf 15 23 29.2 +0.9
comp=Z,3.4nm,1.0s,baz=4.8,slow=2.3,SNR=3.1
OBN Obninsk 139.24 333⇑iPKIKP PKiKP 15 23 34.5 +0.7
OBN e 15 26 21.5
OBN pmax pmax
comp=Z,43nm,1.9s
OBN MLR MLR
comp=Z,320nm,18.0s
VSU Vasula 140.03 343⇓iPKIKP PKiKP 15 23 35.3 0.0
NOA NORSAR Array B 140.22 356 PKP PKiKP 15 23 36.6 +0.9
comp=Z,0.8nm,1.0s,baz=297,slow=20,SNR=2.9
GNI Garni 142.13 308 PKPdf 15 23 37.2 -0.3
GNI Garni 142.13 308⇑iPKIKP PKPdf 15 23 38.1 +0.6
KIV Kislovodsk 142.18 315 i PKIKP PKiKP 15 23 40.9 +0.6
KIV pmax pmax
comp=Z,17nm,1.1s
SOC Sochi 144.28 316 ePKIKP PKPab 15 23 37.6 -1.2
SOC e 15 26 52.8
SOC eSSS SSS 15 51 02.0
ANN Anapa 145.11 319 i PKIKP PKPab 15 23 41.8 0.0
ANN e 15 23 47.2
ANN pmax pmax
comp=Z,82nm,1.5s
AKASG Malin Array Be 145.50 334 PKPbc PKPbc 15 23 42.1 -0.7
comp=Z,3.2nm,0.5s,baz=38,slow=3.8,SNR=56
AKASG Malin Array Be 145.50 334 PKPbc PKPbc 15 23 42.0 -0.9
AKBB Malin Array Si 145.50 334 PKPbc PKPbc 15 23 42.1 -0.7
AKBB Malin Array Si 145.50 334 PKP2 PKPbc 15 23 42.1 -0.7
SIM Simferopol' 146.99 322 i PKP2 PKiKP 15 23 49.6 -0.5
BSEG Bad Segeberg 147.34 355 ePKPbc PKiKP 15 23 50.5 +0.1
baz=12,slow=2.4
SORM Soroca 147.81 331 ⇑P PKiKP 15 23 51.1 -0.5
SORM Soroca 147.81 331 ⇑PKP2 PKiKP 15 23 51.1 -0.5
LVV L'vov 148.22 338 ePKP2 PKPbc 15 23 51.4 +0.7
GAZ Gaziantep 148.68 307 PKPdf PKPdf 15 23 47.2 -1.4
NRDL Niedersach Rie 148.79 355 ePKPbc PKiKP 15 23 54.3 +0.9
baz=12,slow=2.4
ASSE Asse, Remlinge 149.10 354 ePKPbc PKiKP 15 23 54.7 +0.6
baz=12,slow=2.4
OJC Ojcow 149.22 342 PKPbc 15 23 53.5 +0.2
OJC Ojcow 149.22 342 PKP2 PKPbc 15 23 53.5 +0.2
ILGA Ilgaz 149.40 316 PKPbc PKPbc 15 23 53.1 -1.2
CLZ Clausthal 149.42 355 ePKPbc PKiKP 15 23 56.0 +1.1
baz=12,slow=2.4
BUR08 Bucovina Ar. S 149.54 334 PKiKP 15 23 55.6 +0.2
BURAR Bucovina Array 149.56 334 ⇑P PKiKP 15 23 56.3 +0.9
BURAR Bucovina Array 149.56 334 PKPdf PKPdf 15 23 50.3 +0.5
BURAR Bucovina Array 149.56 334 ⇑PKP2 PKiKP 15 23 56.3 +0.9
KOLS Kolonicke sedl 149.58 338 ePKP2 PKiKP 15 23 55.8 +0.5
KOLS Kolonicke sedl 149.58 338 ePKP PKiKP 15 23 55.8 +0.5
CLL Collm 149.64 351 ePKPbc PKiKP 15 23 56.5 +1.2
baz=12,slow=2.4
CLL Collm 149.64 351 ePKPdf PKPdf 15 23 52.0 +2.4
CLL i PKPbc PKiKP 15 23 55.0 -0.3
comp=Z,54nm,1.5s
CLL i PKPab PKPab 15 23 59.8 +0.5
comp=Z,59nm,1.5s
GTTG Gottingen 149.75 355 ePKPbc PKiKP 15 23 56.7 +1.2
baz=12,slow=2.4
OSTC Ostas 149.79 347⇑ePKP PKiKP 15 23 57.4 +1.7
CHVC Chvalec 149.79 347⇑ePKP PKiKP 15 23 57.3 +1.6
CHVC ePKPAB pPKPab 15 24 01.7 -0.6
TESR Tescani 149.79 331 ⇓P PKiKP 15 23 56.0 +0.1
UZH Uzhgorod 149.83 338 ePKHKP PKPdf 15 23 52.7 +2.7
UZH e 15 23 59.8
UPC Upice 149.88 347⇑ePKP PKiKP 15 23 57.0 +1.1
UPC Upice 149.88 347 ePKP2 PKiKP 15 23 57.0 +1.1
NEUB Neuenburg 149.90 353 ePKPbc PKiKP 15 23 57.3 +1.4
baz=12,slow=2.4
BRG Berggiesshubel 149.92 350 ePKP PKPdf 15 23 52.3 +2.2
comp=Z,28nm,1.8s
BRG Berggiesshubel 149.92 350 i PKP PKiKP 15 23 56.8 +0.9
comp=Z,74nm,1.6s
BRG ePKS PKSdf 15 27 24.4 -0.4
comp=Z,42nm,2.1s
BRG ePKKP PKKPdf 15 32 34.0 -5.7
comp=Z,100nm,2.5s
BRG Berggiesshubel 149.92 350 ePKPbc PKiKP 15 23 56.1 +0.2
baz=12,slow=2.4
BRG Berggiesshubel 149.92 350 ePKHKP PKPdf 15 23 52.3 +2.2
BRG i 15 23 56.8
BRG e 15 27 24.4
BRG pmax pmax
comp=Z,28nm,1.8s
BRG pmax pmax
comp=Z,74nm,1.6s
BRG pmax pmax
comp=Z,42nm,2.1s
BRG pmax pmax
comp=Z,100nm,2.5s
DPC Dobruska-Polom 149.96 347⇑ePKP PKiKP 15 23 57.4 +1.3
DPC ePKPAB pPKPab 15 24 02.3 -0.7
DPC Dobruska-Polom 149.96 347 ePKP2 PKiKP 15 23 57.4 +1.3
BRTR Keskin Array B 150.12 314 PKPbc PKPbc 15 23 55.9 -0.1
comp=Z,3.3nm,0.8s,baz=126,slow=2.1,SNR=15
KRLC Kraliky 150.12 346⇑ePKP PKiKP 15 23 58.3 +1.9
KRLC Kraliky 150.12 346 ePKIKP PKiKP 15 23 58.3 +1.9
PVCC Panska Ves 150.14 349⇑ePKP PKiKP 15 23 57.9 +1.5
PVCC Panska Ves 150.14 349 ePKIKP PKiKP 15 23 57.9 +1.5
TOPG Topolog 150.15 327 ⇓P PKiKP 15 23 57.7 +1.1
TRPA Tarpa 150.17 337 ⇑P PKiKP 15 23 57.6 +1.1
MORC Moravsky Berou 150.22 345 ePKP PKiKP 15 23 57.5 +0.9
MORC Moravsky Berou 150.22 345 ⇓P PKiKP 15 23 57.1 +0.5
MORC Moravsky Berou 150.22 345 PKPbc 15 23 55.9 +0.1
MORC Moravsky Berou 150.22 345 PKIKP PKPbc 15 23 55.9 +0.1
VRI Vrincioaia 150.24 330 ⇑P PKPbc 15 23 56.2 +0.2
VRI Vrincioaia 150.24 330 ⇑PKIKP PKPbc 15 23 56.2 +0.2
PLOR Plostina 150.29 330 ⇓P PKiKP 15 23 58.2 +1.3
PLOR Plostina 150.29 330 ⇓PKIKP PKiKP 15 23 58.2 +1.3
UBBA Unterbreizbach 150.46 355 ePKPbc PKiKP 15 23 58.1 +1.2
baz=12,slow=2.4
MOX Moxa 150.47 353 ePKPbc PKiKP 15 23 57.5 +0.5
baz=12,slow=2.4
OZUR 150.50 331 ⇑P PKPab 15 24 02.0 -1.1
HARR Harsova 150.51 327 ⇑P PKiKP 15 23 59.4 +2.1
HARR Harsova 150.51 327 ⇑PKIKP PKiKP 15 23 59.4 +2.1
TANN Tannenbergstha 150.59 351 ePKPbc PKiKP 15 23 57.2 -0.1
baz=12,slow=2.4
ANTO Ankara 150.61 315 PKPbc 15 23 56.9 -0.2
ANTO Ankara 150.61 315 PKIKP PKPbc 15 23 56.9 -0.2
GUNZ Gunzen 150.65 352 ePKPbc PKiKP 15 23 57.8 +0.3
baz=12,slow=2.4
PRU Pruhonice 150.66 349⇑ePKP PKiKP 15 23 57.6 +0.1
PRU ePKPAB pPKPab 15 24 05.0 -0.8
PRU Pruhonice 150.66 349 ePKIKP PKiKP 15 23 57.6 +0.1
PRU e 15 24 05.0
GOPC GO Pecny, Ondr 150.69 348⇑ePKP PKiKP 15 23 59.4 +1.8
GOPC ePKPAB PKPab 15 24 02.5 -1.2
GOPC GO Pecny, Ondr 150.69 348 ePKIKP PKiKP 15 23 59.4 +1.8
GOPC e 15 24 02.5
WERN Wernitzgruen 150.72 352 ePKPbc PKiKP 15 23 59.0 +1.4
baz=12,slow=2.4
NKC Novy Kostel 150.77 351⇑ePKP PKiKP 15 23 58.7 +1.0
NKC Novy Kostel 150.77 351 ePKIKP PKiKP 15 23 58.7 +1.0
DOPR Dopca 150.78 332 ⇑P PKiKP 15 23 59.4 +1.6
VRAC Vranov 150.88 346 ePKP PKiKP 15 23 58.5 +0.5
MLR Muntele Rosu 150.89 330 ⇓P PKPbc 15 23 55.6 -2.1
MLR Muntele Rosu 150.89 330 PKPbc 15 23 55.9 -1.7
MLR Muntele Rosu 150.89 330 ⇓PKIKP PKPbc 15 23 55.6 -2.1
AHRW Bad Neuenahr-A 150.90 358 ePKPbc PKiKP 15 24 00.6 +2.7
baz=12,slow=2.4
JAVC Velka Javorina 151.03 344 ePKP PKiKP 15 24 00.6 +2.2
VYHS Vyhne 151.05 342 ePKIKP PKiKP 15 23 59.0 +0.7
VYHS Vyhne 151.05 342 ePKP PKiKP 15 23 59.0 +0.7
MANZ Manzenberg 151.05 352 ePKPbc PKiKP 15 24 00.2 +1.9
baz=12,slow=2.4
KRUC Moravsky 151.16 346 ePKP PKPbc 15 23 58.2 +0.2
DRGR 151.23 336 ⇓P PKiKP 15 23 59.5 +0.6
DRGR 151.23 336 ⇓PKIKP PKiKP 15 23 59.5 +0.6
PSZ Piszkesteto 151.25 340 ⇑P PKPab 15 24 06.1 -0.1
PSZ Piszkesteto 151.25 340 ⇑PKIKP PKPab 15 24 06.1 -0.1
ROTZ Rotzenmuhle 151.25 351 ePKPbc PKiKP 15 24 00.4 +1.7
baz=12,slow=2.4
VOIR 151.34 331 ⇑P PKiKP 15 24 00.4 +1.3
VOIR 151.34 331 ⇑PKIKP PKiKP 15 24 00.4 +1.3
DOU Dourbes 151.34 2 PKPab PKPab 15 24 04.0 -2.4
ARR Arges 151.58 332 ⇑P PKiKP 15 24 01.9 +2.3
MODS Modra-Piesok 151.58 344 ePKIKP PKiKP 15 23 59.9 +0.4
MODS Modra-Piesok 151.58 344 ePKP PKiKP 15 23 59.9 +0.4
KHC Kasperske Hory 151.66 349 ePKPDF PKPdf 15 23 54.5 +1.6
KHC ⇑ePKP PKPbc 15 23 58.1 -1.1
KHC ePKPAB sPKPbc 15 24 04.2 +1.9
KHC Kasperske Hory 151.66 349 PKPbc 15 23 58.2 -1.1
KHC Kasperske Hory 151.66 349 ePKIKP PKPbc 15 23 58.1 -1.1
KHC e 15 24 04.2
WET Wettzell 151.76 350 ePKPbc PKiKP 15 24 01.7 +1.9
baz=12,slow=2.4
GEC2 GERESS Array S 151.91 349 ePKPbc PKiKP 15 24 01.7 +1.5
baz=12,slow=2.4
GEC2 GERESS Array S 151.91 349 PKPbc 15 23 58.5 -1.4
GERES GERESS Array B 151.91 349 PKP PKPdf 15 23 53.5 +0.1
comp=Z,0.6nm,0.8s,baz=308,slow=4.9,SNR=3.7
GERES PKPbc pPKPbc 15 24 01.4 -0.7
comp=Z,3.4nm,0.9s,baz=22,slow=1.4,SNR=12
GERES GERESS Array B 151.91 349 PKPdf 15 23 53.0 -0.4
GERES PKPbc PKPbc 15 23 59.7 -0.1
SIRR Siria 152.06 336 ⇑P PKiKP 15 24 00.8 +0.3
CONA Conrad Observa 152.34 345 pPKPdf PKPdf 15 23 54.9 +0.8
comp=Z,25nm,1.5s
GZR Gura Zlata 152.35 334 ⇓P PKPbc 15 23 57.8 -3.1
GZR Gura Zlata 152.35 334 ⇓PKIKP PKPbc 15 23 57.8 -3.1
BZS Buzias 152.62 336 ⇑P PKPbc 15 24 00.4 -1.0
BZS Buzias 152.62 336 ⇑PKIKP PKPbc 15 24 00.4 -1.0
MOA Molln 152.76 348 pPKPdf pPKPdf 15 23 56.5 -0.4
comp=Z,9.5nm,1.6s
ARSA Arzberg 153.06 345 pPKPdf pPKPdf 15 23 56.8 -0.6
comp=Z,1.2nm,0.5s
BFO Black Forest 153.06 356 ePKPbc PKiKP 15 24 03.9 +1.4
baz=12,slow=2.4
RJOB Jochberg 153.14 350 ePKPbc PKiKP 15 24 03.8 +1.0

	baz=12,slow=2.4						
UBR	Ueberruh	153.56	354	ePKPbc	PKiKP	15 24 05.7	+2.1
	baz=12,slow=2.4						
RETA	Reutte	153.68	353	PKPbc	PKPbc	15 24 00.9	-2.9
	comp=Z,14nm,1.6s						
KBA	Koelnbreinsper	153.68	348	pPKPdf	pPKPdf	15 23 57.0	-1.4
	comp=Z,8.3nm,1.4s						
SOKA	Soboth	153.71	346	pPKPbc	PKiKP	15 24 04.1	+0.1
	comp=Z,12nm,1.4s						
WATA	Walderalm	153.72	351	pPKiKP	PKiKP	15 24 07.9	+3.8
	comp=Z,8.3nm,0.9s						
MOTA	Moosalm	153.78	352	pPKiKP	PKiKP	15 24 08.9	+4.7
	comp=Z,20nm,1.4s						
SQTA	Sankt Quirin	153.88	352	pPKPdf	PKPdf	15 23 57.1	+0.7
	comp=Z,12nm,1.3s						
DAVA	Damuels	153.97	354	PKiKP	PKPbc	15 24 04.3	-0.3
	comp=Z,16nm,1.3s						
OBKA	Obir	153.98	346	PKPbc	PKPbc	15 24 01.4	-3.1
	comp=Z,6.1nm,1.0s						
FETA	Feichten	154.14	352	epPKPdf	pPKPdf	15 24 00.2	+1.1
	comp=Z,8.8nm,1.2s						
ABTA	Abfaltersbach	154.15	350	ePKPdf	PKPdf	15 23 56.6	-0.1
	comp=Z,2.3nm,0.6s						
LIC	Lamto	161.57	143	eP	PKPdf	15 24 07.5	+0.8
	comp=Z,12nm,0.7s						
KIC	Kosan Boka	161.84	144	eP	PKPdf	15 24 07.4	+0.4
	comp=Z,19nm,1.2s						
TIC	Toumodi	161.92	143	eP	PKPdf	15 24 09.7	+2.6
DBIC	Dimbokro	162.03	143	PKP	PKPdf	15 24 09.0	+1.8
	comp=Z,7.4nm,1.2s,baz=297,slow=2.3,SNR=3.6						
DBIC				PKPab	PKPab	15 24 53.5	+0.3
	comp=Z,3.6nm,0.9s,baz=127,slow=2.7,SNR=3.0						
TORD	Torodi Ar. Bea	170.86	153	PKP	PKPdf	15 24 13.8	-0.1
	comp=Z,3.3nm,1.1s,baz=357,slow=0.4,SNR=9.3						
TORD				PKPab	sPKPab	15 25 34.5	-0.7
	comp=Z,3.4nm,1.1s,baz=230,slow=3.4,SNR=5.7						
TORD				PP	PP	15 29 31.8	+10
	comp=Z,1.6nm,1.2s,baz=173,slow=3.0,SNR=3.6						

ATH 05 15:17:19.7,36°.53N×26°.82E,h132km±5km,ML3.3/8,Error ellipse: s-maj=5.4km s-min=1.9km az=144.0
IDC 05 15:17:20.4±3.8,35°.92N×27°.50E,h129km±41km,mb3.2/3, mb1 3.1/4,mb1mx2.9/30,mbtmp3.5/4,Error ellipse: s-maj=54.9km s-min=22.5km az=136.0
ISK 05 15:17:20.9,36°.58N×26°.88E,h114km±1km,ML2.8/13
DDA 05 15:17:21.8,35°.88N×27°.30E,h28km±4km,ML2.7
THE 05 15:17:22.0,36°.55N×26°.87E,h139km±3km,ML3.0/7,Error ellipse: s-maj=3.0km s-min=0.7km az=18.0
ISC 05 15:17:20.4±0.9,36°.57N±0°.04×26°.90E±0°.03,h122km±6km, n59,σ1.44/85,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOSK	Kos Island	0.19	18	PG	Pn	15 17 37.2	-0.1
DAT	Datca	0.56	73	PG	Pn	15 17 39.5	+0.3
DAT	Datca	0.56	73	iP	Pn	15 17 39.4	+0.3
BODT	Bodrum	0.59	33	P	Pn	15 17 39.5	+0.3
BODT				S	Sn	15 17 53.8	+0.3
BODT	Bodrum	0.59	33	PG	Pn	15 17 39.5	+0.3
BODT				SG	Sn	15 17 52.9	-0.6
AMGA	Amorgos Island	0.85	288	P	Pn	15 17 41.6	+0.3
AMGA				S	Sn	15 17 56.6	-0.5
	158nm,0.9s						
AMGA	Amorgos Island	0.85	288	P	Pn	15 17 41.6	+0.3
KARP	Karpathos	1.04	168	P	Pn	15 17 43.3	+0.2
KARP				S	Sn	15 17 59.3	-1.0
	608nm,0.3s						
KARP	Karpathos	1.04	168	P	Pn	15 17 43.4	+0.3
KARP				AML	AML	15 18 03.4	
	comp=E,897µm,0.1s						
KARP				AML	AML	15 18 04.2	
	comp=N,1766µm,0.2s						
KARP	Karpathos	1.04	168	PG	Pn	15 17 43.7	+0.6
KARP				SG	Sn	15 17 59.9	-0.4
ARG	Arkhangelos	1.05	109	P	Pn	15 17 43.8	+0.7
ARG				S	Sn	15 18 00.7	+0.4
	comp=N,502nm,0.5s						
ARG	Arkhangelos	1.05	109	P	Pn	15 17 43.7	+0.6
ARG				AML	AML	15 18 01.6	
	comp=N,979µm,0.6s						
ARG				AML	AML	15 18 03.1	
	comp=E,987µm,0.3s						
ARG	Arkhangelos	1.05	109	PG	Pn	15 17 43.8	+0.7
ARG				SG	Sn	15 18 00.3	0.0
MRSB	Marmaris-Mugla	1.05	82	PG	Pn	15 17 43.9	+0.7
GCAM	G?zelcaml?	1.16	13	PN	Pn	15 17 44.4	+0.2
SANT	Santorini	1.18	261	P	Pn	15 17 44.9	+0.4
SANT	Santorini	1.18	261	PN	Pn	15 17 44.7	+0.2
APE	Apeiranthos	1.21	295	P	Pn	15 17 45.1	+0.3
APE	Apeiranthos	1.21	295	PN	Pn	15 17 44.9	+0.1
THR3	Thira Island,	1.22	263	P	Pn	15 17 45.1	+0.3
THR6	Thira Island,	1.23	261	P	Pn	15 17 45.6	+0.5
YER	Yerkesik	1.24	63	P	Pn	15 17 45.9	+0.8
YER				S	Sn	15 18 04.1	+0.1
YER	Yerkesik	1.24	63	PN	Pn	15 17 46.0	+0.8
THR5	Thira Island,	1.26	264	P	Pn	15 17 45.4	0.0
IOSP	Ios Island	1.31	277	P	Pn	15 17 46.1	+0.2
IOSP				S	Sn	15 18 04.9	-0.2
	comp=E,238nm,0.7s						
IOSP	Ios island	1.31	277	P	Pn	15 17 46.0	+0.2
TURN	Turunc	1.40	77	PN	Pn	15 17 43.9	-2.9
TURN				SN	Sn	15 18 00.9	-6.0
TURN	Turunc	1.40	77	iP	Pn	15 17 43.4	-3.4
TURN				iS	Sn	15 17 59.8	-7.1
DALY	Dalyan (Mula)	1.43	79	PN	Pn	15 17 48.3	+1.2
DALY	Dalyan (Mula)	1.43	79	iP	Pn	15 17 47.9	+0.8
DALY				iS	Sn	15 18 08.0	+0.5
DALY				IAML		15 18 12.0	
	comp=N,105nm,0.3s						
STIA	Sitia Lasithi	1.52	206	P	Pn	15 17 48.5	+0.3
STIA				S	Sn	15 18 08.8	-0.5
ZKR	Zakros	1.56	201	P	Pn	15 17 49.2	+0.6
ZKR				S	Sn	15 18 10.3	+0.1
	comp=N,378nm,0.7s						
ZKR	Zakros	1.56	201	P	Pn	15 17 49.3	+0.6
ZKR				S	Sn	15 18 10.2	+0.1
ZKR				AML	AML	15 18 12.5	
	comp=E,1303µm,0.4s						
ZKR				AML	AML	15 18 17.1	
	comp=N,220µm,0.5s						
AYDB	Zeytinkoy-Aydi	1.58	29	PN	Pn	15 17 49.2	+0.1
NPS	Neapolis	1.67	219	P	Pn	15 17 49.9	-0.2
NPS				S	Sn	15 18 12.0	-0.6
	comp=N,592nm,0.3s						
NPS	Neapolis	1.67	219	P	Pn	15 17 50.0	0.0
NPS				S	Sn	15 18 11.5	-1.1
NPS				AML	AML	15 18 12.4	
	comp=N,1141µm,0.3s						
NPS				AML	AML	15 18 13.0	
	comp=E,1203µm,0.2s						
FETY	Fethiye	1.75	87	iP	Pn	15 17 51.0	0.0
FETY				iS	Sn	15 18 14.0	-0.4
LAST	Lasithi	1.82	220	P	Pn	15 17 51.7	-0.2
LAST				S	Sn	15 18 14.8	-1.1
	comp=E,210nm,0.7s						
LAST	Lasithi	1.82	220	P	Pn	15 17 51.6	-0.3
LAST				S	Sn	15 18 15.0	-0.8
LAST				AML	AML	15 18 17.8	
	comp=N,515µm,0.5s						
LAST				AML	AML	15 18 20.3	
	comp=E,330µm,0.7s						
TAVA	DENIZLI_Tavas	1.84	60	iP	Pn	15 17 52.2	+0.1
TAVA				iS	Sn	15 18 15.8	-0.5
IDI	Anoyia	2.08	233	P	Pn	15 17 54.6	-0.4
IDI				S	Sn	15 18 19.5	-2.0
IDI				AML	AML	15 18 19.9	
	comp=N,392µm,0.5s						
IDI				AML	AML	15 18 21.2	
	comp=E,697µm,0.5s						
AKAS	Kas	2.21	98	PN	Pn	15 17 57.6	+0.9
AKAS	Kas	2.21	98	iP	Pn	15 17 56.6	-0.1
AKAS				iS	Sn	15 18 23.5	-0.9
AKAS				IAML		15 18 30.0	
	comp=N,68nm,0.3s						
GOLH	Golhisar	2.23	72	iP	Pn	15 17 57.5	+0.5
GOLH				iS	Sn	15 18 23.2	-1.8
VAM	Vamos	2.48	243	P	Pn	15 17 59.7	-0.3
IMMV	Iera Moni Meta	2.62	246	P	Pn	15 18 01.5	-0.3
IMMV				AML	AML	15 18 38.4	
	comp=E,833µm,0.4s						
IMMV				AML	AML	15 18 38.4	
	comp=N,810µm,0.6s						
KORT	Korkueli	2.80	80	iP	Pn	15 18 04.3	0.0
KORT				iS	Sn	15 18 39.5	+1.4
GVD	Gavdhos	2.87	234	P	Pn	15 18 05.5	+0.4
GVD				AML	AML	15 18 40.9	
	comp=N,764µm,0.3s						
GVD				AML	AML	15 18 43.0	
	comp=E,910µm,0.3s						
ANKY	Antikythira Is	3.00	258	P	Pn	15 18 06.2	-0.5
ANKY				S	Sn	15 18 40.0	-2.4
DID	Didima	3.08	289	P	Pn	15 18 07.7	-0.2
KTHA	Kythira Island	3.12	265	P	Pn	15 18 08.4	+0.2
VLI	Veliai	3.19	274	P	Pn	15 18 09.3	-0.1
VLX	Vlachokerasia	3.71	284	P	Pn	15 18 16.7	+0.4
ITM	Ithomi	4.04	280	P	Pn	15 18 21.1	+0.6
PYL	PYLOS	4.16	276	P	Pn	15 18 21.3	-0.8
BRTR	Keskin Array B	6.17	57	P	Pn	15 18 49.3	0.0
	comp=E,0.2nm,0.3s,baz=228,slow=15,SNR=9.3						
FINES	FINESS Array B	24.90	359	P	P	15 22 36.8	+5.2
	comp=E,1.0nm,0.7s,baz=213,slow=15,SNR=1.4						
TORD	Torodi Ar. Bea	32.48	231	P	P	15 23 38.5	-0.9
	comp=E,0.8nm,0.4s,baz=34,slow=9.3,SNR=12						
MKAR	Makanchi Array	41.82	58	P	P	15 24 56.8	-1.2
	comp=E,0.2nm,0.6s,baz=271,slow=7.9,SNR=5.0						

SKO 05 15:22:36.0,41°.48N×22°.32E,h0km,1C,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.25	130	⇑iPg	Pg	15 22 40.6	-0.2
VAY				iSg	Sg	15 22 43.5	-0.4
VAY				eLg	Lg	15 22 43.5	
	comp=E,24nm,0.3s						

ISK 05 15:23:32.8,38°.95N×43°.58E,h5km,ML3.6/18
DDA 05 15:23:33.7,38°.95N×43°.60E,h10km,ML3.4
TEH 05 15:23:33.7,38°.98N×43°.60E,h8km,ML3.5
NSSP 05 15:23:33.0,39°.00N×43°.40E,h10km,Ms3.3
IASPEI 05 15:23:34.5±0.9,38°.95N±0°.02×43°.61E±0°.03,h6km±6km, Error ellipse: s-maj=4.0km s-min=2.9km az=127.2,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009
ISC 05 15:23:34.5±0.9,38°.94N±0°.02×43°.60E±0°.02,h3km±8km, n96,σ1.17/124,6C-6D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.06	333	iP	Pg	15 23 35.5	-0.4
VMUR				IAML		15 23 37.0	
	comp=E,51µm,0.6s						
VMUR				iS	Sg	15 23 37.4	+0.5
VMUR				IAML		15 23 39.0	
	comp=N,39µm,0.6s						
CLDR	Caldiran	0.32	50	PG	Pg	15 23 40.1	-0.7
CLDR				SG	Sg	15 23 45.9	+1.0
CLDR	Caldiran	0.32	50	iP	Pg	15 23 39.9	-0.9
CLDR				iS	Sg	15 23 45.3	+0.3
CLDR				IAML		15 23 47.0	
	comp=N,7µm,0.2s						
CLDR				IAML		15 23 47.0	
	comp=E,4µm,0.6s						
CLDR	Caldiran	0.32	50	ePg	Pg	15 23 40.0	-0.7
VANB	Van	0.38	206	PG	Pg	15 23 42.9	+1.0
VANB				SG	Sb	15 23 51.2	+0.9
VANB	Van	0.38	206	ePg	Pg	15 23 43.0	+1.0
TVAN	Van	0.44	201	iP	Pg	15 23 42.9	-0.1
TVAN				iS	Sb	15 23 50.7	-1.3
TVAN				IAML		15 23 52.0	
	comp=E,8µm,0.5s						
TVAN				IAML		15 23 52.0	
	comp=N,7µm,0.6s						
DYDN	Diyadin	0.61	6	iP	Pg	15 23 45.4	-0.8
DYDN				iS	Sg	15 23 53.8	-0.3
DYDN				IAML		15 23 55.0	
	comp=E,3µm,0.2s						
DYDN				IAML		15 23 55.0	
	comp=N,2µm,0.5s						
ADCV	BITLIS_Adilcev	0.70	259	iP	Pg	15 23 47.2	-0.8
ADCV				iS	Sg	15 23 58.0	+0.9
ADCV				IAML		15 23 58.0	
	comp=E,3µm,0.4s						
ADCV				IAML		15 23 58.0	
	comp=N,3µm,0.7s						
GEVA	Gevas	0.76	214	iP	Pg	15 23 47.4	-1.7
GEVA				iS	Sg	15 23 59.9	+1.0
GEVA				IAML		15 24 01.0	
	comp=N,855nm,0.8s						
TUTA	Tutak	0.77	307	iP	Pg	15 23 47.9	-1.4
TUTA				iS	Sg	15 23 59.8	+0.5
AKDM	Akdamar-Van	0.78	219	PG	Pg	15 23 48.4	-1.1
AKDM	Akdamar-Van	0.78	219	ePg	Pg	15 23 48.3	-1.2
AGRB	Hanur-Agry	0.79	323	PG	Pg	15 23 48.8	-1.0
AGRB	Hanur-Agry	0.79	323	ePg	Pg	15 23 48.7	-1.0
MLAZ	Malazgirt-MUS	0.84	284	PG	Pg	15 23 50.2	-0.6
MLAZ	Malazgirt-MUS	0.84	284	ePg	Pb	15 23 52.0	+0.1
BASK	Baskale_VAN	0.94	160	iP	Pg	15 23 51.8	-0.8
BASK				iS	Sb	15 24 07.7	+1.2
IGDI	IGDIR	1.00	21	iP	Pg	15 23 52.3	-1.4
IGDI				iS	Sb	15 24 07.2	-0.8
IGDI				IAML		15 24 12.0	
	comp=E,1µm,0.6s						
TASB	TASBURUN-IGDIR	1.15	25	PN	Pg	15 23 56.3	-0.3
TASB	TASBURUN-IGDIR	1.15	25	ePn	Pn	15 23 57.5	-0.1
VNNZ	Vanand	1.17	8	⇑iP	Pn	15 23 56.5	-0.6
EKAR	Karacoban	1.24	285	iP	Pg	15 23 58.3	0.0
EKAR				iS	Sn	15 24 16.7	+0.4
EKAR				IAML		15 24 27.0	
	comp=N,1µm,0.7s						
EKAR				IAML		15 24 32.0	
	comp=E,2µm,0.6s						
HYR	Heyderabad	1.24	51	ePn	Pg	15 23 56.7	-1.6
EATA	Eleskirt	1.26	317	iP	Pg	15 23 56.9	-1.9
EATA				iS	Sb	15 24 15.7	-0.2
EATA				IAML		15 24 18.0	
	comp=E,306nm,0.5s						
EATA				IAML		15 24 19.0	
	comp=N,515nm,0.5s						
METS	Metsamor	1.26	17	⇑iP	Pn	15 24 00.1	+1.0
METS				⇑iS	Sn	15 24 19.3	+2.7
BLIS	Bitlis-Merkez	1.28	246	iP	Pg	15 23 56.8	-2.3
BLIS				iS	Sg	15 24 14.3	-1.3
BLIS				IAML		15 24 23.0	
	comp=N,799nm,1.0s						
BLIS				IAML		15 24 24.0	
	comp=E,443nm,0.7s						
GURO	Guroymak-BITLI	1.29	253	PN	Pg	15 23 57.7	-1.5
GURO				SN	Sb	15 24 16.4	-0.1
GURO	Guroymak-BITLI	1.29	253	ePn	Pg	15 23 57.2	-2.0
NRKZ	NAREK	1.34	37	⇓iP	Pn	15 23 59.0	-1.1
ARUZ	Aruch	1.39	16	⇑iP	Pn	15 24 01.0	-0.2
ARUZ				⇓iS	Sn	15 24 20.9	+1.0
DIGO	Kars	1.48	353	iP	Pn	15 24 02.0	-0.3
DIGO				iS	Sg	15 24 27.2	+5.0
DIGO				IAML		15 24 31.0	
	comp=N,350nm,0.8s						
DIGO				IAML		15 24 34.0	
	comp=E,391nm,0.8s						
NAX	Nakhchivan	1.49	80	ePn	Pn	15 24 01.9	-0.3
GNI	Garni	1.49	36	⇓iP	Pn	15 24 01.9	-0.5
GNI				⇓iS	Sg	15 24 22.2	-0.3
GNI	Garni	1.49	36	PN	Pn	15 24 01.9	-0.5
SBZ	Shahbuz	1.58	73	ePn	Pn	15 24 02.6	-0.9
KAPZ	Kaputan	1.62	31	⇓iP	Pb	15 24 04.4	-0.7
KAPZ				⇓iS	Sg	15 24 27.2	+0.6
SRTM	Siirt_Merkez	1.62	235	iP	Pn	15 24 03.5	-0.6
SRTM				iS	Sn	15 24 25.0	-0.5
SRTM				IAML		15 24 31.0	
	comp=E,380nm,1.0s						
SRTM				IAML		15 24 34.0	
	comp=N,510nm,0.6s						
MUSM	Mu-Merkez	1.65	263	iP	Pn	15 24 03.4	-1.1
MUSM				iS	Sn	15 24 25.0	-1.2
IMRD	Marand	1.66	97	e		15 24 36.2	
IMRD				ePn	Pn	15 24 04.0	-0.6
VRTB	Varto-Mus	1.69	278	PN	Pn	15 24 04.6	-0.4
VRTB	Varto-Mus	1.69	278	iP	Pg	15 24 07.7	+0.9
VRTB	Varto-Mus	1.69	278	ePn	Pn	15 24 04.8	-0.2
CUKT	Cukurca	1.69	180	PN	Pn	15 24 04.7	-0.3
CUKT	Cukurca	1.69	180	iP	Pn	15 24 03.6	-1.4
CUKT				iS	Sg	15 24 30.9	+2.1
CUKT				IAML		15 24 34.0	
	comp=N,1µm,1.0s						
CUKT				IAML		15 24 35.0	
	comp=E,1µm,0.7s						
CUKT	Cukurca	1.69	180	ePn	Pn	15 24 04.9	-0.1
SIRT	Sirnak	1.70	213	PN	Pn	15 24 05.1	-0.1
SIRT	Sirnak	1.70	213	ePn	Pn	15 24 05.7	+0.5
KOPR	Koprukoy-ERZUR	1.71	308	PN	Pn	15 24 05.0	-0.4
KOPR	Koprukoy-ERZUR	1.71	308	ePn	Pn	15 24 05.7	+0.3
HOMI	Horasan	1.72	311	iP	Pn	15 24 05.4	-0.1
HOMI				iS	Sg	15 24 33.5	+3.8
HOMI				IAML		15 24 40.0	
	comp=E,529nm,0.8s						
HOMI				IAML		15 24 42.0	
	comp=N,511nm,0.8s						
SIRN	Sırnak	1.72	213	iP	Pn	15 24 04.4	-1.0
SIRN				iS	Sg	15 24 30.5	+0.8
EAK	Akyaka	1.74	0	iP	Pb	15 24 06.6	-0.7
EAK				iS	Sg	15 24 32.3	+1.7
ORD	Ordubad	1.86	90	ePn	Pn	15 24 07.4	0.0
SENK	Senkaya-Erzuru	1.89	330	PN	Pn	15 24 07.4	-0.4
SENK	Senkaya-Erzuru	1.89	330	ePn	Pb	15 24 09.4	-0.3
BNGL	BINGOL	1.91	271	iP	Pn	15 24 08.1	-0.1
BNGL				iS	Sg	15 24 36.1	+0.1
KARO	Karliova-Bingo	2.02	281	PN	Pn	15 24 09.3	-0.3
SVAN	Silvan-Diyarba	2.04	248	PN	Pn	15 24 09.9	+0.1
SVAN	Silvan-Diyarba	2.04	248	iP	Pb	15 24 11.2	-1.1
SVAN	Silvan-Diyarba	2.04	248	ePn	Pn	15 24 10.4	+0.6
AKDA	Akdag	2.09	305	iP	Pb	15 24 12.3	-0.8
ITBZ	Tabriz	2.11	109	ePn	Pn	15 24 11.2	+0.3
STE	Stepanavan	2.14	16	eP	Pn	15 24 10.6	-0.6
STE				eS	Sb	15 24 41.0	0.0
BNGB	Bingl	2.28	272	PN	Pn	15 24 13.1	0.0
EMRE	Erzurum,Aziziy	2.31	299	iP	Pb	15 24 16.5	-0.4
BGD	Bogdanovka	2.32	360	P	Pb	15 24 17.7	+0.6
BGD	Bogdanovka	2.32	360	ePn	Pb	15 24 17.7	+0.6
YEDI	Yedisu-Bingol	2.43	283	PN	Pn	15 24 15.4	+0.2
YEDI	Yedisu-Bingol	2.43	283	ePn	Pn	15 24 16.5	+1.3
GDB	GEDABAY	2.43	42	ePn	Pn	15 24 15.0	-0.2
BINT	Bingol	2.43	269	ePn	Pn	15 24 15.0	-0.2
TVRZ	Varzaqan	2.44	99	ePn	Pb	15 24 17.4	-1.6
TVRZ				e		15 24 58.3	
AKH	Akhalkalaki	2.47	358	P	Pb	15 24 20.2	+0.6
AKH	Akhalkalaki	2.47	358	⇑P	Pg	15 24 20.6	-1.3
AKH	Akhalkalaki	2.47	358	PN	Pn	15 24 15.8	0.0
DAGI	Agillar	2.50	329	iP	Pb	15 24 18.8	-1.3
KZRT	Kazreti	2.52	14	P	Pb	15 24 19.7	-0.7
DBAD	Bademkaya	2.54	325	iP	Pb	15 24 19.7	-1.1
HANI	Diyarbakir_Han	2.56	259	iP	Pb	15 24 18.1	+1.1
TRLG	Trialeti	2.62	8	P	Pb	15 24 21.6	-0.6
KOPT	Kop Dagi	2.63	295	iP	Pb	15 24 21.4	-1.1
MAHB	Mahabad	2.73	142	ePn	Pb	15 24 21.6	+2.2
MARD	Mardin	2.76	235	iP	Pb	15 24 18.2	-1.5
IHRS	Heris	2.76	102	ePn	Pn	15 24 20.8	+0.9
IHRS				e		15 24 32.9	
MAZI	Mazidag	2.89	240	PN	Pn	15 24 22.1	+0.5
BCA	Borcka	2.93	329	⇑P	Pb	15 24 27.5	+0.2
BCA	Borcka	2.93	329	PN	Pn	15 24 22.1	+0.2
IHSH	Hashtrud	2.94	101	ePn	Pg	15 24 29.4	-1.4
IHSH				e		15 24 43.9	
BATM	Batumi	3.04	332	P	Pb	15 24 29.6	+0.4
DDFL	Dedoflistskaro	3.16	37	P	Pb	15 24 28.1	-3.2
ISRB	Sarab	3.38	108	ePn	Pb	15 24 29.8	+1.4
LGD	Lagodekhi	3.52	34	P	Pb	15 24 36.4	-1.1
ONI	Oni	3.65	358	P	Pb	15 24 40.2	+0.6
HSRG	Sareghieh	5.25	133	ePn	Pb	15 24 56.9	+2.8
IKFM	Kafar-mosalman	6.40	146	ePn	Pn	15 25 11.2	+1.6

SJA 05 15:33:49.7±0.4,23°.65S×69°.32W,h77km±3km,ML3.3, MW3.4
GUC 05 15:33:50.2±0.7,23°.64S×69°.27W,h78km±4km,ML3.1
ISC 05 15:33:52.1±1.4,23°.63S±0°.04×69°.33W±0°.05,h70km±13km, n17,σ0.74/27,1C-3D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	IPOC Station P	0.44	343	⇓iP	Pn	15 34 04.2	-0.4
PB15				iS	Sn	15 34 14.4	+0.6
PB15	IPOC Station P	0.44	343	eP	Pn	15 34 03.8	-0.9
PB15				eS	Sn	15 34 14.4	+0.6
PB15				IAML		15 34 15.8	
	comp=Z,5µm,0.2s						
PB06	IPOC Station P	0.95	346	⇓iP	Pn	15 34 09.5	-0.7
PB06				iS	Sn	15 34 23.8	+0.4
PB06				IAML		15 34 25.6	
	comp=E,786nm,0.2s						
PB06	IPOC Station P	0.95	346	eP	Pn	15 34 09.3	-0.8
PB06				eS	Sn	15 34 23.8	+0.4
PB06				IAML		15 34 26.5	
	comp=Z,427nm,0.1s						
LVC	Limon Verde	1.09	21	eP	Pn	15 34 11.3	-0.8
LVC				eS	Sn	15 34 27.4	+0.5
PB05	IPOC Station P	1.11	314	eP	Pn	15 34 11.7	-0.5
PB05				iS	Sn	15 34 27.8	+0.6
PB05				IAML		15 34 32.7	
	comp=E,465nm,0.3s						
PB05	IPOC Station P	1.11	314	eP	Pn	15 34 11.8	-0.4
PB05				IAML		15 34 33.0	
	comp=Z,251nm,0.1s						
PB10	IPOC Station P	1.13	276	eP	Pn	15 34 11.8	-0.4
PB10				iS	Sn	15 34 28.4	+1.0
PB10				IAML		15 34 32.2	
	comp=N,337nm,0.4s						
PB14	IPOC Station P	1.40	225	⇑iP	Pn	15 34 15.3	-0.8
PB14				iS	Sn	15 34 35.0	+1.0
PB14				IAML		15 34 36.1	
	comp=E,209nm,0.3s						
PB14	IPOC Station P	1.40	225	eP	Pn	15 34 15.1	-0.9
PB14				IAML		15 34 37.1	
	comp=Z,319nm,0.3s						
GO02	Mina Guanaco	1.54	189	eP	Pn	15 34 17.0	-1.0
GO02				iS	Sn	15 34 38.3	+0.9
GO02				IAML		15 34 40.1	
	comp=E,687nm,0.1s						
PB03	IPOC Station P	1.62	346	⇓iP	Pn	15 34 18.3	-0.6
PB03				iS	Sn	15 34 39.9	+0.8
PB03				IAML		15 34 42.5	
	comp=N,317nm,0.2s						
PB07	IPOC Station P	1.96	345	eP	Pn	15 34 22.7	-0.8
PB07				iS	Sn	15 34 47.8	+0.6
PB07				IAML		15 34 56.6	
	comp=N,159nm,0.2s						
PB01	IPOC Station P	2.58	357	IAML		15 35 14.0	
	comp=E,177nm,0.1s						
HJA	Humahuaca	3.62	84	eP	Pn	15 34 46.0	-0.2
YJA	Yavi	3.80	68	eP	Pn	15 34 48.5	-0.2
AZAP	Zapla	3.94	99	eP	Pn	15 34 50.1	-0.4

MDD 05 15:34:15.7±1.4,36°.68N×9°.67W,h42km±26km,mb4.2/4, Error ellipse: s-maj=12.4km s-min=11.0km az=22.0, PRXIMO
IGIL 05 15:34:16.3,36°.72N×9°.60W,h18km,ML1.9
INMG 05 15:34:16.2±1.0,36°.67N×9°.66W,h31km±17km,ML2.1, Error ellipse: s-maj=11.9km s-min=3.5km az=57.0
ISC 05 15:34:15.4±3.0,36°.74N±0°.10×9°.60W±0°.10,h33km±8km, n34,σ0.80/64,4C,West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.73	57	⇑eP	Pn	15 34 30.1	+0.6
PFVI				eS	Sn	15 34 40.8	+1.3
PFVI				A	A	15 34 41.9	
	41nm,0.5s						
PFVI	Vila Bisbo	0.73	57	⇑P	Pn	15 34 30.1	+0.6
	12nm,0.1s,SNR=18						
PFVI				S	Sb	15 34 40.3	+0.8
	32nm,0.1s,SNR=12						
MORF	Marmelete	0.94	53	eP	Pb	15 34 33.1	-0.3
MORF				eS	Sb	15 34 45.7	+0.1
MORF				AML	AML	15 34 47.2	
	comp=E,22nm,0.1s						
MORF	Marmelete	0.94	53	eP	Pb	15 34 33.1	-0.3
MORF				eS	Sb	15 34 46.0	+0.4
MORF				A	A	15 34 46.0	
	comp=E,21nm,0.1s						
MORF	Marmelete	0.94	53	P	Pb	15 34 33.1	-0.3
MORF				S	Sb	15 34 45.7	+0.1

comp=E,22nm,0.1s
PTEO Sao Teotonio 1.06 41 eP Pn 15 34 35.1 +1.1
PTEO eS Sb 15 34 48.7 -0.2
PTEO A A 15 34 52.1
comp=E,18nm,0.6s
PTEO Sao Teotonio 1.06 41 P Pn 15 34 35.1 +1.1
PTEO S Sb 15 34 48.7 -0.2
comp=E,8.9nm,0.6s
PBDV Barranco-do-Ve 1.42 69⇑eP Pn 15 34 39.7 +0.7
PBDV eS Sn 15 34 57.2 +0.5
PBDV A A 15 35 08.2
comp=E,5.8nm,0.7s
PBDV Barranco-do-Ve 1.42 69 P Pn 15 34 39.7 +0.7
PBDV S Sn 15 34 57.2 +0.5
comp=E,5.8nm,0.7s
PCVE Castro Verde 1.53 54 eP Pn 15 34 41.4 +1.0
PCVE eS Sn 15 35 00.2 +1.0
PCVE A A 15 35 01.8
comp=E,7.8nm,0.4s
PCVE Castro Verde 1.53 54 P Pn 15 34 41.4 +1.0
PCVE S Sn 15 35 00.2 +1.0
comp=E,7.8nm,0.4s
PNCL Nicolau / Gran 1.61 31 ePn Pn 15 34 42.1 +0.5
PNCL eSn Sn 15 35 01.6 +0.4
PNCL A A 15 35 02.4
comp=E,8.6nm,0.1s
PNCL Nicolau / Gran 1.61 31 P Pn 15 34 42.1 +0.5
PNCL S Sn 15 35 01.6 +0.4
comp=E,8.6nm,0.1s
PVAQ Vaqueiros 1.64 66⇑ePn Pn 15 34 42.6 +0.6
PVAQ eSn Sn 15 35 02.2 +0.2
PVAQ A A 15 35 03.7
comp=E,5.7nm,0.2s
PVAQ Vaqueiros 1.64 66 P Pn 15 34 42.6 +0.6
PVAQ S Sn 15 35 02.2 +0.2
comp=E,5.7nm,0.2s
EGRO El Granado 1.86 64 P Pn 15 34 45.8 +0.7
comp=E,0.7nm,0.1s,SNR=7.9
EGRO S Sn 15 35 07.5 0.0
comp=E,4.6nm,0.1s,SNR=7.9
PBEJ Beja 1.88 46 eSn Sn 15 35 08.4 +0.4
PBEJ A A 15 35 09.7
comp=E,5.3nm,0.2s
PBEJ Beja 1.88 46 S Sn 15 35 08.4 +0.4
comp=E,2.7nm,0.2s
EVO Evora 2.19 35 ePn Pn 15 34 49.8 +0.3
EVO eSn Sn 15 35 15.2 -0.2
EVO A A 15 35 16.1
comp=E,17nm,0.1s
EVO Evora 2.19 35 P Pn 15 34 49.8 +0.3
EVO S Sn 15 35 15.2 -0.2
comp=E,17nm,0.1s
PMAFR Mafra 2.23 6 ePn Pn 15 34 50.3 +0.3
PMAFR eSn Sn 15 35 16.5 +0.1
PMAFR A A 15 35 17.7
comp=E,48nm,0.5s
PMAFR Mafra 2.23 6 P Pn 15 34 50.2 +0.1
comp=E,4.5nm,0.2s,SNR=7.9
PMAFR S Sn 15 35 16.0 -0.4
comp=E,18nm,0.2s,SNR=4.0
EMIN Mina Concepcio 2.55 65 P Pn 15 34 54.4 -0.1
comp=E,0.6nm,0.1s,SNR=7.0
EMIN S Sn 15 35 24.0 -0.3
comp=E,0.9nm,0.1s,SNR=7.9
PMTG Montargil 2.57 25 ePn Pn 15 34 55.8 +1.1
PMTG eSn Sn 15 35 24.9 +0.1
PMTG A A 15 35 26.1
comp=E,2.7nm,0.4s
PMTG Montargil 2.57 25 P Pn 15 34 55.8 +1.1
PMTG S Sn 15 35 24.9 +0.1
comp=E,2.7nm,0.4s
PESTR Estremoz 2.65 36 ePn Pn 15 34 55.9 0.0
PESTR eSn Sn 15 35 26.3 -0.6
EBAD Badajoz 2.87 45 P Pn 15 34 59.3 +0.4
comp=E,0.2nm,0.2s
EBAD S Sn 15 35 31.5 -0.8
comp=E,9.6nm,0.2s,SNR=7.4
ESPR Espera 3.00 86 P Pn 15 35 01.1 +0.4
comp=E,5.2nm,0.2s
ESPR S Sn 15 35 34.2 -1.4
comp=E,0.4nm,0.0s,SNR=4.9
PMRV Marv??o 3.20 32 ePn Pn 15 35 03.7 +0.3
PMRV eSn Sn 15 35 39.0 -1.4
PMRV A A 15 35 41.3
comp=E,2.9nm,0.3s
PMRV Marv??o 3.20 32 P Pn 15 35 03.7 +0.3
PMRV S Sn 15 35 39.0 -1.4
comp=E,2.9nm,0.3s
ECAB El Cabril 3.58 67 S Sn 15 35 48.7 -1.2
comp=E,2.8nm,0.3s,SNR=7.9
EADA Adamuz 4.24 69 P Pn 15 35 17.9 +0.2
comp=E,4.1nm,0.2s,SNR=7.9
EADA S Sn 15 36 05.1 -1.1
comp=E,0.9nm,0.1s,SNR=7.9
EPLA Plasencia 4.32 39 S Sn 15 36 06.3 -1.7
comp=E,3.8nm,0.2s,SNR=7.9
PAB San Pablo 5.00 54 P Pn 15 35 28.5 +0.3
comp=E,0.2nm,0.1s,SNR=7.9
PAB S Sn 15 36 21.9 -2.9
comp=E,0.4nm,0.2s,SNR=7.9

IDC 05 15:37:26.0±1.3, 28.°32N×43.°68W, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.4/47, mbtmp3.7/4, Error ellipse: s-maj=41.7km s-min=31.2km az=36.0
NEIC 05 15:37:27.5±0.8, 28.°4N±0.°2×43.°68W±0.°09, h10km±2km, mb4.6/7, Error ellipse: s-maj=31.3km s-min=12.7km az=192.0
ISC 05 15:37:27.8±1.1, 28.°3N±0.°2×43.°7W±0.°2, h12km, n16, σ0§90/10, mb4.2/5, Northern Mid-Atlantic Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
J55A Hilton 31.20 308 P P 15 43 46.2 -0.6
Y58A Scranton 31.21 289 P P 15 43 48.5 +1.5
URIC Uribia, Colomb 31.22 244 P P 15 43 47.4 +0.1
TORD Torodi Ar. Bea 44.76 100 P P 15 45 41.6 +0.2
0.6nm,0.7s,baz=309,slow=6.2,SNR=3.8
H10N2 ASCENSION HYDR45.68 138 T T 16 34 32.9
baz=323,slow=76,SNR=17
H10N3 ASCENSION HYDR45.68 138 T T 16 34 32.9
baz=323,slow=76,SNR=20
H10N1 ASCENSION HYDR45.70 138 T T 16 34 38.2
baz=323,slow=76,SNR=24
H10S3 ASCENSION HYDR46.48 139 T T 16 35 29.2
baz=322,slow=74,SNR=20
H10S2 ASCENSION HYDR46.49 139 T T 16 35 30.4
baz=258,slow=74,SNR=22
LPAZ La Paz 50.29 211 P P 15 46 24.9 -0.2
0.7nm,0.4s,baz=314,slow=6.0,SNR=4.6
LPAZ La Paz 50.29 211 IAmb IAmb 15 48 21.4
comp=Z,10nm,1.9s
PD31 Pinedale Array 54.22 304 P P 15 46 53.8 0.0
PD31 IAmb IAmb 15 46 57.2
comp=Z,8.5nm,1.8s
PDAR Pinedale Array 54.22 304 P P 15 46 54.0 +0.2
comp=Z,0.9nm,0.6s,baz=87,slow=7.3,SNR=12
PDAR Pinedale Array 54.22 304 P P 15 46 52.8 -0.9
W18A Petrified Fore 55.70 295 P P 15 47 02.9 -1.5
W18A IAmb IAmb 15 47 04.0
comp=Z,11nm,0.8s
ILAR Eielson Array 70.11 334 P P 15 48 39.7 +0.1
comp=Z,0.4nm,0.9s,baz=75,slow=4.8,SNR=4.0

JMA 05 15:46:09.9±0.1, 36.°11N×139.°80E, h76km±1km, M3.7 Broadband fault plane solution: P waves. NP1: ϕs118.00000°, δ31.00000°, λ-60.00000°. NP2: ϕs264.00000°, δ64.00000°, λ-107.00000°. Principal axes: T Plg17.0000°, Azm6.0000°; N Plg15.0000°, Azm271.0000°; P Plg67.0000°, Azm142.0000°;
JMA Felt II J1.
IDC 05 15:46:10.2±1.2, 36.°02N×139.°75E, h90km±11km, mb3.5/13, mb1 3.7/15, mb1mx3.4/46, mbtmp3.9/15 Error ellipse: s-maj=19.3km s-min=8.1km az=68.0
NEIC 05 15:46:10.3±1.8, 36.°03N±0.°07×139.°7E±0.°1, h92km±8km, mb4.8/32, Error ellipse: s-maj=13.0km s-min=7.9km az=58.0
ISC 05 15:46:09.1±0.7, 36.°06N±0.°04×139.°79E±0.°05, h80km±6km, n84, σ1§22/89, mb4.5/29, 5C-5D, Eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JYT Yasato 0.36 62 ⇓P Pn 15 46 22.1 +0.3
JYT S Sn 15 46 31.2 0.0
JAG Ashikaga 0.46 323 ⇓P Pn 15 46 22.7 +0.2
JAG S Sn 15 46 32.2 -0.3
JRY Ryogami san 0.72 267 ⇓P Pn 15 46 25.9 +0.8
JRY S Sn 15 46 37.8 +0.9
JKT Katashina 0.83 328 ⇓P Pn 15 46 26.3 0.0
JKT S Sn 15 46 39.0 -0.1
JOD2 Odawara 2 0.98 216 ⇑P Pn 15 46 28.5 +0.5
JOD2 S Sn 15 46 42.2 +0.2
JYN Shimob 1.16 241 ⇑P Pn 15 46 31.2 +1.0
JYN S Sn 15 46 46.8 +0.8
JFNN Fujinakano 1.25 227 ⇑P Pn 15 46 32.2 +1.0
JFNN S Sn 15 46 48.8 +1.0
JHK Hiroka 1.34 332 ⇓P Pn 15 46 32.6 +0.2
JHK eS Sn 15 46 50.0 +0.1
JFY Yanaizu 1.35 357 ⇑P Pn 15 46 32.6 +0.1
JFY S Sn 15 46 50.3 +0.2
MJAR Matsushiro Arr 1.37 291 P Pn 15 46 32.9 +0.2
14nm,0.3s,baz=99,slow=8.9,SNR=970
MJAR S Sn 15 46 51.6 +1.0
8.0nm,0.3s,baz=172,slow=40,SNR=3.4
MJAR Matsushiro Arr 1.37 291 Pn 15 46 36.0 +3.3
MAJO Matsushiro 1.37 291 Pn 15 46 33.2 +0.5
MAT Matsushiro 1.37 291 P Pn 15 46 33.4 +0.6
MAT Matsushiro 1.37 291 P Pn 15 46 33.3 +0.5
MAT S Sn 15 46 50.0 -0.6
MJB9 Matsu-Tunnel 1.37 291 Pn 15 46 33.3 +0.5
JFT Otama 1.52 16 ⇑P Pn 15 46 35.1 +0.4
JFT S Sn 15 46 54.0 0.0
INU Inuyama 2.37 253 Pn 15 46 47.0 +1.1
JHJ Hachijo jima 2 2.93 180 P Pn 15 46 54.7 +1.1
178nm,0.3s,baz=320,slow=23,SNR=35
JHJ S Sn 15 47 28.4 +0.7
73nm,0.3s,baz=68,slow=23,SNR=7.6
JHJ2 Mitsune 2.94 180 Pn 15 46 54.4 +0.7
ERM Erimo 6.50 23 Pn Pn 15 47 40.0 -2.0
JCJ Chichijima 9.17 167 P Pn 15 48 15.9 -2.7
15nm,0.3s,baz=284,slow=19,SNR=1.3
KSAR Wonju Array Be 9.66 282 Pn Pn 15 48 23.0 -2.2
KS19 Wonju Array Si 9.68 282 Pn Pn 15 48 23.9 -1.6
USA0B Ussuriysk Arra 10.09 326 Pn Pn 15 48 33.6 +2.6
USRK Ussuriysk Ar. 10.09 326 P Pn 15 48 33.8 +2.8
baz=152,slow=13,SNR=20
USRK Ussuriysk Ar. 10.09 326 Pn 15 48 34.0 +3.0
YSS Yuzh-Sakhalins 11.11 11 Pn Pn 15 48 41.9 -2.9
YOJ Yonaguni jima 18.51 236 P P 15 50 18.5 -0.5
MA2 Magadan 24.59 13 P P 15 51 21.5 +0.1
3.1nm,0.6s,baz=190,slow=13,SNR=5.1
SONM Songino Array 27.27 306 P P 15 51 47.8 +1.8
0.7nm,0.7s,baz=97,slow=9.2,SNR=5.7
SONM Songino Array 27.27 306 P P 15 51 45.7 -0.2
SEY Seymchan 28.01 12 P P 15 51 55.9 +3.7
1.6nm,0.6s,baz=201,slow=10.0,SNR=15
H11N2 WAKE ISLAND Hy 28.82 117 T T 16 22 26.1
baz=308,slow=75,SNR=3.5
H11N1 WAKE ISLAND Hy 28.83 117 T T 16 22 29.6
baz=308,slow=75,SNR=3.2
H11N3 WAKE ISLAND Hy 28.84 117 T T 16 22 17.0
baz=308,slow=75,SNR=3.9
H11S1 WAKE ISLAND Hy 29.48 119 T T 16 23 03.1
H11S3 WAKE ISLAND Hy 29.48 119 T T 16 23 03.1
H11S2 WAKE ISLAND Hy 29.49 119 T T 16 23 03.1
BILL Bilibino 35.33 17 P P 15 52 56.4 +0.1
BILL IAmb IAmb 15 53 14.2
comp=Z,17nm,1.9s
TIXI Tiksi 36.11 354 P P 15 53 00.9 -2.0
KKM Kota Kinabalu 36.88 222 P P 15 53 08.5 -1.6
ZAA0 Zalesovo Array 41.62 313 P P 15 53 48.8 -0.2
ZALV Zalesovo Beam 41.62 313 P P 15 53 48.5 -0.6
comp=Z,1.1nm,0.4s,baz=103,slow=6.4,SNR=5.0
MKAR Makanchi Array 43.54 303 P P 15 54 04.6 -0.2
comp=Z,0.4nm,0.6s,baz=90,slow=9.8,SNR=5.3
MAKZ Makanchi 43.75 303 P P 15 54 06.2 -0.2
KURK Kurchatov 45.51 309 P P 15 54 19.6 -0.8
KURBB Kurchatov Arra 45.58 309 P P 15 54 20.4 -0.5
comp=Z,1.0nm,0.4s,baz=79,slow=7.6,SNR=20
IMAR Indian Mountai 48.15 30 P P 15 54 41.6 +0.9
KDAK Kodiak Island 48.69 41 P P 15 54 46.1 +1.2
PPLA Purkeypile 48.71 34 P P 15 54 47.1 +1.8
PPLA IAmb IAmb 15 55 22.5
comp=Z,43nm,1.8s
PBA Port Blair 48.82 252 P P 15 54 45.1 -1.3
BPAW Bear Paw Mtn. 49.25 33 P P 15 54 50.8 +1.6
MLY Manley 49.36 32 P P 15 54 51.1 +1.0
MLY IAmb IAmb 15 56 46.3
comp=Z,14nm,1.9s
BRLK Bradley Lake 49.44 39 P P 15 54 49.7 -1.0
TRF Thorofare Moun 49.57 34 P P 15 54 51.3 -0.5
TRF IAmb IAmb 15 56 44.6
comp=Z,18nm,1.7s
COEN Coen 49.85 176 P P 15 54 54.7 +0.5
BVAR Borovoye Array 50.27 313 P P 15 54 55.9 -1.2
comp=Z,0.3nm,0.5s,baz=79,slow=7.5,SNR=3.0
GHO Glory Hole Cre 50.27 36 P P 15 54 56.8 -0.3
GHO IAmb IAmb 15 55 32.4
comp=Z,18nm,1.4s
BRVK Borovoye 50.33 313 P P 15 54 56.9 -0.6
BRVK IAmb IAmb 15 55 33.0
comp=Z,11nm,2.0s
WRH Wood River Hil 50.51 32 P P 15 55 00.3 +1.6
WRH IAmb IAmb 15 55 27.8
comp=Z,24nm,2.0s
CCB Clear Creek Bu 50.62 32 P P 15 55 01.2 +1.7
CCB IAmb IAmb 15 55 22.7
comp=Z,17nm,1.9s
IL31 51.01 32 P P 15 55 02.1 -0.3
IL31 IAmb IAmb 15 55 58.9
comp=Z,14nm,1.9s
ILAR Eielson Array 51.01 32 P P 15 55 02.5 +0.1
comp=Z,0.7nm,0.6s,baz=270,slow=5.8,SNR=12
ILAR Eielson Array 51.01 32 P P 15 55 02.2 -0.2
BMAR Burnt Mountain 51.81 28 P P 15 55 07.4 -1.0
SCRK Sand Creek 52.33 33 P P 15 55 13.1 +0.6
SCRK IAmb IAmb 15 55 34.5
comp=Z,10nm,1.6s
KKAR Karatay Array 52.49 300 P P 15 55 14.3 +0.5
KNRA Kununurra 52.50 193 P P 15 55 14.1 +0.1
MCARA McCarthy VSAT 53.12 36 P P 15 55 18.6 +0.4
MCARA IAmb IAmb 15 55 31.4
comp=Z,30nm,1.6s
BCAR Beaver Creek A 53.43 34 P P 15 55 22.1 +1.6
WB0 Warramunga Arr 55.76 186 P P 15 55 37.3 -0.4
WB0 IAmb IAmb 15 57 23.0
comp=Z,16nm,1.4s
INK Inuvik 55.84 27 P P 15 55 37.9 +0.2
comp=Z,0.9nm,0.5s,baz=303,slow=5.7,SNR=6.6
WRAB Tennant Creek 55.92 186 P P 15 55 38.2 -0.6
WRAB IAmb IAmb 15 56 48.4
comp=Z,15nm,1.4s
WR0 Warramunga Arr 55.94 186 P P 15 55 38.5 -0.5
WR0 IAmb IAmb 15 56 14.8
comp=Z,31nm,1.8s
WRA Warramunga Arr 55.94 186 P P 15 55 38.6 -0.4
comp=Z,1.7nm,0.5s,baz=3.1,slow=7.5,SNR=16
ARU Arti 56.23 319 P P 15 55 39.9 -0.8
comp=Z,0.8nm,0.5s,baz=128,slow=11,SNR=4.4
ARU Arti 56.23 319 IAmb IAmb 15 56 43.7
comp=Z,19nm,1.8s
ABKAR Akbulak array 57.57 310 P P 15 55 50.0 -0.3
C36M Paulatuk 58.86 24 P P 15 55 59.5 +0.6
C36M IAmb IAmb 15 58 00.3
comp=Z,19nm,1.9s
ASAR Alice Springs 59.66 186 P P 15 56 05.5 +0.4
comp=Z,3.0nm,1.4s,baz=20,slow=13,SNR=11
ASAR Alice Springs 59.66 186 P P 15 56 04.8 -0.2
ARCES ARCESS Array B 64.44 339 P P 15 56 36.3 -0.2
comp=Z,1.3nm,0.8s,baz=50,slow=7.2,SNR=3.8
NVAR Mina Array Bea 76.61 52 P P 15 57 52.8 +1.4
comp=Z,0.4nm,0.7s,baz=270,slow=6.3,SNR=2.9
LPAZ La Paz 148.31 59 PKPbc PKPbc 16 05 47.6 +0.3
comp=Z,0.5nm,0.5s,baz=256,slow=4.4,SNR=3.8

KNET 05 15:48:31.5±1.5, 37.°03N×71.°82E, h0km, ml4.3, Error ellipse: s-maj=16.5km s-min=13.4km az=46.0
IDC 05 15:48:33.7±6.4, 36.°78N×71.°73E, h92km±33km, mb3.3/4, mb1 3.5/11, mb1mx3.1/41, mbtmp3.7/11, MS3.4/1, Ms1 3.4/1, ms1mx2.6/33, Error ellipse: s-maj=81.3km s-min=26.3km az=160.0
NNC 05 15:48:44.0±9.3, 38.°00N×71.°08E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=92.1km s-min=43.8km az=154.0
ISC 05 15:48:37.4±1.6, 37.°2N±0.°1×71.°48E±0.°09, h100km, n24, σ1§69/28, mb3.6/4, 4C-4D, Afghanistan-Tajikistan border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AML Almayashu 5.20 19 P Pn 15 49 55.0 +1.8
SNR=22
UCH Uchtor 5.53 24 P Pn 15 49 59.3 +1.7
SNR=10
KZA Kyzart 5.66 30 P Pn 15 50 00.5 +1.1
SNR=16
AAK Ala-Archa 5.89 22 P Pn 15 50 04.0 +1.7
6.7nm,0.3s,baz=174,slow=6.0,SNR=129
AAK S Sn 15 51 06.3 -2.2
1.6nm,0.3s,baz=348,slow=20,SNR=12
AAK Ala-Archa 5.89 22 P Pn 15 50 04.2 +1.9
SNR=20
AAK Ala-Archa 5.89 22 ⇑P Pn 15 50 04.4 +2.1
12nm,0.5s
AAK ⇑S Sn 15 51 07.2 -1.3
9.8nm,0.5s
KK31 Karatay Array 5.93 353 P Pn 15 50 04.9 +2.2
1.7nm,0.2s,baz=176,slow=13,SNR=122
KK31 ⇓S Sn 15 51 07.7 -1.5
4.9nm,0.3s,baz=182,slow=22,SNR=4.3
ULHL Ulahol 6.22 35 P Pn 15 50 07.7 +0.8
SNR=13
CHMS Chumysh 6.30 22 P Pn 15 50 09.7 +2.0
SNR=8.8
CHMS Chumysh 6.30 22 ⇑P Pn 15 50 09.5 +1.8
15nm,0.6s
CHMS ⇓S Sn 15 51 16.1 -2.1
5.1nm,0.5s
GEYT Alibeck 10.63 278 P Pn 15 51 06.4 -0.3
0.5nm,0.3s,baz=101,slow=12,SNR=7.8
GEYT S Sn 15 53 00.6 -3.1
1.3nm,0.3s,baz=129,slow=12,SNR=9.9
MKAR Makanchi Array 12.49 37 P Pn 15 51 30.7 -0.8
0.1nm,0.3s,baz=219,slow=14,SNR=9.4
KURBB Kurchatov Arra 14.32 18 P P 15 51 58.4 -1.0
0.1nm,0.3s,baz=205,slow=10,SNR=15
KURBB Kurchatov Arra 14.32 18 ⇓P P 15 51 58.2 -1.2
2.1nm,0.5s
KURK Kurchatov 14.43 18 ⇑P P 15 51 59.3 -1.3
2.2nm,0.8s
BVAR Borovoye Array 15.83 358 P P 15 52 16.0 +1.7
0.2nm,0.3s,baz=162,slow=14,SNR=4.3
AKTO Aktyubinsk 16.36 328 P Pn 15 52 22.6 +1.6
0.6nm,0.3s,baz=127,slow=13,SNR=9.9
AKTO S Sn 15 55 15.0 -7.2
0.1nm,0.3s,baz=255,slow=18,SNR=2.7
AKTO Aktyubinsk 16.36 328 ⇓P Pn 15 52 23.0 +2.0
1.6nm,0.5s
ZALV Zalesovo Beam 19.11 25 P P 15 52 51.5 -0.6
0.7nm,0.3s,baz=212,slow=10,SNR=13
KIRV Kirov 25.77 333 LR LR 16 04 08.5
comp=Z,81nm,20.1s,baz=177,slow=36
FINES FINESS Array B 37.11 325 P P 15 55 39.2 +1.4
1.1nm,0.9s,baz=115,slow=9.8,SNR=1.5
NOA NORSAR Array B 44.04 323 P P 15 56 35.8 +0.9
0.1nm,0.4s,baz=110,slow=7.6,SNR=1.9
INK Inuvik 73.14 9 P P 15 59 56.1 -0.4
0.6nm,0.5s,baz=319,slow=5.0,SNR=3.8
YKA Yellowknife Ar 80.51 3 P P 16 00 37.7 -0.3
0.3nm,0.4s,baz=350,slow=5.5,SNR=5.8

NEIC 05 16:10:39.9±2.1, 23.°8S±0.°1×179.°8W±0.°1, h504km±8km, mb4.7/21, Error ellipse: s-maj=17.8km s-min=16.0km az=129.0
IDC 05 16:10:40.1±1.7, 23.°74S×179.°99E, h492km±19km, mb3.4/10, mb1 3.6/11, mb1mx3.3/37, mbtmp4.2/11, Error ellipse: s-maj=29.4km s-min=17.8km az=174.0
ISC 05 16:10:41.0±0.5, 23.°99S±0.°06×179.°82W±0.°09, h526km, n60, σ1§88/71, mb4.3/16, South of Fiji Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RIZ Raoul Island 5.51 163 P P 16 12 11.6 -2.2
RAO Raoul Island 5.51 162 P P 16 12 15.4 +1.5
99nm,0.3s,baz=76,slow=12,SNR=7.5
RAO Raoul Island 5.51 162 P P 16 12 15.7 +1.8
GLKZ Green Lake 5.52 162 P P 16 12 13.3 -0.6
GLKZ S S 16 13 28.9 -1.1
MSVF Nonsavu 6.53 342 P P 16 12 22.6 -1.2
NIUE Niue 10.42 64 P P 16 13 02.0 -1.1
MXZ Matakaoa Point 13.63 186 P P 16 13 38.8 +2.5
RUGZ Raukumara Rang 14.10 188 P P 16 13 43.7 +2.3
URZ Urewera 14.47 190 P P 16 13 45.4 +0.3
1.6nm,0.3s,baz=332,slow=1.9,SNR=9.4
URZ S S 16 16 15.1 -1.8
0.9nm,0.3s,baz=76,slow=21,SNR=12
URZ Urewera 14.47 190 P P 16 13 44.9 -0.1
URZ Urewera 14.47 190 P P 16 13 45.0 -0.1
URZ S S 16 16 13.2 -3.7
MWZ Matawai 14.48 188 P P 16 13 45.1 -0.1
MWZ S S 16 16 12.9 -4.4
RIGZ Rimuhau 14.82 187 P P 16 13 50.7 +1.9
RIGZ S S 16 16 21.8 -1.9
SANVU Saraoutou 14.87 302 P P 16 13 47.8 -1.8
HIZ Hauiti 15.18 196 P P 16 13 58.5 +6.1
BKZ Black Stump Fm 15.46 191 P P 16 13 54.7 -0.7
BKZ Black Stump Fm 15.46 191 P P 16 13 54.7 -0.7
MCHZ McNeill Hill 15.69 190 P P 16 13 58.3 +0.5
VRZ Vera Road 15.78 196 P P 16 14 02.3 +3.6
BHHZ Black Hill Sta 15.85 192 P P 16 13 58.7 -0.7
BHHZ S S 16 16 38.5 -4.0
ANWZ Angora Road 16.72 190 P P 16 14 07.9 -0.1
ANWZ S S 16 16 59.2 +2.0
BFZ Birch Farm 16.97 190 P P 16 14 09.8 -0.6
BFZ S S 16 17 00.7 -0.8
QRZ Quartz Range 17.98 199 P P 16 14 20.4 +0.8
TUWZ Tuamarina 18.16 195 P P 16 14 22.3 +1.0
BSWZ Blackbirch Sta 18.45 195 P P 16 14 24.3 +0.4
THZ Tophouse 18.74 197 P P 16 14 26.4 -0.2
KHZ Kahutara 19.19 195 P P 16 14 30.9 +0.3
LTZ Lake Taylor 19.86 197 P P 16 14 36.3 -0.5
FOZ Fox Glacier 21.28 201 P P 16 14 50.5 +0.9
KNTN Kanton 22.49 22 P P 16 14 57.7 -3.2
MLZ Mavora Lakes 23.70 201 P P 16 15 11.2 +2.0
WHZ Wether Hill Ro 23.99 201 P P 16 15 15.7 +1.9
WHZ IAmb IAmb 16 15 16.5
comp=Z,41nm,1.5s
PMG Port Moresby 34.68 289 P P 16 16 46.6 -0.2
comp=Z,14nm,0.8s,baz=125,slow=4.1,SNR=5.2
PMG Port Moresby 34.68 289 IAmb IAmb 16 16 47.3
comp=Z,13nm,0.8s
COEN Coen 36.29 279 P P 16 17 00.0 -0.2
COEN IAmb IAmb 16 18 25.8
comp=Z,67nm,1.7s
AS31 Alice Springs 42.18 261 P P 16 17 47.6 0.0
ASAR Alice Springs 42.18 261 P P 16 17 47.8 +0.1
comp=Z,2.1nm,0.7s,baz=98,slow=7.2,SNR=56
ASAR ScP ScP 16 22 34.6 +4.3
comp=Z,1.6nm,0.8s,baz=105,slow=4.6,SNR=13
ASAR Alice Springs 42.18 261 P P 16 17 47.1 -0.5
ASAR ScP 16 22 34.6 +4.3
WR0 Warramunga Arr 42.38 266 P P 16 17 48.7 -0.6
WR0 IAmb IAmb 16 18 38.1
comp=Z,33nm,1.9s
WB2 Warramunga Arr 42.55 266 P P 16 17 50.1 -0.5
WB2 IAmb IAmb 16 19 37.6
comp=Z,54nm,1.9s
WRAB Tennant Creek 42.56 266 P P 16 17 49.5 -1.1
WRAB IAmb IAmb 16 19 07.5
comp=Z,46nm,1.8s
WB0 Warramunga Arr 42.56 266 P P 16 17 50.0 -0.7
WRA Warramunga Arr 42.56 266 P P 16 17 50.2 -0.5
comp=Z,3.8nm,0.5s,baz=101,slow=8.4,SNR=70
WRA ScP ScP 16 22 36.0 +4.1
comp=Z,0.5nm,0.6s,baz=96,slow=3.7,SNR=5.9
WRA Warramunga Arr 42.56 266 P P 16 17 49.7 -1.0
MTN Manton Dam 47.62 274 P P 16 18 28.9 -0.7
KNRA Kununurra 48.85 270 P P 16 18 38.6 0.0
FITZ Fitzroy Crossi 50.99 266 P P 16 18 55.0 +0.7
FITZ IAmb IAmb 16 19 45.5
comp=Z,45nm,1.9s
SIJI Sorong 52.62 288 P P 16 19 05.5 -0.7
comp=Z,13nm,0.6s,baz=124,slow=6.9,SNR=8.2
QSPA South Pole Qui 66.10 180 P P 16 20 37.7 +2.1
KSRS Korea Array 78.42 320 P P 16 21 48.7 +1.6
comp=Z,0.8nm,0.7s,baz=125,slow=7.6,SNR=3.0
NVAR Mina Array Bea 84.70 44 P P 16 22 21.5 +1.8
comp=Z,0.2nm,0.6s,baz=210,slow=6.9,SNR=2.0

SEY	Seymchan	89.39	348	P	P	16 22 40.9	+0.1
	comp=Z,1.2nm,0.6s,baz=227,slow=8.9,SNR=7.4						
CMAR	Chiang Mai Arr	89.71	290	P	P	16 22 44.4	+1.0
	comp=Z,0.6nm,0.8s,baz=160,slow=3.7,SNR=5.8						
TXAR	Lajitas Array	90.34	58	P	P	16 22 47.1	+0.9
	comp=Z,0.7nm,0.8s,baz=187,slow=5.0,SNR=3.5						
PDAR	Pinedale Array	92.64	44	P	P	16 22 57.7	+1.0
	comp=Z,0.3nm,0.8s,baz=305,slow=3.2,SNR=2.1						
PDAR	Pinedale Array	92.64	44	P	P	16 22 57.0	+0.3
AKASG	Malin Array Be	145.13	327	PKP	PKPab	16 29 18.9	-1.1
	comp=Z,0.7nm,0.3s,baz=42,slow=4.2,SNR=6.3						
BRTR	Keskin Array B	147.76	307	PKPbc	PKPab	16 29 30.4	-0.8
	comp=Z,1.2nm,0.6s,baz=97,slow=2.9,SNR=8.7						
BRTR	Keskin Array B	147.76	307	PKPbc	PKiKP	16 29 27.4	-0.9
BRTR				PKPab	PKPab	16 29 31.4	+0.3
MMAI	Mount Meron Ar	147.89	294	PKPbc	PKiKP	16 29 28.8	+0.2
	comp=Z,1.2nm,0.5s,baz=90,slow=7.2,SNR=2.7						

*NEIC **05** 16:15:59.3±1.1, 18°.21N±0°.09×146°.65E±0°.08, h76km±7km, mb4.7/22, Error ellipse: s-maj=14.8km s-min=7.3km az=143.0*
*IDC **05** 16:16:01.4±3.3, 18°.19N×146°.61E, h94km±28km, mb3.7/13, mb1 3.8/15, mb1mx3.5/57, mbtmp4.0/15, MS3.0/1, Ms1 3.2/1, ms1mx2.7/25, Error ellipse: s-maj=34.0km s-min=13.2km az=83.0*
ISC 05 16:15:58.3±0.7, **18°.26N**±0°.06×**146°.7E**±0°.1, **h66km, n47, σ0.97**/41, **mb4.3**/21, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	Sarigan	1.76	208	Pn	Pn	16 16 24.8	-1.9
GUMO	Guam	4.95	200	P	Pn	16 17 13.9	+3.8
	8.9nm,0.3s,baz=7.3,slow=11,SNR=6.3						
GUMO				S	Sn	16 18 07.2	+1.0
	11nm,0.3s,baz=194,slow=17,SNR=2.5						
GUMO	Guam	4.95	200		Pn	16 17 11.5	+1.3
JOW	Kunigami	18.98	300	P	P	16 20 14.5	+0.1
JOW				IAmb	IAmb	16 21 12.1	
	comp=Z,32nm,1.2s						
H11S3	WAKE ISLAND Hy	19.02	86	T	T	16 41 13.8	
H11S1	WAKE ISLAND Hy	19.03	86	T	T	16 41 13.8	
H11S2	WAKE ISLAND Hy	19.04	86	T	T	16 41 13.8	
H11N1	WAKE ISLAND Hy	19.20	82	T	T	16 41 35.3	
	baz=267,slow=75,SNR=7.0						
H11N2	WAKE ISLAND Hy	19.20	82	T	T	16 41 34.9	
	baz=267,slow=75,SNR=3.9						
H11N3	WAKE ISLAND Hy	19.21	82	T	T	16 41 37.2	
	baz=267,slow=75,SNR=5.3						
MJAR	Matsushiro Arr	19.67	339	P	Pn	16 20 23.4	-0.5
	comp=Z,0.1nm,0.3s,baz=164,slow=9.1,SNR=3.8						
MAJO	Matsushiro	19.67	339	P	Pn	16 20 23.8	-0.1
MAJO				IAmb	IAmb	16 20 46.0	
	comp=Z,42nm,1.6s						
MJB9	Matsu-Tunnel	19.68	339	P	Pn	16 20 23.8	-0.1
MJB9				IAmb	IAmb	16 20 48.1	
	comp=Z,93nm,2.0s						
USRK	Ussuriysk Ar.	28.64	338	P	P	16 21 48.7	+0.1
	comp=Z,1.9nm,0.7s,baz=140,slow=10,SNR=4.9						
QIZ	Qiongzhong	34.84	277	P	P	16 22 42.7	-0.6
WB0	Warramunga Arr	39.66	198	P	P	16 23 23.6	-0.4
WB0				IAmb	IAmb	16 24 21.6	
	comp=Z,17nm,1.4s						
WR0	Warramunga Arr	39.80	198	P	P	16 23 24.3	-0.9
WR0				IAmb	IAmb	16 23 48.0	
	comp=Z,18nm,1.4s						
WB2	Warramunga Arr	39.84	198	P	P	16 23 24.8	-0.6
WB2				IAmb	IAmb	16 23 46.0	
	comp=Z,34nm,1.8s						
WRA	Warramunga Arr	39.84	198	P	P	16 23 24.8	-0.7
	comp=Z,0.7nm,0.3s,baz=27,slow=8.5,SNR=19						
WRA	Warramunga Arr	39.84	198	P	P	16 23 25.4	-0.2
FITZ	Fitzroy Crossi	41.62	211	P	P	16 23 40.1	0.0
FITZ				IAmb	IAmb	16 24 26.9	
	comp=Z,30nm,1.8s						
AS31	Alice Springs	43.49	197	P	P	16 23 54.9	-0.4
ASAR	Alice Springs	43.49	197	P	P	16 23 54.9	-0.5
	comp=Z,0.6nm,0.5s,baz=22,slow=7.0,SNR=24						
SONM	Songino Array	44.05	321	P	P	16 23 59.9	+0.2
	comp=Z,0.4nm,0.5s,baz=132,slow=7.5,SNR=7.2						
SONM	Songino Array	44.05	321	IAmb	IAmb	16 24 03.2	
	comp=Z,2.2nm,1.4s						
CMAR	Chiang Mai Arr	45.17	278	P	P	16 24 08.8	0.0
	comp=Z,0.2nm,0.6s,baz=75,slow=10,SNR=3.2						
CMAR				LR	LR	16 42 02.7	
	comp=Z,19nm,20.4s,baz=195,slow=35						
YAK	Yakutsk	45.32	349	P	P	16 24 10.8	+1.5
YAK				IAmb	IAmb	16 24 11.4	
	comp=Z,5.7nm,0.7s						
STKA	Stephens Creek	50.09	186	P	P	16 24 46.2	-0.4
	comp=Z,2.5nm,0.8s,baz=74,slow=6.2,SNR=6.4						
KEKH	Kekaha	50.30	76	P	P	16 24 47.8	-0.7
BBOO	Buckleboo	51.79	191	P	P	16 24 59.9	+0.6
TOO	Toolangi	55.55	181	P	P	16 25 26.3	-0.5
TOO				IAmb	IAmb	16 25 31.8	
	comp=Z,31nm,1.4s						
MORW	Morawa	55.57	213	P	P	16 25 25.6	-1.6
ZAA0	Zalesovo Array	58.91	323	P	P	16 25 50.3	-0.1
ZAA0				IAmb	IAmb	16 26 10.3	
	comp=Z,3.5nm,1.2s						
ZALV	Zalesovo Beam	58.91	323	P	P	16 25 50.4	0.0
	comp=Z,1.6nm,0.6s,baz=106,slow=8.0,SNR=9.3						
ZALV	Zalesovo Beam	58.91	323	P	P	16 25 50.1	-0.3
MKAR	Makanchi Array	59.41	314	P	P	16 25 54.5	+0.4
	comp=Z,1.0nm,0.7s,baz=90,slow=9.5,SNR=12						
MAKZ	Makanchi	59.63	314	P	P	16 25 55.8	+0.3
KURK	Kurchatov	62.20	318	P	P	16 26 12.8	0.0
KURK				IAmb	IAmb	16 26 20.6	
	comp=Z,10nm,1.7s						
KURBB	Kurchatov Arra	62.24	318	P	P	16 26 13.3	+0.2
	comp=Z,1.8nm,0.6s,baz=92,slow=7.6,SNR=27						
BVAR	Borovoye Array	67.38	321	P	P	16 26 46.9	+0.3
	comp=Z,2.1nm,0.5s,baz=96,slow=7.8,SNR=22						
BRVK	Borovoye	67.45	321	P	P	16 26 47.4	+0.5
KKAR	Karatay Array	67.74	310	P	P	16 26 49.6	+0.6
YKA	Yellowknife Ar	77.95	28	P	P	16 27 49.1	+0.1
	comp=Z,0.5nm,0.7s,baz=287,slow=5.5,SNR=5.7						
ARCES	ARCESS Array B	83.18	342	P	P	16 28 18.0	+1.1
	comp=Z,2.0nm,0.6s,baz=64,slow=8.2,SNR=13						
ARCES	ARCESS Array B	83.18	342	P	P	16 28 17.8	+0.9
FINES	FINESS Array B	87.65	336	P	P	16 28 38.3	-1.0
	comp=Z,1.2nm,0.6s,baz=69,slow=6.1,SNR=10						
FINES	FINESS Array B	87.65	336	P	P	16 28 37.8	-1.5

*IDC **05** 16:33:27.1±1.2, 27°.05N×52°.74E, h0km, mb3.7/8, mb1 3.7/9, mb1mx3.5/35, mbtmp3.7/9, ML3.6/1, Error ellipse: s-maj=28.0km s-min=21.6km az=174.0*
*TEH **05** 16:33:31.0, 27°.25N×52°.92E, h14km, ML3.6*
*DSN **05** 16:33:32.1±0.8, 27°.20N×53°.03E, h10km, ML3.7/6, Error ellipse: s-maj=13.6km s-min=5.1km az=5.0*
*OMAN **05** 16:33:34.5±0.8, 27°.03N×52°.88E, h33km±5km, ml3.4/9, ms2.9/1, Error ellipse: s-maj=8.9km s-min=4.6km az=18.0*
ISC 05 16:33:29.0±0.7, **27°.14N**±0°.05×**52°.81E**±0°.05, **h10km, n43, σ1.32**/54, **mb3.6**/7, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	Lamerd	0.37	58	ePg	Pg	16 33 35.2	-1.1
LMD1				eSg	Sg	16 33 39.9	-1.3
LAR1	LAR	1.48	69	ePg	Pg	16 33 57.3	-0.2
JHRM	Jahrom	1.52	26	ePg	Pg	16 33 57.0	-1.1
JHRM				e		16 34 24.4	
GHB	Gharebagh	2.24	354	ePg	Pg	16 34 11.4	-0.6
GHB				e		16 34 57.0	
IKAZ	Kazeroun	2.76	342	ePn	Pn	16 34 15.4	+1.8
IKAZ				e		16 35 15.2	
GENO	Geno	3.00	84	ePn	Pn	16 34 18.6	+1.8
GENO				e		16 35 23.7	
SHME	Shamm	3.17	109	P	Pn	16 34 20.0	+1.0
NAZ	Nazwa, Dubai	3.34	129	P	Pn	16 34 23.0	+1.7
BANOM	Banah	3.35	110	iP	Pn	16 34 22.3	+0.9
	SNR=5.5						
BANOM				S	Sn	16 35 01.5	+0.1
BANOM	Banah	3.35	110	P	Pn	16 34 22.7	+1.3
	SNR=5.7						
BANOM				S	Sn	16 35 01.4	+0.1
MSFE	Esma-Masafi	3.49	120	iP	Pn	16 34 24.8	+1.4
	SNR=11						
NIAN	Nian	3.60	82	ePn	Pn	16 34 26.8	+1.9
NIAN				e		16 35 14.1	
MDH	Madha	3.63	120	P	Pn	16 34 26.8	+1.6
MDH				S	Sn	16 35 07.6	-0.6
UOSS	Minazif	3.75	125	iP	Pn	16 34 28.0	+1.1
	SNR=6.5						
UOSS	Minazif	3.75	125	P	Pn	16 34 28.7	+1.7
UOSS				S	Sn	16 35 12.2	+0.9
HATD	Hatta, Dubai	3.77	127	P	Pn	16 34 29.0	+1.7
HATD	Hatta, Dubai	3.77	127	P	Pn	16 34 29.5	+2.2
ASHO	Ashiyiah	3.81	129	iP	Pn	16 34 29.6	+1.8
	SNR=7.5						
ASHO	Ashiyiah	3.81	129	P	Pn	16 34 29.6	+1.8
	SNR=7.5						
ASHO				S	Sn	16 35 14.0	+1.3
KLNJ	Kolanjah	4.00	345	ePn	Pn	16 34 31.6	+1.0
TVBK	TV Kerman	4.48	50	ePn	Pn	16 34 37.9	+0.6
TVBK				e		16 34 41.4	
SOHO	SOHO	4.50	131	P	Pn	16 34 38.9	+1.7
IMEH	Mehriz	4.51	20	ePn	Pn	16 34 38.9	+1.3
KHGB	Koh Gabri	4.55	44	ePn	Pn	16 34 39.0	+0.9
KHGB				e		16 35 35.1	
IRAM	Ramesheh	4.66	355	ePn	Pn	16 34 39.3	-0.4
ISAD	Sadrabad	4.81	9	ePn	Pn	16 34 42.8	+1.0
CHMN	Cheshme madani	4.96	56	ePn	Pn	16 34 46.9	+3.0
CHMN				e		16 34 49.2	
ARQ	Araqi	5.06	138	P	Pn	16 34 46.8	+1.8
	SNR=8.6						
HOQ	Hoqain	5.40	130	P	Pn	16 34 50.6	+1.1
HOQ				S	Sn	16 35 52.0	+0.2
BSY	Bisya	5.92	137	P	Pn	16 34 58.5	+1.8
BSY				S	Sn	16 36 03.8	-0.8
WSAR	Wadi Sarin	6.55	125	Pn	Pn	16 35 05.7	+0.3
	1.2nm,0.3s,baz=306,slow=9.0,SNR=17						
WSAR				Sn	Sn	16 36 18.9	-1.3
	1.2nm,0.3s,baz=269,slow=22,SNR=6.3						
TPRV	Parvadeh(Tabas	6.76	29	ePn	Pn	16 35 08.9	+0.6
JMDO	Jabal Madar	6.76	134	P	Pn	16 35 09.3	+1.0
WBK	Wadi Bani Khal	7.18	128	P	Pn	16 35 14.7	+0.6
WBK				S	Sn	16 36 33.9	-2.0
MHTO	MHTO	7.73	141	P	Pn	16 35 23.0	+1.5
MHTO				S	Sn	16 36 47.6	-1.7
BRTR	Keskin Array B	20.28	313	P	P	16 38 05.2	+0.2
	0.8nm,0.6s,baz=134,slow=11,SNR=5.5						
BVAR	Borovoye Array	28.98	22	P	P	16 39 29.5	+0.9
	0.5nm,0.5s,baz=203,slow=9.2,SNR=4.7						
MKAR	Makanchi Array	30.38	42	P	P	16 39 41.9	+0.8
	0.3nm,0.4s,baz=231,slow=9.5,SNR=9.0						
ZALV	Zalesovo Beam	35.64	33	P	P	16 40 28.0	+1.1
	0.8nm,0.5s,baz=240,slow=7.9,SNR=4.2						
FINES	FINESS Array B	38.70	340	P	P	16 40 52.4	-0.4
	1.0nm,0.8s,baz=150,slow=8.1,SNR=4.5						
TORD	Torodi Ar. Bea	49.65	264	P	P	16 42 20.1	-1.0
	0.5nm,0.7s,baz=84,slow=8.0,SNR=3.7						
DBIC	Dimbokro	58.28	261	P	P	16 43 23.8	-0.5
	1.0nm,0.5s,baz=219,slow=4.9,SNR=3.5						
YKA	Yellowknife Ar	90.11	354	P	P	16 46 28.3	-0.6
	0.2nm,0.5s,baz=7.7,slow=4.5,SNR=3.8						

*THE **05** 16:45:32.7, 38°.13N×20°.41E, h7km, ML3.4/10, Error ellipse: s-maj=1.0km s-min=0.4km az=275.0*
*ATH **05** 16:45:32.7, 38°.14N×20°.45E, h9km±1km, ML3.5/4, Error ellipse: s-maj=2.0km s-min=0.9km az=272.0*
*PDG **05** 16:45:32.1±0.2, 38°.17N×20°.37E, h12km, ML3.5/10, Error ellipse: s-maj=1.1km s-min=0.6km az=90.0*
*IDC **05** 16:45:38.0±2.6, 38°.13N×20°.37E, h59km±27km, mb3.4/6, mb1 3.4/9, mb1mx3.2/44, mbtmp3.5/9, ML3.2/1, Error ellipse: s-maj=24.3km s-min=16.5km az=60.0*
ISC 05 16:45:32.6±0.7, **38°.15N**±0°.02×**20°.44E**±0°.03, **h9km**±3km, **n62, σ0.66**/100, **mb3.6**/6, **1C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARGA	Argostoli. Kep	0.04	55	P	Pg	16 45 34.5	+0.1
ARGA				S	Sg	16 45 35.4	-0.4
KEF2	Argostoli. Kep	0.04	74	P	Pg	16 45 34.5	0.0
KEF2				S	Sg	16 45 35.5	-0.3
ARG2	Argostoli	0.05	59	P	Pg	16 45 34.6	+0.1
ARG2				S	Sg	16 45 36.0	+0.2
LXR1	Lixouri, Cepha	0.05	2	P	Pg	16 45 34.4	-0.1
LXR1				S	Sg	16 45 36.0	+0.1
CHV1	Chavriata, Kef	0.05	305	P	Pg	16 45 34.6	+0.1
CHV1				S	Sg	16 45 35.9	0.0
KEF3	Kipouria, Keph	0.09	305	P	Pg	16 45 35.0	+0.1
KEF3				S	Sg	16 45 36.6	0.0
KEF4	Livadi, Kephal	0.10	355	P	Pg	16 45 35.5	+0.3
KEF4				S	Sg	16 45 37.6	+0.6
VLS	Valsamata	0.12	79	P	Pg	16 45 35.6	+0.1
VLS				S	Sg	16 45 38.0	+0.5
	29μm,0.1s						
VLS	Valsamata	0.12	79	P	Pg	16 45 35.7	+0.2
VLS				S	Sg	16 45 37.7	+0.1
VLS				AML	AML	16 45 38.3	
	comp=E,63974μm,0.1s						
VLS				AML	AML	16 45 38.5	
	comp=N,48294μm,0.1s						
KEF1	Kardakata, Kep	0.13	12	P	Pg	16 45 35.9	+0.3
KEF1				S	Sg	16 45 37.7	+0.1
VSK1	VASILIKIADES	0.27	21	P	Pg	16 45 38.5	+0.4
VSK1				S	Sg	16 45 43.2	+1.3
	comp=N,8μm,0.2s						
FSK	Fiskardo	0.32	18	P	Pg	16 45 39.3	+0.3
FSK				S	Sg	16 45 44.5	+1.2
	comp=N,4μm,0.8s						
FSK	Fiskardo	0.32	18	P	Pg	16 45 39.4	+0.4
FSK				S	Sg	16 45 44.2	+0.9
VLMS	Volimes, Zakyn	0.33	147	P	Pg	16 45 39.4	+0.3
VLMS				S	Sg	16 45 43.8	+0.3
VLMS				AML	AML	16 45 47.1	
	comp=E,22549μm,0.3s						
VLMS				AML	AML	16 45 49.9	
	comp=N,42623μm,0.3s						
EVGI	Lefkada island	0.50	20	P	Pg	16 45 42.5	+0.2
EVGI				S	Sb	16 45 50.7	-0.2
EVGI	Lefkada island	0.50	20	P	Pg	16 45 42.8	+0.5
EVGI				S	Sg	16 45 49.2	+0.4
ZAK2	Zakynthos	0.52	135	P	Pg	16 45 43.1	+0.5
ZAK2				S	Sg	16 45 49.9	+0.5
	comp=N,31μm,0.5s						
MGNA	Meganis	0.57	29	P	Pg	16 45 43.8	0.0
MGNA				S	Sg	16 45 52.6	+1.4
KRI1	kERI	0.58	148	P	Pg	16 45 43.5	-0.3
KRI1				S	Sg	16 45 52.1	+0.8
	comp=N,10μm,0.5s						
AST1	Astakos	0.64	53	P	Pg	16 45 45.2	+0.2
AST1				S	Sb	16 45 55.4	+0.4
	comp=N,4μm,1.1s						
LKD2	Lefkada island	0.66	15	P	Pg	16 45 45.4	+0.1
LKD2				S	Sb	16 45 55.9	+0.4
	comp=N,1μm,0.6s						
LKD2	Lefkada island	0.66	15	P	Pg	16 45 44.8	-0.5
PDO	Prodromos	0.74	53	P	Pg	16 45 46.8	0.0
PDO				S	Sb	16 45 58.7	+1.0
	comp=N,6μm,0.6s						
PDO	Prodromos	0.74	53	P	Pg	16 45 46.8	0.0
RLS	Riolos of Patr	0.82	96	P	Pg	16 45 48.3	-0.1
RLS				S	Sb	16 46 01.3	+1.2
	comp=N,2μm,0.6s						
RLS	Riolos of Patr	0.82	96	P	Pg	16 45 48.3	-0.1
RLS				S	Sg	16 45 58.8	-0.2
RLS				AML	AML	16 46 06.8	
	comp=E,4524μm,0.6s						
RLS				AML	AML	16 46 07.5	
	comp=N,2989μm,0.6s						
PVO	Paravola	0.97	61	P	Pg	16 45 51.5	+0.2
PVO				S	Sn	16 46 06.3	0.0
	comp=N,4μm,0.5s						
PVO	Paravola	0.97	61	P	Pg	16 45 51.4	0.0
PVO				S	Sg	16 46 03.8	-0.2
PVO				AML	AML	16 46 15.8	
	comp=N,5759μm,0.5s						
PVO				AML	AML	16 46 17.1	
	comp=E,8968μm,0.5s						
DRO	Drossia	1.03	101	P	Pg	16 45 52.2	-0.1
DRO	Drossia	1.03	101	P	Pg	16 45 52.2	-0.1
AMT	Artemida-Makis	1.18	121	P	Pg	16 45 54.9	-0.4
EFP	Efpalio	1.19	76	P	Pg	16 45 54.5	-0.9
EFP				S	Sg	16 46 10.3	-0.6
ANX	Ano Chora	1.25	69	P	Pb	16 45 56.0	-0.4
SERG	Sergoula	1.30	78	P	Pn	16 45 56.2	-0.7
TRIZ	Trizonia	1.30	80	P	Pn	16 45 56.6	-0.4
TRIZ	Trizonia	1.30	80	P	Pn	16 45 56.5	-0.4
EVR	Evrytania	1.32	54	P	Pn	16 45 57.2	0.0
ITM	Ithomi	1.53	129	P	Pn	16 46 01.0	+0.9
PYL	PYLOS	1.63	140	P	Pb	16 46 02.7	-0.1
OHR	Ohrid	2.97	5	iPn	Pb	16 46 26.2	+0.5
VAY	Valandovo	3.56	27	iPn	Pg	16 46 39.0	-1.9
ULC	Ulcinj	3.91	347	⇑iPn	Pn	16 46 33.0	+0.2
ULC				eSn	Sn	16 47 19.6	+0.7
DRME	Dracevica, Mon	4.14	347	ePn	Pn	16 46 36.3	+0.4
DRME				eSn	Sn	16 47 25.0	+0.6
MMB	Musomiste	4.26	35	iP	Pn	16 46 38.2	+0.5
BUM	Brajici-Budva	4.31	345	⇓iPn	Pn	16 46 38.3	0.0
BUM				eSn	Sn	16 47 29.1	+0.5
TTG	Podgorica	4.37	348	ePn	Pn	16 46 39.3	+0.3
TTG				eSn	Sn	16 47 30.3	+0.3
PVY	Plav	4.45	355	ePn	Pn	16 46 40.9	+0.6
PVY				eSn	Sn	16 47 32.3	0.0
CEME	Cevo	4.54	346	ePn	Pn	16 46 41.5	0.0
CEME				eSn	Sn	16 47 34.6	+0.3
HCY	Herceg Novi	4.54	342	ePn	Pn	16 46 41.5	+0.1
HCY				eSn	Sn	16 47 34.2	-0.1
IDI	Anoyia	4.58	127	P	Pn	16 46 43.7	+1.7
	comp=E,0.6nm,0.3s,baz=313,slow=18,SNR=1.6						
IDI				S	Sn	16 47 38.7	+3.3
	comp=E,2.4nm,0.3s,baz=185,slow=23,SNR=8.8						
IVA	Berane	4.73	355	ePn	Pn	16 46 44.9	+0.8
IVA				eSn	Sn	16 47 39.6	+0.5
KOME	Kolasin	4.74	352	ePn	Pn	16 46 44.9	+0.6
KOME				eSn	Sn	16 47 39.8	+0.4
NKME	Niksic	4.75	347	ePn	Pn	16 46 44.4	+0.1
NKME				eSn	Sn	16 47 39.5	+0.1
BRY	Bratogost	4.96	344	ePn	Pn	16 46 47.3	0.0
BRY				eSn	Sn	16 47 44.2	-0.6
MLR	Muntele Rosu	8.40	28	Pn	Pn	16 47 39.5	+5.0
	baz=271,slow=17,SNR=1.8						
GERES	GERESS Array B	11.75	338	P	Pn	16 48 21.9	+1.6
	comp=E,0.1nm,0.3s,baz=159,slow=20,SNR=2.2						
FINES	FINESS Array B	23.58	7	P	P	16 50 42.3	-0.9
	comp=E,1.1nm,0.7s,baz=168,slow=9.8,SNR=3.9						
NOA	NORSAR Array B	23.63	349	P	P	16 50 43.6	-0.1
	comp=E,0.5nm,0.7s,baz=161,slow=8.7,SNR=3.4						
TORD	Torodi Ar. Bea	29.97	219	P	P	16 51 40.2	-1.1
	comp=E,0.7nm,0.7s,baz=40,slow=7.9,SNR=4.3						
MKAR	Makanchi Array	45.37	58	P	P	16 53 50.4	-0.7
	comp=E,0.5nm,0.6s,baz=274,slow=6.7,SNR=14						
ZALV	Zalesovo Beam	45.76	48	P	P	16 53 53.2	-0.8
	comp=E,4.7nm,0.3s,baz=280,slow=8.6,SNR=7.5						
YKA	Yellowknife Ar	73.39	340	P	P	16 57 04.7	+0.3
	comp=E,0.1nm,0.6s,baz=89,slow=11,SNR=1.7						

*IDC **05** 16:49:31.3±1.0, 13°.06N×144°.84E, h56km±7km, mb3.8/15, mb1 4.0/16, mb1mx3.8/38, mbtmp4.1/16, MS3.4/3, Ms1 3.4/3, ms1mx2.8/35, Error ellipse: s-maj=22.4km s-min=14.2km az=101.0*
*NEIC **05** 16:49:31.5±1.2, 13°.00N±0°.07×144°.8E±0°.2, h60km±6km, mb4.7/71, Error ellipse: s-maj=21.9km s-min=10.1km az=96.0*
ISC 05 16:49:31.4±0.6, **13°.02N**±0°.07×**144°.8E**±0°.1, **h57km, n111, σ0.76**/107, **mb4.6**/48, **MS3.2**/3, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.58	11	P	Pn	16 49 44.6	+0.5
	991nm,0.3s,baz=149,slow=5.7,SNR=372						
GUMO				S	Sn	16 49 54.2	+1.0
ANA2	Anatahan	3.43	16	Pn	Pn	16 50 21.2	-1.2
SARN	Sarigan	3.79	15	Pn	Pn	16 50 29.3	+1.9
JCJ	Chichijima	14.21	351	P	Pn	16 52 47.3	-2.4
	7.3nm,0.3s,baz=256,slow=23,SNR=8.7						
H11S3	WAKE ISLAND Hy	21.79	73	T	T	17 16 58.7	
	baz=263,slow=74,SNR=4.6						
H11S1	WAKE ISLAND Hy	21.81	73	T	T	17 16 58.9	
	baz=183,slow=74,SNR=3.3						
H11S2	WAKE ISLAND Hy	21.81	73	T	T	17 16 58.3	
H11N1	WAKE ISLAND Hy	22.25	70	T	T	17 17 21.6	
	baz=257,slow=75,SNR=7.6						
H11N2	WAKE ISLAND Hy	22.26	70	T	T	17 17 21.5	
	baz=257,slow=75,SNR=5.9						
H11N3	WAKE ISLAND Hy	22.27	70	T	T	17 17 22.0	
	baz=257,slow=75,SNR=10.0						
JNU	Nakatsue	23.68	330	P	P	16 54 38.6	+0.6
	7.2nm,0.8s,baz=56,slow=2.7,SNR=4.9						
JNU	Nakatsue	23.68	330	IAmb	IAmb	16 54 41.9	
	comp=Z,27nm,1.3s						
MJAR	Matsushiro Arr	24.15	347	P	P	16 54 42.7	+0.4
	comp=Z,0.7nm,0.4s,baz=85,slow=24,SNR=4.2						
MJAR				LR	LR	17 02 29.8	
	comp=Z,91nm,21.5s,baz=215,slow=32						
MJAR	Matsushiro Arr	24.15	347	IAmb	IAmb	16 54 44.9	
	comp=Z,2.0nm,0.8s						
MAJO	Matsushiro	24.15	347	P	P	16 54 43.5	+1.2
MJB9	Matsu-Tunnel	24.15	347	P	P	16 54 43.4	+1.2
KSRS	Korea Array	28.60	331	P	P	16 55 22.0	-0.3
	comp=Z,1.0nm,0.8s,baz=146,slow=9.1,SNR=5.0						
WB0	Warramunga Arr	34.14	198	P	P	16 56 10.6	-0.6
WB0				IAmb	IAmb	16 56 53.6	
	comp=Z,12nm,1.4s						
WR0	Warramunga Arr	34.28	197	P	P	16 56 11.8	-0.6
WRAB	Tennant Creek	34.31	198	P	P	16 56 11.7	-1.0
WRAB				IAmb	IAmb	16 56 12.8	
	comp=Z,7.7nm,0.8s						
WB2	Warramunga Arr	34.32	198	P	P	16 56 12.0	-0.8
WB2				IAmb	IAmb	16 56 13.3	
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	34.32	198	P	P	16 56 12.2	-0.5
	comp=Z,4.3nm,0.8s,baz=20,slow=9.6,SNR=15						
WRA	Warramunga Arr	34.32	198	P	P	16 56 11.8	-1.0
KLR	Kul'dur	37.67	346	LR	LR	17 10 28.1	
	comp=Z,56nm,18.2s,baz=6.0,slow=33						
AS31	Alice Springs	37.97	196	P	P	16 56 43.6	-0.3
ASAR	Alice Springs	37.97	196	P	P	16 56 43.6	-0.3
	comp=Z,0.8nm,0.5s,baz=21,slow=12,SNR=24						
ASAR				PcP	PcP	16 59 00.2	+1.4
	comp=Z,0.5nm,0.8s,baz=20,slow=3.8,SNR=4.1						
ASAR				LR	LR	17 13 47.5	
	comp=Z,36nm,18.6s,baz=7.5,slow=38						
ASAR	Alice Springs	37.97	196	P	P	16 56 43.2	-0.8
ASAR					PcP	16 58 59.7	+0.9
CMAR	Chiang Mai Arr	44.33	283	P	P	16 57 37.4	+1.1
	comp=Z,0.5nm,0.4s,baz=96,slow=7.0,SNR=4.1						
CMAR				PcP	PP	16 59 21.4	+0.8
	comp=Z,0.8nm,0.9s,baz=57,slow=1.2,SNR=6.2						
MA2	Magadan	46.69	4	P	P	16 57 55.5	+1.2
MA2				IAmb	IAmb	16 58 36.9	
	comp=Z,12nm,1.2s						
SONM	Songino Array	47.13	325	P	P	16 57 57.9	-0.2
	comp=Z,0.2nm,0.5s,baz=125,slow=7.2,SNR=3.4						
SONM				PcP	PcP	16 59 29.6	+0.5
	comp=Z,0.4nm,0.5s,baz=138,slow=3.9,SNR=4.1						
SONM	Songino Array	47.13	325	P	P	16 57 58.4	+0.3
YAK	Yakutsk	50.12	351	P	P	16 58 21.3	+0.6
MORW	Morawa	50.20	213	P	P	16 58 22.2	+0.5
ANM	Nome	61.76	22	P	P	16 59 43.4	-0.4
MKAR	Makanchi Array	61.82	316	P	P	16 59 44.3	-0.3
	comp=Z,0.3nm,0.5s,baz=89,slow=8.8,SNR=8.4						
MKAR	Makanchi Array	61.82	316	P	P	16 59 44.0	-0.6
MQZ	McQueen's Vall	61.93	157	P	P	16 59 45.1	-0.1
ZALV	Zalesovo Beam	62.02	325	PcP	PcP	17 00 25.0	-0.8
	comp=Z,0.5nm,0.4s,baz=85,slow=3.7,SNR=3.7						
MAKZ	Makanchi	62.03	316	P	P	16 59 46.0	0.0
OHAK	Old Harbor	64.08	32	P	P	16 59 59.6	+0.2
KDAK	Kodiak Island	64.61	32	P	P	17 00 02.5	-0.3
	comp=Z,3.2nm,0.4s,baz=279,slow=1.8,SNR=8.6						
KDAK	Kodiak Island	64.61	32	P	P	17 00 02.9	+0.1
TTA	Tatalina	64.71	26	P	P	17 00 03.6	+0.1
RSO	Redoubt South	65.32	29	P	P	17 00 08.7	+1.1
CNPM	China Poot	65.78	30	P	P	17 00 09.8	-0.6
BRLK	Bradley Lake	66.02	30	P	P	17 00 11.0	-0.9
PPLA	Purkeypile	66.34	26	P	P	17 00 14.2	+0.1
PPLA				IAmb	IAmb	17 01 22.8	
	comp=Z,18nm,1.4s						
SUA	Susitna One	66.56	28	P	P	17 00 15.7	+0.2
IMAR	Indian Mountai	66.76	23	P	P	17 00 16.4	-0.2
SEW	Seward	66.80	30	P	P	17 00 16.2	-0.6
RC01	Rabbit Creek A	66.92	29	P	P	17 00 17.2	-0.4
KTH	Kantishna Hill	67.09	26	P	P	17 00 18.1	-0.7
KTH				IAmb	IAmb	17 00 18.9	
	comp=Z,4.5nm,0.8s						
BPAW	Bear Paw Mtn.	67.23	25	P	P	17 00 19.3	-0.3
TRF	Thorofare Moun	67.33	26	P	P	17 00 19.6	-0.9
TRF				IAmb	IAmb	17 00 21.1	
	comp=Z,5.8nm,1.1s						
PMR	Palmer	67.34	28	P	P	17 00 19.6	-0.7
GHO	Glory Hole Cre	67.48	28	P	P	17 00 20.8	-0.5
GHO				IAmb	IAmb	17 00 21.7	
	comp=Z,8.0nm,0.9s						
KNK	Knik Glacier	67.60	29	P	P	17 00 21.7	-0.3

MLY	**Manley**	**67.62**	**24**	P	**P**	**17 00 22.0**	**-0.1**
MLY				IAmb	IAmb	17 00 22.6	
	comp=Z,3.6nm,0.6s						
SML	**Sawmill**	**67.76**	**28**	P	**P**	**17 00 22.8**	**-0.2**
SML				IAmb	IAmb	17 00 23.6	
	comp=Z,15nm,1.1s						
BWN	**Browne**	**67.89**	**26**	P	**P**	**17 00 23.6**	**-0.1**
RND	**Reindeer**	**67.94**	**26**	P	**P**	**17 00 23.1**	**-1.0**
GLI	**Glacier Island**	**68.12**	**29**	P	**P**	**17 00 25.0**	**-0.2**
GLI				IAmb	IAmb	17 00 44.6	
	comp=Z,12nm,0.9s						
SCM	**Sheep Creek Mo**	**68.23**	**28**	P	**P**	**17 00 25.9**	**0.0**
SCM				IAmb	IAmb	17 00 26.6	
	comp=Z,14nm,1.1s						
HIN	**Hinchinbrook I**	**68.30**	**30**	P	**P**	**17 00 26.5**	**+0.1**
FID	**Port Fidalgo**	**68.39**	**29**	P	**P**	**17 00 26.8**	**-0.1**
DHY	**Denali Highway**	**68.50**	**27**	P	**P**	**17 00 28.0**	**+0.2**
DHY				IAmb	IAmb	17 00 43.1	
	comp=Z,9.7nm,1.3s						
COLD	**Coldfoot**	**68.51**	**22**	P	**P**	**17 00 28.3**	**+0.7**
WRH	**Wood River Hil**	**68.55**	**25**	P	**P**	**17 00 27.1**	**-0.7**
WRH				IAmb	IAmb	17 00 27.8	
	comp=Z,4.0nm,0.6s						
MDM	**Murphy Dome**	**68.62**	**25**	P	**P**	**17 00 28.9**	**+0.6**
MDM				IAmb	IAmb	17 00 30.9	
	comp=Z,10nm,1.3s						
EYAK	**Cordova Ski Ar**	**68.70**	**30**	P	**P**	**17 00 28.8**	**0.0**
CCB	**Clear Creek Bu**	**68.71**	**25**	P	**P**	**17 00 27.7**	**-1.1**
HDA	**Harding Lake**	**69.01**	**26**	P	**P**	**17 00 29.2**	**-1.5**
IL31		**69.13**	**25**	P	**P**	**17 00 29.9**	**-1.5**
IL31				IAmb	IAmb	17 00 30.4	
	comp=Z,5.4nm,0.5s						
ILAR	**Eielson Array**	**69.13**	**25**	P	**P**	**17 00 29.6**	**-1.8**
	comp=Z,4.3nm,0.5s,baz=251,slow=5.8,SNR=90						
ILAR	**Eielson Array**	**69.13**	**25**	P	**P**	**17 00 29.8**	**-1.7**
TOLK	**Toolik Lake Re**	**69.18**	**21**	P	**P**	**17 00 32.0**	**+0.2**
TOLK				IAmb	IAmb	17 00 32.7	
	comp=Z,3.0nm,0.5s						
PAX	**Paxson**	**69.33**	**27**	P	**P**	**17 00 32.4**	**-0.5**
PAX				IAmb	IAmb	17 00 33.2	
	comp=Z,4.9nm,0.5s						
SUCK	**Suckling Hills**	**69.58**	**30**	P	**P**	**17 00 35.2**	**+1.0**
RIDG	**Independent Ri**	**69.76**	**27**	P	**P**	**17 00 34.5**	**-0.9**
RIDG				IAmb	IAmb	17 01 09.3	
	comp=Z,10nm,1.4s						
GLB	**Gilahina Butte**	**69.79**	**29**	P	**P**	**17 00 35.8**	**+0.1**
GLB				IAmb	IAmb	17 01 04.8	
	comp=Z,11nm,1.4s						
VRDI	**Verde Repeater**	**69.93**	**29**	P	**P**	**17 00 36.5**	**-0.2**
VRDI				IAmb	IAmb	17 01 35.9	
	comp=Z,13nm,1.4s						
CRQM	**Cirque**	**70.00**	**30**	P	**P**	**17 00 37.3**	**+0.2**
DOT	**Dot Lake**	**70.09**	**27**	P	**P**	**17 00 37.0**	**-0.3**
DOT				IAmb	IAmb	17 00 38.0	
	comp=Z,7.9nm,0.8s						
WAX	**Waxell Ridge**	**70.09**	**30**	P	**P**	**17 00 37.5**	**0.0**
TGL	**Tana Glacier**	**70.15**	**30**	P	**P**	**17 00 36.2**	**-1.7**
TGL				IAmb	IAmb	17 00 49.7	
	comp=Z,21nm,1.4s						
MCARA	**McCarthy VSAT**	**70.16**	**29**	P	**P**	**17 00 37.3**	**-0.5**
MCARA				IAmb	IAmb	17 02 22.2	
	comp=Z,20nm,1.5s						
SCRK	**Sand Creek**	**70.18**	**26**	P	**P**	**17 00 37.6**	**-0.5**
SCRK				IAmb	IAmb	17 00 38.5	
	comp=Z,3.2nm,0.5s						
FYU	**Fort Yukon**	**70.22**	**24**	P	**P**	**17 00 38.2**	**+0.1**
FYU				IAmb	IAmb	17 00 39.8	
	comp=Z,14nm,1.4s						
BALM	**Baldy**	**70.43**	**30**	P	**P**	**17 00 39.5**	**-0.1**
BALM				IAmb	IAmb	17 02 46.3	
	comp=Z,17nm,1.4s						
BMAR	**Burnt Mountain**	**70.67**	**23**	P	**P**	**17 00 41.4**	**+0.5**
BARN	**Barnard Glacie**	**70.76**	**30**	P	**P**	**17 00 41.8**	**0.0**
BARN				IAmb	IAmb	17 02 01.1	
	comp=Z,21nm,1.4s						
CTGM	**Chitina Glacie**	**70.90**	**30**	P	**P**	**17 00 42.7**	**+0.2**
CTGM				IAmb	IAmb	17 00 44.5	
	comp=Z,6.7nm,0.8s						
BCAR	**Beaver Creek A**	**71.00**	**27**	P	**P**	**17 00 42.9**	**-0.1**
PCA	**Pinnacle**	**71.33**	**31**	P	**P**	**17 00 44.7**	**-0.4**
DAWY	**Dawson**	**72.19**	**27**	P	**P**	**17 00 50.4**	**+0.2**
HYT	**Haines Junctio**	**72.75**	**30**	P	**P**	**17 00 54.3**	**+0.7**
HYT				IAmb	IAmb	17 00 55.7	
	comp=Z,6.4nm,1.0s						
EPYK	**Eagle Plains**	**73.56**	**24**	P	**P**	**17 00 58.4**	**+0.2**
EPYK				IAmb	IAmb	17 03 34.9	
	comp=Z,10nm,1.4s						
INK	**Inuvik**	**74.93**	**22**	P	**P**	**17 01 05.3**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=302,slow=5.6,SNR=9.9						
INK	**Inuvik**	**74.93**	**22**	P	**P**	**17 01 05.1**	**-0.9**
ABKAR	**Akbulak array**	**76.89**	**318**	P	**P**	**17 01 16.4**	**-1.1**
C36M	**Paulatuk**	**78.33**	**21**	P	**P**	**17 01 24.8**	**-0.4**
YKA	**Yellowknife Ar**	**83.41**	**27**	P	**P**	**17 01 51.9**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=286,slow=5.5,SNR=14						
PINE	**Pine Mountain**	**84.18**	**47**	P	**P**	**17 01 57.5**	**+0.4**
PINE				IAmb	IAmb	17 02 00.5	
	comp=Z,5.9nm,0.7s						
BMO	**Blue Mountains**	**86.47**	**45**	P	**P**	**17 02 08.6**	**+0.2**
NVAR	**Mina Array Bea**	**87.36**	**51**	P	**P**	**17 02 13.7**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=269,slow=7.8,SNR=3.9						
ARCES	**ARCESS Array B**	**87.59**	**342**	P	**P**	**17 02 13.6**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=71,slow=7.8,SNR=7.5						
ARCES	**ARCESS Array B**	**87.59**	**342**	P	**P**	**17 02 13.2**	**+0.1**
MFID	**Camas Ranch**	**87.88**	**46**	P	**P**	**17 02 15.1**	**-0.1**
MFID				IAmb	IAmb	17 02 16.9	
	comp=Z,4.9nm,1.1s						
ELK	**Elko**	**89.03**	**48**	P	**P**	**17 02 20.3**	**-0.6**
FINES	**FINESS Array B**	**91.63**	**335**	P	**P**	**17 02 31.1**	**-1.0**
	comp=Z,1.0nm,0.5s,baz=79,slow=4.0,SNR=10						
LPAZ	**La Paz**	**148.04**	**100**	PKPbc	**PKiKP**	**17 09 13.6**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=300,slow=4.6,SNR=3.7						

ATH ***05*** *17:01:25.5,38.13N×20.42E,h7km±2km,ML2.8/3,Error ellipse: s-maj=2.3km s-min=1.3km az=21.0*
THE ***05*** *17:01:25.7,38.14N×20.42E,h7km,ML2.8/4,Error ellipse: s-maj=0.9km s-min=0.4km az=271.0*
ISC 05 17:01:25.2±1.2,**38.14N**±0.03×**20.43E**±0.04,**h9**km±5km, **n26**,σ**0.32**/41,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF2	**Argostoli. Kep**	**0.05**	**56**	P	**Pg**	**17 01 27.2**	**0.0**
KEF2				S	**Sg**	**17 01 28.5**	**-0.1**
ARGA	**Argostoli. Kep**	**0.06**	**42**	P	**Pg**	**17 01 27.3**	**+0.1**
ARGA				S	**Sg**	**17 01 28.5**	**-0.1**
ARG2	**Argostoli**	**0.06**	**46**	P	**Pg**	**17 01 27.3**	**0.0**
ARG2				S	**Sg**	**17 01 28.7**	**0.0**
CHV1	**Chavriata, Kef**	**0.06**	**320**	P	**Pg**	**17 01 27.3**	**0.0**
CHV1				S	**Sg**	**17 01 28.7**	**0.0**
LXR1	**Lixouri, Cepha**	**0.07**	**4**	P	**Pg**	**17 01 27.5**	**+0.2**
LXR1				S	**Sg**	**17 01 29.0**	**+0.2**
KEF3	**Kipouria, Keph**	**0.09**	**316**	P	**Pg**	**17 01 27.7**	**+0.1**
KEF3				S	**Sg**	**17 01 29.7**	**+0.2**
KEF4	**Livadi, Kephal**	**0.12**	**357**	P	**Pg**	**17 01 28.3**	**+0.2**
VLS	**Valsamata**	**0.13**	**72**	P	**Pg**	**17 01 28.4**	**+0.2**
VLS				S	**Sg**	**17 01 30.7**	**+0.3**
	11μm,0.3s						
VLS	**Valsamata**	**0.13**	**72**	P	**Pg**	**17 01 28.4**	**+0.2**
VLS				S	**Sg**	**17 01 30.8**	**+0.5**
VLS				AML	AML	17 01 31.0	
	comp=E,21427μm,0.1s						
VLS				AML	AML	17 01 34.6	
	comp=N,19534μm,0.4s						
KEF1	**Kardakata, Kep**	**0.14**	**12**	P	**Pg**	**17 01 28.6**	**+0.2**
KEF1				S	**Sg**	**17 01 31.1**	**+0.5**
VSK1	**VASILIKIADES**	**0.29**	**21**	P	**Pg**	**17 01 31.1**	**0.0**
VSK1				S	**Sg**	**17 01 35.7**	**+0.7**
	comp=N,2μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.32**	**145**	P	**Pg**	**17 01 31.9**	**+0.4**
VLMS				AML	AML	17 01 40.6	
	comp=E,6448μm,0.3s						
VLMS				AML	AML	17 01 43.6	
	comp=N,8380μm,0.4s						
FSK	**Fiskardo**	**0.34**	**18**	P	**Pg**	**17 01 31.8**	**-0.2**
FSK				S	**Sg**	**17 01 37.5**	**+1.0**
	comp=N,772nm,0.4s						
FSK	**Fiskardo**	**0.34**	**18**	P	**Pg**	**17 01 32.3**	**+0.3**
FSK				AML	AML	17 01 39.8	
	comp=E,1750μm,0.2s						
FSK				AML	AML	17 01 43.4	
	comp=N,1350μm,0.6s						
EVGI	**Lefkada island**	**0.52**	**20**	P	**Pg**	**17 01 35.2**	**-0.1**
EVGI				S	**Sb**	**17 01 43.5**	**-0.5**
EVGI	**Lefkada island**	**0.52**	**20**	P	**Pg**	**17 01 35.5**	**+0.2**
EVGI				S	**Sb**	**17 01 43.8**	**-0.3**
KRI1	**kERI**	**0.56**	**147**	P	**Pg**	**17 01 36.3**	**+0.2**
KRI1				S	**Sb**	**17 01 45.1**	**-0.2**
	comp=N,2μm,0.4s						
MGNA	**Meganis**	**0.59**	**28**	P	**Pg**	**17 01 36.5**	**-0.2**
MGNA				S	**Sb**	**17 01 45.6**	**-0.5**
LKD2	**Lefkada island**	**0.68**	**15**	P	**Pg**	**17 01 38.5**	**+0.2**
PDO	**Prodromos**	**0.75**	**52**	P	**Pg**	**17 01 39.8**	**+0.1**
PDO	**Prodromos**	**0.75**	**52**	P	**Pg**	**17 01 39.8**	**+0.1**
RLS	**Riolos of Patr**	**0.82**	**95**	P	**Pg**	**17 01 40.6**	**-0.4**
PVO	**Paravola**	**0.98**	**60**	P	**Pg**	**17 01 44.4**	**+0.2**
PVO	**Paravola**	**0.98**	**60**	P	**Pg**	**17 01 44.4**	**+0.2**
DRO	**Drossia**	**1.03**	**100**	P	**Pg**	**17 01 45.0**	**0.0**
ANX	**Ano Chora**	**1.26**	**68**	P	**Pn**	**17 01 48.9**	**-0.1**

IDC ***05*** *17:04:09.8±1.2,27.04N×143.81E,h0km,mb3.5/6, mb1 3.7/8,mb1mx3.5/36,mbtmp3.6/8,ML2.8/2,MS3.7/1, Ms1 3.7/1,ms1mx2.4/32,Error ellipse: s-maj=24.9km s-min=21.7km az=75.0*
JMA ***05*** *17:04:15.3±0.1,27.62N×143.52E,h19km±1km,M4.4*
ISC 05 17:04:15.7±1.1,**27.38N**±0.07×**143.8E**±0.1,**h35**km,**n25**, σ**1.84**/29,**mb3.5**/6,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.45**	**259**	P	**Pn**	**17 04 38.6**	**-0.8**
JCJ	**Chichijima**	**1.45**	**259**	Pn	**Pn**	**17 04 38.5**	**-0.9**
	89nm,0.3s,baz=262,slow=22,SNR=21						
JCJ				Sn	**Sn**	**17 04 56.5**	**-0.7**
	57nm,0.3s,baz=283,slow=20,SNR=6.6						
JHH2	**Haha-jima-NKT2**	**1.61**	**243**	P	**Pn**	**17 04 42.4**	**+0.7**
JHH2				*e*S	**Sn**	**17 05 02.0**	**+0.7**
JHJ2	**Mitsune**	**6.66**	**330**	P	**Pn**	**17 05 51.0**	**-0.1**
JHJ	**Hachijo jima 2**	**6.68**	**330**	Pn	**Pn**	**17 05 49.8**	**-1.6**
	5.1nm,0.3s,baz=70,slow=11,SNR=1.9						
JHJ				Sn	**Sn**	**17 07 04.3**	**-2.0**
	12nm,0.3s,baz=80,slow=19,SNR=0.9						
BSO1	**Boso 1**	**7.64**	**342**	P	**Pn**	**17 06 03.3**	**-0.7**
BSO1				*e*S	**Sn**	**17 07 26.6**	**-2.4**
BSO3	**Boso 3**	**7.91**	**340**	P	**Pn**	**17 06 07.7**	**-0.3**
BSO4	**Boso 4**	**8.14**	**340**	P	**Pn**	**17 06 11.6**	**+0.3**
JOD2	**Odawara 2**	**8.82**	**334**	P	**Pn**	**17 06 20.2**	**-0.6**
JOD2				*e*S	**Sn**	**17 07 56.0**	**-3.0**
JHU	**Hanno**	**9.27**	**337**	P	**Pn**	**17 06 26.6**	**-0.4**
JHU				*e*S	**Sn**	**17 08 06.2**	**-3.8**
JRY	**Ryogami san**	**9.56**	**335**	P	**Pn**	**17 06 30.5**	**-0.4**
JRY				*e*S	**Sn**	**17 08 15.2**	**-1.9**
JAG	**Ashikaga**	**9.74**	**339**	P	**Pn**	**17 06 32.2**	**-1.1**
MJAR	**Matsushiro Arr**	**10.28**	**334**	Pn	**Pn**	**17 06 40.6**	**-0.2**
	0.2nm,0.3s,baz=159,slow=11,SNR=5.1						
MJAR				Sn	**Sn**	**17 08 34.4**	**-0.4**
	0.1nm,0.3s,baz=151,slow=21,SNR=1.8						
GUMO	**Guam**	**13.76**	**176**	LR	LR	17 11 30.2	
	comp=Z,297nm,20.5s,baz=43,slow=33						
KSRS	**Korea Array**	**16.71**	**311**	Pn	**P**	**17 08 11.5**	**+2.3**
	0.1nm,0.3s,baz=126,slow=9.4,SNR=4.2						
USRK	**Ussuriysk Ar.**	**19.28**	**334**	P	**Pn**	**17 08 41.2**	**+2.6**
	baz=144,slow=9.1,SNR=1.9						
H11N2	**WAKE ISLAND Hy**	**22.49**	**105**	T	T	17 32 03.5	
	baz=288						
H11N1	**WAKE ISLAND Hy**	**22.50**	**105**	T	T	17 32 01.1	
	baz=288						
H11N3	**WAKE ISLAND Hy**	**22.51**	**105**	T	T	17 32 05.4	
	baz=288						
SONM	**Songino Array**	**35.50**	**315**	P	**P**	**17 11 09.8**	**+0.5**
	0.3nm,0.9s,baz=112,slow=9.2,SNR=1.9						
WRA	**Warramunga Arr**	**47.92**	**192**	P	**P**	**17 12 47.5**	**-3.3**
	0.5nm,0.7s,baz=15,slow=8.6,SNR=6.0						
MKAR	**Makanchi Array**	**51.39**	**309**	P	**P**	**17 13 17.5**	**+0.4**
	0.4nm,0.6s,baz=89,slow=7.8,SNR=5.5						
ASAR	**Alice Springs**	**51.64**	**192**	P	**P**	**17 13 15.5**	**-3.6**
	0.4nm,0.9s,baz=274,slow=39,SNR=2.1						
ILAR	**Eielson Array**	**56.78**	**29**	P	**P**	**17 13 57.4**	**+1.4**
	0.2nm,0.7s,baz=252,slow=5.6,SNR=2.9						
FINES	**FINESS Array B**	**78.31**	**334**	P	**P**	**17 16 14.2**	**+2.2**
	2.0nm,1.0s,baz=105,slow=3.3,SNR=1.8						

IDC ***05*** *17:08:35.5±0.6,16.89N×147.41E,h0km,mb4.2/21, mb1 4.4/22,mb1mx4.2/40,mbtmp4.2/22,ML4.5/1,MS3.5/4, Ms1 3.5/4,ms1mx3.1/42,Error ellipse: s-maj=19.1km s-min=12.4km az=101.0*
NEIC ***05*** *17:08:42.7±1.3,16.82N±0.09×147.37E±0.10,h54km±6km, mb4.6/87,Error ellipse: s-maj=14.4km s-min=12.1km az=125.0*
ISC 05 17:08:41.2±0.5,**16.79N**±0.07×**147.46E**±0.09,**h41**km,**n150**, σ**0.94**/146,**mb4.6**/58,**MS3.9**/9,**1C,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	**Sarigan**	**1.61**	**267**		**Pn**	**17 09 08.0**	**+0.8**
ANA2	**Anatahan**	**1.73**	**255**		**Pn**	**17 09 09.7**	**+0.8**
GUMO	**Guam**	**4.05**	**219**	Pn	**Pn**	**17 09 40.8**	**+0.1**
	30nm,0.3s,baz=148,slow=11,SNR=14						
GUMO				Sn	**Sn**	**17 10 27.0**	**+0.2**
	29nm,0.3s,baz=148,slow=23,SNR=2.1						
PATS	**Pohnpei**	**14.51**	**132**		Pn	17 11 57.8	-6.2
INU	**Inuyama**	**20.70**	**335**	P	**P**	**17 13 18.1**	**+0.1**
MJAR	**Matsushiro Arr**	**21.32**	**339**	P	**P**	**17 13 24.4**	**-0.3**
	3.4nm,0.4s,baz=88,slow=31,SNR=12						
MJAR	**Matsushiro Arr**	**21.32**	**339**	P	**P**	**17 13 23.4**	**-1.2**
MAJO	**Matsushiro**	**21.32**	**339**	P	**P**	**17 13 24.4**	**-0.2**
MAJO				IAmb	IAmb	17 13 49.2	
	comp=Z,24nm,0.7s						
MAT	**Matsushiro**	**21.32**	**339**	P	**P**	**17 13 24.0**	**-0.6**
MJB9	**Matsu-Tunnel**	**21.32**	**339**	P	**P**	**17 13 24.3**	**-0.4**
MJB9				IAmb	IAmb	17 13 49.2	
	comp=Z,24nm,0.7s						
SIJI	**Sorong**	**23.73**	**224**	P	**P**	**17 13 48.7**	**-1.1**
	comp=Z,6.0nm,0.5s,baz=11,slow=14,SNR=4.2						
SIJI				LR	LR	17 21 22.5	
	comp=Z,88nm,21.2s,baz=52,slow=32						
KCP	**Kidapawan**	**23.92**	**249**	⇑*i*P	**P**	**17 13 52.2**	**+0.5**
PMG	**Port Moresby**	**26.03**	**181**	P	**P**	**17 14 11.9**	**+1.2**
	comp=Z,7.3nm,0.5s,baz=72,slow=5.0,SNR=5.4						
PMG				LR	LR	17 23 17.2	
	comp=Z,40nm,18.7s,baz=325,slow=34						
PMG	**Port Moresby**	**26.03**	**181**	P	**P**	**17 14 11.0**	**+0.3**
PMG				IAmb	IAmb	17 14 22.9	
	comp=Z,22nm,0.8s						
KSRS	**Korea Array**	**26.84**	**324**	P	**P**	**17 14 16.3**	**-1.6**
	comp=Z,1.6nm,0.6s,baz=146,slow=9.8,SNR=8.1						
HNR	**Honiara**	**28.83**	**154**	LR	LR	17 24 50.9	
	comp=Z,125nm,20.1s,baz=321,slow=34						
NJ2	**Nanjing**	**30.03**	**306**	*e*P	**P**	**17 14 45.9**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**30.29**	**338**	P	**P**	**17 14 49.3**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=134,slow=8.3,SNR=2.3						
KLR	**Kul'dur**	**34.79**	**342**	P	**P**	**17 15 27.1**	**-0.8**
	comp=Z,2.6nm,0.5s,baz=157,slow=13,SNR=10.0						
WB0	**Warramunga Arr**	**38.53**	**200**	P	**P**	**17 16 00.2**	**+0.2**
WR0	**Warramunga Arr**	**38.66**	**200**	P	**P**	**17 16 01.6**	**+0.5**
WRAB	**Tennant Creek**	**38.70**	**200**	P	**P**	**17 16 02.2**	**+0.9**
WB2	**Warramunga Arr**	**38.71**	**200**	P	**P**	**17 16 01.0**	**-0.4**
WRA	**Warramunga Arr**	**38.71**	**200**	P	**P**	**17 16 02.1**	**+0.6**
	comp=Z,2.7nm,0.7s,baz=27,slow=9.5,SNR=23						
WRA	**Warramunga Arr**	**38.71**	**200**	P	**P**	**17 16 01.2**	**-0.3**
HHC	**Hu-ho-hao-te**	**39.13**	**315**	*e*P	**P**	**17 16 05.0**	**0.0**
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.6s						
HIA	**Hailar**	**39.43**	**331**	P	**P**	**17 16 07.0**	**-0.3**
KSM	**Kuching**	**39.59**	**251**	P	**P**	**17 16 07.8**	**-1.2**
KSM				IAmb	IAmb	17 16 21.6	
	comp=Z,7.4nm,0.8s						
AS31	**Alice Springs**	**42.33**	**199**	P	**P**	**17 16 31.4**	**-0.1**
ASAR	**Alice Springs**	**42.33**	**199**	P	**P**	**17 16 32.2**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=16,slow=8.0,SNR=17						
ASAR	**Alice Springs**	**42.33**	**199**	P	**P**	**17 16 32.0**	**+0.6**
DZM	**Mont Dzumac**	**42.86**	**154**	*e*LR	LR	17 28 31.7	
	comp=Z,187nm,22.7s						
LZH	**Lanzhou**	**43.11**	**305**	*e*P	**P**	**17 16 36.0**	**-1.8**
LZH				pP	pP	17 16 49.8	+2.1
LZH				sP	pwP	17 16 56.3	+1.5
LZH				*e*PP	**PP**	**17 18 19.2**	**+0.8**
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,76nm,6.0s						
LZH				LR	LR		
	comp=Z,320nm,13.6s						
LZH				LR	LR		
	comp=Z,320nm,13.8s						
LZH				LR	LR		
	comp=Z,470nm,17.0s						
PBKT	**Sadao Pong**	**44.45**	**277**	P	**P**	**17 16 48.4**	**-0.2**
ULN	**Ulaanbaatar**	**45.30**	**322**	P	**P**	**17 16 54.9**	**-0.3**
SONM	**Songino Array**	**45.67**	**322**	P	**P**	**17 16 57.4**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=138,slow=7.3,SNR=14						
SONM	**Songino Array**	**45.67**	**322**	P	**P**	**17 16 57.2**	**-1.0**
CHTO	**Chiang Mai**	**46.13**	**280**	P	**P**	**17 17 01.7**	**-0.3**
CM31	**Chiang Mai Arr**	**46.16**	**280**	P	**P**	**17 17 03.4**	**+1.1**
CM31				IAmb	IAmb	17 17 04.6	
	comp=Z,8.8nm,1.1s						
CMAR	**Chiang Mai Arr**	**46.16**	**280**	P	**P**	**17 17 03.0**	**+0.8**
	comp=Z,4.3nm,0.9s,baz=73,slow=6.3,SNR=32						
SEY	**Seymchan**	**46.22**	**3**	P	**P**	**17 17 01.4**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=204,slow=12,SNR=6.2						
YAK	**Yakutsk**	**46.91**	**349**	P	**P**	**17 17 09.1**	**+1.8**
GTA	**Gaotai**	**47.04**	**309**	*e*P	**P**	**17 17 13.2**	**+4.2**
GTA				pP	sP	17 17 22.8	-0.4
GTA				sP	pwP	17 17 26.6	+0.7
GTA				pmax	pmax		
	comp=Z,85nm,4.8s						
GTA				LR	LR		
	comp=Z,83nm,18.4s						
GTA				LR	LR		
	comp=Z,130nm,16.2s						
GTA				LR	LR		
	comp=Z,120nm,18.1s						
BILL	**Bilibino**	**52.62**	**9**	P	**P**	**17 17 51.0**	**+0.3**
BILL				IAmb	IAmb	17 18 16.9	
	comp=Z,16nm,1.6s						
LSA	**Lhasa**	**52.86**	**295**	P	**P**	**17 17 54.8**	**+1.1**
LSA				IAmb	IAmb	17 18 06.8	
	comp=Z,3.5nm,0.7s						
TIXI	**Tiksi**	**55.95**	**353**	P	**P**	**17 18 14.9**	**0.0**
TIXI				IAmb	IAmb	17 18 52.9	
	comp=Z,17nm,2.0s						
ODAN	**Odare**	**56.22**	**291**	*e*P	**P**	**17 18 18.0**	**+0.1**
	comp=Z,6.0nm,0.5s						
WMQ	**Urumqi**	**56.82**	**312**	*e*P	**P**	**17 18 23.6**	**+1.9**
WMQ				pP	pP	17 18 34.9	+2.9
WMQ				pmax	pmax		
	comp=Z,11nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.9s						
JIRN	**Jiri**	**57.25**	**292**	*e*P	**P**	**17 18 26.0**	**+0.6**
	comp=Z,24nm,0.7s						
GUN	**Gumba**	**57.51**	**293**	*e*P	**P**	**17 18 28.1**	**+0.9**
	comp=Z,4.4nm,0.3s						
PKI	**Pulchoki**	**57.95**	**292**	*e*P	**P**	**17 18 29.7**	**-0.5**
	comp=Z,4.4nm,0.4s						
KKN	**Kakani**	**58.05**	**293**	*e*P	**P**	**17 18 30.2**	**-0.6**
DMN	**Daman**	**58.21**	**292**	*e*P	**P**	**17 18 30.4**	**-1.6**
GKN	**Gorkha**	**58.60**	**293**	*e*P	**P**	**17 18 34.6**	**0.0**
	comp=Z,5.0nm,0.3s						
DANN	**Dangsing**	**59.36**	**293**	*e*P	**P**	**17 18 39.6**	**-0.4**
	comp=Z,38nm,0.6s						
ZAA0	**Zalesovo Array**	**60.54**	**323**	P	**P**	**17 18 46.5**	**-0.8**
ZAA0				IAmb	IAmb	17 18 49.3	
	comp=Z,3.4nm,0.8s						
ZALV	**Zalesovo Beam**	**60.54**	**323**	P	**P**	**17 18 46.5**	**-0.8**
	comp=Z,2.1nm,0.5s,baz=111,slow=8.1,SNR=12						
ZALV	**Zalesovo Beam**	**60.54**	**323**	P	**P**	**17 18 46.4**	**-0.9**
MK31	**Makanchi Array**	**60.99**	**315**	P	**P**	**17 18 50.2**	**-0.3**
MKAR	**Makanchi Array**	**60.99**	**315**	P	**P**	**17 18 50.2**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=91,slow=7.6,SNR=28						
MKAR	**Makanchi Array**	**60.99**	**315**	P	**P**	**17 18 50.4**	**-0.2**
MAKZ	**Makanchi**	**61.21**	**315**	P	**P**	**17 18 51.6**	**-0.4**
IMAR	**Indian Mountai**	**62.29**	**23**	P	**P**	**17 18 59.0**	**+0.2**
KTH	**Kantishna Hill**	**62.58**	**26**	P	**P**	**17 19 00.3**	**-0.6**
BPAW	**Bear Paw Mtn.**	**62.72**	**26**	P	**P**	**17 19 01.7**	**-0.2**
MLY	**Manley**	**63.12**	**25**	P	**P**	**17 19 04.9**	**+0.3**
MLY				IAmb	IAmb	17 19 51.8	
	comp=Z,11nm,1.5s						
KURK	**Kurchatov**	**63.81**	**319**	P	**P**	**17 19 08.9**	**-0.3**
KURK				IAmb	IAmb	17 19 23.8	
	comp=Z,9.7nm,1.0s						
WRH	**Wood River Hil**	**64.04**	**26**	P	**P**	**17 19 10.3**	**-0.2**
WRH				IAmb	IAmb	17 20 00.0	
	comp=Z,6.8nm,1.1s						
IL31		**64.62**	**26**	P	**P**	**17 19 12.8**	**-1.5**
IL31				IAmb	IAmb	17 19 58.7	
	comp=Z,14nm,1.8s						
ILAR	**Eielson Array**	**64.62**	**26**	P	**P**	**17 19 13.2**	**-1.1**
	comp=Z,1.9nm,0.8s,baz=250,slow=5.6,SNR=10						
ILAR	**Eielson Array**	**64.62**	**26**	P	**P**	**17 19 12.6**	**-1.7**
SCRK	**Sand Creek**	**65.66**	**27**	P	**P**	**17 19 20.9**	**-0.3**
SCRK				IAmb	IAmb	17 20 15.3	
	comp=Z,17nm,1.8s						
FYU	**Fort Yukon**	**65.74**	**24**	P	**P**	**17 19 22.1**	**+0.6**
BMAR	**Burnt Mountain**	**66.20**	**23**	P	**P**	**17 19 24.5**	**0.0**
BCAR	**Beaver Creek A**	**66.46**	**28**	P	**P**	**17 19 25.9**	**-0.4**
NIL	**Nilore**	**67.93**	**300**	P	**P**	**17 19 36.5**	**+0.4**
BRVK	**Borovoye**	**69.07**	**321**	P	**P**	**17 19 42.0**	**-0.8**
KK31	**Karatay Array**	**69.28**	**310**	P	**P**	**17 19 44.6**	**+0.3**
KKAR	**Karatay Array**	**69.28**	**310**	P	**P**	**17 19 44.2**	**-0.1**
KKAR	**Karatay Array**	**69.28**	**310**	P	**P**	**17 19 44.0**	**-0.4**
KKAR				IAmb	IAmb	17 19 57.4	
	comp=Z,4.0nm,0.9s						
INK	**Inuvik**	**70.47**	**23**	P	**P**	**17 19 50.9**	**-0.3**
	comp=Z,1.8nm,0.9s,baz=253,slow=7.4,SNR=7.4						
INK	**Inuvik**	**70.47**	**23**	P	**P**	**17 19 50.6**	**-0.5**
INK				IAmb	IAmb	17 20 13.6	
	comp=Z,20nm,1.9s						
PPT2	**Papeete2**	**70.79**	**116**	*e*LR	LR	17 41 26.8	
	comp=Z,104nm,23.0s						
KBL	**Kabul**	**71.29**	**301**	P	**P**	**17 19 56.6**	**-0.4**
KBL				IAmb	IAmb	17 20 09.1	
	comp=Z,5.0nm,0.7s						
TBI	**Tubuai**	**73.41**	**121**	*e*LR	LR	17 42 39.6	
	comp=Z,62nm,31.0s						
ARU	**Arti**	**75.59**	**325**	P	**P**	**17 20 21.6**	**0.0**
ABKAR	**Akbulak array**	**75.87**	**318**	P	**P**	**17 20 22.1**	**-1.3**
HRA	**Herat**	**76.85**	**302**	P	**P**	**17 20 28.4**	**-1.1**
HRA				IAmb	IAmb	17 20 40.5	
	comp=Z,3.9nm,0.7s						
HUMO	**Hull Mountain**	**78.53**	**49**	P	**P**	**17 20 39.2**	**+0.6**
YKA	**Yellowknife Ar**	**78.88**	**28**	P	**P**	**17 20 40.0**	**+0.1**
	comp=Z,2.1nm,0.6s,baz=285,slow=5.6,SNR=30						
YBH	**Yreka Blue Hor**	**78.90**	**50**	P	**P**	**17 20 41.4**	**+0.8**
YBH				IAmb	IAmb	17 20 42.6	
	comp=Z,4.9nm,0.7s						
GEYT	**Alibeck**	**79.37**	**306**	P	**P**	**17 20 41.4**	**-1.9**
	comp=Z,0.4nm,0.4s,baz=32,slow=19,SNR=2.3						
PINE	**Pine Mountain**	**79.71**	**47**	P	**P**	**17 20 45.9**	**+0.7**
B08A	**Colville Reser**	**79.74**	**43**	P	**P**	**17 20 45.2**	**+0.2**
B08A				IAmb	IAmb	17 20 46.3	
	comp=Z,4.5nm,0.7s						
K05A	**Summer Lake**	**79.99**	**48**	P	**P**	**17 20 47.6**	**+0.9**
K05A				IAmb	IAmb	17 20 48.6	
	comp=Z,9.2nm,1.0s						
C09A	**Chrisman Ranch**	**80.56**	**43**	P	**P**	**17 20 48.5**	**-0.9**
C09A				IAmb	IAmb	17 20 50.7	
	comp=Z,5.1nm,0.8s						
MOD	**Modoc Plateau**	**80.61**	**49**	P	**P**	**17 20 50.2**	**+0.2**
AFDM	**Forest Hills D**	**80.83**	**52**	P	**P**	**17 20 51.4**	**+0.3**
RES	**Resolute Bay**	**80.87**	**14**	P	**P**	**17 20 50.8**	**+0.3**
RES				IAmb	IAmb	17 21 54.4	
	comp=Z,13nm,1.7s						
BEKR	**Beckworth**	**81.07**	**51**	P	**P**	**17 20 50.4**	**-2.1**
BEKR				IAmb	IAmb	17 20 53.7	
	comp=Z,4.9nm,0.7s						
NEW	**Newport**	**81.19**	**42**	P	**P**	**17 20 52.7**	**-0.2**
NEW				IAmb	IAmb	17 20 57.6	
	comp=Z,6.1nm,1.0s						
SPITS	**Spitsbergen Ar**	**81.31**	**351**	LR	LR	17 57 17.0	
	comp=Z,67nm,20.4s,baz=180,slow=36						
CMB	**Columbia Colle**	**81.51**	**53**	P	**P**	**17 20 55.2**	**+0.5**
J08A	**Circle Bar Ran**	**81.56**	**47**	P	**P**	**17 20 55.5**	**+0.5**
J08A				IAmb	IAmb	17 20 56.6	
	comp=Z,4.7nm,0.7s						
WVOR	**Wild Horse Val**	**81.68**	**48**	P	**P**	**17 20 56.1**	**+0.5**
PNTR	**Pine Nut**	**81.83**	**52**	P	**P**	**17 20 56.4**	**-0.2**
BMO	**Blue Mountains**	**81.97**	**46**	P	**P**	**17 20 57.6**	**+0.4**
WAKR	**Walker**	**82.11**	**52**	P	**P**	**17 20 58.9**	**+0.8**
WAKR				IAmb	IAmb	17 21 36.8	
	comp=Z,14nm,1.8s						
KVN	**Kaiserville**	**82.97**	**51**	P	**P**	**17 21 03.1**	**+0.6**
NVAR	**Mina Array Bea**	**82.99**	**52**	P	**P**	**17 21 03.6**	**+1.0**
	comp=Z,2.0nm,0.6s,baz=275,slow=5.4,SNR=18						
NV11	**Mina Array Sit**	**83.10**	**52**	P	**P**	**17 21 03.9**	**+0.7**

NV11 IAmb IAmb 17 22 00.7
comp=Z,10nm,1.8s
MFID Camas Ranch 83.40 47 P P 17 21 05.1 +0.5
MFID IAmb IAmb 17 21 09.6
comp=Z,5.7nm,1.1s
KLMR Klimovskoe 83.92 332 eP P 17 21 04.7 -2.0
KLMR AMP 17 21 14.0
comp=Z,37nm,2.0s
ELK Elko 84.60 49 P P 17 21 11.2 +0.3
ARCES ARCESS Array B 84.81 343 P P 17 21 11.2 +0.1
comp=Z,2.5nm,0.7s,baz=64,slow=8.2,SNR=9.7
LRM Limekiln Ridge 84.96 44 P P 17 21 11.7 -0.9
TPNV Topopah Spring 84.97 53 P P 17 21 11.7 -1.0
TPNV IAmb IAmb 17 21 16.5
comp=Z,5.2nm,1.2s
MCMT McKenzie Canyo 85.01 45 P P 17 21 12.1 -0.8
R11A Troy Canyon, C 85.06 52 P P 17 21 13.8 +0.6
R11A IAmb IAmb 17 21 16.7
comp=Z,8.9nm,1.9s
QLMT Earthquake Lak 85.97 44 P P 17 21 17.4 -0.2
YHL Hebgen Lake 86.12 44 P P 17 21 19.6 +1.1
YHB Horse Butte 86.15 44 P P 17 21 19.6 +1.0
PSUT Pine Spring 86.29 51 P P 17 21 19.6 +0.3
YMR Madison River 86.33 44 P P 17 21 20.5 +1.0
YHH Holmes Hill 86.37 44 P P 17 21 20.7 +0.9
YNR Norris Junctio 86.51 44 P P 17 21 21.4 +1.0
IMW Indian Meadow 86.61 45 P P 17 21 19.4 -1.5
IMW IAmb IAmb 17 21 22.9
comp=Z,2.7nm,0.7s
FXWY Fox Creek 86.64 45 P P 17 21 20.8 -0.2
FXWY IAmb IAmb 17 22 23.2
comp=Z,5.8nm,1.6s
H17A Grant Village 86.69 45 P P 17 21 22.2 +1.0
H17A IAmb IAmb 17 21 27.5
comp=Z,6.3nm,1.3s
FLWY Flagg Ranch 86.71 45 P P 17 21 22.6 +1.3
MOOW Moose Ponds 86.80 45 P P 17 21 21.8 +0.1
GCMT Greycliff 86.80 43 P P 17 21 21.4 -0.2
YMP Mirror Lake Pl 86.85 44 P P 17 21 23.6 +1.5
AHID Auburn Hatcher 86.89 46 P P 17 21 21.3 -0.9
AHID IAmb IAmb 17 21 26.6
comp=Z,4.0nm,0.7s
RLMT Red Lodge 87.30 44 P P 17 21 25.2 +1.0
JLU Jordanelle 87.38 48 P P 17 21 25.0 +0.4
MSU Marysvale 87.55 51 P P 17 21 26.0 +0.5
PD31 Pinedale Array 87.95 46 P P 17 21 26.2 -1.1
PD31 IAmb IAmb 17 24 30.5
comp=Z,9.1nm,1.8s
PDAR Pinedale Array 87.95 46 P P 17 21 27.3 -0.1
comp=Z,0.5nm,0.6s,baz=270,slow=4.4,SNR=5.1
PDAR Pinedale Array 87.95 46 P P 17 21 26.9 -0.4
TMUT Trail Mountain 87.99 50 P P 17 21 28.1 +0.4
Q16A Castle Valley 88.15 50 P P 17 21 27.9 -0.4
U15A North Rim 88.15 53 P P 17 21 29.0 +0.5
U15A IAmb IAmb 17 21 30.4
comp=Z,3.1nm,0.8s
SRU San Rafael Swe 88.56 50 P P 17 21 30.9 +0.7
WUAZ Wupatki 89.16 53 P P 17 21 33.6 +0.5
FINES FINESS Array B 89.31 336 P P 17 21 31.6 -1.4
comp=Z,2.6nm,0.7s,baz=69,slow=4.3,SNR=15
VYHS Vyhne 100.57 328 ePDIFF Pdif 17 22 27.8 +3.1
TORD Torodi Ar. Bea 134.96 309 PKP PKPdf 17 27 55.1 -1.8
comp=Z,0.3nm,0.8s,baz=304,slow=0.5,SNR=2.1
LPAZ La Paz 145.91 94 PKPbc PKPdf 17 28 19.4 +2.1
comp=Z,2.6nm,0.6s,baz=348,slow=2.7,SNR=12
LPAZ La Paz 145.91 94 PKPdf 17 28 18.5 +1.2

*NIED **05** 17:32:00, 38.°60N×142.°40E, h44km, Mw5.3 Best double couple: M0 9.13000×10^16 NP1:φs 216.00000°, δ58.00000°, λ76.00000°. NP2:φs 61.00000°, δ35.00000°, λ111.00000°.*
*BJI **05** 17:32:09.7±0.0, 38.°66N×142.°34E, h32km, mB5.2/64, mb5.1/79, Ms4.9/83, Ms7 4.8/77*
*MOS **05** 17:32:11.5±0.9, 38.°79N×142.°33E, h31km, mb5.5/39, MS5.0/11, Error ellipse: s-maj=5.0km s-min=3.7km az=100.7*
*JMA **05** 17:32:12.7, 38.°64N×142.°43E, h40km±1km, M5.3*
JMA Felt IV J1.
*GCMT **05** 17:32:14.8±0.1, 38.°69N±0.°01×142.°30E±0.°01, h36km, MW5.3/131, Moment Tensor Solution. s106,c175; s131,c225; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr 0.82±.02; Mθθ -0.50±.01; Mφφ -0.31±.01; Mrθ -0.13±.01; Mrφ -0.51±.01; Mθφ -0.58±.01; Best double couple: M0 1.05900×10^17 NP1:φs 70.00000°, δ34.00000°, λ124.00000°. NP2:φs 210.00000°, δ62.00000°, λ69.00000°. Principal axes: T 1.0670, Plg66.0000°, Azm82.0000°; N -0.0140, Plg18.0000°, Azm220.0000°; P -1.0520, Plg15.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **05** 17:32:14.4±1.6, 38.°66N×142.°34E, h47km±14km, mb4.6/29, mb1 4.8/36, mb1mx4.7/40, mbtmp4.9/36, ML4.0/7, MS4.6/34, Ms1 4.6/34, ms1mx4.4/52 Error ellipse: s-maj=12.8km s-min=9.6km az=110.0*
*NEIC **05** 17:32:14.8±1.4, 38.°69N±0.°06×142.°36E±0.°09, h49km±4km, mb5.4/421, Mwb5.3/33, Error ellipse: s-maj=11.6km s-min=8.2km az=125.0*
*NEIC **05** 17:32:14.8, 38.°69N×142.°36E, h36km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr 0.99; Mθθ -1.10; Mφφ 0.12; Mrθ -0.14; Mrφ -0.63; Mθφ -0.48; Fault plane solution: M0 1.32000×10^17 NP1:φs 91.16000°, δ42.90000°, λ127.74000°. NP2:φs 224.58000°, δ57.43000°, λ60.37000°. Principal axes: T 1.2098, Plg64.0000°, Azm82.0000°; N 0.2049, Plg25.0000°, Azm242.0000°; P -1.4147, Plg8.0000°, Azm335.0000°;*
*KLM **05** 17:32:15.0, 38.°68N×142.°43E, h48km, mb5.3*
*BGR **05** 17:32:22.6±0.0, 40.°19N×141.°92E, h41km±4km, mb4.9*
ISC 05 17:32:13.9±0.4, 38.°70N±0.°03×142.°35E±0.°03, h46km±3km, h46km:pP-P, n1289, σ1s31/1343, mb5.3/351, MS4.8/60, 39C-47D, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res
OFUJ Ofunato 0.66 306 ⇓P Pn 17 32 26.7 -0.3
OFUJ S Sn 17 32 37.0 +0.7
JKMT Kesennumamotoy 0.69 280 ⇓P Pn 17 32 27.1 -0.4
JKMT S Sn 17 32 37.4 +0.2
JIKH Ishinomakikobu 0.79 241 ⇑P Pn 17 32 27.9 -0.9
JIKH S Sn 17 32 38.7 -0.9
JIO Ouri 0.82 253 ⇑P Pn 17 32 28.5 -0.6
JIO S Sn 17 32 39.8 -0.4
JMK Ichinoseki 0.92 286 ⇓P Pn 17 32 30.5 0.0
JMK S Sn 17 32 42.7 +1.0
MIYJ Miyakonagasawa 0.97 335 ⇓P Pn 17 32 31.0 -0.2
JOFO Osakifurukawao 1.13 266 ⇓P Pn 17 32 33.9 +0.6
JOM Ohasama 1.13 314 ⇓P Pn 17 32 33.8 +0.4
JOM S Sn 17 32 49.7 +1.9
JTH Tanohata 1.30 343 ⇓P Pn 17 32 35.5 -0.1
JTH eS Sn 17 32 52.9 +1.1
JOU Okura 1.36 257 ⇓P Pn 17 32 36.7 +0.2
JOU S Sn 17 32 54.5 +1.0
JMM Marumori 1.48 236 ⇑P Pn 17 32 37.4 -0.7
JMM eS Sn 17 32 56.0 -0.2
JMST Minamisoumatoc 1.51 230 P Pn 17 32 37.8 -0.7
JRG Rokugo 1.51 298 ⇓P Pn 17 32 39.1 +0.6
JRG eS Sn 17 32 59.3 +2.3
JKZ Kuzumaki 1.51 329 ⇓P Pn 17 32 39.4 +0.8
JYK Kaneyama 1.57 279 ⇓P Pn 17 32 39.9 +0.5
JYK eS Sn 17 32 59.0 +0.5
JFK Kawauchi 1.77 222 P Pn 17 32 41.2 -0.9
JFK S Sn 17 33 02.2 -1.2
JANG Nango 1.79 339 ⇓P Pn 17 32 42.3 -0.1
JYA Atsumi 2.07 268 ⇓P Pn 17 32 47.0 +0.8
JFFD Fukushimafurud 2.14 222 P Pn 17 32 46.7 -0.5
JAW Awa shima 2.44 265 P Pn 17 32 52.6 +1.3
JHO Hitachi 2.52 215 ⇓P Pn 17 32 51.3 -1.0
JHK Hiroka 3.00 242 ⇓P Pn 17 33 00.0 +1.0
JSD Sado 3.28 260 ⇓P Pn 17 33 03.3 +0.5
ERM Erimo 3.37 10 Pn 17 33 03.5 -0.5
ERM Erimo 3.37 10 deP Pn 17 33 03.6 -0.4
ERM pmax pmax
comp=Z,355nm,1.3s
MJAR Matsushiro Arr 3.93 238 P Pn 17 33 13.6 +1.9
comp=Z,7.9nm,0.3s,baz=43,slow=13,SNR=165
MJAR S Sn 17 33 57.0 +0.4
comp=Z,4.0nm,0.3s,baz=211,slow=47,SNR=1.2
MJAR LR LR 17 34 58.8
comp=Z,9μm,19.4s,baz=65,slow=42
MJAR Matsushiro Arr 3.93 238 Pn 17 33 13.3 +1.5
MAJO Matsushiro 3.93 238 Pn 17 33 13.5 +1.8
MAJO Matsushiro 3.93 238 deP Pn 17 33 13.8 +2.1
MAT Matsushiro 3.93 238 P Pn 17 33 13.5 +1.8
MAT Matsushiro 3.93 238 P Pn 17 33 13.7 +2.0
MAT S Sn 17 33 57.8 +1.2
MJB9 Matsu-Tunnel 3.93 238 Pn 17 33 13.5 +1.8
JOD2 Odawara 2 4.31 218 P Pn 17 33 17.2 +0.3
JYN Shimob 4.41 225 P Pn 17 33 20.1 +1.7
JNY Yasuok 4.90 229 P Pn 17 33 27.1 +2.0
NMR Nemuro--Hokkai 5.32 28 ⇑iP Pn 17 33 28.4 -2.4
NMR iS Sn 17 34 25.3 -5.4
INU Inuyama 5.42 234 Pn 17 33 33.3 +1.1
GLVR Golovnino 5.58 24 ⇑iP Pn 17 33 32.5 -1.7
GLVR iS Sn 17 34 32.6 -4.4
GLVR pmax pmax
comp=Z,843nm,0.5s
GLVR pmax pmax
comp=N,656nm,0.3s
GLVR pmax pmax
comp=E,330nm,0.3s
GLVR smax smax
comp=N,3μm,0.4s
GLVR smax smax
comp=E,3μm,0.6s
GRPR Tuman 5.88 25 ⇓iP Pn 17 33 36.2 -2.3
GRPR eS Sn 17 34 39.3 -5.3
GRPR pmax pmax
comp=N,166nm,0.3s
GRPR pmax pmax
comp=Z,788nm,0.3s
GRPR pmax pmax
comp=E,113nm,0.2s
GRPR smax smax
comp=N,4μm,0.4s
GRPR smax smax
comp=E,2μm,0.4s
JHJ2 Mitsune 5.94 201 Pn 17 33 37.8 -1.5
JHJ Hachijo jima 2 5.94 201 P Pn 17 33 37.7 -1.7
comp=E,84nm,0.3s,baz=32,slow=20,SNR=23
JHJ S Sn 17 34 40.4 -5.7
comp=E,201nm,0.3s,baz=74,slow=21,SNR=12
YUK Yuzh-Kuril'sk 5.95 25 diP Pn 17 33 36.9 -2.5
YUK iS Sn 17 34 40.6 -5.6
YUK pmax pmax
comp=Z,818nm,0.7s
YUK pmax pmax
comp=N,750nm,0.6s
YUK pmax pmax
comp=E,373nm,0.7s
YUK smax smax
comp=E,262nm,0.3s
YUK smax smax
comp=N,3μm,0.5s
YUK MLR MLR
comp=Z,2μm,12.0s
YUK MLR MLR
comp=N,4μm,13.0s
SHO Shikotan 6.17 32 eP Pn 17 33 39.9 -2.5
SHO iS Sn 17 34 45.0 -6.6
SHO pmax pmax
comp=Z,122nm,0.4s
SHO pmax pmax
comp=E,32nm,0.2s
SHO pmax pmax
comp=N,73nm,0.4s
SHO smax smax
comp=E,521nm,0.2s
SHO smax smax
comp=N,2μm,0.4s
SHO MLR MLR
comp=Z,3μm,17.0s
TEY Ternei 7.65 328 ⇑eP Pn 17 34 03.9 +1.2
TEY pmax pmax
comp=N,20nm,1.6s
TEY pmax pmax
comp=Z,30nm,1.4s
TEY pmax pmax
comp=E,30nm,1.2s
TEY MLR MLR
comp=E,200nm,20.0s
TEY MLR MLR
comp=N,300nm,18.0s
TEY MLR MLR
comp=Z,400nm,19.0s
KUR Kuril'sk 7.71 30 eP Pn 17 33 58.3 -5.3
KUR eS Sn 17 35 23.9 -5.6
KUR pmax pmax
comp=Z,249nm,0.6s
KUR pmax pmax
comp=N,101nm,0.3s
KUR pmax pmax
comp=E,148nm,0.7s
KUR smax smax
comp=E,634nm,0.5s
KUR smax smax
comp=N,290nm,0.3s
KUR MLR MLR
comp=Z,901nm,7.0s
YSS Yuzh-Sakhalins 8.26 2 Pn 17 34 12.2 +1.1
YSS Yuzh-Sakhalins 8.26 2 ⇑iP Pn 17 34 11.5 +0.5
YSS eS Sn 17 35 41.0 -1.9
YSS pmax pmax
comp=N,220nm,0.8s
YSS pmax pmax
comp=Z,290nm,0.8s
YSS pmax pmax
comp=Z,1μm,3.0s
YSS smax smax
comp=E,2μm,8.1s
YSS MLR MLR
comp=Z,3μm,15.0s
YSS MLR MLR
comp=N,2μm,16.0s
VLA Vladivostok 9.07 302 deP Pn 17 34 24.1 +1.9
MSHR Mys Shultsa 9.35 298 deP Pn 17 34 27.5 +1.5
USA0B Ussuriysk Arra 9.52 309 P Pn 17 34 29.0 +0.6
USA0B Ussuriysk Arra 9.52 309 P Pn 17 34 29.0 +0.6
USRK Ussuriysk Arr. 9.52 309 P Pn 17 34 30.2 +1.9
baz=113,slow=15,SNR=69
USRK LR LR 17 38 04.9
comp=N,6μm,18.5s,baz=98,slow=37
USRK Ussuriysk Ar. 9.52 309 Pn 17 34 30.5 +2.1
USRK Ussuriysk Ar. 9.52 309 P Pn 17 34 30.5 +2.1
UGL Uglegorsk 10.38 359 eP Pn 17 34 46.0 +6.0
UGL S Sn 17 36 45.3 +10
UGL pmax pmax
comp=Z,96nm,1.1s
UGL pmax pmax
comp=Z,2μm,4.9s
UGL smax smax
comp=E,4μm,7.0s
UGL MLR MLR
comp=Z,3μm,18.0s
UGL MLR MLR
comp=E,4μm,22.0s
JNU Nakatsue 10.84 243 P Pn 17 34 47.3 +0.9
comp=E,0.7nm,0.3s,baz=8.6,slow=2.7,SNR=14
JNU LR LR 17 39 19.8
comp=E,3μm,19.4s,baz=48,slow=39
JNU Nakatsue 10.84 243 Pn 17 34 46.1 -0.3
MDJ Mudanjiang 11.22 306 P Pn 17 34 53.2 +1.6
MDJ pmax pmax
comp=E,42nm,1.5s
MDJ LR LR
comp=E,2μm,18.0s
MDJ LR LR
comp=E,4μm,18.6s
MDJ LR LR
comp=E,7μm,18.4s
MDJ Mudanjiang 11.22 306 Pn 17 34 51.3 -0.3
KSRS Korea Array 11.44 268 P Pn 17 34 57.2 +2.6
comp=E,2.2nm,0.3s,baz=82,slow=13,SNR=75
KSRS S Sn 17 37 01.2 +0.2
baz=120,slow=7.0,SNR=0.9
KSRS LR LR 17 39 01.7
comp=E,3μm,20.2s,baz=74,slow=36
KSRS PcP PcP 17 40 45.5 +0.9
baz=45,slow=1.6,SNR=4.7
KSAR Wonju Array Be 11.47 268 Pn 17 34 56.7 +1.6
KSAR Wonju Array Be 11.47 268 P Pn 17 34 56.7 +1.6
KS19 Wonju Array Si 11.48 269 Pn 17 34 57.6 +2.5
JCJ Chichijima 11.57 181 P Pn 17 34 53.2 -3.3
comp=E,67nm,0.3s,baz=260,slow=13,SNR=13
JCJ S Sn 17 36 50.6 -14
comp=E,18nm,0.3s,baz=58,slow=23,SNR=4.3
TJN Taejon 12.12 264 deP Pn 17 35 06.2 +2.3
TYV Tymovskoe 12.17 1 eP Pn 17 35 03.6 -0.8
TYV eS Sn 17 37 18.4 -0.2
TYV pmax pmax
comp=Z,50nm,1.8s
TYV smax smax
comp=E,12nm,1.6s
TYV MLR MLR
comp=E,4μm,14.0s
TYV MLR MLR
comp=Z,4μm,18.0s
INCN Inchon 12.45 269 Pn 17 35 10.7 +2.3
INCN Inchon 12.45 269 P Pn 17 35 10.7 +2.3
GRNR Gornyy 12.78 343 ⇑iP Pn 17 35 12.9 +0.1
GRNR eS Sn 17 37 35.1 +1.6
GRNR pmax pmax
comp=Z,10.0nm,0.7s
GRNR smax smax
comp=N,10.0nm,1.0s
GRNR MLR MLR
comp=Z,2μm,19.0s
KLR Kul'dur 12.99 328 P Pn 17 35 15.9 +0.2
comp=Z,1.1nm,0.3s,baz=132,slow=12,SNR=44
KLR LR LR 17 40 18.3
comp=Z,5μm,18.9s,baz=138,slow=37
KLR Kul'dur 12.99 328 deP Pn 17 35 15.3 -0.4
KLR pmax pmax
comp=Z,48nm,1.5s
SNY Shenyang 14.67 288 ⇑P Pn 17 35 36.3 -2.1
SNY S Sn 17 38 17.7 -1.9
SNY pmax pmax
comp=Z,46nm,1.5s
SNY pmax pmax
comp=Z,690nm,7.1s
SNY LR LR
comp=Z,2μm,19.8s
SNY LR LR
comp=Z,2μm,27.7s
SNY LR LR
comp=Z,5μm,22.1s
OKH Okha 14.86 1 deP Pn 17 35 30.3 -11
OKH MLR MLR
comp=Z,2μm,17.0s
OKH MLR MLR
comp=N,2μm,11.0s
OKH MLR MLR
comp=E,2μm,9.0s
DL2 Dalian 16.16 277 ⇓iP Pn 17 35 57.4 -0.3
DL2 S Sn 17 38 56.7 +0.9
DL2 sS S 17 39 07.2 +0.1
DL2 pmax pmax
comp=E,230nm,1.6s
DL2 pmax pmax
comp=E,880nm,5.0s
DL2 LR LR
comp=E,1μm,20.9s
DL2 LR LR
comp=E,2μm,17.5s
DL2 LR LR
comp=E,3μm,23.1s
PETK Petropavlovsk- 17.88 31 P Pn 17 36 18.2 -0.8
comp=E,0.3nm,0.3s,baz=210,slow=8.6,SNR=3.7
PETK LR LR 17 43 33.0
comp=E,769nm,18.3s,baz=227,slow=38
PETK Petropavlovsk- 17.88 31 P Pn 17 36 16.9 -2.1
ZEA Zeya 18.26 330 eP P 17 36 20.3 -3.0
ZEA e 17 39 48.0
ZEA pmax pmax
comp=Z,700nm,2.0s
ZEA pmax pmax
comp=N,320nm,1.4s
ZEA pmax pmax
comp=E,170nm,1.4s
ZEA pmax pmax
comp=Z,400nm,1.2s
ZEA MLR MLR
comp=N,3μm,15.0s
ZEA MLR MLR
comp=E,2μm,15.0s
ZEA MLR MLR
comp=Z,5μm,15.0s
SSE Sheshan 18.92 253 P P 17 36 28.1 -2.6
SSE IAmb IAmb 17 36 36.8
comp=Z,293nm,1.1s
HIA Hailar 19.33 310 P P 17 36 31.9 -3.3
HIA Hailar 19.33 310 P P 17 36 31.9 -3.3
HIA pmax pmax
comp=Z,106nm,1.5s
TIA Tai'an 20.16 271 P P 17 36 42.5 -1.9
TIA pmax pmax
comp=Z,98nm,1.5s
TIA LR LR
comp=Z,2μm,16.1s
TIA LR LR
comp=Z,1μm,21.8s
TIA LR LR
comp=Z,2μm,23.0s
NJ2 Nanjing 20.25 258 eP P 17 36 45.7 +0.5
NJ2 pP pP 17 36 57.0 +0.9
NJ2 pmax pmax
comp=Z,80nm,0.9s
NJ2 pmax pmax
comp=Z,360nm,3.5s
NJ2 LR LR
comp=Z,1μm,14.7s
NJ2 LR LR
comp=Z,2μm,13.3s
NJ2 LR LR
comp=Z,2μm,18.5s
BJI Beijing 20.26 282 P P 17 36 41.8 -3.5
BJI S Sn 17 40 33.9 -1.0
BJI pmax pmax
comp=Z,72nm,1.5s
BJI LR LR
comp=Z,2μm,13.7s
BJI LR LR
comp=Z,3μm,13.7s
BJT Baijiatuau 20.27 282 P P 17 36 43.3 -2.2
BJT IAmb IAmb 17 36 48.0
comp=Z,261nm,1.7s
BJT Baijiatuau 20.27 282 P P 17 36 43.3 -2.2
BJT pmax pmax
comp=Z,261nm,1.7s
MA2 Magadan 21.58 12 P P 17 36 59.4 0.0
comp=Z,40nm,0.6s,baz=195,slow=9.5,SNR=27
MA2 Magadan 21.58 12 P P 17 36 59.6 +0.3
MA2 IAmb IAmb 17 37 13.9
comp=Z,102nm,0.8s
MA2 Magadan 21.58 12 diP P 17 37 00.0 +0.7
MA2 pmax pmax
comp=Z,195nm,1.7s
YHNB Yeheng 22.60 238 P P 17 37 08.2 -2.6
NACB Ninganchiao 22.80 237 P P 17 37 10.1 -2.7
SSLB Suanglung 23.49 237 P P 17 37 16.4 -3.2
SSLB IAmb IAmb 17 37 24.7
comp=Z,223nm,2.0s
YULB Yu-li 23.54 236 P P 17 37 16.6 -3.5
HHC Hu-ho-hao-te 23.70 285 ⇓iP P 17 37 19.0 -2.6
HHC S S 17 41 29.6 -3.7
HHC pmax pmax
comp=Z,200nm,5.2s
HHC LR LR
comp=Z,530nm,13.9s
HHC LR LR
comp=Z,2μm,15.1s
HHC LR LR
comp=Z,2μm,15.5s
CIT Chita 24.04 313 eP P 17 37 21.8 -2.7
CIT e 17 37 35.0
CIT e 17 37 58.7
CIT eS S 17 41 34.7 -3.7
CIT pmax pmax
comp=Z,725nm,1.4s
TPUB Ta-pu 24.04 237 P P 17 37 22.9 -1.8
TPUB IAmb IAmb 17 37 39.0
comp=Z,73nm,0.9s
TWG Pinlang 24.09 235 P P 17 37 24.0 -1.1
WHN Wuhan 24.37 259 ⇓P P 17 37 26.9 -0.7
WHN S S 17 41 37.5 -6.4
WHN LR LR
comp=Z,2μm,10.7s
WHN LR LR
comp=Z,5μm,18.3s
WHN LR LR
comp=Z,5μm,17.4s

YAK Yakutsk 24.63 346 P P 17 37 28.7 -0.9
comp=Z,25nm,0.4s,baz=344,slow=2.4,SNR=41
YAK Yakutsk 24.63 346 P P 17 37 28.7 -0.9
YAK IAmb IAmb 17 37 48.1
comp=Z,134nm,1.0s
YAK Yakutsk 24.63 346 d iP P 17 37 28.6 -1.0
YAK e*PP pP 17 37 43.7 +2.1
YAK e 17 38 02.6
YAK e 17 41 03.3
YAK eS S 17 41 46.4 -1.1
YAK eSS SnSn 17 42 42.1 +5.8
YAK e 17 48 25.8
YAK pmax pmax
comp=Z,87nm,0.9s
YAK pmax pmax
comp=N,80nm,1.0s
YAK pmax pmax
comp=E,25nm,0.9s
YAK pmax pmax
comp=Z,69nm,1.3s
YAK pmax pmax
comp=N,167nm,1.6s
YAK pmax pmax
comp=E,70nm,1.3s
YAK smax smax
comp=N,217nm,1.9s
YAK smax smax
comp=E,259nm,2.1s
KNMB Chin-men Tao 24.77 242 P P 17 37 30.4 -0.8
KNMB IAmb IAmb 17 37 34.9
comp=Z,92nm,1.1s
BTO Baotou 24.89 285 eP P 17 37 31.2 -1.2
SEY Seymchan 25.02 11 P P 17 37 35.3 +2.1
comp=Z,79nm,1.0s,baz=194,slow=8.0,SNR=57
SEY Seymchan 25.02 11⇓eP P 17 37 34.9 +1.7
BOD Bodaibo 26.55 325 eP P 17 37 46.6 -0.5
BOD pmax pmax
comp=Z,172nm,1.5s
ULN Ulaanbaatar 27.08 301 P P 17 37 51.5 -0.7
ULN IAmb IAmb 17 37 56.5
comp=Z,149nm,1.6s
ULN Ulaanbaatar 27.08 301 P P 17 37 51.5 -0.7
ULN pmax pmax
comp=Z,149nm,1.6s
XAN Xi'an 27.23 271 P P 17 37 52.6 -0.9
XAN PP PP 17 38 41.0 -15
XAN S S 17 42 25.4 -3.9
XAN pmax pmax
comp=Z,32nm,1.8s
XAN pmax pmax
comp=Z,270nm,3.5s
XAN LR LR
comp=Z,1μm,19.6s
XAN LR LR
comp=Z,1μm,18.1s
XAN LR LR
comp=Z,1μm,21.1s
XAN Xi'an 27.23 271 P P 17 37 52.6 -0.9
XAN IAmb IAmb 17 37 59.5
comp=Z,127nm,1.4s
XAN Xi'an 27.23 271 P P 17 37 52.6 -0.9
XAN pmax pmax
comp=Z,127nm,1.4s
SONM Songino Array 27.52 301 P P 17 37 56.8 +0.7
comp=Z,16nm,1.0s,baz=109,slow=8.2,SNR=86
SONM PcP PcP 17 41 14.6 +1.5
comp=Z,2.5nm,0.9s,baz=147,slow=2.7,SNR=3.5
SONM LR LR 17 49 22.7
comp=Z,1μm,18.2s,baz=98,slow=37
SONM Songino Array 27.52 301 P P 17 37 56.2 +0.1
SONM Songino Array 27.52 301 P P 17 37 56.2 +0.1
SONM 17 41 14.6
SONM pmax pmax
comp=Z,81nm,1.5s
ENH Enshi 28.25 263 P P 17 38 02.2 -0.5
H11N2 WAKE ISLAND Hy 28.42 125 T T 18 08 35.1
baz=317,slow=76,SNR=1722
H11N1 WAKE ISLAND Hy 28.43 125 T T 18 08 36.6
baz=317,slow=76,SNR=376
H11N3 WAKE ISLAND Hy 28.44 125 T T 18 08 37.6
baz=317,slow=76,SNR=876
H11S1 WAKE ISLAND Hy 29.20 127 T T 18 09 20.3
baz=318,slow=76,SNR=446
H11S3 WAKE ISLAND Hy 29.20 127 T T 18 09 26.4
baz=318,slow=76,SNR=797
H11S2 WAKE ISLAND Hy 29.21 127 T T 18 09 29.9
baz=318,slow=76,SNR=640
IRK Irkutsk 29.57 310 eP P 17 38 14.0 -0.1
IRK pmax pmax
comp=Z,143nm,2.1s
TLY Talaya 29.84 309 P P 17 38 17.3 +0.8
comp=Z,45nm,1.1s,baz=119,slow=10.0,SNR=60
TLY LR LR 17 50 51.2
comp=Z,2μm,19.1s,baz=113,slow=37
TLY Talaya 29.84 309 P P 17 38 16.5 0.0
TLY IAmb IAmb 17 38 18.5
comp=Z,138nm,1.4s
TLY Talaya 29.84 309 d iP P 17 38 16.9 +0.3
TLY eS S 17 43 12.8 +2.7
TLY eSS SnSn 17 44 39.4 -4.1
TLY pmax pmax
comp=Z,253nm,1.3s
TLY MLR MLR
comp=Z,6μm,17.0s
ZAK Zakamensk 29.86 306 eP P 17 38 17.4 +0.6
ZAK pmax pmax
comp=Z,87nm,1.3s
LZH Lanzhou 30.56 277 ⇑P P 17 38 22.3 -0.9
LZH S S 17 43 19.0 -2.9
LZH sS sS 17 43 41.2 -0.8
LZH SS ScP 17 45 00.4 +0.7
LZH pmax pmax
comp=Z,70nm,1.2s
LZH pmax pmax
comp=Z,250nm,4.6s
LZH LR LR
comp=Z,2μm,13.1s
LZH LR LR
comp=Z,2μm,13.2s
LZH LR LR
comp=Z,3μm,16.7s
MOY Mondy 31.47 308 eP P 17 38 30.8 -0.2
MOY pmax pmax
comp=Z,124nm,1.8s
BILL Bilibino 32.23 17 P P 17 38 37.5 +0.2
BILL IAmb IAmb 17 38 58.5
comp=Z,100nm,1.7s
BILL Bilibino 32.23 17⇓eP P 17 38 37.9 +0.6
BILL e 17 39 43.9
BILL pmax pmax
comp=Z,25nm,1.0s
BILL MLR MLR
comp=Z,803nm,22.0s
GYA Guiyang 32.26 258⇑iP P 17 38 37.9 -0.3
GYA PP PP 17 39 48.4 -3.2
GYA S S 17 43 47.7 -0.8
GYA SS SnSn 17 45 45.1 +2.1
GYA pmax pmax
comp=Z,170nm,0.8s
GYA pmax pmax
comp=Z,180nm,5.4s
GYA LR LR
comp=Z,780nm,15.6s
GYA LR LR
comp=Z,960nm,15.3s
GYA LR LR
comp=Z,1μm,15.7s
CD2 Chengdu 32.44 268 P P 17 38 39.1 -0.6
CD2 S S 17 43 47.8 -3.4
CD2 sS sS 17 44 12.0 +0.6
CD2 pmax pmax
comp=Z,70nm,0.9s
CD2 pmax pmax
comp=Z,280nm,5.5s
CD2 LR LR
comp=Z,2μm,16.2s
CD2 LR LR
comp=Z,1μm,17.2s
CD2 LR LR
comp=Z,2μm,17.6s
GTA Gaotai 32.82 285 ⇓P P 17 38 42.6 -0.4
GTA pP pP 17 38 57.1 +1.9
GTA PcP PcP 17 41 28.4 +1.3
GTA S S 17 43 57.9 +0.8
GTA ScP ScP 17 45 07.8 +0.6
GTA PcS PcS 17 45 12.9 +0.4
GTA ScS ScS 17 49 05.5 -1.8
GTA pmax pmax
comp=Z,21nm,1.1s
GTA pmax pmax
comp=Z,160nm,5.1s
GTA LR LR
comp=Z,1μm,20.3s
GTA LR LR
comp=Z,3μm,18.4s
GTA LR LR
comp=Z,3μm,19.7s
TIXI Tiksi 33.74 352 P P 17 38 50.3 -0.1
comp=Z,4.1nm,0.6s,baz=135,slow=6.1,SNR=6.7
TIXI Tiksi 33.74 352 P P 17 38 49.5 -0.9
TIXI Tiksi 33.74 352 deP P 17 38 50.2 -0.2
TIXI pmax pmax
comp=Z,18nm,1.7s
QIZ Qiongzhong 34.30 244 P P 17 38 56.2 +0.3
QIZ S S 17 44 22.1 +2.0
QIZ LR LR
comp=Z,520nm,16.9s
QIZ LR LR
comp=Z,650nm,21.4s
QIZ LR LR
comp=Z,860nm,15.9s
KMI Kunming 35.97 260 P P 17 39 09.6 -0.9
KMI IAmb IAmb 17 39 19.5
comp=Z,63nm,0.9s
KMI Kunming 35.97 260 P P 17 39 09.6 -0.9
KMI pmax pmax
comp=Z,63nm,0.9s
GAMB Gambell 36.91 32 P P 17 39 17.6 -0.2
SLVN Son La 37.20 254 P P 17 39 20.4 -0.4
ANM Nome 39.79 32 P P 17 39 44.4 +2.4
ANM IAmb IAmb 17 39 45.8
comp=Z,105nm,1.6s
ANM Nome 39.79 32 P P 17 39 44.4 +2.4
ANM pmax pmax
comp=Z,105nm,1.6s
UBPT Khong Chiam 39.90 245 P P 17 39 43.5 +0.1
TNTI Ternate 40.17 204 P P 17 39 46.6 +1.0
comp=Z,968nmcomp=Z,41nm,1.2s
TNTI Ternate 40.17 204 P P 17 39 45.2 -0.4
TNTI IAmb IAmb 17 40 00.3
comp=Z,76nm,1.3s
DLV T Lat 40.19 238 P P 17 39 47.1 +1.0
DLV IAmb IAmb 17 40 03.1
comp=Z,138nm,1.7s
KKM Kota Kinabalu 40.20 223 P P 17 39 44.9 -1.2
KKM IAmb IAmb 17 40 14.2
comp=Z,68nm,1.3s
SWI Sorong 40.67 197 P P 17 39 50.7 +1.0
comp=Z,769nmcomp=Z,43nm,1.1s
WMQ Urumqi 40.78 295 P P 17 39 52.0 +1.5
WMQ pP pP 17 40 04.6 +1.6
WMQ S S 17 45 59.7 +1.7
WMQ pmax pmax
comp=Z,83nm,1.3s
WMQ pmax pmax
comp=Z,480nm,5.7s
WMQ LR LR
comp=Z,650nm,17.1s
WMQ LR LR
comp=Z,560nm,17.7s
WMQ LR LR
comp=Z,960nm,23.9s
WMQ Urumqi 40.78 295 P P 17 39 51.8 +1.2
WMQ Urumqi 40.78 295 P P 17 39 51.8 +1.2
WMQ pmax pmax
comp=Z,266nm,1.4s
GENI Genyem 41.13 183 P P 17 39 55.7 +2.1
comp=Z,46nm,1.7s
ZAA0 Zalesovo Array 41.37 311 P P 17 39 54.7 -0.4
ZAA0 IAmb IAmb 17 39 56.6
comp=Z,75nm,1.3s
ZALV Zalesovo Beam 41.37 311 P P 17 39 55.2 +0.1
comp=Z,22nm,0.4s,baz=88,slow=8.1,SNR=86
ZALV PcP PcP 17 41 52.4 -0.2
comp=Z,2.1nm,0.4s,baz=132,slow=2.1,SNR=3.6
ZALV LR LR 17 57 46.1
comp=Z,2μm,18.7s,baz=77,slow=37
ZALV Zalesovo Beam 41.37 311 P P 17 39 55.0 -0.1
KMSI Cibinong 41.51 208 P P 17 39 57.8 +1.1
comp=Z,1μmcomp=Z,135nm,1.0s
RDOG Red Dog Mine 41.69 27 P P 17 39 58.5 +0.8
PBKT Sadao Pong 42.31 250 P P 17 40 03.6 +0.4
KOHI KOHIMA 42.37 267 eP P 17 40 01.8 -2.1
KOHI IAmb IAmb 17 40 06.5
comp=Z,66nm,0.5s
MRSI Marisa 42.40 211 P P 17 40 04.5 +0.6
comp=Z,1μmcomp=Z,104nm,1.4s
CHTO Chiang Mai 42.43 255 P P 17 40 04.4 +0.1
CHTO IAmb IAmb 17 40 19.1
comp=Z,38nm,0.8s
CHTO Chiang Mai 42.43 255 P P 17 40 04.4 +0.1
CHTO pmax pmax
comp=Z,38nm,0.8s
FAKI Fak Fak 42.45 195 P P 17 40 05.3 +1.0
comp=Z,957nmcomp=Z,45nm,1.8s
FAKI Fak Fak 42.45 195 P P 17 40 04.0 -0.3
FAKI IAmb IAmb 17 40 06.5
comp=Z,67nm,1.2s
CM31 Chiang Mai Arr 42.65 254 P P 17 40 05.8 -0.2
CMAR Chiang Mai Arr 42.65 254 P P 17 40 06.3 +0.3
comp=Z,3.0nm,0.7s,baz=44,slow=6.7,SNR=36
CMAR PcP PcP 17 41 56.9 -0.6
comp=Z,2.7nm,0.8s,baz=22,slow=1.6,SNR=4.3
CMAR LR LR 18 00 00.8
comp=Z,246nm,18.9s,baz=51,slow=39
LSA Lhasa 42.82 274 P P 17 40 09.0 +1.2
LSA pmax pmax
comp=Z,120nm,1.9s
LSA Lhasa 42.82 274 iP P 17 40 09.0 +1.2
SNR=8.6
LSA Lhasa 42.82 274 P P 17 40 08.3 +0.4
LSA IAmb IAmb 17 40 13.6
comp=Z,68nm,1.3s
LSA Lhasa 42.82 274 P P 17 40 08.3 +0.4
LSA pmax pmax
comp=Z,69nm,1.3s
TEZP TEZPUR 42.95 269 eP P 17 40 08.8 +0.4
TEZP IAmb IAmb 17 40 11.2
comp=Z,41nm,0.9s
SANI Sanana 43.26 204 P P 17 40 10.1 -0.8
comp=Z,88nm,1.1s
MPSI Mapaga 43.38 214 P P 17 40 12.1 +0.2
comp=Z,644nmcomp=Z,36nm,1.5s
MSAI Masohi 43.63 200 P P 17 40 14.4 +0.5
comp=Z,444nmcomp=Z,23nm,1.6s
TTA Tatalina 43.64 36 P P 17 40 14.5 +0.9
TTA Tatalina 43.64 36 P P 17 40 14.5 +0.9
APSI Ampana 43.77 211 P P 17 40 14.8 -0.3
comp=Z,1μmcomp=Z,116nm,1.2s
MK31 Makanchi Array 43.88 301 P P 17 40 16.0 +0.3
MK31 IAmb IAmb 17 40 19.6
comp=Z,99nm,1.4s
MK31 Makanchi Array 43.88 301 P P 17 40 16.0 +0.3
MK31 pmax pmax
comp=Z,99nm,1.4s
MKAR Makanchi Array 43.88 301 P P 17 40 16.1 +0.4
comp=Z,12nm,0.4s,baz=82,slow=11,SNR=134
MKAR LR LR 17 59 12.1
comp=Z,851nm,20.5s,baz=75,slow=37
NLAI Namlea 44.04 202 P P 17 40 16.7 -0.5
comp=Z,35nm,1.1s
MAKZ Makanchi 44.09 301 P P 17 40 17.6 +0.2
MAKZ IAmb IAmb 17 40 21.4
comp=Z,76nm,1.1s
MAKZ Makanchi 44.09 301 P P 17 40 17.6 +0.2
MAKZ pmax pmax
comp=Z,77nm,1.1s
AAI Ambon 44.16 201 P P 17 40 18.3 +0.2
comp=Z,1μmcomp=Z,86nm,1.5s
BNDI Bandanaira 44.52 198 P P 17 40 22.1 +1.1
comp=Z,214nm,1.5s
IMAR Indian Mountai 44.85 31 P P 17 40 24.6 +1.5
RSO Redoubt South 45.14 39 P P 17 40 24.9 -0.8
SBUM Sibu 45.36 225 P P 17 40 27.6 -0.1
SBUM Sibu 45.36 225 P P 17 40 29.0 +1.2
KDAK Kodiak Island 45.37 43 P P 17 40 26.9 -0.5
KDAK IAmb IAmb 17 40 43.9
comp=Z,53nm,1.0s
KDAK Kodiak Island 45.37 43 P P 17 40 26.9 -0.5
KDAK pmax pmax
comp=Z,53nm,1.0s
PPLA Purkeypile 45.38 36 P P 17 40 29.8 +2.2
PPLA IAmb IAmb 17 40 39.0
comp=Z,128nm,1.5s
KURK Kurchatov 45.51 307 P P 17 40 28.7 +0.1
KURK Kurchatov 45.51 307 P P 17 40 28.7 +0.1
KURK pmax pmax
comp=Z,113nm,0.9s
SKT Skwentna 45.70 37 P P 17 40 31.5 +1.5
BPAW Bear Paw Mtn. 45.93 34 P P 17 40 33.4 +1.7
BPAW IAmb IAmb 17 40 51.2
comp=Z,95nm,2.0s
KTH Kantishna Hill 45.96 35 P P 17 40 33.6 +1.6
KTH IAmb IAmb 17 40 54.1
comp=Z,78nm,1.3s
MLY Manley 46.05 33 P P 17 40 34.6 +1.9
MLY IAmb IAmb 17 40 49.7
comp=Z,30nm,1.0s
SUA Susitna One 46.09 38 P P 17 40 34.1 +0.9
SUA IAmb IAmb 17 40 51.2
comp=Z,54nm,1.4s
BRLK Bradley Lake 46.11 40 P P 17 40 33.5 +0.3
TRF Thorofare Moun 46.24 35 P P 17 40 35.3 +0.9
TRF IAmb IAmb 17 40 53.1
comp=Z,90nm,1.9s
SIMRM Sittwe 46.30 261 P P 17 40 35.8 +0.7
SIMRM IAmb IAmb 17 40 36.9
comp=Z,30nm,1.0s
COLD Coldfoot 46.34 30 P P 17 40 36.1 +1.3
TAPN Taplejung 46.58 273 eP P 17 40 38.0 +0.3
RC01 Rabbit Creek A 46.59 38 P P 17 40 38.4 +1.4
TOLK Toolik Lake Re 46.66 28 P P 17 40 39.2 +1.8
TOLK IAmb IAmb 17 40 54.1
comp=Z,33nm,0.9s
TOLK Toolik Lake Re 46.66 28 P P 17 40 38.5 +1.1
baz=267,SNR=14
PDGK Podgornoye 46.67 297 P P 17 40 36.8 -1.2
NEA Nenana 46.76 33 P P 17 40 39.9 +1.7
NEA IAmb IAmb 17 40 41.4
comp=Z,66nm,1.4s
SEW Seward 46.81 40 P P 17 40 38.5 -0.1
SEW IAmb IAmb 17 40 56.7
comp=Z,68nm,1.3s
MCK McKinley 46.84 35 P P 17 40 39.9 +1.0
MCK IAmb IAmb 17 40 57.5
comp=Z,45nm,1.3s
MCK McKinley 46.84 35 P P 17 40 39.9 +1.0
MCK pmax pmax
comp=Z,45nm,1.3s
PMR Palmer 46.85 38 P P 17 40 39.5 +0.6
PMR Palmer 46.85 38 P P 17 40 39.5 +0.6
PMR pmax pmax
comp=Z,21nm,1.0s
RND Reindeer 46.89 35 P P 17 40 39.8 +0.5
RND IAmb IAmb 17 40 48.5
comp=Z,31nm,0.9s
RND Reindeer 46.89 35 P P 17 40 39.8 +0.5
RND pmax pmax
comp=Z,31nm,0.9s
GHO Glory Hole Cre 46.94 37 P P 17 40 40.9 +1.1
ODAN Odare 47.07 273 eP P 17 40 41.7 +0.3
MDM Murphy Dome 47.12 33 P P 17 40 42.9 +1.9
MDM IAmb IAmb 17 40 57.8
comp=Z,40nm,0.9s
KNK Knik Glacier 47.19 38 P P 17 40 42.4 +0.7
KNK IAmb IAmb 17 41 01.9
comp=Z,30nm,1.0s
WRH Wood River Hil 47.19 34 P P 17 40 42.6 +1.1
SML Sawmill 47.22 37 P P 17 40 42.6 +0.8
SML IAmb IAmb 17 40 58.3
comp=Z,40nm,1.0s
KSM Kuching 47.24 226 P P 17 40 43.8 +1.3
KSM IAmb IAmb 17 40 45.1
comp=Z,29nm,1.0s
KSM Kuching 47.24 226 P P 17 40 44.0 +1.5
TCOL CIGO, UAF Yank 47.28 33 P P 17 40 43.7 +1.5
baz=272
COLA College 47.28 33 P P 17 40 43.8 +1.6
COLA College 47.28 33 P P 17 40 43.8 +1.6
COLA pmax pmax
comp=Z,19nm,0.7s
CCB Clear Creek Bu 47.31 33 P P 17 40 43.6 +1.1
SPSI Sidrap Palu 47.31 211 P P 17 40 42.6 -0.4
comp=Z,43nm,1.3s
POKR Poker Plat Res 47.45 33 P P 17 40 45.4 +1.8
baz=272,SNR=29
SAUI Saumlaki 47.56 195 P P 17 40 45.5 +0.6
comp=Z,153nm,1.4s
SAUI Saumlaki 47.56 195 P P 17 40 45.3 +0.4
BNSI Bone 47.57 211 P P 17 40 45.7 +0.7
comp=Z,1μmcomp=Z,86nm,1.4s
DHY Denali Highway 47.58 35 P P 17 40 45.4 +0.6
DHY IAmb IAmb 17 41 00.8
comp=Z,44nm,1.3s
JIRN Jiri 47.62 274 eP P 17 40 46.2 +0.3
comp=Z,167nm,1.0s
BBSI Bau Bau 47.63 207 P P 17 40 46.2 +0.7
comp=Z,15nm,2.1s
RAMN Ramite 47.64 273 eP P 17 40 46.2 +0.3
comp=Z,88nm,0.8s
HDA Harding Lake 47.69 34 P P 17 40 46.0 +0.6
HDA IAmb IAmb 17 41 01.1
comp=Z,39nm,1.2s
HDA Harding Lake 47.69 34 P P 17 40 45.8 +0.4
baz=273,SNR=14
PRZ Przheval'sk 47.69 296 P P 17 40 46.3 +0.3
PRZ Przheval'sk 47.69 296 P P 17 40 46.3 +0.3
PRZ pmax pmax
comp=Z,136nm,1.5s
SCM Sheep Creek Mo 47.69 37 P P 17 40 46.3 +0.7
SCM IAmb IAmb 17 41 02.1
comp=Z,38nm,1.0s
SCM Sheep Creek Mo 47.69 37 P P 17 40 46.3 +0.7
SCM pmax pmax
comp=Z,38nm,1.0s
IL31 47.70 33 P P 17 40 46.3 +0.9
IL31 IAmb IAmb 17 41 01.3
comp=Z,48nm,1.2s
ILAR Eielson Array 47.70 33 P P 17 40 46.1 +0.7
comp=Z,9.4nm,0.8s,baz=265,slow=5.9,SNR=87
GUN Gumba 47.74 275 eP P 17 40 47.0 +0.2
STKI Sintang 47.75 224 P P 17 40 46.9 +0.4
comp=Z,3μmcomp=Z,26nm,1.2s
PMG Port Moresby 48.06 174 P P 17 40 49.5 +0.7
PMG Port Moresby 48.06 174 ceP P 17 40 49.0 +0.2
PMG pmax pmax
comp=Z,86nm,1.3s
FID Port Fidalgo 48.21 39 P P 17 40 49.6 +0.1
PRP Porcupine Dome 48.23 32 P P 17 40 50.6 +0.8
PRP IAmb IAmb 17 41 12.5
comp=Z,22nm,0.8s
HIN Hinchinbrook I 48.24 39 P P 17 40 50.7 +0.9
KKN Kakani 48.27 275 eP P 17 40 51.1 +0.4
comp=Z,122nm,0.9s
PKI Pulchoki 48.27 275 eP P 17 40 50.8 0.0
PKIN Phulchoki 48.28 275 eP P 17 40 50.5 -0.3
FYU Fort Yukon 48.30 31 P P 17 40 52.5 +2.4
BKSI Bulukumba 48.40 210 P P 17 40 52.0 +0.6
comp=Z,471nmcomp=Z,38nm,1.1s
PAX Paxson 48.45 36 P P 17 40 53.1 +1.7
PAX Paxson 48.45 36 P P 17 40 53.1 +1.7
PAX pmax pmax
comp=Z,17nm,1.0s
DMN Daman 48.49 275 eP P 17 40 53.1 +0.7
BMAR Burnt Mountain 48.52 30 P P 17 40 54.3 +2.4
KDJ Kajisay 48.66 296 P P 17 40 54.3 +0.8
KDJ IAmb IAmb 17 41 12.2
comp=Z,42nm,1.1s
KDJ Kajisay 48.66 296 P P 17 40 54.3 +0.8
KDJ pmax pmax
comp=Z,42nm,1.1s
RIDG Independent Ri 48.66 34 P P 17 40 53.0 0.0
RIDG IAmb IAmb 17 41 12.0
comp=Z,36nm,1.2s
GKN Gorkha 48.67 275 eP P 17 40 53.8 +0.1
SCRK Sand Creek 49.01 34 P P 17 40 56.4 +0.6
SCRK IAmb IAmb 17 41 11.7
comp=Z,51nm,1.2s
DOT Dot Lake 49.02 35 P P 17 40 56.2 +0.5
RAGM Ragged Mountai 49.14 39 P P 17 40 58.1 +1.4
DANN Dangsing 49.19 276 eP P 17 40 58.3 +0.5
comp=Z,323nm,0.8s
MENT Mentasta 49.25 35 P P 17 40 59.2 +1.7
MENT IAmb IAmb 17 41 22.6
comp=Z,43nm,1.2s
GLB Gilahina Butte 49.41 37 P P 17 40 59.7 +0.9
GLB IAmb IAmb 17 41 16.6

	comp=Z,46nm,1.6s						
BOOM	**Boomskoye usch**	**49.41**	**297**	P	**P**	**17 41 00.1**	**+0.9**
BOOM	**Boomskoye usch**	**49.41**	**297**	P	**P**	**17 41 00.1**	**+0.9**
KOLN	**Koldanda**	**49.59**	**276**	eP	**P**	**17 41 01.2**	**+0.4**
VRDI	**Verde Repeater**	**49.61**	**38**	P	**P**	**17 41 01.8**	**+1.3**
VRDI				IAmb	IAmb	17 41 18.1	
	comp=Z,62nm,1.6s						
NRN	**Naryn**	**49.72**	**295**	P	**P**	**17 41 01.6**	**-0.2**
NRN	**Naryn**	**49.72**	**295**	P	**P**	**17 41 01.6**	**-0.2**
NRN				pmax	pmax		
	comp=Z,11nm,0.9s						
MCARA	**McCarthy VSAT**	**49.79**	**37**	P	**P**	**17 41 03.4**	**+1.8**
CRQM	**Cirque**	**49.83**	**38**	P	**P**	**17 41 03.5**	**+1.4**
CRQM				IAmb	IAmb	17 41 19.2	
	comp=Z,37nm,1.0s						
TGL	**Tana Glacier**	**49.98**	**38**	P	**P**	**17 41 04.6**	**+1.4**
TGL				IAmb	IAmb	17 41 20.1	
	comp=Z,40nm,1.2s						
KZA	**Kyzart**	**50.03**	**297**	P	**P**	**17 41 05.6**	**+1.4**
	SNR=8.7						
KBK	**Karagaybulak**	**50.05**	**297**	P	**P**	**17 41 04.9**	**+0.9**
	SNR=16						
BRVK	**Borovoye**	**50.07**	**312**	P	**P**	**17 41 04.3**	**+0.5**
BRVK	**Borovoye**	**50.07**	**312**	P	**P**	**17 41 04.3**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,16nm,0.7s						
BCAR	**Beaver Creek A**	**50.11**	**35**	P	**P**	**17 41 05.7**	**+1.7**
EGAK	**Eagle**	**50.14**	**33**	P	**P**	**17 41 04.5**	**+0.3**
USP	**Ospenovka**	**50.15**	**298**	P	**P**	**17 41 05.3**	**+0.6**
	SNR=12						
BALM	**Baldy**	**50.17**	**38**	P	**P**	**17 41 05.8**	**+1.2**
FRU1	**Bishkek**	**50.22**	**298**	P	**P**	**17 41 05.8**	**+0.6**
FRU1	**Bishkek**	**50.22**	**298**	P	**P**	**17 41 05.8**	**+0.6**
FRU1				pmax	pmax		
	comp=Z,96nm,1.6s						
KULM	**Kulim**	**50.30**	**239**	P	**P**	**17 41 06.6**	**+0.6**
KULM				IAmb	IAmb	17 41 10.0	
	comp=Z,23nm,0.9s						
KULM	**Kulim**	**50.30**	**239**	P	**P**	**17 41 07.0**	**+1.0**
AAK	**Ala-Archa**	**50.37**	**297**	LR	LR	18 03 50.3	
	comp=Z,532nm,19.9s,baz=66,slow=38						
AAK	**Ala-Archa**	**50.37**	**297**	P	**P**	**17 41 06.9**	**+0.4**
	SNR=11						
AAK	**Ala-Archa**	**50.37**	**297**	i P	**P**	**17 41 06.8**	**+0.4**
	SNR=14						
AAK	**Ala-Archa**	**50.37**	**297**	P	**P**	**17 41 06.7**	**+0.3**
AAK				IAmb	IAmb	17 41 26.2	
	comp=Z,56nm,1.6s						
AAK	**Ala-Archa**	**50.37**	**297**d	iP	**P**	**17 41 06.5**	**0.0**
AAK				pmax	pmax		
	comp=Z,31nm,1.7s						
DGPR	**DIGLIPUR**	**50.44**	**254**	eP	**P**	**17 41 07.8**	**+0.7**
DGPR				IAmb	IAmb	17 41 10.0	
	comp=Z,35nm,0.7s						
BARN	**Barnard Glacie**	**50.49**	**38**	P	**P**	**17 41 08.5**	**+1.3**
IPM	**Ipoh**	**50.64**	**238**	P	**P**	**17 41 08.7**	**+0.1**
IPM				IAmb	IAmb	17 41 22.2	
	comp=Z,48nm,1.2s						
IPM	**Ipoh**	**50.64**	**238**	P	**P**	**17 41 09.0**	**+0.4**
CTGM	**Chitina Glacie**	**50.67**	**38**	P	**P**	**17 41 09.9**	**+1.5**
MYKOM	**Kota Tinggi**	**50.84**	**233**	P	**P**	**17 41 11.2**	**+1.1**
DAWY	**Dawson**	**51.01**	**34**	P	**P**	**17 41 11.8**	**+1.0**
SOEI	**Soe**	**51.06**	**203**	P	**P**	**17 41 11.8**	**0.0**
AML	**Almayashu**	**51.10**	**297**	P	**P**	**17 41 13.7**	**+1.5**
	SNR=12						
EPYK	**Eagle Plains**	**51.72**	**30**	P	**P**	**17 41 17.7**	**+1.6**
EPYK	**Eagle Plains**	**51.72**	**30**	P	**P**	**17 41 17.7**	**+1.6**
	baz=280,SNR=20						
MTN	**Manton Dam**	**52.33**	**194**	P	**P**	**17 41 21.1**	**0.0**
COEN	**Coen**	**52.38**	**179**	P	**P**	**17 41 21.6**	**+0.1**
COEN				IAmb	IAmb	17 41 23.8	
	comp=Z,66nm,1.4s						
INK	**Inuvik**	**52.57**	**28**	P	**P**	**17 41 23.6**	**+1.4**
INK				IAmb	IAmb	17 41 38.6	
	comp=Z,28nm,1.0s						
INK	**Inuvik**	**52.57**	**28**	P	**P**	**17 41 23.7**	**+1.4**
KK31	**Karatay Array**	**52.95**	**299**	P	**P**	**17 41 25.8**	**+0.3**
KK31				IAmb	IAmb	17 41 30.2	
	comp=Z,74nm,1.4s						
KK31	**Karatay Array**	**52.95**	**299**	P	**P**	**17 41 25.8**	**+0.3**
KK31				pmax	pmax		
	comp=Z,74nm,1.4s						
KKAR	**Karatay Array**	**52.95**	**299**	P	**P**	**17 41 25.8**	**+0.3**
KKAR				IAmb	IAmb	17 41 30.2	
	comp=Z,74nm,1.4s						
KKAR	**Karatay Array**	**52.95**	**299**	P	**P**	**17 41 25.8**	**+0.3**
SMLA	**Simla**	**52.99**	**283**	eP	**P**	**17 41 25.4**	**-0.6**
SMLA				IAmb	IAmb	17 41 29.2	
	comp=Z,50nm,0.9s						
DHRM	**DHARAMSHALA**	**53.15**	**285**	eP	**P**	**17 41 24.2**	**-3.2**
DHRM				IAmb	IAmb	17 41 31.5	
	comp=Z,43nm,0.8s						
PSI	**Prapat**	**53.28**	**239**	P	**P**	**17 41 28.8**	**+0.4**
PSI				pmax	pmax		
	comp=Z,20nm,0.8s						
RPSI	**Rantau Prapat**	**53.36**	**239**	P	**P**	**17 41 28.8**	**0.0**
BKNI	**Bangkinang**	**53.75**	**235**	P	**P**	**17 41 31.8**	**+0.1**
	comp=Z,199nm,1.0s						
BKNI	**Bangkinang**	**53.75**	**235**	P	**P**	**17 41 32.4**	**+0.7**
WHY	**Whitehorse**	**53.81**	**37**	P	**P**	**17 41 33.1**	**+1.4**
WHY				IAmb	IAmb	17 41 51.5	
	comp=Z,75nm,1.8s						
BTK	**Batken**	**53.89**	**296**	P	**P**	**17 41 32.2**	**-0.4**
BTK				IAmb	IAmb	17 42 28.7	
	comp=Z,37nm,1.2s						
BTK	**Batken**	**53.89**	**296**	P	**P**	**17 41 32.2**	**-0.4**
BTK				pmax	pmax		
	comp=Z,37nm,1.2s						
MLSI	**Meulaboh, Aceh**	**53.94**	**242**	P	**P**	**17 41 32.9**	**-0.2**
	comp=Z,42nm,1.4s						
SVE	**Sverdlovsk**	**54.40**	**318**⇑	eP	**P**	**17 41 36.4**	**+0.5**
SVE				pmax	pmax		
	comp=Z,74nm,0.9s						
SVE				MLR	MLR		
	comp=Z,2μm,18.0s						
TAS	**Tashkent**	**54.45**	**298**	P	**P**	**17 41 36.5**	**-0.1**
TAS				IAmb	IAmb	17 41 58.8	
	comp=Z,42nm,0.9s						
TAS	**Tashkent**	**54.45**	**298**	P	**P**	**17 41 36.5**	**-0.1**
TAS				pmax	pmax		
	comp=Z,42nm,0.9s						
NIL	**Nilore**	**54.81**	**288**	P	**P**	**17 41 40.0**	**+0.7**
NIL	**Nilore**	**54.81**	**288**	P	**P**	**17 41 40.0**	**+0.7**
NIL				pmax	pmax		
	comp=Z,90nm,1.0s						
KPJI	**Karang Pucung**	**55.33**	**222**	P	**P**	**17 41 43.0**	**0.0**
	comp=Z,52nm,1.4s						
KLSI		**55.45**	**228**	P	**P**	**17 41 44.3**	**+0.4**
	comp=Z,20nm,1.1s						
KNRA	**Kununurra**	**55.56**	**196**	P	**P**	**17 41 44.4**	**-0.3**
MDSI	**Maura Dua**	**55.60**	**228**	P	**P**	**17 41 44.7**	**-0.3**
	comp=Z,738nmcomp=Z,33nm,1.3s						
C36M	**Paulatuk**	**55.61**	**25**	P	**P**	**17 41 45.1**	**+0.7**
C36M				IAmb	IAmb	17 42 00.6	
	comp=Z,30nm,0.9s						
ARU	**Arti**	**55.62**	**318**	P	**P**	**17 41 45.1**	**+0.4**
ARU	**Arti**	**55.62**	**318**d	iP	**P**	**17 41 45.0**	**+0.3**
ARU				e*PP	**pP**	**17 41 57.9**	**+0.4**
ARU						17 42 43.8	
ARU						17 43 46.6	
ARU				PPP	PPP	17 45 05.5	
ARU				S	**S**	**17 49 27.3**	**+0.3**
ARU				SS	**SS**	**17 53 09.8**	**-2.1**
ARU				pmax	pmax		
	comp=Z,95nm,1.5s						
ARU				MLR	MLR		
	comp=Z,2μm,18.0s						
AB31	**Akbulak array**	**57.45**	**310**	i P	**P**	**17 41 57.5**	**-0.3**
ABKAR	**Akbulak array**	**57.45**	**310**	P	**P**	**17 41 57.7**	**-0.1**
ABKAR	**Akbulak array**	**57.45**	**310**	P	**P**	**17 41 58.2**	**+0.4**
ABKAR				IAmb	IAmb	17 42 01.0	
	comp=Z,28nm,0.8s						
KBL	**Kabul**	**57.52**	**290**	P	**P**	**17 41 58.9**	**0.0**
KBL				IAmb	IAmb	17 42 05.0	
	comp=Z,48nm,1.1s						
KBL	**Kabul**	**57.52**	**290**	P	**P**	**17 41 58.9**	**0.0**
KBL				pmax	pmax		
	comp=Z,48nm,1.1s						
AKTO	**Aktyubinsk**	**58.12**	**311**	LR	LR	18 08 21.8	
	comp=Z,782nm,19.2s,baz=72,slow=37						
AKTO	**Aktyubinsk**	**58.12**	**311**	P	**P**	**17 42 02.1**	**-0.5**
FITZ	**Fitzroy Crossi**	**58.63**	**199**	LR	LR	18 05 10.6	
	comp=Z,121nm,21.2s,baz=36,slow=34						
FITZ	**Fitzroy Crossi**	**58.63**	**199**	P	**P**	**17 42 06.0**	**-0.3**
FITZ				IAmb	IAmb	17 42 08.0	
	comp=Z,37nm,1.2s						
WB0	**Warramunga Arr**	**58.63**	**189**	P	**P**	**17 42 05.3**	**-1.0**
SANVU	**Saraoutou**	**58.67**	**152**	P	**P**	**17 42 06.2**	**-0.4**
SANVU				IAmb	IAmb	17 42 24.2	
	comp=Z,35nm,0.8s						
WRAB	**Tennant Creek**	**58.80**	**189**	P	**P**	**17 42 06.5**	**-1.0**
WRAB	**Tennant Creek**	**58.80**	**189**c	iP	**P**	**17 42 06.4**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,87nm,1.2s						
WR0	**Warramunga Arr**	**58.80**	**189**	P	**P**	**17 42 06.4**	**-1.1**
WB2	**Warramunga Arr**	**58.81**	**189**	P	**P**	**17 42 06.8**	**-0.8**
WRA	**Warramunga Arr**	**58.81**	**189**	P	**P**	**17 42 06.8**	**-0.8**
	comp=Z,45nm,0.8s,baz=5.5,slow=7.0,SNR=149						
WRA				LR	LR	18 04 58.3	
	comp=Z,286nm,21.7s,baz=45,slow=33						
WRA	**Warramunga Arr**	**58.81**	**189**	P	**P**	**17 42 06.2**	**-1.3**
HYB	**Hyderabad**	**59.00**	**268**	i P	**P**	**17 42 08.0**	**-1.1**
SPA0	**Spitsbergen Ar**	**59.04**	**349**	eP	**P**	**17 42 09.4**	**+0.9**
SPA0	**Spitsbergen Ar**	**59.04**	**349**	P	**P**	**17 42 10.8**	**+2.3**
KNTN	**Kanton**	**59.09**	**123**	P	**P**	**17 42 10.6**	**+1.0**
KBS	**Kingsbay**	**59.15**	**350**	eP	**P**	**17 42 09.9**	**+0.7**
KBS	**Kingsbay**	**59.15**	**350**	P	**P**	**17 42 10.3**	**+1.1**
KBS				IAmb	IAmb	17 42 23.4	
	comp=Z,33nm,1.0s						
KBS	**Kingsbay**	**59.15**	**350**	P	**P**	**17 42 10.3**	**+1.1**
KBS				pmax	pmax		
	comp=Z,33nm,1.0s						
KIRV	**Kirov**	**59.38**	**323**	i P	**P**	**17 42 11.6**	**+0.6**
NOR	**Nord**	**59.44**	**356**	i P	**P**	**17 42 12.0**	**+0.8**
NOR	**Nord**	**59.44**	**356**	i P	**P**	**17 42 12.0**	**+0.8**
PRGR	**Permogore**	**59.78**	**327**	eP	**P**	**17 42 13.1**	**-0.7**
PRGR				pmax	pmax		
	comp=Z,46nm,1.0s						
RES	**Resolute Bay**	**60.81**	**15**	P	**P**	**17 42 21.1**	**+0.5**
RES				IAmb	IAmb	17 42 35.9	
	comp=Z,18nm,0.8s						
RES	**Resolute Bay**	**60.81**	**15**	P	**P**	**17 42 21.1**	**+0.5**
RES				pmax	pmax		
	comp=Z,18nm,0.8s						
APA	**Apatity**	**61.48**	**336**⇓	iP	**P**	**17 42 23.4**	**-1.9**
APA				i S	**S**	**17 50 36.0**	**-6.9**
APA				i SS	**SS**	**17 54 45.0**	**+1.5**
APA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
APA				MLR	MLR		
	comp=Z,1μm,24.0s						
TMCR	**Tamitsa**	**61.65**	**331**	eP	**P**	**17 42 26.7**	**+0.3**
TMCR				pmax	pmax		
	comp=Z,17nm,0.5s						
YKA	**Yellowknife Ar**	**62.00**	**31**	P	**P**	**17 42 29.6**	**+0.7**
	comp=Z,4.6nm,0.9s,baz=298,slow=6.5,SNR=40						
YKA				LR	LR	18 11 49.8	
	comp=Z,168nm,18.8s,baz=0.0,slow=38						
HRA	**Herat**	**62.53**	**293**	P	**P**	**17 42 33.5**	**+0.3**
HRA				IAmb	IAmb	17 42 56.1	
	comp=Z,20nm,1.1s						
AS31	**Alice Springs**	**62.54**	**189**	P	**P**	**17 42 32.4**	**-0.4**
ASAR	**Alice Springs**	**62.54**	**189**	P	**P**	**17 42 32.5**	**-0.4**
	comp=Z,17nm,0.8s,baz=358,slow=5.8,SNR=188						
ASAR				LR	LR	18 09 45.2	
	comp=Z,219nm,21.7s,baz=7.0,slow=36						
ARCES	**ARCESS Array B**	**62.70**	**339**	P	**P**	**17 42 34.1**	**+0.6**
	comp=Z,2.0nm,0.5s,baz=53,slow=8.5,SNR=17						
ARCES				LR	LR	18 14 31.3	
	comp=Z,470nm,18.1s,baz=33,slow=40						
ARCES	**ARCESS Array B**	**62.70**	**339**	P	**P**	**17 42 33.8**	**+0.3**
ARE0	**ARCESS Array S**	**62.70**	**339**	eP	**P**	**17 42 34.2**	**+0.7**
KLMR	**Klimovskoe**	**62.75**	**328**	eP	**P**	**17 42 31.0**	**-3.0**
KLMR				AMP		17 42 36.2	
	comp=Z,38nm,1.4s						
KLMR				ePP	**PP**	**17 44 46.8**	**-5.0**
KLMR				LR	LR	18 07 37.3	
KLMR				AMP		18 12 09.3	
	comp=Z,1μm,15.8s						
KLMR				LRM	MLR	18 12 19.0	
KLMR	**Klimovskoe**	**62.75**	**328**	eP	**P**	**17 42 30.9**	**-3.0**
KLMR				pmax	pmax		
	comp=Z,38nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,1μm,16.0s						
TULEG	**Thule**	**63.36**	**8**	P	**P**	**17 42 37.7**	**0.0**
TULEG				IAmb	IAmb	17 42 58.5	
	comp=Z,53nm,1.2s						
PSAD1	**Pilbara Seismi**	**63.45**	**204**	P	**P**	**17 42 38.5**	**-0.4**
PSAC2	**Pilbara Seismi**	**63.53**	**203**	P	**P**	**17 42 38.8**	**-0.7**
PSAC1	**Pilbara Seismi**	**63.53**	**203**	P	**P**	**17 42 39.1**	**-0.4**
PSAC1				IAmb	IAmb	17 42 40.2	
	comp=Z,30nm,1.1s						
PSAB2	**Pilbara Seismi**	**63.54**	**203**	P	**P**	**17 42 39.6**	**0.0**
PSAB2				IAmb	IAmb	17 42 59.3	
	comp=Z,52nm,1.4s						
PSAA2	**Pilbara Seismi**	**63.55**	**203**	P	**P**	**17 42 39.1**	**-0.5**
PSA00	**Pilbara Seismi**	**63.56**	**203**	P	**P**	**17 42 39.1**	**-0.5**
PSAA3	**Pilbara Seismi**	**63.56**	**203**	P	**P**	**17 42 39.2**	**-0.5**
PSAA3				IAmb	IAmb	17 42 53.2	
	comp=Z,64nm,1.4s						
PSAB1	**Pilbara Seismi**	**63.56**	**203**	P	**P**	**17 42 39.6**	**-0.1**
PSAD2	**Pilbara Seismi**	**63.56**	**203**	P	**P**	**17 42 39.4**	**-0.3**
PSAA1	**Pilbara Seismi**	**63.56**	**203**	P	**P**	**17 42 39.5**	**-0.3**
PSAA1				IAmb	IAmb	17 43 50.3	
	comp=Z,66nm,1.4s						
PSAB3	**Pilbara Seismi**	**63.58**	**203**	P	**P**	**17 42 39.5**	**-0.3**
PSAB3				IAmb	IAmb	17 43 50.1	
	comp=Z,77nm,1.6s						
PSAC3	**Pilbara Seismi**	**63.61**	**203**	P	**P**	**17 42 39.2**	**-0.8**
PSAD3	**Pilbara Seismi**	**63.65**	**203**	P	**P**	**17 42 39.2**	**-1.1**
PSAD3				IAmb	IAmb	17 43 44.8	
	comp=Z,45nm,1.3s						
KTK1	**Kautokeino**	**63.66**	**339**	eP	**P**	**17 42 40.7**	**+0.8**
GEYT	**Alibeck**	**63.69**	**299**	P	**P**	**17 42 40.9**	**+0.4**
	comp=Z,19nm,0.9s,baz=43,slow=3.0,SNR=27						
GEYT				LR	LR	18 12 20.7	
	comp=Z,595nm,18.3s,baz=50,slow=38						
GEYT	**Alibeck**	**63.69**	**299**	P	**P**	**17 42 40.8**	**+0.2**
GYA0B	**ALIBECK ARRAY**	**63.69**	**299**	P	**P**	**17 42 40.9**	**+0.3**
GYA0B				IAmb	IAmb	17 43 03.5	
	comp=Z,28nm,1.0s						
GOA	**Goa**	**63.80**	**269**	eP	**P**	**17 42 41.7**	**+0.1**
GOA				IAmb	IAmb	17 42 45.2	
	comp=Z,39nm,1.0s						
DAG	**Danmarks Havn**	**64.18**	**355**	i P	**P**	**17 42 43.5**	**+0.4**
	comp=Z,14nm,1.0s						
DAG	**Danmarks Havn**	**64.18**	**355**	i P	**P**	**17 42 43.5**	**+0.4**
DAG				pmax	pmax		
	comp=Z,14nm,1.0s						
EIDS	**Eidsvold**	**64.25**	**171**	P	**P**	**17 42 44.9**	**+0.8**
EIDS				IAmb	IAmb	17 43 36.1	
	comp=Z,53nm,1.6s						
TRO	**Tromso**	**64.39**	**341**	eP	**P**	**17 42 45.0**	**+0.5**
NOUC	**Port Laguerre**	**64.51**	**155**	P	**P**	**17 42 46.9**	**+1.0**
DZM	**Mont Dzumac**	**64.53**	**155**	eS	**S**	**17 51 22.9**	**+0.8**
	comp=Z,1μm,31.6s						
DZM	**Mont Dzumac**	**64.53**	**155**	eLR	LR	18 02 07.5	
	comp=Z,1μm,22.0s						
DZM	**Mont Dzumac**	**64.53**	**155**	P	**P**	**17 42 44.7**	**-1.5**
LLLB	**Lillooet**	**64.55**	**45**	P	**P**	**17 42 46.3**	**+0.3**
LLLB				IAmb	IAmb	17 42 48.7	
	comp=Z,43nm,1.4s						
D03D	**Eldon**	**65.43**	**48**	P	**P**	**17 42 54.1**	**+2.3**
	baz=301,SNR=5.5						
B05A	**Bryant**	**65.63**	**47**	P	**P**	**17 42 54.3**	**+1.4**
	baz=301						
F04D	**Rainier, OR**	**66.23**	**49**	P	**P**	**17 42 58.7**	**+1.8**
	baz=302						
E04D	**Cinebar**	**66.25**	**49**	P	**P**	**17 42 59.1**	**+2.1**
	baz=302,SNR=6.8						
MOS	**Moscow**	**66.36**	**323**	eP	**P**	**17 42 56.3**	**-1.2**
MOS				e		17 43 10.9	
MOS				eS	**S**	**17 51 43.0**	**-0.7**
MOS				pmax	pmax		
	comp=Z,60nm,1.3s						
MOS				MLR	MLR		
	comp=Z,1μm,16.0s						
C06D	**Leavenworth**	**66.49**	**47**	P	**P**	**17 43 00.0**	**+1.4**
	baz=302						
G03D	**McMinnville, O**	**66.54**	**50**	P	**P**	**17 43 00.6**	**+1.7**
	baz=302						
STEI	**Steigen**	**66.54**	**341**	eP	**P**	**17 42 58.3**	**-0.2**
LON	**Longmire**	**66.59**	**48**	P	**P**	**17 42 59.9**	**+0.6**
LON	**Longmire**	**66.59**	**48**	P	**P**	**17 42 59.9**	**+0.6**
LON				pmax	pmax		
	comp=Z,19nm,1.3s						
F04A	**Amboy**	**66.66**	**49**	P	**P**	**17 43 00.7**	**+1.0**
F04A				IAmb	IAmb	17 43 02.5	
	comp=Z,85nm,1.6s						
I02D	**Swisshome**	**66.77**	**51**	P	**P**	**17 43 02.4**	**+2.0**
	baz=302						
COR	**Corvallis**	**66.85**	**51**	P	**P**	**17 43 02.9**	**+2.1**
COR	**Corvallis**	**66.85**	**51**	P	**P**	**17 43 02.9**	**+2.1**
COR				pmax	pmax		
	comp=Z,174nm,1.6s						
VRH	**Novokhopyorsk**	**66.85**	**318**	eP	**P**	**17 43 00.0**	**-0.7**
VRH				pmax	pmax		
	comp=Z,40nm,1.5s						
VRH				MLR	MLR		
	comp=Z,1μm,12.0s						
LTY	**Liberty**	**66.98**	**47**	P	**P**	**17 43 02.9**	**+1.1**
LTY				IAmb	IAmb	17 43 18.5	
	comp=Z,79nm,1.8s						
KEBM	**Edson Butte**	**67.12**	**53**	P	**P**	**17 43 04.8**	**+2.1**
PUL	**Pulkovo**	**67.14**	**329**⇑	eP	**P**	**17 43 04.0**	**+1.6**
PUL				pmax	pmax		
	comp=Z,38nm,0.7s						
B08A	**Colville Reser**	**67.14**	**46**	P	**P**	**17 43 03.9**	**+1.2**
B08A				IAmb	IAmb	17 43 05.3	
	comp=Z,33nm,1.2s						
OBN	**Obninsk**	**67.21**	**323**	LR	LR	18 12 32.1	
	comp=Z,37nm,20.6s,baz=17,slow=36						
OBN	**Obninsk**	**67.21**	**323**	P	**P**	**17 43 02.9**	**0.0**
OBN				IAmb	IAmb	17 43 07.2	
	comp=Z,74nm,1.3s						
OBN	**Obninsk**	**67.21**	**323**⇑	eP	**P**	**17 43 03.7**	**+0.8**
OBN				e		17 43 26.2	
OBN				e		17 45 32.8	
OBN				eS	**S**	**17 51 51.9**	**-2.0**
OBN				pmax	pmax		
	comp=Z,55nm,1.2s						
OBN				MLR	MLR		
	comp=Z,822nm,16.0s						
J01E	**Myrtle Point**	**67.22**	**52**	P	**P**	**17 43 05.2**	**+2.0**
	baz=302						
H04D	**Lebanon**	**67.22**	**51**	P	**P**	**17 43 05.0**	**+1.8**
	baz=302						
F05D	**White Salmon**	**67.25**	**49**	P	**P**	**17 43 05.2**	**+1.7**
	baz=303						
I03D	**Drain, OR**	**67.29**	**52**	P	**P**	**17 43 05.8**	**+2.1**
	baz=302,SNR=6.5						
KBO	**Bosley Butte**	**67.54**	**53**	P	**P**	**17 43 06.3**	**+0.9**
KBO				IAmb	IAmb	17 43 08.9	
	comp=Z,76nm,1.4s						
K02D	**Willamette Mer**	**67.63**	**53**	P	**P**	**17 43 07.8**	**+1.8**
	baz=302,SNR=11						
G05D	**Wamic, OR**	**67.69**	**49**	P	**P**	**17 43 07.7**	**+1.5**
	baz=303						
FIA1	**FINESS Array S**	**67.69**	**332**	P	**P**	**17 43 06.5**	**+0.7**
FIA1				IAmb	IAmb	17 43 28.0	
	comp=Z,42nm,1.0s						
FINES	**FINESS Array B**	**67.69**	**332**	P	**P**	**17 43 06.2**	**+0.3**
	comp=Z,27nm,1.0s,baz=35,slow=9.0,SNR=51						
FINES				LR	LR	18 14 38.8	
	comp=Z,1μm,20.6s,baz=42,slow=38						
FINES	**FINESS Array B**	**67.69**	**332**	P	**P**	**17 43 06.1**	**+0.2**
I04A	**Tendick Farm,**	**67.81**	**51**	P	**P**	**17 43 08.4**	**+1.3**
	baz=303,SNR=11						
E07A	**Sunnyside**	**67.83**	**48**	P	**P**	**17 43 08.2**	**+1.2**
E07A				IAmb	IAmb	17 43 10.0	
	comp=Z,91nm,1.7s						
L02E	**Cave Junction**	**67.96**	**53**	P	**P**	**17 43 09.7**	**+1.8**
	baz=303,SNR=8.5						
C09A	**Chrisman Ranch**	**68.04**	**46**	P	**P**	**17 43 09.2**	**+0.8**
C09A				IAmb	IAmb	17 43 11.0	
	comp=Z,86nm,1.6s						
MOR8	**Moi Rana**	**68.06**	**340**	eP	**P**	**17 43 07.4**	**-0.8**
D08A	**Wollman Farm,**	**68.09**	**47**	P	**P**	**17 43 09.4**	**+0.8**
D08A				IAmb	IAmb	17 43 11.2	
	comp=Z,41nm,1.5s						
G06A	**Carlson Farm,**	**68.09**	**49**	P	**P**	**17 43 10.5**	**+1.7**
G06A				IAmb	IAmb	17 43 28.2	
	comp=Z,101nm,2.0s						
HAWA	**Hanford**	**68.10**	**48**	P	**P**	**17 43 10.1**	**+1.3**
HAWA				IAmb	IAmb	17 43 11.7	
	comp=Z,42nm,1.6s						
KRMB	**Red Mountain**	**68.11**	**54**	P	**P**	**17 43 09.2**	**+0.1**
KRMB				IAmb	IAmb	17 43 12.4	
	comp=Z,39nm,1.4s						
HUMO	**Hull Mountain**	**68.12**	**52**	P	**P**	**17 43 10.7**	**+1.7**
F07A	**Phinny Hill Vi**	**68.15**	**48**	P	**P**	**17 43 10.5**	**+1.5**
F07A				IAmb	IAmb	17 43 12.1	
	comp=Z,94nm,1.7s						
I05D	**Terrebonne, OR**	**68.16**	**50**	P	**P**	**17 43 10.8**	**+1.6**
	baz=303						
VSR	**Storozhevoye**	**68.17**	**319**	eP	**P**	**17 43 09.0**	**-0.1**
VSR				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR				MLR	MLR		
	comp=Z,1μm,15.0s						
VORD	**Divnogorie**	**68.25**	**318**	eP	**P**	**17 43 07.7**	**-1.9**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
J04D	**Umpqua Nationa**	**68.30**	**52**	P	**P**	**17 43 12.1**	**+1.8**
	baz=303,SNR=8.8						
E08A	**Dider Farm, El**	**68.32**	**47**	P	**P**	**17 43 11.2**	**+1.1**
E08A				IAmb	IAmb	17 43 12.9	
	comp=Z,61nm,1.7s						
NEW	**Newport**	**68.42**	**45**	P	**P**	**17 43 12.0**	**+1.2**
NEW				IAmb	IAmb	17 43 13.4	
	comp=Z,61nm,1.5s						
NEW	**Newport**	**68.42**	**45**	P	**P**	**17 43 12.0**	**+1.2**
NEW				pmax	pmax		
	comp=Z,61nm,1.5s						
NEW	**Newport**	**68.42**	**45**	P	**P**	**17 43 11.9**	**+1.1**
	baz=304,SNR=12						
KHMM	**Horse Mountain**	**68.57**	**54**	P	**P**	**17 43 13.3**	**+1.3**
KHMM				IAmb	IAmb	17 43 15.5	
	comp=Z,50nm,1.4s						
AKT	**Akhty**	**68.69**	**306**	eP	**P**	**17 43 12.7**	**+0.1**
AKT				e		17 43 38.4	
AKT				e		17 45 43.8	
AKT				pmax	pmax		
	comp=Z,33nm,1.0s						
PINE	**Pine Mountain**	**68.70**	**51**	P	**P**	**17 43 14.5**	**+1.7**
L04D	**Klamath Falls**	**68.73**	**53**	P	**P**	**17 43 14.4**	**+1.5**
	baz=303,SNR=17						
YBH	**Yreka Blue Hor**	**68.75**	**53**	P	**P**	**17 43 13.7**	**+0.7**
YBH	**Yreka Blue Hor**	**68.75**	**53**	P	**P**	**17 43 13.7**	**+0.7**
YBH				pmax	pmax		
	comp=Z,39nm,1.5s						
J05D	**Fort Rock, OR**	**68.81**	**51**	P	**P**	**17 43 15.3**	**+1.9**
	baz=304,SNR=17						
E09A	**Wood Farm, Sta**	**68.83**	**47**	P	**P**	**17 43 14.5**	**+1.2**
E09A				IAmb	IAmb	17 43 16.1	
	comp=Z,54nm,1.4s						
M02C	**Callahan**	**68.84**	**54**	P	**P**	**17 43 15.7**	**+2.1**
	baz=303,SNR=16						
K04D	**Chiloquin, OR**	**68.85**	**52**	P	**P**	**17 43 15.3**	**+1.6**
	baz=304						
GROC	**Groznyy**	**68.94**	**309**	eP	**P**	**17 43 15.9**	**+1.9**
GROC				e		17 45 47.1	
GROC				pmax	pmax		
	comp=Z,16nm,0.6s						
SUMG	**Summit**	**69.02**	**0**	i P	**P**	**17 43 15.5**	**+1.0**
	comp=Z,33nm,0.9s						
SUMG	**Summit**	**69.02**	**0**	P	**P**	**17 43 15.6**	**+1.0**
SUMG	**Summit**	**69.02**	**0**	P	**P**	**17 43 15.6**	**+1.0**
SUMG				pmax	pmax		
	comp=Z,25nm,0.9s						
N02D	**Trinity Center**	**69.17**	**54**	P	**P**	**17 43 17.4**	**+1.8**
	baz=304,SNR=8.3						
M04C	**Macdoel**	**69.26**	**53**	P	**P**	**17 43 17.9**	**+1.7**
	baz=304,SNR=12						
KCPM	**Cahto Peak**	**69.32**	**55**	P	**P**	**17 43 18.3**	**+1.7**
KCPM				IAmb	IAmb	17 43 19.9	
	comp=Z,53nm,1.4s						
K05A	**Summer Lake**	**69.32**	**51**	P	**P**	**17 43 18.5**	**+1.8**
VSU	**Vasula**	**69.40**	**330**	eP	**P**	**17 43 16.8**	**+0.2**
VSU	**Vasula**	**69.40**	**330**⇓	eP	**P**	**17 43 17.2**	**+0.6**
I07A	**Izee**	**69.41**	**50**	P	**P**	**17 43 18.1**	**+1.0**
WDC	**Whiskeytown Da**	**69.49**	**54**	P	**P**	**17 43 18.9**	**+1.4**
WDC	**Whiskeytown Da**	**69.49**	**54**	P	**P**	**17 43 18.9**	**+1.4**
WDC				pmax	pmax		
	comp=Z,25nm,1.3s						
GOF	**Gofitskoye**	**69.54**	**312**⇑	iP	**P**	**17 43 18.3**	**+0.6**
GOF				pmax	pmax		
	comp=Z,81nm,1.1s						
O02D	**Mt. Diablo Mer**	**69.56**	**55**	P	**P**	**17 43 20.0**	**+2.0**
	baz=304,SNR=15						
WALA	**Waterton Lakes**	**69.71**	**43**	P	**P**	**17 43 19.7**	**+0.8**
NCK	**Nalchik**	**70.10**	**310**⇑	eP	**P**	**17 43 22.1**	**+0.9**
NCK				pmax	pmax		
	comp=Z,48nm,1.4s						

O03E Paynes Creek 70.12 54 P P 17 43 22.2 +0.7
baz=304,SNR=12
MOD Modoc Plateau 70.15 52 P P 17 43 22.7 +1.0
MOD IAmb IAmb 17 43 24.6
comp=Z,53nm,1.6s
STKA Stephens Creek 70.22 181 P P 17 43 21.6 -0.2
comp=Z,5.5nm,0.7s,baz=344,slow=10,SNR=11
STKA LR LR 18 21 46.9
comp=Z,92nm,18.1s,baz=18,slow=42
STKA Stephens Creek 70.22 181 P P 17 43 21.4 -0.4
BMO Blue Mountains 70.26 48 P P 17 43 23.4 +1.1
BMO Blue Mountains 70.26 48 P P 17 43 23.4 +1.1
BMO pmax pmax
comp=Z,33nm,1.5s
JTMT Jette 70.28 44 P P 17 43 22.7 +0.3
GDXM Geysers 70.31 56 P P 17 43 23.9 +1.3
ZEI Tsey 70.32 309 eP P 17 43 21.6 -1.2
ZEI pmax pmax
comp=Z,18nm,0.9s
KIV Kislovodsk 70.38 311 iP P 17 43 23.4 +0.4
SNR=9.8
KIV Kislovodsk 70.38 311 P P 17 43 23.1 +0.1
KIV Kislovodsk 70.38 311 eP P 17 43 23.8 +0.8
KIV eS S 17 52 33.2 +1.1
KIV pmax pmax
comp=Z,247nm,1.1s
KIV pmax pmax
comp=Z,76nm,4.6s
KIV MLR MLR
comp=Z,934nm,18.0s
KBZ Khabaz 70.39 311 P P 17 43 23.6 +0.7
comp=Z,28nm,0.9s,baz=64,slow=4.6,SNR=24
KBZ LR LR 18 19 18.0
comp=Z,528nm,18.6s,baz=41,slow=40
FORT Forrest 70.39 193 P P 17 43 22.8 0.0
FORT IAmb IAmb 17 43 24.5
comp=Z,51nm,0.8s
TBLG Delisi 70.41 308 P P 17 43 23.9 +0.8
TBLG IAmb IAmb 17 43 46.9
comp=Z,36nm,1.1s
TBLG Delisi 70.41 308 P P 17 43 23.9 +0.8
TBLG pmax pmax
comp=Z,36nm,1.1s
J08A Circle Bar Ran 70.43 50 P P 17 43 24.4 +1.0
J08A IAmb IAmb 17 43 26.5
comp=Z,53nm,1.4s
ORV Oroville 70.72 55 P P 17 43 25.8 +0.7
ORV Oroville 70.72 55 P P 17 43 25.8 +0.7
ORV pmax pmax
comp=Z,35nm,1.4s
NEY Neytrino 70.77 310⇑eP P 17 43 27.3 +1.8
NEY pmax pmax
comp=Z,4.0nm,0.9s
WVOR Wild Horse Val 70.86 51 P P 17 43 26.7 +0.6
WVOR Wild Horse Val 70.86 51 P P 17 43 26.7 +0.6
WVOR pmax pmax
comp=Z,39nm,1.4s
MSO Missoula 71.01 45 P P 17 43 27.4 +0.6
MSO Missoula 71.01 45 P P 17 43 27.5 +0.7
baz=307,SNR=7.5
BEKR Beckworth 71.27 54 P P 17 43 29.6 +1.0
BEKR IAmb IAmb 17 43 31.0
comp=Z,50nm,1.4s
GNI Garni 71.31 307 P P 17 43 30.4 +1.6
GNI Garni 71.31 307 P P 17 43 29.5 +0.7
GNI IAmb IAmb 17 43 46.4
comp=Z,59nm,1.3s
GNI Garni 71.31 307⇑eP P 17 43 30.4 +1.6
GNI pmax pmax
comp=Z,82nm,1.5s
AKH Akhalkalaki 71.36 308 ⇓P P 17 43 31.1 +2.0
AKH Akhalkalaki 71.36 308 P P 17 43 30.5 +1.4
AKH Akhalkalaki 71.36 308 P P 17 43 30.5 +1.4
AKH pmax pmax
comp=Z,19nm,1.0s
BBOO Buckleboo 71.38 186 P P 17 43 28.8 -0.1
BBOO IAmb IAmb 17 43 30.2
comp=Z,22nm,0.8s
IZAR Zarasai 71.41 328 eP P 17 43 30.4 +1.6
AFDM Forest Hills D 71.41 55 P P 17 43 30.1 +0.9
MNK Minsk 71.53 326 eP P 17 43 33.0 +3.3
ISAL Salakas 71.58 328 eP P 17 43 30.9 +1.0
ISAL IAmb IAmb 17 43 35.0
comp=Z,25nm,1.2s
IIGN Ignalina 71.68 327 eP P 17 43 31.8 +1.2
IIGN IAmb IAmb 17 43 35.0
comp=Z,11nm,0.7s
SLIT Slitere, Latvi 71.70 331 eP P 17 43 30.7 +0.1
NACGM Naroch 71.75 327 e P 17 43 31.0 +0.1
NACGM eLR LR 18 16 08.0
NACGM LRM MLR 18 17 40.0
comp=Z,3.9nm,15.0s
FFC Flin Flon 71.91 33 P P 17 43 32.5 +0.6
FFC Flin Flon 71.91 33 P P 17 43 32.5 +0.6
FFC pmax pmax
comp=Z,35nm,1.2s
MFID Camas Ranch 71.97 49 P P 17 43 33.1 +0.4
PAHR Pah Rah Range 71.98 53 P P 17 43 33.5 +0.6
PAHR IAmb IAmb 17 43 35.4
comp=Z,41nm,1.3s
UOSS Minazif 72.01 288 P P 17 43 36.2 +3.1
VCNR Virginia City 72.05 54 P P 17 43 34.6 +1.3
VCNR IAmb IAmb 17 43 36.1
comp=Z,69nm,1.8s
HATD Hatta, Dubai 72.13 288 P P 17 43 34.7 +0.9
FCC Fort Churchill 72.19 27 P P 17 43 34.0 +0.5
FCC Fort Churchill 72.19 27 P P 17 43 34.0 +0.5
FCC pmax pmax
comp=Z,27nm,1.1s
PNTR Pine Nut 72.20 54 P P 17 43 34.5 +0.2
PNTR IAmb IAmb 17 43 37.2
comp=Z,68nm,1.7s
CMB Columbia Colle 72.31 55 P P 17 43 35.2 +0.5
CMB IAmb IAmb 17 43 37.4
comp=Z,55nm,1.5s
CMB Columbia Colle 72.31 55 P P 17 43 35.2 +0.5
CMB pmax pmax
comp=Z,55nm,1.5s
SOC Sochi 72.34 312 eP P 17 43 34.0 -0.7
SOC e 17 46 11.0
SOC eS S 17 52 52.0 -2.6
SOC e*SS sS 17 53 20.5 +3.6
SOC eSS SS 17 57 42.3 +10
SOC pmax pmax
comp=Z,40nm,1.2s
SOC MLR MLR
comp=Z,579nm,18.0s
LRM Limekiln Ridge 72.44 45 P P 17 43 36.2 +0.6
BCA Borcka 72.48 309 ⇓P P 17 43 36.4 +0.8
YERR Yerington 72.49 54 P P 17 43 37.4 +1.4
YERR IAmb IAmb 17 43 38.7
comp=Z,66nm,1.4s
PABE Paberze 72.52 328 eP P 17 43 36.2 +0.7
PABE IAmb IAmb 17 43 39.7
comp=Z,37nm,0.8s
EGMT Eagleton 72.54 42 P P 17 43 36.5 +0.6
EGMT IAmb IAmb 17 43 38.4
comp=Z,68nm,1.5s
EGMT Eagleton 72.54 42 P P 17 43 36.8 +0.8
baz=309,SNR=8.5
WAKR Walker 72.64 54 P P 17 43 38.3 +1.4
DLMT Dillon 72.64 46 P P 17 43 36.9 +0.2
DLMT IAmb IAmb 17 43 39.3
comp=Z,59nm,1.4s
NC405 NORSAR Array S 72.73 337 P P 17 43 37.4 +0.6
NC303 NORSAR Array S 72.75 338 eP P 17 43 37.4 +0.6
MCMT McKenzie Canyo 72.83 46 P P 17 43 37.8 -0.1
NC204 NORSAR Array S 72.89 338 P P 17 43 38.2 +0.4
NC204 IAmb IAmb 17 43 53.2
comp=Z,39nm,0.8s
NB201 NORSAR Array S 72.91 337 P P 17 43 39.3 +1.5
ANN Anapa 72.91 314 eP P 17 43 35.4 -2.7
ANN e*PP pP 17 43 49.4 -1.9
ANN e 17 43 52.7
ANN e 17 46 17.0
ANN eS S 17 52 57.8 -3.2
ANN eSS SS 17 57 38.3 -2.8
ANN pmax pmax
comp=Z,34nm,1.4s
NB2 NORSAR Subarra 72.94 337 P P 17 43 38.3 +0.3
comp=Z,60nm,1.7s,baz=38,slow=6.2
NB2 NORSAR Subarra 72.94 337 P P 17 43 38.3 +0.3
baz=38,slow=6.2
NOA NORSAR Array B 72.94 337 P P 17 43 38.5 +0.4
comp=Z,6.8nm,0.8s,baz=39,slow=6.0,SNR=22
NOA LR LR 18 18 34.6
comp=Z,805nm,20.8s,baz=40,slow=38
RYN Ryan 73.15 54 P P 17 43 41.2 +1.4
KVN Kaiserville 73.17 53 P P 17 43 40.7 +0.7
KVN IAmb IAmb 17 43 42.8
comp=Z,55nm,1.3s
KVN Kaiserville 73.17 53 P P 17 43 40.7 +0.7
KVN pmax pmax
comp=Z,55nm,1.3s
NVAR Mina Array Bea 73.41 54 P P 17 43 42.5 +1.0
comp=Z,21nm,1.1s,baz=286,slow=5.7,SNR=64
AKASG Malin Array Be 73.44 322 P P 17 43 41.1 0.0
comp=Z,5.8nm,0.5s,baz=45,slow=6.1,SNR=44
AKASG LR LR 18 18 58.8
comp=Z,1μm,18.2s,baz=25,slow=38
AKASG Malin Array Be 73.44 322 P P 17 43 41.4 +0.3
AKASG Malin Array Be 73.44 322 P P 17 43 41.4 +0.3
AKASG pmax pmax
comp=Z,13nm,1.2s
AKBB Malin Array Si 73.44 322 P P 17 43 41.1 0.0
AKBB IAmb IAmb 17 43 44.9
comp=Z,28nm,0.9s
AKBB Malin Array Si 73.44 322 P P 17 43 41.1 0.0
AKBB pmax pmax
comp=Z,28nm,0.9s
OMMB Old Mammoth Mi 73.44 55 P P 17 43 43.0 +1.2
NV11 Mina Array Sit 73.50 54 P P 17 43 42.8 +0.9
MLAC Mammoth, Mammo 73.54 55 P P 17 43 44.0 +1.8
baz=306
QLMT Earthquake Lak 73.62 45 P P 17 43 42.7 +0.2
YHL Hebgen Lake 73.75 45 P P 17 43 44.4 +1.0
YHB Horse Butte 73.80 45 P P 17 43 44.2 +0.5
SUW Suwalki 73.89 328 P P 17 43 44.3 +0.6
SUW IAmb IAmb 17 43 44.9
comp=Z,47nm,1.0s
SUW Suwalki 73.89 328 P P 17 43 44.3 +0.6
SUW pmax pmax
comp=Z,47nm,1.0s
CAN Canberra 73.91 174 P P 17 43 44.6 +0.8
CAN IAmb IAmb 17 44 45.6
comp=Z,81nm,1.9s
CAN Canberra 73.91 174 P P 17 43 44.6 +0.8
CAN pmax pmax
comp=Z,81nm,1.9s
ELK Elko 73.92 51 P P 17 43 44.9 +0.5
ELK Elko 73.92 51 P P 17 43 44.9 +0.5
ELK pmax pmax
comp=Z,35nm,1.7s
YHH Holmes Hill 73.97 45 P P 17 43 45.7 +1.0
YMR Madison River 73.98 45 P P 17 43 46.0 +1.3
GCMT Greycliff 73.99 44 P P 17 43 45.1 +0.5
YNR Norris Junctio 74.11 45 P P 17 43 47.4 +1.9
SMMC Simmler 74.15 57 P P 17 43 47.1 +1.4
baz=306
YUF Upper Falls 74.21 45 P P 17 43 46.9 +0.8
TIN Tinemaha, Big 74.27 55 P P 17 43 48.0 +1.6
baz=307
YNE Yellowstone No 74.30 45 P P 17 43 47.4 +0.8
YPP Pitchstone Pla 74.32 46 P P 17 43 49.0 +2.2
LKWY Lake 74.36 45 P P 17 43 48.1 +1.1
LKWY Lake 74.36 45 P P 17 43 48.1 +1.1
LKWY pmax pmax
comp=Z,35nm,1.4s
H17A Grant Village 74.37 45 P P 17 43 49.8 +2.8
H17A IAmb IAmb 17 43 51.5
comp=Z,63nm,1.4s
H17A Grant Village 74.37 45 P P 17 43 50.2 +3.1
baz=309,SNR=21
YMP Mirror Lake Pl 74.39 45 P P 17 43 48.4 +1.2
VES Vestal, Richgr 74.44 57 P P 17 43 47.9 +0.7
baz=307
IMW Indian Meadow 74.48 46 P P 17 43 49.4 +1.6
IMW IAmb IAmb 17 43 51.2
comp=Z,57nm,1.6s
FLWY Flagg Ranch 74.50 46 P P 17 43 49.2 +1.5
FLWY IAmb IAmb 17 44 08.0
comp=Z,111nm,1.8s
PKM Mcpherson Peak 74.52 58 P P 17 43 49.6 +1.6
baz=307
KONO Kongsberg 74.54 337 P P 17 43 48.7 +1.4
KONO Kongsberg 74.54 337 P P 17 43 48.7 +1.4
KONO pmax pmax
comp=Z,184nm,1.9s
FXWY Fox Creek 74.59 46 P P 17 43 49.4 +1.1
FXWY IAmb IAmb 17 43 51.7
comp=Z,45nm,1.5s
RLMT Red Lodge 74.63 44 P P 17 43 50.0 +1.5
RLMT Red Lodge 74.63 44 P P 17 43 49.5 +1.0
baz=310,SNR=14
MOOW Moose Ponds 74.68 46 P P 17 43 50.6 +1.8
MOOW IAmb IAmb 17 43 52.1
comp=Z,51nm,1.5s
TPAW Teton Pass 74.73 46 P P 17 43 49.6 +0.5
TPAW IAmb IAmb 17 43 51.5
comp=Z,56nm,1.5s
CWC Cottonwood Cre 74.73 56 P P 17 43 50.1 +0.9
baz=307
HVU Hansel Valley 74.75 49 P P 17 43 50.6 +1.5
HVU Hansel Valley 74.75 49 P P 17 43 50.6 +1.5
HVU pmax pmax
comp=Z,16nm,0.9s
GRAC Grapevine Rang 74.86 55 P P 17 43 51.4 +1.7
baz=307,SNR=12
SNOW Snow King Moun 74.86 46 P P 17 43 50.6 +0.8
SNOW IAmb IAmb 17 43 53.2
comp=Z,51nm,1.6s
REDW Red Top Meadow 74.87 46 P P 17 43 51.1 +1.2
ISA Isabella, Lake 74.94 56 P P 17 43 50.6 +0.3
ISA Isabella, Lake 74.94 56 P P 17 43 50.6 +0.3
ISA pmax pmax
comp=Z,22nm,1.4s
ISA Isabella, Lake 74.94 56 P P 17 43 50.5 +0.2
baz=307,SNR=6.8
NWAO Narrogin (SRO) 74.99 202 P P 17 43 50.7 +0.6
NWAO IAmb IAmb 17 44 16.8
comp=Z,47nm,1.2s
NWAO Narrogin (SRO) 74.99 202 P P 17 43 50.5 +0.3
NWAO IAmb IAmb 17 44 16.7
comp=Z,43nm,1.2s
NWAO Narrogin (SRO) 74.99 202 P P 17 43 50.7 +0.6
NWAO pmax pmax
comp=Z,47nm,1.2s
ARVC Arvin 75.03 57 P P 17 43 51.5 +0.8
baz=307
AHID Auburn Hatcher 75.10 47 P P 17 43 51.7 +0.5
BGU Big Grassy Mou 75.13 49 P P 17 43 52.0 +0.7
DAC Darwin (Calif) 75.14 55 P P 17 43 52.6 +1.1
DAC Darwin (Calif) 75.14 55 P P 17 43 52.7 +1.1
DAC pmax pmax
comp=Z,22nm,1.3s
R11A Troy Canyon, C 75.16 53 P P 17 43 52.6 +1.0
R11A IAmb IAmb 17 43 54.4
comp=Z,60nm,1.5s
R11A Troy Canyon, C 75.16 53 P P 17 43 52.7 +1.1
baz=308,SNR=40
SCZ2 Santa Cruz Isl 75.17 58 P P 17 43 52.5 +1.0
baz=307
ODD1 Odda 75.19 339 eP P 17 43 52.3 +1.1
SPUT South Promonto 75.23 49 P P 17 43 53.2 +1.3
LAO LASA Array 75.24 42 P P 17 43 52.8 +1.1
LAO IAmb IAmb 17 43 54.4
comp=Z,100nm,1.5s
LAO LASA Array 75.24 42 P P 17 43 53.1 +1.3
baz=311,SNR=9.7
MPMC Manual Prospec 75.34 56 P P 17 43 53.5 +0.8
baz=307,SNR=15
OSI Osito Audit: C 75.41 57 P P 17 43 52.9 0.0
OSI Osito Audit: C 75.41 57 P P 17 43 54.0 +1.1
baz=307
BLG Laguna Peak, P 75.48 58 P P 17 43 54.3 +1.0
baz=307
FURC Furnace Creek, 75.50 55 P P 17 43 54.4 +1.1
baz=308,SNR=5.7
LRMC Laurel Mtn Rad 75.57 56 P P 17 43 54.6 +0.7
baz=307,SNR=10
SORM Soroca 75.58 321 ⇑P P 17 43 53.8 +0.3
TPNV Topopah Spring 75.60 54 P P 17 43 55.0 +0.9
TPNV IAmb IAmb 17 43 56.8
comp=Z,52nm,1.4s
TPNV Topopah Spring 75.60 54 P P 17 43 55.0 +0.9
TPNV pmax pmax
comp=Z,52nm,1.4s
TPNV Topopah Spring 75.60 54 P P 17 43 55.3 +1.2
baz=308,SNR=26
SNCC San Nicolas Is 75.69 59 P P 17 43 55.8 +1.3
baz=307
DUG Dugway, Tooele 75.71 50 P P 17 43 55.7 +1.0
DUG IAmb IAmb 17 43 57.6
comp=Z,62nm,1.4s
DUG Dugway, Tooele 75.71 50 P P 17 43 55.7 +1.0
DUG pmax pmax
comp=Z,62nm,1.5s
DUG Dugway, Tooele 75.71 50 P P 17 43 56.2 +1.5
baz=309
EDW2 Edwards Air Fo 75.73 57 P P 17 43 56.0 +1.2
baz=307,SNR=13
DECC Green Verdugo 75.88 57 P P 17 43 56.6 +1.0
baz=307
TCUT Toone Canyon 75.96 48 P P 17 43 57.0 +0.8
PD31 Pinedale Array 75.98 46 P P 17 43 57.0 +0.7
PDAR Pinedale Array 75.98 46 P P 17 43 57.1 +0.9
comp=Z,5.3nm,0.6s,baz=263,slow=2.5,SNR=44
PDAR LR LR 18 15 42.8
comp=Z,54nm,22.0s,baz=339,slow=34
PDAR Pinedale Array 75.98 46 P P 17 43 57.0 +0.7
CTU Camp Tracy 76.03 49 P P 17 43 57.5 +1.0
MWC Mount Wilson 76.08 57 P P 17 43 57.5 +0.6
MWC IAmb IAmb 17 43 59.1
comp=Z,50nm,1.4s
MWC Mount Wilson 76.08 57 P P 17 43 57.5 +0.6
MWC pmax pmax
comp=Z,51nm,1.5s
KIS Kishinev 76.11 320 eP P 17 44 03.0 +6.4
KIS eL L 18 11 32.0
KIS LRM MLR 18 20 06.0
comp=Z,1μm,17.0s
KIS Kishinev 76.11 320 eP P 17 44 03.0 +6.4
KIS e 17 44 09.0
KIS e 17 44 20.0
KIS MLR MLR
comp=Z,1μm,17.0s
PSUT Pine Spring 76.12 52 P P 17 43 58.2 +1.1
SHOC Shoshone, Teco 76.22 55 P P 17 43 58.5 +1.0
baz=308
FMP Fort Macarthur 76.23 58 P P 17 43 58.4 +0.8
baz=308
GSC Goldstone, Bar 76.24 56 P P 17 43 58.3 +0.6
GSC Goldstone, Bar 76.24 56 P P 17 43 58.3 +0.6
GSC pmax pmax
comp=Z,27nm,1.3s
GSC Goldstone, Bar 76.24 56 P P 17 43 58.7 +0.9
baz=308,SNR=8.1
JLU Jordanelle 76.27 49 P P 17 43 58.9 +1.0
NLU North Lily Min 76.30 50 P P 17 43 59.0 +0.9
SNART Snartemo 76.33 337 eP P 17 43 58.6 +1.0
BFSC Mount Baldy Ra 76.33 57 P P 17 43 59.1 +0.8
baz=308
LVV L'vov 76.47 324 eP P 17 44 01.8 +3.2
LVV e 17 46 52.5
LVV ePPP PPP 17 48 47.8
LVV eS S 17 53 43.8 +3.2
LVV ePS PnS 17 54 07.6 -15
LVV eSSS SSS 18 01 58.2
LVV MLR MLR
comp=E,900nm,17.0s
LVV MLR MLR
comp=N,400nm,16.0s
LVV MLR MLR
comp=Z,900nm,19.0s
MPU Maple Canyon 76.53 49 P P 17 43 60.0 +0.6
SHPR Sheep Range 76.56 54 P P 17 44 00.9 +1.3
SHPR IAmb IAmb 17 44 02.6
comp=Z,45nm,1.4s
TUQ Turquoise Moun 76.73 55 P P 17 44 01.6 +1.1
baz=308,SNR=17
BBRC Big Bear Solar 76.80 57 P P 17 44 01.7 +0.6
baz=308
HEC Hector,Ludlow 76.84 56 P P 17 44 02.0 +0.9
baz=308,SNR=8.8
TCRU Three Creeks R 76.93 51 P P 17 44 02.5 +0.8
MURC Murrieta 77.03 57 P P 17 44 03.0 +0.9
baz=308
CCUT Cedar City 77.03 52 P P 17 44 03.8 +1.4
MSU Marysvale 77.15 51 P P 17 44 04.0 +1.0
MSU Marysvale 77.15 51 P P 17 44 04.0 +1.0
SZCU Shurtz Canyon 77.17 52 P P 17 44 03.6 +0.5
KWP Kalwaria Pacla 77.21 325 P P 17 44 04.1 +1.3
KWP Kalwaria Pacla 77.21 325 P P 17 44 04.1 +1.3
KWP pmax pmax
comp=Z,936nm,1.3s
TMUT Trail Mountain 77.24 50 P P 17 44 03.8 +0.3
GMRC Granite Mounta 77.30 56 P P 17 44 05.0 +1.2
baz=308,SNR=7.8
RDMU Red Mountain 77.39 48 P P 17 44 05.4 +1.1
ILGA Ilgaz 77.39 313 P P 17 44 06.0 +1.7
ILGA IAmb IAmb 17 44 09.6
comp=Z,49nm,1.3s
P17A Butcher Ranch, 77.40 49 P P 17 44 05.7 +1.4
LCMT Little Creek M 77.44 53 P P 17 44 06.0 +1.5
MTPU Mount Pierson 77.45 51 P P 17 44 06.4 +1.6
BUR08 Bucovina Ar. S 77.45 322 P P 17 44 04.9 +0.6
BURAR Bucovina Array 77.47 322 ⇑P P 17 44 05.6 +1.2
BURAR Bucovina Array 77.47 322 P P 17 44 04.9 +0.5
Q16A Castle Valley 77.50 50 P P 17 44 05.9 +1.0
PFO Pinyon Flats O 77.51 57 P P 17 44 05.7 +0.8
PFO Pinyon Flats O 77.51 57 ⇓iP P 17 44 06.1 +1.2
PFO pmax pmax
comp=Z,43nm,1.4s
PFO Pinyon Flats O 77.51 57 P P 17 44 05.6 +0.8
baz=308
XPFO Pion Flat 77.51 57 P P 17 44 05.6 +0.7
109C Camp Elliot, M 77.53 58 P P 17 44 05.7 +0.9
baz=308
TESR Tescani 77.53 320 ⇓P P 17 44 05.1 +0.4
BELC Belle Mtn. Jos 77.57 56 P P 17 44 05.8 +0.5
baz=308,SNR=5.5
KNB Kanab 77.70 52 P P 17 44 07.4 +1.4
KNB Kanab 77.70 52 P P 17 44 07.4 +1.4
KNB pmax pmax
comp=Z,77nm,1.4s
ULM Lac du Bonnet 77.71 34 P P 17 44 05.7 +0.1
comp=Z,5.3nm,0.8s,baz=342,slow=6.8,SNR=11
ULM LR LR 18 21 29.5
comp=Z,144nm,19.1s,baz=314,slow=38
ULM Lac du Bonnet 77.71 34 P P 17 44 05.4 -0.1
MDND Maddock 77.74 37 P P 17 44 06.7 +0.9
MDND Maddock 77.74 37 P P 17 44 06.3 +0.5
baz=315,SNR=5.3
K22A Casper 77.75 45 P P 17 44 07.0 +0.9
K22A IAmb IAmb 17 44 08.4
comp=Z,74nm,1.6s
K22A Casper 77.75 45 P P 17 44 06.6 +0.4
baz=312,SNR=8.1
PKCU Pink Cliffs 77.75 52 P P 17 44 08.3 +1.8
SRU San Rafael Swe 77.77 50 P P 17 44 07.3 +1.0
SRU San Rafael Swe 77.77 50 P P 17 44 07.4 +1.0
SRU pmax pmax
comp=Z,87nm,1.5s
TOPG Topolog 77.77 318 ⇑P P 17 44 06.5 +0.5
GAZ Gaziantep 77.80 308 P P 17 44 07.9 +1.5
GAZ IAmb IAmb 17 44 25.7
comp=Z,27nm,1.0s
KOLS Kolonicke sedl 77.91 324 eP P 17 44 07.3 +0.6
KOLS pmax pmax
comp=Z,10.0nm,1.2s
KOLS Kolonicke sedl 77.91 324 eP P 17 44 07.3 +0.6
VRI Vrincioaia 77.94 320 ⇑P P 17 44 08.9 +1.9
MONP2 Monument Peak 77.97 58 P P 17 44 08.5 +0.8
baz=308
NEE2 Needles Airpor 77.98 55 P P 17 44 08.1 +0.7
baz=309
PLOR Plostina 77.99 320 ⇑P P 17 44 10.6 +3.3
RWWY Rawlins 78.00 46 P P 17 44 08.3 +0.6
RWWY IAmb IAmb 17 44 09.9
comp=Z,60nm,1.4s
IRM Iron Mountain 78.03 56 P P 17 44 08.6 +1.0
baz=309,SNR=12
STHS Stebnicka Huta 78.03 325 eP P 17 44 10.9 +3.5
STHS pmax pmax
comp=Z,16nm,1.0s
STHS Stebnicka Huta 78.03 325 eP P 17 44 10.9 +3.5
OJC Ojcow 78.07 326 P P 17 44 08.6 +1.0
OJC IAmb IAmb 17 44 12.4
comp=Z,45nm,1.1s
OJC Ojcow 78.07 326 P P 17 44 08.6 +1.0
OJC pmax pmax
comp=Z,45nm,1.1s
RSSD Black Hills 78.10 42 P P 17 44 08.4 +0.3

RSSD IAmb IAmb 17 44 10.2
comp=Z,74nm,1.6s
RSSD Black Hills 78.10 42 P P 17 44 08.4 +0.3
RSSD pmax pmax
comp=Z,74nm,1.7s
RSSD Black Hills 78.10 42 P P 17 44 08.6 +0.5
baz=313
UZH Uzhgorod 78.12 324 eP P 17 44 10.9 +3.1
UZH e 17 44 20.3
UZH e 17 44 26.9
UZH eS S 17 54 00.5 +2.0
UZH MLR MLR
comp=Z,100nm,15.0s
BC3 Big Chuckawall 78.14 56 P P 17 44 08.9 +0.5
baz=309,SNR=10
W13A Hualapai Mount 78.24 54 P P 17 44 09.7 +0.6
OZUR 78.25 321 ⇑P P 17 44 10.6 +1.9
ARCR ARCALIA 78.25 322 ⇑P P 17 44 10.6 +1.9
CRVS Cervenica-Dubn 78.30 325 eP P 17 44 10.1 +1.2
CRVS pmax pmax
comp=Z,53nm,1.7s
CRVS Cervenica-Dubn 78.30 325 eP P 17 44 10.1 +1.2
BR131 Keskin Array S 78.30 312 P P 17 44 09.4 +0.1
BR131 Keskin Array S 78.30 312 P P 17 44 09.4 +0.1
BR131 pmax pmax
comp=Z,16nm,1.3s
BRTR Keskin Array B 78.30 312 P P 17 44 09.8 +0.5
comp=Z,4.0nm,0.7s,baz=116,slow=2.7,SNR=14
BRTR LR LR 18 24 04.5
comp=Z,179nm,18.9s,baz=58,slow=40
BRTR Keskin Array B 78.30 312 P P 17 44 09.0 -0.2
BRTR Keskin Array B 78.30 312 i P P 17 44 12.3 +3.1
BRTR pmax pmax
comp=Z,4.0nm,0.7s
IKP In-Ko-Pah, Jac 78.33 58 P P 17 44 10.6 +1.1
baz=309
SWSC Sam W. Stewart 78.35 57 P P 17 44 10.1 +0.7
baz=309
TRPA Tarpa 78.37 324 ⇑P P 17 44 10.8 +1.5
U15A North Rim 78.41 53 P P 17 44 11.6 +1.5
U15A IAmb IAmb 17 44 13.2
comp=Z,63nm,1.4s
O20A White River Ci 78.44 48 P P 17 44 10.6 +0.5
O20A IAmb IAmb 17 44 12.3
comp=Z,46nm,1.4s
O20A White River Ci 78.44 48 P P 17 44 10.8 +0.8
baz=311,SNR=11
DOPR Dopca 78.54 321 ⇓P P 17 44 11.8 +1.6
PDMCI Parker Dam,Lak 78.58 55 P P 17 44 11.4 +0.8
baz=309,SNR=8.3
ICOR Ion Corvin 78.59 318 ⇑P P 17 44 12.2 +1.6
MLR Muntele Rosu 78.59 320 ⇑P P 17 44 12.9 +2.2
MLR Muntele Rosu 78.59 320 P P 17 44 11.6 +0.9
MLR IAmb IAmb 17 45 02.3
comp=Z,43nm,1.5s
MLR Muntele Rosu 78.59 320 P P 17 44 11.6 +0.9
MLR pmax pmax
comp=Z,43nm,1.5s
Y12C Blythe 78.68 56 P P 17 44 12.5 +1.2
Y12C IAmb IAmb 17 44 13.8
comp=Z,47nm,1.4s
Y12C Blythe 78.68 56 P P 17 44 12.2 +1.0
baz=309,SNR=6.1
ANTO Ankara 78.70 312 ⇓P P 17 44 11.8 +0.5
ANTO Ankara 78.70 312 P P 17 44 12.2 +0.8
ANTO Ankara 78.70 312 P P 17 44 12.2 +0.8
ANTO pmax pmax
comp=Z,17nm,0.8s
BSEG Bad Segeberg 78.91 333 eP P 17 44 13.7 +1.7
comp=Z,17nm,0.9s,baz=35,slow=5.3
GLA Glamis 78.92 57 P P 17 44 12.9 +0.2
GLA IAmb IAmb 17 44 15.2
comp=Z,45nm,1.3s
GLA Glamis 78.92 57 P P 17 44 12.9 +0.2
GLA pmax pmax
comp=Z,45nm,1.3s
GLA Glamis 78.92 57 P P 17 44 13.8 +1.2
baz=309,SNR=5.2
OKC Ostrava-Krasne 79.07 327 eP P 17 44 14.2 +1.2
OKC Ostrava-Krasne 79.07 327 eP P 17 44 14.2 +1.2
VOIR 79.08 320 ⇓P P 17 44 14.8 +1.5
AGMN Agassiz Nation 79.15 35 P P 17 44 13.5 -0.1
AGMN Agassiz Nation 79.15 35 P P 17 44 13.3 -0.2
baz=318
MDUB Mudurnu 79.22 314 P P 17 44 15.7 +1.5
PHWY Pilot Hill 79.24 45 P P 17 44 14.8 +0.2
N23A Red Feather La 79.24 46 P P 17 44 15.7 +1.2
N23A IAmb IAmb 17 44 17.5
comp=Z,64nm,1.4s
N23A Red Feather La 79.24 46 P P 17 44 15.8 +1.3
baz=312,SNR=17
DRGR 79.25 323 ⇑P P 17 44 15.1 +0.9
ARR Arges 79.34 321 ⇑P P 17 44 16.9 +2.2
MORC Moravsky Berou 79.37 327 eP P 17 44 15.9 +1.1
MORC Moravsky Berou 79.37 327 ⇑P P 17 44 16.1 +1.3
MORC Moravsky Berou 79.37 327 P P 17 44 15.8 +1.0
MORC Moravsky Berou 79.37 327 P P 17 44 15.8 +1.0
MORC pmax pmax
comp=Z,19nm,1.0s
CHVC Chvalec 79.37 328 eP P 17 44 16.0 +1.3
DPC Dobruska-Polom 79.44 328 eP P 17 44 16.7 +1.5
DPC ex x 17 44 19.0
DPC Dobruska-Polom 79.44 328 eP P 17 44 16.7 +1.5
DPC e 17 44 19.0
UPC Upice 79.45 328 eP P 17 44 17.3 +2.2
UPC Upice 79.45 328 eP P 17 44 17.3 +2.2
KRLC Kraliky 79.46 328 eP P 17 44 16.4 +1.1
KRLC ex x 17 44 18.8
KRLC ex x 17 44 28.3
KRLC Kraliky 79.46 328 eP P 17 44 16.4 +1.1
KRLC e 17 44 28.3
Y14A Wickenburg 79.54 55 P P 17 44 16.9 +0.9
Y14A IAmb IAmb 17 44 18.6
comp=Z,41nm,1.3s
WUAZ Wupatki 79.56 53 P P 17 44 17.7 +1.5
WUAZ IAmb IAmb 17 44 19.2
comp=Z,46nm,1.3s
WUAZ Wupatki 79.56 53 P P 17 44 17.7 +1.5
baz=310,SNR=18
LOT Lotru 79.71 321 ⇑P P 17 44 18.4 +1.6
PSZ Piszkesteto 79.73 325 P P 17 44 17.8 +1.0
PSZ Piszkesteto 79.73 325 P P 17 44 17.8 +1.0
PSZ pmax pmax
comp=Z,29nm,1.1s
VYHS Vyhne 79.78 326 eP P 17 44 18.0 +1.0
VYHS pmax pmax
comp=Z,16nm,1.2s
VYHS Vyhne 79.78 326 eP P 17 44 18.0 +1.0
SMCO Snowmass 79.81 48 P P 17 44 19.0 +1.2
BRG Berggiesshubel 80.00 330 eP P 17 44 19.1 +1.0
comp=Z,12nm,0.8s
BRG SS SS 17 59 35.0 +7.3
BRG Berggiesshubel 80.00 330 eP P 17 44 19.0 +1.0
comp=Z,7.5nm,0.8s,baz=35,slow=5.3
BRG Berggiesshubel 80.00 330 eP P 17 44 19.1 +1.0
BRG SS SS 17 59 35.0 +7.3
BRG pmax pmax
comp=Z,12nm,0.8s
BRG MLR MLR
comp=N,1μm,20.6s
BRG MLR MLR
comp=E,654nm,12.5s
BRG MLR MLR
comp=Z,2μm,27.6s
JAVC Velka Javorina 80.01 327 eP P 17 44 22.7 +4.4
PVCC Panska Ves 80.02 329 eP P 17 44 19.5 +1.3
PVCC Panska Ves 80.02 329 eP P 17 44 19.5 +1.3
CLL Collm 80.02 330 eP P 17 44 18.7 +0.5
comp=Z,17nm,0.9s,baz=35,slow=5.3
CLL epP pP 17 44 29.9 -1.6
CLL Collm 80.02 330 eP P 17 44 18.0 -0.2
comp=Z,26nm,0.9s
CLL epP pP 17 44 31.0 -0.6
CLL e 17 44 43.0
CLL ePPP PPP 17 49 08.0
CLL eS S 17 54 20.0 +1.4
CLL e 18 00 12.0
CLL eSSS SSS 18 03 00.0
CLL Collm 80.02 330 P P 17 44 18.7 +0.5
CLL Collm 80.02 330 eP P 17 44 18.0 -0.2
CLL e*PP pP 17 44 31.0 -0.6
CLL eS S 17 54 20.0 +1.4
CLL pmax pmax
comp=Z,26nm,0.9s
VRAC Vranov 80.13 327 eP P 17 44 20.2 +1.3
VRAC Vranov 80.13 327 ⇑P P 17 44 20.0 +1.2
NRDL Niedersach Rie 80.15 333 eP P 17 44 20.2 +1.4
comp=Z,6.5nm,0.8s,baz=35,slow=5.3
ISCO Idaho Springs 80.17 46 P P 17 44 20.9 +1.2
ISCO IAmb IAmb 17 44 37.8
comp=Z,57nm,1.8s
ISCO Idaho Springs 80.17 46 P P 17 44 20.9 +1.2
ISCO pmax pmax
comp=Z,57nm,1.8s
ISCO Idaho Springs 80.17 46 P P 17 44 20.9 +1.2
baz=313
MVCO Mesa Verde 80.21 50 P P 17 44 20.6 +0.7
MVCO IAmb IAmb 17 44 22.5
comp=Z,74nm,1.6s
MVCO Mesa Verde 80.21 50 P P 17 44 21.0 +1.1
baz=312
X16A Lo Mia Camp, P 80.23 54 P P 17 44 20.6 +0.7
GZR Gura Zlata 80.23 322 ⇑P P 17 44 20.4 +0.8
SMOL Smolenice 80.38 326 eP P 17 44 21.9 +1.7
SMOL pmax pmax
comp=Z,11nm,1.1s
SMOL Smolenice 80.38 326 eP P 17 44 21.9 +1.7
KRUC Moravsky 80.40 327 eP P 17 44 21.4 +1.1
GOPC GO Pecny, Ondr 80.41 329 eP P 17 44 21.3 +0.9
GOPC ex x 17 44 24.0
GOPC GO Pecny, Ondr 80.41 329 eP P 17 44 21.3 +0.9
PRU Pruhonice 80.45 329 eP P 17 44 21.7 +1.2
PRU epP pP 17 44 34.7 +0.8
PRU Pruhonice 80.45 329 eP P 17 44 21.7 +1.2
PRU e 17 44 34.7
SUSD Miller 80.48 40 P P 17 44 21.4 +0.5
SUSD Miller 80.48 40 P P 17 44 21.3 +0.5
baz=316
MODS Modra-Piesok 80.55 326 eP P 17 44 21.9 +0.8
MODS pmax pmax
comp=Z,37nm,1.5s
MODS Modra-Piesok 80.55 326 eP P 17 44 21.9 +0.8
CLZ Clausthal 80.58 332 eP P 17 44 22.5 +1.2
comp=Z,22nm,1.1s,baz=35,slow=5.3
TREC Trest 80.60 328 eP P 17 44 22.5 +1.1
TREC Trest 80.60 328 eP P 17 44 22.5 +1.1
BZS Buzias 80.63 322 ⇑P P 17 44 22.1 +0.5
RAYN Ar Rayn 80.71 293 P P 17 44 22.6 +0.1
RAYN Ar Rayn 80.71 293 P P 17 44 22.8 +0.4
RAYN Ar Rayn 80.71 293 P P 17 44 22.8 +0.4
RAYN pmax pmax
comp=Z,31nm,1.2s
W18A Petrified Fore 80.84 52 P P 17 44 24.5 +1.4
W18A Petrified Fore 80.84 52 P P 17 44 24.7 +1.5
baz=311,SNR=5.3
S22A 4UR Ranch, Cre 80.85 49 P P 17 44 24.6 +1.3
S22A 4UR Ranch, Cre 80.85 49 P P 17 44 24.9 +1.6
baz=312,SNR=19
PBCC Pribram 80.91 329 eP P 17 44 24.1 +1.1
PBCC ex x 17 44 26.2
214A Organ Pipe Nat 80.93 56 P P 17 44 24.5 +1.0
214A Organ Pipe Nat 80.93 56 P P 17 44 24.2 +0.7
baz=310,SNR=12
GTTG Gottingen 80.97 332 epP pP 17 44 37.3 +0.7
Q24A Divide 81.00 47 P P 17 44 25.0 +0.9
Q24A Divide 81.00 47 P P 17 44 25.3 +1.2
baz=313
GUNZ Gunzen 81.03 330 eP P 17 44 25.1 +1.4
comp=Z,9.3nm,1.0s,baz=35,slow=5.3
WERN Wernitzgruen 81.07 330 eP P 17 44 25.1 +1.2
comp=Z,8.7nm,0.9s,baz=35,slow=5.3
WERN epP pP 17 44 36.5 -0.8
X18A Snowflake 81.09 53 P P 17 44 25.7 +1.2
IBBN Ibbenburen 81.13 334 eP P 17 44 25.3 +1.2
comp=Z,20nm,0.9s,baz=35,slow=5.3
SOCY Socotra 81.23 279 P P 17 44 23.8 -1.6
SOCY IAmb IAmb 17 44 46.8
comp=Z,48nm,1.0s
EYMN Ely 81.34 33 P P 17 44 25.4 0.0
EYMN IAmb IAmb 17 44 26.9
comp=Z,43nm,1.4s
EYMN Ely 81.34 33 P P 17 44 25.3 0.0
baz=320
OGNE Ogallala 81.36 44 P P 17 44 26.3 +0.6
OGNE IAmb IAmb 17 44 27.8
comp=Z,72nm,1.2s
OGNE Ogallala 81.36 44 P P 17 44 26.3 +0.6
baz=315
MANZ Manzenberg 81.42 330 eP P 17 44 26.8 +1.0
comp=Z,10nm,1.1s,baz=35,slow=5.3
CONA Conrad Observa 81.50 327 ePcP P 17 44 28.0 +1.7
comp=Z,9.7nm,0.8s
KHC Kasperske Hory 81.51 329 eP P 17 44 26.8 +0.5
KHC epP pP 17 44 39.3 -0.4
KHC Kasperske Hory 81.51 329 P P 17 44 27.1 +0.8
KHC Kasperske Hory 81.51 329⇓eP P 17 44 27.0 +0.8
KHC pmax pmax
comp=Z,44nm,1.0s
ROTZ Rotzenmuhle 81.56 330 eP P 17 44 28.0 +1.5
comp=Z,5.2nm,0.9s,baz=35,slow=5.3
CSS Mathiatis 81.62 308 P P 17 44 29.3 +2.2
SDCO Great Sand Dun 81.62 48 P P 17 44 28.3 +0.9
SDCO Great Sand Dun 81.62 48 P P 17 44 28.8 +1.4
baz=313
GEC2 GERESS Array S 81.69 329 eP P 17 44 27.9 +0.6
comp=Z,3.8nm,0.8s,baz=35,slow=5.3
GEC2 GERESS Array S 81.69 329 P P 17 44 28.6 +1.3
GERES GERESS Array B 81.69 329 P P 17 44 27.9 +0.6
comp=Z,4.6nm,0.8s,baz=43,slow=6.0,SNR=18
GERES PKKPbc PKKPbc 18 02 57.5 -0.6
comp=Z,0.7nm,0.7s,baz=222,slow=1.8,SNR=6.0
GERES LR LR 18 23 51.6
comp=Z,1μm,19.9s,baz=29,slow=38
GERES GERESS Array B 81.69 329 P P 17 44 27.5 +0.2
WET Wettzell 81.78 329 eP P 17 44 29.3 +1.6
comp=Z,6.7nm,0.9s,baz=35,slow=5.3
WET epP pP 17 44 41.0 -0.1
GRA1 Grafenberg Arr 82.00 330 P P 17 44 29.9 +1.1
GRA1 IAmb IAmb 17 44 45.7
comp=Z,38nm,1.1s
GRF Grafenberg Arr 82.00 330 eP P 17 44 30.9 +2.1
comp=Z,14nm,0.8s,baz=35,slow=5.3
GRF Grafenberg Arr 82.00 330 P P 17 44 29.9 +1.1
GRF pmax pmax
comp=Z,39nm,1.1s
VTS Vitosha 82.01 319 ⇑P P 17 44 30.7 +1.5
VTS Vitosha 82.01 319 i P P 17 44 30.3 +1.1
VTS Vitosha 82.01 319 P P 17 44 30.3 +1.1
VTS Vitosha 82.01 319 P P 17 44 30.3 +1.1
VTS pmax pmax
comp=Z,16nm,0.8s
TUC Tucson 82.01 55 P P 17 44 29.9 +0.6
TUC Tucson 82.01 55 P P 17 44 29.9 +0.6
TUC pmax pmax
comp=Z,24nm,1.4s
TUC Tucson 82.01 55 P P 17 44 30.4 +1.1
baz=311
MANT Manisa 82.06 314 P P 17 44 30.2 +0.6
MANT IAmb IAmb 17 44 54.7
comp=Z,37nm,1.0s
ECSD EROS Data Cent 82.16 39 P P 17 44 30.0 +0.3
ECSD IAmb IAmb 17 44 31.4
comp=Z,55nm,1.4s
ECSD EROS Data Cent 82.16 39 P P 17 44 30.1 +0.4
baz=318
ARSA Arzberg 82.17 327 eP P 17 44 31.4 +1.6
comp=Z,6.9nm,0.9s,baz=35,slow=5.3
ARSA Arzberg 82.17 327 ePcP PcP 17 44 33.3 -1.8
comp=Z,15nm,1.2s
MOA Molln 82.24 328 eP P 17 44 33.0 +2.9
comp=Z,8.0nm,1.0s,baz=35,slow=5.3
MOA Molln 82.24 328 ePcP PcP 17 44 34.6 -0.7
comp=Z,18nm,1.5s
E38A The Farm, Brul 82.35 34 P P 17 44 30.5 -0.2
E38A IAmb IAmb 17 44 31.8
comp=Z,67nm,1.5s
KSCO Kaye Shedlock' 82.39 45 P P 17 44 31.9 +0.8
KSCO Kaye Shedlock' 82.39 45 P P 17 44 32.0 +0.8
baz=314
ELL Elmali 82.47 312 P P 17 44 32.2 +0.5
ELL Elmali 82.47 312 P P 17 44 32.2 +0.5
ELL pmax pmax
comp=Z,92nm,1.1s
TNS Taunus Mts 82.61 332 eP P 17 44 34.5 +2.4
comp=Z,12nm,1.1s,baz=35,slow=5.3
KKB Krupnik 82.63 319 i P P 17 44 35.7 +3.4
T25A Trinidad 82.67 48 P P 17 44 34.0 +1.2
T25A IAmb IAmb 17 44 35.4
comp=Z,60nm,1.6s
T25A Trinidad 82.67 48 P P 17 44 33.8 +1.0
baz=314,SNR=12
SOKA Soboth 82.83 327 ePcP P 17 44 34.2 +1.0
comp=Z,14nm,0.8s
SPMN Marine on St. 82.84 36 P P 17 44 33.2 -0.1
baz=320
RJOB Jochberg 82.93 328 eP P 17 44 35.5 +1.7
comp=Z,14nm,0.8s,baz=35,slow=5.3
RJOB epP pP 17 44 48.8 +1.6
ANMO Albuquerque 82.95 51 P P 17 44 35.2 +1.0
ANMO IAmb IAmb 17 44 37.3
comp=Z,44nm,1.4s
ANMO Albuquerque 82.95 51c iP P 17 44 35.8 +1.5
ANMO pmax pmax
comp=Z,35nm,1.3s
ANMO Albuquerque 82.95 51 P P 17 44 35.7 +1.4
baz=313
URZ Urewera 82.98 153 P P 17 44 33.2 -0.6
BGNE Belgrade 83.08 41 P P 17 44 34.6 -0.1
BGNE Belgrade 83.08 41 P P 17 44 34.8 +0.1
baz=317
OBKA Obir 83.17 327 eP P 17 44 35.9 +0.9
comp=Z,7.7nm,0.8s,baz=35,slow=5.3
OBKA Obir 83.17 327 ePcP PcP 17 44 37.9 -1.6
comp=Z,10nm,0.9s
FUR Furstenfeldbru 83.20 329 eP P 17 44 36.1 +1.0
comp=Z,21nm,0.9s,baz=35,slow=5.3
KBA Koelnbreinsper 83.23 328 eP P 17 44 36.7 +1.2
comp=Z,11nm,0.8s,baz=35,slow=5.3
KBA Koelnbreinsper 83.23 328 ePcP PcP 17 44 39.5 -0.4
comp=Z,12nm,0.9s
D41A Chassel 83.28 32 P P 17 44 35.7 +0.2
D41A IAmb IAmb 17 44 37.4
comp=Z,26nm,1.1s
VAY Valandovo 83.29 319 i P P 17 44 39.1 +3.5
SKO Skopje 83.39 320 i P P 17 44 40.3 +4.1
MYKA Terra Mystica 83.46 327 ePcP PcP 17 44 39.0 -1.8
comp=Z,8.6nm,0.7s
SCHQ Schefferville 83.54 16 P P 17 44 36.5 -0.1
comp=Z,8.8nm,1.0s,baz=359,slow=8.3,SNR=11
SCHQ LR LR 18 23 53.8
comp=Z,152nm,20.5s,baz=324,slow=37
SCHQ Schefferville 83.54 16 P P 17 44 37.4 +0.7
319A Douglas 83.59 55 P P 17 44 38.6 +1.1
319A IAmb IAmb 17 44 40.0
comp=Z,50nm,1.2s
WATA Walderalm 83.75 329 PcP PcP 17 44 41.3 -0.9
comp=Z,14nm,1.3s
121A Cookes Peak, D 83.76 53 P P 17 44 39.8 +1.4
121A IAmb IAmb 17 44 41.4
comp=Z,65nm,1.4s
121A Cookes Peak, D 83.76 53 P P 17 44 39.6 +1.1
baz=312,SNR=15
ABTA Abfaltersbach 83.84 328 ePcP PcP 17 44 41.0 -1.5
comp=Z,7.3nm,1.1s
MOTA Moosalm 83.94 329 ePcP P 17 44 39.5 +0.5
comp=Z,23nm,1.1s,SNR=4.9
RETA Reutte 83.96 329 ePcP P 17 44 40.2 +1.1
comp=Z,29nm,1.2s,SNR=7.2
G40A Rib Lake 83.98 34 P P 17 44 39.7 +0.5
G40A IAmb IAmb 17 44 40.7
comp=Z,47nm,1.6s
SQTA Sankt Quirin 83.99 329 ePcP PcP 17 44 42.6 -0.6
comp=Z,18nm,1.6s
HSIG 84.06 58 P P 17 44 40.0 +0.2
HSIG IAmb IAmb 17 44 42.1
comp=Z,66nm,1.7s
CBKS Cedar Bluff 84.12 44 P P 17 44 39.7 -0.3
CBKS IAmb IAmb 17 44 41.9
comp=Z,36nm,1.1s
CBKS Cedar Bluff 84.12 44 P P 17 44 39.7 -0.3
CBKS pmax pmax
comp=Z,36nm,1.2s
CBKS Cedar Bluff 84.12 44 P P 17 44 39.9 -0.1
baz=316
STAL STALIGIAL 84.14 328 P P 17 44 39.7 -0.3
STAL IAmb IAmb 17 44 58.5
comp=Z,21nm,0.8s
PMOR Pomariorio Ree 84.17 114 eT T 19 17 07.0
comp=Z,57nm,0.2s
BFO Black Forest 84.21 331 eP P 17 44 40.8 +0.5
comp=Z,15nm,1.0s,baz=35,slow=5.3
BFO Black Forest 84.21 331 P P 17 44 41.0 +0.7
BFO IAmb IAmb 17 44 44.2
comp=Z,37nm,1.2s
BFO Black Forest 84.21 331 P P 17 44 41.0 +0.7
BFO pmax pmax
comp=Z,37nm,1.2s
LIT Litokhoron 84.22 318 P P 17 44 41.0 +0.5
LIT IAmb IAmb 17 44 44.2
comp=Z,24nm,1.0s
LIT Litokhoron 84.22 318 P P 17 44 41.0 +0.5
LIT pmax pmax
comp=Z,24nm,1.0s
FNA Florina 84.30 319 P P 17 44 41.2 +0.3
FNA Florina 84.30 319 P P 17 44 41.2 +0.3
FNA pmax pmax
comp=Z,19nm,1.2s
SRIG Santa Rosalia 84.30 60 P P 17 44 41.4 +0.3
SRIG IAmb IAmb 17 44 43.3
comp=Z,36nm,1.3s
FETA Feichten 84.35 329 ePcP P 17 44 41.7 +0.5
comp=Z,13nm,1.1s
DAVA Damuels 84.47 330 eP P 17 44 43.1 +1.3
comp=Z,15nm,0.9s,baz=35,slow=5.3
DAVA Damuels 84.47 330 ePcP P 17 44 43.4 +1.6
comp=Z,22nm,1.0s
E43A Lone Tree Farm 84.47 32 P P 17 44 41.9 +0.3
F42A Maple Grove Fa 84.49 33 P P 17 44 42.0 +0.3
F42A IAmb IAmb 17 44 43.2
comp=Z,38nm,1.4s
E44A Grand Marais A 84.72 31 P P 17 44 43.4 +0.6
E44A Grand Marais A 84.72 31 P P 17 44 43.4 +0.6
baz=324
PPT Papeete 84.72 117 LR LR 18 15 02.7
comp=Z,275nm,20.2s,baz=344,slow=30
PPT2 Papeete2 84.74 117 eS S 17 55 10.5 +2.7
comp=Z,740nm,35.5s
PPT2 Papeete2 84.74 117 eLR LR 18 11 30.4
comp=Z,1μm,24.2s,baz=319
PPT2 Papeete2 84.74 117 eT T 19 17 49.8
comp=Z,16nm,0.3s
CTI Castel Tesino 84.76 328 P P 17 44 43.3 +0.1
CTI IAmb IAmb 17 44 57.5
comp=Z,34nm,1.4s
CTI Castel Tesino 84.76 328 P P 17 44 43.3 +0.1
CTI pmax pmax
comp=Z,34nm,1.4s
PAE Paea 84.78 117 eT T 19 17 52.5
comp=Z,2.7nm,0.2s
FUORN Ofenpass-Fuorn 84.86 329 P P 17 44 44.8 +0.9
FUORN IAmb IAmb 17 44 48.5
comp=Z,58nm,1.3s
I40A Norwalk 84.87 35 P P 17 44 43.8 +0.2
I40A IAmb IAmb 17 44 45.2
comp=Z,53nm,1.6s
TIAR Tiarei 84.88 117 eT T 19 17 59.5
comp=Z,4.9nm,0.2s
DAVOX Davos/Dischmat 84.88 329 P P 17 44 44.7 +0.8
comp=Z,8.1nm,0.8s
DAVOX LR LR 18 26 08.8
comp=Z,861nm,18.9s,baz=40,slow=38
AGG Agios Georgios 85.10 317 P P 17 44 46.6 +1.7
AGG IAmb IAmb 17 45 09.4
comp=Z,20nm,1.1s
AGG Agios Georgios 85.10 317 P P 17 44 46.6 +1.7
AGG pmax pmax
comp=Z,20nm,1.1s
MATQ Matagami 85.12 25 P P 17 44 44.7 0.0
baz=330
SCIA State Center 85.18 38 P P 17 44 46.3 +1.1
SCIA State Center 85.18 38 P P 17 44 46.1 +0.8
baz=320
D46A Sault St. Mari 85.24 30 P P 17 44 45.4 0.0
baz=325
D47A Chapleau 85.47 29 P P 17 44 46.5 -0.1
baz=326
E46A Sault Ste Mari 85.57 30 P P 17 44 47.0 0.0
E46A IAmb IAmb 17 44 49.2
comp=Z,55nm,1.4s
KSU1 Kansas State U 85.58 42 P P 17 44 47.3 +0.1
baz=318
I42A Draeger Farm, 85.63 34 P P 17 44 47.5 +0.1
I42A IAmb IAmb 17 44 48.5
comp=Z,22nm,0.9s
F45A CMU Biological 85.64 31 P P 17 44 47.8 +0.4

baz=324
H43A Windswept, Lux 85.67 33 P P 17 44 47.9 +0.2
JFWS Jewell Farm 85.80 36 P P 17 44 48.7 +0.4
JFWS IAmb IAmb 17 45 04.7
comp=Z,44nm,1.4s
JFWS Jewell Farm 85.80 36 P P 17 44 48.7 +0.4
JFWS pmax pmax
comp=Z,44nm,1.4s
JFWS Jewell Farm 85.80 36 P P 17 44 48.2 -0.1
baz=322
MNTX Cornudas Mount 85.82 52 P P 17 44 49.8 +1.2
MNTX IAmb IAmb 17 44 51.0
comp=Z,33nm,1.5s
MNTX Cornudas Mount 85.82 52 P P 17 44 49.4 +0.7
baz=314
AMTX Amarillo 85.83 48 P P 17 44 49.5 +0.8
AMTX IAmb IAmb 17 44 51.1
comp=Z,40nm,1.2s
AMTX Amarillo 85.83 48 P P 17 44 49.7 +1.0
baz=315
MSTX Muleshoe 85.83 49 P P 17 44 49.4 +0.6
MSTX IAmb IAmb 17 44 50.7
comp=Z,42nm,1.4s
MSTX Muleshoe 85.83 49 P P 17 44 49.3 +0.5
baz=315
D48A Paudash Townsh 85.86 28 P P 17 44 48.0 -0.5
baz=327
TAOE Nuku Hiva Isla 85.86 105 eLR LR 18 12 01.7
comp=Z,779nm,25.0s
TAOE Nuku Hiva Isla 85.86 105 eT T 19 19 16.5
comp=Z,33nm,0.2s
E47A Iron Bridge 85.90 30 P P 17 44 48.6 -0.1
baz=326
LSQQ Lebel-sur-Quev 85.94 25 P P 17 44 49.0 +0.2
baz=330
D49A Beulah Townshi 85.94 28 P P 17 44 48.7 -0.3
baz=327
MEH Mehetia 85.98 117 eT T 19 19 22.7
comp=Z,82nm,0.3s
L40A Anamosa 86.01 37 P P 17 44 49.4 +0.1
L40A IAmb IAmb 17 44 50.8
comp=Z,45nm,1.2s
G45A Suttons Bay 86.11 32 P P 17 44 50.1 +0.4
G45A Suttons Bay 86.11 32 P P 17 44 50.2 +0.4
baz=324
H45A Beulah 86.28 32 P P 17 44 51.1 +0.5
baz=324
E48A Lockeyer 86.30 29 P P 17 44 50.7 0.0
baz=327
D50A G1974 Best Tow 86.58 27 P P 17 44 51.8 -0.3
baz=328
VLDQ Val d'Or 86.60 25 P P 17 44 51.4 -0.7
VLDQ IAmb IAmb 17 44 52.8
comp=Z,48nm,1.4s
F48A Evansville 86.67 30 P P 17 44 52.4 -0.1
baz=326
H46A Fife Lake 86.70 32 P P 17 44 53.6 +0.9
baz=325
G47A Hillman 86.73 31 P P 17 44 54.1 +1.3
baz=326
L42A Oliver, Polo 86.78 36 P P 17 44 51.9 -1.2
D51A Lot 18 Range I 86.82 27 P P 17 44 53.0 -0.2
baz=329
K43A Burlington 86.83 35 P P 17 44 54.4 +1.1
F49A Sandfield 86.95 29 P P 17 44 53.7 -0.1
baz=327
H47A Mio 87.06 31 P P 17 44 54.8 +0.4
baz=325
I46A Reed City 87.09 32 P P 17 44 55.0 +0.4
baz=325
DAMY Dhamar 87.09 286 P P 17 44 55.8 +0.4
N41A Harden Midland 87.24 38 P P 17 44 55.8 +0.4
D52A ZEK Kipawa Sen 87.25 27 P P 17 44 55.1 -0.3
baz=329
D53A Lac Vacive, Po 87.41 26 P P 17 44 56.1 0.0
D53A IAmb IAmb 17 44 57.4
comp=Z,19nm,1.1s
D53A Lac Vacive, Po 87.41 26 P P 17 44 56.0 -0.1
baz=330
I47A Gladwin 87.41 32 P P 17 44 56.5 +0.4
WMOK Wichita Mounta 87.59 46 P P 17 44 57.4 +0.2
WMOK IAmb IAmb 17 44 59.2
comp=Z,22nm,1.3s
WMOK Wichita Mounta 87.59 46 P P 17 44 57.4 +0.2
WMOK pmax pmax
comp=Z,22nm,1.3s
WMOK Wichita Mounta 87.59 46 P P 17 44 58.2 +0.9
baz=317
I48A Sherman Twp 87.60 31 P P 17 44 57.8 +0.8
baz=326
F51A Arnstein 87.61 28 P P 17 44 57.1 +0.1
baz=328
D54A Lac Fusel, La 87.70 25 P P 17 44 56.8 -0.7
baz=331
F52A Sundridge 87.94 28 P P 17 44 58.8 +0.2
baz=329
K46A Dorr 87.96 33 P P 17 44 59.1 +0.3
baz=324
FNO Franklin 87.98 45 P 17 45 00.8 +1.7
M44A Midewin, Midew 88.01 35 P P 17 44 59.2 +0.1
E53A Dumoine, Ponti 88.03 26 P P 17 44 59.3 +0.3
baz=330
HDIL Hopedale 88.09 37 P P 17 45 00.1 +0.7
HDIL Hopedale 88.09 37 P P 17 45 00.0 +0.6
baz=322
E54A Lac Daplat, Po 88.15 26 P P 17 44 59.6 0.0
baz=330
I49A Point Hope 88.16 31 P P 17 45 00.8 +1.0
I49A Point Hope 88.16 31 P P 17 45 00.9 +1.2
baz=326
D55A Sainte-Anne-du 88.21 25 P P 17 44 59.5 -0.4
baz=331
X34A Smith Ranch, M 88.22 46 P P 17 45 00.8 +0.5
X34A IAmb IAmb 17 45 02.8
comp=Z,35nm,1.2s
ALGO Algonquin Park 88.26 27 P P 17 44 59.8 -0.3
baz=330
J48A Bridge Port 88.30 32 P P 17 45 01.5 +1.1
J48A Bridge Port 88.30 32 P P 17 45 01.2 +0.8
baz=326
W35A Tecumseh 88.35 45 P P 17 45 01.9 +1.1
TUL1 Leonard 88.38 44 P P 17 45 01.7 +0.7
TUL1 IAmb IAmb 17 45 02.9
comp=Z,37nm,1.4s
TUL1 Leonard 88.38 44 P P 17 45 01.9 +0.9
baz=318
D56A ZEC Mazanza, M 88.42 24 P P 17 45 01.4 +0.5
baz=332
J49A Marlette 88.52 31 P P 17 45 02.6 +1.2
baz=326
TX31 Lajitas Ar. Si 88.52 53 P P 17 45 02.4 +0.6
TX32 Lajitas Array 88.52 53 P P 17 45 02.6 +0.8
TXAR Lajitas Array 88.52 53 P P 17 45 02.2 +0.3
comp=Z,6.1nm,0.8s,baz=282,slow=3.3,SNR=13
TXAR LR LR 18 19 59.6
comp=Z,106nm,21.1s,baz=0.0,slow=32
TXAR Lajitas Array 88.52 53 P P 17 45 02.1 +0.2
K48A Perry 88.57 32 P P 17 45 02.3 +0.6
baz=326
ABTX Abilene, Hawle 88.62 48 P P 17 45 03.2 +1.0
ABTX Abilene, Hawle 88.62 48 P P 17 45 02.9 +0.8
baz=316
P43A Skaggs, Pawnee 88.71 37 P P 17 45 02.9 +0.6
H52A Wyevale 88.71 29 P P 17 45 02.7 +0.4
baz=328
G54A Lake Saint Pet 88.73 27 P P 17 45 02.6 +0.2
baz=330
D57A Chemin Vers le 88.73 24 P P 17 45 03.0 +0.6
baz=332
LATQ La Tuque 88.75 23 P P 17 45 02.9 +0.5
LATQ La Tuque 88.75 23 P P 17 45 02.8 +0.4
baz=333
TBI Tubuai 88.75 121 eS S 17 55 48.5 +2.3
comp=Z,159nm,29.5s
TBI Tubuai 88.75 121 eLR LR 18 13 32.0
comp=Z,636nm,22.2s,baz=308
TBI Tubuai 88.75 121 eT T 19 22 48.6
comp=Z,84nm,0.4s
G53A Haliburton 88.77 28 P P 17 45 02.8 +0.2
baz=329
E56A St. Veronique 88.78 25 P P 17 45 03.0 +0.5
baz=332
L47A Sherwood 88.79 33 P P 17 45 03.2 +0.4
baz=325
O44A Mansfield 88.80 36 P P 17 45 03.4 +0.6
D58A Chemin du LacG 88.97 23 P P 17 45 04.0 +0.5
baz=333
I51A Listowel 88.99 30 P P 17 45 04.7 +1.1
baz=328
HHAR Hobbs 89.09 42 P P 17 45 04.4 +0.2
HHAR IAmb IAmb 17 45 05.8
comp=Z,21nm,1.3s
CCM Cathedral Cave 89.11 39 P P 17 45 04.8 +0.5
CCM Cathedral Cave 89.11 39 P P 17 45 04.8 +0.5
CCM pmax pmax
comp=Z,84nm,1.4s
CCM Cathedral Cave 89.11 39 P P 17 45 04.7 +0.5
baz=321
M47A Cromwell 89.11 34 P P 17 45 05.0 +0.8
baz=325
L48A N Adams 89.15 33 P P 17 45 05.2 +0.8
baz=325
SLM Saint Louis 89.15 38 P P 17 45 05.2 +0.7
SLM Saint Louis 89.15 38 P P 17 45 05.2 +0.7
SLM pmax pmax
comp=Z,118nm,1.7s
E57A Chemin Saint G 89.18 24 P P 17 45 05.1 +0.6
baz=332
AAM Ann Arbor 89.18 32 P P 17 45 05.3 +0.8
AAM Ann Arbor 89.18 32 P P 17 45 05.3 +0.8
AAM pmax pmax
comp=Z,110nm,1.8s
K50A Casco 89.21 31 P P 17 45 05.5 +0.8
K50A Casco 89.21 31 P P 17 45 05.2 +0.5
baz=326
TRQ Mont Tremblant 89.22 25 P P 17 45 05.4 +0.6
SFIN Lafayette 89.25 35 P P 17 45 05.5 +0.6
SFIN Lafayette 89.25 35 P P 17 45 05.5 +0.6
baz=324
H53A Bobcaygeon 89.26 28 P P 17 45 05.2 +0.3
baz=329
MGMO Mountain Grove 89.29 41 P P 17 45 05.4 +0.2
MGMO IAmb IAmb 17 45 06.6
comp=Z,33nm,1.2s
L49A Milan 89.29 32 P P 17 45 05.9 +0.8
baz=326
G55A Calabogie 89.33 26 P P 17 45 04.8 -0.4
baz=330
D59A Saint-Raymond 89.37 23 P P 17 45 05.5 +0.2
baz=334
PLVO Plevna 89.40 27 P P 17 45 06.1 +0.6
M48A Edgerton 89.40 33 P P 17 45 05.8 +0.1
M48A Edgerton 89.40 33 P P 17 45 05.9 +0.3
baz=325
N47A Urbana 89.47 34 P P 17 45 06.3 +0.4
N47A Urbana 89.47 34 P P 17 45 06.3 +0.4
baz=324
E58A La Victoria 89.49 24 P P 17 45 06.6 +0.7
baz=333
U40A Yellville 89.60 42 P P 17 45 06.8 +0.2
U40A Yellville 89.60 42 P P 17 45 06.9 +0.2
baz=320
J52A Paris 89.68 30 P P 17 45 07.8 +1.0
baz=328
D61A St Aubert, Com 89.68 22 P P 17 45 07.6 +0.8
baz=335
K51A Iona Station 89.71 31 P P 17 45 08.2 +1.2
baz=327
D60A Saint Jean D'O 89.72 22 P P 17 45 08.0 +1.1
baz=335
M49A Liberty Center 89.73 33 P P 17 45 07.9 +0.8
baz=326
L50A Kingsville 89.75 32 P P 17 45 08.0 +0.7
baz=326
N48A Decatur 89.78 34 P P 17 45 07.8 +0.4
baz=325
H55A Tweed 89.78 27 P P 17 45 07.7 +0.4
baz=330
P46A Rosedale 89.81 36 P P 17 45 07.9 +0.4
P46A IAmb IAmb 17 45 24.7
comp=Z,20nm,0.8s
I55A Frankford 89.89 28 P P 17 45 07.8 -0.1
baz=330
K52A Tillsonburg 89.97 30 P P 17 45 08.9 +0.7
baz=328
W39A Magazine 89.99 43 P P 17 45 08.8 +0.3
W39A IAmb IAmb 17 45 09.6
comp=Z,27nm,1.4s
W39A Magazine 89.99 43 P P 17 45 09.0 +0.5
baz=320
G57A Newington 90.06 25 P P 17 45 09.6 +1.0
baz=332
E60A Ste Agathe de 90.06 23 P P 17 45 09.0 +0.5
baz=334
H56A Elgin 90.07 26 P P 17 45 09.2 +0.5
baz=331
JCT Junction City 90.08 50 P P 17 45 09.3 +0.3
JCT IAmb IAmb 17 47 57.4
comp=Z,10nm,0.6s
JCT Junction City 90.08 50 P P 17 45 09.3 +0.3
JCT pmax pmax
comp=Z,10.0nm,0.6s
JCT Junction City 90.08 50 P P 17 45 09.5 +0.5
baz=316
N49A Columbus Grove 90.09 33 P P 17 45 09.8 +0.9
N49A Columbus Grove 90.09 33 P P 17 45 09.5 +0.7
baz=326
OLIL Olney 90.10 37 P P 17 45 09.8 +0.9
D62A Allapoint, All 90.11 21 P P 17 45 09.4 +0.6
baz=336
F59A Saint Guilaume 90.11 24 P P 17 45 10.1 +1.3
baz=333
O48A Farmland 90.22 34 P P 17 45 09.8 +0.4
baz=325
F60A Warwick 90.27 23 P P 17 45 10.0 +0.4
baz=334
G58A Ormstown 90.33 25 P P 17 45 10.4 +0.6
baz=332
WHTX Lake Whitney, 90.35 47 P P 17 45 10.5 +0.3
WHTX Lake Whitney, 90.35 47 P P 17 45 11.3 +1.0
baz=318
S44A Carbondale 90.37 38 P P 17 45 10.8 +0.6
D63A Stockholm 90.41 20 P P 17 45 10.9 +0.7
baz=337
H57A Richville 90.48 26 P P 17 45 10.8 +0.2
baz=332
PBMO Poplar Bluff 90.51 40 P P 17 45 11.6 +0.7
MIAR Mount Ida 90.60 43 P P 17 45 11.9 +0.6
MIAR Mount Ida 90.60 43 P P 17 45 11.9 +0.6
MIAR pmax pmax
comp=Z,75nm,1.6s
MIAR Mount Ida 90.60 43 P P 17 45 12.0 +0.6
baz=320
M51A Elyria 90.60 32 P P 17 45 11.5 +0.3
baz=327
LONY Lake Ozonia 90.62 25 P P 17 45 12.0 +0.7
baz=332
O49A Covington 90.63 34 P P 17 45 12.1 +0.7
O49A Covington 90.63 34 P P 17 45 11.9 +0.5
baz=325
N50A Nevada 90.66 33 P P 17 45 12.2 +0.7
baz=326
J55A Hilton 90.66 28 P P 17 45 11.9 +0.4
baz=330
G59A Clarenceville 90.67 24 P P 17 45 12.0 +0.6
baz=333
LCAR Lake Charles 90.69 41 P P 17 45 12.2 +0.4
WHAR Wooly Hollow 90.71 42 P P 17 45 12.1 +0.2
P48A Milroy 90.74 35 P P 17 45 12.4 +0.5
baz=325
M52A Chesterland 90.76 31 P P 17 45 12.8 +0.9
baz=327
W41B Gary Mavity, V 90.82 42 P P 17 45 12.8 +0.4
W41B Gary Mavity, V 90.82 42 P P 17 45 12.8 +0.4
baz=320
ERPA Erie 90.82 30 P P 17 45 12.9 +0.6
ERPA Erie 90.82 30 P P 17 45 13.3 +1.1
baz=328
I57A Carthage 90.85 26 P P 17 45 12.8 +0.4
baz=331
L53A Girard 90.85 30 P P 17 45 13.4 +1.0
baz=328
N51A Ashland 90.86 32 P P 17 45 12.9 +0.5
baz=327
E63A Oxbow 90.89 21 P P 17 45 12.9 +0.5
baz=336
H59A Cadyville 90.89 25 P P 17 45 12.9 +0.4
baz=333
K54A Basiliko Farm, 90.90 29 P P 17 45 13.4 +0.8
baz=329
G60A Masonville 90.93 24 P P 17 45 13.1 +0.5
baz=334
H58A Gabriels 90.94 25 P P 17 45 13.3 +0.6
baz=332
O50A Cable 90.97 33 P P 17 45 13.5 +0.5
baz=326
L54A Sinclairville 90.98 30 P P 17 45 13.9 +0.9
baz=329
P49A Miami Univ. Ec 91.00 34 P P 17 45 13.6 +0.5
baz=325
J56A Wolcott 91.00 28 P P 17 45 13.3 +0.2
baz=330
G61A St-Isidore-de- 91.01 23 P P 17 45 13.3 +0.2
baz=334
K55A Perry 91.03 29 P P 17 45 14.1 +0.8
baz=330
Q48A North Vernon 91.04 35 P P 17 45 13.7 +0.4
baz=324
X40A Basin Creek Fa 91.04 43 P P 17 45 13.8 +0.4
X40A Basin Creek Fa 91.04 43 P P 17 45 14.1 +0.7
baz=320
E64A Bridgewater 91.05 20 P P 17 45 13.7 +0.5
baz=337
M53A WI Miller and 91.12 31 P P 17 45 14.6 +0.9
baz=328
435B Jarrell 91.16 48 P P 17 45 14.7 +0.7
baz=318
ACSO Alum Creek Sta 91.18 33 P P 17 45 14.2 +0.4
ACSO Alum Creek Sta 91.18 33 P P 17 45 14.3 +0.4
baz=326
J57A Williamstown 91.20 27 P P 17 45 14.6 +0.7
J57A Williamstown 91.20 27 P P 17 45 14.6 +0.7
baz=331
I58A Old Forge 91.31 26 P P 17 45 15.7 +1.2
baz=332
K56A Middlesex 91.34 28 P P 17 45 15.1 +0.5
baz=330
P50A Jamestown 91.34 34 P P 17 45 15.2 +0.5
baz=326
WCI Wyandotte Cave 91.35 36 P P 17 45 15.6 +0.9
baz=324
Q49A Aurora 91.35 35 P P 17 45 15.5 +0.8
baz=325
F63A Nahmakanta, Br 91.35 21 P P 17 45 15.6 +1.0
baz=336
L55A Hinsdale 91.36 29 P P 17 45 15.5 +0.7
baz=329
G62A West of Eustis 91.38 23 P P 17 45 15.7 +1.0
baz=335
O51A Pataskala 91.41 33 P P 17 45 15.6 +0.6
baz=326
F64A Sherman 91.42 21 P P 17 45 16.1 +1.2
baz=336
M54A Oil Creek Stat 91.47 30 P P 17 45 16.1 +0.8
baz=328
J58A Remsen 91.49 26 P P 17 45 15.9 +0.6
baz=332
H61A Lyndonville 91.56 24 P P 17 45 16.5 +0.8
baz=334
I59A Olmsteadville 91.59 25 P P 17 45 16.7 +0.9
baz=332
N53A Lisbon 91.59 31 P P 17 45 16.6 +0.8
baz=328
K57A Scipio Center 91.60 28 P P 17 45 16.4 +0.5
baz=331
J59A Piesco 91.67 26 P P 17 45 17.1 +0.9
baz=332
PKME Peaks-Kenny Pk 91.70 22 P P 17 45 17.5 +1.3
baz=336
L56A Greenwood 91.73 29 P P 17 45 17.2 +0.7
baz=330
I60A Shoreham 91.74 25 P P 17 45 17.4 +1.0
baz=333
G63A Kingsbury 91.74 22 P P 17 45 17.7 +1.2
baz=336
O52A Adamsville 91.76 32 P P 17 45 17.2 +0.5
baz=327
H62A Milan 91.77 23 P P 17 45 17.7 +1.2
baz=334
P51A Williamsport 91.77 33 P P 17 45 17.5 +0.8
baz=326
N54A Moraine State 91.80 31 P P 17 45 17.5 +0.7
baz=328
R49A Shelbyville 91.81 35 P P 17 45 18.0 +1.1
baz=325
LBNH Lisbon 91.83 24 P P 17 45 18.0 +1.2
baz=334
M55A Ridgway 91.85 30 P P 17 45 18.0 +0.9
baz=329
G64A Maxfield 91.86 21 P P 17 45 17.9 +0.9
baz=336
833A Chaparral WMA, 91.87 51 P P 17 45 18.0 +0.6
baz=317
K58A Earlville 91.89 27 P P 17 45 17.9 +0.7
baz=331
Q50A Georgetown 91.89 34 P P 17 45 17.9 +0.6
baz=326
O53A New Philadelph 91.91 32 P P 17 45 18.0 +0.7
baz=327
T47A Sharon Grove 91.96 38 P P 17 45 17.7 +0.1
Z41A Richland Creek 91.99 43 P P 17 45 18.2 +0.4
baz=320
I61A Oroboro, Fairl 92.01 24 P P 17 45 18.0 +0.3
baz=334
Q51A Peebles 92.02 34 P P 17 45 17.9 +0.1
Q51A Peebles 92.02 34 P P 17 45 18.8 +0.9
baz=326
H63A New Sharon 92.03 22 P P 17 45 18.4 +0.7
baz=335
P52A Corning 92.04 33 P P 17 45 18.3 +0.4
baz=327
X43A Marvell 92.04 41 P P 17 45 18.3 +0.3
baz=321
M56A Emporium 92.06 29 P P 17 45 18.5 +0.5
baz=330
L57A Andrews Acres 92.12 28 P P 17 45 18.8 +0.5
baz=330
K59A Cooperstown 92.16 26 P P 17 45 18.6 +0.2
baz=332
S49A Springfield 92.17 36 P P 17 45 19.2 +0.6
baz=325
R50A Paris 92.20 35 P P 17 45 19.3 +0.6
baz=325
J60A Lant Hill Farm 92.23 25 P P 17 45 19.3 +0.6
baz=333
G65A Princeton 92.25 21 P P 17 45 19.5 +0.8
baz=337
BINY Binghamton 92.26 27 P P 17 45 19.8 +0.9
baz=331
WVT Waverly 92.30 38 P P 17 45 19.7 +0.5
baz=323
I62A Tamworth 92.34 24 P P 17 45 19.8 +0.6
baz=334
I63A Otisfield 92.42 23 P P 17 45 20.6 +1.1
baz=335
J61A Chester 92.42 25 P P 17 45 20.3 +0.6
baz=334
L58A Harry Jones Me 92.44 27 P P 17 45 20.3 +0.6
baz=331
P53A Whipple 92.47 32 P P 17 45 20.1 +0.2
baz=327
R51A Hillsboro 92.52 34 P P 17 45 21.4 +1.2
baz=326
Q52A Bidwell 92.54 33 P P 17 45 21.4 +1.2
baz=327
M57A Sunshine Farm, 92.59 29 P P 17 45 21.6 +1.2
baz=330
L59A Walton 92.60 27 P P 17 45 21.5 +1.0
baz=332
T49A Edmonton 92.61 36 P P 17 45 21.4 +0.8
baz=325
S50A Richmond 92.66 35 P P 17 45 21.6 +0.8
baz=325
H66A Whiting 92.70 21 P P 17 45 21.6 +0.8
baz=337
HKT Hockley 92.80 48 eP P 17 45 22.6 +1.1
HKT pmax pmax
comp=Z,14nm,1.2s
OXF Oxford 92.80 40 P P 17 45 22.7 +1.2
baz=322
M58A Price's Panora 92.81 28 P P 17 45 22.6 +1.1
baz=331
N57A Milroy 92.93 29 P P 17 45 22.5 +0.5
baz=330
Q53A Leroy 92.94 33 P P 17 45 22.9 +0.8
baz=327
O56A Blue Knob Stat 92.96 30 P P 17 45 22.6 +0.4
baz=329
J63A Strafford 92.96 24 P P 17 45 22.8 +0.8
baz=334
MCWV Mont Chateau 92.97 31 P P 17 45 22.7 +0.5
baz=328

U49A	Red Boiling Sp	92.97	37	P	**P**	17 45 23.0	+0.7
	baz=324						
T50A	Nancy	93.00	36	P	**P**	17 45 22.5	+0.1
	baz=325						
L60A	Shokan	93.07	26	P	**P**	17 45 23.6	+1.0
	baz=332						
P55A	Reedsville	93.10	31	P	**P**	17 45 24.1	+1.2
	baz=328						
V48A	Smith Brothers	93.10	38	P	**P**	17 45 23.1	+0.2
V48A				IAmb	IAmb	17 45 39.7	
	comp=Z,11nm,1.0s						
L61A	Hillsdale 1, H	93.12	26	P	**P**	17 45 23.8	+1.0
	baz=333						
Q54A	Coxs Mills	93.13	32	P	**P**	17 45 24.1	+1.2
	baz=328						
R53A	Hurricane	93.20	33	P	**P**	17 45 23.4	0.0
	baz=327						
S52A	Salyersville	93.25	34	P	**P**	17 45 24.2	+0.7
	baz=326						
K63A	Dunstable	93.35	24	P	**P**	17 45 24.7	+0.9
	baz=334						
Q55A	Buckhannon	93.43	32	P	**P**	17 45 25.5	+1.1
	baz=328						
T51A	Gray	93.45	35	P	**P**	17 45 25.4	+0.9
	baz=326						
N59A	State Game Lan	93.46	28	P	**P**	17 45 25.5	+1.1
	baz=331						
U50A	Jamestown	93.49	36	P	**P**	17 45 25.9	+1.2
	baz=325						
P56A	Dayton Farm, R	93.50	31	P	**P**	17 45 25.3	+0.7
	baz=329						
Q56A	Snyder Ridge,	93.76	31	P	**P**	17 45 26.6	+0.8
	baz=329						
ZAIG	Zacatecas	93.82	57	P	**P**	17 45 27.8	+1.0
ZAIG				IAmb	IAmb	17 45 29.6	
	comp=Z,26nm,1.4s						
W49A	Belvidere	93.87	38	P	**P**	17 45 27.1	+0.6
	baz=324						
U51A	La Follette	93.90	36	P	**P**	17 45 26.8	+0.2
	baz=326						
V50A	Pikevile	93.98	37	P	**P**	17 45 27.4	+0.5
	baz=325						
TZTN	Tazewell	93.98	35	P	**P**	17 45 27.7	+0.8
	baz=326						
R55A	Marlinton	94.02	32	P	**P**	17 45 28.0	+0.8
	baz=328						
PAL	Palisades	94.05	27	P	**P**	17 45 27.8	+0.7
	baz=332						
KEST	Kesra	94.14	323	LR	LR	18 32 47.2	
	comp=Z,867nm,18.2s,baz=320,slow=39						
U52A	Thorn Hill	94.19	35	P	**P**	17 45 28.8	+0.9
	baz=326						
P60A	Greenville	94.47	28	P	**P**	17 45 29.8	+0.7
	baz=331						
V52A	Sevierville	94.54	36	P	**P**	17 45 29.5	0.0
	baz=326						
T55A	Pulaski	94.72	33	P	**P**	17 45 30.6	+0.2
	baz=328						
S57A	Dark Hollow, R	94.95	32	P	**P**	17 45 30.7	-0.7
	baz=329						
V53A	Saluda	95.04	35	P	**P**	17 45 31.5	-0.4
	baz=326						
T56A	Rocky Mt	95.12	33	P	**P**	17 45 31.8	-0.4
	baz=328						
Q61A	Milford	95.40	29	P	**P**	17 45 32.8	-0.6
	baz=331						
X52A	Dahlonega	95.42	37	P	**P**	17 45 33.9	+0.3
	baz=326						
Z50A	Ashland	95.54	39	P	**P**	17 45 34.2	+0.1
Z50A	Ashland	95.54	39	P	**P**	17 45 35.2	+1.0
	baz=324						
X53A	Estanollee	95.78	36	P	**P**	17 45 35.8	+0.6
	baz=326						
U57A	Blanch	95.92	33	P	**P**	17 45 35.7	0.0
	baz=329						
ESDC	Sonseca Array	96.12	334	P	**P**	17 45 37.6	+0.9
	comp=Z,0.7nm,0.6s,baz=23,slow=4.8,SNR=3.8						
ESDC				LR	LR	18 34 09.5	
	comp=Z,618nm,18.1s,baz=0.0,slow=39						
Y54A	Tignall	96.59	36	P	**P**	17 45 40.2	+1.3
	baz=326						
NHSC	New Hope	98.37	35	P	Pdif	17 45 47.2	+0.3
	baz=328						
TORD	Torodi Ar. Bea	116.67	316	PKP	**PKPdf**	17 50 52.9	-0.5
	comp=Z,1.8nm,0.9s,baz=346,slow=1.9,SNR=7.1						
TORD				PKKPbc	**PKKPab**	18 01 23.5	-3.3
	comp=Z,0.7nm,0.7s,baz=189,slow=2.9,SNR=4.8						
MAW	Mawson	121.36	206	PKP	**PKPdf**	17 51 00.7	0.0
	comp=Z,4.5nm,1.0s,baz=18,slow=3.2,SNR=3.2						
SDV	Santo Domingo	123.58	40		**PKPdf**	17 51 06.4	-0.6
ROSC	El Rosal	124.98	47	PKP	**PKiKP**	17 51 11.2	+0.9
	comp=Z,14nm,0.3s,baz=132,slow=23,SNR=4.5						
LBTB	Lobatse	125.55	265		**PKiKP**	17 51 10.9	+0.2
LBTB	Lobatse	125.55	265	PKIKP	**PKiKP**	17 51 10.9	+0.2
DBIC	Dimbokro	125.56	319	PKP	**PKPdf**	17 51 10.8	+0.2
	comp=Z,2.9nm,0.8s,baz=222,slow=3.0,SNR=4.4						
TIC	Toumodi	125.67	319	ePKIKP	**PKPdf**	17 51 10.7	-0.1
KIC	Kosan Boka	125.76	318	ePKIKP	**PKPdf**	17 51 10.5	-0.5
	comp=Z,16nm,1.1s						
LIC	Lamto	126.03	318	ePKIKP	**PKPdf**	17 51 10.7	-0.8
	comp=Z,20nm,1.2s						
BOSA	Boshof	127.59	261	PKP	**PKPdf**	17 51 14.5	+0.3
	comp=Z,2.7nm,0.9s,baz=85,slow=2.2,SNR=6.7						
QSPA	South Pole Qui	128.44	180		**PKPdf**	17 51 13.8	-0.7
TSUM	Tsumeb	128.70	276		**PKiKP**	17 51 17.4	+0.2
SNAA	Sanae	142.55	197	PKPdf	**PKPdf**	17 51 35.6	-4.9
SNAA	Sanae	142.55	197		**PKPdf**	17 51 35.1	-5.5
SNAA	Sanae	142.55	197	PKHKP	**PKPdf**	17 51 35.1	-5.5
VNA2	Neumayer--Watz	144.12	196	PKPdf	**PKPab**	17 51 41.3	+0.3
	baz=121,slow=2.8						
VNA3	Neumayer Olymp	144.36	195	PKPdf	**PKPab**	17 51 42.1	+0.2
VNA1	Neumayer--Stat	144.52	196	PKPdf	PKPbc	17 51 42.9	+0.3
LPAZ	La Paz	145.20	59	PKPbc	**PKPbc**	17 51 47.3	+0.1
	comp=Z,9.0nm,0.6s,baz=346,slow=4.4,SNR=26						
MNMC	Minye Minye	146.16	64		**PKPab**	17 51 50.8	+0.4
PB11	IPOC Station P	146.53	65		**PKPbc**	17 51 50.6	0.0
GO01	Chusmiza	146.80	64		**PKPbc**	17 51 51.6	-0.3
RCBR	Riachuelo	147.24	357		**PKPdf**	17 51 51.0	+0.6
RCBR	Riachuelo	147.24	357	PKIKP	**PKPdf**	17 51 51.0	+0.6
PB01	IPOC Station P	147.48	66		**PKPbc**	17 51 49.5	-1.1
GO03	Copiap	150.70	78		**PKPbc**	17 52 01.4	+0.2
GO04	Tololo Observa	151.49	83		**PKPbc**	17 52 02.9	-0.2
GO05	Huala	152.42	93		**PKPbc**	17 52 04.8	-0.1
ROC1	El Roble	152.45	88		**PKPbc**	17 52 05.0	-0.2
PEL	Peldehue	152.77	88		**PKPbc**	17 52 05.9	+0.2
PEL	Peldehue	152.77	88	PKIKP	**PKPbc**	17 52 05.9	+0.2
PLCA	Paso Flores	154.69	105	PKP	**PKPdf**	17 52 02.7	+1.6
	comp=Z,2.8nm,0.9s,baz=68,slow=5.6,SNR=2.5						
PLCA				PKPbc	**PKiKP**	17 52 10.4	+0.7
	comp=Z,2.2nm,0.7s,baz=228,slow=2.8,SNR=3.4						
BDFB	Brasilia	155.29	24	PKP	**PKPdf**	17 52 03.9	+1.2
	comp=Z,2.7nm,0.6s,baz=143,slow=11,SNR=2.4						
CPUP	Villa Florida	159.38	59		**PKPab**	17 52 44.8	-0.3
CPUP	Villa Florida	159.38	59	PKP2	**PKPab**	17 52 44.8	-0.3

NNC 05 17:45:14.2±0.6, 42.89N×77.07E, h0km, mpv1.8, Error ellipse: s-maj=3.6km s-min=3.2km az=147.0

SOME 05 17:45:14.5, 42.92N×77.03E, h0km, 1C-1D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**0.14**	**332**	eP	Pg	17 45 17.9	+0.8
	3.2nm,0.1s						
TNSS				eS	Sg	17 45 20.4	+1.6
	13nm,0.3s						
TNSS	**Tian-Shan**	**0.14**	**332**	P	Pg	17 45 17.9	+0.8
	1.8nm,0.1s						
TNSS				S	Sg	17 45 20.4	+1.6
	13nm,0.3s						
MDOK	**Medeo**	**0.25**	**3**	eP	Pg	17 45 19.6	+0.4
	1.4nm,0.2s						
MDOK				eS	Sg	17 45 23.4	+0.9
	11nm,0.3s						
MDOK	**Medeo**	**0.25**	**3**	⇑P	Pg	17 45 19.8	+0.6
	0.4nm,0.5s						
MDOK				⇓S	Sg	17 45 23.9	+1.5
	0.6nm,0.2s						
MDOK	**Medeo**	**0.25**	**3**	Pg	Pg	17 45 19.6	+0.4
	1.0nm,0.1s						
MDOK				Lg	Lg	17 45 23.4	
	7.8nm,0.5s						
KOTS	**Kotyrbulak**	**0.32**	**10**	eP	Pg	17 45 21.3	+0.6
	3.4nm,0.3s						
KOTS				eS	Sg	17 45 26.2	+1.3
	26nm,0.3s						
KOTS	**Kotyrbulak**	**0.32**	**10**	P	Pg	17 45 21.3	+0.6
	2.6nm,0.2s						
KOTS				S	Sg	17 45 26.2	+1.3
	22nm,0.3s						

KRNET 05 17:45:17.6±0.1, 41.68N×75.92E, h35km, mb1.4, 6C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**0.25**	**167**	⇑iP	Pn	17 45 26.5	+1.2
	baz=72						
NRN				⇑iS	Sn	17 45 33.7	+3.1
	baz=72						
ULHL	**Ulahol**	**0.61**	**23**	⇑iP	Pn	17 45 30.6	+0.5
	baz=23						
ULHL				⇑iS	Sn	17 45 40.9	+2.0
	baz=23						
KZA	**Kyzart**	**0.64**	**309**	⇑iP	Pn	17 45 30.6	0.0
	baz=9.0						
KZA				⇑iS	Sn	17 45 41.8	+2.0
	baz=9.0						

ATH 05 17:55:37.4, 38.22N×20.43E, h15km, ML3.5/5, Error ellipse: s-maj=1.9km s-min=0.9km az=268.0

THE 05 17:55:37.6, 38.21N×20.43E, h14km, ML3.6/8, Error ellipse: s-maj=0.9km s-min=0.4km az=269.0

IDC 05 17:55:45.9±6.7, 38.15N×20.80E, h82km±34km, mb3.3/3, mb1 3.4/5, mb1mx3.0/46, mbtmp3.6/5, Error ellipse: s-maj=104.5km s-min=24.2km az=62.0

ISC 05 17:55:37.2±0.8, 38.21N±0.02×20.43E±0.04, h17km±4km, n43, σ0§41/66, mb3.6/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	**Lixouri, Cepha**	**0.01**	**154**	P	**Pg**	**17 55 40.2**	**+0.1**
LXR1				S	**Sg**	**17 55 41.9**	**-0.1**
ARGA	**Argostoli. Kep**	**0.05**	**130**	P	**Pg**	**17 55 40.3**	**+0.1**
ARGA				S	**Sg**	**17 55 41.8**	**-0.4**
CHV1	**Chavriata, Kef**	**0.05**	**241**	P	**Pg**	**17 55 40.3**	**+0.1**
CHV1				S	**Sg**	**17 55 41.9**	**-0.3**
ARG2	**Argostoli**	**0.05**	**124**	P	**Pg**	**17 55 40.3**	**0.0**
ARG2				S	**Sg**	**17 55 42.1**	**-0.2**
KEF4	**Livadi, Kephal**	**0.05**	**351**	P	**Pg**	**17 55 40.3**	**0.0**
KEF4				S	**Sg**	**17 55 42.1**	**-0.3**
KEF2	**Argostoli. Kep**	**0.06**	**135**	P	**Pg**	**17 55 40.5**	**+0.2**
KEF2				S	**Sg**	**17 55 41.9**	**-0.5**
KEF3	**Kipouria, Keph**	**0.07**	**267**	P	**Pg**	**17 55 40.3**	**-0.1**
KEF3				S	**Sg**	**17 55 42.1**	**-0.4**
KEF1	**Kardakata, Kep**	**0.08**	**22**	P	**Pg**	**17 55 40.3**	**-0.2**
KEF1				S	**Sg**	**17 55 42.0**	**-0.7**
VLS	**Valsamata**	**0.13**	**103**	P	**Pg**	**17 55 41.0**	**0.0**
VLS				S	**Sb**	**17 55 43.7**	**-0.2**
	65µm,0.3s						
VLS	**Valsamata**	**0.13**	**103**	P	**Pb**	**17 55 41.1**	**-0.1**
VLS				S	**Sg**	**17 55 43.3**	**-0.2**
VLS				AML	AML	17 55 43.9	
VLS				AML	AML	17 55 44.2	
VSK1	**VASILIKIADES**	**0.23**	**27**	P	**Pg**	**17 55 42.6**	**+0.1**
VSK1				S	**Sg**	**17 55 46.3**	**+0.3**
	22µm,0.3s						
FSK	**Fiskardo**	**0.27**	**22**	P	**Pg**	**17 55 43.3**	**+0.1**
FSK				S	**Sg**	**17 55 47.4**	**+0.2**
	11µm,0.4s						
FSK	**Fiskardo**	**0.27**	**22**	P	**Pg**	**17 55 43.3**	**+0.1**
FSK				S	**Sg**	**17 55 46.7**	**-0.6**
FSK				AML	AML	17 55 48.4	
	comp=N,21497µm,0.4s						
FSK				AML	AML	17 55 48.7	
	comp=E,14084µm,0.1s						
VLMS	**Volimes, Zakyn**	**0.38**	**151**	P	**Pb**	**17 55 45.7**	**+0.2**
VLMS				S	**Sb**	**17 55 50.7**	**-0.3**
VLMS				AML	AML	17 55 52.4	
	comp=E,98793µm,0.3s						
VLMS				AML	AML	17 55 53.0	
	comp=N,75602µm,0.3s						
EVGI	**Lefkada island**	**0.45**	**23**	P	**Pg**	**17 55 46.2**	**-0.1**
EVGI				S	**Sb**	**17 55 53.4**	**+0.2**
EVGI	**Lefkada island**	**0.45**	**23**	P	**Pg**	**17 55 46.2**	**-0.1**
EVGI				S	**Sb**	**17 55 52.9**	**-0.3**
MGNA	**Meganis**	**0.53**	**32**	P	**Pg**	**17 55 47.6**	**-0.2**
MGNA				S	**Sg**	**17 55 54.7**	**-0.2**
ZAK2	**Zakynthos**	**0.56**	**139**	P	**Pb**	**17 55 48.6**	**+0.1**
ZAK2				S	**Sb**	**17 55 56.5**	**+0.3**
	comp=N,20µm,0.3s						
LKD2	**Lefkada island**	**0.61**	**17**	P	**Pg**	**17 55 48.8**	**-0.5**
LKD2	**Lefkada island**	**0.61**	**17**	P	**Pg**	**17 55 48.7**	**-0.5**
LKD2				S	**Sb**	**17 55 57.6**	**-0.2**
LKD2				AML	AML	17 56 05.3	
	comp=E,2288µm,0.4s						
LKD2				AML	AML	17 56 09.6	
	comp=N,2440µm,0.3s						
AST1	**Astakos**	**0.61**	**57**	P	**Pb**	**17 55 49.4**	**-0.1**
AST1				S	**Sb**	**17 55 59.2**	**+1.3**
	comp=N,4µm,0.3s						
KRI1	**kERI**	**0.62**	**151**	P	**Pb**	**17 55 49.6**	**-0.1**
KRI1				S	**Sb**	**17 55 58.5**	**+0.4**
	comp=N,17µm,0.3s						
PDO	**Prodromos**	**0.71**	**56**	P	**Pg**	**17 55 50.9**	**-0.2**
PDO				S	**Sb**	**17 56 01.2**	**+0.6**
	comp=N,3µm,0.8s						
PDO	**Prodromos**	**0.71**	**56**	P	**Pb**	**17 55 51.1**	**0.0**
PDO				S	**Sn**	**17 56 01.8**	**-1.3**
PDO				AML	AML	17 56 05.3	
	comp=N,4516µm,0.3s						
PDO				AML	AML	17 56 10.1	
	comp=E,4324µm,0.6s						
RLS	**Riolos of Patr**	**0.83**	**100**	P	**Pg**	**17 55 53.2**	**-0.2**
RLS	**Riolos of Patr**	**0.83**	**100**	P	**Pg**	**17 55 53.2**	**-0.2**
PVO	**Paravola**	**0.95**	**64**	P	**Pg**	**17 55 55.7**	**0.0**
PVO				S	**Sn**	**17 56 09.3**	**+0.3**
	comp=E,2µm,0.7s						
PVO	**Paravola**	**0.95**	**64**	P	**Pg**	**17 55 55.7**	**0.0**
DRO	**Drossia**	**1.04**	**104**	P	**Pn**	**17 55 57.0**	**-0.1**
DRO	**Drossia**	**1.04**	**104**	P	**Pn**	**17 55 57.0**	**-0.1**
EFP	**Efpalio**	**1.18**	**79**	P	**Pn**	**17 55 59.0**	**0.0**
AMT	**Artemida-Makis**	**1.21**	**123**	P	**Pg**	**17 56 00.9**	**+0.2**
LAKA	**Lakka**	**1.22**	**88**	P	**Pb**	**17 55 59.8**	**0.0**
ANX	**Ano Chora**	**1.23**	**71**	P	**Pg**	**17 56 00.7**	**-0.3**
KLV	**Kalavryta, Ach**	**1.36**	**96**	P	**Pb**	**17 56 02.6**	**+0.3**
ITM	**Ithomi**	**1.57**	**130**	P	**Pg**	**17 56 06.5**	**-0.8**
AGG	**Agios Georgios**	**1.69**	**61**	P	**Pg**	**17 56 09.3**	**-0.5**
VLX	**Vlachokerasia**	**1.75**	**118**	P	**Pb**	**17 56 09.7**	**+0.6**
IDI	**Anoyia**	**4.61**	**128**	P	Pn	17 56 51.3	+5.0
	comp=E,0.2nm,0.3s,baz=133,slow=12,SNR=1.4						
IDI				S	**Sn**	**17 57 39.0**	**-0.5**
	comp=E,0.6nm,0.3s,baz=205,slow=20,SNR=1.6						
MLR	**Muntele Rosu**	**8.36**	**28**	P	Pn	17 57 43.5	+5.8
	comp=E,0.1nm,0.3s,baz=220,slow=8.6,SNR=3.1						
FINES	**FINESS Array B**	**23.53**	**7**	P	**P**	**18 00 47.5**	**+1.3**
	comp=E,0.9nm,0.7s,baz=172,slow=11,SNR=1.9						
MKAR	**Makanchi Array**	**45.34**	**58**	P	**P**	**18 03 54.2**	**-0.2**
	comp=E,0.4nm,0.6s,baz=280,slow=7.2,SNR=9.8						
ZALV	**Zalesovo Beam**	**45.72**	**48**	P	**P**	**18 03 57.3**	**+0.1**
	comp=E,0.8nm,0.4s,baz=272,slow=9.9,SNR=4.8						

IDC 05 18:02:42.3±1.9, 8.69S×123.87E, h0km, mb3.7/1, mb1 3.5/4, mb1mx3.3/35, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=124.4km s-min=28.6km az=63.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.51**	**170**	Pn	Pn	18 05 01.0	+0.4
	0.2nm,0.3s,baz=357,slow=13,SNR=9.1						
FITZ				Sn	Sn	18 06 37.3	-11
	0.6nm,0.3s,baz=247,slow=19,SNR=8.6						
WRA	**Warramunga Arr**	**15.09**	**139**	Pn	Pn	18 06 17.6	+0.6
	0.1nm,0.3s,baz=315,slow=12,SNR=9.9						
WRA				Sn	Sn	18 08 51.8	-13
	0.2nm,0.3s,baz=307,slow=21,SNR=2.2						
ASAR	**Alice Springs**	**17.72**	**148**	P	Pn	18 06 49.9	-0.7
	0.1nm,0.3s,baz=321,slow=11,SNR=5.6						
ASAR				S	Sn	18 09 54.6	-14
	0.0nm,0.3s,baz=312,slow=21,SNR=1.8						
MKAR	**Makanchi Array**	**66.48**	**330**	P	P	18 13 33.7	0.0
	0.8nm,0.9s,baz=116,slow=6.6,SNR=1.9						

BJI 05 18:04:44.6±0.0, 25.58N×125.05E, h208km, mB4.8/28, mb4.5/43

NEIC 05 18:04:51.2±1.9, 26.02N±0.07×124.48E±0.08, h204km±6km, mb4.4/48, Error ellipse: s-maj=11.8km s-min=9.0km az=137.0

IDC 05 18:04:52.0±0.6, 26.14N×124.71E, h210km±5km, mb3.7/18, mb1 3.8/19, mb1mx3.6/45, mbtmp4.2/19, Error ellipse: s-maj=11.2km s-min=9.2km az=49.0

MOS 05 18:04:52.7±0.8, 26.09N×124.49E, h233km, mb4.5/8, Error ellipse: s-maj=10.0km s-min=6.1km az=119.6

JMA 05 18:04:52.1±0.3, 26.18N×124.38E, h175km, M4.5

ISC 05 18:04:51.5±0.4, 26.03N±0.04×124.51E±0.04, h206km±4km, h206km:pP-P, n173, σ1§16/212, mb4.3/56, 7C-4D, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	**1.29**	**149**	P	**Pn**	**18 05 24.2**	**+0.2**
JIKM				S	**S**	**18 05 47.6**	**-1.3**
JIRB	**Irabujima**	**1.34**	**153**	P	**Pn**	**18 05 24.2**	**-0.2**
JIRB				S	**S**	**18 05 47.6**	**-2.1**
JTJ	**Tarama**	**1.39**	**173**	P	**Pn**	**18 05 24.7**	**-0.2**
JTJ				S	**S**	**18 05 48.4**	**-2.1**
JISG	**Ishigakijimahi**	**1.45**	**187**	P	**Pn**	**18 05 24.8**	**-0.5**
JISG				S	**S**	**18 05 49.2**	**-2.1**
JMJ2	**Miyako jima3**	**1.48**	**150**	P	**Pn**	**18 05 26.0**	**+0.4**
JMJ2				S	**S**	**18 05 50.8**	**-0.9**
JOGS	**Gusukube**	**1.50**	**147**	P	**Pn**	**18 05 26.4**	**+0.6**
JOGS				S	**S**	**18 05 51.4**	**-0.6**
JIJ	**Ishigaki jima**	**1.69**	**191**	P	**Pn**	**18 05 26.5**	**-1.0**
JIJ				S	**S**	**18 05 51.7**	**-3.4**
IRIF	**Iriomote-Funau**	**1.83**	**203**	P	**Pn**	**18 05 27.8**	**-1.0**
IRIF				S	**S**	**18 05 55.3**	**-2.1**
JKRS	**Kuro-shima**	**1.84**	**194**	P	**Pn**	**18 05 28.2**	**-0.7**
JKRS				S	**S**	**18 05 55.4**	**-2.2**
HATJ	**Hateruma jima**	**2.06**	**198**	P	**Pn**	**18 05 30.6**	**-0.6**
HATJ				S	**S**	**18 05 59.2**	**-2.3**
YOJ	**Yonaguni jima**	**2.07**	**221**	P	**Pn**	**18 05 30.7**	**-0.5**
YOJ				S	**S**	**18 05 59.5**	**-2.0**
YOJ	**Yonaguni jima**	**2.07**	**221**		**Pn**	**18 05 30.4**	**-0.8**
YOJ				Sn	**S**	**18 05 59.7**	**-1.8**
JKE	**Kume jima 2**	**2.07**	**81**	P	**Pn**	**18 05 31.0**	**-0.1**
JKE				S	**S**	**18 06 01.0**	**-0.5**
JYNG	**Yonagunijimaku**	**2.11**	**222**	P	**Pn**	**18 05 31.1**	**-0.6**
JYNG				S	**S**	**18 06 00.9**	**-1.5**
JAGN	**Aguni-jima**	**2.52**	**77**	P	**Pn**	**18 05 35.6**	**-0.3**
TATO	**Taipei**	**2.92**	**250**		**Pn**	**18 05 41.4**	**+0.8**
JJT3	**Tamagusuku3**	**2.95**	**87**	P	**Pn**	**18 05 41.1**	**+0.3**
JJT3				S	**S**	**18 06 17.3**	**-1.5**
YHNB	**Yeheng**	**3.14**	**245**		**Pn**	**18 05 43.8**	**+0.5**
JNTH	**Nagotoyohara**	**3.19**	**80**	P	**Pn**	**18 05 43.3**	**-0.4**
NACB	**Ninganchiao**	**3.22**	**236**		**Pn**	**18 05 42.5**	**-1.7**
JIH	**Iheya**	**3.26**	**71**	P	**Pn**	**18 05 43.9**	**-0.6**
JIH				S	**S**	**18 06 22.6**	**-2.8**
JOW	**Kunigami**	**3.47**	**76**	P	**Pn**	**18 05 46.3**	**-0.7**
JOW	**Kunigami**	**3.47**	**76**	P	**Pn**	**18 05 46.4**	**-0.7**
	8.9nm,0.3s,baz=114,slow=15,SNR=190						
JOW				S	**S**	**18 06 26.4**	**-3.7**
	37nm,0.3s,baz=101,slow=17,SNR=34						
JOW	**Kunigami**	**3.47**	**76**		**Pn**	**18 05 46.0**	**-1.0**
JYRO	**Yoronjima**	**3.67**	**73**	P	**Pn**	**18 05 48.5**	**-0.9**
JOKE	**Okinoerabujima**	**3.87**	**69**	P	**Pn**	**18 05 50.7**	**-1.2**
SSLB	**Suanglung**	**3.92**	**236**		**Pn**	**18 05 51.1**	**-1.6**
SSLB				Sn	**S**	**18 06 39.6**	**-0.5**
YULB	**Yu-li**	**3.93**	**229**		**Pn**	**18 05 50.1**	**-2.5**
JTK	**Tokunoshima**	**4.34**	**65**	P	**Pn**	**18 05 56.1**	**-1.6**
TPUB	**Ta-pu**	**4.45**	**233**		**Pn**	**18 05 58.0**	**-1.3**
TPUB				Sn	**S**	**18 06 50.1**	**-1.9**
TWG	**Pinlang**	**4.47**	**225**		**Pn**	**18 05 56.8**	**-2.7**
JAMN	**Amaminishikomi**	**4.71**	**61**	P	**Pn**	**18 06 00.5**	**-1.8**
JAM	**Amami Oshima**	**5.12**	**61**	P	**Pn**	**18 06 05.8**	**-1.8**
KNMB	**Chin-men Tao**	**5.76**	**256**	Pn	**Pn**	**18 06 13.8**	**-1.9**
SSE	**Sheshan**	**5.83**	**331**		**Pn**	**18 06 17.5**	**+0.8**
WHN	**Wuhan**	**10.02**	**299**	P	**Pn**	**18 07 10.4**	**-0.5**
KSAR	**Wonju Array Be**	**11.73**	**13**		**Pn**	**18 07 34.2**	**+1.4**
KSAR	**Wonju Array Be**	**11.73**	**13**	P	**Pn**	**18 07 34.2**	**+1.4**
KSRS	**Korea Array**	**11.75**	**13**	P	**Pn**	**18 07 35.1**	**+2.1**
	0.3nm,0.3s,baz=187,slow=12,SNR=23						
KS19	**Wonju Array Si**	**11.79**	**13**	Pn	**Pn**	**18 07 32.6**	**-0.9**
DL2	**Dalian**	**13.07**	**350**	P	**P**	**18 07 54.8**	**+2.3**
DL2				pmax	pmax		
	comp=Z,19nm,0.8s						
ENH	**Enshi**	**13.91**	**291**	P	**Pn**	**18 08 00.5**	**+0.3**
BJT	**Baijiatuau**	**15.59**	**336**	P	**P**	**18 08 20.1**	**-0.4**
BJT	**Baijiatuau**	**15.59**	**336**	P	**P**	**18 08 20.1**	**-0.4**
BJT				pmax	pmax		
	comp=Z,6.0nm,1.0s						
XAN	**Xi'an**	**15.67**	**304**	P	**Pn**	**18 08 23.2**	**+1.5**
XAN				sP	sP	18 09 13.8	-7.0
XAN				pmax	pmax		
	comp=Z,16nm,0.8s						
XAN				pmax	pmax		
	comp=Z,190nm,6.5s						
XAN	**Xi'an**	**15.67**	**304**	P	**Pn**	**18 08 21.6**	**-0.1**
XAN				IAmb	IAmb	18 08 24.4	
	comp=Z,13nm,0.9s						
XAN	**Xi'an**	**15.67**	**304**	P	**Pn**	**18 08 21.6**	**-0.1**
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
MJAR	**Matsushiro Arr**	**15.70**	**45**	P	**Pn**	**18 08 22.4**	**+0.5**
	comp=Z,0.0nm,0.3s,baz=228,slow=8.4,SNR=4.5						
MJAR	**Matsushiro Arr**	**15.70**	**45**	P	**Pn**	**18 08 22.4**	**+0.5**
MJAR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MSHR	**Mys Shultsa**	**17.39**	**17**	⇓eP	**P**	**18 08 37.7**	**-2.5**
HHC	**Hu-ho-hao-te**	**18.27**	**327**	⇑iP	**Pn**	**18 08 52.0**	**-0.5**
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,30nm,5.4s						
SLVN	**Son La**	**19.43**	**260**	P	**P**	**18 09 04.1**	**+1.5**
SLVN				IAmb	IAmb	18 09 08.3	
	comp=Z,12nm,0.9s						
KMI	**Kunming**	**19.66**	**272**	P	**P**	**18 09 04.9**	**-0.3**
KMI	**Kunming**	**19.66**	**272**	P	**P**	**18 09 04.9**	**-0.3**
KMI				pmax	pmax		
	comp=Z,26nm,0.9s						
LZH	**Lanzhou**	**20.31**	**305**	⇓P	**P**	**18 09 13.3**	**+1.3**
LZH				PP	**pP**	**18 09 45.5**	**-0.5**
LZH				sP	sP	18 10 15.0	+2.8
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,72nm,4.5s						
DLV	**T Lat**	**20.60**	**230**	P	**P**	**18 09 15.3**	**0.0**
DLV				IAmb	IAmb	18 09 17.6	
	comp=Z,15nm,0.9s						
UBPT	**Khong Chiam**	**20.75**	**243**	P	**P**	**18 09 17.3**	**+0.7**
UBPT				IAmb	IAmb	18 09 21.1	
	comp=Z,20nm,1.2s						
HIA	**Hailar**	**23.49**	**352**	P	**P**	**18 09 42.6**	**-0.1**
HIA				IAmb	IAmb	18 09 45.3	
	comp=Z,7.5nm,1.0s						
HIA	**Hailar**	**23.49**	**352**	P	**P**	**18 09 42.6**	**-0.1**
HIA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PBKT	**Sadao Pong**	**23.83**	**251**	P	**P**	**18 09 45.8**	**-0.3**
PBKT				IAmb	IAmb	18 09 48.1	
	comp=Z,11nm,0.9s						
KLR	**Kul'dur**	**23.84**	**12**	⇓eP	**P**	**18 09 43.5**	**-2.3**
GTA	**Gaotai**	**24.60**	**309**	⇑P	**P**	**18 09 53.0**	**0.0**
GTA				pP	pP	18 10 35.3	+2.6
GTA				sP	PP	18 10 53.9	+0.8
GTA				pmax	pmax		
	comp=Z,15nm,1.2s						
GTA				pmax	pmax		
	comp=Z,100nm,5.1s						
GTA				LR	LR		
	comp=Z,130nm,17.1s						
GTA				LR	LR		
	comp=Z,150nm,16.8s						
GTA				LR	LR		
	comp=Z,130nm,16.5s						
CHTO	**Chiang Mai**	**24.67**	**258**	P	**P**	**18 09 54.1**	**+0.4**
CHTO				IAmb	IAmb	18 09 55.5	
	comp=Z,18nm,1.2s						
CHTO	**Chiang Mai**	**24.67**	**258**	P	**P**	**18 09 54.1**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,18nm,1.2s						
CM31	**Chiang Mai Arr**	**24.80**	**258**	P	**P**	**18 09 55.5**	**+0.5**
CM31				IAmb	IAmb	18 09 56.4	
	comp=Z,4.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**24.80**	**258**	P	**P**	**18 09 55.9**	**+0.9**

comp=Z,4.1nm,0.8s,baz=58,slow=7.8,SNR=35
CMAR PcP PcP 18 13 26.9 +1.2
comp=Z,0.6nm,0.8s,baz=48,slow=1.3,SNR=5.6
ULN Ulaanbaatar 25.76 332 P P 18 10 03.2 -0.2
ULN Ulaanbaatar 25.76 332 P P 18 10 03.2 -0.2
ULN pmax pmax
comp=Z,29nm,2.0s
SONM Songino Array 26.02 331 P P 18 10 05.6 -0.1
comp=Z,1.4nm,0.4s,baz=151,slow=10,SNR=17
SONM PcP PcP 18 13 28.6 +0.5
comp=Z,0.4nm,0.5s,baz=129,slow=0.9,SNR=3.5
SONM Songino Array 26.02 331 P P 18 10 05.5 -0.2
SBUM Sibu 26.25 209 P P 18 10 07.3 -0.6
SBUM IAmb IAmb 18 10 10.9
comp=Z,2.8nm,0.7s
LSA Lhasa 29.66 285 P P 18 10 39.2 +0.6
LSA Lhasa 29.66 285 P P 18 10 39.2 +0.6
LSA pmax pmax
comp=Z,12nm,0.7s
IPM Ipoh 31.06 230 P P 18 10 50.4 -0.2
MOY Mondy 31.21 331 eP P 18 10 52.8 +1.3
MOY pmax pmax
comp=Z,23nm,1.4s
TAPN Taplejung 32.83 281 eP P 18 11 07.2 +1.0
comp=Z,21nm,0.8s
ODAN Odare 33.17 280 eP P 18 11 10.0 +0.9
comp=Z,54nm,0.8s
PSI Prapat 33.72 231 P P 18 11 14.2 +0.4
PSI pmax pmax
comp=Z,14nm,1.1s
RPSI Rantau Prapat 33.80 231 P P 18 11 14.2 -0.1
RPSI IAmb IAmb 18 11 15.7
comp=Z,14nm,1.1s
RAMN Ramite 33.86 280 eP P 18 11 15.9 +0.8
JIRN Jiri 34.14 281 eP P 18 11 18.3 +0.7
GUN Gumba 34.39 282 eP P 18 11 20.4 +0.7
WMQ Urumqi 34.66 310 eP P 18 11 23.2 +1.7
WMQ pmax pmax
comp=Z,8.0nm,0.9s
WMQ pmax pmax
comp=Z,70nm,5.3s
WMQ Urumqi 34.66 310 P P 18 11 21.4 -0.1
WMQ IAmb IAmb 18 11 23.8
comp=Z,11nm,1.1s
WMQ Urumqi 34.66 310 P P 18 11 21.4 -0.1
WMQ pmax pmax
comp=Z,11nm,1.1s
PKI Pulchoki 34.84 281 eP P 18 11 23.8 +0.3
PKIN Phulchoki 34.85 281 eP P 18 11 23.7 +0.1
KKN Kakani 34.93 282 eP P 18 11 24.8 +0.6
DMN Daman 35.10 282 eP P 18 11 26.3 +0.6
comp=Z,30nm,0.9s
GKN Gorkha 35.47 282 eP P 18 11 29.1 +0.4
WOJI Wonogiri, Jawa 36.16 203 P P 18 11 33.9 -0.5
comp=Z,21nm,1.1s
MDSI Maura Dua 36.17 216 P P 18 11 36.0 +1.4
comp=Z,8.0nm,1.3s
DANN Dangsing 36.20 283 eP P 18 11 35.9 +0.8
KOLN Koldanda 36.41 282 eP P 18 11 37.5 +0.7
comp=Z,38nm,1.0s
LEM Lembang 36.55 209 P P 18 11 39.5 +1.6
comp=Z,15nm,0.6s,baz=3.5,slow=15,SNR=5.6
MK31 Makanchi Array 39.20 313 P P 18 11 59.3 -0.4
MK31 IAmb IAmb 18 12 00.9
comp=Z,4.2nm,0.8s
MK31 Makanchi Array 39.20 313 P P 18 11 59.3 -0.4
MK31 pmax pmax
comp=Z,4.0nm,0.8s
MKAR Makanchi Array 39.20 313 P P 18 11 59.8 +0.1
comp=Z,3.8nm,0.6s,baz=102,slow=10,SNR=94
MKAR pP pP 18 12 44.8 +2.0
comp=Z,3.3nm,0.9s,baz=101,slow=11,SNR=4.5
MKAR PcP PcP 18 14 05.5 +1.0
comp=Z,0.3nm,0.6s,baz=64,slow=3.4,SNR=2.6
MKAR ScP ScP 18 17 32.3 -1.1
comp=Z,1.2nm,1.2s,baz=100,slow=5.0,SNR=3.9
MKAR Makanchi Array 39.20 313 P P 18 11 59.3 -0.4
MKAR pP 18 12 43.1 +0.3
MAKZ Makanchi 39.41 313 P P 18 12 01.0 -0.4
MAKZ IAmb IAmb 18 12 02.7
comp=Z,24nm,1.5s
MAKZ pP 18 12 46.7 +2.0
ZAA0 Zalesovo Array 40.42 324 P P 18 12 08.4 -1.1
ZAA0 IAmb IAmb 18 12 10.1
comp=Z,6.9nm,0.7s
ZAA0 pP 18 12 54.2 +1.2
ZALV Zalesovo Beam 40.42 324 P P 18 12 08.9 -0.6
comp=Z,7.6nm,0.6s,baz=114,slow=8.2,SNR=34
ZALV pP pP 18 12 54.7 +1.8
comp=Z,2.3nm,0.6s,baz=111,slow=7.9,SNR=4.5
ZALV ScP ScP 18 17 36.9 -1.0
comp=Z,2.4nm,0.8s,baz=132,slow=4.2,SNR=9.7
ZALV Zalesovo Beam 40.42 324 P P 18 12 08.0 -1.5
ZALV pP 18 12 54.3 +1.3
ZALV ScP 18 17 36.9 -1.0
PMG Port Moresby 41.54 145⇑eP P 18 12 19.1 0.0
PMG pmax pmax
comp=Z,59nm,1.3s
NRN Naryn 42.61 304 P P 18 12 27.1 -0.8
NRN IAmb IAmb 18 12 30.1
comp=Z,20nm,1.1s
NRN Naryn 42.61 304 P P 18 12 27.1 -0.8
NRN pmax pmax
comp=Z,20nm,1.1s
KURK Kurchatov 42.69 318 P P 18 12 27.5 -0.5
KURK pP 18 13 10.1 -1.7
KURK Kurchatov 42.69 318c iP P 18 12 27.5 -0.5
KURK pmax pmax
comp=Z,8.0nm,1.4s
FRU1 Bishkek 43.77 306 P P 18 12 35.0 -1.8
FRU1 IAmb IAmb 18 12 38.8
comp=Z,9.0nm,0.8s
FRU1 Bishkek 43.77 306 P P 18 12 35.0 -1.8
FRU1 pmax pmax
comp=Z,9.0nm,0.8s
AAK Ala-Archa 43.85 305 P P 18 12 36.7 -0.9
AAK Ala-Archa 43.85 305⇑eP P 18 12 38.2 +0.6
AAK pmax pmax
comp=Z,6.0nm,1.0s
NIL Nilore 44.73 292 P P 18 12 44.8 +0.2
NIL IAmb IAmb 18 12 46.1
comp=Z,18nm,1.1s
NIL Nilore 44.73 292 P P 18 12 44.8 +0.2
NIL pmax pmax
comp=Z,18nm,1.1s
TIXI Tiksi 45.72 2⇓eP P 18 12 52.2 +0.5
TIXI pmax pmax
comp=Z,2.0nm,0.9s
BTK Batken 46.47 301 P P 18 12 58.1 -0.1
BTK Batken 46.47 301 P P 18 12 58.1 -0.1
BTK pmax pmax
comp=Z,4.0nm,0.7s
WRAB Tennant Creek 46.68 167⇑eP P 18 12 59.6 -0.2
WRAB pmax pmax
comp=Z,7.0nm,1.6s
WRA Warramunga Arr 46.68 167 P P 18 13 00.1 +0.2
comp=Z,1.2nm,0.3s,baz=347,slow=8.8,SNR=14
KK31 Karatay Array 46.80 306 P P 18 12 59.6 -1.0
KK31 pP pP 18 13 44.1 -1.1
KK31 Karatay Array 46.80 306 P P 18 12 59.6 -1.0
KK31 pmax pmax
comp=Z,5.0nm,0.9s
KKAR Karatay Array 46.80 306 P P 18 13 00.4 -0.2
KKAR pP pP 18 13 44.1 -1.1
KKAR Karatay Array 46.80 306 P P 18 13 00.0 -0.6
KKAR IAmb IAmb 18 13 02.5
comp=Z,5.2nm,0.9s
KKAR Karatay Array 46.80 306 P P 18 13 00.0 -0.6
KKAR pmax pmax
comp=Z,5.0nm,0.9s
KBL Kabul 48.13 294 P P 18 13 10.9 -0.3
KBL IAmb IAmb 18 13 13.2
comp=Z,23nm,1.0s
KBL Kabul 48.13 294 P P 18 13 10.9 -0.3
KBL pmax pmax
comp=Z,23nm,1.0s
BRVK Borovoye 48.28 319 P P 18 13 11.0 -0.8
BRVK Borovoye 48.28 319 P P 18 13 11.0 -0.8
BRVK pmax pmax
comp=Z,5.0nm,1.1s
AS31 Alice Springs 50.23 169 P P 18 13 27.6 +0.8
ASAR Alice Springs 50.23 169 P P 18 13 27.2 +0.4
comp=Z,0.8nm,0.6s,baz=356,slow=14,SNR=13
ASAR pP pP 18 14 13.1 +0.9
comp=Z,0.3nm,0.5s,baz=356,slow=7.1,SNR=2.2
ASAR Alice Springs 50.23 169 P P 18 13 27.1 +0.3
HRA Herat 53.73 295 P P 18 13 52.8 -0.1
ABKAR Akbulak array 54.34 313 P P 18 13 56.5 -0.3
SVE Sverdlovsk 54.38 323 eP P 18 13 57.5 +0.6
SVE pmax pmax
comp=Z,18nm,1.0s
ARU Arti 55.48 322 P P 18 14 04.1 -0.7
ARU Arti 55.48 322c iP P 18 14 04.5 -0.3
ARU 18 15 01.1
ARU 18 16 07.2
ARU S S 18 21 34.2 +0.7
ARU pmax pmax
comp=Z,15nm,0.9s
AKTO Aktyubinsk 55.59 315 P P 18 14 06.0 +0.3
comp=Z,1.1nm,0.8s,baz=119,slow=7.0,SNR=4.7
GEYT Alibeck 56.49 300 P P 18 14 13.7 +1.4
comp=Z,10nm,0.9s,baz=39,slow=2.8,SNR=28
GEYT PcP PcP 18 15 03.9 -2.7
comp=Z,1.8nm,1.1s,baz=35,slow=8.0,SNR=3.8
GEYT Alibeck 56.49 300 P P 18 14 13.2 +0.9
GYA0B ALIBECK ARRAY 56.49 300 P P 18 14 12.8 +0.5
NWAO Narrogin (SRO) 59.04 187 P P 18 14 32.2 +2.3
comp=Z,13nm,1.1s,baz=82,slow=3.6,SNR=3.3
NWAO Narrogin (SRO) 59.04 187 P P 18 14 32.4 +2.6
PRGR Permogore 62.20 328 eP P 18 14 49.1 -1.8
PRGR pmax pmax
comp=Z,7.0nm,0.7s
KLMR Klimovskoe 65.23 328 eP P 18 15 09.3 -1.4
KLMR AMP 18 15 11.9
comp=Z,13nm,1.3s
KLMR Klimovskoe 65.23 328 eP P 18 15 09.3 -1.4
KLMR pmax pmax
comp=Z,13nm,1.3s
KBZ Khabaz 66.69 309 P P 18 15 20.5 +0.3
comp=Z,2.3nm,0.9s,baz=111,slow=5.9,SNR=4.7
KIV Kislovodsk 66.78 309 P P 18 15 21.0 0.0
KIV Kislovodsk 66.78 309 eP P 18 15 21.5 +0.5
KIV pmax pmax
comp=Z,21nm,1.1s
AKH Akhalkalaki 66.84 306 P P 18 15 20.2 -1.4
AKH IAmb IAmb 18 15 24.2
comp=Z,10.0nm,1.3s
AKH Akhalkalaki 66.84 306 P P 18 15 20.2 -1.4
AKH pmax pmax
comp=Z,10.0nm,1.3s
SOCY Socotra 67.36 273 P P 18 15 23.8 -1.3
ARCES ARCESS Array B 68.96 338 P P 18 15 34.0 -0.1
comp=Z,1.7nm,0.9s,baz=19,slow=7.9,SNR=4.7
ARCES ARCESS Array B 68.96 338 P P 18 15 34.0 -0.1
INK Inuvik 70.38 23 P P 18 15 42.7 0.0
comp=Z,0.4nm,0.4s,baz=117,slow=2.7,SNR=3.0
INK Inuvik 70.38 23 IAmb IAmb 18 17 13.9
comp=Z,16nm,1.9s
RAYN Ar Rayn 70.69 287 P P 18 15 44.8 -0.6
RAYN IAmb IAmb 18 15 47.6
comp=Z,23nm,1.9s
RAYN Ar Rayn 70.69 287 P P 18 15 44.8 -0.6
RAYN pmax pmax
comp=Z,23nm,1.9s
FINES FINESS Array B 71.38 330 P P 18 15 48.9 +0.1
comp=Z,1.9nm,0.5s,baz=59,slow=5.2,SNR=17
AKASG Malin Array Be 73.49 319 P P 18 16 00.9 -0.5
comp=Z,0.8nm,0.5s,baz=61,slow=6.5,SNR=5.6
AKASG Malin Array Be 73.49 319 IAmb IAmb 18 16 02.3
comp=Z,2.1nm,1.1s
AKASG Malin Array Be 73.49 319 P P 18 16 01.0 -0.5
ILGA Ilgaz 73.97 308 P P 18 16 02.2 -2.5
ILGA IAmb IAmb 18 16 03.5
comp=Z,16nm,1.3s
BR131 Keskin Array S 74.50 307 P P 18 16 07.0 -0.8
BR131 Keskin Array S 74.50 307 P P 18 16 07.0 -0.8
BR131 pmax pmax
comp=Z,3.0nm,1.1s
BRTR Keskin Array B 74.50 307 P P 18 16 08.0 +0.2
comp=Z,0.8nm,0.6s,baz=116,slow=7.0,SNR=7.4
BRTR pP pP 18 16 57.3 +0.7
comp=Z,1.8nm,0.9s,baz=97,slow=6.3,SNR=4.5
BRTR Keskin Array B 74.50 307 P P 18 16 07.1 -0.6
BRTR pP 18 16 56.4 -0.2
BRTR Keskin Array B 74.50 307 P P 18 16 08.0 +0.2
DAMY Dhamar 75.01 279 P P 18 16 11.9 +0.6
DAMY IAmb IAmb 18 16 13.5
comp=Z,6.9nm,0.8s
BURAR Bucovina Array 77.11 317 P P 18 16 22.1 -0.2
YKA Yellowknife Ar 80.09 24 P P 18 16 37.5 -0.6
comp=Z,0.5nm,0.7s,baz=306,slow=5.6,SNR=7.7
YKA pP pP 18 17 29.7 +2.0
comp=Z,0.9nm,0.9s,baz=309,slow=5.4,SNR=3.8
VYHS Vyhne 80.55 320 eP P 18 16 39.7 -1.2
VYHS Vyhne 80.55 320 eP P 18 16 39.7 -1.2
KMBO Kilima Mbogo 88.02 268 P P 18 17 20.4 +1.1
comp=Z,1.1nm,0.6s,baz=350,slow=22,SNR=3.3

SKO 05 18:14:09.0, 41.°23N×23.°23E, h42km
ATH 05 18:14:11.6, 41.°23N×23.°22E, h13km±4km, ML1.4/7, Error ellipse: s-maj=4.9km s-min=0.8km az=319.0
ISC 05 18:14:10.2±1.1, 41.°26N±0.°05×23.°21E±0.°03, h23km±9km, n12, σ1.°07/22, Greece-Bulgaria border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KNT Kendrikon 0.25 246 P Pb 18 14 16.8 +0.4
KNT S Sb 18 14 20.5 -0.1
KNT AML AML 18 14 20.7
comp=E,597µm,0.1s
KNT AML AML 18 14 20.7
comp=N,463µm,0.1s
SRS Serrai 0.33 117 P Pb 18 14 17.5 +0.1
SRS S Sb 18 14 22.1 -0.3
SRS AML AML 18 14 22.4
comp=E,102µm,0.2s
SRS AML AML 18 14 23.1
comp=N,94µm,0.1s
SOH Sokhos 0.46 166 P Pb 18 14 19.9 +0.3
SOH S Sb 18 14 25.5 -0.5
SOH AML AML 18 14 26.0
comp=E,319µm,0.2s
SOH AML AML 18 14 26.2
comp=N,150µm,0.2s
VAY Valandovo 0.48 277 ePg Pb 18 14 20.9 +0.9
VAY i Sg Sn 18 14 29.4 -0.1
VAY eLg Lg 18 14 29.8
comp=N,7.2nm,0.5s
NVR Nevrokopi 0.50 80 P Pn 18 14 21.3 -0.8
NVR S Sn 18 14 28.6 -1.4
THE Thessaloniki 0.66 196 P Pn 18 14 23.7 -0.4
THE S Sn 18 14 32.2 -1.6
THE AML AML 18 14 32.8
comp=N,60µm,0.1s
THE AML AML 18 14 33.0
comp=E,129µm,0.1s
HORT Hortiatis 0.67 187 P Pn 18 14 24.1 -0.3
HORT S Sn 18 14 32.6 -1.7
HORT AML AML 18 14 32.8
comp=E,87µm,0.3s
HORT AML AML 18 14 32.9
comp=N,66µm,0.2s
GRG Griva 0.68 243 P Pn 18 14 24.6 +0.1
GRG S Sn 18 14 33.7 -0.8
GRG AML AML 18 14 34.6
comp=N,64µm,0.4s
GRG AML AML 18 14 35.0
comp=E,47µm,0.2s
PLG Polygyros 0.91 168 P Pb 18 14 27.8 +0.5
PLG S Sn 18 14 40.1 +0.1
KAVA Kavala 1.02 105 P Pb 18 14 30.8 +1.6
OUR Ouranopolis 1.10 147 P Pb 18 14 32.0 +1.5
OUR S Sb 18 14 46.5 +2.1
OUR AML AML 18 14 48.0
comp=E,46µm,0.2s
OUR AML AML 18 14 48.0
comp=N,44µm,0.2s
PAIG Paliouri 1.38 165 P Pb 18 14 36.4 +1.0

BEO 05 18:26:00.5±0.9, 38.°11N×20.°15E, h17km±5km, ML3.7/4
THE 05 18:26:01.7, 38.°23N×20.°39E, h16km, ML3.7/10, Error ellipse: s-maj=0.9km s-min=0.4km az=272.0
ATH 05 18:26:01.6, 38.°23N×20.°39E, h16km±1km, ML3.8/3, Error ellipse: s-maj=2.3km s-min=1.0km az=263.0
PDG 05 18:26:01.2±0.2, 38.°26N×20.°22E, h19km±1km, ML3.8/13, Error ellipse: s-maj=1.9km s-min=0.8km az=90.0
IDC 05 18:26:04.5±2.2, 38.°29N×20.°41E, h47km±25km, mb3.3/7, mb1 3.5/11, mb1mx3.2/53, mbtmp3.5/11, ML3.1/4, MS3.8/1, Ms1 3.8/1, ms1mx2.7/34, Error ellipse: s-maj=25.4km s-min=15.1km az=63.0
ISC 05 18:26:01.3±0.7, 38.°23N±0.°02×20.°37E±0.°03, h17km±3km, n127, σ1.°27/187, mb3.5/7, 16C-9D, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF3 Kipouria, Keph 0.03 213 P Pg 18 26 04.5 +0.1
KEF3 S Sg 18 26 06.7 +0.2
CHV1 Chavriata, Kef 0.05 169 P Pg 18 26 04.5 0.0
CHV1 S Sg 18 26 06.9 +0.3
KEF4 Livadi, Kephal 0.05 57 P Pg 18 26 04.7 +0.2
KEF4 S Sg 18 26 06.5 -0.1
LXR1 Lixouri, Cepha 0.06 119 P Pg 18 26 04.7 +0.2
LXR1 S Sg 18 26 07.2 +0.5
KEF1 Kardakata, Kep 0.09 59 P Pg 18 26 04.8 0.0
KEF1 S Sg 18 26 06.9 -0.3
ARGA Argostoli. Kep 0.10 122 P Pg 18 26 05.0 +0.1
ARGA S Sb 18 26 07.1 0.0
ARG2 Argostoli 0.11 119 P Pg 18 26 05.0 +0.1
ARG2 S Sb 18 26 07.3 +0.1
KEF2 Argostoli. Kep 0.11 125 P Pg 18 26 05.1 +0.1
KEF2 S Sb 18 26 07.1 -0.3
VLS Valsamata 0.18 107 P Pg 18 26 05.7 -0.2
VLS S Sg 18 26 09.1 0.0
52µm,0.2s
VLS Valsamata 0.18 107 P Pg 18 26 05.8 -0.2
VLS S Sg 18 26 08.7 -0.4
VLS AML AML 18 26 09.4
VLS AML AML 18 26 09.8
comp=N,49962µm,0.3s
VLS Valsamata 0.18 107 ⇓P Pg 18 26 05.8 -0.2
VLS S Sg 18 26 08.9 -0.1
VSK1 VASILIKIADES 0.23 40 P Pg 18 26 06.8 0.0
VSK1 S Sb 18 26 11.1 +0.1
comp=N,28µm,0.3s
FSK Fiskardo 0.27 33 P Pg 18 26 07.5 +0.2
FSK S Sg 18 26 11.8 +0.3
comp=N,11µm,0.2s
FSK Fiskardo 0.27 33 P Pg 18 26 07.6 +0.2
FSK S Sg 18 26 11.6 0.0
FSK AML AML 18 26 12.5
comp=N,16957µm,0.2s
FSK AML AML 18 26 12.7
comp=E,26364µm,0.2s
VLMS Volimes, Zakyn 0.42 147 P Pg 18 26 09.7 -0.3
VLMS S Sb 18 26 16.2 -0.2
VLMS AML AML 18 26 17.3
comp=N,67469µm,0.3s
VLMS AML AML 18 26 17.6
comp=E,58896µm,0.2s
EVGI Lefkada island 0.45 30 P Pg 18 26 10.4 -0.1
EVGI S Sb 18 26 17.7 +0.5
EVGI Lefkada island 0.45 30 P Pg 18 26 10.6 +0.1
EVGI S Sb 18 26 17.2 0.0
MGNA Meganis 0.54 38 P Pg 18 26 11.7 -0.4
LKD2 Lefkada island 0.60 22 P Pg 18 26 12.8 -0.5
LKD2 S Sb 18 26 21.8 +0.2
comp=E,2µm,0.5s
LKD2 Lefkada island 0.60 22 P Pg 18 26 12.9 -0.3
ZAK2 Zakynthos 0.61 136 P Pb 18 26 13.4 0.0
ZAK2 S Sb 18 26 21.7 0.0
comp=E,40µm,0.5s
AST1 Astakos 0.65 61 P Pg 18 26 13.9 -0.1
AST1 S Sb 18 26 23.0 +0.2
comp=E,8µm,0.4s
KRI1 kERI 0.67 148 P Pg 18 26 13.8 -0.7
KRI1 S Sb 18 26 24.1 +0.7
comp=E,9µm,0.4s
PDO Prodromos 0.74 60 P Pb 18 26 15.5 -0.1
PDO S Sg 18 26 26.2 +0.6
comp=E,8µm,0.7s
PDO Prodromos 0.74 60 P Pb 18 26 15.6 -0.1
RLS Riolos of Patr 0.88 101 P Pb 18 26 17.6 -0.5
RLS Riolos of Patr 0.88 101 P Pb 18 26 17.7 -0.5
PVO Paravola 0.99 67 P Pb 18 26 20.1 +0.2
PVO S Sg 18 26 33.4 0.0
comp=E,4µm,0.8s
PVO Paravola 0.99 67 P Pn 18 26 20.4 +0.1
DRO Drossia 1.09 104 P Pb 18 26 21.3 -0.4
DRO S Sg 18 26 37.1 +0.3
comp=E,3µm,0.5s
DRO Drossia 1.09 104 P Pn 18 26 21.9 0.0
LAKA Lakka 1.27 89 P Pb 18 26 24.8 +0.1
AMT Artemida-Makis 1.27 123 P Pg 18 26 25.9 +0.1
IGT Igoumenitsa 1.30 359 ePg Pg 18 26 27.6 +1.2
IGT eSg Sg 18 26 45.2 +1.8
TRIZ Trizonia 1.35 84 P Pb 18 26 26.2 +0.2
KLV Kalavryta, Ach 1.42 97 ⇓P Pn 18 26 26.7 +0.4
MAKR Makrakomi, Fth 1.59 60 P Pg 18 26 31.3 -0.6
PYL PYLOS 1.72 140 P Pn 18 26 31.0 +0.6
SCTE Santa Cesarea 2.36 322 P Pn 18 26 40.4 +1.2
SCTE S Sn 18 27 08.0 +0.2
FNA Florina 2.67 17 ePn Pn 18 26 45.9 +2.4
OHR Ohrid 2.90 6 i Pn Pn 18 26 49.3 +2.6
TIP Timpagrande 2.98 290 ⇑P Pn 18 26 49.5 +1.6
SERS Sersale 2.99 287 P Pn 18 26 49.5 +1.5
SERS S Sn 18 27 24.2 +0.6
PIPA Pietrapaola 3.04 295 P Pn 18 26 49.9 +1.3
PLAC Placanica 3.10 275 P Pn 18 26 50.8 +1.3
PLAC S Sn 18 27 22.0 -4.0
TIR Tirane 3.14 353 ePn Pn 18 26 51.9 +2.0
TIR Tirane 3.14 353 ⇑P Pn 18 26 51.9 +2.0
CAR1 CAROLEI 3.41 289 P Pn 18 26 56.3 +2.6
CAR1 S Sn 18 27 36.4 +2.7
MPAZ Palizzi 3.45 267 P Pn 18 26 55.1 +0.8
MPAZ S Sn 18 27 34.6 -0.2
VAY Valandovo 3.52 28 eP Pb 18 27 02.9 -0.2
VAY Valandovo 3.52 28 i Pn Pn 18 26 58.6 +3.4
JOPP Joppolo 3.54 277 P Pn 18 26 56.7 +1.2
JOPP S Sn 18 27 37.1 +0.1
NOCI Noci 3.62 316 P Pn 18 26 57.6 +1.1
NOCI S Sn 18 27 38.2 -0.5
LTRZ Laterza 3.63 312 P Pn 18 26 57.8 +1.1
LTRZ S Sn 18 27 39.4 +0.2
T0702 Acquaformosa (3.66 295 P Pn 18 27 00.3 +3.2
T0702 S Sn 18 27 44.5 +4.6
CET2 Cetraro 3.68 292 P Pn 18 26 59.6 +2.2
CET2 S Sn 18 27 41.7 +1.3
MATE Matera 3.73 312 ⇑P Pn 18 26 59.6 +1.6
MATE Matera 3.73 312 P Pn 18 26 58.7 +0.7
MATE S Sn 18 27 41.4 0.0
SRS Serrai 3.81 40 ePn Pn 18 27 00.8 +1.7
PUK Puka 3.83 355 P Pn 18 27 00.4 +1.0
PUK S Sn 18 27 44.9 +0.9
SKO Skopje 3.83 12 ePn Pn 18 26 59.3 -0.1
ULC Ulcinj 3.83 347 ePn Pn 18 26 59.7 +0.3
ULC eSn Sn 18 27 43.6 -0.4
MIGL Miglionico 3.86 309 ⇑P Pn 18 27 02.0 +2.2
MIGL S Sn 18 27 45.4 +0.6
AMUR Altamura 3.95 314 P Pn 18 27 02.1 +1.0
AMUR S Sn 18 27 46.9 -0.1
MCSR Castroreale 4.04 269 P Pn 18 27 03.5 +1.1
DRME Dracevica, Mon 4.05 347 ePn Pn 18 27 03.0 +0.5
DRME eSn Sn 18 27 49.4 -0.2
MTSN Montesano sull 4.12 301 P Pn 18 27 05.2 +1.7
BUM Brajici-Budva 4.22 345 ePn Pn 18 27 05.0 +0.1
BUM eSn Sn 18 27 53.8 +0.1
MMB Musomiste 4.23 37 i P Pn 18 27 06.7 +1.7
PDG Podgorica 4.28 349 ePn Pn 18 27 06.3 +0.7
PDG eSn Sn 18 27 55.4 +0.3
TTG Podgorica 4.28 349 ePn Pn 18 27 06.5 +0.9
TTG eSn Sn 18 27 55.6 +0.5
MRVN Minervino Murg 4.29 313 P Pn 18 27 07.0 +1.2
MRVN S Sn 18 27 54.2 -1.2
HAVL Avola 4.35 255 ⇑P Pn 18 27 05.6 -1.1
PVY Plav 4.37 356 ePn Pn 18 27 08.0 +1.0
PVY i Sn Sn 18 27 57.7 +0.2
HLNI Lentini 4.44 260 ⇓P Pn 18 27 06.8 -1.0
HCY Herceg Novi 4.45 342⇑i Pn Pn 18 27 08.2 +0.3
HCY i Sn Sn 18 27 58.4 -0.9
CEME Cevo 4.45 346⇑i Pn Pn 18 27 08.6 +0.6
CEME i Sn Sn 18 27 58.8 -0.7
MEU Monte Lauro 4.46 257 ⇑P Pn 18 27 08.2 0.0
BOSS Bosilegrad 4.56 20 ePn Pn 18 27 10.8 +1.4
IVA Berane 4.65 356⇑i Pn Pn 18 27 12.3 +1.5
IVA i Sn Sn 18 28 04.4 0.0
NKME Niksic 4.66 347⇑i Pn Pn 18 27 11.9 +0.9
NKME i Sn Sn 18 28 03.6 -0.9

KOME Kolasin 4.66 352 ePn Pn 18 27 11.4 +0.5
KOME eSn Sn 18 28 04.9 +0.3
IDI Anoyia 4.67 128 P Pn 18 27 13.2 +2.2
comp=E,0.3nm,0.3s,baz=306,slow=8.7,SNR=1.7
IDI S Sn 18 28 05.7 +0.9
comp=E,3.6nm,0.3s,baz=152,slow=22,SNR=20
BARS Barje 4.71 13 ePn Pn 18 27 12.6 +1.0
TREB Trebinje 4.74 342 ePn Pn 18 27 11.4 -0.5
TREB eSn Sn 18 28 05.2 -1.2
VAE Valguarnera 4.78 263 S Sn 18 28 08.7 +1.2
comp=E,1.6nm,0.3s,baz=328,slow=8.7,SNR=4.2
RZN Rozhen 4.80 43 eP Pn 18 27 14.9 +1.9
BRY Bratogost 4.87 344 ePn Pn 18 27 13.4 -0.5
BRY eSn Sn 18 28 09.3 -0.6
MSAG Monte S. Angel 4.88 317 P Pn 18 27 15.2 +1.2
MSAG S Sn 18 28 08.4 -1.6
VTS Vitosha 4.90 26 ePn Pn 18 27 16.2 +2.0
VTS Vitosha 4.90 26 ⇑P Pn 18 27 17.2 +3.0
VTS Vitosha 4.90 26 eP Pb 18 27 22.5 -4.2
SELS Selova 5.02 6 ePn Pn 18 27 15.8 0.0
SJES Sjenica 5.04 357 ePn Pn 18 27 17.5 +1.4
UPM Unac-Piva 5.09 348 ePn Pn 18 27 17.3 +0.4
UPM eSn Sn 18 28 14.9 -0.5
PLE Pljevlja 5.15 352 ePn Pn 18 27 18.2 +0.5
PLE eSn Sn 18 28 16.6 -0.1
MELA Melanico ??? S 5.32 312 ⇑P Pn 18 27 22.1 +2.3
IVAS Ivanjica 5.34 358 ePn Pn 18 27 20.1 -0.2
GRUS Gruza 5.66 3 ePn Pn 18 27 25.2 +0.7
BBLS Lazići 5.68 353 ePn Pn 18 27 25.0 +0.1
BBLS eSn Sn 18 28 29.5 -0.2
DIVS Divibare 5.87 357 ePn Pn 18 27 27.7 +0.2
DIVS eSn Sn 18 28 33.1 -1.3
FRGS Fruska Gora 6.94 357 ePn Pn 18 27 41.0 -1.1
FRGS eSn Sn 18 29 00.1 -0.4
FDMO Fiordimonte 7.33 313 ⇓P Pn 18 27 50.5 +3.0
GZR Gura Zlata 7.38 13 ⇓P Pn 18 27 50.4 +2.1
BZS Buzias 7.44 7 ⇓P Pn 18 27 50.6 +1.6
ARVD Arcevia 7.70 315 ⇓P Pn 18 27 54.4 +1.7
VOIR 8.00 24 ⇑P Pn 18 27 59.1 +2.3
BOJS Bojanci 8.21 334 ⇑P Pn 18 28 00.5 +1.0
CPGN Carpegna, Ital 8.24 315 ⇓P Pn 18 28 03.2 +3.0
MLR Muntele Rosu 8.36 28 P Pn 18 28 03.4 +1.7
comp=E,0.1nm,0.3s,baz=265,slow=10,SNR=4.4
MLR Muntele Rosu 8.36 28 ⇓P Pn 18 28 04.8 +3.0
PLOR Plostina 8.93 30 ⇑P Pn 18 28 11.9 +2.4
VRI Vrincioaia 8.97 30 ⇑P Pn 18 28 13.0 +2.9
SOKA Soboth 9.31 337 ePn Pn 18 28 14.6 -0.2
comp=E,2.5nm,0.4s
OBKA Obir 9.32 334 ePn Pn 18 28 15.5 +0.6
comp=E,1.1nm,0.2s
KBA Koelnbreinsper 10.24 332 ePn Pn 18 28 28.8 +1.2
comp=E,0.7nm,0.3s
ABTA Abfaltersbach 10.29 328 Pn Pn 18 28 28.5 +0.3
comp=E,0.5nm,0.2s
BRTR Keskin Array B 10.44 78 P Pn 18 28 31.7 +1.4
comp=E,0.1nm,0.3s,baz=350,slow=29,SNR=1.7
MOA Molln 10.60 337 ePn Pn 18 28 33.5 +1.3
comp=E,2.3nm,0.2s
GERES GERESS Array B 11.66 338 P Pn 18 28 46.0 -0.8
comp=E,0.2nm,0.3s,baz=154,slow=13,SNR=4.7
HFS Hagfors 22.33 351 P P 18 30 57.9 0.0
comp=E,1.2nm,0.5s,baz=143,slow=13,SNR=6.1
FINES FINESS Array B 23.51 7 P P 18 31 08.2 -1.8
comp=E,1.3nm,0.8s,baz=203,slow=5.7,SNR=2.0
NOA NORSAR Array B 23.54 349 P P 18 31 09.4 -1.1
comp=E,1.2nm,1.0s,baz=149,slow=9.8,SNR=2.0
TORD Torodi Ar. Bea 30.00 219 P P 18 32 09.6 +0.5
comp=E,0.4nm,0.9s,baz=197,slow=1.5,SNR=3.7
TORD LR LR 18 45 23.9
comp=E,178nm,20.2s,baz=10.0,slow=39
ARCES ARCESS Array B 31.49 3 P P 18 32 21.0 -0.7
comp=E,1.3nm,0.9s,baz=186,slow=11,SNR=5.4
MKAR Makanchi Array 45.38 58 P P 18 34 17.5 -1.1
comp=E,0.2nm,0.4s,baz=271,slow=7.8,SNR=10
ZALV Zalesovo Beam 45.74 48 P P 18 34 20.1 -1.2
comp=E,0.9nm,0.7s,baz=270,slow=10,SNR=3.0

*THE **05** 18:31:08.8, 38.22N×20.45E, h11km, ML3.1/9, Error ellipse: s-maj=0.9km s-min=0.4km az=245.0*
*ATH **05** 18:31:09.6, 38.23N×20.45E, h11km±1km, ML2.6/9, Error ellipse: s-maj=1.4km s-min=0.8km az=256.0*
ISC 05 18:31:09.3±0.9, 38.22N±0.02×20.46E±0.03, h11km±5km, n32, σ0.48/57, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LXR1 Lixouri, Cepha 0.03 222 P Pg 18 31 10.6 -0.6
LXR1 S Sg 18 31 12.6 0.0
126μm,0.2s
ARGA Argostoli. Kep 0.05 166 P Pg 18 31 11.7 +0.4
ARGA S Sg 18 31 13.3 +0.5
KEF4 Livadi, Kephal 0.05 318 P Pg 18 31 11.7 +0.3
KEF4 S Sg 18 31 13.6 +0.7
ARG2 Argostoli 0.05 157 P Pg 18 31 10.8 -0.6
ARG2 S Sg 18 31 12.4 -0.5
52μm,0.2s
KEF1 Kardakata, Kep 0.06 6 P Pg 18 31 11.9 +0.4
KEF1 S Sg 18 31 13.0 0.0
KEF2 Argostoli. Kep 0.06 163 P Pg 18 31 11.8 +0.3
KEF2 S Sg 18 31 13.5 +0.4
CHV1 Chavriata, Kef 0.08 239 P Pg 18 31 10.8 -0.9
CHV1 S Sg 18 31 13.3 -0.1
92μm,0.1s
KEF3 Kipouria, Keph 0.09 258 P Pg 18 31 11.9 +0.1
KEF3 S Sg 18 31 13.7 -0.1
VLS Valsamata 0.11 115 P Pg 18 31 11.4 -0.7
VLS S Sg 18 31 13.8 -0.4
9μm,0.1s
VLS Valsamata 0.11 115 P Pg 18 31 12.4 +0.2
VLS S Sg 18 31 14.9 +0.7
VLS AML AML 18 31 15.2
comp=E,14417μm,0.1s
VLS AML AML 18 31 15.4
comp=N,22267μm,0.2s
VSK1 VASILIKIADES 0.20 23 P Pg 18 31 13.1 -0.5
VSK1 S Sg 18 31 16.5 -0.1
comp=N,8μm,0.2s
FSK Fiskardo 0.25 18 P Pg 18 31 13.9 -0.5
FSK S Sg 18 31 18.3 +0.4
comp=N,5μm,0.2s
FSK Fiskardo 0.25 18 P Pg 18 31 14.9 +0.4
FSK S Sg 18 31 18.1 +0.3
FSK AML AML 18 31 19.5
comp=N,9688μm,0.3s
FSK AML AML 18 31 20.0
comp=E,8806μm,0.2s
VLMS Volimes, Zakyn 0.38 156 P Pg 18 31 16.9 0.0
VLMS S Sg 18 31 22.4 +0.6
VLMS AML AML 18 31 23.6
comp=E,10000μm,0.3s
VLMS AML AML 18 31 27.4
comp=N,11110μm,0.3s
EVGI Lefkada island 0.42 21 P Pg 18 31 16.9 -0.8
EVGI S Sg 18 31 23.4 +0.1
EVGI Lefkada island 0.42 21 P Pg 18 31 18.0 +0.3
MGNA Meganis 0.50 31 P Pg 18 31 19.0 -0.1
MGNA S Sg 18 31 26.1 +0.3
MGNA AML AML 18 31 27.7
comp=N,2181μm,0.2s
MGNA AML AML 18 31 27.9
comp=E,1500μm,0.1s
AST1 Astakos 0.58 57 P Pg 18 31 20.2 -0.5
AST1 S Sb 18 31 29.4 -0.5
comp=E,1μm,0.3s
LKD2 Lefkada island 0.58 15 P Pg 18 31 20.0 -0.7
LKD2 S Sg 18 31 28.5 +0.1
comp=E,360nm,0.5s
LKD2 Lefkada island 0.58 15 P Pg 18 31 21.0 +0.3
LKD2 S Sg 18 31 28.7 +0.3
LKD2 AML AML 18 31 37.4
comp=N,751μm,0.5s
LKD2 AML AML 18 31 37.7
comp=E,717μm,0.5s
KRI1 kERI 0.63 153 P Pg 18 31 21.0 -0.4
PDO Prodromos 0.68 56 P Pg 18 31 21.7 -0.8
PDO S Sg 18 31 31.9 +0.5
PDO Prodromos 0.68 56 P Pg 18 31 22.7 +0.2
PDO S Sb 18 31 32.3 -0.3
PDO AML AML 18 31 34.5
comp=E,1147μm,0.5s
PDO AML AML 18 31 36.5
comp=N,1254μm,0.3s
RLS Riolos of Patr 0.81 101 P Pg 18 31 24.1 -0.8
RLS S Sb 18 31 36.3 0.0
comp=N,122nm,0.6s
RLS Riolos of Patr 0.81 101 P Pg 18 31 25.1 +0.2
RLS S Sb 18 31 36.5 +0.2
RLS AML AML 18 31 43.2
comp=E,243μm,0.5s
RLS AML AML 18 31 43.9
comp=N,248μm,0.7s
PVO Paravola 0.92 64 P Pg 18 31 26.4 -0.7
PVO Paravola 0.92 64 P Pb 18 31 27.3 0.0
PVO S Sb 18 31 40.3 +0.7
PVO AML AML 18 31 43.3
comp=E,1403μm,0.3s
PVO AML AML 18 31 47.7
comp=N,858μm,0.7s
DRO Drossia 1.02 105 P Pn 18 31 29.5 -0.1
AMT Artemida-Makis 1.20 125 P Pg 18 31 33.2 +0.8
ANX Ano Chora 1.20 72 P Pn 18 31 32.0 -0.2
IGT Igoumenitsa 1.31 356 P Pb 18 31 34.0 0.0
IGT S Sg 18 31 52.6 +1.1
IGT AML AML 18 31 56.0
comp=N,172μm,0.4s
IGT AML AML 18 32 00.2
comp=E,287μm,0.5s
PYL PYLOS 1.67 142 P Pg 18 31 41.3 0.0

*IDC **05** 18:49:56.4±3.1, 38.22N×20.50E, h0km, mb3.6/3, mb1 3.6/3, mb1mx3.2/37, mbtmp3.6/3, Error ellipse: s-maj=348.2km s-min=29.4km az=136.0*
*ATH **05** 18:49:58.2, 38.25N×20.39E, h9km±1km, ML3.2/4, Error ellipse: s-maj=2.1km s-min=0.9km az=258.0*
*THE **05** 18:49:58.3, 38.22N×20.38E, h9km, ML3.3/10, Error ellipse: s-maj=1.0km s-min=0.4km az=260.0*
ISC 05 18:49:58.0±0.9, 38.23N±0.02×20.39E±0.04, h11km±4km, n33, σ0.38/60, mb3.7/3, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF3 Kipouria, Keph 0.04 234 P Pg 18 50 00.2 +0.2
KEF3 S Sg 18 50 01.4 -0.1
CHV1 Chavriata, Kef 0.04 186 P Pg 18 50 00.1 +0.1
CHV1 S Sg 18 50 01.6 +0.1
KEF4 Livadi, Kephal 0.04 42 P Pg 18 49 60.0 -0.1
KEF4 S Sg 18 50 01.1 -0.5
LXR1 Lixouri, Cepha 0.05 122 P Pg 18 50 00.1 0.0
LXR1 S Sg 18 50 01.6 0.0
KEF1 Kardakata, Kep 0.08 52 P Pg 18 50 00.4 -0.1
KEF1 S Sg 18 50 01.6 -0.7
ARGA Argostoli. Kep 0.09 124 P Pg 18 50 00.5 0.0
ARGA S Sg 18 50 02.0 -0.3
ARG2 Argostoli 0.09 121 P Pg 18 50 00.6 0.0
ARG2 S Sg 18 50 02.3 -0.2
KEF2 Argostoli. Kep 0.10 127 P Pg 18 50 00.8 +0.1
KEF2 S Sg 18 50 02.6 0.0
VLS Valsamata 0.17 107 P Pg 18 50 01.6 -0.1
VLS S Sg 18 50 04.3 0.0
18μm,0.1s
VLS Valsamata 0.17 107 P Pg 18 50 01.6 -0.1
VLS S Sg 18 50 04.1 -0.3
VLS AML AML 18 50 04.4
comp=N,40060μm,0.2s
VLS AML AML 18 50 04.6
comp=E,30433μm,0.1s
VSK1 VASILIKIADES 0.23 37 P Pg 18 50 02.9 +0.1
VSK1 S Sg 18 50 06.7 +0.6
comp=E,21μm,0.3s
VLMS Volimes, Zakyn 0.41 148 P Pg 18 50 06.1 0.0
VLMS S Sb 18 50 13.0 -0.5
VLMS AML AML 18 50 13.7
comp=E,26828μm,0.2s
VLMS AML AML 18 50 14.4
comp=N,19512μm,0.2s
EVGI Lefkada island 0.45 28 P Pg 18 50 07.0 +0.2
EVGI S Sg 18 50 13.5 +0.7
EVGI Lefkada island 0.45 28 P Pg 18 50 06.8 0.0
EVGI S Sg 18 50 12.8 0.0
MGNA Meganis 0.53 36 P Pg 18 50 07.6 -0.8
MGNA S Sg 18 50 15.0 -0.5
MGNA AML AML 18 50 16.9
comp=E,4230μm,0.1s
MGNA AML AML 18 50 18.1
comp=N,4827μm,0.1s
ZAK2 Zakynthos 0.60 137 P Pg 18 50 09.9 +0.3
ZAK2 S Sb 18 50 19.1 +0.3
comp=N,40μm,0.4s
LKD2 Lefkada island 0.60 21 P Pg 18 50 09.5 -0.2
LKD2 S Sb 18 50 19.4 +0.3
comp=N,658nm,0.5s
LKD2 Lefkada island 0.60 21 P Pg 18 50 09.0 -0.7
LKD2 S Sg 18 50 17.5 -0.1
AST1 Astakos 0.64 60 P Pg 18 50 10.1 -0.2
AST1 S Sb 18 50 20.4 +0.4
comp=N,4μm,0.4s
KRI1 kERI 0.66 149 P Pg 18 50 10.1 -0.6
KRI1 S Sb 18 50 20.6 0.0
comp=N,7μm,0.2s
PDO Prodromos 0.73 59 P Pg 18 50 11.8 -0.3
PDO S Sb 18 50 23.0 +0.3
comp=N,2μm,0.8s
PDO Prodromos 0.73 59 P Pg 18 50 11.8 -0.3
PDO S Sg 18 50 21.9 +0.2
RLS Riolos of Patr 0.87 101 P Pg 18 50 14.3 -0.4
RLS S Sb 18 50 27.4 +0.7
comp=N,1μm,0.8s
RLS Riolos of Patr 0.87 101 P Pg 18 50 14.6 -0.1
RLS S Sb 18 50 26.9 +0.2
RLS AML AML 18 50 30.0
comp=E,2253μm,0.9s
RLS AML AML 18 50 30.1
comp=N,1922μm,0.5s
PVO Paravola 0.98 66 P Pg 18 50 16.7 -0.1
PVO S Sb 18 50 30.9 +1.1
comp=N,1μm,1.2s
PVO Paravola 0.98 66 P Pg 18 50 16.5 -0.3
DRO Drossia 1.08 104 P Pg 18 50 18.5 -0.2
DRO S Sn 18 50 34.3 +0.3
comp=N,2μm,0.5s
DRO Drossia 1.08 104 P Pb 18 50 18.9 +0.2
DRO S Sb 18 50 33.0 +0.2
AMT Artemida-Makis 1.25 123 P Pg 18 50 22.1 0.0
ANX Ano Chora 1.26 73 P Pn 18 50 21.5 -0.1
TORD Torodi Ar. Bea 30.00 219 P P 18 56 07.2 +0.5
comp=N,0.2nm,0.7s,baz=41,slow=9.5,SNR=1.7
MKAR Makanchi Array 45.37 58 P P 18 58 15.8 -0.4
comp=N,0.6nm,0.6s,baz=273,slow=7.7,SNR=11
ZALV Zalesovo Beam 45.74 48 P P 18 58 18.3 -0.7
comp=N,0.8nm,0.5s,baz=259,slow=9.6,SNR=3.9

IDC 05 18:52:32.1±63.0, 20.25S×175.48W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/25, mbtmp3.8/3, Error ellipse: s-maj=1173.0km s-min=184.9km az=83.0, Tonga Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STKA Stephens Creek 40.02 244 P P 19 00 08.5 -0.5
0.8nm,0.5s,baz=119,slow=13,SNR=3.1
ASAR Alice Springs 46.87 256 P P 19 01 03.9 -0.6
0.8nm,0.7s,baz=99,slow=7.0,SNR=18
WRA Warramunga Arr 46.97 261 P P 19 01 06.0 +0.7
1.6nm,0.7s,baz=93,slow=8.4,SNR=10

*THE **05** 19:40:14.5, 38.19N×20.38E, h10km, ML2.6/8, Error ellipse: s-maj=1.0km s-min=0.5km az=240.0*
*ATH **05** 19:40:14.4, 38.19N×20.41E, h11km±1km, ML2.6/4, Error ellipse: s-maj=1.8km s-min=1.1km az=243.0*
ISC 05 19:40:14.5±1.2, 38.19N±0.03×20.40E±0.05, h11km±5km, n31, σ0.40/52, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.02 246 P Pg 19 40 16.3 -0.1
CHV1 S Sg 19 40 17.6 -0.1
LXR1 Lixouri, Cepha 0.03 70 P Pg 19 40 16.4 0.0
LXR1 S Sg 19 40 17.8 0.0
KEF3 Kipouria, Keph 0.04 287 P Pg 19 40 16.5 0.0
KEF3 S Sg 19 40 18.2 +0.1
ARGA Argostoli. Kep 0.06 102 P Pg 19 40 16.7 0.0
ARGA S Sg 19 40 18.0 -0.3
ARG2 Argostoli 0.07 100 P Pg 19 40 16.8 0.0
ARG2 S Sg 19 40 18.2 -0.2
KEF4 Livadi, Kephal 0.07 15 P Pg 19 40 16.8 0.0
KEF4 S Sg 19 40 18.4 0.0
KEF2 Argostoli. Kep 0.07 110 P Pg 19 40 16.9 +0.1
KEF2 S Sg 19 40 18.5 0.0
KEF1 Kardakata, Kep 0.10 32 P Pg 19 40 17.1 -0.1
KEF1 S Sg 19 40 19.3 +0.2
VLS Valsamata 0.15 95 P Pg 19 40 17.8 -0.1
VLS S Sg 19 40 20.3 0.0
5μm,0.1s
VLS Valsamata 0.15 95 P Pg 19 40 17.8 -0.1
VLS S Sg 19 40 20.3 0.0
VLS AML AML 19 40 20.5
comp=E,11032μm,0.1s
VLS AML AML 19 40 20.9
comp=N,9517μm,0.1s
VSK1 VASILIKIADES 0.25 30 P Pg 19 40 19.9 +0.2
VSK1 S Sg 19 40 23.7 +0.5
comp=N,4μm,0.4s
FSK Fiskardo 0.30 25 P Pg 19 40 20.2 -0.3
FSK S Sg 19 40 25.2 +0.7
comp=N,1μm,0.2s
FSK Fiskardo 0.30 25 P Pg 19 40 19.6 -0.9
FSK S Sg 19 40 25.2 +0.7
FSK AML AML 19 40 26.1
comp=E,2595μm,0.3s
FSK AML AML 19 40 27.7
comp=N,1657μm,0.3s
VLMS Volimes, Zakyn 0.38 146 P Pg 19 40 22.2 +0.3
VLMS AML AML 19 40 29.4
comp=E,1977μm,0.2s
VLMS AML AML 19 40 31.6
comp=N,2187μm,0.2s
EVGI Lefkada island 0.47 25 P Pg 19 40 23.6 -0.2
EVGI S Sg 19 40 30.7 +0.6
EVGI Lefkada island 0.47 25 P Pg 19 40 23.6 -0.2
EVGI S Sg 19 40 30.5 +0.4
MGNA Meganis 0.56 33 P Pg 19 40 25.0 -0.4
MGNA S Sg 19 40 32.9 +0.2
LKD2 Lefkada island 0.63 19 P Pg 19 40 26.6 -0.2
LKD2 S Sg 19 40 35.2 +0.1
comp=N,258nm,0.5s
LKD2 Lefkada island 0.63 19 P Pg 19 40 26.1 -0.6
PDO Prodromos 0.74 56 P Pg 19 40 28.4 -0.4
PDO S Sb 19 40 40.2 +0.7
comp=N,870nm,0.5s
PDO Prodromos 0.74 56 P Pg 19 40 28.4 -0.4
PDO AML AML 19 40 44.1
comp=E,903μm,0.6s
PDO AML AML 19 40 44.1
comp=N,1485μm,0.4s
RLS Riolos of Patr 0.85 99 P Pg 19 40 30.5 -0.4
RLS S Sb 19 40 43.8 +1.1
comp=N,168nm,0.5s
RLS Riolos of Patr 0.85 99 P Pg 19 40 30.5 -0.4
PVO Paravola 0.98 64 P Pg 19 40 33.1 -0.3
PVO S Sn 19 40 47.9 -0.3
comp=N,415nm,0.3s
PVO Paravola 0.98 64 P Pg 19 40 33.2 -0.2
DRO Drossia 1.06 103 P Pg 19 40 34.3 -0.6
DRO S Sn 19 40 50.5 +0.4
comp=N,280nm,0.6s
SERG Sergoula 1.32 80 P Pn 19 40 38.5 -0.4
SERG Sergoula 1.32 80 P Pn 19 40 38.6 -0.4
TRIZ Trizonia 1.33 82 P Pn 19 40 38.4 -0.6
KALE Kalithea 1.38 81 P Pn 19 40 39.2 -0.6
MAKR Makrakomi, Fth 1.59 58 P Pg 19 40 45.2 +0.3

*THE **05** 19:43:02.5, 38.23N×20.40E, h10km, ML2.9/6, Error ellipse: s-maj=1.1km s-min=0.3km az=267.0*
*ATH **05** 19:43:02.3, 38.23N×20.39E, h11km±1km, ML2.7/11, Error ellipse: s-maj=1.7km s-min=0.8km az=253.0*
ISC 05 19:43:02.4±0.9, 38.23N±0.02×20.40E±0.04, h11km±4km, n44, σ0.40/66, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.04 33 P Pg 19 43 04.3 -0.1
LXR1 Lixouri, Cepha 0.04 130 P Pg 19 43 04.5 +0.1
LXR1 S Sg 19 43 05.9 +0.1
CHV1 Chavriata, Kef 0.04 197 P Pg 19 43 04.5 +0.1
CHV1 S Sg 19 43 06.0 +0.1
KEF3 Kipouria, Keph 0.05 239 P Pg 19 43 04.5 +0.1
KEF3 S Sg 19 43 06.0 0.0
KEF1 Kardakata, Kep 0.08 48 P Pg 19 43 04.7 -0.1
KEF1 S Sg 19 43 06.0 -0.5
ARG2 Argostoli 0.09 124 P Pg 19 43 04.9 +0.1
ARG2 S Sg 19 43 06.5 -0.1
25μm,0.2s
KEF2 Argostoli. Kep 0.09 131 P Pg 19 43 05.1 +0.1
KEF2 S Sg 19 43 06.8 -0.1
VLS Valsamata 0.16 108 P Pg 19 43 05.9 0.0
VLS Valsamata 0.16 108 P Pg 19 43 05.9 0.0
VLS S Sg 19 43 08.6 +0.1
VLS AML AML 19 43 08.7
comp=N,23688μm,0.4s
VLS AML AML 19 43 09.2
comp=E,17000μm,0.1s
VSK1 VASILIKIADES 0.22 35 P Pg 19 43 07.2 +0.1
VSK1 S Sg 19 43 11.1 +0.8
comp=E,12μm,0.3s
FSK Fiskardo 0.27 29 P Pg 19 43 07.9 +0.1
FSK S Sg 19 43 11.9 +0.5
comp=E,3μm,0.4s
FSK Fiskardo 0.27 29 P Pg 19 43 07.7 -0.1
FSK S Sg 19 43 11.9 +0.5
FSK AML AML 19 43 13.1
comp=E,7346μm,0.2s
FSK AML AML 19 43 15.2
comp=N,3035μm,0.6s
VLMS Volimes, Zakyn 0.41 149 P Pg 19 43 10.5 +0.1
VLMS S Sg 19 43 16.7 +0.9
VLMS AML AML 19 43 20.0
comp=E,4342μm,0.2s
VLMS AML AML 19 43 22.0
comp=N,5473μm,0.4s
EVGI Lefkada island 0.44 27 P Pg 19 43 11.1 0.0
EVGI Lefkada island 0.44 27 P Pg 19 43 11.1 0.0
MGNA Meganis 0.53 36 P Pg 19 43 12.5 -0.2
MGNA S Sg 19 43 19.4 -0.2
MGNA AML AML 19 43 21.0
comp=N,2114μm,0.2s
MGNA AML AML 19 43 21.8
comp=E,1848μm,0.1s
LKD2 Lefkada island 0.60 20 P Pg 19 43 13.7 -0.3
LKD2 S Sb 19 43 23.1 -0.2
comp=E,485nm,0.5s
LKD2 Lefkada island 0.60 20 P Pg 19 43 13.5 -0.5
LKD2 S Sg 19 43 22.3 +0.4
LKD2 AML AML 19 43 27.5
comp=N,844μm,0.8s
LKD2 AML AML 19 43 31.3
comp=E,1011μm,0.4s
AST1 Astakos 0.63 60 P Pg 19 43 14.2 -0.3
KRI1 kERI 0.65 149 P Pg 19 43 14.5 -0.5
KRI1 S Sb 19 43 25.4 +0.5
comp=E,1μm,0.2s
PDO Prodromos 0.72 59 P Pg 19 43 15.9 -0.4
PDO Prodromos 0.72 59 P Pg 19 43 16.1 -0.2
PDO S Sg 19 43 26.4 +0.7
PDO AML AML 19 43 30.3
comp=E,2477μm,0.6s
PDO AML AML 19 43 33.3
comp=N,1402μm,0.3s
RLS Riolos of Patr 0.86 101 P Pg 19 43 18.5 -0.4
RLS Riolos of Patr 0.86 101 P Pg 19 43 18.7 -0.2
RLS S Sb 19 43 31.2 +0.4
RLS AML AML 19 43 34.1
comp=E,819μm,0.6s
RLS AML AML 19 43 36.7
comp=N,755μm,0.8s
PVO Paravola 0.97 66 P Pg 19 43 20.8 -0.2
PVO Paravola 0.97 66 P Pg 19 43 20.9 0.0
PVO S Sb 19 43 34.4 +0.5
PVO AML AML 19 43 37.6
comp=E,1528μm,0.4s
PVO AML AML 19 43 44.0
comp=N,999μm,0.3s
DRO Drossia 1.07 104 P Pb 19 43 22.7 -0.2
DRO S Sn 19 43 37.8 -0.4
comp=N,620nm,0.4s
DRO Drossia 1.07 104 P Pb 19 43 22.6 -0.3

DRO				S	Sb	19 43 37.4	+0.5
DRO				AML	AML	19 43 47.6	
	comp=E,1683µm,0.4s						
DRO				AML	AML	19 43 51.1	
	comp=N,1630µm,0.5s						
EFP	Efpalio	1.20	80	P	Pn	19 43 24.5	-0.6
LAKA	Lakka	1.24	89	P	Pn	19 43 25.6	-0.1
LAKA				S	Sn	19 43 43.2	+0.7
LAKA				AML	AML	19 43 48.9	
	comp=N,541µm,0.5s						
LAKA				AML	AML	19 43 49.1	
	comp=E,568µm,0.6s						
AMT	Artemida-Makis	1.25	123	P	Pg	19 43 26.3	0.0
ANX	Ano Chora	1.25	73	P	Pn	19 43 25.0	-0.9
ANX	Ano Chora	1.25	73	P	Pg	19 43 26.4	0.0
IGT	Igoumenitsa	1.30	358	P	Pb	19 43 27.1	+0.1
IGT				S	Sg	19 43 45.1	+0.7
IGT				AML	AML	19 43 51.4	
	comp=E,304µm,0.8s						
IGT				AML	AML	19 43 52.1	
	comp=N,261µm,0.8s						
SERG	Sergoula	1.32	81	P	Pn	19 43 26.1	-0.6
SERG	Sergoula	1.32	81	P	Pn	19 43 26.5	-0.2
TRIZ	Trizonia	1.32	83	P	Pn	19 43 25.9	-0.9
ALIK	Aliki, Aigiali	1.35	88	P	Pn	19 43 26.7	-0.4
KALE	Kalithea	1.38	83	P	Pn	19 43 26.9	-0.7
KLV	Kalavryta, Ach	1.39	97	P	Pn	19 43 27.6	-0.2
KLV	Kalavryta, Ach	1.39	97	P	Pn	19 43 28.0	+0.2
MAKR	Makrakomi, Fth	1.57	59	P	Pb	19 43 31.8	+0.4
ITM	Ithomi	1.60	130	P	Pb	19 43 32.1	+0.2
PYL	PYLOS	1.70	141	P	Pb	19 43 33.5	-0.2

ATH 05 19:48:50.4,38.23N×20.40E,h9km±1km,ML3.0/6,Error ellipse: s-maj=1.9km s-min=0.9km az=250.0
THE 05 19:48:50.1,38.24N×20.36E,h9km,ML3.2/21,Error ellipse: s-maj=0.9km s-min=0.4km az=256.0
ISC 05 19:48:50.5±0.8,38.23N±0.02×20.40E±0.03,h9km±4km,n54,σ0.80/88,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.03	32	P	Pg	19 48 52.1	0.0
KEF4				S	Sg	19 48 53.3	+0.1
LXR1	Lixouri, Cepha	0.04	138	P	Pg	19 48 52.3	+0.1
LXR1				S	Sg	19 48 53.9	+0.6
	179µm,0.2s						
CHV1	Chavriata, Kef	0.05	199	P	Pg	19 48 52.3	+0.1
CHV1				S	Sg	19 48 53.7	+0.2
	120µm,0.1s						
KEF3	Kipouria, Keph	0.05	237	P	Pg	19 48 52.3	0.0
KEF3				S	Sg	19 48 53.8	+0.2
KEF1	Kardakata, Kep	0.07	49	P	Pg	19 48 52.4	-0.1
KEF1				S	Sg	19 48 53.7	-0.2
ARGA	Argostoli. Kep	0.08	132	P	Pg	19 48 52.7	0.0
ARGA				S	Sg	19 48 54.2	+0.1
ARG2	Argostoli	0.09	129	P	Pg	19 48 52.8	+0.1
ARG2				S	Sg	19 48 54.5	+0.3
	122µm,0.1s						
KEF2	Argostoli. Kep	0.09	135	P	Pg	19 48 52.9	+0.1
KEF2				S	Sg	19 48 54.6	+0.2
VLS	Valsamata	0.16	110	P	Pg	19 48 53.7	-0.1
VLS				S	Sg	19 48 56.4	+0.3
	38µm,0.2s						
VLS	Valsamata	0.16	110	P	Pg	19 48 53.7	-0.1
VLS				S	Sg	19 48 56.2	0.0
VLS				AML	AML	19 48 56.5	
	comp=N,92203µm,0.2s						
VLS				AML	AML	19 48 57.1	
	comp=E,59224µm,0.2s						
VSK1	VASILIKIADES	0.22	35	P	Pg	19 48 54.9	0.0
VSK1				S	Sg	19 48 58.8	+0.9
	comp=E,19µm,0.3s						
FSK	Fiskardo	0.26	29	P	Pg	19 48 55.6	-0.1
FSK				S	Sg	19 48 59.7	+0.5
	comp=E,4µm,0.3s						
FSK	Fiskardo	0.26	29	P	Pg	19 48 55.7	-0.1
FSK				S	Sg	19 48 59.5	+0.3
VLMS	Volimes, Zakyn	0.41	150	P	Pg	19 48 58.1	-0.4
VLMS				S	Sg	19 49 04.8	+1.0
VLMS				AML	AML	19 49 06.0	
	comp=N,12736µm,0.3s						
VLMS				AML	AML	19 49 07.3	
	comp=E,12638µm,0.2s						
EVGI	Lefkada island	0.44	27	P	Pg	19 48 58.8	-0.2
EVGI				S	Sg	19 49 05.7	+0.9
	comp=E,722nm,0.1s						
EVGI	Lefkada island	0.44	27	P	Pg	19 48 58.8	-0.2
EVGI				S	Sg	19 49 05.7	+0.9
MGNA	Meganis	0.52	36	P	Pg	19 48 60.0	-0.6
MGNA				S	Sg	19 49 08.1	+0.6
MGNA				AML	AML	19 49 08.7	
	comp=N,3867µm,0.2s						
MGNA				AML	AML	19 49 08.9	
	comp=E,2746µm,0.2s						
LKD2	Lefkada island	0.59	20	P	Pg	19 49 01.3	-0.7
LKD2	Lefkada island	0.59	20	P	Pg	19 49 01.2	-0.7
LKD2				S	Sg	19 49 09.9	+0.2
LKD2				AML	AML	19 49 16.6	
	comp=N,1190µm,0.5s						
LKD2				AML	AML	19 49 20.8	
	comp=E,1284µm,0.5s						
ZAK2	Zakynthos	0.59	138	P	Pg	19 49 01.9	0.0
ZAK2				S	Sb	19 49 12.1	+0.6
	comp=E,23µm,0.4s						
AST1	Astakos	0.62	60	P	Pg	19 49 02.1	-0.4
AST1				S	Sb	19 49 12.2	-0.2
	comp=E,3µm,0.3s						
KRI1	kERI	0.66	150	P	Pg	19 49 02.4	-0.7
KRI1				S	Sb	19 49 13.0	-0.4
	comp=E,6µm,0.2s						
PDO	Prodromos	0.71	59	P	Pg	19 49 03.9	-0.4
PDO				S	Sb	19 49 14.6	-0.5
	comp=E,2µm,0.5s						
PDO	Prodromos	0.71	59	P	Pg	19 49 03.8	-0.5
PDO				S	Sb	19 49 14.6	-0.5
PDO				AML	AML	19 49 16.2	
	comp=N,2452µm,0.3s						
PDO				AML	AML	19 49 18.0	
	comp=E,3040µm,0.6s						
RLS	Riolos of Patr	0.86	101	P	Pg	19 49 05.5	-1.5
RLS				S	Sb	19 49 20.3	+1.1
	comp=E,550nm,0.5s						
RLS	Riolos of Patr	0.86	101	P	Pg	19 49 06.3	-0.7
RLS				S	Sg	19 49 17.6	-0.4
RLS				AML	AML	19 49 21.9	
	comp=E,1149µm,0.6s						
RLS				AML	AML	19 49 23.9	
	comp=N,1051µm,0.3s						
PVO	Paravola	0.96	66	P	Pg	19 49 08.7	-0.3
PVO				S	Sn	19 49 23.6	-0.5
	comp=N,878nm,0.4s						
PVO	Paravola	0.96	66	P	Pg	19 49 08.7	-0.3
DRO	Drossia	1.07	105	P	Pg	19 49 10.3	-0.7
DRO				S	Sn	19 49 27.7	+1.0
	comp=N,1µm,0.4s						
DRO	Drossia	1.07	105	P	Pg	19 49 10.3	-0.7
EFP	Efpalio	1.20	80	P	Pb	19 49 12.0	-1.4
LAKA	Lakka	1.24	89	P	Pb	19 49 12.8	-1.3
LAKA				S	Sn	19 49 32.3	+1.3
	comp=N,208nm,0.5s						
ANX	Ano Chora	1.25	73	P	Pn	19 49 13.3	-0.9
ANX				S	Sn	19 49 32.9	+1.7
	comp=N,820nm,0.6s						
AMT	Artemida-Makis	1.25	124	P	Pn	19 49 13.5	-0.7
EVR	Evrytania	1.30	58	P	Pn	19 49 13.7	-1.2
IGT	Igoumenitsa	1.30	358	P	Pn	19 49 14.2	-0.7
IGT				S	Sn	19 49 33.5	+1.0
	comp=N,202nm,0.5s						
SERG	Sergoula	1.31	82	P	Pn	19 49 14.1	-1.0
SERG				S	Sg	19 49 34.8	+2.1
	comp=N,388nm,0.4s						
TRIZ	Trizonia	1.32	84	P	Pn	19 49 14.0	-1.1
ALIK	Aliki, Aigiali	1.34	88	P	Pn	19 49 14.7	-0.8
KALE	Kalithea	1.38	83	P	Pn	19 49 14.9	-1.1
KLV	Kalavryta, Ach	1.39	97	P	Pn	19 49 15.7	-0.5
KLV				S	Sg	19 49 36.8	+1.6
	comp=N,230nm,0.5s						
MAKR	Makrakomi, Fth	1.56	60	P	Pn	19 49 18.7	+0.2
ITM	Ithomi	1.60	131	P	Pn	19 49 18.7	-0.3
SRN	Sarande	1.68	349	P	Pn	19 49 20.1	+0.1
AGG	Agios Georgios	1.70	62	P	Pb	19 49 21.9	-0.1
PYL	PYLOS	1.71	141	P	Pb	19 49 20.4	-0.1
PYL				S	Sn	19 49 42.8	+0.4
	comp=N,115nm,0.4s						
THL	Klokotos Trika	1.83	43	P	Pb	19 49 23.5	-0.7
PROD	Prodromos	1.97	88	P	Pb	19 49 25.7	-0.8
LTK	Loutraki	2.03	95	P	Pn	19 49 25.9	+0.9
VILL	Villia	2.29	91	P	Pn	19 49 29.8	+1.2
KRND	KRANIDI	2.33	110	P	Pn	19 49 30.6	+1.5
DID	Didima	2.36	107	P	Pb	19 49 31.3	-1.9
DID				S	Sn	19 50 00.4	+1.9
	comp=N,132nm,0.5s						
XOR	Xorichti	2.46	62	P	Pn	19 49 32.1	+1.3
TIP	Timpagrande	3.00	289	P	Pn	19 49 38.4	0.0

IDC 05 20:20:45.2±2.1,9.43S×119.88E,h0km,mb3.6/2,mb1 3.8/5,mb1mx3.5/26,mbtmp3.6/5,ML3.5/3,Error ellipse: s-maj=148.3km s-min=22.6km az=56.0
NEIC 05 20:20:48.8±2.5,9.8S±0.2×119.6E±0.1,h37km±9km,mb4.2/6,Error ellipse: s-maj=23.7km s-min=12.8km az=206.0
ISC 05 20:20:50.0±0.9,9.7S±0.2×119.7E±0.1,h35km,n15,σ1.72/15,Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	4.51	91		Pn	20 21 58.1	+2.1
JAGI	Jajag, Banyuwa	5.61	282		Pn	20 22 12.5	+1.5
FITZ	Fitzroy Crossi	10.15	146	Pn	Pn	20 23 12.6	-0.7
	0.2nm,0.3s,baz=325,slow=12,SNR=3.5						
FITZ				Sn	Sn	20 24 54.0	-12
	0.2nm,0.3s,baz=346,slow=17,SNR=1.9						
KNRA	Kununurra	10.65	125	Pn	Pn	20 23 20.3	+0.1
WB0	Warramunga Arr	17.37	127	P	Pn	20 24 49.1	-0.7
WRA	Warramunga Arr	17.42	127	P	Pn	20 24 48.6	-1.9
	0.2nm,0.3s,baz=307,slow=14,SNR=9.3						
WRA				S	Sn	20 27 49.2	-14
	0.1nm,0.3s,baz=310,slow=28,SNR=2.8						
WRA	Warramunga Arr	17.42	127	P	Pn	20 24 46.8	-3.8
WRAB	Tennant Creek	17.43	127	P	Pn	20 24 50.1	-0.4
WRAB				IAmb	IAmb	20 25 44.8	
	comp=Z,40nm,1.9s						
WB2	Warramunga Arr	17.43	127		Pn	20 24 48.8	-1.8
WR0	Warramunga Arr	17.59	127		Pn	20 24 51.2	-1.4
WR0				IAmb	IAmb	20 25 38.1	
	comp=Z,31nm,1.6s						
ASAR	Alice Springs	19.42	137	P	Pn	20 25 15.9	+1.1
	comp=Z,0.2nm,0.3s,baz=310,slow=12,SNR=16						
SONM	Songino Array	58.48	350	P	P	20 30 41.9	-0.9
	comp=Z,0.6nm,0.8s,baz=167,slow=8.4,SNR=5.2						
SONM	Songino Array	58.48	350	P	P	20 30 41.8	-0.9
MKAR	Makanchi Array	65.39	333	P	P	20 31 28.4	-0.7
	comp=Z,0.4nm,0.5s,baz=136,slow=7.8,SNR=6.7						
MKAR	Makanchi Array	65.39	333	P	P	20 31 27.9	-1.2

IDC 05 20:24:43.1±73.0,38.36N×20.56E,h0km,mb3.6/3,mb1 3.6/3,mb1mx3.3/37,mbtmp3.6/3,Error ellipse: s-maj=1357.0km s-min=67.1km az=46.0
ATH 05 20:24:44.3,38.24N×20.40E,h9km±1km,ML3.2/11,Error ellipse: s-maj=1.6km s-min=0.7km az=257.0
BEO 05 20:24:44.4±0.9,38.12N×20.16E,h23km±5km,ML3.3/8
THE 05 20:24:44.1,38.24N×20.37E,h9km,ML3.3/15,Error ellipse: s-maj=1.0km s-min=0.4km az=257.0
ISC 05 20:24:43.7±0.8,38.24N±0.02×20.38E±0.03,h11km±4km,n64,σ0.90/105,mb3.6/3,3C-5D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.04	65	⇑Pc0	Pg	20 24 45.9	+0.2
KEF4				S	Sg	20 24 47.0	-0.2
KEF3	Kipouria, Keph	0.04	212	⇑Pc0	Pg	20 24 46.4	+0.7
KEF3				S	Sg	20 24 47.6	+0.5
CHV1	Chavriata, Kef	0.06	177	P	Pg	20 24 46.4	+0.6
CHV1				S	Sg	20 24 47.9	+0.5
LXR1	Lixouri, Cepha	0.06	130	P	Pg	20 24 46.3	+0.4
LXR1				S	Sg	20 24 47.7	+0.3
KEF1	Kardakata, Kep	0.08	63	P	Pg	20 24 46.2	+0.1
KEF1				S	Sg	20 24 47.4	-0.5
ARGA	Argostoli. Kep	0.10	129	⇓Pd0	Pg	20 24 46.7	+0.3
ARGA				S	Sg	20 24 48.2	0.0
ARG2	Argostoli	0.11	126	P	Pg	20 24 46.8	+0.4
ARG2				S	Sg	20 24 48.4	0.0
KEF2	Argostoli. Kep	0.11	131	⇓Pd0	Pg	20 24 46.9	+0.4
KEF2				S	Sg	20 24 48.5	-0.1
VLS	Valsamata	0.18	111	P	Pg	20 24 47.7	+0.1
VLS				S	Sg	20 24 50.3	+0.1
	48µm,0.1s						
VLS	Valsamata	0.18	111	⇓Pd0	Pg	20 24 47.7	+0.1
VLS				S	Sg	20 24 50.2	-0.1
VSK1	VASILIKIADES	0.22	41	P	Pg	20 24 48.7	+0.4
VSK1				S	Sg	20 24 52.3	+0.8
	30µm,0.3s						
FSK	Fiskardo	0.26	34	P	Pg	20 24 49.5	+0.5
FSK				S	Sg	20 24 53.6	+1.0
	10µm,0.2s						
FSK	Fiskardo	0.26	34	⇓Pd0	Pg	20 24 49.5	+0.5
FSK				S	Sg	20 24 53.3	+0.6
FSK				AML	AML	20 24 53.9	
	comp=N,18633µm,0.2s						
FSK				AML	AML	20 24 54.2	
	comp=E,22645µm,0.2s						
VLMS	Volimes, Zakyn	0.43	148	⇑Pc0	Pg	20 24 52.4	+0.3
VLMS				S	Sb	20 24 59.1	-0.7
VLMS				AML	AML	20 24 59.8	
	comp=E,9673µm,0.2s						
VLMS				AML	AML	20 25 02.0	
	comp=N,13824µm,0.2s						
EVGI	Lefkada island	0.44	30	P	Pg	20 24 52.6	+0.3
EVGI				S	Sb	20 24 59.5	-0.6
EVGI	Lefkada island	0.44	30	P	Pg	20 24 52.7	+0.3
EVGI				S	Sb	20 24 59.4	-0.6
MGNA	Meganis	0.53	38	P	Pg	20 24 53.9	0.0
MGNA				S	Sg	20 25 01.7	+0.8
MGNA				AML	AML	20 25 02.7	
	comp=N,7957µm,0.2s						
MGNA				AML	AML	20 25 02.8	
	comp=E,7946µm,0.3s						
LKD2	Lefkada island	0.59	22	P	Pg	20 24 55.0	-0.1
LKD2	Lefkada island	0.59	22	P	Pg	20 24 55.1	-0.1
LKD2				S	Sg	20 25 03.2	+0.2
LKD2				AML	AML	20 25 12.4	
	comp=N,2454µm,0.4s						
LKD2				AML	AML	20 25 12.7	
	comp=E,3034µm,0.6s						
ZAK2	Zakynthos	0.61	137	P	Pg	20 24 55.7	+0.2
ZAK2				S	Sb	20 25 06.1	+1.1
	comp=E,16µm,0.4s						
AST1	Astakos	0.64	62	P	Pg	20 24 56.0	0.0
AST1				S	Sb	20 25 05.8	+0.1
	comp=E,8µm,0.3s						
KRI1	kERI	0.67	149	P	Pg	20 24 56.3	-0.4
KRI1				S	Sb	20 25 07.4	+0.6
	comp=E,5µm,0.2s						
PDO	Prodromos	0.73	60	P	Pg	20 24 57.6	-0.1
PDO				S	Sb	20 25 09.0	+0.6
	comp=E,4µm,0.4s						
PDO	Prodromos	0.73	60	⇓Pd0	Pg	20 24 57.6	-0.1
PDO				S	Sb	20 25 08.3	-0.1
PDO				AML	AML	20 25 10.0	
	comp=E,7422µm,0.5s						
PDO				AML	AML	20 25 15.4	
	comp=N,4582µm,0.3s						
RLS	Riolos of Patr	0.88	102	P	Pg	20 25 00.1	-0.5
RLS				S	Sb	20 25 13.4	+0.7
	comp=N,925nm,0.3s						
RLS	Riolos of Patr	0.88	102	P	Pg	20 25 00.2	-0.3
RLS				S	Sb	20 25 12.9	+0.2
RLS				AML	AML	20 25 17.2	
	comp=E,2161µm,0.3s						
RLS				AML	AML	20 25 17.6	
	comp=N,1492µm,0.3s						
PVO	Paravola	0.98	67	P	Pg	20 25 02.4	-0.1
PVO				S	Sn	20 25 17.7	+0.5
	comp=N,2µm,0.2s						
PVO	Paravola	0.98	67	P	Pg	20 25 02.4	-0.1
PVO				AML	AML	20 25 19.4	
	comp=E,5373µm,0.3s						
PVO				AML	AML	20 25 19.5	
	comp=N,2954µm,0.3s						
DRO	Drossia	1.09	105	P	Pb	20 25 04.0	-0.6
DRO				S	Sn	20 25 21.6	+1.5
	comp=N,2µm,0.4s						
DRO	Drossia	1.09	105	P	Pb	20 25 04.5	-0.1
DRO				S	Sb	20 25 19.1	+0.3
DRO				AML	AML	20 25 24.8	
	comp=E,2980µm,0.4s						
DRO				AML	AML	20 25 27.6	
	comp=N,2884µm,0.5s						
UPR	University Cam	1.11	87	P	Pn	20 25 05.4	+0.2
EFP	Efpalio	1.22	81	P	Pn	20 25 06.0	-0.7
EFP	Efpalio	1.22	81	P	Pn	20 25 06.2	-0.4
ANX	Ano Chora	1.26	73	P	Pn	20 25 06.9	-0.5
ANX	Ano Chora	1.26	73	P	Pn	20 25 07.5	+0.1
ANX				AML	AML	20 25 33.1	
	comp=E,3639µm,0.8s						
ANX				AML	AML	20 25 34.5	
	comp=N,2637µm,0.6s						
AMT	Artemida-Makis	1.27	123	P	Pn	20 25 07.5	+0.1
AMT	Artemida-Makis	1.27	123	P	Pb	20 25 07.9	+0.2
IGT	Igoumenitsa	1.29	358	P	Pn	20 25 07.3	-0.4
IGT	Igoumenitsa	1.29	358	ePg	Pg	20 25 10.6	+2.1
IGT				eSg	Sg	20 25 29.1	+3.9
IGT	Igoumenitsa	1.29	358	P	Pg	20 25 08.3	-0.2
IGT				AML	AML	20 25 29.8	
	comp=E,587µm,0.7s						
IGT				AML	AML	20 25 34.0	
	comp=N,443µm,0.5s						
EVR	Evrytania	1.31	59	P	Pn	20 25 07.8	-0.2
EVR	Evrytania	1.31	59	P	Pn	20 25 08.2	+0.1
EVR				AML	AML	20 25 32.7	
	comp=N,797µm,0.7s						
EVR				AML	AML	20 25 37.4	
	comp=E,785µm,0.5s						
SERG	Sergoula	1.33	82	P	Pn	20 25 08.0	-0.3
SERG				S	Sg	20 25 28.4	+1.9
	comp=E,610nm,0.4s						
TRIZ	Trizonia	1.34	84	P	Pn	20 25 07.8	-0.5
TRIZ				S	Sg	20 25 28.2	+1.4
	comp=E,950nm,0.3s						
ALIK	Aliki, Aigiali	1.36	89	P	Pn	20 25 08.6	-0.1
ALIK				S	Sg	20 25 30.5	+2.9
KALE	Kalithea	1.39	83	P	Pn	20 25 08.7	-0.5
KLV	Kalavryta, Ach	1.41	97	P	Pn	20 25 09.6	+0.2
KLV				S	Sg	20 25 29.9	+0.8
	comp=E,288nm,0.5s						
MAKR	Makrakomi, Fth	1.57	60	P	Pb	20 25 12.5	-0.4
MAKR				S	Sg	20 25 35.1	+0.7
	comp=E,695nm,0.9s						
THL	Klokotos Trika	1.84	43	P	Pn	20 25 16.1	+0.9
THL				S	Sg	20 25 42.2	-0.6
	comp=E,298nm,0.6s						
FNA	Florina	2.65	17	ePn	Pn	20 25 28.6	+2.1
FNA				eSn	Sb	20 26 02.0	-1.9
OHR	Ohrid	2.88	6	iPn	Pn	20 25 28.8	-0.9
SKO	Skopje	3.81	12	ePn	Pn	20 25 44.3	+1.9
PDG	Podgorica	4.27	349	ePn	Pn	20 25 49.6	+0.9
PDG				eSn	Sn	20 26 38.7	+0.2
BOSS	Bosilegrad	4.54	20	ePn	Pn	20 25 53.3	+0.9
TREB	Trebinje	4.73	342	ePn	Pn	20 25 54.6	-0.4
TREB				eSn	Sn	20 26 48.8	-1.1
VTS	Vitosha	4.88	26	ePn	Pn	20 25 58.6	+1.3
SJES	Sjenica	5.03	357	ePn	Pn	20 26 00.4	+1.3
SJES				eSn	Sn	20 26 56.7	-0.6
IVAS	Ivanjica	5.33	358	ePn	Pn	20 26 03.0	-0.3
IVAS				eSn	Sn	20 27 03.3	-1.5
BBLS	Lazići	5.67	353	eSn	Sn	20 27 10.7	-2.3
ZAGS	Zajecar	5.74	14	ePn	Pn	20 26 09.3	+0.5
DIVS	Divibare	5.86	357	ePn	Pn	20 26 10.7	+0.1
DIVS				eSn	Sn	20 27 15.9	+1.9
FINES	FINESS Array B	23.50	7	P	P	20 29 52.9	-0.4
	comp=E,1.5nm,0.9s,baz=190,slow=10.0,SNR=3.3						
MKAR	Makanchi Array	45.36	58	P	P	20 33 01.5	-0.5
	comp=E,0.4nm,0.5s,baz=284,slow=7.7,SNR=9.0						
ZALV	Zalesovo Beam	45.73	48	P	P	20 33 04.2	-0.5
	comp=E,0.9nm,0.5s,baz=279,slow=8.0,SNR=4.8						

MOS 05 20:35:24.4±1.2,51.23N×178.74E,h23km,mb4.4/10,Error ellipse: s-maj=12.9km s-min=9.7km az=92.1
IDC 05 20:35:27.4±3.8,51.30N×178.74E,h32km±27km,mb3.7/18,mb1 4.0/20,mb1mx3.8/37,mbtmp4.0/20,ML3.5/2,MS3.3/7,Ms1 3.3/7,ms1mx3.0/50,Error ellipse: s-maj=24.6km s-min=13.2km az=170.0
AEIC 05 20:35:27±2.9,51.0N±0.1×178.74E±0.08,h36km±4km,ML4.0/17,mb4.4/42(NEIC),Error ellipse: s-maj=18.2km s-min=7.1km az=178.0
NEIC 05 20:35:29.7±1.9,51.2N±0.1×178.78E±0.08,h57km±7km,Error ellipse: s-maj=20.6km s-min=6.9km az=183.0
ISC 05 20:35:29.5±0.6,51.35N±0.09×178.83E±0.03,h45km,n132,σ1.91/125,mb4.2/36,MS3.1/5,4C-3D,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALAA	Gareloi Lava P	1.55	74		Pn	20 35 56.5	+1.9
TASE	Tanaga Southea	2.01	75		Pn	20 36 02.5	+1.5
TAFP	Tanaga Falls P	2.06	73		Pn	20 36 03.2	+1.6
TAFP					Sn	20 36 31.5	+5.4
KIMD	Kanaga Island	2.49	79		Pn	20 36 09.0	+1.5
KIWB	Kanaga Island	2.56	77		Pn	20 36 09.4	+1.0
ADK	Adak	2.85	78		Pn	20 36 13.3	+0.9
ADK	Adak	2.85	78	P	Pn	20 36 13.3	+0.9
GSTD	Great Sitkin T	3.20	75		Pn	20 36 19.5	+2.1
GSTD					Sn	20 36 59.9	+5.6
SMY	Shemya	3.23	297		Pn	20 36 19.1	+1.5
SMY					Sn	20 36 59.5	+4.7
SMY	Shemya	3.23	297	P	Pn	20 36 19.1	+1.5
SMY						20 36 59.5	
GSMY	Great Sitkin M	3.26	76		Pn	20 36 19.2	+1.2
GSIG	Igitkin Island	3.33	77		Pn	20 36 20.1	+1.1
ATKA	Atka Island	4.41	76		Pn	20 36 33.3	-0.5
ATKA	Atka Island	4.41	76		Sn	20 37 27.9	+4.0
PETK	Petropavlovsk-	13.07	286	Pn	Pn	20 38 31.5	-0.7
	0.2nm,0.3s,baz=94,slow=13,SNR=3.0						
PETK				LR	LR	20 43 07.0	
	comp=Z,115nm,21.2s,baz=51,slow=35						
PETK	Petropavlovsk-	13.07	286		Pn	20 38 30.6	-1.6
KDAK	Kodiak Island	17.69	58	P	Pn	20 39 30.4	-1.8
	1.3nm,0.3s,baz=256,slow=6.1,SNR=16						
KDAK				S	Sn	20 42 40.8	-7.2
	0.1nm,0.3s,baz=280,slow=19,SNR=2.3						
KDAK	Kodiak Island	17.69	58	P	Pn	20 39 31.1	-1.1
KDAK	Kodiak Island	17.69	58	P	Pn	20 39 31.1	-1.1
KDAK				pmax	pmax		
	comp=Z,114nm,1.9s						
MA2	Magadan	17.80	308	LR	LR	20 46 10.7	
	comp=Z,159nm,18.8s,baz=108,slow=36						
BILL	Bilibino	17.83	345	P	P	20 39 36.3	+2.2
BILL	Bilibino	17.83	345	⇑eP	P	20 39 35.9	+1.8
BILL				eS	Sn	20 42 43.8	-7.5
BILL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BILL				MLR	MLR		
	comp=Z,150nm,19.0s						
RSO	Redoubt South	18.21	49	P	P	20 39 34.2	-4.4
SKT	Skwentna	19.26	45	P	Pn	20 39 52.3	+1.1
SKT				IAmb	IAmb	20 39 55.4	
	comp=Z,17nm,0.6s						
PPLA	Purkeypile	19.32	42	P	Pn	20 39 51.1	-1.0
PPLA				IAmb	IAmb	20 40 03.2	
	comp=Z,11nm,0.7s						
SUA	Susitna One	19.45	47	P	Pn	20 39 53.3	-0.3
SUA				IAmb	IAmb	20 40 21.6	
	comp=Z,37nm,1.8s						
KTH	Kantishna Hill	20.11	41	P	Pn	20 40 01.2	0.0
KTH				IAmb	IAmb	20 40 07.6	
	comp=Z,17nm,0.8s						
IMAR	Indian Mountai	20.19	33	P	Pn	20 40 02.0	-0.1
BPAW	Bear Paw Mtn.	20.30	40	P	Pn	20 40 02.6	-1.0
TRF	Thorofare Moun	20.33	42	P	Pn	20 40 03.2	-0.8
TRF				IAmb	IAmb	20 40 17.4	
	comp=Z,22nm,1.4s						
GHO	Glory Hole Cre	20.37	47	P	P	20 40 02.7	+0.6
GHO				IAmb	IAmb	20 40 50.4	
	comp=Z,53nm,1.9s						
KNK	Knik Glacier	20.49	48	P	P	20 40 03.5	+0.2
KNK				IAmb	IAmb	20 40 08.2	
	comp=Z,7.2nm,0.7s						
MLY	Manley	20.80	37	P	Pn	20 40 08.4	-1.1
MLY				IAmb	IAmb	20 40 17.9	
	comp=Z,26nm,1.8s						
RND	Reindeer	20.91	42	P	P	20 40 08.2	+0.3
RND				IAmb	IAmb	20 40 46.8	
	comp=Z,38nm,2.0s						
RND	Reindeer	20.91	42	P	P	20 40 08.2	+0.3
RND				pmax	pmax		

comp=Z,38nm,2.0s
MCK McKinley 20.99 41 P P 20 40 09.8 +1.2
MCK McKinley 20.99 41 P P 20 40 09.9 +1.2
MCK pmax pmax
comp=Z,7.0nm,0.9s
SCM Sheep Creek Mo 21.12 47 P P 20 40 10.5 +0.4
SCM Sheep Creek Mo 21.12 47 P P 20 40 10.5 +0.4
SCM pmax pmax
comp=Z,85nm,2.0s
NEA Nenana 21.26 39 P P 20 40 12.5 +1.0
NEA IAmb IAmb 20 40 20.6
comp=Z,11nm,1.0s
WRH Wood River Hil 21.61 40 P P 20 40 14.9 -0.3
IL31 22.20 40 P P 20 40 22.4 +0.8
ILAR Eielson Array 22.20 40 P P 20 40 20.5 -1.1
comp=Z,1.2nm,0.7s,baz=236,slow=7.3,SNR=16
TOLK Toolik Lake Re 23.00 29 P P 20 40 31.5 +1.4
PRP Porcupine Dome 23.01 38 P P 20 40 30.0 -0.2
PRP IAmb IAmb 20 41 24.0
comp=Z,16nm,1.7s
EGAK Eagle 24.55 42 P P 20 40 43.6 -1.0
EGAK IAmb IAmb 20 40 47.9
comp=Z,8.7nm,0.8s
DAWY Dawson 25.14 44 P P 20 40 52.6 +2.6
DAWY IAmb IAmb 20 40 57.5
comp=Z,9.4nm,0.8s
YAK Yakutsk 28.32 311⇓eP P 20 41 17.3 -1.2
YAK pmax pmax
comp=Z,4.0nm,0.7s
INK Inuvik 28.33 35 P P 20 41 19.1 +0.6
comp=Z,0.5nm,0.3s,baz=264,slow=8.4,SNR=4.5
INK Inuvik 28.33 35 P P 20 41 19.0 +0.4
KLR Kul'dur 29.75 285 P P 20 41 30.4 -0.9
comp=Z,2.9nm,0.6s,baz=70,slow=8.5,SNR=14
KLR Kul'dur 29.75 285⇓iP P 20 41 30.7 -0.7
KLR pmax pmax
comp=Z,3.0nm,0.6s
USRK Ussuriysk Ar. 31.82 276 LR LR 20 53 59.9
comp=Z,28nm,20.8s,baz=25,slow=35
MJAR Matsushiro Arr 32.32 259 LR LR 20 52 38.6
comp=Z,25nm,21.6s,baz=60,slow=36
H11N2 WAKE ISLAND Hy 32.93 201 T T 21 17 03.9
baz=11,slow=76,SNR=13
H11N3 WAKE ISLAND Hy 32.94 201 T T 21 17 02.1
baz=11,slow=76,SNR=17
H11N1 WAKE ISLAND Hy 32.95 201 T T 21 17 05.1
baz=11,slow=76,SNR=12
H11S1 WAKE ISLAND Hy 34.15 201 T T 21 18 29.9
baz=20
H11S3 WAKE ISLAND Hy 34.17 201 T T 21 18 30.3
baz=20
H11S2 WAKE ISLAND Hy 34.17 201 T T 21 18 28.6
baz=20
YKA Yellowknife Ar 36.32 46 P P 20 42 28.9 +0.5
comp=Z,2.5nm,0.7s,baz=281,slow=8.3,SNR=28
YKA ScP ScP 20 48 35.6 +1.0
comp=Z,0.5nm,0.7s,baz=288,slow=3.3,SNR=6.1
BOD Bodaibo 36.80 306 eP P 20 42 31.3 -1.2
BOD pmax pmax
comp=Z,6.0nm,0.8s
MOD Modoc Plateau 41.74 78 P P 20 43 10.1 -4.0
MOD IAmb IAmb 20 43 21.3
comp=Z,16nm,1.6s
ULN Ulaanbaatar 44.93 295 P P 20 43 38.2 -1.6
ULN IAmb IAmb 20 43 40.5
comp=Z,2.8nm,0.9s
ULN Ulaanbaatar 44.93 295 P P 20 43 38.2 -1.6
ULN pmax pmax
comp=Z,3.0nm,0.9s
NVAR Mina Array Bea 45.03 81 P P 20 43 41.7 +1.0
comp=Z,1.8nm,0.8s,baz=292,slow=7.4,SNR=5.2
SONM Songino Array 45.32 295 P P 20 43 42.8 0.0
comp=Z,1.4nm,0.7s,baz=57,slow=7.7,SNR=7.5
SONM LR LR 21 02 35.3
comp=Z,75nm,21.3s,baz=8.5,slow=36
SONM Songino Array 45.32 295 P P 20 43 42.5 -0.4
SONM Songino Array 45.32 295 eP P 20 43 43.0 +0.2
SONM pmax pmax
comp=Z,1.0nm,0.7s
ELK Elko 45.51 77 LR LR 21 01 54.7
comp=Z,24nm,20.0s,baz=298,slow=35
ELK Elko 45.51 77 P P 20 43 43.1 -1.4
ELK Elko 45.51 77 P P 20 43 43.1 -1.4
ELK pmax pmax
comp=Z,2.0nm,0.9s
YHB Horse Butte 45.61 70 P P 20 43 43.2 -2.1
YHH Holmes Hill 45.79 69 P P 20 43 47.4 +0.7
HHC Hu-ho-hao-te 46.26 284 eP P 20 43 50.6 +0.3
RLMT Red Lodge 46.52 68 P P 20 43 52.0 -0.4
RLMT IAmb IAmb 20 43 54.9
comp=Z,4.5nm,0.9s
DUG Dugway, Tooele 47.32 76 P P 20 43 59.2 +0.6
DUG IAmb IAmb 20 44 26.0
comp=Z,3.7nm,0.9s
DUG Dugway, Tooele 47.32 76 P P 20 43 59.2 +0.6
DUG pmax pmax
comp=Z,4.0nm,1.0s
PD31 Pinedale Array 47.73 71 P P 20 44 01.8 -0.1
PD31 IAmb IAmb 20 44 24.3
comp=Z,9.5nm,1.8s
PDAR Pinedale Array 47.73 71 P P 20 44 02.0 +0.1
comp=Z,1.5nm,0.5s,baz=303,slow=3.5,SNR=15
TMUT Trail Mountain 48.85 76 P P 20 44 10.4 -0.2
PFO Pinyon Flats O 49.25 85 LR LR 21 02 11.4
comp=Z,34nm,18.9s,baz=338,slow=32
U15A North Rim 50.00 79 P P 20 44 20.0 +0.6
U15A IAmb IAmb 20 44 21.3
comp=Z,3.2nm,0.7s
WHN Wuhan 51.17 272 P P 20 44 30.8 +2.8
ZALV Zalesovo Beam 52.96 312 P P 20 44 39.8 -1.2
comp=Z,0.5nm,0.5s,baz=55,slow=6.7,SNR=3.3
ZALV Zalesovo Beam 52.96 312 P P 20 44 39.5 -1.4
ZALV Zalesovo Beam 52.96 312 eP P 20 44 43.4 +2.5
LZH Lanzhou 53.96 285 eP P 20 44 46.9 -1.8
LZH pP pP 20 44 58.3 -2.7
LZH sP sP 20 45 02.4 -3.7
LZH ePP PP 20 46 49.5 -0.6
GTA Gaotai 54.19 290 eP P 20 44 50.3 0.0
GTA pP pP 20 44 57.9 -4.9
GTA sP sP 20 45 00.9 -7.1
ARCES ARCESS Array B 57.85 349 P P 20 45 14.4 -1.5
comp=Z,1.8nm,0.9s,baz=32,slow=8.6,SNR=5.3
ARCES ARCESS Array B 57.85 349 eP P 20 45 18.0 +2.1
ARCES pmax pmax
comp=Z,3.0nm,1.0s
KURK Kurchatov 57.95 312 P P 20 45 16.6 -0.2
KURK IAmb IAmb 20 45 26.7
comp=Z,4.6nm,1.0s
KURK Kurchatov 57.95 312⇓eP P 20 45 16.8 0.0
KURK pmax pmax
comp=Z,4.0nm,0.9s
WMQ Urumqi 58.10 302 eP P 20 45 20.6 +2.5
MK31 Makanchi Array 58.87 307 P P 20 45 22.3 -1.1
MK31 Makanchi Array 58.87 307 P P 20 45 22.3 -1.1
MK31 pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 58.87 307 P P 20 45 22.5 -0.9
comp=Z,0.7nm,0.5s,baz=50,slow=6.1,SNR=26
MAKZ Makanchi 59.02 307 P P 20 45 23.8 -0.6
MAKZ Makanchi 59.02 307 P P 20 45 23.8 -0.6
MAKZ pmax pmax
comp=Z,11nm,1.8s
BRVK Borovoye 59.95 319 P P 20 45 30.2 -0.5
BRVK Borovoye 59.95 319 P P 20 45 30.2 -0.5
BRVK pmax pmax
comp=Z,5.0nm,0.6s
TXAR Lajitas Array 60.12 79 P P 20 45 31.3 -1.0
comp=Z,0.7nm,0.6s,baz=284,slow=5.0,SNR=3.6
TXAR Lajitas Array 60.12 79 P P 20 45 30.9 -1.4
X37A Clayton 61.44 70 P P 20 45 40.7 -0.4
ARU Arti 61.83 327 P P 20 45 43.9 +0.6
ARU Arti 61.83 327c iP P 20 45 43.9 +0.6
ARU 20 47 56.3
ARU S S 20 54 09.5 +6.4
ARU SS SS 20 58 07.6 +3.0
ARU pmax pmax
comp=Z,8.0nm,1.2s
M50A Fremont 63.48 56 P P 20 45 56.4 +1.8
ERPA Erie 64.53 54 P P 20 45 58.9 -2.6
Q51A Peebles 65.04 58 P P 20 46 05.0 +0.1
FINES FINESS Array B 65.46 346 P P 20 46 06.2 -1.0
comp=Z,2.3nm,1.1s,baz=23,slow=11,SNR=5.3
AAK Ala-Archa 65.72 308⇑eP P 20 46 09.6 +0.2
AAK pmax pmax
comp=Z,3.0nm,1.2s

CMAR Chiang Mai Arr 69.53 274 P P 20 46 33.0 -0.6
comp=Z,0.5nm,0.5s,baz=31,slow=6.8,SNR=6.7
CMAR Chiang Mai Arr 69.53 274 P P 20 46 33.0 -0.6
TAPN Taplejung 69.81 289 eP P 20 46 35.5 -0.1
comp=Z,13nm,0.9s
ODAN Odare 70.37 289 eP P 20 46 38.8 -0.1
GUN Gumba 70.48 290 eP P 20 46 39.8 +0.1
JIRN Jiri 70.48 290 eP P 20 46 39.9 +0.2
comp=Z,16nm,0.7s
RAMN Ramite 70.77 289 eP P 20 46 41.4 +0.1
KKN Kakani 70.92 291 eP P 20 46 42.4 +0.2
PKI Pulchoki 71.01 290 eP P 20 46 42.9 0.0
PKIN Phulchoki 71.01 290 eP P 20 46 42.7 -0.1
comp=Z,4.2nm,0.7s
GKN Gorkha 71.14 291 eP P 20 46 43.5 0.0
DANN Dangsing 71.39 292 eP P 20 46 45.2 +0.1
comp=Z,14nm,0.7s
KOLN Koldanda 71.92 292 eP P 20 46 48.3 +0.1
AKASG Malin Array Be 75.09 341 P P 20 47 05.1 -1.1
comp=Z,0.6nm,0.4s,baz=20,slow=6.1,SNR=3.4
KBZ Khabaz 77.88 329 P P 20 47 22.4 +0.3
comp=Z,1.4nm,0.8s,baz=53,slow=7.7,SNR=2.7
GNI Garni 80.45 326c eP P 20 47 37.9 +1.4
GNI pmax pmax
comp=Z,16nm,1.7s
WRA Warramunga Arr 80.98 222 P P 20 47 37.3 -1.9
comp=Z,0.6nm,0.7s,baz=32,slow=6.6,SNR=5.6
WRA Warramunga Arr 80.98 222 eP P 20 47 39.5 +0.3
WRA pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 84.33 334 P P 20 47 56.7 0.0
comp=Z,0.5nm,0.6s,baz=74,slow=2.3,SNR=3.8
ASAR Alice Springs 84.48 221 P P 20 47 56.0 -1.3
comp=Z,0.5nm,0.7s,baz=24,slow=5.9,SNR=5.1
ASAR Alice Springs 84.48 221 P P 20 47 55.2 -2.1

IDC **05** *20:52:32.0±0.4, 61.48S×154.49E, h0km, mb5.0/19, mb1 5.0/19, mb1mx5.0/23, mbtmp5.0/19, MS5.3/16, Ms1 5.3/16, ms1mx5.2/18, Error ellipse: s-maj=19.0km s-min=11.8km az=89.0*

NEIC **05** *20:52:33.4±2.0, 61.39S±0.07×154.5E±0.1, h10km±1km, mb5.4/70, Ms_20 5.4/372, Mwb5.8/23, Mww5.9, Mwc5.9(GCMT), Error ellipse: s-maj=16.4km s-min=2.6km az=135.0, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr0.27; Mθθ5.32; Mφφ-5.59; Mrθ0.67; Mθφ-3.73; Mφr0.51; Fault plane solution: M0 6.66000×10^17 NP1:φs242.21000°, δ89.31000°, λ-172.87000°. NP2: φs152.12000°, δ82.88000°, λ-0.69000°. Principal axes: T 6.5107, Plg5.0000°, Azm177.0000°; N 0.2976, Plg83.0000°, Azm248.0000°; P -6.8083, Plg6.0000°, Azm107.0000°;*

MOS **05** *20:52:33.0±1.2, 61.29S×154.59E, h10km, mb5.4/6, MS5.3/18 Error ellipse: s-maj=29.6km s-min=8.2km az=93.4*

NEIC **05** *20:52:38, 61.43S×154.22E, h18km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr-0.22; Mθθ5.90; Mφφ-5.68; Mrθ1.30; Mθφ-4.69; Mφr1.33; Fault plane solution: M0 7.68000×10^17 NP1:φs245.00000°, δ85.00000°, λ-167.00000°. NP2:φs154.00000°, δ77.00000°, λ-5.00000°. Principal axes: T 7.6414, Plg6.0000°, Azm19.0000°; N 0.0809, Plg76.0000°, Azm265.0000°; P -7.7223, Plg13.0000°, Azm110.0000°;*

GCMT **05** *20:52:38.4±0.1, 61.43S×154.18E, h18km, MW5.8/139, Moment Tensor Solution. s133,c265; s139,c395; Duration: 2s0 Moment tensor: Scale 10^17Nm; Mrr-0.41±.06; Mθθ5.86±.06; Mφφ-5.45±.06; Mrθ0.80±.13; Mθφ-4.41±.05; Mφr0.74±.14; Best double couple: M0 7.25600×10^17 NP1:φs154.00000°, δ82.00000°, λ-3.00000°. NP2:φs244.00000°, δ87.00000°, λ-172.00000°. Principal axes: T 7.4100, Plg4.0000°, Azm19.0000°; N -0.3050, Plg81.0000°, Azm264.0000°; P -7.1030, Plg8.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC **05** *20:52:39, 61.37S×154.65E, h14km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr-0.13; Mθθ5.77; Mφφ-5.65; Mrθ-3.08; Mθφ-3.91; Mφr0.92; Fault plane solution: M0 7.63000×10^17 NP1:φs334.00000°, δ75.00000°, λ15.00000°. NP2:φs240.00000°, δ75.00000°, λ164.00000°. Principal axes: T 8.2254, Plg21.0000°, Azm197.0000°; N -1.3666, Plg69.0000°, Azm18.0000°; P -6.8587, Plg0.0000°, Azm287.0000°;*

KLM **05** *20:52:49.0, 61.05S×154.22E, h119km, mb5.3*

ISC 05 20:52:33.5±0.3, 61.49S±0.05×154.61E±0.06, h10km, n559, σ1.48/385, mb5.4/58, MS5.4/219, 32C-22D, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	7.38	20	P	Pn	20 54 19.0	-2.1
baz=7.2							
MCQ	Macquarie Isla	7.38	20		Pn	20 54 18.3	-2.9
MCQ	Macquarie Isla	7.38	20	P	Pn	20 54 18.3	-2.9
PYZ	Puysegur Point	16.88	30		Pn	20 56 30.6	+1.0
PYZ				IAmb	IAmb	20 56 38.2	
comp=Z,401nm,1.5s							
WHZ	Wether Hill Ro	17.45	33	P	Pn	20 56 37.0	+0.2
WHZ				IAmb	IAmb	20 57 01.3	
comp=Z,472nm,1.7s							
MLZ	Mavora Lakes	17.98	32	P	P	20 56 44.6	+0.7
ODZ	Otahua Downs	18.97	37	P	Pn	20 56 56.0	+0.7
ODZ				IAmb	IAmb	20 56 58.5	
comp=Z,391nm,1.4s							
TAU	Tasmania Unive	19.11	343	P	P	20 56 55.6	-0.7
TAU	Tasmania Unive	19.11	343	P	P	20 56 55.6	-0.7
TAU				pmax	pmax		
comp=Z,148nm,1.1s							
MOO	Moorlands	19.59	343	P	P	20 57 02.2	+0.6
baz=19,SNR=18							
CASY	Casey	19.64	237	P	P	20 57 02.3	+0.5
CASY				IAmb	IAmb	20 57 08.2	
comp=Z,378nm,1.6s							
FOZ	Fox Glacier	20.13	34	P	Pn	20 57 08.9	-0.4
FOZ				IAmb	IAmb	20 57 12.8	
comp=Z,539nm,1.5s							
RPZ	Rata Peaks	20.30	36	P	Pn	20 57 10.6	-0.7
comp=Z,176nm,1.1s,baz=189,slow=12,SNR=12							
RPZ				LR	LR	21 03 48.2	
comp=Z,13μm,19.4s,baz=186,slow=33							
RPZ	Rata Peaks	20.30	36	P	Pn	20 57 11.1	-0.2
MQZ	McQueen's Vall	20.78	39	P	Pn	20 57 16.6	-0.2
MQZ				IAmb	IAmb	20 57 20.7	
comp=Z,320nm,1.3s							
LTZ	Lake Taylor	21.51	38	P	P	20 57 24.6	+2.2
LTZ				IAmb	IAmb	20 57 42.8	
comp=Z,186nm,1.3s							
KHZ	Kahutara	22.22	39	P	P	20 57 31.9	+2.0
KHZ				IAmb	IAmb	20 57 35.5	
comp=Z,266nm,1.2s							
KHZ				IAMs_20	IAMs_20	21 05 22.0	
comp=Z,15μm,20.0s							
THZ	Tophouse	22.63	38	P	P	20 57 36.7	+2.3
THZ				IAMs_20	IAMs_20	21 05 17.8	
comp=Z,19μm,19.0s							
BSWZ	Blackbirch Sta	22.96	39	P	P	20 57 40.0	+2.2
TUWZ	Tuamarina	23.25	39	P	P	20 57 43.0	+2.2
QRZ	Quartz Range	23.39	36	IAMs_20	IAMs_20	21 05 13.7	
comp=Z,16μm,21.0s							
SNZO	South Karori	23.59	40	IAMs_20	IAMs_20	21 06 13.3	
comp=Z,14μm,19.0s							
TOO	Toolangi	24.61	342	P	P	20 57 54.3	+0.5
baz=24,SNR=21							
TOO	Toolangi	24.61	342	P	P	20 57 53.5	-0.3
TOO				IAmb	IAmb	20 57 58.7	
comp=Z,65nm,0.8s							
TOO	Toolangi	24.61	342	P	P	20 57 53.5	-0.3
TOO				pmax	pmax		
comp=Z,65nm,0.9s							
TOO				MLR	MLR		
comp=Z,9μm,18.0s							
MILA	Mila	24.70	350	P	P	20 57 54.9	+0.4
baz=24,SNR=8.7							
BKZ	Black Stump Fm	26.10	41	P	P	20 58 08.2	+0.9
BKZ				IAmb	IAmb	20 58 09.6	
comp=Z,77nm,1.2s							
HIZ	Hauiti	26.20	38	IAMs_20	IAMs_20	21 06 52.3	
comp=Z,13μm,22.0s							
CNB	Canberra Magne	26.40	350	P	P	20 58 10.7	+0.7
baz=26,SNR=12							

CAN Canberra 26.43 350 P P 20 58 09.8 -0.4
CAN IAmb IAmb 20 58 14.0
comp=Z,274nm,2.0s
CAN Canberra 26.43 350 P P 20 58 09.8 -0.4
CAN pmax pmax
comp=Z,274nm,2.0s
CAN MLR MLR
comp=Z,7μm,20.0s
URZ Urewera 27.13 41 P P 20 58 17.8 +1.4
comp=Z,79nm,0.9s,baz=257,slow=4.6,SNR=20
URZ LR LR 21 09 07.7
comp=Z,5μm,19.7s,baz=206,slow=37
URZ Urewera 27.13 41 P P 20 58 17.6 +1.2
URZ IAmb IAmb 20 58 20.7
comp=Z,85nm,0.9s
YNG Young 27.50 349 P P 20 58 20.5 +0.7
baz=27,SNR=9.7
MXZ Matakaoa Point 28.15 43 IAMs_20 IAMs_20 21 08 59.0
comp=Z,8μm,18.0s
QSPA South Pole Qui 28.60 180 P P 20 58 30.2 +0.6
comp=Z,21nm,1.1s,baz=2.1,slow=3.9,SNR=19
QSPA LR LR 21 09 55.4
comp=Z,10μm,18.3s,baz=16,slow=36
QSPA South Pole Qui 28.60 180 P P 20 58 31.2 +1.5
QSPA South Pole Qui 28.60 180 IAMs_20 IAMs_20 21 09 36.5
comp=Z,11μm,18.0s
HTT Hallett 29.84 333 P P 20 58 41.1 +0.4
baz=30,SNR=14
CMSA Cobar Meteorol 30.52 345 P P 20 58 47.2 +0.5
baz=30,SNR=6.7
STKA Stephens Creek 30.81 338 P P 20 58 50.0 +0.7
baz=31,SNR=33
STKA Stephens Creek 30.81 338 P P 20 58 50.0 +0.7
comp=Z,34nm,0.9s,baz=162,slow=9.1,SNR=50
STKA LR LR 21 08 25.3
comp=Z,4μm,21.2s,baz=158,slow=31
STKA Stephens Creek 30.81 338 P P 20 58 50.1 +0.7
STKA Stephens Creek 30.81 338 P P 20 58 50.0 +0.7
BBOO Buckleboo 31.10 329 P P 20 58 51.9 0.0
baz=31,SNR=21
BBOO Buckleboo 31.10 329 P P 20 58 52.3 +0.5
BBOO IAmb IAmb 20 58 52.5
comp=Z,52nm,0.9s
ARMA Armidale 31.14 355 P P 20 58 53.0 +0.7
ARMA IAmb IAmb 20 58 56.7
comp=Z,56nm,1.2s
ARMA IAMs_20 IAMs_20 21 08 09.1
comp=Z,8μm,19.0s
RMQ Roma 35.22 351 P P 20 59 28.7 +0.9
baz=35,SNR=20
FORT Forrest 35.30 318 P P 20 59 28.5 +0.1
baz=35,SNR=7.2
FORT Forrest 35.30 318 P P 20 59 28.4 0.0
FORT IAmb IAmb 20 59 29.4
comp=Z,79nm,0.9s
QLP Quilpie 35.59 344 P P 20 59 31.6 +0.6
baz=35,SNR=27
EIDS Eidsvold 36.19 355 P P 20 59 36.7 +0.6
baz=36,SNR=6.3
EIDS Eidsvold 36.19 355 P P 20 59 36.2 +0.1
EIDS IAmb IAmb 20 59 37.7
comp=Z,110nm,1.4s
MAW Mawson 36.41 220 P P 20 59 40.0 +2.5
baz=36,SNR=6.7
MAW Mawson 36.41 220 P P 20 59 38.2 +0.7
comp=Z,10nm,0.8s,baz=131,slow=8.7,SNR=11
MAW LR LR 21 14 42.8
comp=Z,13μm,18.3s,baz=114,slow=37
MAW Mawson 36.41 220 P P 20 59 37.6 +0.1
H01W1 Cape Leeuwin H 36.89 297 T T 21 38 50.4
baz=148,slow=75,SNR=420
H01W2 Cape Leeuwin H 36.90 297 T T 21 38 50.8
baz=148,slow=75,SNR=584
H01W3 Cape Leeuwin H 36.91 297 T T 21 38 48.1
baz=148,slow=75,SNR=506
RAO Raoul Island 37.01 42 IAMs_20 IAMs_20 21 13 14.7
comp=Z,7μm,19.0s
NWAO Narrogin (SRO) 37.31 303 P P 20 59 44.7 -0.9
comp=Z,4.9nm,0.8s,baz=140,slow=17,SNR=2.3
NWAO LR LR 21 11 21.9
comp=Z,6μm,21.2s,baz=149,slow=30
NWAO Narrogin (SRO) 37.31 303 IAMs_20 IAMs_20 21 11 11.2
comp=Z,7μm,22.0s
NWAO Narrogin (SRO) 37.31 303 IAmb IAmb 20 59 52.1
comp=Z,25nm,1.0s
KLBR Kellerberrin 38.28 304 P P 20 59 54.0 +0.3
baz=38,SNR=6.2
MUN Mundaring 38.56 302 P P 20 59 56.2 0.0
baz=38,SNR=4.2
BLDU Ballidu 39.55 304 P P 21 00 04.0 -0.5
baz=39,SNR=4.8
NOUC Port Laguerre 40.19 17 P P 21 00 10.4 +0.7
NOUC IAmb IAmb 21 00 11.8
comp=Z,107nm,1.4s
NOUC IAMs_20 IAMs_20 21 13 11.9
comp=Z,5μm,19.0s
DZM Mont Dzumac 40.23 17 eP P 21 00 10.6 +0.3
comp=Z,300nm,1.2s
DZM eS S 21 06 20.6 +3.3
comp=Z,3μm,27.5s
DZM eLR LR 21 11 15.7
comp=Z,13μm,25.9s,baz=203
DZM Mont Dzumac 40.23 17 P P 21 00 11.4 +1.1
comp=Z,90nm,1.1s,baz=212,slow=4.1,SNR=14
DZM LR LR 21 13 14.2
comp=Z,6μm,20.7s,baz=212,slow=31
DZM Mont Dzumac 40.23 17 P P 21 00 11.1 +0.8
DZM IAmb IAmb 21 00 12.6
comp=Z,196nm,1.3s
DZM IAMs_20 IAMs_20 21 13 03.9
comp=Z,6μm,20.0s
ASAR Alice Springs 40.38 330 P P 21 00 11.3 -0.1
comp=Z,28nm,0.8s,baz=166,slow=8.5,SNR=157
ASAR PcP PcP 21 02 13.5 -1.0
comp=Z,7.3nm,1.0s,baz=158,slow=3.3,SNR=5.7
ASAR LR LR 21 14 32.8
comp=Z,2μm,21.4s,baz=156,slow=33
ASAR Alice Springs 40.38 330 P P 21 00 09.7 -1.8
AS31 Alice Springs 40.38 330 P P 21 00 10.6 -0.9
WRKA Warakurna 40.59 322 P P 21 00 12.7 -0.4
baz=40,SNR=31
MORW Morawa 41.19 304 P P 21 00 18.0 -0.1
baz=41,SNR=5.4
MORW Morawa 41.19 304 P P 21 00 17.6 -0.5
MORW IAMs_20 IAMs_20 21 13 33.1
comp=Z,5μm,20.0s
CTA Charters Tower 41.77 348 P P 21 00 23.1 +0.3
comp=Z,34nm,1.1s,baz=173,slow=7.8,SNR=9.9
CTAO Charters Tower 41.77 348 IAMs_20 IAMs_20 21 14 34.7
comp=Z,5μm,21.0s
QIS Mount Isa 42.22 339 P P 21 00 25.9 -0.6
baz=42,SNR=10
MEEK Meekatharra 42.38 309 P P 21 00 27.3 -0.5
baz=42,SNR=15
WR0 Warramunga Arr 43.81 332 P P 21 00 37.5 -1.9
WR0 IAmb IAmb 21 00 39.7
comp=Z,110nm,1.4s
WB2 Warramunga Arr 43.87 332 P P 21 00 37.9 -1.9
WB2 IAmb IAmb 21 00 39.5
comp=Z,54nm,0.8s
WRA Warramunga Arr 43.87 332 P P 21 00 38.5 -1.3
comp=Z,32nm,0.8s,baz=161,slow=6.9,SNR=65
WRA PcP PcP 21 02 24.6 -1.4
comp=Z,11nm,1.1s,baz=171,slow=3.4,SNR=5.7
WRA LR LR 21 16 13.6
comp=Z,3μm,21.9s,baz=145,slow=32
WRA Warramunga Arr 43.87 332 P P 21 00 37.8 -2.1
WRAB Tennant Creek 43.87 332 P P 21 00 38.8 -1.2
WRAB IAmb IAmb 21 00 39.6
comp=Z,48nm,0.8s
WRAB Tennant Creek 43.87 332 deP P 21 00 38.2 -1.7
WRAB pmax pmax
comp=Z,55nm,0.8s
MTSU Mount Surprise 43.91 346 P P 21 00 40.8 +0.5
baz=44,SNR=11
WB0 Warramunga Arr 44.02 332 P P 21 00 39.8 -1.3
NVL N'lazarevskaya 45.48 196 eP P 21 00 54.6 +2.5
NVL e 21 02 39.2
NVL eS S 21 07 30.4 -2.8
NVL MLR MLR
comp=Z,6μm,12.0s
SNAA Sanae 46.20 190 P P 21 00 58.8 +0.8
SNAA Sanae 46.20 190 P P 21 00 58.5 +0.5
comp=Z,9.1nm,0.9s,baz=175,slow=9.3,SNR=11
SNAA PP PP 21 02 45.4 -0.5
comp=Z,12nm,1.0s,baz=206,slow=6.5,SNR=4.1
SNAA Sanae 46.20 190 P P 21 00 59.1 +1.1

SNAA IAmb IAmb 21 01 04.0
comp=Z,99nm,1.6s
SNAA Sanae 46.20 190c iP P 21 00 59.1 +1.1
PSAC3 Pilbara Seismi 46.52 313 IAMs_20 IAMs_20 21 17 02.5
comp=Z,6µm,20.0s
PSAA3 Pilbara Seismi 46.55 313 IAMs_20 IAMs_20 21 17 03.3
comp=Z,6µm,20.0s
PSA00 Pilbara Seismi 46.56 313 P P 21 01 01.1 -0.1
PSA00 Pilbara Seismi 46.56 313 P P 21 00 59.9 -1.3
PSA00 IAmb IAmb 21 01 11.8
comp=Z,27nm,0.8s
PSAA2 Pilbara Seismi 46.56 313 IAMs_20 IAMs_20 21 17 04.7
comp=Z,6µm,20.0s
PSAB2 Pilbara Seismi 46.57 313 IAMs_20 IAMs_20 21 17 04.8
comp=Z,6µm,20.0s
PSAB1 Pilbara Seismi 46.57 313 IAMs_20 IAMs_20 21 17 04.8
comp=Z,6µm,20.0s
PSAD1 Pilbara Seismi 46.67 313 IAMs_20 IAMs_20 21 16 57.5
comp=Z,7µm,21.0s
MSVF Nonsavu 46.75 31 IAMs_20 IAMs_20 21 16 01.9
comp=Z,4µm,21.0s
MSVF Nonsavu 46.75 31⇓eP P 21 01 02.8 0.0
MSVF pmax pmax
comp=Z,21nm,1.3s
SANVU Saraoutou 46.86 17 P P 21 01 03.2 -0.4
MBWA Marble Bar 46.98 313 IAMs_20 IAMs_20 21 17 05.7
comp=Z,5µm,20.0s
VNA3 Neumayer Olymp 47.10 187 P P 21 01 05.4 +0.5
VNA2 Neumayer--Watz 47.27 188 P P 21 01 07.5 +1.3
baz=159,slow=6.2
VNA1 Neumayer--Stat 47.60 188 P P 21 01 10.7 +1.9
GIRL Giralia 47.66 306 P P 21 01 08.8 -1.0
FITZ Fitzroy Crossi 47.92 322 P P 21 01 11.8 0.0
baz=48,SNR=17
FITZ Fitzroy Crossi 47.92 322 P P 21 01 11.8 0.0
comp=Z,67nm,1.1s,baz=171,slow=8.8,SNR=25
FITZ Fitzroy Crossi 47.92 322 P P 21 01 11.7 0.0
COEN Coen 48.17 345 P P 21 01 13.8 0.0
baz=48,SNR=8.9
COEN Coen 48.17 345 P P 21 01 13.4 -0.4
KNRA Kununurra 49.34 326 P P 21 01 22.5 -0.3
baz=49,SNR=17
KNRA Kununurra 49.34 326 P P 21 01 22.2 -0.5
KNRA IAMs_20 IAMs_20 21 20 15.5
comp=Z,5µm,19.0s
PMSA Palmer Station 50.79 160 IAMs_20 IAMs_20 21 21 18.1
comp=Z,5µm,19.0s
KDU Kakadu 51.30 332 P P 21 01 37.1 -0.5
baz=51,SNR=14
MTN Manton Dam 51.46 330 P P 21 01 38.2 -0.6
baz=51,SNR=9.6
MTN Manton Dam 51.46 330 P P 21 01 38.1 -0.7
HNR Honiara 52.10 7 P P 21 01 42.7 -0.9
comp=Z,23nm,0.3s,baz=178,slow=1.5,SNR=7.1
HNR Honiara 52.10 7 P P 21 01 43.2 -0.4
HNR Honiara 52.10 7 P P 21 01 43.2 -0.4
HNR pmax pmax
comp=Z,130nm,1.0s
HNR MLR MLR
comp=Z,6µm,21.0s
PMG Port Moresby 52.27 351 P P 21 01 45.1 +0.3
PMG Port Moresby 52.27 351 IAMs_20 IAMs_20 21 20 44.2
comp=Z,5µm,19.0s
PMG Port Moresby 52.27 351 P P 21 01 45.1 +0.3
PMG pmax pmax
comp=Z,296nm,2.0s
PMG MLR MLR
comp=Z,4µm,19.0s
AFI Afiamalu 53.30 42 P P 21 01 53.0 +0.4
comp=Z,19nm,0.7s,baz=348,slow=23,SNR=4.2
AFI Afiamalu 53.30 42 P P 21 01 52.8 +0.3
AFI IAmb IAmb 21 01 54.4
comp=Z,60nm,1.2s
TBI Tubuai 53.65 71 eS S 21 09 30.5 +2.1
comp=Z,1µm,28.8s
TBI eLQ LQ 21 14 27.2
comp=Z,5µm,28.5s
TBI eLR LR 21 17 11.4
comp=Z,3µm,28.2s,baz=205
TBI Tubuai 53.65 71 eT T 21 59 35.9
comp=Z,165nm,0.3s
SAUI Saumlaki 56.12 332 IAMs_20 IAMs_20 21 25 15.0
comp=Z,3µm,18.0s
SOEI Soe 56.23 323 P P 21 02 12.2 -1.6
comp=Z,87nm,1.2s
SOEI Soe 56.23 323 P P 21 02 13.4 -0.4
SOEI IAMs_20 IAMs_20 21 24 51.6
comp=Z,3µm,20.0s
PAE Paea 58.56 68 eT T 22 05 43.4
comp=Z,4.8nm,0.3s
TVO Taravao 58.60 68 eT T 22 05 46.4
comp=Z,4.7nm,0.3s
PPT2 Papeete2 58.62 68 eS S 21 10 37.0 +2.2
comp=Z,1µm,27.0s
PPT2 eLQ LQ 21 17 08.4
comp=Z,7µm,25.2s
PPT2 eLR LR 21 19 41.2
comp=Z,4µm,27.0s,baz=202
PPT2 Papeete2 58.62 68 eT T 22 05 49.0
comp=Z,8.3nm,0.3s
PPT Papeete 58.64 68 LR LR 21 24 01.2
comp=Z,1µm,18.2s,baz=213,slow=32
MEH Mehetia 59.05 69 eT T 22 06 20.4
comp=Z,35nm,0.3s
PLAI Plampang 59.11 316 P P 21 02 34.4 +0.4
comp=Z,1µmcomp=Z,48nm,1.4s
IGBI Denpasar 60.02 314 P P 21 02 42.9 +2.7
FAKI Fak Fak 60.82 334 P P 21 02 45.5 -0.2
comp=Z,1µmcomp=Z,2µmcomp=Z,221nm,1.1s
FAKI Fak Fak 60.82 334 P P 21 02 45.7 0.0
AAI Ambon 60.99 329 P P 21 02 45.1 -1.8
comp=Z,33nm,1.2s
GMJI Gumukmas 61.12 312 P P 21 02 45.1 -2.7
comp=Z,45nm,2.2s
MSAI Masohi 61.15 330 P P 21 02 46.1 -1.8
comp=Z,10nm,0.8s
GO09 Cerro Castillo 61.52 149 P P 21 02 53.1 +3.0
GO09 IAmb IAmb 21 02 55.0
comp=Z,60nm,1.1s
VAH Vaihoa 61.56 68 eT T 22 09 28.3
comp=Z,146nm,0.2s
BKSI Bulukumba 61.66 320 P P 21 02 48.3 -3.1
comp=Z,733nmcomp=Z,34nm,1.2s
NLAI Namlea 61.70 328 P P 21 02 50.8 -0.8
comp=Z,169nm,1.2s
KDI Kendari 62.21 323 P P 21 02 55.4 +0.3
comp=Z,67nm,1.1s
BNSI Bone 62.54 320 P P 21 02 56.1 -1.2
comp=Z,1µmcomp=Z,26nm,1.4s
SWI Sorong 63.02 334 P P 21 02 59.5 -1.0
comp=Z,773nmcomp=Z,44nm,1.0s
SPSI Sidrap Palu 63.05 320 P P 21 03 00.4 -0.3
comp=Z,960nmcomp=Z,55nm,1.3s
SANI Sanana 63.12 328 P P 21 02 59.6 -1.6
EFI East Falkland 64.22 158 IAMs_20 IAMs_20 21 25 39.5
comp=Z,2µm,19.0s
PMBI Palembang 69.29 305 IAMs_20 IAMs_20 21 28 11.4
comp=Z,2µm,21.0s
TAOE Nuku Hiva Isla 70.57 72 eLR LR 21 24 58.3
comp=Z,2µm,26.7s
KSM Kuching 71.28 313 P P 21 03 52.6 -0.4
KSM IAmb IAmb 21 03 54.4
comp=Z,55nm,1.3s
KSM Kuching 71.28 313 P P 21 03 54.0 +1.1
SBUM Sibu 71.53 315 P P 21 03 53.4 -1.0
SBUM Sibu 71.53 315 P P 21 03 55.0 +0.6
PLCA Paso Flores 71.75 145 P P 21 03 56.4 +0.8
comp=Z,6.5nm,0.8s,baz=241,slow=6.0,SNR=10
PLCA LR LR 21 29 24.2
comp=Z,2µm,19.4s,baz=232,slow=31
PLCA Paso Flores 71.75 145 P P 21 03 56.5 +0.8
PLCA Paso Flores 71.75 145 P P 21 03 56.5 +0.8
PLCA pmax pmax
comp=Z,13nm,1.0s
KKM Kota Kinabalu 73.61 320 P P 21 04 06.0 -0.8
KKM IAmb IAmb 21 04 07.5
comp=Z,36nm,1.0s
MYKOM Kota Tinggi 73.97 306 P P 21 04 08.6 -0.3
MYKOM IAmb IAmb 21 04 22.9
comp=Z,50nm,1.4s
MYKOM Kota Tinggi 73.97 306 P P 21 04 10.0 +1.1
RPSI Rantau Prapat 76.75 302 P P 21 04 23.7 -1.2
PSI Prapat 76.84 302 P P 21 04 23.7 -1.9
PSI pmax pmax
comp=Z,34nm,1.4s
PSI MLR MLR
comp=Z,2µm,21.0s
IPM Ipoh 77.53 305 P P 21 04 28.5 -0.8
ANA2 Anatahan 77.89 351 P P 21 04 29.4 -1.8
SARN Sarigan 78.24 351 IAMs_20 IAMs_20 21 35 18.3
comp=Z,2µm,21.0s
KULM Kulim 78.42 305 P P 21 04 33.6 -0.6
KULM IAmb IAmb 21 04 38.6
comp=Z,82nm,1.4s
PEL Peldehue 78.80 143 P P 21 04 36.0 -0.3
PEL IAmb IAmb 21 04 38.0
comp=Z,79nm,1.7s
PEL Peldehue 78.80 143 P P 21 04 36.0 -0.3
PEL pmax pmax
comp=Z,79nm,1.7s
H08S2 Diego Garcia H 79.56 273 T T 22 32 19.2
baz=151,slow=76,SNR=28
H08S1 Diego Garcia H 79.57 273 T T 22 32 19.1
baz=151,slow=76,SNR=22
H08S3 Diego Garcia H 79.58 273 T T 22 32 18.0
baz=151,slow=76,SNR=87
BOSA Boshof 81.34 223 P P 21 04 51.9 +1.7
comp=Z,3.1nm,0.8s,baz=140,slow=8.7,SNR=4.3
BOSA LR LR 21 39 21.1
comp=Z,2µm,18.7s,baz=156,slow=34
BOSA Boshof 81.34 223 P P 21 04 48.4 -1.8
BOSA IAmb IAmb 21 05 03.2
comp=Z,42nm,1.4s
GO04 Tololo Observa 81.55 141 IAMs_20 IAMs_20 21 36 33.3
comp=Z,1µm,19.0s
GO03 Copiap 84.13 141 P P 21 05 04.7 +0.1
GO03 IAmb IAmb 21 05 05.8
comp=Z,23nm,1.1s
GO02 Mina Guanaco 86.60 141 P P 21 05 17.6 +0.2
GO02 IAmb IAmb 21 05 54.0
comp=Z,38nm,1.5s
QIZ Qiongzhong 87.83 318 P P 21 05 22.3 -0.3
QIZ S S 21 16 06.8 +1.7
QIZ SS SS 21 21 51.9 -0.7
QIZ LR LR
comp=Z,1µm,20.2s
QIZ LR LR
comp=Z,2µm,23.9s
QIZ LR LR
comp=Z,790nm,23.5s
PBKT Sadao Pong 88.61 309 P P 21 05 24.9 -1.5
CPUP Villa Florida 88.76 152 P P 21 05 26.9 -0.4
comp=Z,5.2nm,0.9s,baz=188,slow=5.2,SNR=7.3
CPUP LR LR 21 41 59.3
comp=Z,1µm,19.0s,baz=196,slow=33
CPUP Villa Florida 88.76 152 P P 21 05 27.9 +0.7
CPUP Villa Florida 88.76 152 P P 21 05 27.9 +0.7
CPUP pmax pmax
comp=Z,11nm,1.1s
LVC Limon Verde 89.21 140 P P 21 05 30.2 +0.4
LVC IAmb IAmb 21 05 32.0
comp=Z,19nm,0.9s
LVC Limon Verde 89.21 140 P P 21 05 30.2 +0.4
LVC pmax pmax
comp=Z,19nm,1.0s
MSEY Mahe Island 90.28 260 IAMs_20 IAMs_20 21 38 50.7
comp=Z,1µm,20.0s
PB01 IPOC Station P 90.50 139 IAMs_20 IAMs_20 21 37 17.6
comp=Z,2µm,20.0s
CM31 Chiang Mai Arr 91.10 308 P P 21 05 37.2 -0.8
CMAR Chiang Mai Arr 91.10 308 P P 21 05 38.4 +0.3
comp=Z,2.3nm,1.0s,baz=188,slow=4.3,SNR=18
CMAR LR LR 21 45 05.8
comp=Z,721nm,19.3s,baz=156,slow=35
CHTO Chiang Mai 91.42 309 P P 21 05 39.4 -0.1
CHTO Chiang Mai 91.42 309 P P 21 05 39.4 -0.1
CHTO pmax pmax
comp=Z,8.0nm,1.1s
CHTO MLR MLR
comp=Z,900nm,21.0s
PB11 IPOC Station P 91.65 139 P P 21 05 41.5 +0.5
PB11 IAmb IAmb 21 05 56.7
comp=Z,20nm,0.9s
PB11 IAMs_20 IAMs_20 21 37 28.1
comp=Z,2µm,20.0s
GO01 Chusmiza 91.88 139 P P 21 05 43.3 +0.8
GO01 IAMs_20 IAMs_20 21 38 00.2
comp=Z,2µm,20.0s
MNMC Minye Minye 92.26 139 P P 21 05 44.8 +0.8
SPB Sao Paulo 93.38 160 IAMs_20 IAMs_20 21 45 01.3
comp=Z,1µm,20.0s
LPAZ La Paz 95.39 139 P P 21 05 58.5 -0.3
comp=Z,2.9nm,0.9s,baz=161,slow=2.1,SNR=7.4
LPAZ LR LR 21 39 31.9
comp=Z,1µm,21.8s,baz=156,slow=30
LPAZ La Paz 95.39 139 P P 21 05 58.1 -0.7
LPAZ La Paz 95.39 139 eP P 21 05 59.4 +0.6
GYA Guiyang 95.78 318 P P 21 06 06.3 +6.8
GYA S S 21 17 23.4 +6.4
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,190nm,7.6s
GYA LR LR
comp=Z,500nm,17.5s
GYA LR LR
comp=Z,330nm,16.5s
GYA LR LR
comp=Z,650nm,18.1s
NNA Nana 96.41 130 IAMs_20 IAMs_20 21 40 29.7
comp=Z,1µm,20.0s
WHN Wuhan 97.34 326 P P 21 06 04.3 -2.0
NJ2 Nanjing 97.62 330 eP Pdif 21 06 09.5 +1.8
NJ2 S S 21 17 35.9 +3.6
NJ2 pmax pmax
comp=Z,14nm,1.1s
NJ2 LR LR
comp=Z,1µm,13.3s
NJ2 LR LR
comp=Z,720nm,11.4s
NJ2 LR LR
comp=Z,880nm,17.1s
MJAR Matsushiro Arr 98.59 347 LR LR 21 48 03.3
comp=Z,491nm,21.2s,baz=165,slow=34
CD2 Chengdu 100.84 317 P Pdif 21 06 23.0 +0.9
CD2 PP PP 21 10 35.9 +5.5
CD2 SKS SKSac 21 17 05.1 +4.4
CD2 S Sdif 21 18 00.5 +0.9
CD2 SS SS 21 25 02.6 +4.4
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,190nm,6.9s
CD2 LR LR
comp=Z,960nm,25.0s
CD2 LR LR
comp=Z,2µm,25.0s
CD2 LR LR
comp=Z,870nm,19.1s
KSRS Korea Array 100.96 339 PP PP 21 10 27.4 -3.8
comp=Z,0.6nm,0.6s,baz=177,slow=10.0,SNR=4.7
BDFB Brasilia 101.05 158 IAMs_20 IAMs_20 21 49 47.6
comp=Z,1µm,20.0s
SAML Samuel 103.83 141 IAMs_20 IAMs_20 21 48 54.7
comp=Z,895nm,19.0s
MBAR Mbarara 104.97 239 IAMs_20 IAMs_20 21 50 58.2
comp=Z,1µm,21.0s
LZH Lanzhou 105.58 319 ePdif Pdif 21 06 46.1 +2.9
LZH PP PP 21 11 10.9 +4.9
LZH S Sdif 21 18 39.4 +0.2
LZH SS SS 21 26 06.2 +2.4
LZH AMB AMB
comp=Z,260nm,8.7s
LZH LR LR
comp=Z,520nm,17.3s
LZH LR LR
comp=Z,620nm,19.0s
LZH LR LR
comp=Z,650nm,20.0s
SOCY Socotra 105.69 267 IAMs_20 IAMs_20 21 44 54.6
comp=Z,1µm,20.0s
GTA Gaotai 109.91 318 ePKP PKiKP 21 11 02.5 -1.7
GTA PP PP 21 11 41.7 +4.2
GTA SS SS 21 27 06.2 +4.0
GTA AMB AMB
comp=Z,190nm,10.5s
GTA LR LR
comp=Z,390nm,20.0s
GTA LR LR
comp=Z,450nm,21.3s
GTA LR LR
comp=Z,440nm,20.3s
KLR Kul'dur 111.88 344⇓iPKIKP PKiKP 21 11 06.8 -0.6
DAMY Dhamar 112.33 259 IAMs_20 IAMs_20 21 48 20.6
comp=Z,832nm,20.0s
JTS Las Juntas de 113.26 113 IAMs_20 IAMs_20 21 48 05.9
comp=Z,1µm,20.0s
UOSS Minazif 115.57 275 IAMs_20 IAMs_20 21 49 31.6
comp=Z,906nm,22.0s
HSIG 117.13 79 IAMs_20 IAMs_20 22 00 11.2
comp=Z,753nm,18.0s
109C Camp Elliot, M 117.52 72 IAMs_20 IAMs_20 21 52 35.2
comp=Z,937nm,19.0s
BAR Barrett 117.55 72 IAMs_20 IAMs_20 21 51 40.9
comp=Z,932nm,19.0s
SDV Santo Domingo 117.94 127 IAMs_20 IAMs_20 21 52 12.4
comp=Z,969nm,22.0s
WMQ Urumqi 117.98 311 ePKP PKiKP 21 11 20.8 +1.4
WMQ LR LR
comp=Z,750nm,24.1s
WMQ LR LR
comp=Z,710nm,25.3s
PFO Pinyon Flats O 118.42 72 IAMs_20 IAMs_20 21 56 48.1
comp=Z,1µm,18.0s
PFO Pinyon Flats O 118.42 72⇓iPKIKP PKiKP 21 11 22.4 +1.7
XPFO Pion Flat 118.42 72 IAMs_20 IAMs_20 21 56 49.1
comp=Z,1µm,18.0s
PMPB Monarch Peak 118.66 67 IAMs_20 IAMs_20 21 59 13.0
comp=Z,1µm,18.0s
GLA Glamis 118.70 73 IAMs_20 IAMs_20 21 53 50.6
comp=Z,875nm,20.0s
214A Organ Pipe Nat 118.72 76 IAMs_20 IAMs_20 21 56 10.3
comp=Z,763nm,18.0s
SAO San Andreas Ge 118.83 66 IAMs_20 IAMs_20 22 01 38.6
comp=Z,987nm,18.0s
ISA Isabella, Lake 119.23 69 IAMs_20 IAMs_20 21 52 14.2
comp=Z,1µm,20.0s
Y12C Blythe 119.42 73 IAMs_20 IAMs_20 21 54 20.7
comp=Z,752nm,20.0s
GSC Goldstone, Bar 119.67 70 IAMs_20 IAMs_20 21 54 38.2
comp=Z,1µm,19.0s
319A Douglas 119.89 79 IAMs_20 IAMs_20 21 58 00.2
comp=Z,726nm,19.0s
GDXM Geysers 119.95 63 IAMs_20 IAMs_20 21 57 36.3
comp=Z,1µm,18.0s
TUC Tucson 119.96 77 IAMs_20 IAMs_20 21 56 43.0
comp=Z,781nm,18.0s
HOPS Hopland Field 119.99 63 IAMs_20 IAMs_20 21 57 17.2
comp=Z,1µm,18.0s
KCPM Cahto Peak 120.35 62 IAMs_20 IAMs_20 21 53 07.7
comp=Z,937nm,20.0s
CMB Columbia Colle 120.36 66 IAMs_20 IAMs_20 21 55 39.0
comp=Z,770nm,20.0s
HRA Herat 120.64 286 PKPdf 21 11 24.8 -0.3
W13A Hualapai Mount 120.83 73 IAMs_20 IAMs_20 21 58 09.1
comp=Z,881nm,18.0s
JCC Jacoby Creek, 121.11 61 IAMs_20 IAMs_20 22 11 11.6
comp=Z,924nm,18.0s
WAKR Walker 121.16 66 IAMs_20 IAMs_20 21 56 07.3
comp=Z,993nm,20.0s
KHMM Horse Mountain 121.28 61 IAMs_20 IAMs_20 21 54 43.1
comp=Z,875nm,20.0s
X16A Lo Mia Camp, P 121.40 75 IAMs_20 IAMs_20 21 58 24.1
comp=Z,804nm,18.0s
SHPR Sheep Range 121.42 71 IAMs_20 IAMs_20 21 55 33.4
comp=Z,1µm,19.0s
BTK Batken 121.50 297 PKPdf 21 11 25.7 -0.7
BTK Batken 121.50 297 PKIKP PKPdf 21 11 25.7 -0.7
BTK MLR MLR
comp=Z,500nm,21.0s
EPT El Paso 121.53 81 IAMs_20 IAMs_20 21 58 37.7
comp=Z,908nm,18.0s
WDC Whiskeytown Da 121.54 62 IAMs_20 IAMs_20 21 53 59.4
comp=Z,919nm,20.0s
121A Cookes Peak, D 121.55 79 IAMs_20 IAMs_20 21 54 44.3
comp=Z,899nm,20.0s
PNTR Pine Nut 121.57 66 IAMs_20 IAMs_20 21 56 47.2
comp=Z,869nm,19.0s
NVAR Mina Array Bea 121.60 67 PKP PKPdf 21 11 25.7 -1.0
comp=Z,0.4nm,0.7s,baz=202,slow=4.6,SNR=3.0
YERR Yerington 121.64 66 IAMs_20 IAMs_20 21 56 31.1
comp=Z,768nm,20.0s
VCNR Virginia City 121.72 65 IAMs_20 IAMs_20 21 56 51.1
comp=Z,770nm,20.0s
MNTX Cornudas Mount 122.00 82 IAMs_20 IAMs_20 21 54 16.2
comp=Z,1µm,19.0s
AAK Ala-Archa 122.09 301⇑iPKIKP PKPdf 21 11 27.5 0.0
PAHR Pah Rah Range 122.18 65 IAMs_20 IAMs_20 21 55 16.2
comp=Z,710nm,20.0s
X18A Snowflake 122.18 76 IAMs_20 IAMs_20 21 56 16.1
comp=Z,845nm,20.0s
KVN Kaiserville 122.20 67 PKiKP 21 11 28.9 +0.9
KVN IAMs_20 IAMs_20 21 56 54.8
comp=Z,789nm,20.0s
KVN Kaiserville 122.20 67 PKIKP PKiKP 21 11 28.9 +0.9
KVN MLR MLR
comp=Z,800nm,20.0s
YBH Yreka Blue Hor 122.42 62 IAMs_20 IAMs_20 21 53 25.3
comp=Z,826nm,22.0s
MK31 Makanchi Array 122.50 309 PKPdf 21 11 27.2 -0.8
MK31 Makanchi Array 122.50 309 PKIKP PKPdf 21 11 27.2 -0.8
MKAR Makanchi Array 122.50 309 PKP PKPdf 21 11 26.4 -1.5
comp=Z,2.8nm,1.1s,baz=134,slow=3.5,SNR=12
MAKZ Makanchi 122.63 309 PKPdf 21 11 26.8 -1.4
MAKZ Makanchi 122.63 309 PKIKP PKPdf 21 11 26.8 -1.4
MAKZ MLR MLR
comp=Z,400nm,21.0s
U15A North Rim 122.66 73 IAMs_20 IAMs_20 21 51 55.4
comp=Z,828nm,22.0s
R11A Troy Canyon, C 122.74 69 IAMs_20 IAMs_20 21 54 19.3
comp=Z,1µm,20.0s
W18A Petrified Fore 122.77 76 IAMs_20 IAMs_20 21 56 45.4
comp=Z,755nm,20.0s
HUMO Hull Mountain 123.04 61 PKiKP 21 11 30.6 +1.3
CCUT Cedar City 123.09 71 PKPdf 21 11 27.1 -2.6
BOD Bodaibo 123.11 335 ePKIKP PKPdf 21 11 24.2 -4.5
BOD pmax pmax
comp=Z,7.0nm,2.0s
DBIC Dimbokro 123.20 205 PKP PKPdf 21 11 28.5 -1.8
comp=Z,2.4nm,0.7s,baz=169,slow=5.2,SNR=5.7
MTDJ Mount Denham 123.55 116 IAMs_20 IAMs_20 21 54 05.4
comp=Z,892nm,21.0s
MOD Modoc Plateau 123.58 63 IAMs_20 IAMs_20 21 56 34.2
comp=Z,750nm,20.0s
KK31 Karatay Array 124.14 298 PKPdf 21 11 30.1 -1.1
KK31 Karatay Array 124.14 298 PKIKP PKPdf 21 11 30.1 -1.1
KKAR Karatay Array 124.14 298 PKPdf 21 11 29.8 -1.4
KKAR Karatay Array 124.14 298 PKPdf 21 11 30.2 -1.0
KKAR Karatay Array 124.14 298 PKIKP PKPdf 21 11 30.2 -1.0
ANMO Albuquerque 124.16 79 IAMs_20 IAMs_20 22 00 23.4
comp=Z,743nm,20.0s
COR Corvallis 124.51 59 IAMs_20 IAMs_20 21 55 12.6
comp=Z,877nm,21.0s
YAK Yakutsk 124.65 346⇑ePKIKP PKPdf 21 11 31.0 -0.5
YAK pmax pmax
comp=Z,22nm,0.7s
WVOR Wild Horse Val 124.73 64 PKiKP 21 11 33.0 +0.2
WVOR Wild Horse Val 124.73 64 PKIKP PKiKP 21 11 33.0 +0.2
WVOR MLR MLR
comp=Z,600nm,20.0s
PINE Pine Mountain 124.85 61 PKiKP 21 11 34.0 +0.8
Q16A Castle Valley 125.20 72 PKPpre 21 11 22.8
GEYT Alibeck 125.45 285 PKP PKPdf 21 11 33.7 -0.2
comp=Z,3.1nm,1.0s,baz=226,slow=3.8,SNR=5.3
GYA0B ALIBECK ARRAY 125.45 285 IAMs_20 IAMs_20 22 00 14.8
comp=Z,1µm,20.0s
DUG Dugway, Tooele 125.49 70 IAMs_20 IAMs_20 21 54 36.2
comp=Z,818nm,21.0s
ABTX Abilene, Hawle 125.50 86 IAMs_20 IAMs_20 21 55 27.1
comp=Z,1µm,21.0s
KDAK Kodiak Island 125.84 32 IAMs_20 IAMs_20 21 54 11.8
comp=Z,1µm,19.0s
S22A 4UR Ranch, Cre 126.26 76 IAMs_20 IAMs_20 22 01 06.9
comp=Z,763nm,18.0s
AMTX Amarillo 126.37 83 IAMs_20 IAMs_20 22 00 28.9
comp=Z,978nm,19.0s
NLWA Neilton Lookou 126.56 57 IAMs_20 IAMs_20 22 19 11.7
comp=Z,1µm,22.0s
MFID Camas Ranch 126.74 65 IAMs_20 IAMs_20 22 00 60.0
comp=Z,615nm,18.0s
SDCO Great Sand Dun 126.88 78 IAMs_20 IAMs_20 21 58 55.4
comp=Z,711nm,19.0s
T25A Trinidad 126.91 79 IAMs_20 IAMs_20 21 58 54.1
comp=Z,724nm,20.0s
KURK Kurchatov 127.11 309 PKPdf 21 11 33.9 -2.7
KURK Kurchatov 127.11 309d iPKIKP PKPdf 21 11 36.6 0.0
KURK pmax pmax
comp=Z,49nm,1.3s
BMO Blue Mountains 127.25 63 IAMs_20 IAMs_20 22 04 09.3
comp=Z,802nm,20.0s

SMCO Snowmass 127.35 75 IAMs_20 IAMs_20 22 04 36.5
comp=Z,750nm,18.0s
GAMB Gambell 127.49 18 PKPdf 21 11 36.2 -0.6
HAWA Hanford 127.54 61 IAMs_20 IAMs_20 21 58 56.7
comp=Z,762nm,21.0s
ZALV Zalesovo Beam 127.57 316 PKP PKPdf 21 11 35.4 -1.9
comp=Z,0.7nm,0.8s,baz=166,slow=0.6,SNR=4.5
ZALV Zalesovo Beam 127.57 316 PKPdf 21 11 34.8 -2.5
WMOK Wichita Mounta 127.64 85 IAMs_20 IAMs_20 21 56 13.7
comp=Z,1μm,21.0s
TOA0 Torodi Ar. Sit 127.91 214 PKPdf 21 11 38.7 -0.6
TORD Torodi Ar. Bea 127.91 214 PKP PKPdf 21 11 39.0 -0.3
comp=Z,2.3nm,0.9s,baz=212,slow=0.5,SNR=9.0
Q24A Divide 128.03 77 IAMs_20 IAMs_20 22 00 06.6
comp=Z,726nm,20.0s
DIB Dawson Inlet, 128.03 47 IAMs_20 IAMs_20 21 58 25.8
comp=Z,949nm,21.0s
SVW2 Sparrevohn 128.06 28 IAMs_20 IAMs_20 21 59 06.2
comp=Z,1μm,20.0s
ISCO Idaho Springs 128.47 76 IAMs_20 IAMs_20 22 02 54.5
comp=Z,731nm,20.0s
SKI Saint Kitts 128.62 132 IAMs_20 IAMs_20 21 59 18.3
comp=Z,879nm,20.0s
OKCFA Oklahoma City 128.82 86 IAMs_20 IAMs_20 21 59 03.1
comp=Z,1μm,20.0s
PDAR Pinedale Array 129.01 71 PKP PKPdf 21 11 40.2 -0.6
comp=Z,0.7nm,0.9s,baz=235,slow=5.2,SNR=4.9
PDAR Pinedale Array 129.01 71 PKPdf 21 11 39.9 -1.0
FXWY Fox Creek 129.04 69 PKPdf 21 11 41.0 +0.1
SMRT St. Maarten 129.16 131 IAMs_20 IAMs_20 22 05 10.6
comp=Z,667nm,19.0s
N23A Red Feather La 129.19 75 IAMs_20 IAMs_20 22 08 23.3
comp=Z,649nm,18.0s
RWWY Rawlins 129.23 73 IAMs_20 IAMs_20 22 01 01.4
comp=Z,746nm,21.0s
ANM Nome 129.25 21 PKPdf 21 11 40.5 +0.3
ANM IAMs_20 IAMs_20 21 58 06.2
comp=Z,853nm,22.0s
ANM Nome 129.25 21 PKIKP PKPdf 21 11 40.5 +0.3
ANM MLR MLR
comp=Z,900nm,22.0s
MOOW Moose Ponds 129.25 69 PKPdf 21 11 41.5 +0.3
RC01 Rabbit Creek A 129.44 31 IAMs_20 IAMs_20 21 57 12.0
comp=Z,905nm,22.0s
BILL Bilibino 129.51 6 ⇑ePKIKP PKPdf 21 11 39.9 -0.7
BILL e 21 13 54.7
BILL eSS SS 21 31 17.4 +3.8
BILL pmax pmax
comp=Z,9.0nm,1.5s
SUA Susitna One 129.51 31 IAMs_20 IAMs_20 21 57 12.9
comp=Z,978nm,22.0s
DLMT Dillon 129.70 66 IAMs_20 IAMs_20 21 59 20.3
comp=Z,815nm,22.0s
SKT Skwentna 129.77 30 IAMs_20 IAMs_20 21 58 45.7
comp=Z,1μm,22.0s
LLLB Lillooet 129.92 56 IAMs_20 IAMs_20 21 59 14.4
comp=Z,687nm,20.0s
GLI Glacier Island 129.93 33 IAMs_20 IAMs_20 21 59 04.2
comp=Z,758nm,21.0s
EYAK Cordova Ski Ar 130.01 34 IAMs_20 IAMs_20 22 02 09.2
comp=Z,847nm,20.0s
TUL1 Leonard 130.02 87 IAMs_20 IAMs_20 21 58 20.8
comp=Z,1μm,22.0s
NEW Newport 130.02 61 IAMs_20 IAMs_20 21 58 29.5
comp=Z,784nm,21.0s
PMR Palmer 130.02 31 IAMs_20 IAMs_20 22 03 21.4
comp=Z,749nm,20.0s
RAGM Ragged Mountai 130.16 35 IAMs_20 IAMs_20 22 00 46.3
comp=Z,940nm,20.0s
MSO Missoula 130.26 64 IAMs_20 IAMs_20 22 05 53.9
comp=Z,1μm,18.0s
K22A Casper 130.31 73 IAMs_20 IAMs_20 22 01 31.7
comp=Z,639nm,20.0s
SML Sawmill 130.41 32 IAMs_20 IAMs_20 22 02 04.6
comp=Z,775nm,20.0s
PPLA Purkeypile 130.41 29 IAMs_20 IAMs_20 22 00 44.5
comp=Z,749nm,20.0s
CBKS Cedar Bluff 130.46 81 IAMs_20 IAMs_20 22 00 58.1
comp=Z,918nm,19.0s
WRAK Wrangell Islan 130.67 44 IAMs_20 IAMs_20 22 01 12.4
comp=Z,1μm,21.0s
CRQM Cirque 130.89 35 IAMs_20 IAMs_20 22 00 23.9
comp=Z,820nm,22.0s
TGL Tana Glacier 130.98 35 IAMs_20 IAMs_20 21 59 54.9
comp=Z,705nm,19.0s
OGNE Ogallala 131.05 78 IAMs_20 IAMs_20 22 04 08.8
comp=Z,868nm,19.0s
VRDI Verde Repeater 131.20 35 IAMs_20 IAMs_20 21 56 51.6
comp=Z,785nm,22.0s
KTH Kantishna Hill 131.27 29 IAMs_20 IAMs_20 22 00 00.3
comp=Z,834nm,21.0s
GLB Gilahina Butte 131.28 34 IAMs_20 IAMs_20 22 00 36.8
comp=Z,906nm,21.0s
TRF Thorofare Moun 131.33 29 PKPdf 21 11 43.3 -1.2
TRF IAMs_20 IAMs_20 21 59 49.9
comp=Z,1μm,22.0s
BALM Baldy 131.34 35 IAMs_20 IAMs_20 22 00 34.6
comp=Z,742nm,22.0s
JIS Juneau Island 131.48 42 IAMs_20 IAMs_20 22 07 46.7
comp=Z,972nm,19.0s
CTGM Chitina Glacie 131.57 36 IAMs_20 IAMs_20 21 58 36.5
comp=Z,1μm,22.0s
RND Reindeer 131.64 30 PKPdf 21 11 43.9 -1.0
RND IAMs_20 IAMs_20 21 59 54.0
comp=Z,752nm,22.0s
RND Reindeer 131.64 30 PKIKP PKPdf 21 11 43.9 -1.0
RND MLR MLR
comp=Z,800nm,22.0s
BPAW Bear Paw Mtn. 131.73 29 PKPdf 21 11 43.7 -1.3
BPAW IAMs_20 IAMs_20 22 02 52.2
comp=Z,687nm,21.0s
MCK McKinley 131.89 30 PKPdf 21 11 45.2 -0.1
MCK IAMs_20 IAMs_20 22 00 48.8
comp=Z,654nm,18.0s
MCK McKinley 131.89 30 PKIKP PKPdf 21 11 45.2 -0.1
MCK MLR MLR
comp=Z,700nm,18.0s
PAX Paxson 132.11 32 IAMs_20 IAMs_20 22 07 21.7
comp=Z,684nm,20.0s
BWN Browne 132.14 29 IAMs_20 IAMs_20 22 01 48.3
comp=Z,846nm,22.0s
NEA Nenana 132.57 29 PKPdf 21 11 46.0 -0.6
NEA IAMs_20 IAMs_20 22 09 49.1
comp=Z,696nm,20.0s
MLY Manley 132.58 28 IAMs_20 IAMs_20 22 01 53.7
comp=Z,786nm,21.0s
RSSD Black Hills 132.59 74 IAMs_20 IAMs_20 22 03 07.4
comp=Z,658nm,20.0s
WRH Wood River Hil 132.72 30 PKPdf 21 11 45.9 -0.9
WRH IAMs_20 IAMs_20 22 00 49.6
comp=Z,978nm,21.0s
IMAR Indian Mountai 132.74 26 PKPdf 21 11 46.5 -0.3
RDOG Red Dog Mine 132.84 20 IAMs_20 IAMs_20 22 01 07.3
comp=Z,1μm,22.0s
CCB Clear Creek Bu 132.93 30 PKPdf 21 11 45.6 -1.6
CCB IAMs_20 IAMs_20 22 00 55.2
comp=Z,742nm,21.0s
HDA Harding Lake 132.94 30 PKPdf 21 11 45.8 -1.5
HDA IAMs_20 IAMs_20 22 03 06.5
comp=Z,828nm,21.0s
EGMT Eagleton 133.00 66 IAMs_20 IAMs_20 22 04 07.5
comp=Z,848nm,19.0s
DOT Dot Lake 133.03 32 IAMs_20 IAMs_20 22 05 08.0
comp=Z,652nm,20.0s
COLA College 133.11 30 IAMs_20 IAMs_20 22 01 00.9
comp=Z,726nm,21.0s
BCAR Beaver Creek A 133.16 34 PKPdf 21 11 47.3 -0.5
WHY Whitehorse 133.22 40 IAMs_20 IAMs_20 22 04 09.4
comp=Z,1μm,20.0s
BGNE Belgrade 133.24 80 IAMs_20 IAMs_20 22 01 00.9
comp=Z,896nm,20.0s
IL31 Eielson Array 133.26 30 PKPdf 21 11 46.8 -0.9
ILAR Eielson Array 133.26 30 PKP PKPdf 21 11 46.8 -1.1
comp=Z,3.2nm,1.0s,baz=267,slow=3.2,SNR=17
ILAR Eielson Array 133.26 30 PKPdf 21 11 45.7 -2.2
SACV Santiago Islan 133.53 182 IAMs_20 IAMs_20 22 04 33.4
comp=Z,1μm,22.0s
TIXI Tiksi 134.05 349 ⇓ePKIKP PKPdf 21 11 48.1 -1.0
DAWY Dawson 134.60 34 PKiKP 21 11 51.3 -0.5
DAWY IAMs_20 IAMs_20 22 02 57.7
comp=Z,856nm,21.0s
EGAK Eagle 134.70 33 IAMs_20 IAMs_20 22 12 01.1
comp=Z,704nm,19.0s
FYU Fort Yukon 135.12 29 IAMs_20 IAMs_20 22 02 21.1
comp=Z,808nm,22.0s
SUSD Miller 135.19 77 IAMs_20 IAMs_20 22 08 29.3
comp=Z,686nm,20.0s

ECSD EROS Data Cent 135.76 80 IAMs_20 IAMs_20 22 04 20.3
comp=Z,801nm,20.0s
TOLK Toolik Lake Re 135.86 26 PKPdf 21 11 52.7 0.0
BMAR Burnt Mountain 135.97 29 PKPdf 21 11 52.2 -0.8
P43A Skaggs, Pawnee 135.99 89 IAMs_20 IAMs_20 22 06 36.9
comp=Z,791nm,19.0s
N41A Harden Midland 136.18 87 IAMs_20 IAMs_20 22 02 12.9
comp=Z,711nm,20.0s
NCK Nalchik 136.63 278 ⇑ePKIKP PKPdf 21 11 54.6 -0.3
KBZ Khabaz 137.14 278 PKP PKPdf 21 11 55.5 -0.2
comp=Z,2.0nm,1.0s,baz=174,slow=9.2,SNR=2.4
R50A Paris 137.41 95 IAMs_20 IAMs_20 22 11 03.6
comp=Z,632nm,20.0s
KIV Kislovodsk 137.41 278 i PKIKP PKPdf 21 11 55.7 -0.7
KIV pmax pmax
comp=Z,18nm,1.1s
KIV MLR MLR
comp=Z,701nm,24.0s
MDND Maddock 137.43 73 IAMs_20 IAMs_20 22 01 21.2
comp=Z,744nm,21.0s
D32A Dogwood Acres, 138.10 76 IAMs_20 IAMs_20 22 06 34.3
comp=Z,941nm,20.0s
BRTR Keskin Array B 138.50 266 PKP PKPdf 21 11 58.7 +0.1
comp=Z,2.2nm,1.0s,baz=159,slow=3.8,SNR=8.2
BRTR Keskin Array B 138.50 266 PKPdf 21 11 58.9 +0.3
BRTR Keskin Array B 138.50 266 PKIKP PKPdf 21 11 58.9 +0.3
BR131 Keskin Array S 138.50 266 PKPdf 21 11 59.5 +0.9
BR131 Keskin Array S 138.50 266 PKIKP PKPdf 21 11 59.5 +0.9
SPMN Marine on St. 138.68 81 IAMs_20 IAMs_20 22 06 27.7
comp=Z,772nm,20.0s
SVE Sverdlovsk 138.69 304 ePKIKP PKPdf 21 11 55.6 -2.6
L44A Lake County Fo 138.72 88 IAMs_20 IAMs_20 22 11 17.2
comp=Z,637nm,20.0s
N47A Urbana 138.79 91 IAMs_20 IAMs_20 22 08 06.1
comp=Z,790nm,21.0s
K43A Burlington 138.92 87 IAMs_20 IAMs_20 22 01 38.5
comp=Z,765nm,20.0s
ARU Arti 139.25 302 PKPdf 21 11 58.6 -0.6
ARU Arti 139.25 302 i PKIKP PKPdf 21 11 57.5 -1.7
ARU SS SS 21 33 04.1 -7.3
INK Inuvik 139.37 33 PKP PKPdf 21 11 58.5 -0.6
comp=Z,2.7nm,0.9s,baz=214,slow=5.0,SNR=7.2
INK Inuvik 139.37 33 PKPdf 21 11 59.6 +0.6
INK IAMs_20 IAMs_20 22 10 44.7
comp=Z,889nm,21.0s
INK Inuvik 139.37 33 PKIKP PKPdf 21 11 59.6 +0.6
INK MLR MLR
comp=Z,900nm,21.0s
AGMN Agassiz Nation 139.48 76 IAMs_20 IAMs_20 22 08 17.8
comp=Z,717nm,18.0s
N49A Columbus Grove 139.54 93 IAMs_20 IAMs_20 22 08 58.2
comp=Z,771nm,21.0s
M50A Fremont 140.46 93 IAMs_20 IAMs_20 22 09 18.5
comp=Z,894nm,20.0s
ULM Lac du Bonnet 140.86 73 PKP PKPdf 21 12 03.3 +0.9
comp=Z,2.4nm,0.7s,baz=154,slow=2.4,SNR=5.3
YKA Yellowknife Ar 141.27 48 PKP PKPdf 21 12 00.7 -2.0
comp=Z,1.2nm,0.7s,baz=234,slow=3.2,SNR=6.6
YKA PP PP 21 15 08.8 +2.7
comp=Z,1.1nm,1.1s,baz=237,slow=6.6,SNR=5.9
EYMN Ely 141.28 79 PKPpre 21 11 57.1
EYMN Ely 141.28 79 IAMs_20 IAMs_20 22 06 49.4
comp=Z,660nm,20.0s
ITM Ithomi 141.97 252 IAMs_20 IAMs_20 22 23 00.5
comp=Z,834nm,19.0s
D41A Chassel 142.03 83 PKPpre 21 12 01.1
ALLY Alegheny Colle 142.04 96 IAMs_20 IAMs_20 22 21 01.3
comp=Z,659nm,22.0s
ERPA Erie 142.47 95 IAMs_20 IAMs_20 22 08 38.8
comp=Z,832nm,22.0s
C36M Paulatuk 142.62 35 IAMs_20 IAMs_20 22 05 26.6
comp=Z,684nm,21.0s
VRH Novokhopyorsk 143.07 285 ePKHKP PKPab 21 12 00.5 -1.1
VRH pmax pmax
comp=Z,10.0nm,1.0s
AGG Agios Georgios 143.28 255 IAMs_20 IAMs_20 22 24 23.0
comp=Z,838nm,20.0s
KDZ Kurdzhali 143.91 260 P PKPab 21 12 05.4 +0.1
VORD Divnogorie 144.04 283 ePKHKP PKPab 21 12 03.3 -2.1
VORD pmax pmax
comp=Z,10.0nm,1.1s
LIT Litokhoron 144.07 256 PKPbc 21 12 06.3 -0.2
LIT Litokhoron 144.07 256 PKIKP PKPbc 21 12 06.3 -0.2
PRD Provadia 144.16 264 P PKPab 21 12 06.1 0.0
VSR Storozhevoye 144.27 283 ePKHKP PKPab 21 12 04.1 -2.2
VSR pmax pmax
comp=Z,10.0nm,1.1s
RZN Rozhen 144.27 260 P PKPab 21 12 06.4 -0.5
BINY Binghamton 144.44 99 PKPab 21 12 06.7 -0.7
PLD Plovdiv 144.60 260 P PKPab 21 12 06.9 -0.9
JURR Jurilovca 144.62 267 ⇑P PKPab 21 12 07.5 -0.4
MMB Musomiste 144.66 259 P PKPab 21 12 07.7 -0.5
ELND Elena 144.68 262 ⇑P PKPab 21 12 08.0 -0.1
RAZG Razgrad 144.86 264 ⇑P PKPbc 21 12 09.1 +0.3
SADO Sadowa 144.88 93 PKP PKPab 21 12 07.9 -0.9
comp=Z,9.7nm,0.7s,baz=260,slow=3.8,SNR=5.9
SADO Sadowa 144.88 93 PKPab 21 12 07.8 -1.0
SADO IAMs_20 IAMs_20 22 12 46.3
comp=Z,604nm,20.0s
TOPG Topolog 144.94 267 ⇑P PKPab 21 12 08.7 -0.4
VAY Valandovo 145.00 257 i Pg PKPbc 21 12 09.2 -0.1
HARR Harsova 145.02 266 ⇓P PKPbc 21 12 08.0 -1.3
HARR Harsova 145.02 266 ⇓PKP2 PKPbc 21 12 08.0 -1.3
K58A Earlville 145.03 99 PKPbc 21 12 07.9 -1.6
FNA Florina 145.13 255 PKPbc 21 12 09.8 -0.1
FNA IAMs_20 IAMs_20 22 25 05.8
comp=Z,585nm,19.0s
FNA Florina 145.13 255 PKIKP PKPbc 21 12 09.8 -0.1
FNA MLR MLR
comp=Z,600nm,19.0s
J57A Williamstown 145.36 98 PKPbc 21 12 09.7 -0.8
OHR Ohrid 145.66 255 i Pg PKiKP 21 12 16.5 +1.3
VTS Vitosha 145.69 259 ⇓P PKPbc 21 12 11.7 0.0
VTS Vitosha 145.69 259 ⇓P PKPdf 21 12 11.4 +0.1
VTS Vitosha 145.69 259 PKPdf 21 12 10.8 -0.5
VTS Vitosha 145.69 259 ⇓PKP2 PKPbc 21 12 11.7 0.0
TIP Timpagrande 145.95 249 ⇑P PKPdf 21 12 14.0 +1.0
SKO Skopje 146.03 257 i Pg PKPdf 21 12 11.4 -0.4
VLAD Vladila 146.19 262 ⇓P PKPab 21 12 13.4 -0.2
KEST Kesra 146.19 236 PKPbc PKPbc 21 12 13.2 -0.1
comp=Z,10nm,1.0s,baz=225,slow=2.9,SNR=3.6
MILM Milestii Mici 146.22 270 ⇑P PKPdf 21 12 12.4 +0.5
BISRR Bisoca 146.24 266 ⇓P PKPdf 21 12 09.1 -2.9
KIS Kishinev 146.27 270 ePKP PKPdf 21 12 12.0 +0.1
KIS eL L 22 02 40.0
KIS LRM MLR 22 28 46.0
comp=Z,600nm,20.0s
KIS Kishinev 146.27 270 ePKIKP PKPdf 21 12 12.0 +0.1
GHRR 146.28 267 ⇑P PKPdf 21 12 13.6 +0.4
HUMR Humele 146.31 263 ⇑P PKPbc 21 12 10.5 -1.6
VRI Vrincioaia 146.46 267 ⇑P PKPdf 21 12 12.4 +0.1
VRI Vrincioaia 146.46 267 ⇑PKIKP PKPdf 21 12 12.4 +0.1
PLOR Plostina 146.49 266 ⇓P PKPdf 21 12 12.3 -0.1
PLOR Plostina 146.49 266 ⇓PKIKP PKPdf 21 12 12.3 -0.1
MLR Muntele Rosu 146.56 265 ⇑P PKPbc 21 12 13.5 -0.7
MLR Muntele Rosu 146.56 265 PKPdf 21 12 12.4 -0.3
MLR Muntele Rosu 146.56 265 ⇑PKP2 PKPbc 21 12 13.5 -0.7
VOIR 146.95 264 ⇓P PKPbc 21 12 14.5 -0.8
VOIR 146.95 264 ⇓PKP2 PKPbc 21 12 14.5 -0.8
TESR Tescani 146.97 267 ⇓P PKPbc 21 12 14.2 -1.0
OZUR 147.08 266 ⇑P PKPbc 21 12 14.8 -0.8
ARR Arges 147.10 264 ⇑P PKPab 21 12 16.6 -0.7
FCC Fort Churchill 147.10 63 PKPdf 21 12 13.8 +0.9
FCC Fort Churchill 147.10 63 PKP2 PKPdf 21 12 13.8 +0.9
DOPR Dopca 147.17 265 ⇑P PKPbc 21 12 15.3 -0.5
D53A Lac Vacive, Po 147.25 92 PKPbc 21 12 15.3 -0.6
SORM Soroca 147.30 271 ⇑P PKPdf 21 12 14.4 +0.8
SORM Soroca 147.30 271 ⇑PKIKP PKPdf 21 12 14.4 +0.8
PRGR Permogore 147.71 302 ePKP2 PKPbc 21 12 15.4 -1.3
PRGR pmax pmax
comp=Z,45nm,0.9s
PRAR RASCA 147.77 268 ⇑P PKPbc 21 12 17.6 +0.2
MOS Moscow 147.85 289 ePKP2 PKPbc 21 12 16.4 -0.9
MOS pmax pmax
comp=Z,38nm,1.3s
OBN Obninsk 147.96 287 ⇓P PKPbc 21 12 17.8 +0.3
OBN Obninsk 147.96 287 PKPbc 21 12 17.0 -0.5
OBN Obninsk 147.96 287 ⇑iPKP2 PKPbc 21 12 17.4 -0.2
OBN e 21 19 05.3
OBN pmax pmax
comp=Z,87nm,1.5s
GZR Gura Zlata 148.00 262 ⇓P PKPbc 21 12 18.5 +0.4
GZR Gura Zlata 148.00 262 ⇓PKIKP PKPbc 21 12 18.5 +0.4
VLDQ Val d'Or 148.09 91 PKPbc 21 12 17.3 -0.8

BURAR Bucovina Array 148.44 267 ⇑P PKPbc 21 12 20.0 +0.7
BURAR Bucovina Array 148.44 267 PKPbc 21 12 19.0 -0.2
BURAR Bucovina Array 148.44 267 ⇑PKP2 PKPbc 21 12 20.0 +0.7
BUR08 Bucovina Ar. S 148.47 267 PKPbc 21 12 19.2 -0.1
ARCR ARCALIA 148.48 266 ⇑P PKPbc 21 12 19.1 -0.1
AKASG Malin Array Be 148.63 275 PKPbc PKPbc 21 12 18.7 -0.8
comp=Z,13nm,1.0s,baz=96,slow=2.4,SNR=17
BZS Buzias 148.72 261 ⇑P PKPbc 21 12 19.5 -0.4
BZS Buzias 148.72 261 ⇑PKP2 PKPbc 21 12 19.5 -0.4
DRGR 149.05 264 ⇑P PKPdf 21 12 17.5 +0.8
DRGR 149.05 264 ⇑PKIKP PKPdf 21 12 17.5 +0.8
KLMR Klimovskoe 149.84 298 ePKPdf PKPbc 21 12 19.9 -2.3
KLMR AMP 21 12 36.1
comp=Z,125nm,1.3s
PKME Peaks-Kenny Pk 149.92 102 IAMs_20 IAMs_20 22 24 28.1
comp=Z,720nm,21.0s
AQU L'Aquila 150.01 248 PKPdf PKPdf 21 12 18.9 +0.6
AQU L'Aquila 150.01 248 PKIKP PKPdf 21 12 18.9 +0.6
TRPA Tarpa 150.08 266 ⇓P PKPbc 21 12 22.9 -0.2
BLY Banja Luka 150.15 256 ⇓P PKPbc 21 12 23.0 -0.4
BLY Banja Luka 150.15 256 PKPdf 21 12 19.2 +0.8
LVV L'vov 150.53 270 i PKIKP PKiKP 21 12 24.7 -0.2
UZH Uzhgorod 150.55 266 ePKIKP PKPdf 21 12 20.8 +2.0
UZH e 21 12 23.4
UZH e 21 12 30.7
KOLS Kolonicke sedl 150.77 267 ePKIKP PKiKP 21 12 25.8 +0.3
KOLS Kolonicke sedl 150.77 267 ePKP PKiKP 21 12 25.8 +0.3
KWP Kalwaria Pacla 151.04 268 PKPbc 21 12 24.6 -0.8
KWP Kalwaria Pacla 151.04 268 PKIKP PKPbc 21 12 24.6 -0.8
CRVS Cervenica-Dubn 151.13 266 ePKIKP PKPab 21 12 33.2 -0.4
CRVS Cervenica-Dubn 151.13 266 ePKP PKPab 21 12 33.2 -0.4
E63A Oxbow 151.19 102 PKPab 21 12 32.3 -1.5
PSZ Piszkesteto 151.20 263 PKPbc 21 12 25.6 -0.3
PSZ Piszkesteto 151.20 263 PKIKP PKPbc 21 12 25.6 -0.3
HAL Halifax 152.08 109 IAMs_20 IAMs_20 22 29 23.8
comp=Z,822nm,20.0s
VYHS Vyhne 152.10 263 ePKIKP PKPbc 21 12 27.8 -0.1
VYHS Vyhne 152.10 263 ePKP PKPbc 21 12 27.8 -0.1
NACGM Naroch 152.40 280 e PKPbc 21 12 27.0 -1.3
NACGM eLQ LQ 22 33 47.0
NACGM eLR LR 22 39 40.0
LMN Caledonia Moun 152.45 106 PKPbc 21 12 28.4 -0.4
SOKA Soboth 152.59 256 PKPab PKPab 21 12 39.2 -0.6
comp=Z,11nm,1.2s
ARSA Arzberg 152.78 257 epPKiKP PKiKP 21 12 34.3 +4.6
comp=Z,8.9nm,1.1s
OJC Ojcow 152.82 266 PKPbc 21 12 29.1 -0.3
OJC Ojcow 152.82 266 PKIKP PKPbc 21 12 29.1 -0.3
RES Resolute Bay 152.93 33 PKPbc 21 12 27.4 -1.5
RES Resolute Bay 152.93 33 PKIKP PKPbc 21 12 27.5 -1.5
RES MLR MLR
comp=Z,1μm,21.0s
CONA Conrad Observa 153.11 259 pPKPdf PKPbc 21 12 26.8 -3.5
comp=Z,6.6nm,1.1s
MORC Moravsky Berou 153.60 263 PKPbc 21 12 29.7 -1.5
MORC Moravsky Berou 153.60 263 PKIKP PKPbc 21 12 29.7 -1.5
KBA Koelnbreinsper 153.67 255 pPKPdf pPKPdf 21 12 26.2 -0.2
comp=Z,5.9nm,1.2s
ABTA Abfaltersbach 153.81 253 pPKPdf pPKPdf 21 12 26.3 -0.2
comp=Z,16nm,1.2s
ESDC Sonseca Array 154.50 221 PKPbc PKiKP 21 12 34.3 +0.8
comp=Z,4.1nm,1.1s,baz=164,slow=0.9,SNR=6.4
ESDC Sonseca Array 154.50 221 PKPbc 21 12 32.3 -1.2
DPC Dobruska-Polom 154.57 263 ⇑ePKP PKiKP 21 12 36.1 +2.8
DPC ex x 21 12 55.2
DPC Dobruska-Polom 154.57 263 ePKIKP PKiKP 21 12 36.1 +2.8
SQTA Sankt Quirin 154.76 252 PKiKP PKiKP 21 12 36.0 +2.1
comp=Z,8.3nm,1.1s
GERES GERESS Array B 154.78 258 PKP PKPdf 21 12 24.2 -1.0
comp=Z,1.0nm,1.0s,baz=191,slow=2.2,SNR=4.3
GERES PKPbc PKPbc 21 12 33.6 -0.2
comp=Z,1.5nm,0.9s,baz=139,slow=2.6,SNR=5.1
UPC Upice 154.83 263 ePKPAB PKPab 21 12 50.2 +1.1
UPC Upice 154.83 263 ePKP2 PKPab 21 12 50.2 +1.1
MOTA Moosalm 154.90 252 pPKPbc pPKPbc 21 12 36.8 +0.1
comp=Z,18nm,1.6s
GOPC GO Pecny, Ondr 155.01 261 ePKP2 PKPab 21 12 59.1 +9.2
KHC Kasperske Hory 155.04 258 ePKPAB PKPab 21 12 42.5 -7.6
KHC ex x 21 12 59.1
PRU Pruhonice 155.18 261 ePKPAB PKPab 21 12 50.6 0.0
PRU Pruhonice 155.18 261 ePKP2 PKPab 21 12 50.6 0.0
DAVA Damuels 155.41 251 PKPdf PKPdf 21 12 27.3 +1.1
comp=Z,15nm,1.0s
BRG Berggiesshubel 156.05 262 ePKP PKPab 21 13 06.2 +12
comp=Z,11nm,1.3s
NKC Novy Kostel 156.33 259 ePKPAB PKPab 21 12 57.4 +1.8
NKC ex x 21 13 06.5
NKC Novy Kostel 156.33 259 ePKP2 PKPab 21 12 57.4 +1.8
CLL Collm 156.79 262 ePKPdiff PKPab 21 12 45.0 -12
CLL e(PKPab) sPKPab 21 13 05.0 +4.3
comp=Z,24nm,1.5s
CLL ePP PP 21 16 40.0 +3.5
CLL eSKSdf SKSdf 21 19 36.0 +2.9
CLL ePPP PPP 21 20 12.0
CLL eSKKSac SKKSac 21 23 18.0 -6.6
CLL ePSKS 21 27 00.0
CLL ePPS PPS 21 30 00.0
CLL eSS SS 21 36 30.0 +1.2
CLL ePSPS 21 37 42.0
CLL eSSS SSS 21 42 18.0
CLL eSSSS 21 46 30.0
CLL Lm MLR 22 30 00.0
comp=N,800nm,18.5s
CLL Lm MLR 22 30 00.0
comp=E,300nm,20.0s
CLL Lm MLR 22 30 00.0
comp=Z,700nm,18.5s
ARCES ARCESS Array B 158.09 313 PKPab PKPab 21 13 02.4 -0.2
comp=Z,7.3nm,1.1s,baz=68,slow=6.7,SNR=6.8
DAG Danmarks Havn 164.48 354 i P PKPab 21 13 28.0 -2.3
comp=Z,20nm,1.1s
DAG Danmarks Havn 164.48 354 i PKP2 PKPab 21 13 28.0 -2.3
DAG pmax pmax
comp=Z,20nm,1.1s
SUMG Summit 167.80 19 i P PKPab 21 13 44.0 -1.6
comp=Z,59nm,1.3s
SUMG Summit 167.80 19 PKPab 21 13 44.6 -1.0
SUMG Summit 167.80 19 i PKP2 PKPab 21 13 44.0 -1.6
SUMG pmax pmax
comp=Z,59nm,1.3s

IDC 05 20:53:03.0±2.2, 6.19S×129.61E, h0km, mb3.8/1, mb1 3.8/4, mb1mx3.5/30, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=111.2km s-min=26.6km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.46	198	Pn	Pn	20 56 02.5	+0.9
	0.2nm,0.3s,baz=16,slow=14,SNR=3.6						
FITZ				Sn	Sn	20 58 08.3	-13
	0.3nm,0.3s,baz=331,slow=19,SNR=3.9						
WRA	Warramunga Arr	14.43	162	Pn	Pn	20 56 30.1	+1.5
	0.3nm,0.3s,baz=334,slow=13,SNR=14						
WRA				Sn	Sn	20 58 55.4	-14
	baz=333,slow=24,SNR=2.2						
ASAR	Alice Springs	17.86	167	P	Pn	20 57 11.4	-1.7
	0.2nm,0.3s,baz=348,slow=11,SNR=10						
MKAR	Makanchi Array	67.34	327	P	P	21 03 60.0	0.0
	0.5nm,0.4s,baz=122,slow=8.0,SNR=21						

THE 05 21:22:09.9, 38.20N×20.43E, h14km, ML3.0/9, Error ellipse: s-maj=0.9km s-min=0.4km az=268.0
ATH 05 21:22:10.0, 38.22N×20.44E, h14km±1km, ML2.6/11, Error ellipse: s-maj=1.8km s-min=0.8km az=251.0
ISC 05 21:22:09.9±0.9, 38.21N±0.02×20.43E±0.04, h15km±4km, n36, σ0.43/64, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.01	127	P	Pg	21 22 12.5	0.0
LXR1				S	Sg	21 22 14.4	+0.2
CHV1	Chavriata, Kef	0.04	240	P	Pg	21 22 12.7	+0.1
CHV1				S	Sg	21 22 14.6	+0.2
ARG2	Argostoli	0.05	121	P	Pg	21 22 12.6	-0.1
ARG2				S	Sg	21 22 14.1	-0.4
KEF4	Livadi, Kephal	0.05	355	P	Pg	21 22 12.5	-0.2
KEF4				S	Sg	21 22 14.3	-0.3
KEF2	Argostoli. Kep	0.06	132	P	Pg	21 22 12.7	-0.1
KEF2				S	Sg	21 22 14.3	-0.3
KEF3	Kipouria, Keph	0.07	268	P	Pg	21 22 12.8	0.0

KEF3 S Sg 21 22 14.8 +0.1
KEF1 Kardakata, Kep 0.08 24 P Pg 21 22 12.7 -0.2
KEF1 S Sg 21 22 14.5 -0.5
VLS Valsamata 0.13 103 P Pg 21 22 13.3 -0.2
VLS S Sg 21 22 15.8 -0.1
19µm,0.1s
VLS Valsamata 0.13 103 P Pg 21 22 13.3 -0.2
VLS S Sg 21 22 15.6 -0.3
VSK1 VASILIKIADES 0.23 27 P Pg 21 22 14.8 -0.2
VSK1 S Sg 21 22 18.7 +0.2
11µm,0.4s
FSK Fiskardo 0.27 22 P Pg 21 22 15.7 -0.1
FSK S Sg 21 22 20.1 +0.4
5µm,0.2s
FSK Fiskardo 0.27 22 P Pg 21 22 15.7 -0.1
FSK S Sg 21 22 19.4 -0.3
FSK AML AML 21 22 20.4
comp=N,10174µm,0.3s
FSK AML AML 21 22 20.9
comp=E,9728µm,0.2s
KFL Anninata 0.30 109 P Pg 21 22 16.1 0.0
VLMS Volimes, Zakyn 0.38 151 P Pg 21 22 17.5 0.0
VLMS S Sb 21 22 23.8 -0.1
VLMS AML AML 21 22 27.4
comp=E,12592µm,0.2s
VLMS AML AML 21 22 28.2
comp=N,15191µm,0.3s
EVGI Lefkada island 0.45 23 P Pg 21 22 18.6 -0.3
EVGI S Sg 21 22 25.5 +0.5
EVGI Lefkada island 0.45 23 P Pg 21 22 18.6 -0.3
EVGI S Sb 21 22 25.6 -0.5
LKD2 Lefkada island 0.61 17 P Pg 21 22 21.4 -0.5
LKD2 S Sb 21 22 31.4 +0.7
comp=N,420nm,0.5s
LKD2 Lefkada island 0.61 17 P Pg 21 22 21.4 -0.5
LKD2 S Sg 21 22 29.1 -0.8
LKD2 AML AML 21 22 38.2
comp=N,808µm,0.5s
LKD2 AML AML 21 22 38.5
comp=E,895µm,0.6s
AST1 Astakos 0.62 57 P Pg 21 22 21.6 -0.4
AST1 S Sb 21 22 31.4 +0.5
comp=E,1µm,0.3s
KRI1 kERI 0.62 150 P Pg 21 22 21.2 -0.9
KRI1 S Sb 21 22 31.0 0.0
comp=E,2µm,0.2s
PDO Prodromos 0.71 56 P Pg 21 22 23.3 -0.4
PDO S Sb 21 22 34.3 +0.8
comp=E,960nm,0.3s
PDO Prodromos 0.71 56 P Pg 21 22 23.3 -0.4
PDO S Sg 21 22 32.8 -0.3
PDO AML AML 21 22 34.8
comp=E,1376µm,0.3s
PDO AML AML 21 22 41.1
comp=N,1412µm,0.6s
RLS Riolos of Patr 0.83 100 P Pg 21 22 25.5 -0.5
RLS S Sb 21 22 38.0 +1.0
comp=N,130nm,0.4s
RLS Riolos of Patr 0.83 100 P Pg 21 22 25.5 -0.5
RLS S Sb 21 22 37.9 +0.9
RLS AML AML 21 22 41.0
comp=N,275µm,0.2s
RLS AML AML 21 22 45.8
comp=E,220µm,0.5s
PVO Paravola 0.95 64 P Pb 21 22 28.0 -0.1
PVO Paravola 0.95 64 P Pb 21 22 28.1 -0.1
PVO AML AML 21 22 44.1
comp=E,2056µm,0.3s
PVO AML AML 21 22 48.5
comp=N,926µm,0.7s
DRO Drossia 1.04 104 P Pb 21 22 29.2 -0.4
DRO S Sn 21 22 45.1 +0.8
comp=N,435nm,0.5s
DRO Drossia 1.04 104 P Pb 21 22 29.7 0.0
DRO S Sg 21 22 43.5 -0.2
DRO AML AML 21 22 54.5
comp=E,1000µm,0.3s
DRO AML AML 21 22 57.3
comp=N,707µm,0.3s
EFP Efpalio 1.18 79 P Pn 21 22 31.0 -0.9
EFP Efpalio 1.18 79 P Pn 21 22 31.8 -0.1
EFP S Sg 21 22 48.7 +0.6
EFP AML AML 21 22 55.9
comp=E,518µm,0.5s
EFP AML AML 21 22 56.6
comp=N,405µm,0.5s
AMT Artemida-Makis 1.21 123 P Pg 21 22 33.6 +0.3
ANX Ano Chora 1.23 71 P Pn 21 22 32.6 -0.1
ANX Ano Chora 1.23 71 P Pn 21 22 32.5 -0.1
ANX S Sg 21 22 49.8 +0.1
ANX AML AML 21 22 57.5
comp=E,512µm,0.7s
ANX AML AML 21 22 58.4
comp=N,657µm,0.6s
EVR Evrytania 1.29 56 P Pn 21 22 33.6 +0.1
EVR S Sn 21 22 51.0 +0.4
EVR AML AML 21 23 01.4
comp=E,140µm,0.9s
EVR AML AML 21 23 03.7
comp=N,153µm,0.5s
SERG Sergoula 1.30 80 P Pn 21 22 32.9 -0.6
IGT Igoumenitsa 1.33 357 P Pb 21 22 34.6 +0.1
IGT AML AML 21 22 59.6
comp=E,281µm,0.4s
IGT AML AML 21 22 59.8
comp=N,253µm,0.5s

NNC 05 21:38:18.8±1.1, 41.°94N×79.°76E, h0km, mb3.6, mpv3.5, Error ellipse: s-maj=7.1km s-min=5.4km az=149.0
KRNET 05 21:38:18.4±0.1, 41.°91N×79.°73E, mb3.0
SOME 05 21:38:18.1, 41.°95N×79.°72E, h10km
ISC 05 21:38:21.8±1.6, 42.°07N±0.°06×79.°74E±0.°05, h10km, n53, σ1§55/94, 23C-13D, Lake Issyk-Kul region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PRZ Przheval'sk 1.07 293 ⇑iP Pg 21 38 39.9 -2.6
baz=1.0
PRZ ⇑iS Sg 21 38 55.9 -0.6
baz=1.0
UZB Uzynbulak 1.20 334 eP Pb 21 38 43.3 -1.5
5.1nm,0.3s
UZB eS Sn 21 39 01.9 +0.6
52nm,0.3s
UZB Uzynbulak 1.20 334 P Pb 21 38 43.3 -1.5
12nm,0.1s
UZB S Sn 21 39 02.1 +0.8
54nm,0.3s
PDGK Podgornoye 1.27 352 P Pn 21 38 44.7 -1.1
12nm,0.2s
PDGK S Sn 21 39 04.0 +0.9
28nm,0.3s
PDGK Podgornoye 1.27 352 ⇑P Pn 21 38 44.3 -1.5
6.1nm,0.3s
PDGK ⇓S Sn 21 39 04.0 +0.9
45nm,0.4s
SATY Saty 1.40 316 eP Pn 21 38 46.7 -0.8
16nm,0.1s
SATY eS Sg 21 39 07.0 +0.2
53nm,0.1s
SATY Saty 1.40 316 P Pn 21 38 46.7 -0.8
16nm,0.1s
SATY S Sg 21 39 06.9 +0.1
53nm,0.1s
ZHN Zhinishke 1.46 319 eP Pb 21 38 48.6 -0.5
24nm,0.2s
ZHN eS Sg 21 39 10.7 +1.8
36nm,0.2s
ZHN Zhinishke 1.46 319 P Pb 21 38 48.6 -0.5
24nm,0.2s
ZHN S Sg 21 39 10.6 +1.8
36nm,0.2s
KPKS Kokpek 1.60 331 eP Pb 21 38 50.6 -0.9
61nm,0.2s
KPKS eS Sg 21 39 14.1 +0.9
123nm,0.2s
ANVS Anan'yevo 1.69 296 ⇑iP Pb 21 38 51.9 -1.2
baz=0.0
ANVS ⇑iS Sg 21 39 16.0 -0.2
baz=0.0
KURS Kuram 1.83 321 eP Pb 21 38 55.0 -0.4
7.8nm,0.3s
KURS eS Sg 21 39 21.3 +0.7
25nm,0.3s

MNBS Baschi 2.24 335 eP Pb 21 39 02.3 0.0
0.2nm,0.1s
MNBS eS Sg 21 39 34.0 +0.3
2.9nm,0.2s
KOTS Kotyrbulak 2.26 302 eP Pb 21 39 01.3 -1.5
14nm,0.2s
KOTS eS Sg 21 39 32.7 -1.7
79nm,0.3s
KOTS Kotyrbulak 2.26 302 Pg Pb 21 39 01.3 -1.5
14nm,0.2s
KOTS Lg Lg 21 39 32.7
79nm,0.3s
DJR Jarkent 2.27 1 eP Pb 21 39 01.4 -1.4
2.7nm,0.2s
DJR eS Sg 21 39 32.8 -1.8
69nm,0.2s
DJR Jarkent 2.27 1 Pg Pb 21 39 01.4 -1.4
2.7nm,0.2s
DJR Lg Lg 21 39 33.6
69nm,0.2s
MDOK Medeo 2.27 300 eP Pb 21 39 01.9 -1.0
9.9nm,0.4s
MDOK eS Sg 21 39 33.2 -1.4
47nm,0.4s
MDOK Medeo 2.27 300 ⇓Pg Pb 21 39 01.3 -1.6
14nm,0.5s
MDOK Lg Lg 21 39 33.0
13nm,0.5s
TNSS Tian-Shan 2.28 296 eP Pb 21 39 01.5 -1.7
5.7nm,0.2s
TNSS eS Sb 21 39 32.6 +1.0
27nm,0.4s
KNDC Almaty 2.34 300 ⇓Pg Pb 21 39 04.4 +0.3
13nm,0.4s
KNDC ⇑Lg Lg 21 39 35.0
15nm,0.4s
AAA Alma-Ata 2.37 300 eP Pb 21 39 03.5 -1.2
10.0nm,0.1s
AAA eS Sg 21 39 36.6 -1.4
42nm,0.2s
AAA Alma-Ata 2.37 300 Pg Pb 21 39 03.5 -1.2
20nm,0.2s
AAA Lg Lg 21 39 36.6
44nm,0.3s
ARXS Arharly 2.56 328 eP Pb 21 39 06.6 -1.2
4.2nm,0.3s
ARXS eS Sg 21 39 41.5 -2.5
37nm,0.3s
ARXS Arharly 2.56 328 Pg Pb 21 39 06.6 -1.2
4.2nm,0.3s
ARXS Lg Lg 21 39 41.5
37nm,0.3s
ULHL Ulahol 2.60 275 ⇓iP Pn 21 39 04.0 -0.1
baz=78
ULHL ⇓iS Sb 21 39 38.1 -2.7
baz=78
MTBS Maitube 2.66 295 eP Pb 21 39 08.5 -1.1
3.1nm,0.1s
MTBS eS Sg 21 39 44.5 -2.8
40nm,0.3s
CHKK Chushkaly 2.69 312 eP Pb 21 39 09.2 -0.9
7.1nm,0.2s
CHKK eS Sg 21 39 46.0 -2.3
72nm,0.3s
CHKK Chushkaly 2.69 312 Pg Pb 21 39 09.2 -0.9
7.1nm,0.2s
CHKK Lg Lg 21 39 46.0
72nm,0.3s
KTBS Karatobe 2.78 307 eP Pb 21 39 11.1 -0.5
6.8nm,0.2s
KTBS eS Sg 21 39 49.4 -1.8
67nm,0.3s
KTBS Karatobe 2.78 307 Pg Pb 21 39 11.1 -0.5
6.8nm,0.2s
KTBS Lg Lg 21 39 49.4
67nm,0.3s
BOOM Boomskoye usch 2.85 280 ⇓iP Pn 21 39 07.7 +0.2
baz=83
BOOM ⇓iS Sn 21 39 43.9 +2.0
baz=83
NRN Naryn 2.87 258 ⇑iP Pn 21 39 07.5 -0.3
baz=61
NRN ⇑iS Sn 21 39 43.5 +1.0
baz=61
KST Kastek 2.95 291 eP Pb 21 39 13.2 -1.4
2.9nm,0.2s
KST eS Sb 21 39 53.0 +2.2
26nm,0.5s
KST Kastek 2.95 291 Pg Pb 21 39 13.2 -1.4
KST Lg Lg 21 39 53.0
KUU Kurty 3.09 307 eP Pb 21 39 16.0 -0.8
0.9nm,0.1s
KUU eS Sb 21 39 57.4 +2.8
16nm,0.3s
TDK Taldyqorghan 3.09 342 eP Pb 21 39 17.2 +0.3
15nm,0.5s
TDK eS Sg 21 39 59.4 -1.6
38nm,0.5s
DGS Degeres 3.15 293 eP Pb 21 39 16.2 -1.7
3.7nm,0.2s
DGS eS Sb 21 39 58.2 +1.7
21nm,0.4s
DGS Degeres 3.15 293 Pg Pb 21 39 16.2 -1.7
3.7nm,0.2s
DGS Lg Lg 21 39 58.7
21nm,0.4s
KZA Kyzart 3.34 272 ⇑iP Pn 21 39 13.9 -0.5
baz=74
KZA ⇑iS Sn 21 39 56.0 +1.6
baz=74
KRBS Karabastau 3.40 300 eP Pb 21 39 21.4 -0.7
1.2nm,0.2s
KRBS eS Sb 21 40 06.8 +3.2
14nm,0.4s
KBK Karagaybulak 3.60 281 ⇓eP Pn 21 39 17.8 0.0
baz=83
KBK ⇓iS Sn 21 40 02.1 +1.7
baz=83
CHMS Chumysh 3.80 286 ⇑eP Pn 21 39 20.6 +0.2
baz=88
CHMS ⇑iS Sn 21 40 06.9 +1.7
baz=88
UCH Uchtor 3.89 274 ⇑iP Pn 21 39 22.1 +0.1
baz=76
UCH ⇑iS Sn 21 40 09.0 +1.1
baz=76
AAK Ala-Archa 3.93 280 ⇑eP Pn 21 39 22.7 +0.4
baz=82
AAK ⇑iS Sn 21 40 10.1 +1.6
baz=82
AAK Ala-Archa 3.93 280 ⇑Pg Pb 21 39 33.2 +2.0
0.9nm,0.3s
AAK Lg Lg 21 40 21.8
2.6nm,0.4s
ARLS Aral 4.04 269 ⇑eP Pn 21 39 23.5 -0.4
baz=71
ARLS ⇑iS Sn 21 40 12.1 +0.8
baz=71
EKS2 Erkin-Say 4.46 280 ⇑iP Pn 21 39 30.1 +0.6
baz=82
EKS2 ⇑eS Sn 21 40 22.7 +1.2
baz=82
AML Almayashu 4.50 273 ⇑eP Pn 21 39 30.7 +0.4
baz=75
AML ⇑iS Sn 21 40 23.8 +0.9
baz=75
MRKS Merke 4.87 280 eP Pb 21 39 47.3 +0.1
2.8nm,0.4s
MRKS eS Sb 21 40 51.4 +5.6
4.2nm,0.5s
MRKS Merke 4.87 280 Pg Pb 21 39 47.3 +0.1
2.8nm,0.4s
MRKS Lg Lg 21 40 51.4
4.2nm,0.5s
MAKZ Makanchi 5.00 18 ⇓Pn Pn 21 39 37.4 +0.4
0.4nm,0.3s
MAKZ ⇓Sn Sn 21 40 35.5 +0.6
0.8nm,0.3s
MK31 Makanchi Array 5.07 20 Pn Pn 21 39 38.4 +0.6
0.2nm,0.2s,baz=201,slow=12,SNR=45
MK31 ⇓Sn Sn 21 40 41.5 +5.1
1.2nm,0.4s,baz=198,slow=25,SNR=4.8
MK31 ⇓Lg Lg 21 41 01.6
1.2nm,0.3s,baz=204,slow=28,SNR=3.9

ROM 05 21:50:25.8±0.1, 42.°810N±0.°004×12.°921E±0.°007, h9km±1km, Md1.5/4, Error ellipse: s-maj=0.4km s-min=0.4km az=298.0, Central Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NRCA Norcia 0.14 81 P Pg 21 50 29.9 +0.8
NRCA S Sg 21 50 32.3 +1.0
NRCA AML AML
comp=E,559µm,1.1s
NRCA AML AML
comp=N,814µm,1.4s
NRCA AML AML
comp=N,725µm,1.4s
NRCA AML AML
comp=E,530µm,0.5s
NRCA AML AML
comp=E,560µm,1.1s
NRCA END
LNSS Leonessa 0.23 157 P Pg 21 50 31.1 +0.6
LNSS S Sg 21 50 34.9 +1.3
LNSS AML AML
comp=E,688µm,0.8s
LNSS AML AML
comp=N,1088µm,0.5s
LNSS AML AML
comp=N,1088µm,0.5s
LNSS END
FDMO Fiordimonte 0.26 28 P Pg 21 50 31.8 +0.8
FDMO S Sb 21 50 35.9 -1.3
FDMO AML AML
comp=E,618µm,0.5s
FDMO AML AML
comp=N,658µm,0.7s
FDMO END
ARRO Arrone 0.26 206 P Pb 21 50 31.9 -0.7
ARRO S Sb 21 50 36.2 -0.9
ARRO AML AML
comp=E,400µm,0.9s
ARRO AML AML
comp=N,482µm,0.8s
ARRO AML AML
comp=N,482µm,0.8s
ARRO AML AML
comp=E,400µm,0.9s
ARRO END
ASSB Assisi San Ben 0.30 320 P Pb 21 50 32.9 -0.5
ASSB S Sb 21 50 37.9 -0.7
CESX Cesi 0.32 232 P Pg 21 50 32.7 +0.5
CESX S Sb 21 50 38.2 -0.8

IDC 05 21:50:41.0±2.4, 25.°84N×90.°55E, h0km, mb3.3/4, mb1 3.5/5, mb1mx3.3/35, mbtmp3.3/5, ML3.5/1, Error ellipse: s-maj=87.9km s-min=23.6km az=70.0, India-Bangladesh border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CMAR Chiang Mai Arr 10.70 132 Pn Pn 21 53 15.0 -0.5
0.1nm,0.3s,baz=307,slow=14,SNR=3.2
MKAR Makanchi Array 21.92 345 P P 21 55 35.7 -0.2
0.4nm,0.6s,baz=156,slow=10.0,SNR=7.4
SONM Songino Array 25.25 26 P P 21 56 08.9 +0.1
0.4nm,0.8s,baz=203,slow=11,SNR=4.1
WRA Warramunga Arr 62.29 133 P P 22 01 05.1 -0.1
0.4nm,0.7s,baz=325,slow=7.1,SNR=3.0
ASAR Alice Springs 64.67 136 P P 22 01 21.2 +0.2
0.3nm,0.4s,baz=313,slow=6.2,SNR=5.7

PRU 05 21:50:49.5±0.0, 43.°13N×11.°66E, h0km
VIE 05 21:50:52.5±1.6, 43.°10N×12.°74E, h8km, mb3.0/12, ml3.0/14, Error ellipse: s-maj=16.6km s-min=11.4km az=2.0 93 km SSE of San Marino
IASPEI 05 21:50:54.0±0.9, 43.°36N±0.°02×12.°54E±0.°02, h10km±5km, Error ellipse: s-maj=3.7km s-min=2.9km az=44.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009
ROM 05 21:50:54.1±0.1, 43.°366N±0.°004×12.°539E±0.°005, h7km, ML3.0/28, Error ellipse: s-maj=0.4km s-min=0.2km az=242.0
LDG 05 21:50:55.8±0.1, 43.°35N×12.°64E, h10km, Ml2.6/13, Error ellipse: s-maj=2.6km s-min=2.0km az=17.0
ISC 05 21:50:53.8±0.8, 43.°35N±0.°02×12.°54E±0.°02, h11km±4km, n74, σ2§02/121, 2C-10D, Central Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ATFO Monte Foce - G 0.03 55 ⇑P Pg 21 50 55.2 -0.9
ATFO S Sg 21 50 56.5 -1.2
ATFO AML AML
ATFO AML AML
MURB Monte Urbino 0.09 186 P Pg 21 50 57.5 +1.0
MURB AML AML
comp=E,19250µm,0.7s
MURB AML AML
comp=N,20000µm,1.0s
MURB AML AML
comp=E,19600µm,0.4s
MURB AML AML
comp=N,22250µm,1.0s
ATVO AVT- Monte Val 0.10 290 ⇓P Pg 21 50 57.0 +0.4
ATVO S Sg 21 50 59.0 +0.2
ATVO AML AML
comp=N,20450µm,0.7s
ATVO AML AML
comp=E,22850µm,0.6s
ATVO AML AML
comp=N,20450µm,0.7s
ATVO AML AML
comp=E,22850µm,0.6s
FOSV Fossato di Vic 0.17 108 P Pg 21 50 58.5 +0.7
FOSV S Sg 21 51 02.2 +1.8
FOSV AML AML
comp=E,8145µm,0.9s
FOSV AML AML
comp=N,10150µm,0.7s
FOSV AML AML
comp=E,8150µm,0.9s
PIEI Pieia 0.19 360 ⇓P Pg 21 50 58.2 +0.2
PIEI S Sg 21 51 01.7 +0.8
PIEI AML AML
comp=N,10950µm,1.0s
PIEI AML AML
comp=E,15550µm,0.9s
SSFR Montelago di S 0.20 64 P Pg 21 50 58.6 +0.4
SSFR S Sg 21 51 02.2 +1.0
SSFR AML AML
comp=E,9690µm,1.2s
SSFR AML AML
comp=N,10375µm,1.1s
SSFR AML AML
comp=N,10195µm,1.1s
SSFR AML AML
comp=E,9660µm,1.2s
SSFR AML AML
comp=N,10205µm,1.1s
SSFR AML AML
comp=N,10400µm,1.1s
SSFR AML AML
comp=E,10140µm,1.2s
FRON Frontone 0.22 39 P Pg 21 50 58.8 +0.2
FRON S Sg 21 51 02.4 +0.7
FRON AML AML
comp=E,6430µm,0.5s
FRON AML AML
comp=N,15400µm,0.7s
FRON AML AML
comp=E,6425µm,0.5s
CDCA Citt' di Caste 0.25 297 P Pg 21 50 59.7 +0.7
CDCA AML AML
comp=E,8090µm,0.7s
CDCA AML AML
comp=N,9270µm,0.7s
CDCA AML AML
comp=N,9310µm,0.7s
CDCA AML AML
comp=N,9280µm,0.7s
CDCA AML AML
comp=N,23000µm,0.5s
CDCA AML AML
comp=E,16500µm,0.7s

CDCA				AML	AML		
	comp=E,8085µm,0.7s						
NARO	**Abbazia di Nar**	**0.26**	**7**	⇓P	**Pg**	**21 50 59.5**	**+0.2**
NARO				S	**Sg**	**21 51 03.9**	**+0.9**
NARO				AML	AML		
	comp=N,3055µm,0.5s						
NARO				AML	AML		
	comp=E,4575µm,0.8s						
BADI	**Badiali**	**0.27**	**307**	⇓P	**Pg**	**21 51 00.0**	**+0.7**
BADI				S	**Sg**	**21 51 05.0**	**+1.9**
BADI				AML	AML		
	comp=E,15350µm,0.6s						
BADI				AML	AML		
	comp=N,17950µm,0.6s						
BADI				AML	AML		
	comp=E,15350µm,0.6s						
BADI				AML	AML		
	comp=N,17950µm,0.6s						
BADI				AML	AML		
	comp=N,17950µm,0.6s						
SNTG	**Esanatoglia**	**0.31**	**107**	⇓P	**Pg**	**21 51 00.9**	**+0.8**
SNTG				S	**Sg**	**21 51 06.8**	**+2.5**
SNTG				AML	AML		
	comp=N,4170µm,0.4s						
SNTG				AML	AML		
	comp=E,331µm,1.4s						
SNTG				AML	AML		
	comp=N,560µm,0.4s						
SNTG				AML	AML		
	comp=E,2110µm,0.7s						
ASSB	**Assisi San Ben**	**0.32**	**164**	P	**Pb**	**21 51 01.4**	**-0.2**
ASSB				S	**Sb**	**21 51 07.3**	**+0.7**
ASSB				AML	AML		
	comp=N,2390µm,0.7s						
ASSB				AML	AML		
	comp=E,2285µm,0.6s						
MPAG	**Monte Paganucc**	**0.33**	**30**	⇓P	**Pg**	**21 51 00.8**	**+0.4**
MPAG				S	**Sb**	**21 51 06.2**	**-0.7**
MPAG				AML	AML		
	comp=E,3560µm,0.5s						
MPAG				AML	AML		
	comp=N,4165µm,0.5s						
MPAG				AML	AML		
	comp=E,3795µm,0.5s						
MPAG				AML	AML		
	comp=N,4030µm,0.5s						
MPAG				AML	AML		
	comp=E,3800µm,0.5s						
MPAG				AML	AML		
	comp=N,4160µm,0.5s						
MPAG				AML	AML		
	comp=N,4025µm,0.5s						
MPAG				AML	AML		
	comp=E,3565µm,0.5s						
ARVD	**Arcevia**	**0.33**	**63**	⇓P	**Pb**	**21 51 01.1**	**-0.7**
ARVD				S	**Sb**	**21 51 06.8**	**-0.3**
ARVD				AML	AML		
	comp=N,1990µm,0.8s						
ARVD				AML	AML		
	comp=E,3265µm,0.5s						
PE3	**Peglio**	**0.35**	**355**	P	**Pg**	**21 51 01.4**	**+0.6**
PE3				S	**Sb**	**21 51 07.8**	**+0.2**
PE3				AML	AML		
	comp=E,11210µm,0.6s						
PE3				AML	AML		
	comp=E,11180µm,0.6s						
PE3				AML	AML		
	comp=N,10320µm,0.4s						
PARC	**Parchiule**	**0.37**	**324**	⇓P	**Pg**	**21 51 01.8**	**+0.6**
PARC				AML	AML		
	comp=E,4440µm,0.4s						
PARC				AML	AML		
	comp=N,5435µm,0.6s						
SSP9	**Sansepolcro**	**0.37**	**308**	P	**Pg**	**21 51 02.1**	**+0.9**
SSP9				AML	AML		
	comp=E,3960µm,1.6s						
SSP9				AML	AML		
	comp=N,3910µm,1.0s						
SSP9				AML	AML		
	comp=N,3875µm,1.0s						
SSP9				AML	AML		
	comp=E,4015µm,1.6s						
FSSB	**Fossombrone**	**0.39**	**27**	P	**Pg**	**21 51 01.8**	**+0.2**
FSSB				S	**Sb**	**21 51 08.2**	**-0.4**
FSSB				AML	AML		
	comp=E,5365µm,0.5s						
FSSB				AML	AML		
	comp=N,5640µm,0.4s						
FSSB				AML	AML		
	comp=E,5370µm,0.5s						
EL6	**Elcito**	**0.41**	**92**	P	**Pb**	**21 51 02.7**	**-0.5**
EL6				S	**Sb**	**21 51 10.2**	**+0.7**
EL6				AML	AML		
	comp=E,4505µm,0.5s						
EL6				AML	AML		
	comp=N,5495µm,0.5s						
EL6				AML	AML		
	comp=E,4495µm,0.5s						
EL6				AML	AML		
	comp=N,5500µm,0.5s						
CING	**Cingoli**	**0.48**	**87**	⇓P	**Pb**	**21 51 04.0**	**-0.3**
CING				S	**Sb**	**21 51 12.1**	**+0.7**
CING				AML	AML		
	comp=N,2050µm,0.8s						
CING				AML	AML		
	comp=E,1230µm,0.5s						
CRE	**Caprese Michel**	**0.51**	**303**	P	**Pg**	**21 51 04.2**	**+0.5**
CRE				AML	AML		
	comp=E,2015µm,0.5s						
CRE				AML	AML		
	comp=N,1590µm,0.5s						
FDMO	**Fiordimonte**	**0.51**	**128**	P	**Pb**	**21 51 04.5**	**-0.3**
FDMO				AML	AML		
	comp=N,658µm,0.7s						
FDMO				AML	AML		
	comp=E,618µm,0.5s						
MGAB	**Montegabbione**	**0.54**	**216**	⇓P	**Pg**	**21 51 05.6**	**+1.3**
MGAB				AML	AML		
	comp=N,2335µm,0.4s						
MGAB				AML	AML		
	comp=N,2340µm,0.4s						
MGAB				AML	AML		
	comp=N,2300µm,0.4s						
MGAB				AML	AML		
	comp=E,3040µm,0.6s						
MGAB				AML	AML		
	comp=E,2870µm,0.6s						
SENI	**Senigallia**	**0.62**	**55**	P	**Pn**	**21 51 07.8**	**-0.8**
PESA	**Pesaro**	**0.63**	**20**	P	**Pb**	**21 51 06.8**	**-0.1**
PESA				AML	AML		
	comp=N,2790µm,1.4s						
PESA				AML	AML		
	comp=E,2555µm,0.8s						
NRCA	**Norcia**	**0.67**	**140**	P	**Pb**	**21 51 07.5**	**+0.1**
NRCA				AML	AML		
	comp=E,560µm,1.1s						
NRCA				AML	AML		
	comp=E,559µm,1.1s						
NRCA				AML	AML		
	comp=E,530µm,0.5s						
NRCA				AML	AML		
	comp=E,560µm,1.1s						
NRCA				AML	AML		
	comp=N,725µm,1.4s						
NRCA				AML	AML		
	comp=N,814µm,1.4s						
ASQU	**Asqua**	**0.70**	**310**	P	**Pg**	**21 51 07.9**	**+0.4**
ASQU				AML	AML		
	comp=N,940µm,0.5s						
ASQU				AML	AML		
	comp=E,786µm,0.5s						
CESX	**Cesi**	**0.74**	**177**	P	**Pb**	**21 51 08.8**	**+0.2**
ARRO	**Arrone**	**0.79**	**168**	P	**Pb**	**21 51 09.6**	**+0.1**
ARRO				AML	AML		
	comp=N,482µm,0.8s						
ARRO				AML	AML		
	comp=N,482µm,0.8s						
ARRO				AML	AML		
	comp=E,400µm,0.9s						
ARRO				AML	AML		
	comp=E,400µm,0.9s						
LNSS	**Leonessa**	**0.83**	**153**	P	**Pb**	**21 51 10.5**	**+0.2**
LNSS				AML	AML		
	comp=E,688µm,0.8s						
LNSS				AML	AML		
	comp=N,1086µm,0.5s						
LNSS				AML	AML		
	comp=N,1088µm,0.5s						
LNSS				AML	AML		
	comp=N,1088µm,0.5s						
LNSS				AML	AML		
	comp=E,724µm,0.7s						
RUFI	**Rufina**	**0.89**	**304**	⇑P	**Pg**	**21 51 11.5**	**+0.4**
OFFI	**Offida**	**0.94**	**116**	P	**Pn**	**21 51 12.8**	**-0.1**
OFFI				AML	AML		
	comp=E,2025µm,0.7s						
OFFI				AML	AML		
	comp=N,2635µm,0.6s						
T0104	**Madonna delle**	**1.15**	**149**	P	**Pn**	**21 51 15.9**	**+0.1**
T0104				AML	AML		
	comp=E,939µm,0.6s						
T0104				AML	AML		
	comp=N,822µm,0.7s						
T0104				AML	AML		
	comp=N,772µm,0.7s						
T0104				AML	AML		
	comp=E,980µm,0.6s						
DUGI	**Dugi Otok**	**1.94**	**70**	*e*Pn	**Pb**	**21 51 28.8**	**-0.3**
DUGI				Sn	**Sg**	**21 51 54.8**	**-1.4**
NVLJ	**Novalja**	**2.08**	**53**	*i* Pn	**Pb**	**21 51 30.1**	**-1.4**
NVLJ				Sn	**Sb**	**21 51 57.0**	**-0.3**
ZIRJ	**Zirje**	**2.28**	**81**	*i* Pn	**Pb**	**21 51 33.8**	**-1.2**
ZIRJ				Sn	**Sg**	**21 52 03.8**	**-3.3**
MORI	**Morici**	**2.36**	**76**	*e*Pn	**Pb**	**21 51 34.9**	**-1.4**
MORI				Sn	**Sg**	**21 52 06.6**	**-3.1**
UDBI	**Udbina**	**2.61**	**62**	*e*Pn	**Pb**	**21 51 39.0**	**-1.7**
UDBI				Sn	**Sb**	**21 52 12.2**	**-0.6**
PGF	**Pioggiola**	**2.72**	**254**	*e*Pn	**Pn**	**21 51 38.7**	**+1.2**
PGF				*e*Sn	**Sn**	**21 52 11.1**	**+0.8**
	comp=E,1.9nm,0.4s						
KIJV	**Kijevo**	**2.88**	**76**	*e*Pn	**Pb**	**21 51 42.6**	**-2.6**
KIJV				Sn	**Sb**	**21 52 18.3**	**-2.2**
MAKA	**Makarska**	**3.27**	**90**	*e*Pn	**Pn**	**21 51 47.8**	**+2.8**
MAKA				Sn	**Sb**	**21 52 29.2**	**-2.5**
ABTA	**Abfaltersbach**	**3.40**	**360**	*e*Pn	**Pn**	**21 51 49.1**	**+2.3**
	comp=E,7.5nm,0.5s,SNR=8.6						
ABTA				Sn	**Sb**	**21 52 33.9**	**-1.5**
	comp=E,19nm,0.6s						
SBF	**Sospel**	**3.74**	**280**	*e*Pn	**Pn**	**21 51 52.7**	**+1.2**
SBF				*e*Sn	**Sn**	**21 52 35.2**	**-0.3**
	comp=E,5.5nm,0.4s						
SOKA	**Soboth**	**3.77**	**27**	*e*Pn	**Pn**	**21 51 55.0**	**+3.1**
	comp=E,0.5nm,0.3s						
KBA	**Koelnbreinsper**	**3.77**	**8**	*e*Pn	**Pn**	**21 51 54.4**	**+2.3**
	comp=E,4.3nm,0.5s,SNR=6.9						
FETA	**Feichten**	**3.89**	**341**	*e*Pn	**Pn**	**21 51 57.7**	**+4.1**
	comp=E,9.7nm,0.8s,SNR=16						
FETA				Sn	**Sb**	**21 52 48.8**	**-0.7**
	comp=E,6.0nm,0.5s						
SQTA	**Sankt Quirin**	**3.98**	**347**	*e*Pn	**Pn**	**21 51 58.9**	**+4.0**
	comp=E,2.8nm,0.2s,SNR=9.7						
SQTA				Sn	**Sb**	**21 52 48.7**	**-3.6**
	comp=E,17nm,0.5s						
WATA	**Walderalm**	**4.04**	**351**	*e*Pn	**Pn**	**21 51 59.5**	**+3.8**
	comp=E,3.3nm,0.2s,SNR=7.3						
WATA				Sn	**Sn**	**21 52 48.1**	**+5.0**
	comp=E,13nm,0.5s						
MOTA	**Moosalm**	**4.12**	**346**	*e*Pn	**Pn**	**21 52 00.7**	**+3.9**
	comp=E,9.2nm,0.6s,SNR=8.6						
MOTA				Sn	**Sb**	**21 52 53.3**	**-3.0**
	comp=E,8.2nm,0.5s						
FRF	**La Foret Royal**	**4.29**	**275**	*e*Pn	**Pn**	**21 52 00.7**	**+1.7**
FRF				*e*Sn	**Sn**	**21 52 47.6**	**-1.4**
	comp=E,3.5nm,0.4s						
RETA	**Reutte**	**4.32**	**344**	*e*Pn	**Pn**	**21 52 03.5**	**+4.0**
	comp=E,5.9nm,0.4s,SNR=11						
RETA				*e*Sn	**Sb**	**21 52 57.7**	**-4.2**
	comp=E,7.5nm,0.5s						
DAVA	**Damuels**	**4.36**	**335**	*e*Pn	**Pn**	**21 52 04.8**	**+4.7**
	comp=E,14nm,0.5s,SNR=16						
DAVA				Sn	**Sb**	**21 52 58.8**	**-4.3**
	comp=E,28nm,0.8s						
MBDF	**Montbardon**	**4.38**	**290**	*e*Pn	**Pn**	**21 52 01.5**	**+1.2**
MBDF				*e*Sn	**Sn**	**21 52 51.5**	**+0.1**
	comp=E,23nm,1.1s						
LMR	**La Mourre**	**4.40**	**272**	*e*Pn	**Pn**	**21 52 01.8**	**+1.4**
LMR				*e*Sn	**Sn**	**21 52 49.8**	**-1.8**
MOA	**Molln**	**4.66**	**14**	*e*Pn	**Pn**	**21 52 06.4**	**+2.3**
	comp=E,2.5nm,0.3s,SNR=6.1						
MOA				*e*Sn	**Sn**	**21 53 03.2**	**+5.0**
	comp=E,5.3nm,0.7s						
LPG	**La Plagne**	**4.67**	**299**	*e*Pn	**Pn**	**21 52 05.6**	**+1.2**
LPG				*e*Sn	**Sn**	**21 52 56.8**	**-1.9**
	comp=E,0.4nm,0.3s						
LPL	**La Plagne**	**4.69**	**300**	*e*Pn	**Pn**	**21 52 05.8**	**+1.2**
LPL				*e*Sn	**Sn**	**21 52 57.0**	**-2.1**
	comp=E,11nm,0.8s						
ORIF	**Oris-en-Rattie**	**5.04**	**290**	*e*Pn	**Pn**	**21 52 10.7**	**+1.3**
ORIF				*e*Sn	**Sn**	**21 53 06.5**	**-1.1**
SMRF	**Simiane la Rot**	**5.09**	**279**	*e*Pn	**Pn**	**21 52 10.6**	**+0.6**
CONA	**Conrad Observa**	**5.14**	**26**	*e*Pn	**Pn**	**21 52 10.9**	**+0.2**
	comp=E,1.3nm,0.6s						
CABF	**La Chapelle**	**5.62**	**308**	*e*Pn	**Pn**	**21 52 18.4**	**+1.1**
CABF				*e*Sn	**Sn**	**21 53 19.7**	**-2.1**
KHC	**Kasperske Hory**	**5.83**	**7**	*e*PN	**Pn**	**21 52 20.8**	**+0.7**
KHC				*e*SN	**Sn**	**21 53 29.6**	**+2.7**
VIVF	**Saint-Julien-l**	**5.86**	**288**	*e*Pn	**Pn**	**21 52 21.8**	**+1.2**
HINF	**Hinteralfeld**	**5.99**	**320**	*e*Pn	**Pn**	**21 52 22.5**	**+0.2**
HINF				*e*Sn	**Sn**	**21 53 28.4**	**-2.5**
	comp=E,11nm,0.7s						
CDF	**Champ du Feu**	**6.25**	**326**	*e*Pn	**Pn**	**21 52 26.8**	**+0.8**
CDF				*e*Sn	**Sn**	**21 53 34.7**	**-2.8**
	comp=E,5.6nm,0.5s						
LASF	**Ste Croix**	**6.33**	**280**	*e*Pn	**Pn**	**21 52 27.7**	**+0.6**
HAU	**Haudompre**	**6.36**	**319**	*e*Pn	**Pn**	**21 52 27.4**	**0.0**
HAU				*e*Sn	**Sn**	**21 53 37.0**	**-3.0**
	comp=E,1.0nm,0.2s						
NKC	**Novy Kostel**	**6.89**	**360**	*e*SN	**Sn**	**21 53 52.9**	**-0.1**
SMF	**Signal de Mont**	**6.99**	**301**	*e*Pn	**Pn**	**21 52 36.7**	**+0.6**
SMF				*e*Sn	**Sn**	**21 53 53.1**	**-2.4**
SFTF	**Sexfontaines**	**7.14**	**315**	*e*Pn	**Pn**	**21 52 38.2**	**0.0**
	baz=133						
LOR	**Lormes**	**7.26**	**306**	*e*Pn	**Pn**	**21 52 41.0**	**+1.2**
	baz=114						
LOR				*e*Sn	**Sn**	**21 53 59.1**	**-3.1**
	comp=E,0.9nm,0.3s						
SSF	**Saint Saulge**	**7.38**	**303**	*e*Pn	**Pn**	**21 52 42.3**	**+0.9**
SSF				*e*Sn	**Sn**	**21 54 01.1**	**-3.9**
	comp=E,0.3nm,0.3s						
BGF	**Bois d'Agland**	**7.58**	**298**	*e*Pn	**Pn**	**21 52 43.9**	**-0.3**
BRG	**Berggiesshubel**	**7.59**	**7**	SG	**Sg**	**21 55 04.5**	**+7.2**
	comp=E,1.6nm,0.6s						

OTT ***05*** *21:52:09.4±0.3, 44°.10N×56°.76W, h18km, ML3.7/14, 323km southeast from Louisbourg, Ns*

ISC 05 21:52:08.5±2.2, **44°.3N**±0°.1×**57°.02W**±0°.08, **h10km, n27,** σ2s.18/54, **North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBN	**Guysborough**	**3.39**	**291**	PN	**Pn**	**21 53 04.7**	**+3.4**
GBN				SN	**Sn**	**21 53 45.3**	**+3.7**
GBN				SN	**Sb**	**21 53 45.8**	**-3.9**
GBN				Trac		21 53 48.3	
	comp=Z,24nm,0.1s						
CHEG	**Cheticamp, Nov**	**3.60**	**316**	PN	**Pn**	**21 53 07.6**	**+3.3**
CHEG				SN	**Sn**	**21 53 50.9**	**+3.9**
CHEG				Trac		21 53 53.2	
	comp=Z,11nm,0.1s						
SJNN	**Saint John's**	**4.49**	**41**	PN	**Pn**	**21 53 14.4**	**-2.1**
SJNN				SN	**Sn**	**21 54 03.9**	**-5.0**
SJNN				Trac		21 54 05.2	
	comp=Z,18nm,0.1s						
HAL	**Halifax**	**4.72**	**277**	PN	**Pn**	**21 53 22.1**	**+2.5**
HAL				SN	**Sn**	**21 54 14.3**	**0.0**
HAL				Trac		21 54 17.0	
	comp=Z,26nm,0.1s						
DRLN	**Deer Lake**	**4.99**	**356**	PN	**Pn**	**21 53 24.4**	**+1.0**
DRLN				SN	**Sn**	**21 54 21.7**	**+0.6**
DRLN				Trac		21 54 21.9	
	comp=Z,24nm,0.3s						
LMN	**Caledonia Moun**	**5.73**	**289**	PN	**Pn**	**21 53 36.2**	**+2.6**
LMN				SN	**Sn**	**21 54 40.1**	**+0.7**
LMN				Trac		21 54 43.4	
	comp=Z,13nm,0.1s						
SVNB	**Stilesville Qu**	**5.86**	**292**	PN	**Pn**	**21 53 38.2**	**+2.9**
SVNB				SN	**Sn**	**21 54 43.5**	**+1.0**
SVNB				Trac		21 54 45.6	
	comp=Z,13nm,0.1s						
ELNB	**Elgin, New Bru**	**5.97**	**288**	PN	**Pn**	**21 53 39.9**	**+3.0**
ELNB				SN	**Sn**	**21 54 45.8**	**+0.6**
ELNB				Trac		21 54 53.0	
	comp=Z,1.3nm,0.1s						
HKNB	**Havelock Quarr**	**6.15**	**289**	PN	**Pn**	**21 53 42.2**	**+2.8**
HKNB				SN	**Sn**	**21 54 50.4**	**+0.7**
HKNB				Trac		21 54 52.9	
	comp=Z,36nm,0.2s						
WCNB	**Wards Creek**	**6.18**	**286**	PN	**Pn**	**21 53 42.3**	**+2.6**
WCNB				SN	**Sn**	**21 54 50.9**	**+0.6**
WCNB				Trac		21 54 53.4	
	comp=Z,26nm,0.1s						
BATG	**Bathurst New B**	**7.00**	**299**	PN	**Pn**	**21 53 53.5**	**+2.6**
BATG				SN	**Sn**	**21 55 10.9**	**+0.4**
BATG				Trac		21 55 13.4	
	comp=Z,13nm,0.1s						
GGN	**Saint George**	**7.05**	**280**	PN	**Pn**	**21 53 53.7**	**+2.1**
GGN				SN	**Sn**	**21 55 09.7**	**-2.1**
GGN				Trac		21 55 13.2	
	comp=Z,8.7nm,0.1s						
HANN	**Hanwell**	**7.08**	**287**	PN	**Pn**	**21 53 52.5**	**+0.4**
HANN				SN	**Sn**	**21 55 11.7**	**-0.9**
HANN				Trac		21 55 15.4	
	comp=Z,1.8nm,0.0s						
H66A	**Whiting**	**7.37**	**278**	P	**Pn**	**21 53 57.8**	**+1.8**
	baz=92						
H66A				S	**Sn**	**21 55 19.2**	**-0.5**
	baz=92						
G65A	**Princeton**	**7.56**	**281**	P	**Pn**	**21 54 00.7**	**+2.0**
	baz=94						
G65A				S	**Sn**	**21 55 22.6**	**-1.8**
	baz=94						
E64A	**Bridgewater**	**7.91**	**289**	P	**Pn**	**21 54 05.0**	**+1.6**
	baz=103						
E64A				S	**Sn**	**21 55 33.2**	**+0.3**
	baz=103						
H65A	**Eastbrook**	**8.04**	**277**	P	**Pn**	**21 54 06.2**	**+1.0**
	baz=90						
H65A				S	**Sn**	**21 55 33.7**	**-2.4**
	baz=90						
F64A	**Sherman**	**8.18**	**285**	P	**Pn**	**21 54 08.2**	**+1.1**
	baz=98						
F64A				S	**Sn**	**21 55 37.6**	**-1.9**
	baz=98						
D63A	**Stockholm**	**8.24**	**293**	P	**Pn**	**21 54 09.1**	**+1.1**
	baz=106						
D63A				S	**Sn**	**21 55 38.9**	**-2.2**
	baz=106						
E63A	**Oxbow**	**8.31**	**289**	P	**Pn**	**21 54 10.4**	**+1.4**
	baz=102						
E63A				S	**Sn**	**21 55 41.4**	**-1.4**
	baz=102						
GSQ	**Grosses Roches**	**8.35**	**307**	PN	**Pn**	**21 54 11.7**	**+2.2**
GSQ				SN	**Sn**	**21 55 43.1**	**-0.7**
GSQ				Trac		21 55 49.1	
	comp=Z,2.8nm,0.1s						
G64A	**Maxfield**	**8.41**	**281**	P	**Pn**	**21 54 12.4**	**+2.1**
	baz=93						
G64A				S	**Sn**	**21 55 42.0**	**-3.2**
	baz=93						
ICQ	**Pointe Anglais**	**8.76**	**310**	PN	**Pn**	**21 54 17.0**	**+2.0**
ICQ				SN	**Sn**	**21 55 51.8**	**-1.9**
ICQ				Trac		21 55 59.1	
	comp=Z,9.3nm,0.2s						
PKME	**Peaks-Kenny Pk**	**8.79**	**281**	PN	**Pn**	**21 54 16.8**	**+1.3**
PKME				SN	**Sn**	**21 55 51.5**	**-3.0**
PKME				Trac		21 55 55.4	
	comp=Z,11nm,0.2s						
SMQ	**Clarke City**	**8.87**	**316**	PN	**Pn**	**21 54 18.2**	**+1.7**
SMQ				SN	**Sn**	**21 55 55.1**	**-1.4**
SMQ				Trac		21 56 01.1	
	comp=Z,5.3nm,0.2s						
CNQ	**Baie Comeau**	**9.09**	**307**	PN	**Pn**	**21 54 21.3**	**+1.6**
CNQ				SN	**Sn**	**21 56 01.7**	**-0.3**
CNQ				Trac		21 56 05.6	
	comp=Z,2.0nm,0.1s						
A54	**Misere**	**9.87**	**293**	PN	**Pn**	**21 54 30.4**	**+0.1**
A54				Trac		21 55 36.3	
	comp=Z,13nm,0.1s						

SJA ***05*** *22:02:01.8±0.5, 23°.54S×68°.04W, h147km±5km, ML3.4, MW3.5*

GUC ***05*** *22:02:03.7±0.6, 23°.56S×68°.63W, h176km±11km, ML3.5*

ISC 05 22:02:01.9±1.7, **23°.56S**±0°.04×**68°.09W**±0°.04, **h158km**±17km, **n23,** σ0s.79/42, **5C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**1.32**	**285**	⇑*i*P	**Pn**	**22 02 30.8**	**+0.3**
PB15				*i* S	**Sn**	**22 02 51.5**	**-1.0**
PB15	**IPOC Station P**	**1.32**	**285**	*i* P	**Pn**	**22 02 30.9**	**+0.3**
PB15				*i* S	**Sn**	**22 02 51.9**	**-0.6**
PB06	**IPOC Station P**	**1.61**	**301**	⇑*i*P	**Pn**	**22 02 33.8**	**+0.4**
PB06				*i* S	**Sn**	**22 02 56.4**	**-1.2**
PB06				IAML		22 02 58.9	
	comp=N,628nm,0.4s						
PB06	**IPOC Station P**	**1.61**	**301**	*i* P	**Pn**	**22 02 33.9**	**+0.5**
PB06				*i* S	**Sn**	**22 02 56.9**	**-0.7**
PB06				IAML		22 03 00.2	
	comp=Z,372nm,0.3s						
PB09	**IPOC Station P**	**2.05**	**328**	*e*P	**Pn**	**22 02 39.6**	**+1.3**
PB09				*i* S	**Sn**	**22 03 07.1**	**+0.8**
PB09				IAML		22 03 10.2	
	comp=Z,119nm,0.4s						
PB05	**IPOC Station P**	**2.07**	**289**	*i* P	**Pn**	**22 02 39.0**	**+0.5**
PB05				*i* S	**Sn**	**22 03 06.1**	**-0.5**
GO02	**Mina Guanaco**	**2.11**	**220**	⇑*i*P	**Pn**	**22 02 40.3**	**+1.2**
GO02				*i* S	**Sn**	**22 03 07.8**	**+0.1**
GO02				IAML		22 03 09.8	
	comp=E,242nm,0.2s						
PB03	**IPOC Station P**	**2.15**	**314**	⇑*i*P	**Pn**	**22 02 39.8**	**+0.4**
PB03				*i* S	**Sn**	**22 03 07.8**	**-0.5**
PB03				IAML		22 03 12.4	
	comp=E,233nm,0.3s						
PB03	**IPOC Station P**	**2.15**	**314**	*e*P	**Pn**	**22 02 39.9**	**+0.4**
PB03				*i* S	**Sn**	**22 03 07.8**	**-0.5**
PB04	**IPOC Station P**	**2.26**	**302**	*e*P	**Pn**	**22 02 41.2**	**+0.5**
PB04				*i* S	**Sn**	**22 03 09.5**	**-1.1**
PB04				IAML		22 03 21.1	
	comp=Z,159nm,0.2s						
PB10	**IPOC Station P**	**2.27**	**271**	*e*P	**Pn**	**22 02 41.9**	**+1.2**
PB14	**IPOC Station P**	**2.37**	**243**	*i* P	**Pn**	**22 02 42.8**	**+0.7**
PB14				*i* S	**Sn**	**22 03 13.4**	**+0.2**
PB07	**IPOC Station P**	**2.47**	**317**	⇑*i*P	**Pn**	**22 02 43.8**	**+0.6**
PB07				*i* S	**Sn**	**22 03 13.7**	**-1.4**
PB07				IAML		22 03 21.7	
	comp=E,222nm,0.4s						
PB07	**IPOC Station P**	**2.47**	**317**	*i* P	**Pn**	**22 02 43.9**	**+0.7**
PB07				*i* S	**Sn**	**22 03 13.6**	**-1.5**
HJA	**Humahuaca**	**2.48**	**83**	*i* P	**Pn**	**22 02 44.1**	**+0.5**
YJA	**Yavi**	**2.74**	**60**	*i* P	**Pn**	**22 02 47.2**	**+0.4**
YJA				*i* S	**Sn**	**22 03 20.8**	**-0.7**
PB02	**IPOC Station P**	**2.79**	**323**	*i* P	**Pn**	**22 02 47.3**	**+0.3**
PB02				*i* S	**Sn**	**22 03 21.3**	**-0.7**
PB02	**IPOC Station P**	**2.79**	**323**	*e*P	**Pn**	**22 02 47.4**	**+0.3**
PB02				*i* S	**Sn**	**22 03 21.2**	**-0.7**
PB01	**IPOC Station P**	**2.82**	**332**	*e*P	**Pn**	**22 02 48.0**	**+0.5**
PB01				*i* S	**Sn**	**22 03 22.4**	**-0.2**
AZAP	**Zapla**	**2.84**	**104**	*i* P	**Pn**	**22 02 48.0**	**+0.2**
AZAP				*i* S	**Sn**	**22 03 24.0**	**+0.6**
PATCX	**Punta Patache**	**3.33**	**324**	*i* P	**Pn**	**22 02 55.1**	**+1.3**
ASTB	**Santa Barbara**	**3.35**	**97**	*i* P	**Pn**	**22 02 53.9**	**-0.3**
GO03	**Copiap**	**4.46**	**205**	*i* P	**Pn**	**22 03 08.3**	**-0.2**
GO03				*i* S	**Sn**	**22 03 59.1**	**-1.3**

SJA ***05*** *22:24:39.6±0.8, 23°.39S×69°.01W, h101km±4km, ML3.5, MW3.4*

GUC ***05*** *22:24:40.9±0.6, 23°.35S×69°.09W, h101km±4km, ML3.4*

ISC 05 22:24:41.5±1.4, **23°.38S**±0°.04×**69°.05W**±0°.05, **h97km**±10km, **n24,** σ0s.70/42, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**0.43**	**294**	*e*P	**Pn**	**22 24 56.3**	**-0.4**
PB15				*i* S	**Sn**	**22 25 08.7**	**+0.7**
PB15				IAML		22 25 11.1	
	comp=N,5µm,0.1s						
PB15	**IPOC Station P**	**0.43**	**294**	*i* P	**Pn**	**22 24 56.4**	**-0.3**
PB15				*i* S	**Sn**	**22 25 08.7**	**+0.7**
LVC	**Limon Verde**	**0.78**	**9**	*i* P	**Pn**	**22 24 58.9**	**-0.9**
LVC				*e*S	**Sn**	**22 25 12.8**	**-0.6**
PB06	**IPOC Station P**	**0.83**	**324**	*e*P	**Pn**	**22 24 59.9**	**-0.1**
PB06				*i* S	**Sn**	**22 25 14.3**	**+0.4**
PB06				IAML		22 25 15.3	

	comp=N,2µm,0.1s						
PB06	IPOC Station P	0.83	324	*i* P	Pn	22 24 60.0	-0.1
PB06				*i* S	Sn	22 25 14.5	+0.6
PB06				IAML		22 25 15.7	
	comp=Z,1µm,0.1s						
PB05	IPOC Station P	1.19	296	*i* P	Pn	22 25 03.8	-0.2
PB05				*i* S	Sn	22 25 21.8	+0.9
PB10	IPOC Station P	1.39	264	*e*P	Pn	22 25 06.1	-0.1
PB10				*i* S	Sn	22 25 26.6	+1.6
PB10	IPOC Station P	1.39	264	*i* P	Pn	22 25 06.2	0.0
PB04	IPOC Station P	1.46	316	*e*P	Pn	22 25 06.9	-0.3
PB04				*i* S	Sn	22 25 26.9	+0.2
PB04				IAML		22 25 29.0	
	comp=E,479nm,0.1s						
PB04	IPOC Station P	1.46	316	*e*P	Pn	22 25 07.0	-0.3
PB04				*e*S	Sn	22 25 27.4	+0.8
PB04				IAML		22 25 28.9	
	comp=Z,372nm,0.6s						
PB03	IPOC Station P	1.48	334	*e*P	Pn	22 25 07.3	-0.2
PB03				*i* S	Sn	22 25 27.3	+0.2
PB03	IPOC Station P	1.48	334	*e*P	Pn	22 25 07.3	-0.2
PB03				*e*S	Sn	22 25 27.4	+0.2
PB09	IPOC Station P	1.59	353	*e*P	Pn	22 25 08.9	+0.1
PB09				*i* S	Sn	22 25 30.2	+0.6
PB09				IAML		22 25 31.9	
	comp=N,315nm,0.5s						
PB09	IPOC Station P	1.59	353	*i* P	Pn	22 25 09.2	+0.3
PB09				*i* S	Sn	22 25 30.9	+1.3
PB09				IAML		22 25 31.6	
	comp=Z,362nm,0.4s						
PB14	IPOC Station P	1.75	225	*e*P	Pn	22 25 10.5	-0.6
PB14				*i* S	Sn	22 25 33.3	-0.2
PB07	IPOC Station P	1.82	335	*e*P	Pn	22 25 11.6	-0.3
PB07				*i* S	Sn	22 25 34.6	-0.3
PB07	IPOC Station P	1.82	335	*e*P	Pn	22 25 11.5	-0.3
PB07				*e*S	Sn	22 25 34.5	-0.4
PB02	IPOC Station P	2.20	339	*e*P	Pn	22 25 16.1	-0.5
PB02				*i* S	Sn	22 25 43.2	-0.3
PB01	IPOC Station P	2.36	350	*i* P	Pn	22 25 18.2	-0.6
PB01				*e*S	Sn	22 25 47.4	0.0
PB08	IPOC Station P	3.23	358	*i* P	Pn	22 25 29.6	-1.0
HJA	Humahuaca	3.35	88	*i* P	Pn	22 25 32.4	+0.2
YJA	Yavi	3.47	70	*i* P	Pn	22 25 34.1	+0.2
AZAP	Zapla	3.74	104	*i* P	Pn	22 25 37.9	+0.6
ACCO	Cerro Coronel	7.18	180	*i* P	Pn	22 26 21.5	-2.6

*IDC **05** 22:35:19.5±1.3, 38.32N×20.11E, h0km, mb3.5/6, mb1 3.5/8, mb1mx3.3/45, mbtmp3.4/8, ML3.3/2, MS3.7/2, Ms1 3.7/2, ms1mx3.1/33, Error ellipse: s-maj=25.9km s-min=22.9km az=104.0*

*BEO **05** 22:35:22.6±1.0, 38.02N×20.03E, h31km±6km, ML3.4/5*

*THE **05** 22:35:23.8, 38.24N×20.37E, h14km, ML3.3/15, Error ellipse: s-maj=1.1km s-min=0.5km az=271.0*

*ATH **05** 22:35:23.3, 38.23N×20.38E, h18km, ML3.3/16, Error ellipse: s-maj=1.5km s-min=0.8km az=260.0*

*PDG **05** 22:35:23.2±0.7, 38.27N×20.31E, h12km±1km, ML3.6/11, Error ellipse: s-maj=1.5km s-min=1.9km az=0.0*

ISC 05 22:35:22.7±0.8**, 38.22N**±0.02×**20.34E**±0.03**, h18**km±2km**, n158, σ1s35**/208**, mb3.5**/6**, 12C-9D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.02	149	⇓Pd0	Pg	22 35 26.5	+0.6
KEF3				S	Sg	22 35 28.7	+0.6
CHV1	Chavriata, Kef	0.05	134	P	Pg	22 35 26.6	+0.6
CHV1				S	Sg	22 35 28.9	+0.6
KEF4	Livadi, Kephal	0.08	59	⇓Pd0	Pg	22 35 26.6	+0.3
KEF4				S	Sg	22 35 28.7	0.0
LXR1	Lixouri, Cepha	0.08	102	P	Pg	22 35 26.8	+0.5
LXR1				S	Sg	22 35 29.2	+0.5
ARGA	Argostoli. Kep	0.12	110	⇑Pc0	Pg	22 35 26.9	+0.2
ARGA				S	Sg	22 35 29.1	-0.1
KEF1	Kardakata, Kep	0.12	60	⇑Pc0	Pg	22 35 26.9	+0.2
KEF1				S	Sg	22 35 29.2	-0.2
ARG2	Argostoli	0.12	108	P	Pg	22 35 26.9	+0.2
ARG2				S	Sg	22 35 29.4	0.0
KEF2	Argostoli. Kep	0.13	114	⇑Pc0	Pg	22 35 27.0	+0.3
KEF2				S	Sg	22 35 29.4	-0.1
VLS	Valsamata	0.20	101	P	Pg	22 35 27.8	0.0
VLS				S	Sb	22 35 30.6	+0.2
	29µm,0.1s						
VLS	Valsamata	0.20	101	⇓Pd0	Pg	22 35 27.7	0.0
VSK1	VASILIKIADES	0.26	43	P	Pb	22 35 28.8	0.0
VSK1				S	Sg	22 35 31.8	-1.0
	17µm,0.3s						
FSK	Fiskardo	0.30	36	P	Pb	22 35 29.5	0.0
FSK				S	Sb	22 35 34.2	+0.1
	7µm,0.3s						
FSK	Fiskardo	0.30	36	⇑Pc0	Pb	22 35 29.5	0.0
FSK				S	Sg	22 35 33.5	-0.3
FSK				AML	AML	22 35 34.4	
	comp=N,12298µm,0.5s						
FSK				AML	AML	22 35 34.5	
	comp=E,15465µm,0.5s						
VLMS	Volimes, Zakyn	0.43	143	⇑Pc0	Pg	22 35 31.6	+0.1
VLMS				S	Sb	22 35 37.9	0.0
VLMS				AML	AML	22 35 39.2	
	comp=N,45768µm,0.2s						
VLMS				AML	AML	22 35 39.5	
	comp=E,47918µm,0.2s						
EVGI	Lefkada island	0.47	32	P	Pb	22 35 32.4	-0.2
EVGI				S	Sb	22 35 39.7	+0.5
EVGI	Lefkada island	0.47	32	⇑Pc0	Pb	22 35 32.4	-0.2
EVGI				S	Sb	22 35 39.4	+0.2
MGNA	Meganis	0.56	39	P	Pg	22 35 33.6	-0.4
MGNA				S	Sg	22 35 41.2	-0.4
MGNA				AML	AML	22 35 43.0	
	comp=N,3521µm,0.3s						
MGNA				AML	AML	22 35 44.2	
	comp=E,3839µm,0.3s						
ZAK2	Zakynthos	0.62	134	P	Pg	22 35 35.5	+0.5
ZAK2				S	Sg	22 35 45.0	-0.9
	comp=E,22µm,0.5s						
LKD2	Lefkada island	0.62	24	P	Pb	22 35 34.9	-0.1
LKD2	Lefkada island	0.62	24	⇑Pc0	Pb	22 35 34.8	-0.4
LKD2				S	Sg	22 35 43.0	-0.5
LKD2				AML	AML	22 35 50.2	
	comp=N,2745µm,0.3s						
LKD2				AML	AML	22 35 51.0	
	comp=E,3088µm,0.3s						
KRI1	kERI	0.67	145	P	Pb	22 35 35.8	0.0
KRI1				S	Sn	22 35 46.9	-0.4
	comp=E,7µm,0.2s						
AST1	Astakos	0.67	61	P	Pb	22 35 35.8	-0.1
AST1				S	Sg	22 35 45.4	+0.4
	comp=E,5µm,0.3s						
PDO	Prodromos	0.77	60	P	Pb	22 35 37.4	-0.1
PDO				S	Sn	22 35 49.2	-0.5
	comp=E,4µm,0.5s						
PDO	Prodromos	0.77	60	⇑Pc0	Pg	22 35 37.2	-0.6
PDO				S	Sg	22 35 48.3	+0.4
PDO				AML	AML	22 35 49.9	
	comp=E,6181µm,0.5s						
PDO				AML	AML	22 35 54.3	
	comp=N,6506µm,0.5s						
RLS	Riolos of Patr	0.90	100	P	Pb	22 35 39.7	-0.2
RLS	Riolos of Patr	0.90	100	⇓Pd0	Pb	22 35 39.6	-0.2
RLS				S	Sg	22 35 52.5	+0.1
RLS				AML	AML	22 36 01.5	
	comp=E,2304µm,0.5s						
RLS				AML	AML	22 36 05.1	
	comp=N,1821µm,0.4s						
PVO	Paravola	1.01	66	P	Pg	22 35 42.4	-0.1
PVO				S	Sn	22 35 58.1	+2.3
	comp=N,3µm,0.3s						
PVO	Paravola	1.01	66	⇓Pd0	Pg	22 35 42.2	-0.3
PVO				S	Sn	22 35 55.7	-0.1
PVO				AML	AML	22 36 02.9	
	comp=N,5369µm,0.3s						
PVO				AML	AML	22 36 03.9	
	comp=E,4583µm,0.6s						
DRO	Drossia	1.11	103	P	Pb	22 35 43.5	+0.1
DRO	Drossia	1.11	103	P	Pb	22 35 43.5	+0.1
DRO				AML	AML	22 36 08.3	
	comp=N,3848µm,0.4s						
DRO				AML	AML	22 36 09.2	
	comp=E,4109µm,0.5s						
UPR	University Cam	1.14	86	P	Pg	22 35 46.3	+1.4
EFP	Efpalio	1.25	80	P	Pb	22 35 45.7	-0.1
EFP	Efpalio	1.25	80	P	Pb	22 35 46.2	+0.4
EFP				AML	AML	22 36 08.6	
	comp=E,2760µm,0.9s						
EFP				AML	AML	22 36 09.1	
	comp=N,2650µm,0.9s						
AMT	Artemida-Makis	1.28	122	P	Pg	22 35 47.8	+0.3
AMT				S	Sg	22 36 05.4	+1.1
	comp=N,2µm,0.5s						
AMT	Artemida-Makis	1.28	122	⇓Pd0	Pg	22 35 48.0	+0.5
AMT				AML	AML	22 36 11.2	
	comp=E,3154µm,0.6s						
AMT				AML	AML	22 36 15.2	
	comp=N,3629µm,0.4s						
LAKA	Lakka	1.29	88	P	Pb	22 35 46.5	0.0
LAKA				S	Sg	22 36 05.2	+0.6
	comp=N,610nm,0.7s						
ANX	Ano Chora	1.30	73	P	Pb	22 35 46.8	+0.1
ANX	Ano Chora	1.30	73	P	Pg	22 35 47.5	-0.4
ANX				S	Sg	22 36 04.7	-0.2
ANX				AML	AML	22 36 12.9	
	comp=N,4967µm,0.5s						
ANX				AML	AML	22 36 14.7	
	comp=E,3770µm,0.6s						
IGT	Igoumenitsa	1.31	360	P	Pg	22 35 47.7	-0.4
IGT				S	Sg	22 36 06.3	+1.0
	comp=E,508nm,0.4s						
IGT	Igoumenitsa	1.31	360	*e*Pg	Pg	22 35 50.5	+2.4
IGT				*e*Sn	Sg	22 36 06.7	+1.4
IGT	Igoumenitsa	1.31	360	P	Pg	22 35 47.5	-0.7
IGT				S	Sg	22 36 06.4	+1.1
IGT				AML	AML	22 36 13.6	
	comp=N,955µm,0.4s						
IGT				AML	AML	22 36 15.0	
	comp=E,1060µm,0.3s						
EVR	Evrytania	1.35	58	P	Pb	22 35 47.9	+0.4
EVR				S	Sg	22 36 07.0	+0.6
	comp=E,638nm,1.0s						
EVR	Evrytania	1.35	58	P	Pb	22 35 47.9	+0.4
EVR				S	Sg	22 36 05.6	-0.9
EVR				AML	AML	22 36 12.6	
	comp=E,934µm,0.8s						
EVR				AML	AML	22 36 14.3	
	comp=N,1351µm,1.1s						
SERG	Sergoula	1.37	81	P	Pb	22 35 47.8	+0.1
SERG	Sergoula	1.37	81	P	Pg	22 35 48.4	-0.7
SERG				S	Sg	22 36 06.5	-0.5
SERG				AML	AML	22 36 12.7	
	comp=N,3022µm,0.4s						
SERG				AML	AML	22 36 15.4	
	comp=E,1840µm,0.6s						
TRIZ	Trizonia	1.37	83	P	Pb	22 35 47.5	-0.3
ALIK	Aliki, Aigiali	1.40	88	P	Pb	22 35 48.1	-0.1
KALE	Kalithea	1.43	82	P	Pb	22 35 48.4	-0.4
KALE	Kalithea	1.43	82	P	Pg	22 35 50.5	+0.2
KALE				S	Sg	22 36 09.3	+0.4
KALE				AML	AML	22 36 16.6	
	comp=E,1159µm,0.7s						
KALE				AML	AML	22 36 16.7	
	comp=N,1419µm,0.5s						
KLV	Kalavryta, Ach	1.44	96	P	Pb	22 35 49.2	+0.2
KLV				S	Sg	22 36 08.7	-0.6
	comp=N,352nm,0.6s						
JAN	Janina	1.49	15	P	Pg	22 35 50.9	-0.6
MAKR	Makrakomi, Fth	1.61	60	P	Pg	22 35 53.1	-0.7
ITM	Ithomi	1.63	129	P	Pb	22 35 52.8	+0.5
ITM				S	Sg	22 36 14.4	-1.0
	comp=N,482nm,0.5s						
ITM	Ithomi	1.63	129	P	Pb	22 35 52.4	+0.1
SRN	Sarande	1.68	351	P	Pb	22 35 53.0	-0.1
PYL	PYLOS	1.73	139	P	Pb	22 35 53.4	-0.5
AGG	Agios Georgios	1.76	62	P	Pg	22 35 55.6	-0.9
AGG	Agios Georgios	1.76	62	P	Pb	22 35 55.2	+0.8
AGG				AML	AML	22 36 22.5	
	comp=N,1055µm,0.8s						
AGG				AML	AML	22 36 26.6	
	comp=E,903µm,0.7s						
KLMT	Kalamata	1.79	130	P	Pg	22 35 56.8	-0.3
VLX	Vlachokerasia	1.82	117	P	Pb	22 35 56.3	+0.7
THL	Klokotos Trika	1.88	44	P	Pb	22 35 57.0	+0.6
KPRO	Kipourio	1.91	24	P	Pb	22 35 57.7	+0.6
PROD	Prodromos	2.02	88	P	Pb	22 35 58.1	-0.8
PENT	Pentalofos	2.07	17	P	Pb	22 36 00.0	+0.2
LTK	Loutraki	2.08	95	P	Pb	22 35 59.0	-1.0
LOUT	Loutraki	2.09	95	P	Pb	22 35 59.4	-0.7
LKR	Lokris	2.13	77	P	Pn	22 35 58.4	+1.0
NEST	Nestorio	2.26	14	P	Pb	22 36 03.0	-0.1
VILL	Villia	2.34	90	P	Pn	22 36 02.1	+1.8
KZN	Kozani	2.37	28	P	Pb	22 36 04.1	-0.7
KRND	KRANIDI	2.38	110	P	Pn	22 36 02.8	+2.0
DID	Didima	2.40	106	P	Pn	22 36 02.9	+1.8
XOR	Xorichti	2.51	62	P	Pb	22 36 04.9	-2.3
MRKA	Markates	2.60	78	P	Pn	22 36 05.4	+1.6
FNA	Florina	2.69	17	P	Pn	22 36 07.6	+2.5
FNA	Florina	2.69	17	*e*Pn	Pb	22 36 07.7	-2.6
ATHU	Athens Univers	2.73	94	P	Pn	22 36 07.6	+2.0
VLY	Voula,Athens	2.75	97	P	Pn	22 36 08.1	+2.2
PTL	Penteli	2.79	92	P	Pn	22 36 08.5	+2.1
EREA	Eretria	2.83	85	P	Pn	22 36 07.3	+0.2
KTHR	Kythira	2.89	132	P	Pb	22 36 11.4	-2.3
OHR	Ohrid	2.91	7	*i* Pn	Pb	22 36 11.5	-2.6
KTHA	Kythira Island	2.92	131	P	Pb	22 36 12.1	-2.2
KTHA				S	Sn	22 36 44.8	+1.8
	comp=E,145nm,0.6s						
TIP	Timpagrande	2.96	290	P	Pn	22 36 11.4	+2.6
TIP	Timpagrande	2.96	290	⇑P	Pb	22 36 12.3	-2.6
TIR	Tirane	3.15	354	*e*Pn	Pn	22 36 13.4	+2.1
HORT	Hortiatis	3.20	41	P	Pn	22 36 15.2	+3.1
VAY	Valandovo	3.54	28	*e*Pn	Pn	22 36 20.2	+3.4
VAY	Valandovo	3.54	28	P	Pn	22 36 20.1	+3.3
VAY	Valandovo	3.54	28	*i* Pn	Pb	22 36 21.1	-3.8
MATE	Matera	3.72	312	⇓P	Pn	22 36 21.7	+2.6
SRS	Serrai	3.83	40	*e*Pn	Pn	22 36 23.6	+2.8
ULC	Ulcinj	3.83	348	*e*Pn	Pn	22 36 21.5	+0.7
ULC				*e*Sn	Sn	22 37 07.6	+2.2
SG1	Sgolgore (BA)	3.85	314	*e*Pn	Pn	22 36 23.5	+2.4
BAI	Bari	3.93	318	*e*Pn	Pn	22 36 24.5	+2.4
DRME	Dracevica, Mon	4.06	348	*e*Pn	Pn	22 36 24.8	+0.9
DRME	Dracevica, Mon	4.06	348	*e*Pn	Pn	22 36 25.1	+1.2
DRME				*e*Sn	Sn	22 37 13.0	+2.0
BUM	Brajici-Budva	4.23	345	*e*Pn	Pn	22 36 27.1	+0.9
BUM				*e*Sn	Sn	22 37 16.8	+1.7
MMB	Musomiste	4.26	37	P	Pn	22 36 28.7	+2.0
PDG	Podgorica	4.29	349	*e*Pn	Pn	22 36 28.0	+1.0
PDG				*e*Sn	Sn	22 37 17.1	+0.6
PDG	Podgorica	4.29	349	*e*Pn	Pn	22 36 27.0	0.0
TTG	Podgorica	4.29	349	*e*Pn	Pn	22 36 27.8	+0.8
TTG				*e*Sn	Sn	22 37 18.1	+1.6
PVY	Plav	4.38	356	*e*Pn	Pn	22 36 30.2	+1.8
PVY				*e*Sn	Sn	22 37 21.4	+2.4
HCY	Herceg Novi	4.45	342	*e*Pn	Pn	22 36 29.5	+0.2
HCY				*e*Sn	Sn	22 37 22.1	+1.5
CEME	Cevo	4.46	346	*e*Pn	Pn	22 36 30.2	+0.8
CEME				*e*Sn	Sn	22 37 21.8	+1.0
BOSS	Bosilegrad	4.58	20	*e*Pn	Pn	22 36 32.9	+1.9
IVA	Berane	4.66	356	*e*Pn	Pn	22 36 33.6	+1.4
IVA				*e*Sn	Sn	22 37 28.2	+2.3
NKME	Niksic	4.67	347	*e*Pn	Pn	22 36 33.1	+0.8
NKME				*e*Sn	Sn	22 37 28.0	+2.1
KOME	Kolasin	4.67	353	*e*Pn	Pn	22 36 33.5	+1.1
KOME				*e*Sn	Sn	22 37 27.9	+1.8
BARS	Barje	4.73	13	*e*Pn	Pn	22 36 34.8	+1.7
TREB	Trebinje	4.74	342	*e*Pn	Pn	22 36 33.4	+0.2
TREB				*e*Sn	Sn	22 37 27.5	-0.3
TREB	Trebinje	4.74	342	*e*Pn	Pn	22 36 33.5	+0.2
BRY	Bratogost	4.88	344	*e*Pn	Pn	22 36 35.2	0.0
BRY	Bratogost	4.88	344	*e*Pn	Pn	22 36 36.3	+1.1
BRY				*e*Sn	Sn	22 37 32.5	+1.3
VTS	Vitosha	4.92	26	*e*Pn	Pn	22 36 38.1	+2.2
VTS	Vitosha	4.92	26	⇑P	Pn	22 36 38.3	+2.5
SELS	Selova	5.03	7	*e*Pn	Pn	22 36 37.8	+0.5
SJES	Sjenica	5.05	357	*e*Pn	Pn	22 36 38.9	+1.4
STON	Ston	5.07	337	*e*Pn	Pn	22 36 38.1	+0.4
UPM	Unac-Piva	5.10	348	*e*Pn	Pn	22 36 40.0	+1.7
UPM				*e*Sn	Sn	22 37 38.2	+1.4
IVAS	Ivanjica	5.36	359	*e*Pn	Pn	22 36 42.0	+0.3
RUDO	Rudo	5.45	353	*e*Pn	Pn	22 36 40.9	-2.0
GRUS	Gruza	5.67	3	*e*Pn	Pn	22 36 46.4	+0.4
BBLS	Lazići	5.69	353	*e*Sn	Sn	22 37 50.7	-0.4
DIVS	Divibare	5.88	358	*e*Pn	Pn	22 36 49.6	+0.6
DIVS				*e*Sn	Sn	22 37 54.6	-1.3
DIVS	Divibare	5.88	358	*e*Pn	Pn	22 36 48.7	-0.3
HAPS	Han Pijesak,BI	5.96	350	*e*Pn	Pn	22 36 52.2	+2.2
TRUS	Trudelj	6.00	0	*e*Pn	Pn	22 36 50.6	+0.1
PLVB	Pleven	6.10	31	⇓P	Pn	22 36 54.9	+3.0
MGRS	Mrkonjic Grad	6.66	339	*e*Pn	Pn	22 37 00.9	+1.3
BLY	Banja Luka	6.94	341	*e*Pn	Pn	22 37 03.8	+0.4
VOIR		8.03	24	⇓P	Pn	22 37 20.8	+2.4
MORH	Mrgy, Hungar	8.09	352	*e*Pn	Pn	22 37 19.3	+0.1
MLR	Muntele Rosu	8.38	28	⇑P	Pn	22 37 26.9	+3.5
CRES	Cresnjev	8.42	336	*e*Pn	Pn	22 37 23.2	-0.6
LJU	Ljubljana	8.93	333	*e*Pn	Pn	22 37 31.5	+0.8
PLOR	Plostina	8.96	30	⇑P	Pn	22 37 34.4	+3.3
SOKA	Soboth	9.32	337	*e*Pn	Pn	22 37 36.3	+0.2
	comp=E,3.9nm,0.4s						
OBKA	Obir	9.32	335	*e*Pn	Pn	22 37 37.6	+1.4
	comp=E,2.1nm,0.4s						
ARSA	Arzberg	9.70	340	*e*Pn	Pn	22 37 42.1	+0.9
	comp=E,1.4nm,0.3s						
KBA	Koelnbreinsper	10.24	332	*e*Pn	Pn	22 37 49.9	+1.1
	comp=E,0.7nm,0.3s						
ABTA	Abfaltersbach	10.29	328	*e*Pn	Pn	22 37 49.7	+0.3
	comp=E,1.2nm,0.4s						
BRTR	Keskin Array B	10.47	78	Pn	Pn	22 37 57.2	+5.2
	comp=E,0.0nm,0.3s,baz=266,slow=12,SNR=2.2						
MOA	Molln	10.60	337	*e*Pn	Pn	22 37 54.6	+1.0
	comp=E,1.7nm,0.3s						
WATA	Walderalm	11.15	328	*e*Pn	Pn	22 38 02.2	+0.9
	comp=E,0.8nm,0.2s						
SQTA	Sankt Quirin	11.22	326	*e*Pn	Pn	22 38 05.6	+3.5
	comp=E,0.8nm,0.2s						
MOTA	Moosalm	11.36	326	*e*Pn	Pn	22 38 06.9	+2.8
	comp=E,0.8nm,0.4s						
RETA	Reutte	11.62	326	*e*Pn	Pn	22 38 10.7	+3.1
	comp=E,0.3nm,0.2s						
GERES	GERESS Array B	11.66	338	Pn	Pn	22 38 06.3	-1.8
	comp=E,0.2nm,0.3s,baz=160,slow=14,SNR=5.0						
KHC	Kasperske Hory	11.95	338	*e*PN	Pn	22 38 11.6	-0.5
MMAI	Mount Meron Ar	13.31	108	LR	LR	22 44 45.1	
	comp=E,163nm,19.5s,baz=80,slow=42						
FINES	FINESS Array B	23.53	7	P	P	22 40 30.9	-0.6
	comp=E,1.3nm,0.7s,baz=177,slow=9.5,SNR=6.4						
NOA	NORSAR Array B	23.55	349	P	P	22 40 30.0	-1.8
	comp=E,0.4nm,0.6s,baz=150,slow=9.7,SNR=2.8						
TORD	Torodi Ar. Bea	29.97	219	P	P	22 41 29.5	-0.6
	comp=E,0.5nm,1.1s,baz=27,slow=8.2,SNR=2.6						
ARCES	ARCESS Array B	31.50	3	P	P	22 41 41.5	-1.6
	comp=E,0.3nm,0.4s,baz=189,slow=10.0,SNR=5.1						
MKAR	Makanchi Array	45.40	58	P	P	22 43 40.1	0.0
	comp=E,0.3nm,0.4s,baz=272,slow=7.5,SNR=11						
ZALV	Zalesovo Beam	45.77	48	P	P	22 43 43.1	+0.2
	comp=E,0.4nm,0.5s,baz=285,slow=8.2,SNR=3.0						
MATP	Matopo	58.83	171	LR	LR	23 12 53.6	
	comp=E,103nm,18.2s,baz=346,slow=38						

*MOS **05** 22:53:03.0±1.1, 20.37S×169.33E, h35km, mb5.6/19, MS4.9/8, Error ellipse: s-maj=9.8km s-min=7.9km az=134.7*

*BJI **05** 22:53:03.3±0.0, 19.92S×169.66E, h32km, mB5.6/45, mb5.1/63, Ms5.2/22, Ms7 4.9/25*

*NEIC **05** 22:53:05.3, 20.40S×169.26E, h31km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.81; $M_{\theta\theta}$0.47; $M_{\phi\phi}$-2.28; $M_{r\theta}$0.63; $M_{\theta\phi}$0.85; $M_{\phi r}$-0.29; Fault plane solution: $M_0$2.36000×10^{17} NP1:ϕ_s5.10000°, δ43.09000°, λ121.56000°. NP2:ϕ_s145.03000°, δ54.41000°, λ63.91000°. Principal axes: T 2.0589, Plg68.0000°, Azm358.0000°; N 0.5117, Plg21.0000°, Azm161.0000°; P -2.5706, Plg6.0000°, Azm253.0000°;*

*NEIC **05** 22:53:05.3±2.2, 20.40S±0.06×169.26E±0.07, h48km±4km, mb5.4/132, Ms_20 5.0/171, Mwb5.5/17 Error ellipse: s-maj=10.6km s-min=8.2km az=113.0*

*IDC **05** 22:53:05.8±2.1, 20.42S×169.37E, h48km±18km, mb4.6/27, mb1 4.7/29, mb1mx4.6/44, mbtmp4.9/29, ML4.7/2, MS4.8/25, Ms1 4.8/25, ms1mx4.7/29, Error ellipse: s-maj=15.8km s-min=13.0km az=142.0*

*GCMT **05** 22:53:07.3±0.1, 20.47S±0.01×169.05E±0.01, h47km, MW5.5/132, Moment Tensor Solution. s132,c212; s131,c219; Duration: 1s3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.78±.03; $M_{\theta\theta}$-0.20±.02; $M_{\phi\phi}$-1.58±.02; $M_{r\theta}$-0.12±.02; $M_{\theta\phi}$0.93±.02; $M_{\phi r}$-0.09±.02; Best double couple: $M_0$1.92100×10^{17} NP1:ϕ_s328.00000°, δ45.00000°, λ82.00000°. NP2:ϕ_s159.00000°, δ46.00000°, λ98.00000°. Principal axes: T 1.7950, Plg84.0000°, Azm149.0000°; N 0.2540, Plg6.0000°, Azm333.0000°; P -2.0470, Plg0.0000°, Azm243.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **05** 22:53:07.8±0.0, 20.41S×169.47E, h42km±3km*

*KLM **05** 22:53:14.0, 20.38S×169.08E, h10km, mb5.5*

ISC 05 22:53:05.2±0.5**, 20.40S**±0.04×**169.25E**±0.04**, h44**km±3km**, h45**km**:pP-P, n659, σ1s40**/565**, mb5.3**/123**, MS5.0**/121**, 29C-13D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.10	237	*e*Pn	Pn	22 53 51.7	0.0
	903nm,0.3s						
DZM				*e*Sn	Sn	22 54 24.1	-3.4
	943nm,0.2s						
DZM				*e*LR	LR	22 54 31.2	
	comp=Z,30µm,23.7s						
DZM	Mont Dzumac	3.10	237	P	Pn	22 53 52.0	+0.3
	84nm,0.3s,baz=91,slow=9.4,SNR=674						
DZM				S	Sn	22 54 26.1	-1.4
	157nm,0.3s,baz=139,slow=19,SNR=10						
DZM				LR	LR	22 54 46.0	
	comp=Z,7µm,18.6s,baz=64,slow=32						
DZM	Mont Dzumac	3.10	237		Pn	22 53 51.2	-0.5
NOUC	Port Laguerre	3.22	238		Pn	22 53 53.4	+0.1
NOUC				Sn	Sn	22 54 28.1	-2.4
SANVU	Saraoutou	5.30	338		Pn	22 54 23.7	+1.9
SANVU				Sn	Sn	22 55 21.0	-0.6
NFK	Norfolk Island	8.68	188	P	Pn	22 55 09.4	+1.2
	baz=8.6						
MSVF	Nonsavu	8.74	74		Pn	22 55 11.9	+2.8
MSVF	Nonsavu	8.74	74	*d i*P	Pn	22 55 15.0	+5.9
HNR	Honiara	14.12	319	Pn	Pn	22 56 21.9	-0.7
HNR	Honiara	14.12	319	P	Pn	22 56 22.0	-0.7
FUNA	Funafuti	15.23	41	Pn	Pn	22 56 35.1	-2.2
FUNA				IAmb	IAmb	22 57 03.6	
	comp=Z,294nm,1.4s						
EIDS	Eidsvold	17.45	250	P	P	22 57 06.5	+0.4
	baz=17						
EIDS	Eidsvold	17.45	250	P	P	22 57 07.9	+1.8
EIDS				IAmb	IAmb	22 57 11.6	
	comp=Z,333nm,1.4s						
ARMA	Armidale	18.76	234	P	Pn	22 57 23.2	+1.8
	baz=19						
ARMA	Armidale	18.76	234	P	Pn	22 57 21.7	+0.2
HAZ	Te Kaha	18.82	159	P	Pn	22 57 25.1	+3.2
MXZ	Matakaoa Point	18.83	157	P	Pn	22 57 24.9	+2.8
RUGZ	Raukumara Rang	18.97	159	P	Pn	22 57 24.2	+0.3
URZ	Urewera	19.05	161	P	Pn	22 57 26.2	+1.4
	comp=Z,2.3nm,0.3s,baz=319,slow=3.7,SNR=16						
URZ				LR	LR	23 03 28.8	
	comp=Z,3µm,19.9s,baz=344,slow=33						
URZ	Urewera	19.05	161	P	Pn	22 57 24.5	-0.3
URZ				IAmb	IAmb	22 57 40.8	
	comp=Z,207nm,1.0s						
URZ	Urewera	19.05	161	P	Pn	22 57 27.3	+2.5
WMGZ	Waiomatatini S	19.09	157	P	Pn	22 57 27.5	+2.2
AFI	Afiamalu	19.24	73	P	Pn	22 57 26.7	-0.5
	comp=Z,2.3nm,0.3s,baz=252,slow=12,SNR=4.8						
AFI				LR	LR	23 03 28.4	
	comp=Z,4µm,21.2s,baz=242,slow=32						
AFI	Afiamalu	19.24	73	P	P	22 57 24.1	-1.9
MWZ	Matawai	19.25	160	P	Pn	22 57 29.9	+2.7
PUZ	Puketiti	19.26	158	P	Pn	22 57 28.7	+1.4
RTZ	Ruatahuna	19.34	161	P	Pn	22 57 30.7	+2.3
RTZ				S	S	23 00 52.7	-11
SNGZ	Shannon Statio	19.60	161	P	Pn	22 57 32.7	+1.3
CNGZ	Carnagh Statio	19.61	159	P	Pn	22 57 32.4	+0.9
RAHZ	Arahi	19.65	162	P	Pn	22 57 33.4	+1.5
RIGZ	Rimuhau	19.67	160	P	Pn	22 57 33.0	+0.8
BKZ	Black Stump Fm	19.71	163	P	Pn	22 57 33.9	+1.2
BKZ				IAmb	IAmb	22 57 57.2	
	comp=Z,160nm,1.0s						
THZ	Tophouse	21.52	173	P	P	22 57 51.2	+0.7
THZ				IAmb	IAmb	22 58 08.4	
	comp=Z,330nm,1.6s						
MSWZ	Moikau Station	21.56	168	P	P	22 57 51.6	+0.8
CTA	Charters Tower	21.57	267	P	P	22 57 54.0	+2.8
	comp=Z,16nm,0.6s,baz=92,slow=12,SNR=16						
CTA				LR	LR	23 05 39.1	

comp=Z,3µm,21.1s,baz=90,slow=35
BSWZ Blackbirch Sta 21.61 171 P P 22 57 51.4 +0.1
PLWZ Palliser 21.71 168 P P 22 57 50.7 -1.8
KHZ Kahutara 22.24 172 P P 22 57 58.9 +0.8
LTZ Lake Taylor 22.46 174 P P 22 57 59.3 -1.2
LTZ IAmb IAmb 22 58 24.9
comp=Z,231nm,1.5s
FOZ Fox Glacier 23.07 179 P P 22 58 07.2 +0.5
FOZ IAMs_20 IAMs_20 23 06 27.1
comp=Z,5µm,20.0s
RABL Rabaul 23.16 312 P P 22 58 08.5 +0.6
CAN Canberra 23.20 226 P P 22 58 08.9 +0.7
CAN IAmb IAmb 22 58 22.4
comp=Z,135nm,1.2s
CAN Canberra 23.20 226 P P 22 58 09.0 +0.7
CAN pmax pmax
comp=Z,135nm,1.2s
RPZ Rata Peaks 23.29 177 P P 22 58 08.8 -0.2
comp=Z,26nm,1.0s,baz=340,slow=2.8,SNR=8.5
RPZ LR LR 23 06 29.0
comp=Z,5µm,20.8s,baz=333,slow=34
RPZ Rata Peaks 23.29 177 IAmb IAmb 22 58 24.3
comp=Z,350nm,1.9s
RPZ IAMs_20 IAMs_20 23 06 07.2
comp=Z,6µm,21.0s
MQZ McQueen's Vall 23.41 174 P P 22 58 08.9 -1.2
MQZ PcP PcP 23 01 48.2 -7.3
PMG Port Moresby 23.95 294 P P 22 58 15.8 +0.3
comp=Z,11nm,0.3s,baz=100,slow=10,SNR=8.5
PMG LR LR 23 06 25.9
comp=Z,2µm,19.4s,baz=136,slow=33
PMG Port Moresby 23.95 294 P P 22 58 16.7 +1.2
PMG IAmb IAmb 22 58 36.5
comp=Z,198nm,1.3s
PMG Port Moresby 23.95 294⇓eP P 22 58 17.6 +2.1
PMG pmax pmax
comp=Z,308nm,1.7s
WHZ Wether Hill Ro 25.45 182 P P 22 58 28.0 -0.8
WHZ IAmb IAmb 22 58 49.1
comp=Z,165nm,1.7s
KNTN Kanton 25.53 49 P P 22 58 29.5 -0.4
KNTN IAmb IAmb 22 58 44.9
comp=Z,93nm,1.0s
COEN Coen 25.70 280 P P 22 58 31.8 +0.4
COEN IAmb IAmb 22 58 45.6
comp=Z,128nm,1.1s
TOO Toolangi 26.80 225 P P 22 58 42.0 +0.8
TOO Toolangi 26.80 225 P P 22 58 42.0 +0.8
TOO pmax pmax
comp=Z,77nm,1.1s
TOO MLR MLR
comp=Z,2µm,20.0s
STKA Stephens Creek 27.25 240 P P 22 58 46.4 +1.1
comp=Z,5.9nm,0.8s,baz=71,slow=9.1,SNR=14
STKA LR LR 23 09 12.6
comp=Z,3µm,20.4s,baz=109,slow=35
STKA Stephens Creek 27.25 240 P P 22 58 46.2 +0.9
MANU Manus Island 28.09 308 P P 22 58 51.8 -1.1
MANU IAmb IAmb 22 59 06.9
comp=Z,164nm,1.9s
RAR Rarotonga 28.95 97 LR LR 23 08 18.5
comp=Z,978nm,20.4s,baz=264,slow=32
BBOO Buckleboo 32.01 240 P P 22 59 27.5 0.0
WR8 Warramunga Arr 32.58 265 IAMs_20 IAMs_20 23 12 32.8
comp=Z,3µm,20.0s
WR7 Warramunga Arr 32.60 265 IAMs_20 IAMs_20 23 12 43.4
comp=Z,4µm,21.0s
WR6 Warramunga Arr 32.62 265 IAMs_20 IAMs_20 23 12 23.9
comp=Z,3µm,20.0s
WR5 Warramunga Arr 32.65 265 IAMs_20 IAMs_20 23 12 34.5
comp=Z,3µm,20.0s
WR4 Warramunga Arr 32.67 265 IAMs_20 IAMs_20 23 12 36.1
comp=Z,3µm,21.0s
WC3 Warramunga Arr 32.70 265 IAMs_20 IAMs_20 23 12 36.9
comp=Z,3µm,20.0s
WB0 Warramunga Arr 32.70 265 IAMs_20 IAMs_20 23 12 37.0
comp=Z,3µm,20.0s
WB8 Warramunga Arr 32.71 265 IAMs_20 IAMs_20 23 12 45.2
comp=Z,3µm,20.0s
WR2 Warramunga Arr 32.71 265 IAMs_20 IAMs_20 23 12 36.2
comp=Z,3µm,20.0s
WB2 Warramunga Arr 32.72 265 IAMs_20 IAMs_20 23 12 26.5
comp=Z,3µm,22.0s
WRAB Tennant Creek 32.73 265 P P 22 59 34.9 +1.1
WRAB PP PnPn 23 00 41.4 -1.7
WRAB Tennant Creek 32.73 265 IAMs_20 IAMs_20 23 12 37.3
comp=Z,3µm,20.0s
WRAB Tennant Creek 32.73 265⇓eP P 22 59 34.4 +0.5
WRAB pmax pmax
comp=Z,13nm,1.2s
WR1 Warramunga Arr 32.73 265 IAMs_20 IAMs_20 23 12 46.8
comp=Z,3µm,20.0s
WRA Warramunga Arr 32.73 265 P P 22 59 34.1 +0.1
comp=Z,8.2nm,0.9s,baz=92,slow=8.4,SNR=18
WRA LR LR 23 12 58.3
comp=Z,3µm,19.4s,baz=100,slow=36
WRA Warramunga Arr 32.73 265 P P 22 59 34.1 +0.1
WC1 Warramunga Arr 32.74 265 IAMs_20 IAMs_20 23 12 37.9
comp=Z,3µm,20.0s
ASAR Alice Springs 32.87 258 P P 22 59 36.0 +0.8
comp=Z,17nm,0.6s,baz=84,slow=9.1,SNR=132
ASAR LR LR 23 13 36.8
comp=Z,3µm,18.1s,baz=96,slow=37
ASAR Alice Springs 32.87 258 P P 22 59 35.4 +0.3
ASAR Alice Springs 32.87 258 P P 22 59 36.0 +0.8
GENI Genyem 33.43 298 P P 22 59 41.2 +1.1
comp=Z,3µmcomp=Z,198nm,1.5s
MTN Manton Dam 37.22 276 IAMs_20 IAMs_20 23 14 18.7
comp=Z,3µm,21.0s
WRKA Warakurna 37.95 255 P P 23 00 20.1 +1.3
baz=38,SNR=9.0
TBI Tubuai 38.34 102 eS S 23 06 19.0 +5.3
comp=Z,432nm,31.5s
TBI eLQ LQ 23 09 20.8
comp=Z,3µm,31.5s
TBI eLR LR 23 11 00.0
comp=Z,3µm,27.0s,baz=266
FORT Forrest 38.37 246 P P 23 00 24.2 +2.0
baz=38,SNR=8.5
FORT Forrest 38.37 246 P P 23 00 23.2 +0.9
FORT IAmb IAmb 23 00 58.8
comp=Z,38nm,0.8s
FORT IAMs_20 IAMs_20 23 16 09.7
comp=Z,3µm,20.0s
KNRA Kununurra 38.71 270 P P 23 00 26.4 +1.2
baz=39,SNR=4.4
KNRA Kununurra 38.71 270 P P 23 00 25.8 +0.6
KNRA IAmb IAmb 23 00 37.1
comp=Z,54nm,1.1s
PPT2 Papeete2 38.97 93 eS S 23 06 28.1 +4.7
comp=Z,632nm,28.0s
PPT2 eLQ LQ 23 09 36.6
comp=Z,3µm,30.2s
PPT2 eLR LR 23 11 15.5
comp=Z,4µm,27.2s,baz=249
PPT Papeete 38.97 93 LR LR 23 12 33.8
comp=Z,1µm,20.8s,baz=256,slow=30
FITZ Fitzroy Crossi 41.15 266 P P 23 00 47.1 +1.7
baz=41,SNR=9.8
FITZ Fitzroy Crossi 41.15 266 P P 23 00 46.7 +1.3
comp=Z,12nm,0.6s,baz=121,slow=8.1,SNR=21
FITZ LR LR 23 17 37.9
comp=Z,2µm,21.1s,baz=101,slow=36
FITZ Fitzroy Crossi 41.15 266 P P 23 00 46.0 +0.6
FITZ IAmb IAmb 23 01 01.6
comp=Z,62nm,0.9s
GUMO Guam 41.42 323 LR LR 23 15 27.4
comp=Z,719nm,22.0s,baz=121,slow=32
SIJI Sorong 41.88 293 P P 23 00 52.6 +1.1
comp=Z,19nm,0.7s,baz=107,slow=8.0,SNR=13
SIJI LR LR 23 18 13.5
comp=Z,2µm,21.6s,baz=111,slow=36
SWI Sorong 41.89 293 P P 23 00 52.6 +1.0
comp=Z,2µmcomp=Z,72nm,1.2s
AAI Ambon 43.27 287 P P 23 01 04.5 +1.7
comp=Z,95nm,0.7s
NLAI Namlea 44.45 287 P P 23 01 14.4 +2.1
comp=Z,92nm,1.6s
SOEI Soe 44.57 277 P P 23 01 16.8 +3.4
comp=Z,2µmcomp=Z,88nm,1.1s
SOEI Soe 44.57 277 P P 23 01 12.8 -0.5
SOEI IAMs_20 IAMs_20 23 18 14.6
comp=Z,2µm,22.0s
LBMI Labuha 45.28 290 P P 23 01 20.4 +1.5
comp=Z,3µmcomp=Z,63nm,1.3s
SANI Sanana 45.97 288 P P 23 01 25.9 +1.6
comp=Z,2µmcomp=Z,95nm,1.3s

PSA00 Pilbara Seismi 45.98 259 P P 23 01 23.1 -1.3
PSA00 IAmb IAmb 23 01 37.8
comp=Z,96nm,1.2s
MEEK Meekatharra 46.60 252 P P 23 01 29.8 +0.6
baz=46,SNR=11
KLBR Kellerberrin 47.23 245 P P 23 01 34.6 +0.6
baz=47,SNR=7.0
BBSI Bau Bau 47.65 282 P P 23 01 39.9 +2.4
comp=Z,277nmcomp=Z,20nm,1.4s
NWAO Narrogin (SRO) 47.70 244 P P 23 01 38.9 +1.2
comp=Z,33nm,1.0s,baz=99,slow=5.5,SNR=5.3
NWAO LR LR 23 21 52.8
comp=Z,4µm,19.9s,baz=100,slow=36
NWAO Narrogin (SRO) 47.70 244 P P 23 01 39.1 +1.5
NWAO Narrogin (SRO) 47.70 244 P P 23 01 39.1 +1.5
NWAO pmax pmax
comp=Z,113nm,1.4s
MUN Mundaring 48.55 245 P P 23 01 45.9 +1.7
baz=48,SNR=4.0
MORW Morawa 48.75 249 P P 23 01 47.0 +1.2
baz=49,SNR=3.7
MORW Morawa 48.75 249 P P 23 01 45.0 -0.8
LUWI Luwuk 49.30 287 P P 23 01 49.8 -0.4
BKSI Bulukumba 49.97 280 P P 23 01 56.6 +1.3
comp=Z,701nmcomp=Z,42nm,1.4s
TAOE Nuku Hiva Isla 50.11 84 eLR LR 23 16 23.8
comp=Z,2µm,27.6s
BNSI Bone 50.34 282 P P 23 02 00.3 +2.3
comp=Z,1µmcomp=Z,82nm,1.4s
APSI Ampana 50.36 287 P P 23 02 00.0 +1.8
comp=Z,1µmcomp=Z,54nm,1.6s
SPSI Sidrap Palu 50.81 282 P P 23 02 02.7 +1.1
comp=Z,815nmcomp=Z,30nm,1.6s
PLAI Plampang 50.93 275 P P 23 02 03.6 +1.1
comp=Z,1µmcomp=Z,111nm,1.4s
MPSI Mapaga 52.48 287 P P 23 02 14.7 +0.6
comp=Z,1µmcomp=Z,92nm,1.3s
SRBI Singaraja 53.56 275 P P 23 02 22.7 +0.6
comp=Z,88nm,1.2s
JCJ Chichijima 54.01 330 LR LR 23 23 12.3
comp=Z,577nm,21.8s,baz=132,slow=33
JAGI Jajag, Banyuwa 54.43 274 P P 23 02 27.8 -0.7
KKM Kota Kinabalu 58.35 291 P P 23 02 56.1 -0.3
CASY Casey 59.07 204 P P 23 02 59.6 -0.9
CASY IAmb IAmb 23 03 12.8
comp=Z,69nm,1.4s
CASY PP PP 23 05 00.6 -11
SBUM Sibu 60.31 285 P P 23 03 09.6 -0.3
SBUM IAmb IAmb 23 03 24.0
comp=Z,47nm,1.5s
SBUM Sibu 60.31 285 P P 23 03 23.0 +13
LEM Lembang 61.08 273 P P 23 03 16.6 +1.2
comp=Z,47nm,0.7s,baz=108,slow=9.6,SNR=5.5
LEM LR LR 23 30 33.2
comp=Z,492nm,19.3s,baz=84,slow=37
JOW Kunigami 61.49 318 P P 23 03 17.0 -0.6
JOW IAMs_20 IAMs_20 23 29 19.9
comp=Z,1µm,21.0s
KSM Kuching 61.64 283 P P 23 03 19.7 +0.7
MJAR Matsushiro Arr 63.78 332 P P 23 03 33.2 +0.5
comp=Z,12nm,0.9s,baz=168,slow=7.3,SNR=17
MJAR LR LR 23 32 59.2
comp=Z,166nm,18.5s,baz=130,slow=38
MJAR Matsushiro Arr 63.78 332 P P 23 03 31.7 -1.0
MAJO Matsushiro 63.78 332 P P 23 03 33.6 +0.9
MAJO IAmb IAmb 23 03 35.4
comp=Z,31nm,1.1s
MAJO Matsushiro 63.78 332 P P 23 03 33.6 +0.9
MAJO pmax pmax
comp=Z,31nm,1.1s
MAT Matsushiro 63.78 332 P P 23 03 34.3 +1.6
JNU Nakatsue 64.61 325 P P 23 03 38.6 +0.3
comp=Z,19nm,0.8s,baz=145,slow=3.5,SNR=11
JNU Nakatsue 64.61 325 IAmb IAmb 23 03 51.6
comp=Z,55nm,1.3s
YHNB Yeheng 64.62 312 P P 23 03 37.9 -0.6
MNAI Manna 66.28 274 P P 23 03 48.0 -1.5
DLV T Lat 67.84 293 P P 23 03 57.9 -1.6
TJN Taejon 68.96 325c iP P 23 04 06.6 +0.8
KSRS Korea Array 69.47 326 P P 23 04 09.7 +0.8
comp=Z,3.0nm,0.7s,baz=146,slow=6.0,SNR=10
KSRS LR LR 23 32 29.1
comp=Z,245nm,21.1s,baz=102,slow=34
KSAR Wonju Array Be 69.48 326 P P 23 04 08.4 -0.6
KSAR Wonju Array Be 69.48 326 P P 23 04 08.4 -0.6
QSPA South Pole Qui 69.66 180 P P 23 04 10.4 +0.5
QSPA South Pole Qui 69.66 180 IAMs_20 IAMs_20 23 32 33.6
comp=Z,842nm,19.0s
QIZ Qiongzhong 70.16 300 P P 23 04 17.7 +4.1
QIZ S S 23 13 22.3 +0.2
QIZ LR LR
comp=Z,360nm,19.6s
INCN Inchon 70.17 325 P P 23 04 14.2 +0.9
INCN Inchon 70.17 325 P P 23 04 14.2 +0.9
INCN pmax pmax
comp=Z,171nm,1.5s
NJ2 Nanjing 71.05 316 eP P 23 04 22.8 +4.1
NJ2 pmax pmax
comp=Z,12nm,0.9s
YSS Yuzh-Sakhalins 71.18 341 P P 23 04 17.5 -1.6
YSS IAmb IAmb 23 04 34.8
comp=Z,62nm,1.2s
YSS Yuzh-Sakhalins 71.18 341⇓eP P 23 04 21.4 +2.2
YSS e 23 04 33.8
YSS e 23 04 43.9
YSS pmax pmax
comp=Z,30nm,0.7s
IPM Ipoh 71.33 282 P P 23 04 21.8 +0.9
KULM Kulim 71.99 283 P P 23 04 24.2 -0.7
RPSI Rantau Prapat 72.58 280 P P 23 04 28.0 -0.4
PSI Prapat 72.62 280 P P 23 04 29.1 +0.3
comp=Z,12nm,1.0s,baz=158,slow=5.6,SNR=13
USA0B Ussuriysk Arra 72.77 333 P P 23 04 28.2 -0.6
USA0B IAmb IAmb 23 04 43.8
comp=Z,86nm,1.2s
USA0B Ussuriysk Arra 72.77 333 P P 23 04 28.2 -0.6
USA0B pmax pmax
comp=Z,86nm,1.2s
USRK Ussuriysk Ar. 72.77 333 P P 23 04 30.0 +1.2
comp=Z,28nm,1.0s,baz=106,slow=4.2,SNR=26
USRK Ussuriysk Ar. 72.77 333 P P 23 04 30.1 +1.2
USRK Ussuriysk Ar. 72.77 333 P P 23 04 30.1 +1.3
WHN Wuhan 73.14 312 ⇓P P 23 04 32.6 +1.4
WHN S SKiKP 23 14 05.3 +5.3
WHN pmax pmax
comp=Z,270nm,1.9s
WHN LR LR
comp=Z,1µm,22.4s
PETK Petropavlovsk- 73.89 353 P P 23 04 35.5 +0.3
comp=Z,6.6nm,0.6s,baz=146,slow=5.9,SNR=6.3
PETK LR LR 23 31 07.7
comp=Z,1µm,21.6s,baz=180,slow=31
PETK Petropavlovsk- 73.89 353 P P 23 04 34.0 -1.2
DL2 Dalian 73.94 323 P P 23 04 37.2 +1.4
DL2 pP pP 23 04 49.2 +0.9
DL2 eS S 23 14 07.0 +2.3
DL2 pmax pmax
comp=Z,83nm,1.0s
DL2 pmax pmax
comp=Z,690nm,4.2s
DL2 LR LR
comp=Z,540nm,19.9s
DL2 LR LR
comp=Z,520nm,21.4s
DL2 LR LR
comp=Z,580nm,20.1s
MDJ Mudanjiang 74.15 332 P P 23 04 38.0 +1.1
MDJ pmax pmax
comp=Z,46nm,1.6s
MDJ pmax pmax
comp=Z,960nm,6.9s
MDJ Mudanjiang 74.15 332 P P 23 04 35.8 -1.1
MDJ IAmb IAmb 23 04 51.8
comp=Z,84nm,1.3s
TIA Tai'an 74.82 319 P P 23 04 39.3 -1.7
TIA pmax pmax
comp=Z,23nm,1.7s
SLVN Son La 76.14 299 P P 23 04 47.1 -1.9
PBKT Sadao Pong 76.42 294 IAmb IAmb 23 05 05.4
comp=Z,48nm,1.3s
GYA Guiyang 76.49 305⇑iP P 23 04 52.1 +1.2
GYA PP PP 23 07 46.9 +3.4
GYA S S 23 14 29.1 -4.7
GYA pmax pmax
comp=Z,20nm,1.0s

GYA pmax pmax
comp=Z,320nm,5.8s
GRNR Gornyy 76.54 339⇑iP P 23 04 52.2 +1.7
GRNR pmax pmax
comp=Z,20nm,1.2s
GRNR MLR MLR
comp=Z,300nm,14.0s
KLR Kul'dur 76.93 336⇑eP P 23 04 53.5 +0.8
KLR pmax pmax
comp=Z,45nm,1.1s
MAW Mawson 77.36 202 P P 23 04 56.2 +1.2
comp=Z,6.3nm,0.5s,baz=229,slow=11,SNR=11
MAW LR LR 23 34 24.9
comp=Z,784nm,21.7s,baz=82,slow=32
MAW Mawson 77.36 202 P P 23 04 55.5 +0.5
BJT Baijiatuau 77.83 321 P P 23 04 58.7 +0.7
BJT IAmb IAmb 23 05 14.3
comp=Z,66nm,1.3s
BJT Baijiatuau 77.83 321 P P 23 04 58.7 +0.7
BJT pmax pmax
comp=Z,67nm,1.3s
XAN Xi'an 78.90 313 P P 23 05 05.2 +1.1
XAN PcP pP 23 05 16.7 0.0
XAN S S 23 14 54.4 -5.0
XAN pmax pmax
comp=Z,27nm,1.5s
XAN pmax pmax
comp=Z,420nm,6.5s
XAN Xi'an 78.90 313 P P 23 05 05.1 +1.0
XAN IAmb IAmb 23 05 18.2
comp=Z,82nm,1.3s
XAN Xi'an 78.90 313 P P 23 05 05.1 +1.0
XAN pmax pmax
comp=Z,82nm,1.3s
CM31 Chiang Mai Arr 78.99 294 P P 23 05 05.8 +1.0
CM31 IAmb IAmb 23 05 20.0
comp=Z,62nm,1.2s
CMAR Chiang Mai Arr 78.99 294 P P 23 05 06.3 +1.5
comp=Z,11nm,0.8s,baz=132,slow=3.9,SNR=45
CHTO Chiang Mai 79.14 295 P P 23 05 07.0 +1.3
CHTO Chiang Mai 79.14 295 P P 23 05 07.0 +1.3
CHTO pmax pmax
comp=Z,149nm,1.8s
CD2 Chengdu 80.95 308 P P 23 05 17.0 +1.7
CD2 S S 23 15 23.4 +2.3
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,480nm,6.1s
CD2 LR LR
comp=Z,390nm,25.5s
CD2 LR LR
comp=Z,430nm,17.2s
CD2 LR LR
comp=Z,550nm,20.6s
HHC Hu-ho-hao-te 81.11 320⇓iP P 23 05 18.0 +2.0
HHC pP pwP 23 05 29.6 -1.4
HHC pmax pmax
comp=Z,15nm,1.2s
HHC pmax pmax
comp=Z,240nm,5.5s
DGPR DIGLIPUR 82.09 287 ex P 23 05 24.5 +3.0
HIA Hailar 82.12 330 P P 23 05 20.9 -0.1
HIA IAmb IAmb 23 05 34.4
comp=Z,61nm,1.5s
HIA Hailar 82.12 330 P P 23 05 20.9 -0.1
HIA pmax pmax
comp=Z,61nm,1.5s
ZEA Zeya 82.22 336 eP P 23 05 22.7 +1.3
ZEA pmax pmax
comp=N,30nm,1.0s
ZEA pmax pmax
comp=Z,46nm,1.2s
OHAK Old Harbor 83.44 19 P P 23 05 27.9 +0.3
OHAK IAmb IAmb 23 05 43.3
comp=Z,60nm,1.0s
LZH Lanzhou 83.51 312 ⇑P P 23 05 30.8 +2.1
LZH pP pwP 23 05 43.1 -0.6
LZH sP sP 23 05 48.9 +2.8
LZH PP PP 23 08 45.3 +3.6
LZH pmax pmax
comp=Z,64nm,1.4s
LZH pmax pmax
comp=Z,210nm,4.6s
LZH LR LR
comp=Z,360nm,17.1s
LZH LR LR
comp=Z,390nm,17.0s
LZH LR LR
comp=Z,560nm,19.2s
SYO Syowa Base 83.82 196⇑eP P 23 05 30.0 +0.4
SYO Syowa Base 83.82 196⇑iX P 23 05 39.6 +10
SEY Seymchan 84.12 352 P P 23 05 31.6 +0.7
comp=Z,2.2nm,0.4s,baz=166,slow=3.9,SNR=6.4
KDAK Kodiak Island 84.12 19 P P 23 05 31.1 +0.1
comp=Z,12nm,0.9s,baz=265,slow=3.7,SNR=8.8
KDAK Kodiak Island 84.12 19 IAmb IAmb 23 05 57.9
comp=Z,109nm,1.9s
GAMB Gambell 85.21 8 P P 23 05 35.9 -0.5
GAMB IAmb IAmb 23 05 49.8
comp=Z,29nm,1.3s
GAMB PP PP 23 08 46.5 -8.3
KOHI KOHIMA 86.13 299 eP P 23 05 43.1 +1.0
RSO Redoubt South 86.26 18 P P 23 05 41.5 -0.4
KCPM Cahto Peak 86.54 45 P P 23 05 43.1 -0.7
KCPM IAmb IAmb 23 05 46.4
comp=Z,18nm,0.7s
SAO San Andreas Ge 86.58 49 IAMs_20 IAMs_20 23 35 35.5
comp=Z,820nm,20.0s
KMRM Mail Ridge 86.72 45 P P 23 05 44.9 +0.3
KMRM IAmb IAmb 23 06 01.0
comp=Z,62nm,1.5s
PMPB Monarch Peak 86.78 50 IAMs_20 IAMs_20 23 36 31.8
comp=Z,727nm,20.0s
CIT Chita 86.89 329 eP P 23 05 46.1 +1.0
CIT e 23 05 58.1
ANM Nome 86.94 11 IAMs_20 IAMs_20 23 37 24.2
comp=Z,664nm,20.0s
KHMM Horse Mountain 87.03 44 P P 23 05 46.0 -0.2
KHMM IAmb IAmb 23 05 49.0
comp=Z,15nm,0.6s
KRMB Red Mountain 87.24 44 P P 23 05 47.5 +0.3
KRMB IAmb IAmb 23 06 15.6
comp=Z,55nm,1.8s
KRMB IAMs_20 IAMs_20 23 35 31.9
comp=Z,625nm,20.0s
O02D Mt. Diablo Mer 87.31 45 P P 23 05 48.7 +1.3
baz=241
KBO Bosley Butte 87.39 43 P P 23 05 47.5 -0.3
KBO IAmb IAmb 23 06 04.9
comp=Z,74nm,1.9s
TEZP TEZPUR 87.57 299 eP P 23 05 49.7 +0.8
SUA Susitna One 87.65 18 IAMs_20 IAMs_20 23 43 14.1
comp=Z,651nm,20.0s
WDC Whiskeytown Da 87.67 45 P P 23 05 49.5 +0.4
WDC IAmb IAmb 23 06 04.0
comp=Z,44nm,1.6s
WDC IAMs_20 IAMs_20 23 35 39.3
comp=Z,724nm,22.0s
WDC Whiskeytown Da 87.67 45 P P 23 05 49.5 +0.4
WDC pmax pmax
comp=Z,44nm,1.6s
WDC MLR MLR
comp=Z,700nm,22.0s
NVL N'lazarevskaya 87.71 187 eP P 23 06 00.0 +11
NVL eS S 23 16 22.2 -5.1
NVL pmax pmax
comp=Z,66nm,1.3s
N02D Trinity Center 87.76 45 P P 23 05 51.0 +1.4
baz=241
L02E Cave Junction 87.76 43 P P 23 05 50.9 +1.4
baz=240
ULN Ulaanbaatar 87.80 323 P P 23 05 50.7 +1.0
ULN Ulaanbaatar 87.80 323 P P 23 05 50.7 +1.0
ULN pmax pmax
comp=Z,89nm,1.2s
M02C Callahan 87.86 44 P P 23 05 51.2 +1.1
baz=240
ORV Oroville 87.88 46 IAmb IAmb 23 06 04.6
comp=Z,47nm,1.8s
SHL Shillong 87.90 298 P P 23 05 50.7 0.0
SHL Shillong 87.90 298 P P 23 05 50.7 0.0
SHL pmax pmax
comp=Z,69nm,1.3s
CMB Columbia Colle 87.92 48 IAMs_20 IAMs_20 23 36 49.1
comp=Z,783nm,20.0s

GTA Gaotai 87.93 313 ⇑P P 23 05 51.4 +0.9
GTA pP pP 23 06 03.8 +0.6
GTA sP sP 23 06 09.8 +1.9
GTA pmax pmax
comp=Z,10.0nm,1.5s
GTA pmax pmax
comp=Z,230nm,6.7s
GTA LR LR
comp=Z,300nm,20.3s
GTA LR LR
comp=Z,270nm,20.9s
YAK Yakutsk 87.98 343 P P 23 05 50.1 +0.1
comp=Z,5.9nm,0.5s,baz=129,slow=4.2,SNR=5.2
YAK Yakutsk 87.98 343 P P 23 05 50.3 +0.3
YAK IAmb IAmb 23 06 03.9
comp=Z,51nm,1.4s
YAK Yakutsk 87.98 343 eP P 23 05 50.9 +0.9
YAK pmax pmax
comp=Z,17nm,1.1s
YAK pmax pmax
comp=N,7.0nm,1.4s
YAK pmax pmax
comp=E,5.0nm,1.3s
K02D Willamette Mer 87.99 43 P P 23 05 51.5 +0.9
baz=240
SNAA Sanae 88.00 182 P P 23 05 50.0 -0.3
SNAA Sanae 88.00 182 P P 23 05 49.8 -0.6
SNAA IAMs_20 IAMs_20 23 44 18.1
comp=Z,573nm,19.0s
SNAA Sanae 88.00 182 eP P 23 05 48.9 -1.4
O03E Paynes Creek 88.03 46 P P 23 05 51.5 +0.6
baz=241
J01E Myrtle Point 88.06 42 P P 23 05 52.4 +1.6
baz=240
YBH Yreka Blue Hor 88.13 44 P P 23 05 50.9 -0.5
comp=Z,4.7nm,0.6s,baz=208,slow=2.2,SNR=18
YBH Yreka Blue Hor 88.13 44 IAMs_20 IAMs_20 23 36 57.3
comp=Z,664nm,20.0s
SONM Songino Array 88.15 323 P P 23 05 52.3 +0.9
comp=Z,17nm,1.0s,baz=136,slow=4.4,SNR=67
SONM LR LR 23 46 54.8
comp=Z,157nm,18.3s,baz=133,slow=37
SONM Songino Array 88.15 323 P P 23 05 51.6 +0.3
BFSC Mount Baldy Ra 88.17 52 P P 23 05 52.8 +1.0
baz=244
ISA Isabella, Lake 88.20 51 IAmb IAmb 23 06 08.6
comp=Z,34nm,1.4s
ISA IAMs_20 IAMs_20 23 38 33.6
comp=Z,536nm,20.0s
ISA Isabella, Lake 88.20 51 P P 23 05 53.7 +1.9
baz=243
EDW2 Edwards Air Fo 88.21 52 P P 23 05 52.8 +0.9
baz=244
BILL Bilibino 88.21 359 P P 23 05 50.4 -0.6
BILL Bilibino 88.21 359⇓eP P 23 05 51.8 +0.8
BILL e 23 09 13.9
BILL eS S 23 16 29.3 -2.4
BILL pmax pmax
comp=Z,11nm,1.2s
PMR Palmer 88.23 19 IAMs_20 IAMs_20 23 37 39.3
comp=Z,747nm,21.0s
HUMO Hull Mountain 88.40 43 IAmb IAmb 23 06 08.7
comp=Z,46nm,1.6s
HUMO IAMs_20 IAMs_20 23 38 21.5
comp=Z,806nm,20.0s
GHO Glory Hole Cre 88.43 18 IAMs_20 IAMs_20 23 38 35.6
comp=Z,815nm,22.0s
MONP2 Monument Peak 88.52 54 P P 23 05 54.9 +1.3
baz=245
VNA3 Neumayer Olymp 88.59 180 P P 23 05 52.6 -0.4
L04D Klamath Falls 88.63 44 P P 23 05 54.3 +0.6
baz=241
I03D Drain, OR 88.69 42 P P 23 05 55.6 +1.8
baz=240
LRMC Laurel Mtn Rad 88.70 51 P P 23 05 55.0 +0.7
baz=244
OMMB Old Mammoth Mi 88.70 49 P P 23 05 54.1 -0.3
OMMB IAMs_20 IAMs_20 23 37 24.7
comp=Z,657nm,20.0s
M04C Macdoel 88.72 44 P P 23 05 55.7 +1.5
baz=241
PFO Pinyon Flats O 88.80 53 P P 23 05 56.0 +1.3
baz=245
XPFO Pion Flat 88.80 53 IAMs_20 IAMs_20 23 38 31.4
comp=Z,526nm,21.0s
WAKR Walker 88.80 48 IAmb IAmb 23 06 10.9
comp=Z,37nm,1.6s
CWC Cottonwood Cre 88.84 50 P P 23 05 54.8 -0.1
baz=244
VNA2 Neumayer--Watz 88.89 181 P P 23 05 54.3 -0.1
baz=175,slow=4.2
MPMC Manual Prospec 89.10 51 P P 23 05 58.4 +2.2
baz=244
DAC Darwin (Calif) 89.12 51 P P 23 05 55.2 -1.1
DAC Darwin (Calif) 89.12 51 P P 23 05 55.2 -1.1
DAC pmax pmax
comp=Z,23nm,0.4s
YERR Yerington 89.16 48 P P 23 05 54.9 -1.5
YERR IAmb IAmb 23 06 12.1
comp=Z,25nm,1.5s
YERR IAMs_20 IAMs_20 23 38 09.8
comp=Z,623nm,20.0s
COR Corvallis 89.16 41 IAMs_20 IAMs_20 23 37 53.7
comp=Z,659nm,19.0s
VNA1 Neumayer--Stat 89.18 181 P P 23 05 57.2 +1.5
J04D Umpqua Nationa 89.25 43 P P 23 05 57.6 +0.8
baz=241
GSC Goldstone, Bar 89.27 52 IAmb IAmb 23 07 20.2
comp=Z,9.3nm,0.5s
KTH Kantishna Hill 89.27 17 IAMs_20 IAMs_20 23 42 45.0
comp=Z,489nm,19.0s
BELC Belle Mtn. Jos 89.31 53 P P 23 05 58.3 +1.1
baz=245
I04A Tendick Farm, 89.33 42 P P 23 05 57.0 +0.1
baz=241
PAHR Pah Rah Range 89.39 47 IAmb IAmb 23 06 13.2
comp=Z,18nm,1.2s
HEC Hector,Ludlow 89.41 52 P P 23 05 59.2 +1.7
baz=245
H04D Lebanon 89.48 42 P P 23 05 59.9 +2.4
baz=240
RYN Ryan 89.50 48 P P 23 05 57.0 -1.0
NVAR Mina Array Bea 89.56 48 P P 23 05 58.1 -0.2
comp=Z,2.2nm,0.7s,baz=226,slow=7.7,SNR=18
NVAR Mina Array Bea 89.56 48 P P 23 05 57.5 -0.9
BC3 Big Chuckawall 89.58 54 P P 23 05 59.6 +1.2
baz=245
NV11 Mina Array Sit 89.67 49 IAmb IAmb 23 06 16.4
comp=Z,22nm,1.4s
RND Reindeer 89.73 17 IAMs_20 IAMs_20 23 39 59.0
comp=Z,576nm,20.0s
VRDI Verde Repeater 89.75 21 IAMs_20 IAMs_20 23 37 14.5
comp=Z,652nm,22.0s
MOD Modoc Plateau 89.79 45 IAMs_20 IAMs_20 23 39 22.3
comp=Z,514nm,19.0s
K05A Summer Lake 89.79 44 IAmb IAmb 23 06 15.3
comp=Z,32nm,1.3s
GLA Glamis 89.80 55 P P 23 06 00.1 +0.7
baz=246
J05D Fort Rock, OR 89.83 43 P P 23 06 00.1 +0.7
baz=242
GMRC Granite Mounta 89.90 53 P P 23 06 00.2 +0.3
baz=245
H04A Detroit Lake 89.91 42 IAmb IAmb 23 06 14.8
comp=Z,29nm,1.3s
H04A IAMs_20 IAMs_20 23 38 46.3
comp=Z,786nm,21.0s
MCK McKinley 89.96 17 IAMs_20 IAMs_20 23 43 17.1
comp=Z,599nm,20.0s
TUQ Turquoise Moun 89.98 52 P P 23 06 01.8 +1.6
baz=245
KVN Kaiserville 89.98 48 IAMs_20 IAMs_20 23 38 05.5
comp=Z,796nm,20.0s
IRM Iron Mountain 90.02 53 P P 23 06 01.4 +1.1
baz=245
LSA Lhasa 90.14 302 P P 23 06 02.6 +1.0
LSA pmax pmax
comp=Z,25nm,1.1s
LSA Lhasa 90.14 302 P P 23 06 01.2 -0.4
LSA IAmb IAmb 23 06 15.7
comp=Z,27nm,1.3s
LSA Lhasa 90.14 302 P P 23 06 01.2 -0.4
LSA pmax pmax
comp=Z,27nm,1.3s
PINE Pine Mountain 90.26 43 IAmb IAmb 23 06 05.4
comp=Z,17nm,0.8s
PINE IAMs_20 IAMs_20 23 39 43.8
comp=Z,769nm,20.0s
I05D Terrebonne, OR 90.27 42 P P 23 06 01.8 +0.5
baz=242
Y12C Blythe 90.32 54 P P 23 06 03.0 +1.2
baz=246
F04A Amboy 90.37 40 IAmb IAmb 23 06 03.7
comp=Z,18nm,0.9s
BOD Bodaibo 90.38 334 eP P 23 06 01.0 -0.3
BOD pmax pmax
comp=Z,54nm,1.4s
TPNV Topopah Spring 90.38 51 IAmb IAmb 23 07 16.5
comp=Z,12nm,0.7s
TPNV Topopah Spring 90.38 51 P P 23 06 02.9 +0.8
baz=245
RDOG Red Dog Mine 90.54 10 IAMs_20 IAMs_20 23 39 14.3
comp=Z,606nm,22.0s
IMAR Indian Mountai 90.55 14 P P 23 06 02.2 +0.2
GO09 Cerro Castillo 90.62 146 P P 23 06 03.3 +0.4
G05D Wamic, OR 90.72 41 P P 23 06 03.9 +0.6
baz=242
D03D Eldon 90.76 39 P P 23 06 04.7 +1.3
baz=240
WRH Wood River Hil 90.77 17 IAmb IAmb 23 07 12.8
comp=Z,26nm,1.9s
WRH IAMs_20 IAMs_20 23 40 31.6
comp=Z,602nm,20.0s
PDMCI Parker Dam,Lak 90.84 54 P P 23 06 06.3 +2.2
baz=246
214A Organ Pipe Nat 90.92 56 IAmb IAmb 23 06 18.5
comp=Z,18nm,1.5s
214A Organ Pipe Nat 90.92 56 P P 23 06 05.5 +1.0
baz=247
CCB Clear Creek Bu 90.98 17 IAMs_20 IAMs_20 23 41 00.2
comp=Z,527nm,21.0s
SHPR Sheep Range 90.99 51 P P 23 06 05.9 +0.9
SHPR IAmb IAmb 23 06 23.0
comp=Z,43nm,1.8s
SHPR IAMs_20 IAMs_20 23 40 25.3
comp=Z,594nm,20.0s
HDA Harding Lake 91.04 17 P P 23 06 04.2 -0.1
HDA IAmb IAmb 23 06 17.6
comp=Z,22nm,1.6s
HDA IAMs_20 IAMs_20 23 40 39.7
comp=Z,808nm,22.0s
JIS Juneau Island 91.13 26 IAMs_20 IAMs_20 23 37 32.3
comp=Z,798nm,22.0s
WVOR Wild Horse Val 91.13 45 IAmb IAmb 23 06 21.2
comp=Z,29nm,1.4s
G06A Carlson Farm, 91.14 42 IAMs_20 IAMs_20 23 39 48.9
comp=Z,691nm,20.0s
PALK Pallekele 91.14 277 P P 23 06 04.6 -1.5
PALK Pallekele 91.14 277 P P 23 06 04.6 -1.5
PALK pmax pmax
comp=Z,71nm,1.6s
COLA College 91.15 17 IAMs_20 IAMs_20 23 44 42.4
comp=Z,488nm,20.0s
ZAK Zakamensk 91.24 324 eP P 23 06 06.3 +0.6
ZAK pmax pmax
comp=Z,18nm,1.3s
HSIG 91.25 60 P P 23 06 04.9 -1.3
HSIG IAmb IAmb 23 06 36.5
comp=Z,18nm,1.5s
HSIG IAMs_20 IAMs_20 23 37 54.4
comp=Z,532nm,20.0s
I07A Izee 91.32 43 IAmb IAmb 23 06 21.4
comp=Z,44nm,1.9s
ILAR Eielson Array 91.33 17 P P 23 06 05.0 -0.6
comp=Z,1.9nm,0.7s,baz=235,slow=4.9,SNR=17
ILAR LR LR 23 41 00.2
comp=Z,495nm,21.0s,baz=236,slow=32
ILAR Eielson Array 91.33 17 P P 23 06 04.9 -0.8
W13A Hualapai Mount 91.35 53 IAmb IAmb 23 06 37.6
comp=Z,29nm,2.0s
W13A IAMs_20 IAMs_20 23 42 10.0
comp=Z,535nm,19.0s
R11A Troy Canyon, C 91.45 49 P P 23 06 08.4 +1.3
baz=245
J08A Circle Bar Ran 91.65 44 IAmb IAmb 23 06 23.3
comp=Z,12nm,1.0s
J08A IAMs_20 IAMs_20 23 37 56.6
comp=Z,653nm,21.0s
B05A Bryant 91.70 39 P P 23 06 09.7 +2.0
baz=241
TLY Talaya 91.72 325 P P 23 06 07.0 -0.8
TLY Talaya 91.72 325c iP P 23 06 08.1 +0.3
TLY e 23 06 20.2
TLY pmax pmax
comp=Z,61nm,1.5s
F07A Phinny Hill Vi 91.88 41 IAMs_20 IAMs_20 23 40 30.7
comp=Z,607nm,20.0s
TAPN Taplejung 92.04 298 eP P 23 06 10.8 +0.6
ODAN Odare 92.12 298 eP P 23 06 11.2 +0.7
comp=Z,29nm,1.0s
PRP Porcupine Dome 92.28 17 IAMs_20 IAMs_20 23 41 17.4
comp=Z,784nm,22.0s
HAWA Hanford 92.36 41 P P 23 06 09.8 -1.1
HAWA IAmb IAmb 23 06 26.6
comp=Z,21nm,1.4s
HAWA IAMs_20 IAMs_20 23 40 02.2
comp=Z,617nm,20.0s
COLD Coldfoot 92.39 15 IAMs_20 IAMs_20 23 41 25.4
comp=Z,598nm,22.0s
WHY Whitehorse 92.43 24 IAMs_20 IAMs_20 23 43 39.6
comp=Z,716nm,20.0s
TUC Tucson 92.64 57 P P 23 06 11.7 -0.9
TUC Tucson 92.64 57 P P 23 06 11.7 -0.9
TUC pmax pmax
comp=Z,7.0nm,1.2s
TUC MLR MLR
comp=Z,400nm,21.0s
TUC Tucson 92.64 57 P P 23 06 14.1 +1.5
baz=248
RAMN Ramite 92.81 298 eP P 23 06 15.5 +1.8
BMO Blue Mountains 93.07 43 IAMs_20 IAMs_20 23 41 25.0
comp=Z,736nm,20.0s
MOY Mondy 93.14 325 eP P 23 06 15.6 +1.1
MOY pmax pmax
comp=Z,70nm,2.2s
JIRN Jiri 93.41 298 eP P 23 06 17.5 +0.9
MFID Camas Ranch 93.42 45 IAMs_20 IAMs_20 23 41 49.3
comp=Z,648nm,21.0s
TOLK Toolik Lake Re 93.66 14 IAMs_20 IAMs_20 23 48 29.9
comp=Z,650nm,19.0s
TOLK Toolik Lake Re 93.66 14 P P 23 06 16.8 +0.4
baz=218
GUN Gumba 93.75 298 eP P 23 06 17.4 -0.8
BMAR Burnt Mountain 93.95 16 P P 23 06 18.4 +0.7
MSU Marysvale 93.97 50 P P 23 06 16.3 -2.5
MSU Marysvale 93.97 50 P P 23 06 16.3 -2.5
PKI Pulchoki 94.02 298 eP P 23 06 19.6 +0.2
PKIN Phulchoki 94.04 298 eP P 23 06 20.2 +0.8
DUG Dugway, Tooele 94.17 49 IAMs_20 IAMs_20 23 41 01.3
comp=Z,713nm,20.0s
KKN Kakani 94.21 298 eP P 23 06 20.6 +0.5
DMN Daman 94.29 298 eP P 23 06 21.6 +1.1
GKN Gorkha 94.82 298 eP P 23 06 22.7 -0.1
HPIG 94.84 63 IAMs_20 IAMs_20 23 38 31.7
comp=Z,627nm,22.0s
KOLN Koldanda 95.60 297 eP P 23 06 27.4 +0.9
DANN Dangsing 95.66 298 eP P 23 06 25.7 -1.1
comp=Z,45nm,1.1s
MSO Missoula 96.03 42 IAMs_20 IAMs_20 23 42 11.4
comp=Z,539nm,20.0s
MNTX Cornudas Mount 96.70 59 IAMs_20 IAMs_20 23 42 06.8
comp=Z,435nm,19.0s
H17A Grant Village 97.29 45 P Pdif 23 06 38.5 +4.6
baz=249
TXAR Lajitas Array 97.31 62 LR LR 23 43 40.2
comp=Z,377nm,19.2s,baz=0.0,slow=31
PDAR Pinedale Array 97.40 47 P Pdif 23 06 33.9 -0.5
comp=Z,0.2nm,0.6s,baz=210,slow=3.1,SNR=3.4
PDAR PP PP 23 10 42.4 +10
comp=Z,1.4nm,1.2s,baz=256,slow=4.4,SNR=3.8
O20A White River Ci 97.40 50 IAMs_20 IAMs_20 23 42 06.0
comp=Z,720nm,21.0s
INK Inuvik 97.64 18 P Pdif 23 06 33.4 -1.0
comp=Z,3.0nm,1.1s,baz=260,slow=4.3,SNR=5.1
PLCA Paso Flores 97.66 138 LR LR 23 41 20.0
comp=Z,165nm,21.9s,baz=280,slow=30
WMQ Urumqi 98.01 314 P Pdif 23 06 38.7 +1.8
WMQ pP pP 23 06 49.7 +0.1
WMQ pmax pmax
comp=Z,15nm,1.3s
WMQ pmax pmax
comp=Z,130nm,5.9s
WMQ LR LR
comp=Z,590nm,26.9s
WMQ LR LR
comp=Z,460nm,25.1s
WMQ Urumqi 98.01 314 P P 23 06 36.2 -0.6
WMQ Urumqi 98.01 314 P P 23 06 36.2 -0.6
WMQ pmax pmax
comp=Z,28nm,1.3s
JCT Junction City 100.86 62 IAMs_20 IAMs_20 23 45 51.9
comp=Z,519nm,18.0s
YKA Yellowknife Ar 101.69 27 P Pdif 23 06 51.7 -0.9
comp=Z,0.5nm,0.6s,baz=258,slow=4.8,SNR=8.0
YKA PP PKiKP 23 11 11.5 -4.4
comp=Z,1.1nm,1.1s,baz=248,slow=6.0,SNR=4.4
YKA PKKPab PKKPdf 23 23 20.6 +12
comp=Z,1.3nm,1.1s,baz=69,slow=5.4,SNR=5.5
MK31 Makanchi Array 102.57 315⇑eP Pdif 23 06 59.1 +2.1
MKAR Makanchi Array 102.57 315 P Pdif 23 06 57.9 +0.9
comp=Z,1.2nm,0.8s,baz=102,slow=6.1,SNR=9.9
MKAR PP PP 23 11 09.9 -1.0
comp=Z,2.9nm,1.1s,baz=101,slow=6.3,SNR=6.4
MKAR PKKPbc PKKPbc 23 22 55.6 -2.8
comp=Z,0.3nm,0.6s,baz=268,slow=3.7,SNR=4.3
MKAR Makanchi Array 102.57 315 Pdif 23 06 56.5 -0.5
ZALV Zalesovo Beam 103.04 323 Pdiff Pdif 23 06 58.6 -0.3
comp=Z,0.7nm,0.6s,baz=138,slow=3.5,SNR=4.3
ZALV Zalesovo Beam 103.04 323 Pdif 23 06 56.3 -2.6
ZALV Zalesovo Beam 103.04 323 P Pdif 23 06 56.3 -2.6
CCIG Comitan 103.39 77 IAMs_20 IAMs_20 23 44 46.2
comp=Z,514nm,20.0s
ECSD EROS Data Cent 106.73 49 IAMs_20 IAMs_20 23 47 21.8
comp=Z,631nm,21.0s
TEIG Tepich 108.02 75 IAMs_20 IAMs_20 23 47 26.0
comp=Z,539nm,20.0s
RES Resolute Bay 111.07 16 PKiKP PKiKP 23 11 31.6 -1.3
comp=Z,0.9nm,0.6s,baz=278,slow=2.4,SNR=5.1
ROSC El Rosal 116.43 95 IAMs_20 IAMs_20 23 53 53.6
comp=Z,331nm,18.0s
SOCY Socotra 117.65 273 IAMs_20 IAMs_20 00 02 18.9
comp=Z,478nm,19.0s
ARU Arti 118.18 324 i PKIKP PKiKP 23 11 47.3 +0.2
ARU 23 13 02.1
ARU 23 18 56.8
ARU SP SP 23 22 42.9 -0.3
GEYT Alibeck 118.66 303 PKP PKPdf 23 11 48.4 -0.2
comp=Z,1.8nm,0.9s,baz=222,slow=2.0,SNR=5.6
GEYT Alibeck 118.66 303 PKPdf 23 11 48.0 -0.6
SPITS Spitsbergen Ar 120.75 354 PKP PKPdf 23 11 51.1 -0.4
comp=Z,11nm,1.0s,baz=133,slow=7.2,SNR=6.4
PRGR Permogore 123.54 332 ePKIKP PKPdf 23 11 55.7 -1.5
PRGR pmax pmax
comp=Z,6.0nm,0.8s
MATP Matopo 124.13 226 PKP PKPdf 23 11 59.6 -0.3
comp=Z,4.4nm,1.0s,baz=168,slow=0.9,SNR=7.5
APA Apatity 125.33 341⇑iPKIKP PKiKP 23 12 12.3 +11
APA pmax pmax
comp=Z,4.0nm,0.9s
APA MLR MLR
comp=Z,1μm,18.0s
ARCES ARCESS Array B 126.19 345 PKP PKPdf 23 12 01.5 -0.6
comp=Z,2.5nm,0.6s,baz=56,slow=1.4,SNR=22
KLMR Klimovskoe 126.56 332 ePKPdf PKPdf 23 11 59.9 -3.1
KLMR AMP 23 12 16.0
comp=Z,35nm,1.4s
KLMR Klimovskoe 126.56 332 ePKIKP PKPdf 23 11 59.9 -3.1
KLMR pmax pmax
comp=Z,35nm,1.4s
RAYN Ar Rayn 128.01 284 PKiKP 23 12 07.5 -0.1
RAYN Ar Rayn 128.01 284 PKIKP PKiKP 23 12 07.5 -0.1
KMBO Kilima Mbogo 128.37 251 PKP PKPdf 23 12 08.6 +0.3
comp=Z,0.7nm,0.4s,baz=76,slow=15,SNR=3.3
KMBO Kilima Mbogo 128.37 251 IAMs_20 IAMs_20 00 03 28.3
comp=Z,326nm,21.0s
BDFB Brasilia 128.79 132 PKP PKPdf 23 12 07.4 -1.4
comp=Z,4.2nm,0.6s,baz=221,slow=2.3,SNR=5.7
BDFB Brasilia 128.79 132 PKPdf 23 12 08.7 -0.1
BDFB Brasilia 128.79 132 PKIKP PKPdf 23 12 08.7 -0.1
VRH Novokhopyorsk 128.97 320 ePKIKP PKiKP 23 12 08.5 -0.1
VRH pmax pmax
comp=Z,10.0nm,1.2s
GNI Garni 129.04 306⇓iPKIKP PKPdf 23 12 07.8 -0.8
GNI pmax pmax
comp=Z,37nm,1.7s
GOF Gofitskoye 129.58 312⇑ePKIKP PKiKP 23 12 21.5 +11
MOS Moscow 129.66 327 ePKIKP PKPdf 23 12 07.8 -1.3
MOS e 23 12 18.0
MOS MLR MLR
comp=Z,400nm,22.0s
AKH Akhalkalaki 129.84 307 ⇑P PKiKP 23 12 11.1 +0.2
KIV Kislovodsk 130.03 311 i PKIKP PKiKP 23 12 11.1 0.0
KIV pmax pmax
comp=Z,14nm,1.1s
KIV MLR MLR
comp=Z,478nm,23.0s
NEY Neytrino 130.13 310⇓iPKIKP PKiKP 23 12 13.3 +1.8
OBN Obninsk 130.47 326c ePKIKP PKiKP 23 12 11.3 -0.1
OBN e 23 14 26.5
OBN eSS SS 23 32 23.5 +34
OBN pmax pmax
comp=Z,56μm,3.2s
OBN MLR MLR
comp=Z,202nm,18.0s
SABA Saba 130.47 84 IAMs_20 IAMs_20 23 53 00.7
comp=Z,273nm,19.0s
VSR Storozhevoye 130.49 321 ePKIKP PKPdf 23 12 10.6 -0.2
VSR pmax pmax
comp=Z,10.0nm,1.4s
SMRT St. Maarten 130.71 83 IAMs_20 IAMs_20 00 09 46.2
comp=Z,333nm,19.0s
FURI Furi 131.00 264 IAMs_20 IAMs_20 00 06 02.9
comp=Z,436nm,21.0s
FINES FINESS Array B 131.66 337 PKP PKPdf 23 12 12.7 0.0
comp=Z,1.3nm,0.6s,baz=86,slow=1.4,SNR=7.8
FINES SKPbc SKPbc 23 15 33.2 -1.5
comp=Z,1.8nm,0.8s,baz=113,slow=2.9,SNR=4.1
MBAR Mbarara 134.34 248 IAMs_20 IAMs_20 00 10 17.4
comp=Z,389nm,20.0s
AKASG Malin Array Be 136.43 324 PKP PKPdf 23 12 21.2 -0.7
comp=Z,0.5nm,0.4s,baz=54,slow=2.2,SNR=9.9
AKASG Malin Array Be 136.43 324 PKPdf 23 12 22.0 0.0
AKASG Malin Array Be 136.43 324 PKIKP PKPdf 23 12 22.0 0.0
NB2 NORSAR Subarra 136.56 345 PKP PKPpre 23 12 16.9
comp=Z,0.8nm,0.9s,baz=16,slow=3.2
NOA NORSAR Array B 136.56 345 PKhKP PKPpre 23 12 16.1
comp=Z,0.3nm,0.6s,baz=37,slow=2.7,SNR=4.1
ILGA Ilgaz 137.14 309 IAMs_20 IAMs_20 00 20 59.7
comp=Z,312nm,21.0s
BRTR Keskin Array B 137.52 307 PKP PKPdf 23 12 24.4 -0.2
comp=Z,2.3nm,1.0s,baz=145,slow=5.0,SNR=7.1
BRTR PP PP 23 15 17.0 +6.0
comp=Z,2.0nm,1.1s,baz=59,slow=3.3,SNR=3.6
BRTR Keskin Array B 137.52 307 PKPdf 23 12 22.9 -1.7
SORM Soroca 138.15 321 ⇑P PKiKP 23 12 26.5 -0.8
SORM Soroca 138.15 321 ⇑PKIKP PKiKP 23 12 26.5 -0.8
CSS Mathiatis 138.69 300 IAMs_20 IAMs_20 00 18 19.6
comp=Z,380nm,20.0s
LVV L'vov 139.73 325 ePKIKP PKPdf 23 12 29.2 +1.1
BURAR Bucovina Array 140.25 322 PKPdf 23 12 27.2 -2.1
MLR Muntele Rosu 140.84 318 ⇑P PKPdf 23 12 25.6 -4.9
MLR Muntele Rosu 140.84 318 ⇑PKIKP PKPdf 23 12 25.6 -4.9
KOLS Kolonicke sedl 141.18 325 ePKIKP PKPdf 23 12 32.1 +1.3
KOLS Kolonicke sedl 141.18 325 ePKP PKPdf 23 12 32.1 +1.3
UZH Uzhgorod 141.35 325 ePKIKP PKPdf 23 12 27.5 -3.5
UZH e 23 12 38.6
CRVS Cervenica-Dubn 141.64 325 ePKIKP PKiKP 23 12 33.2 -1.2
CRVS Cervenica-Dubn 141.64 325 ePKP PKiKP 23 12 33.2 -1.2
ARR Arges 141.71 319 ⇑P PKPdf 23 12 29.5 -2.4
ELND Elena 142.01 315 ⇑P PKPdf 23 12 29.2 -3.3
GZR Gura Zlata 142.83 320 ⇑P PKPdf 23 12 31.0 -3.0
BSEG Bad Segeberg 142.85 339 ePKPbc PKPdf 23 12 30.4 -3.1
baz=38,slow=3.1
BSEG epPKPbc pPKPdf 23 12 42.6 -4.2
KPL Plockton 142.92 355 eP PKPdf 23 12 30.3 -3.2
MORC Moravsky Berou 143.07 329 ePKP PKPbc 23 12 31.9 +0.8
MORC e 23 12 42.6
PLD Plovdiv 143.14 314 P PKPbc 23 12 31.7 +0.3
OSTC Ostas 143.15 331 ePKP PKPbc 23 12 32.6 +1.4
OSTC ex x 23 12 44.3
CHVC Chvalec 143.20 331 ePKP PKPbc 23 12 31.7 +0.3
CHVC ex x 23 12 43.5
KRLC Kraliky 143.22 330 ePKP PKPbc 23 12 31.8 +0.3
KRLC ex x 23 12 44.2
KRLC Kraliky 143.22 330 ePKIKP PKPbc 23 12 31.8 +0.3
KRLC e 23 12 44.2
DPC Dobruska-Polom 143.24 331 ePKP PKPbc 23 12 31.8 +0.3
DPC ex x 23 12 43.8
DPC Dobruska-Polom 143.24 331 ePKIKP PKPbc 23 12 31.8 +0.3

DPC e 23 12 43.8
VYHS Vyhne 143.26 327 ePKIKP PKPdf 23 12 33.2 -1.3
VYHS Vyhne 143.26 327 ePKP PKPdf 23 12 33.2 -1.3
UPC Upice 143.27 331 ePKP PKPbc 23 12 32.0 +0.4
UPC ex x 23 12 43.9
UPC Upice 143.27 331 ePKIKP PKPbc 23 12 32.0 +0.4
UPC e 23 12 43.9
RZN Rozhen 143.31 313 P PKPbc 23 12 32.7 +0.5
PGB Panagyurishte 143.31 315 P PKPbc 23 12 32.1 +0.1
BZS Buzias 143.41 321 ⇑P PKPbc 23 12 32.6 +0.5
BZS Buzias 143.41 321 ⇑PKIKP PKPbc 23 12 32.6 +0.5
JAVC Velka Javorina 143.62 328 ePKP PKPdf 23 12 34.7 -0.5
JAVC e 23 12 46.1
INVG Invergeldie, C 143.68 354 eP PKPbc 23 12 32.5 0.0
KAVA Kavala 143.72 312 P PKPab 23 12 32.7 +0.3
THAS Thassos island 143.74 312 P PKPbc 23 12 32.2 -0.2
VRAC Vranov 143.84 329 ePKP PKPdf 23 12 34.9 -0.6
VRAC e 23 12 45.6
VRAC Vranov 143.84 329 ⇓P PKPbc 23 12 33.3 0.0
VRAC Vranov 143.84 329 ⇓PKIKP PKPbc 23 12 33.3 +0.1
VTS Vitosha 143.89 316 ⇑P PKPbc 23 12 34.5 +0.7
VTS Vitosha 143.89 316 P PKPbc 23 12 34.1 +0.3
VTS Vitosha 143.89 316 PKPbc 23 12 34.4 +0.6
VTS Vitosha 143.89 316 ⇑PKIKP PKPbc 23 12 34.5 +0.7
PVCC Panska Ves 143.90 332 ePKP PKPbc 23 12 33.9 +0.6
PVCC ex x 23 12 46.0
PVCC Panska Ves 143.90 332 ePKIKP PKPbc 23 12 33.9 +0.6
PVCC e 23 12 46.0
BRG Berggiesshubel 143.91 333 i PKP PKPbc 23 12 33.5 +0.1
comp=Z,89nm,1.2s
BRG i pPKP pPKPdf 23 12 45.8 -3.0
comp=Z,97nm,1.2s
BRG e 23 16 39.1
comp=Z,26nm,1.8s
BRG Berggiesshubel 143.91 333 ePKPbc PKPbc 23 12 33.8 +0.4
baz=38,slow=3.1
BRG epPKPbc pPKPdf 23 12 46.2 -2.6
BRG Berggiesshubel 143.91 333 i PKIKP PKPbc 23 12 33.5 +0.1
BRG i 23 12 45.8
BRG pmax pmax
comp=Z,89nm,1.2s
BRG pmax pmax
comp=Z,97nm,1.2s
BRG pmax pmax
comp=Z,26nm,1.8s
SMOL Smolenice 143.96 328 ePKIKP PKPdf 23 12 35.8 +0.1
SMOL Smolenice 143.96 328 ePKP PKPdf 23 12 35.8 +0.1
SRO Srobarova 143.96 326 ePKIKP PKPdf 23 12 36.2 +0.5
SRO Srobarova 143.96 326 ePKP PKPdf 23 12 36.2 +0.5
CLL Collm 143.97 335 ePKPbc PKPbc 23 12 33.7 +0.2
baz=38,slow=3.1
CLL epPKPbc pPKPdf 23 12 46.3 -2.6
CLL Collm 143.97 335 i PKPdf PKPbc 23 12 33.4 -0.1
comp=Z,59nm,1.1s
CLL i (pPKPdf) 23 12 45.5
comp=Z,97nm,1.3s
CLL e 23 14 55.0
CLL ePP PP 23 15 42.0 -7.2
CLL ePKSdf PKSdf 23 16 12.0 +1.0
CLL e 23 16 36.0
CLL LmV 00 18 00.0
comp=Z,300nm,18.0s
CLL Collm 143.97 335 i PKIKP PKPbc 23 12 33.4 -0.1
CLL i 23 12 45.5
CLL pmax pmax
comp=Z,59nm,1.1s
CLL MLR MLR
comp=Z,300nm,18.0s
MMB Musomiste 144.02 314 P PKPbc 23 12 34.3 +0.2
NVR Nevrokopi 144.03 313 P PKPab 23 12 33.6 0.0
KRUC Moravsky 144.10 329 ePKP PKPbc 23 12 34.2 +0.2
KRUC e 23 12 46.5
MODS Modra-Piesok 144.13 328 ePKIKP PKPbc 23 12 35.0 +0.8
MODS Modra-Piesok 144.13 328 ePKP PKPbc 23 12 35.0 +0.8
GOPC GO Pecny, Ondr 144.25 332 ePKP PKPab 23 12 34.2 +0.1
GOPC ex x 23 12 47.0
GOPC GO Pecny, Ondr 144.25 332 ePKIKP PKPab 23 12 34.2 +0.1
GOPC e 23 12 47.0
PRA Prague 144.29 332 ePKP PKPdf 23 12 35.6 -0.6
PRA ex x 23 12 47.2
PRA Prague 144.29 332 ePKIKP PKPdf 23 12 35.6 -0.6
PRA e 23 12 47.2
PRU Pruhonice 144.30 332 ePKP PKPbc 23 12 34.6 0.0
PRU ex x 23 12 46.9
PRU ex x 23 12 54.5
PRU Pruhonice 144.30 332 ePKIKP PKPbc 23 12 34.6 0.0
PRU e 23 12 46.9
SRS Serrai 144.31 313 P PKPab 23 12 34.5 -0.1
KKB Krupnik 144.33 314 P PKPbc 23 12 35.2 +0.2
OUR Ouranopolis 144.36 312 P PKPab 23 12 34.7 -0.1
TREC Trest 144.37 330 ePKP PKPbc 23 12 34.9 0.0
TREC ex x 23 12 47.3
TREC Trest 144.37 330 ePKIKP PKPbc 23 12 34.9 0.0
TREC e 23 12 47.3
NEUB Neuenburg 144.53 335 ePKPbc PKPbc 23 12 35.6 +0.3
baz=38,slow=3.1
NEUB epPKPbc pPKPdf 23 12 48.4 -1.5
CLZ Clausthal 144.55 337 ePKPbc PKPdf 23 12 36.2 -0.5
baz=38,slow=3.1
CLZ epPKPbc pPKPdf 23 12 48.8 -1.2
SOH Sokhos 144.60 313 P PKPab 23 12 35.1 -0.6
SANT Santorini 144.63 305 ⇑P PKPbc 23 12 36.5 +0.4
IOSP Ios island 144.66 305 P PKPab 23 12 34.9 -1.1
PLG Polygyros 144.72 312 P PKPab 23 12 35.5 -0.7
PAIG Paliouri 144.74 311 P PKPab 23 12 35.5 -0.7
KNT Kendrikon 144.77 314 P PKPab 23 12 36.1 -0.2
PBCC Pribram 144.77 332 ePKP PKPbc 23 12 36.1 0.0
PBCC ex x 23 12 48.7
MORH Mrgy, Hungar 144.77 324 eP PKPbc 23 12 36.4 +0.2
NPS Neapolis 144.82 303 P PKPbc 23 12 37.0 +0.2
HORT Hortiatis 144.87 313 P PKPab 23 12 35.7 -1.1
TANN Tannenbergstha 144.87 334 ePKPbc PKPdf 23 12 37.0 -0.3
baz=38,slow=3.1
TANN epPKPbc pPKPdf 23 12 49.5 -1.1
AOS Alonnisos 144.88 310 P PKPab 23 12 35.2 -1.6
VAY Valandovo 144.92 314 i P PKPab 23 12 36.3 -0.5
GTTG Gottingen 144.94 337 ePKPbc PKPdf 23 12 37.6 +0.3
baz=38,slow=3.1
GTTG epPKPbc pPKPdf 23 12 49.8 -0.8
THE Thessaloniki 144.95 313 P PKPab 23 12 36.1 -0.8
LAST Lasithi 144.95 303 P PKPbc 23 12 37.4 +0.1
GUNZ Gunzen 144.97 334 ePKPbc PKPdf 23 12 37.6 +0.2
baz=38,slow=3.1
EDMD Edmundbyers 144.99 351 eP PKPbc 23 12 36.0 -0.7
WERN Wernitzgruen 145.01 334 ePKPbc PKPdf 23 12 37.7 +0.2
baz=38,slow=3.1
WERN epPKPbc pPKPbc 23 12 50.2 -0.1
NKC Novy Kostel 145.02 334 ePKP PKPdf 23 12 37.4 -0.1
NKC epPKP pPKPab 23 12 49.2 -0.7
NKC Novy Kostel 145.02 334 ePKIKP PKPdf 23 12 37.4 -0.1
NKC e 23 12 49.2
MOX Moxa 145.04 335 ePKPbc PKPdf 23 12 37.3 -0.2
baz=38,slow=3.1
MOX epPKPbc pPKPab 23 12 49.8 -0.2
IBBN Ibbenburen 145.06 340 ePKPbc PKPdf 23 12 37.2 -0.3
baz=38,slow=3.1
IBBN epPKPbc pPKPbc 23 12 50.1 -0.2
CONA Conrad Observa 145.13 328 ePKPdf PKPdf 23 12 38.1 +0.2
comp=Z,117nm,1.1s,SNR=44
SKIA Skiathos 145.18 310 P PKPbc 23 12 36.0 -1.8
GRG Griva 145.19 313 P PKPbc 23 12 36.4 -1.4
DIVS Divibare 145.20 320 eP PKPbc 23 12 37.4 -0.4
TEKS Tekeris 145.23 321 eP PKPdf 23 12 38.4 +0.3
MRKA Markates 145.27 309 P PKPbc 23 12 36.8 -1.3
GAL1 Galloway 145.29 354 eP PKPbc 23 12 37.0 -0.5
XOR Xorichti 145.30 310 P PKPbc 23 12 37.1 -1.1
NEO Neokhori 145.30 310 P PKPbc 23 12 36.9 -1.3
PTL Penteli 145.30 308 P PKPbc 23 12 36.7 -1.5
MANZ Manzenberg 145.35 334 ePKPbc PKPab 23 12 38.9 +0.7
baz=38,slow=3.1
MANZ epPKPbc pPKPdf 23 12 51.5 +0.1
KHC Kasperske Hory 145.36 332 ePKP PKPab 23 12 38.3 0.0
KHC epPKP pPKPab 23 12 50.8 -0.5
KHC Kasperske Hory 145.36 332 PKPab 23 12 38.8 +0.5
KHC Kasperske Hory 145.36 332 PKIKP PKPab 23 12 38.8 +0.5
SKO Skopje 145.37 316 i P PKPab 23 12 38.9 +0.4
KESW Keswick, Cumbr 145.38 352 eP PKPdf 23 12 37.9 -0.1
IDI Anoyia 145.38 303 PKPbc PKPbc 23 12 38.5 -0.1
comp=Z,19nm,0.8s,baz=122,slow=2.3,SNR=3.0
ATHU Athens Univers 145.39 308 P PKPbc 23 12 37.7 -0.8
VLY Voula,Athens 145.42 308 P PKPdf 23 12 37.0 -1.6
ATH Athens Observa 145.44 308 P PKPdf 23 12 37.7 -0.9

ROTZ Rotzenmuhle 145.48 333 ePKPbc PKPab 23 12 39.0 +0.4
baz=38,slow=3.1
ROTZ epPKPbc pPKPab 23 12 51.9 +0.2
LIT Litokhoron 145.50 312 P PKPdf 23 12 36.8 -1.9
GEC2 GERESS Array S 145.51 331 ePKPbc PKPdf 23 12 39.0 +0.1
baz=38,slow=3.1
GEC2 epPKPbc pPKPbc 23 12 51.7 -0.2
GERES GERESS Array B 145.51 331 PKPbc PKPab 23 12 39.2 +0.3
comp=Z,47nm,0.8s,baz=33,slow=3.2,SNR=116
UBBA Unterbreizbach 145.52 337 ePKPbc PKPab 23 12 38.7 +0.1
baz=38,slow=3.1
BEHE Becsehely 145.63 326 eP PKPab 23 12 39.3 0.0
KTI Kastanea 145.63 313 P PKPdf 23 12 38.5 -0.5
WET Wettzell 145.66 332 ePKPbc PKPab 23 12 39.4 0.0
baz=38,slow=3.1
WET epPKPbc pPKPbc 23 12 52.0 -0.2
VILL Villia 145.67 308 P PKPdf 23 12 38.0 -1.1
BBLS Lazići 145.68 320 eP PKPab 23 12 39.9 +0.2
LKR Lokris 145.72 309 P PKPdf 23 12 38.0 -1.0
ARSA Arzberg 145.76 328 ePKPbc PKPab 23 12 40.3 +0.5
baz=38,slow=3.1
ARSA Arzberg 145.76 328 ePKPab PKPbc 23 12 39.6 +0.2
comp=Z,60nm,1.3s,SNR=18
HPK Haverah Park 145.78 350 eP PKPdf 23 12 38.8 +0.1
HAPS Han Pijesak,BI 145.84 321 eP PKPdf 23 12 39.2 0.0
RUDO Rudo 145.84 320 eP PKPdf 23 12 39.4 +0.3
IOMK Kirk Michael 145.87 354 eP PKPdf 23 12 38.9 +0.1
VAM Vamos 145.89 303 P PKPab 23 12 40.4 -0.2
KZN Kozani 145.91 313 P PKPdf 23 12 39.5 +0.1
KOGS Kog 145.92 326 ePKPbc PKPbc 23 12 39.9 +0.1
KOGS i pPKPbc pPKPdf 23 12 52.5 0.0
PROD Prodromos 145.93 309 P PKPdf 23 12 39.1 -0.4
GRF Grafenberg Arr 145.94 334 ePKPbc PKPab 23 12 40.8 +0.5
baz=38,slow=3.1
BUG Bochum--Univer 145.95 340 ePKPbc PKPbc 23 12 39.8 0.0
baz=38,slow=3.1
BUG epPKPbc pPKPbc 23 12 52.5 -0.4
DID Didima 145.96 307 P PKPdf 23 12 39.0 -0.6
MOA Molln 145.96 329 ePKPbc PKPab 23 12 41.0 +0.4
baz=38,slow=3.1
MOA epPKPbc pPKPab 23 12 53.4 -0.3
MOA Molln 145.96 329 ePKPab PKPab 23 12 40.3 -0.3
comp=Z,48nm,1.3s,SNR=11
FNA Florina 145.97 314 P PKPdf 23 12 39.7 +0.2
LTK Loutraki 145.97 308 P PKPdf 23 12 38.0 -1.5
LOUT Loutraki 145.98 308 P PKPdf 23 12 39.1 -0.4
WIM Isle of Man 145.99 354 eP PKPdf 23 12 39.4 +0.3
AGG Agios Georgios 146.05 310 P PKPdf 23 12 39.5 -0.2
KRND KRANIDI 146.06 307 P PKPdf 23 12 39.4 -0.3
PHP Peshkopia 146.16 316 P PKPbc 23 12 40.6 -0.2
MAKR Makrakomi, Fth 146.20 311 P PKPdf 23 12 40.3 +0.4
OHR Ohrid 146.20 315 i P PKPbc 23 12 40.9 0.0
NEST Nestorio 146.35 313 P PKPbc 23 12 41.0 -0.5
SOKA Soboth 146.40 327 i PKPab PKPbc 23 12 41.3 -0.1
comp=Z,40nm,1.4s,SNR=8.7
KALE Kalithea 146.44 309 P PKPdf 23 12 40.8 +0.4
ZAG Zagreb 146.46 325 eP PKPab 23 12 42.2 -0.3
EVR Evrytania 146.47 311 P PKPbc 23 12 41.3 -0.6
BLY Banja Luka 146.48 323 ⇑P PKPbc 23 12 42.0 +0.4
BLY Banja Luka 146.48 323 eP PKPbc 23 12 42.1 -0.5
SERG Sergoula 146.49 310 P PKPdf 23 12 41.0 +0.6
TRIZ Trizonia 146.50 309 P PKPbc 23 12 41.7 -0.1
ANX Ano Chora 146.52 310 P PKPbc 23 12 42.2 +0.2
PDG Podgorica 146.55 318 ⇑P PKPbc 23 12 41.7 -0.2
PDG Podgorica 146.55 318 eP PKPab 23 12 42.5 -0.4
KLV Kalavryta, Ach 146.56 309 P PKPbc 23 12 41.9 -0.2
TNS Taunus Mts 146.58 337 ePKPbc PKPbc 23 12 42.1 +0.3
baz=38,slow=3.1
TNS epPKPbc pPKPbc 23 12 54.7 -0.2
EFP Efpalio 146.59 310 P PKPbc 23 12 42.2 +0.1
VLX Vlachokerasia 146.64 308 P PKPbc 23 12 41.7 -0.8
WME Myndd Eilian 146.69 353 eP PKPbc 23 12 41.3 -0.5
TIR Tirane 146.71 316 P PKPbc 23 12 42.9 +0.5
TIR Tirane 146.71 316 PKP2 PKPbc 23 12 42.9 +0.5
DRME Dracevica, Mon 146.72 317 eP PKPbc 23 12 41.2 +0.5
MGRS Mrkonjic Grad 146.73 322 eP PKPab 23 12 43.0 -0.6
RJOB Jochberg 146.74 331 ePKPbc PKPbc 23 12 42.5 +0.1
baz=38,slow=3.1
BRY Bratogost 146.74 319 eP PKPbc 23 12 42.2 -0.4
CRES Cresnjev 146.74 326 eP PKPbc 23 12 42.3 0.0
OBKA Obir 146.76 327 ePKPbc PKPbc 23 12 42.5 0.0
baz=38,slow=3.1
OBKA Obir 146.76 327 ePKPab PKPbc 23 12 42.4 0.0
comp=Z,13nm,0.8s
AHRW Bad Neuenahr-A 146.79 339 ePKPbc PKiKP 23 12 44.3 -0.7
baz=38,slow=3.1
WLF1 Llynfaes 146.81 353 eP PKPbc 23 12 42.5 +0.2
JAN Janina 146.83 312 P PKPbc 23 12 43.1 +0.3
CWF Charnwood Fore 146.90 349 eP PKPbc 23 12 41.8 -0.7
KBA Koelnbreinsper 146.95 329 ePKPbc PKPbc 23 12 43.4 +0.2
baz=38,slow=3.1
KBA Koelnbreinsper 146.95 329 ePKPab PKPbc 23 12 42.9 -0.2
comp=Z,23nm,0.9s,SNR=5.6
TREB Trebinje 146.96 319 eP PKPdf 23 12 41.9 +0.9
PDO Prodromos 147.04 310 P PKPbc 23 12 43.8 +0.4
ITM Ithomi 147.05 308 P PKPbc 23 12 42.7 -0.8
FOEL Foel Wylfa 147.05 352 eP PKPbc 23 12 42.8 -0.2
MEM Membach 147.08 340 PKPdf PKPbc 23 12 43.1 0.0
MEM pPKP pPKPbc 23 12 55.3 -1.0
LJU Ljubljana 147.08 327 i PKPbc PKPbc 23 12 43.4 +0.1
LJU i pPKPbc pPKPbc 23 12 56.0 -0.4
LJU Ljubljana 147.08 327 eP PKPbc 23 12 43.3 0.0
FUR Furstenfeldbru 147.09 332 ePKPbc PKPab 23 12 45.1 +0.2
baz=38,slow=3.1
FUR epPKPbc pPKPbc 23 12 56.5 0.0
MYKA Terra Mystica 147.12 328 i PKPab PKPbc 23 12 43.0 -0.4
comp=Z,17nm,0.8s
BSTI Sart Tilman 147.24 341 PKPdf PKPbc 23 12 43.5 -0.1
BSTI pPKP pPKPbc 23 12 56.2 -0.6
BHOU Houvegnez 147.30 340 PKPdf PKPbc 23 12 43.8 0.0
BHOU pPKP pPKPbc 23 12 55.7 -1.3
UCC Uccle 147.41 342 PKPdf PKPbc 23 12 44.8 +0.9
UCC pPKP pPKPbc 23 12 56.4 -0.8
UCC Uccle 147.41 342 PKPbc 23 12 44.7 +0.7
UCC Uccle 147.41 342 PKP2 PKPbc 23 12 44.7 +0.7
BCLA Clavier 147.46 341 PKPdf PKPbc 23 12 45.0 +0.8
BCLA pPKP pPKPbc 23 12 56.5 -0.8
STU Stuttgart 147.48 335 ePKPbc PKPbc 23 12 45.0 +0.7
baz=38,slow=3.1
STU epPKPbc pPKPbc 23 12 57.7 +0.2
LKLB Kalborn 147.48 340 PKPdf PKPab 23 12 45.8 -0.5
LKLB pPKP pPKPbc 23 12 56.7 -0.8
BGES Gesves 147.56 341 PKPdf PKiKP 23 12 45.6 -0.9
BGES pPKP pPKPbc 23 12 57.2 -0.5
ABTA Abfaltersbach 147.59 330 i PKPbc PKPbc 23 12 43.9 -0.8
comp=Z,14nm,0.6s,SNR=8.1
WATA Walderalm 147.59 331 ePKPab PKPbc 23 12 44.5 -0.3
comp=Z,52nm,1.7s,SNR=7.6
BRQR Ronquire 147.62 342 PKPdf PKPbc 23 12 44.7 +0.2
BRQR pPKP pPKPbc 23 12 57.0 -0.8
BRQR pPKPbc sPKPdf 23 12 59.5 -0.3
BMRD Maredsous 147.73 341 PKPab PKPbc 23 12 44.9 0.0
BMRD pPKP pPKPbc 23 12 57.3 -0.8
MOTA Moosalm 147.79 332 i PKPab PKPbc 23 12 45.1 -0.3
comp=Z,60nm,1.1s,SNR=8.8
RETA Reutte 147.84 332 ePKiKP PKPbc 23 12 45.2 -0.2
comp=Z,32nm,1.2s,SNR=7.2
SQTA Sankt Quirin 147.84 331 i PKiKP PKPbc 23 12 45.3 -0.2
comp=Z,60nm,1.2s,SNR=12
STAL STALIGIAL 147.84 329 PKPbc PKPbc 23 12 44.8 -0.6
WLF Walferdange 147.84 339 ePKPbc PKiKP 23 12 46.4 -0.7
baz=38,slow=3.1
WLF epPKPbc pPKPbc 23 12 58.9 +0.5
WLF Walferdange 147.84 339 PKPdf PKPbc 23 12 45.7 +0.4
WLF pPKP pPKPbc 23 12 58.1 -0.3
MCH1 Michaelchurch 147.89 351 eP PKPbc 23 12 45.4 +0.1
DOU Dourbes 147.96 341 PKPdf PKPbc 23 12 45.6 +0.1
DOU pPKP pPKPbc 23 12 57.5 -1.2
UBR Ueberruh 147.97 333 ePKPbc PKPbc 23 12 45.7 -0.1
baz=38,slow=3.1
UBR epPKPbc pPKPbc 23 12 58.0 -0.9
SWN1 Swindon 148.17 349 eP PKPbc 23 12 45.0 -1.0
BFO Black Forest 148.18 336 ePKPbc PKPbc 23 12 46.5 +0.3
baz=38,slow=3.1
BFO Black Forest 148.18 336 PKPbc PKPbc 23 12 45.6 -0.6
BFO Black Forest 148.18 336 PKP2 PKPbc 23 12 45.6 -0.6
FETA Feichten 148.21 332 i PKiKP PKPbc 23 12 46.6 0.0
comp=Z,53nm,1.2s,SNR=10
DAVA Damuels 148.37 333 ePKPbc PKPbc 23 12 47.2 +0.2
baz=38,slow=3.1
DAVA epPKPbc pPKPbc 23 12 60.0 -0.2
DAVA Damuels 148.37 333 ePKiKP PKPbc 23 12 46.9 0.0
comp=Z,47nm,1.1s,SNR=8.7

MATE Matera 149.12 317 ⇑P PKPdf 23 12 45.1 +0.5
TIP Timpagrande 149.85 314 ⇓P PKiKP 23 12 52.0 +0.3
TIP Timpagrande 149.85 314 PKiKP 23 12 51.6 -0.1
INTR Introdacqua 150.04 321 PKPbc 23 12 51.1 -0.1
AQU L'Aquila 150.12 322 eP PKPbc 23 12 51.2 -0.2
KEST Kesra 156.66 315 PKPab PKPab 23 13 25.6 +0.4
comp=Z,13nm,1.1s,baz=322,slow=12,SNR=3.8
ESDC Sonseca Array 159.93 345 PKPab PKPab 23 13 39.0 -0.1
comp=Z,0.4nm,0.6s,baz=12,slow=4.2,SNR=4.3
ESDC Sonseca Array 159.93 345 PKPdf PKPdf 23 12 57.2 -2.5
ESDC PKPab 23 13 36.3 -2.8
LIC Lamto 164.85 202 eP PKPab 23 14 01.5 +0.4
comp=Z,367nm,2.4s
KIC Kosan Boka 164.87 204 eP PKPab 23 14 03.2 +1.9
comp=Z,350nm,2.2s
DBIC Dimbokro 165.20 204 PKP PKPdf 23 13 05.5 -0.1
comp=Z,3.0nm,1.0s,baz=128,slow=4.3,SNR=3.8
DBIC PKPab PKPab 23 14 03.0 +0.4
comp=Z,6.2nm,1.0s,baz=147,slow=5.8,SNR=5.6
DBIC Dimbokro 165.20 204 PKPdf PKPdf 23 13 05.3 -0.3
DBIC PKPab 23 14 03.5 +0.8
DBIC Dimbokro 165.20 204 PKP2 PKPab 23 14 03.5 +0.8
DBIC 00 13 05.3
TIC Toumodi 165.24 203 eP PKPab 23 14 03.3 +0.4
TORD Torodi Ar. Bea 166.07 241 PKP PKPdf 23 13 05.9 -0.3
comp=Z,2.1nm,1.1s,baz=201,slow=1.2,SNR=6.8
TORD PKPab PKPab 23 14 07.0 +0.2
comp=Z,3.1nm,1.0s,baz=110,slow=3.0,SNR=4.4

*IDC **05** 22:58:22.2±1.3, 6.63S×104.61E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.7/50, mbtmp3.8/8, ML3.5/1, MS3.7/2, Ms1 3.7/2, ms1mx3.2/33, Error ellipse: s-maj=49.6km s-min=17.4km az=40.0*

*DJA **05** 22:58:28.4±0.6, 6°S±7°×10°5E±°, h10km, M4.0/9, MLv4.0/9*

ISC 05 22:58:30.7±1.5, 6.4S±0.1×105.2E±0.1, h58km±14km, n22, σ1§75/22, mb3.9/7, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	Kota Agung	1.07	322	P	Pn	22 58 48.1	-1.5
SKJI	Sukabumi	1.52	114	P	Pn	22 58 53.8	-1.9
SKJI				S	Sn	22 59 14.6	+0.1
DBJI	Dramaga	1.59	97	P	Pn	22 58 54.0	-2.6
DBJI				S	Sn	22 59 15.8	-0.3
KLSI		1.73	346	P	Pn	22 58 57.2	-1.3
LWLI	Liwa	1.74	321	P	Pn	22 58 59.9	+1.2
MDSI	Maura Dua	2.11	332	P	Pn	22 59 03.5	-0.2
MDSI				S	Sn	22 59 31.7	+2.8
CNJI	Cibinong	2.17	116	P	Pn	22 59 02.1	-2.3
CNJI				S	Sn	22 59 31.8	+1.7
LEM	Lembang	2.48	101	Pn	Pn	22 59 10.5	+1.6
	6.1nm,0.3s,baz=230,slow=10,SNR=6.2						
LEM				Sn	Sn	22 59 48.7	+11
	6.7nm,0.3s,baz=246,slow=20,SNR=3.1						
LEM	Lembang	2.48	101	P	Pn	22 59 09.8	+0.9
CISI	Cisompet, Garu	2.88	114	P	Pn	22 59 15.2	+0.9
PMBI	Palembang	3.44	354	P	Pn	22 59 24.1	+2.2
CMJI	Cimerak	3.55	113	P	Pn	22 59 24.2	+0.8
KSI	Kapahiang	3.72	316	P	Pn	22 59 30.9	+5.1
PSI	Prapat	11.04	325	LR	LR	23 05 08.1	
	comp=Z,200nm,21.7s,baz=295,slow=37						
CMAR	Chiang Mai Arr	25.42	346	P	P	23 03 54.3	+1.1
	0.9nm,0.8s,baz=178,slow=9.4,SNR=7.7						
WRA	Warramunga Arr	31.38	118	P	P	23 04 48.6	+2.2
	1.8nm,0.8s,baz=300,slow=9.3,SNR=4.3						
ASAR	Alice Springs	32.54	125	P	P	23 04 57.8	+1.2
	1.5nm,0.8s,baz=297,slow=8.1,SNR=4.2						
STKA	Stephens Creek	42.42	131	P	P	23 06 21.2	+1.3
	3.0nm,0.7s,baz=304,slow=5.9,SNR=5.0						
USRK	Ussuriysk Ar.	55.85	23	LR	LR	23 34 58.7	
	comp=Z,148nm,18.5s,baz=140,slow=39						
GEYT	Alibeck	62.09	319	P	P	23 08 44.4	-1.3
	0.8nm,0.6s,baz=151,slow=3.3,SNR=3.1						
ZALV	Zalesovo Beam	62.49	347	P	P	23 08 46.5	-1.5
	0.5nm,0.4s,baz=154,slow=7.5,SNR=3.4						
BRTR	Keskin Array B	80.05	312	P	P	23 10 32.3	-2.2
	0.2nm,0.5s,baz=116,slow=3.4,SNR=2.5						

*IDC **05** 23:05:28.3±3.0, 10.08S×113.42E, h0km, mb3.4/5, mb1 3.7/6, mb1mx3.4/51, mbtmp3.5/6, ML3.1/1, Error ellipse: s-maj=142.3km s-min=20.4km az=48.0*

ISC 05 23:05:31.6±3.2, 10.1S±0.7×113.5E±0.8, h23km, n9, σ1§47/6, mb3.6/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	14.19	126	Pn	Pn	23 08 50.2	-1.0
	0.1nm,0.3s,baz=307,slow=10,SNR=2.5						
FITZ				Sn	Sn	23 11 17.4	-11
	0.1nm,0.3s,baz=288,slow=20,SNR=2.6						
WRA	Warramunga Arr	22.34	118	P	P	23 10 29.5	+1.5
	0.3nm,0.4s,baz=294,slow=10,SNR=2.2						
ASAR	Alice Springs	23.68	127	P	P	23 10 42.4	+0.6
	0.3nm,0.5s,baz=301,slow=9.0,SNR=5.8						
CMAR	Chiang Mai Arr	31.79	333	P	P	23 11 53.5	-1.1
	0.5nm,0.4s,baz=165,slow=7.5,SNR=4.1						
H08S2	Diego Garcia H	40.61	270	T	T	23 56 16.9	
	baz=97						
H08S3	Diego Garcia H	40.62	270	T	T	23 56 16.0	
	baz=97						
H08S1	Diego Carcia H	40.63	270	T	T	23 56 17.3	
	baz=97						
SONM	Songino Array	57.99	354	P	P	23 15 22.3	-0.2
	0.5nm,0.6s,baz=171,slow=8.7,SNR=5.5						
MKAR	Makanchi Array	63.11	336	P	P	23 15 58.6	+1.2
	0.2nm,0.4s,baz=152,slow=7.9,SNR=8.1						

IDC 05 23:09:19.6±2.9, 7.02S×129.46E, h92km±41km, mb3.3/1, mb1 3.3/5, mb1mx3.0/48, mbtmp3.6/5, Error ellipse: s-maj=75.6km s-min=23.3km az=92.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.37	16	P	Pn	23 10 51.0	0.0
	0.8nm,0.3s,baz=240,slow=20,SNR=7.3						
SIJI				S	Sn	23 11 56.4	-5.9
	0.8nm,0.3s,baz=198,slow=20,SNR=3.6						
FITZ	Fitzroy Crossi	11.62	198	P	Pn	23 12 03.0	+0.5
	0.3nm,0.3s,baz=14,slow=9.8,SNR=8.4						
FITZ				S	Sn	23 14 03.1	-7.3
	0.1nm,0.3s,baz=306,slow=17,SNR=2.7						
WRA	Warramunga Arr	13.69	160	P	Pn	23 12 28.1	-1.8
	0.2nm,0.3s,baz=332,slow=13,SNR=9.2						
WRA				S	Sn	23 14 48.2	-12
	0.4nm,0.3s,baz=343,slow=21,SNR=10						
ASAR	Alice Springs	17.09	166	P	P	23 13 14.1	+0.8
	0.1nm,0.3s,baz=342,slow=8.8,SNR=4.0						
MKAR	Makanchi Array	67.95	327	P	P	23 20 08.7	0.0
	0.3nm,0.5s,baz=122,slow=7.4,SNR=5.6						

IDC 05 23:13:54.3±3.0, 3.56N×126.94E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.4/47, mbtmp3.8/3, Error ellipse: s-maj=351.1km s-min=27.1km az=64.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.46	163	P	P	23 19 15.8	+0.6
	1.5nm,0.5s,baz=342,slow=10,SNR=5.8						
STKA	Stephens Creek	37.89	159	P	P	23 21 12.8	-0.6
	1.4nm,0.6s,baz=355,slow=11,SNR=3.4						
MKAR	Makanchi Array	57.82	325	P	P	23 23 47.6	-0.1
	0.1nm,0.5s,baz=118,slow=6.9,SNR=5.2						

*IDC **05** 23:13:56.0±0.9, 0.26S×132.30E, h0km, mb3.8/6, mb1 4.0/8, mb1mx3.8/42, mbtmp3.9/8, ML3.7/2, Error ellipse: s-maj=20.2km s-min=12.8km az=129.0*

*DJA **05** 23:13:58.9±1.7, 0°S±14°×13°2E±°, h14km±11km, M4.0/5, MLv4.0/5*

ISC 05 23:14:01.4±0.8, 0.27S±0.10×132.04E±0.07, h35km, n13, σ1§23/13, mb3.9/6, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	0.98	232	Pg	Pn	23 14 18.3	-0.4
	18nm,0.3s,baz=24,slow=18,SNR=101						
SIJI				Lg	Lg	23 14 35.5	
	84nm,0.3s,baz=127,slow=20,SNR=33						
SWI	Sorong	0.98	233	P	Pn	23 14 19.3	+0.6
RKPI	Ransiki, Papua	2.47	120	P	Pn	23 14 38.6	-0.5
RKPI				S	Sn	23 15 10.1	+2.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.64	176	P	Pn	23 14 41.9	+0.3
MSAI	Masohi	4.36	225	P	Pn	23 15 18.5	+13
FITZ	Fitzroy Crossi	18.80	199	P	P	23 18 16.8	-1.3
	0.2nm,0.3s,baz=32,slow=13,SNR=3.3						
WRA	Warramunga Arr	19.68	174	P	P	23 18 26.4	-1.2
	0.2nm,0.3s,baz=353,slow=11,SNR=4.2						
ASAR	Alice Springs	23.33	176	P	P	23 19 06.5	-0.1
	4.7nm,0.7s,baz=357,slow=10,SNR=24						
STKA	Stephens Creek	32.71	165	P	P	23 20 30.4	-0.3
	0.8nm,0.6s,baz=352,slow=9.2,SNR=2.9						
SONM	Songino Array	52.85	339	P	P	23 23 13.7	0.0
	0.9nm,1.0s,baz=156,slow=5.5,SNR=6.3						
MKAR	Makanchi Array	63.86	324	P	P	23 24 31.2	+0.6
	0.7nm,0.7s,baz=116,slow=8.2,SNR=6.2						
ZALV	Zalesovo Beam	66.57	332	P	P	23 24 49.9	+2.0
	0.4nm,0.4s,baz=114,slow=7.0,SNR=2.6						
ILAR	Eielson Array	86.43	25	P	P	23 26 38.6	-1.5
	0.8nm,0.8s,baz=250,slow=5.6,SNR=8.4						

IDC 05 23:15:40.2±1.9, 36°.87N×97°.62W, h0km, mb3.5/1, mb1 3.6/5, mb1mx3.4/51, mbtmp3.3/5, ML2.9/3, MS3.2/2, Ms1 3.2/2, ms1mx2.6/29, Error ellipse: s-maj=29.3km s-min=12.5km az=106.0
TUL 05 23:15:40±2.5, 36°.84N±0°.04×97°.75W±0°.06, h11km±7km, ML3.5, Error ellipse: s-maj=7.1km s-min=4.9km az=87.0
NEIC 05 23:15:40.5±1.7, 36°.81N×97°.77W±0°.05, h5km±2km, Error ellipse: s-maj=5.5km s-min=4.1km az=98.0
ANF 05 23:15:41.0±0.5, 36°.80N×97°.76W, h10km, ML4.3/8, Error ellipse: s-maj=7.0km s-min=5.3km az=58.0
ISC 05 23:15:38.8±1.3, 36°.82N±0°.03×97°.74W±0°.03, h4km±10km, n82, σ2°20/104, Oklahoma

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	1.21	165		Pb	23 16 02.3	0.0
OKCFA	Oklahoma City	1.43	170		Pb	23 16 06.3	+0.3
OKCSW	OKLAHOMA CITY	1.44	170	Pn	Pn	23 16 05.7	0.0
OKCSW					Sg	23 16 26.1	+1.2
FNO	Franklin	1.59	170		Pb	23 16 09.5	+0.8
W35A	Tecumseh	1.81	157		Pb	23 16 12.3	-0.2
W35A					Sb	23 16 36.6	+1.0
TUL1	Leonard	1.82	119		Pb	23 16 13.2	+0.4
TUL1					Sg	23 16 37.5	+0.2
TUL1	Leonard	1.82	119	Pb	Pb	23 16 13.7	+1.0
	baz=301						
TUL1				Sb	Sg	23 16 37.7	+0.4
	baz=301						
X34A	Smith Ranch, M	2.22	182		Pn	23 16 18.3	+1.9
WMOK	Wichita Mounta	2.25	202		Pn	23 16 18.2	+1.4
WMOK	Wichita Mounta	2.25	202	P	Pn	23 16 18.3	+1.4
	baz=21						
WMOK				Sb	Sb	23 16 50.3	+2.1
	baz=21						
KSU1	Kansas State U	2.44	21	P	Pb	23 16 22.6	-0.7
	baz=202						
KSU1				Sb	Sg	23 16 56.9	-0.4
	baz=202						
CBKS	Cedar Bluff	2.54	322		Pn	23 16 22.3	+1.5
CBKS	Cedar Bluff	2.54	322	Pb	Pb	23 16 25.6	+0.7
	baz=141						
CBKS				Sb	Sg	23 16 60.0	-0.3
	baz=141						
HHAR	Hobbs	3.11	99		Pn	23 16 30.6	+1.9
W39A	Magazine	3.60	116	Pn	Pn	23 16 37.9	+2.5
W39A	Magazine	3.60	116	P	Pn	23 16 37.2	+1.8
	baz=298						
AMTX	Amarillo	3.74	240		Pn	23 16 40.9	+3.5
U40A	Yellville	3.96	95		Pn	23 16 42.5	+2.0
U40A				Pg	Pb	23 16 52.1	+2.8
U40A					Sn	23 17 21.6	-5.8
U40A	Yellville	3.96	95	P	Pn	23 16 42.6	+2.1
	baz=278						
U40A				S	Sn	23 17 29.0	+1.6
	baz=278						
MIAR	Mount Ida	4.08	123	Pn	Pn	23 16 43.5	+1.4
MIAR					Sn	23 17 30.5	+0.1
MIAR	Mount Ida	4.08	123	P	Pn	23 16 44.0	+2.0
	baz=305						
MIAR				S	Sn	23 17 31.3	+0.9
	baz=305						
MGMO	Mountain Grove	4.40	84		Pn	23 16 49.1	+2.7
MGMO				Sn	Sn	23 17 36.2	-1.9
KSCO	Kaye Shedlock'	4.43	301	Pn	Pn	23 16 45.5	-1.6
ABTX	Abilene, Hawle	4.47	201	Pn	Pn	23 16 45.7	-1.8
ABTX				Pg	Pb	23 16 58.6	+0.6
BGNE	Belgrade	4.59	356		Pn	23 16 51.2	+2.2
BGNE	Belgrade	4.59	356	P	Pn	23 16 51.4	+2.4
	baz=176						
X40A	Basin Creek Fa	4.63	119		Pn	23 16 49.6	+0.1
WHAR	Wooly Hollow	4.68	107	Pn	Pn	23 16 52.6	+2.4
W41B	Gary Mavity, V	4.75	109		Pn	23 16 54.2	+2.9
WHTX	Lake Whitney,	4.83	177	Pn	Pn	23 16 53.6	+1.3
UALR	University of	4.84	113	Pn	Pn	23 16 53.8	+1.3
WLAR	White Oak Lake	4.92	128	Pn	Pn	23 16 53.4	-0.1
MSTX	Muleshoe	5.00	237		Pn	23 16 55.1	+0.4
OGNE	Ogallala	5.30	322		Pn	23 16 60.0	+1.0
CCM	Cathedral Cave	5.32	75		Pn	23 17 01.0	+2.0
CCM				Pg	Pg	23 17 18.3	-2.3
CCM					Sn	23 17 55.1	-5.6
T25A	Trinidad	5.35	275		Pn	23 17 01.8	+2.2
LCAR	Lake Charles	5.37	96	Pn	Pn	23 17 02.3	+2.6
LCAR				Sn	Sn	23 17 57.8	-4.1
NATX	Nacogdoches	5.66	152	Pn	Pn	23 17 04.0	+0.2
435B	Jarrell	6.03	179	Pn	Pn	23 17 08.6	-0.2
435B					Pg	23 17 30.7	-3.6
X43A	Marvell	6.04	110	Pn	Pn	23 17 06.9	-2.0
SCIA	State Center	6.17	33	Pn	Pn	23 17 12.8	+2.1
SCIA				Sn	Sn	23 18 16.2	-5.5
SLM	Saint Louis	6.22	71	Pn	Pn	23 17 14.9	+3.5
Q24A	Divide	6.23	292		Pn	23 17 14.6	+2.7
JCT	Junction City	6.56	196	Pn	Pn	23 17 17.4	+1.3
JCT					Sn	23 18 24.2	-7.1
N41A	Harden Midland	6.63	52	Pn	Pn	23 17 18.1	+1.0
143A	Socs Landing,	6.64	126	Pn	Pn	23 17 16.1	-1.1
S44A	Carbondale	6.83	80	Pn	Pn	23 17 20.4	+0.6
ISCO	Idaho Springs	6.86	298	Pn	Pn	23 17 20.7	+0.1
ISCO					Sn	23 18 40.3	+1.0
ECSD	EROS Data Cent	6.96	7		Pn	23 17 22.9	+1.4
ECSD				Sn	Sn	23 18 38.4	-2.7
P43A	Skaggs, Pawnee	7.06	64	Pn	Pn	23 17 25.9	+3.0
UTMT	University of	7.16	91	Pn	Pn	23 17 23.6	-0.7
OXF	Oxford	7.17	106	Pn	Pn	23 17 25.8	+1.4
L40A	Anamosa	7.27	42		Pn	23 17 27.5	+1.7
ANMO	Albuquerque	7.32	258	Pn	Pn	23 17 30.4	+3.8
	0.1nm,0.3s,baz=73,slow=16,SNR=2.3						
ANMO				Lg	Lg	23 19 27.4	
	2.0nm,0.3s,baz=337,slow=10,SNR=4.1						
ANMO				LR	LR	23 20 33.5	
	comp=Z,177nm,18.8s,baz=344,slow=40						
ANMO	Albuquerque	7.32	258	Pn	Pn	23 17 26.8	+0.1
PHWY	Pilot Hill	7.48	309	Pn	Pn	23 17 30.1	+1.1
N23A	Red Feather La	7.58	305	Pn	Pn	23 17 32.6	+2.3
N23A					Sn	23 18 53.8	-3.0
HDIL	Hopedale	7.58	58	Pn	Pn	23 17 32.2	+2.1
SMCO	Snowmass	7.66	291	Pn	Pn	23 17 32.5	+1.0
SUSD	Miller	7.67	353	Pn	Pn	23 17 34.0	+2.7
OLIL	Olney	7.87	73	Pn	Pn	23 17 35.8	+1.7
WVT	Waverly	8.02	92	Pn	Pn	23 17 36.7	+0.6
PLAL	Pickwick Lake	8.06	100	Pn	Pn	23 17 36.3	-0.4
USIN	University of	8.10	79	Pn	Pn	23 17 37.6	+0.4
L42A	Oliver, Polo	8.11	48		Pn	23 17 38.9	+1.5
MNTX	Cornudas Mount	8.13	233	Pn	Pn	23 17 41.0	+3.3
MNTX					Sn	23 19 08.5	-1.5
JFWS	Jewell Farm	8.38	41		Pn	23 17 42.5	+1.5
T47A	Sharon Grove	8.53	86	Pn	Pn	23 17 45.5	+2.4
RSSD	Black Hills	8.72	329	Pn	Pn	23 17 47.5	+1.6
P46A	Rosedale	8.75	68		Pn	23 17 49.0	+2.9
M44A	Midewin, Midew	8.81	56	Pn	Pn	23 17 48.6	+1.7
V48A	Smith Brothers	8.89	94	Pn	Pn	23 17 48.4	+0.4
I40A	Norwalk	8.91	35		Pn	23 17 50.1	+1.8
K22A	Casper	8.92	313	Pn	Pn	23 17 48.2	-0.4
TX31	Lajitas Ar. Si	8.97	215		Pn	23 17 49.0	-0.3
TX32	Lajitas Array	8.97	215		Pn	23 17 49.0	-0.3
TXAR	Lajitas Array	8.97	215	Pn	Pn	23 17 50.6	+1.3
	0.2nm,0.3s,baz=43,slow=13,SNR=4.9						
TXAR				Lg	Lg	23 20 20.2	
	0.7nm,0.3s,baz=43,slow=19,SNR=5.5						
TXAR	Lajitas Array	8.97	215	Pn	Pn	23 17 49.6	+0.4
PDAR	Pinedale Array	10.85	307	Pn	Pn	23 18 19.1	+4.0
	baz=116,slow=12,SNR=1.9						
PDAR				Lg	Lg	23 21 18.2	
	0.3nm,0.3s,baz=107,slow=35,SNR=3.1						
ULM	Lac du Bonnet	13.49	5	Pn	Pn	23 18 46.0	-4.9
	0.3nm,0.3s,baz=178,slow=13,SNR=4.0						
ULM				Sn	Sn	23 21 11.3	-10
	0.3nm,0.3s,baz=107,slow=19,SNR=2.9						
ULM				Lg	Lg	23 22 34.9	
	0.1nm,0.3s,baz=252,slow=20,SNR=1.9						
SADO	Sadowa	16.15	55	LR	LR	23 25 04.8	
	comp=Z,70nm,21.5s,baz=270,slow=35						
ILAR	Eielson Array	40.17	330	P	P	23 23 17.9	+2.2
	0.6nm,0.8s,baz=110,slow=7.7,SNR=5.9						

IDC 05 23:16:52.6±1.4, 38°.36N×20°.35E, h0km, mb3.6/5, mb1 3.5/9, mb1mx3.3/53, mbtmp3.5/9, ML3.1/4, Error ellipse: s-maj=24.4km s-min=20.6km az=85.0
BEO 05 23:16:52.4±0.9, 38°.14N×21°.12E, h10km, ML3.3/5
THE 05 23:16:54.7, 38°.19N×20°.40E, h10km, ML3.3/16, Error ellipse: s-maj=1.0km s-min=0.5km az=260.0
ATH 05 23:16:54.2, 38°.19N×20°.43E, h12km, ML3.3/13, Error ellipse: s-maj=1.6km s-min=0.8km az=248.0
ISC 05 23:16:53.9±0.7, 38°.18N±0°.02×20°.41E±0°.03, h13km±3km, n88, σ1°20/129, mb3.6/5, 6C-7D, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	268	P	Pg	23 16 56.7	+0.5
CHV1				S	Sg	23 16 58.2	+0.4
LXR1	Lixouri, Cepha	0.03	52	P	Pg	23 16 56.6	+0.4
LXR1				S	Sg	23 16 58.0	+0.2
KEF3	Kipouria, Keph	0.05	291	⇓Pd0	Pg	23 16 56.9	+0.5
KEF3				S	Sg	23 16 58.6	+0.4
ARGA	Argostoli. Kep	0.05	98	⇑Pc0	Pg	23 16 56.6	+0.2
ARGA				S	Sg	23 16 57.9	-0.2
ARG2	Argostoli	0.06	95	P	Pg	23 16 56.7	+0.3
ARG2				S	Sg	23 16 58.0	-0.2
KEF2	Argostoli. Kep	0.06	107	⇑Pc0	Pg	23 16 56.7	+0.2
KEF2				S	Sg	23 16 57.9	-0.4
KEF4	Livadi, Kephal	0.07	8	⇑Pc0	Pg	23 16 57.0	+0.4
KEF4				S	Sg	23 16 58.8	+0.3
KEF1	Kardakata, Kep	0.10	27	⇓Pd0	Pg	23 16 57.2	+0.3
KEF1				S	Sg	23 16 59.0	-0.1
VLS	Valsamata	0.14	93	P	Pg	23 16 57.6	+0.1
VLS				S	Sg	23 16 59.7	-0.2
VLS	Valsamata	0.14	93	⇓Pd0	Pg	23 16 57.6	+0.1
VLS				S	Sg	23 16 59.8	-0.1
VSK1	VASILIKIADES	0.26	28	P	Pg	23 16 59.7	+0.4
VSK1				S	Sg	23 17 03.8	+0.8
	32µm,0.3s						
FSK	Fiskardo	0.30	23	P	Pg	23 17 00.6	+0.4
FSK				S	Sb	23 17 05.2	-0.8
	9µm,0.4s						
FSK	Fiskardo	0.30	23	⇓Pd0	Pg	23 17 00.5	+0.4
FSK				S	Sg	23 17 05.1	+0.8
FSK				AML	AML	23 17 05.8	
	comp=N,14100µm,0.4s						
FSK				AML	AML	23 17 06.2	
	comp=E,20076µm,0.3s						
KFL	Anninata	0.31	104	P	Pb	23 17 01.0	-0.3
KFL				S	Sb	23 17 05.3	+0.9
	comp=E,23µm,0.3s						
VLMS	Volimes, Zakyn	0.37	147	⇑Pc0	Pg	23 17 01.7	+0.4
VLMS				S	Sb	23 17 07.6	-0.3
VLMS				AML	AML	23 17 09.0	
	comp=E,21754µm,0.2s						
VLMS				AML	AML	23 17 12.2	
	comp=N,20683µm,0.3s						
EVGI	Lefkada island	0.48	24	P	Pg	23 17 03.7	+0.4
EVGI				S	Sb	23 17 11.3	+0.1
	comp=N,3µm,0.2s						
EVGI	Lefkada island	0.48	24	⇑Pc0	Pg	23 17 03.5	+0.2
EVGI				S	Sb	23 17 10.9	-0.3
ZAK2	Zakynthos	0.55	136	P	Pb	23 17 05.5	0.0
ZAK2				S	Sn	23 17 15.2	-1.4
	comp=N,22µm,0.5s						
MGNA	Meganis	0.56	32	P	Pg	23 17 04.9	0.0
MGNA				S	Sb	23 17 13.1	-0.4
MGNA				AML	AML	23 17 13.8	
	comp=N,7279µm,0.3s						
MGNA				AML	AML	23 17 13.9	
	comp=E,10570µm,0.3s						
KRI1	kERI	0.61	148	P	Pg	23 17 05.9	0.0
KRI1				S	Sb	23 17 16.1	+1.1
	comp=E,6µm,0.3s						
LKD2	Lefkada island	0.63	18	P	Pg	23 17 06.2	-0.1
LKD2	Lefkada island	0.63	18	P	Pg	23 17 06.2	-0.1
LKD2				S	Sg	23 17 14.7	0.0
LKD2				AML	AML	23 17 22.8	
	comp=E,3068µm,0.5s						
LKD2				AML	AML	23 17 26.1	
	comp=N,3590µm,0.5s						
AST1	Astakos	0.64	56	P	Pg	23 17 06.5	+0.1
AST1				S	Sb	23 17 16.5	+0.6
	comp=N,6µm,0.5s						
PDO	Prodromos	0.73	55	P	Pg	23 17 08.1	-0.1
PDO				S	Sb	23 17 19.8	+1.2
	comp=N,5µm,0.4s						
PDO	Prodromos	0.73	55	⇓Pd0	Pg	23 17 07.8	-0.4
PDO				S	Sb	23 17 18.3	-0.3
PDO				AML	AML	23 17 20.2	
	comp=E,6691µm,0.5s						
PDO				AML	AML	23 17 29.6	
	comp=N,7527µm,0.4s						
RLS	Riolos of Patr	0.84	98	P	Pg	23 17 09.9	-0.3
RLS				S	Sn	23 17 23.7	0.0
	comp=N,908nm,0.3s						
RLS	Riolos of Patr	0.84	98	⇓Pd0	Pg	23 17 09.8	-0.4
RLS				S	Sb	23 17 22.2	+0.6
RLS				AML	AML	23 17 26.1	
	comp=E,1899µm,0.3s						
RLS				AML	AML	23 17 30.2	
	comp=N,1679µm,0.4s						
PVO	Paravola	0.98	63	P	Pb	23 17 12.8	+0.1
PVO				S	Sn	23 17 28.4	+1.3
	comp=N,4µm,0.3s						
PVO	Paravola	0.98	63	⇓Pd0	Pb	23 17 12.8	+0.1
PVO				S	Sb	23 17 25.6	+0.1
PVO				AML	AML	23 17 29.4	
	comp=E,10578µm,0.3s						
PVO				AML	AML	23 17 35.4	
	comp=N,4693µm,0.4s						
DRO	Drossia	1.05	102	P	Pb	23 17 13.8	-0.2
DRO				S	Sn	23 17 31.6	+2.7
	comp=N,2µm,0.4s						
DRO	Drossia	1.05	102	⇑Pc0	Pb	23 17 13.8	-0.2
DRO				S	Sn	23 17 29.0	0.0
DRO				AML	AML	23 17 33.7	
	comp=E,4916µm,0.2s						
DRO				AML	AML	23 17 38.9	
	comp=N,3742µm,0.4s						
UPR	University Cam	1.09	84	P	Pn	23 17 15.4	+0.5
EFP	Efpalio	1.20	78	P	Pn	23 17 15.9	-0.5
EFP	Efpalio	1.20	78	P	Pn	23 17 16.0	-0.4
EFP				AML	AML	23 17 42.2	
	comp=E,2724µm,0.8s						
EFP				AML	AML	23 17 43.1	
	comp=N,1956µm,0.5s						
AMT	Artemida-Makis	1.22	122	P	Pb	23 17 17.1	+0.3
AMT	Artemida-Makis	1.22	122	P	Pb	23 17 16.9	+0.1
AMT				AML	AML	23 17 47.1	
	comp=E,2968µm,0.6s						
AMT				AML	AML	23 17 47.6	
	comp=N,2131µm,0.7s						
LAKA	Lakka	1.24	87	P	Pn	23 17 16.8	-0.2
LAKA				S	Sg	23 17 36.1	+2.3
	comp=N,560nm,0.5s						
ANX	Ano Chora	1.25	71	P	Pb	23 17 17.5	0.0
ANX	Ano Chora	1.25	71	P	Pn	23 17 17.2	-0.1
ANX				AML	AML	23 17 42.4	
	comp=E,3796µm,0.7s						
ANX				AML	AML	23 17 43.3	
	comp=N,4674µm,0.5s						
SERG	Sergoula	1.31	79	P	Pn	23 17 17.9	-0.1
EVR	Evrytania	1.32	56	P	Pn	23 17 18.2	+0.1
EVR	Evrytania	1.32	56	P	Pn	23 17 18.2	+0.1
EVR				AML	AML	23 17 44.5	
	comp=N,836µm,0.7s						
EVR				AML	AML	23 17 45.4	
	comp=E,1009µm,0.4s						
TRIZ	Trizonia	1.32	82	P	Pn	23 17 17.9	-0.2
ALIK	Aliki, Aigiali	1.34	86	P	Pn	23 17 18.6	+0.3
IGT	Igoumenitsa	1.35	357	P	Pg	23 17 19.6	-0.2
IGT				S	Sg	23 17 38.7	+1.3
	comp=E,438nm,0.4s						
IGT	Igoumenitsa	1.35	357	ePg	Pg	23 17 20.1	+0.3
IGT				eSg	Sg	23 17 40.2	+2.8
IGT	Igoumenitsa	1.35	357	P	Pb	23 17 19.1	+0.1
IGT				S	Sg	23 17 38.1	+0.8
IGT				AML	AML	23 17 43.7	
	comp=E,942µm,0.5s						
IGT				AML	AML	23 17 46.7	
	comp=N,802µm,0.3s						
KALE	Kalithea	1.38	81	P	Pn	23 17 18.7	-0.2
KLV	Kalavryta, Ach	1.38	95	P	Pn	23 17 19.2	+0.2
KLV				S	Sg	23 17 39.9	+1.5
	comp=N,332nm,0.8s						
JAN	Janina	1.51	13	P	Pg	23 17 22.5	-0.4
JAN				S	Sg	23 17 42.0	-0.6
	comp=N,588nm,0.5s						
ITM	Ithomi	1.57	129	P	Pb	23 17 22.7	-0.1
ITM				S	Sg	23 17 45.1	+0.8
	comp=N,322nm,0.5s						
ITM	Ithomi	1.57	129	P	Pb	23 17 23.3	+0.5
MAKR	Makrakomi, Fth	1.58	58	P	Pb	23 17 23.4	+0.3
AGG	Agios Georgios	1.72	60	P	Pb	23 17 26.0	+0.6
VLX	Vlachokerasia	1.76	117	P	Pg	23 17 27.4	-0.3
THL	Klokotos Trika	1.86	42	P	Pb	23 17 28.2	+0.4
KPRO	Kipourio	1.92	22	P	Pb	23 17 29.3	+0.5
LTK	Loutraki	2.02	94	P	Pb	23 17 30.2	-0.4
LKR	Lokris	2.09	76	P	Pb	23 17 31.3	-0.3
NEST	Nestorio	2.28	12	P	Pb	23 17 34.9	-0.1
DID	Didima	2.34	106	P	Pb	23 17 35.0	-0.9
NEO	Neokhori	2.47	62	P	Pb	23 17 36.6	-1.6
MRKA	Markates	2.55	77	P	Pb	23 17 37.5	-2.0
FNA	Florina	2.70	16	ePg	Pb	23 17 39.6	+2.5
FNA				eSn	Sn	23 18 07.7	-2.0
OHR	Ohrid	2.94	6	i Pn	Pb	23 17 44.1	-2.1
VAY	Valandovo	3.55	27	i Pn	Pn	23 17 52.4	+3.7
SRS	Serrai	3.82	39	ePg	Pn	23 17 54.7	+2.2
SRS				eSn	Sn	23 18 28.3	-9.0
PDG	Podgorica	4.33	349	ePn	Pn	23 18 00.9	+1.4
PDG				eSn	Sn	23 18 52.3	+2.5
BOSS	Bosilegrad	4.59	20	ePn	Pn	23 17 59.4	-3.6
IDI	Anoyia	4.61	127	Pn	Pn	23 18 06.4	+3.0
	comp=N,0.4nm,0.3s,baz=273,slow=11,SNR=6.7						
IDI				Sn	Sn	23 18 54.9	-2.1
	comp=N,1.4nm,0.3s,baz=284,slow=12,SNR=3.8						
TREB	Trebinje	4.79	342	ePn	Pn	23 18 06.3	+0.5
TREB				eSn	Sn	23 19 03.6	+2.4
VAE	Valguarnera	4.80	263	Sn	Sn	23 18 58.0	-3.5
	comp=N,2.2nm,0.3s,baz=53,slow=5.1,SNR=6.5						
VTS	Vitosha	4.92	25	ePn	Pn	23 18 03.8	-4.0
SELS	Selova	5.06	6	ePn	Pn	23 18 07.3	-2.2
ZAPS	Zavoj	5.36	18	ePn	Pn	23 18 10.8	-2.8
IVAS	Ivanjica	5.39	358	ePn	Pn	23 18 14.1	0.0
DIVS	Divibare	5.92	357	ePn	Pn	23 18 21.5	+0.2
DIVS				eSn	Sn	23 19 27.3	-1.7
MLR	Muntele Rosu	8.39	28	Pn	Pn	23 18 55.2	0.0
	comp=N,0.1nm,0.3s,baz=134,slow=19,SNR=2.1						
SOKA	Soboth	9.37	337	ePn	Pn	23 19 09.0	+0.3
	comp=N,1.8nm,0.3s						
OBKA	Obir	9.38	334	ePn	Pn	23 19 09.6	+0.8
	comp=N,1.0nm,0.2s						
BRTR	Keskin Array B	10.42	77	Pn	Pn	23 19 28.9	+5.8
	comp=N,0.1nm,0.3s,baz=266,slow=12,SNR=2.8						
MOA	Molln	10.65	337	ePn	Pn	23 19 27.3	+1.1
	comp=N,0.9nm,0.3s						
GERES	GERESS Array B	11.71	338	Pn	Pn	23 19 40.4	-0.4
	comp=N,0.2nm,0.3s,baz=159,slow=15,SNR=4.3						
HFS	Hagfors	22.38	351	P	P	23 21 51.6	-0.1
	comp=N,1.4nm,0.7s,baz=170,slow=9.9,SNR=4.4						
FINES	FINESS Array B	23.55	7	P	P	23 22 01.1	-2.6
	comp=N,1.6nm,0.8s,baz=167,slow=9.0,SNR=6.3						
TORD	Torodi Ar. Bea	29.98	219	P	P	23 23 03.7	+1.5
	comp=N,0.4nm,0.8s,baz=26,slow=9.2,SNR=4.0						
MKAR	Makanchi Array	45.37	58	P	P	23 25 11.6	-0.3
	comp=N,0.5nm,0.6s,baz=271,slow=7.4,SNR=8.8						
ZALV	Zalesovo Beam	45.75	48	P	P	23 25 14.3	-0.5
	comp=N,1.2nm,0.4s,baz=278,slow=7.1,SNR=5.2						

ZUR 06 00:09:14.0, 46°.59N×8°.43E, h3km±1km, MLh0.7/6, 4C-2D, Error ellipse: s-maj=3.1km s-min=0.7km az=38.0, Switzerland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GRIMS	Grimsel Gerste	0.07	260	⇓Pg	Pg	00 09 16.0	+0.4
	0.2nm,SNR=1.3						
GRIMS				⇓Pg	Pg	00 09 16.0	+0.4
GRIMS				Sg	Sg	00 09 17.0	+0.3
FUSIO	Fusio	0.21	130	⇑Pg	Pg	00 09 18.8	+0.7
	0.1nm,SNR=1.3						
FUSIO				⇑Pg	Pg	00 09 18.8	+0.7
FUSIO				Sg	Sg	00 09 21.8	+0.8
NALPS	Val Nalps	0.22	89	Pg	Pg	00 09 19.0	+0.7
	0.1nm,SNR=1.0						
NALPS				Pg	Pg	00 09 19.0	+0.7
NALPS				Sg	Sg	00 09 22.0	+0.8
HASLI	Hasliberg/Brie	0.25	311	Sg	Sg	00 09 22.8	+0.7
FIESA	Fiescheralp	0.27	234	⇑Pg	Pg	00 09 19.6	+0.4
FIESA				⇑Pg	Pg	00 09 19.6	+0.4
	0.1nm,SNR=0.6						
FIESA				Sg	Sg	00 09 23.1	+0.4
BNALP	Bannalp	0.28	360	Sg	Sg	00 09 23.8	+0.8
PANIX	Pigniu (Panix)	0.53	63	Sg	Sg	00 09 31.3	+0.4

ROM 06 00:10:13.5±0.1, 43°.407N±0°.003×12°.486E±0°.005, h9km, ML1.4/3, 1C, Error ellipse: s-maj=0.3km s-min=0.3km az=157.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATVO	AVT- Monte Val	0.06	246	⇑P	Pg	00 10 15.6	+0.1
ATVO				S	Sg	00 10 16.9	0.0
ATFO	Monte Foce - G	0.07	123	P	Pg	00 10 15.8	+0.1
ATFO				S	Sg	00 10 17.5	+0.3
PIEI	Pieia	0.13	16	P	Pg	00 10 17.1	+0.6
PIEI				S	Sg	00 10 19.8	+1.2
MURB	Monte Urbino	0.15	169	P	Pg	00 10 17.4	+0.7
MURB				S	Sg	00 10 20.5	+1.6
MURB				AML	AML		
	comp=E,256µm,0.3s						
MURB				AML	AML		
	comp=E,256µm,0.3s						
MURB				AML	AML		
	comp=N,248µm,0.2s						
BADI	Badiali	0.20	300	P	Pg	00 10 18.3	+0.7
BADI				S	Sg	00 10 22.1	+1.6
BADI				AML	AML		
	comp=E,219µm,0.6s						
BADI				AML	AML		
	comp=E,220µm,0.6s						
BADI				AML	AML		
	comp=N,269µm,0.4s						
FRON	Frontone	0.21	58	P	Pg	00 10 18.2	+0.5
FRON				S	Sg	00 10 22.0	+1.4
NARO	Abbazia di Nar	0.21	19	P	Pg	00 10 18.3	+0.5
NARO				S	Sg	00 10 22.0	+1.2
FOSV	Fossato di Vic	0.23	119	P	Pg	00 10 18.7	+0.6
FOSV				S	Sg	00 10 22.9	+1.6
MPAG	Monte Paganucc	0.30	42	P	Pb	00 10 20.5	-0.6
MPAG				S	Sb	00 10 25.3	-0.9
ARVD	Arcevia	0.34	75	P	Pb	00 10 20.8	+0.5
ARVD				S	Sb	00 10 26.8	-0.7
FSSB	Fossombrone	0.35	37	P	Pg	00 10 21.2	+0.7
FSSB				S	Sb	00 10 27.3	-0.5
FSSB				AML	AML		
	comp=N,73µm,1.5s						
FSSB				AML	AML		
	comp=E,54µm,0.7s						
FSSB				AML	AML		
	comp=N,73µm,1.5s						
SNTG	Esanatoglia	0.36	114	P	Pg	00 10 21.1	+0.5
SNTG				S	Sb	00 10 27.4	-0.6
EL6	Elcito	0.46	100	S	Sb	00 10 31.0	+0.3

DDA 06 00:14:09.4, 36°.10N×29°.02E, h7km±3km, ML2.2
ISK 06 00:14:09.2, 36°.08N×29°.02E, h18km, ML2.5/14
NIC 06 00:14:12.6±0.0, 35°.80N×29°.22E, h50km±31km, Ml2.7/3
ISC 06 00:14:06.5±1.3, 35°.95N±0°.04×29°.00E±0°.03, h10km±10km, n28, σ1°18/44, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKAS	Kas	0.56	60	PG	Pb	00 14 19.4	+0.8

AKAS				SG	Sb	00 14 27.4	+0.6
AKAS	Kas	0.56	60	iP	Pb	00 14 19.2	+0.7
AKAS				iS	Sg	00 14 26.1	+1.2
AKAS				IAML		00 14 32.0	
	comp=E,120nm,0.4s						
AKAS				IAML		00 14 32.0	
	comp=N,112nm,0.3s						
FETY	Fethiye	0.69	5	PG	Pb	00 14 20.5	-0.2
FETY				SG	Sg	00 14 29.1	+0.3
FETY	Fethiye	0.69	5	iP	Pb	00 14 20.4	-0.2
FETY				iS	Sg	00 14 28.5	-0.4
FETY				IAML		00 14 30.0	
	comp=E,221nm,0.4s						
FETY				IAML		00 14 32.0	
	comp=N,138nm,0.3s						
ARG	Arkhangelos	0.76	291	PG	Pn	00 14 24.4	+1.1
ARG				SG	Sn	00 14 34.8	0.0
DALY	Dalyan (Mula)	0.91	342	PG	Pb	00 14 24.6	+0.2
DALY				SG	Sb	00 14 36.5	-0.1
DALY	Dalyan (Mula)	0.91	342	iP	Pb	00 14 24.4	0.0
DALY				iS	Sb	00 14 34.5	-1.4
DALY				IAML		00 14 38.0	
	comp=E,64nm,0.5s						
DALY				IAML		00 14 38.0	
	comp=N,69nm,0.4s						
TURN	Turunc	0.98	341	PG	Pn	00 14 27.7	+1.4
TURN	Turunc	0.98	341	iP	Pn	00 14 27.4	+1.1
TURN				iS	Sn	00 14 40.5	+0.3
ELL	Elmali	1.08	42	PG	Pb	00 14 28.4	+1.0
AKUM	Antalya-Kumluc	1.15	71	iP	Pg	00 14 28.9	+0.3
AKUM				IAML		00 14 42.0	
	comp=N,66nm,1.2s						
AKUM				iS	Sg	00 14 42.2	-1.2
YER	Yerkesik	1.32	334	PN	Pn	00 14 31.9	+0.8
GOLH	Golhisar	1.36	19	iP	Pg	00 14 32.3	-0.4
GOLH				iS	Sg	00 14 48.0	-2.3
GOLH				IAML		00 14 58.0	
	comp=N,57nm,0.9s						
DAT	Datca	1.39	305	PN	Pn	00 14 33.6	+1.5
DAT	Datca	1.39	305	iP	Pn	00 14 33.5	+1.4
DAT				iS	Sn	00 14 50.8	+0.2
KORT	Korkueli	1.51	46	PN	Pn	00 14 34.9	+1.1
KORT	Korkueli	1.51	46	iP	Pb	00 14 35.4	+0.7
KORT				iS	Sn	00 14 54.8	+1.2
TAVA	DENIZLI_Tavas	1.52	357	iP	Pb	00 14 34.5	-0.2
TAVA				iS	Sg	00 14 52.7	-2.6
TAVA				IAML		00 14 54.0	
	comp=N,48nm,0.2s						
TAVA				IAML		00 14 55.0	
	comp=E,65nm,0.4s						
KARP	Karpathos	1.55	256	PN	Pg	00 14 37.5	+1.3
BODT	Bodrum	1.76	310	PN	Pb	00 14 38.0	-0.9
AYDN	Tasoluk	1.93	333	iP	Pb	00 14 40.9	-1.0
BRDR	BURDUR-Merkez	1.94	26	iP	Pn	00 14 40.5	+0.8
BASM	Basmaki-Afyon	2.14	23	PN	Pn	00 14 43.1	+0.8
AYDB	Zeytinkoy-Aydi	2.19	336	PN	Pn	00 14 44.1	+1.1
GCAM	G?zelcaml?	2.25	321	PN	Pb	00 14 45.5	-1.8
AKMS	Akamas	2.87	108	P	Pn	00 14 52.4	0.0
AKMS				S	Sn	00 15 23.9	-3.1
AKMS				AML	AML	00 15 24.8	
	comp=E,0.1nm,0.7s						
AKMS				AML	AML	00 15 24.8	
	comp=E,0.1nm,0.7s						
AKMS				AML	AML	00 15 25.6	
	comp=E,0.1nm,0.8s						
AKMS				AML	AML	00 15 25.6	
	comp=E,0.1nm,0.8s						
ALFC	Alefka	3.04	104	P	Pn	00 14 54.9	+0.2
ALFC				S	Sn	00 15 29.5	-1.6
ALFC				AML	AML	00 15 30.4	
	comp=E,0.1nm,0.5s						
ALFC				AML	AML	00 15 30.4	
	comp=E,0.1nm,0.5s						
SZAC	Souni	3.39	109	P	Pn	00 14 59.7	+0.2
SZAC				S	Sn	00 15 38.8	-1.0
SZAC				AML	AML	00 15 40.5	
	comp=E,0.1nm,0.7s						
SZAC				AML	AML	00 15 40.5	
	comp=E,0.1nm,0.7s						

ISK **06** *00:18:17.7, 38.95N×43.61E, h5km, ML2.7/13*
IASPEI **06** *00:18:18.8±0.9, 38.95N±0.03×43.59E±0.03, h9km±6km, Error ellipse: s-maj=4.5km s-min=3.5km az=115.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
DDA **06** *00:18:18.8, 38.95N×43.58E, h9km, ML2.5*
TEH **06** *00:18:19.0, 39.00N×43.64E, h15km, ML2.5*
ISC 06 00:18:19.0±0.9, 38.95N±0.02×43.59E±0.02, h7km±6km, n39, σ1.25/61, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.05	339	iP	Pg	00 18 20.6	-0.3
VMUR				IAML		00 18 22.0	
	comp=N,10μm,0.3s						
VMUR				IAML		00 18 22.0	
	comp=E,13μm,0.2s						
VMUR				iS	Sg	00 18 22.2	0.0
CLDR	Caldiran	0.32	52	PG	Pg	00 18 25.0	-0.4
CLDR				SG	Sg	00 18 30.2	+0.5
CLDR	Caldiran	0.32	52	iP	Pg	00 18 25.0	-0.4
CLDR				iS	Sg	00 18 30.2	+0.5
CLDR				IAML		00 18 31.0	
	comp=N,822nm,0.2s						
CLDR				IAML		00 18 36.0	
	comp=E,450nm,0.2s						
CLDR	Caldiran	0.32	52	ePg	Pg	00 18 25.0	-0.4
VANB	Van	0.38	205	PG	Pb	00 18 28.1	-0.2
VANB				SG	Sb	00 18 35.8	+1.4
VANB	Van	0.38	205	ePg	Pb	00 18 28.0	-0.2
TVAN	Van	0.44	200	iP	Pg	00 18 27.9	+0.3
TVAN				iS	Sb	00 18 35.1	-1.0
TVAN				IAML		00 18 37.0	
	comp=N,946nm,0.6s						
TVAN				IAML		00 18 39.0	
	comp=E,751nm,0.5s						
DYDN	Diyadin	0.60	7	iP	Pb	00 18 30.6	-0.1
DYDN				iS	Sb	00 18 39.5	-1.3
DYDN				IAML		00 18 40.0	
	comp=E,622nm,0.2s						
DYDN				IAML		00 18 40.0	
	comp=N,440nm,0.2s						
ADCV	BITLIS_Adilcev	0.69	259	iP	Pg	00 18 32.4	0.0
ADCV				IAML		00 18 43.0	
	comp=E,437nm,0.3s						
ADCV				IAML		00 18 43.0	
	comp=N,361nm,0.7s						
ADCV				iS	Sb	00 18 43.2	-0.1
GEVA	Gevas	0.76	214	iP	Pg	00 18 33.3	-0.4
GEVA				iS	Sb	00 18 44.7	-0.5
TUTA	Tutak	0.76	307	iP	Pg	00 18 33.2	-0.5
TUTA				iS	Sg	00 18 43.7	+0.1
TUTA				IAML		00 18 47.0	
	comp=N,289nm,0.4s						
AKDM	Akdamar-Van	0.78	218	PG	Pg	00 18 33.5	-0.6
AGRB	Hanur-Agry	0.79	324	PG	Pg	00 18 33.8	-0.4
AGRB				SG	Sb	00 18 46.1	+0.1
AGRB	Hanur-Agry	0.79	324	ePg	Pg	00 18 33.7	-0.4
BASK	Baskale_VAN	0.95	160	iP	Pg	00 18 37.0	-0.3
BASK				iS	Sn	00 18 51.8	-1.0
BASK				IAML		00 18 56.0	
	comp=N,90nm,0.6s						
IGDI	IGDIR	1.00	22	iP	Pb	00 18 38.4	-0.3
IGDI				iS	Sb	00 18 51.8	-0.2
IGDI				IAML		00 18 57.0	
	comp=N,78nm,0.4s						
IGDI				IAML		00 18 57.0	
	comp=E,148nm,0.6s						
TASB	TASBURUN-IGDIR	1.15	25	PN	Pb	00 18 40.5	-0.6
EATA	Eleskirt	1.25	317	iP	Pn	00 18 42.4	-0.8
EATA				iS	Sb	00 18 59.3	-0.3
EATA				IAML		00 19 09.0	
	comp=N,61nm,0.5s						
BLIS	Bitlis-Merkez	1.27	246	iP	Pn	00 18 42.1	-1.3
BLIS				iS	Sb	00 18 56.7	-3.3
BLIS				IAML		00 19 05.0	
	comp=N,88nm,0.5s						
BLIS				IAML		00 19 05.0	
	comp=E,69nm,0.6s						
GURO	Guroymak-BITLI	1.28	253	PN	Pn	00 18 42.7	-0.8
YOVA	Hakkari_Yksek	1.46	158	iP	Pb	00 18 46.1	-0.5
YOVA				iS	Sg	00 19 09.8	+3.7
DIGO	Kars	1.48	353	iP	Pg	00 18 47.2	-0.2
DIGO				iS	Sg	00 19 09.6	+3.0
DIGO				IAML		00 19 19.0	
	comp=E,42nm,0.8s						
GNI	Garni	1.50	36	PN	Pb	00 18 46.5	-0.7
SRTM	Siirt_Merkez	1.62	235	iP	Pb	00 18 49.2	-0.1
SRTM				iS	Sb	00 19 09.6	-0.4
SRTM				IAML		00 19 15.0	
	comp=E,52nm,0.6s						
SRTM				IAML		00 19 19.0	
	comp=N,55nm,0.7s						
MUSM	Mu-Merkez	1.64	263	iP	Pn	00 18 48.4	0.0
MUSM				iS	Sn	00 19 08.5	-1.3
IMRD	Marand	1.66	97	ePn	Pn	00 18 48.7	0.0
IMRD				e		00 18 54.6	
VRTB	Varto-Mus	1.68	278	PN	Pb	00 18 49.8	-0.5
VRTB	Varto-Mus	1.68	278	iP	Pb	00 18 49.8	-0.5
VRTB				iS	Sg	00 19 14.3	+1.3
VRTB				IAML		00 19 22.0	
	comp=N,51nm,0.7s						
VRTB				IAML		00 19 33.0	
	comp=E,68nm,0.8s						
CUKT	Cukurca	1.69	180	PN	Pb	00 18 49.7	-0.9
CUKT	Cukurca	1.69	180	iP	Pb	00 18 50.3	-0.3
CUKT				iS	Sg	00 19 14.7	+1.2
CUKT				IAML		00 19 20.0	
	comp=N,85nm,1.0s						
CUKT				IAML		00 19 28.0	
	comp=E,72nm,0.7s						
SIRT	Sirnak	1.70	213	PN	Pb	00 18 50.2	-0.5
SIRN	Sırnak	1.72	213	iP	Pb	00 18 51.1	+0.1
SIRN				iS	Sg	00 19 16.2	+1.9
SIRN				IAML		00 19 24.0	
	comp=N,35nm,1.0s						
EAK	Akyaka	1.74	0	iP	Pg	00 18 53.3	+0.9
EAK				iS	Sg	00 19 19.8	+4.8
EAK				IAML		00 19 22.0	
	comp=E,49nm,1.2s						
SENK	Senkaya-Erzuru	1.88	330	PN	Pn	00 18 52.3	+0.6
KARO	Karliova-Bingo	2.01	281	PN	Pn	00 18 54.4	+0.9
ITBZ	Tabriz	2.12	109	ePn	Pb	00 18 56.0	-1.9
ITBZ				e		00 19 03.3	
BNGB	Bingl	2.27	272	PN	Pn	00 18 58.1	+1.1
YEDI	Yedisu-Bingol	2.42	283	PN	Pn	00 19 00.2	+1.1
IHRS	Heris	2.77	102	e		00 19 17.9	
IHRS				ePn	Pn	00 19 05.0	+1.0

IDC **06** *00:44:45.9±1.9, 12.71S×166.41E, h0km, mb3.8/10, mb1 4.0/10, mb1mx3.8/31, mbtmp3.8/10, MS3.2/2, Ms1 3.2/2, ms1mx2.7/26, Error ellipse: s-maj=67.0km s-min=24.6km az=130.0*
ISC 06 00:44:53.4±0.9, 12.38S±0.09×166.1E±0.2, h40km, n14, σ1.69/14, mb3.8/11, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.73	295	LR	LR	00 49 22.2	
	comp=Z,90nm,20.2s,baz=134,slow=39						
DZM	Mont Dzumac	9.64	178	Pn	Pn	00 47 08.2	-1.6
	0.3nm,0.3s,baz=342,slow=20,SNR=3.9						
DZM				Sn	Sn	00 49 00.4	+3.4
	0.3nm,0.3s,baz=139,slow=19,SNR=2.3						
STKA	Stephens Creek	29.75	225	P	P	00 50 55.4	-0.8
	0.5nm,0.3s,baz=65,slow=14,SNR=3.4						
WRA	Warramunga Arr	31.39	252	P	P	00 51 10.0	-0.9
	0.4nm,0.7s,baz=84,slow=9.3,SNR=3.0						
ASAR	Alice Springs	32.54	245	P	P	00 51 18.9	-2.1
	1.3nm,0.8s,baz=72,slow=9.8,SNR=10						
ASAR				LR	LR	01 03 31.0	
	comp=Z,90nm,18.7s,baz=111,slow=34						
KLR	Kul'dur	68.42	337	P	P	00 55 53.0	+1.9
	1.0nm,0.5s,baz=160,slow=9.4,SNR=4.7						
CMAR	Chiang Mai Arr	72.98	294	P	P	00 56 21.4	+1.9
	0.4nm,0.3s,baz=127,slow=5.7,SNR=3.4						
SONM	Songino Array	79.95	324	P	P	00 56 59.2	+0.7
	0.5nm,0.7s,baz=119,slow=5.9,SNR=4.0						
ILAR	Eielson Array	84.66	18	P	P	00 57 22.0	-0.5
	0.3nm,0.9s,baz=246,slow=6.8,SNR=4.4						
MKAR	Makanchi Array	94.74	317	P	P	00 58 11.1	+0.4
	0.2nm,0.5s,baz=86,slow=4.9,SNR=5.7						
ZALV	Zalesovo Beam	94.84	324	P	P	00 58 11.0	0.0
	0.6nm,0.6s,baz=64,slow=3.4,SNR=3.7						
YKA	Yellowknife Ar	95.99	27	P	P	00 58 14.5	-1.5
	0.1nm,0.5s,baz=259,slow=5.2,SNR=3.6						
KURBB	Kurchatov Arra	97.93	320	P	P	00 58 24.4	-0.7
	0.8nm,0.3s,baz=50,slow=5.0,SNR=4.5						
KEST	Kesra	148.69	322	PKPbc	PKPbc	01 04 37.4	+0.4
	3.3nm,0.6s,baz=12,slow=2.0,SNR=4.9						

SKHL **06** *00:54:42.1±0.8, 44.46N×150.21E, h35km±5km, mb4.1/2*
JMA **06** *00:54:44.2±0.5, 44.77N×149.94E, h30km, M3.8*
ISC 06 00:54:44.5±4.4, 44.4N±0.1×150.0E±0.2, h35km, n12, σ1.64/21, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.73	300	eP	Pn	00 55 11.0	-1.0
KUR				AMB	AMB	00 55 17.0	
	80nm,0.5s						
KUR				eS	Sn	00 55 32.1	-0.7
KUR				A	A	00 55 38.0	
	301nm,0.6s						
KUR				A	A	00 55 38.0	
	135nm,0.6s						
SHO	Shikotan	2.33	258	eP	Pn	00 55 20.0	-0.3
SHO				AMB	AMB	00 55 22.0	
	26nm,0.3s						
SHO				eS	Sn	00 55 49.0	+1.3
SHO				A	A	00 55 58.0	
	159nm,0.4s						
SHO				A	A	00 55 58.0	
	36nm,0.4s						
NEM2	Nemuro 2	3.24	253	P	Pn	00 55 33.2	+0.5
NEM2				eS	Sn	00 56 09.7	-0.3
NMR	Nemuro--Hokkai	3.25	253	eP	Pn	00 55 33.0	+0.2
NMR				eS	Sn	00 56 11.0	+0.8
GLVR	Golovnino	3.29	260	eP	Pn	00 55 34.0	+0.6
GLVR				eS	Sn	00 56 12.0	+0.8
JAK	Akkeshi	4.08	252	P	Pn	00 55 45.0	+0.7
JAK				eS	Sn	00 56 30.3	-0.6
JTKR	Abashiri--Toko	4.39	267	P	Pn	00 55 50.6	+2.0
JOB	Onbets	4.71	254	P	Pn	00 55 53.9	+1.0
JOB				eS	Sn	00 56 46.1	-0.2
JMP	Maruseppu	4.78	268	P	Pn	00 55 56.7	+2.7
JCH	Churui	5.14	252	P	Pn	00 56 00.4	+1.6
JCH				eS	Sn	00 56 56.8	-0.1
JKB	Kayabe	7.01	252	P	Pn	00 56 24.9	+0.3
JKB				eS	Sn	00 57 39.6	-3.4
JTM	Tenmabayashi	7.50	244	eS	Sn	00 57 51.1	-4.0

ISN **06** *01:24:55.3±0.4, 34.41N×45.51E, h7km±2km, ML2.5*
TEH **06** *01:24:56.5, 34.39N×45.58E, h8km, ML2.5*
ISC 06 01:24:57.4±1.0, 34.40N±0.04×45.56E±0.04, h18km, n11, σ0.90/16, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	Dehrash	0.75	66	ePg	Pb	01 25 11.6	-0.4
IDHR				eSg	Sg	01 25 23.0	+0.9
IDHR				e		01 25 25.3	
IGHG	Ghaleghazi	0.84	95	ePg	Pn	01 25 14.0	-0.6
IGHG				e		01 25 14.9	
IVIS	Veis	1.07	83	ePg	Pn	01 25 17.6	-0.1
IVIS				e		01 25 36.4	
ILIN	Lien	1.27	66	ePg	Pg	01 25 21.6	-0.4
ILIN				e		01 25 26.0	
IBDR	Badra	1.32	166	ePg	Pb	01 25 21.0	-0.7
IBDR				AML	AML	01 25 23.2	
	comp=Z,240nm,0.3s						
IBDR				eSg	Sg	01 25 40.0	-0.3
IKRK	Kirkuk	1.41	315	ePn	Pb	01 25 23.0	-0.3
IKRK				AML	AML	01 25 32.3	
	comp=Z,33nm,0.4s						
IKRK				eSn	Sg	01 25 43.0	-0.1
BHD	Baghdad	1.49	221	ePn	Pb	01 25 24.0	-0.6
BHD				eSn	Sg	01 25 45.0	-0.7
IKOM	Komasi	1.63	97	ePn	Pg	01 25 28.2	-0.7
IKOM				e		01 25 59.9	
IKFM	Kafar-mosalman	2.09	114	ePn	Pb	01 25 33.9	-1.0
IKFM				e		01 26 14.8	
IALM	Almabolaq	2.20	77	ePn	Pb	01 25 37.0	+0.1
IALM				e		01 25 40.7	
NSR	Nassriya	3.42	172	ePn	Pn	01 25 51.0	+1.2
NSR				eSn	Sn	01 26 32.0	+2.2

ZUR 06 01:27:39.7, 46.59N×8.43E, h3km±1km, MLh0.7/5, 1C-2D, Error ellipse: s-maj=3.1km s-min=0.7km az=31.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRIMS	Grimsel Gerste	0.07	261	⇓Pg	Pg	01 27 41.8	+0.4
GRIMS				⇓Pg	Pg	01 27 41.8	+0.4
	0.1nm,SNR=1.0						
GRIMS				Sg	Sg	01 27 42.8	+0.3
FUSIO	Fusio	0.21	130	Pg	Pg	01 27 44.6	+0.7
	0.1nm,SNR=0.9						
FUSIO				Sg	Sg	01 27 47.5	+0.9
NALPS	Val Nalps	0.22	89	Sg	Sg	01 27 47.8	+0.8
HASLI	Hasliberg/Brie	0.25	311	Sg	Sg	01 27 48.6	+0.6
FIESA	Fiescheralp	0.27	235	Pg	Pg	01 27 45.4	+0.4
FIESA				Pg	Pg	01 27 45.4	+0.4
	0.1nm,SNR=0.7						
FIESA				Sg	Sg	01 27 48.8	+0.4
BNALP	Bannalp	0.28	360	⇑Pg	Pg	01 27 45.8	+0.6
	0.2nm,SNR=1.4						
BNALP				Sg	Sg	01 27 49.6	+0.7
PANIX	Pigniu (Panix)	0.53	63	Sg	Sg	01 27 57.0	+0.3

ROM 06 01:28:45.9±0.3, 43.36N±0.02×12.53E±0.01, h11km±1km, ML1.1/2, 1C, Error ellipse: s-maj=1.7km s-min=1.0km az=345.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATVO	AVT- Monte Val	0.10	285	⇑P	Pg	01 28 49.1	+0.5
ATVO				S	Sg	01 28 50.4	-0.2
ATVO				AML	AML		
	comp=E,188μm,0.3s						
ATVO				AML	AML		
	comp=N,206μm,0.1s						
PIEI	Pieia	0.18	0	P	Pb	01 28 50.7	-0.6
PIEI				S	Sg	01 28 53.5	+0.9
PIEI				AML	AML		
	comp=N,67μm,0.3s						
PIEI				AML	AML		
	comp=E,78μm,0.2s						
NARO	Abbazia di Nar	0.26	8	P	Pb	01 28 52.0	-0.6
NARO				S	Sg	01 28 55.8	+1.1
BADI	Badiali	0.26	306	P	Pb	01 28 52.0	-0.7
BADI				S	Sg	01 28 55.9	+1.0
ARVD	Arcevia	0.33	65	P	Pb	01 28 53.0	+0.5
ARVD				S	Sg	01 28 57.4	+0.4

NEIC **06** *01:30:41.5±0.9, 19.2N±0.1×145.67E±0.08, h183km±10km, mb4.1/8, Error ellipse: s-maj=18.0km s-min=5.5km az=216.0*
IDC **06** *01:30:48.3±9.3, 19.15N×145.47E, h239km±91km, mb3.4/10, mb1 3.6/10, mb1mx3.3/46, mbtmp4.0/10, Error ellipse: s-maj=22.6km s-min=15.0km az=81.0*
ISC 06 01:30:44.8±0.7, 19.04N±0.09×145.6E±0.2, h214km, n25, σ1.51/26, mb3.8/15, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	Sarigan	2.33	176	Pn	Pn	01 31 23.4	-4.4
SARN				Sn	S	01 32 00.8	-0.4
ANA2	Anatahan	2.69	178	Pn	Pn	01 31 27.3	-4.4
ANA2				Sn	S	01 32 04.7	-3.4
KSAR	Wonju Array Be	24.00	323	P	P	01 35 38.5	-1.5
WB0	Warramunga Arr	40.10	197	P	P	01 38 00.2	+0.4
WR0	Warramunga Arr	40.25	196	P	P	01 38 02.1	+1.1
WR0				IAmb	IAmb	01 38 04.1	
	comp=Z,5.7nm,1.1s						
WB2	Warramunga Arr	40.28	196	P	P	01 38 02.3	+1.0
WB2				IAmb	IAmb	01 38 16.1	
	comp=Z,6.1nm,1.1s						
WRA	Warramunga Arr	40.29	197	P	P	01 38 02.6	+1.3
	comp=Z,1.7nm,0.7s,baz=17,slow=8.2,SNR=15						
WRA				PcP	PcP	01 40 01.4	+0.8
	comp=Z,0.5nm,0.3s,baz=15,slow=3.4,SNR=6.8						
WRA	Warramunga Arr	40.29	197	P	P	01 38 02.0	+0.7
FITZ	Fitzroy Crossi	41.80	209	P	P	01 38 14.9	+1.3
FITZ				IAmb	IAmb	01 38 28.3	
	comp=Z,5.0nm,1.0s						
SONM	Songino Array	42.82	321	P	P	01 38 22.0	+0.2
	comp=Z,0.2nm,0.4s,baz=112,slow=4.6,SNR=4.6						
SONM	Songino Array	42.82	321	P	P	01 38 20.9	-0.9
ASAR	Alice Springs	43.96	196	P	P	01 38 32.2	+1.3
	comp=Z,0.5nm,0.5s,baz=14,slow=7.4,SNR=6.0						
ASAR	Alice Springs	43.96	196	P	P	01 38 31.4	+0.5
CMAR	Chiang Mai Arr	44.09	277	P	P	01 38 33.8	+1.7
	comp=Z,1.2nm,0.4s,baz=78,slow=7.1,SNR=4.4						
MKAR	Makanchi Array	58.16	314	P	P	01 40 16.0	-0.3
	comp=Z,0.2nm,0.6s,baz=88,slow=9.2,SNR=3.3						
SKT	Skwentna	60.68	29	P	P	01 40 32.4	-0.9
SKT				IAmb	IAmb	01 40 35.2	
	comp=Z,3.2nm,1.0s						
KURBB	Kurchatov Arra	61.01	318	P	P	01 40 34.7	-0.8
	comp=Z,0.5nm,0.4s,baz=94,slow=7.4,SNR=13						
GHO	Glory Hole Cre	61.83	29	P	P	01 40 37.4	-3.6
ILAR	Eielson Array	63.38	26	P	P	01 40 51.2	+0.1
	comp=Z,0.8nm,0.5s,baz=258,slow=5.8,SNR=20						
ILAR	Eielson Array	63.38	26	P	P	01 40 50.0	-1.1
BCAR	Beaver Creek A	65.33	29	P	P	01 41 02.9	-0.9
BVAR	Borovoye Array	66.16	320	P	P	01 41 09.1	-0.1
	comp=Z,1.7nm,0.4s,baz=102,slow=6.5,SNR=19						
YKA	Yellowknife Ar	77.73	28	P	P	01 42 18.7	+1.0
	comp=Z,1.0nm,0.5s,baz=288,slow=5.6,SNR=24						
NVAR	Mina Array Bea	83.00	52	P	P	01 42 49.1	+2.5
	comp=Z,1.6nm,0.6s,baz=270,slow=5.5,SNR=15						
FINES	FINESS Array B	86.54	335	P	P	01 43 02.0	-1.4
	comp=Z,0.7nm,0.4s,baz=72,slow=4.5,SNR=5.5						

NEIC **06** *01:35:12.7±1.6, 29.13N±0.05×52.81E±0.07, h12km±4km, Error ellipse: s-maj=8.7km s-min=6.7km az=75.0*
TEH **06** *01:35:14.7, 29.25N×52.82E, h8km, ML4.1*
THR **06** *01:35:16.3±0.4, 29.29N×52.78E, h14km±5km, ML4.2*
OMAN **06** *01:35:17.7±0.1, 28.96N×52.62E, h33km±18km, ml4.0/7, Error ellipse: s-maj=4.6km s-min=2.7km az=244.0*
IDC **06** *01:35:18.6±2.3, 29.15N×52.81E, h46km±22km, mb3.9/29, mb1 3.9/34, mb1mx3.8/53, mbtmp4.1/34, ML3.5/5, MS3.3/7, Ms1 3.3/7, ms1mx3.0/34, Error ellipse: s-maj=15.2km s-min=11.1km az=3.0*
DSN **06** *01:35:21.0±1.8, 28.55N×52.68E, h10km, ML4.2/5, Error ellipse: s-maj=30.4km s-min=7.3km az=12.0*
ISC 06 01:35:14.3±1.0, 29.18N±0.03×52.79E±0.03, h16km±6km, n196, σ1.98/215, mb4.2/40, MS3.4/5, 9C-5D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHB	Gharebagh	0.30	311	ePg	Pg	01 35 20.2	-0.7
GHB				eSg	Sg	01 35 25.2	-0.1
GHB				e		01 35 29.6	
SHI	Shiraz	0.52	332	ePg	Pg	01 35 24.0	-0.7
SHI				eSg	Sg	01 35 31.4	-0.3
JHRM	Jahrom	0.96	134	Pg	Pn	01 35 33.6	+0.3
JHRM	Jahrom	0.96	134	ePg	Pn	01 35 34.5	+1.2
JHRM				e		01 35 56.4	
IKAZ	Kazeroun	1.02	306	Pg	Pb	01 35 33.7	-0.1
IKAZ	Kazeroun	1.02	306	ePg	Pb	01 35 34.1	-0.1
IKAZ				e		01 35 57.2	
AHBU	AHRAM	1.35	257	ePn	Pg	01 35 41.5	+1.2
LMD1	Lamerd	1.87	170		Pg	01 35 52.2	+2.0
LMD1	Lamerd	1.87	170	ePn	Pg	01 35 51.0	+0.8
LMD1				e		01 36 32.8	
LAR1	LAR	2.05	137	ePn	Pb	01 35 51.4	+0.1
KLNJ	Kolanjah	2.10	331	Pn	Pb	01 35 51.1	-1.1
KLNJ	Kolanjah	2.10	331	ePn	Pb	01 35 51.0	-1.1
IRAM	Ramesheh	2.64	352	Pn	Pn	01 35 58.8	+2.3
IRAM	Ramesheh	2.64	352	ePn	Pn	01 35 58.9	+2.4
IMEH	Mehriz	2.71	35	ePn	Pb	01 36 00.8	-1.7
ISAD	Sadrabad	2.83	16	ePn	Pn	01 36 02.0	+2.9
IBRJ	Brojen	3.02	334	ePn	Pn	01 36 04.4	+2.7
ICHK	Chekchek	3.35	24	ePn	Pn	01 36 09.2	+2.9

IBAF Bafgh 3.39 44 ePn Pn 01 36 09.2 +2.5
KHGB Koh Gabri 3.42 69 e Sg 01 37 16.1 +12
NGRK Negar Kerman 3.47 81 Pn Pn 01 36 10.4 +2.4
NGRK Negar Kerman 3.47 81 ePn Pn 01 36 10.7 +2.7
NGRK e 01 37 29.1
ROKH ROKH 3.50 335 ePn Pn 01 36 10.3 +2.1
KRBR Kerman 3.55 76 ePn Pn 01 36 13.0 +4.0
KRBR eSg Sg 01 37 06.3 -1.9
KRBR Kerman 3.55 76 ePn Pn 01 36 13.0 +4.0
JHBN Jahan bin 3.55 329 ePn Pn 01 36 10.5 +1.5
TVBK TV Kerman 3.55 76 ePn Pn 01 36 12.2 +3.2
TVBK e 01 36 26.5
YZKH Yazd 3.55 25 ePn Pn 01 36 12.1 +3.2
YZKH Yazd 3.55 25 ePn Pn 01 36 12.1 +3.2
IZEF Zefreh 3.72 354 ePn Pn 01 36 12.6 +1.2
ANAR Anarak 4.07 11 ePn Pn 01 36 17.9 +1.8
CHMN Cheshme madani 4.19 80 ePn Pn 01 36 20.6 +2.7
IKLH Kolahrood 4.25 346 ePn Pn 01 36 20.3 +1.6
SHME Shamm 4.31 136 P Pn 01 36 21.8 +2.5
SHME Shamm 4.31 136 ePn Pn 01 36 22.1 +2.8
BANOM Banah 4.50 135 i P Pn 01 36 23.8 +1.9
SNR=6.7
BANOM S Sn 01 37 13.5 -0.3
BANOM Banah 4.50 135 P Pn 01 36 24.9 +3.1
SNR=6.9
BANOM S Sn 01 37 15.3 +1.4
BANOM Banah 4.50 135 ePn Pn 01 36 24.1 +2.3
MSFE Esma-Masafi 4.85 141 i P Pn 01 36 28.7 +2.0
SNR=18
MSFE Esma-Masafi 4.85 141 ePn Pn 01 36 29.3 +2.7
NAZ Nazwa, Dubai 4.90 148 P Pn 01 36 29.5 +2.2
NAZ Nazwa, Dubai 4.90 148 P Pn 01 36 30.0 +2.7
MDH Madha 4.97 140 P Pn 01 36 30.4 +2.1
MDH Madha 4.97 140 P Pn 01 36 30.6 +2.3
MDH S Sn 01 37 25.1 -0.3
MDH Madha 4.97 140 ePn Pn 01 36 30.2 +1.9
ASUD Al Ashush, Dub 5.07 153 P Pn 01 36 34.1 +4.4
TPRV Parvadeh(Tabas 5.08 40 ePn Pn 01 36 32.6 +2.7
SLWR Sila 5.19 191 ePn Pn 01 36 33.3 +2.0
GHWR Ruwais 5.20 179 ePn Pn 01 36 34.5 +3.1
UOSS Minazif 5.20 143 i P Pn 01 36 33.5 +1.9
SNR=14
UOSS Minazif 5.20 143 Pn 01 36 31.0 -0.5
UOSS Sn Sn 01 37 29.2 -2.0
UOSS Minazif 5.20 143 P Pn 01 36 33.4 +1.9
UOSS S Sn 01 37 30.1 -1.1
UOSS Minazif 5.20 143 ePn Pn 01 36 33.8 +2.3
HATD Hatta, Dubai 5.26 145 ePn Pn 01 36 35.2 +2.8
ASHO Ashiyiah 5.35 146 P Pn 01 36 35.9 +2.4
ASHO S Sn 01 37 35.6 +0.8
ASHO Ashiyiah 5.35 146 ePn Pn 01 36 36.3 +2.8
GHVR GHOM 5.43 347 ePn Pn 01 36 37.6 +2.9
GHVR IAML 01 37 41.6
comp=N,86nm,0.6s
GHVR GHOM 5.43 347 ePn Pn 01 36 37.6 +2.9
IKMR Kamar-syah 5.74 320 ePn Pn 01 36 41.0 +2.2
ALNE Al Ain 5.75 152 i P Pn 01 36 41.2 +2.1
SNR=12
ALNE Al Ain 5.75 152 ePn Pn 01 36 41.2 +2.1
TKDS Koohdasht(Taba 5.76 39 ePn Pn 01 36 41.5 +2.2
TNSJ Nastanj 5.77 33 ePn Pn 01 36 41.7 +2.3
BDRS Dareh Seyedi 5.81 326 ePn Pn 01 36 41.6 +1.5
SOHO SOHO 6.04 145 ePn Pn 01 36 45.1 +2.1
IDOB Doab 6.05 321 ePn Pn 01 36 45.2 +1.9
IKOO Kooshah 6.24 57 ePn Pn 01 36 48.6 +2.6
ITEG Tejag 6.31 53 ePn Pn 01 36 48.5 +1.6
IANJ Anjilo 6.34 8 ePn Pn 01 36 49.8 +2.5
IDMV Damavand 6.41 354 ePn Pn 01 36 50.0 +1.7
HAGD Aghdareh 6.42 332 ePn Pn 01 36 50.7 +2.3
IRAZ Razeghan 6.66 339 ePn Pn 01 36 53.2 +1.5
IKOM Komasi 6.71 319 ePn Pn 01 36 52.5 +0.2
ARQ Araqi 6.72 149 P Pn 01 36 54.2 +1.8
SNR=22
UMZA Um Al Zommool 6.79 161 ePn Pn 01 36 55.0 +1.8
AFRZ Afriz 6.80 50 ePn Pn 01 36 55.3 +1.8
IALM Almabolaq 6.89 326 ePn Pn 01 36 55.9 +1.0
HOQ Hoqain 6.89 143 P Pn 01 36 56.7 +2.0
SNR=16
HOQ S Sn 01 38 10.9 -2.0
HSRG Sareghieh 7.15 329 ePn Pn 01 36 59.6 +1.1
IGHG Ghaleghazi 7.38 316 ePn Pn 01 37 03.6 +2.1
SMDO Samad 7.71 141 P Pn 01 37 06.9 +0.8
SNR=11
IDHR Dehrash 7.74 317 ePn Pn 01 37 08.1 +1.6
WSAR Wadi Sarin 7.91 137 P Pn 01 37 10.1 +1.5
comp=N,1.2nm,0.3s,baz=340,slow=6.9,SNR=14
WSAR S Sn 01 38 33.0 -4.8
comp=N,1.7nm,0.3s,baz=142,slow=19,SNR=5.8
WSAR Wadi Sarin 7.91 137 P Pn 01 37 10.1 +1.5
SNR=14
WBK Wadi Bani Khal 8.59 138 P Pn 01 37 18.5 +0.5
SNR=9.8
WBK S Sn 01 38 50.8 -3.8
RAYN Ar Rayn 8.63 231 i P Pn 01 37 18.8 +0.1
SNR=133
RAYN Ar Rayn 8.63 231 Pn 01 37 18.4 -0.3
MHTO MHTO 9.41 149 P Pn 01 37 30.1 +0.8
SNR=14
MHTO S Sn 01 39 09.7 -5.1
SNR=5.3
HRA Herat 9.57 55 Pn 01 37 30.3 -1.3
GEYT Alibeck 9.79 26 P Pn 01 37 37.3 +2.9
comp=N,0.7nm,0.3s,baz=211,slow=10,SNR=9.8
GEYT Alibeck 9.79 26 Pn 01 37 32.5 -2.0
GYA0B ALIBECK ARRAY 9.79 26 Pn 01 37 32.2 -2.2
WHFO Wadi Hawf 11.25 175 P Pn 01 37 53.6 -0.9
SNR=35
WHFO S Sn 01 39 53.0 -7.0
DMTO DMTO 11.58 170 P Pn 01 37 58.5 -0.6
SNR=7.5
ABTO Aybut 11.78 178 P Pn 01 38 01.0 -0.9
SNR=83
ASF Jabal al Asfar 14.00 286 P Pn 01 38 31.8 -0.3
comp=N,0.4nm,0.3s,baz=96,slow=10,SNR=5.1
ASF S Sn 01 40 55.7 -12
comp=N,0.2nm,0.3s,baz=75,slow=19,SNR=3.5
KBL Kabul 14.80 65 Pn 01 38 41.9 -1.3
KBL Kabul 14.80 65 P P 01 38 47.6 -1.4
SNR=5.6
MMAI Mount Meron Ar 15.38 289 P Pn 01 38 50.4 -0.3
comp=N,0.3nm,0.3s,baz=100,slow=16,SNR=3.4
MMAI LR LR 01 46 13.5
comp=N,63nm,19.9s,baz=135,slow=42
EIL Elat 15.56 276 P Pn 01 38 53.4 +0.4
comp=N,0.3nm,0.3s,baz=45,slow=4.3,SNR=1.9
EIL LR LR 01 46 05.2
comp=N,99nm,19.6s,baz=100,slow=42
DAMY Dhamar 16.49 210 Pn 01 39 04.5 -0.8
DAMY IAmb IAmb 01 39 08.3
comp=Z,18nm,0.7s
KBZ Khabaz 16.54 334 P P 01 39 07.0 -0.9
comp=Z,0.1nm,0.3s,baz=153,slow=9.0,SNR=2.5
SOCY Socotra 16.95 176 P Pn 01 39 06.5 -4.5
SOCY IAmb IAmb 01 39 15.4
comp=Z,13nm,1.0s
NIL Nilore 18.02 71 P Pn 01 39 21.9 -2.2
NIL IAmb IAmb 01 39 30.1
comp=Z,7.5nm,0.7s
BR131 Keskin Array S 18.94 309 P P 01 39 32.8 -1.9
BRTR Keskin Array B 18.94 309 P Pn 01 39 37.4 +2.0
comp=Z,0.1nm,0.3s,baz=129,slow=11,SNR=9.2
BRTR Keskin Array B 18.94 309 P P 01 39 33.6 -1.1
KK31 Karatay Array 19.89 41 P P 01 39 44.3 -0.7
KKAR Karatay Array 19.89 41 P P 01 39 44.1 -0.8
KKAR Karatay Array 19.89 41 P P 01 39 44.1 -0.8
KKAR IAmb IAmb 01 39 56.3
comp=Z,3.8nm,0.7s
ABKAR Akbulak array 20.78 13 P P 01 39 53.5 -1.1
AKTO Aktyubinsk 21.59 9 P P 01 40 04.4 +1.2
comp=Z,4.6nm,0.7s,baz=211,slow=12,SNR=18
AKTO LR LR 01 49 58.4
comp=Z,43nm,18.9s,baz=173,slow=41
KSH Kashi 21.68 56 P P 01 40 02.1 -2.4
KSH PP PnPn 01 40 32.8 +7.4
KSH S S 01 43 31.4 -33
KSH SS Sn 01 44 10.0 -3.2
KSH PcS PcS 01 47 41.8 -2.0
NRN Naryn 22.46 51 P P 01 40 08.8 -4.3
NRN IAmb IAmb 01 40 19.6
comp=Z,5.3nm,0.9s
IDI Anoyia 24.33 292 P P 01 40 32.7 +1.3
comp=Z,8.2nm,0.7s,baz=18,slow=6.4,SNR=4.5
JURR Jurilovca 24.51 316 ⇑P P 01 40 34.3 +1.4
HARR Harsova 25.05 315 ⇑P P 01 40 40.2 +2.5
ELND Elena 25.59 310 ⇑P P 01 40 47.2 +4.5
MILM Milestii Mici 25.73 320 ⇑P P 01 40 44.1 +0.3
GHRR 26.07 317 ⇓P P 01 40 48.8 +1.9
VRI Vrincioaia 26.38 316 ⇑P P 01 40 52.2 +2.4
PLOR Plostina 26.41 316 ⇓P P 01 40 52.6 +2.5
MLR Muntele Rosu 26.67 315 P P 01 40 55.1 +2.5
comp=Z,2.5nm,0.9s,baz=150,slow=14,SNR=5.1
MLR Muntele Rosu 26.67 315 ⇑P P 01 40 52.2 -0.4
MLR Muntele Rosu 26.67 315 P P 01 40 51.9 -0.7
MLR IAmb IAmb 01 41 01.8
comp=Z,3.5nm,0.9s
SORM Soroca 26.69 322 ⇓P P 01 40 52.2 -0.3
TESR Tescani 26.75 317 ⇓P P 01 40 55.0 +1.8
KOLN Koldanda 27.08 85 eP P 01 40 57.5 +0.9
BRVK Borovoye 27.10 23 P P 01 40 55.1 -1.1
BRVK IAmb IAmb 01 40 58.1
comp=Z,3.2nm,0.6s
BVAR Borovoye Array 27.11 24 P P 01 40 57.8 +1.5
comp=Z,2.8nm,0.4s,baz=218,slow=7.7,SNR=35
BVAR PcP PcP 01 44 17.3 +0.5
comp=Z,0.5nm,0.5s,baz=189,slow=2.8,SNR=4.3
DANN Dangsing 27.12 84 eP P 01 40 58.4 +1.4
comp=Z,76nm,0.8s
VOIR 27.20 314 ⇑P P 01 40 59.2 +1.9
ARR Arges 27.43 314 ⇓P P 01 41 02.4 +3.0
AKASG Malin Array Be 27.86 327 P P 01 41 02.7 -0.4
comp=Z,0.3nm,0.4s,baz=137,slow=8.0,SNR=2.7
GKN Gorkha 27.94 85 eP P 01 41 04.9 +0.7
comp=Z,15nm,0.5s
BURAR Bucovina Array 28.16 318 ⇑P P 01 41 07.4 +1.5
DMN Daman 28.42 85 eP P 01 41 09.5 +0.9
comp=Z,23nm,0.7s
KKN Kakani 28.54 85 eP P 01 41 10.3 +0.7
comp=Z,22nm,0.4s
PKIN Phulchoki 28.68 85 eP P 01 41 11.6 +0.6
comp=Z,15nm,0.6s
PKI Pulchoki 28.70 85 eP P 01 41 11.6 +0.5
MAKZ Makanchi 28.72 44 P P 01 41 09.7 -1.1
MAKZ IAmb IAmb 01 41 13.2
comp=Z,5.5nm,0.7s
KURBB Kurchatov Arra 28.87 35 P P 01 41 13.6 +1.5
comp=Z,3.3nm,0.8s,baz=234,slow=9.2,SNR=36
KURBB PcP PcP 01 44 21.3 +0.2
comp=Z,0.1nm,0.3s,baz=238,slow=3.2,SNR=4.6
MK31 Makanchi Array 28.91 44 P P 01 41 12.1 -0.4
MK31 IAmb IAmb 01 41 14.7
comp=Z,4.2nm,0.7s
MKAR Makanchi Array 28.91 44 P P 01 41 13.9 +1.5
comp=Z,3.6nm,0.7s,baz=232,slow=8.1,SNR=46
MKAR PcP PcP 01 44 21.5 +0.1
comp=Z,0.4nm,0.6s,baz=254,slow=3.2,SNR=4.2
MKAR Makanchi Array 28.91 44 P P 01 41 11.5 -1.0
KURK Kurchatov 28.97 35 P P 01 41 12.6 -0.4
KURK IAmb IAmb 01 41 15.9
comp=Z,4.6nm,0.9s
KURK Kurchatov 28.97 35 PcP 01 44 21.3 -0.1
GUN Gumba 29.04 84 eP P 01 41 15.1 +0.9
comp=Z,27nm,0.6s
JIRN Jiri 29.36 85 eP P 01 41 17.8 +0.7
comp=Z,27nm,0.6s
KIRV Kirov 29.49 356 P P 01 41 18.3 +0.9
comp=Z,5.5nm,0.6s,baz=237,slow=2.9,SNR=4.1
RAMN Ramite 29.86 86 eP P 01 41 21.4 0.0
comp=Z,15nm,0.6s
KOLS Kolonicke sedl 30.52 319 eP P 01 41 28.7 +2.0
TAPN Taplejung 30.74 85 eP P 01 41 29.4 +0.2
comp=Z,4.3nm,0.4s
KMBO Kilima Mbogo 33.61 209 LR LR 01 56 50.1
comp=Z,88nm,18.2s,baz=58,slow=38
ZAA0 Zalesovo Array 33.95 34 P P 01 41 56.1 -0.6
ZALV Zalesovo Beam 33.95 34 P P 01 41 57.2 +0.6
comp=Z,6.5nm,0.6s,baz=243,slow=9.4,SNR=27
ZALV Zalesovo Beam 33.95 34 P P 01 41 56.0 -0.7
GERES GERESS Array B 35.66 314 P P 01 42 11.9 +0.3
comp=Z,0.4nm,0.6s,baz=90,slow=6.0,SNR=4.5
GERES GERESS Array B 35.66 314 P P 01 42 10.8 -0.8
KHC Kasperske Hory 35.83 315 eP P 01 42 12.5 -0.5
WATA Walderalm 36.58 311 epP P 01 42 20.2 +0.6
comp=Z,1.3nm,0.4s
SQTA Sankt Quirin 36.79 311 epP P 01 42 21.7 +0.3
comp=Z,5.9nm,0.6s
FINES FINESS Array B 36.80 339 P P 01 42 21.5 +0.4
comp=Z,2.5nm,0.5s,baz=140,slow=12,SNR=19
FINES FINESS Array B 36.80 339 P P 01 42 20.4 -0.7
KEST Kesra 37.01 292 P P 01 42 24.9 +1.6
comp=Z,6.9nm,1.1s,baz=45,slow=4.3,SNR=3.5
KEST Kesra 37.01 292 P P 01 42 22.1 -1.2
FETA Feichten 37.06 310 epP P 01 42 24.8 +1.0
comp=Z,1.8nm,0.5s
RETA Reutte 37.15 311 eP P 01 42 24.5 +0.1
comp=Z,0.7nm,0.3s
DAVOX Davos/Dischmat 37.58 310 P P 01 42 29.0 +0.8
comp=Z,1.2nm,0.5s,baz=112,slow=16,SNR=3.3
DAVA Damuels 37.69 311 eP P 01 42 29.0 0.0
comp=Z,2.6nm,0.5s
GTA Gaotai 39.77 62 ⇑P P 01 42 48.4 +1.8
GTA pP sP 01 42 54.2 -0.2
GTA sP pP 01 42 56.5 +4.3
HFS Hagfors 40.57 331 P P 01 42 52.9 +0.1
comp=Z,4.2nm,0.4s,baz=116,slow=9.8,SNR=8.1
NB2 NORSAR Subarra 42.09 331 P P 01 43 04.7 -0.5
comp=Z,1.1nm,0.5s,baz=120,slow=8.6
NOA NORSAR Array B 42.09 331 P P 01 43 05.0 -0.3
comp=Z,1.1nm,0.5s,baz=122,slow=8.3,SNR=8.8
NOA LR LR 02 03 59.5
comp=Z,18nm,18.5s,baz=225,slow=41
CHTO Chiang Mai 43.17 93 P P 01 43 13.7 -0.9
CHTO IAmb IAmb 01 43 18.0
comp=Z,4.6nm,0.8s
CMAR Chiang Mai Arr 43.31 94 P P 01 43 16.3 +0.7
comp=Z,0.9nm,0.4s,baz=285,slow=8.8,SNR=7.5
ARCES ARCESS Array B 43.33 346 P P 01 43 15.7 +0.5
comp=Z,0.8nm,0.6s,baz=146,slow=7.2,SNR=12
ARCES ARCESS Array B 43.33 346 P P 01 43 13.8 -1.3
SONM Songino Array 44.92 50 P P 01 43 29.7 +1.2
comp=Z,1.1nm,0.9s,baz=267,slow=7.7,SNR=9.2
SONM PcP PcP 01 45 10.2 +0.5
comp=Z,0.3nm,0.8s,baz=267,slow=2.9,SNR=2.4
SONM Songino Array 44.92 50 P P 01 43 27.8 -0.6
SONM PcP 01 45 08.5 -1.2
ESDC Sonseca Array 47.28 299 P P 01 43 48.6 +1.6
comp=Z,0.4nm,0.6s,baz=80,slow=6.0,SNR=3.3
ESDC Sonseca Array 47.28 299 P P 01 43 46.2 -0.8
EKA Eskdalemuir Ar 47.32 320 P P 01 43 46.5 -0.6
comp=Z,2.2nm,0.8s,baz=97,slow=7.9,SNR=3.7
XAN Xi'an 47.55 69 P P 01 43 53.8 +4.6
TOA0 Torodi Ar. Sit 49.87 263 P P 01 44 06.2 -0.9
TORD Torodi Ar. Bea 49.87 263 P P 01 44 07.2 +0.1
comp=Z,2.2nm,0.7s,baz=61,slow=8.6,SNR=22
TORD LR LR 02 08 12.2
comp=Z,54nm,18.8s,baz=355,slow=40
DBIC Dimbokro 58.62 259 P P 01 45 11.2 +0.3
comp=Z,1.0nm,0.6s,baz=43,slow=7.0,SNR=3.0
KSRS Korea Array 61.81 61 P P 01 45 31.5 -1.0
comp=Z,1.4nm,0.6s,baz=281,slow=6.8,SNR=5.5
KSRS LR LR 02 16 42.6
comp=Z,24nm,18.8s,baz=310,slow=40
USRK Ussuriysk Ar. 62.94 52 P P 01 45 38.6 -1.3
comp=Z,4.2nm,1.3s,baz=292,slow=7.6,SNR=2.5
BOSA Boshof 63.22 207 P P 01 45 42.7 +0.7
comp=Z,1.7nm,0.8s,baz=9.5,slow=6.1,SNR=3.0
BOSA Boshof 63.22 207 P P 01 45 41.7 -0.3
BOSA IAmb IAmb 01 45 44.3
comp=Z,0.8nm,0.6s
ILAR Eielson Array 85.10 8 P P 01 47 49.1 0.0
comp=Z,0.6nm,0.7s,baz=327,slow=4.3,SNR=8.5
ILAR Eielson Array 85.10 8 P P 01 47 48.5 -0.7
YKA Yellowknife Ar 88.08 354 P P 01 48 04.2 +0.5
comp=Z,0.4nm,0.7s,baz=5.1,slow=4.9,SNR=8.2
WRA Warramunga Arr 92.50 111 P P 01 48 23.5 -1.6
comp=Z,0.5nm,0.8s,baz=308,slow=3.9,SNR=2.7
ASAR Alice Springs 94.00 115 P P 01 48 31.0 -0.9
comp=Z,0.3nm,0.3s,baz=316,slow=5.2,SNR=3.7

KRNET 06 01:38:53.3±0.1, 40.65N×73.07E, h15km, mb2.1, 20C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.68	354	⇓i P	Pg	01 39 06.4	-0.2
	baz=54						
ARSB				⇓i S	Sb	01 39 16.2	0.0
	baz=54						
ARK	Arkit	1.42	324	⇑i P	Pb	01 39 19.8	+0.2
	baz=24						
ARK				⇑i S	Sg	01 39 39.4	+0.3
	baz=24						
ARLS	Aral	1.53	37	⇓i P	Pg	01 39 22.3	-0.5
	baz=37						
ARLS				⇓i S	Sg	01 39 43.3	+0.5
	baz=37						
AML	Almayashu	1.55	17	⇓i P	Pg	01 39 22.7	-0.5
	baz=17						
AML				⇓i S	Sg	01 39 44.0	+0.6
	baz=17						
BTK	Batken	1.82	252	⇑eP	Pg	01 39 27.4	-0.9
	baz=52						
BTK				⇑eS	Sg	01 39 51.8	-0.2
	baz=52						
BTK	Batken	1.82	252	P	Pb	01 39 26.9	+0.5
UCH	Uchtor	1.91	34	⇑i P	Pb	01 39 28.9	+0.8
	baz=34						
UCH				⇑i S	Sg	01 39 54.3	-0.6
	baz=34						
EKS2	Erkin-Say	2.08	14	⇑i P	Pb	01 39 31.4	+0.6
	baz=14						
EKS2				⇑i S	Sg	01 39 59.5	-0.6
	baz=14						
KZA	Kyzart	2.17	48	⇑i P	Pb	01 39 33.1	+0.6
	baz=48						
KZA				⇑i S	Sg	01 40 01.9	-1.3
	baz=48						
AAK	Ala-Archa	2.25	28	⇑i P	Pb	01 39 34.1	+0.3
	baz=28						
AAK				⇑i S	Sg	01 40 03.7	-2.1
	baz=28						
AAK	Ala-Archa	2.25	28	⇑Pg	Pb	01 39 34.4	+0.7
	1.7nm,0.6s						
AAK				⇑Lg	Lg	01 40 02.5	
	2.3nm,0.3s						
NRN	Naryn	2.35	70	⇑eP	Pb	01 39 35.3	-0.2
	baz=70						
NRN				⇑i S	Sb	01 40 05.5	+1.1
	baz=70						
BOOM	Boomskoye usch	2.83	49	⇑i P	Pb	01 39 41.9	-1.7
	baz=49						
BOOM				⇑i S	Sb	01 40 17.3	-0.8
	baz=49						
KK31	Karatay Array	3.11	323	⇑Pg	Pn	01 39 44.8	+3.0
	1.3nm,0.5s,baz=230,slow=13,SNR=31						
KK31				⇑Lg	Lg	01 40 20.7	
	1.0nm,0.5s,baz=132,slow=30,SNR=4.2						

MOS 06 01:42:55.6±1.4, 38.23N×20.20E, h9km, mb4.3/11, Error ellipse: s-maj=7.5km s-min=4.5km az=68.1
IDC 06 01:42:56.6±0.8, 38.39N×20.38E, h0km, mb4.1/15, mb1 4.0/26, mb1mx4.0/42, mbtmp3.9/26, ML3.5/10, MS3.3/1, Ms1 3.3/1, ms1mx2.6/37, Error ellipse: s-maj=14.8km s-min=12.5km az=6.0
ATH 06 01:42:58.7, 38.29N×20.39E, h15km±1km, ML3.8/16, Error ellipse: s-maj=1.7km s-min=0.8km az=249.0
THE 06 01:42:58.8, 38.31N×20.35E, h11km±1km, ML3.9/13, Error ellipse: s-maj=1.3km s-min=0.5km az=263.0
PDG 06 01:42:58.2±0.7, 38.32N×20.33E, h12km±1km, ML4.3/13, Error ellipse: s-maj=1.2km s-min=1.3km az=0.0
NEIC 06 01:42:58.3±1.7, 38.30N±0.03×20.35E±0.03, h14km±4km, Error ellipse: s-maj=4.3km s-min=3.6km az=163.0
SKO 06 01:42:59.2, 38.22N×20.36E, h14km
BEO 06 01:43:00.0±0.7, 38.21N×20.20E, h34km±4km, ML4.2/8
ISC 06 01:42:58.4±0.6, 38.32N±0.02×20.37E±0.02, h13km±4km, n303, σ1.70/413, mb4.0/25, 16C-19D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.08	146	P	Pg	01 43 01.4	+0.4
KEF4				S	Sg	01 43 03.2	+0.2
KEF1	Kardakata, Kep	0.09	119	P	Pg	01 43 01.4	+0.2
KEF3	Kipouria, Keph	0.12	188	P	Pg	01 43 02.0	+0.4
KEF3				S	Sg	01 43 04.3	+0.4
LXR1	Lixouri, Cepha	0.13	156	P	Pg	01 43 02.1	+0.3
LXR1				S	Sg	01 43 04.6	+0.4
CHV1	Chavriata, Kef	0.14	176	P	Pg	01 43 02.2	+0.3
CHV1				S	Sg	01 43 04.6	+0.3
ARGA	Argostoli. Kep	0.17	149	P	Pg	01 43 02.5	+0.1
ARGA				S	Sg	01 43 04.9	-0.1
ARG2	Argostoli	0.17	147	P	Pg	01 43 02.5	+0.1
ARG2				S	Sg	01 43 05.1	0.0
ARG2	Argostoli	0.17	147		Pg	01 43 02.5	+0.1
ARG2					Sg	01 43 05.1	0.0
VSK1	VASILIKIADES	0.18	61	P	Pg	01 43 03.0	+0.5
VSK1				S	Sb	01 43 06.5	-0.6
	108μm,0.4s						
KEF2	Argostoli. Kep	0.18	149	P	Pg	01 43 02.7	+0.1
KEF2				S	Sg	01 43 05.1	-0.3
FSK	Fiskardo	0.20	48	P	Pb	01 43 03.7	-0.4
FSK				S	Sb	01 43 07.2	-0.7
	91μm,0.4s						
FSK	Fiskardo	0.20	48	P	Pb	01 43 03.7	-0.4
FSK				S	Sb	01 43 07.0	-0.8
FSK				AML	AML	01 43 07.6	
FSK				AML	AML	01 43 07.7	
FSK	Fiskardo	0.20	48		Pb	01 43 03.7	-0.4
FSK					Sb	01 43 07.2	-0.7
VLS	Valsamata	0.23	130	P	Pg	01 43 03.2	-0.1
VLS				S	Sg	01 43 06.5	-0.1
	51μm,0.2s						
VLS	Valsamata	0.23	130	P	Pg	01 43 03.2	-0.1
VLS				S	Sg	01 43 06.4	-0.2
VLS	Valsamata	0.23	130		Pg	01 43 03.2	-0.1
VLS					Sg	01 43 06.5	-0.1
VLS	Valsamata	0.23	130	P	Pg	01 43 03.2	-0.1
EVGI	Lefkada island	0.37	37	P	Pb	01 43 06.6	-0.4
EVGI				S	Sb	01 43 12.9	+0.1
EVGI	Lefkada island	0.37	37	P	Pb	01 43 06.6	-0.4
EVGI	Lefkada island	0.37	37		Pb	01 43 06.6	-0.4
EVGI					Sb	01 43 12.9	+0.1
MGNA	Meganis	0.47	45	P	Pg	01 43 08.0	+0.3
MGNA				S	Sb	01 43 14.9	-0.6
MGNA				AML	AML	01 43 19.0	
	comp=N,21502μm,0.2s						
MGNA				AML	AML	01 43 20.4	
	comp=E,21173μm,0.5s						
MGNA	Meganis	0.47	45		Pg	01 43 07.8	+0.1
VLMS	Volimes, Zakyn	0.50	152	P	Pg	01 43 07.9	-0.4
VLMS				S	Sg	01 43 15.2	+0.2
VLMS				AML	AML	01 43 23.4	
	comp=E,23594μm,0.6s						
VLMS				AML	AML	01 43 24.5	
	comp=N,32164μm,0.5s						
LKD2	Lefkada island	0.52	26	P	Pg	01 43 09.0	+0.3
LKD2				S	Sb	01 43 17.7	+0.8
	comp=N,8μm,0.5s						
LKD2	Lefkada island	0.52	26	P	Pg	01 43 08.9	+0.3
LKD2				S	Sb	01 43 17.2	+0.3
LKD2				AML	AML	01 43 19.8	
	comp=E,14055μm,0.2s						
LKD2				AML	AML	01 43 23.5	
	comp=N,15084μm,0.4s						
LKD2	Lefkada island	0.52	26		Pg	01 43 09.0	+0.3
LKD2					Sb	01 43 17.7	+0.8
AST1	Astakos	0.61	69	P	Pg	01 43 10.3	0.0
AST1				S	Sb	01 43 20.4	+1.0
	comp=N,17μm,0.7s						
AST1	Astakos	0.61	69		Pg	01 43 10.3	0.0
AST1					Sb	01 43 20.4	+1.0
ZAK2	Zakynthos	0.68	142	P	Pg	01 43 11.6	0.0
ZAK2				S	Sb	01 43 22.6	+1.1
	comp=N,26μm,0.8s						
ZAK2	Zakynthos	0.68	142		Pg	01 43 11.6	0.0
ZAK2					Sb	01 43 22.6	+1.1
PDO	Prodromos	0.70	66	P	Pg	01 43 11.8	-0.2
PDO				S	Sb	01 43 22.6	+0.6
	comp=N,16μm,0.8s						
PDO	Prodromos	0.70	66	P	Pg	01 43 11.8	-0.2
PDO				S	Sb	01 43 22.4	+0.3
PDO				AML	AML	01 43 27.1	
	comp=E,22698μm,0.9s						
PDO				AML	AML	01 43 31.2	
	comp=N,21588μm,0.8s						
PDO	Prodromos	0.70	66		Pg	01 43 11.8	-0.2
PDO					Sb	01 43 22.6	+0.6
KRI1	kERI	0.75	152	P	Pg	01 43 12.3	-0.7
KRI1				S	Sb	01 43 24.4	+0.9
	comp=N,8μm,0.6s						
KRI1	kERI	0.75	152		Pg	01 43 12.3	-0.7

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KRI1                                    Sb    01 43 24.4 +0.9
RLS  Riolos of Patr    0.91 107  P      Pb    01 43 14.9 -1.1
RLS                              S      Sn    01 43 29.4 -0.5
     comp=N,3µm,0.8s
RLS  Riolos of Patr    0.91 107  P      Pb    01 43 15.0 -1.0
RLS                              S      Sb    01 43 28.3 +0.3
RLS                              AML    AML   01 43 35.1
     comp=N,4859µm,0.7s
RLS                              AML    AML   01 43 37.6
     comp=E,5636µm,0.8s
RLS  Riolos of Patr    0.91 107         Pb    01 43 14.9 -1.1
RLS                                     Sn    01 43 29.4 -0.5
PVO  Paravola          0.95  72  P      Pb    01 43 16.7 -0.2
PVO                              S      Sn    01 43 33.0 +1.9
     comp=E,6µm,0.6s
PVO  Paravola          0.95  72  P      Pb    01 43 16.8 -0.2
PVO                              S      Sg    01 43 29.7 +0.4
PVO                              AML    AML   01 43 36.8
     comp=E,14811µm,0.4s
PVO                              AML    AML   01 43 37.0
     comp=N,8459µm,0.7s
PVO  Paravola          0.95  72         Pb    01 43 16.7 -0.2
PVO                                     Sn    01 43 33.0 +1.9
UPR  University Cam    1.12  92  P      Pg    01 43 20.1 +0.2
UPR                              S      Sn    01 43 36.3 +1.2
UPR  University Cam    1.12  92         Pg    01 43 20.1 +0.2
UPR                                     Sn    01 43 36.3 +1.2
DRO  Drossia           1.12 109  P      Pb    01 43 18.6 -1.1
DRO  Drossia           1.12 109  P      Pb    01 43 19.0 -0.7
DRO                              AML    AML   01 43 42.8
     comp=E,12238µm,0.7s
DRO                              AML    AML   01 43 45.5
     comp=N,7452µm,1.0s
DRO  Drossia           1.12 109         Pb    01 43 18.6 -1.1
IGT  Igoumenitsa       1.21 359  P      Pg    01 43 21.7  0.0
IGT                              S      Sg    01 43 38.6 +1.1
     comp=N,3µm,0.5s
IGT  Igoumenitsa       1.21 359 ePg     Pg    01 43 24.5 +2.8
IGT                             eSg     Sg    01 43 42.1 +4.6
IGT  Igoumenitsa       1.21 359  P      Pg    01 43 22.2 +0.5
IGT                              S      Sg    01 43 39.8 +2.4
IGT                              AML    AML   01 43 42.7
     comp=E,6305µm,0.5s
IGT                              AML    AML   01 43 50.8
     comp=N,5576µm,0.5s
IGT  Igoumenitsa       1.21 359         Pg    01 43 21.7  0.0
IGT                                     Sg    01 43 38.6 +1.1
IGT  Igoumenitsa       1.21 359  P      Pg    01 43 21.7  0.0
IGT                                           01 43 38.6
EFP  Efpalio           1.21  85  P      Pn    01 43 20.3 -0.9
EFP                              S      Sg    01 43 38.5 +0.9
     comp=N,4µm,0.7s
EFP  Efpalio           1.21  85  P      Pn    01 43 20.5 -0.6
EFP                              AML    AML   01 43 45.0
     comp=E,8350µm,0.7s
EFP                              AML    AML   01 43 50.3
     comp=N,7510µm,0.9s
EFP  Efpalio           1.21  85         Pn    01 43 20.3 -0.9
EFP                                     Sg    01 43 38.5 +0.9
ANX  Ano Chora         1.25  77  P      Pn    01 43 21.5 -0.2
ANX                              S      Sg    01 43 39.1 +0.4
ANX                              AML    AML   01 43 45.3
     comp=E,10929µm,0.7s
ANX                              AML    AML   01 43 50.0
     comp=N,15126µm,0.6s
ANX  Ano Chora         1.25  77         Pn    01 43 21.5 -0.2
LAKA Lakka             1.27  93         Pn    01 43 21.4 -0.6
EVR  Evrytania         1.27  62  P      Pn    01 43 22.5 +0.1
EVR                              S      Sg    01 43 41.4 +1.9
EVR                              AML    AML   01 43 48.8
     comp=E,4595µm,0.7s
EVR                              AML    AML   01 43 49.8
     comp=N,6224µm,1.0s
EVR  Evrytania         1.27  62         Pn    01 43 21.9 -0.2
AMT  Artemida-Makis    1.32 126  P      Pb    01 43 23.5 +0.4
AMT                              AML    AML   01 43 55.3
     comp=E,6639µm,1.1s
AMT                              AML    AML   01 43 56.6
     comp=N,7690µm,0.8s
AMT  Artemida-Makis    1.32 126         Pg    01 43 24.6 +0.8
SERG Sergoula          1.33  86  P      Pn    01 43 22.7 -0.1
SERG                             AML    AML   01 43 48.0
     comp=E,6030µm,0.8s
SERG                             AML    AML   01 43 50.1
     comp=N,4082µm,0.7s
SERG Sergoula          1.33  86         Pn    01 43 22.1 -0.7
JAN  Janina            1.38  16  P      Pg    01 43 25.3 +0.2
JAN                              S      Sb    01 43 42.0 +0.1
     comp=N,3µm,0.4s
JAN  Janina            1.38  16  P      Pg    01 43 25.5 +0.4
JAN                              AML    AML   01 43 51.8
     comp=N,6366µm,0.5s
JAN                              AML    AML   01 43 51.8
     comp=E,7415µm,0.5s
JAN  Janina            1.38  16         Pg    01 43 25.3 +0.2
JAN                                     Sb    01 43 42.0 +0.1
JAN  Janina            1.38  16  P      Pg    01 43 25.3 +0.2
JAN                                           01 43 42.0
KALE Kalithea          1.39  87         Pn    01 43 23.2 -0.5
KLV  Kalavryta, Ach    1.43 101         Pn    01 43 23.9 -0.3
KASA Kassiopi          1.46 347         Pg    01 43 28.3 +1.8
MAKR Makrakomi, Fth    1.54  63         Pg    01 43 27.7 -0.4
DLFA Delphi            1.68  84         Pg    01 43 30.9 +0.2
ITM  Ithomi            1.68 132  P      Pb    01 43 29.8 +0.5
ITM                              AML    AML   01 44 02.4
     comp=E,1424µm,1.2s
ITM                              AML    AML   01 44 11.6
     comp=N,1662µm,0.9s
ITM  Ithomi            1.68 132         Pb    01 43 30.1 +0.8
ITM  Ithomi            1.68 132  Pn     Pn    01 43 26.3 -1.3
AGG  Agios Georgios    1.69  65         Pb    01 43 30.2 +0.8
AGG  Agios Georgios    1.69  65  Pn     Pn    01 43 27.2 -0.5
AGG  Agios Georgios    1.69  65  Sn     Sn    01 43 48.1 -1.1
AGG  Agios Georgios    1.69  65  P      Pn    01 43 27.3 -0.5
AGG                                           01 43 48.1
THL  Klokotos Trika    1.79  45         Pb    01 43 31.6 +0.6
PYL  PYLOS             1.79 142         Pb    01 43 31.0 -0.2
KPRO Kipourio          1.80  25         Pb    01 43 32.4 -0.7
LTK  Loutraki          2.07  98         Pg    01 43 34.7 -1.2
LKR  Lokris            2.09  80         Pb    01 43 35.3 -1.0
NEST Nestorio          2.15  14         Pb    01 43 37.8 +0.4
SCTE Santa Cesarea     2.29 320         Pn    01 43 36.4 +0.5
SCTE                             Sn     Sn    01 44 04.1 +0.1
LIT  Litokhoron        2.42  42         Pb    01 43 40.3 -1.6
LIT  Litokhoron        2.42  42  Pn     Pn    01 43 38.0 +0.2
LIT  Litokhoron        2.42  42  P      Pn    01 43 38.0 +0.2
XOR  Xorichti          2.44  64         Pg    01 43 44.0 -1.2
FNA  Florina           2.58  17 ePn     Pn    01 43 42.2 +2.2
FNA  Florina           2.58  17         Pn    01 43 39.8 -0.2
FNA  Florina           2.58  17  P      Pn    01 43 39.8 -0.2
OHR  Ohrid             2.81   7⇓iPn     Pb    01 43 46.1 -2.4
OHR                              i Sn   Sb    01 44 20.8 -2.0
OHR                              eLg    Lg    01 44 22.1
     comp=E,223nm,0.5s
AOS  Alonnisos         2.87  72         Pb    01 43 49.7 +0.1
TIP  Timpagrande       2.95 288 ⇑P      Pn    01 43 46.5 +1.3
TIP                             ⇓S      Sn    01 44 21.8 +1.4
TIP  Timpagrande       2.95 288         Pn    01 43 45.2 +0.1
TIP                                     Sn    01 44 18.2 -2.3
TIR  Tirane            3.05 353 ePn     Pn    01 43 48.5 +2.1
TIR  Tirane            3.05 353  P      Pn    01 43 48.1 +1.7
TIR                             ⇑S      Sb    01 44 26.4 -3.3
TIR  Tirane            3.05 353         Pn    01 43 46.2 -0.1
TIR                              Sn     Sn    01 44 22.6 -0.2
GRG  Griva             3.06  30         Pn    01 43 49.2 +2.5
GRG  Griva             3.06  30  P      Pn    01 43 49.2 +2.5
SOH  Sokhos            3.40  42         Pn    01 43 53.4 +2.1
SOH  Sokhos            3.40  42  P      Pn    01 43 53.4 +2.1
KNT  Kendrikon         3.44  34         Pn    01 43 53.9 +2.1
KNT  Kendrikon         3.44  34  P      Pn    01 43 53.9 +2.1
VAY  Valandovo         3.44  29 ePn     Pn    01 43 53.1 +1.3
VAY  Valandovo         3.44  29 i P     Pn    01 43 53.3 +1.5
VAY  Valandovo         3.44  29 i Pn    Pn    01 43 53.1 +1.3
VAY                             i Sn    Sn    01 44 34.1 +1.7
VAY                             eLg     Lg    01 44 34.8
     comp=N,111nm,1.0s
OUR  Ouranopolis       3.45  53         Pb    01 43 55.7 -3.7
OUR  Ouranopolis       3.45  53  P      Pb    01 43 55.7 -3.7
CEL  Celeste           3.52 270         Pn    01 43 53.0 +0.1
CEL                              Sn     Sn    01 44 33.7 -0.8
MATE Matera            3.67 310 ⇓P      Pn    01 43 56.1 +1.2
MATE                            ⇓S      Sn    01 44 36.0 -1.9
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MATE Matera            3.67 310         Pn    01 43 56.0 +1.2
MATE                                    Sn    01 44 36.0 -1.9
SKO  Skopje            3.74  12 ePn     Pn    01 43 57.4 +1.5
SKO  Skopje            3.74  12 i Pn    Pn    01 43 57.7 +1.9
SKO                             i Sn    Sn    01 44 40.3 +0.5
SKO                             eLg     Lg    01 44 42.5
     comp=E,8.4nm,0.7s
SKO  Skopje            3.74  12         Pn    01 43 58.2 +2.3
SKO  Skopje            3.74  12  P      Pn    01 43 58.2 +2.3
SRS  Serrai            3.74  41 ePn     Pn    01 43 57.4 +1.5
ULC  Ulcinj            3.74 347         Pn    01 43 57.9 +2.0
ULC  Ulcinj            3.74 347  P      Pn    01 43 57.9 +2.0
ULC  Ulcinj            3.74 347 ePn     Pn    01 43 56.3 +0.4
DRME Dracevica, Mon    3.96 347 ePn     Pn    01 43 59.7 +0.7
DRME Dracevica, Mon    3.96 347 ePn     Pn    01 43 59.9 +0.9
DRME                            eSn     Sn    01 44 46.9 +1.5
KKB  Krupnik           4.11  30 i P     Pn    01 44 02.1 +1.1
BUM  Brajici-Budva     4.13 345 ePn     Pn    01 44 01.6 +0.3
BUM                             eSn     Sn    01 44 50.6 +1.0
MMB  Musomiste         4.16  37 i P     Pn    01 44 03.1 +1.4
PDG  Podgorica         4.19 349 ePn     Pn    01 44 03.0 +0.9
PDG                             eSn     Sn    01 44 49.7 -1.2
PDG  Podgorica         4.19 349 ⇓P      Pn    01 44 03.0 +0.9
PDG                             ⇑S      Sn    01 44 50.2 -0.7
PDG  Podgorica         4.19 349 ePn     Pn    01 44 02.4 +0.4
PDG  Podgorica         4.19 349         Pn    01 44 02.5 +0.4
PDG                              Sn     Sn    01 44 50.9 -0.1
TTG  Podgorica         4.19 349 ePn     Pn    01 44 02.9 +0.8
TTG                             eSn     Sn    01 44 51.4 +0.5
ACER Acerenza          4.21 307         Pn    01 44 02.2 -0.3
ACER                             Sn     Sn    01 44 51.8 +0.1
PVY  Plav              4.28 356 ePn     Pn    01 44 04.6 +1.2
PVY                             eSn     Sn    01 44 54.9 +1.6
APE  Apeiranthos       4.28 105⇑eP      Pn    01 44 04.3 +0.9
CEME Cevo              4.36 346 ePn     Pn    01 44 04.8 +0.3
CEME                            eSn     Sn    01 44 55.8 +0.5
HCY  Herceg Novi       4.36 341 ePn     Pn    01 44 03.0 -1.5
HCY  Herceg Novi       4.36 341 ePn     Pn    01 44 04.3 -0.2
HCY                             eSn     Sn    01 44 55.8 +0.6
BOSS Bosilegrad        4.47  20 ePn     Pn    01 44 07.4 +1.4
IVA  Berane            4.56 356 ePn     Pn    01 44 08.6 +1.3
IVA                             i Sn    Sn    01 45 01.7 +1.5
NKME Niksic            4.57 347⇑iPn     Pn    01 44 08.0 +0.7
NKME                            i Sn    Sn    01 45 01.4 +1.1
KOME Kolasin           4.57 352 ePn     Pn    01 44 08.5 +1.1
KOME                            eSn     Sn    01 45 02.0 +1.6
NKY  Niksic            4.61 347 ePn     Pn    01 44 09.2 +1.3
NKY                             i Sn    Sn    01 45 02.1 +0.7
BARS Barje             4.62  13 ePn     Pn    01 44 08.9 +0.8
TREB Trebinje          4.65 341 ePn     Pn    01 44 08.2 -0.2
TREB                            eSn     Sn    01 44 59.8 -2.5
TREB Trebinje          4.65 341 ePn     Pn    01 44 08.0 -0.4
IDI  Anoyia            4.73 128  Pn     Pn    01 44 11.6 +2.1
     comp=E,0.2nm,0.3s,baz=293,slow=8.5,SNR=9.5
IDI                              Sn     Sn    01 45 07.4 +3.1
     comp=E,1.4nm,0.3s,baz=15,slow=20,SNR=3.7
RZN  Rozhen            4.74  43 i P     Pn    01 44 11.6 +1.8
BRY  Bratogost         4.78 344 ePn     Pn    01 44 10.2 -0.2
BRY  Bratogost         4.78 344⇑iPn     Pn    01 44 10.5 +0.1
BRY                             eSn     Sn    01 45 06.6 +0.9
VAE  Valguarnera       4.79 262  Pn     Pn    01 44 11.7 +1.4
     comp=E,1.1nm,0.3s,baz=343,slow=11,SNR=6.1
VAE                              Sn     Sn    01 45 11.1 +5.4
     comp=E,4.9nm,0.3s,baz=55,slow=21,SNR=7.2
VTS  Vitosha           4.81  26 ePn     Pn    01 44 12.5 +1.7
VTS  Vitosha           4.81  26 ⇑P      Pn    01 44 12.5 +1.7
VTS  Vitosha           4.81  26 i P     Pn    01 44 12.3 +1.5
VTS  Vitosha           4.81  26         Pn    01 44 11.1 +0.3
VTS                              Sn     Sn    01 45 05.7 -0.8
SELS Selova            4.92   6 ePn     Pn    01 44 12.5 +0.3
SELS                            eSn     Sn    01 45 08.0 -1.1
SJES Sjenica           4.94 357 ePn     Pn    01 44 13.8 +1.3
SJES                            eSn     Sn    01 45 10.0 +0.3
UPM  Unac-Piva         5.00 348 ePn     Pn    01 44 14.4 +1.0
UPM                             eSn     Sn    01 45 12.3 +1.1
PLE  Pljevlja          5.06 352 ePn     Pn    01 44 15.2 +1.1
PLE                             eSn     Sn    01 45 13.8 +1.3
KDZ  Kurdzhali         5.11  48 i P     Pn    01 44 16.4 +1.7
ZAPS Zavoj             5.24  18 ePn     Pn    01 44 18.6 +2.1
IVAS Ivanjica          5.25 358 ePn     Pn    01 44 16.7  0.0
IVAS                            eSn     Sn    01 45 16.5 -0.7
WDD  Wied Dalam        5.29 244         Pn    01 44 16.5 -0.7
RUDO Rudo              5.34 352 ePn     Pn    01 44 18.3 +0.3
BOVS Bovan             5.40  10 ePn     Pn    01 44 19.4 +0.7
GRUS Gruza             5.57   3 ePn     Pn    01 44 21.3 +0.3
GRUS                            eSn     Sn    01 45 22.7 -2.2
BBLS Lazi&#263;i       5.59 353 ePn     Pn    01 44 21.3  0.0
BBLS                             Sn     Sn    01 45 24.7 -0.7
BBLS Lazi&#263;i       5.59 353 ePn     Pn    01 44 21.1 -0.2
ZAGS Zajecar           5.66  14 ePn     Pn    01 44 22.5 +0.2
DIVS Divibare          5.78 357 ePn     Pn    01 44 23.9 -0.1
DIVS                            eSn     Sn    01 45 27.1 -3.1
DIVS Divibare          5.78 357 ePn     Pn    01 44 23.8 -0.2
HAPS Han Pijesak,Bl    5.86 350 ePn     Pn    01 44 24.2 -0.9
TRUS Trudelj           5.90   0 ePn     Pn    01 44 25.9 +0.4
TRUS                            eSn     Sn    01 45 30.0 -3.0
PLVB Pleven            6.00  31 ⇓P      Pn    01 44 29.4 +2.4
INTR Introdacqua       6.17 309         Pn    01 44 29.6 +0.2
PVL  Pavlikeni         6.17  36 i P     Pn    01 44 33.3 +4.0
ELND Elena             6.22  41 ⇑P      Pn    01 44 31.8 +1.8
TEKS Tekeris           6.25 354 ePn     Pn    01 44 30.0 -0.5
MGRS Mrkonjic Grad     6.57 339 ePn     Pn    01 44 35.5 +0.7
AQU  L'Aquila          6.67 309 ePn     Pn    01 44 39.3 +3.1
BLY  Banja Luka        6.85 341 ePn     Pn    01 44 38.4 -0.2
BLY  Banja Luka        6.85 341         Pn    01 44 38.6  0.0
BLY                              Sn     Sn    01 45 54.2 -2.2
HUMR Humele            7.10  28 ⇓P      Pn    01 44 43.9 +1.8
NRCA Norcia            7.12 312         Pn    01 44 42.6 +0.1
NRCA                             Sn     Sn    01 46 02.4 -1.0
GZR  Gura Zlata        7.29  13 ⇓P      Pn    01 44 45.5 +0.8
BZS  Buzias            7.35   7 ⇓P      Pn    01 44 45.7 +0.2
ARR  Arges             7.72  23 ⇓P      Pn    01 44 52.6 +2.0
VOIR                   7.92  25 ⇑P      Pn    01 44 55.7 +2.3
MORH Mrgy, Hungar      7.99 351 ePn     Pn    01 44 51.8 -2.4
BOJS Bojanci           8.12 334 ePn     Pn    01 44 56.9 +0.8
ZAG  Zagreb            8.18 338 ePn     Pn    01 44 57.7 +0.9
MLR  Muntele Rosu      8.28  28  Pn     Pn    01 45 00.1 +1.7
     comp=E,0.4nm,0.3s,baz=197,slow=5.2,SNR=16
MLR                              Sn     Sn    01 46 39.9 +8.1
     comp=E,0.2nm,0.3s,baz=257,slow=19,SNR=1.7
MLR                              LR     LR    01 48 57.4
     comp=E,193nm,18.2s,baz=124,slow=44
MLR  Muntele Rosu      8.28  28 ⇑P      Pn    01 45 01.0 +2.7
MLR  Muntele Rosu      8.28  28  Pn     Pn    01 44 58.4  0.0
MLR                                     Sn    01 46 31.7 -0.1
CRES Cresnjev          8.34 336 ePn     Pn    01 44 58.8 -0.3
DOPR Dopca             8.50  24 ⇓P      Pn    01 45 03.1 +1.9
SKDS Skadanscina       8.63 329 ePn     Pn    01 45 03.2 +0.1
LJU  Ljubljana         8.85 333 ePn     Pn    01 45 06.3 +0.3
PLOR Plostina          8.85  30 ⇑P      Pn    01 45 08.4 +2.3
VRI  Vrincioaia        8.89  30 ⇑P      Pn    01 45 09.5 +2.8
KEST Kesra             9.19 257  Pn     Pn    01 45 10.9 +0.2
     comp=E,0.3nm,0.3s,baz=24,slow=6.8,SNR=6.3
KEST                             Sn     Sn    01 46 53.0 -1.1
     comp=E,0.1nm,0.3s,baz=229,slow=20,SNR=2.3
KEST Kesra             9.19 257         Pn    01 45 10.1 -0.7
KEST                                    Sn    01 46 52.1 -2.0
SOKA Soboth            9.23 336 ePn     Pn    01 45 11.1 -0.3
     comp=E,7.8nm,0.4s,SNR=16
SOKA                            eSn     Sn    01 46 48.2 -6.9
     comp=E,6.6nm,0.5s
OBKA Obir              9.24 334 ePn     Pn    01 45 12.6 +1.1
     comp=E,2.4nm,0.2s
OBKA                            eSn     Sn    01 46 51.6 -3.7
     comp=E,23nm,0.6s
ARSA Arzberg           9.61 340 ePn     Pn    01 45 16.3 -0.1
     comp=E,2.9nm,0.3s
ARSA                            eSn     Sn    01 46 58.6 -5.6
     comp=E,3.7nm,0.5s
MYKA Terra Mystica     9.67 331  Pn     Pn    01 45 17.6 +0.3
     comp=E,1.8nm,0.4s
MYKA                            eSn     Sn    01 47 01.1 -4.8
     comp=E,3.6nm,0.3s
TRPA Tarpa             9.93   8 ⇓P      Pn    01 45 21.5 +0.7
CTI  Castel Tesino    10.07 323         Pn    01 45 22.6 -0.2
CTI  Castel Tesino    10.07 323  P      Pn    01 45 22.6 -0.2
CONA Conrad Observa   10.15 343 ePn     Pn    01 45 24.4 +0.5
     comp=E,0.5nm,0.3s
ABTA Abfaltersbach    10.22 328  Pn     Pn    01 45 25.2 +0.4
     comp=E,1.2nm,0.3s
ABTA                             Sn     Sn    01 47 13.1 -6.2
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     comp=E,4.0nm,0.3s
VYHS Vyhne            10.23 354 eP      Pn    01 45 24.7 -0.2
VYHS                            e             01 47 14.3
VYHS Vyhne            10.23 354 ePN     Pn    01 45 24.7 -0.2
VYHS                            eSN     Sn    01 47 14.3 -5.2
MODS Modra-Piesok     10.29 348 eSN     Sn    01 47 14.2 -6.9
BRTR Keskin Array B   10.42  78  Pn     Pn    01 45 31.5 +3.7
     comp=E,0.1nm,0.3s,baz=260,slow=13,SNR=5.1
BRTR Keskin Array B   10.42  78         Pn    01 45 27.1 -0.7
MOA  Molln            10.51 337 ePn     Pn    01 45 29.3 +0.4
     comp=E,3.2nm,0.3s,SNR=8.9
MOA                             eSn     Sn    01 47 22.2 -4.2
     comp=E,3.7nm,0.5s
KOLS Kolonicke sedl   10.70   7 eP      Pn    01 45 32.6 +1.3
KOLS Kolonicke sedl   10.70   7 ePN     Pn    01 45 32.6 +1.3
SQTA Sankt Quirin     11.14 326 ePn     Pn    01 45 39.3 +1.7
     comp=E,1.5nm,0.3s
SQTA                             Sn     Sn    01 47 39.6 -2.5
     comp=E,5.5nm,0.4s
FETA Feichten         11.21 324  Pn     Pn    01 45 40.8 +2.2
     comp=E,0.7nm,0.4s
MOTA Moosalm          11.29 326 ePn     Pn    01 45 41.1 +1.6
     comp=E,1.4nm,0.3s
MOTA                             Sn     Sn    01 47 43.6 -2.0
     comp=E,9.9nm,0.6s
DAVOX Davos/Dischmat  11.45 321  Pn     Pn    01 45 42.3 +0.5
     comp=E,0.2nm,0.3s,baz=319,slow=11,SNR=4.2
DAVOX                            Sn     Sn    01 47 36.7  -13
     comp=E,0.6nm,0.3s,baz=139,slow=20,SNR=3.3
RETA Reutte           11.54 326  Pn     Pn    01 45 45.7 +2.7
     comp=E,1.5nm,0.5s
RETA                             Sn     Sn    01 47 50.4 -1.5
     comp=E,4.2nm,0.4s
GERES GERESS Array B  11.57 338  Pn     Pn    01 45 42.4 -1.0
     comp=E,0.4nm,0.3s,baz=155,slow=13,SNR=9.6
GERES                            Sn     Sn    01 47 46.5 -6.0
     comp=E,0.8nm,0.3s,baz=149,slow=25,SNR=6.9
GERES GERESS Array B  11.57 338         Pn    01 45 42.7 -0.7
GERES GERESS Array B  11.57 338  P      Pn    01 45 42.7 -0.7
DAVA Damuels          11.80 323  Pn     Pn    01 45 48.5 +1.9
     comp=E,1.2nm,0.3s
DAVA                             Sn     Sn    01 47 55.7 -2.6
     comp=E,2.7nm,0.3s
KHC  Kasperske Hory   11.86 338 ePN     Pn    01 45 46.3 -1.0
KHC                             eSN     Sn    01 47 53.9 -5.6
KHC                             ex      x     01 48 23.5
KHC  Kasperske Hory   11.86 338⇓eP      Pn    01 45 48.7 +1.4
SENIN Lac Senin/Sane  12.56 314  Pn     Pn    01 45 58.1 +1.1
MMAI Mount Meron Ar   13.32 109  Pn     Pn    01 46 06.3 -1.0
     comp=E,0.6nm,0.3s,baz=310,slow=11,SNR=3.7
AKASG Malin Array Be  13.88  24  Pn     Pn    01 46 12.7 -2.1
     comp=E,0.3nm,0.3s,baz=212,slow=12,SNR=3.2
NACGM Naroch          17.15  13 e       Pn    01 46 48.0  -10
NEY  Neytrino         17.61  67⇓eP      P     01 47 07.9 +3.2
NEY                              pmax   pmax
     comp=Z,1.0nm,0.8s
KIV  Kislovodsk       17.71  64  P      Pn    01 47 03.7 -1.1
KIV  Kislovodsk       17.71  64 eP      P     01 47 06.1 +0.4
KIV                              pmax   pmax
     comp=Z,25nm,1.1s
KBZ  Khabaz           17.82  65  P      P     01 47 08.5 +1.8
     comp=Z,0.1nm,0.3s,baz=280,slow=5.9,SNR=8.2
KBZ  Khabaz           17.82  65⇑eP      P     01 47 07.8 +1.1
AKH  Akhalkalaki      18.01  73  P      Pn    01 47 06.7 -1.9
AKH  Akhalkalaki      18.01  73  P      Pn    01 47 06.7 -1.9
AKH                              pmax   pmax
     comp=Z,5.0nm,0.9s
GOF  Gofitskoye       18.19  61⇑eP      P     01 47 23.9  +13
NCK  Nalchik          18.28  66⇓eP      P     01 47 14.4 +2.5
NCK                              pmax   pmax
     comp=Z,4.0nm,0.3s
ZEI  Tsey             18.41  69 eP      Pn    01 47 13.8 +0.2
ZEI                              pmax   pmax
     comp=Z,6.0nm,0.6s
ESDC Sonseca Array    18.95 282  P      P     01 47 19.5 +0.1
     comp=Z,0.2nm,0.3s,baz=79,slow=13,SNR=3.9
ESDC Sonseca Array    18.95 282  P      P     01 47 19.1 -0.2
GNI  Garni            18.96  77  P      Pn    01 47 21.0 +0.8
     comp=Z,0.4nm,0.3s,baz=241,slow=2.1,SNR=13
GNI  Garni            18.96  77  P      P     01 47 17.6 -2.0
GNI  Garni            18.96  77 d iP    Pn    01 47 21.2 +1.0
GNI                              pmax   pmax
     comp=Z,69nm,1.0s
GROC Groznyy          19.84  68 eP      Pn    01 47 33.5 +3.0
GROC                            eS      Sn    01 51 20.2 +7.0
GROC                             pmax   pmax
     comp=Z,10.0nm,0.8s
OBN  Obninsk          20.05  28 i P     P     01 47 30.2 -0.9
OBN                             i             01 47 51.3
OBN                              pmax   pmax
     comp=Z,18nm,1.4s
VSU  Vasula           20.57  10⇓eP      P     01 47 37.5 +0.7
VSU                              pmax   pmax
     comp=Z,75nm,0.8s
MOS  Moscow           20.92  28 eP      P     01 47 38.5 -2.0
AKT  Akhty            21.19  73 eP      P     01 47 44.6 +0.8
AKT                             e             01 48 05.0
AKT                              pmax   pmax
     comp=Z,11nm,0.8s
HFS  Hagfors          22.24 351  P      P     01 47 54.5 -0.3
     comp=Z,3.9nm,0.6s,baz=159,slow=13,SNR=13
EKA  Eskdalemuir Ar   23.24 325  P      P     01 48 03.5 -1.8
     comp=Z,5.7nm,1.2s,baz=123,slow=10,SNR=2.8
FINES FINESS Array B  23.42   7  P      P     01 48 06.0 -1.0
     comp=Z,4.6nm,0.7s,baz=168,slow=10.0,SNR=32
FINES FINESS Array B  23.42   7  P      P     01 48 05.5 -1.5
NB2  NORSAR Subarra   23.45 349  P      P     01 48 07.3 -0.1
     comp=Z,12nm,1.7s,baz=159,slow=9.3
NOA  NORSAR Array B   23.45 349  P      P     01 48 07.3 -0.1
     comp=Z,1.7nm,0.8s,baz=163,slow=9.6,SNR=8.3
KLMR Klimovskoe       25.55  22 eP      P     01 48 25.9 -0.8
KLMR                             AMP          01 48 32.8
     comp=Z,6.0nm,0.8s
KLMR Klimovskoe       25.55  22 eP      P     01 48 25.8 -0.9
KLMR                             pmax   pmax
     comp=Z,6.0nm,0.8s
KIRV Kirov            27.60  33  P      P     01 48 44.4 -0.8
     comp=Z,5.4nm,0.5s,baz=178,slow=2.7,SNR=4.8
PRGR Permogore        28.08  26 eP      P     01 48 46.5 -3.0
PRGR                             pmax   pmax
     comp=Z,5.0nm,0.6s
GEYT Alibeck          29.57  79  P      P     01 49 03.0  0.0
     comp=Z,1.5nm,0.6s,baz=283,slow=9.0,SNR=8.0
GEYT Alibeck          29.57  79  P      P     01 49 02.4 -0.6
TORD Torodi Ar. Bea   30.07 218  P      P     01 49 08.0 +0.4
     comp=Z,1.5nm,0.7s,baz=29,slow=8.6,SNR=12
ARCES ARCESS Array B  31.40   3  P      P     01 49 17.9 -0.9
     comp=Z,2.2nm,0.9s,baz=170,slow=9.2,SNR=6.8
KK31 Karatay Array    37.85  66  P      P     01 50 14.6 -0.3
KK31                             lAmb   lAmb  01 50 16.4
     comp=Z,2.0nm,0.7s
KK31 Karatay Array    37.85  66  P      P     01 50 14.6 -0.3
KK31                             pmax   pmax
     comp=Z,2.0nm,0.7s
KKAR Karatay Array    37.85  66  P      P     01 50 14.5 -0.4
KKAR                             lAmb   lAmb  01 50 16.4
     comp=Z,2.0nm,0.7s
KKAR Karatay Array    37.85  66  P      P     01 50 14.4 -0.4
KKAR Karatay Array    37.85  66  P      P     01 50 14.5 -0.4
KKAR                             pmax   pmax
     comp=Z,2.0nm,0.7s
DBIC Dimbokro         38.92 222  P      P     01 50 27.4 +3.3
     comp=Z,1.6nm,0.6s,baz=8.0,slow=7.7,SNR=4.1
DBIC Dimbokro         38.92 222  P      P     01 50 23.4 -0.7
DBIC                             lAmb   lAmb  01 50 28.3
     comp=Z,2.1nm,0.8s
DBIC Dimbokro         38.92 222  P      P     01 50 23.4 -0.7
DBIC                             pmax   pmax
     comp=Z,2.0nm,0.8s
KSH  Kashi            42.69  70  P      P     01 50 58.7 +3.5
KSH                              PP     PP    01 52 36.7 +2.7
KSH                              S      S     01 57 20.5 +2.2
KSH                              SS     SS    02 00 19.8 -8.7
KSH                              ScS    ScS   02 00 56.4  0.0
MK31 Makanchi Array   45.33  58  P      P     01 51 15.7 -0.5
MK31                             lAmb   lAmb  01 51 29.0
     comp=Z,2.1nm,1.1s
MK31 Makanchi Array   45.33  58  P      P     01 51 15.7 -0.5
MK31                             pmax   pmax
     comp=Z,2.0nm,1.2s
MKAR Makanchi Array   45.33  58  P      P     01 51 15.2 -1.0
     comp=Z,1.5nm,0.5s,baz=276,slow=7.0,SNR=36
MKAR Makanchi Array   45.33  58  P      P     01 51 15.7 -0.4
MKAR Makanchi Array   45.33  58  P      P     01 51 15.7 -0.4
ZAA0 Zalesovo Array   45.68  48  P      P     01 51 18.6 -0.2
```

ZALV Zalesovo Beam 45.68 48 P P 01 51 18.1 -0.7
comp=Z,7.4nm,0.5s,baz=272,slow=8.7,SNR=36
ZALV Zalesovo Beam 45.68 48 P P 01 51 18.5 -0.3
ZALV Zalesovo Beam 45.68 48 P P 01 51 18.5 -0.3
TIXI Tiksi 59.56 20⇓P P 01 53 01.2 0.0
TIXI pmax pmax
comp=Z,1.0nm,1.1s
GTA Gaotai 59.86 62 eP P 01 53 03.2 -0.8
GTA pP pP 01 53 06.9 -0.3
GTA sP sP 01 53 09.5 0.0
SONM Songino Array 60.46 51 P P 01 53 07.2 -0.7
comp=Z,0.9nm,0.8s,baz=286,slow=7.8,SNR=6.5
SONM Songino Array 60.46 51 P P 01 53 07.6 -0.4
SONM Songino Array 60.46 51 P P 01 53 07.6 -0.4
SONM pmax pmax
comp=Z,1.0nm,1.1s
HIA Hailar 67.50 44⇑eP P 01 53 56.6 +2.5
HIA pmax pmax
comp=Z,128nm,3.3s
CMAR Chiang Mai Arr 69.99 82 P P 01 54 09.0 -1.0
comp=Z,1.2nm,0.3s,baz=302,slow=8.1,SNR=4.2
BILL Bilibino 70.90 13 iP P 01 54 17.8 +3.0
BILL pmax pmax
comp=Z,2.0nm,1.2s
SEY Seymchan 72.04 21deP P 01 54 24.2 +2.4
YKA Yellowknife Ar 73.21 340 P P 01 54 29.4 +0.6
comp=Z,0.1nm,0.8s,baz=41,slow=5.5,SNR=4.7
KLR Kul'dur 73.84 39⇑eP P 01 54 33.0 +0.3
KLR pmax pmax
comp=Z,4.0nm,0.8s
ILAR Eielson Array 76.75 354 P P 01 54 50.0 +0.8
comp=Z,0.6nm,1.0s,baz=357,slow=4.0,SNR=5.0
ILAR Eielson Array 76.75 354 P P 01 54 48.9 -0.3
ILAR Eielson Array 76.75 354 P P 01 54 50.0 +0.8
USRK Ussuriysk Ar. 77.26 43 P P 01 54 51.7 -0.7
comp=Z,1.7nm,0.7s,baz=302,slow=7.1,SNR=5.8
USRK Ussuriysk Ar. 77.26 43 P P 01 54 52.2 -0.2
USRK Ussuriysk Ar. 77.26 43 P P 01 54 52.2 -0.2

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*TIR **06** 02:05:02.4, 41.12N×20.12E, h14km, Md2.8/6*
*SKO **06** 02:05:02.9, 41.05N×20.00E, h1km*
*ATH **06** 02:05:02.0, 41.07N×20.03E, h23km±2km, ML2.0/2, Error ellipse: s-maj=4.2km s-min=1.2km az=34.0*
*THE **06** 02:05:03.2, 41.11N×20.11E, h10km±3km, ML1.7/4, Error ellipse: s-maj=3.6km s-min=0.7km az=293.0*
ISC 06 02:05:03.0±1.0, **41.14N**±0.03×**20.10E**±0.03, **h14**km±9km, **n22**, σ1.60/35, **Albania**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TIR Tirane 0.28 320 P Pg 02 05 08.6 -0.3
TIR S Sb 02 05 14.4 0.0
TIR Tirane 0.28 320 iPG Pg 02 05 08.5 -0.4
TIR iSG Sb 02 05 14.7 +0.3
TIR Tirane 0.28 320 P Pg 02 05 08.5 -0.4
TIR S Sb 02 05 14.4 0.0
TIR AML AML 02 05 17.3
comp=N,1025μm,0.3s
TIR AML AML 02 05 17.5
comp=E,669μm,0.2s
OHR Ohrid 0.53 92 iPg Pg 02 05 13.7 +0.3
OHR iSg Sb 02 05 22.1 +0.6
OHR eLg Lg 02 05 22.2
comp=N,19nm,0.2s
PHP Peshkopia 0.60 25 P Pg 02 05 14.5 -0.4
PHP S Sb 02 05 24.9 +1.0
PHP Peshkopia 0.60 25 iPG Pg 02 05 14.5 -0.4
PHP iSG Sg 02 05 23.4 +0.5
TPE Tepelena 0.84 185 P Pb 02 05 18.7 -0.8
PUK Puka 0.92 350 iPG Pb 02 05 20.1 -0.7
PUK iSG Sn 02 05 35.2 +0.5
NEST Nestorio 1.02 135 P Pb 02 05 21.7 -0.8
NEST S Sg 02 05 36.8 +0.8
comp=N,22nm,0.5s
NEST Nestorio 1.02 135 P Pb 02 05 21.6 -0.8
NEST S Sb 02 05 35.3 -0.4
FNA Florina 1.03 110 P Pb 02 05 22.2 -0.4
FNA S Sg 02 05 36.8 +0.5
comp=N,55nm,0.5s
FNA Florina 1.03 110 iPG Pb 02 05 22.2 -0.4
FNA iSG Sn 02 05 37.6 +0.3
FNA Florina 1.03 110 P Pb 02 05 21.8 -0.8
FNA S Sn 02 05 37.3 0.0
FNA AML AML 02 05 40.6
comp=N,119μm,0.5s
FNA AML AML 02 05 41.6
comp=E,100μm,0.4s
PENT Pentalofos 1.23 140 P Pn 02 05 25.1 -0.8
PENT Pentalofos 1.23 140 P Pn 02 05 25.2 -0.6
BCI Bajram Curri 1.23 359 iPN Pb 02 05 26.3 +0.2
BCI iSN Sg 02 05 44.0 +1.2
SRN Sarande 1.26 184 P Pb 02 05 26.9 +0.4
SRN S Sg 02 05 43.9 +0.3
comp=E,22nm,0.5s
SRN Sarande 1.26 184 iPN Pb 02 05 27.0 +0.5
SRN iSN Sn 02 05 43.5 +0.7
JAN Janina 1.58 159 P Pb 02 05 32.1 +0.1
IGT Igoumenitsa 1.61 174 P Pb 02 05 33.1 +0.5
IGT S Sn 02 05 50.4 -1.2
comp=E,40nm,1.1s
IGT Igoumenitsa 1.61 174 P Pn 02 05 30.3 -0.8
GRG Griva 1.75 95 P Pn 02 05 34.0 +1.1

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*GII **06** 02:09:33.0±0.0, 29.29N×52.93E, h10km*
*NEIC **06** 02:09:34.8±1.8, 29.19N±0.05×52.74E±0.06, h18km±3km, Error ellipse: s-maj=8.0km s-min=7.0km az=48.0*
*MOS **06** 02:09:35.4±1.0, 29.08N×52.70E, h31km, mb4.6/20, Error ellipse: s-maj=8.4km s-min=5.9km az=94.2*
*TEH **06** 02:09:35.9, 29.26N×52.83E, h8km, ML4.2*
*THR **06** 02:09:37.4±0.3, 29.28N×52.78E, h18km±4km, ML4.5*
*IDC **06** 02:09:38.5±2.2, 29.15N×52.76E, h36km±17km, mb4.0/25, mb1 4.1/32, mb1mx4.0/41, mbtmp4.2/32, ML3.7/7, MS3.4/10, Ms1 3.5/10, ms1mx3.1/45, Error ellipse: s-maj=15.0km s-min=11.1km az=177.0*
*OMAN **06** 02:09:41.4±0.1, 28.78N×52.49E, h39km, ml4.0/2, Error ellipse: s-maj=3.7km s-min=2.2km az=12.0*
*DSN **06** 02:09:52.0±2.1, 28.63N×54.12E, h10km, ML3.8/4, Error ellipse: s-maj=22.8km s-min=18.0km az=135.0*
ISC 06 02:09:35.3±0.8, **29.18N**±0.03×**52.75E**±0.03, **h17**km±5km, **n286**, σ1.90/299, **mb4.3**/48, **MS3.4**/7, **21C-12D**, **Southern Iran**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GHB Gharebagh 0.28 317 ePg Pb 02 09 42.0 -0.1
GHB e 02 09 50.8
SHI Shiraz 0.51 336 ePg Pg 02 09 45.2 -0.4
SHI eSg Sg 02 09 52.1 -0.4
JHRM Jahrom 0.99 133 Pg Pn 02 09 55.4 +0.9
JHRM Jahrom 0.99 133 ePg Pn 02 09 55.4 +0.9
JHRM e 02 10 18.9
IKAZ Kazeroun 1.00 307 Pg Pn 02 09 55.7 +0.8
IKAZ Kazeroun 1.00 307 ePg Pn 02 09 55.6 +0.7
AHBU AHRAM 1.31 257 ePn Pn 02 10 02.5 +1.8
LMD1 Lamerd 1.87 169 Pg 02 10 13.2 +2.0
LMD1 Lamerd 1.87 169 ePg Pg 02 10 13.0 +1.8
LMD1 e 02 10 59.3
LAR1 LAR 2.07 136 ePn Pb 02 10 12.1 -0.5
KLNJ Kolanjah 2.08 331 Pn Pb 02 10 12.1 -0.8
KLNJ Kolanjah 2.08 331 ePn Pb 02 10 12.2 -0.7
IRAM Ramesheh 2.64 353 Pn Pn 02 10 19.6 +2.2
IRAM Ramesheh 2.64 353 ePn Pn 02 10 19.8 +2.4
IMEH Mehriz 2.73 36 Pn Pn 02 10 21.3 +2.7
IMEH Mehriz 2.73 36 ePn Pn 02 10 21.5 +2.9
ISAD Sadrabad 2.84 16 ePn Pn 02 10 23.2 +3.0
IBRJ Brojen 3.01 335 Pn Pn 02 10 24.5 +2.0
IBRJ Brojen 3.01 335 ePn Pn 02 10 25.1 +2.6
ICHK Chekchek 3.37 25 ePn Pn 02 10 30.3 +2.8
IBAF Bafgh 3.42 45 ePn Pn 02 10 30.6 +2.5
KHGB Koh Gabri 3.45 69 ePn Pn 02 10 30.7 +2.1
ROKH ROKH 3.49 335 ePn Pn 02 10 31.4 +2.4
GENO Geno 3.50 120 ePn Pn 02 10 31.5 +2.4
GENO e 02 11 46.7
NGRK Negar Kerman 3.50 81 Pn Pn 02 10 31.6 +2.2
NGRK Negar Kerman 3.50 81 ePn Pn 02 10 32.2 +2.8
NGRK e 02 11 50.1
JHBN Jahan bin 3.53 330 ePn Pn 02 10 31.6 +1.8
YZKH Yazd 3.57 26 ePn Pn 02 10 33.0 +2.9
YZKH Yazd 3.57 26 Pn Pn 02 10 32.0 +1.9
YZKH Yazd 3.57 26 ePn Pn 02 10 33.0 +2.9
KRBR Kerman 3.58 76 ePn Pn 02 10 33.8 +3.4
KRBR eSg Sg 02 11 27.7 -2.8
KRBR Kerman 3.58 76 Pn Pn 02 10 33.0 +2.6
KRBR Sg Sb 02 11 27.0 +5.2
KRBR Kerman 3.58 76 ePn Pn 02 10 33.8 +3.4
TVBK TV Kerman 3.58 76 ePn Pn 02 10 33.6 +3.1
TVBK e 02 10 55.9
IZEF Zefreh 3.72 355 ePn Pn 02 10 33.3 +1.0
IPIR Pirpir 3.84 336 ePn Pn 02 10 35.4 +1.4
NIAN Nian 3.94 113 ePn Pn 02 10 36.5 +1.4
ANAR Anarak 4.09 12 ePn Pn 02 10 38.8 +1.6
CHMN Cheshme madani 4.23 80 ePn Pn 02 10 41.4 +2.1
CHMN e 02 10 59.1
IKLH Kolahrood 4.25 347 ePn Pn 02 10 41.4 +1.9
SHME Shamm 4.33 135 P Pn 02 10 41.6 +1.1
QAM Ghamsar 4.71 347 ePn Pn 02 10 47.6 +1.9
MSFE Esma-Masafi 4.86 141 iP Pn 02 10 49.8 +2.0
SNR=15
MSFE Esma-Masafi 4.86 141 ePn Pn 02 10 50.2 +2.4
NAZ Nazwa, Dubai 4.91 147 P Pn 02 10 51.8 +3.3
MDH Madha 4.99 140 P Pn 02 10 51.5 +2.0
MDH Madha 4.99 140 ePn Pn 02 10 51.4 +2.0
TPRV Parvadeh(Tabas 5.11 40 ePn Pn 02 10 53.5 +2.3
UOSS Minazif 5.22 143 iP Pn 02 10 54.5 +1.8
SNR=16
UOSS Minazif 5.22 143 Pn 02 10 53.2 +0.5
UOSS Sn Sn 02 11 52.2 -0.3
UOSS Minazif 5.22 143 P Pn 02 10 54.5 +1.8
UOSS S Sn 02 11 54.1 +1.6
UOSS Minazif 5.22 143 ePn Pn 02 10 54.6 +1.9
HATD Hatta, Dubai 5.28 144 P Pn 02 10 56.4 +2.9
HATD Hatta, Dubai 5.28 144 ePn Pn 02 10 55.3 +1.8
ASHO Ashiyiah 5.36 146 ePn Pn 02 10 57.2 +2.6
GHVR GHOM 5.43 347 ePn Pn 02 10 58.5 +2.9
GHVR IAML 02 12 02.3
comp=N,157nm,0.5s
GHVR GHOM 5.43 347 Pn Pn 02 10 58.0 +2.4
GHVR GHOM 5.43 347 ePn Pn 02 10 58.5 +2.9
IKMR Kamar-syah 5.72 320 ePn Pn 02 11 00.2 +0.8
TKDS Koohdasht(Taba 5.79 39 ePn Pn 02 11 02.5 +1.9
BDRS Dareh Seyedi 5.79 326 ePn Pn 02 11 02.0 +1.2
TNSJ Nastanj 5.80 34 ePn Pn 02 11 03.0 +2.3
IQOM Qom 5.83 346 ePn Pn 02 11 02.5 +1.3
IVRN Varamin 5.87 352 ePn Pn 02 11 02.8 +1.2
IDOB Doab 6.03 321 ePn Pn 02 11 05.3 +1.3
HSAM Samen 6.14 326 ePn Pn 02 11 06.3 +0.8
ILAS Lasjerd 6.19 2 ePn Pn 02 11 09.8 +3.6
IKOO Kooshah 6.28 57 ePn Pn 02 11 09.6 +2.2
ITEG Tejag 6.34 53 ePn Pn 02 11 08.8 +0.6
IANJ Anjilo 6.35 9 ePn Pn 02 11 10.2 +1.8
IHSB Hasanabad 6.37 349 ePn Pn 02 11 10.1 +1.6
HAGD Aghdareh 6.41 332 ePn Pn 02 11 10.5 +1.3
IDMV Damavand 6.41 355 ePn Pn 02 11 11.4 +2.1
IFIR Firoozkooh 6.45 0 ePn Pn 02 11 13.7 +4.0
IRAZ Razeghan 6.65 340 ePn Pn 02 11 13.2 +0.7
NHDN Nehbandan 6.69 69 ePn Pn 02 11 14.1 +1.2
IKOM Komasi 6.69 319 ePn Pn 02 11 12.9 -0.1
ARQ Araqi 6.73 149 P Pn 02 11 15.1 +1.6
SNR=21
AFRZ Afriz 6.83 50 ePn Pn 02 11 16.0 +1.1
IALM Almabolaq 6.87 327 ePn Pn 02 11 16.0 +0.4
HOQ Hoqain 6.91 143 P Pn 02 11 17.9 +2.0
SNR=12
HOQ S Sn 02 12 33.2 -1.0
QABG Abgarm-Qazvin 7.04 338 ePn Pn 02 11 18.9 +1.0
HSRG Sareghieh 7.13 329 ePn Pn 02 11 20.8 +1.6
IGHG Ghaleghazi 7.35 316 ePn Pn 02 11 24.6 +2.4
IGLO Ghaloghah 7.36 7 ePn Pn 02 11 27.1 +4.9
QALM Alamut, Qazvin 7.45 347 ePn Pn 02 11 25.5 +2.0
BSY Bisya 7.55 147 P Pn 02 11 27.2 +2.4
SNR=12
IDHR Dehrash 7.72 317 ePn Pn 02 11 28.6 +1.5
WSAR Wadi Sarin 7.93 137 Pn Pn 02 11 31.8 +2.0
comp=N,1.7nm,0.3s,baz=338,slow=12,SNR=8.3
WSAR Sn Sn 02 12 53.5 -5.7
comp=N,1.2nm,0.3s,baz=300,slow=20,SNR=6.3
RAYN Ar Rayn 8.60 231 Pn 02 11 39.6 +0.5
RAYN Ar Rayn 8.60 231 P Pn 02 11 39.6 +0.5
HRA Herat 9.60 55 Pn 02 11 51.5 -1.5
GEYT Alibeck 9.81 26 Pn Pn 02 11 58.6 +3.0
comp=N,0.9nm,0.3s,baz=208,slow=12,SNR=16
GEYT Alibeck 9.81 26 Pn 02 11 54.7 -0.9
GYA0B ALIBECK ARRAY 9.81 26 Pn 02 11 53.8 -1.8
WHFO Wadi Hawf 11.25 175 P Pn 02 12 14.4 -1.0
SNR=50
DMTO DMTO 11.59 170 P Pn 02 12 21.0 +1.0
SNR=12
RBK Rabkut 11.70 173 P Pn 02 12 22.0 +0.4
SNR=13
ABTO Aybut 11.78 177 P Pn 02 12 21.4 -1.3
SNR=149
GNI Garni 12.77 331 LR LR 02 17 09.4
comp=N,14nm,20.8s,baz=40,slow=35
ASF Jabal al Asfar 13.97 286 Pn Pn 02 12 52.3 -0.2
comp=N,0.6nm,0.3s,baz=80,slow=4.3,SNR=9.2
ASF Sn Sn 02 15 14.6 -13
comp=N,0.1nm,0.3s,baz=41,slow=17,SNR=2.8
KBL Kabul 14.84 65 Pn 02 12 60.0 -4.6
KBL Kabul 14.84 65 P Pn 02 13 00.0 -4.6
GHAJ Ghor Haditha 15.01 282 Pn Pn 02 13 07.7 +1.1
GROC Groznyy 15.07 340 eP Pn 02 13 07.4 0.0
GROC eS Sn 02 15 55.3 +1.4
GROC pmax pmax
comp=Z,5.0nm,0.8s
ZEI Tsey 15.34 335 eP P 02 13 17.5 +1.6
ZEI pmax pmax
comp=Z,7.0nm,0.6s
MMAI Mount Meron Ar 15.35 289 Pn Pn 02 13 11.0 -0.2
comp=Z,0.8nm,0.3s,baz=99,slow=16,SNR=9.0
MMAI Sn Sn 02 15 55.5 -5.4
comp=Z,0.6nm,0.3s,baz=91,slow=27,SNR=5.4
MMAI LR LR 02 20 34.1
comp=Z,139nm,19.2s,baz=100,slow=43
HRFI Mount Harif 15.44 278 Pn Pn 02 13 11.2 -1.2
PRNI Paran 15.46 279 Pn Pn 02 13 11.6 -1.1
EIL Elat 15.52 276 Pn Pn 02 13 13.8 +0.4
comp=Z,0.3nm,0.3s,baz=34,slow=6.8,SNR=3.5
EIL LR LR 02 20 25.9
comp=Z,169nm,18.8s,baz=112,slow=42
EIL Elat 15.52 276 Pn Pn 02 13 13.9 +0.4
MBRI Mt Berech 15.55 277 Pn Pn 02 13 14.6 +0.7
KRMI Paran Flat 15.70 278 Pn Pn 02 13 16.3 +0.4
KZIT Kziot 15.99 281 Pn Pn 02 13 20.8 +1.3
DAMY Dhamar 16.46 210 Pn 02 13 24.5 -1.4
DAMY Dhamar 16.46 210 P Pn 02 13 24.3 -1.6
SNR=13
KBZ Khabaz 16.52 334 Pn P 02 13 28.3 -0.5
comp=Z,0.1nm,0.3s,baz=30,slow=3.9,SNR=4.8
KBZ Khabaz 16.52 334⇑eP P 02 13 27.8 -0.9
KIV Kislovodsk 16.80 334 P P 02 13 28.3 -1.5
KIV Kislovodsk 16.80 334 eP P 02 13 31.5 -0.4
KIV pmax pmax
comp=Z,33nm,0.9s
KIV MLR MLR
comp=Z,55nm,13.0s
SOCY Socotra 16.95 176 Pn 02 13 27.8 -4.0
SOCY IAmb IAmb 02 13 35.9
comp=Z,15nm,0.9s
NIL Nilore 18.05 71 P Pn 02 13 42.7 -2.7
NIL IAmb IAmb 02 13 51.5
comp=Z,18nm,1.1s
NIL Nilore 18.05 71 P Pn 02 13 42.7 -2.7
NIL pmax pmax
comp=Z,18nm,1.1s
BTK Batken 18.38 49 P 02 13 45.2 -4.2
BTK Batken 18.38 49 P P 02 13 45.2 -4.2
BTK pmax pmax
comp=Z,12nm,1.1s
BR131 Keskin Array S 18.91 309 P P 02 13 54.5 -0.9
BR131 Keskin Array S 18.91 309⇓eP Pn 02 13 57.6 +1.6
BRTR Keskin Array B 18.91 309 P Pn 02 13 58.2 +2.2
comp=Z,0.1nm,0.3s,baz=128,slow=12,SNR=11
BRTR Keskin Array B 18.91 309 P P 02 13 54.3 -1.1
BRTR Keskin Array B 18.91 309ceP Pn 02 13 58.5 +2.5
BRTR pmax pmax
comp=Z,3.0nm,1.0s
ATD Arta Tunnel 19.84 210 P Pn 02 14 08.7 +1.6
comp=Z,0.6nm,0.3s,baz=73,slow=19,SNR=3.1
ATD LR LR 02 22 55.8
comp=Z,123nm,20.5s,baz=27,slow=40
ATD Arta Tunnel 19.84 210 P P 02 14 05.1 -0.5
ATD IAmb IAmb 02 14 19.8
comp=Z,12nm,0.8s
KK31 Karatay Array 19.91 41 P P 02 14 04.2 -1.9
KK31 Karatay Array 19.91 41 iP P 02 14 06.4 +0.3
KKAR Karatay Array 19.91 41 P P 02 14 04.6 -1.5
KKAR Karatay Array 19.91 41 P P 02 14 04.4 -1.7
KKAR IAmb IAmb 02 14 15.3
comp=Z,5.0nm,0.7s
KKAR Karatay Array 19.91 41 P P 02 14 04.6 -1.5
KKAR pmax pmax
comp=Z,5.0nm,0.7s
ARSB Arslanbob 20.43 48 P P 02 14 10.0 -2.0
ARSB IAmb IAmb 02 14 19.5
comp=Z,12nm,0.8s
ARSB Arslanbob 20.43 48 P P 02 14 10.0 -2.0
ARSB pmax pmax
comp=Z,12nm,0.8s
ELL Elmali 20.57 297 P P 02 14 12.4 -1.0
ELL Elmali 20.57 297 P P 02 14 12.4 -1.0
ELL pmax pmax
comp=Z,31nm,0.6s
AML Almayashu 21.30 47 P P 02 14 23.0 +1.4
SNR=9.3
AKTO Aktyubinsk 21.60 9 P P 02 14 25.1 +0.9
comp=Z,9.2nm,0.8s,baz=201,slow=12,SNR=22
AKTO LR LR 02 24 39.6
comp=Z,78nm,19.9s,baz=199,slow=42
AAK Ala-Archa 22.07 47 P P 02 14 31.0 +1.4
comp=Z,8.7nm,0.8s,baz=208,slow=12,SNR=14
AAK LR LR 02 24 36.9
comp=Z,232nm,18.1s,baz=251,slow=41
AAK Ala-Archa 22.07 47 P P 02 14 32.9 +3.3
SNR=9.6
AAK Ala-Archa 22.07 47 P P 02 14 27.5 -2.1
AAK IAmb IAmb 02 14 36.9
comp=Z,8.8nm,0.8s
AAK Ala-Archa 22.07 47⇓eP P 02 14 30.8 +1.2
AAK pmax pmax
comp=Z,10.0nm,0.8s
KZA Kyzart 22.28 49 P P 02 14 36.8 +4.6
SNR=6.8
KBK Karagaybulak 22.37 47 P P 02 14 36.7 +3.9
SNR=13
USP Ospenovka 22.40 45 P P 02 14 36.3 +3.3
SNR=9.0
CHMS Chumysh 22.41 46 P P 02 14 36.4 +3.3
SNR=5.4
VRH Novokhopyorsk 23.51 342 eP P 02 14 44.8 +0.6
VRH eS S 02 18 54.8 -2.4
VRH pmax pmax
comp=Z,40nm,0.7s
VRH smax smax
comp=E,50nm,2.1s
VORD Divnogorie 24.00 339 eP P 02 14 48.4 -0.6
VORD pmax pmax
comp=Z,10.0nm,0.4s
VSR Storozhevoye 24.26 339 eP P 02 14 52.2 +0.8
VSR eS S 02 19 08.5 -0.7
VSR pmax pmax
comp=Z,8.0nm,0.4s
VSR smax smax
comp=N,320nm,4.3s
IDI Anoyia 24.30 292 P P 02 14 54.0 +2.0
comp=N,5.1nm,0.5s,baz=83,slow=11,SNR=10.0
TOPG Topolog 24.85 316 ⇓P P 02 14 59.9 +3.1
HARR Harsova 25.03 315 ⇓P P 02 15 02.3 +3.8
ELND Elena 25.57 310 ⇑P P 02 15 10.7 +7.3
PDGK Podgornoye 25.64 49 P P 02 15 04.9 +0.7
MILM Milestii Mici 25.71 320 ⇓P P 02 15 05.1 +0.6
VRI Vrincioaia 26.35 316 ⇑P P 02 15 13.4 +2.9
PLOR Plostina 26.39 316 ⇑P P 02 15 14.0 +3.1
MLR Muntele Rosu 26.65 315 P P 02 15 15.7 +2.5
comp=N,3.3nm,0.9s,baz=63,slow=11,SNR=6.4
MLR Muntele Rosu 26.65 315 ⇑P P 02 15 15.8 +2.5
MLR Muntele Rosu 26.65 315 P P 02 15 12.1 -1.2
MLR IAmb IAmb 02 15 27.8
comp=Z,4.2nm,0.7s
MLR Muntele Rosu 26.65 315 P P 02 15 12.1 -1.2
MLR pmax pmax
comp=Z,4.0nm,0.7s
SORM Soroca 26.67 322 ⇓P P 02 15 13.3 0.0
TESR Tescani 26.73 318 ⇑P P 02 15 15.0 +1.1
HUMR Humele 26.82 312 ⇑P P 02 15 19.5 +4.8
OZUR 27.04 316 ⇑P P 02 15 20.6 +3.9
OZUR ⇑ pP 02 15 22.7 +0.4
KOLN Koldanda 27.12 85 eP P 02 15 18.5 +0.7
BRVK Borovoye 27.12 24 P P 02 15 16.2 -1.1
BRVK Borovoye 27.12 24 P P 02 15 17.3 0.0
BVAR Borovoye Array 27.13 24 P P 02 15 18.8 +1.4
comp=Z,3.6nm,0.4s,baz=216,slow=7.5,SNR=32
BVAR PcP PcP 02 18 38.4 +0.7
comp=Z,0.7nm,0.4s,baz=198,slow=4.0,SNR=4.0
BVAR ScP ScP 02 22 16.1 -1.2
comp=Z,0.7nm,0.8s,baz=266,slow=4.3,SNR=4.7
DANN Dangsing 27.16 84 eP P 02 15 19.4 +1.2
comp=Z,101nm,0.9s
VOIR 27.18 314 ⇓P P 02 15 20.1 +2.1
DOPR Dopca 27.22 316 ⇑P P 02 15 18.2 -0.1
ARU Arti 27.55 7 diP P 02 15 23.1 +2.0
ARU 02 16 04.5
ARU S S 02 20 07.5 +6.1
ARU SS SnSn 02 21 17.7 +5.4
ARU pmax pmax
comp=Z,15nm,2.0s
AKASG Malin Array Be 27.85 327 P P 02 15 23.2 -0.6
comp=Z,0.5nm,0.3s,baz=135,slow=8.5,SNR=9.2
AKASG Malin Array Be 27.85 327 P P 02 15 22.9 -0.9
AKASG Malin Array Be 27.85 327ceP P 02 15 23.7 -0.1
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKBB Malin Array Si 27.85 327 P P 02 15 23.0 -0.8
AKBB IAmb IAmb 02 15 38.8
comp=Z,4.3nm,0.9s
AKBB Malin Array Si 27.85 327 P P 02 15 23.0 -0.8
AKBB pmax pmax
comp=Z,4.0nm,1.0s
GKN Gorkha 27.98 85 eP P 02 15 26.2 +0.7
BURAR Bucovina Array 28.14 318 ⇑P P 02 15 27.9 +1.3
BUR08 Bucovina Ar. S 28.16 318 P P 02 15 26.5 -0.4
OBN Obninsk 28.42 340 iP P 02 15 27.0 -1.8
OBN i 02 16 14.7
OBN i 02 18 42.3
OBN pmax pmax
comp=Z,5.0nm,0.8s
DMN Daman 28.46 85 eP P 02 15 30.4 +0.5
comp=Z,32nm,0.8s
KKN Kakani 28.58 85 eP P 02 15 31.5 +0.6
comp=Z,32nm,0.6s
GZR Gura Zlata 28.61 313 ⇑P P 02 15 35.4 +4.7
PKIN Phulchoki 28.72 85 eP P 02 15 32.4 +0.2
PKI Pulchoki 28.73 85 eP P 02 15 32.6 +0.3
comp=Z,42nm,0.9s
MAKZ Makanchi 28.75 44 P P 02 15 31.0 -0.9
MAKZ Makanchi 28.75 44 P P 02 15 32.9 +0.9
KURBB Kurchatov Arra 28.90 35 P P 02 15 34.6 +1.4
comp=Z,5.1nm,0.8s,baz=235,slow=9.2,SNR=36
MK31 Makanchi Array 28.94 44 P P 02 15 32.9 -0.8
MK31 IAmb IAmb 02 15 35.7
comp=Z,5.5nm,0.7s
MK31 Makanchi Array 28.94 44 iP P 02 15 34.5 +0.9
MKAR Makanchi Array 28.94 44 P P 02 15 34.8 +1.1
comp=Z,4.9nm,0.7s,baz=232,slow=8.1,SNR=64
MKAR PcP PcP 02 18 40.6 -1.7
comp=Z,0.2nm,0.6s,baz=234,slow=3.1,SNR=2.3
MKAR ScP ScP 02 22 21.1 -1.9
comp=Z,0.2nm,0.8s,baz=270,slow=3.8,SNR=2.6
MKAR Makanchi Array 28.94 44 P P 02 15 32.5 -1.1
MKAR Makanchi Array 28.94 44ceP P 02 15 35.0 +1.4
MKAR pmax pmax
comp=Z,5.0nm,0.7s
KURK Kurchatov 29.00 35 P P 02 15 33.0 -1.0
KURK IAmb IAmb 02 15 36.4
comp=Z,7.1nm,0.9s
KURK Kurchatov 29.00 35⇑eP P 02 15 35.5 +1.4
KURK pmax pmax
comp=Z,5.0nm,0.8s
GUN Gumba 29.08 84 eP P 02 15 36.1 +0.7
comp=Z,37nm,0.7s
JIRN Jiri 29.39 85 eP P 02 15 38.8 +0.5
comp=Z,36nm,0.7s
BZS Buzias 29.44 312 ⇑P P 02 15 39.2 +1.1
KIRV Kirov 29.49 356 P P 02 15 39.9 +1.6
comp=Z,8.3nm,0.7s,baz=291,slow=2.3,SNR=3.7
RAMN Ramite 29.89 86 eP P 02 15 42.3 -0.3
comp=Z,18nm,0.6s

KOLS Kolonicke sedl 30.50 319 eP P 02 15 51.5 +4.1
KOLS Kolonicke sedl 30.50 319 eP P 02 15 51.5 +4.1
ODAN Odare 30.60 86 eP P 02 15 48.7 -0.1
comp=Z,7.6nm,0.5s
VYHS Vyhne 32.34 316 eP P 02 16 06.0 +2.4
VYHS Vyhne 32.34 316 eP P 02 16 06.0 +2.4
OJC Ojcow 32.53 319 IAmb IAmb 02 16 03.8
comp=Z,7.5nm,1.1s
KMBO Kilima Mbogo 33.59 209 LR LR 02 31 10.8
comp=Z,108nm,19.5s,baz=0.0,slow=38
ZAA0 Zalesovo Array 33.98 34 P P 02 16 17.2 -0.6
ZALV Zalesovo Beam 33.98 34 P P 02 16 18.3 +0.5
comp=Z,10nm,0.7s,baz=242,slow=9.8,SNR=44
ZALV PcP PcP 02 18 55.1 -0.5
comp=Z,0.5nm,0.5s,baz=235,slow=5.1,SNR=2.6
ZALV LR LR 02 32 12.1
comp=Z,79nm,20.1s,baz=260,slow=40
ZALV Zalesovo Beam 33.98 34 P P 02 16 17.0 -0.8
ZALV PcP 02 18 55.2 -0.4
VSU Vasula 34.34 336⇓iP P 02 16 21.6 +0.7
CHVC Chvalec 34.85 318 eP P 02 16 26.4 +0.9
GERES GERESS Array B 35.63 314 P P 02 16 32.2 -0.1
comp=Z,0.5nm,0.4s,baz=97,slow=9.7,SNR=7.8
GERES GERESS Array B 35.63 314 P P 02 16 31.5 -0.9
KHC Kasperske Hory 35.80 315 eP P 02 16 34.2 +0.5
KHC Kasperske Hory 35.80 315 P P 02 16 32.7 -1.0
KHC Kasperske Hory 35.80 315⇑eP P 02 16 34.4 +0.7
KHC pmax pmax
comp=Z,8.0nm,0.8s
SQTA Sankt Quirin 36.77 311 epP P 02 16 42.6 +0.5
comp=Z,5.9nm,0.4s
FINES FINESS Array B 36.79 339 P P 02 16 42.5 +0.6
comp=Z,4.6nm,0.5s,baz=143,slow=11,SNR=29
FINES FINESS Array B 36.79 339 P P 02 16 41.1 -0.8
MOTA Moosalm 36.87 311 epP P 02 16 44.2 +1.2
comp=Z,4.7nm,0.8s
KEST Kesra 36.97 292 P P 02 16 48.0 +4.1
comp=Z,3.8nm,0.7s,baz=289,slow=3.1,SNR=5.7
KEST Kesra 36.97 292 IAmb IAmb 02 16 56.2
comp=Z,5.8nm,0.9s
FETA Feichten 37.04 311 epP P 02 16 45.5 +1.1
comp=Z,2.8nm,0.6s
RETA Reutte 37.13 311 pP P 02 16 46.4 +1.3
comp=Z,2.5nm,0.5s
DAVA Damuels 37.66 311 eP P 02 16 50.0 +0.3
comp=Z,6.4nm,0.4s
GTA Gaotai 39.81 62 ⇑P P 02 17 09.3 +1.5
GTA pP pP 02 17 14.8 +1.2
GTA sP sP 02 17 17.4 +1.5
NC602 NORSAR Array S 41.78 331 eP P 02 17 23.8 +0.2
NC405 NORSAR Array S 41.90 331 P P 02 17 23.1 -1.5
NB2 NORSAR Subarra 42.07 331 P P 02 17 25.7 -0.3
comp=Z,2.0nm,0.5s,baz=120,slow=8.6
NB2 NORSAR Subarra 42.07 331 P P 02 17 25.7 -0.3
baz=120,slow=8.6
NOA NORSAR Array B 42.07 331 P P 02 17 26.0 0.0
comp=Z,1.8nm,0.5s,baz=121,slow=8.2,SNR=20
NOA LR LR 02 37 45.8
comp=Z,30nm,18.8s,baz=245,slow=40
CHTO Chiang Mai 43.21 93 P P 02 17 34.7 -1.1
CHTO IAmb IAmb 02 17 38.1
comp=Z,5.8nm,0.8s
CHTO Chiang Mai 43.21 93 P P 02 17 34.7 -1.1
CHTO pmax pmax
comp=Z,6.0nm,0.9s
ARCES ARCESS Array B 43.33 346 P P 02 17 36.7 +0.7
comp=Z,0.10nm,0.3s,baz=144,slow=8.4,SNR=15
ARCES ARCESS Array B 43.33 346 P P 02 17 35.0 -1.0
ARE0 ARCESS Array S 43.33 346 eP P 02 17 37.6 +1.5
CMAR Chiang Mai Arr 43.34 94 P P 02 17 36.9 +0.1
comp=Z,2.6nm,0.8s,baz=285,slow=9.1,SNR=10
CMAR LR LR 02 38 59.8
comp=Z,28nm,18.9s,baz=130,slow=41
CMAR Chiang Mai Arr 43.34 94ceP P 02 17 38.5 +1.6
CMAR pmax pmax
comp=Z,3.0nm,0.8s
KTK1 Kautokeino 43.40 345 eP P 02 17 36.7 +0.1
MOR8 Moi Rana 43.78 339 eP P 02 17 40.4 +0.6
STOK Stokkvaagen 44.34 338 eP P 02 17 45.0 +0.9
HAMF Hammerfest 44.59 347 eP P 02 17 47.2 +1.1
TRO Tromso 44.87 344 eP P 02 17 49.0 +0.6
SONM Songino Array 44.95 50 P P 02 17 50.8 +1.2
comp=Z,1.6nm,0.9s,baz=264,slow=8.3,SNR=13
SONM PcP PcP 02 19 30.9 +0.2
comp=Z,0.2nm,0.5s,baz=235,slow=2.5,SNR=2.8
SONM Songino Array 44.95 50 P P 02 17 48.3 -1.3
LOF Lofoten 45.29 341 eP P 02 17 51.7 0.0
ULN Ulaanbaatar 45.40 50 P P 02 17 51.9 -1.2
ULN IAmb IAmb 02 17 55.0
comp=Z,2.9nm,0.9s
ULN Ulaanbaatar 45.40 50 P P 02 17 51.9 -1.2
ULN pmax pmax
comp=Z,3.0nm,1.0s
ESDC Sonseca Array 47.25 299 P P 02 18 08.0 +0.3
comp=Z,0.3nm,0.5s,baz=74,slow=7.6,SNR=2.7
ESDC Sonseca Array 47.25 299 P P 02 18 06.7 -0.9
XAN Xi'an 47.58 69 P P 02 18 09.0 -1.3
XAN pP sP 02 18 21.1 +2.6
TOA0 Torodi Ar. Sit 49.83 263 P P 02 18 27.1 -0.6
TORD Torodi Ar. Bea 49.83 263 P P 02 18 28.4 +0.6
comp=Z,3.5nm,0.7s,baz=61,slow=8.1,SNR=38
TORD Torodi Ar. Bea 49.83 263 P P 02 18 27.3 -0.4
SPA0 Spitsbergen Ar 51.70 351 eP P 02 18 41.5 +0.5
HIA Hailar 53.82 48⇓iP P 02 18 58.3 +1.2
TIXI Tiksi 58.23 21⇓eP P 02 19 28.8 +0.5
TIXI pmax pmax
comp=Z,2.0nm,0.7s
DBIC Dimbokro 58.58 259 P P 02 19 32.5 +1.0
comp=Z,3.2nm,1.0s,baz=33,slow=3.7,SNR=5.0
DBIC Dimbokro 58.58 259 P P 02 19 31.1 -0.5
DBIC IAmb IAmb 02 19 40.3
comp=Z,5.2nm,1.1s
KIC Kosan Boka 58.63 259 eP P 02 19 33.7 +1.7
comp=Z,13nm,1.2s
TIC Toumodi 58.73 259 eP P 02 19 32.3 -0.4
LIC Lamto 58.95 259 eP P 02 19 34.1 0.0
KSRS Korea Array 61.85 61 P P 02 19 53.4 -0.3
comp=Z,2.1nm,0.6s,baz=275,slow=5.7,SNR=7.7
KSRS LR LR 02 49 48.0
comp=Z,35nm,20.2s,baz=290,slow=39
BOSA Boshof 63.20 207 P P 02 20 03.8 +1.1
comp=Z,4.0nm,1.0s,baz=335,slow=4.8,SNR=4.2
BOSA Boshof 63.20 207 P P 02 20 02.3 -0.4
BOSA IAmb IAmb 02 20 21.7
comp=Z,2.7nm,1.1s
BOSA Boshof 63.20 207 P P 02 20 02.3 -0.4
BOSA pmax pmax
comp=Z,3.0nm,1.1s
SEY Seymchan 68.63 29⇑eP P 02 20 36.8 -0.4
BILL Bilibino 71.45 21⇓iP P 02 20 56.2 +1.8
BILL pmax pmax
comp=Z,4.0nm,1.0s
ILAR Eielson Array 85.11 8 P P 02 22 10.1 0.0
comp=Z,0.7nm,0.7s,baz=321,slow=3.8,SNR=9.5
ILAR Eielson Array 85.11 8 P P 02 22 09.2 -0.8
ILAR Eielson Array 85.11 8 P P 02 22 09.3 -0.8
BPAW Bear Paw Mtn. 85.17 10 P P 02 22 09.9 -0.5
MCK McKinley 85.83 9 P P 02 22 12.2 -1.5
MCK McKinley 85.83 9 P P 02 22 12.2 -1.5
MCK pmax pmax
comp=Z,9.0nm,1.2s
SCRK Sand Creek 86.22 7 P P 02 22 14.9 -0.8
SCRK IAmb IAmb 02 22 22.9
comp=Z,2.9nm,1.0s
YKA Yellowknife Ar 88.09 354 P P 02 22 24.9 +0.3
comp=Z,0.6nm,0.8s,baz=6.3,slow=4.9,SNR=12
WRA Warramunga Arr 92.53 111 P P 02 22 45.3 -0.8
comp=Z,0.6nm,1.0s,baz=314,slow=4.0,SNR=3.1
ASAR Alice Springs 94.03 115 P P 02 22 52.3 -0.6
comp=Z,0.8nm,0.8s,baz=311,slow=4.8,SNR=5.6

*MEX **06** 02:24:43.1±0.6, 15.°00N×92.°26W, h57km±18km, MD3.8*
*GCG **06** 02:24:44.8±0.6, 15.°42N×92.°83W, h12km±999km, MD3.9*
ISC 06 02:24:43.2±1.7, 15.°18N±0.°09×93.°20W±0.°08, h67km±16km, n8, σ1.°20/16, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.52	358	eP	Pn	02 24 55.8	-0.2
PCIG				iS	Sn	02 25 05.8	+0.5
THIG		0.94	107	iP	Pn	02 25 02.1	+1.3
THIG				eS	Sn	02 25 12.5	-1.4
CCIG	Comitan	1.50	43	eP	Pn	02 25 09.0	+0.8
CCIG				iS	Sn	02 25 24.7	-2.4
TGIG		1.59	3	iP	Pn	02 25 09.6	+0.3
TGIG				eS	Sn	02 25 30.6	+1.5
STG3	Santiaguito 3,	1.64	106	eP	Pn	02 25 10.2	0.0
STG3				eS	Sn	02 25 29.4	-1.1
FUG	Fuego 3	2.39	107	eP	Pn	02 25 21.8	+1.5
FUG				eS	Sn	02 25 48.4	-0.3
CMIG	Matias Romero	2.50	320	eP	Pn	02 25 21.3	-0.2
CMIG				iS	Sn	02 25 50.6	-0.4
IXG	Ixpaco	2.85	110	eP	Pn	02 25 25.7	-0.8
IXG				eS	Sn	02 26 00.6	+0.8

*BJI **06** 02:33:04.8±0.0, 0.°04S×123.°36E, h104km, mB5.0/3, mb4.4/17*
*NEIC **06** 02:33:06.0±0.9, 0.°08S±0.°07×123.°42E±0.°07, h138km±7km, mb4.0/12, Error ellipse: s-maj=10.2km s-min=9.6km az=194.0*
*IDC **06** 02:33:09.0±2.5, 0.°04S×123.°44E, h157km±22km, mb3.6/13, mb1 3.8/15, mb1mx3.6/35, mbtmp4.1/15, MS3.1/2, Ms1 3.2/2, ms1mx2.6/34, Error ellipse: s-maj=22.5km s-min=11.4km az=69.0*
*DJA **06** 02:33:08.5±0.3, 0.°S±2.°×12.°3E±.°, h109km±6km, M4.5/22, mb4.7/13, mB5.0/8, MLv4.6/22, MLv4.6/12, Mw(mB)4.3/8*
ISC 06 02:33:06.4±0.6, 0.°13S±0.°05×123.°42E±0.°05, h136km±5km, n76, σ1.°37/90, mb4.0/19, 2C, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	0.90	38	P	Pn	02 33 31.1	+2.1
LUWI	Luwuk	1.11	216	P	Pn	02 33 31.0	0.0
LUWI				S	Sn	02 33 48.3	-1.3
LUWI	Luwuk	1.11	216		Pn	02 33 30.8	-0.1
LUWI				Sn	Sn	02 33 48.3	-1.3
MRSI	Marisa	1.60	292	P	Pn	02 33 35.8	-0.3
MRSI				S	Sn	02 33 56.6	-2.1
APSI	Ampana	1.94	246	P	Pn	02 33 40.5	+0.6
APSI				S	Sn	02 34 04.7	-0.9
SANI	Sanana	3.19	127	P	Pn	02 33 54.8	-1.0
MPSI	Mapaga	3.56	278	P	Pn	02 34 02.2	+1.7
KDI	Kendari	3.88	192	P	Pn	02 34 06.8	+2.0
TNTI	Ternate	4.04	77	P	Pn	02 34 08.5	+1.6
TNTI	Ternate	4.04	77	Pn	Pn	02 34 06.5	-0.4
TNTI					Sn	02 34 53.4	-0.4
LBMI	Labuha	4.11	97	P	Pn	02 34 07.8	0.0
TTSI	Tana Toraja	4.62	231	P	Pn	02 34 15.9	+1.3
NLAI	Namlea	4.80	130	P	Pn	02 34 18.4	+1.5
SPSI	Sidrap Palu	5.28	224	P	Pn	02 34 25.3	+2.0
	0.8nm2μm78nm,0.5s						
BNSI	Bone	5.38	218	P	Pn	02 34 27.6	+2.9
	0.4nm1μm131nm,0.6s						
BBSI	Bau Bau	5.39	189	P	Pn	02 34 26.3	+1.5
	0.1nm16nm,0.8s						
AAI	Ambon	5.93	127	P	Pn	02 34 34.8	+2.7
	1.1nm3μm249nm,0.6s						
BKSI	Bulukumba	6.12	213	P	Pn	02 34 36.3	+1.7
	0.2nm39nm,0.8s						
MSAI	Masohi	6.36	120	P	Pn	02 34 40.5	+2.6
	0.2nm2μm26nm,0.6s						
KCP	Kidapawan	7.29	13⇑eP		Pn	02 34 55.1	+4.8
BNDI	Bandanaira	7.81	124	P	Pn	02 34 59.5	+2.2
	1.1nm302nm,0.9s						
SWI	Sorong	7.87	95	P	Pn	02 34 58.6	+0.5
	0.4nm2μm44nm,0.7s						
SIJI	Sorong	7.88	95	P	Pn	02 35 00.9	+2.6
	4.0nm,0.3s,baz=300,slow=11,SNR=7.0						
SIJI				S	Sn	02 36 28.6	+2.7
	1.3nm,0.3s,baz=52,slow=19,SNR=2.7						
FAKI	Fak Fak	9.25	108	P	Pn	02 35 16.1	-0.5
	31nm,0.5s						
FAKI	Fak Fak	9.25	108	Pn	Pn	02 35 16.5	-0.2
FAKI				Sn	Sn	02 36 55.1	-4.0
KKM	Kota Kinabalu	9.46	311		Pn	02 35 20.6	+1.1
JAGI	Jajag, Banyuwa	12.41	228	Pn	Pn	02 35 55.9	-2.6
MTN	Manton Dam	14.76	149	Pn	Pn	02 36 29.1	+0.5
KNRA	Kununurra	16.32	161		Pn	02 36 47.4	-0.4
FITZ	Fitzroy Crossi	17.99	173	P	Pn	02 37 08.2	+0.2
	0.4nm,0.3s,baz=9.0,slow=10,SNR=5.9						
FITZ	Fitzroy Crossi	17.99	173	P	Pn	02 37 08.0	+0.1
FITZ				IAmb	IAmb	02 37 13.0	
	comp=Z,9.6nm,1.1s						
WB0	Warramunga Arr	22.28	152	P	P	02 37 52.7	+0.1
WB0				IAmb	IAmb	02 38 06.4	
	comp=Z,8.3nm,1.1s						
WRA	Warramunga Arr	22.41	152	P	P	02 37 54.8	+1.0
	comp=Z,3.1nm,0.7s,baz=333,slow=10.0,SNR=11						
WRA	Warramunga Arr	22.41	152	P	P	02 37 54.4	+0.5
WB2	Warramunga Arr	22.41	152	P	P	02 37 54.0	+0.1
WB2				IAmb	IAmb	02 38 09.1	
	comp=Z,3.8nm,0.7s						
WR0	Warramunga Arr	22.51	152	P	P	02 37 55.3	+0.3
WR0				IAmb	IAmb	02 38 06.4	
	comp=Z,4.6nm,0.8s						
COEN	Coen	23.90	126	P	P	02 38 07.8	+0.1
COEN				IAmb	IAmb	02 38 11.0	
	comp=Z,5.6nm,0.7s						
ASAR	Alice Springs	25.51	157	P	P	02 38 23.9	+1.5
	comp=Z,0.7nm,0.7s,baz=330,slow=7.2,SNR=5.0						
ASAR				PcP	PcP	02 41 51.4	+0.8
	comp=Z,0.9nm,0.5s,baz=344,slow=1.8,SNR=6.9						
ASAR	Alice Springs	25.51	157	P	P	02 38 21.9	-0.5
ASAR					PcP	02 41 50.0	-0.5
CMAR	Chiang Mai Arr	30.33	309	P	P	02 39 06.6	+1.3
	comp=Z,1.6nm,0.6s,baz=144,slow=8.0,SNR=7.6						
CMAR				LR	LR	02 51 16.9	
	comp=Z,19nm,19.3s,baz=122,slow=36						
STKA	Stephens Creek	35.95	153	P	P	02 39 55.6	+1.7
	comp=Z,2.2nm,0.5s,baz=333,slow=10,SNR=10						
STKA				PcP	PcP	02 42 18.6	+0.6
	comp=Z,0.9nm,0.4s,baz=0.0,slow=5.1,SNR=3.5						
STKA	Stephens Creek	35.95	153	P	P	02 39 54.3	+0.4
STKA					PcP	02 42 17.3	-0.6
XAN	Xi'an	36.62	340	P	P	02 40 00.9	+1.3
XAN				sP	pP	02 40 34.7	+5.1
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MJAR	Matsushiro Arr	38.98	19	P	P	02 40 18.7	-0.8
	comp=Z,2.2nm,0.6s,baz=193,slow=8.5,SNR=6.8						
MJAR	Matsushiro Arr	38.98	19	P	P	02 40 18.3	-1.2
ODAN	Odare	43.83	311	eP	P	02 41 00.8	+1.4
TAPN	Taplejung	43.85	311	eP	P	02 41 01.0	+1.3
RAMN	Ramite	44.48	310	eP	P	02 41 06.2	+1.6
	comp=Z,21nm,0.6s						
USRK	Ussuriysk Ar.	44.80	9	P	P	02 41 06.7	+0.2
	comp=Z,1.3nm,0.6s,baz=209,slow=7.9,SNR=4.1						
USRK	Ussuriysk Ar.	44.80	9	P	P	02 41 05.8	-0.7
GTA	Gaotai	44.89	334	⇑P	P	02 41 09.2	+1.6
GTA				pP	pP	02 41 35.9	-2.5
GTA				sP	sP	02 41 46.6	-7.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
JIRN	Jiri	45.16	311	eP	P	02 41 11.3	+1.2
	comp=Z,25nm,0.6s						
GUN	Gumba	45.52	311	eP	P	02 41 14.3	+1.3
	comp=Z,24nm,0.5s						
PKI	Pulchoki	45.71	310	eP	P	02 41 15.2	+0.8
PKIN	Phulchoki	45.72	310	eP	P	02 41 14.5	+0.1
	comp=Z,6.9nm,0.5s						
KKN	Kakani	45.92	310	eP	P	02 41 16.9	+1.0
DMN	Daman	45.96	310	eP	P	02 41 17.6	+1.3
GKN	Gorkha	46.51	310	eP	P	02 41 21.4	+0.9
KOLN	Koldanda	47.20	309	eP	P	02 41 27.3	+1.4
	comp=Z,24nm,0.6s						
DANN	Dangsing	47.36	310	eP	P	02 41 28.3	+1.1
	comp=Z,43nm,0.6s						
SONM	Songino Array	50.02	345	P	P	02 41 47.8	+0.8
	comp=Z,2.4nm,0.7s,baz=159,slow=8.9,SNR=21						
SONM				PcP	PcP	02 43 04.3	-0.6
	comp=Z,0.7nm,0.7s,baz=163,slow=2.9,SNR=4.1						
SONM	Songino Array	50.02	345	P	P	02 41 46.5	-0.5
SONM					PcP	02 43 04.0	-1.0
MK31	Makanchi Array	58.95	328	P	P	02 42 50.8	-0.7
MKAR	Makanchi Array	58.95	328	P	P	02 42 51.0	-0.5
	comp=Z,0.9nm,0.6s,baz=123,slow=8.8,SNR=20						
MKAR				PcP	sP	02 43 38.1	-0.5
	comp=Z,1.1nm,0.5s,baz=165,slow=3.0,SNR=10						
MKAR				ScP	ScP	02 47 24.9	-2.2
	comp=Z,0.2nm,0.6s,baz=145,slow=4.5,SNR=3.3						
MKAR				LR	LR	03 10 13.6	
	comp=Z,23nm,18.2s,baz=343,slow=38						
MKAR	Makanchi Array	58.95	328	P	P	02 42 50.3	-1.1
PETK	Petropavlovsk-	60.24	23	P	P	02 43 01.4	+1.3
	comp=Z,3.9nm,0.7s,baz=189,slow=3.5,SNR=3.9						
PETK	Petropavlovsk-	60.24	23	P	P	02 42 58.3	-1.8
ZALV	Zalesovo Beam	62.61	335	P	P	02 43 15.5	-0.5
	comp=Z,0.8nm,0.4s,baz=145,slow=5.5,SNR=3.0						
ZALV	Zalesovo Beam	62.61	335	P	P	02 43 15.4	-0.6
KURBB	Kurchatov Arra	63.29	330	P	P	02 43 19.6	-1.0
	comp=Z,1.2nm,0.7s,baz=134,slow=6.5,SNR=4.9						
KURK	Kurchatov	63.30	330	P	P	02 43 20.1	-0.5
ILAR	Eielson Array	89.99	25	P	P	02 45 49.0	-1.1
	comp=Z,0.3nm,0.6s,baz=246,slow=4.9,SNR=10						
ILAR	Eielson Array	89.99	25	P	P	02 45 49.0	-1.1
ARCES	ARCESS Array B	92.90	340	P	P	02 46 01.5	-2.0
	comp=Z,1.4nm,0.8s,baz=76,slow=7.5,SNR=3.1						
ULM	Lac du Bonnet	119.90	28	PKP	PKPdf	02 51 39.9	-0.9
	comp=Z,1.7nm,0.7s,baz=321,slow=1.6,SNR=4.6						
TORD	Torodi Ar. Bea	120.85	285	PKP	PKiKP	02 51 43.1	-0.5
	comp=Z,0.5nm,0.7s,baz=94,slow=1.4,SNR=4.9						

*IDC **06** 02:41:29.4±0.9, 19.°11N×121.°60E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.6/39, mbtmp3.6/9, ML3.8/1, MS3.6/2, Ms1 3.6/2, ms1mx2.8/38, Error ellipse: s-maj=42.3km s-min=17.4km az=72.0*
*NEIC **06** 02:41:33.1±1.5, 19.°05N±0.°08×121.°32E±0.°07, h34km±7km, mb4.2/5, Error ellipse: s-maj=15.4km s-min=3.5km az=141.0*
*MAN **06** 02:41:36.1, 19.°19N×121.°28E, h25km, mb4.8, ML3.7, MS3.6*
ISC 06 02:41:36.3±1.0, 19.°28N±0.°03×121.°22E±0.°06, h53km±11km, n37, σ2.°14/46, mb3.7/11, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	1.30	143	eP	Pn	02 41 56.6	-1.5
SGCP				eS	Sn	02 42 14.0	-0.5
BBP	Basco	1.35	31	eP	Pn	02 42 00.4	+1.6
BBP				eS	Sn	02 42 17.7	+2.0
APYP	Conner	1.41	179	eP	Pn	02 41 58.0	-1.7
APYP				eS	Sn	02 42 15.9	-1.3
SIPP	Brgy, Tapao	1.53	208⇓eP		Pn	02 42 01.0	-0.3
SIPP				eS	Sn	02 42 22.9	+2.7
CAUP	Cauayan	2.40	166	eP	Pn	02 42 14.2	+1.0
CAUP				eS	Sn	02 42 49.2	+7.9
BOLP	Bolinao	3.14	203	eP	Pn	02 42 25.4	+2.0
SMPP	San Manuel, Pa	3.16	189	eP	Pn	02 42 23.1	-0.5
SMPP				eS	Sn	02 43 01.5	+1.4
TWG	Pinlang	3.52	358		Pn	02 42 28.6	0.0
BALP	Baler	3.54	174	eP	Pn	02 42 29.8	+1.0
BALP				eS	Sn	02 43 09.7	+0.3
TPUB	Ta-pu	4.04	352		Pn	02 42 35.2	-0.4
TPUB				Sn	Sn	02 43 22.6	+0.9
YULB	Yu-li	4.09	1		Pn	02 42 36.3	0.0
YULB				Sn	Sn	02 43 24.8	+1.8
SSLB	Suanglung	4.49	357		Pn	02 42 42.1	+0.3
SSLB				Sn	Sn	02 43 31.3	-1.5
NACB	Ninganchiao	4.88	4		Pn	02 42 47.8	+0.6
NACB				Sn	Sn	02 43 41.0	-1.4
LQP	Lukban	5.15	177⇑eP		Pn	02 42 57.2	+6.1
YHNB	Yeheng	5.36	2		Pn	02 42 54.6	+0.7
YHNB				Sn	Sn	02 43 54.5	+0.1
KNMB	Chin-men Tao	5.79	334	Pn	Pn	02 42 57.6	-2.0
KNMB				Sn	Sn	02 44 02.4	-2.3
QIZ	Qiongzhong	10.75	271	Pn	Pn	02 44 06.2	-1.5
DAV	Davao City (W)	12.86	160	LR	LR	02 50 07.4	
	comp=Z,110nm,19.7s,baz=310,slow=41						
KSRS	Korea Array	19.03	17	P	P	02 45 54.3	+0.4
	0.3nm,0.3s,baz=198,slow=11,SNR=4.2						
SONM	Songino Array	30.93	340	P	P	02 47 50.0	+1.8
	0.2nm,0.6s,baz=147,slow=8.1,SNR=2.6						
SONM	Songino Array	30.93	340	P	P	02 47 49.3	+1.1
WB0	Warramunga Arr	40.90	161	P	P	02 49 09.9	-3.6
WB0				IAmb	IAmb	02 49 12.4	
	comp=Z,2.3nm,0.8s						
WRA	Warramunga Arr	41.05	161	P	P	02 49 11.8	-2.9
	comp=Z,0.4nm,0.3s,baz=344,slow=9.2,SNR=9.5						
WRA	Warramunga Arr	41.05	161	P	P	02 49 11.5	-3.2
WR0	Warramunga Arr	41.13	161	P	P	02 49 11.5	-3.9
WR0				IAmb	IAmb	02 49 27.0	
	comp=Z,4.3nm,1.0s						
MKAR	Makanchi Array	41.98	320	P	P	02 49 24.6	+2.4
	comp=Z,0.3nm,0.6s,baz=117,slow=8.3,SNR=5.0						
MKAR	Makanchi Array	41.98	320	P	P	02 49 23.3	+1.2
ZALV	Zalesovo Beam	44.42	330	P	P	02 49 45.8	+4.1
	comp=Z,0.6nm,0.5s,baz=123,slow=5.3,SNR=1.9						
ZALV	Zalesovo Beam	44.42	330	P	P	02 49 43.1	+1.4
ASAR	Alice Springs	44.45	163	P	P	02 49 40.7	-1.6
	comp=Z,0.8nm,0.3s,baz=346,slow=7.0,SNR=13						
KURBB	Kurchatov Arra	45.95	323	P	P	02 49 56.2	+2.4
	comp=Z,0.4nm,0.5s,baz=122,slow=7.2,SNR=4.2						
BBOO	Buckleboo	53.71	164	P	P	02 50 50.2	-2.7
BBOO				IAmb	IAmb	02 50 52.4	
	comp=Z,7.6nm,1.1s						
ABKAR	Akbulak array	56.95	317	P	P	02 51 16.1	0.0
ILAR	Eielson Array	73.55	27	P	P	02 53 03.5	+0.2
	comp=Z,0.2nm,0.7s,baz=282,slow=5.3,SNR=4.5						
ILAR	Eielson Array	73.55	27	P	P	02 53 02.9	-0.4
GERES	GERESS Array B	86.64	321	LR	LR	03 37 20.2	
	comp=Z,88nm,21.1s,baz=292,slow=38						
YKA	Yellowknife Ar	87.46	23	P	P	02 54 18.9	+1.1
	comp=Z,0.4nm,0.6s,baz=308,slow=4.7,SNR=9.9						

*IGQ **06** 02:49:17.7±0.0, 0.°N±3.°×7.°7W±.°, h1km, M4.2/17*
*IDC **06** 02:49:18.7±7.3, 0.°04S×77.°36W, h35km±53km, mb3.1/2, mb1 3.5/4, mb1mx3.3/22, mbtmp3.5/4, ML2.9/2, Error ellipse: s-maj=60.0km s-min=29.7km az=78.0*
ISC 06 02:49:16.3±1.2, 0.°19S±0.°03×77.°18W±0.°03, h13km±9km, n60, σ1.°08/82, 1C-1D, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASC	Dorado de Casc	0.36	333	P	Pb	02 49 24.4	-0.4
CASC				S	Sb	02 49 29.7	-0.7
LAV4	Lava4-Reventad	0.47	282	P	Pg	02 49 25.8	+0.3
CAYA	Cayambe	0.86	288	P	Pg	02 49 32.9	-0.1
CAYA				S	Sg	02 49 44.7	+0.4
APS4	Papallacta	0.95	259	P	Pg	02 49 34.1	-0.6
APS4				S	Sg	02 49 46.5	-0.6
ANTI	Antisana	1.02	255	P	Pg	02 49 35.7	-0.4
ATEN	Tena	1.03	218	P	Pb	02 49 33.5	-2.6
ATEN				S	Sb	02 49 47.4	-2.2
ANTS	Antisana-Sarah	1.04	253	P	Pg	02 49 36.0	-0.5
ANTS				S	Sg	02 49 49.9	-0.3
YAHU	Yahuarcocha	1.06	302	P	Pb	02 49 36.2	-0.5
YAHU				S	Sg	02 49 50.1	-0.5
AIB2	Ibarra (Univer	1.07	300	P	Pb	02 49 36.7	-0.2
AIB2				S	Sg	02 49 51.8	+0.8
ANTM	Antisana-La Mi	1.10	252	P	Pb	02 49 36.9	-0.7
ANTM				S	Sb	02 49 51.5	-0.6
ATUL	Tulcn	1.10	330	P	Pb	02 49 37.4	-0.1
ATUL				S	Sg	02 49 52.0	-0.6
ANTG	Antisana-Guama	1.12	254	P	Pb	02 49 37.4	-0.6
ANTG				S	Sb	02 49 52.1	-0.6
IMBA	Imbabura, San	1.12	294	P	Pb	02 49 38.3	+0.4
ACOT	Cotacachi (Cas	1.20	294	P	Pb	02 49 39.7	+0.6
URCU	Urcuqui	1.25	300	P	Pb	02 49 40.2	+0.3
URCU				S	Sg	02 49 57.2	+0.4
CUIC	Cuicocha-Domo	1.28	293	P	Pb	02 49 40.8	+0.4
CMBC	Cumbal	1.30	330	eP	Pg	02 49 41.5	+0.1
CMBC				eS	Sg	02 49 59.1	+0.8
CMBC				i		02 50 00.2	
	comp=Z,3.4nm,0.1s						
VC1	Cotopaxi 1	1.31	250	P	Pn	02 49 41.1	+0.3
BTAM	Cotopaxi Volca	1.31	249	P	Pn	02 49 41.2	+0.3
BTAM				S	Sb	02 49 58.7	+0.6
BVC2	Cotopaxi Volca	1.32	249	P	Pn	02 49 41.5	+0.5
CUSE	Cuicocha Este	1.32	292	P	Pn	02 49 41.3	+0.4
CUSE				S	Sb	02 49 58.3	0.0
PULU	Pululahua	1.34	279	P	Pn	02 49 41.6	+0.4
OTAV	Otavalo	1.34	288	eP	Pn	02 49 41.4	+0.1
OTAV				eS	Sb	02 49 59.0	0.0
OTAV	Otavalo	1.34	288	P	Pn	02 49 41.4	+0.1
BREF	Cotopaxi Volca	1.35	249	P	Pn	02 49 42.1	+0.5
BREF				S	Sb	02 49 59.6	+0.3
VCES	Cotopaxi	1.36	244	P	Pn	02 49 42.1	+0.5
BNAS	Cotopaxi Volca	1.39	250	P	Pn	02 49 43.0	+1.0
BMOR	Cotopaxi Volca	1.39	247	P	Pn	02 49 42.4	+0.4
BMOR				S	Sn	02 50 00.6	0.0
YANA	Yana	1.40	273	P	Pn	02 49 42.4	+0.4
CPAS2	Pasto	1.41	357⇓iP		Pb	02 49 42.7	0.0
CPAS2				eS	Sg	02 50 00.8	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GCUF	Volcan Galeras	1.42	353	⇑iP	Pb	02 49 42.8	-0.2
GCUF				eS	Sg	02 50 01.6	-0.6
CCUFI	Cufio, Nario	1.42	353	eP	Pb	02 49 43.0	0.0
GGP	Refugio Guagua	1.42	271	P	Pn	02 49 43.4	+1.0
GGPC	Guagua Pichinc	1.42	271	P	Pn	02 49 43.0	+0.6
TERV	Terraza Guagua	1.43	271	P	Pn	02 49 43.5	+0.9
NINA	Atacazo Ninahu	1.46	262	P	Pn	02 49 43.9	+1.0
PISA	Pisayambo	1.48	235	P	Pn	02 49 43.8	+0.5
PIS1	Pisayambo	1.49	235	P	Pn	02 49 43.9	+0.6
APUY	Puyo	1.50	213	P	Pn	02 49 44.4	+1.2
ILLI	Illinizas Sur	1.64	252	P	Pb	02 49 47.1	+0.4
PAC1	Pacto, Paraso	1.68	286	P	Pn	02 49 46.8	+1.2
BRUN	Tungurahua Vol	1.74	225	P	Pn	02 49 47.9	+1.3
BULB	Ulba Tungurahu	1.75	225	P	Pn	02 49 47.4	+0.6
SAGO	Sagoatoa	1.77	237	P	Pb	02 49 49.4	+0.4
APR2	Miler	1.81	278	P	Pb	02 49 49.3	-0.1
IGUA	Igualata	1.95	229	P	Pb	02 49 54.1	+2.0
BBAC	Balboa, Cauca	2.20	358	eP	Pn	02 49 54.4	+1.5
BBAC				eS	Sg	02 50 26.1	-1.1
BBAC				i		02 50 32.6	
	comp=Z,523nm,0.5s						
FLOC	Florencia	2.33	41	eP	Pn	02 49 54.1	-0.3
PTLC	Puerto Leguiza	2.41	81	eP	Pn	02 49 56.4	+0.9
PTLC				eS	Sn	02 50 26.1	+1.2
POPC	Popayan, Colom	2.76	10	eP	Pn	02 50 02.1	+1.5
COHC	Cochancay	3.07	223	P	Pb	02 50 10.5	-0.4
BOSC	San Juan Bosco	3.22	204	P	Pn	02 50 09.8	+2.9
BETC	Betania	3.34	31	eP	Pn	02 50 10.1	+1.7
YOTC	Yotoco, Valle	4.23	11	eP	Pn	02 50 21.7	+1.0
ORTC	Ortega, Tolima	4.51	25	eP	Pn	02 50 25.5	+1.1
GUY2C	Guyana, Caldas	5.67	19	eP	Pn	02 50 44.3	+3.4
ROSC	El Rosal	5.75	30	Pn	Pn	02 50 42.8	+0.9
	comp=Z,1.4nm,0.3s,baz=162,slow=20,SNR=3.5						
ROSC				Pg	Pg	02 51 05.2	-1.5
	comp=Z,3.0nm,0.3s,baz=180,slow=19,SNR=7.4						
ROSC				Lg	Lg	02 52 20.2	
	comp=Z,12nm,0.3s,baz=119,slow=19,SNR=4.3						
LPAZ	La Paz	18.31	151	P	P	02 53 34.6	+3.5
	comp=Z,0.1nm,0.3s,baz=343,slow=11,SNR=5.2						
YKA	Yellowknife Ar	68.55	342	P	P	03 00 16.4	-2.1
	comp=Z,0.3nm,0.8s,baz=148,slow=5.3,SNR=6.1						
TORD	Torodi Ar. Bea	79.20	77	P	P	03 01 20.5	-1.4
	comp=Z,0.2nm,0.9s,baz=268,slow=3.7,SNR=4.4						

THE 06 02:49:38.1, 38°.24N×20°.39E, h10km, ML2.6/8, Error ellipse: s-maj=0.7km s-min=0.3km az=255.0
ATH 06 02:49:38.2, 38°.23N×20°.42E, h11km±1km, ML2.5/9, Error ellipse: s-maj=2.2km s-min=1.0km az=254.0
ISC 06 02:49:37.9±0.9, 38°.23N±0°.02×20°.41E±0°.04, h11km±4km, n49, σ0°.40/75, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.03	31	P	Pg	02 49 40.0	0.0
KEF4				S	Sg	02 49 41.4	-0.1
LXR1	Lixouri, Cepha	0.04	140	P	Pg	02 49 40.2	+0.2
LXR1				S	Sg	02 49 41.7	+0.2
CHV1	Chavriata, Kef	0.05	200	P	Pg	02 49 40.3	+0.2
CHV1				S	Sg	02 49 41.7	0.0
KEF3	Kipouria, Keph	0.05	237	P	Pg	02 49 40.2	+0.1
KEF3				S	Sg	02 49 41.7	-0.1
KEF1	Kardakata, Kep	0.07	49	P	Pg	02 49 40.3	0.0
KEF1				S	Sg	02 49 41.7	-0.3
ARGA	Argostoli. Kep	0.08	133	P	Pg	02 49 40.6	+0.2
ARGA				S	Sg	02 49 42.3	+0.1
ARG2	Argostoli	0.09	129	P	Pg	02 49 40.7	+0.2
ARG2				S	Sg	02 49 42.4	+0.1
KEF2	Argostoli. Kep	0.09	136	P	Pg	02 49 40.8	+0.3
KEF2				S	Sg	02 49 42.7	+0.2
VLS	Valsamata	0.16	111	P	Pg	02 49 41.6	+0.1
VLS				S	Sg	02 49 44.2	+0.2
	11μm,0.1s						
VLS	Valsamata	0.16	111	P	Pg	02 49 41.6	+0.1
VLS				S	Sg	02 49 44.3	+0.2
VLS				AML	AML	02 49 44.4	
	comp=N,17957μm,0.2s						
VLS				AML	AML	02 49 44.5	
	comp=E,24034μm,0.1s						
VSK1	VASILIKIADES	0.22	35	P	Pg	02 49 42.8	+0.3
VSK1				S	Sg	02 49 46.0	+0.3
FSK	Fiskardo	0.26	29	P	Pg	02 49 43.5	+0.2
FSK				S	Sg	02 49 47.5	+0.6
FSK	Fiskardo	0.26	29	P	Pg	02 49 43.5	+0.2
FSK				S	Sg	02 49 47.5	+0.6
FSK				AML	AML	02 49 48.0	
	comp=N,3561μm,0.2s						
FSK				AML	AML	02 49 48.6	
	comp=E,4116μm,0.2s						
KFL	Anninata	0.33	112	P	Pg	02 49 44.7	+0.2
KFL				S	Sg	02 49 49.9	+1.0
VLMS	Volimes, Zakyn	0.41	150	P	Pg	02 49 46.2	+0.1
VLMS				S	Sb	02 49 52.8	-0.7
VLMS				AML	AML	02 49 54.9	
	comp=N,3470μm,0.2s						
VLMS				AML	AML	02 49 55.2	
	comp=E,3526μm,0.1s						
EVGI	Lefkada island	0.43	27	P	Pg	02 49 46.6	+0.1
EVGI				S	Sb	02 49 53.6	-0.6
EVGI	Lefkada island	0.43	27	P	Pg	02 49 46.6	+0.1
EVGI				S	Sb	02 49 53.5	-0.6
MGNA	Meganis	0.52	36	P	Pg	02 49 48.0	-0.1
MGNA				S	Sg	02 49 55.7	+0.7
LKD2	Lefkada island	0.59	20	P	Pg	02 49 49.1	-0.4
LKD2				S	Sg	02 49 57.7	+0.4
	comp=E,255nm,0.3s						
LKD2	Lefkada island	0.59	20	P	Pg	02 49 49.3	-0.1
AST1	Astakos	0.62	60	P	Pg	02 49 49.9	-0.1
AST1				S	Sb	02 49 59.5	0.0
	comp=E,2μm,0.3s						
KRI1	kERI	0.66	150	P	Pg	02 49 50.2	-0.5
KRI1				S	Sb	02 50 00.8	+0.3
	comp=E,932nm,0.2s						
PDO	Prodromos	0.71	59	P	Pg	02 49 51.5	-0.2
PDO				S	Sb	02 50 02.0	-0.2
	comp=E,850nm,0.5s						
PDO	Prodromos	0.71	59	P	Pg	02 49 51.6	-0.2
PDO				AML	AML	02 50 04.0	
	comp=N,1018μm,0.3s						
PDO				AML	AML	02 50 06.3	
	comp=E,1377μm,0.5s						
RLS	Riolos of Patr	0.85	101	P	Pg	02 49 54.2	-0.2
RLS				S	Sb	02 50 07.1	+0.9
	comp=E,130nm,0.4s						
RLS	Riolos of Patr	0.85	101	P	Pg	02 49 54.3	-0.1
PVO	Paravola	0.96	66	P	Pg	02 49 56.4	-0.1
PVO	Paravola	0.96	66	P	Pg	02 49 56.7	+0.2
PVO				AML	AML	02 50 13.4	
	comp=E,1010μm,0.3s						
PVO				AML	AML	02 50 17.8	
	comp=N,648μm,0.3s						
DRO	Drossia	1.07	105	P	Pg	02 49 58.1	-0.4
DRO				S	Sn	02 50 14.3	+0.6
	comp=N,295nm,0.4s						
DRO	Drossia	1.07	105	P	Pg	02 49 58.5	0.0
EFP	Efpalio	1.20	80	P	Pb	02 49 59.8	-0.8
EFP				S	Sn	02 50 17.6	+0.8
	comp=N,138nm,0.4s						
EFP	Efpalio	1.20	80	P	Pb	02 49 59.9	-0.8
EFP				AML	AML	02 50 24.2	
	comp=E,330μm,0.4s						
EFP				AML	AML	02 50 25.7	
	comp=N,222μm,0.4s						
LAKA	Lakka	1.24	89	P	Pn	02 50 00.5	-0.7
LAKA	Lakka	1.24	89	P	Pn	02 50 00.8	-0.4
LAKA				AML	AML	02 50 21.2	
	comp=N,179μm,0.3s						
LAKA				AML	AML	02 50 25.3	
	comp=E,250μm,0.5s						
ANX	Ano Chora	1.24	73	P	Pn	02 50 00.6	-0.8
ANX	Ano Chora	1.24	73	P	Pn	02 50 01.5	+0.1
AMT	Artemida-Makis	1.25	124	P	Pn	02 50 01.8	+0.3
IGT	Igoumenitsa	1.30	358	P	Pn	02 50 02.4	+0.4
IGT				S	Sn	02 50 19.6	+0.2
IGT	Igoumenitsa	1.30	358	P	Pn	02 50 03.3	+0.4
SERG	Sergoula	1.31	82	P	Pn	02 50 01.8	-0.4
SERG	Sergoula	1.31	82	P	Pn	02 50 01.9	-0.4
SERG				AML	AML	02 50 28.0	
	comp=N,296μm,0.4s						
SERG				AML	AML	02 50 29.8	
	comp=E,240μm,0.4s						
TRIZ	Trizonia	1.32	84	P	Pn	02 50 01.8	-0.4
TRIZ	Trizonia	1.32	84	P	Pn	02 50 01.9	-0.4
KALE	Kalithea	1.37	83	P	Pn	02 50 02.8	-0.3
KALE	Kalithea	1.37	83	P	Pn	02 50 02.8	-0.3
KLV	Kalavryta, Ach	1.39	97	P	Pn	02 50 03.3	0.0
KLV	Kalavryta, Ach	1.39	97	P	Pn	02 50 03.5	+0.2
AGG	Agios Georgios	1.70	62	P	Pg	02 50 10.3	-0.3
AGG	Agios Georgios	1.70	62	P	Pg	02 50 10.4	-0.2
AGG				AML	AML	02 50 40.6	
	comp=N,150μm,0.5s						
AGG				AML	AML	02 50 41.3	
	comp=E,109μm,0.4s						

NEIC 06 02:55:39.3±1.1, 40°.28N±0°.03×124°.73W±0°.05, h18km±6km, Error ellipse: s-maj=6.0km s-min=4.8km az=99.0
ANF 06 02:55:42.3±0.9, 40°.54N×124°.30W, h0km, ML3.1/13, Error ellipse: s-maj=8.7km s-min=5.2km az=57.0
NCEDC 06 02:55:42±1.9, 40°.29N±0°.03×124°.51W±0°.05, h14km±5km, Mwr3.6/5, Error ellipse: s-maj=5.1km s-min=3.8km az=81.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.19; $M_{\theta\theta}$2.88; $M_{\phi\phi}$-0.69; $M_{r\theta}$-0.87; $M_{r\phi}$-0.52; $M_{\theta\phi}$-0.12;
IDC 06 02:55:43.8±3.1, 40°.66N×123°.82W, h0km, mb3.1/2, mb1 3.4/3, mb1mx3.2/47, mbtmp3.0/3, ML2.5/1 Error ellipse: s-maj=69.6km s-min=15.3km az=42.0
ISC 06 02:55:40.3±1.4, 40°.26N±0°.03×124°.65W±0°.06, h20km±5km, n112, σ1°.05/124, Near coast of northern California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KCTM	Capetown	0.32	48		Pb	02 55 47.8	+0.4
KCTM					Sb	02 55 52.7	+0.5
KMPM	Mount Pierce	0.43	69		Pg	02 55 49.2	-0.1
KMPM					Sg	02 55 54.9	-0.4
KCRM	Chalk Rock	0.65	75		Pg	02 55 53.6	+0.2
KMRM	Mail Ridge	0.72	93		Pg	02 55 54.8	+0.3
JCC	Jacoby Creek,	0.73	40		Pb	02 55 53.9	-0.4
KBSM	Bell Springs	0.88	113		Pb	02 55 57.0	0.0
KCSM	Cold Springs	0.91	72		Pb	02 55 57.4	-0.1
KHMM	Horse Mountain	0.93	49		Pb	02 55 57.4	-0.4
KPPM	Pickett Peak	0.99	85		Pb	02 55 58.0	-0.9
KCPM	Cahto Peak	1.00	125		Pb	02 55 58.8	-0.2
KIPM	Iron Peak	1.00	117		Pb	02 55 58.8	-0.3
KRPM	Rodgers	1.01	28		Pb	02 55 58.4	-0.8
KFPM	Farley Peak	1.13	123		Pn	02 56 00.5	-0.6
KHBM	Hayfork Bally	1.16	70		Pn	02 56 00.6	-1.0
KBNM	Bluenose Ridge	1.18	108		Pn	02 56 01.4	-0.4
GTC	Three Chop Rid	1.21	135		Pn	02 56 01.6	-0.5
GNAM	Navarro Ridge	1.32	143		Pn	02 56 03.3	-0.4
LBPM	Beegum Peak	1.35	87		Pn	02 56 03.8	-0.3
KOMM	Orleans Mounta	1.36	41		Pn	02 56 03.4	-0.9
KRMB	Red Mountain	1.38	24		Pn	02 56 03.6	-1.0
O02D	Mt. Diablo Mer	1.43	93		Pn	02 56 05.0	-0.1
O02D	Mt. Diablo Mer	1.43	93	P	Pn	02 56 05.0	-0.1
	baz=276,SNR=219						
O02D				S	Sn	02 56 22.0	-1.4
	baz=276						
GHOM	Hamilton Openi	1.49	145		Pn	02 56 05.6	-0.4
GHMM	Hull Mountain	1.53	120		Pn	02 56 06.0	-0.6
LGPM	Granite Peak	1.53	64		Pn	02 56 05.9	-0.7
GROM	Round Mountain	1.56	102		Pn	02 56 06.9	-0.1
GVV	Valley View	1.59	107		Pn	02 56 07.1	-0.4
GASB	Alder Springs	1.60	112		Pn	02 56 07.1	-0.6
WDC	Whiskeytown Da	1.64	78		Pn	02 56 07.7	-0.3
N02D	Trinity Center	1.64	64		Pn	02 56 07.4	-0.7
N02D	Trinity Center	1.64	64	P	Pn	02 56 07.4	-0.7
	baz=244,SNR=99						
N02D				S	Sn	02 56 25.1	-3.6
	baz=244						
GGUM	Gualala	1.66	147		Pn	02 56 07.9	-0.5
KSXB	Camp Six Broad	1.67	20		Pn	02 56 07.6	-0.9
LBKM	Bonanza King	1.72	61		Pn	02 56 08.6	-0.7
GSNM	Snow Mountain	1.73	139		Pn	02 56 09.1	-0.3
GHLM	Highland Sprin	1.75	134		Pn	02 56 09.3	-0.4
HOPS	Hopland Field	1.76	136		Pn	02 56 09.3	-0.3
M02C	Callahan	1.77	50		Pn	02 56 09.1	-0.7
M02C	Callahan	1.77	50	P	Pn	02 56 09.2	-0.7
	baz=229,SNR=152						
M02C				S	Sn	02 56 28.8	-3.0
	baz=229						
GTSM	Trough Springs	1.84	120		Pn	02 56 10.6	-0.3
GCK	Clark Valley	1.85	112		Pn	02 56 11.6	+0.7
GDCM	Dry Creek	1.85	143		Pn	02 56 10.5	-0.5
KTRM	Thompson Ridge	1.90	30		Pn	02 56 11.0	-0.8
GPMM	Pine Mountain	1.93	137		Pn	02 56 12.1	0.0
GMKM	Mount Konoctai	1.93	131		Pn	02 56 12.1	0.0
LTCM	Tuscan Springs	1.93	91		Pn	02 56 12.1	+0.1
GCVM	Cloverdale	1.96	139		Pn	02 56 12.2	-0.1
GACM	Adobe Creek	1.96	135		Pn	02 56 12.2	-0.3
KBO	Bosley Butte	1.97	9		Pn	02 56 12.4	-0.3
GHCM	House Creek	2.00	145		Pn	02 56 12.7	-0.3
LAMM	Antelope Mount	2.04	48		Pn	02 56 13.3	-0.4
GDXM	Geysers	2.04	135	Pn	Pn	02 56 15.0	+1.3
GSGM	Seigler Mounta	2.05	132		Pb	02 56 16.6	-0.1
L02E	Cave Junction	2.05	22		Pn	02 56 13.2	-0.5
L02E	Cave Junction	2.05	22	P	Pn	02 56 13.2	-0.5
	baz=200,SNR=17						
L02E				S	Sn	02 56 36.6	-2.1
	baz=200						
LSHM	Sage Hen Hill	2.06	74		Pn	02 56 13.9	+0.1
GWKM	Walker Ridge	2.06	125		Pb	02 56 15.8	-1.2
YBH	Yreka Blue Hor	2.07	44		Pn	02 56 13.7	-0.4
FTR	Fort Ross	2.09	146		Pn	02 56 13.9	-0.3
NMCNC	Mill Creek, So	2.14	141		Pn	02 56 14.6	-0.3
LGBM	Gray Butte	2.15	59		Pn	02 56 14.4	-0.9
M03C	McCloud	2.17	61		Pn	02 56 15.9	+0.5
O03E	Paynes Creek	2.18	88		Pn	02 56 15.0	-0.5
O03E	Paynes Creek	2.18	88	P	Pn	02 56 14.8	-0.6
	baz=271,SNR=17						
O03E				S	Sn	02 56 40.1	-1.9
	baz=271						
LDBM	Digger Butte	2.19	85		Pn	02 56 15.5	-0.2
MNRC	McLaughlin Min	2.19	128		Pn	02 56 16.7	+1.0
NMTM	Middletown	2.24	130		Pn	02 56 17.0	+0.7
LMPM	Military Pass	2.25	56		Pn	02 56 17.4	+0.9
LHEM	Herd Peak	2.29	53		Pn	02 56 17.6	+0.4
B040	Montague	2.30	46		Pn	02 56 17.4	+0.2
LBFM	Black Fox Moun	2.36	62		Pn	02 56 18.8	+0.7
LMEM	Manzanita Entr	2.37	82		Pn	02 56 18.4	+0.2
LCMM	Colby Mountain	2.40	92		Pn	02 56 18.7	+0.1
MGL	Magalia	2.42	100		Pn	02 56 18.1	-0.7
SUTB	Sutter Butte	2.44	114		Pn	02 56 18.6	-0.3
LRDM	Redding Peak	2.44	84		Pn	02 56 19.8	+0.7
HATC	Hat Creek Radi	2.49	76		Pn	02 56 20.3	+0.5
LGMM	Garner Mountai	2.52	57		Pn	02 56 20.8	+0.5
MCCM	Marconi Confer	2.52	146		Pn	02 56 20.0	-0.1
ORV	Oroville	2.52	105		Pn	02 56 20.4	+0.3
K02D	Willamette Mer	2.54	17	P	Pn	02 56 20.4	-0.1
	baz=195,SNR=34						
K02D				S	Sn	02 56 48.0	-2.9
	baz=195						
CVS	Carmenet Viney	2.56	138		Pn	02 56 21.1	+0.4
LTIM	Timbered Crate	2.57	68		Pn	02 56 21.0	+0.1
LBCM	Butte Creek Ri	2.58	76		Pn	02 56 21.2	+0.1
M04C	Macdoel	2.61	54		Pn	02 56 22.0	+0.5
M04C	Macdoel	2.61	54	P	Pn	02 56 21.7	+0.2
	baz=234,SNR=17						
M04C				Sb	Sn	02 56 53.2	+0.5
	baz=234						
LMHM	Little Mount H	2.62	59		Pn	02 56 21.9	+0.1
L04D	Klamath Falls	2.63	41		Pn	02 56 23.0	+1.2
L04D	Klamath Falls	2.63	41	P	Pn	02 56 22.3	+0.5
	baz=221,SNR=47						
L04D				Sb	Sn	02 56 53.8	+0.5
	baz=221						
HUMO	Hull Mountain	2.67	28		Pn	02 56 22.0	-0.1
LASM	Arnica Sink	2.68	59		Pn	02 56 22.6	0.0
J01E	Myrtle Point	2.94	10	S	Sn	02 56 59.0	-1.8
	baz=189						
AFDM	Forest Hills D	3.13	114		Pn	02 56 29.0	+0.5
K04D	Chiloquin, OR	3.21	42	P	Pn	02 56 30.0	+0.3
	baz=222						
BEKR	Beckworth	3.31	95		Pn	02 56 30.7	-0.5
I03D	Drain, OR	3.56	15	S	Sn	02 57 13.5	-2.5
	baz=195						
MOD	Modoc Plateau	3.67	62		Pn	02 56 35.6	-0.5
K05A	Summer Lake	3.74	48		Pn	02 56 37.6	+0.5
I02D	Swisshome	3.89	9	S	Sn	02 57 21.9	-2.1
	baz=188						
I04A	Tendick Farm,	3.90	25	S	Sn	02 57 21.8	-2.6
	baz=205						
J05D	Fort Rock, OR	3.95	39	P	Pn	02 56 40.8	+0.9
	baz=220,SNR=7.3						
VCNR	Virginia City	3.97	102		Pn	02 56 40.1	-0.2
PNTR	Pine Nut	4.07	105		Pn	02 56 43.5	+1.9
PAHR	Pah Rah Range	4.08	96		Pn	02 56 42.4	+0.6
YERR	Yerington	4.37	105		Pn	02 56 46.6	+0.9
BJOM	Mount Johnson	4.47	143		Pn	02 56 47.2	+0.2
BJOM					Pb	02 56 55.0	-3.2
PINE	Pine Mountain	4.48	37	Pn	Pn	02 56 46.7	-0.5
H04D	Lebanon	4.49	18	S	Sn	02 57 36.2	-2.6
	baz=198						
LUL	Lundy Lake	4.79	116		Pn	02 56 52.3	+0.7
NVAR	Mina Array Bea	5.25	108	Pn	Pn	02 56 58.7	+0.9
	0.2nm,0.3s,baz=291,slow=14,SNR=4.7						
NVAR				Pg	Pb	02 57 10.7	-0.8
	0.1nm,0.3s,baz=292,slow=17,SNR=4.0						
NVAR				Lg	Lg	02 58 14.6	
	baz=300,slow=24,SNR=2.4						
YKA	Yellowknife Ar	23.07	12	P	P	03 00 46.2	+2.0
	0.5nm,0.7s,baz=201,slow=11,SNR=11						
ILAR	Eielson Array	27.72	340	P	P	03 01 31.1	+4.0
	0.3nm,0.7s,baz=153,slow=8.1,SNR=3.3						

IDC 06 03:07:07.3±1.8, 7°.93S×123°.50E, h0km, mb3.7/2, mb1 4.2/4, mb1mx3.7/28, mbtmp3.9/4, ML4.1/2, Error ellipse: s-maj=179.7km s-min=27.2km az=59.0
NEIC 06 03:07:26.8±1.4, 8°.3S±0°.1×124°.1E±0°.2, h205km±9km, mb4.1/7, Error ellipse: s-maj=25.0km s-min=14.4km az=59.0
ISC 06 03:07:26.6±0.9, 8°.36S±0°.09×124°.2E±0°.1, h200km, n17, σ1°.76/22, mb3.5/3, Timor region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOEI	Soe	1.39	177		Pn	03 08 00.5	+0.9
SOEI				Sn	Sn	03 08 24.1	-1.2
MTN	Manton Dam	8.16	124		Pn	03 09 23.8	+1.8
MTN					Sn	03 10 52.2	-1.7
KNRA	Kununurra	8.54	149		Pn	03 09 25.7	-1.3
FITZ	Fitzroy Crossi	9.79	172	Pn	Pn	03 09 44.3	+1.1
FITZ					Sn	03 11 31.3	-1.3
WB0	Warramunga Arr	15.05	140		P	03 10 51.0	+0.9
WB0				IAmb	IAmb	03 10 54.6	
	comp=Z,6.3nm,0.8s						
WRA	Warramunga Arr	15.14	141	Pn	P	03 10 52.5	+1.3
	comp=Z,0.5nm,0.3s,baz=314,slow=13,SNR=14						
WRA				Sn	S	03 13 34.8	-4.2
	comp=Z,0.7nm,0.3s,baz=320,slow=25,SNR=5.8						
WRA	Warramunga Arr	15.14	141	P	P	03 10 51.9	+0.6
WR0	Warramunga Arr	15.29	140	P	P	03 10 54.6	+1.9
WR0				IAmb	IAmb	03 10 58.6	
	comp=Z,7.9nm,0.7s						
AS31	Alice Springs	17.85	150	P	P	03 11 20.9	-0.1
ASAR	Alice Springs	17.85	150	P	Pn	03 11 25.9	+2.9
	comp=Z,1.3nm,0.3s,baz=329,slow=12,SNR=65						
ASAR				S	S	03 14 39.0	+3.3
	comp=Z,0.1nm,0.3s,baz=337,slow=26,SNR=3.2						
ASAR	Alice Springs	17.85	150	P	P	03 11 21.1	+0.2
COEN	Coen	19.44	108	P	P	03 11 38.3	0.0
COEN				IAmb	IAmb	03 11 54.8	
	comp=Z,7.4nm,0.9s						
NWAO	Narrogin (SRO)	25.29	194	P	P	03 12 34.6	-0.1
BBOO	Buckleboo	26.71	157	P	P	03 12 46.3	-1.2
BBOO				IAmb	IAmb	03 13 04.2	
	comp=Z,3.7nm,1.0s						
SONM	Songino Array	58.12	346	P	P	03 16 58.6	-0.7
	comp=Z,0.6nm,0.9s,baz=169,slow=8.2,SNR=3.4						
MKAR	Makanchi Array	66.35	330	P	P	03 17 53.4	-0.4
	comp=Z,0.6nm,0.5s,baz=126,slow=5.9,SNR=12						
MKAR	Makanchi Array	66.35	330	P	P	03 17 53.1	-0.8

TEH 06 03:40:03.8, 26°.74N×57°.87E, h8km, ML3.4
OMAN 06 03:40:04.4±0.2, 26°.70N×57°.79E, h117km, ml3.5/8, Error ellipse: s-maj=5.5km s-min=3.3km az=40.0
ISC 06 03:40:04.6±1.2, 26°.61N±0°.04×57°.76E±0°.07, h10km, n30, σ1°.52/35, Southern Iran

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JSK1	Jask	0.97	179	ePg	Pn	03 40 26.1	+1.9
NIAN	Nian	1.25	319	ePg	Pn	03 40 28.1	-0.1
KHNJ	Kahnooj	1.33	358	ePg	Pn	03 40 26.9	-2.4
KHNJ				eSg	Sb	03 40 46.7	-0.2
KHNJ				e		03 40 54.4	
BANOM	Banah	1.48	243	P	Pb	03 40 31.7	-0.5
	SNR=29						
BANOM				S	Sg	03 40 53.6	+1.5
BANOM	Banah	1.48	243	ePn	Pg	03 40 32.3	-0.6
SHME	Shamm	1.55	249	ePn	Pb	03 40 32.7	-0.8
GENO	Geno	1.62	299	ePn	Pb	03 40 34.6	-0.1
GENO				e		03 41 04.9	
MDH	Madha	1.85	226	ePn	Pn	03 40 34.9	-1.5
MSFE	Esma-Masafi	1.90	229	ePn	Pn	03 40 35.9	-1.2
UOSS	Minazif	2.17	221	P	Pn	03 40 38.7	-2.1
UOSS				S	Sn	03 41 08.4	+0.6
UOSS	Minazif	2.17	221	ePn	Pn	03 40 39.1	-1.7
HATD	Hatta, Dubai	2.30	220	ePn	Pn	03 40 43.1	+0.5
ASHO	Ashiyiah	2.46	219	P	Pn	03 40 44.4	-0.4
ASHO	Ashiyiah	2.46	219	ePn	Pn	03 40 43.0	-1.8
NAZ	Nazwa, Dubai	2.48	230	ePn	Pn	03 40 45.2	+0.1
SOHO	SOHO	2.70	204	ePn	Pn	03 40 46.4	-1.7
HOQ	Hoqain	3.04	188	P	Pn	03 40 51.3	-1.5
	SNR=15						
NGRK	Negar Kerman	3.16	344	ePn	Pn	03 40 55.8	+1.1
NGRK				e		03 41 50.4	
CHMN	Cheshme madani	3.25	357	ePn	Pn	03 40 58.4	+2.5
CHMN				e		03 41 09.9	
ARQ	Araqi	3.45	199	P	Pn	03 40 59.7	+1.3
	SNR=26						
ARQ				S	Sn	03 41 41.0	+1.7
TVBK	TV Kerman	3.48	346	ePn	Pn	03 41 00.2	+1.1
TVBK				e		03 42 05.0	
BSY	Bisya	3.88	188	P	Pn	03 41 05.8	+1.4
BSY				S	Sn	03 41 52.6	+2.5
KHGB	Koh Gabri	3.92	344	e		03 42 20.5	
WBK	Wadi Bani Khal	4.13	164	P	Pn	03 41 08.9	+1.0
WBK				S	Sn	03 41 54.4	-1.9
IMEH	Mehriz	5.50	331	ePn	Pn	03 41 28.8	+2.0
IKOO	Kooshah	5.89	10	ePn	Pn	03 41 33.7	+1.5
TPRV	Parvadeh(Tabas	6.46	352	ePn	Pn	03 41 42.0	+2.1
KLNJ	Kolanjah	6.96	310	ePn	Pn	03 41 47.2	+0.2
IRAM	Ramesheh	6.99	319	ePn	Pn	03 41 48.1	+0.8
ABTO	Aybut	10.10	205	P	Pn	03 42 28.0	-1.7
	SNR=9.9						

MOS 06 04:13:53.8±1.0, 37°.93N×75°.78E, h112km, mb4.6/15, Error ellipse: s-maj=7.2km s-min=4.6km az=104.1
BJI 06 04:13:55.4±0.0, 37°.97N×75°.81E, h114km, mB4.7/14, mb4.1/17
NEIC 06 04:13:55.2±1.6, 37°.96N±0°.06×75°.66E±0°.09, h117km±2km, mb4.5/32, Error ellipse: s-maj=10.2km s-min=8.8km az=98.0
IDC 06 04:13:56.3±0.7, 37°.94N×75°.75E, h121km±5km, mb4.0/25, mb1 4.1/30, mb1mx4.0/44, mbtmp4.4/30, Error ellipse: s-maj=11.6km s-min=10.2km az=179.0
NNC 06 04:13:56.1±1.6, 38°.65N×75°.00E, h0km, mb4.9, mpv4.7, Error ellipse: s-maj=15.1km s-min=9.6km az=139.0
ISC 06 04:13:54.4±0.4, 37°.85N±0°.04×75°.74E±0°.04, h115km±3km, h114km:pP-P, n276, σ1°.91/278, mb4.4/59, 24C-20D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.68	6	⇓iP	Pn	04 14 19.7	-4.0
KSH				S	Sn	04 14 37.9	-8.2
KSH				smax	smax		
	comp=N,249μm,0.3s						
KSH				smax	smax		
	comp=E,185μm,0.2s						
ARSB	Arslanbob	4.07	329		Pn	04 14 54.2	-0.7
ARSB				Sn	Sn	04 15 37.7	-4.1
KZA	Kyzart	4.24	355	P	Pn	04 14 57.3	-0.1
	SNR=112						
ULHL	Ulahol	4.41	5	P	Pn	04 14 59.5	0.0
	SNR=14						
KDJ	Kajisay	4.42	14		Pn	04 14 59.9	+0.3
KDJ	Kajisay	4.42	14	PN	Pn	04 14 59.9	+0.3
BTK	Batken	4.43	301		Pn	04 14 59.6	0.0
BTK	Batken	4.43	301	PN	Pn	04 14 59.6	0.0

UCH Uchtor 4.48 348 P Pn 04 15 00.4 -0.2
SNR=206
AML Almayashu 4.56 341 P Pn 04 15 01.1 -0.5
SNR=84
CHCP Chirah Chowk 4.64 206 P Pn 04 15 05.8 +3.4
BOOM Boomskoye usch 4.64 2 Pn 04 15 02.8 +0.2
BOOM Boomskoye usch 4.64 2 PN Pn 04 15 02.8 +0.2
NIL Nilore 4.65 207 Pn 04 15 05.5 +2.9
NIL Nilore 4.65 207 PN Pn 04 15 05.5 +2.9
KBK Karagaybulak 4.84 353 P Pn 04 15 05.7 +0.4
SNR=54
AAK Ala-Archa 4.88 349 P Pn 04 15 06.1 +0.4
24nm,0.3s,baz=149,slow=7.4,SNR=319
AAK S Sn 04 15 59.8 -1.4
26nm,0.3s,baz=320,slow=17,SNR=8.4
AAK Ala-Archa 4.88 349 P Pn 04 15 06.1 +0.4
SNR=63
AAK Ala-Archa 4.88 349 Pn Pn 04 15 00.3 -5.5
81nm,0.7s
AAK ⇓Lg Lg 04 16 04.8
302nm,0.9s
AAK Ala-Archa 4.88 349 Pn 04 15 06.1 +0.4
AAK Sn 04 15 59.4 -1.8
AAK Ala-Archa 4.88 349 d iPN Pn 04 15 05.7 0.0
AAK pmax pmax
comp=Z,89nm,0.7s
FRU1 Bishkek 5.03 351 Pn 04 15 07.6 -0.1
FRU1 Bishkek 5.03 351 PN Pn 04 15 07.6 -0.1
EKS2 Erkin-Say 5.04 343 P Pn 04 15 08.0 +0.1
SNR=35
PRZ Przheval'sk 5.06 23 Pn 04 15 08.1 -0.1
PRZ Przheval'sk 5.06 23 PN Pn 04 15 08.1 -0.1
CEP Cherat 5.08 219 P Pn 04 15 10.2 +1.7
JMU Jammu 5.16 188 eP Pn 04 15 11.5 +2.0
JMU eS Sn 04 16 06.5 -1.4
KST Kastek 5.19 2 Pg Pn 04 15 16.3 +6.4
comp=Z,87nm,0.4s
KST Lg Lg 04 16 16.6
comp=Z,115nm,0.6s
CHMS Chumysh 5.20 352 P Pn 04 15 10.3 +0.3
SNR=36
CHMS Chumysh 5.20 352 ⇑Pn Pn 04 15 04.5 -5.5
comp=Z,44nm,0.8s
CHMS ⇑Lg Lg 04 16 19.4
comp=Z,59nm,0.8s
CHMS Chumysh 5.20 352 i PN Pn 04 15 09.3 -0.7
CHMS pmax pmax
comp=Z,44nm,0.8s
IZV Izvestkoviy 5.23 7 Pg Pn 04 15 19.5 +9.0
comp=Z,51nm,0.6s
IZV Lg Lg 04 16 22.3
comp=Z,74nm,0.6s
MRKS Merke 5.26 339 Pg Pn 04 15 10.6 -0.2
comp=Z,42nm,0.6s
MRKS Lg Lg 04 16 07.5
comp=Z,95nm,0.5s
TNSS Tian-Shan 5.27 10 Pg Pn 04 15 20.3 +9.1
comp=Z,94nm,0.6s
TNSS Lg Lg 04 16 22.9
comp=Z,85nm,0.7s
MTBS Maitube 5.30 5 Pg Pn 04 15 18.6 +7.2
comp=Z,35nm,0.5s
MTBS Lg Lg 04 16 19.8
comp=Z,42nm,0.5s
DGS Degeres 5.39 0 Pg Pn 04 15 20.4 +7.9
comp=Z,90nm,0.5s
DGS Lg Lg 04 16 23.7
comp=Z,91nm,0.6s
THN Thein Dam 5.40 180 eP Pn 04 15 15.5 +2.8
THN eS Sn 04 16 13.2 -0.4
MDOK Medeo 5.40 10 ⇑Pg Pn 04 15 22.2 +9.4
comp=Z,51nm,0.6s
MDOK ⇓Lg Lg 04 16 30.3
comp=Z,276nm,1.4s
MDOK Medeo 5.40 10 Pg Pn 04 15 22.0 +9.2
comp=Z,64nm,0.5s
MDOK Lg Lg 04 16 25.7
comp=Z,106nm,0.7s
AAA Alma-Ata 5.43 9 Pg Pn 04 15 22.8 +10
comp=Z,52nm,0.3s
AAA Lg Lg 04 16 27.4
comp=Z,63nm,0.3s
AAA Alma-Ata 5.43 9 ePN Pn 04 15 27.5 +14
KOTS Kotyrbulak 5.48 11 Pg Pn 04 15 25.5 +12
comp=Z,195nm,0.5s
KOTS Lg Lg 04 16 32.5
comp=Z,100nm,0.5s
USP Ospenovka 5.50 351 P Pn 04 15 13.8 -0.1
SNR=14
DHRM DHARAMSHALA 5.60 175 eP Pn 04 15 16.0 +0.4
DHRM eS Sn 04 16 17.6 -1.3
DHRM IAML 04 16 40.1
comp=E,399nm,0.5s
DHRM IAML 04 16 40.3
comp=N,307nm,0.2s
KTBS Karatobe 5.90 7 Pg Pn 04 15 31.1 +12
comp=N,44nm,0.6s
KTBS Lg Lg 04 16 41.7
comp=N,56nm,0.8s
THW Thamme Wali 6.00 214 P Pn 04 15 22.0 +1.1
KUU Kurty 6.06 4 Pg Pn 04 15 34.1 +13
comp=N,26nm,0.6s
KUU Lg Lg 04 16 46.8
comp=N,32nm,0.9s
DZA Taraz 6.06 328 Pg Pn 04 15 22.2 +0.7
comp=N,103nm,0.1s
DZA Lg Lg 04 16 26.1
comp=N,466nm,0.5s
JBG Jabagly 6.06 321 Pg Pn 04 15 21.5 -0.1
comp=N,45nm,0.3s
JBG Lg Lg 04 16 25.6
comp=N,268nm,0.6s
CHKK Chushkaly 6.08 9 Pg Pn 04 15 34.4 +13
comp=N,44nm,0.6s
CHKK Lg Lg 04 16 47.6
comp=N,54nm,0.4s
PDGK Podgornoye 6.18 26 ⇓Pn Pn 04 15 23.5 +0.3
comp=N,178nm,0.6s
PDGK ⇑Lg Lg 04 17 03.4
comp=N,93nm,0.8s
KBL Kabul 6.34 241 Pn 04 15 26.7 +1.1
KBL Kabul 6.34 241 PN Pn 04 15 26.7 +1.1
SARP Sargodha 6.42 204 P Pn 04 15 27.1 +0.6
BHK Bhakra 6.44 175 eS Sn 04 16 39.8 +1.0
ARXS Arharly 6.55 13 Pg Pn 04 15 45.2 +17
comp=N,45nm,0.5s
ARXS Lg Lg 04 17 05.2
comp=N,58nm,0.8s
KK31 Karatay Array 6.59 324 ⇑Pn Pn 04 15 24.8 -4.0
comp=N,5.1nm,0.3s,baz=134,slow=14,SNR=224
KK31 ⇑Sn Sn 04 16 29.8 -13
comp=N,44nm,0.4s,baz=137,slow=22,SNR=3.6
KK31 Karatay Array 6.59 324 Pn 04 15 27.8 -0.9
KK31 Karatay Array 6.59 324 PN Pn 04 15 27.8 -0.9
KKAR Karatay Array 6.59 324 Pn 04 15 27.8 -0.9
KKAR Karatay Array 6.59 324 Pn 04 15 27.6 -1.1
KKAR Karatay Array 6.59 324 PN Pn 04 15 27.6 -1.1
SMLA Simla 6.80 170 eP Pn 04 15 33.3 +1.7
SMLA eS Sn 04 16 44.3 -3.3
SMLA IAML 04 16 50.5
comp=N,279nm,0.2s
SMLA IAML 04 16 50.5
comp=E,321nm,0.2s
JOSI Joshimath 7.93 155 eP Pn 04 15 49.6 +2.5
JOSI eS Sn 04 17 14.3 -1.0
JOSI IAML 04 17 21.1
comp=N,538nm,0.2s
JOSI IAML 04 17 21.2
comp=E,428nm,0.7s
KALG Kalgarh 8.69 162 eP Pn 04 15 50.6 -6.6
KALG eS Sn 04 17 25.4 -8.0
NDI New Delhi 9.22 172 ex Pn 04 16 03.0 -1.4
NDI eS Sn 04 17 37.0 -9.4
AYAN Aya Nagar 9.41 173 eP Pn 04 16 06.2 -0.8
AYAN eS Sn 04 17 44.6 -6.3
SONA Sohna 9.64 173 eP Pn 04 16 10.0 0.0
SONA eS Sn 04 17 50.6 -5.8
MAKZ Makanchi 10.07 25 ⇑P Pn 04 16 15.1 -0.7
comp=E,21nm,0.8s
MAKZ Makanchi 10.07 25 Pn 04 16 15.7 -0.2
MAKZ Makanchi 10.07 25 P Pn 04 16 14.8 -1.0
MK31 Makanchi Array 10.17 26 ⇓P Pn 04 16 16.3 -0.8
comp=E,27nm,0.8s,baz=199,slow=13,SNR=166
MK31 S Sn 04 18 09.0 -0.1
comp=E,8.1nm,0.9s,baz=148,slow=37,SNR=4.2
MK31 Makanchi Array 10.17 26 Pn 04 16 17.1 0.0

MK31 Makanchi Array 10.17 26 P Pn 04 16 17.1 0.0
MKAR Makanchi Array 10.17 26 P Pn 04 16 16.8 -0.3
comp=E,4.0nm,0.3s,baz=202,slow=15,SNR=195
WMQ Urumqi 10.84 53 eP Pn 04 16 25.4 -0.8
WMQ S Sn 04 18 20.4 -5.2
WMQ pmax pmax
comp=E,13nm,0.9s
WMQ pmax pmax
comp=E,180nm,4.5s
WMQ Urumqi 10.84 53 Pn 04 16 25.5 -0.8
WMQ Urumqi 10.84 53 P Pn 04 16 25.5 -0.8
HRA Herat 11.45 257 Pn 04 16 33.5 -1.1
DANN Dangsing 11.61 142 eP Pn 04 16 34.4 -2.4
comp=E,194nm,0.4s
KOLN Koldanda 12.02 144 eP Pn 04 16 39.6 -2.6
comp=E,106nm,0.5s
GKN Gorkha 12.33 140 eP Pn 04 16 44.6 -1.6
comp=E,149nm,0.3s
KKN Kakani 12.83 139 eP Pn 04 16 51.3 -1.5
comp=E,77nm,0.5s
DMN Daman 12.89 140 eP Pn 04 16 51.5 -2.1
comp=E,38nm,0.3s
KURBB Kurchatov Arra 12.93 8 P Pn 04 16 51.1 -2.5
comp=E,0.2nm,0.3s,baz=192,slow=12,SNR=34
KURBB Kurchatov Arra 12.93 8 ⇑P Pn 04 16 49.7 -3.9
comp=E,7.9nm,0.7s
KURK Kurchatov 13.03 8 ⇑P Pn 04 16 51.8 -3.1
comp=E,17nm,0.9s
KURK Kurchatov 13.03 8 P Pn 04 16 52.6 -2.4
KURK Kurchatov 13.03 8 c iP Pn 04 16 52.7 -2.3
KURK pmax pmax
comp=Z,18nm,0.8s
GUN Gumba 13.06 136 eP Pn 04 16 53.9 -2.0
comp=Z,38nm,0.3s
PKIN Phulchoki 13.07 139 eP Pn 04 16 53.9 -2.0
comp=Z,56nm,0.4s
PKI Pulchoki 13.08 139 eP Pn 04 16 54.0 -2.1
comp=Z,84nm,0.4s
JIRN Jiri 13.43 136 eP Pn 04 16 59.2 -1.5
comp=Z,159nm,0.3s
GEYT Alibeck 13.92 276 P Pn 04 17 02.3 -4.3
comp=Z,0.9nm,0.3s,baz=100,slow=11,SNR=6.1
GEYT S Sn 04 19 28.2 -12
comp=Z,1.0nm,0.3s,baz=88,slow=22,SNR=4.3
GEYT Alibeck 13.92 276 P Pn 04 17 02.9 -3.8
GYA0B ALIBECK ARRAY 13.92 276 ⇓P Pn 04 17 03.2 -3.5
GYA0B ⇓S Sn 04 19 32.8 -7.3
RAMN Ramite 14.21 137 eP Pn 04 17 07.7 -2.9
comp=Z,94nm,0.5s
TAPN Taplejung 14.52 133 eP Pn 04 17 12.4 -2.3
comp=Z,48nm,0.5s
ODAN Odare 14.71 135 eP Pn 04 17 14.3 -2.8
comp=Z,51nm,0.4s
LSA Lhasa 15.16 118 Pn Pn 04 17 23.3 +0.4
LSA Lhasa 15.16 118 P Pn 04 17 23.3 +0.4
LSA pmax pmax
comp=Z,6.0nm,0.5s
BVAR Borovoye Array 15.63 348 P Pn 04 17 27.9 -0.2
comp=Z,1.6nm,0.3s,baz=153,slow=14,SNR=45
BRVK Borovoye 15.68 348 ⇑P Pn 04 17 28.8 +0.1
comp=Z,16nm,0.9s
BRVK Borovoye 15.68 348 Pn 04 17 28.0 -0.7
BRVK IAmb IAmb 04 17 32.5
comp=Z,11nm,0.7s
BRVK Borovoye 15.68 348 P Pn 04 17 28.8 +0.1
AB31 Akbulak array 16.12 320 ⇑P Pn 04 17 30.6 -3.6
comp=Z,32nm,0.5s,baz=126,slow=12,SNR=56
AB31 ⇓S Sn 04 20 20.2 -13
comp=Z,21nm,0.5s,baz=130,slow=25,SNR=8.3
ABKAR Akbulak array 16.12 320 Pn 04 17 31.7 -2.5
ZAA0 Zalesovo Array 17.27 18 ⇑P Pn 04 17 50.8 +2.6
comp=Z,1.0nm,0.5s
ZAA0 Zalesovo Array 17.27 18 IAmb IAmb 04 17 51.2
comp=Z,12nm,0.5s
ZALV Zalesovo Beam 17.27 18 P P 04 17 46.9 -1.0
comp=Z,3.5nm,0.3s,baz=210,slow=11,SNR=40
ZALV Zalesovo Beam 17.27 18 P P 04 17 47.1 -0.8
ZALV Zalesovo Beam 17.27 18 P P 04 17 47.1 -0.8
AKTO Aktyubinsk 17.83 321 P P 04 17 54.2 0.0
comp=Z,1.9nm,0.3s,baz=107,slow=11,SNR=26
AKTO S S 04 21 00.5 -13
comp=Z,0.1nm,0.3s,baz=311,slow=19,SNR=2.3
AKTO Aktyubinsk 17.83 321 ⇑P P 04 17 53.7 -0.5
comp=Z,6.2nm,0.6s
AKTO ⇓S S 04 21 00.1 -13
comp=Z,3.6nm,0.6s
SHL Shillong 18.37 127 P P 04 18 00.5 +0.1
SHL IAmb IAmb 04 18 03.5
comp=Z,8.5nm,0.5s
SHL Shillong 18.37 127 P P 04 18 00.5 +0.1
SHL pmax pmax
comp=Z,8.0nm,0.5s
GTA Gaotai 18.87 78 P Pn 04 18 08.4 +0.8
GTA pP pP 04 18 23.6 -3.4
GTA S S 04 21 31.4 -2.8
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,200nm,3.8s
HYB Hyderabad 20.50 172 i P P 04 18 24.0 +0.6
WSAR Wadi Sarin 20.66 230 P Pn 04 18 28.0 -0.5
comp=Z,11nm,0.8s,baz=45,slow=5.8,SNR=4.9
ARU Arti 21.84 334 P P 04 18 38.0 +0.6
comp=Z,4.2nm,0.4s,baz=139,slow=4.5,SNR=11
ARU Arti 21.84 334 P P 04 18 36.6 -0.8
ARU IAmb IAmb 04 18 43.9
comp=Z,33nm,1.0s
ARU Arti 21.84 334 d iP P 04 18 38.8 +1.4
ARU 04 19 09.5
ARU S S 04 22 32.2 +0.7
ARU SS SnSn 04 23 16.7 +8.5
ARU pmax pmax
comp=Z,21nm,0.7s
LZH Lanzhou 22.50 86 eP P 04 18 53.9 +9.4
LZH pP pP 04 18 57.5 -9.3
LZH sP sP 04 18 59.1 -22
ZAK Zakamensk 23.26 49 eP P 04 18 52.4 +0.7
ZAK pmax pmax
comp=Z,5.0nm,0.8s
GNI Garni 24.14 285 P P 04 19 02.6 +2.7
comp=Z,13nm,0.8s,baz=50,slow=7.6,SNR=9.4
GNI Garni 24.14 285 P P 04 18 58.8 -1.0
GNI IAmb IAmb 04 19 03.8
comp=Z,12nm,0.7s
GNI Garni 24.14 285 d iP P 04 19 03.1 +3.3
GNI pmax pmax
comp=Z,36nm,0.7s
SONM Songino Array 24.45 56 P P 04 19 04.7 +2.2
comp=Z,9.1nm,0.6s,baz=255,slow=9.2,SNR=46
SONM pP pP 04 19 29.6 +2.3
comp=Z,3.1nm,0.6s,baz=254,slow=10,SNR=4.0
SONM sP sP 04 19 43.3 +1.6
comp=Z,2.9nm,0.7s,baz=250,slow=12,SNR=2.7
SONM Songino Array 24.45 56 P P 04 19 02.8 +0.3
ZEI Tsey 24.68 292 eP P 04 19 08.0 +3.2
ZEI pmax pmax
comp=Z,6.0nm,0.6s
ULN Ulaanbaatar 24.89 56 P P 04 19 06.1 -0.4
ULN Ulaanbaatar 24.89 56 P P 04 19 06.1 -0.4
ULN pmax pmax
comp=Z,5.0nm,0.8s
NCK Nalchik 24.93 293 ⇓eP P 04 19 09.5 +2.8
NCK pmax pmax
comp=Z,43nm,1.3s
AKH Akhalkalaki 25.01 288 IAmb IAmb 04 19 13.4
comp=Z,18nm,0.9s
KBZ Khabaz 25.44 294 P P 04 19 12.8 +1.4
comp=Z,2.1nm,0.9s,baz=177,slow=8.4,SNR=4.1
NEY Neytrino 25.56 293 ⇓eP P 04 19 14.2 +1.6
KIV Kislovodsk 25.60 294 eP P 04 19 15.6 +2.6
KIV pmax pmax
comp=Z,17nm,1.0s
CMAR Chiang Mai Arr 28.00 127 pP pP 04 20 03.3 +2.7
comp=Z,1.5nm,0.3s,baz=305,slow=9.4,SNR=1.7
CMAR sP sP 04 20 16.1 +1.8
comp=Z,1.6nm,0.3s,baz=317,slow=13,SNR=1.8
PRGR Permogore 30.25 332 eP P 04 19 51.5 -2.5
PRGR pmax pmax
comp=Z,7.0nm,0.6s
OBN Obninsk 31.50 316 i P P 04 20 04.5 -0.5
OBN i *PP sP 04 20 46.8 +1.4
OBN i 04 21 08.9
OBN pmax pmax
comp=Z,12nm,0.8s
SIM Simferopol' 31.74 296 ceP P 04 20 09.4 +2.1
SIM pmax pmax

comp=Z,20nm,0.6s
KLMR Klimovskoe 32.28 327 eP P 04 20 07.5 -4.4
KLMR AMP 04 20 12.9
comp=Z,10.0nm,1.4s
KLMR Klimovskoe 32.28 327 eP P 04 20 07.4 -4.4
KLMR pmax pmax
comp=Z,10.0nm,1.4s
BR131 Keskin Array S 32.66 287 IAmb IAmb 04 20 18.0
comp=Z,9.6nm,0.9s
BRTR Keskin Array B 32.66 287 P P 04 20 17.1 +1.5
comp=Z,3.9nm,0.4s,baz=97,slow=8.2,SNR=48
BRTR Keskin Array B 32.66 287 P P 04 20 15.1 -0.5
AKASG Malin Array Be 35.12 307 P P 04 20 36.6 +0.1
comp=Z,0.6nm,0.4s,baz=79,slow=7.2,SNR=6.9
AKASG pP pP 04 21 05.8 +2.5
comp=Z,1.2nm,0.6s,baz=78,slow=7.1,SNR=2.8
AKASG sP sP 04 21 17.8 +0.7
comp=Z,1.3nm,0.6s,baz=78,slow=7.7,SNR=2.4
AKASG Malin Array Be 35.12 307 P P 04 20 36.6 +0.1
VRI Vrincioaia 36.88 298 ⇓P P 04 20 54.2 +2.5
PLOR Plostina 36.94 298 ⇓P P 04 20 54.4 +2.2
MLR Muntele Rosu 37.46 298 P P 04 20 58.9 +2.2
baz=103,slow=14
MLR Muntele Rosu 37.46 298 ⇑P P 04 20 59.1 +2.4
MLR Muntele Rosu 37.46 298 P P 04 20 56.7 0.0
MLR IAmb IAmb 04 21 00.2
comp=Z,7.6nm,0.9s
LVZ Lovozero 37.69 336 ⇑eP P 04 20 59.4 +1.2
LVZ pmax pmax
comp=Z,27nm,1.0s
BURAR Bucovina Array 37.77 302 ⇓P P 04 21 00.8 +1.5
BURAR Bucovina Array 37.77 302 P P 04 20 59.1 -0.2
DOPR Dopca 37.80 299 ⇑P P 04 21 01.2 +1.8
VOIR 38.09 298 ⇑P P 04 21 03.5 +1.5
LVV L'vov 38.44 305 eP P 04 21 05.3 +0.6
FINES FINESS Array B 38.55 324 P P 04 21 06.3 +0.8
comp=Z,4.3nm,0.4s,baz=114,slow=9.6,SNR=87
FINES FINESS Array B 38.55 324 P P 04 21 05.8 +0.3
TRPA Tarpa 39.53 303 ⇑P P 04 21 16.3 +2.5
KOLS Kolonicke sedl 39.64 304 eP P 04 21 15.6 +0.9
KOLS Kolonicke sedl 39.64 304 eP P 04 21 15.6 +0.9
GZR Gura Zlata 39.69 298 ⇑P P 04 21 16.9 +1.7
VTS Vitosha 39.84 294 ⇑P P 04 21 18.7 +2.1
CRVS Cervenica-Dubn 40.17 304 eP P 04 21 17.9 -1.2
CRVS Cervenica-Dubn 40.17 304 eP P 04 21 17.9 -1.2
BZS Buzias 40.46 299 ⇓P P 04 21 23.2 +1.7
IDI Anoyia 40.51 282 P P 04 21 22.4 +0.3
comp=Z,4.3nm,0.3s,baz=98,slow=7.9,SNR=9.6
NIE Niedzica 40.89 305 eP P 04 21 26.9 +1.9
NIE Niedzica 40.89 305 eP P 04 21 26.9 +1.9
OJC Ojcow 41.14 306 eP P 04 21 28.1 +1.0
OJC Ojcow 41.14 306 eP P 04 21 28.1 +1.0
KLR Kul'dur 41.28 55 ⇑eP P 04 21 29.3 +1.1
KLR pmax pmax
comp=Z,12nm,2.3s
ARCES ARCESS Array B 41.41 336 P P 04 21 30.0 +1.0
comp=Z,13nm,0.8s,baz=104,slow=8.6,SNR=66
ARCES ARCESS Array B 41.41 336 P P 04 21 29.1 +0.2
ARE0 ARCESS Array S 41.41 336 P P 04 21 29.9 +0.9
VYHS Vyhne 41.95 304 eP P 04 21 34.6 +0.9
VYHS Vyhne 41.95 304 eP P 04 21 34.6 +0.9
KTK1 Kautokeino 41.96 335 eP P 04 21 34.1 +0.6
HAMF Hammerfest 42.41 337 eP P 04 21 38.5 +1.4
GKP Gorka Klasztor 42.53 311 eP P 04 21 39.5 +1.2
GKP Gorka Klasztor 42.53 311 eP P 04 21 39.5 +1.2
MORC Moravsky Berou 42.64 306 ⇓P P 04 21 40.6 +1.4
SMOL Smolenice 42.87 304 eP P 04 21 42.6 +1.5
SMOL Smolenice 42.87 304 eP P 04 21 42.6 +1.5
KRLC Kraliky 43.09 306 eP P 04 21 44.1 +1.2
KRLC Kraliky 43.09 306 eP P 04 21 44.1 +1.2
TIXI Tiksi 43.12 22 P P 04 21 42.8 +0.1
TIXI IAmb IAmb 04 21 44.4
comp=Z,5.3nm,0.7s
TIXI Tiksi 43.12 22 ⇓eP P 04 21 43.0 +0.3
TIXI pmax pmax
comp=Z,5.0nm,0.7s
VRAC Vranov 43.31 305 ⇑P P 04 21 46.4 +1.7
KSP Ksiaz 43.31 307 eP P 04 21 46.1 +1.5
KSP Ksiaz 43.31 307 eP P 04 21 46.1 +1.5
DPC Dobruska-Polom 43.35 307 eP P 04 21 46.7 +1.7
DPC ex x 04 21 51.5
DPC Dobruska-Polom 43.35 307 eP P 04 21 46.7 +1.7
CHVC Chvalec 43.49 307 eP P 04 21 47.4 +1.3
UPC Upice 43.53 307 eP P 04 21 48.0 +1.6
UPC Upice 43.53 307 eP P 04 21 48.0 +1.6
TRO Tromso 43.61 335 eP P 04 21 47.2 +0.5
CONA Conrad Observa 44.00 303 eP P 04 21 51.7 +1.4
comp=Z,3.3nm,0.6s
ARSA Arzberg 44.34 302 eP P 04 21 54.3 +1.4
comp=Z,2.5nm,0.6s
STEI Steigen 44.52 332 eP P 04 21 54.5 +0.5
PRU Pruhonice 44.53 306 eP P 04 21 55.7 +1.3
PRU Pruhonice 44.53 306 eP P 04 21 55.7 +1.3
MOR8 Moi Rana 44.54 329 eP P 04 21 54.4 +0.1
SOKA Soboth 44.78 302 eP P 04 21 57.9 +1.3
comp=Z,2.7nm,0.6s
BRG Berggiesshubel 44.78 308 i P P 04 21 57.5 +1.1
comp=Z,8.0nm,0.6s
BRG Berggiesshubel 44.78 308 i P P 04 21 57.5 +1.1
BRG pmax pmax
comp=Z,8.0nm,0.6s
MOA Molln 45.07 303 eP P 04 22 01.6 +2.8
comp=Z,1.9nm,0.6s
KONS Konsvik 45.11 330 eP P 04 21 59.8 +1.1
LOF Lofoten 45.19 332 eP P 04 21 59.3 +0.1
GERES GERESS Array B 45.26 305 P P 04 22 01.5 +1.2
comp=Z,2.7nm,0.7s,baz=61,slow=7.2,SNR=22
GERES GERESS Array B 45.26 305 P P 04 22 00.1 -0.2
KHC Kasperske Hory 45.29 305 eP P 04 22 01.8 +1.3
KHC Kasperske Hory 45.29 305 P P 04 22 00.7 +0.3
KHC Kasperske Hory 45.29 305 eP P 04 22 01.8 +1.3
CLL Collm 45.31 308 eP P 04 22 01.0 +0.5
comp=Z,4.0nm,0.7s
CLL Collm 45.31 308 eP P 04 22 01.0 +0.5
CLL pmax pmax
comp=Z,4.0nm,0.7s
NC405 NORSAR Array S 45.37 322 P P 04 22 01.2 +0.3
NSS Namsos 45.40 327 eP P 04 22 01.8 +0.8
NC602 NORSAR Array S 45.46 322 P P 04 22 02.3 +0.7
NC303 NORSAR Array S 45.54 322 P P 04 22 02.6 +0.4
NB2 NORSAR Subarra 45.62 322 P P 04 22 03.3 +0.4
comp=Z,4.1nm,0.6s,baz=90,slow=7.9
NB2 NORSAR Subarra 45.62 322 P P 04 22 03.3 +0.4
baz=90,slow=7.9
NOA NORSAR Array B 45.62 322 P P 04 22 03.1 +0.3
comp=Z,5.8nm,0.7s,baz=91,slow=7.6,SNR=29
KBA Koelnbreinsper 45.84 302 P P 04 22 05.7 +0.8
comp=Z,1.9nm,0.5s
KONO Kongsberg 46.45 320 eP P 04 22 10.6 +1.2
ABTA Abfaltersbach 46.46 302 eP P 04 22 11.1 +1.3
comp=Z,1.6nm,0.5s
DOMB Dombas 46.64 323 eP P 04 22 11.2 +0.3
SKAR Skarslia 47.05 322 eP P 04 22 15.8 +1.7
SQTA Sankt Quirin 47.23 303 eP P 04 22 16.1 +0.3
comp=Z,1.9nm,0.5s
MOTA Moosalm 47.27 303 eP P 04 22 16.9 +0.8
comp=Z,3.3nm,0.6s
FETA Feichten 47.59 303 eP P 04 22 18.7 +0.1
comp=Z,1.9nm,0.5s
AKN Aaknes 47.61 324 eP P 04 22 18.5 +0.1
ODD1 Odda 47.94 321 eP P 04 22 21.4 +0.5
FUORN Ofenpass-Fuorn 48.00 302 P P 04 22 21.8 0.0
FUORN IAmb IAmb 04 22 29.3
comp=Z,7.1nm,0.9s
DAVA Damuels 48.09 303 eP P 04 22 23.1 +0.6
comp=Z,14nm,0.7s
BER Bergen 48.54 321 eP P 04 22 26.2 +0.8
ASK Askoy 48.59 322 eP P 04 22 26.8 +1.0
MJAR Matsushiro Arr 48.94 71 P P 04 22 30.2 +1.2
comp=Z,1.5nm,0.6s,baz=296,slow=8.8,SNR=4.1
KEST Kesra 52.18 289 P P 04 22 54.5 +1.2
comp=Z,4.0nm,1.0s,baz=0.0,slow=1.0,SNR=3.2
KEST Kesra 52.18 289 IAmb IAmb 04 23 09.7
comp=Z,6.8nm,1.1s
KMBO Kilima Mbogo 52.58 232 P P 04 22 57.9 +1.2
comp=Z,1.4nm,0.6s,baz=14,slow=7.1,SNR=4.4
KMBO Kilima Mbogo 52.58 232 P P 04 22 57.3 +0.6
BILL Bilibino 55.71 27 i P P 04 23 14.1 -4.3
BILL pmax pmax
comp=Z,6.0nm,1.5s
ESDC Sonseca Array 60.15 299 P P 04 23 50.5 +0.5
comp=Z,1.0nm,0.5s,baz=54,slow=7.1,SNR=17
ANM Nome 67.30 24 P P 04 24 37.4 +1.0
ANM IAmb IAmb 04 24 39.0

comp=Z,3.4nm,0.8s
ANM Nome 67.30 24 P P 04 24 37.4 +1.0
ANM pmax pmax
comp=Z,3.0nm,0.8s
TOA0 Torodi Ar. Sit 69.51 271 P P 04 24 51.1 +0.2
TOA0 IAmb IAmb 04 24 51.4
comp=Z,4.4nm,0.6s
TORD Torodi Ar. Bea 69.51 271 P P 04 24 50.9 0.0
comp=Z,3.6nm,0.4s,baz=47,slow=5.6,SNR=82
INK Inuvik 71.92 11 P P 04 25 05.4 +0.8
INK IAmb IAmb 04 25 06.4
comp=Z,5.0nm,0.9s
INK Inuvik 71.92 11 P P 04 25 05.4 +0.8
INK pmax pmax
comp=Z,5.0nm,1.0s
C36M Paulatuk 72.12 7 IAmb IAmb 04 25 06.9
comp=Z,8.4nm,0.9s
ILAR Eielson Array 72.40 18 P P 04 25 07.8 +0.3
comp=Z,1.5nm,0.8s,baz=319,slow=5.1,SNR=24
ILAR pP pP 04 25 38.8 +1.4
comp=Z,0.1nm,0.5s,baz=317,slow=6.4,SNR=1.1
ILAR Eielson Array 72.40 18 P P 04 25 07.9 +0.3
ILAR pP 04 25 35.9 -1.5
BCAR Beaver Creek A 75.05 17 P P 04 25 23.1 0.0
KDAK Kodiak Island 76.47 24 P P 04 25 32.4 +1.2
comp=Z,6.4nm,0.9s,baz=323,slow=5.1,SNR=4.4
KDAK Kodiak Island 76.47 24 P P 04 25 31.8 +0.6
DBIC Dimbokro 78.52 270 P P 04 25 44.1 +0.8
comp=Z,3.5nm,0.5s,baz=17,slow=7.3,SNR=15
DBIC Dimbokro 78.52 270 P P 04 25 43.2 -0.1
DBIC IAmb IAmb 04 25 44.5
comp=Z,4.0nm,0.5s
KIC Kosan Boka 78.62 269 eP P 04 25 44.6 +0.7
comp=Z,12nm,0.5s
TIC Toumodi 78.67 270 eP P 04 25 44.7 +0.5
LIC Lamto 78.92 269 eP P 04 25 46.1 +0.6
comp=Z,14nm,0.4s
WRA Warramunga Arr 79.58 125 P P 04 25 49.9 +1.0
comp=Z,1.5nm,0.9s,baz=320,slow=4.1,SNR=5.7
YKA Yellowknife Ar 79.66 5 P P 04 25 49.3 +0.6
comp=Z,3.1nm,0.7s,baz=344,slow=5.3,SNR=49
YKA pP pP 04 26 19.1 0.0
comp=Z,1.0nm,0.6s,baz=342,slow=5.2,SNR=4.4
BOSA Boshof 81.27 223 P P 04 25 58.5 +0.6
comp=Z,1.4nm,0.7s,baz=0.0,slow=3.0,SNR=3.1
BOSA Boshof 81.27 223 P P 04 25 57.7 -0.2
ASAR Alice Springs 82.01 128 P P 04 26 02.8 +1.0
comp=Z,0.9nm,0.7s,baz=312,slow=5.7,SNR=8.4
ASAR Alice Springs 82.01 128 P P 04 26 02.4 +0.7
SCHQ Schefferville 82.26 339 P P 04 26 03.0 +0.3
comp=Z,1.6nm,0.6s,baz=333,slow=2.7,SNR=3.6
SCHQ Schefferville 82.26 339 P P 04 26 03.1 +0.3
PLCA Paso Flores 153.84 253 PKPbc PKiKP 04 33 41.6 +1.6
comp=Z,0.8nm,0.9s,baz=21,slow=3.4,SNR=4.7
PLCA Paso Flores 153.84 253 PKPdf PKPdf 04 33 32.4 +0.5
PLCA Paso Flores 153.84 253 PKIKP PKPdf 04 33 32.4 +0.5

IDC 06 04:46:04.9±0.9, 6.94N×73.17W, h146km±67km, mb3.1/2, mb1 3.5/4, mb1mx3.1/34, mbtmp3.6/4, Error ellipse: s-maj=159.4km s-min=8.5km az=133.0
RSNC 06 04:46:06.1±1.0, 6.83N×73.10W, h154km±4km, ML3.2, Mw3.4
ISC 06 04:46:04.8±0.9, 6.83N±0.03×73.08W±0.04, h161km±6km, n35, σ1.43/68, 3C-7D, Northern Colombia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BARC Barichara 0.25 203⇑iP Pn 04 46 26.5 -0.4
BARC eS Sn 04 46 42.2 -1.6
BARC i 04 46 44.0
comp=Z,655nm,0.3s
PAMC Pamplona, Colo 0.64 37⇓eP Pn 04 46 29.3 +0.6
PAMC eS Sn 04 46 46.7 -0.3
PAMC i 04 46 48.2
comp=Z,254nm,0.7s
BRRC Barranca, Sant 0.69 294⇑iP Pn 04 46 28.4 0.0
BRRC eS Sn 04 46 46.0 -0.4
BRRC i 04 46 53.0
comp=Z,161nm,0.2s
RUSC La Rusia 0.93 180⇓iP Pn 04 46 30.4 -0.3
RUSC eS Sn 04 46 50.4 -0.1
RUSC i 04 46 53.6
comp=Z,92nm,0.4s
TAMC Tame, Arauca 1.34 107⇓iP Pn 04 46 34.7 +1.0
TAMC eS Sn 04 46 56.5 +0.6
TAMC i 04 46 56.9
comp=Z,81nm,0.3s
PTBC PUERTO BERRIO, 1.40 258 eP Pn 04 46 33.2 -1.0
PTBC eS Sn 04 46 55.5 -1.2
PTBC i 04 47 01.6
comp=Z,296nm,0.3s
OCAC Ocana 1.42 350 eP Pn 04 46 34.6 0.0
OCAC eS Sn 04 46 57.5 -0.2
OCAC i 04 47 01.2
comp=Z,229nm,0.4s
SPBC San Pablo de B 1.53 220⇓iP Pn 04 46 35.4 -0.3
SPBC eS Sn 04 46 58.2 -1.1
SPBC i 04 47 03.1
comp=Z,273nm,0.2s
NORC Norcasia 2.18 235 eP Pn 04 46 42.4 -0.4
NORC eS Sn 04 47 11.7 -0.3
NORC i 04 47 15.9
comp=Z,204nm,0.3s
SMLC San Martn de 2.19 334⇓eP Pn 04 46 42.9 0.0
SMLC eS Sn 04 47 12.6 +0.2
SMLC i 04 47 14.6
comp=Z,250nm,0.3s
CHIC Chingaza 2.28 197⇓eP Pn 04 46 44.2 -0.1
CHIC eS Sn 04 47 15.3 +0.5
CHIC i 04 47 23.5
comp=Z,41nm,0.3s
ROSC El Rosal 2.33 212 P Pn 04 46 46.4 +1.5
comp=Z,38nm,0.3s,baz=228,slow=6.3,SNR=55
ROSC S Sn 04 47 15.2 -0.5
comp=Z,13nm,0.3s,baz=114,slow=20,SNR=5.0
ROSC El Rosal 2.33 212 eP Pn 04 46 46.2 +1.3
ROSC eS Sn 04 47 16.4 +0.7
ROSC i 04 47 24.4
comp=Z,183nm,0.3s
HELC Santa Helena 2.51 256 eP Pn 04 46 47.3 +0.3
HELC eS Sn 04 47 19.4 -0.2
HELC i 04 47 25.5
comp=Z,168nm,0.4s
UREC San Jos de Ur 2.60 291 eP Pn 04 46 46.3 -1.4
UREC eS Sn 04 47 17.9 -3.0
UREC i 04 47 30.0
comp=Z,108nm,0.2s
VILC Villavicencio, 2.77 193 eP Pn 04 46 49.5 -0.4
VILC eS Sn 04 47 25.0 +0.1
VILC i 04 47 40.0
comp=Z,86nm,0.4s
GUY2C Guyana, Caldas 2.77 235 eP Pn 04 46 50.8 +0.5
GUY2C eS Sn 04 47 27.7 +2.3
GUY2C i 04 47 31.7
comp=Z,115nm,0.5s
PTGC Puerto Gaitan, 2.78 160⇓iP Pn 04 46 49.4 -0.4
PTGC eS Sn 04 47 22.6 -2.2
PTGC i 04 47 25.2
comp=Z,75nm,0.3s
RREF El Recreo 2.96 230 eP Pn 04 46 53.5 +0.8
RREF eS Sn 04 47 32.2 +2.5
RREF i 04 47 39.2
comp=Z,100nm,0.6s
CBOC Ciudad Bolivar 3.07 252 eP Pn 04 46 54.2 +0.5
CBOC eS Sn 04 47 31.4 0.0
CBOC i 04 47 45.3
comp=Z,46nm,1.1s
CODC Agustn Codazz 3.11 353 eP Pn 04 46 54.4 +0.4
CODC eS Sn 04 47 32.1 -0.1
CODC i 04 47 40.2
comp=Z,36nm,0.6s
DBBC Dabeiba 3.11 274⇑eP Pn 04 46 54.1 0.0
DBBC eS Sn 04 47 32.5 +0.2
DBBC i 04 47 49.2
comp=Z,80nm,0.7s
SDV Santo Domingo 3.17 50 P Pn 04 46 55.9 +0.9
comp=Z,6.5nm,0.3s,baz=243,slow=11,SNR=99
SDV S Sn 04 47 32.9 -1.0
comp=Z,5.8nm,0.3s,baz=58,slow=19,SNR=27
SDV Santo Domingo 3.17 50 eP Pn 04 46 55.9 +0.9
SDV eS Sn 04 47 34.4 +0.4
SDV i 04 47 46.3
comp=Z,9.9nm,1.6s
ARGC Ariguani, Magd 3.23 339 eP Pn 04 46 56.8 +1.3
ARGC eS Sn 04 47 35.0 +0.1
ARGC i 04 47 36.9
comp=Z,40nm,0.3s
ANIL Santa Ana 3.27 225 eP Pn 04 46 57.7 +1.3
ANIL eS Sn 04 47 37.1 +0.7
PRAC Prado 3.58 210 eP Pn 04 46 60.0 0.0
PRAC eS Sn 04 47 43.6 +0.7
PRAC i 04 47 46.9
comp=Z,61nm,0.7s
ORTC Ortega, Tolima 3.61 217 eP Pn 04 47 00.8 +0.4
ORTC eS Sn 04 47 44.5 +0.7
ORTC i 04 47 49.3
comp=Z,51nm,0.5s
SJCC San Jacinto, C 3.69 326 eP Pn 04 47 00.3 -1.2
SJCC eS Sn 04 47 42.1 -3.4
SJCC i 04 47 46.0
comp=Z,45nm,0.4s
PLMC San Jos del P 3.71 239 eP Pn 04 47 02.4 +0.7
PLMC eS Sn 04 47 45.9 -0.1
PLMC i 04 47 56.0
comp=Z,48nm,0.5s
GUVC San Jose del G 4.28 174 eP Pn 04 47 08.1 -0.9
GUVC eS Sn 04 47 56.5 -2.6
GUVC i 04 48 01.4
comp=Z,34nm,0.4s
SMRC Santa Marta, M 4.46 345 eP Pn 04 47 11.4 +0.1
SMRC eS Sn 04 47 58.9 -4.3
SMRC i 04 48 00.6
comp=Z,30nm,0.6s
MACC Macarena, Meta 4.71 189 eP Pn 04 47 13.3 -1.4
MACC eS Sn 04 48 03.2 -6.1
MACC i 04 48 09.2
comp=Z,19nm,1.1s
PDAR Pinedale Array 48.10 324 P P 04 54 29.3 +0.7
comp=Z,0.4nm,0.9s,baz=132,slow=7.5,SNR=2.8
YKA Yellowknife Ar 63.27 340 P P 04 56 16.6 +0.6
comp=Z,0.4nm,0.5s,baz=134,slow=6.6,SNR=12

IDC 06 05:02:57.6±0.7, 27.09N×141.49E, h71km±5km, mb3.6/17, mb1 3.8/19, mb1mx3.7/38, mbtmp3.9/19, MS2.9/2, Ms1 2.9/2, ms1mx2.5/32, Error ellipse: s-maj=16.6km s-min=13.8km az=79.0
NEIC 06 05:02:57.9±1.5, 27.1N±0.1×141.48E±0.09, h64km±7km, mb4.1/25, Error ellipse: s-maj=16.2km s-min=11.8km az=173.0
JMA 06 05:02:59.5±0.1, 27.11N×141.75E, h74km, M4.4
JMA Felt II J1.
ISC 06 05:02:58.2±0.5, 27.11N±0.06×141.56E±0.08, h74km, n72, σ1.39/72, mb4.0/28, Bonin Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CBIJ Chichi jima 0.56 91 P Pn 05 03 11.7 -0.3
CBIJ S Sn 05 03 20.6 -1.6
JCJ Chichijima 0.56 91 P Pn 05 03 11.5 -0.5
2µm,0.3s,baz=350,slow=23,SNR=744
JCJ LR LR 05 03 18.9
comp=Z,250nm,18.5s,baz=94,slow=34
JCJ S Sn 05 03 20.7 -1.4
3µm,0.3s,baz=287,slow=19,SNR=118
JHH2 Haha-jima-NKT2 0.73 130 P Pn 05 03 13.8 +0.1
JHH2 S Sn 05 03 24.6 -0.6
BSO4 Boso 4 7.93 353 P Pn 05 04 52.9 +2.3
BSO4 eS Sn 05 06 19.4 +0.7
JHU Hanno 8.93 348 P Pn 05 05 06.4 +2.0
JHU eS Sn 05 06 40.5 -2.9
MJAR Matsushiro Arr 9.83 344 P Pn 05 05 16.6 -0.1
0.1nm,0.3s,baz=171,slow=12,SNR=2.8
JFK Kawauchi 10.25 357 P Pn 05 05 20.2 -2.2
KSRS Korea Array 15.45 315 LR LR 05 11 36.3
comp=Z,39nm,19.4s,baz=148,slow=34
USRK Ussuriysk Ar. 18.72 338 P P 05 07 10.5 -0.3
baz=154,slow=11,SNR=4.7
KLR Kul'dur 23.35 344 P P 05 07 59.7 -0.4
6.3nm,0.7s,baz=139,slow=4.1,SNR=15
KLR LR LR 05 15 48.6
comp=Z,32nm,21.9s,baz=290,slow=33
H11N2 WAKE ISLAND Hy 24.36 102 T T 05 33 04.1
baz=302,slow=74
H11N1 WAKE ISLAND Hy 24.36 102 T T 05 33 06.7
baz=302
H11N3 WAKE ISLAND Hy 24.37 102 T T 05 33 05.4
baz=302,slow=74
H11S3 WAKE ISLAND Hy 24.67 105 T T 05 33 43.2
baz=297,slow=74,SNR=24
H11S1 WAKE ISLAND Hy 24.67 105 T T 05 33 29.7
baz=297,slow=74,SNR=15
H11S2 WAKE ISLAND Hy 24.68 105 T T 05 33 40.1
baz=297,slow=74,SNR=13
XAN Xi'an 28.85 292 P P 05 08 50.1 +0.3
XAN IAmb IAmb 05 08 50.7
comp=Z,2.8nm,0.5s
SONM Songino Array 34.32 317 ScP ScP 05 15 48.7 -2.2
comp=Z,0.3nm,0.7s,baz=113,slow=3.3,SNR=3.6
CMAR Chiang Mai Arr 40.06 267 P P 05 10 26.8 +0.3
comp=Z,0.7nm,0.4s,baz=81,slow=5.7,SNR=2.5
COEN Coen 40.85 178 P P 05 10 33.9 +0.9
MTN Manton Dam 40.98 196 P P 05 10 35.8 +1.8
WB0 Warramunga Arr 47.11 189 P P 05 11 23.2 +0.2
WR0 Warramunga Arr 47.28 189 P P 05 11 24.4 +0.1
WRA Warramunga Arr 47.29 189 P P 05 11 24.4 0.0
comp=Z,4.9nm,0.7s,baz=10,slow=8.5,SNR=14
WRA Warramunga Arr 47.29 189 P P 05 11 24.9 +0.5
ZALV Zalesovo Beam 49.11 319 ScP ScP 05 16 46.7 -2.5
comp=Z,0.3nm,0.4s,baz=129,slow=5.7,SNR=3.0
MK31 Makanchi Array 50.03 310 P P 05 11 44.3 -1.0
MKAR Makanchi Array 50.03 310 P P 05 11 43.4 -1.9
comp=Z,0.1nm,0.6s,baz=92,slow=9.4,SNR=2.7
MKAR ScP ScP 05 16 49.9 -3.5
comp=Z,0.6nm,0.6s,baz=73,slow=4.7,SNR=8.3
MKAR Makanchi Array 50.03 310 P P 05 11 44.0 -1.2
ANM Nome 50.20 27 P P 05 11 48.9 +2.7
ANM IAmb IAmb 05 11 53.4
comp=Z,2.1nm,1.1s
MAKZ Makanchi 50.25 310 P P 05 11 46.9 0.0
MAKZ IAmb IAmb 05 11 57.0
comp=Z,1.9nm,1.2s
ASAR Alice Springs 51.02 189 P P 05 11 51.4 -1.4
comp=Z,0.4nm,0.7s,baz=20,slow=11,SNR=4.7
ASAR Alice Springs 51.02 189 P P 05 11 53.1 +0.3
KURBB Kurchatov Arra 52.63 314 P P 05 12 02.8 -1.7
comp=Z,0.3nm,0.4s,baz=91,slow=7.6,SNR=3.1
KNTN Kanton 53.95 116 P P 05 12 14.2 -0.5
KDAK Kodiak Island 54.69 37 P P 05 12 19.6 +0.2
comp=Z,2.1nm,0.6s,baz=252,slow=1.6,SNR=4.8
KDAK Kodiak Island 54.69 37 P P 05 12 20.6 +1.1
IMAR Indian Mountai 55.29 27 P P 05 12 25.7 +2.0
BRLK Bradley Lake 55.73 34 P P 05 12 27.6 +0.6
GIRL Giralia 56.07 211 P P 05 12 29.1 -0.6
BPAW Bear Paw Mtn. 56.13 29 P P 05 12 31.1 +1.3
BPAW IAmb IAmb 05 12 34.1
comp=Z,2.3nm,1.0s
MLY Manley 56.36 28 P P 05 12 33.4 +2.0
MLY IAmb IAmb 05 12 41.7
comp=Z,1.4nm,1.1s
BVAR Borovoye Array 57.65 317 P P 05 12 39.6 -1.1
comp=Z,0.3nm,0.3s,baz=98,slow=6.6,SNR=3.2
HDA Harding Lake 57.92 29 P P 05 12 43.6 +1.2
HDA IAmb IAmb 05 12 43.8
comp=Z,1.3nm,0.6s
HIN Hinchinbrook I 57.95 34 P P 05 12 43.8 +1.0
IL31 57.97 29 P P 05 12 43.8 +1.1
IL31 IAmb IAmb 05 12 44.0
comp=Z,1.8nm,0.8s
ILAR Eielson Array 57.97 29 P P 05 12 43.0 +0.3
comp=Z,1.5nm,0.8s,baz=262,slow=5.9,SNR=20
ILAR Eielson Array 57.97 29 P P 05 12 43.4 +0.7
KKAR Karatay Array 58.62 306 P P 05 12 47.4 -0.3
STKA Stephens Creek 58.66 180 P P 05 12 47.7 -0.2
comp=Z,2.0nm,0.7s,baz=334,slow=12,SNR=4.0
STKA Stephens Creek 58.66 180 P P 05 12 47.7 -0.2
BMAR Burnt Mountain 59.09 26 P P 05 12 53.2 +2.7
DOT Dot Lake 59.16 30 P P 05 12 52.4 +1.4
SCRK Sand Creek 59.20 30 P P 05 12 52.8 +1.4
INK Inuvik 63.25 25 P P 05 13 19.2 +0.7
comp=Z,0.7nm,0.9s,baz=277,slow=5.0,SNR=4.7
INK Inuvik 63.25 25 P P 05 13 19.4 +0.9
INK IAmb IAmb 05 13 20.2
comp=Z,4.1nm,1.4s
ABKAR Akbulak array 64.69 314 P P 05 13 27.4 -0.8
YKA Yellowknife Ar 72.40 28 P P 05 14 15.9 -0.2
comp=Z,0.8nm,0.5s,baz=295,slow=6.4,SNR=11
YKA pP PcP 05 14 34.0 +0.4
comp=Z,1.0nm,0.7s,baz=291,slow=6.2,SNR=8.2
ARCES ARCESS Array B 73.34 341 P P 05 14 21.7 +0.1
comp=Z,1.8nm,0.6s,baz=69,slow=8.8,SNR=9.8
ARCES ARCESS Array B 73.34 341 P P 05 14 22.7 +1.1
KBZ Khabaz 77.59 313 P P 05 14 45.7 -0.6
comp=Z,1.4nm,0.8s,baz=222,slow=15,SNR=2.4
FINES FINESS Array B 77.69 334 P P 05 14 46.0 -0.6
comp=Z,0.9nm,0.3s,baz=71,slow=4.2,SNR=18
FINES pP pP 05 15 06.6 +1.5
comp=Z,2.3nm,0.6s,baz=59,slow=5.3,SNR=4.1
BMO Blue Mountains 78.69 45 P P 05 14 54.5 +1.9
WALA Waterton Lakes 78.80 40 P P 05 14 55.2 +2.1
WALA IAmb IAmb 05 15 12.9
comp=Z,2.7nm,1.3s
NVAR Mina Array Bea 80.95 52 P P 05 15 06.5 +1.4
comp=Z,0.5nm,0.6s,baz=287,slow=4.6,SNR=6.5
AKASG Malin Array Be 82.28 324 pP pP 05 15 31.5 +1.3
comp=Z,0.3nm,0.4s,baz=53,slow=5.7,SNR=2.3
NB2 NORSAR Subarra 83.39 338 P P 05 15 16.7 -0.5
comp=Z,0.2nm,0.3s,baz=44,slow=5.3
NOA NORSAR Array B 83.39 338 P P 05 15 16.5 -0.7
comp=Z,0.4nm,0.6s,baz=53,slow=6.6,SNR=3.9
NOA pP pP 05 15 37.8 +1.9
comp=Z,0.6nm,0.8s,baz=47,slow=4.8,SNR=1.2
RLMT Red Lodge 83.53 42 P P 05 15 20.5 +2.1
PDAR Pinedale Array 84.60 44 P P 05 15 24.0 +0.1
comp=Z,0.2nm,0.4s,baz=212,slow=5.3,SNR=4.5
PDAR Pinedale Array 84.60 44 P P 05 15 25.8 +1.9
GERES GERESS Array B 91.21 329 pP pP 05 16 15.8 +1.6
comp=Z,0.4nm,0.7s,baz=27,slow=6.6,SNR=2.7

IDC 06 05:43:55.9±1.1, 13.54N×121.08E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/53, mbtmp3.5/5, Error ellipse: s-maj=45.5km s-min=8.9km az=76.0
MAN 06 05:43:57.6, 13.68N×120.78E, h16km, mb4.5, ML3.4, MS3.2
ISC 06 05:43:57.0±1.2, 13.61N±0.03×120.92E±0.03, h6km±9km, n18, σ1.53/28, mb3.6/5, 1C-1D, Mindoro

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TGY Tagaytay City 0.49 2 Pg Pb 05 44 07.5 -0.6
1µm,0.3s,baz=180,slow=6.0,SNR=34
TGY Lg Lg 05 44 14.5
3µm,0.3s,baz=143,slow=20,SNR=76
TGY Tagaytay City 0.49 2 eP Pn 05 44 13.4 +2.8
LUBP Lubang 0.66 281 eP Pg 05 44 08.9 -0.8
LUBP eS Sg 05 44 19.1 +0.8
LQP Lukban 0.79 50⇑iP Pb 05 44 12.7 -0.5
LQP i S Sb 05 44 23.7 -0.5
BOAC Boac 0.92 99 eP Pn 05 44 15.5 -0.9
BOAC eS Sn 05 44 29.9 -0.1
SJMP San Jose 1.16 170 eP Pn 05 44 20.3 +0.6
SJMP eS Sn 05 44 39.8 +3.9
POLP Polillo Island 1.49 42 eP Pn 05 44 23.8 -0.6
POLP eS Sg 05 44 44.2 -0.7
GQP Guinayangan 1.52 79⇓eP Pg 05 44 25.5 -0.5
GQP eS Sg 05 44 47.7 +1.9
OTRP Odiongan 1.64 139 eP Pg 05 44 28.2 -0.3
OTRP eS Sg 05 44 50.4 +0.6
BALP Baler 2.21 17 eP Pn 05 44 34.8 +0.5
BALP eS Sb 05 45 05.1 0.0
SCZP Santa Cruz 2.36 336 eP Pb 05 44 40.0 0.0
SCZP eS Sn 05 45 04.1 -1.6
CUYO Cuyo Island 2.74 178 eP Pn 05 44 42.6 +1.0
ENPP El Nido 2.80 212 eP Pn 05 44 41.9 -0.5
ENPP eS Sn 05 45 13.1 -3.3
CMAR Chiang Mai Arr 21.65 286 P P 05 48 50.8 +2.4
1.1nm,0.4s,baz=96,slow=8.4,SNR=6.7
WRA Warramunga Arr 35.86 158 P P 05 50 56.2 -1.7
3.9nm,0.3s,baz=331,slow=11,SNR=15
SONM Songino Array 36.20 343 P P 05 51 00.8 +0.1
1.1nm,0.6s,baz=161,slow=10,SNR=7.6
ASAR Alice Springs 39.16 161 P P 05 51 24.9 -1.0
0.2nm,0.5s,baz=341,slow=7.4,SNR=5.1
MKAR Makanchi Array 46.23 324 P P 05 52 23.6 +0.5
0.3nm,0.8s,baz=127,slow=9.3,SNR=2.9

IDC 06 05:45:20.9±1.2, 17.17N×145.47E, h462km±15km, mb2.6/6, mb1 3.0/7, mb1mx2.7/53, mbtmp3.5/7, Error ellipse: s-maj=33.4km s-min=19.0km az=106.0, Mariana Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GUMO Guam 3.61 189 P P 05 46 35.6 +2.0
7.3nm,0.3s,baz=180,slow=19,SNR=2.1
GUMO S S 05 47 32.2 -0.4
30nm,0.3s,baz=36,slow=23,SNR=8.9
WRA Warramunga Arr 38.47 197 P P 05 52 02.0 -0.2
0.4nm,0.6s,baz=21,slow=9.1,SNR=4.7
ASAR Alice Springs 42.13 196 P P 05 52 31.4 -0.2
0.3nm,0.5s,baz=20,slow=8.0,SNR=5.6
MKAR Makanchi Array 59.37 315 P P 05 54 37.6 0.0
0.1nm,0.4s,baz=84,slow=9.3,SNR=4.3
ILAR Eielson Array 65.11 26 P P 05 55 14.0 -0.6
0.2nm,0.5s,baz=261,slow=5.7,SNR=6.4
YKA Yellowknife Ar 79.43 28 P P 05 56 38.1 +0.1
0.2nm,0.4s,baz=284,slow=5.2,SNR=6.0
NVAR Mina Array Bea 84.25 52 P P 05 57 04.0 +0.5
0.2nm,0.6s,baz=262,slow=6.3,SNR=2.4

MOS 06 05:47:01.0±0.9, 11.47S×166.35E, h47km, mb5.6/51, MS5.0/4, Error ellipse: s-maj=6.9km s-min=6.7km az=104.2
BJI 06 05:47:01.8±0.0, 11.06S×166.54E, h48km, mB5.5/42, mb5.3/70, Ms5.2/34, Ms7 4.9/36
NEIC 06 05:47:02.5±1.4, 11.55S±0.07×166.40E±0.07, h50km±3km, mb5.4/212, Mwb5.5/41, Error ellipse: s-maj=11.0km s-min=8.7km az=49.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr2.44; Mθθ-0.01; Mφφ-2.42; Mrθ0.24; Mrφ-0.64; Mθφ0.30; Fault plane solution: M0 2.54000×10^{17} NP1:φs189.86000°, δ41.20000°, λ83.98000°. NP2:φs17.85000°, δ49.07000°, λ95.25000°. Principal axes: T 2.4747, Plg84.0000°, Azm329.0000°; N 0.1309, Plg4.0000°, Azm194.0000°; P -2.6056, Plg4.0000°, Azm104.0000°;
IDC 06 05:47:02.2±0.5, 11.52S×166.48E, h50km±3km, mb4.8/28, mb1 4.9/32, mb1mx4.8/41, mbtmp5.1/32, MS4.5/27, Ms1 4.5/27, ms1mx4.5/27 Error ellipse: s-maj=11.5km s-min=10.3km az=93.0
GCMT 06 05:47:03.5±0.1, 11.62S±0.01×166.07E±0.01, h54km, MW5.4/141, Moment Tensor Solution. s141,c221; s121,c208; Duration: 1.3s Moment tensor: Scale 10^{17} Nm; Mrr1.72±.02; Mθθ-0.04±.02; Mφφ-1.68±.02; Mrθ-0.07±.02; Mrφ0.28±.02; Mθφ0.34±.02; Best double couple: M0 1.75700×10^{17} NP1:φs171.00000°, δ39.00000°, λ91.00000°. NP2:φs350.00000°, δ51.00000°, λ89.00000°. Principal axes: T 1.7540, Plg84.0000°, Azm255.0000°; N 0.0060, Plg1.0000°, Azm351.0000°; P -1.7600, Plg6.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
KLM 06 05:47:06.0, 11.70S×166.39E, h62km, mb5.8
ISC 06 05:47:02.5±0.4, 11.58S±0.04×166.40E±0.04, h53km±3km, h53km:pP-P, n576, σ1.16/604, mb5.3/175, MS4.7/40, 9C-1D, Santa Cruz Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 3.92 169 Pn 05 48 02.8 +2.6
HNR Honiara 6.70 288 P Pn 05 48 40.3 +2.0
279nm,0.3s,baz=173,slow=3.7,SNR=52
HNR S Sn 05 49 50.2 -3.1
baz=229,slow=19,SNR=3.4
HNR LR LR 05 51 34.8
comp=Z,8µm,20.7s,baz=119,slow=40
HNR Honiara 6.70 288 i P Pn 05 48 40.0 +1.7
HNR Honiara 6.70 288 Pn Pn 05 48 39.8 +1.5
HNR Sn 05 49 54.4 +1.0
DZM Mont Dzumac 10.43 180 ePn Pn 05 49 27.4 -2.1
191nm,0.8s
DZM eSn Sn 05 51 17.3 -7.7
320nm,0.8s
DZM eLR LR 05 51 54.2
comp=Z,11µm,25.8s
DZM Mont Dzumac 10.43 180 P Pn 05 49 31.7 +2.2

1.6nm,0.3s,baz=311,slow=22,SNR=31
DZM S Sn 05 51 22.1 -2.9
9.7nm,0.3s,baz=111,slow=23,SNR=4.0
DZM Mont Dzumac 10.43 180 Pn 05 49 30.4 +0.9
DZM Sn 05 51 25.3 +0.2
NOUC Port Laguerre 10.46 181 Pn 05 49 29.4 -0.5
MSVF Nonsavu 12.82 120 Pn 05 50 04.1 +2.0
MSVF Nonsavu 12.82 120 *i* P Pn 05 50 04.7 +2.5
FUNA Funafuti 12.96 78 Pn 05 50 05.2 +1.2
TARA Tarawa 14.39 27 P 05 50 26.3 -2.7
KRVT Keravat (AS076 15.96 296 P Pn 05 50 44.3 +0.6
37nm,0.3s,baz=332,slow=1.7,SNR=3.9
KRVT LR LR 05 57 28.5
comp=Z,2µm,18.6s,baz=118,slow=39
PMG Port Moresby 19.04 275 P Pn 05 51 22.8 +1.1
2.4nm,0.3s,baz=87,slow=5.5,SNR=22
PMG LR LR 05 58 12.4
comp=Z,3µm,20.8s,baz=128,slow=35
PMG Port Moresby 19.04 275 P P 05 51 19.2 -1.3
PMG Port Moresby 19.04 275 *c e* P Pn 05 51 22.5 +0.8
PMG pmax pmax
comp=Z,330nm,1.1s
EIDS Eidsvold 19.95 224 P P 05 51 30.2 -0.1
PATS Pohnpei 19.99 336 P Pn 05 51 32.4 -0.4
PATS IAmb IAmb 05 51 48.3
comp=Z,277nm,1.1s
KWAJ Kwajalein Atol 20.29 3 P P 05 51 34.5 +0.5
KWAJ Kwajalein Atol 20.29 3 P P 05 51 34.5 +0.5
KWAJ pmax pmax
comp=Z,809nm,1.5s
LHI Lord Howe Isla 20.97 198 P P 05 51 42.7 +1.5
MANU Manus Island 21.12 295 P P 05 51 44.2 +1.1
CTA Charters Tower 21.13 244 P P 05 51 45.3 +2.2
comp=Z,57nm,0.9s,baz=69,slow=13,SNR=19
CTA S S 05 55 34.1 -1.4
comp=Z,1.7nm,0.3s,baz=164,slow=11,SNR=2.3
CTA LR LR 05 58 56.0
comp=Z,2µm,21.4s,baz=76,slow=34
AFI Afiamalu 21.41 99 P P 05 51 46.0 -0.2
comp=Z,36nm,0.9s,baz=90,slow=5.1,SNR=1.9
AFI LR LR 05 58 28.5
comp=Z,2µm,20.3s,baz=256,slow=32
AFI Afiamalu 21.41 99 P P 05 51 47.3 +1.1
AFI IAmb IAmb 05 52 06.3
comp=Z,155nm,1.1s
AFI Afiamalu 21.41 99 P P 05 51 47.3 +1.1
AFI pmax pmax
comp=Z,155nm,1.1s
COEN Coen 22.77 262 P P 05 52 00.8 0.0
COEN IAmb IAmb 05 52 20.6
comp=Z,140nm,1.2s
RAO Raoul Island 22.87 143 LR LR 05 59 19.5
comp=Z,761nm,18.4s,baz=312,slow=32
ARMA Armidale 23.22 214 P P 05 52 05.5 +0.3
KNTN Kanton 23.38 70 P P 05 52 07.8 +1.0
KNTN IAmb IAmb 05 52 10.8
comp=Z,204nm,1.0s
HIZ Hauiti 27.86 166 P P 05 52 48.2 +1.0
HIZ IAmb IAmb 05 52 49.8
comp=Z,127nm,1.2s
URZ Urewera 28.24 162 P P 05 52 51.1 +0.6
comp=Z,14nm,0.7s,baz=97,slow=2.4,SNR=12
URZ Urewera 28.24 162 P P 05 52 51.3 +0.8
CAN Canberra 28.42 211 P P 05 52 53.8 +1.5
CAN Canberra 28.42 211 P P 05 52 53.8 +1.5
CAN pmax pmax
comp=Z,35nm,0.9s
BKZ Black Stump Fm 28.90 164 P P 05 52 56.8 +0.3
SMPI Sarmi 29.07 287 P P 05 53 00.2 +2.0
comp=Z,126µmcomp=Z,129nm,1.0s
H11S2 WAKE ISLAND Hy 29.88 1 T T 06 23 51.1
baz=182
H11S3 WAKE ISLAND Hy 29.89 1 T T 06 23 50.3
baz=182,slow=74
H11S1 WAKE ISLAND Hy 29.90 1 T T 06 23 54.8
baz=182,slow=74
TUWZ Tuamarina 30.46 169 P P 05 53 10.7 +0.5
SNZO South Karori 30.50 168 P P 05 53 09.5 -1.0
STKA Stephens Creek 30.51 225 P P 05 53 11.7 +1.0
comp=Z,55nm,0.7s,baz=37,slow=9.3,SNR=124
STKA PcP PcP 05 56 08.3 -0.6
comp=Z,14nm,0.8s,baz=26,slow=5.1,SNR=4.9
STKA LR LR 06 04 34.1
comp=Z,2µm,21.5s,baz=48,slow=34
STKA Stephens Creek 30.51 225 P P 05 53 12.6 +1.8
STKA Stephens Creek 30.51 225 P P 05 53 12.6 +1.8
STKA pmax pmax
comp=Z,14nm,0.8s
THZ Tophouse 30.60 170 P P 05 53 12.1 +0.6
THZ IAmb IAmb 05 53 15.7
comp=Z,53nm,0.8s
BHW Baring Head 30.63 167 P P 05 53 11.5 -0.2
MSWZ Moikau Station 30.72 167 P P 05 53 12.3 -0.2
WR0 Warramunga Arr 31.73 251 P P 05 53 21.8 +0.2
WR0 IAmb IAmb 05 53 22.9
comp=Z,57nm,1.1s
WB0 Warramunga Arr 31.83 251 P P 05 53 23.0 +0.4
WB2 Warramunga Arr 31.90 251 P P 05 53 21.0 -2.2
WB2 IAmb IAmb 05 53 24.5
comp=Z,89nm,1.1s
WRAB Tennant Creek 31.90 251 P P 05 53 23.3 +0.1
WRAB Tennant Creek 31.90 251 *c i* P P 05 53 22.8 -0.4
WRAB pmax pmax
comp=Z,64nm,1.0s
WRA Warramunga Arr 31.91 251 P P 05 53 22.9 -0.4
comp=Z,54nm,0.9s,baz=83,slow=9.1,SNR=87
WRA pP pP 05 53 37.5 +1.7
comp=Z,23nm,0.8s,baz=80,slow=8.8,SNR=7.2
WRA PcP PcP 05 56 13.3 +0.3
comp=Z,9.9nm,0.8s,baz=74,slow=2.7,SNR=8.6
WRA S S 05 58 25.4 -5.5
comp=Z,1.8nm,1.1s,baz=87,slow=12,SNR=4.1
WRA ScP ScP 05 59 54.2 +2.1
comp=Z,3.2nm,0.9s,baz=78,slow=3.9,SNR=7.2
WRA LR LR 06 04 58.1
comp=Z,1µm,21.8s,baz=70,slow=34
WRA Warramunga Arr 31.91 251 P P 05 53 23.7 +0.4
TOO Toolangi 31.96 212 P P 05 53 25.3 +1.8
TOO IAmb IAmb 05 53 26.0
comp=Z,74nm,0.8s
TOO Toolangi 31.96 212 P P 05 53 25.3 +1.8
TOO pmax pmax
comp=Z,74nm,0.9s
FOZ Fox Glacier 31.97 175 P P 05 53 24.9 +1.4
FOZ IAmb IAmb 05 53 25.9
comp=Z,62nm,1.0s
RPZ Rata Peaks 32.27 174 P P 05 53 26.1 0.0
comp=Z,64nm,0.6s,baz=295,slow=3.0,SNR=53
RPZ Rata Peaks 32.27 174 P P 05 53 26.9 +0.8
MQZ McQueen's Vall 32.46 172 P P 05 53 28.0 +0.2
AS31 Alice Springs 33.13 244 P P 05 53 34.2 +0.2
ASAR Alice Springs 33.13 244 P P 05 53 33.5 -0.5
comp=Z,37nm,0.8s,baz=74,slow=9.5,SNR=285
ASAR pP pP 05 53 47.5 +1.1
comp=Z,22nm,0.6s,baz=67,slow=9.7,SNR=12
ASAR PcP PcP 05 56 16.1 -0.1
comp=Z,13nm,0.9s,baz=83,slow=2.9,SNR=11
ASAR pPcP 05 56 28.4
comp=Z,4.3nm,0.8s,baz=79,slow=2.0,SNR=3.7
ASAR S S 05 58 45.7 -4.2
comp=Z,1.0nm,0.9s,baz=77,slow=13,SNR=3.7
ASAR ScP ScP 05 59 58.4 +2.0
comp=Z,3.8nm,0.8s,baz=85,slow=2.7,SNR=10
ASAR LR LR 06 05 40.7
comp=Z,2µm,21.6s,baz=70,slow=34
MLZ Mavora Lakes 33.70 178 P P 05 53 39.7 +1.1
MLZ IAmb IAmb 05 53 40.1
comp=Z,46nm,1.0s
WHZ Wether Hill Ro 34.22 178 P P 05 53 42.9 -0.1
MTN Manton Dam 34.48 264 P P 05 53 46.9 +1.2
MTN IAmb IAmb 05 54 02.7
comp=Z,48nm,0.9s
BBOO Buckleboo 34.94 228 P P 05 53 50.1 +0.6
BBOO IAmb IAmb 05 53 50.9
comp=Z,51nm,0.9s
TAU Tasmania Unive 35.34 205 P P 05 53 53.0 +0.2
TAU Tasmania Unive 35.34 205 P P 05 53 53.0 +0.2
TAU pmax pmax
comp=Z,124nm,1.4s
SIJI Sorong 36.46 284 P P 05 54 03.3 +0.6
comp=Z,36nm,1.0s,baz=103,slow=2.9,SNR=21
SIJI pP pP 05 54 16.4 +0.8
comp=Z,29nm,0.8s,baz=73,slow=5.6,SNR=4.9
SWI Sorong 36.47 284 P P 05 54 04.5 +1.7
comp=Z,57nm,0.9s
KNRA Kununurra 36.77 259 P P 05 54 06.1 +0.7
BNDI Bandanaira 36.78 278 P P 05 54 07.0 +1.5
comp=Z,3µmcomp=Z,15µmcomp=Z,330nm,0.8s
FITZ Fitzroy Crossi 39.87 256 P P 05 54 32.2 +0.8
FITZ IAmb IAmb 05 54 32.9
comp=Z,48nm,0.8s
FORT Forrest 40.27 236 P P 05 54 35.9 +1.3
SANI Sanana 41.17 280 P P 05 54 43.3 +1.1
comp=Z,2µmcomp=Z,80nm,1.0s
PPT Papeete 42.95 103 LR LR 06 09 26.6
comp=Z,595nm,18.1s,baz=266,slow=31
PPT2 Papeete2 42.95 103 *e* S S 06 01 21.7 +3.2
comp=Z,498nm,28.0s
PPT2 *e* LQ LQ 06 05 05.1
comp=Z,2µm,27.8s
PPT2 *e* LR LR 06 06 53.2
comp=Z,4µm,29.5s,baz=276
TBI Tubuai 43.54 112 *e* S S 06 01 30.3 +3.5
comp=Z,339nm,28.2s
TBI *e* LQ LQ 06 05 22.1
comp=Z,2µm,30.0s
TBI *e* LR LR 06 07 13.3
comp=Z,4µm,29.0s,baz=282
KMSI Cibinong 43.83 283 P P 05 55 06.0 +2.2
comp=Z,214nm,1.2s
LUWI Luwuk 44.54 280 P P 05 55 11.7 +2.2
comp=Z,5µmcomp=Z,191nm,1.1s
WSI Waingapu 45.32 268 P P 05 55 25.5 +10
PSA00 Pilbara Seismi 45.56 251 P P 05 55 18.6 +1.1
PSA00 Pilbara Seismi 45.56 251 P P 05 55 17.3 -0.3
PSA00 IAmb IAmb 05 55 18.5
comp=Z,83nm,1.1s
APSI Ampana 45.66 280 P P 05 55 20.6 +2.2
comp=Z,1µmcomp=Z,80nm,1.5s
BKSI Bulukumba 46.15 274 P P 05 55 36.1 +14
BNSI Bone 46.35 275 P P 05 55 25.2 +1.4
comp=Z,1µmcomp=Z,115nm,1.2s
SPSI Sidrap Palu 46.77 275 P P 05 55 34.5 +7.4
PLAI Plampang 47.89 269 P P 05 55 40.9 +5.0
NWAO Narrogin (SRO) 49.70 237 P P 05 55 50.3 +0.8
NWAO Narrogin (SRO) 49.70 237 P P 05 55 50.2 +0.7
NWAO IAmb IAmb 05 55 51.1
comp=Z,89nm,0.9s
NWAO Narrogin (SRO) 49.70 237 P P 05 55 50.3 +0.8
NWAO pmax pmax
comp=Z,111nm,0.9s
MORW Morawa 49.94 242 P P 05 55 52.3 +0.9
IGBI Denpasar 50.47 268 P P 05 56 12.7 +17
SRBI Singaraja 50.51 269 P P 05 56 13.0 +17
JAGI Jajag, Banyuwa 51.49 268 P P 05 56 03.3 +0.1
comp=Z,2µmcomp=Z,101nm,1.2s
SPMM Sapulut 52.24 285 P P 05 56 11.0 +2.1
TAOE Nuku Hiva Isla 52.61 92 *e* LR LR 06 11 21.9
comp=Z,1µm,26.5s
KKM Kota Kinabalu 52.91 287 P P 05 56 14.6 +0.8
JOW Kunigami 53.19 316 P P 05 56 15.2 -0.3
comp=Z,3.8nm,0.9s,baz=143,slow=12,SNR=4.7
JOW Kunigami 53.19 316 P P 05 56 15.3 -0.3
JOW IAmb IAmb 05 56 43.3
comp=Z,28nm,1.0s
PCJI Pacitan 54.44 268 P P 05 56 26.1 +1.1
comp=Z,292nm,1.1s
MJAR Matsushiro Arr 54.74 332 P P 05 56 25.8 -0.9
comp=Z,8.7nm,0.9s,baz=161,slow=7.8,SNR=12
MJAR pP pP 05 56 39.8 -0.9
comp=Z,5.5nm,0.7s,baz=149,slow=8.3,SNR=4.4
MJAR LR LR 06 17 35.7
comp=Z,260nm,21.8s,baz=165,slow=34
MJAR Matsushiro Arr 54.74 332 P P 05 56 25.9 -0.9
MAT Matsushiro 54.74 332 P P 05 56 25.8 -1.0
WOJI Wonogiri, Jawa 54.74 269 P P 05 56 41.6 +14
SBUM Sibu 55.63 281 P P 05 56 34.2 +0.6
SBUM IAmb IAmb 05 56 51.5
comp=Z,27nm,1.1s
SBUM Sibu 55.63 281 P P 05 56 35.0 +1.4
STKI Sintang 55.74 278 P P 05 56 36.2 +1.8
comp=Z,56nm,1.2s
JNU Nakatsue 55.89 324 P P 05 56 35.0 -0.1
comp=Z,18nm,1.0s,baz=142,slow=0.7,SNR=5.3
JNU pP pP 05 56 49.0 -0.1
comp=Z,36nm,1.1s,baz=86,slow=4.8,SNR=7.3
JNU Nakatsue 55.89 324 P P 05 56 34.7 -0.4
JNU IAmb IAmb 05 56 52.5
comp=Z,52nm,1.1s
KSM Kuching 57.22 279 P P 05 56 45.3 +0.4
KSM Kuching 57.22 279 P P 05 56 46.0 +1.1
CISI Cisompet, Garu 57.83 268 P P 05 57 03.1 +14
CISI Cisompet, Garu 57.83 268 P P 05 56 47.9 -1.4
LEM Lembang 58.14 269 P P 05 56 52.6 +1.0
comp=Z,79nm,0.8s,baz=108,slow=8.3,SNR=5.4
CNJI Cibinong 58.54 268 P P 05 57 02.6 +8.4
TPI Tanjungpandan 58.85 274 P P 05 57 12.1 +16
DBJI Dramaga 59.03 269 P P 05 57 11.8 +14
SKJI Sukabumi 59.15 269 P P 05 57 15.0 +17
PPBI Pangkal Pinang 60.45 274 P P 05 57 22.8 +15
KSRS Korea Array 60.68 325 P P 05 57 08.4 0.0
comp=Z,2.8nm,0.7s,baz=140,slow=7.7,SNR=9.3
KSRS LR LR 06 21 45.3
comp=Z,124nm,20.3s,baz=132,slow=34
KSAR Wonju Array Be 60.69 325 P P 05 57 08.2 -0.3
KSAR Wonju Array Be 60.69 325 P P 05 57 08.2 -0.3
KS19 Wonju Array Si 60.74 325 P P 05 57 08.8 0.0
KASI Kota Agung 61.42 270 P P 05 57 27.0 +13
MDSI Maura Dua 61.91 271 P P 05 57 17.2 -0.1
comp=Z,29nm,1.4s
YSS Yuzh-Sakhalins 61.99 342 *e* P P 05 57 17.7 +0.6
YSS *e* 05 57 31.2
NJ2 Nanjing 62.85 315 *e* P P 05 57 24.2 +1.1
NJ2 pmax pmax
comp=Z,23nm,0.5s
QIZ Qiongzhong 63.50 298 P P 05 57 28.1 +0.4
QIZ S S 06 05 58.9 +1.4
QIZ pmax pmax
comp=Z,14nm,1.2s
QIZ LR LR
comp=Z,320nm,25.0s
QIZ LR LR
comp=Z,450nm,23.0s
QIZ LR LR
comp=Z,630nm,26.5s
MYKOM Kota Tinggi 63.56 278 P P 05 57 28.0 -0.2
USA0B Ussuriysk Arra 63.71 333 P P 05 57 29.0 +0.4
USA0B IAmb IAmb 05 57 45.8
comp=Z,83nm,1.6s
USA0B Ussuriysk Arra 63.71 333 *i* P P 05 57 29.5 +0.9
USRK Ussuriysk Ar. 63.71 333 P P 05 57 29.4 +0.9
comp=Z,13nm,1.0s,baz=146,slow=6.6,SNR=15
USRK LR LR 06 22 53.1
comp=Z,143nm,20.6s,baz=134,slow=34
USRK Ussuriysk Ar. 63.71 333 P P 05 57 29.0 +0.4
PEA0B Petropavlovsk- 64.86 354 *i* P P 05 57 36.4 +0.5
PETK Petropavlovsk- 64.86 354 P P 05 57 35.9 0.0
comp=Z,8.8nm,0.9s,baz=152,slow=6.5,SNR=3.5
PETK LR LR 06 19 23.3
comp=Z,484nm,22.0s,baz=212,slow=30
MDJ Mudanjiang 65.12 332 P P 05 57 38.9 +1.1
MDJ pmax pmax
comp=Z,16nm,1.0s
MDJ pmax pmax
comp=Z,440nm,6.5s
MDJ Mudanjiang 65.12 332 P P 05 57 38.2 +0.4
WHN Wuhan 65.23 311 ⇑P P 05 57 38.6 -0.2
WHN LR LR
comp=Z,2µm,29.4s
DL2 Dalian 65.29 323 P P 05 57 39.6 +0.6
DL2 *e* S S 06 06 22.4 +3.5
DL2 pmax pmax
comp=Z,42nm,1.1s
DL2 pmax pmax
comp=Z,370nm,6.7s
DL2 LR LR
comp=Z,630nm,20.5s
DL2 LR LR
comp=Z,480nm,21.4s
DL2 LR LR
comp=Z,670nm,19.4s
SDSI Sungai Dareh 65.31 274 P P 05 57 55.9 +16
JRMM Jerantut 65.40 280 P P 05 57 42.0 +1.8
BKNI Bangkinang 65.96 276 P P 05 57 45.8 +1.9
comp=Z,11µmcomp=Z,204nm,1.2s
BKNI Bangkinang 65.96 276 P P 05 57 44.4 +0.5
UBPT Khong Chiam 65.97 293 P P 05 57 44.1 +0.3
UBPT IAmb IAmb 05 58 01.7
comp=Z,30nm,1.0s
VNDA Vanda 65.97 181 P P 05 57 43.4 +0.6
comp=Z,21nm,1.0s,baz=349,slow=7.0,SNR=19
VNDA LR LR 06 22 16.9
comp=Z,336nm,21.3s,baz=5.0,slow=32
CASY Casey 66.12 201 P P 05 57 44.4 +0.5
CN2 Changchun 66.53 329 *e* P P 05 57 46.8 -0.1
CN2 pmax pmax
comp=Z,20nm,1.3s
IPM Ipoh 66.95 280 P P 05 57 50.9 +0.8
IPM Ipoh 66.95 280 P P 05 57 51.0 +0.8
GRNR Gornyy 67.36 340 *e* P P 05 57 52.0 0.0
GRNR pmax pmax
comp=Z,10.0nm,1.1s
KULM Kulim 67.51 281 P P 05 57 53.0 -0.7
KULM Kulim 67.51 281 P P 05 57 55.0 +1.3
KLR Kul'dur 67.80 336 P P 05 57 55.0 +0.2
comp=Z,2.4nm,0.5s,baz=123,slow=4.6,SNR=12
KLR Kul'dur 67.80 336 P P 05 57 55.0 +0.2
RPSI Rantau Prapat 68.55 278 P P 05 57 60.0 -0.3
RPSI IAmb IAmb 05 58 01.4
comp=Z,38nm,0.9s
RPSI Rantau Prapat 68.55 278 P P 05 58 00.3 0.0
PSI Prapat 68.58 278 P P 05 58 00.3 -0.3
comp=Z,24nm,0.8s,baz=135,slow=4.3,SNR=26
ENH Enshi 68.73 309 P P 05 58 00.8 -0.3
ENH IAmb IAmb 05 58 02.2
comp=Z,57nm,1.0s
GYA Guiyang 69.25 304 ⇑*i* P P 05 58 05.3 +0.8
GYA pP pP 05 58 15.8 -3.0
GYA PP PP 06 00 41.8 +3.6
GYA S S 06 07 10.5 +3.2
GYA sS sS 06 07 27.9 -2.4
GYA SS SS 06 11 33.2 -1.8
GYA pmax pmax
comp=Z,30nm,0.8s
GYA pmax pmax
comp=Z,290nm,5.2s
BJT Baijiatuau 69.29 321 P P 05 58 04.7 +0.4
BJT Baijiatuau 69.29 321 P P 05 58 04.7 +0.4
BJT pmax pmax
comp=Z,18nm,1.0s
BJI Beijing 69.30 321 P P 05 58 04.7 +0.4
BJI pmax pmax
comp=Z,19nm,1.2s
SLVN Son La 69.53 298 P P 05 58 07.3 +1.1
SLVN IAmb IAmb 05 58 24.6
comp=Z,69nm,1.5s
KCSI Kotacane, Aceh 69.86 278 P P 05 58 07.9 -0.5
comp=Z,41nm,0.8s
TIY Taiyuan 70.39 317 *e* P P 05 58 12.3 +1.1
PBKT Sadao Pong 70.48 292 P P 05 58 13.2 +1.2
PBKT IAmb IAmb 05 58 30.3
comp=Z,46nm,0.9s
XAN Xi'an 70.96 312 ⇑P P 05 58 15.2 +0.5
XAN pP sP 05 58 32.8 -2.2
XAN PcP PcP 05 58 37.0 +2.1
XAN pmax pmax
comp=Z,46nm,0.9s
XAN pmax pmax
comp=Z,380nm,5.3s
XAN LR LR
comp=Z,480nm,20.6s
XAN LR LR
comp=Z,730nm,26.0s
XAN Xi'an 70.96 312 P P 05 58 15.2 +0.5
XAN IAmb IAmb 05 58 16.3
comp=Z,42nm,0.9s
XAN Xi'an 70.96 312 P P 05 58 15.2 +0.5
XAN pmax pmax
comp=Z,42nm,0.9s
MLSI Meulaboh, Aceh 71.37 279 P P 05 58 17.8 +0.2
comp=Z,120nm,1.2s
KMI Kunming 71.95 301 P P 05 58 22.7 +1.6
KMI pP pP 05 58 35.0 -0.4
KMI PP PP 06 00 57.2 -4.4
KMI S S 06 07 40.7 +1.8
KMI sS sS 06 08 02.3 +0.2
KMI pmax pmax
comp=Z,49nm,1.2s
KMI pmax pmax
comp=Z,490nm,4.2s
KMI LR LR
comp=Z,200nm,8.0s
KMI LR LR
comp=Z,550nm,23.8s
KMI LR LR
comp=Z,650nm,24.8s
MA2 Magadan 72.03 352 *i* P P 05 58 21.0 +0.5
HHC Hu-ho-hao-te 72.66 319 *e* P P 05 58 25.9 +1.0
HHC sP PcP 05 58 41.0 -1.1
HHC pmax pmax
comp=Z,15nm,1.1s
HHC pmax pmax
comp=Z,130nm,7.6s
HHC LR LR
comp=Z,360nm,15.2s
HHC LR LR
comp=Z,280nm,16.1s
HHC LR LR
comp=Z,630nm,22.7s
CM31 Chiang Mai Arr 72.92 293 P P 05 58 28.5 +1.8
CM31 IAmb IAmb 05 58 29.5
comp=Z,66nm,0.9s
CMAR Chiang Mai Arr 72.92 293 P P 05 58 28.2 +1.5
comp=Z,35nm,0.9s,baz=119,slow=4.4,SNR=112
CMAR pP pP 05 58 41.5 +0.5
comp=Z,24nm,0.8s,baz=122,slow=4.2,SNR=7.1
CMAR LR LR 06 29 17.9
comp=Z,122nm,22.0s,baz=121,slow=35
CHTO Chiang Mai 73.03 294 P P 05 58 28.4 +1.0
CHTO IAmb IAmb 05 58 29.8
comp=Z,69nm,1.1s
CHTO Chiang Mai 73.03 294 P P 05 58 28.4 +1.0
CHTO pmax pmax
comp=Z,69nm,1.2s
ZEA Zeya 73.08 337 *e* P P 05 58 27.7 +0.8
ZEA pmax pmax
comp=Z,29nm,1.0s
HIA Hailar 73.15 330 P P 05 58 27.7 +0.2
HIA Hailar 73.15 330 P P 05 58 27.7 +0.2
HIA pmax pmax
comp=Z,25nm,1.2s
CD2 Chengdu 73.44 307 P P 05 58 30.7 +1.1
CD2 S SKiKP 06 07 58.1 +1.9
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,220nm,4.9s
CD2 LR LR
comp=Z,710nm,21.6s
CD2 LR LR
comp=Z,990nm,25.5s
BTO Baotou 73.52 319 *e* P P 05 58 30.3 +0.4
SEY Seymchan 75.08 353 *i* P P 05 58 38.3 -0.1
LZH Lanzhou 75.59 312 ⇑P P 05 58 43.8 +1.6
LZH pP pP 05 58 56.1 -0.7
LZH sP sP 05 59 00.2 -2.3
LZH PP PP 06 01 33.6 +1.2
LZH pmax pmax
comp=Z,99nm,1.2s
LZH pmax pmax
comp=Z,280nm,6.0s
LZH LR LR
comp=Z,470nm,18.4s
LZH LR LR
comp=Z,500nm,17.3s
LZH LR LR
comp=Z,850nm,19.0s
GAMB Gambell 76.98 10 P P 05 58 49.6 +0.4
QSPA South Pole Qui 78.43 180 P P 05 58 57.7 +0.2
YAK Yakutsk 78.79 343 P P 05 58 58.9 -0.3
YAK Yakutsk 78.79 343 *e* P P 05 58 59.3 +0.1
YAK pmax pmax
comp=Z,14nm,0.8s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=N,9.0nm,1.3s
ANM Nome 78.88 12 P P 05 58 59.1 -0.5
ANM Nome 78.88 12 P P 05 58 59.2 -0.5
ANM pmax pmax
comp=Z,19nm,1.4s
BRLK Bradley Lake 78.91 20 P P 05 59 00.9 +0.8
ULN Ulaanbaatar 79.11 324 P P 05 59 01.9 +0.3
ULN IAmb IAmb 05 59 03.5
comp=Z,38nm,1.0s
ULN Ulaanbaatar 79.11 324 P P 05 59 01.9 +0.3

ULN pmax pmax
comp=Z,38nm,1.0s
BILL Bilibino 79.41 360 P P 05 59 02.4 -0.2
BILL Bilibino 79.41 360 i P P 05 59 01.0 -1.6
BILL i 05 59 12.0
BILL i S S 06 09 17.1 +18
BILL pmax pmax
comp=Z,16nm,0.9s
SONM Songino Array 79.48 324 P P 05 59 03.8 +0.2
comp=Z,12nm,1.0s,baz=138,slow=5.4,SNR=59
SONM LR LR 06 34 15.6
comp=Z,132nm,19.5s,baz=112,slow=36
SONM Songino Array 79.48 324 P P 05 59 03.8 +0.2
TTA Tatalina 79.75 16 P P 05 59 05.0 +0.4
TTA Tatalina 79.75 16 P P 05 59 05.0 +0.4
RPN Rapa Nui 79.76 116 LR LR 06 27 41.8
comp=Z,327nm,20.1s,baz=292,slow=31
GTA Gaotai 79.89 314 ⇑P P 05 59 07.2 +1.2
GTA pP pP 05 59 17.1 -3.6
GTA sP sP 05 59 21.3 -5.1
GTA pmax pmax
comp=Z,50nm,1.2s
GTA pmax pmax
comp=Z,430nm,6.4s
GTA LR LR
comp=Z,420nm,20.3s
GTA LR LR
comp=Z,450nm,20.3s
GTA LR LR
comp=Z,550nm,21.9s
SUA Susitna One 80.21 19 P P 05 59 08.2 +1.0
PMR Palmer 80.84 20 P P 05 59 10.1 -0.2
PMR Palmer 80.84 20 P P 05 59 10.1 -0.2
PMR pmax pmax
comp=Z,17nm,1.1s
KNK Knik Glacier 80.93 20 P P 05 59 11.6 +0.6
KNK IAmb IAmb 05 59 45.2
comp=Z,51nm,1.4s
GLI Glacier Island 81.03 21 P P 05 59 11.9 +0.4
GHO Glory Hole Cre 81.03 20 P P 05 59 12.6 +1.0
GHO IAmb IAmb 05 59 48.1
comp=Z,72nm,1.9s
BOD Bodaibo 81.29 335 eP P 05 59 12.1 -0.7
BOD pmax pmax
comp=Z,27nm,1.6s
SHL Shillong 81.34 298 P P 05 59 14.4 +0.3
SHL Shillong 81.34 298 P P 05 59 14.4 +0.3
SHL pmax pmax
comp=Z,134nm,1.4s
SCM Sheep Creek Mo 81.61 20 P P 05 59 14.9 +0.3
SCM Sheep Creek Mo 81.61 20 P P 05 59 14.9 +0.3
SCM pmax pmax
comp=Z,21nm,1.0s
KTH Kantishna Hill 81.71 18 P P 05 59 15.4 +0.3
TRF Thorofare Moun 81.82 18 P P 05 59 15.9 +0.1
BPAW Bear Paw Mtn. 82.09 17 P P 05 59 17.4 +0.4
RND Reindeer 82.23 19 P P 05 59 17.5 -0.3
RND Reindeer 82.23 19 P P 05 59 17.5 -0.3
RND pmax pmax
comp=Z,15nm,1.1s
RDOG Red Dog Mine 82.42 11 P P 05 59 18.9 +0.3
RDOG IAmb IAmb 05 59 36.3
comp=Z,37nm,1.4s
KCPM Cahto Peak 82.44 47 P P 05 59 20.6 +1.1
KCPM IAmb IAmb 05 59 23.2
comp=Z,32nm,0.8s
MCK McKinley 82.44 18 P P 05 59 18.3 -0.6
MCK McKinley 82.44 18 P P 05 59 18.3 -0.6
MCK pmax pmax
comp=Z,21nm,1.1s
TGL Tana Glacier 82.50 23 P P 05 59 19.6 +0.2
TGL IAmb IAmb 05 59 52.3
comp=Z,61nm,1.5s
ZAK Zakamensk 82.51 325 eP P 05 59 19.6 0.0
ZAK e 05 59 33.3
ZAK pmax pmax
comp=Z,19nm,1.0s
ZAK pmax pmax
comp=Z,12nm,1.1s
HOPS Hopland Field 82.56 48 P P 05 59 19.3 -0.7
GLB Gilahina Butte 82.58 22 P P 05 59 19.3 -0.4
GLB IAmb IAmb 05 59 53.3
comp=Z,38nm,1.5s
BWN Browne 82.60 18 P P 05 59 18.6 -1.1
BWN IAmb IAmb 06 00 00.3
comp=Z,34nm,1.0s
GDXM Geysers 82.69 48 P P 05 59 22.6 +1.8
GDXM IAmb IAmb 05 59 39.6
comp=Z,49nm,1.4s
IMAR Indian Mountai 82.77 15 P P 05 59 20.5 +0.1
KHMM Horse Mountain 82.78 46 P P 05 59 22.3 +1.1
KHMM IAmb IAmb 05 59 40.4
comp=Z,50nm,1.3s
MCARA McCarthy VSAT 82.83 22 P P 05 59 20.3 -0.6
MCARA IAmb IAmb 06 00 02.1
comp=Z,32nm,1.2s
BALM Baldy 82.86 22 P P 05 59 20.9 -0.3
BALM IAmb IAmb 05 59 55.6
comp=Z,31nm,1.3s
MLY Manley 82.86 17 P P 05 59 20.6 -0.4
TLY Talaya 82.92 326 P P 05 59 21.3 -0.3
TLY Talaya 82.92 326 eP P 05 59 21.5 -0.1
TLY pmax pmax
comp=Z,40nm,0.9s
TLY MLR MLR
comp=Z,250nm,6.0s
NEA Nenana 83.01 18 P P 05 59 21.4 -0.3
BARN Barnard Glacie 83.13 23 P P 05 59 22.4 -0.3
BARN IAmb IAmb 05 59 54.9
comp=Z,57nm,1.5s
LSA Lhasa 83.18 302 P P 05 59 25.3 +1.3
LSA pmax pmax
comp=Z,70nm,1.1s
LSA Lhasa 83.18 302 P P 05 59 24.4 +0.4
LSA Lhasa 83.18 302 P P 05 59 24.4 +0.4
LSA pmax pmax
comp=Z,133nm,2.0s
O02D Mt. Diablo Mer 83.19 47 P P 05 59 21.4 -1.9
baz=249,SNR=14
CTGM Chitina Glacie 83.20 23 P P 05 59 23.3 +0.3
CTGM IAmb IAmb 05 59 55.0
comp=Z,33nm,1.2s
WRH Wood River Hil 83.23 18 P P 05 59 22.3 -0.6
SNCC San Nicolas Is 83.31 54 P P 05 59 21.8 -2.2
baz=252
L02E Cave Junction 83.35 45 P P 05 59 24.3 +0.2
baz=248,SNR=5.9
CCB Clear Creek Bu 83.45 18 P P 05 59 22.6 -1.3
J01E Myrtle Point 83.50 44 P P 05 59 24.9 +0.2
baz=248
K02D Willamette Mer 83.50 44 P P 05 59 25.3 +0.4
baz=248,SNR=9.1
WDC Whiskeytown Da 83.51 46 P P 05 59 25.6 +0.7
WDC IAmb IAmb 05 59 43.6
comp=Z,41nm,1.4s
WDC Whiskeytown Da 83.51 46 P P 05 59 25.6 +0.7
WDC pmax pmax
comp=Z,41nm,1.4s
N02D Trinity Center 83.54 46 P P 05 59 24.7 -0.4
baz=249,SNR=13
HDA Harding Lake 83.54 19 P P 05 59 23.9 -0.6
HDA IAmb IAmb 05 59 26.9
comp=Z,27nm,0.8s
HDA Harding Lake 83.54 19 P P 05 59 23.9 -0.6
baz=226
M02C Callahan 83.58 46 P P 05 59 23.5 -1.8
baz=249,SNR=17
TCOL CIGO, UAF Yank 83.59 18 P P 05 59 23.5 -1.2
baz=225
COLA College 83.59 18 P P 05 59 23.9 -0.8
COLA College 83.59 18 P P 05 59 23.9 -0.8
COLA pmax pmax
comp=Z,16nm,0.9s
SMMC Simmler 83.60 52 P P 05 59 23.5 -2.0
baz=251
MENT Mentasta 83.60 21 P P 05 59 25.1 +0.2
PKM Mcpherson Peak 83.61 53 P P 05 59 23.7 -2.0
baz=251
RIDG Independent Ri 83.76 20 P P 05 59 25.9 +0.2
RIDG IAmb IAmb 05 59 28.5
comp=Z,37nm,1.0s
YBH Yreka Blue Hor 83.81 45 P P 05 59 26.9 +0.4
YBH IAmb IAmb 05 59 45.3
comp=Z,35nm,1.3s
YBH Yreka Blue Hor 83.81 45 P P 05 59 26.9 +0.4
YBH pmax pmax
comp=Z,35nm,1.3s
IL31 83.81 18 P P 05 59 25.2 -0.6
ILAR Eielson Array 83.81 18 P P 05 59 25.1 -0.7
comp=Z,6.1nm,0.8s,baz=222,slow=6.0,SNR=32
ILAR LR LR 06 30 20.2
comp=Z,147nm,21.5s,baz=228,slow=31
ILAR Eielson Array 83.81 18 P P 05 59 24.6 -1.2
POKR Poker Flat Res 83.89 18 P P 05 59 25.1 -1.2
baz=225
ORV Oroville 83.89 48 P P 05 59 27.0 +0.1
ORV IAmb IAmb 05 59 45.1
comp=Z,42nm,1.4s
ORV Oroville 83.89 48 P P 05 59 27.0 +0.1
ORV pmax pmax
comp=Z,42nm,1.5s
I02D Swisshome 83.92 43 P P 05 59 25.6 -1.3
baz=248
O03E Paynes Creek 83.94 47 P P 05 59 25.8 -1.4
baz=249,SNR=14
DOT Dot Lake 83.96 20 P P 05 59 26.9 +0.3
DOT IAmb IAmb 05 59 29.5
comp=Z,23nm,0.9s
HUMO Hull Mountain 83.96 44 P P 05 59 28.3 +1.1
SCI2 San Clemente I 84.01 55 P P 05 59 24.9 -2.7
baz=252
AFDM Forest Hills D 84.07 48 P P 05 59 28.1 +0.2
AFDM IAmb IAmb 05 59 46.0
comp=Z,44nm,1.3s
I03D Drain, OR 84.10 43 P P 05 59 26.8 -0.9
baz=248
CMB Columbia Colle 84.20 49 P P 05 59 28.5 0.0
CMB Columbia Colle 84.20 49 P P 05 59 28.5 0.0
CMB pmax pmax
comp=Z,23nm,1.2s
SCRK Sand Creek 84.20 20 P P 05 59 28.1 +0.1
CIS Catalina Islan 84.24 54 P P 05 59 26.7 -2.1
baz=252
L04D Klamath Falls 84.27 45 P P 05 59 28.9 +0.1
baz=249,SNR=11
BCAR Beaver Creek A 84.36 21 P P 05 59 28.9 +0.2
OSI Osito Audit: C 84.37 53 P P 05 59 29.1 -0.4
baz=252
MOY Mondy 84.38 325 eP P 05 59 28.9 -0.3
MOY pmax pmax
comp=Z,43nm,2.4s
VOG Valley Oaks Go 84.40 51 P P 05 59 28.8 -0.7
baz=251
FMP Fort Macarthur 84.43 54 P P 05 59 28.6 -1.1
baz=252
M04C Macdoel 84.43 46 P P 05 59 29.1 -0.7
baz=249,SNR=9.8
ARVC Arvin 84.45 53 P P 05 59 29.1 -0.6
baz=252
MAW Mawson 84.47 202 P P 05 59 29.5 +0.2
comp=Z,24nm,1.1s,baz=96,slow=7.5,SNR=12
MAW pP pP 05 59 43.8 -0.3
comp=Z,6.7nm,0.8s,baz=147,slow=12,SNR=3.0
MAW LR LR 06 30 48.4
comp=Z,394nm,21.1s,baz=69,slow=31
MAW Mawson 84.47 202 P P 05 59 29.6 +0.3
VES Vestal, Richgr 84.47 52 P P 05 59 29.2 -0.7
baz=252
DECC Green Verdugo 84.57 54 P P 05 59 30.1 -0.4
baz=252
G03D McMinnville, O 84.72 42 P P 05 59 31.1 +0.2
baz=248
PRP Porcupine Dome 84.75 18 P P 05 59 30.6 -0.2
I04A Tendick Farm, 84.76 43 P P 05 59 31.8 +0.5
baz=249,SNR=5.7
J04D Umpqua Nationa 84.77 44 P P 05 59 31.6 +0.1
baz=249,SNR=5.1
MWC Mount Wilson 84.78 54 P P 05 59 31.7 0.0
MWC IAmb IAmb 05 59 49.9
comp=Z,55nm,1.4s
MWC Mount Wilson 84.78 54 P P 05 59 31.7 0.0
MWC pmax pmax
comp=Z,55nm,1.5s
K04D Chiloquin, OR 84.79 45 P P 05 59 31.5 0.0
baz=249
H04D Lebanon 84.81 43 P P 05 59 31.3 0.0
baz=248
BEKR Beckworth 84.83 48 P P 05 59 32.5 +0.7
BEKR IAmb IAmb 05 59 50.1
comp=Z,42nm,1.4s
ISA Isabella, Lake 84.89 52 P P 05 59 32.6 +0.5
ISA IAmb IAmb 05 59 49.7
comp=Z,32nm,1.3s
ISA Isabella, Lake 84.89 52 P P 05 59 32.6 +0.5
ISA Isabella, Lake 84.89 52 P P 05 59 31.7 -0.4
baz=252,SNR=7.4
EDW2 Edwards Air Fo 85.02 53 P P 05 59 32.1 -0.6
baz=252,SNR=9.1
WAKR Walker 85.06 49 P P 05 59 33.5 +0.5
WAKR IAmb IAmb 05 59 51.8
comp=Z,52nm,1.3s
BFSC Mount Baldy Ra 85.09 54 P P 05 59 32.4 -0.9
baz=253
OMMB Old Mammoth Mi 85.10 50 P P 05 59 33.9 +0.5
OMMB IAmb IAmb 05 59 51.8
comp=Z,29nm,1.3s
PNTR Pine Nut 85.13 49 P P 05 59 34.2 +0.8
PNTR IAmb IAmb 05 59 51.9
comp=Z,39nm,1.2s
109C Camp Elliot, M 85.14 55 P P 05 59 32.7 -0.6
baz=253
VCNR Virginia City 85.16 48 P P 05 59 34.9 +1.3
VCNR IAmb IAmb 05 59 51.2
comp=Z,40nm,1.6s
MLAC Mammoth, Mammo 85.23 50 P P 05 59 33.9 0.0
baz=252
MURC Murrieta 85.27 54 P P 05 59 33.4 -0.6
baz=253
YERR Yerington 85.36 49 P P 05 59 35.2 +0.7
YERR IAmb IAmb 05 59 52.9
comp=Z,38nm,1.4s
J05D Fort Rock, OR 85.38 44 P P 05 59 34.2 -0.3
baz=250,SNR=15
TAPN Taplejung 85.42 299 eP P 05 59 35.7 +0.5
CWC Cottonwood Cre 85.43 52 P P 05 59 34.6 -0.3
baz=252
LRMC Laurel Mtn Rad 85.45 53 P P 05 59 35.0 +0.1
baz=252,SNR=5.8
PAHR Pah Rah Range 85.48 48 P P 05 59 34.7 -0.4
PAHR IAmb IAmb 05 59 53.5
comp=Z,46nm,1.3s
TIN Tinemaha, Big 85.51 51 P P 05 59 35.3 +0.1
baz=252,SNR=6.9
MOD Modoc Plateau 85.55 46 P P 05 59 35.8 +0.5
MOD IAmb IAmb 05 59 53.6
comp=Z,46nm,1.6s
ODAN Odare 85.57 298 eP P 05 59 36.5 +0.6
comp=Z,214nm,1.1s
EGAK Eagle 85.66 20 P P 05 59 35.9 +0.8
EGAK IAmb IAmb 05 59 52.9
comp=Z,18nm,0.9s
I05D Terrebonne, OR 85.68 43 P P 05 59 35.1 -0.7
baz=249
BBRC Big Bear Solar 85.69 54 P P 05 59 35.4 -0.8
baz=253
MONP2 Monument Peak 85.69 55 P P 05 59 36.7 +0.4
baz=253,SNR=6.7
D03D Eldon 85.71 40 P P 05 59 35.2 -0.6
baz=248
PINE Pine Mountain 85.76 44 P P 05 59 36.0 -0.3
PINE IAmb IAmb 05 59 55.9
comp=Z,47nm,1.6s
MPMC Manual Prospec 85.77 52 P P 05 59 36.8 +0.1
baz=253,SNR=11
D04E Lakebay 85.77 40 P P 05 59 36.5 +0.4
baz=248
RYN Ryan 85.78 49 P P 05 59 37.3 +0.7
RYN IAmb IAmb 05 59 54.9
comp=Z,37nm,1.4s
DAWY Dawson 85.82 21 P P 05 59 36.2 +0.2
TOLK Toolik Lake Re 85.84 15 P P 05 59 36.9 +0.8
TOLK IAmb IAmb 05 59 53.5
comp=Z,24nm,1.4s
TOLK Toolik Lake Re 85.84 15 P P 05 59 36.4 +0.4
baz=223
PFO Pinyon Flats O 85.86 55 P P 05 59 37.2 +0.1
PFO IAmb IAmb 05 59 54.6
comp=Z,22nm,1.4s
PFO Pinyon Flats O 85.86 55 P P 05 59 37.2 +0.1
PFO pmax pmax
comp=Z,22nm,1.4s
PFO Pinyon Flats O 85.86 55 P P 05 59 36.7 -0.4
baz=253
XPFO Pion Flat 85.87 55 P P 05 59 36.9 -0.2
IKP In-Ko-Pah, Jac 85.87 56 P P 05 59 35.8 -1.3
baz=254
NVAR Mina Array Bea 85.88 50 P P 05 59 37.7 +0.6
comp=Z,8.2nm,0.9s,baz=232,slow=7.8,SNR=40
NVAR pP pP 05 59 52.0 0.0
comp=Z,18nm,1.1s,baz=231,slow=5.5,SNR=10.0
NVAR LR LR 06 30 10.0
comp=Z,918nm,21.1s,baz=233,slow=30
NVAR Mina Array Bea 85.88 50 P P 05 59 37.0 -0.2
NV11 Mina Array Sit 85.99 50 P P 05 59 37.6 0.0
NV11 IAmb IAmb 05 59 55.9
comp=Z,34nm,1.2s
G05D Wamic, OR 86.01 42 P P 05 59 36.9 -0.5
baz=249
GSC Goldstone, Bar 86.08 53 P P 05 59 38.0 -0.1
GSC IAmb IAmb 05 59 55.7
comp=Z,34nm,1.5s
GSC Goldstone, Bar 86.08 53 P P 05 59 38.0 -0.1
GSC pmax pmax
comp=Z,34nm,1.5s
GSC Goldstone, Bar 86.08 53 P P 05 59 37.8 -0.2
baz=253,SNR=6.7
F05D White Salmon 86.15 42 P P 05 59 39.0 +1.0
baz=249
GRAC Grapevine Rang 86.15 51 P P 05 59 38.8 +0.5
baz=253,SNR=6.5
SWSC Sam W. Stewart 86.20 55 P P 05 59 38.6 0.0
baz=254
KVN Kaiserville 86.22 49 P P 05 59 38.8 0.0
KVN IAmb IAmb 05 59 56.3
comp=Z,36nm,1.4s
KVN Kaiserville 86.22 49 P P 05 59 38.8 0.0
KVN pmax pmax
comp=Z,36nm,1.4s
RAMN Ramite 86.28 298 eP P 05 59 39.7 +0.3
comp=Z,101nm,1.2s
HEC Hector,Ludlow 86.31 54 P P 05 59 39.3 +0.1
baz=253,SNR=8.8
BMAR Burnt Mountain 86.33 17 P P 05 59 39.1 +0.6
BELC Belle Mtn. Jos 86.34 54 P P 05 59 40.0 +0.6
baz=254,SNR=15
FURC Furnace Creek, 86.38 52 P P 05 59 39.8 +0.5
baz=253,SNR=10
A04D Lummi Island 86.39 39 P P 05 59 39.1 +0.1
baz=248
B05A Bryant 86.60 39 P P 05 59 40.3 +0.2
baz=249
SHOC Shoshone, Teco 86.67 53 P P 05 59 40.9 +0.1
baz=253,SNR=6.9
BC3 Big Chuckawall 86.68 55 P P 05 59 41.3 +0.3
baz=254,SNR=6.5
TIXI Tiksi 86.74 349 P P 05 59 39.2 -1.1
TIXI IAmb IAmb 05 59 56.0
comp=Z,38nm,1.7s
TIXI Tiksi 86.74 349 P P 05 59 39.2 -1.1
TIXI pmax pmax
comp=Z,38nm,1.7s
TUQ Turquoise Moun 86.81 53 P P 05 59 41.7 0.0
baz=254,SNR=7.6
JIRN Jiri 86.81 299 eP P 05 59 42.6 +0.4
GMRC Granite Mounta 86.83 54 P P 05 59 42.1 +0.2
baz=254,SNR=6.8
I07A Izee 86.83 44 P P 05 59 41.6 0.0
I07A IAmb IAmb 05 59 59.3
comp=Z,40nm,1.6s
WVOR Wild Horse Val 86.90 46 P P 05 59 42.8 +0.8
WVOR IAmb IAmb 06 00 00.5
comp=Z,41nm,1.4s
WVOR Wild Horse Val 86.90 46 P P 05 59 42.8 +0.8
WVOR pmax pmax
comp=Z,41nm,1.4s
TPNV Topopah Spring 86.99 52 P P 05 59 42.5 0.0
TPNV IAmb IAmb 06 00 00.2
comp=Z,42nm,1.6s
TPNV Topopah Spring 86.99 52 P P 05 59 42.5 0.0
TPNV pmax pmax
comp=Z,42nm,1.6s
TPNV Topopah Spring 86.99 52 P P 05 59 43.0 +0.5
baz=253,SNR=6.1
GLA Glamis 87.02 56 P P 05 59 42.7 +0.1
GLA Glamis 87.02 56 P P 05 59 42.7 +0.1
GLA pmax pmax
comp=Z,80nm,1.6s
GLA Glamis 87.02 56 P P 05 59 43.4 +0.8
baz=254,SNR=8.9
IRM Iron Mountain 87.07 54 P P 05 59 43.5 +0.7
baz=254,SNR=14
GUN Gumba 87.14 299 eP P 05 59 43.9 +0.2
LTY Liberty 87.14 41 P P 05 59 43.5 +0.6
LTY IAmb IAmb 06 00 00.1
comp=Z,25nm,1.5s
C06D Leavenworth 87.23 40 P P 05 59 44.1 +0.8
baz=250
PALK Pallekele 87.26 278 P P 05 59 43.4 -0.8
PALK IAmb IAmb 05 59 46.1
comp=Z,33nm,0.9s
PALK Pallekele 87.26 278 P P 05 59 43.4 -0.8
PALK pmax pmax
comp=Z,33nm,1.0s
J08A Circle Bar Ran 87.30 45 P P 05 59 44.2 +0.4
J08A IAmb IAmb 06 00 01.5
comp=Z,23nm,1.3s
E07A Sunnyside 87.42 42 P P 05 59 44.7 +0.4
Y12C Blythe 87.45 55 P P 05 59 45.7 +1.0
Y12C IAmb IAmb 06 00 02.7
comp=Z,50nm,1.4s
Y12C Blythe 87.45 55 P P 05 59 44.8 +0.2
baz=254,SNR=6.3
PKI Pulchoki 87.46 299 eP P 05 59 45.2 0.0
comp=Z,123nm,1.1s
PKIN Phulchoki 87.47 299 eP P 05 59 45.2 0.0
HAWA Hanford 87.58 42 P P 05 59 45.3 +0.3
HAWA IAmb IAmb 06 00 03.4
comp=Z,57nm,1.9s
KKN Kakani 87.62 299 eP P 05 59 46.0 +0.1
NEE2 Needles Airpor 87.65 54 P P 05 59 45.5 0.0
baz=254
SHPR Sheep Range 87.70 52 P P 05 59 46.5 +0.5
SHPR IAmb IAmb 06 00 04.0
comp=Z,42nm,1.5s
DMN Daman 87.73 299 eP P 05 59 46.9 +0.5
comp=Z,181nm,1.1s
R11A Troy Canyon, C 87.89 50 P P 05 59 47.3 +0.4
R11A IAmb IAmb 06 00 05.2
comp=Z,25nm,1.4s
R11A Troy Canyon, C 87.89 50 P P 05 59 46.9 0.0
baz=254,SNR=18
PDMCI Parker Dam,Lak 87.91 55 P P 05 59 47.5 +0.7
baz=255,SNR=13
E08A Dider Farm, El 87.92 42 P P 05 59 47.0 +0.5
EPYK Eagle Plains 88.09 20 P P 05 59 47.4 +0.3
EPYK IAmb IAmb 06 00 36.5
comp=Z,34nm,1.7s
EPYK Eagle Plains 88.09 20 P P 05 59 47.1 +0.1
baz=235
D08A Wollman Farm, 88.20 41 P P 05 59 47.9 0.0
D08A IAmb IAmb 06 00 06.4
comp=Z,54nm,1.9s
GKN Gorkha 88.23 299 eP P 05 59 48.5 -0.2
W13A Hualapai Mount 88.32 54 P P 05 59 49.1 +0.1
W13A IAmb IAmb 06 00 07.7
comp=Z,26nm,1.3s
B08A Colville Reser 88.36 40 P P 05 59 49.2 +0.5
B08A IAmb IAmb 06 00 06.7
comp=Z,26nm,1.5s
214A Organ Pipe Nat 88.38 57 P P 05 59 49.0 -0.2
214A Organ Pipe Nat 88.38 57 P P 05 59 50.1 +0.9
baz=255
BMO Blue Mountains 88.57 44 P P 05 59 49.8 0.0
BMO Blue Mountains 88.57 44 P P 05 59 49.8 0.0
BMO pmax pmax
comp=Z,56nm,1.8s
Y14A Wickenburg 88.72 55 P P 05 59 51.3 +0.5
Y14A IAmb IAmb 06 00 08.7
comp=Z,26nm,1.6s
ELK Elko 88.82 48 P P 05 59 51.5 +0.2
ELK IAmb IAmb 06 00 09.7
comp=Z,43nm,1.6s
ELK Elko 88.82 48 P P 05 59 51.5 +0.2
ELK pmax pmax
comp=Z,43nm,1.6s
F10A Beach Ranch, E 88.96 43 P P 05 59 51.5 -0.1
DANN Dangsing 89.06 299 eP P 05 59 52.2 -0.6

Code	Station	Δ	Az	Op	ISC	Time	Res
	comp=Z,94nm,0.9s						
KOLN	Koldanda	89.06	298	eP	P	05 59 52.1	-0.6
MFID	Camas Ranch	89.16	45	P	P	05 59 53.3	+0.6
MFID				IAmb	IAmb	06 00 11.1	
	comp=Z,32nm,1.6s						
PSUT	Pine Spring	89.25	51	P	P	05 59 53.7	+0.4
LCMT	Little Creek M	89.32	52	P	P	05 59 54.1	+0.5
CCUT	Cedar City	89.37	52	P	P	05 59 53.6	-0.3
SZCU	Shurtz Canyon	89.52	52	P	P	05 59 54.8	-0.2
KNB	Kanab	89.65	52	P	P	05 59 55.2	0.0
KNB	Kanab	89.65	52	P	P	05 59 55.2	0.0
KNB				pmax	pmax		
	comp=Z,60nm,1.4s						
NEW	Newport	89.73	41	P	P	05 59 54.9	-0.3
NEW				IAmb	IAmb	06 00 12.5	
	comp=Z,34nm,1.9s						
NEW	Newport	89.73	41	P	P	05 59 54.9	-0.3
NEW				pmax	pmax		
	comp=Z,34nm,1.9s						
NEW	Newport	89.73	41	P	P	05 59 55.5	+0.4
	baz=252						
U15A	North Rim	89.91	53	P	P	05 59 57.1	+0.6
WMQ	Urumqi	89.93	315	P	P	05 59 56.7	+0.5
WMQ				pP	pP	06 00 07.0	-4.1
WMQ				sP	sP	06 00 11.0	-5.7
WMQ				pmax	pmax		
	comp=Z,32nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,290nm,5.3s						
WMQ				LR	LR		
	comp=Z,930nm,25.1s						
WMQ				LR	LR		
	comp=Z,410nm,22.3s						
WMQ				LR	LR		
	comp=Z,500nm,27.5s						
WMQ	Urumqi	89.93	315	P	P	05 59 56.3	+0.1
WMQ	Urumqi	89.93	315	P	P	05 59 56.3	+0.1
WMQ				pmax	pmax		
	comp=Z,51nm,1.2s						
X16A	Lo Mia Camp, P	90.10	55	P	P	05 59 57.4	+0.1
X16A				IAmb	IAmb	06 00 24.9	
	comp=Z,16nm,1.1s						
TUC	Tucson	90.13	57	P	P	05 59 58.2	+0.7
TUC				IAmb	IAmb	06 00 24.9	
	comp=Z,12nm,1.1s						
TUC	Tucson	90.13	57	P	P	05 59 58.2	+0.7
TUC				pmax	pmax		
	comp=Z,12nm,1.1s						
TUC	Tucson	90.13	57	P	P	05 59 57.2	-0.3
	baz=256						
PKCU	Pink Cliffs	90.15	52	P	P	05 59 58.0	+0.2
TCRU	Three Creeks R	90.34	51	P	P	05 59 58.8	+0.3
MTPU	Mount Pierson	90.39	51	P	P	05 59 58.8	-0.1
WUAZ	Wupatki	90.41	54	P	P	05 59 59.2	+0.4
WUAZ				IAmb	IAmb	06 00 26.8	
	comp=Z,22nm,1.2s						
WUAZ	Wupatki	90.41	54	P	P	05 59 59.6	+0.8
	baz=256						
DUG	Dugway, Tooele	90.46	49	P	P	05 59 59.5	+0.6
DUG				IAmb	IAmb	06 00 17.3	
	comp=Z,20nm,1.2s						
DUG	Dugway, Tooele	90.46	49	P	P	05 59 59.5	+0.6
DUG				pmax	pmax		
	comp=Z,19nm,1.3s						
DUG	Dugway, Tooele	90.46	49	P	P	05 59 59.1	+0.2
	baz=255						
BGU	Big Grassy Mou	90.49	48	P	P	05 59 59.6	+0.6
MSU	Marysvale	90.52	51	P	P	06 00 00.5	+1.2
MSU	Marysvale	90.52	51	P	P	06 00 00.5	+1.2
HVU	Hansel Valley	90.89	48	P	P	06 00 01.0	+0.1
HVU	Hansel Valley	90.89	48	P	P	06 00 01.0	+0.1
HVU				pmax	pmax		
	comp=Z,37nm,1.2s						
NLU	North Lily Min	90.95	49	P	P	06 00 01.9	+0.7
319A	Douglas	91.17	58	P	P	06 00 02.7	+0.4
MPU	Maple Canyon	91.29	50	P	P	06 00 03.7	+0.9
X18A	Snowflake	91.32	55	P	P	06 00 03.0	-0.1
X18A				IAmb	IAmb	06 00 06.7	
	comp=Z,9.1nm,0.9s						
CTU	Camp Tracy	91.37	49	P	P	06 00 02.8	-0.3
Q16A	Castle Valley	91.38	51	P	P	06 00 03.5	+0.3
HYB	Hyderabad	91.39	287	i P	P	06 00 03.0	-0.5
HYB				epP	pP	06 00 17.0	-1.4
MSO	Missoula	91.39	43	P	P	06 00 03.5	+0.6
	baz=255						
TMUT	Trail Mountain	91.44	50	P	P	06 00 03.4	-0.3
JLU	Jordanelle	91.57	49	P	P	06 00 04.1	0.0
MCMT	McKenzie Canyo	91.61	45	P	P	06 00 04.2	-0.1
DLMT	Dillon	91.92	44	P	P	06 00 06.1	+0.6
DLMT				IAmb	IAmb	06 00 08.8	
	comp=Z,9.6nm,0.9s						
WALA	Waterton Lakes	92.00	40	P	P	06 00 05.7	-0.1
FXWY	Fox Creek	92.59	46	P	P	06 00 08.7	-0.1
REDW	Red Top Meadow	92.65	46	P	P	06 00 09.9	+0.8
REDW				IAmb	IAmb	06 00 26.8	
	comp=Z,42nm,2.0s						
121A	Cookes Peak, D	92.66	57	P	P	06 00 08.6	-0.6
121A				IAmb	IAmb	06 00 12.7	
	comp=Z,8.6nm,0.8s						
121A	Cookes Peak, D	92.66	57	P	P	06 00 09.2	-0.1
	baz=258						
IMW	Indian Meadow	92.71	46	P	P	06 00 08.7	-0.7
YHB	Horse Butte	92.73	45	P	P	06 00 09.2	-0.2
YHL	Hebgen Lake	92.76	45	P	P	06 00 09.6	0.0
MOOW	Moose Ponds	92.81	46	P	P	06 00 09.5	-0.3
YMR	Madison River	92.87	45	P	P	06 00 10.3	+0.2
MVCO	Mesa Verde	93.05	53	P	P	06 00 10.1	-1.0
	baz=258						
H17A	Grant Village	93.08	45	P	P	06 00 11.7	+0.7
H17A	Grant Village	93.08	45	P	P	06 00 10.6	-0.5
	baz=257						
BW06	Boulder Array	93.44	47	P	P	06 00 12.4	-0.3
	baz=258						
PD31	Pinedale Array	93.44	47	P	P	06 00 12.4	-0.3
PDAR	Pinedale Array	93.44	47	P	P	06 00 12.1	-0.6
	comp=Z,2.0nm,0.9s,baz=253,slow=1.6,SNR=13						
PDAR				PKKPbc	PKKPdf	06 17 18.3	-1.1
	comp=Z,1.1nm,0.7s,baz=100,slow=4.3,SNR=12						
PDAR				LR	LR	06 36 09.5	
	comp=Z,181nm,20.1s,baz=256,slow=32						
PDAR	Pinedale Array	93.44	47	P	P	06 00 11.4	-1.3
YNE	Yellowstone No	93.61	45	P	P	06 00 13.0	-0.5
C36M	Paulatuk	93.72	19	P	P	06 00 12.5	-0.5
	baz=247						
O20A	White River Ci	93.86	50	P	P	06 00 14.3	-0.3
	baz=258						
RLMT	Red Lodge	94.15	45	P	P	06 00 15.4	-0.5
	baz=258						
ANMO	Albuquerque	94.22	55	P	P	06 00 17.5	+1.0
ANMO	Albuquerque	94.22	55	i P	P	06 00 18.0	+1.6
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ANMO	Albuquerque	94.22	55	P	P	06 00 16.3	-0.1
	baz=259						
MK31	Makanchi Array	94.35	317	P	P	06 00 16.4	-0.2
MK31	Makanchi Array	94.35	317	P	P	06 00 16.4	-0.2
MK31				pmax	pmax		
	comp=Z,28nm,1.0s						
MKAR	Makanchi Array	94.35	317	P	P	06 00 16.5	0.0
	comp=Z,27nm,0.8s,baz=101,slow=6.3,SNR=167						
MKAR				pP	pP	06 00 31.4	-0.1
	comp=Z,16nm,0.8s,baz=93,slow=4.9,SNR=11						
MKAR				PKKPbc	PKKPdf	06 17 14.6	-3.0
	comp=Z,0.7nm,0.7s,baz=275,slow=2.7,SNR=8.3						
MKAR				LR	LR	06 42 42.0	
	comp=Z,66nm,20.5s,baz=96,slow=35						
ZAA0	Zalesovo Array	94.36	324	P	P	06 00 15.2	-1.1
ZAA0					pP	06 00 29.6	-1.7
ZALV	Zalesovo Beam	94.36	324	P	P	06 00 14.8	-1.5
	comp=Z,9.0nm,0.9s,baz=108,slow=4.8,SNR=25						
ZALV				LR	LR	06 40 11.1	
	comp=Z,132nm,21.7s,baz=82,slow=34						
ZALV	Zalesovo Beam	94.36	324	i P	P	06 00 15.5	-0.9
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
EGMT	Eagleton	94.43	42	P	P	06 00 17.2	+0.2
EGMT				IAmb	IAmb	06 00 36.0	
	comp=Z,37nm,1.9s						
EGMT	Eagleton	94.43	42	P	P	06 00 17.7	+0.7
	baz=258						
S22A	4UR Ranch, Cre	94.46	53	P	P	06 00 18.3	+0.7
S22A	4UR Ranch, Cre	94.46	53	P	P	06 00 17.8	+0.2
	baz=259						
MNTX	Cornudas Mount	94.49	59	P	P	06 00 17.0	-0.5
	baz=259						
MAKZ	Makanchi	94.56	317	P	P	06 00 17.1	-0.4
MAKZ	Makanchi	94.56	317	P	P	06 00 17.1	-0.4
MAKZ				pmax	pmax		
	comp=Z,36nm,1.1s						
YKA	Yellowknife Ar	95.15	27	P	P	06 00 18.2	-1.6
	comp=Z,1.1nm,0.6s,baz=257,slow=4.9,SNR=24						
YKA				LR	LR	06 36 12.6	
	comp=Z,178nm,21.6s,baz=0.0,slow=31						
SDCO	Great Sand Dun	95.50	53	P	P	06 00 21.6	-0.8
	baz=260						
TX31	Lajitas Ar. Si	95.52	61	P	P	06 00 23.6	+1.2
TX32	Lajitas Array	95.52	61	P	P	06 00 23.5	+1.1
TXAR	Lajitas Array	95.52	61	P	P	06 00 23.6	+1.2
	comp=Z,1.5nm,0.8s,baz=219,slow=6.2,SNR=8.7						
TXAR				PP	PP	06 04 11.5	-2.5
	comp=Z,1.4nm,1.2s,baz=283,slow=5.5,SNR=2.3						
TXAR				LR	LR	06 35 36.5	
	comp=Z,276nm,20.8s,baz=0.0,slow=30						
TXAR	Lajitas Array	95.52	61	P	P	06 00 22.1	-0.3
POO	Poona	95.99	288	eP	P	06 00 18.0	-6.7
SNAA	Sanae	96.62	183	P	P	06 00 25.7	-0.8
SNAA	Sanae	96.62	183	P	P	06 00 26.4	-0.2
SNAA				IAmb	IAmb	06 00 51.7	
	comp=Z,12nm,1.2s						
SNAA	Sanae	96.62	183	P	P	06 00 26.4	-0.2
SNAA				pmax	pmax		
	comp=Z,12nm,1.2s						
MSTX	Muleshoe	97.05	57	P	P	06 00 27.8	-1.4
	baz=261						
VNA3	Neumayer Olymp	97.33	181	P	P	06 00 28.6	-1.0
KURK	Kurchatov	97.46	320	P	P	06 00 29.2	-1.4
KURK					pP	06 00 43.8	-1.6
KURK	Kurchatov	97.46	320	ceP	P	06 00 28.9	-1.6
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
VNA2	Neumayer--Watz	97.58	182	P	P	06 00 30.0	-0.8
	baz=169,slow=4.8						
KSH	Kashi	97.59	309	P	Pdif	06 00 33.1	+1.5
KSH				sP	sP	06 00 50.7	-1.5
KSH				PP	PP	06 04 35.7	+5.9
KSH				SKS	SKSac	06 11 01.6	-3.3
KSH				S	S	06 11 49.5	-3.4
KSH				pmax	pmax		
	comp=Z,18nm,0.8s						
KSH				LR	LR		
	comp=Z,190nm,6.7s						
KSH				LR	LR		
	comp=Z,320nm,8.7s						
KSH				LR	LR		
	comp=Z,620nm,7.1s						
AAK	Ala-Archa	99.13	312	P	Pdif	06 00 38.4	0.0
	comp=Z,2.0nm,0.8s,baz=96,slow=4.2,SNR=7.6						
AAK				LR	LR	06 46 01.8	
	comp=Z,110nm,22.0s,baz=80,slow=36						
AAK	Ala-Archa	99.13	312	P	Pdif	06 00 37.7	-0.8
AAK	Ala-Archa	99.13	312	ceP	Pdif	06 00 38.1	-0.4
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KK31	Karatay Array	102.09	312		Pdif	06 00 48.8	-2.6
KK31	Karatay Array	102.09	312	P	Pdif	06 00 48.8	-2.6
KKAR	Karatay Array	102.09	312		Pdif	06 00 48.6	-2.9
KKAR	Karatay Array	102.09	312		Pdif	06 00 49.1	-2.3
KKAR	Karatay Array	102.09	312	P	Pdif	06 00 49.1	-2.3
APA	Apatity	116.14	342	⇓i PKIKP	PKPdf	06 05 49.7	+10
APA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
APA				MLR	MLR		
	comp=Z,700nm,24.0s						
ARCES	ARCESS Array B	117.01	346	PKP	PKPdf	06 05 39.8	-1.2
	comp=Z,3.1nm,0.9s,baz=58,slow=1.8,SNR=10						
KLMR	Klimovskoe	117.51	334	ePKPdf	PKPdf	06 05 37.8	-4.3
KLMR				AMP		06 05 39.5	
	comp=Z,24nm,1.9s						
KLMR	Klimovskoe	117.51	334	ePKIKP	PKPdf	06 05 37.8	-4.3
KLMR				pmax	pmax		
	comp=Z,24nm,1.9s						
LPAZ	La Paz	119.37	116	PKP	PKPdf	06 05 47.1	-0.7
	comp=Z,1.4nm,0.6s,baz=230,slow=5.5,SNR=5.9						
LPAZ	La Paz	119.37	116	PKPdf	PKPdf	06 05 45.7	-2.1
OBN	Obninsk	121.59	329	i PKIKP	PKiKP	06 05 51.3	+1.1
OBN				i		06 07 20.7	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KIV	Kislovodsk	122.06	315	i PKIKP	PKiKP	06 05 54.0	+2.3
KIV				pmax	pmax		
	comp=Z,11nm,0.9s						
KIV				MLR	MLR		
	comp=Z,341nm,22.0s						
FINES	FINESS Array B	122.50	339	PKP	PKPdf	06 05 51.1	-0.5
	comp=Z,4.9nm,1.0s,baz=90,slow=1.9,SNR=6.5						
RAYN	Ar Rayn	122.75	291		PKPdf	06 05 52.3	-1.1
RAYN	Ar Rayn	122.75	291	PKIKP	PKPdf	06 05 52.3	-1.1
SDV	Santo Domingo	123.88	87		PKPdf	06 05 54.6	-1.3
BOSA	Boshof	125.16	222	PKP	PKPdf	06 05 58.2	+0.2
	comp=Z,15nm,0.9s,baz=92,slow=1.3,SNR=14						
BOSA	Boshof	125.16	222		PKPdf	06 05 57.5	-0.6
SAML	Samuel	126.64	110		PKPdf	06 06 00.3	-0.8
SAML	Samuel	126.64	110	PKIKP	PKPdf	06 06 00.3	-0.8
LBTB	Lobatse	127.24	226		PKPdf	06 06 02.2	+0.1
LBTB	Lobatse	127.24	226	PKIKP	PKPdf	06 06 02.2	+0.1
NB2	NORSAR Subarra	127.38	345	PKPdf	PKPdf	06 05 57.2	-3.9
	comp=Z,1.2nm,0.8s,baz=31,slow=1.9						
NOA	NORSAR Array B	127.38	345	PKP	PKPdf	06 06 00.7	-0.4
	comp=Z,1.5nm,0.8s,baz=33,slow=2.0,SNR=5.2						
AKASG	Malin Array Be	127.66	327	PKP	PKPdf	06 06 01.2	-0.6
	comp=Z,0.3nm,0.4s,baz=45,slow=2.7,SNR=4.6						
AKASG	Malin Array Be	127.66	327		PKPdf	06 06 01.7	-0.2
AKASG	Malin Array Be	127.66	327	PKIKP	PKPdf	06 06 01.7	-0.2
KMBO	Kilima Mbogo	127.93	259	PKP	PKiKP	06 06 05.0	+0.6
	comp=Z,3.3nm,0.8s,baz=359,slow=2.3,SNR=6.3						
SUW	Suwalki	128.63	333		PKPdf	06 06 03.9	+0.3
SUW	Suwalki	128.63	333	PKIKP	PKPdf	06 06 03.9	+0.3
BRTR	Keskin Array B	129.80	313	PKP	PKPdf	06 06 04.7	-1.9
	comp=Z,1.1nm,0.9s,baz=22,slow=1.6,SNR=5.6						
BRTR				PP	PP	06 08 14.2	-3.8
	comp=Z,1.5nm,1.0s,baz=100,slow=6.0,SNR=4.3						
BRTR	Keskin Array B	129.80	313		PKPdf	06 06 06.0	-0.5
BRTR	Keskin Array B	129.80	313	PKIKP	PKPdf	06 06 06.0	-0.5
LSZ	Lusaka	130.76	238		PKiKP	06 06 10.2	+0.3
LSZ	Lusaka	130.76	238	PKIKP	PKiKP	06 06 10.2	+0.3
KOLS	Kolonicke sedl	132.34	328	ePKIKP	PKiKP	06 06 12.5	+0.5
KOLS	Kolonicke sedl	132.34	328	ePKP	PKiKP	06 06 12.5	+0.5
VYHS	Vyhne	134.35	330	ePKIKP	PKPdf	06 06 13.2	-1.5
VYHS	Vyhne	134.35	330	ePKP	PKPdf	06 06 13.2	-1.5
CLL	Collm	134.85	337	ePKPdf	PKiKP	06 06 17.0	+0.1
CLL				ePP	PP	06 09 00.0	+11
CLL				ePPS	PPS	06 20 54.0	
CLL				eSSS	SSS	06 31 54.0	
CLL				LmV		07 09 00.0	
	comp=Z,300nm,19.8s						
CLL	Collm	134.85	337	ePKIKP	PKiKP	06 06 17.0	+0.1
CLL				MLR	MLR		
	comp=Z,300nm,19.8s						
KHC	Kasperske Hory	136.30	334	ePKPDF	PKiKP	06 06 20.0	0.0
KHC	Kasperske Hory	136.30	334	ePKIKP	PKiKP	06 06 20.0	0.0
GERES	GERESS Array B	136.47	334	PKP	PKPdf	06 06 18.0	-0.8
	comp=Z,1.6nm,0.8s,baz=28,slow=2.8,SNR=7.5						
GERES	GERESS Array B	136.47	334		PKPdf	06 06 18.8	+0.1
GERES	GERESS Array B	136.47	334	PKIKP	PKPdf	06 06 18.8	+0.1
BDFB	Brasilia	136.50	128	PKP	PKPdf	06 06 19.4	-0.4
	comp=Z,2.1nm,0.7s,baz=122,slow=5.5,SNR=3.2						
BDFB	Brasilia	136.50	128		PKPdf	06 06 18.6	-1.1
KEST	Kesra	148.23	323	PKPbc	PKPbc	06 06 43.1	-0.1
	comp=Z,17nm,0.9s,baz=239,slow=2.0,SNR=13						
KEST				pPKPbc	pPKPbc	06 06 58.4	-0.3
	comp=Z,19nm,0.9s,baz=248,slow=5.7,SNR=6.2						
KEST	Kesra	148.23	323		PKPbc	06 06 43.7	+0.4
ESDC	Sonseca Array	150.74	345	PKPbc	PKPbc	06 06 49.1	-0.3
	comp=Z,3.8nm,0.8s,baz=17,slow=2.7,SNR=15						
ESDC				pPKPbc	sPKPdf	06 07 03.0	-1.9
	comp=Z,2.4nm,0.8s,baz=6.1,slow=2.9,SNR=4.9						
ESDC	Sonseca Array	150.74	345		PKPbc	06 06 49.3	-0.1
TOA0	Torodi Ar. Sit	164.98	278		PKPdf	06 07 00.9	-0.8
TOA0					PKPab	06 07 58.1	-0.4
TORD	Torodi Ar. Bea	164.98	278	PKP	PKPdf	06 07 00.8	-0.9
	comp=Z,4.2nm,1.0s,baz=38,slow=1.5,SNR=13						
TORD				pPKP	pPKPdf	06 07 16.1	-1.3
	comp=Z,4.9nm,1.1s,baz=18,slow=2.3,SNR=6.1						
TORD				PKPab	PKPab	06 07 58.9	+0.4
	comp=Z,8.9nm,0.9s,baz=69,slow=3.7,SNR=12						
TORD				pPKPab	pPKPab	06 08 13.2	-0.3
	comp=Z,10nm,1.1s,baz=94,slow=4.0,SNR=4.9						
TORD				PP	PP	06 11 45.4	0.0
	comp=Z,2.4nm,1.1s,baz=130,slow=2.3,SNR=3.9						
TORD	Torodi Ar. Bea	164.98	278		PKPdf	06 07 00.9	-0.9
TORD				PKPab	PKPab	06 07 58.2	-0.3
KIC	Kosan Boka	169.83	240	ePKP2	PKPab	06 08 19.8	-0.1
	comp=Z,65nm,1.0s						
KIC	Kosan Boka	169.83	240	eP	PKPdf	06 07 04.1	-1.2
	comp=Z,8.7nm,1.0s						
LIC	Lamto	170.00	239	ePKP2	PKPab	06 08 20.5	-0.1
	comp=Z,106nm,1.0s						
LIC	Lamto	170.00	239	eP	PKPdf	06 07 05.6	+0.2
	comp=Z,12nm,0.6s						
DBIC	Dimbokro	170.09	241	PKP	PKPdf	06 07 03.2	-2.3
	comp=Z,3.0nm,0.9s,baz=172,slow=4.6,SNR=5.0						
DBIC				PKPab	PKPab	06 08 21.4	+0.3
	comp=Z,13nm,0.9s,baz=98,slow=5.7,SNR=16						
DBIC				pPKPab	pPKPab	06 08 35.6	-0.3
	comp=Z,6.7nm,0.8s,baz=283,slow=5.5,SNR=5.3						
DBIC	Dimbokro	170.09	241		PKPdf	06 07 05.1	-0.4
DBIC					PKPab	06 08 21.1	+0.1
DBIC	Dimbokro	170.09	241	PKIKP	PKPdf	06 07 05.1	-0.4
DBIC						06 08 21.1	
TIC	Toumodi	170.21	241	ePKP2	PKPab	06 08 21.4	-0.2
	comp=Z,38nm,0.7s						
TIC	Toumodi	170.21	241	eP	PKPdf	06 07 04.1	-1.5

*ATH **06** 06:02:16.1, 38.14N×20.41E, h14km, ML2.9/5, Error ellipse: s-maj=1.7km s-min=1.0km az=256.0*
*THE **06** 06:02:16.4, 38.16N×20.39E, h12km, ML3.1/8, Error ellipse: s-maj=1.2km s-min=0.9km az=257.0*
ISC 06 06:02:16.4±1.0, 38.16N±0.03×20.41E±0.04, h13km±4km, n40, σ0§43/64, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.04	318	P	Pg	06 02 18.7	-0.1
CHV1				S	Sg	06 02 20.4	0.0
LXR1	Lixouri, Cepha	0.05	23	P	Pg	06 02 18.8	0.0
LXR1				S	Sg	06 02 20.9	+0.3
ARGA	Argostoli. Kep	0.06	67	P	Pg	06 02 18.8	-0.1
ARGA				S	Sg	06 02 20.2	-0.5
KEF2	Argostoli. Kep	0.06	80	P	Pg	06 02 18.9	-0.1
KEF2				S	Sg	06 02 20.6	-0.1
ARG2	Argostoli	0.06	68	P	Pg	06 02 18.9	0.0
ARG2				S	Sg	06 02 20.7	-0.1
KEF3	Kipouria, Keph	0.07	313	P	Pg	06 02 19.0	-0.1
KEF3				S	Sg	06 02 20.8	-0.2
KEF4	Livadi, Kephal	0.10	5	P	Pg	06 02 19.3	-0.1
KEF4				S	Sg	06 02 21.8	+0.3
KEF1	Kardakata, Kep	0.13	20	P	Pg	06 02 19.7	0.0
KEF1				S	Sg	06 02 22.1	0.0
VLS	Valsamata	0.14	81	P	Pg	06 02 19.8	-0.1
VLS				S	Sg	06 02 22.4	0.0
	14μm,0.1s						
VLS	Valsamata	0.14	81	P	Pg	06 02 19.8	-0.1
VLS				S	Sg	06 02 22.5	0.0
VLS				AML	AML	06 02 22.5	
	comp=N,20437μm,0.1s						
VLS				AML	AML	06 02 22.6	
	comp=E,32144μm,0.1s						
VSK1	VASILIKIADES	0.28	25	P	Pg	06 02 22.1	-0.2
VSK1				S	Sg	06 02 27.0	+0.8
	comp=E,13μm,0.2s						
FSK	Fiskardo	0.33	21	P	Pg	06 02 23.0	-0.1
FSK				S	Sg	06 02 28.0	+0.5
	comp=E,5μm,0.3s						
FSK	Fiskardo	0.33	21	P	Pg	06 02 23.0	-0.1
FSK				S	Sg	06 02 28.4	+0.9
FSK				AML	AML	06 02 28.8	
	comp=E,14985μm,0.1s						
FSK				AML	AML	06 02 29.3	
	comp=N,4435μm,0.2s						
VLMS	Volimes, Zakyn	0.34	145	P	Pg	06 02 23.2	-0.1
VLMS				S	Sg	06 02 28.1	+0.1
VLMS				AML	AML	06 02 29.4	
	comp=E,3836μm,0.1s						
VLMS				AML	AML	06 02 29.5	
	comp=N,4156μm,0.2s						
EVGI	Lefkada island	0.50	22	P	Pg	06 02 25.9	-0.4
EVGI				S	Sb	06 02 33.8	-0.6
EVGI	Lefkada island	0.50	22	P	Pg	06 02 26.0	-0.3
EVGI				S	Sb	06 02 34.0	-0.5
MGNA	Meganis	0.58	31	P	Pg	06 02 27.1	-0.7
MGNA				S	Sg	06 02 36.2	+0.6
MGNA				AML	AML	06 02 36.7	
	comp=N,2544μm,0.1s						
MGNA				AML	AML	06 02 37.6	
	comp=E,2281μm,0.1s						
KRI1	kERI	0.59	147	P	Pg	06 02 27.6	-0.3
KRI1				S	Sb	06 02 37.4	+0.6
	comp=E,1μm,0.1s						
AST1	Astakos	0.66	54	P	Pg	06 02 28.7	-0.5
AST1				S	Sb	06 02 39.2	+0.4
	comp=E,1μm,0.3s						
LKD2	Lefkada island	0.66	17	P	Pg	06 02 28.7	-0.6
LKD2	Lefkada island	0.66	17	P	Pg	06 02 28.7	-0.6
PDO	Prodromos	0.75	54	P	Pg	06 02 30.6	-0.3
PDO				S	Sb	06 02 42.3	+0.8
	comp=E,860nm,0.2s						
PDO	Prodromos	0.75	54	P	Pg	06 02 30.7	-0.3
PDO				S	Sg	06 02 40.7	-0.1
PDO				AML	AML	06 02 45.1	
	comp=E,840μm,0.3s						
PDO				AML	AML	06 02 48.9	
	comp=N,1431μm,0.2s						
RLS	Riolos of Patr	0.84	96	P	Pg	06 02 32.0	-0.6
RLS				S	Sn	06 02 45.3	-0.8
	comp=N,190nm,0.3s						
RLS	Riolos of Patr	0.84	96	P	Pg	06 02 32.0	-0.6
RLS				S	Sb	06 02 44.6	+0.7
PVO	Paravola	0.99	62	P	Pb	06 02 35.2	-0.2
PVO				S	Sn	06 02 51.0	+1.1
	comp=N,1μm,0.2s						
PVO	Paravola	0.99	62	P	Pb	06 02 35.1	-0.2
AMT	Artemida-Makis	1.20	121	P	Pg	06 02 39.7	+0.2
EFP	Efpalio	1.21	77	P	Pn	06 02 38.3	-0.7
LAKA	Lakka	1.24	86	P	Pn	06 02 39.1	-0.4
ANX	Ano Chora	1.26	69	P	Pn	06 02 40.4	+0.3
SERG	Sergoula	1.32	78	P	Pn	06 02 40.2	-0.4
TRIZ	Trizonia	1.32	80	P	Pn	06 02 40.3	-0.3
EVR	Evrytania	1.33	55	P	Pb	06 02 41.6	+0.2
KLV	Kalavryta, Ach	1.37	94	P	Pn	06 02 41.1	-0.3
IGT	Igoumenitsa	1.38	357	P	Pg	06 02 42.9	0.0
KALE	Kalithea	1.38	80	P	Pn	06 02 41.3	-0.1
ITM	Ithomi	1.54	129	P	Pb	06 02 45.0	+0.1
MAKR	Makrakomi, Fth	1.60	57	P	Pb	06 02 47.2	+0.1
THL	Klokotos Trika	1.88	41	P	Pb	06 02 50.9	+0.3

IDC 06 06:09:39.9±7.5, 30.54N×90.38E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.4/28, mbtmp3.6/4, ML2.9/1, MS4.1/2, Ms1 4.1/2, ms1mx3.0/51, Error ellipse: s-maj=137.4km s-min=53.2km az=165.0, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	17.40	341	P	Pn	06 13 44.3	+0.2
	0.0nm,0.3s,baz=149,slow=14,SNR=5.1						
SONM	Songino Array	21.20	31	P	P	06 14 27.1	0.0
	1.2nm,0.8s,baz=218,slow=12,SNR=9.3						
YAK	Yakutsk	40.48	27	LR	LR	06 34 20.4	
	comp=Z,286nm,20.1s,baz=138,slow=37						
MA2	Magadan	49.29	36	LR	LR	06 41 20.8	
	comp=Z,148nm,18.1s,baz=108,slow=39						
FINES	FINESS Array B	51.45	326	P	P	06 18 46.4	-0.2
	1.3nm,0.9s,baz=99,slow=8.6,SNR=2.5						
ARCES	ARCESS Array B	52.98	336	P	P	06 18 57.8	-0.1
	2.2nm,0.9s,baz=106,slow=9.4,SNR=3.5						

*DJA **06** 06:26:59.2±3.7, 5°S±36°×15°4E±1°1, h95km±13km, M5.4/6, mb4.8/6, mB5.1/2, MLv5.7/1, Mw(mB)4.5/2*
*NEIC **06** 06:27:01.7±1.2, 4.81S±0.09×153.74E±0.09, h99km±6km, mb4.4/23, Error ellipse: s-maj=14.1km s-min=11.8km az=214.0*
*IDC **06** 06:27:02.4±2.3, 4.91S×153.83E, h108km±18km, mb3.8/17, mb1 4.0/18, mb1mx3.8/47, mbtmp4.2/18, MS3.5/11, Ms1 3.5/11, ms1mx3.2/40, Error ellipse: s-maj=23.0km s-min=13.6km az=99.0*
*GCMT **06** 06:27:02.7±0.3, 5.04S±0.03×153.76E±0.03, h94km±4km, MW4.9/76, Moment Tensor Solution. s15,c18; s76,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.66±.11; $M_{\theta\theta}$-0.30±.15; $M_{\phi\phi}$-1.36±.15; $M_{r\theta}$-1.00±.08; $M_{\theta\phi}$1.00±.14;*

M_w1.27±.08; Best double couple: $M_0$2.42800×10[16] NP1:ϕ_s156.00000°,δ25.00000°,λ101.00000°. NP2: ϕ_s324.00000°,δ66.00000°,λ85.00000°. Principal axes: T 2.2850, Plg69.0000°, Azm224.0000°; N 0.2870, Plg5.0000°, Azm326.0000°; P -2.5710, Plg21.0000°, Azm57.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 06 06:27:02.3±0.5, 4.82S±0.06×153.83E±0.07, h105km, n64, σ0s97/59, mb4.2/24, New Ireland region

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Code  Station Name        Δ°  AZ°   Phase ID        Time      Res
                                    Op    ISC      h  m  s    ISC
RABL  Rabaul             1.77 291   Pn    Pn     06 27 32.4 +0.2
KRVT  Keravat (AS076     1.87 286   P     Pn     06 27 33.1 -0.3
      165nm,0.3s,baz=175,slow=0.4,SNR=25
KRVT                                S     Sn     06 27 55.9 -1.3
      88nm,0.3s,baz=322,slow=1.7,SNR=10
KRVT                                LR    LR     06 28 29.5
      comp=Z,1μm,18.5s,baz=94,slow=46
HNR   Honiara            7.60 127   Pn    Pn     06 28 51.0 +0.6
PMG   Port Moresby       8.03 235   P     Pn     06 28 57.5 +1.2
      28nm,0.3s,baz=55,slow=9.1,SNR=29
PMG                                 S     Sn     06 30 28.3 +2.8
      6.3nm,0.3s,baz=90,slow=19,SNR=4.3
PMG                                 LR    LR     06 32 24.8
      comp=Z,255nm,18.2s,baz=76,slow=40
PMG   Port Moresby       8.03 235   Pn    Pn     06 28 54.0 -2.3
PATS  Pohnpei           12.42  21   Pn    Pn     06 29 55.0 -0.5
COEN  Coen              13.88 228   Pn    Pn     06 30 17.0 +2.4
GUMO  Guam              20.34 334   LR    LR     06 40 40.1
      comp=Z,47nm,18.3s,baz=305,slow=40
DZM   Mont Dzumac       21.05 146   P     P      06 31 37.2 -0.9
      1.7nm,0.5s,baz=336,slow=20,SNR=5.0
DZM   Mont Dzumac       21.05 146   P     P      06 31 37.9 -0.3
SIJI  Sorong            22.87 279   LR    LR     06 41 46.2
      comp=Z,144nm,19.0s,baz=172,slow=39
MTN   Manton Dam        23.78 249   P     P      06 32 06.6 +1.0
WB0   Warramunga Arr    24.06 230   P     P      06 32 08.2 +0.2
WB0                                 IAmb  IAmb   06 32 10.9
      comp=Z,25nm,1.4s
WR0   Warramunga Arr    24.06 230   P     P      06 32 07.5 -0.5
WR0                                 IAmb  IAmb   06 32 10.8
      comp=Z,9.6nm,1.0s
WRA   Warramunga Arr    24.20 230   P     P      06 32 09.0 -0.4
      comp=Z,5.0nm,0.6s,baz=54,slow=10,SNR=10
WRA                                 pP    pwP    06 32 34.0 -1.2
      comp=Z,8.2nm,1.1s,baz=55,slow=9.0,SNR=3.3
WRA                                 LR    LR     06 42 16.9
      comp=Z,85nm,18.8s,baz=75,slow=38
WRA   Warramunga Arr    24.20 230   P     P      06 32 09.2 -0.1
ARMA  Armidale          25.54 184   P     P      06 32 22.5 +1.1
ARMA                                IAmb  IAmb   06 32 23.3
      comp=Z,13nm,0.9s
H11S3 WAKE ISLAND Hy    26.41  28   T     T      07 01 11.6
      baz=208,slow=76,SNR=17
H11S2 WAKE ISLAND Hy    26.42  28   T     T      07 01 07.2
      baz=208,slow=76,SNR=4.2
H11S1 WAKE ISLAND Hy    26.43  28   T     T      07 01 20.0
      baz=208,slow=76,SNR=3.7
AS31  Alice Springs     26.83 224   P     P      06 32 33.1  0.0
ASAR  Alice Springs     26.83 224   P     P      06 32 32.6 -0.5
      comp=Z,5.4nm,0.9s,baz=56,slow=9.2,SNR=28
ASAR                                LR    LR     06 43 38.8
      comp=Z,170nm,18.1s,baz=71,slow=37
ASAR  Alice Springs     26.83 224   P     P      06 32 33.1  0.0
KNRA  Kununurra         26.88 244   P     P      06 32 32.3 -1.3
STKA  Stephens Creek    29.26 202   P     P      06 32 53.2 -1.3
      comp=Z,4.0nm,0.7s,baz=20,slow=10,SNR=7.6
STKA  Stephens Creek    29.26 202   P     P      06 32 54.0 -0.5
FITZ  Fitzroy Crossi    30.55 242   P     P      06 33 05.2 -1.0
      comp=Z,5.9nm,0.6s,baz=61,slow=6.1,SNR=14
FITZ  Fitzroy Crossi    30.55 242   P     P      06 33 05.4 -0.7
FITZ                                IAmb  IAmb   06 33 07.2
      comp=Z,8.9nm,0.8s
BBOO  Buckleboo         32.41 209   P     P      06 33 21.7 -0.6
BBOO                                IAmb  IAmb   06 33 23.0
      comp=Z,9.7nm,0.9s
FORT  Forrest           35.42 220   P     P      06 33 48.0 -0.4
PSA00 Pilbara Seismi    36.90 240   P     P      06 34 00.4 -0.7
TGY   Tagaytay City     37.66 300   LR    LR     06 49 53.3
      comp=Z,60nm,19.2s,baz=19,slow=36
MLZ   Mavora Lakes      42.27 165   P     P      06 34 45.9 +0.5
MORW  Morawa            43.13 232   P     P      06 34 51.8 -0.8
CISI  Cisompet, Garu    45.81 264   P     P      06 35 13.4 -0.7
KSRS  Korea Array       48.49 332   LR    LR     06 54 26.6
      comp=Z,20nm,20.1s,baz=170,slow=34
USRK  Ussuriysk Ar.     52.61 340   P     P      06 36 05.3  0.0
      comp=Z,1.3nm,0.7s,baz=149,slow=4.7,SNR=4.0
PPT   Papeete           56.74 108   LR    LR     06 58 45.3
      comp=Z,34nm,18.6s,baz=310,slow=34
XAN   Xi'an             57.35 316   P     P      06 36 39.5 -0.3
XAN                                 IAmb  IAmb   06 36 40.6
      comp=Z,2.8nm,0.8s
PETK  Petropavlovsk-    57.81   3   P     P      06 36 42.9 +0.4
      comp=Z,1.9nm,0.6s,baz=166,slow=9.4,SNR=4.1
CMAR  Chiang Mai Arr    58.82 295   P     P      06 36 51.1 +0.9
      comp=Z,1.4nm,0.3s,baz=120,slow=5.9,SNR=5.8
MA2   Magadan           64.24 358   P     P      06 37 27.1 +1.2
      comp=Z,3.3nm,0.5s,baz=150,slow=20,SNR=3.8
MA2   Magadan           64.24 358   P     P      06 37 25.8 -0.1
SONM  Songino Array     66.89 327   P     P      06 37 44.0 +0.6
      comp=Z,0.5nm,0.5s,baz=147,slow=6.4,SNR=5.6
GHO   Glory Hole Cre    79.46  24   P     P      06 38 58.3 +1.3
GHO                                 IAmb  IAmb   06 39 00.2
      comp=Z,4.4nm,0.5s
FID   Port Fidalgo      79.97  26   P     P      06 38 60.0 +0.3
IMAR  Indian Mountai    80.07  19   P     P      06 39 01.2 +1.2
MLY   Manley            80.54  21   P     P      06 39 03.5 +0.8
MKAR  Makanchi Array    81.02 319   P     P      06 39 06.0 +0.3
      comp=Z,0.4nm,0.4s,baz=93,slow=8.4,SNR=8.7
ZALV  Zalesovo Beam     81.74 326   P     P      06 39 08.4 -0.8
      comp=Z,0.9nm,0.4s,baz=107,slow=5.0,SNR=3.0
ILAR  Eielson Array     81.80  22   P     P      06 39 08.3 -1.0
      comp=Z,0.3nm,0.7s,baz=245,slow=4.5,SNR=4.3
ILAR                                LR    LR     07 08 41.3
      comp=Z,47nm,21.0s,baz=268,slow=30
KURK  Kurchatov         84.42 322   P     P      06 39 23.0 -0.1
KURK                                IAmb  IAmb   06 39 25.6
      comp=Z,3.6nm,1.1s
KURBB Kurchatov Arra    84.45 322   P     P      06 39 22.7 -0.5
      comp=Z,1.0nm,0.7s,baz=86,slow=4.0,SNR=5.5
QSPA  South Pole Qui    85.14 180   P     P      06 39 27.4 +0.8
MAW   Mawson            85.94 203   P     P      06 39 29.7 -0.7
      comp=Z,3.8nm,0.8s,baz=152,slow=3.8,SNR=4.0
MAW   Mawson            85.94 203   P     P      06 39 30.0 -0.3
MAW                                 pP    pP     06 39 54.9 -1.7
BVAR  Borovoye Array    89.87 323   P     P      06 39 48.9 -0.5
      comp=Z,1.7nm,0.7s,baz=106,slow=5.3,SNR=8.8
NVAR  Mina Array Bea    91.29  52   P     P      06 39 58.0 +1.4
      comp=Z,0.1nm,0.5s,baz=256,slow=3.6,SNR=2.5
NVAR  Mina Array Bea    91.29  52   P     P      06 39 55.9 -0.7
RPN   Rapa Nui          93.89 118   LR    LR     07 16 06.9
      comp=Z,19nm,19.0s,baz=238,slow=31
PDAR  Pinedale Array    98.11  48   LR    LR     07 20 45.3
      comp=Z,27nm,19.5s,baz=298,slow=33
TORD  Torodi Ar. Bea   151.29 289   PKPbc PKPbc  06 46 43.8 -0.9
      comp=Z,1.7nm,0.6s,baz=57,slow=2.5,SNR=12
TORD                                pPKPbc sPKPdf 06 47 15.2 -1.1
      comp=Z,2.1nm,0.7s,baz=57,slow=2.4,SNR=5.4
TORD  Torodi Ar. Bea   151.29 289   PKPbc PKPbc  06 46 44.5 -0.1
DBIC  Dimbokro         158.71 276   PKPab PKPab  06 47 24.3 -0.5
      comp=Z,1.5nm,0.8s,baz=82,slow=5.4,SNR=4.2
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*NIC **06** 06:30:39.5±0.0, 36.70N×31.34E, h51km±32km, Ml3.0/3*
*ISK **06** 06:30:39.8, 36.63N×31.07E, h80km, ML2.9/27*
*DDA **06** 06:30:40.4, 36.71N×31.26E, h7km±7km, ML2.6*

ISC 06 06:30:39.7±1.3, 36.56N±0.03×31.13E±0.03, h78km±9km, n51, σ1s20/71, Turkey

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Code  Station Name        Δ°  AZ°   Phase ID        Time      Res
                                    Op    ISC      h  m  s    ISC
KEMT  Kemer-ANTALYA      0.47 276   PG    Pn     06 30 53.5 +0.5
KEMT                                SG    Sn     06 31 03.3 +0.5
KEPZ  Antalya-Kepez      0.51  48   iP    Pn     06 30 53.3 -0.2
KEPZ                                iS    Sn     06 31 02.5 -1.1
ANTB  Antalya            0.52 312   PG    Pn     06 30 53.4  0.0
ANTB                                SG    Sn     06 31 03.5  0.0
AKUM  Antalya-Kumluc     0.68 250   iP    Pn     06 30 55.8 +0.9
AKUM                                iS    Sn     06 31 08.2 +1.9
AKUM                                IAML         06 31 14.0
      comp=N,178nm,0.4s
AKUM                                IAML         06 31 14.0
      comp=E,402nm,0.4s
KORT  Korkueli           0.77 305   PG    Pn     06 30 56.1  0.0
KORT  Korkueli           0.77 305   iP    Pn     06 30 56.4 +0.3
KORT                                iS    Sn     06 31 07.0 -1.3
KORT                                IAML         06 31 12.0
      comp=N,180nm,0.5s
KORT                                IAML         06 31 13.0
      comp=E,164nm,0.5s
BCK   Bucak              1.00 334   PG    Pn     06 30 58.4 -0.3
BCK                                 SG    Sn     06 31 12.2 -0.8
ELL   Elmali             1.00 281   PG    Pn     06 30 59.3 +0.5
GAZI  Gazipasa           1.01 108   PG    Pn     06 31 00.1 +1.4
GAZI  Gazipasa           1.01 108   iP    Pn     06 30 59.3 +0.6
GAZI                                iS    Sn     06 31 12.2 -0.7
GAZI                                IAML         06 31 17.0
      comp=N,171nm,0.4s
GAZI                                IAML         06 31 18.0
      comp=E,158nm,0.4s
SEYD  Seydisehir-KON     1.02  33   PG    Pn     06 30 59.3 +0.3
HDMB  Hadim              1.16  69   PN    Pn     06 31 02.0 +1.2
AKAS  Kas                1.27 256   PN    Pn     06 31 02.7 +0.5
AKAS  Kas                1.27 256   iP    Pn     06 31 02.4 +0.2
AKAS                                iS    Sn     06 31 17.0 -2.0
AKAS                                IAML         06 31 21.0
      comp=E,56nm,0.7s
AKAS                                IAML         06 31 21.0
      comp=N,54nm,0.4s
ISP   Isparta            1.35 339   PN    Pn     06 31 03.3 +0.1
BRDR  BURDUR-Merkez      1.42 323   iP    Pn     06 31 05.4 +1.4
BRDR                                iS    Sn     06 31 20.2 -2.1
BRDR                                IAML         06 31 24.0
      comp=E,60nm,0.4s
GOLH  Golhisar           1.43 299   iP    Pn     06 31 06.5 +2.3
GOLH                                iS    Sn     06 31 23.9 +1.3
GOLH                                IAML         06 31 31.0
      comp=N,62nm,0.3s
GOLH                                IAML         06 31 45.0
      comp=E,68nm,1.0s
ERMK  Ermenek            1.43  86   iP    Pn     06 31 06.4 +2.1
ERMK                                iS    Sn     06 31 24.1 +1.3
ERMK                                IAML         06 31 29.0
      comp=N,192nm,0.7s
ERMK                                IAML         06 31 30.0
      comp=E,174nm,0.4s
BAGO  Egridir - ISPA     1.46 349   iP    Pn     06 31 04.8 +0.3
BAGO                                iS    Sn     06 31 21.3 -1.8
KMER  Konya-Meram        1.56  39   iP    Pn     06 31 07.2 +1.4
KMER                                iS    Sn     06 31 24.5 -1.1
KMER                                IAML         06 31 28.0
      comp=E,89nm,0.5s
KMER                                IAML         06 31 29.0
      comp=N,56nm,0.6s
DOGA  KONYA_Doganhis     1.60  15   iP    Pn     06 31 07.4 +0.9
DOGA                                iS    Sn     06 31 25.7 -0.9
DOGA                                IAML         06 31 30.0
      comp=E,88nm,0.8s
DOGA                                IAML         06 31 31.0
      comp=N,130nm,0.7s
BASM  Basmaki-Afyon      1.61 328   PN    Pn     06 31 06.6 +0.1
FETY  Fethiye            1.65 273   PN    Pn     06 31 07.7 +0.8
TEKE  Tekeli-Mersin      1.65 104   PN    Pn     06 31 09.1 +2.2
KONT  Konya--Tatoy       1.70  35   PN    Pn     06 31 09.0 +1.5
KONT  Konya--Tatoy       1.70  35   iP    Pn     06 31 08.7 +1.1
KONT                                iS    Sn     06 31 26.7 -2.0
BERE  Bereket-Mersin     1.70  96   PN    Pn     06 31 09.8 +2.1
AKMS  Akamas             1.82 147   P     Pn     06 31 09.2  0.0
AKMS                                S     Sn     06 31 31.7 +0.2
AKMS                                AML   AML    06 31 32.3
      comp=N,0.4nm,0.3s
AKMS                                AML   AML    06 31 32.3
      comp=N,0.4nm,0.3s
AKMS                                AML   AML    06 31 32.4
      comp=N,0.3nm,0.2s
AKMS                                AML   AML    06 31 32.4
      comp=N,0.3nm,0.2s
ALFC  Alefka             1.84 139   P     Pn     06 31 08.9 -0.5
ALFC                                S     Sn     06 31 30.0 -2.0
ALFC                                AML   AML    06 31 30.4
      comp=N,0.4nm,0.2s
ALFC                                AML   AML    06 31 30.4
      comp=N,0.4nm,0.2s
ALFC                                AML   AML    06 31 31.8
      comp=N,0.4nm,0.1s
ALFC                                AML   AML    06 31 31.8
      comp=N,0.4nm,0.1s
TEVE  Tevekalti-Mers     1.86  93   PN    Pn     06 31 12.1 +2.3
KZIL  AFYON_Kizioren     1.87 335   iP    Pn     06 31 10.6 +0.6
KZIL                                iS    Sn     06 31 32.4 -0.5
KZIL                                IAML         06 31 34.0
      comp=E,58nm,0.5s
LADK  Ladik-KONYA        1.91  31   PN    Pn     06 31 11.8 +1.3
GULN  MERSIN_Gulnar      1.98 100   iP    Pn     06 31 12.9 +1.7
GULN                                iS    Sn     06 31 33.1 -2.2
GULN                                IAML         06 31 45.0
      comp=N,30nm,0.4s
DALY  Dalyan (Mula)      2.01 278   PN    Pn     06 31 12.4 +0.8
SHUT  Suhut-Afyon        2.05 347   PN    Pn     06 31 12.9 +0.6
TURN  Turunc             2.06 280   PN    Pn     06 31 16.6 +4.3
YER   Yerkesik           2.36 285   PN    Pn     06 31 17.1 +0.7
MRSB  Marmaris-Mugla     2.37 275   PN    Pn     06 31 17.4 +0.9
CSS   Mathiatis          2.39 131   P     Pn     06 31 16.0 -0.8
CSS                                 S     Sn     06 31 44.4 -0.9
KIZT  Kizilcal           2.39  14   PN    Pn     06 31 17.3 +0.4
ARG   Arkhangelos        2.45 263   PN    Pn     06 31 17.8 +0.3
CHBY  Cihanbeyli         2.46  34   PN    Pn     06 31 18.9 +1.2
MVOU  Mavrovouni         2.55 126   P     Pn     06 31 18.9 +0.1
MVOU                                S     Sn     06 31 46.9 -2.0
MVOU                                AML   AML    06 31 48.1
      comp=N,0.1nm,0.2s
MVOU                                AML   AML    06 31 48.1
      comp=N,0.1nm,0.2s
KULA  Kula-Manisa        2.77 316   PN    Pn     06 31 22.6 +0.6
CIFT  Cifteler, Eski     2.80 359   PN    Pn     06 31 22.8 +0.4
GEDZ  Gediz              2.83 332   PN    Pn     06 31 23.6 +0.8
DAT   Datca              2.87 274   PN    Pn     06 31 24.3 +1.0
AUSIV SIVRIHISAR         2.90   6   PN    Pn     06 31 24.2 +0.5
SVRH  Sivrihisar-ESK     2.90   6   PN    Pn     06 31 24.2 +0.5
BODT  Bodrum             3.11 280   PN    Pn     06 31 27.2 +0.7
TVSB  Tavsanli           3.18 336   PN    Pn     06 31 28.2 +0.7
```

*IDC **06** 06:35:54.8±3.3, 44.24N×147.07E, h0km, mb3.5/7, mb1 3.8/7, mb1mx3.5/59, mbtmp3.5/7, Error ellipse: s-maj=95.2km s-min=27.9km az=170.0*
*SKHL **06** 06:36:12.8±0.2, 44.42N×147.63E, h166km±9km, mb4.2/3, msh4.5/3*
*MOS **06** 06:36:13.4±0.9, 44.83N×147.03E, h170km, mb3.8/1, Error ellipse: s-maj=19.7km s-min=13.1km az=70.4*
*JMA **06** 06:36:15.7±0.5, 44.57N×146.98E, h168km, M3.4*

ISC 06 06:36:14.8±0.7, 44.69N±0.08×146.96E±0.07, h178km±7km, n42, σ1s42/49, mb3.3/8, 3C-1D, Kuril Islands

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Code  Station Name        Δ°  AZ°   Phase ID        Time      Res
                                    Op    ISC      h  m  s    ISC
SHO   Shikotan           0.82 186   iP    Pn     06 36 40.0 -1.1
SHO                                 AMB   AMB    06 36 40.0
      79nm,0.3s
SHO                                 iS    Sn     06 36 59.2 -2.0
SHO                                 A     A      06 37 00.0
      40nm,0.2s
SHO                                 A     A      06 37 00.0
      30nm,0.2s
SHO   Shikotan           0.82 186 c iPN   Pn     06 36 40.2 -0.9
SHO                                 iS    Sn     06 36 58.9 -2.3
SHO                                 pmax  pmax
      comp=N,185μm,0.1s
SHO                                 pmax  pmax
      comp=Z,788μm,0.1s
SHO                                 smax  smax
      comp=N,424nm,0.2s
SHO                                 smax  smax
      comp=E,293nm,0.2s
KUR   Kuril'sk           0.85  50   erx   Sn     06 37 01.4 -0.1
YUK   Yuzh-Kuril'sk      1.02 231   eP    Pn     06 36 44.2 +2.2
YUK                                 AMB   AMB    06 36 45.4
YUK                                 eS    Sn     06 37 07.5 +3.9
      comp=E,58nm,0.2s
YUK                                 A     A      06 37 10.1
      comp=E,50nm,0.2s
YUK                                 A     A      06 37 10.1
      comp=E,60nm,0.2s
YUK                                 A     A      06 37 10.1
      comp=E,50nm,0.2s
YUK   Yuzh-Kuril'sk      1.02 231 c iPN   Pn     06 36 42.0 -0.4
YUK                                 iS    Sn     06 37 02.6 -1.0
GRPR  Tuman              1.10 231   eS    Sn     06 37 06.0 +1.3
GLVR  Golovnino          1.40 228   iP    Pn     06 36 46.0 +0.4
GLVR                                AMB   AMB    06 36 46.0
      comp=E,16nm,0.2s
GLVR                                eS    Sn     06 37 12.0 +2.6
GLVR                                A     A      06 37 18.0
      comp=E,26nm,0.2s
GLVR                                A     A      06 37 18.0
      comp=E,53nm,0.2s
GLVR  Golovnino          1.40 228 d iPN   Pn     06 36 46.2 +0.6
GLVR                                eS    Sn     06 37 10.2 +0.8
GLVR                                pmax  pmax
      comp=Z,161μm,0.1s
GLVR                                smax  smax
      comp=N,258nm,0.2s
GLVR                                smax  smax
      comp=E,53nm,0.1s
NEM2  Nemuro 2           1.58 214   P     Pn     06 36 46.6 -0.8
NEM2                                eS    Sn     06 37 10.8 -1.7
NMR   Nemuro--Hokkai     1.59 214   eP    Pn     06 36 47.0 -0.4
NMR                                 iS    Sn     06 37 13.5 +0.9
NMR   Nemuro--Hokkai     1.59 214   ePN   Pn     06 36 47.0 -0.4
NMR                                 iS    Sn     06 37 10.9 -1.7
JNSB  Nemuroshibetsu     1.67 238   P     Pn     06 36 48.3  0.0
JNK   Nakash             1.95 236   P     Pn     06 36 51.0 -0.2
JKHN  Kushirohamanak     2.06 220   P     Pn     06 36 51.9 -0.5
JKHN                                eS    Sn     06 37 20.2 -1.3
JTKR  Abashiri--Toko     2.30 253   P     Pn     06 36 54.4 -0.6
JAK   Akkeshi            2.35 225   P     Pn     06 36 55.1 -0.5
JAK                                 eS    Sn     06 37 25.4 -1.9
JAR   Ashorobuto         2.69 240   P     Pn     06 37 00.4 +0.8
JOB   Onbets             2.88 233   P     Pn     06 37 02.0 +0.2
JOB                                 eS    Sn     06 37 37.0 -1.4
JCH   Churui             3.33 233   P     Pn     06 37 06.9 -0.5
JCH                                 eS    Sn     06 37 45.4 -3.0
YSS   Yuzh-Sakhalins     3.71 309   erx   Pn     06 37 09.9 -2.2
YSS   Yuzh-Sakhalins     3.71 309   ePN   Pn     06 37 09.9 -2.2
ERM   Erimo              3.85 227 c iPN   Pn     06 37 14.4 +0.5
JNBK  Urakawa-nobuka     3.89 233   P     Pn     06 37 13.2 -1.2
USA0B Ussuriysk Arra    10.72 273   iPN   Pn     06 38 44.4 +0.8
HIA   Hailar            19.08 294   iP    P      06 40 23.9 +0.3
BILL  Bilibino          25.50  17   eP    P      06 41 27.8 +1.5
BILL  Bilibino          25.50  17   iP    P      06 41 27.8 +1.5
TIXI  Tiksi             28.41 348   eP    P      06 41 52.2  0.0
TIXI  Tiksi             28.41 348   iP    P      06 41 52.2  0.0
TIXI                                pmax  pmax
      comp=Z,1.0nm,1.4s
H11N2 WAKE ISLAND Hy    29.91 140   T     T      07 13 27.6
      baz=331,slow=76,SNR=9.4
H11N1 WAKE ISLAND Hy    29.92 140   T     T      07 13 24.7
      baz=331,slow=76,SNR=8.2
H11N3 WAKE ISLAND Hy    29.92 140   T     T      07 13 27.8
      baz=331,slow=76,SNR=12
H11S1 WAKE ISLAND Hy    30.88 141   T     T      07 14 37.2
      baz=331,slow=76,SNR=17
H11S3 WAKE ISLAND Hy    30.89 141   T     T      07 14 35.0
      baz=331,slow=76,SNR=12
H11S2 WAKE ISLAND Hy    30.90 141   T     T      07 14 38.6
      baz=331,slow=76,SNR=10
ILAR  Eielson Array     40.82  37   P     P      06 43 38.0 -0.5
      comp=Z,0.4nm,0.7s,baz=272,slow=6.9,SNR=4.9
MKAR  Makanchi Array    44.03 297   P     P      06 44 03.6 -1.1
      comp=Z,0.1nm,0.5s,baz=77,slow=9.6,SNR=2.3
INK   Inuvik            45.66  31   P     P      06 44 15.9 -1.2
      comp=Z,0.6nm,0.3s,baz=297,slow=9.2,SNR=25
BVAR  Borovoye Array    48.80 309   P     P      06 44 43.2 +1.6
      comp=Z,0.4nm,0.5s,baz=52,slow=9.3,SNR=3.2
YKA   Yellowknife Ar    55.10  34   P     P      06 45 27.6 -0.4
      comp=Z,0.7nm,0.8s,baz=300,slow=6.8,SNR=6.9
NVAR  Mina Array Bea    67.20  58   P     P      06 46 51.1 +1.2
      comp=Z,0.1nm,0.4s,baz=294,slow=7.7,SNR=2.4
PDAR  Pinedale Array    69.41  50   P     P      06 47 04.1 +0.5
      comp=Z,0.3nm,0.5s,baz=343,slow=2.8,SNR=5.3
```

*IDC **06** 07:03:21.3±0.9, 15.12S×173.61W, h0km, mb4.1/6, mb1 4.3/7, mb1mx3.9/40, mbtmp4.2/7, ML4.7/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/31, Error ellipse: s-maj=46.4km s-min=19.4km az=142.0*
*NEIC **06** 07:03:21.5±1.0, 15.09S±0.07×173.5W±0.1, h10km±1km, mb4.7/13, Error ellipse: s-maj=22.7km s-min=8.0km az=295.0*

ISC 06 07:03:24.9±0.7, 15.07S±0.09×173.5W±0.1, h30km, n34, σ1s07/27, mb4.5/11, Tonga Islands

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Code  Station Name        Δ°  AZ°   Phase ID        Time      Res
                                    Op    ISC      h  m  s    ISC
AFI   Afiamalu           2.03  56   Pn    Pn     07 03 56.5 -0.6
      226nm,0.3s,baz=154,slow=0.6,SNR=321
AFI                                 Sn    Sn     07 04 16.3 -5.2
      255nm,0.3s,baz=124,slow=1.3,SNR=14
AFI                                 LR    LR     07 04 38.0
      comp=Z,377nm,20.7s,baz=244,slow=36
NIUE  Niue               5.25 140         Pn     07 04 40.1 -1.2
KNTN  Kanton            12.35   8   Pn    Pn     07 06 16.7 -2.0
RAO   Raoul Island      14.69 195   LR    LR     07 11 45.7
      comp=Z,89nm,21.0s,baz=118,slow=34
URZ   Urewera           24.54 198   P     P      07 08 42.3 +0.3
      4.6nm,0.4s,baz=14,slow=2.5,SNR=7.8
URZ   Urewera           24.54 198   P     P      07 08 40.7 -1.3
URZ                                 IAmb  IAmb   07 08 45.3
      comp=Z,41nm,1.3s
BKZ   Black Stump Fm    25.56 198   P     P      07 08 50.3 -1.0
BKZ                                 IAmb  IAmb   07 08 52.9
      comp=Z,16nm,1.1s
QRZ   Quartz Range      28.39 203   P     P      07 09 17.0 +0.4
THZ   Tophouse          29.08 201   P     P      07 09 21.7 -1.1
KHZ   Kahutara          29.45 200   P     P      07 09 24.9 -1.0
LTZ   Lake Taylor       30.20 201   P     P      07 09 31.7 -1.0
LTZ                                 IAmb  IAmb   07 09 36.1
      comp=Z,8.7nm,0.6s
RPZ   Rata Peaks        31.45 202   P     P      07 09 42.6 -1.0
RPZ                                 IAmb  IAmb   07 09 43.1
      comp=Z,16nm,1.2s
MLZ   Mavora Lakes      33.95 203   P     P      07 10 04.4 -1.1
H11S2 WAKE ISLAND Hy    38.63 329   T     T      07 51 38.3
      baz=146,slow=76,SNR=9.0
H11S3 WAKE ISLAND Hy    38.65 329   T     T      07 51 35.6
      baz=146,slow=76,SNR=8.7
H11S1 WAKE ISLAND Hy    38.65 329   T     T      07 51 33.6
      baz=146,slow=76,SNR=8.5
H11N3 WAKE ISLAND Hy    39.58 330   T     T      07 52 54.7
      baz=147,slow=76,SNR=5.0
H11N1 WAKE ISLAND Hy    39.59 330   T     T      07 52 41.9
      baz=147,slow=76,SNR=3.9
H11N2 WAKE ISLAND Hy    39.60 330   T     T      07 52 42.8
      baz=147,slow=76,SNR=4.2
STKA  Stephens Creek    44.12 240   P     P      07 11 30.8  0.0
      comp=Z,1.6nm,0.7s,baz=118,slow=12,SNR=3.5
STKA  Stephens Creek    44.12 240   P     P      07 11 29.8 -1.0
BBOO  Buckleboo         48.89 240   P     P      07 12 08.6 +0.4
WR0   Warramunga Arr    49.63 256   P     P      07 12 14.5 +0.4
WB0   Warramunga Arr    49.78 257   P     P      07 12 15.2  0.0
WB0                                 IAmb  IAmb   07 12 27.4
      comp=Z,7.2nm,1.1s
WB2   Warramunga Arr    49.81 256   P     P      07 12 15.7 +0.3
WB2                                 IAmb  IAmb   07 12 22.0
      comp=Z,15nm,1.4s
WRA   Warramunga Arr    49.82 256   P     P      07 12 15.3 -0.3
      comp=Z,0.7nm,0.4s,baz=92,slow=6.5,SNR=11
WRA                                 LR    LR     07 32 24.7
      comp=Z,28nm,18.2s,baz=265,slow=35
WRA   Warramunga Arr    49.82 256   P     P      07 12 15.4 -0.1
AS31  Alice Springs     50.12 252   P     P      07 12 16.6 -1.1
ASAR  Alice Springs     50.12 252   P     P      07 12 17.1 -0.7
      comp=Z,2.5nm,0.5s,baz=87,slow=8.3,SNR=49
ASAR  Alice Springs     50.12 252   P     P      07 12 17.2 -0.6
NVAR  Mina Array Bea    74.15  42   P     P      07 15 01.4 +2.4
      comp=Z,0.2nm,0.3s,baz=239,slow=8.3,SNR=4.0
QSPA  South Pole Qui    74.97 180   P     P      07 15 04.4 +1.3
MAW   Mawson            88.07 199   P     P      07 16 13.1 +1.0
      comp=Z,1.9nm,0.7s,baz=131,slow=6.8,SNR=3.5
BRTR  Keskin Array B   145.84 321   PKPbc PKPab  07 23 03.2 +1.1
      comp=Z,0.4nm,0.5s,baz=90,slow=3.8,SNR=4.9
```

*NNC **06** 07:08:14.6±0.5, 50.02N×78.66E, h1km±5km, mb3.7, mpv3.4, Error ellipse: s-maj=4.7km s-min=3.3km az=62.0, Suspected Mining explosion.*
*IDC **06** 07:08:15.2±0.8, 50.06N×78.81E, h0km, mb1 3.4/6, mb1mx3.2/48, mbtmp3.4/6, ML3.3/6, Error ellipse: s-maj=10.8km s-min=6.5km az=67.0*

ISC 06 07:08:14.5±0.7,**49°.95N**±0°.03×**78°.59E**±0°.04,**h0km**,**n22**, σ1§42/31,**12C-7D**,**Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.68**	**357**	Pg	**Pg**	**07 08 26.4**	**-1.1**
	8.9nm,0.3s,baz=166,slow=19,SNR=86						
KURBB				Lg		07 08 33.9	
	12nm,0.3s,baz=161,slow=33,SNR=54						
KURBB	**Kurchatov Arra**	**0.68**	**357**	⇑P	**Pg**	**07 08 26.4**	**-1.1**
	43nm,0.3s						
KURBB				⇓S	**Sg**	**07 08 35.0**	**-1.3**
	302nm,0.5s						
KURK	**Kurchatov**	**0.77**	**2**	⇑P	**Pg**	**07 08 27.6**	**-1.6**
	16nm,0.3s						
KURK				⇓S	**Sg**	**07 08 38.1**	**-1.2**
	90nm,0.6s						
SEM	**Semipalatinsk**	**1.16**	**66**	P	**Pg**	**07 08 35.4**	**-1.4**
	21nm,0.2s						
SEM				S	**Sg**	**07 08 50.2**	**-1.6**
	114nm,0.3s						
BRZS	**Berezniki**	**3.82**	**273**	Pg	**Pg**	**07 09 26.4**	**-1.2**
	25nm,0.3s						
BRZS				Lg	Lg	07 10 17.7	
	15nm,0.3s						
MAKZ	**Makanchi**	**3.87**	**143**	⇓Pn	**Pn**	**07 09 16.9**	**+1.6**
	0.8nm,0.6s						
MAKZ				⇑Pg	**Pb**	**07 09 24.0**	**+0.4**
	1.8nm,0.3s						
MAKZ				⇓Lg	Lg	07 10 15.0	
	11nm,0.8s						
MK31	**Makanchi Array**	**4.00**	**141**	⇑Pn	**Pn**	**07 09 18.7**	**+1.6**
	0.6nm,0.3s,baz=323,slow=11,SNR=120						
MK31				⇓Pg	**Pb**	**07 09 27.2**	**+1.3**
	1.8nm,0.3s,baz=326,slow=14,SNR=24						
MK31				⇑Lg	Lg	07 10 20.2	
	5.9nm,0.5s,baz=324,slow=26,SNR=14						
MKAR	**Makanchi Array**	**4.00**	**141**	Pn	**Pn**	**07 09 18.4**	**+1.3**
	1.5nm,0.3s,baz=328,slow=11,SNR=62						
MKAR				Lg	Lg	07 10 20.4	
	5.0nm,0.3s,baz=323,slow=26,SNR=13						
KAPS	**Kapalarasan**	**4.69**	**173**	Pg	**Pg**	**07 09 43.1**	**-1.3**
	3.3nm,0.3s						
KAPS				Lg	Lg	07 10 45.7	
	16nm,0.5s						
ZAA0	**Zalesovo Array**	**5.56**	**41**	⇓Pn	**Pn**	**07 09 38.4**	**0.0**
	0.6nm,0.5s						
ZAA0				⇑Lg	Lg	07 11 09.7	
	1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**5.56**	**41**	Pn	**Pn**	**07 09 38.4**	**0.0**
	3.7nm,0.3s,baz=232,slow=14,SNR=32						
ZALV				Sn	**Sn**	**07 10 43.0**	**+0.1**
	0.5nm,0.3s,baz=221,slow=23,SNR=2.4						
ZALV				Lg	Lg	07 11 06.1	
	0.7nm,0.3s,baz=244,slow=31,SNR=3.9						
DJR	**Jarkent**	**5.68**	**171**	Pg	**Pg**	**07 10 01.9**	**-1.3**
	2.2nm,0.2s						
DJR				Lg	Lg	07 11 19.3	
	5.2nm,0.7s						
ARXS	**Arharly**	**5.76**	**185**	Pg	**Pg**	**07 10 02.7**	**-2.1**
	3.4nm,0.3s						
ARXS				Lg	Lg	07 11 19.1	
	12nm,0.4s						
BVA1	**Borovoye Array**	**5.98**	**304**	⇑Pn	**Pn**	**07 09 44.7**	**+0.5**
BVA1				⇓Sn	**Sn**	**07 10 51.1**	**-2.2**
BVA1				⇑Lg	Lg	07 11 19.6	
BVAR	**Borovoye Array**	**5.98**	**304**	Pn	**Pn**	**07 09 45.4**	**+1.2**
	0.5nm,0.3s,baz=120,slow=14,SNR=12						
BVAR				Sn	**Sn**	**07 10 54.2**	**+1.0**
	1.9nm,0.3s,baz=115,slow=27,SNR=14						
BVAR				Lg	Lg	07 11 24.8	
	1.3nm,0.3s,baz=111,slow=27,SNR=5.1						
BRVK	**Borovoye**	**6.05**	**304**	⇑Pn	**Pn**	**07 09 46.2**	**+1.0**
	0.9nm,0.6s						
BRVK				⇑Sn	**Sn**	**07 10 55.8**	**+0.7**
	4.0nm,0.5s						
BRVK				⇑Lg	Lg	07 11 26.0	
	3.9nm,0.6s						
KUU	**Kurty**	**6.25**	**195**	Pg	**Pg**	**07 10 11.6**	**-2.6**
	2.8nm,0.1s						
KUU				Lg	Lg	07 11 34.7	
	6.8nm,0.4s						
KTBS	**Karatobe**	**6.37**	**193**	Pg	**Pg**	**07 10 14.2**	**-2.4**
	1.7nm,0.5s						
KTBS				Lg	Lg	07 11 39.1	
	15nm,0.7s						
AAK	**Ala-Archa**	**7.84**	**203**	Pn	**Pn**	**07 10 11.5**	**+1.6**
	0.7nm,0.3s,baz=65,slow=14,SNR=9.2						
AAK				Lg	Lg	07 12 29.2	
	0.3nm,0.3s,baz=213,slow=21,SNR=5.8						
AB31	**Akbulak array**	**12.12**	**274**	Pg	**Pn**	**07 11 07.3**	**-1.0**
	0.3nm,0.5s,baz=77,slow=14,SNR=11						
AB31				⇑Lg	Lg	07 12 07.9	
	0.8nm,0.3s,baz=356,slow=26,SNR=2.7						
AKTO	**Aktyubinsk**	**13.19**	**280**	Pn	**Pn**	**07 11 23.6**	**+0.7**
	0.1nm,0.3s,baz=77,slow=18,SNR=2.5						
SONM	**Songino Array**	**18.37**	**86**	P	**P**	**07 12 31.4**	**+0.7**
	0.3nm,0.3s,baz=305,slow=13,SNR=5.0						

IDC 06 07:13:45.7±9.7,**17°.12S**×**177°.22W**,**h0km**,**mb3.4**/3, **mb1 3.7**/3,**mb1mx3.5**/42,**mbtmp3.4**/3,**Error ellipse: s-maj=431.6km s-min=37.5km az=142.0**,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.90**	**259**	P	P	07 22 10.0	-0.4
	0.2nm,0.2s,baz=95,slow=7.2,SNR=4.6						
ASAR	**Alice Springs**	**46.10**	**253**	P	P	07 22 12.2	+0.1
	0.2nm,0.6s,baz=84,slow=9.7,SNR=3.2						
ILAR	**Eielson Array**	**84.87**	**13**	P	P	07 26 21.9	0.0
	0.2nm,0.4s,baz=220,slow=5.1,SNR=6.3						

IDC ***06*** *07:19:19.2±0.9, 2°.86N×126°.27E, h0km, mb4.2/8, mb1 4.4/8, mb1mx3.9/49, mbtmp4.2/8, MS3.3/5, Ms1 3.3/5, ms1mx2.9/37, Error ellipse: s-maj=58.0km s-min=12.9km az=78.0*
NEIC ***06*** *07:19:20.4±1.8, 2°.84N±0°.09×126°.2E±0°.1, h9km±3km, mb4.6/16, Error ellipse: s-maj=16.3km s-min=11.9km az=56.0*
DJA ***06*** *07:19:20.3±0.3, 3°N±3°×12°6E±°, h10km, M4.7/11, mB5.1/3, mb4.9/3, MLv4.7/11, Mw(mB)4.4/3*
MAN ***06*** *07:19:22.7, 3°.08N×125°.67E, h136km, mb5.1, ML4.1, MS4.2*
ISC 06 07:19:23.4±0.6,**2°.98N**±0°.04×**126°.07E**±0°.07,**h35km**,**n55**, σ**2§09**/52,**mb4.5**/13,**MS3.6**/4,**2C-1D**,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.54**	**149**	P	**Pn**	**07 20 04.8**	**+2.6**
DDMP	**Don Marcelino,**	**3.13**	**353**	eP	**Pn**	**07 20 09.5**	**-0.7**
DDMP				eS	**Sn**	**07 20 39.6**	**-6.8**
KMSI	**Cibinong**	**3.17**	**221**	P	**Pn**	**07 20 11.5**	**+0.6**
SKMP	**Bagumbayan, Su**	**3.83**	**337**	eP	**Pn**	**07 20 18.5**	**-1.5**
SKMP				eS	**Sn**	**07 21 00.9**	**-3.0**
LBMI	**Labuha**	**3.87**	**158**	P	**Pn**	**07 20 23.0**	**+2.6**
MATI	**Mati**	**3.94**	**3**	eP	**Pn**	**07 20 22.7**	**+1.2**
MATI				eS	**Sn**	**07 21 07.4**	**+0.8**
DAV	**Davao City (W)**	**4.09**	**353**	LR	LR	07 22 29.5	
	comp=Z,70nm,19.4s,baz=270,slow=45						
KCP	**Kidapawan**	**4.12**	**346**	⇑iP	**Pn**	**07 20 26.3**	**+2.3**
KCP				iS	**Sn**	**07 21 11.4**	**+0.4**
CTBH	**Cotabato--PC H**	**4.59**	**337**	⇓iP	**Pn**	**07 20 30.4**	**0.0**
MRSI	**Marisa**	**4.82**	**239**	P	**Pn**	**07 20 34.2**	**+0.6**
BUKP	**Musuan**	**4.97**	**348**	eP	**Pn**	**07 20 34.3**	**-1.3**
BUKP				eS	Sn	07 21 21.7	-10
SANI	**Sanana**	**5.00**	**181**	P	**Pn**	**07 20 36.1**	**+0.1**
LUWI	**Luwuk**	**5.18**	**220**	Pn	**Pn**	**07 20 34.8**	**-3.7**
LUWI				Sn	**Sn**	**07 21 34.6**	**-2.5**
PAGZ	**Pagadian**	**5.53**	**331**	eP	**Pn**	**07 20 40.3**	**-3.0**
PAGZ				eS	Sn	07 21 27.2	-19
APSI	**Ampana**	**5.87**	**229**	P	**Pn**	**07 20 51.9**	**+3.9**
DCPH	**Dipolog City**	**6.19**	**334**	⇑eP	**Pn**	**07 20 53.7**	**+1.3**
NLAI	**Namlea**	**6.26**	**171**	P	**Pn**	**07 20 54.1**	**+0.7**
	0.5nm2µm74nm,0.4s						
FAKI	**Fak Fak**	**8.51**	**133**	Pn	**Pn**	**07 21 20.7**	**-3.6**
TTSI	**Tana Toraja**	**8.65**	**226**	P	**Pn**	**07 21 30.1**	**+3.9**
BNSI	**Bone**	**9.45**	**219**	P	Pn	07 21 42.3	+5.2
KKM	**Kota Kinabalu**	**10.29**	**288**	Pn	**Pn**	**07 21 50.8**	**+2.1**
SAUI	**Saumlaki**	**12.07**	**154**	Pn	**Pn**	**07 22 09.5**	**-3.5**
MTN	**Manton Dam**	**16.50**	**162**	Pn	**Pn**	**07 23 09.5**	**-2.9**
MTN				IAmb	IAmb	07 23 15.9	
	comp=Z,26nm,1.1s						
KNRA	**Kununurra**	**18.73**	**172**		**P**	**07 23 38.4**	**-0.8**
KNRA				IAmb	IAmb	07 23 40.9	
	comp=Z,71nm,1.2s						
FITZ	**Fitzroy Crossi**	**20.95**	**181**	P	**P**	**07 24 02.9**	**-0.5**
	comp=Z,8.7nm,0.6s,baz=15,slow=10,SNR=14						
FITZ	**Fitzroy Crossi**	**20.95**	**181**	P	**P**	**07 24 02.9**	**-0.5**
FITZ				IAmb	IAmb	07 24 08.0	
	comp=Z,8.6nm,0.8s						
WB0	**Warramunga Arr**	**24.04**	**160**	P	**P**	**07 24 34.9**	**-0.5**
WRAB	**Tennant Creek**	**24.18**	**161**	P	**P**	**07 24 35.5**	**-1.2**
WRA	**Warramunga Arr**	**24.18**	**161**	P	**P**	**07 24 36.4**	**-0.3**
	comp=Z,34nm,0.4s,baz=337,slow=11,SNR=285						
WRA				S	**S**	**07 28 53.6**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=348,slow=15,SNR=3.7						
WRA	**Warramunga Arr**	**24.18**	**161**	P	**P**	**07 24 35.2**	**-1.5**
WB2	**Warramunga Arr**	**24.19**	**161**	P	**P**	**07 24 36.3**	**-0.5**
WB2				IAmb	IAmb	07 24 37.4	
	comp=Z,33nm,0.8s						
WR0	**Warramunga Arr**	**24.27**	**160**	P	**P**	**07 24 37.1**	**-0.4**
WR0				IAmb	IAmb	07 24 38.2	
	comp=Z,26nm,0.6s						
PSA00	**Pilbara Seismi**	**25.15**	**194**	P	**P**	**07 24 44.4**	**-1.1**
PSA00				IAmb	IAmb	07 25 02.1	
	comp=Z,18nm,1.1s						
AS31	**Alice Springs**	**27.56**	**164**	P	**P**	**07 25 06.9**	**-0.4**
AS31				IAmb	IAmb	07 25 19.1	
	comp=Z,2.5nm,0.7s						
ASAR	**Alice Springs**	**27.56**	**164**	P	**P**	**07 25 07.0**	**-0.3**
	comp=Z,2.5nm,0.3s,baz=345,slow=7.2,SNR=59						
ASAR				S	S	07 29 59.0	+13
	comp=Z,1.4nm,0.8s,baz=346,slow=18,SNR=6.1						
ASAR	**Alice Springs**	**27.56**	**164**	P	**P**	**07 25 06.1**	**-1.2**
MORW	**Morawa**	**33.29**	**196**	P	**P**	**07 25 57.5**	**-0.3**
MORW				IAmb	IAmb	07 26 01.6	
	comp=Z,13nm,1.1s						
FORT	**Forrest**	**33.62**	**177**	P	**P**	**07 26 00.8**	**+0.2**
KSRS	**Korea Array**	**34.35**	**3**	LR	LR	07 42 19.3	
	comp=Z,12nm,18.4s,baz=40,slow=40						
BBOO	**Buckleboo**	**36.83**	**166**	P	**P**	**07 26 28.0**	**-0.3**
BBOO				IAmb	IAmb	07 26 29.4	
	comp=Z,6.4nm,0.8s						
STKA	**Stephens Creek**	**37.67**	**158**	P	**P**	**07 26 35.9**	**+0.4**
	comp=Z,7.6nm,0.6s,baz=333,slow=8.0,SNR=21						
STKA	**Stephens Creek**	**37.67**	**158**	P	**P**	**07 26 35.1**	**-0.3**
USRK	**Ussuriysk Ar.**	**41.38**	**6**	P	**P**	**07 27 08.2**	**+2.0**
	comp=Z,2.8nm,0.7s,baz=199,slow=8.5,SNR=6.1						
H11S3	**WAKE ISLAND Hy**	**42.63**	**66**	T	T	08 13 56.4	
	baz=253,slow=75,SNR=18						
H11S2	**WAKE ISLAND Hy**	**42.65**	**66**	T	T	08 13 33.4	
	baz=253,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy**	**42.65**	**66**	T	T	08 13 35.5	
	baz=253,slow=75,SNR=9.7						
KLR	**Kul'dur**	**46.34**	**5**	P	**P**	**07 27 46.4**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=145,slow=12,SNR=3.0						
SONM	**Songino Array**	**47.80**	**342**	LR	LR	07 50 16.3	
	comp=Z,54nm,18.5s,baz=195,slow=39						
MK31	**Makanchi Array**	**57.80**	**326**	P	**P**	**07 29 11.3**	**-0.1**
MKAR	**Makanchi Array**	**57.80**	**326**	P	**P**	**07 29 13.6**	**+2.2**
	comp=Z,0.4nm,0.3s,baz=122,slow=7.5,SNR=13						
MKAR	**Makanchi Array**	**57.80**	**326**	P	**P**	**07 29 13.3**	**+2.0**
MAKZ	**Makanchi**	**57.98**	**326**	P	**P**	**07 29 15.4**	**+2.8**
GNI	**Garni**	**81.46**	**310**	LR	LR	08 12 26.4	
	comp=Z,35nm,20.8s,baz=292,slow=39						
KVAR	**Kislovodsk Arr**	**83.17**	**314**	LR	LR	08 12 48.2	
	comp=Z,73nm,21.5s,baz=106,slow=38						
ILAR	**Eielson Array**	**86.06**	**25**	P	**P**	**07 32 02.4**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=242,slow=5.9,SNR=5.1						

GUC ***06*** *07:47:26.6±0.7, 21°.83S×68°.52W, h127km±5km, ML2.6*
SJA ***06*** *07:47:26.1±0.7, 21°.86S×68°.44W, h126km±5km, ML2.5, MW2.7*
ISC 06 07:47:29.9±1.4,**21°.83S**±0°.04×**68°.56W**±0°.09, **h110km**±11km,**n21**,σ**1§14**/38,**7C-4D**,**Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.64**	**273**	⇑iP	**Pn**	**07 47 47.4**	**-0.6**
PB09				iS	**Sn**	**07 48 02.4**	**+0.9**
PB09	**IPOC Station P**	**0.64**	**273**	iP	**Pn**	**07 47 47.6**	**-0.4**
PB09				eS	**Sn**	**07 48 02.9**	**+1.4**
PB09					IAML	07 48 05.1	
	comp=Z,52nm,0.3s						
LVC	**Limon Verde**	**0.84**	**203**	⇓iP	**Pn**	**07 47 48.4**	**-1.6**
LVC				iS	**Sn**	**07 48 04.2**	**-0.9**
LVC	**Limon Verde**	**0.84**	**203**	iP	**Pn**	**07 47 48.4**	**-1.6**
LVC				eS	**Sn**	**07 48 04.8**	**-0.2**
PB01	**IPOC Station P**	**1.17**	**312**	⇑iP	**Pn**	**07 47 51.9**	**-1.1**
PB01				iS	**Sn**	**07 48 11.1**	**+0.6**
PB07	**IPOC Station P**	**1.24**	**275**	eP	**Pn**	**07 47 52.9**	**-1.0**
PB07				iS	**Sn**	**07 48 12.6**	**+0.6**
PB07					IAML	07 48 13.5	
	comp=N,79nm,0.1s						
PB06	**IPOC Station P**	**1.28**	**227**	⇑iP	**Pn**	**07 47 53.1**	**-1.2**
PB06				iS	**Sn**	**07 48 13.1**	**+0.3**
PB06					IAML	07 48 15.0	
	comp=N,96nm,0.1s						
PB06	**IPOC Station P**	**1.28**	**227**	iP	**Pn**	**07 47 53.2**	**-1.2**
PB06				eS	**Sn**	**07 48 13.3**	**+0.4**
PB06					IAML	07 48 15.4	
	comp=Z,42nm,0.3s						
PB02	**IPOC Station P**	**1.35**	**292**	eP	**Pn**	**07 47 54.0**	**-1.1**
PB02				iS	**Sn**	**07 48 14.5**	**+0.4**
PB02					IAML	07 48 20.0	
	comp=E,82nm,0.2s						
PB04	**IPOC Station P**	**1.56**	**251**	iP	**Pn**	**07 47 56.3**	**-1.3**
PB04				eS	**Sn**	**07 48 19.4**	**+0.8**
PB04					IAML	07 48 22.6	
	comp=Z,42nm,0.1s						
PB15	**IPOC Station P**	**1.61**	**211**	⇑iP	**Pn**	**07 47 57.0**	**-1.2**
PB15				iS	**Sn**	**07 48 20.1**	**+0.3**
PB15	**IPOC Station P**	**1.61**	**211**	iP	**Pn**	**07 47 57.1**	**-1.2**
PB15				eS	**Sn**	**07 48 19.4**	**-0.4**
PB15					IAML	07 48 22.8	
	comp=Z,169nm,0.2s						
PB08	**IPOC Station P**	**1.77**	**342**	⇑iP	**Pn**	**07 47 59.9**	**-0.5**
PB08				eS	**Sn**	**07 48 24.3**	**+0.7**
PATCX	**Punta Patache**	**1.80**	**304**	⇑iP	**Pn**	**07 47 59.4**	**-1.0**
PATCX				iS	**Sn**	**07 48 23.3**	**-0.4**
PATCX					IAML	07 48 25.3	
	comp=N,61nm,0.3s						
PB05	**IPOC Station P**	**1.83**	**236**	⇓iP	**Pn**	**07 47 59.4**	**-1.5**
PB05					IAML	07 48 30.7	
	comp=N,22nm,0.3s						
PB05	**IPOC Station P**	**1.83**	**236**	iP	**Pn**	**07 47 59.4**	**-1.5**
GO01	**Chusmiza**	**2.23**	**344**	eP	**Pn**	**07 48 05.2**	**-1.2**
GO01				eS	**Sn**	**07 48 33.9**	**-0.3**
PB11	**IPOC Station P**	**2.30**	**333**	⇓iP	**Pn**	**07 48 05.2**	**-1.8**
PB11				iS	**Sn**	**07 48 34.7**	**-0.6**
PB10	**IPOC Station P**	**2.49**	**227**	⇓iP	**Pn**	**07 48 08.0**	**-1.2**
PB10					IAML	07 48 41.3	
	comp=Z,6.3nm,0.6s						
MNMC	**Minye Minye**	**2.86**	**340**	⇑iP	**Pn**	**07 48 12.9**	**-1.5**
MNMC				iS	**Sn**	**07 48 48.6**	**+0.2**
MNMC					IAML	07 48 52.7	
	comp=N,54nm,0.3s						
TRQA	**Tornquist**	**17.14**	**162**	iP	**Pn**	**07 51 25.2**	**+2.7**

ATH ***06*** *07:55:18.0, 38°.15N×20°.38E, h14km±1km, ML3.1/10, Error ellipse: s-maj=1.5km s-min=0.8km az=249.0*
THE ***06*** *07:55:18.2, 38°.16N×20°.35E, h13km±1km, ML3.2/8, Error ellipse: s-maj=1.4km s-min=0.7km az=262.0*
ISC 06 07:55:18.5±1.0,**38°.16N**±0°.02×**20°.39E**±0°.04,**h13km**±4km, **n42**,σ**0§57**/72,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.03**	**348**	P	**Pg**	**07 55 20.6**	**-0.1**
CHV1				S	**Sg**	**07 55 22.4**	**+0.1**
KEF3	**Kipouria, Keph**	**0.06**	**325**	P	**Pg**	**07 55 20.8**	**-0.1**
KEF3				S	**Sg**	**07 55 22.8**	**0.0**
LXR1	**Lixouri, Cepha**	**0.06**	**42**	P	**Pg**	**07 55 21.0**	**0.0**
LXR1				S	**Sg**	**07 55 23.0**	**+0.2**
ARGA	**Argostoli. Kep**	**0.07**	**74**	P	**Pg**	**07 55 21.0**	**-0.1**
ARGA				S	**Sg**	**07 55 22.8**	**-0.1**
KEF2	**Argostoli. Kep**	**0.08**	**84**	P	**Pg**	**07 55 21.1**	**-0.1**
KEF2				S	**Sg**	**07 55 23.1**	**0.0**
ARG2	**Argostoli**	**0.08**	**75**	P	**Pg**	**07 55 21.1**	**-0.1**
ARG2				S	**Sg**	**07 55 23.2**	**+0.1**
KEF4	**Livadi, Kephal**	**0.10**	**16**	P	**Pg**	**07 55 21.4**	**-0.1**
KEF4				S	**Sg**	**07 55 23.9**	**+0.3**
KEF1	**Kardakata, Kep**	**0.14**	**28**	P	**Pg**	**07 55 21.9**	**0.0**
KEF1				S	**Sg**	**07 55 24.2**	**-0.1**
VLS	**Valsamata**	**0.16**	**83**	P	**Pg**	**07 55 22.1**	**-0.2**
VLS				S	**Sg**	**07 55 25.0**	**+0.1**
	19µm,0.2s						
VLS	**Valsamata**	**0.16**	**83**	P	**Pg**	**07 55 22.0**	**-0.2**
VLS				S	**Sg**	**07 55 25.0**	**+0.1**
VLS				AML	AML	07 55 25.1	
	comp=N,35535µm,0.2s						
VLS				AML	AML	07 55 25.6	
	comp=E,37232µm,0.2s						
VSK1	**VASILIKIADES**	**0.29**	**29**	P	**Pg**	**07 55 24.3**	**-0.1**
VSK1				S	**Sg**	**07 55 29.1**	**+0.7**
	comp=E,29µm,0.3s						
FSK	**Fiskardo**	**0.33**	**24**	P	**Pg**	**07 55 25.0**	**-0.2**
FSK				S	**Sg**	**07 55 30.5**	**+0.8**
	comp=E,9µm,0.2s						
FSK	**Fiskardo**	**0.33**	**24**	P	**Pg**	**07 55 25.0**	**-0.2**
FSK				S	**Sg**	**07 55 30.5**	**+0.8**
FSK				AML	AML	07 55 31.0	
	comp=N,11763µm,0.2s						
FSK				AML	AML	07 55 31.0	
	comp=E,23048µm,0.2s						
VLMS	**Volimes, Zakyn**	**0.35**	**142**	P	**Pg**	**07 55 25.5**	**-0.1**
VLMS				S	**Sg**	**07 55 30.9**	**+0.5**
VLMS				AML	AML	07 55 32.0	
	comp=E,19810µm,0.2s						
VLMS				AML	AML	07 55 32.1	
	comp=N,27343µm,0.2s						
EVGI	**Lefkada island**	**0.51**	**24**	P	**Pg**	**07 55 28.1**	**-0.4**
EVGI				S	**Sg**	**07 55 35.8**	**+0.6**
EVGI	**Lefkada island**	**0.51**	**24**	P	**Pg**	**07 55 28.1**	**-0.4**
EVGI				S	**Sg**	**07 55 35.7**	**+0.4**
MGNA	**Meganis**	**0.59**	**32**	P	**Pg**	**07 55 29.6**	**-0.4**
MGNA				S	**Sg**	**07 55 37.6**	**-0.2**
MGNA				AML	AML	07 55 39.2	
	comp=N,4620µm,0.3s						
MGNA				AML	AML	07 55 39.3	
	comp=E,6565µm,0.2s						
KRI1	**kERI**	**0.60**	**145**	P	**Pg**	**07 55 29.5**	**-0.7**
KRI1				S	**Sb**	**07 55 40.3**	**+1.1**
	comp=E,3µm,0.3s						
LKD2	**Lefkada island**	**0.67**	**18**	P	**Pg**	**07 55 30.8**	**-0.6**
LKD2				S	**Sb**	**07 55 41.7**	**+0.6**
	comp=E,982nm,0.5s						
LKD2	**Lefkada island**	**0.67**	**18**	P	**Pg**	**07 55 30.7**	**-0.8**
AST1	**Astakos**	**0.67**	**55**	P	**Pg**	**07 55 31.2**	**-0.3**
AST1				S	**Sb**	**07 55 41.8**	**+0.5**
	comp=E,3µm,0.3s						
PDO	**Prodromos**	**0.76**	**55**	P	**Pg**	**07 55 32.7**	**-0.6**
PDO				S	**Sb**	**07 55 45.2**	**+1.2**
	comp=E,2µm,0.6s						
PDO	**Prodromos**	**0.76**	**55**	P	**Pg**	**07 55 32.7**	**-0.6**
RLS	**Riolos of Patr**	**0.86**	**96**	P	**Pg**	**07 55 34.2**	**-0.8**
RLS				S	**Sn**	**07 55 48.2**	**-0.4**
	comp=E,495nm,0.5s						
RLS	**Riolos of Patr**	**0.86**	**96**	P	**Pg**	**07 55 34.2**	**-0.8**
RLS				AML	AML	07 55 50.2	
	comp=N,1044µm,0.4s						
RLS				AML	AML	07 55 50.8	
	comp=E,886µm,0.4s						
PVO	**Paravola**	**1.00**	**62**	P	**Pb**	**07 55 37.3**	**-0.4**
PVO				S	**Sg**	**07 55 51.2**	**+0.2**
PVO				AML	AML	07 55 54.4	
	comp=E,3830µm,0.3s						
PVO				AML	AML	07 56 00.1	
	comp=N,2227µm,0.4s						
DRO	**Drossia**	**1.06**	**101**	P	**Pb**	**07 55 38.1**	**-0.7**
DRO				S	**Sb**	**07 55 52.4**	**-0.2**
DRO				AML	AML	07 56 02.7	
	comp=E,2489µm,0.5s						
DRO				AML	AML	07 56 03.2	
	comp=N,2432µm,0.4s						
AMT	**Artemida-Makis**	**1.22**	**120**	P	**Pg**	**07 55 42.1**	**+0.2**
AMT				S	**Sb**	**07 55 57.1**	**+0.1**
EFP	**Efpalio**	**1.22**	**77**	P	**Pn**	**07 55 40.9**	**-0.3**
EFP				S	**Sg**	**07 55 59.5**	**+1.6**
EFP				AML	AML	07 56 05.0	
	comp=N,953µm,0.5s						
EFP				AML	AML	07 56 09.0	
	comp=E,1013µm,0.6s						
LAKA	**Lakka**	**1.25**	**86**	P	**Pn**	**07 55 41.0**	**-0.8**
LAKA				S	**Sg**	**07 56 00.3**	**+1.3**
LAKA				AML	AML	07 56 06.1	
	comp=E,544µm,1.0s						
LAKA				AML	AML	07 56 08.1	
	comp=N,428µm,0.5s						
ANX	**Ano Chora**	**1.28**	**70**	P	**Pn**	**07 55 42.0**	**-0.2**
SERG	**Sergoula**	**1.34**	**78**	P	**Pn**	**07 55 42.4**	**-0.5**
TRIZ	**Trizonia**	**1.34**	**81**	P	**Pn**	**07 55 42.5**	**-0.4**
TRIZ				S	**Sg**	**07 56 02.6**	**+0.9**
IGT	**Igoumenitsa**	**1.37**	**358**	P	**Pb**	**07 55 44.1**	**0.0**
KLV	**Kalavryta, Ach**	**1.39**	**94**	P	**Pn**	**07 55 43.9**	**+0.2**
KALE	**Kalithea**	**1.40**	**80**	P	**Pn**	**07 55 44.2**	**-0.3**
ITM	**Ithomi**	**1.56**	**128**	P	**Pb**	**07 55 46.7**	**-0.5**
ITM				S	**Sg**	**07 56 09.0**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.61**	**57**	P	**Pb**	**07 55 49.5**	**+0.1**
MAKR				S	**Sg**	**07 56 10.3**	**0.0**
MAKR				AML	AML	07 56 20.3	
	comp=N,714µm,0.7s						
MAKR				AML	AML	07 56 24.4	
	comp=E,927µm,0.5s						
PYL	**PYLOS**	**1.66**	**139**	P	**Pb**	**07 55 48.2**	**-0.6**
AGG	**Agios Georgios**	**1.75**	**60**	P	**Pg**	**07 55 51.2**	**-0.8**
THL	**Klokotos Trika**	**1.89**	**42**	P	**Pb**	**07 55 52.3**	**-0.6**
DID	**Didima**	**2.35**	**105**	P	**Pn**	**07 55 58.5**	**+1.7**

NEIC ***06*** *07:56:17.7±3.5, 15°.99N±0°.06×98°.77W±0°.03, h12km±8km, Error ellipse: s-maj=8.8km s-min=3.0km az=156.0*
MEX ***06*** *07:56:21.5±0.9, 16°.04N×98°.74W, h17km±86km, MD4.0*
ISC 06 07:56:15.0±1.6,**15°.98N**±0°.06×**98°.78W**±0°.03,**h2km**±11km, **n28**,σ**1§74**/49,**Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.75**	**57**		**Pn**	**07 56 32.1**	**-0.4**
PNIG					**Sb**	**07 56 41.1**	**-0.3**
PNIG	**Pinotepa**	**0.75**	**57**	eP	**Pn**	**07 56 32.1**	**-0.4**
PNIG				iS	**Sb**	**07 56 41.1**	**-0.3**
YOIG	**Yosondua**	**1.47**	**54**	eP	**Pn**	**07 56 43.3**	**0.0**
YOIG				eS	**Sn**	**07 56 59.9**	**-2.8**
PEIG	**Puerto Escondi**	**1.57**	**89**	eP	**Pn**	**07 56 45.1**	**-0.1**
PEIG				eS	**Sn**	**07 57 03.1**	**-1.8**
TLIG	**Tlapa**	**1.58**	**8**		**Pn**	**07 56 44.5**	**-0.9**
TLIG				Sn	**Sb**	**07 57 04.2**	**-1.4**
TLIG	**Tlapa**	**1.58**	**8**		**Pn**	**07 56 44.7**	**-0.7**
TLIG					**Sn**	**07 57 02.3**	**-3.0**
TLIG	**Tlapa**	**1.58**	**8**	eP	**Pn**	**07 56 44.7**	**-0.7**
TLIG				iS	**Sn**	**07 57 02.5**	**-2.8**
CAIG	**El Cayaco**	**1.77**	**307**		**Pn**	**07 56 47.7**	**-1.3**
CAIG					**Sn**	**07 57 08.3**	**-1.5**
CAIG	**El Cayaco**	**1.77**	**307**	eP	**Pn**	**07 56 47.7**	**-1.3**
CAIG				eS	**Sn**	**07 57 08.3**	**-1.5**
FTIG	**Fresnillo de T**	**2.01**	**18**	eP	**Pb**	**07 56 50.9**	**-1.4**
FTIG				eS	**Sn**	**07 57 13.2**	**-2.6**
HLIG	**Huajuapan de L**	**2.06**	**27**	eP	**Pb**	**07 56 52.1**	**-1.1**
HLIG				eS	**Sn**	**07 57 15.0**	**-2.2**
MEIG	**Mezcala**	**2.09**	**338**		**Pb**	**07 56 53.1**	**-0.5**
MEIG	**Mezcala**	**2.09**	**338**	eP	**Pb**	**07 56 53.1**	**-0.5**
VHO	**Vista Hermosa**	**2.25**	**61**	eP	**Pb**	**07 56 54.5**	**-1.8**
VHO				eS	**Sn**	**07 57 20.3**	**-1.4**
OXBJ	**Oaxaca**	**2.25**	**61**	iP	**Pb**	**07 56 58.3**	**+0.2**
OXBJ				iS	**Sg**	**07 57 29.4**	**+2.1**
PLIG	**Platanillo**	**2.49**	**344**		**Pb**	**07 57 00.7**	**+0.1**
PLIG					**Sn**	**07 57 26.4**	**-1.3**
PLIG	**Platanillo**	**2.49**	**344**	eP	**Pb**	**07 57 00.7**	**+0.1**
PLIG				eS	**Sn**	**07 57 26.4**	**-1.3**
HUIG	**Huatulco**	**2.58**	**94**		**Pb**	**07 56 59.4**	**-2.6**
HUIG	**Huatulco**	**2.58**	**94**	eP	**Pb**	**07 56 59.4**	**-2.6**
YAIG	**Yautepec**	**2.88**	**355**		**Pb**	**07 57 06.6**	**-0.5**
YAIG					**Sn**	**07 57 37.3**	**0.0**
YAIG	**Yautepec**	**2.88**	**355**	eP	**Pb**	**07 57 06.6**	**-0.5**
YAIG				eS	**Sn**	**07 57 34.3**	**-3.0**
UNM	**Universidad Na**	**3.35**	**354**	Pn	**Pb**	**07 57 13.2**	**-2.0**
UNM				Sn	**Sn**	**07 57 51.1**	**+2.1**
CMIG	**Matias Romero**	**3.90**	**73**		**Pn**	**07 57 16.8**	**+0.9**
CMIG					**Sn**	**07 58 00.9**	**-1.4**
CMIG	**Matias Romero**	**3.90**	**73**	eP	**Pn**	**07 57 16.8**	**+0.9**
CMIG				eS	**Sn**	**07 58 00.9**	**-1.4**
CCIG	**Comitan**	**6.39**	**86**	Pn	**Pn**	**07 57 51.8**	**+1.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CCIG				Sn	Sn	07 59 04.1	0.0
TEIG	Tepich	10.84	66	Pn	Pn	07 58 52.6	+1.3
LCAR	Lake Charles	21.13	17	P	P	08 01 05.3	+4.3
LCAR				IAmb	IAmb	08 01 06.3	
	comp=Z,4.5nm,0.9s						
GOGA	Godfrey	22.20	36	P	P	08 01 15.5	+2.9
GOGA				IAmb	IAmb	08 01 22.4	
	comp=Z,8.9nm,1.4s						

KNET **06** *07:58:20.5±0.4, 43.05N×74.90E, h6km±4km, ml1.2, Error ellipse: s-maj=3.9km s-min=1.6km az=54.0*
SOME **06** *07:58:20.8, 43.02N×74.90E*
NNC **06** *07:58:21.0±0.3, 43.03N×74.90E, h0km, mb2.7, mpv2.6, Error ellipse: s-maj=2.8km s-min=1.4km az=159.0, Suspected Mining explosion.*
ISC 06 07:58:21.2±0.8, 43.02N±0.03×74.90E±0.02, h0km, n18, σ0.67/31, 14C-1D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMS	Chumysh	0.11	258	⇑P	Pg	07 58 23.2	-0.2
	22nm,0.1s,SNR=89						
CHMS				⇑S	Sg	07 58 25.1	+0.2
	43nm,0.2s						
CHMS	Chumysh	0.11	258	⇑P	Pg	07 58 23.1	-0.2
	32nm,0.8s						
CHMS				⇑S	Sg	07 58 24.8	0.0
	53nm,0.8s						
KBK	Karagaybulak	0.37	175	⇑P	Pg	07 58 28.6	+0.4
	14nm,0.1s,SNR=74						
KBK				⇑S	Sb	07 58 34.9	-2.2
	10nm,0.2s						
USP	Ospenovka	0.38	310	⇑P	Pg	07 58 28.0	-0.6
	16nm,0.1s,SNR=59						
USP				⇑S	Sg	07 58 33.5	-0.1
	16nm,0.2s						
AAK	Ala-Archa	0.49	218	⇑P	Pg	07 58 30.6	0.0
	1.7nm,0.1s,SNR=13						
AAK				⇑S	Sg	07 58 38.1	+1.3
	5.5nm,0.2s						
AAK	Ala-Archa	0.49	218	⇑P	Pg	07 58 30.3	-0.2
	0.7nm,0.3s						
AAK				⇑S	Sg	07 58 37.9	+1.0
	3.4nm,0.6s						
DGS	Degeres	0.67	71	P	Pg	07 58 34.2	+0.1
	2.6nm,0.2s						
DGS				S	Sg	07 58 43.6	+0.7
	5.6nm,0.4s						
KST	Kastek	0.78	88	P	Pg	07 58 35.8	-0.3
	3.0nm,0.1s						
KST				S	Sg	07 58 46.4	+0.2
	3.4nm,0.2s						
UCH	Uchtor	0.84	200	⇓P	Pg	07 58 37.1	-0.3
	0.8nm,0.1s,SNR=5.8						
KRBS	Karabastau	0.88	40	P	Pg	07 58 37.9	-0.2
	2.5nm,0.1s						
KRBS				S	Sg	07 58 49.7	+0.2
	1.3nm,0.2s						
EKS2	Erkin-Say	0.90	247	⇑P	Pg	07 58 38.2	-0.3
	2.4nm,0.1s,SNR=18						
ULHL	Ulahol	1.26	128	⇑P	Pg	07 58 44.1	-1.1
	0.7nm,0.1s,SNR=9.2						
MRKS	Merke	1.26	258	P	Pg	07 58 45.1	-0.4
	2.1nm,0.1s						
MRKS				S	Sb	07 59 02.3	-0.6
	3.9nm,0.2s						
KUU	Kurty	1.36	50	P	Pn	07 58 47.6	+0.1
	1.3nm,0.2s						
KUU				S	Sn	07 59 06.8	+0.5
	4.4nm,0.3s						
KTBS	Karatobe	1.47	61	P	Pn	07 58 48.7	-0.4
	2.4nm,0.1s						
KTBS				S	Sg	07 59 08.0	-0.4
	6.8nm,0.4s						
KOTS	Kotyrbulak	1.63	82	P	Pn	07 58 51.6	+0.2
	6.0nm,0.2s						
KOTS				S	Sn	07 59 13.3	+0.2
	5.7nm,0.5s						
BTLS	Baital	2.11	343	Pg	Pg	07 59 01.6	-0.1
	1.0nm,0.3s						
BTLS				Lg	Lg	07 59 28.2	
	3.3nm,0.4s						
ARXS	Arharly	2.44	60	Pg	Pb	07 59 06.8	+0.9
	1.1nm,0.5s						
ARXS				Lg	Lg	07 59 37.4	
	5.1nm,0.6s						

SKO **06** *07:58:25.8, 38.61N×23.10E, h12km*
NEIC **06** *07:58:26.4±2.5, 38.73N±0.04×22.85E±0.05, h10km±1km, Error ellipse: s-maj=6.2km s-min=4.0km az=224.0*
THE **06** *07:58:26.9, 38.72N×22.77E, h10km±1km, ML4.3/16, Error ellipse: s-maj=1.3km s-min=0.6km az=239.0*
BEO **06** *07:58:26.0±0.7, 38.58N×22.99E, h10km, ML4.0/4*
PDG **06** *07:58:26.7±0.5, 38.72N×22.79E, h12km, ML4.2/12, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
MED_RC **06** *07:58:26.0±0.3, 38.69N×22.76E, h18km±1km, MW4.6/17, Moment Tensor Solution.Mantle waves: s17,c27; Duration: 1.0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.93±.12; $M_{\theta\theta}$1.17±.08; $M_{\phi\phi}$-0.23±.06; $M_{r\theta}$-0.01±.09; $M_{r\phi}$-0.04±.06; $M_{\theta\phi}$-0.14±.10; Best double couple: $M_0$1.07000×10^{16} NP1:ϕ_s282.00000°, δ46.00000°, λ-75.00000°. NP2:ϕ_s81.00000°, δ46.00000°, λ-105.00000°. Principal axes: T 1.1700, Plg0.0000°, Azm182.0000°; N -0.2100, Plg11.0000°, Azm92.0000°; P -0.9600, Plg79.0000°, Azm272.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
ATH **06** *07:58:26.0, 38.71N×22.77E, h22km, ML4.3/24 Error ellipse: s-maj=0.9km s-min=0.3km az=195.0*
MOS **06** *07:58:27.5±1.3, 38.65N×22.66E, h28km, mb4.6/16, Error ellipse: s-maj=7.7km s-min=4.5km az=82.5*
IDC **06** *07:58:30.3±1.9, 38.70N×22.75E, h35km±15km, mb3.9/28, mb1 4.0/36, mb1mx3.9/59, mbtmp4.0/36, ML3.6/7, MS3.5/27, Ms1 3.5/27, ms1mx3.4/55, Error ellipse: s-maj=10.9km s-min=10.5km az=6.0*
ISC 06 07:58:27.2±0.8, 38.70N±0.02×22.76E±0.01, h13km±4km, n389, σ1.39/439, mb4.3/52, MS3.5/18, 18C-12D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AXAR	Agios Charalam	0.10	308	P	Pg	07 58 30.0	-0.2
LKR	Lokris	0.19	106	P	Pg	07 58 31.0	-0.5
LKR				S	Sg	07 58 34.6	+0.1
	289μm,0.2s						
LKR	Lokris	0.19	106	P	Pg	07 58 31.0	-0.5
LKR				S	Sg	07 58 34.4	-0.1
LKR				AML	AML	07 58 35.5	
LKR				AML	AML	07 58 35.6	
PROD	Prodromos	0.46	166	P	Pg	07 58 35.4	-0.8
PROD				S	Sg	07 58 42.0	-0.3
PROD	Prodromos	0.46	166	P	Pg	07 58 35.4	-0.8
PROD				S	Sg	07 58 42.5	+0.1
PROD				AML	AML	07 58 45.9	
PROD				AML	AML	07 58 48.5	
	comp=N,89140μm,0.2s						
AGG	Agios Georgios	0.46	314	P	Pg	07 58 35.8	-0.6
AGG				S	Sg	07 58 42.5	-0.1
	comp=N,29μm,0.5s						
AGG	Agios Georgios	0.46	314	P	Pg	07 58 35.8	-0.6
AGG				S	Sg	07 58 41.9	-0.7
AGG				AML	AML	07 58 44.1	
	comp=N,61400μm,0.7s						
AGG				AML	AML	07 58 44.5	
	comp=E,56101μm,0.3s						
AGG	Agios Georgios	0.46	314	Pg	Pg	07 58 35.8	-0.6
AGG				Sg	Sg	07 58 42.7	+0.1
KALE	Kalithea	0.58	238	P	Pg	07 58 37.4	-1.1
KALE				S	Sb	07 58 48.4	+1.0
	comp=E,31μm,0.5s						
KALE	Kalithea	0.58	238	P	Pg	07 58 37.3	-1.3
KALE				S	Sg	07 58 46.5	+0.3
KALE				AML	AML	07 58 48.8	
	comp=E,48572μm,0.5s						
KALE				AML	AML	07 58 50.6	
	comp=N,76212μm,0.6s						
MAKR	Makrakomi, Fth	0.58	302	P	Pg	07 58 37.9	-0.7
MAKR				S	Sb	07 58 47.0	-0.5
	comp=N,32μm,0.5s						
MAKR	Makrakomi, Fth	0.58	302	P	Pg	07 58 37.7	-0.8
MAKR				S	Sg	07 58 45.5	-0.8
MAKR				AML	AML	07 58 48.3	
	comp=N,68525μm,0.7s						
MAKR				AML	AML	07 58 50.2	
	comp=E,59643μm,0.3s						
SERG	Sergoula	0.62	243	P	Pg	07 58 38.1	-1.3
SERG	Sergoula	0.62	243	P	Pg	07 58 38.1	-1.3
SERG				AML	AML	07 58 51.2	
	comp=E,83454μm,0.3s						
SERG				AML	AML	07 58 54.5	
	comp=N,78639μm,0.5s						
VIL2	Platees	0.63	141	P	Pg	07 58 39.4	-0.1
VIL2				S	Sb	07 58 49.4	+0.5
VIL2				AML	AML	07 58 55.2	
VIL2				AML	AML	07 58 56.8	
	comp=N,59101μm,0.8s						
TRIZ	Trizonia	0.64	238	P	Pg	07 58 38.1	-1.5
TRIZ	Trizonia	0.64	238	P	Pg	07 58 38.1	-1.5
MRKA	Markates	0.65	90	P	Pg	07 58 38.6	-1.2
MRKA	Markates	0.65	90	P	Pg	07 58 38.7	-1.0
MRKA				AML	AML	07 58 53.0	
	comp=N,81746μm,0.7s						
MRKA				AML	AML	07 58 56.0	
	comp=E,56966μm,0.5s						
ANX	Ano Chora	0.67	261	P	Pg	07 58 39.1	-1.1
ANX	Ano Chora	0.67	261	P	Pg	07 58 38.9	-1.3
ANX				AML	AML	07 58 52.9	
	comp=N,47172μm,0.4s						
ANX				AML	AML	07 58 54.0	
	comp=E,31928μm,0.3s						
VILL	Villia	0.69	141	P	Pg	07 58 39.6	-1.0
LTK	Loutraki	0.70	167	P	Pg	07 58 39.7	-1.0
LTK				S	Sn	07 58 52.1	-1.4
	comp=E,38μm,0.4s						
LTK	Loutraki	0.70	167	P	Pg	07 58 39.8	-1.0
LTK				S	Sg	07 58 49.8	-0.1
LTK				AML	AML	07 58 55.1	
	comp=N,93153μm,0.4s						
LTK				AML	AML	07 58 57.8	
	comp=E,55478μm,0.4s						
NEO	Neokhori	0.70	31	P	Pg	07 58 39.7	-1.2
NEO	Neokhori	0.70	31	P	Pg	07 58 39.8	-1.0
NEO				S	Sg	07 58 49.8	-0.3
NEO				AML	AML	07 58 55.3	
	comp=E,94717μm,0.3s						
NEO				AML	AML	07 58 56.0	
SKIA	Skiathos	0.72	50	P	Pg	07 58 40.5	-0.7
SKIA	Skiathos	0.72	50	P	Pg	07 58 40.5	-0.7
SKIA				AML	AML	07 58 53.3	
	comp=E,86047μm,0.5s						
SKIA				AML	AML	07 58 54.6	
	comp=N,85501μm,0.6s						
EFP	Efpalio	0.73	248	P	Pg	07 58 40.0	-1.3
EFP				S	Sb	07 58 52.6	+1.0
	comp=N,20μm,0.8s						
EFP	Efpalio	0.73	248	P	Pg	07 58 40.0	-1.3
EFP				AML	AML	07 58 56.5	
	comp=E,27882μm,0.5s						
EFP				AML	AML	07 58 56.7	
	comp=N,42665μm,0.5s						
LOUT	Loutraki	0.73	167	P	Pg	07 58 40.4	-1.0
LOUT				S	Sn	07 58 53.1	-1.3
	comp=N,35μm,0.7s						
LOUT	Loutraki	0.73	167	P	Pg	07 58 40.3	-1.2
LOUT				AML	AML	07 58 58.4	
	comp=E,10582μm,0.4s						
LOUT				AML	AML	07 58 58.5	
	comp=N,11288μm,0.4s						
XOR	Xorichti	0.74	27	P	Pg	07 58 40.6	-1.0
XOR	Xorichti	0.74	27	P	Pg	07 58 40.6	-1.0
XOR				AML	AML	07 58 54.4	
	comp=E,49754μm,0.4s						
XOR				AML	AML	07 58 55.1	
	comp=N,63013μm,0.3s						
LAKA	Lakka	0.77	233	P	Pg	07 58 41.6	-0.5
LAKA				AML	AML	07 58 58.7	
	comp=E,13532μm,0.6s						
LAKA				AML	AML	07 59 01.5	
	comp=N,11638μm,0.6s						
EVR	Evrytania	0.78	286	P	Pg	07 58 42.0	-0.2
EVR				S	Sg	07 58 52.4	0.0
	comp=N,5μm,0.5s						
EVR	Evrytania	0.78	286	P	Pg	07 58 42.0	-0.2
KLV	Kalavryta, Ach	0.81	216	P	Pg	07 58 41.6	-1.4
KLV				S	Sb	07 58 54.5	+0.3
	comp=N,19μm,0.8s						
KLV	Kalavryta, Ach	0.81	216	P	Pg	07 58 41.4	-1.6
KLV				AML	AML	07 59 00.1	
	comp=N,52558μm,0.7s						
KLV				AML	AML	07 59 01.4	
	comp=E,18151μm,0.6s						
UPR	University Cam	0.87	242	P	Pg	07 58 42.9	-1.2
EREA	Eretria	0.96	107	P	Pg	07 58 44.6	-1.2
EREA	Eretria	0.96	107	P	Pg	07 58 44.5	-1.2
EREA				S	Sg	07 58 58.3	+0.1
EREA				AML	AML	07 59 00.4	
	comp=E,88816μm,0.4s						
EREA				AML	AML	07 59 03.4	
	comp=N,58487μm,0.3s						
PVO	Paravola	0.97	265	P	Pb	07 58 44.8	-1.1
AOS	Alonnisos	0.99	62	P	Pb	07 58 44.8	-1.4
AOS				S	Sg	07 58 59.5	+0.3
	comp=N,27μm,0.8s						
AOS	Alonnisos	0.99	62	P	Pb	07 58 44.8	-1.4
AOS				AML	AML	07 59 01.7	
	comp=E,45191μm,0.5s						
AOS				AML	AML	07 59 02.0	
	comp=N,53776μm,0.6s						
LRSO	Larissa Observ	1.01	344	P	Pb	07 58 45.2	-1.3
THL	Klokotos Trika	1.04	326	P	Pb	07 58 45.8	-1.3
THL				S	Sb	07 59 00.5	-0.1
	comp=N,3μm,0.9s						
THL	Klokotos Trika	1.04	326	P	Pb	07 58 45.7	-1.3
THL				AML	AML	07 59 06.7	
	comp=E,6269μm,0.7s						
THL				AML	AML	07 59 10.7	
	comp=N,3919μm,0.6s						
ATH	Athens Observa	1.05	134	P	Pb	07 58 46.6	-0.6
ATH				S	Sn	07 59 02.8	+0.7
	comp=N,23μm,0.7s						
ATH	Athens Observa	1.05	134	P	Pb	07 58 46.1	-1.1
PTL	Penteli	1.09	127	P	Pb	07 58 46.7	-1.1
PTL				S	Sg	07 59 02.4	+0.1
PTL				AML	AML	07 59 06.7	
	comp=N,42299μm,0.7s						
PTL				AML	AML	07 59 07.7	
	comp=E,47238μm,0.5s						
ATHU	Athens Univers	1.09	132	P	Pb	07 58 47.1	-0.8
ATHU	Athens Univers	1.09	132	P	Pb	07 58 46.9	-1.0
ATHU				S	Sb	07 59 02.1	0.0
ATHU				AML	AML	07 59 07.0	
	comp=N,41383μm,0.6s						
ATHU				AML	AML	07 59 07.7	
	comp=E,27937μm,1.4s						
DRO	Drossia	1.12	228	P	Pb	07 58 47.6	-0.8
DRO	Drossia	1.12	228	P	Pb	07 58 47.6	-0.8
DRO				AML	AML	07 59 10.0	
	comp=E,33441μm,0.6s						
DRO				AML	AML	07 59 11.6	
	comp=N,24500μm,0.5s						
VLY	Voula,Athens	1.18	136	P	Pn	07 58 48.3	-1.1
VLY				AML	AML	07 59 08.5	
	comp=N,46998μm,0.8s						
VLY				AML	AML	07 59 10.1	
	comp=E,46303μm,0.5s						
RLS	Riolos of Patr	1.21	238	P	Pn	07 58 49.1	-0.6
PDO	Prodromos	1.24	266	P	Pn	07 58 49.9	-0.4
DID	Didima	1.25	162	P	Pn	07 58 49.4	-1.1
DID				S	Sg	07 59 08.4	+0.8
	comp=E,15μm,0.8s						
DID	Didima	1.25	162	P	Pn	07 58 49.5	-1.0
KRND	KRANIDI	1.35	167	P	Pn	07 58 51.8	0.0
VLX	Vlachokerasia	1.36	193	P	Pn	07 58 52.0	0.0
SKY	Skiros Island	1.41	82	P	Pn	07 58 51.7	-0.9
LIT	Litokhoron	1.41	352	P	Pn	07 58 52.3	-0.4
LIT				S	Sb	07 59 11.4	0.0
LIT	Litokhoron	1.41	352	P	Pn	07 58 52.4	-0.4
LIT	Litokhoron	1.41	352	Pn	Pn	07 58 52.6	-0.1
LIT	Litokhoron	1.41	352	P	Pn	07 58 52.6	-0.1
PAIG	Paliouri	1.42	30	P	Pn	07 58 51.8	-0.9
PAIG				S	Sn	07 59 10.0	-1.2
	comp=E,4μm,1.1s						
PAIG	Paliouri	1.42	30	P	Pn	07 58 51.8	-0.9
AMT	Artemida-Makis	1.43	216	P	Pb	07 58 53.5	-0.4
KARY	Karystos	1.48	116	P	Pn	07 58 53.3	-0.2
KARY				S	Sb	07 59 13.0	-0.2
	comp=E,5μm,0.6s						
KARY	Karystos	1.48	116	P	Pn	07 58 53.3	-0.2
LKD2	Lefkada island	1.65	274	P	Pb	07 58 57.1	-0.3
KPRO	Kipourio	1.66	319	P	Pn	07 58 55.9	-0.1
ITM	Ithomi	1.66	204	P	Pb	07 58 57.2	-0.4
ITM	Ithomi	1.66	204		Pb	07 58 57.5	-0.1
ITM				Sn	Sn	07 59 13.8	-3.4
PLG	Polygyros	1.75	17	P	Pn	07 58 56.8	-0.5
PLG	Polygyros	1.75	17	P	Pn	07 58 56.5	-0.9
JAN	Janina	1.76	303	P	Pn	07 58 58.2	+0.7
KZN	Kozani	1.77	335	P	Pn	07 58 58.2	+0.5
VLMS	Volimes, Zakyn	1.85	244	P	Pn	07 58 58.2	-0.4
OUR	Ouranopolis	1.88	30	P	Pn	07 58 58.6	-0.5
OUR				S	Sn	07 59 22.3	-0.4
	comp=E,3μm,0.6s						
OUR	Ouranopolis	1.88	30	P	Pn	07 58 58.6	-0.5
HORT	Hortiatis	1.91	8	P	Pn	07 58 59.0	-0.6
THE	Thessaloniki	1.93	5	P	Pn	07 58 59.1	-0.7
PYL	PYLOS	1.98	204	P	Pn	07 59 01.4	+1.0
IGT	Igoumenitsa	2.06	294	*e*Pn	Pb	07 59 04.9	+0.4
IGT	Igoumenitsa	2.06	294	P	Pn	07 59 02.3	+0.7
SOH	Sokhos	2.16	12	P	Pn	07 59 03.3	+0.3
GRG	Griva	2.27	353	P	Pn	07 59 04.4	0.0
FNA	Florina	2.34	333	*e*Pn	Pn	07 59 06.4	+1.0
FNA	Florina	2.34	333	P	Pn	07 59 06.2	+0.8
FNA	Florina	2.34	333		Pn	07 59 06.3	+1.0
FNA	Florina	2.34	333	P	Pn	07 59 06.4	+1.0
THAS	Thassos island	2.43	38	P	Pn	07 59 05.7	-0.9
KTHA	Kythira Island	2.45	174	P	Pn	07 59 07.3	+0.3
KNT	Kendrikon	2.46	2	P	Pn	07 59 07.6	+0.6
SIGR	SIGRI	2.46	77	P	Pn	07 59 07.4	+0.3
SRS	Serrai	2.49	15	*e*Pn	Pn	07 59 07.3	-0.2
SRS	Serrai	2.49	15	P	Pn	07 59 07.5	0.0
CHOS	Chios island	2.60	96	P	Pn	07 59 09.1	0.0
CHOS	Chios island	2.60	96	P	Pn	07 59 09.4	+0.3
VAY	Valandovo	2.62	357	*e*Pn	Pn	07 59 09.6	+0.4
VAY	Valandovo	2.62	357	*i* Pn	Pn	07 59 09.7	+0.5
KAVA	Kavala	2.66	30	P	Pn	07 59 08.5	-1.3
APE	Apeiranthos	2.73	126	P	Pn	07 59 10.9	0.0
APE	Apeiranthos	2.73	126	⇑P	Pn	07 59 11.0	0.0
APE	Apeiranthos	2.73	126	P	Pn	07 59 10.8	0.0
APE	Apeiranthos	2.73	126	*i* P	Pn	07 59 11.0	+0.2
IOSP	Ios island	2.81	134	P	Pn	07 59 12.0	+0.1
OHR	Ohrid	2.84	329	*i* Pn	Pn	07 59 14.3	+1.9
OHR				*i* Sn	Sb	07 59 49.5	-3.0
OHR				*e*Lg	Lg	08 00 00.3	
	comp=N,572nm,1.1s						
ANKY	Antikythira Is	2.86	171	P	Pn	07 59 13.0	+0.4
KRBN	Karaburun	2.97	91	*e*P	Pn	07 59 14.7	+0.6
STIP	Stip	3.02	352	⇓*i*Pn	Pn	07 59 16.0	+1.2
THT2	Imerovigli	3.10	136	P	Pn	07 59 15.9	+0.1
AMGA	Amorgos Island	3.11	126	P	Pn	07 59 16.1	+0.1
SANT	Santorini	3.17	137	⇓P	Pn	07 59 17.4	+0.7
SANT	Santorini	3.17	137	*e*P	Pn	07 59 18.4	+1.6
SANT	Santorini	3.17	137		Pn	07 59 16.8	0.0
DKL	Dikili	3.25	82	*e*P	Pn	07 59 19.2	+1.2
ALN	Alexandroupoli	3.35	48		Pn	07 59 18.5	-0.7
ALN	Alexandroupoli	3.35	48	P	Pn	07 59 18.5	-0.7
BLCB	Balcova	3.37	94	*e*P	Pn	07 59 22.4	+2.8
SKO	Skopje	3.42	343	*e*Pn	Pn	07 59 21.4	+1.2
SKO	Skopje	3.42	343	*i* Pn	Pn	07 59 22.0	+1.7
TIR	Tirane	3.45	321	*e*Pn	Pn	07 59 22.5	+1.8
TIR	Tirane	3.45	321	⇑P	Pn	07 59 23.7	+3.0
TIR	Tirane	3.45	321		Pn	07 59 20.1	-0.6
TIR	Tirane	3.45	321	P	Pn	07 59 20.1	-0.6
SCTE	Santa Cesarea	3.60	294	Pn	Pn	07 59 23.2	+0.6
BOSS	Bosilegrad	3.79	357	*e*Pn	Pn	07 59 26.3	+0.9
IDI	Anoyia	3.81	153	Pn	Pn	07 59 26.6	+0.9
	comp=N,11nm,0.3s,baz=291,slow=6.9,SNR=41						
IDI				Sn	Sn	08 00 10.7	+0.3
	comp=N,13nm,0.3s,baz=9.4,slow=11,SNR=3.0						
IDI				Lg	Lg	08 00 30.0	
	comp=N,12nm,0.3s,baz=285,slow=8.6,SNR=3.1						
IDI				LR	LR	08 01 26.7	
	comp=N,840nm,19.9s,baz=324,slow=46						
IDI	Anoyia	3.81	153	*e*P	Pn	07 59 26.2	+0.5
HRKL	Herakleio	3.87	150	*e*P	Pn	07 59 29.3	+2.9
KOSK	Kos Island	3.87	119	*e*P	Pn	07 59 24.9	-1.5
VTS	Vitosha	3.93	5	*e*Pn	Pn	07 59 27.8	+0.4
VTS	Vitosha	3.93	5	⇓P	Pn	07 59 28.2	+0.9
VTS	Vitosha	3.93	5		Pn	07 59 26.6	-0.8
VTS	Vitosha	3.93	5	P	Pn	07 59 26.6	-0.8
BODT	Bodrum	3.95	113	*e*P	Pn	07 59 28.7	+1.1
BALB	Balikesir	4.09	75	*e*P	Pn	07 59 30.8	+1.4
AYDB	Zeytinkoy-Aydi	4.10	99	*e*P	Pn	07 59 31.1	+1.3
BARS	Barje	4.17	350	*e*Pn	Pn	07 59 31.6	+1.0
ULC	Ulcinj	4.22	322	*e*Pn	Pn	07 59 32.6	+1.3
ULC				*e*Sn	Sn	08 00 22.5	+2.0
DAT	Datca	4.30	116	*e*P	Pn	07 59 34.2	+1.8
DRME	Dracevica, Mon	4.42	323	*e*Pn	Pn	07 59 36.5	+2.5
DRME	Dracevica, Mon	4.42	323	*e*Pn	Pn	07 59 35.3	+1.3
DRME				*e*Sn	Sn	08 00 27.2	+1.8
PVY	Plav	4.43	332	*e*Pn	Pn	07 59 35.4	+1.1
PVY				*e*Sn	Sn	08 00 27.3	+1.4
ZKR	Zakros	4.53	141	*e*P	Pn	07 59 38.1	+2.6
ZAPS	Zavoj	4.57	359	*e*Pn	Pn	07 59 37.9	+1.8
PDG	Podgorica	4.58	325	*e*Pn	Pn	07 59 38.7	+2.5
PDG				*e*Sn	Sn	08 00 30.6	+1.3
PDG	Podgorica	4.58	325	⇑P	Pn	07 59 39.0	+2.8
PDG	Podgorica	4.58	325	*e*Pn	Pn	07 59 38.3	+2.1
PDG	Podgorica	4.58	325		Pn	07 59 37.9	+1.7
TTG	Podgorica	4.58	325	*e*Pn	Pn	07 59 37.6	+1.4
TTG				*e*Sn	Sn	08 00 30.5	+1.3
TAR1	Taranto	4.61	295	*e*Pn	Pn	07 59 38.1	+1.6
KULA	Kula-Manisa	4.62	91	*e*P	Pn	07 59 38.0	+1.1
YER	Yerkesik	4.64	108	*e*P	Pn	07 59 39.5	+2.4
BUM	Brajici-Budva	4.65	322	*e*Pn	Pn	07 59 38.2	+1.0
BUM				*e*Sn	Sn	08 00 32.7	+1.6
SELS	Selova	4.68	345	*e*Pn	Pn	07 59 38.0	+0.4
IVA	Berane	4.70	333	*e*Pn	Pn	07 59 38.6	+0.7
IVA				*e*Sn	Sn	08 00 33.7	+1.4
TIP	Timpagrande	4.71	278	⇑P	Pn	07 59 39.6	+1.6
TIP	Timpagrande	4.71	278		Pn	07 59 39.2	+1.2
KARP	Karpathos	4.72	131	*e*P	Pn	07 59 40.1	+1.9
KARP	Karpathos	4.72	131		Pn	07 59 39.9	+1.7
KOME	Kolasin	4.82	330	*e*Pn	Pn	07 59 40.8	+1.2
KOME				*e*Sn	Sn	08 00 36.1	+0.8
CEME	Cevo	4.83	324	*e*Pn	Pn	07 59 40.9	+1.3
CEME				*i* Sn	Sn	08 00 37.0	+1.6
ELND	Elena	4.84	28	⇓P	Pn	07 59 39.7	0.0
PLVB	Pleven	4.89	16	⇑P	Pn	07 59 41.8	+1.4
ARG	Arkhangelos	4.94	119	*e*P	Pn	07 59 43.4	+2.3
HCY	Herceg Novi	4.95	320	*e*Pn	Pn	07 59 35.8	-5.5
HCY	Herceg Novi	4.95	320	*e*Pn	Pn	07 59 42.3	+1.0
HCY				*e*Sn	Sn	08 00 40.0	+1.5
NKME	Niksic	4.98	326	⇑*i*Pn	Pn	07 59 43.0	+1.2
NKME				*i* Sn	Sn	08 00 40.3	+1.0
BOVS	Bovan	4.99	351	*e*Pn	Pn	07 59 42.4	+0.6
SJES	Sjenica	5.02	336	*e*Pn	Pn	07 59 44.3	+2.0
DALY	Dalyan (Mula)	5.03	110	*e*P	Pn	07 59 44.9	+2.5
ZAGS	Zajecar	5.12	356	*e*Pn	Pn	07 59 43.6	0.0
ZAGS				*e*Sn	Sn	08 00 43.7	+1.1
BAI	Bari	5.12	300	*e*Pn	Pn	07 59 45.0	+1.4
SG1	Sgolgore (BA)	5.15	296	*e*Pn	Pn	07 59 45.4	+1.3
TREB	Trebinje	5.23	322	*e*Pn	Pn	07 59 45.4	+0.4
TREB				*e*Sn	Sn	08 00 46.8	+1.6
TREB	Trebinje	5.23	322	*e*Pn	Pn	07 59 45.5	+0.4
IVAS	Ivanjica	5.25	339	*e*Pn	Pn	07 59 46.5	+1.0
BRY	Bratogost	5.28	324	*e*Pn	Pn	07 59 47.2	+1.3
BRY	Bratogost	5.28	324	*e*Pn	Pn	07 59 46.8	+0.9
BRY				*e*Sn	Sn	08 00 47.8	+1.1
UPM	Unac-Piva	5.36	328	*e*Pn	Pn	07 59 49.6	+2.5
UPM	Unac-Piva	5.36	328	*e*Pn	Pn	07 59 48.1	+1.0
UPM				*e*Sn	Sn	08 00 49.9	+1.1
GRUS	Gruza	5.41	344	*e*Pn	Pn	07 59 48.2	+0.7
CEL	Celeste	5.41	267	Pn	Pn	07 59 48.6	+1.0
FETY	Fethiye	5.42	110	*e*P	Pn	07 59 50.5	+2.7
RUDO	Rudo	5.54	334	*e*Pn	Pn	07 59 50.2	+0.8
ACER	Acerenza	5.65	294		Pn	07 59 51.2	+0.2
BBLS	Lazići	5.74	335	*e*Sn	Sn	08 01 00.7	+2.6
BBLS	Lazići	5.74	335	*e*Pn	Pn	07 59 54.1	+1.9
DIVS	Divibare	5.78	340	*e*Pn	Pn	07 59 53.6	+0.9
DIVS				*e*Sn	Sn	08 00 58.9	0.0
DIVS	Divibare	5.78	340	*e*Pn	Pn	07 59 53.1	+0.4
TRUS	Trudelj	5.79	343	*e*Pn	Pn	07 59 53.6	+0.8
HUMR	Humele	6.05	15	⇑P	Pn	07 59 57.5	+1.1
HAPS	Han Pijesak,BI	6.09	333	*e*Pn	Pn	07 59 57.3	+0.2
TEKS	Tekeris	6.32	339	*e*Pn	Pn	07 59 59.4	-0.8
ICOR	Ion Corvin	6.60	33	⇑P	Pn	08 00 04.8	+0.8

GZR Gura Zlata 6.69 0 ⇓P Pn 08 00 05.8 +0.7
MTUR Matau 6.74 14 ⇑P Pn 08 00 07.6 +1.7
LOT Lotru 6.78 6 ⇓P Pn 08 00 07.7 +1.1
ARR Arges 6.80 11 ⇑P Pn 08 00 07.8 +1.1
VOIR 6.94 13 ⇑P Pn 08 00 09.8 +1.1
BZS Buzias 6.96 353 ePn Pn 08 00 08.7 -0.2
BZS Buzias 6.96 353 ⇑P Pn 08 00 08.9 +0.1
MGRS Mrkonjic Grad 7.12 325 ePn Pn 08 00 12.3 +1.2
HARR Harsova 7.12 31 ⇑P Pn 08 00 11.8 +0.7
MLR Muntele Rosu 7.18 18 Pn Pn 08 00 13.4 +1.3
comp=N,6.9nm,0.3s,baz=260,slow=5.1,SNR=56
MLR Sn Sn 08 01 39.2 +5.6
baz=50,slow=18,SNR=1.5
MLR LR LR 08 03 15.4
comp=N,841nm,18.0s,baz=236,slow=40
MLR Muntele Rosu 7.18 18 ⇓P Pn 08 00 13.7 +1.7
BLY Banja Luka 7.34 327 ⇑P Pn 08 00 15.7 +1.6
BLY Banja Luka 7.34 327 ePn Pn 08 00 15.3 +1.2
BLY Banja Luka 7.34 327 Pn 08 00 15.1 +1.0
DOPR Dopca 7.51 14 ⇓P Pn 08 00 18.1 +1.5
INTR Introdacqua 7.53 299 Pn 08 00 18.2 +1.4
PLOR Plostina 7.70 21 ⇑P Pn 08 00 22.4 +3.3
VRI Vrincioaia 7.74 21 ⇓P Pn 08 00 21.5 +1.9
DRGR 8.08 360 ⇑P Pn 08 00 26.6 +2.2
MORH Mrgy, Hungar 8.10 339 ePn Pn 08 00 25.4 +0.9
TESR Tescani 8.31 19 ⇓P Pn 08 00 29.1 +1.6
NRCA Norcia 8.40 302 Pn 08 00 30.4 +1.7
NRCA Sn Sn 08 02 04.3 +0.8
BR131 Keskin Array S 8.51 80 Pn 08 00 26.8 -3.5
BR131 Keskin Array S 8.51 80 Pn 08 00 26.8 -3.5
BRTR Keskin Array B 8.51 80 Pn Pn 08 00 32.1 +1.9
comp=N,0.5nm,0.3s,baz=262,slow=12,SNR=10
BRTR LR LR 08 03 48.5
comp=N,135nm,18.4s,baz=252,slow=37
BRTR Keskin Array B 8.51 80 Pn 08 00 28.2 -2.0
BRTR Keskin Array B 8.51 80 P Pn 08 00 28.2 -2.0
CRES Cresnjev 8.94 325 ePn Pn 08 00 36.4 +0.4
BURAR Bucovina Array 9.09 11 ⇓P Pn 08 00 39.9 +1.8
BUR08 Bucovina Ar. S 9.11 10 Pn 08 00 36.0 -2.4
KIS Kishinev 9.40 26 eP Pn 08 00 44.0 +1.6
KIS eLQ LQ 08 03 16.0
KIS eLR LR 08 04 20.0
comp=N,700nm,8.0s
KIS Kishinev 9.40 26 eP Pn 08 00 44.0 +1.6
KIS MLR MLR
comp=N,700nm,8.0s
KIS MLR MLR
comp=Z,800nm,10.0s
PSZ Piszkesteto 9.44 348 Pn Pn 08 00 40.8 -2.2
PSZ Piszkesteto 9.44 348 P Pn 08 00 40.8 -2.2
SOKA Soboth 9.79 327 ePn Pn 08 00 47.3 -0.4
comp=Z,3.7nm,0.6s
OBKA Obir 9.87 325 ePn Pn 08 00 50.0 +1.1
comp=Z,0.9nm,0.2s
ARSA Arzberg 10.05 331 ePn Pn 08 00 52.1 +0.9
comp=Z,3.9nm,0.6s
VYHS Vyhne 10.19 345 eP Pn 08 00 53.9 +0.7
VYHS e 08 02 43.7
VYHS Vyhne 10.19 345 ePN Pn 08 00 53.9 +0.7
VYHS eSN Sn 08 02 43.7 -3.6
KOLS Kolonicke sedl 10.23 358 eP Pn 08 00 55.8 +2.1
KOLS Kolonicke sedl 10.23 358 ePN Pn 08 00 55.8 +2.1
CRVS Cervenica-Dubn 10.24 355 eP Pn 08 00 58.7 +4.9
CRVS Cervenica-Dubn 10.24 355 ePN Pn 08 00 58.7 +4.9
SORM Soroca 10.26 21 ⇑P Pn 08 00 54.0 -0.1
MODS Modra-Piesok 10.45 339 eP Pn 08 00 59.7 +3.0
MODS Modra-Piesok 10.45 339 ePN Pn 08 00 59.7 +3.0
TEOL Teolo 10.59 312 Pn Pn 08 00 58.5 -0.2
KBA Koelnbreinsper 10.85 324 ePn Pn 08 01 03.8 +1.5
comp=Z,0.6nm,0.3s
MOA Molln 11.03 329 ePn Pn 08 01 05.3 +0.6
comp=Z,6.0nm,0.7s
KEST Kesra 11.10 259 LR LR 08 07 01.0
comp=Z,194nm,18.7s,baz=338,slow=46
LVV L'vov 11.15 4 eP Pn 08 01 12.5 +6.1
VRAC Vranov 11.49 339 LR LR 08 05 57.6
comp=Z,46nm,20.1s,baz=185,slow=39
MMAI Mount Meron Ar 11.72 115 LR LR 08 06 56.1
comp=Z,79nm,19.6s,baz=265,slow=43
GERES GERESS Array B 12.06 330 Pn Pn 08 01 20.6 +1.8
comp=Z,0.1nm,0.3s,baz=155,slow=13,SNR=9.4
KHC Kasperske Hory 12.34 331 ePN Pn 08 01 24.5 +1.9
KHC Kasperske Hory 12.34 331 eP Pn 08 01 24.5 +1.9
DAVOX Davos/Dischmat 12.43 315 LR LR 08 07 51.8
comp=Z,341nm,18.2s,baz=120,slow=45
AKASG Malin Array Be 12.84 19 Pn Pn 08 01 29.0 -0.3
comp=Z,0.5nm,0.3s,baz=203,slow=12,SNR=4.6
AKASG LR LR 08 07 01.5
comp=Z,272nm,21.6s,baz=185,slow=40
ASF Jabal al Asfar 13.23 115 Pn Pn 08 01 36.6 +1.7
comp=Z,0.2nm,0.3s,baz=338,slow=11,SNR=2.5
EIL Elat 13.52 128 Pn Pn 08 01 41.0 +2.3
comp=Z,0.6nm,0.3s,baz=358,slow=9.6,SNR=4.3
SOC Sochi 13.67 64 eP Pn 08 01 43.6 +2.9
SOC e 08 04 17.7
SOC MLR MLR
comp=Z,56nm,8.0s
CLL Collm 14.35 335 eP Pn 08 01 51.0 +1.0
CLL ePP PnPn 08 01 59.0 +1.1
CLL Collm 14.35 335 eP Pn 08 01 51.0 +1.0
SHA1 Shidzhatmaz 15.78 65 iP P 08 02 12.4 -0.9
KIV Kislovodsk 15.85 64 eP P 08 02 11.9 +1.8
KIV pmax pmax
comp=Z,36nm,1.1s
KIV MLR MLR
comp=Z,112nm,12.0s
KBZ Khabaz 15.95 65 Pn P 08 02 15.2 +0.4
comp=Z,0.1nm,0.3s,baz=256,slow=12,SNR=8.0
KBZ Khabaz 15.95 65 iP P 08 02 14.9 +0.1
KBZ pmax pmax
comp=Z,13nm,1.2s
PYA1 Pyatigorsk 16.16 64 iP P 08 02 17.3 +0.1
GOF Gofitskoye 16.37 61⇑eP P 08 02 23.2 +3.7
ZEI Tsey 16.52 69 eP P 08 02 20.8 -0.7
ZEI pmax pmax
comp=Z,10.0nm,1.2s
VSR Storozhevoye 17.02 37 eP P 08 02 26.5 -0.1
VSR pmax pmax
comp=Z,5.0nm,1.0s
GNI Garni 17.04 78 P P 08 02 28.0 +0.9
comp=Z,0.5nm,0.3s,baz=198,slow=6.0,SNR=4.9
GNI Garni 17.04 78 iP P 08 02 30.7 +3.5
GNI pmax pmax
comp=Z,47nm,1.2s
OBN Obninsk 18.87 25 LR LR 08 10 08.0
comp=Z,15nm,19.4s,baz=186,slow=37
OBN Obninsk 18.87 25 iP Pn 08 02 51.0 +3.4
OBN pmax pmax
comp=Z,14nm,1.1s
VSU Vasula 19.94 6 iP P 08 02 59.4 +0.7
VSU pmax pmax
comp=Z,136nm,0.8s
ESDC Sonseca Array 20.72 281 P P 08 03 07.4 +0.1
comp=Z,3.5nm,0.8s,baz=75,slow=11,SNR=12
ESDC LR LR 08 11 37.9
comp=Z,145nm,18.7s,baz=270,slow=38
PAB San Pablo 21.02 281 P P 08 03 12.5 +1.8
PAB San Pablo 21.02 281 P P 08 03 12.5 +1.8
PAB pmax pmax
comp=Z,4.0nm,0.8s
HFS Hagfors 22.20 348 P P 08 03 22.6 -0.5
comp=Z,2.9nm,0.5s,baz=161,slow=9.4,SNR=9.0
HFS LR LR 08 13 40.9
comp=Z,135nm,19.3s,baz=174,slow=41
FINES FINESS Array B 22.86 4 P P 08 03 31.4 +1.4
comp=Z,3.4nm,0.8s,baz=187,slow=14,SNR=6.7
FINES PcP PcP 08 07 19.2 -1.3
comp=Z,1.1nm,0.6s,baz=113,slow=4.4,SNR=4.8
FINES FINESS Array B 22.86 4 P P 08 03 28.0 -2.0
FINES PcP 08 07 19.7 -0.8
MDT Midelt 22.93 264 P P 08 03 33.0 +1.9
comp=Z,2.9nm,0.9s,baz=81,slow=14,SNR=3.8
NC602 NORSAR Array S 23.15 346 P P 08 03 30.9 -2.2
NAO01 NORSAR Array S 23.38 345 P P 08 03 33.9 -1.5
NC405 NORSAR Array S 23.47 346 P P 08 03 34.8 -1.4
NC405 IAmb IAmb 08 03 42.1
comp=Z,36nm,1.2s
NB2 NORSAR Subarra 23.49 346 P P 08 03 35.4 -1.2
comp=Z,8.0nm,0.8s,baz=160,slow=11
NOA NORSAR Array B 23.49 346 P P 08 03 35.4 -1.2
comp=Z,1.3nm,0.6s,baz=159,slow=10,SNR=7.3
NOA LR LR 08 13 10.8
comp=Z,111nm,18.2s,baz=160,slow=38
NC303 NORSAR Array S 23.64 346 P P 08 03 35.5 -2.4
NC303 IAmb IAmb 08 03 36.7
comp=Z,29nm,1.4s
NC204 NORSAR Array S 23.80 346 P P 08 03 37.0 -2.5
PVAQ Vaqueiros 23.99 276 P P 08 03 39.2 -2.3
EKA Eskdalemuir Ar 24.05 322 P P 08 03 41.2 -0.7
comp=Z,14nm,0.7s,baz=115,slow=10,SNR=33
ESK Eskdalemuir 24.07 322 P P 08 03 39.1 -3.0
ESK Eskdalemuir 24.07 322 P P 08 03 39.1 -3.0
ESK pmax pmax
comp=Z,67nm,1.4s
KLMR Klimovskoe 24.53 20 eP P 08 03 45.8 -0.4
KLMR AMP 08 03 53.9
comp=Z,22nm,1.3s
KLMR Klimovskoe 24.53 20 eP P 08 03 45.8 -0.4
KLMR pmax pmax
comp=Z,22nm,1.3s
KIRV Kirov 26.27 32 LR LR 08 14 17.1
comp=Z,96nm,18.2s,baz=139,slow=36
KIRV Kirov 26.27 32 iP P 08 04 03.6 +1.7
AKTO Aktyubinsk 27.46 53 P P 08 04 12.2 -0.6
comp=Z,0.4nm,0.5s,baz=204,slow=5.3,SNR=2.1
AKTO LR LR 08 16 26.5
comp=Z,56nm,20.5s,baz=263,slow=39
GEYT Alibeck 27.65 80 P P 08 04 13.3 -1.4
comp=Z,1.5nm,0.6s,baz=73,slow=26,SNR=5.9
GEYT LR LR 08 16 03.0
comp=Z,63nm,21.4s,baz=260,slow=38
ABKAR Akbulak array 28.49 56 P P 08 04 19.1 -3.0
ARU Arti 29.50 41 P P 08 04 31.2 +0.2
comp=Z,1.8nm,0.2s,baz=286,slow=13,SNR=3.1
ARU LR LR 08 16 27.5
comp=Z,96nm,19.0s,baz=216,slow=36
ARU Arti 29.50 41 d iP P 08 04 33.9 +3.0
ARU 08 05 26.4
ARU S S 08 09 30.3 +5.3
ARU SS ScP 08 10 57.5 -20
ARU pmax pmax
comp=Z,5.0nm,1.0s
ARCES ARCESS Array B 30.93 2 P P 08 04 43.3 -0.1
comp=Z,1.2nm,0.8s,baz=194,slow=9.6,SNR=5.0
ARCES PcP PcP 08 07 38.3 -1.2
comp=Z,1.8nm,0.9s,baz=204,slow=2.0,SNR=5.0
ARCES LR LR 08 17 01.0
comp=Z,131nm,18.6s,baz=166,slow=36
TOA0 Torodi Ar. Sit 31.57 222 P P 08 04 49.0 -0.6
TOA0 IAmb IAmb 08 04 55.1
comp=Z,4.8nm,0.8s
TORD Torodi Ar. Bea 31.57 222 P P 08 04 49.8 +0.3
comp=Z,4.5nm,0.7s,baz=32,slow=9.2,SNR=33
TORD LR LR 08 19 12.0
comp=Z,115nm,18.4s,baz=15,slow=39
BVAR Borovoye Array 35.43 50 P P 08 05 24.1 +1.2
comp=Z,0.3nm,0.5s,baz=267,slow=5.3,SNR=3.4
KKAR Karatay Array 35.97 67 P P 08 05 26.4 -1.3
KKAR Karatay Array 35.97 67 P P 08 05 26.8 -0.9
KKAR IAmb IAmb 08 05 36.1
comp=Z,4.7nm,1.2s
KKAR Karatay Array 35.97 67 P P 08 05 26.8 -0.9
KKAR pmax pmax
comp=Z,5.0nm,1.3s
AAK Ala-Archa 38.94 67 P P 08 05 54.0 +1.0
comp=Z,0.6nm,0.3s,baz=222,slow=14,SNR=3.3
AAK LR LR 08 25 09.4
comp=Z,50nm,18.1s,baz=276,slow=41
AAK Ala-Archa 38.94 67 P P 08 05 53.6 +0.7
AAK Ala-Archa 38.94 67 P P 08 05 53.6 +0.7
AAK pmax pmax
comp=Z,5.0nm,1.2s
DBIC Dimbokro 40.49 225 P P 08 06 05.7 -0.2
comp=Z,5.5nm,0.7s,baz=14,slow=10,SNR=13
DBIC LR LR 08 25 01.2
comp=Z,42nm,19.2s,baz=7.5,slow=39
DBIC Dimbokro 40.49 225 P P 08 06 05.1 -0.8
DBIC IAmb IAmb 08 06 11.8
comp=Z,8.3nm,0.8s
DBIC Dimbokro 40.49 225 P P 08 06 05.1 -0.8
DBIC pmax pmax
comp=Z,8.0nm,0.8s
TIC Toumodi 40.60 225 eP P 08 06 06.7 -0.2
NIL Nilore 40.65 81 P P 08 06 07.0 -0.1
NIL IAmb IAmb 08 06 20.3
comp=Z,7.9nm,1.1s
NIL Nilore 40.65 81 P P 08 06 07.0 -0.1
NIL pmax pmax
comp=Z,8.0nm,1.1s
KIC Kosan Boka 40.68 225 eP P 08 06 07.6 +0.1
comp=Z,9.9nm,0.7s
KSH Kashi 40.79 71 P P 08 06 09.2 +0.8
KSH PP PnPn 08 07 44.3 -2.1
KSH PcP PcP 08 08 15.0 +5.6
KSH S S 08 12 17.5 -1.5
LIC Lamto 40.95 225 eP P 08 06 09.6 -0.1
comp=Z,14nm,0.4s
MK31 Makanchi Array 43.52 59 P P 08 06 30.0 -0.4
MK31 Makanchi Array 43.52 59 P P 08 06 30.0 -0.4
MK31 pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 43.52 59 P P 08 06 30.4 0.0
comp=Z,0.6nm,0.5s,baz=272,slow=7.2,SNR=16
MKAR LR LR 08 29 15.7
comp=Z,49nm,18.2s,baz=290,slow=42
ZAA0 Zalesovo Array 44.03 49 P P 08 06 32.8 -1.6
ZAA0 IAmb IAmb 08 06 36.7
comp=Z,3.9nm,0.7s
ZALV Zalesovo Beam 44.03 49 P P 08 06 34.2 -0.2
comp=Z,4.1nm,0.6s,baz=271,slow=9.1,SNR=11
ZALV LR LR 08 26 55.7
comp=Z,57nm,20.7s,baz=267,slow=39
ZALV Zalesovo Beam 44.03 49 P P 08 06 33.3 -1.0
ZALV Zalesovo Beam 44.03 49 P P 08 06 33.3 -1.0
WMQ Urumqi 47.96 62 eP P 08 07 08.3 +2.7
TLY Talaya 55.63 48 iP P 08 08 04.1 +1.4
TLY pmax pmax
comp=Z,2.0nm,1.1s
GTA Gaotai 58.02 63 eP P 08 08 20.5 +0.5
GTA pP sP 08 08 27.6 +1.8
GTA sP pP 08 08 30.8 +6.6
TIXI Tiksi 58.54 21 P P 08 08 23.8 +0.9
comp=Z,2.4nm,0.4s,baz=50,slow=0.7,SNR=4.7
TIXI Tiksi 58.54 21 P P 08 08 22.6 -0.3
TIXI IAmb IAmb 08 08 26.8
comp=Z,4.3nm,1.1s
TIXI Tiksi 58.54 21 iP P 08 08 26.0 +3.1
TIXI pmax pmax
comp=Z,4.0nm,1.1s
SONM Songino Array 58.76 52 P P 08 08 25.0 0.0
comp=Z,1.2nm,0.8s,baz=285,slow=8.8,SNR=7.8
SONM Songino Array 58.76 52 P P 08 08 25.0 0.0
SCHQ Schefferville 59.26 318 P P 08 08 27.9 -0.3
comp=Z,4.4nm,0.7s,baz=42,slow=7.8,SNR=12
SCHQ Schefferville 59.26 318 P P 08 08 26.9 -1.3
LZH Lanzhou 62.39 65 eP P 08 08 48.5 -1.5
LZH pP pP 08 08 51.8 -2.4
LZH sP sP 08 08 53.2 -2.6
LZH ePP PP 08 11 07.6 +0.6
LBTB Lobatse 63.44 177 P P 08 08 55.6 -1.2
LBTB IAmb IAmb 08 08 58.7
comp=Z,3.1nm,0.8s
LBTB Lobatse 63.44 177 P P 08 08 55.6 -1.2
LBTB pmax pmax
comp=Z,3.0nm,0.8s
HHC Hu-ho-hao-te 65.28 57 eP P 08 09 08.7 -0.2
BOSA Boshof 67.01 178 LR LR 08 42 01.1
comp=Z,64nm,18.3s,baz=350,slow=39
XAN Xi'an 67.02 64 P P 08 09 19.8 -0.3
XAN Xi'an 67.02 64 P P 08 09 18.4 -1.7
XAN Xi'an 67.02 64 P P 08 09 18.4 -1.7
XAN pmax pmax
comp=Z,14nm,1.4s
BILL Bilibino 70.10 14 iP P 08 09 37.6 -1.1
BILL i 08 09 57.1
BILL pmax pmax
comp=Z,3.0nm,1.5s
SEY Seymchan 71.00 22 P P 08 09 44.1 -0.1
comp=Z,0.8nm,0.5s,baz=41,slow=21,SNR=4.3
SEY Seymchan 71.00 22 iP P 08 09 46.8 +2.5
INK Inuvik 71.83 351 P P 08 09 48.7 -0.5
comp=Z,1.0nm,0.7s,baz=14,slow=9.4,SNR=9.0
INK Inuvik 71.83 351 P P 08 09 47.5 -1.7
INK Inuvik 71.83 351 P P 08 09 47.5 -1.7
INK pmax pmax
comp=Z,2.0nm,1.0s
KLR Kul'dur 72.34 41 P P 08 09 52.8 +0.2
comp=Z,1.5nm,0.7s,baz=310,slow=12,SNR=4.1
KLR Kul'dur 72.34 41 iP P 08 09 53.0 +0.4
KLR pmax pmax
comp=Z,3.0nm,1.1s
YKA Yellowknife Ar 73.48 341 P P 08 09 58.5 -0.5
comp=Z,0.9nm,0.6s,baz=30,slow=5.2,SNR=15
YKA LR LR 08 43 40.7
comp=Z,33nm,19.6s,baz=0.0,slow=37
Q56A Snyder Ridge, 74.66 308 P P 08 10 06.4 -0.1
NJ2 Nanjing 75.03 61 eP P 08 10 07.9 -0.7
IMAR Indian Mountai 75.61 359 P P 08 10 11.5 +0.1
USRK Ussuriysk Ar. 75.68 44 P P 08 10 11.7 -0.5
comp=Z,1.8nm,0.7s,baz=298,slow=3.1,SNR=3.0
USRK Ussuriysk Ar. 75.68 44 P P 08 10 10.4 -1.8
USRK Ussuriysk Ar. 75.68 44 P P 08 10 10.4 -1.8
ULM Lac du Bonnet 76.31 325 P P 08 10 15.1 -0.5
comp=Z,1.5nm,0.6s,baz=3.7,slow=4.8,SNR=4.0
ULM LR LR 08 45 17.5
comp=Z,41nm,18.1s,baz=75,slow=37
ILAR Eielson Array 76.54 355 P P 08 10 16.9 +0.1
comp=Z,0.3nm,0.6s,baz=350,slow=3.6,SNR=7.9
ILAR Eielson Array 76.54 355 P P 08 10 16.0 -0.7
ILAR Eielson Array 76.54 355 P P 08 10 16.0 -0.7
DAWY Dawson 76.60 352 P P 08 10 16.3 -0.8
HDA Harding Lake 76.90 355 P P 08 10 16.7 -2.1
HDA IAmb IAmb 08 10 26.2
comp=Z,5.2nm,1.1s
DOT Dot Lake 77.45 354 P P 08 10 22.2 +0.3
DOT IAmb IAmb 08 10 28.9
comp=Z,4.6nm,1.2s
KSAR Wonju Array Be 77.61 52 P P 08 10 22.7 -0.5
KSAR Wonju Array Be 77.61 52 P P 08 10 22.7 -0.5
KSRS Korea Array 77.63 52 P P 08 10 22.4 -0.9
comp=Z,2.1nm,0.6s,baz=306,slow=4.7,SNR=6.9
KSRS LR LR 08 49 28.1
comp=Z,41nm,18.9s,baz=130,slow=39
BCAR Beaver Creek A 77.82 353 P P 08 10 22.5 -1.5
DHY Denali Highway 78.26 355 P P 08 10 26.3 -0.2
DHY IAmb IAmb 08 10 32.8
comp=Z,3.9nm,0.9s
PPLA Purkeypile 78.66 358 P P 08 10 28.6 -0.2
PPLA IAmb IAmb 08 10 29.7
comp=Z,3.0nm,0.9s
SCM Sheep Creek Mo 79.49 355 P P 08 10 33.1 -0.1
SCM IAmb IAmb 08 10 42.9
comp=Z,12nm,1.5s
SCM Sheep Creek Mo 79.49 355 P P 08 10 33.1 -0.1
SCM pmax pmax
comp=Z,12nm,1.5s
SKT Skwentna 79.56 357 P P 08 10 32.9 -0.7
SKT IAmb IAmb 08 10 35.1
comp=Z,2.1nm,0.7s
SML Sawmill 79.58 356 P P 08 10 34.1 +0.4
CRQM Cirque 80.22 353 P P 08 10 37.0 -0.3
CRQM IAmb IAmb 08 10 43.7
comp=Z,8.3nm,1.1s
RC01 Rabbit Creek A 80.37 356 P P 08 10 35.6 -2.4
RC01 IAmb IAmb 08 10 40.3
comp=Z,2.6nm,0.7s
ECSD EROS Data Cent 81.33 320 P P 08 10 42.4 -1.0
CCM Cathedral Cave 82.47 313 P P 08 10 49.5 0.0
CCM IAmb IAmb 08 10 53.2
comp=Z,2.9nm,0.7s
CCM Cathedral Cave 82.47 313 P P 08 10 49.5 0.0
CCM pmax pmax
comp=Z,3.0nm,0.7s
PDAR Pinedale Array 88.09 327 P P 08 11 16.9 -0.8
comp=Z,0.4nm,0.6s,baz=57,slow=5.5,SNR=4.5
PDAR LR LR 08 51 45.2
comp=Z,94nm,19.3s,baz=44,slow=36
PDAR Pinedale Array 88.09 327 P P 08 11 16.8 -1.0
ASAR Alice Springs 120.49 97 PKP PKPdf 08 17 17.4 -1.4
comp=Z,0.5nm,0.7s,baz=304,slow=1.3,SNR=5.8
ASAR Alice Springs 120.49 97 PKPdf 08 17 16.9 -1.9
ASAR Alice Springs 120.49 97 PKIKP PKPdf 08 17 16.9 -1.9

ROM 06 08:00:13.1±0.1, 43°.393N±0°.004×12°.503E±0°.004, h6km±1km, ML1.1/1, Error ellipse: s-maj=0.3km s-min=0.1km az=352.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	Monte Foce - G	0.06	117	P	Pg	08 00 14.8	+0.1
ATFO				S	Sg	08 00 16.1	+0.2
ATFO				AML	AML		
comp=E,204µm,0.2s							
ATFO				AML	AML		
comp=N,256µm,0.2s							
ATVO	AVT- Monte Val	0.07	261	P	Pg	08 00 15.0	+0.1
ATVO				S	Sg	08 00 16.4	+0.2
ATVO				AML	AML		
comp=N,166µm,0.2s							
ATVO				AML	AML		
comp=E,110µm,1.0s							
MURB	Monte Urbino	0.13	173	P	Pg	08 00 16.3	+0.5
MURB				S	Sg	08 00 18.9	+1.2
MURB				AML	AML		
comp=E,132µm,1.4s							
MURB				AML	AML		
comp=N,132µm,0.2s							
PIEI	Pieia	0.14	9	P	Pg	08 00 16.7	+0.6
PIEI				S	Sg	08 00 19.5	+1.4
FRON	Frontone	0.20	52	P	Pg	08 00 17.6	+0.5
FRON				S	Sg	08 00 21.3	+1.4
SSFR	Montelago di S	0.21	78	P	Pg	08 00 17.6	+0.4
SSFR				S	Sg	08 00 21.3	+1.3
BADI	Badiali	0.22	302	P	Pg	08 00 18.0	+0.5
BADI				S	Sg	08 00 21.9	+1.5
ATTE	AVT- Monte Tez	0.22	209	P	Pg	08 00 18.2	+0.7
CIMA	Civitanova Mar	0.86	95	S	Sn	08 00 44.0	-0.5

TIR 06 08:14:24.0, 41°.44N×20°.59E, h13km, Md2.8/5
SKO 06 08:14:24.6, 41°.42N×20°.58E, h15km
PDG 06 08:14:24.9±0.3, 41°.43N×20°.60E, h5km, ML2.8/9, Error ellipse: s-maj=1.0km s-min=0.7km az=90.0
BEO 06 08:14:25.5±0.4, 41°.44N×20°.58E, h10km±3km, ML2.4/4
ISC 06 08:14:25.2±1.0, 41°.43N±0°.03×20°.55E±0°.02, h14km±8km, n32, σ1°.39/56, 2C-3D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	Peshkopia	0.27	342	iPG	Pg	08 14 30.0	-0.9
PHP				iSG	Sg	08 14 34.2	-0.5
OHR	Ohrid	0.37	149⇓	iPg	Pg	08 14 32.2	-0.5
OHR				iSg	Sb	08 14 38.4	-0.9
OHR				eLg	Lg	08 14 38.7	
comp=N,283nm,0.3s							
TIR	Tirane	0.52	261	ePg	Pg	08 14 35.3	-0.2
TIR				eSg	Sb	08 14 43.7	+0.1
TIR	Tirane	0.52	261	iPG	Pg	08 14 35.3	-0.2
TIR				iSG	Sb	08 14 44.0	+0.4
PUK	Puka	0.78	321	iPG	Pg	08 14 40.1	-0.3
PUK				iSG	Sb	08 14 51.6	+0.3
SKO	Skopje	0.86	51	ePg	Pg	08 14 40.4	-1.5
SKO				eSg	Sg	08 14 52.8	-0.3
SKO	Skopje	0.86	51	iPg	Pg	08 14 41.3	-0.6
SKO				iSg	Sb	08 14 53.5	+0.1
SKO				eLg	Lg	08 14 53.9	
comp=N,17nm,0.3s							
FNA	Florina	0.90	136	iPG	Pg	08 14 41.8	-0.9
FNA				iSG	Sb	08 14 54.6	0.0
BCI	Bajram Curri	1.00	339	iPN	Pb	08 14 44.0	-0.4
BCI				iSN	Sn	08 14 58.4	-0.5
PVY	Plav	1.24	339	ePg	Pn	08 14 48.0	-0.4
PVY				eSg	Sg	08 15 07.5	+2.1
STIP	Stip	1.26	77⇓	iPg	Pg	08 14 51.0	+1.6
STIP				iSg	Sg	08 15 11.1	+5.4
STIP				eLg	Lg	08 15 13.2	
comp=N,8.6nm,0.3s							
DRME	Dracevica, Mon	1.27	307	ePg	Pg	08 14 48.5	-0.1
DRME				iSg	Sg	08 15 09.8	+3.6
PDG	Podgorica	1.39	316	ePg	Pb	08 14 50.9	-0.1
PDG				eSg	Sg	08 15 10.6	+0.6
TTG	Podgorica	1.39	316	ePg	Pg	08 14 51.4	-0.5
TTG				eSg	Sg	08 15 13.6	+3.6
VAY	Valandovo	1.52	93	ePg	Pn	08 14 52.4	+0.3
VAY				eSg	Sg	08 15 13.2	-1.1
VAY	Valandovo	1.52	93	P	Pn	08 14 52.1	+0.1
VAY				S	Sb	08 15 13.0	+0.5
VAY	Valandovo	1.52	93⇓	iPg	Pb	08 14 52.7	-0.6
VAY				iSg	Sg	08 15 13.6	-0.7
VAY				eLg	Lg	08 15 14.5	
comp=E,26nm,0.3s							

KOME Kolasin 1.61 332⇑iPn Pg 08 14 55.4 -0.8
KOME eSn Sg 08 15 20.1 +2.9
CEME Cevo 1.65 313 ePn Pb 08 14 54.9 -0.6
CEME eSn Sg 08 15 20.5 +2.1
BARS Barje 1.67 34 ePg Pb 08 14 55.4 -0.5
NKME Niksic 1.79 319 ePn Pb 08 14 57.7 -0.1
NKME eSn Sg 08 15 24.0 +1.3
BOSS Bosilegrad 1.79 53 ePn Pn 08 14 56.0 +0.2
HCY Herceg Novi 1.84 304⇑iPn Pb 08 14 58.4 -0.3
HCY eSn Sg 08 15 25.5 +1.1
SJES Sjenica 1.88 347 ePg Pb 08 14 58.9 -0.5
SJES eSg Sg 08 15 24.4 -1.3
TREB Trebinje 2.08 309 ePg Pg 08 15 03.8 -1.3
BRY Bratogost 2.10 315 ePn Pb 08 15 02.4 -0.7
BRY eSn Sg 08 15 31.5 -1.1
UPM Unac-Piva 2.15 326 ePn Pb 08 15 02.7 -1.4
UPM eSn Sg 08 15 33.0 -1.4
IVAS Ivanjica 2.16 352 ePn Pn 08 15 01.0 0.0
VTS Vitosha 2.33 58 ePn Pn 08 15 03.7 +0.5
VTS Vitosha 2.33 58 P Pn 08 15 03.8 +0.5
GRUS Gruza 2.46 3 ePn Pn 08 15 06.1 +1.1
DIVS Divibare 2.70 351 ePn Pn 08 15 08.5 +0.2

*BJI **06** 08:27:30.6±0.0,21.°40S×177.°70W,h363km,mB5.3/28, mb4.8/50*
*NEIC **06** 08:27:31.1±2.0,21.°90S±0.°07×177.°89W±0.°08, h367km±5km,mb5.0/190,Error ellipse: s-maj=11.5km s-min=10.2km az=119.0*
*KLM **06** 08:27:32.0,21.°84S×177.°94W,h363km,mb5.6*
*BGR **06** 08:27:32.5±0.0,22.°01S×177.°81W,h375km*
*MOS **06** 08:27:34.0±3.2,21.°70S×178.°07W,h376km,mb4.9/30, Error ellipse: s-maj=8.8km s-min=7.0km az=72.5*
*IDC **06** 08:27:34.6±0.6,21.°82S×178.°05W,h393km±5km,mb4.4/24, mb1 4.5/26,mb1mx4.4/33,mbtmp5.1/26,Error ellipse: s-maj=9.5km s-min=8.1km az=146.0*
*GCMT **06** 08:27:37.1±0.2,21.°86S±0.°03×178.°10W±0.°02, h384km±1km,MW5.4/106,Moment Tensor Solution. s106,c158; Duration: 1s2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.65±.03; $M_{\theta\theta}$0.25±.05; $M_{\phi\phi}$0.39±.05; $M_{r\theta}$-0.75±.04; $M_{\theta\phi}$0.22±.04; $M_{\phi r}$-1.17±.04; Best double couple: $M_0$1.51500×10^{17} NP1:ϕ_s218.00000°,δ12.00000°, λ-85.00000°. NP2:ϕ_s33.00000°,δ78.00000°,λ-91.00000°. Principal axes: T 1.4670, Plg33.0000°, Azm124.0000°; N 0.0940, Plg1.0000°, Azm33.0000°; P -1.5620, Plg57.0000°, Azm302.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
ISC 06 08:27:31.8±0.4,**21.°93S**±0.°04×**177.°91W**±0.°04, **h374**km±4km,**h376km:pP-P,n807,**σ1s**24**/876,**mb5.1**/177, **29C-41D,Fiji Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSVF Nonsavu 5.65 317 Pn 08 29 00.4 +0.6
MSVF Nonsavu 5.65 317 i P Pn 08 28 58.6 -1.2
MSVF pmax pmax
comp=Z,1μm,1.0s
RIZ Raoul Island 7.29 180 P Pn 08 29 17.0 -1.0
RIZ S S 08 30 41.9 -2.7
RAO Raoul Island 7.29 180 P Pn 08 29 17.0 -1.0
comp=Z,52nm,0.3s,baz=67,slow=22,SNR=7.6
RAO S S 08 30 41.7 -3.0
comp=Z,1μm,0.3s,baz=265,slow=23,SNR=15
RAO Raoul Island 7.29 180 Pn Pn 08 29 17.2 -0.9
RAO S S 08 30 42.7 -2.1
RAO Raoul Island 7.29 180 P Pn 08 29 17.2 -0.9
RAO S S 08 30 42.7 -2.1
GLKZ Green Lake 7.30 180 P Pn 08 29 17.0 -1.2
GLKZ S S 08 30 39.3 -5.7
NIUE Niue 8.00 71 P Pn 08 29 26.3 -0.1
baz=7.6,SNR=15
NIUE Niue 8.00 71 Pn 08 29 25.7 -0.8
NIUE S 08 30 55.3 -4.9
AFI Afiamalu 9.88 37 P Pn 08 29 44.8 -3.8
comp=Z,16nm,0.3s,baz=292,slow=6.0,SNR=18
AFI S S 08 31 29.1 -12
comp=Z,22nm,0.3s,baz=43,slow=22,SNR=7.5
FUNA Funafuti 13.62 348 P P 08 30 28.8 -1.6
DZM Mont Dzumac 14.52 267 eP Pn 08 30 42.4 -0.2
comp=Z,189nm,0.9s
DZM Mont Dzumac 14.52 267 P Pn 08 30 42.2 -0.4
comp=Z,2.7nm,0.3s,baz=81,slow=16,SNR=61
DZM S S 08 33 13.2 -3.1
baz=283,slow=22,SNR=1.6
DZM Mont Dzumac 14.52 267 P P 08 30 41.2 +1.0
NFK Norfolk Island 14.60 238 P Pn 08 30 45.6 +2.2
baz=15,SNR=4.3
NOUC Port Laguerre 14.64 266 P Pn 08 30 43.8 -0.2
OUZ Omahuta 15.19 207 P Pn 08 30 50.8 +0.8
SANVU Saraoutou 15.50 292 P P 08 30 51.8 +0.9
SANVU IAmb IAmb 08 30 59.8
comp=Z,122nm,0.9s
KUZ Kuaotunu 15.77 199 P Pn 08 30 55.5 -1.2
MXZ Matakaoa Point 15.92 191 P P 08 30 56.4 +1.2
MXZ IAmb IAmb 08 31 08.2
comp=Z,54nm,0.9s
MXZ S 08 33 43.6 -0.1
MXZ Matakaoa Point 15.92 191 P P 08 30 56.4 +1.2
WMGZ Waiomatatini S 16.15 191 P Pn 08 30 59.8 -1.3
WMGZ S S 08 33 44.6 -3.7
HAZ Te Kaha 16.21 192 P P 08 30 58.8 +0.5
HAZ S S 08 33 47.2 -2.1
MKAZ Moumakai 16.27 200 P P 08 31 00.6 +1.6
PUZ Puketiti 16.42 191 P P 08 31 01.3 +0.6
PUZ S S 08 33 49.6 -4.0
RUGZ Raukumara Rang 16.43 192 P P 08 31 01.4 +0.6
RUGZ S S 08 33 50.8 -3.2
TOZ Tahuroa Road 16.74 198 P P 08 31 05.5 +1.4
URZ Urewera 16.83 194 P P 08 31 04.2 -0.8
comp=Z,20nm,0.3s,baz=307,slow=2.7,SNR=53
URZ S S 08 34 01.5 0.0
comp=Z,16nm,0.3s,baz=247,slow=23,SNR=16
URZ Urewera 16.83 194 P P 08 31 04.6 -0.4
URZ IAmb IAmb 08 31 13.0
comp=Z,69nm,0.7s
URZ S 08 34 02.5 +1.0
URZ Urewera 16.83 194 P P 08 31 03.0 -2.0
URZ S S 08 33 55.5 -6.1
CNGZ Carnagh Statio 16.83 191 P Pn 08 31 08.1 -1.0
TKGZ Te Karaka 16.86 192 P P 08 31 06.2 +1.0
TKGZ S S 08 33 56.2 -5.9
RAR Rarotonga 16.89 91 P P 08 31 07.5 +1.7
comp=Z,0.9nm,0.3s,baz=261,slow=6.4,SNR=6.8
RAR Rarotonga 16.89 91 P P 08 31 05.4 -0.4
RAR Rarotonga 16.89 91 P P 08 31 05.4 -0.4
RAR pmax pmax
comp=Z,214nm,1.4s
RAGZ Rawiri 16.99 193 P P 08 31 06.9 0.0
RAGZ S S 08 34 03.6 -1.4
RIGZ Rimuhau 17.13 192 P P 08 31 08.8 +0.5
RTZ Ruatahuna 17.20 194 P P 08 31 09.4 +0.3
RTZ S S 08 34 02.9 -6.0
SNGZ Shannon Statio 17.29 193 P P 08 31 10.9 +1.0
HIZ Hauiti 17.66 199 P P 08 31 13.4 -0.4
HIZ Hauiti 17.66 199 P P 08 31 15.2 +1.3
BKZ Black Stump Fm 17.84 194 P P 08 31 15.0 -0.8
BKZ IAmb IAmb 08 31 21.1
comp=Z,34nm,0.6s
BKZ S 08 34 19.8 -1.5
BKZ Black Stump Fm 17.84 194 P P 08 31 14.5 -1.3
FWVZ Far West T-bar 18.15 196 P P 08 31 20.3 +1.0
WHVZ Whangaehu Hut 18.17 196 P P 08 31 21.5 +2.0
PKVZ Pokaka 18.24 197 P P 08 31 21.4 +1.4
MOVZ Moawhango 18.24 196 P P 08 31 20.8 +0.7
VRZ Vera Road 18.25 198 P P 08 31 23.8 +3.7
MHEZ Mangahewa 18.34 200 P P 08 31 26.2 +5.1
KHEZ Kahui Hut 18.64 200 P P 08 31 27.6 +3.3
NBEZ Newall Road No 18.66 200 P P 08 31 28.4 +3.9
WAZ Wanganui 18.77 197 P P 08 31 25.8 +0.1
NMEZ Namu Road 18.79 200 P P 08 31 30.0 +4.2
MSWZ Moikau Station 20.27 195 P P 08 31 39.1 -1.4
MSWZ S 08 35 00.0 -3.6
SNZO South Karori 20.30 196 P P 08 31 39.9 -0.9
SNZO S 08 35 04.1 0.0
BHW Baring Head 20.35 196 P P 08 31 40.3 -0.9
BHW S 08 35 04.8 -0.1
PLWZ Palliser 20.41 195 P P 08 31 40.7 -1.1
PLWZ S 08 35 05.8 -0.2
QRZ Quartz Range 20.50 201 P P 08 31 42.6 0.0
TUWZ Tuamarina 20.62 198 P P 08 31 42.6 -1.0
CMWZ Cape Campbell 20.84 197 P P 08 31 46.7 +1.0
CMWZ S 08 35 13.8 +0.9
BSWZ Blackbirch Sta 20.90 197 P P 08 31 46.1 -0.1
BSWZ S 08 35 16.3 +2.4
THZ Tophouse 21.23 199 P P 08 31 49.4 +0.2
THZ IAmb IAmb 08 31 56.1
comp=Z,74nm,0.7s
KHZ Kahutara 21.65 197 P P 08 31 52.2 -0.7
KHZ IAmb IAmb 08 31 55.8
comp=Z,84nm,1.0s
KHZ S 08 35 27.1 +1.3
LTZ Lake Taylor 22.35 199 P P 08 31 58.2 -1.3
LTZ S 08 35 35.2 -2.0
LHI Lord Howe Isla 22.64 240 P P 08 32 03.6 +1.5
baz=23,SNR=5.0
LHI Lord Howe Isla 22.64 240 P P 08 32 01.3 -0.8
MQZ McQueen's Vall 23.09 198 P P 08 32 04.8 -1.2
MQZ IAmb IAmb 08 32 08.3
comp=Z,56nm,1.0s
RPZ Rata Peaks 23.58 200 P P 08 32 11.0 +0.5
comp=Z,31nm,0.5s,baz=8.4,slow=3.9,SNR=26
RPZ S S 08 36 02.6 +6.0
comp=Z,8.8nm,0.6s,baz=340,slow=22,SNR=5.8
RPZ Rata Peaks 23.58 200 P P 08 32 10.1 -0.3
RPZ IAmb IAmb 08 32 14.6
comp=Z,64nm,1.1s
FOZ Fox Glacier 23.84 202 P P 08 32 12.0 -0.7
FOZ IAmb IAmb 08 32 17.2
comp=Z,59nm,0.7s
HNR Honiara 24.63 297 P P 08 32 20.1 -0.1
comp=Z,41nm,0.4s,baz=73,slow=1.5,SNR=4.6
HNR Honiara 24.63 297 P P 08 32 19.6 -0.7
HNR Honiara 24.63 297 P P 08 32 19.6 -0.7
HNR pmax pmax
comp=Z,140nm,0.9s
ODZ Otahua Downs 24.90 200 P P 08 32 22.1 -0.2
MLZ Mavora Lakes 26.03 203 P P 08 32 31.9 -0.6
MLZ IAmb IAmb 08 32 36.5
comp=Z,29nm,0.7s
WHZ Wether Hill Ro 26.55 202 P P 08 32 36.4 -0.6
WHZ IAmb IAmb 08 32 44.0
comp=Z,63nm,0.9s
PAE Paea 26.97 86 eP P 08 32 42.2 +1.2
comp=Z,9.4nm,1.2s
PPT2 Papeete2 26.99 86 eP P 08 32 42.5 +1.2
comp=Z,71nm,1.1s
PPT Papeete 27.00 86 P P 08 32 42.2 +1.0
comp=Z,63nm,0.9s,baz=59,slow=5.9,SNR=4.5
PPTF Pamatai, Papee 27.00 86 P P 08 32 40.6 -0.8
PPTF IAmb IAmb 08 32 46.7
comp=Z,94nm,1.0s
TIAR Tiarei 27.21 86 eP P 08 32 44.4 +1.2
comp=Z,33nm,1.0s
ARMA Armidale 28.55 246 P P 08 32 56.5 +1.6
baz=29,SNR=54
ARMA Armidale 28.55 246 P P 08 32 56.2 +1.3
EIDS Eidsvold 28.58 257 P P 08 32 55.6 +0.4
baz=29,SNR=12
EIDS Eidsvold 28.58 257 P P 08 32 55.6 +0.4
EIDS IAmb IAmb 08 32 56.9
comp=Z,71nm,1.1s
PMOR Pomariorio Ree 29.25 82 eP P 08 33 02.3 +1.1
comp=Z,108nm,1.1s
MGCD Mangrove Creek 29.57 241 P P 08 33 05.5 +1.7
baz=30,SNR=15
RIV Riverview 29.69 240 P P 08 33 06.8 +2.1
baz=30,SNR=3.9
RMQ Roma 30.69 255 P P 08 33 15.2 +1.5
baz=31,SNR=48
CNB Canberra Magne 31.52 238 P P 08 33 22.1 +1.3
baz=32,SNR=38
CAN Canberra 31.80 238 P P 08 33 24.3 +1.0
CAN IAmb IAmb 08 33 25.4
comp=Z,108nm,0.8s
CAN Canberra 31.80 238 P P 08 33 24.3 +1.0
CAN pmax pmax
comp=Z,109nm,0.8s
YNG Young 32.02 240 P P 08 33 26.2 +1.0
baz=32,SNR=10
MILA Mila 32.20 235 P P 08 33 27.8 +1.2
baz=33,SNR=3.9
CMSA Cobar Meteorol 33.76 246 P P 08 33 40.6 +0.6
baz=34,SNR=125
QLP Quilpie 34.74 255 P P 08 33 48.7 +0.3
baz=35,SNR=39
TOO Toolangi 35.14 235 P P 08 33 52.4 +0.7
baz=36,SNR=39
TOO Toolangi 35.14 235 P P 08 33 52.1 +0.4
TOO IAmb IAmb 08 33 53.0
comp=Z,35nm,0.7s
TOO Toolangi 35.14 235 P P 08 33 52.1 +0.4
TOO pmax pmax
comp=Z,35nm,0.7s
MOO Moorlands 35.58 227 P P 08 33 55.8 +0.5
baz=36,SNR=4.9
MTSU Mount Surprise 35.63 269 P P 08 33 56.3 +0.2
baz=36,SNR=54
TAU Tasmania Unive 35.68 226 P P 08 33 56.8 +0.6
TAU IAmb IAmb 08 34 00.5
comp=Z,37nm,0.7s
TAU Tasmania Unive 35.68 226 P P 08 33 56.8 +0.6
TAU pmax pmax
comp=Z,37nm,0.7s
PMG Port Moresby 35.77 285 P P 08 33 57.2 -0.1
PMG Port Moresby 35.77 285 deP P 08 33 56.9 -0.3
PMG pmax pmax
comp=Z,681nm,1.0s
PATS Pohnpei 36.89 318 P P 08 34 06.0 -0.5
PATS IAmb IAmb 08 34 07.5
comp=Z,104nm,1.1s
STKA Stephens Creek 37.26 246 P P 08 34 10.3 +0.7
baz=38,SNR=72
STKA Stephens Creek 37.26 246 P P 08 34 10.2 +0.7
comp=Z,125nm,0.7s,baz=90,slow=9.8,SNR=268
STKA S S 08 39 27.4 -1.3
comp=Z,2.7nm,0.7s,baz=350,slow=22,SNR=3.9
STKA Stephens Creek 37.26 246 P P 08 34 10.2 +0.7
STKA Stephens Creek 37.26 246 P P 08 34 10.2 +0.7
STKA pmax pmax
comp=Z,29nm,0.8s
COEN Coen 37.78 275 P P 08 34 14.5 +0.5
baz=38,SNR=45
COEN Coen 37.78 275 P P 08 34 14.4 +0.3
COEN IAmb IAmb 08 34 16.8
comp=Z,88nm,0.8s
MANU Manus Island 39.12 296 P P 08 34 24.8 -0.3
QIS Mount Isa 39.53 264 P P 08 34 28.7 +0.3
baz=40,SNR=6.3
HTT Hallett 39.65 244 P P 08 34 29.4 +0.2
baz=40,SNR=104
BBOO Buckleboo 42.01 245 P P 08 34 47.9 -0.3
baz=42,SNR=80
BBOO Buckleboo 42.01 245 P P 08 34 47.8 -0.4
BBOO IAmb IAmb 08 34 48.9
comp=Z,140nm,0.8s
AS31 Alice Springs 44.29 258 P P 08 35 04.8 -1.6
ASAR Alice Springs 44.29 258 P P 08 35 06.2 -0.3
comp=Z,117nm,0.8s,baz=89,slow=8.2,SNR=640
ASAR pP pwP 08 36 24.8 +0.9
comp=Z,22nm,0.9s,baz=88,slow=8.5,SNR=4.1
ASAR PcP PcP 08 36 45.0 +1.6
comp=Z,18nm,0.8s,baz=106,slow=3.5,SNR=8.4
ASAR ScP ScP 08 40 00.8 +1.8
comp=Z,3.4nm,0.8s,baz=115,slow=5.3,SNR=5.0
ASAR S S 08 41 10.2 -1.7
comp=Z,3.9nm,0.8s,baz=91,slow=16,SNR=10
ASAR Alice Springs 44.29 258 P P 08 35 04.8 -0.8
WR0 Warramunga Arr 44.32 263 P P 08 35 05.7 -1.0
WB0 Warramunga Arr 44.49 264 P P 08 35 06.8 -1.2
WB0 IAmb IAmb 08 35 08.2
comp=Z,71nm,0.8s
WB2 Warramunga Arr 44.49 263 P P 08 35 07.1 -0.9
WB2 IAmb IAmb 08 35 09.1
comp=Z,94nm,0.9s
WRAB Tennant Creek 44.50 263 P P 08 35 05.9 -2.1
WRAB IAmb IAmb 08 35 08.2
comp=Z,79nm,0.9s
WRAB Tennant Creek 44.50 263 ceP P 08 35 06.9 -1.2
WRAB pmax pmax
comp=Z,76nm,0.9s
WRA Warramunga Arr 44.51 263 P P 08 35 07.1 -1.1
comp=Z,66nm,0.9s,baz=98,slow=7.8,SNR=161
WRA pP pwP 08 36 26.6 +0.4
comp=Z,18nm,1.1s,baz=100,slow=7.9,SNR=2.7
WRA PcP PcP 08 36 42.8 -1.3
comp=Z,16nm,1.0s,baz=96,slow=3.7,SNR=6.8
WRA Warramunga Arr 44.51 263 P P 08 35 07.0 -1.1
WRA Warramunga Arr 44.51 263 P P 08 35 07.0 -1.1
WRA pmax pmax
comp=Z,5.0nm,0.9s
JAY Jayapura 44.59 290 P P 08 35 08.3 -0.6
comp=Z,1μmcomp=Z,123nm,0.8s
KDU Kakadu 48.08 272 P P 08 35 34.8 -0.8
baz=48,SNR=15
FORT Forrest 48.82 248 P P 08 35 40.6 -0.4
baz=49,SNR=101
FORT Forrest 48.82 248 P P 08 35 40.8 -0.2
FORT S 08 42 15.0 -0.4
WRKA Warakurna 49.17 255 P P 08 35 43.6 -0.2
baz=50,SNR=228
MTN Manton Dam 49.28 272 P P 08 35 43.8 -0.8
baz=50,SNR=6.5
MTN Manton Dam 49.28 272 P P 08 35 43.9 -0.8
MTN IAmb IAmb 08 35 45.2
comp=Z,39nm,0.6s
KNRA Kununurra 50.66 267 P P 08 35 54.7 -0.2
baz=51,SNR=48
KNRA Kununurra 50.66 267 P P 08 35 55.0 0.0
FITZ Fitzroy Crossi 52.94 263 P P 08 36 11.4 -0.1
baz=53,SNR=22
FITZ Fitzroy Crossi 52.94 263 P P 08 36 11.1 -0.4
FITZ IAmb IAmb 08 36 12.9
comp=Z,79nm,1.1s
SWI Sorong 53.70 286 P P 08 36 17.0 -0.1
comp=Z,2μmcomp=Z,176nm,0.8s
KMBL Kambalda 54.06 246 P P 08 36 19.4 -0.1
baz=54,SNR=23
NLAI Namlea 56.45 281 P P 08 36 36.6 +0.1
comp=Z,111nm,1.4s
VNDA Vanda 56.50 185 P P 08 36 38.6 +2.7
comp=Z,6.0nm,0.8s,baz=346,slow=6.4,SNR=8.4
VNDA PcP PcP 08 37 30.5 +2.9
comp=Z,8.8nm,0.8s,baz=329,slow=1.6,SNR=3.9
VNDA pP pwP 08 37 58.8 +1.9
comp=Z,6.8nm,1.2s,baz=265,slow=2.7,SNR=1.3
SOEI Soe 56.64 273 P P 08 36 37.9 -0.1
comp=Z,4μmcomp=Z,387nm,1.1s
SOEI Soe 56.64 273 P P 08 36 38.6 +0.6
LBMI Labuha 57.18 284 P P 08 36 41.4 -0.2
comp=Z,123nm,0.9s
PSA00 Pilbara Seismi 57.44 258 P P 08 36 42.8 -0.5
PSA00 Pilbara Seismi 57.44 258 P P 08 36 41.9 -1.5
PSA00 IAmb IAmb 08 36 43.0
comp=Z,77nm,0.9s
KLBR Kellerberrin 57.54 246 P P 08 36 43.4 -0.5
baz=58,SNR=118
MEEK Meekatharra 57.54 252 P P 08 36 43.0 -1.0
baz=58,SNR=24
NWAO Narrogin (SRO) 57.81 244 P P 08 36 45.7 0.0
baz=58,SNR=33
NWAO Narrogin (SRO) 57.81 244 P P 08 36 45.8 0.0
NWAO IAmb IAmb 08 36 47.9
comp=Z,90nm,0.8s
NWAO Narrogin (SRO) 57.81 244 P P 08 36 45.9 +0.2
NWAO IAmb IAmb 08 36 47.9
comp=Z,72nm,0.8s
NWAO Narrogin (SRO) 57.81 244 P P 08 36 45.9 +0.2
NWAO pmax pmax
comp=Z,72nm,0.8s
RKGY Rocky Gully 57.84 242 P P 08 36 46.7 +0.8
baz=58,SNR=7.5
TNTI Ternate 57.91 286 P P 08 36 47.8 +1.1
comp=Z,119nm,0.9s
TNTI Ternate 57.91 286 P P 08 36 46.8 +0.1
TNTI IAmb IAmb 08 36 47.5
comp=Z,108nm,1.0s
SANI Sanana 57.95 282 P P 08 36 46.2 -0.7
comp=Z,1μmcomp=Z,110nm,1.0s
BLDU Ballidu 58.56 247 P P 08 36 50.4 -0.5
baz=59,SNR=42
MUN Mundaring 58.79 245 P P 08 36 52.6 +0.1
baz=59,SNR=14
MORW Morawa 59.37 248 P P 08 36 56.1 -0.3
baz=60,SNR=28
MORW Morawa 59.37 248 P P 08 36 55.5 -0.9
LUWI Luwuk 61.29 281 P P 08 37 11.1 +1.7
comp=Z,3μmcomp=Z,224nm,1.1s
LUWI Luwuk 61.29 281 P P 08 37 09.8 +0.3
DDMP Don Marcelino, 61.84 290 eP P 08 37 10.4 -2.6
BKSI Bulukumba 62.05 276 P P 08 37 13.9 -0.6
comp=Z,972nmcomp=Z,73nm,0.9s
GIRL Giralia 62.26 255 P P 08 37 16.9 +1.2
baz=62,SNR=9.0
GIRL Giralia 62.26 255 P P 08 37 16.9 +1.2
APSI Ampana 62.37 281 P P 08 37 17.4 +0.9
comp=Z,896nmcomp=Z,84nm,1.1s
BNSI Bone 62.41 277 P P 08 37 16.9 +0.1
comp=Z,1μmcomp=Z,88nm,1.2s
MRSI Marisa 62.67 283 P P 08 37 18.2 -0.4
comp=Z,815nmcomp=Z,43nm,1.1s
CASY Casey 62.72 206 P P 08 37 18.6 +0.7
CASY IAmb IAmb 08 37 19.9
comp=Z,56nm,0.8s
KCP Kidapawan 62.81 291⇑iP P 08 37 19.7 +0.2
SPSI Sidrap Palu 62.88 277 P P 08 37 18.8 -1.2
comp=Z,62nm,1.0s
PLAI Plampang 62.98 271 P P 08 37 20.3 -0.3
comp=Z,2μmcomp=Z,246nm,1.0s
SKMP Bagumbayan, Su 63.05 290 eP P 08 37 19.3 -1.7
TTSI Tana Toraja 63.19 278 P P 08 37 21.7 -0.3
comp=Z,44nm,1.0s
BUKP Musuan 63.25 291 eP P 08 37 23.0 +0.6
BUTP Butuan 63.31 293 eP P 08 37 22.4 -0.2
MPSI Mapaga 64.47 281 P P 08 37 29.8 -0.4
comp=Z,98nm,1.2s
MSLP Maasin 64.54 294 eP P 08 37 29.3 -1.3
PAGZ Pagadian 64.70 291 eP P 08 37 31.8 +0.2
IGBI Denpasar 65.42 270 P P 08 37 36.9 +0.6
comp=Z,244nm,1.0s
SRBI Singaraja 65.61 271 P P 08 37 37.2 -0.3
comp=Z,206nm,1.0s
JAGI Jajag, Banyuwa 66.46 270 P P 08 37 41.7 -1.2
comp=Z,202nm,1.0s
JAGI Jajag, Banyuwa 66.46 270 P P 08 37 40.5 -2.4
PVCP Virac 66.89 296 eP P 08 37 44.4 -1.0
GMJI Gumukmas 67.19 270 P P 08 37 46.8 -0.6
comp=Z,1μmcomp=Z,126nm,1.0s
OTRP Odiongan 68.06 294 eP P 08 37 51.3 -1.4
QSPA South Pole Qui 68.15 180 P P 08 37 54.8 +2.3
comp=Z,36nm,1.0s,baz=21,slow=0.8,SNR=104
QSPA South Pole Qui 68.15 180 P P 08 37 53.6 +1.1
QSPA IAmb IAmb 08 38 01.7
comp=Z,33nm,0.7s
GRJI Gresik 68.56 271 P P 08 37 56.8 +1.0
comp=Z,2μmcomp=Z,256nm,0.9s
POLP Polillo Island 69.31 296 eP P 08 38 05.5 +5.2
PCJI Pacitan 69.32 269 P P 08 38 00.8 +0.3
comp=Z,4μmcomp=Z,511nm,1.0s
NGJI Ngawi 69.34 270 P P 08 38 00.9 +0.3
comp=Z,154nm,1.0s
WOJI Wonogiri, Jawa 69.68 270 P P 08 38 02.9 +0.3
comp=Z,173nm,1.1s
ENPP El Nido 69.72 292 eP P 08 38 01.9 -0.9
TGY Tagaytay City 69.83 295 P P 08 38 04.4 +0.8
comp=Z,134nm,0.3s,baz=180,slow=22,SNR=3.4
BATP Bataraza 70.02 289 eP P 08 38 04.8 +0.1
UGM Wanagama 70.03 269 P P 08 38 05.1 +0.3
comp=Z,287nm,1.2s
UGM Wanagama 70.03 269 P P 08 38 04.6 -0.2
BALP Baler 70.12 297 eP P 08 38 02.6 -2.6
KKM Kota Kinabalu 70.21 285 P P 08 38 06.6 +0.6
KKM IAmb IAmb 08 38 06.7
comp=Z,38nm,0.8s
SMRI Semarang 70.40 270 P P 08 38 07.1 0.0
CAUP Cauayan 70.54 298 eP P 08 38 13.2 +5.6
MJAR Matsushiro Arr 71.41 324 P P 08 38 12.3 -0.2
comp=Z,21nm,0.9s,baz=152,slow=5.7,SNR=28
MJAR Matsushiro Arr 71.41 324 P P 08 38 11.4 -1.0
MJAR Matsushiro Arr 71.41 324 P P 08 38 11.5 -1.0
MJAR pmax pmax
comp=Z,11nm,1.0s
MAJO Matsushiro 71.41 324 P P 08 38 12.2 -0.3
MAJO IAmb IAmb 08 38 13.4
comp=Z,38nm,1.0s
MAJO Matsushiro 71.41 324 P P 08 38 12.2 -0.3
MAJO pmax pmax
comp=Z,38nm,1.0s
MAT Matsushiro 71.41 324 P P 08 38 12.1 -0.4
MAT S S 08 46 59.8 +0.1
MJB9 Matsu-Tunnel 71.41 324 P P 08 38 11.7 -0.9
MJB9 IAmb IAmb 08 38 13.3

comp=Z,38nm,1.0s
APYP Conner 71.48 299 eP P 08 38 12.9 -0.3
KPJI Karang Pucung 71.71 269 P P 08 38 14.7 0.0
comp=Z,156nm,0.9s
CMJI Cimerak 72.00 269 P P 08 38 16.1 -0.4
comp=Z,194nm,1.0s
STKI Sintang 72.08 278 P P 08 38 17.8 +0.9
SBUM Sibu 72.33 280 P P 08 38 17.6 -0.9
SBUM IAmb IAmb 08 38 20.1
comp=Z,18nm,1.0s
SBUM Sibu 72.33 280 P P 08 38 19.0 +0.6
CISI Cisompet, Garu 72.66 269 P P 08 38 20.1 -0.4
comp=Z,3µmcomp=Z,203nm,1.2s
CISI Cisompet, Garu 72.66 269 P P 08 38 18.2 -2.2
JNU Nakatsue 73.37 317 P P 08 38 24.2 +0.1
comp=Z,52nm,1.1s,baz=110,slow=5.4
JNU Nakatsue 73.37 317 P P 08 38 24.6 +0.5
CNJI Cibinong 73.39 269 P P 08 38 24.5 -0.1
comp=Z,2µmcomp=Z,286nm,1.0s
KSM Kuching 73.70 278 P P 08 38 26.0 -0.4
KSM Kuching 73.70 278 P P 08 38 27.0 +0.6
ATKA Atka Island 73.88 2 P P 08 38 26.0 -0.5
CBJI Citeko 73.96 269 P P 08 38 32.0 +4.1
DBJI Dramaga 74.00 269 P P 08 38 28.3 +0.1
comp=Z,247nm,1.1s
TPI Tanjungpandan 74.54 273 P P 08 38 31.8 +0.6
comp=Z,439nmcomp=Z,44nm,1.0s
NACB Ninganchiao 74.55 304 P P 08 38 28.2 -2.8
TPUB Ta-pu 74.82 304 P P 08 38 31.2 -1.3
SSLB Suanglung 74.83 304 P P 08 38 31.3 -1.3
SSLB IAmb IAmb 08 38 33.4
comp=Z,62nm,1.2s
YHNB Yeheng 74.98 305 P P 08 38 33.1 -0.4
BLSI Bandar Lampung 75.83 270 P P 08 38 38.7 +0.2
comp=Z,85nm,0.4s
UNV Unalaska Valle 76.10 7 P P 08 38 39.1 +0.1
PPBI Pangkal Pinang 76.17 273 P P 08 38 41.6 +1.2
comp=Z,17µmcomp=Z,68nm,1.0s
KASI Kota Agung 76.46 269 P P 08 38 41.4 -0.6
comp=Z,2µmcomp=Z,205nm,1.0s
KLSI 76.55 270 P P 08 38 41.6 -0.9
comp=Z,12nm,1.3s
LWLI Liwa 77.05 270 P P 08 38 48.8 +3.4
MDSI Maura Dua 77.13 270 P P 08 38 44.6 -1.1
comp=Z,856nmcomp=Z,60nm,0.9s
YSS Yuzh-Sakhalins 77.21 334 P P 08 38 46.5 +1.2
YSS Yuzh-Sakhalins 77.21 334 eP P 08 38 47.0 +1.7
YSS pmax pmax
comp=Z,30nm,1.2s
PETK Petropavlovsk- 77.67 345 P P 08 38 47.9 +0.2
comp=Z,28nm,1.0s,baz=95,slow=3.8,SNR=9.1
PETK Petropavlovsk- 77.67 345 P P 08 38 48.1 +0.4
PETK Petropavlovsk- 77.67 345 P P 08 38 48.1 +0.4
KSRS Korea Array 78.01 319 P P 08 38 50.8 +0.8
comp=Z,11nm,1.0s,baz=141,slow=6.1,SNR=22
KSAR Wonju Array Be 78.03 319 P P 08 38 50.3 +0.3
KSAR Wonju Array Be 78.03 319 P P 08 38 50.3 +0.3
CNBA Chernabura Isl 78.03 11 P P 08 38 50.9 +1.2
SDPT Sand Point 78.39 10 P P 08 38 52.3 +0.7
KSI Kapahiang 78.91 271 P P 08 38 55.3 -0.2
comp=Z,13µmcomp=Z,115nm,0.8s
PKM Mcpherson Peak 78.93 45 P P 08 38 57.0 +1.7
baz=233
ARVC Arvin 79.72 46 P P 08 39 00.7 +1.5
baz=234
PMSA Palmer Station 79.95 157 P P 08 39 03.5 +3.6
comp=Z,30nm,1.0s,baz=117,slow=4.7,SNR=3.7
VES Vestal, Richgr 79.97 45 P P 08 39 01.9 +1.4
baz=234
BFSC Mount Baldy Ra 80.00 47 P P 08 39 02.6 +1.7
baz=235
MONP2 Monument Peak 80.08 49 P P 08 39 02.8 +1.3
baz=236
EDW2 Edwards Air Fo 80.14 46 P P 08 39 02.6 +1.0
baz=235
USA0B Ussuriysk Arra 80.19 326 iP P 08 39 02.0 +0.5
USRK Ussuriysk Ar. 80.19 326 P P 08 39 02.0 +0.6
comp=Z,22nm,0.9s,baz=126,slow=4.1,SNR=30
USRK Ussuriysk Ar. 80.19 326 P P 08 39 01.2 -0.3
USRK Ussuriysk Ar. 80.19 326 P P 08 39 01.2 -0.3
MAW Mawson 80.25 200 P P 08 39 01.1 -0.4
baz=80,SNR=19
MAW Mawson 80.25 200 P P 08 39 03.0 +1.5
comp=Z,31nm,0.8s,baz=133,slow=6.5,SNR=29
MAW Mawson 80.25 200 P P 08 39 02.7 +1.2
MAW Mawson 80.25 200 P P 08 39 02.7 +1.2
MAW pmax pmax
comp=Z,6.0nm,0.8s
ISA Isabella, Lake 80.27 45 P P 08 39 03.4 +1.2
baz=234
O02D Mt. Diablo Mer 80.32 40 P P 08 39 03.3 +0.9
baz=230,SNR=7.9
CMB Columbia Colle 80.45 42 P P 08 39 03.7 +0.6
CMB Columbia Colle 80.45 42 P P 08 39 03.7 +0.6
CMB pmax pmax
comp=Z,7.0nm,1.2s
PFO Pinyon Flats O 80.46 48 P P 08 39 04.3 +1.0
baz=236
AFDM Forest Hills D 80.65 41 P P 08 39 04.2 +0.1
ORV Oroville 80.70 41 P P 08 39 03.9 -0.4
ORV Oroville 80.70 41 P P 08 39 03.9 -0.4
ORV pmax pmax
comp=Z,5.0nm,0.9s
SII Sitkinak Islan 80.71 13 P P 08 39 04.1 +0.1
WDC Whiskeytown Da 80.72 39 P P 08 39 05.9 +1.6
WDC Whiskeytown Da 80.72 39 P P 08 39 05.9 +1.6
WDC pmax pmax
comp=Z,9.0nm,1.0s
NJ2 Nanjing 80.86 310 eP P 08 39 06.5 +1.3
NJ2 pmax pmax
comp=Z,33nm,0.9s
N02D Trinity Center 80.87 39 P P 08 39 06.2 +0.9
baz=230,SNR=5.3
O03E Paynes Creek 80.98 40 P P 08 39 07.2 +1.3
baz=231
CWC Cottonwood Cre 80.98 45 P P 08 39 06.8 +0.7
baz=234
BELC Belle Mtn. Jos 81.00 48 P P 08 39 06.8 +0.6
baz=236
M02C Callahan 81.05 39 P P 08 39 07.3 +1.1
baz=230,SNR=10
MPMC Manual Prospec 81.15 45 P P 08 39 07.8 +0.7
baz=235
BC3 Big Chuckawall 81.18 48 P P 08 39 08.1 +1.0
baz=236
COCO West Island 81.20 260 P P 08 39 06.6 -0.9
COCO West Island 81.20 260 P P 08 39 06.6 -0.9
COCO pmax pmax
comp=Z,120nm,1.1s
HEC Hector,Ludlow 81.23 47 P P 08 39 08.0 +0.7
baz=236
GLA Glamis 81.29 49 P P 08 39 08.4 +0.8
baz=237
WAKR Walker 81.33 43 P P 08 39 08.7 +0.9
YBH Yreka Blue Hor 81.35 38 P P 08 39 07.3 -0.4
YBH Yreka Blue Hor 81.35 38 P P 08 39 07.3 -0.4
YBH pmax pmax
comp=Z,10.0nm,0.8s
K02D Willamette Mer 81.42 37 P P 08 39 09.4 +1.3
baz=230
J01E Myrtle Point 81.58 37 P P 08 39 10.0 +1.2
baz=229
PNTR Pine Nut 81.58 42 P P 08 39 08.5 -0.7
PNTR IAmb IAmb 08 39 18.8
comp=Z,15nm,0.9s
BEKR Beckworth 81.58 41 P P 08 39 08.5 -0.6
GMRC Granite Mounta 81.66 47 P P 08 39 10.6 +1.0
baz=236
IRM Iron Mountain 81.67 48 P P 08 39 10.5 +1.0
baz=236,SNR=7.2
VCNR Virginia City 81.67 42 P P 08 39 09.0 -0.6
MDJ Mudanjiang 81.73 325 P P 08 39 11.3 +1.8
MDJ pmax pmax
comp=Z,31nm,0.9s
MDJ pmax pmax
comp=Z,580nm,6.9s
MDJ Mudanjiang 81.73 325 P P 08 39 09.6 0.0
MDJ IAmb IAmb 08 39 12.9
comp=Z,32nm,1.0s
YERR Yerington 81.74 42 P P 08 39 11.3 +1.3
HUMO Hull Mountain 81.77 38 P P 08 39 09.9 +0.1
HUMO IAmb IAmb 08 39 13.0
comp=Z,16nm,1.1s
GRAC Grapevine Rang 81.77 45 P P 08 39 10.9 +0.8
baz=235
FURC Furnace Creek, 81.80 45 P P 08 39 12.0 +2.0
baz=235
JRMM Jerantut 81.84 278 P P 08 39 12.0 +1.2
TUQ Turquoise Moun 81.85 47 P P 08 39 11.3 +0.8
baz=236
SHOC Shoshone, Teco 81.87 46 P P 08 39 11.3 +0.8
baz=236
Y12C Blythe 81.88 49 P P 08 39 11.2 +0.6
Y12C Blythe 81.88 49 P P 08 39 12.1 +1.6
baz=237
M04C Macdoel 81.89 39 P P 08 39 11.6 +1.0
baz=231,SNR=5.6
L04D Klamath Falls 81.89 38 P P 08 39 11.0 +0.4
baz=231,SNR=6.5
PDSI Padang 81.89 272 P P 08 39 12.0 +0.8
RYN Ryan 81.98 43 P P 08 39 11.1 0.0
NVAR Mina Array Bea 82.00 43 P P 08 39 12.4 +1.1
comp=Z,3.9nm,0.9s,baz=224,slow=8.7,SNR=24
NVAR pP pwP 08 40 41.5 +2.5
comp=Z,3.2nm,0.8s,baz=227,slow=9.0,SNR=7.5
NVAR PKKPbc PKKPbc 08 57 43.2 +3.3
comp=Z,0.7nm,0.8s,baz=101,slow=2.9,SNR=3.7
NVAR Mina Array Bea 82.00 43 P P 08 39 11.4 0.0
PAHR Pah Rah Range 82.08 42 P P 08 39 13.0 +1.4
NV11 Mina Array Sit 82.10 43 P P 08 39 12.7 +0.9
214A Organ Pipe Nat 82.14 51 P P 08 39 11.3 -0.7
KDAK Kodiak Island 82.18 13 P P 08 39 12.2 +0.7
KDAK IAmb IAmb 08 39 15.6
comp=Z,47nm,1.1s
KDAK Kodiak Island 82.18 13 P P 08 39 12.2 +0.7
KDAK pmax pmax
comp=Z,47nm,1.1s
I03D Drain, OR 82.25 37 P P 08 39 13.2 +1.0
baz=230
PDMCI Parker Dam,Lak 82.45 49 P P 08 39 14.2 +0.8
baz=237
K04D Chiloquin, OR 82.47 38 P P 08 39 14.8 +1.3
baz=231
TPNV Topopah Spring 82.48 45 P P 08 39 13.6 -0.2
TPNV Topopah Spring 82.48 45 P P 08 39 13.6 -0.2
TPNV pmax pmax
comp=Z,6.0nm,1.0s
TPNV Topopah Spring 82.48 45 P P 08 39 14.2 +0.4
baz=235
KVN Kaiserville 82.50 43 P P 08 39 13.6 -0.2
KVN Kaiserville 82.50 43 P P 08 39 13.6 -0.2
KVN pmax pmax
comp=Z,10.0nm,1.1s
J04D Umpqua Nationa 82.65 38 P P 08 39 15.9 +1.3
baz=231
I04A Tendick Farm, 82.83 37 P P 08 39 16.5 +1.2
baz=230
MOD Modoc Plateau 82.86 39 P P 08 39 15.4 -0.2
SHPR Sheep Range 82.96 46 P P 08 39 16.0 -0.2
K05A Summer Lake 83.02 39 P P 08 39 17.6 +1.1
K05A IAmb IAmb 08 39 19.4
comp=Z,22nm,1.1s
Y14A Wickenburg 83.05 49 P P 08 39 17.8 +1.2
W13A Hualapai Mount 83.05 48 P P 08 39 17.4 +0.6
H04D Lebanon 83.12 36 P P 08 39 17.6 +1.0
baz=230
J05D Fort Rock, OR 83.17 38 P P 08 39 18.1 +0.9
baz=231,SNR=17
G03D McMinnville, O 83.27 35 P P 08 39 18.7 +1.3
baz=230
WHN Wuhan 83.36 307 ⇓P P 08 39 19.6 +1.5
IPM Ipoh 83.40 277 P P 08 39 17.8 -1.1
IPM Ipoh 83.40 277 P P 08 39 20.0 +1.2
CN2 Changchun 83.48 323 eP P 08 39 18.7 +0.2
CN2 pmax pmax
comp=Z,20nm,1.3s
H04A Detroit Lake 83.52 36 P P 08 39 19.5 +0.8
H04A IAmb IAmb 08 39 20.9
comp=Z,26nm,1.2s
PINE Pine Mountain 83.66 38 P P 08 39 20.9 +1.2
PINE IAmb IAmb 08 39 22.6
comp=Z,25nm,1.1s
R11A Troy Canyon, C 83.70 44 P P 08 39 20.7 +0.8
baz=236
I05D Terrebonne, OR 83.77 37 P P 08 39 20.7 +0.7
baz=231,SNR=6.6
TUC Tucson 83.79 52 P P 08 39 22.0 +1.6
TUC Tucson 83.79 52 P P 08 39 22.0 +1.6
TUC pmax pmax
comp=Z,9.0nm,1.2s
TUC Tucson 83.79 52 P P 08 39 21.1 +0.6
baz=239
KLR Kul'dur 83.80 329 iP P 08 39 20.5 +0.6
KLR pmax pmax
comp=Z,21nm,1.4s
E03A Lebam 83.98 34 P P 08 39 22.2 +1.3
E03A IAmb IAmb 08 39 24.0
comp=Z,44nm,1.1s
KULM Kulim 84.05 278 P P 08 39 21.6 -0.5
KULM IAmb IAmb 08 39 24.0
comp=Z,28nm,0.9s
WVOR Wild Horse Val 84.17 40 P P 08 39 23.8 +1.7
WVOR Wild Horse Val 84.17 40 P P 08 39 23.8 +1.7
WVOR pmax pmax
comp=Z,9.0nm,1.1s
F04A Amboy 84.19 35 P P 08 39 23.6 +1.7
F04A IAmb IAmb 08 39 24.2
comp=Z,29nm,1.2s
G05D Wamic, OR 84.35 36 P P 08 39 24.2 +1.3
baz=231
BRLK Bradley Lake 84.36 13 P P 08 39 24.3 +1.8
BRLK IAmb IAmb 08 39 26.7
comp=Z,56nm,1.1s
319A Douglas 84.43 53 P P 08 39 23.7 0.0
E04D Cinebar 84.51 35 P P 08 39 24.9 +1.3
baz=230
RSO Redoubt South 84.61 12 P P 08 39 23.9 0.0
I07A Izee 84.66 38 P P 08 39 25.0 +0.5
RPSI Rantau Prapat 84.66 275 P P 08 39 24.5 -0.6
PSI Prapat 84.70 275 P P 08 39 24.9 -0.5
comp=Z,40nm,0.8s,baz=174,slow=3.9,SNR=22
PSI Prapat 84.70 275 P P 08 39 24.5 -1.0
PSI pmax pmax
comp=Z,49nm,0.9s
CCUT Cedar City 84.73 46 P P 08 39 25.0 -0.2
J08A Circle Bar Ran 84.81 39 P P 08 39 24.3 -1.0
U15A North Rim 84.86 48 P P 08 39 25.5 -0.4
PSUT Pine Spring 84.94 45 P P 08 39 26.2 0.0
WUAZ Wupatki 85.02 49 P P 08 39 27.3 +0.7
baz=239,SNR=5.8
MA2 Magadan 85.18 345 ceP P 08 39 26.7 +0.2
MA2 pmax pmax
comp=Z,90nm,2.8s
ELK Elko 85.27 43 P P 08 39 27.0 -0.8
ELK Elko 85.27 43 P P 08 39 27.0 -0.8
ELK pmax pmax
comp=Z,3.0nm,0.9s
SYO Syowa Base 85.36 193 ⇑iP P 08 39 24.0 -3.4
SYO Syowa Base 85.36 193 ⇑iP P 08 39 25.2 -2.2
GAMB Gambell 85.56 3 P P 08 39 27.8 -0.5
GAMB IAmb IAmb 08 39 32.9
comp=Z,38nm,1.1s
RC01 Rabbit Creek A 85.80 13 P P 08 39 30.5 +0.9
RC01 IAmb IAmb 08 39 34.6
comp=Z,47nm,1.1s
B05A Bryant 85.85 34 P P 08 39 31.7 +1.7
baz=230
SUA Susitna One 85.93 13 P P 08 39 29.7 -0.6
SUA IAmb IAmb 08 39 32.8
comp=Z,31nm,0.9s
LTY Liberty 85.96 35 P P 08 39 31.7 +0.9
E07A Sunnyside 85.97 36 P P 08 39 32.0 +1.3
E07A IAmb IAmb 08 39 33.3
comp=Z,14nm,1.0s
KCSI Kotacane, Aceh 86.04 275 P P 08 39 31.9 0.0
comp=Z,23nm,0.8s
HAWA Hanford 86.05 36 P P 08 39 32.2 +1.2
HAWA IAmb IAmb 08 39 34.1
comp=Z,16nm,1.2s
GLI Glacier Island 86.20 15 P P 08 39 32.5 +1.0
FID Port Fidalgo 86.23 15 P P 08 39 33.3 +1.6
SKT Skwentna 86.24 12 P P 08 39 31.8 +0.1
SKT IAmb IAmb 08 39 33.5
comp=Z,32nm,1.4s
RAGM Ragged Mountai 86.36 16 P P 08 39 33.9 +1.6
KNK Knik Glacier 86.37 14 P P 08 39 32.2 -0.1
KNK IAmb IAmb 08 39 36.5
comp=Z,19nm,0.8s
BMO Blue Mountains 86.38 38 P P 08 39 33.3 +0.4
BMO Blue Mountains 86.38 38 P P 08 39 33.3 +0.4
BMO pmax pmax
comp=Z,4.0nm,0.9s
PMR Palmer 86.38 13 P P 08 39 32.7 +0.4
PMR IAmb IAmb 08 39 35.8
comp=Z,46nm,1.2s
PMR Palmer 86.38 13 P P 08 39 32.7 +0.4
PMR pmax pmax
comp=Z,46nm,1.2s
MFID Camas Ranch 86.42 40 P P 08 39 32.7 -0.4
TPTI 86.49 275 P P 08 39 34.3 +0.3
comp=Z,12nm,0.9s
DUG Dugway, Tooele 86.51 44 P P 08 39 34.8 +1.1
baz=238
SNAA Sanae 86.59 178 P P 08 39 33.9 +0.4
SNAA Sanae 86.59 178 P P 08 39 33.3 -0.2
SNAA IAmb IAmb 08 39 39.9
comp=Z,8.4nm,0.7s
SNAA Sanae 86.59 178 iP P 08 39 34.0 +0.5
GHO Glory Hole Cre 86.59 13 P P 08 39 33.4 0.0
VNA3 Neumayer Olymp 86.72 176 P P 08 39 34.9 +0.8
D08A Wollman Farm, 86.78 36 P P 08 39 36.2 +1.6
D08A IAmb IAmb 08 39 37.0
comp=Z,15nm,1.1s
E09A Wood Farm, Sta 86.88 37 P P 08 39 36.3 +1.2
E09A IAmb IAmb 08 39 37.2
comp=Z,13nm,1.1s
ENH Enshi 86.91 304 P P 08 39 36.3 +0.7
PPLA Purkeypile 86.96 11 IAmb IAmb 08 39 37.3
comp=Z,20nm,1.2s
BJI Beijing 86.97 315 P P 08 39 36.2 +0.6
BJI pmax pmax
comp=Z,11nm,0.8s
CRQM Cirque 87.07 16 IAmb IAmb 08 39 38.8
comp=Z,29nm,1.1s
F10A Beach Ranch, E 87.08 38 P P 08 39 36.9 +0.7
F10A IAmb IAmb 08 39 37.9
comp=Z,21nm,0.9s
TGL Tana Glacier 87.15 16 IAmb IAmb 08 39 39.8
comp=Z,38nm,1.3s
VNA2 Neumayer--Watz 87.16 177 P P 08 39 37.2 +1.1
baz=190,slow=4.0
NVL N'lazarevskaya 87.30 183 eP P 08 39 37.2 +0.4
NVL e 08 43 12.4
NVL ePPP PPP 08 45 15.3
NVL eS SKSac 08 49 27.9 +0.4
NVL pmax pmax
comp=Z,35nm,0.7s
B08A Colville Reser 87.35 35 P P 08 39 37.8 +0.5
B08A IAmb IAmb 08 39 38.9
comp=Z,11nm,0.9s
VNA1 Neumayer--Stat 87.39 177 P P 08 39 38.2 +1.1
VRDI Verde Repeater 87.39 16 P P 08 39 37.7 +0.3
VRDI IAmb IAmb 08 39 40.9
comp=Z,34nm,1.3s
GYA Guiyang 87.43 300 P P 08 39 39.8 +1.5
GYA pmax pmax
comp=Z,20nm,1.0s
GLB Gilahina Butte 87.49 16 IAmb IAmb 08 39 41.8
comp=Z,30nm,1.2s
MNTX Cornudas Mount 87.51 54 P P 08 39 39.0 +0.5
baz=242
BALM Baldy 87.52 16 IAmb IAmb 08 39 42.8
comp=Z,22nm,1.1s
SLVN Son La 87.54 294 IAmb IAmb 08 39 43.1
comp=Z,13nm,1.1s
C09A Chrisman Ranch 87.58 36 IAmb IAmb 08 39 40.4
comp=Z,16nm,1.1s
MLSI Meulaboh, Aceh 87.58 276 P P 08 39 40.3 +1.1
comp=Z,92nm,0.8s
MCARA McCarthy VSAT 87.64 16 P P 08 39 40.5 +2.2
MCARA IAmb IAmb 08 39 42.6
comp=Z,39nm,1.3s
CTGM Chitina Glacie 87.73 17 IAmb IAmb 08 39 43.3
comp=Z,46nm,1.4s
TXAR Lajitas Array 87.75 57 P P 08 39 42.1 +2.4
comp=Z,2.4nm,0.9s,baz=210,slow=7.2,SNR=5.0
TXAR pP pwP 08 41 10.6 +2.0
comp=Z,5.3nm,1.0s,baz=211,slow=4.4,SNR=12
TXAR PKKPbc PKKPbc 08 57 27.1 +1.7
comp=Z,1.1nm,1.0s,baz=45,slow=2.1,SNR=4.5
SEY Seymchan 87.78 347 iP P 08 39 39.5 +0.6
KTH Kantishna Hill 87.80 12 P P 08 39 37.5 -1.6
KTH IAmb IAmb 08 39 40.9
comp=Z,29nm,1.0s
TRF Thorofare Moun 87.82 12 P P 08 39 38.3 -1.0
PBKT Sadao Pong 88.16 289 IAmb IAmb 08 39 45.9
comp=Z,29nm,1.0s
ANMO Albuquerque 88.23 51 iP P 08 39 43.1 +1.1
ANMO pmax pmax
comp=Z,10.0nm,1.6s
ANMO Albuquerque 88.23 51 P P 08 39 42.1 +0.2
baz=242
PLCA Paso Flores 88.23 133 P P 08 39 44.1 +2.2
comp=Z,1.6nm,1.0s,baz=270,slow=8.5,SNR=3.7
PLCA Paso Flores 88.23 133 P P 08 39 40.6 -1.3
PLCA Paso Flores 88.23 133 P P 08 39 40.6 -1.3
PLCA pmax pmax
comp=Z,4.0nm,1.2s
BPAW Bear Paw Mtn. 88.28 11 P P 08 39 41.1 -0.2
BPAW IAmb IAmb 08 39 43.2
comp=Z,17nm,1.4s
MCK McKinley 88.34 12 P P 08 39 41.3 -0.3
MCK IAmb IAmb 08 39 44.2
comp=Z,32nm,1.0s
MCK McKinley 88.34 12 P P 08 39 41.3 -0.3
MCK pmax pmax
comp=Z,32nm,1.0s
PAX Paxson 88.41 14 P P 08 39 41.9 -0.1
PAX IAmb IAmb 08 39 44.1
comp=Z,16nm,1.2s
PAX Paxson 88.41 14 P P 08 39 41.9 -0.1
PAX pmax pmax
comp=Z,16nm,1.2s
NEW Newport 88.48 36 P P 08 39 43.6 +1.0
baz=234
BWN Browne 88.63 12 P P 08 39 42.5 -0.4
MENT Mentasta 88.79 15 P P 08 39 44.0 +0.3
MENT IAmb IAmb 08 39 48.6
comp=Z,16nm,1.1s
ZEA Zeya 88.92 331 eP P 08 39 45.0 +0.6
ZEA pmax pmax
comp=Z,28nm,1.2s
AHID Auburn Hatcher 88.97 43 P P 08 39 43.9 -1.3
MCMT McKenzie Canyo 88.98 40 P P 08 39 45.6 +0.2
XAN Xi'an 89.06 307 P P 08 39 46.2 +0.5
XAN pP pP 08 41 13.2 +1.0
XAN pmax pmax
comp=Z,18nm,0.9s
XAN pmax pmax
comp=Z,250nm,5.9s
XAN Xi'an 89.06 307 P P 08 39 45.3 -0.4
XAN IAmb IAmb 08 39 48.5
comp=Z,16nm,0.9s
XAN Xi'an 89.06 307 P P 08 39 45.3 -0.4
XAN pmax pmax
comp=Z,16nm,0.9s
NEA Nenana 89.07 12 P P 08 39 44.8 -0.2
NEA IAmb IAmb 08 39 46.5
comp=Z,17nm,1.0s
MLY Manley 89.17 11 P P 08 39 44.5 -0.9
MLY IAmb IAmb 08 39 48.7
comp=Z,34nm,1.2s
WRH Wood River Hil 89.17 12 P P 08 39 44.5 -0.9
WRH IAmb IAmb 08 39 48.0
comp=Z,35nm,0.9s
RIDG Independent Ri 89.22 14 P P 08 39 45.1 -0.6
RIDG IAmb IAmb 08 39 49.6
comp=Z,39nm,1.3s
S22A 4UR Ranch, Cre 89.29 49 P P 08 39 47.7 +0.7
baz=241
DOT Dot Lake 89.32 14 P P 08 39 46.0 -0.2
DOT IAmb IAmb 08 39 50.6
comp=Z,24nm,1.0s
HDA Harding Lake 89.35 13 P P 08 39 45.5 -0.7
HDA IAmb IAmb 08 39 48.3
comp=Z,20nm,0.9s
HDA Harding Lake 89.35 13 P P 08 39 47.3 +1.1
baz=209,SNR=25
BCAR Beaver Creek A 89.37 16 P P 08 39 46.4 -0.1
CCB Clear Creek Bu 89.39 12 P P 08 39 45.7 -0.7
CCB IAmb IAmb 08 39 49.9
comp=Z,30nm,0.7s
TPAW Teton Pass 89.44 42 P P 08 39 47.6 +0.1
MSO Missoula 89.44 38 P P 08 39 48.1 +0.9
baz=236
IMAR Indian Mountai 89.55 10 P P 08 39 47.0 -0.1

TCOL CIGO, UAF Yank 89.58 12 P P 08 39 48.1 +0.9
baz=208,SNR=20
COLA College 89.58 12 P P 08 39 46.8 -0.4
COLA College 89.58 12 P P 08 39 46.8 -0.4
COLA pmax pmax
comp=Z,35nm,0.8s
MDM Murphy Dome 89.58 12 P P 08 39 48.0 +0.6
MDM IAmb IAmb 08 39 49.6
comp=Z,40nm,1.1s
SCRK Sand Creek 89.62 14 IAmb IAmb 08 39 50.3
comp=Z,18nm,1.2s
IMW Indian Meadow 89.65 42 IAmb IAmb 08 39 54.7
comp=Z,15nm,1.1s
IL31 89.68 13 P P 08 39 47.0 -0.7
IL31 IAmb IAmb 08 39 50.9
comp=Z,39nm,1.2s
ILAR Eielson Array 89.68 13 P P 08 39 46.8 -1.0
comp=Z,10nm,0.8s,baz=216,slow=4.2,SNR=60
ILAR Eielson Array 89.68 13 P P 08 39 46.3 -1.5
ILAR Eielson Array 89.68 13 P P 08 39 46.3 -1.5
QLMT Earthquake Lak 89.84 41 P P 08 39 50.2 +1.0
POKR Poker Flat Res 89.88 12 P P 08 39 49.6 +0.9
baz=208
FLWY Flagg Ranch 89.90 42 IAmb IAmb 08 39 52.3
comp=Z,13nm,1.0s
HIA Hailar 89.90 325 i P P 08 39 48.6 -0.6
HIA pmax pmax
comp=Z,58nm,1.2s
BW06 Boulder Array 89.94 43 P P 08 39 50.8 +0.9
baz=240
PD31 Pinedale Array 89.94 43 P P 08 39 50.1 +0.3
PDAR Pinedale Array 89.94 43 P P 08 39 50.6 +0.8
comp=Z,3.4nm,0.9s,baz=209,slow=2.9,SNR=20
PDAR PKKPbc PKKPbc 08 57 21.4 +0.4
comp=Z,0.2nm,0.5s,baz=90,slow=4.4,SNR=5.2
PDAR Pinedale Array 89.94 43 P P 08 39 48.9 -0.9
KMI Kunming 90.07 297 P P 08 39 52.8 +2.0
KMI pmax pmax
comp=Z,13nm,0.8s
H17A Grant Village 90.14 41 P P 08 39 51.6 +0.9
baz=239
SDCO Great Sand Dun 90.22 49 P P 08 39 51.8 +0.4
baz=242
HHC Hu-ho-hao-te 90.41 314 eP P 08 39 52.6 +0.7
HHC pmax pmax
comp=Z,6.0nm,0.9s
HHC pmax pmax
comp=Z,94nm,7.6s
BILL Bilibino 90.46 354 i P P 08 39 51.2 -0.1
BILL pmax pmax
comp=Z,9.0nm,0.9s
PRP Porcupine Dome 90.62 13 P P 08 39 52.4 +0.1
PRP IAmb IAmb 08 39 56.3
comp=Z,28nm,1.2s
CMAR Chiang Mai Arr 90.67 290 P P 08 39 54.6 +1.2
comp=Z,35nm,0.9s,baz=132,slow=3.1,SNR=99
CMAR Chiang Mai Arr 90.67 290 i P P 08 39 55.2 +1.8
CMAR pmax pmax
comp=Z,35nm,0.9s
WALA Waterton Lakes 90.68 36 P P 08 39 53.1 +0.2
T25A Trinidad 90.71 50 P P 08 39 53.9 +0.4
baz=243
DAWY Dawson 90.80 16 P P 08 39 53.0 0.0
DAWY IAmb IAmb 08 39 56.6
comp=Z,22nm,1.1s
CHTO Chiang Mai 90.81 290 P P 08 39 53.5 -0.6
CHTO IAmb IAmb 08 39 57.4
comp=Z,29nm,0.9s
CHTO Chiang Mai 90.81 290 P P 08 39 53.5 -0.6
CHTO pmax pmax
comp=Z,29nm,1.0s
EGAK Eagle 90.96 15 P P 08 39 53.5 -0.1
EGAK IAmb IAmb 08 39 57.0
comp=Z,29nm,1.1s
RLMT Red Lodge 91.31 41 P P 08 39 57.1 +1.0
baz=240
N23A Red Feather La 91.39 46 P P 08 39 58.4 +1.8
baz=242
FYU Fort Yukon 91.59 12 P P 08 39 56.5 -0.1
CD2 Chengdu 91.63 303 eP P 08 39 58.5 +0.8
K22A Casper 91.83 44 P P 08 39 58.8 +0.3
baz=242
BMAR Burnt Mountain 92.47 12 P P 08 40 00.7 +0.1
TOLK Toolik Lake Re 92.64 10 P P 08 40 03.1 +1.6
baz=206
YAK Yakutsk 93.46 338 eP P 08 40 04.6 -0.6
YAK pmax pmax
comp=Z,26nm,1.1s
YAK pmax pmax
comp=E,7.0nm,1.0s
YAK pmax pmax
comp=N,4.0nm,1.0s
LZH Lanzhou 93.70 307 ⇓P P 08 40 08.7 +1.5
LZH pP pP 08 41 33.2 -0.8
LZH sP sP 08 42 09.3 -3.2
LZH PP PP 08 44 02.5 +3.9
LZH pmax pmax
comp=N,22nm,1.4s
LZH pmax pmax
comp=N,95nm,6.2s
LAO LASA Array 93.93 41 P P 08 40 09.0 +1.1
baz=242
RSSD Black Hills 94.12 44 P P 08 40 10.1 +1.1
baz=243
INK Inuvik 95.62 15 PKKPbc PKKPbc 08 57 07.8 +0.7
comp=N,0.9nm,0.7s,baz=23,slow=6.1,SNR=4.9
SONM Songino Array 96.88 319 P P 08 40 20.3 -1.0
comp=N,0.8nm,0.8s,baz=117,slow=4.2,SNR=5.1
SONM PP PP 08 44 23.9 +1.2
comp=N,1.9nm,1.0s,baz=126,slow=8.3,SNR=4.0
YKA Yellowknife Ar 97.77 25 P P 08 40 24.4 -0.4
comp=N,1.6nm,1.0s,baz=239,slow=4.7,SNR=9.1
YKA PKKPbc PKKPbc 08 56 58.3 -2.6
comp=N,0.6nm,0.7s,baz=36,slow=2.2,SNR=8.4
GTA Gaotai 97.94 309 eP P 08 40 26.3 0.0
GTA sP sP 08 42 34.4 +2.7
GTA PP PP 08 44 33.2 +2.3
GTA pmax pmax
comp=N,1.0nm,1.1s
TLY Talaya 100.07 322 i P Pdif 08 40 35.6 +0.3
TLY pmax pmax
comp=Z,4.0nm,0.9s
TIXI Tiksi 100.14 345 i P Pdif 08 40 33.3 -1.8
TIXI pmax pmax
comp=Z,2.0nm,1.2s
MKAR Makanchi Array 112.23 313 PKiKP PKiKP 08 45 22.4 -1.2
comp=Z,2.0nm,0.8s,baz=230,slow=1.4,SNR=10
MKAR PKKPbc PKKPab 08 56 21.6 -2.2
comp=Z,0.8nm,1.0s,baz=289,slow=3.7,SNR=3.7
MKAR Makanchi Array 112.23 313c iPKIKP PKiKP 08 45 24.2 +0.6
MKAR pmax pmax
comp=Z,2.0nm,0.8s
KURK Kurchatov 115.10 317c iPKIKP PKPdf 08 45 28.4 -0.4
KURK pmax pmax
comp=Z,4.0nm,1.0s
KURBB Kurchatov Arra 115.14 317 PKP PKPdf 08 45 27.9 -1.0
comp=Z,2.0nm,0.8s,baz=98,slow=1.9,SNR=11
KURBB PP PP 08 46 33.1 -2.5
comp=Z,2.4nm,1.0s,baz=97,slow=6.3,SNR=6.4
BOOM Boomskoye usch 116.16 308 PKiKP 08 45 32.9 +1.4
BOOM Boomskoye usch 116.16 308 PKIKP PKiKP 08 45 32.9 +1.4
NOR Nord 119.77 3 i P PKPdf 08 45 36.2 -0.9
NOR Nord 119.77 3 ePKIKP PKPdf 08 45 36.2 -0.9
KK31 Karatay Array 120.19 308 PKPdf 08 45 38.4 -0.5
KK31 Karatay Array 120.19 308 PKIKP PKPdf 08 45 38.4 -0.5
KKAR Karatay Array 120.19 308 PKPdf 08 45 37.9 -1.1
KKAR Karatay Array 120.19 308 PKPdf 08 45 38.8 -0.2
KKAR Karatay Array 120.19 308 PKIKP PKPdf 08 45 37.9 -1.1
BVAR Borovoye Array 120.22 319 PKP PKPdf 08 45 37.2 -1.4
comp=Z,1.9nm,0.4s,baz=79,slow=2.3,SNR=18
KBL Kabul 120.64 298 PKiKP 08 45 40.7 +0.2
KBL Kabul 120.64 298 PKIKP PKiKP 08 45 40.7 +0.2
DAG Danmarks Havn 124.15 6 i P PKPdf 08 45 44.1 -1.4
comp=Z,5.7nm,0.8s
DAG Danmarks Havn 124.15 6 i PKIKP PKPdf 08 45 44.1 -1.4
DAG pmax pmax
comp=Z,6.0nm,0.8s
SUMG Summit 124.52 14 i P PKPdf 08 45 46.0 -0.9
comp=Z,33nm,0.9s
SUMG Summit 124.52 14 i PKIKP PKPdf 08 45 46.0 -0.9
SUMG pmax pmax
comp=Z,33nm,0.9s
BOSA Boshof 125.00 205 PKP PKPdf 08 45 48.6 -0.3
comp=Z,5.9nm,0.7s,baz=182,slow=1.3,SNR=5.3
ARU Arti 126.42 325 PKP PKPdf 08 45 49.8 -0.6
comp=Z,2.9nm,0.7s,baz=191,slow=1.6,SNR=12
ARU Arti 126.42 325 PKiKP 08 45 50.8 -0.2
ARU Arti 126.42 325 i PKIKP PKPdf 08 45 50.0 -0.4
ARU 08 52 25.0
ABKAR Akbulak array 127.17 316 PKPdf 08 45 52.1 0.0
AKTO Aktyubinsk 128.18 318 PKP PKPdf 08 45 53.2 -0.8
comp=Z,5.1nm,1.0s,baz=17,slow=2.0,SNR=13
GEYT Alibeck 129.61 302 PKP PKPdf 08 45 57.5 +0.3
comp=Z,4.7nm,0.9s,baz=315,slow=1.0,SNR=8.1
GEYT PP PP 08 48 10.8 -2.4
comp=Z,4.1nm,1.0s,baz=102,slow=2.1,SNR=7.5
SOCY Socotra 129.65 268 PKPdf 08 45 57.9 0.0
KIRV Kirov 130.24 330 PKP PKPdf 08 45 57.2 -0.4
comp=Z,11nm,0.5s,baz=46,slow=5.2,SNR=3.7
KIRV SKPbc SKPbc 08 48 44.5 -0.5
comp=Z,15nm,0.6s,baz=88,slow=2.6,SNR=5.7
ARCES ARCESS Array B 130.34 349 PKP PKPdf 08 45 57.1 -0.4
comp=Z,8.5nm,0.8s,baz=43,slow=1.5,SNR=21
ARCES SKPbc SKPbc 08 48 44.9 -0.2
comp=Z,7.8nm,1.0s,baz=46,slow=6.4,SNR=6.5
KLMR Klimovskoe 133.22 336 ePKPdf PKPdf 08 45 55.0 -8.2
KLMR AMP 08 46 07.4
comp=Z,13nm,1.1s
KLMR ePP PP 08 48 31.0 -4.0
KLMR Klimovskoe 133.22 336 ePKHKP PKPpre 08 45 54.9
KLMR pmax pmax
comp=Z,13nm,1.1s
FINES FINESS Array B 137.16 343 PKP PKPdf 08 46 08.0 -2.5
comp=Z,4.0nm,0.7s,baz=72,slow=6.2,SNR=4.2
FINES SKPbc SKPbc 08 49 07.4 -0.4
comp=Z,6.7nm,0.9s,baz=46,slow=6.0,SNR=7.4
FINES FINESS Array B 137.16 343 PKPdf 08 46 10.3 -0.2
FINES FINESS Array B 137.16 343c iPKIKP PKiKP 08 46 17.8 +5.3
FINES pmax pmax
comp=Z,4.0nm,0.9s
OBN Obninsk 138.04 331 i PKIKP PKPdf 08 46 12.6 +0.3
OBN pmax pmax
comp=Z,7.0nm,1.1s
KMBO Kilima Mbogo 138.74 241 PKhKP PKPpre 08 46 03.5
comp=Z,0.6nm,0.4s,baz=191,slow=5.2,SNR=2.0
KMBO SKPbc SKiKP 08 49 19.9 +2.4
comp=Z,6.3nm,0.9s,baz=64,slow=4.2,SNR=6.4
VSR Storozhevoye 138.99 325 ePKIKP PKiKP 08 46 15.6 -0.9
VSR pmax pmax
comp=Z,10.0nm,1.3s
VSU Vasula 139.42 340 i PKHKP PKPpre 08 46 10.7
KIV Kislovodsk 140.00 313 i PKIKP PKPdf 08 46 16.1 -0.3
KIV pmax pmax
comp=Z,17nm,1.1s
KIV MLR MLR
comp=Z,89nm,24.0s
NB2 NORSAR Subarra 140.40 353 PKP PKPdf 08 46 09.4 -7.1
comp=Z,1.0nm,0.5s,baz=17,slow=2.6
NOA NORSAR Array B 140.40 353 PKhKP PKPpre 08 46 09.1
comp=Z,4.1nm,0.9s,baz=16,slow=4.6,SNR=7.6
HFS Hagfors 140.96 351 PKhKP PKPpre 08 46 09.9
comp=Z,7.1nm,0.8s,baz=66,slow=2.5,SNR=19
BCA Borcka 141.56 310 ⇓P PKPdf 08 46 13.9 -5.4
BNGB Bingl 142.97 306 eP PKPdf 08 46 18.9 -3.0
ANN Anapa 143.13 317 ePKHKP PKPbc 08 46 19.2 -0.4
ANN pmax pmax
comp=Z,54nm,1.3s
MAZI Mazidag 143.54 304 eP PKPab 08 46 20.4 -0.3
DYBB Diyarbakir 143.65 305 eP PKPab 08 46 20.9 -0.1
SVRC Sivrice-ELAZID 144.17 306 eP PKPbc 08 46 23.4 +0.2
AKASG Malin Array Be 144.29 330 PKP PKPbc 08 46 21.5 -1.5
comp=Z,14nm,0.5s,baz=42,slow=4.6,SNR=68
AKASG SKPbc SKPbc 08 49 26.0 -0.7
comp=Z,2.9nm,0.7s,baz=44,slow=2.3,SNR=5.3
ARPR Arapgir-MALATY 144.68 307 eP PKPab 08 46 25.1 +0.1
URFA Urfa 144.79 304 eP PKPbc 08 46 25.2 +0.1
RSDY Resadiye-TOKAT 144.97 310 eP PKPbc 08 46 25.4 -0.1
SIM Simferopol' 145.13 319d iPKIKP PKPab 08 46 26.2 -0.1
SIM pmax pmax
comp=Z,101nm,1.1s
SVSK Karacayir 145.38 309 eP PKPab 08 46 27.1 -0.3
DARE Darende-Malaty 145.48 307 eP PKPbc 08 46 27.5 +0.4
SEVA Sevastopol 145.61 318 ⇓P PKPbc 08 46 27.3 +0.1
GAZ Gaziantep 146.10 305 eP PKPbc 08 46 29.2 +0.2
KMRS Kahramanmaras 146.24 305 eP PKPbc 08 46 29.1 -0.2
SARI SarD1z-Kayseri 146.32 307 eP PKPbc 08 46 29.3 -0.4
EKA Eskdalemuir Ar 146.41 5 PKPbc PKPbc 08 46 28.4 -0.8
comp=Z,14nm,0.7s,baz=348,slow=2.4,SNR=17
SORM Soroca 146.46 328 ⇑P PKPbc 08 46 29.1 -0.4
SORM Soroca 146.46 328 ⇑PKIKP PKPbc 08 46 29.1 -0.4
BNN Bunyan 146.59 308 eP PKPbc 08 46 29.9 -0.5
YOZ Yozgat 146.69 310 eP PKPbc 08 46 29.7 -0.9
BEL Belsk 146.81 339 ePKP PKPbc 08 46 30.8 +0.4
BEL Belsk 146.81 339 ePKIKP PKPbc 08 46 30.8 +0.4
KIS Kishinev 146.97 326 ePKP PKPdf 08 46 29.0 +0.7
comp=Z,110nm,1.0s
KIS Kishinev 146.97 326 ePKIKP PKPdf 08 46 29.0 +0.7
KIS pmax pmax
comp=Z,110nm,1.0s
CORM Corum 146.97 311 eP PKPbc 08 46 31.2 -0.2
MILM Milestii Mici 147.02 326 ⇓P PKPbc 08 46 30.1 -0.9
KOZT Kozan 147.06 306 eP PKPbc 08 46 30.8 -0.8
TAHT Tahtakopru-Hat 147.12 304 eP PKPbc 08 46 31.7 0.0
LVV L'vov 147.22 333 i PKIKP PKPbc 08 46 31.4 -0.1
LVV e 08 48 02.8
CEYT Ceyhan 147.27 305 eP PKPbc 08 46 31.9 -0.2
BSEG Bad Segeberg 147.44 351 ePKPbc PKPbc 08 46 32.3 +0.4
baz=18,slow=2.4
LEOM Leova 147.60 325 ⇓P PKPbc 08 46 31.9 -0.7
LEOM Leova 147.60 325 ⇓PKIKP PKPbc 08 46 31.9 -0.7
CMRD Camardi-Nigde 147.63 306 eP PKPbc 08 46 32.8 -0.4
BR131 Keskin Array S 147.85 311 PKPbc 08 46 33.3 -0.4
BR131 Keskin Array S 147.85 311 PKIKP PKPbc 08 46 33.3 -0.4
BRTR Keskin Array B 147.85 311 PKPbc PKPbc 08 46 32.9 -0.8
comp=Z,10nm,0.9s,baz=137,slow=4.6,SNR=29
BRTR Keskin Array B 147.85 311 eP PKPbc 08 46 32.9 -0.8
BRTR Keskin Array B 147.85 311 PKIKP PKPbc 08 46 32.8 -0.9
KWP Kalwaria Pacla 147.91 334 ePKP PKPbc 08 46 33.6 +0.2
KWP Kalwaria Pacla 147.91 334 ePKIKP PKPbc 08 46 33.6 +0.2
YAYX Yaylak 148.03 309 eP PKPbc 08 46 33.2 -1.0
TLCR 148.10 323 ⇓P PKPbc 08 46 34.1 +0.1
TLCR 148.10 323 ⇓PKIKP PKPbc 08 46 34.1 +0.1
RUE Ruedersdorf 148.20 346 ePKPbc PKPbc 08 46 34.4 +0.4
baz=18,slow=2.4
SERE Sereflikochisa 148.21 309 eP PKPbc 08 46 33.6 -1.0
MERS Mersin 148.25 305 eP PKPbc 08 46 33.9 -0.8
GHRR 148.31 325 ⇓P PKPbc 08 46 35.1 +0.6
BUR08 Bucovina Ar. S 148.32 330 PKiKP 08 46 35.7 -0.3
JURR Jurilovca 148.33 322 ⇓P PKPbc 08 46 34.4 -0.1
BURAR Bucovina Array 148.34 330 ⇓P PKiKP 08 46 35.4 -0.6
BURAR Bucovina Array 148.34 330 PKiKP 08 46 35.9 -0.1
BURAR Bucovina Array 148.34 330 ⇓PKIKP PKiKP 08 46 35.4 -0.6
AFSR Afar-Bala (An 148.36 311 eP PKPbc 08 46 34.8 -0.2
ANTO Ankara 148.38 311 eP PKPbc 08 46 34.7 -0.3
ANTO Ankara 148.38 311 eP PKPbc 08 46 34.5 -0.5
ANTO Ankara 148.38 311 PKPbc 08 46 35.3 +0.3
ANTO Ankara 148.38 311 PKIKP PKPbc 08 46 35.3 +0.3
LOD Lodumlu 148.39 312 eP PKPbc 08 46 34.6 -0.6
TESR Tescani 148.41 327 ⇓P PKPbc 08 46 34.4 -0.3
OJC Ojcow 148.51 338 ePKP PKPbc 08 46 34.8 -0.1
SULT Sultanhani-AKS 148.53 308 eP PKiKP 08 46 36.7 0.0
TOPG Topolog 148.54 323 ⇓P PKPbc 08 46 35.7 +0.6
KOLS Kolonicke sedl 148.63 334 ePKP PKPbc 08 46 35.6 +0.4
KIZK Mersin 148.66 305 eP PKPdf 08 46 33.1 +1.7
MMLI Mount Malkishu 148.67 297 eP PKPbc 08 46 35.8 -0.1
VRI Vrincioaia 148.80 326 ⇑P PKPbc 08 46 35.6 -0.1
CHBY Cihanbeyli 148.84 309 eP PKPbc 08 46 35.4 -0.8
PLOR Plostina 148.85 326 ⇓P PKPbc 08 46 35.4 -0.6
UZH Uzhgorod 148.86 334 ePKIKP PKPbc 08 46 30.0 -1.4
UZH i 08 46 35.9
UZH e 08 46 42.7
UZH e 08 48 06.3
NRDL Niedersach Rie 148.87 351 ePKPbc PKPbc 08 46 36.0 +0.4
baz=18,slow=2.4
HARR Harsova 148.91 323 ⇓P PKPbc 08 46 35.9 -0.1
YUVA Yuva-Kibriscik 148.91 313 eP PKPbc 08 46 35.9 -0.4
MFTR Murfatlar 148.94 322 ⇓P PKPbc 08 46 36.5 +0.4
CRVS Cervenica-Dubn 148.98 335 ePKP PKPbc 08 46 36.4 +0.3
CRVS e 08 46 43.7
KEBE Keben-Mersin 149.00 305 eP PKPbc 08 46 36.0 -0.6
NIE Niedzica 149.00 337 ePKP PKPbc 08 46 36.6 +0.4
BISRR Bisoca 149.02 325 ⇓P PKiKP 08 46 37.0 -0.4
MANR Mangalia 149.06 321 ⇓P PKPbc 08 46 33.5 +1.7
KSP Ksiaz 149.07 342 ePKP PKPbc 08 46 36.6 +0.3
IKL Isikli 149.09 304 eP PKPbc 08 46 35.9 -0.8
OZUR 149.13 327 ⇑P PKPbc 08 46 36.9 +0.3
TRPA Tarpa 149.15 333 ⇓P PKPbc 08 46 36.2 -0.3
TEVE Tevekalti-Mers 149.21 305 eP PKPbc 08 46 36.2 -0.9
ICOR Ion Corvin 149.33 322 ⇓P PKPbc 08 46 37.3 +0.2
OSTC Ostas 149.35 342⇑ePKP PKPbc 08 46 37.1 +0.1
LADK Ladik-KONYA 149.37 309 eP PKPbc 08 46 36.2 -1.3
CHVC Chvalec 149.37 342⇑ePKP PKPbc 08 46 37.4 +0.4
HRFI Mount Harif 149.38 292 eP PKPbc 08 46 37.4 -0.3
BERE Bereket-Mersin 149.40 305 eP PKPbc 08 46 37.0 -0.7
DOPR Dopca 149.42 327 ⇓P PKiKP 08 46 38.3 +0.1
KIZT Kizilcal 149.44 310 eP PKPbc 08 46 36.9 -0.8
UPC Upice 149.45 342⇑ePKP PKPbc 08 46 37.3 +0.1
UPC ePKPAB PKPab 08 46 46.0 +2.6
CLZ Clausthal 149.46 350 ePKPbc PKiKP 08 46 37.8 -0.3
baz=18,slow=2.4
MLR Muntele Rosu 149.46 326 PKPbc PKPbc 08 46 37.0 -0.5
comp=Z,29nm,1.0s,baz=28,slow=3.6,SNR=28
MLR Muntele Rosu 149.46 326 ⇓P PKPbc 08 46 37.0 -0.5
MLR Muntele Rosu 149.46 326 PKPbc 08 46 37.6 0.0
CLL Collm 149.47 346 ePKPbc PKPbc 08 46 37.4 +0.3
baz=18,slow=2.4
CLL Collm 149.47 346⇓iPKPbc PKPbc 08 46 37.1 -0.1
comp=Z,47nm,1.0s
CLL i PKiKP PKiKP 08 46 39.4 +1.3
comp=Z,42nm,1.0s
CLL i PKPab PKPab 08 46 43.3 -0.1
comp=Z,36nm,1.3s
CLL epPKPab pPKPbc 08 48 10.0 +2.3
CLL e 08 48 19.0
DPC Dobruska-Polom 149.51 342⇑ePKP PKiKP 08 46 37.9 -0.4
TEKE Tekeli-Mersin 149.55 305 eP PKPbc 08 46 36.9 -1.0
KRLC Kraliky 149.62 341⇑ePKP PKPbc 08 46 37.7 0.0
MORC Moravsky Berou 149.64 340 ePKP PKPbc 08 46 37.7 0.0
MORC Moravsky Berou 149.64 340 ⇓P PKPbc 08 46 38.1 +0.4
MORC Moravsky Berou 149.64 340 PKPbc 08 46 37.2 -0.5
BRG Berggiesshubel 149.66 345 i PKP PKPbc 08 46 37.6 -0.1
comp=Z,36nm,1.1s
BRG epPKP pPKPbc 08 48 09.6 +1.2
comp=Z,23nm,1.6s
BRG pSKP 08 49 32.6
comp=Z,12nm,1.4s
BRG Berggiesshubel 149.66 345 ePKPbc PKPbc 08 46 38.0 +0.4
baz=18,slow=2.4
GULT Gulveren 149.68 314 eP PKPbc 08 46 37.2 -1.0
KECS Kecovo 149.70 335 ePKP PKiKP 08 46 38.8 +0.1
KECS e 08 46 45.9
HDMB Hadim 149.75 306 eP PKPbc 08 46 37.3 -1.3
CJR Cluj-Napoca 149.75 330 ⇑P PKPbc 08 46 38.5 +0.4
CSS Mathiatis 149.75 302 eP PKPbc 08 46 37.5 -0.9
CSS Mathiatis 149.75 302 PKPbc PKPbc 08 46 38.1 -0.3
ORH Orhaniye 149.76 315 P PKPab 08 46 45.4 +0.4
SRCK Saricakaya, Es 149.79 313 eP PKPbc 08 46 37.3 -1.0
CIFT Cifteler, Eski 149.80 312 eP PKPbc 08 46 37.8 -0.7
KZIT Kziot 149.80 294 eP PKPbc 08 46 37.7 -1.0
GTTG Gottingen 149.81 350 ePKPbc PKiKP 08 46 38.4 -0.3
baz=18,slow=2.4
GTTG ePKPab PKPab 08 46 47.0 +2.1
baz=18,slow=2.4
NEUB Neuenburg 149.81 348 ePKPbc PKiKP 08 46 38.5 -0.3
baz=18,slow=2.4
NEUB ePKPab PKPab 08 46 46.7 +1.9
baz=18,slow=2.4
PVCC Panska Ves 149.82 344⇑ePKP PKiKP 08 46 38.5 -0.3
VOIR 149.96 327 ⇑P PKPbc 08 46 38.6 -0.1
BORA Eskisehir 149.98 313 eP PKPbc 08 46 38.1 -0.8
HRT Hereke 150.04 315 eP PKPbc 08 46 38.1 -0.9
LEF Lefka 150.05 303 ⇓P PKPbc 08 46 38.8 -0.3
LEF Lefka 150.05 303 eP PKPbc 08 46 38.3 -0.8
SEYD Seydisehir-KON 150.06 308 eP PKPbc 08 46 38.3 -0.9
DRGR 150.10 331 ⇓P PKPbc 08 46 38.4 -0.5
DRGR 150.10 331 i P PKPbc 08 46 38.5 -0.5
PRD Provadia 150.12 321 i P PKPbc 08 46 38.8 -0.2
GAZI Gazipasa 150.13 305 eP PKPbc 08 46 37.6 -1.7
ARR Arges 150.22 327 ⇓P PKiKP 08 46 40.5 +0.6
VYHS Vyhne 150.31 337 ePKIKP PKPbc 08 46 39.2 -0.1
VYHS e 08 46 48.0
VYHS Vyhne 150.31 337 ePKP PKPbc 08 46 39.2 -0.1
VYHS e 08 46 48.0
PRU Pruhonice 150.32 344⇑ePKP PKPbc 08 46 39.3 0.0
PRU Pruhonice 150.32 344 ePKIKP PKPbc 08 46 39.3 0.0
GOPC GO Pecny, Ondr 150.33 343⇑ePKP PKPbc 08 46 39.3 0.0
GOPC GO Pecny, Ondr 150.33 343 ePKIKP PKPbc 08 46 39.3 0.0
VRAC Vranov 150.35 341 ePKP PKPbc 08 46 39.4 0.0
VRAC Vranov 150.35 341 PKPbc PKPbc 08 46 39.4 0.0
comp=Z,12nm,0.9s,baz=320,slow=1.2,SNR=6.7
VRAC PKPab PKPab 08 46 48.6 +1.4
comp=Z,18nm,1.1s,baz=127,slow=1.6,SNR=5.9
VRAC Vranov 150.35 341 ⇓P PKPbc 08 46 39.6 +0.2
MOX Moxa 150.38 348 ePKPbc PKPbc 08 46 39.7 +0.3
baz=18,slow=2.4
PSZ Piszkesteto 150.39 335 PKPbc PKPbc 08 46 39.0 -0.6
PSZ PKPab PKPab 08 46 47.4 -0.1
PSZ Piszkesteto 150.39 335 PKIKP PKPbc 08 46 39.0 -0.6
PSZ 08 46 47.4
JAVC Velka Javorina 150.40 339 ePKP PKiKP 08 46 40.6 +0.4
TANN Tannenbergstha 150.42 347 ePKPbc PKiKP 08 46 40.0 -0.2
baz=18,slow=2.4
GUNZ Gunzen 150.50 347 ePKPbc PKiKP 08 46 40.2 -0.1
baz=18,slow=2.4
GUNZ ePKPab PKPab 08 46 49.6 +1.8
baz=18,slow=2.4
UBBA Unterbreitbach 150.51 350 ePKPab PKPab 08 46 49.5 +1.9
baz=18,slow=2.4
SHUT Suhut-Afyon 150.52 311 eP PKPbc 08 46 39.6 -0.7
WERN Wernitzgruen 150.56 347 ePKPbc PKiKP 08 46 40.4 0.0
baz=18,slow=2.4
WERN ePKPab PKPab 08 46 50.0 +1.9
baz=18,slow=2.4
NKC Novy Kostel 150.60 346⇑ePKP PKPbc 08 46 38.8 -1.1
NKC ePKPAB PKPab 08 46 48.2 0.0
NKC Novy Kostel 150.60 346 ePKIKP PKPbc 08 46 38.8 -1.1
NKC e 08 46 48.2
HUMR Humele 150.61 325 ⇓P PKPbc 08 46 39.5 -0.6
KRUC Moravsky 150.63 341 ePKP PKPbc 08 46 39.9 -0.1
TREC Trest 150.69 342⇑ePKP PKPbc 08 46 40.0 -0.2
TREC Trest 150.69 342 ePKIKP PKPbc 08 46 40.0 -0.2
PBCC Pribram 150.74 344⇑ePKP PKPbc 08 46 40.3 0.0
SMOL Smolenice 150.78 339 ePKIKP PKPbc 08 46 40.9 0.0
SMOL e 08 46 50.9
SMOL Smolenice 150.78 339 ePKP PKiKP 08 46 40.9 0.0
SMOL e 08 46 50.9
TVSB Tavsanli 150.86 313 eP PKPbc 08 46 40.4 -0.6
MANZ Manzenberg 150.91 347 ePKPbc PKiKP 08 46 41.1 -0.1
baz=18,slow=2.4
SZH Strazhica 150.92 323 i P PKPbc 08 46 40.3 -0.6
MODS Modra-Piesok 150.95 339 ePKIKP PKPbc 08 46 40.4 -0.4
MODS e 08 46 50.4
MODS Modra-Piesok 150.95 339 ePKP PKPbc 08 46 40.4 -0.4
MODS e 08 46 50.4
SIRR Siria 150.97 331 ⇑P PKiKP 08 46 41.3 -0.1
ROTZ Rotzenmuhle 151.09 346 ePKPbc PKiKP 08 46 41.4 -0.1
baz=18,slow=2.4
GZR Gura Zlata 151.11 329 ⇓P PKPbc 08 46 40.7 -0.6
GZR Gura Zlata 151.11 329 ⇓PKIKP PKPbc 08 46 40.7 -0.6
ELND Elena 151.17 322 ⇓P PKPbc 08 46 41.1 -0.3
AHRW Bad Neuenahr-A 151.18 353 ePKPbc PKiKP 08 46 42.1 +0.5
baz=18,slow=2.4
MEM Membach 151.21 355 PKPbc PKPbc 08 46 41.4 +0.1
BSTI Sart Tilman 151.27 355 PKPab PKPbc 08 46 41.4 0.0
PVL Pavlikeni 151.29 323 i P PKPbc 08 46 41.7 0.0
KORT Korkueli 151.31 308 eP PKPbc 08 46 40.4 -1.8
TNS Taunus Mts 151.32 351 ePKPbc PKiKP 08 46 42.0 0.0
baz=18,slow=2.4
KHC Kasperske Hory 151.36 344⇑ePKP PKPbc 08 46 41.7 0.0
KHC ePKPAB PKPab 08 46 51.5 +0.1
KHC Kasperske Hory 151.36 344 PKPbc 08 46 41.1 -0.6
KHC PKPab PKPab 08 46 51.6 +0.2
KHC Kasperske Hory 151.36 344 ePKIKP PKPbc 08 46 41.7 0.0
KHC e 08 46 51.5
GRA1 Grafenberg Arr 151.37 348 PKPbc 08 46 41.6 -0.1
GRF Grafenberg Arr 151.37 348 ePKPbc PKiKP 08 46 42.3 +0.2
baz=18,slow=2.4
GRF Grafenberg Arr 151.37 348 PKIKP PKPbc 08 46 41.6 -0.1
SRE Strehaia 151.43 327 ⇑P PKiKP 08 46 42.4 0.0
SRE Strehaia 151.43 327 ⇑PKIKP PKiKP 08 46 42.4 0.0
BZS Buzias 151.49 331 ⇓P PKPbc 08 46 41.9 -0.2
BZS Buzias 151.49 331 ⇓PKIKP PKPbc 08 46 41.9 -0.2
WET Wettzell 151.52 345 ePKPbc PKiKP 08 46 42.3 -0.1
baz=18,slow=2.4
WET ePKPab PKPab 08 46 52.1 0.0
baz=18,slow=2.4
PLVB Pleven 151.57 324 ⇓P PKPbc 08 46 42.1 -0.2
GEC2 GERESS Array S 151.59 344 ePKPbc PKPbc 08 46 42.4 +0.1
baz=18,slow=2.4
GEC2 ePKPab PKPab 08 46 53.8 +1.3
GEC2 GERESS Array S 151.59 344 PKPbc 08 46 41.8 -0.5

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEC2				PKPab	**PKPab**	08 46 53.3	+0.8
GERES	**GERESS Array B**	151.59	344	PKP	**PKPdf**	08 46 35.3	-0.5
	comp=Z,0.7nm,0.7s,baz=106,slow=2.9,SNR=4.9						
GERES				PKPbc	**PKPbc**	08 46 42.1	-0.3
	comp=Z,13nm,0.9s,baz=42,slow=2.2,SNR=45						
GERES				PKPab	**PKPab**	08 46 53.3	+0.8
	comp=Z,3.7nm,1.0s,baz=22,slow=5.4,SNR=7.5						
GERES	**GERESS Array B**	151.59	344		**PKPbc**	08 46 41.5	-0.8
GERES					**PKPab**	08 46 52.4	-0.1
GERES	**GERESS Array B**	151.59	344	PKIKP	**PKPab**	08 46 52.4	-0.1
ELL	**Elmali**	151.74	308		**PKPbc**	08 46 42.3	-0.8
ELL	**Elmali**	151.74	308	PKIKP	**PKPbc**	08 46 42.3	-0.8
CONA	**Conrad Observa**	151.80	340	ePKiKP	**PKiKP**	08 46 43.2	+0.1
	comp=Z,18nm,0.8s,SNR=9.7						
DOU	**Dourbes**	151.82	357	PKPbc	**PKiKP**	08 46 43.0	0.0
DIM	**Dimitrovgrad**	151.91	321	*i* P	**PKPbc**	08 46 42.7	-0.5
MANT	**Manisa**	151.94	312		**PKPbc**	08 46 42.5	-1.1
WLF	**Walferdange**	152.14	354	ePKPbc	**PKiKP**	08 46 44.3	+0.7
	baz=18,slow=2.4						
WLF				ePKPab	**PKPab**	08 46 55.5	+0.9
	baz=18,slow=2.4						
WLF	**Walferdange**	152.14	354	PKPbc	**PKPbc**	08 46 43.3	-0.1
WLF	**Walferdange**	152.14	354		**PKiKP**	08 46 43.7	+0.1
WLF				PKPab	**PKPab**	08 46 56.1	+1.5
WLF	**Walferdange**	152.14	354	PKIKP	**PKiKP**	08 46 43.7	+0.1
WLF						08 46 56.1	
AKAS	**Kas**	152.17	307	eP	**PKPbc**	08 46 42.7	-1.4
ALN	**Alexandroupoli**	152.30	319		**PKPbc**	08 46 42.6	-1.4
ALN				PKPab	**PKPab**	08 46 54.0	-1.6
ALN	**Alexandroupoli**	152.30	319	PKIKP	**PKPab**	08 46 54.1	-1.6
MOA	**Molln**	152.35	342	ePKPbc	**PKPbc**	08 46 43.7	-0.3
	comp=Z,5.0nm,0.7s						
ARSA	**Arzberg**	152.51	340	ePKPbc	**PKPbc**	08 46 43.9	-0.5
	comp=Z,7.3nm,1.2s						
FUR	**Furstenfeldbru**	152.81	346	ePKPab	**PKPab**	08 46 58.9	+1.3
	baz=18,slow=2.4						
VTS	**Vitosha**	152.84	324	⇓P	**PKPbc**	08 46 44.9	-0.5
VTS	**Vitosha**	152.84	324		**PKPbc**	08 46 44.4	-1.0
VTS	**Vitosha**	152.84	324	PKIKP	**PKPbc**	08 46 44.4	-1.0
RJOB	**Jochberg**	152.85	344	ePKPbc	**PKPbc**	08 46 44.8	-0.3
	baz=18,slow=2.4						
RJOB				ePKPab	**PKPab**	08 46 58.7	+0.9
	baz=18,slow=2.4						
SOKA	**Soboth**	153.17	340	ePKPbc	**PKPbc**	08 46 45.3	-0.6
	comp=Z,9.5nm,1.0s						
BFO	**Black Forest**	153.19	351	ePKPbc	**PKPbc**	08 46 45.8	0.0
	baz=18,slow=2.4						
BFO				ePKPab	**PKPab**	08 47 00.4	+1.3
	baz=18,slow=2.4						
BFO	**Black Forest**	153.19	351		**PKPbc**	08 46 45.4	-0.4
BFO				PKPab	**PKPab**	08 46 59.5	+0.4
BFO	**Black Forest**	153.19	351	PKP2	**PKPab**	08 46 59.6	+0.4
KBA	**Koelnbreinsper**	153.31	343	ePKPbc	**PKPbc**	08 46 45.4	-0.9
	comp=Z,11nm,1.0s						
ECH	**Echery**	153.46	352		**PKPab**	08 47 00.6	+0.3
ECH	**Echery**	153.46	352	PKP2	**PKPab**	08 47 00.6	+0.3
UBR	**Ueberruh**	153.51	348	ePKPbc	**PKPbc**	08 46 46.6	0.0
	baz=18,slow=2.4						
WATA	**Walderalm**	153.52	345	ePKiKP	**PKPbc**	08 46 46.4	-0.3
	comp=Z,6.3nm,0.6s						
RETA	**Reutte**	153.56	347	ePKiKP	**PKPbc**	08 46 46.7	0.0
	comp=Z,8.7nm,1.0s						
MOTA	**Moosalm**	153.62	346	ePKPdf	**PKPdf**	08 46 38.3	-0.5
	comp=Z,6.3nm,0.8s						
MOTA				ePKiKP	**PKPbc**	08 46 46.8	-0.1
	comp=Z,10nm,0.9s						
MYKA	**Terra Mystica**	153.63	342	ePKPbc	**PKPbc**	08 46 46.2	-0.7
	comp=Z,2.8nm,0.6s						
SQTA	**Sankt Quirin**	153.71	346	ePKPdf	**PKPdf**	08 46 38.7	-0.3
	comp=Z,4.8nm,0.9s						
SQTA				ePKiKP	**PKPbc**	08 46 47.0	-0.1
	comp=Z,8.6nm,0.8s						
PDKS	**Podkum**	153.73	339	ePKPbc	**PKPbc**	08 46 46.5	-0.5
VNDS	**Vrh nad Dolski**	153.79	340	ePKPbc	**PKPbc**	08 46 46.6	-0.5
ABTA	**Abfaltersbach**	153.84	344	ePKPdf	**PKPdf**	08 46 38.2	-0.9
	comp=Z,4.7nm,0.7s						
ABTA				ePKPbc	**PKPbc**	08 46 46.6	-0.7
	comp=Z,12nm,0.8s						
DAVA	**Damuels**	153.93	348	ePKiKP	**PKPbc**	08 46 47.5	-0.1
	comp=Z,8.7nm,1.0s						
CLF	**Chambon-Foret**	153.96	360		**PKPab**	08 47 00.1	-2.3
FETA	**Feichten**	154.01	346	ePKPdf	**PKPdf**	08 46 39.4	-0.1
	comp=Z,6.1nm,0.8s						
FETA				ePKiKP	**PKiKP**	08 46 47.9	+0.1
	comp=Z,11nm,1.1s						
BLY	**Banja Luka**	154.07	335		**PKPab**	08 47 04.2	+1.2
STAL	**STALIGIAL**	154.23	343		**PKPbc**	08 46 47.4	-0.7
DAVOX	**Davos/Dischmat**	154.42	348	PKP	**PKPdf**	08 46 39.3	-0.7
	comp=Z,3.0nm,0.7s,baz=53,slow=13,SNR=3.8						
DAVOX				PKPbc	**PKPbc**	08 46 48.6	-0.1
	comp=Z,8.6nm,0.7s,baz=23,slow=22,SNR=8.5						
DAVOX				PKPab	**PKPab**	08 47 05.6	+0.9
	comp=Z,16nm,1.0s,baz=20,slow=10.0,SNR=5.2						
FUORN	**Ofenpass-Fuorn**	154.49	347		**PKPab**	08 47 04.0	-1.1
CTI	**Castel Tesino**	154.71	344		**PKPab**	08 47 05.6	-0.2
CTI	**Castel Tesino**	154.71	344	PKP2	**PKPab**	08 47 05.6	-0.2
LIT	**Litokhoron**	154.93	321		**PKPab**	08 47 06.3	-0.5
LIT	**Litokhoron**	154.93	321	PKP2	**PKPab**	08 47 06.4	-0.5
SENIN	**Lac Senin/Sane**	155.26	351		**PKPab**	08 47 09.0	+0.7
NRCA	**Norcia**	157.21	339		**PKPab**	08 47 17.6	+1.0
TIP	**Timpagrande**	158.72	327		**PKPab**	08 47 25.2	+1.9
ESDC	**Sonseca Array**	161.57	15	PKP	**PKPdf**	08 46 50.3	+1.5
	comp=Z,0.1nm,0.3s,baz=5.7,slow=1.3,SNR=4.8						
ESDC				PKPab	**PKPab**	08 47 37.0	+1.3
	comp=Z,8.3nm,1.1s,baz=353,slow=3.5,SNR=12						
ESDC	**Sonseca Array**	161.57	15	PKPab	**PKPab**	08 47 36.2	+0.5
LIC	**Lamto**	162.94	155	ePKIKP	**PKPdf**	08 46 50.3	-0.5
	comp=Z,3.8nm,0.5s						
KIC	**Kosan Boka**	163.17	156	ePKIKP	**PKPdf**	08 46 50.7	-0.3
	comp=Z,31nm,1.0s						
TIC	**Toumodi**	163.32	155	ePKIKP	**PKPdf**	08 46 50.9	-0.3
DBIC	**Dimbokro**	163.41	155	PKP	**PKPdf**	08 46 51.4	+0.1
	comp=Z,7.8nm,0.7s,baz=206,slow=0.9,SNR=15						
DBIC				PKPab	**PKPab**	08 47 45.9	+1.6
	comp=Z,1.8nm,0.7s,baz=154,slow=5.8,SNR=2.9						
DBIC	**Dimbokro**	163.41	155		**PKPdf**	08 46 51.3	+0.1
DBIC					**PKPab**	08 47 42.3	-2.0
DBIC	**Dimbokro**	163.41	155	PKP2	**PKPab**	08 47 42.3	-2.0
DBIC						09 46 51.3	
KEST	**Kesra**	164.86	337	PKPab	**PKPab**	08 47 51.5	+1.2
	comp=Z,12nm,1.0s,baz=296,slow=2.6,SNR=5.4						
KEST	**Kesra**	164.86	337		**PKPab**	08 47 50.4	0.0
MDT	**Midelt**	167.64	27	PKP	**PKPdf**	08 46 55.4	+1.2
	comp=Z,4.2nm,1.0s,baz=41,slow=17,SNR=4.1						
TOA0	**Torodi Ar. Sit**	171.26	177		**PKPdf**	08 46 55.9	-0.9
TOA0					**PKPab**	08 48 19.5	+0.6
TORD	**Torodi Ar. Bea**	171.26	177	PKP	**PKPdf**	08 46 56.0	-0.8
	comp=Z,6.8nm,1.0s,baz=356,slow=0.3,SNR=24						
TORD				PKPab	**PKPab**	08 48 20.0	+1.2
	comp=Z,9.9nm,0.7s,baz=184,slow=4.8,SNR=19						
TORD				SKP	**SKPdf**	08 49 47.5	-4.4
	comp=Z,2.4nm,0.8s,baz=194,slow=2.9,SNR=4.3						
TORD				PP	**PP**	08 52 11.3	+2.6
	comp=Z,2.3nm,0.9s,baz=163,slow=4.4,SNR=5.4						

ROM 06 08:44:23.9±0.1, 43.428N±0.002×12.451E±0.005, h7km, Md1.1/2, Error ellipse: s-maj=0.4km s-min=0.2km az=288.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATPI	**Pietralunga -**	0.04	302	P	Pg	08 44 25.6	+0.1
ATPI				S	Sg	08 44 26.8	+0.2
ATPI				END			
ATVO	**AVT- Monte Val**	0.06	215	P	Pg	08 44 25.8	+0.2
ATVO				S	Sg	08 44 27.2	+0.3
ATVO				AML	AML		
	comp=E,62μm,1.5s						
ATVO				AML	AML		
	comp=N,72μm,1.6s						
ATVO				END			
PIEI	**Pieia**	0.12	29	P	Pg	08 44 27.0	+0.3
PIEI				S	Sg	08 44 29.3	+0.8

IDC 06 09:07:59.1±2.9, 6.97S×129.03E, h0km, mb3.4/1, mb1 3.9/3, mb1mx3.5/24, mbtmp3.7/3, ML4.0/2, Error ellipse: s-maj=295.5km s-min=31.3km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	13.89	159	Pn	Pn	09 11 17.2	-0.1
	0.8nm,0.3s,baz=334,slow=13,SNR=7.2						
WRA				Sn	Sn	09 13 39.4	-13
	1.5nm,0.3s,baz=333,slow=21,SNR=7.4						
ASAR	**Alice Springs**	17.25	165	P	Pn	09 12 01.8	+0.1
	0.4nm,0.3s,baz=350,slow=13,SNR=20						
ASAR				S	Sn	09 15 04.2	-10
	0.3nm,0.3s,baz=344,slow=24,SNR=5.6						
MKAR	**Makanchi Array**	67.67	327	P	P	09 18 58.1	0.0
	0.1nm,0.4s,baz=127,slow=7.1,SNR=3.6						

IDC 06 09:13:52.8±7.7, 19.02S×178.30W, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/34, mbtmp3.6/3, Error ellipse: s-maj=336.3km s-min=39.6km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	44.54	261	P	P	09 22 07.3	+0.5
	0.9nm,0.6s,baz=95,slow=7.8,SNR=6.8						
ASAR	**Alice Springs**	44.60	255	P	P	09 22 06.5	-0.7
	0.4nm,0.4s,baz=90,slow=8.5,SNR=9.5						
ILAR	**Eielson Array**	86.95	13	P	P	09 26 39.2	-0.1
	0.1nm,0.4s,baz=219,slow=4.5,SNR=4.3						

PRU 06 09:41:30.1±0.0, 51.46N×16.10E, h0km
VIE 06 09:41:31.3±2.1, 51.35N×16.10E, h0km, mb2.4/5, ml2.6/6, Error ellipse: s-maj=21.9km s-min=11.1km az=30.0 70 km WNW of Wroclaw Suspected Mining induced.
ISC 06 09:41:29.2±1.2, 51.50N±0.05×16.10E±0.03, h0km, n26, σ0.96/51, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.67	170	*i* Pg	**Pg**	09 41 42.2	+0.2
KSP				*i*		09 41 43.1	
KSP				eSg	**Sg**	09 41 50.5	-0.2
CHVC	**Chvalec**	0.91	182	ePG	**Pg**	09 41 47.1	+0.4
CHVC				eSG	**Sg**	09 41 58.7	+0.2
	comp=Z,37nm,0.4s						
OSTC	**Ostas**	0.95	176	ePG	**Pg**	09 41 47.6	+0.2
OSTC				eSG	**Sg**	09 41 59.6	0.0
	comp=Z,47nm,0.4s						
UPC	**Upice**	1.00	183	ePG	**Pg**	09 41 48.3	0.0
UPC				eSG	**Sg**	09 42 01.3	+0.1
	comp=Z,65nm,0.4s						
DPC	**Dobruska-Polom**	1.16	173	ePG	**Pg**	09 41 51.1	-0.3
DPC				eSG	**Sg**	09 42 05.1	-1.4
	comp=Z,37nm,0.4s						
PVCC	**Panska Ves**	1.37	225	ePG	**Pg**	09 41 55.5	0.0
PVCC				eSG	**Sn**	09 42 14.9	+0.4
	comp=Z,68nm,0.2s						
KRLC	**Kraliky**	1.49	163	ePG	**Pn**	09 41 56.5	-0.8
BRG	**Berggiesshubel**	1.50	246	PN	**Pn**	09 41 56.7	-0.6
BRG				PG	**Pb**	09 41 58.0	+0.2
BRG				SG	**Sn**	09 42 18.6	+1.0
	34nm,0.3s						
GOPC	**GO Pecny, Ondr**	1.79	208	ePG	**Pb**	09 42 03.0	0.0
GOPC				eSG	**Sb**	09 42 26.2	+0.2
PRU	**Pruhonice**	1.81	214	ePG	**Pb**	09 42 02.8	-0.4
PRU				eSG	**Sb**	09 42 26.0	-0.4
	comp=Z,25nm,0.4s						
CLL	**Collm**	1.95	266	ePn	**Pn**	09 42 01.0	-2.6
CLL				ePg	**Pb**	09 42 06.0	+0.4
CLL				e		09 42 09.0	
CLL				eSg	**Sg**	09 42 33.0	+1.1
	comp=Z,19nm,0.5s						
MORC	**Moravsky Berou**	1.95	151	ePN	**Pn**	09 42 02.7	-1.0
MORC				eSG	**Sg**	09 42 31.3	-0.7
VRAC	**Vranov**	2.22	172	ePN	**Pn**	09 42 07.6	+0.3
VRAC				eSG	**Sb**	09 42 38.7	+0.5
TREC	**Trest**	2.24	190	eSG	**Sb**	09 42 39.7	+0.8
KRUC	**Moravsky**	2.45	175	ePN	**Pn**	09 42 10.7	+0.3
KRUC				eSG	**Sg**	09 42 46.9	-0.9
NKC	**Novy Kostel**	2.64	243	ePN	**Pn**	09 42 13.6	+0.5
NKC				ePG	**Pg**	09 42 19.5	-0.3
NKC				eSG	**Sg**	09 42 54.7	+0.7
	comp=Z,46nm,0.3s						
OJC	**Ojcow**	2.67	117	ePg	**Pg**	09 42 19.3	-1.1
OJC				eSg	**Sg**	09 42 54.9	0.0
JAVC	**Velka Javorina**	2.83	159	ePN	**Pn**	09 42 16.6	+0.9
KHC	**Kasperske Hory**	2.87	215	ePN	**Pn**	09 42 16.0	-0.3
KHC				ePG	**Pb**	09 42 21.8	+0.5
KHC				eSN	**Sn**	09 42 49.4	-2.1
KHC				eSG	**Sb**	09 42 59.1	+2.1
	comp=Z,16nm,0.5s						
MODS	**Modra-Piesok**	3.22	166	ePN	**Pn**	09 42 20.1	-1.0
MODS				ePG	**Pg**	09 42 31.0	+0.1
MODS				eSG	**Sg**	09 43 13.0	+0.4
VYHS	**Vyhne**	3.49	149	ePN	**Pn**	09 42 23.5	-1.2
VYHS				ePG	**Pg**	09 42 36.9	+0.9
CONA	**Conrad Observa**	3.58	183	ePn	**Pn**	09 42 26.1	0.0
	comp=Z,0.6nm,0.2s						
MOA	**Molln**	3.84	199	ePn	**Pn**	09 42 29.7	0.0
	comp=Z,0.7nm,0.2s						
MOA				Sg	**Sg**	09 43 31.9	-0.8
	comp=Z,7.4nm,0.6s						
STHS	**Stebnicka Huta**	3.89	120	eSG	**Sg**	09 43 37.3	+3.1
STHS				eLG	Lg	09 43 40.4	
ARSA	**Arzberg**	4.27	185	Pg	**Pg**	09 42 49.8	-1.3
	comp=Z,0.8nm,0.3s						
KBA	**Koelnbreinsper**	4.78	203	Pn	**Pn**	09 42 43.2	+0.5
	comp=Z,2.1nm,0.6s						

PAS 06 09:48:27.7±2.9, 33.85N±0.02×118.24W±0.03, h10km±2km, ML2.2/135, Error ellipse: s-maj=4.0km s-min=1.9km az=116.0
NEIC 06 09:48:27.4±1.7, 33.83N±0.02×118.27W±0.03, h19km±1km, Error ellipse: s-maj=4.9km s-min=2.1km az=130.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTT2	**Watts, South G**	0.12	5		Pg	09 48 32.5	+1.1
FMP	**Fort Macarthur**	0.12	191		Pg	09 48 33.5	+2.0
RPV	**Rancho Palos V**	0.15	232		Pg	09 48 34.4	+2.6
BHPC	**Baldwin Hills**	0.17	333		Pg	09 48 31.8	-0.4
USC	**University of**	0.19	355		Pg	09 48 32.0	-0.4
USC					Sg	09 48 35.6	0.0
LCGC	**La Cienega, Cu**	0.19	331		Pg	09 48 32.1	-0.3
LCGC					Sg	09 48 35.9	+0.1
BREC	**Barre Substati**	0.24	96		Pg	09 48 37.8	+4.7
GVRC	**Garvey Reservo**	0.25	29		Pb	09 48 32.8	-0.3
GVRC	**Garvey Reservo**	0.25	29		Sg	09 48 37.3	+0.1
GR2C	**Griffith Obs.**	0.28	354		Pg	09 48 32.7	-1.1
DJJ	**Donna J Jenkin**	0.31	330		Sg	09 48 38.4	-0.7
DJJ	**Donna J Jenkin**	0.31	330		Pg	09 48 33.6	-0.7
PASC	**Pasadena Art C**	0.34	11		Sg	09 48 38.8	-1.1
PASC	**Pasadena Art C**	0.34	11	Pg	Pg	09 48 33.3	-1.5
DECC	**Green Verdugo**	0.42	352		Pg	09 48 35.0	-1.2
MWC	**Mount Wilson**	0.43	24		Sg	09 48 40.8	-1.6
MWC	**Mount Wilson**	0.43	24	Pg	Pg	09 48 35.2	-1.2
CIAC	**Catalina I. Ai**	0.45	196		Pb	09 48 36.8	0.0
CIAC					Sb	09 48 43.6	+0.5
PSRC	**Puddingstone R**	0.46	56		Pg	09 48 36.0	-0.9
PSRC					Sg	09 48 42.3	-1.0
PEM	**Pine Mountain**	0.47	45		Pg	09 48 36.0	-1.0
CHFC	**Chilao Flat St**	0.54	22		Pb	09 48 36.9	-1.4
CHFC					Sb	09 48 43.8	-1.9
IR2C	**Iron Canyon**	0.56	349		Pb	09 48 37.5	-1.1
XTL	**Crystal Lake,**	0.57	36		Pb	09 48 37.6	-1.3
SSK	**Sunset Peak**	0.61	52		Pb	09 48 38.3	-1.2
BFSC	**Mount Baldy Ra**	0.65	51		Pb	09 48 38.9	-1.2
HOLC	**Holcomb Ridge**	0.71	29		Pb	09 48 40.3	-1.0
LRRC	**Littlerock Res**	0.72	16		Pb	09 48 40.3	-1.0
SBI	**Santa Barbara**	0.73	241		Pg	09 48 42.1	+0.3
SBI					Sn	09 48 52.6	-0.5
SS2	**San Sevaine**	0.74	59		Pb	09 48 40.5	-1.2
RVR	**Riverside**	0.76	78		Pb	09 48 41.0	-1.0
SME	**Santa Rosa Min**	0.76	91		Pb	09 48 40.7	-1.3
RSBC	**Riverside Bore**	0.79	80		Pb	09 48 41.5	-1.1
LEOC	**Leona Valley**	0.80	358		Pb	09 48 41.7	-1.0
PYR	**Pyramid**	0.83	332		Pb	09 48 43.2	-0.1
CSP	**Cedar Springs**	0.89	58		Pb	09 48 43.1	-1.2
PEC	**Perris**	0.92	86		Pb	09 48 43.8	-1.0
MURC	**Murrieta**	0.92	104		Pb	09 48 43.5	-1.3
SBB	**Saddle Back Bu**	0.93	23		Pb	09 48 43.8	-1.2
BACC	**Bachelor Mtn.**	1.05	102		Pb	09 48 46.0	-0.9
HMTC	**Hemet**	1.06	96		Pb	09 48 46.1	-1.1
DGR	**Domenigoni Val**	1.06	100		Pb	09 48 46.1	-1.2
EDW2	**Edwards Air Fo**	1.07	12		Pb	09 48 46.4	-1.0
GORC	**Green Oak Ranc**	1.10	128		Pn	09 48 47.0	-0.8
POB	**Polly Butte**	1.13	97		Pn	09 48 47.3	-1.0
BTL	**Butler Peak**	1.13	68		Pn	09 48 47.6	-0.9
HYS	**Haystack Butte**	1.18	29		Pb	09 48 49.4	+0.2
CRY	**Cary Ranch**	1.30	101		Pn	09 48 50.0	-0.7
109C	**Camp Elliot, M**	1.35	134	Pn	Pn	09 48 51.3	+0.1
109C					Sb	09 49 08.9	-0.1
HWB	**Hans Werner Br**	1.36	126		Pn	09 48 50.5	-0.8
BZNA	**Buzz No.'s Pla**	1.38	104		Pn	09 48 51.4	-0.4
DPP	**Dos Picos Cty**	1.39	127		Pn	09 48 50.8	-0.9
DNR	**Dunn Ranch,Anz**	1.39	101		Pn	09 48 51.9	0.0
PFO	**Pinyon Flats O**	1.52	98		Pn	09 48 54.2	+0.5
PFO				Sn	Sb	09 49 13.8	-0.2
XPFO	**Pion Flat**	1.53	98		Pn	09 48 54.2	+0.5
XPFO				Sn	Sb	09 49 13.7	-0.4
SDRC	**San Diego Road**	1.56	134		Pn	09 48 53.7	-0.4
BAR	**Barrett**	1.76	130	Pn	Pn	09 48 58.4	-0.8
BAR					Sn	09 49 19.1	+0.2
GSC	**Goldstone, Bar**	1.90	39		Pb	09 49 01.4	0.0
HAY	**Hayfield**	2.15	93		Pb	09 49 04.6	-1.2
NEE2	**Needles Airpor**	3.16	72		Pb	09 49 23.1	+0.2

ASRS 06 09:52:21.3, 53.65N×87.88E, M1.6, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)
NNC 06 09:52:26.0±2.3, 53.53N×87.80E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=17.7km s-min=8.5km az=58.0, Suspected Mining explosion.
IDC 06 09:52:27.3±2.2, 53.49N×87.77E, h0km, mb1 3.2/4, mb1mx3.0/38, mbtmp3.2/4, ML3.0/4, Error ellipse: s-maj=22.1km s-min=13.9km az=59.0
ISC 06 09:52:26.4±1.4, 53.60N±0.09×87.77E±0.08, h0km, n11, σ0.98/17, 9C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	1.79	283	⇑P	**Pn**	09 52 57.7	-0.8
	1.1nm,0.6s						
ZAA0				⇓S	**Sb**	09 53 23.3	+0.4
	9.4nm,0.8s						
ZALV	**Zalesovo Beam**	1.79	283	Pn	**Pn**	09 52 57.7	-0.8
	3.2nm,0.3s,baz=104,slow=13,SNR=40						
ZALV				Lg	Lg	09 53 23.9	
	7.4nm,0.3s,baz=105,slow=25,SNR=36						
KURK	**Kurchatov**	6.33	247	⇑Pn	**Pn**	09 53 59.9	-1.0
	0.8nm,0.5s						
KURK				⇓Sn	**Sn**	09 55 15.2	+1.4
	2.1nm,0.5s						
KURK				⇑Lg	Lg	09 55 43.2	
	5.1nm,0.7s						
KURBB	**Kurchatov Arra**	6.42	246	Pn	**Pn**	09 54 02.2	0.0
	0.2nm,0.3s,baz=61,slow=14,SNR=18						
KURBB				Sn	Sn	09 55 04.9	-11
	0.3nm,0.3s,baz=305,slow=18,SNR=9.7						
KURBB				Lg	Lg	09 55 35.5	
	0.4nm,0.3s,baz=306,slow=31,SNR=16						
KURBB	**Kurchatov Arra**	6.42	246	⇑Pn	**Pn**	09 54 02.2	0.0
	3.0nm,0.5s						
KURBB				⇑Sn	**Sn**	09 55 14.4	-1.7
	2.9nm,0.6s						
KURBB				⇑Lg	Lg	09 55 47.3	
	23nm,0.8s						
MK31	**Makanchi Array**	7.66	209	⇓Pn	**Pn**	09 54 18.8	-0.4
	0.4nm,0.6s,baz=29,slow=12,SNR=19						
MK31				⇑Sn	**Sn**	09 55 48.1	+1.3
	0.4nm,0.3s,baz=36,slow=26,SNR=3.8						
MK31				⇑Lg	Lg	09 56 24.8	
	1.6nm,0.6s,baz=40,slow=32,SNR=4.5						
MKAR	**Makanchi Array**	7.66	209	Pn	**Pn**	09 54 19.8	+0.6
	0.3nm,0.3s,baz=28,slow=13,SNR=16						
MKAR				Sn	**Sn**	09 55 46.1	-0.6
	0.1nm,0.3s,baz=27,slow=16,SNR=5.3						
MKAR				Lg	Lg	09 56 28.2	
	0.2nm,0.3s,baz=32,slow=33,SNR=6.6						
MAKZ	**Makanchi**	7.74	211	⇑Pn	**Pn**	09 54 21.1	+0.8
	2.0nm,1.1s						
MAKZ				⇓Sn	**Sn**	09 55 47.9	-0.8
	0.6nm,0.6s						
MAKZ				⇓Lg	Lg	09 56 28.2	
	6.9nm,1.2s						
BVAR	**Borovoye Array**	10.42	274	Pn	**Pn**	09 54 58.5	+1.5
	0.2nm,0.3s,baz=23,slow=7.8,SNR=3.1						
SONM	**Songino Array**	13.12	109	Pn	**Pn**	09 55 34.2	+0.2
	0.1nm,0.3s,baz=306,slow=14,SNR=2.1						
ARU	**Arti**	16.93	291	Pn	**P**	09 56 26.4	-0.1
	0.0nm,0.3s,baz=94,slow=24,SNR=4.0						

NNC 06 10:15:20.7±0.9, 46.32N×80.33E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=12.4km s-min=5.3km az=135.0
SOME 06 10:15:23.4, 46.17N×80.28E, h10km
ISC 06 10:15:21.2±0.8, 46.25N±0.04×80.47E±0.03, h10km, n49, σ2.07/76, 11C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKZ	**Makanchi**	1.18	61	⇑P	**Pn**	10 15 43.6	-0.2
	4.8nm,0.2s						
MAKZ				⇓S	**Sn**	10 15 59.2	-0.8
	13nm,0.2s						
KAPS	**Kapalarasan**	1.24	219	eP	**Pn**	10 15 43.8	-0.8
	30nm,0.1s						
KAPS				eS	**Sb**	10 15 58.8	-1.9
	106nm,0.1s						
KAPS	**Kapalarasan**	1.24	219	P	**Pn**	10 15 43.5	-1.1
	30nm,0.1s						
KAPS				S	**Sb**	10 15 58.8	-1.9
	106nm,0.1s						
MK31	**Makanchi Array**	1.37	66	⇓P	**Pg**	10 15 47.1	-0.4
	4.4nm,0.2s,baz=242,slow=18,SNR=458						
MK31				⇑S	**Sg**	10 16 05.7	+0.4
	7.1nm,0.2s,baz=242,slow=30,SNR=8.7						
TDK	**Taldyqorghan**	1.91	230	eP	**Pb**	10 15 55.5	-0.6
	115nm,0.1s						
TDK				eS	**Sn**	10 16 18.9	+1.0
	222nm,0.2s						
TDK	**Taldyqorghan**	1.91	230	P	**Pb**	10 15 55.5	-0.6
	138nm,0.3s						
TDK				S	**Sn**	10 16 19.2	+1.3
	312nm,0.3s						
DJR	**Jarkent**	1.98	194	eP	**Pb**	10 15 58.0	+0.7
	13nm,0.3s						
DJR				eS	**Sb**	10 16 23.2	+1.2
	289nm,0.2s						
DJR	**Jarkent**	1.98	194	Pg	**Pb**	10 15 58.0	+0.7
	13nm,0.3s						
DJR				Lg	Lg	10 16 23.2	
	289nm,0.2s						
ARXS	**Arharly**	2.76	223	eP	**Pb**	10 16 10.3	-0.4
	6.3nm,0.3s						
ARXS				eS	**Sb**	10 16 44.3	-0.2
	101nm,0.4s						
ARXS	**Arharly**	2.76	223	Pg	**Pb**	10 16 10.3	-0.4
	6.3nm,0.3s						
ARXS				Lg	Lg	10 16 44.3	
	101nm,0.4s						
PDGK	**Podgornoye**	3.00	194	Pg	**Pb**	10 16 15.6	+0.8
	7.3nm,0.2s						
PDGK				Lg	Lg	10 16 53.0	
	29nm,0.3s						
PDGK	**Podgornoye**	3.00	194	⇓Pn	**Pb**	10 16 15.8	+1.0
	11nm,0.6s						
PDGK				⇑Sn	**Sb**	10 16 53.6	+2.0
	44nm,0.5s						
KPKS	**Kokpek**	3.06	205	eP	**Pg**	10 16 17.8	-1.9
	22nm,0.1s						
KPKS				eS	**Sb**	10 16 56.7	+3.5
	194nm,0.4s						
SHLS	**Shalkode**	3.17	193	eP	**Pb**	10 16 17.9	+0.2
	17nm,0.3s						
SHLS				eS	**Sb**	10 16 57.0	+0.5
	43nm,0.3s						
SHLS	**Shalkode**	3.17	193	Pg	**Pb**	10 16 17.9	+0.2
	17nm,0.3s						
SHLS				Lg	Lg	10 16 57.0	
	43nm,0.3s						
KURS	**Kuram**	3.21	211	eP	**Pb**	10 16 19.8	+1.6
	4.2nm,0.3s						
KURS				eS	**Sb**	10 17 00.3	+2.9
	16nm,0.3s						
KURS	**Kuram**	3.21	211	Pg	**Pb**	10 16 19.8	+1.6
	4.2nm,0.3s						
KURS				Lg	Lg	10 17 00.3	
	16nm,0.3s						

ZSN Zaisan 3.25 67 eP Pg 10 16 21.7 -1.7
4.4nm,0.2s
ZSN eS Sg 10 17 03.8 -1.6
8.1nm,0.2s
ZSN Zaisan 3.25 67 Pg Pg 10 16 21.7 -1.7
4.9nm,0.3s
ZSN Lg Lg 10 17 03.8
17nm,0.4s
UZB Uzynbulak 3.27 199 eP Pb 10 16 20.6 +1.3
9.3nm,0.2s
UZB eS Sb 10 17 01.7 +2.4
43nm,0.3s
UZB Uzynbulak 3.27 199 Pg Pb 10 16 20.6 +1.3
9.3nm,0.2s
UZB Lg Lg 10 17 01.7
43nm,0.3s
ZHN Zhinishke 3.41 206 eP Pb 10 16 22.5 +0.9
4.5nm,0.2s
ZHN eS Sb 10 17 04.9 +1.8
20nm,0.2s
ZHN Zhinishke 3.41 206 Pg Pb 10 16 22.5 +0.9
4.5nm,0.2s
ZHN Lg Lg 10 17 04.9
20nm,0.2s
CHKK Chushkaly 3.44 227 eP Pb 10 16 22.5 +0.4
6.6nm,0.2s
CHKK eS Sb 10 17 05.2 +1.2
36nm,0.3s
CHKK Chushkaly 3.44 227 Pg Pb 10 16 22.5 +0.4
6.6nm,0.2s
CHKK Lg Lg 10 17 05.2
36nm,0.3s
SATY Saty 3.51 205 eP Pb 10 16 25.2 +1.7
6.4nm,0.2s
SATY eS Sb 10 17 09.5 +3.3
34nm,0.2s
SATY Saty 3.51 205 Pg Pb 10 16 25.2 +1.7
6.4nm,0.2s
SATY Lg Lg 10 17 09.5
34nm,0.2s
KTBS Karatobe 3.69 228 eP Pb 10 16 27.7 +1.2
7.9nm,0.3s
KTBS eS Sb 10 17 14.1 +2.7
76nm,0.5s
KTBS Karatobe 3.69 228 Pg Pb 10 16 27.7 +1.2
7.9nm,0.3s
KTBS Lg Lg 10 17 14.1
76nm,0.5s
KUU Kurty 3.75 233 eP Pb 10 16 28.4 +0.8
4.6nm,0.2s
KUU eS Sb 10 17 14.9 +1.8
45nm,0.4s
KUU Kurty 3.75 233 Pg Pb 10 16 28.4 +0.8
4.6nm,0.2s
KUU Lg Lg 10 17 14.9
45nm,0.4s
KOTS Kotyrbulak 3.85 220 eP Pb 10 16 31.1 +1.8
6.0nm,0.4s
KOTS eS Sb 10 17 19.8 +3.9
49nm,0.4s
KOTS Kotyrbulak 3.85 220 Pg Pb 10 16 31.1 +1.8
6.0nm,0.4s
KOTS Lg Lg 10 17 19.8
49nm,0.4s
MDOK Medeo 3.93 220 eP Pb 10 16 32.6 +2.0
4.2nm,0.3s
MDOK eS Sb 10 17 22.2 +3.9
16nm,0.5s
MDOK Medeo 3.93 220 ⇓Pg Pg 10 16 37.5 +1.0
2.1nm,0.4s
MDOK ⇑Lg Lg 10 17 28.4
13nm,0.5s
MDOK Medeo 3.93 220 Pg Pb 10 16 32.6 +2.0
4.2nm,0.3s
MDOK Lg Lg 10 17 22.2
16nm,0.5s
TNSS Tian-Shan 4.08 219 eP Pb 10 16 35.4 +2.1
7.6nm,0.4s
TNSS eS Sb 10 17 27.1 +4.3
27nm,0.5s
TNSS Tian-Shan 4.08 219 Pg Pb 10 16 35.4 +2.1
7.6nm,0.4s
TNSS Lg Lg 10 17 27.1
27nm,0.5s
MTBS Maitube 4.25 224 eP Pb 10 16 37.7 +1.7
3.4nm,0.2s
MTBS eS Sb 10 17 30.9 +3.6
21nm,0.3s
MTBS Maitube 4.25 224 Pg Pb 10 16 37.7 +1.7
3.4nm,0.2s
MTBS Lg Lg 10 17 30.9
21nm,0.3s
DGS Degeres 4.50 230 eP Pb 10 16 41.5 +1.3
3.2nm,0.4s
DGS eS Sb 10 17 38.2 +3.6
22nm,0.6s
DGS Degeres 4.50 230 Pg Pb 10 16 41.5 +1.3
3.2nm,0.4s
DGS Lg Lg 10 17 38.2
22nm,0.6s
KST Kastek 4.54 227 eP Pb 10 16 44.1 +3.1
4.7nm,0.4s
KST eS Sg 10 17 42.0 -4.9
14nm,0.4s
KST Kastek 4.54 227 Pg Pb 10 16 44.1 +3.1
4.7nm,0.4s
KST Lg Lg 10 17 42.0
14nm,0.4s
KURBB Kurchatov Arra 4.56 344 ⇑Pg Pb 10 16 41.3 0.0
3.4nm,0.5s
KURBB ⇑Lg Lg 10 17 41.3
22nm,0.6s
KURK Kurchatov 4.63 345 ⇑Pg Pb 10 16 44.5 +2.0
0.6nm,0.3s
KURK ⇑Lg Lg 10 17 46.6
11nm,0.6s
BTLS Baital 4.66 257 eP Pb 10 16 46.3 +3.3
1.4nm,0.0s
BTLS eS Sg 10 17 45.6 -5.2
3.2nm,0.1s
BTLS Baital 4.66 257 Pg Pb 10 16 46.3 +3.3
3.1nm,0.2s
BTLS Lg Lg 10 17 46.6
5.7nm,0.3s
KK31 Karatay Array 7.76 250 ⇑Pn Pn 10 17 13.3 -0.9
0.3nm,0.3s,baz=62,slow=13,SNR=18
KK31 ⇑Sn Sn 10 18 42.2 +0.2
0.5nm,0.4s
KK31 ⇑Lg Lg 10 19 30.3
1.4nm,0.5s,baz=59,slow=30,SNR=4.7

BJI 06 10:24:09.7±0.0, 13.40N×147.04E, h30km, mB5.0/12, mb4.5/28, Ms4.8/4, Ms7 4.5/3
IDC 06 10:24:11.0±0.6, 13.76N×146.49E, h0km, mb4.2/19, mb1 4.3/20, mb1mx4.2/43, mbtmp4.2/20, ML4.4/1, MS3.6/13, Ms1 3.6/13, ms1mx3.3/42, Error ellipse: s-maj=16.5km s-min=12.7km az=91.0
NEIC 06 10:24:18.3±2.0, 13.62N±0.06×146.41E±0.07, h53km±4km, mb4.5/36, Error ellipse: s-maj=12.4km s-min=6.0km az=131.0
ISC 06 10:24:15.2±0.5, 13.63N±0.07×146.46E±0.07, h26km, n86, σ1.03/77, mb4.5/42, MS3.5/12, 1D, South of Mariana Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GUMO Guam 1.54 269 Pn Pn 10 24 41.1 +0.1
169nm,0.3s,baz=95,slow=6.5,SNR=91
GUMO Sn Sb 10 25 02.1 -0.2
230nm,0.3s,baz=18,slow=22,SNR=14
ANA2 Anatahan 2.79 345 Pn Pn 10 24 59.7 +1.5
SARN Sarigan 3.12 348 Pn Pn 10 25 04.5 +1.8
PATS Pohnpei 13.48 119 Pn Pn 10 27 19.9 -4.9
JCJ Chichijima 13.98 344 LR LR 10 31 17.4
comp=Z,85nm,21.0s,baz=132,slow=31
KRVT Keravat (AS076 18.66 162 P Pn 10 28 33.4 +1.6
1.2nm,0.3s,baz=20,slow=15,SNR=2.5
KRVT LR LR 10 34 22.3
comp=Z,120nm,21.5s,baz=3.1,slow=33
JHJ Hachijo jima 2 20.33 344 LR LR 10 36 16.1
comp=Z,186nm,20.3s,baz=164,slow=36
PMG Port Moresby 22.90 178 P P 10 29 16.6 -0.6
24nm,0.9s,baz=268,slow=8.7,SNR=3.1
MJAR Matsushiro Arr 23.98 343 P P 10 29 26.8 -0.8
1.5nm,0.8s,baz=168,slow=10,SNR=3.4
MJAR LR LR 10 38 07.8
comp=Z,169nm,18.4s,baz=180,slow=35
JNU Nakatsue 24.04 326 P P 10 29 27.2 -1.0
8.8nm,0.9s,baz=56,slow=7.9,SNR=4.2
TGY Tagaytay City 24.78 274 LR LR 10 40 00.1
comp=Z,95nm,18.7s,baz=210,slow=38
HNR Honiara 26.54 149 LR LR 10 41 16.5
comp=Z,137nm,18.3s,baz=314,slow=38
KSRS Korea Array 28.91 328 P P 10 30 10.4 -1.6
1.5nm,0.5s,baz=142,slow=9.4,SNR=8.0
KSRS LR LR 10 40 42.9
comp=Z,124nm,18.6s,baz=70,slow=34
NJ2 Nanjing 31.21 311 eP P 10 30 32.9 +0.4
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
USRK Ussuriysk Ar. 32.88 341 LR LR 10 42 23.2
comp=Z,84nm,19.2s,baz=139,slow=33
WB0 Warramunga Arr 35.25 200 P P 10 31 08.0 +0.2
WB0 IAmb IAmb 10 31 08.7
comp=Z,4.4nm,0.8s
WR0 Warramunga Arr 35.38 200 P P 10 31 08.9 -0.1
WR0 IAmb IAmb 10 31 17.2
comp=Z,9.2nm,1.2s
WB2 Warramunga Arr 35.43 200 P P 10 31 09.0 -0.4
WB2 IAmb IAmb 10 31 10.7
comp=Z,6.5nm,0.8s
WRA Warramunga Arr 35.43 200 P P 10 31 09.7 +0.3
comp=Z,5.0nm,0.8s,baz=22,slow=9.4,SNR=18
KLR Kul'dur 37.51 344 P P 10 31 25.8 -1.0
comp=Z,0.5nm,0.4s,baz=155,slow=14,SNR=2.9
ASAR Alice Springs 39.05 198 P P 10 31 40.4 +0.4
comp=Z,2.2nm,1.0s,baz=3.9,slow=6.7,SNR=13
ASAR Alice Springs 39.05 198 P P 10 31 40.6 +0.5
XAN Xi'an 39.59 307 P P 10 31 56.1 +12
XAN pP pwP 10 32 02.9 +3.2
HHC Hu-ho-hao-te 40.75 318 eP P 10 31 54.7 +0.5
HHC pmax pmax
comp=Z,3.0nm,1.0s
HHC pmax pmax
comp=Z,97nm,6.6s
LZH Lanzhou 44.20 308 eP P 10 32 24.1 +1.7
LZH pP pwP 10 32 35.4 -2.2
LZH sP sP 10 32 40.0 +10
LZH ePP PcP 10 34 08.6 +1.7
LZH pmax pmax
comp=Z,21nm,1.2s
LZH pmax pmax
comp=Z,68nm,5.6s
LZH LR LR
comp=Z,290nm,13.5s
LZH LR LR
comp=Z,310nm,13.3s
LZH LR LR
comp=Z,440nm,16.8s
STKA Stephens Creek 45.49 186 P P 10 32 32.7 +0.3
comp=Z,3.1nm,0.6s,baz=343,slow=4.8,SNR=6.9
CMAR Chiang Mai Arr 45.82 283 P P 10 32 35.2 -0.1
comp=Z,3.4nm,1.0s,baz=84,slow=6.5,SNR=11
CMAR LR LR 10 51 48.0
comp=Z,51nm,19.5s,baz=73,slow=36
BBOO Buckleboo 47.24 192 P P 10 32 46.1 0.0
SONM Songino Array 47.59 324 P P 10 32 48.2 -0.8
comp=Z,1.7nm,0.8s,baz=139,slow=9.6,SNR=6.9
SONM Songino Array 47.59 324 P P 10 32 49.1 +0.2
GTA Gaotai 48.30 311 ⇓P P 10 32 56.2 +1.6
GTA pP pP 10 33 00.9 +0.6
GTA sP sP 10 33 03.3 +0.6
GTA pmax pmax
comp=Z,3.0nm,1.4s
WMQ Urumqi 58.23 313 eP P 10 34 09.5 +2.0
WMQ pP pwP 10 34 20.2 -2.4
WMQ pmax pmax
comp=Z,10.0nm,0.7s
WMQ pmax pmax
comp=Z,120nm,4.7s
SDPT Sand Point 58.27 32 P P 10 34 06.0 -1.4
ZALV Zalesovo Beam 62.49 324 P P 10 34 35.3 -1.0
comp=Z,1.1nm,0.5s,baz=66,slow=5.0,SNR=4.8
MK31 Makanchi Array 62.53 316 P P 10 34 36.2 -0.5
MKAR Makanchi Array 62.53 316 P P 10 34 35.9 -0.9
comp=Z,1.1nm,0.5s,baz=90,slow=8.3,SNR=9.5
MKAR Makanchi Array 62.53 316 P P 10 34 36.1 -0.6
MAKZ Makanchi 62.75 316 P P 10 34 37.9 -0.3
MAKZ IAmb IAmb 10 34 43.3
comp=Z,4.8nm,1.0s
KDAK Kodiak Island 63.22 32 P P 10 34 41.1 +0.1
PPLA Purkeypile 65.06 26 P P 10 34 54.1 +0.8
KURK Kurchatov 65.55 320 P P 10 34 55.9 -0.5
IMAR Indian Mountai 65.55 23 P P 10 34 55.1 -1.1
RC01 Rabbit Creek A 65.59 29 P P 10 34 56.9 +0.3
RC01 IAmb IAmb 10 35 14.2
comp=Z,7.7nm,1.1s
MLY Manley 66.38 24 P P 10 35 01.6 0.0
MLY IAmb IAmb 10 35 17.8
comp=Z,5.4nm,1.0s
KSH Kashi 66.44 307 P P 10 35 05.1 +2.5
KSH pmax pmax
comp=Z,88nm,1.9s
ILAR Eielson Array 67.87 25 P P 10 35 09.3 -1.7
comp=Z,1.7nm,0.8s,baz=258,slow=4.4,SNR=13
TOLK Toolik Lake Re 68.02 21 P P 10 35 12.4 +0.4
TOLK IAmb IAmb 10 35 28.0
comp=Z,3.5nm,0.9s
VRDI Verde Repeater 68.58 29 P P 10 35 13.7 -2.2
CRQM Cirque 68.64 30 P P 10 35 13.8 -2.4
CRQM IAmb IAmb 10 35 17.2
comp=Z,10nm,1.2s
BMAR Burnt Mountain 69.46 23 P P 10 35 21.0 0.0
CTGM Chitina Glacie 69.55 30 P P 10 35 22.6 +0.9
CTGM IAmb IAmb 10 35 22.9
comp=Z,5.4nm,1.0s
BCAR Beaver Creek A 69.69 27 P P 10 35 22.0 -0.5
PCA Pinnacle 69.95 31 P P 10 35 24.1 -0.1
DAWY Dawson 70.91 27 P P 10 35 29.9 0.0
BRVK Borovoye 70.92 322 P P 10 35 29.9 -0.2
INK Inuvik 73.73 22 P P 10 35 45.9 -0.7
comp=Z,2.2nm,0.9s,baz=256,slow=5.0,SNR=8.3
INK Inuvik 73.73 22 P P 10 35 45.9 -0.7
ABKAR Akbulak array 77.54 318 P P 10 36 07.3 -1.5
AKTO Aktyubinsk 78.64 319 LR LR 11 13 33.3
comp=Z,39nm,18.6s,baz=55,slow=38
HUMO Hull Mountain 81.34 48 P P 10 36 30.4 +0.7
HUMO IAmb IAmb 10 36 34.8
comp=Z,11nm,1.5s
YBH Yreka Blue Hor 81.68 49 P P 10 36 32.7 +1.1
YBH IAmb IAmb 10 36 33.3
comp=Z,4.0nm,0.9s
YKA Yellowknife Ar 82.11 28 P P 10 36 32.2 -1.0
comp=Z,0.8nm,0.8s,baz=282,slow=5.2,SNR=10
K05A Summer Lake 82.81 48 P P 10 36 38.6 +1.0
K05A IAmb IAmb 10 36 43.2
comp=Z,9.3nm,1.1s
MOD Modoc Plateau 83.41 49 P P 10 36 41.2 +0.5
MOD IAmb IAmb 10 36 41.8
comp=Z,3.5nm,0.8s
BEKR Beckworth 83.80 51 P P 10 36 43.1 +0.4
BEKR IAmb IAmb 10 36 43.8
comp=Z,3.5nm,0.8s
RES Resolute Bay 84.15 14 LR LR 11 15 38.3
comp=Z,26nm,19.1s,baz=356,slow=37
RES Resolute Bay 84.15 14 P P 10 36 42.5 -1.1
WVOR Wild Horse Val 84.50 48 P P 10 36 46.2 0.0
PNTR Pine Nut 84.55 51 P P 10 36 48.2 +1.6
PNTR IAmb IAmb 10 37 00.9
comp=Z,4.4nm,0.9s
BMO Blue Mountains 84.86 45 P P 10 36 48.2 +0.2
BMO IAmb IAmb 10 36 48.4
comp=Z,3.3nm,1.0s
NVAR Mina Array Bea 85.68 52 P P 10 36 53.0 +0.7
comp=Z,1.6nm,0.6s,baz=270,slow=5.3,SNR=18
NVAR Mina Array Bea 85.68 52 P P 10 36 52.5 +0.1
ELK Elko 87.39 49 P P 10 37 01.4 +0.7
ARCES ARCESS Array B 87.51 342 P P 10 37 00.8 +0.4
comp=Z,3.1nm,0.9s,baz=60,slow=7.2,SNR=5.1
PSUT Pine Spring 89.03 51 P P 10 37 09.2 +0.8
YHL Hebgen Lake 89.05 44 P P 10 37 09.8 +1.2
DUG Dugway, Tooele 89.32 49 P P 10 37 10.3 +0.6
DUG IAmb IAmb 10 37 10.9
comp=Z,3.3nm,0.8s
JLU Jordanelle 90.19 48 P P 10 37 14.8 +0.9
KNB Kanab 90.25 52 P P 10 37 15.6 +1.4
PDAR Pinedale Array 90.83 46 P P 10 37 15.7 -1.2
comp=Z,0.2nm,0.6s,baz=252,slow=0.6,SNR=3.3
FINES FINESS Array B 91.77 335 P P 10 37 18.5 -1.9
comp=Z,0.6nm,0.7s,baz=88,slow=7.1,SNR=3.3
FINES LR LR 11 21 30.1
comp=Z,46nm,18.8s,baz=23,slow=38
X18A Snowflake 93.24 53 pP 10 37 43.5 +9.4
ULM Lac du Bonnet 96.33 35 LR LR 11 17 11.1
comp=Z,39nm,21.1s,baz=355,slow=33
DBIC Dimbokro 145.10 304 PKPbc PKPdf 10 43 51.2 -0.1
comp=Z,6.8nm,0.7s,baz=55,slow=2.2,SNR=13
DBIC Dimbokro 145.10 304 PKPdf 10 43 51.5 +0.1
LPAZ La Paz 146.50 99 PKPbc PKPab 10 43 56.6 -0.2
comp=Z,2.0nm,0.6s,baz=60,slow=2.1,SNR=7.7

ATH 06 10:34:34.1, 38.18N×20.37E, h12km±1km, ML2.7/3, Error ellipse: s-maj=2.5km s-min=1.3km az=247.0
THE 06 10:34:34.3, 38.18N×20.39E, h11km, ML2.7/2, Error ellipse: s-maj=1.0km s-min=0.5km az=197.0
ISC 06 10:34:34.1±1.9, 38.18N±0.04×20.38E±0.06, h12km±6km, n21, σ0.32/34, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.01 338 P Pg 10 34 36.2 0.0
CHV1 S Sg 10 34 37.5 -0.1
KEF3 Kipouria, Keph 0.04 311 P Pg 10 34 36.3 0.0
KEF3 S Sg 10 34 37.7 -0.2
LXR1 Lixouri, Cepha 0.05 62 P Pg 10 34 36.5 +0.1
LXR1 S Sg 10 34 38.2 +0.2
ARGA Argostoli. Kep 0.07 91 P Pg 10 34 36.7 +0.1
ARGA S Sg 10 34 37.8 -0.6
ARG2 Argostoli 0.08 90 P Pg 10 34 36.8 +0.1
ARG2 S Sg 10 34 38.6 0.0
KEF2 Argostoli. Kep 0.08 99 P Pg 10 34 36.8 +0.1
KEF4 Livadi, Kephal 0.09 22 P Pg 10 34 36.8 0.0
KEF4 S Sg 10 34 38.8 +0.1
KEF1 Kardakata, Kep 0.12 34 P Pg 10 34 37.1 -0.1
KEF1 S Sg 10 34 39.3 -0.2
VLS Valsamata 0.16 90 P Pg 10 34 37.8 -0.1
VLS S Sg 10 34 40.3 -0.2
10μm,0.1s
VLS Valsamata 0.16 90 P Pg 10 34 37.8 -0.1
VLS S Sg 10 34 40.4 -0.1
VLS AML AML 10 34 40.8
comp=N,21721μm,0.2s
VLS AML AML 10 34 40.9
comp=E,15879μm,0.1s
VSK1 VASILIKIADES 0.27 31 P Pg 10 34 39.7 0.0
FSK Fiskardo 0.31 26 P Pg 10 34 40.5 0.0
FSK S Sg 10 34 45.4 +0.6
comp=E,990nm,0.2s
FSK Fiskardo 0.31 26 P Pg 10 34 40.6 +0.1
FSK S Sg 10 34 45.7 +0.9
FSK AML AML 10 34 46.0
comp=N,2132μm,0.2s
FSK AML AML 10 34 46.0
comp=E,1797μm,0.2s
VLMS Volimes, Zakyn 0.37 144 P Pg 10 34 41.6 0.0
VLMS S Sg 10 34 46.8 +0.3
VLMS AML AML 10 34 51.4
comp=N,3394μm,0.2s
VLMS AML AML 10 34 52.0
comp=E,2473μm,0.2s
EVGI Lefkada island 0.49 26 P Pg 10 34 43.6 -0.2
EVGI S Sg 10 34 50.7 +0.4
EVGI Lefkada island 0.49 26 P Pg 10 34 43.1 -0.7
MGNA Meganis 0.57 34 P Pg 10 34 44.8 -0.5
LKD2 Lefkada island 0.65 19 P Pg 10 34 46.6 -0.1
LKD2 Lefkada island 0.65 19 P Pg 10 34 46.5 -0.1
TSLK Tsoukalades, L 0.68 18 P Pg 10 34 46.9 -0.4
TSLK Tsoukalades, L 0.68 18 P Pg 10 34 47.2 -0.2

IDC 06 11:01:04.9±2.1, 42.60N×143.69E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.3/56, mbtmp3.4/5, ML2.3/1, Error ellipse: s-maj=57.4km s-min=29.3km az=140.0
MOS 06 11:01:07.9±1.0, 42.31N×143.81E, h51km, mb4.1/1, Error ellipse: s-maj=41.5km s-min=11.7km az=56.5
JMA 06 11:01:08.6±0.1, 42.34N×143.89E, h56km±2km, M3.3
SKHL 06 11:01:09.2±0.5, 42.07N×144.27E, h70km±7km, mb4.4/4
ISC 06 11:01:08.7±1.3, 42.28N±0.07×143.98E±0.04, h40km±13km, n35, σ1.14/46, 7D, Hokkaido region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JTHR Tokachihiroo 0.50 272 ⇓P Pn 11 01 19.7 +0.3
JTHR eS Sn 11 01 27.0 0.0
JCH Churui 0.56 307 ⇓P Pn 11 01 20.2 -0.1
JCH eS Sn 11 01 27.9 -0.6
JOB Onbets 0.63 351 ⇓P Pn 11 01 21.1 -0.1
JOB eS Sn 11 01 30.0 -0.2
JAK Akkeshi 0.89 36 ⇓P Pn 11 01 24.6 -0.2
JNBK Urakawa-nobuka 0.91 271 P Pn 11 01 24.5 -0.4
JAR Ashorobuto 1.03 352 ⇓P Pn 11 01 26.3 -0.3
JAR eS Sn 11 01 38.5 -1.4
JSHD Hidakashinhida 1.13 277 P Pn 11 01 27.9 0.0
JKHN Kushirohamanak 1.19 47 P Pn 11 01 28.9 +0.1
JKHN eS Sn 11 01 43.9 +0.2
JBT2 Biratori 2 1.29 293 P Pn 11 01 29.1 -1.1
JFR Furan 1.35 311 P Pn 11 01 30.4 -0.6
JNK Nakash 1.42 22 ⇓P Pn 11 01 31.3 -0.7
JNK eS Sn 11 01 47.7 -1.7
JIAM Iburiatsuma 1.56 283 P Pn 11 01 36.1 +2.2
NMR Nemuro--Hokkai 1.69 49 eP Pn 11 01 35.0 -0.7
NMR eS Sn 11 01 54.0 -2.1
NMR Nemuro--Hokkai 1.69 49 ePN Pn 11 01 35.2 -0.5
NMR eS Sn 11 01 54.3 -1.8
JTKR Abashiri--Toko 1.69 358 ⇓P Pn 11 01 36.1 +0.4
JTKR eS Sn 11 01 55.9 -0.3
JAB Ashibetsu 1.78 314 P Pn 11 01 37.6 +0.7
GLVR Golovnino 1.85 37 eP Pn 11 01 38.0 +0.2
GLVR AMB AMB 11 01 39.0
81nm,0.3s
GLVR eS Sn 11 02 00.0 0.0
GLVR A A 11 02 04.0
480nm,0.3s
GLVR A A 11 02 04.0
280nm,0.3s
GLVR Golovnino 1.85 37 ePN Pn 11 01 38.9 +1.1
GLVR eS Sn 11 02 00.2 +0.2
GLVR pmax pmax
comp=Z,81nm,0.1s
GLVR pmax pmax
comp=E,68nm,0.2s
GLVR smax smax
comp=N,962nm,0.3s
GLVR smax smax
comp=E,578nm,0.3s
GRPR Tuman 2.16 37 eP Pn 11 01 44.0 +1.8
GRPR AMB AMB 11 01 46.0
comp=E,63nm,0.3s
GRPR eS Sn 11 02 09.0 +1.3
GRPR A A 11 02 11.0
comp=E,308nm,0.4s
GRPR A A 11 02 11.0
comp=E,350nm,0.4s
GRPR Tuman 2.16 37 ePN Pn 11 01 44.5 +2.3
GRPR eS Sn 11 02 09.7 +2.0
GRPR pmax pmax
comp=E,23nm,0.1s
GRPR pmax pmax
comp=Z,63nm,0.1s
GRPR smax smax
comp=N,308nm,0.3s
GRPR smax smax
comp=E,705nm,0.4s
YUK Yuzh-Kuril'sk 2.23 38 eP Pn 11 01 45.0 +1.9
YUK AMB AMB 11 01 48.0
comp=E,115nm,0.4s
YUK eS Sn 11 02 10.0 +0.5
YUK A A 11 02 13.0
comp=E,170nm,0.4s
YUK A A 11 02 13.0
comp=E,360nm,0.4s
YUK Yuzh-Kuril'sk 2.23 38 ePN Pn 11 01 45.2 +2.1
YUK eS Sn 11 02 10.8 +1.3
YUK pmax pmax
comp=N,48nm,0.2s
YUK pmax pmax
comp=E,55nm,0.2s
YUK pmax pmax
comp=Z,115nm,0.2s
YUK smax smax
comp=N,347nm,0.4s
YUK smax smax
comp=E,721nm,0.5s

SHO Shikotan 2.63 52 eP Pn 11 01 49.0 +0.4
SHO AMB AMB 11 01 51.0
comp=E,24nm,0.3s
SHO eS Sn 11 02 18.0 -1.2
SHO A A 11 02 22.0
comp=E,191nm,0.4s
SHO A A 11 02 22.0
comp=E,244nm,0.4s
SHO Shikotan 2.63 52 ePN Pn 11 01 49.8 +1.2
SHO eS Sn 11 02 18.6 -0.6
SHO pmax pmax
comp=Z,24nm,0.3s
SHO pmax pmax
comp=N,11nm,0.2s
SHO pmax pmax
comp=E,14nm,0.2s
SHO smax smax
comp=N,191nm,0.4s
SHO smax smax
comp=E,244nm,0.4s
MJAR Matsushiro Arr 7.26 220 Pn Pn 11 02 53.6 +1.4
comp=E,0.1nm,0.3s,baz=26,slow=15,SNR=3.0
H11N2 WAKE ISLAND Hy 29.68 132 T T 11 38 37.1
baz=326,slow=75,SNR=62
H11N1 WAKE ISLAND Hy 29.69 132 T T 11 38 38.6
baz=326,slow=75,SNR=39
H11N3 WAKE ISLAND Hy 29.70 132 T T 11 38 36.5
baz=326,slow=75,SNR=55
H11S1 WAKE ISLAND Hy 30.57 134 T T 11 39 45.9
baz=327,slow=76,SNR=64
H11S3 WAKE ISLAND Hy 30.57 134 T T 11 39 47.8
baz=327,slow=76,SNR=38
H11S2 WAKE ISLAND Hy 30.58 134 T T 11 39 45.9
baz=327,slow=76,SNR=33
MKAR Makanchi Array 43.21 298 P P 11 09 05.4 -0.2
comp=E,0.1nm,0.5s,baz=68,slow=6.6,SNR=3.8
ILAR Eielson Array 44.04 35 P P 11 09 12.8 +0.8
comp=E,0.2nm,0.6s,baz=262,slow=6.3,SNR=3.9
INK Inuvik 48.84 29 P P 11 09 50.1 +0.6
comp=E,0.3nm,0.4s,baz=289,slow=5.0,SNR=4.8
FINES FINESS Array B 65.11 332 P P 11 11 43.8 -0.9
comp=E,0.8nm,0.5s,baz=50,slow=9.2,SNR=4.1

IDC 06 11:07:07.2±1.2, 2.13N×127.78E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.4/40, mbtmp3.4/5, ML3.5/1, MS2.7/1, Ms1 2.7/1, ms1mx2.4/17, Error ellipse: s-maj=73.3km s-min=19.3km az=65.0
DJA 06 11:07:10.2±0.4, 2°N±3°×12°8E±°, h10km, M3.7/7, MLv3.7/7
ISC 06 11:07:09.4±0.9, 2.16N±0.07×128.02E±0.09, h10km, n8, σ1s30/10, mb3.4/4, 1D, Halmahera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TNTI Ternate 1.53 205 P Pb 11 07 37.3 -0.6
TNTI S Sg 11 07 58.9 +0.3
LBMI Labuha 2.83 190 P Pn 11 07 55.8 +1.1
SIJI Sorong 4.43 133 Pn Pn 11 08 17.9 +1.1
2.5nm,0.3s,baz=311,slow=20,SNR=4.6
SIJI Sn Sn 11 09 08.5 0.0
1.8nm,0.3s,baz=189,slow=24,SNR=1.8
SIJI LR LR 11 10 11.2
comp=Z,85nm,18.3s,baz=236,slow=40
KCP Kidapawan 5.63 329⇓eP Pn 11 08 35.4 +2.1
WRA Warramunga Arr 22.83 165 P P 11 12 12.4 -0.4
0.3nm,0.5s,baz=343,slow=11,SNR=6.2
ASAR Alice Springs 26.31 168 P P 11 12 44.7 -0.8
0.4nm,0.8s,baz=355,slow=9.3,SNR=2.9
SONM Songino Array 49.19 341 P P 11 15 56.0 -1.9
0.4nm,0.6s,baz=140,slow=7.6,SNR=2.7
MKAR Makanchi Array 59.56 325 P P 11 17 12.7 -0.7
0.6nm,0.4s,baz=115,slow=7.6,SNR=20

IDC 06 11:22:48.6±1.1, 16.68S×173.04W, h0km, mb3.9/6, mb1 4.2/7, mb1mx3.9/39, mbtmp4.0/7, ML3.0/1, MS3.0/3, Ms1 3.0/3, ms1mx2.8/31, Error ellipse: s-maj=38.2km s-min=23.2km az=142.0
ISC 06 11:22:52.1±0.8, 16.4S±0.1×172.9W±0.1, h32km, n13, σ2s23/11, mb3.9/5, MS3.1/4, Samoa Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AFI Afiamalu 2.67 24 Pn Pn 11 23 31.9 -1.1
6.6nm,0.3s,baz=202,slow=5.4,SNR=18
AFI Sn Sn 11 24 01.4 -3.0
38nm,0.3s,baz=96,slow=21,SNR=9.0
AFI LR LR 11 24 53.0
comp=Z,154nm,19.6s,baz=253,slow=41
RAR Rarotonga 13.34 113 Pn Pn 11 25 58.6 -0.7
0.8nm,0.3s,baz=249,slow=13,SNR=3.8
RAR LR LR 11 29 50.2
comp=Z,86nm,19.5s,baz=257,slow=32
DZM Mont Dzumac 20.30 251 eP P 11 27 25.3 -0.2
56nm,1.7s
DZM eLR LR 11 32 02.0
comp=Z,124nm,24.4s
DZM Mont Dzumac 20.30 251 P P 11 27 25.5 0.0
4.3nm,1.0s,baz=128,slow=11,SNR=3.2
PPT2 Papeete2 22.35 97 eLR LR 11 33 14.2
comp=Z,81nm,25.0s
PPT Papeete 22.35 96 LR LR 11 34 25.9
comp=Z,57nm,19.3s,baz=197,slow=31
TBI Tubuai 23.11 111 eLR LR 11 33 26.6
comp=Z,125nm,28.8s
URZ Urewera 23.51 200 P P 11 27 56.8 -2.5
10nm,1.0s,baz=68,slow=5.4,SNR=2.2
WRA Warramunga Arr 50.09 257 P P 11 31 43.5 -1.0
0.7nm,0.6s,baz=92,slow=7.1,SNR=7.1
ASAR Alice Springs 50.27 253 P P 11 31 45.0 -0.9
3.3nm,0.6s,baz=89,slow=8.4,SNR=37
PDAR Pinedale Array 82.67 42 P P 11 35 16.6 +3.8
0.3nm,0.7s,baz=213,slow=2.8,SNR=3.8
ILAR Eielson Array 83.30 11 P P 11 35 17.8 +2.5
0.4nm,0.7s,baz=227,slow=6.0,SNR=8.0
BRTR Keskin Array B 147.20 320 PKPbc PKiKP 11 42 35.4 +0.4
1.1nm,0.8s,baz=82,slow=1.7,SNR=4.4

NIED 06 11:32:00, 24.80N×125.40E, h53km, Mw4.9 Best double couple: M0 2.79000×10^16 NP1:φs2.00000°, δ79.00000°, λ59.00000°. NP2:φs255.00000°, δ32.00000°, λ160.00000°.
BJI 06 11:32:23.6±0.0, 24.53N×125.65E, h48km, mB4.8/42, mb4.4/60, ML4.4/2, Ms4.5/56, Ms7 4.2/52
MOS 06 11:32:25.4±1.0, 24.87N×125.37E, h38km, mb5.1/42, MS4.4/4, Error ellipse: s-maj=8.5km s-min=5.1km az=113.6
JMA 06 11:32:26.6±0.1, 24.81N×125.34E, h48km±1km, M5.0
JMA Felt III J1.
IDC 06 11:32:27.2±1.6, 24.85N×125.32E, h43km±16km, mb4.3/26, mb1 4.4/28, mb1mx4.4/38, mbtmp4.5/28, ML3.6/2, MS3.9/29, Ms1 3.9/29, ms1mx3.8/40, Error ellipse: s-maj=12.6km s-min=9.2km az=107.0
NEIC 06 11:32:27.6±1.6, 24.81N±0.06×125.33E±0.06, h43km±6km, mb5.0/103, Error ellipse: s-maj=10.5km s-min=7.3km az=143.0
GCMT 06 11:32:28.6±0.2, 24.72N±0.02×125.39E±0.02, h45km±1km, MW4.9/87, Moment Tensor Solution. s36,c42; s87,c123; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.31±.17; Mθθ0.39±.11; Mφφ-1.70±.10; Mrθ-0.52±.08; Mrφ-1.73±.07; Mθφ1.97±.10; Best double couple: M0 3.07900×10^16 NP1:φs246.00000°, δ41.00000°, λ155.00000°. NP2: φs355.00000°, δ74.00000°, λ52.00000°. Principal axes: T 2.9590, Plg47.0000°, Azm226.0000°; N 0.2420, Plg36.0000°, Azm8.0000°; P -3.2000, Plg20.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
KLM 06 11:32:30.0, 25.08N×125.32E, h88km, mb4.9
ISC 06 11:32:27.5±0.5, 24.82N±0.04×125.36E±0.03, h43km±3km, n373, σ1s24/351, mb4.9/125, MS4.1/33, 42C-13D, Southwestern Ryukyu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JOGS Gusukube 0.07 145 ⇑P Pn 11 32 34.1 -0.2
JOGS eS Sn 11 32 39.7 +0.6
JMJ2 Miyako jima3 0.08 203 ⇑P Pn 11 32 34.0 -0.4
JMJ2 S Sn 11 32 39.4 +0.3
JIKM Ikemajima 0.15 316 ⇑P Pn 11 32 34.4 -0.3
JIKM S Sn 11 32 40.1 +0.4
JIRB Irabujima 0.17 274 ⇓P Pn 11 32 34.2 -0.6
JIRB S Sn 11 32 39.8 -0.2
JTJ Tarama 0.63 254 ⇓P Pn 11 32 39.3 -0.7
JTJ S Sn 11 32 48.6 -0.3
JISG Ishigakijimahi 0.98 257 ⇓P Pn 11 32 43.8 -1.0
JISG eS Sn 11 32 56.2 -1.4
JIJ Ishigaki jima 1.20 248 ⇓P Pn 11 32 47.0 -0.8
JIJ eS Sn 11 33 02.7 -0.2
JKRS Kuro-shima 1.36 245 P Pn 11 32 49.9 -0.1
JKRS eS Sn 11 33 08.6 +1.8
IRIF Iriomote-Funau 1.56 252 P Pn 11 32 52.3 -0.5
HATJ Hateruma jima 1.61 242 P Pn 11 32 53.4 0.0
YOJ Yonaguni jima 2.17 261 P Pn 11 33 00.3 -0.8
YOJ Yonaguni jima 2.17 261 Pn 11 33 00.8 -0.3
YOJ Yonaguni jima 2.17 261 P Pn 11 33 00.8 -0.3
JNTH Nagotoyohara 2.94 54 ⇓P Pn 11 33 11.9 +0.2
JIH Iheya 3.22 46 P Pn 11 33 15.8 +0.2
JOW Kunigami 3.30 52 ⇓P Pn 11 33 16.7 0.0
JOW Kunigami 3.30 52 P Pn 11 33 17.2 +0.4
5.0nm,0.3s,baz=203,slow=17,SNR=99
JOW S Sn 11 33 55.0 +0.2
26nm,0.3s,baz=206,slow=18,SNR=5.9
JOW Kunigami 3.30 52 Pn 11 33 16.4 -0.3
JOW Sn 11 33 55.0 +0.2
NACB Ninganchiao 3.49 260 Pn 11 33 19.0 -0.3
TATO Taipei 3.52 273 Pn 11 33 21.2 +1.5
YHNB Yeheng 3.63 269 Pn 11 33 22.6 +1.4
YULB Yu-li 3.98 250 Pn 11 33 24.1 -1.9
SSLB Suanglung 4.15 257 Pn 11 33 27.5 -0.9
SSLB Sn Sn 11 34 14.5 -1.2
TWG Pinlang 4.40 244 Pn 11 33 29.6 -2.3
TPUB Ta-pu 4.58 252 Pn 11 33 34.5 +0.2
JMZ Minamidaito 2 5.39 78 P Pn 11 33 42.3 -3.1
JKDJ Kitadaitoujima 5.49 77 P Pn 11 33 43.6 -3.1
QZH Quanzhou 6.15 273 P Pn 11 33 56.5 +0.7
QZH S Sn 11 35 02.4 -2.5
QZH LR LR
comp=N,890nm,5.0s
QZH LR LR
comp=E,820nm,3.8s
QZH LR LR
comp=Z,2μm,11.4s
KNMB Chin-men Tao 6.36 268 Pn 11 33 57.5 -1.2
SSE Sheshan 7.26 330 Pn 11 34 11.8 +0.8
NJ2 Nanjing 9.21 323 eP Pn 11 34 37.9 +0.2
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
NJ2 LR LR
comp=N,1μm,12.8s
NJ2 LR LR
comp=E,2μm,21.8s
NJ2 LR LR
comp=Z,1μm,14.7s
JNU Nakatsue 9.58 29 P Pn 11 34 43.2 +0.3
1.0nm,0.3s,baz=262,slow=3.5,SNR=8.7
JNU LR LR 11 38 40.3
comp=Z,573nm,20.4s,baz=198,slow=39
JNU Nakatsue 9.58 29 Pn 11 34 42.7 -0.2
WHN Wuhan 11.30 303 ⇑P Pn 11 35 08.8 +2.4
WHN S Sn 11 37 10.4 -0.9
WHN LR LR
comp=N,2μm,10.8s
WHN LR LR
comp=E,2μm,10.3s
WHN LR LR
comp=Z,3μm,13.8s
TGY Tagaytay City 11.44 202 P Pn 11 35 10.2 +1.7
43nm,0.3s,baz=90,slow=6.1,SNR=3.2
TGY S Sn 11 37 13.9 -1.2
45nm,0.3s,baz=224,slow=18,SNR=3.5
TGY LR LR 11 39 23.8
comp=Z,138nm,19.7s,baz=350,slow=36
TJN Taejon 11.65 8 ceP Pn 11 35 14.3 +3.2
KSAR Wonju Array Be 12.77 9 Pn 11 35 28.2 +1.8
KSAR Wonju Array Be 12.77 9 P Pn 11 35 28.2 +1.8
KSRS Korea Array 12.79 9 P Pn 11 35 29.2 +2.5
0.4nm,0.3s,baz=189,slow=13,SNR=24
KSRS LR LR 11 40 24.7
comp=Z,367nm,20.5s,baz=192,slow=38
DL2 Dalian 14.40 348 P P 11 35 57.8 +3.2
DL2 pP Pn 11 36 08.0 +19
DL2 S S 11 38 45.0 -0.3
JHJ Hachijo jima 2 15.08 53 LR LR 11 41 22.4
comp=Z,637nm,20.5s,baz=248,slow=35
JCJ Chichijima 15.30 78 LR LR 11 40 58.5
comp=Z,949nm,20.0s,baz=282,slow=33
QIZ Qiongzhong 15.51 251 P Pn 11 36 01.0 -2.3
QIZ S Sn 11 38 53.6 -0.4
QIZ pmax pmax
comp=Z,15nm,1.4s
QIZ LR LR
comp=N,410nm,25.5s
QIZ LR LR
comp=E,730nm,20.1s
QIZ LR LR
comp=Z,890nm,22.5s
QIZ Qiongzhong 15.51 251 P P 11 36 06.0 -1.1
MAJO Matsushiro 16.07 40 iP P 11 36 12.7 -0.5
MAT Matsushiro 16.07 40 P P 11 36 13.6 +0.4
MAT S Sn 11 39 02.8 -4.7
MJAR Matsushiro Arr 16.07 40 P P 11 36 14.2 +1.0
0.3nm,0.3s,baz=232,slow=9.8,SNR=38
MJAR LR LR 11 42 45.0
comp=Z,193nm,19.6s,baz=230,slow=38
MJAR Matsushiro Arr 16.07 40 P P 11 36 13.6 +0.4
MJAR Matsushiro Arr 16.07 40 P P 11 36 13.6 +0.4
MJAR pmax pmax
comp=Z,19nm,1.0s
MJB9 Matsu-Tunnel 16.07 40 P P 11 36 14.3 +1.1
GYA Guiyang 16.94 280⇑iP P 11 36 23.6 +0.5
GYA pP pP 11 36 31.7 -1.5
GYA PP sP 11 36 39.3 +0.7
GYA S Sn 11 39 24.7 -4.3
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,140nm,4.9s
GYA LR LR
comp=Z,640nm,8.9s
GYA LR LR
comp=Z,850nm,13.6s
GYA LR LR
comp=Z,880nm,15.9s
XAN Xi'an 17.00 306 P P 11 36 24.9 +1.3
XAN pP sP 11 36 36.5 -2.3
XAN sP pP 11 36 42.4 +8.9
XAN S S 11 39 39.4 +0.7
XAN SS SnSn 11 40 00.0 +16
XAN pmax pmax
comp=Z,18nm,1.5s
XAN pmax pmax
comp=Z,270nm,3.3s
XAN LR LR
comp=Z,550nm,14.1s
XAN LR LR
comp=Z,890nm,16.3s
XAN LR LR
comp=Z,1μm,15.2s
XAN Xi'an 17.00 306 P P 11 36 25.0 +1.4
XAN Xi'an 17.00 306 P P 11 36 25.0 +1.4
XAN pmax pmax
comp=Z,32nm,1.3s
BJI Beijing 17.03 335 P Pn 11 36 22.1 -0.3
BJI pmax pmax
comp=Z,4.0nm,0.5s
CN2 Changchun 18.94 0 eP Pn 11 36 47.0 +1.2
CN2 pmax pmax
comp=Z,10.0nm,1.0s
HHC Hu-ho-hao-te 19.71 328 eP Pn 11 36 54.8 -0.3
HHC sP sP 11 37 09.2 +0.3
HHC S S 11 40 29.0 -4.4
HHC pmax pmax
comp=Z,14nm,1.0s
HHC LR LR
comp=Z,300nm,15.1s
HHC LR LR
comp=Z,420nm,13.0s
HHC LR LR
comp=Z,420nm,16.9s
CD2 Chengdu 20.03 292 P P 11 36 57.0 +0.1
CD2 sP sP 11 37 14.9 +2.5
CD2 S Sn 11 40 42.1 -1.3
CD2 pmax pmax
comp=Z,70nm,0.8s
CD2 pmax pmax
comp=Z,270nm,5.9s
CD2 LR LR
comp=Z,480nm,7.8s
CD2 LR LR
comp=Z,990nm,12.8s
CD2 LR LR
comp=Z,960nm,14.2s
MDJ Mudanjiang 20.05 9 P Pn 11 37 14.1 +15
USA0B Ussuriysk Arra 20.08 14 P P 11 36 57.0 -0.3
USA0B Ussuriysk Arra 20.08 14 iP P 11 36 57.8 +0.5
USRK Ussuriysk Ar. 20.08 14 P P 11 36 56.6 -0.7
comp=Z,2.1nm,0.4s,baz=185,slow=8.3,SNR=17
USRK Ussuriysk Ar. 20.08 14 P P 11 36 57.2 -0.1
USRK Ussuriysk Ar. 20.08 14 P P 11 36 57.2 -0.1
BTO Baotou 20.31 325 eP Pn 11 37 08.7 +6.5
KMI Kunming 20.51 276 P P 11 37 03.1 +0.7
KMI pP pP 11 37 12.6 -0.1
KMI S S 11 40 52.1 +2.3
KMI sS sS 11 41 07.8 +1.3
KMI pmax pmax
comp=Z,12nm,1.4s
KMI pmax pmax
comp=Z,250nm,6.3s
KMI LR LR
comp=Z,420nm,19.1s
KMI LR LR
comp=Z,800nm,13.9s
KMI LR LR
comp=Z,930nm,14.6s
KKM Kota Kinabalu 20.62 207 P P 11 37 04.2 +0.6
KKM IAmb IAmb 11 37 06.2
comp=Z,124nm,1.3s
GUMO Guam 21.51 118 LR LR 11 43 59.1
comp=Z,282nm,21.2s,baz=303,slow=32
LZH Lanzhou 21.64 306 eP P 11 37 15.7 +1.3
LZH pP sP 11 37 27.3 -2.3
LZH sP pP 11 37 32.8 +8.4
LZH sS sS 11 41 27.3 -1.3
LZH SS SnSn 11 41 44.6 +6.8
LZH pmax pmax
comp=Z,26nm,1.0s
LZH pmax pmax
comp=Z,350nm,4.6s
LZH LR LR
comp=Z,530nm,11.2s
LZH LR LR
comp=Z,720nm,11.4s
LZH LR LR
comp=Z,930nm,13.5s
SPMM Sapulut 21.75 205 P P 11 37 18.0 +2.5
ERM Erimo 22.61 36 iP P 11 37 22.7 -1.8
ASAJ Asahikawa 23.84 32 P P 11 37 35.4 -1.3
comp=Z,24nm,0.8s,baz=232,slow=10,SNR=14
JKA Kamikawa-asahi 23.84 32 P P 11 37 35.4 -1.3
PBKT Sadao Pong 24.22 255 P P 11 37 40.9 +0.5
PBKT IAmb IAmb 11 37 44.0
comp=Z,50nm,1.2s
MRSI Marisa 24.42 188 P P 11 37 43.1 +0.9
comp=Z,42nm,1.6s
HIA Hailar 24.80 351 iP P 11 37 45.2 -0.2
HIA pmax pmax
comp=Z,32nm,1.1s
KLR Kul'dur 24.88 10 P P 11 37 45.3 -0.8
comp=Z,1.5nm,0.4s,baz=175,slow=11,SNR=7.2
KLR Kul'dur 24.88 10 iP P 11 37 46.1 0.0
KLR pmax pmax
comp=Z,42nm,4.2s
CHTO Chiang Mai 25.22 262 P P 11 37 49.7 +0.2
CHTO IAmb IAmb 11 37 53.4
comp=Z,42nm,1.2s
CHTO Chiang Mai 25.22 262 P P 11 37 49.7 +0.2
CHTO pmax pmax
comp=Z,42nm,1.3s
CMAR Chiang Mai Arr 25.34 261 P P 11 37 50.5 0.0
comp=Z,23nm,1.2s,baz=61,slow=8.1,SNR=35
CMAR LR LR 11 48 09.4
comp=Z,221nm,19.7s,baz=76,slow=37
CMAR Chiang Mai Arr 25.34 261 ceP P 11 37 51.0 +0.4
CMAR pmax pmax
comp=Z,23nm,1.2s
SBUM Sibu 25.60 212 IAmb IAmb 11 37 55.4
comp=Z,54nm,1.3s
SBUM Sibu 25.60 212 P P 11 37 54.0 +1.1
APSI Ampana 25.83 189 P P 11 37 59.7 +4.7
GTA Gaotai 25.96 310 ⇓P P 11 37 55.2 -1.0
GTA pP pP 11 38 04.8 -2.7
GTA PcP PcP 11 41 25.1 +1.2
GTA pmax pmax
comp=Z,15nm,1.1s
GTA pmax pmax
comp=Z,120nm,4.3s
GTA LR LR
comp=Z,280nm,16.8s
GTA LR LR
comp=Z,530nm,15.2s
GTA LR LR
comp=Z,560nm,15.6s
YSS Yuzh-Sakhalins 26.09 28 eP P 11 37 56.7 -0.4
YSS e 11 38 11.7
YSS pmax pmax
comp=Z,20nm,0.7s
SANI Sanana 26.71 179 P P 11 38 01.4 -1.6
comp=Z,626nmcomp=Z,65nm,1.0s
ULN Ulaanbaatar 27.19 332 P P 11 38 05.9 -1.3
ULN Ulaanbaatar 27.19 332 P P 11 38 05.9 -1.3
ULN pmax pmax
comp=Z,15nm,1.2s
KSM Kuching 27.39 214 P P 11 38 09.2 +0.1
KSM IAmb IAmb 11 38 12.8
comp=Z,71nm,1.3s
KSM Kuching 27.39 214 P P 11 38 11.0 +1.9
SONM Songino Array 27.45 332 P P 11 38 08.5 -1.0
comp=Z,2.6nm,0.5s,baz=150,slow=8.8,SNR=14
SONM ScP ScP 11 45 03.1 -1.3
comp=Z,0.7nm,0.9s,baz=126,slow=3.1,SNR=4.4
SONM LR LR 11 50 35.2
comp=Z,490nm,19.4s,baz=152,slow=40
SONM Songino Array 27.45 332 P P 11 38 08.1 -1.4
SONM Songino Array 27.45 332 P P 11 38 08.1 -1.4
SONM pmax pmax
comp=Z,6.0nm,1.1s
STKI Sintang 28.04 211 P P 11 38 19.8 +4.9
JRMM Jerantut 30.30 230 P P 11 38 36.0 +1.0
KULM Kulim 30.65 235 P P 11 38 38.3 +0.1
KULM IAmb IAmb 11 38 39.2
comp=Z,22nm,1.2s
KULM Kulim 30.65 235 P P 11 38 39.0 +0.9
LSA Lhasa 30.73 287 P P 11 38 39.7 +0.4
LSA Lhasa 30.73 287 P P 11 38 39.7 +0.4
LSA pmax pmax
comp=Z,6.0nm,0.9s
MYKOM Kota Tinggi 30.91 226 P P 11 38 40.0 -0.4
MYKOM IAmb IAmb 11 38 41.7
comp=Z,52nm,1.2s
MYKOM Kota Tinggi 30.91 226 P P 11 38 41.0 +0.6
IPM Ipoh 30.92 233 IAmb IAmb 11 38 41.5
comp=Z,36nm,1.3s
IPM Ipoh 30.92 233 P P 11 38 40.0 -0.5
TLY Talaya 31.54 334 iP P 11 38 45.3 -0.3
TLY pmax pmax
comp=Z,5.0nm,0.8s
MOY Mondy 32.64 332 eP P 11 38 54.4 -0.9
MOY pmax pmax
comp=Z,20nm,1.4s
PSI Prapat 33.59 233 P P 11 39 03.7 -0.3
comp=Z,21nm,1.1s,baz=333,slow=3.5,SNR=9.7
PSI LR LR 11 52 33.5
comp=Z,159nm,20.8s,baz=42,slow=36
TAPN Taplejung 33.83 283 eP P 11 39 07.0 +0.8
BKNI Bangkinang 33.86 228 P P 11 39 07.7 +1.5
comp=Z,123nm,1.1s
PMBI Palembang 34.06 219 P P 11 39 18.9 +11
JAGI Jajag, Banyuwa 34.84 200 P P 11 39 15.3 +0.6
comp=Z,41nm,1.4s
RAMN Ramite 34.85 282 eP P 11 39 15.3 +0.3
JIRN Jiri 35.15 283 eP P 11 39 18.2 +0.4
comp=Z,10nm,0.4s
GUN Gumba 35.41 284 eP P 11 39 20.3 +0.4
comp=Z,12nm,0.3s
MDSI Maura Dua 35.68 218 P P 11 39 23.0 +1.1
comp=Z,30nm,1.3s
KPJI Karang Pucung 35.74 209 P P 11 39 24.2 +1.8
comp=Z,38nm,1.3s
PKI Pulchoki 35.85 283 eP P 11 39 23.8 +0.1

PKIN Phulchoki 35.86 283 eP P 11 39 24.3 +0.6
comp=Z,11nm,0.4s
KSI Kapahiang 35.92 221 P P 11 39 37.0 +13
WMQ Urumqi 36.03 311 P P 11 39 24.8 0.0
WMQ pP pP 11 39 38.8 +2.4
WMQ pmax pmax
comp=Z,10.0nm,1.3s
WMQ pmax pmax
comp=Z,170nm,4.3s
WMQ LR LR
comp=Z,300nm,16.1s
WMQ LR LR
comp=Z,360nm,16.1s
DMN Daman 36.12 283 eP P 11 39 26.6 +0.7
GKN Gorkha 36.50 284 eP P 11 39 29.1 +0.1
DANN Dangsing 37.24 285 eP P 11 39 36.1 +0.6
comp=Z,30nm,0.5s
PETK Petropavlovsk- 37.26 32 P P 11 39 34.6 -0.4
comp=Z,7.9nm,0.7s,baz=189,slow=5.2,SNR=18
PETK LR LR 11 54 51.9
comp=Z,212nm,21.9s,baz=239,slow=36
KOLN Koldanda 37.43 284 eP P 11 39 37.5 +0.5
H11N1 WAKE ISLAND Hy 38.66 89 T T 12 20 33.3
baz=283,slow=74,SNR=19
H11N2 WAKE ISLAND Hy 38.66 89 T T 12 20 36.1
baz=283,slow=74,SNR=9.6
H11N3 WAKE ISLAND Hy 38.68 89 T T 12 20 34.4
baz=283,slow=74,SNR=19
H11S3 WAKE ISLAND Hy 38.81 91 T T 12 20 40.6
baz=288,slow=74,SNR=40
H11S1 WAKE ISLAND Hy 38.82 91 T T 12 20 40.3
baz=288,slow=74,SNR=23
H11S2 WAKE ISLAND Hy 38.83 91 T T 12 20 41.0
baz=288,slow=74,SNR=14
KRVT Keravat (AS076 38.86 134 LR LR 11 52 16.4
comp=Z,152nm,21.0s,baz=332,slow=31
PMG Port Moresby 40.11 145 P P 11 39 59.6 +0.4
comp=Z,5.3nm,0.7s,baz=211,slow=10,SNR=3.9
PMG LR LR 11 54 26.2
comp=Z,83nm,21.6s,baz=305,slow=33
PMG Port Moresby 40.11 145ceP P 11 39 59.7 +0.4
PMG pmax pmax
comp=Z,24nm,1.7s
MK31 Makanchi Array 40.59 314 eP P 11 40 01.4 -1.6
MKAR Makanchi Array 40.59 314 P P 11 40 02.2 -0.8
comp=Z,7.2nm,0.5s,baz=101,slow=10.0,SNR=168
MKAR LR LR 11 58 26.0
comp=Z,379nm,18.4s,baz=106,slow=38
MKAR Makanchi Array 40.59 314 P P 11 40 02.1 -0.9
MAKZ Makanchi 40.80 314 P P 11 40 04.1 -0.6
MAKZ IAmb IAmb 11 40 05.3
comp=Z,18nm,0.9s
MAKZ Makanchi 40.80 314 P P 11 40 04.1 -0.6
MAKZ pmax pmax
comp=Z,18nm,1.0s
ZAA0 Zalesovo Array 41.85 325 P P 11 40 11.6 -1.6
ZALV Zalesovo Beam 41.85 325 P P 11 40 11.5 -1.7
comp=Z,2.9nm,0.3s,baz=115,slow=8.2,SNR=24
ZALV LR LR 11 59 02.9
comp=Z,243nm,18.2s,baz=121,slow=38
ZALV Zalesovo Beam 41.85 325 P P 11 40 11.1 -2.1
COEN Coen 42.28 154 P P 11 40 17.4 +0.4
COEN IAmb IAmb 11 41 41.8
comp=Z,54nm,1.6s
FITZ Fitzroy Crossi 42.66 180 P P 11 40 19.0 -1.1
comp=Z,8.1nm,0.9s,baz=19,slow=6.9,SNR=7.5
KDJ Kajisay 43.14 306 P P 11 40 24.7 +0.6
KDJ IAmb IAmb 11 40 25.9
comp=Z,22nm,1.2s
KDJ Kajisay 43.14 306 P P 11 40 24.7 +0.6
KDJ pmax pmax
comp=Z,22nm,1.3s
KSH Kashi 43.77 302 P P 11 40 32.8 +3.6
KSH sP sP 11 40 50.7 +4.7
KSH PcP PcP 11 42 18.2 +2.9
KSH S S 11 46 59.9 +3.0
KSH pmax pmax
comp=Z,33nm,0.9s
KSH pmax pmax
comp=Z,250nm,6.5s
KSH LR LR
comp=Z,250nm,8.1s
KSH LR LR
comp=Z,410nm,8.8s
KSH LR LR
comp=Z,640nm,6.6s
ULHL Ulahol 43.85 306 P P 11 40 30.4 +0.5
SNR=9.8
KURK Kurchatov 44.10 318 P P 11 40 30.4 -1.1
KURK Kurchatov 44.10 318ceP P 11 40 30.9 -0.6
KURK pmax pmax
comp=Z,16nm,1.3s
KZA Kyzart 44.56 305 P P 11 40 36.9 +1.1
SNR=8.4
KBK Karagaybulak 44.85 306 P P 11 40 38.3 +0.5
SNR=8.8
CHMS Chumysh 45.03 307 P P 11 40 39.9 +0.8
SNR=6.8
UCH Uchtor 45.12 306 P P 11 40 40.8 +0.6
SNR=26
WB0 Warramunga Arr 45.18 168 IAmb IAmb 11 40 40.9
comp=Z,19nm,0.9s
AAK Ala-Archa 45.18 306 P P 11 40 39.8 -0.6
AAK Ala-Archa 45.18 306ceP P 11 40 41.0 +0.6
AAK pmax pmax
comp=Z,5.0nm,1.0s
USP Ospenovka 45.25 307 P P 11 40 40.6 -0.2
SNR=5.3
WRA Warramunga Arr 45.34 168 P P 11 40 41.2 -0.3
comp=Z,11nm,0.8s,baz=349,slow=8.7,SNR=38
WRA Warramunga Arr 45.34 168 P P 11 40 41.0 -0.5
WB2 Warramunga Arr 45.34 168 IAmb IAmb 11 40 42.3
comp=Z,20nm,0.9s
WR0 Warramunga Arr 45.39 168 IAmb IAmb 11 40 42.7
comp=Z,16nm,0.9s
AML Almayashu 45.72 305 P P 11 40 45.8 +0.9
SNR=9.3
NIL Nilore 45.91 294 P P 11 40 46.2 0.0
NIL Nilore 45.91 294 P P 11 40 46.2 0.0
NIL pmax pmax
comp=Z,29nm,0.9s
ARSB Arslanbob 46.18 304 IAmb IAmb 11 40 51.9
comp=Z,22nm,1.6s
TIXI Tiksi 46.91 2 iP P 11 40 52.5 -0.8
TIXI pmax pmax
comp=Z,17nm,3.9s
KK31 Karatay Array 48.14 306 P P 11 41 03.6 +0.2
KK31 Karatay Array 48.14 306 P P 11 41 03.6 +0.2
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 48.14 306 P P 11 41 03.2 -0.2
KKAR Karatay Array 48.14 306 IAmb IAmb 11 41 05.0
comp=Z,3.6nm,0.8s
KKAR Karatay Array 48.14 306 P P 11 41 03.2 -0.2
ASAR Alice Springs 48.90 170 P P 11 41 09.1 -0.2
comp=Z,3.2nm,0.6s,baz=355,slow=6.8,SNR=60
KBL Kabul 49.34 295 P P 11 41 13.4 +0.5
KBL Kabul 49.34 295 P P 11 41 13.4 +0.5
KBL pmax pmax
comp=Z,58nm,1.3s
BRVK Borovoye 49.70 320 P P 11 41 15.0 -0.1
BRVK Borovoye 49.70 320 P P 11 41 15.0 -0.1
BRVK pmax pmax
comp=Z,8.0nm,1.2s
BILL Bilibino 49.83 19 P P 11 41 16.1 +0.2
BILL IAmb IAmb 11 41 44.7
comp=Z,27nm,1.8s
BILL Bilibino 49.83 19 iP P 11 41 14.3 -1.6
BILL i 11 42 33.4
BILL i 11 43 10.2
BILL pmax pmax
comp=Z,6.0nm,1.0s
AB31 Akbulak array 55.74 314 P P 11 41 59.0 -0.8
ABKAR Akbulak array 55.74 314 P P 11 41 59.3 -0.5
SVE Sverdlovsk 55.81 323 eP P 11 41 59.8 -0.4
SVE pmax pmax
comp=Z,16nm,1.2s
SVE MLR MLR
comp=Z,430nm,20.0s
ARU Arti 56.91 322d iP P 11 42 07.1 -0.9
ARU S S 11 49 58.3 -0.4
ARU pmax pmax
comp=Z,17nm,1.4s
ARU MLR MLR
comp=Z,237nm,18.0s
AKTO Aktyubinsk 56.99 315 P P 11 42 05.3 -3.5

GEYT Alibeck 57.76 300 P P 11 42 13.7 -0.7
comp=Z,9.3nm,0.8s,baz=75,slow=1.7,SNR=20
GEYT LR LR 12 11 09.7
comp=Z,162nm,18.7s,baz=40,slow=40
GEYT Alibeck 57.76 300 P P 11 42 15.5 +1.0
GYA0B ALIBECK ARRAY 57.76 300 IAmb IAmb 11 42 16.2
comp=Z,15nm,0.8s
NWAO Narrogin (SRO) 57.94 188 P P 11 42 15.8 +0.3
NWAO Narrogin (SRO) 57.94 188 IAmb IAmb 11 42 19.9
comp=Z,118nm,1.9s
NWAO Narrogin (SRO) 57.94 188 P P 11 42 15.8 +0.3
NWAO pmax pmax
comp=Z,25nm,0.9s
BBOO Buckleboo 58.21 169 P P 11 42 17.4 +0.1
BBOO IAmb IAmb 11 42 29.2
comp=Z,15nm,1.1s
STKA Stephens Creek 58.47 164 P P 11 42 19.1 -0.1
comp=Z,8.1nm,0.7s,baz=342,slow=7.7,SNR=20
STKA LR LR 12 11 34.6
comp=Z,29nm,18.1s,baz=32,slow=40
ANM Nome 58.98 28 P P 11 42 23.8 +1.4
ANM Nome 58.98 28 P P 11 42 23.8 +1.4
ANM pmax pmax
comp=Z,60nm,1.8s
SDPT Sand Point 61.03 39 P P 11 42 35.6 -1.0
DZM Mont Dzumac 61.35 136 eS S 11 51 01.7 +4.6
comp=Z,97nm,29.1s
DZM eLR LR 12 00 49.7
comp=Z,251nm,24.7s
DZM Mont Dzumac 61.35 136 LR LR 12 05 51.5
comp=Z,97nm,20.5s,baz=242,slow=33
CNBA Chernabura Isl 61.57 39 P P 11 42 40.0 -0.2
KIRV Kirov 61.89 325 iP P 11 42 40.6 -1.7
PRGR Permogore 63.64 328 eP P 11 42 48.8 -5.1
PRGR pmax pmax
comp=Z,7.0nm,0.4s
IMAR Indian Mountai 63.91 27 P P 11 42 56.1 +0.4
OHAK Old Harbor 64.88 36 P P 11 43 02.2 +0.1
TOO Toolangi 64.88 162 P P 11 42 59.7 -2.6
TOO Toolangi 64.88 162 P P 11 42 59.7 -2.6
TOO pmax pmax
comp=Z,54nm,1.9s
KDAK Kodiak Island 65.18 36 P P 11 43 04.3 +0.2
KDAK Kodiak Island 65.18 36 P P 11 43 04.3 +0.2
KDAK pmax pmax
comp=Z,136nm,2.0s
SKT Skwentna 65.20 31 P P 11 43 04.8 +0.6
BPAW Bear Paw Mtn. 65.22 29 IAmb IAmb 11 43 19.1
comp=Z,23nm,1.5s
MLY Manley 65.23 28 IAmb IAmb 11 43 19.1
comp=Z,18nm,1.3s
COLD Coldfoot 65.24 25 P P 11 43 06.7 +2.4
KTH Kantishna Hill 65.31 29 P P 11 43 05.9 +1.0
KTH IAmb IAmb 11 43 40.7
comp=Z,15nm,1.4s
TOLK Toolik Lake Re 65.35 24 P P 11 43 05.8 +0.7
TOLK IAmb IAmb 11 43 18.9
comp=Z,19nm,0.8s
TRF Thorofare Moun 65.60 29 P P 11 43 08.1 +1.1
TRF IAmb IAmb 11 43 37.9
comp=Z,38nm,1.9s
SUA Susitna One 65.63 32 IAmb IAmb 11 43 24.1
comp=Z,14nm,0.9s
CNPM China Poot 65.65 34 P P 11 43 06.9 -0.2
BRLK Bradley Lake 65.79 33 P P 11 43 07.1 -1.0
BWN Browne 65.88 29 P P 11 43 09.6 +1.1
BWN IAmb IAmb 11 43 50.1
comp=Z,18nm,0.9s
NEA Nenana 65.99 28 IAmb IAmb 11 43 36.5
comp=Z,18nm,1.0s
MCK McKinley 66.17 29 IAmb IAmb 11 43 23.7
comp=Z,17nm,1.1s
RC01 Rabbit Creek A 66.17 32 P P 11 43 11.0 +0.6
RC01 IAmb IAmb 11 43 33.8
comp=Z,25nm,1.5s
MDM Murphy Dome 66.30 28 P P 11 43 11.1 -0.2
PMR Palmer 66.38 31 P P 11 43 11.9 +0.2
PMR IAmb IAmb 11 43 24.5
comp=Z,23nm,1.5s
PMR Palmer 66.38 31 P P 11 43 11.9 +0.2
PMR pmax pmax
comp=Z,23nm,1.5s
SEW Seward 66.46 33 P P 11 43 12.5 +0.3
CCB Clear Creek Bu 66.53 28 IAmb IAmb 11 43 43.0
comp=Z,13nm,1.4s
KLMR Klimovskoe 66.66 328 eP P 11 43 11.6 -1.9
KLMR AMP 11 43 14.1
comp=Z,18nm,1.2s
KLMR Klimovskoe 66.66 328 eP P 11 43 11.6 -1.9
KLMR pmax pmax
comp=Z,18nm,1.2s
TMCR Tamitsa 66.81 332 eP P 11 43 15.1 +0.7
TMCR pmax pmax
comp=Z,13nm,0.7s
IL31 66.90 28 IAmb IAmb 11 43 58.0
comp=Z,13nm,1.5s
ILAR Eielson Array 66.90 28 P P 11 43 14.3 -0.7
comp=Z,0.9nm,0.5s,baz=249,slow=5.0,SNR=24
ILAR LR LR 12 12 50.4
comp=Z,41nm,20.5s,baz=292,slow=36
ILAR Eielson Array 66.90 28 P P 11 43 13.7 -1.3
ILAR Eielson Array 66.90 28 P P 11 43 13.7 -1.3
HDA Harding Lake 66.93 28 IAmb IAmb 11 43 34.0
comp=Z,7.2nm,0.6s
DHY Denali Highway 66.96 30 P P 11 43 16.0 +0.3
DHY IAmb IAmb 11 43 31.9
comp=Z,20nm,1.6s
VRH Novokhopyorsk 67.19 317 eP P 11 43 16.1 -0.9
VRH pmax pmax
comp=Z,20nm,0.9s
FYU Fort Yukon 67.27 26 P P 11 43 19.0 +1.7
BMAR Burnt Mountain 67.38 25 P P 11 43 19.7 +1.7
ZEI Tsey 67.55 308 eP P 11 43 18.8 -1.0
ZEI pmax pmax
comp=Z,17nm,1.0s
GNI Garni 67.57 305ceP P 11 43 19.4 -0.5
GNI pmax pmax
comp=Z,55nm,1.3s
GOF Gofitskoye 67.63 311⇑eP P 11 43 19.3 -0.7
GOF pmax pmax
comp=Z,30nm,0.8s
RIDG Independent Ri 67.96 29 IAmb IAmb 11 43 35.5
comp=Z,19nm,1.2s
KBZ Khabaz 68.04 309 P P 11 43 21.7 -0.9
comp=Z,18nm,0.9s,baz=84,slow=5.8,SNR=30
KBZ LR LR 12 17 53.3
comp=Z,155nm,19.1s,baz=60,slow=40
KBZ Khabaz 68.04 309c iP P 11 43 22.4 -0.2
KIV Kislovodsk 68.14 309 eP P 11 43 23.7 +0.3
KIV pmax pmax
comp=Z,107nm,1.0s
KIV MLR MLR
comp=Z,194nm,17.0s
AKH Akhalkalaki 68.18 307 ⇓P P 11 43 25.4 +1.6
EYAK Cordova Ski Ar 68.19 32 P P 11 43 24.1 +0.9
EYAK IAmb IAmb 11 45 04.7
comp=Z,30nm,1.4s
SOCY Socotra 68.20 274 P P 11 43 22.1 -2.1
SHA1 Shidzhatmaz 68.21 309 iP P 11 43 23.0 -1.0
SCRK Sand Creek 68.28 28 IAmb IAmb 11 43 39.0
comp=Z,42nm,2.0s
VSR Storozhevoye 68.75 318 eP P 11 43 25.4 -1.5
VSR pmax pmax
comp=Z,20nm,1.1s
GLB Gilahina Butte 68.92 31 IAmb IAmb 11 43 41.5
comp=Z,15nm,1.4s
VRDI Verde Repeater 69.13 31 IAmb IAmb 11 43 43.6
comp=Z,32nm,1.6s
MCARA McCarthy VSAT 69.30 31 IAmb IAmb 11 43 36.2
comp=Z,12nm,1.0s
OBN Obninsk 69.35 322ceP P 11 43 30.6 +0.1
OBN pmax pmax
comp=Z,11nm,0.4s
CRQM Cirque 69.39 32 IAmb IAmb 11 43 33.7
comp=Z,16nm,1.2s
BCAR Beaver Creek A 69.45 29 P P 11 43 31.8 +0.7
TGL Tana Glacier 69.54 32 P P 11 43 32.5 +0.8
TGL IAmb IAmb 11 43 46.4
comp=Z,11nm,0.9s
BALM Baldy 69.70 31 P P 11 43 33.1 +0.3
BALM IAmb IAmb 11 43 54.8
comp=Z,21nm,1.7s
BARN Barnard Glacie 70.02 31 P P 11 43 35.7 +0.9
BARN IAmb IAmb 11 43 48.6
comp=Z,17nm,1.5s

CTGM Chitina Glacie 70.20 31 P P 11 43 36.0 +0.1
DAWY Dawson 70.22 28 IAmb IAmb 11 43 50.4
comp=Z,26nm,1.7s
SOC Sochi 70.31 310 eP P 11 43 35.5 -1.2
SOC e 11 46 15.9
SOC ePPP PPP 11 47 53.6
SOC eS S 11 52 47.5 +1.7
SOC pmax pmax
comp=Z,23nm,0.9s
SOC MLR MLR
comp=Z,233nm,18.0s
ARCES ARCESS Array B 70.37 338 P P 11 43 36.8 +0.2
comp=Z,2.4nm,0.8s,baz=70,slow=8.2,SNR=12
ARCES LR LR 12 18 08.3
comp=Z,91nm,21.4s,baz=147,slow=39
EPYK Eagle Plains 70.64 25 IAmb IAmb 11 43 51.9
comp=Z,25nm,1.4s
PCA Pinnacle 70.95 32 P P 11 43 40.1 -0.3
INK Inuvik 71.19 23 IAmb IAmb 11 44 02.4
comp=Z,14nm,1.1s
ANN Anapa 71.55 311 eP P 11 43 43.7 -0.4
ANN pmax pmax
comp=Z,53nm,1.2s
FINES FINESS Array B 72.81 330 P P 11 43 50.7 -0.7
comp=Z,3.6nm,0.5s,baz=48,slow=5.5,SNR=14
FINES LR LR 12 19 39.9
comp=Z,179nm,18.4s,baz=90,slow=39
FINES FINESS Array B 72.81 330 P P 11 43 51.4 +0.1
FINES FINESS Array B 72.81 330ceP P 11 43 51.2 -0.1
FINES pmax pmax
comp=Z,4.0nm,0.5s
WHY Whitehorse 73.30 30 IAmb IAmb 11 44 09.6
comp=Z,40nm,1.6s
AKASG Malin Array Be 74.91 319 P P 11 44 03.0 -0.8
comp=Z,4.8nm,0.4s,baz=56,slow=6.2,SNR=22
AKASG Malin Array Be 74.91 319 P P 11 44 03.4 -0.5
AKASG Malin Array Be 74.91 319ceP P 11 44 03.0 -0.8
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKBB Malin Array Si 74.91 319 IAmb IAmb 11 44 03.9
comp=Z,11nm,0.5s
BR131 Keskin Array S 75.84 307 IAmb IAmb 11 44 11.1
comp=Z,28nm,1.0s
BRTR Keskin Array B 75.84 307 P P 11 44 09.7 0.0
comp=Z,23nm,1.0s,baz=101,slow=5.2,SNR=79
BRTR Keskin Array B 75.84 307 P P 11 44 09.0 -0.7
BRTR Keskin Array B 75.84 307ceP P 11 44 09.6 0.0
BRTR pmax pmax
comp=Z,22nm,1.0s
DAG Danmarks Havn 76.30 352 iP P 11 44 10.3 -1.1
DAG Danmarks Havn 76.30 352 iP P 11 44 10.3 -1.1
SORM Soroca 76.37 317 ⇓P P 11 44 11.3 -1.0
SORM Soroca 76.37 317 ⇓P P 11 44 11.3 -1.0
TESR Tescani 78.07 316 ⇑P P 11 44 21.4 -0.5
VRI Vrincioaia 78.27 315 ⇑P P 11 44 24.1 +1.1
VRI Vrincioaia 78.27 315 ⇑P P 11 44 24.1 +1.1
LVV L'vov 78.33 320 eP P 11 44 23.4 +0.2
PLOR Plostina 78.33 315 ⇑P P 11 44 23.6 +0.2
PLOR Plostina 78.33 315 ⇑P P 11 44 23.6 +0.2
BUR08 Bucovina Ar. S 78.52 317 IAmb IAmb 11 44 25.9
comp=Z,13nm,1.4s
BURAR Bucovina Array 78.52 317 ⇑P P 11 44 25.0 +0.6
BURAR Bucovina Array 78.52 317 P P 11 44 24.1 -0.3
BURAR Bucovina Array 78.52 317 ⇑P P 11 44 25.0 +0.6
OZUR 78.78 316 ⇑P P 11 44 26.9 +1.1
MLR Muntele Rosu 78.93 315 ⇑P P 11 44 27.5 +0.7
MLR Muntele Rosu 78.93 315 ⇑P P 11 44 27.5 +0.7
KWP Kalwaria Pacla 79.18 320 eP P 11 44 28.6 +0.7
KWP Kalwaria Pacla 79.18 320 eP P 11 44 28.6 +0.7
BEL Belsk 79.31 322 eP P 11 44 29.9 +1.3
BEL Belsk 79.31 322 eP P 11 44 29.9 +1.3
NB2 NORSAR Subarra 79.42 333 P P 11 44 28.1 -0.9
comp=Z,11nm,1.2s,baz=58,slow=5.6
NOA NORSAR Array B 79.42 333 P P 11 44 28.4 -0.6
comp=Z,1.1nm,0.5s,baz=54,slow=5.5,SNR=6.8
NOA LR LR 12 23 08.8
comp=Z,93nm,20.6s,baz=70,slow=38
NC204 NORSAR Array S 79.47 333 P P 11 44 29.6 +0.2
VOIR 79.52 315 ⇑P P 11 44 32.2 +2.2
VOIR 79.52 315 ⇑P P 11 44 32.2 +2.2
KOLS Kolonicke sedl 79.74 319 eP P 11 44 31.2 +0.2
KOLS pmax pmax
comp=Z,5.0nm,1.1s
KOLS Kolonicke sedl 79.74 319 eP P 11 44 31.1 +0.1
ARR Arges 79.82 315 ⇑P P 11 44 32.5 +0.9
TRPA Tarpa 79.94 318 ⇓P P 11 44 32.6 +0.6
HUMR Humele 79.95 314 ⇓P P 11 44 32.6 +0.4
ELND Elena 80.02 313 ⇑P P 11 44 33.3 +0.7
CRVS Cervenica-Dubn 80.24 319 eP P 11 44 34.7 +1.0
CRVS pmax pmax
comp=Z,12nm,1.2s
CRVS Cervenica-Dubn 80.24 319 eP P 11 44 34.7 +1.0
DRGR 80.42 317 ⇑P P 11 44 35.7 +0.9
DRGR 80.42 317 ⇑P P 11 44 35.7 +0.9
OJC Ojcow 80.60 321 eP P 11 44 36.1 +0.5
OJC Ojcow 80.60 321 eP P 11 44 36.1 +0.5
NIE Niedzica 80.68 320 eP P 11 44 36.5 +0.4
NIE Niedzica 80.68 320 eP P 11 44 36.5 +0.4
YKA Yellowknife Ar 80.88 24 P P 11 44 37.0 +0.2
comp=Z,3.7nm,0.8s,baz=303,slow=5.1,SNR=30
YKA PKKPbc PKKPbc 12 03 12.8 -3.0
comp=Z,0.4nm,0.6s,baz=130,slow=2.2,SNR=7.8
YKA LR LR 12 25 21.5
comp=Z,32nm,18.6s,baz=0.0,slow=39
YKA Yellowknife Ar 80.88 24 P P 11 44 37.0 +0.2
GZR Gura Zlata 80.99 316 ⇑P P 11 44 38.6 +0.8
GZR Gura Zlata 80.99 316 ⇑P P 11 44 38.6 +0.8
BZS Buzias 81.62 316 ⇑P P 11 44 41.1 0.0
BZS Buzias 81.62 316 ⇑P P 11 44 41.1 0.0
VTS Vitosha 81.91 313 ⇑P P 11 44 43.9 +1.0
VTS Vitosha 81.91 313 ⇑P P 11 44 43.9 +1.0
VYHS Vyhne 81.97 320 eP P 11 44 43.2 +0.3
VYHS pmax pmax
comp=Z,12nm,1.2s
VYHS Vyhne 81.97 320 eP P 11 44 43.2 +0.3
MORC Moravsky Berou 82.10 321 eP P 11 44 43.6 0.0
MORC Moravsky Berou 82.10 321 ⇑P P 11 44 44.5 +0.9
MORC Moravsky Berou 82.10 321 ⇑P P 11 44 44.5 +0.9
SUMG Summit 82.24 355 iP P 11 44 45.0 +0.7
SUMG Summit 82.24 355 P P 11 44 44.3 0.0
SUMG IAmb IAmb 11 45 00.6
comp=Z,24nm,1.3s
SUMG Summit 82.24 355 iP P 11 44 45.0 +0.7
KSP Ksiaz 82.27 323 eP P 11 44 45.1 +0.7
KSP Ksiaz 82.27 323 eP P 11 44 45.1 +0.7
KRLC Kraliky 82.38 322 eP P 11 44 44.8 -0.3
KRLC Kraliky 82.38 322 eP P 11 44 44.8 -0.3
JAVC Velka Javorina 82.47 321 eP P 11 44 46.7 +1.1
DPC Dobruska-Polom 82.50 322 eP P 11 44 46.5 +0.8
DPC Dobruska-Polom 82.50 322 eP P 11 44 46.5 +0.8
VRAC Vranov 82.86 321 eP P 11 44 47.9 +0.3
MODS Modra-Piesok 82.94 320 eP P 11 44 47.9 -0.1
MODS pmax pmax
comp=Z,14nm,1.4s
MODS Modra-Piesok 82.94 320 eP P 11 44 47.9 -0.1
KRUC Moravsky 83.10 321 eP P 11 44 49.7 +0.9
BRG Berggiesshubel 83.53 324 eP P 11 44 51.1 +0.2
comp=Z,9.7nm,1.2s
BRG Berggiesshubel 83.53 324 eP P 11 44 51.1 +0.2
BRG pmax pmax
comp=Z,10.0nm,1.2s
CLL Collm 83.80 324 eP P 11 44 52.0 -0.3
CLL epP pP 11 45 05.0 -0.1
CLL eS S 11 55 24.0 +12
CLL LmV 12 24 00.0
comp=Z,200nm,20.6s
CLL Collm 83.80 324 eP P 11 44 52.0 -0.3
CLL e 11 45 05.0
CONA Conrad Observa 83.98 320 ePcP P 11 44 54.7 +1.3
comp=Z,13nm,1.2s
ARSA Arzberg 84.52 320 ePcP P 11 44 56.7 +0.6
comp=Z,5.7nm,1.1s
KHC Kasperske Hory 84.65 322 eP P 11 44 57.1 +0.4
KHC Kasperske Hory 84.65 322 eP P 11 44 57.1 +0.4
GERES GERESS Array B 84.73 322 P P 11 44 57.0 -0.3
comp=Z,3.6nm,0.9s,baz=49,slow=4.5,SNR=17
GERES LR LR 12 26 10.4
comp=Z,122nm,21.5s,baz=104,slow=38
GERES GERESS Array B 84.73 322 P P 11 44 57.0 -0.3
MOA Molln 84.94 321 P P 11 44 57.4 -0.8
comp=Z,6.7nm,1.1s
KBA Koelnbreinsper 85.88 321 PcP P 11 45 04.6 +1.5
comp=Z,8.3nm,1.3s

ABTA	Abfaltersbach	86.54	321	P	P	11 45 04.6	-1.7
	comp=Z,8.0nm,1.2s						
WATA	Walderalm	86.75	321	ePcP	P	11 45 08.0	+0.7
	comp=Z,2.6nm,0.5s						
WTTA	Wattenberg	86.76	321	ePcP	P	11 45 07.9	+0.5
	comp=Z,11nm,1.1s						
DAVA	Damuels	87.73	322	ePcP	P	11 45 11.7	-0.4
	comp=Z,7.6nm,1.0s						
KMBO	Kilima Mbogo	88.75	268	LR	LR	12 23 05.5	
	comp=Z,33nm,21.8s,baz=88,slow=34						
FCC	Fort Churchill	90.54	19	P	P	11 45 24.9	+0.1
FCC	Fort Churchill	90.54	19	P	P	11 45 24.9	+0.1
FCC				pmax	pmax		
	comp=Z,16nm,1.2s						
PPT	Papeete	92.90	108	LR	LR	12 17 48.6	
	comp=Z,51nm,20.1s,baz=298,slow=29						
PPT2	Papeete2	92.91	108	eLR	LR	12 15 24.4	
	comp=Z,387nm,31.8s						
NVAR	Mina Array Bea	93.34	45	P	P	11 45 39.1	+0.6
	comp=Z,0.8nm,0.7s,baz=316,slow=3.8,SNR=9.8						
PDAR	Pinedale Array	95.87	37	P	P	11 45 49.6	-0.4
	comp=Z,0.3nm,0.7s,baz=350,slow=4.6,SNR=3.2						
PDAR				LR	LR	12 34 03.9	
	comp=Z,17nm,18.1s,baz=351,slow=39						
ULM	Lac du Bonnet	96.81	25	LR	LR	12 34 31.0	
	comp=Z,47nm,18.8s,baz=346,slow=38						
SYO	Syowa Base	111.42	203⇑	epPdiff	pPdif	11 47 10.3	-0.8
TORD	Torodi Ar. Bea	113.35	298	PP	PP	11 51 43.5	-8.7
	comp=Z,0.8nm,0.9s,baz=53,slow=5.0,SNR=4.7						

ISK 06 11:36:53.7, 38°.74N×38°.24E, h5km, ML2.6/13
DDA 06 11:36:54.2, 38°.75N×38°.26E, h7km±2km, ML2.7
ISC 06 11:36:54.5±1.1, 38°.75N±0°.02×38°.23E±0°.02, h6km±10km, n26, σ1§21/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEKM	Malatya_Hekimh	0.25	303	iP	Pg	11 36 59.6	+0.2
HEKM				iS	Sg	11 37 03.6	+0.9
HEKM				IAML		11 37 04.0	
	comp=N,3μm,0.4s						
HEKM				IAML		11 37 05.0	
	comp=E,3μm,0.2s						
ARPR	Arapgir-MALATY	0.36	14	PG	Pb	11 37 02.2	-1.2
ARPR				SG	Sb	11 37 08.0	-1.3
KEMA	Kemaliye	0.56	22	iP	Pg	11 37 05.0	-0.3
KEMA				iS	Sb	11 37 13.7	-1.5
KEMA				IAML		11 37 17.0	
	comp=E,428nm,0.3s						
KEMA				IAML		11 37 18.0	
	comp=N,440nm,0.4s						
DARE	Darende-Malaty	0.61	253	PG	Pg	11 37 05.9	-0.3
DARE				SG	Sb	11 37 15.4	-1.0
ELZG	Elazig	0.65	112	iP	Pb	11 37 07.0	-1.3
ELZG				iS	Sb	11 37 16.2	-1.4
ELZG				IAML		11 37 18.0	
	comp=N,407nm,0.3s						
ELZG				IAML		11 37 18.0	
	comp=E,452nm,0.4s						
CUGUR	Gurin_SVAS	0.74	269	iP	Pg	11 37 08.6	-0.3
CUGUR				iS	Sb	11 37 20.1	-0.4
CUGUR				IAML		11 37 22.0	
	comp=E,299nm,0.5s						
CUGUR				IAML		11 37 23.0	
	comp=N,288nm,0.6s						
CUKAN	kangal_SIVAS	0.82	314	iP	Pg	11 37 09.5	-0.8
CUKAN				iS	Sg	11 37 21.0	0.0
SVRC	Sivrice-ELAZID	0.92	113	PG	Pg	11 37 11.9	-0.4
SVRC				SG	Sb	11 37 25.7	0.0
TNCL	Tunceli-Merkez	1.09	70	iP	Pg	11 37 14.8	-0.7
TNCL				iS	Sb	11 37 30.4	0.0
TNCL				IAML		11 37 32.0	
	comp=N,214nm,0.6s						
TNCL				IAML		11 37 33.0	
	comp=E,310nm,0.5s						
CUZAR	Zara_SIVAS	1.19	343	iP	Pg	11 37 16.9	-0.5
CUZAR				iS	Sn	11 37 36.0	+1.4
CUALT	Altinyayla-SIV	1.26	295	iP	Pn	11 37 19.8	+0.9
CUALT				iS	Sn	11 37 36.4	+0.2
CUALT				IAML		11 37 40.0	
	comp=E,129nm,0.4s						
CUALT				IAML		11 37 40.0	
	comp=N,96nm,0.5s						
URFA	Urfa	1.39	160	PN	Pn	11 37 21.1	0.0
URFA				SN	Sn	11 37 41.0	+1.9
SCER	sogukcermik	1.40	323	iP	Pb	11 37 20.8	-0.4
SCER				iS	Sg	11 37 40.3	+0.7
SCER				IAML		11 37 43.0	
	comp=N,103nm,0.3s						
SCER				IAML		11 37 44.0	
	comp=E,100nm,0.6s						
SARI	SarD1z-Kayseri	1.46	257	PN	Pg	11 37 22.0	-0.4
SARI				SN	Sg	11 37 43.3	+2.0
SUSE	Susehri	1.46	359	iP	Pg	11 37 22.2	-0.4
SUSE				iS	Sg	11 37 44.7	+3.2
GZT	Gaziantep	1.48	201	iP	Pg	11 37 23.2	+0.2
GZT				iS	Sg	11 37 44.9	+2.7
SVSK	Karacayir	1.51	321	PN	Pg	11 37 23.3	-0.1
SVSK				SN	Sg	11 37 44.7	+1.7
KELT	Kelkit	1.61	29	iP	Pb	11 37 24.0	-0.8
KELT				iS	Sg	11 37 46.7	+0.4
KMRS	Kahramanmaras	1.62	221	PN	Pg	11 37 24.7	-0.9
KMRS				SN	Sg	11 37 47.1	+0.5
CUSAR	Sarkisla-SIVAS	1.68	294	iP	Pb	11 37 25.7	-0.2
CUSAR				iS	Sg	11 37 49.4	+0.9
GAZ	Gaziantep	1.76	207	PN	Pb	11 37 26.7	-0.6
GAZ				SN	Sg	11 37 50.6	-0.6
RSDY	Resadiye-TOKAT	1.79	337	PN	Pb	11 37 27.2	-0.5
RSDY				SN	Sg	11 37 51.7	-0.3
BNN	Bunyan	1.86	274	PN	Pb	11 37 28.6	-0.4
KOZT	Kozan	2.27	237	PN	Pb	11 37 34.4	-1.6
YOZ	Yozgat	2.43	292	PN	Pb	11 37 36.6	-2.1
CMRD	Camardi-Nigde	2.77	248	PN	Pb	11 37 41.5	-3.0

IDC 06 11:40:16.3±6.0, 59°.03S×153°.20E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.7/25, mbtmp3.5/2, MS3.7/10, Ms1 3.7/10, ms1mx3.4/20, Error ellipse: s-maj=439.3km s-min=49.2km az=49.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	Vanda	18.80	174	LR	LR	11 50 46.5	
	comp=Z,223nm,20.2s,baz=354,slow=34						
RPZ	Rata Peaks	18.86	43	LR	LR	11 51 09.9	
	comp=Z,189nm,18.2s,baz=182,slow=35						
URZ	Urewera	25.84	47	LR	LR	11 56 30.9	
	comp=Z,146nm,18.0s,baz=204,slow=38						
H01W1	Cape Leeuwin H	35.16	296	T	T	12 23 28.5	
	baz=147,slow=75,SNR=30						
H01W2	Cape Leeuwin H	35.17	296	T	T	12 23 28.0	
	baz=147,slow=75,SNR=19						
H01W3	Cape Leeuwin H	35.18	296	T	T	12 23 30.5	
	baz=147,slow=75,SNR=20						
RAO	Raoul Island	35.73	46	LR	LR	12 01 13.3	
	comp=Z,165nm,19.6s,baz=159,slow=35						
MAW	Mawson	37.87	219	LR	LR	12 04 15.9	
	comp=Z,54nm,18.4s,baz=88,slow=38						
ASAR	Alice Springs	37.89	330	P	P	11 47 35.0	+0.1
	0.8nm,1.0s,baz=160,slow=9.0,SNR=5.4						
CTA	Charters Tower	39.22	350	LR	LR	12 02 37.9	
	comp=Z,198nm,19.1s,baz=212,slow=34						
WRA	Warramunga Arr	41.36	333	P	P	11 48 03.6	-0.3
	0.9nm,1.1s,baz=164,slow=7.6,SNR=2.8						
WRA				LR	LR	12 03 10.1	
	comp=Z,72nm,21.9s,baz=340,slow=33						
FITZ	Fitzroy Crossi	45.55	322	LR	LR	12 06 00.8	
	comp=Z,70nm,19.1s,baz=185,slow=34						
HNR	Honiara	49.76	9	LR	LR	12 05 36.0	
	comp=Z,119nm,18.9s,baz=256,slow=30						
CMAR	Chiang Mai Arr	89.00	310	LR	LR	12 31 56.5	
	comp=Z,12nm,19.1s,baz=170,slow=35						
NVAR	Mina Array Bea	121.27	67	PKP	PKPdf	11 59 10.5	-0.2
	0.1nm,0.4s,baz=216,slow=4.5,SNR=2.6						

THE 06 11:47:53.9, 38°.37N×20°.47E, h9km±1km, ML2.7/6, Error ellipse: s-maj=1.7km s-min=0.4km az=271.0
ATH 06 11:47:53.2, 38°.38N×20°.46E, h16km±1km, ML2.5/15, Error ellipse: s-maj=1.8km s-min=0.7km az=273.0
ISC 06 11:47:53.4±0.9, 38°.37N±0°.02×20°.48E±0°.04, h12km±5km, n49, σ0§46/73, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	VASILIKIADES	0.08	63	P	Pg	11 47 55.9	-0.1
VSK1				S	Sg	11 47 57.5	-0.4
	14μm,0.1s						
FSK	Fiskardo	0.11	38	P	Pg	11 47 56.4	+0.1
FSK				S	Sg	11 47 58.5	0.0
	6μm,0.3s						
FSK	Fiskardo	0.11	38	P	Pg	11 47 56.5	+0.1
FSK				S	Sg	11 47 58.6	0.0
FSK				AML	AML	11 47 59.0	
	comp=E,14285μm,0.2s						
FSK				AML	AML	11 47 59.1	
	comp=N,8440μm,0.2s						
KEF4	Livadi, Kephal	0.12	199	P	Pg	11 47 56.5	0.0
KEF4				S	Sg	11 47 58.9	+0.2
LXR1	Lixouri, Cepha	0.17	190	P	Pg	11 47 57.5	+0.2
LXR1				S	Sg	11 48 00.7	+0.7
ARG2	Argostoli	0.20	177	P	Pg	11 47 57.8	+0.2
ARG2				S	Sg	11 48 01.1	+0.5
ARGA	Argostoli. Kep	0.20	179	P	Pg	11 47 57.7	0.0
ARGA				S	Sg	11 48 01.3	+0.7
KEF3	Kipouria, Keph	0.20	211	P	Pg	11 47 57.7	0.0
KEF3				S	Sg	11 48 01.2	+0.5
CHV1	Chavriata, Kef	0.20	201	P	Pg	11 47 57.9	+0.1
CHV1				S	Sg	11 48 01.5	+0.7
KEF2	Argostoli. Kep	0.21	178	P	Pg	11 47 57.9	+0.1
KEF2				S	Sg	11 48 00.6	-0.4
VLS	Valsamata	0.21	155	P	Pg	11 47 57.9	-0.1
VLS				S	Sg	11 48 01.6	+0.4
	comp=N,3μm,0.1s						
VLS	Valsamata	0.21	155	P	Pg	11 47 58.1	0.0
VLS				S	Sg	11 48 01.4	+0.3
VLS				AML	AML	11 48 03.6	
	comp=N,5594μm,0.2s						
VLS				AML	AML	11 48 03.6	
	comp=E,6430μm,0.1s						
EVGI	Lefkada island	0.28	30	P	Pg	11 47 59.5	+0.2
EVGI				S	Sb	11 48 06.0	+0.7
EVGI	Lefkada island	0.28	30	P	Pg	11 47 59.5	+0.2
EVGI				S	Sg	11 48 04.4	+1.2
MGNA	Meganis	0.38	41	P	Pg	11 48 01.0	0.0
MGNA				S	Sg	11 48 05.8	-0.1
MGNA				AML	AML	11 48 07.5	
	comp=N,4644μm,0.2s						
MGNA				AML	AML	11 48 07.6	
	comp=E,4237μm,0.2s						
LKD2	Lefkada island	0.44	19	P	Pg	11 48 02.0	-0.1
LKD2				S	Sg	11 48 09.0	+1.0
	comp=E,505nm,0.2s						
LKD2	Lefkada island	0.44	19	P	Pg	11 48 02.1	-0.1
LKD2				S	Sg	11 48 08.9	+0.9
LKD2				AML	AML	11 48 10.5	
	comp=E,1115μm,0.2s						
LKD2				AML	AML	11 48 14.8	
	comp=N,933μm,0.2s						
TSLK	Tsoukalades, L	0.47	17	P	Pg	11 48 02.8	+0.1
TSLK				S	Sb	11 48 10.2	-0.5
	comp=N,602nm,0.3s						
TSLK	Tsoukalades, L	0.47	17	P	Pg	11 48 02.8	+0.1
TSLK				S	Sg	11 48 09.7	+0.7
TSLK				AML	AML	11 48 12.8	
	comp=N,1342μm,0.4s						
TSLK				AML	AML	11 48 14.7	
	comp=E,1260μm,0.2s						
AST1	Astakos	0.51	71	P	Pg	11 48 03.7	+0.3
AST1				S	Sb	11 48 11.4	-0.3
VLMS	Volimes, Zakyn	0.52	163	P	Pg	11 48 03.4	-0.2
VLMS				S	Sb	11 48 11.7	-0.3
VLMS				AML	AML	11 48 12.4	
	comp=N,4727μm,0.4s						
VLMS				AML	AML	11 48 13.3	
	comp=E,3924μm,0.1s						
PDO	Prodromos	0.60	68	P	Pg	11 48 05.2	+0.1
PDO	Prodromos	0.60	68	P	Pg	11 48 05.2	+0.1
PDO				AML	AML	11 48 20.2	
	comp=N,1344μm,0.5s						
PDO				AML	AML	11 48 24.5	
	comp=E,802μm,0.4s						
KRI1	kERI	0.76	159	P	Pg	11 48 07.5	-0.6
KRI1				S	Sb	11 48 19.8	+0.9
	comp=E,1μm,0.2s						
RLS	Riolos of Patr	0.84	112	P	Pg	11 48 09.9	+0.2
RLS	Riolos of Patr	0.84	112	P	Pg	11 48 09.7	0.0
PVO	Paravola	0.86	73	P	Pg	11 48 10.3	+0.3
PVO	Paravola	0.86	73	P	Pg	11 48 10.3	+0.3
PVO				AML	AML	11 48 30.6	
	comp=N,648μm,0.3s						
PVO				AML	AML	11 48 31.1	
	comp=E,624μm,0.4s						
DRO	Drossia	1.06	113	P	Pb	11 48 13.4	-0.3
DRO	Drossia	1.06	113	P	Pb	11 48 13.4	-0.3
DRO				AML	AML	11 48 35.6	
	comp=E,766μm,0.4s						
DRO				AML	AML	11 48 35.7	
	comp=N,982μm,0.4s						
EFP	Efpalio	1.12	87	P	Pb	11 48 14.2	-0.6
EFP				AML	AML	11 48 38.0	
	comp=E,466μm,0.5s						
EFP				AML	AML	11 48 40.8	
	comp=N,375μm,0.4s						
ANX	Ano Chora	1.16	79	P	Pb	11 48 14.9	-0.5
ANX	Ano Chora	1.16	79	P	Pb	11 48 14.9	-0.5
ANX				AML	AML	11 48 38.4	
	comp=N,625μm,0.6s						
ANX				AML	AML	11 48 39.3	
	comp=E,628μm,0.7s						
IGT	Igoumenitsa	1.16	355	P	Pb	11 48 14.4	-1.1
EVR	Evrytania	1.18	62	P	Pb	11 48 15.1	-0.7
EVR				AML	AML	11 48 39.0	
	comp=E,218μm,0.7s						
EVR				AML	AML	11 48 42.6	
	comp=N,278μm,0.7s						
LAKA	Lakka	1.19	96	P	Pn	11 48 15.1	-0.9
LAKA				S	Sg	11 48 32.2	+0.4
LAKA				AML	AML	11 48 36.0	
	comp=E,263μm,0.3s						
LAKA				AML	AML	11 48 36.5	
	comp=N,257μm,0.4s						
SERG	Sergoula	1.24	88	P	Pn	11 48 16.1	-0.6
SERG				AML	AML	11 48 41.4	
	comp=E,215μm,0.3s						
SERG				AML	AML	11 48 43.4	
	comp=N,315μm,0.4s						
TRIZ	Trizonia	1.25	90	P	Pn	11 48 16.2	-0.6
TRIZ	Trizonia	1.25	90	P	Pn	11 48 16.3	-0.4
AMT	Artemida-Makis	1.29	130	P	Pb	11 48 17.6	0.0
KALE	Kalithea	1.31	89	P	Pn	11 48 17.1	-0.5
KALE	Kalithea	1.31	89	P	Pn	11 48 17.2	-0.4
KLV	Kalavryta, Ach	1.36	103	P	Pn	11 48 18.2	-0.1
KLV	Kalavryta, Ach	1.36	103	P	Pn	11 48 18.3	0.0
KLV				S	Sg	11 48 37.4	+0.2
KLV				AML	AML	11 48 40.0	
	comp=N,189μm,0.5s						
KLV				AML	AML	11 48 42.2	
	comp=E,163μm,0.3s						
MAKR	Makrakomi, Fth	1.45	63	P	Pb	11 48 20.3	0.0
AGG	Agios Georgios	1.59	65	P	Pb	11 48 22.7	-0.1
ITM	Ithomi	1.66	136	P	Pn	11 48 22.9	+0.6
THL	Klokotos Trika	1.69	45	P	Pb	11 48 25.1	+0.7
VIL2	Platees	2.20	93	P	Pb	11 48 33.1	-0.1

OMAN 06 12:03:38.9±0.2, 17°.16N×59°.65E, h64km, ml3.9/5, Error ellipse: s-maj=3.0km s-min=1.5km az=23.0
ISC 06 12:03:36.4±3.9, 17°.2N±0°.2×59°.6E±0°.2, h10km, n9, σ0§94/17, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DQM	DQM	3.35	325	P	Pn	12 04 29.7	+0.7
	SNR=12						
DQM				S	Sn	12 05 09.5	+0.7
SHAO	Shalim	3.86	283	P	Pn	12 04 36.6	+0.6
SHAO				S	Sn	12 05 21.8	+0.3
MHTO	MHTO	4.08	338	P	Pn	12 04 38.4	-0.6
	SNR=15						
MHTO				S	Sn	12 05 26.5	-0.4
DMTO	DMTO	4.45	278	P	Pn	12 04 44.0	-0.1
DMTO				S	Sn	12 05 35.7	-0.3
RBK	Rabkut	5.14	274	P	Pn	12 04 54.6	+1.0
JMDO	Jabal Madar	5.35	345	P	Pn	12 04 56.9	+0.5
JMDO				S	Sn	12 05 58.5	+0.3
ABTO	Aybut	6.00	273	P	Pn	12 05 05.9	+0.4
ABTO				S	Sn	12 06 12.1	-2.3
SMDO	Samad	6.03	346	P	Pn	12 05 05.5	-0.3
	SNR=7.7						
SMDO				S	Sn	12 06 13.5	-1.4
ASHO	Ashiyiah	8.16	337	P	Pn	12 05 36.2	+1.1
ASHO				S	Sn	12 07 06.9	-0.5

NIED 06 12:10:00, 38°.40N×141°.90E, h62km, Mw4.1 Best double couple: $M_0$1.53000×10^15 NP1:φs188.00000°, δ47.00000°, λ79.00000°. NP2:φs24.00000°, δ44.00000°, λ101.00000°.
NEIC 06 12:10:26.2±2.1, 38°.45N±0°.06×142°.0E±0°.1, h54km±7km, mb4.4/31, Error ellipse: s-maj=13.5km s-min=7.6km az=110.0
IDC 06 12:10:27.4±0.5, 38°.43N×141°.89E, h68km±4km, mb3.9/22, mb1 4.0/30, mb1mx4.0/44, mbtmp4.2/30, MS3.0/4, Ms1 3.0/4, ms1mx2.6/63, Error ellipse: s-maj=12.5km s-min=9.5km az=114.0
JMA 06 12:10:27.1, 38°.45N×141°.91E, h62km±1km, M4.2
JMA Felt III J1.
ISC 06 12:10:27.3±0.5, 38°.43N±0°.04×141°.92E±0°.06, h67km±4km, n105, σ1§12/121, mb4.2/35, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.37	252	P	Pn	12 10 38.1	-0.5
JIKH				S	Sn	12 10 45.8	-1.1
JIO	Ouri	0.45	273	P	Pn	12 10 38.7	-0.5
JIO				S	Sn	12 10 46.9	-1.1
JKMT	Kesennumamotoy	0.51	318	P	Pn	12 10 39.4	-0.5
JKMT				S	Sn	12 10 48.0	-1.2
OFUJ	Ofunato	0.68	344	P	Pn	12 10 41.1	-0.6
OFUJ				S	Sn	12 10 51.1	-1.2
JMK	Ichinoseki	0.75	314	P	Pn	12 10 42.2	-0.3
JMK				S	Sn	12 10 53.1	-0.7
JOU	Okura	0.98	267	P	Pn	12 10 45.0	-0.4
JOU				S	Sn	12 10 58.3	-0.6
JMM	Marumori	1.05	238	P	Pn	12 10 45.6	-0.6
JMM				S	Sn	12 10 59.2	-1.1
JOM	Ohasama	1.15	335	P	Pn	12 10 47.1	-0.4
JOM				S	Sn	12 11 02.4	-0.2
JYK	Kaneyama	1.31	292	P	Pn	12 10 49.4	-0.2
JYK				S	Sn	12 11 06.2	-0.2
JFK	Kawauchi	1.34	218	P	Pn	12 10 49.7	-0.4
JFK				S	Sn	12 11 06.5	-0.7
JRG	Rokugo	1.39	314	P	Pn	12 10 50.3	-0.3
JYS	Shirataka	1.47	262	P	Pn	12 10 51.8	+0.1
JYS				S	Sn	12 11 10.5	+0.4
JFT	Otama	1.54	234	P	Pn	12 10 52.9	+0.2
JFT				S	Sn	12 11 11.8	-0.1
MAT	Matsushiro	3.50	239	P	Pn	12 11 20.9	+1.7
MAT				eS	Sn	12 11 58.4	-1.1
MJAR	Matsushiro Arr	3.50	239	P	Pn	12 11 20.5	+1.3
	4.2nm,0.3s,baz=35,slow=14,SNR=207						
MJAR				S	Sn	12 12 09.3	+10
	0.8nm,0.3s,baz=46,slow=40,SNR=2.6						
MJAR				LR	LR	12 12 59.8	
	comp=Z,177nm,20.3s,baz=75,slow=44						
MJAR	Matsushiro Arr	3.50	239		Pn	12 11 24.5	+5.3
MJB9	Matsu-Tunnel	3.50	239	Pn	Pn	12 11 20.2	+0.9
MJB9					Pn	12 11 21.0	+1.8
ERM	Erimo	3.71	14	Pn	Pn	12 11 20.3	-1.7
INU	Inuyama	4.99	233		Pn	12 11 40.1	+0.6
JHJ2	Mitsune	5.57	198	Pn	Pn	12 11 47.2	-0.4
JHJ2				Sn	Sn	12 12 47.0	-3.3
JHJ	Hachijo jima 2	5.58	199	P	Pn	12 11 46.3	-1.3
	20nm,0.3s,baz=14,slow=16,SNR=5.9						
JHJ				S	Sn	12 12 44.3	-6.0
	34nm,0.3s,baz=46,slow=19,SNR=2.4						
ASAJ	Asahikawa	5.71	5	P	Pn	12 11 47.9	-1.5
	2.4nm,0.3s,baz=208,slow=17,SNR=30						
ASAJ				S	Sn	12 12 49.3	-4.1
	3.3nm,0.3s,baz=96,slow=31,SNR=3.0						
JKA	Kamikawa-asahi	5.71	5		Pn	12 11 47.9	-1.5
JKA					Sn	12 12 49.3	-4.1
USA0B	Ussuriysk Arra	9.43	311	Pn	Pn	12 12 40.4	+0.2
USRK	Ussuriysk Ar.	9.43	311	P	Pn	12 12 41.0	+0.8
	baz=116,slow=14,SNR=59						
USRK	Ussuriysk Ar.	9.43	311	Pn	Pn	12 12 40.3	0.0
JNU	Nakatsue	10.41	243	P	Pn	12 12 54.1	+0.4
	0.3nm,0.3s,baz=109,slow=12,SNR=4.1						
JNU				LR	LR	12 17 44.2	
	comp=Z,87nm,19.3s,baz=30,slow=42						
JNU	Nakatsue	10.41	243		Pn	12 12 55.0	+1.2
KSRS	Korea Array	11.10	269	P	Pn	12 13 05.5	+2.6
	1.4nm,0.3s,baz=79,slow=14,SNR=16						
KSRS				LR	LR	12 16 54.7	
	comp=Z,69nm,20.2s,baz=95,slow=35						
KSAR	Wonju Array Be	11.13	269	Pn	Pn	12 13 04.4	+0.9
KS19	Wonju Array Si	11.13	270	Pn	Pn	12 13 04.0	+0.5
JCJ	Chichijima	11.30	179	P	Pn	12 13 06.4	+0.4
	3.8nm,0.3s,baz=311,slow=20,SNR=1.8						
JCJ				S	Sn	12 14 59.8	-11
	6.3nm,0.3s,baz=282,slow=22,SNR=1.5						
KLR	Kul'dur	13.04	329	P	Pn	12 13 30.5	+1.0
	0.1nm,0.3s,baz=145,slow=16,SNR=2.8						
PETK	Petropavlovsk-	18.29	32	P	Pn	12 14 36.7	+0.6
	0.1nm,0.3s,baz=219,slow=12,SNR=3.6						
HHC	Hu-ho-hao-te	23.44	286	eP	P	12 15 31.1	+0.4
YAK	Yakutsk	24.80	346	P	P	12 15 42.5	-0.2
	3.6nm,0.3s,baz=214,slow=2.4,SNR=3.9						
SEY	Seymchan	25.35	11	P	P	12 15 47.2	-0.4
	2.8nm,0.8s,baz=190,slow=16,SNR=4.5						
XAN	Xi'an	26.89	271	P	P	12 16 02.0	+0.1
XAN				pP	pP	12 16 10.9	-7.0
XAN				sP	sP	12 16 15.2	-11
SONM	Songino Array	27.36	302	P	P	12 16 05.4	-0.8
	1.6nm,0.5s,baz=105,slow=9.1,SNR=16						
SONM				PcP	PcP	12 19 23.9	+0.2
	0.1nm,0.3s,baz=112,slow=3.0,SNR=3.6						
SONM	Songino Array	27.36	302	IAmb	IAmb	12 16 08.0	
	comp=Z,1.1nm,0.8s						
ENH	Enshi	27.87	263	P	P	12 16 11.3	+0.6
ENH				IAmb	IAmb	12 16 12.6	
	comp=Z,11nm,0.7s						
H11N2	WAKE ISLAND Hy	28.55	124	T	T	12 46 40.3	
	baz=316,slow=76,SNR=493						
H11N1	WAKE ISLAND Hy	28.56	124	T	T	12 46 41.0	
	baz=316,slow=76,SNR=694						
H11N3	WAKE ISLAND Hy	28.57	124	T	T	12 46 41.7	
	baz=316,slow=76,SNR=628						
H11S1	WAKE ISLAND Hy	29.32	126	T	T	12 47 36.6	
	baz=318,slow=76,SNR=149						
H11S3	WAKE ISLAND Hy	29.32	126	T	T	12 47 33.6	
	baz=318,slow=76,SNR=179						
H11S2	WAKE ISLAND Hy	29.33	126	T	T	12 47 35.7	
	baz=318,slow=76,SNR=146						
ZAA0	Zalesovo Array	41.28	311	P	P	12 18 05.6	-0.2
ZAA0				IAmb	IAmb	12 18 07.3	
	comp=Z,2.9nm,0.6s						
ZALV	Zalesovo Beam	41.28	311	P	P	12 18 05.8	+0.1
	comp=Z,3.8nm,0.5s,baz=87,slow=8.5,SNR=16						
ZALV				PcP	PcP	12 20 02.7	-0.5
	comp=Z,0.8nm,0.3s,baz=108,slow=4.7,SNR=6.1						
ZALV	Zalesovo Beam	41.28	311	P	P	12 18 05.3	-0.5
CMAR	Chiang Mai Arr	42.25	254	P	P	12 18 13.9	-0.2
	comp=Z,0.2nm,0.3s,baz=42,slow=8.2,SNR=2.7						
MK31	Makanchi Array	43.73	301	P	P	12 18 25.9	+0.2
MKAR	Makanchi Array	43.73	301	P	P	12 18 25.8	0.0
	comp=Z,2.8nm,0.7s,baz=86,slow=9.9,SNR=41						
MKAR	Makanchi Array	43.73	301	P	P	12 18 26.1	+0.3
IMAR	Indian Mountai	45.25	31	P	P	12 18 38.4	+0.8
KURK	Kurchatov	45.40	307	P	P	12 18 38.9	0.0
OHAK	Old Harbor	45.47	44	P	P	12 18 39.3	-0.1
PPLA	Purkeypile	45.80	36	P	P	12 18 43.7	+1.6
PPLA				IAmb	IAmb	12 18 49.8	
	comp=Z,5.3nm,1.1s						
KDAK	Kodiak Island	45.80	43	P	P	12 18 41.7	-0.3
	comp=Z,5.6nm,0.7s,baz=336,slow=3.0,SNR=8.8						
KDAK	Kodiak Island	45.80	43	IAmb	IAmb	12 18 42.7	
	comp=Z,7.7nm,0.9s						
RC01	Rabbit Creek A	47.02	38	P	P	12 18 51.0	-0.5
RC01				IAmb	IAmb	12 19 02.7	
	comp=Z,8.1nm,1.2s						
GHO	Glory Hole Cre	47.36	37	P	P	12 18 54.4	+0.1
IL31		48.11	33	P	P	12 19 00.5	+0.7
IL31				IAmb	IAmb	12 19 00.6	
	comp=Z,4.3nm,1.1s						
ILAR	Eielson Array	48.11	33	P	P	12 19 00.1	+0.2
	comp=Z,1.7nm,0.7s,baz=266,slow=6.3,SNR=33						
ILAR				pP	pP	12 19 17.0	+0.3
	comp=Z,1.6nm,0.8s,baz=262,slow=5.1,SNR=7.3						

SCM Sheep Creek Mo 48.11 37 P P 12 19 00.5 +0.4
SCM IAmb IAmb 12 19 01.2
comp=Z,5.4nm,1.0s
BMAR Burnt Mountain 48.92 29 P P 12 19 07.8 +1.6
RIDG Independent Ri 49.07 34 P P 12 19 07.7 +0.3
SCRK Sand Creek 49.43 34 P P 12 19 10.0 -0.2
SCRK IAmb IAmb 12 19 11.4
comp=Z,2.7nm,0.9s
DOT Dot Lake 49.43 34 P P 12 19 10.3 +0.2
DOT IAmb IAmb 12 19 19.3
comp=Z,5.2nm,1.5s
KSH Kashi 50.21 293 P P 12 19 24.7 +8.2
INK Inuvik 52.97 28 P P 12 19 37.0 +0.6
comp=Z,1.9nm,0.8s,baz=289,slow=6.1,SNR=11
INK pP pP 12 19 54.0 +0.6
comp=Z,1.1nm,0.7s,baz=318,slow=6.1,SNR=3.8
INK Inuvik 52.97 28 IAmb IAmb 12 19 37.1
comp=Z,3.7nm,1.2s
LEM Lembang 55.17 223 LR LR 12 42 34.3
comp=Z,14nm,20.0s,baz=125,slow=35
C36M Paulatuk 56.00 25 IAmb IAmb 12 20 16.4
comp=Z,0.8nm,0.3s
ABKAR Akbulak array 57.35 310 P P 12 20 08.2 -0.1
ABKAR IAmb IAmb 12 20 24.2
comp=Z,1.8nm,0.6s
ABKAR Akbulak array 57.35 310 P P 12 20 07.5 -0.8
WB0 Warramunga Arr 58.32 188 P P 12 20 13.8 -1.5
WR0 Warramunga Arr 58.49 188 P P 12 20 15.4 -1.1
WR0 IAmb IAmb 12 20 17.4
comp=Z,4.6nm,0.9s
WB2 Warramunga Arr 58.49 188 P P 12 20 15.2 -1.4
WRA Warramunga Arr 58.50 188 P P 12 20 15.5 -1.1
comp=Z,3.2nm,0.6s,baz=7.3,slow=7.3,SNR=38
WRA pP pP 12 20 34.2 +0.3
comp=Z,0.7nm,0.4s,baz=12,slow=4.9,SNR=3.0
WRA Warramunga Arr 58.50 188 P P 12 20 16.1 -0.4
ASAR Alice Springs 62.22 188 P P 12 20 41.8 -0.1
comp=Z,1.3nm,0.6s,baz=5.6,slow=4.5,SNR=17
ASAR pP pP 12 21 00.4 +0.9
comp=Z,0.8nm,0.7s,baz=8.5,slow=4.8,SNR=3.2
YKA Yellowknife Ar 62.41 31 P P 12 20 42.1 -0.6
comp=Z,1.1nm,0.6s,baz=301,slow=6.6,SNR=17
YKA pP pP 12 21 00.6 +0.5
comp=Z,0.5nm,0.7s,baz=299,slow=6.4,SNR=4.1
ARCES ARCESS Array B 62.83 339 P P 12 20 45.1 -0.4
comp=Z,1.2nm,0.8s,baz=46,slow=8.7,SNR=4.6
ARCES pP pP 12 21 03.4 +0.4
comp=Z,1.3nm,0.8s,baz=58,slow=8.6,SNR=1.1
FINES FINESS Array B 67.77 332 P P 12 21 17.3 -0.2
comp=Z,3.6nm,0.7s,baz=43,slow=12,SNR=8.5
FINES pP pP 12 21 34.8 -0.4
comp=Z,1.1nm,0.6s,baz=61,slow=6.8,SNR=1.9
STKA Stephens Creek 69.95 180 P P 12 21 31.4 +0.2
comp=Z,0.9nm,0.5s,baz=16,slow=7.4,SNR=3.4
KBZ Khabaz 70.30 310 P P 12 21 34.0 +0.5
comp=Z,1.7nm,0.8s,baz=84,slow=6.4,SNR=4.6
EGMT Eagleton 72.96 42 IAmb IAmb 12 21 51.0
comp=Z,4.5nm,0.8s
NB2 NORSAR Subarra 73.06 337 P P 12 21 49.5 -0.3
comp=Z,0.9nm,0.6s,baz=38,slow=6.2
NOA NORSAR Array B 73.06 337 P P 12 21 49.4 -0.3
comp=Z,1.8nm,0.7s,baz=38,slow=5.9,SNR=5.8
AKASG Malin Array Be 73.44 322 P P 12 21 51.7 -0.5
comp=Z,1.8nm,0.5s,baz=46,slow=6.0,SNR=10.0
NVAR Mina Array Bea 73.84 54 P P 12 21 55.6 +0.5
comp=Z,1.0nm,0.8s,baz=288,slow=6.1,SNR=8.7
NVAR pP pP 12 22 13.9 +1.0
comp=Z,1.0nm,0.9s,baz=284,slow=6.5,SNR=4.1
H17A Grant Village 74.80 45 P P 12 22 02.9 +2.3
H17A IAmb IAmb 12 22 04.2
comp=Z,3.3nm,0.8s
PD31 Pinedale Array 76.41 46 P P 12 22 10.4 +0.7
PDAR Pinedale Array 76.41 46 P P 12 22 10.2 +0.4
comp=Z,1.8nm,0.5s,baz=284,slow=0.8,SNR=29
PDAR pP pP 12 22 28.6 +0.9
comp=Z,0.7nm,0.6s,baz=303,slow=0.3,SNR=4.5
PDAR Pinedale Array 76.41 46 P P 12 22 09.8 0.0
VYHS Vyhne 79.80 326 eP P 12 22 27.7 -0.4
CLL Collm 80.08 330 eP P 12 22 30.0 +0.4
MODS Modra-Piesok 80.58 326 eP P 12 22 32.1 -0.2
GERES GERESS Array B 81.73 328 P P 12 22 37.9 -0.7
comp=Z,0.4nm,0.3s,baz=36,slow=5.0,SNR=3.9
ZCCA Zocca 86.44 327 P P 12 23 02.9 +0.4
TXAR Lajitas Array 88.96 53 P P 12 23 14.8 -0.1
comp=Z,1.1nm,0.7s,baz=302,slow=3.0,SNR=11
TXAR pP pP 12 23 33.2 0.0
comp=Z,0.5nm,0.7s,baz=282,slow=2.4,SNR=3.0
TXAR Lajitas Array 88.96 53 P P 12 23 15.6 +0.7
LPAZ La Paz 145.63 58 PKPbc PKPdf 12 29 58.9 -0.2
comp=Z,2.6nm,0.7s,baz=346,slow=8.2,SNR=8.7
LPAZ pPKPbc pPKPdf 12 30 17.6 -0.7
comp=Z,1.2nm,0.6s,baz=298,slow=6.5,SNR=2.7
LPAZ La Paz 145.63 58 PKPab 12 29 59.8 -0.1

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*THE **06** 12:12:07.8, 38.19N×20.39E, h9km±1km, ML2.5/8, Error ellipse: s-maj=1.3km s-min=0.5km az=216.0*
*ATH **06** 12:12:07.9, 38.21N×20.41E, h7km±2km, ML2.6/2, Error ellipse: s-maj=2.3km s-min=1.0km az=245.0*
ISC 06 12:12:07.9±1.0, **38.21N**±0.03×**20.41E**±0.04, **h7km±5km, n33,** σ0.42/52, **Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
CHV1	Chavriata, Kef	0.04	219	P	Pg	12 12 09.4	+0.1
CHV1				S	Sg	12 12 10.8	+0.5
	49μm,0.1s						
KEF4	Livadi, Kephal	0.05	13	P	Pg	12 12 09.5	0.0
KEF4				S	Sg	12 12 10.8	+0.2
KEF3	Kipouria, Keph	0.05	259	P	Pg	12 12 09.4	-0.1
KEF3				S	Sg	12 12 10.9	+0.2
ARGA	Argostoli. Kep	0.06	123	P	Pg	12 12 09.8	+0.1
ARGA				S	Sg	12 12 11.0	+0.1
ARG2	Argostoli	0.07	119	P	Pg	12 12 09.8	+0.1
ARG2				S	Sg	12 12 11.2	+0.2
	19μm,0.1s						
KEF2	Argostoli. Kep	0.08	128	P	Pg	12 12 09.9	+0.1
KEF2				S	Sg	12 12 11.2	+0.1
KEF1	Kardakata, Kep	0.08	36	P	Pg	12 12 09.9	0.0
KEF1				S	Sg	12 12 11.4	+0.1
VLS	Valsamata	0.14	104	P	Pg	12 12 10.9	-0.1
VLS				S	Sg	12 12 13.3	+0.3
	8μm,0.1s						
VLS	Valsamata	0.14	104	P	Pg	12 12 10.9	-0.1
VLS				S	Sg	12 12 13.3	+0.3
VLS				AML	AML	12 12 13.5	
	comp=N,14532μm,0.1s						
VLS				AML	AML	12 12 13.5	
	comp=E,15006μm,0.1s						
VSK1	VASILIKIADES	0.23	31	P	Pg	12 12 12.6	+0.1
VSK1				S	Sg	12 12 16.4	+0.8
	comp=E,1μm,0.2s						
FSK	Fiskardo	0.27	26	P	Pg	12 12 13.4	0.0
FSK				S	Sg	12 12 18.3	+1.3
	comp=E,305nm,0.3s						
FSK	Fiskardo	0.27	26	P	Pg	12 12 13.3	0.0
FSK				S	Sg	12 12 17.0	0.0
VLMS	Volimes, Zakyn	0.39	149	P	Pg	12 12 15.7	+0.2
VLMS				S	Sg	12 12 21.7	+1.0
VLMS				AML	AML	12 12 22.6	
	comp=E,872μm,0.1s						
VLMS				AML	AML	12 12 27.9	
	comp=N,1171μm,0.3s						
EVGI	Lefkada island	0.45	25	P	Pg	12 12 16.6	-0.1
EVGI				S	Sg	12 12 23.8	+1.2
EVGI	Lefkada island	0.45	25	P	Pg	12 12 16.6	-0.1
EVGI				S	Sg	12 12 23.4	+0.8
MGNA	Meganis	0.53	34	P	Pg	12 12 18.1	-0.2
LKD2	Lefkada island	0.61	19	P	Pg	12 12 19.9	+0.2
LKD2				S	Sb	12 12 29.0	-0.7
	comp=N,95nm,0.4s						
TSLK	Tsoukalades, L	0.64	17	P	Pg	12 12 20.0	-0.3
PDO	Prodromos	0.72	57	P	Pg	12 12 21.6	-0.2
PDO				S	Sb	12 12 32.9	0.0
	comp=N,295nm,0.5s						
PDO	Prodromos	0.72	57	P	Pg	12 12 21.6	-0.2
PVO	Paravola	0.96	65	P	Pg	12 12 26.4	-0.1
PVO				S	Sn	12 12 41.8	-0.1
	comp=N,190nm,0.3s						
PVO	Paravola	0.96	65	P	Pg	12 12 26.2	-0.3
LAKA	Lakka	1.23	88	P	Pn	12 12 30.9	-0.8
LAKA				S	Sn	12 12 49.1	+0.5
ANX	Ano Chora	1.25	72	P	Pn	12 12 31.6	-0.3
ANX	Ano Chora	1.25	72	P	Pn	12 12 31.8	-0.1
SERG	Sergoula	1.31	81	P	Pn	12 12 32.4	-0.3
SERG	Sergoula	1.31	81	P	Pn	12 12 32.4	-0.3
TRIZ	Trizonia	1.32	83	P	Pn	12 12 32.0	-0.7
KALE	Kalithea	1.37	82	P	Pn	12 12 33.5	-0.1
KLV	Kalavryta, Ach	1.38	96	P	Pn	12 12 33.4	-0.3
KLV	Kalavryta, Ach	1.38	96	P	Pn	12 12 33.3	-0.4
MAKR	Makrakomi, Fth	1.57	59	P	Pg	12 12 38.1	+0.1
AGG	Agios Georgios	1.71	61	P	Pg	12 12 40.6	-0.1

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*IDC **06** 12:27:09.7±0.6, 37.82N×21.15E, h0km, mb4.0/22, mb1 4.0/29, mb1mx4.0/51, mbtmp4.0/29, ML3.5/7, MS3.4/18, Ms1 3.4/18, ms1mx3.2/48, Error ellipse: s-maj=13.7km s-min=12.2km az=131.0*
*MOS **06** 12:27:10.2±1.8, 37.90N×21.65E, h10km±12km, mb4.5/12, Error ellipse: s-maj=9.4km s-min=4.9km az=70.8*
*HLW **06** 12:27:10.0, 37.90N×21.65E, h10km±12km, Md4.4, Ml4.8*
*BEO **06** 12:27:10.9±1.1, 37.51N×20.69E, h24km±5km, ML4.0/4*
*ATH **06** 12:27:12.3, 37.81N×21.18E, h11km±1km, ML4.1/34, Error ellipse: s-maj=1.4km s-min=0.6km az=12.0*
*NEIC **06** 12:27:12.8±3.2, 37.77N±0.05×21.11E±0.02, h18km±4km, Error ellipse: s-maj=7.8km s-min=1.6km az=193.0*
*THE **06** 12:27:13.3, 37.84N×21.15E, h14km±2km, ML4.2/11, Error ellipse: s-maj=2.1km s-min=0.7km az=329.0*
*PDG **06** 12:27:14.2±1.0, 37.89N×21.09E, h12km±1km, ML4.3/12, Error ellipse: s-maj=1.5km s-min=2.0km az=0.0*
*MED_RC **06** 12:27:15.0±0.6, 37.89N×21.00E, h10km, MW4.3/9, Moment Tensor Solution.Mantle waves: s9,c10; Duration: 1s0 Moment tensor: Scale 10^15Nm; Mrr0.58±.18; Mθθ-0.28±.19; Mφφ-0.30±.19; Mrθ2.61±.50; Mrφ2.02±.16; Mθφ-1.19±.47; Best double couple: Mo3.42000×10^15 NP1:φs2.00000°, δ30.00000°, λ166.00000°. NP2: φs105.00000°, δ83.00000°, λ60.00000°. Principal axes: T 2.8700, Plg44.0000°, Azm345.0000°; N 1.0900, Plg29.0000°, Azm109.0000°; P -3.9600, Plg31.0000°, Azm219.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
ISC 06 12:27:12.7±0.9, **37.83N**±0.02×**21.13E**±0.02, **h12km±5km, n338,** σ1.86/378, **mb4.2**/37, **MS3.4**/11, **12C-9D, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
ZAK2	Zakynthos	0.18	258	P	Pb	12 27 18.2	+0.2
ZAK2				S	Sg	12 27 22.6	+3.0
KRI1	kERI	0.29	236	P	Pb	12 27 19.4	-0.5
KRI1				S	Sb	12 27 25.1	+0.4
RLS	Riolos of Patr	0.36	49	P	Pg	12 27 19.3	-0.6
RLS				S	Sb	12 27 25.3	-1.2
	34μm,0.3s						
RLS	Riolos of Patr	0.36	49	P	Pg	12 27 19.2	-0.8
RLS				S	Sg	12 27 24.3	-0.4
RLS				AML	AML	12 27 25.6	
	comp=N,77066μm,0.4s						
RLS				AML	AML	12 27 26.4	
	comp=E,57920μm,0.3s						
RLS	Riolos of Patr	0.36	49		Pg	12 27 19.1	-0.8
RLS					Sb	12 27 24.9	-1.6
VLMS	Volimes, Zakyn	0.37	278	P	Pb	12 27 20.7	-0.5
VLMS	Volimes, Zakyn	0.37	278		Pb	12 27 20.9	-0.4
VLMS					Sb	12 27 28.0	+1.0
DRO	Drossia	0.48	74	P	Pg	12 27 21.0	-1.2
DRO				S	Sb	12 27 28.7	-1.4
	comp=E,101μm,0.5s						
DRO	Drossia	0.48	74	P	Pg	12 27 21.0	-1.2
DRO				S	Sg	12 27 27.8	-0.8
DRO				AML	AML	12 27 35.8	
DRO				AML	AML	12 27 40.6	
AMT	Artemida-Makis	0.55	122	P	Pg	12 27 22.8	-0.7
AMT				S	Sb	12 27 32.1	+0.1
	comp=E,90μm,0.8s						
AMT	Artemida-Makis	0.55	122	P	Pg	12 27 22.6	-0.9
AMT				S	Sg	12 27 29.4	-1.3
AMT				AML	AML	12 27 32.5	
AMT				AML	AML	12 27 33.8	
VLS	Valsamata	0.55	310	P	Pb	12 27 23.6	-0.7
VLS				S	Sn	12 27 33.0	-2.5
	comp=E,15μm,0.4s						
VLS	Valsamata	0.55	310	P	Pb	12 27 23.3	-1.0
VLS				S	Sb	12 27 32.4	+0.3
KEF2	Argostoli. Kep	0.61	304	P	Pb	12 27 24.5	-0.8
ARG2	Argostoli	0.61	305	P	Pb	12 27 24.8	-0.6
ARG2				S	Sn	12 27 35.1	-1.9
ARGA	Argostoli. Kep	0.62	305	P	Pb	12 27 24.8	-0.6
ARGA				S	Sn	12 27 34.8	-2.3
LXR1	Lixouri, Cepha	0.66	305	P	Pn	12 27 26.3	-1.5
KEF1	Kardakata, Kep	0.69	311	P	Pb	12 27 25.9	-0.7
CHV1	Chavriata, Kef	0.69	302	P	Pb	12 27 26.3	-0.3
UPR	University Cam	0.69	49	P	Pb	12 27 26.5	-0.2
UPR				S	Sn	12 27 36.9	-2.1
UPR	University Cam	0.69	49	P	Pb	12 27 26.1	-0.6
KEF4	Livadi, Kephal	0.70	308	P	Pb	12 27 26.3	-0.6
AST1	Astakos	0.72	358	P	Pb	12 27 26.9	-0.2
KEF3	Kipouria, Keph	0.72	302	P	Pb	12 27 26.8	-0.4
VSK1	VASILIKIADES	0.73	323	P	Pb	12 27 26.7	-0.7
FSK	Fiskardo	0.77	325	P	Pb	12 27 27.2	-0.9
FSK				AML	AML	12 27 50.5	
	comp=N,17605μm,0.5s						
FSK				AML	AML	12 27 51.6	
	comp=E,21574μm,0.6s						
PDO	Prodromos	0.77	3	P	Pb	12 27 27.7	-0.4
PDO				S	Sb	12 27 37.8	-0.8
	comp=E,40μm,0.4s						
PDO	Prodromos	0.77	3	P	Pb	12 27 27.8	-0.4
PDO				S	Sn	12 27 39.0	-2.0
PDO				AML	AML	12 27 48.0	
	comp=N,57504μm,0.3s						
PDO				AML	AML	12 27 48.0	
	comp=E,57210μm,0.4s						
LAKA	Lakka	0.79	58	P	Pg	12 27 26.8	-1.3
LAKA				S	Sb	12 27 39.5	+0.4
	comp=E,10μm,0.7s						
LAKA	Lakka	0.79	58	P	Pg	12 27 26.8	-1.3
LAKA				S	Sg	12 27 37.3	-1.2
LAKA				AML	AML	12 27 43.0	
	comp=E,21390μm,0.7s						
LAKA				AML	AML	12 27 48.1	
	comp=N,23083μm,0.6s						
KLV	Kalavryta, Ach	0.84	75	P	Pg	12 27 27.3	-1.7
KLV				S	Sb	12 27 40.9	+0.4
	comp=N,9μm,0.5s						
KLV	Kalavryta, Ach	0.84	75	P	Pg	12 27 27.3	-1.7
KLV				AML	AML	12 27 47.8	
	comp=N,19839μm,0.5s						
KLV				AML	AML	12 27 48.9	
	comp=E,18801μm,0.6s						
PVO	Paravola	0.85	22	P	Pb	12 27 29.0	-0.4
PVO	Paravola	0.85	22	P	Pb	12 27 29.0	-0.4
PVO				S	Sb	12 27 40.7	-0.1
PVO				AML	AML	12 27 51.0	
	comp=E,20275μm,0.5s						
PVO				AML	AML	12 27 55.5	
	comp=N,21003μm,0.5s						
EFP	Efpalio	0.86	45	P	Pg	12 27 28.2	-1.2
EFP				S	Sn	12 27 42.2	-0.9
	comp=N,10μm,0.6s						
EFP	Efpalio	0.86	45	P	Pg	12 27 28.1	-1.3
EFP				S	Sb	12 27 40.0	-1.1
EFP				AML	AML	12 27 45.2	
	comp=N,18861μm,0.5s						
EFP				AML	AML	12 27 45.6	
	comp=E,19938μm,0.7s						
MGNA	Meganis	0.87	343	P	Pb	12 27 28.9	-0.8
EVGI	Lefkada island	0.88	335	P	Pb	12 27 29.1	-0.7
ITM	Ithomi	0.91	135	P	Pg	12 27 28.9	-1.3
ITM				S	Sn	12 27 43.7	-0.5
	comp=E,29μm,0.7s						
ITM	Ithomi	0.91	135	P	Pg	12 27 28.9	-1.3
ITM				AML	AML	12 27 49.4	
	comp=N,68935μm,0.8s						
ITM				AML	AML	12 27 49.8	
	comp=E,50230μm,0.5s						
ITM	Ithomi	0.91	135	P	Pg	12 27 29.1	-1.2
TRIZ	Trizonia	0.92	54	P	Pg	12 27 29.0	-1.5
SERG	Sergoula	0.94	51	P	Pg	12 27 29.1	-1.8
SERG				S	Sb	12 27 42.9	-0.5
SERG				AML	AML	12 27 48.9	
	comp=E,23507μm,0.4s						
SERG				AML	AML	12 27 54.4	
	comp=N,22674μm,0.3s						
KALE	Kalithea	0.98	54	P	Pg	12 27 30.0	-1.6
KALE				AML	AML	12 27 49.5	
	comp=E,27575μm,0.6s						
KALE				AML	AML	12 27 50.3	
	comp=N,32120μm,0.6s						
ANX	Ano Chora	0.99	39	P	Pg	12 27 30.4	-1.4
ANX				S	Sb	12 27 44.6	-0.3
ANX				AML	AML	12 27 49.5	
	comp=N,26859μm,0.6s						
ANX				AML	AML	12 27 50.4	
	comp=E,25651μm,0.6s						
LKD2	Lefkada island	1.03	339	P	Pn	12 27 31.9	-1.1
LKD2				AML	AML	12 27 53.8	
	comp=E,31577μm,0.8s						
LKD2				AML	AML	12 27 56.6	
	comp=N,23443μm,0.6s						
TSLK	Tsoukalades, L	1.06	340	P	Pn	12 27 32.6	-0.9
KLMT	Kalamata	1.06	135	P	Pb	12 27 32.7	-0.3
KLMT				S	Sn	12 27 49.0	+0.9
	comp=N,22μm,0.6s						
VLX	Vlachokerasia	1.09	114	P	Pb	12 27 32.7	-0.9
VLX				S	Sn	12 27 50.0	+1.0
	comp=N,8μm,1.2s						
VLX	Vlachokerasia	1.09	114	P	Pb	12 27 32.0	-1.6
VLX				S	Sb	12 27 46.4	-1.5
VLX				AML	AML	12 27 55.6	
	comp=E,33267μm,0.7s						
VLX				AML	AML	12 27 56.6	
	comp=N,24159μm,0.7s						
EVR	Evrytania	1.22	26	P	Pb	12 27 34.7	-1.0
EVR				AML	AML	12 28 00.7	
	comp=E,10287μm,0.7s						
EVR				AML	AML	12 28 01.2	
	comp=N,11193μm,0.5s						
DLFA	Delphi	1.26	58	P	Pn	12 27 34.7	-1.5
MAKR	Makrakomi, Fth	1.43	33	P	Pg	12 27 39.0	-1.2
MAKR				AML	AML	12 28 04.7	
	comp=E,19024μm,0.7s						
MAKR				AML	AML	12 28 09.2	
	comp=N,12099μm,0.6s						
PROD	Prodromos	1.47	72	P	Pb	12 27 39.2	-0.7
PROD				AML	AML	12 28 05.5	
	comp=E,8042μm,0.8s						
PROD				AML	AML	12 28 18.6	
	comp=N,8084μm,0.4s						
LTK	Loutraki	1.47	82	P	Pn	12 27 38.9	-0.1
LTK				AML	AML	12 28 07.2	
	comp=N,8422μm,0.6s						
LTK				AML	AML	12 28 10.1	
	comp=E,13697μm,0.9s						
LOUT	Loutraki	1.47	83	P	Pb	12 27 39.3	-0.7
AGG	Agios Georgios	1.52	38	P	Pb	12 27 40.0	-1.0
AGG	Agios Georgios	1.52	38		Pb	12 27 40.1	-0.8
AGG	Agios Georgios	1.52	38	P	Pb	12 27 40.1	-0.8
AXAR	Agios Charalam	1.53	52	P	Pb	12 27 39.9	-1.1
AXAR				AML	AML	12 28 09.8	
	comp=E,17331μm,0.6s						
AXAR				AML	AML	12 28 13.9	
	comp=N,21514μm,1.0s						
KRND	KRANIDI	1.67	105	P	Pb	12 27 43.6	+0.3
KRND				AML	AML	12 28 12.7	
	comp=E,11061μm,1.1s						
KRND				AML	AML	12 28 16.2	
	comp=N,11946μm,0.7s						
LKR	Lokris	1.69	60	P	Pb	12 27 43.4	-0.3
DID	Didima	1.71	100	P	Pb	12 27 43.6	-0.4
DID				S	Sb	12 28 05.8	+0.4
VIL2	Platees	1.74	76	P	Pb	12 27 44.0	-0.5
VIL2				AML	AML	12 28 15.7	
	comp=N,9360μm,1.3s						
VIL2				AML	AML	12 28 19.0	
	comp=E,12862μm,0.9s						
IGT	Igoumenitsa	1.81	340	ePg	Pg	12 27 47.3	-0.2
IGT				eSg	Sg	12 28 16.0	+4.9
IGT	Igoumenitsa	1.81	340	P	Pb	12 27 45.3	-0.5
VLI	Veliai	1.82	127	P	Pb	12 27 45.9	0.0
VLI				AML	AML	12 28 26.7	
	comp=N,8296μm,1.1s						
VLI				AML	AML	12 28 27.8	
	comp=E,9303μm,0.9s						
JAN	Janina	1.84	353	P	Pg	12 27 46.6	-1.5
JAN				AML	AML	12 28 25.9	
	comp=N,3859μm,1.1s						
JAN				AML	AML	12 28 32.2	
	comp=E,4990μm,1.3s						
THL	Klokotos Trika	1.87	22	P	Pg	12 27 47.3	-1.4
THL				AML	AML	12 28 26.1	
	comp=N,2389μm,1.5s						
THL				AML	AML	12 28 28.4	
	comp=E,3890μm,1.4s						
ATH	Athens Observa	2.06	85	P	Pb	12 27 49.2	-0.7
ATH				AML	AML	12 28 26.6	
	comp=N,6215μm,0.6s						
ATH				AML	AML	12 28 26.8	
	comp=E,7760μm,0.7s						
ATHU	Athens Univers	2.11	85	P	Pb	12 27 49.3	-1.5
VLY	Voula,Athens	2.11	88	P	Pb	12 27 49.3	-1.6
VLY				AML	AML	12 28 26.4	
	comp=N,4722μm,0.6s						
VLY				AML	AML	12 28 26.8	
	comp=E,4509μm,0.7s						
MRKA	Markates	2.13	65	P	Pn	12 27 48.9	+0.9
MRKA				AML	AML	12 28 29.0	
	comp=N,6067μm,0.7s						
MRKA				AML	AML	12 28 36.1	
	comp=E,3524μm,0.8s						
KPRO	Kipourio	2.13	5	P	Pb	12 27 51.0	-0.3
PTL	Penteli	2.18	83	P	Pb	12 27 50.1	-1.9
KTHA	Kythira Island	2.20	135	P	Pb	12 27 51.5	-1.0
KTHA				AML	AML	12 28 33.7	
	comp=N,6217μm,0.7s						
KTHA				AML	AML	12 28 35.0	
	comp=E,7264μm,0.7s						
KTHA	Kythira Island	2.20	135	eP	Pb	12 27 50.7	-1.8
XOR	Xorichti	2.23	46	P	Pb	12 27 50.7	-2.3
SKIA	Skiathos	2.27	53	P	Pb	12 27 51.1	+1.0
EREA	Eretria	2.29	74	P	Pb	12 27 52.7	-1.3
EREA				AML	AML	12 28 32.7	
	comp=N,2959μm,0.6s						
EREA				AML	AML	12 28 35.4	
	comp=E,5100μm,0.9s						
PENT	Pentalofos	2.37	0	P	Pb	12 27 54.3	-1.0
LIT	Litokhoron	2.51	25	P	Pb	12 27 55.5	-2.2
LIT	Litokhoron	2.51	25		Pb	12 27 55.0	-2.7
LIT	Litokhoron	2.51	25	P	Pb	12 27 55.0	-2.7
ALNA	Alonissos	2.52	58	P	Pb	12 27 55.4	-2.5
KZN	Kozani	2.53	11	P	Pb	12 27 56.4	-1.7
AOS	Alonnisos	2.54	57	P	Pn	12 27 54.8	+1.0
AOS	Alonnisos	2.54	57	eP	Pn	12 27 55.0	+1.2
ANKY	Antikythira Is	2.62	138	P	Pn	12 27 56.0	+1.2
ANKY				AML	AML	12 28 49.6	
	comp=N,4524μm,0.8s						
ANKY				AML	AML	12 28 50.5	
	comp=E,4274μm,0.7s						
KARY	Karystos	2.63	84	P	Pn	12 27 56.4	+1.5
SERI	Serifos	2.75	103	P	Pn	12 27 57.6	+0.9
SERI				AML	AML	12 28 47.1	
	comp=N,2512μm,1.5s						
SERI				AML	AML	12 28 48.5	
	comp=E,1196μm,0.6s						
FNA	Florina	2.96	4	ePn	Pn	12 28 01.6	+2.0
FNA	Florina	2.96	4	P	Pn	12 28 01.0	+1.4
FNA				AML	AML	12 29 02.5	
	comp=N,1248μm,1.1s						
FNA				AML	AML	12 29 09.4	
	comp=E,1638μm,1.1s						
FNA	Florina	2.96	4		Pn	12 28 01.0	+1.4
FNA	Florina	2.96	4	P	Pn	12 28 01.0	+1.4
SCTE	Santa Cesarea	3.05	318		Pn	12 27 59.5	-1.3
RODP	Rodopos	3.10	136	eP	Pn	12 28 03.5	+2.1
HORT	Hortiatis	3.17	28	P	Pn	12 28 04.0	+1.6
GRG	Griva	3.28	17	P	Pn	12 28 05.4	+1.5
OHR	Ohrid	3.29	356	i Pn	Pn	12 28 06.2	+2.1
IMMV	Iera Moni Meta	3.29	135	P	Pn	12 28 05.4	+1.3
IMMV	Iera Moni Meta	3.29	135	eP	Pn	12 28 06.4	+2.3
KNDR	Palaiochora Ch	3.31	141	eP	Pn	12 28 06.0	+1.8
VAM	Vamos	3.46	133	P	Pn	12 28 07.4	+1.1
IOSP	Ios island	3.50	107	P	Pn	12 28 07.9	+1.1
APE	Apeiranthos	3.59	101	P	Pn	12 28 09.4	+1.3
APE	Apeiranthos	3.59	101	⇓P	Pn	12 28 11.0	+2.8
APE	Apeiranthos	3.59	101	eP	Pn	12 28 08.9	+0.8
APE	Apeiranthos	3.59	101	i P	Pn	12 28 10.8	+2.7
KNT	Kendrikon	3.60	22	P	Pn	12 28 10.4	+2.1
TIR	Tirane	3.65	345	ePn	Pn	12 28 09.4	+0.4
TIR	Tirane	3.65	345	⇑P	Pn	12 28 11.6	+2.6

TIR Tirane 3.65 345 Pn 12 28 09.1 +0.1
TIR Tirane 3.65 345 P Pn 12 28 09.1 +0.1
VAY Valandovo 3.67 17 ePn Pn 12 28 12.2 +3.0
VAY Valandovo 3.67 17 i P Pb 12 28 12.6 -4.8
VAY Valandovo 3.67 17 i Pn Pn 12 28 11.9 +2.8
TIP Timpagrande 3.68 293 ⇓P Pn 12 28 10.2 +0.7
TIP Timpagrande 3.68 293 Pn 12 28 09.8 +0.3
SANT Santorini 3.76 111 ⇓P Pn 12 28 11.7 +1.3
SANT Santorini 3.76 111 eP Pn 12 28 11.1 +0.6
SANT Santorini 3.76 111 Pn 12 28 09.9 -0.6
SRS Serrai 3.80 29 ePn Pn 12 28 13.3 +2.2
GVDS Gavdos 3.82 140 eP Pn 12 28 11.8 +0.5
GVD Gavdhos 3.82 140 eP Pn 12 28 11.8 +0.5
AMGA Amorgos Island 3.93 103 P Pn 12 28 15.1 +2.3
CHOS Chios island 3.93 80 eP Pn 12 28 14.7 +1.8
IDI Anoyia 3.95 129 Pn Pn 12 28 11.8 -1.3
comp=E,3.3nm,0.3s,baz=292,slow=12,SNR=12
IDI Sn Sn 12 28 56.1 -3.3
comp=E,9.2nm,0.3s,baz=46,slow=22,SNR=5.1
IDI Anoyia 3.95 129 eP Pn 12 28 14.7 +1.6
STIP Stip 3.95 12 i Pn Pn 12 28 16.4 +3.3
SIGR SIGRI 3.96 68 eP Pn 12 28 15.8 +2.6
CEL Celeste 4.15 278 Pn 12 28 14.6 -1.4
MMB Musomiste 4.26 27 i P Pn 12 28 18.7 +1.3
KKB Krupnik 4.31 20 i P Pn 12 28 20.1 +2.1
BOZC Bozcaada 4.34 61 eP Pn 12 28 20.6 +2.1
ULC Ulcinj 4.38 341 ePn Pn 12 28 19.4 +0.4
ULC eSn Sn 12 29 10.7 +0.8
LAST Lasithi 4.40 126 P Pn 12 28 20.5 +1.1
MATE Matera 4.44 311 ⇑P Pn 12 28 20.9 +1.1
DRME Dracevica, Mon 4.60 342 ePn Pn 12 28 22.4 +0.3
DRME Dracevica, Mon 4.60 342 ePn Pn 12 28 22.9 +0.8
DRME eSn Sn 12 29 16.6 +1.2
BLCB Balcova 4.70 81 eP Pn 12 28 26.3 +2.9
DKL Dikili 4.71 73 eP Pn 12 28 25.7 +2.3
RZN Rozhen 4.75 35 i P Pn 12 28 26.1 +1.9
BUM Brajici-Budva 4.79 340 ePn Pn 12 28 24.9 +0.2
BUM eSn Sn 12 29 20.8 +0.8
PDG Podgorica 4.82 343 ePn Pn 12 28 25.1 +0.1
PDG eSn Sn 12 29 19.9 -0.8
PDG Podgorica 4.82 343 ⇑P Pn 12 28 25.7 +0.8
PDG Podgorica 4.82 343 Pn 12 28 24.7 -0.3
PDG Podgorica 4.82 343 Pn 12 28 25.1 +0.1
TTG Podgorica 4.82 343 ePn Pn 12 28 25.5 +0.5
TTG eSn Sn 12 29 22.6 +1.9
GCAM G?zelcaml? 4.84 90 eP Pn 12 28 26.3 +1.0
PVY Plav 4.85 350 ePn Pn 12 28 27.0 +1.5
PVY eSn Sn 12 29 22.8 +1.2
GELI Tayfur-Gelibol 4.89 57 eP Pn 12 28 28.5 +2.5
ALN Alexandroupoli 4.89 50 eP Pn 12 28 28.5 +2.5
ALN Alexandroupoli 4.89 50 Pn 12 28 27.0 +1.0
ALN Alexandroupoli 4.89 50 P Pn 12 28 27.0 +1.0
ZKR Zakros 4.91 122 P Pn 12 28 28.2 +1.9
ZKR Zakros 4.91 122 eP Pn 12 28 27.1 +0.7
BODT Bodrum 4.98 97 eP Pn 12 28 28.9 +1.6
ACER Acerenza 4.99 308 Pn 12 28 29.5 +2.1
CEME Cevo 5.01 341 ePn Pn 12 28 29.3 +1.6
CEME eSn Sn 12 29 26.2 +0.7
BARS Barje 5.01 6 ePn Pn 12 28 30.1 +2.4
HCY Herceg Novi 5.04 337 ePn Pn 12 28 27.3 -0.7
HCY Herceg Novi 5.04 337 ePn Pn 12 28 28.1 +0.1
HCY eSn Sn 12 29 26.6 +0.5
VTS Vitosha 5.05 18 ePn Pn 12 28 30.9 +2.5
VTS Vitosha 5.05 18 ⇓P Pn 12 28 31.0 +2.6
VTS Vitosha 5.05 18 i P Pn 12 28 30.4 +2.0
VTS Vitosha 5.05 18 Pn 12 28 29.7 +1.3
VTS Vitosha 5.05 18 P Pn 12 28 29.7 +1.3
KDZ Kurdzhali 5.05 40 i P Pn 12 28 29.3 +1.0
ERIK Erikli-Kesan 5.06 54 eP Pn 12 28 29.6 +1.3
LPK Lapseki 5.07 58 eP Pn 12 28 31.8 +3.4
PLD Plovdiv 5.08 32 i P Pb 12 28 35.7 -5.8
KOME Kolasin 5.17 347 ePn Pn 12 28 31.8 +1.9
KOME eSn Sn 12 29 30.4 +0.9
NKY Niksic 5.24 343 ePn Pn 12 28 32.0 +1.1
NKY eSn Sn 12 29 32.0 +0.7
DAT Datca 5.26 100 eP Pn 12 28 32.9 +1.7
TREB Trebinje 5.33 337 ePn Pn 12 28 31.5 -0.5
TREB eSn Sn 12 29 31.6 -1.7
TREB Trebinje 5.33 337 ePn Pn 12 28 31.2 -0.8
VAE Valguarnera 5.34 268 Pn Pn 12 28 32.2 0.0
comp=E,3.3nm,0.3s,baz=54,slow=14,SNR=2.2
VAE Sn Sn 12 29 30.0 -3.6
comp=E,5.5nm,0.3s,baz=9.5,slow=18,SNR=2.6
AYDB Zeytinkoy-Aydi 5.35 87 eP Pn 12 28 33.6 +1.1
KARP Karpathos 5.36 113 eP Pn 12 28 35.6 +3.1
KARP Karpathos 5.36 113 Pn 12 28 34.3 +1.9
SELS Selova 5.39 360 ePn Pn 12 28 33.2 +0.3
BRY Bratogost 5.44 340 ePn Pn 12 28 34.0 +0.3
BRY Bratogost 5.44 340 ePn Pn 12 28 35.0 +1.3
BRY eSn Sn 12 29 36.3 0.0
KRBG Karabiga-Canak 5.44 60 eP Pn 12 28 35.0 +1.4
SJES Sjenica 5.50 351 ePn Pn 12 28 35.0 +0.5
ZAPS Zavoj 5.56 11 ePn Pn 12 28 37.4 +2.1
UPM Unac-Piva 5.63 343 ePn Pn 12 28 37.7 +1.3
UPM Unac-Piva 5.63 343 ePn Pn 12 28 37.6 +1.2
UPM eSn Sn 12 29 41.4 +0.4
WDD Wied Dalam 5.65 251 Pn 12 28 35.9 -0.6
WDD Sn 12 29 38.5 -2.8
PLE Pljevlja 5.66 347 ⇑Pn Pn 12 28 38.2 +1.6
PLE eSn Sn 12 29 42.2 +0.7
SGRT San Giovanni R 5.71 315 Pn 12 28 36.9 -0.4
YER Yerkesik 5.73 95 eP Pn 12 28 41.6 +3.9
MRMT Marmara Adasi 5.74 59 eP Pn 12 28 40.4 +2.7
IVAS Ivanjica 5.79 353 ePn Pn 12 28 38.5 0.0
EDC Edincik 5.81 62 eP Pn 12 28 40.8 +2.1
BOVS Bovan 5.82 4 ePn Pn 12 28 39.3 +0.5
ARG Arkhangelos 5.83 104 eP Pn 12 28 40.8 +1.9
RUDO Rudo 5.94 348 ePn Pn 12 28 40.2 -0.2
KULA Kula-Manisa 5.98 81 eP Pn 12 28 44.1 +3.1
PAOL Paolisi 6.00 304 Pn 12 28 43.1 +1.8
TURN Turunc 6.03 97 eP Pn 12 28 40.5 -1.2
GRUS Gruza 6.07 357 ePn Pn 12 28 42.0 -0.1
DALY Dalyan (Mula) 6.08 97 eP Pn 12 28 44.5 +2.1
BBLS Lazići 6.17 348 ePn Pn 12 28 43.8 +0.1
BBLS Lazići 6.17 348 ePn Pn 12 28 44.7 +1.0
CORL Corleone 6.19 273 Pn Pn 12 28 44.5 +0.6
ELND Elena 6.25 34 ⇓P Pn 12 28 47.3 +2.5
PVL Pavlikeni 6.27 29 i P Pn 12 28 45.4 +0.5
CLTB Caltabellotta 6.28 270 Pn 12 28 46.3 +1.2
DIVS Divibare 6.33 353 ePn Pn 12 28 45.6 -0.2
DIVS eSn Sn 12 29 58.0 0.0
DIVS Divibare 6.33 353 ePn Pn 12 28 45.4 -0.4
FETY Fethiye 6.46 98 eP Pn 12 28 51.4 +3.8
HAPS Han Pijesak,BI 6.47 346 ePn Pn 12 28 46.7 -1.1
KUBS Kucevo 6.59 3 ePn Pn 12 28 50.3 +0.9
ARMT Armutlu 6.60 63 eP Pn 12 28 52.3 +2.8
TVSB Tavsanli 6.72 73 eP Pn 12 28 54.3 +3.0
TEKS Tekeris 6.83 350 ePn Pn 12 28 51.7 -0.9
INTR Introdacqua 6.95 309 Pn 12 28 56.1 +1.8
YLV Yalova 6.96 64 eP Pn 12 28 57.5 +2.9
AKAS Kas 6.97 101 eP Pn 12 28 57.9 +3.2
BEO Beograd 7.00 356 ePn Pn 12 28 56.1 +1.2
ELL Elmali 7.08 96 eP Pn 12 28 58.3 +2.0
SLUM Salum 7.16 151 P Pn 12 28 53.4 -3.8
baz=154
SLUM AMP 12 30 00.0
baz=154
SLUM S Sn 12 30 08.5 -10
baz=154
MGRS Mrkonjic Grad 7.26 336 ePn Pn 12 28 51.0 -7.5
KORT Korkueli 7.39 94 eP Pn 12 29 02.9 +2.4
BLY Banja Luka 7.53 338 ePn Pn 12 29 05.3 +3.1
GZR Gura Zlata 7.66 9 ⇓P Pn 12 29 05.6 +1.5
BZS Buzias 7.79 3 ⇓P Pn 12 29 08.8 +2.9
VOIR 8.15 20 ⇑P Pn 12 29 13.9 +3.1
MLR Muntele Rosu 8.46 24 Pn Pn 12 29 16.5 +1.4
comp=E,0.1nm,0.3s,baz=245,slow=5.7,SNR=3.1
MLR LR LR 12 33 05.2
comp=E,390nm,21.1s,baz=185,slow=42
MLR Muntele Rosu 8.46 24 ⇓P Pn 12 29 18.6 +3.4
MLR Muntele Rosu 8.46 24 Pn 12 29 15.8 +0.6
MORH Mrgy, Hungar 8.58 348 ePn Pn 12 29 13.5 -3.2
DOPR Dopca 8.73 20 ⇓P Pn 12 29 20.8 +2.1
CRES Cresnjev 9.04 334 ePn Pn 12 29 21.4 -1.6
VRI Vrincioaia 9.05 26 ⇑P Pn 12 29 26.8 +3.6
SWA2 9.29 156 P Pn 12 29 23.2 -3.2
baz=158
SWA2 AMP 12 31 00.0
baz=158
SWA2 S Sn 12 31 00.8 -10
baz=158
KEST Kesra 9.68 261 Pn Pn 12 29 32.0 +0.2
comp=E,0.5nm,0.3s,baz=348,slow=9.3,SNR=4.4
KEST Sn Sn 12 31 16.1 -4.4
comp=E,0.4nm,0.3s,baz=266,slow=22,SNR=1.3
SOKA Soboth 9.93 335 ePn Pn 12 29 34.2 -1.0
comp=E,0.5nm,0.2s
OBKA Obir 9.95 333 Pn Pn 12 29 37.8 +2.3
comp=E,1.3nm,0.3s
BRTR Keskin Array B 9.96 75 Pn Pn 12 29 37.9 +2.2
comp=E,0.1nm,0.3s,baz=257,slow=13,SNR=2.7
BRTR LR LR 12 33 38.2
comp=E,170nm,20.4s,baz=242,slow=39
BRTR Keskin Array B 9.96 75 ceP Pn 12 29 41.9 +6.2
BRTR pmax pmax
comp=Z,2.0nm,0.5s
ARSA Arzberg 10.28 338 Pn Pn 12 29 39.9 -0.1
comp=Z,1.6nm,0.3s
KIS Kishinev 10.78 29 eP Pn 12 29 44.0 -2.8
KIS eLQ LQ 12 32 34.0
KIS eLR LR 12 33 18.0
comp=Z,300nm,10.0s
KIS Kishinev 10.78 29 eP Pn 12 29 44.0 -2.8
KIS MLR MLR
comp=Z,400nm,12.0s
VYHS Vyhne 10.79 352 eP Pn 12 29 47.9 +0.9
VYHS e 12 31 47.7
VYHS Vyhne 10.79 352 ePN Pn 12 29 47.9 +0.9
VYHS eSN Sn 12 31 47.7 +0.1
CONA Conrad Observa 10.81 341 Pn Pn 12 29 49.3 +2.1
comp=Z,0.4nm,0.2s
KBA Koelnbreinsper 10.88 331 Pn Pn 12 29 51.2 +2.9
comp=Z,1.8nm,0.4s
WTTA Wattenberg 11.73 326 Pn Pn 12 30 03.1 +3.1
comp=Z,2.2nm,0.4s
VRAC Vranov 11.94 346 LR LR 12 35 15.4
comp=Z,153nm,19.0s,baz=157,slow=41
FETA Feichten 11.97 323 Pn Pn 12 30 06.9 +3.7
comp=Z,1.9nm,0.6s
MOTA Moosalm 12.03 325 Pn Pn 12 30 06.2 +2.2
comp=Z,1.5nm,0.3s
LVV L'vov 12.17 9 eP P 12 30 22.2 +3.8
DAVOX Davos/Dischmat 12.21 321 Pn Pn 12 30 10.2 +3.6
comp=Z,0.3nm,0.3s,baz=165,slow=23,SNR=1.8
DAVOX Sn Sn 12 32 19.5 -3.1
comp=Z,0.2nm,0.3s,baz=122,slow=21,SNR=2.2
GERES GERESS Array B 12.26 336 Pn Pn 12 30 07.7 +0.6
comp=Z,0.4nm,0.3s,baz=159,slow=13,SNR=6.5
GERES Sn Sn 12 32 17.0 -6.7
comp=Z,0.1nm,0.3s,baz=155,slow=24,SNR=2.1
GERES LR LR 12 35 45.7
comp=Z,191nm,18.5s,baz=138,slow=42
GERES GERESS Array B 12.26 336 Pn 12 30 04.3 -2.8
KHC Kasperske Hory 12.55 337 i P Pn 12 30 14.5 +3.5
KHC pmax pmax
comp=Z,5.0nm,1.0s
EIL Elat 14.08 121 LR LR 12 38 31.8
comp=Z,54nm,18.0s,baz=291,slow=48
AKASG Malin Array Be 14.11 22 Pn Pn 12 30 30.8 -1.4
comp=Z,0.4nm,0.3s,baz=210,slow=8.1,SNR=3.6
AKASG LR LR 12 36 15.7
comp=Z,165nm,20.2s,baz=210,slow=39
CLL Collm 14.66 339 epP Pn 12 30 42.0 +2.3
CLL esPP 12 30 54.0
CLL LmH 12 35 00.0
comp=N,300nm,18.4s
CLL LmH 12 35 00.0
comp=E,600nm,19.0s
CLL Collm 14.66 339 eP Pn 12 30 42.0 +2.3
KIV Kislovodsk 17.39 63 eP P 12 31 20.6 +4.1
KIV pmax pmax
comp=Z,21nm,1.1s
KIV MLR MLR
comp=Z,95nm,13.0s
KBZ Khabaz 17.49 63 P P 12 31 18.4 +1.0
comp=Z,0.1nm,0.3s,baz=330,slow=8.1,SNR=1.8
KBZ Khabaz 17.49 63 i P P 12 31 21.6 +4.1
KBZ pmax pmax
comp=Z,3.0nm,1.0s
ZEI Tsey 18.05 67 eP P 12 31 28.8 +5.0
ZEI pmax pmax
comp=Z,4.0nm,0.6s
GNI Garni 18.50 75 LR LR 12 38 51.7
comp=Z,96nm,18.2s,baz=294,slow=38
GNI Garni 18.50 75 i P Pn 12 31 33.0 +4.1
GNI pmax pmax
comp=Z,23nm,1.0s
VSR Storozhevoye 18.50 38 eP Pn 12 31 31.7 +3.1
VSR pmax pmax
comp=Z,10.0nm,1.3s
OBN Obninsk 20.22 26 LR LR 12 40 01.1
comp=Z,38nm,20.5s,baz=187,slow=38
OBN Obninsk 20.22 26 i P Pn 12 31 51.8 +2.6
OBN i 12 32 03.1
OBN pmax pmax
comp=Z,11nm,1.1s
OBN MLR MLR
comp=Z,160nm,15.0s
MOS Moscow 21.09 27 eP P 12 31 59.9 +3.2
MOS e 12 32 21.6
MDT Midelt 21.55 264 P P 12 32 00.7 -1.4
comp=Z,2.9nm,1.1s,baz=73,slow=11,SNR=2.8
HFS Hagfors 22.82 350 P P 12 32 13.8 -1.5
comp=Z,5.1nm,0.8s,baz=164,slow=12,SNR=11
FINES FINESS Array B 23.84 6 P P 12 32 24.1 -1.3
comp=Z,7.9nm,0.9s,baz=185,slow=9.9,SNR=19
FINES LR LR 12 42 34.9
comp=Z,128nm,18.6s,baz=188,slow=39
FINES FINESS Array B 23.84 6 P P 12 32 23.6 -1.8
EKA Eskdalemuir Ar 23.99 325 P P 12 32 26.0 -0.9
comp=Z,2.5nm,0.7s,baz=122,slow=7.9,SNR=5.2
NC405 NORSAR Array S 24.05 349 P P 12 32 25.5 -2.0
NC405 IAmb IAmb 12 32 44.3
comp=Z,30nm,1.1s
NB2 NORSAR Subarra 24.06 348 P P 12 32 26.7 -0.8
comp=Z,16nm,1.4s,baz=159,slow=9.3
NOA NORSAR Array B 24.06 348 P P 12 32 26.4 -1.1
comp=Z,2.7nm,1.0s,baz=155,slow=9.3,SNR=5.7
NOA LR LR 12 41 54.7
comp=Z,58nm,20.9s,baz=150,slow=37
NBO00 NORSAR Array S 24.12 348 P P 12 32 27.5 -0.6
NC204 NORSAR Array S 24.36 348 P P 12 32 29.4 -0.9
KLMR Klimovskoe 25.80 21 eP P 12 32 40.3 -2.9
KLMR AMP 12 32 57.2
comp=Z,27nm,2.0s
KLMR Klimovskoe 25.80 21 eP P 12 32 40.3 -2.9
KLMR pmax pmax
comp=Z,27nm,2.0s
PRGR Permogore 28.28 25 eP P 12 33 03.4 -2.1
PRGR pmax pmax
comp=Z,6.0nm,0.6s
AKTO Aktyubinsk 29.01 52 P P 12 33 11.9 -0.4
comp=Z,2.3nm,0.7s,baz=260,slow=11,SNR=5.9
GEYT Alibeck 29.08 78 P P 12 33 12.1 -0.9
comp=Z,0.6nm,0.3s,baz=280,slow=9.5,SNR=2.0
GEYT LR LR 12 47 34.9
comp=Z,64nm,18.7s,baz=50,slow=42
ABKAR Akbulak array 30.05 55 P P 12 33 21.8 +0.3
TORD Torodi Ar. Bea 30.06 220 P P 12 33 21.6 -0.2
comp=Z,5.9nm,0.6s,baz=30,slow=9.4,SNR=37
TORD LR LR 12 45 12.4
comp=Z,84nm,20.3s,baz=30,slow=36
ARU Arti 31.01 41 c i P P 12 33 32.9 +3.1
ARU 12 34 32.0
ARU S S 12 38 39.5 +5.3
ARU pmax pmax
comp=Z,8.0nm,1.4s
ARCES ARCESS Array B 31.86 3 P P 12 33 36.5 -0.6
comp=Z,2.0nm,0.7s,baz=191,slow=9.2,SNR=26
ARCES LR LR 12 47 00.1
comp=Z,78nm,18.2s,baz=160,slow=37
SVE Sverdlovsk 32.22 41 eP P 12 33 43.6 +3.1
SVE pmax pmax
comp=Z,15nm,1.1s
BRVK Borovoye 36.92 49 P P 12 34 20.7 -0.5
BRVK IAmb IAmb 12 34 26.0
comp=Z,15nm,1.4s
BRVK Borovoye 36.92 49 P P 12 34 20.7 -0.5
BRVK pmax pmax
comp=Z,15nm,1.4s
KKAR Karatay Array 37.50 66 P P 12 34 28.6 +2.4
KKAR Karatay Array 37.50 66 P P 12 34 28.6 +2.4
DBIC Dimbokro 38.96 224 P P 12 34 37.2 -1.5
comp=Z,4.5nm,0.8s,baz=18,slow=9.1,SNR=7.2
DBIC Dimbokro 38.96 224 IAmb IAmb 12 34 41.2
comp=Z,4.6nm,0.8s
TIC Toumodi 39.07 224 eP P 12 34 41.0 +1.3
KIC Kosan Boka 39.16 223 eP P 12 34 38.9 -1.5
comp=Z,13nm,0.9s
LIC Lamto 39.43 224 eP P 12 34 42.4 -0.2
comp=Z,5.4nm,0.2s
AAK Ala-Archa 40.47 66 ceP P 12 34 55.3 +4.0
AAK pmax pmax
comp=Z,5.0nm,1.4s
SPITS Spitsbergen Ar 40.51 358 P P 12 34 50.0 -1.0
comp=Z,4.3nm,0.9s,baz=186,slow=12,SNR=3.8
KURK Kurchatov 42.10 53 P P 12 35 02.4 -2.0
KURK IAmb IAmb 12 35 09.5
comp=Z,8.4nm,1.1s
KURK Kurchatov 42.10 53 ceP P 12 35 08.2 +3.8
KURK pmax pmax
comp=Z,8.0nm,1.0s
KSH Kashi 42.30 70 P P 12 35 08.8 +2.5
MK31 Makanchi Array 45.08 58 P P 12 35 26.8 -1.7
MK31 IAmb IAmb 12 35 32.2
comp=Z,2.5nm,0.7s
MK31 Makanchi Array 45.08 58 P P 12 35 26.8 -1.7
MK31 pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 45.08 58 P P 12 35 27.0 -1.5
comp=Z,1.3nm,0.4s,baz=277,slow=7.6,SNR=28
MKAR LR LR 12 58 55.8
comp=Z,52nm,18.4s,baz=24,slow=42
ZAA0 Zalesovo Array 45.57 48 P P 12 35 30.8 -1.4
ZAA0 IAmb IAmb 12 35 41.4
comp=Z,4.1nm,0.7s
ZALV Zalesovo Beam 45.57 48 P P 12 35 30.7 -1.5
comp=Z,2.8nm,0.5s,baz=274,slow=8.8,SNR=9.9
ZALV LR LR 12 54 51.4
comp=Z,80nm,18.4s,baz=58,slow=36
ZALV Zalesovo Beam 45.57 48 P P 12 35 30.0 -2.2
SCHQ Schefferville 59.04 318 P P 12 37 11.6 -0.6
comp=Z,1.3nm,0.4s,baz=77,slow=4.7,SNR=11
GTA Gaotai 59.57 62 eP P 12 37 18.2 +1.9
GTA pP sP 12 37 24.5 +2.9
GTA sP pP 12 37 27.5 +7.2
TIXI Tiksi 59.81 20 LR LR 13 04 19.7
comp=Z,45nm,18.8s,baz=322,slow=37
TIXI Tiksi 59.81 20 ceP P 12 37 21.3 +4.0
TIXI pmax pmax
comp=Z,3.0nm,1.0s
SONM Songino Array 60.31 51 P P 12 37 20.0 -1.3
comp=Z,0.5nm,0.5s,baz=285,slow=7.3,SNR=2.7
SONM Songino Array 60.31 51 IAmb IAmb 12 37 26.2
comp=Z,1.9nm,1.2s
SONM Songino Array 60.31 51 P P 12 37 20.0 -1.3
BOSA Boshof 66.20 176 P P 12 38 00.0 -0.3
comp=Z,2.2nm,0.5s,baz=152,slow=18,SNR=3.9
BOSA Boshof 66.20 176 IAmb IAmb 12 38 00.6
comp=Z,6.8nm,1.5s
HHC Hu-ho-hao-te 66.84 56 eP P 12 38 05.2 +0.7
CMAR Chiang Mai Arr 69.46 82 P P 12 38 19.0 -2.2
comp=Z,0.5nm,0.4s,baz=306,slow=7.9,SNR=7.0
CMAR Chiang Mai Arr 69.46 82 ceP P 12 38 22.7 +1.6
CMAR pmax pmax
comp=Z,1.0nm,0.5s
BILL Bilibino 71.25 13 i P P 12 38 31.7 +0.4
BILL i 12 38 52.2
BILL pmax pmax
comp=Z,3.0nm,1.3s
INK Inuvik 72.49 350 P P 12 38 37.8 -0.8
comp=Z,0.5nm,0.5s,baz=360,slow=7.1,SNR=5.8
YKA Yellowknife Ar 73.88 340 P P 12 38 45.0 -2.0
comp=Z,0.2nm,0.5s,baz=32,slow=5.2,SNR=5.7
ULM Lac du Bonnet 76.27 324 P P 12 38 59.6 -1.4
comp=Z,1.2nm,0.7s,baz=59,slow=5.9,SNR=2.2
ULM Lac du Bonnet 76.27 324 IAmb IAmb 12 39 04.2
comp=Z,3.0nm,1.1s
IMAR Indian Mountai 76.44 358 P P 12 39 02.9 +1.1
ILAR Eielson Array 77.30 355 P P 12 39 04.7 -1.9
comp=Z,0.2nm,0.7s,baz=350,slow=2.9,SNR=3.6
KSRS Korea Array 79.18 51 P P 12 39 17.3 -0.2
comp=Z,0.6nm,0.4s,baz=307,slow=4.5,SNR=2.4
KSRS LR LR 13 17 27.7
comp=Z,23nm,18.2s,baz=50,slow=38
YSS Yuzh-Sakhalins 80.77 36 eP P 12 39 21.1 -4.8
PDAR Pinedale Array 88.11 326 LR LR 13 21 35.8
comp=Z,20nm,19.1s,baz=14,slow=37
SMCO Snowmass 89.75 322 P P 12 40 13.9 +2.4
SMCO IAmb IAmb 12 40 19.7
comp=Z,5.8nm,1.0s
WRA Warramunga Arr 120.05 93 PKP PKPdf 12 46 01.9 -1.7
comp=Z,1.6nm,1.2s,baz=326,slow=1.4,SNR=5.6
ASAR Alice Springs 121.66 97 PKP PKPdf 12 46 05.2 -1.5
comp=Z,0.4nm,0.8s,baz=311,slow=2.1,SNR=3.1

IDC 06 12:32:57.0±2.3, 7°.04S×129°.09E, h0km, mb3.1/1, mb1 3.5/4, mb1mx3.3/36, mbtmp3.3/4, ML3.1/3, Error ellipse: s-maj=81.1km s-min=30.5km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.49	197	Pn	Pn	12 35 41.7	-0.8
	0.0nm,0.3s,baz=13,slow=18,SNR=1.7						
FITZ				Sn	Sn	12 37 38.9	-13
	0.2nm,0.3s,baz=286,slow=13,SNR=1.6						
WRA	Warramunga Arr	13.80	159	Pn	Pn	12 36 15.1	+1.0
	0.2nm,0.3s,baz=338,slow=13,SNR=9.7						
WRA				Sn	Sn	12 38 39.4	-8.8
	0.3nm,0.3s,baz=334,slow=23,SNR=7.1						
ASAR	Alice Springs	17.17	165	P	Pn	12 36 58.2	-0.2
	0.1nm,0.3s,baz=340,slow=11,SNR=4.6						
ASAR				S	Sn	12 39 57.5	-13
	0.0nm,0.3s,baz=351,slow=32,SNR=1.4						
MKAR	Makanchi Array	67.77	327	P	P	12 43 56.7	+0.1
	0.1nm,0.4s,baz=111,slow=7.7,SNR=1.8						

IDC 06 12:48:08.1±1.0, 36°.84N×98°.46W, h0km, mb1 3.6/5, mb1mx3.3/57, mbtmp3.3/5, ML3.2/5, Error ellipse: s-maj=13.2km s-min=11.1km az=124.0
TUL 06 12:48:08.6±2.7, 36°.75N±0°.04×98°.30W±0°.05, h4km±3km, ML3.3, Error ellipse: s-maj=7.4km s-min=3.8km az=222.0
NEIC 06 12:48:10.6±1.7, 36°.65N±0°.04×98°.27W±0°.04, h5km±2km, Error ellipse: s-maj=7.7km s-min=4.8km az=37.0
ANF 06 12:48:10.6±0.6, 36°.64N×98°.28W, h5km, ML4.0/11, Error ellipse: s-maj=7.9km s-min=7.3km az=104.0
ISC 06 12:48:09.5±3.6, 36°.73N±0°.04×98°.24W±0°.05, h3km±27km, n52, σ1″26/64, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	1.28	147	Pn	Pn	12 48 33.4	-1.0
OKCFA	Oklahoma City	1.46	154		Pn	12 48 36.1	-0.7
OKCFA					Sn	12 48 55.9	-0.6
OKCSW	OKLAHOMA CITY	1.47	154		Pn	12 48 36.2	-0.8
OKCSW				Sn	Sn	12 48 55.4	-1.4
FNO	Franklin	1.62	155		Pn	12 48 39.3	+0.3
FNO					Sn	12 49 01.7	+1.3
W35A	Tecumseh	1.92	145		Pn	12 48 43.3	+0.1
W35A					Sn	12 49 09.6	+1.7
WMOK	Wichita Mounta	2.04	193		Pn	12 48 44.1	-0.6
WMOK				Sn	Sn	12 49 11.1	+0.3
WMOK	Wichita Mounta	2.04	193	P	Pn	12 48 44.5	-0.3
	baz=12						
WMOK				S	Sn	12 49 11.2	+0.4
	baz=12						
TUL1	Leonard	2.14	112		Pn	12 48 47.5	+1.3
TUL1					LR	12 49 17.3	
TUL1	Leonard	2.14	112	P	Pn	12 48 47.2	+1.1
	baz=291						
TUL1				S	Sn	12 49 14.4	+1.2
	baz=291						
X34A	Smith Ranch, M	2.15	171		Pn	12 48 46.5	+0.2
CBKS	Cedar Bluff	2.40	331		Pn	12 48 51.0	+1.3
CBKS	Cedar Bluff	2.40	331	P	Pn	12 48 51.3	+1.5
	baz=151						
CBKS				S	Sb	12 49 23.5	+0.1
	baz=151						
KSU1	Kansas State U	2.69	28	P	Pn	12 48 56.0	+2.2
	baz=209						
AMTX	Amarillo	3.35	238		Pn	12 49 03.8	+0.9
AMTX	Amarillo	3.35	238	Pb	Pb	12 49 09.5	-0.2
	baz=56						
AMTX				Sb	Sb	12 49 51.9	+1.0
	baz=56						
HHAR	Hobbs	3.49	96		Pn	12 49 05.5	+0.8
W39A	Magazine	3.92	112		Pn	12 49 11.5	+0.8
W39A	Magazine	3.92	112	P	Pn	12 49 11.1	+0.4

baz=293
KSCO Kaye Shedlock' 4.15 305 Pn 12 49 15.5 +1.5
KSCO Kaye Shedlock' 4.15 305 P Pn 12 49 15.0 +0.9
baz=123
ABTX Abilene, Hawle 4.26 196 Pn 12 49 14.2 -1.1
ABTX Abilene, Hawle 4.26 196 P Pn 12 49 14.5 -0.8
baz=15
ABTX Sb Sb 12 50 19.5 +2.6
baz=15
U40A Yellville 4.35 93 Pn 12 49 17.1 +0.6
U40A Yellville 4.35 93 P Pn 12 49 17.4 +0.8
baz=276
MIAR Mount Ida 4.38 119 Pn 12 49 18.1 +1.2
MIAR Mount Ida 4.38 119 P Pn 12 49 17.4 +0.5
baz=300
MIAR S Sn 12 50 08.9 +0.5
baz=300
MSTX Muleshoe 4.62 235 Pn Pn 12 49 21.9 +1.6
MSTX Muleshoe 4.62 235 Pb Pb 12 49 30.3 -1.0
baz=52
BGNE Belgrade 4.67 1 Pn 12 49 21.7 +0.7
WHTX Lake Whitney, 4.77 172 Pn Pn 12 49 21.1 -1.3
MGMO Mount Grove 4.80 83 Pn 12 49 23.7 +1.0
X40A Basin Creek Fa 4.94 115 Pn 12 49 25.3 +0.6
T25A Trinidad 4.96 277 Pn 12 49 25.1 -0.1
WHAR Wooly Hollow 5.03 105 Pn Pn 12 49 26.8 +0.9
W41B Gary Mavity, V 5.10 106 Pn Pn 12 49 27.2 +0.4
UALR University of 5.17 110 Pn Pn 12 49 28.2 +0.3
LCAR Lake Charles 5.75 94 Pn Pn 12 49 36.4 +0.6
SDCO Great Sand Dun 5.88 282 Pn 12 49 38.7 +0.8
ANMO Albuquerque 6.91 257 Pn Pn 12 49 49.9 -2.0
0.1nm,0.3s,baz=22,slow=5.6,SNR=3.2
ANMO Pg Pb 12 50 12.4 +2.0
0.4nm,0.3s,baz=70,slow=17,SNR=5.9
ANMO Lg Lg 12 51 39.0
1.2nm,0.3s,baz=341,slow=10,SNR=3.3
S44A Carbondale 7.23 80 Pn Pn 12 49 55.5 -0.6
S44A Sn Sn 12 51 17.0 -1.7
N23A Red Feather La 7.31 307 Pn Pn 12 49 58.4 +0.8
P43A Skaggs, Pawnee 7.45 64 Pn Pn 12 49 59.4 +0.2
L40A Anamosa 7.60 43 Pn Pn 12 50 02.8 +1.6
MNTX Cornudas Mount 7.76 232 Pn Pn 12 50 01.9 -1.5
RSSD Black Hills 8.60 331 Pn Pn 12 50 16.8 +1.6
TX32 Lajitas Array 8.67 213 Pn 12 50 13.7 -2.3
TXAR Lajitas Array 8.67 213 Pn Pn 12 50 14.0 -2.0
0.2nm,0.3s,baz=42,slow=11,SNR=13
TXAR Pg Pg 12 50 44.2 -11
0.6nm,0.3s,baz=37,slow=15,SNR=9.4
TXAR Lg Lg 12 52 34.0
0.6nm,0.3s,baz=31,slow=30,SNR=5.4
TXAR Lajitas Array 8.67 213 Pn Pn 12 50 14.9 -1.1
K22A Casper 8.70 315 Pn Pn 12 50 15.6 -0.9
PDAR Pinedale Array 10.59 308 Pn Pn 12 50 38.8 -3.7
0.1nm,0.3s,baz=127,slow=15,SNR=6.2
PDAR Lg Lg 12 53 33.4
0.2nm,0.3s,baz=116,slow=25,SNR=4.0
TKL Tuckaleechee C 11.74 91 Pn Pn 12 50 57.7 -0.2
0.3nm,0.3s,baz=288,slow=20,SNR=4.2
TKL Lg Lg 12 54 13.6
0.3nm,0.3s,baz=0.3,slow=18,SNR=2.7
ULM Lac du Bonnet 13.62 6 Pn Pn 12 51 16.9 -6.7
0.2nm,0.3s,baz=189,slow=13,SNR=3.6
ULM Sn Sn 12 53 41.0 -14
0.1nm,0.3s,baz=95,slow=13,SNR=1.2
ULM Lg Lg 12 55 09.9
0.1nm,0.3s,baz=331,slow=0.6,SNR=2.2

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*IDC **06** 12:53:45.8±8.0, 9°.70N×82°.25W, h0km, mb3.2/4, mb1 3.6/5, mb1mx3.5/41, mbtmp3.7/5, ML3.9/1, Error ellipse: s-maj=168.7km s-min=38.6km az=170.0*
*UCR **06** 12:53:45.4±2.1, 8°.27N×82°.80W, h14km±5km*
*UPA **06** 12:53:46.1±1.7, 8°.32N×82°.78W, h20km±4km, MW4.3*
ISC 06 12:53:46.0±0.9, **8°.31N**±0°.04×**82°.79W**±0°.02, **h26**km±6km, **n51**, σ1°.**33**/81, **mb3.2**/4, **1C-2D, Panama-Costa Rica border region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SBAR3 San Bartolo, C 0.09 276 ⇑iP Pb 12 53 50.0 -0.8
SBAR3 eS Sb 12 53 54.1 +0.2
BAGA3 Bagala, Chiriq 0.31 59 ⇓iP Pb 12 53 53.5 +0.2
BAGA3 eS Sb 12 53 56.3 -1.9
DVD David 0.36 70 iP Pb 12 53 53.9 -0.1
DVD eS Sn 12 54 00.7 -1.2
PEDE3 Pedregal, Chir 0.37 79 iP Pb 12 53 54.2 -0.1
PEDE3 eS Sb 12 54 00.4 +0.5
LOCO3 Loma Colorada, 0.38 75 iP Pb 12 53 54.4 0.0
LOMA3 Las Lomas, Chi 0.42 73 iP Pb 12 53 54.8 -0.1
LOMA3 eS Sb 12 54 01.1 +0.1
CHIR3 Chiriqui UPA, 0.47 79 iP Pb 12 53 55.5 -0.2
CHIR3 eS Sb 12 54 01.6 -0.7
PTAR3 Potrerillos Ar 0.48 38 iP Pb 12 53 56.0 -0.1
PTAR3 eS Sb 12 54 03.9 +1.0
BCO2 Palmira 0.48 33 iP Pb 12 53 56.0 -0.1
BCO2 eS Sb 12 54 03.5 +0.4
BRU2 Volcan 0.49 12 ⇓iP Pb 12 53 56.0 -0.4
BRU2 eS Sb 12 54 03.9 +0.7
BRU2 Volcan 0.49 12 eP Pb 12 53 55.9 -0.4
BRU2 eS Sb 12 54 04.1 +0.9
EDSV San Vito 0.54 341 eP Pb 12 53 56.5 -0.5
EDSV eS Sb 12 54 05.5 +1.0
PTJ1 Puerto Jimnez 0.55 294 eP Pb 12 53 55.8 -1.4
PTJ1 eS Sb 12 54 04.9 +0.2
PTJ1 Puerto Jimnez 0.55 294 eP Pb 12 53 55.8 -1.4
PTJ1 eS Sb 12 54 05.2 +0.5
CHGR2 Aguacate 0.90 46 iP Pb 12 54 01.8 -1.2
CHGR2 eS Sb 12 54 11.8 -2.8
EDPN Palmar Norte 0.92 315 eP Pb 12 54 01.7 -1.7
EDPN eS Sb 12 54 14.9 -0.4
EDBA Buenos Aires 0.97 331 eP Pb 12 54 02.8 -1.5
EDBA eS Sn 12 54 18.4 +1.4
NANC3 Nancito, Chiri 1.05 94 iP Pb 12 54 04.2 -1.0
NANC3 eS Sb 12 54 17.6 -1.5
CNI2 El Empalme, Bo 1.15 16 iP Pb 12 54 06.3 -0.2
CNI2 eS Sb 12 54 21.1 -0.7
PVID3 Puerto Vidal, 1.20 102 iP Pn 12 54 06.1 -1.1
PVID3 eS Sn 12 54 21.2 -1.5
EDDO Dominical 1.41 312 eP Pn 12 54 10.2 +0.1
EDDO eS Sb 12 54 29.1 -0.3
CNAZ3 Canazas, Verag 1.57 88 iP Pn 12 54 11.2 -1.0
CNAZ3 eS Sn 12 54 32.1 +0.4
GMAL Guarumal, Vera 1.64 109 iP Pn 12 54 12.9 -0.3
GMAL eS Sn 12 54 34.3 +0.8
GMAL Guarumal, Vera 1.64 109 eP Pn 12 54 12.7 -0.5
RSUS3 Rio de Jesus, 1.65 101 eP Pn 12 54 13.1 -0.3
RSUS3 eS Sn 12 54 33.2 -0.6
SFRA3 San Francisco, 1.80 92 iP Pn 12 54 14.7 -0.8
SFRA3 eS Sb 12 54 40.1 -0.5
LCR2 La Lucha 2 1.86 320 eP Pb 12 54 16.0 -0.5
MARI3 Mariato, Verag 1.90 110 iP Pn 12 54 18.7 -1.4
MARI3 eS Sn 12 54 40.9 +0.9
CALO3 Calobre, Verag 1.93 90 iP Pn 12 54 17.8 +0.6
CALO3 eS Sb 12 54 45.5 +1.2
CVTR Volcan Turrial 1.95 331 eP Pb 12 54 18.4 +0.5
HDC Heredia 2.13 322 eP Pn 12 54 21.9 +1.8
HDC eS Sb 12 54 49.7 -0.4
HDC Heredia 2.13 322 eP Pn 12 54 21.9 +1.8
CACAO El Cacao, Vera 2.14 116 eP Pn 12 54 21.2 +1.1
CACAO eS Sb 12 54 53.6 +3.3
PNME Penonome 2.45 86 eP Pn 12 54 23.4 -0.9
PNME eS Sb 12 55 08.4 +9.3
AZU Azuero 2.55 101 eP Pn 12 54 27.0 +1.3
AZU eS Sn 12 54 57.4 +1.5
AZU Azuero 2.55 101 eP Pn 12 54 27.8 +2.1
VTON El Valle, Cocl 2.67 83 eP Pb 12 54 31.7 -1.5
VTON eS Sb 12 55 09.4 +3.9
ARE1 Arenal 1 2.86 319 eP Pn 12 54 32.2 +2.1
JTS Las Juntas de 2.90 313 Pn Pn 12 54 31.0 +0.4
22nm,0.3s,baz=95,slow=12,SNR=33
JTS Sn Sn 12 55 04.8 +0.1
33nm,0.3s,baz=38,slow=21,SNR=11
JTS Las Juntas de 2.90 313 eP Pn 12 54 33.1 +2.5
JTS eS Sn 12 55 05.5 +0.8
JTS Las Juntas de 2.90 313 eP Pn 12 54 32.8 +2.2
BCIP Isla Barro Col 3.04 74 iP Pb 12 54 38.9 -0.6
BCIP eS Sb 12 55 19.2 +2.9
BCIP Isla Barro Col 3.04 74 eP Pb 12 54 33.4 +0.8
PLVR Palo Verde 3.24 309 eP Pn 12 54 36.3 +1.0
UPA Univ. de Panam 3.29 78 eP Pb 12 54 41.4 -2.4
UPA eS Sb 12 55 25.6 +2.2
CUI Cuipilapa 3.30 315 eP Pn 12 54 38.9 +2.7

PDAR Pinedale Array 41.60 330 P P 13 01 27.8 -4.4
0.2nm,0.6s,baz=121,slow=9.9,SNR=2.8
NVAR Mina Array Bea 43.82 319 P P 13 01 49.4 -0.8
0.2nm,0.5s,baz=116,slow=5.3,SNR=3.1
YKA Yellowknife Ar 58.83 343 P P 13 03 38.4 -3.7
0.1nm,0.5s,baz=141,slow=6.4,SNR=3.7
ILAR Eielson Array 71.64 336 P P 13 05 01.8 -3.4
0.2nm,0.6s,baz=121,slow=5.3,SNR=4.1
ASAR Alice Springs 141.71 242 PKhKP PKPpre 13 13 07.5
0.7nm,1.1s,baz=90,slow=3.4,SNR=3.1

IDC 06 13:04:03.5±2.6, **2°.36N**×**127°.54E**, **h0**km, **mb3.2**/3, **mb1 3.5**/3, **mb1mx3.3**/22, **mbtmp3.3**/3, **Error ellipse: s-maj=200.2km s-min=28.3km az=67.0, Northern Molucca Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 23.15 164 P P 13 09 12.2 +0.5
0.8nm,0.7s,baz=342,slow=10.0,SNR=5.4
ASAR Alice Springs 26.60 167 P P 13 09 43.1 -0.7
0.2nm,0.5s,baz=350,slow=7.6,SNR=2.9
MKAR Makanchi Array 59.13 325 P P 13 14 06.3 +0.3
0.2nm,0.7s,baz=116,slow=5.6,SNR=2.6

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*SOME **06** 13:18:29.5, 40°.97N×73°.23E, h15km*
*NNC **06** 13:18:31.1±1.5, 41°.00N×73°.22E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=12.7km s-min=5.4km az=169.0*
*KRNET **06** 13:18:31.9±0.1, 41°.07N×73°.27E, h17km, mb3.1*
*ISU **06** 13:18:31.0, 41°.50N×72°.60E, h5km*
*KNET **06** 13:18:33.6±0.6, 41°.18N×73°.36E, h0km±3km, ml2.6, Error ellipse: s-maj=4.8km s-min=4.1km az=125.0*
ISC 06 13:18:29.5±1.2, **41°.00N**±0°.03×**73°.25E**±0°.02, **h1**km±11km, **n56**, σ1°.**46**/95, **29C-21D, Kyrgyzstan**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ARSB Arslanbob 0.39 328 ⇓iP Pb 13 18 38.6 -0.7
baz=19
ARSB ⇓iS Sg 13 18 43.5 +1.5
baz=19
ARSB Arslanbob 0.39 328 eP Pg 13 18 38.0 +1.0
ARSB eS Sg 13 18 43.0 +1.0
ANR Andizhan 0.72 251 eP Pg 13 18 43.1 -0.2
ARLS Aral 1.18 43 ⇑iP Pg 13 18 53.1 +1.0
baz=45
ARLS ⇑iS Sb 13 19 08.0 -0.6
baz=45
AML Almayashu 1.18 16 ⇓iP Pn 13 18 53.0 -0.5
baz=17
AML ⇓iS Sb 13 19 07.5 0.0
baz=17
AML Almayashu 1.18 16 ⇓P Pn 13 18 53.1 -0.5
49nm,0.2s,SNR=266
AML ⇑S Sg 13 19 07.8 +0.3
124nm,0.3s
ARK Arkit 1.26 310 ⇓iP Pg 13 18 53.9 +0.2
baz=7.0
ARK ⇓iS Sn 13 19 10.8 -1.1
baz=7.0
UCH Uchtor 1.55 37 ⇓iP Pb 13 18 59.1 -0.2
baz=39
UCH ⇓iS Sb 13 19 19.3 -0.3
baz=39
UCH Uchtor 1.55 37 ⇑P Pg 13 19 00.1 +0.8
31nm,0.2s,SNR=78
UCH ⇑S Sg 13 19 20.0 +0.6
44nm,0.3s
EKS2 Erkin-Say 1.71 13 ⇓iP Pb 13 19 02.2 +0.4
baz=13
EKS2 ⇓iS Sb 13 19 23.5 -0.3
baz=13
EKS2 Erkin-Say 1.71 13 ⇑P Pg 13 19 02.3 0.0
11nm,0.2s,SNR=31
EKS2 ⇓S Sg 13 19 25.9 +1.5
42nm,0.2s
MRKS Merke 1.75 359 eP Pb 13 19 02.8 +0.4
17nm,0.2s
MRKS eS Sg 13 19 27.5 +1.8
146nm,0.3s
MRKS Merke 1.75 359 P Pb 13 19 02.8 +0.4
17nm,0.2s
MRKS S Sg 13 19 27.5 +1.8
146nm,0.3s
KZA Kyzart 1.85 54 ⇑P Pg 13 19 06.2 +1.2
52nm,0.4s,SNR=62
KZA ⇓S Sg 13 19 30.6 +1.8
24nm,0.2s
AAK Ala-Archa 1.88 29 ⇓iP Pb 13 19 05.2 +0.4
baz=30
AAK ⇓iS Sb 13 19 29.3 +0.4
baz=30
AAK Ala-Archa 1.88 29 ⇓P Pg 13 19 06.2 +0.6
48nm,0.3s,SNR=76
AAK ⇓S Sg 13 19 30.3 +0.3
45nm,0.2s
AAK Ala-Archa 1.88 29 ⇑Pn Pg 13 19 06.2 +0.6
25nm,0.3s
AAK Sn Sg 13 19 30.2 +0.1
47nm,0.5s
BTK Batken 2.08 244 ⇑iP Pb 13 19 09.2 -0.2
baz=42
BTK ⇑iS Sg 13 19 37.2 +0.9
baz=42
BTK Batken 2.08 244 iP Pg 13 19 12.1 +2.7
BTK eS Sg 13 19 35.8 -0.5
FRU1 Bishkek 2.08 29 ⇓iP Pb 13 19 08.3 +0.2
baz=30
FRU1 ⇓iS Sb 13 19 34.5 0.0
baz=30
KBK Karagaybulak 2.09 37 ⇑iP Pb 13 19 08.9 +0.7
baz=38
KBK ⇑iS Sb 13 19 35.4 +0.7
baz=38
KBK Karagaybulak 2.09 37 ⇑P Pg 13 19 10.0 +0.5
54nm,0.4s,SNR=74
KBK ⇑S Sg 13 19 37.4 +0.8
97nm,0.3s
NRN Naryn 2.12 77 ⇑iP Pb 13 19 08.8 0.0
baz=79
NRN ⇑iS Sb 13 19 36.6 +0.9
baz=79
CHMS Chumysh 2.29 29 ⇑iP Pb 13 19 11.2 -0.4
baz=29
CHMS ⇑iS Sb 13 19 39.7 -0.7
baz=29
CHMS Chumysh 2.29 29 ⇑P Pb 13 19 12.4 +0.7
16nm,0.3s,SNR=16
CHMS Chumysh 2.29 29 ⇓Pn Pb 13 19 12.3 +0.7
23nm,0.7s
CHMS ⇑Sn Sb 13 19 42.0 +1.5
50nm,0.7s
DZA Taraz 2.38 323 eP Pb 13 19 13.2 +0.1
68nm,0.0s
DZA eS Sg 13 19 45.4 -0.5
65nm,0.1s
DZA Taraz 2.38 323 Pg Pb 13 19 13.2 +0.1
68nm,0.0s
DZA Lg Lg 13 19 45.4
65nm,0.1s
USP Ospenovka 2.45 22 ⇑iP Pb 13 19 13.6 -0.8
baz=22
USP ⇑iS Sb 13 19 43.6 -1.5
baz=22
USP Ospenovka 2.45 22 ⇑P Pb 13 19 14.1 -0.3
15nm,0.3s,SNR=22
JBG Jabagly 2.48 306 Pg Pg 13 19 15.9 -1.1
17nm,0.2s
JBG Lg Lg 13 19 49.9
70nm,0.2s
IUG Iuzhnay 2.68 296 eP Pb 13 19 18.8 +0.5
0.8nm,0.2s
IUG eS Sg 13 19 54.9 -0.6
72nm,0.2s
IUG Iuzhnay 2.68 296 Pg Pb 13 19 18.8 +0.5
0.8nm,0.2s
IUG Lg Lg 13 19 54.9
72nm,0.2s
KST Kastek 2.87 44 eP Pb 13 19 22.9 +1.3
2.6nm,0.1s
KST eS Sg 13 20 01.5 -0.3
34nm,0.4s
KST Kastek 2.87 44 Pg Pb 13 19 22.9 +1.3
2.6nm,0.1s
KST Lg Lg 13 20 01.5
34nm,0.4s
KK31 Karatay Array 2.93 317 ⇑Pn Pb 13 19 19.8 -2.8
0.5nm,0.5s,baz=131,slow=13,SNR=70
KK31 ⇑Pg Pg 13 19 23.4 -2.3
5.1nm,0.3s,baz=131,slow=17,SNR=8.8
KK31 ⇑Lg Lg 13 20 01.5
7.2nm,0.3s,baz=133,slow=28,SNR=7.6
KDJ Kajisay 3.16 68 ⇑iP Pb 13 19 23.6 -2.9
baz=69
KDJ ⇑iS Sn 13 20 01.3 +2.5
baz=69
MTBS Maitube 3.18 47 eP Pb 13 19 28.4 +1.5
1.9nm,0.1s
MTBS eS Sg 13 20 10.7 -1.1
20nm,0.2s
MTBS Maitube 3.18 47 Pg Pb 13 19 28.4 +1.5
1.9nm,0.1s
MTBS Lg Lg 13 20 10.7
20nm,0.2s
IZV Izvestkoviy 3.23 50 eP Pg 13 19 29.8 -1.6
3.7nm,0.3s
IZV eS Sg 13 20 13.3 +0.1
30nm,0.4s
IZV Izvestkoviy 3.23 50 Pg Pg 13 19 29.8 -1.6
3.7nm,0.3s
IZV Lg Lg 13 20 13.3
30nm,0.4s
KRBS Karabastau 3.24 33 eP Pb 13 19 28.6 +0.8
2.9nm,0.2s
KRBS eS Sb 13 20 11.1 +3.3
11nm,0.4s
KRBS Karabastau 3.24 33 Pg Pb 13 19 28.6 +0.8
2.9nm,0.2s
KRBS Lg Lg 13 20 11.1
11nm,0.4s
MDOK Medeo 3.56 51 eP Pb 13 19 35.2 +1.9
3.8nm,0.2s
MDOK eS Sg 13 20 22.4 -1.4
13nm,0.4s
MDOK Medeo 3.56 51 Pg Pb 13 19 35.2 +1.9
3.8nm,0.2s
MDOK Lg Lg 13 20 22.4
13nm,0.4s
KOTS Kotyrbulak 3.64 51 eP Pb 13 19 36.9 +2.2
7.6nm,0.2s
KOTS eS Sg 13 20 25.5 -0.9
81nm,0.5s
KOTS Kotyrbulak 3.64 51 Pg Pb 13 19 36.9 +2.2
7.6nm,0.2s
KOTS Lg Lg 13 20 25.5
81nm,0.5s
KUU Kurty 3.69 37 eP Pb 13 19 37.0 +1.6
1.3nm,0.1s
KUU eS Sg 13 20 25.5 -2.4
16nm,0.2s
KUU Kurty 3.69 37 Pg Pb 13 19 37.0 +1.6
1.3nm,0.1s
KUU Lg Lg 13 20 25.5
16nm,0.2s
CHKK Chushkaly 3.97 43 eP Pb 13 19 42.5 +2.2
2.1nm,0.0s
CHKK eS Sg 13 20 35.3 -1.8
12nm,0.1s
CHKK Chushkaly 3.97 43 Pg Pb 13 19 42.5 +2.2
2.1nm,0.0s
CHKK Lg Lg 13 20 35.3
12nm,0.1s
KURS Kuram 4.42 54 eP Pg 13 19 51.6 -2.6
0.9nm,0.2s
KURS eS Sg 13 20 50.5 -0.9
5.3nm,0.3s
KURS Kuram 4.42 54 Pg Pg 13 19 51.6 -2.6
0.9nm,0.2s
KURS Lg Lg 13 20 50.5
5.3nm,0.3s
ARXS Arharly 4.66 45 eP Pb 13 19 54.9 +2.9
1.6nm,0.3s
ARXS eS Sg 13 20 56.6 -2.6
11nm,0.3s
ARXS Arharly 4.66 45 Pg Pb 13 19 54.9 +2.9
1.6nm,0.3s
ARXS Lg Lg 13 20 56.6
11nm,0.3s
PDGK Podgornoye 5.19 61 ⇑Pg Pg 13 20 05.2 -3.7
2.4nm,0.9s
PDGK ⇓Lg Lg 13 21 14.8
3.6nm,0.8s

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*IDC **06** 13:29:58.5±1.3, 38°.38N×20°.35E, h0km, mb3.8/5, mb1 3.8/7, mb1mx3.5/31, mbtmp3.7/7, ML3.3/2, Error ellipse: s-maj=26.0km s-min=23.2km az=112.0*
*PDG **06** 13:30:00.9±0.4, 38°.40N×20°.44E, h13km, ML3.7/10, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
*ATH **06** 13:30:01.4, 38°.37N×20°.46E, h13km±1km, ML3.3/21, Error ellipse: s-maj=1.2km s-min=0.6km az=256.0*
*THE **06** 13:30:01.7, 38°.39N×20°.47E, h0km±1km, ML3.6/19, Error ellipse: s-maj=1.7km s-min=0.5km az=37.0*
*BEO **06** 13:30:02.2±0.7, 38°.25N×20°.14E, h29km±4km, ML3.5/6*
ISC 06 13:30:01.2±0.8, **38°.39N**±0°.01×**20°.46E**±0°.02, **h10**km±4km, **n130**, σ1°.**19**/193, **mb3.9**/5, **1C-1D, Greece**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VSK1 VASILIKIADES 0.09 74 P Pg 13 30 03.4 -0.3
VSK1 S Sg 13 30 04.8 -0.6
165µm,0.4s
FSK Fiskardo 0.11 48 P Pg 13 30 03.8 -0.1
FSK S Sg 13 30 05.5 -0.4
57µm,0.3s
FSK Fiskardo 0.11 48 P Pg 13 30 03.9 -0.1
FSK S Sg 13 30 05.9 0.0
FSK AML AML 13 30 06.1
FSK AML AML 13 30 06.2
KEF4 Livadi, Kephal 0.13 192 P Pg 13 30 04.4 +0.1
KEF4 S Sg 13 30 07.6 +1.2
LXR1 Lixouri, Cepha 0.18 185 P Pg 13 30 05.7 +0.5
LXR1 S Sg 13 30 08.9 +1.1
106µm,0.4s
KEF3 Kipouria, Keph 0.20 206 P Pg 13 30 05.6 +0.1
KEF3 S Sg 13 30 08.7 +0.4
ARG2 Argostoli 0.21 174 P Pg 13 30 05.8 +0.2
ARG2 S Sg 13 30 09.3 +0.8
67µm,0.2s
ARGA Argostoli. Kep 0.21 176 P Pg 13 30 05.7 +0.2
ARGA S Sg 13 30 09.6 +1.1
CHV1 Chavriata, Kef 0.21 197 P Pg 13 30 05.7 +0.1
CHV1 S Sg 13 30 09.8 +1.2
56µm,0.5s
KEF2 Argostoli. Kep 0.22 174 P Pg 13 30 06.0 +0.2
KEF2 S Sg 13 30 09.2 +0.4
VLS Valsamata 0.23 154 P Pg 13 30 06.0 0.0
VLS S Sg 13 30 09.9 +0.7
14µm,0.4s
VLS Valsamata 0.23 154 P Pg 13 30 06.0 0.0
VLS S Sg 13 30 09.9 +0.7
VLS AML AML 13 30 12.7
comp=E,25303µm,0.3s
VLS AML AML 13 30 12.8
comp=N,30001µm,0.6s
EVGI Lefkada island 0.28 33 P Pg 13 30 07.1 +0.2
EVGI S Sb 13 30 12.1 -1.1
EVGI Lefkada island 0.28 33 P Pg 13 30 07.2 +0.2
EVGI S Sb 13 30 12.1 -1.1
MGNA Meganis 0.38 44 P Pg 13 30 08.6 0.0
MGNA S Sg 13 30 14.6 +0.9
MGNA AML AML 13 30 16.9
comp=N,19850µm,0.4s
MGNA AML AML 13 30 17.2
comp=E,16538µm,0.3s
LKD2 Lefkada island 0.43 21 P Pg 13 30 09.7 -0.1
LKD2 S Sg 13 30 15.5 0.0
comp=E,2µm,0.9s
LKD2 Lefkada island 0.43 21 P Pg 13 30 09.7 -0.1
LKD2 S Sb 13 30 17.7 +0.1
LKD2 AML AML 13 30 22.4
comp=E,6805µm,0.4s
LKD2 AML AML 13 30 22.4
comp=N,6282µm,0.4s
TSLK Tsoukalades, L 0.47 19 P Pg 13 30 10.5 +0.2
TSLK Tsoukalades, L 0.47 19 P Pg 13 30 10.7 +0.3
TSLK S Sb 13 30 18.0 -0.5
AST1 Astakos 0.52 72 P Pg 13 30 11.6 +0.3
AST1 S Sb 13 30 19.6 -0.4
comp=N,14µm,0.4s

VLMS Volimes, Zakyn 0.53 162 P Pg 13 30 11.5 -0.1
VLMS S Sg 13 30 18.8 +0.1
VLMS AML AML 13 30 24.1
comp=E,10544µm,0.3s
VLMS AML AML 13 30 24.3
comp=N,21599µm,0.3s
PDO Prodromos 0.61 69 P Pg 13 30 13.0 0.0
PDO Prodromos 0.61 69 P Pg 13 30 13.1 0.0
ZAK2 Zakynthos 0.69 150 P Pb 13 30 15.0 -0.3
ZAK2 S Sb 13 30 25.4 +0.5
comp=N,24µm,0.5s
KRI1 kERI 0.78 159 P Pg 13 30 15.6 -0.6
KRI1 S Sb 13 30 28.1 +0.7
comp=N,12µm,0.5s
RLS Riolos of Patr 0.86 112 P Pg 13 30 17.4 -0.4
RLS Riolos of Patr 0.86 112 P Pg 13 30 17.3 -0.5
RLS S Sb 13 30 30.0 +0.2
RLS AML AML 13 30 39.0
comp=N,2366µm,0.5s
RLS AML AML 13 30 42.4
comp=E,2041µm,0.5s
PVO Paravola 0.87 74 P Pg 13 30 18.0 +0.1
PVO S Sn 13 30 32.6 +0.4
comp=E,3µm,0.6s
PVO Paravola 0.87 74 P Pg 13 30 18.1 +0.1
PVO S Sb 13 30 30.5 +0.4
PVO AML AML 13 30 37.7
comp=E,5791µm,0.7s
PVO AML AML 13 30 38.9
comp=N,6767µm,0.4s
UPR University Cam 1.05 95 P Pg 13 30 20.4 -1.0
DRO Drossia 1.08 113 P Pg 13 30 21.2 -0.7
DRO Drossia 1.08 113 P Pg 13 30 21.3 -0.7
EFP Efpalio 1.14 87 P Pg 13 30 21.8 -1.3
EFP S Sn 13 30 40.0 +1.1
comp=N,3µm,0.4s
EFP Efpalio 1.14 87 P Pg 13 30 22.1 -0.9
EFP AML AML 13 30 46.2
comp=N,6453µm,0.4s
EFP AML AML 13 30 46.5
comp=E,5035µm,0.4s
IGT Igoumenitsa 1.15 355 P Pb 13 30 22.6 -0.6
IGT S Sn 13 30 42.0 +2.8
comp=E,665nm,0.4s
IGT Igoumenitsa 1.15 355 ePg Pn 13 30 25.7 +2.3
IGT eSg Sn 13 30 43.5 +4.3
IGT Igoumenitsa 1.15 355 P Pn 13 30 23.6 +0.1
IGT S Sn 13 30 40.0 +0.7
IGT AML AML 13 30 45.2
comp=E,1644µm,0.4s
IGT AML AML 13 30 51.7
comp=N,1099µm,0.4s
ANX Ano Chora 1.17 79 P Pg 13 30 22.8 -0.8
ANX S Sn 13 30 42.0 +2.3
comp=N,3µm,0.5s
ANX Ano Chora 1.17 79 P Pg 13 30 22.9 -0.8
ANX S Sn 13 30 40.5 +0.8
ANX AML AML 13 30 47.0
comp=N,4550µm,0.5s
ANX AML AML 13 30 47.8
comp=E,6871µm,0.5s
EVR Evrytania 1.18 63 P Pb 13 30 23.2 -0.6
EVR Evrytania 1.18 63 P Pb 13 30 23.3 -0.5
EVR AML AML 13 30 48.7
comp=E,2067µm,0.7s
EVR AML AML 13 30 50.1
comp=N,1749µm,0.6s
LAKA Lakka 1.20 96 P Pb 13 30 23.1 -1.0
LAKA Lakka 1.20 96 P Pb 13 30 23.5 -0.6
LAKA S Sn 13 30 41.3 +0.7
LAKA AML AML 13 30 52.9
comp=N,1628µm,1.0s
LAKA AML AML 13 30 53.0
comp=E,1562µm,1.2s
SERG Sergoula 1.25 88 P Pn 13 30 24.0 -0.9
SERG S Sn 13 30 43.2 +1.4
comp=E,2µm,0.6s
SERG Sergoula 1.25 88 P Pn 13 30 24.0 -0.9
SERG AML AML 13 30 48.7
comp=E,3270µm,0.7s
SERG AML AML 13 30 50.5
comp=N,3497µm,0.4s
TRIZ Trizonia 1.27 90 P Pn 13 30 24.1 -0.9
TRIZ Trizonia 1.27 90 P Pn 13 30 24.5 -0.5
TRIZ S Sn 13 30 43.5 +1.4
AMT Artemida-Makis 1.30 130 P Pn 13 30 25.3 -0.2
AMT S Sn 13 30 46.3 +3.3
comp=N,2µm,0.7s
AMT Artemida-Makis 1.30 130 P Pg 13 30 26.0 -0.2
ALIK Aliki, Aigiali 1.30 95 P Pn 13 30 25.4 -0.1
JAN Janina 1.31 13 P Pg 13 30 27.4 +1.1
JAN S Sn 13 30 46.9 +3.8
comp=N,900nm,0.6s
JAN Janina 1.31 13 P Pg 13 30 26.8 +0.5
JAN S Sn 13 30 44.6 +1.5
JAN AML AML 13 30 48.6
comp=N,1726µm,0.4s
JAN AML AML 13 30 49.5
comp=E,1920µm,0.6s
KALE Kalithea 1.32 89 P Pn 13 30 24.9 -0.9
KALE S Sn 13 30 46.5 +3.0
comp=E,1µm,0.5s
KALE Kalithea 1.32 89 P Pn 13 30 25.0 -0.8
KALE AML AML 13 30 52.5
comp=N,2725µm,0.5s
KALE AML AML 13 30 53.5
comp=E,1820µm,0.5s
KLV Kalavryta, Ach 1.38 104 P Pn 13 30 26.0 -0.6
KLV Kalavryta, Ach 1.38 104 P Pn 13 30 26.4 -0.1
KASA Kassiopi 1.42 343 P Pg 13 30 28.5 0.0
KASA S Sg 13 30 48.2 +1.3
KASA AML AML 13 30 53.4
comp=N,1218µm,0.4s
KASA AML AML 13 31 03.3
comp=E,1225µm,0.5s
MAKR Makrakomi, Fth 1.45 64 P Pn 13 30 27.9 +0.3
MAKR Makrakomi, Fth 1.45 64 P Pb 13 30 28.3 0.0
MAKR AML AML 13 30 56.0
comp=E,2881µm,0.3s
MAKR AML AML 13 31 02.5
comp=N,2363µm,1.3s
AGG Agios Georgios 1.60 66 P Pb 13 30 30.5 -0.3
AGG Agios Georgios 1.60 66 P Pg 13 30 32.5 +0.7
AGG S Sg 13 30 54.7 +2.2
AGG AML AML 13 31 03.0
comp=E,1284µm,1.4s
AGG AML AML 13 31 04.3
comp=N,1449µm,0.8s
DLFA Delphi 1.60 86 P Pg 13 30 32.6 +0.7
ITM Ithomi 1.67 136 P Pb 13 30 32.2 +0.1
ITM Ithomi 1.67 136 P Pb 13 30 32.4 +0.2
ITM AML AML 13 31 08.5
comp=N,960µm,1.2s
ITM AML AML 13 31 15.8
comp=E,1229µm,1.3s
THL Klokotos Trika 1.69 45 P Pb 13 30 33.0 +0.6
THL S Sg 13 30 56.2 +0.6
comp=E,585nm,0.7s
THL Klokotos Trika 1.69 45 P Pb 13 30 33.0 +0.6
KPRO Kipourio 1.72 24 P Pb 13 30 34.3 +0.1
KPRO Kipourio 1.72 24 P Pb 13 30 33.5 +0.5
KPRO S Sg 13 30 57.3 +0.8
AXAR Agios Charalam 1.77 77 P Pb 13 30 34.4 +0.7
AXAR AML AML 13 31 07.8
comp=E,2670µm,0.6s
AXAR AML AML 13 31 12.3
comp=N,2632µm,0.5s
PYL PYLOS 1.80 145 P Pn 13 30 33.1 +0.7
PYL PYLOS 1.80 145 P Pn 13 30 33.3 +0.9
VLX Vlachokerasia 1.83 123 P Pb 13 30 35.5 +0.7
PENT Pentalofos 1.88 16 P Pb 13 30 36.2 +0.4
PENT Pentalofos 1.88 16 P Pb 13 30 36.6 +0.9
PROD Prodromos 1.92 93 P Pb 13 30 37.0 +0.6
PROD S Sb 13 31 00.7 +0.2
PROD AML AML 13 31 08.2
comp=E,1098µm,0.7s
PROD AML AML 13 31 15.0
comp=N,1032µm,0.5s
LTK Loutraki 2.01 100 P Pb 13 30 36.8 -1.1
LTK Loutraki 2.01 100 P Pb 13 30 36.7 -1.1
LKR Lokris 2.01 82 P Pb 13 30 37.3 -0.6
LOUT Loutraki 2.02 101 P Pb 13 30 38.0 -0.1
KZN Kozani 2.17 28 P Pb 13 30 40.2 -0.5
VIL2 Platees 2.22 94 P Pb 13 30 41.0 -0.4
DID Didima 2.37 111 P Pb 13 30 42.1 -1.8
MRKA Markates 2.47 82 P Pn 13 30 43.4 +1.8
SKIA Skiathos 2.48 71 P Pn 13 30 43.6 +1.9
FNA Florina 2.50 16 ePn Pn 13 30 44.1 +2.1
VLI Veliai 2.58 129 P Pn 13 30 45.3 +2.3
VLY Voula,Athens 2.68 100 P Pn 13 30 46.2 +1.7
EREA Eretria 2.73 88 P Pn 13 30 47.3 +2.1
OHR Ohrid 2.73 5 i Pn Pb 13 30 48.0 -2.3
AOS Alonnisos 2.79 73 P Pn 13 30 47.7 +1.8
TIR Tirane 2.99 351 ePn Pn 13 30 50.4 +1.6
VAY Valandovo 3.35 28 ePn Pn 13 30 56.7 +3.0
VAY Valandovo 3.35 28 i Pn Pn 13 30 56.6 +2.9
STIP Stip 3.56 21 i Pn Pn 13 31 00.5 +4.0
SRS Serrai 3.64 41 ePn Pn 13 31 00.0 +2.3
ULC Ulcinj 3.69 346 ePn Pn 13 30 58.1 -0.3
ULC eSn Sn 13 31 42.5 +0.5
DRME Dracevica, Mon 3.92 346 ⇑i Pn Pn 13 31 01.8 +0.3
DRME i Sn Sn 13 31 47.2 -0.4
BUM Brajici-Budva 4.09 343 ePn Pn 13 31 03.9 0.0
BUM eSn Sn 13 31 52.7 +0.9
PDG Podgorica 4.14 348 ePn Pn 13 31 05.2 +0.7
PDG eSn Sn 13 31 52.9 -0.1
TTG Podgorica 4.14 348 ePn Pn 13 31 04.7 +0.2
TTG eSn Sn 13 31 53.3 +0.3
PVY Plav 4.22 355 ⇓i Pn Pn 13 31 06.8 +1.0
PVY eSn Sn 13 31 56.2 +1.0
CEME Cevo 4.32 345 ePn Pn 13 31 06.8 -0.2
CEME eSn Sn 13 31 57.6 +0.1
HCY Herceg Novi 4.33 340 ePn Pn 13 31 07.3 +0.2
HCY eSn Sn 13 31 57.9 +0.3
BOSS Bosilegrad 4.39 20 ePn Pn 13 31 09.9 +2.0
IVA Berane 4.50 355 ePn Pn 13 31 09.9 +0.3
IVA eSn Sn 13 32 02.7 +0.7
KOME Kolasin 4.52 351 ePn Pn 13 31 10.4 +0.6
KOME eSn Sn 13 32 02.9 +0.5
NKME Niksic 4.53 346 ePn Pn 13 31 10.0 +0.2
NKME eSn Sn 13 32 02.5 0.0
BARS Barje 4.54 13 ePn Pn 13 31 11.9 +1.8
NKY Niksic 4.56 346 ePn Pn 13 31 10.4 0.0
NKY eSn Sn 13 32 03.5 0.0
TREB Trebinje 4.62 340 ePn Pn 13 31 10.6 -0.4
TREB eSn Sn 13 32 01.9 -2.8
VTS Vitosha 4.73 26 ePn Pn 13 31 15.1 +2.4
VTS eSn Sn 13 32 09.4 +1.7
BRY Bratogost 4.74 343 ePn Pn 13 31 12.0 -0.9
BRY eSn Sn 13 32 07.8 -0.2
SELS Selova 4.86 6 ePn Pn 13 31 14.2 -0.2
SJES Sjenica 4.88 356 ePn Pn 13 31 16.0 +1.1
SJES eSn Sn 13 32 10.0 -1.5
UPM Unac-Piva 4.96 347 ePn Pn 13 31 16.0 +0.1
UPM eSn Sn 13 32 13.3 0.0
ZAPS Zavoj 5.15 18 ePn Pn 13 31 20.5 +2.0
IVAS Ivanjica 5.19 358 ePn Pn 13 31 19.1 +0.1
BOVS Bovan 5.33 10 ePn Pn 13 31 21.2 +0.4
BOVS eSn Sn 13 32 21.5 -0.7
GRUS Gruza 5.50 2 ePn Pn 13 31 23.4 +0.2
BBLS Lazići 5.53 352 ePn Pn 13 31 24.0 +0.3
BBLS eSn Sn 13 32 26.4 -1.0
ZAGS Zajecar 5.58 13 ePn Pn 13 31 24.7 +0.4
DIVS Divibare 5.72 357 ePn Pn 13 31 27.4 +1.1
DIVS eSn Sn 13 32 29.0 -3.0
TRUS Trudelj 5.83 360 ePn Pn 13 31 27.9 +0.1
BRTR Keskin Array B 10.34 78 Pn Pn 13 32 33.2 +3.5
comp=N,0.1nm,0.3s,baz=259,slow=11,SNR=2.6
GERES GERESS Array B 11.54 337 Pn Pn 13 32 44.9 -1.2
comp=N,0.2nm,0.3s,baz=151,slow=15,SNR=3.2
FINES FINESS Array B 23.35 7 P P 13 35 08.8 -0.6
comp=N,1.2nm,0.5s,baz=184,slow=12,SNR=8.3
TORD Torodi Ar. Bea 30.16 219 P P 13 36 09.9 -1.6
comp=N,0.5nm,0.9s,baz=27,slow=9.7,SNR=2.6
ARCES ARCESS Array B 31.33 3 P P 13 36 20.7 -0.7
comp=N,3.0nm,1.1s,baz=181,slow=8.8,SNR=2.5
MKAR Makanchi Array 45.23 59 P P 13 38 17.4 -1.2
comp=N,0.6nm,0.4s,baz=278,slow=7.4,SNR=17
ZALV Zalesovo Beam 45.59 48 P P 13 38 20.7 -0.5
comp=N,1.5nm,0.5s,baz=272,slow=8.9,SNR=7.1

IDC 06 13:41:39.4±4.2, 15.°02S×129.°55E, h0km, mb3.3/1, mb1 3.8/4, mb1mx3.5/24, mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=44.3km s-min=20.7km az=0.0
AUST 06 13:41:40.0±0.5, 15.°06S×129.°57E, h10km, Error ellipse: s-maj=8.6km s-min=4.2km az=137.0
ISC 06 13:41:40.1±0.8, 15.°16S±0.°06×129.°67E±0.°05, h10km, n16, σ2.°78/27, Northern Territory

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KNRA Kununurra 1.02 239 P Pg 13 41 59.9 +0.2
baz=1.0,SNR=60
KNRA S Sb 13 42 13.7 +0.5
baz=1.0,SNR=5.2
MTN Manton Dam 2.70 32 P Pn 13 42 23.9 +0.2
baz=2.7,SNR=18
MTN S Sn 13 42 56.6 +0.2
baz=2.7,SNR=4.9
KDU Kakadu 3.67 48 P Pn 13 42 36.7 -0.2
baz=3.7,SNR=8.5
KDU S Sn 13 43 20.0 -0.2
baz=3.7
FITZ Fitzroy Crossi 4.84 232 P Pn 13 42 53.2 +0.1
baz=4.8,SNR=6.3
FITZ S Sn 13 43 47.7 -1.7
baz=4.8
FITZ Fitzroy Crossi 4.84 232 Pn Pn 13 42 54.3 +1.2
1.1nm,0.3s,baz=52,slow=17,SNR=25
FITZ Pg Pb 13 43 08.9 +3.8
1.1nm,0.3s,baz=55,slow=14,SNR=6.3
FITZ Sn Sn 13 43 47.4 -1.9
4.3nm,0.3s,baz=226,slow=7.9,SNR=6.2
FITZ Lg Lg 13 44 09.2
11nm,0.3s,baz=15,slow=12,SNR=10
WRA Warramunga Arr 6.52 138 Pn Pn 13 43 18.9 +2.8
2.1nm,0.3s,baz=315,slow=14,SNR=77
WRA Sn Sn 13 44 32.0 +1.4
5.6nm,0.3s,baz=317,slow=23,SNR=11
WRA Lg Lg 13 45 11.9
3.3nm,0.3s,baz=321,slow=27,SNR=4.8
WB2 Warramunga Arr 6.53 138 P Pn 13 43 18.4 +2.2
baz=6.7
ASAR Alice Springs 9.36 155 Pn Pn 13 43 58.2 +3.1
1.0nm,0.3s,baz=340,slow=15,SNR=59
ASAR Sn Sn 13 45 40.8 +0.2
2.1nm,0.3s,baz=316,slow=16,SNR=11
ASAR Lg Lg 13 46 42.0
1.2nm,0.3s,baz=336,slow=29,SNR=6.1
AS01 Alice Springs 9.38 155 P Pn 13 43 58.9 +3.5
baz=9.5
WRKA Warakurna 9.91 187 P Pn 13 44 04.6 +1.8
baz=10,SNR=4.9
WRKA S Sn 13 45 51.4 -2.9
baz=10
QIS Mount Isa 10.88 121 P Pn 13 44 18.4 +2.4
baz=11
QIS S Sn 13 46 14.7 -3.2
baz=11
COEN Coen 13.13 87 P Pn 13 44 46.7 -0.1
baz=13,SNR=5.9
COEN S Sn 13 47 02.7 -10
baz=13
MEEK Meekatharra 15.39 220 P Pn 13 45 15.2 -2.2
baz=15
FORT Forrest 15.62 185 P Pn 13 45 19.1 -1.3
baz=16
FORT S Sn 13 48 04.1 -10
baz=16
BBOO Buckleboo 18.51 163 P Pn 13 45 57.6 +0.9
baz=19
STKA Stephens Creek 19.89 149 P Pn 13 46 14.4 +1.1
0.6nm,0.4s,baz=333,slow=16,SNR=3.6

IDC 06 13:50:22.7±3.2, 6.°33S×148.°45E, h54km±35km, mb4.0/4, mb1 4.2/7, mb1mx3.6/32, mbtmp4.2/7, ML4.2/3, MS3.0/1, Ms1 3.0/1, ms1mx2.5/25, Error ellipse: s-maj=57.6km s-min=16.3km az=129.0
ISC 06 13:50:22.4±1.2, 6.°2S±0.°2×148.°3E±0.°2, h50km, n7, σ0.°95/8, mb4.1/4, New Britain region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 3.36 200 P Pn 13 51 13.5 +1.0
22nm,0.3s,baz=37,slow=6.9,SNR=76
PMG S Sn 13 51 49.8 -1.4
6.1nm,0.3s,baz=167,slow=23,SNR=2.1
KRVT Keravat (AS076 4.14 63 P Pn 13 51 23.8 +0.6
8.3nm,0.3s,baz=232,slow=3.1,SNR=5.4
KRVT LR LR 13 53 05.6
comp=Z,174nm,19.8s,baz=216,slow=40
WRA Warramunga Arr 19.25 224 P P 13 54 43.0 0.0
1.1nm,0.3s,baz=50,slow=11,SNR=13
ASAR Alice Springs 22.21 217 P P 13 55 14.6 -0.3
3.7nm,0.5s,baz=54,slow=8.9,SNR=159
FITZ Fitzroy Crossi 25.09 240 P P 13 55 43.1 +0.6
11nm,0.5s,baz=58,slow=8.7,SNR=21
STKA Stephens Creek 26.28 193 P P 13 55 53.8 +0.5
0.6nm,0.4s,baz=350,slow=12,SNR=2.8
ILAR Eielson Array 85.17 23 P P 14 02 52.2 -0.8
1.0nm,0.8s,baz=250,slow=4.7,SNR=13

IDC 06 14:04:38.5±4.5, 4.°78S×153.°75E, h106km±31km, mb3.2/6, mb1 3.5/7, mb1mx3.4/26, mbtmp3.7/7, Error ellipse: s-maj=45.1km s-min=18.3km az=102.0
ISC 06 14:04:37.7±1.2, 4.°8S±0.°1×153.°8E±0.°1, h100km, n9, σ0.°90/11, mb3.3/6, New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRVT Keravat (AS076 1.85 284 P Pn 14 05 08.6 +0.2
14nm,0.3s,baz=72,slow=20,SNR=23
KRVT S Sn 14 05 31.6 -0.2
21nm,0.3s,baz=14,slow=22,SNR=24
PMG Port Moresby 8.07 235 P Pn 14 06 33.7 +1.5
4.1nm,0.3s,baz=50,slow=8.0,SNR=13
PMG S Sn 14 08 00.9 -1.0
0.3nm,0.3s,baz=9.0,slow=19,SNR=1.6
WRA Warramunga Arr 24.25 230 P P 14 09 45.1 -0.5
1.8nm,0.6s,baz=54,slow=10.0,SNR=16
ASAR Alice Springs 26.88 224 P P 14 10 08.6 -0.9
0.4nm,0.4s,baz=54,slow=9.0,SNR=26
SONM Songino Array 66.84 327 P P 14 15 20.1 +1.0
0.2nm,0.5s,baz=123,slow=5.1,SNR=2.1
MKAR Makanchi Array 80.97 319 P P 14 16 41.7 +0.3
0.2nm,0.5s,baz=106,slow=4.7,SNR=3.5
ZALV Zalesovo Beam 81.69 326 P P 14 16 44.8 -0.2
0.3nm,0.3s,baz=108,slow=4.7,SNR=2.4
ILAR Eielson Array 81.73 22 P P 14 16 44.6 -0.4
0.2nm,0.7s,baz=252,slow=4.7,SNR=3.0
TORD Torodi Ar. Bea 151.27 289 PKPbc PKPbc 14 24 19.8 -0.9
0.4nm,0.7s,baz=98,slow=1.9,SNR=3.3

IDC 06 14:19:03.6±1.1, 3.°36S×146.°13E, h0km, mb3.8/6, mb1 4.1/8, mb1mx3.8/30, mbtmp3.9/8, ML2.4/2, MS3.4/12, Ms1 3.4/12, ms1mx3.2/30, Error ellipse: s-maj=33.8km s-min=21.2km az=118.0
NEIC 06 14:19:04.7±2.0, 3.°4S±0.°1×146.°2E±0.°2, h10km±7km, mb4.4/10, Error ellipse: s-maj=26.9km s-min=6.0km az=124.0
ISC 06 14:19:07.1±0.8, 3.°32S±0.°07×146.°2E±0.°1, h25km, n29, σ1.°53/20, mb3.8/5, MS3.5/8, Bismarck Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MANU Manus Island 1.76 44 Pn 14 19 34.7 -1.4
KRVT Keravat (AS076 5.94 100 Pn Pn 14 20 33.9 +0.2
0.6nm,0.3s,baz=280,slow=12,SNR=2.2
PMG Port Moresby 6.12 171 Pn Pn 14 20 34.8 -1.3
1.5nm,0.3s,baz=0.0,slow=5.1,SNR=7.6
PMG Sn Sn 14 21 42.8 -2.6
baz=325,slow=21,SNR=0.7
PMG LR LR 14 22 45.0
comp=Z,174nm,19.4s,baz=349,slow=36
COEN Coen 10.97 195 Pn Pn 14 21 41.8 -0.7
HNR Honiara 14.99 115 LR LR 14 28 28.7
comp=Z,107nm,18.2s,baz=267,slow=38
SIJI Sorong 15.07 279 LR LR 14 27 51.1
comp=Z,131nm,19.9s,baz=58,slow=35
GUMO Guam 16.85 356 LR LR 14 27 55.4
comp=Z,92nm,18.4s,baz=124,slow=32
MTN Manton Dam 17.61 237 P 14 23 11.1 -0.7
MTN IAmb IAmb 14 23 23.2
comp=Z,33nm,1.2s
SARN Sarigan 19.90 359 P P 14 23 34.4 -2.6
WB0 Warramunga Arr 19.97 214 P P 14 23 36.1 -1.6
WR0 Warramunga Arr 20.04 214 P P 14 23 37.5 -1.0
WR0 IAmb IAmb 14 23 40.5
comp=Z,16nm,1.1s
WRAB Tennant Creek 20.13 214 P P 14 23 38.4 -1.1
WRAB IAmb IAmb 14 23 41.5
comp=Z,27nm,1.2s
WB2 Warramunga Arr 20.13 214 P P 14 23 39.2 -0.3
WB2 IAmb IAmb 14 23 41.6
comp=Z,17nm,0.8s
WRA Warramunga Arr 20.14 214 P P 14 23 39.3 -0.3
comp=Z,9.2nm,0.8s,baz=38,slow=12,SNR=34
WRA LR LR 14 31 23.7
comp=Z,103nm,20.2s,baz=45,slow=37
WRA Warramunga Arr 20.14 214 P Pn 14 23 39.8 -1.8
KNRA Kununurra 21.06 233 P P 14 23 50.8 +1.2
AS31 Alice Springs 23.43 209 P P 14 24 14.5 -0.1
ASAR Alice Springs 23.43 209 P P 14 24 14.6 -0.1
comp=Z,3.8nm,0.7s,baz=44,slow=7.5,SNR=51
ASAR LR LR 14 32 33.0
comp=Z,102nm,20.6s,baz=34,slow=35
FITZ Fitzroy Crossi 24.89 232 P P 14 24 27.5 -0.6
comp=Z,8.2nm,0.9s,baz=61,slow=12,SNR=8.5
FITZ LR LR 14 34 43.8
comp=Z,183nm,19.1s,baz=57,slow=38
FITZ Fitzroy Crossi 24.89 232 P P 14 24 27.3 -0.8
FITZ IAmb IAmb 14 24 33.9
comp=Z,9.7nm,0.9s
DZM Mont Dzumac 27.12 135 LR LR 14 34 14.4
comp=Z,220nm,19.0s,baz=252,slow=34
STKA Stephens Creek 28.72 188 P P 14 25 06.1 +3.5
comp=Z,1.7nm,0.8s,baz=20,slow=12,SNR=3.1
KSRS Korea Array 43.97 339 LR LR 14 41 59.2
comp=Z,62nm,21.2s,baz=165,slow=31
CMAR Chiang Mai Arr 51.27 297 LR LR 14 50 02.7
comp=Z,13nm,19.6s,baz=74,slow=36
SONM Songino Array 61.67 331 LR LR 14 56 07.1
comp=Z,65nm,19.4s,baz=6.5,slow=36
MKAR Makanchi Array 74.91 320 P P 14 30 46.9 +0.9
comp=Z,0.1nm,0.4s,baz=113,slow=7.6,SNR=3.8
ZALV Zalesovo Beam 76.31 328 LR LR 15 02 29.3
comp=Z,27nm,22.0s,baz=110,slow=34
ILAR Eielson Array 83.37 23 P P 14 31 33.1 +1.3
comp=Z,0.4nm,0.9s,baz=260,slow=5.5,SNR=5.5
YKA Yellowknife Ar 97.21 28 P Pdif 14 32 36.8 -0.7
comp=Z,0.1nm,0.6s,baz=275,slow=4.7,SNR=3.5

NNC 06 14:26:03.4±5.6, 37.°81N×71.°60E, h0km, mb3.6, mpv3.2, 3C-2D, Error ellipse: s-maj=43.2km s-min=34.7km az=165.0, Afghanistan-Tajikistan border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AAK Ala-Archa 5.31 24 Pn Pn 14 27 24.1 +0.1
1.9nm,0.4s
AAK ⇑Sn Sn 14 28 27.6 +1.6
4.5nm,0.6s
KK31 Karatay Array 5.36 351 ⇑Pn Pn 14 27 25.8 +1.3
0.7nm,0.4s,baz=177,slow=12,SNR=10
KK31 ⇓Sn Sn 14 28 28.3 +1.4
2.2nm,0.3s,baz=172,slow=22,SNR=14
CHMS Chumysh 5.72 24 ⇓Pn Pn 14 27 28.4 -1.1
3.1nm,0.8s
CHMS ⇑Sn Sn 14 28 35.8 -0.1
2.4nm,0.7s

IDC 06 14:32:40.5±11.0, 6.°11S×127.°41E, h418km±161km, mb2.4/1, mb1 3.0/3, mb1mx2.6/28, mbtmp3.7/3, Error ellipse: s-maj=114.5km s-min=60.2km az=69.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 15.31 155 P P 14 35 55.7 -0.2
0.7nm,0.3s,baz=334,slow=11,SNR=11
WRA S S 14 38 35.6 -1.9
0.1nm,0.3s,baz=328,slow=19,SNR=1.3
ASAR Alice Springs 18.54 161 P P 14 36 30.5 +0.3
0.3nm,0.3s,baz=343,slow=11,SNR=7.7
MKAR Makanchi Array 66.09 328 P P 14 42 44.6 -0.1
0.1nm,0.3s,baz=115,slow=5.5,SNR=1.2

JMA 06 14:49:54.8±0.1,38.65N×142.40E,h40km±1km,M3.7
IDC 06 14:49:58.3±3.4,38.90N×142.23E,h58km±28km,mb3.2/4, mb1 3.4/6,mb1mx3.1/41,mbtmp3.5/6,ML2.8/2,Error ellipse: s-maj=36.8km s-min=20.0km az=124.0
ISC 06 14:49:52.2±1.9,38.65N±0.04×142.40E±0.07,h17km±10km, n25,σ1°16/30,mb3.6/4,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.71	307	P	Pn	14 50 08.6	+1.1
OFUJ				S	Sn	14 50 18.3	+0.2
JKMT	Kesennumamotoy	0.74	283	P	Pn	14 50 08.9	+1.0
JKMT				S	Sn	14 50 18.7	-0.1
JKIH	Ishinomakikobu	0.81	245	P	Pn	14 50 09.7	+0.9
JKIH				S	Sn	14 50 20.2	-0.2
JIO	Ouri	0.84	257	P	Pn	14 50 10.4	+1.1
JIO				S	Sn	14 50 21.0	-0.4
JMK	Ichinoseki	0.97	288	P	Pn	14 50 12.3	+1.3
JMK				S	Sn	14 50 24.7	+0.3
JOM	Ohasama	1.19	314	P	Pg	14 50 15.6	+0.4
JOM				S	Sg	14 50 30.6	-0.1
JTH	Tanohata	1.35	342	P	Pn	14 50 17.4	+1.1
JTH				eS	Sb	14 50 34.4	+0.3
JOU	Okura	1.39	259	P	Pg	14 50 18.4	-0.6
JOU				S	Sg	14 50 36.0	-1.1
JMM	Marumori	1.49	239	P	Pb	14 50 19.3	-0.1
JMM				eS	Sn	14 50 36.5	-0.7
JRG	Rokugo	1.56	299	P	Pb	14 50 20.9	+0.2
JYK	Kaneyama	1.61	280	P	Pb	14 50 21.5	-0.1
JFK	Kawauchi	1.76	224	P	Pn	14 50 22.9	+1.0
JFK				eS	Sn	14 50 43.6	-0.4
MJAR	Matsushiro Arr	3.94	239	P	Pn	14 50 55.9	+4.1
	0.2nm,0.3s,baz=38,slow=14,SNR=9.0						
MJAR				S	Sb	14 51 47.2	-1.3
	0.0nm,0.3s,baz=46,slow=29,SNR=3.1						
ASAJ	Asahikawa	5.46	2	P	Pn	14 51 14.0	+1.2
	0.4nm,0.3s,baz=194,slow=14,SNR=12						
ASAJ				S	Sn	14 52 13.6	-1.7
	0.2nm,0.3s,baz=188,slow=22,SNR=1.2						
USRK	Ussuriysk Ar.	9.58	309	P	Pn	14 52 14.5	+5.2
	baz=120,slow=15,SNR=4.2						
H11N2	WAKE ISLAND Hy	28.36	125	T	T	15 26 17.8	
	baz=317,slow=75,SNR=86						
H11N1	WAKE ISLAND Hy	28.37	125	T	T	15 26 15.9	
	baz=317,slow=75,SNR=85						
H11N3	WAKE ISLAND Hy	28.38	125	T	T	15 26 17.2	
	baz=317,slow=75,SNR=61						
H11S1	WAKE ISLAND Hy	29.14	127	T	T	15 27 12.1	
	baz=318,slow=76,SNR=8.4						
H11S3	WAKE ISLAND Hy	29.14	127	T	T	15 27 03.7	
	baz=318,slow=76,SNR=9.5						
H11S2	WAKE ISLAND Hy	29.16	127	T	T	15 27 13.5	
	baz=318,slow=76,SNR=6.2						
ZALV	Zalesovo Beam	41.42	311	P	P	14 57 36.6	-1.0
	0.5nm,0.4s,baz=85,slow=9.6,SNR=3.0						
MKAR	Makanchi Array	43.94	301	P	P	14 57 57.7	-0.5
	0.2nm,0.4s,baz=95,slow=8.4,SNR=6.0						
ILAR	Eielson Array	47.72	33	P	P	14 58 27.2	-0.5
	1.2nm,1.2s,baz=260,slow=5.3,SNR=4.2						
PDAR	Pinedale Array	75.98	46	P	P	15 01 38.9	+0.4
	0.2nm,0.4s,baz=298,slow=3.8,SNR=2.5						

IDC 06 14:56:33.6±1.2,18.48N×121.24E,h0km,mb3.4/5, mb1 3.6/6,mb1mx3.3/44,mbtmp3.4/6,ML3.7/1,Error ellipse: s-maj=57.8km s-min=21.6km az=82.0
MAN 06 14:56:40.8,18.58N×120.91E,h20km,MS3.7
ISC 06 14:56:36.8±1.5,18.75N±0.04×120.84E±0.06,h16km±10km, n16,σ1°67/24,mb3.1/5,2C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.90	204⇑	eP	Pn	14 56 55.4	+0.6
SIPP				eS	Sn	14 57 07.8	+0.3
APYP	Conner	0.96	157	eP	Pn	14 56 55.5	-0.1
APYP				eS	Sb	14 57 06.9	-0.7
SGCP	Mt. Cagua	1.25	114	eP	Pg	14 57 00.5	-0.4
SGCP				eS	Sg	14 57 17.0	+0.9
BBP	Basco	1.99	32	eP	Pg	14 57 15.2	+0.3
BBP				eS	Sb	14 57 36.0	-1.1
CAUP	Cauayan	2.02	152	eP	Pb	14 57 12.7	-0.5
CAUP				eS	Sg	14 57 42.1	+0.2
BOLP	Bolinao	2.52	201	eP	Pb	14 57 19.9	-1.7
BOLP				eS	Sn	14 57 45.1	-2.4
SMPP	San Manuel, Pa	2.59	183	eP	Pn	14 57 19.8	+1.7
SMPP				eS	Sn	14 57 49.4	+0.1
BALP	Baler	3.07	167	eP	Pn	14 57 27.0	+2.3
BALP				eS	Sn	14 58 04.1	+2.9
SCZP	Santa Cruz	3.09	197	eP	Pg	14 57 36.8	+0.8
SCZP				eS	Sn	14 58 01.1	-0.5
LQP	Lukban	4.66	172⇑	eP	Pn	14 57 49.6	+2.9
KSRS	Korea Array	19.64	17	P	Pn	15 01 05.9	-0.3
	0.2nm,0.3s,baz=199,slow=11,SNR=4.0						
WRA	Warramunga Arr	40.67	160	P	P	15 04 11.8	-4.8
	0.2nm,0.5s,baz=338,slow=7.1,SNR=4.3						
MKAR	Makanchi Array	42.16	320	P	P	15 04 31.5	+2.9
	0.3nm,0.7s,baz=119,slow=8.4,SNR=3.5						
ASAR	Alice Springs	44.04	163	P	P	15 04 41.0	-3.0
	0.2nm,0.6s,baz=344,slow=6.8,SNR=8.8						
ILAR	Eielson Array	74.18	26	P	P	15 08 12.2	-0.3
	0.2nm,0.6s,baz=280,slow=6.2,SNR=3.4						
YKA	Yellowknife Ar	88.08	22	P	P	15 09 26.3	-0.1
	0.2nm,0.5s,baz=310,slow=4.4,SNR=6.9						

NDI 06 15:07:45.1±1.4,28.66N×96.86E,h96km,ML3.3, mb4.5(NEIC)
BJI 06 15:07:50.9±0.0,27.45N×96.89E,h43km,mB4.3/2, mb4.0/22,ML4.0/1,Ms3.8/8,Ms7 3.6/9
NEIC 06 15:07:53.1±1.9,27.47N±0.09×97.00E±0.08,h48km±7km, mb4.5/28,Error ellipse: s-maj=12.9km s-min=9.5km az=205.0
IDC 06 15:07:54.6±3.5,27.48N×97.15E,h60km±33km,mb3.6/14, mb1 3.7/15,mb1mx3.5/58,mbtmp3.8/15,ML3.8/1,Error ellipse: s-maj=26.1km s-min=13.3km az=59.0
ISC 06 15:07:52.5±0.5,27.42N±0.06×96.95E±0.05,h35km,n68, σ1°74/73,mb4.1/28,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JORH	JORHAT	2.50	255	eP	Pn	15 08 36.5	+6.0
JORH				eS	Sn	15 09 10.4	+11
JORH				IAML		15 09 31.0	
	comp=E,359nm,0.7s						
KOHI	KOHIMA	3.05	237	eP	Pn	15 08 39.9	+1.6
KOHI				eS	Sn	15 09 17.2	+3.4
KOHI				IAML		15 09 30.5	
	comp=Z,45nm,0.4s						
KOHI				IAML		15 09 35.5	
	comp=E,105nm,0.6s						
KOHI				IAML		15 09 37.0	
	comp=N,135nm,0.4s						
TEZP	TEZPUR	3.79	259	eP	Pn	15 08 45.9	-2.4
TEZP				eS	Sn	15 09 30.7	-1.0
SHL	Shillong	4.90	249	IAML		15 10 01.3	
	comp=Z,25nm,0.4s						
SHL				IAML		15 10 02.2	
	comp=N,59nm,0.4s						
SHL	Shillong	4.90	249		Pn	15 09 02.6	-1.2
LSA	Lhasa	5.58	295	P	Pn	15 09 14.3	+0.8
LSA				S	Sn	15 10 19.0	+2.3
LSA	Lhasa	5.58	295		Pn	15 09 14.2	+0.7
KMI	Kunming	5.68	112	P	Pn	15 09 16.2	+1.6
KMI				S	Sn	15 10 20.0	+1.3
KMI	Kunming	5.68	112		Pn	15 09 14.0	-0.5
GTK	Tadong	7.42	271	eP	Pn	15 09 29.9	-8.5
CMAR	Chiang Mai Arr	9.10	168	P	Pn	15 10 04.0	+2.6
	comp=N,0.3nm,0.3s,baz=340,slow=11,SNR=15						
LZH	Lanzhou	10.45	32	eP	Pn	15 10 23.0	+3.1
LZH				pP		15 10 30.7	
LZH				PP	PnPn	15 10 32.3	+4.6
LZH				sP		15 10 37.8	
LZH				pmax	pmax		
	comp=N,23nm,1.0s						
LZH				LR	LR		
	comp=N,390nm,10.0s						
LZH				LR	LR		
	comp=N,410nm,10.2s						
LZH				LR	LR		
	comp=N,540nm,12.6s						
ENH	Enshi	11.36	73	Pn	Pn	15 10 31.7	-0.6
GTA	Gaotai	12.20	11	eP	Pn	15 10 47.1	+3.3
GTA				pP	P	15 10 56.6	+0.7
GTA				sP		15 11 01.5	
GTA				pmax	pmax		
	comp=N,1.0nm,1.0s						
WMQ	Urumqi	18.00	338	eP	P	15 12 00.5	+0.4
WMQ				sP	sP	15 12 14.7	-0.4
WMQ				pmax	pmax		
	comp=N,8.0nm,1.1s						
WMQ				LR	LR		
	comp=N,200nm,9.5s						
WMQ				LR	LR		
	comp=N,95nm,10.3s						
WMQ				LR	LR		
	comp=N,130nm,8.5s						
HHC	Hu-ho-hao-te	18.02	38	eP	P	15 12 00.4	0.0
HHC				pmax	pmax		
	comp=N,2.0nm,0.8s						
HHC				pmax	pmax		
	comp=N,89nm,6.6s						
NJ2	Nanjing	19.57	71	eP	Pn	15 12 17.2	-1.6
NJ2				pmax	pmax		
	comp=N,11nm,0.5s						
KSH	Kashi	21.20	310	P	P	15 12 37.1	+2.0
KSH				sP	sP	15 12 53.8	+4.3
KSH				S	S	15 16 22.9	-6.1
KSH				PcP	PcP	15 16 42.7	+3.0
KSH				SS	SnSn	15 16 56.8	+4.8
KSH				pmax	pmax		
	comp=N,14nm,1.2s						
KSH				LR	LR		
	comp=N,410nm,7.3s						
KSH				LR	LR		
	comp=N,460nm,5.8s						
KSH				LR	LR		
	comp=N,130nm,10.6s						
PRZ	Przheval'sk	21.31	320	P	P	15 12 36.8	+0.4
PRZ				IAmb	IAmb	15 12 38.6	
	comp=Z,9.3nm,1.0s						
NIL	Nilore	21.31	293	P	P	15 12 36.9	+0.6
NIL				IAmb	IAmb	15 12 38.8	
	comp=Z,7.6nm,1.1s						
SSE	Sheshan	21.45	74	P	P	15 12 38.5	+0.8
SSE				IAmb	IAmb	15 13 05.3	
	comp=Z,124nm,1.8s						
SONM	Songino Array	21.68	17	P	P	15 12 39.7	-0.5
	comp=Z,1.4nm,0.6s,baz=207,slow=10,SNR=13						
SONM	Songino Array	21.68	17	P	P	15 12 39.2	-1.0
KDJ	Kajisay	21.82	317	P	P	15 12 42.3	+0.5
ULN	Ulaanbaatar	21.89	18	P	P	15 12 39.8	-2.7
NRN	Naryn	22.15	315	P	P	15 12 46.2	+0.6
NRN				IAmb	IAmb	15 12 49.3	
	comp=Z,9.4nm,1.6s						
NACB	Ninganchiao	22.41	93	P	P	15 12 49.5	+1.3
NACB				IAmb	IAmb	15 12 60.0	
	comp=Z,73nm,1.5s						
MK31	Makanchi Array	22.53	333	P	P	15 12 48.4	-0.9
MKAR	Makanchi Array	22.53	333	P	P	15 12 48.3	-0.9
	comp=Z,1.7nm,0.4s,baz=148,slow=8.4,SNR=27						
MKAR	Makanchi Array	22.53	333	eP	P	15 12 48.0	-1.3
MAKZ	Makanchi	22.67	333	P	P	15 12 50.7	0.0
AAK	Ala-Archa	23.75	316	P	P	15 13 03.3	+1.7
	comp=Z,0.6nm,0.4s,baz=283,slow=1.8,SNR=4.8						
AAK	Ala-Archa	23.75	316	P	P	15 13 02.2	+0.5
AAK				IAmb	IAmb	15 13 36.1	
	comp=Z,8.4nm,1.8s						
KBL	Kabul	24.91	293	P	P	15 13 11.5	-0.9
KBL				IAmb	IAmb	15 13 26.0	
	comp=Z,3.4nm,0.8s						
BTK	Batken	25.02	307	P	P	15 13 13.0	-0.3
BTK				IAmb	IAmb	15 13 40.9	
	comp=Z,8.9nm,1.5s						
KKAR	Karatay Array	26.51	313	P	P	15 13 25.5	-1.2
KKAR	Karatay Array	26.51	313	P	P	15 13 25.4	-1.3
KKAR				IAmb	IAmb	15 13 36.5	
	comp=Z,1.0nm,0.8s						
KURBB	Kurchatov Arra	27.09	334	P	P	15 13 31.8	0.0
	comp=Z,3.8nm,0.8s,baz=145,slow=11,SNR=14						
KURK	Kurchatov	27.13	334	P	P	15 13 30.8	-1.3
KURK				IAmb	IAmb	15 13 35.9	
	comp=Z,5.4nm,0.8s						
ZALV	Zalesovo Beam	27.98	345	P	P	15 13 39.4	-0.2
	comp=Z,0.9nm,0.6s,baz=166,slow=7.5,SNR=5.8						
ZALV	Zalesovo Beam	27.98	345	P	P	15 13 38.5	-1.1
USA0B	Ussuriysk Arra	32.68	50	P	P	15 14 20.3	-1.0
USA0B				IAmb	IAmb	15 14 58.5	
	comp=Z,16nm,1.4s						
USRK	Ussuriysk Ar.	32.68	50	P	P	15 14 19.8	-1.6
	comp=Z,1.7nm,0.8s,baz=213,slow=13,SNR=5.1						
ABKAR	Akbulak array	35.79	318	P	P	15 14 47.7	-0.5
FIA1	FINESS Array S	57.20	327	P	P	15 17 35.9	+0.2
FINES	FINESS Array B	57.20	327	P	P	15 17 35.8	0.0
	comp=Z,1.1nm,0.6s,baz=108,slow=6.2,SNR=6.4						
KARP	Karpathos	58.97	297	P	P	15 17 49.0	+0.4
KARP				IAmb	IAmb	15 18 22.0	
	comp=Z,24nm,1.1s						
MORW	Morawa	59.07	160	P	P	15 17 49.4	+0.3
WB0	Warramunga Arr	59.29	138	P	P	15 17 49.6	-1.3
WB0				IAmb	IAmb	15 18 18.6	
	comp=Z,22nm,1.6s						
WRA	Warramunga Arr	59.39	138	P	P	15 17 50.4	-1.2
	comp=Z,2.2nm,0.6s,baz=328,slow=7.6,SNR=26						
WRA	Warramunga Arr	59.39	138	P	P	15 17 50.2	-1.4
WB2	Warramunga Arr	59.40	138	P	P	15 17 50.2	-1.4
WB2				IAmb	IAmb	15 18 22.0	
	comp=Z,30nm,1.7s						
WR0	Warramunga Arr	59.52	138	P	P	15 17 51.5	-1.0
WR0				IAmb	IAmb	15 17 53.7	
	comp=Z,25nm,1.8s						
AS31	Alice Springs	62.06	141	P	P	15 18 08.5	-1.2
ASAR	Alice Springs	62.06	141	P	P	15 18 08.7	-1.1
	comp=Z,0.8nm,0.5s,baz=325,slow=6.5,SNR=30						
NC405	NORSAR Array S	64.14	327	P	P	15 18 21.5	-1.5
BLY	Banja Luka	64.28	309	P	P	15 18 22.8	-1.4
NOA	NORSAR Array B	64.39	327	P	P	15 18 24.2	-0.5
	comp=Z,0.5nm,0.6s,baz=81,slow=6.4,SNR=3.2						
NC204	NORSAR Array S	64.56	328	P	P	15 18 25.5	-0.4
GERES	GERESS Array B	65.61	314	P	P	15 18 33.4	+0.4
	comp=Z,0.2nm,0.2s,baz=89,slow=5.2,SNR=3.0						
GERES	GERESS Array B	65.61	314	P	P	15 18 32.5	-0.4
IMAR	Indian Mountai	72.69	24	P	P	15 19 14.5	-1.9
BMAR	Burnt Mountain	75.00	21	P	P	15 19 30.5	+0.5
ILAR	Eielson Array	75.77	23	P	P	15 19 32.5	-1.9
	comp=Z,0.4nm,0.9s,baz=287,slow=3.7,SNR=4.5						
ILAR	Eielson Array	75.77	23	P	P	15 19 34.2	-0.1
OHAK	Old Harbor	77.24	32	P	P	15 19 41.9	-0.9
YKA	Yellowknife Ar	86.91	14	P	P	15 20 32.6	-0.8
	comp=Z,0.1nm,0.4s,baz=322,slow=4.7,SNR=3.2						
TORD	Torodi Ar. Bea	88.61	284	P	P	15 20 42.0	-0.4
	comp=Z,0.5nm,0.8s,baz=49,slow=6.6,SNR=3.0						

IDC 06 15:12:59.7±9.5,11.93S×166.15E,h153km±87km,mb3.4/3, mb1 3.5/4,mb1mx3.1/50,mbtmp3.8/4,Error ellipse: s-maj=68.9km s-min=50.8km az=174.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.09	178	P	Pn	15 15 22.0	+1.0
	0.3nm,0.3s,baz=308,slow=23,SNR=7.7						
DZM				S	Sn	15 17 10.7	-2.0
	0.1nm,0.3s,baz=189,slow=19,SNR=2.6						
WRA	Warramunga Arr	31.57	251	P	P	15 19 07.5	-0.5
	0.6nm,0.7s,baz=85,slow=9.2,SNR=3.3						
ASAR	Alice Springs	32.77	245	P	P	15 19 18.9	+0.4
	0.4nm,0.7s,baz=68,slow=9.5,SNR=6.7						
ASAR				PcP	PcP	15 22 00.4	+0.1
	0.2nm,0.5s,baz=87,slow=2.8,SNR=4.1						
MKAR	Makanchi Array	94.44	317	P	P	15 26 01.8	-0.7
	0.7nm,0.5s,baz=93,slow=6.2,SNR=8.9						

IDC 06 15:16:05.7±1.1,27.83N×139.96E,h490km±11km, mb3.1/18,mb1 3.3/23,mb1mx3.1/57,mbtmp4.0/23,Error ellipse: s-maj=15.1km s-min=12.3km az=59.0
NEIC 06 15:16:05.1±1.5,27.83N±0.10×140.1E±0.1,h494km±6km, mb4.2/31,Error ellipse: s-maj=16.3km s-min=13.8km az=68.0
JMA 06 15:16:06.1±0.1,28.00N×140.35E,h491km,M4.1
ISC 06 15:16:04.9±0.6,27.86N±0.06×140.08E±0.08,h487km±6km, n99,σ1°24/114,mb3.7/28,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.02	112	P	P	15 17 10.0	+1.1
CBIJ				eS	S	15 18 00.1	-0.7
JCJ	Chichijima	2.02	112	P	P	15 17 10.0	+1.1
	88nm,0.3s,baz=68,slow=3.7,SNR=39						
JCJ				S	S	15 17 59.7	-1.1
	113nm,0.3s,baz=278,slow=22,SNR=15						
JHH2	Haha-jima-NKT2	2.23	123	eS	S	15 18 03.8	+0.9
JHJ2	Mitsune	5.24	358	P	P	15 17 33.1	-0.1
JHJ	Hachijo jima 2	5.25	357	P	P	15 17 31.9	-1.4
	3.8nm,0.3s,baz=82,slow=15,SNR=3.0						
JHJ				S	S	15 18 43.0	-2.5
	20nm,0.3s,baz=21,slow=14,SNR=2.9						
TTO1	TONANKAI O.B.S	6.40	335	P	P	15 17 47.9	+3.8
BSO1	Boso 1	6.81	6	P	P	15 17 50.6	+2.7
BSO3	Boso 3	6.93	3	P	P	15 17 51.0	+1.6
BSO3				eS	S	15 19 13.6	-1.6
JTNC	Tanabenakahech	7.07	328	P	P	15 17 53.8	+2.6
JIE	Ise	7.12	337	P	P	15 17 54.6	+2.9
JKN2	Miekihoku	7.14	334	P	P	15 17 54.9	+3.0
INU	Inuyama	7.91	341	P	P	15 18 01.7	+1.9
JHU	Hanno	7.99	355	P	P	15 18 01.2	+0.5
JHO	Hitachi	8.73	3	P	P	15 18 10.2	+1.7
JHO				eS	S	15 19 48.3	-1.8
MJAR	Matsushiro Arr	8.80	350	P	P	15 18 09.6	+0.4
	0.7nm,0.3s,baz=170,slow=11,SNR=41						
MJAR				S	S	15 19 49.9	-1.5
	0.1nm,0.3s,baz=124,slow=12,SNR=2.9						
MJAR	Matsushiro Arr	8.80	350	P	P	15 18 08.5	-0.6
MAJO	Matsushiro	8.80	350	P	P	15 18 09.1	-0.1
MAT	Matsushiro	8.80	350	P	P	15 18 10.6	+1.4
MAT				S	S	15 19 48.6	-2.8
MJB9	Matsu-Tunnel	8.80	350	P	P	15 18 09.3	0.0
JHS	Saijyo	9.27	322	P	P	15 18 16.5	+2.3
JFK	Kawauchi	9.50	4	P	P	15 18 19.2	+2.5
JNU	Nakatsue	9.51	306	P	P	15 18 18.8	+2.0
	0.6nm,0.3s,baz=124,slow=7.5,SNR=6.7						
JNU	Nakatsue	9.51	306	P	P	15 18 17.1	+0.2
JAMN	Amaminishikomi	9.64	275	P	P	15 18 19.8	+1.5
JMK	Ichinoseki	11.10	5	P	P	15 18 35.8	+2.2
KSRS	Korea Array	14.00	316	P	P	15 19 04.8	+0.2
	0.3nm,0.3s,baz=127,slow=11,SNR=4.7						
YULB	Yu-li	17.51	259	P	P	15 19 40.8	-0.6
YULB				IAmb	IAmb	15 19 57.8	
	comp=Z,39nm,1.4s						
USA0B	Ussuriysk Arra	17.55	340	P	P	15 19 42.5	+1.1
USA0B				IAmb	IAmb	15 19 45.5	
	comp=Z,13nm,1.2s						
USRK	Ussuriysk Ar.	17.55	340	P	P	15 19 42.5	+1.1
	baz=173,slow=9.2,SNR=17						
USRK	Ussuriysk Ar.	17.55	340	P	P	15 19 42.0	+0.6
SSLB	Suanglung	17.69	261	P	P	15 19 42.7	-0.4
TPUB	Ta-pu	18.12	260	P	P	15 19 44.8	-2.3
SONM	Songino Array	32.87	316	P	P	15 21 58.2	+0.6
	comp=Z,0.4nm,0.8s,baz=120,slow=8.5,SNR=2.7						
SONM	Songino Array	32.87	316	P	P	15 21 57.8	+0.2
PBKT	Sadao Pong	37.76	261	P	P	15 22 38.4	-0.3
PBKT				IAmb	IAmb	15 22 39.6	
	comp=Z,3.0nm,0.7s						
CMAR	Chiang Mai Arr	38.81	265	P	P	15 22 46.6	-0.6
	comp=Z,0.4nm,0.5s,baz=58,slow=8.4,SNR=7.2						
MTN	Manton Dam	41.38	193	P	P	15 23 07.3	-0.5
KNRA	Kununurra	44.65	196	P	P	15 23 33.3	-0.1
TAPN	Taplejung	46.11	282	eP	P	15 23 45.4	+0.4
	comp=Z,3.6nm,0.4s						
ODAN	Odare	46.50	282	eP	P	15 23 48.3	+0.4
	comp=Z,5.6nm,0.4s						
RAMN	Ramite	47.16	282	eP	P	15 23 53.3	+0.3
	comp=Z,8.4nm,0.7s						
GAMB	Gambell	47.27	27	P	P	15 23 51.4	-1.3
JIRN	Jiri	47.35	283	eP	P	15 23 55.2	+0.7
	comp=Z,19nm,0.6s						
GUN	Gumba	47.56	283	eP	P	15 23 56.7	+0.6
	comp=Z,12nm,0.4s						
JOHN	Johnston Islan	47.63	92	P	P	15 23 54.6	-1.6
WB0	Warramunga Arr	47.67	187	P	P	15 23 55.5	-0.9
ZALV	Zalesovo Beam	47.68	319	P	P	15 23 56.1	0.0
	comp=Z,0.8nm,0.3s,baz=98,slow=2.9,SNR=3.0						
ZALV				PcP	PcP	15 25 15.9	-0.3
	comp=Z,0.5nm,0.3s,baz=143,slow=4.7,SNR=2.8						
ZALV	Zalesovo Beam	47.68	319	P	P	15 23 56.2	+0.1
WR0	Warramunga Arr	47.84	187	P	P	15 23 57.1	-0.7
WR0				IAmb	IAmb	15 24 11.9	
	comp=Z,12nm,1.6s						
WR0				PcP	PcP	15 25 18.1	+0.9
WB2	Warramunga Arr	47.85	187	P	P	15 23 57.1	-0.7
WB2				IAmb	IAmb	15 23 57.8	
	comp=Z,3.8nm,0.7s						
WB2				PcP	PcP	15 25 18.6	+1.4
WRA	Warramunga Arr	47.85	187	P	P	15 23 57.4	-0.4
	comp=Z,2.2nm,0.3s,baz=2.8,slow=7.7,SNR=71						
WRA				PcP	PcP	15 25 18.0	+0.7
	comp=Z,0.6nm,0.6s,baz=3.3,slow=4.2,SNR=4.0						
WRA	Warramunga Arr	47.85	187	P	P	15 23 56.3	-1.5
PKI	Pulchoki	48.05	283	eP	P	15 23 59.6	-0.1
	comp=Z,2.4nm,0.4s						
PKIN	Phulchoki	48.05	283	eP	P	15 23 59.8	+0.1
DMN	Daman	48.30	283	eP	P	15 24 01.6	+0.1
	comp=Z,6.8nm,0.7s						
MK31	Makanchi Array	48.54	309	P	P	15 24 03.1	+0.4
MKAR	Makanchi Array	48.54	309	P	P	15 24 03.2	+0.4
	comp=Z,0.3nm,0.3s,baz=88,slow=10.0,SNR=8.5						
MKAR				PcP	PcP	15 25 19.7	+0.2
	comp=Z,0.5nm,0.8s,baz=84,slow=5.5,SNR=4.7						
MKAR				ScP	ScP	15 28 26.9	-0.6
	comp=Z,0.3nm,0.6s,baz=77,slow=6.4,SNR=3.6						
MKAR	Makanchi Array	48.54	309	P	P	15 24 02.9	+0.2
MKAR					PcP	15 25 19.9	+0.4
DANN	Dangsing	49.28	285	eP	P	15 24 09.7	+0.9
KURK	Kurchatov	51.11	314	P	P	15 24 21.7	+0.1
KURK				IAmb	IAmb	15 24 22.8	
	comp=Z,5.9nm,1.4s						
KURBB	Kurchatov Arra	51.17	314	P	P	15 24 21.9	-0.1
	comp=Z,0.9nm,0.5s,baz=91,slow=8.0,SNR=16						
AS31	Alice Springs	51.57	187	P	P	15 24 23.4	-1.9
ASAR	Alice Springs	51.58	187	PcP	PcP	15 25 32.5	+1.5
	comp=Z,0.4nm,0.8s,baz=355,slow=5.1,SNR=2.8						
ASAR	Alice Springs	51.58	187	P	P	15 24 22.3	-3.0
ASAR					PcP	15 25 30.9	-0.2
AAK	Ala-Archa	54.28	304	P	P	15 24 45.2	+0.5
	comp=Z,0.9nm,0.5s,baz=340,slow=0.4,SNR=4.5						
AAK	Ala-Archa	54.28	304	P	P	15 24 44.7	0.0
BVAR	Borovoye Array	56.21	317	P	P	15 24 58.4	+0.6
	comp=Z,3.1nm,0.4s,baz=91,slow=7.0,SNR=18						
BRVK	Borovoye	56.27	317	P	P	15 24 57.9	-0.3
KK31	Karatay Array	57.12	305	P	P	15 25 04.3	+0.1
KKAR	Karatay Array	57.12	305	P	P	15 25 04.2	0.0
KKAR	Karatay Array	57.12	305	P	P	15 25 04.3	+0.1
DOT	Dot Lake	59.16	30	P	P	15 25 17.2	-0.5
DOT				IAmb	IAmb	15 25 40.7	
	comp=Z,16nm,0.6s						
SCRK	Sand Creek	59.19	30	P	P	15 25 18.4	+0.3
SCRK				IAmb	IAmb	15 25 42.7	
	comp=Z,6.3nm,1.0s						
FORT	Forrest	59.43	192	P	P	15 25 20.0	+0.1
FORT				IAmb	IAmb	15 25 42.9	
	comp=Z,15nm,0.8s						
BBOO	Buckleboo	60.46	184	P	P	15 25 26.9	+0.2
BBOO				IAmb	IAmb	15 25 33.8	
	comp=Z,28nm,1.6s						
ARU	Arti	62.67	322	P	P	15 25 40.4	-0.6
	comp=Z,1.1nm,0.4s,baz=150,slow=12,SNR=6.3						
ARU	Arti	62.67	322	P	P	15 25 40.0	-1.0
ARU				IAmb	IAmb	15 25 41.8	
	comp=Z,3.4nm,0.7s						
INK	Inuvik	63.11	25	P	P	15 25 43.7	+0.2
	comp=Z,0.2nm,0.5s,baz=270,slow=5.1,SNR=2.1						
INK	Inuvik	63.11	25	P	P	15 25 43.6	+0.1
INK				IAmb	IAmb	15 26 09.9	
	comp=Z,5.5nm,1.6s						
ABKAR	Akbulak array	63.22	314	P	P	15 25 44.0	-0.6
ABKAR				IAmb	IAmb	15 25 45.5	
	comp=Z,2.0nm,0.7s						
DLBC	Dease Lake	66.65	35	P	P	15 26 07.3	+1.0
	comp=Z,30nm,1.0s,baz=264,slow=0.0,SNR=3.6						
DLBC	Dease Lake	66.65	35	P	P	15 26 06.8	+0.5
NIUE	Niue	67.22	128	P	P	15 26 08.8	-1.4
ARCES	ARCESS Array B	72.20	340	P	P	15 26 39.7	+0.4
	comp=Z,1.4nm,0.7s,baz=79,slow=7.6,SNR=8.3						
YKA	Yellowknife Ar	72.35	28	P	P	15 26 41.5	+1.2
	comp=Z,0.4nm,0.4s,baz=292,slow=5.7,SNR=8.2						
KBZ	Khabaz	76.11	312	P	P	15 27 02.3	+0.3
	comp=Z,0.6nm,0.5s,baz=122,slow=7.9,SNR=3.6						

FINES	FINESS Array B	76.43	333	P	P	15 27 03.6	+0.3
	comp=Z,2.6nm,0.3s,baz=68,slow=4.8,SNR=39						
FINES	FINESS Array B	76.43	333	P	P	15 27 03.1	-0.2
AKASG	Malin Array Be	80.89	323	P	P	15 27 27.1	-0.4
	comp=Z,0.3nm,0.3s,baz=50,slow=5.3,SNR=4.6						
AKASG	Malin Array Be	80.89	323	P	P	15 27 27.4	0.0
NVAR	Mina Array Bea	81.50	51	P	P	15 27 33.2	+2.0
	comp=Z,0.3nm,0.5s,baz=309,slow=5.7,SNR=3.8						
NVAR	Mina Array Bea	81.50	51	P	P	15 27 32.1	+0.9
NB2	NORSAR Subarra	82.20	338	P	P	15 27 33.8	-0.2
	comp=Z,0.4nm,0.4s,baz=41,slow=5.3						
NOA	NORSAR Array B	82.20	338	P	P	15 27 33.4	-0.7
	comp=Z,0.4nm,0.6s,baz=38,slow=4.8,SNR=3.8						
BRTR	Keskin Array B	84.11	312	P	P	15 27 43.3	-0.9
	comp=Z,0.5nm,0.8s,baz=57,slow=5.3,SNR=2.7						
BRTR	Keskin Array B	84.11	312	P	P	15 27 42.8	-1.4
TORD	Torodi Ar. Bea	122.66	310	PKP	PKPdf	15 34 05.2	-0.3
	comp=Z,0.3nm,0.5s,baz=354,slow=3.1,SNR=3.2						
LPAZ	La Paz	151.50	72	PKPbc	PKiKP	15 35 07.0	+2.0
	comp=Z,0.5nm,0.5s,baz=290,slow=5.2,SNR=3.6						
PLCA	Paso Flores	151.78	125	PKPbc	PKiKP	15 35 05.3	+1.1
	comp=Z,1.5nm,1.0s,baz=180,slow=6.1,SNR=3.1						

*NEIC **06** 15:16:59.0±2.4, 19.9S±0.1×177.8W±0.1, h566km±10km, mb4.4/13, Error ellipse: s-maj=18.1km s-min=15.7km az=133.0*
*IDC **06** 15:17:05.9±5.1, 19.75S×178.27W, h627km±57km, mb3.0/7, mb1 3.3/8, mb1mx3.0/46, mbtmp4.1/8, Error ellipse: s-maj=79.6km s-min=29.1km az=151.0*
ISC 06 15:16:59.8±0.6, 19.9S±0.1×177.9W±0.1, h569km, n34, σ1.36/34, mb4.1/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.43	298	P	P	15 18 29.1	+2.8
NIUE	Niue	7.52	85	P	P	15 18 48.6	-4.9
AFI	Afiamalu	8.31	45	P	P	15 18 59.7	-1.6
DZM	Mont Dzumac	14.83	259	P	P	15 20 09.9	+2.7
	0.3nm,0.3s,baz=90,slow=20,SNR=5.0						
DZM	Mont Dzumac	14.83	259	P	P	15 20 09.5	+2.2
URZ	Urewera	18.83	192	P	P	15 20 42.3	-1.8
URZ				IAmb	IAmb	15 20 57.5	
	comp=Z,34nm,1.2s						
WHZ	Wether Hill Ro	28.46	201	P	P	15 22 10.0	+0.4
WHZ				IAmb	IAmb	15 22 16.0	
	comp=Z,32nm,1.5s						
RABL	Rabaul	33.12	294	P	P	15 22 48.1	-1.8
CTA	Charters Tower	33.69	263	P	P	15 22 54.9	+0.1
	comp=Z,2.6nm,0.5s,baz=95,slow=15,SNR=4.1						
STKA	Stephens Creek	38.18	243	P	P	15 23 31.3	-0.3
	comp=Z,2.0nm,0.8s,baz=70,slow=12,SNR=4.3						
STKA	Stephens Creek	38.18	243	P	P	15 23 31.1	-0.5
BBOO	Buckleboo	42.95	243	P	P	15 24 09.1	-0.4
BBOO				IAmb	IAmb	15 24 09.7	
	comp=Z,5.7nm,0.7s						
ASAR	Alice Springs	44.80	256	P	P	15 24 23.4	-0.5
	comp=Z,3.4nm,0.6s,baz=87,slow=8.0,SNR=106						
ASAR				PcP	PcP	15 25 53.2	-0.4
	comp=Z,0.6nm,0.7s,baz=102,slow=3.9,SNR=4.4						
WB0	Warramunga Arr	44.80	262	P	P	15 24 23.0	-1.0
WB0				IAmb	IAmb	15 24 23.2	
	comp=Z,8.2nm,1.1s						
WB2	Warramunga Arr	44.81	261	P	P	15 24 23.2	-0.9
WB2				IAmb	IAmb	15 24 36.5	
	comp=Z,14nm,1.4s						
WB2				PcP	PcP	15 25 52.2	-1.4
WRA	Warramunga Arr	44.82	261	P	P	15 24 23.4	-0.8
	comp=Z,1.2nm,0.4s,baz=97,slow=8.1,SNR=20						
WRA	Warramunga Arr	44.82	261	P	P	15 24 23.2	-0.9
OPA	Opana	45.65	26	P	P	15 24 30.3	0.0
FITZ	Fitzroy Crossi	53.25	262	P	P	15 25 26.0	-0.3
SOEI	Soe	56.62	271	P	P	15 25 47.7	-2.3
SOEI				IAmb	IAmb	15 26 13.7	
	comp=Z,34nm,1.3s						
LUWI	Luwuk	60.96	280	P	P	15 26 17.9	-1.0
QSPA	South Pole Qui	70.18	180	P	P	15 27 16.7	+1.0
TXAR	Lajitas Array	86.61	57	P	P	15 28 46.6	+2.8
	comp=Z,0.4nm,0.6s,baz=246,slow=6.8,SNR=4.4						
TXAR	Lajitas Array	86.61	57	P	P	15 28 44.7	+0.9
ILAR	Eielson Array	87.69	13	P	P	15 28 48.1	+0.2
	comp=Z,0.8nm,0.9s,baz=221,slow=5.3,SNR=6.0						
ILAR	Eielson Array	87.69	13	P	P	15 28 47.9	0.0
PDAR	Pinedale Array	88.42	43	P	P	15 28 53.6	+1.5
	comp=Z,0.3nm,0.6s,baz=217,slow=2.8,SNR=3.1						
PDAR	Pinedale Array	88.42	43	P	P	15 28 52.9	+0.8
ARCES	ARCESS Array B	128.34	350	PKP	PKPdf	15 35 00.1	-1.4
	comp=Z,3.5nm,1.1s,baz=29,slow=2.1,SNR=4.2						
AKASG	Malin Array Be	142.54	332	PKhKP	PKPpre	15 35 24.6	
	comp=Z,0.5nm,0.3s,baz=41,slow=4.7,SNR=6.8						
BRTR	Keskin Array B	146.52	313	PKPbc	PKPbc	15 35 37.7	-0.5
	comp=Z,0.5nm,0.5s,baz=144,slow=2.5,SNR=4.5						
BRTR	Keskin Array B	146.52	313		PKPbc	15 35 37.1	-1.1
GERES	GERESS Array B	149.65	345	PKPbc	PKPbc	15 35 45.6	-0.1
	comp=Z,0.3nm,0.3s,baz=3.8,slow=4.0,SNR=5.3						
GERES	GERESS Array B	149.65	345		PKPbc	15 35 46.0	+0.3

WEL 06 15:37:04.5, 44°S±4°×17°3E±°, h5km, ML3.9/6, MLv3.3/25, Error ellipse: s-maj=0.0km s-min=0.0km az=0.9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	McQueen's Vall	0.18	190	P	Pg	15 37 10.4	+2.4
MQZ				S	Sg	15 37 13.6	+3.2
OKCZ	Okains Bay	0.33	126	P	Pb	15 37 12.5	-0.3
AMCZ	Amberley	0.36	355	P	Pb	15 37 13.0	-0.4
AKCZ	Akaroa Harbour	0.37	156	P	Pb	15 37 13.8	+0.2
OXZ	Oxford	0.52	293	P	Pb	15 37 16.6	+0.5
OXZ				S	Sb	15 37 24.5	+0.5
GVZ	Greta Valley S	0.62	24	P	Pb	15 37 17.5	-0.2
LTZ	Lake Taylor	0.81	337	P	Pb	15 37 21.6	+0.5
RPZ	Rata Peaks	1.21	261	P	Pn	15 37 28.2	+0.2
KHZ	Kahutara	1.28	29	P	Pn	15 37 27.3	-1.7
WVZ	Waitaha Valley	1.50	287	P	Pb	15 37 32.7	-0.1
THZ	Tophouse	1.78	5	P	Pn	15 37 35.0	-0.9
DSZ	Denniston Nort	1.90	339	P	Pn	15 37 37.4	-0.2
BSWZ	Blackbirch Sta	2.02	26	P	Pn	15 37 38.2	-0.9
FOZ	Fox Glacier	2.10	269	P	Pb	15 37 42.2	-0.8
ODZ	Otahua Downs	2.11	224	P	Pn	15 37 40.9	+0.5
TUWZ	Tuamarina	2.30	24	P	Pn	15 37 41.8	-1.2
NNZ	Nelson	2.37	13	P	Pn	15 37 43.5	-0.4
TCW	Tory Channel	2.60	27	P	Pn	15 37 46.3	-0.8
BHW	Baring Head	2.66	38	P	Pn	15 37 46.1	-1.9
QRZ	Quartz Range	2.71	357	P	Pn	15 37 48.0	-0.6
HHSZ	Highcliff Hill	2.79	212	P	Pn	15 37 50.1	+0.4
MSWZ	Moikau Station	2.84	43	P	Pn	15 37 48.4	-2.1
DUWZ	D'Urville Isla	2.88	19	P	Pn	15 37 53.1	+2.1
JCZ	Jackson Bay	2.88	258	P	Pn	15 37 52.5	+1.4
WKZ	Wanaka	2.95	243	P	Pn	15 37 52.4	+0.5
EAZ	Earnscleugh	2.96	234	P	Pn	15 37 52.6	+0.5
CAW	Cannon Point	2.99	37	P	Pn	15 37 51.0	-1.6
KIW	Kapiti Island	3.14	32	P	Pn	15 37 53.6	-0.9
TUZ	Tuapeka	3.26	221	P	Pn	15 37 56.5	+0.3
OGWZ	Otaki Gorge	3.28	35	P	Pn	15 37 55.1	-1.4
HOWZ	Holdsworth Sta	3.37	39	P	Pn	15 37 57.2	-0.5
MSZ	Milford Sound	3.62	250	P	Pn	15 38 01.6	+0.4
MLZ	Mavora Lakes	3.75	239	P	Pn	15 38 03.1	0.0
WHZ	Wether Hill Ro	4.13	233	P	Pn	15 38 07.5	-0.6
KHEZ	Kahui Hut	4.35	14	P	Pn	15 38 13.1	+1.8
NBEZ	Newall Road No	4.35	12	P	Pn	15 38 12.6	+1.4
PKE	Pukeiti	4.44	13	P	Pn	15 38 14.6	+2.1
APZ	The Paps	4.69	224	P	Pn	15 38 16.1	+0.2
PKVZ	Pokaka	4.69	26	P	Pn	15 38 16.8	+0.9
TRVZ	Turoa	4.74	28	P	Pn	15 38 17.1	+0.3
FWVZ	Far West T-bar	4.78	28	P	Pn	15 38 17.7	+0.3
NGZ	Ngauruhoe	4.87	28	P	Pn	15 38 18.0	-0.5
BKZ	Black Stump Fm	5.21	34	P	Pn	15 38 22.0	-1.2
HIZ	Hauiti	5.27	19	P	Pn	15 38 23.3	-0.6

*ATH **06** 15:58:11.0, 38.18N×20.40E, h12km±1km, ML2.2/2, Error ellipse: s-maj=2.0km s-min=1.4km az=227.0*
*THE **06** 15:58:11.0, 38.16N×20.41E, h11km, ML2.5/8, Error ellipse: s-maj=0.8km s-min=0.5km az=229.0*
ISC 06 15:58:11.2±1.5, 38.17N±0.04×20.41E±0.05, h11km±5km, n22, σ0.40/38, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	294	P	Pg	15 58 13.0	-0.2
CHV1				S	Sg	15 58 14.3	-0.3
	12µm,0.2s						
LXRA	Lixouri, Kepha	0.03	38	P	Pg	15 58 13.3	0.0
LXRA				S	Sg	15 58 15.0	+0.3
LXR1	Lixouri, Cepha	0.04	38	P	Pg	15 58 13.2	-0.1
LXR1				S	Sg	15 58 15.0	+0.3
	37µm,0.1s						
ARGA	Argostoli. Kep	0.05	86	P	Pg	15 58 13.3	-0.1
ARGA				S	Sg	15 58 14.9	-0.1
KEF3	Kipouria, Keph	0.06	301	P	Pg	15 58 13.2	-0.2
KEF3				S	Sg	15 58 14.8	-0.2
KEF2	Argostoli. Kep	0.06	98	P	Pg	15 58 13.4	-0.1
KEF2				S	Sg	15 58 15.0	-0.1
ARG2	Argostoli	0.06	85	P	Pg	15 58 13.4	-0.1
ARG2				S	Sg	15 58 14.9	-0.2
	10µm,0.1s						
KEF1	Kardakata, Kep	0.11	24	P	Pg	15 58 14.0	-0.1
KEF1				S	Sg	15 58 16.2	0.0
VLS	Valsamata	0.14	88	P	Pg	15 58 14.3	-0.2
VLS				S	Sg	15 58 16.8	-0.1
	2µm,0.1s						
VLS	Valsamata	0.14	88	P	Pg	15 58 14.3	-0.2
VLS				S	Sg	15 58 16.9	-0.1
VLS				AML	AML	15 58 17.1	
	comp=N,2431µm,0.1s						
VLS				AML	AML	15 58 18.6	
	comp=E,4747µm,0.1s						
VSK1	VASILIKIADES	0.26	27	P	Pg	15 58 16.5	-0.2
VSK1				S	Sg	15 58 20.7	+0.4
	comp=E,1µm,0.1s						
KONA	Konidatara, Ke	0.28	27	P	Pg	15 58 16.8	-0.2
FSK	Fiskardo	0.31	23	P	Pg	15 58 17.3	-0.2
FSK				S	Sg	15 58 22.4	+0.7
	comp=E,932nm,0.2s						
VLMS	Volimes, Zakyn	0.36	146	P	Pg	15 58 18.0	-0.3
VLMS				S	Sg	15 58 23.8	+0.7
VLMS				AML	AML	15 58 24.4	
	comp=E,1019µm,0.2s						
VLMS				AML	AML	15 58 27.3	
	comp=N,672µm,0.2s						
EVGI	Lefkada island	0.49	23	P	Pg	15 58 20.3	-0.5
EVGI				S	Sg	15 58 27.9	+0.7
EVGI	Lefkada island	0.49	23	P	Pg	15 58 20.3	-0.5
MGNA	Meganis	0.57	32	P	Pg	15 58 21.6	-0.7
LKD2	Lefkada island	0.64	17	P	Pg	15 58 23.4	-0.4
PDO	Prodromos	0.74	55	P	Pg	15 58 25.0	-0.6
PDO				S	Sb	15 58 36.0	-0.3
	comp=N,175nm,0.2s						
PDO	Prodromos	0.74	55	P	Pg	15 58 24.8	-0.7
PVO	Paravola	0.98	63	P	Pg	15 58 29.7	-0.4
PVO				S	Sn	15 58 45.7	+0.8
	comp=N,192nm,0.3s						
PVO	Paravola	0.98	63	P	Pg	15 58 29.7	-0.4

*SSNC **06** 16:04:50.4±0.6, 19.68N×75.49W, h38km±4km, MD3.3, ML3.1, MW3.7*
*OSPL **06** 16:04:50.6±0.6, 20.40N×75.19W, h0km±25km, ML3.1*
*JSN **06** 16:04:50.2±0.7, 19.58N×75.65W, h0km±169km, MD3.7*
ISC 06 16:04:49.8±1.9, 19.78N±0.05×75.54W±0.03, h36km±1km, n16, σ1.11/25, 2C-5D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCC	Rio Carpintero	0.26	325	iP	Pn	16 04 58.4	+0.6
RCC				iS	Sn	16 05 04.2	-0.6
RCC					IAML	16 05 04.7	
	comp=N,3µm,0.2s						
RCC					IAML	16 05 05.1	
	comp=E,2µm,0.2s						
GTBY	Guantanamo Bay	0.43	70	iP	Pn	16 04 59.0	-0.2
GTBY				eS	Sn	16 05 05.4	-0.6
GTBY					IAML	16 05 05.9	
	comp=Z,3µm,0.3s						
GTMO	Guantanamo	0.48	51	iP	Pn	16 05 00.1	+0.1
GTMO				eS	Sn	16 05 07.4	+0.2
GTMO					IAML	16 05 08.8	
	comp=N,3µm,0.1s						
GTMO					IAML	16 05 08.9	
	comp=E,3µm,0.2s						
MOAC	Moa	1.03	32	iP	Pn	16 05 08.0	+0.4
MOAC				eS	Sn	16 05 21.1	+0.3
MOAC					IAML	16 05 22.7	
	comp=E,244nm,0.2s						
MOAC					IAML	16 05 23.0	
	comp=N,276nm,0.2s						
MASC	Masc	1.29	72	iP	Pn	16 05 10.3	-0.9
MASC				eS	Sn	16 05 25.8	-1.4
MASC					IAML	16 05 29.1	
	comp=E,178nm,0.1s						
MASC					IAML	16 05 29.2	
	comp=N,217nm,0.2s						
LMGC	Las Mercedes	1.41	282	iP	Pn	16 05 13.7	+0.9
LMGC				eS	Sn	16 05 30.5	+0.3
LMGC					IAML	16 05 31.8	
	comp=E,369nm,0.1s						
LMGC					IAML	16 05 31.9	
	comp=N,430nm,0.1s						
CMJ	Castle Mountai	1.82	206	⇓iP	Pn	16 05 18.3	-0.2
BNJ	Bonny Gate	1.98	223	⇓iP	Pn	16 05 20.4	-0.3
GWJ	Greenwich	2.04	214	⇑iP	Pn	16 05 21.1	-0.6
STH	Stony Hill	2.08	216	⇓iP	Pn	16 05 21.6	-0.6
BBJ	Bamboo Saint A	2.15	230	⇓iP	Pn	16 05 22.9	-0.2
CCCC	Cccc	2.52	304	eP	Pn	16 05 28.3	+0.2
CCCC				eS	Sn	16 05 56.7	-0.9
CCCC					IAML	16 06 01.3	
	comp=N,13nm,0.2s						
CCCC					IAML	16 06 02.3	
	comp=E,14nm,0.4s						
PCJ	Portland Cotta	2.54	217	⇓iP	Pn	16 05 28.9	+0.4
MCJ	Malvern	2.75	228	⇑iP	Pn	16 05 32.0	+0.6
MCJ				iS	Sn	16 06 02.7	-0.7
LGNH	Logne	3.05	114	eS	Sn	16 06 14.3	+3.7
SDDR	Presa de Saban	4.09	101	iP	Pn	16 05 50.7	+0.9
SDDR				eS	Sn	16 06 34.6	-1.9
SDDR					IAML	16 06 48.2	
	comp=Z,13nm,0.5s						

*DJA **06** 16:13:50.0±0.3, 7°S±2°×13°0E±°, h189km±5km, M4.7/12, mB5.2/7, mb4.8/10, MLv4.8/12, MLv4.8/9, Mw(mB)4.6/7*
*NEIC **06** 16:13:50.6±1.4, 6.59S±0.07×129.81E±0.06, h165km±7km, mb4.5/51, Error ellipse: s-maj=9.7km s-min=8.2km az=202.0*
*IDC **06** 16:13:51.1±2.5, 6.58S×129.88E, h167km±24km, mb3.8/13, mb1 3.9/16, mb1mx3.8/35, mbtmp4.3/16, Error ellipse: s-maj=20.8km s-min=11.6km az=65.0*
ISC 06 16:13:50.4±0.3, 6.66S±0.04×129.88E±0.05, h167km, n134, σ1.68/141, mb4.4/28, 2C-1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.93	133	P	Pn	16 14 27.5	+1.8
SAUI				S	Sn	16 14 55.6	+2.5
SAUI	Saumlaki	1.93	133		Pn	16 14 27.5	+1.8
BNDI	Bandanaira	2.13	1	P	Pn	16 14 29.4	+1.4
BNDI				S	Sn	16 14 57.6	+0.4
AAI	Ambon	3.40	330	P	Pn	16 14 44.7	+1.2
MSAI	Masohi	3.43	344	P	Pn	16 14 45.6	+1.7
MSAI				S	Sn	16 15 26.6	+1.1
FAKI	Fak Fak	4.41	33	P	Pn	16 14 54.8	-1.7
FAKI	Fak Fak	4.41	33		Pn	16 14 54.7	-1.7
FAKI				Sn	Sn	16 15 41.6	-6.4
SIJI	Sorong	5.92	14	P	Pn	16 15 15.4	-0.9
	26nm,0.3s,baz=48,slow=0.5,SNR=84						
SIJI				S	Sn	16 16 17.8	-5.9
	30nm,0.3s,baz=240,slow=23,SNR=22						
SWI	Sorong	5.92	13	P	Pn	16 15 14.4	-1.9
	1.5nm1.5nm6µm94nm,0.5s						
SANI	Sanana	6.00	320	P	Pn	16 15 18.4	+1.0
	0.1nm51nm,0.8s						
MTN	Manton Dam	6.26	169		Pn	16 15 20.5	-0.3
MTN				Sn	Sn	16 16 27.4	-4.4
SOEI	Soe	6.35	241	P	Pn	16 15 22.4	+0.4
	0.9nm0.9nm2µm74nm,0.5s						
SOEI	Soe	6.35	241		Pn	16 15 22.5	+0.5
SOEI				Sn	Sn	16 16 31.1	-2.9
LBMI	Labuha	6.44	338	P	Pn	16 15 23.9	+0.8
	0.7nm2µm214nm,0.9s						
RKPI	Ransiki, Papua	6.68	40	P	Pn	16 15 26.2	-0.1
	4.2nm9µm487nm,0.6s						
BBSI	Bau Bau	7.36	279	P	Pn	16 15 37.5	+2.1
	0.0nm0.0nm11nm,1.1s						
TNTI	Ternate	7.80	341	Pn	Pn	16 15 42.0	+0.8
KNRA	Kununurra	9.03	187		Pn	16 15 55.8	-1.6
KNRA				Sn	Sn	16 17 29.8	-8.1
BNSI	Bone	9.98	283	P	Pn	16 16 24.4	+14
APSI	Ampana	10.00	304	P	Pn	16 16 14.4	+4.1
SPSI	Sidrap Palu	10.42	284	P	Pn	16 16 26.5	+2.0
MRSI	Marisa	10.63	312	P	Pn	16 16 21.1	+2.6
FITZ	Fitzroy Crossi	12.09	200	P	Pn	16 16 35.4	-2.1
	4.5nm,0.3s,baz=26,slow=12,SNR=54						
FITZ				S	Sn	16 18 41.2	-10
	7.7nm,0.3s,baz=135,slow=14,SNR=13						
FITZ	Fitzroy Crossi	12.09	200	P	Pn	16 16 35.2	-2.3
FITZ					Sn	16 18 40.7	-11
MPSI	Mapaga	12.15	305	P	P	16 16 42.4	-1.5
WB0	Warramunga Arr	13.74	162		Pn	16 16 55.7	-2.8
WRAB	Tennant Creek	13.89	162		Pn	16 16 58.5	-1.8
WRA	Warramunga Arr	13.89	162	P	Pn	16 16 57.7	-2.7
	2.2nm,0.3s,baz=349,slow=15,SNR=53						
WRA				S	Sn	16 19 25.8	-9.0
	7.6nm,0.3s,baz=351,slow=22,SNR=8.6						
WRA	Warramunga Arr	13.89	162		Pn	16 16 56.8	-3.6
WRA					Sn	16 19 21.9	-13
WB2	Warramunga Arr	13.90	162		Pn	16 16 57.9	-2.6
WR0	Warramunga Arr	13.97	162		Pn	16 16 57.9	-3.5
COEN	Coen	14.95	120		Pn	16 17 14.8	+1.2
COEN				IAmb	IAmb	16 17 17.3	
	comp=Z,18nm,1.0s						
JAGI	Jajag, Banyuwa	15.69	262		Pn	16 17 21.3	-1.4
JAGI				IAmb	IAmb	16 17 48.4	
	comp=Z,31nm,1.3s						
PMG	Port Moresby	17.32	100	P	Pn	16 17 44.0	+1.6
	comp=Z,1.3nm,0.3s,baz=240,slow=13,SNR=3.1						
PMG				S	S	16 20 49.7	-3.6
	comp=Z,0.4nm,0.3s,baz=220,slow=23,SNR=5.7						
PMG	Port Moresby	17.32	100		Pn	16 17 44.5	+2.1
AS31	Alice Springs	17.34	168	P	P	16 17 42.3	+0.9
AS31				IAmb	IAmb	16 17 45.9	
	comp=Z,14nm,0.3s						
ASAR	Alice Springs	17.34	168	P	P	16 17 42.8	+1.4
	comp=Z,3.4nm,0.3s,baz=346,slow=9.4,SNR=279						
ASAR				S	S	16 20 47.1	-6.5
	comp=Z,1.4nm,0.3s,baz=190,slow=19,SNR=5.0						
ASAR	Alice Springs	17.34	168	P	P	16 17 42.3	+0.8
PSAD1	Pilbara Seismi	17.63	212		P	16 17 45.5	+0.9
PSAD1				IAmb	IAmb	16 17 46.3	
	comp=Z,17nm,0.8s						
PSAC2	Pilbara Seismi	17.68	212		P	16 17 46.1	+1.0
PSAC2				IAmb	IAmb	16 17 47.0	
	comp=Z,18nm,0.7s						
PSAD2	Pilbara Seismi	17.69	212	P	P	16 17 45.6	+0.4
PSAD2				IAmb	IAmb	16 17 46.7	
	comp=Z,10nm,0.6s						
PSAC1	Pilbara Seismi	17.70	212		P	16 17 46.4	+1.0
PSAC1				IAmb	IAmb	16 17 47.2	
	comp=Z,18nm,0.7s						
PSA00	Pilbara Seismi	17.71	212	P	P	16 17 46.1	+0.6
KKM	Kota Kinabalu	18.58	313	P	P	16 17 55.0	-0.1
KKM				IAmb	IAmb	16 17 58.4	
	comp=Z,30nm,1.1s						
UGM	Wanagama	19.24	265	P	P	16 18 03.5	+1.3
SBUM	Sibu	19.82	297	P	P	16 18 08.9	+0.5
CTA	Charters Tower	20.75	132	P	P	16 18 20.4	+2.1
	comp=Z,6.2nm,0.7s,baz=307,slow=14,SNR=5.0						
GIRL	Giralia	21.91	222	P	P	16 18 29.1	-1.3
CISI	Cisompet, Garu	21.91	266	P	P	16 18 29.5	-1.2
KRVT	Keravat (AS076	22.17	85	S	S	16 22 30.9	+5.4
	comp=Z,7.0nm,0.4s,baz=49,slow=20,SNR=2.3						
CNJI	Cibinong	22.59	267	P	P	16 18 35.4	-1.7
FORT	Forrest	24.05	184	P	P	16 18 51.0	+0.7
BBOO	Buckleboo	26.64	168	P	P	16 19 13.8	+0.1
BBOO				IAmb	IAmb	16 19 18.2	
	comp=Z,7.5nm,0.7s						
STKA	Stephens Creek	27.37	158	P	P	16 19 20.9	+0.8
	comp=Z,3.3nm,0.3s,baz=334,slow=8.4,SNR=21						
STKA	Stephens Creek	27.37	158	P	P	16 19 20.8	+0.6
NWAO	Narrogin (SRO)	28.66	203	P	P	16 19 31.9	+0.3
ARMA	Armidale	31.23	142	P	P	16 19 56.0	+1.5
KULM	Kulim	31.50	291	P	P	16 19 55.1	-1.7
KULM				IAmb	IAmb	16 19 56.5	
	comp=Z,13nm,1.2s						
RPSI	Rantau Prapat	32.27	286	P	P	16 20 03.5	-0.1
RPSI				IAmb	IAmb	16 20 06.1	
	comp=Z,16nm,1.2s						
PSI	Prapat	32.30	286	P	P	16 20 04.5	+0.5
	comp=Z,4.2nm,0.4s,baz=234,slow=1.8,SNR=6.9						
JOW	Kunigami	33.33	357	P	P	16 20 12.1	-0.6
CAN	Canberra	33.51	151	P	P	16 20 16.1	+1.9
TOO	Toolangi	33.89	157	P	P	16 20 18.4	+1.0
TOO				IAmb	IAmb	16 20 39.2	
	comp=Z,14nm,1.2s						
NOUC	Port Laguerre	38.34	117	P	P	16 20 56.1	+0.7
CMAR	Chiang Mai Arr	39.42	310	P	P	16 21 04.6	+0.2
	comp=Z,1.0nm,0.6s,baz=136,slow=6.8,SNR=14						
CMAR				PcP	PcP	16 23 10.8	+1.6
	comp=Z,0.6nm,0.7s,baz=169,slow=2.8,SNR=6.1						
WHN	Wuhan	39.88	339	⇓P	P	16 21 15.2	+7.2
NJ2	Nanjing	39.91	345	eP	P	16 21 10.8	+2.6
MJAR	Matsushiro Arr	43.68	10	P	P	16 21 37.4	-1.4
	comp=Z,2.0nm,0.7s,baz=182,slow=9.6,SNR=6.1						
MJAR	Matsushiro Arr	43.68	10	P	P	16 21 37.6	-1.2
KSRS	Korea Array	43.92	358	P	P	16 21 41.5	+0.8
	comp=Z,1.0nm,0.8s,baz=170,slow=8.9,SNR=3.9						
XAN	Xi'an	45.09	335	P	P	16 21 48.8	-1.2
XAN				pP	pP	16 22 05.6	-20
XAN	Xi'an	45.09	335	P	P	16 21 49.3	-0.7
BJT	Baijiatuau	48.14	346	P	P	16 22 13.3	-0.3
LZH	Lanzhou	49.05	332	⇑P	P	16 22 21.4	+0.5
LZH				pP	pP	16 22 59.5	+2.6
LZH				sP	sP	16 23 18.6	+3.8
LZH				PP	PP	16 24 17.3	+1.1
HHC	Hu-ho-hao-te	50.19	342	eP	P	16 22 31.3	+2.0
USA0B	Ussuriysk Arra	50.66	2	P	P	16 22 33.0	+0.4
USA0B				IAmb	IAmb	16 22 52.7	
	comp=Z,15nm,1.4s						
USRK	Ussuriysk Ar.	50.66	2	P	P	16 22 32.8	+0.2
	comp=Z,2.0nm,0.5s,baz=183,slow=7.6,SNR=9.7						
WHZ	Wether Hill Ro	51.05	146	P	P	16 22 36.6	+1.1
WHZ				IAmb	IAmb	16 23 02.8	
	comp=Z,24nm,1.7s						
LSA	Lhasa	51.87	316	P	P	16 22 42.5	0.0
TUWZ	Tuamarina	52.21	139	P	P	16 22 44.5	+0.2
ODAN	Odare	52.95	311	eP	P	16 22 49.9	-0.3
	comp=Z,9.4nm,0.4s						
TAPN	Taplejung	52.97	312	eP	P	16 22 50.1	-0.4
	comp=Z,15nm,0.3s						
RAMN	Ramite	53.59	311	eP	P	16 22 55.0	+0.1
	comp=Z,28nm,0.4s						
GTA	Gaotai	53.62	331	⇑P	P	16 22 55.2	+0.4
GTA				pP	pP	16 23 32.9	+1.5
GTA				sP	sP	16 23 48.4	-0.8
JIRN	Jiri	54.28	311	eP	P	16 22 59.6	-0.4
	comp=Z,11nm,0.3s						
GUN	Gumba	54.64	311	eP	P	16 23 02.3	-0.3
	comp=Z,18nm,0.4s						
PKI	Pulchoki	54.82	310	eP	P	16 23 03.1	-0.8
	comp=Z,7.8nm,0.5s						
PKIN	Phulchoki	54.83	310	eP	P	16 23 03.0	-0.9
	comp=Z,5.6nm,0.5s						
KKN	Kakani	55.03	311	eP	P	16 23 04.8	-0.5
	comp=Z,7.5nm,0.5s						
DMN	Daman	55.07	310	eP	P	16 23 05.1	-0.5
	comp=Z,5.6nm,0.5s						
GKN	Gorkha	55.62	310	eP	P	16 23 09.1	-0.3
	comp=Z,17nm,0.2s						
KOLN	Koldanda	56.29	310	eP	P	16 23 13.8	-0.5
	comp=Z,10nm,0.4s						
DANN	Dangsing	56.47	310	eP	P	16 23 15.0	-0.6
ULN	Ulaanbaatar	57.91	342	P	P	16 23 25.7	+0.5
ULN				IAmb	IAmb	16 23 26.7	
	comp=Z,3.8nm,0.8s						
SONM	Songino Array	58.09	342	P	P	16 23 27.0	+0.7
	comp=Z,1.0nm,0.4s,baz=162,slow=6.5,SNR=20						
SONM	Songino Array	58.09	342	P	P	16 23 26.8	+0.5
WMQ	Urumqi	63.05	327	eP	P	16 24 01.2	+1.2
WMQ	Urumqi	63.05	327	P	P	16 24 00.3	+0.3
WMQ				IAmb	IAmb	16 24 01.5	
	comp=Z,9.3nm,0.9s						
PETK	Petropavlovsk-	64.04	18	P	P	16 24 06.8	+0.6
	comp=Z,4.5nm,0.9s,baz=195,slow=5.8,SNR=5.0						
PETK	Petropavlovsk-	64.04	18	P	P	16 24 06.7	+0.5
NIL	Nilore	66.91	311	P	P	16 24 24.7	-0.3
MK31	Makanchi Array	67.88	327	P	P	16 24 31.7	+0.8
MKAR	Makanchi Array	67.88	327	P	P	16 24 32.0	+1.1
	comp=Z,18nm,0.5s,baz=119,slow=8.3,SNR=197						
MKAR	Makanchi Array	67.88	327	P	P	16 24 31.5	+0.6

MAKZ	Makanchi	68.06	327	P	P	16 24 32.7	+0.7
KDJ	Kajisay	68.24	320	P	P	16 24 34.4	+1.0
KDJ				IAmb	IAmb	16 24 35.2	
	comp=Z,9.0nm,1.2s						
YAK	Yakutsk	68.49	360	P	P	16 24 34.4	+0.2
YAK				IAmb	IAmb	16 24 35.2	
	comp=Z,9.2nm,0.9s						
KZA	Kyzart	69.44	320	P	P	16 24 42.6	+1.5
	SNR=5.9						
UCH	Uchtor	69.99	319	P	P	16 24 46.0	+1.4
	SNR=6.4						
AAK	Ala-Archa	70.21	320	P	P	16 24 46.5	+1.0
	SNR=6.1						
AAK	Ala-Archa	70.21	320	P	P	16 24 45.6	+0.1
AAK				IAmb	IAmb	16 24 47.5	
	comp=Z,5.6nm,0.9s						
AML	Almayashu	70.48	319	P	P	16 24 48.6	+1.1
	SNR=13						
USP	Ospenovka	70.52	320	P	P	16 24 48.1	+0.8
	SNR=9.1						
ARSB	Arslanbob	70.56	318	P	P	16 24 48.5	+0.8
ARSB				IAmb	IAmb	16 24 49.3	
	comp=Z,10.0nm,0.8s						
EKS2	Erkin-Say	70.68	320	P	P	16 24 49.8	+1.5
	SNR=12						
ZALV	Zalesovo Beam	71.23	334	P	P	16 24 50.3	-0.9
	comp=Z,1.9nm,0.5s,baz=126,slow=5.0,SNR=11						
ZALV	Zalesovo Beam	71.23	334	P	P	16 24 50.8	-0.4
BTK	Batken	71.45	316	P	P	16 24 53.4	+0.4
KURK	Kurchatov	72.17	329	P	P	16 24 57.0	+0.1
KURK				IAmb	IAmb	16 24 58.0	
	comp=Z,5.6nm,0.9s						
KK31	Karatay Array	73.01	319	P	P	16 25 01.7	-0.3
KKAR	Karatay Array	73.01	319	P	P	16 25 02.0	-0.1
KKAR	Karatay Array	73.01	319	P	P	16 25 01.4	-0.7
KKAR				IAmb	IAmb	16 25 03.8	
	comp=Z,5.7nm,1.1s						
SOCY	Socotra	77.73	284	P	P	16 25 27.8	-1.9
SOCY				IAmb	IAmb	16 25 31.1	
	comp=Z,10nm,1.3s						
BRVK	Borovoye	77.79	328	P	P	16 25 28.5	-0.5
TIXI	Tiksi	78.16	360	P	P	16 25 30.3	-0.4
GEYT	Alibeck	79.91	310	P	P	16 25 40.5	-0.5
	comp=Z,2.2nm,0.7s,baz=117,slow=5.0,SNR=4.6						
GEYT	Alibeck	79.91	310	P	P	16 25 41.0	0.0
ABKAR	Akbulak array	82.17	322	P	P	16 25 52.1	-0.6
ARU	Arti	85.36	328	P	P	16 26 08.5	-0.1
	comp=Z,0.8nm,0.5s,baz=265,slow=12,SNR=3.6						
ARU	Arti	85.36	328	P	P	16 26 08.6	-0.1
ARU				IAmb	IAmb	16 26 29.4	
	comp=Z,11nm,1.7s						
RAYN	Ar Rayn	87.50	294	P	P	16 26 19.8	-0.1
RAYN				IAmb	IAmb	16 26 21.1	
	comp=Z,6.1nm,0.7s						
ILAR	Eielson Array	93.09	25	P	P	16 26 43.7	-1.3
	comp=Z,0.3nm,0.6s,baz=254,slow=5.0,SNR=7.1						
TORD	Torodi Ar. Bea	128.63	281	PKP	PKPdf	16 32 39.4	+0.6
	comp=Z,0.5nm,0.7s,baz=46,slow=4.2,SNR=3.3						
LPAZ	La Paz	151.06	142	PKPbc	PKPbc	16 33 26.4	+1.0
	comp=Z,0.5nm,0.4s,baz=225,slow=1.4,SNR=3.1						

ZUR 06 16:14:54.4,46°.58N×8°.43E,h3km±2km,MLh0.5/3,1C, Error ellipse: s-maj=3.8km s-min=1.0km az=46.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRIMS	Grimsel Gerste	0.08	269	Pg	Pg	16 14 56.5	+0.5
	0.1nm,SNR=1.0						
GRIMS				Pg	Pg	16 14 56.5	+0.5
GRIMS				Sg	Sg	16 14 57.5	+0.3
NALPS	Val Nalps	0.22	86	Sg	Sg	16 15 02.6	+1.0
HASLI	Hasliberg/Brie	0.26	313	Sg	Sg	16 15 03.4	+0.4
FIESA	Fiescheralp	0.26	237	Sg	Sg	16 15 03.7	+0.7
BNALP	Bannalp	0.29	359	⇑Pg	Pg	16 15 00.5	+0.5
	0.1nm,SNR=0.7						

ROM 06 16:16:14.4±0.1,43°.414N±0°.003×12°.472E±0°.005, h6km±1km,ML1.1/3,1C,Error ellipse: s-maj=0.4km s-min=0.2km az=66.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATVO	AVT- Monte Val	0.06	236	P	Pg	16 16 16.1	+0.1
ATVO				S	Sg	16 16 17.4	+0.2
ATVO				AML	AML		
	comp=E,334μm,0.4s						
ATVO				AML	AML		
	comp=N,172μm,0.2s						
ATPI	Pietralunga -	0.06	306	P	Pg	16 16 16.3	+0.2
ATPI				S	Sg	16 16 17.7	+0.3
ATPI				AML	AML		
	comp=E,124μm,1.3s						
ATPI				AML	AML		
	comp=N,177μm,0.1s						
ATFO	Monte Foce - G	0.09	123	⇑P	Pg	16 16 16.6	+0.1
ATFO				S	Sg	16 16 18.4	+0.4
PIEI	Pieia	0.13	21	P	Pg	16 16 17.7	+0.5
PIEI				S	Sg	16 16 20.5	+1.4
PIEI				AML	AML		
	comp=E,147μm,0.3s						
PIEI				AML	AML		
	comp=N,116μm,0.7s						
MURB	Monte Urbino	0.16	166	P	Pg	16 16 18.2	+0.6
MURB				S	Sg	16 16 21.1	+1.3
MURB				AML	AML		
	comp=E,198μm,0.3s						
MURB				AML	AML		
	comp=N,150μm,1.6s						
BADI	Badiali	0.19	300	P	Pg	16 16 18.9	+0.6
BADI				S	Sg	16 16 22.4	+1.6
BADI				AML	AML		
	comp=E,95μm,1.6s						
BADI				AML	AML		
	comp=N,84μm,1.6s						
NARO	Abbazia di Nar	0.21	22	P	Pg	16 16 19.0	+0.4
NARO				S	Sg	16 16 22.7	+1.2
ATCC	AVT- Casa Cast	0.26	152	P	Pg	16 16 20.2	+0.6
ATCC				S	Sb	16 16 25.0	-1.2

IDC 06 16:29:03.3±9.8,28°.15S×64°.83E,h0km,mb3.6/2, mb1 3.8/2,mb1mx3.2/48,mbtmp3.6/2,Error ellipse: s-maj=528.9km s-min=57.8km az=34.0,Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	61.54	103	P	P	16 39 22.1	-0.5
	0.5nm,0.8s,baz=239,slow=5.5,SNR=6.1						
WRA	Warramunga Arr	63.26	99	P	P	16 39 34.6	+0.5
	0.6nm,0.9s,baz=243,slow=6.9,SNR=2.5						
YKA	Yellowknife Ar	145.66	360	PKPbc	PKPdf	16 48 42.5	-0.5
	0.1nm,0.5s,baz=2.8,slow=5.0,SNR=4.0						

ATH 06 16:46:08.1,38°.11N×20°.41E,h16km±1km,ML2.7/5,Error ellipse: s-maj=2.2km s-min=1.1km az=254.0
THE 06 16:46:08.2,38°.09N×20°.41E,h14km,ML3.0/3,Error ellipse: s-maj=1.1km s-min=0.6km az=267.0
ISC 06 16:46:08.1±1.2,38°.10N±0°.03×20°.41E±0°.06,h16km±5km, n30,σ0°.33/47,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.09	344	P	Pg	16 46 11.2	-0.2
CHV1				S	Sg	16 46 13.5	-0.1
KEF2	Argostoli. Kep	0.09	42	P	Pg	16 46 11.3	-0.2
KEF2				S	Sg	16 46 13.4	-0.2
ARGA	Argostoli. Kep	0.09	34	P	Pg	16 46 11.3	-0.2
ARGA				S	Sg	16 46 13.6	-0.2
ARG2	Argostoli	0.10	37	P	Pg	16 46 11.4	-0.1
ARG2				S	Sg	16 46 13.8	0.0
LXRA	Lixouri, Kepha	0.10	11	P	Pg	16 46 11.5	0.0
LXRA				S	Sb	16 46 14.2	+0.1
LXR1	Lixouri, Cepha	0.10	12	P	Pg	16 46 11.5	-0.1
LXR1				S	Sb	16 46 14.0	-0.1
KEF4	Livadi, Kephal	0.16	4	P	Pg	16 46 12.2	-0.1
KEF4				S	Sb	16 46 15.4	-0.3
VLS	Valsamata	0.16	61	P	Pg	16 46 12.1	-0.2
VLS				S	Sg	16 46 15.2	0.0
	8μm,0.1s						
VLS	Valsamata	0.16	61	P	Pg	16 46 12.1	-0.2
VLS				S	Sg	16 46 15.1	-0.1
VLS				AML	AML	16 46 15.3	
	comp=N,20094μm,0.2s						
VLS				AML	AML	16 46 16.2	
	comp=E,12758μm,0.1s						
KEF1	Kardakata, Kep	0.18	15	P	Pg	16 46 12.5	-0.2
KEF1				S	Sg	16 46 15.5	-0.2
VLMS	Volimes, Zakyn	0.30	138	P	Pg	16 46 14.4	-0.1
VLMS				S	Sg	16 46 19.2	+0.3
VLMS				AML	AML	16 46 23.7	
	comp=E,3366μm,0.2s						
VLMS				AML	AML	16 46 25.0	
	comp=N,4706μm,0.2s						
VSK1	VASILIKIADES	0.33	21	P	Pg	16 46 14.9	-0.2
VSK1				S	Sg	16 46 20.3	+0.5
	comp=N,6μm,0.3s						
KONA	Konidatara, Ke	0.35	21	P	Pg	16 46 15.3	-0.1
KONA				S	Sg	16 46 20.0	-0.4
FSK	Fiskardo	0.38	18	P	Pg	16 46 15.8	-0.1
FSK				S	Sg	16 46 21.5	+0.3
	comp=N,2μm,0.3s						
FSK	Fiskardo	0.38	18	P	Pg	16 46 15.8	-0.1
FSK				S	Sg	16 46 21.2	0.0
FSK				AML	AML	16 46 22.3	
	comp=N,2632μm,0.2s						
FSK				AML	AML	16 46 23.2	
	comp=E,3501μm,0.2s						
KRI1	kERI	0.54	144	P	Pg	16 46 18.2	-0.7
EVGI	Lefkada island	0.56	20	P	Pg	16 46 17.9	-1.3
MGNA	Meganis	0.63	28	P	Pg	16 46 20.2	-0.4
MGNA				S	Sg	16 46 28.8	-0.2
MGNA				AML	AML	16 46 30.6	
	comp=E,1087μm,0.1s						
MGNA				AML	AML	16 46 31.3	
	comp=N,670μm,0.1s						
LKD2	Lefkada island	0.71	16	P	Pg	16 46 21.9	-0.2
LKD2	Lefkada island	0.71	16	P	Pg	16 46 21.7	-0.4
TSLK	Tsoukalades, L	0.75	15	P	Pg	16 46 22.3	-0.5
TSLK	Tsoukalades, L	0.75	15	P	Pg	16 46 22.6	-0.2
PDO	Prodromos	0.79	50	P	Pg	16 46 23.0	-0.4
PDO	Prodromos	0.79	50	P	Pg	16 46 23.0	-0.4
PDO				S	Sb	16 46 34.4	+0.6
PDO				AML	AML	16 46 42.1	
	comp=E,495μm,0.3s						
PDO				AML	AML	16 46 43.3	
	comp=N,1036μm,0.3s						
RLS	Riolos of Patr	0.83	93	P	Pb	16 46 24.1	0.0
PVO	Paravola	1.02	59	P	Pg	16 46 27.7	-0.1
PVO	Paravola	1.02	59	P	Pb	16 46 27.6	+0.3
DRO	Drossia	1.04	98	P	Pn	16 46 28.1	+0.2
ANX	Ano Chora	1.28	67	P	Pb	16 46 32.0	0.0
IGT	Igoumenitsa	1.43	358	P	Pb	16 46 34.8	+0.3

IDC 06 16:49:20.4±5.7,6°.72S×148°.22E,h54km±49km,mb3.5/4, mb1 3.7/6,mb1mx3.4/29,mbtmp3.7/6,ML3.8/1,MS2.1/1, Ms1 2.1/1,ms1mx2.0/20,Error ellipse: s-maj=57.0km s-min=35.0km az=125.0
NEIC 06 16:49:21.4±1.2,6°.58S±0°.08×147°.8E±0°.1,h52km±16km, mb4.4/12,Error ellipse: s-maj=15.2km s-min=10.8km az=111.0
ISC 06 16:49:20.9±0.8,6°.56S±0°.09×147°.8E±0°.1,h51km,n23, σ0°.77/25,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	2.90	192	P	Pn	16 50 04.6	0.0
	4.9nm,0.3s,baz=24,slow=6.2,SNR=27						
PMG				S	Sn	16 50 37.7	-0.7
	11nm,0.3s,baz=15,slow=23,SNR=7.3						
PMG				LR	LR	16 50 56.6	
	comp=Z,35nm,18.9s,baz=58,slow=34						
PMG	Port Moresby	2.90	192		Pn	16 50 04.3	-0.4
PMG					Sn	16 50 37.9	-0.4
RABL	Rabaul	4.94	62	Pn	Pn	16 50 32.9	+0.2
COEN	Coen	8.65	211	Pn	Pn	16 51 24.7	+1.2
MTN	Manton Dam	17.57	248		P	16 53 22.8	0.0
MTN				IAmb	IAmb	16 53 27.6	
	comp=Z,39nm,1.3s						
WB0	Warramunga Arr	18.49	223	P	Pn	16 53 33.6	0.0
WR0	Warramunga Arr	18.52	223	P	Pn	16 53 33.7	-0.3
WR0				IAmb	IAmb	16 53 36.6	
	comp=Z,13nm,1.4s						
WB2	Warramunga Arr	18.64	223	P	P	16 53 34.4	-0.3
WB2				IAmb	IAmb	16 54 03.2	
	comp=Z,18nm,1.3s						
WRA	Warramunga Arr	18.65	223	P	P	16 53 34.4	-0.3
	comp=Z,0.3nm,0.3s,baz=55,slow=10.0,SNR=21						
KNRA	Kununurra	20.74	242	P	P	16 53 58.5	+1.0
KNRA				IAmb	IAmb	16 54 36.9	
	comp=Z,76nm,1.6s						
AS31	Alice Springs	21.63	217	P	P	16 54 06.8	-0.2
ASAR	Alice Springs	21.63	217	P	P	16 54 07.2	+0.2
	comp=Z,1.3nm,0.5s,baz=55,slow=9.0,SNR=64						
ASAR	Alice Springs	21.63	217	P	P	16 54 06.6	-0.4
SOEI	Soe	23.50	261	P	P	16 54 25.6	-1.1
FITZ	Fitzroy Crossi	24.46	240	P	P	16 54 36.3	+1.0
	comp=Z,3.7nm,0.4s,baz=61,slow=9.7,SNR=9.4						
FITZ	Fitzroy Crossi	24.46	240	P	P	16 54 36.2	+1.0
FITZ				IAmb	IAmb	16 54 43.1	
	comp=Z,10nm,1.2s						
STKA	Stephens Creek	25.85	192	P	P	16 54 48.2	+0.4
	comp=Z,1.7nm,0.7s,baz=9.5,slow=12,SNR=4.0						
STKA	Stephens Creek	25.85	192	P	P	16 54 48.4	+0.7
FORT	Forrest	30.39	215	P	P	16 55 28.7	+0.4
FORT				IAmb	IAmb	16 55 32.0	
	comp=Z,18nm,0.9s						
MORW	Morawa	37.40	229	P	P	16 56 29.6	+0.4
MNAI	Manna	44.68	270	P	P	16 57 29.1	-0.2
ILAR	Eielson Array	85.68	23	P	P	17 01 51.7	-2.3
	comp=Z,0.2nm,0.8s,baz=261,slow=4.5,SNR=2.6						
TORD	Torodi Ar. Bea	145.99	284	PKPbc	PKPab	17 08 57.1	+0.4
	comp=Z,0.3nm,0.3s,baz=85,slow=3.1,SNR=5.4						

IDC 06 17:06:09.5±2.4,4°.82S×151°.93E,h88km±12km,mb2.9/3, mb1 3.2/4,mb1mx3.0/23,mbtmp3.3/4,Error ellipse: s-maj=111.9km s-min=14.4km az=126.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.52	10	LR	LR	17 06 12.8	
	comp=Z,22nm,20.9s,baz=165,slow=6.4						
KRVT				P	Pn	17 06 24.8	+0.6
	28nm,0.3s,baz=165,slow=3.8,SNR=44						
KRVT				S	Sn	17 06 37.0	+1.9
	139nm,0.3s,baz=0.0,slow=20,SNR=110						
PMG	Port Moresby	6.58	226	P	Pn	17 07 44.3	+0.6
	0.6nm,0.3s,baz=15,slow=12,SNR=3.1						
PMG				S	Sn	17 08 58.5	+1.3
	1.8nm,0.3s,baz=97,slow=20,SNR=8.5						
WRA	Warramunga Arr	22.79	227	P	P	17 11 03.3	-1.8
	0.3nm,0.7s,baz=52,slow=9.8,SNR=3.6						
ASAR	Alice Springs	25.56	221	P	P	17 11 31.1	+0.6
	0.2nm,0.7s,baz=51,slow=8.7,SNR=3.6						
ILAR	Eielson Array	82.50	22	P	P	17 18 21.9	-0.3
	0.6nm,0.6s,baz=252,slow=5.4,SNR=10						
TORD	Torodi Ar. Bea	149.49	288	PKPbc	PKPbc	17 25 50.1	+0.3
	0.3nm,0.4s,baz=25,slow=3.6,SNR=2.8						

BYKL 06 17:19:43.7±0.2,55°.68N×110°.77E,h7km±3km
IDC 06 17:19:44.3±6.3,55°.66N×110°.63E,h0km,mb1 3.2/3, mb1mx3.1/45,mbtmp3.2/3,ML3.2/3,Error ellipse: s-maj=69.0km s-min=34.8km az=67.0
ISC 06 17:19:43.4±0.7,55°.66N±0°.03×110°.70E±0°.02,h10km,n36, σ2°.78/88,9C-4D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMO	Kumora	0.36	50	⇑iPg	Pg	17 19 48.9	-1.7
KMO				⇓i		17 19 50.1	
KMO				eSg	Sg	17 19 54.7	-0.7
KMO				max			
	1μm,0.3s						
KMO				Smax			
	3μm,1.0s						
NIZ	Nizh Angarsk	0.67	281	⇑iPg	Pg	17 19 56.3	0.0
NIZ				i Sg	Sb	17 20 06.4	-0.1
NIZ				eSb	Sn	17 20 11.5	+2.0
NIZ				Pmax			
	101nm,0.3s						
NIZ				max			
	742nm,0.2s						
YOA	Uoyan	0.75	50	⇑iPg	Pg	17 19 56.1	-1.7
YOA				eSg	Sg	17 20 06.3	-1.3
YOA				Pmax			
	457nm,0.3s						
YOA				Smax			
	2μm,0.7s						
YLYR	Ulyunkhan	0.82	161	⇑iPg	Pg	17 19 58.5	-0.7
YLYR				eSg	Sg	17 20 10.2	+0.2
YLYR				Pmax			
	262nm,0.3s						
YLYR				Smax			
	663nm,0.3s						
UKT	Uakit	1.67	95	⇑iPg	Pn	17 20 12.8	+0.1
UKT				e		17 20 14.2	
UKT				eSg	Sb	17 20 34.9	-0.4
UKT				e		17 20 38.1	
UKT				max			
	188nm,0.6s						
UKT				max			
	887nm,0.5s						
SVKR	Severomuysk	1.67	73	ePg	Pb	17 20 13.3	-1.0
SVKR				eSg	Sn	17 20 34.3	0.0
SVKR				Pmax			
	289nm,0.3s						
SVKR				Smax			
	1μm,0.6s						
SYVR	Suvo	2.04	192	⇑iPn	Pb	17 20 19.7	-0.8
SYVR				ePg	Pg	17 20 22.0	-0.5
SYVR				eSg	Sg	17 20 49.1	+0.1
SYVR				Pmax			
	200nm,0.6s						
SYVR				Smax			
	645nm,0.9s						
OGRR	Ongureny	2.71	223	ePn	Pb	17 20 30.2	-1.7
OGRR				e		17 20 31.2	
OGRR				ePg	Pg	17 20 33.3	-1.9
OGRR				eSn	Sn	17 20 59.0	-0.7
OGRR				eSg	Sg	17 21 10.0	-0.2
OGRR				Pmax			
	31nm,0.2s						
OGRR				Smax			
	200nm,0.4s						
BOD	Bodaibo	2.83	39	ePn	Pn	17 20 29.5	+0.9
BOD				e		17 20 31.1	
BOD				ePg	Pb	17 20 33.3	-0.6
BOD				eSn	Sn	17 21 03.7	+1.0
BOD				eSg	Sb	17 21 09.6	+1.0
BOD				Pmax			
	15nm,0.3s						
BOD				Smax			
	116nm,0.9s						
NLYR	Nelyaty	2.92	71	⇓iPn	Pn	17 20 30.7	+0.8
NLYR				ePg	Pb	17 20 35.0	-0.6
NLYR				e		17 21 09.8	
NLYR				eSg	Sb	17 21 13.3	+1.9
NLYR				Pmax			
	33nm,0.5s						
NLYR				Smax			
	155nm,1.1s						
KELR	Kotokel	3.29	209	ePn	Pn	17 20 36.2	+1.3
KELR				ePg	Pb	17 20 43.3	+1.6
KELR				eSg	Sg	17 21 27.5	-1.3
ZRHB	Zarechye	3.75	215	ePg	Pb	17 20 50.8	+1.3
ZRHB				eSg	Sg	17 21 41.3	-2.2
ZRHB				Pmax			
	65nm,0.8s						
ZRHB				Smax			
	472nm,0.8s						
TRG	Tyrgan	3.87	223	⇓iPn	Pn	17 20 44.8	+1.9
TRG				e		17 20 55.7	
TRG				eSg	Sg	17 21 44.2	-3.2
TRG				max			
	17nm,0.4s						
TRG				Smax			
	111nm,0.3s						
TRTB	Turuntaevo	3.88	209	⇑iPn	Pn	17 20 45.0	+1.9
TRTB				e		17 20 51.8	
TRTB				ePg	Pb	17 20 54.6	+2.7
TRTB				eSg	Sg	17 21 44.9	-3.1
TRTB				e		17 21 46.7	
CIT	Chita	4.01	154	ePn	Pn	17 20 47.3	+2.4
CIT				ePg	Pb	17 20 55.9	+1.8
CIT				eSn	Sn	17 21 32.0	0.0
CIT				eSg	Sg	17 21 48.3	-3.8
CIT				Pmax			
	25nm,0.3s						
CIT				Smax			
	88nm,0.4s						
UUDB	Ulan-Yde	4.20	207	⇑iPg	Pb	17 20 59.7	+2.4
UUDB				e		17 21 31.2	
UUDB				eSg	Sg	17 21 55.9	-2.3
UUDB				Pmax			
	28nm,0.8s						
UUDB				Smax			
	126nm,1.3s						
STDB	Stepnoy Dvoret	4.33	218	ePg	Pb	17 21 02.0	+2.4
STDB				e		17 21 47.3	
STDB				eSg	Sg	17 21 59.6	-2.8
KAB	Kabansk	4.33	215	e	Sg	17 21 57.2	-5.3
KAB				eSg	Sg	17 22 00.2	-2.3
KAB				Smax			
	269nm,1.4s						
CRS	Chara	4.40	70	ePn	Pn	17 20 50.9	+0.7
CRS				ePg	Pb	17 21 02.4	+1.7
CRS				e		17 21 47.9	
CRS				eSg	Sb	17 21 58.6	+4.9
CRS				Pmax			
	69nm,1.0s						
CRS				Smax			
	77nm,1.2s						
HRMR	Khuramsha	4.61	210	ePn	Pn	17 20 55.1	+2.0
HRMR				ePg	Pb	17 21 06.7	+2.4
HRMR				e		17 21 09.2	
HRMR				eSg	Sg	17 22 07.9	-3.4
HRMR				e		17 22 11.2	
HRMR				max			
	35nm,0.5s						
HRMR				max			
	233nm,0.6s						
BGT	Bolshoye Golou	4.79	223	ePn	Pn	17 20 56.5	+1.0
BGT				e		17 20 59.0	
BGT				ePg	Pb	17 21 09.4	+2.1
BGT				e		17 21 53.2	
BGT				eSg	Sg	17 22 13.0	-3.9
BGT				e		17 22 17.5	
BGT				Pmax			
	8.0nm,0.5s						
BGT				max			
	86nm,0.6s						
IRK	Irkutsk	5.11	231	e	Pg	17 21 21.9	+0.7
IRK				e		17 21 59.9	
IRK				eSg	Sg	17 22 23.1	-4.2
IRK				max			
	54nm,0.2s						
IRK				Smax			
	215nm,0.4s						
LSTR	Listvyanka	5.15	225	ePn	Pn	17 21 01.9	+1.4
LSTR				e		17 21 05.3	
LSTR				ePg	Pb	17 21 16.1	+2.6
LSTR				e		17 22 05.9	
LSTR				eSg	Sg	17 22 23.7	-4.9
LSTR				Pmax			
	8.0nm,0.5s						
LSTR				Smax			
	86nm,1.4s						
IVK	Ivanovka	5.37	227	ePn	Pn	17 21 04.8	+1.3
IVK				ePg	Pb	17 21 20.2	+3.0
IVK				e		17 22 11.0	
IVK				eSg	Sg	17 22 30.6	-5.0
IVK				Pmax			
	8.0nm,0.4s						
IVK				Smax			
	97nm,1.1s						
TUP	Tupik	5.46	99	⇑iPn	Pn	17 21 05.3	+0.5
TUP				ePg	Pb	17 21 20.2	+2.2
TUP				eSn	Sn	17 22 05.7	-1.9
TUP				eSg	Sg	17 22 32.1	-6.4
TUP				Pmax			
	17nm,0.9s						
TUP				Smax			
	110nm,1.1s						
TLY	Talaya	5.78	229	ePn	Pb	17 21 12.8	+3.6
TLY				ePg	Pb	17 21 27.7	+3.4

TLY				eSn	Sn	17 22 13.8	-1.7
TLY				eSg	Sg	17 22 42.9	-6.0
TLY				Pmax			
	10.0nm,0.5s						
TLY				Smax			
	83nm,0.9s						
KPC	Khapcheranga	6.05	170	ePn	Pn	17 21 13.3	+0.4
KPC				e		17 21 24.1	
KPC				ePg	Pb	17 21 33.6	+4.8
KPC				eSn	Sn	17 22 21.5	-0.6
KPC				e		17 22 38.1	
KPC				eSg	Sg	17 22 51.8	-5.6
KPC				Pmax			
	10.0nm,1.1s						
KPC				Smax			
	55nm,1.0s						
ARS	Arshan	6.17	236	ePn	Pn	17 21 15.3	+0.8
ARS				e		17 21 28.7	
ARS				Pg	Pg	17 21 36.7	-4.7
ARS				eSn	Sn	17 22 26.4	+1.3
ARS				eSg	Sg	17 22 57.1	-4.2
ARS				Pmax			
	20nm,0.6s						
ARS				Smax			
	250nm,0.6s						
ZAK	Zakamensk	6.92	223	eSg	Sg	17 23 18.2	-7.2
ZAK				Smax			
	32nm,1.0s						
MOY	Mondy	7.02	239⇓	iPn	Pn	17 21 29.1	+2.9
MOY				e		17 21 46.8	
MOY				e		17 22 48.7	
MOY				eSg	Sg	17 23 22.8	-5.6
MOY				max			
	13nm,0.9s						
MOY				Smax			
	57nm,1.3s						
ORL	Orlik	7.12	249	i Pn	Pn	17 21 30.4	+2.7
ORL				e		17 22 47.1	
ORL				e		17 22 52.8	
ORL				eSg	Sg	17 23 26.9	-5.0
ORL				max			
	10.0nm,0.9s						
ORL				Smax			
	110nm,0.8s						
SONM	Songino Array	8.27	201	Pn	Pn	17 21 45.9	+2.5
	0.4nm,0.3s,baz=15,slow=14,SNR=9.9						
SONM				Pg	Pg	17 22 16.2	-5.4
	0.3nm,0.3s,baz=18,slow=17,SNR=6.1						
SONM				Lg	Lg	17 24 05.8	
	1.0nm,0.3s,baz=21,slow=25,SNR=11						
TDJR	Todzha	9.19	255	e		17 24 21.6	
TDJR				Sg	Sn	17 24 29.7	+50
KLR	Kul'dur	14.32	108	Lg	Lg	17 27 10.8	
	0.1nm,0.3s,baz=242,slow=16,SNR=3.8						
ZALV	Zalesovo Beam	15.00	274	Pn	Pn	17 23 16.7	+1.5
	0.1nm,0.3s,baz=74,slow=15,SNR=2.0						
ZALV				Lg	Lg	17 27 40.1	
	0.1nm,0.3s,baz=94,slow=16,SNR=1.2						
MKAR	Makanchi Array	19.76	255	P	Pn	17 24 14.8	+0.1
	0.2nm,0.3s,baz=54,slow=8.0,SNR=13						

UCR 06 17:20:20.7±1.2, 9°53N×84°40W, h21km±3km, MD3.8, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCR2	La Lucha 2	0.45	61	eP	Pb	17 20 29.6	-0.3
LCR2				eS	Sb	17 20 36.4	+0.3
HDC	Heredia	0.55	31	eP	Pb	17 20 31.9	0.0
HDC				eS	Sb	17 20 40.2	+0.8
SRA1	San Ramn	0.56	352	eP	Pb	17 20 31.7	-0.3
SRA1				eS	Sb	17 20 40.1	+0.4
EDDO	Dominical	0.59	117	eP	Pb	17 20 31.3	-1.2
CVTR	Volcan Turrial	0.80	52	eP	Pb	17 20 36.3	+0.2
JTS	Las Juntas de	0.94	324	eP	Pb	17 20 37.2	-1.1
JTS				eS	Sb	17 20 50.2	0.0
ARE1	Arenal 1	0.98	341	eP	Pb	17 20 39.0	0.0
EDBA	Buenos Aires	1.17	108	eS	Sn	17 20 57.3	+0.1
AMAS	Alto Masis	1.23	332	i P	Pn	17 20 42.3	-0.4
ACAL	Aguas Claras	1.27	330	i P	Pn	17 20 43.1	-0.2
ACAL				i S	Sb	17 21 00.4	+0.6
GUAI	GUAI	1.32	304	i P	Pn	17 20 43.6	-0.3
CUI	Cuipilapa	1.35	326	eP	Pn	17 20 44.6	+0.1
CUI				i S	Sb	17 21 02.4	+0.1
HORNC	Hornillas	1.41	327	i P	Pn	17 20 45.1	-0.1
HORNC				i S	Sn	17 21 03.4	+0.3
GUAB	Guayabo de Bag	1.43	325	i P	Pn	17 20 45.8	+0.3

IDC 06 17:26:14.7±0.9, 7°23S×128°24E, h0km, mb4.0/7, mb1 4.1/12, mb1mx3.9/47, mbtmp4.0/12, ML3.7/4, MS2.9/2, Ms1 2.9/2, ms1mx2.5/34, Error ellipse: s-maj=32.1km s-min=17.3km az=69.0
NEIC 06 17:26:17.7±1.5, 7°29S±0°06×128°37E±0°06, h29km±7km, mb4.2/20, Error ellipse: s-maj=11.2km s-min=6.0km az=49.0
ISC 06 17:26:18.8±0.6, 7°39S±0°06×128°35E±0°08, h35km, n46, σ1°25/41, mb4.2/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.98	102	Pn	Pn	17 27 03.5	-0.2
SOEI	Soe	4.67	240	Pn	Pn	17 27 27.6	+0.6
FAKI	Fak Fak	5.90	41	Pn	Pn	17 27 41.4	-2.4
MTN	Manton Dam	6.07	153	Pn	Pn	17 27 46.5	+0.4
SIJI	Sorong	7.10	24	Pn	Pn	17 27 58.4	-1.9
	1.2nm,0.3s,baz=218,slow=16,SNR=4.1						
SIJI				Sn	Sn	17 29 11.9	-8.0
	0.2nm,0.3s,baz=343,slow=19,SNR=2.0						
KNRA	Kununurra	8.24	177	Pn	Pn	17 28 16.1	+0.1
FITZ	Fitzroy Crossi	10.96	194	Pn	Pn	17 28 55.0	+1.6
	0.4nm,0.3s,baz=30,slow=6.7,SNR=6.2						
FITZ				Sn	Sn	17 30 54.4	-0.4
	0.2nm,0.3s,baz=78,slow=20,SNR=3.2						
FITZ				LR	LR	17 33 18.1	
	comp=Z,32nm,18.4s,baz=10.0,slow=38						
FITZ	Fitzroy Crossi	10.96	194		Pn	17 28 54.1	+0.8
WB0	Warramunga Arr	13.63	155		Pn	17 29 30.0	+0.3
WRAB	Tennant Creek	13.76	156	Pn	Pn	17 29 32.5	+1.0
WRA	Warramunga Arr	13.76	156	Pn	Pn	17 29 32.5	+1.0
	0.6nm,0.3s,baz=336,slow=12,SNR=19						
WRA				Sn	Sn	17 32 00.6	-2.7
	0.7nm,0.3s,baz=336,slow=23,SNR=7.7						
WRA	Warramunga Arr	13.76	156		Pn	17 29 31.6	0.0
WB2	Warramunga Arr	13.77	156		Pn	17 29 32.1	+0.4
WR0	Warramunga Arr	13.86	155	Pn	Pn	17 29 33.5	+0.6
PSAC2	Pilbara Seismi	16.28	209	Pn	Pn	17 30 05.0	0.0
PSAC2				IAmb	IAmb	17 30 19.8	
	comp=Z,28nm,1.4s						
PSAC1	Pilbara Seismi	16.30	210	Pn	Pn	17 30 06.6	+1.4
PSAC1				IAmb	IAmb	17 30 11.6	
	comp=Z,11nm,0.9s						
PSAA1	Pilbara Seismi	16.32	209	Pn	Pn	17 30 05.0	-0.5
PSAA1				IAmb	IAmb	17 30 18.4	
	comp=Z,17nm,1.1s						
PSAB1	Pilbara Seismi	16.32	209	Pn	Pn	17 30 06.0	+0.5
PSAB3	Pilbara Seismi	16.33	209	Pn	Pn	17 30 04.1	-1.5
PSAB3				IAmb	IAmb	17 30 09.2	
	comp=Z,20nm,1.3s						
PSAC3	Pilbara Seismi	16.37	209	Pn	Pn	17 30 05.0	-1.0
PSAD3	Pilbara Seismi	16.41	209	Pn	Pn	17 30 03.5	-3.0
PSAD3				IAmb	IAmb	17 30 17.6	
	comp=Z,38nm,1.6s						
AS31	Alice Springs	17.04	162	P	Pn	17 30 13.4	-1.1
ASAR	Alice Springs	17.04	162	P	Pn	17 30 15.7	+1.1
	comp=Z,0.1nm,0.3s,baz=333,slow=9.3,SNR=17						
ASAR				S	Sn	17 33 21.1	-1.9
	comp=Z,0.2nm,0.3s,baz=323,slow=20,SNR=5.4						
ASAR				LR	LR	17 36 49.5	
	comp=Z,60nm,21.0s,baz=337,slow=37						
ASAR	Alice Springs	17.04	162	P	Pn	17 30 15.1	+0.6
PMG	Port Moresby	18.71	97	P	Pn	17 30 37.5	+2.4
	comp=Z,0.2nm,0.3s,baz=247,slow=13,SNR=1.7						
BBOO	Buckleboo	26.29	165	P	P	17 31 53.5	+2.4
STKA	Stephens Creek	27.31	155	P	P	17 32 03.4	+3.0
	comp=Z,1.5nm,0.7s,baz=335,slow=13,SNR=3.6						
STKA	Stephens Creek	27.31	155	P	P	17 32 00.9	+0.5
DLV	T Lat	27.55	314	P	P	17 32 02.0	-0.9
CMAR	Chiang Mai Arr	38.75	312	P	P	17 33 39.5	-0.6
	comp=Z,0.4nm,0.7s,baz=138,slow=7.3,SNR=4.2						
MJAR	Matsushiro Arr	44.67	11	P	P	17 34 27.8	-0.5
	comp=Z,1.8nm,0.9s,baz=201,slow=9.1,SNR=3.3						
LSA	Lhasa	51.37	318	P	P	17 35 18.9	-1.9
LSA				IAmb	IAmb	17 35 22.1	
	comp=Z,1.8nm,0.6s						
USRK	Ussuriysk Ar.	51.45	3	P	P	17 35 19.9	-0.7
	comp=Z,2.6nm,1.1s,baz=167,slow=9.9,SNR=2.7						
ULN	Ulaanbaatar	58.15	343	P	P	17 36 09.6	+0.4
ULN				IAmb	IAmb	17 36 10.4	
	comp=Z,2.1nm,0.9s						
SONM	Songino Array	58.31	343	P	P	17 36 10.3	0.0
	comp=Z,1.2nm,0.8s,baz=152,slow=6.5,SNR=9.9						
SONM	Songino Array	58.31	343	P	P	17 36 09.4	-0.9
MK31	Makanchi Array	67.67	328	P	P	17 37 12.7	+0.3
MK31				IAmb	IAmb	17 37 13.6	
	comp=Z,2.7nm,0.8s						
MKAR	Makanchi Array	67.67	328	P	P	17 37 13.0	+0.5
	comp=Z,2.8nm,0.7s,baz=130,slow=7.8,SNR=38						
MKAR	Makanchi Array	67.67	328	P	P	17 37 12.2	-0.2
MAKZ	Makanchi	67.84	328	P	P	17 37 11.9	-1.6
MAKZ				IAmb	IAmb	17 37 14.5	
	comp=Z,2.9nm,0.8s						
AAK	Ala-Archa	69.79	321	P	P	17 37 26.1	+0.1
AAK				IAmb	IAmb	17 37 27.7	
	comp=Z,2.8nm,0.8s						
ARSB	Arslanbob	70.09	319	P	P	17 37 26.5	-1.3
ZAA0	Zalesovo Array	71.22	335	P	P	17 37 33.4	-0.7
ZAA0				IAmb	IAmb	17 37 34.6	
	comp=Z,3.3nm,0.8s						
ZALV	Zalesovo Beam	71.22	335	P	P	17 37 34.0	-0.1
	comp=Z,3.7nm,0.8s,baz=128,slow=5.2,SNR=15						
ZALV	Zalesovo Beam	71.22	335	P	P	17 37 33.5	-0.6
KURK	Kurchatov	72.01	329	P	P	17 37 37.1	-1.9

MAN 06 17:48:02.4, 5°55N×126°37E, h60km, MS3.5
IDC 06 17:48:06.0±1.1, 5°77N×126°23E, h116km±13km, mb3.3/5, mb1 3.5/6, mb1mx3.1/43, mbtmp3.7/6, MS2.8/1, Ms1 2.8/1, ms1mx2.3/19, Error ellipse: s-maj=63.6km s-min=14.6km az=67.0
ISC 06 17:48:03.1±1.4, 5°55N±0°09×126°4E±0°1, h79km±13km, n18, σ1°97/24, mb3.7/5, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.86	310	eP	Pn	17 48 19.8	-0.6
DDMP				eS	Sn	17 48 32.8	-0.6
MATI	Mati	1.39	355	eP	Pn	17 48 26.6	-0.3
MATI				eS	Sn	17 48 43.4	-1.5
DAV	Davao City (W)	1.71	332	P	Pn	17 48 31.5	+0.4
	44nm,0.3s,baz=236,slow=18,SNR=2.1						
DAV				S	Sn	17 48 52.9	+0.7
	53nm,0.3s,baz=92,slow=23,SNR=8.0						
DMPH	Davao City--Mi	1.75	330⇓	iP	Pn	17 48 31.9	+0.2
DMPH				i S	Sn	17 48 53.7	+0.4
KCP	Kidapawan	1.93	319⇑	eP	Pn	17 48 34.8	+0.6
KCP				i S	Sn	17 49 01.3	+3.5
SKMP	Bagumbayan, Su	2.06	298	eP	Pn	17 48 34.8	-1.0
SKMP				eS	Sn	17 49 00.2	-0.6
BUKP	Musuan	2.66	331	eP	Pn	17 48 44.0	+0.2
BUKP				eS	Sn	17 49 15.4	+0.3
CTBH	Cotabato--PC H	2.69	308⇑	iP	Pn	17 48 44.4	+0.1
CGP	Cagayan de Oro	3.33	330⇓	eP	Pn	17 48 54.2	+1.3
CGP				eS	Sn	17 49 37.3	+5.8
BUTP	Butuan	3.48	348	eP	Pn	17 48 55.3	+0.4
PAGZ	Pagadian	3.75	308	eP	Pn	17 48 58.4	-0.2
SIJI	Sorong	8.03	142	P	Pn	17 50 02.5	+5.5
	0.3nm,0.3s,baz=204,slow=12,SNR=1.8						
FITZ	Fitzroy Crossi	23.51	182	LR	LR	18 04 27.9	
	comp=Z,22nm,18.0s,baz=198,slow=41						
WRA	Warramunga Arr	26.52	163	P	P	17 53 34.9	+1.4
	0.5nm,0.4s,baz=342,slow=10.0,SNR=19						
ASAR	Alice Springs	29.95	166	P	P	17 54 05.5	+1.4
	0.6nm,0.4s,baz=345,slow=7.3,SNR=24						
STKA	Stephens Creek	39.95	160	P	P	17 55 31.8	+2.0
	1.0nm,0.4s,baz=345,slow=8.3,SNR=5.1						
MKAR	Makanchi Array	55.87	325	P	P	17 57 29.3	-3.4
	0.4nm,0.4s,baz=115,slow=7.6,SNR=7.2						
ILAR	Eielson Array	83.62	26	P	P	18 00 20.7	-1.9
	0.2nm,0.4s,baz=265,slow=4.7,SNR=2.0						

JMA 06 17:48:08.8±0.2, 24°68N×121°80E, h80km±2km, M3.1
TAP 06 17:48:09.7, 24°70N×121°82E, h72km, ML3.8, B
ISC 06 17:48:09.6±1.2, 24°72N±0°03×121°84E±0°02, h77km±5km, n131, σ0°71/222, 38C-5D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILA	Ilan	0.09	300	i P	Pn	17 48 21.1	+0.5
	baz=330						
ILA				S	Sn	17 48 29.6	+0.8
	baz=330						
TWC	Suao	0.11	175⇓	iP	Pn	17 48 21.1	+0.4
	baz=147						
TWC				S	Sn	17 48 29.2	+0.3
	baz=147						
NTC	Toucheng	0.14	357⇑	eP	Pn	17 48 20.8	0.0
	baz=16						
NTC				eS	Sn	17 48 28.8	-0.2
	baz=16						
TWE	Neicheng	0.16	271⇑	iP	Pn	17 48 21.1	+0.3
	baz=287						
TWE				S	Sn	17 48 29.5	+0.4
	baz=287						
SLBB	Yuanshan	0.19	281	⇑P	Pn	17 48 21.2	+0.2
	baz=301						
SLBB				eS	Sn	17 48 29.5	+0.1
	baz=301						
TIPB	Shuangxi	0.25	357⇑	iP	Pn	17 48 21.4	+0.1
	baz=3.0						
TIPB				S	Sn	17 48 29.4	-0.6
	baz=3.0						
ENTT	Nioudou	0.26	252⇑	iP	Pn	17 48 21.6	+0.3
	baz=266						
ENTT				S	Sn	17 48 30.0	0.0
	baz=266						
ENA	Nanau	0.30	197⇓	eP	Pn	17 48 21.8	+0.2
	baz=197						
ENA				eS	Sn	17 48 31.0	+0.7
	baz=197						
NWLT	Wulai	0.31	281⇑	iP	Pn	17 48 21.5	-0.1
	baz=295						
NWLT				eS	Sn	17 48 30.0	-0.5
	baz=295						
EOS1	EOS1	0.31	122	⇓P	Pn	17 48 22.1	+0.6
	baz=113						
EOS1				eS	Sn	17 48 31.4	+1.1
	baz=113						
NDT	Datong Townshi	0.32	249⇑	iP	Pn	17 48 21.9	+0.2
	baz=261						
NDT				eS	Sn	17 48 30.3	-0.2
	baz=261						
TWB1	Santiao Chiao	0.32	25⇑	iP	Pn	17 48 21.7	+0.1
	baz=36						
TWB1				S	Sn	17 48 30.1	-0.4
	baz=36						
TWA	Mucha	0.35	318⇑	iP	Pn	17 48 21.9	+0.1
	baz=324						
TWA				S	Sn	17 48 30.9	0.0
	baz=324						
NWF	Wu-fen Shan	0.35	352⇑	iP	Pn	17 48 22.1	+0.1
	baz=359						
NWF				S	Sn	17 48 30.2	-0.9
	baz=359						
WFSB	Wu-fen Shan	0.35	352	⇑P	Pn	17 48 22.1	+0.2
	baz=359						
WFSB				S	Sn	17 48 30.2	-0.8
	baz=359						
NHDH	Xindian Distri	0.37	311	⇑P	Pn	17 48 22.1	+0.1
	baz=308						
NHDH				eS	Sn	17 48 31.0	-0.2
	baz=308						
TATO	Taipei	0.41	309	⇑P	Pn	17 48 22.2	0.0
	baz=306						
TATO				S	Sn	17 48 31.0	-0.6
	baz=306						
YHNB	Yeheng	0.42	263	⇑P	Pn	17 48 22.2	-0.2
	baz=266						
YHNB				S	Sn	17 48 30.8	-1.2
	baz=266						
TAP1	Taipei	0.43	318⇑	iP	Pn	17 48 22.5	+0.1
	baz=315						
TAP1				S	Sn	17 48 31.6	-0.2
	baz=315						
NSK	Sanguang	0.44	265⇑	iP	Pn	17 48 22.3	-0.3
	baz=266						
NSK				eS	Sn	17 48 30.9	-1.3
	baz=266						
TAP	Taipei	0.44	317	⇑P	Pn	17 48 22.5	0.0
	baz=315						
TAP				S	Sn	17 48 32.1	+0.1
	baz=315						
YM01	YM01	0.49	330⇑	iP	Pn	17 48 23.0	0.0
	baz=339						
YM01				S	Sn	17 48 32.8	-0.1
	baz=339						
YM10	YM10	0.50	330⇑	iP	Pn	17 48 23.1	0.0
	baz=326						
YM10				S	Sn	17 48 33.1	0.0
	baz=326						
NNSB	Datong	0.51	235	⇑P	Pn	17 48 23.3	+0.1
	baz=241						
NNSB				S	Sn	17 48 32.9	-0.4
	baz=241						
NNSH	Datong	0.51	235	P	Pn	17 48 23.4	+0.2
	baz=239						
NNSH				eS	Sn	17 48 32.7	-0.6
	baz=239						
YM11	YM11	0.51	332⇑	iP	Pn	17 48 23.1	-0.1
	baz=340						
YM11				S	Sn	17 48 32.8	-0.4
	baz=340						
NNS	Nan Shan	0.51	237⇑	iP	Pn	17 48 23.3	+0.1
	baz=242						
NNS				S	Sn	17 48 32.8	-0.5
	baz=242						
YM08	YM08	0.52	334⇑	iP	Pn	17 48 23.0	-0.2
	baz=342						
YM08				eS	Sn	17 48 32.3	-1.0
	baz=342						
YM03	YM03	0.53	329	⇑P	Pn	17 48 23.2	-0.2
	baz=332						
YM03				S	Sn	17 48 32.9	-0.8
	baz=332						
TWS1	Kuangyinshan	0.54	315⇑	iP	Pn	17 48 23.7	+0.3
	baz=310						
TWS1				eS	Sn	17 48 34.1	+0.5
	baz=310						
ANP	Anpu	0.55	328	⇑P	Pn	17 48 23.4	-0.2
	baz=332						
ANP				S	Sn	17 48 33.1	-0.8
	baz=332						
WLTB	Daxi	0.55	284⇑	iP	Pn	17 48 23.7	+0.2
	baz=287						
WLTB				S	Sn	17 48 33.9	+0.2
	baz=287						
NTST	Danshui	0.57	322	eP	Pn	17 48 23.9	+0.2
	baz=331						
NTST				eS	Sn	17 48 34.8	+0.8
	baz=331						
NACB	Ninganchiao	0.59	202	⇑P	Pn	17 48 23.1	-0.8
	baz=210						
NACB				eS	Sn	17 48 33.5	-0.8
	baz=210						
TWY	Chenhua	0.59	339⇑	iP	Pn	17 48 24.2	+0.3
	baz=342						
TWY				S	Sn	17 48 35.1	+0.6
	baz=342						
ETLH	Xiulin Townshi	0.60	213	eP	Pn	17 48 23.9	-0.2
	baz=212						
ETLH				eS	Sn	17 48 34.7	-0.1
	baz=212						
NCU	National Centr	0.64	293⇑	iP	Pn	17 48 24.6	+0.2
	baz=287						
NCU				eS	Sn	17 48 35.2	-0.1
	baz=287						
NCUH	Zhongli	0.64	293⇑	eP	Pn	17 48 24.5	+0.1
	baz=287						
NCUH				S	Sn	17 48 35.6	+0.2
	baz=287						
TWD	Chiawan	0.67	199	eP	Pn	17 48 24.1	-0.6
	baz=206						
TWD				eS	Sn	17 48 34.9	-1.0
	baz=206						
LIOB	Emei	0.75	265⇑	iP	Pn	17 48 25.6	0.0
	baz=265						
LIOB				eS	Sn	17 48 36.6	-0.8
	baz=265						
TWT	Tachien	0.76	233	P	Pn	17 48 26.6	+0.8
	baz=232						
TWT				eS	Sn	17 48 38.5	+0.5
	baz=232						
NSTT	Nanjuang	0.77	264⇑	iP	Pn	17 48 25.6	-0.1
	baz=264						
NSTT				eS	Sn	17 48 37.3	-0.4
	baz=264						
HWA	Hwalien	0.77	196	eP	Pn	17 48 25.7	-0.1
	baz=204						
TDCB	Techi	0.77	233	⇑P	Pn	17 48 26.6	+0.7
	baz=233						
TDCB				eS	Sn	17 48 37.9	-0.2
	baz=233						
WHF	Hehuan Shan	0.77	223	eP	Pn	17 48 26.3	0.0
	baz=216						
WHF				eS	Sn	17 48 38.2	-0.4
	baz=216						
SBCB	Hsinchu	0.78	276	⇑P	Pn	17 48 26.0	+0.1
	baz=277						
SBCB				eS	Sn	17 48 37.6	-0.3
	baz=277						
HSN	Hsinchu	0.79	276	P	Pn	17 48 25.7	-0.3
	baz=280						
HSN				S	Sn	17 48 37.1	-1.1
	baz=280						
ENLB	Shoufeng	0.84	195	eP	Pn	17 48 26.0	-0.5
	baz=203						
ENLB				eS	Sn	17 48 39.5	+0.4
	baz=203						
CHGB	Renai	0.89	223	⇑P	Pn	17 48 27.9	+0.5
	baz=214						
CHGB				S	Sn	17 48 40.7	+0.1
	baz=214						
WHP	Taichung City	0.92	242⇑	eP	Pn	17 48 28.4	+0.7
	baz=250						
WHP				S	Sn	17 48 41.0	-0.1
	baz=250						
NMLH	Miaoli	0.97	259	eP	Pn	17 48 28.4	+0.3
	baz=259						
NMLH				eS	Sn	17 48 42.1	+0.2
	baz=259						
OWD	Renai	0.97	219	eP	Pn	17 48 28.7	+0.5
	baz=212						
OWD				eS	Sn	17 48 42.2	0.0
	baz=212						
NSY	Sanyi	1.03	253	⇑P	Pn	17 48 29.2	+0.4
	baz=252						
NSY				S	Sn	17 48 43.5	+0.4
	baz=252						
TWQ1	Liyutan	1.04	249	P	Pn	17 48 29.1	+0.2
	baz=248						
TWQ1				S	Sn	17 48 43.1	-0.2
	baz=248						
JYNG	Yonagunijimaku	1.04	105	P	Pn	17 48 28.8	-0.1
JYNG				S	Sn	17 48 42.9	-0.5
PTSB	Yuanli	1.07	256	eP	Pn	17 48 29.1	-0.1
	baz=264						
PTSB				eS	Sn	17 48 43.4	-0.6
	baz=264						
DPDB	Guoxing	1.07	231	eP	Pn	17 48 30.0	+0.6
	baz=240						
DPDB				eS	Sn	17 48 45.1	+0.9
	baz=240						
YOJ	Yonaguni jima	1.10	103	eP	Pn	17 48 29.4	-0.2
	baz=102						
YOJ				eS	Sn	17 48 43.9	-0.7
	baz=102						
YOJ	Yonaguni jima	1.10	103	P	Pn	17 48 29.5	-0.1
YOJ				eS	Sn	17 48 44.1	-0.5
EGFH	Guangfu	1.11	200	eP	Pn	17 48 28.9	-0.9
	baz=198						
EGFH				eS	Sn	17 48 43.9	-1.0
	baz=198						
VWDT	VWDT	1.15	214	eP	Pn	17 48 30.8	+0.5
	baz=206						
VWDT				eS	Sn	17 48 46.0	+0.2
	baz=206						
WDJ	Dajia District	1.15	252	eP	Pn	17 48 30.6	+0.3
	baz=251						
WDJ				eS	Sn	17 48 46.4	+0.5
	baz=251						
TCU	Taichung	1.20	242	eP	Pn	17 48 31.3	+0.4
	baz=241						
TYC	Yuchr	1.21	228	eP	Pn	17 48 31.6	+0.6
	baz=234						
TYC				eS	Sn	17 48 48.0	+0.9
	baz=234						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SSLB	Suanglung	1.23	221	⇓P	Pn	17 48 32.0	+0.7
	baz=231						
SSLB				eS	Sn	17 48 48.4	+0.7
	baz=231						
HGSD	Ruisui	1.28	197	eP	Pn	17 48 31.6	-0.3
	baz=203						
HGSD				eS	Sn	17 48 48.6	-0.1
	baz=203						
EHY	Hungye	1.30	201	eP	Pn	17 48 30.9	-1.3
	baz=200						
EHY				eS	Sn	17 48 47.6	-1.6
	baz=200						
WCHH	Zhanghua	1.33	242	eP	Pn	17 48 32.7	+0.1
	baz=240						
WCHH				eS	Sn	17 48 50.5	+0.7
	baz=240						
WJS	Zhushan	1.35	229	eP	Pn	17 48 33.7	+0.9
	baz=238						
WJS				eS	Sn	17 48 51.6	+1.2
	baz=238						
WHYT	Xinyi Township	1.36	222	eP	Pn	17 48 34.0	+1.0
	baz=232						
YULB	Yu-li	1.41	201	eP	Pn	17 48 32.1	-1.5
	baz=199						
YULB				eS	Sn	17 48 49.8	-1.9
	baz=199						
TWF1	Yuli	1.45	200	eP	Pn	17 48 33.2	-0.9
	baz=198						
TWF1				eS	Sn	17 48 50.6	-2.0
	baz=198						
ALS	Alishan	1.53	218	eP	Pn	17 48 36.2	+0.8
	baz=226						
ALS				eS	Sn	17 48 56.7	+1.8
	baz=226						
CHN5	Tsauling	1.54	224	eP	Pn	17 48 35.9	+0.6
	baz=231						
CHN5				eS	Sn	17 48 55.7	+0.9
	baz=231						
WGK	Gukeng	1.55	229	eP	Pn	17 48 36.0	+0.6
	baz=237						
WGK				eS	Sn	17 48 56.2	+1.1
	baz=237						
WDLH	Douliu	1.57	229	eP	Pn	17 48 36.2	+0.5
	baz=238						
WDLH				eS	Sn	17 48 56.2	+0.8
	baz=238						
RLNB	Erlin	1.58	239	eP	Pn	17 48 36.1	+0.3
	baz=237						
RLNB				eS	Sn	17 48 55.3	-0.3
	baz=237						
FULB	Fuli	1.59	198	eP	Pn	17 48 35.8	-0.2
	baz=202						
FULB				eS	Sn	17 48 56.6	+0.6
	baz=202						
WTCT	Ta-ch'eng	1.66	239	eP	Pn	17 48 36.9	+0.1
	baz=238						
WTCT				eS	Sn	17 48 57.2	-0.3
	baz=238						
CHKT	Chengkung	1.67	195	eP	Pn	17 48 36.9	-0.1
	baz=185						
ELDTW	Lidau	1.70	206	eP	Pn	17 48 37.6	+0.1
	baz=198						
ELDTW				eS	Sn	17 48 58.6	-0.1
	baz=198						
CHN2	Minshiung	1.72	227	eP	Pn	17 48 38.7	+1.1
	baz=235						
IRIF	Iriomote-Funau	1.77	102	P	Pn	17 48 38.1	-0.1
IRIF				S	Sn	17 48 59.4	-0.6
CHY	Chiayi	1.77	227	eP	Pn	17 48 38.7	+0.4
	baz=234						
CHY				eS	Sn	17 49 01.2	+1.0
	baz=234						
CHN4	Tsaushan	1.77	220	eP	Pn	17 48 39.1	+0.7
	baz=219						
TPUB	Ta-pu	1.79	218	eP	Pn	17 48 39.1	+0.4
	baz=218						
WSF	Szhu	1.83	234	eP	Pn	17 48 39.4	+0.3
	baz=232						
WSF				eS	Sn	17 49 01.8	+0.3
	baz=232						
STYT	Tauyuan	1.84	213	eP	Pn	17 48 39.7	+0.4
	baz=212						
WTP	Ta-pu	1.84	218	eP	Pn	17 48 40.1	+0.7
	baz=227						
WLGB	Puzi	1.87	229	eP	Pn	17 48 40.2	+0.5
	baz=236						
WLGB				eS	Sn	17 49 02.7	+0.2
	baz=236						
HATJ	Hateruma jima	1.91	110	P	Pn	17 48 40.5	+0.3
HATJ				S	Sn	17 49 03.9	+0.4
SNST	Tainan City	1.93	220	eP	Pn	17 48 41.1	+0.7
	baz=219						
CHN1	Nanshi	1.94	218	eP	Pn	17 48 41.0	+0.4
	baz=216						
CHN1				eS	Sn	17 49 05.1	+0.8
	baz=216						
SGST	Jiashian	1.99	215	eP	Pn	17 48 41.5	+0.2
	baz=223						
SGST				eS	Sn	17 49 05.8	+0.3
	baz=223						
TWG	Pinlang	2.02	201	eP	Pn	17 48 40.8	-0.8
	baz=189						
TWG				eS	Sn	17 49 04.4	-1.6
	baz=189						
TWGBT	Beinan	2.02	200	eP	Pn	17 48 40.7	-0.9
	baz=189						
TWGBT				eS	Sn	17 49 04.3	-1.7
	baz=189						
CHN8	Yiju	2.02	228	eP	Pn	17 48 42.1	+0.4
	baz=237						
TWH	Lutao	2.03	189	eP	Pn	17 48 41.0	-0.7
	baz=182						
TWH				eS	Sn	17 49 04.0	-2.2
	baz=182						
PTTC	Pingtan	2.03	293	eP	Pn	17 48 41.1	-0.6
	baz=292						
JKRS	Kuro-shima	2.04	103	P	Pn	17 48 42.1	+0.3
JKRS				S	Sn	17 49 06.3	-0.1
SLGT	Liugui	2.04	213	eP	Pn	17 48 43.1	+1.2
	baz=212						
JIJ	Ishigaki jima	2.13	99	P	Pn	17 48 43.1	0.0
JIJ				eS	Sn	17 49 07.9	-0.8
VWUC	VWUC	2.19	278	eP	Pn	17 48 43.2	-0.6
	baz=277						
MATB	Ma-tsu	2.23	310	eP	Pn	17 48 43.6	-0.8
	baz=309						
SSD	Sandimen	2.25	210	eP	Pn	17 48 46.0	+1.2
	baz=220						
JISG	Ishigakijimahi	2.25	93	P	Pn	17 48 45.0	+0.2
JISG				eS	Sn	17 49 11.2	-0.5
ECL	Taimali	2.26	201	eP	Pn	17 48 44.8	-0.2
	baz=194						
TWM1	Shoushan	2.29	215	eP	Pn	17 48 47.1	+1.8
	baz=223						
SGLT	Jiouru	2.34	212	eP	Pn	17 48 46.9	+1.0
	baz=221						
MASBT	Mashibuluo	2.37	208	eP	Pn	17 48 47.5	+1.1
	baz=219						
PNG	Penghu	2.38	242	eP	Pn	17 48 45.6	-0.9
	baz=241						
PHUB	P'eng-hu	2.39	240	eP	Pn	17 48 45.3	-1.3
	baz=239						
WDGT	Dungji	2.46	234	eP	Pn	17 48 47.7	+0.1
	baz=233						
PTMZ	Houxiangcun	2.49	278	eP	Pn	17 48 47.5	-0.4
	baz=277						
EAST	Anshuo	2.50	202	eP	Pn	17 48 48.6	+0.5
	baz=193						
SSPT	Xinbi	2.51	208	eP	Pn	17 48 49.6	+1.4
	baz=207						
WSSB	Gushan	2.52	215	eP	Pn	17 48 49.9	+1.4
	baz=214						
SCZT	Fangliau	2.59	206	eP	Pn	17 48 49.9	+0.6
	baz=217						
JTJ	Tarama	2.61	91	P	Pn	17 48 50.7	+1.2
JTJ				eS	Sn	17 49 21.1	+0.9
LYJJ	Jianjiangzhen	2.62	315	⇓eP	Pn	17 48 48.8	-0.8
	baz=313						
XPSS	Dashiqiu	2.66	326	eP	Pn	17 48 49.9	-0.3
	baz=325						
VCHM	Qimei	2.67	236	eP	Pn	17 48 49.8	-0.6
	baz=235						
LAY	Lan-yu	2.68	186	eP	Pn	17 48 49.5	-1.0
	baz=178						
MHZQ	Yeshan	2.89	299	eP	Pn	17 48 52.8	-0.5
	baz=297						
TWKBT	Hengchun	2.92	199	eP	Pn	17 48 54.0	+0.2
	baz=199						
KNM	Kinmen	3.12	265	eP	Pn	17 48 58.4	+2.0
	baz=263						
JMJ	Miyako jima 2	3.14	88	eP	Pn	17 48 59.2	+2.4
	baz=88						
KNMB	Chin-men Tao	3.15	266	eP	Pn	17 48 56.0	-0.8
	baz=265						
AXDP	Jialang	3.52	274	eP	Pn	17 49 01.6	-0.3
	baz=272						
ZPLA	Ao Xicun	3.81	259	eP	Pn	17 49 05.5	-0.4
	baz=257						
ZZJH	Jiuhuzhen	3.84	267	eP	Pn	17 49 06.9	+0.6
	baz=265						

*IDC **06** 17:55:16.6±1.1, 30.°31S×179.°27W, h314^{km}±17^{km}, mb2.7/2, mb1 3.0/3, mb1mx2.9/34, mbtmp3.6/3, Error ellipse: s-maj=51.2km s-min=20.2km az=112.0*

ISC 06 17:55:16.6±1.0**, 30.°4S**±0.°1×**179.°5W**±0.°2**, h300**^{km}**, n17, σ3^{s}01**/21**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.79	51	P	Pn	17 56 01.3	-0.5
GLKZ				S	S	17 56 36.3	-1.5
RIZ	Raoul Island	1.79	51	P	Pn	17 56 01.5	-0.3
RAO	Raoul Island	1.79	51	P	Pn	17 56 01.4	-0.4
	42nm,0.3s,baz=260,slow=23,SNR=8.7						
RAO				S	S	17 56 37.8	-0.1
	46nm,0.3s,baz=90,slow=20,SNR=2.5						
MWZ	Matawai	8.29	196	P	Pn	17 57 17.5	+3.8
MWZ				S	S	17 58 51.0	+2.3
URZ	Urewera	8.33	199	P	Pn	17 57 16.8	+2.8
	1.4nm,0.3s,baz=267,slow=5.6,SNR=12						
URZ				S	S	17 58 52.2	+2.7
	0.8nm,0.3s,baz=296,slow=22,SNR=9.9						
URZ	Urewera	8.33	199	P	Pn	17 57 16.0	+1.9
URZ				S	S	17 58 53.2	+3.7
RIGZ	Rimuhau	8.59	194	P	P	17 57 21.5	-1.1
OGWZ	Otaki Gorge	11.26	201	P	Pn	17 57 52.3	+2.2
OGWZ				S	S	17 59 50.4	-5.4
KIW	Kapiti Island	11.38	202	S	S	17 59 53.1	-5.5
TRWZ	Traveller	11.65	198	S	S	18 00 02.4	-2.1
PAWZ	Paruwai Farm	11.70	199	S	S	18 00 02.5	-3.3
MSWZ	Moikau Station	11.79	200	S	S	18 00 03.9	-3.8
TCW	Tory Channel	11.91	203	S	S	18 00 06.5	-3.8
PLWZ	Palliser	11.93	199	S	S	18 00 05.7	-5.1
ASAR	Alice Springs	41.80	268	P	P	18 02 38.2	+0.4
	0.4nm,0.9s,baz=106,slow=7.1,SNR=4.8						
WRA	Warramunga Arr	42.79	273	P	P	18 02 45.9	+0.2
	0.9nm,1.1s,baz=109,slow=8.3,SNR=7.0						
FINES	FINESS Array B	144.68	339	PKP	PKPbc	18 14 14.4	-2.1
	0.5nm,0.3s,baz=51,slow=5.5,SNR=10						

*IDC **06** 17:55:43.4±2.0, 53.°07S×47.°08W, h0^{km}, mb3.9/4, mb1 4.0/4, mb1mx3.9/26, mbtmp3.9/4, Error ellipse: s-maj=69.6km s-min=31.3km az=15.0*

*NEIC **06** 17:55:44.9±0.4, 52.°8S±0.°2×47.°6W±0.°2, h10^{km}±2^{km}, mb4.3/6, Error ellipse: s-maj=37.4km s-min=14.3km az=20.0*

ISC 06 17:55:44.8±0.7**, 52.°9S**±0.°1×**47.°6W**±0.°1**, h10**^{km}**, n20, σ1^{s}43**/15**, mb4.0**/4**, South Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EFI	East Falkland	6.57	277	Pn	Pn	17 57 20.6	-0.7
HOPE	Hope Point	6.72	106	Pn	Pn	17 57 24.5	+1.1
PLCA	Paso Flores	19.81	299	P	Pn	18 00 20.2	+3.4
	2.3nm,1.0s,baz=159,slow=11,SNR=2.3						
PLCA	Paso Flores	19.81	299	P	P	18 00 14.2	-1.2
PLCA				IAmb	IAmb	18 00 31.3	
	comp=Z,28nm,1.6s						
SNAA	Sanae	26.97	151	P	P	18 01 27.3	+1.2
SNAA				IAmb	IAmb	18 01 27.4	
	comp=Z,7.5nm,1.4s						
QSPA	South Pole Qui	37.31	180	P	P	18 02 56.5	-0.3
LPAZ	La Paz	40.00	328	P	P	18 03 21.9	+1.6
	comp=Z,1.4nm,0.5s,baz=135,slow=7.1,SNR=6.0						
LPAZ	La Paz	40.00	328	P	P	18 03 19.6	-0.7
H10S3	ASCENSION HYDR	51.31	43	T	T	19 00 17.3	
	baz=205,slow=74,SNR=14						
H10S2	ASCENSION HYDR	51.31	43	T	T	19 00 17.5	
	baz=15,slow=74,SNR=14						
H10N3	ASCENSION HYDR	52.38	43	T	T	19 01 35.0	
	baz=204,slow=74,SNR=13						
H10N1	ASCENSION HYDR	52.38	43	T	T	19 01 34.6	
	baz=204,slow=74,SNR=14						
H10N2	ASCENSION HYDR	52.40	43	T	T	19 01 34.1	
	baz=204,slow=74,SNR=11						
OTAV	Otavalo	58.93	323		P	18 05 44.0	-0.6
LSZ	Lusaka	69.37	88	P	P	18 06 51.0	-1.9
DBIC	Dimbokro	69.52	46	P	P	18 06 53.5	0.0
	comp=Z,2.0nm,0.9s,baz=211,slow=7.0,SNR=2.5						
TORD	Torodi Ar. Bea	78.18	49	P	P	18 07 44.1	-0.1
	comp=Z,0.7nm,0.6s,baz=210,slow=5.7,SNR=4.3						
YKA	Yellowknife Ar	126.55	328	PKP	PKPdf	18 14 46.1	-0.5
	comp=Z,0.4nm,0.7s,baz=132,slow=1.4,SNR=3.4						
CMAR	Chiang Mai Arr	136.85	130	PKP	PKiKP	18 15 08.5	-0.8
	comp=Z,0.3nm,0.7s,baz=212,slow=3.2,SNR=1.9						
MKAR	Makanchi Array	147.66	80	PKPbc	PKPdf	18 15 26.7	+0.8
	comp=Z,0.3nm,0.5s,baz=259,slow=4.5,SNR=1.3						

*IDC **06** 18:05:15.5±1.7, 18.°44N×100.°72W, h48^{km}±9^{km}, mb4.1/16, mb1 4.2/17, mb1mx4.0/42, mbtmp4.3/17, ML3.6/1, MS3.3/12, Ms1 3.3/12, ms1mx3.1/35, Error ellipse: s-maj=31.7km s-min=24.5km az=16.0*

*NEIC **06** 18:05:15.2±2.6, 18.°20N±0.°04×100.°95W±0.°04, h57^{km}±6^{km}, mb4.4/107, Md4.2/92(MEX), Error ellipse: s-maj=6.2km s-min=5.8km az=46.0*

*MEX **06** 18:05:17.0±1.1, 18.°17N×101.°02W, h58^{km}±10^{km}, MD4.4*

ISC 06 18:05:14.8±0.6**, 18.°19N**±0.°03×**100.°94W**±0.°02**, h55**^{km}±5^{km}**, n415, σ1^{s}81**/439**, mb4.5**/45**, MS3.3**/8**, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARIG	Puente Sto Nin	0.57	81		Pn	18 05 28.6	+1.3
ARIG					Sn	18 05 38.5	+2.2
ARIG	Puente Sto Nin	0.57	81	eP	Pn	18 05 28.6	+1.3
ARIG				i S	Sn	18 05 38.5	+2.2
ZIIG	Zihuatanejo	0.77	221		Pn	18 05 29.5	-0.1
ZIIG					Sn	18 05 40.6	+0.1
ZIIG	Zihuatanejo	0.77	221	i P	Pn	18 05 29.5	-0.1
ZIIG				eS	Sn	18 05 40.6	+0.1
MEIG	Mezcala	1.28	102		Pn	18 05 38.6	+2.1
MEIG					Sn	18 05 52.4	-0.3
MEIG	Mezcala	1.28	102	eP	Pn	18 05 38.6	+2.1
MEIG				i S	Sn	18 05 54.8	+2.0
CAIG	El Cayaco	1.30	151		Pn	18 05 37.6	+0.8
CAIG					Sn	18 05 53.7	+0.6
CAIG	El Cayaco	1.30	151	eP	Pn	18 05 37.6	+0.8
CAIG				i S	Sn	18 05 53.7	+0.6
PLIG	Platanillo	1.38	81		Pn	18 05 39.8	+2.0
PLIG					Sn	18 05 52.3	-2.8
PLIG	Platanillo	1.38	81	i P	Pn	18 05 39.8	+2.0
PLIG				i S	Sn	18 05 57.2	+2.1
MOIG	Morelia	1.50	351		Pn	18 05 40.0	+0.3
MOIG	Morelia	1.50	351		Pn	18 05 40.4	+0.7
MOIG					Sn	18 06 00.2	+1.8
MOIG	Morelia	1.50	351	eP	Pn	18 05 40.4	+0.7
MOIG				eS	Sn	18 05 59.5	+1.1
MAVM	Malinalco, Edo	1.57	61		Pn	18 05 42.5	+1.9
MAVM					Sn	18 05 57.8	-2.1
MAVM	Malinalco, Edo	1.57	61	eP	Pn	18 05 42.5	+1.9
MAVM				i S	Sn	18 06 01.9	+2.0
TOVM	TOLUCA	1.61	47		Pn	18 05 43.5	+2.2
TOVM					Sn	18 05 58.1	-3.1
TOVM	TOLUCA	1.61	47	i P	Pn	18 05 43.5	+2.2
TOVM				i S	Sn	18 06 03.6	+2.4
ATVM	ATLACOMULCO	1.88	33		Pn	18 05 46.5	+1.6
ATVM	ATLACOMULCO	1.88	33	i P	Pn	18 05 46.5	+1.6
YAIG	Yautepec	1.90	69		Pn	18 05 47.3	+2.3
YAIG					Sn	18 06 20.5	+13
YAIG	Yautepec	1.90	69	eP	Pn	18 05 47.3	+2.3
YAIG				i S	Sn	18 06 09.5	+1.7
UNM	Universidad Na	2.02	55		Pn	18 05 44.4	-2.3
UNM	Universidad Na	2.02	55	eP	Pn	18 05 49.0	+2.3
ACIG	Acambay	2.04	29	i P	Pn	18 05 48.5	+1.5
ACIG				i S	Sn	18 06 12.3	+0.8
CVM	Colonia del Va	2.04	54	i P	Pn	18 05 48.5	+1.6
CVM				i S	Sn	18 06 12.0	+0.8
AZVM	Cuida Lopez Ma	2.09	48		Pn	18 05 49.7	+1.9
AZVM					Sn	18 06 06.0	-6.8
AZVM	Cuida Lopez Ma	2.09	48	eP	Pn	18 05 49.7	+1.9
AZVM				eS	Sn	18 06 15.0	+2.2
AMVM	AMECAMECA	2.24	65		Pn	18 05 52.7	+2.9
AMVM					Sn	18 06 09.3	-7.2
AMVM	AMECAMECA	2.24	65	i P	Pn	18 05 52.7	+2.9
AMVM				i S	Sn	18 06 19.3	+2.8
MMIG	Aquila	2.29	273		Pn	18 05 49.3	-0.9
MMIG					Sn	18 06 20.5	+3.2
MMIG	Aquila	2.29	273	eP	Pn	18 05 49.3	-0.9
MMIG				i S	Sn	18 06 15.5	-1.8
TLIG	Tlapa	2.34	105		Pn	18 05 53.5	+2.5
TLIG	Tlapa	2.34	105		Pn	18 05 53.9	+2.9
TLIG					Sn	18 06 35.2	+17
TLIG	Tlapa	2.34	105	eP	Pn	18 05 52.8	+1.8
TLIG				i S	Sn	18 06 20.9	+2.2
PPM	Popocatepetl	2.36	68	i P	Pn	18 05 54.1	+2.5
PPM				i S	Sn	18 06 22.0	+2.4
ZUVM	ZUMPANGO	2.40	47		Pn	18 05 53.2	+1.3
ZUVM	ZUMPANGO	2.40	47	eP	Pn	18 05 53.2	+1.3
JRQG	Juriquilla Cam	2.54	10		Sn	18 06 35.7	+12
JRQG	Juriquilla Cam	2.54	10	eS	Sn	18 06 25.7	+1.9
IGIG	Irapuato, Guan	2.58	352		Pn	18 05 54.7	+0.4
IGIG					Sn	18 06 12.7	-12
IGIG					Sn	18 06 38.8	+14
IGIG	Irapuato, Guan	2.58	352	i P	Pn	18 05 54.7	+0.4
IGIG				i S	Sn	18 06 24.7	+0.1
VTVM	Tizayuca	2.58	52		Pn	18 05 56.5	+2.0
VTVM	Tizayuca	2.58	52	i P	Pn	18 05 56.5	+2.0
FTIG	Fresnillo de T	2.68	96	eP	Pn	18 05 58.5	+2.9
FTIG				eS	Sn	18 06 27.4	+0.3
DEIG	Demacu	2.76	40	i P	Pn	18 05 58.1	+1.2
DEIG				eS	Sn	18 06 32.0	+2.7
COIG	Colima	2.79	291	eP	Pn	18 05 58.0	+0.9
COIG				i S	Sn	18 06 36.1	+6.4
EZ5V		2.83	297		Pn	18 05 59.7	+1.8
EZ5V		2.83	297	eP	Pn	18 05 59.7	+1.8
EZ5V				eS	Sn	18 06 33.2	+2.3
HLIG	Huajuapan de L	3.00	96	eP	Pn	18 06 03.2	+3.1
R15V		3.05	289		Pn	18 06 02.1	+1.4
R15V					Sn	18 06 42.3	+6.3
R15V		3.05	289	eP	Pn	18 06 02.1	+1.4
R15V				i S	Sn	18 06 42.3	+6.3
R15V				i S	Sn	18 06 44.5	+8.5
PNIG	Pinotepa	3.22	123		Pn	18 06 05.3	+2.3
PNIG					Sn	18 06 54.7	+15
PNIG	Pinotepa	3.22	123	eP	Pn	18 06 05.3	+2.3
PNIG				i S	Sn	18 06 44.7	+4.5
YOIG	Yosondua	3.50	112	eP	Pn	18 06 10.4	+3.4
YOIG				i S	Sn	18 06 57.1	+10
VHO	Vista Hermosa	4.16	105	i P	Pn	18 06 19.9	+3.9
VHO				i S	Sn	18 07 03.6	+0.2
PEIG	Puerto Escondi	4.23	120	eP	Pn	18 06 19.5	+2.8
PEIG				i S	Sn	18 07 11.7	+6.8
LVIG	Laguna Verde	4.54	70		Pn	18 06 20.7	-0.3
LVIG	Laguna Verde	4.54	70	i P	Pn	18 06 20.7	-0.3
ZAIG	Zacatecas	4.81	342		Pn	18 06 25.2	+0.2
HUIG	Huatulco	5.21	117		Pn	18 06 33.8	+3.6
HUIG	Huatulco	5.21	117	i P	Pn	18 06 33.8	+3.6
CMIG	Matias Romero	5.87	100	P	Pn	18 06 42.7	+3.3
	1.9nm,0.3s,baz=245,slow=12,SNR=16						
CMIG				Lg	Lg	18 08 20.2	
	4.4nm,0.3s,baz=309,slow=14,SNR=3.7						
CMIG				LR	LR	18 09 09.9	
	comp=Z,101nm,21.0s,baz=318,slow=41						
CMIG	Matias Romero	5.87	100	i P	Pn	18 06 42.6	+3.3
TGIG		7.59	99		Pn	18 06 54.9	-8.0
TGIG		7.59	99	eP	Pn	18 06 54.9	-8.0
CCIG	Comitan	8.62	101		Pn	18 07 08.2	-8.9
833A	Chaparral WMA,	10.19	8		Pn	18 07 37.2	-1.2
833A	Chaparral WMA,	10.19	8	P	Pn	18 07 39.3	+0.9
	baz=186						
APG	El Apazote	10.53	106	P	Pn	18 07 47.2	+3.9
	0.9nm,0.3s,baz=286,slow=12,SNR=3.7						
APG				Lg	Lg	18 10 48.7	
	0.1nm,0.3s,baz=40,slow=15,SNR=2.8						
TX32	Lajitas Array	11.37	348		Pn	18 07 54.2	-0.4
TXAR	Lajitas Array	11.37	348	P	Pn	18 07 57.5	+2.8
	0.1nm,0.3s,baz=164,slow=14,SNR=13						
TXAR				Lg	Lg	18 11 14.7	
	0.1nm,0.3s,baz=196,slow=22,SNR=2.4						
TXAR				LR	LR	18 12 45.4	
	comp=Z,128nm,20.7s,baz=0.0,slow=40						
TXAR	Lajitas Array	11.37	348		Pn	18 07 52.7	-2.0
TX31	Lajitas Ar. Si	11.37	348		Pn	18 07 53.6	-1.1
TEIG	Tepich	12.13	78	P	Pn	18 08 06.9	+2.0
	1.0nm,0.3s,baz=319,slow=20,SNR=4.4						
JCT	Junction City	12.28	5		Pn	18 08 05.4	-1.6
JCT	Junction City	12.28	5	P	Pn	18 08 08.5	+1.5
	baz=184						
MNTX	Cornudas Mount	14.04	344	P	P	18 08 36.3	-0.8
MNTX	Cornudas Mount	14.04	344	P	Pn	18 08 31.6	+0.7
	baz=162,SNR=18						
ABTX	Abilene, Hawle	14.42	4	P	Pn	18 08 37.5	+1.5
	baz=184						
319A	Douglas	15.15	332	P	Pn	18 08 47.8	+2.3
319A				IAmb	IAmb	18 08 53.1	
	comp=Z,20nm,0.8s						
121A	Cookes Peak, D	15.56	338	P	Pn	18 08 52.7	+1.8
121A	Cookes Peak, D	15.56	338	P	Pn	18 08 52.2	+1.3
	baz=154						
MSTX	Muleshoe	15.80	354		Pn	18 08 52.7	-1.2
MSTX				IAmb	IAmb	18 08 55.6	
	comp=Z,22nm,0.7s						
MSTX	Muleshoe	15.80	354	P	Pn	18 08 54.7	+0.8
	baz=173,SNR=7.6						
X34A	Smith Ranch, M	16.58	9	P	Pn	18 09 03.5	-0.1
X34A				IAmb	IAmb	18 09 24.2	
	comp=Z,37nm,1.3s						
WMOK	Wichita Mounta	16.59	6		Pn	18 09 02.1	-1.8
WMOK	Wichita Mounta	16.59	6	P	Pn	18 09 03.4	-0.4
	baz=186						
TUC	Tucson	16.63	330		Pn	18 09 03.4	-1.0
TUC	Tucson	16.63	330	P	Pn	18 09 06.5	+2.2
	baz=145						
AMTX	Amarillo	16.64	358		Pn	18 09 04.4	-0.1
AMTX				IAmb	IAmb	18 09 05.7	
	comp=Z,37nm,1.1s						
AMTX	Amarillo	16.64	358	P	Pn	18 09 05.1	+0.6
	baz=177						
X37A	Clayton	17.07	16	P	Pn	18 09 07.5	-2.2
X37A				IAmb	IAmb	18 09 30.7	
	comp=Z,39nm,1.4s						
JTS	Las Juntas de	17.36	115	LR	LR	18 15 18.8	
	comp=Z,55nm,18.7s,baz=138,slow=35						
ANMO	Albuquerque	17.40	345	P	Pn	18 09 13.7	-0.3
	comp=Z,0.2nm,0.3s,baz=147,slow=12,SNR=14						
ANMO				LR	LR	18 16 40.6	
	comp=Z,169nm,18.1s,baz=176,slow=40						
ANMO	Albuquerque	17.40	345	P	Pn	18 09 14.2	+0.3
ANMO	Albuquerque	17.40	345	P	Pn	18 09 16.1	+2.1
	baz=162						
214A	Organ Pipe Nat	17.41	324	P	Pn	18 09 15.4	+1.5
	baz=139						
MIAR	Mount Ida	17.56	21	P	Pn	18 09 14.6	-1.1
MIAR	Mount Ida	17.56	21	P	Pn	18 09 14.5	-1.3
	baz=202						
W39A	Magazine	18.09	19	P	P	18 09 21.6	-0.5
W39A				IAmb	IAmb	18 09 35.7	
	comp=Z,25nm,1.1s						
W39A	Magazine	18.09	19	P	P	18 09 22.3	+0.3
	baz=201						
TUL1	Leonard	18.23	13	P	P	18 09 22.3	-1.2
TUL1				IAmb	IAmb	18 09 23.9	
	comp=Z,32nm,0.8s						
TUL1	Leonard	18.23	13	P	P	18 09 23.1	-0.4
	baz=195,SNR=6.4						
X43A	Marvell	18.57	27	P	P	18 09 25.9	-1.4
X43A	Marvell	18.57	27	P	P	18 09 26.7	-0.6
	baz=210						
W18A	Petrified Fore	18.59	337	P	P	18 09 29.7	+2.0
	baz=152						
W41B	Gary Mavity, V	18.60	23	P	P	18 09 26.8	-0.8
	baz=206						
X16A	Lo Mia Camp, P	18.68	332	P	P	18 09 30.4	+1.6
Y14A	Wickenburg	19.04	328	P	P	18 09 32.5	0.0
HHAR	Hobbs	19.05	18	P	P	18 09 31.6	-1.0
T25A	Trinidad	19.12	351		P	18 09 35.2	+1.6
T25A	Trinidad	19.12	351	P	P	18 09 34.9	+1.3
	baz=169,SNR=6.7						
U40A	Yellville	19.45	20	P	P	18 09 36.2	-0.8
U40A	Yellville	19.45	20	P	P	18 09 36.2	-0.8
	baz=202						

WUAZ Wupatki 19.59 334 P P 18 09 40.3 +1.7
WUAZ IAmb IAmb 18 09 42.2
comp=Z,22nm,0.8s
WUAZ Wupatki 19.59 334 P P 18 09 41.1 +2.5
baz=149,SNR=19
Y12C Blythe 19.70 325 P P 18 09 41.3 +1.6
baz=138
LCAR Lake Charles 19.80 24 P P 18 09 37.3 -3.4
SDCO Great Sand Dun 19.89 349 P P 18 09 43.0 +1.0
SDCO Great Sand Dun 19.89 349 P P 18 09 43.1 +1.1
baz=167,SNR=13
PDMCI Parker Dam,Lak 19.91 326 P P 18 09 43.6 +1.6
baz=140
MVCO Mesa Verde 20.08 342 P P 18 09 44.9 +0.8
MVCO IAmb IAmb 18 09 46.4
comp=Z,20nm,1.2s
MVCO Mesa Verde 20.08 342 P P 18 09 45.1 +1.0
baz=158,SNR=9.4
BC3 Big Chuckawall 20.16 323 P P 18 09 46.5 +1.7
baz=136
S22A 4UR Ranch, Cre 20.16 346 P P 18 09 46.2 +1.3
S22A IAmb IAmb 18 09 47.7
comp=Z,21nm,1.4s
S22A 4UR Ranch, Cre 20.16 346 P P 18 09 46.0 +1.1
baz=163,SNR=9.6
MONP2 Monument Peak 20.20 319 P P 18 09 47.1 +1.8
baz=133
PLAL Pickwick Lake 20.26 32 P P 18 09 44.0 -1.7
PLAL IAmb IAmb 18 09 49.2
comp=Z,51nm,1.3s
IRM Iron Mountain 20.35 324 P P 18 09 48.3 +1.6
baz=138,SNR=11
MGMO Mountain Grove 20.37 20 P P 18 09 46.4 -0.6
MGMO IAmb IAmb 18 09 48.4
comp=Z,14nm,0.9s
CBKS Cedar Bluff 20.58 3 P P 18 09 49.1 -0.1
CBKS IAmb IAmb 18 09 53.9
comp=Z,16nm,0.8s
CBKS Cedar Bluff 20.58 3 P P 18 09 49.5 +0.3
baz=182
PBMO Poplar Bluff 20.70 24 P P 18 09 49.7 -0.8
PBMO IAmb IAmb 18 09 51.0
comp=Z,21nm,0.9s
PFO Pinyon Flats O 20.72 321 P P 18 09 51.8 +1.0
comp=Z,1.8nm,0.3s,baz=145,slow=9.0,SNR=4.8
PFO Pinyon Flats O 20.72 321 P P 18 09 51.1 +0.2
PFO Pinyon Flats O 20.72 321 P P 18 09 51.8 +1.0
baz=134
BELC Belle Mtn. Jos 20.72 322 P P 18 09 52.6 +1.8
baz=136
U15A North Rim 20.75 333 P P 18 09 53.3 +2.0
U15A IAmb IAmb 18 09 54.6
comp=Z,14nm,0.9s
KSCO Kaye Shedlock' 20.80 356 P P 18 09 53.3 +1.6
baz=175
Q24A Divide 21.02 351 P P 18 09 56.0 +1.7
baz=168
GMRC Granite Mounta 21.10 324 P P 18 09 56.2 +1.3
baz=138
Y51A Rockmart 21.12 39 P P 18 09 54.3 -0.8
baz=225
MURC Murrieta 21.16 320 P P 18 09 57.0 +1.5
baz=132
WVT Waverly 21.30 30 P P 18 09 57.5 +0.6
WVT IAmb IAmb 18 09 59.1
comp=Z,33nm,1.5s
WVT Waverly 21.30 30 P P 18 09 57.2 +0.3
baz=215
W49A Belvidere 21.32 35 P P 18 09 55.5 -1.6
baz=220
KNB Kanab 21.48 333 P P 18 10 00.5 +1.5
SMCO Snowmass 21.56 347 P P 18 10 01.9 +1.7
SMCO IAmb IAmb 18 10 05.8
comp=Z,21nm,1.1s
LCMT Little Creek M 21.66 332 P P 18 10 01.7 +0.9
TUQ Turquoise Moun 21.73 325 P P 18 10 03.1 +1.4
baz=138,SNR=8.2
GOGA Godfrey 21.79 43 P P 18 09 59.8 -2.4
baz=229
BFSC Mount Baldy Ra 21.87 320 P P 18 10 04.1 +0.9
baz=133
ISCO Idaho Springs 21.91 350 P P 18 10 04.3 +0.5
ISCO Idaho Springs 21.91 350 P P 18 10 04.4 +0.6
baz=167,SNR=10
155A Kite 21.97 46 P P 18 10 01.5 -2.6
baz=232
V49A McMinnville 22.00 34 P P 18 10 02.4 -2.0
baz=220
CLTN Cedars of Leba 22.02 33 P P 18 10 03.6 -1.0
CLTN IAmb IAmb 18 10 06.6
comp=Z,34nm,1.7s
MTPU Mount Pierson 22.09 336 P P 18 10 07.2 +1.4
SHPR Sheep Range 22.15 328 P P 18 10 05.9 -0.2
X52A Dahlonega 22.31 40 P P 18 10 05.4 -2.5
baz=226
T47A Sharon Grove 22.33 30 P P 18 10 06.7 -1.3
T47A IAmb IAmb 18 10 13.8
comp=Z,19nm,1.1s
V50A Pikevile 22.36 36 P P 18 10 06.5 -1.9
baz=222
SRU San Rafael Swe 22.45 340 P P 18 10 09.7 +0.3
Q16A Castle Valley 22.50 339 P P 18 10 10.7 +0.7
MSU Marysvale 22.50 336 P P 18 10 10.8 +0.8
Y54A Tignall 22.58 43 P P 18 10 08.3 -2.4
baz=230
U49A Red Boiling Sp 22.63 33 P P 18 10 10.6 -0.6
baz=219
W52A Murphy 22.63 39 P P 18 10 10.2 -1.0
baz=225
OGNE Ogallala 22.70 358 P P 18 10 12.4 +0.4
baz=177
O20A White River Ci 22.76 345 P P 18 10 12.2 -0.5
O20A IAmb IAmb 18 10 15.4
comp=Z,13nm,1.0s
O20A White River Ci 22.76 345 P P 18 10 13.0 +0.2
baz=161,SNR=9.3
TMUT Trail Mountain 22.85 339 P P 18 10 14.3 +0.5
P17A Butcher Ranch, 22.85 340 P P 18 10 13.8 +0.2
V51A Loudon 22.88 37 P P 18 10 11.7 -2.1
baz=223
FURC Furnace Creek, 23.00 326 P P 18 10 16.8 +1.9
baz=138
N23A Red Feather La 23.04 350 P P 18 10 15.1 -0.5
N23A IAmb IAmb 18 10 17.5
comp=Z,19nm,0.9s
N23A Red Feather La 23.04 350 P P 18 10 15.7 +0.1
baz=167,SNR=12
TPNV Topopah Spring 23.04 327 P P 18 10 16.7 +1.1
TPNV Topopah Spring 23.04 327 P P 18 10 16.7 +1.1
baz=140,SNR=6.7
MPMC Manual Prospec 23.05 324 P P 18 10 16.4 +0.7
baz=136,SNR=8.3
TKL Tuckaleechee C 23.11 38 P P 18 10 13.9 -2.2
comp=Z,3.4nm,0.5s,baz=201,slow=10,SNR=5.8
TKL LR LR 18 20 39.3
comp=Z,40nm,20.6s,baz=187,slow=40
TKL Tuckaleechee C 23.11 38 P P 18 10 13.4 -2.7
TKL IAmb IAmb 18 11 06.4
comp=Z,24nm,1.4s
W53A Cullowhee 23.14 40 P P 18 10 14.9 -1.6
baz=226
PSUT Pine Spring 23.19 334 P P 18 10 17.4 +0.3
T49A Edmonton 23.21 33 P P 18 10 14.9 -2.2
baz=219
X54A Belton 23.22 42 P P 18 10 15.2 -1.9
baz=229
BGNE Belgrade 23.27 5 P P 18 10 17.3 -0.3
baz=186
ISA Isabella, Lake 23.33 322 P P 18 10 20.0 +1.7
baz=134
V52A Sevierville 23.34 38 P P 18 10 16.3 -2.0
baz=224
PHWY Pilot Hill 23.36 351 P P 18 10 18.3 -0.5
PHWY IAmb IAmb 18 10 20.3
comp=Z,30nm,1.6s
U51A La Follette 23.48 36 P P 18 10 17.2 -2.5
baz=223
T50A Nancy 23.50 34 P P 18 10 17.5 -2.4
baz=220
P43A Skaggs, Pawnee 23.55 22 P P 18 10 18.8 -1.5
CWC Cottonwood Cre 23.65 324 P P 18 10 22.1 +0.7
baz=136
GRAC Grapevine Rang 23.66 326 P P 18 10 23.1 +1.7
baz=138
W54A Cherokee Point 23.68 41 P P 18 10 19.6 -1.9
baz=228
V53A Saluda 23.68 39 P P 18 10 19.9 -1.7
baz=226
WCI Wyandotte Cave 23.71 30 P P 18 10 20.4 -1.4
WCI Wyandotte Cave 23.71 30 P P 18 10 20.0 -1.7
baz=216
R11A Troy Canyon, C 23.81 330 P P 18 10 23.1 +0.2
R11A Troy Canyon, C 23.81 330 P P 18 10 23.8 +0.9
baz=143,SNR=6.9
NHSC New Hope 23.83 47 P P 18 10 20.4 -2.4
baz=235
TZTN Tazewell 23.86 37 P P 18 10 21.7 -1.5
baz=224
RWWY Rawlins 24.03 348 P P 18 10 25.2 +0.3
N41A Harden Midland 24.06 19 P P 18 10 23.6 -1.4
Y57A Sumter 24.19 45 P P 18 10 23.5 -2.7
baz=233
Z58A St. Stephen 24.21 47 P P 18 10 24.0 -2.3
baz=236
DUG Dugway, Tooele 24.21 337 P P 18 10 26.1 -0.4
DUG Dugway, Tooele 24.21 337 P P 18 10 26.8 +0.3
baz=151,SNR=5.4
V54A Nebo 24.28 40 P P 18 10 25.7 -1.3
baz=228
HDIL Hopedale 24.44 22 P P 18 10 26.8 -1.6
HDIL Hopedale 24.44 22 P P 18 10 26.8 -1.6
baz=207
Q48A North Vernon 24.54 30 P P 18 10 27.9 -1.4
baz=216
TCUT Toone Canyon 24.56 341 P P 18 10 29.4 -0.3
V55A Taylorsville 24.78 41 P P 18 10 30.1 -1.4
baz=229
K22A Casper 24.84 350 P P 18 10 32.1 -0.1
K22A IAmb IAmb 18 10 34.6
comp=Z,24nm,0.9s
K22A Casper 24.84 350 P P 18 10 33.1 +0.9
baz=167,SNR=7.3
U54A Nelsons Funny 24.85 39 P P 18 10 30.4 -1.9
baz=227
MLAC Mammoth, Mammo 24.93 325 P P 18 10 34.9 +1.8
baz=136
BGU Big Grassy Mou 24.93 338 P P 18 10 32.6 -0.5
Q49A Aurora 25.00 31 P P 18 10 32.2 -1.3
baz=217
OMMB Old Mammoth Mi 25.00 324 P P 18 10 33.5 -0.4
P48A Milroy 25.10 29 P P 18 10 33.8 -0.6
baz=216
R51A Hillsboro 25.12 34 P P 18 10 32.7 -1.9
baz=221
SFIN Lafayette 25.13 25 P P 18 10 33.1 -1.5
SFIN IAmb IAmb 18 10 34.5
comp=Z,11nm,0.9s
SFIN Lafayette 25.13 25 P P 18 10 33.6 -1.1
baz=211
NV11 Mina Array Sit 25.15 327 P P 18 10 36.5 +1.4
NV11 IAmb IAmb 18 10 37.7
comp=Z,11nm,0.9s
V56A Mocksville 25.20 42 P P 18 10 33.8 -1.6
baz=230
NVAR Mina Array Bea 25.23 327 P P 18 10 37.1 +1.3
comp=Z,10nm,0.7s,baz=148,slow=10,SNR=48
NVAR Mina Array Bea 25.23 327 P P 18 10 36.8 +1.0
U55A TA2, Sparta 25.30 40 P P 18 10 34.6 -1.8
baz=228
Q50A Georgetown 25.32 32 P P 18 10 34.1 -2.3
baz=219
T54A Tazewell 25.36 38 P P 18 10 34.8 -2.0
baz=226
RYN Ryan 25.49 327 P P 18 10 36.9 -1.2
RYN IAmb IAmb 18 10 42.7
comp=Z,8.1nm,0.9s
P49A Miami Univ. Ec 25.50 30 P P 18 10 36.4 -1.6
baz=217
BW06 Boulder Array 25.57 345 P P 18 10 38.6 -0.3
BW06 IAmb IAmb 18 10 41.8
comp=Z,7.9nm,0.8s
BW06 Boulder Array 25.57 345 P P 18 10 39.2 +0.2
baz=160,SNR=7.2
PD31 Pinedale Array 25.57 345 P P 18 10 38.5 -0.4
PD31 IAmb IAmb 18 10 41.8
comp=Z,8.0nm,0.9s
PDAR Pinedale Array 25.57 345 P P 18 10 38.1 -0.9
comp=Z,5.6nm,0.8s,baz=151,slow=9.4,SNR=38
PDAR pP pP 18 10 51.1 -1.7
comp=Z,2.0nm,0.9s,baz=152,slow=9.8,SNR=3.9
PDAR LR LR 18 21 43.8
comp=Z,75nm,18.6s,baz=186,slow=39
PDAR Pinedale Array 25.57 345 P P 18 10 37.9 -1.0
KVN Kaiserville 25.59 328 P P 18 10 40.5 +1.4
KVN IAmb IAmb 18 10 44.0
comp=Z,15nm,1.1s
ELK Elko 25.63 334 P P 18 10 39.5 0.0
comp=Z,0.9nm,0.8s,baz=142,slow=7.1,SNR=4.1
ELK LR LR 18 21 47.4
comp=Z,111nm,19.6s,baz=165,slow=39
ELK Elko 25.63 334 P P 18 10 39.0 -0.5
V57A Coltrane Farms 25.71 43 P P 18 10 37.9 -2.1
baz=231
ECSD EROS Data Cent 25.73 7 P P 18 10 41.4 +1.4
ECSD IAmb IAmb 18 10 44.9
comp=Z,45nm,1.9s
ECSD EROS Data Cent 25.73 7 P P 18 10 39.2 -0.8
baz=189
Q51A Peebles 25.79 33 P P 18 10 39.1 -1.5
Q51A IAmb IAmb 18 10 40.2
comp=Z,15nm,0.7s
Q51A Peebles 25.79 33 P P 18 10 38.6 -2.0
baz=220
O48A Farmland 25.87 28 P P 18 10 39.2 -2.2
baz=215
T55A Pulaski 25.87 39 P P 18 10 39.5 -1.9
baz=228
RSSD Black Hills 25.99 355 P P 18 10 43.2 +0.6
baz=173
P50A Jamestown 26.00 31 P P 18 10 40.2 -2.3
baz=219
S54A Dingess, Beckl 26.02 37 P P 18 10 40.9 -1.9
baz=226
R53A Hurricane 26.02 36 P P 18 10 40.9 -1.9
baz=224
V58A Windy Hill, Pi 26.08 43 P P 18 10 40.9 -2.5
baz=232
N47A Urbana 26.14 27 P P 18 10 41.8 -2.0
N47A Urbana 26.14 27 P P 18 10 42.1 -1.7
baz=214
BLA Blacksburg 26.15 39 P P 18 10 42.3 -1.7
baz=228
O49A Covington 26.19 30 P P 18 10 42.1 -2.1
baz=217
JFWS Jewell Farm 26.26 18 P P 18 10 43.7 -1.2
baz=203
T56A Rocky Mt 26.27 40 P P 18 10 43.4 -1.6
baz=229
P51A Williamsport 26.27 32 P P 18 10 43.1 -1.9
P51A IAmb IAmb 18 10 45.1
comp=Z,14nm,0.9s
P51A Williamsport 26.27 32 P P 18 10 43.4 -1.6
baz=220
Q52A Bidwell 26.30 34 P P 18 10 43.9 -1.4
baz=222
N48A Decatur 26.41 28 P P 18 10 44.8 -1.4
baz=215
REDW Red Top Meadow 26.46 344 P P 18 10 46.5 -0.4
REDW IAmb IAmb 18 10 51.8
comp=Z,16nm,1.4s
S55A Lewisburg 26.47 38 P P 18 10 45.8 -1.1
baz=227
O50A Cable 26.50 31 P P 18 10 45.5 -1.6
baz=218
W60A Pink Hill 26.60 46 P P 18 10 45.9 -2.2
baz=236
T57A Hurt 26.73 41 P P 18 10 48.0 -1.1
baz=230
PAHR Pah Rah Range 26.74 327 P P 18 10 50.8 +1.5
FXWY Fox Creek 26.76 344 P P 18 10 50.6 +0.9
FXWY IAmb IAmb 18 10 54.3
comp=Z,8.4nm,1.1s
MOOW Moose Ponds 26.79 344 P P 18 10 51.2 +1.2
U58A Oxford 26.81 43 P P 18 10 47.8 -2.1
baz=232
N49A Columbus Grove 26.84 29 P P 18 10 48.8 -1.3
baz=216
P52A Corning 26.87 33 P P 18 10 48.5 -1.9
baz=222
ACSO Alum Creek Sta 26.88 31 P P 18 10 47.8 -2.7
baz=219
IMW Indian Meadow 26.98 344 P P 18 10 51.2 -0.5
IMW IAmb IAmb 18 10 57.1
comp=Z,19nm,1.8s
O51A Pataskala 27.00 32 P P 18 10 49.8 -1.9
baz=220
R55A Marlinton 27.03 38 P P 18 10 48.6 -3.4
baz=227
AFDM Forest Hills D 27.04 324 P P 18 10 51.7 -0.4
AFDM IAmb IAmb 18 10 55.2
comp=Z,4.2nm,0.5s
FLWY Flagg Ranch 27.09 344 P P 18 10 54.0 +1.4
FLWY IAmb IAmb 18 10 57.8
comp=Z,9.9nm,1.1s
T58A Grand View Acr 27.15 42 P P 18 10 51.7 -1.3
baz=232
O52A Adamsville 27.38 33 P P 18 10 52.6 -2.3
O52A Adamsville 27.38 33 P P 18 10 52.3 -2.7
baz=222
S57A Dark Hollow, R 27.39 40 P P 18 10 52.8 -2.3
baz=230
L48A N Adams 27.55 27 P P 18 10 54.7 -1.8
baz=215
RLMT Red Lodge 27.74 347 P P 18 10 58.9 +0.5
baz=162
O53A New Philadelph 27.80 34 P P 18 10 56.4 -2.3
baz=222
R57A Stanardsville 28.00 40 P P 18 10 58.8 -1.7
baz=230
P55A Reedsville 28.03 36 P P 18 10 59.3 -1.5
baz=226
L50A Kingsville 28.36 29 P P 18 11 02.2 -1.4
baz=218
N53A Lisbon 28.40 33 P P 18 11 02.1 -1.9
baz=222
O03E Paynes Creek 28.44 325 P P 18 11 05.7 +1.1
baz=135
M52A Chesterland 28.68 32 P P 18 11 04.6 -2.0
baz=221
MOD Modoc Plateau 28.84 329 P P 18 11 08.2 0.0
M54A Oil Creek Stat 29.52 34 P P 18 11 12.5 -1.5
baz=224
N56A West Decatur 29.85 36 P P 18 11 15.4 -1.6
baz=226
SSPA Standing Stone 29.89 37 P P 18 11 15.4 -1.9
baz=227
BMO Blue Mountains 29.91 336 P P 18 11 16.3 -1.2
YBH Yreka Blue Hor 29.94 326 P P 18 11 16.9 -1.0
comp=Z,1.3nm,0.6s,baz=188,slow=14,SNR=4.1
YBH Yreka Blue Hor 29.94 326 P P 18 11 17.5 -0.4
M55A Ridgway 29.97 35 P P 18 11 15.8 -2.2
baz=225
O58A Lewisberry 30.11 38 P P 18 11 17.3 -2.0
baz=230
N57A Milroy 30.16 37 P P 18 11 17.9 -1.8
baz=228
F45A CMU Biological 30.27 22 P P 18 11 19.3 -1.2
baz=209
H48A Harrisville 30.27 25 P P 18 11 19.2 -1.3
baz=214
AGMN Agassiz Nation 30.32 7 P P 18 11 20.0 -0.9
baz=189
J52A Paris 30.38 30 P P 18 11 19.7 -1.9
baz=220
L55A Hinsdale 30.64 34 P P 18 11 22.2 -1.8
baz=225
EYMN Ely 30.67 12 P P 18 11 22.2 -1.9
baz=197
M57A Sunshine Farm, 30.79 36 P P 18 11 23.0 -2.2
baz=228
F10A Beach Ranch, E 30.83 338 P P 18 11 25.6 0.0
F10A IAmb IAmb 18 11 27.1
comp=Z,11nm,0.9s
M58A Price's Panora 31.19 37 P P 18 11 26.9 -1.8
baz=229
L57A Andrews Acres 31.38 36 P P 18 11 28.5 -1.9
baz=227
J01E Myrtle Point 31.59 327 P P 18 11 33.1 +0.9
baz=135
K56A Middlesex 31.59 34 P P 18 11 30.4 -2.0
baz=226
F49A Sandfield 31.66 26 P P 18 11 31.6 -1.2
baz=215
I03D Drain, OR 31.68 328 P P 18 11 33.9 +0.9
baz=136
J55A Hilton 31.73 33 P P 18 11 31.4 -2.1
baz=224
L58A Harry Jones Me 31.97 37 P P 18 11 34.3 -1.3
baz=229
BINY Binghamton 32.00 36 P P 18 11 33.4 -2.5
baz=228
SADO Sadowa 32.16 30 P P 18 11 34.9 -2.4
comp=Z,1.3nm,0.3s,baz=260,slow=10,SNR=4.4
SADO Sadowa 32.16 30 P P 18 11 35.0 -2.3
E48A Lockeyer 32.19 25 P P 18 11 35.8 -1.7
baz=214
J56A Wolcott 32.24 34 P P 18 11 35.9 -2.0
baz=226
ULM Lac du Bonnet 32.24 6 P P 18 11 36.0 -1.9
comp=Z,2.9nm,0.5s,baz=183,slow=11,SNR=8.5
ULM LR LR 18 24 34.9
comp=Z,67nm,20.7s,baz=88,slow=36
ULM Lac du Bonnet 32.24 6 P P 18 11 35.2 -2.6
ULM IAmb IAmb 18 12 04.5
comp=Z,15nm,1.8s
H53A Bobcaygeon 32.29 31 P P 18 11 36.1 -2.3
baz=222
F05D White Salmon 32.45 333 P P 18 11 41.4 +1.7
baz=141
G53A Haliburton 32.67 30 P P 18 11 39.1 -2.6
baz=221
M61A Granite Spring 32.73 40 P P 18 11 41.5 -0.8
baz=233
NEW Newport 32.77 340 LR LR 18 26 08.5
comp=Z,55nm,19.4s,baz=154,slow=38
NEW Newport 32.77 340 P P 18 11 42.3 -0.2
baz=150
J57A Williamstown 32.79 35 P P 18 11 40.8 -2.0
baz=227
F52A Sundridge 32.86 28 P P 18 11 41.0 -2.3
baz=219
D48A Paudash Townsh 32.90 24 P P 18 11 42.4 -1.3
baz=214
K59A Cooperstown 33.01 36 P P 18 11 43.2 -1.5
baz=229
SJG San Juan 33.02 85 P P 18 11 48.7 +3.6
comp=Z,18nm,0.6s,baz=264,slow=8.9,SNR=6.3
G54A Lake Saint Pet 33.13 30 P P 18 11 43.4 -2.3
baz=222
J58A Remsen 33.15 35 P P 18 11 44.2 -1.7
baz=228
I57A Carthage 33.33 34 P P 18 11 45.0 -2.4
baz=227
I58A Old Forge 33.53 35 P P 18 11 47.1 -2.2
baz=228
G55A Calabogie 33.69 31 P P 18 11 48.6 -2.1
baz=224
H57A Richville 33.82 34 P P 18 11 49.7 -2.0
baz=227
D52A ZEK Kipawa Sen 34.17 28 P P 18 11 53.1 -1.6
baz=220
I59A Olmsteadville 34.21 36 P P 18 11 52.5 -2.6
baz=230
E54A Lac Daplat, Po 34.32 30 P P 18 11 53.7 -2.3
baz=222
H58A Gabriels 34.44 35 P P 18 11 54.2 -3.0
baz=228
G57A Newington 34.47 33 P P 18 11 55.2 -2.2
baz=226
G58A Ormstown 34.99 34 P P 18 11 59.9 -1.9
baz=228
J62A Henniker 35.04 38 P P 18 11 59.8 -2.4
baz=233
D54A Lac Fusel, La 35.09 29 P P 18 12 01.1 -1.6
baz=222
I61A Oroboro, Fairl 35.23 37 P P 18 12 01.8 -2.2
baz=232
H60A Morristown 35.35 36 P P 18 12 03.0 -1.9
baz=230
E56A St. Veronique 35.44 31 P P 18 12 04.2 -1.5
baz=225
D55A Sainte-Anne-du 35.56 30 P P 18 12 05.0 -1.7
baz=224
H61A Lyndonville 35.76 36 P P 18 12 06.5 -2.0
baz=231
E57A Chemin Saint G 35.79 32 P P 18 12 06.9 -1.8
baz=226
G60A Masonville 35.89 35 P P 18 12 07.4 -2.1
baz=230
D56A ZEC Mazanza, M 35.93 31 P P 18 12 07.9 -2.0
baz=225
D57A Chemin Vers le 36.33 32 P P 18 12 11.4 -1.9

baz=226
FFC Flin Flon 36.48 359 P P 18 12 13.2 -1.2
FFC IAmb IAmb 18 12 14.0
comp=Z,8.6nm,0.9s
MATQ Matagami 36.64 25 P P 18 12 14.7 -1.2
baz=218
G62A West of Eustis 36.97 36 P P 18 12 16.9 -1.9
baz=232
E60A Ste Agathe de 37.17 34 P P 18 12 18.7 -1.7
baz=230
G64A Maxfield 38.00 38 P P 18 12 26.0 -1.5
baz=235
F64A Sherman 38.59 37 P P 18 12 30.9 -1.5
baz=234
E63A Oxbow 38.87 36 P P 18 12 32.8 -1.9
baz=234
D62A Allapoint, All 38.91 35 P P 18 12 33.3 -1.8
baz=232
E64A Bridgewater 39.20 37 P P 18 12 36.1 -1.4
baz=234
D63A Stockholm 39.40 36 P P 18 12 37.3 -1.9
baz=234
BBB Bella Bella 40.08 334 LR LR 18 29 03.0
comp=Z,64nm,18.9s,baz=126,slow=36
SCHQ Schefferville 44.89 27 P P 18 13 21.4 -2.4
comp=Z,3.4nm,0.7s,baz=316,slow=0.7,SNR=4.8
SCHQ Schefferville 44.89 27 P P 18 13 21.9 -1.9
YKA Yellowknife Ar 45.28 351 P P 18 13 25.4 -1.4
comp=Z,2.9nm,0.8s,baz=160,slow=7.4,SNR=40
YKA pP pP 18 13 39.5 -1.8
comp=Z,0.1nm,0.4s,baz=161,slow=7.3,SNR=1.2
PB11 IPOC Station P 48.63 139 P 18 13 48.2 -5.4
PB01 IPOC Station P 49.70 140 P 18 13 56.4 -5.2
BCAR Beaver Creek A 52.87 338 P P 18 14 25.2 +0.4
EPYK Eagle Plains 53.50 343 P P 18 14 29.6 +0.2
baz=136
EGAK Eagle 53.75 340 P P 18 14 31.1 -0.1
EGAK IAmb IAmb 18 14 32.3
comp=Z,6.0nm,0.8s
INK Inuvik 54.14 346 P P 18 14 34.1 +0.2
comp=Z,7.7nm,0.9s,baz=125,slow=7.1,SNR=27
INK Inuvik 54.14 346 P P 18 14 33.2 -0.7
PAX Paxson 54.16 337 P P 18 14 34.1 -0.3
PAX IAmb IAmb 18 14 36.5
comp=Z,4.9nm,1.0s
SCRK Sand Creek 54.21 338 P P 18 14 36.2 +1.5
RIDG Independent Ri 54.37 338 P P 18 14 36.4 +0.6
SUA Susitna One 55.48 334 P P 18 14 44.9 +0.9
HDA Harding Lake 55.51 338 P P 18 14 44.5 +0.5
HDA IAmb IAmb 18 14 45.3
comp=Z,5.5nm,0.8s
HDA Harding Lake 55.51 338 P P 18 14 44.1 +0.1
baz=124
PRP Porcupine Dome 55.66 339 P P 18 14 45.9 +0.8
RND Reindeer 55.68 336 P P 18 14 45.8 +0.5
IL31 55.70 338 P P 18 14 45.6 +0.3
IL31 IAmb IAmb 18 14 46.7
comp=Z,6.5nm,0.9s
ILAR Eielson Array 55.70 338 P P 18 14 45.9 +0.5
comp=Z,4.0nm,0.9s,baz=145,slow=6.2,SNR=32
ILAR LR LR 18 40 34.7
comp=Z,34nm,19.8s,baz=152,slow=38
ILAR Eielson Array 55.70 338 P P 18 14 45.2 -0.1
RSO Redoubt South 55.90 332 P P 18 14 47.8 +0.7
CCB Clear Creek Bu 55.95 338 P P 18 14 46.8 -0.3
CCB IAmb IAmb 18 14 48.4
comp=Z,3.0nm,0.9s
WRH Wood River Hil 55.96 337 P P 18 14 46.6 -0.6
WRH IAmb IAmb 18 14 50.4
comp=Z,3.6nm,0.8s
SKT Skwentna 56.05 334 P P 18 14 48.6 +0.6
POKR Poker Flat Res 56.08 338 P P 18 14 48.3 +0.2
baz=124
TCOL CIGO, UAF Yank 56.10 338 P P 18 14 49.1 +0.9
baz=123
FYU Fort Yukon 56.19 340 P P 18 14 49.6 +0.9
TRF Thorofare Moun 56.26 336 P P 18 14 49.4 -0.2
TOLK Toolik Lake Re 58.75 341 P P 18 15 07.1 +0.3
TOLK Toolik Lake Re 58.75 341 P P 18 15 07.2 +0.4
baz=123
SUMG Summit 64.65 17 P P 18 15 46.1 -0.8
SPITS Spitsbergen Ar 77.66 11 P P 18 17 05.7 +0.7
comp=Z,2.6nm,0.5s,baz=232,slow=11,SNR=7.9
NB2 NORSAR Subarra 84.46 27 P P 18 17 43.1 +1.6
comp=Z,0.9nm,0.7s,baz=301,slow=5.1
NOA NORSAR Array B 84.46 27 P P 18 17 43.1 +1.6
comp=Z,1.2nm,0.8s,baz=302,slow=5.3,SNR=5.2
NOA LR LR 18 55 15.9
comp=Z,9.2nm,20.3s,baz=260,slow=36
ARCES ARCESS Array B 84.73 17 P P 18 17 43.3 +0.7
comp=Z,4.1nm,0.6s,baz=300,slow=5.3,SNR=19
ARCES ARCESS Array B 84.73 17 P P 18 17 43.2 +0.5
FINES FINESS Array B 90.17 23 P P 18 18 09.1 +0.2
comp=Z,2.5nm,1.0s,baz=242,slow=3.0,SNR=3.5
FINES FINESS Array B 90.17 23 P P 18 18 07.9 -1.1
KSH Kashi 122.53 3 PKP PKPdf 18 24 00.7 -4.0
KSH sPKP 18 24 14.7
KSH PP PP 18 25 41.6 +1.2
KSH PKS PKSdf 18 27 35.2 -6.2
ASAR Alice Springs 128.74 254 PKP PKPdf 18 24 16.9 +0.2
comp=Z,0.9nm,0.9s,baz=78,slow=1.8,SNR=4.7
ASAR pPKP pPKPdf 18 24 33.0 -0.4
comp=Z,1.3nm,1.1s,baz=96,slow=2.5,SNR=4.2
ASAR Alice Springs 128.74 254 PKPdf 18 24 15.4 -1.3

TIR 06 18:05:44.3,38.08N×20.47E,h2km,Md4.4/6
MOS 06 18:05:48.5±1.3,38.36N×20.21E,h11km,mb4.7/6,Error ellipse: s-maj=8.6km s-min=5.4km az=68.5
SKO 06 18:05:48.5,38.06N×20.28E,h11km
IDC 06 18:05:48.3±0.7,38.33N×20.40E,h0km,mb3.9/17, mb1 4.0/25,mb1mx3.9/56,mbtmp3.9/25,ML3.6/6,MS3.1/9, Ms1 3.1/9,ms1mx2.8/55,Error ellipse: s-maj=15.1km s-min=12.3km az=170.0
PDG 06 18:05:48.6±0.6,38.23N×20.31E,h12km±1km,ML4.0/14, Error ellipse: s-maj=1.1km s-min=1.3km az=0.0
BEO 06 18:05:49.4±0.7,38.11N×20.15E,h21km±4km,ML3.9/7
ATH 06 18:05:49.0,38.22N×20.35E,h8km,ML3.9/18,Error ellipse: s-maj=1.6km s-min=0.8km az=81.0
NEIC 06 18:05:49.2±3.0,38.28N±0.05×20.34E±0.05,h8km±5km, Error ellipse: s-maj=7.1km s-min=5.4km az=171.0
THE 06 18:05:49.1,38.25N×20.34E,h0km±2km,ML4.0/16,Error ellipse: s-maj=2.5km s-min=0.6km az=254.0
ISC 06 18:05:49.2±0.6,38.23N±0.02×20.37E±0.02,h7km±4km, n342,σ1.60/410,mb4.1/25,MS3.0/4,23C-15D,Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
KEF3 Kipouria, Keph 0.03 205 P Pg 18 05 51.2 +0.5
KEF4 Livadi, Kephal 0.05 62 S Sg 18 05 52.2 +0.2
CHV1 Chavriata, Kef 0.05 167 P Pg 18 05 51.2 +0.3
CHV1 S Sg 18 05 52.4 +0.4
865μm,0.5s
LXR1 Lixouri, Cepha 0.07 121 P Pg 18 05 51.3 +0.3
LXR1 S Sg 18 05 52.6 +0.3
1319μm,0.5s
LXRA Lixouri, Kepha 0.07 121 P Pg 18 05 51.3 +0.3
LXRA S Sg 18 05 52.5 +0.2
KEF1 Kardakata, Kep 0.09 62 P Pg 18 05 51.0 -0.4
KEF1 S Sg 18 05 53.3 +0.4
ARGA Argostoli. Kep 0.10 123 P Pg 18 05 51.2 -0.4
ARGA S Sg 18 05 53.6 +0.3
ARG2 Argostoli 0.11 120 P Pg 18 05 52.0 +0.3
ARG2 S Sg 18 05 53.7 +0.3
130μm,0.1s
KEF2 Argostoli. Kep 0.12 126 P Pg 18 05 51.5 -0.3
KEF2 S Sg 18 05 54.1 +0.5
VLS Valsamata 0.18 108 P Pg 18 05 53.0 0.0
VLS S Sg 18 05 55.8 +0.2
55μm,0.2s
VLS Valsamata 0.18 108 P Pg 18 05 53.1 +0.1
VLS S Sg 18 05 55.7 +0.1
VLS AML AML 18 05 56.2
comp=N,96374μm,0.3s
VLS AML AML 18 05 56.6
KONA Konidatara, Ke 0.25 40 P Pg 18 05 54.7 +0.5
KONA S Sg 18 05 58.9 +1.4
VLMS Volimes, Zakyn 0.43 147 P Pg 18 05 58.0 +0.5
VLMS AML AML 18 06 05.6
comp=E,34104μm,0.3s
VLMS AML AML 18 06 07.4
comp=N,52449μm,0.5s
EVGI Lefkada island 0.45 30 P Pg 18 05 58.2 +0.2
EVGI S Sb 18 06 05.1 -1.2
EVGI Lefkada island 0.45 30 P Pg 18 05 58.4 +0.5
EVGI S Sb 18 06 05.2 -1.1
MGNA Meganis 0.54 38 P Pg 18 05 59.7 0.0
MGNA S Sg 18 06 07.5 +0.8
MGNA AML AML 18 06 08.5
comp=N,77553μm,0.5s
MGNA AML AML 18 06 08.7
comp=E,82613μm,0.4s
LKD2 Lefkada island 0.60 22 P Pg 18 06 00.7 -0.1
LKD2 S Sg 18 06 08.2 -0.5
comp=E,10μm,0.8s
LKD2 Lefkada island 0.60 22 P Pg 18 06 00.9 0.0
LKD2 S Sg 18 06 08.9 +0.2
LKD2 AML AML 18 06 14.9
comp=N,20154μm,0.6s
LKD2 AML AML 18 06 15.3
comp=E,18150μm,0.7s
ZAK2 Zakynthos 0.61 136 P Pb 18 06 01.6 -0.6
ZAK2 S Sb 18 06 11.8 +0.8
comp=E,44μm,0.5s
TSLK Tsoukalades, L 0.63 21 P Pg 18 06 01.3 -0.1
TSLK S Sg 18 06 10.1 +0.4
comp=E,13μm,0.5s
TSLK Tsoukalades, L 0.63 21 P Pg 18 06 01.5 +0.1
TSLK S Sg 18 06 10.4 +0.7
TSLK AML AML 18 06 14.8
comp=N,27276μm,0.4s
TSLK AML AML 18 06 18.3
comp=E,23967μm,0.5s
AST1 Astakos 0.65 61 P Pg 18 06 01.9 +0.2
AST1 S Sb 18 06 12.2 +0.2
comp=E,25μm,0.4s
KRI1 kERI 0.67 148 P Pg 18 06 02.1 -0.1
KRI1 S Sb 18 06 12.8 0.0
comp=E,16μm,0.4s
PDO Prodromos 0.74 60 P Pg 18 06 02.8 -0.6
PDO S Sb 18 06 14.0 -0.7
comp=E,21μm,0.5s
PDO Prodromos 0.74 60 P Pg 18 06 03.3 -0.2
PDO S Sb 18 06 14.8 +0.1
PDO AML AML 18 06 15.7
comp=E,30468μm,0.6s
PDO AML AML 18 06 19.3
comp=N,28419μm,0.5s
RLS Riolos of Patr 0.89 101 P Pg 18 06 05.6 -0.6
RLS Riolos of Patr 0.89 101 P Pg 18 06 05.8 -0.4
RLS AML AML 18 06 29.6
comp=E,5224μm,0.6s
RLS AML AML 18 06 33.7
comp=N,4796μm,0.6s
PVO Paravola 0.99 67 P Pg 18 06 08.0 -0.2
PVO S Sn 18 06 23.4 -0.2
comp=N,9μm,0.6s
PVO Paravola 0.99 67 P Pg 18 06 08.2 0.0
PVO S Sn 18 06 22.2 -1.4
PVO AML AML 18 06 29.0
comp=N,20897μm,0.5s
PVO AML AML 18 06 30.0
comp=E,16946μm,0.7s
DRO Drossia 1.10 104 P Pg 18 06 09.5 -0.8
DRO S Sn 18 06 27.7 +1.3
comp=E,7μm,0.5s
DRO Drossia 1.10 104 P Pg 18 06 09.6 -0.7
DRO AML AML 18 06 35.7
comp=N,14417μm,0.5s
DRO AML AML 18 06 36.5
comp=E,13713μm,0.5s
EFP Efpalio 1.23 80 P Pb 18 06 11.6 -1.1
EFP Efpalio 1.23 80 P Pb 18 06 11.5 -1.1
EFP AML AML 18 06 35.9
comp=E,8190μm,0.6s
EFP AML AML 18 06 41.5
comp=N,8464μm,0.6s
LAKA Lakka 1.27 89 P Pn 18 06 12.4 -1.0
LAKA Lakka 1.27 89 P Pn 18 06 12.4 -1.0
LAKA AML AML 18 06 37.0
comp=N,4128μm,1.0s
LAKA AML AML 18 06 39.4
comp=E,5100μm,0.8s
AMT Artemida-Makis 1.27 123 P Pg 18 06 13.7 +0.1
AMT Artemida-Makis 1.27 123 P Pn 18 06 13.2 -0.2
AMT AML AML 18 06 47.3
comp=E,8502μm,0.7s
AMT AML AML 18 06 49.7
comp=N,7483μm,0.7s
ANX Ano Chora 1.27 73 P Pn 18 06 12.2 -1.3
ANX Ano Chora 1.27 73 P Pn 18 06 13.1 -0.4
ANX AML AML 18 06 36.9
comp=N,17318μm,0.7s
ANX AML AML 18 06 39.5
comp=E,19164μm,0.7s
IGT Igoumenitsa 1.30 359 P Pn 18 06 13.7 0.0
IGT S Sg 18 06 32.2 +1.2
comp=E,2μm,0.7s
IGT Igoumenitsa 1.30 359 ePg Pg 18 06 15.7 +1.6
IGT eSg Sg 18 06 34.3 +3.3
IGT Igoumenitsa 1.30 359 P Pn 18 06 13.8 0.0
EVR Evrytania 1.32 58 P Pn 18 06 13.7 -0.5
EVR AML AML 18 06 38.9
comp=E,6650μm,0.8s
EVR AML AML 18 06 42.6
comp=N,5775μm,1.0s
SERG Sergoula 1.34 82 P Pn 18 06 13.4 -1.0
SERG S Sg 18 06 34.6 +2.2
comp=N,3μm,1.1s
SERG Sergoula 1.34 82 P Pn 18 06 13.7 -0.7
SERG AML AML 18 06 42.1
comp=N,6889μm,0.7s
SERG AML AML 18 06 42.1
comp=E,7085μm,0.6s
TRIZ Trizonia 1.35 84 P Pn 18 06 13.4 -1.0
TRIZ S Sg 18 06 35.7 +3.1
comp=E,3μm,1.0s
TRIZ Trizonia 1.35 84 P Pn 18 06 13.7 -0.7
KALE Kalithea 1.40 83 P Pn 18 06 14.5 -0.7
KALE Kalithea 1.40 83 P Pn 18 06 14.6 -0.6
KALE AML AML 18 06 43.8
comp=N,5795μm,0.6s
KALE AML AML 18 06 44.0
comp=E,6228μm,0.5s
KLV Kalavryta, Ach 1.42 97 P Pn 18 06 14.4 -1.1
KLV Kalavryta, Ach 1.42 97 P Pn 18 06 15.0 -0.5
KLV AML AML 18 06 44.1
comp=E,3042μm,0.9s
KLV AML AML 18 06 50.6
comp=N,2416μm,0.8s
KLV Kalavryta, Ach 1.42 97 P Pn 18 06 15.2 -0.3
JAN Janina 1.47 15 P Pg 18 06 17.4 0.0
JAN Janina 1.47 15 P Pg 18 06 17.4 0.0
KASA Kassiopi 1.55 348 P Pn 18 06 17.3 +0.2
MAKR Makrakomi, Fth 1.59 60 P Pg 18 06 19.9 +0.2
ITM Ithomi 1.62 130 P Pb 18 06 18.7 -0.8
ITM Ithomi 1.62 130 Pb 18 06 18.8 -0.8
SRN Sarande 1.67 350 P Pn 18 06 19.4 +0.6
SRN Sarande 1.67 350 i PN Pn 18 06 19.1 +0.3
SRN i SN Sg 18 06 44.2 +1.3
SRN Sarande 1.67 350 P Pn 18 06 19.1 +0.3
AGG Agios Georgios 1.73 62 P Pb 18 06 21.5 +0.2
AGG AML AML 18 06 51.5
comp=N,4650μm,0.6s
AGG AML AML 18 06 54.4
comp=E,2880μm,0.5s
AGG Agios Georgios 1.73 62 Pn 18 06 20.0 +0.3
AGG Agios Georgios 1.73 62 P Pn 18 06 20.0 +0.3
VLX Vlachokerasia 1.81 118 P Pg 18 06 23.6 -0.4
THL Klokotos Trika 1.85 44 P Pb 18 06 23.4 +0.1
THL S Sg 18 06 49.6 +0.9
comp=E,3μm,0.7s
THL Klokotos Trika 1.85 44 P Pb 18 06 23.4 +0.1
AXAR Agios Charalam 1.88 73 P Pg 18 06 24.7 -0.5
KPRO Kipourio 1.89 24 P Pb 18 06 24.2 +0.2
KPRO Kipourio 1.89 24 P Pb 18 06 24.4 +0.4
PROD Prodromos 2.00 89 P Pb 18 06 26.2 +0.4
PENT Pentalofos 2.05 17 P Pb 18 06 26.3 -0.5
PENT Pentalofos 2.05 17 P Pb 18 06 26.4 -0.5
LTK Loutraki 2.06 95 P Pb 18 06 26.0 -1.0
TPE Tepelena 2.08 352 i PN Pb 18 06 27.8 +0.6
TPE i SN Sg 18 06 59.3 +3.3
LKR Lokris 2.11 78 P Pb 18 06 26.9 -0.9
NEST Nestorio 2.24 13 P Pb 18 06 29.5 -0.6
VIL2 Platees 2.29 90 P Pb 18 06 29.6 -1.2
KZN Kozani 2.34 27 P Pb 18 06 30.0 -1.7
KZN Kozani 2.34 27 P Pb 18 06 30.6 -1.2
KRND KRANIDI 2.36 110 P Pb 18 06 31.3 -0.8
DID Didima 2.38 107 P Pb 18 06 31.0 -1.5
LIT Litokhoron 2.49 41 P Pb 18 06 32.2 -2.1
LIT Litokhoron 2.49 41 P Pb 18 06 32.3 -1.9
LIT Litokhoron 2.49 41 Pn 18 06 31.8 +1.6
LIT Litokhoron 2.49 41 P Pn 18 06 31.8 +1.6
KTI Kastanea 2.55 32 P Pb 18 06 33.4 -1.9
MRKA Markates 2.57 78 P Pb 18 06 33.2 -2.5
MRKA Markates 2.57 78 P Pb 18 06 33.4 -2.3
SKIA Skiathos 2.60 68 P Pn 18 06 33.3 +1.7
FNA Florina 2.66 17 P Pn 18 06 34.2 +1.6
FNA Florina 2.66 17 ePn Pn 18 06 33.7 +1.1
FNA Florina 2.66 17 P Pn 18 06 34.3 +1.8
FNA Florina 2.66 17 Pn 18 06 32.5 -0.1
FNA Florina 2.66 17 P Pn 18 06 32.5 -0.1
VLY Voula,Athens 2.73 97 P Pn 18 06 34.8 +1.3
PTL Penteli 2.76 93 P Pn 18 06 36.0 +2.1
EREA Eretria 2.81 85 P Pn 18 06 36.2 +1.6
OHR Ohrid 2.89 6 ⇓iPn Pn 18 06 38.0 +2.2
OHR i Sn Sb 18 07 14.0 -2.8
OHR eLg Lg 18 07 30.4
comp=N,396nm,1.0s
AOS Alonnisos 2.90 70 P Pn 18 06 37.2 +1.4
TIP Timpagrande 2.98 290 P Pn 18 06 38.0 +1.1
TIP Timpagrande 2.98 290 ⇓P Pn 18 06 37.9 +1.0
TIP ⇑S Sn 18 07 13.9 +1.0
TIP Timpagrande 2.98 290 P Pn 18 06 38.0 +1.1
TIP AML AML
comp=N,248μm,0.9s
TIP AML AML
comp=E,212μm,0.4s
TIP Timpagrande 2.98 290 Pn 18 06 36.9 0.0
SERS Sersale 2.99 287 ⇓P Pn 18 06 37.9 +0.8
SERS AML AML
comp=E,670μm,0.7s
SERS AML AML
comp=N,398μm,1.3s
PIPA Pietrapaola 3.04 295 P Pn 18 06 38.8 +1.0
PIPA AML AML
comp=E,469μm,0.7s
PIPA AML AML
comp=N,569μm,0.7s
PIPA AML AML
comp=E,502μm,0.7s
PIPA AML AML
comp=N,537μm,1.2s
PLAC Placanica 3.10 275 P Pn 18 06 39.2 +0.7
PLAC AML AML
comp=N,518μm,0.7s
PLAC AML AML
comp=E,320μm,0.5s
TIR Tirane 3.13 353 ePn Pn 18 06 39.9 +0.9
TIR Tirane 3.13 353 i PN Pn 18 06 40.4 +1.4
TIR i SN Sn 18 07 11.0 -5.6
TIR Tirane 3.13 353 ⇑P Pn 18 06 40.1 +1.1
TIR Tirane 3.13 353 Pn 18 06 39.4 +0.4
TIR Tirane 3.13 353 P Pn 18 06 39.4 +0.4
GRG Griva 3.14 29 P Pn 18 06 39.8 +0.7
KARY Karystos 3.22 92 P Pn 18 06 42.6 +2.5
CELI Celico 3.23 292 P Pn 18 06 41.5 +1.1
TAR1 Taranto 3.31 315 ePn Pn 18 06 43.0 +1.6
CAR1 CAROLEI 3.41 289 P Pn 18 06 44.3 +1.5
CAR1 AML AML
comp=E,834μm,0.8s
CAR1 AML AML
comp=N,674μm,0.6s
PHP Peshkopia 3.45 1 P Pn 18 06 44.5 +1.2
PHP Peshkopia 3.45 1 i PN Pn 18 06 44.3 +1.0
PHP i SN Sn 18 07 25.1 +0.6
MPAZ Palizzi 3.45 267 P Pn 18 06 43.1 -0.3
MPAZ AML AML
comp=E,394μm,0.7s
MPAZ AML AML
comp=N,446μm,0.8s
SOH Sokhos 3.47 41 P Pn 18 06 45.2 +1.6
KNT Kendrikon 3.52 33 P Pn 18 06 45.8 +1.6
VAY Valandovo 3.52 28 ePn Pn 18 06 45.3 +1.0
VAY Valandovo 3.52 28 P Pn 18 06 45.3 +1.0
VAY Valandovo 3.52 28 ⇓iPn Pn 18 06 45.5 +1.2
VAY ⇓i Sn Sn 18 07 27.4 +1.3
VAY eLg Lg 18 07 33.3
comp=E,160nm,1.0s
CEL Celeste 3.52 272 Pn 18 06 44.0 -0.3
SALB San Lorenzo Be 3.53 299 P Pn 18 06 46.3 +1.7
SALB AML AML
comp=N,204μm,0.6s
SALB AML AML
comp=E,340μm,0.5s
JOPP Joppolo 3.54 277 P Pn 18 06 45.4 +0.8
JOPP AML AML
comp=E,452μm,0.9s
JOPP AML AML
comp=N,328μm,0.5s
NOCI Noci 3.61 316 ⇓P Pn 18 06 46.1 +0.6
NOCI AML AML
comp=E,668μm,1.4s
NOCI AML AML
comp=N,1026μm,1.0s
LTRZ Laterza 3.63 312 P Pn 18 06 46.4 +0.7
T0702 Acquaformosa (3.65 295 P Pn 18 06 49.0 +2.8
MATE Matera 3.72 312 ⇑P Pn 18 06 48.2 +1.2
STIP Stip 3.73 21 ⇓iPn Pn 18 06 49.9 +2.7
SRS Serrai 3.81 40 ePn Pn 18 06 49.1 +0.9
PUK Puka 3.82 355 i PN Pn 18 06 45.4 -3.1
PUK i SN Sn 18 07 27.0 -6.7
PUK Puka 3.82 355 P Pn 18 06 49.1 +0.6
SKO Skopje 3.82 12 ePn Pn 18 06 49.3 +0.8
ULC Ulcinj 3.82 347 ePn Pn 18 06 47.9 -0.6
ULC eSn Sn 18 07 34.1 +0.4
MIGL Miglionico 3.85 309 P Pn 18 06 50.5 +1.7
MIGL AML AML
comp=N,2000μm,1.0s
MIGL AML AML
comp=E,2200μm,1.1s
SG1 Sgolgore (BA) 3.86 314 ePn Pn 18 06 51.1 +2.1
BAI Bari 3.93 318 ePn Pn 18 06 50.7 +0.8
AMUR Altamura 3.95 314 P Pn 18 06 50.9 +0.7
AMUR AML AML
comp=E,518μm,0.8s
AMUR AML AML
comp=N,376μm,0.9s
DRME Dracevica, Mon 4.05 347 ePn Pn 18 06 50.9 -0.7
DRME Dracevica, Mon 4.05 347 ePn Pn 18 06 51.4 -0.2
DRME eSn Sn 18 07 39.7 +0.5
MTSN Montesano sull 4.12 301 P Pn 18 06 54.2 +1.6
MTSN S Sn 18 07 44.1 +3.1
MTSN AML AML
comp=E,316μm,0.7s
MTSN AML AML
comp=N,290μm,1.3s
BCI Bajram Curri 4.13 357 i PN Pn 18 06 54.2 +1.4
BCI i SN Sb 18 07 50.4 -2.1
BUM Brajici-Budva 4.21 345 ePn Pn 18 06 53.5 -0.4
BUM eSn Sn 18 07 43.2 -0.2
APE Apeiranthos 4.26 104 ⇑P Pb 18 06 60.0 -4.5
APE Apeiranthos 4.26 104 i P Pb 18 06 59.9 -4.5
ACER Acerenza 4.27 308 P Pn 18 06 56.3 +1.7
ACER S Sn 18 07 43.8 -0.8
PDG Podgorica 4.28 349 ePn Pn 18 06 54.5 -0.2
PDG eSn Sn 18 07 43.3 -1.5
PDG Podgorica 4.28 349 ⇓P Pn 18 06 54.7 0.0
PDG ⇑S Sn 18 07 44.5 -0.3
PDG Podgorica 4.28 349 ePn Pn 18 06 53.8 -0.9
PDG Podgorica 4.28 349 Pn 18 06 53.7 -0.9
TTG Podgorica 4.28 349 ePn Pn 18 06 54.2 -0.5
TTG eSn Sn 18 07 44.7 -0.1
MRVN Minervino Murg 4.28 313 P Pn 18 06 55.7 +0.9
MRVN S Sn 18 07 42.6 -2.4
MRVN AML AML
comp=N,526μm,0.9s
MRVN AML AML
comp=E,322μm,0.8s
PALZ Palazzo San Ge 4.35 310 P Pn 18 06 57.5 +1.8
PALZ AML AML
comp=E,2020μm,1.4s
PALZ AML AML
comp=N,1180μm,1.2s
HAVL Avola 4.35 255 P Pn 18 06 53.9 -1.9
HAVL S Sn 18 07 43.6 -3.1
HAVL AML AML
comp=E,752μm,0.3s
HAVL AML AML
comp=N,678μm,0.4s

PVY Plav 4.37 356 ePn Pn 18 06 56.3 +0.3
PVY eSn Sn 18 07 47.4 +0.2
HLNI Lentini 4.44 260 ⇓P Pn 18 06 55.5 -1.4
HLNI AML AML
comp=E,360µm,0.9s
HLNI AML AML
comp=N,358µm,1.6s
HCY Herceg Novi 4.45 342 ePn Pn 18 06 55.6 -1.4
HCY Herceg Novi 4.45 342⇑/Pn Pn 18 06 55.9 -1.1
HCY i Sn Sn 18 07 47.2 -1.8
CEME Cevo 4.45 346 ePn Pn 18 06 56.1 -1.0
CEME eSn Sn 18 07 48.5 -0.6
HPAC Pachino 4.45 251 ⇑P Pn 18 06 56.8 -0.3
HPAC S Sn 18 07 47.9 -1.2
HPAC AML AML
comp=N,668µm,0.5s
HPAC AML AML
comp=E,704µm,0.6s
SANT Santorini 4.46 113 Pn 18 06 58.3 +1.0
BOSS Bosilegrad 4.55 20 ePn Pn 18 06 59.6 +1.1
BOSS eSn Sn 18 07 51.8 +0.2
MSFR San Fratello 4.56 269 ⇓P Pn 18 06 59.7 +1.1
HVZN Vizzini 4.60 258 ⇑P Pn 18 06 58.4 -0.8
HVZN AML AML
comp=E,3370µm,0.5s
HVZN AML AML
comp=N,3750µm,0.4s
IVA Berane 4.65 356 ePn Pn 18 07 00.2 +0.3
IVA eSn Sn 18 07 54.5 +0.4
NKME Niksic 4.65 347 ePn Pn 18 06 59.8 -0.1
NKME eSn Sn 18 07 54.0 -0.2
KOME Kolasin 4.66 352 ePn Pn 18 07 00.5 +0.5
KOME eSn Sn 18 07 54.8 +0.5
IDI Anoyia 4.67 128 Pn Pn 18 07 03.2 +3.0
comp=N,0.3nm,0.3s,baz=12,slow=19,SNR=3.9
IDI Sn Sn 18 07 56.0 +1.4
comp=N,3.0nm,0.3s,baz=319,slow=23,SNR=9.0
IDI LR LR 18 08 47.0
comp=N,139nm,18.4s,baz=262,slow=38
NKY Niksic 4.69 348⇓/Pn Pn 18 07 00.3 -0.2
NKY eSn Sn 18 07 55.3 +0.1
BARS Barje 4.71 13 ePn Pn 18 07 00.9 +0.3
TREB Trebinje 4.74 342 ePn Pn 18 06 59.9 -1.1
TREB Trebinje 4.74 342 ePn Pn 18 06 59.7 -1.3
VAE Valguarnera 4.77 263 Pn Pn 18 07 04.1 +2.5
comp=N,2.1nm,0.3s,baz=316,slow=18,SNR=2.1
VAE Sn Sn 18 08 00.1 +2.9
comp=E,4.9nm,0.3s,baz=292,slow=11,SNR=2.6
RZN Rozhen 4.80 43 P Pn 18 07 07.6 +5.5
BRY Bratogost 4.87 344 ePn Pn 18 07 02.2 -0.7
BRY Bratogost 4.87 344 ePn Pn 18 07 02.0 -0.9
BRY eSn Sn 18 07 58.4 -1.1
MSAG Monte S. Angel 4.88 317 P Pn 18 07 03.5 +0.5
MSAG S Sn 18 07 55.5 -4.2
VTS Vitosha 4.89 26 ePn Pn 18 07 04.3 +1.0
VTS Vitosha 4.89 26 ⇑P Pn 18 07 04.5 +1.2
VTS Vitosha 4.89 26 P Pn 18 07 04.2 +0.9
VTS AML AML
comp=N,48µm,0.9s
VTS AML AML
comp=E,59µm,0.6s
VTS Vitosha 4.89 26 P Pn 18 07 04.7 +1.4
VTS Vitosha 4.89 26 Pn 18 07 03.5 +0.2
VTS Vitosha 4.89 26 P Pn 18 07 03.5 +0.2
SGRT San Giovanni R 5.00 316 Pn 18 07 05.1 +0.4
SELS Selova 5.01 6 ePn Pn 18 07 04.1 -0.7
SJES Sjenica 5.03 357 ePn Pn 18 07 05.7 +0.5
SJES eSn Sn 18 08 02.6 -1.0
STON Ston 5.06 337 ePn Pn 18 07 04.3 -1.1
UPM Unac-Piva 5.09 348 ePn Pn 18 07 05.9 -0.1
UPM Unac-Piva 5.09 348⇓/Pn Pn 18 07 05.8 -0.2
UPM eSn Sn 18 08 04.7 -0.3
ALN Alexandroupoli 5.13 57 Pn 18 07 07.6 +1.2
ALN Alexandroupoli 5.13 57 P Pn 18 07 07.6 +1.2
PLE Pljevlja 5.14 352 ePn Pn 18 07 07.0 +0.3
PLE eSn Sn 18 08 06.6 +0.2
KDZ Kurdzhali 5.17 47 P Pn 18 07 07.8 +0.9
PAOL Paolisi 5.28 304 Pn 18 07 07.8 -0.7
MELA Melanico ??? S 5.31 312 P Pn 18 07 10.3 +1.4
ZAPS Zavoj 5.32 18 ePn Pn 18 07 10.5 +1.4
IVAS Ivanjica 5.34 358 ePn Pn 18 07 08.6 -0.7
RUDO Rudo 5.43 352 ePn Pn 18 07 10.2 -0.4
BOVS Bovan 5.49 10 ePn Pn 18 07 11.2 -0.1
BOVS eSn Sn 18 08 14.1 -0.6
SGG Gregorio Mates 5.58 306 ⇑P Pn 18 07 15.4 +2.7
CORL Corleone 5.58 269 Pn 18 07 14.6 +1.9
GRUS Gruza 5.66 3 ePn Pn 18 07 13.5 -0.1
GRUS eSn Sn 18 08 17.4 -1.4
BLKB Belogradchik 5.66 17 ⇑P Pn 18 07 14.0 +0.3
BBLS Lazići 5.67 353 eSn Sn 18 08 17.5 -1.8
BBLS Lazići 5.67 353 ePn Pn 18 07 12.8 -1.1
CLTB Caltabellotta 5.69 266 Pn 18 07 12.3 -1.9
MPEP Malo Peshtene 5.72 26 P Pn 18 07 17.2 +2.7
ZAGS Zajecar 5.75 14 ePn Pn 18 07 14.8 -0.1
ZAGS eSn Sn 18 08 19.9 -1.2
DIVS Divibare 5.87 357 ePn Pn 18 07 15.9 -0.7
DIVS eSn Sn 18 08 21.7 -2.4
DIVS Divibare 5.87 357 ePn Pn 18 07 15.6 -1.0
HAPS Han Pijesak,BI 5.94 350 ePn Pn 18 07 16.2 -1.5
TRUS Trudelj 5.98 0 eSn Sn 18 08 24.6 -2.3
PLVB Pleven 6.08 31 ⇑P Pn 18 07 21.2 +1.9
LPEL Lama dei Pelig 6.08 311 P Pn 18 07 22.2 +2.7
INTR Introdacqua 6.22 309 Pn 18 07 22.4 +0.9
ELND Elena 6.29 40 ⇑P Pn 18 07 23.8 +1.5
TEKS Tekeris 6.34 355 eSn Sn 18 08 31.6 -4.1
MGRS Mrkonjic Grad 6.65 339 ePn Pn 18 07 27.4 +0.1
BLY Banja Luka 6.93 341 ⇑P Pn 18 07 31.3 +0.1
BLY Banja Luka 6.93 341 ePn Pn 18 07 31.1 -0.1
BLY Banja Luka 6.93 341 Pn 18 07 30.1 -1.1
NRCA Norcia 7.18 312 Pn 18 07 36.1 +1.4
GZR Gura Zlata 7.38 13 ⇓P Pn 18 07 37.4 +0.1
BZS Buzias 7.44 7 ⇑P Pn 18 07 38.2 +0.1
MURB Monte Urbino 7.79 313 Pn 18 07 43.3 +0.4
VOIR 8.00 24 ⇓P Pn 18 07 47.4 +1.5
MORH Mrgy, Hungar 8.08 351 ePn Pn 18 07 44.6 -2.2
BOJS Bojanci 8.20 334 i Pn Pn 18 07 48.4 -0.2
MLR Muntele Rosu 8.36 28 Pn Pn 18 07 53.7 +2.9
comp=E,0.5nm,0.3s,baz=200,slow=4.4,SNR=12
MLR Sn Sn 18 09 23.6 -1.9
comp=E,0.1nm,0.3s,baz=225,slow=17,SNR=1.6
MLR Muntele Rosu 8.36 28 ⇑P Pn 18 07 53.3 +2.5
MLR Muntele Rosu 8.36 28 Pn 18 07 52.0 +1.2
CRES Cresnjev 8.42 336 i Pn Pn 18 07 50.7 -0.6
CRES Cresnjev 8.42 336 ePn Pn 18 07 50.3 -1.2
DOPR Dopca 8.58 24 ⇓P Pn 18 07 55.3 +1.5
VISS Visnje 8.61 333 i Pn Pn 18 07 53.7 -0.4
BISRR Bisoca 8.70 31 ⇓P Pn 18 07 56.4 +0.9
LJU Ljubljana 8.93 333 ePn Pn 18 07 57.7 -0.8
PLOR Plostina 8.93 30 ⇑P Pn 18 08 01.0 +2.4
VRI Vrincioaia 8.97 30 ⇑P Pn 18 08 00.8 +1.7
KEST Kesra 9.16 258 Pn Pn 18 08 03.3 +1.4
comp=E,0.3nm,0.3s,baz=5.2,slow=11,SNR=3.5
KEST Sn Sn 18 09 42.9 -2.4
comp=E,0.1nm,0.3s,baz=218,slow=19,SNR=3.1
KEST Kesra 9.16 258 Pn 18 08 01.8 -0.1
SOKA Soboth 9.31 337 ePn Pn 18 08 02.6 -1.2
comp=E,12nm,0.4s,SNR=32
OBKA Obir 9.32 334 ePn Pn 18 08 04.1 +0.1
comp=E,3.1nm,0.3s,SNR=10
TEOL Teolo 9.63 320 Pn 18 08 07.3 -0.9
ARSA Arzberg 9.69 340 Pn Pn 18 08 06.8 -2.1
comp=E,3.1nm,0.4s,SNR=4.8
MYKA Terra Mystica 9.75 332 ePn Pn 18 08 09.1 -0.8
comp=E,2.2nm,0.3s
CTI Castel Tesino 10.14 323 Pn 18 08 14.3 -0.9
CTI Castel Tesino 10.14 323 P Pn 18 08 14.3 -0.9
CONA Conrad Observa 10.23 343 Pn Pn 18 08 15.1 -1.3
comp=E,1.1nm,0.5s
KBA Koelnbreinsper 10.23 332 ePn Pn 18 08 16.0 -0.6
comp=E,1.3nm,0.3s
ABTA Abfaltersbach 10.29 328 Pn Pn 18 08 15.1 -2.1
comp=E,5.0nm,0.5s
VYHS Vyhne 10.32 354 eP Pn 18 08 12.9 -4.6
VYHS e 18 10 06.6
VYHS Vyhne 10.32 354 ePN Pn 18 08 12.9 -4.6
VYHS eSN Sn 18 10 06.6 -6.8
BR131 Keskin Array S 10.44 78 Pn 18 08 20.9 +1.5
BR131 Keskin Array S 10.44 78 P Pn 18 08 20.9 +1.5
BRTR Keskin Array B 10.44 78 Pn Pn 18 08 23.7 +4.3
comp=E,0.1nm,0.3s,baz=259,slow=12,SNR=9.4
BRTR Keskin Array B 10.44 78 Pn 18 08 23.1 +3.7
BRTR Keskin Array B 10.44 78 P Pn 18 08 23.1 +3.7

MOA Molln 10.59 337 ePn Pn 18 08 20.2 -1.2
comp=E,2.2nm,0.2s,SNR=11
KOLS Kolonicke sedl 10.78 7 eP Pn 18 08 24.8 +0.9
KOLS Kolonicke sedl 10.78 7 ePN Pn 18 08 24.8 +0.9
WTTA Wattenberg 11.07 327 Pn Pn 18 08 25.9 -2.1
comp=E,2.5nm,0.3s,SNR=4.4
WATA Walderalm 11.15 327 ePn Pn 18 08 27.7 -1.4
comp=E,8.1nm,0.5s
FUORN Ofenpass-Fuorn 11.21 322 Pn 18 08 28.0 -2.0
SQTA Sankt Quirin 11.22 326 Pn Pn 18 08 30.3 +0.4
comp=E,4.0nm,0.4s,SNR=4.5
FETA Feichten 11.28 324 Pn Pn 18 08 32.2 +1.3
comp=E,1.8nm,0.5s
MOTA Moosalm 11.36 326 Pn Pn 18 08 30.2 -1.7
comp=E,5.3nm,0.6s,SNR=5.7
VRAC Vranov 11.40 347 LR LR 18 13 49.9
comp=E,46nm,18.6s,baz=176,slow=43
DAVOX Davos/Dischmat 11.52 321 Pn Pn 18 08 32.8 -1.3
baz=126,slow=19
DAVOX Sn Sn 18 10 37.8 -5.2
comp=E,0.3nm,0.3s,baz=338,slow=19,SNR=2.7
DAVOX LR LR 18 15 14.7
comp=E,89nm,18.1s,baz=123,slow=49
RETA Reutte 11.62 326 Pn Pn 18 08 35.2 -0.2
comp=E,1.0nm,0.3s
GEC2 GERESS Array S 11.65 338 Pn 18 08 34.3 -1.6
GERES GERESS Array B 11.65 338 Pn Pn 18 08 34.3 -1.6
comp=E,0.7nm,0.3s,baz=157,slow=13,SNR=18
GERES Sn Sn 18 10 36.8 -9.4
comp=E,0.3nm,0.3s,baz=149,slow=17,SNR=3.8
GERES LR LR 18 14 36.2
comp=E,89nm,18.7s,baz=140,slow=46
GERES GERESS Array B 11.65 338 Pn 18 08 34.0 -1.8
KHC Kasperske Hory 11.94 338 ePN Pn 18 08 37.9 -1.9
KHC ex x 18 08 44.7
KHC Kasperske Hory 11.94 338 i P Pn 18 08 38.5 -1.3
MMAI Mount Meron Ar 13.29 109 Pn Pn 18 08 58.8 +0.4
comp=E,0.5nm,0.3s,baz=289,slow=13,SNR=2.6
AKASG Malin Array Be 13.96 24 Pn Pn 18 09 06.4 -0.9
comp=E,0.6nm,0.3s,baz=211,slow=12,SNR=3.6
CLL Collm 14.07 341 ePP P 18 09 18.0 +1.3
SNF Seneffe 16.77 322 PnPn P 18 09 52.1 +5.5
KIV Kislovodsk 17.75 64 P P 18 09 58.2 +0.6
KIV Kislovodsk 17.75 64 eP P 18 09 59.2 +1.6
KIV pmax pmax
comp=Z,20nm,1.0s
KIV MLR MLR
comp=Z,93nm,14.0s
KBZ Khabaz 17.85 65 P P 18 10 00.4 +1.8
comp=Z,0.1nm,0.3s,baz=293,slow=8.2,SNR=11
KBZ Khabaz 17.85 65 i P P 18 10 00.5 +1.8
KBZ pmax pmax
comp=Z,5.0nm,0.9s
GOF Gofitskoye 18.23 61⇑eP P 18 10 10.1 +7.2
NCK Nalchik 18.32 66ceP P 18 10 08.4 +4.6
ZEI Tsey 18.45 68ceP P 18 10 11.0 +5.5
VSR Storozhevoye 18.55 40 eP P 18 10 05.7 -0.6
VSR pmax pmax
comp=Z,10.0nm,1.4s
KORR Kora 18.60 67ceP Pn 18 10 12.9 +5.7
ESDC Sonseca Array 18.97 282 P Pn 18 10 14.5 +2.8
comp=Z,0.2nm,0.3s,baz=229,slow=27,SNR=4.3
GNI Garni 18.98 77 P P 18 10 10.6 -0.7
comp=Z,0.5nm,0.3s,baz=352,slow=1.4,SNR=8.4
GNI LR LR 18 18 22.6
comp=Z,36nm,18.6s,baz=276,slow=40
GNI Garni 18.98 77 P P 18 10 10.3 -1.0
GNI IAmb IAmb 18 10 14.5
comp=Z,9.1nm,0.8s
GNI Garni 18.98 77 i P Pn 18 10 13.5 +1.6
GNI pmax pmax
comp=Z,70nm,1.8s
BTKR Batakoyurt 18.98 67 i P Pn 18 10 15.1 +3.3
VRH Novokhopyorsk 19.87 42 eP Pn 18 10 23.9 +1.6
VRH pmax pmax
comp=Z,5.0nm,0.4s
GROC Groznyy 19.87 67ceP Pn 18 10 27.3 +4.9
GROC pmax pmax
comp=Z,17nm,1.7s
OBN Obninsk 20.13 28 i P P 18 10 22.8 -0.7
OBN pmax pmax
comp=Z,8.0nm,0.8s
VSU Vasula 20.66 10 i P P 18 10 29.1 -0.2
VSU pmax pmax
comp=Z,102nm,0.8s
MDT Midelt 21.01 263 LR LR 18 19 60.0
comp=Z,54nm,21.2s,baz=29,slow=40
HFS Hagfors 22.33 351 P P 18 10 46.5 -0.7
comp=Z,11nm,0.7s,baz=149,slow=12,SNR=13
HFS LR LR 18 21 51.0
comp=Z,85nm,18.2s,baz=251,slow=43
EKA Eskdalemuir Ar 23.31 325 P P 18 10 56.0 -1.6
comp=Z,8.7nm,1.0s,baz=124,slow=12,SNR=6.5
EKA Eskdalemuir Ar 23.31 325 P P 18 10 56.0 -1.6
FINES FINESS Array B 23.51 7 P P 18 10 57.8 -1.6
comp=Z,3.7nm,0.6s,baz=170,slow=9.4,SNR=27
FINES LR LR 18 21 07.7
comp=Z,64nm,21.4s,baz=232,slow=39
FINES FINESS Array B 23.51 7 P P 18 10 57.7 -1.7
FIA1 FINESS Array S 23.51 7 P P 18 10 58.2 -1.2
FIA1 IAmb IAmb 18 11 38.1
comp=Z,52nm,1.8s
NC405 NORSAR Array S 23.54 349 P P 18 10 58.3 -1.4
NC405 IAmb IAmb 18 11 13.6
comp=Z,54nm,1.4s
NB2 NORSAR Subarra 23.54 349 P P 18 10 58.2 -1.6
comp=Z,9.5nm,1.0s,baz=155,slow=11
NOA NORSAR Array B 23.54 349 P P 18 10 59.4 -0.4
comp=Z,2.0nm,0.8s,baz=167,slow=12,SNR=9.8
NOA LR LR 18 22 06.9
comp=Z,50nm,18.2s,baz=160,slow=42
KLMR Klimovskoe 25.63 22 eP P 18 11 09.2 -10
KLMR AMP 18 11 20.4
comp=Z,20nm,1.6s
KLMR Klimovskoe 25.63 22 eP P 18 11 09.1 -10
KLMR pmax pmax
comp=Z,20nm,1.6s
PRGR Permogore 28.16 26 eP P 18 11 40.4 -1.4
PRGR pmax pmax
comp=Z,8.0nm,0.8s
AKTO Aktyubinsk 29.24 53 P P 18 11 50.5 -1.0
comp=Z,0.7nm,0.5s,baz=270,slow=5.0,SNR=2.7
GEYT Alibeck 29.58 79 P P 18 11 54.7 0.0
comp=Z,0.8nm,0.5s,baz=289,slow=8.7,SNR=2.7
GEYT Alibeck 29.58 79 P P 18 11 54.4 -0.4
TORD Torodi Ar. Bea 30.00 219 P P 18 11 58.7 +0.2
comp=Z,1.8nm,0.9s,baz=38,slow=9.0,SNR=7.4
TORD Torodi Ar. Bea 30.00 219 P P 18 11 58.0 -0.6
ARCES ARCESS Array B 31.48 3 P P 18 12 10.1 -1.0
comp=Z,1.9nm,0.7s,baz=192,slow=11,SNR=7.5
KK31 Karatay Array 37.88 66 P P 18 13 06.4 -0.4
KK31 IAmb IAmb 18 13 09.9
comp=Z,2.7nm,0.6s
KK31 Karatay Array 37.88 66 P P 18 13 06.4 -0.4
KK31 pmax pmax
comp=Z,3.0nm,0.6s
KKAR Karatay Array 37.88 66 P P 18 13 05.7 -1.1
KKAR Karatay Array 37.88 66 P P 18 13 06.3 -0.5
KKAR IAmb IAmb 18 13 09.9
comp=Z,2.7nm,0.6s
KKAR Karatay Array 37.88 66 P P 18 13 05.7 -1.1
KKAR 18 13 06.3
KKAR pmax pmax
comp=Z,3.0nm,0.6s
DBIC Dimbokro 38.85 222 P P 18 13 15.6 +0.5
comp=Z,1.1nm,0.6s,baz=34,slow=7.3,SNR=3.1
MK31 Makanchi Array 45.38 58 P P 18 14 06.9 -1.2
MK31 Makanchi Array 45.38 58 P P 18 14 06.9 -1.2
MK31 pmax pmax
comp=Z,2.0nm,1.1s
MKAR Makanchi Array 45.38 58 P P 18 14 07.3 -0.8
comp=Z,1.4nm,0.4s,baz=277,slow=6.9,SNR=17
MKAR Makanchi Array 45.38 58 P P 18 14 06.7 -1.4
ZAA0 Zalesovo Array 45.74 48 P P 18 14 09.9 -1.0
ZAA0 IAmb IAmb 18 14 10.7
comp=Z,4.5nm,0.6s
ZALV Zalesovo Beam 45.74 48 P P 18 14 10.2 -0.7
comp=Z,4.6nm,0.5s,baz=274,slow=8.7,SNR=24
ZALV Zalesovo Beam 45.74 48 P P 18 14 09.6 -1.3
WMQ Urumqi 49.84 61 eP P 18 14 44.7 +1.8
SCHQ Schefferville 58.34 317 P P 18 15 44.9 +0.2
comp=Z,1.0nm,0.5s,baz=63,slow=4.5,SNR=3.9
SONM Songino Array 60.52 51 P P 18 15 59.7 -0.2
comp=Z,0.7nm,0.8s,baz=289,slow=7.4,SNR=5.5
LZH Lanzhou 64.29 63 eP P 18 16 25.3 -0.1
LZH pP pP 18 16 28.5 +0.7

LZH sP sP 18 16 30.2 +1.5
LZH ePP PP 18 18 48.6 +2.1
HHC Hu-ho-hao-te 67.10 55 eP P 18 16 42.8 -0.7
CMAR Chiang Mai Arr 70.00 82 P P 18 17 01.1 -0.7
comp=Z,0.6nm,0.8s,baz=310,slow=7.1,SNR=8.5
YKA Yellowknife Ar 73.30 340 P P 18 17 21.6 +0.7
comp=Z,0.3nm,0.8s,baz=34,slow=5.1,SNR=3.9
ULM Lac du Bonnet 75.58 324 P P 18 17 35.6 +1.2
comp=Z,1.4nm,0.7s,baz=8.1,slow=7.1,SNR=3.0
ILAR Eielson Array 76.84 354 P P 18 17 42.2 +0.9
comp=Z,0.3nm,0.8s,baz=359,slow=6.3,SNR=3.2

IDC 06 18:24:16.6±2.1, 29.93S×177.20W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/31, mbtmp3.9/3, MS2.5/1, Ms1 2.5/1, ms1mx2.3/34, Error ellipse: s-maj=43.3km s-min=34.9km az=69.0, Kermadec Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RAO Raoul Island 0.92 317 Pn Pn 18 24 36.9 +0.2
804nm,0.3s,baz=97,slow=7.0,SNR=92
RAO Sn Sn 18 24 49.5 -1.2
740nm,0.3s,baz=49,slow=19,SNR=26
URZ Urewera 9.55 208 Sn Sn 18 28 16.3 -7.2
0.8nm,0.3s,baz=256,slow=22,SNR=6.4
AFI Afiamalu 16.71 19 LR LR 18 34 59.6
comp=Z,15nm,18.4s,baz=138,slow=38
STKA Stephens Creek 35.26 256 P P 18 31 14.2 +1.1
0.7nm,0.4s,baz=99,slow=10,SNR=4.0
ASAR Alice Springs 43.83 266 P P 18 32 24.2 -0.5
0.5nm,0.4s,baz=103,slow=7.2,SNR=15
WRA Warramunga Arr 44.78 271 P P 18 32 31.4 -0.9
1.2nm,0.4s,baz=112,slow=7.3,SNR=29
FINES FINESS Array B 144.93 341 PKP PKPab 18 43 54.1 -0.1
1.3nm,0.6s,baz=56,slow=5.2,SNR=15
AKASG Malin Array Be 151.34 324 PKPbc PKPbc 18 44 11.9 +0.1
0.2nm,0.3s,baz=48,slow=3.0,SNR=2.9

NIED 06 18:26:00, 34.60N×140.20E, h80km, Mw3.7 Best double couple: M₀4.22000×10¹⁴ NP1:φs168.00000°, δ76.00000°, λ84.00000°. NP2:φs13.00000°, δ15.00000°, λ114.00000°.
JMA 06 18:26:20.0±0.2, 34.61N×140.19E, h71km±2km, M3.6 Broadband fault plane solution: P waves. NP1: φs351.00000°, δ14.00000°, λ86.00000°. NP2: φs175.00000°, δ76.00000°, λ91.00000°. Principal axes: T Plg59.0000°, Azm86.0000°; N Plg1.0000°, Azm355.0000°; P Plg31.0000°, Azm264.0000°;
IDC 06 18:26:21.6±1.1, 34.60N×140.03E, h86km±9km, mb3.3/10, mb1 3.5/11, mb1mx3.3/46, mbtmp3.6/11, MS2.4/1, Ms1 2.4/1, ms1mx2.0/22 Error ellipse: s-maj=22.3km s-min=6.0km az=73.0
ISC 06 18:26:19.9±0.8, 34.61N±0.04×140.20E±0.05, h71km±7km, n37, σ1.52/44, mb3.6/10, 9C-4D, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BSO3 Boso 3 0.32 53 ⇓P Pn 18 26 31.6 +0.7
BSO3 eX 18 26 40.1
BSO4 Boso 4 0.39 16 ⇓P Pn 18 26 32.2 +0.5
TATJ Tateyama 2 0.49 329 ⇑P Pn 18 26 33.6 +0.9
KTR Katsuura 0.54 10 ⇓P Pn 18 26 33.4 +0.2
KTR S Sn 18 26 43.8 +0.9
JKUC kamogawauchiur 0.55 360 ⇑P Pn 18 26 33.4 +0.2
JKUC S Sn 18 26 43.7 +0.7
BSO1 Boso 1 0.64 86 ⇓P Pn 18 26 34.3 +0.7
JIM2 Oshima 3 0.65 280 ⇑P Pn 18 26 34.4 +0.2
JIM2 S Sn 18 26 45.0 +0.1
JTHY Toshimahigashi 0.76 264 P Pn 18 26 36.1 +0.6
JMKN Mikurajimanish 0.88 215 ⇑P Pn 18 26 37.5 +0.6
JKO Kozu shima 0.98 245 ⇑P Pn 18 26 38.8 +0.7
KTJ3 Kamata3 0.99 289 ⇑P Pn 18 26 38.0 -0.2
KTJ3 S Sn 18 26 51.3 -0.6
JIZS Izushimoda 1.10 276 ⇑P Pn 18 26 39.7 +0.1
JIZS eS Sn 18 26 54.8 +0.5
JOD2 Odawara 2 1.12 306 ⇑P Pn 18 26 39.6 -0.4
JOD2 S Sn 18 26 54.4 -0.6
JFNN Fujinakano 1.38 295 P Pn 18 26 43.8 +0.6
JFNN S Sn 18 27 01.8 +1.0
JHJ Hachijo jima 2 1.53 193 P Pn 18 26 46.7 +1.4
257nm,0.3s,baz=66,slow=22,SNR=52
JHJ S Sn 18 27 06.3 +2.0
334nm,0.3s,baz=295,slow=22,SNR=29
JHJ2 Mitsune 1.53 192 P Pn 18 26 46.6 +1.4
JHJ2 S Sn 18 27 06.2 +1.8
JYN Shimob 1.62 303 ⇑P Pn 18 26 47.1 +0.6
JYN S Sn 18 27 07.7 +1.0
MJAR Matsushiro Arr 2.52 320 P Pn 18 26 59.5 +0.9
3.9nm,0.3s,baz=146,slow=12,SNR=149
MJAR S Sn 18 27 28.4 +0.2
2.9nm,0.3s,baz=156,slow=22,SNR=12
MAT Matsushiro 2.52 320 P Pn 18 26 59.8 +1.2
MAT S Sn 18 27 28.4 +0.1
JCJ Chichijima 7.68 167 P Pn 18 28 07.3 -1.8
10.0nm,0.3s,baz=312,slow=22,SNR=4.7
JCJ S Sn 18 29 27.4 -7.3
2.9nm,0.3s,baz=279,slow=19,SNR=2.3
JNU Nakatsue 7.90 262 P Pn 18 28 14.8 +2.8
2.0nm,0.3s,baz=65,slow=3.9,SNR=14
JNU LR LR 18 31 31.7
comp=Z,24nm,19.6s,baz=206,slow=40
H11N2 WAKE ISLAND Hy 27.88 115 T T 19 01 52.8
baz=308,slow=75,SNR=63
H11N1 WAKE ISLAND Hy 27.89 115 T T 19 01 53.2
baz=308,slow=75,SNR=38
H11N3 WAKE ISLAND Hy 27.90 115 T T 19 01 54.2
baz=308,slow=75,SNR=52
SONM Songino Array 28.41 308 P P 18 32 07.4 -0.3
0.3nm,0.6s,baz=89,slow=7.6,SNR=3.0
H11S3 WAKE ISLAND Hy 28.49 117 T T 19 02 35.9
baz=310,slow=76,SNR=15
H11S1 WAKE ISLAND Hy 28.50 117 T T 19 02 40.3
baz=310,slow=76,SNR=8.4
H11S2 WAKE ISLAND Hy 28.51 117 T T 19 02 42.8
baz=310,slow=76,SNR=7.9
CMAR Chiang Mai Arr 39.96 257 P P 18 33 45.5 -2.1
0.3nm,0.7s,baz=62,slow=8.3,SNR=4.1
ZALV Zalesovo Beam 42.86 314 P P 18 34 10.1 -0.7
0.5nm,0.4s,baz=99,slow=8.9,SNR=3.3
MKAR Makanchi Array 44.61 304 P P 18 34 25.0 -0.1
1.3nm,0.5s,baz=84,slow=9.4,SNR=23
ILAR Eielson Array 52.07 31 P P 18 35 22.4 +0.3
0.5nm,0.9s,baz=269,slow=5.6,SNR=5.4
WRA Warramunga Arr 54.54 187 P P 18 35 40.0 -0.7
0.4nm,0.5s,baz=1.1,slow=6.2,SNR=8.4
ASAR Alice Springs 58.27 187 P P 18 36 07.2 +0.1
0.3nm,0.6s,baz=7.5,slow=14,SNR=5.7
FINES FINESS Array B 70.50 332 P P 18 37 27.3 +0.7
1.2nm,0.9s,baz=62,slow=6.5,SNR=2.8
NVAR Mina Array Bea 77.24 52 P P 18 38 07.3 +0.7
0.5nm,0.7s,baz=291,slow=6.3,SNR=4.0
PDAR Pinedale Array 80.07 45 P P 18 38 23.0 +0.8
0.2nm,0.6s,baz=325,slow=2.3,SNR=3.5

IDC 06 18:31:23.8±1.4, 14.52N×120.31E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/38, mbtmp3.3/3, Error ellipse: s-maj=62.0km s-min=9.6km az=37.0
MAN 06 18:31:23.1, 13.75N×120.42E, h48km, MS3.1
ISC 06 18:31:24.0±1.0, 13.62N±0.04×120.38E±0.05, h51km±8km, n15, σ2.14/25, mb3.3/3, 1C-2D, Mindoro

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LUBP Lubang 0.17 310 eP Pn 18 31 31.8 -0.5
LUBP eS Sn 18 31 39.2 +1.0
TGY Tagaytay City 0.72 49 Pg Pn 18 31 37.9 -0.2
2µm,0.3s,baz=142,slow=1.1,SNR=86
TGY Lg Lg 18 31 48.5
1µm,0.3s,baz=342,slow=24,SNR=13
TGY Tagaytay City 0.72 49 eP Pn 18 31 37.9 -0.2
TGY i S Sn 18 31 47.7 -0.7
LQP Lukban 1.23 67⇑/P Pn 18 31 44.1 -0.8
LQP i S Sn 18 31 56.2 -4.4
BOAC Boac 1.43 96 eP Pn 18 31 47.9 +0.3
BOAC eS Sn 18 32 04.3 -1.0
GQP Guinayangan 2.03 82⇓/P Pn 18 31 54.3 -1.4
GQP eS Sn 18 32 20.9 +1.0
OTRP Odiongan 2.03 128 eP Pn 18 31 57.0 +1.2
OTRP eS Sn 18 32 22.1 +2.0
PCPH Palayan 2.05 20⇓ep Pn 18 31 54.0 -2.1

SCZP Santa Cruz 2.19 348 eP Pn 18 31 56.0 -2.0
SCZP eS Sn 18 32 26.1 +2.3
BALP Baler 2.40 29 eP Pn 18 31 59.7 -1.1
BALP eS Sn 18 32 29.0 -0.1
ENPP El Nido 2.58 201 eP Pn 18 32 03.4 +0.1
ENPP eS Sn 18 32 28.5 -4.9
CAUP Cauayan 3.58 23 eP Pn 18 32 15.3 -1.8
CAUP eS Sn 18 33 01.9 +3.7
CMAR Chiang Mai Arr 21.15 286 P P 18 36 07.2 +2.3
1.3nm,0.9s,baz=94,slow=8.3,SNR=12
SONM Songino Array 36.04 344 P P 18 38 19.2 -1.3
0.5nm,0.6s,baz=163,slow=8.5,SNR=4.2
MKAR Makanchi Array 45.91 324 P P 18 39 42.7 +1.2
0.2nm,0.9s,baz=116,slow=9.9,SNR=1.6

IDC 06 18:34:18.5±1.3, 7.21S×128.44E, h0km, mb3.8/4, mb1 3.8/8, mb1mx3.7/34, mbtmp3.8/8, ML3.5/4, MS3.1/3, Ms1 3.1/3, ms1mx2.7/33, Error ellipse: s-maj=49.3km s-min=22.7km az=79.0

NEIC 06 18:34:23.2±1.8, 7.38S±0.05×128.5E±0.1, h46km±12km, mb4.3/6, Error ellipse: s-maj=16.7km s-min=7.8km az=86.0

ISC 06 18:34:22.5±0.8, 7.38S±0.06×128.5E±0.1, h35km, n25, σ1.18/27, mb4.3/7, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

SOEI Soe 4.82 240 Pn Pn 18 35 33.5 +0.8
MTN Manton Dam 6.01 155 Pn Pn 18 35 49.8 +0.9
SIJI Sorong 7.03 23 Pn Pn 18 36 02.3 -0.7
1.1nm,0.3s,baz=328,slow=23,SNR=4.8
KNRA Kununurra 8.25 178 Pn Pn 18 36 21.1 +1.4
FITZ Fitzroy Crossi 11.02 194 Pn Pn 18 37 00.4 +2.8
0.2nm,0.3s,baz=24,slow=12,SNR=2.9
FITZ Sn Sn 18 38 56.8 -2.9
0.2nm,0.3s,baz=162,slow=20,SNR=1.9
FITZ LR LR 18 41 23.5
comp=Z,64nm,18.5s,baz=22,slow=38
FITZ Fitzroy Crossi 11.02 194 Pn 18 36 58.1 +0.5
WB0 Warramunga Arr 13.57 156 Pn Pn 18 37 34.0 +1.5
WRA Warramunga Arr 13.70 156 Pn Pn 18 37 36.0 +1.5
0.3nm,0.3s,baz=322,slow=14,SNR=13
WRA Sn Sn 18 40 04.4 -1.1
0.4nm,0.3s,baz=333,slow=23,SNR=6.5
WRA LR LR 18 43 16.6
comp=Z,39nm,19.2s,baz=245,slow=39
WB2 Warramunga Arr 13.71 156 Pn Pn 18 37 35.0 +0.5
WR0 Warramunga Arr 13.80 156 Pn Pn 18 37 35.3 -0.4
AS31 Alice Springs 17.00 163 Pn Pn 18 38 15.9 -1.7
ASAR Alice Springs 17.00 163 P P 18 38 20.3 +1.1
0.1nm,0.3s,baz=338,slow=8.9,SNR=9.9
ASAR S Sn 18 41 26.3 +0.6
0.1nm,0.3s,baz=333,slow=18,SNR=5.5
ASAR Alice Springs 17.00 163 P P 18 38 17.8 +0.1
CMAR Chiang Mai Arr 38.87 312 P P 18 41 44.8 0.0
0.2nm,0.7s,baz=140,slow=5.8,SNR=3.0
SONM Songino Array 58.35 343 P P 18 44 14.3 +0.1
0.8nm,0.9s,baz=151,slow=6.6,SNR=7.1
SONM Songino Array 58.35 343 P P 18 44 14.8 +0.5
MK31 Makanchi Array 67.75 328 P P 18 45 16.1 -0.5
MK31 IAmb IAmb 18 45 17.9
comp=Z,1.9nm,0.8s
MKAR Makanchi Array 67.75 328 P P 18 45 16.9 +0.3
comp=Z,2.0nm,0.7s,baz=133,slow=8.0,SNR=27
MKAR Makanchi Array 67.75 328 P P 18 45 15.6 -1.0
AAK Ala-Archa 69.89 321 P P 18 45 30.4 +0.2
AAK IAmb IAmb 18 45 41.3
comp=Z,3.8nm,1.1s
ZAA0 Zalesovo Array 71.28 334 P P 18 45 38.2 0.0
ZAA0 IAmb IAmb 18 45 44.1
comp=Z,4.8nm,1.1s
ZALV Zalesovo Beam 71.28 334 P P 18 45 37.8 -0.4
comp=Z,2.3nm,0.8s,baz=119,slow=4.8,SNR=11
ZALV Zalesovo Beam 71.28 334 P P 18 45 37.3 -0.9
KURK Kurchatov 72.08 329 P P 18 45 43.2 +0.1
AKTO Aktyubinsk 83.48 323 LR LR 19 27 54.2
comp=Z,20nm,18.3s,baz=24,slow=39

THE 06 18:51:41.9, 38.22N×20.36E, h8km±1km, ML3.1/10, Error ellipse: s-maj=1.3km s-min=0.6km az=212.0

ATH 06 18:51:42.0, 38.24N×20.39E, h8km±1km, ML2.7/9, Error ellipse: s-maj=1.9km s-min=0.8km az=253.0

ISC 06 18:51:41.6±1.0, 38.23N±0.02×20.38E±0.04, h10km±5km, n38, σ0.36/58, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

KEF3 Kipouria, Keph 0.04 219 P Pg 18 51 43.7 +0.2
KEF3 S Sg 18 51 44.8 +0.1
KEF4 Livadi, Kephal 0.05 54 P Pg 18 51 43.5 -0.1
KEF4 S Sg 18 51 44.5 -0.3
CHV1 Chavriata, Kef 0.05 176 P Pg 18 51 43.7 +0.2
CHV1 S Sg 18 51 45.0 +0.1
147μm,0.3s
LXR1 Lixouri, Cepha 0.06 122 P Pg 18 51 43.8 +0.2
LXR1 S Sg 18 51 45.1 +0.1
261μm,0.3s
ARG2 Argostoli 0.10 121 P Pg 18 51 44.5 +0.3
ARG2 S Sg 18 51 46.1 +0.1
32μm,0.2s
KEF2 Argostoli. Kep 0.11 127 P Pg 18 51 44.7 +0.4
KEF2 S Sg 18 51 46.3 +0.1
VLS Valsamata 0.18 108 P Pg 18 51 45.6 +0.2
VLS S Sg 18 51 48.4 +0.4
12μm,0.2s
VLS Valsamata 0.18 108 P Pg 18 51 45.6 +0.2
VLS S Sg 18 51 48.3 +0.3
VLS AML AML 18 51 48.5
comp=N,26976μm,0.3s
VLS AML AML 18 51 49.1
comp=E,18636μm,0.2s
KFL Anninata 0.35 110 P Pg 18 51 48.7 +0.2
VLMS Volimes, Zakyn 0.42 147 P Pg 18 51 50.3 +0.4
VLMS S Sg 18 51 56.1 +0.7
VLMS AML AML 18 51 58.0
comp=E,5223μm,0.2s
VLMS AML AML 18 51 59.7
comp=N,6092μm,0.2s
EVGI Lefkada island 0.45 29 P Pg 18 51 50.7 +0.4
EVGI S Sb 18 51 57.9 -0.5
EVGI Lefkada island 0.45 29 P Pg 18 51 50.7 +0.4
EVGI S Sg 18 51 57.0 +0.7
LKD2 Lefkada island 0.60 21 P Pg 18 51 53.1 -0.1
LKD2 S Sb 18 52 02.2 -0.6
comp=N,638nm,0.4s
LKD2 Lefkada island 0.60 21 P Pg 18 51 53.2 -0.1
LKD2 S Sg 18 52 01.5 +0.3
LKD2 AML AML 18 52 03.7
comp=N,992μm,0.4s
LKD2 AML AML 18 52 03.9
comp=E,1350μm,0.2s
TSLK Tsoukalades, L 0.63 20 P Pg 18 51 53.9 0.0
TSLK S Sb 18 52 04.0 +0.3
comp=E,772nm,0.5s
TSLK Tsoukalades, L 0.63 20 P Pg 18 51 53.9 0.0
TSLK S Sg 18 52 02.8 +0.6
TSLK AML AML 18 52 07.3
comp=E,1501μm,0.6s
TSLK AML AML 18 52 07.4
comp=N,1485μm,0.3s
AST1 Astakos 0.64 61 P Pg 18 51 54.2 +0.2
AST1 S Sb 18 52 04.5 +0.6
comp=N,3μm,0.2s
KRI1 kERI 0.67 148 P Pb 18 51 54.9 -0.5
KRI1 S Sb 18 52 04.7 0.0
comp=N,1μm,0.3s
PDO Prodromos 0.73 60 P Pg 18 51 55.7 0.0
PDO S Sb 18 52 06.2 -0.4
comp=N,2μm,0.3s
PDO Prodromos 0.73 60 P Pg 18 51 55.8 +0.1
PDO AML AML 18 52 11.6
comp=N,1988μm,0.4s
PDO AML AML 18 52 11.7
comp=E,2154μm,0.4s
RLS Riolos of Patr 0.88 101 P Pg 18 51 58.2 -0.3
RLS Riolos of Patr 0.88 101 P Pg 18 51 58.3 -0.1
RLS AML AML 18 52 16.0
comp=E,315μm,0.2s
RLS AML AML 18 52 16.4
comp=N,372μm,0.5s
PVO Paravola 0.98 67 P Pg 18 52 00.5 0.0
PVO S Sn 18 52 16.5 +1.0
comp=N,738nm,0.2s
PVO Paravola 0.98 67 P Pb 18 52 00.7 0.0
PVO S Sb 18 52 13.6 -0.1
PVO AML AML 18 52 18.2
comp=E,1276μm,0.2s
PVO AML AML 18 52 18.3
comp=N,1606μm,0.2s
DRO Drossia 1.09 104 P Pb 18 52 02.1 -0.5
LAKA Lakka 1.26 89 P Pn 18 52 05.0 -0.3
AMT Artemida-Makis 1.26 123 P Pg 18 52 05.9 0.0
ANX Ano Chora 1.27 73 P Pn 18 52 05.2 -0.3
IGT Igoumenitsa 1.30 358 P Pb 18 52 06.0 -0.2
EVR Evrytania 1.31 58 P Pg 18 52 06.7 -0.2
EVR AML AML 18 52 32.2
comp=N,276μm,0.5s
EVR AML AML 18 52 32.3
comp=E,311μm,0.6s
SERG Sergoula 1.33 82 P Pn 18 52 06.1 -0.3
SERG Sergoula 1.33 82 P Pb 18 52 06.6 -0.2
SERG AML AML 18 52 35.1
comp=N,379μm,0.8s
SERG AML AML 18 52 35.5
comp=E,499μm,0.4s
TRIZ Trizonia 1.34 84 P Pn 18 52 06.0 -0.4
TRIZ Trizonia 1.34 84 P Pn 18 52 06.3 -0.1
KLV Kalavryta, Ach 1.41 97 P Pb 18 52 07.6 -0.5
KLV Kalavryta, Ach 1.41 97 P Pb 18 52 07.7 -0.5
MAKR Makrakomi, Fth 1.58 60 P Pg 18 52 11.8 -0.1
VLX Vlachokerasia 1.80 118 P Pg 18 52 15.9 -0.3

JMA 06 18:52:08.4±0.2, 24.94N×122.87E, h21km±4km, M2.3

TAP 06 18:52:09.6, 24.82N×122.81E, h9km±1km, ML2.5, D

ISC 06 18:52:06.9±1.8, 24.89N±0.07×122.90E±0.03, h2km±12km, n31, σ0.52/51, Taiwan region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

YOJ Yonaguni jima 0.44 167 P Pb 18 52 18.1 +0.7
YOJ eS Sb 18 52 24.9 +0.5
JYNG Yonagunijimaku 0.44 175 P Pb 18 52 17.9 +0.5
JYNG eS Sb 18 52 24.8 +0.3
EOS1 EOS1 0.78 244 P Pb 18 52 23.7 +0.5
baz=246
EOS1 S Sb 18 52 33.8 -0.3
baz=246
IRIF Iriomote-Funau 0.94 126 P Pn 18 52 26.3 -0.8
TIPB Shuangxi 0.98 275 eP Pn 18 52 27.2 -0.4
baz=279
TIPB eS Sb 18 52 39.9 -0.1
baz=279
TWC Suao 1.00 254 eP Pn 18 52 27.6 -0.3
baz=256
ILA Ilan 1.05 263 eS Sb 18 52 43.2 +1.1
baz=266
TWE Neicheng 1.13 262 P Pn 18 52 29.5 -0.3
baz=264
TWE eS Sb 18 52 44.4 0.0
baz=264
ENA Nanau 1.15 246 P Pb 18 52 29.6 +0.1
baz=247
ENA S Sg 18 52 44.2 +0.3
baz=247
JKRS Kuro-shima 1.20 123 P Pn 18 52 30.8 +0.1
JKRS S Sn 18 52 47.3 -0.3
YM08 YM08 1.22 284 eS Sn 18 52 48.6 +0.4
baz=288
ENTT Nioudou 1.24 258 P Pn 18 52 31.2 0.0
baz=260
ENTT eS Sb 18 52 47.4 0.0
baz=260
JIJ Ishigaki jima 1.25 115 P Pn 18 52 31.3 0.0
NDT Datong Townshi 1.29 257 P Pn 18 52 32.4 +0.4
baz=259
NDT S Sg 18 52 48.7 +0.3
baz=259
JISG Ishigakijimahi 1.32 103 P Pn 18 52 32.0 -0.3
NACB Ninganchiao 1.39 239 P Pg 18 52 33.5 0.0
baz=239
NACB S Sg 18 52 51.5 0.0
baz=239
YHNB Yeheng 1.40 261 P Pb 18 52 34.8 +0.9
baz=263
YHNB eS Sg 18 52 52.0 +0.1
baz=263
NSK Sanguang 1.42 262 eP Pb 18 52 34.9 +0.8
baz=263
NSK eS Sg 18 52 52.2 -0.3
baz=263
NNSB Datong 1.46 252 P Pb 18 52 35.1 +0.4
baz=253
NNSB eS Sb 18 52 54.2 +0.4
baz=253
NNSH Datong 1.46 252 P Pb 18 52 35.4 +0.6
baz=253
NNSH S Sg 18 52 52.6 -1.0
baz=253
NNS Nan Shan 1.46 252 eP Pb 18 52 34.9 0.0
baz=253
NNS S Sg 18 52 53.1 -0.7
baz=253
ETLH Xiulin Townshi 1.46 242 P Pn 18 52 34.7 +0.3
baz=243
WHF Hehuan Shan 1.67 244 P Pb 18 52 38.2 -0.3
baz=244
WHF eS Sn 18 52 58.8 -0.8
baz=244
TDCB Techi 1.71 248 P Pb 18 52 38.7 -0.4
baz=249
TDCB S Sn 18 53 00.7 +0.3
baz=249
ESL Shilin 1.72 232 P Pn 18 52 38.0 +0.2
baz=231
CHGB Renai 1.78 243 eP Pb 18 52 40.0 -0.3
baz=243
CHGB S Sn 18 53 02.3 +0.2
baz=243
OWD Renai 1.83 240 P Pn 18 52 39.9 +0.4
baz=239
OWD eS Sn 18 53 02.8 -0.5
baz=239
HGSD Ruisui 1.94 224 eP Pn 18 52 41.5 +0.7
baz=223
DPDB Guoxing 1.99 245 eP Pb 18 52 43.6 -0.2
baz=245
EHY Hungye 2.00 227 P Pn 18 52 41.6 0.0
baz=225
EHY S Sn 18 53 06.2 -1.0
baz=225
SMLT Sun Moon Lake 2.08 242 eP Pb 18 52 44.5 +1.0
baz=241

IDC 06 18:55:50.5±0.8, 6.27S×147.60E, h63km±6km, mb3.9/15, mb1 4.2/20, mb1mx4.0/42, mbtmp4.3/20, MS3.5/15, Ms1 3.5/15, ms1mx3.3/33, Error ellipse: s-maj=18.2km s-min=8.6km az=93.0

NEIC 06 18:55:51.5±1.8, 6.32S±0.06×147.48E±0.09, h70km±6km, mb4.8/33, Error ellipse: s-maj=12.3km s-min=8.8km az=92.0

DJA 06 18:55:52.3±0.6, 6.S±3.×14.8E±., h74km±6km, M4.6/16, mb4.6/16, mB5.0/3, MLv4.7/2, Mw(mB)4.3/1

ISC 06 18:55:50.9±0.4, 6.36S±0.05×147.51E±0.05, h63km, n82, σ1.56/86, mb4.6/28, 1C, Eastern New Guinea region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

PMG Port Moresby 3.05 186 P Pn 18 56 37.7 +1.0
77nm,0.3s,baz=6.8,slow=6.2,SNR=192
PMG S Sn 18 57 14.5 +2.5
178nm,0.3s,baz=61,slow=17,SNR=8.9
PMG LR LR 18 57 43.1
comp=Z,732nm,19.0s,baz=28,slow=36
MANU Manus Island 4.29 358 Pn Pn 18 56 55.8 +2.0
KRVT Keravat (AS076 4.94 66 P Pn 18 57 00.8 -1.9
19nm,0.3s,baz=180,slow=4.9,SNR=24
GENI Genyem 8.22 297 P Pn 18 58 02.7 +15
COEN Coen 8.67 209 Pn 18 57 55.2 +1.4
COEN Sn 18 59 29.0 -1.1
SMPI Sarmi 9.79 296 P Pn 18 58 21.7 +13
HNR Honiara 12.69 105 P Pn 18 58 50.6 +1.9
1.6nm,0.3s,baz=162,slow=13,SNR=3.5
HNR S Sn 19 01 08.8 +0.4
1.3nm,0.3s,baz=0.0,slow=15,SNR=2.3
CTA Charters Tower 13.70 185 P Pn 18 59 04.1 +1.8
0.6nm,0.3s,baz=3.8,slow=14,SNR=8.2
SIJI Sorong 17.10 288 P Pn 18 59 45.7 -0.2
1.4nm,0.3s,baz=181,slow=17,SNR=7.2
SIJI LR LR 19 08 01.8
comp=Z,138nm,18.0s,baz=148,slow=43
MTN Manton Dam 17.38 247 P 18 59 49.7 -0.1
MTN IAmb IAmb 19 00 04.1
comp=Z,112nm,1.6s
WB0 Warramunga Arr 18.44 222 P Pn 19 00 02.0 -0.3
WR0 Warramunga Arr 18.48 222 P P 19 00 02.2 +0.3
WRAB Tennant Creek 18.59 222 P P 19 00 03.1 0.0
WB2 Warramunga Arr 18.59 222 P P 19 00 03.5 +0.4
WRA Warramunga Arr 18.60 222 P P 19 00 03.7 +0.5
comp=Z,2.0nm,0.3s,baz=54,slow=10.0,SNR=121
WRA S Sn 19 03 24.7 -7.0
comp=Z,0.3nm,0.3s,baz=41,slow=23,SNR=3.6
WRA LR LR 19 07 48.0
comp=Z,121nm,19.7s,baz=40,slow=38
WRA ScP ScP 19 08 01.4 +0.8
baz=35,slow=2.0,SNR=4.9
WRA Warramunga Arr 18.60 222 P P 19 00 03.4 +0.1
WRA Warramunga Arr 18.60 222 ScP 19 08 01.9 +1.3
EIDS Eidsvold 19.21 170 P P 19 00 09.9 0.0
EIDS IAmb IAmb 19 00 12.8
comp=Z,19nm,0.8s
AAI Ambon 19.42 277 P Pn 19 00 23.9 +10
KNRA Kununurra 20.58 242 P P 19 00 26.1 +1.2
KNRA IAmb IAmb 19 00 43.7
comp=Z,60nm,0.9s
AS31 Alice Springs 21.61 216 P P 19 00 36.6 +0.7
ASAR Alice Springs 21.62 216 P P 19 00 36.5 +0.6
comp=Z,21nm,1.1s,baz=52,slow=8.7,SNR=125
ASAR S S 19 04 29.0 -3.2
comp=Z,1.5nm,0.9s,baz=34,slow=24,SNR=2.7
ASAR ScP ScP 19 08 09.2 +1.5
comp=Z,2.1nm,0.9s,baz=43,slow=4.8,SNR=8.2
ASAR LR LR 19 09 17.8
comp=Z,190nm,18.9s,baz=36,slow=37
ASAR Alice Springs 21.62 216 P P 19 00 36.2 +0.3
ASAR Alice Springs 21.62 216 ScP 19 08 09.8 +2.1
SANI Sanana 21.88 280 P P 19 00 41.2 +2.4
comp=Z,28nm,0.8s
DZM Mont Dzumac 24.05 132 P P 19 01 00.4 -0.1
comp=Z,8.4nm,0.9s,baz=261,slow=15,SNR=4.3
DZM LR LR 19 09 13.7
comp=Z,393nm,20.8s,baz=344,slow=33
DZM Mont Dzumac 24.05 132 P P 19 01 00.2 -0.3
DZM IAmb IAmb 19 01 32.8
comp=Z,95nm,2.0s
ARMA Armidale 24.25 171 P P 19 01 02.9 +0.7
ARMA IAmb IAmb 19 01 03.5
comp=Z,28nm,1.1s
FITZ Fitzroy Crossi 24.31 239 P P 19 01 03.6 +0.8
comp=Z,9.8nm,0.4s,baz=57,slow=9.3,SNR=25
FITZ LR LR 19 12 08.9
comp=Z,148nm,18.9s,baz=68,slow=40
FITZ Fitzroy Crossi 24.31 239 P P 19 01 03.6 +0.8
FITZ IAmb IAmb 19 01 06.5
comp=Z,19nm,0.9s
STKA Stephens Creek 25.98 192 P P 19 01 17.7 -0.1
comp=Z,4.7nm,0.3s,baz=2.1,slow=8.5,SNR=32
STKA Stephens Creek 25.98 192 P P 19 01 17.7 -0.1
APSI Ampana 26.36 281 P P 19 01 23.2 +1.8
comp=Z,24nm,1.1s
BBOO Buckleboo 28.39 201 P P 19 01 39.8 +0.3
BBOO IAmb IAmb 19 02 14.3
comp=Z,16nm,1.1s
FORT Forrest 30.39 215 P P 19 01 57.7 +0.6
FORT IAmb IAmb 19 02 25.1
comp=Z,22nm,0.9s
PSA00 Pilbara Seismi 30.73 238 P P 19 01 59.9 -0.3
PSA00 IAmb IAmb 19 02 09.9
comp=Z,13nm,1.1s
JAGI Jajag, Banyuwa 33.14 264 P P 19 02 20.3 -1.2
JAGI IAmb IAmb 19 02 52.6
comp=Z,32nm,1.2s
TGY Tagaytay City 33.29 308 LR LR 19 14 56.5
comp=Z,28nm,20.4s,baz=128,slow=34
MORW Morawa 37.31 229 P P 19 02 58.0 +0.7
MORW IAmb IAmb 19 03 14.9
comp=Z,43nm,1.4s
NWAO Narrogin (SRO) 38.61 223 P P 19 03 08.4 +0.2
NWAO Narrogin (SRO) 38.61 223 P P 19 03 08.3 +0.2
NWAO IAmb IAmb 19 03 55.5
comp=Z,38nm,1.4s
CISI Cisompet, Garu 39.41 266 P P 19 03 14.3 -0.9
TPUB Ta-pu 39.48 319 P P 19 03 13.8 -1.8
NACB Ninganchiao 39.49 321 P P 19 03 14.7 -0.9
SSLB Suanglung 39.62 320 P P 19 03 15.7 -1.0
LEM Lembang 39.62 267 LR LR 19 22 36.5
comp=Z,22nm,18.9s,baz=58,slow=40
MLZ Mavora Lakes 42.79 159 P P 19 03 44.2 +1.8
MDSI Maura Dua 43.17 270 P P 19 03 47.9 +2.0
comp=Z,39μmcomp=Z,11nm,1.2s
MJAR Matsushiro Arr 43.56 349 P P 19 03 46.7 -1.9
comp=Z,2.4nm,0.8s,baz=166,slow=7.4,SNR=3.5
MJAR LR LR 19 20 29.5
comp=Z,29nm,20.0s,baz=185,slow=34
NJ2 Nanjing 46.96 326 eP P 19 04 16.7 +1.1
KSRS Korea Array 47.27 339 P P 19 04 17.2 -0.7
comp=Z,0.6nm,0.4s,baz=157,slow=8.9,SNR=5.4
KSRS LR LR 19 21 44.6
comp=Z,63nm,21.6s,baz=152,slow=33
KULM Kulim 48.19 283 P P 19 04 26.1 +0.6
KULM IAmb IAmb 19 04 26.7
comp=Z,9.6nm,1.1s
CMAR Chiang Mai Arr 53.86 298 P P 19 05 08.2 +0.1
comp=Z,0.6nm,0.9s,baz=125,slow=6.3,SNR=7.0
CMAR pP pP 19 05 24.5 -0.7
comp=Z,1.2nm,1.0s,baz=120,slow=4.9,SNR=4.1
CMAR LR LR 19 30 18.2
comp=Z,20nm,18.3s,baz=114,slow=38
XAN Xi'an 54.28 320 P P 19 05 09.8 -1.1
XAN pP pP 19 05 19.4 -8.3
KLR Kul'dur 57.05 348 P P 19 05 29.9 -0.5
comp=Z,2.3nm,0.7s,baz=129,slow=1.9,SNR=10
HHC Hu-ho-hao-te 57.40 328 eP P 19 05 36.4 +3.2
LZH Lanzhou 58.81 319 eP P 19 05 45.5 +2.3
LZH pP sP 19 06 05.8 -1.6
LZH sP pP 19 06 15.0 +15
LZH ePP PP 19 07 58.6 +4.7
PEA0B Petropavlovsk- 59.87 7 P P 19 05 50.0 0.0
PETK Petropavlovsk- 59.87 7 P P 19 05 49.2 -0.7
comp=Z,4.9nm,0.8s,baz=183,slow=8.8,SNR=3.9
PETK LR LR 19 26 58.0
comp=Z,49nm,21.5s,baz=241,slow=31
GTA Gaotai 63.34 320 eP P 19 06 13.8 0.0
GTA pP sP 19 06 38.6 +0.4
GTA sP PcP 19 06 47.6 -2.8
ULN Ulaanbaatar 64.67 331 P P 19 06 21.0 -1.4
ULN IAmb IAmb 19 06 23.0
comp=Z,3.8nm,0.9s
SONM Songino Array 64.96 331 P P 19 06 24.1 -0.2
comp=Z,1.1nm,0.5s,baz=146,slow=7.0,SNR=12
SONM LR LR 19 34 07.5
comp=Z,43nm,20.9s,baz=320,slow=35
SONM Songino Array 64.96 331 P P 19 06 23.5 -0.7
WMQ Urumqi 73.39 319 eP P 19 07 17.3 +0.9
MK31 Makanchi Array 78.09 320 P P 19 07 42.3 -0.9
MKAR Makanchi Array 78.09 320 P P 19 07 41.9 -1.3
comp=Z,0.5nm,0.3s,baz=97,slow=8.5,SNR=16
MKAR pP pP 19 08 01.0 -0.3
comp=Z,0.6nm,0.7s,baz=108,slow=6.9,SNR=3.0
MKAR Makanchi Array 78.09 320 P P 19 07 41.6 -1.5
ZALV Zalesovo Beam 79.58 328 P P 19 07 48.9 -2.2
comp=Z,1.5nm,0.5s,baz=104,slow=5.7,SNR=8.2
ZALV pP pP 19 08 08.1 -1.3
comp=Z,1.2nm,0.6s,baz=114,slow=6.6,SNR=3.5
ZALV LR LR 19 43 42.0
comp=Z,22nm,19.8s,baz=184,slow=36
ZALV Zalesovo Beam 79.58 328 P P 19 07 48.6 -2.5
MAW Mawson 82.11 203 LR LR 19 43 09.6
comp=Z,32nm,18.3s,baz=62,slow=34
QSPA South Pole Qui 83.61 180 P P 19 08 10.7 -1.6
QSPA IAmb IAmb 19 08 54.3
comp=Z,17nm,1.6s
ILAR Eielson Array 85.61 23 P P 19 08 19.6 -2.7
comp=Z,0.8nm,0.8s,baz=249,slow=5.0,SNR=10
SYO Syowa Base 90.43 200 eP P 19 08 45.6 +0.4
INK Inuvik 91.80 21 P P 19 08 49.4 -2.1
comp=Z,1.2nm,0.9s,baz=229,slow=5.4,SNR=3.3
INK Inuvik 91.80 21 IAmb IAmb 19 09 34.9
comp=Z,6.8nm,1.6s
NVAR Mina Array Bea 97.19 52 P P 19 09 16.8 -0.4
comp=Z,0.2nm,0.4s,baz=258,slow=3.6,SNR=2.8
TORD Torodi Ar. Bea 145.67 284 PKPbc PKPbc 19 15 23.7 0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,6.8nm,0.5s,baz=74,slow=3.8,SNR=67						
KIC	**Kosan Boka**	**152.42**	**272**	ePKP1	**PKPbc**	**19 15 40.8**	**-0.3**
	comp=Z,5.6nm,0.6s						
DBIC	**Dimbokro**	**152.54**	**272**	PKPbc	**PKiKP**	**19 15 41.7**	**+0.1**
	comp=Z,3.8nm,0.7s,baz=83,slow=6.1,SNR=8.9						
LIC	**Lamto**	**152.70**	**271**	ePKP1	**PKPbc**	**19 15 41.5**	**-0.2**
	comp=Z,15nm,0.5s						
TIC	**Toumodi**	**152.70**	**272**	ePKP1	**PKPbc**	**19 15 41.6**	**-0.1**
BDFB	**Brasilia**	**153.28**	**145**	PKPbc	**PKPbc**	**19 15 42.9**	**-0.1**
	comp=Z,2.7nm,0.6s,baz=221,slow=4.2,SNR=4.5						

IDC ***06*** *18:58:07.3±0.8, 38.73N×105.35W, h0km, mb4.1/7, mb1 4.0/15, mb1mx3.8/51, mbtmp3.9/15, ML3.5/7, Error ellipse: s-maj=16.6km s-min=7.4km az=147.0*

NEIC ***06*** *18:58:07.1±1.6, 43.81N±0.05×105.14W±0.08, h0km±1km, ML3.8/73, Error ellipse: s-maj=9.5km s-min=8.5km az=94.0*

ISC 06 18:58:07.3±0.6, **43.79N**±0.06×**105.11W**±0.06, **h0**km, **n117**, σ1§**18**/116, **mb4.2**/7, **Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.84**	**67**		**Pn**	**18 58 25.9**	**-0.7**
K22A	**Casper**	**1.54**	**223**		**Pn**	**18 58 34.8**	**-1.3**
K22A				IAML		18 58 57.8	
	comp=E,2μm,0.8s						
K22A				IAML		18 58 58.2	
	comp=N,2μm,0.4s						
PHWY	**Pilot Hill**	**2.50**	**186**		**Pn**	**18 58 50.2**	**+0.7**
RWWY	**Rawlins**	**2.61**	**217**		**Pn**	**18 58 52.1**	**+1.2**
RWWY				IAML		18 59 28.1	
	comp=N,699nm,0.8s						
RWWY				IAML		18 59 28.6	
	comp=N,690nm,0.7s						
N23A	**Red Feather La**	**2.96**	**192**		**Pn**	**18 58 56.7**	**+0.9**
N23A				IAML		18 59 43.9	
	comp=E,158nm,0.6s						
N23A				IAML		18 59 44.1	
	comp=N,285nm,0.6s						
LAO	**LASA Array**	**3.00**	**345**		**Pn**	**18 58 56.6**	**+0.4**
LAO				IAML		18 59 41.3	
	comp=N,501nm,0.6s						
RLMT	**Red Lodge**	**3.26**	**296**		**Pn**	**18 58 59.6**	**-0.2**
RLMT				IAML		18 59 52.4	
	comp=N,154nm,0.3s						
RLMT				IAML		18 59 55.1	
	comp=N,202nm,0.8s						
PD31	**Pinedale Array**	**3.40**	**254**		**Pn**	**18 59 01.5**	**-0.4**
PDAR	**Pinedale Array**	**3.40**	**254**	Pn	**Pn**	**18 59 02.2**	**+0.4**
	comp=N,18nm,0.3s,baz=68,slow=16,SNR=219						
PDAR				Pg	**Pb**	**18 59 07.8**	**-0.8**
	comp=N,58nm,0.3s,baz=71,slow=20,SNR=91						
PDAR				Lg	Lg	18 59 44.4	
	comp=N,8.0nm,0.3s,baz=75,slow=29,SNR=4.1						
PDAR	**Pinedale Array**	**3.40**	**254**		**Pn**	**18 59 01.3**	**-0.5**
BW06	**Boulder Array**	**3.41**	**254**		**Pn**	**18 59 01.3**	**-0.5**
OGNE	**Ogallala**	**3.65**	**140**		**Pn**	**18 59 07.1**	**+2.1**
YNE	**Yellowstone No**	**3.71**	**291**		**Pn**	**18 59 05.9**	**-0.2**
YMP	**Mirror Lake Pl**	**3.75**	**286**		**Pn**	**18 59 06.3**	**-0.3**
GCMT	**Greycliff**	**3.81**	**303**		**Pn**	**18 59 06.9**	**-0.4**
LKWY	**Lake**	**3.88**	**283**	Pn	**Pn**	**18 59 08.5**	**0.0**
LKWY				IAML		18 59 39.7	
	comp=N,139nm,0.6s						
LKWY				IAML		19 00 12.7	
	comp=N,87nm,0.9s						
H17A	**Grant Village**	**3.98**	**281**		**Pn**	**18 59 10.3**	**+0.5**
H17A				IAML		19 00 14.2	
	comp=N,106nm,0.7s						
YUF	**Upper Falls**	**3.99**	**285**		**Pn**	**18 59 10.9**	**+1.1**
ISCO	**Idaho Springs**	**4.01**	**186**		**Pn**	**18 59 11.5**	**+1.3**
FLWY	**Flagg Ranch**	**4.05**	**276**		**Pn**	**18 59 10.2**	**-0.4**
FLWY				IAML		19 00 23.1	
	comp=N,120nm,1.0s						
FLWY				IAML		19 00 49.7	
	comp=N,106nm,1.2s						
MOOW	**Moose Ponds**	**4.08**	**271**		**Pn**	**18 59 11.0**	**-0.1**
YNR	**Norris Junctio**	**4.11**	**285**		**Pn**	**18 59 10.6**	**-0.9**
SNOW	**Snow King Moun**	**4.11**	**267**		**Pn**	**18 59 11.7**	**+0.1**
SNOW				IAML		19 00 37.8	
	comp=N,103nm,1.4s						
SNOW				IAML		19 00 42.1	
	comp=N,106nm,0.8s						
YPP	**Pitchstone Pla**	**4.13**	**279**		**Pn**	**18 59 11.7**	**-0.2**
REDW	**Red Top Meadow**	**4.19**	**266**		**Pn**	**18 59 12.7**	**0.0**
REDW				IAML		19 00 25.1	
	comp=N,135nm,1.1s						
REDW				IAML		19 00 28.5	
	comp=N,163nm,0.7s						
IMW	**Indian Meadow**	**4.22**	**273**	Pn	**Pn**	**18 59 13.4**	**+0.3**
IMW				IAML		19 00 24.0	
	comp=N,92nm,0.8s						
IMW				IAML		19 00 24.4	
	comp=N,85nm,0.7s						
YHH	**Holmes Hill**	**4.24**	**286**		**Pn**	**18 59 12.6**	**-0.8**
FXWY	**Fox Creek**	**4.29**	**270**		**Pn**	**18 59 13.9**	**-0.1**
YMR	**Madison River**	**4.30**	**284**		**Pn**	**18 59 13.3**	**-0.8**
O20A	**White River Ci**	**4.33**	**214**		**Pn**	**18 59 15.2**	**+0.6**
O20A				IAML		19 00 28.9	
	comp=N,125nm,0.9s						
YHB	**Horse Butte**	**4.47**	**284**		**Pn**	**18 59 15.8**	**-0.7**
SUSD	**Miller**	**4.48**	**80**	Pn	**Pn**	**18 59 16.1**	**-0.3**
YHL	**Hebgen Lake**	**4.48**	**286**		**Pn**	**18 59 15.7**	**-1.0**
AHID	**Auburn Hatcher**	**4.49**	**259**		**Pn**	**18 59 16.8**	**0.0**
AHID				IAML		19 00 36.3	
	comp=E,98nm,1.2s						
AHID				IAML		19 00 46.3	
	comp=N,107nm,1.0s						
RDMU	**Red Mountain**	**4.62**	**227**		**Pn**	**18 59 18.3**	**-0.2**
QLMT	**Earthquake Lak**	**4.65**	**285**		**Pn**	**18 59 17.5**	**-1.5**
DGMT	**Dagmar**	**4.72**	**7**		**Pn**	**18 59 20.7**	**+0.9**
SMCO	**Snowmass**	**4.82**	**198**	Pn	**Pn**	**18 59 21.5**	**+0.1**
SMCO				IAML		19 00 46.3	
	comp=N,66nm,1.2s						
SMCO				IAML		19 00 47.4	
	comp=N,53nm,0.8s						
Q24A	**Divide**	**4.82**	**180**		**Pn**	**18 59 21.7**	**+0.3**
Q24A				IAML		19 00 44.6	
	comp=E,62nm,0.8s						
Q24A				IAML		19 00 46.2	
	comp=N,39nm,0.7s						
KSCO	**Kaye Shedlock'**	**5.13**	**158**		**Pn**	**18 59 26.2**	**+0.8**
EGMT	**Eagleton**	**5.33**	**324**		**Pn**	**18 59 27.4**	**-0.7**
TCUT	**Toone Canyon**	**5.37**	**242**		**Pn**	**18 59 28.5**	**-0.4**
DLMT	**Dillon**	**5.57**	**289**	Pn	**Pn**	**18 59 30.1**	**-1.4**
MDND	**Maddock**	**5.59**	**42**		**Pn**	**18 59 29.5**	**-2.2**
LRM	**Limekiln Ridge**	**5.60**	**294**	Pn	**Pn**	**18 59 31.1**	**-0.9**
MCMT	**McKenzie Canyo**	**5.65**	**283**		**Pn**	**18 59 32.6**	**-0.1**
BGNE	**Belgrade**	**5.66**	**112**		**Pn**	**18 59 33.6**	**+1.0**
JLU	**Jordanelle**	**5.68**	**238**		**Pn**	**18 59 32.6**	**-0.6**
CTU	**Camp Tracy**	**5.82**	**240**		**Pn**	**18 59 33.1**	**-1.9**
SPUT	**South Promonto**	**5.96**	**248**	Pn	**Pn**	**18 59 36.3**	**-0.6**
HVU	**Hansel Valley**	**5.99**	**253**	Pn	**Pn**	**18 59 34.6**	**-2.6**
P17A	**Butcher Ranch,**	**6.03**	**226**		**Pn**	**18 59 36.8**	**-1.1**
SDCO	**Great Sand Dun**	**6.05**	**183**		**Pn**	**18 59 39.3**	**+1.1**
ECSD	**EROS Data Cent**	**6.15**	**88**		**Pn**	**18 59 40.2**	**+0.9**
MPU	**Maple Canyon**	**6.16**	**234**		**Pn**	**18 59 37.3**	**-2.3**
S22A	**4UR Ranch, Cre**	**6.18**	**193**		**Pn**	**18 59 40.8**	**+0.8**
SRU	**San Rafael Swe**	**6.20**	**223**		**Pn**	**18 59 38.9**	**-1.3**
TMUT	**Trail Mountain**	**6.41**	**228**		**Pn**	**18 59 43.4**	**+0.2**
CBKS	**Cedar Bluff**	**6.41**	**139**	Pn	**Pn**	**18 59 43.0**	**+0.1**
NLU	**North Lily Min**	**6.46**	**236**		**Pn**	**18 59 43.0**	**-0.8**
BGU	**Big Grassy Mou**	**6.53**	**247**		**Pn**	**18 59 44.9**	**+0.2**
T25A	**Trinidad**	**6.67**	**175**		**Pn**	**18 59 47.5**	**+0.9**
Q16A	**Castle Valley**	**6.67**	**225**		**Pn**	**18 59 46.8**	**+0.1**
DUG	**Dugway, Tooele**	**6.77**	**241**		**Pn**	**18 59 47.7**	**-0.3**
MSO	**Missoula**	**6.93**	**299**		**Pn**	**18 59 47.9**	**-2.2**
MVCO	**Mesa Verde**	**7.06**	**203**		**Pn**	**18 59 53.0**	**+1.0**
MSU	**Marysvale**	**7.50**	**228**		**Pn**	**18 59 58.0**	**-0.1**
JTMT	**Jette**	**7.53**	**305**	Pn	**Pn**	**18 59 57.8**	**-0.6**
MFID	**Camas Ranch**	**7.79**	**271**	Pn	**Pn**	**19 00 00.8**	**-1.2**
MTPU	**Mount Pierson**	**7.85**	**225**		**Pn**	**19 00 02.7**	**-0.3**
AGMN	**Agassiz Nation**	**7.85**	**52**		**Pn**	**19 00 02.3**	**-0.4**
WALA	**Waterton Lakes**	**8.04**	**314**		**Pn**	**19 00 04.2**	**-1.2**
ELK	**Elko**	**8.10**	**251**	Pn	**Pn**	**19 00 06.5**	**+0.2**
	comp=N,1.1nm,0.3s,baz=56,slow=9.8,SNR=16						
ELK				Lg	Lg	19 02 13.2	
	comp=N,0.1nm,0.3s,baz=292,slow=17,SNR=1.8						
ELK	**Elko**	**8.10**	**251**		**Pn**	**19 00 06.2**	**-0.2**
PKCU	**Pink Cliffs**	**8.37**	**223**	Pn	**Pn**	**19 00 08.6**	**-1.5**
PSUT	**Pine Spring**	**8.43**	**234**		**Pn**	**19 00 11.1**	**+0.3**
CCUT	**Cedar City**	**8.84**	**228**		**Pn**	**19 00 15.7**	**-0.7**
F10A	**Beach Ranch, E**	**8.88**	**288**		**Pn**	**19 00 14.9**	**-1.9**
ANMO	**Albuquerque**	**8.89**	**187**	Lg	Lg	19 02 45.9	
	comp=N,0.0nm,0.3s,baz=312,slow=9.4,SNR=2.0						
I10CA	**LAC DU BONNET**	**8.92**	**41**	*i*		19 57 20.0	
	baz=218,slow=333,SNR=1.6						
KNB	**Kanab**	**8.96**	**224**		**Pn**	**19 00 18.5**	**+0.4**
ULM	**Lac du Bonnet**	**9.03**	**41**	Pn	**Pn**	**19 00 18.8**	**0.0**
	comp=N,3.8nm,0.3s,baz=231,slow=12,SNR=28						
ULM				Lg	Lg	19 02 49.4	
	comp=N,2.0nm,0.3s,baz=147,slow=17,SNR=4.0						
ULM	**Lac du Bonnet**	**9.03**	**41**		**Pn**	**19 00 17.9**	**-0.8**
LCMT	**Little Creek M**	**9.18**	**225**	Pn	**Pn**	**19 00 19.5**	**-1.5**
U15A	**North Rim**	**9.18**	**219**		**Pn**	**19 00 21.1**	**0.0**
AMTX	**Amarillo**	**9.28**	**162**	Pn	**Pn**	**19 00 22.7**	**+0.3**
W18A	**Petrified Fore**	**9.37**	**204**	Pn	**Pn**	**19 00 22.5**	**-1.2**
NEW	**Newport**	**9.47**	**302**	Pn	**Pn**	**19 00 23.4**	**-1.5**
	comp=N,0.3nm,0.3s,baz=102,slow=6.8,SNR=4.8						
NEW				Lg	Lg	19 02 56.0	
	comp=N,0.1nm,0.3s,baz=20,slow=18,SNR=2.9						
NEW	**Newport**	**9.47**	**302**		**Pn**	**19 00 24.0**	**-0.9**
WUAZ	**Wupatki**	**9.57**	**212**		**Pn**	**19 00 25.9**	**-0.5**
R11A	**Troy Canyon, C**	**9.59**	**239**		**Pn**	**19 00 26.0**	**-0.8**
WVOR	**Wild Horse Val**	**9.99**	**267**	Pn	**Pn**	**19 00 30.3**	**-1.8**
C09A	**Chrisman Ranch**	**10.03**	**298**		**Pn**	**19 00 31.5**	**-1.0**
WMOK	**Wichita Mounta**	**10.28**	**149**	Pn	**Pn**	**19 00 35.3**	**-0.7**
EYMN	**Ely**	**10.36**	**62**	Pn	**Pn**	**19 00 36.6**	**-0.5**
X16A	**Lo Mia Camp, P**	**10.57**	**210**	Pn	**Pn**	**19 00 39.8**	**-0.4**
G40A	**Rib Lake**	**10.75**	**77**	Pn	**Pn**	**19 00 42.3**	**-0.1**
KVN	**Kaiserville**	**10.84**	**249**		**Pn**	**19 00 44.4**	**+0.6**
FFC	**Flin Flon**	**11.13**	**9**		**Pn**	**19 00 46.6**	**-1.0**
NVAR	**Mina Array Bea**	**11.30**	**246**	Pn	**Pn**	**19 00 51.0**	**+0.9**
	comp=N,0.3nm,0.3s,baz=50,slow=12,SNR=3.8						
NVAR	**Mina Array Bea**	**11.30**	**246**		**Pn**	**19 00 49.6**	**-0.5**
D41A	**Chassel**	**12.08**	**69**		**Pn**	**19 01 00.0**	**-0.5**
YBH	**Yreka Blue Hor**	**13.10**	**267**	Pn	**Pn**	**19 01 18.3**	**+3.7**
	comp=N,0.1nm,0.3s,baz=60,slow=8.7,SNR=4.0						
TXAR	**Lajitas Array**	**14.47**	**175**	Pn	**Pn**	**19 01 34.6**	**+1.2**
	comp=N,0.0nm,0.3s,baz=0.0,slow=9.2,SNR=2.5						
TXAR				Pg	P	19 02 29.2	+49
	comp=N,0.1nm,0.3s,baz=18,slow=9.6,SNR=3.6						
TXAR				Lg	Lg	19 05 38.0	
	comp=N,0.1nm,0.3s,baz=2.1,slow=26,SNR=4.7						
T47A	**Sharon Grove**	**15.30**	**110**	P	**P**	**19 01 48.6**	**-0.8**
YKA	**Yellowknife Ar**	**19.54**	**347**	P	**P**	**19 02 35.4**	**-0.7**
	comp=N,0.2nm,0.3s,baz=159,slow=12,SNR=17						
YKA				Lg	Lg	19 08 16.4	
	comp=N,0.0nm,0.3s,baz=152,slow=27,SNR=3.1						
PCA	**Pinnacle**	**26.68**	**320**		**S**	**19 08 31.0**	**+7.1**
ILAR	**Eielson Array**	**31.29**	**327**	P	**P**	**19 04 28.9**	**+0.3**
	comp=N,0.2nm,0.5s,baz=104,slow=7.1,SNR=5.1						
SEY	**Seymchan**	**57.22**	**328**	P	**P**	**19 07 56.5**	**+0.7**
	comp=N,3.1nm,0.3s,baz=133,slow=9.8,SNR=3.9						
ARCES	**ARCESS Array B**	**61.33**	**18**	P	**P**	**19 08 23.9**	**-0.2**
	comp=N,1.2nm,0.5s,baz=331,slow=6.9,SNR=12						
ARCES	**ARCESS Array B**	**61.33**	**18**	P	**P**	**19 08 23.1**	**-1.0**
FINES	**FINESS Array B**	**67.94**	**23**	P	**P**	**19 09 07.5**	**+0.1**
	comp=N,1.1nm,0.7s,baz=5.2,slow=8.4,SNR=5.4						
ZALV	**Zalesovo Beam**	**82.27**	**354**	P	**P**	**19 10 30.0**	**-0.2**
	comp=N,1.2nm,0.6s,baz=354,slow=4.1,SNR=5.7						
ZALV	**Zalesovo Beam**	**82.27**	**354**	P	**P**	**19 10 29.3**	**-0.9**
SONM	**Songino Array**	**84.63**	**339**	P	**P**	**19 10 43.4**	**+0.8**
	comp=N,0.5nm,0.5s,baz=23,slow=3.7,SNR=5.1						
MKAR	**Makanchi Array**	**89.56**	**355**	P	**P**	**19 11 06.8**	**+0.3**
	comp=N,1.0nm,0.7s,baz=10,slow=4.2,SNR=9.0						
MKAR	**Makanchi Array**	**89.56**	**355**	P	**P**	**19 11 05.8**	**-0.7**

IDC ***06*** *19:05:40.4±0.7, 28.77N×139.52E, h457km±16km, mb3.1/12, mb1 3.2/16, mb1mx3.0/48, mbtmp4.0/16, Error ellipse: s-maj=41.1km s-min=10.9km az=73.0*

JMA ***06*** *19:05:40.4±0.1, 28.80N×139.86E, h485km, M3.6*

ISC 06 19:05:40.6±0.7, **28.74N**±0.07×**139.4E**±0.1, **h450**km, **n33**, σ1§**26**/40, **mb3.5**/12, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.00**	**122**	P	**P**	**19 06 48.2**	**+0.5**
CBIJ				S	**S**	**19 07 41.9**	**-0.2**
JCJ	**Chichijima**	**3.00**	**122**	P	**P**	**19 06 48.2**	**+0.5**
	91nm,0.3s,baz=80,slow=3.1,SNR=43						
JCJ				S	**S**	**19 07 41.5**	**-0.6**
	92nm,0.3s,baz=298,slow=20,SNR=17						
JHH2	**Haha-jima-NKT2**	**3.27**	**129**	P	**P**	**19 06 50.7**	**+0.9**
JHH2				eS	**S**	**19 07 45.9**	**0.0**
BSO1	**Boso 1**	**6.06**	**13**	P	**P**	**19 07 17.1**	**+2.3**
BSO1				S	**S**	**19 08 32.0**	**0.0**
JKN2	**Miekihoku**	**6.08**	**335**	P	**P**	**19 07 19.5**	**+3.9**
JHU	**Hanno**	**7.09**	**360**	P	**P**	**19 07 26.9**	**+0.7**
JRY	**Ryogami san**	**7.27**	**357**	P	**P**	**19 07 29.5**	**+1.4**
JRY				eS	**S**	**19 08 57.2**	**+1.0**
JAG	**Ashikaga**	**7.67**	**1**	P	**P**	**19 07 32.2**	**-0.1**
JAG				S	**S**	**19 09 00.8**	**-3.2**
MJAR	**Matsushiro Arr**	**7.84**	**353**	P	**P**	**19 07 33.8**	**-0.4**
	0.1nm,0.3s,baz=249,slow=10,SNR=6.2						
JHO	**Hitachi**	**7.92**	**7**	P	**P**	**19 07 36.2**	**+1.2**
JFK	**Kawauchi**	**8.70**	**8**	P	**P**	**19 07 46.7**	**+3.2**
JFK				eS	**S**	**19 09 22.7**	**-1.8**
KSRS	**Korea Array**	**12.93**	**315**	P	**P**	**19 08 30.1**	**+0.8**
	0.3nm,0.3s,baz=129,slow=10,SNR=6.0						
USRK	**Ussuriysk Ar.**	**16.52**	**341**	P	**P**	**19 09 08.0**	**+0.4**
	baz=156,slow=7.4,SNR=10						
KLR	**Kul'dur**	**21.28**	**346**	P	**P**	**19 09 53.2**	**-0.2**
	1.6nm,0.5s,baz=191,slow=5.8,SNR=9.9						
SONM	**Songino Array**	**31.79**	**316**	P	**P**	**19 11 26.5**	**0.0**
	1.0nm,0.5s,baz=124,slow=8.4,SNR=16						
TAPN	**Taplejung**	**45.30**	**281**	eP	**P**	**19 13 17.8**	**+0.5**
	3.1nm,0.5s						
ODAN	**Odare**	**45.70**	**281**	eP	**P**	**19 13 20.8**	**+0.5**
	2.9nm,0.4s						
RAMN	**Ramite**	**46.36**	**281**	eP	**P**	**19 13 26.0**	**+0.6**
	3.6nm,0.5s						
JIRN	**Jiri**	**46.53**	**282**	eP	**P**	**19 13 27.7**	**+0.9**
	9.6nm,0.5s						
ZALV	**Zalesovo Beam**	**46.60**	**319**	P	**P**	**19 13 25.8**	**-0.6**
	0.4nm,0.3s,baz=96,slow=7.5,SNR=3.1						
GUN	**Gumba**	**46.74**	**282**	eP	**P**	**19 13 29.1**	**+0.8**
DMN	**Daman**	**47.48**	**282**	eP	**P**	**19 13 34.3**	**+0.5**
MKAR	**Makanchi Array**	**47.49**	**309**	P	**P**	**19 13 33.0**	**-0.4**
	0.6nm,0.4s,baz=87,slow=9.9,SNR=14						
GKN	**Gorkha**	**47.78**	**283**	eP	**P**	**19 13 36.9**	**+0.9**
	1.3nm,0.2s						
DANN	**Dangsing**	**48.44**	**284**	eP	**P**	**19 13 41.9**	**+0.8**
	3.0nm,0.3s						
WRA	**Warramunga Arr**	**48.63**	**186**	P	**P**	**19 13 41.8**	**-0.4**
	1.0nm,0.4s,baz=1.5,slow=7.7,SNR=24						
KURBB	**Kurchatov Arra**	**50.10**	**314**	P	**P**	**19 13 52.4**	**-0.3**
	2.0nm,0.4s,baz=91,slow=8.1,SNR=15						
ASAR	**Alice Springs**	**52.36**	**186**	P	**P**	**19 14 09.0**	**-0.6**
	0.4nm,0.5s,baz=15,slow=11,SNR=8.2						
BVAR	**Borovoye Array**	**55.13**	**317**	P	**P**	**19 14 28.7**	**-0.2**
	1.3nm,0.5s,baz=88,slow=7.1,SNR=16						
AKTO	**Aktyubinsk**	**63.10**	**315**	P	**P**	**19 15 21.6**	**-1.1**
	0.9nm,0.6s,baz=79,slow=6.1,SNR=2.9						
ARCES	**ARCESS Array B**	**71.16**	**340**	P	**P**	**19 16 11.7**	**-0.6**
	2.9nm,1.0s,baz=72,slow=8.7,SNR=1.4						
KBZ	**Khabaz**	**75.05**	**312**	P	**P**	**19 16 35.4**	**+0.3**
	0.6nm,0.8s,baz=295,slow=4.3,SNR=3.7						
FINES	**FINESS Array B**	**75.36**	**333**	P	**P**	**19 16 35.5**	**-1.0**
	0.6nm,0.3s,baz=72,slow=5.1,SNR=13						

IDC ***06*** *19:15:09.4±4.6, 36.15N×71.31E, h50km±31km, mb3.6/9, mb1 3.7/15, mb1mx3.4/69, mbtmp3.9/15, ML3.8/6, MS3.0/2, Ms1 3.2/2, ms1mx2.6/32, Error ellipse: s-maj=49.3km s-min=23.9km az=150.0*

NNC ***06*** *19:15:17.4±3.3, 36.78N×70.76E, h108km±82km, mb3.8, mpv4.4, Error ellipse: s-maj=31.0km s-min=17.4km az=149.0*

ISC 06 19:15:15.1±0.7, **36.48N**±0.06×**71.41E**±0.09, **h100**km, **n43**, σ1§**59**/45, **mb3.9**/8, **8C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**4.73**	**142**	*i* P	**Sn**	**19 17 17.5**	**-0.3**
THN	**Thein Dam**	**5.38**	**137**	eP	**Pn**	**19 16 32.5**	**-0.4**
THN				eS	**Sn**	**19 17 35.5**	**+1.9**
AML	**Almayashu**	**5.91**	**17**	P	**Pn**	**19 16 41.4**	**+0.8**
	SNR=135						
UCH	**Uchtor**	**6.22**	**22**	P	**Pn**	**19 16 45.8**	**+1.0**
	SNR=18						
KZA	**Kyzart**	**6.33**	**27**	P	**Pn**	**19 16 47.3**	**+1.0**
	SNR=7.1						
EKS2	**Erkin-Say**	**6.44**	**16**	P	**Pn**	**19 16 48.5**	**+1.1**
	SNR=41						
AAK	**Ala-Archa**	**6.59**	**20**	P	**Pn**	**19 16 50.4**	**+0.8**
	6.5nm,0.3s,baz=179,slow=4.6,SNR=165						
AAK				S	**Sn**	**19 18 01.0**	**-2.3**
	0.2nm,0.3s,baz=201,slow=19,SNR=2.3						
AAK				LR	LR	19 19 43.6	
	comp=Z,36nm,18.8s,baz=302,slow=40						
AAK	**Ala-Archa**	**6.59**	**20**	P	**Pn**	**19 16 50.7**	**+1.2**
	SNR=42						
AAK	**Ala-Archa**	**6.59**	**20**	⇑P	**Pn**	**19 16 50.9**	**+1.3**
	17nm,0.5s						
AAK				⇑S	**Sn**	**19 18 03.3**	**0.0**
	14nm,1.1s						
KK31	**Karatay Array**	**6.65**	**354**	⇑P	**Pn**	**19 16 49.3**	**-0.9**
	14nm,0.7s,baz=180,slow=13,SNR=197						
KK31				⇑S	**Sn**	**19 18 01.5**	**-3.0**
	6.0nm,0.5s,baz=176,slow=21						
KBK	**Karagaybulak**	**6.74**	**23**	P	**Pn**	**19 16 53.5**	**+1.9**
	SNR=9.5						
CHMS	**Chumysh**	**7.00**	**21**	P	**Pn**	**19 16 56.0**	**+1.1**
	SNR=23						
CHMS	**Chumysh**	**7.00**	**21**	⇑P	**Pn**	**19 16 55.9**	**+0.9**
	23nm,0.6s						
CHMS				⇑S	**Sn**	**19 18 13.1**	**+0.1**
	5.0nm,0.7s						
USP	**Ospenovka**	**7.18**	**18**	P	**Pn**	**19 16 59.1**	**+1.6**
	SNR=14						
GEYT	**Alibeck**	**10.71**	**282**	P	Pn	19 17 39.4	-6.0
	1.2nm,0.3s,baz=97,slow=9.6,SNR=15						
GEYT				S	Sn	19 19 30.7	-12
	1.4nm,0.3s,baz=123,slow=12,SNR=4.7						
GYA0B	**ALIBECK ARRAY**	**10.71**	**282**	⇓P	Pn	19 17 39.6	-5.8
GYA0B				⇓S	Sn	19 19 30.4	-13
MKAR	**Makanchi Array**	**13.11**	**35**	P	**Pn**	**19 18 16.9**	**-0.4**
	0.1nm,0.3s,baz=222,slow=13,SNR=6.4						
DANN	**Dangsing**	**13.20**	**124**	eP	**Pn**	**19 18 17.4**	**-1.5**
	9.1nm,0.4s						
GKN	**Gorkha**	**14.01**	**123**	eP	**Pn**	**19 18 27.2**	**-2.2**
	7.2nm,0.2s						
DMN	**Daman**	**14.58**	**123**	eP	**Pn**	**19 18 35.5**	**-1.3**
	4.3nm,0.4s						
KKN	**Kakani**	**14.59**	**123**	eP	**Pn**	**19 18 34.9**	**-1.9**
PKIN	**Phulchoki**	**14.80**	**123**	eP	**Pn**	**19 18 38.4**	**-1.2**
	3.5nm,0.3s						
PKI	**Pulchoki**	**14.81**	**123**	eP	**Pn**	**19 18 38.0**	**-1.8**
	4.4nm,0.3s						
GUN	**Gumba**	**14.92**	**121**	eP	**Pn**	**19 18 39.7**	**-1.5**
KURBB	**Kurchatov Arra**	**15.04**	**18**	P	**P**	**19 18 44.6**	**-0.4**
	0.1nm,0.3s,baz=204,slow=11,SNR=11						
AB31	**Akbulak array**	**15.26**	**330**	⇑P	**Pn**	**19 18 41.4**	**-3.6**
	1.5nm,0.3s,baz=138,slow=12,SNR=52						
AB31				⇑S	Sn	19 21 19.8	-14
	0.6nm,0.3s,baz=154,slow=23,SNR=3.1						
JIRN	**Jiri**	**15.29**	**121**	eP	**Pn**	**19 18 43.4**	**-2.5**
	11nm,0.3s						
RAMN	**Ramite**	**16.02**	**122**	eP	**Pn**	**19 18 53.3**	**-1.6**
	6.0nm,0.4s						
TAPN	**Taplejung**	**16.54**	**119**	eP	**Pn**	**19 19 00.6**	**-0.8**
	4.1nm,0.4s						
BVAR	**Borovoye Array**	**16.56**	**358**	P	**Pn**	**19 19 00.0**	**-1.1**
	0.5nm,0.3s,baz=173,slow=11,SNR=11						
AKTO	**Aktyubinsk**	**16.96**	**329**	P	**Pn**	**19 19 04.2**	**-1.9**
	0.7nm,0.3s,baz=140,slow=11,SNR=9.5						
AKTO				S	Sn	19 21 59.5	-15
	0.1nm,0.3s,baz=193,slow=17,SNR=1.3						
AKTO	**Aktyubinsk**	**16.96**	**329**	⇓P	**Pn**	**19 19 04.2**	**-1.9**
	5.6nm,0.8s						
AKTO				⇓S	Sn	19 22 01.3	-13
	2.3nm,0.8s						
ZALV	**Zalesovo Beam**	**19.80**	**24**	P	**P**	**19 19 38.0**	**+0.6**
	0.3nm,0.3s,baz=213,slow=11,SNR=18						
ARU	**Arti**	**21.76**	**341**	P	**P**	**19 19 59.1**	**+0.7**
	0.9nm,0.5s,baz=160,slow=4.4,SNR=6.6						
AKASG	**Malin Array Be**	**33.22**	**309**	P	**P**	**19 21 43.9**	**+1.7**
	0.9nm,0.5s,baz=82,slow=6.9,SNR=4.1						
FINES	**FINESS Array B**	**37.69**	**326**	P	**P**	**19 22 20.4**	**+0.1**
	0.9nm,0.3s,baz=122,slow=8.8,SNR=12						
ARCES	**ARCESS Array B**	**41.29**	**337**	P	**P**	**19 22 51.8**	**+1.6**
	1.5nm,0.4s,baz=116,slow=8.1,SNR=23						
HFS	**Hagfors**	**43.29**	**322**	P	**P**	**19 23 07.0**	**+0.5**
	2.5nm,0.5s,baz=98,slow=11,SNR=12						
NB2	**NORSAR Subarra**	**44.60**	**323**	P	**P**	**19 23 19.2**	**+2.2**
	comp=Z,0.8nm,0.5s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.60**	**323**	P	**P**	**19 23 19.4**	**+2.3**
	comp=Z,1.5nm,0.6s,baz=97,slow=7.6,SNR=7.2						
TORD	**Torodi Ar. Bea**	**66.05**	**269**	P	**P**	**19 25 50.3**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=53,slow=6.1,SNR=7.5						
ILAR	**Eielson Array**	**74.71**	**16**	LR	LR	20 06 21.9	
	comp=Z,32nm,18.0s,baz=108,slow=41						
YKA	**Yellowknife Ar**	**81.25**	**3**	P	**P**	**19 27 21.3**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=345,slow=5.2,SNR=5.1						

ATH 06 19:20:51.7, 38.70N×22.78E, h13km±2km, **ML2.3**/5, **Error ellipse: s-maj=2.9km s-min=1.0km az=33.0, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AXAR	**Agios Charalam**	**0.12**	**307**	P	Pg	19 20 54.9	-0.1
AXAR				S	Sg	19 20 57.3	0.0
AXAR				AML	AML	19 20 57.4	
	comp=E,17556μm,0.1s						
AXAR				AML	AML	19 20 57.5	
	comp=N,11920μm,0.1s						
LKR	**Lokris**	**0.18**	**105**	P	Pg	19 20 55.5	-0.3
LKR				S	Sg	19 20 58.8	0.0
LKR				AML	AML	19 20 59.4	
	comp=N,3948μm,0.2s						
LKR				AML	AML	19 21 00.2	
	comp=E,7008μm,0.1s						
DLFA	**Delphi**	**0.31**	**225**	P	Pg	19 20 58.1	0.0
DLFA				S	Sg	19 21 03.0	+0.6
DLFA				AML	AML	19 21 04.4	
	comp=N,900μm,0.4s						
DLFA				AML	AML	19 21 04.5	
	comp=E,2031μm,0.5s						
PROD	**Prodromos**	**0.45**	**167**	P	Pg	19 21 00.3	-0.3
PROD				S	Sb	19 21 07.5	-0.5
PROD				AML	AML	19 21 10.7	
	comp=N,759μm,0.3s						
PROD				AML	AML	19 21 11.4	
	comp=E,782μm,0.2s						
AGG	**Agios Georgios**	**0.48**	**313**	P	Pg	19 21 01.0	-0.2
AGG				S	Sg	19 21 07.5	0.0
AGG				AML	AML	19 21 11.5	
	comp=E,210μm,0.2s						
AGG				AML	AML	19 21 11.6	
	comp=N,213μm,0.3s						
KALE	**Kalithea**	**0.58**	**239**	P	Pg	19 21 02.7	-0.5
MAKR	**Makrakomi, Fth**	**0.59**	**302**	P	Pg	19 21 03.4	+0.1
VIL2	**Platees**	**0.62**	**141**	P	Pb	19 21 04.7	+0.3
ANX	**Ano Chora**	**0.68**	**261**	P	Pg	19 21 04.5	-0.4
NEO	**Neokhori**	**0.70**	**30**	P	Pb	19 21 05.8	0.0
SKIA	**Skiathos**	**0.71**	**49**	P	Pg	19 21 05.5	-0.1
XOR	**Xorichti**	**0.74**	**26**	P	Pg	19 21 05.8	-0.3

IDC ***06*** *19:20:57.8±0.6, 38.17N×20.45E, h0km, mb4.3/24, mb1 4.3/35, mb1mx4.3/48, mbtmp4.2/35, ML4.0/10, MS3.6/17, Ms1 3.7/17, ms1mx3.5/37, Error ellipse: s-maj=12.1km s-min=11.0km az=179.0*

TIR ***06*** *19:20:57.8, 38.54N×21.49E, h1km, Md4.6/7*

BJI ***06*** *19:20:58.9±0.0, 38.49N×20.43E, h15km, mB5.1/20, mb4.5/30, Ms5.0/4, Ms7 4.8/3*

SKO ***06*** *19:20:58.4, 38.02N×20.20E, h0km*

MOS ***06*** *19:20:59.3±1.2, 38.20N×20.29E, h22km, mb5.0/15, Error ellipse: s-maj=5.7km s-min=3.5km az=75.0*

PDG ***06*** *19:20:59.5±0.4, 38.15N×20.32E, h16km, ML4.5/13, Error ellipse: s-maj=0.7km s-min=1.1km az=0.0*

THE ***06*** *19:21:00.2, 38.17N×20.33E, h10km±1km, ML4.5/7, Error ellipse: s-maj=1.5km s-min=0.8km az=77.0*

ATH ***06*** *19:21:00.3, 38.15N×20.38E, h13km±1km, ML4.4/11, Error ellipse: s-maj=2.0km s-min=1.0km az=258.0*

MED_RC ***06*** *19:21:01.0±0.3, 38.02N×20.30E, h17km±1km, MW4.7/18, Moment Tensor Solution. Mantle waves: s18,c28; Duration: 1§0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.96±.11; $M_{\theta\theta}$0.15±.06; $M_{\phi\phi}$-1.11±.07; $M_{r\theta}$0.49±.14; $M_{\theta\phi}$0.32±.04; $M_{\phi r}$-0.19±.09; Best double couple: M_0 1.21000×10^{16} NP1: ϕ_s9.00000°, δ42.00000°, λ126.00000°. NP2: ϕ_s144.00000°, δ57.00000°, λ62.00000°. Principal axes: T 1.1900, Plg65.0000°, Azm2.0000°; N 0.0400, Plg23.0000°, Azm160.0000°; P -1.2300, Plg8.0000°, Azm254.0000°; nsta1 refers to body waves.*

nsta2 refers to surface waves, cutoff=35s.
*BEO **06** 19:21:01.4±0.8, 38.13N×20.19E, h20km±4km, ML4.4/10*
*NEIC **06** 19:21:02.2±2.4, 38.22N±0.06×20.35E±0.06, h29km±4km, Error ellipse: s-maj=8.4km s-min=6.6km az=197.0*
*BGR **06** 19:21:03.0±0.8, 38.20N×20.31E, h15km, Error ellipse: s-maj=26.7km s-min=11.1km az=52.0*
*HLW **06** 19:21:04.4, 37.22N×19.65E, h10km±22km, Md4.6, Ml4.9*
*GII **06** 19:21:10.9±0.0, 37.69N×21.43E, h10km*
ISC 06 19:21:00.0±0.5, 38.15N±0.02×20.34E±0.02, h16km±2km, n586, σ1.82/673, mb4.6/70, MS3.8/17, 50C-26D, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
CHV1	Chavriata, Kef	0.04	43	P	Pg	19 21 02.6	-0.4
CHV1				S	Sg	19 21 04.1	-0.8
KEF3	Kipouria, Keph	0.05	3	P	Pg	19 21 02.8	-0.2
KEF3				S	Sg	19 21 04.7	-0.3
LXRA	Lixouri, Kepha	0.09	57	P	Pg	19 21 03.0	-0.3
LXRA				S	Sg	19 21 05.0	-0.5
LXR1	Lixouri, Cepha	0.09	57	P	Pg	19 21 03.0	-0.3
LXR1				S	Sg	19 21 05.0	-0.5
ARGA	Argostoli. Kep	0.11	77	P	Pg	19 21 03.1	-0.5
ARGA				S	Sg	19 21 05.0	-0.8
ARG2	Argostoli	0.12	77	P	Pg	19 21 03.1	-0.5
ARG2				S	Sg	19 21 05.1	-0.9
	1337µm,0.2s						
KEF4	Livadi, Kephal	0.12	31	P	Pg	19 21 03.4	-0.3
KEF4				S	Sg	19 21 05.7	-0.4
KEF1	Kardakata, Kep	0.16	38	P	Pg	19 21 03.8	-0.4
KEF1				S	Sg	19 21 05.7	-1.3
VLS	Valsamata	0.20	83	P	Pg	19 21 04.1	-0.6
VLS				S	Sg	19 21 07.2	-0.7
VLS	Valsamata	0.20	83	P	Pg	19 21 04.1	-0.6
VLS				S	Sg	19 21 07.0	-0.9
VLS				AML	AML	19 21 07.9	
VLS				AML	AML	19 21 08.4	
VLS	Valsamata	0.20	83	P	Pg	19 21 04.1	-0.6
VLS				S	Sg	19 21 07.2	-0.7
KONA	Konidatara, Ke	0.33	33	P	Pg	19 21 06.5	-0.3
KONA				S	Sg	19 21 11.4	-0.2
VLMS	Volimes, Zakyn	0.37	137	P	Pg	19 21 07.7	+0.1
VLMS				S	Sg	19 21 12.9	0.0
VLMS				AML	AML	19 21 14.2	
VLMS				AML	AML	19 21 14.3	
EVGI	Lefkada island	0.53	28	P	Pg	19 21 09.9	-0.6
EVGI				S	Sg	19 21 18.1	+0.5
EVGI	Lefkada island	0.53	28	P	Pg	19 21 09.9	-0.6
EVGI				S	Sb	19 21 18.6	+0.3
ZAK2	Zakynthos	0.57	129	P	Pg	19 21 11.4	+0.1
ZAK2				S	Sb	19 21 20.9	+1.5
MGNA	Meganis	0.61	35	P	Pg	19 21 11.4	-0.7
MGNA				S	Sb	19 21 20.8	+0.1
KRI1	kERI	0.62	142	P	Pg	19 21 11.4	-0.7
KRI1				S	Sb	19 21 21.5	+0.8
	81µm,0.4s						
LKD2	Lefkada island	0.68	21	P	Pg	19 21 12.7	-0.7
LKD2	Lefkada island	0.68	21	P	Pg	19 21 13.2	-0.2
LKD2				AML	AML	19 21 29.9	
	comp=N,39095µm,0.6s						
LKD2				AML	AML	19 21 31.4	
	comp=E,41513µm,0.6s						
AST1	Astakos	0.70	56	P	Pg	19 21 13.2	-0.6
TSLK	Tsoukalades, L	0.71	20	P	Pg	19 21 13.3	-0.7
TSLK	Tsoukalades, L	0.71	20	P	Pg	19 21 13.4	-0.6
TSLK				AML	AML	19 21 32.4	
	comp=E,51661µm,0.5s						
TSLK				AML	AML	19 21 33.0	
	comp=N,46806µm,0.7s						
PDO	Prodromos	0.80	56	P	Pb	19 21 14.4	-1.0
PDO				S	Sb	19 21 26.1	+0.1
	comp=N,42µm,0.6s						
PDO	Prodromos	0.80	56	P	Pb	19 21 14.9	-0.5
PDO				AML	AML	19 21 34.8	
	comp=E,60950µm,0.5s						
PDO				AML	AML	19 21 37.1	
	comp=N,62527µm,0.6s						
RLS	Riolos of Patr	0.89	96	P	Pb	19 21 16.2	-0.8
RLS				S	Sn	19 21 31.7	+1.4
	comp=N,16µm,0.7s						
RLS	Riolos of Patr	0.89	96	P	Pb	19 21 16.4	-0.6
RLS				AML	AML	19 21 32.6	
	comp=N,30113µm,0.8s						
RLS				AML	AML	19 21 34.8	
	comp=E,34848µm,0.7s						
PVO	Paravola	1.04	63	P	Pb	19 21 19.3	-0.3
PVO				S	Sn	19 21 35.4	+1.4
	comp=E,41µm,0.8s						
PVO	Paravola	1.04	63	P	Pb	19 21 19.6	0.0
PVO				AML	AML	19 21 41.5	
	comp=N,85218µm,1.1s						
PVO				AML	AML	19 21 41.7	
	comp=E,77212µm,0.5s						
DRO	Drossia	1.10	100	P	Pb	19 21 19.7	-0.9
DRO	Drossia	1.10	100	P	Pb	19 21 20.4	-0.1
DRO				AML	AML	19 21 43.1	
	comp=E,70630µm,0.5s						
DRO				AML	AML	19 21 50.5	
	comp=N,63155µm,0.6s						
AMT	Artemida-Makis	1.25	119	P	Pn	19 21 23.0	+0.3
AMT				S	Sg	19 21 41.2	+0.9
	comp=N,27µm,0.9s						
AMT	Artemida-Makis	1.25	119	P	Pb	19 21 23.5	+0.3
AMT				AML	AML	19 21 53.0	
	comp=E,44544µm,1.1s						
AMT				AML	AML	19 21 53.5	
	comp=N,55680µm,0.9s						
LAKA	Lakka	1.29	86	P	Pn	19 21 23.3	0.0
LAKA	Lakka	1.29	86	P	Pn	19 21 23.4	0.0
LAKA				AML	AML	19 21 50.6	
	comp=E,23486µm,0.7s						
LAKA				AML	AML	19 21 58.0	
	comp=N,15788µm,0.8s						
IGT	Igoumenitsa	1.38	360	P	Pb	19 21 25.6	+0.2
IGT				S	Sg	19 21 44.2	-0.3
	comp=N,6µm,0.8s						
IGT	Igoumenitsa	1.38	360	ePg	Pg	19 21 28.1	+1.5
IGT				eSg	Sg	19 21 45.2	+0.7
KLV	Kalavryta, Ach	1.43	94	P	Pn	19 21 25.2	0.0
KLV	Kalavryta, Ach	1.43	94	P	Pb	19 21 26.0	-0.2
KLV				AML	AML	19 21 58.6	
	comp=E,12763µm,0.8s						
KLV				AML	AML	19 22 04.2	
	comp=N,12843µm,1.1s						
KLV	Kalavryta, Ach	1.43	94	P	Pn	19 21 25.3	0.0
KLV				AML	AML		
	comp=E,8775µm,0.9s						
KLV				AML	AML		
	comp=N,7980µm,1.1s						
KLV				AML	AML		
	comp=E,8825µm,0.9s						
KLV				AML	AML		
	comp=N,8790µm,1.0s						
KALE	Kalithea	1.43	80	P	Pn	19 21 25.6	+0.2
JAN	Janina	1.55	15	P	Pg	19 21 30.8	+0.9
ITM	Ithomi	1.59	127	P	Pb	19 21 29.1	+0.2
ITM	Ithomi	1.59	127	P	Pb	19 21 28.9	0.0
ITM				AML	AML		
	comp=E,1680µm,1.5s						
ITM				AML	AML		
	comp=N,1240µm,1.4s						
ITM				AML	AML		
	comp=E,1780µm,0.9s						
ITM				AML	AML		
	comp=N,1288µm,1.1s						
ITM	Ithomi	1.59	127		Pb	19 21 28.7	-0.2
PYL	PYLOS	1.68	138	P	Pn	19 21 29.3	+0.7
SRN	Sarande	1.75	351	P	Pb	19 21 30.8	-0.8
SRN	Sarande	1.75	351	*i* PN	Pb	19 21 31.2	-0.5
SRN				*i* SN	Sg	19 21 57.5	+1.2
SRN	Sarande	1.75	351	P	Pb	19 21 30.8	-0.8
SRN				AML	AML		
	comp=E,5105µm,0.5s						
SRN				AML	AML		
	comp=N,3525µm,0.7s						
SRN				AML	AML		
	comp=N,4255µm,0.5s						
SRN				AML	AML		
	comp=E,5260µm,1.1s						
MEV	Metsovon	1.77	23	P	Pb	19 21 33.0	+0.8
AGG	Agios Georgios	1.78	60	P	Pg	19 21 33.5	-0.8
AGG	Agios Georgios	1.78	60		Pg	19 21 33.4	-0.8
AGG	Agios Georgios	1.78	60	P	Pb	19 21 33.4	+1.1
THL	Klokotos Trika	1.92	42	P	Pb	19 21 35.1	+0.5
THL	Klokotos Trika	1.92	42	P	Pb	19 21 35.1	+0.5
THL				AML	AML		
	comp=N,964µm,0.7s						
THL				AML	AML		
	comp=E,1495µm,1.1s						
KPRO	Kipourio	1.97	23	P	Pb	19 21 35.7	+0.2
PENT	Pentalofos	2.13	17	P	Pb	19 21 37.8	-0.5
TPE	Tepelena	2.16	353	P	Pn	19 21 36.6	+1.4
TPE	Tepelena	2.16	353	*i* PN	Pb	19 21 37.6	-1.1
TPE				*i* SN	Sg	19 22 10.1	+0.7
NEST	Nestorio	2.33	13	P	Pb	19 21 41.2	-0.4
VLO	Vlora	2.41	344	*i* PN	Pn	19 21 39.3	+0.6
VLO				*i* SN	Sg	19 22 20.2	+2.8
SCTE	Santa Cesarea	2.41	323	P	Pn	19 21 39.9	+1.2
SCTE				S	Sn	19 22 07.9	+0.1
SCTE				AML	AML		
	comp=E,8240µm,0.6s						
SCTE				AML	AML		
	comp=N,6700µm,0.4s						
SCTE	Santa Cesarea	2.41	323		Pn	19 21 39.6	+0.9
FNA	Florina	2.75	17	*e*Pn	Pn	19 21 45.9	+2.5
FNA	Florina	2.75	17		Pn	19 21 45.6	+2.2
FNA	Florina	2.75	17	P	Pn	19 21 45.6	+2.2
OHR	Ohrid	2.98	7	⇓*i*Pn	Pn	19 21 49.5	+3.0
OHR				*i* Sn	Sb	19 22 27.1	-1.7
OHR				*e*Lg	Lg	19 22 30.9	
	comp=N,516nm,0.8s						
TIP	Timpagrande	2.99	291	⇓P	Pn	19 21 48.4	+1.7
TIP				⇑S	Sn	19 22 23.2	+0.9
TIP	Timpagrande	2.99	291	⇓P	Pn	19 21 48.4	+1.7
TIP				AML	AML		
	comp=N,1052µm,1.0s						
TIP				AML	AML		
	comp=N,1319µm,1.0s						
TIP				AML	AML		
	comp=E,940µm,1.2s						
TIP				AML	AML		
	comp=E,1120µm,1.1s						
TIP	Timpagrande	2.99	291		Pn	19 21 48.1	+1.3
SERS	Sersale	3.00	288	P	Pn	19 21 48.3	+1.4
SERS				AML	AML		
	comp=E,1270µm,0.5s						
SERS				AML	AML		
	comp=E,2930µm,0.8s						
SERS				AML	AML		
	comp=N,1276µm,1.5s						
SERS				AML	AML		
	comp=N,2900µm,0.8s						
PIPA	Pietrapaola	3.06	297	P	Pn	19 21 48.8	+1.1
PIPA				AML	AML		
	comp=N,2140µm,0.7s						
PIPA				AML	AML		
	comp=E,2290µm,0.7s						
PIPA				AML	AML		
	comp=E,2365µm,0.7s						
PIPA				AML	AML		
	comp=N,2045µm,0.7s						
PLAC	Placanica	3.09	277	⇓P	Pn	19 21 49.2	+1.1
PLAC				AML	AML		
	comp=E,3325µm,0.6s						
PLAC				AML	AML		
	comp=N,1220µm,0.7s						
PLAC				AML	AML		
	comp=N,3320µm,0.6s						
PLAC				AML	AML		
	comp=E,1385µm,0.7s						
GRI	Girifalco	3.15	283	P	Pn	19 21 50.3	+1.3
GRI				AML	AML		
	comp=E,2815µm,0.8s						
GRI				AML	AML		
	comp=N,1895µm,0.6s						
TIR	Tirane	3.21	354	*e*Pn	Pn	19 21 52.3	+2.5
TIR	Tirane	3.21	354	*i* PN	Pn	19 21 39.5	-10
TIR				*i* SN	Sn	19 22 17.0	-11
TIR	Tirane	3.21	354	P	Pn	19 21 52.0	+2.2
TIR				AML	AML		
	comp=E,1905µm,0.6s						
TIR				AML	AML		
	comp=N,2315µm,0.6s						
TIR	Tirane	3.21	354		Pn	19 21 51.3	+1.5
TIR	Tirane	3.21	354	P	Pn	19 21 51.3	+1.5
CELI	Celico	3.25	294	P	Pn	19 21 51.9	+1.5
CELI				AML	AML		
	comp=E,990µm,0.9s						
CELI				AML	AML		
	comp=N,2770µm,1.1s						
CELI				AML	AML		
	comp=N,1130µm,1.1s						
CELI				AML	AML		
	comp=E,2480µm,0.9s						
TAR1	Taranto	3.35	316	*e*Pn	Pn	19 21 53.1	+1.4
SOI	Samo	3.38	270	P	Pn	19 21 53.0	+0.8
SOI				AML	AML		
	comp=E,838µm,0.4s						
SOI				AML	AML		
	comp=N,886µm,0.7s						
CAR1	CAROLEI	3.42	290	⇓P	Pn	19 21 54.7	+2.1
CAR1				S	Sn	19 22 35.3	+2.5
CAR1				AML	AML		
	comp=E,4360µm,0.9s						
CAR1				AML	AML		
	comp=N,4585µm,0.9s						
CAR1				AML	AML		
	comp=E,4185µm,0.9s						
CAR1				AML	AML		
	comp=N,4680µm,0.9s						
MPAZ	Palizzi	3.43	268	P	Pn	19 21 53.7	+0.9
MPAZ				AML	AML		
	comp=N,2760µm,0.6s						
MPAZ				AML	AML		
	comp=E,2145µm,0.5s						
CEL	Celeste	3.51	273		Pn	19 21 55.0	+1.2
PHP	Peshkopia	3.53	1	*i* PN	Pn	19 21 56.8	+2.6
PHP				*i* SN	Sn	19 22 36.4	+0.8
JOPP	Joppolo	3.53	279	P	Pn	19 21 55.5	+1.4
JOPP				S	Sn	19 22 37.0	+1.4
JOPP				AML	AML		
	comp=E,1815µm,0.7s						
JOPP				AML	AML		
	comp=N,2130µm,0.5s						
GMB	Gambarie	3.56	272	⇓P	Pn	19 21 55.7	+1.0
GMB				S	Sn	19 22 36.1	-0.3
GMB				AML	AML		
	comp=E,6230µm,1.2s						
GMB				AML	AML		
	comp=N,6975µm,1.5s						
SALB	San Lorenzo Be	3.56	300	P	Pn	19 21 56.7	+2.1
SALB				AML	AML		
	comp=E,1295µm,0.5s						
SALB				AML	AML		
	comp=N,1062µm,0.8s						
ORI	Oriolo Calabro	3.58	303	P	Pn	19 21 57.3	+2.4
ORI				AML	AML		
	comp=E,3220µm,0.5s						
ORI				AML	AML		
	comp=N,3530µm,0.5s						
VAY	Valandovo	3.60	28	*e*Pn	Pn	19 21 57.2	+2.1
VAY	Valandovo	3.60	28	*i* Pn	Pn	19 21 57.1	+2.1
VAY				*i* Sn	Sn	19 22 40.9	+3.7
VAY				*e*Lg	Lg	19 23 07.9	
	comp=N,864nm,1.1s						
NOCI	Noci	3.66	317	P	Pn	19 21 57.0	+1.1
NOCI				S	Sn	19 22 38.1	-0.6
NOCI				AML	AML		
	comp=N,2445µm,1.1s						
NOCI				AML	AML		
	comp=E,3080µm,0.6s						
LTRZ	Laterza	3.67	313	P	Pn	19 21 57.3	+1.2
LTRZ				AML	AML		
	comp=E,1545µm,0.9s						
LTRZ				AML	AML		
	comp=N,2590µm,1.0s						
MTTG	Motta San Giov	3.67	269	P	Pn	19 21 56.9	+0.8
MTTG				S	Sn	19 22 37.7	-1.4
MTTG				AML	AML		
	comp=E,2370µm,0.6s						
MTTG				AML	AML		
	comp=N,2605µm,0.7s						
MATE	Matera	3.76	313	⇑P	Pn	19 21 59.3	+2.0
MATE	Matera	3.76	313	P	Pn	19 21 58.7	+1.4
MATE				AML	AML		
	comp=E,1690µm,0.7s						
MATE				AML	AML		
	comp=N,2585µm,1.1s						
STIP	Stip	3.81	21	*i* Pn	Pn	19 22 01.8	+3.8
SRS	Serrai	3.88	39	*e*Pn	Pn	19 22 01.1	+2.2
ULC	Ulcinj	3.90	348	*e*Pn	Pn	19 21 59.4	+0.2
ULC				*e*Sn	Sn	19 22 46.0	+1.3
PUK	Puka	3.90	355	*i* PN	Pn	19 22 01.7	+2.4
PUK				*i* SN	Sn	19 22 46.1	+1.3
PUK	Puka	3.90	355	⇑P	Pn	19 22 00.5	+1.2
PUK				AML	AML		
	comp=E,1110µm,1.3s						
PUK				AML	AML		
	comp=N,860µm,0.3s						
SG1	Sgolgore (BA)	3.90	315	*e*Pn	Pn	19 22 00.9	+1.6
SKO	Skopje	3.91	12	*e*Pn	Pn	19 22 01.6	+2.3
SKO	Skopje	3.91	12	*i* Pn	Pn	19 22 01.1	+1.7
BAI	Bari	3.98	319	*e*Pn	Pn	19 22 01.9	+1.6
AMUR	Altamura	3.99	315	P	Pn	19 22 01.5	+1.0
AMUR				AML	AML		
	comp=E,2260µm,1.0s						
AMUR				AML	AML		
	comp=N,2015µm,1.0s						
MCSR	Castroreale	4.02	270	P	Pn	19 22 02.1	+1.2
MCSR				AML	AML		
	comp=N,3100µm,0.9s						
MCSR				AML	AML		
	comp=E,2380µm,0.4s						
SIRI	Monte Sirino -	4.03	302	P	Pn	19 22 03.7	+2.6
SIRI				AML	AML		
	comp=E,1147µm,1.6s						
SIRI				AML	AML		
	comp=N,1048µm,0.5s						
SIRI				AML	AML		
	comp=N,1070µm,0.5s						
SIRI				AML	AML		
	comp=E,1165µm,1.6s						
NOV	Novara	4.11	270	P	Pn	19 22 03.2	+1.1
NOV				AML	AML		
	comp=E,2990µm,1.1s						
NOV				AML	AML		
	comp=N,1770µm,1.3s						
DRME	Dracevica, Mon	4.13	348	*e*Pn	Pn	19 22 02.9	+0.6
DRME	Dracevica, Mon	4.13	348	*e*Pn	Pn	19 22 03.1	+0.8
DRME				*e*Sn	Sn	19 22 51.6	+1.4
MCEL	Monticello	4.14	303	P	Pn	19 22 04.7	+2.1
MCEL				AML	AML		
	comp=N,1404µm,1.1s						
MCEL				AML	AML		
	comp=E,1155µm,1.6s						
MTSN	Montesano sull	4.14	302	P	Pn	19 22 04.9	+2.2
MTSN				AML	AML		
	comp=E,1050µm,1.2s						
MTSN				AML	AML		
	comp=N,1315µm,0.7s						
BCI	Bajram Curri	4.21	357	*i* PN	Pn	19 22 05.7	+2.1
BCI				*i* SN	Sn	19 22 54.7	+2.3
MGR	Morigerati	4.22	300	P	Pn	19 22 05.3	+1.7
MGR				AML	AML		
	comp=N,846µm,0.8s						
MGR				AML	AML		
	comp=E,708µm,0.9s						
LLI	Lipari	4.25	276	S	Sn	19 22 53.0	-0.4
APE	Apeiranthos	4.26	103	⇓P	Pn	19 22 08.1	+4.0
APE	Apeiranthos	4.26	103	*i* P	Pn	19 22 05.4	+1.2
KKB	Krupnik	4.26	29	P	Pn	19 22 07.6	+3.4
EMSG	Monte Spagnolo	4.28	267	P	Pn	19 22 05.7	+1.2
EMSG				AML	AML		
	comp=E,1415µm,1.2s						
EMSG				AML	AML		
	comp=N,2240µm,0.8s						
BUM	Brajici-Budva	4.29	345	*e*Pn	Pn	19 22 05.1	+0.5
BUM				*e*Sn	Sn	19 22 55.2	+0.9
SSY	Sortino	4.30	258	P	Pn	19 22 03.7	-1.0
ACER	Acerenza	4.30	309	⇑P	Pn	19 22 07.1	+2.3
ACER				AML	AML		
	comp=E,4460µm,0.7s						
ACER				AML	AML		
	comp=E,4540µm,0.7s						
ACER				AML	AML		
	comp=N,4760µm,1.2s						
ACER				AML	AML		
	comp=N,4630µm,1.2s						
ACER	Acerenza	4.30	309		Pn	19 22 06.0	+1.2
HAVL	Avola	4.32	256	P	Pn	19 22 04.0	-0.9
HAVL				AML	AML		
	comp=E,2315µm,1.0s						
HAVL				AML	AML		
	comp=N,1745µm,0.5s						
MUCR	Ucria	4.32	270	P	Pn	19 22 06.3	+1.2
MUCR				AML	AML		
	comp=N,1420µm,0.4s						
MUCR				AML	AML		
	comp=E,1200µm,0.5s						
MRVN	Minervino Murg	4.33	313	P	Pn	19 22 06.4	+1.3
MRVN				AML	AML		
	comp=N,1412µm,1.3s						
MRVN				AML	AML		
	comp=E,1375µm,1.2s						
PDG	Podgorica	4.35	349	*e*Pn	Pn	19 22 06.1	+0.6
PDG				*e*Sn	Sn	19 22 56.0	+0.3
PDG	Podgorica	4.35	349	⇑P	Pn	19 22 06.2	+0.8
PDG				⇑S	Sn	19 22 56.1	+0.3
PDG	Podgorica	4.35	349	P	Pn	19 22 06.4	+1.0
PDG				AML	AML		
	comp=N,738µm,1.6s						
PDG				AML	AML		
	comp=E,740µm,0.4s						
PDG				AML	AML		
	comp=E,923µm,0.4s						
PDG				AML	AML		
	comp=N,931µm,1.6s						
PDG	Podgorica	4.35	349	*e*Pn	Pn	19 22 05.9	+0.6
PDG	Podgorica	4.35	349		Pn	19 22 05.5	+0.1
TTG	Podgorica	4.35	349	*e*Pn	Pn	19 22 06.0	+0.6
TTG				*e*Sn	Sn	19 22 56.8	+1.0
PALZ	Palazzo San Ge	4.39	311	P	Pn	19 22 07.8	+1.8
PALZ				AML	AML		
	comp=N,5435µm,1.3s						
PALZ				AML	AML		
	comp=E,5290µm,1.0s						
HLNI	Lentini	4.41	261	P	Pn	19 22 05.1	-1.1
HLNI				S	Sn	19 22 53.5	-3.7
HLNI				AML	AML		
	comp=N,1126µm,0.9s						
HLNI				AML	AML		
	comp=E,1130µm,0.5s						
HPAC	Pachino	4.41	252	P	Pn	19 22 06.6	+0.4
HPAC				AML	AML		
	comp=E,3045µm,0.7s						
HPAC				AML	AML		
	comp=N,2330µm,0.9s						
MEU	Monte Lauro	4.42	258	P	Pn	19 22 06.4	-0.1
MEU				S	Sn	19 22 57.0	-0.7
MEU				AML	AML		
	comp=N,4545µm,0.4s						
MEU				AML	AML		
	comp=E,3265µm,0.5s						
MCPD	Capo d'Orlando	4.43	271	P	Pn	19 22 08.1	+1.7
MCPD				AML	AML		
	comp=E,1305µm,0.6s						
MCPD				AML	AML		
	comp=N,1161µm,0.5s						
PVY	Plav	4.45	356	*e*Pn	Pn	19 22 08.2	+1.4
PVY				*e*Sn	Sn	19 22 59.3	+1.0
SANT	Santorini	4.45	112	⇑P	Pn	19 22 11.6	+4.8
SANT	Santorini	4.45	112		Pn	19 22 10.8	+4.0
HCY	Herceg Novi	4.52	342	*e*Pn	Pn	19 22 07.4	-0.3
HCY	Herceg Novi	4.52	342	*e*Pn	Pn	19 22 07.6	-0.1
HCY				*e*Sn	Sn	19 23 00.7	+0.8
CEME	Cevo	4.52	347	*e*Pn	Pn	19 22 07.6	-0.2
CEME				*e*Sn	Sn	19 22 59.9	-0.2
MSFR	San Fratello	4.54	270	P	Pn	19 22 09.5	+1.5
MSFR				AML	AML		
	comp=E,538µm,1.5s						
MSFR				AML	AML		
	comp=N,413µm,1.0s						
CDRU	Civita di Ruta	4.55	302	P	Pn	19 22 11.4	+3.2
CDRU				AML	AML		
	comp=E,498µm,1.2s						
CDRU				AML	AML		
	comp=N,466µm,0.8s						
HVZN	Vizzini	4.57	259	P	Pn	19 22 08.0	-0.5
HVZN				AML	AML		
	comp=N,8875µm,0.9s						
HVZN				AML	AML		
	comp=E,9515µm,1.1s						
BOSS	Bosilegrad	4.64	20	*e*Pn	Pn	19 22 10.9	+1.6
IDI	Anoyia	4.64	127	Pn	Pn	19 22 10.6	+1.2

comp=E,1.4nm,0.3s,baz=260,slow=8.1,SNR=16
IDI Sn Sn 19 23 03.9 +1.0
comp=E,9.2nm,0.3s,baz=280,slow=20,SNR=2.5
IDI LR LR 19 24 31.3
comp=E,726nm,18.5s,baz=304,slow=47
IDI Anoyia 4.64 127 S Sn 19 23 07.0 +4.1
CAGR Agira 4.65 265 ⇓P Pn 19 22 10.9 +1.3
CAGR AML AML
comp=E,1237μm,1.1s
CAGR AML AML
comp=N,1195μm,0.9s
IVA Berane 4.73 356 ⇑/Pn Pn 19 22 11.8 +1.1
IVA eSn Sn 19 23 06.2 +1.1
NKME Niksic 4.73 347 ePn Pn 19 22 11.2 +0.5
NKME eSn Sn 19 23 06.1 +0.9
KOME Kolasin 4.74 353 ePn Pn 19 22 11.9 +1.1
KOME eSn Sn 19 23 05.9 +0.5
VAE Valguarnera 4.75 264 Pn Pn 19 22 12.6 +1.7
comp=N,1.7nm,0.3s,baz=175,slow=6.9,SNR=5.9
VAE Sn Sn 19 23 08.2 +2.6
comp=N,12nm,0.3s,baz=121,slow=13,SNR=11
HBSP Bosco Santo Pi 4.76 259 P Pn 19 22 10.8 -0.2
HBSP AML AML
comp=E,3275μm,1.5s
HBSP AML AML
comp=N,3625μm,0.6s
NKY Niksic 4.77 348 ePn Pn 19 22 12.0 +0.8
NKY eSn Sn 19 23 07.0 +0.8
BARS Barje 4.79 13 ePn Pn 19 22 12.8 +1.3
TREB Trebinje 4.81 342 ePn Pn 19 22 11.6 -0.1
TREB eSn Sn 19 23 06.1 -0.9
TREB Trebinje 4.81 342 ePn Pn 19 22 11.3 -0.4
SNAL S. Angelo Dei 4.84 307 P Pn 19 22 14.8 +2.6
SNAL AML AML
comp=N,27750μm,1.6s
SNAL AML AML
comp=N,1945μm,1.0s
SNAL AML AML
comp=E,1225μm,1.5s
SNAL AML AML
comp=E,18050μm,1.6s
SGTA Sant Agata di 4.86 309 P Pn 19 22 15.6 +3.1
SGTA AML AML
comp=E,1075μm,1.2s
SGTA AML AML
comp=N,990μm,1.2s
SGTA AML AML
comp=N,1013μm,1.0s
SGTA AML AML
comp=E,1237μm,1.2s
RZN Rozhen 4.88 42 P Pn 19 22 15.9 +3.1
CAFE Carife 4.88 308 P Pn 19 22 15.7 +3.0
CAFE AML AML
comp=N,846μm,1.3s
CAFE AML AML
comp=N,829μm,1.2s
CAFE AML AML
comp=E,1001μm,1.6s
CAFE AML AML
comp=E,1012μm,1.6s
MSAG Monte S. Angel 4.92 318 ⇓P Pn 19 22 14.5 +1.1
MSAG S Sn 19 23 09.0 -1.0
MSAG AML AML
comp=N,3770μm,1.1s
MSAG AML AML
comp=E,1615μm,1.3s
MSAG AML AML
comp=N,3870μm,1.1s
MSAG AML AML
comp=E,1545μm,1.3s
BRY Bratogost 4.94 344 ePn Pn 19 22 13.4 -0.2
BRY Bratogost 4.94 344 ePn Pn 19 22 13.6 0.0
BRY eSn Sn 19 23 10.4 -0.1
VTS Vitosha 4.98 25 ePn Pn 19 22 16.3 +2.2
VTS Vitosha 4.98 25 ⇑P Pn 19 22 16.2 +2.1
VTS Vitosha 4.98 25 ⇑P Pn 19 22 15.9 +1.8
VTS AML AML
comp=N,157μm,1.0s
VTS AML AML
comp=E,200μm,0.9s
VTS Vitosha 4.98 25 P Pn 19 22 16.4 +2.3
VTS Vitosha 4.98 25 Pn 19 22 15.5 +1.4
VTS Vitosha 4.98 25 Pn 19 22 15.5 +1.4
RDO Rodhopi 5.00 52 ⇑P Pn 19 22 16.4 +2.1
RDO AML AML
comp=N,66μm,1.4s
RDO AML AML
comp=E,66μm,1.0s
SGRT San Giovanni R 5.04 317 ⇑P Pn 19 22 16.4 +1.4
SGRT AML AML
comp=E,1285μm,1.5s
SGRT AML AML
comp=N,1215μm,0.5s
SGRT San Giovanni R 5.04 317 Pn 19 22 16.1 +1.1
SELS Selova 5.10 6 ePn Pn 19 22 16.0 +0.3
SJES Sjenica 5.11 357 ePn Pn 19 22 17.4 +1.4
SJES eSn Sn 19 23 13.9 -0.8
STON Ston 5.13 338 ePn Pn 19 22 16.0 0.0
MOCO Biccari - m.te 5.13 310 ⇑P Pn 19 22 20.2 +4.1
MOCO AML AML
comp=E,1274μm,1.2s
MOCO AML AML
comp=N,709μm,1.3s
MOCO AML AML
comp=E,1310μm,1.1s
MOCO AML AML
comp=N,736μm,1.3s
CLTA Licata 5.16 261 ⇓P Pn 19 22 17.6 +1.0
CLTA AML AML
comp=N,1865μm,1.2s
CLTA AML AML
comp=E,2075μm,0.7s
UPM Unac-Piva 5.16 348 ePn Pn 19 22 17.5 +0.8
UPM Unac-Piva 5.16 348 ePn Pn 19 22 17.3 +0.6
UPM eSn Sn 19 23 16.8 +0.8
PLD Plovdiv 5.17 39 P Pb 19 22 24.8 -5.2
ALN Alexandroupoli 5.19 56 Pn 19 22 18.8 +1.9
ALN Alexandroupoli 5.19 56 P Pn 19 22 18.8 +1.9
WDD Wied Dalam 5.20 245 ⇓P Pn 19 22 17.9 +0.8
WDD AML AML
comp=N,5025μm,0.7s
WDD AML AML
comp=E,2905μm,0.7s
WDD Wied Dalam 5.20 245 Pn 19 22 17.9 +0.8
PLE Pljevlja 5.22 352 ePn Pn 19 22 18.4 +0.9
PLE eSn Sn 19 23 18.2 +0.8
KDZ Kurdzhali 5.24 47 P Pn 19 22 19.6 +2.0
PGB Panagyurishte 5.27 32 P Pn 19 22 20.2 +2.1
PAOL Paolisi 5.31 305 Pn 19 22 20.4 +1.8
MELA Melanico ??? S 5.36 313 ⇑P Pn 19 22 21.7 +2.5
GATE Gambatesa 5.36 310 ⇑P Pn 19 22 24.4 +5.1
ZAPS Zavoj 5.40 18 ePn Pn 19 22 22.0 +2.1
IVAS Ivanjica 5.42 359 ePn Pn 19 22 20.5 +0.3
IVAS eSn Sn 19 23 21.4 -0.8
RUDO Rudo 5.51 353 ePn Pn 19 22 22.3 +1.0
CORL Corleone 5.56 270 P Pn 19 22 22.5 +0.4
CORL Corleone 5.56 270 Pn 19 22 23.9 +1.7
DIM Dimitrovgrad 5.56 44 P Pn 19 22 25.2 +3.1
BOVS Bovan 5.57 10 ePn Pn 19 22 22.6 +0.4
CLTB Caltabellotta 5.67 266 Pn 19 22 24.7 +1.1
GRUS Gruza 5.74 3 ePn Pn 19 22 25.0 +0.6
GRUS eSn Sn 19 23 29.5 -0.4
BBLS Lazići 5.75 353 ePn Pn 19 22 25.6 +0.9
BBLS eSn Sn 19 23 29.2 -1.2
BBLS Lazići 5.75 353 ePn Pn 19 22 25.3 +0.6
MPEP Malo Peshtene 5.80 25 P Pn 19 22 27.6 +2.3
ZAGS Zajecar 5.83 14 ePn Pn 19 22 26.2 +0.5
DIVS Divibare 5.95 358 ePn Pn 19 22 27.3 -0.1
DIVS eSn Sn 19 23 33.1 -2.1
DIVS Divibare 5.95 358 ePn Pn 19 22 27.4 0.0
HAPS Han Pijesak,Bl 6.02 350 ePn Pn 19 22 27.7 -0.7
KARP Karpathos 6.05 113 Pn 19 22 31.7 +2.8
TRUS Trudelj 6.07 0 ePn Pn 19 22 29.3 +0.3
TRUS eSn Sn 19 23 36.8 -1.2
CAFR Castel Frentan 6.13 313 ⇑P Pn 19 22 32.8 +2.9
PLVB Pleven 6.15 30 ⇑P Pn 19 22 32.9 +2.7
INTR Introdacqua 6.26 310 ⇓P Pn 19 22 35.2 +3.5
INTR Introdacqua 6.26 310 Pn 19 22 33.7 +2.0
PVL Pavlikeni 6.32 35 P Pn 19 22 33.4 +1.0
ELND Elena 6.36 40 ⇑P Pn 19 22 35.3 +2.3
TEKS Tekeris 6.42 355 ePn Pn 19 22 35.1 +1.3
TEKS eSn Sn 19 23 43.4 -3.4
TEKS Tekeris 6.42 355 ePn Pn 19 22 33.1 -0.7

PUNG Punghina 6.42 17 ⇑P Pn 19 22 35.2 +1.4
MANT Manisa 6.47 84 Pn Pn 19 22 36.0 +1.3
VCEL Villa Celiera 6.53 312 ⇑P Pn 19 22 38.3 +2.8
FAGN Fagnano 6.61 311 ⇓P Pn 19 22 42.2 +5.8
SZH Strazhica 6.64 38 P Pn 19 22 39.7 +2.8
MGRS Mrkonjic Grad 6.72 340 ePn Pn 19 22 39.4 +1.4
AQU L'Aquila 6.77 311 ePn Pn 19 22 42.7 +4.1
AQU L'Aquila 6.77 311 Pn 19 22 39.9 +1.3
AQU L'Aquila 6.77 311 P Pn 19 22 39.9 +1.3
SMA1 SAN MARTINO 6.97 312 ⇑P Pn 19 22 44.5 +3.0
BLY Banja Luka 7.00 341 ⇓P Pn 19 22 42.6 +0.8
BLY Banja Luka 7.00 341 ⇓P Pn 19 22 42.8 +0.9
BLY Banja Luka 7.00 341 ePn Pn 19 22 42.3 +0.5
BLY Banja Luka 7.00 341 Pn 19 22 41.9 +0.1
RAZG Razgrad 7.14 39 ⇑P Pn 19 22 46.4 +2.7
NRCA Norcia 7.22 313 ⇓P Pn 19 22 48.4 +3.4
NRCA Norcia 7.22 313 Pn 19 22 48.0 +3.0
HUMR Humele 7.26 27 ⇑P Pn 19 22 47.4 +2.1
FDMO Fiordimonte 7.37 314 ⇓P Pn 19 22 50.1 +3.3
GZR Gura Zlata 7.46 13 ⇑P Pn 19 22 49.3 +1.1
BZS Buzias 7.52 7 ⇓P Pn 19 22 50.2 +1.3
MOMA Monte Martano 7.53 311 ⇓P Pn 19 22 54.0 +4.9
EL6 Elcito 7.55 316 P Pn 19 22 51.2 +1.9
ASSB Assisi San Ben 7.62 312 P Pn 19 22 54.2 +3.9
LOT Lotru 7.72 18 ⇑P Pn 19 22 53.7 +1.8
ELL Elmali 7.74 98 Pn Pn 19 22 55.4 +3.4
ELL Elmali 7.74 98 P Pn 19 22 55.4 +3.4
SLUM Salum 7.76 148 P Pn 19 22 51.4 -0.8
baz=139
SLUM AMP 19 24 00.0
baz=139
SLUM S Sn 19 24 10.5 -9.2
baz=139
SSFR Montelago di S 7.79 315 ⇑P Pn 19 22 54.9 +2.2
MURB Monte Urbino 7.83 313 Pn 19 22 57.4 +4.2
ATFO Monte Foce - G 7.87 314 ⇓P Pn 19 22 56.7 +2.9
SULR 7.89 32 ⇑P Pn 19 22 55.8 +1.9
ARR Arges 7.89 23 ⇑P Pn 19 22 56.4 +2.4
MPAG Monte Paganucc 7.93 316 ⇑P Pn 19 22 57.6 +2.9
ATVO AVT- Monte Val 7.97 313 ⇑P Pn 19 22 59.1 +4.0
PIEI Pieia 8.00 315 ⇑P Pn 19 22 58.1 +2.6
ATPI Pietralunga - 8.02 314 ⇑P Pn 19 22 59.4 +3.6
VOIR 8.08 24 ⇓P Pn 19 22 59.0 +2.3
MORH Mrgy, Hungar 8.15 352 ePn Pn 19 22 56.4 -1.2
BOJS Bojanci 8.27 334 *i* Pn Pn 19 22 59.8 +0.6
BOJS Bojanci 8.27 334 ⇓P Pn 19 23 00.2 +1.0
MLR Muntele Rosu 8.44 28 Pn Pn 19 23 03.1 +1.5
comp=E,0.2nm,0.3s,baz=236,slow=11,SNR=9.0
MLR LR LR 19 27 00.8
comp=E,480nm,21.6s,baz=188,slow=43
MLR Muntele Rosu 8.44 28 ⇓P Pn 19 23 03.7 +2.1
MLR Muntele Rosu 8.44 28 Pn 19 23 02.6 +0.9
GCIS Gornji Cirnik 8.47 337 ePn Pn 19 23 01.9 0.0
CRES Cresnjev 8.49 336 ePn Pn 19 23 02.3 +0.1
GOLS Golise 8.60 337 ePn Pn 19 23 03.3 -0.5
LEGS Legarje 8.64 336 ePn Pn 19 23 04.5 +0.2
DOPR Dopca 8.66 24 ⇑P Pn 19 23 07.0 +2.4
BEHE Becsehely 8.72 344 ePn Pn 19 23 04.9 -0.5
MDUB Mudurnu 8.73 71 Pn 19 23 08.3 +2.8
OSSC Osservatorio P 8.73 311 Pn Pn 19 23 09.0 +3.4
TIRR Tirgusor 8.75 41 Pn 19 23 06.6 +0.9
TIRR Tirgusor 8.75 41 P Pn 19 23 06.6 +0.9
RUFI Rufina 8.77 313 ⇑P Pn 19 23 08.6 +2.6
BISRR Bisoca 8.78 31 ⇑P Pn 19 23 08.7 +2.4
OZUR 8.90 25 ⇑P Pn 19 23 10.7 +2.8
LJU Ljubljana 8.99 333 ePn Pn 19 23 09.4 +0.3
TRI Trieste 9.00 329 Pn 19 23 09.2 0.0
TRI Trieste 9.00 329 P Pn 19 23 09.2 0.0
PLOR Plostina 9.01 29 ⇑P Pn 19 23 12.1 +2.7
TOPG Topolog 9.02 39 ⇑P Pn 19 23 11.3 +1.8
VRI Vrincioaia 9.05 30 ⇓P Pn 19 23 12.6 +2.7
KEST Kesra 9.13 258 Pn Pn 19 23 12.6 +1.4
comp=E,0.4nm,0.3s,baz=265,slow=2.7,SNR=3.1
KEST Sn Sn 19 24 52.6 -1.0
comp=E,0.4nm,0.3s,baz=257,slow=24,SNR=8.5
KEST Kesra 9.13 258 Pn 19 23 12.0 +0.9
SABO M.te Sabotino 9.29 330 ⇓P Pn 19 23 13.7 +0.5
SOKA Soboth 9.38 337 *i* Pn Pn 19 23 14.2 -0.2
comp=E,40nm,0.7s,SNR=54
SOKA eSn Sn 19 24 53.7 -5.9
comp=E,29nm,0.6s
ZCCA Zocca 9.38 314 Pn 19 23 15.9 +1.4
OBKA Obir 9.39 335 ePn Pn 19 23 15.5 +0.9
OBKA eSn Sn 19 24 56.5 -3.3
OBKA Obir 9.39 335 ePn Pn 19 23 15.4 +0.8
comp=E,8.1nm,0.2s,SNR=25
OBKA Sn Sn 19 24 57.0 -2.7
comp=E,76nm,0.7s
TEOL Teolo 9.68 321 Pn 19 23 18.1 -0.5
ARSA Arzberg 9.76 340 ePn Pn 19 23 19.2 -0.4
ARSA eSn Sn 19 25 03.8 -5.0
ARSA Arzberg 9.76 340 ePn Pn 19 23 19.3 -0.4
comp=E,6.3nm,0.3s,SNR=12
ARSA eSn Sn 19 25 04.0 -4.8
comp=E,8.5nm,0.5s
PSZ Piszkesteto 9.77 358 Pn 19 23 20.5 +0.7
PSZ Piszkesteto 9.77 358 P Pn 19 23 20.5 +0.7
MYKA Terra Mystica 9.81 332 ePn Pn 19 23 21.3 +0.9
comp=E,11nm,0.4s
MYKA Sn Sn 19 25 07.0 -3.2
comp=E,22nm,0.5s
SWA2 9.85 153 P Pn 19 23 19.9 -1.0
baz=146
SWA2 S Sn 19 24 57.9 -13
baz=146
SWA2 AMP 19 25 00.0
baz=146
STAL STALIGIAL 9.88 328 Pn 19 23 20.5 -0.8
BURAR Bucovina Array 10.11 19 ⇓P Pn 19 23 24.0 -0.5
BURAR Bucovina Array 10.11 19 Pn 19 23 24.6 +0.1
BUR08 Bucovina Ar. S 10.13 19 Pn 19 23 25.5 +0.7
CTI Castel Tesino 10.19 323 Pn 19 23 25.3 -0.3
CTI Castel Tesino 10.19 323 P Pn 19 23 25.3 -0.3
KBA Koelnbreinsper 10.30 332 ePn Pn 19 23 28.1 +1.0
KBA eSn Sn 19 25 17.1 -5.2
KBA Koelnbreinsper 10.30 332 ePn Pn 19 23 27.0 -0.2
comp=E,5.0nm,0.3s,SNR=9.8
KBA eSn Sn 19 25 18.3 -4.0
comp=E,40nm,0.9s
CONA Conrad Observa 10.30 343 ePn Pn 19 23 25.7 -1.5
comp=E,2.3nm,0.6s
CONA Sn Sn 19 25 17.1 -5.2
comp=E,6.7nm,0.9s
ABTA Abfaltersbach 10.35 329 ePn Pn 19 23 28.5 +0.7
comp=E,5.0nm,0.3s,SNR=13
ABTA eSn Sn 19 25 17.8 -5.6
comp=E,96nm,0.6s
VYHS Vyhne 10.39 354 eP Pn 19 23 28.7 +0.4
VYHS e 19 25 21.2
VYHS Vyhne 10.39 354 ePN Pn 19 23 28.7 +0.4
VYHS eSN Sn 19 25 21.2 -3.2
SALO Salr 10.45 319 Pn 19 23 28.8 -0.2
MODS Modra-Piesok 10.46 349 eP Pn 19 23 30.9 +1.7
MODS e 19 25 20.1
MODS Modra-Piesok 10.46 349 ePN Pn 19 23 30.9 +1.7
MODS eSN Sn 19 25 20.1 -5.8
BR131 Keskin Array S 10.48 77 Pn Pn 19 23 30.8 +1.2
BR131 Keskin Array S 10.48 77 P Pn 19 23 30.8 +1.2
BRTR Keskin Array B 10.48 77 Pn Pn 19 23 30.4 +0.8
comp=E,0.1nm,0.3s,baz=262,slow=12,SNR=4.4
BRTR LR LR 19 27 21.9
comp=E,122nm,18.6s,baz=222,slow=37
BRTR Keskin Array B 10.48 77 Pn 19 23 29.6 0.0
UZH Uzhgorod 10.57 7 eP Pn 19 23 32.7 +2.0
UZH eS Sn 19 25 30.9 +2.3
MOA Molln 10.66 337 ePn Pn 19 23 32.3 +0.4
MOA eSn Sn 19 25 26.1 -4.8
MOA Molln 10.66 337 ePn Pn 19 23 32.4 +0.4
comp=E,7.3nm,0.2s,SNR=26
MOA eSn Sn 19 25 27.8 -3.1
comp=E,22nm,0.5s
ILGA Ilgaz 10.72 70 Pn 19 23 35.0 +2.0
KIS Kishinev 10.82 33 eP Pn 19 23 40.0 +5.9
KIS eLQ LQ 19 26 25.0
KIS eLR LR 19 27 34.0
comp=E,500nm,10.0s
KIS Kishinev 10.82 33 eP Pn 19 23 40.0 +5.9
KIS MLR MLR
comp=Z,1.0nm,10.0s
KIS MLR MLR
comp=Z,500nm,12.0s
KOLS Kolonicke sedl 10.87 7 eP Pn 19 23 36.2 +1.4
KOLS Kolonicke sedl 10.87 7 ePN Pn 19 23 36.2 +1.4

JAVC Velka Javorina 10.88 351 ePN Pn 19 23 35.8 +0.9
CSS Mathiatis 10.92 103 Pn 19 23 34.2 -1.4
CSS Mathiatis 10.92 103 Pn Pn 19 23 34.6 -1.0
RJOB Jochberg 11.06 332 ePn Pn 19 23 39.6 +2.2
RJOB eSn Sn 19 25 36.5 -4.1
WTTA Wattenberg 11.13 328 ePn Pn 19 23 40.1 +1.7
WTTA eSn Sn 19 25 34.4 -8.2
WTTA Wattenberg 11.13 328 ePn Pn 19 23 40.2 +1.7
comp=Z,15nm,0.5s,SNR=12
WTTA Sn Sn 19 25 38.6 -4.0
comp=Z,67nm,0.6s
WATA Walderalm 11.21 328 ePn Pn 19 23 41.0 +1.5
comp=Z,17nm,0.6s,SNR=6.7
WATA Sn Sn 19 25 40.4 -4.1
comp=Z,76nm,0.9s
NIE Niedzica 11.26 360 ePn Pn 19 23 41.9 +1.7
NIE Niedzica 11.26 360 eP Pn 19 23 41.5 +1.3
NIE Niedzica 11.26 360 eP Pn 19 23 41.5 +1.3
FUORN Ofenpass-Fuorn 11.27 322 Pn 19 23 40.7 +0.2
KRUC Moravsky 11.27 347 ePN Pn 19 23 40.8 +0.5
SQTA Sankt Quirin 11.28 326 ePn Pn 19 23 43.0 +2.6
comp=Z,3.8nm,0.2s
FETA Feichten 11.34 324 ePn Pn 19 23 43.1 +1.8
comp=Z,1.0nm,0.3s
FETA Sn Sn 19 25 47.0 -0.7
comp=Z,25nm,0.8s
MOTA Moosalm 11.42 327 ePn Pn 19 23 44.7 +2.2
comp=Z,18nm,0.7s,SNR=20
MOTA Sn Sn 19 25 46.0 -3.7
comp=Z,38nm,0.6s
VRAC Vranov 11.47 348 ePN Pn 19 23 44.2 +1.1
VRAC Vranov 11.47 348 Pn Pn 19 23 43.9 +0.8
comp=Z,0.3nm,0.3s,baz=180,slow=12,SNR=5.1
SORM Soroca 11.56 28 ⇑P Pn 19 23 46.1 +2.0
DAVOX Davos/Dischmat 11.57 322 Pn Pn 19 23 46.1 +1.5
comp=Z,1.0nm,0.3s,baz=310,slow=20,SNR=7.9
DAVOX Sn Sn 19 25 43.1 -10
comp=Z,0.9nm,0.3s,baz=162,slow=21,SNR=2.8
KWP Kalwaria Pacla 11.60 8 Pn 19 23 46.0 +1.2
KWP Kalwaria Pacla 11.60 8 P Pn 19 23 46.0 +1.2
RETA Reutte 11.68 326 eSn Sn 19 25 55.3 -0.5
comp=Z,37nm,0.7s
GEC2 GERESS Array S 11.72 338 ePn Pn 19 23 46.5 0.0
GEC2 eSn Sn 19 25 52.8 -4.2
GEC2 GERESS Array S 11.72 338 Pn 19 23 46.2 -0.3
GERES GERESS Array B 11.72 338 Pn Pn 19 23 46.6 0.0
comp=Z,1.6nm,0.3s,baz=156,slow=13,SNR=30
GERES Sn Sn 19 25 46.9 -10
comp=Z,0.5nm,0.3s,baz=157,slow=17,SNR=2.0
GERES LR LR 19 28 59.3
comp=Z,272nm,19.6s,baz=156,slow=41
GERES GERESS Array B 11.72 338 Pn 19 23 45.4 -1.1
OKC Ostrava-Krasne 11.79 353 ePN Pn 19 23 48.5 +1.2
OKC AMS AMS 19 29 40.0
comp=Z,800nm,9.1s
OKC Ostrava-Krasne 11.79 353 eP Pn 19 23 48.5 +1.2
OKC MLR MLR
comp=Z,800nm,9.1s
MORC Moravsky Berou 11.79 351 ePN Pn 19 23 48.1 +0.6
OBER Oberstdorf 11.82 325 eSn Sn 19 25 54.9 -4.6
DAVA Damuels 11.93 323 eSn Sn 19 25 54.7 -7.5
DAVA Damuels 11.93 323 Pn Pn 19 23 51.0 +1.6
comp=Z,1.9nm,0.3s
DAVA eSn Sn 19 25 58.6 -3.6
comp=Z,27nm,0.5s
KHC Kasperske Hory 12.01 338 ePn Pn 19 23 50.5 0.0
KHC eSn Sn 19 25 57.3 -6.7
KHC Kasperske Hory 12.01 338 ePN Pn 19 23 50.2 -0.3
KHC ex x 19 24 00.0
KHC eSN Sn 19 25 57.8 -6.2
KHC Kasperske Hory 12.01 338 Pn 19 23 49.3 -1.2
KHC Kasperske Hory 12.01 338 eP Pn 19 23 50.2 -0.3
KHC e 19 25 57.8
HNAT Natroun 12.04 132 P Pn 19 23 50.2 -0.6
baz=126
KRLC Kraliky 12.19 349 ePN Pn 19 23 54.2 +1.3
KRLC Kraliky 12.19 349 eP Pn 19 23 54.2 +1.3
WET Wettzell 12.24 336 ePn Pn 19 23 53.4 -0.1
GOPC GO Pecny, Ondr 12.41 343 ePN Pn 19 23 56.1 +0.2
GOPC GO Pecny, Ondr 12.41 343 eP Pn 19 23 56.1 +0.2
DPC Dobruska-Polom 12.53 348 AMS AMS 19 29 50.0
comp=Z,700nm,9.1s
PRU Pruhonice 12.54 343 ePN Pn 19 23 57.5 -0.1
PRU Pruhonice 12.54 343 eP Pn 19 23 57.5 -0.1
HSAF As Saff 12.61 129 P Pn 19 23 58.4 -0.2
baz=124
SENIN Lac Senin/Sane 12.66 315 Pn 19 24 00.6 +1.0
GLL Jalalah 12.73 129 P Pn 19 23 58.2 -2.2
baz=123
HFRF Wahat Farafira 12.86 146 P Pn 19 23 59.4 -2.6
baz=141
HFRF AMP 19 26 00.0
baz=141
ROTZ Rotzenmuhle 13.00 336 ePn Pn 19 24 03.8 0.0
ROTZ eSn Sn 19 26 19.2 -8.8
NBNS Bani Suef 13.18 133 P Pn 19 24 04.1 -2.4
baz=128
MANZ Manzenberg 13.22 336 ePn Pn 19 24 07.4 +0.5
MMAI Mount Meron Ar 13.28 108 Pn Pn 19 24 05.1 -2.8
comp=Z,1.3nm,0.3s,baz=291,slow=9.7,SNR=9.7
MMAI Sn Sn 19 26 26.1 -9.1
comp=Z,2.7nm,0.3s,baz=249,slow=12,SNR=2.7
KSDI Kefar Szold 13.39 107 Pn Pn 19 24 08.0 -1.4
GAZ Gaziantep 13.40 89 Pn Pn 19 24 07.7 -1.8
NATI Neve Ativ 13.42 107 Pn Pn 19 24 08.3 -1.4
BRG Berggiesshubel 13.51 342 eP Pn 19 24 10.5 -0.3
comp=Z,4.0nm,0.9s
BRG e 19 24 23.4
comp=Z,12nm,1.1s
BRG Berggiesshubel 13.51 342 eP Pn 19 24 10.5 -0.3
BRG pmax pmax
comp=Z,4.0nm,0.9s
BRG pmax pmax
comp=Z,12nm,1.1s
KZIT Kziot 13.65 118 Pn Pn 19 24 11.5 -1.3
KZIT Sn Sn 19 26 32.4 -12
AMAZ Amatzia 13.66 115 Pn Pn 19 24 11.8 -1.2
AMAZ Sn Sn 19 26 32.4 -12
HMDT Nahal Hemdat 13.73 111 Pn Pn 19 24 12.5 -1.5
HMDT Sn Sn 19 26 35.5 -11
YTIR Yattir 13.90 115 Pn Pn 19 24 14.4 -1.9
MOX Moxa 13.95 336 ePn Pn 19 24 16.9 +0.1
MOX eSn Sn 19 26 45.3 -6.0
AKASG Malin Array Be 14.04 24 Pn Pn 19 24 16.8 -1.4
comp=Z,0.7nm,0.3s,baz=213,slow=12,SNR=13
AKBB Malin Array Si 14.04 24 Pn 19 24 18.1 -0.1
AKBB Malin Array Si 14.04 24 *i* P Pn 19 24 19.1 +1.0
CLL Collm 14.14 341 P 19 24 24.6 -2.4
CLL Collm 14.14 341 eP Pn 19 24 23.0 +3.6
PRNI Paran 14.39 118 Pn Pn 19 24 21.0 -2.1
PRNI Sn Sn 19 26 50.2 -12
HRFI Mount Harif 14.61 119 Pn Pn 19 24 23.8 -2.2
HRFI Sn Sn 19 26 55.7 -12
MBRI Mt Berech 14.67 120 Pn Pn 19 24 26.0 -0.9
TNS Taunus Mts 14.76 329 eSn Sn 19 27 02.8 -8.2
EIL Elat 14.77 121 Pn Pn 19 24 27.5 -0.8
comp=Z,0.4nm,0.3s,baz=316,slow=2.5,SNR=6.9
EIL Sn Sn 19 26 55.9 -16
comp=Z,0.4nm,0.3s,baz=0.1,slow=22,SNR=2.0
EIL Elat 14.77 121 Pn Pn 19 24 27.3 -0.9
RUE Ruedersdorf 15.04 344 eP P 19 24 39.4 +2.4
WLF Walferdange 15.37 323 PnPn P 19 24 45.2 +4.6
WLF pP sP 19 24 47.1 +0.1
WLF Walferdange 15.37 323 P P 19 24 40.3 -0.3
WLF IAmb IAmb 19 24 48.0
comp=Z,45nm,0.9s
WLF Walferdange 15.37 323 P P 19 24 40.3 -0.3
WLF pmax pmax
comp=Z,45nm,0.9s
SOC Sochi 15.62 64 eP P 19 24 44.4 +1.0
SOC pmax pmax
comp=Z,40nm,1.2s
SOC MLR MLR
comp=Z,114nm,11.0s
SUW Suwalki 15.98 6 ePn Pn 19 24 45.1 +1.1
SUW Suwalki 15.98 6 Pn 19 24 44.8 +0.8
SUW IAmb IAmb 19 24 51.0
comp=Z,70nm,0.8s
SUW Suwalki 15.98 6 P Pn 19 24 44.8 +0.8
SUW pmax pmax
comp=Z,70nm,0.8s
MEM Membach 16.09 325 PnPn P 19 24 53.5 +4.8
BCLA Clavier 16.28 324 x x 19 24 55.5
BCLA sP sP 19 25 00.9 +3.7

DOU Dourbes 16.40 322 PnPn P 19 24 57.9 +5.8
DOU sP sP 19 25 01.7 +3.2
NACGM Naroch 17.32 13 e P 19 25 02.0 -0.2
NACGM eLQ LQ 19 30 22.0
NACGM eLR LR 19 31 52.0
PABE Paberze 17.53 7 eP Pn 19 25 02.5 -1.0
PABE IAmb IAmb 19 25 08.8
comp=Z,62nm,0.9s
IIGN Ignalina 17.66 11 eP Pn 19 25 03.8 -1.3
IIGN IAmb IAmb 19 25 10.4
comp=Z,13nm,0.8s
NEY Neytrino 17.70 66 i P P 19 25 08.4 +1.7
SHA1 Shidzhatmaz 17.73 65 i P P 19 25 08.1 +0.9
KIV Kislovodsk 17.80 64 P P 19 25 07.7 0.0
KIV IAmb IAmb 19 25 14.0
comp=Z,41nm,1.1s
KIV Kislovodsk 17.80 64 eP P 19 25 09.1 +1.4
KIV eS S 19 28 28.7 -3.1
KIV pmax pmax
comp=Z,116nm,1.1s
KIV MLR MLR
comp=Z,140nm,14.0s
KVAR Kislovodsk Arr 17.80 64 P P 19 25 08.9 +1.1
baz=254,slow=19,SNR=7.7
ISAL Salakas 17.86 11 eP Pn 19 25 04.8 -2.7
ISAL IAmb IAmb 19 25 17.3
comp=Z,12nm,0.8s
KBZ Khabaz 17.91 65 P P 19 25 10.6 +1.9
comp=Z,0.2nm,0.3s,baz=281,slow=7.3,SNR=16
IZAR Zarasai 18.05 11 eP Pn 19 25 06.8 -3.0
AKH Akhalkalaki 18.08 72 P P 19 25 12.1 +1.2
AKH Akhalkalaki 18.08 72 P P 19 25 12.1 +1.2
AKH pmax pmax
comp=Z,19nm,1.0s
PYA1 Pyatigorsk 18.11 64 i P P 19 25 12.5 +1.4
GOF Gofitskoye 18.29 61⥣eP P 19 25 14.7 +1.7
GOF pmax pmax
comp=Z,28nm,0.8s
ZEI Tsey 18.49 68 eP P 19 25 13.1 -2.4
ZEI pmax pmax
comp=Z,15nm,0.8s
VORD Divnogorie 18.54 40 eP P 19 25 15.7 0.0
VORD pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 18.63 39 eP P 19 25 16.5 -0.2
VSR pmax pmax
comp=Z,10.0nm,0.6s
ESDC Sonseca Array 18.97 282 P Pn 19 25 22.6 +1.3
comp=Z,0.2nm,0.3s,baz=75,slow=11,SNR=7.3
ESDC LR LR 19 32 44.1
comp=Z,174nm,18.1s,baz=270,slow=37
GNI Garni 19.02 76 P Pn 19 25 23.1 +1.1
comp=Z,0.7nm,0.3s,baz=210,slow=1.5,SNR=24
GNI Garni 19.02 76 P Pn 19 25 22.0 +0.1
GNI IAmb IAmb 19 25 24.6
comp=Z,63nm,1.1s
GNI Garni 19.02 76ceP Pn 19 25 22.4 +0.5
GNI pmax pmax
comp=Z,205nm,1.3s
TBLG Delisi 19.02 71 P Pn 19 25 22.1 +0.2
TBLG Delisi 19.02 71 P Pn 19 25 22.1 +0.2
TBLG pmax pmax
comp=Z,24nm,1.0s
GROC Groznyy 19.92 67 i P Pn 19 25 32.8 +0.3
VRH Novokhopyorsk 19.94 42 eP Pn 19 25 32.2 -0.5
VRH pmax pmax
comp=Z,40nm,1.2s
OBN Obninsk 20.21 28 P P 19 25 33.7 -0.2
comp=Z,15nm,0.4s,baz=251,slow=7.1,SNR=6.7
OBN Obninsk 20.21 28 P P 19 25 33.4 -0.5
OBN Obninsk 20.21 28 i P P 19 25 33.3 -0.6
OBN i 19 25 57.2
OBN i S S 19 29 07.6 -12
OBN pmax pmax
comp=Z,29nm,1.0s
OBN MLR MLR
comp=Z,144nm,14.0s
VSU Vasula 20.75 10 eP P 19 25 40.6 +0.9
VSU Vasula 20.75 10ceP P 19 25 40.1 +0.4
VSU pmax pmax
comp=Z,877nm,1.7s
MOS Moscow 21.08 28 eP P 19 25 41.8 -1.5
MOS pmax pmax
comp=Z,57nm,1.2s
MAK Makhachkala 21.14 68 eP P 19 25 44.0 -0.1
MAK eS S 19 29 39.6 +0.9
MAK pmax pmax
comp=Z,262nm,1.1s
MAK MLR MLR
comp=Z,78nm,11.0s
AKT Akhty 21.26 72 eP P 19 25 46.0 +0.4
AKT e 19 26 05.1
AKT pmax pmax
comp=Z,95nm,1.1s
HFS Hagfors 22.40 351 P P 19 25 57.5 0.0
comp=Z,24nm,0.9s,baz=169,slow=8.5,SNR=16
PUL Pulkovo 22.56 13ceP P 19 25 59.8 +0.7
PUL pmax pmax
comp=Z,103nm,0.8s
NC602 NORSAR Array S 23.28 349 P P 19 26 07.0 +0.4
EKA Eskdalemuir Ar 23.37 325 P P 19 26 07.8 +0.3
comp=Z,17nm,0.9s,baz=129,slow=11,SNR=13
NAO01 NORSAR Array S 23.48 348 P P 19 26 08.7 +0.1
FINES FINESS Array B 23.59 7 P P 19 26 09.1 -0.5
comp=Z,7.1nm,0.6s,baz=168,slow=10,SNR=21
FINES LR LR 19 37 31.4
comp=Z,224nm,18.2s,baz=196,slow=42
FINES FINESS Array B 23.59 7 P P 19 26 08.3 -1.4
FIA1 FINESS Array S 23.59 7 P P 19 26 08.5 -1.1
FIA1 IAmb IAmb 19 26 10.5
comp=Z,42nm,1.4s
NC405 NORSAR Array S 23.61 350 P P 19 26 09.4 -0.5
NB201 NORSAR Array S 23.61 349 P P 19 26 09.5 -0.4
NB2 NORSAR Subarra 23.62 349 P P 19 26 10.1 +0.1
comp=Z,33nm,1.1s,baz=163,slow=10
NOA NORSAR Array B 23.62 349 P P 19 26 10.2 +0.1
comp=Z,4.5nm,0.7s,baz=148,slow=9.8,SNR=22
NOA LR LR 19 38 03.5
comp=Z,102nm,18.7s,baz=170,slow=43
NBO00 NORSAR Array S 23.68 348 P P 19 26 11.1 +0.6
NC303 NORSAR Array S 23.77 349 P P 19 26 11.6 +0.2
NC204 NORSAR Array S 23.91 349 P P 19 26 13.3 +0.4
KLMR Klimovskoe 25.71 22 eP P 19 26 27.5 -1.7
KLMR AMP 19 26 30.8
comp=Z,28nm,1.1s
KLMR LR LR 19 35 01.5
KLMR AMP 19 37 42.5
comp=Z,389nm,14.3s
KLMR Klimovskoe 25.71 22 eP P 19 26 27.4 -1.7
KLMR pmax pmax
comp=Z,28nm,1.1s
KLMR MLR MLR
comp=Z,389nm,14.0s
RAYN Ar Rayn 25.96 117 P P 19 26 32.3 +0.5
RAYN IAmb IAmb 19 26 41.4
comp=Z,11nm,1.1s
RAYN Ar Rayn 25.96 117 P P 19 26 32.3 +0.5
RAYN pmax pmax
comp=Z,11nm,1.1s
KIRV Kirov 27.75 33 P P 19 26 46.8 -0.7
comp=Z,7.2nm,0.8s,baz=242,slow=16,SNR=5.0
PRGR Permogore 28.25 26 eP P 19 26 49.3 -2.6
PRGR pmax pmax
comp=Z,13nm,0.8s
AKTO Aktyubinsk 29.31 53 P P 19 27 01.0 -0.5
comp=Z,1.4nm,0.6s,baz=260,slow=6.2,SNR=5.9
GEYT Alibeck 29.62 79 P P 19 27 04.3 -0.1
comp=Z,1.1nm,0.5s,baz=286,slow=12,SNR=4.9
GEYT LR LR 19 42 25.7
comp=Z,59nm,19.8s,baz=345,slow=44
GEYT Alibeck 29.62 79 P P 19 27 04.0 -0.5
GYA0B ALIBECK ARRAY 29.62 79 P P 19 27 03.0 -1.5
TOA0 Torodi Ar. Sit 29.92 219 P P 19 27 07.4 +0.2
TOA0 IAmb IAmb 19 27 13.3
comp=Z,7.8nm,1.1s
TORD Torodi Ar. Bea 29.92 219 P P 19 27 08.1 +0.8
comp=Z,6.4nm,0.9s,baz=330,slow=8.9,SNR=18
TORD Torodi Ar. Bea 29.92 219 P P 19 27 07.2 -0.1
ABKAR Akbulak array 30.37 56 P P 19 27 09.8 -1.1
ARU Arti 31.17 42 P P 19 27 17.0 -0.9
ARU IAmb IAmb 19 27 18.4
comp=Z,13nm,1.3s
ARU Arti 31.17 42c iP P 19 27 17.3 -0.6
ARU 19 28 18.7
ARU S S 19 32 25.0 +2.0
ARU SS SnSn 19 34 04.8 -0.2
ARU pmax pmax
comp=Z,12nm,1.4s
ARU MLR MLR
comp=Z,161nm,12.0s
ARCES ARCESS Array B 31.57 3 P P 19 27 21.1 -0.1
comp=Z,3.3nm,0.8s,baz=190,slow=10,SNR=12
SVE Sverdlovsk 32.38 42⥣eP P 19 27 29.0 +0.4
SVE pmax pmax
comp=Z,20nm,0.9s
KK31 Karatay Array 37.93 66 P P 19 28 15.5 -1.1
KK31 IAmb IAmb 19 28 24.7
comp=Z,8.2nm,0.8s
KK31 Karatay Array 37.93 66 P P 19 28 15.5 -1.1
KK31 pmax pmax
comp=Z,8.0nm,0.8s
KKAR Karatay Array 37.93 66 P P 19 28 15.6 -1.0
KKAR Karatay Array 37.93 66 P P 19 28 16.6 +0.1
KKAR IAmb IAmb 19 28 24.7
comp=Z,8.2nm,0.8s
KKAR Karatay Array 37.93 66 P P 19 28 16.7 +0.1
KKAR pmax pmax
comp=Z,8.0nm,0.8s
DBIC Dimbokro 38.78 222 P P 19 28 24.7 +0.8
comp=Z,4.6nm,0.9s,baz=354,slow=7.2,SNR=8.1
DBIC LR LR 19 44 28.7
comp=Z,64nm,20.1s,baz=18,slow=36
DBIC Dimbokro 38.78 222 P P 19 28 24.1 +0.2
BTK Batken 38.79 71 P P 19 28 24.1 +0.2
BTK Batken 38.79 71 P P 19 28 24.1 +0.2
BTK pmax pmax
comp=Z,12nm,1.4s
TIC Toumodi 38.89 223 eP P 19 28 25.2 +0.4
KIC Kosan Boka 38.98 222 eP P 19 28 25.9 +0.3
comp=Z,14nm,1.1s
KBL Kabul 39.03 80 P P 19 28 25.7 -0.5
KBL Kabul 39.03 80 P P 19 28 25.7 -0.5
KBL pmax pmax
comp=Z,4.0nm,1.1s
LIC Lamto 39.24 222 eP P 19 28 28.6 +0.8
comp=Z,25nm,1.1s
ARSB Arslanbob 40.09 68 P P 19 28 34.5 -0.3
ARSB Arslanbob 40.09 68 P P 19 28 34.5 -0.3
ARSB pmax pmax
comp=Z,9.0nm,1.1s
AAK Ala-Archa 40.90 66 P P 19 28 40.8 -0.6
AAK Ala-Archa 40.90 66ceP P 19 28 42.4 +0.9
AAK pmax pmax
comp=Z,4.0nm,0.8s
FRU1 Bishkek 40.96 66 P P 19 28 42.1 +0.3
FRU1 IAmb IAmb 19 28 48.1
comp=Z,11nm,0.8s
FRU1 Bishkek 40.96 66 P P 19 28 42.1 +0.3
FRU1 pmax pmax
comp=Z,11nm,0.9s
KMBO Kilima Mbogo 42.09 154 LR LR 19 50 16.5
comp=Z,62nm,18.4s,baz=90,slow=42
NRN Naryn 42.27 67 P P 19 28 53.0 +0.1
NRN Naryn 42.27 67 P P 19 28 53.0 +0.1
NRN pmax pmax
comp=Z,7.0nm,1.1s
KURK Kurchatov 42.40 53 P P 19 28 52.4 -1.1
KURK Kurchatov 42.40 53ceP P 19 28 53.2 -0.3
KURK pmax pmax
comp=Z,5.0nm,0.8s
NIL Nilore 42.62 79 P P 19 28 54.0 -1.5
NIL IAmb IAmb 19 29 01.9
comp=Z,19nm,1.2s
NIL Nilore 42.62 79 P P 19 28 54.0 -1.5
NIL pmax pmax
comp=Z,19nm,1.2s
MAKZ Makanchi 45.22 58 P P 19 29 15.5 -0.7
MAKZ IAmb IAmb 19 29 16.8
comp=Z,5.1nm,1.0s
MAKZ Makanchi 45.22 58 P P 19 29 15.5 -0.7
MAKZ pmax pmax
comp=Z,5.0nm,1.0s
MK31 Makanchi Array 45.43 58 P P 19 29 17.1 -0.8
MK31 IAmb IAmb 19 29 23.5
comp=Z,5.0nm,0.7s
MK31 Makanchi Array 45.43 58 P P 19 29 17.1 -0.8
MK31 pmax pmax
comp=Z,5.0nm,0.7s
MKAR Makanchi Array 45.43 58 P P 19 29 17.8 -0.2
comp=Z,3.5nm,0.4s,baz=273,slow=7.3,SNR=59
MKAR Makanchi Array 45.43 58 P P 19 29 17.1 -0.8
ZAA0 Zalesovo Array 45.81 48 P P 19 29 20.1 -0.7
ZALV Zalesovo Beam 45.81 48 P P 19 29 20.6 -0.2
comp=Z,11nm,0.5s,baz=275,slow=8.9,SNR=51
ZALV Zalesovo Beam 45.81 48 P P 19 29 19.4 -1.3
WMQ Urumqi 49.89 61 P P 19 29 51.4 -1.2
WMQ IAmb IAmb 19 29 59.5
comp=Z,13nm,1.0s
WMQ Urumqi 49.89 61 P P 19 29 51.4 -1.2
WMQ pmax pmax
comp=Z,13nm,1.0s
DANN Dangsing 53.02 81 eP P 19 30 15.8 -0.7
comp=Z,33nm,1.0s
KOLN Koldanda 53.17 81 eP P 19 30 16.3 -1.2
GKN Gorkha 53.86 81 eP P 19 30 22.1 -0.5
DMN Daman 54.42 81 eP P 19 30 24.6 -2.1
PKI Pulchoki 54.67 81 eP P 19 30 26.5 -2.2
GUN Gumba 54.87 80 eP P 19 30 29.0 -1.1
JIRN Jiri 55.23 80 eP P 19 30 31.9 -0.9
TAPN Taplejung 56.56 80 eP P 19 30 40.3 -1.9
TLY Talaya 57.41 47 P P 19 30 47.3 -0.3
TLY IAmb IAmb 19 30 49.8
comp=Z,14nm,1.4s
TLY Talaya 57.41 47 eP P 19 30 49.0 +1.5
TLY pmax pmax
comp=Z,18nm,1.0s
TLY MLR MLR
comp=Z,172nm,7.0s
LSA Lhasa 58.08 75 P P 19 30 50.7 -2.4
LSA Lhasa 58.08 75 P P 19 30 50.7 -2.4
LSA pmax pmax
comp=Z,4.0nm,1.0s
SCHQ Schefferville 58.38 317 P P 19 30 55.2 +0.9
comp=Z,1.9nm,0.6s,baz=28,slow=5.1,SNR=5.0
TIXI Tiksi 59.72 20ceP P 19 31 05.1 +1.8
TIXI pmax pmax
comp=Z,9.0nm,2.5s
GTA Gaotai 59.96 62 ⥣P P 19 31 05.2 -0.4
GTA pP pP 19 31 08.7 -2.1
GTA sP sP 19 31 10.8 -2.0
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,83nm,4.8s
GTA LR LR
comp=Z,140nm,18.1s
GTA LR LR
comp=Z,170nm,17.5s
GTA LR LR
comp=Z,150nm,18.1s
BOD Bodaibo 60.48 38 eP P 19 31 07.0 -1.7
BOD pmax pmax
comp=Z,9.0nm,1.3s
SONM Songino Array 60.58 51 P P 19 31 09.9 +0.2
comp=Z,3.4nm,0.9s,baz=284,slow=8.9,SNR=22
SONM LR LR 19 57 53.1
comp=Z,66nm,19.3s,baz=260,slow=37
SONM Songino Array 60.58 51 P P 19 31 09.9 +0.2
SHL Shillong 60.69 79 P P 19 31 08.6 -2.3
SHL IAmb IAmb 19 31 16.3
comp=Z,5.7nm,1.0s
SHL Shillong 60.69 79 P P 19 31 08.6 -2.3
SHL pmax pmax
comp=Z,6.0nm,1.0s
ULN Ulaanbaatar 60.97 50 P P 19 31 12.2 -0.2
ULN IAmb IAmb 19 31 13.5
comp=Z,3.9nm,0.8s
ULN Ulaanbaatar 60.97 50 P P 19 31 12.2 -0.2
ULN pmax pmax
comp=Z,4.0nm,0.9s
YAK Yakutsk 65.20 29 P P 19 31 39.6 -0.4
YAK Yakutsk 65.20 29 eP P 19 31 40.2 +0.2
YAK pmax pmax
comp=Z,17nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,5.0nm,1.3s
XAN Xi'an 68.96 63 P P 19 32 04.6 +0.1
XAN pP sP 19 32 17.0 +5.2
XAN pmax pmax
comp=E,6.0nm,1.2s
XAN pmax pmax
comp=E,200nm,4.5s
CHTO Chiang Mai 69.83 82 P P 19 32 09.3 -0.7
CHTO IAmb IAmb 19 32 16.6
comp=Z,4.7nm,1.2s
CHTO Chiang Mai 69.83 82 P P 19 32 09.3 -0.7
CHTO pmax pmax
comp=Z,5.0nm,1.2s
CM31 Chiang Mai Arr 70.03 82 P P 19 32 10.4 -0.8
CM31 IAmb IAmb 19 32 11.8
comp=Z,4.3nm,1.1s
CMAR Chiang Mai Arr 70.03 82 P P 19 32 10.8 -0.5
comp=Z,1.8nm,0.8s,baz=304,slow=7.6,SNR=25
BILL Bilibino 71.07 13 P P 19 32 16.8 0.0
BILL IAmb IAmb 19 32 24.0
comp=Z,5.1nm,1.1s
BILL Bilibino 71.07 13ceP P 19 32 18.4 +1.6
BILL pmax pmax
comp=Z,6.0nm,1.3s
M54A Oil Creek Stat 72.35 309 P P 19 32 22.8 -2.2
TOLK Toolik Lake Re 73.26 356 P P 19 32 30.8 +0.9
TOLK IAmb IAmb 19 32 32.6
comp=Z,10.0nm,1.3s
YKA Yellowknife Ar 73.37 340 P P 19 32 31.4 +0.8
comp=Z,0.6nm,0.7s,baz=37,slow=5.4,SNR=11
KLR Kul'dur 73.98 39 i P P 19 32 35.5 +1.0
KLR pmax pmax
comp=Z,13nm,1.0s
BMAR Burnt Mountain 74.12 354 P P 19 32 36.1 +1.1
COLD Coldfoot 74.70 356 P P 19 32 39.6 +1.3
ULM Lac du Bonnet 75.64 324 P P 19 32 45.1 +1.1
comp=Z,1.7nm,0.5s,baz=36,slow=7.3,SNR=4.4
ULM Lac du Bonnet 75.64 324 P P 19 32 44.6 +0.6
ULM IAmb IAmb 19 32 46.1
comp=Z,10nm,1.2s
IMAR Indian Mountai 76.09 358 P P 19 32 47.9 +1.5
DAWY Dawson 76.86 351 P P 19 32 52.5 +1.7
DAWY IAmb IAmb 19 32 53.8
comp=Z,3.5nm,0.9s
MLY Manley 76.91 356 P P 19 32 52.7 +1.6
ILAR Eielson Array 76.92 354 P P 19 32 51.9 +0.8
comp=Z,1.0nm,0.8s,baz=358,slow=5.1,SNR=13
HDA Harding Lake 77.28 354 P P 19 32 54.0 +0.9
HDA IAmb IAmb 19 32 55.4
comp=Z,6.4nm,1.0s
WRH Wood River Hil 77.31 355 P P 19 32 53.1 -0.2
WRH IAmb IAmb 19 32 55.6
comp=Z,4.5nm,0.9s
USRK Ussuriysk Ar. 77.39 43 P P 19 32 54.5 +0.4
comp=Z,4.2nm,0.9s,baz=282,slow=4.6,SNR=7.4
USRK Ussuriysk Ar. 77.39 43 P P 19 32 53.8 -0.2
ANM Nome 77.52 3 P P 19 32 55.6 +1.2
ANM IAmb IAmb 19 33 03.7
comp=Z,10nm,1.4s
ANM Nome 77.52 3 P P 19 32 55.6 +1.2
ANM pmax pmax
comp=Z,10.0nm,1.4s
BCAR Beaver Creek A 78.11 352 P P 19 32 59.5 +1.7
KSRS Korea Array 79.45 51 P P 19 33 05.9 +0.4
comp=Z,2.7nm,0.8s,baz=313,slow=4.9,SNR=5.7
KSRS LR LR 20 09 26.5
comp=Z,46nm,19.1s,baz=326,slow=37
YSS Yuzh-Sakhalins 80.87 36 P P 19 33 14.0 +1.0
YSS Yuzh-Sakhalins 80.87 36 eP P 19 33 14.4 +1.4
YSS e 19 33 23.8
YSS pmax pmax
comp=Z,30nm,1.1s
PETK Petropavlovsk- 81.88 24 LR LR 20 13 24.6
comp=Z,64nm,18.1s,baz=251,slow=38
BDFB Brasilia 83.38 244 LR LR 20 11 02.0
comp=Z,49nm,18.1s,baz=29,slow=36
EGMT Eagleton 83.39 329 P P 19 33 27.1 +0.7
SDV Santo Domingo 85.35 278 P P 19 33 37.7 +0.8
SDV IAmb IAmb 19 33 39.7
comp=Z,6.1nm,0.8s
YNE Yellowstone No 85.90 327 P P 19 33 40.1 +0.8
MJAR Matsushiro Arr 86.10 46 P P 19 33 40.1 0.0
comp=Z,3.3nm,0.9s,baz=340,slow=3.8,SNR=5.4
MJAR Matsushiro Arr 86.10 46 P P 19 33 40.4 +0.2
MJAR Matsushiro Arr 86.10 46 P P 19 33 40.4 +0.2
MJAR pmax pmax
comp=Z,8.0nm,1.5s
C09A Chrisman Ranch 86.82 333 P P 19 33 44.0 +0.5
C09A IAmb IAmb 19 33 46.6
comp=Z,9.8nm,1.1s
PDAR Pinedale Array 87.49 326 P P 19 33 48.2 +1.0
comp=Z,0.3nm,0.8s,baz=343,slow=2.8,SNR=2.4
PDAR LR LR 20 15 27.2
comp=Z,36nm,19.0s,baz=35,slow=37
PDAR Pinedale Array 87.49 326 P P 19 33 48.3 +1.2
RDMU Red Mountain 89.24 324 P P 19 33 56.5 +1.0
TXAR Lajitas Array 94.89 313 P P 19 34 23.3 +1.7
comp=Z,0.1nm,0.4s,baz=203,slow=26,SNR=2.8
CPUP Villa Florida 96.91 242 LR LR 20 19 41.3
comp=Z,67nm,19.0s,baz=48,slow=36
LPAZ La Paz 98.70 256 LR LR 20 19 51.6
comp=Z,33nm,19.9s,baz=45,slow=36
ASAR Alice Springs 122.31 96 PKP PKPdf 19 39 52.3 -2.2
comp=Z,0.8nm,0.9s,baz=343,slow=1.5,SNR=4.2
ASAR Alice Springs 122.31 96 P PKPdf 19 39 52.7 -1.8
ASAR Alice Springs 122.31 96 PKIKP PKPdf 19 39 52.7 -1.8

IDC 06 19:21:44.7±2.5, 6.69S×148.43E, h112km±27km, mb3.6/2, mb1 3.8/6, mb1mx3.4/33, mbtmp4.2/6, MS2.4/1, Ms1 2.4/1, ms1mx2.3/21, Error ellipse: s-maj=52.4km s-min=15.0km az=137.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	2.97	205	P	Pn	19 22 29.0	-1.4
	6.5nm,0.3s,baz=47,slow=2.3,SNR=19						
PMG				S	Sn	19 23 06.7	+1.1
	11nm,0.3s,baz=229,slow=17,SNR=9.3						
KRVT	Keravat (AS076	4.30	57	P	Pn	19 22 48.8	+0.7
	5.2nm,0.3s,baz=162,slow=1.1,SNR=9.3						
KRVT				LR	LR	19 24 37.1	
	comp=Z,43nm,20.1s,baz=292,slow=40						
HNR	Honiara	11.73	104	P	Pn	19 24 27.8	-0.7
	23nm,0.3s,baz=339,slow=23,SNR=13						
WRA	Warramunga Arr	18.98	225	P	P	19 25 56.6	-0.9
	0.4nm,0.3s,baz=51,slow=10,SNR=18						
ASAR	Alice Springs	21.90	218	P	P	19 26 29.5	+0.6
	1.8nm,0.5s,baz=52,slow=9.0,SNR=51						
FITZ	Fitzroy Crossi	24.94	241	P	P	19 26 57.0	-0.7
	2.3nm,0.6s,baz=68,slow=9.2,SNR=8.0						
TORD	Torodi Ar. Bea	146.63	284	PKPbc	PKPbc	19 41 14.3	0.0
	0.3nm,0.4s,baz=69,slow=3.1,SNR=5.7						

ATH 06 19:29:19.8, 38.14N×20.34E, h15km, ML3.3/13, Error ellipse: s-maj=1.5km s-min=1.0km az=241.0
THE 06 19:29:20.7, 38.19N×20.37E, h12km, ML3.3/10, Error ellipse: s-maj=1.2km s-min=0.6km az=262.0
IDC 06 19:29:30.3±1.6, 39.37N×21.81E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.3/33, mbtmp3.6/4, Error ellipse: s-maj=61.6km s-min=28.0km az=129.0
ISC 06 19:29:20.4±0.8, 38.18N±0.02×20.36E±0.03, h15km±3km, n82, σ0.86/113, mb3.7/4, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	65	P	Pg	19 29 22.9	-0.1
CHV1				S	Sg	19 29 24.5	-0.2
KEF3	Kipouria, Keph	0.03	340	P	Pg	19 29 23.1	0.0
KEF3				S	Sg	19 29 25.1	+0.3
LXRA	Lixouri, Kepha	0.07	68	P	Pg	19 29 23.2	0.0
LXRA				S	Sg	19 29 25.2	+0.1
LXR1	Lixouri, Cepha	0.07	68	P	Pg	19 29 23.2	-0.1
LXR1				S	Sg	19 29 25.2	+0.1
ARGA	Argostoli. Kep	0.09	89	P	Pg	19 29 23.3	-0.2
ARGA				S	Sg	19 29 25.3	-0.3
KEF4	Livadi, Kephal	0.10	31	P	Pg	19 29 23.6	+0.1
KEF4				S	Sg	19 29 26.0	+0.3
ARG2	Argostoli	0.10	88	P	Pg	19 29 23.3	-0.2
ARG2				S	Sg	19 29 25.3	-0.4
KEF2	Argostoli. Kep	0.10	96	P	Pg	19 29 23.4	-0.2
KEF2				S	Sg	19 29 25.3	-0.4
KEF1	Kardakata, Kep	0.13	40	P	Pg	19 29 24.0	-0.1
KEF1				S	Sg	19 29 26.2	-0.2
VLS	Valsamata	0.18	89	P	Pg	19 29 24.3	-0.4
VLS				S	Sg	19 29 27.1	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
	34µm,0.2s						
VLS	**Valsamata**	**0.18**	**89**	P	**Pg**	**19 29 24.3**	**-0.4**
VLS				AML	AML	19 29 27.2	
	comp=E,83335µm,0.2s						
VLS				S	**Sg**	**19 29 27.3**	**-0.4**
VLS				AML	AML	19 29 27.4	
	comp=N,49129µm,0.2s						
KONA	**Konidatara, Ke**	**0.30**	**34**	P	**Pg**	**19 29 26.8**	**+0.1**
KONA				S	**Sb**	**19 29 31.8**	**-0.5**
VLMS	**Volimes, Zakyn**	**0.38**	**141**	P	**Pb**	**19 29 28.0**	**-0.2**
VLMS				S	**Sg**	**19 29 33.4**	**0.0**
VLMS				AML	AML	19 29 34.2	
	comp=N,41434µm,0.4s						
VLMS				AML	AML	19 29 34.4	
	comp=E,25879µm,0.1s						
EVGI	**Lefkada island**	**0.50**	**27**	P	**Pg**	**19 29 30.3**	**0.0**
EVGI				S	**Sg**	**19 29 37.4**	**+0.3**
EVGI	**Lefkada island**	**0.50**	**27**	P	**Pg**	**19 29 30.3**	**0.0**
EVGI				S	**Sb**	**19 29 38.1**	**0.0**
ZAK2	**Zakynthos**	**0.58**	**132**	P	**Pg**	**19 29 31.7**	**0.0**
ZAK2				S	**Sb**	**19 29 41.7**	**+1.5**
	comp=E,21µm,0.4s						
MGNA	**Meganis**	**0.59**	**35**	P	**Pg**	**19 29 31.5**	**-0.5**
MGNA				S	**Sb**	**19 29 40.6**	**+0.1**
MGNA				AML	AML	19 29 41.0	
	comp=N,5739µm,0.2s						
MGNA				AML	AML	19 29 41.0	
	comp=E,13453µm,0.1s						
KRI1	**kERI**	**0.63**	**145**	P	**Pg**	**19 29 31.9**	**-0.8**
KRI1				S	**Sb**	**19 29 42.0**	**+0.3**
	comp=E,6µm,1.1s						
LKD2	**Lefkada island**	**0.66**	**21**	P	**Pg**	**19 29 33.0**	**-0.2**
LKD2	**Lefkada island**	**0.66**	**21**	P	**Pg**	**19 29 33.1**	**-0.1**
AST1	**Astakos**	**0.68**	**57**	P	**Pg**	**19 29 33.0**	**-0.7**
TSLK	**Tsoukalades, L**	**0.69**	**20**	P	**Pg**	**19 29 33.7**	**-0.1**
TSLK	**Tsoukalades, L**	**0.69**	**20**	P	**Pg**	**19 29 33.9**	**+0.1**
PDO	**Prodromos**	**0.77**	**57**	P	**Pg**	**19 29 34.9**	**-0.5**
PDO				S	**Sb**	**19 29 45.8**	**-0.1**
	comp=E,5µm,0.3s						
PDO	**Prodromos**	**0.77**	**57**	P	**Pg**	**19 29 34.8**	**-0.5**
PDO				S	**Sb**	**19 29 46.9**	**+1.0**
PDO				AML	AML	19 29 54.5	
	comp=E,5745µm,0.5s						
PDO				AML	AML	19 29 57.3	
	comp=N,8099µm,0.3s						
RLS	**Riolos of Patr**	**0.88**	**97**	P	**Pg**	**19 29 36.4**	**-1.1**
RLS	**Riolos of Patr**	**0.88**	**97**	P	**Pg**	**19 29 36.4**	**-1.1**
RLS				AML	AML	19 29 58.4	
	comp=E,1625µm,0.6s						
RLS				AML	AML	19 29 59.1	
	comp=N,1654µm,0.4s						
PVO	**Paravola**	**1.02**	**64**	P	**Pb**	**19 29 39.5**	**-0.2**
PVO				S	**Sn**	**19 29 55.5**	**+1.3**
	comp=N,2µm,0.3s						
PVO	**Paravola**	**1.02**	**64**	P	**Pb**	**19 29 39.5**	**-0.2**
PVO				S	**Sn**	**19 29 54.7**	**+0.5**
PVO				AML	AML	19 30 02.1	
	comp=E,5340µm,0.3s						
PVO				AML	AML	19 30 02.8	
	comp=N,4491µm,0.3s						
DRO	**Drossia**	**1.09**	**101**	P	**Pb**	**19 29 40.2**	**-0.7**
DRO	**Drossia**	**1.09**	**101**	P	**Pb**	**19 29 40.3**	**-0.7**
DRO				AML	AML	19 30 04.0	
	comp=E,5783µm,0.5s						
DRO				AML	AML	19 30 04.0	
	comp=N,4614µm,0.4s						
AMT	**Artemida-Makis**	**1.25**	**121**	P	**Pn**	**19 29 43.8**	**+0.5**
AMT				S	**Sb**	**19 29 59.4**	**-0.1**
	comp=N,2µm,0.9s						
AMT	**Artemida-Makis**	**1.25**	**121**	P	**Pn**	**19 29 43.1**	**-0.2**
LAKA	**Lakka**	**1.28**	**87**	P	**Pn**	**19 29 43.5**	**-0.3**
LAKA				S	**Sg**	**19 30 02.2**	**+0.6**
	comp=N,450nm,0.6s						
LAKA	**Lakka**	**1.28**	**87**	P	**Pn**	**19 29 43.7**	**0.0**
LAKA				S	**Sg**	**19 30 02.9**	**+1.3**
LAKA				AML	AML	19 30 09.2	
	comp=E,1162µm,0.6s						
LAKA				AML	AML	19 30 11.3	
	comp=N,827µm,0.5s						
ANX	**Ano Chora**	**1.29**	**71**	P	**Pn**	**19 29 44.2**	**+0.1**
ANX	**Ano Chora**	**1.29**	**71**	P	**Pn**	**19 29 44.3**	**+0.3**
EVR	**Evrytania**	**1.35**	**56**	P	**Pg**	**19 29 46.2**	**-0.3**
EVR	**Evrytania**	**1.35**	**56**	P	**Pb**	**19 29 45.9**	**+0.4**
IGT	**Igoumenitsa**	**1.35**	**359**	P	**Pb**	**19 29 45.9**	**+0.4**
IGT				S	**Sg**	**19 30 05.0**	**+0.9**
	comp=N,385nm,0.3s						
IGT	**Igoumenitsa**	**1.35**	**359**	P	**Pn**	**19 29 45.5**	**+0.7**
SERG	**Sergoula**	**1.35**	**79**	P	**Pn**	**19 29 44.5**	**-0.3**
SERG	**Sergoula**	**1.35**	**79**	P	**Pn**	**19 29 44.5**	**-0.3**
SERG				AML	AML	19 30 10.1	
	comp=E,1453µm,0.8s						
SERG				AML	AML	19 30 13.8	
	comp=N,1461µm,0.5s						
TRIZ	**Trizonia**	**1.36**	**81**	P	**Pn**	**19 29 44.6**	**-0.3**
TRIZ	**Trizonia**	**1.36**	**81**	P	**Pn**	**19 29 44.8**	**-0.1**
TRIZ				S	**Sg**	**19 30 05.4**	**+1.1**
ALIK	**Aliki, Aigiali**	**1.38**	**86**	P	**Pn**	**19 29 45.2**	**+0.1**
KALE	**Kalithea**	**1.42**	**81**	P	**Pn**	**19 29 45.4**	**-0.3**
KALE	**Kalithea**	**1.42**	**81**	P	**Pn**	**19 29 45.4**	**-0.3**
KALE				S	**Sg**	**19 30 05.8**	**-0.3**
KALE				AML	AML	19 30 17.6	
	comp=E,883µm,0.6s						
KALE				AML	AML	19 30 17.7	
	comp=N,1441µm,0.6s						
KLV	**Kalavryta, Ach**	**1.42**	**95**	P	**Pn**	**19 29 45.7**	**0.0**
KLV	**Kalavryta, Ach**	**1.42**	**95**	P	**Pn**	**19 29 45.7**	**0.0**
JAN	**Janina**	**1.53**	**14**	P	**Pg**	**19 29 49.4**	**-0.4**
JAN				S	**Sg**	**19 30 08.7**	**-0.9**
	comp=N,360nm,0.4s						
ITM	**Ithomi**	**1.59**	**128**	P	**Pn**	**19 29 49.1**	**+1.0**
ITM				S	**Sg**	**19 30 11.3**	**-0.3**
	comp=N,310nm,0.6s						
KASA	**Kassiopi**	**1.60**	**348**	P	**Pb**	**19 29 49.7**	**0.0**
MAKR	**Makrakomi, Fth**	**1.62**	**58**	P	**Pg**	**19 29 51.4**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.62**	**58**	P	**Pb**	**19 29 50.4**	**+0.4**
MAKR				AML	AML	19 30 21.4	
	comp=N,1286µm,0.5s						
MAKR				AML	AML	19 30 22.9	
	comp=E,1423µm,0.5s						
SRN	**Sarande**	**1.73**	**351**	P	**Pb**	**19 29 51.5**	**-0.3**
AGG	**Agios Georgios**	**1.76**	**61**	P	**Pb**	**19 29 53.3**	**+0.9**
AGG	**Agios Georgios**	**1.76**	**61**	P	**Pb**	**19 29 52.8**	**+0.4**
AGG				S	**Sg**	**19 30 16.5**	**-0.6**
AGG				AML	AML	19 30 26.5	
	comp=N,715µm,0.7s						
AGG				AML	AML	19 30 26.7	
	comp=E,635µm,0.8s						
VLX	**Vlachokerasia**	**1.79**	**116**	P	**Pb**	**19 29 52.9**	**-0.1**
THL	**Klokotos Trika**	**1.90**	**42**	P	**Pb**	**19 29 54.9**	**+0.2**
AXAR	**Agios Charalam**	**1.90**	**71**	P	**Pb**	**19 29 54.8**	**0.0**
AXAR				AML	AML	19 30 33.8	
	comp=E,1256µm,0.6s						
AXAR				AML	AML	19 30 35.3	
	comp=N,1346µm,0.5s						
LTK	**Loutraki**	**2.06**	**93**	P	**Pn**	**19 29 56.1**	**+1.6**
LTK	**Loutraki**	**2.06**	**93**	P	**Pn**	**19 29 56.2**	**+1.6**
LOUT	**Loutraki**	**2.07**	**94**	P	**Pn**	**19 29 56.3**	**+1.6**
LKR	**Lokris**	**2.13**	**76**	P	**Pn**	**19 29 57.2**	**+1.8**
VIL2	**Platees**	**2.29**	**88**	P	**Pn**	**19 29 60.0**	**+2.3**
DID	**Didima**	**2.37**	**105**	P	**Pn**	**19 30 00.7**	**+1.9**
XOR	**Xorichti**	**2.51**	**61**	P	**Pn**	**19 30 02.1**	**+1.3**
MRKA	**Markates**	**2.59**	**77**	P	**Pn**	**19 30 03.7**	**+1.9**
VLY	**Voula,Athens**	**2.73**	**96**	P	**Pn**	**19 30 04.9**	**+1.2**
VLY	**Voula,Athens**	**2.73**	**96**	P	**Pn**	**19 30 05.0**	**+1.2**
OHR	**Ohrid**	**2.95**	**6**	*i* Pn	**Pn**	**19 30 08.5**	**+1.7**
TIP	**Timpagrande**	**2.99**	**291**	P	**Pn**	**19 30 08.4**	**+1.0**
TIP				S	**Sn**	**19 30 42.9**	**-0.1**
VAY	**Valandovo**	**3.57**	**28**	*i* Pn	**Pb**	**19 30 21.7**	**-1.6**
STIP	**Stip**	**3.78**	**21**	*i* Pn	**Pb**	**19 30 23.0**	**-3.9**
SOKA	**Soboth**	**9.36**	**337**	*e*Pn	**Pn**	**19 31 35.0**	**+0.2**
	comp=N,1.1nm,0.3s						
OBKA	**Obir**	**9.37**	**335**	*e*Pn	**Pn**	**19 31 36.2**	**+1.2**
	comp=N,0.9nm,0.2s						
MOA	**Molln**	**10.64**	**337**	*e*Pn	**Pn**	**19 31 54.4**	**+2.0**
	comp=N,0.6nm,0.2s						
FINES	**FINESS Array B**	**23.56**	**7**	P	**P**	**19 34 28.4**	**-1.6**
	comp=N,1.2nm,0.6s,baz=188,slow=12,SNR=4.6						
TORD	**Torodi Ar. Bea**	**29.95**	**219**	P	**P**	**19 35 54.7**	**+27**
	comp=N,0.2nm,0.7s,baz=19,slow=8.7,SNR=1.5						
MKAR	**Makanchi Array**	**45.41**	**58**	P	**P**	**19 37 37.7**	**-0.7**
	comp=N,0.5nm,0.4s,baz=274,slow=7.1,SNR=15						
ZALV	**Zalesovo Beam**	**45.79**	**48**	P	**P**	**19 37 40.4**	**-0.8**
	comp=N,1.0nm,0.4s,baz=275,slow=9.5,SNR=5.8						

ANF ***06*** *19:42:20.4±0.9, 35°.46N×121°.33W, h15km±8km, ML4.3/41, Error ellipse: s-maj=6.2km s-min=3.5km az=88.0*
NEIC ***06*** *19:42:20.2±1.7, 35°.51N±0°.02×121°.36W±0°.03, h10km±1km, Error ellipse: s-maj=4.5km s-min=2.8km az=242.0*
IDC ***06*** *19:42:20.7±0.8, 35°.42N×121°.25W, h0km, mb4.2/16, mb1 4.3/21, mb1mx4.2/43, mbtmp4.1/21, ML3.5/6, MS3.5/8, Ms1 3.5/8, ms1mx3.2/35, Error ellipse: s-maj=14.8km s-min=10.9km az=44.0*
NCEDC ***06*** *19:42:21±3.3, 35°.53N±0°.02×121°.27W±0°.03, h3km±4km, Mwr4.1/7, mb4.4/30(NEIC), Error ellipse: s-maj=3.2km s-min=2.4km az=64.0, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr1.87; Mθθ-1.82; Mφφ-0.05; Mrθ-0.34; Mθφ0.51; Mφr0.37;*
ISC 06 19:42:20.1±1.4, 35°.49N±0°.03×121°.33W±0°.03, h0km±8km, n363, σ1§48/358, mb4.3/22, MS3.7/3, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCBM	**Cambria**	**0.22**	**83**		**Pg**	**19 42 25.0**	**+0.7**
PHCM	**Hearst Castle**	**0.24**	**37**		**Pg**	**19 42 25.2**	**+0.6**
ARDC	**Alexander Ranc**	**0.28**	**96**		**Pg**	**19 42 26.4**	**+0.9**
ARDC					**Sg**	**19 42 30.2**	**+1.0**
BLDC	**Black Mountain**	**0.34**	**83**		**Pg**	**19 42 27.7**	**+1.0**
BLDC	**Black Mountain**	**0.34**	**83**		**Pg**	**19 42 27.6**	**+1.0**
PHSB	**Hesperia Broad**	**0.40**	**34**		**Pg**	**19 42 28.3**	**+0.6**
RAMR	**Ramage Ranch**	**0.40**	**69**		**Pg**	**19 42 28.4**	**+0.7**
PAPM	**Alder Peak**	**0.42**	**356**		**Pg**	**19 42 28.8**	**+0.7**
LSDC	**Los Osos Digit**	**0.44**	**116**		**Pb**	**19 42 29.9**	**-0.9**
PANM	**San Antonio Re**	**0.45**	**50**		**Pg**	**19 42 29.2**	**+0.6**
VPDC	**Valencia Peak**	**0.45**	**124**		**Pb**	**19 42 30.4**	**-0.5**
DCD	**Diablo Creek**	**0.49**	**125**		**Pb**	**19 42 30.6**	**-0.8**
DPD	**Davis Peak**	**0.52**	**120**		**Pb**	**19 42 31.4**	**-0.6**
PTAM	**Tassajara Cree**	**0.52**	**101**		**Pg**	**19 42 30.9**	**+0.9**
EFD	**Emergency Oper**	**0.52**	**109**		**Pg**	**19 42 30.9**	**+0.9**
PCCM	**Crazy Canyon**	**0.61**	**12**		**Pg**	**19 42 32.5**	**+0.8**
PSAM	**San Ardo**	**0.64**	**34**		**Pg**	**19 42 32.7**	**+0.4**
PPO	**Portuguese Can**	**0.69**	**57**		**Pg**	**19 42 34.0**	**+0.7**
BAPM	**Anderson Peak**	**0.73**	**339**		**Pg**	**19 42 35.0**	**+0.9**
PVCM	**Vineyard Canyo**	**0.77**	**56**		**Pg**	**19 42 35.1**	**+0.2**
TCHL	**Shandon**	**0.78**	**75**		**Pg**	**19 42 35.8**	**+0.8**
PKD	**Bear Valley Ra**	**0.78**	**55**		**Pg**	**19 42 35.1**	**0.0**
PSTM	**Stockdale Moun**	**0.80**	**57**		**Pg**	**19 42 35.3**	**0.0**
TSCN	**Private Proper**	**0.80**	**86**		**Pb**	**19 42 36.3**	**-0.5**
PCMM	**Cholame Hills**	**0.81**	**67**		**Pg**	**19 42 36.1**	**+0.5**
PMCM	**McMillan Canyo**	**0.81**	**73**		**Pg**	**19 42 36.4**	**+0.7**
BPOM	**Post Ranch**	**0.82**	**334**		**Pg**	**19 42 36.3**	**+0.6**
PHAM	**Harlan Ranch**	**0.83**	**65**		**Pg**	**19 42 36.6**	**+0.6**
PMLM	**Mount Lospe**	**0.84**	**135**		**Pb**	**19 42 36.6**	**-0.9**
PMPB	**Monarch Peak**	**0.84**	**358**		**Pg**	**19 42 36.5**	**+0.3**
PHFM	**Heflinger Ranc**	**0.85**	**62**		**Pg**	**19 42 36.6**	**+0.3**
PKLM	**Kerr Lake**	**0.85**	**71**		**Pg**	**19 42 36.8**	**+0.4**
GHC	**Gold Hill**	**0.86**	**67**		**Pg**	**19 42 36.8**	**+0.2**
TRAM	**Private Proper**	**0.88**	**78**		**Pg**	**19 42 37.5**	**+0.5**
PSNM	**Stone Corral**	**0.89**	**70**		**Pg**	**19 42 37.4**	**+0.2**
BSMM	**Soledad Missio**	**0.89**	**355**		**Pg**	**19 42 37.5**	**+0.3**
HAST	**Hastings Reser**	**0.91**	**349**		**Pg**	**19 42 37.7**	**+0.1**
CTM	**Castle Mountai**	**0.92**	**61**		**Pg**	**19 42 38.2**	**+0.6**
BSGM	**Shirttail Gulc**	**0.92**	**4**		**Pg**	**19 42 37.8**	**+0.1**
PTRM	**Twissleman Ran**	**0.92**	**80**		**Pg**	**19 42 38.0**	**+0.2**
THIS	**South End of C**	**0.92**	**75**		**Pg**	**19 42 38.3**	**+0.5**
PSRM	**Scobie Ranch**	**0.93**	**67**		**Pg**	**19 42 38.0**	**+0.1**
PMRM	**Maxey Ranch**	**0.93**	**72**		**Pg**	**19 42 38.2**	**+0.2**
LRV	**Little Rabbit**	**0.96**	**15**		**Pg**	**19 42 38.9**	**+0.3**
BPIM	**Pinnacles**	**1.00**	**7**		**Pg**	**19 42 39.2**	**-0.1**
BBNM	**San Benito**	**1.03**	**11**		**Pg**	**19 42 40.0**	**+0.1**
BJCM	**Johnson Can.**	**1.05**	**357**		**Pg**	**19 42 40.0**	**-0.2**
PARM	**Anticline Ridg**	**1.10**	**46**		**Pb**	**19 42 41.3**	**-0.6**
SMMC	**Simmler**	**1.10**	**99**		**Pb**	**19 42 41.1**	**-0.9**
SMMC	**Simmler**	**1.10**	**99**	P	**Pb**	**19 42 40.8**	**-1.3**
	baz=282,SNR=405						
SMMC				S	**Sn**	**19 42 57.0**	**-1.7**
	baz=282						
SCZ	**Santa Cruz**	**1.10**	**357**		**Pb**	**19 42 40.7**	**-1.4**
BPCNC	**Pine Canyon**	**1.10**	**347**		**Pb**	**19 42 40.9**	**-1.1**
BBGB	**Big Mountain B**	**1.11**	**12**		**Pb**	**19 42 41.4**	**-0.8**
BJOM	**Mount Johnson**	**1.13**	**1**		**Pb**	**19 42 40.9**	**-1.7**
PKEM	**Kettleman Hill**	**1.14**	**60**		**Pb**	**19 42 41.9**	**-0.8**
GATR	**Gnd/Air Tx Cnt**	**1.16**	**144**		**Pb**	**19 42 41.7**	**-1.2**
BLRM	**Lewis Ranch**	**1.17**	**2**		**Pb**	**19 42 41.7**	**-1.5**
BAVM	**Antelope Valle**	**1.18**	**12**		**Pb**	**19 42 42.1**	**-1.2**
BEHM	**Elkhorn Ranch**	**1.18**	**6**		**Pb**	**19 42 42.3**	**-1.0**
BEMM	**Emmet**	**1.18**	**9**		**Pn**	**19 42 42.2**	**-1.7**
BSRM	**Salinas Radio**	**1.18**	**352**		**Pn**	**19 42 41.7**	**-2.2**
HMOM	**Monterey**	**1.21**	**337**		**Pn**	**19 42 41.9**	**-2.3**
BCGM	**Cienega Road**	**1.21**	**359**		**Pn**	**19 42 42.2**	**-2.1**
CARC	**Carrizo Plain**	**1.22**	**98**		**Pn**	**19 42 42.6**	**-1.9**
BHRM	**Hodges Ranch**	**1.23**	**2**		**Pn**	**19 42 43.4**	**-1.1**
BMSM	**Mercy Hot Spri**	**1.24**	**20**		**Pn**	**19 42 43.6**	**-1.1**
BVYM	**Vineyard**	**1.26**	**357**		**Pn**	**19 42 42.6**	**-2.3**
FRP	**Fremont Peak**	**1.27**	**354**		**Pn**	**19 42 42.8**	**-2.3**
SAO	**San Andreas Ge**	**1.27**	**356**		**Pn**	**19 42 43.5**	**-1.6**
BSLM	**Silva Ranch**	**1.28**	**359**		**Pn**	**19 42 43.5**	**-1.7**
PWMM	**Westland Maint**	**1.30**	**44**		**Pn**	**19 42 43.2**	**-2.2**
HJSM	**John Smith Roa**	**1.32**	**1**		**Pn**	**19 42 44.4**	**-1.4**
FIGC	**Figueroa Mtn.**	**1.34**	**124**		**Pn**	**19 42 44.1**	**-1.9**
HERM	**Elkhorn Road**	**1.34**	**347**		**Pn**	**19 42 44.2**	**-1.8**
HTUM	**Tustin Road**	**1.36**	**349**		**Pn**	**19 42 44.5**	**-1.9**
HBTM	**San Juan Bauti**	**1.37**	**352**		**Pn**	**19 42 45.2**	**-1.2**
MOBB	**Monterey Bay O**	**1.38**	**331**		**Pn**	**19 42 44.5**	**-1.9**
PKM	**Mcpherson Peak**	**1.38**	**116**		**Pn**	**19 42 45.2**	**-1.5**
PKM	**Mcpherson Peak**	**1.38**	**116**	P	**Pn**	**19 42 44.5**	**-2.2**
	baz=299,SNR=131						
PKM				S	**Sg**	**19 43 05.3**	**+1.0**
	baz=299						
HLTM	**Lone Tree Road**	**1.39**	**1**		**Pn**	**19 42 45.1**	**-1.6**
BRMM	**Rolling Bench**	**1.40**	**17**		**Pn**	**19 42 46.1**	**-0.7**
ANZ	**Anzar Road**	**1.41**	**351**		**Pn**	**19 42 44.9**	**-2.1**
HCOM	**Corn Cob Canyo**	**1.43**	**348**		**Pn**	**19 42 45.6**	**-1.6**
OCR	**O'Connell Ranc**	**1.43**	**354**		**Pn**	**19 42 46.7**	**-0.5**
SYP	**Santa Ynez Pea**	**1.47**	**131**		**Pn**	**19 42 46.7**	**-1.2**
HFEM	**San Felipe**	**1.49**	**358**		**Pn**	**19 42 46.4**	**-1.7**
JELB	**Ellicott, Sant**	**1.49**	**344**		**Pn**	**19 42 46.4**	**-1.7**
PACP	**Pacheco Peak**	**1.51**	**1**		**Pn**	**19 42 47.3**	**-1.2**
CDC	**Canada Road**	**1.53**	**355**		**Pn**	**19 42 48.5**	**-0.3**
SFJWR	**San Luis Fatjo**	**1.56**	**5**		**Pn**	**19 42 47.7**	**-1.4**
HPCM	**Pacheco Lake**	**1.56**	**1**		**Pn**	**19 42 47.9**	**-1.2**
HLPM	**Lions Peak**	**1.56**	**351**		**Pn**	**19 42 47.4**	**-1.7**
SLD	**San Luis Dam**	**1.58**	**3**		**Pn**	**19 42 47.8**	**-1.5**
JTGM	**Trout Gulch Ro**	**1.60**	**344**		**Pn**	**19 42 48.0**	**-1.6**
JRGM	**Rodeo Gulch Ro**	**1.62**	**342**		**Pn**	**19 42 48.1**	**-1.8**
BCW	**Bitter Crk WRg**	**1.66**	**109**		**Pn**	**19 42 49.1**	**-1.5**
JHLM	**Holstrom Ranch**	**1.66**	**346**		**Pn**	**19 42 48.5**	**-2.1**
CADM	**Anderson Res.**	**1.69**	**352**		**Pn**	**19 42 49.2**	**-1.5**
JLAB	**Laurel Hill**	**1.69**	**349**		**Pn**	**19 42 49.2**	**-1.6**
SBC	**Santa Barbara**	**1.69**	**128**		**Pn**	**19 42 49.3**	**-1.5**
SBC	**Santa Barbara**	**1.69**	**128**	P	**Pn**	**19 42 47.9**	**-2.9**
	baz=311,SNR=27						
SCKWR	**San Luis Creek**	**1.70**	**7**		**Pn**	**19 42 51.2**	**+0.3**
AMC	**Almaden**	**1.71**	**346**		**Pn**	**19 42 49.1**	**-2.1**
JUMM	**Mount Umunhum**	**1.73**	**345**		**Pn**	**19 42 49.3**	**-2.1**
JSTM	**Santa Teresa H**	**1.75**	**348**		**Pn**	**19 42 49.8**	**-1.9**
JBNB	**Ben Lomond Mou**	**1.76**	**338**		**Pn**	**19 42 49.6**	**-2.2**
VOG	**Valley Oaks Go**	**1.78**	**62**	P	**Pn**	**19 42 50.6**	**-1.5**
	baz=243,SNR=25						
VOG				S	**Sn**	**19 43 13.8**	**-1.6**
	baz=243						
CCOB	**Coe Ranch Numb**	**1.78**	**351**		**Pn**	**19 42 51.0**	**-1.2**
VES	**Vestal, Richgr**	**1.86**	**79**		**Pn**	**19 42 51.4**	**-1.7**
VES	**Vestal, Richgr**	**1.86**	**79**	P	**Pn**	**19 42 50.6**	**-2.5**
	baz=261,SNR=125						
VES				S	**Sn**	**19 43 13.9**	**-3.4**
	baz=261						
ARN	**Arnold Ranch**	**1.86**	**355**		**Pn**	**19 42 51.7**	**-1.5**
MHC	**Mount Hamilton**	**1.86**	**352**		**Pn**	**19 42 51.8**	**-1.5**
JSGM	**Saratoga Golf**	**1.88**	**342**		**Pn**	**19 42 51.7**	**-1.7**
CMMM	**Mount Mocho**	**1.96**	**356**		**Pn**	**19 42 53.3**	**-1.4**
MAGC	**SCE Magundon P**	**1.97**	**93**		**Pn**	**19 42 52.6**	**-2.0**
JJRM	**Joaquin Road**	**1.98**	**339**		**Pn**	**19 42 52.8**	**-2.0**
MRHM	**Rocky Hill**	**1.98**	**66**		**Pn**	**19 42 52.9**	**-2.0**
FRI	**Friant**	**1.99**	**41**		**Pn**	**19 42 52.8**	**-2.1**
JFP	**Foothills Park**	**1.99**	**340**		**Pn**	**19 42 52.8**	**-2.2**
MHDM	**Hidden Dam**	**1.99**	**35**		**Pn**	**19 42 53.5**	**-1.4**
CMLM	**Mount Lewis**	**2.00**	**353**		**Pn**	**19 42 53.8**	**-1.4**
MYLM	**Yosemite Lake**	**2.02**	**21**		**Pn**	**19 42 54.0**	**-1.4**
JSFB	**Stanford Teles**	**2.03**	**340**		**Pn**	**19 42 53.5**	**-2.0**
SCZ2	**Santa Cruz Isl**	**2.04**	**137**	P	**Pn**	**19 42 53.7**	**-2.0**
	baz=319						
JRSC	**Jasper Ridge**	**2.04**	**339**		**Pn**	**19 42 53.6**	**-2.1**
CMJM	**Mission San Jo**	**2.07**	**348**		**Pn**	**19 42 54.4**	**-1.7**
ARVC	**Arvin**	**2.07**	**99**		**Pn**	**19 42 54.3**	**-1.8**
ARVC	**Arvin**	**2.07**	**99**	P	**Pn**	**19 42 54.3**	**-1.8**
	baz=282,SNR=50						
JHPM	**Huddart Park**	**2.10**	**338**		**Pn**	**19 42 54.5**	**-2.0**
WOFM	**Oak Flat**	**2.13**	**88**		**Pn**	**19 42 54.8**	**-2.2**
WENL	**Wente Vineyard**	**2.15**	**351**		**Pn**	**19 42 56.0**	**-1.2**
TEJ	**El Tejon**	**2.17**	**96**		**Pn**	**19 42 55.4**	**-2.1**
CNIC	**Niles Canyon**	**2.17**	**346**		**Pn**	**19 42 56.2**	**-1.3**
OXMT	**Ox Mountain**	**2.19**	**336**		**Pn**	**19 42 56.3**	**-1.4**
SPG2	**Springville 2**	**2.20**	**71**		**Pn**	**19 42 56.3**	**-1.6**
HELL	**Mitchell Peak,**	**2.21**	**57**		**Pn**	**19 42 56.5**	**-1.6**
JCPM	**Coyote Point**	**2.24**	**339**		**Pn**	**19 42 56.4**	**-2.0**
SAC	**San Andreas**	**2.26**	**337**		**Pn**	**19 42 58.0**	**-0.7**
WASM	**Alta Sierra Ca**	**2.27**	**83**		**Pn**	**19 42 57.5**	**-1.5**
MMIM	**Miami Mountain**	**2.31**	**33**		**Pn**	**19 42 58.6**	**-0.9**
OSI	**Osito Audit: C**	**2.31**	**112**		**Pn**	**19 42 58.2**	**-1.2**
OSI	**Osito Audit: C**	**2.31**	**112**	P	**Pn**	**19 42 57.9**	**-1.5**
	baz=294,SNR=32						
PYR	**Pyramid**	**2.31**	**113**		**Pn**	**19 42 58.4**	**-1.1**
BLG	**Laguna Peak, P**	**2.32**	**126**	P	**Pn**	**19 42 57.3**	**-2.2**
	baz=309,SNR=7.0						
BLG				S	**Sn**	**19 43 27.9**	**-0.8**
	baz=309						
CLCB	**Lake Chabot**	**2.32**	**345**		**Pn**	**19 42 57.7**	**-1.7**
ISA	**Isabella, Lake**	**2.33**	**85**	Pn	**Pn**	**19 42 57.6**	**-2.1**
ISA	**Isabella, Lake**	**2.33**	**85**	P	**Pn**	**19 42 57.9**	**-1.8**
	baz=267,SNR=76						
ISA				S	**Sn**	**19 43 25.8**	**-3.4**
	baz=267						
CMOB	**Morgan Territo**	**2.34**	**351**		**Pn**	**19 42 59.0**	**-0.9**
CMCM	**Mills College**	**2.38**	**344**		**Pn**	**19 43 00.1**	**-0.2**
BGC	**Bolinger Road**	**2.39**	**346**		**Pn**	**19 42 59.4**	**-1.2**
CRHM	**Round Hill Res**	**2.42**	**347**		**Pn**	**19 43 00.0**	**-0.9**
KCC	**Kaiser Creek**	**2.44**	**41**		**Pn**	**19 43 00.5**	**-0.7**
CRPB	**Russellman Par**	**2.46**	**349**		**Pn**	**19 42 59.7**	**-1.7**
JPRM	**Presidio of Sa**	**2.48**	**338**		**Pn**	**19 42 59.8**	**-1.8**
BKS	**Berkeley--Byer**	**2.49**	**343**		**Pn**	**19 43 00.5**	**-1.3**
BL67	**Building 67, L**	**2.49**	**343**		**Pn**	**19 43 01.0**	**-0.9**
CVPM	**Vollmer Peak**	**2.49**	**343**		**Pn**	**19 42 59.6**	**-2.3**
BDM	**Black Diamond**	**2.49**	**350**		**Pn**	**19 43 01.7**	**-0.2**
OAT	**Oat Mountain**	**2.51**	**116**		**Pn**	**19 43 01.7**	**-0.4**
BRIB	**Briones**	**2.51**	**345**		**Pn**	**19 43 00.3**	**-1.8**
WORM	**Onyx Ranch**	**2.52**	**85**		**Pn**	**19 43 01.2**	**-1.1**
MCUB	**Copperopolis B**	**2.54**	**13**		**Pn**	**19 43 01.0**	**-1.5**
FARB	**Farallon Islan**	**2.58**	**329**		**Pn**	**19 43 01.5**	**-1.5**
CSPM	**San Pablo Ridg**	**2.58**	**342**		**Pn**	**19 43 01.9**	**-1.2**
CPIM	**Pinole Ridge**	**2.59**	**344**		**Pn**	**19 43 01.5**	**-1.7**
CMB	**Columbia Colle**	**2.65**	**16**	Pn	**Pn**	**19 43 03.5**	**-0.6**
WCHM	**Chimney Peak**	**2.67**	**81**		**Pn**	**19 43 04.1**	**-0.6**
MNHB	**New Hogan Dam**	**2.68**	**9**		**Pn**	**19 43 03.3**	**-1.1**
SNCC	**San Nicolas Is**	**2.69**	**146**	Pn	**Pn**	**19 43 02.6**	**-2.0**
SNCC	**San Nicolas Is**	**2.69**	**146**	P	**Pn**	**19 43 02.9**	**-1.6**
	baz=328						
SNCC				S	**Sn**	**19 43 34.8**	**-3.1**
	baz=328						
DECC	**Green Verdugo**	**2.75**	**116**	P	**Pn**	**19 43 03.6**	**-1.9**
	baz=299,SNR=10						
CWC	**Cottonwood Cre**	**2.80**	**69**	P	**Pn**	**19 43 05.7**	**-0.5**
	baz=251						
EDW2	**Edwards Air Fo**	**2.80**	**102**	P	**Pn**	**19 43 04.0**	**-2.1**
	baz=284,SNR=42						
MINS	**Minaret Summit**	**2.82**	**40**		**Pn**	**19 43 07.2**	**+0.5**
OMMB	**Old Mammoth Mi**	**2.83**	**41**	Pn	**Pn**	**19 43 07.1**	**+0.3**
MDYM	**Dry Creek**	**2.85**	**40**		**Pn**	**19 43 07.8**	**+0.7**
MDCM	**Deadman Creek**	**2.88**	**39**		**Pn**	**19 43 07.8**	**+0.4**
MCMM	**Convict Lake**	**2.89**	**42**		**Pn**	**19 43 07.8**	**+0.3**
MEMM	**East Mammoth H**	**2.90**	**41**		**Pn**	**19 43 08.3**	**+0.6**
MTUM	**Tungsten Hills**	**2.90**	**49**		**Pn**	**19 43 09.6**	**+1.9**
PASC	**Pasadena Art C**	**2.90**	**116**	Pn	**Pn**	**19 43 05.5**	**-2.0**
MCBM	**Casa Benchmark**	**2.90**	**42**		**Pn**	**19 43 08.7**	**+0.9**
MCCM	**Marconi Confer**	**2.93**	**335**	Pn	**Pn**	**19 43 05.5**	**-2.3**
MLAC	**Mammoth, Mammo**	**2.93**	**42**	P	**Pn**	**19 43 07.8**	**-0.3**
	baz=224						
MDRNC	**Doe Ridge**	**2.93**	**42**		**Pn**	**19 43 08.8**	**+0.6**
LMCR	**Lookout Mounta**	**2.94**	**40**		**Pn**	**19 43 09.2**	**+0.9**
TIN	**Tinemaha, Big**	**2.95**	**57**	P	**Pn**	**19 43 07.8**	**-0.4**
	baz=239						
MWC	**Mount Wilson**	**2.97**	**114**	Pn	**Pn**	**19 43 07.6**	**-1.1**
LRMC	**Laurel Mtn Rad**	**2.97**	**89**	P	**Pn**	**19 43 07.8**	**-0.8**
	baz=272						
FMP	**Fort Macarthur**	**3.07**	**125**	P	**Pn**	**19 43 08.5**	**-1.2**
	baz=307						
DAC	**Darwin (Calif)**	**3.13**	**74**		**Pn**	**19 43 12.6**	**+1.8**
MPMC	**Manual Prospec**	**3.17**	**79**	P	**Pn**	**19 43 09.9**	**-1.4**
	baz=261,SNR=83						
CIS	**Catalina Islan**	**3.18**	**130**	P	**Pn**	**19 43 09.9**	**-1.5**
	baz=313						
SSK	**Sunset Peak**	**3.25**	**112**		**Pn**	**19 43 11.4**	**-1.0**
BFSC	**Mount Baldy Ra**	**3.27**	**111**	P	**Pn**	**19 43 10.9**	**-1.7**
	baz=294,SNR=76						
WAKR	**Walker**	**3.36**	**26**		**Pn**	**19 43 15.0**	**+1.0**
SCI2	**San Clemente I**	**3.40**	**137**	P	**Pn**	**19 43 13.3**	**-1.1**
	baz=319						
AFDM	**Forest Hills D**	**3.46**	**5**		**Pn**	**19 43 14.8**	**-0.4**
GDXM	**Geysers**	**3.51**	**341**		**Pn**	**19 43 14.0**	**-1.9**
GRAC	**Grapevine Rang**	**3.54**	**64**	P	**Pn**	**19 43 15.1**	**-1.2**
	baz=246						
RRX	**Edison Barstow**	**3.60**	**99**	P	**Pn**	**19 43 15.6**	**-1.5**
	baz=282						
BFC	**Buffalo Canyon**	**3.66**	**21**		**Pn**	**19 43 20.0**	**+1.9**
RUBR	**Rubicon Trail**	**3.67**	**14**		**Pn**	**19 43 18.5**	**+0.2**
GSC	**Goldstone, Bar**	**3.70**	**92**	Pn	**Pn**	**19 43 17.0**	**-1.6**
GSC	**Goldstone, Bar**	**3.70**	**92**	P	**Pn**	**19 43 16.6**	**-1.9**
	baz=275,SNR=25						
FURC	**Furnace Creek,**	**3.75**	**74**	P	**Pn**	**19 43 18.2**	**-0.9**
	baz=256						
HOPS	**Hopland Field**	**3.76**	**339**	Pn	**Pn**	**19 43 18.2**	**-1.1**
NVAR	**Mina Array Bea**	**3.80**	**39**	Pn	**Pn**	**19 43 22.5**	**+2.4**
	1.8nm,0.3s,baz=214,slow=12,SNR=24						
NVAR				Lg	Lg	19 44 16.1	
	1.9nm,0.3s,baz=188,slow=20,SNR=1.3						
NVAR				LR	LR	19 45 08.3	
	comp=Z,972nm,19.1s,baz=254,slow=43						
NVAR	**Mina Array Bea**	**3.80**	**39**	Pn	**Pn**	**19 43 21.0**	**+0.9**
BBRC	**Big Bear Solar**	**3.82**	**107**	P	**Pn**	**19 43 19.2**	**-1.2**
	baz=291						
PNTR	**Pine Nut**	**3.84**	**20**		**Pn**	**19 43 22.4**	**+1.7**
RYN	**Ryan**	**3.85**	**35**		**Pn**	**19 43 22.4**	**+1.7**
YERR	**Yerington**	**3.86**	**25**		**Pn**	**19 43 22.5**	**+1.6**
NV11	**Mina Array Sit**	**3.88**	**40**		**Pn**	**19 43 21.6**	**+0.5**
MURC	**Murrieta**	**3.90**	**118**	P	**Pn**	**19 43 19.9**	**-1.4**
	baz=301,SNR=8.7						
MPK	**Martis Peak**	**3.93**	**15**		**Pn**	**19 43 23.5**	**+1.6**
DONR	**Donner Summit**	**3.93**	**11**		**Pn**	**19 43 23.6**	**+1.7**
VCNR	**Virginia City**	**4.02**	**19**		**Pn**	**19 43 23.9**	**+0.8**
ORV	**Oroville**	**4.06**	**358**		**Pn**	**19 43 22.9**	**-0.5**
SHOC	**Shoshone, Teco**	**4.13**	**83**	P	**Pn**	**19 43 23.4**	**-1.1**
	baz=266						
HEC	**Hector,Ludlow**	**4.14**	**98**	P	**Pn**	**19 43 22.9**	**-1.7**
	baz=281						
TPNV	**Topopah Spring**	**4.35**	**69**	Pn	**Pn**	**19 43 27.9**	**+0.3**
TPNV	**Topopah Spring**	**4.35**	**69**	P	**Pn**	**19 43 26.3**	**-1.4**
	baz=252						
109C	**Camp Elliot, M**	**4.36**	**125**	P	**Pn**	**19 43 26.2**	**-1.3**
	baz=309						
KVN	**Kaiserville**	**4.38**	**35**	Pn	**Pn**	**19 43 26.1**	**-1.9**
TUQ	**Turquoise Moun**	**4.41**	**89**	P	**Pn**	**19 43 26.6**	**-1.8**
	baz=273,SNR=15						
BEKR	**Beckworth**	**4.43**	**10**		**Pn**	**19 43 27.9**	**-0.8**
PFO	**Pinyon Flats O**	**4.43**	**114**	Pn	**Pn**	**19 43 27.1**	**-1.6**
	5.8nm,0.3s,baz=300,slow=12,SNR=46						
PFO				Lg	Lg	19 44 35.3	
	3.2nm,0.3s,baz=305,slow=17,SNR=1.5						
PFO	**Pinyon Flats O**	**4.43**	**114**		**Pn**	**19 43 26.9**	**-1.7**
PFO	**Pinyon Flats O**	**4.43**	**114**	P	**Pn**	**19 43 26.8**	**-1.8**
	baz=297,SNR=13						
XPFO	**Pion Flat**	**4.44**	**114**		**Pn**	**19 43 27.2**	**-1.6**
PAHR	**Pah Rah Range**	**4.48**	**20**		**Pn**	**19 43 28.8**	**-0.5**
BELC	**Belle Mtn. Jos**	**4.63**	**107**	P	**Pn**	**19 43 29.8**	**-1.6**
	baz=291						
GMRC	**Granite Mounta**	**4.70**	**97**	P	**Pn**	**19 43 30.7**	**-1.6**
	baz=281,SNR=12						
BAR	**Barrett**	**4.77**	**125**		**Pn**	**19 43 31.4**	**-1.8**
O03E	**Paynes Creek**	**4.81**	**356**	P	**Pn**	**19 43 32.3**	**-1.5**
	baz=175						
MONP2	**Monument Peak**	**4.82**	**121**	P	**Pn**	**19 43 32.7**	**-1.4**
	baz=305,SNR=29						
KMRN	**Mail Ridge**	**5.08**	**339**		**Pn**	**19 43 36.0**	**-1.6**
SHPR	**Sheep Range**	**5.10**	**77**		**Pn**	**19 43 38.5**	**+0.6**
IKP	**In-Ko-Pah, Jac**	**5.17**	**122**	P	**Pn**	**19 43 37.9**	**-0.9**
	baz=305,SNR=6.1						
BC3	**Big Chuckawall**	**5.18**	**109**	P	**Pn**	**19 43 37.1**	**-1.8**
	baz=293						

IRM Iron Mountain 5.26 103 P Pn 19 43 38.2 -1.7
baz=287,SNR=11
R11A Troy Canyon, C 5.41 57 Pn 19 43 43.7 +1.5
R11A Troy Canyon, C 5.41 57 P Pn 19 43 40.3 -1.9
baz=240
Y12C Blythe 5.87 105 Pn 19 43 45.5 -2.8
Y12C Blythe 5.87 105 P Pn 19 43 46.9 -1.5
baz=290
GLA Glamis 5.91 113 P Pn 19 43 48.1 -0.7
baz=297
PDMCI Parker Dam,Lak 6.02 99 P Pn 19 43 49.1 -1.2
baz=284
KRPM Rodgers 6.04 340 Pn 19 43 56.0 +5.3
W13A Hualapai Mount 6.10 92 Pn 19 43 50.0 -1.7
YBH Yreka Blue Hor 6.32 351 Pn Pn 19 43 56.7 +2.1
0.2nm,0.3s,baz=170,slow=7.7,SNR=6.7
YBH LR LR 19 46 44.3
comp=Z,317nm,18.2s,baz=158,slow=41
LCMT Little Creek M 6.70 75 Pn 19 43 59.7 -0.2
CCUT Cedar City 6.73 70 Pn 19 43 59.7 -0.7
Y14A Wickenburg 7.03 100 Pn 19 44 02.5 -1.7
KNB Kanab 7.04 75 Pn 19 44 02.4 -2.2
ELK Elko 7.11 41 Pn Pn 19 44 06.3 +0.8
0.3nm,0.3s,baz=232,slow=12,SNR=7.2
ELK Lg Lg 19 46 00.4
0.8nm,0.3s,baz=334,slow=10.0,SNR=5.1
ELK LR LR 19 47 03.6
comp=Z,446nm,20.7s,baz=222,slow=40
ELK Elko 7.11 41 Pn 19 44 04.8 -0.7
HUMO Hull Mountain 7.22 350 Pn Pn 19 44 05.5 -1.3
K05A Summer Lake 7.23 3 Pn 19 44 04.3 -2.8
WVOR Wild Horse Val 7.24 16 Pn 19 44 08.3 +1.0
U15A North Rim 7.39 80 Pn 19 44 10.5 +1.2
PKCU Pink Cliffs 7.52 72 Pn 19 44 12.0 +0.7
MTPU Mount Pierson 7.76 68 Pn 19 44 11.0 -3.6
MSU Marysvale 7.92 65 Pn 19 44 16.0 -0.6
214A Organ Pipe Nat 7.92 114 Pn 19 44 16.3 -0.2
214A Organ Pipe Nat 7.92 114 P Pn 19 44 16.0 -0.5
baz=299
WUAZ Wupatki 8.12 87 Pn 19 44 17.5 -1.8
J08A Circle Bar Ran 8.16 15 Pn 19 44 18.9 -0.9
X16A Lo Mia Camp, P 8.19 95 Pn 19 44 20.9 +0.6
DUG Dugway, Tooele 8.21 53 Pn Pn 19 44 18.3 -2.2
PINE Pine Mountain 8.29 2 Pn Pn 19 44 21.8 +0.1
BGU Big Grassy Mou 8.49 48 Pn Pn 19 44 23.0 -1.4
I07A Izee 8.69 9 Pn Pn 19 44 31.1 +3.9
Q16A Castle Valley 8.79 64 Pn Pn 19 44 27.8 -0.8
TMUT Trail Mountain 8.90 62 Pn Pn 19 44 32.6 +2.5
MPU Maple Canyon 8.90 57 Pn Pn 19 44 33.1 +3.0
MFID Camas Ranch 8.98 27 Pn Pn 19 44 31.4 +0.3
P17A Butcher Ranch, 9.30 62 Pn Pn 19 44 35.6 0.0
JLU Jordanelle 9.31 54 Pn Pn 19 44 37.1 +1.4
TUC Tucson 9.32 107 Pn Pn 19 44 32.8 -2.9
SRU San Rafael Swe 9.33 64 Pn Pn 19 44 39.2 +3.2
TCUT Toone Canyon 9.60 51 Pn Pn 19 44 42.0 +2.3
MVCO Mesa Verde 10.49 77 Pn 19 44 52.3 +0.4
MVCO Mesa Verde 10.49 77 P Pn 19 44 49.9 -1.9
baz=264
RDMU Red Mountain 10.56 58 Pn Pn 19 44 53.9 +1.0
F10A Beach Ranch, E 10.92 15 Pn 19 45 07.8 +10
HAWA Hanford 10.97 7 Pn Pn 19 44 56.2 -2.1
E07A Sunnyside 11.11 5 Pn Pn 19 45 00.8 +0.6
O20A White River Ci 11.34 62 Pn 19 45 05.2 +1.7
121A Cookes Peak, D 11.62 101 Pn 19 45 07.5 +0.2
121A Cookes Peak, D 11.62 101 P Pn 19 45 06.9 -0.4
baz=289
PDAR Pinedale Array 11.67 48 Pn Pn 19 45 10.9 +2.9
0.0nm,0.3s,baz=295,slow=32,SNR=1.6
PDAR LR LR 19 50 11.4
comp=Z,208nm,21.5s,baz=247,slow=40
PDAR Pinedale Array 11.67 48 Pn Pn 19 45 09.4 +1.4
S22A 4UR Ranch, Cre 11.87 75 Pn Pn 19 45 11.2 +0.5
SMCO Snowmass 12.00 68 Pn 19 45 13.3 +0.6
ANMO Albuquerque 12.18 88 Pn Pn 19 45 18.6 +3.6
0.1nm,0.3s,baz=282,slow=11,SNR=3.5
ANMO LR LR 19 50 00.2
comp=Z,61nm,19.7s,baz=276,slow=38
ANMO Albuquerque 12.18 88 Pn Pn 19 45 15.4 +0.5
YHH Holmes Hill 12.25 38 Pn Pn 19 45 16.6 +0.6
YNE Yellowstone No 12.83 39 Pn Pn 19 45 23.2 -0.7
SDCO Great Sand Dun 12.91 75 Pn 19 45 25.0 -0.1
NEW Newport 13.14 12 Pn Pn 19 45 29.6 +1.8
0.2nm,0.3s,baz=183,slow=14,SNR=2.5
NEW Newport 13.14 12 Pn Pn 19 45 27.7 -0.2
GCMT Greycliff 13.55 37 Pn Pn 19 45 33.8 +0.1
MNTX Cornudas Mount 13.82 101 Pn 19 45 36.8 -0.4
WALA Waterton Lakes 14.61 20 P P 19 45 51.9 -2.8
EGMT Eagleton 15.19 31 P P 19 46 01.7 +0.6
EGMT IAmb IAmb 19 46 12.3
comp=Z,24nm,1.6s
KSCO Kaye Shedlock' 15.30 71 P Pn 19 45 58.0 +0.6
KSCO IAmb IAmb 19 46 03.6
comp=Z,23nm,1.0s
MSTX Muleshoe 15.33 90 P Pn 19 46 04.3 +1.5
MSTX IAmb IAmb 19 46 07.8
comp=Z,21nm,0.8s
LAO LASA Array 15.93 41 Pn 19 46 03.7 -1.9
LAO IAmb IAmb 19 46 17.9
comp=Z,21nm,1.3s
AMTX Amarillo 16.08 86 Pn 19 46 06.5 -1.1
TX31 Lajitas Ar. Si 16.12 107 P Pn 19 46 07.1 -1.0
TX32 Lajitas Array 16.12 107 P Pn 19 46 06.9 -1.2
TXAR Lajitas Array 16.12 107 Pn Pn 19 46 10.9 -0.6
comp=Z,0.1nm,0.3s,baz=278,slow=9.3,SNR=24
TXAR Lajitas Array 16.12 107 P Pn 19 46 06.9 -1.2
435B Jarrell 20.41 97 P Pn 19 46 58.8 -1.9
435B IAmb IAmb 19 47 05.4
comp=Z,39nm,1.1s
ZAIG Zacatecas 20.67 123 P P 19 47 01.0 -0.9
TUL1 Leonard 20.73 81 P P 19 47 02.1 +0.1
X37A Clayton 21.25 85 P P 19 47 10.5 +2.7
X37A IAmb IAmb 19 47 29.6
comp=Z,18nm,1.2s
MIAR Mount Ida 22.72 84 P P 19 47 22.2 -1.3
MIAR IAmb IAmb 19 47 46.9
comp=Z,10nm,1.0s
AGMN Agassiz Nation 22.75 48 P P 19 47 22.9 -0.8
AGMN IAmb IAmb 19 47 25.4
comp=Z,22nm,1.6s
AGMN Agassiz Nation 22.75 48 P P 19 47 21.6 -2.1
baz=245
FFC Flin Flon 23.44 29 P P 19 47 29.6 -1.2
ULM Lac du Bonnet 23.62 44 P P 19 47 33.1 +0.5
comp=Z,9.3nm,1.0s,baz=245,slow=9.4,SNR=8.8
ULM Lac du Bonnet 23.62 44 P P 19 47 31.0 -1.6
ULM IAmb IAmb 19 47 34.8
comp=Z,9.5nm,0.9s
YKA Yellowknife Ar 27.35 7 P P 19 48 07.8 +1.4
comp=Z,0.4nm,0.6s,baz=195,slow=8.0,SNR=7.5
YKA LR LR 19 59 03.4
comp=Z,160nm,20.0s,baz=0.0,slow=37
IL31 33.10 340 P P 19 48 57.6 +0.4
IL31 IAmb IAmb 19 49 02.5
comp=Z,14nm,1.8s
ILAR Eielson Array 33.10 340 P P 19 48 59.5 +2.2
comp=Z,1.3nm,0.6s,baz=155,slow=8.6,SNR=24
ILAR Eielson Array 33.10 340 P P 19 48 59.4 +2.1
INK Inuvik 33.58 352 P P 19 49 03.5 +2.1
comp=Z,3.3nm,1.1s,baz=108,slow=8.8,SNR=9.1
INK Inuvik 33.58 352 P P 19 49 02.8 +1.4
INK IAmb IAmb 19 49 13.7
comp=Z,5.0nm,1.2s
IMAR Indian Mountai 35.97 338 P P 19 49 23.0 +0.8
RES Resolute Bay 41.28 10 P P 19 50 07.1 +0.5
RES IAmb IAmb 19 50 10.2
comp=Z,4.5nm,0.9s
SCHQ Schefferville 41.78 45 P P 19 50 13.4 +2.4
comp=Z,4.1nm,1.0s,baz=288,slow=9.6,SNR=3.0
SCHQ Schefferville 41.78 45 IAmb IAmb 19 51 29.3
comp=Z,7.9nm,1.2s
PETK Petropavlovsk- 57.43 315 P P 19 52 11.9 +1.6
comp=Z,4.2nm,0.9s,baz=117,slow=5.4,SNR=3.2
TIXI Tiksi 62.57 340 P P 19 52 45.4 +0.1
H11N3 WAKE ISLAND Hy 64.25 277 T T 21 02 52.1
baz=58,slow=75,SNR=622
H11N2 WAKE ISLAND Hy 64.25 277 T T 21 02 58.7
baz=58,slow=75,SNR=552
H11N1 WAKE ISLAND Hy 64.27 277 T T 21 02 50.0
baz=58,slow=75,SNR=767
H11S1 WAKE ISLAND Hy 65.04 276 T T 21 03 59.3
baz=59,slow=75,SNR=853
H11S2 WAKE ISLAND Hy 65.04 276 T T 21 03 55.3
baz=59,slow=75,SNR=521
H11S3 WAKE ISLAND Hy 65.06 276 T T 21 03 52.8
baz=59,slow=75,SNR=500
LPAZ La Paz 72.04 126 P P 19 53 47.0 +0.2
comp=Z,1.8nm,0.8s,baz=309,slow=6.5,SNR=3.5
LPAZ La Paz 72.04 126 IAmb IAmb 19 53 49.5
comp=Z,2.5nm,0.9s
MNMC Minye Minye 73.17 129 P P 19 53 52.6 -0.5
PB11 IPOC Station P 73.60 130 P P 19 53 53.1 -2.3
USRK Ussuriysk Ar. 76.52 315 P P 19 54 12.9 +0.9
comp=Z,4.0nm,0.8s,baz=89,slow=3.6,SNR=5.3
USRK Ussuriysk Ar. 76.52 315 P P 19 54 10.1 -1.9
MJAR Matsushiro Arr 77.10 306 P P 19 54 17.3 +1.9
comp=Z,2.1nm,0.8s,baz=49,slow=6.3,SNR=4.3
FINES FINESS Array B 79.83 15 P P 19 54 30.4 +0.5
comp=Z,2.6nm,0.7s,baz=336,slow=4.2,SNR=10
FINES LR LR 20 31 23.5
comp=Z,30nm,18.3s,baz=317,slow=37
BRG Berggiesshubel 85.42 27 ePKP P 19 55 03.2 +3.9
comp=Z,5.6nm,0.9s
CPUP Villa Florida 86.21 126 P P 19 55 05.3 +1.8
comp=Z,3.0nm,1.0s,baz=351,slow=10,SNR=3.2
SONM Songino Array 86.72 330 P P 19 55 07.2 +1.2
comp=Z,1.4nm,0.7s,baz=30,slow=3.4,SNR=11
SONM Songino Array 86.72 330 P P 19 55 04.6 -1.4
GERES GERESS Array B 86.99 28 LR LR 20 39 21.6
comp=Z,54nm,18.7s,baz=290,slow=39
ZALV Zalesovo Beam 88.10 345 P P 19 55 12.0 -0.3
comp=Z,0.5nm,0.3s,baz=359,slow=5.9,SNR=5.6
ZALV Zalesovo Beam 88.10 345 P P 19 55 11.2 -1.1
ARU Arti 88.44 0 P P 19 55 14.0 +0.2
PLCA Paso Flores 89.06 144 P P 19 55 18.0 +1.1
comp=Z,4.7nm,1.1s,baz=344,slow=5.8,SNR=3.4
HHC Hu-ho-hao-te 89.82 323 eP P 19 55 21.4 +0.6
AKASG Malin Array Be 90.33 18 P P 19 55 21.9 -0.9
comp=Z,0.5nm,0.5s,baz=330,slow=3.8,SNR=2.9
MKAR Makanchi Array 95.38 344 P P 19 55 46.2 0.0
comp=Z,0.7nm,0.9s,baz=343,slow=1.5,SNR=4.0
WMQ Urumqi 96.76 339 eP P 19 55 53.9 +1.3

IDC 06 19:44:06.0±1.8,58.°06S×25.°59W,h0km,mb3.8/1, mb1 3.8/1,mb1mx3.5/19,mbtmp3.8/1,Error ellipse: s-maj=98.9km s-min=65.1km az=147.0
ISC 06 19:44:13.1±1.2,58.°05S±0.°2×25.°77W±0.°5,h49km,n9,σ0.°41/9, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	14.67	157	P	Pn	19 47 37.9	+0.6
VNA3	Neumayer Olymp	14.87	160	P	Pn	19 47 39.8	-0.1
VNA2	Neumayer--Watz	15.07	157	P	Pn	19 47 42.8	+0.3
	baz=316,slow=13						
SNAA	Sanae	16.62	155	P	P	19 48 03.6	-0.6
TORD	Torodi Ar. Bea	74.40	28	P	P	19 55 45.6	0.0
	0.5nm,0.5s,baz=199,slow=6.5,SNR=7.2						
YKA	Yellowknife Ar	138.15	316	PKP	PKPdf	20 03 31.2	+0.3
	0.2nm,0.4s,baz=136,slow=2.0,SNR=4.5						
INK	Inuvik	147.82	318	PKPbc	PKPbc	20 03 50.6	-0.2
	0.8nm,0.6s,baz=120,slow=0.9,SNR=6.3						
SONM	Songino Array	150.01	89	PKPbc	PKPbc	20 03 56.9	-0.2
	0.4nm,0.3s,baz=225,slow=3.0,SNR=5.2						
ILAR	Eielson Array	151.99	309	PKPbc	PKiKP	20 04 01.5	+0.1
	0.9nm,0.8s,baz=130,slow=2.3,SNR=8.9						

NNC 06 19:46:03.1±5.9,37.°75N×71.°94E, h222km±72km, mb2.7, mpv3.8, Error ellipse: s-maj=57.1km s-min=38.6km az=157.0
IDC 06 19:46:04.4±8.5,39.°30N×70.°86E, h0km, mb1 3.5/3, mb1mx3.1/35, mbtmp3.5/3, ML3.1/3, Error ellipse: s-maj=208.1km s-min=24.9km az=157.0
ISC 06 19:45:59.3±1.0,37.°46N±0.°08×71.°91E±0.°07,h200km,n27, σ1.°74/26, 8C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	4.86	16	P	Pn	19 47 13.3	+1.0
	SNR=85						
UCH	Uchtor	5.17	22	P	Pn	19 47 16.9	+0.7
	SNR=40						
KZA	Kyzart	5.28	28	P	Pn	19 47 18.1	+0.5
	SNR=17						
EKS2	Erkin-Say	5.39	15	P	Pn	19 47 20.4	+1.7
	SNR=12						
AAK	Ala-Archa	5.54	20	P	Pn	19 47 22.3	+1.6
	SNR=21						
AAK	Ala-Archa	5.54	20	⇓P	Pn	19 47 22.0	+1.3
	4.3nm,0.3s						
AAK				⇓S	Sn	19 48 24.7	-0.3
	12nm,0.7s						
KBK	Karagaybulak	5.69	23	P	Pn	19 47 24.4	+1.7
	SNR=5.8						
KK31	Karatay Array	5.74	350	⇓P	Pn	19 47 24.4	+1.3
	3.4nm,0.3s,baz=152,slow=8.4,SNR=125						
KK31				⇑S	Sn	19 48 27.5	-1.9
	28nm,0.6s,baz=157,slow=22,SNR=17						
ULHL	Ulahol	5.83	34	P	Pn	19 47 25.3	+0.8
	SNR=8.9						
THN	Thein Dam	5.91	147	eP	Pn	19 47 23.0	-2.4
THN				eS	Sn	19 48 27.5	-6.0
CHMS	Chumysh	5.94	21	P	Pn	19 47 27.5	+1.7
	SNR=8.5						
CHMS	Chumysh	5.94	21	⇑P	Pn	19 47 26.6	+0.8
	4.0nm,0.3s						
CHMS				⇑S	Sn	19 48 32.3	-2.0
	7.0nm,0.8s						
GEYT	Alibeck	10.94	277	Pn	Pn	19 48 30.0	-0.7
	0.7nm,0.3s,baz=81,slow=9.2,SNR=14						
GEYT				Sn	Sn	19 50 26.3	-6.4
	0.7nm,0.3s,baz=136,slow=12,SNR=7.2						
GYA0B	ALIBECK ARRAY	10.94	277	⇑P	Pn	19 48 33.1	+2.4
GYA0B				⇓S	Sn	19 50 32.1	-0.7
MKAR	Makanchi Array	12.09	36	Pn	Pn	19 48 47.0	+1.8
	0.0nm,0.3s,baz=226,slow=13,SNR=1.5						
DANN	Dangsing	13.47	129	eP	Pn	19 49 00.5	-2.5
	5.1nm,0.2s						
KOLN	Koldanda	13.79	131	eP	Pn	19 49 03.9	-3.0
	5.9nm,0.3s						
GKN	Gorkha	14.26	128	eP	Pn	19 49 10.7	-1.9
	8.2nm,0.2s						
AB31	Akbulak array	14.63	327	⇑P	P	19 49 18.5	+0.6
	0.9nm,0.3s,baz=174,slow=9.3,SNR=44						
AB31				⇑S	S	19 51 56.8	-2.5
	0.9nm,0.3s,baz=156,slow=21,SNR=8.3						
KKN	Kakani	14.81	127	eP	Pn	19 49 17.5	-2.0
PKIN	Phulchoki	15.04	127	eP	Pn	19 49 20.6	-1.7
	2.4nm,0.2s						
PKI	Pulchoki	15.05	127	eP	Pn	19 49 20.5	-2.0
	4.7nm,0.3s						
GUN	Gumba	15.12	125	eP	Pn	19 49 22.1	-1.3
	14nm,0.8s						
JIRN	Jiri	15.49	125	eP	P	19 49 26.5	-1.5
	6.7nm,0.3s						
RAMN	Ramite	16.24	126	eP	P	19 49 34.9	-1.3
	5.6nm,0.4s						
AKTO	Aktyubinsk	16.34	327	⇑P	Pn	19 49 39.4	+1.8
	4.5nm,1.4s						
AKTO				⇑S	S	19 52 33.8	-3.8
	2.4nm,0.9s						
ZALV	Zalesovo Beam	18.74	24	P	Pn	19 50 08.0	+2.2
	0.6nm,0.3s,baz=214,slow=10.0,SNR=11						

NCEDC 06 19:47:06.3±0.9,35.°54N±0.°01×121.°25W±0.°01,h3km±6km, Md2.8/71,Error ellipse: s-maj=2.2km s-min=0.9km az=219.0
NEIC 06 19:47:06.2±0.8,35.°55N±0.°02×121.°28W±0.°03,h8km±5km, Error ellipse: s-maj=4.0km s-min=1.4km az=61.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHCM	Hearst Castle	0.17	38		Pg	19 47 10.1	+0.2
PCBM	Cambria	0.18	98		Pg	19 47 09.8	-0.2
ARDC	Alexander Ranc	0.26	108		Pg	19 47 11.3	-0.2
ARDC					Sg	19 47 15.0	+0.1
BLDC	Black Mountain	0.31	92		Pg	19 47 12.5	+0.2
BLDC	Black Mountain	0.31	92		Pg	19 47 12.5	+0.2
PHSB	Hesperia Broad	0.34	34		Pg	19 47 13.2	+0.4
RAMR	Ramage Ranch	0.35	75		Pg	19 47 13.3	+0.2
PAPM	Alder Peak	0.37	350		Pg	19 47 13.8	+0.2
PANM	San Antonio Re	0.39	53		Pg	19 47 14.1	+0.3
LSDC	Los Osos Digit	0.44	124		Pg	19 47 15.1	+0.4
VPDC	Valencia Peak	0.46	132		Pg	19 47 15.4	+0.3
DCD	Diablo Creek	0.49	132		Pg	19 47 15.5	-0.2
PTAM	Tassajara Cree	0.49	108		Pg	19 47 15.9	+0.1
EFD	Emergency Oper	0.51	116		Pg	19 47 15.7	-0.3
DPD	Davis Peak	0.52	127		Pg	19 47 16.5	+0.3
PCCM	Crazy Canyon	0.55	10		Pg	19 47 17.5	+0.5
PSAM	San Ardo	0.58	34		Pg	19 47 17.5	+0.1
PPO	Portuguese Can	0.63	59		Pg	19 47 18.8	+0.4
BAPM	Anderson Peak	0.69	335		Pb	19 47 20.2	-0.5
PVCM	Vineyard Canyo	0.72	58		Pg	19 47 20.0	-0.1
PKD	Bear Valley Ra	0.72	56		Pg	19 47 20.0	-0.2
LRC	Lone Oak Road	0.73	16		Pg	19 47 20.2	0.0
TCHL	Shandon	0.73	79		Pg	19 47 20.6	+0.2
PSTM	Stockdale Moun	0.74	59		Pg	19 47 20.2	-0.2
PCMM	Cholame Hills	0.76	70		Pg	19 47 21.0	+0.1
TSCN	Private Proper	0.76	90		Pg	19 47 21.2	+0.2
PMCM	McMillan Canyo	0.77	76		Pg	19 47 21.2	+0.2
PMPB	Monarch Peak	0.78	30		Pg	19 47 21.1	-0.1
BPOM	Post Ranch	0.79	330		Pg	19 47 21.5	+0.1
PKLM	Kerr Lake	0.80	73		Pg	19 47 21.6	0.0
GHC	Gold Hill	0.81	69		Pg	19 47 21.7	-0.1
TRAM	Private Proper	0.84	81		Pg	19 47 22.4	+0.1
PSNM	Stone Corral	0.84	73		Pg	19 47 22.2	-0.2
BSMM	Soledad Missio	0.84	352		Pg	19 47 22.6	+0.1
PMLM	Mount Lospe	0.85	139		Pg	19 47 21.6	-1.0
CTM	Castle Mountai	0.86	63		Pg	19 47 23.1	+0.3
BSGM	Shirttail Gulc	0.87	2		Pg	19 47 22.7	-0.2
HAST	Hastings Reser	0.87	346		Pg	19 47 22.6	-0.4
PSRM	Scobie Ranch	0.88	69		Pg	19 47 22.8	-0.2
PTRM	Twissleman Ran	0.88	83		Pg	19 47 23.0	-0.2
PMRM	Maxey Ranch	0.89	74		Pg	19 47 23.1	-0.2
BPIM	Pinnacles	0.95	6		Pg	19 47 24.1	-0.3
BBNM	San Benito	0.98	10		Pg	19 47 24.9	-0.1
BJCM	Johnson Can.	1.00	355		Pg	19 47 24.9	-0.6
PARM	Anticline Ridg	1.04	47		Pb	19 47 26.4	-0.1
BBGB	Big Mountain B	1.05	11		Pg	19 47 27.4	-0.1
SCZ	Santa Cruz	1.05	355		Pg	19 47 25.6	-0.9
BPCNC	Pine Canyon	1.06	345		Pg	19 47 26.2	-0.5
BEMM	Emmet	1.12	8		Pb	19 47 27.8	0.0
BSRM	Salinas Radio	1.14	350		Pg	19 47 27.2	-0.9
BMSM	Mercy Hot Spri	1.18	20		Pn	19 47 29.6	+0.4
BHRM	Hodges Ranch	1.18	1		Pn	19 47 30.1	+1.0
BVYM	Vineyard	1.21	355		Pb	19 47 27.7	-1.7
FRP	Fremont Peak	1.22	352		Pb	19 47 29.2	-0.4
SAO	San Andreas Ge	1.22	354		Pb	19 47 28.5	-1.1
BSLM	Silva Ranch	1.23	358		Pb	19 47 30.8	+1.0
HTUM	Tustin Road	1.31	347		Pn	19 47 31.0	+0.1
HBTM	San Juan Bauti	1.32	351		Pn	19 47 31.7	+0.2
HCOM	Corn Cob Canyo	1.38	346		Pb	19 47 32.4	0.0
ISA	Isabella, Lake	2.29	86	Pn	Pn	19 47 43.1	-1.3
CMB	Columbia Colle	2.59	16	Pn	Pn	19 47 48.2	-0.3
OMMB	Old Mammoth Mi	2.76	41	Pn	Pn	19 47 51.1	-0.1
MWC	Mount Wilson	2.96	116	Pn	Pn	19 47 53.8	0.0
WAKR	Walker	3.30	26	Pn	Pn	19 47 59.1	+0.6

THE 06 20:16:21.2,38.°16N×20.°37E,h14km,ML3.1/8,Error ellipse: s-maj=1.0km s-min=0.5km az=264.0
ATH 06 20:16:21.4,38.°16N×20.°40E,h15km±1km,ML2.6/7,Error ellipse: s-maj=1.9km s-min=1.0km az=249.0
ISC 06 20:16:21.8±1.0,38.°17N±0.°03×20.°42E±0.°04,h15km±4km, n37,σ0.°70/54, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.03	20	P	Pg	20 16 24.2	-0.2
LXR1				S	Sg	20 16 26.2	0.0
	80µm,0.2s						
CHV1	Chavriata, Kef	0.04	293	P	Pg	20 16 23.8	-0.6
CHV1				S	Sg	20 16 25.6	-0.6
	39µm,0.1s						
KEF2	Argostoli. Kep	0.05	94	P	Pg	20 16 24.3	-0.3
KEF2				S	Sg	20 16 26.2	-0.2
ARG2	Argostoli	0.05	79	P	Pg	20 16 24.3	-0.2
ARG2				S	Sg	20 16 26.2	-0.2
	55µm,0.1s						
KEF3	Kipouria, Keph	0.07	300	P	Pg	20 16 24.1	-0.6
KEF3				S	Sg	20 16 26.1	-0.6
KEF4	Livadi, Kephal	0.09	0	P	Pg	20 16 24.6	-0.3
KEF4				S	Sg	20 16 27.0	+0.1
VLS	Valsamata	0.13	86	P	Pg	20 16 25.2	-0.2
VLS				S	Sg	20 16 28.0	+0.2
	12µm,0.2s						
VLS	Valsamata	0.13	86	P	Pg	20 16 25.3	-0.2
VLS				S	Sg	20 16 28.1	+0.2
VLS				AML	AML	20 16 28.2	
	comp=N,15822µm,0.2s						
VLS				AML	AML	20 16 28.2	
	comp=E,17297µm,0.1s						
KFL	Anninata	0.29	102	P	Pg	20 16 28.3	+0.3
VLMS	Volimes, Zakyn	0.35	147	P	Pg	20 16 28.7	-0.2
VLMS				S	Sg	20 16 33.9	+0.1
VLMS				AML	AML	20 16 34.9	
	comp=E,22244µm,0.2s						
VLMS				AML	AML	20 16 35.4	
	comp=N,10779µm,0.1s						
EVGI	Lefkada island	0.49	22	P	Pg	20 16 31.1	-0.3
EVGI				S	Sb	20 16 38.9	-0.2
EVGI	Lefkada island	0.49	22	P	Pg	20 16 31.1	-0.3
EVGI				S	Sb	20 16 39.3	+0.2
KRI1	kERI	0.59	148	P	Pg	20 16 32.2	-1.3
KRI1				S	Sg	20 16 42.3	+0.9
	comp=N,2µm,0.2s						
AST1	Astakos	0.64	54	P	Pg	20 16 33.9	-0.5
AST1				S	Sn	20 16 44.8	-1.5
	comp=N,1µm,0.4s						
LKD2	Lefkada island	0.65	16	P	Pg	20 16 33.8	-0.7
LKD2				S	Sb	20 16 44.2	+0.5
	comp=N,340nm,0.3s						
LKD2	Lefkada island	0.65	16	P	Pg	20 16 34.0	-0.5
LKD2				AML	AML	20 16 51.3	
	comp=N,772µm,0.3s						
LKD2				AML	AML	20 16 51.9	
	comp=E,607µm,0.2s						
TSLK	Tsoukalades, L	0.68	15	P	Pg	20 16 34.6	-0.5
TSLK				S	Sb	20 16 44.8	+0.2
	comp=E,335nm,0.2s						
TSLK	Tsoukalades, L	0.68	15	P	Pg	20 16 34.6	-0.5
PDO	Prodromos	0.73	54	P	Pg	20 16 35.7	-0.4
PDO	Prodromos	0.73	54	P	Pg	20 16 35.4	-0.7
PDO				AML	AML	20 16 54.7	
	comp=N,1178µm,0.3s						
PDO				AML	AML	20 16 55.5	
	comp=E,958µm,0.3s						
RLS	Riolos of Patr	0.83	97	P	Pg	20 16 37.5	-0.4
RLS				S	Sb	20 16 49.5	+0.5
RLS				AML	AML	20 16 53.2	
	comp=N,578µm,0.3s						
RLS				AML	AML	20 16 53.8	
	comp=E,445µm,0.3s						
PVO	Paravola	0.97	62	P	Pb	20 16 40.5	+0.1
PVO	Paravola	0.97	62	P	Pb	20 16 40.5	+0.1
PVO				S	Sn	20 16 53.9	-0.7
PVO				AML	AML	20 16 57.9	
	comp=E,663µm,0.3s						
PVO				AML	AML	20 17 01.7	
	comp=N,534µm,0.4s						
DRO	Drossia	1.04	102	P	Pg	20 16 41.0	-0.9
DRO	Drossia	1.04	102	P	Pg	20 16 40.9	-0.9
AMT	Artemida-Makis	1.20	122	P	Pg	20 16 43.7	-1.2
LAKA	Lakka	1.23	86	P	Pg	20 16 44.5	-1.0
ANX	Ano Chora	1.25	70	P	Pg	20 16 44.7	-1.2
SERG	Sergoula	1.31	79	P	Pg	20 16 45.7	-1.3
TRIZ	Trizonia	1.31	81	P	Pg	20 16 45.5	-1.6
EVR	Evrytania	1.32	55	P	Pg	20 16 46.7	+0.9
EVR				AML	AML	20 17 11.3	
	comp=E,144µm,0.9s						
EVR				AML	AML	20 17 13.6	
	comp=N,150µm,0.6s						
IGT	Igoumenitsa	1.36	357	P	Pn	20 16 47.7	+1.4
KALE	Kalithea	1.37	80	P	Pg	20 16 47.9	-0.3
KLV	Kalavryta, Ach	1.37	95	P	Pn	20 16 47.1	+0.7
ITM	Ithomi	1.55	129	P	Pn	20 16 50.1	+1.2
MAKR	Makrakomi, Fth	1.58	57	P	Pb	20 16 50.9	+0.1
THL	Klokotos Trika	1.87	41	P	Pb	20 16 55.7	0.0

BJI 06 20:29:02.2±0.0,6.°97S×129.°36E,h194km,mB4.9/45, mb4.8/60
MOS 06 20:29:07.2±1.1,6.°54S×128.°97E,h205km,mb5.0/19,Error ellipse: s-maj=9.6km s-min=5.2km az=113.6
NEIC 06 20:29:08.0±1.6,6.°62S±0.°07×129.°08E±0.°07,h205km±4km, mb5.1/97,Error ellipse: s-maj=9.9km s-min=9.5km az=98.0

DJA **06** 20:29:08.6±0.2, 7°S±2°×12°9E±°, h202km±2km, M5.0/97, mb5.3/97, mB5.5/67, MLv5.8/19, Mw(mB)4.9/67, Mwp5.2/5

GCMT **06** 20:29:09.0±0.3, 6°.64S±0°.02×129°.17E±0°.02, h213km±2km, MW5.0/98, Moment Tensor Solution. s31,c40; s98,c129; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.46±.15; Mθθ-4.56±.14; Mφφ2.10±.16; Mrθ-0.54±.12; Mθφ0.52±.15; Mφr2.64±.12; Best double couple: Mo4.80800×10^16 NP1:φs60.00000°, δ53.00000°, λ33.00000°. NP2: φs309.00000°, δ64.00000°, λ138.00000°. Principal axes: T 4.9260, Plg47.0000°, Azm270.0000°; N -0.2360, Plg42.0000°, Azm103.0000°; P -4.6900, Plg7.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

IDC **06** 20:29:10.6±0.6, 6°.59S×129°.10E, h225km±4km, mb4.5/38, mb1 4.4/39, mb1mx4.4/49, mbtmp5.0/39 Error ellipse: s-maj=9.5km s-min=6.4km az=76.0

KLM **06** 20:29:16.0, 6°.55S×129°.35E, h302km, mb5.2

ISC 06 20:29:08.2±0.4, 6°.65S±0°.03×129°.12E±0°.04, h210km±3km, h211km:pP-P, n518, σ1§50/566, mb5.0/134, 25C-9D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.25**	**20**	P	**Pn**	**20 29 51.3**	**+1.2**
SAUI	**Saumlaki**	**2.53**	**122**	P	**Pn**	**20 29 53.6**	**+0.5**
SAUI	**Saumlaki**	**2.53**	**122**		**Pn**	**20 29 53.1**	**0.0**
SAUI				Sn	S	20 30 22.7	-5.0
AAI	**Ambon**	**3.08**	**342**	P	**Pn**	**20 30 00.7**	**+1.3**
MSAI	**Masohi**	**3.29**	**357**	P	**Pn**	**20 30 02.9**	**+1.2**
NLAI	**Namlea**	**3.94**	**329**	P	**Pn**	**20 30 12.1**	**+2.5**
FAKI	**Fak Fak**	**4.84**	**40**	P	**Pn**	**20 30 18.9**	**-1.9**
FAKI	**Fak Fak**	**4.84**	**40**		**Pn**	**20 30 19.0**	**-1.8**
KMPI	**Kaimana, Papua**	**5.44**	**57**	P	**Pn**	**20 30 28.8**	**+0.3**
	33nm60µm5µm,0.6s						
SANI	**Sanana**	**5.54**	**325**	P	**Pn**	**20 30 30.7**	**+1.0**
	2.3nm6µm631nm,0.9s						
SOEI	**Soe**	**5.71**	**237**	P	**Pn**	**20 30 31.7**	**-0.3**
	20nm14µm1µm,0.7s						
SOEI	**Soe**	**5.71**	**237**		**Pn**	**20 30 30.8**	**-1.3**
SIJI	**Sorong**	**6.13**	**21**	P	**Pn**	**20 30 35.6**	**-1.6**
	99nm,0.3s,baz=233,slow=22,SNR=347						
SIJI				S	**S**	**20 31 42.6**	**-5.2**
	48nm,0.3s,baz=136,slow=21,SNR=20						
SWI	**Sorong**	**6.13**	**20**	P	**Pn**	**20 30 35.2**	**-2.1**
	4.9nm3µm8µm549nm,0.7s						
LBMI	**Labuha**	**6.19**	**345**	P	**Pn**	**20 30 39.0**	**+1.0**
	9.4nm21µm3µm,0.9s						
MTN	**Manton Dam**	**6.47**	**162**	P	**Pn**	**20 30 40.7**	**-0.9**
	baz=6.4,SNR=1000						
MTN	**Manton Dam**	**6.47**	**162**		**Pn**	**20 30 40.7**	**-0.9**
BBSI	**Bau Bau**	**6.62**	**280**	P	**Pn**	**20 30 46.1**	**+2.5**
	0.9nm2µm256nm,1.1s						
KDU	**Kakadu**	**6.85**	**151**	P	**Pn**	**20 30 45.5**	**-1.1**
	baz=6.8,SNR=1000						
KDI	**Kendari**	**7.01**	**292**	P	**Pn**	**20 30 51.2**	**+2.6**
	0.3nm66nm,1.5s						
RKPI	**Ransiki, Papua**	**7.17**	**45**	P	**Pn**	**20 30 49.9**	**-0.9**
	41nm52µm5µm,0.8s						
TNTI	**Ternate**	**7.58**	**347**	P	**Pn**	**20 30 56.4**	**+0.4**
	4.3nm1µm13µm2µm,0.9s						
TNTI	**Ternate**	**7.58**	**347**		**Pn**	**20 30 56.6**	**+0.7**
LUWI	**Luwuk**	**8.44**	**311**	P	**Pn**	**20 31 08.8**	**+1.7**
	2µm190nm,0.9s						
LUWI	**Luwuk**	**8.44**	**311**		**Pn**	**20 31 07.5**	**+0.4**
KMSI	**Cibinong**	**8.82**	**324**	P	**Pn**	**20 31 14.5**	**+2.4**
	1.9nm5µm507nm,0.6s						
KNRA	**Kununurra**	**8.98**	**182**	P	**Pn**	**20 31 12.2**	**-1.9**
	baz=9.0,SNR=1000						
KNRA	**Kununurra**	**8.98**	**182**		**Pn**	**20 31 12.4**	**-1.7**
BKSI	**Bulukumba**	**9.05**	**278**	P	**Pn**	**20 31 16.3**	**+1.2**
	1µm132nm,0.8s						
WSI	**Waingapu**	**9.24**	**250**	P	**Pn**	**20 31 16.0**	**-1.5**
	21µm804nm,0.5s						
BNSI	**Bone**	**9.25**	**284**	P	**Pn**	**20 31 16.4**	**-1.2**
	2µm167nm,0.8s						
APSI	**Ampana**	**9.38**	**307**	P	**Pn**	**20 31 22.3**	**+2.9**
	1µm140nm,1.1s						
SPSI	**Sidrap Palu**	**9.69**	**286**	P	**Pn**	**20 31 25.2**	**+1.9**
	2µm171nm,0.6s						
WAMI	**Wamena**	**9.93**	**74**	P	**P**	**20 31 31.4**	**-2.6**
	7µm529nm,0.9s						
TTSI	**Tana Toraja**	**9.94**	**291**	P	**Pn**	**20 31 29.6**	**+3.1**
	2µm225nm,0.8s						
MRSI	**Marisa**	**10.07**	**314**	P	**Pn**	**20 31 31.3**	**+3.0**
	1µm84nm,0.7s						
SMPI	**Sarmi**	**10.62**	**65**	P	**Pn**	**20 31 36.3**	**+1.0**
	83nm,0.8s						
MMPI	**Merauke**	**11.31**	**100**	P	**P**	**20 31 51.4**	**+1.9**
PLAI	**Plampang**	**11.45**	**258**	P	**Pn**	**20 31 44.7**	**-1.2**
	3µm272nm,0.7s						
MPSI	**Mapaga**	**11.53**	**307**	P	**Pn**	**20 31 49.2**	**+2.3**
	590nm33nm,0.7s						
GENI	**Genyem**	**11.72**	**70**	P	**P**	**20 31 52.1**	**-2.0**
	150nm,0.7s						
FITZ	**Fitzroy Crossi**	**11.88**	**196**	P	**Pn**	**20 31 48.5**	**-2.8**
	95nm,0.3s,baz=29,slow=10,SNR=377						
FITZ				S	**S**	**20 33 54.6**	**-8.2**
	17nm,0.3s,baz=118,slow=3.1,SNR=4.5						
FITZ	**Fitzroy Crossi**	**11.88**	**196**		**Pn**	**20 31 48.2**	**-3.1**
DDMP	**Don Marcelino,**	**13.12**	**345**	eP	**Pn**	**20 32 07.5**	**+0.6**
BKB	**Balikpapan**	**13.32**	**293**	P	**P**	**20 32 11.7**	**-0.2**
	7µm804nm,1.6s						
BKB	**Balikpapan**	**13.32**	**293**	P	**P**	**20 32 11.8**	**0.0**
SMKI	**Samarinda**	**13.39**	**297**	P	**P**	**20 32 13.2**	**+0.5**
	726nm,1.0s						
MATI	**Mati**	**13.80**	**348**	eP	**Pn**	**20 32 15.2**	**-0.2**
SKMP	**Bagumbayan, Su**	**13.86**	**341**	eP	**Pn**	**20 32 16.3**	**+0.2**
SRBI	**Singaraja**	**13.87**	**263**	P	**Pn**	**20 32 16.8**	**+0.6**
	2µm360nm,1.0s						
DNP	**Denpasar**	**13.94**	**261**	P	**P**	**20 32 19.5**	**+0.8**
	9µm680nm,0.9s						
WB0	**Warramunga Arr**	**14.01**	**159**	P	**Pn**	**20 32 14.8**	**-3.1**
IGBI	**Denpasar**	**14.02**	**260**	P	**Pn**	**20 32 18.9**	**+0.9**
	4µm222nm,0.9s						
DAV	**Davao City (W)**	**14.08**	**345**	P	**P**	**20 32 20.3**	**0.0**
	25nm,0.3s,baz=34,slow=6.8,SNR=4.7						
WRAB	**Tennant Creek**	**14.15**	**159**	P	**Pn**	**20 32 16.8**	**-2.8**
WRAB	**Tennant Creek**	**14.15**	**159**	ceP	**Pn**	**20 32 17.0**	**-2.6**
WRAB				pmax	pmax		
	comp=Z,631nm,1.7s						
KCP	**Kidapawan**	**14.15**	**343**	⇑iP	**Pn**	**20 32 20.2**	**+0.4**
WRA	**Warramunga Arr**	**14.15**	**160**	P	**Pn**	**20 32 16.9**	**-2.7**
	comp=Z,6.1nm,0.3s,baz=340,slow=13,SNR=164						
WRA				S	S	20 34 46.1	-10
	comp=Z,19nm,0.3s,baz=338,slow=22,SNR=6.1						
WRA	**Warramunga Arr**	**14.15**	**160**	P	Pn	20 32 15.4	-4.3
WRA	**Warramunga Arr**	**14.15**	**160**	P	Pn	20 32 15.4	-4.3
WRA				S	S	20 34 46.2	-10
WB2	**Warramunga Arr**	**14.16**	**159**	P	**Pn**	**20 32 16.6**	**-3.1**
WR0	**Warramunga Arr**	**14.24**	**159**	P	**Pn**	**20 32 17.6**	**-3.1**
CTBH	**Cotabato--PC H**	**14.61**	**340**	⇑iP	**P**	**20 32 26.1**	**-0.1**
JAGI	**Jajag, Banyuwa**	**14.95**	**262**	P	**P**	**20 32 27.7**	**-1.8**
	comp=Z,4µmcomp=Z,238nm,0.6s						
JAGI	**Jajag, Banyuwa**	**14.95**	**262**	P	**Pn**	**20 32 26.2**	**-3.3**
BUKP	**Musuan**	**14.99**	**344**	eP	**P**	**20 32 31.0**	**+0.6**
KMMI	**Kalianget**	**15.05**	**268**	P	**P**	**20 32 33.7**	**+2.6**
	comp=Z,3µmcomp=Z,331nm,0.9s						
PAGZ	**Pagadian**	**15.50**	**338**	eP	**Pn**	**20 32 35.9**	**-0.2**
COEN	**Coen**	**15.61**	**119**	P	**Pn**	**20 32 38.1**	**+0.6**
	baz=16,SNR=3.8						
COEN	**Coen**	**15.61**	**119**	P	**P**	**20 32 37.0**	**-0.2**
COEN				IAmb	IAmb	20 32 45.5	
	comp=Z,66nm,0.7s						
CGP	**Cagayan de Oro**	**15.64**	**344**	⇓eP	**Pn**	**20 32 38.4**	**+0.6**
BUTP	**Butuan**	**15.90**	**347**	eP	**Pn**	**20 32 42.5**	**+1.6**
GRJI	**Gresik**	**16.53**	**268**	P	**Pn**	**20 32 49.9**	**+1.4**
	comp=Z,2µmcomp=Z,196nm,0.8s						
SPMM	**Sapulut**	**16.94**	**311**	P	**Pn**	**20 32 56.0**	**+2.6**
QIS	**Mount Isa**	**17.16**	**145**	P	**Pn**	**20 32 55.7**	**-0.2**
	baz=17,SNR=198						
MSLP	**Maasin**	**17.20**	**346**	eP	**Pn**	**20 32 56.8**	**+0.4**
PSA00	**Pilbara Seismi**	**17.34**	**210**	P	**P**	**20 32 56.1**	**-0.1**
PSA00	**Pilbara Seismi**	**17.34**	**210**	P	**P**	**20 32 56.5**	**+0.3**
PSA00				IAmb	IAmb	20 33 19.0	
	comp=Z,78nm,0.8s						
AS31	**Alice Springs**	**17.53**	**165**	P	**P**	**20 32 59.6**	**+1.2**
ASAR	**Alice Springs**	**17.53**	**165**	P	**P**	**20 32 59.8**	**+1.4**
	comp=Z,104nm,0.3s,baz=344,slow=10,SNR=2401						
ASAR				S	**S**	**20 36 04.6**	**-5.0**
	comp=Z,5.4nm,0.3s,baz=347,slow=22,SNR=9.6						
ASAR				ScP	**ScP**	**20 40 43.4**	**+0.4**
	baz=350,slow=3.3,SNR=5.0						
ASAR	**Alice Springs**	**17.53**	**165**	P	**P**	**20 32 59.1**	**+0.7**
NGJI	**Ngawi**	**17.55**	**267**	P	**Pn**	**20 33 01.2**	**+0.7**
	comp=Z,135nm,1.1s						
PCJI	**Pacitan**	**17.86**	**264**	P	**P**	**20 33 01.9**	**-0.1**
	comp=Z,4µmcomp=Z,312nm,0.8s						
KKM	**Kota Kinabalu**	**18.03**	**314**	P	**P**	**20 33 04.2**	**+0.4**
KKM				IAmb	IAmb	20 33 40.2	
	comp=Z,79nm,1.0s						
PMG	**Port Moresby**	**18.07**	**100**	P	**Pn**	**20 33 08.9**	**+2.3**
	comp=Z,4.6nm,0.3s,baz=282,slow=5.7,SNR=70						
PMG				S	**S**	**20 36 23.3**	**+2.9**
	comp=Z,1.3nm,0.3s,baz=308,slow=19,SNR=3.3						
PMG	**Port Moresby**	**18.07**	**100**	P	**Pn**	**20 33 09.2**	**+2.7**
PMG				IAmb	IAmb	20 33 10.9	
	comp=Z,116nm,0.8s						
PMG	**Port Moresby**	**18.07**	**100**	ceP	**Pn**	**20 33 09.3**	**+2.7**
PMG				pmax	pmax		
	comp=Z,1µm,1.7s						
WOJI	**Wonogiri, Jawa**	**18.09**	**265**	P	**P**	**20 33 03.4**	**-1.1**
	comp=Z,93nm,0.8s						
OCLP	**Ormoc**	**18.15**	**346**	eP	**Pn**	**20 33 07.7**	**+0.2**
WRKA	**Warakurna**	**18.30**	**182**	P	**P**	**20 33 08.0**	**+1.3**
	baz=18,SNR=451						
GUIM	**Jordan**	**18.35**	**339**	eP	**P**	**20 33 08.0**	**+0.7**
UGM	**Wanagama**	**18.49**	**265**	P	Pn	20 33 19.1	+7.5
UGM	**Wanagama**	**18.49**	**265**	P	**P**	**20 33 07.2**	**-1.7**
SMRI	**Semarang**	**18.55**	**268**	P	**Pn**	**20 33 12.1**	**-0.2**
	comp=Z,165nm,0.6s						
SMRI	**Semarang**	**18.55**	**268**	P	**P**	**20 33 08.6**	**-0.9**
MTSU	**Mount Surprise**	**18.70**	**129**	P	**P**	**20 33 12.8**	**+1.7**
	baz=19,SNR=44						
MANU	**Manus Island**	**18.75**	**77**	P	**Pn**	**20 33 13.7**	**-0.9**
MANU				IAmb	IAmb	20 33 15.8	
	comp=Z,39nm,0.8s						
BATP	**Bataraza**	**19.05**	**324**	eP	**Pn**	**20 33 19.0**	**+0.9**
SBUM	**Sibu**	**19.14**	**298**	P	**P**	**20 33 16.8**	**+0.9**
SBUM	**Sibu**	**19.14**	**298**	P	**Pn**	**20 33 19.0**	**-0.3**
CUYO	**Cuyo Island**	**19.16**	**335**	eP	**Pn**	**20 33 18.0**	**-1.5**
RCP	**Roxas**	**19.17**	**341**	⇑eP	**Pn**	**20 33 18.4**	**-1.1**
CNP	**Catarman**	**19.54**	**347**	eP	**P**	**20 33 18.4**	**-1.7**
KPJI	**Karang Pucung**	**20.05**	**267**	P	**P**	**20 33 24.9**	**-0.7**
	comp=Z,3µmcomp=Z,384nm,0.7s						
OTRP	**Odiongan**	**20.16**	**339**	eP	Pn	20 33 29.4	-2.2
ENPP	**El Nido**	**20.19**	**331**	eP	**P**	**20 33 25.9**	**-1.2**
KSM	**Kuching**	**20.44**	**293**	P	**P**	**20 33 29.1**	**-0.6**
KSM	**Kuching**	**20.44**	**293**	P	Pn	20 33 33.0	-2.0
CMJI	**Cimerak**	**20.54**	**266**	P	**P**	**20 33 28.8**	**-2.0**
	comp=Z,4µmcomp=Z,346nm,0.8s						
BUSP	**Coron**	**20.55**	**334**	eP	Pn	20 33 34.3	-2.0
SJMP	**San Jose**	**20.59**	**337**	eP	**P**	**20 33 32.9**	**+1.7**
PVCP	**Virac**	**20.71**	**346**	eP	**P**	**20 33 30.9**	**-1.6**
CISI	**Cisompet, Garu**	**21.16**	**266**	P	**P**	**20 33 36.5**	**-0.9**
	comp=Z,9µmcomp=Z,901nm,0.8s						
CISI	**Cisompet, Garu**	**21.16**	**266**	P	**P**	**20 33 34.7**	**-2.8**
BOAC	**Boac**	**21.24**	**340**	eP	**P**	**20 33 40.2**	**+2.1**
CTA	**Charters Tower**	**21.33**	**130**	P	**P**	**20 33 40.0**	**+1.0**
	comp=Z,4.5nm,0.4s,baz=296,slow=13,SNR=8.2						
CTA	**Charters Tower**	**21.33**	**130**	P	**P**	**20 33 40.0**	**+1.0**
LEM	**Lembang**	**21.36**	**268**	P	**P**	**20 33 39.6**	**0.0**
	comp=Z,446nm,0.7s,baz=44,slow=7.3,SNR=66						
GIRL	**Giralia**	**21.42**	**221**	P	**P**	**20 33 40.8**	**+0.9**
	baz=21,SNR=21						
GIRL	**Giralia**	**21.42**	**221**	P	**P**	**20 33 40.9**	**+1.0**
TPI	**Tanjungpandan**	**21.74**	**279**	P	**P**	**20 33 44.3**	**+1.1**
	comp=Z,2µmcomp=Z,247nm,0.8s						
CNJI	**Cibinong**	**21.84**	**267**	P	**P**	**20 33 41.2**	**-3.0**
	comp=Z,11µmcomp=Z,1µm,0.8s						
LUBP	**Lubang**	**22.09**	**336**	eP	**P**	**20 33 47.1**	**+0.6**
CBJI	**Citeko**	**22.13**	**269**	P	**P**	**20 33 44.9**	**-2.0**
	comp=Z,12µmcomp=Z,1µm,0.6s						
TGY	**Tagaytay City**	**22.16**	**339**	P	**P**	**20 33 49.0**	**+1.8**
	comp=Z,384nm,0.6s,baz=156,slow=3.3,SNR=13						
TGY				PKKP	**PKKPdf**	**21 00 30.8**	**-3.0**
	comp=Z,342nm,0.4s,baz=243,slow=7.5,SNR=3.5						
TGY	**Tagaytay City**	**22.16**	**339**	P	**P**	**20 33 49.0**	**+1.8**
DBJI	**Dramaga**	**22.23**	**269**	P	**P**	**20 33 46.6**	**-1.3**
	comp=Z,3µmcomp=Z,150nm,0.6s						
MEEK	**Meekatharra**	**22.26**	**206**	P	**P**	**20 33 47.9**	**-0.2**
	baz=22,SNR=67						
POLP	**Polillo Island**	**22.40**	**341**	eP	**P**	**20 33 49.7**	**+0.4**
SKJI	**Sukabumi**	**22.41**	**268**	P	**P**	**20 33 48.4**	**-1.1**
	comp=Z,6µmcomp=Z,714nm,0.6s						
KRVT	**Keravat (AS076**	**22.91**	**85**	P	**P**	**20 33 54.0**	**-0.1**
	comp=Z,21nm,0.4s,baz=51,slow=6.2,SNR=5.2						
BALP	**Baler**	**23.47**	**341**	eP	**P**	**20 33 58.8**	**-0.2**
FORT	**Forrest**	**24.03**	**182**	P	**P**	**20 34 05.0**	**+1.0**
	baz=24,SNR=39						
FORT	**Forrest**	**24.03**	**182**	P	**P**	**20 34 04.5**	**+0.6**
SMPP	**San Manuel, Pa**	**24.14**	**340**	eP	**P**	**20 34 05.5**	**+0.4**
KLSI		**24.35**	**273**	P	**P**	**20 34 09.0**	**+1.9**
	comp=Z,29nm,0.8s						
PALP	**Palanan**	**24.47**	**344**	eP	**P**	20 34 18.4	+10
QLP	**Quilpie**	**24.50**	**146**	P	**P**	**20 34 09.4**	**+1.1**
	baz=25,SNR=6.0						
KASI	**Kota Agung**	**24.51**	**271**	P	**P**	**20 34 07.7**	**-0.9**
	comp=Z,1µmcomp=Z,176nm,0.8s						
CAUP	**Cauayan**	**24.53**	**343**	eP	**P**	**20 34 07.7**	**-0.9**
PMBI	**Palembang**	**24.54**	**278**	P	**P**	**20 34 11.0**	**+2.1**
	comp=Z,628nm,1.0s						
PMBI	**Palembang**	**24.54**	**278**	P	**P**	**20 34 10.0**	**+1.2**
MDSI	**Maura Dua**	**24.92**	**274**	P	**P**	**20 34 12.6**	**+0.3**
	comp=Z,43nm,1.0s						
LWLI	**Liwa**	**24.99**	**272**	P	**P**	**20 34 14.0**	**+1.0**
	comp=Z,9µmcomp=Z,63nm,0.8s						
GUMO	**Guam**	**25.47**	**38**	P	**P**	**20 34 17.1**	**-0.1**
	comp=Z,239nm,0.8s,baz=354,slow=5.0,SNR=5.2						
GUMO	**Guam**	**25.47**	**38**	IAmb	IAmb	20 34 22.2	
	comp=Z,295nm,0.9s						
MORW	**Morawa**	**25.49**	**207**	P	**P**	**20 34 17.6**	**+0.3**
	baz=26,SNR=5.3						
MORW	**Morawa**	**25.49**	**207**	P	**P**	**20 34 16.6**	**-0.7**
KMBL	**Kambalda**	**25.51**	**194**	P	**P**	**20 34 18.2**	**+0.8**
	baz=26,SNR=9.6						
APYP	**Conner**	**25.57**	**342**	eP	**P**	**20 34 16.8**	**-1.1**
SGCP	**Mt. Cagua**	**25.70**	**344**	eP	**P**	**20 34 17.9**	**-1.3**
MNAI	**Manna**	**26.14**	**274**	P	**P**	**20 34 22.4**	**-0.9**
BLDU	**Ballidu**	**26.54**	**205**	P	**P**	**20 34 27.1**	**+0.5**
	baz=26,SNR=11						
MYKOM	**Kota Tinggi**	**26.58**	**288**	P	**P**	**20 34 25.4**	**-1.8**
MYKOM				IAmb	IAmb	20 34 31.3	
	comp=Z,97nm,1.3s						
MYKOM	**Kota Tinggi**	**26.58**	**288**	P	**P**	**20 34 28.0**	**+0.8**
BBOO	**Buckleboo**	**26.82**	**167**	P	**P**	**20 34 29.7**	**+0.6**
	baz=27,SNR=35						
BBOO	**Buckleboo**	**26.82**	**167**	P	**P**	**20 34 29.5**	**+0.4**
KLBR	**Kellerberrin**	**27.00**	**202**	P	**P**	**20 34 31.5**	**+0.8**
	baz=27,SNR=12						
STKA	**Stephens Creek**	**27.67**	**157**	P	**P**	**20 34 37.6**	**+0.9**
	baz=28,SNR=32						
STKA	**Stephens Creek**	**27.67**	**157**	P	**P**	**20 34 37.6**	**+0.9**
	comp=Z,6.6nm,0.5s,baz=329,slow=9.1,SNR=47						
STKA	**Stephens Creek**	**27.67**	**157**	P	**P**	**20 34 36.9**	**+0.2**
STKA				IAmb	IAmb	20 35 39.1	
	comp=Z,20nm,0.7s						
MUN	**Mundaring**	**27.94**	**204**	P	**P**	**20 34 39.5**	**+0.5**
	baz=28,SNR=12						
KRJI	**Kerinci**	**27.94**	**278**	P	**P**	**20 34 40.7**	**+1.3**
	comp=Z,166nm,0.8s						
HTT	**Hallett**	**28.16**	**162**	P	**P**	**20 34 41.9**	**+0.9**
	baz=28,SNR=6.5						
NWAO	**Narrogin (SRO)**	**28.39**	**201**	P	**P**	**20 34 43.7**	**+0.7**
	baz=28,SNR=29						
NWAO	**Narrogin (SRO)**	**28.39**	**201**	P	**P**	**20 34 43.8**	**+0.7**
	comp=Z,15nm,0.4s,baz=41,slow=7.7,SNR=47						
NWAO	**Narrogin (SRO)**	**28.39**	**201**	P	**P**	**20 34 42.6**	**-0.4**
NWAO				IAmb	IAmb	20 35 35.1	
	comp=Z,54nm,0.7s						
NWAO	**Narrogin (SRO)**	**28.39**	**201**	P	**P**	**20 34 43.0**	**-0.1**
NWAO				IAmb	IAmb	20 35 35.1	
	comp=Z,43nm,0.7s						
JRMM	**Jerantut**	**28.59**	**291**	P	**P**	**20 34 46.0**	**+1.0**
BKNI	**Bangkinang**	**28.87**	**283**	P	**P**	**20 34 49.2**	**+1.7**
	comp=Z,2µmcomp=Z,236nm,0.8s						
BKNI	**Bangkinang**	**28.87**	**283**	P	**P**	**20 34 47.5**	**0.0**
PDSI	**Padang**	**29.15**	**280**	P	**P**	**20 34 50.1**	**+0.1**
	comp=Z,459nmcomp=Z,43nm,0.9s						
CMSA	**Cobar Meteorol**	**29.21**	**150**	P	**P**	**20 34 51.9**	**+1.6**
	baz=29,SNR=13						
RKGY	**Rocky Gully**	**30.00**	**200**	P	**P**	**20 34 59.4**	**+2.1**
	baz=30,SNR=15						
IPM	**Ipoh**	**30.15**	**291**	P	**P**	**20 34 57.6**	**-1.2**
IPM				IAmb	IAmb	20 35 02.4	
	comp=Z,51nm,0.7s						
IPM	**Ipoh**	**30.15**	**291**	P	**P**	**20 34 59.0**	**+0.2**
SISI	**Saibi**	**30.41**	**279**	P	**P**	**20 35 02.7**	**+1.6**
	comp=Z,30nm,0.6s						
KULM	**Kulim**	**30.80**	**292**	P	**P**	**20 35 03.5**	**-1.0**
KULM				IAmb	IAmb	20 35 08.2	
	comp=Z,62nm,0.9s						
KULM	**Kulim**	**30.80**	**292**	P	**P**	**20 35 04.0**	**-0.5**
RPSI	**Rantau Prapat**	**31.54**	**286**	P	**P**	**20 35 09.4**	**-1.7**
RPSI	**Rantau Prapat**	**31.54**	**286**	P	**P**	**20 35 09.3**	**-1.7**
PSI	**Prapat**	**31.58**	**286**	P	**P**	**20 35 09.3**	**-2.2**
	comp=Z,89nm,0.8s,baz=100,slow=6.3,SNR=37						
QIZ	**Qiongzhong**	**31.81**	**324**	P	**P**	**20 35 15.9**	**+2.6**
QIZ				S	**S**	**20 40 10.4**	**+2.3**
QIZ				sS	**ScP**	**20 41 19.6**	**-3.1**
UBPT	**Khong Chiam**	**32.00**	**313**	P	**P**	**20 35 14.9**	**-0.1**
YNG	**Young**	**32.77**	**150**	P	**P**	**20 35 23.8**	**+2.2**
	baz=33,SNR=6.4						
JOW	**Kunigami**	**33.29**	**359**	P	**P**	**20 35 26.2**	**+0.2**
	comp=Z,4.2nm,0.5s,baz=185,slow=15,SNR=13						
JOW	**Kunigami**	**33.29**	**359**	P	**P**	**20 35 26.4**	**+0.3**
JOW				IAmb	IAmb	20 35 28.0	
	comp=Z,32nm,0.6s						
CAN	**Canberra**	**33.89**	**150**	P	**P**	**20 35 33.5**	**+2.4**
CAN				IAmb	IAmb	20 35 47.1	
	comp=Z,72nm,1.6s						
CAN	**Canberra**	**33.89**	**150**	P	**P**	**20 35 33.6**	**+2.4**
CAN				pmax	pmax		
	comp=Z,72nm,1.6s						
SNSI	**Sinabang, Aceh**	**33.95**	**284**	P	**P**	**20 35 35.4**	**+3.4**
	comp=Z,216nm,1.1s						
LHMI	**Lhok Sumawe**	**34.22**	**289**	P	**P**	**20 35 34.4**	**+0.2**
	comp=Z,2µmcomp=Z,335nm,0.8s						
LHMI	**Lhok Sumawe**	**34.22**	**289**	P	**P**	**20 35 33.6**	**-0.6**
MLSI	**Meulaboh, Aceh**	**34.42**	**287**	P	**P**	**20 35 34.8**	**-1.2**
	comp=Z,4µmcomp=Z,413nm,0.7s						
JCJ	**Chichijima**	**35.85**	**20**	P	**P**	**20 35 47.5**	**-0.5**
	comp=Z,83nm,0.5s,baz=250,slow=8.0,SNR=13						
PBKT	**Sadao Pong**	**36.16**	**310**	P	**P**	**20 35 49.5**	**-1.2**
SLVN	**Son La**	**37.23**	**319**	P	**P**	**20 36 00.2**	**+0.4**
CM31	**Chiang Mai Arr**	**38.84**	**310**	P	**P**	**20 36 13.4**	**+0.2**
CM31				IAmb	IAmb	20 36 15.5	
	comp=Z,31nm,0.8s						
CMAR	**Chiang Mai Arr**	**38.84**	**310**	P	**P**	**20 36 14.0**	**+0.8**
	comp=Z,19nm,0.7s,baz=137,slow=7.0,SNR=196						
CMAR				PcP	**PcP**	**20 38 21.9**	**+1.8**
	comp=Z,7.1nm,0.7s,baz=170,slow=2.4,SNR=11						
CMAR				ScP	**ScP**	**20 41 48.5**	**+0.2**
	comp=Z,2.9nm,0.7s,baz=153,slow=3.4,SNR=8.3						
CHTO	**Chiang Mai**	**39.06**	**311**	P	**P**	**20 36 15.5**	**+0.5**
CHTO				IAmb	IAmb	20 36 17.1	
	comp=Z,46nm,0.8s						
CHTO	**Chiang Mai**	**39.06**	**311**	P	**P**	**20 36 15.5**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,46nm,0.9s						
GYA	**Guiyang**	**39.47**	**327**	⇑iP	**P**	**20 36 18.2**	**-0.2**
GYA				pP	pP	20 36 59.0	-3.2
GYA				PP	**PnPn**	**20 37 59.1**	**+0.1**
GYA				PcP	**PcP**	**20 38 23.4**	**+1.4**
GYA				ScP	**ScP**	**20 41 51.3**	**+0.6**
GYA				S	**S**	**20 42 04.3**	**-0.5**
GYA				sS	sS	20 43 21.1	-0.7
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,140nm,5.2s						
JNU	**Nakatsue**	**39.59**	**2**	P	**P**	**20 36 19.5**	**+0.3**
	comp=Z,19nm,0.7s,baz=189,slow=3.1,SNR=14						
JNU	**Nakatsue**	**39.59**	**2**	P	**P**	**20 36 19.2**	**0.0**
JNU				IAmb	IAmb	20 36 20.3	
	comp=Z,32nm,0.9s						
WHN	**Wuhan**	**39.60**	**340**	⇓P	**P**	**20 36 20.8**	**+1.5**
NJ2	**Nanjing**	**39.71**	**346**	eP	**P**	**20 36 22.4**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
KMI	**Kunming**	**40.70**	**322**	P	**P**	**20 36 30.1**	**+1.4**
KMI				PcP	**PcP**	**20 38 28.5**	**+2.4**
KMI				ScP	**ScP**	**20 41 56.7**	**+1.0**
KMI				S	**S**	**20 42 19.8**	**-3.5**
KMI				pmax	pmax		
	comp=Z,20nm,1.0s						
KMI				LR	LR		
	comp=Z,140nm,4.9s						
KMI				LR	LR		
	comp=Z,190nm,4.2s						
KMI				LR	LR		
	comp=Z,60nm,5.1s						
KMI	**Kunming**	**40.70**	**322**	P	**P**	**20 36 28.9**	**+0.2**
KMI	**Kunming**	**40.70**	**322**	P	**P**	**20 36 29.0**	**+0.2**
KMI				pmax	pmax		
	comp=Z,24nm,1.1s						
ENH	**Enshi**	**41.26**	**334**	P	**P**	**20 36 32.3**	**-0.7**
MJAR	**Matsushiro Arr**	**43.80**	**11**	P	**P**	**20 36 52.7**	**-0.6**
	comp=Z,29nm,0.7s,baz=186,slow=9.5,SNR=84						
MJAR				ScP	**ScP**	**20 42 06.6**	**-1.1**
	comp=Z,3.1nm,0.8s,baz=192,slow=5.1,SNR=5.6						
MJAR	**Matsushiro Arr**	**43.80**	**11**	P	**P**	**20 36 51.9**	**-1.4**
MAJO	**Matsushiro**	**43.80**	**11**	P	**P**	**20 36 52.0**	**-1.3**
MAJO				IAmb	IAmb	20 36 53.8	
	comp=Z,47nm,0.8s						
MAJO	**Matsushiro**	**43.80**	**11**	P	**P**	**20 36 52.0**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,47nm,0.8s						
MAT	**Matsushiro**	**43.80**	**11**	P	**P**	**20 36 52.3**	**-1.0**
MAT				eS	**S**	**20 43 02.0**	**-5.9**
MJB9	**Matsu-Tunnel**	**43.80**	**11**	P	**P**	**20 36 52.3**	**-1.0**
MJB9				IAmb	IAmb	20 36 53.8	
	comp=Z,47nm,0.8s						
KSAR	**Wonju Array Be**	**43.88**	**359**	P	**P**	**20 36 54.4**	**+0.6**
KSAR	**Wonju Array Be**	**43.88**	**359**	P	**P**	**20 36 54.4**	**+0.6**
KSRS	**Korea Array**	**43.89**	**359**	P	**P**	**20 36 55.1**	**+1.2**
	comp=Z,9.3nm,0.6s,baz=174,slow=8.9,SNR=58						
KSRS				PcP	**PcP**	**20 38 37.4**	**+1.2**
	comp=Z,2.8nm,0.6s,baz=185,slow=3.3,SNR=4.7						
KSRS				ScP	**ScP**	**20 42 08.0**	**0.0**
	comp=Z,4.2nm,0.9s,baz=184,slow=4.3,SNR=7.0						
KS19	**Wonju Array Si**	**43.94**	**359**	P	**P**	**20 36 55.2**	**+0.9**
KS19				IAmb	IAmb	20 38 15.9	
	comp=Z,124nm,1.8s						
CD2	**Chengdu**	**44.55**	**328**	P	**P**	**20 36 59.3**	**0.0**
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
XAN	**Xi'an**	**44.76**	**336**	P	**P**	**20 37 00.3**	**-0.7**
XAN				PcP	**PcP**	**20 38 40.7**	**+1.3**
XAN				ScP	**ScP**	**20 42 11.8**	**+0.1**
XAN				ScS	**ScS**	**20 46 34.5**	**-1.5**
XAN				pmax	pmax		
	comp=Z,18nm,0.8s						
XAN				pmax	pmax		
	comp=Z,210nm,4.3s						
XAN	**Xi'an**	**44.76**	**336**	P	**P**	**20 37 00.1**	**-0.9**
XAN	**Xi'an**	**44.76**	**336**	P	**P**	**20 37 00.1**	**-0.9**
XAN				pmax	pmax		
	comp=Z,17nm,0.7s						
TIY	**Taiyuan**	**46.80**	**342**	eP	**P**	**20 37 17.1**	**+0.2**
BJT	**Baijiatuau**	**47.95**	**347**	P	**P**	**20 37 25.7**	**+0.1**
BJT	**Baijiatuau**	**47.95**	**347**	P	**P**	**20 37 25.7**	**+0.1**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BJI	**Beijing**	**47.97**	**347**	P	**P**	**20 37 26.4**	**+0.7**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SHL	**Shillong**	**48.32**	**313**	P	**P**	**20 37 28.5**	**-0.5**
SHL				IAmb	IAmb	20 37 30.3	
	comp=Z,108nm,1.1s						
SHL	**Shillong**	**48.32**	**313**	P	**P**	**20 37 28.5**	**-0.5**
SHL				pmax	pmax		
	comp=Z,108nm,1.1s						
LZH	**Lanzhou**	**48.69**	**333**	⇑P	**P**	**20 37 32.5**	**+1.0**
LZH				pP	pP	20 38 16.1	0.0
LZH				sP	sP	20 38 38.2	-0.6
LZH				PP	**PP**	**20 39 27.6**	**+0.8**
LZH				pmax	pmax		
	comp=Z,26nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,5.6s						
VLA	**Vladivostok**	**49.59**	**3**	iP	**P**	**20 37 39.5**	**+1.5**
VLA				pmax	pmax		
	comp=Z,37nm,0.8s						
HHC	**Hu-ho-hao-te**	**49.95**	**343**	eP	**P**	**20 37 42.2**	**+1.3**
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,90nm,6.6s						
ERM	**Erimo**	**50.10**	**14**	ceP	**P**	**20 37 43.1**	**+1.3**
ERM				pmax	pmax		
	comp=Z,49nm,0.9s						
PALK	**Pallekele**	**50.24**	**285**	P	**P**	**20 37 42.9**	**-0.6**
	comp=Z,16nm,0.7s,baz=91,slow=5.3,SNR=11						

PALK PcP PcP 20 39 00.2 +0.8
comp=Z,5.2nm,0.5s,baz=99,slow=3.7,SNR=4.2
PALK Pallekele 50.24 285 P P 20 37 43.1 -0.4
CN2 Changchun 50.32 357 eP P 20 37 44.4 +0.9
CN2 pmax pmax
comp=Z,10.0nm,0.6s
USA0B Ussuriysk Arra 50.68 3 P P 20 37 46.7 +0.6
USA0B Ussuriysk Arra 50.68 3 d iP P 20 37 46.8 +0.6
USRK Ussuriysk Ar. 50.68 3 P P 20 37 46.9 +0.8
comp=Z,17nm,0.6s,baz=181,slow=6.9,SNR=69
USRK Ussuriysk Ar. 50.68 3 P P 20 37 46.3 +0.2
MDJ Mudanjiang 51.03 0 P P 20 37 50.2 +1.4
MDJ pmax pmax
comp=Z,18nm,0.8s
MDJ pmax pmax
comp=Z,130nm,5.7s
MDJ Mudanjiang 51.03 0 P P 20 37 49.3 +0.6
LSA Lhasa 51.35 317 P P 20 37 53.4 +1.4
LSA Lhasa 51.35 317 P P 20 37 53.3 +1.4
LSA Lhasa 51.35 317 P P 20 37 51.7 -0.3
LSA IAmb IAmb 20 37 54.3
comp=Z,55nm,0.7s
LSA Lhasa 51.35 317 P P 20 37 51.7 -0.3
LSA pmax pmax
comp=Z,55nm,0.7s
WHZ Wether Hill Ro 51.48 146 P P 20 37 53.3 +1.1
WHZ IAmb IAmb 20 39 03.1
comp=Z,55nm,1.7s
TEY Ternei 51.88 7⇓eP P 20 37 55.9 +0.8
TEY pmax pmax
comp=Z,50nm,0.8s
ASAJ Asahikawa 51.98 12 P P 20 37 55.8 0.0
comp=Z,25nm,0.8s,baz=215,slow=8.8,SNR=12
JKA Kamikawa-asahi 51.98 12 P P 20 37 55.8 0.0
RPZ Rata Peaks 52.04 142 P P 20 37 58.8 +2.4
comp=Z,9.8nm,0.5s,baz=330,slow=4.1,SNR=9.5
RPZ Rata Peaks 52.04 142 P P 20 37 57.7 +1.3
RPZ IAmb IAmb 20 39 41.3
comp=Z,54nm,1.3s
ODAN Odare 52.37 311 eP P 20 38 00.0 +0.7
comp=Z,302nm,0.6s
TAPN Taplejung 52.41 312 eP P 20 38 00.3 +0.7
comp=Z,266nm,0.4s
TUWZ Tuamarina 52.72 138 P P 20 38 02.2 +0.9
RAMN Ramite 53.01 311 eP P 20 38 05.0 +1.0
comp=Z,710nm,0.6s
GTA Gaotai 53.25 332 ⇑P P 20 38 06.2 +0.8
GTA pP pP 20 38 50.8 +0.1
GTA PcP sP 20 39 12.2 -1.2
GTA sP PcP 20 39 14.1 +3.8
GTA ScP ScP 20 42 48.3 +0.4
GTA PcS PcS 20 43 09.6 0.0
GTA S S 20 45 19.2 -1.0
GTA ScS ScS 20 47 30.6 -2.8
GTA pmax pmax
comp=Z,24nm,1.0s
GTA pmax pmax
comp=Z,70nm,5.2s
JIRN Jiri 53.70 311 eP P 20 38 09.9 +0.7
GUN Gumba 54.07 312 eP P 20 38 12.3 +0.5
comp=Z,522nm,0.7s
PKI Pulchoki 54.24 311 eP P 20 38 13.2 +0.2
comp=Z,156nm,0.6s
PKIN Phulchoki 54.25 311 eP P 20 38 13.2 +0.2
comp=Z,122nm,0.6s
KKN Kakani 54.45 311 eP P 20 38 14.8 +0.4
comp=Z,212nm,0.7s
DMN Daman 54.49 311 eP P 20 38 15.1 +0.4
comp=Z,275nm,0.9s
YSS Yuzh-Sakhalins 54.72 11 P P 20 38 16.4 +0.7
YSS IAmb IAmb 20 38 31.4
comp=Z,119nm,2.0s
YSS Yuzh-Sakhalins 54.72 11 eP P 20 38 15.8 +0.1
YSS pmax pmax
comp=Z,20nm,0.7s
GKN Gorkha 55.05 311 eP P 20 38 19.1 +0.5
HYB Hyderabad 55.38 296 iP P 20 38 20.0 -1.0
HYB epP pP 20 39 07.0 +0.4
KLR Kul'dur 55.69 2 P P 20 38 23.8 +1.2
comp=Z,9.2nm,0.8s,baz=228,slow=3.7,SNR=35
KLR Kul'dur 55.69 2 iP P 20 38 23.3 +0.7
KLR pmax pmax
comp=Z,15nm,0.9s
KOLN Koldanda 55.71 310 eP P 20 38 24.1 +0.7
comp=Z,423nm,0.8s
DANN Dangsing 55.89 311 eP P 20 38 25.2 +0.5
comp=Z,261nm,0.8s
KAAM Kaadhehdhoo 56.45 275 P P 20 38 29.1 +0.4
ULN Ulaanbaatar 57.67 343 P P 20 38 37.7 +1.0
ULN Ulaanbaatar 57.67 343 P P 20 38 37.7 +1.0
ULN pmax pmax
comp=Z,11nm,0.8s
H08N1 Diego Garcia H 57.71 267 P P 20 38 38.2 +1.2
baz=129,slow=3.2,SNR=4.4
H08N2 Diego Garcia H 57.72 267 P P 20 38 38.2 +1.0
baz=129,slow=3.2,SNR=3.2
H08N3 Diego Garcia H 57.73 267 P P 20 38 38.5 +1.3
baz=129,slow=3.2,SNR=3.8
MNCI Minicoy 57.83 284 P P 20 38 38.7 +0.4
SONM Songino Array 57.84 342 P P 20 38 39.1 +1.2
comp=Z,3.5nm,0.5s,baz=156,slow=6.9,SNR=34
SONM PcP PcP 20 39 27.1 -0.8
comp=Z,4.1nm,0.8s,baz=159,slow=4.1,SNR=5.7
SONM Songino Array 57.84 342 P P 20 38 38.2 +0.3
POO Poona 59.96 296⇑iP P 20 38 49.2 -3.7
comp=Z,80nm,0.6s
ZEA Zeya 60.18 359 eP P 20 38 54.9 +1.3
ZEA pmax pmax
comp=Z,23nm,0.8s
ZAK Zakamensk 61.05 341 eP P 20 39 00.6 +0.9
ZAK e 20 39 41.0
ZAK pmax pmax
comp=Z,4.0nm,1.1s
ZAK pmax pmax
comp=Z,7.0nm,0.9s
TLY Talaya 62.08 342 eP P 20 39 07.8 +1.4
TLY pmax pmax
comp=Z,15nm,1.0s
IRK Irkutsk 62.38 343 eP P 20 39 01.8 -6.7
IRK e 20 40 14.5
IRK pmax pmax
comp=Z,40nm,4.0s
WMQ Urumqi 62.63 327 P P 20 39 12.2 +1.9
WMQ pP pP 20 39 58.1 +0.9
WMQ pmax pmax
comp=Z,30nm,1.3s
WMQ pmax pmax
comp=Z,160nm,4.3s
WMQ Urumqi 62.63 327 P P 20 39 10.3 0.0
WMQ IAmb IAmb 20 39 13.1
comp=Z,26nm,0.7s
WMQ Urumqi 62.63 327 P P 20 39 10.3 0.0
WMQ pmax pmax
comp=Z,26nm,0.7s
MOY Mondy 62.90 341 eP P 20 39 13.6 +1.6
MOY pmax pmax
comp=Z,21nm,1.3s
PETK Petropavlovsk- 64.27 19 P P 20 39 22.4 +1.6
comp=Z,21nm,0.6s,baz=173,slow=4.3,SNR=26
PETK Petropavlovsk- 64.27 19 P P 20 39 21.8 +1.0
BOD Bodaibo 65.41 351 eP P 20 39 29.0 +0.9
BOD pmax pmax
comp=Z,265nm,1.0s
NIL Nilore 66.33 311 P P 20 39 34.6 +0.2
NIL Nilore 66.33 311 P P 20 39 34.7 +0.2
NIL pmax pmax
comp=Z,77nm,0.6s
KSH Kashi 67.17 318 P P 20 39 41.8 +2.0
KSH PP PP 20 42 15.9 +5.0
KSH PcS 20 44 09.2
KSH S S 20 48 15.7 -1.7
KSH pmax pmax
comp=Z,33nm,0.9s
KSH pmax pmax
comp=Z,260nm,6.6s
KSH LR LR
comp=Z,310nm,6.6s
KSH LR LR
comp=Z,290nm,6.4s
KSH LR LR
comp=Z,170nm,6.7s
PRZ Przheval'sk 67.18 322 P P 20 39 41.3 +1.4
PRZ IAmb IAmb 20 39 43.1
comp=Z,28nm,0.9s
PRZ Przheval'sk 67.18 322 P P 20 39 41.3 +1.4

PRZ pmax pmax
comp=Z,28nm,1.0s
MK31 Makanchi Array 67.46 327 P P 20 39 41.9 +0.6
MK31 IAmb IAmb 20 39 43.5
comp=Z,21nm,0.6s
MK31 Makanchi Array 67.46 327 P P 20 39 41.9 +0.6
MK31 pmax pmax
comp=Z,21nm,0.6s
MKAR Makanchi Array 67.46 327 P P 20 39 42.3 +1.0
comp=Z,28nm,0.4s,baz=116,slow=8.7,SNR=557
MKAR PcP PcP 20 40 07.8 +0.7
comp=Z,13nm,0.6s,baz=128,slow=4.9,SNR=6.8
MKAR S S 20 48 17.8 -2.4
comp=Z,1.4nm,1.1s,baz=118,slow=12,SNR=5.7
MKAR Makanchi Array 67.46 327 P P 20 39 41.8 +0.4
MAKZ Makanchi 67.64 327 P P 20 39 42.6 +0.2
MAKZ IAmb IAmb 20 39 44.5
comp=Z,26nm,0.6s
MAKZ Makanchi 67.64 327 P P 20 39 42.6 +0.2
MAKZ pmax pmax
comp=Z,26nm,0.6s
KDJ Kajisay 67.75 321 P P 20 39 44.2 +0.7
KDJ IAmb IAmb 20 39 46.0
comp=Z,24nm,0.6s
KDJ Kajisay 67.75 321 P P 20 39 44.2 +0.7
KDJ pmax pmax
comp=Z,24nm,0.6s
NRN Naryn 68.14 320 P P 20 39 46.4 +0.4
NRN Naryn 68.14 320 P P 20 39 46.4 +0.4
NRN pmax pmax
comp=Z,11nm,0.8s
MA2 Magadan 68.23 12ceP P 20 39 46.6 +0.8
MA2 pmax pmax
comp=Z,18nm,1.0s
YAK Yakutsk 68.48 0 P P 20 39 48.4 +1.2
comp=Z,9.3nm,0.4s,baz=346,slow=0.6,SNR=21
YAK pP pwP 20 40 41.0 +0.2
comp=Z,6.3nm,0.5s,baz=24,slow=3.5,SNR=5.7
YAK Yakutsk 68.48 0 P P 20 39 47.5 +0.2
YAK IAmb IAmb 20 39 49.8
comp=Z,34nm,0.9s
YAK Yakutsk 68.48 0 eP P 20 39 48.3 +1.1
YAK e 20 40 05.7
YAK e*PP pwP 20 40 41.2 +0.4
YAK e 20 42 31.0
YAK eS S 20 48 31.5 -0.1
YAK e 20 49 22.9
YAK pmax pmax
comp=Z,28nm,0.8s
YAK pmax pmax
comp=N,6.0nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=Z,555nm,5.3s
YAK pmax pmax
comp=N,347nm,5.3s
YAK pmax pmax
comp=E,542nm,5.8s
YAK smax smax
comp=N,148nm,1.8s
YAK smax smax
comp=E,107nm,1.6s
KZA Kyzart 68.95 320 P P 20 39 52.9 +1.8
SNR=30
KBK Karagaybulak 69.44 320 P P 20 39 55.4 +1.5
SNR=17
UCH Uchtor 69.50 320 P P 20 39 56.1 +1.5
SNR=27
AAK Ala-Archa 69.71 320 P P 20 39 57.0 +1.4
comp=E,16nm,0.9s,baz=130,slow=4.4,SNR=49
AAK Ala-Archa 69.71 320 P P 20 39 57.1 +1.6
SNR=19
AAK Ala-Archa 69.71 320 iP P 20 39 56.9 +1.4
SNR=30
AAK Ala-Archa 69.71 320 P P 20 39 56.4 +0.8
AAK IAmb IAmb 20 39 58.3
comp=Z,20nm,0.9s
AAK Ala-Archa 69.71 320 P P 20 39 57.0 +1.4
FRU1 Bishkek 69.72 320 P P 20 39 55.6 +0.2
FRU1 Bishkek 69.72 320 P P 20 39 55.6 +0.2
FRU1 pmax pmax
comp=Z,10.0nm,0.5s
CHMS Chumysh 69.73 321 P P 20 39 56.5 +1.0
SNR=7.1
AML Almayashu 69.98 319 P P 20 39 59.0 +1.6
SNR=39
USP Ospenovka 70.03 321 P P 20 39 58.5 +1.2
SNR=28
ARSB Arslanbob 70.05 318 P P 20 39 57.7 +0.1
ARSB IAmb IAmb 20 40 00.0
comp=Z,37nm,0.8s
ARSB Arslanbob 70.05 318 P P 20 39 57.7 +0.1
ARSB pmax pmax
comp=Z,37nm,0.8s
EKS2 Erkin-Say 70.19 320 P P 20 39 59.8 +1.5
SNR=29
ZAA0 Zalesovo Array 70.89 334 P P 20 40 01.9 -0.3
ZAA0 IAmb IAmb 20 40 04.8
comp=Z,19nm,0.8s
ZALV Zalesovo Beam 70.89 334 P P 20 40 02.2 0.0
comp=Z,19nm,0.7s,baz=125,slow=4.9,SNR=66
ZALV pP pwP 20 40 55.8 -0.8
comp=Z,6.4nm,0.8s,baz=117,slow=5.5,SNR=3.9
ZALV S S 20 48 57.0 -3.1
comp=Z,0.4nm,0.5s,baz=310,slow=19,SNR=2.6
ZALV Zalesovo Beam 70.89 334 P P 20 40 01.5 -0.7
BTK Batken 70.92 316 P P 20 40 02.2 -0.5
BTK Batken 70.92 316 P P 20 40 02.3 -0.5
BTK pmax pmax
comp=Z,15nm,1.0s
SEY Seymchan 71.62 11 iP P 20 40 09.2 +2.8
KURBB Kurchatov Arra 71.76 329 P P 20 40 08.2 +0.7
comp=Z,36nm,0.5s,baz=132,slow=5.0,SNR=303
KURBB pP pwP 20 41 00.8 -1.3
comp=Z,1.6nm,0.5s,baz=124,slow=5.8,SNR=4.7
KURBB S S 20 49 04.8 -5.3
comp=Z,1.4nm,0.9s,baz=135,slow=13,SNR=4.1
KURK Kurchatov 71.77 329 P P 20 40 07.6 +0.2
KURK IAmb IAmb 20 40 10.2
comp=Z,46nm,0.9s
KURK Kurchatov 71.77 329 P P 20 40 08.2 +0.7
KURK *PP pwP 20 41 00.8 -1.4
KK31 Karatay Array 72.50 319 P P 20 40 11.9 -0.2
KK31 Karatay Array 72.50 319 P P 20 40 11.9 -0.2
KK31 pmax pmax
comp=Z,19nm,1.0s
KKAR Karatay Array 72.50 319 P P 20 40 11.8 -0.3
KKAR Karatay Array 72.50 319 P P 20 40 12.3 +0.2
KKAR IAmb IAmb 20 40 14.8
comp=Z,19nm,1.0s
KKAR Karatay Array 72.50 319 P P 20 40 12.3 +0.2
KKAR pmax pmax
comp=Z,19nm,1.0s
TAS Tashkent 72.52 317 P P 20 40 13.3 +1.1
TAS IAmb IAmb 20 40 15.3
comp=Z,57nm,0.7s
TAS Tashkent 72.52 317 P P 20 40 13.3 +1.1
VNDA Vanda 72.90 173 P P 20 40 14.5 +0.7
comp=Z,6.9nm,0.8s,baz=317,slow=8.0,SNR=5.5
MSEY Mahe Island 73.25 267 P P 20 40 18.5 +1.3
WSAR Wadi Sarin 74.93 296 P P 20 40 27.6 +1.1
comp=Z,36nm,0.6s,baz=170,slow=5.0,SNR=55
MAW Mawson 74.96 201 P P 20 40 27.5 +1.7
baz=75,SNR=11
MAW Mawson 74.96 201 P P 20 40 27.4 +1.6
comp=Z,18nm,0.7s,baz=87,slow=6.2,SNR=15
MAW Mawson 74.96 201 P P 20 40 25.9 +0.1
HRA Herat 75.05 308 P P 20 40 27.4 0.0
HRA IAmb IAmb 20 40 30.3
comp=Z,20nm,0.8s
SHAO Shalim 76.52 290 iP P 20 40 36.3 +0.6
SNR=19
SOCY Socotra 77.00 284 P P 20 40 38.0 -0.5
BVAR Borovoye Array 77.31 328 P P 20 40 39.9 +0.5
comp=Z,19nm,0.8s,baz=127,slow=8.4,SNR=104
BVAR S S 20 50 10.3 -1.3
comp=Z,0.5nm,0.7s,baz=116,slow=13,SNR=4.0
BRVK Borovoye 77.38 328 P P 20 40 39.5 -0.2
BRVK IAmb IAmb 20 40 42.0
comp=Z,18nm,0.8s
BRVK Borovoye 77.38 328 P P 20 40 39.5 -0.2
BRVK pmax pmax
comp=Z,19nm,0.8s
MDH Madha 77.49 298 P P 20 40 40.7 -0.3
UOSS Minazif 77.49 297 P P 20 40 41.8 +0.9

UOSS Minazif 77.49 297 P P 20 40 41.6 +0.6
HATD Hatta, Dubai 77.53 297 iP P 20 40 42.2 +1.0
SNR=8.1
ASHO Ashiyiah 77.56 297 iP P 20 40 41.9 +0.5
SNR=17
MSFE Esma-Masafi 77.62 298 iP P 20 40 42.9 +1.2
SNR=9.1
BANOM Banah 77.63 298 iP P 20 40 43.0 +1.2
SNR=6.3
ALNE Al Ain 77.69 296 iP P 20 40 42.7 +0.6
SNR=17
SHME Shamm 77.80 298 iP P 20 40 43.8 +1.1
SNR=13
NAZ Nazwa, Dubai 77.98 297 iP P 20 40 45.4 +1.8
SNR=8.7
FAQ Al Faqa, Dubai 77.98 297 iP P 20 40 45.4 +1.8
SNR=6.3
TIXI Tiksi 78.14 360 P P 20 40 43.7 +0.2
TIXI Tiksi 78.14 360ceP P 20 40 44.3 +0.8
TIXI pmax pmax
comp=Z,3.0nm,0.7s
ASUD Al Ashush, Dub 78.19 297 iP P 20 40 46.0 +1.2
SNR=7.9
AJN Ajban 78.48 297 P P 20 40 46.7 +0.3
BILL Bilibino 78.97 13 iP P 20 40 49.1 +0.9
BILL i 20 41 00.0
BILL i *PP pP 20 41 36.8 -0.4
BILL pmax pmax
comp=Z,1.0nm,1.0s
GEYT Alibeck 79.32 310 P P 20 40 51.8 +1.0
comp=Z,3.8nm,0.4s,baz=126,slow=3.8,SNR=19
GEYT Alibeck 79.32 310 P P 20 40 51.0 +0.2
GYA0B ALIBECK ARRAY 79.32 310 P P 20 40 51.1 +0.4
ABPO Ambohimpanom 80.23 252 P P 20 40 55.9 -0.3
ABPO Ambohimpanom 80.23 252 P P 20 40 55.9 -0.3
ABPO pmax pmax
comp=Z,9.0nm,0.7s
ABKAR Akbulak array 81.69 322 P P 20 41 02.5 -0.5
ABKAR IAmb IAmb 20 44 01.4
comp=Z,30nm,0.6s
ABKAR Akbulak array 81.69 322 P P 20 41 03.0 -0.1
AKTO Aktyubinsk 83.27 322 P P 20 41 12.0 +0.8
comp=Z,16nm,0.8s,baz=105,slow=7.2,SNR=49
AKTO pP pwP 20 42 05.5 -1.6
comp=Z,3.7nm,0.7s,baz=164,slow=1.8,SNR=3.9
AKTO S S 20 51 09.2 -4.6
comp=Z,0.4nm,0.3s,baz=331,slow=22,SNR=4.6
QSPA South Pole Qui 83.33 180 P P 20 41 11.3 0.0
QSPA IAmb IAmb 20 41 12.5
comp=Z,23nm,0.7s
SYO Syowa Base 83.67 201⇓iP P 20 41 12.4 -0.5
SYO Syowa Base 83.67 201⇓iPcP P 20 41 14.0 +1.1
SVE Sverdlovsk 84.02 329deP P 20 41 15.5 +0.7
SVE pmax pmax
comp=Z,39nm,0.9s
ARU Arti 84.95 328 P P 20 41 19.3 -0.2
comp=Z,8.9nm,0.7s,baz=123,slow=1.2,SNR=47
ARU Arti 84.95 328 P P 20 41 19.1 -0.4
ARU IAmb IAmb 20 41 20.7
comp=Z,27nm,0.8s
ARU Arti 84.95 328c iP P 20 41 19.9 +0.4
ARU *PP pP 20 42 09.7 +0.6
ARU 20 44 35.8
ARU S S 20 51 24.3 -5.9
ARU pmax pmax
comp=Z,30nm,0.8s
DAMY Dhamar 86.59 285 P P 20 41 30.2 +1.4
DAMY IAmb IAmb 20 41 33.2
comp=Z,30nm,0.7s
RAYN Ar Rayn 86.81 294 iP P 20 41 29.9 +0.4
SNR=42
RAYN Ar Rayn 86.81 294 P P 20 41 29.8 +0.4
RAYN IAmb IAmb 20 41 32.2
comp=Z,36nm,0.7s
RAYN Ar Rayn 86.81 294 P P 20 41 29.8 +0.4
RAYN pmax pmax
comp=Z,36nm,0.7s
ATD Arta Tunnel 87.69 282 P P 20 41 35.5 +1.7
comp=Z,22nm,0.9s,baz=107,slow=1.1,SNR=10
ATD Arta Tunnel 87.69 282 P P 20 41 35.4 +1.6
ATD IAmb IAmb 20 41 38.1
comp=Z,20nm,0.8s
GNI Garni 89.96 310 P P 20 41 44.5 +0.4
comp=Z,2.8nm,0.7s,baz=99,slow=13,SNR=3.3
GNI Garni 89.96 310 IAmb IAmb 20 41 48.1
comp=Z,20nm,1.6s
TBLG Delisi 90.20 312 P P 20 41 45.5 +0.5
TBLG IAmb IAmb 20 41 49.8
comp=Z,9.2nm,0.7s
TBLG Delisi 90.20 312 P P 20 41 45.5 +0.5
TBLG pmax pmax
comp=Z,9.0nm,0.7s
KIRV Kirov 90.29 329 P P 20 41 43.5 -1.3
comp=Z,6.5nm,0.6s,baz=24,slow=5.7,SNR=5.5
ZEI Tsey 90.97 313 eP P 20 41 47.1 -1.6
ZEI pmax pmax
comp=Z,8.0nm,0.8s
AKH Akhalkalaki 91.08 311 P P 20 41 49.3 0.0
AKH IAmb IAmb 20 41 51.7
comp=Z,19nm,1.3s
AKH Akhalkalaki 91.08 311 P P 20 41 49.3 0.0
AKH pmax pmax
comp=Z,19nm,1.3s
KMBO Kilima Mbogo 91.73 269 iP P 20 41 53.8 +0.9
SNR=8.5
KMBO Kilima Mbogo 91.73 269 P P 20 41 55.0 +2.0
KMBO Kilima Mbogo 91.73 269 P P 20 41 55.0 +2.0
KMBO pmax pmax
comp=Z,12nm,1.2s
KBZ Khabaz 91.82 314 P P 20 41 52.0 -0.3
comp=Z,1.3nm,0.6s,baz=123,slow=5.6,SNR=9.1
MLY Manley 91.83 25 P P 20 41 52.3 +0.3
SHA1 Shidzhatmaz 92.00 314 iP P 20 41 53.4 -0.1
KIV Kislovodsk 92.00 314 eP P 20 41 51.6 -1.8
KIV pmax pmax
comp=Z,9.0nm,1.1s
RND Reindeer 92.33 26 P P 20 41 54.2 -0.2
RND IAmb IAmb 20 42 09.9
comp=Z,9.9nm,0.9s
RND Reindeer 92.33 26 P P 20 41 54.2 -0.2
RND pmax pmax
comp=Z,10.0nm,0.9s
PRGR Permogore 92.71 332 eP P 20 41 53.5 -2.5
PRGR pmax pmax
comp=Z,4.0nm,0.6s
ILAR Eielson Array 93.40 25 P P 20 41 58.1 -1.0
comp=Z,0.4nm,0.6s,baz=277,slow=4.6,SNR=5.3
ILAR PKKPbc PKKPdf 20 59 05.8 -0.3
comp=Z,0.8nm,0.7s,baz=17,slow=1.6,SNR=12
ILAR Eielson Array 93.40 25 PKKPdf 20 59 04.2 -1.9
VRH Novokhopyorsk 93.50 321 eP P 20 41 58.8 -1.1
VRH pmax pmax
comp=Z,9.0nm,0.6s
BMAR Burnt Mountain 94.66 23 P P 20 42 04.3 -0.7
VORD Divnogorie 95.00 321 eP P 20 42 05.8 -1.0
VORD pmax pmax
comp=Z,10.0nm,0.6s
VSR Storozhevoye 95.10 321 eP P 20 42 05.7 -1.6
VSR pmax pmax
comp=Z,10.0nm,1.0s
ASF Jabal al Asfar 95.38 302 P P 20 42 08.9 -0.2
comp=Z,2.3nm,0.9s,baz=338,slow=4.6,SNR=3.6
BCAR Beaver Creek A 95.46 27 P P 20 42 08.8 +0.1
KLMR Klimovskoe 95.56 331 eP P 20 42 06.3 -2.8
KLMR AMP 20 42 08.3
comp=Z,13nm,1.3s
KLMR Klimovskoe 95.56 331 eP P 20 42 06.3 -2.8
KLMR pmax pmax
comp=Z,13nm,1.3s
SNAA Sanae 95.80 194 P P 20 42 11.0 +0.8
SNAA Sanae 95.80 194 P P 20 42 10.7 +0.5
SNAA IAmb IAmb 20 42 12.1
comp=Z,12nm,1.3s
SNAA Sanae 95.80 194 P P 20 42 10.7 +0.5
SNAA pmax pmax
comp=Z,12nm,1.3s
TMCR Tamitsa 96.41 334 eP P 20 42 11.2 -1.7
TMCR pmax pmax
comp=Z,11nm,0.6s
OBN Obninsk 96.87 325 P P 20 42 13.7 -1.5
comp=Z,3.1nm,0.5s,baz=138,slow=2.6,SNR=6.0
OBN Obninsk 96.87 325 P P 20 42 13.6 -1.5
OBN Obninsk 96.87 325 iP P 20 42 13.0 -2.1
OBN i *PP pP 20 43 06.8 +1.3
OBN pmax pmax

	comp=Z,9.0nm,0.7s						
VNA2	**Neumayer--Watz**	**97.37**	**193**	P	Pdif	20 42 18.4	+1.1
	baz=130,slow=4.3						
VNA3	**Neumayer Olymp**	**97.64**	**192**	P	Pdif	20 42 19.4	+0.9
BR131	**Keskin Array S**	**98.42**	**309**	P	**P**	**20 42 21.6**	**-1.1**
BR131	**Keskin Array S**	**98.42**	**309**	P	**P**	**20 42 21.6**	**-1.1**
BR131				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BRTR	**Keskin Array B**	**98.42**	**309**	P	**P**	**20 42 21.4**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=139,slow=5.6,SNR=6.1						
LSZ	**Lusaka**	**98.73**	**253**	P	Pdif	20 42 25.4	+0.8
LSZ				IAmb	IAmb	20 42 28.1	
	comp=Z,3.5nm,0.8s						
LSZ	**Lusaka**	**98.73**	**253**	P	Pdif	20 42 25.4	+0.8
LSZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOSA	**Boshof**	**98.89**	**240**	P	**P**	**20 42 24.7**	**-0.4**
	comp=Z,3.2nm,0.6s,baz=122,slow=3.9,SNR=9.5						
BOSA	**Boshof**	**98.89**	**240**	P	**P**	**20 42 24.1**	**-1.0**
ARCES	**ARCESS Array B**	**100.95**	**340**	P	**Pdif**	**20 42 32.8**	**-0.4**
	comp=Z,6.2nm,0.8s,baz=81,slow=6.4,SNR=25						
ARCES				PKiKP	**PKiKP**	**20 46 57.8**	**+0.4**
	comp=Z,3.2nm,0.9s,baz=156,slow=1.2,SNR=4.8						
ARCES				PKKPbc	**PKKPbc**	**20 58 43.6**	**-4.0**
	comp=Z,2.8nm,0.9s,baz=282,slow=2.4,SNR=6.4						
AKASG	**Malin Array Be**	**101.38**	**320**	P	**Pdif**	**20 42 34.3**	**-1.1**
	comp=Z,1.4nm,0.7s,baz=67,slow=4.5,SNR=8.1						
MILM	**Milestii Mici**	**101.87**	**316**	⇑P	**PKiKP**	**20 46 54.3**	**-5.3**
FINES	**FINESS Array B**	**102.04**	**331**	P	**Pdif**	**20 42 36.4**	**-1.7**
	comp=Z,1.6nm,0.6s,baz=67,slow=5.0,SNR=7.6						
FINES				PKiKP	**PKiKP**	**20 46 59.8**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=111,slow=1.8,SNR=7.1						
TIRR	**Tirgusor**	**102.27**	**314**	⇓P	PKiKP	20 46 50.4	-10
VRI	**Vrincioaia**	**103.37**	**315**	⇑P	**PKiKP**	**20 46 56.9**	**-5.5**
TESR	**Tescani**	**103.38**	**316**	⇑P	**PKiKP**	**20 46 55.9**	**-6.5**
PLOR	**Plostina**	**103.43**	**315**	⇑P	**PKiKP**	**20 46 58.5**	**-4.1**
MLR	**Muntele Rosu**	**103.95**	**315**	Pdiff	**Pdif**	**20 42 46.2**	**-0.9**
	comp=Z,1.5nm,1.0s,baz=56,slow=13,SNR=3.2						
MLR				PKiKP	**PKiKP**	**20 47 03.9**	**+0.3**
	comp=Z,11nm,1.0s,baz=69,slow=5.5,SNR=5.9						
MLR	**Muntele Rosu**	**103.95**	**315**	⇓P	**PKiKP**	**20 47 02.1**	**-1.5**
MLR	**Muntele Rosu**	**103.95**	**315**		**PKiKP**	**20 47 04.1**	**+0.5**
BURAR	**Bucovina Array**	**104.25**	**317**	⇑P	**PKiKP**	**20 47 02.8**	**-1.3**
BUR08	**Bucovina Ar. S**	**104.26**	**317**		**Pdif**	**20 42 48.6**	**+0.1**
DOPR	**Dopca**	**104.30**	**316**	⇑P	**PKiKP**	**20 47 02.4**	**-1.7**
VOIR		**104.58**	**315**	⇑P	**PKiKP**	**20 47 01.2**	**-3.5**
ARR	**Arges**	**104.88**	**315**	⇑P	**PKiKP**	**20 47 06.1**	**+0.8**
VTS	**Vitosha**	**106.16**	**312**	⇑P	PKiKP	20 47 17.3	+9.4
GZR	**Gura Zlata**	**106.18**	**315**	⇑P	**PKiKP**	**20 47 07.8**	**+0.1**
BZS	**Buzias**	**106.96**	**316**	⇑P	**PKiKP**	**20 47 08.1**	**-0.9**
YKA	**Yellowknife Ar**	**107.82**	**26**	PKiKP	**PKiKP**	**20 47 08.8**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=292,slow=1.9,SNR=8.8						
YKA				PKKPbc	**PKKPbc**	**20 58 24.1**	**-2.5**
	comp=Z,2.0nm,0.6s,baz=110,slow=2.9,SNR=23						
MORC	**Moravsky Berou**	**108.93**	**320**	⇑P	**PKiKP**	**20 47 13.3**	**+0.6**
NOA	**NORSAR Array B**	**109.07**	**333**	Pdiff	**Pdif**	**20 43 09.3**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=106,slow=4.1,SNR=2.8						
CLL	**Collm**	**111.35**	**323**	*e*PKPdf	**PKiKP**	**20 47 16.0**	**-1.1**
CLL				LmV		22 29 00.0	
	comp=Z,200nm,19.3s						
GERES	**GERESS Array B**	**111.59**	**320**	PKiKP	**PKiKP**	**20 47 18.2**	**+0.5**
	comp=Z,2.7nm,0.5s,baz=61,slow=2.1,SNR=16						
ABTA	**Abfaltersbach**	**112.92**	**318**	*e*PKiKP	**PKiKP**	**20 47 20.1**	**-0.3**
	comp=Z,3.7nm,0.7s,SNR=4.1						
WTTA	**Wattenberg**	**113.36**	**319**	*e*PKiKP	**PKiKP**	**20 47 21.6**	**+0.3**
	comp=Z,14nm,0.5s,SNR=17						
WATA	**Walderalm**	**113.38**	**319**	*e*PKiKP	**PKiKP**	**20 47 21.5**	**+0.2**
	comp=Z,4.5nm,0.5s,SNR=4.7						
SQTA	**Sankt Quirin**	**113.65**	**319**	*e*PKiKP	**PKiKP**	**20 47 22.1**	**+0.3**
	comp=Z,2.3nm,0.5s						
MOTA	**Moosalm**	**113.68**	**319**	*e*PKiKP	**PKiKP**	**20 47 22.1**	**+0.2**
	comp=Z,5.4nm,0.5s,SNR=6.8						
RETA	**Reutte**	**113.86**	**319**	*e*PKiKP	**PKiKP**	**20 47 22.1**	**0.0**
	comp=Z,3.7nm,0.5s						
FETA	**Feichten**	**114.02**	**319**	PKiKP	**PKiKP**	**20 47 22.9**	**+0.4**
	comp=Z,3.0nm,0.7s						
DAVA	**Damuels**	**114.50**	**319**	*e*PKiKP	**PKiKP**	**20 47 24.0**	**+0.6**
	comp=Z,6.7nm,0.5s,SNR=5.7						
REDW	**Red Top Meadow**	**116.18**	**45**		**PKiKP**	**20 47 28.2**	**+1.3**
PDAR	**Pinedale Array**	**117.26**	**45**	PKP	**PKiKP**	**20 47 29.8**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=200,slow=1.0,SNR=7.4						
PDAR				PKKPbc	**PKKPbc**	**20 57 53.6**	**-1.2**
	comp=Z,1.8nm,0.6s,baz=120,slow=5.3,SNR=4.2						
PDAR	**Pinedale Array**	**117.26**	**45**		**PKPdf**	**20 47 27.2**	**-1.8**
KEST	**Kesra**	**117.92**	**307**	PKP	**PKiKP**	**20 47 31.5**	**+1.2**
	comp=Z,3.9nm,0.5s,baz=163,slow=0.4,SNR=18						
KEST	**Kesra**	**117.92**	**307**		**PKPdf**	**20 47 30.7**	**+0.4**
RSSD	**Black Hills**	**120.58**	**42**		**PKPdf**	**20 47 35.4**	**0.0**
RSSD	**Black Hills**	**120.58**	**42**	PKIKP	**PKPdf**	**20 47 35.4**	**0.0**
S22A	**4UR Ranch, Cre**	**120.73**	**50**		**PKiKP**	**20 47 37.4**	**+1.3**
121A	**Cookes Peak, D**	**121.31**	**56**		**PKiKP**	**20 47 38.4**	**+1.2**
ULM	**Lac du Bonnet**	**122.62**	**33**	PKP	**PKPdf**	**20 47 38.9**	**+0.1**
	comp=Z,2.3nm,0.5s,baz=329,slow=3.5,SNR=6.6						
T25A	**Trinidad**	**122.75**	**50**		**PKiKP**	**20 47 40.6**	**+0.6**
MNTX	**Cornudas Mount**	**123.49**	**56**		**PKiKP**	**20 47 42.0**	**+0.7**
TXAR	**Lajitas Array**	**125.49**	**59**	PKP	**PKiKP**	**20 47 46.3**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=234,slow=1.8,SNR=11						
TXAR				PKKPbc	**PKKPbc**	**20 57 23.6**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=108,slow=5.8,SNR=6.9						
ESDC	**Sonseca Array**	**126.64**	**315**	PKP	**PKiKP**	**20 47 47.9**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=277,slow=25,SNR=4.6						
ESDC	**Sonseca Array**	**126.64**	**315**		**PKPdf**	**20 47 47.3**	**+0.4**
TOA0	**Torodi Ar. Sit**	**127.89**	**281**		**PKPdf**	**20 47 49.9**	**0.0**
TORD	**Torodi Ar. Bea**	**127.89**	**281**	PKP	**PKPdf**	**20 47 50.1**	**+0.2**
	comp=Z,12nm,0.7s,baz=77,slow=2.0,SNR=57						
TORD				SKPbc	SKPbc	20 50 48.3	
	comp=Z,5.5nm,0.7s,baz=77,slow=3.8,SNR=13						
TORD	**Torodi Ar. Bea**	**127.89**	**281**		**PKPdf**	**20 47 48.7**	**-1.1**
JCT	**Junction City**	**128.43**	**56**		**PKiKP**	**20 47 51.8**	**+0.6**
JCT	**Junction City**	**128.43**	**56**	PKIKP	**PKiKP**	**20 47 51.8**	**+0.6**
PLCA	**Paso Flores**	**129.50**	**161**	PKP	**PKiKP**	**20 47 53.5**	**+0.3**
	comp=Z,6.0nm,0.6s,baz=187,slow=1.4,SNR=21						
PLCA				SKPbc	SKPab	20 50 54.2	+0.1
	comp=Z,6.9nm,0.9s,baz=330,slow=2.3,SNR=6.8						
SCHQ	**Schefferville**	**130.27**	**12**	PKP	**PKiKP**	**20 47 54.3**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=247,slow=5.5,SNR=6.4						
SCHQ				SKPbc	**SKPbc**	**20 50 54.8**	**-1.9**
	comp=Z,9.7nm,0.7s,baz=353,slow=3.6,SNR=19						
SCHQ	**Schefferville**	**130.27**	**12**	SKPbc	**SKPbc**	**20 50 55.2**	**-1.4**
U40A	**Yellville**	**131.61**	**46**		**PKiKP**	**20 47 57.5**	**+0.1**
KIC	**Kosan Boka**	**134.17**	**272**	*e*P	**PKPdf**	**20 48 02.2**	**+0.4**
	comp=Z,23nm,0.8s						
DBIC	**Dimbokro**	**134.30**	**273**	PKP	**PKiKP**	**20 48 03.5**	**+0.1**
	comp=Z,9.6nm,0.4s,baz=66,slow=2.1,SNR=27						
DBIC				SKPbc	**SKPbc**	**20 51 10.7**	**-1.3**
	comp=Z,4.2nm,0.5s,baz=79,slow=4.3,SNR=10						
DBIC	**Dimbokro**	**134.30**	**273**		**PKPdf**	**20 48 02.8**	**+0.8**
DBIC					**SKPbc**	**20 51 10.6**	**-1.3**
LIC	**Lamto**	**134.45**	**272**	*e*P	**PKPdf**	**20 48 03.9**	**+0.2**
	comp=Z,46nm,0.4s						
TIC	**Toumodi**	**134.47**	**273**	*e*P	**PKiKP**	**20 48 03.9**	**+0.1**
	comp=Z,24nm,0.4s						
Q54A	**Coxs Mills**	**137.97**	**36**		PKPpre	20 47 54.8	
PB10	**IPOC Station P**	**144.39**	**148**		**PKPdf**	**20 48 20.6**	**+0.4**
PB04	**IPOC Station P**	**145.56**	**147**		**PKPdf**	**20 48 24.1**	**+0.7**
LVC	**Limon Verde**	**145.98**	**149**		**PKPab**	**20 48 25.2**	**-0.1**
LVC	**Limon Verde**	**145.98**	**149**	PKP2	**PKPab**	**20 48 25.2**	**-0.1**
JTS	**Las Juntas de**	**146.11**	**81**		**PKPab**	**20 48 25.9**	**+0.2**
JTS	**Las Juntas de**	**146.11**	**81**	PKP2	**PKPab**	**20 48 25.9**	**+0.2**
CPUP	**Villa Florida**	**146.62**	**169**	PKPbc	**PKPbc**	**20 48 25.7**	**+0.7**
	comp=Z,33nm,0.6s,baz=185,slow=1.8,SNR=61						
CPUP				SKPbc	**SKiKP**	**20 51 45.1**	**+0.4**
	comp=Z,8.9nm,0.9s,baz=196,slow=0.9,SNR=6.3						
CPUP	**Villa Florida**	**146.62**	**169**		**PKPdf**	**20 48 24.9**	**+1.0**
PB01	**IPOC Station P**	**146.97**	**147**		**PKPdf**	**20 48 25.5**	**+0.8**
PB11	**IPOC Station P**	**147.90**	**145**		**PKPdf**	**20 48 27.4**	**+1.0**
NNA	**Nana**	**148.23**	**126**		**PKPbc**	**20 48 31.2**	**+0.8**
NNA	**Nana**	**148.23**	**126**	PKP2	**PKPbc**	**20 48 31.2**	**+0.8**
GO01	**Chusmiza**	**148.23**	**146**		**PKPdf**	**20 48 28.1**	**+0.8**
MNMC	**Minye Minye**	**148.43**	**145**		**PKPdf**	**20 48 28.0**	**+0.6**
LPAZ	**La Paz**	**151.52**	**143**	PKP	**PKPdf**	**20 48 34.5**	**+1.8**
	comp=Z,5.8nm,0.9s,baz=166,slow=1.8,SNR=14						
LPAZ				PKPbc	**PKiKP**	**20 48 40.0**	**+0.5**
	comp=Z,6.9nm,0.4s,baz=21,slow=2.4,SNR=21						
LPAZ	**La Paz**	**151.52**	**143**		**PKPdf**	**20 48 33.3**	**+0.6**
BDFB	**Brasilia**	**157.67**	**187**	PKP	**PKPdf**	**20 48 40.6**	**0.0**
	comp=Z,2.3nm,0.5s,baz=47,slow=5.3,SNR=4.5						
SDV	**Santo Domingo**	**160.30**	**82**		**PKPdf**	**20 48 43.7**	**-0.1**
RCBR	**Riachuelo**	**160.59**	**231**		**PKPab**	**20 49 28.0**	**+1.5**
RCBR	**Riachuelo**	**160.59**	**231**	PKP2	**PKPab**	**20 49 28.0**	**+1.5**

MAN 06 20:50:35.0,9.77N×123.77E,h4km,mb4.7,ML3.6,MS3.5, 2C-3D,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.12**	**128**	*i*P	Pg	20 50 38.2	+0.9
LLP	**Lapu-Lapu**	**0.58**	**20**⇑	*e*P	Pg	20 50 46.5	+0.3
LLP				*e*S	Sb	20 50 55.3	-1.1
SNPH	**Sibulan**	**0.67**	**231**⇓	*e*P	Pg	20 50 48.5	+0.6
SNPH				*i*S	Sb	20 50 59.6	+0.7
MSLP	**Maasin**	**1.14**	**71**	*e*P	Pg	20 50 56.4	-0.4
MSLP				*e*S	Sn	20 51 13.7	0.0
GUIM	**Jordan**	**1.44**	**306**	*e*P	Pn	20 51 01.2	-0.7
GUIM				*e*S	Sg	20 51 21.7	+0.3
OCLP	**Ormoc**	**1.52**	**33**	*e*P	Pn	20 51 02.7	-0.3
OCLP				*e*S	Sg	20 51 26.3	+2.3
CGP	**Cagayan de Oro**	**1.59**	**145**⇓	*e*P	Pn	20 51 03.3	-0.6
PAGZ	**Pagadian**	**1.94**	**191**	*e*P	Pn	20 51 08.1	-0.7
PAGZ				*e*S	Sb	20 51 35.1	-0.4
RCP	**Roxas**	**2.05**	**331**⇓	*e*P	Pn	20 51 10.6	+0.4
BUKP	**Musuan**	**2.27**	**146**	*e*P	Pn	20 51 14.5	+1.2
BUKP				*e*S	Sb	20 51 45.2	+0.2
CTBH	**Cotabato--PC H**	**2.57**	**169**⇑	*i*P	Pn	20 51 17.5	+0.1
CTBH				*i* S	Sn	20 51 50.2	+1.0

KLM ***06*** *20:56:41.0, 9.62S×121.63E, h91km, mb4.9*
IDC ***06*** *20:56:45.4±2.2, 8.98S×121.27E, h100km±19km, mb4.2/24, mb1 4.3/29, mb1mx4.1/57, mbtmp4.6/29, MS3.1/4, Ms1 3.2/4, ms1mx2.7/36, Error ellipse: s-maj=17.2km s-min=10.0km az=64.0*
NEIC ***06*** *20:56:45.6±1.9, 9.15S±0.06×121.28E±0.07, h117km±5km, mb4.7/45, Error ellipse: s-maj=10.8km s-min=8.2km az=122.0*
BJI ***06*** *20:56:47.0±0.0, 9.30S×121.20E, h141km, mB4.8/4, mb4.4/16*
DJA ***06*** *20:56:48.2±0.3, 9°S±3°×12°1E±°, h135km±5km, M4.8/17, mb4.9/17, mB5.3/12, MLv4.9/15, Mw(mB)4.7/12*
ISC 06 20:56:49.1±0.3**, 9.27S**±0.04×**121.30E**±0.05**, h150**km**, n139,** σ**1.98**/147**, mb4.4**/40**, 2C-1D, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.07**	**248**	P	**Pn**	**20 57 12.2**	**-2.2**
WSI				S	**Sn**	**20 57 29.2**	**-4.5**
SOEI	**Soe**	**2.97**	**100**	P	**Pn**	**20 57 35.6**	**-0.5**
SOEI	**Soe**	**2.97**	**100**		**Pn**	**20 57 36.0**	**-0.2**
PLAI	**Plampang**	**3.51**	**277**	P	**Pn**	**20 57 42.4**	**-0.5**
BBSI	**Bau Bau**	**3.96**	**19**	P	**Pn**	**20 57 48.0**	**-0.8**
BKSI	**Bulukumba**	**4.09**	**343**	P	**Pn**	**20 57 48.4**	**-2.1**
BNSI	**Bone**	**4.98**	**346**	P	**Pn**	**20 58 01.7**	**-0.5**
	0.7nm1μm195nm,0.8s						
KDI	**Kendari**	**5.43**	**14**	P	**Pn**	**20 58 07.6**	**-0.7**
	0.2nm9μm46nm,0.6s						
SPSI	**Sidrap Palu**	**5.48**	**344**	P	**Pn**	**20 58 08.9**	**0.0**
	0.3nm717nm68nm,0.7s						
DNP	**Denpasar**	**6.04**	**275**	P	**Pn**	**20 58 15.9**	**-0.5**
IGBI	**Denpasar**	**6.09**	**274**	P	**Pn**	**20 58 15.2**	**-1.8**
SRBI	**Singaraja**	**6.13**	**281**	P	**Pn**	**20 58 16.1**	**-1.4**
	0.6nm2μm128nm,0.9s						
TTSI	**Tana Toraja**	**6.35**	**347**	P	**Pn**	**20 58 20.9**	**+0.4**
	0.3nm90nm,0.8s						
JAGI	**Jajag, Banyuwa**	**7.11**	**276**	P	**Pn**	**20 58 27.5**	**-3.1**
JAGI	**Jajag, Banyuwa**	**7.11**	**276**		**Pn**	**20 58 27.3**	**-3.3**
APSI	**Ampana**	**8.31**	**2**	P	**Pn**	**20 58 46.6**	**0.0**
	20nm,0.7s						
SANI	**Sanana**	**8.55**	**33**	P	**Pn**	**20 58 49.8**	**-0.1**
	48nm,1.0s						
BKB	**Balikpapan**	**9.08**	**331**	P	**Pn**	**20 58 59.5**	**+2.6**
	147nm,1.5s						
KNRA	**Kununurra**	**9.68**	**132**		**Pn**	**20 59 02.6**	**-2.3**
MRSI	**Marisa**	**9.70**	**4**	P	**Pn**	**20 59 05.4**	**+0.3**
FITZ	**Fitzroy Crossi**	**9.74**	**155**	P	**Pn**	**20 59 04.7**	**-1.0**
	5.4nm,0.3s,baz=348,slow=7.1,SNR=47						
FITZ				S	**Sn**	**21 00 47.2**	**-6.4**
	13nm,0.3s,baz=193,slow=9.7,SNR=8.6						
FITZ				LR	LR	21 03 15.0	
	comp=Z,84nm,20.5s,baz=324,slow=39						
FITZ	**Fitzroy Crossi**	**9.74**	**155**		**Pn**	**20 59 04.3**	**-1.3**
NGJI	**Ngawi**	**9.92**	**280**	P	Pn	20 59 12.3	+4.3
PCJI	**Pacitan**	**10.06**	**275**	P	**Pn**	**20 59 08.8**	**-1.2**
	2μm193nm,0.7s						
MTN	**Manton Dam**	**10.29**	**111**	Pn	**Pn**	**20 59 11.2**	**-1.7**
WOJI	**Wonogiri, Jawa**	**10.36**	**277**	P	**Pn**	**20 59 12.9**	**-1.0**
	47nm,0.8s						
UGM	**Wanagama**	**10.74**	**276**	Pn	**Pn**	**20 59 17.6**	**-1.4**
PSA00	**Pilbara Seismi**	**12.32**	**186**	Pn	**Pn**	**20 59 36.9**	**-2.6**
PSA00	**Pilbara Seismi**	**12.32**	**186**	Pn	**Pn**	**20 59 36.4**	**-3.1**
KPJI	**Karang Pucung**	**12.39**	**278**	P	**Pn**	**20 59 39.2**	**-1.3**
	52nm,0.6s						
FAKI	**Fak Fak**	**12.58**	**61**		**Pn**	**20 59 38.9**	**-4.0**
SWI	**Sorong**	**12.96**	**50**	P	**P**	**20 59 55.6**	**+2.9**
SIJI	**Sorong**	**12.96**	**51**	P	**Pn**	**20 59 45.3**	**-2.6**
	1.5nm,0.3s,baz=290,slow=5.7,SNR=4.6						
SIJI				S	**S**	**21 02 17.9**	**-6.9**
	2.0nm,0.3s,baz=91,slow=22,SNR=7.0						
CISI	**Cisompet, Garu**	**13.45**	**276**	P	**Pn**	**20 59 52.2**	**-1.9**
CISI	**Cisompet, Garu**	**13.45**	**276**		**Pn**	**20 59 51.1**	**-3.0**
LEM	**Lembang**	**13.76**	**279**	P	**Pn**	**20 59 54.7**	**-3.5**
	6.0nm,0.3s,baz=42,slow=11,SNR=16						
SBUM	**Sibu**	**14.74**	**322**	P	**P**	**21 00 10.2**	**-2.4**
SBUM	**Sibu**	**14.74**	**322**	P	**P**	**21 00 11.0**	**-1.5**
GIRL	**Giralia**	**14.93**	**206**	Pn	**Pn**	**21 00 11.4**	**-1.3**
KSM	**Kuching**	**15.29**	**314**	P	**P**	**21 00 17.0**	**-1.6**
WB0	**Warramunga Arr**	**16.41**	**131**	P	**P**	**21 00 30.4**	**-0.5**
WRA	**Warramunga Arr**	**16.48**	**132**	P	**Pn**	**21 00 31.6**	**-0.1**
	7.5nm,0.3s,baz=309,slow=14,SNR=88						
WRA				S	S	21 03 23.1	-12
	6.0nm,0.3s,baz=304,slow=24,SNR=8.7						
WRA	**Warramunga Arr**	**16.48**	**132**	P	**Pn**	**21 00 31.2**	**-0.5**
WRAB	**Tennant Creek**	**16.48**	**131**	P	**Pn**	**21 00 31.4**	**-0.3**
WRAB				IAmb	IAmb	21 00 44.6	
	comp=Z,36nm,0.7s						
WB2	**Warramunga Arr**	**16.48**	**132**	P	**Pn**	**21 00 30.9**	**-0.9**
WB2				IAmb	IAmb	21 00 34.3	
	comp=Z,38nm,0.8s						
WR0	**Warramunga Arr**	**16.64**	**131**	P	**P**	**21 00 32.3**	**-1.1**
WR0				IAmb	IAmb	21 00 37.6	
	comp=Z,42nm,0.7s						
AS31	**Alice Springs**	**18.72**	**141**	P	**Pn**	**21 00 58.8**	**+0.4**
AS31				IAmb	IAmb	21 01 02.3	
	comp=Z,14nm,0.6s						
ASAR	**Alice Springs**	**18.72**	**141**	P	**Pn**	**21 00 59.4**	**+0.9**
	comp=Z,9.5nm,0.3s,baz=332,slow=14,SNR=144						
ASAR				S	**S**	**21 04 20.8**	**-0.8**
	comp=Z,1.7nm,0.3s,baz=317,slow=24,SNR=10						
ASAR				LR	LR	21 08 50.2	
	comp=Z,78nm,18.4s,baz=300,slow=38						
ASAR	**Alice Springs**	**18.72**	**141**	P	**Pn**	**21 00 58.4**	**0.0**
MNAI	**Manna**	**18.85**	**284**		**P**	**21 00 56.0**	**-1.8**
MORW	**Morawa**	**20.31**	**193**	P	Pn	21 01 15.3	-1.7
COEN	**Coen**	**21.92**	**104**	P	**P**	**21 01 28.6**	**-2.1**
FORT	**Forrest**	**22.32**	**165**	P	**P**	**21 01 35.0**	**+0.6**
FORT				IAmb	IAmb	21 02 05.9	
	comp=Z,25nm,0.8s						
NWAO	**Narrogin (SRO)**	**23.85**	**188**	P	**P**	**21 01 47.9**	**-0.7**
NWAO				IAmb	IAmb	21 02 15.6	
	comp=Z,55nm,1.6s						
NWAO	**Narrogin (SRO)**	**23.85**	**188**	P	**P**	**21 01 48.1**	**-0.4**
NWAO				IAmb	IAmb	21 02 15.6	
	comp=Z,62nm,1.5s						
PMG	**Port Moresby**	**25.52**	**92**	P	**P**	**21 02 05.3**	**+1.4**
	comp=Z,5.0nm,0.4s,baz=236,slow=6.5,SNR=4.6						
PMG	**Port Moresby**	**25.52**	**92**	P	**P**	**21 02 04.8**	**+0.9**
BBOO	**Buckleboo**	**27.11**	**152**	P	**P**	**21 02 20.2**	**+2.1**
BBOO				IAmb	IAmb	21 02 53.1	
	comp=Z,15nm,0.7s						
STKA	**Stephens Creek**	**29.34**	**143**	P	**P**	**21 02 41.2**	**+3.4**
	comp=Z,6.3nm,0.5s,baz=322,slow=8.9,SNR=30						
STKA				LR	LR	21 17 24.1	
	comp=Z,68nm,19.7s,baz=42,slow=42						
STKA	**Stephens Creek**	**29.34**	**143**	P	**P**	**21 02 40.4**	**+2.6**
PBKT	**Sadao Pong**	**32.61**	**322**	P	**P**	**21 03 07.5**	**+0.8**
SLVN	**Son La**	**34.88**	**331**	P	**P**	**21 03 26.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**35.29**	**321**	P	**P**	**21 03 30.8**	**+0.9**
	comp=Z,1.7nm,0.7s,baz=147,slow=6.7,SNR=21						
CMAR				PcP	**PcP**	**21 06 00.0**	**+2.8**
	comp=Z,0.6nm,0.3s,baz=181,slow=2.7,SNR=6.7						
CMAR				ScP	**ScP**	**21 09 33.4**	**+4.3**
	comp=Z,0.9nm,0.7s,baz=176,slow=2.6,SNR=6.8						
CMAR				LR	LR	21 21 37.2	
	comp=Z,21nm,19.3s,baz=138,slow=43						
CHTO	**Chiang Mai**	**35.56**	**322**	P	**P**	**21 03 33.2**	**+1.1**
XAN	**Xi'an**	**44.64**	**345**	P	**P**	**21 04 46.6**	**-0.2**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
XAN	**Xi'an**	**44.64**	**345**	P	**P**	**21 04 45.5**	**-1.3**
XAN				IAmb	IAmb	21 06 28.9	
	comp=Z,21nm,2.0s						
SHL	**Shillong**	**44.93**	**321**	P	**P**	**21 04 49.4**	**0.0**
SHL				IAmb	IAmb	21 04 50.4	
	comp=Z,9.1nm,0.8s						
DZM	**Mont Dzumac**	**45.12**	**112**	P	**P**	**21 04 53.3**	**+2.3**
	comp=Z,2.8nm,0.8s,baz=210,slow=20,SNR=1.6						
MJAR	**Matsushiro Arr**	**48.26**	**18**	P	**P**	**21 05 14.9**	**0.0**
	comp=Z,1.2nm,0.7s,baz=178,slow=9.5,SNR=5.9						
LSA	**Lhasa**	**48.41**	**324**	P	**P**	**21 05 17.9**	**+1.2**
LSA	**Lhasa**	**48.41**	**324**	P	**P**	**21 05 17.3**	**+0.6**
LSA				IAmb	IAmb	21 05 18.6	
	comp=Z,11nm,0.7s						
BJT	**Baijiatuau**	**49.26**	**355**	P	**P**	**21 05 21.6**	**-0.9**
BJT				IAmb	IAmb	21 05 23.5	
	comp=Z,7.3nm,0.7s						
GTA	**Gaotai**	**52.38**	**339**	*e*P	**P**	**21 05 47.1**	**+1.1**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**54.09**	**9**	P	**P**	**21 05 57.4**	**-0.8**
	comp=Z,4.0nm,0.7s,baz=197,slow=6.3,SNR=12						
ULN	**Ulaanbaatar**	**58.27**	**349**	P	**P**	**21 06 27.2**	**-0.8**
ULN				IAmb	IAmb	21 06 29.1	
	comp=Z,6.1nm,1.1s						
SONM	**Songino Array**	**58.37**	**348**	P	**P**	**21 06 27.8**	**-0.8**
	comp=Z,2.2nm,0.4s,baz=160,slow=8.1,SNR=29						
SONM	**Songino Array**	**58.37**	**348**	P	**P**	**21 06 27.3**	**-1.3**
WMQ	**Urumqi**	**61.01**	**333**	P	**P**	**21 06 44.9**	**-1.8**
NIL	**Nilore**	**62.47**	**316**	P	**P**	**21 06 55.5**	**-1.1**
NIL				IAmb	IAmb	21 06 57.2	
	comp=Z,5.3nm,0.5s						
TLY	**Talaya**	**62.58**	**348**	P	**P**	**21 06 57.3**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=49,slow=16,SNR=3.1						
TLY	**Talaya**	**62.58**	**348**	P	**P**	**21 06 55.6**	**-1.4**
TLY				IAmb	IAmb	21 09 14.7	
	comp=Z,4.2nm,0.8s						
KSH	**Kashi**	**64.18**	**322**	P	**P**	**21 07 08.7**	**+0.7**
KSH				PP	**PP**	**21 09 30.8**	**-0.4**
KSH				S	**S**	**21 15 25.4**	**-8.1**
KSH				sS	sS	21 16 32.0	-1.7
KSH				LR	LR		
	comp=Z,140nm,9.9s						
KSH				LR	LR		
	comp=Z,190nm,6.4s						
KSH				LR	LR		
	comp=Z,92nm,9.5s						
MK31	**Makanchi Array**	**65.75**	**332**	P	**P**	**21 07 17.8**	**0.0**
MKAR	**Makanchi Array**	**65.75**	**332**	P	**P**	**21 07 18.2**	**+0.5**
	comp=Z,14nm,0.6s,baz=139,slow=7.6,SNR=164						
MKAR				PcP	**PcP**	**21 07 48.9**	**+1.1**
	comp=Z,1.4nm,0.5s,baz=125,slow=5.2,SNR=1.8						
MKAR	**Makanchi Array**	**65.75**	**332**	P	**P**	**21 07 17.3**	**-0.5**
KBL	**Kabul**	**65.89**	**314**	P	**P**	**21 07 18.8**	**-0.4**
MAKZ	**Makanchi**	**65.90**	**332**	P	**P**	**21 07 18.4**	**-0.4**
MAKZ				IAmb	IAmb	21 07 19.8	
	comp=Z,6.4nm,0.6s						
AAK	**Ala-Archa**	**67.01**	**324**	P	**P**	**21 07 26.5**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=100,slow=5.0,SNR=5.7						
AAK				PcP	**PcP**	**21 07 56.2**	**+2.9**
	comp=Z,2.6nm,0.9s,baz=135,slow=4.9,SNR=3.6						
AAK	**Ala-Archa**	**67.01**	**324**	P	**P**	**21 07 25.7**	**-0.4**
AAK				IAmb	IAmb	21 08 02.1	
	comp=Z,9.7nm,1.4s						
PETK	**Petropavlovsk-**	**69.43**	**22**	P	**P**	**21 07 42.1**	**+1.4**
	comp=Z,2.4nm,0.6s,baz=354,slow=2.5,SNR=5.0						
PETK	**Petropavlovsk-**	**69.43**	**22**	P	**P**	**21 07 41.4**	**+0.7**
MAW	**Mawson**	**69.77**	**200**	P	**P**	**21 07 41.6**	**-1.0**
	comp=Z,4.8nm,0.5s,baz=297,slow=22,SNR=6.6						
MAW	**Mawson**	**69.77**	**200**	P	**P**	**21 07 41.3**	**-1.3**
MAW				IAmb	IAmb	21 09 25.8	
	comp=Z,23nm,1.9s						
ZAA0	**Zalesovo Array**	**70.11**	**338**	P	**P**	**21 07 43.7**	**-1.2**
ZALV	**Zalesovo Beam**	**70.11**	**338**	P	**P**	**21 07 43.9**	**-1.0**
	comp=Z,12nm,0.5s,baz=138,slow=4.9,SNR=52						
ZALV	**Zalesovo Beam**	**70.11**	**338**	P	**P**	**21 07 43.5**	**-1.3**
KURBB	**Kurchatov Arra**	**70.23**	**333**	P	**P**	**21 07 46.0**	**+0.4**
	comp=Z,5.1nm,0.5s,baz=147,slow=5.4,SNR=28						
KURBB				PcP	**PcP**	**21 08 08.0**	**+1.5**
	comp=Z,0.8nm,0.5s,baz=146,slow=5.0,SNR=4.2						
KURK	**Kurchatov**	**70.25**	**333**	P	**P**	**21 07 45.9**	**+0.2**
KURK				IAmb	IAmb	21 07 46.8	
	comp=Z,13nm,0.8s						
YAK	**Yakutsk**	**71.38**	**4**	P	**P**	**21 07 52.0**	**-0.3**
	comp=Z,4.8nm,0.5s,baz=357,slow=1.6,SNR=7.7						
YAK	**Yakutsk**	**71.38**	**4**	P	**P**	**21 07 51.8**	**-0.5**
VNDA	**Vanda**	**71.38**	**171**	P	P	21 07 56.2	+3.9
	comp=Z,6.1nm,0.9s,baz=319,slow=9.8,SNR=6.9						
GEYT	**Alibeck**	**75.27**	**313**	P	**P**	**21 08 17.1**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=145,slow=5.3,SNR=3.1						
GEYT	**Alibeck**	**75.27**	**313**	P	**P**	**21 08 16.8**	**+1.0**
BVAR	**Borovoye Array**	**75.61**	**331**	P	**P**	**21 08 17.4**	**0.0**
	comp=Z,3.6nm,0.8s,baz=131,slow=6.7,SNR=15						
BRVK	**Borovoye**	**75.68**	**331**	P	**P**	**21 08 17.7**	**0.0**
SYO	**Syowa Base**	**78.43**	**201**⇓	*e*P	**P**	**21 08 35.6**	**+2.8**
SYO	**Syowa Base**	**78.43**	**201**⇓	*e*PcP	**PcP**	**21 08 43.6**	**+2.1**
SYO	**Syowa Base**	**78.43**	**201**⇑	*e*pP	pP	21 09 06.4	-3.0
ABKAR	**Akbulak array**	**79.09**	**324**	P	**P**	**21 08 35.9**	**-0.9**
ABKAR	**Akbulak array**	**79.09**	**324**	P	**P**	**21 08 36.1**	**-0.6**
ABKAR				IAmb	IAmb	21 11 04.9	
	comp=Z,14nm,0.4s						
QSPA	**South Pole Qui**	**80.73**	**180**	P	**P**	**21 08 48.2**	**+2.7**
	comp=Z,3.1nm,0.5s,baz=310,slow=0.7,SNR=11						
QSPA	**South Pole Qui**	**80.73**	**180**	P	**P**	**21 08 49.1**	**+3.7**
AKTO	**Aktyubinsk**	**80.74**	**325**	P	**P**	**21 08 45.4**	**-0.3**
	comp=Z,4.0nm,0.8s,baz=105,slow=6.8,SNR=12						
TIXI	**Tiksi**	**80.90**	**2**	P	**P**	**21 08 45.7**	**-0.2**
	comp=Z,6.2nm,0.5s,baz=192,slow=2.9,SNR=27						
TIXI	**Tiksi**	**80.90**	**2**	P	**P**	**21 08 45.0**	**-1.0**
ARU	**Arti**	**83.21**	**330**	P	**P**	**21 08 57.9**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=104,slow=2.5,SNR=4.6						
ARU	**Arti**	**83.21**	**330**	P	**P**	**21 08 57.6**	**-0.8**
ARU				IAmb	IAmb	21 11 42.6	
	comp=Z,20nm,2.0s						
KMBO	**Kilima Mbogo**	**83.94**	**270**	P	**P**	**21 09 04.5**	**+1.1**
	comp=Z,1.5nm,0.6s,baz=71,slow=5.6,SNR=4.3						
TBLG	**Delisi**	**86.24**	**313**	P	**P**	**21 09 14.1**	**+0.2**
TBLG				IAmb	IAmb	21 09 17.3	
	comp=Z,8.1nm,1.0s						
AKH	**Akhalkalaki**	**87.05**	**313**	P	**P**	**21 09 17.4**	**-0.6**
AKH				IAmb	IAmb	21 09 21.8	
	comp=Z,6.6nm,1.3s						
KBZ	**Khabaz**	**88.07**	**315**	P	**P**	**21 09 23.7**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=145,slow=3.4,SNR=6.3						
LSZ	**Lusaka**	**90.56**	**255**	P	**P**	**21 09 38.0**	**+2.9**
LSZ				IAmb	IAmb	21 09 39.5	
	comp=Z,3.8nm,0.7s						
BOSA	**Boshof**	**90.87**	**241**	P	**P**	**21 09 39.9**	**+3.6**
	comp=Z,2.5nm,0.5s,baz=113,slow=5.7,SNR=14						
YKA	**Yellowknife Ar**	**113.49**	**25**	PKiKP	**PKiKP**	**21 15 10.2**	**+1.3**
	comp=Z,1.4nm,0.5s,baz=301,slow=1.9,SNR=24						
NVAR	**Mina Array Bea**	**119.43**	**51**	PKP	**PKiKP**	**21 15 24.1**	**+2.6**
	comp=Z,0.8nm,0.6s,baz=252,slow=3.2,SNR=5.3						
NVAR	**Mina Array Bea**	**119.43**	**51**		**PKiKP**	**21 15 22.7**	**+1.2**
TOA0	**Torodi Ar. Sit**	**120.74**	**280**		**PKiKP**	**21 15 25.0**	**+0.6**
TORD	**Torodi Ar. Bea**	**120.74**	**280**	PKP	**PKiKP**	**21 15 26.4**	**+2.0**
	comp=Z,3.6nm,0.6s,baz=80,slow=1.9,SNR=24						
TORD	**Torodi Ar. Bea**	**120.74**	**280**		**PKiKP**	**21 15 24.4**	**-0.1**
PDAR	**Pinedale Array**	**124.55**	**44**	PKP	**PKiKP**	**21 15 33.2**	**+1.7**
	comp=Z,0.3nm,0.4s,baz=140,slow=1.4,SNR=4.5						
PDAR	**Pinedale Array**	**124.55**	**44**		**PKiKP**	**21 15 31.7**	**+0.2**
DBIC	**Dimbokro**	**126.65**	**271**	PKP	**PKiKP**	**21 15 38.7**	**+2.5**
	comp=Z,0.9nm,0.4s,baz=61,slow=2.2,SNR=4.1						
ULM	**Lac du Bonnet**	**128.87**	**30**	PKP	**PKiKP**	**21 15 40.0**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=320,slow=3.1,SNR=4.7						
ULM	**Lac du Bonnet**	**128.87**	**30**		**PKiKP**	**21 15 39.8**	**+0.2**
TXAR	**Lajitas Array**	**133.46**	**58**	PKhKP	PKPpre	21 15 42.6	
	comp=Z,1.0nm,0.4s,baz=324,slow=31,SNR=4.4						
TXAR				PKP	**PKiKP**	**21 15 51.4**	**+1.8**
	comp=Z,0.4nm,0.9s,baz=205,slow=2.4,SNR=4.8						
SCHQ	**Schefferville**	**134.09**	**7**	PKP	**PKiKP**	**21 15 50.9**	**+0.9**
	comp=Z,2.3nm,0.5s,baz=286,slow=1.7,SNR=7.7						
SCHQ	**Schefferville**	**134.09**	**7**		**PKiKP**	**21 15 50.1**	**+0.1**
CPUP	**Villa Florida**	**144.59**	**182**	PKP	**PKiKP**	**21 16 11.4**	**-0.9**
	comp=Z,6.7nm,0.8s,baz=134,slow=1.1,SNR=12						
SIV	**San Ignacio**	**154.80**	**175**	PKP	**PKPbc**	**21 16 28.6**	**-5.0**
	comp=Z,0.9nm,0.7s,baz=56,slow=1.3,SNR=3.9						
SIV				PKPab	**PKPab**	**21 16 52.8**	**+3.8**
	comp=Z,0.7nm,0.5s,baz=196,slow=6.2,SNR=6.0						

IDC ***06*** *20:57:02.5±46.0, 38.08N×20.33E, h0km, mb3.5/3, mb1 3.5/3, mb1mx3.2/57, mbtmp3.5/3, MS2.6/1, Ms1 2.7/1, ms1mx2.2/42, Error ellipse: s-maj=862.7km s-min=65.7km az=45.0*

THE **06** 20:57:05.8,38.38N×20.42E,h11km±1km,ML3.1/13,Error ellipse: s-maj=1.4km s-min=0.4km az=254.0
ATH **06** 20:57:05.9,38.37N×20.46E,h13km±1km,ML3.0/6,Error ellipse: s-maj=2.4km s-min=0.7km az=276.0
ISC 06 20:57:06.1±0.8,**38.38N**±0.02×**20.48E**±0.03,**h8**km±5km, **n65**,σ**0.90**/94,**mb3.5**/3,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
KONA	Konidatara, Ke	0.09	55	P	Pg	20 57 08.3	0.0
KONA				S	Sg	20 57 10.2	+0.3
KEF1	Kardakata, Kep	0.10	185	P	Pg	20 57 08.4	0.0
KEF1				S	Sg	20 57 10.4	+0.3
KEF4	Livadi, Kephal	0.12	201	P	Pg	20 57 08.9	0.0
KEF4				S	Sg	20 57 11.5	+0.7
LXR1	Lixouri, Cepha	0.18	191	P	Pg	20 57 09.9	+0.2
LXR1				S	Sg	20 57 13.1	+0.9
LXRA	Lixouri, Kepha	0.18	191	P	Pg	20 57 10.1	+0.4
LXRA				S	Sg	20 57 13.3	+1.0
ARG2	Argostoli	0.20	178	P	Pg	20 57 10.1	0.0
ARG2				S	Sg	20 57 13.9	+1.1
ARGA	Argostoli. Kep	0.20	180	P	Pg	20 57 10.2	+0.1
ARGA				S	Sg	20 57 13.9	+1.0
CHV1	Chavriata, Kef	0.21	202	S	Sg	20 57 14.1	+1.0
KEF2	Argostoli. Kep	0.21	179	P	Pg	20 57 10.4	+0.1
KEF2				S	Sg	20 57 14.1	+0.9
VLS	Valsamata	0.21	157	P	Pg	20 57 10.5	+0.1
VLS				S	Sg	20 57 14.4	+1.0
	5μm,0.1s						
VLS	Valsamata	0.21	157	P	Pg	20 57 10.5	+0.1
VLS				S	Sg	20 57 14.4	+1.0
VLS				AML	AML	20 57 16.6	
	comp=N,12846μm,0.4s						
VLS				AML	AML	20 57 17.0	
	comp=E,10034μm,0.1s						
EVGI	Lefkada island	0.28	29	P	Pg	20 57 11.8	+0.1
EVGI				S	Sg	20 57 16.6	+1.1
EVGI	Lefkada island	0.28	29	P	Pg	20 57 11.9	+0.2
EVGI				S	Sg	20 57 17.0	+1.5
MGNA	Meganis	0.37	41	P	Pg	20 57 13.4	+0.1
MGNA				S	Sg	20 57 19.6	+1.3
MGNA				AML	AML	20 57 20.1	
	comp=N,10118μm,0.3s						
MGNA				AML	AML	20 57 20.4	
	comp=E,6776μm,0.3s						
LKD2	Lefkada island	0.44	18	P	Pg	20 57 14.5	-0.1
LKD2				S	Sg	20 57 21.2	+0.9
	comp=E,2μm,0.5s						
LKD2	Lefkada island	0.44	18	P	Pg	20 57 14.5	-0.1
LKD2				S	Sg	20 57 21.3	+0.9
LKD2				AML	AML	20 57 28.4	
	comp=N,5152μm,0.6s						
LKD2				AML	AML	20 57 29.4	
	comp=E,3439μm,0.6s						
TSLK	Tsoukalades, L	0.47	17	P	Pg	20 57 15.2	-0.1
TSLK				S	Sg	20 57 21.9	+0.5
	comp=E,3μm,0.6s						
TSLK	Tsoukalades, L	0.47	17	P	Pg	20 57 15.1	-0.1
AST1	Astakos	0.51	71	P	Pg	20 57 16.0	+0.1
AST1				S	Sb	20 57 24.8	+0.1
	comp=E,4μm,0.4s						
VLMS	Volimes, Zakyn	0.52	164	P	Pg	20 57 15.9	-0.2
VLMS				S	Sb	20 57 24.2	-0.9
VLMS				AML	AML	20 57 25.2	
	comp=N,15883μm,0.5s						
VLMS				AML	AML	20 57 29.0	
	comp=E,7974μm,0.4s						
PDO	Prodromos	0.59	68	P	Pg	20 57 17.6	0.0
PDO	Prodromos	0.59	68	P	Pg	20 57 17.6	0.0
PDO				S	Sb	20 57 26.7	-0.5
PDO				AML	AML	20 57 31.7	
	comp=E,3785μm,0.6s						
PDO				AML	AML	20 57 34.7	
	comp=N,4745μm,0.4s						
ZAK2	Zakynthos	0.67	150	P	Pg	20 57 19.2	+0.2
ZAK2				S	Sb	20 57 28.8	-0.7
	comp=N,11μm,0.5s						
KRI1	kERI	0.76	159	P	Pg	20 57 20.1	-0.6
RLS	Riolos of Patr	0.84	112	P	Pg	20 57 22.1	-0.1
RLS	Riolos of Patr	0.84	112	P	Pg	20 57 22.1	-0.1
RLS				S	Sg	20 57 33.9	+0.8
RLS				AML	AML	20 57 40.3	
	comp=N,1386μm,0.7s						
RLS				AML	AML	20 57 40.5	
	comp=E,894μm,0.6s						
PVO	Paravola	0.85	73	P	Pg	20 57 22.7	+0.2
PVO				S	Sn	20 57 37.4	+0.4
	comp=E,2μm,0.8s						
PVO	Paravola	0.85	73	P	Pg	20 57 22.7	+0.2
DRO	Drossia	1.06	113	P	Pg	20 57 25.9	-0.5
DRO				S	Sn	20 57 44.1	+2.0
	comp=E,2μm,0.4s						
DRO	Drossia	1.06	113	P	Pg	20 57 26.2	-0.2
ANX	Ano Chora	1.15	79	P	Pg	20 57 27.8	-0.4
ANX				S	Sn	20 57 46.1	+1.6
	comp=E,1μm,0.7s						
ANX	Ano Chora	1.15	79	P	Pg	20 57 27.6	-0.6
IGT	Igoumenitsa	1.16	354	P	Pb	20 57 27.8	-0.6
IGT				S	Sn	20 57 44.9	+0.2
	comp=E,540nm,0.5s						
EVR	Evrytania	1.17	62	P	Pb	20 57 27.6	-1.0
EVR				S	Sn	20 57 45.2	+0.2
	comp=E,552nm,0.9s						
EVR	Evrytania	1.17	62	P	Pb	20 57 27.8	-0.8
LAKA	Lakka	1.19	96	P	Pb	20 57 28.5	-0.3
SERG	Sergoula	1.24	88	P	Pn	20 57 28.9	-0.8
SERG				S	Sb	20 57 44.9	-0.9
	comp=E,712nm,0.7s						
SERG	Sergoula	1.24	88	P	Pn	20 57 28.9	-0.8
TRIZ	Trizonia	1.25	90	P	Pn	20 57 28.8	-1.0
TRIZ				S	Sn	20 57 49.4	+2.6
	comp=E,725nm,0.8s						
TRIZ	Trizonia	1.25	90	P	Pn	20 57 28.8	-1.0
AMT	Artemida-Makis	1.28	131	P	Pn	20 57 30.8	+0.1
ALIK	Aliki, Aigiali	1.29	95	P	Pn	20 57 29.9	-0.4
ALIK				S	Sg	20 57 47.9	+0.4
KALE	Kalithea	1.30	89	P	Pn	20 57 29.7	-0.9
KALE	Kalithea	1.30	89	P	Pn	20 57 29.8	-0.9
JAN	Janina	1.31	13	P	Pg	20 57 32.3	+1.0
KLV	Kalavryta, Ach	1.36	104	P	Pn	20 57 30.9	-0.4
KLV				S	Sg	20 57 52.2	+2.5
	comp=E,298nm,0.7s						
KLV	Kalavryta, Ach	1.36	104	P	Pn	20 57 30.8	-0.5
MAKR	Makrakomi, Fth	1.44	63	P	Pg	20 57 33.7	0.0
MAKR	Makrakomi, Fth	1.44	63	P	Pg	20 57 33.7	0.0
AGG	Agios Georgios	1.58	65	P	Pg	20 57 36.3	-0.2
AGG	Agios Georgios	1.58	65	P	Pg	20 57 36.2	-0.2
ITM	Ithomi	1.65	136	P	Pb	20 57 37.0	+0.2
ITM	Ithomi	1.65	136	P	Pb	20 57 37.2	+0.4
THL	Klokotos Trika	1.69	45	P	Pb	20 57 37.8	+0.5
KPRO	Kipourio	1.72	23	P	Pb	20 57 37.5	-0.4
VLX	Vlachokerasia	1.81	123	P	Pb	20 57 39.6	+0.2
OHR	Ohrid	2.74	5	*i* Pn	Pn	20 58 01.7	+3.1
STIP	Stip	3.56	21	*i* Pn	Pb	20 58 06.2	-3.1
SOKA	Soboth	9.22	336	*e*Pn	Pn	20 59 17.6	-1.7
	comp=E,2.2nm,0.8s						
OBKA	Obir	9.23	334	*e*Pn	Pn	20 59 19.6	+0.1
	comp=E,0.3nm,0.2s						
MOA	Molln	10.50	336	*e*Pn	Pn	20 59 36.4	-0.4
	comp=E,0.4nm,0.3s						
FINES	FINESS Array B	23.36	7	P	P	21 02 15.4	+0.8
	comp=E,1.0nm,0.7s,baz=180,slow=9.0,SNR=6.0						
NOA	NORSAR Array B	23.42	349	LR	LR	21 12 51.6	
	comp=E,15nm,21.8s,baz=235,slow=40						
MKAR	Makanchi Array	45.23	59	P	P	21 05 23.7	+0.1
	comp=E,0.1nm,0.4s,baz=277,slow=7.2,SNR=5.6						
ZALV	Zalesovo Beam	45.58	48	P	P	21 05 25.6	-0.7
	comp=E,0.4nm,0.3s,baz=276,slow=7.4,SNR=3.6						

IDC **06** 20:59:13.6±2.7,43.17N×105.09W,h0km,mb2.5/1, mb1 3.3/3,mb1mx3.1/56,mbtmp3.1/3,ML3.1/2,MS2.7/2, Ms1 2.7/2,ms1mx2.3/13,Error ellipse: s-maj=50.9km s-min=8.2km az=153.0
NEIC **06** 20:59:16.9±2.0,43.61N±0.05×105.09W±0.04,h0km±1km, ML2.5/59,Error ellipse: s-maj=9.1km s-min=5.1km az=183.0
ISC 06 20:59:15.1±0.8,**43.79N**±0.05×**105.57W**±0.04,**h0**km,**n45**, σ**1.77**/41,**Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
RSSD	Black Hills	1.15	73		Pg	20 59 37.2	-0.1
K22A	Casper	1.34	212		Pn	20 59 41.5	+0.3
K22A				IAML		21 00 05.0	
	comp=N,242nm,0.5s						
RWWY	Rawlins	2.42	211		Pb	20 59 59.5	-0.3
RWWY				IAML		21 00 33.8	
	comp=N,126nm,0.6s						
PHWY	Pilot Hill	2.49	178		Pn	20 59 57.2	0.0
N23A	Red Feather La	2.91	186		Pn	21 00 04.0	+1.1
N23A				IAML		21 00 45.1	
	comp=E,59nm,0.8s						
N23A				IAML		21 00 48.1	
	comp=N,87nm,0.8s						
LAO	LASA Array	2.94	351		Pb	21 00 08.3	0.0
RLMT	Red Lodge	2.96	298		Pg	21 00 10.0	-1.9
RLMT				IAML		21 01 04.4	
	comp=N,40nm,0.6s						
RLMT				IAML		21 01 09.0	
	comp=N,46nm,0.6s						
BW06	Boulder Array	3.09	252		Pb	21 00 10.5	-0.6
BW06				IAML		21 01 00.0	
	comp=E,28nm,0.4s						
BW06				IAML		21 01 00.6	
	comp=N,38nm,0.5s						
PD31	Pinedale Array	3.09	252		Pb	21 00 10.2	-0.9
PDAR	Pinedale Array	3.09	252	Pn	Pb	21 00 10.3	-0.7
	comp=N,1.5nm,0.3s,baz=76,slow=15,SNR=21						
PDAR				Pg	Pg	21 00 16.1	+1.7
	comp=N,4.7nm,0.3s,baz=71,slow=18,SNR=32						
PDAR				Lg	Lg	21 00 56.6	
	comp=N,5.5nm,0.3s,baz=74,slow=26,SNR=10						
PDAR	Pinedale Array	3.09	252	Pn	Pb	21 00 10.8	-0.3
YNE	Yellowstone No	3.41	292		Pb	21 00 15.6	-0.9
YMP	Mirror Lake Pl	3.43	288		Pb	21 00 14.8	-2.2
GCMT	Greycliff	3.54	306		Pb	21 00 17.6	-1.1
LKWY	Lake	3.56	284		Pg	21 00 20.2	-3.2
LKWY				IAML		21 01 32.8	
	comp=N,30nm,1.2s						
LKWY				IAML		21 02 11.2	
	comp=N,38nm,0.5s						
H17A	Grant Village	3.66	281		Pb	21 00 21.2	+0.4
H17A				IAML		21 01 24.6	
	comp=N,30nm,1.0s						
H17A				IAML		21 01 31.6	
	comp=E,21nm,2.6s						
FLWY	Flagg Ranch	3.72	276		Pb	21 00 21.6	-0.2
FLWY				IAML		21 01 28.0	
	comp=E,44nm,3.0s						
FLWY				IAML		21 01 58.4	
	comp=E,27nm,4.7s						
MOOW	Moose Ponds	3.75	271		Pb	21 00 20.8	-1.5
YPP	Pitchstone Pla	3.81	279		Pb	21 00 22.6	-0.8
REDW	Red Top Meadow	3.86	265		Pb	21 00 23.1	-1.2
OGNE	Ogallala	3.87	136		Pn	21 00 12.2	-3.7
IMW	Indian Meadow	3.89	273		Pb	21 00 23.5	-1.2
IMW				IAML		21 01 41.6	
	comp=E,20nm,0.6s						
IMW				IAML		21 01 45.5	
	comp=E,31nm,0.7s						
TPAW	Teton Pass	3.92	267		Pb	21 00 23.1	-2.1
TPAW				IAML		21 02 28.9	
	comp=E,17nm,4.0s						
TPAW				IAML		21 02 54.6	
	comp=E,24nm,4.6s						
YHH	Holmes Hill	3.92	287		Pb	21 00 24.1	-1.2
FXWY	Fox Creek	3.96	270		Pb	21 00 23.9	-2.0
YMR	Madison River	3.98	285		Pb	21 00 25.5	-0.7
ISCO	Idaho Springs	3.99	181		Pn	21 00 18.1	+0.3
YHB	Horse Butte	4.16	285		Pb	21 00 26.8	-2.4
O20A	White River Ci	4.16	210		Pn	21 00 22.7	+2.6
O20A				IAML		21 01 38.1	
	comp=E,33nm,1.4s						
YHL	Hebgen Lake	4.17	287		Pb	21 00 28.8	-0.7
AHID	Auburn Hatcher	4.17	258		Pb	21 00 26.3	-3.2
AHID				IAML		21 01 44.8	
	comp=N,26nm,0.7s						
AHID				IAML		21 01 48.9	
	comp=E,30nm,2.5s						
QLMT	Earthquake Lak	4.33	286		Pg	21 00 38.8	+0.6
RDMU	Red Mountain	4.38	224		Pn	21 00 26.6	+3.4
SMCO	Snowmass	4.73	193		Pn	21 00 26.3	-1.8
SMCO				IAML		21 02 50.7	
	comp=E,22nm,4.7s						
SMCO				IAML		21 02 56.1	
	comp=E,25nm,4.6s						
DGMT	Dagmar	4.78	11		Pn	21 00 31.3	+2.9
EGMT	Eagleton	5.14	327		Pb	21 00 40.1	-5.9
MCMT	McKenzie Canyo	5.33	284		Pb	21 00 42.0	-7.2
SRU	San Rafael Swe	5.98	220		Pn	21 00 46.4	+1.4
SDCO	Great Sand Dun	6.04	180	Pn	Pn	21 00 45.1	-0.8
ELK	Elko	7.79	250	LR	LR	21 04 06.5	
	comp=E,46nm,18.1s,baz=40,slow=37						
ANMO	Albuquerque	8.86	185	LR	LR	21 04 57.7	
	comp=E,57nm,21.5s,baz=323,slow=42						
I10CA	LAC DU BONNET	9.14	42	*i*		22 00 00.0	
	baz=216,slow=335,SNR=3.0						
ULM	Lac du Bonnet	9.24	42	Pn	Pn	21 01 29.6	0.0
	comp=E,0.6nm,0.3s,baz=227,slow=13,SNR=3.8						
ULM				Sn	Sn	21 03 11.8	-2.4
	comp=E,0.4nm,0.3s,baz=141,slow=8.2,SNR=2.6						
ULM				Lg	Lg	21 04 04.0	
	comp=E,0.2nm,0.3s,baz=146,slow=11,SNR=2.2						
ULM	Lac du Bonnet	9.24	42		Pn	21 01 29.3	-0.4
YKA	Yellowknife Ar	19.47	347	P	Pn	21 03 48.8	+4.4
	comp=E,0.1nm,0.4s,baz=156,slow=13,SNR=1.4						

JMA **06** 21:04:33.2±0.1,23.90N×121.95E,h28km±3km,M2.0
TAP **06** 21:04:34.0,23.94N×121.92E,h36km,ML2.5,C
ISC 06 21:04:33.7±1.0,**23.93N**±0.02×**121.92E**±0.02,**h32**km±3km, **n58**,σ**0.48**/105,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.29	266	P	Pn	21 04 41.6	-0.2
	baz=258						
ENLB				S	Sn	21 04 47.8	+0.8
	baz=258						
HWA	Hwalien	0.29	280	P	Pn	21 04 42.0	+0.3
	baz=272						
TWD	Chiawan	0.34	297	*i* P	Pb	21 04 42.1	+0.3
	baz=296						
TWD				*i* S	Sn	21 04 48.3	+0.2
	baz=296						
NACB	Ninganchiao	0.39	310	P	Pb	21 04 42.6	0.0
	baz=308						
NACB				S	Sb	21 04 49.1	+0.4
	baz=308						
ESL	Shilin	0.46	256	*i* P	Pn	21 04 44.0	-0.1
	baz=247						
ESL				*i* S	Sn	21 04 51.1	-0.1
	baz=247						
ETLH	Xiulin Townshi	0.49	305	P	Pb	21 04 44.2	+0.1
	baz=303						
ETLH				S	Sn	21 04 52.1	0.0
	baz=303						
EGFH	Guangfu	0.52	241	P	Pb	21 04 44.8	+0.2
	baz=239						
EGFH				S	Sn	21 04 53.4	+0.7
	baz=239						
ENA	Nanau	0.53	342	*i* P	Pb	21 04 44.7	0.0
	baz=332						
ENA				S	Sn	21 04 52.8	-0.1
	baz=332						
HGSD	Ruisui	0.63	227	*e*P	Pb	21 04 46.3	0.0
	baz=221						
HGSD				*e*S	Sn	21 04 55.4	+0.1
	baz=221						
WHF	Hehuan Shan	0.64	290	*i* P	Pn	21 04 47.1	+0.2
	baz=280						
WHF				S	Sb	21 04 56.1	+0.3
	baz=280						
EOS1	EOS1	0.65	17	*e*P	Pn	21 04 46.5	-0.1
	baz=27						
EOS1				S	Sn	21 04 55.9	+0.1
	baz=27						
OWD	Renai	0.68	273	P	Pn	21 04 47.3	0.0
	baz=279						
OWD				S	Sb	21 04 56.5	-0.2
	baz=279						
TWC	Suao	0.69	354	P	Pb	21 04 47.5	+0.2
	baz=355						
TWC				S	Sn	21 04 56.9	+0.2
	baz=355						
EHY	Hungye	0.69	233	P	Pn	21 04 47.1	-0.1
	baz=231						
EHY				S	Sb	21 04 56.1	-0.6
	baz=231						
CHGB	Renai	0.70	281	P	Pn	21 04 47.6	+0.1
	baz=272						
CHGB				*e*S	Sb	21 04 57.2	+0.1
	baz=272						
NNSB	Datong	0.70	316	P	Pn	21 04 47.6	+0.1
	baz=315						
NNSB				*i* S	Sb	21 04 57.1	0.0
	baz=315						
NNSH	Datong	0.70	316	P	Pn	21 04 47.5	-0.1
	baz=314						
NNSH				S	Sb	21 04 56.9	-0.3
	baz=314						
NNS	Nan Shan	0.72	316	*i* P	Pn	21 04 47.9	+0.1
	baz=315						
NNS				*i* S	Sb	21 04 57.7	+0.1
	baz=315						
VWDT	VWDT	0.74	257	P	Pb	21 04 48.3	+0.2
	baz=246						
VWDT				S	Sn	21 04 58.5	+0.6
	baz=246						
TWT	Tachien	0.76	296	*i* P	Pb	21 04 48.9	+0.3
	baz=294						
TWT				*i* S	Sn	21 04 58.6	-0.2
	baz=294						
NDT	Datong Townshi	0.77	331	P	Pn	21 04 48.5	+0.1
	baz=331						
NDT				S	Sn	21 04 59.0	+0.1
	baz=331						
TDCB	Techi	0.77	295	P	Pb	21 04 48.8	0.0
	baz=286						
TDCB				S	Sn	21 04 59.2	+0.2
	baz=286						
YULB	Yu-li	0.78	227	P	Pn	21 04 48.0	-0.5
	baz=237						
YULB				S	Sn	21 04 58.8	-0.3
	baz=237						
ENTT	Nioudou	0.78	336	P	Pn	21 04 48.6	+0.1
	baz=335						
ENTT				S	Sn	21 04 59.1	0.0
	baz=335						
TWF1	Yuli	0.81	225	*i* P	Pn	21 04 48.6	-0.3
	baz=236						
TWF1				*i* S	Sn	21 04 59.7	-0.1
	baz=236						
TWE	Neicheng	0.83	344	*e*P	Pn	21 04 48.7	-0.4
	baz=344						
TWE				S	Sb	21 05 00.6	+0.2
	baz=344						
SLBB	Yuanshan	0.87	342	P	Pn	21 04 49.9	+0.2
	baz=342						
SLBB				*e*S	Sb	21 05 01.9	+0.3
	baz=342						
YHNB	Yeheng	0.89	326	P	Pn	21 04 49.6	-0.6
	baz=315						
YHNB				*e*S	Sn	21 05 01.7	-0.3
	baz=315						
SSLB	Suanglung	0.90	261	P	Pn	21 04 50.5	+0.4
	baz=260						
SSLB				*e*S	Sn	21 05 02.2	+0.2
	baz=260						
NSK	Sanguang	0.91	326	P	Pb	21 04 50.8	-0.3
	baz=315						
NSK				S	Sn	21 05 01.6	-0.7
	baz=315						
DPDB	Guoxing	0.92	277	P	Pb	21 04 51.1	-0.1
	baz=271						
DPDB				S	Sb	21 05 03.8	+0.6
	baz=271						
NWLT	Wulai	0.93	336	P	Pn	21 04 50.3	-0.3
	baz=324						
NWLT				S	Sn	21 05 02.9	0.0
	baz=324						
SMLT	Sun Moon Lake	0.94	268	P	Pn	21 04 51.2	+0.4
	baz=266						
SMLT				*e*S	Sb	21 05 03.6	-0.1
	baz=266						
WHP	Taichung City	0.96	292	P	Pb	21 04 51.8	-0.1
	baz=291						
WHP				S	Sn	21 05 04.2	+0.6
	baz=291						
WHYT	Xinyi Township	1.01	257	P	Pb	21 04 52.2	-0.4
	baz=247						
WHYT				S	Sb	21 05 06.7	+1.1
	baz=247						
LIOB	Emei	1.09	311	P	Pb	21 04 54.1	-0.1
	baz=311						
LIOB				S	Sb	21 05 08.2	0.0
	baz=311						
NSTT	Nanjuang	1.10	310	P	Pb	21 04 54.8	+0.7
	baz=310						
NSTT				S	Sb	21 05 08.1	-0.1
	baz=310						
ELDTW	Lidau	1.11	229	P	Pn	21 04 52.4	-0.7
	baz=227						
ELDTW				S	Sn	21 05 07.2	-0.1
	baz=227						
WLTB	Daxi	1.11	327	*e*S	Sn	21 05 07.6	+0.5
	baz=326						
YOJ	Yonaguni jima	1.13	62	P	Pn	21 04 53.5	+0.2
YOJ				*e*S	Sn	21 05 07.9	+0.2
TWQ1	Liyutan	1.13	292	P	Pb	21 04 54.7	0.0
	baz=291						
TWQ1				S	Sb	21 05 10.3	+1.1
	baz=291						
CHN5	Tsauling	1.19	254	P	Pb	21 04 55.9	+0.2
	baz=253						
CHN5				S	Sb	21 05 11.7	+0.9
	baz=253						
WGK	Gukeng	1.27	259	*e*S	Sb	21 05 14.2	+1.1
	baz=258						
YM10	YM10	1.27	345	S	Sb	21 05 12.6	-0.6
	baz=330						
YM04	YM04	1.27	344	*e*S	Sb	21 05 12.6	-0.7
	baz=334						
YM05	YM05	1.28	345	*e*S	Sn	21 05 11.5	+0.1
	baz=331						
WDLH	Douliu	1.29	260	*e*S	Sb	21 05 14.4	+0.8
	baz=258						
STYT	Tauyuan	1.31	235	*e*S	Sb	21 05 13.8	-0.6
	baz=226						
TPUB	Ta-pu	1.34	243	P	Pb	21 04 57.7	-0.5
	baz=241						
TPUB				*e*S	Sb	21 05 14.9	-0.1
	baz=241						
CHN4	Tsaushan	1.35	245	*e*P	Pb	21 04 58.2	-0.2
	baz=244						
CHN4				*e*S	Sb	21 05 17.0	+1.7
	baz=244						
WTP	Ta-pu	1.38	241	P	Pb	21 04 58.4	-0.5
	baz=239						
WTP				*e*S	Sb	21 05 15.9	-0.3
	baz=239						
RLNB	Erlin	1.43	269	*e*S	Sb	21 05 18.2	+0.5
	baz=268						
IRIF	Iriomote-Funau	1.70	76	P	Pn	21 05 01.6	+0.5
IRIF				S	Sn	21 05 22.3	+0.5
HATJ	Hateruma jima	1.73	85	*e*S	Sn	21 05 22.4	0.0
JKRS	Kuro-shima	1.93	80	P	Pn	21 05 05.4	+1.1
JKRS				S	Sn	21 05 29.0	+1.5
JIJ	Ishigaki jima	2.08	77	P	Pn	21 05 06.7	+0.4
JIJ				S	Sn	21 05 30.3	-0.7
JISG	Ishigakijimahi	2.28	73	P	Pn	21 05 09.2	+0.1
JISG				*e*S	Sn	21 05 35.1	-0.9
JTJ	Tarama	2.63	74	*e*S	Sn	21 05 45.1	+0.3

ATH **06** 21:07:10.7,38.20N×20.39E,h18km,ML3.1/8,Error ellipse: s-maj=1.7km s-min=0.8km az=252.0
PDG **06** 21:07:10.3±0.5,38.27N×20.31E,h12km±1km,ML3.3/12, Error ellipse: s-maj=1.1km s-min=1.0km az=90.0
THE **06** 21:07:11.1,38.20N×20.39E,h16km,ML3.2/6,Error ellipse: s-maj=1.5km s-min=0.7km az=265.0
IDC **06** 21:07:15.0±4.0,38.26N×20.08E,h66km±40km,mb3.5/4, mb1 3.5/7,mb1mx3.1/47,mbtmp3.6/7,ML3.1/3,Error ellipse: s-maj=49.7km s-min=21.9km az=150.0
ISC 06 21:07:10.6±0.8,**38.21N**±0.02×**20.36E**±0.03,**h18**km±3km, **n87**,σ**0.80**/122,**mb3.8**/4,**1C-1D**,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.01	250	P	Pg	21 07 13.7	0.0
KEF3				S	Sg	21 07 15.4	-0.4
CHV1	Chavriata, Kef	0.03	145	P	Pg	21 07 13.8	+0.1
CHV1				S	Sg	21 07 15.7	-0.1
LXRA	Lixouri, Kepha	0.06	96	P	Pg	21 07 14.0	+0.1

LXRA S Sg 21 07 16.1 0.0
LXR1 Lixouri, Cepha 0.06 96 P Pg 21 07 14.0 +0.1
LXR1 S Sg 21 07 16.3 +0.2
KEF4 Livadi, Kephal 0.07 44 P Pg 21 07 14.0 0.0
KEF4 S Sg 21 07 16.2 -0.1
ARGA Argostoli. Kep 0.10 108 P Pg 21 07 14.3 +0.1
ARGA S Sg 21 07 16.6 -0.1
ARG2 Argostoli 0.10 106 P Pg 21 07 14.4 +0.1
ARG2 S Sg 21 07 15.9 -0.8
KEF2 Argostoli. Kep 0.11 113 P Pg 21 07 14.4 +0.1
KEF2 S Sg 21 07 16.6 -0.3
VLS Valsamata 0.18 99 P Pg 21 07 15.3 0.0
VLS S Sg 21 07 18.4 -0.1
41μm,0.1s
VLS Valsamata 0.18 99 P Pg 21 07 15.2 0.0
VLS S Sg 21 07 18.3 -0.2
VLS AML AML 21 07 18.5
comp=E,84161μm,0.1s
VLS AML AML 21 07 18.6
comp=N,74527μm,0.1s
KONA Konidatara, Ke 0.27 37 P Pg 21 07 16.7 -0.1
KONA S Sg 21 07 20.4 -0.4
VLMS Volimes, Zakyn 0.41 144 P Pb 21 07 19.1 -0.2
VLMS S Sb 21 07 24.9 -0.3
VLMS AML AML 21 07 26.2
comp=E,21383μm,0.3s
VLMS AML AML 21 07 27.9
comp=N,24990μm,0.2s
EVGI Lefkada island 0.47 29 P Pg 21 07 20.1 -0.1
EVGI S Sg 21 07 26.3 -0.4
EVGI Lefkada island 0.47 29 P Pg 21 07 20.1 -0.1
EVGI S Sb 21 07 27.0 -0.1
MGNA Meganis 0.56 37 P Pg 21 07 21.3 -0.5
MGNA S Sb 21 07 29.7 +0.1
MGNA AML AML 21 07 33.5
comp=N,2109μm,0.4s
MGNA AML AML 21 07 36.3
comp=E,2588μm,0.3s
LKD2 Lefkada island 0.63 22 P Pg 21 07 22.8 -0.2
LKD2 S Sn 21 07 34.0 -0.2
comp=E,800nm,0.2s
LKD2 Lefkada island 0.63 22 P Pg 21 07 22.5 -0.5
LKD2 S Sb 21 07 32.4 +0.9
LKD2 AML AML 21 07 39.1
comp=N,1560μm,0.2s
LKD2 AML AML 21 07 43.6
comp=E,1687μm,0.4s
KRI1 kERI 0.65 146 P Pb 21 07 23.4 0.0
KRI1 S Sb 21 07 33.2 +1.1
comp=E,4μm,0.5s
TSLK Tsoukalades, L 0.66 20 P Pb 21 07 23.4 -0.2
TSLK Tsoukalades, L 0.66 20 P Pb 21 07 23.4 -0.2
AST1 Astakos 0.66 59 P Pb 21 07 23.4 -0.2
AST1 S Sg 21 07 32.9 +0.4
comp=E,4μm,0.4s
PDO Prodromos 0.76 59 P Pb 21 07 24.2 -1.0
PDO Prodromos 0.76 59 P Pb 21 07 25.1 -0.1
PDO AML AML 21 07 42.0
comp=E,2056μm,0.4s
PDO AML AML 21 07 42.4
comp=N,3172μm,0.3s
RLS Riolos of Patr 0.88 99 P Pb 21 07 27.3 -0.1
RLS Riolos of Patr 0.88 99 P Pb 21 07 26.8 -0.6
PVO Paravola 1.00 66 P Pg 21 07 29.9 -0.2
PVO S Sn 21 07 44.0 +0.6
comp=N,1μm,0.5s
PVO Paravola 1.00 66 P Pn 21 07 29.6 -0.1
PVO AML AML 21 07 49.5
comp=N,2553μm,0.5s
PVO AML AML 21 07 51.8
comp=E,3204μm,0.5s
DRO Drossia 1.09 103 P Pb 21 07 28.8 -2.2
LAKA Lakka 1.27 88 P Pb 21 07 34.2 +0.1
LAKA Lakka 1.27 88 P Pb 21 07 34.1 0.0
LAKA AML AML 21 07 58.3
comp=E,767μm,0.5s
LAKA AML AML 21 08 03.3
comp=N,886μm,0.5s
ANX Ano Chora 1.28 72 P Pb 21 07 34.4 +0.1
ANX Ano Chora 1.28 72 P Pb 21 07 34.4 +0.1
IGT Igoumenitsa 1.32 359 P Pg 21 07 35.6 -0.6
IGT Igoumenitsa 1.32 359 P Pg 21 07 35.5 -0.6
EVR Evrytania 1.34 58 P Pb 21 07 35.2 0.0
EVR Evrytania 1.34 58 P Pb 21 07 35.1 -0.1
SERG Sergoula 1.35 81 P Pb 21 07 35.1 -0.3
SERG Sergoula 1.35 81 P Pb 21 07 35.1 -0.3
TRIZ Trizonia 1.36 83 P Pb 21 07 35.2 -0.2
TRIZ Trizonia 1.36 83 P Pb 21 07 35.1 -0.4
ALIK Aliki, Aigiali 1.38 87 P Pb 21 07 36.0 +0.2
KALE Kalithea 1.41 82 P Pb 21 07 36.3 -0.2
KALE Kalithea 1.41 82 P Pb 21 07 36.2 -0.2
KALE AML AML 21 08 06.5
comp=E,718μm,0.5s
KALE AML AML 21 08 10.0
comp=N,1082μm,0.5s
KLV Kalavryta, Ach 1.42 96 P Pb 21 07 36.8 +0.2
KLV S Sn 21 07 53.2 -0.6
comp=N,250nm,0.5s
KLV Kalavryta, Ach 1.42 96 P Pb 21 07 36.6 0.0
JAN Janina 1.50 15 P Pg 21 07 39.1 -0.4
JAN Janina 1.50 15 P Pg 21 07 39.3 -0.1
KASA Kassiopi 1.57 348 P Pg 21 07 39.4 +0.3
MAKR Makrakomi, Fth 1.60 59 P Pb 21 07 40.5 +0.8
ITM Ithomi 1.61 129 P Pb 21 07 39.9 +0.1
ITM Ithomi 1.61 129 P Pb 21 07 39.9 +0.1
SRN Sarande 1.69 351 P Pb 21 07 40.8 -0.4
AGG Agios Georgios 1.74 62 P Pb 21 07 42.5 +0.4
AGG Agios Georgios 1.74 62 P Pb 21 07 42.9 +0.8
VLX Vlachokerasia 1.80 117 P Pb 21 07 43.2 +0.1
KPRO Kipourio 1.91 24 P Pb 21 07 45.9 +0.9
PROD Prodromos 2.00 88 P Pb 21 07 46.0 -0.4
PROD Prodromos 2.00 88 P Pb 21 07 46.1 -0.1
LTK Loutraki 2.06 94 P Pb 21 07 47.0 -0.5
VILL Villia 2.33 90 P Pb 21 07 50.6 -1.4
OHR Ohrid 2.92 7 iPn Pn 21 07 55.3 -0.9
TIP Timpagrande 2.98 290 P Pn 21 07 59.0 +2.0
STIP Stip 3.75 21 iPn Pb 21 08 13.3 -3.0
ULC Ulcinj 3.85 347 ePn Pn 21 08 09.3 +0.4
ULC eSn Sn 21 08 54.6 +0.9
DRME Dracevica, Mon 4.08 348 ePn Pn 21 08 12.7 +0.7
DRME eSn Sn 21 09 00.3 +1.0
BUM Brajici-Budva 4.24 345 ePn Pn 21 08 15.0 +0.7
BUM eSn Sn 21 09 04.3 +0.9
TTG Podgorica 4.30 349 ePn Pn 21 08 16.0 +0.9
TTG eSn Sn 21 09 05.9 +1.1
PVY Plav 4.39 356 ePn Pn 21 08 17.1 +0.6
PVY eSn Sn 21 09 07.9 +0.6
HCY Herceg Novi 4.47 342 ePn Pn 21 08 17.3 -0.1
HCY eSn Sn 21 09 09.9 +0.9
CEME Cevo 4.47 346 ePn Pn 21 08 17.9 +0.4
CEME eSn Sn 21 09 09.6 +0.5
IVA Berane 4.67 356 ePn Pn 21 08 21.2 +0.9
IVA eSn Sn 21 09 14.9 +0.8
NKME Niksic 4.68 347 ePn Pn 21 08 21.3 +0.9
NKME eSn Sn 21 09 14.9 +0.7
KOME Kolasin 4.68 352⇑iPn Pn 21 08 21.0 +0.6
KOME eSn Sn 21 09 15.1 +0.7
NKY Niksic 4.72 348 ePn Pn 21 08 21.5 +0.6
NKY eSn Sn 21 09 15.6 +0.4
VAE Valguarnera 4.76 263 P Pn 21 08 22.9 +1.4
comp=N,0.5nm,0.3s,baz=215,slow=23,SNR=1.8
VAE S Sn 21 09 14.7 -1.6
comp=N,1.0nm,0.3s,baz=356,slow=21,SNR=1.8
BRY Bratogost 4.89 344 ePn Pn 21 08 23.5 +0.2
BRY eSn Sn 21 09 20.1 +0.6
UPM Unac-Piva 5.11 348⇓iPn Pn 21 08 27.4 +1.0
UPM eSn Sn 21 09 25.5 +0.4
MLR Muntele Rosu 8.38 28 P Pn 21 09 15.8 +4.5
comp=N,0.0nm,0.3s,baz=115,slow=21,SNR=1.3
SOKA Soboth 9.33 337 ePn Pn 21 09 24.3 0.0
comp=N,1.1nm,0.3s
OBKA Obir 9.34 334 ePn Pn 21 09 25.8 +1.4
comp=N,0.7nm,0.2s
KBA Koelnbreinsper 10.26 332 Pn Pn 21 09 37.5 +0.5
comp=N,0.2nm,0.2s
ABTA Abfaltersbach 10.31 328 Pn Pn 21 09 38.4 +0.8
comp=N,0.4nm,0.3s
GERES GERESS Array B 11.67 338 P Pn 21 09 55.0 -1.3
comp=N,0.2nm,0.3s,baz=155,slow=14,SNR=4.0
FINES FINESS Array B 23.53 7 P P 21 12 18.9 -0.6
comp=N,1.4nm,0.8s,baz=193,slow=7.8,SNR=4.0
ARCES ARCESS Array B 31.51 3 P P 21 13 30.8 -0.4
comp=N,1.6nm,0.9s,baz=184,slow=9.0,SNR=3.9

MKAR Makanchi Array 45.39 58 P P 21 15 27.8 -0.2
comp=N,0.4nm,0.5s,baz=280,slow=6.5,SNR=9.8
ZALV Zalesovo Beam 45.77 48 P P 21 15 30.2 -0.5
comp=N,0.7nm,0.4s,baz=272,slow=7.6,SNR=4.2

NEIC 06 21:15:56.6±1.9, 19.08N±0.06×66.80W±0.03, h24km±9km, Error ellipse: s-maj=8.3km s-min=2.9km az=165.0
NEIC 06 21:16:54.7±1.9, 18.98N±0.07×66.87W±0.01, h35km±54km, Error ellipse: s-maj=10.6km s-min=1.4km az=176.0
RSPR 06 21:15:58.5, 19.14N×66.86W, h24km±10km, MD2.9/13, 15C-1D, Puerto Rico region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AGPR Aguadilla, PR 0.71 200⇑eP Pb 21 16 10.5 -1.8
AGPR Aguadilla, PR 0.71 200 eS Sb 21 16 19.8 -1.8
AGPR Aguadilla, PR 0.71 200 Pb 21 16 10.5 -1.8
AGPR Sb 21 16 19.8 -1.8
EMPR Esperanza - Ma 0.73 155⇓eP Pb 21 16 10.9 -1.6
EMPR Esperanza - Ma 0.73 155 eS Sb 21 16 20.5 -1.6
EMPR Esperanza - Ma 0.73 155 Pb 21 16 10.9 -1.6
EMPR Pn 21 16 20.5 +7.2
AOPR Arecibo Observ 0.80 173⇑eP Pb 21 16 11.6 -2.1
AOPR Arecibo Observ 0.80 173⇑eP Pb 21 16 11.8 -1.9
AOPR Arecibo Observ 0.80 173 eS Sb 21 16 22.3 -1.7
AOPR Arecibo Observ 0.80 173 Pb 21 16 11.8 -1.9
AOPR Sb 21 16 22.3 -1.7
IDE Isla Desecheo 0.95 218⇑eP Pb 21 16 14.2 -2.1
IDE Isla Desecheo 0.95 218 eS Sb 21 16 26.1 -2.4
IDE Isla Desecheo 0.95 218 Pb 21 16 14.2 -2.1
IDE Sb 21 16 26.1 -2.4
MPR Mayaguez 0.96 196 Sb 21 16 26.4 -2.4
LSP Las Mesas 0.98 193⇑eP Pn 21 16 14.4 -2.4
LSP Las Mesas 0.98 193 Pn 21 16 14.4 -2.4
CELP Cerrillos 1.09 166⇑eP Pn 21 16 16.1 -2.2
CELP eS Sb 21 16 29.6 -2.9
CELP Cerrillos 1.09 166 Pn 21 16 16.1 -2.2
CELP Sb 21 16 29.6 -2.9
GCPR Guaynabo City 1.10 138⇑eP Pn 21 16 16.1 -2.4
GCPR Guaynabo City 1.10 138 eS Sb 21 16 29.8 -3.0
GCPR Guaynabo City 1.10 138 Pn 21 16 16.1 -2.4
GCPR Sb 21 16 29.8 -3.0
OBIP Obispado Ponce 1.12 168⇑eP Pn 21 16 16.6 -2.1
OBIP Obispado Ponce 1.12 168 eS Sb 21 16 30.0 -3.3
OBIP Obispado Ponce 1.12 168 Pn 21 16 16.6 -2.1
OBIP Sb 21 16 30.0 -3.3
CRPR Cabo Rojo, PR 1.15 192⇑eP Pn 21 16 16.8 -2.3
CRPR Cabo Rojo, PR 1.15 192 eS Sn 21 16 31.1 -3.0
CRPR Cabo Rojo, PR 1.15 192 Pn 21 16 16.8 -2.3
CRPR Sn 21 16 31.1 -3.0
GBPR Guanica, Bosqu 1.16 181⇑eP Pn 21 16 17.4 -1.8
GBPR Guanica, Bosqu 1.16 181 Pn 21 16 17.4 -1.8
MLPR Magueyes Islan 1.18 189⇑eP Pn 21 16 16.5 -3.0
MLPR Magueyes Islan 1.18 189 Pn 21 16 16.5 -3.0
CBYP Canovanas 1.28 132⇑eP Pn 21 16 18.2 -2.7
CBYP Canovanas 1.28 132 Sn 21 16 32.7 -4.7
CBYP Canovanas 1.28 132 Pn 21 16 18.2 -2.7
IGPR InterUniversit 1.37 149⇑eP Pn 21 16 19.9 -2.1
IGPR InterUniversit 1.37 149 eS Sn 21 16 36.6 -2.8
IGPR InterUniversit 1.37 149 Sn 21 16 35.3 -4.2
HUMP Col San Antoni 1.38 136⇑eP Pn 21 16 20.1 -2.1
HUMP Col San Antoni 1.38 136 eS Sn 21 16 36.6 -3.1
HUMP Col San Antoni 1.38 136 Pn 21 16 20.1 -2.1
HUMP Sn 21 16 36.6 -3.1
MTP Monte Pirata 1.61 130⇑eP Pn 21 16 23.2 -2.3
MTP Monte Pirata 1.61 130 Pn 21 16 23.2 -2.3

DDA 06 21:16:03.5, 39.34N×27.95E, h7km±2km, ML1.1, Turkey

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STEP BALIKESIR_Sava 0.18 283 iP Pg 21 16 07.4 +0.1
STEP iS Sg 21 16 11.2 +1.4
DURS Dursunbey 0.48 57 iP Pg 21 16 13.3 +0.4
DURS iS Sb 21 16 20.6 -1.2
DEMI Demirci 0.66 116 iP Pg 21 16 16.4 +0.1
MANT Manisa 0.97 150 iP Pn 21 16 24.3 +0.6
MANT iS Sb 21 16 35.6 -0.2
BAYC CANAKKALE_Bayr 1.16 291 iP Pn 21 16 26.7 +0.6
BAYC iS Sn 21 16 42.6 +0.4
BAYC IAML 21 16 44.0
comp=N,4.3nm,0.4s

SKO 06 21:16:01.2, 38.26N×19.94E, h5km
BEO 06 21:16:01.9±0.7, 38.20N×20.07E, h19km±4km, ML3.7/9
PDG 06 21:16:01.7±0.4, 38.41N×20.34E, h8km, ML3.9/13, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0
THE 06 21:16:02.6, 38.39N×20.42E, h11km±1km, ML3.9/22, Error ellipse: s-maj=1.3km s-min=0.3km az=252.0
ATH 06 21:16:02.8, 38.36N×20.50E, h12km±1km, ML3.8/16, Error ellipse: s-maj=1.4km s-min=0.6km az=273.0
NEIC 06 21:16:05.2±2.4, 38.45N±0.06×20.34E±0.06, h20km±4km, Error ellipse: s-maj=8.7km s-min=6.4km az=192.0
IDC 06 21:16:07.6±1.2, 38.41N×20.41E, h45km±16km, mb3.7/13, mb1 3.7/22, mb1mx3.6/46, mbtmp3.8/22, ML3.6/7, MS3.1/7, Ms1 3.2/7, ms1mx2.8/59, Error ellipse: s-maj=14.9km s-min=10.0km az=15.0
ISC 06 21:16:03.1±0.7, 38.39N±0.02×20.46E±0.02, h9km±4km, n293, σ1§44/370, mb4.1/23, MS3.2/4, 15C-10D, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KONA Konidatara, Ke 0.10 67 P Pg 21 16 05.1 -0.5
KONA S Sg 21 16 07.1 -0.3
KEF1 Kardakata, Kep 0.11 174 P Pg 21 16 05.3 -0.4
KEF1 S Sg 21 16 07.4 -0.1
KEF4 Livadi, Kephal 0.13 191 P Pg 21 16 05.7 -0.3
KEF4 S Sg 21 16 08.3 +0.2
LXR1 Lixouri, Cepha 0.19 185 P Pg 21 16 06.8 -0.2
LXR1 S Sg 21 16 09.8 +0.2
LXRA Lixouri, Kepha 0.19 185 P Pg 21 16 06.8 -0.2
LXRA S Sg 21 16 09.8 +0.1
KEF3 Kipouria, Keph 0.20 205 P Pg 21 16 07.0 -0.3
KEF3 S Sg 21 16 10.5 +0.4
ARG2 Argostoli 0.21 173 P Pg 21 16 06.9 -0.5
ARG2 S Sg 21 16 10.3 0.0
CHV1 Chavriata, Kef 0.21 196 P Pg 21 16 07.1 -0.3
CHV1 S Sg 21 16 10.7 +0.3
KEF2 Argostoli. Kep 0.22 174 P Pg 21 16 07.1 -0.5
KEF2 S Sg 21 16 09.8 -0.9
VLS Valsamata 0.23 153 P Pg 21 16 07.3 -0.6
VLS S Sg 21 16 10.8 -0.3
36μm,0.4s
VLS Valsamata 0.23 153 P Pg 21 16 07.3 -0.6
VLS S Sg 21 16 11.1 0.0
VLS AML AML 21 16 11.3
comp=E,65041μm,0.1s
VLS AML AML 21 16 15.8
comp=N,54080μm,0.3s
EVGI Lefkada island 0.28 34 P Pg 21 16 08.6 -0.2
EVGI S Sg 21 16 13.4 +0.8
EVGI Lefkada island 0.28 34 P Pg 21 16 08.8 +0.1
EVGI S Sg 21 16 13.6 +1.1
MGNA Meganis 0.38 44 P Pg 21 16 10.1 -0.4
MGNA S Sg 21 16 16.3 +0.8
MGNA AML AML 21 16 17.0
comp=N,66883μm,0.3s
MGNA AML AML 21 16 17.2
comp=E,58936μm,0.4s
LKD2 Lefkada island 0.43 21 P Pg 21 16 11.1 -0.5
LKD2 S Sg 21 16 18.1 +0.8
comp=E,12μm,0.4s
LKD2 Lefkada island 0.43 21 P Pg 21 16 11.2 -0.4
LKD2 S Sg 21 16 18.3 +1.0
LKD2 AML AML 21 16 23.6
comp=E,18799μm,0.4s
LKD2 AML AML 21 16 25.2
comp=N,29073μm,0.5s
TSLK Tsoukalades, L 0.46 20 P Pg 21 16 11.9 -0.3
TSLK S Sg 21 16 18.3 0.0
comp=N,16μm,0.6s
TSLK Tsoukalades, L 0.46 20 P Pg 21 16 11.9 -0.3
TSLK S Sg 21 16 18.3 0.0
AST1 Astakos 0.52 73 P Pg 21 16 12.9 -0.3
AST1 S Sb 21 16 21.5 -0.5
comp=N,32μm,0.3s
VLMS Volimes, Zakyn 0.54 162 P Pg 21 16 12.7 -0.8

VLMS S Sg 21 16 21.0 +0.5
VLMS AML AML 21 16 22.0
comp=N,62845μm,0.5s
VLMS AML AML 21 16 23.8
comp=E,34277μm,0.3s
PDO Prodromos 0.61 69 P Pg 21 16 14.3 -0.6
PDO S Sb 21 16 24.1 -0.4
comp=E,24μm,0.3s
PDO Prodromos 0.61 69 P Pg 21 16 14.5 -0.4
PDO AML AML 21 16 29.0
comp=E,32362μm,0.3s
PDO AML AML 21 16 31.4
comp=N,36895μm,0.4s
ZAK2 Zakynthos 0.69 150 P Pg 21 16 16.0 -0.5
ZAK2 S Sb 21 16 27.7 +0.8
comp=N,53μm,0.5s
KRI1 kERI 0.78 158 P Pg 21 16 16.8 -1.3
KRI1 S Sb 21 16 29.3 -0.1
comp=N,23μm,0.4s
RLS Riolos of Patr 0.86 112 P Pg 21 16 18.7 -0.9
RLS S Sb 21 16 32.1 +0.3
comp=N,3μm,0.6s
RLS Riolos of Patr 0.86 112 P Pg 21 16 18.7 -0.9
RLS AML AML 21 16 39.8
comp=N,7453μm,0.5s
RLS AML AML 21 16 48.8
comp=E,5177μm,0.9s
PVO Paravola 0.87 74 P Pg 21 16 19.3 -0.5
PVO S Sn 21 16 33.9 -0.3
comp=E,10μm,0.6s
PVO Paravola 0.87 74 P Pg 21 16 19.6 -0.2
PVO AML AML 21 16 39.5
comp=E,18066μm,0.5s
PVO AML AML 21 16 40.6
comp=N,23788μm,0.7s
UPR University Cam 1.05 95 P Pg 21 16 22.9 -0.4
DRO Drossia 1.08 113 P Pg 21 16 22.4 -1.4
DRO S Sg 21 16 37.5 -0.3
comp=N,11μm,0.5s
DRO Drossia 1.08 113 P Pg 21 16 22.4 -1.4
DRO AML AML 21 16 45.3
comp=N,22347μm,0.4s
DRO AML AML 21 16 45.8
comp=E,22626μm,0.6s
IGT Igoumenitsa 1.15 355 P Pb 21 16 24.0 -1.1
IGT S Sn 21 16 41.7 +0.5
comp=E,2μm,0.8s
IGT Igoumenitsa 1.15 355 ePg Pn 21 16 26.2 +0.9
IGT eSg Sn 21 16 44.5 +3.3
IGT Igoumenitsa 1.15 355 P Pb 21 16 24.0 -1.1
ANX Ano Chora 1.17 79 P Pb 21 16 24.1 -1.3
ANX S Sn 21 16 43.2 +1.5
comp=E,8μm,0.6s
ANX Ano Chora 1.17 79 P Pb 21 16 24.2 -1.3
ANX AML AML 21 16 48.8
comp=E,14396μm,0.6s
ANX AML AML 21 16 52.7
comp=N,19499μm,0.6s
EVR Evrytania 1.18 63 P Pb 21 16 24.3 -1.4
EVR S Sn 21 16 43.0 +0.9
comp=N,2μm,0.7s
EVR Evrytania 1.18 63 P Pb 21 16 24.3 -1.4
EVR AML AML 21 16 51.1
comp=E,4748μm,0.8s
EVR AML AML 21 16 53.6
comp=N,5199μm,0.7s
LAKA Lakka 1.21 97 P Pb 21 16 24.7 -1.4
LAKA S Sn 21 16 42.8 +0.2
comp=N,1μm,0.8s
LAKA Lakka 1.21 97 P Pb 21 16 24.5 -1.6
LAKA AML AML 21 16 47.9
comp=N,4768μm,0.8s
LAKA AML AML 21 16 51.6
comp=E,5063μm,0.7s
SERG Sergoula 1.26 88 P Pn 21 16 25.3 -1.5
SERG S Sn 21 16 45.8 +1.9
comp=E,4μm,0.4s
SERG Sergoula 1.26 88 P Pn 21 16 25.4 -1.4
SERG AML AML 21 16 49.9
comp=E,8350μm,0.4s
SERG AML AML 21 16 50.5
comp=N,8154μm,0.4s
TRIZ Trizonia 1.27 90 P Pn 21 16 25.6 -1.4
TRIZ S Sb 21 16 42.9 -0.7
comp=N,5μm,0.7s
TRIZ Trizonia 1.27 90 P Pn 21 16 25.5 -1.4
JAN Janina 1.30 13 P Pg 21 16 28.0 -0.1
JAN S Sn 21 16 46.1 +1.0
comp=N,3μm,0.7s
JAN Janina 1.30 13 P Pg 21 16 28.1 -0.1
JAN AML AML 21 16 50.5
comp=N,6266μm,0.5s
JAN AML AML 21 16 52.2
comp=E,7373μm,0.9s
AMT Artemida-Makis 1.31 130 P Pn 21 16 27.1 -0.4
AMT Artemida-Makis 1.31 130 P Pn 21 16 27.0 -0.5
AMT AML AML 21 16 55.8
comp=N,11318μm,0.6s
AMT AML AML 21 16 56.9
comp=E,11235μm,0.8s
ALIK Aliki, Aigiali 1.31 95 P Pn 21 16 26.2 -1.3
ALIK S Sb 21 16 44.7 +0.1
KALE Kalithea 1.32 89 P Pn 21 16 26.4 -1.4
KALE S Sg 21 16 46.4 +0.7
comp=E,4μm,0.6s
KALE Kalithea 1.32 89 P Pn 21 16 26.4 -1.4
KLV Kalavryta, Ach 1.38 104 P Pn 21 16 27.8 -0.7
KLV S Sg 21 16 47.6 +0.2
comp=E,2μm,0.8s
KLV Kalavryta, Ach 1.38 104 P Pn 21 16 27.6 -1.0
KLV AML AML 21 16 57.4
comp=E,3338μm,0.7s
KLV AML AML 21 16 59.5
comp=N,3622μm,0.9s
KASA Kassiopi 1.42 344 P Pb 21 16 29.5 -0.1
MAKR Makrakomi, Fth 1.45 64 P Pb 21 16 29.3 -0.2
MAKR Makrakomi, Fth 1.45 64 P Pb 21 16 29.4 -0.2
SRN Sarande 1.53 347 P Pn 21 16 30.8 +0.2
AGG Agios Georgios 1.60 66 P Pb 21 16 32.3 -0.5
AGG Agios Georgios 1.60 66 P Pn 21 16 31.9 +0.4
AGG Agios Georgios 1.60 66 Pn 21 16 32.8 +0.1
ITM Ithomi 1.68 136 P Pn 21 16 32.5 -0.1
ITM S Sb 21 16 55.4 +0.1
comp=N,2μm,1.2s
ITM Ithomi 1.68 136 P Pn 21 16 32.9 +0.3
ITM Ithomi 1.68 136 Pn Pg 21 16 36.1 +0.9
THL Klokotos Trika 1.69 45 P Pb 21 16 33.7 -0.6
THL S Sn 21 16 53.1 -1.4
comp=N,2μm,0.8s
THL Klokotos Trika 1.69 45 P Pn 21 16 33.5 +0.7
KPRO Kipourio 1.72 24 P Pn 21 16 34.5 -0.3
KPRO S Sn 21 16 55.5 +0.2
comp=N,2μm,0.9s
KPRO Kipourio 1.72 24 P Pb 21 16 35.2 +0.3
AXAR Agios Charalam 1.77 77 P Pn 21 16 34.7 +0.9
PYL PYLOS 1.81 145 P Pn 21 16 34.5 +0.1
VLX Vlachokerasia 1.83 123 P Pb 21 16 36.8 0.0
VLX AML AML 21 17 12.7
comp=E,6095μm,0.6s
VLX AML AML 21 17 15.0
comp=N,6607μm,0.6s
PENT Pentalofos 1.88 16 P Pb 21 16 37.3 -0.4
PENT Pentalofos 1.88 16 P Pb 21 16 37.3 -0.4
PROD Prodromos 1.93 93 P Pb 21 16 37.5 -0.9
PROD S Sb 21 17 02.4 -0.1
LTK Loutraki 2.01 100 P Pb 21 16 38.6 -1.2
LTK Loutraki 2.01 100 P Pb 21 16 38.6 -1.2
LKR Lokris 2.01 82 P Pb 21 16 39.1 -0.8
LKR Lokris 2.01 82 P Pb 21 16 39.0 -0.8
LOUT Loutraki 2.02 101 P Pb 21 16 39.1 -0.9
NEST Nestorio 2.08 13 P Pb 21 16 40.6 -0.4
NEST Nestorio 2.08 13 P Pb 21 16 40.6 -0.4
KZN Kozani 2.17 28 P Pb 21 16 41.0 +1.5
KZN Kozani 2.17 28 P Pb 21 16 41.8 -0.8
VIL2 Platees 2.22 94 P Pb 21 16 42.1 -1.3
VILL Villia 2.26 95 P Pb 21 16 42.4 -1.6
SCTE Santa Cesarea 2.29 318 Pn 21 16 40.7 -0.2
LIT Litokhoron 2.33 42 P Pn 21 16 42.8 +1.2
LIT Litokhoron 2.33 42 Pb 21 16 44.7 -0.6
NEO Neokhori 2.35 66 P Pn 21 16 43.2 +1.4
XOR Xorichti 2.35 65 P Pn 21 16 43.4 +1.6
XOR Xorichti 2.35 65 P Pn 21 16 43.0 +1.2
KRND KRANIDI 2.35 114 P Pn 21 16 43.5 +1.6
KRND KRANIDI 2.35 114 P Pn 21 16 43.3 +1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DID	Didima	2.37	111	P	Pn	21 16 43.0	+0.9
MRKA	Markates	2.48	82	P	Pn	21 16 45.1	+1.5
MRKA	Markates	2.48	82	P	Pn	21 16 44.7	+1.1
SKIA	Skiathos	2.48	71	P	Pn	21 16 45.0	+1.4
FNA	Florina	2.50	16	P	Pn	21 16 43.9	0.0
FNA	Florina	2.50	16	ePn	Pn	21 16 45.5	+1.6
FNA	Florina	2.50	16		Pn	21 16 44.0	0.0
VLY	Voula,Athens	2.69	100	P	Pn	21 16 47.8	+1.3
PTL	Penteli	2.71	96	P	Pn	21 16 48.2	+1.5
PTL	Penteli	2.71	96	P	Pn	21 16 47.7	+1.0
EREA	Eretria	2.73	88	P	Pn	21 16 48.5	+1.4
EREA	Eretria	2.73	88	P	Pn	21 16 48.4	+1.4
OHR	Ohrid	2.73	5	⇓iPn	Pn	21 16 48.8	+1.6
OHR				iSn	Sb	21 17 23.2	-2.5
OHR				eLg	Lg	21 17 27.7	
	comp=N,246nm,0.9s						
GRG	Griva	2.97	30	P	Pn	21 16 51.1	+0.7
TIR	Tirane	2.99	351	ePn	Pn	21 16 51.7	+1.1
TIR	Tirane	2.99	351	⇑P	Pn	21 16 51.0	+0.4
TIR				⇑S	Sn	21 17 25.4	-1.2
TIR	Tirane	2.99	351		Pn	21 16 51.8	+1.1
TIP	Timpagrande	3.00	286	⇓P	Pn	21 16 51.3	+0.6
TIP				⇑S	Sn	21 17 27.7	+0.9
TIP	Timpagrande	3.00	286		Pn	21 16 52.2	+1.4
VAY	Valandovo	3.35	28	ePn	Pn	21 16 58.2	+2.6
VAY	Valandovo	3.35	28	P	Pn	21 16 57.9	+2.3
VAY	Valandovo	3.35	28	iPn	Pn	21 16 58.3	+2.7
STIP	Stip	3.56	21	iPn	Pn	21 17 01.9	+3.4
CEL	Celeste	3.59	269	Pn	Pn	21 16 59.1	+0.2
SRS	Serrai	3.64	41	ePn	Pn	21 17 01.1	+1.5
SKO	Skopje	3.66	12	ePn	Pn	21 17 02.3	+2.5
SKO	Skopje	3.66	12	iPn	Pn	21 17 01.7	+1.9
MATE	Matera	3.68	309	⇑P	Pn	21 16 59.9	-0.2
MATE				⇑S	Sn	21 17 43.9	+0.4
ULC	Ulcinj	3.69	346	ePn	Pn	21 16 59.3	-1.0
ULC				eSn	Sn	21 17 44.1	+0.2
SG1	Sgolgore (BA)	3.81	311	ePn	Pn	21 17 02.6	+0.7
BAI	Bari	3.87	316	ePn	Pn	21 17 03.8	+1.1
DRME	Dracevica, Mon	3.92	346	ePn	Pn	21 17 03.0	-0.4
DRME	Dracevica, Mon	3.92	346	ePn	Pn	21 17 02.7	-0.7
DRME				eSn	Sn	21 17 49.6	+0.1
KKB	Krupnik	4.02	29	P	Pn	21 17 08.6	+3.8
BUM	Brajici-Budva	4.09	344	ePn	Pn	21 17 04.8	-1.0
BUM				eSn	Sn	21 17 53.3	-0.5
PDG	Podgorica	4.14	348	ePn	Pn	21 17 06.0	-0.5
PDG				eSn	Sn	21 17 53.8	-1.1
PDG	Podgorica	4.14	348	⇑P	Pn	21 17 06.2	-0.2
PDG				⇑S	Sn	21 17 54.1	-0.8
PDG	Podgorica	4.14	348	ePn	Pn	21 17 05.6	-0.8
PDG	Podgorica	4.14	348		Pn	21 17 05.9	-0.5
TTG	Podgorica	4.14	348	ePn	Pn	21 17 05.9	-0.5
TTG				eSn	Sn	21 17 55.1	+0.2
PVY	Plav	4.22	355	ePn	Pn	21 17 07.5	-0.2
PVY				eSn	Sn	21 17 57.2	+0.1
ACER	Acerenza	4.23	306		Pn	21 17 08.3	+0.6
APE	Apeiranthos	4.23	107	⇑P	Pn	21 17 09.9	+2.1
APE				⇑S	Sn	21 17 59.1	+1.8
CEME	Cevo	4.32	345	ePn	Pn	21 17 07.6	-1.3
CEME				eSn	Sn	21 17 58.7	-0.7
HCY	Herceg Novi	4.32	340	ePn	Pn	21 17 07.4	-1.6
HCY	Herceg Novi	4.32	340	ePn	Pn	21 17 07.8	-1.2
HCY				eSn	Sn	21 17 59.3	-0.2
BOSS	Bosilegrad	4.38	20	ePn	Pn	21 17 11.4	+1.6
SANT	Santorini	4.46	115	Pn	Pn	21 17 15.5	+4.6
IVA	Berane	4.50	355	ePn	Pn	21 17 10.8	-0.7
IVA				eSn	Sn	21 18 03.6	-0.4
KOME	Kolasin	4.52	351	ePn	Pn	21 17 11.6	-0.1
KOME				eSn	Sn	21 18 04.2	-0.1
NKME	Niksic	4.52	346	ePn	Pn	21 17 11.2	-0.5
NKME				eSn	Sn	21 18 04.4	0.0
BARS	Barje	4.54	13	ePn	Pn	21 17 12.1	+0.1
NKY	Niksic	4.56	346	ePn	Pn	21 17 11.7	-0.6
NKY				eSn	Sn	21 18 04.8	-0.6
TREB	Trebinje	4.61	340	ePn	Pn	21 17 11.6	-1.3
TREB				eSn	Sn	21 18 04.0	-2.6
TREB	Trebinje	4.61	340	ePn	Pn	21 17 11.3	-1.6
IDI	Anoyia	4.71	130	P	Pn	21 17 16.1	+1.7
	comp=N,0.5nm,0.3s,baz=300,slow=9.6,SNR=9.0						
IDI				S	Sn	21 18 10.7	+1.5
	comp=N,3.9nm,0.3s,baz=159,slow=13.3,SNR=5.7						
VTS	Vitosha	4.73	26	ePn	Pn	21 17 15.7	+1.0
VTS				eSn	Sn	21 18 12.0	+2.4
VTS	Vitosha	4.73	26	⇓P	Pn	21 17 15.3	+0.6
VTS				⇑S	Sn	21 18 10.2	+0.5
VTS	Vitosha	4.73	26	P	Pn	21 17 17.5	+2.8
VTS	Vitosha	4.73	26		Pn	21 17 15.6	+1.0
BRY	Bratogost	4.74	343	ePn	Pn	21 17 13.5	-1.4
BRY	Bratogost	4.74	343	⇓iPn	Pn	21 17 13.4	-1.4
BRY				eSn	Sn	21 18 09.0	-0.9
SELS	Selova	4.85	6	ePn	Pn	21 17 15.9	-0.4
VAE	Valguarnera	4.86	261	P	Pn	21 17 16.6	+0.2
	comp=N,0.5nm,0.3s,baz=146,slow=18,SNR=2.4						
VAE				S	Sn	21 18 15.3	+2.5
	comp=N,1.7nm,0.3s,baz=185,slow=22,SNR=6.2						
SJES	Sjenica	4.88	356	ePn	Pn	21 17 16.8	0.0
SJES				eSn	Sn	21 18 12.1	-1.3
SGRT	San Giovanni R	4.94	314	Pn	Pn	21 17 17.1	-0.4
UPM	Unac-Piva	4.95	347	ePn	Pn	21 17 18.3	+0.5
UPM	Unac-Piva	4.95	347	ePn	Pn	21 17 17.1	-0.7
UPM				eSn	Sn	21 18 14.7	-0.6
ALN	Alexandroupoli	4.99	58		Pn	21 17 19.7	+1.6
PLE	Pljevlja	5.00	351	ePn	Pn	21 17 18.5	+0.1
PLE				eSn	Sn	21 18 15.6	-0.8
KDZ	Kurdzhali	5.01	48	P	Pn	21 17 20.1	+1.7
ZAPS	Zavoj	5.15	18	ePn	Pn	21 17 21.1	+0.7
IVAS	Ivanjica	5.19	358	ePn	Pn	21 17 20.0	-0.9
IVAS				eSn	Sn	21 18 19.4	-1.5
PAOL	Paolisi	5.25	302		Pn	21 17 26.3	+4.5
RUDO	Rudo	5.29	351	ePn	Pn	21 17 19.9	-2.4
BOVS	Bovan	5.33	10	ePn	Pn	21 17 22.0	-0.7
WDD	Wied Dalam	5.38	244	Pn	Pn	21 17 22.7	-0.7
BLKB	Belogradchik	5.49	17	⇑S	Sn	21 18 28.4	+0.1
GRUS	Gruza	5.50	2	ePn	Pn	21 17 24.4	-0.7
BBLS	Lazići	5.53	352	ePn	Pn	21 17 25.6	0.0
BBLS				eSn	Sn	21 18 28.0	-1.3
BBLS	Lazići	5.53	352	ePn	Pn	21 17 24.9	-0.7
MPEP	Malo Peshtene	5.55	26	P	Pn	21 17 30.5	+4.7
ZAGS	Zajecar	5.58	13	ePn	Pn	21 17 28.6	+2.3
ZAGS				eSn	Sn	21 18 30.2	-0.3
CORL	Corleone	5.66	267	Pn	Pn	21 17 28.1	+0.7
DIVS	Divibare	5.72	357	ePn	Pn	21 17 26.8	-1.4
DIVS				eSn	Sn	21 18 32.4	-1.5
DIVS	Divibare	5.72	357	ePn	Pn	21 17 26.8	-1.4
CLTB	Caltabellotta	5.78	264		Pn	21 17 31.4	+2.4
HAPS	Han Pijesak,BI	5.81	349	ePn	Pn	21 17 27.2	-2.2
TRUS	Trudelj	5.83	360	ePn	Pn	21 17 28.5	-1.2
TRUS				eSn	Sn	21 18 36.0	-0.6
KARP	Karpathos	6.07	116		Pn	21 17 36.4	+3.4
ELND	Elena	6.13	41	⇑P	Pn	21 17 34.2	+0.5
INTR	Introdacqua	6.18	308		Pn	21 17 35.5	+0.9
MGRS	Mrkonjic Grad	6.54	338	ePn	Pn	21 17 39.3	-0.1
AQU	L'Aquila	6.69	309	Pn	Pn	21 17 42.5	+1.1
BLY	Banja Luka	6.81	340	⇓P	Pn	21 17 42.2	-0.9
BLY				⇓S	Sn	21 19 00.2	-0.6
BLY	Banja Luka	6.81	340	ePn	Pn	21 17 40.7	-2.4
BLY	Banja Luka	6.81	340		Pn	21 17 41.9	-1.2
NRCA	Norcia	7.13	311		Pn	21 17 49.0	+1.4
GZR	Gura Zlata	7.21	13	⇓P	Pn	21 17 47.8	-0.9
BZS	Buzias	7.28	6	⇑P	Pn	21 17 49.5	0.0
ELL	Elmali	7.68	99		Pn	21 17 58.9	+3.6
MURB	Monte Urbino	7.74	312	Pn	Pn	21 17 56.9	+1.0
VOIR		7.83	24	⇑P	Pn	21 17 57.8	+0.6
MORH	Mrgy, Hungar	7.94	351	ePn	Pn	21 17 55.7	-2.8
MLR	Muntele Rosu	8.19	28	P	Pn	21 18 05.2	+3.0
	comp=N,0.3nm,0.3s,baz=216,slow=10,SNR=11						
MLR	Muntele Rosu	8.19	28	⇑P	Pn	21 18 01.6	-0.6
MLR	Muntele Rosu	8.19	28		Pn	21 18 02.2	0.0
CRES	Cresnjev	8.31	335	ePn	Pn	21 18 01.8	-1.9
DOPR	Dopca	8.41	24	⇓P	Pn	21 18 04.4	-0.7
CASP	Castiglione de	8.52	304	Pn	Pn	21 18 07.3	+0.7
PLOR	Plostina	8.76	30	⇓P	Pn	21 18 09.6	-0.4
VRI	Vrincioaia	8.80	30	⇓P	Pn	21 18 11.2	+0.7
LJU	Ljubljana	8.82	332	ePn	Pn	21 18 08.1	-2.6
TRI	Trieste	8.85	328	Pn	Pn	21 18 10.3	-0.7
SOKA	Soboth	9.20	336	ePn	Pn	21 18 14.2	-1.8
	comp=N,7.9nm,0.5s						
OBKA	Obir	9.21	334	ePn	Pn	21 18 15.7	-0.5
	comp=N,5.6nm,0.5s						
KEST	Kesra	9.27	257	Pn	Pn	21 18 19.8	+2.9
ZCCA	Zocca	9.29	313	Pn	Pn	21 18 16.7	-0.4
VLC	Villacollemand	9.52	310	Pn	Pn	21 18 19.3	-1.0
PSZ	Piszkesteto	9.54	358	Pn	Pn	21 18 20.7	+0.1
TEOL	Teolo	9.56	320	Pn	Pn	21 18 20.0	-0.9
TEOL					Sn	21 20 01.9	-6.4
MYKA	Terra Mystica	9.65	331	Pn	Pn	21 18 20.2	-1.9
	comp=N,1.0nm,0.3s						
ANTO	Ankara	9.70	77	Pn	Pn	21 18 24.2	+1.3
STAL	STALIGIAL	9.73	326		Pn	21 18 21.5	-1.7
CTI	Castel Tesino	10.06	322		Pn	21 18 26.5	-1.3
KBA	Koelnbreinsper	10.13	331	ePn	Pn	21 18 27.9	-1.0
	comp=N,1.3nm,0.3s						
VYHS	Vyhne	10.17	354	ePN	Pn	21 18 28.8	-0.4
VYHS				eSN	Sn	21 20 17.2	-6.1
ABTA	Abfaltersbach	10.20	328	Pn	Pn	21 18 28.4	-1.2
	comp=N,3.4nm,0.6s						
SALO	Salr	10.33	318	Pn	Pn	21 18 32.4	+1.0
BR131	Keskin Array S	10.34	78		Pn	21 18 34.2	+2.6
BRTR	Keskin Array B	10.34	78	P	Pn	21 18 35.5	+3.9
	comp=N,0.2nm,0.3s,baz=263,slow=13,SNR=7.7						
BRTR				LR	LR	21 23 16.9	
	comp=N,75nm,18.1s,baz=222,slow=41						
BRTR	Keskin Array B	10.34	78	Pn	Pn	21 18 34.2	+2.6
MOA	Molln	10.48	336	Pn	Pn	21 18 31.3	-2.1
	comp=N,3.2nm,0.4s						
ILGA	Ilgaz	10.56	71	Pn	Pn	21 18 35.8	+1.1
CSS	Mathiatis	10.89	104	Pn	Pn	21 18 43.0	+4.0
WTTA	Wattenberg	10.98	327	ePn	Pn	21 18 40.1	-0.3
	comp=N,1.9nm,0.4s						
WATA	Walderalm	11.06	327	ePn	Pn	21 18 40.6	-0.8
	comp=N,6.4nm,0.8s						
SQTA	Sankt Quirin	11.13	325	Pn	Pn	21 18 43.0	+0.6
	comp=N,2.2nm,0.4s						
FUORN	Ofenpass-Fuorn	11.14	321	Pn	Pn	21 18 42.1	-0.6
FETA	Feichten	11.20	323	Pn	Pn	21 18 45.7	+2.2
	comp=N,0.7nm,0.4s						
MOTA	Moosalm	11.27	326	ePn	Pn	21 18 44.4	0.0
	comp=N,4.9nm,0.7s						
DAVOX	Davos/Dischmat	11.44	321	P	Pn	21 18 47.6	+0.9
	comp=N,0.2nm,0.3s,baz=155,slow=14,SNR=3.4						
DAVOX				S	Sn	21 20 49.6	-5.1
	comp=N,0.6nm,0.3s,baz=89,slow=20,SNR=3.5						
RETA	Reutte	11.53	325	Pn	Pn	21 18 48.9	+1.1
	comp=N,0.7nm,0.3s						
GEC2	GERESS Array S	11.54	337	Pn	Pn	21 18 47.5	-0.4
GERES	GERESS Array B	11.54	337	P	Pn	21 18 46.1	-1.8
	comp=N,0.2nm,0.3s,baz=159,slow=15,SNR=5.2						
GERES				LR	LR	21 23 23.8	
	comp=N,65nm,22.0s,baz=226,slow=38						
GERES	GERESS Array B	11.54	337	Pn	Pn	21 18 47.4	-0.6
KHC	Kasperske Hory	11.83	337	ePN	Pn	21 18 48.3	-3.6
KHC				ex	x	21 19 08.0	
KHC				eSN	Sn	21 21 00.8	-3.2
OJC	Ojcow	11.84	358	Pn	Pn	21 18 52.6	+0.6
SENIN	Lac Senin/Sane	12.56	314	Pn	Pn	21 19 02.6	+0.5
GRA1	Grafenberg Arr	13.10	333	Pn	Pn	21 19 08.9	-0.3
MMAI	Mount Meron Ar	13.27	109	P	Pn	21 19 11.1	-0.7
	comp=N,0.8nm,0.3s,baz=317,slow=12,SNR=5.2						
MMAI				S	Sn	21 21 32.2	-7.3
	comp=N,0.8nm,0.3s,baz=307,slow=28,SNR=1.9						
AKASG	Malin Array Be	13.79	24	P	Pn	21 19 19.2	+0.6
	comp=N,0.3nm,0.3s,baz=1.6,slow=28,SNR=2.3						
CLL	Collm	13.95	340	Pn	Pn	21 19 18.1	-2.7
ASF	Jabal al Asfar	14.78	110	P	P	21 19 37.6	-0.8
	comp=N,0.4nm,0.3s,baz=284,slow=11,SNR=4.8						
EIL	Elat	14.82	122	P	P	21 19 37.9	-0.9
	comp=N,0.7nm,0.3s,baz=340,slow=15,SNR=6.6						
EIL				S	Sn	21 22 04.4	-13
	comp=N,0.2nm,0.3s,baz=65,slow=17,SNR=1.3						
EIL				LR	LR	21 27 35.2	
	comp=N,38nm,21.0s,baz=12,slow=46						
CART	Cartagena	16.94	274	Pn	Pn	21 20 00.6	+0.4
KBZ	Khabaz	17.73	65	P	P	21 20 13.2	+2.3
	comp=N,0.1nm,0.3s,baz=280,slow=9.4,SNR=5.0						
GNI	Garni	18.88	77	P	Pn	21 20 24.9	+0.6
	comp=N,0.6nm,0.3s,baz=220,slow=11,SNR=5.5						
GNI	Garni	18.88	77	P	Pn	21 20 25.2	+0.9
OBN	Obninsk	19.96	28	P	P	21 20 35.4	+0.2
	comp=N,1.6nm,0.3s,baz=356,slow=6.2,SNR=4.8						
OBN	Obninsk	19.96	28	P	Pn	21 20 36.5	-0.5
HFS	Hagfors	22.19	351	P	P	21 20 59.2	0.0
	comp=N,2.3nm,0.5s,baz=152,slow=10,SNR=14						
HFS				LR	LR	21 29 51.7	
	comp=N,74nm,19.5s,baz=266,slow=37						
NC602	NORSAR Array S	23.06	349	P	P	21 21 08.7	+0.2
NC602				IAmb	IAmb	21 21 21.6	
	comp=Z,10nm,1.1s						
EKA	Eskdalemuir Ar	23.23	325	P	P	21 21 09.8	-0.4
	comp=Z,2.2nm,0.8s,baz=122,slow=11,SNR=4.5						
ESK	Eskdalemuir	23.24	324	P	P	21 21 11.3	+1.0
ESK				IAmb	IAmb	21 21 11.8	
	comp=Z,3.5nm,0.9s						
NAO01	NORSAR Array S	23.27	348	P	P	21 21 11.3	+0.6
NAO01				IAmb	IAmb	21 21 15.6	
	comp=Z,8.5nm,1.0s						
FINES	FINESS Array B	23.35	7	P	P	21 21 11.5	+0.2
	comp=Z,2.5nm,0.5s,baz=183,slow=10,SNR=20						
FINES				LR	LR	21 31 36.1	
	comp=Z,108nm,18.9s,baz=90,slow=40						
FINES	FINESS Array B	23.35	7	P	P	21 21 09.7	-1.6
FIA1	FINESS Array S	23.35	7	P	P	21 21 12.4	+1.0
FIA1				IAmb	IAmb	21 21 13.7	
	comp=Z,7.7nm,1.0s						
NC405	NORSAR Array S	23.40	349	P	P	21 21 11.8	-0.1
NB2	NORSAR Subarra	23.40	349	P	P	21 21 12.4	+0.4
	comp=Z,3.2nm,1.0s,baz=162,slow=11						
NOA	NORSAR Array B	23.40	349	P	P	21 21 11.1	-0.9
	comp=Z,0.9nm,0.6s,baz=158,slow=10,SNR=5.6						
NOA				LR	LR	21 32 06.7	
	comp=Z,50nm,18.9s,baz=220,slow=41						
NC303	NORSAR Array S	23.56	349	P	P	21 21 14.2	+0.7
NC204	NORSAR Array S	23.70	348	P	P	21 21 15.7	+0.8
NC204				IAmb	IAmb	21 21 26.3	
	comp=Z,13nm,1.0s						
RAYN	Ar Rayn	25.98	118	P	P	21 21 38.5	+2.3
GEYT	Alibeck	29.48	79	P	P	21 22 08.7	+1.3
	comp=Z,0.7nm,0.5s,baz=284,slow=10.0,SNR=5.3						
GEYT	Alibeck	29.48	79	P	P	21 22 08.3	+0.9
GYA0B	ALIBECK ARRAY	29.48	79	P	P	21 22 07.6	+0.2
GYA0B				IAmb	IAmb	21 22 16.4	
	comp=Z,2.7nm,0.8s						
TOA0	Torodi Ar. Sit	30.16	219	P	P	21 22 12.2	-1.3
TORD	Torodi Ar. Bea	30.16	219	P	P	21 22 13.2	-0.4
	comp=Z,1.2nm,1.1s,baz=27,slow=9.5,SNR=3.9						
TORD	Torodi Ar. Bea	30.16	219	P	P	21 22 14.5	+1.0
ABKAR	Akbulak array	30.17	56	P	P	21 22 13.6	+0.2
ARU	Arti	30.94	42	P	P	21 22 20.2	+0.2
ARU				IAmb	IAmb	21 22 25.9	
	comp=Z,2.8nm,1.0s						
ARCES	ARCESS Array B	31.33	3	P	P	21 22 22.8	-0.5
	comp=Z,2.6nm,1.0s,baz=184,slow=12,SNR=2.8						
UOSS	Minazif	33.03	103	P	P	21 22 39.0	+0.3
KK31	Karatay Array	37.76	66	P	P	21 23 19.5	+0.2
KK31				IAmb	IAmb	21 23 21.9	
	comp=Z,3.0nm,0.7s						
KKAR	Karatay Array	37.76	66	P	P	21 23 19.3	+0.1
KKAR	Karatay Array	37.76	66	P	P	21 23 18.9	-0.3
KKAR				IAmb	IAmb	21 23 21.9	
	comp=Z,3.0nm,0.7s						
BTK	Batken	38.63	71	P	P	21 23 28.3	+1.6
AAK	Ala-Archa	40.72	66	P	P	21 23 44.1	-0.1
	comp=Z,1.1nm,0.9s,baz=281,slow=19,SNR=4.0						
AAK	Ala-Archa	40.72	66	IAmb	IAmb	21 23 51.4	
	comp=Z,2.0nm,0.8s						
MK31	Makanchi Array	45.23	59	P	P	21 24 19.9	-0.7
MK31				IAmb	IAmb	21 24 21.3	
	comp=Z,1.1nm,0.6s						
MKAR	Makanchi Array	45.23	59	P	P	21 24 19.6	-0.9
	comp=Z,1.2nm,0.5s,baz=278,slow=7.4,SNR=16						
MKAR	Makanchi Array	45.23	59	P	P	21 24 20.1	-0.4
ZALV	Zalesovo Beam	45.59	48	P	P	21 24 21.8	-1.4
	comp=Z,4.0nm,0.5s,baz=275,slow=8.5,SNR=19						
ZALV				LR	LR	21 43 12.9	
	comp=Z,38nm,18.4s,baz=214,slow=36						
ZALV	Zalesovo Beam	45.59	48	P	P	21 24 22.8	-0.4
SCHQ	Schefferville	58.27	317	P	P	21 25 58.0	+0.3
	comp=Z,0.7nm,0.4s,baz=54,slow=5.3,SNR=3.7						
SONM	Songino Array	60.36	51	P	P	21 26 12.2	-0.3
	comp=Z,0.3nm,0.4s,baz=270,slow=7.4,SNR=5.0						
SONM	Songino Array	60.36	51	IAmb	IAmb	21 26 20.2	
	comp=Z,0.9nm,1.2s						
HHC	Hu-ho-hao-te	66.96	56	eP	P	21 26 58.2	+2.1
CMAR	Chiang Mai Arr	69.91	82	P	P	21 27 15.0	+0.3
	comp=Z,0.4nm,0.8s,baz=308,slow=7.4,SNR=6.8						

NEIC **06** *21:16:39.0±2.9, 24.33S±0.06×66.71W±0.09, h68km±12km, mb4.0/6, Error ellipse: s-maj=11.7km s-min=8.1km az=107.0*

SJA **06** *21:16:39.9±0.5, 24.11S×67.23W, h203km±5km, ML3.3, MW3.0*

IDC **06** *21:16:41.0±1.0, 24.27S×67.14W, h160km±12km, mb3.6/2, mb1 3.7/8, mb1mx3.4/31, mbtmp4.0/8, Error ellipse: s-maj=19.6km s-min=12.6km az=73.0*

GUC **06** *21:16:43.5±0.5, 24.18S×67.73W, h206km±11km, ML4.4*

ISC 06 21:16:42.2±0.7, 24.20S±0.05×67.27W±0.04, h172km±8km, n48, σ1.50/60, 4C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.69	108	iP	Pn	21 17 16.3	+0.8
SLA				IAML		21 17 17.6	
	comp=Z,119nm,0.6s						
SLA				iSg	Sn	21 17 43.2	+1.8
AZAP	Zapla	2.01	91	iP	Pn	21 17 19.7	+0.6
AZAP				IAML		21 17 20.6	
	comp=Z,124nm,0.4s						
AZAP				iSg	Sn	21 17 48.5	+0.9
LVC	Limon Verde	2.19	316	P	Pn	21 17 22.7	+1.5
	comp=Z,13nm,0.3s,baz=118,slow=7.0,SNR=58						
LVC				S	Sn	21 17 51.8	+0.5
	comp=Z,63nm,0.3s,baz=25,slow=22,SNR=77						
LVC	Limon Verde	2.19	316		Pn	21 17 22.1	+0.9
LVC					Sn	21 17 50.7	-0.7
PB15	IPOC Station P	2.25	295	⇑iP	Pn	21 17 23.3	+1.6
PB15				iS	Sn	21 17 53.3	+1.0
GO02	Mina Guanaco	2.32	245	⇑iP	Pn	21 17 23.7	+1.0
GO02				eS	Sn	21 17 54.6	+0.5
GO02				IAML		21 17 57.0	
	comp=E,1μm,0.2s						
GO02	Mina Guanaco	2.32	245		Pn	21 17 23.2	+0.5
PB06	IPOC Station P	2.59	305	eP	Pn	21 17 27.0	+1.4
PB06				iS	Sn	21 17 59.4	+0.1
PB14	IPOC Station P	2.89	261	⇑iP	Pn	21 17 29.8	+0.3
PB14				iS	Sn	21 18 05.0	-1.2
PB14	IPOC Station P	2.89	261	iP	Pn	21 17 29.8	+0.3
PB14				iSg	Sn	21 18 07.1	+0.9
PB05	IPOC Station P	3.01	296	⇑iP	Pn	21 17 31.7	+1.0
PB05				iS	Sn	21 18 07.0	-1.4
PB05				IAML		21 18 09.0	
	comp=E,561nm,0.2s						
PB10	IPOC Station P	3.09	282		Pn	21 17 32.6	+1.0
PB03	IPOC Station P	3.13	313	eP	Pn	21 17 33.4	+1.1
PB03				iS	Sn	21 18 10.3	-1.0
PB04	IPOC Station P	3.23	304	eP	Pn	21 17 34.3	+0.7
PB04				iS	Sn	21 18 12.3	-1.2
PB04				IAML		21 18 14.2	
	comp=E,1μm,0.4s						
PB04	IPOC Station P	3.23	304		Pn	21 17 34.2	+0.6
PB01	IPOC Station P	3.75	326		Pn	21 17 40.1	+0.1
GO03	Copiap	4.31	218		Pn	21 17 46.2	-0.9
GO03				Sn	Sn	21 18 35.5	-2.5
CYA	Choya	4.43	163	iP	Pn	21 17 48.8	+0.2
VCA	Vinchina	4.60	190	iP	Pn	21 17 51.2	+0.3
GO01	Chusmiza	4.85	338		Pn	21 17 55.0	+0.5
PB11	IPOC Station P	4.94	333		Pn	21 17 54.8	-0.6
ACLC	CERRO LA CRUZ	5.22	177	iP	Pn	21 17 59.3	+0.4
AGUA	GUANDACOL	5.38	191	iP	Pn	21 18 01.3	+0.2
MNMC	Minye Minye	5.49	336		Pn	21 18 03.0	+0.4
AROD	Rodeo	6.26	198	iP	Pn	21 18 13.4	+0.6
ACCO	Cerro Coronel	6.56	194	iP	Pn	21 18 17.4	+0.6
GO04	Tololo Observa	6.73	207	Pn	Pn	21 18 17.4	-1.5
RTLL	Cerro Villicun	7.19	188	iP	Pn	21 18 24.2	-0.6
CFA	Coronel Fontan	7.43	186	P	Pn	21 18 26.9	-1.1
	comp=E,0.9nm,0.3s,baz=320,slow=11,SNR=16						
CFA				S	Sn	21 19 45.3	-6.2
	comp=E,1.3nm,0.3s,baz=135,slow=21,SNR=9.5						
RTLS	Leoncito	7.78	193	iP	Pn	21 18 32.7	-0.2
LPAZ	La Paz	7.91	354	P	Pn	21 18 36.0	+1.0
	comp=E,2.0nm,0.3s,baz=148,slow=6.4,SNR=31						
LPAZ				S	Sn	21 19 59.7	-4.2
	baz=148,slow=24,SNR=2.1						
LPAZ	La Paz	7.91	354		Pn	21 18 35.7	+0.7
ACAN	Cantantal	8.05	180	iP	Pn	21 18 34.6	-1.6
ASAL	Salagasta	8.48	189	iP	Pn	21 18 41.2	-0.6
CPUP	Villa Florida	9.24	105	P	Pn	21 18 49.5	-2.4
	comp=E,0.1nm,0.3s,baz=259,slow=10,SNR=2.1						
CPUP	Villa Florida	9.24	105		Pn	21 18 43.0	-8.9
SIV	San Ignacio	10.02	37	P	Pn	21 19 00.2	-2.1
	comp=E,1.8nm,0.3s,baz=237,slow=9.0,SNR=23						
SIV				S	Sn	21 20 38.9	-15
	comp=E,0.1nm,0.3s,baz=222,slow=15,SNR=3.9						
SAML	Samuel	15.66	15	Pn	Pn	21 20 13.3	-0.4
PLCA	Paso Flores	16.72	189	P	Pn	21 20 28.8	+2.3
	comp=E,0.4nm,0.3s,baz=19,slow=11,SNR=6.6						
PLCA	Paso Flores	16.72	189	IAmb	IAmb	21 20 46.4	
	comp=Z,6.3nm,1.1s						
BDFB	Brasilia	19.98	68	P	P	21 21 00.6	-1.0
	comp=Z,1.3nm,0.3s,baz=242,slow=11,SNR=23						
BDFB	Brasilia	19.98	68	P	P	21 21 01.6	0.0
BDFB				IAmb	IAmb	21 21 02.3	
	comp=Z,16nm,0.8s						
EFI	East Falkland	28.33	168	P	P	21 22 22.6	+2.9
TORD	Torodi Ar. Bea	76.86	69	P	P	21 28 15.8	+0.2
	comp=Z,2.7nm,0.9s,baz=259,slow=5.7,SNR=15						
TORD	Torodi Ar. Bea	76.86	69	P	P	21 28 16.2	+0.5
YKA	Yellowknife Ar	94.22	340	P	P	21 29 40.6	-0.5
	comp=Z,0.1nm,0.6s,baz=128,slow=4.0,SNR=2.8						
ZALV	Zalesovo Beam	143.68	28	PKP	PKPbc	21 35 55.2	+1.0
	comp=Z,0.6nm,0.3s,baz=316,slow=4.1,SNR=4.8						
MKAR	Makanchi Array	146.83	40	PKPbc	PKPbc	21 36 04.0	0.0
	comp=Z,1.1nm,0.6s,baz=297,slow=3.3,SNR=13						

RSPR 06 21:16:54.6, 18.98N×66.90W, h5km±1km, MD2.5/4, 6C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.55	202	eS	Sg	21 17 13.4	+1.0
AGPR	Aguadilla, PR	0.55	202	⇑eP	Pg	21 17 05.4	+0.2
AGPR	Aguadilla, PR	0.55	202		Sg	21 17 13.4	+1.0
AGPR	Aguadilla, PR	0.55	202	Pg	Pg	21 17 05.4	+0.2
EMPR	Esperanza - Ma	0.61	145	eS	Sg	21 17 15.5	+1.2
EMPR	Esperanza - Ma	0.61	145	⇑eP	Pg	21 17 06.4	0.0
EMPR	Esperanza - Ma	0.61	145		Pn	21 17 09.4	-0.5
EMPR					Sb	21 17 16.7	0.0
AOPR	Arecibo Observ	0.65	168	Pg	Pg	21 17 07.1	+0.1
MPR	Mayaguez	0.80	197	Pg	Pg	21 17 10.1	+0.1
IDE	Isla Desecheo	0.81	223	eS	Sg	21 17 21.0	+0.4
IDE	Isla Desecheo	0.81	223	⇑eP	Pg	21 17 09.4	-0.7
IDE	Isla Desecheo	0.81	223		Pg	21 17 09.4	-0.7
IDE					Sg	21 17 21.0	+0.4
CELP	Cerrillos	0.95	162	⇑eP	Pg	21 17 11.2	-1.7
CELP				eS	Sg	21 17 24.5	-0.7
CELP	Cerrillos	0.95	162		Pg	21 17 11.2	-1.7
CELP					Sg	21 17 24.5	-0.7
OBIP	Obispado Ponce	0.97	164	⇑eP	Pg	21 17 11.5	-1.8
OBIP	Obispado Ponce	0.97	164	eS	Sg	21 17 24.8	-1.1
OBIP	Obispado Ponce	0.97	164		Pg	21 17 11.5	-1.8
OBIP					Sg	21 17 24.8	-1.1
CRPR	Cabo Rojo, PR	0.99	192	Pg	Pg	21 17 13.4	-0.2
CRPR				Sg	Sg	21 17 26.2	-0.3
MLPR	Magueyes Islan	1.02	188	⇑eP	Pg	21 17 11.5	-2.6
MLPR	Magueyes Islan	1.02	188		Pg	21 17 11.5	-2.6
SJG	San Juan	1.12	141	Pg	Pg	21 17 15.5	-0.5

ANF **06** *21:26:50.9±0.1, 38.08N×82.00W, h0km, ML2.5/34, Error ellipse: s-maj=1.1km s-min=1.1km az=108.0*

ISC 06 21:26:51.1±1.1, 38.08N±0.02×82.00W±0.02, h1km±10km, n42, σ0.79/64, West Virginia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R53A	Hurricane	0.25	9	P	Pg	21 26 56.8	+0.8
	baz=189,SNR=91						
R53A				S	Sg	21 27 00.7	+1.4
	baz=189						
S53A	Williamson	0.41	194	S	Sg	21 27 05.2	+0.9
	baz=14						
R52A	Catlettsburg	0.57	297	S	Sb	21 27 10.9	-1.5
	baz=117						
S54A	Dingess, Beckl	0.61	117	P	Pg	21 27 03.1	+0.2
	baz=297						
S54A				S	Sg	21 27 11.4	+0.6
	baz=297						
R54A	Victor	0.81	82	P	Pg	21 27 07.0	+0.4
	baz=262						

R54A				S	Sg	21 27 17.8	+0.8
	baz=262						
Q53A	**Leroy**	**0.86**	**26**	P	Pg	21 27 07.7	+0.1
	baz=206,SNR=9.1						
Q53A				S	Sb	21 27 20.7	-0.3
	baz=206						
Q52A	**Bidwell**	**0.91**	**347**	P	Pg	21 27 08.3	-0.1
	baz=167						
Q52A				S	Sb	21 27 21.8	-0.4
	baz=167						
S52A	**Salyersville**	**0.94**	**245**	S	Sb	21 27 22.8	-0.4
	baz=65						
T54A	**Tazewell**	**1.07**	**161**	S	Sb	21 27 26.5	-0.6
	baz=342						
T53A	**Wise**	**1.18**	**201**	P	Pg	21 27 13.2	-0.4
	baz=21,SNR=6.8						
T52A	**Hallie**	**1.25**	**219**		Pn	21 27 16.7	+1.0
T52A	**Hallie**	**1.25**	**219**	P	Pg	21 27 14.8	-0.2
	baz=38,SNR=9.2						
T52A				S	Sn	21 27 32.7	-0.4
	baz=38						
R51A	**Hillsboro**	**1.26**	**280**	P	Pg	21 27 14.7	-0.6
	baz=100						
Q54A	**Coxs Mills**	**1.29**	**45**		Pn	21 27 26.4	+10
Q54A	**Coxs Mills**	**1.29**	**45**	P	Pg	21 27 15.4	-0.4
	baz=226						
Q54A				S	Sn	21 27 34.4	+0.3
	baz=226						
S51A	**Beattyville**	**1.33**	**251**		Sb	21 27 37.5	+3.1
Q51A	**Peebles**	**1.41**	**312**		Sb	21 27 40.1	+3.3
Q51A	**Peebles**	**1.41**	**312**	P	Pn	21 27 17.4	-0.6
	baz=132						
Q51A				S	Sb	21 27 37.0	+0.1
	baz=132						
P53A	**Whipple**	**1.48**	**19**	P	Pn	21 27 19.0	0.0
	baz=199,SNR=9.1						
P53A				S	Sn	21 27 39.3	+0.3
	baz=199						
R55A	**Marlinton**	**1.50**	**82**	P	Pn	21 27 19.1	-0.1
	baz=263						
R55A				S	Sn	21 27 40.0	+0.6
	baz=263						
BLA	**Blacksburg**	**1.53**	**124**	P	Pn	21 27 19.7	+0.1
	baz=305						
BLA				S	Sn	21 27 40.3	+0.2
	baz=305						
P52A	**Corning**	**1.56**	**356**	P	Pn	21 27 19.6	-0.3
	baz=176						
P52A				S	Sg	21 27 41.2	+0.1
	baz=176						
U54A	**Nelsons Funny**	**1.56**	**175**	P	Pn	21 27 20.1	0.0
	baz=355						
U54A				S	Sg	21 27 41.3	0.0
	baz=355						
P51A	**Williamsport**	**1.62**	**330**		Sg	21 27 43.7	+0.4
P51A	**Williamsport**	**1.62**	**330**	P	Pn	21 27 20.4	-0.5
	baz=149						
P51A				S	Sg	21 27 43.4	0.0
	baz=149						
Q50A	**Georgetown**	**1.73**	**297**	P	Pn	21 27 22.3	0.0
	baz=116						
Q50A				S	Sn	21 27 45.1	+0.1
	baz=116						
U55A	**TA2, Sparta**	**1.75**	**154**	Pb	Pb	21 27 24.0	-0.1
	baz=334						
U55A				S	Sb	21 27 46.3	-0.2
	baz=334						
Q55A	**Buckhannon**	**1.76**	**58**	P	Pn	21 27 22.8	0.0
	baz=239						
Q55A				S	Sg	21 27 47.3	-0.4
	baz=239						
T56A	**Rocky Mt**	**1.89**	**123**	Sb	Sg	21 27 52.3	+0.6
	baz=304						
T51A	**Gray**	**1.90**	**235**	P	Pn	21 27 24.8	+0.1
	baz=54						
T51A				Sb	Sg	21 27 52.7	+0.5
	baz=54						
P54A	**Burton**	**1.93**	**38**	Pb	Pb	21 27 26.5	-0.6
	baz=218						
P54A				S	Sb	21 27 51.5	-0.2
	baz=218						
S50A	**Richmond**	**1.94**	**259**	P	Pn	21 27 25.4	+0.2
	baz=78						
S50A				Sb	Sg	21 27 53.6	+0.3
	baz=78						
TZTN	**Tazewell**	**1.97**	**219**	Pb	Pb	21 27 26.9	-0.8
	baz=38						
TZTN				Sb	Sg	21 27 54.5	+0.2
	baz=38						
S56A	**Natural Bridge**	**1.97**	**101**	Pb	Pb	21 27 27.2	-0.5
	baz=282						
S56A				S	Sb	21 27 52.6	-0.2
	baz=282						
U52A	**Thorn Hill**	**2.00**	**213**	Pb	Pb	21 27 28.0	-0.4
	baz=32						
O52A	**Adamsville**	**2.04**	**4**	S	Sb	21 27 54.9	+0.1
	baz=184						
P50A	**Jamestown**	**2.07**	**318**	Sb	Sg	21 27 57.5	-0.2
	baz=137						
R56A	**Bull Pasture M**	**2.07**	**80**	Pb	Pb	21 27 28.8	-0.8
	baz=262						
R56A				S	Sb	21 27 55.3	-0.6
	baz=262						
O51A	**Pataskala**	**2.12**	**347**	Sb	Sg	21 27 58.8	-0.3
	baz=167						
U56A	**King**	**2.16**	**143**	Sb	Sg	21 28 00.3	-0.2
	baz=324						
P55A	**Reedsville**	**2.22**	**49**	S	Sn	21 27 58.2	+1.0
	baz=230						
V53A	**Saluda**	**2.49**	**195**		Pb	21 27 35.6	-1.0

IDC ***06*** *21:27:34.7±0.9, 39°.45N×74°.15E, h0km, mb4.0/11, mb1 4.0/16, mb1mx3.6/68, mbtmp3.8/16, ML2.8/4, Error ellipse: s-maj=16.4km s-min=12.3km az=119.0*

SOME ***06*** *21:27:36.0, 39°.87N×74°.68E, h10km*

KRNET ***06*** *21:27:39.9±0.1, 39°.56N×74°.26E, mb4.0*

NEIC ***06*** *21:27:39.9±3.0, 39°.48N±0°.06×74°.23E±0°.07, h36km±2km, mb4.3/15, Error ellipse: s-maj=9.3km s-min=7.1km az=148.0*

NNC ***06*** *21:27:41.2±1.9, 39°.89N×74°.28E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=16.1km s-min=8.6km az=0.0*

ISC 06 21:27:35.8±0.5**, 39°.70N**±0°.03×**74°.43E**±0°.03**, h10km, n110, σ1§92/140, mb4.2/19, 24C-21D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**1.96**	**326**	⇑eP	Pg	21 28 13.0	-0.4
	baz=32						
ARSB				⇑iS	Sb	21 28 36.9	+0.6
	baz=32						
ARSB	**Arslanbob**	**1.96**	**326**		Pg	21 28 13.6	+0.2
NRN	**Naryn**	**2.10**	**34**	⇑eP	Pg	21 28 16.7	+0.6
	baz=34						
NRN				⇑iS	Sg	21 28 43.1	-0.3
	baz=34						
NRN	**Naryn**	**2.10**	**34**		Pg	21 28 17.5	+1.4
ARLS	**Aral**	**2.16**	**358**	⇓eP	Pg	21 28 16.4	-0.8
	baz=1.0						
ARLS				⇓iS	Sb	21 28 44.5	-0.7
	baz=1.0						
KZA	**Kyzart**	**2.45**	**14**	⇑eP	Pg	21 28 21.8	-1.0
	baz=16						
KZA				⇑iS	Sg	21 28 52.2	-2.4
	baz=16						
KZA	**Kyzart**	**2.45**	**14**	P	Pg	21 28 22.4	-0.5
	SNR=40						
AML	**Almayashu**	**2.49**	**347**	⇓eP	Pg	21 28 21.3	-2.2
	baz=51						
AML				⇓iS	Sb	21 28 51.3	-0.4
	baz=51						
AML	**Almayashu**	**2.49**	**347**	P	Pg	21 28 21.4	-2.2
	SNR=192						
UCH	**Uchtor**	**2.52**	**1**	⇓eP	Pg	21 28 22.2	-2.0
	baz=4.0						
UCH				⇓iS	Sb	21 28 53.1	+0.4
	baz=4.0						
UCH	**Uchtor**	**2.52**	**1**	P	Pg	21 28 23.0	-1.2
	SNR=45						
BTK	**Batken**	**2.80**	**278**	Pn	Pn	21 28 22.8	+2.1
ARK	**Arkit**	**2.81**	**319**	⇑iP	Pb	21 28 23.9	-2.3
	baz=23						
ARK				⇑iS	Sn	21 28 56.5	+1.6
	baz=23						
ULHL	**Ulahol**	**2.89**	**28**	⇓iP	Pg	21 28 27.8	-3.3
	baz=29						
ULHL				⇓iS	Sb	21 29 02.3	-0.7
	baz=29						
ULHL	**Ulahol**	**2.89**	**28**	P	Pg	21 28 28.8	-2.3
	SNR=22						
AAK	**Ala-Archa**	**2.93**	**1**	Pn	Pb	21 28 28.7	+0.4
	21nm,0.3s,baz=161,slow=8.7,SNR=58						
AAK				Pg	Pg	21 28 32.2	+0.2
	29nm,0.3s,baz=152,slow=7.1,SNR=117						
AAK				Sn	Sg	21 29 07.4	-2.6
	6.9nm,0.3s,baz=117,slow=24,SNR=8.4						
AAK				Lg	Lg	21 29 12.9	
	7.2nm,0.3s,baz=293,slow=23,SNR=2.4						
AAK	**Ala-Archa**	**2.93**	**1**	⇑iP	Pb	21 28 28.0	-0.3
	baz=3.0						
AAK				⇑iS	Sb	21 29 02.6	-1.6
	baz=3.0						
AAK	**Ala-Archa**	**2.93**	**1**	P	Pb	21 28 28.6	+0.4
	SNR=132						
AAK	**Ala-Archa**	**2.93**	**1**	⇓Pn	Pb	21 28 28.6	+0.4
	62nm,0.5s						
AAK				⇑Lg	Lg	21 29 10.5	
	102nm,0.9s						
KBK	**Karagaybulak**	**2.98**	**7**	⇑eP	Pb	21 28 28.8	-0.2
	baz=9.0						
KBK				⇑eS	Sb	21 29 04.0	-1.5
	baz=9.0						
KBK	**Karagaybulak**	**2.98**	**7**	P	Pg	21 28 29.7	-3.2
	SNR=75						
EKS2	**Erkin-Say**	**3.00**	**351**	⇑iP	Pb	21 28 28.5	-0.8
	baz=54						
EKS2				⇑iS	Sb	21 29 03.4	-2.7
	baz=54						
EKS2	**Erkin-Say**	**3.00**	**351**	P	Pb	21 28 28.8	-0.5
	SNR=45						
BOOM	**Boomskoye usch**	**3.01**	**22**	⇓iP	Pb	21 28 29.5	-0.1
	baz=23						
BOOM				⇓iS	Sb	21 29 05.4	-1.0
	baz=23						
FRU1	**Bishkek**	**3.11**	**3**	⇑eP	Pb	21 28 30.5	-0.7
	baz=5.0						
FRU1				⇑iS	Sb	21 29 06.3	-2.9
	baz=5.0						
FRU1	**Bishkek**	**3.11**	**3**	Pn	Pg	21 28 32.5	-2.8
MRKS	**Merke**	**3.17**	**344**	eP	Pb	21 28 32.0	-0.4
	12nm,0.2s						
MRKS				eS	Sb	21 29 12.5	+1.4
	72nm,0.3s						
MRKS	**Merke**	**3.17**	**344**	Pg	Pb	21 28 32.6	+0.3
	37nm,0.5s						
MRKS				Lg	Lg	21 29 12.2	
	72nm,0.5s						
KDJ	**Kajisay**	**3.20**	**40**	⇓eP	Pb	21 28 32.2	-0.6
	baz=40						
KDJ				⇓eS	Sb	21 29 09.9	-1.9
	baz=40						
KDJ	**Kajisay**	**3.20**	**40**		Pb	21 28 32.6	-0.1
CHMS	**Chumysh**	**3.30**	**4**	⇓eP	Pb	21 28 32.8	-1.7
	baz=6.0						
CHMS				⇓iS	Sb	21 29 11.2	-3.5
	baz=6.0						
CHMS	**Chumysh**	**3.30**	**4**	P	Pb	21 28 33.6	-0.8
	SNR=12						
CHMS	**Chumysh**	**3.30**	**4**	⇑Pn	Pb	21 28 33.0	-1.5
	11nm,0.5s						
CHMS				⇑Lg	Lg	21 29 22.0	
	82nm,1.1s						
KST	**Kastek**	**3.53**	**19**	eP	Pb	21 28 37.7	-0.7
	36nm,0.2s						
KST				eS	Sb	21 29 22.8	+1.3
	100nm,0.3s						
KST	**Kastek**	**3.53**	**19**	Pg	Pb	21 28 37.9	-0.5
	36nm,0.5s						
KST				Lg	Lg	21 29 21.0	
	80nm,0.8s						
USP	**Ospenovka**	**3.56**	**1**	⇓iP	Pb	21 28 36.4	-2.5
	baz=3.0						
USP				⇓iS	Sb	21 29 17.5	-4.7
	baz=3.0						
USP	**Ospenovka**	**3.56**	**1**	P	Pg	21 28 41.7	-2.3
	SNR=11						
IZV	**Izvestkoviy**	**3.71**	**26**	eP	Pb	21 28 41.5	-0.1
	12nm,0.2s						
IZV				eS	Sb	21 29 28.2	+1.6
	22nm,0.3s						
MTBS	**Maitube**	**3.74**	**23**	eP	Pb	21 28 41.0	-1.0
	41nm,0.2s						
MTBS				eS	Sb	21 29 27.3	-0.1
	17nm,0.2s						
TNSS	**Tian-Shan**	**3.83**	**29**	eP	Pb	21 28 42.0	-1.7
	8.2nm,0.2s						
TNSS				eS	Sb	21 29 29.3	-1.0
	12nm,0.4s						
TNSS	**Tian-Shan**	**3.83**	**29**	Pg	Pg	21 28 49.3	+0.1
	50nm,0.4s						
TNSS				Lg	Lg	21 29 40.3	
	18nm,0.7s						
ANVS	**Anan'yevo**	**3.93**	**37**	⇑iP	Pb	21 28 42.4	-2.8
	baz=37						
ANVS				⇑iS	Sb	21 29 28.1	-4.8
	baz=37						
DZA	**Taraz**	**3.95**	**325**	eP	Pg	21 28 49.2	-2.2
	29nm,0.1s						
DZA				eS	Sg	21 29 41.7	-1.0
	51nm,0.2s						
DZA	**Taraz**	**3.95**	**325**	Pg	Pb	21 28 44.7	-0.8
	15nm,0.2s						
DZA				Lg	Lg	21 29 32.1	
	50nm,0.5s						
AAA	**Alma-Ata**	**3.97**	**27**	eP	Pb	21 28 44.9	-1.0
	14nm,0.1s						
AAA				eS	Sb	21 29 34.2	+0.2
	7.6nm,0.0s						
AAA	**Alma-Ata**	**3.97**	**27**	Pg	Pg	21 28 52.1	+0.3
	49nm,0.6s						
AAA				Lg	Lg	21 29 45.0	
	28nm,0.7s						
MDOK	**Medeo**	**3.98**	**29**	eP	Pb	21 28 44.7	-1.4
	5.4nm,0.3s						
MDOK				eS	Sb	21 29 33.7	-0.6
	12nm,0.4s						
MDOK	**Medeo**	**3.98**	**29**	Pn	Pb	21 28 43.5	-2.6
	3.7nm,0.5s						
MDOK				Pg	Pg	21 28 51.7	-0.3
	41nm,0.6s						
MDOK				Lg	Lg	21 29 48.4	
	32nm,0.7s						
JBG	**Jabagly**	**4.00**	**314**	Pg	Pb	21 28 48.3	+1.8
	3.4nm,0.1s						
JBG				Lg	Lg	21 29 38.0	
	21nm,0.5s						
KOTS	**Kotyrbulak**	**4.06**	**29**	eP	Pb	21 28 45.4	-2.1
	15nm,0.2s						
KOTS				eS	Sb	21 29 34.8	-1.9
	30nm,0.6s						
PRZ	**Przheval'sk**	**4.09**	**46**		Pb	21 28 45.6	-2.3
KRBS	**Karabastau**	**4.10**	**13**	eP	Pb	21 28 46.5	-1.5
	1.4nm,0.2s						
KRBS				eS	Sb	21 29 36.6	-1.0
	9.1nm,0.4s						
IUG	**Iuzhnay**	**4.13**	**308**	eP	Pg	21 28 52.3	-2.6
	2.2nm,0.2s						
IUG				eS	Sg	21 29 47.2	-1.3
	81nm,0.3s						
KUU	**Kurty**	**4.42**	**18**	eP	Pb	21 28 55.4	+1.8
	2.0nm,0.3s						
KUU				eS	Sg	21 29 52.1	-5.7
	34nm,0.5s						
KUU	**Kurty**	**4.42**	**18**	Pg	Pg	21 28 58.8	-1.7
	12nm,0.6s						
KUU				Lg	Lg	21 29 56.3	
	30nm,1.1s						
SATY	**Saty**	**4.49**	**40**	Pg	Pg	21 29 01.0	-0.8
	27nm,0.9s						
SATY				Lg	Lg	21 30 00.7	
	26nm,1.4s						
KK31	**Karatay Array**	**4.50**	**320**	⇑Pn	Pn	21 28 47.2	+3.2
	2.6nm,0.5s,baz=123,slow=12,SNR=33						
KK31				⇑Pg	Pg	21 28 58.1	-3.9
	5.1nm,0.5s,baz=140,slow=16,SNR=17						
KK31				⇓Sn	Sn	21 29 40.9	+4.5
	7.3nm,0.6s,baz=224,slow=52,SNR=4.3						
KK31				⇓Lg	Lg	21 29 56.3	
	23nm,0.5s,baz=133,slow=29,SNR=5.2						
KK31	**Karatay Array**	**4.50**	**320**		Pn	21 28 47.2	+3.2
KKAR	**Karatay Array**	**4.50**	**320**		Pn	21 28 47.5	+3.5
KKAR	**Karatay Array**	**4.50**	**320**		Pn	21 28 47.2	+3.2
CHKK	**Chushkaly**	**4.57**	**24**	eP	Pb	21 28 55.4	-0.6
	0.8nm,0.1s						
CHKK				eS	Sb	21 29 51.9	+0.8
	5.5nm,0.2s						
KURS	**Kuram**	**4.71**	**35**	eP	Pb	21 28 57.5	-0.9
	4.2nm,0.3s						
KURS				eS	Sb	21 29 55.7	+0.5
	5.0nm,0.3s						
UZB	**Uzynbulak**	**4.87**	**44**	Pg	Pb	21 29 00.8	-0.5
	11nm,0.7s						
UZB				Lg	Lg	21 29 59.4	
	9.1nm,1.0s						
SHLS	**Shalkode**	**5.12**	**46**	Pg	Pg	21 29 17.4	+3.6
	22nm,0.8s						
SHLS				Lg	Lg	21 30 27.9	
	19nm,1.6s						
PDGK	**Podgornoye**	**5.25**	**45**	Pg	Pg	21 29 10.7	-5.5
	2.8nm,0.8s						
PDGK				Lg	Lg	21 30 16.6	
	3.7nm,1.0s						
PDGK	**Podgornoye**	**5.25**	**45**	⇓Pn	Pn	21 28 59.3	+4.9
	2.2nm,0.9s						
PDGK				⇑Pg	Pg	21 29 13.5	-2.7
	16nm,0.8s						
PDGK				⇓Lg	Lg	21 30 23.7	
	14nm,0.8s						
TDK	**Taldyqorghan**	**6.06**	**28**	Pg	Pg	21 29 30.7	-1.0
	38nm,0.8s						
TDK				Lg	Lg	21 30 50.8	
	16nm,0.6s						
DJR	**Jarkent**	**6.11**	**39**	Pg	Pg	21 29 28.9	-3.8
	1.2nm,0.5s						
DJR				Lg	Lg	21 30 47.9	
	2.9nm,0.9s						
NIL	**Nilore**	**6.11**	**189**	Pn	Pn	21 29 07.1	+0.9
KBL	**Kabul**	**6.71**	**222**	Pn	Pn	21 29 12.3	-2.3
DHRM	**DHARAMSHALA**	**7.59**	**168**	eP	Pn	21 29 30.1	+3.4
DHRM				i x	x	21 29 32.4	
DHRM				eS	Sn	21 30 53.6	+0.8
MAKZ	**Makanchi**	**8.98**	**35**	Pn	Pn	21 29 52.8	+7.3
MKAR	**Makanchi Array**	**9.11**	**36**	Pn	Pn	21 29 54.7	+7.4
	0.0nm,0.3s,baz=222,slow=13,SNR=1.9						
MKAR				Sn	Sn	21 31 40.7	+11
	baz=79,slow=37,SNR=0.7						
MKAR				Lg	Lg	21 32 24.8	
	baz=213,slow=45,SNR=2.0						
JOSI	**Joshimath**	**10.04**	**154**	eP	Pn	21 30 14.3	+14
JOSI				i x	x	21 30 16.7	
JOSI				eS	Sn	21 31 54.1	+1.1
JOSI				IAML		21 32 00.8	
	comp=N,26nm,0.8s						
JOSI				IAML		21 32 01.6	
	comp=E,26nm,0.5s						
HRA	**Herat**	**11.09**	**245**	Pn	Pn	21 30 13.4	-1.2
KURBB	**Kurchatov Arra**	**11.29**	**13**	Lg	Lg	21 33 36.4	
	baz=200,slow=28,SNR=5.9						
GEYT	**Alibeck**	**12.85**	**267**	Pn	Pn	21 30 34.9	-3.6
	comp=E,0.2nm,0.3s,baz=81,slow=9.6,SNR=4.0						
GYA0B	**ALIBECK ARRAY**	**12.85**	**267**	Pn	Pn	21 30 35.9	-2.6
BVAR	**Borovoye Array**	**13.61**	**350**	Pn	Pn	21 30 51.2	+2.5
	baz=138,slow=15,SNR=1.8						
ABKAR	**Akbulak array**	**14.06**	**318**		Pn	21 30 55.8	+0.9
AKTO	**Aktyubinsk**	**15.76**	**318**	Pn	Pn	21 31 17.8	+0.1
	comp=E,0.1nm,0.3s,baz=137,slow=11,SNR=3.7						
AKTO				Sn	Sn	21 33 58.4	-14
	comp=E,0.1nm,0.3s,baz=18,slow=8.0,SNR=1.8						
ZALV	**Zalesovo Beam**	**15.90**	**23**	Pn	P	21 31 24.0	+0.8
	comp=E,0.1nm,0.3s,baz=243,slow=9.5,SNR=1.5						
LSA	**Lhasa**	**16.96**	**121**	Pn	P	21 31 35.2	-0.4
UOSS	**Minazif**	**21.24**	**232**	P	P	21 32 19.0	-3.0
UOSS				IAmb	IAmb	21 32 21.9	
	comp=Z,25nm,1.1s						
GNI	**Garni**	**22.73**	**281**	P	P	21 32 34.2	-3.8
KVAR	**Kislovodsk Arr**	**23.95**	**291**	P	P	21 32 50.8	+0.6
	comp=Z,3.2nm,0.9s,baz=151,slow=5.4,SNR=2.9						
SOCY	**Socotra**	**32.83**	**219**	P	P	21 34 03.4	-6.4
SOCY				IAmb	IAmb	21 34 13.1	
	comp=Z,6.8nm,1.0s						
FIA1	**FINESS Array S**	**36.45**	**323**	P	P	21 34 41.7	+1.2
FIA1				IAmb	IAmb	21 34 42.3	
	comp=Z,4.9nm,1.1s						
FINES	**FINESS Array B**	**36.45**	**323**	P	P	21 34 41.7	+1.2
	comp=Z,1.9nm,0.4s,baz=116,slow=9.7,SNR=34						
KEV	**Kevo**	**38.91**	**336**	P	P	21 35 00.2	-1.0
KEV				IAmb	IAmb	21 35 01.8	
	comp=Z,7.3nm,1.0s						
ARCES	**ARCESS Array B**	**39.30**	**335**	P	P	21 35 06.0	+1.6
	comp=Z,2.7nm,0.8s,baz=98,slow=7.5,SNR=7.5						
ARE0	**ARCESS Array S**	**39.30**	**335**	P	P	21 35 05.0	+0.6
YAK	**Yakutsk**	**39.79**	**37**	P	P	21 35 12.5	+3.9
	comp=Z,6.1nm,0.5s,baz=327,slow=1.9,SNR=4.5						
USA0B	**Ussuriysk Arra**	**42.29**	**64**	P	P	21 35 32.6	+3.1
USA0B				IAmb	IAmb	21 35 48.9	
	comp=Z,2.2nm,1.0s						
USRK	**Ussuriysk Ar.**	**42.29**	**64**	P	P	21 35 32.6	+3.1
HFS	**Hagfors**	**42.31**	**320**	P	P	21 35 30.0	+0.7
	comp=Z,1.7nm,0.4s,baz=104,slow=11,SNR=19						
NC405	**NORSAR Array S**	**43.29**	**321**	P	P	21 35 38.0	+0.7
NC405				IAmb	IAmb	21 35 54.7	
	comp=Z,8.0nm,1.1s						
NC602	**NORSAR Array S**	**43.37**	**320**	P	P	21 35 38.7	+0.7
NC602				IAmb	IAmb	21 35 48.9	
	comp=Z,6.1nm,0.8s						
GERES	**GERESS Array B**	**43.38**	**303**	P	P	21 35 39.6	+1.2
	comp=Z,0.3nm,0.5s,baz=73,slow=8.3,SNR=3.9						
NC303	**NORSAR Array S**	**43.45**	**321**	P	P	21 35 39.9	+1.3
NB201	**NORSAR Array S**	**43.49**	**321**	P	P	21 35 39.8	+0.8
NB2	**NORSAR Subarra**	**43.53**	**321**	P	P	21 35 39.9	+0.6
	comp=Z,0.7nm,0.4s,baz=90,slow=8.6						
NOA	**NORSAR Array B**	**43.53**	**321**	P	P	21 35 40.0	+0.7
	comp=Z,1.0nm,1.0s,baz=101,slow=7.3,SNR=6.4						
NC204	**NORSAR Array S**	**43.75**	**321**	P	P	21 35 41.9	+0.8
FAKI	**Fak Fak**	**67.78**	**114**	P	P	21 38 32.8	-1.2
TOA0	**Torodi Ar. Sit**	**68.48**	**269**	P	P	21 38 37.1	-1.4
TOA0				IAmb	IAmb	21 38 49.8	
	comp=Z,2.6nm,1.1s						
TORD	**Torodi Ar. Bea**	**68.48**	**269**	P	P	21 38 37.1	-1.3
	comp=Z,0.9nm,0.6s,baz=47,slow=5.5,SNR=11						
YKA	**Yellowknife Ar**	**77.89**	**4**	P	P	21 39 34.4	+1.1
	comp=Z,0.2nm,0.5s,baz=351,slow=5.7,SNR=3.5						
WRA	**Warramunga Arr**	**81.48**	**125**	P	P	21 39 53.9	+0.6
	comp=Z,0.5nm,0.3s,baz=302,slow=3.8,SNR=8.0						
ASAR	**Alice Springs**	**83.95**	**127**	P	P	21 40 06.7	+0.4
	comp=Z,0.2nm,0.6s,baz=310,slow=4.9,SNR=5.3						

NCEDC ***06*** *21:30:02.9±0.7, 37°.63N±0°.02×119°.03W±0°.03, h5km±2km, Md1.9, Error ellipse: s-maj=3.4km s-min=3.2km az=181.0*

NEIC 06 21:30:02.8±0.6**, 37°.63N**±0°.03×**119°.05W**±0°.03**, h5**km±3km**, Error ellipse: s-maj=3.8km s-min=3.3km az=164.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMSM	**Mammoth Summit**	**0.01**	**78**		Pg	21 30 04.1	-0.1
MMPM	**Mammoth Pass**	**0.02**	**141**		Pg	21 30 04.0	-0.1
MLIM	**Lincoln Peak**	**0.02**	**69**		Pg	21 30 04.1	0.0
MRDM	**Red Cones**	**0.03**	**198**		Pg	21 30 04.3	+0.2
OMMB	**Old Mammoth Mi**	**0.04**	**112**		Pg	21 30 03.9	-0.3
OMMB				Sg	Sg	21 30 04.8	-0.4
MDYM	**Dry Creek**	**0.04**	**42**		Pg	21 30 04.2	0.0
MMLB	**Mammoth Lakes**	**0.06**	**60**		Pg	21 30 04.5	0.0
MDCM	**Deadman Creek**	**0.08**	**3**		Pg	21 30 04.8	0.0
MEMM	**East Mammoth H**	**0.09**	**66**		Pg	21 30 05.0	+0.1
MLCM	**Laurel Creek C**	**0.10**	**99**		Pg	21 30 05.2	+0.1
MGPM	**Gravel Pit**	**0.11**	**91**		Pg	21 30 05.5	+0.3
MCSM	**Casa Diablo Ho**	**0.12**	**76**		Pg	21 30 05.5	+0.2
MCBM	**Casa Benchmark**	**0.12**	**82**		Pg	21 30 05.6	+0.3
RCCR	**Rock Creek Can**	**0.29**	**119**		Pg	21 30 08.6	+0.1
WAKR	**Walker**	**0.93**	**341**	Pg	Pg	21 30 20.9	+0.3
WAKR				Sg	Sg	21 30 31.9	-0.8
NVAR	**Mina Array Bea**	**0.99**	**36**		Pg	21 30 21.9	+0.1
NV11	**Mina Array Sit**	**1.07**	**41**	Pg	Pg	21 30 22.9	-0.3
RYN	**Ryan**	**1.08**	**22**	Pg	Pg	21 30 23.5	0.0
CMB	**Columbia Colle**	**1.14**	**291**	Pg	Pg	21 30 23.7	-0.8
YERR	**Yerington**	**1.36**	**354**	Pn	Pn	21 30 28.5	-0.2
PNTR	**Pine Nut**	**1.52**	**344**	Pn	Pn	21 30 30.9	-0.1
KVN	**Kaiserville**	**1.60**	**27**		Pn	21 30 32.4	+0.4
RUBR	**Rubicon Trail**	**1.67**	**329**	Pn	Pn	21 30 32.9	0.0
VCNR	**Virginia City**	**1.73**	**344**	Pn	Pn	21 30 33.6	-0.2
DAC	**Darwin (Calif)**	**1.78**	**139**	Pn	Pn	21 30 35.0	+0.6
PMPB	**Monarch Peak**	**1.99**	**225**	Pn	Pn	21 30 37.6	+0.4
AFDM	**Forest Hills D**	**2.01**	**312**		Pn	21 30 38.6	+1.2
ISA	**Isabella, Lake**	**2.02**	**167**	Pn	Pn	21 30 37.8	+0.3
SAO	**San Andreas Ge**	**2.10**	**247**	Pn	Pn	21 30 38.9	+0.2
TPNV	**Topopah Spring**	**2.33**	**106**	Pn	Pn	21 30 42.0	0.0
BEKR	**Beckworth**	**2.46**	**336**	Pn	Pn	21 30 42.7	-1.1

ORV	**Oroville**	**2.72**	**316**	Pn	Pn	21 30 45.8	-1.4
R11A	**Troy Canyon, C**	**2.83**	**74**	Pn	Pn	21 30 48.3	-0.5

*JMA **06** 21:36:23.7, 37.°74N×141.°80E, h53km±1km, M3.8*
*IDC **06** 21:36:27.6±3.5, 37.°76N×141.°70E, h88km±31km, mb3.2/8, mb1 3.4/10, mb1mx3.3/41, mbtmp3.5/10, Error ellipse: s-maj=28.8km s-min=20.6km az=92.0*
ISC 06 21:36:23.3±1.8, **37.°73N**±0.°06×**141.°9E**±0.°1, **h45**km±16km, **n32**, σ**1.°03**/39, **mb3.5**/8, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.67**	**330**	P	**Pn**	**21 36 36.8**	**+0.4**
JIKH				S	**Sn**	**21 36 46.0**	**+0.1**
JMST	**Minamisoumatoc**	**0.79**	**270**	P	**Pn**	**21 36 38.0**	**0.0**
JMST				S	**Sn**	**21 36 48.3**	**-0.5**
JIO	**Ouri**	**0.84**	**330**	P	**Pn**	**21 36 39.0**	**+0.3**
JIO				S	**Sn**	**21 36 49.6**	**-0.3**
JMM	**Marumori**	**0.88**	**279**	P	**Pn**	**21 36 39.2**	**0.0**
JMM				S	**Sn**	**21 36 50.3**	**-0.5**
JFK	**Kawauchi**	**0.88**	**246**	P	**Pn**	**21 36 39.3**	**0.0**
JFK				S	**Sn**	**21 36 50.3**	**-0.7**
ONAJ	**Iwakimizuishiy**	**1.07**	**234**	P	**Pn**	**21 36 41.8**	**-0.1**
ONAJ				S	**Sn**	**21 36 54.7**	**-0.9**
JOU	**Okura**	**1.16**	**304**	P	**Pn**	**21 36 43.1**	**+0.1**
JOU				S	**Sn**	**21 36 57.5**	**-0.2**
JFT	**Otama**	**1.25**	**261**	P	**Pn**	**21 36 44.8**	**+0.5**
JFT				*e*S	**Sn**	**21 37 00.2**	**+0.3**
JMK	**Ichinoseki**	**1.33**	**337**	P	**Pn**	**21 36 45.9**	**+0.5**
JMK				*e*S	**Sn**	**21 37 02.0**	**+0.1**
JYS	**Shirataka**	**1.52**	**289**	P	**Pn**	**21 36 48.4**	**+0.4**
JYK	**Kaneyama**	**1.69**	**315**	P	**Pn**	**21 36 50.7**	**+0.4**
JFY	**Yanaizu**	**1.76**	**260**	P	**Pn**	**21 36 51.7**	**+0.4**
JOM	**Ohasama**	**1.80**	**345**	P	**Pn**	**21 36 52.5**	**+0.6**
JOM				*e*S	**Sn**	**21 37 14.2**	**+0.7**
JYA	**Atsumi**	**1.92**	**297**	P	**Pn**	**21 36 53.7**	**+0.3**
JRG	**Rokugo**	**1.93**	**330**	P	**Pn**	**21 36 54.5**	**+0.9**
JRG				S	**Sn**	**21 37 17.9**	**+1.2**
MJAR	**Matsushiro Arr**	**3.17**	**249**	P	**Pn**	**21 37 12.1**	**+1.4**
	0.4nm,0.3s,baz=56,slow=12,SNR=28						
MJAR				S	**Sn**	**21 37 50.5**	**+3.3**
	0.3nm,0.3s,baz=314,slow=41,SNR=1.6						
MAT	**Matsushiro**	**3.17**	**249**	P	**Pn**	**21 37 11.9**	**+1.2**
MAT				*e*S	**Sn**	**21 37 50.2**	**+3.0**
USRK	**Ussuriysk Ar.**	**9.88**	**314**	P	**Pn**	**21 38 44.0**	**+1.4**
	baz=119,slow=14,SNR=8.6						
SONM	**Songino Array**	**27.72**	**303**	P	**P**	**21 42 06.4**	**-1.0**
	0.5nm,0.4s,baz=100,slow=10,SNR=7.1						
H11N2	**WAKE ISLAND Hy**	**28.19**	**123**	T	T	22 12 38.2	
	baz=316,slow=76,SNR=77						
H11N1	**WAKE ISLAND Hy**	**28.20**	**123**	T	T	22 12 39.0	
	baz=316,slow=76,SNR=54						
H11N3	**WAKE ISLAND Hy**	**28.21**	**123**	T	T	22 12 39.6	
	baz=316,slow=76,SNR=50						
H11S1	**WAKE ISLAND Hy**	**28.93**	**125**	T	T	22 13 34.6	
	baz=318,slow=76,SNR=27						
H11S3	**WAKE ISLAND Hy**	**28.93**	**125**	T	T	22 13 34.6	
	baz=318,slow=76,SNR=26						
H11S2	**WAKE ISLAND Hy**	**28.95**	**125**	T	T	22 13 36.1	
	baz=318,slow=76,SNR=14						
ZALV	**Zalesovo Beam**	**41.73**	**312**	P	**P**	**21 44 06.3**	**-1.3**
	0.3nm,0.4s,baz=63,slow=7.1,SNR=1.8						
MKAR	**Makanchi Array**	**44.07**	**302**	P	**P**	**21 44 25.4**	**-1.4**
	0.4nm,0.7s,baz=89,slow=8.6,SNR=5.3						
WRA	**Warramunga Arr**	**57.80**	**188**	P	**P**	**21 46 09.4**	**-0.7**
	0.8nm,0.4s,baz=6.2,slow=7.4,SNR=2.9						
ASAR	**Alice Springs**	**61.53**	**188**	P	**P**	**21 46 35.1**	**-0.6**
	0.2nm,0.5s,baz=23,slow=5.0,SNR=1.8						
YKA	**Yellowknife Ar**	**63.02**	**30**	P	**P**	**21 46 45.7**	**+0.5**
	0.2nm,0.5s,baz=305,slow=6.7,SNR=2.3						
PDAR	**Pinedale Array**	**76.91**	**46**	P	**P**	**21 48 11.6**	**+0.5**
	0.2nm,0.6s,baz=255,slow=2.7,SNR=2.6						
TXAR	**Lajitas Array**	**89.40**	**53**	P	**P**	**21 49 15.9**	**+0.4**
	0.2nm,0.6s,baz=317,slow=3.7,SNR=3.2						

*IDC **06** 21:38:41.5±1.1, 1.°57N×122.°95E, h0km, mb3.9/5, mb1 4.2/6, mb1mx3.7/38, mbtmp4.0/6, ML4.7/1, MS2.8/3, Ms1 2.8/3, ms1mx2.6/26, Error ellipse: s-maj=117.0km s-min=18.7km az=68.0*
*DJA **06** 21:38:42.5±0.4, 2°N±4°×12°2E±°, h10km, M4.4/13, mB5.0/4, mb4.7/7, MLv4.5/13, MLv4.3/7, Mw(mB)4.3/4*
*NEIC **06** 21:38:44.2±1.8, 1.°55N±0.°06×122.°39E±0.°08, h32km±7km, mb4.4/23, Error ellipse: s-maj=11.6km s-min=9.0km az=73.0*
ISC 06 21:38:45.0±0.6, **1.°50N**±0.°06×**122.°34E**±0.°07, **h38**km, **n54**, σ**1.°49**/44, **mb4.3**/13, **1C-1D**, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.09**	**201**	P	**Pn**	**21 39 04.0**	**+0.2**
KMSI	**Cibinong**	**1.89**	**119**	P	**Pn**	**21 39 17.0**	**+2.3**
APSI	**Ampana**	**2.49**	**196**	P	**Pn**	**21 39 24.6**	**+1.5**
LUWI	**Luwuk**	**2.56**	**170**	P	**Pn**	**21 39 26.1**	**+2.0**
LUWI	**Luwuk**	**2.56**	**170**	Pn	**Pn**	**21 39 27.2**	**+3.2**
MPSI	**Mapaga**	**2.70**	**245**	P	**Pn**	**21 39 25.1**	**-0.8**
SANI	**Sanana**	**5.08**	**134**	P	**Pn**	**21 40 00.0**	**+1.4**
	0.2nm14nm,0.5s						
TNTI	**Ternate**	**5.08**	**98**	Pn	**Pn**	**21 39 58.8**	**+0.1**
TTSI	**Tana Toraja**	**5.17**	**209**	P	**Pn**	**21 40 01.3**	**+1.4**
	0.3nm0.3nm1μm51nm,0.6s						
KDI	**Kendari**	**5.43**	**177**	P	**Pn**	**21 40 05.6**	**+2.1**
	33nm,0.7s						
LBMI	**Labuha**	**5.59**	**112**	P	**Pn**	**21 40 08.0**	**+2.4**
	0.2nm0.2nm26nm,0.5s						
CTBH	**Cotabato--PC H**	**5.99**	**18**	⇓*i*P	**Pn**	**21 40 11.3**	**+0.1**
CTBH	**Cotabato--PC H**	**5.99**	**18**	⇑*i*P	Sn	21 41 09.6	-9.0
SPSI	**Sidrap Palu**	**6.00**	**205**	P	Pn	21 40 06.2	-5.2
BKB	**Balikpapan**	**6.09**	**243**	Pn	**Pn**	**21 40 11.5**	**-1.1**
BNSI	**Bone**	**6.27**	**201**	P	**Pn**	**21 40 17.3**	**+2.3**
	0.4nm1μm141nm,0.8s						
DAV	**Davao City (W)**	**6.41**	**30**	LR	LR	21 43 18.3	
	comp=Z,65nm,18.5s,baz=276,slow=46						
DAV	**Davao City (W)**	**6.41**	**30**	Pn	**Pn**	**21 40 14.4**	**-2.5**
BKSI	**Bulukumba**	**7.13**	**198**	P	**Pn**	**21 40 27.4**	**+0.6**
	0.1nm22nm,0.7s						
KKM	**Kota Kinabalu**	**7.59**	**307**	Pn	**Pn**	**21 40 34.0**	**+0.7**
SBUM	**Sibu**	**10.15**	**275**	Pn	**Pn**	**21 41 08.7**	**+0.3**
FAKI	**Fak Fak**	**10.84**	**114**	Pn	**Pn**	**21 41 17.2**	**-0.6**
UGM	**Wanagama**	**15.04**	**231**	Pn	**Pn**	**21 42 16.1**	**+1.1**
UGM				IAmb	IAmb	21 42 26.5	
	comp=Z,50nm,1.1s						
MTN	**Manton Dam**	**16.71**	**149**	Pn	**Pn**	**21 42 34.5**	**-2.0**
KNRA	**Kununurra**	**18.21**	**160**	P	**Pn**	**21 42 55.0**	**0.0**
KNRA				IAmb	IAmb	21 43 11.0	
	comp=Z,31nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.75**	**171**	P	**P**	**21 43 11.6**	**-0.1**
	comp=Z,1.7nm,0.3s,baz=0.0,slow=7.5,SNR=18						
FITZ	**Fitzroy Crossi**	**19.75**	**171**	IAmb	IAmb	21 43 12.5	
	comp=Z,16nm,1.1s						
TPUB	**Ta-pu**	**21.73**	**356**	P	**P**	**21 43 31.9**	**-1.3**
YULB	**Yu-li**	**21.78**	**357**	P	**P**	**21 43 33.4**	**-0.3**
YOJ	**Yonaguni jima**	**22.83**	**2**	P	**P**	**21 43 44.5**	**-0.5**
PSA00	**Pilbara Seismi**	**23.06**	**186**	P	**P**	**21 43 45.1**	**-2.2**
PSA00				IAmb	IAmb	21 43 49.5	
	comp=Z,9.6nm,1.1s						
KNMB	**Chin-men Tao**	**23.14**	**351**	P	**P**	**21 43 45.5**	**-2.6**
KNMB				IAmb	IAmb	21 43 59.6	
	comp=Z,24nm,1.1s						
WB0	**Warramunga Arr**	**24.22**	**151**	P	**P**	**21 43 58.1**	**-0.4**
WB0				IAmb	IAmb	21 44 08.4	
	comp=Z,10nm,1.1s						
WRA	**Warramunga Arr**	**24.35**	**152**	P	**P**	**21 43 59.6**	**0.0**
	comp=Z,3.6nm,0.6s,baz=332,slow=9.7,SNR=12						
WRA	**Warramunga Arr**	**24.35**	**152**	IAmb	IAmb	21 44 08.3	
	comp=Z,0.2nm,1.0s						
WR0	**Warramunga Arr**	**24.46**	**151**	P	**P**	**21 44 00.9**	**+0.3**
WR0				IAmb	IAmb	21 44 01.5	
	comp=Z,4.9nm,0.7s						
ASAR	**Alice Springs**	**27.43**	**156**	P	**P**	**21 44 27.2**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=344,slow=15,SNR=12						
CMAR	**Chiang Mai Arr**	**28.47**	**308**	LR	LR	21 56 15.8	
	comp=Z,19nm,20.0s,baz=174,slow=36						
MORW	**Morawa**	**30.99**	**191**	P	**P**	**21 44 56.9**	**-2.0**
MORW				IAmb	IAmb	21 45 12.1	
	comp=Z,9.2nm,1.1s						
FORT	**Forrest**	**32.56**	**171**	P	**P**	**21 45 11.1**	**-1.7**
NWAO	**Narrogin (SRO)**	**34.58**	**188**	P	**P**	**21 45 29.0**	**-1.3**
NWAO	**Narrogin (SRO)**	**34.58**	**188**	P	**P**	**21 45 28.8**	**-1.5**
NWAO				IAmb	IAmb	21 45 47.5	
	comp=Z,18nm,1.1s						
KSRS	**Korea Array**	**36.15**	**8**	LR	LR	22 00 34.6	
	comp=Z,14nm,20.3s,baz=65,slow=36						
BBOO	**Buckleboo**	**36.51**	**160**	P	**P**	**21 45 46.6**	**-0.3**
BBOO				IAmb	IAmb	21 46 04.1	
	comp=Z,7.5nm,1.1s						
STKA	**Stephens Creek**	**37.89**	**153**	P	**P**	**21 45 58.9**	**+0.3**
	comp=Z,6.1nm,0.7s,baz=328,slow=8.7,SNR=16						
STKA	**Stephens Creek**	**37.89**	**153**	P	**P**	**21 45 59.2**	**+0.6**
ARMA	**Armidale**	**42.27**	**141**	P	**P**	**21 46 35.3**	**+0.1**
CAN	**Canberra**	**44.31**	**148**	P	**P**	**21 46 51.4**	**-0.1**
CAN				IAmb	IAmb	21 46 53.6	
	comp=Z,5.0nm,0.7s						
SONM	**Songino Array**	**48.17**	**346**	P	**P**	**21 47 22.9**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=164,slow=9.3,SNR=7.0						
SONM	**Songino Array**	**48.17**	**346**	IAmb	IAmb	21 47 24.0	
	comp=Z,0.7nm,0.8s						
TLY	**Talaya**	**52.41**	**345**	P	**P**	**21 47 54.7**	**+1.0**
TLY				IAmb	IAmb	21 48 00.3	
	comp=Z,3.0nm,0.6s						
MKAR	**Makanchi Array**	**56.99**	**328**	P	P	21 48 32.9	+5.9
	comp=Z,0.3nm,0.9s,baz=132,slow=4.3,SNR=1.7						
ABKAR	**Akbulak array**	**71.14**	**322**	P	**P**	**21 50 02.7**	**+3.0**
RAGM	**Ragged Mountai**	**90.19**	**30**		pP	21 51 50.7	-1.6

*IDC **06** 21:56:27.3±3.8, 44.°59N×101.°40E, h0km, mb3.9/2, mb1 3.6/5, mb1mx3.3/50, mbtmp3.6/5, ML2.5/2, MS3.2/2, Ms1 3.3/2, ms1mx2.6/48, Error ellipse: s-maj=64.8km s-min=19.9km az=162.0*
ISC 06 21:56:31.2±1.2, **45.°1N**±0.°1×**101.°8E**±0.°1, **h10**km, **n13**, σ**2.°30**/11, **Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**4.21**	**47**	Pn	**Pb**	**21 57 41.7**	**-3.7**
	17nm,0.3s,baz=230,slow=15,SNR=710						
SONM				Pg	**Pg**	**21 57 55.5**	**+3.7**
	32nm,0.3s,baz=226,slow=18,SNR=20						
SONM				Lg	Lg	21 58 54.7	
	29nm,0.3s,baz=225,slow=32,SNR=2.6						
MKAR	**Makanchi Array**	**13.68**	**284**	Pn	Pn	21 59 40.4	-4.7
	0.0nm,0.3s,baz=92,slow=17,SNR=3.9						
MKAR				Lg	Lg	22 03 36.9	
	0.1nm,0.3s,baz=80,slow=27,SNR=5.4						
ZALV	**Zalesovo Beam**	**14.12**	**315**	Pn	**Pn**	**21 59 52.3**	**+1.2**
	0.1nm,0.3s,baz=130,slow=11,SNR=1.5						
ZALV				Lg	Lg	22 03 50.1	
	0.1nm,0.3s,baz=118,slow=22,SNR=6.5						
TAPN	**Taplejung**	**20.97**	**217**	*e*P	**P**	**22 01 16.6**	**+1.9**
	8.4nm,0.9s						
KSRS	**Korea Array**	**21.01**	**102**	LR	LR	22 10 40.1	
	comp=Z,25nm,18.3s,baz=52,slow=40						
GUN	**Gumba**	**21.31**	**222**	*e*P	**P**	**22 01 18.8**	**+0.3**
JIRN	**Jiri**	**21.38**	**221**	*e*P	**P**	**22 01 19.6**	**+0.4**
	15nm,0.6s						
ODAN	**Odare**	**21.53**	**217**	*e*P	**P**	**22 01 22.5**	**+1.8**
	10.0nm,0.6s						
PKI	**Pulchoki**	**21.82**	**222**	*e*P	**P**	**22 01 22.7**	**-1.2**
	6.9nm,0.5s						
PKIN	**Phulchoki**	**21.82**	**222**	*e*P	**P**	**22 01 22.4**	**-1.5**
	5.4nm,0.5s						
FINES	**FINESS Array B**	**45.34**	**319**	P	**P**	**22 04 47.7**	**-1.3**
	1.7nm,1.0s,baz=91,slow=14,SNR=4.0						
HFS	**Hagfors**	**51.48**	**320**	P	**P**	**22 05 35.4**	**-1.0**
	1.3nm,0.8s,baz=81,slow=9.1,SNR=3.1						
NVAR	**Mina Array Bea**	**89.36**	**30**	LR	LR	22 53 35.0	
	comp=Z,30nm,19.6s,baz=286,slow=38						

*IDC **06** 21:57:48.1±1.3, 15.°88N×92.°01W, h0km, mb3.5/5, mb1 3.9/8, mb1mx3.6/40, mbtmp3.7/8, ML4.0/3, MS2.9/5, Ms1 3.0/5, ms1mx2.7/34, Error ellipse: s-maj=40.2km s-min=10.4km az=30.0*
*GCG **06** 21:57:51.4±1.5, 15.°81N×91.°93W, h1km±89km, MD4.1*
*NEIC **06** 21:57:51.3±1.7, 15.°80N±0.°03×92.°02W±0.°04, h19km±2km, Error ellipse: s-maj=5.2km s-min=3.9km az=77.0*
*MEX **06** 21:57:51.3±0.8, 15.°77N×92.°02W, h4km±4km, MD4.1*
ISC 06 21:57:50.6±0.8, **15.°82N**±0.°03×**92.°00W**±0.°03, **h17**km±6km, **n58**, σ**1.°38**/66, **mb3.5**/5, **MS3.0**/3, **1D**, **Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**0.47**	**344**		**Pb**	**21 58 01.1**	**+0.5**
CCIG				Sg	**Sb**	**21 58 09.0**	**+1.7**
CCIG	**Comitan**	**0.47**	**344**		**Pb**	**21 58 01.1**	**+0.5**
CCIG					**Sb**	**21 58 08.4**	**+1.0**
CCIG	**Comitan**	**0.47**	**344**	*e*P	**Pb**	**21 58 01.1**	**+0.5**
CCIG				*e*S	**Sb**	**21 58 08.4**	**+1.0**
THIG		**0.94**	**196**		**Pb**	**21 58 08.5**	**+0.1**
THIG					**Sn**	**21 58 21.9**	**-0.2**
THIG		**0.94**	**196**	*i* P	**Pb**	**21 58 08.5**	**+0.1**
THIG				*i* S	**Sn**	**21 58 21.9**	**-0.2**
PCIG		**1.18**	**264**		**Pn**	**21 58 10.1**	**-2.1**
PCIG					**Sb**	**21 58 25.9**	**-1.4**
PCIG		**1.18**	**264**	*e*P	**Pn**	**21 58 10.1**	**-2.1**
PCIG				*e*S	**Sb**	**21 58 25.9**	**-1.4**
STG3	**Santiaguito 3,**	**1.18**	**159**	⇓*i*P	**Pn**	**21 58 12.5**	**+0.1**
TGIG		**1.43**	**312**		**Pn**	**21 58 16.4**	**+0.6**
TGIG					**Sn**	**21 58 33.1**	**-1.2**
TGIG		**1.43**	**312**	*e*P	**Pn**	**21 58 16.4**	**+0.6**
TGIG				*e*S	**Sn**	**21 58 33.1**	**-1.2**
ERG	**Entre ros, C**	**1.44**	**163**	*e*P	**Pb**	**21 58 17.6**	**+0.7**
ERG				*e*S	**Sg**	**21 58 36.7**	**-0.4**
APG	**El Apazote**	**1.69**	**119**	Pn	**Pn**	**21 58 20.0**	**+0.5**
	35nm,0.3s,baz=327,slow=15,SNR=75						
APG				Lg	Lg	21 58 43.1	
	408nm,0.3s,baz=136,slow=9.6,SNR=21						
FUG	**Fuego 3**	**1.77**	**140**	*e*P	**Pb**	**21 58 23.1**	**+0.4**
FUG				*e*S	**Sb**	**21 58 46.3**	**+1.7**
PCG	**Pacaya**	**1.96**	**136**	*e*P	**Pb**	**21 58 26.4**	**+0.4**
NBG	**Las Nubes**	**2.02**	**127**	*e*P	**Pn**	**21 58 26.0**	**+2.0**
NBG				*e*S	**Sb**	**21 58 53.7**	**+1.9**
IXG	**Ixpaco**	**2.23**	**137**	*e*P	**Pn**	**21 58 28.6**	**+1.7**
MRL	**Marmol**	**2.35**	**108**	*e*P	**Pn**	**21 58 29.6**	**+0.9**
CMIG	**Matias Romero**	**3.04**	**295**	Pn	**Pn**	**21 58 38.2**	**+0.4**
	8.6nm,0.3s,baz=115,slow=7.5,SNR=69						
CMIG				Sn	**Sn**	**21 59 15.1**	**+1.3**
	38nm,0.3s,baz=288,slow=21,SNR=6.6						
CMIG				Lg	Lg	21 59 22.1	
	77nm,0.3s,baz=22,slow=20,SNR=9.7						
CMIG	**Matias Romero**	**3.04**	**295**		**Pn**	**21 58 38.0**	**+0.2**
CMIG	**Matias Romero**	**3.04**	**295**	*e*P	**Pn**	**21 58 38.0**	**+0.2**
HUIG	**Huatulco**	**3.95**	**270**		**Pn**	**21 58 49.0**	**-1.4**
HUIG	**Huatulco**	**3.95**	**270**	*i* P	**Pn**	**21 58 49.0**	**-1.4**
TGUH	**Tegucigalpa,Un**	**4.90**	**110**		**Pn**	**21 59 03.2**	**-0.3**
TGUH	**Tegucigalpa,Un**	**4.90**	**110**	Pg	**Pg**	**21 59 21.6**	**-2.8**
TGUH	**Tegucigalpa,Un**	**4.90**	**110**	*i* P	**Pn**	**21 59 03.2**	**-0.3**
TEIG	**Tepich**	**5.63**	**38**	Pn	**Pn**	**21 59 13.0**	**-0.6**
	25nm,0.3s,baz=321,slow=0.9,SNR=76						
TEIG				Sn	**Sn**	**22 00 13.8**	**-4.1**
	32nm,0.3s,baz=319,slow=23,SNR=33						
TEIG	**Tepich**	**5.63**	**38**		**Pn**	**21 59 12.9**	**-0.7**
TEIG	**Tepich**	**5.63**	**38**		**Sn**	**22 00 15.4**	**-2.5**
TEIG	**Tepich**	**5.63**	**38**	*i* P	**Pn**	**21 59 12.9**	**-0.7**
TEIG				*i* S	**Sn**	**22 00 13.7**	**-4.2**
ESTN	**Estel**	**6.09**	**116**	Pn	**Pn**	**21 59 20.4**	**+0.5**
TLIG	**Tlapa**	**6.52**	**286**	Pn	**Pn**	**21 59 28.3**	**+2.4**
ACON	**Acoyapa**	**7.66**	**119**	Pn	**Pn**	**21 59 42.4**	**+1.0**
JTS	**Las Juntas de**	**8.80**	**128**	LR	LR	22 02 50.7	
	comp=Z,24nm,20.3s,baz=136,slow=34						
JTS	**Las Juntas de**	**8.80**	**128**	Pn	**Pn**	**21 59 56.3**	**-0.7**
PAYG	**Puerto Ayora**	**16.48**	**174**	Pn	**Pn**	**22 01 41.3**	**+0.2**
TXAR	**Lajitas Array**	**17.21**	**323**	P	**Pn**	**22 01 51.3**	**+1.0**
	0.1nm,0.3s,baz=152,slow=15,SNR=9.3						
TX31	**Lajitas Ar. Si**	**17.21**	**323**		**P**	**22 01 51.6**	**-0.2**
CCAR	**Cane Creek**	**18.02**	**1**	Pn	**Pn**	**22 02 00.3**	**+0.1**
ABTX	**Abilene, Hawle**	**18.11**	**339**	Pn	**P**	**22 02 02.4**	**+0.8**
ABTX				IAmb	IAmb	22 02 04.0	
	comp=Z,10nm,1.2s						
Z50A	**Ashland**	**18.21**	**17**	P	**P**	**22 02 04.2**	**+1.5**
Z50A				IAmb	IAmb	22 02 09.8	
	comp=Z,14nm,1.3s						
Z51A	**Franklin**	**18.48**	**18**	P	**P**	**22 02 06.0**	**+0.3**
Z51A				IAmb	IAmb	22 02 24.4	
	comp=Z,14nm,0.5s						
MIAR	**Mount Ida**	**18.70**	**356**	P	**P**	**22 02 08.8**	**+0.7**
MIAR				IAmb	IAmb	22 02 27.0	
	comp=Z,9.9nm,1.4s						
LPIG	**La Paz**	**19.06**	**298**	LR	LR	22 09 35.3	
	comp=Z,64nm,18.6s,baz=182,slow=37						
WMOK	**Wichita Mounta**	**19.80**	**343**	P	**P**	**22 02 20.3**	**+0.2**
WMOK					**sP**	**22 02 28.6**	**+0.9**
U40A	**Yellville**	**20.46**	**358**	P	**P**	**22 02 28.1**	**+0.7**
U40A				IAmb	IAmb	22 02 39.5	
	comp=Z,5.5nm,0.8s						
SDV	**Santo Domingo**	**21.97**	**106**	P	**P**	**22 02 43.1**	**-0.9**
	comp=Z,6.6nm,0.7s,baz=320,slow=4.1,SNR=9.3						
SDV	**Santo Domingo**	**21.97**	**106**	P	**P**	**22 02 44.7**	**+0.7**
SDV				IAmb	IAmb	22 02 49.0	
	comp=Z,10.0nm,0.9s						
Y12C	**Blythe**	**27.04**	**315**	P	**P**	**22 03 34.8**	**+2.8**
LCMT	**Little Creek M**	**28.29**	**322**		pP	22 03 53.9	+5.1
PFO	**Pinyon Flats O**	**28.29**	**313**	LR	LR	22 16 02.9	
	comp=Z,34nm,19.5s,baz=60,slow=39						
PDAR	**Pinedale Array**	**30.78**	**334**	LR	LR	22 17 33.7	
	comp=Z,27nm,18.2s,baz=102,slow=39						
NVAR	**Mina Array Bea**	**32.28**	**319**	P	**P**	**22 04 19.7**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=133,slow=9.2,SNR=2.3						
LPAZ	**La Paz**	**39.66**	**142**	LR	LR	22 20 04.9	
	comp=Z,24nm,19.2s,baz=21,slow=34						
NLWA	**Neilton Lookou**	**41.04**	**327**		pP	22 05 43.0	+4.3
YKA	**Yellowknife Ar**	**49.26**	**346**	P	**P**	**22 06 37.0**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=149,slow=7.4,SNR=5.3						
INK	**Inuvik**	**58.70**	**343**	P	**P**	**22 07 46.5**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=158,slow=5.4,SNR=1.2						
INK	**Inuvik**	**58.70**	**343**	IAmb	IAmb	22 08 03.8	
	comp=Z,0.9nm,0.8s						
ILAR	**Eielson Array**	**61.17**	**336**	P	**P**	**22 08 03.6**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=102,slow=6.8,SNR=2.6						

*IDC **06** 22:00:58.9±1.7, 36.°58N×22.°25E, h0km, mb3.8/11, mb1 3.8/16, mb1mx3.6/58, mbtmp3.8/16, ML3.2/4, MS2.6/1, Ms1 2.6/1, ms1mx2.1/52, Error ellipse: s-maj=37.8km s-min=16.0km az=33.0*
*ATH **06** 22:01:02.7, 36.°42N×22.°13E, h25km±1km, ML3.5/7, Error ellipse: s-maj=2.3km s-min=1.0km az=41.0*
*BEO **06** 22:01:02.2±1.0, 36.°33N×21.°18E, h0km, ML3.9/3*
*THE **06** 22:01:03.1, 36.°40N×22.°12E, h3km±1km, ML3.6/9, Error ellipse: s-maj=1.9km s-min=0.5km az=44.0*
*DDA **06** 22:01:13.1, 36.°99N×23.°00E, h7km±4km, ML3.3*
ISC 06 22:01:02.3±1.1, **36.°37N**±0.°04×**22.°06E**±0.°03, **h33**km±5km, **n88**, σ**1.°61**/111, **mb3.8**/11, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.58**	**334**	P	**Pb**	**22 01 13.9**	**-0.4**
PYL				S	**Sb**	**22 01 23.2**	**+0.7**
	6μm,0.5s						
PYL	**PYLOS**	**0.58**	**334**	P	**Pb**	**22 01 14.1**	**-0.2**
PYL				S	**Sb**	**22 01 22.9**	**+0.4**
PYL				AML	AML	22 01 23.9	
	comp=N,9734μm,0.6s						
PYL				AML	AML	22 01 24.8	
	comp=E,12946μm,0.4s						
KLMT	**Kalamata**	**0.69**	**0**	P	**Pb**	**22 01 15.8**	**-0.2**
KLMT				S	**Sn**	**22 01 26.2**	**+0.8**
	comp=E,6μm,0.4s						
KTHR	**Kythira**	**0.77**	**98**	P	**Pb**	**22 01 16.9**	**-0.5**
KTHR				S	**Sb**	**22 01 27.7**	**+0.1**
	comp=E,5μm,0.3s						
VLI	**Veliai**	**0.79**	**64**	P	**Pb**	**22 01 17.0**	**-0.7**
VLI				S	**Sb**	**22 01 28.0**	**-0.1**
	comp=E,4μm,0.6s						
VLI	**Veliai**	**0.79**	**64**	P	**Pb**	**22 01 16.9**	**-0.7**
VLI				S	**Sb**	**22 01 27.4**	**-0.8**
VLI				AML	AML	22 01 28.8	
	comp=N,8652μm,0.6s						
VLI				AML	AML	22 01 35.7	
	comp=E,6632μm,0.7s						
ITM	**Ithomi**	**0.82**	**353**	P	**Pb**	**22 01 17.7**	**-0.5**
ITM				S	**Sn**	**22 01 29.4**	**+0.9**
	comp=E,6μm,0.5s						
ITM	**Ithomi**	**0.82**	**353**	P	**Pb**	**22 01 17.7**	**-0.5**
ITM				S	**Sb**	**22 01 29.0**	**+0.1**
ITM				AML	AML	22 01 32.0	
	comp=E,11019μm,0.5s						
ITM				AML	AML	22 01 33.1	
	comp=N,12771μm,0.6s						
KTHA	**Kythira Island**	**0.82**	**98**	P	**Pb**	**22 01 17.8**	**-0.4**
KTHA				S	**Sb**	**22 01 28.3**	**-0.7**
	comp=N,6μm,0.3s						
KTHA	**Kythira Island**	**0.82**	**98**	P	**Pb**	**22 01 17.8**	**-0.4**
KTHA				S	**Sn**	**22 01 29.4**	**+0.8**
MNVA	**Monemvasia**	**0.85**	**68**	P	**Pn**	**22 01 18.5**	**+0.5**
MNVA				S	**Sb**	**22 01 28.8**	**-1.0**
MNVA				AML	AML	22 01 31.6	
	comp=N,2813μm,0.6s						
MNVA				AML	AML	22 01 32.2	
	comp=E,2644μm,0.9s						
VLX	**Vlachokerasia**	**1.03**	**14**	P	**Pn**	**22 01 21.1**	**+0.5**
VLX				S	**Sn**	**22 01 36.2**	**+1.1**
	comp=E,4μm,0.6s						
VLX	**Vlachokerasia**	**1.03**	**14**	P	**Pn**	**22 01 21.3**	**+0.7**
VLX				S	**Sb**	**22 01 35.6**	**+0.5**
VLX				AML	AML	22 01 40.2	
	comp=N,8628μm,0.6s						
VLX				AML	AML	22 01 42.2	
	comp=E,8183μm,0.5s						
ANKY	**Antikythira Is**	**1.12**	**116**	P	**Pb**	**22 01 23.8**	**+0.5**
ANKY				S	**Sb**	**22 01 39.5**	**+1.9**
	comp=E,2μm,0.5s						
ANKY	**Antikythira Is**	**1.12**	**116**	P	**Pb**	**22 01 23.8**	**+0.5**
AMT	**Artemida-Makis**	**1.19**	**347**	P	**Pn**	**22 01 24.1**	**+1.3**
AMT				S	**Sb**	**22 01 42.1**	**+2.4**
	comp=E,5μm,0.5s						
AMT	**Artemida-Makis**	**1.19**	**347**	P	**Pn**	**22 01 24.1**	**+1.3**
AMT				S	**Sb**	**22 01 42.0**	**+2.4**
AMT				AML	AML	22 01 45.4	
	comp=E,9255μm,0.5s						
AMT				AML	AML	22 01 50.1	
	comp=N,9401μm,0.4s						
KRND	**KRANIDI**	**1.34**	**41**	P	**Pb**	**22 01 27.2**	**+0.3**
KRND	**KRANIDI**	**1.34**	**41**	P	**Pb**	**22 01 27.2**	**+0.3**
DID	**Didima**	**1.48**	**39**	P	**Pb**	**22 01 28.9**	**-0.3**
DID	**Didima**	**1.48**	**39**	P	**Pb**	**22 01 28.9**	**-0.3**
YDRA	**Hydra**	**1.49**	**49**	P	**Pb**	**22 01 29.3**	**-0.2**
RODP	**Rodopos**	**1.60**	**120**	P	**Pb**	**22 01 31.7**	**+0.4**
DRO	**Drossia**	**1.60**	**350**	P	**Pb**	**22 01 31.5**	**+0.1**
DRO	**Drossia**	**1.60**	**350**	P	**Pb**	**22 01 31.7**	**+0.3**
KLV	**Kalavryta, Ach**	**1.67**	**3**	P	**Pb**	**22 01 31.5**	**+2.1**
KLV	**Kalavryta, Ach**	**1.67**	**3**	P	**Pb**	**22 01 32.0**	**-0.5**
KLV				AML	AML	22 02 04.1	
	comp=N,1189μm,0.5s						
KLV				AML	AML	22 02 05.1	
	comp=E,1688μm,0.6s						
RLS	**Riolos of Patr**	**1.75**	**345**	P	**Pb**	**22 01 33.8**	**0.0**
RLS	**Riolos of Patr**	**1.75**	**345**	P	**Pb**	**22 01 34.1**	**+0.2**
LOUT	**Loutraki**	**1.77**	**24**	P	**Pb**	**22 01 33.7**	**-0.5**
LTK	**Loutraki**	**1.80**	**23**	P	**Pb**	**22 01 33.6**	**+2.4**
LTK	**Loutraki**	**1.80**	**23**	P	**Pb**	**22 01 33.8**	**-0.9**
IMMV	**Iera Moni Meta**	**1.81**	**120**	P	**Pb**	**22 01 34.1**	**-0.7**
IMMV	**Iera Moni Meta**	**1.81**	**120**	P	**Pb**	**22 01 34.2**	**-0.6**
CHAN	**Chania**	**1.82**	**117**	P	**Pb**	**22 01 34.0**	**-1.0**
MHLO	**Agia Marina, M**	**1.92**	**80**	P	**Pn**	**22 01 34.8**	**+2.2**
MHLO	**Agia Marina, M**	**1.92**	**80**	P	**Pn**	**22 01 34.8**	**+2.2**
MHLA	**Plaka, Milos I**	**1.94**	**78**	P	**Pn**	**22 01 35.3**	**+2.3**
VAM	**Vamos**	**1.99**	**118**	P	**Pb**	**22 01 36.5**	**-1.4**
VLY	**Voula,Athens**	**2.03**	**43**	P	**Pn**	**22 01 35.9**	**+1.7**
SERI	**Serifos**	**2.10**	**67**	P	**Pn**	**22 01 37.0**	**+1.7**
SERI	**Serifos**	**2.10**	**67**	P	**Pn**	**22 01 36.6**	**+1.3**
ATHU	**Athens Univers**	**2.11**	**40**	P	**Pn**	**22 01 37.1**	**+1.8**
PTL	**Penteli**	**2.21**	**40**	P	**Pn**	**22 01 38.5**	**+1.8**
PTL	**Penteli**	**2.21**	**40**	P	**Pn**	**22 01 38.6**	**+1.8**
KARY	**Karystos**	**2.52**	**48**	P	**Pn**	**22 01 43.1**	**+2.1**
IDI	**Anoyia**	**2.54**	**114**	Pn	**Pn**	**22 01 42.4**	**+1.0**
	comp=E,3.1nm,0.3s,baz=250,slow=10,SNR=37						
IDI				Sn	**Sn**	**22 02 15.0**	**+3.8**
	comp=E,11nm,0.3s,baz=329,slow=20,SNR=5.3						
IDI				LR	LR	22 03 06.5	
	comp=E,109nm,20.0s,baz=304,slow=51						
MRKA	**Markates**	**2.63**	**27**	P	**Pn**	**22 01 44.2**	**+1.7**
AGG	**Agios Georgios**	**2.66**	**5**	*i* P	**Pb**	**22 01 49.9**	**+0.7**
AGG				IAML		22 03 03.0	
	comp=N,223nm,0.3s						
SANT	**Santorini**	**2.75**	**89**	*i* P	**Pn**	**22 01 45.9**	**+1.8**
SANT				*i* S	**Sn**	**22 02 19.3**	**+3.1**
APE	**Apeiranthos**	**2.88**	**75**	*i* P	**Pn**	**22 01 47.3**	**+1.4**
APE				*i* S	**Sn**	**22 02 18.6**	**-0.9**
IGT	**Igoumenitsa**	**3.44**	**337**	*e*Pn	**Pn**	**22 01 55.4**	**+1.8**
IGT				*e*Sn	**Sn**	**22 02 34.1**	**+0.8**
LIT	**Litokhoron**	**3.74**	**5**	*i* P	**Pb**	**22 02 10.0**	**+2.3**
ZEY	**zmir**	**4.01**	**61**	*i* P	**Pn**	**22 02 05.0**	**+3.6**
DGB	**zmir**	**4.20**	**65**	*i* P	**Pn**	**22 02 06.8**	**+2.8**

FNA Florina 4.44 353 ePn Pn 22 02 09.8 +2.4
FNA Florina 4.44 353 i P Pb 22 02 19.3 -0.3
FNA i S Sn 22 02 53.8 -4.2
ZEDA zmir-Bergama 4.75 55 i P Pn 22 02 15.0 +3.4
BAYC CANAKKALE_Bayr 4.89 45 i P Pn 22 02 18.3 +4.8
VAY Valandovo 4.96 4 i Pn Pn 22 02 18.6 +4.1
STIP Stip 5.32 1 i Pn Pn 22 02 26.5 +7.0
BOSS Bosilegrad 6.13 3 ePn Pn 22 02 34.1 +3.5
VAE Valguarnera 6.22 283 Pn Pn 22 02 33.8 +1.9
comp=N,0.4nm,0.3s,baz=125,slow=8.4,SNR=2.9
VAE Sn Sn 22 03 42.9 +0.9
comp=N,1.1nm,0.3s,baz=176,slow=17,SNR=2.9
VTS Vitosha 6.31 8 ePn Pn 22 02 38.3 +5.2
PDG Podgorica 6.43 341 ePn Pn 22 02 34.9 +0.2
PDG eSn Sn 22 03 45.7 -1.2
SELS Selova 6.88 354 ePn Pn 22 02 43.5 +2.6
TREB Trebinje 6.96 337 ePn Pn 22 02 41.0 -0.9
TREB eSn Sn 22 03 56.6 -3.3
SJES Sjenica 7.07 348 ePn Pn 22 02 44.9 +1.3
SJES eSn Sn 22 04 02.4 -0.4
IVAS Ivanjica 7.34 349 ePn Pn 22 02 48.9 +1.6
GRUS Gruza 7.58 353 ePn Pn 22 02 53.5 +3.0
BBLS Lazići 7.76 346 ePn Pn 22 02 52.9 -0.1
BBLS eSn Sn 22 04 17.0 -2.7
DIVS Divibare 7.88 349 ePn Pn 22 02 55.5 +0.8
DIVS eSn Sn 22 04 20.8 -1.9
BRTR Keskin Array B 9.73 66 Pn Pn 22 03 25.2 +5.2
comp=N,0.1nm,0.3s,baz=248,slow=10,SNR=2.7
MMAI Mount Meron Ar 11.48 103 Pn Pn 22 03 41.3 -2.7
comp=N,0.7nm,0.3s,baz=302,slow=38,SNR=4.2
ASF Jabal al Asfar 12.97 105 Pn Pn 22 04 03.7 -0.7
comp=N,0.4nm,0.3s,baz=313,slow=18,SNR=2.8
KBZ Khabaz 17.54 59 P Pn 22 05 05.4 +1.2
comp=N,0.1nm,0.3s,baz=217,slow=12,SNR=4.7
GNI Garni 18.20 71 P Pn 22 05 10.5 -2.0
comp=N,0.1nm,0.3s,baz=312,slow=12,SNR=2.2
HFS Hagfors 24.38 350 P P 22 06 17.1 -0.2
comp=N,1.7nm,0.8s,baz=178,slow=12,SNR=1.9
FINES FINESS Array B 25.23 5 P P 22 06 23.5 -1.3
comp=N,0.8nm,0.5s,baz=185,slow=8.8,SNR=5.6
EKA Eskdalemuir Ar 25.61 326 P P 22 06 28.5 +0.1
comp=N,2.2nm,0.9s,baz=116,slow=9.6,SNR=2.6
NOA NORSAR Array B 25.64 348 P P 22 06 29.8 +1.2
comp=N,0.7nm,0.9s,baz=155,slow=9.0,SNR=1.9
KIRV Kirov 28.55 30 P P 22 06 53.6 -1.2
comp=N,4.7nm,0.6s,baz=224,slow=8.5,SNR=3.3
ARCES ARCESS Array B 33.28 2 P P 22 07 36.5 +0.2
comp=N,1.8nm,0.9s,baz=189,slow=9.3,SNR=6.2
MKAR Makanchi Array 45.23 57 P P 22 09 16.1 -0.3
comp=N,1.2nm,0.3s,baz=268,slow=7.9,SNR=40
ZALV Zalesovo Beam 46.01 47 P P 22 09 21.2 -1.1
comp=N,1.6nm,0.5s,baz=265,slow=9.4,SNR=5.6
SONM Songino Array 60.66 50 P P 22 11 09.6 -0.7
comp=N,0.3nm,0.7s,baz=276,slow=5.2,SNR=3.1
CMAR Chiang Mai Arr 68.92 82 P P 22 12 04.0 -0.4
comp=N,0.4nm,0.4s,baz=302,slow=7.4,SNR=2.4
YKA Yellowknife Ar 75.50 341 P P 22 12 43.8 +0.8
comp=N,0.1nm,0.5s,baz=41,slow=5.5,SNR=2.2

ATH 06 22:02:44.8, 38.69N×22.75E, h13km±2km, ML2.5/6, Error ellipse: s-maj=3.2km s-min=1.0km az=14.0, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AXAR Agios Charalam 0.10 315 P Pg 22 02 47.9 0.0
AXAR S Sg 22 02 49.9 -0.2
AXAR AML AML 22 02 50.2
comp=E,34252μm,0.1s
AXAR AML AML 22 02 50.3
comp=N,24016μm,0.2s
LKR Lokris 0.20 102 P Pg 22 02 49.4 +0.2
LKR S Sg 22 02 52.5 +0.2
LKR AML AML 22 02 53.2
comp=E,4580μm,0.2s
LKR AML AML 22 02 54.1
comp=N,4332μm,0.2s
DLFA Delphi 0.29 223 P Pg 22 02 50.8 -0.1
DLFA S Sg 22 02 55.6 +0.6
DLFA AML AML 22 02 56.5
comp=E,2086μm,0.2s
DLFA AML AML 22 02 56.7
comp=N,2236μm,0.2s
PROD Prodromos 0.45 165 P Pg 22 02 53.7 0.0
PROD AML AML 22 03 03.2
comp=E,1701μm,0.2s
PROD AML AML 22 03 05.3
comp=N,1516μm,0.2s
AGG Agios Georgios 0.46 315 P Pg 22 02 53.9 -0.1
AGG S Sg 22 03 00.7 +0.5
AGG AML AML 22 03 01.8
comp=E,1690μm,0.4s
AGG AML AML 22 03 03.5
comp=N,1031μm,0.3s
AGG Agios Georgios 0.46 315 i S Pg 22 02 54.2 +0.2
KALE Kalithea 0.57 238 P Pg 22 02 55.5 -0.4
SERG Sergoula 0.61 243 P Pg 22 02 56.2 -0.6
SERG S Sb 22 03 05.6 -0.2
SERG AML AML 22 03 07.8
comp=E,764μm,0.4s
SERG AML AML 22 03 09.0
comp=N,714μm,0.2s
TRIZ Trizonia 0.62 239 P Pg 22 02 56.5 -0.5
LTK Loutraki 0.69 166 P Pg 22 02 58.1 -0.1
LOUT Loutraki 0.73 166 P Pg 22 02 58.7 -0.2

IDC 06 22:13:55.3±0.8, 49.67N×28.36W, h0km, mb3.7/14, mb1 3.8/16, mb1mx3.7/54, mbtmp3.7/16, ML4.3/2, MS3.6/20, Ms1 3.6/20, ms1mx3.4/42, Error ellipse: s-maj=24.1km s-min=15.7km az=32.0
NEIC 06 22:13:55.8±1.6, 49.5N±0.1×28.3W±0.1, h10km±1km, mb4.5/11, Error ellipse: s-maj=19.1km s-min=15.3km az=192.0
ISC 06 22:13:57.0±0.6, 49.56N±0.09×28.37W±0.09, h17km, n51, σ1.17/34, mb4.1/17, MS3.6/20, Northern Mid-Atlantic Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ROSA Rosais 10.84 179 Pn Pn 22 16 30.1 -1.2
CMLA Cha da Macela 11.97 169 Pn Pn 22 16 44.4 -2.3
EKA Eskdalemuir Ar 16.37 60 Pn P 22 17 47.6 -0.8
baz=248,slow=8.8,SNR=8.5
ESDC Sonseca Array 19.90 111 P Pn 22 18 30.3 +1.0
0.3nm,0.3s,baz=287,slow=9.0,SNR=1.9
ESDC Sonseca Array 19.90 111 P P 22 18 26.3 -1.3
JMIC Jan Mayen 23.40 16 LR LR 22 25 26.7
comp=Z,113nm,20.3s,baz=257,slow=30
SCHQ Schefferville 23.94 298 P P 22 19 09.4 -0.5
3.4nm,1.1s,baz=71,slow=14,SNR=2.2
SCHQ LR LR 22 26 07.8
comp=Z,64nm,20.5s,baz=340,slow=31
SCHQ Schefferville 23.94 298 IAmb IAmb 22 19 14.1
comp=Z,19nm,1.6s
MDT Midelt 24.33 125 P P 22 19 13.8 0.0
comp=Z,2.1nm,0.7s,baz=321,slow=8.1,SNR=2.8
NB201 NORSAR Array S 24.91 47 P P 22 19 17.3 -1.5
DAVOX Davos/Dischmat 25.48 82 LR LR 22 28 58.4
comp=Z,312nm,19.2s,baz=265,slow=36
KEST Kesra 30.64 102 LR LR 22 31 30.0
comp=Z,96nm,20.0s,baz=255,slow=34
FINES FINESS Array B 32.06 47 P P 22 20 23.2 +0.8
comp=Z,1.9nm,0.8s,baz=271,slow=10,SNR=6.1
FINES FINESS Array B 32.06 47 P P 22 20 21.7 -0.7
ARCES ARCESS Array B 32.28 32 P P 22 20 23.9 -0.5
comp=Z,2.3nm,0.9s,baz=307,slow=9.0,SNR=3.8
ARCES ARCESS Array B 32.28 32 P P 22 20 22.7 -1.6
SADO Sadowa 34.31 282 LR LR 22 34 33.1
comp=Z,90nm,18.6s,baz=154,slow=36
BUR08 Bucovina Ar. S 34.85 72 P P 22 20 47.5 +0.4
BURAR Bucovina Array 34.88 72 P P 22 20 46.8 -0.4
AKASG Malin Array Be 36.13 66 P P 22 20 57.8 -0.1
comp=Z,0.1nm,0.2s,baz=292,slow=8.4,SNR=5.4
ULM Lac du Bonnet 42.12 298 LR LR 22 37 03.0
comp=Z,39nm,18.6s,baz=72,slow=33
TKL Tuckaleechee C 42.14 272 LR LR 22 39 50.0
comp=Z,92nm,18.0s,baz=68,slow=37
TOA0 Torodi Ar. Sit 43.90 135 P P 22 22 02.8 +0.2
TOA0 IAmb IAmb 22 22 12.2
comp=Z,5.7nm,1.2s
TORD Torodi Ar. Bea 43.90 135 P P 22 22 04.2 +1.6
comp=Z,1.9nm,0.8s,baz=338,slow=6.8,SNR=9.3
TORD LR LR 22 39 42.9
comp=Z,48nm,18.4s,baz=350,slow=35
TORD Torodi Ar. Bea 43.90 135 P P 22 22 03.7 +1.0
BRTR Keskin Array B 44.04 78 P P 22 22 05.9 +2.1
comp=Z,0.4nm,0.8s,baz=270,slow=4.7,SNR=2.2
BRTR LR LR 22 41 13.3
comp=Z,40nm,20.1s,baz=252,slow=37
YKA Yellowknife Ar 46.21 320 P P 22 22 21.1 +0.5
comp=Z,0.7nm,0.9s,baz=66,slow=7.7,SNR=4.9
CSS Mathiatis 46.65 84 P P 22 22 24.6 +0.3
CSS IAmb IAmb 22 24 07.4
comp=Z,4.7nm,1.0s
DBIC Dimbokro 47.10 147 P P 22 22 29.9 +1.9
comp=Z,1.3nm,0.7s,baz=354,slow=9.2,SNR=2.0
KBZ Khabaz 47.59 68 LR LR 22 42 48.4
comp=Z,86nm,21.3s,baz=320,slow=36
INK Inuvik 50.12 332 P P 22 22 50.6 +0.1
comp=Z,1.2nm,0.8s,baz=61,slow=12,SNR=4.3
INK Inuvik 50.12 332 IAmb IAmb 22 23 13.0
comp=Z,11nm,1.8s
ABKAR Akbulak array 54.13 54 P P 22 23 20.4 -0.3
TEIG Tepich 55.43 261 LR LR 22 44 26.8
comp=Z,59nm,19.6s,baz=319,slow=33
B08A Colville Reser 56.07 307 P P 22 23 35.6 +0.8
B08A IAmb IAmb 22 23 39.8
comp=Z,23nm,1.9s
BCAR Beaver Creek A 56.10 330 P P 22 23 35.8 +1.0
ILAR Eielson Array 56.47 333 P P 22 23 38.6 +1.3
comp=Z,0.7nm,0.9s,baz=37,slow=6.0,SNR=7.6
ILAR LR LR 22 46 48.9
comp=Z,32nm,18.9s,baz=121,slow=35
ILAR Eielson Array 56.47 333 P P 22 23 37.4 +0.1
SPUT South Promonto 56.66 296 P P 22 23 36.7 -2.6
IMAR Indian Mountai 57.45 337 P P 22 23 44.5 +0.3
ROSC El Rosal 59.02 237 LR LR 22 45 51.6
comp=Z,62nm,21.7s,baz=30,slow=32
TXAR Lajitas Array 59.06 280 P P 22 23 57.4 +1.2
comp=Z,0.2nm,0.8s,baz=52,slow=5.8,SNR=2.5
TXAR LR LR 22 49 42.8
comp=Z,41nm,18.5s,baz=0.0,slow=36
GEYT Alibeck 60.26 65 LR LR 22 52 59.1
comp=Z,31nm,18.4s,baz=300,slow=39
ZALV Zalesovo Beam 62.57 38 LR LR 22 52 28.3
comp=Z,53nm,18.7s,baz=280,slow=37
MKAR Makanchi Array 66.82 44 P P 22 24 46.4 -1.1
comp=Z,0.9nm,0.6s,baz=331,slow=6.1,SNR=7.4
MKAR LR LR 22 53 35.8
comp=Z,81nm,19.0s,baz=300,slow=36
BDFB Brasilia 67.20 201 LR LR 22 49 42.6
comp=Z,76nm,19.8s,baz=53,slow=32
LPAZ La Paz 74.38 220 LR LR 22 54 44.8
comp=Z,55nm,19.4s,baz=32,slow=33
SONM Songino Array 75.41 30 P P 22 25 40.6 +1.0
comp=Z,0.8nm,0.9s,baz=306,slow=5.0,SNR=6.3
SONM Songino Array 75.41 30 IAmb IAmb 22 25 43.3
comp=Z,0.8nm,1.0s
CMAR Chiang Mai Arr 97.81 50 LR LR 23 15 10.8
comp=Z,44nm,18.4s,baz=300,slow=38
ASAR Alice Springs 150.65 35 PKPbc PKiKP 22 33 48.1 -0.6
comp=Z,1.1nm,0.7s,baz=354,slow=2.0,SNR=10

NIED 06 22:15:00, 36.30N×141.80E, h20km, Mw4.1 Best double couple: M0 1.38000×10^15 NP1:φs13.00000°, δ72.00000°, λ77.00000°. NP2:φs230.00000°, δ22.00000°, λ125.00000°.
IDC 06 22:15:23.5±0.8, 36.21N×142.01E, h0km, mb3.8/14, mb1 3.9/17, mb1mx3.9/57, mbtmp3.8/17, ML3.2/3, MS3.2/9, Ms1 3.3/9, ms1mx2.9/50, Error ellipse: s-maj=22.2km s-min=16.5km az=101.0
JMA 06 22:15:27.5±0.2, 36.27N×141.80E, h46km, M3.8
NEIC 06 22:15:29.3±1.1, 36.21N±0.07×141.8E±0.1, h35km±6km, mb4.3/10, Error ellipse: s-maj=14.2km s-min=9.2km az=114.0
ISC 06 22:15:29.1±2.5, 36.21N±0.05×141.81E±0.09, h35km±11km, n66, σ1.21/60, mb4.0/21, MS3.2/4, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHOJ Chosi 0.92 237 P Pn 22 15 44.8 -0.8
CHOJ eS Sn 22 15 57.6 0.0
JHYU Hitachinakayam 1.00 278 P Pn 22 15 45.3 -1.3
JHYU eS Sn 22 15 59.1 -0.4
JIHU Itakohorinouch 1.07 257 P Pn 22 15 47.1 -0.5
JHO Hitachi 1.08 292 P Pn 22 15 45.7 -2.1
ONAJ Iwakimizuishiy 1.21 318 P Pn 22 15 47.5 -2.1
JFK Kawauchi 1.38 327 P Pn 22 15 50.0 -1.9
BSO1 Boso 1 1.69 204 P Pn 22 15 56.0 +0.2
BSO1 eS Sn 22 16 17.2 +1.2
BSO3 Boso 3 1.76 217 P Pn 22 15 56.7 -0.2
JFT Otama 1.76 318 P Pn 22 15 56.5 -0.7
JMM Marumori 1.84 334 P Pn 22 15 57.2 -1.1
JAG Ashikaga 1.92 277 P Pn 22 15 58.1 -1.2
JFY Yanaizu 2.07 306 P Pn 22 16 01.1 -0.3
MJAR Matsushiro Arr 2.92 278 Pn Pn 22 16 13.9 +0.7
2.8nm,0.3s,baz=120,slow=8.1,SNR=170
MJAR Sn Sn 22 16 48.2 +1.0
1.4nm,0.3s,baz=88,slow=15,SNR=7.7
MJAR LR LR 22 17 28.3
comp=Z,350nm,18.3s,baz=125,slow=41
MJAR Matsushiro Arr 2.92 278 Pn Pn 22 16 13.1 -0.1
MAJO Matsushiro 2.93 278 Pn Pn 22 16 13.8 +0.6
MAT Matsushiro 2.93 278 P Pn 22 16 13.7 +0.5
MAT S Sn 22 16 49.0 +1.8
MJB9 Matsu-Tunnel 2.93 278 Pn Pn 22 16 13.8 +0.5
JHJ2 Mitsune 3.50 209 Pn Pn 22 16 20.8 -0.3
JHJ Hachijo jima 2 3.51 209 Pn Pn 22 16 21.2 0.0
39nm,0.3s,baz=100,slow=22,SNR=9.8
JHJ Sn Sn 22 16 59.0 -2.5
57nm,0.3s,baz=268,slow=22,SNR=7.5
INU Inuyama 3.99 259 Pn Pn 22 16 28.4 +0.6
ERM Erimo 5.89 10 Pn Pn 22 16 52.4 -1.5
JNU Nakatsue 9.52 254 LR LR 22 21 41.2
comp=Z,170nm,18.7s,baz=45,slow=39
JNU Nakatsue 9.52 254 Pn Pn 22 17 43.9 +0.2
USRK Ussuriysk Ar. 10.95 320 Pn Pn 22 18 04.6 +1.3
baz=120,slow=13,SNR=4.3
USRK LR LR 22 21 59.1
comp=Z,111nm,19.9s,baz=122,slow=36
KSRS Korea Array 11.20 280 LR LR 22 22 12.4
comp=Z,114nm,20.4s,baz=78,slow=36
KLR Kul'dur 14.95 334 LR LR 22 24 26.4
comp=Z,91nm,18.6s,baz=92,slow=36
YULB Yu-li 21.85 240 P P 22 20 14.4 -4.4
YULB IAmb IAmb 22 20 19.6
comp=Z,16nm,1.1s
TPUB Ta-pu 22.38 241 P P 22 20 22.6 -1.9
TPUB IAmb IAmb 22 20 23.9
comp=Z,15nm,1.1s
MA2 Magadan 24.09 11 LR LR 22 31 00.7
comp=Z,42nm,19.6s,baz=197,slow=39
XAN Xi'an 26.92 275 P P 22 21 06.7 -0.4
XAN IAmb IAmb 22 21 18.2
comp=Z,3.6nm,0.7s
YAK Yakutsk 26.94 347 P P 22 21 06.9 -0.1
H11N2 WAKE ISLAND Hy 27.46 120 T T 22 50 05.3
baz=312,slow=75,SNR=26
H11N1 WAKE ISLAND Hy 27.46 120 T T 22 50 05.7
baz=312,slow=75,SNR=20
H11N3 WAKE ISLAND Hy 27.47 120 T T 22 50 06.6
baz=312,slow=75,SNR=17
ENH Enshi 27.59 267 P P 22 21 12.5 -0.7
ENH IAmb IAmb 22 21 23.4
comp=Z,8.5nm,0.9s
H11S1 WAKE ISLAND Hy 28.15 122 T T 22 50 40.3
baz=316,slow=74,SNR=29
H11S3 WAKE ISLAND Hy 28.15 122 T T 22 51 31.8
SNR=24
H11S2 WAKE ISLAND Hy 28.16 122 T T 22 50 53.1
baz=13,slow=74,SNR=14
SONM Songino Array 28.52 305 P P 22 21 21.6 +0.2
comp=Z,1.8nm,0.8s,baz=103,slow=8.8,SNR=14
SONM LR LR 22 33 07.0
comp=Z,68nm,19.3s,baz=152,slow=37
SONM Songino Array 28.52 305 P P 22 21 21.9 +0.5
TIXI Tiksi 36.15 353 P P 22 22 27.4 -0.1
comp=Z,1.8nm,0.3s,baz=170,slow=0.6,SNR=4.1
CMAR Chiang Mai Arr 41.61 257 P P 22 23 14.7 +0.7
comp=Z,0.2nm,0.4s,baz=38,slow=5.2,SNR=4.1
CMAR LR LR 22 41 16.2
comp=Z,23nm,19.7s,baz=350,slow=37
ZALV Zalesovo Beam 42.71 313 P P 22 23 23.1 +0.6
comp=Z,1.5nm,0.5s,baz=88,slow=6.4,SNR=7.7
ZALV Zalesovo Beam 42.71 313 P P 22 23 22.4 -0.1
MK31 Makanchi Array 44.83 303 P P 22 23 40.3 +0.3
MKAR Makanchi Array 44.83 303 P P 22 23 40.1 +0.4
comp=Z,1.7nm,0.8s,baz=89,slow=9.0,SNR=15
MAKZ Makanchi 45.04 303 P P 22 23 42.0 +0.6
MAKZ IAmb IAmb 22 23 44.7
comp=Z,2.5nm,0.8s
KURK Kurchatov 46.69 309 P P 22 23 54.7 +0.4
ILAR Eielson Array 50.02 32 P P 22 24 19.9 +0.2
comp=Z,0.3nm,0.6s,baz=265,slow=5.5,SNR=5.0
BRVK Borovoye 51.42 313 P P 22 24 30.9 +0.4
KKAR Karatay Array 53.82 301 P P 22 24 49.4 +1.0
INK Inuvik 54.97 27 P P 22 24 56.5 +0.2
comp=Z,1.4nm,0.8s,baz=275,slow=4.2,SNR=3.4
INK Inuvik 54.97 27 IAmb IAmb 22 24 59.2
comp=Z,1.9nm,1.1s
WR0 Warramunga Arr 56.28 188 P P 22 25 05.9 -0.4
WR0 IAmb IAmb 22 25 12.4
comp=Z,3.9nm,1.1s
WB2 Warramunga Arr 56.29 188 P P 22 25 05.8 -0.5
WB2 IAmb IAmb 22 25 23.4
comp=Z,4.6nm,1.1s
WRA Warramunga Arr 56.29 188 P P 22 25 05.6 -0.8
comp=Z,0.7nm,0.8s,baz=5.6,slow=7.3,SNR=6.0
ABKAR Akbulak array 58.72 311 P P 22 25 23.3 +0.1
ASAR Alice Springs 60.02 188 P P 22 25 32.5 +0.1
comp=Z,0.2nm,0.6s,baz=30,slow=7.5,SNR=2.7
YKA Yellowknife Ar 64.36 30 P P 22 25 58.7 -2.3
comp=Z,0.1nm,0.5s,baz=297,slow=6.7,SNR=3.8
ARCES ARCESS Array B 64.88 340 P P 22 26 04.5 +0.1
comp=Z,1.4nm,0.8s,baz=76,slow=7.5,SNR=2.7
TULEG Thule 65.87 8 P P 22 26 14.1 +3.4
FINES FINESS Array B 69.69 333 P P 22 26 35.2 +0.3
comp=Z,0.3nm,0.4s,baz=336,slow=3.0,SNR=3.4
NC204 NORSAR Array S 75.02 338 P P 22 27 07.1 +0.2
NOA NORSAR Array B 75.07 338 P P 22 27 06.5 -0.5
comp=Z,1.0nm,0.9s,baz=35,slow=5.8,SNR=3.5
AKASG Malin Array Be 75.14 323 P P 22 27 07.4 -0.2
comp=Z,0.8nm,0.5s,baz=46,slow=6.1,SNR=7.6
GERES GERESS Array B 83.58 328 LR LR 23 06 40.3
comp=Z,23nm,18.3s,baz=292,slow=37

IDC 06 22:22:34.8±5.2, 4.86S×153.61E, h117km±34km, mb3.1/5, mb1 3.3/6, mb1mx3.1/34, mbtmp3.6/6, Error ellipse: s-maj=58.6km s-min=19.6km az=96.0, New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRVT Keravat (AS076 1.67 289 P Pn 22 23 03.2 -0.9
13nm,0.3s,baz=60,slow=2.8,SNR=2.9
KRVT S Sn 22 23 26.7 +0.4
14nm,0.3s,baz=195,slow=18,SNR=5.8
PMG Port Moresby 7.83 234 P Pn 22 24 26.7 +0.7
3.4nm,0.3s,baz=74,slow=9.0,SNR=10
PMG S Sn 22 25 51.0 -2.1
0.9nm,0.3s,baz=268,slow=11,SNR=1.3
WRA Warramunga Arr 24.01 230 P P 22 27 39.4 +0.5
0.7nm,0.6s,baz=56,slow=10,SNR=5.1
ASAR Alice Springs 26.65 224 P P 22 28 03.5 +0.6
0.2nm,0.4s,baz=58,slow=8.2,SNR=4.4
STKA Stephens Creek 29.14 201 P P 22 28 24.6 -0.2
0.7nm,0.4s,baz=67,slow=12,SNR=3.1
SONM Songino Array 66.81 327 P P 22 33 12.7 -1.3
0.2nm,0.6s,baz=132,slow=4.1,SNR=2.1
MKAR Makanchi Array 80.90 319 P P 22 34 37.1 +1.0
0.1nm,0.4s,baz=91,slow=6.7,SNR=1.9
TORD Torodi Ar. Bea 151.09 288 PKPbc PKPbc 22 42 14.8 -0.4
0.7nm,0.9s,baz=92,slow=1.5,SNR=3.1

ATH 06 22:27:40.4, 38.15N×20.40E, h12km±1km, ML2.4/5, Error ellipse: s-maj=1.9km s-min=1.1km az=253.0
THE 06 22:27:40.8, 38.18N×20.41E, h11km, ML3.2/7, Error ellipse: s-maj=1.1km s-min=0.6km az=270.0
ISC 06 22:27:40.7±1.2, 38.17N±0.03×20.41E±0.04, h11km±5km, n25, σ0.40/45, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.03 307 P Pg 22 27 42.6 -0.1
CHV1 S Sg 22 27 44.1 -0.1
59μm,0.2s
LXRA Lixouri, Kepha 0.04 29 P Pg 22 27 42.8 0.0
LXRA S Sg 22 27 44.5 +0.1
LXR1 Lixouri, Cepha 0.04 29 P Pg 22 27 42.9 +0.1
LXR1 S Sg 22 27 44.6 +0.3
98μm,0.2s
ARGA Argostoli. Kep 0.05 77 P Pg 22 27 42.9 0.0
ARGA S Sg 22 27 44.4 -0.1
KEF2 Argostoli. Kep 0.06 89 P Pg 22 27 42.9 0.0
KEF2 S Sg 22 27 44.4 -0.2
ARG2 Argostoli 0.06 77 P Pg 22 27 43.0 0.0
ARG2 S Pg 22 27 44.6 0.0
54μm,0.1s
KEF3 Kipouria, Keph 0.06 307 P Pg 22 27 42.9 -0.1
KEF3 S Sg 22 27 44.4 -0.3
KEF4 Livadi, Kephal 0.09 6 P Pg 22 27 43.4 0.0
KEF4 S Sg 22 27 45.5 +0.2
VLS Valsamata 0.14 85 P Pg 22 27 44.0 0.0
VLS S Sg 22 27 46.5 +0.1
9μm,0.1s
VLS Valsamata 0.14 85 P Pg 22 27 44.0 0.0
KONA Konidatara, Ke 0.29 26 P Pg 22 27 46.4 -0.1
KONA S Sg 22 27 51.1 +0.6
VLMS Volimes, Zakyn 0.35 145 P Pg 22 27 47.7 +0.1
VLMS S Sg 22 27 53.2 +0.9
VLMS AML AML 22 27 58.5
comp=E,2707μm,0.3s
VLMS AML AML 22 28 02.0
comp=N,4147μm,0.2s
EVGI Lefkada island 0.49 23 P Pg 22 27 50.1 -0.3
EVGI S Sg 22 27 57.8 +0.9
EVGI Lefkada island 0.49 23 P Pg 22 27 50.1 -0.3
EVGI S Sg 22 27 57.8 +0.9
MGNA Meganis 0.57 31 P Pg 22 27 51.2 -0.7
KRI1 kERI 0.59 147 P Pg 22 27 52.0 -0.3
KRI1 S Sb 22 28 01.8 +0.3
comp=N,928nm,0.2s
AST1 Astakos 0.65 55 P Pg 22 27 52.9 -0.4
AST1 S Sb 22 28 03.1 0.0
comp=N,1μm,0.5s
LKD2 Lefkada island 0.65 17 P Pg 22 27 53.1 -0.3
LKD2 AML AML 22 28 10.8
comp=E,351μm,0.4s
LKD2 AML AML 22 28 13.9
comp=N,496μm,0.5s
TSLK Tsoukalades, L 0.69 16 P Pg 22 27 53.6 -0.4
TSLK S Sb 22 28 04.7 +0.5
PDO Prodromos 0.74 54 P Pg 22 27 54.8 -0.3
PDO S Sg 22 28 05.2 +0.3
comp=N,830nm,0.4s
PDO Prodromos 0.74 54 P Pg 22 27 54.7 -0.4
PDO S Sg 22 28 05.4 +0.6
PDO AML AML 22 28 11.2
comp=E,1218μm,0.5s
PDO AML AML 22 28 12.9
comp=N,1109μm,0.3s
RLS Riolos of Patr 0.84 97 P Pg 22 27 56.2 -0.7
RLS S Sg 22 28 07.9 +0.1
RLS AML AML 22 28 17.2
comp=N,245μm,0.4s
RLS AML AML 22 28 19.1
comp=E,281μm,0.7s
PVO Paravola 0.98 62 P Pg 22 27 59.4 -0.3
PVO Paravola 0.98 62 P Pg 22 27 59.3 -0.3
DRO Drossia 1.05 101 P Pb 22 28 00.3 -0.5
DRO S Sb 22 28 15.2 +0.7
DRO AML AML 22 28 23.9
comp=E,667μm,0.3s
DRO AML AML 22 28 25.3
comp=N,463μm,0.3s

ATH 06 22:45:01.6, 38.27N×20.40E, h14km±1km, ML2.8/4, Error ellipse: s-maj=2.2km s-min=0.8km az=263.0
THE 06 22:45:01.8, 38.27N×20.40E, h12km, ML2.7/7, Error ellipse: s-maj=0.9km s-min=0.3km az=247.0
ISC 06 22:45:01.6±1.0, 38.27N±0.02×20.39E±0.04, h13km±5km, n38, σ0.36/63, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.03 119 P Pg 22 45 03.8 -0.2
KEF4 S Sg 22 45 05.3 -0.3
KEF3 Kipouria, Keph 0.08 207 P Pg 22 45 04.4 0.0

KEF3 S Sg 22 45 06.5 +0.2
LXR1 **Lixouri, Cepha** **0.08 153** P **Pg** **22 45 04.5 +0.1**
LXR1 S **Sg** **22 45 06.5 +0.2**
LXRA **Lixouri, Kepha** **0.08 154** P **Pg** **22 45 04.5 +0.1**
LXRA S **Sg** **22 45 06.5 +0.2**
CHV1 **Chavriata, Kef** **0.09 185** P **Pg** **22 45 04.5 0.0**
CHV1 S **Sg** **22 45 06.5 0.0**
ARG2 **Argostoli** **0.12 141** P **Pg** **22 45 04.9 0.0**
ARG2 S **Sg** **22 45 06.8 -0.3**
KEF2 **Argostoli. Kep** **0.13 145** P **Pg** **22 45 05.1 +0.1**
KEF2 S **Sg** **22 45 07.4 0.0**
VLS **Valsamata** **0.18 121** P **Pg** **22 45 05.7 -0.1**
VLS S **Sg** **22 45 08.3 -0.4**
7µm,0.1s
VLS **Valsamata** **0.18 121** P **Pg** **22 45 05.7 -0.1**
VLS S **Sg** **22 45 08.6 0.0**
VLS AML AML 22 45 08.8
comp=E,17596µm,0.2s
VLS AML AML 22 45 09.0
comp=N,8675µm,0.1s
KONA **Konidatara, Ke** **0.21 42** P **Pg** **22 45 06.2 -0.1**
KONA S **Sg** **22 45 09.6 +0.3**
EVGI **Lefkada island** **0.41 31** P **Pg** **22 45 09.6 -0.2**
EVGI S **Sg** **22 45 15.7 +0.5**
EVGI **Lefkada island** **0.41 31** P **Pg** **22 45 09.6 -0.2**
EVGI S **Sg** **22 45 15.7 +0.5**
VLMS **Volimes, Zakyn** **0.45 152** P **Pg** **22 45 10.6 0.0**
VLMS S **Sb** **22 45 17.7 -0.3**
VLMS AML AML 22 45 18.5
comp=E,18464µm,0.4s
VLMS AML AML 22 45 18.7
comp=N,23435µm,0.5s
MGNA **Meganis** **0.49 39** P **Pg** **22 45 11.3 -0.1**
MGNA S **Sg** **22 45 18.3 +0.3**
LKD2 **Lefkada island** **0.56 22** P **Pg** **22 45 12.0 -0.6**
LKD2 S **Sb** **22 45 21.1 -0.1**
LKD2 **Lefkada island** **0.56 22** P **Pg** **22 45 12.0 -0.6**
LKD2 S **Sg** **22 45 20.5 +0.5**
LKD2 AML AML 22 45 26.9
comp=N,706µm,0.3s
LKD2 AML AML 22 45 30.1
comp=E,868µm,0.3s
TSLK **Tsoukalades, L** **0.59 20** P **Pg** **22 45 12.8 -0.4**
TSLK S **Sb** **22 45 22.4 +0.3**
comp=E,415nm,0.5s
TSLK **Tsoukalades, L** **0.59 20** P **Pg** **22 45 12.7 -0.5**
TSLK S **Sb** **22 45 22.2 +0.1**
AST1 **Astakos** **0.61 64** P **Pg** **22 45 13.3 -0.3**
AST1 S **Sg** **22 45 21.8 +0.2**
comp=E,1µm,0.4s
KRI1 **kERI** **0.69 151** P **Pg** **22 45 14.7 -0.4**
KRI1 S **Sb** **22 45 25.4 +0.3**
comp=E,4µm,0.3s
PDO **Prodromos** **0.70 62** P **Pg** **22 45 15.0 -0.3**
PDO S **Sb** **22 45 25.6 +0.3**
PDO **Prodromos** **0.70 62** P **Pg** **22 45 15.0 -0.3**
RLS **Riolos of Patr** **0.87 104** P **Pg** **22 45 17.9 -0.6**
RLS S **Sb** **22 45 31.0 +0.8**
RLS **Riolos of Patr** **0.87 104** P **Pg** **22 45 17.9 -0.6**
PVO **Paravola** **0.95 68** P **Pg** **22 45 19.9 -0.1**
PVO S **Sn** **22 45 34.0 -0.2**
comp=E,355nm,0.5s
PVO **Paravola** **0.95 68** P **Pg** **22 45 19.9 -0.1**
PVO AML AML 22 45 40.4
comp=N,614µm,0.4s
PVO AML AML 22 45 41.7
comp=E,710µm,0.3s
DRO **Drossia** **1.09 107** P **Pb** **22 45 21.9 -0.4**
DRO S **Sn** **22 45 38.4 +0.9**
comp=E,585nm,0.4s
DRO **Drossia** **1.09 107** P **Pb** **22 45 21.7 -0.6**
ANX **Ano Chora** **1.24 75** P **Pn** **22 45 24.8 0.0**
ANX S **Sg** **22 45 42.5 +0.8**
comp=E,295nm,0.6s
ANX **Ano Chora** **1.24 75** P **Pn** **22 45 24.7 0.0**
IGT **Igoumenitsa** **1.26 358** P **Pn** **22 45 24.9 0.0**
AMT **Artemida-Makis** **1.28 125** P **Pb** **22 45 25.7 +0.2**
SERG **Sergoula** **1.32 83** P **Pn** **22 45 25.3 -0.4**
TRIZ **Trizonia** **1.32 85** P **Pn** **22 45 25.3 -0.5**
TRIZ **Trizonia** **1.32 85** P **Pn** **22 45 25.5 -0.3**
KALE **Kalithea** **1.38 85** P **Pn** **22 45 26.5 -0.1**
KLV **Kalavryta, Ach** **1.40 99** P **Pn** **22 45 27.2 +0.2**
KLV **Kalavryta, Ach** **1.40 99** P **Pn** **22 45 27.2 +0.2**

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*IDC **06** 22:46:00.1±1.3, 9°.68S×159°.71E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/31, mbtmp3.7/5, Error ellipse: s-maj=79.6km s-min=10.7km az=137.0*
ISC 06 22:46:03.8±1.7, **9°.8S**±0°.4×**159°.8E**±0°.5, **h26**km, **n7**, σ0§**84**/9, **mb3.6**/5, **Bougainville-Solomon Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HNR **Honiara** **0.36 30** Pn **Pn** **22 46 12.8 -0.6**
698nm,0.3s,baz=173,slow=9.1,SNR=50
HNR Sn **Sn** **22 46 18.9 -0.8**
4µm,0.3s,baz=214,slow=23,SNR=66
HNR **Honiara** **0.36 30** *i* P **Pb** **22 46 12.0 +0.1**
HNR *i* S **Sb** **22 46 18.0 +0.6**
WRA **Warramunga Arr** **26.55 245** P **P** **22 51 38.9 -1.0**
1.5nm,0.9s,baz=72,slow=10,SNR=5.1
STKA **Stephens Creek** **27.72 215** P **P** **22 51 50.5 +0.3**
1.2nm,0.7s,baz=32,slow=14,SNR=1.9
ASAR **Alice Springs** **28.30 238** P **P** **22 51 54.8 -0.8**
0.6nm,0.8s,baz=62,slow=9.8,SNR=2.4
ILAR **Eielson Array** **84.25 20** P **P** **22 58 33.4 +0.6**
0.3nm,0.5s,baz=247,slow=5.2,SNR=6.3
MKAR **Makanchi Array** **88.59 318** P **P** **22 58 55.5 +0.9**
0.1nm,0.6s,baz=108,slow=3.2,SNR=1.8

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*TEH **06** 23:00:55.0, 39°.83N×48°.22E, h14km, ML2.9*
ISC 06 23:00:53.9±2.3, **39°.81N**±0°.05×**48°.2E**±0°.2, **h10**km, **n8**, σ**2**§**23**/12, **Iran-Armenia-Azerbaijan border region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AHAR **Ahar** **1.61 215** *e*Pg **Pb** **23 01 25.4 +1.6**
AHAR *e*Sg **Sg** **23 01 47.9 +2.2**
AHAR *e* 23 01 49.3
IHSH **Hashtrud** **1.69 207** *e*Pn **Sn** **23 01 40.6 -4.9**
IHSH *e* 23 02 23.3
IHRS **Heris** **1.76 212** *e*Pg **Pb** **23 01 27.7 +1.3**
IHRS *e* 23 01 54.1
TVRZ **Varzaqan** **1.79 224** *e*Pg **Pb** **23 01 28.4 +1.5**
TVRZ *e* 23 01 54.6
ISRB **Sarab** **2.03 193** *e*Pn **Pb** **23 01 31.7 +0.6**
ISRB *e* 23 01 44.1
DDFL **Dedoflistskaro** **2.29 316** P **Pn** **23 01 32.5 +0.6**
DDFL S **Sb** **23 02 03.2 -0.7**
LGD **Lagodekhi** **2.52 324** P **Pn** **23 01 36.0 +1.1**
LGD S **Sn** **23 02 04.8 -1.0**
ONI **Oni** **4.55 309** P **Pn** **23 02 01.8 -1.1**
ONI S **Sn** **23 02 53.8 -2.1**

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*ASRS **06** 23:28:34.3±0.4, 50°N±2°×8°8E±°, h10km, MLh3.0/15, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*NNC **06** 23:28:35.1±2.2, 50°.00N×87°.98E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=18.7km s-min=12.0km az=86.0*
ISC 06 23:28:34.8±1.2, **49°.95N**±0°.03×**87°.97E**±0°.03, **h0**km±**11**km, **n21**, σ**1**§**69**/39, **12C-2D**, **Kazakhstan-Xinjiang border region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CUR **Chagan-Uzun** **0.29 59** Pg **Pb** **23 28 42.4 -0.5**
CUR Sg **Sb** **23 28 47.8 -0.5**
AKAR **Aktash** **0.43 329** Pg **Pb** **23 28 45.0 -0.3**
AKAR Sg **Sb** **23 28 52.1 -0.3**
DGZ **Jazzator, Alta** **0.43 234** Pg **Pb** **23 28 42.1 -1.0**
DGZ Sg **Sg** **23 28 46.5 -2.1**
CHBI **Chibit, Altay** **0.47 320** Pg **Pb** **23 28 45.5 -0.4**
CHBI Sg **Sb** **23 28 52.7 -0.8**
ULGR **Ulagan, Altay** **0.67 360** Pg **Pn** **23 28 49.5 -2.1**
ULGR Sg **Sn** **23 28 59.6 -3.3**
TUNR **Tungur** **1.08 282** Pg **Pg** **23 28 54.9 -0.6**
TUNR Sg **Sg** **23 29 09.1 -0.3**
TEL **Teeli** **1.78 52** Pg **Pg** **23 29 09.6 +0.7**
TEL Sg **Sg** **23 29 34.3 +2.3**
ARTR **Artybash** **1.90 347** Pg **Pg** **23 29 11.6 +0.4**
ARTR Sg **Sg** **23 29 38.6 +2.9**
GALT **Gorno-Altaysk,** **2.38 328** Pg **Pg** **23 29 20.6 +0.2**
GALT Sg **Sg** **23 29 52.8 +1.5**
TASR **Tashtagol** **2.81 359** Pg **Pg** **23 29 28.4 -0.2**
TASR Sg **Sg** **23 30 06.2 +1.2**
ELT **Eltsovka** **3.48 343** Pg **Pg** **23 29 40.5 -1.1**
ELT Sg **Sg** **23 30 27.7 +1.1**
DJO **Djoy, Khakassi** **3.49 34** Sg **Sg** **23 30 26.9 +0.1**
DJOS **Djoyskaya Sosn** **3.56 36** Sg **Sg** **23 30 32.8 +3.5**
VEH **Verkhnyaya Baz** **3.61 23** Pg **Pg** **23 29 42.9 -1.1**
VEH Sg **Sg** **23 30 30.2 -0.6**
CERR **Cheremushki** **3.62 35** Pg **Pg** **23 29 42.9 -1.2**
CERR Sg **Sg** **23 30 31.8 +0.8**
LUZB **Luzhba, Kemero** **3.76 8** Pg **Pg** **23 29 44.8 -1.9**
LUZB Sg **Sg** **23 30 36.6 +1.2**
ZAA0 **Zalesovo Array** **4.45 335** ⇑Pg **Pb** **23 29 53.9 +0.2**
0.2nm,0.5s
ZAA0 ⇓Lg Lg 23 30 58.3
0.5nm,0.5s
MK31 **Makanchi Array** **4.93 232** ⇑Pn **Pn** **23 29 52.9 +2.8**
0.7nm,0.4s,baz=57,slow=13,SNR=35
MK31 ⇑Pg **Pg** **23 30 06.3 -3.0**
1.3nm,0.5s,baz=51,slow=16,SNR=8.9
MK31 ⇑Lg Lg 23 31 11.0
1.5nm,0.5s,baz=56,slow=29,SNR=4.3
MAKZ **Makanchi** **5.08 234** ⇓Pn **Pn** **23 29 51.0 -1.2**
1.5nm,0.9s
MAKZ ⇑Pg **Pb** **23 30 07.7 +3.1**
1.2nm,0.5s
MAKZ ⇑Lg Lg 23 31 17.6
2.6nm,0.7s
KURK **Kurchatov** **6.04 281** ⇑Pn **Pn** **23 30 05.0 -0.2**
1.2nm,0.7s
KURK ⇑Sn **Sn** **23 31 16.3 +1.4**
1.3nm,0.5s
KURK ⇑Lg Lg 23 31 45.9
4.8nm,0.8s
KURBB **Kurchatov Arra** **6.09 280** ⇑Pn **Pn** **23 30 07.4 +1.5**
3.2nm,0.7s
KURBB ⇑Sn **Sn** **23 31 17.8 +1.6**
3.2nm,0.6s
KURBB ⇑Lg Lg 23 31 46.3
8.0nm,0.5s

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*IASPEI **06** 23:31:50.8±0.8, 44°.50N±0°.02×6°.75E±0°.02, h11km±6km, Error ellipse: s-maj=2.8km s-min=2.2km az=70.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*GEN **06** 23:31:50.9, 44°.47N×6°.70E, h4km±1km, Ml1.9*
*STR **06** 23:31:51.2±0.2, 45°N±1°×6°±°, h9km±2km, MLv2.0/7*
*LDG **06** 23:31:51.5±0.0, 44°.50N×6°.76E, h2km, Md2.6/7, Ml2.4/17, Error ellipse: s-maj=0.9km s-min=0.6km az=58.0*
*ROM **06** 23:31:51.3±0.3, 44°.504N±0°.009×6°.77E±0°.02, h10km±2km, ML2.0/8, Error ellipse: s-maj=1.6km s-min=1.0km az=242.0*
ISC 06 23:31:51.3±0.8, **44°.50N**±0°.01×**6°.76E**±0°.02, **h18**km±**3**km, **n71**, σ**1**§**15**/130, **1C**, **France**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SURF **Saint Ours** **0.05 120** Pg **Pg** **23 31 53.1 -1.7**
SURF Sg **Sg** **23 31 54.7 -2.5**
OGAG **Argentiere** **0.16 252** Pg **Pg** **23 31 57.5 +1.7**
OGAG Sg **Sg** **23 32 02.4 +3.5**
MBDF **Montbardon** **0.22 3** *e*Pg **Pg** **23 31 56.0 -0.7**
MBDF *e*Sg **Sg** **23 31 59.1 -1.3**
95nm,0.2s
PZZ **Stroppo** **0.26 89** ⇑P **Pg** **23 31 56.8 -0.4**
PZZ S **Sg** **23 32 01.1 -0.3**
PZZ AML AML
comp=N,580µm,0.3s
PZZ AML AML
comp=E,642µm,0.4s
PZZ AML AML
comp=N,580µm,0.3s
PZZ **Stroppo** **0.26 89** P **Pg** **23 31 56.8 -0.4**
PZZ S **Sg** **23 32 01.0 -0.3**
DOI **San Damiano** **0.35 90** P **Pg** **23 31 58.3 -0.5**
DOI S **Sb** **23 32 04.3 -0.1**
DOI AML AML
comp=E,218µm,0.5s
DOI AML AML
comp=N,309µm,0.2s
ISO **Isola** **0.38 147** Pg **Pg** **23 31 58.5 -0.8**
ISO Sg **Sg** **23 32 03.3 -1.4**
RRL **Rocca Remolon** **0.42 3** P **Pg** **23 31 59.6 -0.4**
RRL S **Sg** **23 32 06.3 +0.4**
RRL **Rocca Remolon** **0.42 3** P **Pg** **23 31 59.6 -0.4**
RRL S **Sg** **23 32 06.2 +0.3**
STV **Sant Anna di V** **0.48 122** P **Pg** **23 32 00.7 -0.4**
STV S **Sg** **23 32 07.2 -0.4**
STV AML AML
comp=E,120µm,0.6s
STV AML AML
comp=N,158µm,0.6s
STV **Sant Anna di V** **0.48 122** P **Pg** **23 32 00.7 -0.4**
STV S **Sg** **23 32 07.0 -0.7**
BHB **Bricherasio** **0.49 47** P **Pg** **23 32 01.1 -0.2**
BHB S **Sg** **23 32 08.3 +0.3**
BHB AML AML
comp=E,163µm,1.5s
BHB AML AML
comp=N,260µm,0.2s
BHB **Bricherasio** **0.49 47** P **Pg** **23 32 01.2 -0.1**
BHB S **Sg** **23 32 08.3 +0.3**
OGDI **Digne** **0.51 220** Pg **Pb** **23 32 02.2 +0.4**
OGDI Sg **Sb** **23 32 09.2 +0.3**
BNI **Bardonecchia** **0.55 354** P **Pg** **23 32 01.8 -0.5**
BNI S **Sb** **23 32 10.4 +0.3**
ENR **Entracque** **0.55 120** P **Pg** **23 32 01.8 -0.6**
ENR AML AML
comp=N,233µm,1.0s
ENR AML AML
comp=N,232µm,1.0s
ENR AML AML
comp=E,148µm,1.3s
ENR **Entracque** **0.55 120** P **Pg** **23 32 01.8 -0.6**
ENR S **Sg** **23 32 09.3 -0.5**
TURF **col de Turini** **0.70 139** Pg **Pg** **23 32 04.7 -0.4**
TURF Sg **Sg** **23 32 14.0 -0.4**
RSP **Reno Superiore** **0.74 29** P **Pg** **23 32 05.8 -0.1**
RSP S **Sg** **23 32 15.7 0.0**
RSP AML AML
comp=E,108µm,1.4s
RSP AML AML
comp=N,90µm,1.0s
RSP **Reno Superiore** **0.74 29** P **Pg** **23 32 05.7 -0.1**
RSP S **Sg** **23 32 15.5 -0.2**
ORIF **Oris-en-Rattie** **0.75 304** *e*Pg **Pg** **23 32 05.0 -1.0**
ORIF *e*Sg **Sg** **23 32 14.9 -1.1**
comp=N,39nm,0.2s
BLAF **les Blancs** **0.75 223** P **Pg** **23 32 05.5 -0.5**
BLAF Pg **Pb** **23 32 05.9 0.0**
BLAF Sg **Sg** **23 32 16.4 +0.3**
CALF **Calern** **0.76 171** Pg **Pg** **23 32 05.8 -0.5**
CALF Sg **Sg** **23 32 15.5 -0.8**
SAOF **Saorge** **0.77 132** Pg **Pg** **23 32 06.1 -0.4**
SAOF Sg **Sg** **23 32 16.4 -0.3**
SAOF **Saorge** **0.77 132** P **Pg** **23 32 06.0 -0.4**
SAOF S **Sb** **23 32 17.1 +0.7**
SAOF AML AML
comp=E,110µm,0.3s
SAOF AML AML
comp=N,107µm,1.4s
SAOF AML AML
comp=E,110µm,0.3s
SBF **Sospel** **0.81 142** *e*Pg **Pg** **23 32 06.6 -0.5**
SBF *e*Sg **Sg** **23 32 17.1 -0.7**
comp=E,58nm,0.2s
GBOS **Grotte di Boss** **0.82 108** P **Pg** **23 32 06.9 -0.4**
GBOS S **Sb** **23 32 18.4 +0.6**
GBOS **Grotte di Boss** **0.82 108** P **Pg** **23 32 07.0 -0.4**
GBOS S **Sg** **23 32 18.0 -0.3**
GDM **Grand'Maison** **0.83 327** Pg **Pg** **23 32 06.5 -1.2**
GDM Sg **Sg** **23 32 17.6 -1.1**
FRF **La Foret Royal** **0.95 185** *e*Pg **Pg** **23 32 08.8 -0.9**
FRF *e*Sg **Sg** **23 32 21.3 -0.9**
comp=E,77nm,0.2s
NEGI **Seborga** **0.95 134** P **Pg** **23 32 09.4 -0.3**
NEGI S **Sb** **23 32 22.2 +0.8**
NEGI AML AML
comp=E,142µm,1.3s
NEGI AML AML
comp=N,203µm,1.6s
NEGI **Seborga** **0.95 134** P **Pg** **23 32 09.4 -0.3**
NEGI S **Sg** **23 32 21.1 -1.1**
LSD **Lago del Serru** **0.99 16** P **Pg** **23 32 09.9 -0.8**
LSD S **Sb** **23 32 23.8 +0.8**
LSD AML AML
comp=N,62µm,0.5s
LSD AML AML
comp=E,78µm,0.2s
LSD **Lago del Serru** **0.99 16** P **Pg** **23 32 09.9 -0.8**
LSD S **Sb** **23 32 23.9 +1.0**
LPG **La Plagne** **0.99 360** *e*Pg **Pg** **23 32 10.2 -0.5**
LPG *e*Sg **Sg** **23 32 23.2 -0.6**
comp=E,6.1nm,0.2s
SMRF **Simiane la Rot** **1.00 239** *e*Pg **Pg** **23 32 10.5 -0.2**
SMRF *e*Sg **Sg** **23 32 23.5 -0.3**
comp=E,17nm,0.3s
IMI **Imperia** **1.01 126** P **Pg** **23 32 10.2 -0.6**
IMI AML AML
comp=N,166µm,0.5s
IMI AML AML
comp=E,114µm,1.2s
IMI **Imperia** **1.01 126** P **Pg** **23 32 10.3 -0.6**
IMI S **Sg** **23 32 23.0 -1.2**
LPL **La Plagne** **1.01 359** *e*Pg **Pg** **23 32 10.6 -0.4**
LPL *e*Sg **Sg** **23 32 23.7 -0.6**
comp=E,8.6nm,0.2s
GRN **Grenoble** **1.03 316** Pg **Pg** **23 32 11.1 -0.2**
GRN Sg **Sg** **23 32 24.4 -0.5**
RUSF **Rustrel** **1.07 239** Pg **Pb** **23 32 12.3 +0.9**
QLNO **Quiliano** **1.15 98** P **Pb** **23 32 13.0 +0.2**
FINB **Finale Ligure** **1.17 106** P **Pb** **23 32 13.2 +0.2**
LMR **La Mourre** **1.18 189** *e*Pg **Pb** **23 32 13.4 +0.2**
LMR *e*Sg **Sb** **23 32 28.9 +0.7**
comp=E,22nm,0.2s
OGSM **Saint Maurice** **1.33 326** Pg **Pb** **23 32 16.6 +0.8**
OGSM Sg **Sn** **23 32 34.2 +1.8**
OG35 **Corcelles** **1.75 332** Pg **Pg** **23 32 24.6 -0.4**
OG35 Sg **Sg** **23 32 47.3 -0.5**
LASF **Ste Croix** **2.12 259** *e*Pn **Pn** **23 32 26.5 +0.6**
LASF **Ste Croix** **2.12 259** *e*Pg **Pb** **23 32 30.9 +1.6**
LASF *e*Sn **Sn** **23 32 51.8 -0.1**
comp=E,1.5nm,0.2s
CABF **La Chapelle** **2.16 348** *e*Pn **Pn** **23 32 26.9 +0.4**
CABF **La Chapelle** **2.16 348** *e*Pg **Pb** **23 32 31.6 +1.7**
CABF *e*Sn **Sn** **23 32 52.6 -0.2**
comp=E,2.3nm,0.3s
CABF *e*Sg **Sg** **23 32 59.6 -1.2**
PGF **Pioggiola** **2.55 139** *e*Pn **Pn** **23 32 32.7 +0.9**
PGF *e*Sn **Sn** **23 33 01.7 -0.7**
comp=E,3.0nm,0.2s
PGF **Pioggiola** **2.55 139** Pn **Pn** **23 32 32.6 +0.8**
SMF **Signal de Mont** **2.96 317** *e*Pn **Pn** **23 32 37.5 +0.1**
SMF **Signal de Mont** **2.96 317** *e*Pg **Pn** **23 32 46.5 -1.6**
SMF *e*Sn **Sn** **23 33 11.8 -0.7**
comp=E,4.2nm,0.4s
SMF *e*Sg **Sg** **23 33 24.4 -2.0**
AVF **Avril sur Loir** **3.31 315** *e*P **Pn** **23 32 45.5 +3.4**
AVF *e*Sn **Sn** **23 33 20.0 -0.9**
comp=E,1.6nm,0.3s
HINF **Hinteralfeld** **3.31 1** *e*Pn **Pn** **23 32 42.8 +0.5**
HINF *e*Sn **Sn** **23 33 20.4 -0.8**
comp=E,1.0nm,0.3s
SSF **Saint Saulge** **3.42 320** *e*Pn **Pn** **23 32 44.2 +0.5**
SSF **Saint Saulge** **3.42 320** *e*P **Pn** **23 32 47.2 +3.5**
SSF **Saint Saulge** **3.42 320** *e*Pg **Pn** **23 32 55.2 -1.6**
SSF *e*Sn **Sn** **23 33 22.6 -1.2**
SSF *e*Sg **Sg** **23 33 38.6 -2.6**
comp=E,2.2nm,0.3s
LOR **Lormes** **3.42 325** *e*Pn **Pn** **23 32 43.9 +0.1**
baz=149
LOR **Lormes** **3.42 325** *e*Pg **Pg** **23 32 54.8 -2.1**
LOR *e*Sn **Sn** **23 33 22.5 -1.5**
LOR *e*Sg **Sg** **23 33 38.8 -2.5**
BGF **Bois d'Agland** **3.43 308** *e*P **Pn** **23 32 46.1 +2.2**
BGF *e*Sn **Sn** **23 33 22.6 -1.4**
BGF *e*Sg **Sn** **23 33 39.2 -2.2**
HAU **Haudompre** **3.51 356** *e*Pn **Pn** **23 32 45.3 +0.3**
HAU **Haudompre** **3.51 356** *e*P **Pn** **23 32 48.6 +3.6**
HAU **Haudompre** **3.51 356** *e*Pg **Pg** **23 32 57.4 -1.2**
HAU *e*Sn **Sn** **23 33 25.2 -0.9**
comp=E,2.5nm,0.3s
TCF **Toulx Ste Croi** **3.67 301** *e*Pn **Pn** **23 32 47.4 +0.3**
TCF *e*Sn **Sn** **23 33 28.7 -1.2**
comp=E,0.6nm,0.2s
FNEB **Nbias** **3.73 246** Pn **Pn** **23 32 49.1 +1.1**
CDF **Champ du Feu** **3.93 5** *e*Pn **Pn** **23 32 51.2 +0.5**
CDF *e*Sn **Sn** **23 33 35.2 -1.2**
comp=E,2.1nm,0.3s
MFF **Saint Martin d** **5.28 296** *e*Pn **Pn** **23 33 09.3 0.0**
ETSF **Etsaut** **5.54 256** *e*Pn **Pn** **23 33 12.5 -0.4**
BAIF **Baives** **5.82 344** *e*P **Pn** **23 33 20.0 +3.3**

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*ISK **07** 00:16:26.7, 37°.44N×38°.57E, h8km, ML2.5/15*
*DDA **07** 00:16:26.5, 37°.47N×38°.58E, h5km±2km, ML2.5*
ISC 07 00:16:27.1±1.0, **37°.47N**±0°.03×**38°.56E**±0°.02, **h7**km±**9**km, **n31**, σ**0**§**68**/42, **Turkey**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
URFA **Urfa** **0.21 99** PG **Pg** **00 16 30.8 -0.5**
URFA SG **Sg** **00 16 34.6 +0.5**
ATAB **Bozova** **0.21 269** *i* P **Pg** **00 16 31.4 0.0**
ATAB *i* S **Sg** **00 16 34.8 +0.5**
SANL **SANLIURFA_Merk** **0.46 132** *i* P **Pg** **00 16 35.9 -0.1**
SANL *i* S **Sg** **00 16 42.0 +0.1**
SANL IAML 00 16 42.0
comp=N,467nm,0.2s
GZT **Gaziantep** **0.81 262** *i* P **Pb** **00 16 42.9 -0.6**
GZT *i* S **Sb** **00 16 55.1 +0.5**
GZT IAML 00 16 56.0
comp=N,143nm,0.3s
ELZG **Elazig** **1.07 18** *i* P **Pn** **00 16 48.2 -0.5**
ELZG *i* S **Sg** **00 17 01.9 +0.2**
SVRC **Sivrice-ELAZID** **1.08 33** PN **Pn** **00 16 48.4 -0.4**
GAZ **Gaziantep** **1.12 255** PN **Pn** **00 16 48.7 -0.6**
GAZ SN **Sn** **00 17 04.4 -0.5**
KHMN **Narli-Kahraman** **1.12 266** PN **Pn** **00 16 48.8 -0.5**
DIYA **Diyarbakir** **1.31 70** *i* P **Pn** **00 16 51.8 -0.5**
DIYA *i* S **Sg** **00 17 08.9 -0.5**
DIYA IAML 00 17 15.0
comp=N,100nm,0.3s
KMRS **Kahramanmaras** **1.32 272** PN **Pn** **00 16 51.7 -0.3**
HCB **Kahramanmara** **1.32 265** *i* P **Pn** **00 16 51.9 -0.4**
HCB *i* S **Sb** **00 17 08.1 -1.4**
DYBB **Diyarbakir** **1.34 69** PN **Pn** **00 16 52.6 -0.2**
DYBB SN **Sn** **00 17 11.1 +0.8**
KUZU **Kuzuini** **1.38 240** *i* P **Pg** **00 16 53.6 0.0**
KUZU *i* S **Sg** **00 17 11.8 +0.4**
KUZU IAML 00 17 12.0
comp=N,298nm,0.4s
DARE **Darende-Malaty** **1.39 322** PN **Pg** **00 16 53.5 -0.2**
DARE SN **Sg** **00 17 12.8 +1.0**
AYKD **Aykdinkavak** **1.40 268** *i* P **Pn** **00 16 53.5 -0.4**
HEKM **Malatya_Hekimh** **1.48 341** *i* P **Pb** **00 16 54.9 -0.2**
MAZI **Mazidag** **1.50 90** PN **Pn** **00 16 54.3 -0.2**
KAMA **Osmaniye** **1.54 260** *i* P **Pb** **00 16 55.3 -0.7**
CUGUR **Gurin_SVAS** **1.61 321** *i* P **Pg** **00 16 58.1 +0.1**
ARPR **Arapgir-MALATY** **1.63 354** PN **Pb** **00 16 57.1 -0.4**
HANI **Diyarbakir_Han** **1.73 57** *i* P **Pn** **00 16 57.2 -0.4**
HANI *i* S **Sb** **00 17 21.0 -0.2**
ANDN **Andirin** **1.77 274** *i* P **Pb** **00 17 00.1 +0.2**
KEMA **Kemaliye** **1.79 358** *i* P **Pg** **00 17 01.0 -0.5**
SARI **SarD1z-Kayseri** **1.94 299** PN **Pn** **00 17 00.7 +0.1**
SVAN **Silvan-Diyarba** **2.19 71** PN **Pn** **00 17 05.1 +1.1**
TAHT **Tahtakopru-Hat** **2.20 241** PN **Pn** **00 17 04.4 +0.4**
BNN **Bunyan** **2.54 304** PN **Pn** **00 17 10.2 +1.3**
GUNE **Kayseri** **2.72 303** *i* P Pn 00 16 55.9 -15
CMRD **Camardi-Nigde** **2.84 275** PN **Pn** **00 17 14.5 +1.5**
GURO **Guroymak-BITLI** **2.94 68** PN **Pn** **00 17 15.6 +1.2**
SIRT **Sirnak** **3.08 88** PN **Pn** **00 17 17.8 +1.5**

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*TEH **07** 00:33:45.9, 27°.30N×53°.37E, h16km, ML3.2*
*OMAN **07** 00:33:53.4±0.3, 26°.96N×53°.32E, h50km±3km, ml3.1/5, Error ellipse: s-maj=7.0km s-min=2.4km az=10.0*

ISC 07 00:33:47.1±1.6,27.31N±0.05×53.39E±0.10,h16km,n22, σ1.59/32,Southern Iran

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LMD1	Lamerd	0.21	278	ePg	Pg	00 33 50.6	-1.4
LAR1	LAR	0.94	68	eSg	Sn	00 34 18.7	-0.2
LAR1				ePg	Pb	00 34 04.2	-0.9
LAR1				e		00 34 26.5	
JHRM	Jahrom	1.20	8	e		00 34 37.9	
JHRM				ePg	Pn	00 34 08.5	-0.8
GHB	Gharebagh	2.19	340	ePn	Pn	00 34 24.2	+1.0
GHB				e		00 35 10.8	
BANOM	Banah	2.95	117	P	Pb	00 34 37.7	-1.5
BANOM				S	Sn	00 35 10.8	+2.4
NAZ	Nazwa, Dubai	3.08	138	P	Pn	00 34 37.2	+2.1
NAZ				S	Sn	00 35 13.9	+2.2
MDH	Madha	3.29	127	P	Pn	00 34 40.8	+2.8
MDH				S	Sn	00 35 16.2	-0.6
HATD	Hatta, Dubai	3.49	135	P	Pn	00 34 42.3	+1.5
HATD				S	Sn	00 35 22.5	+0.7
ASHO	Ashiyiah	3.55	137	P	Pn	00 34 43.0	+1.4
	SNR=6.9						
ASHO				S	Sn	00 35 24.1	+0.9
NGRK	Negar Kerman	3.75	51	ePn	Pn	00 34 44.5	-0.1
KHGB	Koh Gabri	4.08	41	ePn	Pn	00 34 49.5	+0.5
IMEH	Mehriz	4.20	14	ePn	Pn	00 34 51.3	+0.6
SOHO	SOHO	4.25	137	P	Pn	00 34 52.2	+1.0
SOHO				S	Sn	00 35 40.2	-0.2
CHMN	Cheshme madani	4.44	54	ePn	Pn	00 34 55.9	+1.7
CHMN				e		00 34 57.2	
IRAM	Ramesheh	4.57	349	ePn	Pn	00 34 56.4	+0.6
ISAD	Sadrabad	4.59	3	ePn	Pn	00 34 56.9	+0.7
IBAF	Bafgh	4.67	23	ePn	Pn	00 34 57.6	+0.6
HOQ	Hoqain	5.13	136	P	Pn	00 35 04.3	+1.0
HOQ				S	Sn	00 36 00.5	-1.7
BSY	Bisya	5.71	142	P	Pn	00 35 12.4	+1.2
	SNR=23						
BSY				S	Sn	00 36 15.0	-1.6
SMDO	Samad	5.98	134	P	Pn	00 35 15.8	+0.7
SMDO				S	Sn	00 36 21.0	-2.2
MHTO	MHTO	7.55	145	P	Pn	00 35 37.2	+0.6
MHTO				S	Sn	00 36 57.6	-4.3
WHFO	Wadi Hawf	9.36	178	P	Pn	00 36 02.5	+1.1
	SNR=6.6						

GUC 07 00:43:00.7±0.4,30.39S×69.57W,h24km±4km,ML3.2
SJA 07 00:43:00.2±1.0,30.50S×69.46W,h10km±6km,ML2.9, MW3.0
ISC 07 00:43:00.4±1.9,30.50S±0.03×69.53W±0.03,h13km±16km, n20,σ1.29/34,1C-2D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AROD	Rodeo	0.33	9	iP	Pb	00 43 08.0	-0.5
AROD				eS	Sb	00 43 13.8	-0.1
ACCO	Cerro Coronel	0.41	103	iP	Pb	00 43 09.7	-0.1
ACCO				eS	Sb	00 43 17.0	+0.9
AMOG	MOGNA	1.00	116	iP	Pb	00 43 18.4	-1.2
AMOG				eS	Sb	00 43 32.1	-0.5
GO04	Tololo Observa	1.14	286	⇓iP	Pb	00 43 21.6	-0.6
GO04				iS	Sn	00 43 37.2	-0.9
GO04				IAML		00 43 40.7	
	comp=N,2μm,0.3s						
RTLL	Cerro Villicun	1.23	133	iP	Pn	00 43 22.5	-0.9
RTLL				eS	Sb	00 43 39.1	-0.3
RTLL				IAML		00 43 39.8	
	comp=Z,505nm,0.4s						
ZON	Zonda	1.27	145	iP	Pb	00 43 24.6	+0.3
ZON				eS	Sn	00 43 40.7	-0.4
ZON				IAML		00 43 41.1	
	comp=Z,127nm,0.4s						
CO02	Combarbal	1.45	241	⇑iP	Pb	00 43 27.7	+0.4
CO02				iS	Sg	00 43 48.0	+1.0
CO02				IAML		00 43 49.6	
	comp=N,1μm,0.5s						
LSCH	La Serena	1.60	291	iS	Sb	00 43 48.8	-1.0
LSCH				IAML		00 43 52.3	
	comp=E,242nm,0.4s						
RTCV	Cerro Valdivia	1.60	148	iP	Pn	00 43 29.3	+0.8
RTCV				eS	Sb	00 43 51.1	+1.0
ARCO	CERRO ARCO	2.39	168	iP	Pb	00 43 42.5	-1.0
ARCO				eS	Sg	00 44 16.8	-0.6
ARCO				IAML		00 44 18.0	
	comp=Z,77nm,0.4s						
VA03	San Esteban	2.42	201	eP	Pb	00 43 42.9	-1.0
VA03				iS	Sb	00 44 15.4	+1.6
AAGR	Agrelo	2.65	167	iP	Pb	00 43 46.2	-1.6
ACAN	Cantantal	2.67	132	iP	Pn	00 43 44.5	+1.2
ACAN				eS	Sb	00 44 20.8	-0.2
ROC1	El Roble	2.77	207	iP	Pn	00 43 46.5	+1.6
ROC1				eS	Sb	00 44 22.8	-1.3
PEL	Peldehue	2.81	200	eP	Pb	00 43 48.5	-2.2
PEL				iS	Sb	00 44 24.5	-0.5
PEL				IAML		00 44 34.2	
	comp=N,83nm,0.3s						
PEL	Peldehue	2.81	200	iP	Pb	00 43 48.9	-1.8
FCH	Farellones	2.89	193	⇓iP	Pb	00 43 50.2	-1.9
FCH				iS	Sb	00 44 27.9	+0.3
LAMA	Las Malvinas	4.43	177	iP	Pn	00 44 09.5	+2.1
COIS	El Sosneado	4.60	181	iP	Pn	00 44 13.1	+3.4
GO05	Huala	4.93	204	iP	Pn	00 44 14.5	+0.2

JMA 07 00:43:41.8,37.68N×139.93E,h8km±1km,M3.5,5C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYAR	Yonezawaarcadi	0.29	36	⇑P	Pg	00 43 47.7	+0.2
JYAR				S	Sg	00 43 51.9	+0.5
JFY	Yanaizu	0.33	213	⇑P	Pg	00 43 48.3	+0.1
JFY				S	Sg	00 43 52.7	+0.1
JFT	Otama	0.36	116	⇓P	Pg	00 43 49.0	+0.1
JFT				S	Sg	00 43 53.8	+0.1
JNS	Sasagawa	0.51	286	⇓P	Pg	00 43 51.7	+0.1
JNS				S	Sg	00 43 58.3	+0.1
JYS	Shirataka	0.55	11	P	Pg	00 43 52.7	+0.2
JYS				S	Sg	00 44 00.5	+0.8
JMM	Marumori	0.71	75	⇑P	Pg	00 43 55.4	-0.1
JFK	Kawauchi	0.81	112	⇓P	Pg	00 43 57.1	-0.3
JFK				S	Sg	00 44 07.5	-0.5
JHK	Hiroka	0.84	240	⇑P	Pg	00 43 57.6	-0.4
JHK				S	Sg	00 44 08.5	-0.5
JOU	Okura	0.90	40	⇑P	Pg	00 43 59.0	-0.1
JOU				S	Sg	00 44 10.9	+0.2
JYA	Atsumi	0.93	349	⇓P	Pg	00 43 59.5	-0.1
JYA				S	Sg	00 44 12.1	+0.4
JAW	Awa shima	0.94	325	P	Pg	00 44 00.0	+0.1
JAW				S	Sb	00 44 13.0	-0.1
JIZZ	Izumozaki	0.98	262	P	Pb	00 44 01.4	+0.4
JIZZ				S	Sn	00 44 15.8	-0.1
MAT	Matsushiro	1.79	231	P	Pn	00 44 13.3	+0.4
MAT				S	Sn	00 44 36.4	+0.6

ISK 07 00:52:03.9,34.65N×32.29E,h28km,ML2.9/22
NIC 07 00:52:04.5±0.0,34.73N×32.26E,h56km,Md3.9/7,Ml3.2/4
DDA 07 00:52:06.7,34.81N×32.39E,h39km±2km,ML2.6
GII 07 00:52:07.2±0.0,34.48N×32.73E,h1km
ISC 07 00:52:05.0±1.2,34.65N±0.04×32.24E±0.03,h44km±10km, n76,σ1.43/97,1C-4D,Cyprus region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NATA	Nata	0.30	65	⇓P	Pn	00 52 14.0	+0.3
NATA				AML	AML	00 52 18.5	
	5.7nm,0.1s						
NATA				AML	AML	00 52 18.5	
	5.7nm,0.1s						
NATA				S	Sn	00 52 21.2	+1.4
NATA				AMd		00 54 08.1	
NATA				AMd		00 54 08.1	
AKMS	Akamas	0.37	12	⇓P	Pn	00 52 14.1	-0.3
AKMS				S	Sn	00 52 20.6	-0.5
AKMS				AML	AML	00 52 20.9	
	6.7nm,0.3s						
AKMS				AML	AML	00 52 20.9	
	6.7nm,0.3s						
AKMS				AMd		00 53 51.0	
AKMS				AMd		00 53 51.0	
SZAC	Souni	0.54	79	⇓P	Pn	00 52 16.5	0.0
SZAC				AML	AML	00 52 27.8	
	3.7nm,0.3s						
SZAC				AMd		00 53 43.0	
ALFC	Alefka	0.58	30	⇓P	Pn	00 52 16.4	-0.7
ALFC				AML	AML	00 52 24.1	
	5.1nm,0.3s						
ALFC				AML	AML	00 52 24.1	
	5.1nm,0.3s						
ALFC				S	Sn	00 52 24.6	-1.1
ALFC				AMd		00 53 48.5	
ALFC				AMd		00 53 48.5	
LEF	Lefka	0.71	49	PG	Pn	00 52 17.7	-1.0
LEF				SG	Sn	00 52 27.4	-1.1
LEF	Lefka	0.71	49	iP	Pn	00 52 17.8	-0.9
LEF				iS	Sn	00 52 27.0	-1.6
LEF				IAML		00 52 28.0	
	comp=N,329nm,0.2s						
ASGA	Asgata	0.84	81	P	Pn	00 52 20.0	-0.5
ASGA				AMd		00 53 30.6	
CSS	Mathiatis	0.95	71	PG	Pn	00 52 21.4	-0.6
CSS				SG	Sn	00 52 33.8	-0.6
CSS	Mathiatis	0.95	71	P	Pn	00 52 21.4	-0.6
CSS				S	Sn	00 52 33.9	-0.6
CSS				AMd		00 53 57.8	
CSS				AMd		00 53 57.8	
CSS	Mathiatis	0.95	71	Pg	Pn	00 52 21.6	-0.4
AKIN	Akıncılar- Kıb	1.07	70	PG	Pn	00 52 23.0	-0.6
AKIN				SG	Sn	00 52 36.8	-0.5
MVOU	Mavrovouni	1.20	72	⇑P	Pn	00 52 25.1	-0.3
MVOU				AMd		00 53 44.6	
GAZI	Gazipasa	1.58	2	PN	Pn	00 52 30.1	-0.5
GAZI	Gazipasa	1.58	2	iP	Pn	00 52 29.9	-0.7
GAZI				iS	Sn	00 52 45.4	-4.5
GAZI				IAML		00 52 49.0	
	comp=N,66nm,0.7s						
TEKE	Tekeli-Mersin	1.65	25	PN	Pn	00 52 31.8	+0.3
EREN	Erenkoy	1.81	60	PN	Pn	00 52 33.6	-0.1
EREN	Erenkoy	1.81	60	iP	Pn	00 52 35.6	+2.0
EREN				iS	Sn	00 52 58.3	+2.9
OREN	Orenkoy-Mersin	1.84	32	PN	Pn	00 52 34.3	+0.1
AKKU	Akkuyu-Mersin	1.85	35	PN	Pn	00 52 34.2	0.0
GULN	MERSIN_Gulnar	1.86	34	iP	Pn	00 52 34.6	+0.2
GULN				iS	Sn	00 52 55.4	-1.4
BERE	Bereket-Mersin	1.87	25	PN	Pn	00 52 34.8	+0.1
ALAN	Alanya-ANTALYA	1.91	355	PN	Pn	00 52 35.3	+0.2
TISA	Tisan-Mersin	1.91	38	PN	Pn	00 52 35.1	0.0
KARG	Kargicak-Mersi	1.96	37	PN	Pn	00 52 35.7	-0.1
IKL	Isikli	1.98	36	PN	Pn	00 52 35.8	-0.2
TEVE	Tevekalti-Mers	2.03	29	PN	Pn	00 52 36.9	+0.1
ERMK	Ermenek	2.06	15	iP	Pn	00 52 38.8	+1.5
KEBE	Keben-Mersin	2.16	33	PN	Pn	00 52 39.2	+0.7
KEPZ	Antalya-Kepez	2.30	347	iP	Pn	00 52 41.0	+0.5
KEPZ				iS	Sn	00 53 07.3	-0.4
HDMB	Hadim	2.32	5	PN	Pn	00 52 41.8	+0.9
KIZK	Mersin	2.40	40	PN	Pn	00 52 41.6	-0.1
KIZK	Mersin	2.40	40	iP	Pn	00 52 43.5	+1.7
KIZK				iS	Sn	00 53 08.6	-1.2
AKAS	Kas	2.67	307	PN	Pn	00 52 46.9	+1.3
AKAS	Kas	2.67	307	iP	Pn	00 52 47.2	+1.6
AKAS				iS	Sn	00 53 11.6	-5.2
SEYD	Seydisehir-KON	2.77	353	PN	Pn	00 52 47.9	+0.9
KORT	Korkueli	2.80	327	PN	Pn	00 52 48.6	+1.1
KORT	Korkueli	2.80	327	iP	Pn	00 52 50.2	+2.8
ELL	Elmali	2.82	318	PN	Pn	00 52 48.9	+1.1
MERS	Mersin	2.89	39	PN	Pn	00 52 48.9	+0.3
MMA0B	Mount Meron ar	3.10	121	Pn	Pn	00 52 51.7	+0.2
MMA0B				Sn	Sn	00 53 25.2	-2.1
KERG	Konya-Eregli	3.15	28	iP	Pn	00 52 54.3	+2.0
KERG				iS	Sn	00 53 30.6	+1.9
KERG				IAML		00 53 33.0	
	comp=E,29nm,0.5s						
KSDI	Kefar Szold	3.19	116	P	Pn	00 52 53.2	+0.5
KSDI	Kefar Szold	3.19	116	Pn	Pn	00 52 52.7	0.0
KSDI				Sn	Sn	00 53 27.4	-2.1
NATI	Neve Ativ	3.22	115	Pn	Pn	00 52 53.1	+0.1
NATI				Sn	Sn	00 53 28.1	-2.0
FETY	Fethiye	3.24	308	iP	Pn	00 52 54.2	+0.8
FETY				iS	Sn	00 53 24.3	-6.5
FETY				IAML		00 53 32.0	
	comp=N,20nm,0.4s						
KONT	Konya--Tatoy	3.29	2	PN	Pn	00 52 55.0	+1.0
KONT	Konya--Tatoy	3.29	2	iP	Pn	00 52 55.9	+1.9
GULE	Gulek	3.34	37	iP	Pn	00 52 57.1	+2.3
YESY	Yesilyurt	3.35	21	PN	Pn	00 52 55.8	+0.8
SLTI	Sal'it	3.36	135	Pn	Pn	00 52 55.6	+0.6
SLTI				Sn	Sn	00 53 32.1	-1.5
GOLH	Golhisar	3.37	321	iP	Pn	00 52 57.9	+2.6
KSHT	Keshet	3.41	118	Pn	Pn	00 52 56.8	+1.1
MMLI	Mount Malkishu	3.46	129	Pn	Pn	00 52 56.9	+0.6
KARA	Karaisali	3.46	40	PN	Pn	00 52 57.0	+0.6
DOGA	KONYA_Doganhis	3.48	353	iP	Pn	00 52 58.5	+1.7
BRDR	BURDUR-Merkez	3.51	331	iP	Pn	00 52 59.4	+2.3
DALY	Dalyan (Mula)	3.63	308	iP	Pn	00 52 59.5	+0.8
DALY				iS	Sn	00 53 37.7	-2.5
DALY				IAML		00 53 40.0	
	comp=E,15nm,0.2s						
HMDT	Nahal Hemdat	3.64	130	Pn	Pn	00 52 59.7	+0.8
TAHT	Tahtakopru-Hat	3.65	61	PN	Pn	00 52 59.1	+0.1
CMRD	Camardi-Nigde	3.74	36	PN	Pn	00 53 01.1	+0.8
AKO	Adana	3.82	42	iP	Pn	00 53 02.7	+1.4
AKO				iS	Sn	00 53 44.5	-0.6
TAVA	DENIZLI_Tavas	3.89	317	iP	Pn	00 53 03.4	+1.1
KZIL	AFYON_Kizioren	3.98	335	iP	Pn	00 53 04.9	+1.3
DSI	Dead Sea	4.05	139	Pn	Pn	00 53 05.6	+1.1
YTIR	Yattir	4.07	143	Pn	Pn	00 53 05.4	+0.5
KZIT	Kziot	4.15	153	Pn	Pn	00 53 07.2	+1.3
YAHY	KAYSERI_Yahyal	4.26	35	iP	Pn	00 53 09.8	+2.3
KHAL	Karahalli	4.32	330	iP	Pn	00 53 09.1	+0.8
DAT	Datca	4.32	300	iP	Pn	00 53 09.1	+0.8
GHAJ	Ghor Haditha	4.36	139	Pn	Pn	00 53 09.8	+1.2
AYDN	Tasoluk	4.63	312	iP	Pn	00 53 13.8	+1.3
PRNI	Paran	4.88	151	Pn	Pn	00 53 17.2	+1.3
GCAM	G?zelcaml?	5.06	308	iP	Pn	00 53 18.8	+0.5
MBRI	Mt Berech	5.35	154	Pn	Pn	00 53 24.7	+2.3
EIL	Elat	5.47	154	Pn	Pn	00 53 26.1	+2.1
EIL	Elat	5.47	154	Pn	Pn	00 53 26.1	+2.1

IDC 07 00:54:09.9±2.4,55.05S×35.31W,h0km,mb3.8/2, mb1 4.0/2,mb1mx3.7/18,mbtmp3.8/2,Error ellipse: s-maj=131.5km s-min=36.2km az=178.0,South Georgia Island region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	27.28	287	P	P	00 59 55.2	-0.7
	3.0nm,1.0s,baz=169,slow=10,SNR=2.5						
H10S2	ASCENSION HYDR	48.82	28	T	T	01 55 17.0	
	baz=195,slow=74,SNR=224						
H10S3	ASCENSION HYDR	48.82	28	T	T	01 55 17.1	
	baz=25,slow=74,SNR=234						
H10N3	ASCENSION HYDR	49.93	27	T	T	01 56 40.5	
	baz=194,slow=75,SNR=374						
H10N1	ASCENSION HYDR	49.93	27	T	T	01 56 41.2	
	baz=194,slow=75,SNR=301						
H10N2	ASCENSION HYDR	49.94	27	T	T	01 56 39.1	
	baz=194,slow=75,SNR=412						
TORD	Torodi Ar. Bea	74.77	37	P	P	01 05 51.5	-0.1
	0.4nm,0.8s,baz=200,slow=4.6,SNR=3.3						
FINES	FINESS Array B	125.79	31	PKP	PKPdf	01 13 11.3	-0.7
	2.4nm,1.0s,baz=132,slow=2.1,SNR=4.9						
YKA	Yellowknife Ar	132.44	322	PKP	PKPdf	01 13 24.6	0.0
	0.1nm,0.5s,baz=127,slow=2.6,SNR=4.8						
ILAR	Eielson Array	146.06	314	PKPbc	PKPab	01 13 50.9	0.0
	0.8nm,0.6s,baz=125,slow=1.7,SNR=12						
ZALV	Zalesovo Beam	146.14	67	PKPbc	PKPdf	01 13 49.3	-0.4
	0.3nm,0.4s,baz=253,slow=4.4,SNR=2.3						

TIR 07 01:21:49.6,38.17N×21.71E,h12km,Md4.0/76
BGR 07 01:21:50.7±1.2,37.74N×21.44E,h15km,Error ellipse: s-maj=48.9km s-min=15.6km az=60.0
BJI 07 01:21:51.7±0.0,38.30N×21.70E,h8km,mB4.9/8, mb4.5/34,Ms4.6/5,Ms7 4.4/3
SKO 07 01:21:52.3,38.15N×21.86E,h0km
IDC 07 01:21:52.9±0.5,38.43N×21.69E,h0km,mb4.5/25, mb1 4.5/38,mb1mx4.5/50,mbtmp4.4/38,ML4.2/12, MS3.4/21,Ms1 3.5/21,ms1mx3.3/47,Error ellipse: s-maj=10.6km s-min=9.9km az=25.0
MED_RC 07 01:21:53.0±0.4,38.27N×21.61E,h23km±2km,MW4.4/14, Moment Tensor Solution.Mantle waves: s14,c20; Duration: 1.1 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.77±.74; $M_{\theta\theta}$5.60±.54; $M_{\phi\phi}$-4.83±.45; $M_{r\theta}$0.72±.47; $M_{r\phi}$-0.13±.28; $M_{\theta\phi}$0.13±.42; Best double couple: $M_0$5.26000×10^{15} NP1:ϕ_s136.00000°,δ84.00000°, λ3.00000°. NP2:ϕ_s46.00000°,δ87.00000°,λ174.00000°. Principal axes: T 5.6800, Plg6.0000°, Azm1.0000°; N -0.8400, Plg83.0000°, Azm198.0000°; P -4.8400, Plg2.0000°, Azm91.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.
THE 07 01:21:53.8,38.31N×21.72E,h0km±1km,ML4.3/18 Error ellipse: s-maj=1.4km s-min=0.4km az=201.0
MOS 07 01:21:53.4±1.0,38.32N×21.62E,h17km,mb4.8/28,Error ellipse: s-maj=4.3km s-min=2.2km az=84.3
PDG 07 01:21:53.8±0.7,38.33N×21.68E,h10km±1km,ML4.4/14, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0
ATH 07 01:21:53.2,38.30N×21.71E,h20km,ML4.2/31,Error ellipse: s-maj=0.9km s-min=0.5km az=350.0
BEO 07 01:21:54.4±0.7,38.31N×21.62E,h0km,ML4.5/4
NEIC 07 01:21:54.6±1.4,38.36N±0.04×21.72E±0.06,h10km±2km, Error ellipse: s-maj=7.2km s-min=5.9km az=114.0
HLW 07 01:22:03.1,37.90N×22.77E,h10km±10km,Md4.5,Ml4.7
GII 07 01:22:05.6±0.4,37.29N×21.83E,h80km
ISC 07 01:21:54.1±0.7,38.30N±0.01×21.71E±0.01,h12km±4km, n673,σ1.61/747,mb4.6/77,MS3.5/16,74C-20D,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAKA	Lakka	0.22	106	P	Pg	01 21 58.5	-0.2
LAKA				S	Sg	01 22 01.6	-0.3
	56μm,0.5s						
LAKA	Lakka	0.22	106	P	Pg	01 21 58.5	-0.2
LAKA				S	Sg	01 22 02.1	+0.2
LAKA				AML	AML	01 22 02.6	
LAKA				AML	AML	01 22 07.2	
	comp=N,66863μm,1.0s						
TRIZ	Trizonia	0.29	77	P	Pg	01 21 59.7	-0.3
TRIZ				S	Sg	01 22 04.7	+0.7
	comp=N,74μm,0.6s						
TRIZ	Trizonia	0.29	77	P	Pg	01 21 59.8	-0.3
TRIZ				S	Sg	01 22 04.7	+0.7
SERG	Sergoula	0.29	67	P	Pg	01 21 59.7	-0.4
SERG	Sergoula	0.29	67	P	Pg	01 21 59.8	-0.3
SERG				S	Sg	01 22 04.2	0.0
SERG				AML	AML	01 22 05.6	
	comp=E,93580μm,0.8s						
SERG				AML	AML	01 22 09.8	
RLS	Riolos of Patr	0.31	219	P	Pg	01 22 00.3	-0.1
RLS				S	Sb	01 22 05.3	-1.2
	comp=E,64μm,0.8s						
RLS	Riolos of Patr	0.31	219	P	Pg	01 22 00.3	-0.1
RLS				S	Sg	01 22 04.9	+0.4
RLS				AML	AML	01 22 05.9	
RLS				AML	AML	01 22 06.2	
	comp=E,96044μm,0.5s						
ALIK	Aliki, Aigiali	0.32	97	P	Pg	01 22 00.3	-0.2
ANX	Ano Chora	0.34	29	P	Pg	01 22 00.3	-0.6
ANX				S	Sg	01 22 05.6	+0.1
	comp=E,116μm,0.5s						
ANX	Ano Chora	0.34	29	P	Pg	01 22 00.4	-0.6
ANX				S	Sg	01 22 06.0	+0.6
ANX				AML	AML	01 22 07.5	
ANX				AML	AML	01 22 11.4	
DRO	Drossia	0.35	180	P	Pg	01 22 00.7	-0.3
DRO				S	Sg	01 22 06.4	+0.7
	comp=E,78μm,0.6s						
DRO	Drossia	0.35	180	P	Pg	01 22 00.7	-0.3
DRO				S	Sg	01 22 06.4	+0.7
DRO				AML	AML	01 22 14.6	
DRO				AML	AML	01 22 21.8	
KALE	Kalithea	0.35	75	P	Pg	01 22 00.7	-0.4
KALE				S	Sg	01 22 06.6	+0.8
	comp=E,33μm,0.5s						
KALE	Kalithea	0.35	75	P	Pg	01 22 00.7	-0.4
KALE				S	Sb	01 22 07.1	-0.7
KALE				AML	AML	01 22 11.0	
	comp=E,69612μm,0.6s						
KALE				AML	AML	01 22 12.6	
	comp=N,61067μm,0.4s						
PVO	Paravola	0.35	335	P	Pg	01 22 00.3	-0.8
PVO				S	Sg	01 22 06.3	+0.5
	comp=N,143μm,0.5s						
PVO	Paravola	0.35	335	P	Pg	01 22 00.4	-0.8
PVO				S	Sg	01 22 06.4	+0.6
PVO				AML	AML	01 22 06.9	
PVO				AML	AML	01 22 07.2	
KLV	Kalavryta, Ach	0.43	126	P	Pg	01 22 02.3	-0.3
KLV	Kalavryta, Ach	0.43	126	P	Pg	01 22 02.3	-0.3
KLV				AML	AML	01 22 11.7	
	comp=N,24952μm,0.6s						
KLV				AML	AML	01 22 20.4	
	comp=E,18959μm,0.9s						
PDO	Prodromos	0.51	306	P	Pg	01 22 03.4	-0.7
PDO				S	Sb	01 22 11.4	-1.0
	comp=E,184μm,0.5s						
PDO	Prodromos	0.51	306	P	Pg	01 22 03.2	-0.9
PDO				S	Sg	01 22 11.1	+0.2
PDO				AML	AML	01 22 14.0	
PDO				AML	AML	01 22 17.3	
AST1	Astakos	0.55	296	P	Pg	01 22 04.0	-0.7
AST1				S	Sb	01 22 13.1	-0.2
	comp=E,89μm,0.6s						
EVR	Evrytania	0.62	7	P	Pg	01 22 04.9	-1.3
EVR	Evrytania	0.62	7	P	Pg	01 22 05.0	-1.2
EVR				AML	AML	01 22 19.8	
	comp=E,57717μm,0.5s						
EVR				AML	AML	01 22 21.4	
	comp=N,39951μm,0.4s						
DLFA	Delphi	0.64	74	P	Pg	01 22 05.5	-1.1
DLFA				S	Sg	01 22 15.0	0.0
DLFA				AML	AML	01 22 21.3	
	comp=E,43114μm,0.8s						
DLFA				AML	AML	01 22 22.5	
	comp=N,36267μm,0.5s						
KFL	Anninata	0.75	256	P	Pg	01 22 08.0	-0.6
AMT	Artemida-Makis	0.77	180	P	Pg	01 22 08.0	-0.9
AMT				S	Sb	01 22 19.4	-0.3
	comp=N,24μm,0.6s						
AMT	Artemida-Makis	0.77	180	P	Pg	01 22 08.5	-0.4
AMT				AML	AML	01 22 32.7	
	comp=N,41499μm,0.5s						
AMT				AML	AML	01 22 32.8	
	comp=E,51862μm,0.7s						
MAKR	Makrakomi, Fth	0.79	25	P	Pg	01 22 08.2	-1.1
MAKR	Makrakomi, Fth	0.79	25	P	Pg	01 22 08.4	-0.9
MAKR				S	Sg	01 22 18.9	-0.6
MAKR				AML	AML	01 22 27.8	
	comp=E,90516μm,0.8s						
MAKR				AML	AML	01 22 28.4	
	comp=N,55585μm,0.6s						
MGNA	Meganis	0.81	296	P	Pg	01 22 08.7	-0.9
MGNA				AML	AML	01 22 24.4	
	comp=N,33534μm,0.7s						
MGNA				AML	AML	01 22 31.5	
	comp=E,35384μm,0.5s						
ZAK2	Zakynthos	0.82	232	P	Pb	01 22 10.1	-0.1
AGG	Agios Georgios	0.87	34	P	Pg	01 22 09.5	-1.4
AGG				S	Sg	01 22 22.2	0.0
	comp=E,16μm,0.7s						
AGG	Agios Georgios	0.87	34	P	Pg	01 22 09.2	-1.6
AGG				S	Sg	01 22 21.6	-0.6
AGG				AML	AML	01 22 23.2	
	comp=E,36898μm,0.7s						
AGG				AML	AML	01 22 28.9	
	comp=N,26586μm,0.8s						
AGG	Agios Georgios	0.87	34		Pg	01 22 10.0	-0.8
AGG	Agios Georgios	0.87	34	P	Pg	01 22 10.0	-0.8
AXAR	Agios Charalam	0.88	58	P	Pg	01 22 10.1	-0.8
AXAR				AML	AML	01 22 31.9	
	comp=E,79916μm,0.5s						
AXAR				AML	AML	01 22 34.7	
	comp=N,85781μm,0.5s						
EVGI	Lefkada island	0.89	291	P	Pg	01 22 10.0	-1.2
EVGI				S	Sn	01 22 24.2	-1.0
EVGI	Lefkada island	0.89	291	P	Pg	01 22 09.8	-1.4
VLS	Valsamata	0.89	262	P	Pg	01 22 10.1	-1.2
VLS				S	Sn	01 22 24.6	-0.7
	comp=N,90μm,0.3s						
VLS	Valsamata	0.89	262	P	Pg	01 22 10.2	-1.1
VLS				AML	AML	01 22 25.7	

VLS AML AML 01 22 25.8
VLS Valsamata 0.89 262 P Pg 01 22 10.1 -1.2
VLS S Sn 01 22 24.6 -0.7
KONA Konidatara, Ke 0.91 278 P Pg 01 22 10.4 -1.2
VLMS Volimes, Zakyn 0.93 243 P Pg 01 22 11.1 -0.9
VLMS AML AML 01 22 35.3
comp=N,55870µm,0.8s
VLMS AML AML 01 22 39.1
comp=E,34530µm,0.6s
PROD Prodromos 0.94 92 P Pg 01 22 10.9 -1.2
PROD Prodromos 0.94 92 P Pg 01 22 11.0 -1.1
PROD AML AML 01 22 29.6
comp=N,30484µm,0.8s
PROD AML AML 01 22 32.1
comp=E,32330µm,0.5s
KRI1 kERI 0.95 228 P Pg 01 22 11.4 -1.0
LKD2 Lefkada island 0.96 301 P Pg 01 22 11.2 -1.4
LKD2 Lefkada island 0.96 301 P Pg 01 22 11.0 -1.6
LKD2 AML AML 01 22 33.1
comp=E,46693µm,0.4s
LKD2 AML AML 01 22 35.0
comp=N,46665µm,0.5s
ARG2 Argostoli 0.97 263 P Pg 01 22 11.6 -1.2
ARG2 S Sn 01 22 27.3 +0.1
KEF2 Argostoli. Kep 0.97 262 P Pg 01 22 11.6 -1.2
KEF1 Kardakata, Kep 0.98 269 P Pg 01 22 11.7 -1.2
TSLK Tsoukalades, L 0.98 303 P Pg 01 22 11.8 -1.2
TSLK Tsoukalades, L 0.98 303 P Pg 01 22 10.9 -2.1
LXR1 Lixouri, Cepha 1.01 265 P Pg 01 22 12.2 -1.3
LXR1 S Sn 01 22 28.8 +0.7
LXRA Lixouri, Kepha 1.01 265 P Pg 01 22 12.4 -1.0
KEF4 Livadi, Kephal 1.01 268 P Pg 01 22 12.4 -1.2
LTK Loutraki 1.03 105 P Pg 01 22 12.7 -1.1
LTK Loutraki 1.03 105 P Pg 01 22 12.5 -1.3
CHV1 Chavriata, Kef 1.05 264 P Pb 01 22 13.0 -1.2
VLX Vlachokerasia 1.07 150 P Pb 01 22 13.2 -1.3
VLX Vlachokerasia 1.07 150 P Pb 01 22 13.3 -1.2
VLX AML AML 01 22 35.7
comp=N,33617µm,0.5s
VLX AML AML 01 22 41.5
comp=E,25809µm,1.1s
LKR Lokris 1.07 70 P Pb 01 22 12.3 -2.2
LKR S Sg 01 22 29.0 +0.4
comp=E,7µm,0.4s
LKR Lokris 1.07 70 P Pb 01 22 12.5 -2.0
LKR S Sb 01 22 28.3 -0.1
LKR AML AML 01 22 32.1
comp=E,13345µm,0.4s
LKR AML AML 01 22 34.4
comp=N,17339µm,0.3s
KEF3 Kipouria, Keph 1.08 265 P Pb 01 22 13.4 -1.3
ITM Ithomi 1.13 171 P Pb 01 22 15.2 -0.4
ITM Ithomi 1.13 171 P Pb 01 22 15.1 -0.5
ITM AML AML 01 22 38.3
comp=E,16228µm,0.8s
ITM AML AML 01 22 47.5
comp=N,13459µm,0.8s
ITM Ithomi 1.13 171 Pn Pb 01 22 15.3 -0.2
VIL2 Platees 1.23 94 P Pb 01 22 17.0 -0.2
VIL2 AML AML 01 22 40.5
comp=N,17328µm,0.8s
VIL2 AML AML 01 22 41.0
comp=E,27022µm,0.5s
KLMT Kalamata 1.27 167 P Pb 01 22 17.6 -0.2
VILL Villia 1.27 96 P Pn 01 22 17.0 -0.6
THL Klokotos Trika 1.28 10 P Pn 01 22 17.2 -0.6
THL Klokotos Trika 1.28 10 P Pn 01 22 17.3 -0.6
THL AML AML 01 22 45.2
comp=N,13472µm,1.4s
THL AML AML 01 22 45.8
comp=E,12097µm,1.3s
PYL PYLOS 1.40 179 P Pb 01 22 20.1 -0.1
PYL PYLOS 1.40 179 P Pb 01 22 19.9 -0.3
DID Didima 1.44 123 P Pn 01 22 19.8 -0.2
DID S Sg 01 22 40.4 -0.1
comp=E,6µm,0.7s
DID Didima 1.44 123 P Pn 01 22 20.1 +0.1
DID AML AML 01 22 48.0
comp=N,11059µm,0.6s
DID AML AML 01 22 53.4
comp=E,11921µm,0.6s
KRND KRANIDI 1.46 128 P Pn 01 22 20.2 0.0
LRSO Larissa Observ 1.47 21 P Pb 01 22 20.9 -0.4
LRSO S Sg 01 22 41.4 +0.1
comp=E,16µm,0.8s
LRSO Larissa Observ 1.47 21 P Pn 01 22 20.6 +0.3
JAN Janina 1.51 334 P Pn 01 22 20.9 -0.1
JAN Janina 1.51 334 P Pb 01 22 22.3 +0.2
JAN AML AML 01 22 53.1
comp=E,23154µm,0.7s
JAN AML AML 01 23 00.0
comp=N,15579µm,1.3s
JAN Janina 1.51 334 P Pn 01 22 20.9 -0.1
MRKA Markates 1.53 74 P Pn 01 22 21.4 +0.2
MRKA Markates 1.53 74 P Pn 01 22 21.2 0.0
MRKA AML AML 01 22 50.8
comp=N,8795µm,0.7s
MRKA AML AML 01 22 51.5
comp=E,9355µm,0.9s
NEO Neokhori 1.55 49 P Pn 01 22 21.2 -0.3
NEO Neokhori 1.55 49 P Pb 01 22 22.1 -0.7
XOR Xorichti 1.57 47 P Pn 01 22 21.9 +0.1
XOR Xorichti 1.57 47 P Pb 01 22 22.3 -0.7
ATH Athens Observa 1.61 101 P Pn 01 22 22.8 +0.5
ATH S Sg 01 22 45.0 -1.0
comp=E,4µm,0.9s
ATH Athens Observa 1.61 101 P Pn 01 22 22.8 +0.5
ATH AML AML 01 22 54.6
comp=N,7932µm,0.7s
ATH AML AML 01 23 01.6
comp=E,9963µm,1.0s
ATH Athens Observa 1.61 101 P Pn 01 22 22.8 +0.5
ATH S Sg 01 22 45.0 -1.0
SKIA Skiathos 1.62 57 P Pn 01 22 22.7 +0.2
SKIA Skiathos 1.62 57 P Pn 01 22 22.8 +0.4
SKIA AML AML 01 22 56.0
comp=E,4825µm,0.8s
SKIA AML AML 01 22 59.9
comp=N,6020µm,0.8s
IGT Igoumenitsa 1.64 319 P Pb 01 22 23.7 -0.5
IGT S Sg 01 22 46.7 0.0
comp=N,4µm,0.7s
IGT Igoumenitsa 1.64 319 ePn Pb 01 22 24.1 -0.1
IGT eSn Sb 01 22 44.6 -0.2
IGT Igoumenitsa 1.64 319 P Pn 01 22 23.2 +0.6
IGT Igoumenitsa 1.64 319 P Pb 01 22 23.7 -0.5
IGT S Sg 01 22 46.7 0.0
ATHU Athens Univers 1.67 101 P Pn 01 22 23.4 +0.3
ATHU Athens Univers 1.67 101 P Pn 01 22 23.4 +0.3
ATHU AML AML 01 22 55.6
comp=N,4242µm,1.3s
ATHU AML AML 01 23 03.0
comp=E,2449µm,1.0s
KPRO Kipourio 1.68 351 P Pb 01 22 24.1 -0.8
YDRA Hydra 1.68 124 P Pb 01 22 24.5 -0.4
VLY Voula,Athens 1.70 105 P Pn 01 22 23.9 +0.3
VLY Voula,Athens 1.70 105 P Pn 01 22 23.9 +0.3
PTL Penteli 1.71 98 P Pn 01 22 24.2 +0.4
EREA Eretria 1.75 85 P Pn 01 22 24.7 +0.5
EREA S Sb 01 22 47.4 -0.6
comp=E,5µm,0.8s
EREA Eretria 1.75 85 P Pn 01 22 24.5 +0.2
VLI Veliai 1.85 148 P Pn 01 22 26.5 +0.8
ALNA Alonissos 1.89 63 P Pn 01 22 26.3 +0.3
LIT Litokhoron 1.90 18 P Pn 01 22 26.4 +0.1
LIT Litokhoron 1.90 18 Pn 01 22 26.0 -0.3
LIT Litokhoron 1.90 18 P Pn 01 22 26.0 -0.3
AOS Alonnisos 1.91 62 P Pn 01 22 26.0 -0.3
KASA Kassiopi 2.00 317 P Pb 01 22 29.5 -0.9
KZN Kozani 2.00 1 P Pb 01 22 29.4 -1.2
SRN Sarande 2.06 320 i PN Pb 01 22 30.7 -0.8
SRN i SN Sb 01 22 56.1 -1.0
KARY Karystos 2.16 96 P Pn 01 22 30.9 +1.0
PAIG Paliouri 2.23 43 P Pn 01 22 30.9 0.0
PAIG Paliouri 2.23 43 P Pn 01 22 32.3 +1.4
KTHA Kythira Island 2.31 152 P Pn 01 22 33.8 -1.8
PLG Polygyros 2.47 32 P Pn 01 22 34.0 -0.2
SERI Serifos 2.48 116 P Pn 01 22 34.5 +0.3
FNA Florina 2.50 354 ePn Pb 01 22 36.7 -2.1
FNA eSn Sn 01 23 05.7 +0.8
FNA Florina 2.50 354 Pn 01 22 36.1 +1.6
FNA Florina 2.50 354 P Pn 01 22 36.1 +1.6
THE Thessaloniki 2.52 22 P Pn 01 22 35.7 +0.9

OUR Ouranopolis 2.69 40 P Pn 01 22 39.0 +1.9
GRG Griva 2.71 11 P Pn 01 22 38.4 +1.0
VLO Vlora 2.77 322 P Pn 01 22 37.9 -0.3
SOH Sokhos 2.82 26 P Pn 01 22 40.2 +1.2
OHR Ohrid 2.90 346 ⇓iPn Pb 01 22 42.8 -2.9
OHR Ohrid 2.90 346 P Pn 01 22 42.6 +2.6
KNT Kendrikon 3.00 17 P Pn 01 22 42.4 +0.9
SCTE Santa Cesarea 3.08 306 Pn Pn 01 22 42.7 +0.2
VAY Valandovo 3.09 12 ⇓iPn Pn 01 22 43.8 +1.1
VAY i Sn Sg 01 23 40.0 +6.8
VAY eLg Lg 01 23 40.5
comp=N,879nm,0.9s
VAY Valandovo 3.09 12 P Pn 01 22 43.7 +1.1
SRS Serrai 3.17 27 ePn Pn 01 22 44.1 +0.4
SRS Serrai 3.17 27 P Pn 01 22 44.9 +1.2
APE Apeiranthos 3.27 111 ⇓P Pn 01 22 46.3 +1.1
APE Apeiranthos 3.27 111 d iP Pn 01 22 46.0 +0.8
TIR Tirane 3.36 336 ePn Pn 01 22 48.2 +1.8
TIR Tirane 3.36 336 ⇓P Pn 01 22 48.5 +2.2
TIR Tirane 3.36 336 Pn 01 22 47.3 +0.9
TIR Tirane 3.36 336 P Pn 01 22 47.3 +0.9
STIP Stip 3.41 6 i Pn Pn 01 22 49.1 +2.0
PHP Peshkopia 3.52 344 P Pn 01 22 51.1 +2.5
SANT Santorini 3.55 122 ⇓P Pn 01 22 50.8 +1.8
SANT Santorini 3.55 122 Pn 01 22 50.6 +1.5
SKO Skopje 3.67 357 ⇓iPn Pn 01 22 53.2 +2.5
SKO i Sn Sg 01 24 00.7 +8.7
SKO eLg Lg 01 24 01.1
comp=E,37nm,0.7s
SKO Skopje 3.67 357 P Pn 01 22 52.7 +2.0
KKB Krupnik 3.71 16 P Pn 01 22 51.0 -0.3
EZN Ezine 3.90 66 eP Pn 01 22 57.3 +3.5
EZN Ezine 3.90 66 P Pn 01 22 55.4 +1.6
IDI Anoyia 3.94 139 Pn Pn 01 22 56.3 +1.9
comp=E,4.3nm,0.3s,baz=320,slow=14,SNR=38
IDI Sn Sn 01 23 40.1 -0.6
comp=E,7.5nm,0.3s,baz=254,slow=18,SNR=4.1
IDI LR LR 01 24 15.8
comp=E,195nm,21.5s,baz=320,slow=35
TIP Timpagrande 3.97 284 ⇑P Pn 01 22 55.8 +1.0
TIP ⇑S Sn 01 23 42.8 +1.4
TIP Timpagrande 3.97 284 Pn 01 22 55.5 +0.6
TAR1 Taranto 4.09 304 ⇑iPn Pn 01 22 56.9 +0.6
RZN Rozhen 4.09 33 P Pn 01 22 57.3 +0.6
ULC Ulcinj 4.12 333 P Pn 01 22 57.8 +1.0
ULC Ulcinj 4.12 333 ePn Pn 01 22 57.2 +0.4
ULC eSn Sn 01 23 46.1 +1.1
DKL Dikili 4.14 78 eP Pn 01 22 59.0 +2.0
BLCB Balcova 4.19 87 eP Pn 01 22 59.8 +2.0
BOSS Bosilegrad 4.23 8 ePn Pn 01 23 00.0 +1.6
ALN Alexandroupoli 4.23 51 Pn 01 22 58.4 +0.1
ALN Alexandroupoli 4.23 51 P Pn 01 22 58.4 +0.1
GELI Tayfur-Gelibol 4.24 59 eP Pn 01 22 58.4 -0.1
DRME Dracevica, Mon 4.34 334 ⇑iPn Pn 01 23 00.3 +0.4
DRME Dracevica, Mon 4.34 334 ePn Pn 01 23 00.2 +0.4
DRME eSn Sn 01 23 51.0 +0.7
KDZ Kurdzhali 4.39 39 P Pn 01 22 59.7 -0.9
GCAM G?zelcaml? 4.40 96 eP Pn 01 23 01.9 +1.2
ERIK Erikli-Kesan 4.41 56 eP Pn 01 23 03.1 +2.4
LPK Lapseki 4.43 61 eP Pn 01 23 02.4 +1.4
PLD Plovdiv 4.44 30 P Pn 01 23 03.0 +1.8
VTS Vitosha 4.47 15 ePn Pn 01 23 02.7 +1.0
VTS eSn Sn 01 23 54.4 +0.7
VTS Vitosha 4.47 15 ⇑P Pn 01 23 03.4 +1.7
VTS ⇑S Sn 01 23 55.7 +2.0
VTS Vitosha 4.47 15 Pn 01 23 02.6 +0.9
VTS Vitosha 4.47 15 P Pn 01 23 02.6 +0.9
PVY Plav 4.49 343 ePn Pn 01 23 03.1 +1.0
PVY eSn Sn 01 23 55.6 +1.3
BARS Barje 4.51 1 ePn Pn 01 23 04.1 +1.9
MATE Matera 4.53 303 ⇓P Pn 01 23 03.0 +0.6
MATE ⇑S Sn 01 23 55.3 +0.3
PDG Podgorica 4.53 336 ePn Pn 01 23 02.5 0.0
PDG eSn Sn 01 23 54.8 -0.3
PDG Podgorica 4.53 336 ⇑P Pn 01 23 03.5 +1.1
PDG Podgorica 4.53 336 ⇑iPn Pn 01 23 02.7 +0.2
PDG Podgorica 4.53 336 Pn 01 23 03.0 +0.5
TTG Podgorica 4.53 336 ePn Pn 01 23 03.0 +0.5
TTG eSn Sn 01 23 56.4 +1.3
BUM Brajici-Budva 4.54 333 ePn Pn 01 23 02.8 +0.1
BUM eSn Sn 01 23 56.5 +1.1
SOF Sofiya 4.55 15 P Pn 01 23 05.0 +2.2
CEL Celeste 4.58 271 Pn 01 23 03.7 +0.5
BODT Bodrum 4.61 104 eP Pn 01 23 05.8 +2.2
PGB Panagyurishte 4.64 23 P Pn 01 23 06.5 +2.5
SG1 Sgolgore (BA) 4.64 305 ⇓iPn Pn 01 23 04.9 +0.9
BAI Bari 4.66 308 ⇓iPn Pn 01 23 04.8 +0.5
CEME Cevo 4.75 334 ePn Pn 01 23 05.2 -0.3
CEME eSn Sn 01 24 01.5 +1.0
DIM Dimitrovgrad 4.75 37 P Pn 01 23 07.1 +1.6
IVA Berane 4.77 344 ePn Pn 01 23 06.9 +1.0
IVA eSn Sn 01 24 02.2 +1.1
HCY Herceg Novi 4.82 330 ⇑iPn Pn 01 23 06.0 -0.4
HCY Herceg Novi 4.82 330 P Pn 01 23 06.4 0.0
HCY Herceg Novi 4.82 330 ⇑iPn Pn 01 23 05.8 -0.6
HCY i Sn Sn 01 24 02.6 +0.5
KOME Kolasin 4.84 340 ⇓iPn Pn 01 23 08.0 +1.2
KOME eSn Sn 01 24 04.0 +1.1
AYDB Zeytinkoy-Aydi 4.88 92 eP Pn 01 23 10.1 +2.7
DAT Datca 4.92 107 eP Pn 01 23 09.2 +1.3
NKME Niksic 4.93 336 ePn Pn 01 23 08.4 +0.4
NKME eSn Sn 01 24 05.7 +0.7
SELS Selova 4.94 355 ePn Pn 01 23 08.8 +0.8
NKY Niksic 4.96 336 P Pn 01 23 10.4 +1.9
NKY Niksic 4.96 336 ePn Pn 01 23 09.0 +0.5
NKY eSn Sn 01 24 06.7 +0.9
ZAPS Zavoj 5.02 8 ePn Pn 01 23 11.2 +2.0
MRMT Marmara Adasi 5.10 61 eP Pn 01 23 10.8 +0.4
TREB Trebinje 5.10 331 ePn Pn 01 23 09.9 -0.4
TREB eSn Sn 01 24 08.3 -0.8
TREB Trebinje 5.10 331 ⇑iPn Pn 01 23 09.8 -0.5
ACER Acerenza 5.11 301 Pn 01 23 10.8 +0.4
SJES Sjenica 5.13 346 ePn Pn 01 23 12.1 +1.3
BRY Bratogost 5.19 333 ePn Pn 01 23 11.3 -0.4
BRY Bratogost 5.19 333 P Pn 01 23 11.9 +0.2
BRY Bratogost 5.19 333 ePn Pn 01 23 10.8 -0.9
BRY eSn Sn 01 24 11.9 +0.3
EDRB Edirne 5.24 46 eP Pn 01 23 15.6 +3.4
PLE Pljevlja 5.33 341 P Pn 01 23 15.3 +1.8
PLE Pljevlja 5.33 341 ePn Pn 01 23 14.1 +0.6
PLE eSn Sn 01 24 15.6 +0.8
BOVS Bovan 5.33 360 ePn Pn 01 23 14.8 +1.4
YER Yerkesik 5.34 101 eP Pn 01 23 16.7 +3.1
YER Yerkesik 5.34 101 P Pn 01 23 18.1 +4.5
UPM Unac-Piva 5.34 337 ⇑iPn Pn 01 23 15.1 +1.5
UPM Unac-Piva 5.34 337 ePn Pn 01 23 15.0 +1.2
UPM eSn Sn 01 24 16.2 +0.9
MANT Manisa 5.38 86 Pn 01 23 15.3 +0.9
IVAS Ivanjica 5.40 348 ePn Pn 01 23 14.8 +0.3
CRLT Corlu 5.44 57 eP Pn 01 23 16.0 +1.1
ZAGS Zajecar 5.52 4 ePn Pn 01 23 17.3 +1.2
PLVB Pleven 5.54 23 ⇑P Pn 01 23 17.8 +1.5
JMB Yambol 5.58 40 P Pn 01 23 18.0 +1.1
RUDO Rudo 5.60 342 ⇑iPn Pn 01 23 16.9 -0.3
ELND Elena 5.60 33 ⇓P Pn 01 23 18.0 +0.7
PVL Pavlikeni 5.63 28 P Pn 01 23 16.4 -1.1
GRUS Gruza 5.63 353 ePn Pn 01 23 18.7 +1.1
DALY Dalyan (Mula) 5.71 103 eP Pn 01 23 22.1 +3.5
SGRT San Giovanni R 5.74 309 Pn 01 23 18.9 -0.2
SLVT Silivri 5.80 58 eP Pb 01 23 28.2 -6.9
BBLS Lazići 5.83 343 ePn Pn 01 23 20.7 +0.4
BBLS Lazići 5.83 343 ⇑iPn Pn 01 23 20.5 +0.2
VAE Valguarnera 5.83 264 Pn Pn 01 23 22.9 +2.4
comp=E,1.0nm,0.3s,baz=350,slow=18,SNR=6.7
VAE Sn Sn 01 24 28.8 +1.6
comp=E,3.1nm,0.3s,baz=202,slow=19,SNR=1.9
BAIL Bailesti 5.85 12 ⇑P Pn 01 23 21.8 +1.3
SZH Strazhica 5.91 32 P Pn 01 23 22.6 +1.3
DIVS Divibare 5.94 348 ePn Pn 01 23 22.1 +0.2
DIVS eSn Sn 01 24 29.5 -0.3
DIVS Divibare 5.94 348 ⇑iPn Pn 01 23 22.1 +0.2
ARMT Armutlu 5.98 66 eP Pn 01 23 23.1 +0.7
CTKS Kestanelik-??a 6.00 59 eP Pn 01 23 25.5 +2.9
TRUS Trudelj 6.00 351 ePn Pn 01 23 22.9 +0.3
ZIMR 6.02 26 ⇑P Pn 01 23 24.8 +1.9
ZIMR 6.02 26 P Pn 01 23 24.8 +1.9
PUNG Punghina 6.04 8 ⇑P Pn 01 23 24.8 +1.6
VLAD Vladila 6.04 19 ⇑P Pn 01 23 24.6 +1.4
FETY Fethiye 6.09 104 eP Pn 01 23 29.1 +5.1
HAPS Han Pijesak,Bl 6.14 341 ⇓iPn Pn 01 23 23.6 -1.1

PAOL Paolisi 6.15 299 Pn 01 23 26.3 +1.5
TVSB Tavsanli 6.16 77 eP Pn 01 23 27.4 +2.5
WDD Wied Dalam 6.25 249 Pn 01 23 27.1 +1.0
YLV Yalova 6.35 67 eP Pn 01 23 34.5 +7.0
RAZG Razgrad 6.39 33 ⇑P Pn 01 23 29.0 +0.9
COPA Copaceanca 6.40 23 ⇑P Pn 01 23 30.0 +1.9
SRE Strehaia 6.46 10 ⇑P Pn 01 23 30.6 +1.7
SRE Strehaia 6.46 10 P Pn 01 23 30.6 +1.7
TEKS Tekeris 6.46 346 ePn Pn 01 23 29.3 +0.4
TEKS eSn Sn 01 24 41.8 -0.7
TEKS Tekeris 6.46 346 ⇑iPn Pn 01 23 28.9 0.0
BEO Beograd 6.57 352 P Pn 01 23 35.2 +4.8
BEO pmax pmax
comp=Z,57nm,1.1s
HRT Hereke 6.64 65 eP Pn 01 23 30.8 -0.7
HUMR Humele 6.69 20 ⇑P Pn 01 23 34.1 +2.0
ELL Elmali 6.70 101 eP Pn 01 23 40.4 +8.1
ELL Elmali 6.70 101 Pn 01 23 35.0 +2.7
ELL Elmali 6.70 101 P Pn 01 23 35.0 +2.7
SGRR Singureni 6.73 27 ⇑P Pn 01 23 33.7 +1.1
CLTB Caltabellotta 6.75 266 Pn 01 23 35.3 +2.2
SHUT Suhut-Afyon 6.94 85 eP Pn 01 23 39.0 +3.3
ISP Isparta 6.97 91 P Pn 01 23 39.7 +3.7
ISP pmax pmax
comp=Z,47nm,0.7s
GOLR 6.97 19 ⇑P Pn 01 23 37.3 +1.3
DOB Doboj 6.97 338 ePn Pn 01 23 34.5 -1.5
KORT Korkueli 6.97 98 eP Pn 01 23 41.5 +5.3
MGRS Mrkonjic Grad 7.03 332 ⇓iPn Pn 01 23 37.2 +0.4
INTR Introdacqua 7.04 304 Pn 01 23 37.4 +0.5
BANR Banloc 7.09 357 ⇑P Pn 01 23 40.7 +3.2
GZR Gura Zlata 7.13 6 ⇑P Pn 01 23 40.5 +2.3
GZR Gura Zlata 7.13 6 P Pn 01 23 40.5 +2.3
SRCK Saricakaya, Es 7.14 73 eP Pn 01 23 40.8 +2.5
GULT Gulveren 7.14 70 eP Pn 01 23 41.4 +3.0
SULR 7.23 27 ⇓P Pn 01 23 41.8 +2.3
ANTB Antalya 7.24 98 eP Pn 01 23 45.7 +6.1
PSN Preselentsi 7.27 40 P Pn 01 23 42.3 +2.3
BLY Banja Luka 7.28 334 ⇑P Pn 01 23 40.4 +0.1
BLY Banja Luka 7.28 334 ⇑iPn Pn 01 23 39.6 -0.6
LOT Lotru 7.31 11 ⇑P Pn 01 23 41.5 +0.9
BZS Buzias 7.31 359 ⇓P Pn 01 23 41.5 +0.9
BZS Buzias 7.31 359 P Pn 01 23 41.3 +0.7
BZS pmax pmax
comp=Z,5.0nm,0.8s
MTUR Matau 7.36 19 ⇑P Pn 01 23 43.1 +1.7
MTUR Matau 7.36 19 P Pn 01 23 43.1 +1.7
SLUM Salum 7.38 156 P Pn 01 23 41.5 0.0
baz=161
SLUM S Sn 01 24 53.6 -12
baz=161
SLUM AMP 01 25 00.0
baz=161
ARR Arges 7.39 16 ⇑P Pn 01 23 43.1 +1.3
ICOR Ion Corvin 7.40 36 ⇑P Pn 01 23 43.1 +1.2
AQU L'Aquila 7.53 305 ePn Pn 01 23 45.2 +1.5
AQU L'Aquila 7.53 305 Pn 01 23 44.4 +0.7
AQU L'Aquila 7.53 305 P Pn 01 23 44.4 +0.7
VOIR 7.55 18 ⇑P Pn 01 23 46.0 +1.9
VOIR 7.55 18 P Pn 01 23 45.5 +1.5
VOIR pmax pmax
comp=Z,56nm,0.7s
DEV Deva 7.63 6 ⇑P Pn 01 23 46.1 +1.1
DEV Deva 7.63 6 P Pn 01 23 47.8 +2.8
DEV pmax pmax
comp=Z,38nm,1.4s
MDUB Mudurnu 7.66 71 Pn 01 23 46.8 +1.2
ISR Istrita 7.71 26 ⇑P Pn 01 23 48.7 +2.5
ISR Istrita 7.71 26 P Pn 01 23 48.5 +2.3
ISR pmax pmax
comp=Z,177nm,1.0s
MFTR Murfatlar 7.75 39 ⇑P Pn 01 23 48.6 +2.0
MLR Muntele Rosu 7.85 22 Pn Pn 01 23 49.6 +1.5
comp=Z,1.9nm,0.3s,baz=184,slow=7.7,SNR=38
MLR LR LR 01 27 23.6
comp=Z,557nm,18.4s,baz=206,slow=43
MLR Muntele Rosu 7.85 22 ⇑P Pn 01 23 50.5 +2.4
HARR Harsova 7.91 34 ⇑P Pn 01 23 49.3 +0.5
HARR Harsova 7.91 34 P Pn 01 23 49.3 +0.5
TIRR Tirgusor 7.95 37 ⇑P Pn 01 23 50.3 +1.0
TIRR Tirgusor 7.95 37 ⇑P Pn 01 23 50.3 +1.0
TIRR Tirgusor 7.95 37 P Pn 01 23 53.2 +3.8
TIRR pmax pmax
comp=Z,97nm,0.9s
NRCA Norcia 7.96 307 Pn 01 23 50.0 +0.4
SIRR Siria 7.96 360 ⇑P Pn 01 23 52.0 +2.4
MDB Medias 8.08 13 ⇑P Pn 01 23 54.6 +3.3
MDB Medias 8.08 13 P Pn 01 23 54.5 +3.3
DOPR Dopca 8.13 18 ⇑P Pn 01 23 53.5 +1.6
BISRR Bisoca 8.14 26 ⇑P Pn 01 23 55.0 +2.9
MORH Mrgy, Hungar 8.23 345 ⇑iPn Pn 01 23 52.1 -1.1
TOPG Topolog 8.25 35 ⇑P Pn 01 23 54.3 +0.8
OZUR 8.36 20 ⇑P Pn 01 23 57.0 +2.0
PLOR Plostina 8.39 24 ⇑P Pn 01 23 58.1 +2.6
PLOR Plostina 8.39 24 P Pn 01 23 58.1 +2.6
JURR Jurilovca 8.40 37 ⇑P Pn 01 23 56.1 +0.6
KONT Konya--Tatoy 8.40 89 eP Pn 01 23 59.2 +3.6
VRI Vrincioaia 8.43 25 ⇑P Pn 01 23 58.5 +2.5
VRI Vrincioaia 8.43 25 P Pn 01 23 58.4 +2.4
VRI pmax pmax
comp=Z,110nm,1.3s
ODBI Odobesti 8.45 26 ⇑P Pn 01 23 58.9 +2.6
PETR Petresti 8.48 27 ⇑P Pn 01 23 59.2 +2.7
DRGR 8.52 5 ⇑P Pn 01 24 00.4 +3.1
DRGR 8.52 5 P Pn 01 23 59.9 +2.6
DRGR pmax pmax
comp=Z,32nm,1.0s
MURB Monte Urbino 8.55 308 Pn 01 23 58.5 +0.7
ZAG Zagreb 8.64 332 ePn Pn 01 23 58.6 -0.2
ZAG Zagreb 8.64 332 P Pn 01 23 59.3 +0.5
ZAG pmax pmax
comp=Z,150nm,0.7s
GCIS Gornji Cirnik 8.81 331 i Pn Pn 01 23 59.7 -1.5
GCIS eSn Sn 01 25 36.8 -3.5
CRES Cresnjev 8.84 330 i Pn Pn 01 24 00.4 -1.3
CRES eSn Sn 01 25 37.8 -3.3
CRES Cresnjev 8.84 330 ⇑iPn Pn 01 24 00.3 -1.3
AFSR Afar-Bala (An 8.93 79 eP Pn 01 24 05.9 +2.9
BEHE Becsehely 8.94 338 ePn Pn 01 24 02.2 -0.8
TESR Tescani 8.98 22 ⇑P Pn 01 24 05.1 +1.5
ARCR ARCALIA 8.99 12 ⇑P Pn 01 24 04.6 +1.0
KNDS Knezji Dol 9.05 325 i Pn Pn 01 24 03.4 -1.2
BIR Birlad 9.09 27 ⇑P Pn 01 24 07.5 +2.6
BIR Birlad 9.09 27 P Pn 01 24 07.5 +2.6
SKDS Skadanscina 9.23 324 ePn Pn 01 24 05.4 -1.7
GIRR Girov 9.34 21 ⇑P Pn 01 24 11.1 +2.6
BERE Bereket-Mersin 9.37 98 eP Pn 01 24 14.9 +5.8
BUD Budapest 9.39 349 P Pn 01 24 10.0 +0.9
BUD pmax pmax
comp=Z,57nm,0.6s
BRTR Keskin Array B 9.39 78 Pn Pn 01 24 12.2 +2.9
comp=Z,1.4nm,0.3s,baz=260,slow=12,SNR=62
BRTR LR LR 01 28 02.0
comp=Z,133nm,19.5s,baz=233,slow=39
BRTR Keskin Array B 9.39 78 Pn 01 24 10.1 +0.8
BRTR Keskin Array B 9.39 78 i P Pn 01 24 12.1 +2.8
BRTR pmax pmax
comp=Z,5.0nm,0.5s
LJU Ljubljana 9.39 328 ePn Pn 01 24 07.8 -1.4
BMR Baia Mare 9.46 7 ⇓P Pn 01 24 13.1 +3.0
BMR Baia Mare 9.46 7 P Pn 01 24 13.0 +3.0
TRI Trieste 9.47 324 P Pn 01 24 09.5 -0.7
TRI pmax pmax
comp=Z,46nm,0.7s
LEOM Leova 9.49 28 ⇑P Pn 01 24 12.7 +2.2
LEOM Leova 9.49 28 P Pn 01 24 12.6 +2.2
SWA2 9.55 160 P Pn 01 24 12.7 +1.2
baz=164
SWA2 S Sn 01 25 47.0 -12
baz=164
SWA2 AMP 01 26 00.0
baz=164
ILGA Ilgaz 9.65 70 Pn Pn 01 24 14.0 +1.0
BURAR Bucovina Array 9.66 14 ⇑P Pn 01 24 14.7 +1.8
BURAR Bucovina Array 9.66 14 Pn 01 24 13.5 +0.7
BURAR Bucovina Array 9.66 14 P Pn 01 24 14.7 +1.8
BUR08 Bucovina Ar. S 9.68 14 Pn 01 24 13.9 +0.7
PSZ Piszkesteto 9.71 353 ⇓P Pn 01 24 16.1 +2.6
PSZ Piszkesteto 9.71 353 P Pn 01 24 16.1 +2.6
PSZ pmax pmax
comp=Z,147nm,1.0s
SOKA Soboth 9.71 332 ePn Pn 01 24 12.0 -1.6

comp=Z,19nm,0.5s,SNR=26
SOKA Sn Sn 01 25 57.1 -5.6
comp=Z,14nm,0.8s
OBKA Obir 9.76 329 *e*Pn Pn 01 24 12.8 -1.5
comp=Z,28nm,0.6s,SNR=37
OBKA Sn Sn 01 26 00.6 -3.3
comp=Z,51nm,0.6s
TRPA Tarpa 9.85 3 ⇓P Pn 01 24 17.5 +2.2
CSS Mathiatis 9.91 106 Pn 01 24 17.6 +1.3
CSS Mathiatis 9.91 106 Pn Pn 01 24 20.7 +4.3
ARSA Arzberg 10.03 335 *e*Pn Pn 01 24 16.5 -1.4
comp=Z,10nm,0.4s,SNR=12
MILM Milestii Mici 10.07 29 ⇑P Pn 01 24 19.5 +1.1
KIS Kishinev 10.14 29 *e*P Pn 01 24 21.0 +1.6
KIS *e*LQ LQ 01 27 18.0
KIS *e*LR LR 01 28 36.0
comp=Z,900nm,10.0s
KIS Kishinev 10.14 29 *e*P Pn 01 24 21.0 +1.6
KIS MLR MLR
comp=Z,900nm,10.0s
KEST Kesra 10.22 259 Pn Pn 01 24 24.9 +4.3
comp=Z,0.3nm,0.3s,baz=46,slow=17,SNR=6.8
KEST Sn Sn 01 26 15.1 0.0
comp=Z,0.1nm,0.3s,baz=252,slow=20,SNR=2.0
KEST Kesra 10.22 259 Pn Pn 01 24 21.1 +0.5
MYKA Terra Mystica 10.23 327 *e*Pn Pn 01 24 19.0 -1.7
comp=Z,12nm,0.8s,SNR=7.6
MYKA *e*Sn Sn 01 26 11.1 -4.3
comp=Z,16nm,0.7s
UZH Uzhgorod 10.34 2 *e*P Pn 01 24 25.0 +2.9
UZH *e*S Sn 01 26 22.2 +4.4
UZH MLR MLR
comp=Z,70nm,11.0s
VYHS Vyhne 10.40 349 *e*P Pn 01 24 22.4 -0.6
VYHS *e* 01 26 22.3
VYHS Vyhne 10.40 349 *e*PN Pn 01 24 22.4 -0.6
VYHS *e*SN Sn 01 26 22.3 +2.9
CONA Conrad Observa 10.53 338 *e*Pn Pn 01 24 23.6 -1.2
comp=Z,2.7nm,0.6s
MODS Modra-Piesok 10.57 344 *e*P Pn 01 24 24.1 -1.3
MODS *e* 01 26 22.2
MODS Modra-Piesok 10.57 344 *e*PN Pn 01 24 24.0 -1.3
MODS *e*SN Sn 01 26 22.2 -1.4
CRVS Cervenica-Dubn 10.60 359 *e*P Pn 01 24 27.5 +1.8
CRVS Cervenica-Dubn 10.60 359 *e*PN Pn 01 24 27.5 +1.8
KOLS Kolonicke sedl 10.64 2 *e*P Pn 01 24 28.2 +2.0
KOLS Kolonicke sedl 10.64 2 *e*PN Pn 01 24 28.2 +2.0
SMOL Smolenice 10.67 344 *e*P Pn 01 24 26.9 +0.2
SMOL *e* 01 26 19.7
SMOL Smolenice 10.67 344 *e*PN Pn 01 24 26.9 +0.2
SMOL *e*SN Sn 01 26 19.7 -6.4
PRMA PARMA 10.71 311 Pn Pn 01 24 27.4 +0.3
KBA Koelnbreinsper 10.71 328 *e*Pn Pn 01 24 26.3 -1.1
comp=Z,9.3nm,0.4s
KBA Sn Sn 01 26 23.0 -4.3
comp=Z,6.3nm,0.4s
KBA Koelnbreinsper 10.71 328 P Pn 01 24 27.5 +0.1
KBA pmax pmax
comp=Z,38nm,0.7s
CTI Castel Tesino 10.75 319 Pn 01 24 27.1 -0.8
CTI Castel Tesino 10.75 319 P Pn 01 24 27.1 -0.8
ABTA Abfaltersbach 10.83 324 *e*Pn Pn 01 24 27.2 -1.7
comp=Z,12nm,0.5s,SNR=8.7
ABTA Sn Sn 01 26 26.3 -3.7
comp=Z,25nm,0.7s
JAVC Velka Javorina 10.95 346 *e*PN Pn 01 24 30.3 -0.3
SORM Soroca 10.95 24 ⇑P Pn 01 24 29.9 -0.6
MOA Molln 10.98 333 *e*Pn Pn 01 24 30.8 -0.2
comp=Z,3.1nm,0.3s,SNR=7.8
MOA Sn Sn 01 26 31.1 -2.6
comp=Z,8.9nm,0.7s
NIE Niedzica 11.16 355 *e*P Pn 01 24 37.9 +4.5
NIE Niedzica 11.16 355 *e*P Pn 01 24 37.9 +4.5
KWP Kalwaria Pacla 11.35 3 *e*P Pn 01 24 42.9 +6.9
KWP Kalwaria Pacla 11.35 3 *e*P Pn 01 24 42.9 +6.9
HNAT Natroun 11.37 137 P Pn 01 24 38.3 +2.0
baz=139
SIM Simferopol' 11.41 50 P Pn 01 24 35.9 -0.9
KRUC Moravsky 11.42 342 *e*PN Pn 01 24 36.6 -0.3
KRUC Moravsky 11.42 342 P Pn 01 24 35.5 -1.4
KRUC pmax pmax
comp=Z,10.0nm,2.4s
RJOB Jochberg 11.46 328 *e*Pn Pn 01 24 36.3 -1.3
RJOB *e*Sn Sn 01 26 42.1 -3.4
VRAC Vranov 11.61 343 *e*PN Pn 01 24 39.3 -0.2
VRAC Vranov 11.61 343 Pn Pn 01 24 39.3 -0.2
comp=Z,0.2nm,0.3s,baz=168,slow=12,SNR=9.3
VRAC LR LR 01 30 19.0
comp=Z,309nm,20.9s,baz=186,slow=44
VRAC Vranov 11.61 343 ⇑P Pn 01 24 39.5 0.0
WTTA Wattenberg 11.61 324 *e*Pn Pn 01 24 39.1 -0.6
comp=Z,14nm,0.4s,SNR=9.5
WTTA Sn Sn 01 26 44.8 -4.5
comp=Z,66nm,0.8s
WTTA Wattenberg 11.61 324 P Pn 01 24 40.2 +0.5
LVV L'vov 11.64 7 *e*P Pn 01 24 45.9 +6.0
LVV *e*S Sn 01 26 59.7 +10
LVV MLR MLR
comp=E,200nm,11.0s
LVV MLR MLR
comp=N,200nm,10.0s
LVV MLR MLR
comp=Z,200nm,10.0s
WATA Walderalm 11.69 324 *e*Pn Pn 01 24 40.5 -0.3
comp=Z,17nm,0.5s,SNR=15
WATA Sn Sn 01 26 47.0 -4.2
comp=Z,68nm,1.0s
SQTA Sankt Quirin 11.78 323 *e*Pn Pn 01 24 41.9 -0.1
comp=Z,12nm,0.4s,SNR=12
SQTA Sn Sn 01 26 48.5 -5.0
comp=Z,13nm,0.6s
OKC Ostrava-Krasne 11.81 349 *e*PN Pn 01 24 43.2 +0.9
OKC *e*SN Sn 01 26 55.6 +1.6
OKC Ostrava-Krasne 11.81 349 *e*P Pn 01 24 43.2 +0.9
OKC *e* 01 26 55.6
FUORN Ofenpass-Fuorn 11.85 318 Pn 01 24 43.4 +0.4
MORC Moravsky Berou 11.86 347 Pn Pn 01 24 44.3 +1.4
MORC Moravsky Berou 11.86 347 P Pn 01 24 44.3 +1.4
TREC Trest 11.87 340 P Pn 01 24 42.1 -1.0
TREC pmax pmax
comp=Z,3.0nm,1.4s
FETA Feichten 11.88 321 *e*Pn Pn 01 24 43.4 +0.1
comp=Z,3.9nm,0.6s
FETA Sn Sn 01 26 54.4 -1.4
comp=Z,9.5nm,0.7s
MOTA Moosalm 11.92 323 *e*Pn Pn 01 24 43.4 -0.5
comp=Z,55nm,1.0s,SNR=21
MOTA Sn Sn 01 26 52.8 -4.1
comp=Z,21nm,0.7s
OJC Ojcow 12.00 354 *e*P Pn 01 24 51.3 +6.5
OJC Ojcow 12.00 354 *e*P Pn 01 24 51.3 +6.5
GLL Jalalah 12.02 133 P Pn 01 24 43.8 -1.3
baz=135
GEC2 GERESS Array S 12.03 334 *e*Pn Pn 01 24 45.2 -0.1
GEC2 *e*Sn Sn 01 26 57.4 -2.0
GEC2 GERESS Array S 12.03 334 Pn 01 24 45.6 +0.3
GEC2 GERESS Array S 12.03 334 P Pn 01 24 45.3 0.0
GEC2 pmax pmax
comp=Z,13nm,0.7s
GERES GERESS Array B 12.03 334 Pn 01 24 45.3 0.0
comp=Z,1.6nm,0.3s,baz=158,slow=14,SNR=38
GERES Sn Sn 01 26 55.7 -3.7
comp=Z,0.9nm,0.3s,baz=154,slow=23,SNR=6.1
GERES LR LR 01 30 55.5
comp=Z,156nm,21.4s,baz=144,slow=46
GERES GERESS Array B 12.03 334 Pn 01 24 44.4 -0.9
DAVOX Davos/Dischmat 12.15 318 Pn Pn 01 24 47.7 +0.6
comp=Z,1.7nm,0.3s,baz=75,slow=9.2,SNR=18
DAVOX Sn Sn 01 27 01.3 -1.4
comp=Z,1.1nm,0.3s,baz=319,slow=22,SNR=7.1
RETA Reutte 12.19 322 *e*Pn Pn 01 24 46.5 -1.0
comp=Z,4.1nm,0.4s
RETA Sn Sn 01 26 59.1 -4.2
comp=Z,11nm,0.5s
KRLC Kraliky 12.29 345 *e*PN Pn 01 24 48.7 -0.1
KRLC Kraliky 12.29 345 *e*P Pn 01 24 48.7 -0.1
KHC Kasperske Hory 12.31 334 *e*PN Pn 01 24 48.8 -0.4
KHC *e*SN Sn 01 27 04.0 -2.3
KHC AMS AMS 01 30 00.0
comp=Z,1μm,11.2s
KHC Kasperske Hory 12.31 334 Pn 01 24 49.0 -0.2
KHC Kasperske Hory 12.31 334 *i* P Pn 01 24 49.2 0.0
MMAI Mount Meron Ar 12.32 111 Pn Pn 01 24 50.4 +1.1
comp=Z,1.8nm,0.3s,baz=300,slow=12,SNR=15
GAZ Gaziantep 12.32 90 Pn Pn 01 24 49.2 -0.2

KSDI Kefar Szold 12.42 110 Pn Pn 01 24 53.7 +3.1
HFRF Wahat Farafira 12.42 152 P Pn 01 24 48.7 -2.0
baz=155
FUR Furstenfeldbru 12.44 326 *e*Pn Pn 01 24 49.0 -1.9
NATI Neve Ativ 12.44 110 Pn Pn 01 24 54.3 +3.3
SLTI Sal'it 12.45 115 Pn Pn 01 24 53.8 +2.7
DAVA Damuels 12.48 320 *e*Pn Pn 01 24 50.8 -0.8
comp=Z,2.8nm,0.3s
WET Wettzell 12.57 332 *e*Pn Pn 01 24 52.7 0.0
WET Wettzell 12.57 332 P Pn 01 24 52.5 -0.2
WET pmax pmax
comp=Z,14nm,0.8s
GOPC GO Pecny, Ondr 12.62 339 *e*PN Pn 01 24 52.4 -1.0
GOPC AMS AMS 01 30 10.0
comp=Z,1μm,8.5s
GOPC GO Pecny, Ondr 12.62 339 *e*P Pn 01 24 52.4 -1.0
GOPC MLR MLR
comp=Z,1μm,8.5s
UBR Ueberruh 12.64 322 *e*Pn Pn 01 24 52.6 -1.0
UBR *e*Sn Sn 01 27 10.1 -4.2
DPC Dobruska-Polom 12.65 344 *e*PN Pn 01 24 53.9 +0.2
DPC Dobruska-Polom 12.65 344 *e*P Pn 01 24 53.9 +0.2
AMAZ Amatzia 12.76 118 Pn Pn 01 24 57.3 +2.0
PRU Pruhonice 12.76 339 *e*PN Pn 01 24 55.4 +0.2
PRU AMS AMS 01 30 20.0
comp=Z,1μm,8.6s
PRU Pruhonice 12.76 339 *e*P Pn 01 24 55.4 +0.2
PRU MLR MLR
comp=Z,1μm,8.6s
KZIT Kziot 12.78 121 Pn Pn 01 24 56.3 +0.7
KZIT Sn Sn 01 27 10.7 -7.1
HMDT Nahal Hemdat 12.79 114 Pn Pn 01 24 58.7 +3.0
PRA Prague 12.87 338 AMS AMS 01 30 30.0
comp=Z,1μm,7.9s
CHVC Chvalec 12.93 344 *e*PN Pn 01 24 57.0 -0.5
YTIR Yattir 13.00 118 Pn Pn 01 24 59.3 +0.7
DSI Dead Sea 13.06 117 Pn Pn 01 25 02.0 +2.6
GHAJ Ghor Haditha 13.35 117 Pn Pn 01 25 05.1 +1.8
SENIN Lac Senin/Sane 13.35 312 Pn 01 25 04.6 +1.1
KIEV Kiev 13.49 21 P Pn 01 25 05.0 -0.1
AKASG Malin Array Be 13.50 21 Pn Pn 01 25 05.7 +0.5
comp=Z,0.7nm,0.3s,baz=209,slow=12,SNR=9.6
AKASG Malin Array Be 13.50 21 *i* P Pn 01 25 06.3 +1.1
AKASG pmax pmax
comp=Z,7.0nm,0.8s
AKBB Malin Array Si 13.50 21 *i* P Pn 01 25 05.5 +0.3
KRMI Paran Flat 13.50 123 Pn Pn 01 25 06.2 +0.7
ZFRI Zfri 13.53 121 Pn Pn 01 25 06.8 +1.1
PRNI Paran 13.54 122 Pn Pn 01 25 07.0 +1.1
NKC Novy Kostel 13.64 334 P Pn 01 25 08.5 +1.3
NKC pmax pmax
comp=Z,5.0nm,0.8s
BRG Berggiesshubel 13.72 339 *e*P P 01 25 12.9 -4.1
BRG pmax pmax
comp=Z,4.0nm,0.9s
HRFI Mount Harif 13.76 123 Pn Pn 01 25 09.5 +0.5
GUNZ Gunzen 13.79 334 *e*Pn Pn 01 25 10.3 +1.1
ASF Jabal al Asfar 13.83 112 Pn P 01 25 14.8 -3.6
comp=Z,0.2nm,0.3s,baz=244,slow=17,SNR=6.8
MBRI Mt Berech 13.84 124 Pn Pn 01 25 08.5 -1.6
STU Stuttgart 13.84 323 P Pn 01 25 08.5 -1.4
STU pmax pmax
comp=Z,56nm,0.8s
EIL Elat 13.94 124 Pn Pn 01 25 13.9 +2.4
comp=Z,1.2nm,0.3s,baz=332,slow=11,SNR=14
EIL Elat 13.94 124 Pn Pn 01 25 11.5 0.0
BFO Black Forest 13.96 320 *e*Pn Pn 01 25 09.8 -1.8
BFO Black Forest 13.96 320 Pn 01 25 10.7 -0.9
BFO Black Forest 13.96 320 P Pn 01 25 10.7 -0.9
CLL Collm 14.38 338 *e*P P 01 25 23.0 -1.4
SOC Sochi 14.59 63 *e*P Pn 01 25 20.2 0.0
SOC *e* 01 28 02.7
SOC pmax pmax
comp=Z,23nm,1.1s
SOC MLR MLR
comp=Z,88nm,11.0s
RUE Ruedersdorf 15.22 341 *e*P P 01 25 34.4 +0.8
SUW Suwalki 15.75 3 *e*P Pn 01 25 36.0 +0.5
SUW Suwalki 15.75 3 Pn 01 25 35.8 +0.2
SUW Suwalki 15.75 3 *e*P Pn 01 25 36.0 +0.5
MEM Membach 16.61 323 Pn P 01 25 47.2 +0.7
MEM Membach 16.61 323 P P 01 25 49.1 +0.1
MEM pP **pP 01 25 51.7 -0.7**
MEM PnPn **PnPn 01 25 55.1 -0.6**
KIV Kislovodsk 16.77 64 *e*P Pn 01 25 48.9 +0.2
KIV pmax pmax
comp=Z,20nm,1.0s
KIV MLR MLR
comp=Z,60nm,13.0s
KVAR Kislovodsk Arr 16.77 64 Pn Pn 01 25 49.6 +0.8
baz=260,slow=18,SNR=2.5
KBZ Khabaz 16.87 65 Pn P 01 25 53.4 +1.5
comp=Z,0.2nm,0.3s,baz=280,slow=10,SNR=15
KBZ Khabaz 16.87 65 *i* P Pn 01 25 50.2 +0.3
KBZ pmax pmax
comp=Z,5.0nm,1.0s
NACGM Naroch 16.96 10 *e* Pn 01 25 51.0 0.0
DOU Dourbes 16.97 320 P P 01 25 53.1 +0.1
DOU PnPn **PnPn 01 26 01.0 +0.2**
AKH Akhalkalaki 17.00 73 Pn P 01 25 52.8 -0.9
AKH Akhalkalaki 17.00 73 P P 01 25 52.8 -0.9
AKH pmax pmax
comp=Z,6.0nm,0.7s
PABE Paberze 17.28 4 *e*P Pn 01 25 54.1 -0.8
PABE IAmb IAmb 01 25 55.2
comp=Z,77nm,0.8s
IIGN Ignalina 17.33 9 *e*P Pn 01 25 55.2 -0.4
IIGN IAmb IAmb 01 25 59.5
comp=Z,10nm,0.6s
ZEI Tsey 17.44 68 *e*P P 01 26 01.6 +3.1
ZEI pmax pmax
comp=Z,4.0nm,0.6s
BSEG Bad Segeberg 17.48 337 P Pn 01 25 57.9 +0.4
BSEG pmax pmax
comp=Z,19nm,0.9s
ISAL Salakas 17.53 8 *e*P Pn 01 25 57.3 -0.8
ISAL IAmb IAmb 01 26 02.2
comp=Z,9.7nm,0.8s
IZAR Zarasai 17.72 8 *e*P Pn 01 25 58.9 -1.6
PBUR Paburge 17.73 0 *e*P Pn 01 25 59.7 -0.9
VORD Divnogorie 17.74 39 *e*P P 01 26 01.7 +0.1
VORD pmax pmax
comp=Z,20nm,0.9s
VSR Storozhevoye 17.84 38 *e*P P 01 26 02.5 -0.1
VSR pmax pmax
comp=Z,20nm,1.0s
GNI Garni 17.93 77 P P 01 26 07.3 +3.4
comp=Z,0.2nm,0.3s,baz=326,slow=20,SNR=3.5
GNI LR LR 01 33 38.5
comp=Z,84nm,20.3s,baz=272,slow=39
GNI Garni 17.93 77 P P 01 26 05.4 +1.4
GNI Garni 17.93 77*c*eP P 01 26 04.7 +0.7
GNI pmax pmax
comp=Z,10.0nm,1.0s
TBLG Delisi 17.96 72 P P 01 26 06.4 +2.3
TBLG Delisi 17.96 72 P P 01 26 06.4 +2.3
TBLG pmax pmax
comp=Z,8.0nm,1.0s
VRH Novokhopyorsk 19.11 41 *e*P Pn 01 26 18.3 +0.8
VRH pmax pmax
comp=Z,10.0nm,0.6s
OBN Obninsk 19.59 26 P P 01 26 21.9 0.0
comp=Z,0.7nm,0.3s,baz=216,slow=8.7,SNR=6.0
OBN Obninsk 19.59 26 P P 01 26 20.9 -0.9
OBN Obninsk 19.59 26 *e*P Pn 01 26 22.7 -0.5
OBN *e*S **S 01 29 56.6 -6.0**
OBN pmax pmax
comp=Z,42nm,1.7s
OBN MLR MLR
comp=Z,150nm,15.0s
ESDC Sonseca Array 19.99 282 P Pn 01 26 27.3 -0.8
comp=Z,0.7nm,0.3s,baz=75,slow=11,SNR=17
ESDC LR LR 01 35 14.7
comp=Z,71nm,18.5s,baz=240,slow=40
ESDC Sonseca Array 19.99 282 P P 01 26 26.4 0.0
AKT Akhty 20.19 73 *e*P Pn 01 26 32.4 +1.9
AKT *e* 01 26 50.1
AKT pmax pmax
comp=Z,16nm,1.1s
PAB San Pablo 20.30 282 P Pn 01 26 30.7 -1.1
PAB pmax pmax
comp=Z,55nm,1.9s
VSU Vasula 20.44 8 *e*P P 01 26 30.8 -0.3
VSU Vasula 20.44 8*c*eP P 01 26 31.6 +0.6

VSU pmax pmax
comp=Z,159nm,0.6s
MOS Moscow 20.45 26 *e*P P 01 26 29.3 -1.9
MOS *e*PPP PPP 01 26 54.6
MOS pmax pmax
comp=Z,35nm,0.8s
MDT Midelt 22.07 264 P P 01 26 49.9 +1.0
comp=Z,2.5nm,0.7s,baz=93,slow=12,SNR=5.3
MDT LR LR 01 36 25.7
comp=Z,56nm,19.8s,baz=60,slow=40
HFS Hagfors 22.44 349 P P 01 26 51.2 -1.3
comp=Z,16nm,0.5s,baz=161,slow=11,SNR=100
HFS LR LR 01 37 45.1
comp=Z,132nm,19.6s,baz=186,slow=43
KONO Kongsberg 22.73 344 *e*P P 01 26 53.7 -1.9
KONO Kongsberg 22.73 344 P P 01 26 55.0 -0.6
KONO IAmb IAmb 01 26 57.3
comp=Z,33nm,1.0s
KONO Kongsberg 22.73 344*c*eP P 01 26 55.6 0.0
KONO pmax pmax
comp=Z,62nm,1.7s
OSL Oslo 22.76 346 *e*P P 01 26 54.0 -2.0
BLS5 Blasjo 23.29 340 *e*P P 01 27 01.1 -0.3
FINES FINESS Array B 23.33 5 P P 01 27 00.3 -1.5
comp=Z,6.5nm,0.4s,baz=169,slow=9.3,SNR=44
FINES PcP **PcP 01 30 48.7 +0.2**
comp=Z,0.7nm,0.4s,baz=225,slow=1.8,SNR=4.4
FINES LR LR 01 37 10.7
comp=Z,174nm,20.2s,baz=192,slow=40
FINES FINESS Array B 23.33 5 P P 01 27 00.0 -1.8
FINES FINESS Array B 23.33 5*c*eP P 01 27 00.3 -1.5
FINES pmax pmax
comp=Z,10.0nm,0.6s
FIA1 FINESS Array S 23.33 5 P P 01 26 59.5 -2.2
FIA1 IAmb IAmb 01 27 02.4
comp=Z,28nm,1.1s
NC602 NORSAR Array S 23.35 347 *e*P P 01 27 00.6 -1.4
NORES NORESS Array B 23.35 347 P P 01 27 02.4 +0.3
NORES pmax pmax
comp=Z,16nm,0.4s
NB2 NORSAR Subarra 23.70 347 P P 01 27 04.8 -0.7
comp=Z,12nm,0.5s,baz=154,slow=10
NB2 NORSAR Subarra 23.70 347 P P 01 27 04.8 -0.7
baz=154,slow=10
NOA NORSAR Array B 23.70 347 P P 01 27 04.3 -1.2
comp=Z,12nm,1.0s,baz=165,slow=10,SNR=80
NOA LR LR 01 37 20.7
comp=Z,43nm,20.7s,baz=165,slow=39
EKA Eskdalemuir Ar 23.88 324 P P 01 27 06.9 -0.4
comp=Z,27nm,0.7s,baz=123,slow=10.0,SNR=64
ESK Eskdalemuir 23.89 324 P P 01 27 07.3 0.0
ESK Eskdalemuir 23.89 324 P P 01 27 07.3 0.0
ESK pmax pmax
comp=Z,45nm,0.9s
SKAR Skarslia 23.94 344 *e*P P 01 27 08.4 +0.6
NC204 NORSAR Array S 24.00 347 P P 01 27 07.4 -0.9
HYA Hoyanger 24.86 342 *e*P P 01 27 16.8 +0.7
DOMB Dombas 25.02 346 *e*P P 01 27 18.8 +1.1
KLMR Klimovskoe 25.19 21 *e*P P 01 27 17.2 -1.9
KLMR AMP 01 27 20.6
comp=Z,28nm,0.9s
KLMR Klimovskoe 25.19 21 *e*P P 01 27 17.2 -1.9
KLMR pmax pmax
comp=Z,28nm,0.9s
MOL Molde 25.80 345 *e*P P 01 27 26.3 +1.7
TBLU Trondheim 25.93 348 *e*P P 01 27 28.4 +2.5
NSS Namsos 26.90 351 *e*P P 01 27 35.3 +0.7
KIRV Kirov 27.05 32 P P 01 27 35.3 -0.6
comp=Z,12nm,0.7s,baz=50,slow=1.9,SNR=5.7
KIRV LR LR 01 39 05.0
comp=Z,129nm,18.2s,baz=210,slow=38
KIRV Kirov 27.05 32 *i* P P 01 27 34.6 -1.3
PRGR Permogore 27.66 25 *e*P P 01 27 36.0 -5.4
PRGR pmax pmax
comp=Z,13nm,0.9s
MOR8 Moi Rana 28.23 354 *e*P P 01 27 48.3 +1.8
AKTO Aktyubinsk 28.36 53 P P 01 27 47.7 -0.1
comp=Z,3.5nm,0.7s,baz=262,slow=9.4,SNR=19
AKTO LR LR 01 40 51.6
comp=Z,54nm,18.4s,baz=264,slow=40
GEYT Alibeck 28.53 79 LR LR 01 41 46.8
comp=Z,42nm,19.8s,baz=125,slow=42
GYA0B ALIBECK ARRAY 28.53 79 P P 01 27 47.6 -1.9
ABKAR Akbulak array 29.40 56 P P 01 27 56.8 -0.3
STEI Steigen 29.90 355 *e*P P 01 28 01.8 +0.5
ARU Arti 30.35 41 P P 01 28 05.8 +0.4
ARU Arti 30.35 41*d* *i*P P 01 28 04.8 -0.6
ARU 01 29 01.3
ARU S **S 01 33 07.5 +2.2**
ARU SS **SnSn 01 34 38.3 -1.6**
ARU pmax pmax
comp=Z,10.0nm,1.5s
TOA0 Torodi Ar. Sit 30.72 221 P P 01 28 09.7 +0.6
TOA0 IAmb IAmb 01 28 10.6
comp=Z,9.6nm,0.8s
TORD Torodi Ar. Bea 30.72 221 P P 01 28 09.9 +0.9
comp=Z,8.1nm,0.6s,baz=31,slow=9.3,SNR=62
TORD Torodi Ar. Bea 30.72 221 P P 01 28 08.9 -0.2
KTK1 Kautokeino 30.78 1 *e*P P 01 28 08.5 -0.5
DAMY Dhamar 30.99 134 P P 01 28 13.3 +1.5
DAMY IAmb IAmb 01 28 18.8
comp=Z,13nm,0.8s
ARCES ARCESS Array B 31.36 3 P P 01 28 13.5 -0.7
comp=Z,4.9nm,0.6s,baz=194,slow=9.9,SNR=57
ARCES LR LR 01 41 50.2
comp=Z,162nm,19.0s,baz=167,slow=38
ARE0 ARCESS Array S 31.36 3 *e*P P 01 28 13.1 -1.1
TRO Tromso 31.43 358 *e*P P 01 28 14.9 +0.1
BRVK Borovoye 36.26 50 P P 01 28 57.3 +0.4
BRVK Borovoye 36.26 50 P P 01 28 57.3 +0.4
BRVK pmax pmax
comp=Z,6.0nm,0.9s
KK31 Karatay Array 36.89 67 P P 01 29 02.8 +0.4
KK31 IAmb IAmb 01 29 07.9
comp=Z,12nm,0.6s
KK31 Karatay Array 36.89 67 P P 01 29 02.8 +0.4
KK31 pmax pmax
comp=Z,12nm,0.6s
KKAR Karatay Array 36.89 67 P P 01 29 02.5 +0.1
KKAR Karatay Array 36.89 67 P P 01 29 02.5 +0.1
BTK Batken 37.72 71 P P 01 29 10.1 +0.5
BTK IAmb IAmb 01 29 22.7
comp=Z,8.2nm,0.8s
BTK Batken 37.72 71 P P 01 29 10.1 +0.5
BTK pmax pmax
comp=Z,8.0nm,0.8s
SOCY Socotra 38.75 123 P P 01 29 16.8 -1.6
ARSB Arslanbob 39.03 69 P P 01 29 20.7 -0.1
ARSB IAmb IAmb 01 29 36.4
comp=Z,14nm,0.9s
ARSB Arslanbob 39.03 69 P P 01 29 20.7 -0.1
ARSB pmax pmax
comp=Z,14nm,0.9s
DBIC Dimbokro 39.63 224 P P 01 29 26.2 +0.5
comp=Z,8.5nm,0.8s,baz=51,slow=7.0,SNR=15
DBIC Dimbokro 39.63 224 P P 01 29 25.7 0.0
DBIC IAmb IAmb 01 29 30.6
comp=Z,9.8nm,0.8s
TIC Toumodi 39.74 224 *e*P P 01 29 26.7 +0.1
KIC Kosan Boka 39.82 224 *e*P P 01 29 27.4 +0.1
comp=Z,34nm,1.2s
AAK Ala-Archa 39.85 66 P P 01 29 28.2 +0.6
AAK Ala-Archa 39.85 66*c*eP P 01 29 29.5 +1.9
AAK pmax pmax
comp=Z,4.0nm,0.8s
FRU1 Bishkek 39.91 66 P P 01 29 29.2 +1.2
FRU1 IAmb IAmb 01 29 44.1
comp=Z,15nm,0.9s
FRU1 Bishkek 39.91 66 P P 01 29 29.2 +1.2
FRU1 pmax pmax
comp=Z,15nm,0.9s
SPA0 Spitsbergen Ar 40.05 358 *e*P P 01 29 29.2 +0.6
LIC Lamto 40.09 224 *e*P P 01 29 29.5 0.0
comp=Z,31nm,0.8s
NRN Naryn 41.22 68 P P 01 29 39.2 +0.2
NRN Naryn 41.22 68 P P 01 29 39.3 +0.2
NRN pmax pmax
comp=Z,8.0nm,0.9s
KURK Kurchatov 41.45 54 P P 01 29 40.6 +0.1
KURK Kurchatov 41.45 54*c*eP P 01 29 40.5 +0.1
KURK pmax pmax
comp=Z,12nm,1.3s
KSH Kashi 41.70 71 P P 01 29 42.4 -0.4
KSH sP **sP 01 29 50.3 +2.3**
KSH PP **PnPn 01 31 22.0 -2.0**

KSH				S	S	01 35 56.7	-2.8
KSH				sS	sS	01 36 07.5	+1.7
KSH				pmax	pmax		
	comp=Z,13nm,1.4s						
KSH				LR	LR		
	comp=Z,230nm,6.7s						
KSH				LR	LR		
	comp=Z,260nm,5.9s						
KSH				LR	LR		
	comp=Z,80nm,6.3s						
DAG	**Danmarks Havn**	**42.38**	**347**	*i* P	**P**	**01 29 47.5**	**-0.2**
	comp=Z,1.7nm,0.6s						
DAG	**Danmarks Havn**	**42.38**	**347**	*i* P	**P**	**01 29 47.5**	**-0.2**
DAG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MAKZ	**Makanchi**	**44.22**	**59**	P	**P**	**01 30 03.2**	**+0.2**
MAKZ				IAmb	IAmb	01 30 04.4	
	comp=Z,8.3nm,0.8s						
MAKZ	**Makanchi**	**44.22**	**59**	P	**P**	**01 30 03.2**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MK31	**Makanchi Array**	**44.44**	**59**	P	**P**	**01 30 04.8**	**+0.1**
MK31	**Makanchi Array**	**44.44**	**59**	P	**P**	**01 30 04.8**	**+0.1**
MK31				pmax	pmax		
	comp=Z,13nm,0.7s						
MKAR	**Makanchi Array**	**44.44**	**59**	P	**P**	**01 30 05.1**	**+0.3**
	comp=Z,20nm,0.7s,baz=282,slow=6.7,SNR=182						
MKAR				PcP	**PP**	01 31 48.1	-0.1
	comp=Z,1.9nm,0.6s,baz=283,slow=3.5,SNR=2.9						
MKAR				ScP	**ScP**	01 35 41.9	+1.8
	comp=Z,0.6nm,0.7s,baz=291,slow=3.0,SNR=4.4						
MKAR				LR	LR	01 53 20.4	
	comp=Z,36nm,18.5s,baz=264,slow=42						
MKAR	**Makanchi Array**	**44.44**	**59**	P	**P**	**01 30 04.8**	**+0.1**
MKAR	**Makanchi Array**	**44.44**	**59**	*ce*P	**P**	**01 30 04.8**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,20nm,0.7s						
ZALV	**Zalesovo Beam**	**44.91**	**48**	P	**P**	**01 30 08.2**	**-0.2**
	comp=Z,12nm,0.4s,baz=275,slow=8.9,SNR=58						
ZALV	**Zalesovo Beam**	**44.91**	**48**	P	**P**	**01 30 07.7**	**-0.7**
ZALV	**Zalesovo Beam**	**44.91**	**48**	*i* P	**P**	**01 30 08.0**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,12nm,0.4s						
NOR	**Nord**	**45.48**	**353**	*i* P	**P**	**01 30 12.4**	**-0.1**
	comp=Z,4.8nm,0.7s						
NOR				*i*		01 30 16.2	
NOR	**Nord**	**45.48**	**353**	*i* P	**P**	**01 30 12.4**	**-0.1**
NOR				*i*		01 30 16.2	
NOR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WMQ	**Urumqi**	**48.88**	**61**	*e*P	**P**	**01 30 42.1**	**+2.5**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.3s						
WMQ	**Urumqi**	**48.88**	**61**	P	**P**	**01 30 40.5**	**+0.8**
WMQ				IAmb	IAmb	01 30 49.6	
	comp=Z,7.1nm,1.0s						
WMQ	**Urumqi**	**48.88**	**61**	P	**P**	**01 30 40.5**	**+0.8**
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TLY	**Talaya**	**56.51**	**48**	P	**P**	**01 31 36.6**	**+0.6**
TLY	**Talaya**	**56.51**	**48**	*e*P	**P**	**01 31 36.1**	**+0.1**
TLY				pmax	pmax		
	comp=Z,14nm,1.6s						
TLY				MLR	MLR		
	comp=Z,104nm,5.0s						
GTA	**Gaotai**	**58.94**	**62**	*e*P	**P**	**01 31 53.2**	**-0.1**
GTA				pP	sP	01 32 00.8	+2.2
GTA				sP	pP	01 32 04.3	+6.9
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SCHQ	**Schefferville**	**59.01**	**318**	P	**P**	**01 31 53.5**	**+0.2**
	comp=Z,2.2nm,0.5s,baz=71,slow=5.3,SNR=12						
TIXI	**Tiksi**	**59.21**	**21**	*i* P	**P**	**01 31 54.6**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	**Songino Array**	**59.65**	**51**	P	**P**	**01 31 58.1**	**-0.1**
	comp=Z,2.8nm,0.8s,baz=286,slow=7.6,SNR=16						
SONM	**Songino Array**	**59.65**	**51**	P	**P**	**01 31 57.8**	**-0.4**
RES	**Resolute Bay**	**59.91**	**344**	P	**P**	**01 31 59.8**	**+0.5**
RES				IAmb	IAmb	01 34 01.9	
	comp=Z,16nm,1.9s						
RES	**Resolute Bay**	**59.91**	**344**	P	**P**	**01 31 59.8**	**+0.5**
RES				pmax	pmax		
	comp=Z,17nm,1.9s						
ULN	**Ulaanbaatar**	**60.04**	**51**	P	**P**	**01 32 00.9**	**+0.1**
ULN	**Ulaanbaatar**	**60.04**	**51**	P	**P**	**01 32 00.9**	**+0.1**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LZH	**Lanzhou**	**63.31**	**64**	*e*P	**P**	**01 32 23.2**	**+0.1**
LZH				pP	sP	01 32 28.5	+0.1
LZH				sP	pP	01 32 30.9	+3.8
LZH				PP	**PP**	01 34 45.2	+3.2
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
LZH				pmax	pmax		
	comp=Z,59nm,4.8s						
LZH				LR	LR		
	comp=Z,220nm,15.0s						
LZH				LR	LR		
	comp=Z,350nm,18.1s						
HHC	**Hu-ho-hao-te**	**66.19**	**56**	*e*P	**P**	**01 32 38.0**	**-3.7**
HHC				pmax	pmax		
	comp=Z,2.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,77nm,5.6s						
BOSA	**Boshof**	**66.65**	**177**	P	**P**	**01 32 47.0**	**+2.5**
	comp=Z,2.8nm,1.0s,baz=324,slow=8.7,SNR=3.9						
BOSA				LR	LR	02 04 01.4	
	comp=Z,81nm,20.1s,baz=340,slow=38						
XAN	**Xi'an**	**67.93**	**64**	P	**P**	**01 32 56.2**	**+3.4**
XAN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KMI	**Kunming**	**68.17**	**75**	P	**P**	**01 32 56.7**	**+2.0**
KMI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**68.94**	**83**	P	**P**	**01 33 00.1**	**+0.8**
	comp=Z,1.0nm,0.4s,baz=308,slow=7.8,SNR=4.1						
BILL	**Bilibino**	**70.69**	**13**	*e*P	**P**	**01 33 08.3**	**-0.9**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,59nm,17.0s						
TOLK	**Toolik Lake Re**	**73.18**	**357**	IAmb	IAmb	01 33 30.6	
	comp=Z,4.3nm,0.8s						
KLR	**Kul'dur**	**73.18**	**40**	*i* P	**P**	**01 33 24.7**	**+0.2**
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	**Yellowknife Ar**	**73.59**	**340**	P	**P**	**01 33 26.9**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=34,slow=5.3,SNR=23						
BMAR	**Burnt Mountain**	**74.08**	**355**	P	**P**	**01 33 30.4**	**+0.9**
COLD	**Coldfoot**	**74.62**	**357**	P	**P**	**01 33 33.9**	**+1.2**
COWI	**Conover**	**75.61**	**318**	IAmb	IAmb	01 33 43.9	
	comp=Z,6.8nm,0.7s						
NJ2	**Nanjing**	**75.94**	**60**	*e*P	**P**	**01 33 41.8**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
IMAR	**Indian Mountai**	**75.99**	**358**	P	**P**	**01 33 41.0**	**+0.5**
ULM	**Lac du Bonnet**	**76.15**	**324**	P	**P**	**01 33 42.1**	**+0.4**
	comp=Z,7.0nm,0.8s,baz=51,slow=4.8,SNR=14						
ULM	**Lac du Bonnet**	**76.15**	**324**	IAmb	IAmb	01 33 46.4	
	comp=Z,7.8nm,0.8s						
USRK	**Ussuriysk Ar.**	**76.54**	**44**	P	**P**	**01 33 43.4**	**-0.7**
	comp=Z,1.8nm,0.6s,baz=296,slow=4.4,SNR=8.0						
MLY	**Manley**	**76.83**	**357**	IAmb	IAmb	01 33 51.6	
	comp=Z,3.1nm,0.7s						
ILAR	**Eielson Array**	**76.87**	**355**	P	**P**	**01 33 45.9**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=359,slow=4.7,SNR=16						
DAWY	**Dawson**	**76.88**	**352**	IAmb	IAmb	01 33 48.0	
	comp=Z,5.1nm,0.8s						
HDA	**Harding Lake**	**77.24**	**355**	IAmb	IAmb	01 33 49.3	
	comp=Z,5.9nm,0.7s						
WRH	**Wood River Hil**	**77.25**	**355**	IAmb	IAmb	01 33 49.4	
	comp=Z,6.0nm,0.8s						
SCRK	**Sand Creek**	**77.43**	**354**	IAmb	IAmb	01 33 57.3	
	comp=Z,15nm,1.7s						
BCAR	**Beaver Creek A**	**78.11**	**352**	P	**P**	**01 33 53.7**	**+1.1**
PSI	**Prapat**	**78.23**	**96**	P	**P**	**01 33 56.6**	**+2.5**
	comp=Z,3.9nm,0.4s,baz=342,slow=5.8,SNR=4.9						
RPSI	**Rantau Prapat**	**78.30**	**96**	P	**P**	**01 33 55.8**	**+1.5**
RPSI				IAmb	IAmb	01 33 58.1	
	comp=Z,6.4nm,0.9s						
KSRS	**Korea Array**	**78.52**	**51**	P	**P**	**01 33 54.7**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=312,slow=5.0,SNR=4.9						
KSRS				LR	LR	02 12 26.1	
	comp=Z,24nm,18.9s,baz=327,slow=39						
L40A	**Anamosa**	**79.42**	**316**	IAmb	IAmb	01 34 04.5	
	comp=Z,8.1nm,0.8s						
ECSD	**EROS Data Cent**	**81.11**	**320**	P	**P**	**01 34 09.6**	**+0.4**
ECSD				IAmb	IAmb	01 34 14.2	
	comp=Z,7.9nm,1.0s						
X48A	**Hartselle**	**82.04**	**308**	P	**P**	**01 34 15.0**	**+0.8**
X48A				IAmb	IAmb	01 34 19.3	
	comp=Z,9.3nm,0.9s						
CCM	**Cathedral Cave**	**82.15**	**313**	P	**P**	**01 34 15.6**	**+0.8**
CCM				IAmb	IAmb	01 34 20.2	
	comp=Z,5.5nm,0.7s						
CCM	**Cathedral Cave**	**82.15**	**313**	P	**P**	**01 34 15.6**	**+0.8**
CCM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
RLMT	**Red Lodge**	**85.95**	**328**	IAmb	IAmb	01 34 43.7	
	comp=Z,12nm,1.6s						
PDAR	**Pinedale Array**	**87.97**	**326**	P	**P**	**01 34 44.1**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=64,slow=5.5,SNR=6.9						
PDAR				LR	LR	02 16 07.3	
	comp=Z,38nm,18.3s,baz=31,slow=37						
PDAR	**Pinedale Array**	**87.97**	**326**	P	**P**	**01 34 44.3**	**+0.1**
WMOK	**Wichita Mounta**	**88.78**	**315**	IAmb	IAmb	01 34 53.5	
	comp=Z,3.2nm,1.0s						
BGU	**Big Grassy Mou**	**90.97**	**327**	P	**P**	**01 34 58.7**	**+0.5**
DUG	**Dugway, Tooele**	**91.48**	**327**	IAmb	IAmb	01 35 23.3	
	comp=Z,2.7nm,1.0s						
BEKR	**Beckworth**	**94.80**	**332**	P	**P**	**01 35 12.6**	**-3.4**
NVAR	**Mina Array Bea**	**95.25**	**330**	P	**P**	**01 35 17.4**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=56,slow=5.5,SNR=3.1						
TXAR	**Lajitas Array**	**95.56**	**314**	P	**P**	**01 35 19.9**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=64,slow=2.1,SNR=5.0						
TXAR	**Lajitas Array**	**95.56**	**314**	P	**P**	**01 35 20.0**	**+0.5**
TXAR	**Lajitas Array**	**95.56**	**314**	P	**P**	**01 35 20.0**	**+0.5**
CPUP	**Villa Florida**	**97.94**	**243**	LR	LR	02 21 21.5	
	comp=Z,58nm,18.9s,baz=70,slow=36						
LPAZ	**La Paz**	**99.79**	**257**	LR	LR	02 23 04.1	
	comp=Z,13nm,18.8s,baz=66,slow=37						
WRA	**Warramunga Arr**	**119.61**	**93**	PKP	**PKiKP**	**01 40 45.3**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=303,slow=1.8,SNR=3.2						
ASAR	**Alice Springs**	**121.25**	**97**	PKP	**PKiKP**	**01 40 47.9**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=317,slow=1.6,SNR=7.8						

*BEO **07** 01:40:15.1±1.0, 38°03N×20°88E, h35km±5km, ML3.1/5*
*THE **07** 01:40:16.1, 38°20N×20°33E, h5km±1km, ML2.8/11, Error ellipse: s-maj=1.4km s-min=0.5km az=106.0*
*ATH **07** 01:40:16.5, 38°21N×20°36E, h6km±1km, ML2.7/5, Error ellipse: s-maj=1.9km s-min=0.9km az=253.0*
ISC 07 01:40:16.1±0.9, **38°20N**±0°03×**20°36E**±0°04, **h7**km±4km, **n45,** $\sigma 1^{s}$**07**/74, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.01**	**269**	P	**Pg**	**01 40 17.7**	**+0.4**
KEF3				S	**Sg**	**01 40 18.6**	**+0.3**
CHV1	**Chavriata, Kef**	**0.03**	**141**	P	**Pg**	**01 40 17.7**	**+0.3**
CHV1				S	**Sg**	**01 40 18.6**	**+0.3**
	477μm,0.4s						
LXR1	**Lixouri, Cepha**	**0.06**	**92**	P	**Pg**	**01 40 18.0**	**+0.2**
LXR1				S	**Sg**	**01 40 19.2**	**+0.2**
LXRA	**Lixouri, Kepha**	**0.06**	**93**	P	**Pg**	**01 40 18.0**	**+0.2**
LXRA				S	**Sg**	**01 40 19.2**	**+0.2**
KEF4	**Livadi, Kephal**	**0.07**	**42**	P	**Pg**	**01 40 18.3**	**+0.3**
KEF4				S	**Sg**	**01 40 19.8**	**+0.4**
ARGA	**Argostoli. Kep**	**0.10**	**106**	P	**Pg**	**01 40 18.6**	**+0.3**
ARGA				S	**Sg**	**01 40 20.4**	**+0.6**
ARG2	**Argostoli**	**0.10**	**104**	P	**Pg**	**01 40 18.8**	**+0.4**
ARG2				S	**Sg**	**01 40 20.4**	**+0.4**
KEF2	**Argostoli. Kep**	**0.11**	**111**	P	**Pg**	**01 40 18.9**	**+0.4**
KEF2				S	**Sg**	**01 40 20.5**	**+0.4**
KEF1	**Kardakata, Kep**	**0.11**	**49**	P	**Pg**	**01 40 18.8**	**+0.2**
KEF1				S	**Sg**	**01 40 20.7**	**+0.4**
VLS	**Valsamata**	**0.18**	**98**	P	**Pg**	**01 40 19.9**	**+0.1**
VLS				S	**Sg**	**01 40 22.8**	**+0.5**
	15μm,0.2s						
VLS	**Valsamata**	**0.18**	**98**	P	**Pg**	**01 40 19.9**	**+0.1**
VLS				S	**Sg**	**01 40 22.6**	**+0.3**
VLS				AML	AML	01 40 22.9	
	comp=N,41148μm,0.4s						
VLS				AML	AML	01 40 23.2	
	comp=E,18805μm,0.1s						
KONA	**Konidatara, Ke**	**0.28**	**37**	P	**Pg**	**01 40 21.8**	**+0.3**
KONA				S	**Sg**	**01 40 26.5**	**+1.2**
KFL	**Anninata**	**0.35**	**105**	P	**Pg**	**01 40 23.2**	**+0.3**
KFL				S	**Sg**	**01 40 28.6**	**+1.1**
	comp=E,5μm,0.5s						
KFL	**Anninata**	**0.35**	**105**	P	**Pg**	**01 40 23.2**	**+0.3**
VLMS	**Volimes, Zakyn**	**0.40**	**144**	P	**Pg**	**01 40 24.3**	**+0.4**
VLMS				S	**Sb**	**01 40 30.8**	**-1.1**
VLMS				AML	AML	01 40 36.7	
	comp=N,6402μm,0.3s						
VLMS				AML	AML	01 40 37.9	
	comp=E,5857μm,0.3s						
EVGI	**Lefkada island**	**0.48**	**29**	P	**Pg**	**01 40 25.5**	**+0.2**
EVGI				S	**Sb**	**01 40 33.3**	**-0.8**
	comp=E,2μm,0.1s						
EVGI	**Lefkada island**	**0.48**	**29**	P	**Pg**	**01 40 25.6**	**+0.2**
EVGI				S	**Sg**	**01 40 32.8**	**+1.2**
MGNA	**Meganis**	**0.56**	**37**	P	**Pg**	**01 40 26.9**	**-0.1**
MGNA				S	**Sb**	**01 40 35.7**	**-0.8**
LKD2	**Lefkada island**	**0.63**	**22**	P	**Pg**	**01 40 27.9**	**-0.4**
LKD2				S	**Sb**	**01 40 37.9**	**-0.6**
	comp=E,540nm,0.6s						
LKD2	**Lefkada island**	**0.63**	**22**	P	**Pg**	**01 40 28.0**	**-0.2**
LKD2				S	**Sg**	**01 40 36.9**	**+0.4**
LKD2				AML	AML	01 40 42.5	
	comp=N,1180μm,0.7s						
LKD2				AML	AML	01 40 42.9	
	comp=E,886μm,0.6s						
KRI1	**kERI**	**0.65**	**146**	P	**Pg**	**01 40 28.5**	**-0.1**
KRI1				S	**Sb**	**01 40 38.7**	**-0.3**
	comp=E,2μm,0.5s						
TSLK	**Tsoukalades, L**	**0.66**	**20**	P	**Pg**	**01 40 28.6**	**-0.2**
TSLK				S	**Sg**	**01 40 38.6**	**+1.1**
	comp=E,552nm,0.6s						
TSLK	**Tsoukalades, L**	**0.66**	**20**	P	**Pg**	**01 40 28.7**	**-0.2**
AST1	**Astakos**	**0.66**	**59**	P	**Pg**	**01 40 28.8**	**-0.1**
AST1				S	**Sb**	**01 40 39.7**	**+0.3**
	comp=E,880nm,0.2s						
PDO	**Prodromos**	**0.76**	**58**	P	**Pg**	**01 40 30.4**	**-0.2**
PDO	**Prodromos**	**0.76**	**58**	P	**Pg**	**01 40 30.4**	**-0.2**
PDO				AML	AML	01 40 46.0	
	comp=E,1044μm,0.5s						
PDO				AML	AML	01 40 50.6	
	comp=N,1350μm,0.5s						
RLS	**Riolos of Patr**	**0.88**	**99**	P	**Pb**	**01 40 33.5**	**-0.3**
RLS				S	**Sb**	**01 40 46.2**	**+0.5**
	comp=N,288nm,0.7s						
RLS	**Riolos of Patr**	**0.88**	**99**	P	**Pg**	**01 40 33.2**	**+0.1**
RLS				AML	AML	01 40 48.7	
	comp=N,560μm,0.4s						
RLS				AML	AML	01 40 54.4	
	comp=E,599μm,0.5s						
PVO	**Paravola**	**1.00**	**65**	P	**Pg**	**01 40 35.1**	**-0.3**
PVO	**Paravola**	**1.00**	**65**	P	**Pg**	**01 40 35.3**	**0.0**
DRO	**Drossia**	**1.09**	**103**	P	**Pb**	**01 40 37.6**	**+0.2**
DRO				S	**Sn**	**01 40 55.0**	**+1.8**
	comp=E,738nm,0.5s						
DRO	**Drossia**	**1.09**	**103**	P	**Pn**	**01 40 37.7**	**-0.1**
ANX	**Ano Chora**	**1.29**	**72**	P	**Pn**	**01 40 40.1**	**-0.5**
IGT	**Igoumenitsa**	**1.33**	**359**	*e*P	**Pg**	**01 40 45.3**	**+3.7**
IGT				*e*Sg	**Sn**	**01 41 03.6**	**+4.6**
TRIZ	**Trizonia**	**1.36**	**83**	P	**Pn**	**01 40 40.6**	**-0.8**
KALE	**Kalithea**	**1.41**	**82**	P	**Pn**	**01 40 41.6**	**-0.7**
KLV	**Kalavryta, Ach**	**1.42**	**96**	P	**Pn**	**01 40 42.2**	**-0.2**
KLV				S	**Sg**	**01 41 03.6**	**+1.8**
	comp=E,158nm,0.9s						
FNA	**Florina**	**2.69**	**17**	*e*Pn	**Pn**	**01 40 57.7**	**-2.2**
TIR	**Tirane**	**3.16**	**353**	*e*Pn	**Pn**	**01 41 05.7**	**-0.6**
SRS	**Serrai**	**3.83**	**40**	*e*Pn	Pn	01 41 09.2	-6.3
PDG	**Podgorica**	**4.31**	**349**	*e*Pn	**Pn**	**01 41 21.9**	**-0.1**
PDG				*e*Sn	**Sn**	**01 42 12.8**	**+0.4**
TREB	**Trebinje**	**4.76**	**342**	*e*Pn	**Pn**	**01 41 27.0**	**-1.3**
TREB				*e*Sn	**Sn**	**01 42 23.0**	**-0.7**
SJES	**Sjenica**	**5.06**	**357**	*e*Pn	**Pn**	**01 41 31.0**	**-1.5**
SJES				*e*Sn	**Sn**	**01 42 29.3**	**-2.0**
IVAS	**Ivanjica**	**5.37**	**358**	*e*Pn	**Pn**	**01 41 35.3**	**-1.4**
DIVS	**Divibare**	**5.90**	**357**	*e*Pn	**Pn**	**01 41 43.3**	**-0.6**
DIVS				*e*Sn	**Sn**	**01 42 48.7**	**-3.1**

*NCEDC **07** 02:01:18.2±0.6, 37°857N±0°010×122°25W±0°01, h6km, Md2.0/52, Error ellipse: s-maj=1.5km s-min=1.2km az=192.0*
NEIC 07 02:01:18.8±0.7, **37°86N**±0°01×**122°262W**±0°008, **h4**km±2km, **Error ellipse: s-maj=1.8km s-min=0.8km az=165.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRK	**Berkeley--Havi**	**0.01**	**4**		Pg	02 01 20.4	+0.8
BL88	**Building 88, L**	**0.01**	**25**		Pg	02 01 19.5	-0.2
VAK	**Adit at Lawren**	**0.02**	**38**		Pg	02 01 19.6	-0.1
BKS	**Berkeley--Byer**	**0.02**	**60**		Pg	02 01 19.5	-0.1
CVPM	**Vollmer Peak**	**0.04**	**58**		Pg	02 01 19.8	-0.1
RFSB	**Richmond Field**	**0.08**	**311**		Pg	02 01 20.6	+0.1
CYBM	**Yerba Buena Is**	**0.10**	**236**		Pg	02 01 20.9	+0.2
CSPM	**San Pablo Ridg**	**0.10**	**337**		Pg	02 01 21.2	+0.4
BRIB	**Briones**	**0.10**	**58**		Pg	02 01 20.9	0.0
BRIB					Sg	02 01 22.9	+0.6
CMCM	**Mills College**	**0.11**	**141**		Pg	02 01 20.7	-0.3
SMCB	**Saint Mary's C**	**0.12**	**102**		Pg	02 01 21.1	-0.2
CPIM	**Pinole Ridge**	**0.13**	**17**		Pg	02 01 21.8	+0.4
CPMM	**Point Molate**	**0.14**	**306**		Pg	02 01 21.8	+0.2
HERB	**Hercules**	**0.15**	**360**		Pg	02 01 22.1	+0.4
BGC	**Bolinger Road**	**0.17**	**107**		Pg	02 01 22.0	-0.1
JPRM	**Presidio of Sa**	**0.18**	**248**		Pg	02 01 22.7	+0.4
CLCB	**Lake Chabot**	**0.20**	**129**		Pg	02 01 22.6	-0.1
CRHM	**Round Hill Res**	**0.21**	**91**		Pg	02 01 23.4	+0.5
NLHM	**Lake Herman**	**0.27**	**19**		Pg	02 01 24.5	+0.5
JCPM	**Coyote Point**	**0.28**	**190**		Pg	02 01 24.2	+0.1
CRPB	**Russellman Par**	**0.28**	**80**		Pg	02 01 24.3	0.0
SAC	**San Andreas**	**0.31**	**204**		Pg	02 01 24.8	+0.1
SAC					Sg	02 01 29.7	+1.0
BDM	**Black Diamond**	**0.33**	**74**		Pg	02 01 25.5	+0.4
CNIC	**Niles Canyon**	**0.35**	**137**		Pg	02 01 25.5	0.0
SNT	**Sears Point**	**0.35**	**335**		Pg	02 01 26.4	+0.8
CMOB	**Morgan Territo**	**0.37**	**98**		Pg	02 01 26.3	+0.4
OXMT	**Ox Mountain**	**0.39**	**200**		Pg	02 01 26.1	-0.1
JHPM	**Huddart Park**	**0.42**	**184**		Pg	02 01 27.0	+0.2
NOLM	**Olema**	**0.46**	**293**		Pg	02 01 27.5	0.0
CMJM	**Mission San Jo**	**0.46**	**138**		Pg	02 01 27.7	+0.1
CVS	**Carmenet Viney**	**0.51**	**342**		Pg	02 01 28.5	0.0
JFP	**Foothills Park**	**0.51**	**173**		Pg	02 01 28.4	-0.1
JJRM	**Joaquin Road**	**0.52**	**175**		Pg	02 01 28.9	+0.1
MCCM	**Marconi Confer**	**0.56**	**300**	Pg	Pg	02 01 29.1	-0.5
MCCM	**Marconi Confer**	**0.56**	**300**		Sg	02 01 29.3	-7.6
NAPC	**Atlas Peak**	**0.57**	**1**		Pg	02 01 30.1	+0.2
JSGM	**Saratoga Golf**	**0.60**	**164**		Pg	02 01 30.6	+0.2
FARB	**Farallon Islan**	**0.61**	**254**		Pg	02 01 30.5	0.0
NADM	**Allendale**	**0.64**	**21**		Pb	02 01 32.1	-0.4
NSHM	**Saint Helena R**	**0.71**	**338**		Pg	02 01 32.2	-0.2
CMMM	**Mount Mocho**	**0.73**	**124**		Pg	02 01 32.9	+0.1
JBNB	**Ben Lomond Mou**	**0.74**	**174**		Pg	02 01 32.8	-0.2
JSTM	**Santa Teresa H**	**0.75**	**150**		Pg	02 01 32.8	-0.4
JUMM	**Mount Umunhum**	**0.76**	**157**		Pg	02 01 33.1	-0.3
AMC	**Almaden**	**0.78**	**155**		Pg	02 01 33.2	-0.5
NMCNC	**Mill Creek, So**	**0.89**	**325**		Pg	02 01 35.5	-0.4
FTR	**Fort Ross**	**0.97**	**313**		Pg	02 01 37.4	+0.1
BJOM	**Mount Johnson**	**1.45**	**148**		Pg	02 01 46.6	+0.1
GNO	**Genoa**	**2.17**	**60**		Pn	02 01 55.2	-0.7

*IDC **07** 02:04:54.9±1.0, 11°87N×95°03E, h0km, mb3.8/11, mb1 3.9/12, mb1mx3.8/32, mbtmp3.8/12, ML4.0/1, MS3.2/4, Ms1 3.2/4, ms1mx2.8/34, Error ellipse: s-maj=31.5km s-min=20.4km az=52.0*
*NEIC **07** 02:05:00.5±0.6, 11°94N±0°08×95°11E±0°08, h36km±5km, mb4.1/11, Error ellipse: s-maj=13.8km s-min=8.1km az=130.0*
ISC 07 02:04:58.4±0.9, **11°9N**±0°1×**95°05E**±0°07, **h21**km, **n30,** $\sigma 0^{s}$**73**/26, **mb4.0**/15, **MS3.2**/4, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.28**	**263**	*e*P	Pb	02 05 36.8	-1.9
PBA				*e*S	Sb	02 06 13.0	+6.5
PBA				IAML		02 06 14.7	
	comp=N,219nm,0.8s						
PBA				IAML		02 06 15.1	
	comp=E,224nm,0.5s						
PBA	**Port Blair**	**2.28**	**263**	Pn	Pn	02 05 36.3	+1.5
DGPR	**DIGLIPUR**	**2.41**	**301**	*e*P	**Pn**	**02 05 37.1**	**+0.6**
DGPR				*e*S	**Sb**	**02 06 08.7**	**-1.5**
DGPR				IAML		02 06 15.0	
	comp=E,378nm,1.1s						
DGPR				IAML		02 06 17.3	
	comp=N,279nm,0.5s						
PBKT	**Sadao Pong**	**7.36**	**51**		**Pn**	**02 06 44.6**	**0.0**
CMAR	**Chiang Mai Arr**	**7.49**	**30**	Pn	**Pn**	**02 06 46.9**	**+0.5**
	comp=N,0.6nm,0.3s,baz=222,slow=14,SNR=7.8						
LSA	**Lhasa**	**18.04**	**349**	Pn	**Pn**	**02 09 07.4**	**-0.9**
XAN	**Xi'an**	**25.38**	**28**	P	**P**	**02 10 23.8**	**-0.5**
XAN				IAmb	IAmb	02 10 24.8	
	comp=Z,5.9nm,0.8s						
MK31	**Makanchi Array**	**36.37**	**345**	P	**P**	**02 12 01.7**	**+0.6**
MK31				IAmb	IAmb	02 12 13.7	
	comp=Z,2.4nm,1.0s						
MKAR	**Makanchi Array**	**36.37**	**345**	P	**P**	**02 12 01.6**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=155,slow=9.0,SNR=9.0						
MKAR	**Makanchi Array**	**36.37**	**345**	P	**P**	**02 12 01.2**	**+0.1**
MAKZ	**Makanchi**	**36.47**	**345**	P	**P**	**02 12 02.1**	**+0.2**
MAKZ				IAmb	IAmb	02 12 10.5	
	comp=Z,2.2nm,0.9s						
SONM	**Songino Array**	**37.02**	**13**	P	**P**	**02 12 07.2**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=190,slow=9.7,SNR=8.9						
SONM	**Songino Array**	**37.02**	**13**	IAmb	IAmb	02 12 08.3	
	comp=Z,1.6nm,1.0s						
KURK	**Kurchatov**	**40.94**	**344**	P	**P**	**02 12 39.8**	**+0.5**
KURK				IAmb	IAmb	02 12 51.9	
	comp=Z,3.3nm,1.0s						
GEYT	**Alibek**	**41.89**	**315**	P	**P**	**02 12 48.3**	**+0.9**
	comp=Z,3.0nm,0.6s,baz=138,slow=9.0,SNR=8.7						
GEYT	**Alibek**	**41.89**	**315**	P	**P**	**02 12 48.9**	**+1.5**
HIA	**Hailar**	**42.46**	**24**	P	**P**	**02 12 51.9**	**0.0**
ZALV	**Zalesovo Beam**	**42.68**	**351**	P	**P**	**02 12 53.3**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=171,slow=14,SNR=4.5						
ZALV				LR	LR	02 32 35.5	
	comp=Z,28nm,19.1s,baz=3.0,slow=39						
ZALV	**Zalesovo Beam**	**42.68**	**351**	P	**P**	**02 12 53.9**	**+0.4**
ABKAR	**Akbulak array**	**47.17**	**329**	P	**P**	**02 13 29.8**	**+0.5**
GUMO	**Guam**	**48.55**	**82**	LR	LR	02 32 39.1	
	comp=Z,56nm,20.6s,baz=142,slow=34						
WRA	**Warramunga Arr**	**50.00**	**129**	P	**P**	**02 13 50.9**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=306,slow=8.3,SNR=4.0						
ASAR	**Alice Springs**	**51.92**	**133**	P	**P**	**02 14 05.7**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=316,slow=7.0,SNR=4.2						
BR131	**Keskin Array S**	**60.52**	**309**	P	**P**	**02 15 06.1**	**-1.3**
BR131				IAmb	IAmb	02 15 28.0	
	comp=Z,3.6nm,1.4s						
BRTR	**Keskin Array B**	**60.52**	**309**	P	**P**	**02 15 06.4**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=95,slow=5.6,SNR=5.2						
BRTR				LR	LR	02 43 27.7	
	comp=Z,13nm,18.1s,baz=216,slow=38						
FINES	**FINESS Array B**	**69.57**	**331**	P	**P**	**02 16 05.8**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=96,slow=4.2,SNR=2.7						
GERES	**GERESS Array B**	**75.43**	**318**	P	**P**	**02 16 41.0**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=128,slow=8.6,SNR=4.6						
NOA	**NORSAR Array B**	**76.66**	**330**	LR	LR	02 53 39.0	
	comp=Z,11nm,19.0s,baz=220,slow=38						
TORD	**Torodi Ar. Bea**	**90.53**	**283**	P	**P**	**02 17 59.9**	**+0.3**
	comp=Z,0.3nm,0.9s,baz=95,slow=4.1,SNR=2.8						
ILAR	**Eielson Array**	**90.66**	**22**	P	**P**	**02 17 58.9**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=307,slow=4.0,SNR=7.6						

*ATH **07** 02:14:29.7, 37°81N×21°05E, h30km±1km, ML2.6/10, Error ellipse: s-maj=1.7km s-min=0.9km az=209.0*
*THE **07** 02:14:30.4, 37°77N×21°04E, h14km±1km, ML2.6/10, Error ellipse: s-maj=1.7km s-min=0.8km az=216.0*
ISC 07 02:14:30.7±1.1, **37°81N**±0°03×**21°06E**±0°02, **h19**km±2km, **n32,** $\sigma 0^{s}$**76**/55, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAK2	**Zakynthos**	**0.13**	**261**	P	**Pg**	**02 14 34.6**	**-0.2**
VLMS	**Volimes, Zakyn**	**0.33**	**282**	P	**Pg**	**02 14 37.6**	**-0.1**
VLMS				S	**Sb**	**02 14 43.5**	**+0.6**
VLMS				AML	AML	02 14 44.5	
	comp=E,2623μm,0.1s						
VLMS				AML	AML	02 14 45.6	
	comp=N,5102μm,0.2s						
KFL	**Anninata**	**0.37**	**324**	P	**Pg**	**02 14 38.3**	**-0.2**
KFL				S	**Sg**	**02 14 44.3**	**+0.5**
KFL	**Anninata**	**0.37**	**324**	P	**Pg**	**02 14 38.0**	**-0.5**

KFL S Sg 02 14 44.5 +0.6
RLS Riolos of Patr 0.40 52 P Pg 02 14 37.9 -1.2
RLS S Sg 02 14 45.4 +0.6
comp=N,1μm,0.4s
RLS Riolos of Patr 0.40 52 P Pg 02 14 37.9 -1.2
RLS S Sg 02 14 45.3 +0.6
RLS AML AML 02 14 47.2
comp=N,2080μm,0.3s
RLS AML AML 02 14 47.4
comp=E,2037μm,0.5s
VLS Valsamata 0.53 315 P Pb 02 14 40.6 -0.7
VLS S Sb 02 14 48.8 +0.3
VLS Valsamata 0.53 315 P Pb 02 14 40.6 -0.7
DRO Drossia 0.53 74 P Pb 02 14 40.4 -1.0
DRO S Sg 02 14 49.9 +1.3
comp=E,2μm,0.4s
DRO Drossia 0.53 74 P Pb 02 14 40.8 -0.6
DRO S Sg 02 14 49.1 +0.5
DRO AML AML 02 14 52.6
comp=E,3415μm,0.3s
DRO AML AML 02 14 53.7
comp=N,3011μm,0.4s
AMT Artemida-Makis 0.58 118 P Pb 02 14 41.8 -0.4
AMT S Sg 02 14 51.1 +1.0
comp=N,400nm,0.5s
AMT Artemida-Makis 0.58 118 P Pb 02 14 41.9 -0.4
AMT S Sg 02 14 51.1 +1.0
AMT AML AML 02 14 55.9
comp=E,795μm,0.4s
AMT AML AML 02 14 58.2
comp=N,689μm,0.7s
AST1 Astakos 0.73 2 P Pb 02 14 44.4 -0.4
AST1 S Sn 02 14 56.9 +0.2
comp=N,1μm,0.1s
PDO Prodromos 0.79 7 P Pb 02 14 45.7 -0.2
PDO S Sn 02 14 58.8 +0.5
comp=N,1μm,0.2s
PDO Prodromos 0.79 7 P Pb 02 14 45.7 -0.2
PDO S Sg 02 14 57.3 +0.5
PDO AML AML 02 15 01.3
comp=N,2000μm,0.2s
PDO AML AML 02 15 01.7
comp=E,1868μm,0.2s
EVGI Lefkada island 0.87 338 P Pb 02 14 46.5 -0.8
EVGI S Sn 02 15 00.6 +0.4
EVGI Lefkada island 0.87 338 P Pb 02 14 46.5 -0.8
PVO Paravola 0.88 24 P Pb 02 14 47.7 +0.2
PVO S Sn 02 15 02.0 +1.5
comp=E,335nm,0.2s
PVO Paravola 0.88 24 P Pb 02 14 47.6 +0.1
PVO AML AML 02 15 04.4
comp=N,646μm,0.2s
PVO AML AML 02 15 05.8
comp=E,681μm,0.3s
KLV Kalavryta, Ach 0.89 74 P Pb 02 14 47.2 -0.4
KLV S Sn 02 15 00.9 +0.1
comp=E,130nm,0.4s
KLV Kalavryta, Ach 0.89 74 P Pb 02 14 47.0 -0.6
KLV S Sn 02 15 00.6 -0.1
KLV AML AML 02 15 06.3
comp=N,269μm,0.4s
KLV AML AML 02 15 06.4
comp=E,256μm,0.3s
ITM Ithomi 0.93 132 P Pn 02 14 48.4 -0.4
ITM Ithomi 0.93 132 P Pb 02 14 48.1 -0.2
TRIZ Trizonia 0.97 55 P Pb 02 14 48.5 -0.4
TRIZ S Sg 02 15 04.4 +2.0
comp=E,270nm,0.3s
SERG Sergoula 0.99 52 P Pb 02 14 48.9 -0.4
SERG Sergoula 0.99 52 P Pb 02 14 48.9 -0.4
SERG S Sg 02 15 03.5 +0.5
SERG AML AML 02 15 07.3
comp=E,429μm,0.3s
SERG AML AML 02 15 08.4
comp=N,550μm,0.4s
KALE Kalithea 1.03 55 P Pb 02 14 49.6 -0.4
KALE S Sg 02 15 05.8 +1.6
comp=N,212nm,0.4s
KALE Kalithea 1.03 55 P Pb 02 14 49.4 -0.6
KALE S Sn 02 15 04.5 +0.3
KALE AML AML 02 15 09.3
comp=N,524μm,0.5s
KALE AML AML 02 15 09.6
comp=E,300μm,0.3s
LKD2 Lefkada island 1.03 342 P Pb 02 14 49.0 -1.0
LKD2 Lefkada island 1.03 342 P Pb 02 14 49.0 -1.0
ANX Ano Chora 1.03 41 P Pb 02 14 50.0 -0.1
ANX S Sg 02 15 06.2 +1.8
comp=E,272nm,0.4s
ANX Ano Chora 1.03 41 P Pb 02 14 49.8 -0.3
ANX S Sb 02 15 03.3 0.0
ANX AML AML 02 15 11.2
comp=E,422μm,0.4s
ANX AML AML 02 15 13.8
comp=N,678μm,0.5s

*IDC **07** 02:27:22.7±0.7, 13.°80N×121.°01E, h122km±4km, mb3.5/8, mb1 3.6/8, mb1mx3.3/33, mbtmp3.8/8, Error ellipse: s-maj=44.9km s-min=15.4km az=64.0*
*MAN **07** 02:27:23.5, 13.°75N×120.°53E, h99km, mb4.1, ML2.9, MS2.6*
*NEIC **07** 02:27:23±0.6, 13.°7N±0.°1×120.°9E±0.°1, h127km±5km, mb4.0/6, Error ellipse: s-maj=20.4km s-min=10.4km az=213.0*
ISC 07 02:27:23.2±0.7, 13.°74N±0.°05×120.°61E±0.°07, h118km±6km, n25, σ1.ˢ18/32, mb3.8/10, Mindoro

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LUBP Lubang 0.35 269 eP Pn 02 27 39.6 -0.4
LUBP eS Sn 02 27 50.2 -2.5
TGY Tagaytay City 0.48 41 P Pn 02 27 41.7 +0.8
260nm,0.3s,baz=216,slow=2.4,SNR=23
TGY S Sn 02 27 54.7 +0.6
1μm,0.3s,baz=18,slow=20,SNR=18
TGY Tagaytay City 0.48 41 eP Pn 02 27 41.4 +0.5
TGY iS Sn 02 27 54.7 +0.6
BOAC Boac 1.23 103 eP Pn 02 27 47.8 +0.4
BOAC eS Sn 02 28 05.9 +0.2
SJMP San Jose 1.36 159 eP Pn 02 27 49.6 +0.6
SJMP eS Sn 02 28 08.8 +0.3
POLP Polilio Island 1.62 53 eP Pn 02 27 52.5 +0.6
PCPH Palayan 1.87 15 ep Pn 02 27 54.3 -0.6
PCPH eS Sn 02 28 20.5 +1.3
OTRP Odiongan 1.94 135 eP Pn 02 27 56.2 +0.3
OTRP eS Sn 02 28 21.0 +0.3
ENPP El Nido 2.77 205 eP Pn 02 28 06.8 +0.4
SBUM Sibu 13.95 217 P P 02 30 42.1 +2.0
CMAR Chiang Mai Arr 21.33 286 P P 02 32 04.1 +3.0
1.2nm,0.4s,baz=94,slow=8.1,SNR=4.5
MJAR Matsushiro Arr 27.64 32 P P 02 32 58.2 -1.6
SONM Songino Array 35.99 344 P P 02 34 12.6 -0.3
1.5nm,0.6s,baz=162,slow=10,SNR=18
SONM Songino Array 35.99 344 IAmb IAmb 02 34 14.1
comp=Z,1.3nm,0.7s
WRA Warramunga Arr 36.09 158 P P 02 34 11.8 -2.1
comp=Z,0.6nm,0.8s,baz=323,slow=7.2,SNR=4.7
ASAR Alice Springs 39.38 161 P P 02 34 39.5 -2.1
comp=Z,0.3nm,0.4s,baz=336,slow=7.1,SNR=6.3
ASAR pP pP 02 35 07.6 -0.6
comp=Z,0.5nm,0.6s,baz=340,slow=6.6,SNR=3.2
MK31 Makanchi Array 45.95 324 P P 02 35 35.0 +0.7
MK31 IAmb IAmb 02 35 35.7
comp=Z,1.1nm,0.8s
MKAR Makanchi Array 45.95 324 P P 02 35 34.8 +0.4
comp=Z,1.5nm,0.7s,baz=132,slow=9.0,SNR=20
ZALV Zalesovo Beam 48.98 333 P P 02 35 57.1 -0.5
comp=Z,1.2nm,0.3s,baz=130,slow=7.3,SNR=5.0
KURK Kurchatov 50.11 326 P P 02 36 06.5 +0.3
KKAR Karatay Array 51.88 314 P P 02 36 20.0 +0.3
BRVK Borovoye 55.76 326 P P 02 36 47.9 +0.2
BRVK IAmb IAmb 02 36 49.3
comp=Z,4.8nm,1.2s
ABKAR Akbulak array 60.65 319 P P 02 37 21.3 -0.5
ARCES ARCESS Array B 79.02 339 P P 02 39 13.1 -0.7
comp=Z,2.2nm,0.9s,baz=69,slow=6.8,SNR=7.4
BRTR Keskin Array B 79.06 308 P P 02 39 15.1 +0.2
comp=Z,0.3nm,0.6s,baz=90,slow=4.3,SNR=3.0

*NIED **07** 03:14:00, 43.°40N×147.°30E, h47km, Mw4.5 Best double couple: $M_0$5.58000×10^{15} NP1:φs45.00000°, δ65.00000°, λ108.00000°. NP2:φs188.00000°, δ30.00000°, λ57.00000°.*
*BJI **07** 03:14:18.9±0.0, 43.°45N×147.°40E, h45km, mB5.0/26, mb4.6/40, Ms4.2/13, Ms7 4.0/10*
*SKHL **07** 03:14:19.5±0.8, 43.°28N×147.°52E, h55km±4km, mb5.1/11*
SKHL Felt (III) at Malokuril'skoye.
*JMA **07** 03:14:20.6±0.2, 43.°31N×147.°29E, h34km±4km, M4.7*
JMA Felt I J1.
*MOS **07** 03:14:20.1±0.9, 43.°43N×147.°37E, h52km, mb5.1/61, MS3.3/5, Error ellipse: s-maj=6.7km s-min=4.2km az=113.0*
MOS Felt (III) at Malokuril'skoye.
*IDC **07** 03:14:22.2±0.5, 43.°43N×147.°36E, h56km±3km, mb4.4/38, mb1 4.5/45, mb1mx4.3/68, mbtmp4.6/45, MS3.5/19, Ms1 3.5/19, ms1mx3.3/29, Error ellipse: s-maj=11.2km s-min=8.4km az=178.0*
*NEIC **07** 03:14:22.1±1.1, 43.°37N±0.°07×147.°4E±0.°1, h58km±4km, mb4.7/172, Error ellipse: s-maj=11.1km s-min=9.4km az=124.0*
ISC 07 03:14:20.8±0.4, 43.°35N±0.°04×147.°37E±0.°04, h48km±2km, h48km:pP-P, n680, σ1.ˢ08/687, mb4.7/171, MS3.6/16, 24C-26D, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SHO Shikotan 0.66 323 iP Pn 03 14 33.0 -0.9
SHO AMB AMB 03 14 34.0
14μm,0.3s
SHO iS Sn 03 14 43.0 -0.3
SHO A A 03 14 44.0
13μm,0.4s
SHO A A 03 14 44.0
26μm,0.4s
SHO Shikotan 0.66 323 diPN Pn 03 14 33.8 -0.1
SHO iS Sn 03 14 43.4 +0.1
SHO pmax pmax
comp=N,5μm,0.3s
SHO pmax pmax
comp=E,4μm,0.3s
SHO pmax pmax
comp=Z,14μm,0.3s
SHO smax smax
comp=N,13μm,0.3s
SHO smax smax
comp=E,26μm,0.4s
NEM2 Nemuro 2 1.19 271 ⇓P Pn 03 14 40.6 -0.4
NEM2 eS Sn 03 14 54.5 -1.5
NMR Nemuro--Hokkai 1.20 272 iP Pn 03 14 40.0 -1.2
NMR iS Sn 03 14 56.0 -0.3
NMR Nemuro--Hokkai 1.20 272 ⇓iPN Pn 03 14 40.6 -0.6
NMR iS Sn 03 14 56.1 -0.3
YUK Yuzh-Kuril'sk 1.29 303 iP Pn 03 14 42.0 -0.5
YUK AMB AMB 03 14 46.0
comp=E,4μm,0.7s
YUK iS Sn 03 14 58.0 -0.6
YUK A A 03 14 59.0
comp=E,4μm,0.5s
YUK A A 03 14 59.0
comp=E,13μm,0.5s
YUK Yuzh-Kuril'sk 1.29 303 diPN Pn 03 14 42.2 -0.3
YUK iS Sn 03 14 58.2 -0.4
YUK pmax pmax
comp=Z,4μm,0.7s
YUK pmax pmax
comp=N,2μm,0.4s
YUK pmax pmax
comp=E,2μm,0.4s
YUK smax smax
comp=N,4μm,0.2s
YUK smax smax
comp=E,13μm,0.5s
GRPR Tuman 1.33 300 iP Pn 03 14 42.0 -0.9
GRPR AMB AMB 03 14 43.0
comp=E,7μm,0.4s
GRPR iS Sn 03 14 59.0 -0.5
GRPR A A 03 15 00.0
comp=E,19μm,0.2s
GRPR A A 03 15 00.0
comp=E,4μm,0.2s
GRPR Tuman 1.33 300 ⇓iPN Pn 03 14 42.7 -0.2
GRPR iS Sn 03 14 59.0 -0.5
GRPR pmax pmax
comp=N,2μm,0.4s
GRPR pmax pmax
comp=Z,7μm,0.4s
GRPR pmax pmax
comp=E,2μm,0.2s
GRPR smax smax
comp=N,19μm,0.2s
GRPR smax smax
comp=E,4μm,0.2s
GLVR Golovnino 1.40 287 iP Pn 03 14 43.0 -0.9
GLVR AMB AMB 03 14 44.0
comp=E,2μm,0.4s
GLVR iS Sn 03 15 01.0 -0.3
GLVR A A 03 15 05.0
comp=E,5μm,0.5s
GLVR A A 03 15 05.0
comp=E,9μm,0.5s
GLVR Golovnino 1.40 287 ⇓iPN Pn 03 14 43.9 0.0
GLVR iS Sn 03 15 01.7 +0.4
GLVR pmax pmax
comp=Z,2μm,0.4s
GLVR pmax pmax
comp=N,143nm,0.3s
GLVR pmax pmax
comp=E,243nm,0.1s
GLVR smax smax
comp=N,5μm,0.5s
GLVR smax smax
comp=E,9μm,0.4s
JKHN Kushirohamanak 1.64 262 ⇓P Pn 03 14 47.4 +0.3
JKHN eS Sn 03 15 07.0 0.0
JRA Rausu 1.74 291 ⇓P Pn 03 14 48.7 +0.2
JNSB Nemuroshibetsu 1.77 285 P Pn 03 14 49.2 +0.2
JNSB eS Sn 03 15 10.6 +0.2
KUR Kuril'sk 1.92 10 eP Pn 03 14 51.5 +0.5
KUR Kuril'sk 1.92 10 diPN Pn 03 14 51.5 +0.5
KUR eS Sn 03 15 13.2 -0.7
KUR pmax pmax
comp=Z,226nm,0.4s
KUR pmax pmax
comp=E,149nm,0.5s
KUR pmax pmax
comp=N,210nm,0.3s
KUR smax smax
comp=E,3μm,0.5s
KUR smax smax
comp=N,3μm,0.3s
JNK Nakash 1.95 278 ⇓P Pn 03 14 51.2 -0.2
JNK eS Sn 03 15 14.1 -0.5
JAK Akkeshi 1.99 261 ⇓P Pn 03 14 51.7 -0.2
JAK eS Sn 03 15 14.7 -0.9
JTKR Abashiri--Toko 2.59 285 P Pn 03 15 01.4 +1.2
JTKR eS Sn 03 15 31.5 +1.1
JOB Onbets 2.63 262 P Pn 03 15 01.1 +0.4
JAR Ashorobuto 2.63 270 ⇓P Pn 03 15 01.2 +0.5
JAR eS Sn 03 15 31.4 0.0
JMP Maruseppu 2.99 284 ⇓P Pn 03 15 07.0 +1.4
JCH Churui 3.03 257 P Pn 03 15 06.3 0.0
JCH eS Sn 03 15 39.7 -1.6
ERM Erimo 3.38 248 Pn 03 15 13.0 +1.9
ERM Erimo 3.38 248 dePN Pn 03 15 12.9 +1.9
ERM pmax pmax
comp=Z,735nm,1.0s
JKK2 Kamakawa 2 3.40 280 P Pn 03 15 13.0 +1.7
JFR Furan 3.50 269 P Pn 03 15 13.8 +1.2
JFR eS Sn 03 15 52.9 +0.1
JKA Kamikawa-asahi 3.54 284 eP Pn 03 15 15.6 +2.3
JKA Kamikawa-asahi 3.54 284 Pn 03 15 15.6 +2.3
JKA Sn 03 15 55.7 +1.8
ASAJ Asahikawa 3.55 284 P Pn 03 15 15.2 +1.9
ASAJ Asahikawa 3.55 284 P Pn 03 15 15.6 +2.2
comp=Z,19nm,0.3s,baz=89,slow=10,SNR=168
ASAJ S Sn 03 15 55.7 +1.7
comp=Z,9.3nm,0.3s,baz=131,slow=18,SNR=2.0
ASAJ LR LR 03 16 24.9
comp=Z,156nm,19.9s,baz=54,slow=35
JNBK Urakawa-nobuka 3.56 254 P Pn 03 15 13.8 +0.3
JBT2 Biratori 2 3.71 263 P Pn 03 15 16.2 +0.6
JSE Soyaes 3.81 297 ⇓P Pn 03 15 18.0 +1.2
YSS Yuzh-Sakhalins 4.87 319 eP Pn 03 15 32.0 +0.6
YSS AMB AMB 03 15 33.0
comp=Z,60nm,0.8s
YSS eS Sn 03 16 26.0 -0.4
YSS Yuzh-Sakhalins 4.87 319 Pn 03 15 32.8 +1.5
YSS Yuzh-Sakhalins 4.87 319 ⇓ePN Pn 03 15 32.6 +1.2
YSS eS Sn 03 16 28.4 +2.0
YSS pmax pmax
comp=Z,60nm,0.8s
YSS pmax pmax
comp=N,30nm,0.7s
YSS pmax pmax
comp=E,30nm,0.6s
YSS smax smax
comp=N,60nm,0.7s
YSS smax smax
comp=E,90nm,0.7s
YSS MLR MLR
comp=Z,600nm,16.0s
TYV Tymovskoe 8.18 339 eP Pn 03 16 18.0 +1.3
TYV AMB AMB 03 16 31.6
comp=Z,13nm,0.9s
TYV eS Sn 03 17 47.7 0.0
TYV A A 03 17 51.2
comp=Z,12nm,0.7s
TYV A A 03 17 51.2
comp=Z,16nm,0.7s
TYV Tymovskoe 8.18 339 ePN Pn 03 16 20.3 +3.6
TYV eS Sn 03 17 56.2 +8.5
TYV pmax pmax
comp=Z,9.0nm,0.6s
TYV smax smax
comp=N,5.0nm,0.5s
TYV MLR MLR
comp=Z,1μm,16.0s
MJAR Matsushiro Arr 9.78 229 P Pn 03 16 38.9 +0.1
comp=Z,0.2nm,0.3s,baz=35,slow=14,SNR=16
MJAR S Sn 03 18 29.3 +2.2
comp=Z,0.1nm,0.3s,baz=269,slow=26,SNR=2.9
MJAR Matsushiro Arr 9.78 229 Pn 03 16 38.6 -0.2
MJB9 Matsu-Tunnel 9.78 229 Pn 03 16 38.4 -0.4
MAJO Matsushiro 9.78 229 Pn 03 16 37.8 -1.0
MAJO Matsushiro 9.78 229 iPN Pn 03 16 38.0 -0.8
MAT Matsushiro 9.78 229 P Pn 03 16 38.1 -0.7
MAT S Sn 03 18 25.5 -1.6
GRNR Gornyy 10.53 319 eP Pn 03 16 51.3 +2.4
GRNR AMB AMB 03 16 52.1
comp=Z,4.0nm,0.5s
GRNR Gornyy 10.53 319 ⇑iPN Pn 03 16 51.3 +2.4
GRNR eS Sn 03 18 51.9 +6.6
GRNR pmax pmax
comp=Z,4.0nm,0.5s
GRNR smax smax
comp=N,3.0nm,0.7s
GRNR MLR MLR
comp=Z,70nm,15.0s
OKH Okha 10.63 345 eP Pn 03 16 52.6 +2.4
OKH AMB AMB 03 16 53.5
comp=Z,140nm,0.3s
OKH Okha 10.63 345 dePN Pn 03 16 43.2 -7.0
OKH pmax pmax
comp=Z,100nm,9.3s
OKH MLR MLR
comp=Z,200nm,16.0s
USA0B Ussuriysk Arra 11.16 280 Pn 03 16 58.8 +1.2
USA0B Ussuriysk Arra 11.16 280 iPN Pn 03 16 57.9 +0.3
USRK Ussuriysk Ar. 11.16 280 P Pn 03 16 58.5 +0.9
baz=92,slow=14,SNR=10.0
USRK LR LR 03 21 32.2
comp=Z,210nm,19.0s,baz=71,slow=39
USRK Ussuriysk Ar. 11.16 280 Pn 03 16 58.1 +0.5
JHJ Hachijo jima 2 11.82 213 S Sn 03 19 06.9 -10
comp=Z,32nm,0.3s,baz=66,slow=20,SNR=4.1
JHJ LR LR 03 21 52.7
comp=Z,118nm,18.4s,baz=169,slow=38
PEA0B Petropavlovsk- 11.94 31 Pn Pn 03 17 06.9 -1.2
PEA0B Petropavlovsk- 11.94 31 iPN Pn 03 17 08.2 0.0
PETK Petropavlovsk- 11.94 31 P Pn 03 17 07.0 -1.2
comp=Z,0.9nm,0.3s,baz=185,slow=11,SNR=10
PETK LR LR 03 21 33.8
comp=Z,237nm,21.5s,baz=237,slow=36
PETK Petropavlovsk- 11.94 31 Pn Pn 03 17 06.6 -1.6
PETK Petropavlovsk- 11.94 31 PN Pn 03 17 07.0 -1.2
KLR Kul'dur 12.30 304 P Pn 03 17 14.2 +1.1
comp=Z,0.1nm,0.3s,baz=111,slow=16,SNR=3.8
KLR LR LR 03 21 53.2
comp=Z,153nm,21.9s,baz=52,slow=37
KLR Kul'dur 12.30 304 eP Pn 03 17 14.4 +1.3
KLR Kul'dur 12.30 304 iPN Pn 03 17 14.4 +1.3
KLR pmax pmax
comp=Z,6.0nm,0.9s
MDJ Mudanjiang 12.87 282 P Pn 03 17 20.3 -0.7
MDJ pP P 03 17 27.7 -2.8
MDJ S Sn 03 19 43.4 +0.7
MDJ SS SnSn 03 19 57.1 +2.2
MDJ ScP ScP 03 26 23.8 +2.1
MDJ PcS PcS 03 26 29.3 +2.3
MDJ ScS ScS 03 29 59.2 +1.2
MDJ pmax pmax
comp=Z,12nm,0.9s
MDJ pmax pmax
comp=Z,140nm,3.0s
MDJ LR LR
comp=Z,270nm,5.3s
MDJ LR LR
comp=Z,220nm,4.7s
EKMR Ekimchan 13.65 320 eP Pn 03 17 30.5 -1.1
EKMR AMB AMB 03 17 43.3
comp=Z,12nm,0.9s
KSRS Korea Array 15.93 255 P Pn 03 18 01.9 +0.3
comp=Z,0.3nm,0.3s,baz=53,slow=14,SNR=5.2
KSRS LR LR 03 24 27.7
comp=Z,130nm,19.4s,baz=82,slow=38
KSAR Wonju Array Be 15.96 255 Pn P 03 18 03.3 -1.5
KSAR Wonju Array Be 15.96 255 P P 03 18 03.3 -1.5
MA2 Magadan 16.39 6 eP Pn 03 18 05.8 -1.4
MA2 Magadan 16.39 6 iP Pn 03 18 05.8 -1.4
MA2 pmax pmax
comp=Z,11nm,1.0s
JNU Nakatsue 16.47 237 LR LR 03 24 52.6
comp=Z,144nm,19.6s,baz=48,slow=38
BMKR Bomnak 16.58 320 eP Pn 03 18 07.5 -2.2
BMKR AMB AMB 03 18 13.5
comp=Z,7.0nm,0.9s
ZEA Zeya 16.84 315 eP Pn 03 18 11.0 -1.9
ZEA AMB AMB 03 18 25.0
comp=Z,17nm,1.0s
ZEA Zeya 16.84 315 eP P 03 18 24.2 +10
ZEA pmax pmax
comp=Z,17nm,1.0s
ZEA MLR MLR
comp=Z,400nm,14.0s
KROS Kirovskiy 17.34 317 eP Pn 03 18 17.0 -2.1
KROS AMB AMB 03 18 20.1
comp=Z,4.0nm,0.5s
SEY Seymchan 19.84 7 P P 03 18 46.7 -0.6
comp=Z,0.6nm,0.3s,baz=186,slow=8.6,SNR=17
SEY Seymchan 19.84 7 eP Pn 03 18 47.3 -1.9
SEY Seymchan 19.84 7 iP Pn 03 18 47.3 -1.9
YAK Yakutsk 21.43 337 P P 03 19 04.0 -0.4
comp=Z,19nm,0.6s,baz=332,slow=1.1,SNR=4.8
YAK Yakutsk 21.43 337 eP P 03 19 03.9 -0.5
YAK Yakutsk 21.43 337 P P 03 19 04.0 -0.4
YAK IAmb IAmb 03 19 08.8
comp=Z,42nm,0.7s
YAK Yakutsk 21.43 337 eP P 03 19 04.1 -0.4
YAK e 03 19 24.2
YAK eS S 03 22 50.0 -9.4
YAK eSS Sn 03 23 06.7 -2.6
YAK eSSS SSS 03 23 28.3
YAK e 03 30 23.8
YAK pmax pmax
comp=Z,31nm,0.7s
YAK pmax pmax
comp=N,19nm,0.9s
YAK pmax pmax
comp=E,12nm,1.0s
YAK pmax pmax
comp=Z,210nm,5.5s
YAK pmax pmax
comp=N,128nm,5.0s
YAK pmax pmax
comp=E,153nm,5.3s
YAK smax smax
comp=E,272nm,5.5s
YAK smax smax
comp=N,92nm,1.8s

YAK MLR MLR
comp=Z,68nm,18.0s
YAK MLR MLR
comp=N,93nm,18.0s
YAK MLR MLR
comp=E,60nm,17.0s
BJI Beijing 23.46 273 P P 03 19 24.9 -0.9
BJI pmax pmax
comp=E,8.0nm,0.8s
BJT Baijiatuau 23.47 273 P P 03 19 25.3 -0.6
BJT Baijiatuau 23.47 273 P P 03 19 25.3 -0.6
BJT pmax pmax
comp=Z,6.0nm,0.7s
TIA Tai'an 24.22 263 P P 03 19 35.1 +2.2
TIA pmax pmax
comp=Z,14nm,0.8s
NJ2 Nanjing 25.11 253 eP P 03 19 41.0 +0.1
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
BOD Bodaibo 25.34 317 eP P 03 19 39.0 -3.8
BOD pmax pmax
comp=Z,4.0nm,1.4s
HHC Hu-ho-hao-te 26.56 277 eP P 03 19 55.5 +1.3
HHC pP pP 03 20 06.9 +0.7
HHC sP sP 03 20 12.1 +0.3
HHC PP PnPn 03 20 38.5 +2.2
HHC pmax pmax
comp=Z,4.0nm,0.9s
HHC pmax pmax
comp=Z,54nm,4.3s
HHC LR LR
comp=Z,75nm,10.6s
HHC LR LR
comp=Z,120nm,9.2s
BILL Bilibino 26.70 16 eP P 03 19 55.9 +0.8
BILL Bilibino 26.70 16 P P 03 19 55.8 +0.8
BILL Bilibino 26.70 16 eP P 03 19 55.9 +0.8
BILL e 03 20 39.2
BILL pmax pmax
comp=Z,3.0nm,0.7s
TIY Taiyuan 27.01 270 eP P 03 20 03.8 +5.5
BTO Baotou 27.75 277 eP P 03 20 08.0 +3.1
ULN Ulaanbaatar 28.33 293 eP P 03 20 10.1 0.0
ULN Ulaanbaatar 28.33 293 P P 03 20 10.1 0.0
ULN IAmb IAmb 03 20 12.0
comp=Z,16nm,0.8s
ULN Ulaanbaatar 28.33 293 P P 03 20 10.1 0.0
ULN pmax pmax
comp=Z,16nm,0.9s
H11N2 WAKE ISLAND Hy 28.69 139 T T 03 50 59.9
baz=330,slow=75,SNR=360
H11N1 WAKE ISLAND Hy 28.70 139 T T 03 50 58.3
baz=330,slow=75,SNR=269
H11N3 WAKE ISLAND Hy 28.71 139 T T 03 51 02.3
baz=330,slow=75,SNR=271
SONM Songino Array 28.78 293 P P 03 20 14.8 +0.8
comp=Z,12nm,0.7s,baz=85,slow=8.3,SNR=101
SONM pP pP 03 20 27.0 +0.8
comp=Z,6.2nm,0.9s,baz=84,slow=9.2,SNR=6.5
SONM LR LR 03 32 58.8
comp=Z,204nm,19.2s,baz=57,slow=39
SONM Songino Array 28.78 293 P P 03 20 14.2 +0.2
WHN Wuhan 29.12 255 P P 03 20 31.2 +14
H11S1 WAKE ISLAND Hy 29.65 141 T T 03 52 12.2
baz=331,slow=76,SNR=331
H11S3 WAKE ISLAND Hy 29.66 141 T T 03 52 14.3
baz=331,slow=76,SNR=243
H11S2 WAKE ISLAND Hy 29.67 141 T T 03 52 09.6
baz=331,slow=76,SNR=279
TIXI Tiksi 29.79 348 eP P 03 20 21.6 -0.9
TIXI Tiksi 29.79 348 eP P 03 20 21.6 -0.9
TIXI pmax pmax
comp=Z,1.0nm,0.8s
TLY Talaya 30.30 301 eP P 03 20 26.7 -0.5
TLY Talaya 30.30 301 eP P 03 20 26.7 -0.5
TLY pmax pmax
comp=Z,2.0nm,0.9s
XAN Xi'an 31.18 266 P P 03 20 35.8 +0.5
XAN IAmb IAmb 03 20 55.5
comp=Z,8.5nm,0.8s
XAN Xi'an 31.18 266 P P 03 20 35.8 +0.5
XAN pmax pmax
comp=Z,9.0nm,0.8s
ANM Nome 33.83 35 P P 03 20 58.6 +0.6
ANM Nome 33.83 35 P P 03 20 58.6 +0.6
ANM pmax pmax
comp=Z,29nm,1.2s
LZH Lanzhou 33.95 273 eP P 03 20 59.2 -0.4
LZH pP pP 03 21 12.1 +0.4
LZH sP sP 03 21 19.7 +2.5
LZH PP PnPn 03 22 10.4 -3.3
LZH pmax pmax
comp=Z,13nm,1.4s
LZH pmax pmax
comp=Z,69nm,5.4s
LZH LR LR
comp=Z,290nm,13.5s
LZH LR LR
comp=Z,310nm,13.3s
LZH LR LR
comp=Z,440nm,16.8s
GTA Gaotai 35.52 280 P P 03 21 10.8 -2.3
GTA pP pP 03 21 23.1 -2.1
GTA sP pwP 03 21 27.9 0.0
GTA PcP PcP 03 23 42.5 +1.1
GTA pmax pmax
comp=Z,10.0nm,1.4s
GTA pmax pmax
comp=Z,82nm,5.6s
GTA LR LR
comp=Z,78nm,19.0s
GTA LR LR
comp=Z,95nm,15.6s
RDOG Red Dog Mine 35.80 29 P P 03 21 14.5 -0.4
RDOG IAmb IAmb 03 21 16.4
comp=Z,7.7nm,0.7s
CD2 Chengdu 36.53 265 P P 03 21 22.1 +0.4
CD2 pmax pmax
comp=Z,20nm,0.6s
IMAR Indian Mountai 38.89 34 P P 03 21 40.3 -0.8
IMAR PcP 03 23 52.2 +1.2
MLY Manley 40.08 36 IAmb IAmb 03 21 53.4
comp=Z,9.4nm,0.7s
TRF Thorofare Moun 40.25 38 P P 03 21 53.3 +0.6
TRF IAmb IAmb 03 21 55.9
comp=Z,9.0nm,1.0s
COLD Coldfoot 40.41 32 P P 03 21 54.2 +0.5
KMI Kunming 40.59 258 P P 03 21 57.7 +1.7
KMI pP pP 03 22 09.9 +1.7
KMI sP sP 03 22 15.4 +1.8
KMI pmax pmax
comp=Z,6.0nm,1.2s
KMI pmax pmax
comp=Z,110nm,4.3s
RC01 Rabbit Creek A 40.60 42 P P 03 21 56.2 +0.8
RC01 IAmb IAmb 03 21 57.4
comp=Z,16nm,0.8s
TOLK Toolik Lake Re 40.75 30 P P 03 21 56.9 +0.3
TOLK Toolik Lake Re 40.75 30 P P 03 21 57.5 +0.9
baz=265
MCK McKinley 40.85 38 P P 03 21 57.3 -0.2
MCK IAmb IAmb 03 21 59.0
comp=Z,8.2nm,0.8s
MCK McKinley 40.85 38 P P 03 21 57.3 -0.2
MCK pmax pmax
comp=Z,8.0nm,0.8s
PMR Palmer 40.85 41 P P 03 21 57.8 +0.3
PMR Palmer 40.85 41 P P 03 21 57.8 +0.3
PMR pmax pmax
comp=Z,7.0nm,0.8s
MDM Murphy Dome 41.14 36 IAmb IAmb 03 22 01.8
comp=Z,13nm,0.6s
KNK Knik Glacier 41.19 41 IAmb IAmb 03 22 01.8
comp=Z,45nm,1.6s
WRH Wood River Hil 41.21 36 P P 03 22 00.8 +0.4
WRH IAmb IAmb 03 22 05.8
comp=Z,9.6nm,0.7s
WRH PcP 03 23 58.7 +0.3
TCOL CIGO, UAF Yank 41.30 36 P P 03 22 02.1 +1.0
baz=271
COLA College 41.30 36 P P 03 22 01.6 +0.5
COLA IAmb IAmb 03 22 03.2
comp=Z,10nm,0.8s
COLA College 41.30 36 P P 03 22 01.6 +0.5
COLA pmax pmax

comp=Z,10.0nm,0.8s
ZALV Zalesovo Beam 41.37 307 P P 03 22 01.8 0.0
comp=Z,4.3nm,0.6s,baz=86,slow=6.9,SNR=17
ZALV PcP PcP 03 23 59.2 0.0
comp=Z,2.2nm,0.6s,baz=109,slow=1.2,SNR=4.3
ZALV pPcP 03 24 15.1
comp=Z,5.6nm,0.8s,baz=74,slow=3.2,SNR=6.6
ZALV LR LR 03 41 10.3
comp=Z,37nm,18.3s,baz=24,slow=39
ZALV Zalesovo Beam 41.37 307 P P 03 22 01.6 -0.2
ZALV Zalesovo Beam 41.37 307 i P P 03 22 01.7 -0.2
ZALV pmax pmax
comp=Z,4.0nm,0.6s
POKR Poker Plat Res 41.48 35 P P 03 22 04.0 +1.4
baz=271,SNR=21
HDA Harding Lake 41.70 37 IAmb IAmb 03 22 05.5
comp=Z,10nm,0.6s
HDA Harding Lake 41.70 37 P P 03 22 04.6 +0.2
baz=272,SNR=6.7
IL31 41.72 36 P P 03 22 04.6 +0.1
IL31 IAmb IAmb 03 22 28.2
comp=Z,48nm,2.0s
ILAR Eielson Array 41.72 36 P P 03 22 04.8 +0.2
comp=Z,4.4nm,0.8s,baz=252,slow=5.2,SNR=64
ILAR LR LR 03 41 24.3
comp=Z,25nm,18.4s,baz=356,slow=39
ILAR Eielson Array 41.72 36 P P 03 22 04.1 -0.5
ILAR Eielson Array 41.72 36 P P 03 22 04.1 -0.5
WMQ Urumqi 42.40 292 eP P 03 22 12.1 +1.7
WMQ pP pP 03 22 21.7 -1.4
WMQ sP sP 03 22 29.5 +0.8
WMQ pmax pmax
comp=Z,11nm,1.1s
WMQ pmax pmax
comp=Z,110nm,4.9s
WMQ Urumqi 42.40 292 P P 03 22 11.1 +0.7
WMQ IAmb IAmb 03 22 22.6
comp=Z,11nm,1.0s
WMQ Urumqi 42.40 292 P P 03 22 11.1 +0.7
WMQ pmax pmax
comp=Z,11nm,1.0s
BMAR Burnt Mountain 42.59 32 P P 03 22 12.6 +0.9
RIDG Independent Ri 42.67 37 IAmb IAmb 03 22 14.6
comp=Z,7.3nm,0.6s
DOT Dot Lake 43.03 38 IAmb IAmb 03 22 51.4
comp=Z,26nm,1.5s
SCRK Sand Creek 43.03 37 IAmb IAmb 03 22 17.4
comp=Z,10nm,0.8s
VRDI Verde Repeater 43.61 41 IAmb IAmb 03 22 22.1
comp=Z,9.9nm,0.8s
MCARA McCarthy VSAT 43.79 41 P P 03 22 19.5 -1.8
MCARA IAmb IAmb 03 22 40.6
comp=Z,15nm,0.9s
BCAR Beaver Creek A 44.12 38 P P 03 22 24.7 +0.7
EGAK Eagle 44.16 36 P P 03 22 24.5 +0.2
EGAK IAmb IAmb 03 22 25.6
comp=Z,9.6nm,0.8s
BALM Baldy 44.17 41 IAmb IAmb 03 22 26.5
comp=Z,15nm,0.8s
BARN Barnard Glacie 44.49 41 IAmb IAmb 03 22 29.4
comp=Z,18nm,1.0s
CTGM Chitina Glacie 44.67 41 IAmb IAmb 03 22 30.7
comp=Z,25nm,1.1s
MK31 Makanchi Array 44.92 298 P P 03 22 31.5 +0.9
MK31 IAmb IAmb 03 22 32.1
comp=Z,20nm,1.2s
MK31 Makanchi Array 44.92 298 eP P 03 22 29.6 -1.0
MKAR Makanchi Array 44.92 298 P P 03 22 31.1 +0.5
comp=Z,8.5nm,0.6s,baz=81,slow=8.9,SNR=77
MKAR LR LR 03 41 53.7
comp=Z,73nm,19.8s,baz=66,slow=37
MKAR Makanchi Array 44.92 298 eP P 03 22 31.4 +0.8
MKAR Makanchi Array 44.92 298 P P 03 22 31.4 +0.8
MKAR Makanchi Array 44.92 298 P P 03 22 31.4 +0.8
MAKZ Makanchi 45.11 298 P P 03 22 32.5 +0.3
MAKZ IAmb IAmb 03 22 33.7
comp=Z,12nm,1.0s
MAKZ Makanchi 45.11 298 P P 03 22 32.5 +0.3
MAKZ pmax pmax
comp=Z,12nm,1.0s
EPYK Eagle Plains 45.77 33 P P 03 22 38.4 +1.3
baz=279
KURK Kurchatov 45.89 304 eP P 03 22 38.6 +0.4
KURK Kurchatov 45.89 304 P P 03 22 38.0 -0.2
KURK IAmb IAmb 03 22 39.3
comp=Z,14nm,1.1s
KURK Kurchatov 45.89 304 ceP P 03 22 38.6 +0.4
KURK pmax pmax
comp=Z,16nm,1.3s
KURBB Kurchatov Arra 45.98 304 P P 03 22 38.9 +0.1
comp=Z,6.6nm,0.8s,baz=72,slow=9.0,SNR=36
KURBB pPcP 03 24 30.7
comp=Z,3.0nm,0.7s,baz=70,slow=3.5,SNR=7.6
LSA Lhasa 46.37 272 P P 03 22 44.1 +1.3
LSA Lhasa 46.37 272 P P 03 22 44.1 +1.3
LSA pmax pmax
comp=Z,5.0nm,0.8s
INK Inuvik 46.67 30 P P 03 22 45.3 +1.3
INK pmax pmax
comp=Z,27nm,0.8s
CMAR Chiang Mai Arr 47.57 254 pP pP 03 23 06.4 +2.3
comp=Z,1.8nm,0.3s,baz=40,slow=7.8,SNR=3.1
CMAR LR LR 03 42 42.8
comp=Z,53nm,18.6s,baz=46,slow=36
WHY Whitehorse 47.82 41 IAmb IAmb 03 22 55.9
comp=Z,6.3nm,0.8s
C36M Paulatuk 49.76 28 P P 03 23 08.5 +0.7
baz=287
BVAR Borovoye Array 49.88 310 P P 03 23 09.2 +0.2
comp=Z,1.5nm,0.3s,baz=101,slow=10,SNR=15
BVAR pPcP 03 24 43.7
comp=Z,2.9nm,0.7s,baz=140,slow=3.3,SNR=5.2
BRVK Borovoye 49.93 310 P P 03 23 09.5 +0.1
BRVK IAmb IAmb 03 23 10.7
comp=Z,5.3nm,0.8s
BRVK Borovoye 49.93 310 P P 03 23 09.5 +0.1
BRVK pmax pmax
comp=Z,5.0nm,0.8s
KBK Karagaybulak 51.37 296 P P 03 23 21.6 +1.0
SNR=8.8
USP Ospenovka 51.39 297 P P 03 23 21.7 +1.1
SNR=7.5
KZA Kyzart 51.44 295 P P 03 23 23.1 +1.7
SNR=5.8
AAK Ala-Archa 51.68 296 P P 03 23 23.3 +0.4
comp=Z,4.5nm,0.7s,baz=105,slow=4.5,SNR=9.7
AAK Ala-Archa 51.68 296 P P 03 23 23.7 +0.8
SNR=6.3
AAK Ala-Archa 51.68 296 eP P 03 23 24.2 +1.3
AAK Ala-Archa 51.68 296 P P 03 23 23.0 +0.1
AAK IAmb IAmb 03 23 25.1
comp=Z,6.6nm,0.8s
AAK Ala-Archa 51.68 296 ceP P 03 23 24.2 +1.3
AAK pmax pmax
comp=Z,15nm,1.7s
EKS2 Erkin-Say 52.14 296 P P 03 23 27.1 +0.9
SNR=6.8
KSH Kashi 52.16 292 P P 03 23 35.6 +9.1
KSH pmax pmax
comp=Z,33nm,0.9s
KSH pmax pmax
comp=Z,120nm,5.5s
AML Almayashu 52.44 296 P P 03 23 29.9 +1.0
SNR=5.6
KK31 Karatay Array 54.05 298 P P 03 23 40.6 +0.4
KK31 IAmb IAmb 03 23 41.4
comp=Z,10nm,0.8s
KK31 Karatay Array 54.05 298 i P P 03 23 39.5 -0.7
KKAR Karatay Array 54.05 298 P P 03 23 40.3 +0.1
KKAR Karatay Array 54.05 298 P P 03 23 40.3 +0.1
ARU Arti 54.75 317 P P 03 23 44.8 -0.3
comp=Z,2.9nm,0.2s,baz=41,slow=4.1,SNR=14
ARU Arti 54.75 317 eP P 03 23 45.2 +0.1
ARU Arti 54.75 317 P P 03 23 44.8 -0.3
ARU Arti 54.75 317 c iP P 03 23 44.8 -0.3
ARU 03 25 45.2
ARU S S 03 31 24.2 +2.4
ARU SS SS 03 35 07.0 +2.3
ARU pmax pmax
comp=Z,10.0nm,0.7s
SPA0 Spitsbergen Ar 55.21 349 eP P 03 23 46.8 -1.3
SPITS Spitsbergen Ar 55.21 349 P P 03 23 46.5 -1.6
comp=Z,2.3nm,0.4s,baz=79,slow=7.5,SNR=5.8
SPITS LR LR 03 49 56.2
comp=Z,31nm,18.2s,baz=90,slow=39
RES Resolute Bay 55.31 17 P P 03 23 48.5 -0.3

RES pmax pmax
comp=Z,33nm,0.8s
YKA Yellowknife Ar 56.05 34 P P 03 23 54.8 +0.5
comp=Z,7.3nm,0.6s,baz=297,slow=6.8,SNR=112
YKA pP pwP 03 24 09.5 -0.6
comp=Z,2.7nm,0.6s,baz=304,slow=7.5,SNR=6.1
NIL Nilore 57.06 287 P P 03 24 02.2 +0.2
NIL Nilore 57.06 287 P P 03 24 02.2 +0.2
NIL pmax pmax
comp=Z,15nm,0.7s
AB31 Akbulak array 57.44 309 eP P 03 24 04.8 +0.4
ABKAR Akbulak array 57.44 309 P P 03 24 04.6 +0.2
AKTO Aktyubinsk 57.92 311 P P 03 24 08.0 +0.2
comp=Z,3.9nm,0.6s,baz=129,slow=9.2,SNR=17
AKTO Aktyubinsk 57.92 311 i P P 03 24 06.5 -1.2
AKTO pmax pmax
comp=Z,7.0nm,0.7s
PRGR Permogore 57.99 327 eP P 03 24 06.9 -1.1
PRGR pmax pmax
comp=Z,16nm,0.6s
KIRV Kirov 58.01 322 P P 03 24 08.2 0.0
comp=Z,8.7nm,0.5s,baz=39,slow=0.2,SNR=6.0
APA Apatity 58.81 336 ⇑ iP P 03 24 12.4 -1.2
APA pmax pmax
comp=Z,7.0nm,0.9s
KBL Kabul 59.48 290 P P 03 24 18.7 -0.4
KBL IAmb IAmb 03 24 19.2
comp=Z,7.3nm,0.8s
KBL Kabul 59.48 290 P P 03 24 18.7 -0.4
KBL pmax pmax
comp=Z,7.0nm,0.9s
D03D Eldon 59.54 52 P P 03 24 20.1 +1.1
baz=302
ARCES ARCESS Array B 59.68 340 P P 03 24 19.5 -0.2
comp=Z,2.0nm,0.4s,baz=47,slow=6.8,SNR=71
ARE0 ARCESS Array S 59.68 340 eP P 03 24 19.6 -0.1
B05A Bryant 59.71 51 P P 03 24 20.9 +0.7
baz=302
DAG Danmarks Havn 59.83 356 i P P 03 24 20.0 -0.6
DAG Danmarks Havn 59.83 356 i P P 03 24 20.0 -0.6
D04E Lakebay 59.91 52 P P 03 24 22.4 +0.8
baz=303
E04D Cinebar 60.36 53 P P 03 24 25.7 +1.1
baz=303
KTK1 Kautokeino 60.62 340 eP P 03 24 25.9 -0.2
KLMR Klimovskoe 60.86 328 eP P 03 24 26.6 -1.3
KLMR AMP 03 24 28.7
comp=Z,29nm,1.4s
KLMR ePP PP 03 26 41.4 -0.4
KLMR Klimovskoe 60.86 328 eP P 03 24 26.5 -1.3
KLMR e 03 26 41.3
KLMR pmax pmax
comp=Z,29nm,1.4s
TRO Tromso 61.19 342 eP P 03 24 29.6 -0.3
B08A Colville Reser 61.21 49 IAmb IAmb 03 24 31.5
comp=Z,4.9nm,0.8s
I04A Tendick Farm, 61.98 55 P P 03 24 37.2 +1.4
baz=304
NEW Newport 62.48 49 P P 03 24 39.3 +0.3
NEW pmax pmax
comp=Z,7.0nm,0.9s
NEW Newport 62.48 49 P P 03 24 39.3 +0.3
baz=305
J04D Umpqua Nationa 62.48 55 P P 03 24 40.5 +1.2
baz=305
OUL Oulu 62.73 336 P P 03 24 40.3 0.0
OUL pmax pmax
comp=Z,24nm,3.0s
E09A Wood Farm, Sta 62.92 51 IAmb IAmb 03 24 43.7
comp=Z,19nm,1.6s
L04D Klamath Falls 62.95 57 P P 03 24 43.0 +0.6
baz=305
J05D Fort Rock, OR 62.98 55 P P 03 24 42.7 +0.2
baz=305
STEI Steigen 63.37 342 eP P 03 24 43.8 -0.6
N02D Trinity Center 63.42 58 P P 03 24 46.8 +1.4
baz=305
M04C Macdoel 63.48 57 P P 03 24 47.1 +1.2
baz=306
LOF Lofoten 63.59 342 eP P 03 24 45.2 -0.7
WALA Waterton Lakes 63.74 46 IAmb IAmb 03 24 49.0
comp=Z,5.2nm,0.9s
O02D Mt. Diablo Mer 63.83 59 P P 03 24 49.3 +1.2
baz=306
WRA Warramunga Arr 64.11 194 P P 03 24 50.0 +0.1
comp=Z,3.0nm,0.7s,baz=14,slow=6.9,SNR=9.3
WRA pP sP 03 25 06.4 -1.0
comp=Z,1.6nm,0.5s,baz=10.0,slow=6.7,SNR=4.5
WRA Warramunga Arr 64.11 194 P P 03 24 49.8 -0.1
HRA Herat 64.17 294 IAmb IAmb 03 24 52.2
comp=Z,8.3nm,0.7s
SUMG Summit 64.31 2 i P P 03 24 51.4 +0.3
comp=Z,69nm,0.6s
SUMG Summit 64.31 2 P P 03 24 51.4 +0.3
SUMG Summit 64.31 2 i P P 03 24 51.4 +0.3
SUMG pmax pmax
comp=Z,69nm,0.6s
SUF Sumiainen 64.36 334 P P 03 24 51.0 -0.1
SUF pmax pmax
comp=Z,32nm,0.7s
O03E Paynes Creek 64.37 58 P P 03 24 52.3 +0.6
baz=306
GEYT Alibeck 64.78 299 P P 03 24 54.8 +0.4
comp=Z,4.9nm,0.6s,baz=15,slow=6.3,SNR=6.3
GEYT LR LR 03 55 46.5
comp=Z,76nm,19.1s,baz=170,slow=38
GEYT Alibeck 64.78 299 P P 03 24 54.9 +0.6
GYA0B ALIBECK ARRAY 64.78 299 P P 03 24 54.3 0.0
GYA0B IAmb IAmb 03 24 55.6
comp=Z,7.8nm,0.8s
MOS Moscow 64.87 324 eP P 03 24 53.3 -1.2
MOS e 03 25 30.8
MOR8 Moi Rana 64.97 341 eP P 03 24 53.6 -1.4
MSO Missoula 65.06 48 P P 03 24 56.7 +0.6
baz=307,SNR=5.1
VAF Ylistaro 65.20 336 P P 03 24 56.9 +0.4
VAF pmax pmax
comp=Z,24nm,0.8s
FIA1 FINESS Array S 65.31 333 P P 03 24 57.2 -0.1
FINES FINESS Array B 65.31 333 P P 03 24 57.2 0.0
comp=Z,22nm,0.6s,baz=41,slow=8.0,SNR=150
FINES LR LR 03 55 00.3
comp=Z,34nm,19.7s,baz=36,slow=37
FINES FINESS Array B 65.31 333 P P 03 24 57.1 -0.2
FINES FINESS Array B 65.31 333 ceP P 03 24 57.0 -0.2
FINES pmax pmax
comp=Z,22nm,0.6s
BEKR Beckworth 65.51 58 P P 03 24 59.2 0.0
BEKR IAmb IAmb 03 25 14.5
comp=Z,6.3nm,0.8s
OBN Obninsk 65.74 324 P P 03 25 00.1 0.0
comp=Z,2.4nm,0.4s,baz=20,slow=6.4,SNR=6.1
OBN Obninsk 65.74 324 eP P 03 24 59.9 -0.2
OBN Obninsk 65.74 324 P P 03 25 00.1 0.0
OBN Obninsk 65.74 324 eP P 03 24 59.9 -0.2
OBN i *PP pP 03 25 13.2 +0.1
OBN pmax pmax
comp=Z,38nm,1.7s
FFC Flin Flon 65.93 36 P P 03 25 02.0 +0.6
FFC Flin Flon 65.93 36 P P 03 25 02.0 +0.6
FFC pmax pmax
comp=Z,16nm,0.9s
VRH Novokhopyorsk 65.93 318 eP P 03 25 00.7 -0.8
VRH pmax pmax
comp=Z,20nm,0.8s
FCC Fort Churchill 66.29 30 P P 03 25 03.2 -0.4
FCC IAmb IAmb 03 25 04.1
comp=Z,9.7nm,0.7s
FCC Fort Churchill 66.29 30 P P 03 25 03.2 -0.4
FCC pmax pmax
comp=Z,10.0nm,0.7s
EGMT Eagleton 66.56 46 IAmb IAmb 03 25 07.2
comp=Z,8.0nm,0.7s
EGMT Eagleton 66.56 46 P P 03 25 06.2 +0.5
baz=309,SNR=6.6
DLMT Dillon 66.70 49 IAmb IAmb 03 25 09.3
comp=Z,11nm,1.5s
YERR Yerington 66.74 58 IAmb IAmb 03 25 09.3
comp=Z,11nm,1.0s
MCMT McKenzie Canyo 66.90 50 P P 03 25 06.4 -1.7
NSS Namsos 66.92 341 eP P 03 25 07.3 -0.3
VSR Storozhevoye 67.15 320 eP P 03 25 09.0 -0.2
VSR pmax pmax
comp=Z,10.0nm,0.5s
VSU Vasula 67.27 331 eP P 03 25 10.3 +0.4
VSU Vasula 67.27 331 ceP P 03 25 10.5 +0.7

VSU pmax pmax
comp=Z,34nm,1.0s
KVN Kaiserville 67.40 57 IAmb IAmb 03 25 13.5
comp=Z,9.1nm,0.9s
KVN pwP 03 25 30.5 +2.8
RYN Ryan 67.40 58 IAmb IAmb 03 25 13.4
comp=Z,6.2nm,0.9s
RYN pwP 03 25 30.1 +2.3
NVAR Mina Array Bea 67.66 58 P **P** **03 25 14.0 +1.0**
comp=Z,5.7nm,0.7s,baz=286,slow=6.6,SNR=43
NVAR pP **pwP** **03 25 28.6 -0.8**
comp=Z,2.0nm,0.7s,baz=297,slow=7.0,SNR=4.0
NVAR Mina Array Bea 67.66 58 P **P** **03 25 13.6 +0.6**
ASAR Alice Springs 67.82 193 P **P** **03 25 15.1 +1.4**
comp=Z,1.2nm,0.6s,baz=11,slow=6.2,SNR=9.8
ASAR pP **pwP** **03 25 31.3 +1.1**
comp=Z,1.8nm,0.8s,baz=9.7,slow=6.3,SNR=3.5
ASAR LR LR 03 56 17.2
comp=Z,11nm,18.5s,baz=333,slow=37
ASAR Alice Springs 67.82 193 P **P** **03 25 14.6 +0.9**
ASAR Alice Springs 67.82 193 P **P** **03 25 14.6 +0.9**
H17A Grant Village 68.43 49 P **P** **03 25 18.7 +1.0**
H17A IAmb IAmb 03 25 21.3
comp=Z,8.1nm,1.1s
H17A Grant Village 68.43 49 P **P** **03 25 20.2 +2.4**
baz=310,SNR=5.6
RLMT Red Lodge 68.67 48 P **P** **03 25 20.0 +0.8**
baz=310
AKT Akhty 68.93 307 eP **P** **03 25 21.5 +0.7**
AKT e 03 25 44.0
AKT pmax pmax
comp=Z,11nm,0.8s
REDW Red Top Meadow 68.94 50 IAmb IAmb 03 25 23.4
comp=Z,13nm,1.5s
CWC Cottonwood Cre 69.03 59 P **P** **03 25 22.3 +0.7**
baz=309
GRAC Grapevine Rang 69.13 59 P **P** **03 25 23.2 +1.2**
baz=309,SNR=5.9
SBC Santa Barbara 69.24 62 P **P** **03 25 22.6 -0.1**
baz=309
LAO LASA Array 69.25 45 P **P** **03 25 23.3 +0.7**
baz=312
ISA Isabella, Lake 69.27 60 P **P** **03 25 22.9 0.0**
baz=309
R11A Troy Canyon, C 69.37 56 P **P** **03 25 24.3 +0.7**
baz=309,SNR=11
IZAR Zarasai 69.46 329 eP **P** **03 25 24.2 +0.6**
IZAR IAmb IAmb 03 25 24.9
comp=Z,8.7nm,0.5s
FRB Frobisher Bay 69.52 16 P **P** **03 25 23.5 -0.3**
FRB pmax pmax
comp=Z,20nm,0.8s
ISAL Salakas 69.64 329 eP **P** **03 25 25.1 +0.5**
MPMC Manual Prospec 69.64 59 P **P** **03 25 26.1 +0.8**
baz=309,SNR=6.7
DOMB Dombas 69.73 340 eP **P** **03 25 25.0 -0.2**
IIGN Ignalina 69.76 329 eP **P** **03 25 26.1 +0.6**
IIGN IAmb IAmb 03 25 27.1
comp=Z,14nm,0.6s
FURC Furnace Creek, 69.78 59 P **P** **03 25 27.0 +1.1**
baz=310
NC303 NORSAR Array S 69.84 339 eP **P** **03 25 25.8 -0.1**
DUG Dugway, Tooele 69.85 54 P **P** **03 25 26.6 +0.1**
DUG Dugway, Tooele 69.85 54 P **P** **03 25 26.6 +0.1**
DUG pmax pmax
comp=Z,6.0nm,1.1s
DUG Dugway, Tooele 69.85 54 P **P** **03 25 27.4 +0.9**
baz=310,SNR=5.2
TPNV Topopah Spring 69.85 58 IAmb IAmb 03 25 28.6
comp=Z,8.4nm,0.9s
TPNV Topopah Spring 69.85 58 P **P** **03 25 27.5 +0.9**
baz=310,SNR=7.7
NACGM Naroch 69.88 328 e **P** **03 25 25.0 -1.2**
NB2 NORSAR Subarra 70.04 339 P **P** **03 25 26.8 -0.4**
comp=Z,16nm,0.6s,baz=31,slow=6.5
NB2 NORSAR Subarra 70.04 339 P **P** **03 25 26.8 -0.4**
baz=31,slow=6.5
NOA NORSAR Array B 70.04 339 P **P** **03 25 27.3 +0.1**
comp=Z,25nm,0.6s,baz=32,slow=6.6,SNR=93
NOA pP **pwP** **03 25 43.2 +2.5**
comp=Z,3.5nm,0.6s,baz=32,slow=6.6,SNR=3.2
NOA LR LR 04 00 12.6
comp=Z,32nm,19.5s,baz=15,slow=39
BW06 Boulder Array 70.05 50 P **P** **03 25 28.0 +0.2**
baz=311
PDAR Pinedale Array 70.05 50 P **P** **03 25 28.1 +0.3**
comp=Z,1.9nm,0.6s,baz=332,slow=0.1,SNR=38
EDW2 Edwards Air Fo 70.07 61 P **P** **03 25 28.9 +1.1**
baz=310
AKN Aaknes 70.10 341 eP **P** **03 25 27.4 -0.1**
SNCC San Nicolas Is 70.11 63 P **P** **03 25 30.1 +2.1**
baz=309
HFS Hagfors 70.12 337 P **P** **03 25 27.5 -0.2**
comp=Z,29nm,0.6s,baz=46,slow=6.4,SNR=171
KIV Kislovodsk 70.15 312 ⇑P **P** **03 25 29.2 +1.0**
KIV Kislovodsk 70.15 312 eP **P** **03 25 29.3 +1.0**
KIV Kislovodsk 70.15 312 P **P** **03 25 28.9 +0.6**
KIV Kislovodsk 70.15 312 eP **P** **03 25 29.3 +1.0**
KIV pmax pmax
comp=Z,106nm,1.0s
KBZ Khabaz 70.19 312 P **P** **03 25 29.4 +1.1**
comp=Z,15nm,0.8s,baz=76,slow=2.6,SNR=36
KBZ LR LR 04 01 12.4
comp=Z,58nm,18.3s,baz=36,slow=40
KBZ Khabaz 70.19 312 eP **P** **03 25 28.5 +0.2**
KBZ Khabaz 70.19 312 iP **P** **03 25 28.5 +0.2**
KBZ pmax pmax
comp=Z,17nm,0.8s
NORES NORESS Array B 70.21 339 P **P** **03 25 27.7 -0.4**
NORES pmax pmax
comp=Z,1.0nm,0.3s
SHA1 Shidzhatmaz 70.31 312 iP **P** **03 25 29.2 -0.2**
TBLG Delisi 70.48 309 P **P** **03 25 30.5 +0.3**
TBLG Delisi 70.48 309 P **P** **03 25 30.5 +0.3**
TBLG pmax pmax
comp=Z,26nm,0.8s
PABE Paberze 70.49 330 eP **P** **03 25 30.1 +0.2**
GSC Goldstone, Bar 70.55 60 P **P** **03 25 32.0 +1.2**
baz=310
BFSC Mount Baldy Ra 70.69 61 P **P** **03 25 32.9 +1.2**
baz=310
SHPR Sheep Range 70.81 58 P **P** **03 25 33.1 +0.7**
SHPR IAmb IAmb 03 25 34.7
comp=Z,8.0nm,1.0s
PBUR Paburge 70.82 331 eP **P** **03 25 31.7 -0.2**
TUQ Turquoise Moun 71.02 59 P **P** **03 25 34.6 +0.9**
baz=310
SKAR Skarslia 71.09 340 eP **P** **03 25 34.2 +0.6**
HEC Hector,Ludlow 71.15 60 P **P** **03 25 35.4 +1.0**
baz=310
HYA Hoyanger 71.18 341 eP **P** **03 25 34.4 +0.5**
MURC Murrieta 71.39 61 P **P** **03 25 36.4 +0.5**
baz=310
RDMU Red Mountain 71.48 51 P **P** **03 25 37.4 +0.8**
GNI Garni 71.52 308 P **P** **03 25 37.6 +0.9**
comp=Z,5.9nm,0.7s,baz=28,slow=3.3,SNR=3.7
GNI Garni 71.52 308 IAmb IAmb 03 25 59.4
comp=Z,15nm,1.1s
GMRC Granite Mounta 71.60 59 P **P** **03 25 38.0 +0.7**
baz=310,SNR=5.1
KONO Kongsberg 71.65 339 eP **P** **03 25 36.7 -0.2**
ULM Lac du Bonnet 71.72 37 P **P** **03 25 37.3 -0.2**
comp=Z,4.2nm,0.6s,baz=314,slow=7.0,SNR=11
K22A Casper 71.79 48 IAmb IAmb 03 25 39.8
comp=Z,6.0nm,0.8s
K22A Casper 71.79 48 P **P** **03 25 38.7 +0.4**
baz=313
PFO Pinyon Flats O 71.85 61 P **P** **03 25 39.9 +1.1**
baz=310
BELC Belle Mtn. Jos 71.90 60 P **P** **03 25 39.5 +0.4**
baz=310
SUW Suwalki 71.93 329 P **P** **03 25 38.8 +0.1**
SUW Suwalki 71.93 329 P **P** **03 25 38.8 +0.1**
SUW pmax pmax
comp=Z,22nm,1.0s
SOC Sochi 72.00 313 eP **P** **03 25 38.5 -0.8**
SOC e 03 28 26.3
SOC ePPP PPP 03 30 04.0
SOC eS **S** **03 34 55.8 -1.2**
SOC eSS **SS** **03 39 34.7 +1.2**
SOC pmax pmax
comp=Z,10.0nm,0.5s
AKASG Malin Array Be 72.00 324 P **P** **03 25 39.1 0.0**
comp=Z,16nm,0.7s,baz=40,slow=6.4,SNR=56
AKASG pP **pwP** **03 25 55.4 +0.6**
comp=Z,2.2nm,0.5s,baz=41,slow=6.3,SNR=3.3

AKASG Malin Array Be 72.00 324 P **P** **03 25 39.4 +0.3**
AKASG Malin Array Be 72.00 324 ceP **P** **03 25 39.0 -0.1**
AKASG pmax pmax
comp=Z,17nm,0.7s
BER Bergen 72.06 341 eP **P** **03 25 40.1 +0.8**
RSSD Black Hills 72.12 46 P **P** **03 25 40.2 -0.1**
RSSD IAmb IAmb 03 25 41.4
comp=Z,20nm,1.6s
RSSD Black Hills 72.12 46 P **P** **03 25 40.2 -0.1**
RSSD pmax pmax
comp=Z,20nm,1.7s
RSSD Black Hills 72.12 46 P **P** **03 25 40.3 -0.1**
baz=314
ODD1 Odda 72.17 340 eP **P** **03 25 40.8 +0.7**
IRM Iron Mountain 72.33 60 P **P** **03 25 42.3 +0.8**
baz=311,SNR=5.3
BC3 Big Chuckawall 72.46 60 P **P** **03 25 43.2 +0.8**
baz=311
O20A White River Ci 72.53 51 P **P** **03 25 43.1 +0.3**
baz=312
U15A North Rim 72.61 56 IAmb IAmb 03 25 45.8
comp=Z,6.3nm,0.8s
BLS5 Blasjo 72.64 340 eP **P** **03 25 43.2 +0.4**
IKP In-Ko-Pah, Jac 72.70 61 P **P** **03 25 45.2 +1.4**
baz=311
PDMCI Parker Dam,Lak 72.87 59 P **P** **03 25 45.7 +1.1**
baz=311
Y12C Blythe 72.99 60 IAmb IAmb 03 25 47.3
comp=Z,8.8nm,0.9s
Y12C Blythe 72.99 60 P **P** **03 25 46.4 +1.1**
baz=311
GLA Glamis 73.25 60 P **P** **03 25 48.1 +1.2**
baz=311
N23A Red Feather La 73.31 49 P **P** **03 25 48.0 +0.6**
baz=313
SNART Snartemo 73.40 339 eP **P** **03 25 47.8 +0.5**
WUAZ Wupatki 73.77 56 P **P** **03 25 51.3 +1.2**
baz=312
SMCO Snowmass 73.90 51 P **P** **03 25 51.0 -0.2**
ISCO Idaho Springs 74.24 50 P **P** **03 25 54.4 +1.4**
ISCO Idaho Springs 74.24 50 P **P** **03 25 53.4 +0.4**
baz=314
SORM Soroca 74.29 323 ⇓P **P** **03 25 52.5 -0.2**
SORM Soroca 74.29 323 P **P** **03 25 52.5 -0.2**
MVCO Mesa Verde 74.35 54 P **P** **03 25 54.2 +0.6**
baz=313
X16A Lo Mia Camp, P 74.47 57 IAmb IAmb 03 25 56.6
comp=Z,5.7nm,0.8s
LVV L'vov 74.85 326 eP **P** **03 25 56.6 +0.7**
S22A 4UR Ranch, Cre 74.96 52 P **P** **03 25 58.0 +0.9**
baz=314
MILM Milestii Mici 75.00 321 ⇑P **P** **03 25 56.7 -0.1**
Q24A Divide 75.08 50 P **P** **03 25 58.7 +0.9**
baz=314
214A Organ Pipe Nat 75.25 60 P **P** **03 25 59.7 +1.1**
baz=312
EYMN Ely 75.36 36 P **P** **03 25 58.6 -0.3**
baz=320
OGNE Ogallala 75.40 47 P **P** **03 25 59.8 +0.4**
baz=315
KWP Kalwaria Pacla 75.53 326 eP **P** **03 26 01.2 +1.3**
KWP Kalwaria Pacla 75.53 326 eP **P** **03 26 01.2 +1.3**
LEOM Leova 75.59 321 ⇓P **P** **03 26 00.4 +0.2**
LEOM Leova 75.59 321 P **P** **03 26 00.4 +0.2**
SDCO Great Sand Dun 75.72 51 P **P** **03 26 02.1 +0.5**
baz=314
FORT Forrest 75.86 197 P **P** **03 26 02.3 +0.5**
BIR Birlad 76.02 322 ⇓P **P** **03 26 04.2 +1.5**
BIR Birlad 76.02 322 P **P** **03 26 04.2 +1.5**
BUR08 Bucovina Ar. S 76.04 324 IAmb IAmb 03 26 04.3
comp=Z,9.0nm,0.8s
BURAR Bucovina Array 76.06 324 ⇓P **P** **03 26 03.1 0.0**
BURAR Bucovina Array 76.06 324 P **P** **03 26 03.3 +0.2**
BURAR Bucovina Array 76.06 324 P **P** **03 26 03.0 0.0**
ECSD EROS Data Cent 76.16 42 IAmb IAmb 03 26 04.7
comp=Z,13nm,1.4s
ECSD EROS Data Cent 76.16 42 P **P** **03 26 03.6 0.0**
baz=318
OJC Ojcow 76.21 328 eP **P** **03 26 04.5 +0.8**
OJC Ojcow 76.21 328 P **P** **03 26 04.2 +0.5**
OJC Ojcow 76.21 328 eP **P** **03 26 04.5 +0.8**
KOLS Kolonicke sedl 76.26 326 eP **P** **03 26 04.6 +0.6**
KOLS pmax pmax
comp=Z,11nm,1.2s
KOLS Kolonicke sedl 76.26 326 eP **P** **03 26 04.6 +0.6**
TESR Tescani 76.28 322 ⇑P **P** **03 26 04.5 +0.3**
TUC Tucson 76.29 59 P **P** **03 26 05.5 +0.9**
TUC Tucson 76.29 59 P **P** **03 26 05.5 +0.9**
TUC Tucson 76.29 59 P **P** **03 26 05.5 +0.9**
baz=313
TLCR 76.29 320 ⇓P **P** **03 26 04.6 +0.3**
E38A The Farm, Brul 76.36 37 IAmb IAmb 03 26 05.1
comp=Z,11nm,0.8s
KSCO Kaye Shedlock' 76.44 49 P **P** **03 26 05.7 +0.2**
baz=315
JURR Jurilovca 76.58 320 ⇑P **P** **03 26 05.7 -0.1**
CRVS Cervenica-Dubn 76.61 327 eP **P** **03 26 06.4 +0.4**
CRVS pmax pmax
comp=Z,11nm,0.9s
CRVS Cervenica-Dubn 76.61 327 eP **P** **03 26 06.4 +0.4**
NIE Niedzica 76.66 328 eP **P** **03 26 07.1 +0.8**
NIE Niedzica 76.66 328 eP **P** **03 26 07.1 +0.8**
ODBI Odobesti 76.67 322 ⇓P **P** **03 26 07.8 +1.4**
TOPG Topolog 76.73 320 ⇑P **P** **03 26 07.4 +0.7**
VRI Vrincioaia 76.73 322 ⇑P **P** **03 26 07.6 +0.8**
VRI Vrincioaia 76.73 322 P **P** **03 26 07.9 +1.1**
VRI pmax pmax
comp=Z,9.0nm,1.0s
T25A Trinidad 76.77 51 P **P** **03 26 08.3 +0.9**
baz=315
ARCR ARCALIA 76.84 324 ⇑P **P** **03 26 08.2 +0.9**
SPMN Marine on St. 76.85 39 P **P** **03 26 07.4 -0.1**
baz=320
ILGA Ilgaz 76.93 315 P **P** **03 26 09.3 +1.0**
ILGA IAmb IAmb 03 26 10.9
comp=Z,14nm,0.9s
OZUR 76.98 323 ⇑P **P** **03 26 09.4 +1.2**
KSP Ksiaz 77.00 331 eP **P** **03 26 08.9 +0.8**
KSP Ksiaz 77.00 331 eP **P** **03 26 08.9 +0.8**
TIRR Tirgusor 77.03 320 ⇑P **P** **03 26 08.7 +0.3**
TIRR Tirgusor 77.03 320 P **P** **03 26 08.7 +0.3**
ANMO Albuquerque 77.11 54 P **P** **03 26 09.3 0.0**
ANMO Albuquerque 77.11 54 P **P** **03 26 09.3 0.0**
ANMO pmax pmax
comp=Z,3.0nm,1.0s
ANMO Albuquerque 77.11 54 P **P** **03 26 10.5 +1.2**
baz=314
OKC Ostrava-Krasne 77.14 329 eP **P** **03 26 07.3 -1.7**
OKC Ostrava-Krasne 77.14 329 eP **P** **03 26 07.3 -1.7**
DOPR Dopca 77.25 323 ⇑P **P** **03 26 10.9 +1.2**
OSTC Ostas 77.26 331 eP **P** **03 26 10.4 +0.7**
CHVC Chvalec 77.29 331 eP **P** **03 26 10.8 +0.9**
MLR Muntele Rosu 77.38 322 P **P** **03 26 11.1 +0.6**
comp=Z,5.4nm,0.7s,baz=243,slow=4.5,SNR=3.3
MLR Muntele Rosu 77.38 322 ⇑P **P** **03 26 10.4 -0.2**
UPC Upice 77.38 331 eP **P** **03 26 11.1 +0.8**
UPC Upice 77.38 331 eP **P** **03 26 11.1 +0.8**
DPC Dobruska-Polom 77.39 330 eP **P** **03 26 10.9 +0.4**
DPC Dobruska-Polom 77.39 330 eP **P** **03 26 10.9 +0.4**
MORC Moravsky Berou 77.42 329 eP **P** **03 26 11.0 +0.4**
MORC Moravsky Berou 77.42 329 ⇓P **P** **03 26 11.7 +1.1**
MORC Moravsky Berou 77.42 329 IAmb IAmb 03 26 12.3
comp=Z,8.1nm,0.9s
MORC Moravsky Berou 77.42 329 P **P** **03 26 11.4 +0.8**
MORC pmax pmax
comp=Z,9.0nm,1.0s
ICOR Ion Corvin 77.58 320 ⇓P **P** **03 26 12.3 +0.8**
CLL Collm 77.75 333 iP **P** **03 26 12.1 -0.2**
comp=Z,15nm,0.7s
CLL epP **pP** **03 26 27.0 +1.4**
CLL e 03 26 31.0
CLL ePP **PP** **03 29 04.0 -3.4**
CLL Collm 77.75 333 P **P** **03 26 12.3 0.0**
CLL Collm 77.75 333 iP **P** **03 26 12.1 -0.2**
CLL e*SP **sP** **03 26 31.0 +0.2**
CLL pmax pmax
comp=Z,15nm,0.7s
DRGR 77.77 325 ⇑P **P** **03 26 13.2 +0.5**
DRGR 77.77 325 P **P** **03 26 13.1 +0.5**
BRG Berggiesshubel 77.80 332 eP **P** **03 26 13.0 +0.4**
BRG pmax pmax
comp=Z,8.0nm,1.2s
VOIR 77.82 323 ⇓P **P** **03 26 14.1 +1.2**
VOIR 77.82 323 P **P** **03 26 14.2 +1.2**

VOIR pmax pmax
comp=Z,11nm,0.9s
319A Douglas 77.86 58 P **P** **03 26 14.2 +0.7**
319A IAmb IAmb 03 26 15.6
comp=Z,12nm,1.0s
PVCC Panska Ves 77.87 331 P **P** **03 26 14.0 +1.0**
PVCC pmax pmax
comp=Z,5.0nm,0.6s
BRTR Keskin Array B 77.94 314 P **P** **03 26 14.1 +0.3**
comp=Z,2.5nm,0.6s,baz=84,slow=3.6,SNR=9.0
BRTR Keskin Array B 77.94 314 P **P** **03 26 13.8 0.0**
BRTR Keskin Array B 77.94 314 ceP **P** **03 26 14.3 +0.5**
BRTR pmax pmax
comp=Z,3.0nm,0.6s
SCHQ Schefferville 77.95 19 P **P** **03 26 13.5 +0.1**
comp=Z,6.6nm,0.7s,baz=345,slow=4.3,SNR=16
SCHQ Schefferville 77.95 19 IAmb IAmb 03 26 14.6
comp=Z,8.1nm,0.9s
VYHS Vyhne 77.97 328 eP **P** **03 26 14.4 +0.7**
VYHS pmax pmax
comp=Z,10.0nm,1.3s
VYHS Vyhne 77.97 328 eP **P** **03 26 14.4 +0.7**
121A Cookes Peak, D 77.98 57 IAmb IAmb 03 26 16.6
comp=Z,6.6nm,0.8s
121A Cookes Peak, D 77.98 57 P **P** **03 26 15.4 +1.2**
baz=314
G40A Rib Lake 77.99 38 P **P** **03 26 13.6 -0.2**
G40A IAmb IAmb 03 26 13.7
comp=Z,11nm,1.1s
PSZ Piszkesteto 78.02 327 P **P** **03 26 13.2 -0.9**
PSZ IAmb IAmb 03 26 15.8
comp=Z,12nm,1.2s
PSZ Piszkesteto 78.02 327 P **P** **03 26 13.2 -0.9**
PSZ pmax pmax
comp=Z,12nm,1.2s
ARR Arges 78.06 323 ⇑P **P** **03 26 15.5 +1.3**
JAVC Velka Javorina 78.12 329 eP **P** **03 26 16.1 +1.6**
CBKS Cedar Bluff 78.15 47 P **P** **03 26 14.1 -0.8**
CBKS IAmb IAmb 03 26 15.4
comp=Z,6.9nm,1.0s
CBKS Cedar Bluff 78.15 47 P **P** **03 26 14.1 -0.8**
CBKS pmax pmax
comp=Z,7.0nm,1.0s
CBKS Cedar Bluff 78.15 47 P **P** **03 26 14.5 -0.4**
baz=317
VRAC Vranov 78.16 330 eP **P** **03 26 15.2 +0.5**
VRAC Vranov 78.16 330 P **P** **03 26 14.8 +0.2**
comp=Z,5.8nm,0.9s,baz=12,slow=4.2,SNR=6.2
VRAC Vranov 78.16 330 ⇑P **P** **03 26 15.5 +0.9**
ANTO Ankara 78.28 314 P **P** **03 26 16.3 +0.7**
ANTO Ankara 78.28 314 P **P** **03 26 16.3 +0.7**
ANTO pmax pmax
comp=Z,16nm,0.7s
GOPC GO Pecny, Ondr 78.31 331 eP **P** **03 26 16.1 +0.6**
GOPC GO Pecny, Ondr 78.31 331 eP **P** **03 26 16.1 +0.6**
PRU Pruhonice 78.33 331 eP **P** **03 26 16.1 +0.5**
PRU Pruhonice 78.33 331 eP **P** **03 26 16.1 +0.5**
KRUC Moravsky 78.43 330 eP **P** **03 26 16.7 +0.5**
KRUC Moravsky 78.43 330 P **P** **03 26 17.0 +0.8**
KRUC pmax pmax
comp=Z,13nm,1.0s
SMOL Smolenice 78.50 329 eP **P** **03 26 17.7 +1.1**
SMOL pmax pmax
comp=Z,3.0nm,0.8s
SMOL Smolenice 78.50 329 eP **P** **03 26 17.7 +1.1**
EKA Eskdalemuir Ar 78.56 343 P **P** **03 26 17.0 +0.3**
comp=Z,5.5nm,0.6s,baz=26,slow=5.5,SNR=27
EKA Eskdalemuir Ar 78.56 343 P **P** **03 26 17.0 +0.3**
TREC Trest 78.57 330 P **P** **03 26 17.6 +0.6**
TREC pmax pmax
comp=Z,3.0nm,1.6s
MODS Modra-Piesok 78.67 329 eP **P** **03 26 17.8 +0.3**
MODS Modra-Piesok 78.67 329 eP **P** **03 26 17.8 +0.3**
NKC Novy Kostel 78.85 332 eP **P** **03 26 19.2 +0.7**
NKC Novy Kostel 78.85 332 eP **P** **03 26 19.2 +0.7**
BZS Buzias 79.16 325 P **P** **03 26 20.7 +0.5**
BZS pmax pmax
comp=Z,7.0nm,1.9s
MATQ Matagami 79.27 28 P **P** **03 26 20.6 -0.2**
baz=328
D46A Sault St. Mari 79.30 33 P **P** **03 26 20.3 -0.7**
baz=325
KHC Kasperske Hory 79.39 331 eP **P** **03 26 22.1 +0.6**
KHC epP **pP** **03 26 36.2 +1.4**
KHC Kasperske Hory 79.39 331 eP **P** **03 26 22.1 +0.6**
KHC e 03 26 36.2
CONA Conrad Observa 79.57 329 eP **P** **03 26 23.0 +0.5**
comp=Z,3.6nm,0.7s
GERES GERESS Array B 79.59 331 P **P** **03 26 22.7 +0.1**
comp=Z,1.1nm,0.6s,baz=37,slow=5.7,SNR=10
GERES GERESS Array B 79.59 331 P **P** **03 26 22.6 0.0**
KSU1 Kansas State U 79.59 45 P **P** **03 26 22.2 -0.6**
baz=318
WET Wettzell 79.62 332 P **P** **03 26 23.0 +0.3**
WET pmax pmax
comp=Z,12nm,1.9s
JFWS Jewell Farm 79.80 39 P **P** **03 26 23.1 -0.7**
baz=321
D48A Paudash Townsh 79.94 32 P **P** **03 26 23.6 -0.8**
baz=326
E47A Iron Bridge 79.96 33 P **P** **03 26 23.8 -0.8**
baz=325
MNTX Cornudas Mount 80.02 56 P **P** **03 26 26.1 +0.9**
baz=315
LSQQ Lebel-sur-Quev 80.09 28 P **P** **03 26 25.0 -0.2**
baz=329
E48A Lockeyer 80.37 32 P **P** **03 26 25.2 -1.6**
baz=326
MEM Membach 80.56 336 P **P** **03 26 27.4 -0.2**
BSTI Sart Tilman 80.71 336 pP pP 03 26 41.4 -0.5
H46A Fife Lake 80.73 35 P **P** **03 26 28.5 -0.3**
baz=324
F48A Evansville 80.73 33 P **P** **03 26 28.2 -0.6**
baz=326
VLDQ Val d'Or 80.74 29 IAmb IAmb 03 26 28.9
comp=Z,8.5nm,1.0s
VTS Vitosha 80.84 322 ⇑P **P** **03 26 30.3 +0.8**
VTS Vitosha 80.84 322 P **P** **03 26 30.0 +0.4**
VTS Vitosha 80.84 322 P **P** **03 26 30.0 +0.4**
VTS pmax pmax
comp=Z,39nm,0.5s
SOKA Soboth 80.93 329 eP **P** **03 26 30.1 +0.2**
comp=Z,3.5nm,0.6s
F49A Sandfield 81.02 33 P **P** **03 26 29.7 -0.5**
baz=326
KBA Koelnbreinsper 81.21 330 eP **P** **03 26 32.8 +1.3**
comp=Z,6.0nm,1.0s
KBA Koelnbreinsper 81.21 330 P **P** **03 26 32.3 +0.8**
KBA pmax pmax
comp=Z,11nm,0.8s
D52A ZEK Kipawa Sen 81.37 30 P **P** **03 26 31.6 -0.5**
baz=328
MYKA Terra Mystica 81.48 330 P **P** **03 26 33.1 +0.3**
comp=Z,1.5nm,0.5s
D53A Lac Vacive, Po 81.53 29 P **P** **03 26 32.8 -0.2**
baz=329
WATA Walderalm 81.62 331 eP **P** **03 26 34.0 +0.4**
comp=Z,2.3nm,0.5s
WMOK Wichita Mounta 81.66 50 P **P** **03 26 34.1 +0.2**
baz=318
WTTA Wattenberg 81.66 331 P **P** **03 26 34.4 +0.5**
comp=Z,2.8nm,0.5s
F51A Arnstein 81.70 31 P **P** **03 26 33.2 -0.6**
baz=327
MOTA Moosalm 81.78 332 eP **P** **03 26 34.7 +0.3**
comp=Z,8.6nm,0.9s
D54A Lac Fusel, La 81.84 29 P **P** **03 26 34.0 -0.6**
baz=329
SQTA Sankt Quirin 81.85 332 P **P** **03 26 35.3 +0.5**
comp=Z,2.4nm,0.6s
MMAI Mount Meron Ar 81.86 308 P **P** **03 26 36.4 +1.3**
comp=Z,10.0nm,0.7s,baz=40,slow=6.6,SNR=28
MMAI pP **pP** **03 26 49.9 +1.2**
comp=Z,5.3nm,0.8s,baz=52,slow=8.6,SNR=5.2
PLE Pljevlja 81.95 324 P **P** **03 26 36.5 +1.1**
F52A Sundridge 82.03 31 P **P** **03 26 35.0 -0.6**
baz=328
E53A Dumoine, Ponti 82.15 30 P **P** **03 26 35.1 -1.1**
baz=329
I49A Point Hope 82.21 34 P **P** **03 26 36.2 -0.4**
baz=326
DAVA Damuels 82.25 332 P **P** **03 26 37.8 +0.9**
comp=Z,2.5nm,0.6s
L46A Eue Claire 82.30 37 P **P** **03 26 36.8 -0.2**
baz=324
D55A Sainte-Anne-du 82.37 28 P **P** **03 26 36.9 -0.4**

	baz=330						
TUL1	Leonard	82.41	47	P	P	03 26 37.7	-0.1
	baz=319						
J49A	Marlette	82.56	35	P	P	03 26 38.9	+0.5
	baz=326						
D56A	ZEC Mazanza, M	82.58	28	P	P	03 26 38.3	-0.2
	baz=330						
K48A	Perry	82.60	36	P	P	03 26 38.4	-0.2
	baz=325						
DAVOX	Davos/Dischmat	82.69	332	P	P	03 26 39.8	+0.6
	comp=Z,2.0nm,0.5s,baz=45,slow=4.3						
ABTX	Abilene, Hawle	82.73	52	P	P	03 26 41.2	+1.7
	baz=318						
TX31	Lajitas Ar. Si	82.74	56	IAmb	IAmb	03 26 41.1	
	comp=Z,6.2nm,0.7s						
TX32	Lajitas Array	82.74	56	IAmb	IAmb	03 26 41.1	
	comp=Z,6.3nm,0.7s						
TXAR	Lajitas Array	82.74	56	P	P	03 26 40.6	+0.9
	comp=Z,6.1nm,0.7s,baz=299,slow=3.9,SNR=51						
TXAR				pP	pwP	03 26 55.0	-1.4
	comp=Z,2.7nm,0.7s,baz=291,slow=3.9,SNR=6.7						
TXAR	Lajitas Array	82.74	56	P	P	03 26 39.6	-0.1
TXAR	Lajitas Array	82.74	56	P	P	03 26 39.6	-0.1
TXAR				*PP	pwP	03 26 55.0	-1.4
L47A	Sherwood	82.81	37	P	P	03 26 39.6	-0.2
	baz=324						
D57A	Chemin Vers le	82.90	27	P	P	03 26 40.5	+0.3
	baz=331						
E56A	St. Veronique	82.93	28	P	P	03 26 40.0	-0.3
	baz=330						
LATQ	La Tuque	82.94	26	P	P	03 26 40.0	-0.3
	baz=332						
HHAR	Hobbs	83.11	46	P	P	03 26 41.5	+0.1
CCM	Cathedral Cave	83.11	43	P	P	03 26 41.6	+0.3
	baz=321						
D58A	Chemin du LacG	83.16	26	P	P	03 26 40.5	-1.0
	baz=332						
L48A	N Adams	83.17	36	P	P	03 26 41.8	+0.2
	baz=325						
HPIG		83.21	59	P	P	03 26 42.6	+0.2
HPIG				IAmb	IAmb	03 26 44.8	
	comp=Z,4.9nm,0.8s						
SFIN	Lafayette	83.25	39	P	P	03 26 41.8	-0.2
	baz=323						
L49A	Milan	83.32	36	P	P	03 26 42.2	-0.1
	baz=325						
E57A	Chemin Saint G	83.34	28	P	P	03 26 42.7	+0.2
	baz=331						
G55A	Calabogie	83.45	30	P	P	03 26 42.5	-0.5
	baz=329						
N47A	Urbana	83.48	38	P	P	03 26 42.6	-0.6
	baz=324						
U40A	Yellville	83.61	45	IAmb	IAmb	03 26 45.7	
	comp=Z,22nm,1.4s						
U40A	Yellville	83.61	45	P	P	03 26 43.9	-0.1
	baz=320						
E58A	La Victoria	83.67	27	P	P	03 26 44.0	-0.1
	baz=332						
M49A	Liberty Center	83.75	36	P	P	03 26 44.2	-0.3
	baz=325						
L50A	Kingsville	83.78	35	P	P	03 26 44.6	-0.1
	baz=326						
N48A	Decatur	83.79	37	P	P	03 26 44.4	-0.4
	baz=325						
D60A	Saint Jean D'O	83.95	25	P	P	03 26 45.3	-0.1
	baz=333						
W39A	Magazine	84.02	46	P	P	03 26 46.3	+0.3
	baz=320						
N49A	Columbus Grove	84.11	37	P	P	03 26 46.3	-0.1
	baz=325						
G57A	Newington	84.20	29	P	P	03 26 46.2	-0.5
	baz=330						
JCT	Junction City	84.21	53	IAmb	IAmb	03 26 48.6	
	comp=Z,13nm,0.8s						
JCT	Junction City	84.21	53	P	P	03 26 47.8	+0.6
	baz=318						
O48A	Farmland	84.23	38	P	P	03 26 47.1	0.0
	baz=324						
E60A	Ste Agathe de	84.27	26	P	P	03 26 46.8	-0.3
	baz=333						
F59A	Saint Guilaume	84.29	27	P	P	03 26 47.0	-0.2
	baz=332						
D62A	Allapoint, All	84.37	24	P	P	03 26 47.7	+0.1
	baz=334						
S44A	Carbondale	84.37	42	IAmb	IAmb	03 26 49.0	
	comp=Z,11nm,0.8s						
G58A	Ormstown	84.48	28	P	P	03 26 48.2	0.0
	baz=331						
E61A	Lac Etchemin	84.51	25	P	P	03 26 48.0	-0.4
	baz=333						
H57A	Richville	84.61	29	P	P	03 26 48.3	-0.6
	baz=330						
MIAR	Mount Ida	84.62	46	IAmb	IAmb	03 26 51.1	
	comp=Z,7.8nm,0.9s						
MIAR	Mount Ida	84.62	46	P	P	03 26 49.8	+0.6
MIAR				pmax	pmax		
	comp=Z,15nm,1.0s						
MIAR	Mount Ida	84.62	46	P	P	03 26 49.6	+0.5
	baz=320						
O49A	Covington	84.64	37	P	P	03 26 48.9	-0.3
	baz=325						
N50A	Nevada	84.68	36	P	P	03 26 49.6	+0.3
	baz=326						
WHAR	Wooly Hollow	84.73	45	IAmb	IAmb	03 26 50.7	
	comp=Z,12nm,1.1s						
F61A	St Evariste	84.76	26	P	P	03 26 50.1	+0.4
	baz=333						
MURB	Monte Urbino	84.77	329	P	P	03 26 50.6	+0.9
M52A	Chesterland	84.80	35	P	P	03 26 50.1	+0.2
	baz=327						
W41B	Gary Mavity, V	84.84	45	P	P	03 26 50.3	+0.2
	baz=321						
N51A	Ashland	84.89	35	P	P	03 26 50.0	-0.4
	baz=326						
L53A	Girard	84.90	34	P	P	03 26 50.6	+0.2
	baz=327						
NRCA	Norcia	84.91	328	P	P	03 26 50.7	+0.2
O50A	Cable	84.99	37	P	P	03 26 51.2	+0.3
	baz=325						
P49A	Miami Univ. Ec	85.01	38	P	P	03 26 51.1	+0.1
	baz=325						
X40A	Basin Creek Fa	85.06	46	P	P	03 26 52.3	+0.9
	baz=321						
H58A	Gabriels	85.08	28	P	P	03 26 51.8	+0.5
	baz=331						
M53A	WI Miller and	85.17	34	P	P	03 26 51.9	+0.2
	baz=327						
G61A	St-Isidore-de-	85.21	26	P	P	03 26 52.2	+0.3
	baz=333						
E64A	Bridgewater	85.33	24	P	P	03 26 51.5	-0.9
	baz=335						
WCI	Wyandotte Cave	85.35	40	P	P	03 26 53.1	+0.4
	baz=324						
P50A	Jamestown	85.36	37	P	P	03 26 52.4	-0.3
	baz=325						
Q49A	Aurora	85.36	38	P	P	03 26 53.0	+0.3
	baz=325						
O51A	Pataskala	85.43	36	P	P	03 26 52.9	-0.2
	baz=326						
M54A	Oil Creek Stat	85.52	33	P	P	03 26 53.8	+0.3
	baz=328						
G62A	West of Eustis	85.58	26	P	P	03 26 54.3	+0.6
	baz=333						
F63A	Nahmakanta, Br	85.59	25	P	P	03 26 54.5	+0.7
	baz=334						
N53A	Lisbon	85.63	35	P	P	03 26 54.6	+0.6
	baz=327						
K57A	Scipio Center	85.70	31	P	P	03 26 55.0	+0.6
	baz=330						
H61A	Lyndonville	85.74	27	P	P	03 26 54.2	-0.4
	baz=332						
N54A	Moraine State	85.85	34	P	P	03 26 55.4	+0.2
	baz=328						
M55A	Ridgway	85.91	33	P	P	03 26 55.5	0.0
	baz=328						
O53A	New Philadelph	85.94	35	P	P	03 26 56.1	+0.5
	baz=327						
H62A	Milan	85.96	27	P	P	03 26 56.2	+0.6
	baz=333						
LBNH	Lisbon	86.00	27	P	P	03 26 56.1	+0.3
	baz=332						
Q51A	Peebles	86.03	37	P	P	03 26 56.6	+0.5
	baz=326						
M56A	Emporium	86.13	33	P	P	03 26 56.3	-0.2
	baz=329						
S49A	Springfield	86.17	39	P	P	03 26 57.0	+0.2
	baz=325						
K59A	Cooperstown	86.27	30	P	P	03 26 57.0	-0.3
	baz=331						
WVT	Waverly	86.30	42	P	P	03 26 57.7	+0.2
	baz=323						
O54A	Avella	86.34	35	P	P	03 26 57.8	+0.2
	baz=327						
N55A	Marion Center	86.41	33	P	P	03 26 58.0	0.0
	baz=328						
P53A	Whipple	86.50	36	P	P	03 26 58.8	+0.4
	baz=327						
L58A	Harry Jones Me	86.54	31	P	P	03 26 58.9	+0.3
	baz=330						
N56A	West Decatur	86.56	33	P	P	03 26 59.0	+0.3
	baz=329						
T49A	Edmonton	86.61	40	P	P	03 26 59.4	+0.4
	baz=324						
M57A	Sunshine Farm,	86.66	32	P	P	03 26 59.5	+0.3
	baz=329						
S50A	Richmond	86.67	39	P	P	03 26 59.9	+0.7
	baz=325						
P54A	Burton	86.79	35	P	P	03 27 00.4	+0.6
	baz=327						
OXF	Oxford	86.81	44	P	P	03 27 00.5	+0.6
	baz=322						
M58A	Price's Panora	86.89	31	P	P	03 27 00.5	+0.2
	baz=330						
Q53A	Leroy	86.97	36	P	P	03 27 01.0	+0.3
	baz=327						
SSPA	Standing Stone	86.97	33	P	P	03 27 01.0	+0.3
	baz=329						
U49A	Red Boiling Sp	86.98	40	P	P	03 27 01.3	+0.5
	baz=324						
N57A	Milroy	87.00	32	P	P	03 27 01.0	+0.2
	baz=329						
T50A	Nancy	87.00	39	P	P	03 27 01.3	+0.4
	baz=325						
O56A	Blue Knob Stat	87.01	33	P	P	03 27 01.4	+0.5
	baz=328						
P55A	Reedsville	87.14	35	P	P	03 27 02.1	+0.5
	baz=328						
Q54A	Coxs Mills	87.16	36	P	P	03 27 01.7	+0.1
	baz=327						
L60A	Shokan	87.18	30	P	P	03 27 02.0	+0.3
	baz=331						
N59A	State Game Lan	87.54	31	P	P	03 27 04.1	+0.6
	baz=330						
P56A	Dayton Farm, R	87.55	34	P	P	03 27 04.1	+0.6
	baz=328						
O58A	Lewisberry	87.78	32	P	P	03 27 04.9	+0.3
	baz=329						
W49A	Belvidere	87.87	41	P	P	03 27 05.9	+0.8
	baz=324						
V51A	Loudon	88.22	40	P	P	03 27 07.5	+0.8
	baz=325						
R56A	Bull Pasture M	88.24	35	P	P	03 27 07.2	+0.2
	baz=328						
U53A	Fall Branch	88.58	38	P	P	03 27 09.3	+0.8
	baz=326						
U54A	Nelsons Funny	88.78	38	P	P	03 27 09.7	+0.2
	baz=327						
X52A	Dahlonega	89.42	40	P	P	03 27 12.4	-0.1
	baz=325						
Y51A	Rockmart	89.44	41	P	P	03 27 12.9	+0.3
	baz=325						
Z50A	Ashland	89.55	42	P	P	03 27 13.1	0.0
	baz=324						
X53A	Estanollee	89.78	40	P	P	03 27 14.6	+0.5
	baz=326						
KMSC	Kings Mountain	90.15	38	P	P	03 27 15.7	-0.1
	baz=327						
X54A	Belton	90.17	39	P	P	03 27 16.9	+1.0
	baz=326						
T59A	Double "B" Far	90.23	34	P	P	03 27 16.9	+0.8
	baz=329						
Y54A	Tignall	90.59	40	P	P	03 27 18.6	+0.7
	baz=326						
Y55A	Saluda	90.92	39	P	P	03 27 20.8	+1.5
	baz=327						
KEST	Kesra	92.50	327	P	P	03 27 25.6	-1.2
	comp=Z,3.6nm,0.8s,baz=337,slow=9.4,SNR=4.3						
KEST				LR	LR	04 12 37.4	
	comp=Z,58nm,18.8s,baz=230,slow=38						
158A	Hollywood	92.68	39	P	P	03 27 27.9	+0.4
	baz=328						
ESDC	Sonseca Array	93.39	338	P	P	03 27 30.4	-0.3
	comp=Z,0.5nm,0.5s,baz=29,slow=5.5,SNR=4.0						
LSZ	Lusaka	121.49	279	PKP	PKiKP	03 33 09.8	+0.3
	comp=Z,0.9nm,0.5s,baz=333,slow=4.8,SNR=4.1						
DBIC	Dimbokro	124.21	326	PKP	PKiKP	03 33 14.2	-0.6
	comp=Z,1.6nm,0.6s,baz=6.8,slow=3.6,SNR=4.4						
SIV	San Ignacio	143.53	50	PKhKP	PKPpre	03 33 47.6	
	comp=Z,1.9nm,0.7s,baz=274,slow=4.6,SNR=10						
SNAA	Sanae	148.12	197	PKPbc	PKiKP	03 33 59.5	-2.1
	comp=Z,1.1nm,0.8s,baz=188,slow=7.1,SNR=8.7						
BDFB	Brasilia	149.42	30	PKPbc	PKiKP	03 34 05.1	-0.9
	comp=Z,9.2nm,0.7s,baz=217,slow=0.5,SNR=17						
BDFB	Brasilia	149.42	30		PKPab	03 34 05.9	-3.8
BDFB	Brasilia	149.42	30	PKP2	PKPab	03 34 05.9	-3.8
PLCA	Paso Flores	151.87	98	PKPbc	PKiKP	03 34 10.7	+0.4
	comp=Z,6.8nm,1.2s,baz=0.0,slow=4.0,SNR=2.6						
PLCA				pPKPbc	sPKPbc	03 34 28.1	-0.6
	comp=Z,2.7nm,0.9s,baz=275,slow=2.6,SNR=2.4						
CPUP	Villa Florida	153.70	58	PKPbc	PKiKP	03 34 14.9	+0.5
	comp=Z,0.8nm,0.6s,baz=279,slow=3.7,SNR=3.1						
CPUP				PKPab	pPKPbc	03 34 27.2	-0.9
	comp=Z,3.3nm,0.8s,baz=338,slow=6.0,SNR=7.1						

IDC 07 03:15:12.3±0.7, 11.°92N×95.°02E, h0km, mb4.1/16, mb1 4.2/17, mb1mx3.9/62, mbtmp4.1/17, ML3.9/1, MS3.1/5, Ms1 3.2/5, ms1mx2.9/34, Error ellipse: s-maj=30.8km s-min=14.1km az=52.0

BJI 07 03:15:19.9±0.0, 12.°09N×94.°78E, h49km, mB4.8/21, mb4.4/33, Ms4.2/14, Ms7 3.9/15

NEIC 07 03:15:20.8±2.4, 11.°85N±0.°08×94.°88E±0.°05, h61km±6km, mb4.5/35, Error ellipse: s-maj=13.4km s-min=5.0km az=211.0

ISC 07 03:15:16.4±0.5, 11.°81N±0.°06×94.°84E±0.°05, h21km, n105, σ1.88/99, mb4.4/36, MS3.6/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	Port Blair	2.06	266	eS	Sb	03 16 30.7	+12
PBA				IAML		03 16 31.5	
	comp=E,466nm,0.4s						
PBA				IAML		03 16 32.9	
	comp=N,508nm,0.5s						
PBA	Port Blair	2.06	266		Pb	03 15 53.1	+0.1
DGPR	DIGLIPUR	2.31	306	eP	Pn	03 15 53.7	+0.5
DGPR				eP	Pb	03 15 54.3	-3.0
DGPR				eS	Sb	03 16 29.2	+3.8
DGPR				IAML		03 16 34.0	
	comp=N,732nm,0.7s						
RNTT	Ranong	4.31	124	P	Pn	03 16 17.7	-3.1
PHET	Kaeng Krachan	4.81	76	P	Pn	03 16 21.8	-5.8
PKDT	Phuket	5.20	138	P	Pn	03 16 31.1	-1.9
UMPA	Umpang Tak	5.86	41	P	Pn	03 16 35.6	-6.5
PATY	Pattaya	5.99	79	P	Pn	03 16 37.6	-6.3
PBKT	Sadao Pong	7.60	51		Pn	03 17 01.0	-5.0
PBKT	Sadao Pong	7.60	51	P	Pn	03 17 00.9	-5.1
CM01	Chiang Mai Arr	7.69	31	P	Pn	03 17 03.8	-3.4
CMAR	Chiang Mai Arr	7.71	30	Pn	Pn	03 17 03.9	-3.6
	comp=N,0.5nm,0.3s,baz=220,slow=15,SNR=15						
CMAR				LR	LR	03 19 47.6	
	comp=N,58nm,20.2s,baz=215,slow=37						
CM09	Chiang Mai Arr	7.72	31	P	Pn	03 17 03.9	-3.8
CHTO	Chiang Mai	8.01	29	Pn	Pn	03 17 13.7	+2.1
PSI	Prapat	9.82	155	P	Pn	03 17 40.0	+3.4
	comp=N,0.4nm,0.3s,baz=298,slow=12,SNR=5.2						
PSI				LR	LR	03 21 37.3	
	comp=N,237nm,18.1s,baz=314,slow=39						
RPSI	Rantau Prapat	9.92	156		Pn	03 17 42.3	+4.5
RPSI	Rantau Prapat	9.92	156		Pn	03 17 40.0	+2.2
BKNI	Bangkinang	12.96	151	Pn	Pn	03 18 23.1	+3.6
SHL	Shillong	13.97	349	Pn	Pn	03 18 36.6	+3.2
PALK	Pallekele	14.65	253	LR	LR	03 23 55.0	
	comp=N,47nm,19.8s,baz=96,slow=35						
KMI	Kunming	15.21	28	P	Pn	03 18 52.3	+2.0
KMI				pP	pP	03 19 01.1	+0.5
KMI				sP	sP	03 19 11.6	+8.9
KMI				S	Sn	03 21 43.8	+5.5
KMI				sS	S	03 21 54.4	-0.6
KMI				pmax	pmax		
	comp=N,5.0nm,1.5s						
KMI				pmax	pmax		
	comp=N,92nm,6.2s						
KMI				LR	LR		
	comp=N,380nm,9.9s						
KMI				LR	LR		
	comp=N,330nm,9.9s						
KMI				LR	LR		
	comp=N,350nm,11.8s						
QIZ	Qiongzhong	16.14	62	P	Pn	03 19 03.0	+0.8
QIZ				S	Sn	03 22 01.8	+1.1
QIZ				pmax	pmax		
	comp=N,20nm,1.0s						
QIZ				LR	LR		
	comp=N,220nm,9.8s						
QIZ				LR	LR		
	comp=N,290nm,8.6s						
QIZ				LR	LR		
	comp=N,260nm,9.6s						
HYB	Hyderabad	16.71	291	iP	P	03 19 14.0	+2.3
HYB				eS	Sn	03 22 17.0	+2.4
TAPN	Taplejung	16.85	338	eP	Pn	03 19 10.4	-1.0
RAMN	Ramite	16.94	334	eP	Pn	03 19 11.6	-0.9
	comp=N,138nm,1.1s						
JIRN	Jiri	17.73	334	eP	Pn	03 19 21.7	-0.8
	comp=N,145nm,1.1s						
PKI	Pulchoki	18.00	332	eP	Pn	03 19 25.3	-0.5
	comp=N,125nm,1.1s						
PKIN	Phulchoki	18.02	332	eP	Pn	03 19 25.3	-0.6
	comp=N,37nm,0.8s						
GUN	Gumba	18.09	334	eP	Pn	03 19 25.2	-1.6
LSA	Lhasa	18.13	350	P	Pn	03 19 24.9	-2.6
LSA	Lhasa	18.13	350		Pn	03 19 25.6	-1.9
LSA				IAmb	IAmb	03 19 34.3	
	comp=Z,21nm,0.8s						
DMN	Daman	18.18	331	eP	Pn	03 19 27.5	-0.4
	comp=Z,54nm,0.9s						
KKN	Kakani	18.25	332	eP	Pn	03 19 28.5	-0.2
KOLN	Koldanda	19.06	328	eP	P	03 19 37.5	-0.2
	comp=Z,18nm,0.7s						
DANN	Dangsing	19.45	329	eP	P	03 19 41.7	-0.3
	comp=Z,116nm,1.0s						
SBUM	Sibu	19.58	117	P	P	03 19 43.0	-0.3
CD2	Chengdu	20.73	22	P	P	03 19 54.4	-1.3
CD2				S	S	03 23 46.7	+0.4
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
CD2				LR	LR		
	comp=Z,300nm,13.5s						
POO	Poona	21.32	291	eP	P	03 20 06.0	+3.8
KKM	Kota Kinabalu	21.87	103	P	P	03 20 11.0	+2.8
KKM				IAmb	IAmb	03 20 13.4	
	comp=Z,29nm,0.9s						
ENH	Enshi	22.86	34	P	P	03 20 20.5	+2.0
NDI	New Delhi	23.51	318	eP	P	03 20 34.0	+8.9
LZH	Lanzhou	25.51	17	eP	P	03 20 44.2	+0.6
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				pmax	pmax		
	comp=Z,59nm,5.4s						
LZH				LR	LR		
	comp=Z,220nm,12.6s						
LZH				LR	LR		
	comp=Z,200nm,13.0s						
LZH				LR	LR		
	comp=Z,240nm,14.4s						
XAN	Xi'an	25.59	28	P	P	03 20 41.1	-3.2
XAN				pP	sP	03 20 54.6	+2.2
XAN				sP	pwP	03 21 01.2	+8.7
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,120nm,5.5s						
GTA	Gaotai	27.84	8	P	P	03 21 02.9	-1.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
NIL	Nilore	29.36	321	P	P	03 21 19.5	+1.5
NIL				IAmb	IAmb	03 21 33.4	
	comp=Z,7.7nm,1.0s						
KAPI	Kappang	29.89	123	LR	LR	03 33 40.0	
	comp=Z,63nm,19.2s,baz=324,slow=37						
NJ2	Nanjing	29.91	44	eP	P	03 21 24.3	+1.4
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSH	Kashi	32.27	332	P	P	03 21 41.6	-2.2
KSH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,460nm,6.9s						
KSH				LR	LR		
	comp=Z,320nm,5.2s						
KSH				LR	LR		
	comp=Z,300nm,4.7s						
KSH				LR	LR		
	comp=Z,680nm,6.3s						
HHC	Hu-ho-hao-te	32.46	24	eP	P	03 21 48.4	+3.0
HHC				pP	pwP	03 22 02.6	+8.9
HHC				pmax	pmax		
	comp=Z,4.0nm,1.7s						
HHC				pmax	pmax		
	comp=Z,46nm,5.1s						
HHC				LR	LR		
	comp=Z,140nm,14.5s						
HHC				LR	LR		
	comp=Z,120nm,17.0s						
HHC				LR	LR		
	comp=Z,60nm,11.9s						
WMQ	Urumqi	32.49	350	eP	P	03 21 47.6	+2.0
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,150nm,5.1s						
WMQ				LR	LR		
	comp=Z,100nm,17.7s						
WMQ				LR	LR		
	comp=Z,63nm,15.7s						
WMQ				LR	LR		
	comp=Z,130nm,27.9s						
KBL	Kabul	32.60	318	P	P	03 21 47.5	+0.7
AAK	Ala-Archa	35.45	334	P	P	03 22 11.1	-0.3
	comp=Z,1.6nm,0.7s,baz=159,slow=8.6,SNR=2.8						
AAK				LR	LR	03 39 31.4	
	comp=Z,36nm,18.2s,baz=128,slow=41						
AAK	Ala-Archa	35.45	334	P	P	03 22 11.6	+0.2
AAK				IAmb	IAmb	03 22 19.7	
	comp=Z,6.7nm,1.1s						
MK31	Makanchi Array	36.45	345	P	P	03 22 18.5	-1.3
MKAR	Makanchi Array	36.45	345	P	P	03 22 18.6	-1.2
	comp=Z,1.9nm,0.9s,baz=156,slow=9.3,SNR=17						
MKAR	Makanchi Array	36.45	345	P	P	03 22 18.0	-1.7
MAKZ	Makanchi	36.54	345	P	P	03 22 20.9	+0.3
SONM	Songino Array	37.20	13	P	P	03 22 24.3	-2.0
	comp=Z,0.6nm,0.6s,baz=189,slow=8.3,SNR=3.6						
SONM	Songino Array	37.20	13	P	P	03 22 25.1	-1.2
ULN	Ulaanbaatar	37.38	14	P	P	03 22 28.9	+1.1
KKAR	Karatay Array	37.64	330	P	P	03 22 30.1	+0.1
TLY	Talaya	40.40	8	P	P	03 22 54.1	+1.2
KURK	Kurchatov	41.01	344	P	P	03 22 59.3	+1.4
KURK				IAmb	IAmb	03 23 09.3	
	comp=Z,8.7nm,1.0s						
GEYT	Alibeck	41.84	315	P	P	03 23 05.6	+0.6
	comp=Z,7.9nm,0.8s,baz=146,slow=8.4,SNR=15						
GEYT	Alibeck	41.84	315	P	P	03 23 05.5	+0.5
GYA0B	ALIBECK ARRAY	41.84	315	P	P	03 23 05.0	+0.1
HIA	Hailar	42.66	24	P	P	03 23 10.6	-0.9
HIA				IAmb	IAmb	03 23 17.6	
	comp=Z,4.9nm,0.6s						
ZAA0	Zalesovo Array	42.78	351	P	P	03 23 12.7	+0.4
ZAA0				IAmb	IAmb	03 23 23.3	
	comp=Z,5.2nm,0.9s						
ZALV	Zalesovo Beam	42.78	351	P	P	03 23 10.9	-1.4
	comp=Z,1.0nm,0.6s,baz=168,slow=7.4,SNR=2.9						
ZALV	Zalesovo Beam	42.78	351	P	P	03 23 11.0	-1.4
BVAR	Borovoye Array	45.54	339	P	P	03 23 33.2	-1.3
	comp=Z,3.6nm,1.0s,baz=111,slow=8.1,SNR=3.7						
BRVK	Borovoye	45.60	339	P	P	03 23 36.8	+1.8
BRVK				IAmb	IAmb	03 23 43.2	
	comp=Z,5.0nm,0.7s						
ABKAR	Akbulak array	47.17	329	P	P	03 23 47.1	-0.3
WRA	Warramunga Arr	50.07	129	P	P	03 24 08.9	-1.3
	comp=Z,5.7nm,0.8s,baz=307,slow=8.6,SNR=18						
WRA				PcP	PcP	03 25 28.2	-1.5
	comp=Z,1.4nm,0.6s,baz=314,slow=3.1,SNR=5.4						
WRA	Warramunga Arr	50.07	129	IAmb	IAmb	03 24 17.2	
	comp=Z,0.2nm,1.0s						
WRAB	Tennant Creek	50.08	129	P	P	03 24 12.0	+1.9
ASAR	Alice Springs	51.98	133	P	P	03 24 23.6	-0.8
	comp=Z,3.2nm,0.8s,baz=311,slow=7.1,SNR=25						
ASAR	Alice Springs	51.98	133	P	P	03 24 23.2	-1.3
GNI	Garni	52.27	312	P	P	03 24 26.5	-0.1

comp=Z,1.4nm,0.5s,baz=112,slow=5.4,SNR=2.6
GNI Garni 52.27 312 P P 03 24 26.2 -0.3
ARU Arti 52.59 336 P P 03 24 27.5 -0.9
AKH Akhalkalaki 53.56 313 P P 03 24 35.0 -1.1
AKH IAmb IAmb 03 24 46.4
comp=Z,9.0nm,1.1s
KIV Kislovodsk 54.94 316 P P 03 24 46.6 +0.6
GAZ Gaziantep 57.24 307 P P 03 25 02.2 -0.4
GAZ IAmb IAmb 03 25 18.1
comp=Z,6.2nm,1.1s
BR131 Keskin Array S 60.45 309 P P 03 25 23.4 -1.6
BR131 IAmb IAmb 03 25 33.2
comp=Z,2.3nm,0.7s
BRTR Keskin Array B 60.45 309 P P 03 25 23.4 -1.5
comp=Z,0.9nm,0.7s,baz=123,slow=7.9,SNR=8.6
BRTR Keskin Array B 60.45 309 P P 03 25 23.4 -1.6
ILGA Ilgaz 60.62 311 P P 03 25 26.9 +0.7
ILGA IAmb IAmb 03 25 40.3
comp=Z,6.3nm,1.0s
STKA Stephens Creek 62.37 136 P P 03 25 37.2 -0.5
comp=Z,2.9nm,0.8s,baz=330,slow=8.3,SNR=7.2
STKA Stephens Creek 62.37 136 IAmb IAmb 03 25 45.8
comp=Z,0.9nm,0.9s
MDUB Mudurnu 62.41 310 P P 03 25 38.4 +0.2
ELL Elmali 62.98 305 P P 03 25 42.0 0.0
TIXI Tiksi 63.27 11 P P 03 25 40.2 -2.9
TIXI IAmb IAmb 03 25 48.4
comp=Z,9.5nm,1.1s
BILL Bilibino 72.20 22 P P 03 26 40.3 +0.8
BILL IAmb IAmb 03 26 47.2
comp=Z,11nm,1.5s
GERES GERESS Array B 75.39 318 P P 03 26 58.1 -0.6
comp=Z,1.7nm,0.8s,baz=97,slow=4.6,SNR=6.5
GERES GERESS Array B 75.39 318 P P 03 26 57.5 -1.2
HFS Hagfors 75.44 329 P P 03 26 57.8 -0.8
comp=Z,1.9nm,0.6s,baz=108,slow=3.3,SNR=2.2
NB2 NORSAR Subarra 76.67 330 P P 03 27 13.2 +7.5
comp=Z,2.5nm,0.8s,baz=94,slow=5.1
ANM Nome 83.60 25 P P 03 27 43.0 0.0
EKA Eskdalemuir Ar 84.89 325 P P 03 27 49.4 -0.3
comp=Z,1.5nm,0.9s,baz=89,slow=5.8,SNR=2.5
IMAR Indian Mountai 87.75 22 P P 03 28 02.1 -1.4
MLY Manley 89.30 23 P P 03 28 10.1 -0.9
MLY IAmb IAmb 03 28 18.5
comp=Z,6.4nm,1.4s
TORD Torodi Ar. Bea 90.36 283 P P 03 28 17.1 +0.2
comp=Z,0.4nm,0.6s,baz=60,slow=3.9,SNR=2.8
ILAR Eielson Array 90.86 22 P P 03 28 15.4 -2.8
comp=Z,0.5nm,0.7s,baz=297,slow=4.3,SNR=6.4
NVAR Mina Array Bea 121.20 30 PKP PKPdf 03 34 06.8 -1.8
comp=Z,0.3nm,0.6s,baz=46,slow=3.9,SNR=3.2

IDC 07 03:26:41.7±0.5, 38.°44N×20.°51E, h0km, mb4.2/29, mb1 4.2/40, mb1mx4.1/55, mbtmp4.1/40, ML3.9/10, MS2.9/6, Ms1 2.9/6, ms1mx2.6/49, Error ellipse: s-maj=12.4km s-min=10.4km az=12.0
PDG 07 03:26:42.5±0.5, 38.°34N×20.°33E, h11km±1km, ML4.3/14, Error ellipse: s-maj=0.7km s-min=0.6km az=90.0
SKO 07 03:26:42.1, 38.°16N×20.°30E, h13km
MOS 07 03:26:42.0±1.2, 38.°29N×20.°30E, h17km, mb4.6/16, Error ellipse: s-maj=5.1km s-min=2.9km az=72.1
MED_RC 07 03:26:42.0±0.5, 38.°20N×20.°31E, h14km±2km, MW4.1/12, Moment Tensor Solution.Mantle waves: s12,c12; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; Mrr1.61±.38; Mθθ-0.26±.26; Mφφ-1.36±.27; Mrθ0.68±.57; Mrφ-0.34±.14; Mθφ-0.31±.53; Best double couple: M0 1.67000×10^{15} NP1:φs34.00000°, δ46.00000°, λ118.00000°. NP2:φs176.00000°, δ51.00000°, λ64.00000°. Principal axes: T 1.8800, Plg70.0000°, Azm21.0000°; N -0.4300, Plg20.0000°, Azm193.0000°; P -1.4600, Plg2.0000°, Azm284.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.
NEIC 07 03:26:43.1±2.0, 38.°33N±0.°05×20.°36E±0.°04, h10km±2km, mb4.4/30, ML4.2(THE) Error ellipse: s-maj=7.3km s-min=4.6km az=193.0
ATH 07 03:26:43.6, 38.°33N×20.°43E, h13km±1km, ML4.0/9, Error ellipse: s-maj=1.7km s-min=0.6km az=249.0
THE 07 03:26:44.0, 38.°33N×20.°44E, h9km±1km, ML4.2/15, Error ellipse: s-maj=1.7km s-min=0.4km az=242.0
BEO 07 03:26:44.5±0.6, 38.°22N×20.°27E, h34km±4km, ML4.0/11
BGR 07 03:26:46.0±1.6, 38.°35N×20.°38E, h15km, Error ellipse: s-maj=131.2km s-min=22.2km az=64.0
ISC 07 03:26:43.4±0.6, 38.°33N±0.°02×20.°41E±0.°02, h13km±3km, n416, σ1s65/513, mb4.3/51, 19C-13D, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF1 Kardakata, Kep 0.07 139 P Pg 03 26 46.0 -0.1
KEF1 S Sg 03 26 47.5 -0.4
KEF4 Livadi, Kephal 0.07 172 P Pg 03 26 46.1 0.0
KEF4 S Sg 03 26 48.1 +0.1
LXR1 Lixouri, Cepha 0.13 171 P Pg 03 26 47.0 +0.2
LXR1 S Sg 03 26 49.7 +0.5
488μm,0.4s
LXRA Lixouri, Kepha 0.13 171 P Pg 03 26 47.0 +0.2
LXRA S Sg 03 26 49.6 +0.4
KEF3 Kipouria, Keph 0.14 201 P Pg 03 26 47.1 +0.2
KEF3 S Sb 03 26 50.1 -0.8
CHV1 Chavriata, Kef 0.15 189 P Pg 03 26 47.2 +0.2
CHV1 S Sg 03 26 50.0 +0.4
KONA Konidatara, Ke 0.16 54 P Pg 03 26 47.1 0.0
KONA S Sg 03 26 49.9 +0.1
ARGA Argostoli. Kep 0.16 161 P Pg 03 26 47.2 -0.1
ARGA S Sg 03 26 49.9 0.0
ARG2 Argostoli 0.17 159 P Pg 03 26 47.3 0.0
ARG2 S Sg 03 26 49.7 -0.2
KEF2 Argostoli. Kep 0.18 160 P Pg 03 26 47.4 -0.1
KEF2 S Sg 03 26 50.4 +0.1
VLS Valsamata 0.21 138 P Pg 03 26 47.8 -0.2
VLS S Sg 03 26 51.0 -0.1
114μm,0.2s
VLS Valsamata 0.21 138 P Pg 03 26 47.8 -0.2
VLS S Sg 03 26 51.1 0.0
VLS AML AML 03 26 51.3
VLS AML AML 03 26 51.4
VLS Valsamata 0.21 138 Pg 03 26 47.8 -0.2
VLS Sg 03 26 51.0 -0.1
VLS Valsamata 0.21 138 P Pg 03 26 47.8 -0.2
EVGI Lefkada island 0.35 34 P Pg 03 26 50.6 +0.2
EVGI Lefkada island 0.35 34 P Pg 03 26 50.6 +0.2
EVGI S Sg 03 26 56.0 +0.9
EVGI Lefkada island 0.35 34 P Pg 03 26 50.6 +0.2
KFL Anninata 0.37 127 P Pg 03 26 50.6 -0.2
KFL S Sg 03 26 56.2 +0.3
208μm,0.4s
KFL Anninata 0.37 127 P Pg 03 26 50.6 -0.2
KFL S Sg 03 26 56.3 +0.5
KFL AML AML 03 26 56.8
KFL AML AML 03 26 56.9
KFL Anninata 0.37 127 Pg 03 26 50.6 -0.2
KFL Sg 03 26 56.2 +0.3
MGNA Meganis 0.44 43 P Pg 03 26 52.0 -0.1
MGNA S Sg 03 26 58.2 +0.2
MGNA AML AML 03 26 59.7
comp=E,34200μm,0.2s
MGNA AML AML 03 27 00.3
comp=N,34138μm,0.3s
LKD2 Lefkada island 0.49 23 P Pg 03 26 53.3 +0.1
LKD2 Lefkada island 0.49 23 P Pg 03 26 53.3 +0.1
LKD2 S Sb 03 27 00.6 -0.5
LKD2 AML AML 03 27 04.1
comp=N,20477μm,0.3s
LKD2 AML AML 03 27 10.7
comp=E,26116μm,0.3s
VLMS Volimes, Zakyn 0.50 156 P Pg 03 26 52.8 -0.4
VLMS S Sb 03 27 00.6 -0.6
VLMS AML AML 03 27 07.3
comp=E,36434μm,0.4s
VLMS AML AML 03 27 08.0
comp=N,64873μm,0.6s
TSLK Tsoukalades, L 0.53 21 P Pg 03 26 53.9 +0.1
TSLK S Sb 03 27 02.3 +0.2
comp=N,14μm,0.4s
TSLK Tsoukalades, L 0.53 21 P Pg 03 26 54.0 +0.2
TSLK S Sb 03 27 01.6 -0.5
TSLK AML AML 03 27 05.2
comp=E,24111μm,0.4s
TSLK AML AML 03 27 09.8
comp=N,31220μm,0.5s
TSLK Tsoukalades, L 0.53 21 Pg 03 26 53.9 +0.1
AST1 Astakos 0.57 68 P Pg 03 26 54.4 -0.2
PDO Prodromos 0.66 66 P Pg 03 26 55.9 -0.4
PDO S Sg 03 27 04.9 -0.1
comp=N,38μm,0.4s
PDO Prodromos 0.66 66 P Pg 03 26 56.1 -0.2
PDO S Sg 03 27 05.3 +0.3
PDO AML AML 03 27 09.8
comp=N,52347μm,0.4s
PDO AML AML 03 27 10.8
comp=E,52448μm,0.4s
ZAK2 Zakynthos 0.67 144 P Pg 03 26 56.1 -0.3
ZAK2 S Sb 03 27 07.0 +1.0
comp=E,78μm,0.5s
KRI1 kERI 0.74 154 P Pg 03 26 57.2 -0.6
KRI1 S Sg 03 27 07.8 +0.3
comp=E,27μm,0.5s
RLS Riolos of Patr 0.88 108 P Pg 03 26 59.2 -1.1
RLS Riolos of Patr 0.88 108 P Pg 03 26 59.4 -0.9
RLS AML AML 03 27 17.4
comp=N,12314μm,0.7s
RLS AML AML 03 27 18.9
comp=E,17348μm,0.6s
PVO Paravola 0.92 72 P Pb 03 27 00.8 -0.4
PVO Paravola 0.92 72 P Pb 03 27 01.3 +0.1
PVO AML AML 03 27 21.0
comp=N,28531μm,0.4s
PVO AML AML 03 27 21.0
comp=E,49622μm,0.4s
UPR University Cam 1.08 92 P Pb 03 27 03.3 -0.7
DRO Drossia 1.09 110 P Pb 03 27 04.0 -0.2
DRO S Sn 03 27 21.4 +2.0
comp=E,15μm,0.5s
DRO Drossia 1.09 110 P Pb 03 27 04.1 0.0
IGT Igoumenitsa 1.20 357 P Pg 03 27 06.5 0.0
IGT S Sg 03 27 22.7 +0.6
comp=E,5μm,0.3s
IGT Igoumenitsa 1.20 357 ePg Pg 03 27 09.7 +3.2
IGT eSg Sg 03 27 25.6 +3.5
IGT Igoumenitsa 1.20 357 P Pg 03 27 06.5 0.0
IGT Igoumenitsa 1.20 357 P Pg 03 27 06.5 0.0
IGT S Sg 03 27 22.7 +0.6
ANX Ano Chora 1.21 77 P Pn 03 27 05.8 -0.4
ANX S Sg 03 27 24.2 +1.6
comp=E,20μm,0.5s
ANX Ano Chora 1.21 77 P Pn 03 27 05.5 -0.7
LAKA Lakka 1.24 94 P Pn 03 27 05.6 -0.8
LAKA S Sg 03 27 24.1 +0.8
comp=E,4μm,0.7s
LAKA Lakka 1.24 94 P Pn 03 27 05.7 -0.8
EVR Evrytania 1.24 61 P Pn 03 27 05.7 -0.8
EVR S Sg 03 27 26.0 +2.6
comp=E,5μm,0.7s
SERG Sergoula 1.29 86 P Pn 03 27 06.6 -0.6
SERG S Sg 03 27 27.1 +1.9
comp=E,7μm,0.6s
SERG Sergoula 1.29 86 P Pn 03 27 06.8 -0.4
AMT Artemida-Makis 1.30 128 P Pg 03 27 09.3 +0.9
AMT Artemida-Makis 1.30 128 P Pg 03 27 08.8 +0.4
TRIZ Trizonia 1.31 88 P Pn 03 27 06.8 -0.5
ALIK Aliki, Aigiali 1.34 93 P Pn 03 27 07.5 -0.3
KALE Kalithea 1.36 87 P Pn 03 27 07.3 -0.8
KALE Kalithea 1.36 87 P Pn 03 27 07.7 -0.4
JAN Janina 1.37 14 P Pg 03 27 09.6 -0.1
JAN Janina 1.37 14 P Pg 03 27 09.8 +0.1
JAN Janina 1.37 14 P Pg 03 27 09.6 -0.1
KLV Kalavryta, Ach 1.40 101 P Pn 03 27 08.1 -0.6
KLV Kalavryta, Ach 1.40 101 P Pn 03 27 08.6 -0.1
KASA Kassiopi 1.46 345 P Pb 03 27 10.7 +0.3
SRN Sarande 1.58 348 P Pb 03 27 12.0 -0.4
AGG Agios Georgios 1.65 65 P Pg 03 27 14.8 -0.3
AGG S Sg 03 27 37.2 +0.6
comp=E,5μm,0.7s
AGG Agios Georgios 1.65 65 P Pg 03 27 14.7 -0.5
AGG Agios Georgios 1.65 65 Pb 03 27 14.1 +0.4
AGG Agios Georgios 1.65 65 P Pb 03 27 14.1 +0.4
ITM Ithomi 1.66 133 P Pb 03 27 14.1 +0.2
ITM Ithomi 1.66 133 P Pb 03 27 14.2 +0.2
ITM Ithomi 1.66 133 Pg 03 27 14.9 -0.4
THL Klokotos Trika 1.75 45 P Pb 03 27 15.8 +0.4
THL S Sb 03 27 38.3 +1.0
comp=E,3μm,0.6s
PENT Pentalofos 1.94 17 P Pb 03 27 18.4 -0.4
LTK Loutraki 2.04 98 P Pb 03 27 19.0 -1.3
LKR Lokris 2.06 80 P Pb 03 27 19.7 -0.9
NEST Nestorio 2.14 13 P Pb 03 27 21.9 -0.1
KZN Kozani 2.24 28 P Pb 03 27 22.6 -1.1
KZN Kozani 2.24 28 P Pb 03 27 22.6 -1.1
VILL Villia 2.29 93 P Pn 03 27 22.5 +1.6
SCTE Santa Cesarea 2.30 320 Pn 03 27 21.1 +0.1
DID Didima 2.38 109 P Pn 03 27 24.1 +1.9
LIT Litokhoron 2.39 42 P Pn 03 27 24.3 +2.0
LIT Litokhoron 2.39 42 Pn 03 27 23.7 +1.4
LIT Litokhoron 2.39 42 P Pn 03 27 23.7 +1.4
NEO Neokhori 2.40 65 P Pn 03 27 24.2 +1.8
XOR Xorichti 2.40 64 P Pn 03 27 24.5 +2.0
KTI Kastanea 2.45 32 P Pb 03 27 25.5 -1.8
MRKA Markates 2.52 81 P Pn 03 27 25.9 +1.9
SKIA Skiathos 2.53 70 P Pn 03 27 26.2 +2.0
FNA Florina 2.56 17 P Pn 03 27 26.4 +1.8
FNA Florina 2.56 17 ePn Pn 03 27 26.6 +2.0
FNA eSn Sb 03 27 58.4 -2.2
FNA Florina 2.56 17 Pn 03 27 25.8 +1.2
FNA Florina 2.56 17 P Pn 03 27 25.8 +1.2
VLY Voula,Athens 2.71 99 P Pn 03 27 28.1 +1.4
PTL Penteli 2.73 95 P Pn 03 27 28.3 +1.3
EREA Eretria 2.77 87 P Pn 03 27 28.8 +1.3
OHR Ohrid 2.79 6 ⇓iPn Pn 03 27 30.3 +2.5
OHR iSn Sb 03 28 04.5 -2.8
OHR eLg Lg 03 28 06.0
comp=E,290nm,0.5s
OHR Ohrid 2.79 6 P Pb 03 27 31.2 -2.0
AOS Alonnisos 2.84 72 P Pn 03 27 30.1 +1.7
TIP Timpagrande 2.98 288 P Pn 03 27 30.9 +0.5
TIP Timpagrande 2.98 288 ⇑P Pn 03 27 31.2 +0.8
TIP Timpagrande 2.98 288 Pn 03 27 30.0 -0.4
PAIG Paliouri 3.00 57 P Pn 03 27 31.5 +0.9
THE Thessaloniki 3.03 40 P Pn 03 27 32.8 +1.8
GRG Griva 3.04 30 P Pn 03 27 32.3 +1.1
GRG Griva 3.04 30 P Pn 03 27 32.3 +1.1
TIR Tirane 3.04 352 P Pn 03 27 33.0 +1.9
TIR Tirane 3.04 352 ePn Pn 03 27 33.1 +1.9
TIR Tirane 3.04 352 ⇑P Pn 03 27 32.8 +1.6
TIR Tirane 3.04 352 Pn 03 27 31.9 +0.7
TIR Tirane 3.04 352 P Pn 03 27 31.9 +0.7
PLG Polygyros 3.11 48 P Pn 03 27 33.2 +1.0
PLG Polygyros 3.11 48 P Pn 03 27 33.2 +1.0
TAR1 Taranto 3.27 313 ⇓iPn Pn 03 27 34.5 +0.2
PHP Peshkopia 3.35 0 P Pn 03 27 37.0 +1.5
PHP Peshkopia 3.35 0 P Pn 03 27 37.0 +1.5
SOH Sokhos 3.37 42 P Pn 03 27 37.5 +1.7
SOH Sokhos 3.37 42 P Pn 03 27 37.5 +1.7
KNT Kendrikon 3.42 33 P Pn 03 27 37.9 +1.6
KNT Kendrikon 3.42 33 P Pn 03 27 37.9 +1.6
OUR Ouranopolis 3.42 53 P Pn 03 27 38.3 +2.0
OUR Ouranopolis 3.42 53 P Pn 03 27 38.3 +2.0
VAY Valandovo 3.42 28 ⇑iPn Pn 03 27 37.3 +1.0
VAY iSn Sn 03 28 17.9 +1.1
VAY eLg Lg 03 28 20.4
comp=E,107nm,0.7s
VAY Valandovo 3.42 28 P Pn 03 27 37.5 +1.1
CEL Celeste 3.56 270 Pn 03 27 38.3 -0.1
STIP Stip 3.62 22 ⇓iPn Pn 03 27 42.0 +2.8
MATE Matera 3.69 310 ⇑P Pn 03 27 40.4 +0.4
SRS Serrai 3.71 40 ePn Pn 03 27 41.2 +0.8
SRS Serrai 3.71 40 P Pn 03 27 41.7 +1.3
SKO Skopje 3.72 12 iPn Pn 03 27 41.0 +0.5
SKO iSn Sn 03 28 26.5 +2.3
SKO Skopje 3.72 12 P Pn 03 27 42.8 +2.3
ULC Ulcinj 3.74 347 P Pn 03 27 41.1 +0.3
ULC Ulcinj 3.74 347 ePn Pn 03 27 40.5 -0.3
ULC eSn Sn 03 28 25.5 +0.9
SG1 Sgolgore (BA) 3.82 312 ⇑iPn Pn 03 27 42.5 +0.6
BAI Bari 3.89 317 ⇓iPn Pn 03 27 43.2 +0.4
DRME Dracevica, Mon 3.96 347 ePn Pn 03 27 44.2 +0.3
DRME Dracevica, Mon 3.96 347 ePn Pn 03 27 44.0 +0.1
DRME eSn Sn 03 28 30.9 +0.7
KKB Krupnik 4.08 29 P Pn 03 27 47.2 +1.7
BUM Brajici-Budva 4.13 344 ePn Pn 03 27 46.1 -0.1
BUM eSn Sn 03 28 35.0 +0.6
PDG Podgorica 4.19 348 ePn Pn 03 27 47.6 +0.7
PDG eSn Sn 03 28 35.6 -0.1
PDG Podgorica 4.19 348 ⇓P Pn 03 27 46.8 -0.1
PDG ⇑S Sn 03 28 34.7 -1.0
PDG Podgorica 4.19 348 ePn Pn 03 27 47.1 +0.2
PDG Podgorica 4.19 348 Pn 03 27 47.1 +0.2
TTG Podgorica 4.19 348 ePn Pn 03 27 46.9 -0.1
TTG eSn Sn 03 28 36.5 +0.8
VAM Vamos 4.21 133 P Pn 03 27 48.7 +1.4
ACER Acerenza 4.24 307 Pn 03 27 48.0 +0.4
APE Apeiranthos 4.25 106 iP Pn 03 27 48.3 +0.4
PVY Plav 4.27 356 ePn Pn 03 27 49.1 +0.9
PVY eSn Sn 03 28 38.7 +0.7
CEME Cevo 4.36 345 ePn Pn 03 27 49.1 -0.3
CEME eSn Sn 03 28 40.7 +0.6
HCY Herceg Novi 4.36 341 ePn Pn 03 27 48.4 -1.0
HCY Herceg Novi 4.36 341 P Pn 03 27 49.0 -0.4
HCY Herceg Novi 4.36 341 ePn Pn 03 27 48.3 -1.1
HCY eSn Sn 03 28 39.1 -1.0
BOSS Bosilegrad 4.45 20 ePn Pn 03 27 51.8 +1.2
SANT Santorini 4.47 114 Pn Pn 03 27 52.9 +2.0
IVA Berane 4.55 355 ⇓iPn Pn 03 27 52.6 +0.6
IVA eSn Sn 03 28 45.6 +0.7
KOME Kolasin 4.56 352 ePn Pn 03 27 52.8 +0.6
KOME eSn Sn 03 28 46.0 +0.8
NKME Niksic 4.57 346 ePn Pn 03 27 52.3 +0.1
NKME eSn Sn 03 28 45.5 +0.3
NKY Niksic 4.60 347 P Pn 03 27 55.4 +2.6
NKY Niksic 4.60 347 ePn Pn 03 27 52.8 0.0
NKY iSn Sn 03 28 46.9 +0.7
BARS Barje 4.61 13 ePn Pn 03 27 53.5 +0.8
BARS eSn Sn 03 28 45.6 -0.5
TREB Trebinje 4.65 341 ePn Pn 03 27 53.3 -0.1
TREB eSn Sn 03 28 45.2 -2.0
TREB Trebinje 4.65 341 ePn Pn 03 27 52.4 -1.0
IDI Anoyia 4.71 129 Pn Pn 03 27 55.8 +1.7
comp=E,1.4nm,0.3s,baz=317,slow=11,SNR=12
IDI Sn Sn 03 28 49.9 +1.2
comp=E,5.3nm,0.3s,baz=301,slow=9.9,SNR=3.1
IDI LR LR 03 29 42.8
comp=E,131nm,19.8s,baz=189,slow=38
RZN Rozhen 4.71 43 P Pn 03 27 55.9 +1.6
RZN Rozhen 4.71 43 P Pn 03 27 56.9 +2.6
RZN S Sn 03 28 51.7 +2.9
BRY Bratogost 4.78 343 ePn Pn 03 27 54.5 -0.8
BRY Bratogost 4.78 343 P Pn 03 27 55.2 -0.1
BRY Bratogost 4.78 343 ⇓iPn Pn 03 27 54.8 -0.5
BRY eSn Sn 03 28 50.8 +0.2
VTS Vitosha 4.79 26 ePn Pn 03 27 56.5 +1.1
VTS eSn Sn 03 28 49.2 -1.7
VTS Vitosha 4.79 26 ⇑P Pn 03 27 56.5 +1.1
VTS ⇓S Sn 03 28 50.3 -0.6
VTS Vitosha 4.79 26 P Pn 03 27 56.8 +1.4
VTS Vitosha 4.79 26 Pn 03 27 56.3 +0.9
VTS Vitosha 4.79 26 P Pn 03 27 56.3 +0.9
VAE Valguarnera 4.82 262 Pn Pn 03 27 57.0 +1.3
comp=E,0.8nm,0.3s,baz=55,slow=3.8,SNR=5.4
VAE Sn Sn 03 28 52.2 +0.8
comp=E,3.9nm,0.3s,baz=157,slow=24,SNR=3.7
SELS Selova 4.91 6 ePn Pn 03 27 56.7 -0.2
SJES Sjenica 4.94 356 ePn Pn 03 27 58.2 +0.9
SJES eSn Sn 03 28 54.1 -0.2
SGRT San Giovanni R 4.95 315 Pn 03 27 57.0 -0.5
PLD Plovdiv 5.00 40 P Pn 03 28 01.6 +3.5
PLD pmax pmax
comp=Z,3.0nm,0.7s
UPM Unac-Piva 5.00 347 ePn Pn 03 27 58.6 +0.3
UPM Unac-Piva 5.00 347 ePn Pn 03 27 58.2 -0.1
UPM eSn Sn 03 28 56.1 +0.1
ALN Alexandroupoli 5.05 58 Pn 03 28 00.3 +1.5
ALN Alexandroupoli 5.05 58 P Pn 03 28 00.3 +1.5
PLE Pljevlja 5.05 351 P Pn 03 28 00.8 +1.8
PLE Pljevlja 5.05 351 ePn Pn 03 27 59.4 +0.4
PLE eSn Sn 03 28 57.4 +0.2
KDZ Kurdzhali 5.07 48 P Pn 03 27 59.4 +0.2
KDZ Kurdzhali 5.07 48 P Pn 03 27 59.2 0.0
PGB Panagyurishte 5.09 33 P Pn 03 28 01.0 +1.5
ZAPS Zavoj 5.22 18 ePn Pn 03 28 01.8 +0.7
IVAS Ivanjica 5.24 358 ePn Pn 03 28 01.0 -0.5
IVAS eSn Sn 03 28 59.4 -2.4
PAOL Paolisi 5.25 303 Pn 03 28 02.8 +1.1
WDD Wied Dalam 5.33 244 Pn 03 28 01.9 -0.7
RUDO Rudo 5.34 352 ePn Pn 03 28 03.1 +0.3
BOVS Bovan 5.39 10 ePn Pn 03 28 03.5 +0.1
BOVS eSn Sn 03 29 03.7 -1.6
DIM Dimitrovgrad 5.40 45 P Pn 03 28 05.3 +1.7
BLKB Belogradchik 5.56 17 ⇑S Sn 03 29 08.8 -0.7
GRUS Gruza 5.56 2 ePn Pn 03 28 06.0 +0.3
GRUS eSn Sn 03 29 08.7 -0.8
BBLS Lazići 5.58 352 ePn Pn 03 28 06.6 +0.4
BBLS eSn Sn 03 29 07.5 -2.7
BBLS Lazići 5.58 352 ePn Pn 03 28 06.5 +0.4
MPEP Malo Peshtene 5.62 26 P Pn 03 28 08.9 +2.3
ZAGS Zajecar 5.64 14 ePn Pn 03 28 06.8 -0.2
CLTB Caltabellotta 5.74 265 Pn 03 28 08.7 +0.4
DIVS Divibare 5.77 357 ePn Pn 03 28 08.3 -0.5
DIVS eSn Sn 03 29 11.2 -3.6
DIVS Divibare 5.77 357 ePn Pn 03 28 08.2 -0.5
HAPS Han Pijesak,Bl 5.85 350 ePn Pn 03 28 08.8 -1.1
TRUS Trudelj 5.89 360 ePn Pn 03 28 10.2 -0.1
TRUS eSn Sn 03 29 15.5 -2.1
PLVB Pleven 5.97 31 ⇑P Pn 03 28 13.4 +1.9
KARP Karpathos 6.08 115 Pn 03 28 14.8 +1.8
EDC Edincik 6.12 68 P Pn 03 28 17.1 +3.6
PVL Pavlikeni 6.14 36 P Pn 03 28 13.8 -0.1
PVL Pavlikeni 6.14 36 P Pn 03 28 13.7 -0.1
ELND Elena 6.19 40 ⇑P Pn 03 28 16.0 +1.5
TEKS Tekeris 6.25 354 ePn Pn 03 28 14.7 -0.6
TEKS eSn Sn 03 29 23.8 -2.7
TEKS Tekeris 6.25 354 ePn Pn 03 28 14.0 -1.3
SZH Strazhica 6.47 39 P Pn 03 28 19.5 +1.2
ARG Arkhangelos 6.50 107 P Pn 03 28 25.5 +6.7
ARG pmax pmax
comp=Z,47nm,1.3s
MGRS Mrkonjic Grad 6.57 339 ePn Pn 03 28 20.1 +0.3
DOB Doboj 6.63 346 ePn Pn 03 28 18.8 -1.6
AQU L'Aquila 6.69 309 P Pn 03 28 23.7 +2.3
AQU pmax pmax
comp=Z,77nm,0.9s
BLY Banja Luka 6.85 340 ⇓P Pn 03 28 23.3 -0.3
BLY Banja Luka 6.85 340 ePn Pn 03 28 23.6 +0.1
GZR Gura Zlata 7.27 13 ⇑P Pn 03 28 29.8 +0.4
GZR Gura Zlata 7.27 13 P Pn 03 28 29.8 +0.4
BZS Buzias 7.33 7 ⇑P Pn 03 28 30.1 0.0
BZS Buzias 7.33 7 P Pn 03 28 30.1 0.0
ARR Arges 7.70 23 ⇓P Pn 03 28 36.8 +1.5
ELL Elmali 7.71 99 Pn 03 28 37.6 +2.1
ELL Elmali 7.71 99 P Pn 03 28 37.6 +2.1
VOIR 7.90 24 ⇑P Pn 03 28 39.9 +2.0
VOIR 7.90 24 P Pn 03 28 39.7 +1.8
VOIR pmax pmax
comp=Z,14nm,0.8s
MORH Mrgy, Hungar 7.99 351 ePn Pn 03 28 38.2 -0.9
BOJS Bojanci 8.13 333 ePn Pn 03 28 41.0 0.0
BOJS iSn Sn 03 30 08.3 -4.5
MLR Muntele Rosu 8.26 28 P Pn 03 28 47.3 +4.4
comp=Z,0.6nm,0.3s,baz=197,slow=11,SNR=8.6
MLR Muntele Rosu 8.26 28 ⇓P Pn 03 28 45.5 +2.5
MLR Muntele Rosu 8.26 28 Pn 03 28 43.4 +0.5
MLR Muntele Rosu 8.26 28 P Pn 03 28 43.4 +0.5
CRES Cresnjev 8.34 335 iPn Pn 03 28 43.5 -0.6
CRES eSn Sn 03 30 11.3 -6.7
CRES Cresnjev 8.34 335 ePn Pn 03 28 43.4 -0.6
KNDS Knezji Dol 8.48 330 iPn Pn 03 28 45.6 -0.3
VISS Visnje 8.54 333 iPn Pn 03 28 46.7 +0.1
BISRR Bisoca 8.60 31 ⇑P Pn 03 28 50.3 +2.7
MDUB Mudurnu 8.62 72 Pn 03 28 50.0 +2.1
DRGR 8.62 11 ⇑P Pn 03 28 47.9 0.0
DRGR 8.62 11 P Pn 03 28 47.9 0.0
OSSC Osservatorio P 8.66 310 Pn 03 28 47.4 -1.0
PLOR Plostina 8.83 30 ⇓P Pn 03 28 51.5 +0.8
PLOR Plostina 8.83 30 P Pn 03 28 51.4 +0.8
LJU Ljubljana 8.86 332 ePn Pn 03 28 50.5 -0.5
VRI Vrincioaia 8.87 30 ⇑P Pn 03 28 53.6 +2.3
VRI Vrincioaia 8.87 30 P Pn 03 28 53.5 +2.3
TRI Trieste 8.87 328 P Pn 03 28 51.0 -0.3
TRI pmax pmax
comp=Z,33nm,0.6s
KEST Kesra 9.22 257 Pn Pn 03 28 57.7 +1.6
comp=Z,0.2nm,0.3s,baz=346,slow=7.7,SNR=4.1
KEST Sn Sn 03 30 37.0 -2.8
comp=Z,0.3nm,0.3s,baz=305,slow=16,SNR=3.2

SOKA Soboth 9.23 336 ePn Pn 03 28 55.1 -1.2
comp=Z,12nm,0.4s,SNR=32
SOKA Sn Sn 03 30 33.1 -7.0
comp=Z,5.7nm,0.6s
OBKA Obir 9.25 334 ePn Pn 03 28 56.0 -0.5
comp=Z,7.6nm,0.2s,SNR=24
OBKA Sn Sn 03 30 37.0 -3.4
comp=Z,16nm,0.3s
PSZ Piszkesteto 9.59 358 Pn Pn 03 29 00.9 -0.2
PSZ Piszkesteto 9.59 358 P Pn 03 29 00.9 -0.2
ARSA Arzberg 9.61 340 ePn Pn 03 28 60.0 -1.4
comp=Z,5.6nm,0.3s,SNR=14
ARSA eSn Sn 03 30 44.4 -4.7
comp=Z,4.3nm,0.5s
MYKA Terra Mystica 9.68 331 ePn Pn 03 29 01.4 -0.9
comp=Z,5.9nm,0.4s,SNR=6.3
MYKA Sn Sn 03 30 43.4 -7.5
comp=Z,4.0nm,0.5s
CTI Castel Tesino 10.08 323 Pn 03 29 07.0 -0.9
CTI Castel Tesino 10.08 323 P Pn 03 29 07.0 -0.9
CONA Conrad Observa 10.15 342 ePn Pn 03 29 09.9 +1.1
comp=Z,0.5nm,0.3s
KBA Koelnbreinsper 10.17 332 ePn Pn 03 29 08.5 -0.6
comp=Z,3.5nm,0.4s,SNR=9.7
KBA eSn Sn 03 30 56.9 -6.1
comp=Z,6.4nm,0.4s
KBA Koelnbreinsper 10.17 332 P Pn 03 29 09.2 +0.1
KBA pmax pmax
comp=Z,13nm,0.6s
VYHS Vyhne 10.22 354 eP Pn 03 29 09.6 -0.1
VYHS Vyhne 10.22 354 eSN Sn 03 30 58.1 -6.1
VYHS Vyhne 10.22 354 ePN Pn 03 29 09.6 -0.1
VYHS eSN 03 29 30.9
ABTA Abfaltersbach 10.23 328 ePn Pn 03 29 09.2 -0.7
comp=Z,8.6nm,0.4s,SNR=17
ABTA eSn Sn 03 30 59.0 -5.4
comp=Z,21nm,0.7s
MODS Modra-Piesok 10.29 348 eSN Sn 03 30 58.0 -7.9
SALO Salr 10.35 318 Pn Pn 03 29 09.6 -1.8
BRTR Keskin Array B 10.39 78 Pn Pn 03 29 15.8 +3.7
comp=Z,0.6nm,0.3s,baz=262,slow=12,SNR=14
BRTR Keskin Array B 10.39 78 Pn 03 29 12.7 +0.6
MOA Molln 10.52 337 ePn Pn 03 29 13.7 -0.1
comp=Z,4.3nm,0.2s,SNR=18
MOA eSn Sn 03 31 05.9 -5.5
comp=Z,6.5nm,0.4s
ILGA Ilgaz 10.61 71 Pn Pn 03 29 16.7 +1.5
CSS Mathiatis 10.91 104 Pn Pn 03 29 19.9 +0.7
RJOB Jochberg 10.92 332 ePn Pn 03 29 19.5 +0.1
RJOB eSn Sn 03 31 16.0 -5.4
WTTA Wattenberg 11.00 327 ePn Pn 03 29 20.5 -0.1
comp=Z,6.6nm,0.3s
WTTA eSn Sn 03 31 19.7 -3.8
comp=Z,32nm,0.7s
WTTA Wattenberg 11.00 327 P Pn 03 29 20.4 -0.2
WTTA pmax pmax
comp=Z,14nm,0.6s
WATA Walderalm 11.09 327 ePn Pn 03 29 22.0 +0.3
comp=Z,7.4nm,0.4s,SNR=7.2
WATA Sn Sn 03 31 22.9 -2.7
comp=Z,16nm,0.7s
SQTA Sankt Quirin 11.16 326 ePn Pn 03 29 23.1 +0.5
comp=Z,5.0nm,0.3s
FUORN Ofenpass-Fuorn 11.16 321 Pn 03 29 23.1 +0.2
FETA Feichten 11.22 324 ePn Pn 03 29 23.9 +0.3
comp=Z,1.3nm,0.3s
FETA Sn Sn 03 31 26.9 -2.1
comp=Z,2.5nm,0.4s
MOTA Moosalm 11.30 326 ePn Pn 03 29 25.4 +0.8
comp=Z,7.6nm,0.4s,SNR=8.8
MOTA eSn Sn 03 31 28.0 -2.7
comp=Z,7.0nm,0.5s
VRAC Vranov 11.31 347 LR LR 03 33 34.3
comp=Z,41nm,21.0s,baz=190,slow=37
DAVOX Davos/Dischmat 11.46 321 Pn Pn 03 29 27.7 +0.8
comp=Z,1.2nm,0.3s,baz=132,slow=23,SNR=15
DAVOX Sn Sn 03 31 34.3 -0.5
comp=Z,1.7nm,0.3s,baz=345,slow=20,SNR=5.9
RETA Reutte 11.56 325 Pn Pn 03 29 28.8 +0.7
comp=Z,3.3nm,0.4s
RETA Sn Sn 03 31 34.3 -2.6
comp=Z,5.5nm,0.6s
GEC2 GERESS Array S 11.57 337 ePn Pn 03 29 29.1 +0.7
GEC2 eSn Sn 03 31 31.2 -6.3
GERES GERESS Array B 11.57 337 Pn Pn 03 29 27.1 -1.2
comp=Z,0.7nm,0.3s,baz=157,slow=14,SNR=17
GERES Sn Sn 03 31 30.8 -6.6
comp=Z,0.9nm,0.3s,baz=154,slow=24,SNR=5.1
GERES LR LR 03 35 09.2
comp=Z,109nm,18.9s,baz=142,slow=44
GERES GERESS Array B 11.57 337 Pn 03 29 27.5 -0.8
GERES GERESS Array B 11.57 337 P Pn 03 29 27.5 -0.8
DAVA Damuels 11.82 323 ePn Pn 03 29 32.3 +0.6
comp=Z,3.0nm,0.2s
DAVA eSn Sn 03 31 40.1 -3.4
comp=Z,3.3nm,0.3s
KHC Kasperske Hory 11.87 338 ePN Pn 03 29 30.3 -2.0
KHC eSN Sn 03 31 36.6 -7.9
KHC Kasperske Hory 11.87 338 Pn 03 29 31.4 -0.9
KHC Kasperske Hory 11.87 338 iP Pn 03 29 32.0 -0.3
WET Wettzell 12.10 336 ePn Pn 03 29 35.2 -0.2
SENIN Lac Senin/Sane 12.58 314 Pn 03 29 42.7 +0.5
MMAI Mount Meron Ar 13.29 109 Pn Pn 03 29 50.8 -1.0
comp=Z,1.5nm,0.3s,baz=321,slow=9.1,SNR=10
MMAI Sn Sn 03 32 12.8 -6.7
comp=Z,0.9nm,0.3s,baz=270,slow=24,SNR=3.8
GAZ Gaziantep 13.35 90 Pn Pn 03 29 54.3 +1.7
AKASG Malin Array Be 13.86 24 Pn Pn 03 29 58.3 -1.1
comp=Z,0.6nm,0.3s,baz=210,slow=11,SNR=3.6
CLL Collm 13.99 340 ePP P 03 30 09.0 -0.1
ASF Jabal al Asfar 14.80 110 Pn Pn 03 30 12.4 -0.1
comp=Z,0.1nm,0.3s,baz=315,slow=19,SNR=2.4
ASF Sn Sn 03 32 58.1 +1.8
comp=Z,0.1nm,0.3s,baz=242,slow=17,SNR=1.9
EIL Elat 14.82 121 Pn Pn 03 30 12.6 -0.1
comp=Z,0.3nm,0.3s,baz=281,slow=0.8,SNR=9.5
EIL Sn Sn 03 32 49.8 -7.0
comp=Z,0.5nm,0.3s,baz=352,slow=15,SNR=4.0
EIL LR LR 03 38 19.1
comp=Z,34nm,18.2s,baz=292,slow=47
NEY Neytrino 17.58 67 iP P 03 30 50.5 +1.3
SHA1 Shidzhatmaz 17.61 65 iP P 03 30 50.3 +0.6
KIV Kislovodsk 17.67 64 eP P 03 30 50.3 +0.1
KIV pmax pmax
comp=Z,22nm,1.0s
KBZ Khabaz 17.78 65 P P 03 30 51.9 +0.7
comp=Z,0.2nm,0.3s,baz=277,slow=8.6,SNR=15
KBZ Khabaz 17.78 65 iP P 03 30 52.2 +1.0
KBZ pmax pmax
comp=Z,10.0nm,0.9s
AKH Akhalkalaki 17.97 73 Pn Pn 03 30 51.3 -1.8
AKH Akhalkalaki 17.97 73 P Pn 03 30 51.3 -1.8
AKH pmax pmax
comp=Z,7.0nm,0.9s
VORD Divnogorie 18.37 40 eP Pn 03 31 00.5 +2.8
VORD pmax pmax
comp=Z,20nm,0.6s
ZEI Tsey 18.38 69 eP Pn 03 30 59.0 +0.9
ZEI pmax pmax
comp=Z,5.0nm,0.6s
VSR Storozhevoye 18.46 40 eP P 03 30 57.9 -0.7
VSR pmax pmax
comp=Z,6.0nm,0.5s
TBLG Delisi 18.92 72 P Pn 03 31 05.8 +1.3
TBLG IAmb IAmb 03 31 13.6
comp=Z,36nm,1.8s
TBLG Delisi 18.92 72 P Pn 03 31 05.8 +1.3
TBLG pmax pmax
comp=Z,36nm,1.8s
GNI Garni 18.92 77 P Pn 03 31 05.4 +0.7
comp=Z,1.0nm,0.3s,baz=316,slow=2.3,SNR=18
GNI Garni 18.92 77 P Pn 03 31 05.2 +0.6
GNI Garni 18.92 77 iP Pn 03 31 05.3 +0.7
GNI pmax pmax
comp=Z,102nm,1.1s
ESDC Sonseca Array 18.98 282 P Pn 03 31 05.1 -0.2
comp=Z,0.3nm,0.3s,baz=74,slow=12,SNR=9.0
ESDC Sonseca Array 18.98 282 IAmb IAmb 03 31 09.8
comp=Z,2.6nm,1.3s
GROC Groznyy 19.80 68 eP P 03 31 11.1 -2.3
GROC pmax pmax
comp=Z,23nm,1.3s
OBN Obninsk 20.03 28 eP P 03 31 16.6 +0.8
OBN pmax pmax
comp=Z,8.0nm,0.6s
VSU Vasula 20.56 9 ceP P 03 31 22.0 +0.5
VSU pmax pmax
comp=Z,62nm,0.7s
MOS Moscow 20.89 28 eP P 03 31 23.3 -1.9
MAK Makhachkala 21.03 69 iP P 03 31 28.5 +1.7
MAK pmax pmax
comp=Z,63nm,0.8s
AKT Akhty 21.16 73 eP P 03 31 28.7 +0.4
AKT e 03 31 47.6
AKT pmax pmax
comp=Z,28nm,1.0s
HFS Hagfors 22.23 351 P P 03 31 38.9 -0.6
comp=Z,2.9nm,0.5s,baz=158,slow=12,SNR=18
EKA Eskdalemuir Ar 23.25 325 P P 03 31 50.1 -0.1
comp=Z,4.0nm,0.8s,baz=118,slow=10,SNR=7.3
FINES FINESS Array B 23.40 7 P P 03 31 50.1 -1.6
comp=Z,2.8nm,0.4s,baz=171,slow=9.4,SNR=34
FINES PcP PcP 03 35 37.8 +0.1
comp=Z,1.4nm,0.6s,baz=199,slow=1.8,SNR=4.1
FINES FINESS Array B 23.40 7 P P 03 31 51.1 -0.6
FINES FINESS Array B 23.40 7 P P 03 31 51.1 -0.6
FINES 03 35 37.8
NB2 NORSAR Subarra 23.45 349 P P 03 31 51.9 -0.3
comp=Z,0.9nm,0.5s,baz=160,slow=10
NOA NORSAR Array B 23.45 349 P P 03 31 52.0 -0.3
comp=Z,1.6nm,0.8s,baz=159,slow=9.8,SNR=10.0
NOA LR LR 03 42 01.0
comp=Z,27nm,21.1s,baz=230,slow=39
NOA NORSAR Array B 23.45 349 P P 03 31 52.0 -0.3
KLMR Klimovskoe 25.53 22 eP P 03 32 10.4 -1.0
KLMR AMP 03 32 15.6
comp=Z,25nm,1.8s
KLMR Klimovskoe 25.53 22 eP P 03 32 10.3 -1.1
KLMR pmax pmax
comp=Z,25nm,1.8s
RAYN Ar Rayn 25.99 117 P P 03 32 16.9 +0.9
RAYN Ar Rayn 25.99 117 P P 03 32 16.9 +0.9
RAYN pmax pmax
comp=Z,5.0nm,1.0s
KIRV Kirov 27.57 33 P P 03 32 28.4 -1.5
comp=Z,8.2nm,0.6s,baz=228,slow=12,SNR=3.9
KIRV Kirov 27.57 33 iP P 03 32 28.8 -1.0
PRGR Permogore 28.06 26 eP P 03 32 32.4 -1.8
PRGR pmax pmax
comp=Z,7.0nm,0.4s
AKTO Aktyubinsk 29.16 53 P P 03 32 43.0 -1.1
comp=Z,1.4nm,0.3s,baz=240,slow=5.4,SNR=16
GEYT Alibeck 29.53 79 P P 03 32 47.6 0.0
comp=Z,4.4nm,0.5s,baz=292,slow=9.4,SNR=9.4
GEYT Alibeck 29.53 79 P P 03 32 48.0 +0.4
TOA0 Torodi Ar. Sit 30.10 219 P P 03 32 54.0 +1.3
TOA0 IAmb IAmb 03 32 56.6
comp=Z,4.1nm,0.8s
TORD Torodi Ar. Bea 30.10 219 P P 03 32 53.3 +0.6
comp=Z,4.0nm,0.6s,baz=32,slow=9.4,SNR=24
TORD Torodi Ar. Bea 30.10 219 P P 03 32 53.3 +0.6
ABKAR Akbulak array 30.23 56 P P 03 32 52.9 -0.7
ABKAR PcP 03 35 54.1 0.0
ARU Arti 31.00 42 P P 03 32 59.3 -1.0
comp=Z,2.6nm,0.2s,baz=186,slow=12,SNR=4.1
ARU LR LR 03 46 30.7
comp=Z,40nm,20.3s,baz=22,slow=38
ARU Arti 31.00 42 IAmb IAmb 03 32 59.8
comp=Z,3.9nm,0.6s
ARU Arti 31.00 42 d iP P 03 32 59.3 -1.0
ARU 03 33 58.1
ARU S S 03 38 05.7 +1.1
ARU pmax pmax
comp=Z,8.0nm,1.0s
ARCES ARCESS Array B 31.38 3 P P 03 33 03.3 -0.2
comp=Z,2.1nm,0.7s,baz=195,slow=8.5,SNR=7.5
ARCES PcP PcP 03 35 56.6 -0.2
comp=Z,1.5nm,0.7s,baz=199,slow=1.9,SNR=10.0
HRA Herat 33.71 84 P P 03 33 24.8 +0.2
HRA IAmb IAmb 03 33 37.7
comp=Z,14nm,1.9s
BRVK Borovoye 37.02 50 P P 03 33 52.5 -0.1
BRVK Borovoye 37.02 50 P P 03 33 52.5 -0.1
BRVK pmax pmax
comp=Z,6.0nm,1.4s
BVAR Borovoye Array 37.09 50 P P 03 33 53.0 -0.2
comp=Z,1.7nm,0.5s,baz=270,slow=7.4,SNR=13
BVAR PP PP 03 35 16.6 -1.0
comp=Z,1.5nm,0.8s,baz=274,slow=8.8,SNR=3.7
BVAR Borovoye Array 37.09 50 P P 03 33 53.0 -0.2
KKAR Karatay Array 37.81 66 P P 03 33 59.1 -0.4
KKAR Karatay Array 37.81 66 P P 03 33 59.1 -0.4
DBIC Dimbokro 38.95 222 P P 03 34 11.5 +2.3
comp=Z,5.4nm,0.7s,baz=17,slow=9.4,SNR=10.0
DBIC Dimbokro 38.95 222 P P 03 34 10.6 +1.4
DBIC IAmb IAmb 03 34 12.9
comp=Z,6.5nm,0.8s
DBIC Dimbokro 38.95 222 P P 03 34 10.6 +1.4
DBIC pmax pmax
comp=Z,7.0nm,0.8s
KBL Kabul 38.95 80 P P 03 34 09.1 -0.3
KBL Kabul 38.95 80 P P 03 34 09.1 -0.3
KBL pmax pmax
comp=Z,2.0nm,0.7s
TIC Toumodi 39.06 223 eP P 03 34 12.1 +2.0
KIC Kosan Boka 39.15 222 eP P 03 34 13.6 +2.7
comp=Z,15nm,0.8s
LIC Lamto 39.41 222 eP P 03 34 15.8 +2.7
comp=Z,18nm,0.5s
SPITS Spitsbergen Ar 39.99 359 P P 03 34 17.0 -0.3
comp=Z,11nm,1.0s,baz=157,slow=7.8,SNR=6.8
SPITS Spitsbergen Ar 39.99 359 P P 03 34 17.0 -0.3
AAK Ala-Archa 40.77 66 P P 03 34 24.5 +0.1
comp=Z,1.4nm,0.6s,baz=235,slow=8.3,SNR=5.1
AAK Ala-Archa 40.77 66 IAmb IAmb 03 34 29.5
comp=Z,3.0nm,0.9s
AAK Ala-Archa 40.77 66 ceP P 03 34 25.0 +0.6
AAK pmax pmax
comp=Z,3.0nm,0.9s
KURBB Kurchatov Arra 42.21 54 P P 03 34 34.6 -1.2
comp=Z,1.4nm,0.7s,baz=282,slow=9.0,SNR=8.6
KURBB PP PP 03 36 13.7 +0.3
comp=Z,0.7nm,0.8s,baz=276,slow=12,SNR=5.2
KURBB PcP PcP 03 36 30.0 +0.3
comp=Z,1.2nm,0.6s,baz=277,slow=3.8,SNR=7.4
KURK Kurchatov 42.25 53 PcP 03 36 30.0 +0.1
KURK Kurchatov 42.25 53 P P 03 34 34.6 -1.5
KURK Kurchatov 42.25 53 IAmb IAmb 03 35 03.8
comp=Z,14nm,2.0s
KURK Kurchatov 42.25 53 iP P 03 34 37.5 +1.3
KURK pmax pmax
comp=Z,2.0nm,1.0s
NIL Nilore 42.53 80 P P 03 34 39.8 +1.1
NIL IAmb IAmb 03 34 57.0
comp=Z,11nm,1.1s
NIL Nilore 42.53 80 eP P 03 34 39.8 +1.1
NIL pmax pmax
comp=Z,11nm,1.2s
MAKZ Makanchi 45.08 59 P P 03 34 58.0 -1.1
MAKZ IAmb IAmb 03 36 43.8
comp=Z,5.4nm,1.5s
MAKZ Makanchi 45.08 59 P P 03 34 58.0 -1.1
MAKZ pmax pmax
comp=Z,5.0nm,1.5s
MK31 Makanchi Array 45.29 58 P P 03 34 59.6 -1.1
MK31 IAmb IAmb 03 35 00.3
comp=Z,2.3nm,0.6s
MK31 Makanchi Array 45.29 58 P P 03 34 59.6 -1.1
MK31 pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 45.29 58 P P 03 34 59.7 -1.0
comp=Z,3.3nm,0.5s,baz=274,slow=7.4,SNR=49
MKAR PcP PcP 03 36 40.4 0.0
comp=Z,1.0nm,0.6s,baz=273,slow=4.4,SNR=3.6
MKAR Makanchi Array 45.29 58 P P 03 34 59.5 -1.3
ZAA0 Zalesovo Array 45.65 48 P P 03 35 02.5 -0.9
ZALV Zalesovo Beam 45.65 48 P P 03 35 02.6 -0.9
comp=Z,11nm,0.4s,baz=274,slow=8.7,SNR=46
ZALV Zalesovo Beam 45.65 48 P P 03 35 02.4 -1.1
WMQ Urumqi 49.76 61 eP P 03 35 38.9 +3.3
TLY Talaya 57.24 47 P P 03 36 30.8 +0.5
TLY Talaya 57.24 47 eP P 03 36 30.0 -0.3
TLY pmax pmax
comp=Z,3.0nm,0.9s
SCHQ Schefferville 58.29 317 P P 03 36 38.0 +0.4
comp=Z,1.4nm,0.5s,baz=15,slow=6.3,SNR=4.1
TIXI Tiksi 59.54 20 eP P 03 36 47.1 +1.2
TIXI pmax pmax
comp=Z,1.0nm,1.0s
GTA Gaotai 59.83 62 eP P 03 36 47.5 -1.2
GTA pP pP 03 36 51.1 -1.6
GTA sP sP 03 36 53.5 -0.8
SONM Songino Array 60.43 51 P P 03 36 52.1 -0.5
comp=Z,1.1nm,0.6s,baz=283,slow=7.6,SNR=9.3
SONM Songino Array 60.43 51 P P 03 36 51.9 -0.7
LZH Lanzhou 64.21 63 eP P 03 37 19.6 +1.4
LZH pP sP 03 37 26.0 +2.1
LZH sP pP 03 37 29.3 +7.0
LZH PP PP 03 39 47.0 +7.9
YAK Yakutsk 65.02 29 iP P 03 37 22.1 -0.7
YAK pmax pmax
comp=Z,5.0nm,0.7s
HHC Hu-ho-hao-te 67.02 55 eP P 03 37 37.2 +1.0
XAN Xi'an 68.83 63 P P 03 37 47.0 -0.6
XAN pP PcP 03 38 07.6 -4.6
XAN sP sP 03 38 16.5 +23
CHTO Chiang Mai 69.75 82 P P 03 37 52.6 -0.8
CHTO IAmb IAmb 03 37 56.0
comp=Z,3.8nm,1.0s
CHTO Chiang Mai 69.75 82 P P 03 37 52.7 -0.8
CHTO pmax pmax
comp=Z,4.0nm,1.0s
CMAR Chiang Mai Arr 69.95 82 P P 03 37 53.2 -1.5
comp=Z,1.7nm,0.3s,baz=305,slow=7.5,SNR=7.4
BILL Bilibino 70.89 13 eP P 03 38 01.8 +2.2
BILL pmax pmax
comp=Z,2.0nm,1.3s
INK Inuvik 71.90 350 P P 03 38 05.8 +0.1
comp=Z,0.5nm,0.5s,baz=351,slow=4.4,SNR=5.5
PBKT Sadao Pong 72.61 82 P P 03 38 12.0 +1.2
YKA Yellowknife Ar 73.22 340 P P 03 38 13.9 +0.2
comp=Z,0.4nm,0.8s,baz=43,slow=6.0,SNR=6.2
KLR Kul'dur 73.81 39 eP P 03 38 17.6 +0.2
KLR pmax pmax
comp=Z,4.0nm,0.9s
ULM Lac du Bonnet 75.52 324 P P 03 38 28.2 +0.9
comp=Z,1.8nm,0.7s,baz=63,slow=7.8,SNR=4.1
DAWY Dawson 76.69 351 P P 03 38 34.1 +0.3
ILAR Eielson Array 76.75 354 P P 03 38 34.7 +0.7
comp=Z,0.4nm,0.7s,baz=15,slow=3.7,SNR=5.2
USRK Ussuriysk Ar. 77.23 43 P P 03 38 36.9 -0.2
comp=Z,3.6nm,0.7s,baz=306,slow=4.0,SNR=8.6
KSRS Korea Array 79.30 51 P P 03 38 48.4 -0.3
comp=Z,3.2nm,0.9s,baz=298,slow=5.4,SNR=4.5
YSS Yuzh-Sakhalins 80.69 36 ⇑eP P 03 38 55.8 -0.2
YSS e 03 39 00.3
YSS pmax pmax
comp=Z,20nm,0.9s
YNE Yellowstone No 85.78 327 P P 03 39 24.5 +1.8
MJAR Matsushiro Arr 85.94 46 P P 03 39 23.4 0.0
comp=Z,0.8nm,0.3s,baz=320,slow=5.4,SNR=4.0
PDAR Pinedale Array 87.37 326 P P 03 39 31.9 +1.4
comp=Z,0.5nm,1.0s,baz=24,slow=6.9,SNR=3.9
TXAR Lajitas Array 94.80 313 P P 03 40 05.7 +0.5
comp=Z,0.5nm,0.8s,baz=73,slow=6.9,SNR=3.8
WRA Warramunga Arr 120.63 92 PKP PKPdf 03 45 34.4 -0.9
comp=Z,0.3nm,0.4s,baz=319,slow=2.0,SNR=11
ASAR Alice Springs 122.28 96 PKP PKPdf 03 45 37.9 -0.5
comp=Z,0.5nm,0.4s,baz=309,slow=1.4,SNR=6.6

IDC 07 03:32:33.8±1.1, 36°66N×8°42E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.2/48, mbtmp3.5/5, Error ellipse: s-maj=24.9km s-min=12.8km az=62.0
TUN 07 03:32:51.4, 35°50N×9°29E, h31km, MD3.4
ISC 07 03:32:35.5±0.9, 36°6N±0°1×8°52E±0°06, h10km, n16, σ1s09/15, mb3.4/5, Tunisia

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
CMAH Djebel Manchou 0.89 274 P Pg 03 32 52.8 +0.3
THTN Thala 1.01 172 iP Pn 03 33 04.1 +8.3
KEST Kesra 1.07 141 Pg Pn 03 32 57.1 +0.5
56nm,0.3s,baz=294,slow=2.9,SNR=446
KEST Lg Lg 03 33 13.6
124nm,0.3s,baz=80,slow=19,SNR=25
TROT Trozza 1.33 138 iP Pg 03 33 00.6 -0.4
CAEH 'Ain El Ouahch 1.36 280 P Pg 03 33 02.9 +1.4
CKFL Kef-Lekhel 1.46 264 P Pn 03 33 00.0 -2.0
CASM Ain Smara 1.66 260 P Pn 03 33 03.7 -1.0
BTHT Jabal bu Thady 2.03 134 iP Pn 03 33 09.6 -0.1
DFRA Djebel Bou Aff 2.13 270 P Pn 03 33 10.8 -0.4
BERT Berda 2.35 170 iP Pn 03 33 14.9 +0.7
ESDC Sonseca Array 10.31 291 Pn Pn 03 35 05.0 +1.6
0.5nm,0.3s,baz=103,slow=14,SNR=7.1
TORD Torodi Ar. Bea 24.11 196 P P 03 37 51.2 -0.2
0.6nm,0.7s,baz=12,slow=9.3,SNR=6.9
DBIC Dimbokro 32.17 206 P P 03 39 03.1 -0.3
1.5nm,0.6s,baz=2.0,slow=12,SNR=4.1
ZALV Zalesovo Beam 53.76 45 P P 03 41 57.8 +0.1
0.6nm,0.6s,baz=310,slow=5.1,SNR=2.3
MKAR Makanchi Array 54.16 54 P P 03 41 59.0 -1.8
0.2nm,0.6s,baz=279,slow=6.9,SNR=2.7
YKA Yellowknife Ar 71.27 336 P P 03 43 55.2 +0.6
0.2nm,0.7s,baz=49,slow=5.8,SNR=4.1

NEIC 07 03:36:22.7±0.7, 16°59N±0°08×94°11W±0°05, h122km±10km, Error ellipse: s-maj=12.2km s-min=5.6km az=198.0
MEX 07 03:36:23.3±1.0, 16°65N×94°08W, h133km±9km, MD4.0
ISC 07 03:36:22.5±1.8, 16°52N±0°09×94°15W±0°05, h123km±15km, n15, σ0s73/26, Oaxaca

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
CMIG Matias Romero 0.91 309 Pn 03 36 43.9 -0.1
CMIG Sn 03 37 00.5 +0.3
CMIG Matias Romero 0.91 309 eP Pn 03 36 43.9 -0.1
CMIG iS Sn 03 37 00.5 +0.3
TGIG 1.01 75 Pn 03 36 44.7 -0.3
TGIG Sn 03 37 01.5 -0.5
TGIG 1.01 75 eP Pn 03 36 44.7 -0.3
TGIG iS Sn 03 37 01.5 -0.5
TGBT Tuxtla Gutierr 1.04 75 iP Pn 03 36 45.4 +0.2
TGBT eS Sn 03 37 01.2 -1.2
PCIG 1.20 132 Pn 03 36 47.6 +0.8
PCIG Sn 03 37 05.5 +0.3
PCIG 1.20 132 eP Pn 03 36 47.6 +0.8
PCIG iS Sn 03 37 05.5 +0.3
CCIG Comitan 1.94 97 Pn 03 36 55.8 +0.2
VHO Vista Hermosa 2.54 283 iP Pn 03 37 04.3 +1.2
VHO iS Sn 03 37 35.2 +0.9
PEIG Puerto Escondi 2.93 260 eP Pn 03 37 06.5 -1.5
PEIG iS Sn 03 37 42.6 -0.5
HLIG Huajuapan de L 3.73 291 iP Pn 03 37 19.5 +0.7
HLIG iS Sn 03 38 01.9 -0.4
PNIG Pinotepa 3.82 269 Pn 03 37 19.0 -0.8
PNIG Pinotepa 3.82 269 iP Pn 03 37 19.0 -0.8
FTIG Fresnillo de T 4.05 291 eP Pn 03 37 23.9 +0.9
FTIG iS Sn 03 38 09.3 -0.5
TLIG Tlapa 4.36 284 Pn Pn 03 37 27.4 +0.4

THE 07 04:04:44.6, 38°34N×20°39E, h14km±1km, ML3.0/9, Error ellipse: s-maj=1.1km s-min=0.4km az=246.0
ATH 07 04:04:44.5, 38°34N×20°43E, h15km±1km, ML3.0/6, Error ellipse: s-maj=2.0km s-min=0.8km az=269.0
BEO 07 04:04:47.8±1.3, 38°34N×20°32E, h38km±6km, ML2.7/3
ISC 07 04:04:44.7±0.8, 38°33N±0°02×20°42E±0°03, h13km±5km, n55, σ0s86/81, Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KEF1 Kardakata, Kep 0.07 142 P Pg 04 04 47.2 -0.1
KEF1 S Sg 04 04 48.8 -0.2
KEF4 Livadi, Kephal 0.07 178 P Pg 04 04 47.4 0.0
KEF4 S Sg 04 04 49.4 +0.2
LXR1 Lixouri, Cepha 0.13 174 P Pg 04 04 48.3 +0.3
LXR1 S Sg 04 04 51.2 +0.8
LXRA Lixouri, Kepha 0.13 174 P Pg 04 04 48.4 +0.3
LXRA S Sg 04 04 51.0 +0.7
KEF3 Kipouria, Keph 0.14 204 P Pg 04 04 48.4 +0.2
KEF3 S Sb 04 04 51.3 -0.8
CHV1 Chavriata, Kef 0.15 192 P Pg 04 04 48.5 +0.2
CHV1 S Sg 04 04 51.6 +0.8
KONA Konidatara, Ke 0.15 51 P Pg 04 04 48.2 -0.2
KONA S Sg 04 04 50.8 -0.1
ARGA Argostoli. Kep 0.16 163 P Pg 04 04 48.6 +0.1
ARGA S Sg 04 04 51.4 +0.3
ARG2 Argostoli 0.16 161 P Pg 04 04 48.6 +0.1
ARG2 S Sg 04 04 51.6 +0.5
17μm,0.2s

KEF2	**Argostoli. Kep**	**0.17**	**162**	P	**Pg**	**04 04 48.8**	**+0.1**
KEF2				S	**Sg**	**04 04 51.5**	**+0.1**
VLS	**Valsamata**	**0.20**	**139**	P	**Pg**	**04 04 49.1**	**-0.1**
VLS				S	**Sg**	**04 04 52.7**	**+0.5**
	10µm,0.1s						
VLS	**Valsamata**	**0.20**	**139**	P	**Pg**	**04 04 49.2**	**-0.1**
VLS				S	**Sg**	**04 04 52.5**	**+0.2**
VLS				AML	AML	04 04 52.8	
	comp=E,16950µm,0.1s						
VLS				AML	AML	04 04 52.8	
	comp=N,21504µm,0.1s						
EVGI	**Lefkada island**	**0.34**	**32**	P	**Pg**	**04 04 51.5**	**-0.2**
EVGI				S	**Sg**	**04 04 57.0**	**+0.6**
EVGI	**Lefkada island**	**0.34**	**32**	P	**Pg**	**04 04 51.5**	**-0.2**
EVGI				S	**Sg**	**04 04 57.0**	**+0.6**
KFL	**Anninata**	**0.36**	**127**	P	**Pg**	**04 04 52.0**	**-0.1**
KFL				S	**Sg**	**04 04 57.9**	**+1.0**
	comp=N,13µm,0.3s						
KFL	**Anninata**	**0.36**	**127**	P	**Pg**	**04 04 51.9**	**-0.1**
KFL				S	**Sg**	**04 04 57.8**	**+0.9**
KFL				AML	AML	04 04 58.3	
	comp=N,16898µm,0.3s						
KFL				AML	AML	04 04 58.4	
	comp=E,34572µm,0.3s						
MGNA	**Meganis**	**0.44**	**42**	P	**Pg**	**04 04 53.0**	**-0.4**
VLMS	**Volimes, Zakyn**	**0.49**	**157**	P	**Pg**	**04 04 54.3**	**-0.1**
VLMS				S	**Sb**	**04 05 02.2**	**-0.2**
VLMS				AML	AML	04 05 07.3	
	comp=E,2341µm,0.2s						
VLMS				AML	AML	04 05 09.5	
	comp=N,4531µm,0.4s						
LKD2	**Lefkada island**	**0.49**	**22**	P	**Pg**	**04 04 54.0**	**-0.5**
LKD2				S	**Sb**	**04 05 01.8**	**-0.7**
	comp=N,548nm,0.3s						
LKD2	**Lefkada island**	**0.49**	**22**	P	**Pg**	**04 04 54.1**	**-0.5**
TSLK	**Tsoukalades, L**	**0.53**	**20**	P	**Pg**	**04 04 54.6**	**-0.5**
TSLK	**Tsoukalades, L**	**0.53**	**20**	P	**Pg**	**04 04 54.8**	**-0.3**
AST1	**Astakos**	**0.57**	**68**	P	**Pg**	**04 04 55.6**	**-0.2**
AST1				S	**Sb**	**04 05 04.7**	**+0.2**
	comp=N,3µm,0.3s						
PDO	**Prodromos**	**0.66**	**66**	P	**Pg**	**04 04 57.0**	**-0.5**
PDO				S	**Sb**	**04 05 08.3**	**+1.2**
	comp=N,2µm,0.6s						
PDO	**Prodromos**	**0.66**	**66**	P	**Pg**	**04 04 56.9**	**-0.5**
PDO				AML	AML	04 05 14.2	
	comp=N,2608µm,0.6s						
PDO				AML	AML	04 05 14.3	
	comp=E,1976µm,0.3s						
KRI1	**kERI**	**0.74**	**155**	P	**Pg**	**04 04 58.8**	**-0.2**
KRI1				S	**Sb**	**04 05 10.7**	**+1.3**
	comp=E,2µm,0.3s						
RLS	**Riolos of Patr**	**0.87**	**108**	P	**Pb**	**04 05 01.1**	**-0.6**
RLS	**Riolos of Patr**	**0.87**	**108**	P	**Pb**	**04 05 00.9**	**-0.7**
PVO	**Paravola**	**0.91**	**71**	P	**Pb**	**04 05 02.2**	**-0.2**
PVO	**Paravola**	**0.91**	**71**	P	**Pb**	**04 05 02.3**	**-0.2**
PVO				AML	AML	04 05 22.4	
	comp=N,1383µm,0.4s						
PVO				AML	AML	04 05 22.8	
	comp=E,1400µm,0.4s						
DRO	**Drossia**	**1.08**	**110**	P	**Pb**	**04 05 05.3**	**-0.1**
DRO				S	**Sn**	**04 05 22.5**	**+1.9**
	comp=E,538nm,0.6s						
DRO	**Drossia**	**1.08**	**110**	P	**Pb**	**04 05 05.2**	**-0.1**
IGT	**Igoumenitsa**	**1.20**	**357**	*e*Pg	**Pg**	**04 05 10.7**	**+2.8**
IGT				*e*Sg	**Sg**	**04 05 25.6**	**+2.0**
ANX	**Ano Chora**	**1.21**	**77**	P	**Pn**	**04 05 07.1**	**-0.3**
ANX	**Ano Chora**	**1.21**	**77**	P	**Pn**	**04 05 06.8**	**-0.6**
LAKA	**Lakka**	**1.23**	**94**	P	**Pn**	**04 05 07.2**	**-0.5**
LAKA				S	**Sg**	**04 05 25.9**	**+1.5**
	comp=E,128nm,0.5s						
LAKA	**Lakka**	**1.23**	**94**	P	**Pn**	**04 05 07.2**	**-0.5**
EVR	**Evrytania**	**1.23**	**61**	P	**Pb**	**04 05 07.9**	**-0.1**
SERG	**Sergoula**	**1.29**	**86**	P	**Pn**	**04 05 08.2**	**-0.3**
SERG	**Sergoula**	**1.29**	**86**	P	**Pn**	**04 05 08.2**	**-0.3**
AMT	**Artemida-Makis**	**1.29**	**128**	P	**Pg**	**04 05 09.8**	**+0.2**
TRIZ	**Trizonia**	**1.30**	**88**	P	**Pn**	**04 05 08.3**	**-0.3**
TRIZ	**Trizonia**	**1.30**	**88**	P	**Pn**	**04 05 08.1**	**-0.5**
KALE	**Kalithea**	**1.35**	**87**	P	**Pn**	**04 05 09.3**	**-0.1**
KALE	**Kalithea**	**1.35**	**87**	P	**Pn**	**04 05 09.3**	**-0.1**
KALE				AML	AML	04 05 37.4	
	comp=N,545µm,0.4s						
KALE				AML	AML	04 05 41.0	
	comp=E,326µm,0.7s						
KLV	**Kalavryta, Ach**	**1.39**	**101**	P	**Pn**	**04 05 09.8**	**-0.2**
KLV	**Kalavryta, Ach**	**1.39**	**101**	P	**Pn**	**04 05 09.9**	**0.0**
PROD	**Prodromos**	**1.95**	**91**	P	**Pb**	**04 05 19.0**	**-1.1**
VIL2	**Platees**	**2.24**	**92**	P	**Pn**	**04 05 23.7**	**-1.4**
MRKA	**Markates**	**2.51**	**80**	P	**Pn**	**04 05 27.2**	**+1.8**
FNA	**Florina**	**2.56**	**16**	*e*Pn	**Pn**	**04 05 27.6**	**+1.6**
SRS	**Serrai**	**3.71**	**40**	*e*Pn	**Pn**	**04 05 43.0**	**+1.3**
PDG	**Podgorica**	**4.19**	**348**	*e*Pn	**Pn**	**04 05 48.6**	**+0.2**
PDG				*e*Sn	**Sn**	**04 06 34.9**	**-2.3**
TREB	**Trebinje**	**4.66**	**341**	*e*Pn	**Pn**	**04 05 54.6**	**-0.2**
TREB				*e*Sn	**Sn**	**04 06 45.7**	**-3.0**
IVAS	**Ivanjica**	**5.25**	**358**	*e*Pn	**Pn**	**04 06 02.8**	**-0.1**

*IDC **07** 04:05:40.3±2.1, 36°37N×141°79E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.4/39, mbtmp3.6/5, ML3.3/2, MS2.7/2, Ms1 2.7/2, ms1mx2.3/37, Error ellipse: s-maj=43.4km s-min=32.0km az=143.0*

*JMA **07** 04:05:40.1±0.2, 36°18N×142°01E, h51km, M3.4*

ISC 07 04:05:39.1±2.0, **36°24N**±0°04×**141°89E**±0°08, **h4**km±11km, **n29**, σ1§**48**/28, **mb3.6**/3, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.99**	**237**	P	**Pg**	**04 05 58.4**	**+0.3**
CHOJ				*e*S	**Sg**	**04 06 12.2**	**+1.3**
JHYU	**Hitachinakayam**	**1.05**	**276**	P	**Pn**	**04 06 00.5**	**-0.1**
JHYU				S	**Sn**	**04 06 15.5**	**-0.2**
JHO	**Hitachi**	**1.12**	**290**	P	**Pb**	**04 06 00.9**	**-0.2**
JIHU	**Itakohorinouch**	**1.13**	**256**	P	**Pn**	**04 06 01.6**	**-0.1**
ONAJ	**Iwakimizuishiy**	**1.23**	**315**	P	**Pn**	**04 06 02.8**	**-0.2**
JFK	**Kawauchi**	**1.39**	**324**	P	**Pg**	**04 06 05.1**	**-0.5**
BSO1	**Boso 1**	**1.75**	**205**	P	**Pn**	**04 06 08.7**	**-1.0**
BSO1				S	**Sn**	**04 06 30.8**	**-1.4**
JFT	**Otama**	**1.78**	**316**	P	**Pb**	**04 06 12.1**	**-0.2**
JFT				*e*S	**Sg**	**04 06 35.2**	**-1.0**
BSO3	**Boso 3**	**1.82**	**218**	P	**Pn**	**04 06 10.2**	**-0.8**
BSO3				S	**Sn**	**04 06 33.9**	**-0.5**
JMM	**Marumori**	**1.84**	**332**	P	**Pn**	**04 06 11.1**	**-0.4**
JAG	**Ashikaga**	**1.97**	**276**	P	**Pn**	**04 06 13.1**	**-0.2**
JFY	**Yanaizu**	**2.10**	**304**	P	**Pb**	**04 06 16.1**	**-1.6**
JKT	**Katashina**	**2.19**	**285**	P	**Pn**	**04 06 17.0**	**+0.7**
JRY	**Ryogami san**	**2.42**	**266**	P	**Pn**	**04 06 19.4**	**-0.1**
JOD2	**Odawara 2**	**2.48**	**248**	P	**Pn**	**04 06 20.3**	**+0.1**
MJAR	**Matsushiro Arr**	**2.98**	**277**	Pn	**Pn**	**04 06 28.0**	**+0.8**
	1.1nm,0.3s,baz=93,slow=10,SNR=39						
MAT	**Matsushiro**	**2.98**	**277**	P	**Pn**	**04 06 28.5**	**+1.3**
MAT				S	**Sn**	**04 07 03.5**	**+0.1**
JHJ	**Hachijo jima 2**	**3.56**	**210**	Pn	**Pn**	**04 06 37.7**	**+2.6**
	29nm,0.3s,baz=78,slow=14,SNR=3.3						
JHJ				Sn	**Sn**	**04 07 12.2**	**-5.5**
	29nm,0.3s,baz=108,slow=19,SNR=4.9						
KSRS	**Korea Array**	**11.25**	**280**	LR	LR	04 12 37.3	
	comp=Z,29nm,19.1s,baz=305,slow=37						
KLR	**Kul'dur**	**14.95**	**333**	LR	LR	04 14 21.4	
	comp=Z,31nm,19.0s,baz=342,slow=35						
H11N2	**WAKE ISLAND Hy**	**27.42**	**120**	T	T	04 39 58.5	
	baz=312,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	**27.43**	**120**	T	T	04 40 00.6	
	baz=312,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**27.44**	**120**	T	T	04 39 59.8	
	baz=312,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**28.11**	**122**	T	T	04 40 51.7	
	baz=314,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	**28.11**	**122**	T	T	04 40 51.4	
	baz=314,slow=75,SNR=11						
H11S2	**WAKE ISLAND Hy**	**28.13**	**122**	T	T	04 40 50.7	
	baz=314,slow=75,SNR=9.8						
SONM	**Songino Array**	**28.55**	**305**	P	**P**	**04 11 36.7**	**+0.7**
	0.6nm,0.5s,baz=101,slow=8.9,SNR=5.4						
MKAR	**Makanchi Array**	**44.86**	**303**	P	**P**	**04 13 54.4**	**0.0**
	0.5nm,0.7s,baz=92,slow=7.8						
YKA	**Yellowknife Ar**	**64.30**	**30**	P	**P**	**04 16 17.0**	**+1.7**
	0.1nm,0.6s,baz=294,slow=6.7,SNR=2.8						

*IDC **07** 04:43:16.5±0.6, 32°60N×48°86E, h0km, mb4.4/31, mb1 4.4/39, mb1mx4.3/62, mbtmp4.3/39, ML4.1/5, MS3.4/18, Ms1 3.4/18, ms1mx3.2/51, Error ellipse: s-maj=14.6km s-min=10.0km az=173.0*

*MOS **07** 04:43:17.3±1.3, 32°57N×48°90E, h18km, mb4.7/38, Error ellipse: s-maj=5.9km s-min=3.7km az=115.4*

*NEIC **07** 04:43:17.9±1.5, 32°59N±0°05×48°84E±0°05, h10km±2km, Error ellipse: s-maj=7.6km s-min=4.9km az=219.0*

*GII **07** 04:43:18.0±0.0, 32°54N×48°83E, h10km*

*BJI **07** 04:43:18.0±0.0, 32°50N×48°80E, h20km, mB5.0/22, mb4.5/34, Ms4.5/6, Ms7 4.3/5*

*THR **07** 04:43:18.9±0.4, 32°66N×48°69E, h14km±5km, ML4.7*

*TEH **07** 04:43:19.4, 32°62N×48°82E, h10km, ML4.6*

*DSN **07** 04:43:27.0±2.0, 31°87N×49°13E, h10km, ML5.1/5, Error ellipse: s-maj=27.9km s-min=11.4km az=10.0*

*OMAN **07** 04:43:27.4±1.5, 31°83N×48°78E, h50km±13km, ms3.4/1, Error ellipse: s-maj=16.7km s-min=4.4km az=91.0*

ISC 07 04:43:19.3±0.3, **32°50N**±0°03×**48°82E**±0°03, **h23**km, **n383**, σ1§**87**/414, **mb4.5**/91, **MS3.4**/17, **32C-5D**, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.39**	**182**	*e*Pg	**Pn**	**04 43 29.9**	**+0.3**
SHGR				*e*Sg	**Sn**	**04 43 37.9**	**+1.6**
SHGR				IAML		04 43 43.3	
	comp=E,27µm,0.5s						
SHGR				IAML		04 43 46.9	
	comp=N,70µm,0.9s						
SHGR	**Shooshtar-Gavs**	**0.39**	**182**	*e*Pg	**Pn**	**04 43 30.0**	**+0.5**
IKMR	**Kamar-syah**	**1.08**	**340**	Pg	**Pn**	**04 43 36.7**	**-2.3**
IKMR	**Kamar-syah**	**1.08**	**340**	*e*Pg	**Pn**	**04 43 36.7**	**-2.3**
IKMR				*e*		04 43 52.3	
IKFM	**Kafar-mosalman**	**1.31**	**322**		**Pn**	**04 43 41.6**	**-0.6**
IKFM				Sg	**Sb**	**04 44 01.7**	**+2.2**
IKFM	**Kafar-mosalman**	**1.31**	**322**	*e*Pg	**Pn**	**04 43 41.6**	**-0.6**
IKFM				*e*Sg	**Sb**	**04 44 01.8**	**+2.2**
IDOB	**Doab**	**1.39**	**337**		**Pn**	**04 43 42.4**	**-1.2**
IDOB	**Doab**	**1.39**	**337**	*e*Pg	**Pn**	**04 43 42.4**	**-1.2**
KHMZ	**Khomeyn**	**1.56**	**37**	*e*Pg	**Pb**	**04 43 46.6**	**-1.1**
KHMZ	**Khomeyn**	**1.56**	**37**	*e*Pn	**Pb**	**04 43 46.6**	**-1.1**
JHBN	**Jahan bin**	**1.59**	**99**	*e*Pn	**Pb**	**04 43 48.1**	**0.0**
JHBN				*e*		04 44 19.3	
HSAM	**Samen**	**1.72**	**354**	*e*Pn	**Pn**	**04 43 47.3**	**-0.8**
IPIR	**Pirpir**	**1.76**	**83**	Pn	**Pn**	**04 43 49.7**	**+1.0**
IPIR	**Pirpir**	**1.76**	**83**	*e*Pn	**Pn**	**04 43 49.7**	**+1.0**
IPIR				*e*		04 44 19.3	
ROKH	**ROKH**	**1.88**	**94**	*e*Pn	**Pb**	**04 43 52.7**	**-0.4**
IKOM	**Komasi**	**2.00**	**327**	*e*Pn	**Pb**	**04 43 53.6**	**-1.5**
IKOM				*e*		04 44 40.0	
IBZA	**Bozab**	**2.12**	**338**	Pn	**Pn**	**04 43 54.9**	**+1.3**
IBZA	**Bozab**	**2.12**	**338**	*e*Pn	**Pn**	**04 43 55.0**	**+1.3**
ASAO	**Ashtian**	**2.28**	**26**	*e*Pn	**Pn**	**04 43 57.2**	**+1.4**
ASAO	**Ashtian**	**2.28**	**26**	*e*Pn	**Pn**	**04 43 57.2**	**+1.4**
HAGD	**Aghdareh**	**2.33**	**7**	*e*Pn	**Pn**	**04 43 57.6**	**+1.1**
HAGD				*e*		04 44 33.8	
IALM	**Almabolaq**	**2.42**	**347**	*e*Pn	**Pn**	**04 43 59.3**	**+1.6**
IKLH	**Kolahrood**	**2.46**	**70**	*e*Pn	**Pn**	**04 44 00.4**	**+2.1**
QAM	**Ghamsar**	**2.53**	**60**	*e*Pn	**Pb**	**04 44 01.6**	**-2.6**
IVIS	**Veis**	**2.61**	**321**	Pn	**Pn**	**04 44 01.1**	**+0.9**
IVIS	**Veis**	**2.61**	**321**	*e*Pn	**Pn**	**04 44 01.1**	**+0.9**
IVIS				*e*		04 44 44.3	
IGHG	**Ghaleghazi**	**2.62**	**315**	*e*Pn	**Pb**	**04 44 03.2**	**-2.5**
IGHG				*e*		04 44 56.1	
HSRG	**Sareghieh**	**2.77**	**351**	*e*Pn	**Pn**	**04 44 04.2**	**+1.6**
HSRG				*e*		04 44 53.3	
KLNJ	**Kolanjah**	**2.79**	**121**	*e*Pn	**Pn**	**04 44 05.5**	**+2.6**
GHVR	**GHOM**	**2.86**	**46**	*e*Pn	**Pn**	**04 44 05.4**	**+1.8**
GHVR				IAML		04 44 58.3	
	comp=N,3µm,1.0s						
GHVR	**GHOM**	**2.86**	**46**	*e*Pn	**Pn**	**04 44 05.4**	**+1.8**
SNGE	**Sanandaj**	**2.86**	**335**	*e*Pn	**Pn**	**04 44 03.5**	**-0.2**
SNGE	**Sanandaj**	**2.86**	**335**	*e*Pn	**Pn**	**04 44 03.6**	**-0.2**
ILIN	**Lien**	**2.87**	**328**	*e*		04 44 49.6	
ILIN				*e*Pn	**Pn**	**04 44 05.3**	**+1.4**
IZEF	**Zefreh**	**2.99**	**81**	*e*Pn	**Pn**	**04 44 07.3**	**+1.8**
IDHR	**Dehrash**	**2.99**	**318**	*e*Pn	**Pn**	**04 44 07.3**	**+1.8**
IDHR				*e*		04 45 10.7	
IQOM	**Qom**	**3.00**	**38**	*e*Pn	**Pn**	**04 44 06.8**	**+1.1**
IRAZ	**Razeghan**	**3.04**	**17**	*e*Pn	**Pn**	**04 44 08.2**	**+2.0**
IRAM	**Ramesheh**	**3.10**	**102**	*e*Pn	**Pn**	**04 44 08.6**	**+1.6**
KRSH	**Karshahi**	**3.14**	**61**	*e*Pn	**Pn**	**04 44 09.4**	**+1.8**
QABG	**Abgarm-Qazvin**	**3.26**	**11**	*e*Pn	**Pn**	**04 44 10.4**	**+1.1**
IMHD	**Mahdasht**	**3.53**	**25**	*e*Pn	**Pn**	**04 44 14.1**	**+1.3**
IKAZ	**Kazeroun**	**3.75**	**136**	*e*Pn	**Pn**	**04 44 19.6**	**+3.5**
IKAZ				*e*		04 45 07.3	
IGZV	**Ghazvin**	**4.05**	**16**	*e*Pn	**Pn**	**04 44 20.7**	**+0.6**
ANAR	**Anarak**	**4.19**	**79**	*e*Pn	**Pn**	**04 44 23.3**	**+1.3**
QALM	**Alamut, Qazvin**	**4.20**	**21**	*e*Pn	**Pn**	**04 44 23.2**	**+1.0**
GHB	**Gharebagh**	**4.46**	**133**	*e*Pn	**Pn**	**04 44 28.0**	**+2.2**
ICHK	**Chekchek**	**4.74**	**92**	*e*Pn	**Pn**	**04 44 31.5**	**+2.0**
MAHB	**Mahabad**	**4.97**	**330**	*e*Pn	**Pn**	**04 44 33.9**	**+1.2**
IBAF	**Bafgh**	**5.80**	**97**	*e*Pn	**Pn**	**04 44 46.2**	**+2.1**
CUKT	**Cukurca**	**6.38**	**319**	*e*P	**Pn**	**04 44 50.5**	**-1.6**
AKDM	**Akdamar-Van**	**7.52**	**322**	*e*P	**Pn**	**04 45 08.9**	**+1.2**
VANB	**Van**	**7.52**	**325**	*e*P	**Pn**	**04 45 08.9**	**+1.2**
CLDR	**Caldiran**	**7.73**	**330**	*e*P	**Pn**	**04 45 12.8**	**+2.1**
GURO	**Guroymak-BITLI**	**8.19**	**319**	*e*P	**Pn**	**04 45 17.7**	**+0.9**
GNI	**Garni**	**8.31**	**338**	Pn	Pn	04 45 23.5	+4.9
	comp=N,0.2nm,0.3s,baz=131,slow=20,SNR=3.8						
GNI				Lg	Lg	04 47 39.5	
	comp=N,0.5nm,0.3s,baz=37,slow=20,SNR=3.1						
GNI				LR	LR	04 48 55.5	
	comp=N,376nm,18.1s,baz=155,slow=41						
GNI	**Garni**	**8.31**	**338**	Pn	**Pn**	**04 45 17.5**	**-1.0**
GNI	**Garni**	**8.31**	**338**	*i* P	**Pn**	**04 45 17.6**	**-1.0**
GANJ	**Ganja**	**8.38**	**347**	P	**Pn**	**04 45 23.8**	**+4.5**
SVAN	**Silvan-Diyarba**	**8.40**	**314**	*e*P	**Pn**	**04 45 18.5**	**-1.1**
MAZI	**Mazidag**	**8.46**	**308**	*e*P	**Pn**	**04 45 21.4**	**+0.8**
AGRB	**Hanur-Agry**	**8.49**	**328**	*e*P	**Pn**	**04 45 24.4**	**+3.4**
SEKA	**Sheki**	**8.79**	**352**	P	**Pn**	**04 45 26.9**	**+1.9**
DYBB	**Diyarbakir**	**8.94**	**310**	*e*P	Pn	04 45 33.4	+6.3
SHME	**Shamm**	**9.06**	**133**	P	**Pn**	**04 45 28.7**	**-0.1**
BANOM	**Banah**	**9.25**	**133**	*i* P	**Pn**	**04 45 31.7**	**+0.3**
	SNR=58						
BANOM				S	**Sn**	**04 47 10.4**	**-4.4**
BANOM	**Banah**	**9.25**	**133**	P	**Pn**	**04 45 32.8**	**+1.4**
	SNR=58						
BANOM				S	**Sn**	**04 47 11.6**	**-3.2**
GEYT	**Alibeck**	**9.34**	**52**	Pn	**Pn**	**04 45 34.1**	**+1.6**
	comp=N,2.7nm,0.3s,baz=240,slow=17,SNR=16						
GEYT	**Alibeck**	**9.34**	**52**		**Pn**	**04 45 32.6**	**+0.1**
GYA0B	**ALIBECK ARRAY**	**9.34**	**52**		**Pn**	**04 45 32.3**	**-0.2**
RAYN	**Ar Rayn**	**9.41**	**199**	*i* P	**Pn**	**04 45 34.8**	**+1.3**
	SNR=90						
RAYN	**Ar Rayn**	**9.41**	**199**		**Pn**	**04 45 34.3**	**+0.8**
RAYN	**Ar Rayn**	**9.41**	**199**	P	**Pn**	**04 45 34.3**	**+0.8**
URFA	**Urfa**	**9.57**	**304**	*e*P	**Pn**	**04 45 37.2**	**+1.5**
AJN	**Ajban**	**9.59**	**144**	*i* P	**Pn**	**04 45 37.4**	**+1.5**
	SNR=16						
AJN	**Ajban**	**9.59**	**144**	P	**Pn**	**04 45 38.1**	**+2.2**
	SNR=16						
AJN				S	**Sn**	**04 47 22.1**	**-0.8**
	SNR=9.3						
MSFE	**Esma-Masafi**	**9.59**	**136**	*i* P	**Pn**	**04 45 36.4**	**+0.4**
	SNR=20						
NAZ	**Nazwa, Dubai**	**9.59**	**140**	*i* P	**Pn**	**04 45 37.0**	**+0.9**
	SNR=17						
NAZ	**Nazwa, Dubai**	**9.59**	**140**	P	**Pn**	**04 45 36.9**	**+0.9**
	SNR=17						
NAZ				S	**Sn**	**04 47 20.5**	**-2.6**
	SNR=14						
ASUD	**Al Ashush, Dub**	**9.71**	**142**	*i* P	**Pn**	**04 45 39.7**	**+2.1**
	SNR=11						
ASUD	**Al Ashush, Dub**	**9.71**	**142**	P	**Pn**	**04 45 40.1**	**+2.5**
	SNR=11						
ASUD				S	**Sn**	**04 47 25.7**	**-0.3**
	SNR=12						
MDH	**Madha**	**9.71**	**136**	*i* P	**Pn**	**04 45 37.5**	**-0.2**
	SNR=9.5						
MDH	**Madha**	**9.71**	**136**	P	**Pn**	**04 45 37.6**	**-0.2**
	SNR=9.9						
MDH				S	**Sn**	**04 47 22.0**	**-4.1**
	SNR=18						
SVRC	**Sivrice-ELAZID**	**9.72**	**310**	*e*P	**Pn**	**04 45 37.2**	**-0.7**
FAQ	**Al Faqa, Dubai**	**9.75**	**141**	P	**Pn**	**04 45 40.0**	**+1.8**
FAQ				S	**Sn**	**04 47 25.2**	**-1.8**
	SNR=8.7						
TBLG	**Delisi**	**9.77**	**342**	Pn	**Pn**	**04 45 36.0**	**-2.4**
TBLG	**Delisi**	**9.77**	**342**	P	**Pn**	**04 45 36.0**	**-2.4**
AKH	**Akhalkalaki**	**9.86**	**336**	Pn	**Pn**	**04 45 38.9**	**-0.9**
AKH	**Akhalkalaki**	**9.86**	**336**	P	**Pn**	**04 45 38.9**	**-0.9**
UOSS	**Minazif**	**9.93**	**137**	*i* P	**Pn**	**04 45 40.5**	**-0.1**
	SNR=21						
UOSS	**Minazif**	**9.93**	**137**		**Pn**	**04 45 41.4**	**+0.8**
HATD	**Hatta, Dubai**	**9.98**	**138**	P	**Pn**	**04 45 41.9**	**+0.5**
HATD				S	**Sn**	**04 47 29.4**	**-3.3**
	SNR=13						
ASHO	**Ashiyiah**	**10.05**	**139**	*i* P	**Pn**	**04 45 42.9**	**+0.5**
	SNR=44						
ASHO	**Ashiyiah**	**10.05**	**139**	P	**Pn**	**04 45 42.8**	**+0.5**
	SNR=44						
ASHO				S	**Sn**	**04 47 31.8**	**-2.6**
	SNR=12						
ASF	**Jabal al Asfar**	**10.09**	**271**	Pn	**Pn**	**04 45 42.9**	**0.0**
	comp=N,2.6nm,0.3s,baz=47,slow=12,SNR=19						
ASF				Sn	**Sn**	**04 47 30.9**	**-4.5**
	comp=N,1.1nm,0.3s,baz=167,slow=19,SNR=3.6						
MZR	**Muzera**	**10.32**	**155**	*i* P	**Pn**	**04 45 47.7**	**+1.7**
	SNR=17						
MZR	**Muzera**	**10.32**	**155**	P	**Pn**	**04 45 49.1**	**+3.1**
	SNR=17						
MZR				S	**Sn**	**04 47 39.9**	**-1.1**
ALNE	**Al Ain**	**10.39**	**142**	*i* P	**Pn**	**04 45 48.4**	**+1.4**
	SNR=10						
MAK	**Makhachkala**	**10.50**	**355**	*e*P	**Pn**	**04 45 46.5**	**-1.8**
MAK				*e*S	**Sn**	**04 47 44.3**	**-0.8**
MAK				pmax	pmax		
	comp=Z,98nm,1.2s						
MAK				MLR	MLR		
	comp=Z,256nm,16.0s						
GAZ	**Gaziantep**	**10.62**	**299**	*e*P	**Pn**	**04 45 50.4**	**+0.3**
GAZ	**Gaziantep**	**10.62**	**299**		**Pn**	**04 45 50.7**	**+0.6**
SOHO	**SOHO**	**10.75**	**139**	P	**Pn**	**04 45 51.3**	**-0.6**
	SNR=11						
SOHO				S	**Sn**	**04 47 47.7**	**-3.8**
	SNR=7.0						
KMRS	**Kahramanmaras**	**10.97**	**300**	*e*P	**Pn**	**04 45 53.7**	**-1.2**
ZEI	**Tsey**	**10.98**	**341**	*e*P	**Pn**	**04 45 59.3**	**+4.1**
ZEI				pmax	pmax		
	comp=Z,14nm,1.5s						
NATI	**Neve Ativ**	**11.03**	**277**	Pn	**Pn**	**04 45 56.0**	**+0.4**
DARE	**Darende-Malaty**	**11.04**	**306**	*e*P	Pn	04 46 01.2	+5.3
TAHT	**Tahtakopru-Hat**	**11.12**	**294**	*e*P	**Pn**	**04 45 55.3**	**-1.7**
HMDT	**Nahal Hemdat**	**11.24**	**272**	Pn	**Pn**	**04 45 59.3**	**+0.7**
MMAI	**Mount Meron Ar**	**11.31**	**276**	Pn	**Pn**	**04 46 00.9**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=92,slow=15,SNR=2.5						
MMAI				Sn	**Sn**	**04 48 03.8**	**-1.5**
	comp=Z,1.5nm,0.3s,baz=110,slow=25,SNR=3.1						
MMAI				Lg	Lg	04 49 16.9	
	comp=Z,4.0nm,0.3s,baz=12,slow=13,SNR=12						
MMAI				LR	LR	04 51 33.9	
	comp=Z,208nm,18.2s,baz=110,slow=44						
GHAJ	**Ghor Haditha**	**11.33**	**267**	Pn	**Pn**	**04 46 00.5**	**+0.8**
ARQ	**Araqi**	**11.38**	**141**	P	**Pn**	**04 46 00.9**	**+0.3**
	SNR=30						
ARQ				S	**Sn**	**04 48 05.7**	**-1.4**
	SNR=6.0						
KOZT	**Kozan**	**11.75**	**299**	*e*P	**Pn**	**04 46 06.1**	**+0.5**
PRNI	**Paran**	**11.99**	**263**	Pn	**Pn**	**04 46 09.6**	**+0.7**
KBZ	**Khabaz**	**12.14**	**339**	Pn	**Pn**	**04 46 13.9**	**+3.2**
	comp=Z,0.0nm,0.3s,baz=160,slow=16,SNR=3.2						
KBZ				LR	LR	04 51 36.2	
	comp=Z,61nm,18.6s,baz=132,slow=42						
KBZ	**Khabaz**	**12.14**	**339**	*i* P	**Pn**	**04 46 13.5**	**+2.8**
BIDO	**Bidbid**	**12.14**	**135**	P	**Pn**	**04 46 09.5**	**-1.4**
BIDO				S	**Sn**	**04 48 18.6**	**-7.1**
MBRI	**Mt Berech**	**12.21**	**261**	Pn	**Pn**	**04 46 11.8**	**-0.1**
EIL	**Elat**	**12.22**	**260**	Pn	**Pn**	**04 46 12.9**	**+1.0**
	comp=Z,2.4nm,0.3s,baz=75,slow=8.2,SNR=16						
EIL				Lg	Lg	04 49 45.4	
	comp=Z,0.8nm,0.3s,baz=9.3,slow=18,SNR=2.4						
EIL				LR	LR	04 52 12.2	
	comp=Z,225nm,18.7s,baz=86,slow=44						
EIL	**Elat**	**12.22**	**260**	Pn	**Pn**	**04 46 12.1**	**+0.2**
SHA1	**Shidzhatmaz**	**12.22**	**338**	*i* P	**Pn**	**04 46 12.0**	**-0.1**
BSY	**Bisya**	**12.22**	**141**	P	**Pn**	**04 46 12.5**	**+0.4**
	SNR=24						
BSY				S	**Sn**	**04 48 20.9**	**-6.8**
KVAR	**Kislovodsk Arr**	**12.40**	**339**	Pn	**Pn**	**04 46 15.8**	**+1.3**
	baz=130,slow=16,SNR=2.8						
KIV	**Kislovodsk**	**12.41**	**339**	Pn	**Pn**	**04 46 13.8**	**-0.7**
KIV	**Kislovodsk**	**12.41**	**339**	*e*P	**Pn**	**04 46 15.4**	**+0.9**
KIV				pmax	pmax		
	comp=Z,23nm,1.1s						
KIV				MLR	MLR		
	comp=Z,183nm,10.0s						
SMDO	**Samad**	**12.45**	**137**	P	**Pn**	**04 46 15.9**	**+0.7**
	SNR=8.3						
SMDO				S	**Sn**	**04 48 28.9**	**-4.5**
	SNR=11						
WSAR	**Wadi Sarin**	**12.66**	**134**	Pn	**Pn**	**04 46 17.9**	**-0.2**
	comp=Z,7.8nm,0.3s,baz=313,slow=10,SNR=49						
WSAR				Sn	**Sn**	**04 48 30.8**	**-7.5**
	comp=Z,2.7nm,0.3s,baz=65,slow=19,SNR=5.8						
WSAR				LR	LR	04 51 57.8	
	comp=Z,74nm,20.1s,baz=318,slow=41						
JMDO	**Jabal Madar**	**13.02**	**138**	P	**Pn**	**04 46 23.8**	**+0.8**
JMDO				S	**Sn**	**04 48 42.6**	**-4.6**
CSS	**Mathiatis**	**13.12**	**285**		**Pn**	**04 46 24.0**	**-0.4**
SOC	**Sochi**	**13.18**	**330**	*e*P	**P**	**04 46 33.9**	**-0.9**
SOC				pmax	pmax		
	comp=Z,29nm,0.9s						
SOC				MLR	MLR		
	comp=Z,299nm,18.0s						
WBK	**Wadi Bani Khal**	**13.34**	**135**	P	**Pn**	**04 46 27.8**	**+0.6**
	SNR=23						
WBK				S	**Sn**	**04 48 48.6**	**-6.3**
MHTO	**MHTO**	**14.07**	**142**	P	**Pn**	**04 46 37.1**	**-0.2**
	SNR=49						
MHTO				P	P	04 46 38.0	-6.9
	SNR=11						
MHTO				S	**Sn**	**04 49 11.0**	**-1.8**
	SNR=6.9						
BR131	**Keskin Array S**	**14.22**	**305**		**Pn**	**04 46 40.9**	**+1.5**
BR131	**Keskin Array S**	**14.22**	**305**	P	**Pn**	**04 46 40.9**	**+1.5**
BRTR	**Keskin Array B**	**14.22**	**305**	Pn	**Pn**	**04 46 41.2**	**+1.8**
	comp=Z,0.0nm,0.3s,baz=120,slow=12,SNR=12						
BRTR				ScP	**ScP**	**04 55 30.4**	**+1.2**
	baz=129,slow=2.5,SNR=5.2						
DQM	**DQM**	**14.75**	**146**	P	**Pn**	**04 46 45.5**	**-1.1**
DQM				S	**Sn**	**04 49 22.1**	**-7.3**
ILGA	**Ilgaz**	**14.79**	**309**	Pn	**Pn**	**04 46 48.1**	**+0.8**
ANTO	**Ankara**	**14.87**	**304**	Pn	**Pn**	**04 46 48.9**	**+0.7**
ANTO	**Ankara**	**14.87**	**304**	P	**Pn**	**04 46 48.9**	**+0.7**
BR231	**Keskin MP Arra**	**14.87**	**304**	Pn	**Pn**	**04 46 50.4**	**+2.1**
WHFO	**Wadi Hawf**	**15.19**	**162**	P	**Pn**	**04 46 51.0**	**-1.5**
	SNR=14						
WHFO				S	**Sn**	**04 49 31.8**	**-8.3**
ABTO	**Aybut**	**15.61**	**164**	P	**Pn**	**04 46 56.9**	**-1.2**
	SNR=22						
ABTO				S	**Sn**	**04 49 41.2**	**-9.3**
SHAO	**Shalim**	**15.67**	**155**	P	**Pn**	**04 46 57.5**	**-1.1**
	SNR=14						
SHAO				S	**Sn**	**04 49 43.8**	**-7.8**
RBK	**Rabkut**	**15.70**	**161**	P	**Pn**	**04 46 58.5**	**-0.7**
	SNR=13						
RBK				S	**Sn**	**04 49 45.9**	**-6.7**
DMTO	**DMTO**	**15.72**	**158**	P	**Pn**	**04 46 58.7**	**-0.7**
	SNR=36						
DMTO				S	**Sn**	**04 49 44.7**	**-8.4**
ELL	**Elmali**	**16.13**	**290**	P	**P**	**04 47 07.1**	**-0.7**
MDUB	**Mudurnu**	**16.23**	**304**	Pn	**Pn**	**04 47 04.5**	**-1.4**
KBL	**Kabul**	**16.99**	**78**	Pn	**Pn**	**04 47 15.5**	**-0.2**
KBL	**Kabul**	**16.99**	**78**	P	**Pn**	**04 47 15.5**	**-0.2**
KBL				pmax	pmax		
	comp=Z,20nm,1.3s						
MANT	**Manisa**	**17.54**	**296**	Pn	**Pn**	**04 47 21.6**	**-0.9**
ISK	**Istanbul-Kandi**	**17.96**	**304**	P	**Pn**	**04 47 25.6**	**-1.9**
ABKAR	**Akbulak array**	**18.70**	**23**	P	**P**	**04 47 34.9**	**-1.0**
AKTO	**Aktyubinsk**	**19.17**	**18**	P	**P**	**04 47 40.9**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=206,slow=9.7,SNR=27						
VRH	**Novokhopyorsk**	**19.41**	**346**	*e*P	**P**	**04 47 43.3**	**-0.3**
VRH				pmax	pmax		
	comp=Z,50nm,0.6s						
SANT	**Santorini**	**19.64**	**288**	P	**Pn**	**04 47 47.6**	**-0.3**
APE	**Apeiranthos**	**19.65**	**290**	*i* P	**P**	**04 47 46.6**	**+0.1**
APE				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MFTR	**Murfatlar**	**19.74**	**312**	⇑P	**Pn**	**04 47 48.1**	**-0.8**
VORD	**Divnogorie**	**19.74**	**342**	*e*P	**P**	**04 47 47.4**	**+0.1**
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
JURR	**Jurilovca**	**19.76**	**314**	⇑P	**P**	**04 47 47.7**	**+0.2**
VSR	**Storozhevoye**	**20.00**	**342**	*e*P	**P**	**04 47 48.9**	**-1.3**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TLCR		**20.02**	**315**	⇑P	Pn	04 47 51.6	-0.6
TLCR		**20.02**	**315**	P	Pn	04 47 51.5	-0.7

IDI Anoyia 20.05 285 P Pn 04 47 53.4 +0.7
comp=Z,14nm,0.5s,baz=99,slow=4.7,SNR=21
IDI LR LR 04 59 01.2
comp=Z,46nm,19.2s,baz=134,slow=47
ALN Alexandroupoli 20.05 301 P P 04 47 51.0 +0.2
ALN IAmb IAmb 04 48 00.7
comp=Z,27nm,0.9s
ALN Alexandroupoli 20.05 301 P P 04 47 51.0 +0.2
ALN pmax pmax
comp=Z,27nm,0.9s
KKAR Karatay Array 20.09 52 P P 04 47 50.5 -0.8
KKAR Karatay Array 20.09 52 P P 04 47 50.5 -0.8
TOPG Topolog 20.12 314 ⇑P P 04 47 52.0 +0.6
HARR Harsova 20.30 313 ⇑P P 04 47 53.9 +0.5
HARR Harsova 20.30 313 P P 04 47 53.9 +0.5
NIL Nilore 20.50 80 P P 04 47 56.2 +0.4
NIL IAmb IAmb 04 48 09.8
comp=Z,36nm,0.9s
NIL Nilore 20.50 80 P P 04 47 56.2 +0.4
NIL pmax pmax
comp=Z,36nm,0.9s
RAZG Razgrad 20.69 309 ⇑P P 04 47 58.8 +1.1
SOCY Socotra 20.77 166 P P 04 47 56.9 -1.9
ELND Elena 20.86 306 ⇓P Pn 04 48 01.2 -1.0
MILM Milestii Mici 20.99 319 ⇑P P 04 48 00.4 -0.6
LEOM Leova 21.05 317 P P 04 48 00.6 -1.0
GHRR 21.32 316 ⇑P P 04 48 05.7 +1.3
ODBI Odobesti 21.37 315 ⇑P P 04 48 06.6 +1.6
PLD Plovdiv 21.39 304 P P 04 48 08.4 +3.2
BISRR Bisoca 21.47 314 ⇑P P 04 48 08.0 +1.8
ATD Arta Tunnel 21.58 196 P P 04 48 13.9 +6.4
comp=Z,3.9nm,0.4s,baz=292,slow=18,SNR=5.9
ATD LR LR 04 56 07.5
comp=Z,93nm,21.2s,baz=22,slow=36
VRI Vrincioaia 21.62 315 ⇓P P 04 48 08.5 +0.7
VRI Vrincioaia 21.62 315 P P 04 48 08.7 +1.0
VRI pmax pmax
comp=Z,20nm,0.9s
PLOR Plostina 21.66 314 ⇑P P 04 48 08.8 +0.6
PLOR Plostina 21.66 314 P P 04 48 08.8 +0.6
SRS Serrai 21.90 300 P P 04 48 14.8 +4.1
SRS pmax pmax
comp=Z,14nm,0.9s
MLR Muntele Rosu 21.92 313 P P 04 48 12.6 +1.6
comp=Z,8.4nm,0.8s,baz=144,slow=7.0,SNR=15
MLR LR LR 04 57 17.2
comp=Z,70nm,19.4s,baz=130,slow=38
MLR Muntele Rosu 21.92 313 ⇑P P 04 48 12.8 +1.8
MLR Muntele Rosu 21.92 313 IAmb IAmb 04 48 34.2
comp=Z,14nm,0.7s
SORM Soroca 21.98 321 ⇑P P 04 48 10.9 -0.6
SORM Soroca 21.98 321 P P 04 48 10.8 -0.6
TESR Tescani 22.00 316 ⇑P P 04 48 11.8 0.0
HUMR Humele 22.10 310 ⇑P P 04 48 14.5 +1.7
OZUR 22.30 314 ⇑P P 04 48 16.7 +1.6
MTUR Matau 22.35 312 ⇑P P 04 48 17.7 +2.1
AGG Agios Georgios 22.41 294 P P 04 48 16.9 +0.5
AGG IAmb IAmb 04 48 35.0
comp=Z,18nm,1.0s
AGG Agios Georgios 22.41 294 P P 04 48 16.9 +0.5
AGG pmax pmax
comp=Z,18nm,1.0s
VOIR 22.45 312 ⇑P P 04 48 18.4 +1.7
VOIR 22.45 312 P P 04 48 17.9 +1.2
VOIR pmax pmax
comp=Z,68nm,0.8s
DOPR Dopca 22.48 314 ⇑P P 04 48 18.0 +1.0
VTS Vitosha 22.58 304 ⇓P P 04 48 20.6 +2.4
VTS Vitosha 22.58 304 P P 04 48 20.7 +2.5
VTS pmax pmax
comp=Z,9.0nm,0.9s
AAK Ala-Archa 22.65 56 P P 04 48 18.7 -0.2
comp=Z,3.5nm,0.9s,baz=193,slow=5.1,SNR=6.2
AAK LR LR 04 58 17.8
comp=Z,216nm,19.8s,baz=250,slow=40
AAK Ala-Archa 22.65 56 P P 04 48 19.4 +0.5
AAK Ala-Archa 22.65 56 *c*eP P 04 48 17.7 -1.3
AAK pmax pmax
comp=Z,12nm,1.7s
ARR Arges 22.68 311 ⇑P P 04 48 20.5 +1.4
GRG Griva 22.73 299 P P 04 48 19.7 0.0
GRG pmax pmax
comp=Z,15nm,0.9s
KSH Kashi 23.00 65 P P 04 48 20.0 -2.6
KSH pP pP 04 48 29.1 -0.2
KSH sP sP 04 48 31.9 -0.5
KSH PcP PcP 04 52 13.5 +1.6
KSH S S 04 52 18.9 -13
KSH pmax pmax
comp=Z,33nm,0.9s
KSH pmax pmax
comp=Z,340nm,4.8s
KSH LR LR
comp=Z,440nm,11.5s
KSH LR LR
comp=Z,790nm,13.3s
KSH LR LR
comp=Z,660nm,13.1s
AKASG Malin Array Be 23.23 327 P P 04 48 23.5 -1.2
comp=Z,1.5nm,0.4s,baz=132,slow=9.2,SNR=4.8
AKASG ScP ScP 04 55 48.6 0.0
comp=Z,1.9nm,0.9s,baz=116,slow=1.8,SNR=7.3
AKASG Malin Array Be 23.23 327 P P 04 48 24.7 0.0
AKASG ScP 04 55 49.6 +1.1
AKBB Malin Array Si 23.23 327 P P 04 48 24.0 -0.6
AKBB Malin Array Si 23.23 327 *i* P P 04 48 23.5 -1.2
KMPD K-Podol'skiy 23.24 320 P P 04 48 22.0 -2.8
BURAR Bucovina Array 23.41 317 ⇑P P 04 48 27.1 +0.4
BURAR Bucovina Array 23.41 317 P P 04 48 26.1 -0.5
BURAR Bucovina Array 23.41 317 P P 04 48 27.1 +0.4
FNA Florina 23.45 298 P P 04 48 29.4 +2.4
FNA pmax pmax
comp=Z,14nm,1.3s
GZR Gura Zlata 23.88 310 ⇑P P 04 48 32.8 +1.7
GZR Gura Zlata 23.88 310 P P 04 48 32.8 +1.7
IGT Igoumenitsa 24.02 295 P P 04 48 35.0 +2.5
IGT pmax pmax
comp=Z,49nm,1.6s
OBN Obninsk 24.20 343 P P 04 48 34.5 +0.6
comp=Z,4.9nm,0.3s,baz=90,slow=16,SNR=3.1
OBN Obninsk 24.20 343 *e*P P 04 48 33.9 0.0
OBN *i* 04 49 06.4
OBN pmax pmax
comp=Z,15nm,0.6s
OBN MLR MLR
comp=Z,98nm,16.0s
DRGR 24.51 313 ⇓P P 04 48 38.3 +1.4
DRGR 24.51 313 P P 04 48 37.9 +0.9
DRGR pmax pmax
comp=Z,14nm,1.4s
TIR Tirane 24.68 299 ⇑P P 04 48 40.1 +1.6
TIR Tirane 24.68 299 P P 04 48 38.8 +0.3
TIR Tirane 24.68 299 P P 04 48 38.8 +0.3
TIR pmax pmax
comp=Z,36nm,0.9s
BZS Buzias 24.72 310 ⇑P P 04 48 39.5 +0.8
BZS Buzias 24.72 310 P P 04 48 40.3 +1.6
BZS pmax pmax
comp=Z,9.0nm,1.4s
ARU Arti 24.87 13 P P 04 48 40.0 0.0
comp=Z,2.2nm,0.3s,baz=190,slow=9.0,SNR=17
ARU Arti 24.87 13 P P 04 48 40.0 0.0
ARU IAmb IAmb 04 48 42.4
comp=Z,22nm,1.0s
ARU Arti 24.87 13 *c i* P P 04 48 39.9 0.0
ARU 04 49 09.6
ARU S S 04 53 02.6 +1.1
ARU SS SnSn 04 53 53.1 +3.4
ARU pmax pmax
comp=Z,23nm,1.0s
SIRR Siria 24.95 311 ⇓P P 04 48 42.9 +2.1
TRPA Tarpa 25.23 316 ⇑P P 04 48 44.8 +1.5
PLE Pljevlja 25.49 304 P P 04 48 48.9 +3.0
UZH Uzhgorod 25.62 317 *e*P P 04 48 48.8 +2.0
UZH *e* 04 48 53.4
SVE Sverdlovsk 25.66 15 *e*P P 04 48 47.4 +0.2
BRVK Borovoye 25.71 31 P P 04 48 46.9 -0.8
BRVK IAmb IAmb 04 48 53.3
comp=Z,16nm,1.2s
BRVK Borovoye 25.71 31 P P 04 48 46.9 -0.8
BRVK pmax pmax
comp=Z,16nm,1.2s
BVAR Borovoye Array 25.73 31 P P 04 48 48.0 +0.1
comp=Z,9.2nm,0.6s,baz=227,slow=7.7,SNR=42

BVAR Borovoye Array 25.73 31 P P 04 48 48.0 +0.1
KOLS Kolonicke sedl 25.78 317 *e*P P 04 48 50.0 +1.7
KOLS pmax pmax
comp=Z,16nm,1.1s
KOLS Kolonicke sedl 25.78 317 *e*P P 04 48 50.0 +1.7
KIRV Kirov 26.09 1 P P 04 48 50.9 -0.1
comp=Z,78nm,0.7s,baz=200,slow=2.8,SNR=22
KIRV Kirov 26.09 1 *i* P P 04 48 50.6 -0.4
CRVS Cervenica-Dubn 26.23 317 *e*P P 04 48 53.8 +1.3
CRVS pmax pmax
comp=Z,12nm,0.8s
CRVS Cervenica-Dubn 26.23 317 *e*P P 04 48 53.8 +1.3
PSZ Piszkesteto 26.72 314 P P 04 48 56.8 -0.2
PSZ Piszkesteto 26.72 314 P P 04 48 56.8 -0.2
PSZ pmax pmax
comp=Z,6.0nm,0.8s
TIP Timpagrande 26.74 294 ⇑P P 04 48 58.5 +1.3
MATE Matera 26.93 297 ⇑P P 04 48 59.0 +0.2
VYHS Vyhne 27.61 314 *e*P P 04 49 05.5 +0.7
VYHS Vyhne 27.61 314 *e*P P 04 49 05.5 +0.7
SUW Suwalki 28.20 327 P P 04 49 09.9 -0.1
SUW IAmb IAmb 04 49 11.4
comp=Z,30nm,1.1s
SUW Suwalki 28.20 327 P P 04 49 09.9 -0.1
SUW pmax pmax
comp=Z,30nm,1.1s
KURBB Kurchatov Arra 28.39 42 P P 04 49 12.5 +0.7
comp=Z,6.0nm,0.7s,baz=245,slow=9.4,SNR=34
KURK Kurchatov 28.49 41 P P 04 49 13.1 +0.5
KURK IAmb IAmb 04 49 14.4
comp=Z,11nm,0.9s
KURK Kurchatov 28.49 41 *c e*P P 04 49 13.4 +0.8
KURK pmax pmax
comp=Z,14nm,1.0s
MAKZ Makanchi 29.01 51 P P 04 49 17.6 +0.2
MAKZ Makanchi 29.01 51 P P 04 49 17.6 +0.2
MAKZ pmax pmax
comp=Z,12nm,1.6s
KLMR Klimovskoe 29.01 351 *e*P P 04 49 14.0 -3.2
KLMR AMP 04 49 16.9
comp=Z,19nm,0.9s
KLMR Klimovskoe 29.01 351 *e*P P 04 49 14.0 -3.2
KLMR pmax pmax
comp=Z,19nm,0.9s
MK31 Makanchi Array 29.21 51 *i* P P 04 49 19.3 +0.1
MKAR Makanchi Array 29.21 51 P P 04 49 20.0 +0.8
comp=Z,2.5nm,0.5s,baz=247,slow=8.8,SNR=39
MKAR LR LR 05 01 40.9
comp=Z,37nm,20.6s,baz=217,slow=38
MKAR Makanchi Array 29.21 51 P P 04 49 19.1 -0.1
MKAR Makanchi Array 29.21 51 P P 04 49 19.1 -0.1
PRGR Permogore 29.22 357 *e*P P 04 49 16.9 -2.1
PRGR pmax pmax
comp=Z,28nm,0.7s
TREC Trest 29.95 314 *e*P P 04 49 34.5 +8.8
CHVC Chvalec 30.12 317 *e*P P 04 49 27.5 +0.3
MOA Molln 30.23 311 P P 04 49 29.4 +1.2
comp=Z,6.7nm,1.0s
DANN Dangsing 30.33 89 *e*P P 04 49 30.8 +1.2
comp=Z,36nm,1.0s
KBA Koelnbreinsper 30.61 309 P P 04 49 33.1 +1.4
comp=Z,4.2nm,0.6s
GERES GERESS Array B 30.90 312 P P 04 49 34.2 0.0
comp=Z,0.7nm,0.7s,baz=115,slow=11,SNR=4.4
GERES PcP PcP 04 52 28.7 -1.7
comp=Z,0.7nm,0.7s,baz=116,slow=3.1,SNR=3.7
GERES GERESS Array B 30.90 312 P P 04 49 33.9 -0.3
GERES GERESS Array B 30.90 312 P P 04 49 33.9 -0.3
KHC Kasperske Hory 31.07 313 *e*P P 04 49 36.3 +0.7
KHC Kasperske Hory 31.07 313 *e*P P 04 49 36.3 +0.7
GKN Gorkha 31.17 89 *e*P P 04 49 38.4 +1.6
comp=Z,24nm,0.3s
DMN Daman 31.68 89 *e*P P 04 49 42.5 +1.0
comp=Z,15nm,0.7s
KKN Kakani 31.78 89 *e*P P 04 49 43.6 +1.3
comp=Z,22nm,0.5s
WTTA Wattenberg 31.78 309 P P 04 49 43.0 +0.9
comp=Z,1.6nm,0.4s
WATA Walderalm 31.84 309 *e*P P 04 49 43.2 +0.7
comp=Z,2.4nm,0.4s
PKIN Phulchoki 31.94 89 *e*P P 04 49 45.4 +1.7
comp=Z,13nm,0.5s
PKI Pulchoki 31.95 89 *e*P P 04 49 44.7 +0.8
comp=Z,17nm,0.7s
SQTA Sankt Quirin 32.05 308 *e*P P 04 49 44.3 -0.1
comp=Z,6.1nm,0.5s,SNR=7.2
MOTA Moosalm 32.15 309 *e*P P 04 49 45.6 +0.3
comp=Z,10nm,0.9s,SNR=5.5
GUN Gumba 32.25 88 *e*P P 04 49 47.7 +1.2
WMQ Urumqi 32.31 58 *e*P P 04 49 48.8 +2.2
WMQ pmax pmax
comp=Z,9.0nm,0.9s
WMQ pmax pmax
comp=Z,110nm,5.5s
FETA Feichten 32.33 308 P P 04 49 47.2 +0.4
comp=Z,5.5nm,0.7s
TMCR Tamitsa 32.39 351 *e*P P 04 49 44.7 -2.2
TMCR pmax pmax
comp=Z,9.0nm,0.5s
RETA Reutte 32.41 309 P P 04 49 47.7 +0.3
comp=Z,0.8nm,0.3s,SNR=5.6
FINES FINESS Array B 32.50 340 P P 04 49 47.5 -0.4
comp=Z,2.1nm,0.5s,baz=150,slow=7.9,SNR=24
FINES FINESS Array B 32.50 340 P P 04 49 46.9 -1.0
FINES FINESS Array B 32.50 340 *c e*P P 04 49 47.7 -0.2
FINES pmax pmax
comp=Z,2.0nm,0.4s
JIRN Jiri 32.59 89 *e*P P 04 49 50.4 +0.9
comp=Z,25nm,0.4s
KEST Kesra 32.69 287 P P 04 49 51.7 +1.7
comp=Z,3.6nm,0.7s,baz=46,slow=2.9,SNR=4.4
BSD Bornholm Skovb 32.80 324 *i* P P 04 49 50.3 -0.3
BSD Bornholm Skovb 32.80 324 *i* P P 04 49 50.3 -0.3
DAVOX Davos/Dischmat 32.84 307 P P 04 49 52.0 +0.6
comp=Z,1.7nm,0.5s,baz=116,slow=16,SNR=4.8
DAVA Damuels 32.95 308 *e*P P 04 49 52.2 -0.1
comp=Z,7.2nm,0.5s,SNR=6.2
RAMN Ramite 33.15 90 *e*P P 04 49 54.8 +0.4
comp=Z,14nm,0.6s
ZAA0 Zalesovo Array 33.34 39 P P 04 49 55.4 0.0
ZAA0 IAmb IAmb 04 49 56.1
comp=Z,8.4nm,0.8s
ZALV Zalesovo Beam 33.34 39 P P 04 49 55.3 -0.1
comp=Z,3.8nm,0.4s,baz=252,slow=8.9,SNR=28
ZALV LR LR 05 04 36.7
comp=Z,26nm,19.4s,baz=166,slow=38
ZALV Zalesovo Beam 33.34 39 P P 04 49 54.9 -0.5
ZALV Zalesovo Beam 33.34 39 *i* P P 04 49 55.4 0.0
ZALV pmax pmax
comp=Z,7.0nm,0.7s
BNI Bardonecchia 34.78 304 P P 04 50 06.8 -1.4
WLF Walferdange 35.88 311 P P 04 50 17.9 +0.5
HFS Hagfors 36.02 331 P P 04 50 18.5 +0.1
comp=Z,10nm,0.4s,baz=139,slow=8.4,SNR=136
LSA Lhasa 36.19 83 P P 04 50 21.4 +0.6
LSA IAmb IAmb 04 50 31.7
comp=Z,8.3nm,1.2s
LSA Lhasa 36.19 83 P P 04 50 21.4 +0.6
LSA pmax pmax
comp=Z,8.0nm,1.2s
NORES NORESS Array B 37.24 331 P P 04 50 29.1 +0.3
NORES pmax pmax
comp=Z,1.0nm,0.2s
NB2 NORSAR Subarra 37.54 331 P P 04 50 30.6 -0.8
comp=Z,2.8nm,0.6s,baz=121,slow=8.6
NOA NORSAR Array B 37.54 331 P P 04 50 31.0 -0.4
comp=Z,4.7nm,0.8s,baz=124,slow=8.0,SNR=22
NOA PP PP 04 51 55.3 -1.8
comp=Z,2.0nm,0.8s,baz=128,slow=11,SNR=3.7
NOA LR LR 05 08 24.0
comp=Z,56nm,18.3s,baz=120,slow=40
NOA NORSAR Array B 37.54 331 P P 04 50 31.0 -0.4
SHL Shillong 38.08 89 P P 04 50 36.2 -0.4
SHL IAmb IAmb 04 50 41.6
comp=Z,12nm,1.1s
SHL Shillong 38.08 89 P P 04 50 36.2 -0.4
SHL pmax pmax
comp=Z,12nm,1.1s
ARCES ARCESS Array B 39.33 347 P P 04 50 46.3 -0.1
comp=Z,0.9nm,0.6s,baz=150,slow=8.8,SNR=15
ARCES PP PP 04 52 13.1 -3.5
comp=Z,2.7nm,0.8s,baz=149,slow=12,SNR=4.2
GTA Gaotai 41.40 66 P P 04 51 04.9 +0.9
GTA pP sP 04 51 13.0 -1.2
GTA sP pP 04 51 18.0 +6.7

GTA PcS PcS 04 56 56.3 +3.1
GTA pmax pmax
comp=Z,2.0nm,1.3s
GTA pmax pmax
comp=Z,28nm,4.8s
GTA LR LR
comp=Z,110nm,14.9s
GTA LR LR
comp=Z,140nm,16.5s
GTA LR LR
comp=Z,140nm,16.5s
MOY Mondy 42.17 47 *e*P P 04 51 11.7 +1.5
MOY pmax pmax
comp=Z,9.0nm,1.7s
EKA Eskdalemuir Ar 42.59 318 P P 04 51 13.5 +0.1
comp=Z,0.8nm,0.4s,baz=115,slow=8.0,SNR=9.0
ESDC Sonseca Array 42.73 295 P P 04 51 15.6 +0.8
comp=Z,1.6nm,0.7s,baz=69,slow=8.1,SNR=5.6
TLY Talaya 43.82 47 LR LR 05 11 03.8
comp=Z,67nm,18.2s,baz=289,slow=38
TLY Talaya 43.82 47 *e*P P 04 51 25.6 +2.2
TLY pmax pmax
comp=Z,9.0nm,1.2s
TLY MLR MLR
comp=Z,87nm,6.0s
LZH Lanzhou 45.10 70 *e*P P 04 51 35.4 +1.4
LZH pP sP 04 51 44.5 +0.3
LZH sP pP 04 51 50.2 +8.9
LZH PP PcP 04 53 16.4 +2.0
LZH pmax pmax
comp=Z,17nm,1.2s
LZH pmax pmax
comp=Z,66nm,4.9s
SONM Songino Array 45.54 53 P P 04 51 37.6 +0.3
comp=Z,0.8nm,0.3s,baz=275,slow=8.4,SNR=9.6
SONM LR LR 05 13 27.1
comp=Z,40nm,19.8s,baz=148,slow=40
SONM Songino Array 45.54 53 P P 04 51 37.0 -0.3
SONM Songino Array 45.54 53 P P 04 51 37.0 -0.3
SONM pmax pmax
comp=Z,3.0nm,1.3s
ULN Ulaanbaatar 45.98 53 P P 04 51 40.4 -0.4
ULN IAmb IAmb 04 51 42.3
comp=Z,9.9nm,1.1s
ULN Ulaanbaatar 45.98 53 P P 04 51 40.4 -0.4
ULN pmax pmax
comp=Z,10.0nm,1.1s
CHTO Chiang Mai 46.80 94 P P 04 51 46.9 -0.5
CHTO IAmb IAmb 04 51 48.5
comp=Z,6.7nm,0.8s
CHTO Chiang Mai 46.80 94 P P 04 51 46.9 -0.5
CHTO pmax pmax
comp=Z,7.0nm,0.8s
CM31 Chiang Mai Arr 46.96 95 P P 04 51 48.6 -0.1
CMAR Chiang Mai Arr 46.96 95 P P 04 51 49.2 +0.6
comp=Z,3.7nm,0.7s,baz=293,slow=8.2,SNR=17
CMAR LR LR 05 13 37.0
comp=Z,21nm,18.7s,baz=295,slow=39
TOA0 Torodi Ar. Sit 47.08 257 P P 04 51 51.0 +1.3
TOA0 IAmb IAmb 04 51 54.9
comp=Z,12nm,1.1s
TORD Torodi Ar. Bea 47.08 257 P P 04 51 51.2 +1.6
comp=Z,12nm,1.0s,baz=62,slow=7.7,SNR=52
TORD LR LR 05 14 41.5
comp=Z,103nm,18.7s,baz=5.0,slow=40
TORD Torodi Ar. Bea 47.08 257 P P 04 51 50.6 +1.0
KMI Kunming 47.40 84 P P 04 51 52.3 0.0
KMI pmax pmax
comp=Z,10.0nm,1.0s
SPITS Spitsbergen Ar 47.91 351 P P 04 51 55.6 +0.3
comp=Z,2.2nm,0.4s,baz=150,slow=15,SNR=30
PBKT Sadao Pong 49.55 96 P P 04 52 08.7 +0.1
PBKT IAmb IAmb 04 52 14.7
comp=Z,5.2nm,0.9s
XAN Xi'an 49.63 71 P P 04 52 07.7 -1.5
XAN pmax pmax
comp=Z,3.0nm,0.7s
SLVN Son La 49.89 88 P P 04 52 10.9 -0.3
SLVN IAmb IAmb 04 52 12.6
comp=Z,9.2nm,1.3s
HHC Hu-ho-hao-te 50.06 62 *e*P P 04 52 12.0 -0.4
HHC pP pP 04 52 19.3 -0.5
HHC pmax pmax
comp=Z,3.0nm,1.0s
HHC pmax pmax
comp=Z,79nm,3.8s
BOD Bodaibo 50.10 39 *e*P P 04 52 11.5 -0.8
BOD pmax pmax
comp=Z,7.0nm,1.5s
DAG Danmarks Havn 53.49 345 *i* P P 04 52 37.0 -0.3
DAG Danmarks Havn 53.49 345 *i* P P 04 52 37.0 -0.3
DBIC Dimbokro 56.02 255 P P 04 52 58.1 +1.6
comp=Z,4.2nm,0.8s,baz=41,slow=11,SNR=5.0
DBIC Dimbokro 56.02 255 IAmb IAmb 04 53 03.8
comp=Z,12nm,1.1s
IPM Ipoh 56.10 108 P P 04 52 56.6 -0.5
KIC Kosan Boka 56.10 254 *e*P P 04 52 59.0 +1.9
comp=Z,19nm,1.0s
TIC Toumodi 56.17 255 *e*P P 04 52 59.2 +1.6
TIXI Tiksi 56.40 22 P P 04 52 58.0 -0.4
TIXI IAmb IAmb 04 52 58.8
comp=Z,5.6nm,1.0s
TIXI Tiksi 56.40 22 *e*P P 04 52 58.0 -0.4
TIXI pmax pmax
comp=Z,7.0nm,1.3s
LIC Lamto 56.41 255 *e*P P 04 53 00.6 +1.3
comp=Z,8.9nm,0.5s
YAK Yakutsk 57.67 33 *i* P P 04 53 06.9 -0.6
YAK pmax pmax
comp=Z,7.0nm,0.8s
NJ2 Nanjing 58.17 70 *e*P P 04 53 11.0 -0.5
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
SUMG Summit 58.53 339 *i* P P 04 53 14.4 +0.5
SUMG Summit 58.53 339 P P 04 53 13.9 0.0
SUMG Summit 58.53 339 P P 04 53 13.9 0.0
SUMG pmax pmax
comp=Z,49nm,1.2s
KLR Kul'dur 61.84 48 *e*P P 04 53 36.0 -0.4
KLR pmax pmax
comp=Z,3.0nm,0.9s
KSAR Wonju Array Be 63.17 61 P P 04 53 45.0 -0.6
KSAR Wonju Array Be 63.17 61 P P 04 53 45.0 -0.6
KSRS Korea Array 63.20 61 P P 04 53 45.5 -0.1
comp=Z,9.2nm,0.8s,baz=278,slow=7.3,SNR=16
KSRS LR LR 05 25 27.7
comp=Z,30nm,18.9s,baz=315,slow=40
USRK Ussuriysk Ar. 63.66 53 P P 04 53 48.0 -0.6
comp=Z,3.9nm,0.7s,baz=272,slow=7.3,SNR=6.8
USRK Ussuriysk Ar. 63.66 53 P P 04 53 47.8 -0.8
BOSA Boshof 64.77 203 P P 04 53 58.5 +2.4
comp=Z,3.3nm,0.7s,baz=7.5,slow=7.4,SNR=5.5
BOSA LR LR 05 23 36.2
comp=Z,127nm,19.8s,baz=32,slow=37
SEY Seymchan 67.37 29 *i* P P 04 54 12.6 +0.3
YSS Yuzh-Sakhalins 69.53 47⇑*e*P P 04 54 25.2 -0.8
YSS pmax pmax
comp=Z,33nm,2.5s
BILL Bilibino 69.58 21 P P 04 54 26.1 0.0
BILL IAmb IAmb 04 54 27.2
comp=Z,4.9nm,0.9s
BILL Bilibino 69.58 21 *e*P P 04 54 26.5 +0.5
BILL *e* 04 54 29.5
BILL pmax pmax
comp=Z,7.0nm,1.3s
BILL MLR MLR
comp=Z,34nm,17.0s
SCHQ Schefferville 77.03 328 P P 04 55 09.6 -0.6
comp=Z,4.6nm,0.8s,baz=41,slow=13,SNR=5.8
TOLK Toolik Lake Re 78.24 7 P P 04 55 16.9 +0.1
C36M Paulatuk 78.32 357 P P 04 55 16.5 -0.6
BMAR Burnt Mountain 79.87 5 P P 04 55 25.8 +0.1
IMAR Indian Mountai 80.30 9 P P 04 55 27.2 -0.8
ILAR Eielson Array 82.27 7 P P 04 55 38.0 -0.5
comp=Z,1.4nm,0.8s,baz=326,slow=4.3,SNR=17
ILAR Eielson Array 82.27 7 P P 04 55 37.6 -0.9
ILAR Eielson Array 82.27 7 P P 04 55 37.6 -0.9
EGAK Eagle 82.73 4 P P 04 55 40.7 -0.2
EGAK IAmb IAmb 04 57 57.0
comp=Z,3.6nm,0.8s
BCAR Beaver Creek A 84.39 5 P P 04 55 48.7 -0.8
YKA Yellowknife Ar 84.40 352 P P 04 55 49.1 -0.4
comp=Z,1.9nm,0.9s,baz=9.5,slow=5.2,SNR=28
KDAK Kodiak Island 88.28 11 P P 04 56 08.9 +0.3
comp=Z,15nm,1.1s,baz=18,slow=3.2,SNR=5.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MEDO	Medina	90.57	324	P	P	04 56 17.3	-2.3
ULM	Lac du Bonnet	91.88	338	P	P	04 56 25.1	-0.5
	comp=Z,2.5nm,0.8s,baz=69,slow=2.4,SNR=5.9						

ATH 07 04:45:38.7,38.31N×21.72E,h15km±2km,ML1.9/8,Error ellipse: s-maj=2.2km s-min=0.9km az=141.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	University Cam	0.06	119	P	Pg	04 45 40.9	-0.6
UPR				S	Sg	04 45 43.1	-0.3
LAKA	Lakka	0.22	110	P	Pg	04 45 43.4	-0.2
LAKA				S	Sg	04 45 47.4	+0.5
LAKA				AML	AML	04 45 47.6	
	comp=E,763μm,0.2s						
LAKA				AML	AML	04 45 47.7	
	comp=N,458μm,0.1s						
TRIZ	Trizonia	0.28	80	P	Pg	04 45 44.8	+0.1
TRIZ				S	Sb	04 45 49.7	-0.4
SERG	Sergoula	0.28	70	P	Pg	04 45 44.7	0.0
SERG				S	Sb	04 45 49.5	-0.7
SERG				AML	AML	04 45 52.0	
	comp=E,411μm,0.2s						
SERG				AML	AML	04 45 52.4	
	comp=N,528μm,0.2s						
ANX	Ano Chora	0.32	30	P	Pg	04 45 45.4	0.0
ANX				S	Sb	04 45 51.1	-0.2
ANX				AML	AML	04 45 53.4	
	comp=N,710μm,0.3s						
ANX				AML	AML	04 45 54.5	
	comp=E,602μm,0.4s						
RLS	Riolos of Patr	0.32	218	P	Pg	04 45 45.3	0.0
RLS				S	Sg	04 45 50.4	+0.5
RLS				AML	AML	04 45 52.4	
	comp=N,796μm,0.2s						
RLS				AML	AML	04 45 52.4	
	comp=E,763μm,0.3s						
PVO	Paravola	0.34	334	P	Pg	04 45 45.4	-0.2
PVO				S	Sb	04 45 51.5	-0.2
PVO				AML	AML	04 45 53.3	
	comp=N,523μm,0.4s						
PVO				AML	AML	04 45 55.7	
	comp=E,540μm,0.2s						
KALE	Kalithea	0.34	77	P	Pg	04 45 45.7	-0.1
KALE				S	Sg	04 45 50.1	-0.5
KALE				AML	AML	04 45 56.0	
	comp=E,232μm,0.2s						
KALE				AML	AML	04 45 57.9	
	comp=N,326μm,0.2s						
DRO	Drossia	0.36	181	P	Pg	04 45 45.7	-0.3
DRO				S	Sb	04 45 52.1	-0.3
KLV	Kalavryta, Ach	0.44	128	P	Pg	04 45 47.3	-0.2
KLV				S	Sg	04 45 53.3	0.0
PDO	Prodromos	0.51	304	P	Pg	04 45 48.3	-0.4
PDO				S	Sg	04 45 55.9	+0.3
PDO				AML	AML	04 46 00.5	
	comp=E,743μm,0.3s						
PDO				AML	AML	04 46 01.1	
	comp=N,850μm,0.2s						
EVR	Evrytania	0.61	7	P	Pg	04 45 49.8	-0.8
MAKR	Makrakomi, Fth	0.77	25	P	Pg	04 45 53.0	-0.7
MAKR				AML	AML	04 46 08.8	
	comp=E,241μm,0.5s						
MAKR				AML	AML	04 46 13.3	
	comp=N,127μm,0.7s						
AMT	Artemida-Makis	0.78	180	P	Pb	04 45 54.0	0.0
AGG	Agios Georgios	0.85	34	P	Pg	04 45 54.7	-0.6
AXAR	Agios Charalam	0.87	58	P	Pb	04 45 54.3	-1.2
AXAR				S	Sb	04 46 07.2	+0.3
LKR	Lokris	1.06	71	P	Pn	04 45 59.0	-0.1
DID	Didima	1.45	123	P	Pg	04 46 06.4	-0.1

ATH 07 04:46:24.0,38.37N×20.40E,h10km±4km,ML1.8/3,Error ellipse: s-maj=4.3km s-min=0.9km az=106.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF1	Kardakata, Kep	0.11	149	P	Pg	04 46 26.5	-0.2
KEF1				S	Sg	04 46 28.6	0.0
KONA	Konidatara, Ke	0.14	67	P	Pg	04 46 26.6	-0.8
KONA				S	Sg	04 46 28.6	-1.1
ARGA	Argostoli. Kep	0.20	162	P	Pg	04 46 28.3	+0.1
ARGA				S	Sg	04 46 31.6	+0.5
KEF2	Argostoli. Kep	0.21	162	P	Pg	04 46 28.7	+0.2
KEF2				S	Sg	04 46 32.2	+0.7
VLS	Valsamata	0.24	142	P	Pg	04 46 28.6	-0.4
VLS				S	Sg	04 46 32.1	-0.2
VLS				AML	AML	04 46 33.3	
	comp=E,677μm,0.1s						
VLS				AML	AML	04 46 34.8	
	comp=N,607μm,0.2s						
EVGI	Lefkada island	0.32	38	P	Pg	04 46 30.5	0.0
EVGI				S	Sg	04 46 35.5	+0.7
KFL	Anninata	0.40	130	P	Pg	04 46 31.3	-0.6
KFL				S	Sg	04 46 37.6	+0.4
KFL				AML	AML	04 46 38.8	
	comp=E,536μm,0.2s						
KFL				AML	AML	04 46 39.1	
	comp=N,548μm,0.2s						
MGNA	Meganis	0.42	47	P	Pg	04 46 31.8	-0.5
MGNA				S	Sg	04 46 38.1	+0.3
MGNA				AML	AML	04 46 38.4	
	comp=N,389μm,0.5s						
MGNA				AML	AML	04 46 38.6	
	comp=E,307μm,0.2s						
TSLK	Tsoukalades, L	0.50	24	P	Pg	04 46 33.7	0.0
TSLK				S	Sb	04 46 41.7	-0.5
VLMS	Volimes, Zakyn	0.53	157	P	Pg	04 46 34.3	-0.1
VLMS				S	Sg	04 46 42.2	+0.8

IDC 07 04:46:24.6±0.9, 12.89S×169.56E, h649km±10km, mb3.8/21, mb1 3.9/23, mb1mx3.7/39, mbtmp4.8/23, Error ellipse: s-maj=10.4km s-min=9.9km az=168.0

NEIC 07 04:46:24.8±0.9, 12.9S±0.1×169.6E±0.1, h652km±6km, mb4.5/120, Error ellipse: s-maj=15.2km s-min=14.9km az=79.0

ISC 07 04:46:24.3±0.3, 12.87S±0.06×169.55E±0.06, h645km, n253, σ1.12/224, mb4.6/71, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.43	221	P	P	04 47 49.4	-0.1
MSVF	Nonsavu	9.52	122	P	P	04 48 40.5	+1.0
DZM	Mont Dzumac	9.62	198	P	P	04 48 42.2	+1.9
	2.1nm,0.3s,baz=39,slow=14,SNR=9.7						
DZM				S	S	04 50 33.1	+1.1
	0.2nm,0.3s,baz=190,slow=22,SNR=3.7						
DZM	Mont Dzumac	9.62	198	P	P	04 48 41.1	+0.7
NOUC	Port Laguerre	9.69	198	P	P	04 48 42.0	+1.1
HNR	Honiara	10.03	289	eP	P	04 48 45.0	+0.7
AFI	Afiamalu	18.20	95	P	P	04 50 01.0	+1.0
	2.0nm,0.3s,baz=207,slow=4.5,SNR=8.8						
AFI	Afiamalu	18.20	95	P	P	04 50 00.1	0.0
PMG	Port Moresby	22.24	277	P	P	04 50 37.5	+1.3
	82nm,0.8s,baz=96,slow=9.7,SNR=34						
PMG	Port Moresby	22.24	277	P	P	04 50 36.9	+0.7
CTA	Charters Tower	23.45	249	P	P	04 50 47.8	+0.9
	3.2nm,0.4s,baz=63,slow=6.8,SNR=4.4						
ARMA	Armidale	24.07	221	P	P	04 50 52.7	+0.3
ARMA				IAmb	IAmb	04 50 54.3	
	comp=Z,16nm,0.8s						
MANU	Manus Island	24.46	294	P	P	04 50 55.6	-0.3
COEN	Coen	25.68	265	P	P	04 51 07.0	+0.5
COEN				IAmb	IAmb	04 51 08.5	
	comp=Z,20nm,0.9s						
URZ	Urewera	26.16	166	P	P	04 51 10.8	+0.4
	comp=Z,9.4nm,0.7s,baz=207,slow=4.5,SNR=5.3						
URZ				S	S	04 54 59.0	-0.2
	comp=Z,15nm,1.1s,baz=148,slow=19,SNR=3.7						
FWVZ	Far West T-bar	26.81	170	P	P	04 51 18.0	+1.6
MOVZ	Moawhango	26.99	169	P	P	04 51 18.1	+0.4
BHHZ	Black Hill Sta	27.13	169	P	P	04 51 18.7	-0.2
KWHZ	Kaweka Forest	27.14	168	P	P	04 51 18.9	0.0
WAZ	Wanganui	27.20	171	P	P	04 51 21.1	+1.6
KRHZ	Kereru	27.34	168	P	P	04 51 20.2	-0.5
KAHZ	Kahuranaki	27.59	168	P	P	04 51 22.1	-0.8
DVHZ	Dannevirke	27.93	169	P	P	04 51 21.4	-4.4
POWZ	Post Office Ro	27.95	170	P	P	04 51 19.7	-6.2
PRWZ	Pori Road	28.15	170	P	P	04 51 18.2	-9.5
MRZ	Mangatainoka R	28.18	170	P	P	04 51 19.6	-8.4
BFZ	Birch Farm	28.32	169	P	P	04 51 20.2	-8.9
TIWZ	Tintock	28.35	170	P	P	04 51 18.9	-11
TUWZ	Tuamarina	28.71	173	P	P	04 51 32.2	-0.3
MSWZ	Moikau Station	28.87	171	P	P	04 51 33.4	-0.5
THZ	Tophouse	28.93	175	P	P	04 51 34.2	-0.2
CAN	Canberra	29.06	216	P	P	04 51 35.4	-0.3
KHZ	Kahutara	29.64	174	P	P	04 51 39.2	-1.2
RPZ	Rata Peaks	30.76	178	P	P	04 51 50.3	+0.3
	comp=Z,15nm,0.7s,baz=330,slow=6.3,SNR=5.7						
RPZ	Rata Peaks	30.76	178	IAmb	IAmb	04 51 54.4	
	comp=Z,17nm,0.8s						
STKA	Stephens Creek	31.88	229	P	P	04 52 00.7	+1.1
	comp=Z,13nm,0.5s,baz=52,slow=8.7,SNR=38						
STKA				PcP	PcP	04 54 29.6	+0.1
	comp=Z,8.2nm,0.9s,baz=41,slow=4.5,SNR=6.9						
STKA				ScP	ScP	04 57 13.3	0.0
	comp=Z,1.7nm,0.6s,baz=27,slow=4.5,SNR=4.2						
STKA	Stephens Creek	31.88	229	P	P	04 52 00.2	+0.5
SMPI	Sarmi	32.39	287	P	P	04 52 05.3	+1.1
	comp=Z,2μmcomp=Z,242nm,1.0s						
TOO	Toolangi	32.66	217	P	P	04 52 06.0	-0.2
WRA	Warramunga Arr	34.45	254	P	P	04 52 21.3	-0.1
	comp=Z,15nm,0.4s,baz=85,slow=8.5,SNR=144						
WRA				PcP	PcP	04 54 37.0	-0.3
	comp=Z,3.6nm,0.9s,baz=76,slow=2.9,SNR=5.0						
WRA				S	S	04 57 01.4	-5.1
	comp=Z,13nm,0.8s,baz=83,slow=14,SNR=7.2						
WRA				ScP	ScP	04 57 23.3	+0.6
	comp=Z,6.1nm,0.9s,baz=76,slow=3.9,SNR=5.6						
WRA	Warramunga Arr	34.45	254	IAmb	IAmb	04 52 21.8	
	comp=Z,0.8nm,0.6s						
AS31	Alice Springs	35.42	247	P	P	04 52 29.1	-0.2
ASAR	Alice Springs	35.42	247	P	P	04 52 29.5	+0.2
	comp=Z,19nm,0.6s,baz=73,slow=9.5,SNR=236						
ASAR				PcP	PcP	04 54 39.9	-0.3
	comp=Z,5.2nm,0.9s,baz=76,slow=3.5,SNR=13						
ASAR				S	S	04 57 18.6	-2.3
	comp=Z,8.1nm,0.7s,baz=77,slow=15,SNR=20						
ASAR				ScP	ScP	04 57 27.1	+1.0
	comp=Z,9.7nm,0.9s,baz=84,slow=4.7,SNR=26						
ASAR	Alice Springs	35.42	247	P	P	04 52 28.7	-0.6
ASAR					PcP	04 54 39.0	-1.1
GUMO	Guam	35.91	316	P	P	04 52 33.9	+0.6
	comp=Z,30nm,0.3s,baz=124,slow=3.6,SNR=3.8						
GUMO	Guam	35.91	316	IAmb	IAmb	04 52 39.9	
	comp=Z,211nm,1.1s						
BBOO	Buckleboo	36.46	231	P	P	04 52 38.0	+0.3
RKPI	Ransiki, Papua	36.80	285	P	P	04 52 41.4	+0.7
FAKI	Fak Fak	38.20	282	P	P	04 52 51.7	-0.3
SIJI	Sorong	39.76	284	P	P	04 53 04.5	0.0
	comp=Z,30nm,0.6s,baz=72,slow=10,SNR=18						
SWI	Sorong	39.77	284	P	P	04 53 04.5	0.0
	comp=Z,1μmcomp=Z,80nm,0.8s						
FORT	Forrest	42.15	238	P	P	04 53 22.9	0.0
FITZ	Fitzroy Crossi	42.56	257	P	P	04 53 26.7	+0.4
	comp=Z,4.6nm,0.3s,baz=76,slow=8.5,SNR=9.9						
FITZ	Fitzroy Crossi	42.56	257	P	P	04 53 25.8	-0.5
TNTI	Ternate	43.98	285	P	P	04 53 37.0	-0.3
SOEI	Soe	44.47	269	P	P	04 53 43.1	+1.9
SOEI	Soe	44.47	269	P	P	04 53 41.6	+0.3
LUWI	Luwuk	47.80	280	P	P	04 54 06.2	+0.1
BNSI	Bone	49.53	275	P	P	04 54 19.2	+0.4
NWAO	Narrogin (SRO)	51.60	238	P	P	04 54 33.5	0.0
	comp=Z,12nm,0.6s,baz=88,slow=5.8						
MJAR	Matsushiro Arr	57.35	330	P	P	04 55 13.1	-0.3
	comp=Z,3.0nm,0.7s,baz=155,slow=7.1,SNR=5.4						
MAT	Matsushiro	57.35	330	P	P	04 55 12.5	-0.8
LEM	Lembang	61.20	269	P	P	04 55 40.0	+0.6
	comp=Z,26nm,0.6s,baz=197,slow=6.0,SNR=4.9						
NJ2	Nanjing	65.94	314	eP	P	04 56 10.9	+2.0
USRK	Ussuriysk Ar.	66.28	331	P	P	04 56 11.4	+0.6
	comp=Z,1.5nm,0.6s,baz=199,slow=7.8,SNR=5.9						
USRK	Ussuriysk Ar.	66.28	331	P	P	04 56 11.0	+0.3
XAN	Xi'an	74.11	311	P	P	04 56 57.7	+0.6
XAN	Xi'an	74.11	311	P	P	04 56 57.2	+0.1
KMI	Kunming	75.25	300	P	P	04 57 08.1	+4.3
HHC	Hu-ho-hao-te	75.64	318	eP	P	04 57 06.5	+0.1
CMAR	Chiang Mai Arr	76.25	293	P	P	04 57 10.3	+1.2
	comp=Z,1.6nm,0.4s,baz=130,slow=4.4,SNR=8.9						
QSPA	South Pole Qui	77.14	180	P	P	04 57 13.4	+0.1
GAMB	Gambell	77.76	8	P	P	04 57 16.3	0.0
LZH	Lanzhou	78.75	311	eP	P	04 57 23.4	+1.0
LZH				pP	pwP	04 59 37.7	+0.6
LZH				PP	PP	05 00 27.5	-6.0
LZH				sP	sP	05 00 44.3	+5.1
BILL	Bilibino	80.73	359	P	P	04 57 31.8	0.0
PMR	Palmer	81.03	19	IAmb	IAmb	04 57 35.2	
	comp=Z,17nm,1.2s						
GHO	Glory Hole Cre	81.23	19	P	P	04 57 35.0	+0.4
GHO				IAmb	IAmb	04 57 35.7	
	comp=Z,22nm,1.0s						
O02D	Mt. Diablo Mer	81.85	46	P	P	04 57 38.6	+0.3
	baz=246						
PKM	Mcpherson Peak	81.96	52	P	P	04 57 39.1	0.0
	baz=248						
WDC	Whiskeytown Da	82.19	45	IAmb	IAmb	04 57 43.0	
	comp=Z,19nm,1.4s						
N02D	Trinity Center	82.24	45	P	P	04 57 40.5	+0.4
	baz=246						
K02D	Willamette Mer	82.31	43	P	P	04 57 41.0	+0.5
	baz=245						
M02C	Callahan	82.31	45	P	P	04 57 41.2	+0.7
	baz=245						
SONM	Songino Array	82.35	323	pP	pP	04 59 56.7	+2.1
	comp=Z,0.4nm,0.6s,baz=116,slow=3.4,SNR=2.1						
CRQM	Cirque	82.42	21	IAmb	IAmb	04 57 42.3	
	comp=Z,21nm,1.1s						
RND	Reindeer	82.50	18	P	P	04 57 40.5	-0.4
RND				IAmb	IAmb	04 57 41.6	
	comp=Z,17nm,1.0s						
ORV	Oroville	82.51	47	P	P	04 57 41.4	0.0
TGL	Tana Glacier	82.53	21	IAmb	IAmb	04 57 42.6	
	comp=Z,15nm,1.0s						
O03E	Paynes Creek	82.59	46	P	P	04 57 42.1	+0.1
	baz=246						
AFDM	Forest Hills D	82.64	47	IAmb	IAmb	04 57 43.7	
	comp=Z,17nm,1.0s						
CMB	Columbia Colle	82.72	48	IAmb	IAmb	04 57 44.0	
	comp=Z,12nm,1.0s						
MCK	McKinley	82.72	17	IAmb	IAmb	04 57 43.3	
	comp=Z,20nm,1.2s						
VES	Vestal, Richgr	82.87	51	P	P	04 57 43.5	+0.2
	baz=248						
MCARA	McCarthy VSAT	82.90	21	IAmb	IAmb	04 57 44.5	
	comp=Z,18nm,1.2s						
I03D	Drain, OR	82.94	42	P	P	04 57 45.0	+1.5
	baz=245						
GTA	Gaotai	83.01	313	eP	P	04 57 44.6	+0.4
GTA				pP	pwP	05 00 03.1	+1.9
GTA				sP	PP	05 01 05.7	-2.2
L04D	Klamath Falls	83.02	44	P	P	04 57 44.0	-0.2
	baz=246						
RDOG	Red Dog Mine	83.11	10	P	P	04 57 44.8	+0.9
RDOG				IAmb	IAmb	04 57 45.6	
	comp=Z,12nm,0.8s						
BARN	Barnard Glacie	83.16	22	IAmb	IAmb	04 57 45.6	
	comp=Z,12nm,0.8s						
M04C	Macdoel	83.16	45	P	P	04 57 45.1	+0.3
	baz=246						
CTGM	Chitina Glacie	83.21	22	IAmb	IAmb	04 57 45.7	
	comp=Z,13nm,0.8s						
IMAR	Indian Mountai	83.22	14	P	P	04 57 44.4	0.0
MLY	Manley	83.22	16	IAmb	IAmb	04 57 45.1	
	comp=Z,3.4nm,0.5s						
ISA	Isabella, Lake	83.27	51	IAmb	IAmb	04 57 47.2	
	comp=Z,11nm,1.1s						
ISA	Isabella, Lake	83.27	51	P	P	04 57 45.5	0.0
	baz=249						
EDW2	Edwards Air Fo	83.36	52	P	P	04 57 46.0	+0.1
	baz=249						
BFSC	Mount Baldy Ra	83.39	53	P	P	04 57 45.9	-0.2
	baz=250						
BEKR	Beckworth	83.44	47	IAmb	IAmb	04 57 47.9	
	comp=Z,13nm,1.1s						
WRH	Wood River Hil	83.53	17	IAmb	IAmb	04 57 46.2	
	comp=Z,8.8nm,0.8s						
MURC	Murrieta	83.53	54	P	P	04 57 47.1	+0.3
	baz=250						
WAKR	Walker	83.59	48	IAmb	IAmb	04 57 49.1	
	comp=Z,20nm,1.2s						
PNTR	Pine Nut	83.69	48	IAmb	IAmb	04 57 49.5	
	comp=Z,12nm,1.0s						
H04D	Lebanon	83.69	42	P	P	04 57 47.7	+0.5
	baz=245						
MLAC	Mammoth, Mammo	83.70	49	P	P	04 57 48.0	+0.2
	baz=248						
CCB	Clear Creek Bu	83.74	17	IAmb	IAmb	04 57 47.2	
	comp=Z,9.0nm,0.9s						
HDA	Harding Lake	83.81	18	P	P	04 57 47.2	-0.1
	baz=222						
CWC	Cottonwood Cre	83.84	51	P	P	04 57 48.5	+0.1
	baz=249						
TCOL	CIGO, UAF Yank	83.89	17	P	P	04 57 47.6	-0.1
	baz=222						
COLA	College	83.90	17	P	P	04 57 47.3	-0.4
COLA				IAmb	IAmb	04 57 48.1	
	comp=Z,16nm,0.8s						
MONP2	Monument Peak	83.91	54	P	P	04 57 49.1	+0.3
	baz=250,SNR=5.0						
TIN	Tinemaha, Big	83.95	50	P	P	04 57 49.1	+0.3
	baz=249						
IKP	In-Ko-Pah, Jac	84.08	55	P	P	04 57 50.2	+0.7
	baz=251						
IL31		84.10	17	IAmb	IAmb	04 57 49.0	
	comp=Z,9.1nm,0.8s						
ILAR	Eielson Array	84.10	17	P	P	04 57 47.7	-1.0
	comp=Z,10nm,0.9s,baz=235,slow=5.7,SNR=59						
ILAR				pP	pP	05 00 03.8	+0.9
	comp=Z,0.7nm,0.8s,baz=242,slow=5.9,SNR=3.6						
ILAR				S	S	05 07 18.6	-2.5
	comp=Z,1.4nm,0.9s,baz=225,slow=10,SNR=8.1						
ILAR	Eielson Array	84.10	17	P	P	04 57 47.4	-1.3
PFO	Pinyon Flats O	84.12	54	P	P	04 57 49.7	0.0
PFO	Pinyon Flats O	84.12	54	P	P	04 57 49.7	0.0
	baz=250						
XPFO	Pion Flat	84.12	54	P	P	04 57 50.2	+0.4
MPMC	Manual Prospec	84.15	51	P	P	04 57 50.1	+0.2
	baz=250,SNR=6.5						
J05D	Fort Rock, OR	84.17	43	P	P	04 57 50.5	+0.7
	baz=246,SNR=5.3						
POKR	Poker Flat Res	84.20	17	P	P	04 57 48.6	-0.7
	baz=222						
SCRK	Sand Creek	84.39	19	IAmb	IAmb	04 57 51.9	
	comp=Z,5.1nm,0.8s						
GSC	Goldstone, Bar	84.42	52	P	P	04 57 51.0	-0.1
	baz=250						
SWSC	Sam W. Stewart	84.42	55	P	P	04 57 51.1	+0.1
	baz=251						
MAW	Mawson	84.42	202	P	P	04 57 50.5	+0.2
	comp=Z,15nm,0.8s,baz=164,slow=2.9,SNR=9.8						
MAW	Mawson	84.42	202	IAmb	IAmb	04 57 51.5	
	comp=Z,3.6nm,0.9s						
BCAR	Beaver Creek A	84.48	20	P	P	04 57 50.5	-0.2
I05D	Terrebonne, OR	84.53	42	P	P	04 57 51.9	+0.6
	baz=246						
GRAC	Grapevine Rang	84.57	50	P	P	04 57 51.7	-0.1
	baz=250,SNR=6.0						
BELC	Belle Mtn. Jos	84.61	54	P	P	04 57 52.1	-0.1
	baz=251,SNR=9.4						
HEC	Hector,Ludlow	84.62	53	P	P	04 57 52.2	+0.1
	baz=250						
E04D	Cinebar	84.65	40	P	P	04 57 52.1	+0.2
	baz=245						
D03D	Eldon	84.75	39	P	P	04 57 52.5	+0.2
	baz=245						
KVN	Kaiserville	84.76	48	IAmb	IAmb	04 57 54.4	
	comp=Z,15nm,1.3s						
FURC	Furnace Creek,	84.77	51	P	P	04 57 52.3	-0.3
	baz=250						
G05D	Wamic, OR	84.91	42	P	P	04 57 53.0	-0.1
	baz=246						
BC3	Big Chuckawall	84.92	54	P	P	04 57 53.3	-0.3
	baz=251						
SHOC	Shoshone, Teco	85.03	52	P	P	04 57 53.5	-0.4
	baz=250,SNR=5.0						
F05D	White Salmon	85.08	41	P	P	04 57 54.3	+0.3
	baz=246						
GMRC	Granite Mounta	85.13	53	P	P	04 57 54.3	-0.3
	baz=251,SNR=5.7						
TUQ	Turquoise Moun	85.14	52	P	P	04 57 54.5	-0.2
	baz=250,SNR=6.5						
GLA	Glamis	85.23	55	P	P	04 57 55.1	+0.1
	baz=251						
IRM	Iron Mountain	85.33	54	P	P	04 57 55.2	-0.2
	baz=251,SNR=12						
TPNV	Topopah Spring	85.40	51	IAmb	IAmb	04 57 57.5	
	comp=Z,7.8nm,0.8s						
TPNV	Topopah Spring	85.40	51	P	P	04 57 55.8	-0.1
	baz=250,SNR=8.2						
WVOR	Wild Horse Val	85.61	45	IAmb	IAmb	04 57 59.6	
	comp=Z,16nm,1.5s						
I07A	Izee	85.64	43	IAmb	IAmb	04 57 58.6	
	comp=Z,6.7nm,0.7s						
B05A	Bryant	85.66	39	P	P	04 57 56.7	+0.1
	baz=245						
Y12C	Blythe	85.69	54	IAmb	IAmb	04 57 59.3	
	comp=Z,18nm,1.1s						
Y12C	Blythe	85.69	54	P	P	04 57 58.1	+1.0
	baz=251,SNR=5.7						
J08A	Circle Bar Ran	86.06	44	P	P	04 57 59.2	+0.4
J08A				IAmb	IAmb	04 58 01.2	
	comp=Z,13nm,1.1s						
SHPR	Sheep Range	86.08	51	IAmb	IAmb	04 58 01.3	
	comp=Z,19nm,1.2s						
LTY	Liberty	86.13	40	IAmb	IAmb	04 58 00.2	
	comp=Z,7.8nm,0.6s						
PDMCI	Parker Dam,Lak	86.16	54	P	P	04 57 59.2	-0.2
	baz=252,SNR=8.3						
C06D	Leavenworth	86.25	39	P	P	04 57 59.7	+0.3
	baz=246						
TOLK	Toolik Lake Re	86.32	14	P	P	04 57 59.9	+0.5
	baz=220						
R11A	Troy Canyon, C	86.36	50	P	P	04 58 00.9	+0.5
	baz=250,SNR=11						
E07A	Sunnyside	86.37	41	IAmb	IAmb	04 58 01.8	
	comp=Z,11nm,0.7s						
HAWA	Hanford	86.51	41	IAmb	IAmb	04 58 02.5	
	comp=Z,11nm,0.9s						
214A	Organ Pipe Nat	86.51	56	P	P	04 58 01.7	+0.6
	baz=252,SNR=7.6						
W13A	Hualapai Mount	86.61	53	IAmb	IAmb	04 58 03.8	
	comp=Z,13nm,1.1s						
BMAR	Burnt Mountain	86.68	16	P	P	04 58 01.0	0.0
LLLB	Lillooet	86.76	36	IAmb	IAmb	04 58 03.5	
	comp=Z,9.0nm,1.1s						
D08A	Wollman Farm,	87.15	40	IAmb	IAmb	04 58 05.4	
	comp=Z,14nm,1.1s						
HSIG		87.20	60	P	P	04 58 04.5	+0.1
HSIG				IAmb	IAmb	04 58 05.8	
	comp=Z,18nm,1.3s						
B08A	Colville Reser	87.39	39	IAmb	IAmb	04 58 06.6	
	comp=Z,15nm,1.4s						
BMO	Blue Mountains	87.39	43	IAmb	IAmb	04 58 06.3	
	comp=Z,9.6nm,1.1s						
ELK	Elko	87.41	47	IAmb	IAmb	04 58 07.0	
	comp=Z,10nm,1.1s						
E09A	Wood Farm, Sta	87.44	41	IAmb	IAmb	04 58 07.1	
	comp=Z,16nm,1.3s						
LCMT	Little Creek M	87.70	51	P	P	04 58 07.4	+0.7
MFID	Camas Ranch	87.89	45	IAmb	IAmb	04 58 09.0	
	comp=Z,8.4nm,0.9s						
TUC	Tucson	88.26	56	P	P	04 58 09.9	+0.6
TUC				IAmb	IAmb	04 58 11.6	
	comp=Z,6.8nm,0.8s						
TUC	Tucson	88.26	56	P	P	04 58 10.3	+1.0
	baz=254						
X16A	Lo Mia Camp, P	88.33	54	IAmb	IAmb	04 58 12.0	
	comp=Z,11nm,0.9s						
WUAZ	Wupatki	88.70	53	IAmb	IAmb	04 58 13.5	
	comp=Z,12nm,0.9s						
WUAZ	Wupatki	88.70	53	P	P	04 58 12.3	+0.9
	baz=253						
NEW	Newport	88.72	40	IAmb	IAmb	04 58 12.1	
	comp=Z,8.9nm,0.8s						
NEW	Newport	88.72	40	P	P	04 58 11.3	+0.2
	baz=249						
MSU	Marysvale	88.95	50	P	P	04 58 13.9	+1.3
DUG	Dugway, Tooele	88.99	48	P	P	04 58 13.4	+0.8
	baz=252						
X18A	Snowflake	89.54	55	IAmb	IAmb	04 58 17.3	
	comp=Z,9.0nm,1.0s						
W18A	Petrified Fore	89.87	54	P	P	04 58 17.6	+0.8
	baz=254						
TMUT	Trail Mountain	89.91	50	P	P	04 58 17.2	+0.1
121A	Cookes Peak, D	90.76	57	P	P	04 58 21.8	+0.8
	baz=255						
H17A	Grant Village	91.80	45	P	P	04 58 27.3	+1.7
	baz=254						
BW06	Boulder Array	92.07	47	P	P	04 58 27.5	+0.6
	baz=254						
PDAR	Pinedale Array	92.07	47	P	P	04 58 26.7	-0.2
	comp=Z,0.5nm,0.6s,baz=236,slow=3.7,SNR=5.6						
O20A	White River Ci	92.33	49	P	P	04 58 28.6	+0.5
	baz=255						
ANMO	Albuquerque	92.43	55	P	P	04 58 28.9	+0.2

ANMO Albuquerque 92.43 55 P P 04 58 29.3 +0.6
baz=256
MNTX Cornudas Mount 92.54 58 P P 04 58 30.1 +1.1
baz=256
S22A 4UR Ranch, Cre 92.81 52 IAmb IAmb 04 58 32.1
comp=Z,4.8nm,1.3s
S22A 4UR Ranch, Cre 92.81 52 P P 04 58 31.2 +0.7
baz=256
RLMT Red Lodge 92.89 44 P P 04 58 32.0 +1.5
baz=255
WMQ Urumqi 93.02 314 eP P 04 58 32.4 +1.4
TXAR Lajitas Array 93.44 61 P P 04 58 33.4 +0.1
comp=Z,0.8nm,0.7s,baz=224,slow=5.1,SNR=9.2
TXAR Lajitas Array 93.44 61 P P 04 58 32.9 -0.4
ISCO Idaho Springs 94.22 50 P P 04 58 37.4 +0.5
baz=257
N23A Red Feather La 94.22 49 P P 04 58 37.2 +0.4
baz=257
YKA Yellowknife Ar 94.89 27 P P 04 58 38.6 -0.3
comp=Z,4.9nm,0.8s,baz=255,slow=4.9,SNR=63
YKA PKiKP PKiKP 05 03 15.8 -0.3
comp=Z,0.1nm,0.5s,baz=260,slow=1.5,SNR=5.3
YKA PKKPbc PKKPdf 05 15 29.7 -3.2
comp=Z,0.4nm,0.8s,baz=66,slow=2.0,SNR=4.4
SNAA Sanae 95.50 182 P P 04 58 42.9 +1.2
VNA3 Neumayer Olymp 96.08 180 P P 04 58 45.8 +1.5
VNA2 Neumayer--Watz 96.38 181 P P 04 58 47.7 +2.2
baz=204,slow=2.8
MKAR Makanchi Array 97.40 316 P Pdif 04 58 50.5 -0.1
comp=Z,0.2nm,0.5s,baz=100,slow=5.3,SNR=3.5
MKAR PKKPbc PKKPbc 05 15 24.6 -2.1
comp=Z,0.4nm,0.6s,baz=262,slow=4.3,SNR=4.8
OXF Oxford 106.20 58 P PKiKP 05 03 37.8 +0.4
baz=265
V49A McMinnville 109.15 56 P PKiKP 05 03 43.1 +0.2
baz=268
Z58A St. Stephen 114.13 59 P PKiKP 05 03 52.7 +0.3
baz=270
R56A Bull Pasture M 114.33 54 P PKiKP 05 03 53.4 +0.6
baz=273
P57A Homestead Farm 115.35 52 P PKPdf 05 03 54.4 -0.2
baz=274
T59A Double "B" Far 115.87 55 P PKPdf 05 03 55.6 -0.1
baz=273
LPAZ La Paz 116.04 115 PKP PKPdf 05 03 57.1 -0.3
comp=Z,1.0nm,0.5s,baz=225,slow=4.3,SNR=5.0
I57A Carthage 116.64 47 P PKiKP 05 03 58.0 +1.0
baz=278
ARCES ARCESS Array B 119.00 346 PKP PKPdf 05 04 00.1 -0.7
comp=Z,5.2nm,0.5s,baz=65,slow=2.9,SNR=77
ARCES PKKPbc PKKPbc 05 14 16.1 -3.8
comp=Z,2.4nm,0.9s,baz=222,slow=2.5,SNR=10
CPUP Villa Florida 120.03 131 PKP PKPdf 05 04 03.3 -0.8
comp=Z,2.2nm,0.8s,baz=332,slow=5.6,SNR=5.0
SDV Santo Domingo 120.87 87 PKPdf 05 04 05.2 -1.0
FIA1 FINESS Array S 124.80 340 PKPdf 05 04 11.8 -0.2
FINES FINESS Array B 124.80 340 PKP PKPdf 05 04 11.5 -0.6
comp=Z,4.0nm,0.8s,baz=100,slow=1.6,SNR=28
FINES SKPbc SKiKP 05 06 27.1 -21
comp=Z,0.9nm,0.5s,baz=48,slow=5.7,SNR=5.5
FINES PKKPbc PKPab 05 13 55.4 -1.1
comp=Z,0.8nm,0.4s,baz=196,slow=3.3,SNR=7.2
FINES FINESS Array B 124.80 340 PKPdf 05 04 11.4 -0.7
BOSA Boshof 126.21 219 PKP PKPdf 05 04 15.8 -0.3
comp=Z,4.0nm,0.9s,baz=175,slow=2.9,SNR=4.8
NB2 NORSAR Subarra129.38 347 PKPdf PKPdf 05 04 20.4 -0.5
comp=Z,0.7nm,0.6s,baz=31,slow=1.9
NOA NORSAR Array B 129.38 347 PKP PKPdf 05 04 20.4 -0.5
comp=Z,1.4nm,0.7s,baz=30,slow=2.1,SNR=6.8
NOA SKPbc SKPbc 05 06 44.2 +0.3
comp=Z,11nm,0.9s,baz=30,slow=2.9,SNR=25
HFS Hagfors 129.57 345 PKP PKPdf 05 04 20.8 -0.4
comp=Z,1.5nm,0.6s,baz=68,slow=1.4,SNR=10
AKASG Malin Array Be 130.40 328 PKP PKPdf 05 04 22.5 -0.6
comp=Z,0.8nm,0.5s,baz=53,slow=2.1,SNR=5.3
AKASG SKPbc SKPbc 05 06 47.8 -0.1
comp=Z,5.1nm,0.8s,baz=44,slow=4.3,SNR=26
BR131 Keskin Array S 132.93 313 PKPdf 05 04 28.1 -0.4
BRTR Keskin Array B 132.93 313 PKP PKPdf 05 04 27.4 -1.0
comp=Z,0.5nm,0.4s,baz=141,slow=3.8,SNR=5.4
BRTR SKPbc SKPbc 05 06 57.9 +0.7
comp=Z,4.9nm,1.0s,baz=58,slow=5.0,SNR=18
BRTR Keskin Array B 132.93 313 PKPdf 05 04 26.5 -2.0
BDFB Brasilia 133.27 126 PKP PKPdf 05 04 29.2 -0.5
comp=Z,2.0nm,0.5s,baz=153,slow=4.5,SNR=3.8
KOLS Kolonicke sedl 135.03 330 ePKP PKPdf 05 04 32.5 +0.6
MODS Modra-Piesok 137.78 333 ePKP PKPdf 05 04 38.0 +1.0
GERES GERESS Array B 138.94 336 PKP PKPdf 05 04 38.7 -0.5
comp=Z,1.1nm,0.8s,baz=9.9,slow=3.1,SNR=5.8
GERES SKPbc SKPbc 05 07 14.3 -0.6
comp=Z,1.2nm,0.7s,baz=45,slow=2.1,SNR=9.3
MURB Monte Urbino 143.81 331 PKPbc 05 04 47.3 -0.1
INTR Introdacqua 144.07 328 PKPbc 05 04 48.1 -0.2
TIP Timpagrande 144.43 322 PKPdf 05 04 49.0 -0.2
KEST Kesra 151.07 325 PKPbc PKPbc 05 05 06.4 -0.2
comp=Z,7.1nm,0.9s,baz=73,slow=1.3,SNR=7.2
KEST Kesra 151.07 325 PKPbc 05 05 06.1 -0.6
ESDC Sonseca Array 152.70 349 PKPbc PKPbc 05 05 09.9 -0.1
comp=Z,1.2nm,0.7s,baz=6.4,slow=4.5,SNR=4.8
ESDC Sonseca Array 152.70 349 PKPbc 05 05 10.1 0.0
TOA0 Torodi Ar. Sit 168.16 273 PKPdf 05 05 18.5 -0.9
TORD Torodi Ar. Bea 168.16 273 PKP PKPdf 05 05 17.8 -1.6
comp=Z,2.2nm,0.9s,baz=344,slow=2.1,SNR=9.8
TORD PKPab PKPab 05 06 32.2 -0.4
comp=Z,1.2nm,0.9s,baz=102,slow=4.6,SNR=4.9
TORD Torodi Ar. Bea 168.16 273 PKPdf 05 05 18.5 -0.9
TORD PKPab PKPab 05 06 32.6 0.0
KIC Kosan Boka 171.43 222 ePKP2 PKPab 05 06 46.9 0.0
LIC Lamto 171.50 219 ePKP2 PKPab 05 06 47.2 0.0
comp=Z,26nm,1.1s
TIC Toumodi 171.82 221 ePKP2 PKPab 05 06 48.5 -0.1

NIC 07 04:48:06.4±0.0, 37.°54N×36.°24E, h0km±3km, Ml3.8/5
GII 07 04:48:08.2±4.5, 37.°31N×36.°21E, h1km
ISK 07 04:48:08.8, 37.°30N×36.°20E, h9km, ML3.6/21
DDA 07 04:48:08.7, 37.°31N×36.°21E, h5km±2km, ML3.8
ISC 07 04:48:09.0±1.0, 37.°32N±0.°02×36.°20E±0.°02, h9km±9km, n60, σ1.§19/78, 5C, Turkey

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ANDN Andirin 0.28 25 iP Pg 04 48 15.1 +0.3
KOZT Kozan 0.34 299 PG Pg 04 48 16.3 +0.6
KOZT SG Sb 04 48 21.8 -0.9
KAMA Osmaniye 0.40 109 iP Pg 04 48 16.4 -0.5
CEYT Ceyhan 0.47 229 PG Pg 04 48 18.6 +0.4
CEYT SG Sg 04 48 25.4 +1.0
AYKD Aykdinkavak 0.50 79 iP Pg 04 48 18.3 -0.4
AYKD iS Sg 04 48 25.3 +0.1
AYKD IAML 04 48 26.0
comp=E,6µm,0.4s
HCB Kahramanmara 0.57 87 iP Pg 04 48 19.6 -0.5
KMRS Kahramanmaras 0.59 72 PG Pg 04 48 19.9 -0.6
SAIM ADANA 0.66 352 iP Pg 04 48 21.6 -0.2
YURE YUREGIR 0.67 223 PG Pg 04 48 22.0 +0.1
YURE YUREGIR 0.67 223 iP Pg 04 48 21.9 0.0
KHMN Narli-Kahraman 0.77 84 PG Pb 04 48 24.0 -0.6
KHMN SG Sb 04 48 35.2 0.0
GAZ Gaziantep 0.82 100 PG Pg 04 48 25.1 -0.5
GAZ SG Sb 04 48 36.7 -0.1
GAZ Gaziantep 0.82 100 ⇑P Pg 04 48 24.0 -0.9
GAZ S Sb 04 48 37.0 +0.2
GAZ AML AML 04 48 38.1
comp=E,11nm,0.4s
GAZ AML AML 04 48 38.1
comp=E,11nm,0.4s
GAZ AML AML 04 48 38.5
comp=E,8.4nm,0.5s
GAZ AML AML 04 48 38.5
comp=E,8.4nm,0.5s
KUZU Kuzuini 0.89 128 iP Pb 04 48 26.1 -0.5
KUZU iS Sb 04 48 38.2 -0.4
KUZU IAML 04 48 43.0
comp=N,4µm,0.3s
KARA Karaisali 0.91 267 PG Pg 04 48 26.3 -0.3
TAHT Tahtakopru-Hat 0.94 181 PG Pg 04 48 26.9 -0.2
KRTS Karatas 0.99 222 PG Pb 04 48 28.4 0.0
YAHY KAYSERI_Yahyal 1.02 320 iP Pg 04 48 27.9 -0.6
YAHY iS Sn 04 48 46.0 +2.0
CMRD Camardi-Nigde 1.02 290 PG Pg 04 48 28.1 -0.5
GZT Gaziantep 1.09 88 iP Pg 04 48 29.5 -0.5
GZT iS Sb 04 48 44.6 +0.1
GZT IAML 04 48 45.0
comp=E,3µm,0.4s

SARI SarD1z-Kayseri 1.10 9 PN Pn 04 48 30.8 0.0
GULE Gulek 1.13 269 iP Pb 04 48 29.8 -1.1
GULE iS Sn 04 48 49.0 +2.0
GULE IAML 04 48 51.0
comp=N,1µm,0.4s
DED Mersin 1.17 253 iP Pb 04 48 30.1 -1.4
ELBS KAHRAMANMARAS1.25 36 iP Pg 04 48 33.9 +0.9
ELBS iS Sn 04 48 49.6 -0.2
ELBS IAML 04 48 52.0
comp=N,2µm,0.4s
MERS Mersin 1.41 252 PN Pn 04 48 34.4 -0.6
NIG Nigde 1.48 303 PN Pb 04 48 36.5 -0.4
BNN Bunyan 1.55 350 PN Pb 04 48 37.7 -0.4
DARE Darende-Malaty 1.61 39 PN Pb 04 48 38.4 -0.6
CUGUR Gurin_SVAS 1.64 31 iP Pg 04 48 40.7 +0.3
CUGUR iS Sg 04 49 03.2 +1.4
CUGUR IAML 04 49 06.0
comp=E,3µm,0.3s
GUNE Kayseri 1.64 344 iP Pg 04 48 40.1 -0.5
KERG Konya-Eregli 1.65 274 iP Pb 04 48 39.9 +0.2
KERG iS Sg 04 49 03.2 +1.0
ATAB Bozova 1.68 84 iP Pg 04 48 40.4 -0.8
ATAB iS Sg 04 49 01.7 -1.3
ATAB IAML 04 49 03.0
comp=E,582nm,0.3s
AVNS Nevsehir-Avano 1.83 325 iP Pb 04 48 42.1 -0.6
KIZK Mersin 1.85 244 PN Pn 04 48 41.5 +0.6
KIZK Mersin 1.85 244 iP Pn 04 48 40.8 -0.1
GULA Gulagac 1.86 304 PN Pn 04 48 41.9 +0.7
YESY Yesilyurt 2.00 284 PN Pn 04 48 44.0 +0.8
SILI Silifke-Mersin 2.06 243 PN Pn 04 48 44.5 +0.7
HEKM Malatya_Hekimh 2.09 41 iP Pg 04 48 48.1 -0.9
CUSAR Sarkisla-SIVAS 2.10 1 iP Pn 04 48 45.3 +0.8
KEBE Keben-Mersin 2.17 247 PN Pn 04 48 46.3 +0.9
SIRC Yozgat 2.17 338 iP Pn 04 48 43.1 -2.4
SANL SANLIURFA_Merk 2.23 93 iP Pb 04 48 49.8 +0.2
SANL iS Sg 04 49 20.6 -0.2
SANL IAML 04 49 27.0
comp=E,623nm,0.5s
IKL Isikli 2.29 243 PN Pn 04 48 47.3 +0.4
SULT Sultanhani-AKS 2.30 293 PN Pn 04 48 48.1 +0.9
TEVE Tevekalti-Mers 2.38 249 PN Pn 04 48 49.2 +0.9
YOZ Yozgat 2.42 344 PN Pn 04 48 49.8 +0.9
YAYX Yaylak 2.48 311 PN Pn 04 48 50.7 +1.0
PARAL Paralimni 2.90 218 S Sb 04 49 36.6 0.0
MVOU Mavrovouni 3.10 223 ⇑P Pn 04 48 59.2 +1.1
MVOU AML AML 04 49 45.3
comp=E,0.2nm,0.8s
MVOU AML AML 04 49 56.5
comp=E,0.2nm,0.6s
CSS Mathiatis 3.30 225 ⇑P Pn 04 49 02.4 +1.5
CSS Mathiatis 3.30 225 Pn Pn 04 49 02.3 +1.4
ALFC Alefka 3.62 234 ⇑P Pn 04 49 04.7 -0.6
ALFC AML AML 04 49 46.8
comp=E,0.4nm,0.4s
ALFC AML AML 04 49 49.0
comp=E,0.4nm,0.4s
SZAC Souni 3.71 227 ⇑P Pn 04 49 07.7 +1.2
SZAC S Sb 04 49 55.2 -4.6
SZAC AML AML 04 49 57.2
comp=E,0.6nm,0.5s
SZAC AML AML 04 49 57.2
comp=E,0.6nm,0.5s
SZAC AML AML 04 50 10.0
comp=E,0.5nm,0.6s
SZAC AML AML 04 50 10.0
comp=E,0.5nm,0.6s
AKMS Akamas 3.88 235 P Pn 04 49 10.2 +1.3
AKMS S Sb 04 49 59.8 -4.8
AKMS AML AML 04 50 01.9
comp=E,0.4nm,1.0s
AKMS AML AML 04 50 01.9
comp=E,0.4nm,1.0s
AKMS AML AML 04 50 02.9
comp=E,0.3nm,0.9s
AKMS AML AML 04 50 02.9
comp=E,0.3nm,0.9s
NATA Nata 3.88 230 P Pn 04 49 10.5 +1.7
NATI Neve Ativ 4.07 185 Pn Pn 04 49 13.1 +1.7
HNTI Hanita 4.31 191 Pn Pn 04 49 16.1 +1.3
MMA0B Mount Meron ar 4.34 189 Pn Pn 04 49 16.6 +1.3
MMLI Mount Malkishu 4.91 188 Pn Pn 04 49 24.4 +1.3
MMLI Sn Sn 04 50 20.8 +0.7

ATH 07 04:58:29.5, 38.°18N×20.°40E, h9km±2km, ML2.6/3, Error ellipse: s-maj=2.3km s-min=1.2km az=252.0
THE 07 04:58:29.6, 38.°16N×20.°40E, h8km±1km, ML3.0/6, Error ellipse: s-maj=1.1km s-min=0.6km az=279.0
ISC 07 04:58:29.4±1.4, 38.°18N±0.°03×20.°41E±0.°04, h10km±5km, n18, σ0.§36/35, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.02 294 P Pg 04 58 31.1 0.0
CHV1 S Sg 04 58 32.4 +0.1
52µm,0.2s
LXRA Lixouri, Kepha 0.04 46 P Pg 04 58 31.2 0.0
LXRA S Sg 04 58 32.9 +0.3
LXR1 Lixouri, Cepha 0.04 46 P Pg 04 58 31.3 +0.1
LXR1 S Sg 04 58 32.8 +0.3
33µm,0.2s
KEF3 Kipouria, Keph 0.05 302 P Pg 04 58 31.4 0.0
KEF3 S Sg 04 58 32.9 +0.1
ARGA Argostoli. Kep 0.06 88 P Pg 04 58 31.4 0.0
ARGA S Sg 04 58 32.5 -0.4
ARG2 Argostoli 0.07 87 P Pg 04 58 31.5 0.0
ARG2 S Sg 04 58 33.0 0.0
30µm,0.2s
KEF2 Argostoli. Kep 0.07 99 P Pg 04 58 31.5 0.0
KEF2 S Sg 04 58 33.1 0.0
KEF4 Livadi, Kephal 0.08 10 P Pg 04 58 31.8 0.0
KEF4 S Sg 04 58 33.7 +0.3
KEF1 Kardakata, Kep 0.12 27 P Pg 04 58 32.2 0.0
KEF1 S Sg 04 58 34.1 0.0
VLS Valsamata 0.15 89 P Pg 04 58 32.5 -0.1
VLS S Sg 04 58 35.1 +0.1
6µm,0.1s
VLS Valsamata 0.15 89 P Pg 04 58 32.6 -0.1
VLS S Sg 04 58 35.1 +0.1
VLS AML AML 04 58 35.2
comp=E,16300µm,0.1s
VLS AML AML 04 58 35.8
comp=N,8364µm,0.1s
KONA Konidatara, Ke 0.28 28 P Pg 04 58 35.0 -0.1
KONA S Sg 04 58 38.7 -0.2
KFL Anninata 0.31 102 P Pg 04 58 35.3 -0.3
KFL S Sg 04 58 40.6 +0.9
comp=N,1µm,0.3s
KFL Anninata 0.31 102 P Pg 04 58 35.4 -0.1
KFL AML AML 04 58 42.9
comp=E,3354µm,0.3s
KFL AML AML 04 58 44.4
comp=N,1451µm,0.3s
VLMS Volimes, Zakyn 0.36 146 P Pg 04 58 36.7 +0.2
VLMS S Sg 04 58 42.5 +1.2
VLMS AML AML 04 58 43.7
comp=E,2450µm,0.1s
VLMS AML AML 04 58 44.5
comp=N,2147µm,0.2s
EVGI Lefkada island 0.49 24 P Pg 04 58 39.0 +0.1
EVGI S Sb 04 58 47.0 -0.3
EVGI Lefkada island 0.49 24 P Pg 04 58 38.8 -0.1
EVGI S Sg 04 58 46.0 +0.7
KRI1 kERI 0.61 147 P Pg 04 58 40.6 -0.5
KRI1 S Sb 04 58 50.3 -0.4
comp=N,720nm,0.2s

IDC 07 05:00:51.0±1.0, 15.°12S×173.°61W, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.9/43, mbtmp3.9/8, ML4.4/1, MS3.4/7, Ms1 3.4/7, ms1mx3.0/35, Error ellipse: s-maj=48.1km s-min=18.1km az=138.0
NEIC 07 05:00:52.7±2.6, 15.°12S±0.°09×173.°5W±0.°1, h10km±1km, mb4.5/8, Error ellipse: s-maj=22.6km s-min=13.7km az=112.0
ISC 07 05:00:55.3±0.6, 15.°15S±0.°06×173.°33W±0.°09, h30km, n33, σ1.§80/27, mb4.1/11, MS3.3/6, Tonga Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AFI Afiamalu 1.94 51 Pn Pn 05 01 26.9 +0.6
119nm,0.3s,baz=354,slow=2.0,SNR=114
AFI Sn Sn 05 01 46.7 -3.1
198nm,0.3s,baz=30,slow=23,SNR=20
AFI LR LR 05 02 20.9
comp=Z,397nm,22.0s,baz=261,slow=42
AFI Afiamalu 1.94 51 Pn 05 01 26.9 +0.6
AFI Sn 05 01 47.8 -2.0
NIUE Niue 5.08 141 Pn Pn 05 02 10.8 +1.5
NIUE Sn Sn 05 03 03.7 -3.3
KNTN Kanton 12.40 7 Pn Pn 05 03 49.0 -0.9
DZM Mont Dzumac 20.36 247 LR LR 05 12 12.5
comp=Z,77nm,19.4s,baz=20,slow=34
URZ Urewera 24.52 198 P P 05 06 12.1 0.0
6.2nm,0.7s,baz=315,slow=1.4,SNR=3.3
URZ LR LR 05 14 22.4
comp=Z,108nm,20.4s,baz=34,slow=33
URZ Urewera 24.52 198 P P 05 06 12.6 +0.5
URZ IAmb IAmb 05 06 21.2
comp=Z,21nm,1.2s
WHZ Wether Hill Ro 34.45 203 P 05 07 41.1 +0.9
WHZ IAmb IAmb 05 07 42.1
comp=Z,8.2nm,0.6s
H11S2 WAKE ISLAND Hy 38.79 329 T T 05 49 01.2
baz=151,slow=76
H11S3 WAKE ISLAND Hy 38.80 329 T T 05 48 56.3
baz=151,slow=76
H11S1 WAKE ISLAND Hy 38.81 329 T T 05 49 07.9
baz=151,slow=76
H11N3 WAKE ISLAND Hy 39.73 330 T T 05 50 09.4
baz=154
H11N1 WAKE ISLAND Hy 39.74 330 T T 05 50 31.3
baz=154
H11N2 WAKE ISLAND Hy 39.75 330 T T 05 50 37.2
baz=154
STKA Stephens Creek 44.22 240 P P 05 09 00.2 -1.7
comp=Z,1.7nm,0.7s,baz=111,slow=8.6,SNR=3.1
STKA Stephens Creek 44.22 240 P P 05 09 01.4 -0.6
WR0 Warramunga Arr 49.78 257 P P 05 09 43.6 -2.0
WR0 IAmb IAmb 05 09 50.3
comp=Z,11nm,1.3s
WB0 Warramunga Arr 49.93 257 P P 05 09 44.7 -2.0
WRA Warramunga Arr 49.97 257 P P 05 09 44.9 -2.1
comp=Z,0.6nm,0.3s,baz=91,slow=6.8,SNR=14
WRA Warramunga Arr 49.97 257 P P 05 09 45.0 -2.1
AS31 Alice Springs 50.25 252 P P 05 09 48.3 -0.9
AS31 IAmb IAmb 05 09 49.1
comp=Z,1.1nm,0.6s
ASAR Alice Springs 50.26 252 P P 05 09 47.0 -2.2
comp=Z,3.5nm,0.6s,baz=87,slow=7.9,SNR=31
ASAR LR LR 05 29 51.4
comp=Z,20nm,18.2s,baz=106,slow=35
ASAR Alice Springs 50.26 252 P P 05 09 46.7 -2.5
MJAR Matsushiro Arr 68.80 320 LR LR 05 35 42.0
comp=Z,15nm,21.6s,baz=60,slow=30
CCB Clear Creek Bu 81.91 11 P P 05 13 13.4 +1.9
CCB IAmb IAmb 05 13 13.4
comp=Z,2.0nm,0.8s
PDAR Pinedale Array 82.03 42 P P 05 13 14.7 +1.7
comp=Z,0.7nm,1.1s,baz=225,slow=3.7,SNR=3.6
PDAR LR LR 05 42 05.7
comp=Z,36nm,19.5s,baz=24,slow=30
PDAR Pinedale Array 82.03 42 P P 05 13 15.3 +2.3
ILAR Eielson Array 82.19 11 P P 05 13 13.8 +0.9
comp=Z,0.5nm,0.7s,baz=228,slow=6.6,SNR=8.5
IMAR Indian Mountai 82.22 8 P P 05 13 14.6 +1.5
YKA Yellowknife Ar 89.84 23 P P 05 13 51.7 +0.9
comp=Z,0.2nm,0.7s,baz=243,slow=4.4,SNR=4.8
ULM Lac du Bonnet 93.70 39 LR LR 05 47 49.1
comp=Z,46nm,20.2s,baz=75,slow=30
BRTR Keskin Array B 146.01 321 PKPbc PKPbc 05 20 33.0 +0.3
comp=Z,0.9nm,0.7s,baz=93,slow=3.7,SNR=9.2
BRTR Keskin Array B 146.01 321 PKPab 05 20 33.7 +0.5

NNC 07 05:05:02.3±16.0, 41.°25N×83.°45E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=121.7km s-min=60.3km az=159.0
SOME 07 05:05:06.8, 42.°58N×83.°57E, h15km
ISC 07 05:05:08.4±3.3, 42.°1N±0.°1×83.°4E±0.°1, h15km, n8, σ2.§97/16, 4C-2D, Northern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SHLS Shalkode 3.10 291 eP Pn 05 05 58.3 +1.4
5.3nm,0.2s
SHLS eS Sn 05 06 35.5 +1.8
33nm,0.4s
PDGK Podgornoye 3.13 294 ⇑Pg Pg 05 06 08.1 -0.4
0.9nm,0.4s
PDGK ⇑Sn Sb 05 06 42.4 +0.4
9.7nm,0.6s
UZB Uzynbulak 3.40 289 eP Pb 05 06 07.5 -0.9
1.5nm,0.2s
UZB eS Sb 05 06 51.0 +1.3
9.2nm,0.3s
DJR Jarkent 3.46 311 eP Pb 05 06 06.6 -2.7
0.6nm,0.2s
DJR eS Sb 05 06 50.0 -1.2
2.3nm,0.4s
KPKS Kokpek 3.73 293 eP Pb 05 06 13.2 -0.9
4.0nm,0.1s
KPKS eS Sb 05 07 00.8 +1.6
16nm,0.4s
KAPS Kapalarasan 4.33 319 eP Pb 05 06 20.8 -3.3
1.7nm,0.4s
KAPS eS Sb 05 07 13.7 -2.5
2.2nm,0.5s
MK31 Makanchi Array 4.75 351 ⇑Pn Pb 05 06 27.7 -3.7
0.3nm,0.3s,baz=162,slow=16,SNR=8.3
MK31 ⇓Sn Sb 05 07 33.4 +4.9
1.0nm,0.4s,baz=160,slow=26,SNR=5.7
MAKZ Makanchi 4.81 348 ⇑Pn Pb 05 06 29.4 -3.0
3.2nm,1.4s
MAKZ ⇓Sn Sb 05 07 35.5 +5.4
2.8nm,1.0s

IDC 07 05:13:51.0±2.2, 12.°15N×94.°97E, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.4/37, mbtmp3.5/5, ML3.7/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/33, Error ellipse: s-maj=73.3km s-min=28.0km az=72.0, Andaman Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CMAR Chiang Mai Arr 7.35 31 Pn Pn 05 15 39.6 -0.1
0.3nm,0.3s,baz=227,slow=15,SNR=2.5
MKAR Makanchi Array 36.16 345 P P 05 20 55.8 +0.7
0.4nm,0.8s,baz=141,slow=7.1,SNR=3.4
SONM Songino Array 36.84 13 P P 05 21 01.3 +0.2
0.6nm,0.8s,baz=184,slow=6.5,SNR=4.6
SONM LR LR 05 38 47.5
comp=Z,23nm,20.2s,baz=98,slow=41
ASAR Alice Springs 52.12 133 P P 05 23 03.5 +0.1
0.2nm,0.6s,baz=312,slow=7.1,SNR=2.9
ILAR Eielson Array 90.50 22 P P 05 26 53.0 -1.6
0.3nm,0.8s,baz=308,slow=4.5,SNR=2.6

THE 07 05:16:51.6, 38.°26N×20.°37E, h10km±1km, ML3.1/15, Error ellipse: s-maj=1.2km s-min=0.4km az=236.0
ATH 07 05:16:51.6, 38.°27N×20.°41E, h10km±1km, ML2.8/8, Error ellipse: s-maj=2.2km s-min=0.9km az=256.0
ISC 07 05:16:51.4±1.1, 38.°27N±0.°02×20.°39E±0.°05, h10km±5km, n43, σ0.§57/68, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.03 109 P Pg 05 16 53.2 0.0
KEF4 S Sg 05 16 54.3 -0.2
KEF1 Kardakata, Kep 0.07 82 P Pg 05 16 53.5 -0.1
KEF1 S Sg 05 16 54.6 -0.5
KEF3 Kipouria, Keph 0.07 205 P Pg 05 16 54.0 +0.4
KEF3 S Sg 05 16 55.6 +0.3
LXR1 Lixouri, Cepha 0.08 149 P Pg 05 16 54.0 +0.3
LXR1 S Sg 05 16 55.8 +0.5
89µm,0.1s
LXRA Lixouri, Kepha 0.08 150 P Pg 05 16 54.0 +0.3
LXRA S Sg 05 16 55.7 +0.4
CHV1 Chavriata, Kef 0.09 183 P Pg 05 16 54.1 +0.3
CHV1 S Sg 05 16 56.0 +0.5
60µm,0.2s
ARGA Argostoli. Kep 0.12 142 P Pg 05 16 54.3 +0.1
ARGA S Sg 05 16 56.3 +0.1
ARG2 Argostoli 0.12 138 P Pg 05 16 54.4 +0.1
ARG2 S Sg 05 16 56.5 +0.2
47µm,0.1s
KEF2 Argostoli. Kep 0.13 142 P Pg 05 16 54.6 +0.2

KEF2 S Sg 05 16 56.5 0.0
VLS Valsamata 0.18 120 P Pg 05 16 55.2 -0.1
VLS S Sg 05 16 58.1 0.0
19µm,0.1s
VLS Valsamata 0.18 120 P Pg 05 16 55.3 -0.1
VLS S Sg 05 16 58.0 0.0
VLS AML AML 05 16 58.4
comp=E,39515µm,0.1s
VLS AML AML 05 16 58.5
comp=N,36265µm,0.1s
VSK1 VASILIKIADES 0.20 45 P Pg 05 16 55.8 +0.2
VSK1 S Sg 05 16 59.2 +0.8
comp=N,8µm,0.3s
KONA Konidatara, Ke 0.21 43 P Pg 05 16 56.1 +0.2
KONA S Sg 05 16 59.4 +0.6
KFL Anninata 0.35 117 P Pg 05 16 58.3 -0.1
KFL S Sg 05 17 03.8 +0.6
comp=N,7µm,0.3s
KFL Anninata 0.35 117 P Pg 05 16 58.3 -0.1
KFL S Sg 05 17 03.7 +0.6
KFL AML AML 05 17 04.4
comp=E,20258µm,0.3s
KFL AML AML 05 17 06.5
comp=N,7430µm,0.2s
EVGI Lefkada island 0.41 31 P Pg 05 16 59.7 +0.2
EVGI S Sb 05 17 06.4 -0.7
comp=N,515nm,0.2s
EVGI Lefkada island 0.41 31 P Pg 05 16 59.7 +0.2
EVGI S Sg 05 17 06.1 +1.2
VLMS Volimes, Zakyn 0.45 151 P Pg 05 17 00.2 0.0
VLMS S Sb 05 17 07.2 -0.9
VLMS AML AML 05 17 09.2
comp=E,7827µm,0.2s
VLMS AML AML 05 17 12.0
comp=N,9766µm,0.6s
MGNA Meganis 0.50 39 P Pg 05 17 01.1 -0.1
MGNA AML AML 05 17 09.4
comp=E,1564µm,0.4s
MGNA AML AML 05 17 15.3
comp=N,1324µm,0.5s
LKD2 Lefkada island 0.56 22 P Pg 05 17 02.3 0.0
LKD2 S Sb 05 17 11.3 -0.2
comp=N,490nm,0.5s
LKD2 Lefkada island 0.56 22 P Pg 05 17 02.1 -0.2
TSLK Tsoukalades, L 0.59 21 P Pg 05 17 02.9 -0.1
TSLK Tsoukalades, L 0.59 21 P Pg 05 17 02.8 -0.1
TSLK AML AML 05 17 19.7
comp=E,1158µm,0.9s
TSLK AML AML 05 17 21.0
comp=N,928µm,0.7s
ZAK2 Zakynthos 0.63 140 P Pg 05 17 03.9 +0.3
ZAK2 S Sb 05 17 14.4 +1.1
comp=N,7µm,0.3s
KRI1 kERI 0.69 151 P Pg 05 17 04.4 -0.4
KRI1 S Sb 05 17 15.4 +0.2
comp=N,2µm,0.2s
PDO Prodromos 0.71 62 P Pg 05 17 04.8 -0.3
PDO S Sb 05 17 16.0 +0.4
comp=N,2µm,0.4s
PDO Prodromos 0.71 62 P Pg 05 17 04.9 -0.1
PDO AML AML 05 17 19.4
comp=E,2181µm,0.5s
PDO AML AML 05 17 22.4
comp=N,2144µm,0.3s
RLS Riolos of Patr 0.88 104 P Pg 05 17 07.8 -0.5
RLS S Sn 05 17 21.9 -0.7
comp=N,462nm,0.3s
RLS Riolos of Patr 0.88 104 P Pg 05 17 07.8 -0.5
PVO Paravola 0.96 68 P Pg 05 17 09.7 -0.1
PVO S Sn 05 17 25.0 +0.3
comp=N,530nm,0.3s
PVO Paravola 0.96 68 P Pg 05 17 09.8 -0.1
PVO AML AML 05 17 29.8
comp=N,978µm,0.8s
PVO AML AML 05 17 31.1
comp=E,991µm,0.3s
ANX Ano Chora 1.25 74 P Pn 05 17 14.9 -0.1
ANX Ano Chora 1.25 74 P Pn 05 17 14.8 -0.1
LAKA Lakka 1.25 91 P Pn 05 17 14.3 -0.7
LAKA Lakka 1.25 91 P Pn 05 17 14.2 -0.7
LAKA AML AML 05 17 36.6
comp=E,424µm,0.4s
LAKA AML AML 05 17 40.6
comp=N,322µm,0.7s
EVR Evrytania 1.29 59 P Pn 05 17 14.9 -0.7
SERG Sergoula 1.32 83 P Pn 05 17 15.4 -0.5
TRIZ Trizonia 1.33 85 P Pn 05 17 15.5 -0.5
TRIZ Trizonia 1.33 85 P Pn 05 17 15.5 -0.5
KALE Kalithea 1.38 84 P Pn 05 17 16.5 -0.3
KALE Kalithea 1.38 84 P Pn 05 17 16.5 -0.3
KLV Kalavryta, Ach 1.41 99 P Pn 05 17 17.1 -0.1
KLV S Sg 05 17 39.7 +3.0
comp=N,122nm,0.5s
AGG Agios Georgios 1.70 63 P Pg 05 17 23.8 -0.2

MAN 07 05:27:34.9, 14.63N×124.66E, h26km, mb4.5, ML3.3, MS3.2
IDC 07 05:27:45.4±5.2, 14.59N×124.62E, h124km±45km, mb3.4/8, mb1 3.5/8, mb1mx3.3/35, mbtmp3.8/8, Error ellipse: s-maj=58.5km s-min=15.2km az=62.0
ISC 07 05:27:34.3±0.9, 14.68N±0.06×124.70E±0.08, h22km, n16, σ1.29/21, mb3.7/8, 1D, Luzon

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PVCP Virac 1.20 206 eP Pn 05 27 50.2 -1.3
PVCP eS Sn 05 28 08.7 -2.8
CNP Catarman 2.16 181 eP Pn 05 28 10.1 +1.2
CNP eS Sn 05 28 34.3 -0.8
GQP Guinayangan 2.32 251⇓eP Pn 05 28 12.1 +0.9
POLP Polilio Island 2.68 271 eP Pn 05 28 16.4 +0.4
POLP eS Sn 05 28 47.8 0.0
BOAC Boac 3.03 247 eP Pn 05 28 20.9 0.0
BOAC eS Sn 05 28 57.7 +1.2
BALP Baler 3.20 290 eP Pn 05 28 22.4 -0.8
BALP eS Sn 05 28 57.4 -3.3
OTRP Odiongan 3.48 229 eP Pn 05 28 27.0 -0.1
OTRP eS Sn 05 28 47.7 -20
TGY Tagaytay City 3.70 261 P Pb 05 28 40.2 +1.2
113nm,0.3s,baz=72,slow=2.9,SNR=5.0
CMAR Chiang Mai Arr 24.97 282 P P 05 32 57.0 +0.6
1.6nm,0.3s,baz=100,slow=7.2,SNR=5.7
CMAR pP pwP 05 33 24.9 +17
1.5nm,0.3s,baz=97,slow=8.3,SNR=4.7
WRA Warramunga Arr 35.69 164 P P 05 34 30.4 -0.8
0.6nm,0.9s,baz=343,slow=9.3,SNR=2.8
SONM Songino Array 36.38 339 P P 05 34 38.2 +1.2
0.8nm,1.0s,baz=140,slow=7.0,SNR=4.1
ASAR Alice Springs 39.16 167 P P 05 35 00.9 +0.3
1.2nm,0.6s,baz=351,slow=7.3,SNR=20
MKAR Makanchi Array 47.63 321 P P 05 36 08.5 -0.3
0.4nm,0.6s,baz=108,slow=8.7,SNR=4.9
STKA Stephens Creek 49.05 161 P P 05 36 19.7 0.0
1.0nm,0.5s,baz=316,slow=12,SNR=3.8
FINES FINESS Array B 81.31 331 P P 05 39 48.5 -0.2
1.2nm,0.8s,baz=54,slow=7.2,SNR=2.9
AKASG Malin Array Be 82.21 320 P P 05 39 53.2 -0.5
0.1nm,0.3s,baz=77,slow=4.1,SNR=3.1

IDC 07 05:41:38.2±1.0, 45.78S×76.62W, h0km, mb4.1/9, mb1 4.2/11, mb1mx4.1/27, mbtmp4.1/11, ML3.3/2, MS3.8/14, Ms1 3.8/14, ms1mx3.7/21, Error ellipse: s-maj=42.0km s-min=17.6km az=99.0
NEIC 07 05:41:39.3±1.8, 45.73S±0.07×76.9W±0.2, h10km±1km, mb4.6/14, Error ellipse: s-maj=18.6km s-min=11.6km az=69.0
ISC 07 05:41:43.1±0.7, 45.74S±0.08×76.77W±0.2, h35km, n55, σ0.76/43, mb4.4/14, MS3.9/14, Off coast of southern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GO09 Cerro Castillo 6.26 154 Pn Pn 05 43 12.8 0.0
PLCA Paso Flores 6.75 44 Pn Pn 05 43 18.4 -1.3
0.2nm,0.3s,baz=246,slow=12,SNR=5.7
PLCA LR LR 05 45 52.2
comp=Z,2µm,20.7s,baz=248,slow=38
PLCA Paso Flores 6.75 44 Pn 05 43 20.1 +0.5
USHA Ushuaia 10.53 153 LR LR 05 48 32.3
comp=Z,164nm,20.6s,baz=324,slow=40
GO05 Huala 11.33 21 Pn Pn 05 44 20.2 -2.3
CFA Coronel Fontan 15.59 28 Pn Pn 05 45 20.4 +0.2
0.1nm,0.3s,baz=206,slow=12,SNR=7.4
CFA LR LR 05 51 28.9
comp=Z,560nm,19.7s,baz=206,slow=38
PMSA Palmer Station 20.32 164 P P 05 46 15.6 -0.1
20nm,0.9s,baz=3.4,slow=19,SNR=4.3
PMSA LR LR 05 52 49.8
comp=Z,35nm,18.4s,baz=322,slow=33
GO02 Mina Guanaco 21.33 18 P P 05 46 28.6 +1.3
GO02 IAmb IAmb 05 46 32.6
comp=Z,30nm,1.4s
LVC Limon Verde 23.95 18 P P 05 46 54.3 0.0
comp=Z,1.8nm,0.7s,baz=189,slow=9.7,SNR=4.2
LVC LR LR 05 57 00.5
comp=Z,111nm,19.9s,baz=198,slow=38
LVC Limon Verde 23.95 18 P P 05 46 54.1 -0.3
CPUP Villa Florida 24.82 45 P P 05 47 02.1 +0.3
comp=Z,23nm,1.2s,baz=230,slow=8.8,SNR=13
CPUP LR LR 05 57 22.8
comp=Z,632nm,19.4s,baz=216,slow=38
CPUP Villa Florida 24.82 45 P P 05 47 02.3 +0.4
LPAZ La Paz 30.24 17 P P 05 47 49.9 -1.3
comp=Z,1.4nm,1.0s,baz=207,slow=3.7,SNR=3.9
LPAZ La Paz 30.24 17 P P 05 47 51.6 +0.4
SIV San Ignacio 32.44 29 LR LR 06 02 19.3
comp=Z,143nm,19.2s,baz=240,slow=38
NNA Nana 33.64 360 LR LR 05 59 43.3
comp=Z,96nm,18.1s,baz=158,slow=32
BDFB Brasilia 38.47 48 LR LR 06 05 49.0
comp=Z,595nm,19.2s,baz=211,slow=38
SAML Samuel 38.47 22 P P 05 49 00.9 -0.8
SAML IAmb IAmb 05 49 02.8
comp=Z,10.0nm,1.2s
SNAA Sanae 42.38 153 P P 05 49 33.0 -0.5
comp=Z,1.7nm,0.8s,baz=276,slow=7.7,SNR=4.3
SNAA Sanae 42.38 153 P P 05 49 33.3 -0.3
SNAA IAmb IAmb 05 49 40.9
comp=Z,9.8nm,1.1s
QSPA South Pole Qui 44.50 180 P P 05 49 50.8 0.0
comp=Z,1.7nm,0.8s,baz=104,slow=5.4,SNR=4.7
QSPA South Pole Qui 44.50 180 P P 05 49 51.6 +0.8
ROSC El Rosal 50.41 3 LR LR 06 10 08.6
comp=Z,95nm,19.1s,baz=208,slow=34
VNDA Vanda 51.87 194 LR LR 06 08 04.5
comp=Z,53nm,21.2s,baz=176,slow=31
GRGR Grenville 59.19 17 P P 05 51 41.6 +1.0
TBI Tubuai 61.80 265 eLR LR 06 10 21.7
comp=Z,409nm,26.5s
PPT2 Papeete2 65.70 269 eLR LR 06 12 05.5
comp=Z,209nm,25.5s
BOSA Boshof 77.75 118 LR LR 06 24 16.3
comp=Z,63nm,18.6s,baz=172,slow=33
TXAR Lajitas Array 78.62 336 P P 05 53 43.0 +1.9
comp=Z,0.7nm,1.0s,baz=188,slow=3.6,SNR=3.0
TXAR Lajitas Array 78.62 336 P P 05 53 41.4 +0.3
JCT Junction City 78.70 340 P P 05 53 41.5 +0.1
DBIC Dimbokro 82.31 72 P P 05 54 01.2 0.0
comp=Z,3.4nm,1.0s,baz=194,slow=2.1,SNR=3.5
DBIC LR LR 06 25 18.5
comp=Z,56nm,21.4s,baz=172,slow=32
WMOK Wichita Mounta 82.55 342 P P 05 54 02.8 +0.8
WMOK IAmb IAmb 05 54 10.7
comp=Z,6.4nm,1.2s
CCM Cathedral Cave 84.44 349 P P 05 54 11.7 +0.2
ANMO Albuquerque 84.69 336 P P 05 54 14.7 +1.6
ANMO IAmb IAmb 05 54 22.4
comp=Z,6.9nm,1.4s
T25A Trinidad 86.19 338 P P 05 54 20.5 -0.1
T25A IAmb IAmb 05 54 30.5
comp=Z,8.1nm,1.2s
ECSD EROS Data Cent 90.83 346 P P 05 54 41.8 -0.4
ECSD IAmb IAmb 05 54 49.5
comp=Z,3.8nm,0.8s
TORD Torodi Ar. Bea 91.41 73 P P 05 54 45.9 +0.3
comp=Z,0.6nm,0.9s,baz=214,slow=4.2,SNR=2.8
TORD LR LR 06 33 07.3
comp=Z,48nm,18.9s,baz=0.0,slow=34
DZM Mont Dzumac 91.51 236 eLR LR 06 24 18.4
comp=Z,103nm,28.2s
H11S2 WAKE ISLAND Hyl21.49 264 T T 08 13 42.4
baz=134,slow=75
H11S1 WAKE ISLAND Hyl21.49 264 T T 08 13 43.5
baz=134,slow=75
H11S3 WAKE ISLAND Hyl21.49 264 T T 08 13 43.1
baz=134,slow=75
BRTR Keskin Array B 129.98 71 PKP PKPdf 06 00 48.8 +0.1
comp=Z,0.4nm,0.8s,baz=219,slow=1.8,SNR=2.9
BRTR Keskin Array B 129.98 71 PKPdf 06 00 48.5 -0.2
KIRV Kirov 145.54 48 PKPbc PKPab 06 01 16.7 -0.2
comp=Z,9.1nm,0.5s,baz=296,slow=7.5,SNR=4.9
GEYT Alibeck 145.85 87 PKPbc PKPbc 06 01 17.8 -0.5
comp=Z,2.2nm,0.7s,baz=188,slow=1.0,SNR=6.5
GEYT Alibeck 145.85 87 PKPab 06 01 18.4 -0.4
ARU Arti 150.47 52 PKPbc PKiKP 06 01 30.7 +0.1
comp=Z,1.5nm,0.6s,baz=156,slow=2.2,SNR=8.5
ARU Arti 150.47 52 PKPbc 06 01 30.0 +0.1
ARU PKPab 06 01 36.5 -0.2
ABKAR Akbulak array 150.83 67 PKPbc 06 01 31.0 0.0
CMAR Chiang Mai Arr 152.56 171 PKPbc PKiKP 06 01 35.9 -0.3
comp=Z,1.1nm,0.4s,baz=217,slow=3.8,SNR=6.0
MKAR Makanchi Array 165.46 78 PKPab PKPab 06 02 41.0 -0.7
comp=Z,0.6nm,0.8s,baz=254,slow=3.7,SNR=4.1
MKAR Makanchi Array 165.46 78 PKPab 06 02 40.8 -0.9
ZALV Zalesovo Beam 165.58 49 PKP PKPdf 06 01 42.3 -0.6
comp=Z,0.4nm,0.5s,baz=318,slow=1.9,SNR=2.4
ZALV Zalesovo Beam 165.58 49 PKPdf 06 01 42.6 -0.3

BJI 07 05:47:23.3±0.0, 5.10N×94.55E, h61km, mB5.0/27, mb4.7/46, Ms4.5/8, Ms7 4.2/6
DJA 07 05:47:26.7±0.7, 5˚N±˚×9˚5E±˚, h10km, M4.6/7, mB5.0/2, mb4.7/6, MLv4.6/7, Mw(mB)4.3/2
KLM 07 05:47:26.0, 5.01N×94.38E, h44km, mb4.7
IDC 07 05:47:28.7±2.5, 5.43N×94.66E, h68km±23km, mb4.1/24, mb1 4.2/26, mb1mx4.0/46, mbtmp4.4/26, MS3.2/4, Ms1 3.2/4, ms1mx2.9/29, Error ellipse: s-maj=23.0km s-min=9.9km az=47.0
NEIC 07 05:47:29.0±1.4, 5.47N±0.09×94.70E±0.06, h68km±5km, mb4.6/51, Error ellipse: s-maj=14.5km s-min=6.1km az=204.0
ISC 07 05:47:29.5±0.9, 5.47N±0.05×94.69E±0.05, h74km±8km, n198, σ1.52/210, mb4.6/50, 7C-3D, Northern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CMBY CAMPBELL BAY 1.71 334 eP Pn 05 47 56.2 -1.1
CMBY eS Sn 05 48 20.3 +1.9
MLSI Meulaboh, Aceh 2.08 125 P Pn 05 47 59.8 -2.5
LHMI Lhok Sumawe 2.26 96 P Pn 05 48 04.1 -0.5
LHMI S Sn 05 48 33.2 +1.6
LHMI Lhok Sumawe 2.26 96 Pn 05 48 04.2 -0.5
LHMI Sn Sn 05 48 32.2 +0.6
SNSI Sinabang, Aceh 3.45 152 P Pn 05 48 17.4 -3.5
PKDT Phuket 4.34 56 S Sn 05 49 19.7 -2.7
PSI Prapat 4.99 122 P Pn 05 48 42.2 +0.3
8.0nm,0.3s,baz=317,slow=11,SNR=24
PSI S Sn 05 49 39.5 +1.1
12nm,0.3s,baz=26,slow=22,SNR=5.1
PSI LR LR 05 50 54.9
comp=Z,229nm,18.9s,baz=352,slow=41
RPSI Rantau Prapat 5.04 123 Pn 05 48 42.2 -0.4
RPSI Sn 05 49 39.5 -0.1
TRTT Trang 5.49 64 P Pn 05 48 48.8 0.0
TRTT S Sn 05 49 47.6 -3.0
KULM Kulim 5.93 91 Pn 05 48 54.1 -0.7
KULM Sn Sn 05 49 58.7 -2.7
IPM Ipoh 6.38 99 Pn 05 48 59.6 -1.4
IPM Sn Sn 05 50 10.1 -2.5
IPM Ipoh 6.38 99 P Pn 05 49 00.0 -1.0
JRMM Jerantut 7.92 101 P Pn 05 49 21.0 -0.9
RGRI Rengat 9.57 127 P Pn 05 50 00.9 +16
SRAK Srakaew 11.15 40 P Pn 05 50 13.8 +7.7
CHAI Chaiyaphum 12.59 34 P Pn 05 50 27.8 +2.0
PBKT Sadao Pong 12.63 29 Pn 05 50 29.2 +3.0
PBKT Sadao Pong 12.63 29 P Pn 05 50 29.2 +3.0
CM05 Chiang Mai Arr 13.50 18 P P 05 50 41.8 -2.8
CM13 Chiang Mai Arr 13.51 17 P Pn 05 50 41.4 +3.4
CM04 Chiang Mai Arr 13.51 18 P Pn 05 50 41.6 +3.5
CM01 Chiang Mai Arr 13.53 18 P P 05 50 42.2 -2.6
CM02 Chiang Mai Arr 13.53 18 P Pn 05 50 41.8 +3.4
CMAR Chiang Mai Arr 13.55 17 P Pn 05 50 41.2 +2.6
1.7nm,0.3s,baz=210,slow=14,SNR=28
CMAR LR LR 05 56 11.5
comp=Z,65nm,18.7s,baz=214,slow=38
CM09 Chiang Mai Arr 13.56 18 P P 05 50 43.2 -2.0
CM36 Chiang Mai Arr 13.66 18 P P 05 50 44.6 -1.7
CM32 Chiang Mai Arr 13.71 17 P Pn 05 50 42.3 +1.6
CM35 Chiang Mai Arr 13.83 18 P Pn 05 50 44.2 +2.0
CHTO Chiang Mai 13.89 17 P P 05 50 47.2 -1.7
CMMT Chiang Mai 13.89 17 P P 05 50 47.0 -1.9
CM33 Chiang Mai Arr 13.90 17 P P 05 50 47.9 -1.1
CM34 Chiang Mai Arr 13.99 18 P P 05 50 48.1 -1.9
PALK Pallekele 14.02 278 P Pn 05 50 45.1 +0.3
0.8nm,0.3s,baz=98,slow=15,SNR=3.3
PALK S Sn 05 53 03.4 -16
1.6nm,0.3s,baz=11,slow=22,SNR=4.4
PALK Pallekele 14.02 278 Pn 05 50 44.3 -0.5
UBPT Khong Chiam 14.39 47 P P 05 50 56.1 +1.7
DLV T Lat 15.07 64 P P 05 51 03.3 +1.1
SLVN Son La 18.12 29 P Pn 05 51 37.1 +0.8
QIZ Qiongzhong 19.99 46 P Pn 05 51 58.1 -0.4
QIZ IAmb IAmb 05 52 12.6
comp=Z,37nm,1.3s
KMI Kunming 21.01 21 P P 05 52 08.8 +1.4
ODAN Odare 22.38 343 eP P 05 52 21.9 -0.2
comp=Z,16nm,0.5s
RAMN Ramite 22.71 341 eP P 05 52 25.1 -0.5
comp=Z,12nm,0.4s
TAPN Taplejung 22.75 344 eP P 05 52 25.9 -0.2
comp=Z,8.8nm,0.4s
JIRN Jiri 23.50 341 eP P 05 52 32.8 -0.6
comp=Z,21nm,0.3s
GYA Guiyang 23.80 27⇑iP P 05 52 36.5 +0.7
GYA pmax pmax
comp=Z,30nm,0.9s
DMN Daman 23.83 339 eP P 05 52 35.9 -0.3
comp=Z,13nm,0.6s
GUN Gumba 23.84 340 eP P 05 52 35.7 -0.7
comp=Z,31nm,0.6s
KKN Kakani 23.93 339 eP P 05 52 36.7 -0.4
LSA Lhasa 24.33 352 P P 05 52 41.4 +0.5
LSA IAmb IAmb 05 52 43.3
comp=Z,11nm,0.6s
GKN Gorkha 24.36 338 eP P 05 52 41.0 +0.1
comp=Z,25nm,0.2s
KOLN Koldanda 24.56 336 eP P 05 52 42.6 -0.1
comp=Z,15nm,0.3s
DANN Dangsing 25.01 337 eP P 05 52 46.6 -0.3
H08S3 Diego Garcia H 25.70 240 T T 06 19 55.9
baz=61,slow=75
H08S2 Diego Garcia H 25.70 240 T T 06 19 56.8
baz=61,slow=75
H08S1 Diego Carcia H 25.71 240 T T 06 19 58.0
baz=61,slow=75
CD2 Chengdu 26.70 18 P P 05 53 01.1 -0.8
CD2 pmax pmax
comp=Z,20nm,0.4s
KAPI Kappang 27.11 112 P P 05 53 05.9 +0.2
comp=Z,7.6nm,0.6s,baz=273,slow=12,SNR=4.7
KAPI Kappang 27.11 112 P P 05 53 05.6 -0.2
KAPI IAmb IAmb 05 53 06.6
comp=Z,11nm,0.8s
WHN Wuhan 31.05 34 P P 05 53 45.2 +4.7
XAN Xi'an 31.34 23 P P 05 53 42.4 -0.7
XAN pmax pmax
comp=Z,21nm,0.6s
XAN pmax pmax
comp=Z,190nm,4.4s
XAN Xi'an 31.34 23 P P 05 53 42.3 -0.7
XAN IAmb IAmb 05 53 43.0
comp=Z,16nm,0.6s
LZH Lanzhou 31.61 14 eP P 05 53 48.4 +2.8
LZH pP pP 05 54 02.2 -0.6
LZH sP sP 05 54 10.4 -0.9
LZH PP PP 05 54 56.4 -1.8
LZH pmax pmax
comp=Z,16nm,1.1s
LZH pmax pmax
comp=Z,67nm,4.9s
GTA Gaotai 34.10 7 P P 05 54 07.1 -0.2
GTA pP pP 05 54 23.9 -0.8
GTA sP sP 05 54 30.9 -2.3
GTA pmax pmax
comp=Z,9.0nm,0.9s
NJ2 Nanjing 34.78 38 eP P 05 54 14.3 +1.2
NJ2 pmax pmax
comp=Z,11nm,0.6s
PSAC2 Pilbara Seismi 36.51 138 P P 05 54 27.4 -0.5
PSAC2 IAmb IAmb 05 54 41.4
comp=Z,28nm,1.5s
KSH Kashi 37.87 336 P P 05 54 38.3 -1.2
KSH pP pP 05 54 52.5 -4.3
KSH PcP PcP 05 56 54.8 +0.3
KSH S S 06 00 20.6 -5.1
KSH SS SnSn 06 03 01.2 -13
KSH pmax pmax
comp=Z,9.0nm,0.6s
KSH pmax pmax
comp=Z,84nm,4.8s
KSH LR LR
comp=Z,140nm,5.5s
KSH LR LR
comp=Z,170nm,4.8s
KSH LR LR
comp=Z,120nm,7.0s
HHC Hu-ho-hao-te 38.33 21 eP P 05 54 46.9 +3.6
HHC pmax pmax
comp=Z,2.0nm,0.9s
HHC pmax pmax
comp=Z,30nm,3.7s
FAKI Fak Fak 38.43 102 P P 05 54 44.1 -0.3
FITZ Fitzroy Crossi 38.48 128 P P 05 54 43.5 -1.2
comp=Z,3.1nm,0.5s,baz=307,slow=5.7,SNR=7.7
FITZ Fitzroy Crossi 38.48 128 P P 05 54 43.8 -0.9
FITZ IAmb IAmb 05 54 58.0
comp=Z,15nm,1.4s
WMQ Urumqi 38.69 352 eP P 05 54 47.4 +1.2
WMQ sP sP 05 55 10.7 -1.2
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ pmax pmax
comp=Z,130nm,5.7s
WMQ Urumqi 38.69 352 P P 05 54 47.3 +1.2
WMQ IAmb IAmb 05 54 48.0
comp=Z,8.2nm,0.6s
BJT Baijiatuau 39.45 26 P P 05 54 53.9 +1.3
BJT IAmb IAmb 05 54 55.0
comp=Z,8.4nm,0.8s
MTN Manton Dam 40.52 117 P P 05 55 01.3 -0.4
UCH Uchtor 40.76 337 P P 05 55 04.7 +0.7
SNR=9.4
KBK Karagaybulak 40.96 338 P P 05 55 06.5 +1.3
SNR=22
AML Almayashu 41.01 336 P P 05 55 06.7 +0.9
SNR=16
AAK Ala-Archa 41.12 337 P P 05 55 08.0 +1.5
comp=Z,9.8nm,0.7s,baz=133,slow=5.8,SNR=27
AAK Ala-Archa 41.12 337 P P 05 55 08.4 +1.9
SNR=8.0
AAK Ala-Archa 41.12 337 P P 05 55 08.1 +1.5
AAK IAmb IAmb 05 55 09.3
comp=Z,8.6nm,0.7s
EKS2 Erkin-Say 41.42 337 P P 05 55 09.9 +1.0
SNR=6.5
USP Ospenovka 41.65 338 P P 05 55 11.3 +0.6
SNR=14
MK31 Makanchi Array 42.53 347 P P 05 55 17.8 0.0
MK31 IAmb IAmb 05 55 18.6
comp=Z,6.6nm,0.9s
MKAR Makanchi Array 42.53 347 P P 05 55 17.5 -0.3
comp=Z,5.5nm,0.6s,baz=160,slow=8.1,SNR=96
MKAR PcP PcP 05 57 09.5 +0.3
comp=Z,0.8nm,0.6s,baz=182,slow=3.7,SNR=3.3
MAKZ Makanchi 42.62 347 P P 05 55 18.4 -0.1
MAKZ IAmb IAmb 05 55 19.0
comp=Z,8.0nm,0.6s
KK31 Karatay Array 43.14 334 P P 05 55 23.1 +0.3
KK31 IAmb IAmb 05 55 24.8
comp=Z,5.0nm,0.9s
KKAR Karatay Array 43.14 334 P P 05 55 23.1 +0.3
KKAR Karatay Array 43.14 334 P P 05 55 23.1 +0.3
KKAR IAmb IAmb 05 55 24.8
comp=Z,5.0nm,0.9s
SONM Songino Array 43.38 11 P P 05 55 24.3 -0.4
comp=Z,4.7nm,0.7s,baz=190,slow=8.2,SNR=37
SONM PcP PcP 05 57 12.6 +0.5
comp=Z,1.4nm,0.5s,baz=196,slow=3.4,SNR=8.2
SONM Songino Array 43.38 11 P P 05 55 24.7 -0.1
SONM PcP 05 57 12.2 +0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ULN	**Ulaanbaatar**	**43.54**	**12**	P	**P**	**05 55 25.3**	**-0.8**
ULN				IAmb	IAmb	05 55 26.3	
	comp=Z,4.1nm,0.6s						
KSRS	**Korea Array**	**43.94**	**39**	P	**P**	**05 55 29.6**	**+0.3**
	comp=Z,2.9nm,0.7s,baz=218,slow=9.3,SNR=7.1						
KSRS				LR	LR	06 16 46.0	
	comp=Z,33nm,18.2s,baz=233,slow=40						
GEYT	**Alibeck**	**46.36**	**319**	P	**P**	**05 55 48.8**	**+0.4**
	comp=Z,3.8nm,0.6s,baz=146,slow=8.7,SNR=6.6						
GEYT	**Alibeck**	**46.36**	**319**	P	**P**	**05 55 49.2**	**+0.7**
WB0	**Warramunga Arr**	**46.41**	**124**	P	**P**	**05 55 48.8**	**-0.3**
WRA	**Warramunga Arr**	**46.45**	**124**	P	**P**	**05 55 49.4**	**0.0**
	comp=Z,2.8nm,0.6s,baz=307,slow=8.2,SNR=8.6						
WRA				LR	LR	06 18 25.7	
	comp=Z,25nm,18.2s,baz=260,slow=40						
WRA	**Warramunga Arr**	**46.45**	**124**	P	**P**	**05 55 49.4**	**0.0**
WR0	**Warramunga Arr**	**46.62**	**124**	P	**P**	**05 55 50.8**	**0.0**
WR0				IAmb	IAmb	05 55 51.5	
	comp=Z,7.9nm,0.7s						
CN2	**Changchun**	**46.78**	**31**	*e*P	**P**	**05 55 54.1**	**+2.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KURBB	**Kurchatov Arra**	**46.99**	**346**	P	**P**	**05 55 53.8**	**+0.6**
	baz=172,slow=6.9						
KURK	**Kurchatov**	**47.06**	**346**	P	**P**	**05 55 54.4**	**+0.7**
AS31	**Alice Springs**	**47.98**	**129**	P	**P**	**05 56 01.3**	**0.0**
ASAR	**Alice Springs**	**47.98**	**129**	P	**P**	**05 56 01.1**	**-0.1**
	comp=Z,3.5nm,0.5s,baz=301,slow=7.6,SNR=70						
ASAR				PcP	**PcP**	**05 57 28.8**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=316,slow=3.9,SNR=2.8						
ASAR	**Alice Springs**	**47.98**	**129**	P	**P**	**05 56 01.3**	**0.0**
ASAR					**PcP**	**05 57 28.4**	**-0.1**
ZAA0	**Zalesovo Array**	**48.99**	**352**	P	**P**	**05 56 09.0**	**+0.4**
ZAA0				IAmb	IAmb	05 56 09.4	
	comp=Z,14nm,1.1s						
ZALV	**Zalesovo Beam**	**48.99**	**352**	P	**P**	**05 56 08.6**	**0.0**
	comp=Z,6.5nm,0.3s,baz=186,slow=7.7,SNR=30						
ZALV	**Zalesovo Beam**	**48.99**	**352**	P	**P**	**05 56 09.0**	**+0.5**
MDJ	**Mudanjiang**	**49.50**	**33**	P	**P**	**05 56 13.1**	**+0.5**
MDJ				S	**S**	**06 03 15.2**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,180nm,4.8s						
MDJ				LR	LR		
	comp=Z,310nm,4.4s						
MDJ				LR	LR		
	comp=Z,210nm,4.0s						
MDJ				LR	LR		
	comp=Z,210nm,4.4s						
USRK	**Ussuriysk Ar.**	**50.55**	**34**	P	**P**	**05 56 20.7**	**+0.2**
	comp=Z,2.4nm,0.6s,baz=239,slow=6.7,SNR=8.3						
USRK	**Ussuriysk Ar.**	**50.55**	**34**	P	**P**	**05 56 21.2**	**+0.7**
RAYN	**Ar Rayn**	**50.60**	**296**	P	**P**	**05 56 22.4**	**+1.1**
BVAR	**Borovoye Array**	**51.42**	**341**	P	**P**	**05 56 26.8**	**-0.1**
	comp=Z,5.8nm,0.7s,baz=141,slow=9.8,SNR=38						
BRVK	**Borovoye**	**51.49**	**341**	P	**P**	**05 56 27.6**	**+0.2**
ABKAR	**Akbulak array**	**52.59**	**332**	P	**P**	**05 56 35.7**	**+0.1**
AKTO	**Aktyubinsk**	**54.31**	**332**	P	**P**	**05 56 47.9**	**-0.4**
	comp=Z,2.4nm,0.4s,baz=109,slow=6.3,SNR=14						
STKA	**Stephens Creek**	**58.07**	**133**	P	**P**	**05 57 15.0**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=308,slow=14,SNR=6.0						
STKA	**Stephens Creek**	**58.07**	**133**	P	**P**	**05 57 15.5**	**+0.1**
ARU	**Arti**	**58.30**	**337**	P	**P**	**05 57 16.0**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=193,slow=6.7,SNR=4.2						
ARU	**Arti**	**58.30**	**337**	P	**P**	**05 57 15.8**	**-0.7**
ARU				IAmb	IAmb	05 57 17.1	
	comp=Z,4.0nm,0.8s						
KBZ	**Khabaz**	**59.23**	**318**	P	**P**	**05 57 22.7**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=142,slow=4.0,SNR=4.1						
BR131	**Keskin Array S**	**64.41**	**312**	P	**P**	**05 57 57.6**	**-0.7**
BRTR	**Keskin Array B**	**64.41**	**312**	P	**P**	**05 57 57.2**	**-1.1**
	comp=Z,1.5nm,0.7s,baz=127,slow=7.5,SNR=11						
ELL	**Elmali**	**66.60**	**308**	P	**P**	**05 58 13.0**	**+0.6**
KARP	**Karpathos**	**68.59**	**306**	P	**P**	**05 58 25.5**	**+0.6**
TIXI	**Tiksi**	**69.47**	**11**	P	**P**	**05 58 28.9**	**-0.6**
TIXI				IAmb	IAmb	05 58 29.1	
	comp=Z,7.0nm,0.8s						
AKASG	**Malin Array Be**	**70.37**	**322**	P	**P**	**05 58 33.8**	**-1.7**
	comp=Z,0.8nm,0.5s,baz=85,slow=5.4,SNR=7.2						
AKASG	**Malin Array Be**	**70.37**	**322**	P	**P**	**05 58 33.7**	**-1.7**
AKBB	**Malin Array Si**	**70.37**	**322**	P	**P**	**05 58 33.9**	**-1.6**
VRI	**Vrincioaia**	**70.81**	**317**	⇑P	**P**	**05 58 38.8**	**+0.5**
PLOR	**Plostina**	**70.86**	**317**	⇓P	**P**	**05 58 39.4**	**+0.7**
TESR	**Tescani**	**71.00**	**317**	⇑P	**P**	**05 58 39.5**	**+0.1**
MLR	**Muntele Rosu**	**71.27**	**316**	⇑P	**P**	**05 58 42.1**	**+0.9**
MLR	**Muntele Rosu**	**71.27**	**316**	P	**P**	**05 58 41.9**	**+0.7**
MLR				IAmb	IAmb	05 58 42.3	
	comp=Z,4.5nm,0.6s						
PLVB	**Pleven**	**71.81**	**314**	⇓P	**P**	**05 58 43.0**	**-1.3**
VOIR		**71.87**	**316**	⇑P	**P**	**05 58 44.4**	**-0.4**
BURAR	**Bucovina Array**	**72.19**	**318**	⇑P	**P**	**05 58 47.1**	**+0.4**
BURAR	**Bucovina Array**	**72.19**	**318**	P	**P**	**05 58 47.1**	**+0.4**
BUR08	**Bucovina Ar. S**	**72.20**	**318**	P	**P**	**05 58 46.0**	**-0.8**
ITM	**Ithomi**	**72.99**	**307**	P	**P**	**05 58 50.9**	**-0.7**
DRGR		**73.72**	**317**	⇑P	**P**	**05 58 54.7**	**-1.0**
LVZ	**Lovozero**	**73.99**	**340**	P	**P**	**05 58 56.5**	**-0.3**
TRPA	**Tarpa**	**74.05**	**318**	⇑P	**P**	**05 58 57.8**	**+0.3**
FIA1	**FINESS Array S**	**75.08**	**332**	P	**P**	**05 59 02.7**	**-0.5**
FIA1				IAmb	IAmb	05 59 10.4	
	comp=Z,13nm,1.4s						
FINES	**FINESS Array B**	**75.08**	**332**	P	**P**	**05 59 02.5**	**-0.7**
	comp=Z,1.7nm,0.5s,baz=105,slow=5.5,SNR=19						
FINES	**FINESS Array B**	**75.08**	**332**	P	**P**	**05 59 02.7**	**-0.5**
OJC	**Ojcow**	**76.16**	**320**	P	**P**	**05 59 10.5**	**+0.8**
OJC				IAmb	IAmb	05 59 25.9	
	comp=Z,9.0nm,1.3s						
VYHS	**Vyhne**	**76.55**	**318**	*e*P	**P**	**05 59 11.7**	**-0.2**
ARCES	**ARCESS Array B**	**77.70**	**340**	P	**P**	**05 59 18.0**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=95,slow=6.2,SNR=30						
ARCES	**ARCESS Array B**	**77.70**	**340**	P	**P**	**05 59 18.2**	**+0.3**
ARE0	**ARCESS Array S**	**77.70**	**340**	P	**P**	**05 59 17.9**	**+0.1**
GEC2	**GERESS Array S**	**79.97**	**319**	P	**P**	**05 59 31.4**	**+0.5**
GEC2				IAmb	IAmb	05 59 32.1	
	comp=Z,3.7nm,0.7s						
GERES	**GERESS Array B**	**79.97**	**319**	P	**P**	**05 59 31.4**	**+0.5**
	comp=Z,2.5nm,0.6s,baz=102,slow=5.4,SNR=19						
GERES	**GERESS Array B**	**79.97**	**319**	P	**P**	**05 59 31.9**	**+1.0**
STAL	**STALIGIAL**	**80.53**	**316**	P	**P**	**05 59 34.0**	**+0.1**
STAL				IAmb	IAmb	05 59 35.1	
	comp=Z,10nm,1.3s						
SPA0	**Spitsbergen Ar**	**82.28**	**348**	P	**P**	**05 59 43.0**	**+0.5**
SENIN	**Lac Senin/Sane**	**84.28**	**316**	P	**P**	**05 59 54.9**	**+1.3**
SENIN				IAmb	IAmb	06 00 05.2	
	comp=Z,14nm,1.5s						
TORD	**Torodi Ar. Bea**	**91.68**	**283**	P	**P**	**06 00 29.9**	**+0.5**
	comp=Z,0.9nm,1.0s,baz=81,slow=3.9,SNR=3.1						
TORD	**Torodi Ar. Bea**	**91.68**	**283**	P	**P**	**06 00 29.6**	**+0.1**
ESDC	**Sonseca Array**	**93.17**	**310**	P	**P**	**06 00 36.8**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=62,slow=4.4,SNR=3.6						
ESDC	**Sonseca Array**	**93.17**	**310**	P	**P**	**06 00 36.6**	**+0.6**
IMAR	**Indian Mountai**	**93.63**	**22**	P	**P**	**06 00 37.6**	**+0.2**
TOLK	**Toolik Lake Re**	**94.02**	**19**	P	**P**	**06 00 39.9**	**+0.7**
ILAR	**Eielson Array**	**96.74**	**22**	P	**P**	**06 00 50.5**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=293,slow=4.2,SNR=5.2						
ILAR	**Eielson Array**	**96.74**	**22**	P	**P**	**06 00 50.7**	**-1.0**
SCHQ	**Schefferville**	**117.97**	**348**	PKPdf	**PKPdf**	**06 06 07.3**	**-0.5**
HAWA	**Hanford**	**120.09**	**27**	PKPdf	**PKiKP**	**06 06 12.6**	**+0.4**
HUMO	**Hull Mountain**	**121.20**	**32**	PKPdf	**PKiKP**	**06 06 15.4**	**+0.9**
F10A	**Beach Ranch, E**	**121.42**	**26**	PKPdf	**PKiKP**	**06 06 15.1**	**+0.1**
MSO	**Missoula**	**122.08**	**23**	PKPdf	**PKPdf**	**06 06 15.9**	**-0.2**
EGMT	**Eagleton**	**122.56**	**19**	PKPdf	**PKPdf**	**06 06 17.4**	**+0.3**
ULM	**Lac du Bonnet**	**123.75**	**8**	PKP	**PKPdf**	**06 06 18.7**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=4.6,slow=3.1,SNR=6.8						
ULM	**Lac du Bonnet**	**123.75**	**8**	PKPpre	PKPpre	06 06 12.4	
ULM					**PKPdf**	**06 06 19.0**	**0.0**
DLMT	**Dillon**	**123.81**	**23**	PKPdf	**PKiKP**	**06 06 20.0**	**+0.3**
REDW	**Red Top Meadow**	**126.17**	**23**	PKPdf	**PKiKP**	**06 06 25.6**	**+1.0**
EYMN	**Ely**	**126.53**	**5**	PKPdf	**PKiKP**	**06 06 25.4**	**+0.5**
PD31	**Pinedale Array**	**127.18**	**22**	PKPdf	**PKPdf**	**06 06 26.3**	**+0.2**
PDAR	**Pinedale Array**	**127.18**	**22**	PKP	**PKPdf**	**06 06 26.1**	**0.0**
	comp=Z,0.6nm,0.5s,baz=100,slow=2.1,SNR=13						
PDAR	**Pinedale Array**	**127.18**	**22**	PKPdf	**PKPdf**	**06 06 26.2**	**+0.2**
DUG	**Dugway, Tooele**	**127.98**	**27**	PKPdf	**PKiKP**	**06 06 28.8**	**+0.6**
R11A	**Troy Canyon, C**	**128.13**	**30**	PKPdf	**PKiKP**	**06 06 29.5**	**+1.0**
SADO	**Sadowa**	**129.68**	**354**	PKPdf	**PKPdf**	**06 06 30.8**	**+0.3**
Q16A	**Castle Valley**	**129.76**	**26**	PKPdf	**PKiKP**	**06 06 32.6**	**+0.8**
O20A	**White River Ci**	**129.94**	**23**	PKPdf	**PKiKP**	**06 06 32.5**	**+0.3**
ECSD	**EROS Data Cent**	**129.97**	**11**	PKPdf	**PKiKP**	**06 06 32.0**	**+0.1**
P48A	**Milroy**	**135.29**	**0**	PKPdf	**PKiKP**	**06 06 42.4**	**-0.4**
HHAR	**Hobbs**	**137.68**	**10**	PKPdf	**PKiKP**	**06 06 47.4**	**-0.3**
LCAR	**Lake Charles**	**138.31**	**7**	PKPdf	**PKiKP**	**06 06 48.8**	**-0.2**
CLTN	**Cedars of Leba**	**138.64**	**1**	PKPdf	**PKiKP**	**06 06 49.5**	**-0.2**
V53A	**Saluda**	**139.01**	**357**	PKPdf	**PKiKP**	**06 06 50.6**	**0.0**
CPCT	**Cooper Cave**	**139.29**	**359**	PKPdf	**PKiKP**	**06 06 51.2**	**+0.2**
TXAR	**Lajitas Array**	**141.15**	**26**	PKP	**PKPdf**	**06 06 53.0**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=11,slow=1.8,SNR=7.4						
TXAR	**Lajitas Array**	**141.15**	**26**		**PKPdf**	**06 06 52.6**	**+0.2**
CUPR	**Culebra, Puert**	**149.20**	**321**	PKPbc	**PKPbc**	**06 07 10.9**	**+0.3**
MTP	**Monte Pirata**	**149.53**	**321**	PKPbc	**PKPbc**	**06 07 11.6**	**+0.2**
HUMP	**Col San Antoni**	**149.68**	**321**	PKPbc	**PKPbc**	**06 07 12.3**	**+0.5**
AGPR	**Aguadilla, PR**	**150.20**	**323**	PKPbc	**PKiKP**	**06 07 14.1**	**+0.3**
ICMP	**Isla Caja de M**	**150.29**	**322**	PKPbc	**PKiKP**	**06 07 14.0**	**0.0**
MPR	**Mayaguez**	**150.42**	**323**	PKPbc	**PKiKP**	**06 07 14.8**	**+0.5**
MLPR	**Magueyes Islan**	**150.55**	**323**	PKPbc	**PKPbc**	**06 07 12.9**	**-0.9**

IDC **07** *05:53:36.3±1.1, 15.09S×172.99W, h0km, mb4.0/6, mb1 4.2/6, mb1mx3.9/27, mbtmp4.0/6, MS3.6/9, Ms1 3.6/9, ms1mx3.4/23, Error ellipse: s-maj=53.3km s-min=18.8km az=134.0*

NEIC **07** *05:53:38.7±3.0, 15.14S±0.07×172.6W±0.1, h12km±3km, mb4.7/13, Error ellipse: s-maj=16.7km s-min=8.8km az=108.0*

ISC 07 05:53:40.1±0.6, **15.17S**±0.06×**172.47W**±0.09, **h29km, n40,** σ1.85/33, **mb4.6**/13, **MS3.7**/8, **Samoa Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.42**	**28**	Pn	**Pb**	**05 54 05.1**	**-1.0**
	477nm,0.3s,baz=236,slow=18,SNR=686						
AFI				LR	LR	05 54 14.7	
	comp=Z,72nm,20.5s,baz=172,slow=23						
AFI				Sn	**Sn**	**05 54 21.2**	**-0.8**
	517nm,0.3s,baz=206,slow=12,SNR=20						
AFI	**Afiamalu**	**1.42**	**28**		**Pb**	**05 54 05.2**	**-0.9**
AFI				Sn	**Sn**	**05 54 21.5**	**-0.4**
NIUE	**Niue**	**4.59**	**148**		**Pn**	**05 54 48.4**	**+0.8**
NIUE				Sn	**Sn**	**05 55 36.4**	**-3.6**
KNTN	**Kanton**	**12.34**	**4**	Pn	**Pn**	**05 56 32.5**	**-1.4**
RAR	**Rarotonga**	**13.48**	**118**	LR	LR	06 01 21.8	
	comp=Z,53nm,20.2s,baz=293,slow=33						
DZM	**Mont Dzumac**	**21.11**	**248**	P	**P**	**05 58 24.4**	**+1.7**
	14nm,1.1s,baz=70,slow=14,SNR=4.2						
DZM	**Mont Dzumac**	**21.11**	**248**	P	**P**	**05 58 24.7**	**+2.0**
URZ	**Urewera**	**24.77**	**200**	P	**P**	**05 58 59.0**	**-0.4**
	7.4nm,0.5s,baz=311,slow=3.9,SNR=10.0						
URZ				LR	LR	06 07 31.4	
	comp=Z,128nm,19.0s,baz=253,slow=34						
URZ	**Urewera**	**24.77**	**200**	P	**P**	**05 58 59.2**	**-0.2**
BKZ	**Black Stump Fm**	**25.80**	**200**		**P**	**05 59 09.2**	**+0.5**
BKZ				IAmb	IAmb	05 59 13.0	
	comp=Z,41nm,1.4s						
TUWZ	**Tuamarina**	**28.69**	**202**	P	**P**	**05 59 36.1**	**+1.4**
QRZ	**Quartz Range**	**28.70**	**204**	P	**P**	**05 59 38.0**	**+3.2**
LTZ	**Lake Taylor**	**30.48**	**202**	P	**P**	**05 59 51.3**	**+0.7**
LTZ				IAmb	IAmb	05 59 53.7	
	comp=Z,16nm,1.4s						
MLZ	**Mavora Lakes**	**34.26**	**205**	P	**P**	**06 00 24.7**	**+1.1**
MLZ				IAmb	IAmb	06 00 39.0	
	comp=Z,9.9nm,1.1s						
WHZ	**Wether Hill Ro**	**34.77**	**204**	P	**P**	**06 00 29.2**	**+1.3**
H11S2	**WAKE ISLAND Hy**	**39.23**	**328**	T	T	06 41 42.6	
	baz=146,slow=76						
H11S3	**WAKE ISLAND Hy**	**39.25**	**328**	T	T	06 41 45.7	
	baz=146,slow=76						
H11S1	**WAKE ISLAND Hy**	**39.25**	**328**	T	T	06 41 45.4	
	baz=146,slow=76						
H11N3	**WAKE ISLAND Hy**	**40.16**	**329**	T	T	06 42 50.9	
	baz=147,slow=76						
H11N1	**WAKE ISLAND Hy**	**40.17**	**329**	T	T	06 42 50.8	
	baz=147,slow=76						
H11N2	**WAKE ISLAND Hy**	**40.18**	**329**	T	T	06 42 56.4	
	baz=147,slow=76						
COEN	**Coen**	**42.89**	**266**	P	**P**	**06 01 35.4**	**-1.1**
COEN				IAmb	IAmb	06 01 49.1	
	comp=Z,20nm,1.3s						
STKA	**Stephens Creek**	**44.92**	**240**	P	**P**	**06 01 49.1**	**-3.5**
	comp=Z,1.0nm,0.5s,baz=88,slow=14,SNR=2.9						
STKA				LR	LR	06 17 47.9	
	comp=Z,46nm,18.1s,baz=51,slow=33						
STKA	**Stephens Creek**	**44.92**	**240**	P	**P**	**06 01 52.4**	**-0.3**
WB2	**Warramunga Arr**	**50.76**	**257**	P	**P**	**06 02 38.2**	**+0.2**
WB2				IAmb	IAmb	06 02 46.2	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**50.77**	**257**	P	**P**	**06 02 34.4**	**-3.7**
	comp=Z,0.6nm,0.7s,baz=91,slow=6.8,SNR=4.6						
WRA				PcP	**PcP**	**06 03 55.5**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=91,slow=3.6,SNR=4.0						
WRA	**Warramunga Arr**	**50.77**	**257**	P	**P**	**06 02 36.4**	**-1.7**
ASAR	**Alice Springs**	**51.03**	**252**	P	**P**	**06 02 36.9**	**-3.2**
	comp=Z,2.4nm,0.6s,baz=87,slow=7.6,SNR=23						
ASAR				LR	LR	06 22 28.4	
	comp=Z,66nm,21.7s,baz=98,slow=34						
ASAR	**Alice Springs**	**51.03**	**252**	P	**P**	**06 02 37.8**	**-2.3**
GLA	**Glamis**	**72.97**	**48**	P	**P**	**06 05 07.1**	**-0.2**
GLA				IAmb	IAmb	06 05 11.3	
	comp=Z,3.9nm,0.6s						
QSPA	**South Pole Qui**	**74.88**	**180**	P	**P**	**06 05 20.4**	**+2.3**
TXAR	**Lajitas Array**	**79.74**	**56**	LR	LR	06 35 01.2	
	comp=Z,21nm,19.0s,baz=0.0,slow=31						
PDAR	**Pinedale Array**	**81.50**	**42**	LR	LR	06 34 50.9	
	comp=Z,50nm,20.1s,baz=233,slow=30						
ILAR	**Eielson Array**	**82.05**	**11**	P	**P**	**06 05 58.5**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=220,slow=5.4,SNR=5.1						
ILAR				LR	LR	06 34 32.2	
	comp=Z,41nm,20.3s,baz=184,slow=30						
ILAR	**Eielson Array**	**82.05**	**11**	P	**P**	**06 05 59.1**	**+1.9**
MAW	**Mawson**	**88.29**	**198**	LR	LR	06 45 22.0	
	comp=Z,54nm,18.6s,baz=52,slow=35						
YKA	**Yellowknife Ar**	**89.53**	**23**	P	**P**	**06 06 36.6**	**+2.3**
	comp=Z,0.5nm,0.8s,baz=240,slow=4.8,SNR=8.2						
ULM	**Lac du Bonnet**	**93.19**	**39**	LR	LR	06 42 19.8	
	comp=Z,69nm,19.1s,baz=184,slow=31						
BRTR	**Keskin Array B**	**146.53**	**322**	PKPbc	**PKiKP**	**06 13 21.9**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=134,slow=4.2,SNR=8.1						
BRTR	**Keskin Array B**	**146.53**	**322**		**PKiKP**	**06 13 22.0**	**-0.2**

DJA 07 06:31:49.1±0.5, **8°S**±4°×**11°2E**±°, **h10km, M2.9**/6, **MLv2.9**/6, **Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PWJI	**Pagerwojo**	**0.29**	**20**	P	Pg	06 31 55.6	+0.6
PCJI	**Pacitan**	**0.53**	**281**	P	Pb	06 32 00.4	-0.1
PCJI				S	Sg	06 32 07.2	+0.8
WOJI	**Wonogiri, Jawa**	**0.90**	**301**	P	Pb	06 32 06.7	0.0
WOJI				S	Sb	06 32 18.5	-0.3
NGJI	**Ngawi**	**0.96**	**346**	P	Pn	06 32 09.2	+0.6
GMJI	**Gumukmas**	**1.73**	**89**	P	Pn	06 32 18.7	-0.5
GMJI				S	Sn	06 32 41.8	+0.5
JAGI	**Jajag, Banyuwa**	**2.43**	**94**	P	Pb	06 32 32.7	-0.3

IDC **07** *06:40:28.1±1.2, 13.17S×166.28E, h0km, mb4.3/10, mb1 4.4/11, mb1mx4.2/33, mbtmp4.3/11, ML4.5/1, MS3.7/11, Ms1 3.7/11, ms1mx3.5/23, Error ellipse: s-maj=40.6km s-min=21.0km az=118.0*

NEIC **07** *06:40:33.9±1.6, 13.18S±0.08×166.25E±0.07, h36km±6km, mb4.6/19, Error ellipse: s-maj=14.2km s-min=5.7km az=221.0*

ISC 07 06:40:33.7±0.6, **13.20S**±0.06×**166.24E**±0.09, **h35km, n53,** σ1.40/52, **mb4.4**/18, **MS3.9**/11, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**2.42**	**158**		**Pn**	**06 41 10.3**	**-0.5**
SANVU					**Sn**	**06 41 39.8**	**+0.6**
HNR	**Honiara**	**7.22**	**301**	P	**Pn**	**06 42 16.0**	**-0.8**
HNR	**Honiara**	**7.22**	**301**		**Pn**	**06 42 16.6**	**-0.1**
HNR				Sn	**Sn**	**06 43 36.4**	**-1.2**
DZM	**Mont Dzumac**	**8.83**	**179**	*e*Pn	**Pn**	**06 42 38.6**	**-0.3**
	19nm,0.3s						
DZM				*e*Sn	**Sn**	**06 44 10.3**	**-6.9**
	10nm,0.3s						
DZM				*e*LR	LR	06 44 50.9	
	comp=Z,682nm,24.4s						
DZM	**Mont Dzumac**	**8.83**	**179**	Pn	**Pn**	**06 42 39.2**	**+0.2**
	5.3nm,0.3s,baz=333,slow=12,SNR=29						
DZM				Sn	**Sn**	**06 44 16.7**	**-0.5**
	1.7nm,0.3s,baz=139,slow=20,SNR=4.5						
DZM				LR	LR	06 45 21.1	
	comp=Z,241nm,18.6s,baz=20,slow=33						
DZM	**Mont Dzumac**	**8.83**	**179**		**Pn**	**06 42 39.1**	**+0.2**
DZM				Sn	**Sn**	**06 44 17.9**	**+0.7**
NOUC	**Port Laguerre**	**8.86**	**180**	Pn	**Pn**	**06 42 40.2**	**+1.0**
NOUC				Sn	**Sn**	**06 44 17.8**	**0.0**
EIDS	**Eidsvold**	**18.72**	**227**	P	**Pn**	**06 44 50.8**	**+0.8**
PMG	**Port Moresby**	**19.09**	**279**	LR	LR	06 50 06.8	
	comp=Z,232nm,21.3s,baz=116,slow=30						
AFI	**Afiamalu**	**21.38**	**94**	LR	LR	06 51 18.5	
	comp=Z,263nm,19.3s,baz=280,slow=30						
RAO	**Raoul Island**	**21.71**	**140**	LR	LR	06 51 05.6	
	comp=Z,67nm,19.5s,baz=58,slow=29						
COEN	**Coen**	**22.43**	**265**	P	**P**	**06 45 30.2**	**+0.4**
STKA	**Stephens Creek**	**29.27**	**227**	P	**P**	**06 46 33.3**	**+0.6**
	1.1nm,0.5s,baz=74,slow=9.9,SNR=4.1						
STKA				LR	LR	06 58 02.1	
	comp=Z,223nm,18.0s,baz=46,slow=36						
STKA	**Stephens Creek**	**29.27**	**227**	P	**P**	**06 46 34.2**	**+1.5**
LTZ	**Lake Taylor**	**29.94**	**171**	P	**P**	**06 46 39.3**	**+0.8**
LTZ				IAmb	IAmb	06 46 40.2	
	comp=Z,18nm,1.1s						
RPZ	**Rata Peaks**	**30.69**	**173**	P	**P**	**06 46 45.7**	**+0.6**
WB0	**Warramunga Arr**	**31.20**	**254**	P	**P**	**06 46 48.9**	**-0.9**
WB0				IAmb	IAmb	06 47 06.0	
	comp=Z,6.8nm,1.3s						
WRA	**Warramunga Arr**	**31.27**	**253**	P	**P**	**06 46 49.4**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=85,slow=8.8,SNR=9.2						
WRA				LR	LR	06 59 20.2	
	comp=Z,290nm,18.3s,baz=80,slow=36						
WRA	**Warramunga Arr**	**31.27**	**253**	P	**P**	**06 46 49.2**	**-1.3**
MLZ	**Mavora Lakes**	**32.10**	**178**	P	**P**	**06 46 58.3**	**+0.8**
AS31	**Alice Springs**	**32.32**	**247**	P	**P**	**06 46 59.2**	**-0.6**
ASAR	**Alice Springs**	**32.32**	**247**	P	**P**	**06 46 58.6**	**-1.1**
	comp=Z,4.8nm,0.6s,baz=73,slow=9.6,SNR=70						
ASAR				PcP	**PcP**	**06 49 48.1**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=85,slow=1.9,SNR=3.8						
ASAR				LR	LR	07 00 09.4	
	comp=Z,319nm,19.0s,baz=81,slow=36						
BBOO	**Buckleboo**	**33.77**	**230**	P	**P**	**06 47 12.9**	**+0.7**
BBOO				IAmb	IAmb	06 47 28.2	
	comp=Z,8.9nm,0.9s						
FORT	**Forrest**	**39.25**	**237**	P	**P**	**06 47 59.2**	**+0.2**
PPT2	**Papeete2**	**42.75**	**102**	*e*LR	LR	07 00 35.6	
	comp=Z,314nm,27.5s						
MORW	**Morawa**	**49.05**	**243**	P	**P**	**06 49 18.1**	**+0.5**
MORW				IAmb	IAmb	06 49 29.3	
	comp=Z,8.9nm,0.7s						
TAOE	**Nuku Hiva Isla**	**52.72**	**91**	*e*LR	LR	07 05 10.8	
	comp=Z,219nm,26.1s						
MNAI	**Manna**	**63.02**	**272**	P	**P**	**06 50 57.9**	**+0.1**
PETK	**Petropavlovsk-**	**66.44**	**354**	LR	LR	07 18 20.2	
	comp=Z,48nm,18.1s,baz=67,slow=34						
PETK	**Petropavlovsk-**	**66.44**	**354**	P	**P**	**06 51 19.9**	**+0.6**
KLR	**Kul'dur**	**69.21**	**337**	P	**P**	**06 51 37.6**	**+0.9**
	comp=Z,2.0nm,0.6s,baz=144,slow=7.2,SNR=7.8						
CMAR	**Chiang Mai Arr**	**73.42**	**294**	P	**P**	**06 52 04.9**	**+2.0**
	comp=Z,1.2nm,0.4s,baz=134,slow=3.9,SNR=6.1						
CMAR				LR	LR	07 26 39.1	
	comp=Z,17nm,18.3s,baz=115,slow=38						
QSPA	**South Pole Qui**	**76.82**	**180**	P	**P**	**06 52 22.1**	**+0.3**
QSPA				IAmb	IAmb	06 52 35.5	
	comp=Z,8.1nm,1.4s						
SONM	**Songino Array**	**80.68**	**324**	P	**P**	**06 52 41.9**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=116,slow=6.6,SNR=4.1						
SONM	**Songino Array**	**80.68**	**324**	P	**P**	**06 52 44.2**	**+1.0**
RND	**Reindeer**	**83.81**	**19**	P	**P**	**06 52 58.8**	**-0.4**
RND				IAmb	IAmb	06 53 17.0	
	comp=Z,5.0nm,1.2s						
IMAR	**Indian Mountai**	**84.36**	**15**	P	**P**	**06 53 01.9**	**+0.1**
WRH	**Wood River Hil**	**84.81**	**18**	P	**P**	**06 53 02.6**	**-1.5**
WRH				IAmb	IAmb	06 53 06.9	
	comp=Z,9.2nm,1.5s						
IL31		**85.39**	**18**	P	**P**	**06 53 05.4**	**-1.6**
IL31				IAmb	IAmb	06 53 15.8	
	comp=Z,2.8nm,1.1s						
ILAR	**Eielson Array**	**85.39**	**18**	P	**P**	**06 53 06.0**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=244,slow=4.7,SNR=12						
ILAR	**Eielson Array**	**85.39**	**18**	P	**P**	**06 53 05.5**	**-1.5**
TIXI	**Tiksi**	**88.28**	**349**	P	**P**	**06 53 21.5**	**+0.6**
	comp=Z,1.8nm,0.3s,baz=113,slow=1.5,SNR=3.1						
TIXI	**Tiksi**	**88.28**	**349**	P	**P**	**06 53 21.3**	**+0.4**
TIXI				IAmb	IAmb	06 53 23.2	
	comp=Z,2.9nm,1.0s						
PDAR	**Pinedale Array**	**94.65**	**47**	LR	LR	07 33 03.3	
	comp=Z,36nm,18.8s,baz=266,slow=33						
MKAR	**Makanchi Array**	**95.41**	**317**	P	**P**	**06 53 54.3**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=97,slow=4.8,SNR=5.1						
ZALV	**Zalesovo Beam**	**95.57**	**324**	P	**P**	**06 53 54.2**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=132,slow=2.1,SNR=3.2						
ZALV	**Zalesovo Beam**	**95.57**	**324**	P	**P**	**06 53 54.0**	**-1.1**
TXAR	**Lajitas Array**	**96.43**	**61**	LR	LR	07 29 12.7	
	comp=Z,38nm,20.8s,baz=0.0,slow=30						
ARCES	**ARCESS Array B**	**118.53**	**345**	PKP	**PKPdf**	**06 59 15.6**	**-1.7**
	comp=Z,2.1nm,0.9s,baz=90,slow=0.9,SNR=5.5						
ARCES	**ARCESS Array B**	**118.53**	**345**		**PKPdf**	**06 59 14.3**	**-2.9**
ESDC	**Sonseca Array**	**152.25**	**344**	PKPab	**PKPab**	**07 00 36.0**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=2.5,slow=4.2,SNR=6.0						
ESDC	**Sonseca Array**	**152.25**	**344**		**PKPab**	**07 00 36.2**	**+0.4**
TORD	**Torodi Ar. Bea**	**164.95**	**272**	PKP	**PKPdf**	**07 00 34.3**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=351,slow=2.1,SNR=4.0						

ANF **07** *06:48:48.2±0.1, 35.01N×119.13W, h22km±1km, ML2.8/26, Error ellipse: s-maj=1.0km s-min=1.0km az=101.0*

NEIC **07** *06:48:48.7±2.0, 35.00N±0.03×119.13W±0.03, h24km±8km, Error ellipse: s-maj=3.4km s-min=3.1km az=182.0*

PAS **07** *06:48:49.1±1.8, 35.02N±0.02×119.13W±0.03, h21km±6km, ML2.8/150, Error ellipse: s-maj=4.0km s-min=1.4km az=51.0*

SCEDC **07** *06:48:49.1, 35.02N×119.14W, h19km*

ISC 07 06:48:49.1±0.9, **35.01N**±0.02×**119.14W**±0.02, **h21**km±1km, **n85**, σ0.69/122, **Central California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MPI	**Mount Pinos, F**	**0.20**	**182**		**Sb**	**06 48 57.2**	**-2.1**
BCW	**Bitter Crk WRg**	**0.24**	**253**		**Sb**	**06 48 58.6**	**-0.6**
ARVC	**Arvin**	**0.28**	**65**		**Pb**	**06 48 55.3**	**+0.1**
ARVC					**Sb**	**06 49 00.5**	**+0.9**
ARVC	**Arvin**	**0.28**	**65**	P	**Pb**	**06 48 55.2**	**+0.1**
	baz=247,SNR=80						
ARVC				S	**Sb**	**06 48 59.9**	**+0.3**
	baz=247						
TJR	**Tejon Ranch**	**0.32**	**87**		**Pb**	**06 48 55.5**	**-0.2**
TJR					**Sb**	**06 49 00.3**	**-0.3**
BAKC	**Calstate**	**0.33**	**5**		**Pb**	**06 48 56.4**	**+0.5**
BAKC					**Sb**	**06 49 02.4**	**+1.6**
MAGC	**SCE Magundon P**	**0.39**	**27**		**Sb**	**06 49 02.0**	**-0.4**
THC	**Tehachapi Micr**	**0.40**	**104**		**Pb**	**06 48 56.8**	**-0.3**
QAL	**Quail Lake**	**0.43**	**127**		**Pb**	**06 48 57.5**	**-0.1**
OSI	**Osito Audit: C**	**0.52**	**139**		**Pb**	**06 48 58.8**	**-0.5**
OSI					**Sb**	**06 49 05.9**	**-0.6**
OSI	**Osito Audit: C**	**0.52**	**139**	Pg	**Pb**	**06 48 58.6**	**-0.7**
OSI	**Osito Audit: C**	**0.52**	**139**	P	**Pb**	**06 48 58.7**	**-0.5**
	baz=320						
OSI				S	**Sb**	**06 49 05.6**	**-0.9**
	baz=320						
PYR	**Pyramid**	**0.55**	**143**		**Pb**	**06 48 59.2**	**-0.6**
PYR					**Sb**	**06 49 06.7**	**-0.6**
BTPC	**Burnt Peak**	**0.57**	**125**		**Pb**	**06 48 59.7**	**-0.5**
BTPC					**Sb**	**06 49 07.5**	**-0.5**
PKM	**Mcpherson Peak**	**0.57**	**258**		**Pb**	**06 48 59.9**	**-0.4**
PKM					**Sb**	**06 49 08.4**	**+0.4**
PKM	**Mcpherson Peak**	**0.57**	**258**	P	**Pb**	**06 48 59.9**	**-0.4**
	baz=77,SNR=19						
PKM				S	**Sb**	**06 49 08.3**	**+0.3**
	baz=77						
STTC	**Scott Ranch**	**0.60**	**112**		**Pb**	**06 49 00.7**	**0.0**
WOFM	**Oak Flat**	**0.63**	**33**		**Pb**	**06 49 00.3**	**-0.9**
WOFM					**Sb**	**06 49 08.7**	**-1.0**
CARC	**Carrizo Plain**	**0.65**	**297**		**Pb**	**06 49 01.3**	**-0.3**
CARC					**Sb**	**06 49 10.3**	**0.0**
SBC	**Santa Barbara**	**0.74**	**220**		**Pb**	**06 49 03.7**	**+0.8**
SBC	**Santa Barbara**	**0.74**	**220**	P	**Pb**	**06 49 03.4**	**+0.5**
	baz=39						
SBC				Sn	**Sn**	**06 49 14.5**	**-0.1**
	baz=39						
FIGC	**Figueroa Mtn.**	**0.75**	**248**		**Pb**	**06 49 03.2**	**0.0**
FIGC					**Sb**	**06 49 12.8**	**-0.3**
ALPC	**Antelope**	**0.76**	**115**		**Pb**	**06 49 03.2**	**-0.1**
ALPC					**Sb**	**06 49 13.1**	**-0.1**
SMMC	**Simmler**	**0.77**	**294**		**Sb**	**06 49 13.1**	**-0.3**
SMMC	**Simmler**	**0.77**	**294**	P	**Pb**	**06 49 02.8**	**-0.6**
	baz=113						
SMMC				S	**Sb**	**06 49 13.6**	**+0.2**
	baz=113						

LEOC	**Leona Valley**	**0.78**	**119**		**Pb**	**06 49 03.5**	**-0.2**
FOXC	**Fox Airport**	**0.79**	**109**		**Pb**	**06 49 03.8**	**0.0**
VES	**Vestal, Richgr**	**0.83**	**3**		**Pb**	**06 49 03.8**	**-0.7**
VES					**Sb**	**06 49 15.1**	**-0.1**
VES	**Vestal, Richgr**	**0.83**	**3**	P	**Pb**	**06 49 03.7**	**-0.8**
	baz=183,SNR=41						
VES				S	**Sb**	**06 49 15.0**	**-0.2**
	baz=183						
SYP	**Santa Ynez Pea**	**0.84**	**235**		**Pb**	**06 49 05.1**	**+0.3**
ISA	**Isabella, Lake**	**0.85**	**40**		**Pb**	**06 49 04.2**	**-0.7**
ISA	**Isabella, Lake**	**0.85**	**40**		**Sb**	**06 49 15.0**	**-0.8**
ISA	**Isabella, Lake**	**0.85**	**40**	P	**Pb**	**06 49 04.1**	**-0.7**
	baz=220,SNR=15						
ISA				S	**Sb**	**06 49 15.1**	**-0.7**
	baz=220						
WASM	**Alta Sierra Ca**	**0.87**	**33**		**Pb**	**06 49 04.4**	**-0.8**
WASM					**Sb**	**06 49 15.8**	**-0.7**
BLG	**Laguna Peak, P**	**0.90**	**176**		**Pb**	**06 49 05.6**	**-0.1**
BLG					**Sb**	**06 49 18.2**	**+0.9**
BLG	**Laguna Peak, P**	**0.90**	**176**	P	**Pb**	**06 49 05.6**	**-0.1**
	baz=356,SNR=6.1						
BLG				Sn	**Sn**	**06 49 18.5**	**-0.1**
	baz=356						
WHFM	**Hanning Flat**	**0.94**	**43**		**Pb**	**06 49 06.0**	**-0.4**
EDW2	**Edwards Air Fo**	**0.95**	**97**		**Pb**	**06 49 06.2**	**-0.3**
EDW2					**Sb**	**06 49 18.6**	**0.0**
EDW2	**Edwards Air Fo**	**0.95**	**97**	P	**Pb**	**06 49 06.2**	**-0.3**
	baz=279,SNR=17						
EDW2				S	**Sb**	**06 49 18.5**	**-0.1**
	baz=279						
WORM	**Onyx Ranch**	**1.00**	**47**		**Pb**	**06 49 07.0**	**-0.4**
WORM					**Sb**	**06 49 20.1**	**-0.1**
DECC	**Green Verdugo**	**1.00**	**138**		**Pb**	**06 49 07.5**	**+0.1**
DECC	**Green Verdugo**	**1.00**	**138**	P	**Pb**	**06 49 07.2**	**-0.3**
	baz=319						
DECC				Sn	**Sn**	**06 49 21.5**	**+0.3**
	baz=319						
LRRC	**Littlerock Res**	**1.03**	**118**		**Pn**	**06 49 07.8**	**-0.2**
DJJ	**Donna J Jenkin**	**1.06**	**148**		**Pn**	**06 49 08.2**	**-0.3**
DJJ					**Sb**	**06 49 22.3**	**+0.5**
SCZ2	**Santa Cruz Isl**	**1.09**	**202**		**Pn**	**06 49 08.7**	**-0.2**
SCZ2	**Santa Cruz Isl**	**1.09**	**202**	P	**Pn**	**06 49 08.4**	**-0.4**
	baz=22						
SCZ2				S	**Sb**	**06 49 23.2**	**+0.4**
	baz=22						
SBB	**Saddle Back Bu**	**1.13**	**106**		**Pn**	**06 49 08.9**	**-0.5**
GR2C	**Griffith Obs.**	**1.13**	**142**		**Pn**	**06 49 09.3**	**0.0**
CHFC	**Chilao Flat St**	**1.14**	**126**		**Pn**	**06 49 09.4**	**-0.2**
CHFC					**Sb**	**06 49 24.0**	**-0.2**
PASC	**Pasadena Art C**	**1.15**	**137**	Pn	**Pn**	**06 49 09.7**	**+0.1**
MWC	**Mount Wilson**	**1.19**	**131**		**Pn**	**06 49 10.6**	**+0.3**
MWC					**Sn**	**06 49 26.2**	**+0.3**
LRMC	**Laurel Mtn Rad**	**1.28**	**68**	S	**Sn**	**06 49 27.7**	**-0.5**
	baz=249						
VOG	**Valley Oaks Go**	**1.32**	**351**		**Pn**	**06 49 11.7**	**-0.4**
VOG	**Valley Oaks Go**	**1.32**	**351**	P	**Pn**	**06 49 11.6**	**-0.4**
	baz=171						
VOG				S	**Sn**	**06 49 29.0**	**0.0**
	baz=171						
BFSC	**Mount Baldy Ra**	**1.44**	**122**	Pb	**Pn**	**06 49 13.9**	**+0.2**
	baz=303,SNR=5.9						
BFSC				Sb	**Sb**	**06 49 33.5**	**+0.6**
	baz=303						
FMP	**Fort Macarthur**	**1.47**	**151**	Sb	**Sb**	**06 49 34.2**	**+0.6**
	baz=332						
CWC	**Cottonwood Cre**	**1.67**	**31**		**Pb**	**06 49 18.5**	**-0.3**
CWC	**Cottonwood Cre**	**1.67**	**31**	Pb	**Pb**	**06 49 18.3**	**-0.5**
	baz=211						
CWC				Sb	**Sb**	**06 49 40.0**	**+0.5**
	baz=211						
MPMC	**Manual Prospec**	**1.70**	**52**	P	**Pn**	**06 49 17.1**	**-0.4**
	baz=233						
MPMC				Sb	**Sb**	**06 49 41.6**	**+1.0**
	baz=233						
CIS	**Catalina Islan**	**1.71**	**159**	Pb	**Pb**	**06 49 19.9**	**+0.3**
	baz=340						
CIS				S	**Sn**	**06 49 38.1**	**-0.6**
	baz=340						
DAC	**Darwin (Calif)**	**1.78**	**44**		**Pb**	**06 49 23.3**	**+2.4**
GSC	**Goldstone, Bar**	**1.93**	**81**		**Pb**	**06 49 23.8**	**+0.5**
GSC	**Goldstone, Bar**	**1.93**	**81**	P	**Pn**	**06 49 19.6**	**-0.9**
	baz=262						
GSC				S	**Sn**	**06 49 44.2**	**0.0**
	baz=262						
BBRC	**Big Bear Solar**	**1.97**	**112**	P	**Pn**	**06 49 20.7**	**-0.5**
	baz=293						
MURC	**Murrieta**	**2.14**	**131**	S	**Sn**	**06 49 48.7**	**-0.5**
	baz=312						
TIN	**Tinemaha, Big**	**2.17**	**20**	P	**Pn**	**06 49 23.4**	**-0.4**
	baz=200,SNR=13						
TIN				Sb	**Sb**	**06 49 55.4**	**+1.5**
	baz=200						
DGR	**Domenigoni Val**	**2.22**	**127**		**Pb**	**06 49 29.2**	**+1.0**
MMIM	**Miami Mountain**	**2.45**	**349**		**Pb**	**06 49 28.6**	**+0.9**
GVN	**Grapevine**	**2.46**	**36**		**Pb**	**06 49 33.2**	**+0.9**
SAO	**San Andreas Ge**	**2.56**	**314**	Pn	**Pn**	**06 49 28.6**	**-0.5**
OMMB	**Old Mammoth Mi**	**2.60**	**2**		**Pn**	**06 49 31.9**	**+2.0**
PFO	**Pinyon Flats O**	**2.62**	**121**		**Pn**	**06 49 29.4**	**-0.6**
PFO	**Pinyon Flats O**	**2.62**	**121**	P	**Pn**	**06 49 29.8**	**-0.1**
	baz=303						
XPFO	**Pion Flat**	**2.62**	**121**		**Pn**	**06 49 29.5**	**-0.5**
MLAC	**Mammoth, Mammo**	**2.63**	**5**	Pb	**Pb**	**06 49 34.4**	**-0.8**
	baz=185						
109C	**Camp Elliot, M**	**2.71**	**141**	P	**Pn**	**06 49 30.6**	**-0.4**
	baz=322						
BELC	**Belle Mtn. Jos**	**2.78**	**110**	P	**Pn**	**06 49 31.9**	**-0.3**
	baz=292,SNR=6.3						
GMRC	**Granite Mounta**	**2.87**	**94**	P	**Pn**	**06 49 32.6**	**-0.8**
	baz=276						
TPNV	**Topopah Spring**	**3.04**	**50**		**Pn**	**06 49 37.1**	**+1.3**
CMB	**Columbia Colle**	**3.18**	**342**		**Pn**	**06 49 38.1**	**+0.5**
SWSC	**Sam W. Stewart**	**3.46**	**126**		**Pn**	**06 49 41.4**	**+0.1**
WAKR	**Walker**	**3.50**	**356**		**Pn**	**06 49 41.1**	**-1.0**
RYN	**Ryan**	**3.64**	**8**	Pg	**Pn**	**06 49 51.5**	**-1.1**
KVN	**Kaiserville**	**4.12**	**11**		**Pb**	**06 50 02.6**	**+2.0**
BEKR	**Beckworth**	**4.94**	**349**		**Pb**	**06 50 13.6**	**-1.1**

*THE **07** 06:59:59.5, 38°.71N×22°.78E, h12km±2km, ML3.5/17, Error ellipse: s-maj=2.1km s-min=0.5km az=152.0*
*PDG **07** 06:59:59.4±0.4, 38°.71N×22°.79E, h12km, ML3.7/11, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*ATH **07** 06:59:59.2, 38°.71N×22°.78E, h18km±1km, ML3.6/22, Error ellipse: s-maj=1.7km s-min=0.6km az=321.0*
ISC 07 06:59:59.7±0.8, **38°.70N**±0°.02×**22°.79E**±0°.01, **h13**km±5km, **n80**, σ1s.05/128, **4C-5D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AXAR	**Agios Charalam**	**0.12**	**304**	P	**Pg**	**07 00 02.9**	**0.0**
AXAR				S	**Sg**	**07 00 05.4**	**+0.2**
AXAR				AML	AML	07 00 05.7	
AXAR				AML	AML	07 00 05.8	
LKR	**Lokris**	**0.17**	**106**	P	**Pg**	**07 00 03.4**	**-0.3**
LKR				S	**Sg**	**07 00 06.8**	**+0.3**
	22μm,0.2s						
LKR	**Lokris**	**0.17**	**106**	P	**Pg**	**07 00 03.5**	**-0.3**
LKR				S	**Sg**	**07 00 06.8**	**+0.3**
LKR				AML	AML	07 00 08.3	
	comp=E,40400μm,0.2s						
LKR				AML	AML	07 00 08.3	
	comp=N,12599μm,0.6s						
DLFA	**Delphi**	**0.32**	**226**	P	**Pg**	**07 00 05.7**	**-0.5**
DLFA				S	**Sg**	**07 00 10.9**	**+0.4**
DLFA				AML	AML	07 00 11.3	
	comp=E,64706μm,0.3s						
DLFA				AML	AML	07 00 11.3	
	comp=N,46645μm,0.2s						
PROD	**Prodromos**	**0.45**	**168**	P	**Pg**	**07 00 08.1**	**-0.5**
PROD				S	**Sg**	**07 00 15.4**	**+0.8**
PROD	**Prodromos**	**0.45**	**168**	P	**Pg**	**07 00 08.1**	**-0.5**
PROD				AML	AML	07 00 17.5	
	comp=N,20403μm,0.3s						
PROD				AML	AML	07 00 19.0	
	comp=E,17453μm,0.2s						
AGG	**Agios Georgios**	**0.48**	**312**	P	**Pg**	**07 00 08.7**	**-0.4**
AGG				S	**Sg**	**07 00 15.7**	**+0.1**
	comp=E,10μm,0.5s						
AGG	**Agios Georgios**	**0.48**	**312**	P	**Pg**	**07 00 08.7**	**-0.4**
AGG				S	**Sg**	**07 00 15.4**	**-0.2**
AGG				AML	AML	07 00 16.1	
	comp=N,19868μm,0.4s						
AGG				AML	AML	07 00 17.1	
	comp=E,18683μm,0.6s						
KALE	**Kalithea**	**0.59**	**239**	P	**Pg**	**07 00 10.2**	**-1.1**
KALE				S	**Sb**	**07 00 20.3**	**0.0**
	comp=E,22μm,0.4s						
KALE	**Kalithea**	**0.59**	**239**	P	**Pg**	**07 00 10.5**	**-0.8**
KALE				S	**Sb**	**07 00 20.0**	**-0.3**
KALE				AML	AML	07 00 21.7	
	comp=E,41037μm,0.5s						
KALE				AML	AML	07 00 22.1	
	comp=N,44314μm,0.4s						
MAKR	**Makrakomi, Fth**	**0.60**	**302**	P	**Pg**	**07 00 10.7**	**-0.7**
MAKR				S	**Sb**	**07 00 19.8**	**-0.7**
	comp=N,8μm,0.4s						
MAKR	**Makrakomi, Fth**	**0.60**	**302**	P	**Pg**	**07 00 11.0**	**-0.4**
MAKR				S	**Sb**	**07 00 19.9**	**-0.6**
MAKR				AML	AML	07 00 21.8	
	comp=N,16008μm,0.4s						
MAKR				AML	AML	07 00 24.0	
	comp=E,16369μm,0.4s						
VIL2	**Platees**	**0.62**	**142**	P	**Pb**	**07 00 12.4**	**0.0**
VIL2				AML	AML	07 00 25.7	
	comp=N,14175μm,0.3s						
VIL2				AML	AML	07 00 28.4	
	comp=E,13188μm,0.3s						
MRKA	**Markates**	**0.63**	**89**	P	**Pg**	**07 00 10.9**	**-1.1**
MRKA				S	**Sb**	**07 00 21.0**	**-0.3**
	comp=E,1μm,0.6s						
MRKA	**Markates**	**0.63**	**89**	P	**Pg**	**07 00 11.2**	**-0.8**
SERG	**Sergoula**	**0.64**	**244**	P	**Pg**	**07 00 10.9**	**-1.3**
SERG				S	**Sb**	**07 00 21.2**	**-0.4**
	comp=E,19μm,0.4s						
SERG	**Sergoula**	**0.64**	**244**	P	**Pg**	**07 00 11.6**	**-0.6**
SERG				S	**Sg**	**07 00 21.0**	**+0.4**
SERG				AML	AML	07 00 22.5	
	comp=N,43436μm,0.4s						
SERG				AML	AML	07 00 23.1	
	comp=E,30581μm,0.4s						
TRIZ	**Trizonia**	**0.65**	**239**	P	**Pg**	**07 00 11.2**	**-1.1**
TRIZ				S	**Sb**	**07 00 21.9**	**0.0**
	comp=E,22μm,0.5s						
TRIZ	**Trizonia**	**0.65**	**239**	P	**Pg**	**07 00 11.3**	**-1.1**
TRIZ				S	**Sb**	**07 00 21.8**	**-0.2**
VILL	**Villia**	**0.68**	**142**	P	**Pg**	**07 00 12.3**	**-0.6**
VILL				S	**Sb**	**07 00 23.5**	**+0.7**
	comp=E,848nm,0.3s						
ANX	**Ano Chora**	**0.69**	**261**	P	**Pg**	**07 00 12.2**	**-0.8**
ANX				S	**Sg**	**07 00 22.3**	**+0.2**
	comp=E,10μm,0.3s						
ANX	**Ano Chora**	**0.69**	**261**	P	**Pg**	**07 00 12.3**	**-0.8**
ANX				S	**Sb**	**07 00 23.1**	**+0.1**
ANX				AML	AML	07 00 24.4	
	comp=E,15202μm,0.3s						
ANX				AML	AML	07 00 24.7	
	comp=N,27388μm,0.3s						
ALIK	**Aliki, Aigiali**	**0.69**	**230**	P	**Pg**	**07 00 12.5**	**-0.6**
ALIK				S	**Sb**	**07 00 23.3**	**+0.3**
LTK	**Loutraki**	**0.69**	**168**	P	**Pg**	**07 00 12.3**	**-0.8**
LTK				S	**Sb**	**07 00 24.0**	**+0.9**
	comp=N,6μm,0.4s						
LTK	**Loutraki**	**0.69**	**168**	P	**Pg**	**07 00 12.6**	**-0.6**
LTK				AML	AML	07 00 26.2	
	comp=E,12000μm,0.4s						
LTK				AML	AML	07 00 28.2	
	comp=N,12067μm,0.4s						
NEO	**Neokhori**	**0.70**	**29**	P	**Pg**	**07 00 12.4**	**-0.8**
NEO				S	**Sg**	**07 00 22.3**	**-0.1**
	comp=N,4μm,0.3s						
NEO	**Neokhori**	**0.70**	**29**	P	**Pg**	**07 00 12.5**	**-0.7**
NEO				S	**Sb**	**07 00 22.7**	**-0.6**
NEO				AML	AML	07 00 26.4	
	comp=E,7794μm,0.2s						
NEO				AML	AML	07 00 28.6	
	comp=N,8875μm,0.3s						
SKIA	**Skiathos**	**0.71**	**49**	P	**Pg**	**07 00 12.8**	**-0.7**
SKIA				S	**Sb**	**07 00 23.0**	**-0.6**
	comp=N,2μm,0.6s						
SKIA	**Skiathos**	**0.71**	**49**	P	**Pg**	**07 00 13.0**	**-0.4**
SKIA				S	**Sb**	**07 00 23.5**	**-0.1**
SKIA				AML	AML	07 00 27.3	
	comp=E,4327μm,0.7s						
SKIA				AML	AML	07 00 29.0	
	comp=N,3871μm,0.6s						
LOUT	**Loutraki**	**0.73**	**168**	P	**Pg**	**07 00 12.9**	**-0.9**
LOUT				S	**Sn**	**07 00 25.4**	**-1.3**
	comp=N,4μm,0.5s						
LOUT	**Loutraki**	**0.73**	**168**	P	**Pg**	**07 00 13.2**	**-0.6**
XOR	**Xorichti**	**0.74**	**25**	P	**Pg**	**07 00 13.1**	**-0.9**
XOR				S	**Sb**	**07 00 24.9**	**+0.4**
	comp=N,4μm,0.4s						
XOR	**Xorichti**	**0.74**	**25**	P	**Pg**	**07 00 13.6**	**-0.5**
XOR				AML	AML	07 00 27.3	
	comp=E,6208μm,0.4s						
XOR				AML	AML	07 00 27.5	
	comp=N,7507μm,0.4s						
LAKA	**Lakka**	**0.78**	**234**	P	**Pg**	**07 00 14.2**	**-0.7**
LAKA				S	**Sg**	**07 00 25.1**	**0.0**
	comp=N,2μm,0.4s						
LAKA	**Lakka**	**0.78**	**234**	P	**Pg**	**07 00 14.3**	**-0.5**
LAKA				S	**Sg**	**07 00 25.2**	**0.0**
LAKA				AML	AML	07 00 31.2	
	comp=E,4059μm,0.4s						
LAKA				AML	AML	07 00 32.3	
	comp=N,4561μm,0.5s						
EVR	**Evrytania**	**0.79**	**286**	P	**Pg**	**07 00 14.9**	**-0.2**
EVR				S	**Sn**	**07 00 27.2**	**-1.3**
	comp=N,2μm,0.8s						
EVR	**Evrytania**	**0.79**	**286**	P	**Pg**	**07 00 14.6**	**-0.5**
KLV	**Kalavryta, Ach**	**0.82**	**217**	P	**Pg**	**07 00 14.3**	**-1.4**
KLV				S	**Sg**	**07 00 26.4**	**0.0**
EREA	**Eretria**	**0.94**	**107**	P	**Pb**	**07 00 17.3**	**-0.6**
EREA				S	**Sn**	**07 00 31.1**	**-1.0**
EREA				AML	AML	07 00 34.7	
	comp=E,4801μm,0.3s						
EREA				AML	AML	07 00 36.6	
	comp=N,4774μm,0.4s						
AOS	**Alonnisos**	**0.97**	**61**	P	**Pb**	**07 00 17.7**	**-0.8**
AOS	**Alonnisos**	**0.97**	**61**	P	**Pb**	**07 00 17.8**	**-0.7**
AOS				AML	AML	07 00 34.5	
	comp=E,2137μm,0.7s						
AOS				AML	AML	07 00 42.0	
	comp=N,2878μm,0.6s						
PVO	**Paravola**	**0.99**	**266**	P	**Pb**	**07 00 18.2**	**-0.5**
ATH	**Athens Observa**	**1.03**	**134**	P	**Pb**	**07 00 19.5**	**0.0**
ATH				S	**Sn**	**07 00 34.3**	**0.0**
ATH				AML	AML	07 00 36.2	
	comp=N,5790μm,0.6s						
ATH				AML	AML	07 00 36.9	
	comp=E,8416μm,0.6s						
THL	**Klokotos Trika**	**1.05**	**325**	P	**Pb**	**07 00 18.9**	**-0.9**
THL				S	**Sn**	**07 00 34.2**	**-0.5**
	comp=E,790nm,0.7s						
THL	**Klokotos Trika**	**1.05**	**325**	P	**Pb**	**07 00 18.9**	**-0.9**
PTL	**Penteli**	**1.07**	**127**	P	**Pb**	**07 00 19.6**	**-0.5**
PTL				S	**Sg**	**07 00 34.6**	**+0.3**
PTL				AML	AML	07 00 37.2	
	comp=E,4564μm,1.0s						
PTL				AML	AML	07 00 39.6	
	comp=N,3370μm,0.9s						
ATHU	**Athens Univers**	**1.07**	**133**	P	**Pb**	**07 00 19.6**	**-0.6**
ATHU				S	**Sn**	**07 00 35.6**	**+0.2**
ATHU				AML	AML	07 00 38.2	
	comp=N,3097μm,0.5s						
ATHU				AML	AML	07 00 39.9	
	comp=E,1967μm,0.5s						
DRO	**Drossia**	**1.13**	**229**	P	**Pb**	**07 00 20.4**	**-0.7**
VLY	**Voula,Athens**	**1.16**	**136**	P	**Pb**	**07 00 21.7**	**0.0**
VLY				S	**Sg**	**07 00 37.9**	**+0.7**
VLY				AML	AML	07 00 42.2	
	comp=E,4287μm,0.6s						
VLY				AML	AML	07 00 42.6	
	comp=N,4309μm,0.5s						
RLS	**Riolos of Patr**	**1.22**	**239**	P	**Pn**	**07 00 22.3**	**-0.2**
RLS				AML	AML	07 00 42.1	
	comp=N,3662μm,0.6s						
RLS				AML	AML	07 00 44.1	
	comp=E,3198μm,0.7s						
DID	**Didima**	**1.24**	**163**	P	**Pn**	**07 00 22.7**	**-0.2**
PDO	**Prodromos**	**1.26**	**266**	P	**Pg**	**07 00 23.6**	**-0.3**
KRND	**KRANIDI**	**1.35**	**168**	P	**Pn**	**07 00 24.3**	**+0.1**
VLX	**Vlachokerasia**	**1.37**	**194**	P	**Pb**	**07 00 25.1**	**-0.2**
LIT	**Litokhoron**	**1.42**	**351**	P	**Pn**	**07 00 25.1**	**-0.2**
KARY	**Karystos**	**1.46**	**117**	P	**Pn**	**07 00 26.1**	**+0.3**
ITM	**Ithomi**	**1.66**	**204**	P	**Pb**	**07 00 30.0**	**-0.2**
KPRO	**Kipourio**	**1.67**	**319**	P	**Pb**	**07 00 29.3**	**-1.1**
VAY	**Valandovo**	**2.62**	**356**	*i* Pn	**Pn**	**07 00 43.1**	**+1.3**
APE	**Apeiranthos**	**2.71**	**126**	⇓P	**Pn**	**07 00 43.6**	**+0.4**
MMB	**Musomiste**	**2.98**	**14**	P	**Pn**	**07 00 46.8**	**+0.1**
STIP	**Stip**	**3.03**	**351**	*i* Pn	**Pn**	**07 00 48.8**	**+1.4**
KKB	**Krupnik**	**3.17**	**4**	P	**Pn**	**07 00 51.3**	**+1.9**
RZN	**Rozhen**	**3.33**	**26**	P	**Pn**	**07 00 51.9**	**+0.2**
VTS	**Vitosha**	**3.93**	**5**	⇑P	**Pn**	**07 01 03.5**	**+3.6**
VTS	**Vitosha**	**3.93**	**5**	P	**Pb**	**07 01 04.5**	**-4.4**
ULC	**Ulcinj**	**4.24**	**321**	*e*Pn	**Pn**	**07 01 05.4**	**+1.4**
ULC				*e*Sn	**Sn**	**07 01 55.2**	**+1.8**
DRME	**Dracevica, Mon**	**4.43**	**323**	⇓*i*Pn	**Pn**	**07 01 08.2**	**+1.5**
DRME				*i* Sn	**Sn**	**07 02 00.1**	**+1.9**
PVY	**Plav**	**4.44**	**332**	⇑*i*Pn	**Pn**	**07 01 07.5**	**+0.5**
PVY				*i* Sn	**Sn**	**07 01 59.8**	**+1.2**
TTG	**Podgorica**	**4.59**	**325**	⇓*i*Pn	**Pn**	**07 01 10.2**	**+1.3**
TTG				*e*Sn	**Sn**	**07 02 03.5**	**+1.4**
MPEP	**Malo Peshtene**	**4.71**	**9**	P	**Pn**	**07 01 12.4**	**+1.9**
TIP	**Timpagrande**	**4.72**	**278**	⇑P	**Pn**	**07 01 12.3**	**+1.6**
KOME	**Kolasin**	**4.83**	**330**	⇑*i*Pn	**Pn**	**07 01 13.1**	**+0.8**
KOME				*e*Sn	**Sn**	**07 02 09.5**	**+1.4**
CEME	**Cevo**	**4.84**	**324**	*e*Pn	**Pn**	**07 01 13.4**	**+1.1**
CEME				*e*Sn	**Sn**	**07 02 09.2**	**+0.9**
HCY	**Herceg Novi**	**4.97**	**320**	*e*Pn	**Pn**	**07 01 15.2**	**+1.2**
HCY				*e*Sn	**Sn**	**07 02 12.5**	**+1.1**
NKME	**Niksic**	**5.00**	**326**	⇓*i*Pn	**Pn**	**07 01 16.0**	**+1.5**
NKME				*e*Sn	**Sn**	**07 02 13.5**	**+1.3**
NKY	**Niksic**	**5.02**	**326**	*e*Pn	**Pn**	**07 01 16.2**	**+1.4**
NKY				*e*Sn	**Sn**	**07 02 14.1**	**+1.4**
BRY	**Bratogost**	**5.29**	**324**	*e*Pn	**Pn**	**07 01 19.9**	**+1.3**
BRY				*e*Sn	**Sn**	**07 02 20.7**	**+1.2**
UPM	**Unac-Piva**	**5.37**	**328**	*e*Pn	**Pn**	**07 01 21.2**	**+1.4**
UPM				*e*Sn	**Sn**	**07 02 22.6**	**+1.0**
MLR	**Muntele Rosu**	**7.18**	**18**	⇓P	**Pn**	**07 01 48.6**	**+4.0**

*ATH **07** 07:11:27.0, 38°.21N×20°.40E, h10km±1km, ML2.8/3, Error ellipse: s-maj=2.0km s-min=1.3km az=247.0*
*THE **07** 07:11:27.5, 38°.21N×20°.40E, h7km±1km, ML2.9/8, Error ellipse: s-maj=1.5km s-min=0.6km az=246.0*
ISC 07 07:11:27.6±1.1, **38°.22N**±0°.02×**20°.43E**±0°.03, **h7**km±5km, **n30**, σ0s.74/51, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	**Lixouri, Cepha**	**0.02**	**154**	P	**Pg**	**07 11 28.8**	**0.0**
LXR1				S	**Sg**	**07 11 29.9**	**+0.2**
LXRA	**Lixouri, Kepha**	**0.02**	**157**	P	**Pg**	**07 11 28.7**	**-0.1**
LXRA				S	**Sg**	**07 11 30.0**	**+0.3**
KEF4	**Livadi, Kephal**	**0.04**	**356**	P	**Pg**	**07 11 28.8**	**-0.2**
KEF4				S	**Sg**	**07 11 30.2**	**+0.1**
CHV1	**Chavriata, Kef**	**0.05**	**228**	P	**Pg**	**07 11 29.0**	**-0.1**
CHV1				S	**Sg**	**07 11 30.3**	**+0.1**
ARGA	**Argostoli. Kep**	**0.06**	**135**	P	**Pg**	**07 11 29.1**	**-0.1**
ARGA				S	**Sg**	**07 11 30.5**	**+0.2**
ARG2	**Argostoli**	**0.06**	**129**	P	**Pg**	**07 11 29.2**	**0.0**
ARG2				S	**Sg**	**07 11 30.6**	**+0.2**
	63μm,0.1s						
KEF3	**Kipouria, Keph**	**0.06**	**258**	P	**Pg**	**07 11 29.2**	**-0.1**
KEF3				S	**Sg**	**07 11 30.6**	**+0.1**
KEF2	**Argostoli. Kep**	**0.07**	**138**	P	**Pg**	**07 11 29.4**	**0.0**
KEF2				S	**Sg**	**07 11 30.9**	**+0.3**
KEF1	**Kardakata, Kep**	**0.07**	**29**	P	**Pg**	**07 11 29.2**	**-0.2**
KEF1				S	**Sg**	**07 11 30.5**	**-0.1**
VLS	**Valsamata**	**0.13**	**107**	P	**Pg**	**07 11 30.3**	**-0.1**
VLS				S	**Sg**	**07 11 32.8**	**+0.5**
	15μm,0.1s						
VLS	**Valsamata**	**0.13**	**107**	P	**Pg**	**07 11 30.3**	**-0.1**
VLS				S	**Sg**	**07 11 32.6**	**+0.3**
VLS				AML	AML	07 11 32.7	
	comp=N,25892μm,0.2s						
VLS				AML	AML	07 11 33.1	
	comp=E,32042μm,0.1s						
VSK1	**VASILIKIADES**	**0.22**	**29**	P	**Pg**	**07 11 32.0**	**0.0**
VSK1				S	**Sg**	**07 11 35.3**	**+0.3**
	comp=E,4μm,0.2s						
KONA	**Konidatara, Ke**	**0.24**	**28**	P	**Pg**	**07 11 32.2**	**-0.1**
KFL	**Anninata**	**0.30**	**111**	P	**Pg**	**07 11 33.4**	**-0.2**
KFL				S	**Sg**	**07 11 38.5**	**+0.9**
KFL	**Anninata**	**0.30**	**111**	P	**Pg**	**07 11 33.3**	**-0.2**
KFL				S	**Sg**	**07 11 38.5**	**+0.9**
VLMS	**Volimes, Zakyn**	**0.39**	**151**	P	**Pg**	**07 11 34.8**	**-0.4**
EVGI	**Lefkada island**	**0.44**	**24**	P	**Pg**	**07 11 36.2**	**0.0**
EVGI				S	**Sg**	**07 11 43.3**	**+1.3**
AST1	**Astakos**	**0.61**	**58**	P	**Pg**	**07 11 39.2**	**-0.2**
AST1				S	**Sg**	**07 11 49.3**	**+1.9**
	comp=E,1μm,0.1s						
KRI1	**kERI**	**0.63**	**151**	P	**Pg**	**07 11 39.3**	**-0.5**
KRI1				S	**Sg**	**07 11 49.7**	**+1.7**
	comp=E,1μm,0.2s						
TSLK	**Tsoukalades, L**	**0.63**	**16**	P	**Pg**	**07 11 39.9**	**+0.1**
TSLK				S	**Sb**	**07 11 49.9**	**-0.2**
	comp=E,282nm,0.4s						
PDO	**Prodromos**	**0.70**	**57**	P	**Pg**	**07 11 40.3**	**-0.9**
PDO				S	**Sb**	**07 11 52.6**	**+0.4**
	comp=E,720nm,0.3s						
PDO	**Prodromos**	**0.70**	**57**	P	**Pg**	**07 11 39.9**	**-1.3**
PDO				AML	AML	07 11 52.6	
	comp=E,942μm,0.3s						
PDO				AML	AML	07 11 55.6	
	comp=N,1061μm,0.3s						
RLS	**Riolos of Patr**	**0.83**	**101**	P	**Pg**	**07 11 43.2**	**-0.5**
RLS				S	**Sb**	**07 11 56.7**	**+0.8**
RLS	**Riolos of Patr**	**0.83**	**101**	P	**Pg**	**07 11 43.1**	**-0.5**
PVO	**Paravola**	**0.95**	**65**	P	**Pg**	**07 11 45.5**	**-0.4**
PVO				S	**Sb**	**07 12 00.7**	**+1.4**
	comp=N,472nm,0.5s						
PVO	**Paravola**	**0.95**	**65**	P	**Pg**	**07 11 45.7**	**-0.2**
PVO				AML	AML	07 12 04.3	
	comp=E,910μm,0.3s						
PVO				AML	AML	07 12 05.7	
	comp=N,804μm,0.5s						
LAKA	**Lakka**	**1.22**	**88**	P	**Pg**	**07 11 49.6**	**-1.5**
ANX	**Ano Chora**	**1.23**	**72**	P	**Pg**	**07 11 49.8**	**-1.4**
TRIZ	**Trizonia**	**1.30**	**83**	P	**Pg**	**07 11 50.7**	**-1.9**
KLV	**Kalavryta, Ach**	**1.37**	**97**	P	**Pn**	**07 11 52.5**	**-0.7**

*BJI **07** 07:18:10.1±0.0, 43°.21N×90°.06E, h7km, mb3.5/2, ML3.2/10*
*NNC **07** 07:18:15.6±2.4, 43°.18N×89°.39E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=18.5km s-min=16.0km az=61.0*
ISC 07 07:18:09.5±1.3, **43°.0N**±0°.2×**90°.0E**±0°.1, **h10**km, **n5**, σ1s.**75**/9, **5C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**1.85**	**297**	Pg	**Pb**	**07 18 43.8**	**+0.4**
WMQ				Sg	**Sb**	**07 19 07.3**	**+0.6**
WMQ				smax	smax		
	comp=N,260nm,0.5s						
WMQ				smax	smax		
	comp=E,240nm,0.9s						
MK31	**Makanchi Array**	**6.64**	**307**	⇑Pn	**Pn**	**07 19 49.2**	**+2.1**
	0.3nm,0.3s,baz=126,slow=12,SNR=6.1						
MK31				⇓Sn	**Sn**	**07 21 01.0**	**-1.9**
	1.0nm,0.3s,baz=119,slow=26,SNR=4.5						
MK31				⇑Lg	Lg	07 21 34.4	
	7.0nm,0.6s,baz=120,slow=29,SNR=6.0						
MAKZ	**Makanchi**	**6.83**	**307**	⇑Pn	**Pn**	**07 19 50.6**	**+0.9**
	2.0nm,0.6s						
MAKZ				⇑Sn	**Sn**	**07 21 04.8**	**-2.7**
	2.6nm,0.4s						
MAKZ				⇓Lg	Lg	07 21 40.1	
	11nm,1.1s						
PDGK	**Podgornoye**	**7.68**	**276**	⇑Pn	**Pn**	**07 20 02.0**	**+0.6**
	3.9nm,0.5s						
PDGK				⇓Sn	**Sn**	**07 21 27.5**	**-1.0**
	6.7nm,0.5s						
PDGK				⇓Lg	Lg	07 22 04.7	
	8.6nm,0.9s						
GTA	**Gaotai**	**8.24**	**113**	*e*P	**Pn**	**07 20 08.6**	**-0.5**
GTA				pP	Pb	07 20 13.1	-19
GTA				sP	Pg	07 20 15.6	-32
GTA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
GTA				smax	smax		
	comp=N,18nm,1.2s						
GTA				smax	smax		
	comp=E,17nm,0.9s						

IDC 07 07:23:12.7±4.1, **2°.41S**×**99°.32E**, **h0**km, **mb3.5**/5, **mb1** 3.6/5, **mb1mx3.4**/25, **mbtmp3.5**/5, **Error ellipse: s-maj=173.3km s-min=23.3km az=56.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	27.22	258	T	T	07 57 38.5	
	baz=80,slow=74,SNR=5.3						
H08S3	Diego Garcia H	27.22	258	T	T	07 57 40.9	
	baz=80,slow=74,SNR=25						
H08S1	Diego Garcia H	27.23	258	T	T	07 57 38.0	
	baz=80						
WRA	Warramunga Arr	38.38	120	P	P	07 30 35.5	-0.5
	0.3nm,0.7s,baz=304,slow=8.9,SNR=4.9						
ASAR	Alice Springs	39.56	125	P	P	07 30 45.8	-0.2
	0.2nm,0.6s,baz=305,slow=7.3,SNR=3.3						
SONM	Songino Array	50.42	6	P	P	07 32 12.0	0.0
	0.3nm,0.4s,baz=193,slow=10,SNR=3.8						
MKAR	Makanchi Array	51.24	345	P	P	07 32 18.1	-0.1
	0.4nm,0.6s,baz=147,slow=7.8,SNR=5.6						
ZALV	Zalesovo Beam	57.45	350	P	P	07 33 02.6	-0.6
	0.4nm,0.4s,baz=186,slow=8.7,SNR=3.0						
TXAR	Lajitas Array	145.44	37	PKPbc	PKPdf	07 42 53.7	0.0
	0.3nm,0.4s,baz=198,slow=0.8,SNR=8.4						

UCR 07 07:35:10.8±1.8, 9.62N×84.83W, h13km±249km, MD3.6, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRA1	San Ramn	0.58	36	eP	Pg	07 35 22.0	-0.2
SRA1				eS	Sg	07 35 29.9	0.0
JTS	Las Juntas de	0.68	350	eP	Pg	07 35 24.2	0.0
HDC	Heredia	0.80	61	eP	Pg	07 35 25.8	-0.6
LCR2	La Lucha 2	0.82	81	eP	Pg	07 35 25.7	-1.1
ARE1	Arenal 1	0.85	7	eP	Pb	07 35 27.4	0.0
GUAI	GUAI	0.94	314	iP	Pb	07 35 26.1	-2.8
GUAI				iS	Sg	07 35 37.3	-3.9
CUI	Cuipilapa	1.09	342	eP	Pb	07 35 30.9	-0.6
CUI				eS	Sn	07 35 47.0	+0.3
NY14	Universidad de	1.24	326	iP	Pn	07 35 33.5	-0.3
EDLM	Las Mercedes	1.27	105	eP	Pn	07 35 33.1	-1.1
EDLM				eS	Sb	07 35 50.4	-0.4
BUEV	Buena Vista	1.31	334	eP	Pn	07 35 34.0	-0.9
BUEV				eS	Sb	07 35 50.9	-1.1
GB1A	Borinquen Arri	1.32	335	eP	Pn	07 35 34.7	-0.4

ASRS 07 07:51:44.1, 53.76N×91.04E, M2.0, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)

NNC 07 07:51:49.0±3.7, 53.87N×90.73E, h0km, mb3.5, mpv3.2, 6C-5D, Error ellipse: s-maj=28.3km s-min=19.3km az=59.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.50	274	⇓Pg	Pb	07 52 51.5	-0.2
	1.1nm,0.8s						
ZAA0				⇓Lg	Lg	07 53 41.0	
	5.2nm,0.9s						
KURK	Kurchatov	8.07	252	⇑Pn	Pn	07 53 49.6	+2.3
	2.5nm,1.0s						
KURK				⇑Sn	Sn	07 55 20.6	+1.5
	6.0nm,1.0s						
KURK				⇑Lg	Lg	07 56 04.4	
	14nm,1.1s						
MK31	Makanchi Array	8.90	221	⇓Pn	Pn	07 53 58.9	+0.2
	1.5nm,0.9s,baz=34,slow=12,SNR=9.8						
MK31				⇑Sn	Sn	07 55 38.3	-1.4
	0.5nm,0.5s						
MK31				⇑Lg	Lg	07 56 31.6	
	6.8nm,0.9s,baz=39,slow=32,SNR=5.3						
MAKZ	Makanchi	9.01	222	⇓Pn	Pn	07 53 59.6	-0.7
	2.8nm,1.4s						
MAKZ				⇓Sn	Sn	07 55 45.5	+3.2
	1.8nm,0.9s						
MAKZ				⇑Lg	Lg	07 56 36.9	
	7.3nm,1.1s						

NEIC 07 07:53:10.8±2.9, 50.51N±0.09×139.1W±0.2, h10km±1km, mb4.6/2, Mwr4.2(OTT), Error ellipse: s-maj=18.3km s-min=15.2km az=297.0

PGC 07 07:53:14.3±0.9, 50.74N×138.91W, h10km, MLSn3.5/6, Mw4.2/6, 560km Wsw of Sandspit, Bc West Of Vancouver Island

ISC 07 07:53:11.9±1.5, 50.7N±0.1×138.92W±0.07, h10km, n42, σ2.38/52, West of Vancouver Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIB	Van Inlet	4.73	54	Pn	Pn	07 54 23.9	+0.6
VIB				Sn	Sn	07 55 15.1	-3.0
VIB	Van Inlet	4.73	54	Pn	Pn	07 54 23.9	+0.6
VIB				Sn	Sn	07 55 15.1	-3.0
DIB	Dawson Inlet,	4.73	55	Pn	Pn	07 54 23.8	+0.5
DIB				Sn	Sn	07 55 15.5	-2.6
DIB	Dawson Inlet,	4.73	55	Pn	Pn	07 54 23.8	+0.5
DIB				Sn	Sn	07 55 15.5	-2.6
DIB	Dawson Inlet,	4.73	55	Pn	Pn	07 54 23.8	+0.5
BNB	Barry Inlet	4.86	64	Pn	Sn	07 55 19.9	-1.5
BNB	Barry Inlet	4.86	64	Pn	Sn	07 55 19.9	-1.5
NDB	Naden	4.94	46	Pn	Pn	07 54 28.1	+2.0
NDB				Sn	Sn	07 55 22.1	-1.2
NDB	Naden	4.94	46	Pn	Pn	07 54 28.1	+2.0
NDB				Sn	Sn	07 55 22.1	-1.2
MOBC	Moresby Island	4.97	57	Pn	Pn	07 54 27.9	+1.2
MOBC				Sn	Sn	07 55 23.1	-1.1
MOBC	Moresby Island	4.97	57	Pn	Pn	07 54 27.9	+1.2
MOBC				Sn	Sn	07 55 23.1	-1.1
HG3B	Hotspring	5.04	65	Pn	Pn	07 54 28.7	+1.2
HG3B				Sn	Sn	07 55 24.5	-1.2
HG3B	Hotspring	5.04	65	Pn	Pn	07 54 28.7	+1.2
HG3B				Sn	Sn	07 55 24.5	-1.2
DHAK	Deception Hill	8.47	2	Pn	Pn	07 55 16.7	+2.1
PLBC	Pleasant Camp	8.94	8	Pn	Pn	07 55 23.7	+2.7
PLBC	Pleasant Camp	8.94	8	Pn	Pn	07 55 23.7	+2.7
PNL	Peninsula	9.04	358	Pn	Pn	07 55 25.3	+2.9
PNL	Peninsula	9.04	358	Pn	Pn	07 55 25.3	+2.9
YUK7	Dusty Glacier	9.91	2	Pn	Pn	07 55 37.6	+3.2
YUK7	Dusty Glacier	9.91	2	Pn	Pn	07 55 37.6	+3.2
HYT	Haines Junctio	10.23	4	Pn	Pn	07 55 39.6	+0.9
WHY	Whitehorse	10.28	11	Pn	Pn	07 55 43.4	+3.9
WHY	Whitehorse	10.28	11	Pn	Pn	07 55 43.4	+3.9
WHY	Whitehorse	10.28	11	Pn	Pn	07 55 42.7	+3.3
YUK6	Outpost Mounta	10.32	2	Pn	Pn	07 55 43.0	+2.9
YUK6	Outpost Mounta	10.32	2	Pn	Pn	07 55 43.0	+2.9
TGL	Tana Glacier	10.36	349	Pn	Pn	07 55 39.8	-0.8
CTGM	Chitina Glacie	10.43	353	Pn	Pn	07 55 42.3	+0.8
YUK4	Talbot Arm	10.72	1	Pn	Pn	07 55 50.3	+4.8
YUK4	Talbot Arm	10.72	1	Pn	Pn	07 55 50.3	+4.8
YUK3	Moose Creek	11.18	356	Pn	Pn	07 55 54.9	+3.1
YUK3	Moose Creek	11.18	356	Pn	Pn	07 55 54.9	+3.1
YUK2	White River	11.21	355	Pn	Pn	07 55 55.3	+3.1
YUK2	White River	11.21	355	Pn	Pn	07 55 55.3	+3.1
SML	Sawmill	12.33	339	Pn	Pn	07 56 06.5	-0.9
DAWY	Dawson	13.45	359	Pn	Pn	07 56 25.8	+3.1
TRF	Thorofare Moun	14.21	339	Pn	Pn	07 56 32.6	-0.5
PPLA	Purkeypile	14.22	335		P	07 56 40.5	-0.2
BWN	Browne	14.66	342	P	P	07 56 43.1	-2.4
MLY	Manley	15.68	341	P	P	07 56 52.6	-0.1
ATKA	Atka Island	21.92	288	P	P	07 58 04.9	-0.2
ATKA				IAmb	IAmb	07 58 22.5	
	comp=Z,50nm,1.0s						
109C	Camp Elliot, M	23.93	130	P	P	07 58 26.5	+0.6
109C				IAmb	IAmb	07 58 29.9	
	comp=Z,7.8nm,0.9s						

NEIC 07 08:03:56.8±2.8, 7.53N±0.05×73.18W±0.06, h142km±6km, Error ellipse: s-maj=9.2km s-min=7.3km az=89.0

IDC 07 08:03:57.9±0.9, 7.44N×73.04W, h150km±12km, mb3.4/4, mb1 3.8/7, mb1mx3.3/29, mbtmp4.0/7, Error ellipse: s-maj=29.0km s-min=7.5km az=133.0

RSNC 07 08:03:58.0±1.1, 7.46N×73.21W, h135km±4km, ML3.6, Mw3.7

ISC 07 08:03:56.5±0.6, 7.49N±0.03×73.18W±0.04, h139km±5km, n77, σ1.35/115, mb4.1/10, 8C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	0.50	108	⇓iP	Pn	08 04 18.1	+0.9
PAMC				eS	Sn	08 04 33.5	+0.7
PAMC				i		08 04 34.2	
	comp=Z,1µm,0.2s						
OCAC	Ocana	0.75	349	⇓eP	Pn	08 04 19.4	+0.9
OCAC				eS	Sn	08 04 36.5	+1.3
OCAC				i		08 04 38.5	
	comp=Z,631nm,0.1s						
OCAC				i		08 04 38.6	
	comp=Z,582nm,0.1s						
BARC	Barichara	0.90	180	⇑eP	Pn	08 04 19.7	0.0
BARC				eS	Sn	08 04 36.4	-0.8
BARC				i		08 04 37.6	
	comp=Z,2µm,0.4s						
SMLC	San Martn de	1.57	326	⇑eP	Pn	08 04 26.7	+0.6
SMLC				eS	Sn	08 04 48.9	+0.2
SMLC				i		08 04 50.1	
	comp=Z,1µm,0.1s						
SMLC				i		08 04 50.2	
	comp=Z,1µm,0.1s						
PTBC	PUERTO BERRIO,	1.58	233	⇑eP	Pn	08 04 25.9	-0.3
PTBC				eS	Sn	08 04 48.0	-0.9
PTBC				i		08 04 51.5	
	comp=Z,591nm,0.2s						
PTBC				i		08 04 52.6	
	comp=Z,522nm,0.2s						
RUSC	La Rusia	1.59	177	eP	Pn	08 04 26.8	-0.1
RUSC				eS	Sn	08 04 49.5	-0.4
RUSC				i		08 04 49.9	
	comp=Z,103nm,0.4s						
RUSC				i		08 04 52.3	
	comp=Z,109nm,0.5s						
RUSC	La Rusia	1.59	177	Pn	Pn	08 04 26.1	-0.8
ZARC	Zaragoza, Cauc	1.67	270	⇑iP	Pn	08 04 26.7	-0.4
ZARC				eS	Sn	08 04 51.0	+0.5
ZARC				i		08 04 52.5	
	comp=Z,758nm,0.2s						
ZARC				i		08 04 55.5	
	comp=Z,698nm,0.1s						
TAMC	Tame, Arauca	1.73	127	eP	Pn	08 04 28.6	+0.7
TAMC				eS	Sn	08 04 52.5	+0.6
TAMC				i		08 04 55.4	
	comp=Z,253nm,0.2s						
TAMC				i		08 05 01.0	
	comp=Z,247nm,1.1s						
SPBC	San Pablo de B	2.04	206	eP	Pn	08 04 32.0	+0.4
SPBC				eS	Sn	08 04 58.7	+0.3
SPBC				i		08 05 05.3	
	comp=Z,437nm,0.4s						
SPBC				i		08 05 05.5	
	comp=Z,539nm,0.4s						
UREC	San Jos de Ur	2.35	276	eP	Pn	08 04 34.8	-0.5
UREC				eS	Sn	08 05 03.5	-1.5
UREC				i		08 05 05.6	
	comp=Z,383nm,0.1s						
UREC				i		08 05 05.7	
	comp=Z,423nm,0.1s						
CODC	Agustn Codazz	2.44	354	eP	Pn	08 04 37.8	+1.4
CODC				eS	Sn	08 05 08.4	+1.3
CODC				i		08 05 11.7	
	comp=Z,56nm,0.2s						
CODC				i		08 05 13.0	
	comp=Z,76nm,0.4s						
NORC	Norcasia	2.55	221	⇑eP	Pn	08 04 38.2	+0.3
NORC				eS	Sn	08 05 08.5	-1.1
NORC				i		08 05 15.5	
	comp=Z,355nm,0.2s						
NORC				i		08 05 15.7	
	comp=Z,351nm,0.2s						
ARGC	Ariguani, Magd	2.58	336	eP	Pn	08 04 39.7	+1.6
ARGC				eS	Sn	08 05 11.6	+1.4
ARGC				i		08 05 17.3	
	comp=Z,88nm,0.4s						
HELC	Santa Helena	2.67	241	eP	Pn	08 04 40.2	+0.6
HELC				eS	Sn	08 05 12.7	-0.1
HELC				i		08 05 21.1	
	comp=Z,212nm,0.4s						
HELC				i		08 05 22.8	
	comp=Z,247nm,0.2s						
ROSC	El Rosal	2.87	203	P	Pn	08 04 44.1	+1.9
	comp=Z,33nm,0.3s,baz=74,slow=12,SNR=67						
ROSC				S	Sn	08 05 20.4	+2.9
	comp=Z,52nm,0.3s,baz=40,slow=22,SNR=11						
ROSC	El Rosal	2.87	203	⇑eP	Pn	08 04 43.5	+1.3
ROSC				eS	Sn	08 05 20.6	+3.1
ROSC				i		08 05 28.0	
	comp=Z,304nm,0.5s						
ROSC				i		08 05 29.0	
	comp=Z,244nm,0.6s						
ROSC	El Rosal	2.87	203		Pn	08 04 43.9	+1.6
ROSC				Sn	Sn	08 05 19.8	+2.4
SDV	Santo Domingo	2.87	61	P	Pn	08 04 43.5	+1.5
	comp=Z,43nm,0.3s,baz=260,slow=6.1,SNR=828						
SDV				S	Sn	08 05 17.3	+0.2
	comp=Z,25nm,0.3s,baz=341,slow=13,SNR=15						
CHIC	Chingaza	2.90	191	eP	Pn	08 04 43.2	+0.6
CHIC				eS	Sn	08 05 18.8	+0.6
CHIC				i		08 05 24.6	
	comp=Z,89nm,0.3s						
CHIC				i		08 05 26.9	
	comp=Z,108nm,0.4s						
DBBC	Dabeiba	3.05	261	⇑eP	Pn	08 04 44.6	+0.4
DBBC				eS	Sn	08 05 20.1	-0.8
DBBC				i		08 05 33.0	
	comp=Z,223nm,0.9s						
SJCC	San Jacinto, C	3.10	320	eP	Pn	08 04 45.6	+0.7
SJCC				eS	Sn	08 05 23.3	+1.1
SJCC				i		08 05 24.0	
	comp=Z,60nm,0.4s						
GUY2C	Guyana, Caldas	3.13	224	eP	Pn	08 04 46.3	+0.6
GUY2C				eS	Sn	08 05 24.1	+0.6
GUY2C				i		08 05 33.0	
	comp=Z,244nm,0.4s						
GUY2C				i		08 05 33.1	
	comp=Z,220nm,0.3s						
CBOC	Ciudad Bolivar	3.25	240	eP	Pn	08 04 47.7	+0.9
CBOC				eS	Sn	08 05 28.2	+2.5
CBOC				i		08 05 34.0	
	comp=Z,90nm,0.5s						
CBOC				i		08 05 37.2	
	comp=Z,51nm,0.5s						
VILC	Villavicencio,	3.40	189	eP	Pn	08 04 49.5	+0.7
VILC				eS	Sn	08 05 29.4	+0.2
VILC				i		08 05 42.8	
	comp=Z,179nm,0.4s						
PTGC	Puerto Gaitan,	3.43	162	eP	Pn	08 04 48.4	-0.8
PTGC				eS	Sn	08 05 26.6	-3.3
LCBC	Los crdobas,	3.44	293	eP	Pn	08 04 49.1	-0.1
LCBC				eS	Sn	08 05 31.7	+1.9
SMRC	Santa Marta, M	3.79	344	eP	Pn	08 04 54.8	+1.1
SMRC				eS	Sn	08 05 36.1	-2.0
SMRC				i		08 05 40.1	
	comp=Z,39nm,0.3s						
PLMC	San Jos del P	4.02	230	eP	Pn	08 04 57.5	+0.7
PLMC				i		08 05 51.8	
	comp=Z,70nm,0.2s						
ORTC	Ortega, Tolima	4.11	210	⇑eP	Pn	08 04 58.1	0.0
ORTC				eS	Sn	08 05 47.9	+2.0
ORTC				i		08 05 55.9	
	comp=Z,95nm,0.6s						
ORTC				i		08 05 55.9	
	comp=Z,99nm,0.4s						
PRAC	Prado	4.12	204	eP	Pn	08 04 58.4	+0.1
PRAC				eS	Sn	08 05 45.9	-0.2
PRAC				i		08 05 55.4	
	comp=Z,147nm,0.5s						
PRAC				i		08 05 57.3	
	comp=Z,119nm,0.3s						
CAPC	Capurgana	4.29	286	eP	Pn	08 05 00.5	+0.2
CAPC				eS	Sn	08 05 45.4	-4.5
URIC	Uribia, Colomb	4.34	16		Pn	08 05 00.9	-0.2
SOLC	Bahia Solano	4.39	254	eP	Pn	08 05 02.5	+0.9
SOLC				i		08 06 20.9	
	comp=Z,33nm,0.7s						
PTAC	Punta Ardita,	4.61	266	eP	Pn	08 05 04.3	-0.2
PTAC				eS	Sn	08 05 55.2	-2.3
PTAC				i		08 05 58.9	
	comp=Z,248nm,0.3s						
PTAC				i		08 05 59.1	
	comp=Z,242nm,0.3s						
YOTC	Yotoco, Valle	4.70	222	eP	Pn	08 05 05.6	-0.4
YOTC				eS	Sn	08 06 00.6	+0.7
GUVC	San Jose del G	4.95	174	eP	Pn	08 05 09.4	+0.3
GUVC				eS	Sn	08 06 04.7	-1.0
GUVC				i		08 06 07.7	
	comp=Z,75nm,0.4s						
MACC	Macarena, Meta	5.36	187	eP	Pn	08 05 13.3	-1.3
MACC				eS	Sn	08 06 12.9	-2.6
MACC				i		08 06 47.9	
	comp=Z,27nm,0.6s						
FLOC	Florencia	6.37	203	Pn	Pn	08 05 28.1	-0.1
BBAC	Balboa, Cauca	6.78	217	eP	Pn	08 05 33.5	-0.4
BCIP	Isla Barro Col	6.80	285	Pn	Pn	08 05 33.3	-0.6
PCRV	Puerto La Cruz	8.85	72	P	Pn	08 06 02.3	+0.8
	comp=Z,4.2nm,0.3s,baz=290,slow=2.7,SNR=11						
PCRV				S	Sn	08 07 41.5	+1.8
	comp=Z,0.8nm,0.3s,baz=55,slow=16,SNR=2.5						
PLCV	Puerto La Cruz	8.89	72		Pn	08 06 02.3	+0.3
PLCV					Sn	08 07 41.5	+0.8
OTAV	Otavalo	8.92	216	Pn	Pn	08 06 04.2	+1.3
BANI	BANI	11.18	14	Pn	Pn	08 06 30.9	-1.5
PDPR	Patillas Dam,	12.57	33	Pn	Pn	08 06 49.6	-1.0
ACON	Acoyapa	12.63	292	Pn	Pn	08 06 49.0	-2.5
GCPR	Guaynabo City	12.78	32	Pn	Pn	08 06 52.7	-0.6
CDVI	St. Croix	13.08	38	Pn	Pn	08 06 57.4	+0.2
SAML	Samuel	19.13	148	P	P	08 08 08.5	-0.5
TEIG	Tepich	19.34	312	P	Pn	08 08 12.9	-1.0
PB11	IPOC Station P	27.30	173	P	P	08 09 28.1	-0.4
PB11				IAmb	IAmb	08 09 36.2	
	comp=Z,8.5nm,1.1s						
JCT	Junction City	33.84	316		P	08 10 22.1	-3.7
JCT				IAmb	IAmb	08 10 27.5	
	comp=Z,2.9nm,1.0s						
BINY	Binghamton	34.65	356	P	P	08 10 30.9	-1.7
TXAR	Lajitas Array	35.98	311	P	P	08 10 45.6	+1.3
	comp=Z,0.2nm,0.7s,baz=124,slow=9.2,SNR=2.7						
TXAR	Lajitas Array	35.98	311	P	P	08 10 46.7	+2.4
NCB	Newcomb	36.35	359	P	P	08 10 43.9	-3.2
ECSD	EROS Data Cent	41.52	334	P	P	08 11 31.3	+1.1
ECSD				IAmb	IAmb	08 11 43.3	
	comp=Z,4.6nm,1.4s						
EYMN	Ely	43.22	342	P	P	08 11 45.2	+1.4
YKA	Yellowknife Ar	62.62	340	P	P	08 14 06.7	+1.0
	comp=Z,1.7nm,0.6s,baz=132,slow=6.7,SNR=43						
YKA				pP	pP	08 14 39.3	-0.2
	comp=Z,0.3nm,0.6s,baz=129,slow=7.2,SNR=5.2						
SUMG	Summit	68.34	11	P	P	08 14 44.4	+1.5
INK	Inuvik	72.38	340	P	P	08 15 08.7	+1.7
INK				IAmb	IAmb	08 15 11.2	
	comp=Z,6.4nm,1.5s						
DOT	Dot Lake	74.88	334	P	P	08 15 23.2	+1.4
DOT				IAmb	IAmb	08 15 29.2	
	comp=Z,11nm,1.5s						
RIDG	Independent Ri	75.24	334	P	P	08 15 25.2	+1.4
RIDG				IAmb	IAmb	08 15 26.6	
	comp=Z,4.8nm,1.1s						
ILAR	Eielson Array	76.33	335	P	P	08 15 30.4	+0.4
	comp=Z,0.5nm,0.8s,baz=116,slow=4.9,SNR=4.8						
ILAR	Eielson Array	76.33	335	P	P	08 15 30.8	+0.8
TRF	Thorofare Moun	77.58	333	P	P	08 15 39.1	+1.9
ARCES	ARCESS Array B	86.06	20	P	P	08 16 22.3	+1.0
	comp=Z,2.6nm,0.9s,baz=258,slow=4.2,SNR=3.5						
ARCES	ARCESS Array B	86.06	20	P	P	08 16 21.9	+0.6
MKAR	Makanchi Array	121.71	20	PKP	PKPdf	08 22 33.8	-0.4
	comp=Z,0.2nm,0.9s,baz=328,slow=2.4,SNR=2.3						
MKAR	Makanchi Array	121.71	20		PKPdf	08 22 33.6	-0.6
ASAR	Alice Springs	149.45	235	PKPbc	PKPbc	08 23 29.6	-0.6
	comp=Z,0.3nm,0.4s,baz=117,slow=3.4,SNR=5.6						
ASAR				PKPab	PKPab	08 23 34.8	-0.7
	comp=Z,0.3nm,0.4s,baz=114,slow=3.8,SNR=7.7						
ASAR	Alice Springs	149.45	235		PKPbc	08 23 29.5	-0.8
WR0	Warramunga Arr	150.42	242	PKPbc	PKPbc	08 23 32.3	-0.3
WRA	Warramunga Arr	150.60	242	PKPbc	PKPbc	08 23 32.7	-0.3
	comp=Z,0.7nm,0.4s,baz=106,slow=2.7,SNR=11						
WRA	Warramunga Arr	150.60	242		PKPbc	08 23 31.6	-1.4
WB0	Warramunga Arr	150.62	243	PKPbc	PKPbc	08 23 32.7	-0.4

IDC 07 08:12:03.4±4.5, 6.36S×130.33E, h95km±59km, mb3.3/1, mb1 3.2/4, mb1mx3.0/29, mbtmp3.5/4, ML3.3/3, Error ellipse: s-maj=118.5km s-min=24.9km az=81.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.53	10	P	Pn	08 13 23.7	+0.3
	2.6nm,0.3s,baz=192,slow=20,SNR=15						
SIJI				S	Sn	08 14 20.6	-5.0
	4.6nm,0.3s,baz=243,slow=23,SNR=11						
WRA	Warramunga Arr	14.06	164	P	Pn	08 15 17.3	-1.1
	0.1nm,0.3s,baz=345,slow=15,SNR=6.5						
WRA				S	Sn	08 17 42.3	-11
	0.3nm,0.3s,baz=323,slow=23,SNR=6.9						
ASAR	Alice Springs	17.55	169	P	Pn	08 16 03.0	+0.8
	0.1nm,0.3s,baz=348,slow=11,SNR=8.6						
ASAR				S	Sn	08 19 09.8	-7.9
	0.1nm,0.3s,baz=348,slow=26,SNR=5.9						
MKAR	Makanchi Array	67.87	327	P	P	08 22 51.6	-0.1
	0.3nm,0.4s,baz=114,slow=8.2,SNR=8.4						

IDC 07 08:12:16.6±1.0, 24.75N×123.35E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/31, mbtmp3.6/6, Error ellipse: s-maj=64.0km s-min=19.7km az=69.0

JMA 07 08:12:19.5±0.2, 24.83N×123.23E, h26km±4km, M2.9

ISC 07 08:12:18.8±1.9, 24.77N±0.07×123.32E±0.05, h14km±12km, n15, σ0.58/20, mb3.6/6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.42	223	P	Pb	08 12 28.1	+0.1
YOJ				S	Sb	08 12 33.9	-0.3
JYNG	Yonagunijimaku	0.47	227	P	Pb	08 12 28.8	-0.1
JYNG				S	Sb	08 12 35.1	-0.6
IRIF	Iriomote-Funau	0.57	139	P	Pn	08 12 32.3	-0.3
JKRS	Kuro-shima	0.82	130	P	Pn	08 12 36.4	+0.4
JKRS				eS	Sn	08 12 48.3	+0.4
HATJ	Hateruma jima	0.83	148	P	Pn	08 12 36.8	+0.6
JIJ	Ishigaki jima	0.85	118	P	Pn	08 12 36.4	0.0
JIJ				eS	Sn	08 12 49.0	+0.3
JISG	Ishigakijimahi	0.92	101	P	Pn	08 12 37.2	-0.1
JISG				eS	Sn	08 12 50.8	+0.5
JTJ	Tarama	1.26	96	P	Pg	08 12 43.3	+0.2
JIRB	Irabujima	1.68	88	P	Pb	08 12 49.2	-0.4
SONM	Songino Array	26.64	334	P	P	08 17 57.8	+0.6
	0.8nm,0.8s,baz=148,slow=9.7,SNR=6.4						
MKAR	Makanchi Array	39.30	315	P	P	08 19 47.5	+0.1
	0.1nm,0.4s,baz=95,slow=9.4,SNR=4.4						
WRA	Warramunga Arr	45.72	165	P	P	08 20 40.5	+0.7
	0.6nm,0.9s,baz=348,slow=8.8,SNR=18						
ASAR	Alice Springs	49.23	167	P	P	08 21 05.4	-1.7
	0.8nm,0.6s,baz=347,slow=10,SNR=7.8						
FINES	FINESS Array B	71.92	330	P	P	08 23 41.4	-0.1
	2.0nm,1.0s,baz=66,slow=4.7,SNR=3.0						
YKA	Yellowknife Ar	81.67	23	P	P	08 24 36.5	+0.1
	0.3nm,0.6s,baz=304,slow=5.3,SNR=6.6						

UCR 07 08:25:23.1±1.1, 10.07N×85.65W, h17km±3km, MD3.9, 3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUAI	GUAI	0.24	35	⇓iP	Pg	08 25 28.4	-0.2
NY14	Universidad de	0.58	11	⇓iP	Pg	08 25 34.4	-0.3
JTS	Las Juntas de	0.72	72	eP	Pb	08 25 36.4	-0.9
JTS				eS	Sb	08 25 47.0	+0.2
LAPC	Finca la Perla	0.72	17	iP	Pb	08 25 36.1	-1.2
GBS3	Finca Las Img	0.73	15	iP	Pb	08 25 36.3	-1.1
COLC	Colonia	0.73	37	iP	Pb	08 25 36.5	-1.0
GPS3	Bodega del ICE	0.73	22	iP	Pb	08 25 36.4	-1.1
GPS2	Hotel Rincn d	0.74	23	iP	Pb	08 25 36.5	-1.0
CUI	Cuipilapa	0.75	39	iP	Pb	08 25 36.9	-0.9
CUI				eS	Sg	08 25 48.1	+0.2
GUAB	Guayabo de Bag	0.76	33	iP	Pb	08 25 36.8	-1.1
BUEV	Buena Vista	0.76	18	iP	Pb	08 25 36.7	-1.3
GB1A	Borinquen Arri	0.78	18	eP	Pb	08 25 37.2	-1.1
GB1A				eS	Sb	08 25 48.4	-0.3
PTEN	Parque Tenorio	0.91	45	iP	Pb	08 25 39.7	-0.9
ARE1	Arenal 1	0.99	67	⇓eP	Pb	08 25 41.6	-0.3
SRA1	San Ramn	1.15	89	eP	Pn	08 25 43.6	-0.9
HDC	Heredia	1.51	92	eP	Pn	08 25 49.4	-0.2
HDC				eS	Sb	08 26 09.5	-0.3
SJS	Escuela Geolog	1.58	95	eP	Pn	08 25 50.8	+0.4
LCR2	La Lucha 2	1.65	101	eP	Pn	08 25 52.1	+0.5
CVTR	Volcan Turrial	1.86	91	eP	Pn	08 25 55.0	+0.4
ACON	Acoyapa	1.94	14	eP	Pn	08 25 56.0	+0.7
EDLM	Las Mercedes	2.18	111	eS	Sn	08 26 25.0	-0.3

ATH 07 08:26:17.2,38.21N×20.39E,h11km±1km,ML2.6/1,Error ellipse: s-maj=2.6km s-min=1.6km az=220.0
THE 07 08:26:17.3,38.21N×20.39E,h11km,ML3.0/5,Error ellipse: s-maj=1.0km s-min=0.4km az=232.0
ISC 07 08:26:17.1±2.1,38.21N±0.05×20.39E±0.06,h12km±9km, n14,σ0.38/28,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	187	P	Pg	08 26 19.4	+0.3
CHV1				S	Sg	08 26 20.7	+0.1
	38µm,0.1s						
KEF3	Kipouria, Keph	0.03	254	P	Pg	08 26 19.3	+0.2
KEF3				S	Sg	08 26 20.9	+0.2
LXR1	Lixouri, Cepha	0.04	105	P	Pg	08 26 19.4	+0.2
LXR1				S	Sg	08 26 20.9	+0.1
	50µm,0.2s						
LXRA	Lixouri, Kepha	0.04	106	P	Pg	08 26 19.4	+0.1
LXRA				S	Sg	08 26 20.9	+0.1
KEF4	Livadi, Kephal	0.06	33	P	Pg	08 26 19.2	-0.2
KEF4				S	Sg	08 26 20.8	-0.2
ARGA	Argostoli. Kep	0.08	115	P	Pg	08 26 19.8	+0.2
ARGA				S	Sg	08 26 21.5	+0.1
ARG2	Argostoli	0.09	113	P	Pg	08 26 19.9	+0.2
ARG2				S	Sg	08 26 21.6	0.0
	15µm,0.1s						
KEF2	Argostoli. Kep	0.09	120	P	Pg	08 26 18.7	-1.1
KEF2				S	Sg	08 26 21.7	0.0
VLS	Valsamata	0.16	102	P	Pg	08 26 20.8	0.0
VLS				S	Sg	08 26 23.5	+0.1
	3µm,0.1s						
VLS	Valsamata	0.16	102	P	Pg	08 26 20.8	0.0
VLS				S	Sg	08 26 23.5	+0.1
VLS				AML	AML	08 26 23.6	
	comp=N,6272µm,0.1s						
VLS				AML	AML	08 26 24.1	
	comp=E,5312µm,0.1s						
VSK1	VASILIKIADES	0.24	35	P	Pg	08 26 22.2	+0.1
VSK1				S	Sg	08 26 26.3	+0.7
	comp=E,2µm,0.2s						
KONA	Konidatara, Ke	0.26	34	P	Pg	08 26 22.6	+0.1
KONA				S	Sg	08 26 26.5	+0.5
KFL	Anninata	0.33	108	P	Pg	08 26 23.9	+0.1
KFL				S	Sg	08 26 29.1	+0.9
EVGI	Lefkada island	0.46	27	P	Pg	08 26 25.9	-0.2
EVGI				S	Sb	08 26 33.4	-0.6

THE 07 08:26:42.1,38.25N×20.39E,h12km±1km,ML3.5/5,Error ellipse: s-maj=2.0km s-min=0.6km az=177.0
ATH 07 08:26:42.9,38.21N×20.39E,h10km±2km,ML3.1/1,Error ellipse: s-maj=2.7km s-min=1.2km az=253.0
ISC 07 08:26:41.7±3.1,38.25N±0.06×20.38E±0.08,h15km±14km, n11,σ0.32/22,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.04	70	P	Pg	08 26 44.8	+0.3
KEF4				S	Sg	08 26 46.2	0.0
KEF3	Kipouria, Keph	0.05	212	P	Pg	08 26 44.7	+0.2
KEF3				S	Sg	08 26 46.2	-0.1
CHV1	Chavriata, Kef	0.06	180	P	Pg	08 26 44.7	+0.1
CHV1				S	Sg	08 26 46.2	-0.3
	125µm,0.2s						
LXR1	Lixouri, Cepha	0.06	136	P	Pg	08 26 44.7	+0.1
LXR1				S	Sg	08 26 46.2	-0.3
	168µm,0.3s						
LXRA	Lixouri, Kepha	0.06	136	P	Pg	08 26 44.7	+0.1
LXRA				S	Sg	08 26 46.2	-0.3
ARG2	Argostoli	0.11	129	P	Pg	08 26 45.2	+0.1
ARG2				S	Sg	08 26 46.9	-0.3
	32µm,0.1s						
KEF2	Argostoli. Kep	0.12	134	P	Pg	08 26 45.2	+0.1
KEF2				S	Sg	08 26 47.2	-0.3
VLS	Valsamata	0.18	113	P	Pg	08 26 46.2	+0.2
VLS				S	Sg	08 26 48.9	0.0
	10µm,0.2s						
VLS	Valsamata	0.18	113	P	Pg	08 26 46.3	+0.2
VLS				S	Sg	08 26 48.8	0.0
VLS				AML	AML	08 26 49.0	
	comp=N,18859µm,0.2s						
VLS				AML	AML	08 26 49.1	
	comp=E,19960µm,0.1s						
VSK1	VASILIKIADES	0.22	41	P	Pg	08 26 46.2	-0.5
VSK1				S	Sg	08 26 50.4	+0.4
	comp=E,7µm,0.4s						
EVGI	Lefkada island	0.43	30	P	Pg	08 26 50.0	-0.4
EVGI				S	Sg	08 26 57.1	+0.8

BJI 07 08:40:11.6±0.0,14.96S×167.37E,h110km,mB6.2/79, mb5.6/76
IDC 07 08:40:11.2±0.9,14.98S×167.37E,h101km±7km,mb5.3/35, mb1 5.4/37,mb1mx5.3/40,mbtmp5.7/37,MS5.5/17, Ms1 5.5/17,ms1mx5.5/24,Error ellipse: s-maj=8.7km s-min=7.7km az=50.0
MOS 07 08:40:13.0±1.1,14.98S×167.28E,h131km,mb5.8/53, Error ellipse: s-maj=7.9km s-min=6.1km az=124.2
NEIC 07 08:40:13.6±2.3,15.07S±0.06×167.37E±0.08,h122km±1km, mb5.7/292,Mwb6.5/63,Mwc6.5/101,Mww6.5, Mwc6.5(GCMT),Error ellipse: s-maj=12.4km s-min=10.7km az=100.0,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; Mθθ-0.05; Mφφ-6.90; Mrθ-0.53; Mθφ-1.15; Mφr0.14; Fault plane solution: $M_0$7.05000×10^{18} NP1:ϕ_s4.76000°,δ45.41000°, λ83.58000°. NP2:ϕ_s193.87000°,δ44.96000°,λ96.47000°. Principal axes: T 7.0020, Plg85.0000°, Azm192.0000°; N 0.0910, Plg5.0000°, Azm9.0000°; P -7.0930, Plg0.0000°, Azm99.0000°;
KLM 07 08:40:14.0,15.18S×167.39E,h107km,mb6.1
GCMT 07 08:40:17.6±0.0,15.13S×167.29E,h127km,MW6.5/172, Moment Tensor Solution. s168,c434; s172,c770; Duration: 4.3 Moment tensor: Scale 10^{18}Nm; Mrr6.59±.02; Mθθ0.37±.03; Mφφ-6.97±.03; Mrθ-1.36±.02; Mθφ-1.15±.03; Mφr-0.31±.02; Best double couple: $M_0$7.02000×10^{18} NP1:ϕ_s357.00000°,δ44.00000°, λ73.00000°. NP2:ϕ_s200.00000°,δ48.00000°,λ106.00000°. Principal axes: T 6.8750, Plg78.0000°, Azm179.0000°; N 0.2840, Plg12.0000°, Azm10.0000°; P -7.1660, Plg2.0000°, Azm279.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function
NEIC 07 08:40:18,15.12S×167.29E,h128km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; Mrr6.87; Mθθ0.18; Mφφ-7.04; Mrθ-1.41; Mθφ-1.22; Mφr-0.31; Fault plane solution: $M_0$7.21000×10^{18} NP1:ϕ_s358.00000°, δ44.00000°,λ74.00000°. NP2:ϕ_s200.00000°,δ48.00000°, λ105.00000°. Principal axes: T 7.1520, Plg79.0000°, Azm179.0000°; N 0.1125, Plg11.0000°, Azm10.0000°; P -7.2645, Plg2.0000°, Azm280.0000°;
NEIC 07 08:40:18,15.06S×167.24E,h120km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; Mrr7.24; Mθθ0.03; Mφφ-7.27; Mrθ-0.84; Mθφ-0.80; Mφr-0.57; Fault plane solution: $M_0$7.37000×10^{18} NP1:ϕ_s0.00000°, δ43.00000°,λ81.00000°. NP2:ϕ_s192.00000°,δ48.00000°, λ98.00000°. Principal axes: T 7.3514, Plg83.0000°, Azm163.0000°; N 0.0312, Plg6.0000°, Azm7.0000°; P -7.3827, Plg3.0000°, Azm276.0000°;
NEIC 07 08:40:37.8,14.72S×167.30E,h117km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; Mrr7.66; Mθθ0.20; Mφφ-7.86; Mrθ-1.18; Mθφ-0.84; Mφr-0.85; Fault plane solution: $M_0$7.94000×10^{18} NP1:ϕ_s193.96000°, δ49.11000°,λ100.73000°. NP2:ϕ_s357.81000°,δ42.03000°, λ77.86000°. Principal axes: T 7.8750, Plg81.0000°, Azm163.0000°; N 0.1378, Plg8.0000°, Azm7.0000°; P -8.0128, Plg4.0000°, Azm276.0000°;
ISC 07 08:40:13.5±0.3,15.08S±0.03×167.42E±0.03,h125km±2km, h125km:pP-P,n1410,σ1.97/1517,mb5.7/274,85C-22D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.42	209		Pn	08 40 29.0	-2.6
DZM	Mont Dzumac	7.02	187	ePn	Pn	08 41 51.8	-2.0
	5µm,0.9s						
DZM				eSn	Sn	08 43 05.6	-6.6
	39µm,1.0s						
DZM				eLR	LR	08 43 27.7	
	comp=Z,139µm,34.3s						
DZM	Mont Dzumac	7.02	187	P	Pn	08 41 53.1	-0.7
	39nm,0.3s,baz=292,slow=23,SNR=111						
DZM				S	Sn	08 43 13.5	+1.2
	283nm,0.3s,baz=309,slow=20,SNR=21						
DZM	Mont Dzumac	7.02	187		Pn	08 41 53.4	-0.4
DZM				Sn	Sn	08 43 13.9	+1.6
NOUC	Port Laguerre	7.07	188		Pn	08 41 54.9	+0.6
HNR	Honiara	9.21	307	eP	Pn	08 42 22.0	-1.3
HNR	Honiara	9.21	307		Pn	08 42 21.2	-2.0
HNR	Honiara	9.21	307	P	Pn	08 42 21.3	-2.0
MSVF	Nonsavu	10.54	106		Pn	08 42 45.2	+3.9
MSVF	Nonsavu	10.54	106	*d* iP	Pn	08 42 44.6	+3.3
FUNA	Funafuti	13.24	62		Pn	08 43 18.9	+2.2
NFK	Norfolk Island	13.91	178	P	P	08 43 27.4	-1.9
	baz=14,SNR=7.2						
TARA	Tarawa	17.21	19	P	Pn	08 44 08.6	+2.2
TARA				IAmb	IAmb	08 44 16.8	
	comp=Z,737nm,0.9s						
LHI	Lord Howe Isla	18.06	204	P	Pn	08 44 18.5	+2.0
	baz=18,SNR=10.0						
LHI	Lord Howe Isla	18.06	204		Pn	08 44 17.8	+1.3
LHI				IAmb	IAmb	08 44 51.0	
	comp=Z,1µm,1.9s						
EIDS	Eidsvold	18.41	234	P	Pn	08 44 20.9	+0.2
	baz=18,SNR=127						
EIDS	Eidsvold	18.41	234	P	Pn	08 44 21.0	+0.2
EIDS				IAmb	IAmb	08 44 24.7	
	comp=Z,484nm,1.1s						
RIZ	Raoul Island	19.54	139	P	Pn	08 44 33.8	-0.1
RAO	Raoul Island	19.55	139	P	Pn	08 44 33.4	-0.7
	comp=Z,72nm,0.3s,baz=187,slow=5.0,SNR=17						
RAO				S	Sn	08 48 11.3	-3.1
	comp=Z,40nm,0.3s,baz=287,slow=19,SNR=2.6						
RAO	Raoul Island	19.55	139	P	P	08 44 32.5	+1.0
GLKZ	Green Lake	19.56	139	P	Pn	08 44 33.3	-0.9
AFI	Afiamalu	20.18	89	P	Pn	08 44 40.3	-1.3
	comp=Z,478nm,0.9s,baz=40,slow=0.7,SNR=34						
AFI				S	Sn	08 48 25.6	-4.2
	comp=Z,14nm,0.5s,baz=90,slow=20,SNR=3.0						
AFI	Afiamalu	20.18	89	P	Pn	08 44 40.9	-0.7
AFI	Afiamalu	20.18	89	P	Pn	08 44 40.9	-0.7
AFI				pmax	pmax		
	comp=Z,610nm,0.8s						
PMG	Port Moresby	20.58	284	P	P	08 44 42.9	+0.2
	comp=Z,139nm,1.0s,baz=126,slow=4.2,SNR=10						
PMG				S	S	08 48 31.3	+5.1
	comp=Z,9.0nm,0.8s,baz=225,slow=20,SNR=4.1						
PMG				ScP	ScP	08 52 17.6	+3.5
	comp=Z,46nm,1.1s,baz=86,slow=1.6,SNR=5.7						
PMG	Port Moresby	20.58	284	P	P	08 44 42.9	+0.2
PMG				IAmb	IAmb	08 45 04.2	
	comp=Z,250nm,1.1s						
PMG	Port Moresby	20.58	284	*d* iP	P	08 44 42.5	-0.2
PMG				pmax	pmax		
	comp=Z,123nm,1.0s						
CTA	Charters Tower	20.77	253	P	P	08 44 45.4	+0.5
	comp=Z,87nm,0.9s,baz=78,slow=13,SNR=30						
CTA				S	S	08 48 33.8	+3.8
	comp=Z,9.7nm,0.9s,baz=41,slow=20,SNR=6.4						
CTA				PcP	PcP	08 48 50.5	+1.3
	comp=Z,30nm,0.6s,baz=112,slow=4.7,SNR=6.0						
CTA				ScP	ScP	08 52 16.8	+2.3
	comp=Z,28nm,1.0s,baz=328,slow=2.1,SNR=4.5						
CTAO	Charters Tower	20.77	253	P	Pn	08 44 46.8	-1.7
CTAO				pmax	pmax		
	comp=Z,177nm,1.4s						
RMQ	Roma	20.78	234	P	P	08 44 46.2	+1.4
	baz=21,SNR=89						
OUZ	Omahuta	20.81	166	P	P	08 44 45.3	+0.3
ARMA	Armidale	21.06	221	P	P	08 44 49.1	+1.3
	baz=21,SNR=52						
ARMA	Armidale	21.06	221	P	P	08 44 49.6	+1.8
ARMA					S	08 48 41.3	+5.8
NIUE	Niue	22.02	104	P	P	08 44 58.0	0.0
	baz=22,SNR=32						
NIUE	Niue	22.02	104	P	P	08 44 58.4	+0.4
MTSU	Mount Surprise	22.34	259	P	P	08 45 01.3	0.0
	baz=22,SNR=47						
MGCD	Mangrove Creek	23.34	216	P	P	08 45 11.7	+1.0
	baz=23,SNR=69						
COEN	Coen	23.49	270	P	P	08 45 12.7	+0.4
	baz=24,SNR=17						
COEN	Coen	23.49	270	P	P	08 45 13.8	+1.5
COEN				PcP	PcP	08 48 56.4	+1.7
PATS	Pohnpei	23.57	337	P	P	08 45 13.9	+1.0
	baz=24,SNR=14						
PATS	Pohnpei	23.57	337	P	P	08 45 14.6	+1.6
PATS				PcP	PcP	08 48 57.4	+2.6
MANU	Manus Island	23.64	301	P	P	08 45 13.5	-0.1
TOZ	Tahuroa Road	23.68	164	P	P	08 45 14.7	+1.0
RIV	Riverview	23.76	215	P	P	08 45 15.5	+1.0
	baz=24,SNR=35						
RIV	Riverview	23.76	215	P	P	08 45 15.8	+1.3
RIV				pmax	pmax		
	comp=Z,2µm,0.9s						
TGRZ	Tauranga	23.89	162	P	P	08 45 17.8	+2.2
KNTN	Kanton	23.93	61	P	P	08 45 15.4	-0.8
KNTN				IAmb	IAmb	08 45 19.8	
	comp=Z,236nm,1.1s						
OPRZ	Ohinepanea	24.08	162	P	P	08 45 21.3	+4.0
HIZ	Hauiti	24.25	166	P	P	08 45 21.2	+2.3
HAZ	Te Kaha	24.39	160	P	P	08 45 21.0	+0.9
HAZ				S	S	08 49 32.5	+1.8
MXZ	Matakaoa Point	24.39	159	P	P	08 45 19.9	-0.3
MXZ	Matakaoa Point	24.39	159	P	P	08 45 20.5	+0.4
MXZ				S	S	08 49 28.6	-2.2
QLP	Quilpie	24.46	238	P	P	08 45 21.2	+0.2
	baz=24,SNR=65						
RUGZ	Raukumara Rang	24.54	160	P	P	08 45 21.8	+0.1
RUGZ				S	S	08 49 29.9	-3.6
URZ	Urewera	24.63	161	P	P	08 45 23.2	+0.8
	comp=Z,1µm,0.9s,baz=14,slow=4.8,SNR=66						
URZ				S	S	08 49 34.9	+0.3
	comp=Z,44nm,0.5s,baz=355,slow=23,SNR=11						
URZ				LR	LR	08 53 43.4	
	comp=Z,20µm,18.9s,baz=344,slow=33						
URZ	Urewera	24.63	161	P	P	08 45 22.9	+0.6
URZ	Urewera	24.63	161	P	P	08 45 22.4	0.0
URZ				S	S	08 49 33.9	-0.7
WMGZ	Waiomatatini S	24.66	159	P	P	08 45 22.5	-0.1
WMGZ				S	S	08 49 33.2	-1.9
MUGZ	Murupara	24.73	162	P	P	08 45 23.8	+0.5
MUGZ				S	S	08 49 37.8	+1.6
MWZ	Matawai	24.83	161	P	P	08 45 24.2	-0.1
MWZ				S	S	08 49 34.8	-3.1
PUZ	Puketiti	24.83	159	P	P	08 45 23.6	-0.6
PUZ				S	S	08 49 33.4	-4.5
RTZ	Ruatahuna	24.92	162	P	P	08 45 25.1	0.0
RTZ				S	S	08 49 38.2	-1.1
RAGZ	Rawiri	24.94	161	P	P	08 45 26.5	+1.2
RAGZ				S	S	08 49 37.2	-2.6
TKGZ	Te Karaka	25.03	160	P	P	08 45 26.3	+0.4
BKZ	Black Stump Fm	25.29	163	P	P	08 45 28.1	-0.3
YNG	Young	25.70	218	P	P	08 45 32.7	+0.5
	baz=26,SNR=38						
CMSA	Cobar Meteorol	25.74	227	P	P	08 45 32.4	-0.1
	baz=26,SNR=113						
CNB	Canberra Magne	25.86	216	P	P	08 45 34.0	+0.4
	baz=26,SNR=67						
CAN	Canberra	26.07	216	IAmb	IAmb	08 45 39.2	
	comp=Z,563nm,1.5s						
CAN	Canberra	26.07	216	P	P	08 45 37.6	+2.1
CAN				pmax	pmax		
	comp=Z,200nm,1.4s						
SNZO	South Karori	26.89	168	P	P	08 45 42.9	+0.2
QIS	Mount Isa	27.01	254	P	P	08 45 44.4	+0.3
	baz=27,SNR=19						
MILA	Mila	27.25	213	P	P	08 45 47.2	+1.1
	baz=27,SNR=14						
KHZ	Kahutara	27.75	170	IAmb	IAmb	08 45 52.8	
	comp=Z,338nm,0.9s						
RPZ	Rata Peaks	28.71	175	P	P	08 45 59.3	+0.4
	comp=Z,462nm,0.8s,baz=316,slow=1.3,SNR=71						
RPZ				S	S	08 50 39.5	+0.6
	comp=Z,76nm,1.3s,baz=237,slow=19,SNR=6.5						
RPZ				ScP	ScP	08 52 39.8	+3.5
	comp=Z,14nm,0.7s,baz=4.3,slow=8.7,SNR=5.3						
RPZ	Rata Peaks	28.71	175	P	P	08 45 58.7	-0.3
RPZ					ScP	08 52 38.2	+1.9
STKA	Stephens Creek	28.88	230	P	P	08 46 01.0	+0.4
	baz=29,SNR=138						
STKA	Stephens Creek	28.88	230	P	P	08 46 01.1	+0.4
	comp=Z,206nm,0.7s,baz=43,slow=7.8,SNR=147						
STKA				PcP	PcP	08 49 07.8	+0.9
	comp=Z,142nm,0.7s,baz=43,slow=2.4,SNR=15						
STKA				ScP	ScP	08 52 40.1	+3.0
	comp=Z,26nm,0.7s,baz=47,slow=4.2,SNR=10.0						
STKA	Stephens Creek	28.88	230	P	P	08 46 01.0	+0.4
STKA				IAmb	IAmb	08 46 04.6	
	comp=Z,119nm,1.1s						
STKA				PcP	PcP	08 49 07.7	+0.7
STKA				ScP	ScP	08 52 39.4	+2.4
MQZ	McQueen's Vall	28.88	172	P	P	08 45 58.8	-1.6
MQZ					PcP	08 49 07.0	+0.3
TOO	Toolangi	29.66	217	P	P	08 46 07.6	+0.2
	baz=30,SNR=45						
PYZ	Puysegur Point	31.00	181	IAmb	IAmb	08 46 27.2	
	comp=Z,282nm,1.2s						
SMPI	Sarmi	31.16	292	P	P	08 46 25.1	+4.2
	comp=Z,49µmcomp=Z,3µmcomp=Z,198nm,1.4s						
HTT	Hallett	31.60	230	P	P	08 46 24.9	+0.2
	baz=32,SNR=136						
WR0	Warramunga Arr	31.69	256	P	P	08 46 24.8	-0.8
WR0				IAmb	IAmb	08 46 31.4	
	comp=Z,78nm,0.9s						
WR0				PcP	PcP	08 49 15.6	+1.0
RAR	Rarotonga	31.73	106	P	P	08 46 26.9	+1.1
	comp=Z,348nm,1.0s,baz=248,slow=6.0,SNR=32						
RAR	Rarotonga	31.73	106	P	P	08 46 26.5	+0.7
WB0	Warramunga Arr	31.82	257	IAmb	IAmb	08 46 32.4	
	comp=Z,220nm,1.2s						
WB2	Warramunga Arr	31.87	256	IAmb	IAmb	08 46 29.0	
	comp=Z,281nm,1.6s						
WRAB	Tennant Creek	31.87	256	P	P	08 46 27.8	+0.7
WRAB				IAmb	IAmb	08 46 29.0	
	comp=Z,286nm,1.8s						
WRAB					PcP	08 49 15.7	+0.6
WRAB	Tennant Creek	31.87	256	*c* iP	P	08 46 26.0	-1.1
WRAB				pmax	pmax		
	comp=Z,57nm,1.2s						
WRA	Warramunga Arr	31.88	256	P	P	08 46 25.9	-1.3
	comp=Z,28nm,0.6s,baz=86,slow=8.7,SNR=38						
WRA				PcP	PcP	08 49 15.6	+0.5
	comp=Z,68nm,0.9s,baz=82,slow=3.0,SNR=13						
WRA				S	S	08 51 25.6	-3.5
	comp=Z,26nm,1.3s,baz=87,slow=15,SNR=8.6						
WRA				ScP	ScP	08 52 49.5	+2.3
	comp=Z,30nm,1.0s,baz=86,slow=3.4,SNR=11						
WRA				PKiKP	PKiKP	08 56 41.5	-2.1
	comp=Z,9.3nm,0.8s,baz=351,slow=0.3,SNR=12						
WRA				LR	LR	08 59 31.5	
	comp=Z,40µm,18.4s,baz=85,slow=36						
WRA				P3KPbc		09 18 03.5	
	comp=Z,1.8nm,0.7s,baz=275,slow=3.2,SNR=9.2						
WRA	Warramunga Arr	31.88	256	P	P	08 46 25.0	-2.2
WRA				PcP	PcP	08 49 15.0	-0.1
WRA					ScP	08 52 48.7	+1.5
MOO	Moorlands	32.35	209	P	P	08 46 31.3	+0.3
	baz=32,SNR=39						
TAU	Tasmania Unive	32.66	208	P	P	08 46 35.3	+1.6
TAU					PcP	08 49 17.8	+1.1
TAU	Tasmania Unive	32.66	208	P	P	08 46 35.3	+1.6
TAU						08 49 17.8	
TAU				pmax	pmax		
	comp=Z,466nm,1.2s						
AS31	Alice Springs	32.68	250	IAmb	IAmb	08 46 40.6	
	comp=Z,81nm,1.0s						
ASAR	Alice Springs	32.68	250	P	P	08 46 32.6	-1.6
	comp=Z,164nm,1.0s,baz=78,slow=9.2,SNR=158						
ASAR				PcP	PcP	08 49 17.9	+0.7
	comp=Z,40nm,0.8s,baz=78,slow=2.6,SNR=5.8						
ASAR				S	S	08 51 39.2	-2.3
	comp=Z,7.9nm,1.0s,baz=82,slow=14,SNR=4.5						
ASAR				ScP	ScP	08 52 52.1	+2.2
	comp=Z,34nm,0.9s,baz=89,slow=3.3,SNR=16						
ASAR				PKiKP	PKiKP	08 56 41.8	-2.3
	comp=Z,7.1nm,0.9s,baz=104,slow=1.3,SNR=16						
ASAR				LR	LR	09 00 01.9	
	comp=Z,21µm,18.9s,baz=86,slow=36						
ASAR	Alice Springs	32.68	250	P	P	08 46 35.9	-1.3
ASAR					PcP	08 49 17.2	-0.1
ASAR					ScP	08 52 51.7	+1.8
ASAR	Alice Springs	32.68	250	P	P	08 46 32.9	-1.3
BBOO	Buckleboo	33.48	233	P	P	08 46 41.1	+0.1
	baz=34,SNR=171						
BBOO	Buckleboo	33.48	233	P	P	08 46 40.7	-0.3
BAKI	Biak	33.85	291	P	P	08 46 50.9	+6.5
KDU	Kakadu	33.98	270	P	P	08 46 46.0	+0.5
	baz=34,SNR=25						
MTN	Manton Dam	35.26	269	P	P	08 46 56.5	0.0
	baz=35,SNR=13						
MTN	Manton Dam	35.26	269	IAmb	IAmb	08 47 03.1	
	comp=Z,66nm,0.8s						
RKPI	Ransiki, Papua	35.47	289	P	P	08 47 04.9	+6.6
GUMO	Guam	36.18	321	P	P	08 47 04.0	-0.3
	comp=Z,97nm,0.7s,baz=171,slow=12,SNR=3.9						
GUMO	Guam	36.18	321	P	P	08 47 03.3	-0.9
GUMO	Guam	36.18	321	P	P	08 47 04.0	-0.3
FAKI	Fak Fak	36.70	286	P	P	08 47 11.2	+2.4
	comp=Z,40µmcomp=Z,4µmcomp=Z,248nm,1.1s						
FAKI	Fak Fak	36.70	286	P	P	08 47 08.7	-0.1
KNRA	Kununurra	37.24	264	P	P	08 47 12.6	-0.8
	baz=37,SNR=19						
ANA2	Anatahan	37.87	325	P	P	08 47 18.9	+0.3
WRKA	Warakurna	37.94	249	P	P	08 47 17.9	-1.3
	baz=38,SNR=65						
BNDI	Bandanaira	38.36	282	P	P	08 47 27.1	+4.3
	comp=Z,32µmcomp=Z,18µmcomp=Z,815nm,1.0s						
SIJI	Sorong	38.39	288	P	P	08 47 22.6	-0.4
	comp=Z,82nm,0.8s,baz=77,slow=7.1,SNR=31						
SIJI				S	S	08 53 10.3	+1.4
	comp=Z,4.1nm,0.5s,baz=220,slow=20,SNR=14						
SWI	Sorong	38.40	288	P	P	08 47 25.0	+1.9
	comp=Z,31µmcomp=Z,4µmcomp=Z,271nm,1.1s						
XMAS	Kiritimati	38.71	67	P	P	08 47 27.1	+1.4
JOHN	Johnston Islan	38.95	37	P	P	08 47 30.1	+2.6
FORT	Forrest	39.24	240	P	P	08 47 29.6	-0.4
	baz=39,SNR=108						
MSAI	Masohi	39.66	283	P	P	08 47 37.9	+4.3
	comp=Z,1µmcomp=Z,25nm,0.8s						
MCQ	Macquarie Isla	39.89	188	P	P	08 47 37.0	+2.1
	baz=40,SNR=11						
MCQ	Macquarie Isla	39.89	188	P	P	08 47 35.6	+0.6
MCQ	Macquarie Isla	39.89	188	P	P	08 47 35.5	+0.6
MCQ				pmax	pmax		
	comp=Z,1µm,1.5s						
FITZ	Fitzroy Crossi	40.09	260	P	P	08 47 36.4	-0.7
	baz=40,SNR=66						
FITZ	Fitzroy Crossi	40.09	260	P	P	08 47 37.2	0.0
	comp=Z,164nm,0.8s,baz=101,slow=7.4,SNR=30						
FITZ				ScP	ScP	08 53 18.1	+0.9
	comp=Z,39nm,1.2s,baz=135,slow=1.7,SNR=5.3						
FITZ				S	S	08 53 30.7	-3.7
	comp=Z,10nm,1.1s,baz=211,slow=16,SNR=4.0						
FITZ	Fitzroy Crossi	40.09	260	P	P	08 47 36.9	-0.3
FITZ				IAmb	IAmb	08 47 42.0	
	comp=Z,244nm,1.1s						
FITZ					ScP	08 53 20.3	+3.0
AAI	Ambon	40.24	282	P	P	08 47 45.3	+6.9
PAE	Paea	41.28	100	eP	P	08 47 47.5	+0.6
	comp=Z,473nm,1.1s						
PPT2	Papeete2	41.28	100	eP	P	08 47 47.9	+0.9
	comp=Z,2µm,1.2s						
PPT2				eS	S	08 53 53.0	+0.8
	comp=Z,16µm,25.0s						
PPT2				eLQ	LQ	08 57 36.3	
	comp=Z,36µm,23.0s						
PPT2				eLR	LR	08 59 17.9	
	comp=Z,86µm,31.2s						
PPT	Papeete	41.29	100	P	P	08 47 48.2	+1.2
	comp=Z,2µm,0.9s,baz=322,slow=7.2,SNR=50						
PPT	Papeete	41.29	100	P	P	08 47 49.0	+2.0
PPT	Papeete	41.29	100	P	P	08 47 49.0	+2.0
PPTF	Pamatai, Papee	41.30	100	P	P	08 47 49.0	+1.8
NLAI	Namlea	41.42	282	P	P	08 47 50.4	+2.3
	comp=Z,7µmcomp=Z,417nm,1.5s						
TBI	Tubuai	41.42	108	eP	P	08 47 48.2	+0.2
	comp=Z,517nm,1.0s						
TBI				eS	S	08 53 54.3	+0.4
	comp=Z,14µm,26.8s						
TBI				eLQ	LQ	08 57 38.7	
	comp=Z,31µm,32.2s						
TBI				eLR	LR	08 59 20.1	
	comp=Z,66µm,33.8s						
TIAR	Tiarei	41.51	100	eP	P	08 47 49.7	+0.9
	comp=Z,704nm,1.1s						
TVO	Taravao	41.58	100	eP	P	08 47 50.2	+0.7

comp=Z,642nm,1.1s
LBMI Labuha 41.95 286 P P 08 47 57.6 +5.2
comp=Z,5µmcomp=Z,211nm,1.6s
SOEI Soe 42.42 272 P P 08 48 00.1 +3.7
comp=Z,42µmcomp=Z,4µmcomp=Z,235nm,1.0s
SOEI Soe 42.42 272 P P 08 47 57.0 +0.6
TNTI Ternate 42.61 288 P P 08 48 07.1 +9.3
MEH Mehetia 42.71 100 eP P 08 47 59.2 +0.7
comp=Z,1µm,1.2s
SANI Sanana 42.86 284 P P 08 48 00.5 +0.7
comp=Z,33µmcomp=Z,4µmcomp=Z,255nm,0.9s
PMOR Pomariorio Ree 43.10 96 eP P 08 48 01.9 +0.2
comp=Z,5µm,1.3s
VAH Vaihoa 43.33 96 eP P 08 48 04.6 +1.0
comp=Z,3µm,1.3s
KMBL Kambalda 44.54 240 P P 08 48 12.6 -0.5
baz=44,SNR=51
KDI Kendari 45.45 279 P P 08 48 23.7 +3.3
comp=Z,184nm,1.7s
PSA00 Pilbara Seismi 45.48 254 P P 08 48 20.2 -0.4
PSA00 Pilbara Seismi 45.48 254 IAmb IAmb 08 48 27.5
comp=Z,293nm,1.1s
KMSI Cibinong 45.66 286 P P 08 48 27.6 +5.5
comp=Z,392nm,0.9s
LUWI Luwuk 46.22 283 P P 08 48 30.2 +3.7
comp=Z,32µmcomp=Z,10µmcomp=Z,225nm,2.1s
LUWI Luwuk 46.22 283 P P 08 48 26.9 +0.4
LUWI IAmb IAmb 08 50 07.9
comp=Z,285nm,1.2s
MEEK Meekatharra 46.78 248 P P 08 48 29.9 -0.9
baz=47,SNR=40
DAV Davao City (W) 46.94 295 LR LR 09 08 08.4
comp=Z,3µm,18.0s,baz=86,slow=36
DAV Davao City (W) 46.94 295⇑eP P 08 48 31.5 -0.6
APSI Ampana 47.32 283 P P 08 48 38.1 +3.0
comp=Z,20µmcomp=Z,3µmcomp=Z,110nm,0.9s
BKSI Bulukumba 47.45 277 P P 08 48 37.9 +1.8
comp=Z,28µmcomp=Z,3µmcomp=Z,144nm,1.0s
MRSI Marisa 47.53 285 P P 08 48 40.1 +3.4
comp=Z,27µmcomp=Z,2µmcomp=Z,127nm,1.0s
BNSI Bone 47.72 278 P P 08 48 39.1 +1.0
comp=Z,30µmcomp=Z,3µmcomp=Z,223nm,1.0s
KAPI Kappang 47.89 277 P P 08 48 38.9 -0.6
comp=Z,88nm,0.8s,baz=103,slow=4.6,SNR=31
KAPI PcP PcP 08 50 09.8 +3.6
comp=Z,56nm,0.9s,baz=158,slow=7.3,SNR=3.6
KAPI Kappang 47.89 277 P P 08 48 39.6 +0.1
KAPI IAmb IAmb 08 48 46.6
comp=Z,205nm,0.9s
KAPI Kappang 47.89 277 P P 08 48 39.6 +0.1
KAPI pmax pmax
comp=Z,205nm,0.9s
KLBR Kellerberrin 48.06 241 P P 08 48 39.3 -1.2
baz=48,SNR=44
SPSI Sidrap Palu 48.16 278 P P 08 48 43.1 +1.5
comp=Z,30µmcomp=Z,2µmcomp=Z,91nm,0.8s
TTSI Tana Toraja 48.38 279 P P 08 48 45.9 +2.6
comp=Z,27µmcomp=Z,3µmcomp=Z,114nm,1.0s
NWAO Narrogin (SRO) 48.69 239 P P 08 48 44.5 -0.9
baz=49,SNR=30
NWAO Narrogin (SRO) 48.69 239 P P 08 48 44.7 -0.7
comp=Z,112nm,0.8s,baz=84,slow=7.1,SNR=29
NWAO LR LR 09 10 01.6
comp=Z,18µm,18.5s,baz=82,slow=37
NWAO Narrogin (SRO) 48.69 239 P P 08 48 44.3 -1.1
NWAO Narrogin (SRO) 48.69 239 P P 08 48 44.4 -1.1
NWAO IAmb IAmb 08 48 51.4
comp=Z,248nm,0.9s
BLDU Ballidu 48.82 242 P P 08 48 47.0 +0.6
baz=49,SNR=19
PLAI Plampang 48.88 271 P P 08 48 47.7 +0.6
comp=Z,31µmcomp=Z,4µmcomp=Z,340nm,0.9s
RKGY Rocky Gully 49.19 237 P P 08 48 48.7 -0.4
baz=49,SNR=11
MORW Morawa 49.25 245 P P 08 48 48.7 -1.0
baz=49,SNR=26
MPSI Mapaga 49.39 284 P P 08 48 50.8 -0.2
comp=Z,29µmcomp=Z,4µmcomp=Z,211nm,1.2s
MUN Mundaring 49.42 241 P P 08 48 50.6 -0.3
baz=49,SNR=21
OPA Opana 49.85 44 P P 08 48 55.9 +1.7
OPA Opana 49.85 44 P P 08 48 55.9 +1.7
OPA pmax pmax
comp=Z,1µm,2.0s
KHU Kahuku 49.87 48 P P 08 48 55.9 +1.2
KHU Kahuku 49.87 48 P P 08 48 55.9 +1.2
KHU pmax pmax
comp=Z,322nm,1.4s
AIN Ainahou 50.06 48 P P 08 48 56.6 +0.5
AIN IAmb IAmb 08 49 02.3
comp=Z,197nm,1.0s
HMH Humu'ula Sheep 50.20 48 P P 08 48 59.4 +2.1
HMH IAmb IAmb 08 49 03.9
comp=Z,200nm,1.0s
KHLH Kahului Airpor 50.39 46 IAmb IAmb 08 49 14.4
comp=Z,224nm,1.4s
GIRL Giralia 50.67 253 P P 08 49 00.8 +0.2
baz=51,SNR=9.5
DNP Denpasar 51.39 271 P P 08 49 11.6 +5.6
comp=Z,62µmcomp=Z,29µmcomp=Z,810nm,0.8s
IGBI Denpasar 51.42 271 P P 08 49 09.1 +2.9
comp=Z,14µmcomp=Z,5µmcomp=Z,500nm,1.0s
SRBI Singaraja 51.51 272 P P 08 49 09.8 +2.9
comp=Z,25µmcomp=Z,5µmcomp=Z,138nm,0.9s
RCP Roxas 51.55 298⇑eP P 08 49 08.7 +1.5
TAOE Nuku Hiva Isla 51.57 89 eP P 08 49 08.5 +1.0
comp=Z,2µm,1.2s
TAOE Nuku Hiva Isla 51.57 89 eLQ LQ 09 01 52.6
comp=Z,14µm,32.2s
TAOE eLR LR 09 04 01.5
comp=Z,44µm,35.1s
TAOE Nuku Hiva Isla 51.57 89 P P 08 49 09.6 +2.1
SMKI Samarinda 51.67 282 P P 08 49 15.4 +7.3
KBKI Kotabaru 51.80 278 P P 08 49 12.8 +3.8
comp=Z,2µmcomp=Z,75nm,0.9s
JAGI Jajag, Banyuwa 52.45 271 P P 08 49 15.4 +1.5
comp=Z,27µmcomp=Z,4µmcomp=Z,141nm,0.9s
JAGI Jajag, Banyuwa 52.45 271 IAmb IAmb 08 50 04.1
comp=Z,159nm,1.1s
GMJI Gumukmas 53.18 271 P P 08 49 21.8 +2.6
comp=Z,25µmcomp=Z,2µmcomp=Z,110nm,0.9s
SPMM Sapulut 54.16 287 P P 08 49 30.0 +3.6
NGJI Ngawi 55.30 271 P P 08 49 39.0 +4.4
comp=Z,36µmcomp=Z,6µmcomp=Z,236nm,1.0s
PCJI Pacitan 55.39 270 P P 08 49 36.5 +1.3
comp=Z,24µmcomp=Z,5µmcomp=Z,540nm,1.1s
WOJI Wonogiri, Jawa 55.71 271 P P 08 49 39.7 +2.2
comp=Z,16µmcomp=Z,3µmcomp=Z,201nm,1.1s
UGM Wanagama 56.08 271 P P 08 49 44.9 +4.7
comp=Z,29µmcomp=Z,465nm,1.1s
PBKI Pangkalan Bun 56.27 277 P P 08 49 48.9 +7.3
SMRI Semarang 56.35 272 P P 08 49 47.6 +5.4
comp=Z,31µmcomp=Z,5µmcomp=Z,455nm,1.0s
JOW Kunigami 56.40 317 IAmb IAmb 08 49 49.0
comp=Z,70nm,0.7s
SBUM Sibu 57.32 283 IAmb IAmb 08 49 53.0
comp=Z,276nm,2.0s
SBUM Sibu 57.32 283 P P 08 49 50.0 +1.0
KPJI Karang Pucung 57.75 271 P P 08 49 53.4 +1.5
comp=Z,32µmcomp=Z,4µmcomp=Z,367nm,0.8s
INU Inuyama 57.84 331 P P 08 49 53.0 +0.9
INU IAmb IAmb 08 49 55.2
comp=Z,325nm,1.8s
CMJI Cimerak 58.11 270 P P 08 49 56.3 +1.8
comp=Z,35µmcomp=Z,4µmcomp=Z,223nm,0.9s
MJAR Matsushiro Arr 58.28 332 P P 08 49 53.2 -2.0
comp=Z,12nm,0.6s,baz=161,slow=8.1,SNR=21
MJAR LR LR 09 12 40.1
comp=Z,2µm,21.9s,baz=170,slow=34
MJAR PKP2bc 09 19 42.1
comp=Z,3.4nm,0.8s,baz=332,slow=2.3,SNR=5.6
MJAR Matsushiro Arr 58.28 332 P P 08 49 52.3 -2.9
MAJO Matsushiro 58.28 332 P P 08 49 54.9 -0.3
MAJO IAmb IAmb 08 50 02.6
comp=Z,288nm,1.7s
MAJO Matsushiro 58.28 332 P P 08 49 54.9 -0.3
MAJO pmax pmax
comp=Z,288nm,1.7s
MAT Matsushiro 58.28 332 P P 08 49 53.5 -1.7
MAT S S 08 57 43.6 -4.2
MJB9 Matsu-Tunnel 58.28 332 IAmb IAmb 08 50 02.5
comp=Z,281nm,1.7s
YOJ Yonaguni jima 58.50 312 P P 08 49 57.5 +0.6
YOJ Yonaguni jima 58.50 312 P P 08 49 57.5 +0.6
YOJ pmax pmax
comp=Z,119nm,0.7s
CISI Cisompet, Garu 58.77 270 P P 08 50 01.0 +1.8
comp=Z,25µmcomp=Z,7µmcomp=Z,422nm,1.1s
KSM Kuching 58.81 281 P P 08 50 02.0 +2.6
YULB Yu-li 59.12 310 IAmb IAmb 08 50 08.9
comp=Z,60nm,1.1s
LEM Lembang 59.13 271 P P 08 50 01.9 +0.2
comp=Z,361nm,0.9s,baz=72,slow=7.7,SNR=30
JNU Nakatsue 59.28 324 IAmb IAmb 08 50 07.8
comp=Z,74nm,0.7s
NACB Ninganchiao 59.36 310 IAmb IAmb 08 50 10.0
comp=Z,83nm,0.8s
CNJI Cibinong 59.49 270 P P 08 50 05.9 +1.9
comp=Z,4µmcomp=Z,396nm,0.9s
TPUB Ta-pu 59.57 309 IAmb IAmb 08 50 10.0
comp=Z,97nm,0.8s
SSLB Suanglung 59.61 310 IAmb IAmb 08 50 09.9
comp=Z,61nm,0.9s
TATO Taipei 59.92 311 P P 08 50 07.3 +0.6
CBJI Citeko 59.97 271 P P 08 50 12.3 +5.0
comp=Z,483nm,0.6s
DBJI Dramaga 60.03 271 P P 08 50 09.5 +1.7
comp=Z,359nm,1.0s
TPI Tanjungpandan 60.12 276 P P 08 50 10.6 +2.3
comp=Z,2µmcomp=Z,126nm,0.9s
SKJI Sukabumi 60.12 271 P P 08 50 12.7 +4.4
comp=Z,20µmcomp=Z,6µmcomp=Z,604nm,0.8s
ERM Erimo 61.06 340⇑eP P 08 50 12.9 -1.2
ERM pmax pmax
comp=Z,79nm,1.5s
BLSI Bandar Lampung 61.77 272 P P 08 50 22.9 +3.4
comp=Z,16µmcomp=Z,4µmcomp=Z,291nm,0.7s
KNMB Chin-men Tao 61.92 309 P P 08 50 20.9 +0.6
KNMB IAmb IAmb 08 50 23.6
comp=Z,156nm,1.6s
YUK Yuzh-Kuril'sk 62.03 343 eP P 08 50 21.5 +0.9
YUK i 08 51 01.2
YUK 08 52 41.8
YUK iS S 08 58 36.8 +1.4
YUK pmax pmax
comp=Z,294nm,1.5s
YUK pmax pmax
comp=N,143nm,1.1s
YUK pmax pmax
comp=E,319nm,1.0s
YUK pmax pmax
comp=Z,471nm,1.9s
QZH Quanzhou 62.03 309⇑iP P 08 50 21.6 +0.6
QZH pP pP 08 50 53.1 +2.2
QZH S S 08 58 34.7 -1.4
QZH pmax pmax
comp=Z,79nm,1.7s
QZH pmax pmax
comp=Z,2µm,9.2s
QZH LR LR
comp=Z,5µm,21.8s
QZH LR LR
comp=Z,4µm,21.3s
QZH LR LR
comp=Z,9µm,33.6s
KLSI 62.43 273 P P 08 50 24.5 +0.6
comp=Z,853nmcomp=Z,28nm,2.0s
KASI Kota Agung 62.45 272 P P 08 50 25.3 +1.2
comp=Z,19µmcomp=Z,5µmcomp=Z,344nm,1.0s
VNDA Vanda 62.52 181 P P 08 50 24.7 +1.2
comp=Z,105nm,0.8s,baz=359,slow=7.5,SNR=48
VNDA LR LR 09 15 49.6
comp=Z,4µm,18.2s,baz=40,slow=34
VNDA Vanda 62.52 181 P P 08 50 24.5 +1.0
KUR Kuril'sk 62.59 345⇑iP P 08 50 23.9 -0.4
KUR iS S 08 58 38.6 -3.7
KUR pmax pmax
comp=E,65nm,1.7s
KUR pmax pmax
comp=Z,268nm,1.7s
KUR pmax pmax
comp=N,171nm,1.6s
KUR pmax pmax
comp=Z,2µm,8.1s
PMBI Palembang 62.84 274 P P 08 50 33.3 +6.6
comp=Z,22µmcomp=Z,37µmcomp=Z,609nm,0.7s
LWLI Liwa 63.00 272 P P 08 50 29.7 +1.9
comp=Z,16µmcomp=Z,187nm,0.8s
MDSI Maura Dua 63.02 273 P P 08 50 27.7 -0.1
comp=Z,2µmcomp=Z,139nm,1.2s
JKA Kamikawa-asahi 63.11 340 P P 08 50 28.0 +0.2
ASAJ Asahikawa 63.12 340 P P 08 50 28.0 +0.2
comp=Z,33nm,0.6s,baz=234,slow=8.7,SNR=5.4
CASY Casey 63.26 202 P P 08 50 29.0 +0.5
TJN Taejon 63.63 325⇓eP P 08 50 31.9 +0.5
HKC Hong Kong Obse 64.03 304 ⇑P P 08 50 37.0 +2.7
HKPS Hong Kong Po S 64.05 304 IAmb IAmb 08 50 42.5
comp=Z,119nm,0.9s
KSRS Korea Array 64.11 326 P P 08 50 33.5 -1.0
comp=Z,8.1nm,0.7s,baz=139,slow=6.5,SNR=15
KSRS LR LR 09 15 53.5
comp=Z,3µm,20.4s,baz=122,slow=34
KSRS PKPKPKP P'P'df 09 19 24.1 +0.3
comp=Z,0.7nm,0.4s,baz=12,slow=22,SNR=3.5
KSAR Wonju Array Be 64.12 326 P P 08 50 33.7 -0.8
KSAR Wonju Array Be 64.12 326 P P 08 50 33.7 -0.8
KSI Kapahiang 64.76 273 P P 08 50 40.7 +1.4
comp=Z,16µmcomp=Z,191nm,0.8s
INCN Inchon 64.83 325 P P 08 50 41.4 +2.2
INCN PcP 08 51 12.3 +0.7
INCN Inchon 64.83 325 P P 08 50 41.4 +2.2
INCN 08 51 12.3
INCN pmax pmax
comp=Z,433nm,2.0s
MYKOM Kota Tinggi 65.05 279 P P 08 50 41.6 +0.5
MYKOM IAmb IAmb 08 50 44.8
comp=Z,302nm,1.7s
MYKOM Kota Tinggi 65.05 279 P P 08 50 44.0 +2.9
GZH Guangzhou 65.09 305 P P 08 50 42.9 +1.8
GZH pP pP 08 51 11.1 -0.2
GZH S S 08 59 14.5 +0.4
GZH pmax pmax
comp=Z,3µm,6.7s
YSS Yuzh-Sakhalins 65.60 342 P P 08 50 44.8 +0.9
YSS IAmb IAmb 08 50 51.5
comp=Z,148nm,1.0s
YSS Yuzh-Sakhalins 65.60 342αiP P 08 50 45.0 +1.1
YSS e*PP pP 08 51 13.9 +0.1
YSS e 08 51 17.2
YSS e 08 53 06.1
YSS ePPP PPP 08 54 45.8
YSS eS S 08 59 19.4 0.0
YSS ePS PnS 08 59 43.0 -15
YSS eSSS SSS 09 06 37.0
YSS pmax pmax
comp=Z,4µm,9.3s
YSS pmax pmax
comp=N,1µm,9.6s
YSS pmax pmax
comp=E,500nm,4.7s
YSS pmax pmax
comp=N,40nm,1.0s
YSS pmax pmax
comp=Z,140nm,1.0s
YSS pmax pmax
comp=E,60nm,0.9s
YSS smax smax
comp=E,2µm,8.9s
YSS smax smax
comp=N,5µm,10.5s
YSS MLR MLR
comp=Z,3µm,15.0s
YSS MLR MLR
comp=N,2µm,16.0s
NJ2 Nanjing 66.02 316 eP P 08 50 47.7 +0.8
NJ2 pP PcP 08 51 16.0 -0.6
NJ2 S S 08 59 26.2 +1.1
NJ2 sS sS 09 00 15.1 0.0
NJ2 pmax pmax
comp=N,59nm,1.1s
NJ2 pmax pmax
comp=N,3µm,6.4s
NJ2 LR LR
comp=N,5µm,18.7s
NJ2 LR LR
comp=N,3µm,16.8s
NJ2 LR LR
comp=N,7µm,20.8s
QIZ Qiongzhong 66.03 299 P P 08 50 47.0 -0.3
QIZ pP PcP 08 51 16.0 -0.9
QIZ S S 08 59 26.2 +0.5
QIZ SS SS 09 03 41.7 -2.0
QIZ pmax pmax
comp=N,2µm,6.7s
QIZ Qiongzhong 66.03 299 IAmb IAmb 08 50 54.8
comp=Z,91nm,0.9s
TEY Ternei 66.05 337⇓eP P 08 50 46.0 -0.8
TEY e 08 59 24.7
TEY pmax pmax
comp=Z,300nm,9.4s
TEY pmax pmax
comp=E,200nm,10.0s
TEY pmax pmax
comp=N,400nm,11.6s
TEY MLR MLR
comp=N,100nm,19.0s
SKR Severo-Kuril's 66.22 352 eP P 08 50 45.7 -2.1
SKR e*PP PcP 08 51 14.9 -2.0
SKR eS S 08 59 30.9 +4.1
SKR pmax pmax
comp=Z,126nm,1.6s
SKR pmax pmax
comp=Z,2µm,12.3s
SKR pmax pmax
comp=Z,3µm,11.7s
SKR MLR MLR
comp=Z,2µm,18.0s
MSHR Mys Shultsa 66.36 332ceP P 08 50 50.0 +1.2
VLA Vladivostok 66.45 332ceP P 08 50 51.6 +2.2
VLA pmax pmax
comp=Z,125nm,1.7s
JRMM Jerantut 66.99 281 P P 08 50 54.0 +0.5
USA0B Ussuriysk Arra 67.26 333c iP P 08 50 53.8 -0.7
USRK Ussuriysk Ar. 67.26 333 P P 08 50 54.6 +0.1
comp=Z,21nm,0.7s,baz=137,slow=4.2,SNR=45
USRK PKPPKP P'P'df 09 19 18.4 +0.2
comp=Z,1.6nm,0.9s,baz=45,slow=3.0,SNR=6.6
USRK Ussuriysk Ar. 67.26 333 P P 08 50 54.3 -0.3
BKNI Bangkinang 67.32 277 P P 08 50 58.0 +2.4
comp=Z,24µmcomp=Z,7µmcomp=Z,425nm,0.9s
BKNI Bangkinang 67.32 277 P P 08 50 55.7 +0.1
PPSI Pulau Pagai 67.47 273 P P 08 51 03.1 +6.5
comp=Z,7µmcomp=Z,519nm,1.0s
PDSI Padang 67.53 275 P P 08 50 57.7 +0.7
comp=Z,9µmcomp=Z,3µmcomp=Z,52nm,1.0s
PET Petropavlovsk 68.24 354 eP P 08 51 00.6 +0.1
PET eS S 08 59 52.2 +1.3
PET e*SS SKiKP 09 00 43.0 +0.3
PET pmax pmax
comp=Z,75nm,1.3s
PET pmax pmax
comp=Z,3µm,16.2s
PET pmax pmax
comp=Z,3µm,15.7s
WHN Wuhan 68.28 312 ⇓P P 08 51 00.5 -0.7
WHN sP sP 08 51 42.1 -2.8
WHN S S 08 59 46.7 -5.6
WHN LR LR
comp=Z,7µm,13.4s
WHN LR LR
comp=Z,8µm,13.0s
WHN LR LR
comp=Z,16µm,22.7s
PEA0B Petropavlovsk- 68.42 354ceP P 08 51 02.8 +1.2
PETK Petropavlovsk- 68.42 354 P P 08 51 01.2 -0.4
comp=Z,18nm,0.9s,baz=136,slow=3.0,SNR=14
PETK PKPPKP P'P'df 09 19 17.0 +1.5
comp=Z,6.0nm,1.0s,baz=68,slow=28,SNR=5.5
PETK Petropavlovsk- 68.42 354 P P 08 51 01.1 -0.5
IPM Ipoh 68.55 281 P P 08 51 04.0 +0.7
MDJ Mudanjiang 68.65 332 P P 08 51 02.9 -0.4
MDJ pP pP 08 51 30.8 -2.8
MDJ sP sP 08 51 42.7 -4.2
MDJ S S 09 00 00.0 +3.9
MDJ sS SKSac 09 00 50.0 -0.7
MDJ ScS ScS 09 00 53.0 +1.4
MDJ SS SS 09 04 28.7 +5.2
MDJ pmax pmax
comp=Z,140nm,1.7s
MDJ pmax pmax
comp=Z,4µm,7.4s
MDJ Mudanjiang 68.65 332 IAmb IAmb 08 51 10.5
comp=Z,185nm,0.9s
DL2 Dalian 68.66 323 P P 08 51 01.8 -1.6
DL2 pP PcP 08 51 30.2 +2.7
DL2 S S 08 59 55.9 -0.5
DL2 pmax pmax
comp=Z,120nm,0.8s
DL2 pmax pmax
comp=Z,2µm,8.8s
SISI Saibi 68.74 275 P P 08 51 06.8 +2.3
comp=Z,12µmcomp=Z,3µmcomp=Z,70nm,1.2s
TYV Tymovskoe 69.15 344 eP P 08 51 07.7 +1.5
TYV eS S 09 00 03.5 +1.8
TYV pmax pmax
comp=Z,78nm,1.9s
TYV pmax pmax
comp=Z,2µm,6.7s
TYV smax smax
comp=N,1µm,3.5s
KULM Kulim 69.16 282 P P 08 51 07.0 -0.1
TIA Tai'an 69.69 318 P P 08 51 08.6 -1.3
TIA S S 09 00 08.3 -0.4
TIA pmax pmax
comp=N,46nm,1.3s
TIA pmax pmax
comp=N,2µm,6.3s
TIA LR LR
comp=N,6µm,20.3s
TIA LR LR
comp=N,4µm,18.8s
TIA LR LR
comp=N,7µm,20.1s
CN2 Changchun 70.02 329 ⇑P P 08 51 11.2 -0.5
CN2 epP pP 08 51 43.0 +0.9
CN2 pmax pmax
comp=N,13µm,8.0s
CN2 LR LR
comp=N,4µm,17.0s
CN2 LR LR
comp=N,4µm,17.0s
CN2 LR LR
comp=N,2µm,18.0s
RPSI Rantau Prapat 70.02 279 P P 08 51 10.7 -1.7
RPSI IAmb IAmb 08 51 18.6
comp=Z,154nm,0.9s
PSI Prapat 70.05 279 P P 08 51 10.7 -2.0
PSI pmax pmax
comp=Z,154nm,0.9s
GRNR Gornyy 70.97 340⇓iP P 08 51 19.0 +1.7
GRNR eS S 09 00 26.6 +3.6
GRNR eSS SS 09 04 57.6 -1.3
GRNR pmax pmax
comp=Z,120nm,1.7s
GRNR smax smax
comp=E,3.0nm,1.3s
KLR Kul'dur 71.38 336 P P 08 51 20.1 +0.3
comp=E,29nm,0.7s,baz=137,slow=5.8,SNR=80
KLR Kul'dur 71.38 336⇑eP P 08 51 19.1 -0.7
KLR i *PP pP 08 51 48.5 -1.7
KLR pmax pmax
comp=Z,248nm,1.4s
ENH Enshi 71.69 309 IAmb IAmb 08 51 28.9
comp=Z,223nm,1.0s
NKL Nikolayevsk 71.74 343 eP P 08 51 21.8 -0.1
NKL e 08 51 54.2
NKL eS S 09 00 30.3 -1.4
NKL pmax pmax
comp=Z,82nm,1.8s
NKL pmax pmax
comp=Z,241nm,11.7s
NKL smax smax
comp=E,10.0nm,5.6s
NKL smax smax
comp=N,16nm,6.6s
GYA Guiyang 72.03 305⇑iP P 08 51 23.9 -0.5
GYA pP pP 08 51 56.2 +1.2
GYA PP PP 08 54 03.9 -2.3
GYA S S 09 00 36.8 +0.4
GYA SS SS 09 05 19.3 +3.0
GYA pmax pmax
comp=N,100nm,0.9s
GYA pmax pmax
comp=N,2µm,7.4s
GYA LR LR
comp=N,6µm,17.4s
GYA LR LR
comp=N,5µm,18.6s

GYA LR LR
comp=N,7µm,20.9s
SLVN Son La **72.05 299** IAmb IAmb 08 51 28.8
comp=Z,182nm,1.6s
SNSI Sinabang, Aceh **72.42 277** P **P** **08 51 29.4 +2.6**
comp=Z,28µmcomp=Z,5µmcomp=Z,268nm,0.9s
BJT Baijiatuau **72.61 321** IAmb IAmb 08 51 34.3
comp=Z,69nm,1.0s
BJI Beijing **72.62 321** P **P** **08 51 27.0 -0.4**
BJI pP **pP** **08 51 56.4 -1.6**
BJI S **S** **09 00 42.6 +0.3**
BJI sS **sS** **09 01 29.0 -4.5**
BJI pmax pmax
comp=Z,3µm,8.0s
BJI LR LR
comp=Z,7µm,13.9s
BJI LR LR
comp=Z,4µm,19.7s
BJI LR LR
comp=Z,10µm,39.6s
LHMI Lhok Sumawe **72.65 280** P **P** **08 51 31.9 +3.7**
comp=Z,24µmcomp=Z,5µmcomp=Z,226nm,0.9s
PBKT Sadao Pong **72.73 293** P **P** **08 51 28.9 +0.3**
PBKT IAmb IAmb 08 51 32.8
comp=Z,160nm,1.3s
MLSI Meulaboh, Aceh **72.88 279** P **P** **08 51 29.5 -0.1**
comp=Z,18µmcomp=Z,6µmcomp=Z,555nm,1.1s
TIY Taiyuan **73.61 317** *e*P **P** **08 51 33.7 +0.3**
TIY pP **pP** **08 52 06.2 +2.0**
TIY S **S** **09 00 53.8 0.0**
TIY pmax pmax
comp=Z,470nm,1.9s
TIY pmax pmax
comp=Z,2µm,7.4s
TIY LR LR
comp=Z,6µm,22.2s
TIY LR LR
comp=Z,3µm,16.5s
TIY LR LR
comp=Z,11µm,31.7s
XAN Xi'an **74.03 313** P **P** **08 51 35.4 -0.5**
XAN PcP **PcP** **08 51 51.5 +1.0**
XAN PP **PP** **08 54 20.7 -2.3**
XAN S **SKiKP** **09 00 48.8 -3.2**
XAN ScS **SKKSac** **09 01 32.1 -0.1**
XAN SS **SS** **09 05 44.2 -2.2**
XAN pmax pmax
comp=Z,120nm,0.8s
XAN pmax pmax
comp=Z,3µm,11.8s
XAN LR LR
comp=Z,5µm,24.0s
XAN LR LR
comp=Z,4µm,26.0s
XAN LR LR
comp=Z,7µm,27.5s
XAN Xi'an **74.03 313** IAmb IAmb 08 51 42.6
comp=Z,95nm,0.8s
KMI Kunming **74.61 302** P **P** **08 51 39.9 +0.2**
KMI pP pP 08 52 14.4 +3.9
KMI sP sP **08 52 24.0 +0.2**
KMI S **S** **09 01 04.2 -1.6**
KMI sS sS 09 01 59.2 +1.7
KMI pmax pmax
comp=Z,170nm,1.6s
KMI pmax pmax
comp=Z,3µm,7.6s
KMI LR LR
comp=Z,3µm,28.8s
KMI LR LR
comp=Z,2µm,27.0s
KMI LR LR
comp=Z,8µm,44.7s
KMI Kunming **74.61 302** IAmb IAmb 08 51 44.0
comp=Z,136nm,0.9s
QSPA South Pole Qui **74.95 180** P **P** **08 51 40.4 -0.5**
comp=Z,738nm,1.0s,baz=359,slow=0.9,SNR=399
QSPA South Pole Qui **74.95 180** P **P** **08 51 40.1 -0.7**
CM31 Chiang Mai Arr **75.22 294** P **P** **08 51 43.4 +0.3**
CM31 IAmb IAmb 08 51 47.4
comp=Z,110nm,1.1s
CMAR Chiang Mai Arr **75.22 294** P **P** **08 51 43.4 +0.3**
comp=Z,30nm,0.9s,baz=123,slow=3.8,SNR=42
CMAR PKPPKP **P'P'df** **09 19 06.1 -1.0**
comp=Z,0.9nm,0.4s,baz=126,slow=26,SNR=3.1
CMAR LR LR 09 25 58.3
comp=Z,1µm,18.7s,baz=105,slow=37
CHTO Chiang Mai **75.35 294** P **P** **08 51 43.8 0.0**
CHTO IAmb IAmb 08 51 47.8
comp=Z,364nm,1.6s
CHTO Chiang Mai **75.35 294** P **P** **08 51 43.8 0.0**
CHTO pmax pmax
comp=Z,364nm,1.6s
MA2 Magadan **75.61 351** P **P** **08 51 44.8 +0.4**
comp=Z,34nm,0.8s,baz=148,slow=7.6,SNR=11
MA2 Magadan **75.61 351** P **P** **08 51 44.8 +0.4**
MA2 IAmb IAmb 08 51 50.2
comp=Z,74nm,0.8s
MA2 Magadan **75.61 351** *c i*P **P** **08 51 44.9 +0.5**
MA2 pmax pmax
comp=Z,88nm,0.9s
HHC Hu-ho-hao-te **75.94 320** *e*P **P** **08 51 46.8 0.0**
HHC pP pP 08 52 19.8 +2.1
HHC sP sP 08 52 32.7 +1.8
HHC S **S** **09 01 19.7 0.0**
HHC pmax pmax
comp=Z,41nm,1.2s
HHC pmax pmax
comp=Z,1µm,5.9s
HHC LR LR
comp=Z,2µm,18.4s
HHC LR LR
comp=Z,2µm,20.8s
HHC LR LR
comp=Z,7µm,21.2s
CMBY CAMPBELL BAY **76.05 281** *e*P **P** **08 51 46.7 -1.1**
CD2 Chengdu **76.33 308** P **P** **08 51 49.0 -0.2**
CD2 pP pP 08 52 16.4 -3.8
CD2 sP sP 08 52 29.4 -4.0
CD2 PP **PP** **08 54 42.0 -0.6**
CD2 S **S** **09 01 20.0 -4.2**
CD2 SKS **SKKSac** **09 01 49.9 +0.1**
CD2 SS **SS** **09 06 22.5 +1.1**
CD2 pmax pmax
comp=Z,170nm,0.8s
CD2 pmax pmax
comp=Z,5µm,9.7s
CD2 LR LR
comp=Z,5µm,19.9s
CD2 LR LR
comp=Z,5µm,17.1s
CD2 LR LR
comp=Z,12µm,22.8s
HIA Hailar **76.66 330** IAmb IAmb 08 51 56.7
comp=Z,65nm,0.9s
ZEA Zeya **76.67 337** *e*P **P** **08 51 52.0 +1.5**
ZEA *e* 08 52 24.0
ZEA *e* 08 54 46.0
ZEA *e*S **S** **09 01 27.0 +0.2**
ZEA *e*PS PnS 09 01 59.0 -23
ZEA pmax pmax
comp=N,330nm,2.0s
ZEA pmax pmax
comp=E,130nm,2.0s
ZEA pmax pmax
comp=Z,590nm,2.0s
ZEA pmax pmax
comp=E,800nm,10.0s
ZEA pmax pmax
comp=Z,3µm,10.0s
ZEA pmax pmax
comp=N,800nm,9.0s
ZEA pmax pmax
comp=Z,600nm,10.0s
ZEA smax smax
comp=N,7µm,13.0s
ZEA smax smax
comp=Z,2µm,13.0s
BTO Baotou **76.78 319** *e*P **P** **08 51 51.3 -0.3**
BTO S **S** **09 01 20.3 -8.5**
BTO LR LR
comp=Z,4090µm,18.4s
BTO LR LR
comp=Z,1145µm,13.1s
PBA Port Blair **78.56 285** *e*P P 08 52 02.1 +0.3
PBA IAmb IAmb 08 52 08.5

comp=Z,105nm,0.4s
SEY Seymchan **78.64 353**⇓*e*P **P** **08 52 00.8 -0.4**
LZH Lanzhou **78.66 312** ⇑P **P** **08 52 02.8 +0.6**
LZH pP pP 08 52 35.0 +1.7
LZH S **S** **09 01 51.1 +1.7**
LZH sS sS 09 02 42.2 +1.1
LZH pmax pmax
comp=Z,190nm,1.8s
LZH pmax pmax
comp=Z,4µm,4.9s
LZH LR LR
comp=Z,3µm,17.1s
LZH LR LR
comp=Z,3µm,18.0s
LZH LR LR
comp=Z,4µm,18.6s
DGPR DIGLIPUR **78.86 287** *e*P **P** **08 52 03.4 -0.1**
DGPR IAmb IAmb 08 52 10.0
comp=Z,250nm,1.1s
OHAK Old Harbor **79.06 21** P **P** **08 52 04.0 +0.3**
OHAK IAmb IAmb 08 52 12.7
comp=Z,80nm,1.0s
GAMB Gambell **80.25 9** P **P** **08 52 10.0 +0.2**
LKP Lekhapani **81.16 301** *e*P **P** **08 52 14.9 -0.7**
CIT Chita **81.44 330** *e*P **P** **08 52 15.2 -1.4**
CIT pmax pmax
comp=Z,488nm,1.7s
MAW Mawson **81.62 202** P **P** **08 52 18.8 +1.5**
comp=Z,186nm,1.0s,baz=99,slow=6.6,SNR=60
MAW LR LR 09 23 58.6
comp=Z,4µm,20.5s,baz=90,slow=32
MAW Mawson **81.62 202** P **P** **08 52 17.9 +0.7**
MAW IAmb IAmb 08 52 20.5
comp=Z,88nm,1.2s
BRLK Bradley Lake **81.83 20** IAmb IAmb 08 52 26.8
comp=Z,54nm,0.8s
YAK Yakutsk **82.40 343** P **P** **08 52 21.6 +0.4**
comp=Z,118nm,0.7s,baz=54,slow=0.8,SNR=38
YAK Yakutsk **82.40 343** P **P** **08 52 20.9 -0.4**
YAK Yakutsk **82.40 343** *e*P **P** **08 52 21.8 +0.5**
YAK *e**PP **pP** **08 52 52.3 +0.1**
YAK *e* 08 55 28.1
YAK *e*S **S** **09 02 23.4 -3.5**
YAK *e**SS sS 09 03 32.8 +12
YAK pmax pmax
comp=Z,264nm,1.3s
YAK pmax pmax
comp=N,146nm,1.3s
YAK pmax pmax
comp=E,85nm,1.3s
YAK pmax pmax
comp=Z,290nm,5.4s
YAK pmax pmax
comp=N,377nm,4.8s
YAK pmax pmax
comp=E,180nm,4.8s
YAK smax smax
comp=N,914nm,5.6s
YAK smax smax
comp=E,765nm,5.6s
ULN Ulaanbaatar **82.50 324** P **P** **08 52 21.4 -1.0**
ULN Ulaanbaatar **82.50 324** P **P** **08 52 21.4 -1.0**
ULN pmax pmax
comp=Z,488nm,1.5s
SEW Seward **82.56 20** IAmb IAmb 08 52 54.2
comp=Z,211nm,1.8s
SONM Songino Array **82.86 324** P **P** **08 52 23.6 -0.6**
comp=Z,28nm,0.6s,baz=130,slow=2.3,SNR=75
SONM PKKP **PKKPdf** **09 10 39.1 -1.0**
comp=Z,1.0nm,0.9s,baz=256,slow=4.3,SNR=3.6
SONM PKKPbc **PKKPbc** **09 10 47.5 -1.7**
comp=Z,2.3nm,1.1s,baz=219,slow=1.8,SNR=6.3
SONM PKPPKP **P'P'df** **09 18 51.4 0.0**
comp=Z,1.1nm,0.9s,baz=256,slow=0.6,SNR=5.5
SONM LR LR 09 29 09.3
comp=Z,1µm,18.3s,baz=121,slow=36
SONM Songino Array **82.86 324** P **P** **08 52 23.3 -0.9**
ZIRO ZIRO **82.89 301**⇑*i*P **P** **08 52 25.8 +0.9**
ZIRO IAmb IAmb 08 52 28.0
comp=Z,174nm,1.1s
BILL Bilibino **82.89 360** P **P** **08 52 23.0 -0.8**
BILL IAmb IAmb 08 52 27.5
comp=Z,196nm,1.4s
BILL Bilibino **82.89 360** *c i*P **P** **08 52 22.4 -1.3**
BILL *e* 08 55 36.2
BILL *i* S **S** **09 02 36.6 +4.9**
BILL *i* 09 03 21.1
BILL pmax pmax
comp=Z,178nm,1.5s
GTA Gaotai **83.01 314** ⇑P **P** **08 52 25.2 0.0**
GTA pP pP 08 52 54.3 -2.3
GTA sP sP 08 53 05.1 -4.6
GTA S **S** **09 02 33.2 -1.2**
GTA sS sS 09 03 27.6 +0.6
GTA SS **SS** **09 08 06.9 +5.7**
GTA pmax pmax
comp=Z,120nm,1.9s
GTA pmax pmax
comp=Z,3µm,7.7s
GTA LR LR
comp=Z,5µm,23.8s
GTA LR LR
comp=Z,3µm,21.3s
GTA LR LR
comp=Z,5µm,23.8s
RC01 Rabbit Creek A **83.21 19** IAmb IAmb 08 52 31.3
comp=Z,171nm,1.4s
PMR Palmer **83.78 19** IAmb IAmb 08 52 30.6
comp=Z,188nm,1.6s
AGT Agartala **83.84 297**⇑*i*P **P** **08 52 29.1 -0.5**
AGT IAmb IAmb 08 52 37.7
comp=Z,213nm,0.7s
PPLA Purkeypile **83.85 17** IAmb IAmb 08 52 30.2
comp=Z,94nm,1.6s
SHL Shillong **83.86 298** *e*P **P** **08 52 29.3 -0.6**
KNK Knik Glacier **83.86 20** IAmb IAmb 08 52 31.2
comp=Z,276nm,1.9s
GHO Glory Hole Cre **83.98 19** IAmb IAmb 08 52 37.2
comp=Z,56nm,1.0s
KCPM Cahto Peak **84.10 46** IAmb IAmb 08 52 36.7
comp=Z,60nm,0.7s
HOPS Hopland Field **84.17 47** IAmb IAmb 08 52 34.8
comp=Z,208nm,1.8s
KMRM Mail Ridge **84.24 46** IAmb IAmb 08 52 37.5
comp=Z,74nm,0.7s
GDXM Geysers **84.29 47** IAmb IAmb 08 52 35.0
comp=Z,146nm,2.0s
KHMM Horse Mountain **84.50 45** IAmb IAmb 08 52 39.3
comp=Z,296nm,1.9s
SNCC San Nicolas Is **84.56 54** P **P** **08 52 33.1 0.0**
baz=248
SNCC SKSac **SKSac** **09 02 49.9 +4.1**
baz=248
PMPB Monarch Peak **84.71 50** IAmb IAmb 08 52 46.1
comp=Z,68nm,1.1s
SCZ2 Santa Cruz Isl **84.75 53** P **P** **08 52 33.4 -0.7**
baz=248
TRF Thorofare Moun **84.83 18** IAmb IAmb 08 52 35.3
comp=Z,121nm,1.7s
BOD Bodaibo **84.85 334** *e*P **P** **08 52 32.3 -1.6**
BOD pmax pmax
comp=Z,302nm,1.8s
SBC Santa Barbara **84.86 52** P **P** **08 52 34.7 +0.2**
baz=248
O02D Mt. Diablo Mer **84.86 46** P **P** **08 52 34.9 +0.4**
baz=246,SNR=20
PKM Mcpherson Peak **84.95 52** P **P** **08 52 35.4 +0.2**
baz=248
SMMC Simmler **84.97 52** P **P** **08 52 35.4 +0.3**
baz=248
WAX Waxell Ridge **85.12 22** IAmb IAmb 08 52 38.5
comp=Z,87nm,1.3s
L02E Cave Junction **85.14 44** P **P** **08 52 35.7 0.0**
baz=245
RND Reindeer **85.22 18** IAmb IAmb 08 52 37.6
comp=Z,226nm,2.0s
SCI2 San Clemente I **85.22 54** P **P** **08 52 36.3 -0.1**
baz=249
BLG Laguna Peak, P **85.23 53** P **P** **08 52 36.1 -0.3**
baz=248
N02D Trinity Center **85.25 46** P **P** **08 52 36.5 +0.1**
baz=246,SNR=14
K02D Willamette Mer **85.32 44** P **P** **08 52 36.9 +0.1**
baz=245
M02C Callahan **85.32 45** P **P** **08 52 36.6 -0.2**
baz=245,SNR=12

J01E Myrtle Point **85.35 43** P **P** **08 52 37.4 +0.7**
baz=244
CIS Catalina Islan **85.48 54** P **P** **08 52 37.2 -0.5**
baz=249
ORV Oroville **85.52 47** IAmb IAmb 08 52 40.4
comp=Z,123nm,1.9s
YBH Yreka Blue Hor **85.56 45** IAmb IAmb 08 52 41.2
comp=Z,192nm,2.0s
O03E Paynes Creek **85.60 46** P **P** **08 52 37.2 -1.0**
baz=246,SNR=14
RDOG Red Dog Mine **85.64 11** IAmb IAmb 08 52 41.1
comp=Z,132nm,1.7s
OSI Osito Audit: C **85.68 53** IAmb IAmb 08 52 41.9
comp=Z,191nm,1.7s
OSI Osito Audit: C **85.68 53** P **P** **08 52 38.4 -0.3**
baz=248
FMP Fort Macarthur **85.69 54** P **P** **08 52 38.1 -0.5**
baz=249
ARVC Arvin **85.79 52** P **P** **08 52 39.2 0.0**
baz=248,SNR=9.9
I02D Swisshome **85.81 42** P **P** **08 52 39.3 +0.3**
baz=244
VOG Valley Oaks Go **85.81 51** P **P** **08 52 38.6 -0.6**
baz=248
DECC Green Verdugo **85.85 53** P **P** **08 52 38.4 -1.1**
baz=249
VES Vestal, Richgr **85.86 51** P **P** **08 52 37.9 -1.5**
baz=248,SNR=13
IMAR Indian Mountai **85.86 15** P **P** **08 52 38.6 -0.2**
LSA Lhasa **85.86 302** P **P** **08 52 40.5 +0.3**
LSA Lhasa **85.86 302** P **P** **08 52 41.5 +1.3**
LSA Lhasa **85.86 302** IAmb IAmb 08 52 47.0
comp=Z,90nm,0.8s
ZAK Zakamensk **85.92 325** *e*P **P** **08 52 38.4 -1.1**
ZAK pmax pmax
comp=Z,123nm,1.2s
I03D Drain, OR **85.96 43** P **P** **08 52 38.7 -1.0**
baz=245
L04D Klamath Falls **86.04 45** P **P** **08 52 40.3 -0.1**
baz=246
MWC Mount Wilson **86.05 53** IAmb IAmb 08 52 43.4
comp=Z,254nm,1.6s
M04C Macdoel **86.18 45** P **P** **08 52 40.5 -0.6**
baz=246
ISA Isabella, Lake **86.25 52** IAmb IAmb 08 52 44.6
comp=Z,133nm,1.6s
ISA Isabella, Lake **86.25 52** P **P** **08 52 41.7 +0.2**
baz=249,SNR=17
IRK Irkutsk **86.30 327** *e*P **P** **08 52 41.3 0.0**
IRK *e* 09 03 01.4
IRK pmax pmax
comp=Z,254nm,1.9s
109C Camp Elliot, M **86.32 55** IAmb IAmb 08 53 24.0
comp=Z,147nm,1.8s
109C Camp Elliot, M **86.32 55** P **P** **08 52 41.1 -0.7**
baz=250
EDW2 Edwards Air Fo **86.34 53** P **P** **08 52 41.0 -1.0**
baz=249,SNR=22
TLY Talaya **86.36 326** P **P** **08 52 41.1 -0.4**
comp=Z,27nm,0.6s,baz=159,slow=4.1,SNR=24
TLY Talaya **86.36 326** P **P** **08 52 40.6 -0.9**
TLY IAmb IAmb 08 52 44.6
comp=Z,80nm,0.9s
TLY Talaya **86.36 326** *c i*P **P** **08 52 40.3 -1.3**
TLY *e* 08 56 00.5
TLY *e*S **SKSac** **09 02 54.7 -1.5**
TLY pmax pmax
comp=Z,498nm,1.8s
BFSC Mount Baldy Ra **86.37 53** P **P** **08 52 41.4 -0.7**
baz=249,SNR=12
BEKR Beckworth **86.45 47** IAmb IAmb 08 52 45.4
comp=Z,180nm,1.9s
MURC Murrieta **86.50 54** P **P** **08 52 42.1 -0.7**
baz=249,SNR=7.9
HDA Harding Lake **86.53 18** IAmb IAmb 08 52 48.0
comp=Z,48nm,0.9s
HDA Harding Lake **86.53 18** P **P** **08 52 40.7 -1.4**
baz=224
K04D Chiloquin, OR **86.58 44** P **P** **08 52 43.2 +0.2**
baz=246
OMMB Old Mammoth Mi **86.58 50** IAmb IAmb 08 52 46.3
comp=Z,77nm,1.5s
J04D Umpqua Nationa **86.59 44** P **P** **08 52 42.4 -0.8**
baz=246
WAKR Walker **86.59 49** IAmb IAmb 08 52 46.5
comp=Z,214nm,1.9s
BAR Barrett **86.59 55** IAmb IAmb 08 53 25.4
comp=Z,146nm,2.0s
TCOL CIGO, UAF Yank **86.60 18** P **P** **08 52 41.6 -0.7**
baz=223
COLA College **86.60 18** P **P** **08 52 42.8 +0.4**
COLA College **86.60 18** P **P** **08 52 42.8 +0.4**
COLA pmax pmax
comp=Z,28nm,0.9s
I04A Tendick Farm, **86.62 43** P **P** **08 52 41.7 -1.3**
baz=246
G03D McMinnville, O **86.66 41** P **P** **08 52 42.0 -1.1**
baz=245
PNTR Pine Nut **86.69 48** IAmb IAmb 08 53 26.1
comp=Z,148nm,1.8s
MLAC Mammoth, Mammo **86.70 50** P **P** **08 52 43.4 -0.4**
baz=248,SNR=5.9
H04D Lebanon **86.71 42** P **P** **08 52 42.8 -0.6**
baz=245
VCNR Virginia City **86.73 48** IAmb IAmb 08 52 50.0
comp=Z,90nm,1.9s
LRMC Laurel Mtn Rad **86.79 52** P **P** **08 52 42.9 -1.3**
baz=249,SNR=15
ILAR Eielson Array **86.81 18** P **P** **08 52 42.2 -1.3**
comp=Z,6.6nm,0.7s,baz=238,slow=4.6,SNR=70
ILAR PKiKP **PKiKP** **08 57 48.9 +0.2**
comp=Z,0.6nm,0.7s,baz=263,slow=3.1,SNR=4.7
ILAR PKKPbc **PKKPbc** **09 10 38.0 -2.4**
comp=Z,6.1nm,0.9s,baz=349,slow=2.0,SNR=15
ILAR PKPPKP **P'P'df** **09 18 44.2 +1.4**
comp=Z,2.3nm,0.9s,baz=5.3,slow=1.9,SNR=7.5
ILAR LR LR 09 24 58.6
comp=Z,3µm,21.6s,baz=237,slow=31
ILAR Eielson Array **86.81 18** P **P** **08 52 41.5 -2.0**
CWC Cottonwood Cre **86.83 51** P **P** **08 52 43.8 -0.6**
baz=249
MONP2 Monument Peak **86.86 55** P **P** **08 52 44.3 -0.5**
baz=250,SNR=7.6
POKR Poker Plat Res **86.90 17** P **P** **08 52 42.1 -1.8**
baz=223
TIN Tinemaha, Big **86.94 50** P **P** **08 52 44.4 -0.5**
baz=249,SNR=10
BBRC Big Bear Solar **86.95 53** P **P** **08 52 44.2 -0.9**
baz=250
IKP In-Ko-Pah, Jac **87.03 55** P **P** **08 52 44.7 -0.7**
baz=250
E03A Lebam **87.04 40** IAmb IAmb 08 52 50.7
comp=Z,50nm,0.8s
PFO Pinyon Flats O **87.08 54** P **P** **08 52 45.7 +0.1**
comp=Z,14nm,0.7s,baz=283,slow=5.9,SNR=16
PFO Pinyon Flats O **87.08 54** P **P** **08 52 46.0 +0.3**
PFO IAmb IAmb 08 53 28.1
comp=Z,135nm,1.9s
PFO Pinyon Flats O **87.08 54**⇓*e*P **P** **08 52 45.8 +0.1**
PFO pmax pmax
comp=Z,70nm,1.6s
PFO Pinyon Flats O **87.08 54** P **P** **08 52 45.1 -0.6**
baz=250
XPFO Pion Flat **87.08 54** P **P** **08 52 46.5 +0.9**
XPFO IAmb IAmb 08 53 28.1
comp=Z,135nm,1.9s
RRX Edison Barstow **87.10 53** P **P** **08 52 44.9 -0.7**
baz=250
MPMC Manual Prospec **87.14 52** P **P** **08 52 44.7 -1.3**
baz=249,SNR=29
F04D Rainier, OR **87.19 41** P **P** **08 52 45.6 -0.1**
baz=245
J05D Fort Rock, OR **87.19 44** P **P** **08 52 45.1 -0.8**
baz=246,SNR=5.4
K05A Summer Lake **87.20 44** IAmb IAmb 08 53 39.9
comp=Z,188nm,1.7s
GTK Tadong **87.21 299** *e*P **P** **08 52 45.6 -0.8**
BCAR Beaver Creek A **87.25 21** P **P** **08 52 44.6 -1.0**
SWSC Sam W. Stewart **87.38 55** P **P** **08 52 46.5 -0.4**
baz=250,SNR=9.4
GSC Goldstone, Bar **87.40 53** IAmb IAmb 08 52 50.1
comp=Z,138nm,1.6s
GSC Goldstone, Bar **87.40 53** P **P** **08 52 47.0 -0.1**
baz=250,SNR=16
F04A Amboy **87.50 41** IAmb IAmb 08 52 54.3
comp=Z,268nm,1.9s
BWNR Bhubaneshwar **87.53 292**⇑*i*P **P** **08 52 46.4 -1.4**

BWNR IAmb IAmb 08 52 53.1
comp=Z,50nm,0.9s
BWNR *i* pP **pP** **08 53 19.6 -0.2**
I05D Terrebonne, OR **87.54 43** P **P** **08 52 46.8 -0.7**
baz=246,SNR=6.2
GRAC Grapevine Rang **87.57 51** P **P** **08 52 47.5 -0.3**
baz=249,SNR=34
BELC Belle Mtn. Jos **87.58 54** P **P** **08 52 48.0 0.0**
baz=250,SNR=27
HEC Hector,Ludlow **87.60 53** P **P** **08 52 47.5 -0.5**
baz=250,SNR=6.3
E04D Cinebar **87.67 40** P **P** **08 52 48.0 0.0**
baz=245,SNR=5.4
D03D Eldon **87.75 39** P **P** **08 52 48.1 -0.3**
baz=245,SNR=8.2
FURC Furnace Creek, **87.76 51** P **P** **08 52 48.4 -0.2**
baz=250
KVN Kaiserville **87.76 49** IAmb IAmb 08 52 51.8
comp=Z,188nm,2.0s
D04E Lakebay **87.80 40** P **P** **08 52 48.5 0.0**
baz=245
MOY Mondy **87.80 325** *e*P **P** **08 52 49.0 +0.4**
MOY pmax pmax
comp=Z,251nm,2.5s
BC3 Big Chuckawall **87.89 54** P **P** **08 52 49.7 +0.2**
baz=250,SNR=17
G05D Wamic, OR **87.92 42** P **P** **08 52 49.4 +0.1**
baz=246
TAPN Taplejung **87.97 299** *e*P **P** **08 52 49.4 -0.9**
comp=Z,156nm,0.8s
SHOC Shoshone, Teco **88.01 52** P **P** **08 52 49.5 -0.4**
baz=250,SNR=6.0
PGC Sidney **88.01 38** IAmb IAmb 08 53 32.4
comp=Z,54nm,1.1s
F05D White Salmon **88.09 41** P **P** **08 52 49.4 -0.6**
baz=246,SNR=6.4
ODAN Odare **88.09 298** *e*P **P** **08 52 49.9 -0.9**
comp=Z,246nm,0.7s
GMRC Granite Mounta **88.10 53** P **P** **08 52 50.2 -0.3**
baz=250,SNR=22
TUQ Turquoise Moun **88.12 53** P **P** **08 52 50.4 -0.2**
baz=250,SNR=18
GLA Glamis **88.18 55** IAmb IAmb 08 52 54.3
comp=Z,149nm,1.6s
GLA Glamis **88.18 55** P **P** **08 52 51.2 +0.4**
baz=251,SNR=13
LON Longmire **88.22 41** IAmb IAmb 08 52 57.4
comp=Z,82nm,1.8s
D05A Enumclaw **88.29 40** IAmb IAmb 08 52 55.1
comp=Z,211nm,1.6s
IRM Iron Mountain **88.30 54** P **P** **08 52 51.4 +0.1**
baz=251,SNR=30
G06A Carlson Farm, **88.36 42** IAmb IAmb 08 54 05.5
comp=Z,92nm,1.8s
TPNV Topopah Spring **88.39 51** IAmb IAmb 08 52 54.9
comp=Z,126nm,1.6s
TPNV Topopah Spring **88.39 51** P **P** **08 52 51.8 -0.1**
baz=250,SNR=28
SYO Syowa Base **88.42 197**⇑*i*P **P** **08 52 49.0 -2.2**
SYO Syowa Base **88.42 197**⇑*i*PcP **P** **08 52 51.0 -0.2**
BOK Bokaro **88.47 295**⇑*i*P **P** **08 52 52.0 -0.3**
BOK IAmb IAmb 08 52 56.8
comp=Z,22nm,1.0s
A04D Lummi Island **88.49 38** P **P** **08 52 51.7 0.0**
baz=245
CHLP Challavanipeta **88.60 289** *e*P **P** **08 52 52.9 -0.1**
CHLP IAmb IAmb 08 52 59.0
comp=Z,26nm,0.8s
CHLP *e*SKSac **SKSac** **09 03 09.1 -2.1**
CHLP IVMs_BB IVMs_BB 09 24 27.4
comp=Z,1μm,52.7s
WVOR Wild Horse Val **88.62 45** IAmb IAmb 08 52 56.0
comp=Z,148nm,1.7s
Y12C Blythe **88.65 55** IAmb IAmb 08 53 32.3
comp=Z,58nm,1.2s
Y12C Blythe **88.65 55** P **P** **08 52 52.7 -0.2**
baz=251,SNR=13
I07A Izee **88.66 44** IAmb IAmb 08 52 56.0
comp=Z,160nm,1.8s
B05A Bryant **88.67 39** P **P** **08 52 53.1 +0.5**
baz=246
PALK Pallekele **88.72 278** P **P** **08 52 55.3 +1.5**
PALK Pallekele **88.72 278** P **P** **08 52 55.0 +1.2**
PALK IAmb IAmb 08 53 00.1
comp=Z,57nm,0.8s
PALK Pallekele **88.72 278***c*eP **P** **08 52 53.9 +0.2**
PALK pmax pmax
comp=Z,153nm,1.3s
RAMN Ramite **88.79 298** *e*P **P** **08 52 53.0 -1.1**
comp=Z,74nm,0.6s
NEE2 Needles Airpor **88.91 54** P **P** **08 52 53.7 -0.4**
baz=251
TOLK Toolik Lake Re **88.95 14** P **P** **08 52 53.3 -0.3**
baz=221
SHPR Sheep Range **89.06 52** IAmb IAmb 08 52 58.3
comp=Z,111nm,1.5s
F07A Phinny Hill Vi **89.08 42** IAmb IAmb 08 52 57.5
comp=Z,80nm,1.6s
J08A Circle Bar Ran **89.08 45** IAmb IAmb 08 52 57.7
comp=Z,64nm,1.4s
PDMCI Parker Dam,Lak **89.13 54** P **P** **08 52 54.7 -0.4**
baz=251,SNR=26
B06A Marblemount **89.14 39** IAmb IAmb 08 52 57.5
comp=Z,91nm,1.8s
C06D Leavenworth **89.26 40** P **P** **08 52 55.1 -0.4**
baz=246
JIRN Jiri **89.35 299** *e*P **P** **08 52 55.8 -1.0**
comp=Z,377nm,1.2s
R11A Troy Canyon, C **89.36 50** P **P** **08 52 56.1 -0.3**
baz=250
BMAR Burnt Mountain **89.37 17** P **P** **08 52 55.3 -0.3**
E07A Sunnyside **89.38 41** IAmb IAmb 08 53 02.1
comp=Z,25nm,0.7s
214A Organ Pipe Nat **89.45 57** IAmb IAmb 08 53 37.2
comp=Z,118nm,1.7s
214A Organ Pipe Nat **89.45 57** P **P** **08 52 56.0 -0.8**
baz=252
HAWA Hanford **89.52 41** IAmb IAmb 08 52 59.7
comp=Z,112nm,1.6s
GUN Gumba **89.69 299** *e*P **P** **08 52 57.5 -0.9**
LLLB Lillooet **89.76 37** IAmb IAmb 08 53 00.6
comp=Z,55nm,1.4s
E08A Dider Farm, El **89.86 41** IAmb IAmb 08 53 41.5
comp=Z,91nm,1.2s
Y14A Wickenburg **89.91 55** IAmb IAmb 08 53 38.0
comp=Z,61nm,1.6s
PKI Pulchoki **89.99 298** *e*P **P** **08 52 58.6 -1.2**
PKIN Phulchoki **90.00 298** *e*P **P** **08 52 59.0 -0.7**
comp=Z,179nm,1.2s
HSIG **90.09 60** IAmb IAmb 08 53 39.5
comp=Z,103nm,1.7s
KKN Kakani **90.16 299** *e*P **P** **08 52 59.5 -0.9**
comp=Z,379nm,1.6s
D08A Wollman Farm, **90.16 41** IAmb IAmb 08 53 02.7
comp=Z,103nm,1.8s
DMN Daman **90.25 298** *e*P **P** **08 52 59.8 -1.1**
comp=Z,172nm,0.9s
TIXI Tiksi **90.34 349** P **P** **08 52 58.9 -1.0**
comp=Z,24nm,0.8s,baz=126,slow=7.0,SNR=40
TIXI PKiKP **PKiKP** **08 57 54.5 +0.2**
comp=Z,1.9nm,0.5s,baz=116,slow=4.2,SNR=3.3
TIXI Tiksi **90.34 349** P **P** **08 52 59.8 -0.1**
TIXI IAmb IAmb 08 53 02.1
comp=Z,124nm,1.6s
TIXI Tiksi **90.34 349**⇑*e*P **P** **08 52 58.1 -1.8**
TIXI pmax pmax
comp=Z,82nm,1.5s
B08A Colville Reser **90.40 40** IAmb IAmb 08 53 43.3
comp=Z,59nm,1.3s
BMO Blue Mountains **90.41 43** IAmb IAmb 08 53 03.6
comp=Z,74nm,1.6s
E09A Wood Farm, Sta **90.46 42** IAmb IAmb 08 53 43.9
comp=Z,64nm,1.4s
PVM Polavaram **90.48 288** *e*P **P** **08 52 59.8 -2.0**
PVM IAmb IAmb 08 53 06.7
comp=Z,15nm,0.9s
PVM IVMs_BB IVMs_BB 09 25 45.3
comp=Z,1μm,37.1s
MDRS Chennai **90.67 283**⇑*i*PP **P** **08 52 58.4 -4.3**
MDRS *e*P **PcP** **08 53 03.2 -0.5**
MDRS *i* x x 08 57 09.2
MDRS *e*x x 09 03 51.2
GKN Gorkha **90.77 299** *e*P **P** **08 53 01.8 -1.4**
C09A Chrisman Ranch **90.85 40** IAmb IAmb 08 53 45.7
comp=Z,56nm,1.6s
F10A Beach Ranch, E **90.86 42** IAmb IAmb 08 53 45.7
comp=Z,72nm,1.3s

EPYK Eagle Plains **91.03 19** P **P** **08 53 01.4 -2.0**
baz=233
TUC Tucson **91.19 57** P **P** **08 53 06.1 +1.2**
TUC IAmb IAmb 08 53 44.5
comp=Z,36nm,1.1s
TUC Tucson **91.19 57** P **P** **08 53 06.1 +1.2**
TUC pmax pmax
comp=Z,36nm,1.1s
TUC Tucson **91.19 57** P **P** **08 53 03.8 -1.1**
baz=253
U15A North Rim **91.23 53** IAmb IAmb 08 53 44.8
comp=Z,63nm,1.2s
MYLAV Mylavaram **91.27 287** *e*P **P** **08 53 04.4 -1.1**
MYLAV IAmb IAmb 08 53 08.0
comp=Z,57nm,1.5s
MYLAV *e*SKSac **SKSac** **09 03 26.1 -0.6**
MYLAV IVMs_BB IVMs_BB 09 26 07.0
comp=Z,903nm,43.2s
X16A Lo Mia Camp, P **91.29 55** IAmb IAmb 08 53 45.0
comp=Z,32nm,1.1s
SKHT Srikalahasti **91.34 284** *e*P **P** **08 53 06.2 +0.3**
SKHT IAmb IAmb 08 53 12.5
comp=Z,45nm,1.0s
SKHT *e*S **SKSac** **09 03 26.3 -0.9**
SKHT IVMsBB 09 27 18.6
comp=Z,484nm,26.5s
DANN Dangsing **91.61 299** *e*P **P** **08 53 05.1 -2.1**
ADKI Addanki **91.65 286** *e*P **P** **08 53 08.3 +1.1**
ADKI IAmb IAmb 08 53 09.8
comp=Z,31nm,1.4s
ADKI *e*PP **PP** **08 56 46.6 -1.0**
ADKI *e*SKSac **SKSac** **09 03 29.1 +0.3**
ADKI IVMsBB 09 27 05.2
comp=Z,589nm,29.3s
WUAZ Wupatki **91.67 54** IAmb IAmb 08 53 46.6
comp=Z,46nm,1.1s
WUAZ Wupatki **91.67 54** P **P** **08 53 06.8 -0.3**
baz=253
NEW Newport **91.73 40** IAmb IAmb 08 53 48.8
comp=Z,42nm,1.4s
NEW Newport **91.73 40** P **P** **08 53 05.1 -1.9**
baz=249
GGR Gangavaram **91.94 288** *e*P **P** **08 53 07.3 -1.4**
GGR IAmb IAmb 08 53 10.7
comp=Z,93nm,1.6s
GGR *e*pP **pP** **08 53 40.8 +0.1**
GGR *e*S **SKSac** **09 03 29.6 -1.0**
GGR IVMs_BB IVMs_BB 09 26 22.2
comp=Z,1μm,47.4s
DUG Dugway, Tooele **91.99 49** P **P** **08 53 08.1 -0.4**
baz=252
319A Douglas **92.15 58** IAmb IAmb 08 53 48.9
comp=Z,55nm,1.1s
NJS Nagarjunasagar **92.44 286** *e*P **P** **08 53 10.5 -0.5**
NJS IAmb IAmb 08 53 13.2
comp=Z,64nm,1.4s
NJS *e*SKSac **SKSac** **09 03 31.4 -1.9**
NJS IVMs_BB IVMs_BB 09 26 39.7
comp=Z,602nm,47.5s
X18A Snowflake **92.50 55** IAmb IAmb 08 53 50.3
comp=Z,25nm,1.0s
TRD Trivandrum **92.61 278** *e*P **P** **08 53 12.4 +0.6**
TRD IAmb IAmb 08 53 18.2
comp=Z,48nm,0.8s
SRLM Srisailam **92.71 286** *e*P **P** **08 53 11.0 -1.2**
SRLM *e*SKSac **SKSac** **09 03 33.4 -1.6**
SRLM IVMsBB 09 26 39.7
comp=Z,489nm,24.0s
NVL N'lazarevskaya **92.73 188**⇓*i*P **P** **08 53 10.5 -0.7**
NVL *e*S **SKSac** **09 03 36.7 +3.6**
NVL *e* 09 04 00.2
NVL *e*SS **SS** **09 10 28.8 +9.2**
NVL pmax pmax
comp=Z,498nm,1.2s
W18A Petrified Fore **92.83 55** IAmb IAmb 08 53 51.6
comp=Z,45nm,1.1s
W18A Petrified Fore **92.83 55** P **P** **08 53 11.7 -0.9**
baz=254
RPR Rampur **93.04 289** *e*P **P** **08 53 12.9 -0.7**
RPR IAmb IAmb 08 53 18.7
comp=Z,34nm,1.0s
RPR *e*SKSac **SKSac** **09 03 34.9 -1.7**
RPR IVMs_BB IVMs_BB 09 26 28.1
comp=Z,847nm,47.8s
WMQ Urumqi **93.07 315** P **P** **08 53 14.2 +0.9**
WMQ pP pP 08 53 41.7 -3.5
WMQ sP sP 08 53 53.4 -4.8
WMQ PP **PP** **08 57 01.0 +2.7**
WMQ SKS **SKSac** **09 03 35.4 -0.5**
WMQ S **S** **09 04 07.1 -2.2**
WMQ SS **SS** **09 10 28.0 +0.7**
WMQ pmax pmax
comp=Z,100nm,1.3s
WMQ pmax pmax
comp=Z,1μm,8.7s
WMQ LR LR
comp=Z,2μm,22.1s
WMQ LR LR
comp=Z,1μm,22.7s
WMQ LR LR
comp=Z,2μm,24.7s
INK Inuvik **93.17 19** PKKP 09 10 20.7
comp=Z,9.3nm,1.1s,baz=83,slow=3.8,SNR=8.9
SNAA Sanae **93.21 183** P **P** **08 53 12.3 -1.3**
SNAA Sanae **93.21 183** P **P** **08 53 11.7 -1.9**
SNAA Sanae **93.21 183***c i*P **P** **08 53 12.0 -1.5**
MSO Missoula **93.28 42** P **P** **08 53 13.0 -1.3**
baz=252
HYB Hyderabad **93.36 287** *i* P **P** **08 53 14.0 -1.2**
HYB *e*pP **pP** **08 53 47.0 -0.3**
HYB *e*SKS **SKSac** **09 03 40.0 +1.5**
HYB *e*ScS **S** **09 04 12.0 -0.8**
HYB *e*SS **SS** **09 10 32.0 -0.4**
HYB Hyderabad **93.36 287** *e*x P 08 53 10.1 -5.1
HYB IAmb IAmb 08 53 20.7
comp=Z,33nm,1.1s
HYBB Hyderabad (bro **93.36 287** *e*P **P** **08 53 15.5 +0.3**
HYBB IAmb IAmb 08 53 16.9
comp=Z,70nm,1.7s
HYBB *e*PP **PP** **08 57 01.0 -0.1**
HYBB *e*SKSac **SKSac** **09 03 36.8 -1.7**
HYBB IVMs_BB IVMs_BB 09 27 05.0
comp=Z,940nm,39.9s
121A Cookes Peak, D **93.69 57** P **P** **08 53 14.7 -1.9**
baz=255
VNA3 Neumayer Olymp **93.87 181** P **P** **08 53 15.1 -1.4**
SRSP Sriramsagar **93.93 288** *e*P **P** **08 53 17.4 -0.4**
SRSP IAmb IAmb 08 53 19.4
comp=Z,80nm,1.5s
SRSP *e*PP **PP** **08 57 03.4 -2.1**
SRSP *e*SKSac **SKSac** **09 03 38.6 -2.9**
URV Uravakonda **93.94 284** *e*P **P** **08 53 18.6 +0.7**
URV IAmb IAmb 08 53 20.1
comp=Z,69nm,1.3s
URV *e*SKSac **SKSac** **09 03 40.1 -1.6**
URV IVMsBB 09 26 55.4
comp=Z,903nm,32.2s
VNA2 Neumayer--Watz **94.14 182** P **P** **08 53 16.7 -1.1**
baz=170,slow=4.4
MVCO Mesa Verde **94.37 53** P **P** **08 53 18.4 -1.3**
baz=254
VNA1 Neumayer--Stat **94.44 181** P **P** **08 53 17.9 -1.2**
H17A Grant Village **94.81 45** P **P** **08 53 22.4 +0.8**
baz=254
BW06 Boulder Array **95.08 47** P **P** **08 53 21.6 -1.1**
baz=254
PDAR Pinedale Array **95.08 47** P **P** **08 53 22.7 -0.1**
comp=Z,1.0nm,0.6s,baz=224,slow=3.8,SNR=13
PDAR PP **PP** **08 57 08.8 -5.4**
comp=Z,4.0nm,1.1s,baz=250,slow=4.3,SNR=7.2
PDAR PKKP **PKKPbc** **09 10 17.3 -1.2**
comp=Z,3.4nm,1.1s,baz=112,slow=4.6,SNR=4.6
PDAR PKPPKP **P'P'df** **09 18 27.1 -2.4**
comp=Z,1.7nm,1.1s,baz=108,slow=4.8,SNR=4.8
PDAR LR LR 09 33 11.9
comp=Z,923nm,18.0s,baz=264,slow=34
PDAR Pinedale Array **95.08 47** P **P** **08 53 21.3 -1.5**
KLRI Killari **95.33 287** *e*P **P** **08 53 23.7 -0.5**
KLRI IAmb IAmb 08 53 24.8
comp=Z,32nm,1.4s
KLRI *e*SKSac **SKSac** **09 03 45.9 -3.1**
KLRI IVMs_BB IVMs_BB 09 27 54.5
comp=Z,1μm,44.6s
O20A White River Ci **95.33 50** IAmb IAmb 08 53 29.1
comp=Z,12nm,0.7s

O20A White River Ci **95.33 50** P **P** **08 53 22.5 -1.5**
baz=255
ANMO Albuquerque **95.38 55** P **P** **08 53 24.1 -0.2**
ANMO Albuquerque **95.38 55**⇑*e*P **P** **08 53 24.8 +0.5**
ANMO pmax pmax
comp=Z,19nm,3.1s
ANMO Albuquerque **95.38 55** P **P** **08 53 23.5 -0.8**
baz=255
MNTX Cornudas Mount **95.45 59** P **P** **08 53 24.9 +0.4**
baz=256
S22A 4UR Ranch, Cre **95.79 53** P **P** **08 53 27.3 +1.0**
baz=256
BHPL Bhopal **95.81 292** *e*P **P** **08 53 26.3 0.0**
BHPL IAmb IAmb 08 53 30.5
comp=Z,13nm,0.7s
RLMT Red Lodge **95.91 45** P **P** **08 53 27.3 +0.8**
baz=255
TX31 Lajitas Ar. Si **96.32 61** IAmb IAmb 08 54 08.4
comp=Z,35nm,1.8s
TX32 Lajitas Array **96.32 61** IAmb IAmb 08 54 08.4
comp=Z,36nm,1.8s
TXAR Lajitas Array **96.32 61** P **P** **08 53 29.1 +0.6**
comp=Z,2.7nm,0.9s,baz=222,slow=4.5,SNR=17
TXAR PP **PP** **08 57 24.8 +0.9**
comp=Z,13nm,1.3s,baz=243,slow=5.5,SNR=11
TXAR PKKPbc **PKKPbc** **09 10 14.0 -0.4**
comp=Z,1.4nm,0.7s,baz=90,slow=3.5,SNR=8.9
TXAR PKPPKP **P'P'df** **09 18 24.0 -4.0**
comp=Z,3.3nm,1.2s,baz=144,slow=4.5,SNR=3.8
TXAR LR LR 09 32 42.9
comp=Z,1μm,18.1s,baz=0.0,slow=33
TXAR Lajitas Array **96.32 61** P **P** **08 53 28.7 +0.1**
EGMT Eagleton **96.35 42** P **P** **08 53 26.6 -1.7**
baz=255
SDCO Great Sand Dun **96.81 53** P **P** **08 53 29.4 -1.4**
baz=256
DDI Dehra Dun **96.92 299** *e*P **P** **08 53 30.5 -0.7**
ISCO Idaho Springs **97.21 51** P **P** **08 53 31.5 -1.2**
baz=256
K22A Casper **97.21 48** P Pdif 08 53 32.6 +0.1
baz=256
N23A Red Feather La **97.22 50** P **P** **08 53 31.5 -1.1**
baz=256
GOA Goa **97.29 284** *e*x **P** **08 53 30.8 -2.3**
Q24A Divide **97.36 52** P **P** **08 53 32.7 -0.7**
baz=257
T25A Trinidad **97.52 54** P **P** **08 53 33.4 -0.6**
baz=257
MK31 Makanchi Array **97.55 316** *i* P **P** **08 53 33.1 -0.5**
MKAR Makanchi Array **97.55 316** P **P** **08 53 33.2 -0.5**
comp=Z,24nm,0.6s,baz=87,slow=6.2,SNR=56
MKAR PKiKP **PKiKP** **08 58 08.3 +0.7**
comp=Z,1.6nm,0.5s,baz=203,slow=1.3,SNR=11
MKAR PKKPbc **PKKPbc** **09 10 09.4 -2.3**
comp=Z,1.8nm,0.6s,baz=289,slow=3.7,SNR=4.9
MKAR PKPPKP **P'P'df** **09 18 25.9 +1.6**
comp=Z,0.7nm,1.0s,baz=17,slow=1.3,SNR=3.6
MKAR LR LR 09 37 29.4
comp=Z,1μm,21.1s,baz=100,slow=35
MKAR Makanchi Array **97.55 316** P **P** **08 53 32.7 -1.0**
MKAR Makanchi Array **97.55 316** *i* P **P** **08 53 33.2 -0.5**
MKAR pmax pmax
comp=Z,25nm,0.6s
ZALV Zalesovo Beam **97.75 324** P **P** **08 53 32.4 -1.9**
comp=Z,22nm,0.7s,baz=118,slow=4.5,SNR=34
ZALV LR LR 09 37 50.4
comp=Z,927nm,19.8s,baz=96,slow=35
ZALV Zalesovo Beam **97.75 324** P **P** **08 53 31.4 -2.9**
MAKZ Makanchi **97.76 316** P **P** **08 53 33.9 -0.7**
MAKZ Makanchi **97.76 316** P **P** **08 53 33.9 -0.7**
MAKZ pmax pmax
comp=Z,150nm,1.5s
YKA Yellowknife Ar **97.79 27** P **P** **08 53 33.0 -1.3**
comp=Z,16nm,1.0s,baz=252,slow=4.7,SNR=67
YKA PKiKP **PKiKP** **08 58 08.4 +0.9**
comp=Z,0.6nm,0.4s,baz=248,slow=1.5,SNR=12
YKA PKKPbc **PKKPbc** **09 10 09.1 -2.6**
comp=Z,5.3nm,0.8s,baz=63,slow=2.6,SNR=28
YKA PKPPKP **P'P'df** **09 18 17.8 -4.8**
comp=Z,3.9nm,1.2s,baz=44,slow=1.6,SNR=7.2
YKA LR LR 09 33 31.8
comp=Z,2μm,19.3s,baz=0.0,slow=33
YKA Yellowknife Ar **97.79 27** P **P** **08 53 33.0 -1.3**
POO Poona **97.97 287** *e*x **P** **08 53 32.8 -3.3**
POO IAmb IAmb 08 53 40.4
MSTX Muleshoe **98.11 57** Pdiff **P** **08 53 35.6 -0.9**
baz=257
LAO LASA Array **98.35 44** Pdiff Pdif 08 53 37.7 +0.3
baz=257
DHRM DHARAMSHALA **98.81 301** *e*P **P** **08 53 37.6 -2.3**
DHRM IAmb IAmb 08 53 42.9
comp=Z,13nm,1.1s
AMTX Amarillo **99.19 56** Pdiff **Pdif** **08 53 41.3 0.0**
baz=258
KSCO Kaye Shedlock' **99.29 52** Pdiff **Pdif** **08 53 41.0 -0.8**
baz=258
RSSD Black Hills **99.31 47** Pdiff **Pdif** **08 53 41.6 -0.2**
baz=258
833A Chaparral WMA, **99.75 63** Pdiff **Pdif** **08 53 43.2 -0.6**
baz=258
JCT Junction City **99.84 61** Pdiff **Pdif** **08 53 43.9 -0.4**
baz=258
OGNE Ogallala **100.12 50** Pdiff **Pdif** **08 53 44.9 -0.4**
baz=259
ABTX Abilene, Hawle **100.40 59** Pdiff **Pdif** **08 53 46.4 -0.3**
baz=259
KSH Kashi **100.52 308** P **Pdif** **08 53 49.8 +2.6**
KSH PP **PP** **08 58 01.5 +5.7**
KSH SKS **SKSac** **09 04 15.6 +0.8**
KSH S **Sdif** **09 05 11.7 -1.8**
KSH sS pS 09 06 01.1 +6.4
KSH SS **SS** **09 12 16.9 +4.2**
KSH pmax pmax
comp=Z,9.0nm,1.1s
KSH pmax pmax
comp=Z,1μm,8.3s
KSH LR LR
comp=Z,2μm,13.2s
KSH LR LR
comp=Z,4μm,16.2s
KSH LR LR
comp=Z,5μm,22.9s
KURK Kurchatov **100.76 320** **Pdif** **08 53 48.9 +1.1**
KURK Kurchatov **100.76 320***c*eP **Pdif** **08 53 47.9 +0.1**
KURK pmax pmax
comp=Z,70nm,2.5s
KURBB Kurchatov Arra **100.80 320** P **Pdif** **08 53 47.1 -0.8**
comp=Z,2.1nm,0.6s,baz=104,slow=3.4,SNR=20
KURBB PP **PP** **08 57 53.8 -3.5**
comp=Z,4.2nm,0.9s,baz=99,slow=7.9,SNR=6.0
KURBB PKiKP **PKiKP** **08 58 13.9 +0.8**
comp=Z,2.8nm,0.6s,baz=108,slow=1.5,SNR=13
KURBB PKKPbc **PKKPbc** **09 10 00.9 -1.7**
comp=Z,1.7nm,0.8s,baz=275,slow=3.9,SNR=6.2
CBKS Cedar Bluff **101.47 53** Pdiff **Pdif** **08 53 52.2 +0.9**
baz=260
WMOK Wichita Mounta **101.50 57** Pdiff **Pdif** **08 53 52.4 +0.8**
baz=260
435B Jarrell **101.78 61** Pdiff **Pdif** **08 53 53.0 +0.2**
baz=259
WHTX Lake Whitney, **102.10 60** Pdiff **Pdif** **08 53 52.8 -1.4**
baz=260
AAK Ala-Archa **102.17 311** P **Pdif** **08 53 54.9 +0.4**
comp=Z,1.6nm,0.6s,baz=155,slow=8.4,SNR=5.4
AAK PKKPbc **PKKPbc** **09 09 57.3 -1.2**
comp=Z,7.5nm,1.1s,baz=232,slow=3.4,SNR=6.6
BHUJ Bhuj **102.80 291** *e*x **Pdif** **08 53 54.4 -3.1**
SUSD Miller **102.95 47** Pdiff **Pdif** **08 53 58.5 +0.7**
baz=262
MDND Maddock **103.00 44** Pdiff **Pdif** **08 53 57.6 -0.2**
baz=262
BGNE Belgrade **103.09 50** PKiKP PKiKP 08 58 08.9 -8.8
baz=261
KSU1 Kansas State U **103.92 53** PKiKP **PKiKP** **08 58 17.7 -1.5**
baz=262
TUL1 Leonard **104.10 56** PKiKP **PKiKP** **08 58 17.7 -2.0**
baz=262
NATX Nacogdoches **104.41 61** PKiKP **PKiKP** **08 58 19.9 -0.5**
baz=261
ULM Lac du Bonnet **105.70 41** PKiKP **PKiKP** **08 58 21.1 -1.1**
comp=Z,2.6nm,0.5s,baz=304,slow=4.4,SNR=6.8
ULM PKKPbc **PKKPbc** **09 09 45.9 -2.1**
comp=Z,4.0nm,0.8s,baz=90,slow=1.4,SNR=6.9
ULM PKPPKP **P'P'df** **09 18 10.6 +2.0**
comp=Z,2.4nm,0.8s,baz=60,slow=2.8,SNR=6.7
MIAR Mount Ida **105.71 58** PKiKP **PKiKP** **08 58 25.2 +2.5**
baz=262

BVAR Borovoye Array 106.11 321 Pdiff Pdif 08 54 12.3 +0.7
comp=Z,2.1nm,0.6s,baz=40,slow=2.5,SNR=8.9
BVAR PKiKP PKiKP 08 58 22.7 -0.1
comp=Z,2.9nm,0.6s,baz=125,slow=1.4,SNR=11
Z41A Richland Creek 106.18 59 PKiKP PKiKP 08 58 24.4 +0.9
baz=262
X40A Basin Creek Fa 106.31 58 PKiKP PKiKP 08 58 24.1 +0.4
baz=263
SCIA State Center 106.82 50 PKiKP PKiKP 08 58 26.0 +1.5
baz=265
SPMN Marine on St. 107.39 47 PKiKP PKiKP 08 58 26.8 +1.4
baz=266
JFWS Jewell Farm 109.09 49 PKiKP PKiKP 08 58 29.3 +0.6
baz=267
OXF Oxford 109.12 58 PKiKP PKiKP 08 58 29.3 +0.3
baz=265
HDIL Hopedale 109.67 52 PKiKP PKiKP 08 58 30.9 +1.0
baz=267
SVE Sverdlovsk 111.67 326 ePKiKP PKiKP 08 58 34.5 +1.4
SVE pmax pmax
comp=Z,29nm,1.3s
WCI Wyandotte Cave 111.88 55 PKiKP PKiKP 08 58 34.0 -0.1
baz=268
U49A Red Boiling Sp 112.22 56 PKiKP PKiKP 08 58 34.8 0.0
baz=267
OPO Ambohidratompo 112.30 242 PKiKP PKiKP 08 58 35.1 -0.6
comp=Z,26nm,0.8s,baz=105,slow=1.9,SNR=17
N47A Urbana 112.42 52 PKiKP PKiKP 08 58 34.8 -0.3
baz=269
G45A Suttons Bay 112.44 47 PKiKP PKiKP 08 58 35.6 +0.7
baz=271
M47A Cromwell 112.48 51 PKiKP PKiKP 08 58 35.3 +0.1
baz=270
F45A CMU Biological 112.53 47 PKiKP PKiKP 08 58 34.7 -0.4
baz=271
W50A Signal Mountai 112.53 58 PKiKP PKiKP 08 58 34.6 -1.0
baz=267
P48A Milroy 112.60 53 PKiKP PKiKP 08 58 34.7 -0.7
baz=269
S49A Springfield 112.66 55 PKiKP PKiKP 08 58 34.7 -0.9
baz=268
L47A Sherwood 112.79 51 PKiKP PKiKP 08 58 35.3 -0.5
baz=270
ARU Arti 112.85 325 PKiKP PKiKP 08 58 35.7 +0.3
comp=Z,8.0nm,0.5s,baz=59,slow=0.6,SNR=31
ARU Arti 112.85 325 i PKiKP PKiKP 08 58 36.0 +0.6
ARU 08 59 22.3
ARU 09 05 01.4
ARU SP SP 09 08 44.3 -2.2
ARU PS PS 09 09 04.0 +2.1
ARU SS SS 09 14 49.8 -8.7
N48A Decatur 112.92 52 PKiKP PKiKP 08 58 35.4 -0.6
baz=270
K47A Vermontville 112.94 50 PKiKP PKiKP 08 58 34.5 -1.5
baz=270
U50A Jamestown 112.97 57 PKiKP PKiKP 08 58 36.0 -0.3
baz=268
T50A Nancy 112.99 56 PKiKP PKiKP 08 58 35.6 -0.7
baz=268
J47A Sunmer 113.07 49 PKiKP PKiKP 08 58 36.0 -0.2
baz=271
P49A Miami Univ. Ec 113.15 53 PKiKP PKiKP 08 58 36.3 -0.2
baz=269
Z52A Williamson 113.17 60 PKiKP PKiKP 08 58 35.8 -0.9
baz=267
S50A Richmond 113.36 55 PKiKP PKiKP 08 58 37.0 0.0
baz=269
L48A N Adams 113.37 51 PKiKP PKiKP 08 58 38.2 +1.3
baz=270
NOR Nord 113.41 1 i P PKiKP 08 58 36.7 +0.8
NOR e 09 12 18.2
NOR Nord 113.41 1 i PKiKP PKiKP 08 58 36.7 +0.8
O49A Covington 113.44 52 PKiKP PKiKP 08 58 37.5 +0.5
baz=270
Y52A Lilburn 113.50 59 PKiKP PKiKP 08 58 37.9 +0.5
baz=267
D46A Sault St. Mari 113.51 45 PKiKP PKiKP 08 58 38.1 +1.1
baz=273
N49A Columbus Grove 113.56 52 PKiKP PKiKP 08 58 37.0 -0.3
baz=270
K48A Perry 113.59 50 PKiKP PKiKP 08 58 37.0 -0.2
baz=271
W52A Murphy 113.66 58 PKiKP PKiKP 08 58 37.2 -0.5
baz=268
X52A Dahlonega 113.67 59 PKiKP PKiKP 08 58 37.6 -0.1
baz=268
T51A Gray 113.71 56 PKiKP PKiKP 08 58 38.1 +0.4
baz=269
G47A Hillman 113.71 47 PKiKP PKiKP 08 58 37.6 +0.3
baz=272
M49A Liberty Center 113.72 51 PKiKP PKiKP 08 58 37.3 -0.3
baz=271
AKTO Aktyubinsk 113.82 319 PKiKP PKiKP 08 58 37.3 -0.2
comp=Z,11nm,0.6s,baz=94,slow=5.1,SNR=40
AKTO PKKPbc PKKPbc 09 09 21.9 +0.2
comp=Z,8.6nm,1.0s,baz=266,slow=5.5,SNR=3.8
J48A Bridge Port 113.82 49 PKiKP PKiKP 08 58 38.4 +0.7
baz=272
I48A Sherman Twp 113.86 48 PKiKP PKiKP 08 58 38.2 +0.5
baz=272
P50A Jamestown 113.86 53 PKiKP PKiKP 08 58 38.7 +0.9
baz=270
L49A Milan 113.86 50 PKiKP PKiKP 08 58 38.6 +0.8
baz=271
Z53A Monticello 113.88 60 PKiKP PKiKP 08 58 38.4 +0.3
baz=267
V52A Sevierville 113.96 57 PKiKP PKiKP 08 58 39.1 +0.9
baz=268
O50A Cable 113.99 53 PKiKP PKiKP 08 58 38.5 +0.4
baz=270
S51A Beattyville 114.00 55 PKiKP PKiKP 08 58 38.8 +0.6
baz=269
TZTN Tazewell 114.01 56 PKiKP PKiKP 08 58 39.2 +0.9
baz=269
E47A Iron Bridge 114.05 46 PKiKP PKiKP 08 58 39.4 +1.4
baz=273
D47A Chapleau 114.14 45 PKiKP PKiKP 08 58 39.1 +0.9
baz=274
U52A Thorn Hill 114.16 57 PKiKP PKiKP 08 58 38.9 +0.3
baz=269
Q51A Peebles 114.21 54 PKiKP PKiKP 08 58 38.9 +0.3
baz=270
154A Montrose 114.24 61 PKiKP PKPdf 08 58 38.7 0.0
baz=267
GEYT Alibeck 114.25 305 PKiKP PKPdf 08 58 37.6 -1.1
comp=Z,4.6nm,0.6s,baz=270,slow=1.5,SNR=7.7
GEYT PKKPbc PKKPab 09 09 25.1 -0.1
comp=Z,1.7nm,0.5s,baz=291,slow=4.6,SNR=4.3
LPA La Plata 114.25 140 PDIFF Pdif 08 54 45.4 -2.9
LPA PP PP 08 59 27.8 -7.3
LPA pPP 09 00 07.0
LPA PPP PPP 09 02 02.0
LPA SKS SKSac 09 05 11.4 -3.1
LPA SDIFF Sdif 09 07 05.3 -2.7
LPA PS SP 09 08 49.6 -10
LPA PSP PSP 09 10 10.0
LPA SS SS 09 15 19.2 +2.6
W53A Cullowhee 114.29 58 PKiKP PKiKP 08 58 39.6 +0.6
baz=268
J49A Marlette 114.29 49 PKiKP PKiKP 08 58 40.2 +1.6
baz=272
N50A Nevada 114.35 52 PKiKP PKiKP 08 58 39.5 +0.7
baz=271
M50A Fremont 114.42 51 PKiKP PKiKP 08 58 40.0 +1.1
baz=271
ACSO Alum Creek Sta 114.48 52 PKiKP PKiKP 08 58 39.6 +0.6
baz=271
F48A Evansville 114.55 46 PKiKP PKiKP 08 58 40.0 +1.1
baz=274
L50A Kingsville 114.58 50 PKiKP PKiKP 08 58 39.4 +0.2
baz=272
V53A Saluda 114.59 57 PKiKP PKiKP 08 58 39.6 +0.2
baz=269
O51A Pataskala 114.77 53 PKiKP PKiKP 08 58 40.1 +0.5
baz=271
U53A Fall Branch 114.79 57 PKiKP PKiKP 08 58 40.1 +0.3
baz=269
E48A Lockeyer 114.82 46 PKiKP PKiKP 08 58 40.6 +1.1
baz=274
T53A Wise 114.83 56 PKiKP PKiKP 08 58 40.9 +1.0
baz=270
X54A Belton 114.92 59 PKiKP PKiKP 08 58 40.8 +0.8
baz=268
N51A Ashland 114.93 52 PKiKP PKiKP 08 58 40.7 +0.8
baz=271
F49A Sandfield 114.95 46 PKiKP PKPdf 08 58 40.8 +1.1
baz=274

D48A Paudash Townsh 115.01 45 PKiKP PKPdf 08 58 40.5 +0.7
baz=275
Q52A Bidwell 115.05 54 PKiKP PKPdf 08 58 40.4 +0.2
baz=271
KBS Kingsbay 115.06 355 ePdif Pdif 08 54 53.0 +2.2
KBS ePKPdf PKPdf 08 58 39.8 +0.8
KBS ePP PP 08 59 42.5 +2.3
KBS eSP SP 09 09 07.5 +1.9
KBS eSS SS 09 15 29.2 +2.9
KBS IVMs_BB IVMs_BB 09 36 21.7
comp=Z,802nm,4.2s
M51A Elyria 115.06 51 PKiKP PKPdf 08 58 40.8 +0.6
baz=272
P52A Corning 115.14 53 PKiKP PKPdf 08 58 40.7 +0.4
baz=271
UOSS Minazif 115.20 291 P PKPdf 08 58 40.7 -0.2
UOSS Minazif 115.20 291 PKiKP 08 58 41.1 +0.2
HATD Hatta, Dubai 115.25 291 P PKPdf 08 58 40.5 -0.5
MSFE Esma-Masafi 115.28 291 P PKiKP 08 58 41.6 +0.5
SPA0 Spitsbergen Ar 115.29 354 ePKPdf PKPdf 08 58 40.4 +0.8
SPA0 ePP PP 08 59 42.1 +0.1
SPA0 eSKSac SKSac 09 05 17.7 +1.1
SPITS Spitsbergen Ar 115.29 354 PKKPbc PKKPbc 09 09 16.8 -0.7
comp=Z,6.7nm,0.8s,baz=169,slow=9.3,SNR=6.7
V54A Nebo 115.30 57 PKiKP PKiKP 08 58 41.3 +0.5
baz=269
ASHO Ashiyiah 115.30 290 P PKPdf 08 58 40.9 -0.2
U54A Nelsons Funny 115.41 56 PKiKP PKiKP 08 58 41.6 +0.6
baz=270
DWPF Disney Wildern 115.41 66 PKiKP PKiKP 08 58 41.2 +0.1
baz=266
N52A McGinn's Farm, 115.46 52 PKiKP PKiKP 08 58 41.2 +0.3
baz=272
ALNE Al Ain 115.52 290 P PKPdf 08 58 41.2 -0.4
HOPEN Hopen 115.53 351 ePdif Pdif 08 54 54.4 +1.5
HOPEN ePP PP 08 59 45.3 +1.7
HOPEN ePS PKKPab 09 09 24.5 +6.1
HOPEN eSS SS 09 15 33.8 +1.3
HOPEN IVMs_BB IVMs_BB 09 35 56.3
comp=Z,2μm,3.3s
X55A Gracelyn & Ava 115.53 59 PKiKP PKiKP 08 58 42.3 +1.1
baz=269
T54A Tazewell 115.60 56 PKiKP PKiKP 08 58 42.0 +0.6
baz=270
Q53A Leroy 115.63 54 PKiKP PKiKP 08 58 42.4 +1.1
baz=271
KULLO Kullorsuaq 115.66 12 i P SP 09 09 17.3 +6.2
M52A Chesterland 115.68 51 PKiKP PKiKP 08 58 42.0 +0.7
baz=272
NAZ Nazwa, Dubai 115.69 291 P PKPdf 08 58 40.4 -1.4
P53A Whipple 115.72 53 PKiKP PKiKP 08 58 41.7 +0.2
baz=271
KMSC Kings Mountain 115.79 58 PKiKP PKiKP 08 58 42.0 +0.3
baz=269
S54A Dingess, Beckl 115.81 55 PKiKP PKiKP 08 58 41.8 +0.1
baz=271
O53A New Philadelph 115.83 52 PKiKP PKiKP 08 58 42.1 +0.5
baz=272
V55A Taylorsville 115.89 57 PKiKP PKiKP 08 58 42.4 +0.4
baz=270
U55A TA2, Sparta 116.03 57 PKiKP PKiKP 08 58 42.6 +0.4
baz=270
N53A Lisbon 116.10 52 PKiKP PKiKP 08 58 42.5 +0.4
baz=272
Q54A Coxs Mills 116.16 54 PKiKP PKiKP 08 58 42.4 +0.1
baz=272
M53A WI Miller and 116.19 51 PKiKP PKiKP 08 58 42.7 +0.4
baz=273
J52A Paris 116.24 49 PKiKP PKiKP 08 58 43.1 +0.8
baz=274
HSPB Hornsund (broa 116.40 353 ePKPdf PKiKP 08 58 42.5 +0.8
HSPB ePP PP 08 59 49.1 -0.6
HSPB eSP SP 09 09 20.7 +3.0
HSPB eSS SS 09 15 47.2 +3.4
HSPB IVMs_BB IVMs_BB 09 35 27.4
comp=Z,1μm,13.8s
HSPB IVMsBB 09 36 37.3
comp=Z,879nm,35.3s
P54A Burton 116.42 53 PKiKP PKPdf 08 58 42.8 0.0
baz=272
F51A Arnstein 116.42 46 PKiKP PKiKP 08 58 43.8 +1.2
baz=276
O54A Avella 116.48 52 PKiKP PKPdf 08 58 42.9 0.0
baz=272
V56A Mocksville 116.48 57 PKiKP PKPdf 08 58 42.8 -0.2
baz=270
L53A Girard 116.48 50 PKiKP PKPdf 08 58 41.7 -1.1
baz=273
BLA Blacksburg 116.53 56 PKiKP PKPdf 08 58 43.1 0.0
baz=271
H52A Wyevale 116.56 47 PKiKP PKPdf 08 58 42.7 -0.2
baz=275
U56A King 116.56 57 PKiKP PKPdf 08 58 43.1 -0.1
baz=270
ERPA Erie 116.67 50 PKiKP PKPdf 08 58 43.1 -0.1
baz=274
D51A Lot 18 Range I 116.67 45 PKiKP PKiKP 08 58 43.1 +0.1
baz=277
N54A Moraine State 116.74 52 PKiKP PKiKP 08 58 43.4 0.0
baz=273
R55A Marlinton 116.74 55 PKiKP PKPdf 08 58 43.2 -0.4
baz=272
Q55A Buckhannon 116.75 54 PKiKP PKPdf 08 58 43.5 -0.1
baz=272
X57A Johnson Farm, 116.80 59 PKiKP PKPdf 08 58 44.0 +0.3
baz=270
T56A Rocky Mt 116.84 56 PKiKP PKPdf 08 58 44.0 +0.3
baz=271
W57A Gilead 116.89 58 PKiKP PKPdf 08 58 43.9 +0.1
baz=270
LPAZ La Paz 116.92 117 PKP PKPdf 08 58 44.5 -0.7
comp=Z,1.9nm,0.5s,baz=32,slow=0.6,SNR=11
LPAZ PKKPbc PKKPbc 09 09 11.3 +0.4
comp=Z,5.1nm,0.9s,baz=68,slow=6.4,SNR=12
M54A Oil Creek Stat 116.95 51 PKiKP PKiKP 08 58 43.9 +0.1
baz=274
V57A Coltrane Farms 117.06 57 PKiKP PKPdf 08 58 44.5 +0.3
baz=271
Y58A Scranton 117.15 59 PKiKP PKPdf 08 58 44.9 +0.5
baz=270
L54A Sinclairville 117.16 50 PKiKP PKiKP 08 58 44.6 +0.5
baz=274
S56A Natural Bridge 117.19 55 PKiKP PKiKP 08 58 44.7 +0.3
baz=272
KIRV Kirov 117.24 329 PKP PKiKP 08 58 44.5 +0.8
comp=Z,31nm,0.5s,baz=102,slow=1.5,SNR=13
KIRV Kirov 117.24 329 i PKiKP PKiKP 08 58 44.1 +0.4
E52A Mattawa 117.25 45 PKiKP PKiKP 08 58 44.8 +0.6
baz=277
O55A Ligonier 117.30 52 PKiKP PKPdf 08 58 44.9 +0.4
baz=273
R56A Bull Pasture M 117.30 54 PKiKP PKPdf 08 58 44.6 -0.1
baz=272
D52A ZEK Kipawa Sen 117.34 45 PKiKP PKPdf 08 58 43.8 -0.6
baz=277
G53A Haliburton 117.41 47 PKiKP PKPdf 08 58 44.5 0.0
baz=276
MATQ Matagami 117.45 42 PKiKP PKPdf 08 58 44.1 -0.3
baz=279
T57A Hurt 117.46 56 PKiKP PKPdf 08 58 43.5 -1.3
baz=272
MZR Muzera 117.49 288 i P PKiKP 08 58 46.6 +1.2
SNR=14
H53A Bobcaygeon 117.49 47 PKiKP PKPdf 08 58 44.7 0.0
baz=276
W58A Raeford 117.51 58 PKiKP PKPdf 08 58 44.8 -0.2
baz=270
M55A Ridgway 117.63 51 PKiKP PKPdf 08 58 45.0 -0.1
baz=274
P56A Dayton Farm, R 117.69 53 PKiKP PKPdf 08 58 45.3 0.0
baz=273
ALGO Algonquin Park 117.71 46 PKiKP PKPdf 08 58 45.7 +0.6
baz=277
G54A Lake Saint Pet 117.75 46 PKiKP PKPdf 08 58 45.4 +0.2
baz=277
D53A Lac Vacive, Po 117.81 45 PKiKP PKiKP 08 58 45.4 +0.2
baz=278
L55A Hinsdale 117.82 50 PKiKP PKPdf 08 58 45.3 -0.1
baz=275
O56A Blue Knob Stat 117.86 52 PKiKP PKPdf 08 58 45.6 0.0
baz=274
E53A Dumoine, Ponti 117.92 45 PKiKP PKPdf 08 58 45.9 +0.4
baz=278
LSQQ Lebel-sur-Quev 117.99 42 PKiKP PKPdf 08 58 45.4 -0.1
baz=280
N56A West Decatur 118.02 51 PKiKP PKPdf 08 58 45.9 0.0
baz=274

T58A Grand View Acr 118.04 56 PKiKP PKPdf 08 58 45.5 -0.5
baz=272
PRGR Permogore 118.04 333 ePKiKP PKPdf 08 58 42.9 -2.3
PRGR pmax pmax
comp=Z,38nm,0.8s
U58A Oxford 118.04 57 PKiKP PKPdf 08 58 45.9 -0.1
baz=272
BJO1 Bjornoya 118.05 351 ePdif Pdif 08 55 05.3 +1.1
BJO1 ePP PP 09 00 00.4 -0.7
BJO1 eSP SP 09 09 33.5 +0.9
BJO1 IVMs_BB IVMs_BB 09 38 02.8
comp=Z,1μm,3.5s
M56A Emporium 118.06 51 PKiKP PKPdf 08 58 46.4 +0.4
baz=275
DAG Danmarks Havn 118.21 2 i P PKPdf 08 58 45.0 -0.2
comp=Z,15nm,0.8s
DAG e 09 12 59.0
DAG Danmarks Havn 118.21 2 i PKiKP PKPdf 08 58 45.0 -0.2
DAG pmax pmax
comp=Z,15nm,0.8s
DAG MLR MLR
comp=Z,3μm,18.0s
E54A Lac Daplat, Po 118.25 45 PKiKP PKPdf 08 58 46.0 -0.1
baz=278
P57A Homestead Farm 118.33 53 PKiKP PKPdf 08 58 46.4 0.0
baz=274
SSPA Standing Stone 118.35 52 PKiKP 08 58 47.3 +0.8
SSPA Standing Stone 118.35 52 PKiKP PKiKP 08 58 46.9 +0.4
baz=274
S58A Poland Farm, P 118.40 55 PKiKP PKPdf 08 58 45.8 -0.8
baz=273
R58A Rapidan 118.41 54 PKiKP PKPdf 08 58 46.3 -0.3
baz=273
L56A Greenwood 118.47 50 PKiKP PKPdf 08 58 46.7 0.0
baz=275
H55A Tweed 118.49 47 PKiKP PKiKP 08 58 47.1 +0.4
baz=277
D54A Lac Fusel, La 118.50 44 PKiKP PKiKP 08 58 46.8 +0.2
baz=279
R58B Mineral 118.52 55 PKiKP PKiKP 08 58 47.0 +0.1
baz=273
ROSC El Rosal 118.52 93 PKP PKPdf 08 58 47.0 -1.1
comp=Z,14nm,0.5s,baz=122,slow=7.3,SNR=9.2
ROSC PKKPab PKKPab 09 09 07.8 -0.4
comp=Z,5.7nm,0.5s,baz=323,slow=20,SNR=3.2
O57A Amberson 118.57 52 PKiKP PKiKP 08 58 47.2 +0.3
baz=274
N57A Milroy 118.59 52 PKiKP PKPdf 08 58 46.6 -0.4
baz=275
Q58A Fox Den Farm, 118.62 54 PKiKP PKPdf 08 58 47.1 0.0
baz=274
U59A Littleton 118.66 57 PKiKP PKPdf 08 58 47.2 0.0
baz=272
G55A Calabogie 118.73 46 PKiKP PKPdf 08 58 46.8 -0.2
baz=278
T59A Double "B" Far 118.82 56 PKiKP PKPdf 08 58 47.1 -0.3
baz=272
M57A Sunshine Farm, 118.86 51 PKiKP PKPdf 08 58 47.6 +0.1
baz=275
J56A Wolcott 118.87 49 PKiKP PKPdf 08 58 47.5 +0.1
baz=276
P58A Pank, Wackersv 118.88 53 PKiKP PKPdf 08 58 47.5 0.0
baz=274
F55A Otter Lake 118.90 46 PKiKP PKPdf 08 58 48.0 +0.5
baz=278
CBN Corbin Frederi 118.91 55 PKiKP PKPdf 08 58 48.0 +0.3
baz=273
S59A Mechanicsville 118.99 55 PKiKP PKPdf 08 58 47.7 0.0
baz=273
L57A Andrews Acres 119.01 50 PKiKP PKPdf 08 58 47.7 0.0
baz=276
E55A Montcerf-Lytto 119.02 45 PKiKP PKPdf 08 58 47.8 +0.2
baz=279
V60A Jim Taylor Roa 119.11 57 PKiKP PKPdf 08 58 48.1 0.0
baz=272
R59A King George, V 119.11 55 PKiKP PKPdf 08 58 48.8 +0.7
baz=274
O58A Lewisberry 119.12 52 PKiKP PKiKP 08 58 48.4 +0.4
baz=275
LVZ Lovozero 119.17 341 PKiKP 08 58 48.0 +0.6
LVZ Lovozero 119.17 341 d i PKiKP PKiKP 08 58 47.9 +0.6
LVZ pmax pmax
comp=Z,162nm,2.5s
K57A Scipio Center 119.18 49 PKiKP PKiKP 08 58 48.3 +0.2
baz=276
N58A Sunbury 119.22 51 PKiKP PKiKP 08 58 48.6 +0.4
baz=275
D55A Sainte-Anne-du 119.32 44 PKiKP PKiKP 08 58 48.9 +0.7
baz=280
M58A Price's Panora 119.36 51 PKiKP PKiKP 08 58 49.3 +0.8
baz=276
Q59A Harwood 119.42 54 PKiKP PKiKP 08 58 49.5 +0.9
baz=274
T60A Surry 119.47 56 PKiKP PKiKP 08 58 49.1 +0.3
baz=273
J57A Williamstown 119.48 48 PKiKP PKPdf 08 58 48.0 -0.5
baz=277
S60A Water View 119.50 55 PKiKP PKiKP 08 58 49.1 +0.3
baz=274
P59A Jarrettsville 119.54 53 PKiKP PKiKP 08 58 48.9 0.0
baz=275
BINY Binghamton 119.63 50 PKiKP PKPdf 08 58 48.8 -0.1
baz=276
I57A Carthage 119.65 48 PKiKP PKiKP 08 58 49.4 +0.4
baz=278
O59A Robesonia 119.67 52 PKiKP PKiKP 08 58 49.4 +0.3
baz=275
E56A St. Veronique 119.70 45 PKiKP PKiKP 08 58 49.5 +0.5
baz=280
L58A Harry Jones Me 119.75 50 PKiKP PKiKP 08 58 50.0 +0.8
baz=276
APA Apatity 119.75 341 i PKiKP PKPdf 08 58 46.3 -2.0
APA i *PP pPKPdf 08 59 24.0 +2.7
APA i 09 09 46.0
APA pmax pmax
comp=Z,30nm,0.7s
H57A Richville 119.77 47 PKiKP PKiKP 08 58 49.6 +0.5
baz=278
D56A ZEC Mazanza, M 119.80 44 PKiKP PKiKP 08 58 49.2 +0.1
baz=280
K58A Earlville 119.81 49 PKiKP PKiKP 08 58 49.7 +0.4
baz=277
N59A State Game Lan 119.93 51 PKiKP PKiKP 08 58 49.8 +0.2
baz=276
G57A Newington 119.96 46 PKiKP PKiKP 08 58 50.0 +0.5
baz=279
J58A Remsen 120.00 48 PKiKP PKiKP 08 58 50.0 +0.4
baz=278
Q60A Greensboro 120.05 54 PKiKP PKPdf 08 58 49.7 0.0
baz=275
TMCR Tamitsa 120.06 337 ePKiKP PKPdf 08 58 47.6 -1.4
TMCR pmax pmax
comp=Z,72nm,1.5s
KEV Kevo 120.09 345 PKPdf 08 58 48.6 -0.3
KEV Kevo 120.09 345 PKiKP PKPdf 08 58 48.6 -0.3
CPUP Villa Florida 120.11 133 PKP PKPdf 08 58 49.7 -0.6
comp=Z,5.5nm,0.8s,baz=279,slow=2.6,SNR=8.5
CPUP PKKPab PKKPab 09 09 02.0 +0.2
comp=Z,4.8nm,0.9s,baz=108,slow=2.9,SNR=5.9
M59A Waymart 120.11 51 PKiKP PKiKP 08 58 50.7 +0.7
baz=276
P60A Greenville 120.14 53 PKiKP PKiKP 08 58 50.3 +0.3
baz=275
I58A Old Forge 120.18 48 PKiKP PKiKP 08 58 51.2 +1.2
baz=278
HAMF Hammerfest 120.22 347 ePKPdf PKiKP 08 58 49.7 +0.5
HAMF ePP PP 09 00 11.1 -5.0
HAMF eSP SP 09 09 51.7 -0.6
HAMF eSS SS 09 16 30.1 -3.2
O60A Telford 120.26 52 PKiKP PKiKP 08 58 50.8 +0.6
baz=276
LONY Lake Ozonia 120.32 47 PKiKP PKPdf 08 58 50.1 -0.1
baz=279
E57A Chemin Saint G 120.33 45 PKiKP PKPdf 08 58 50.3 0.0
baz=280
L59A Walton 120.33 50 PKiKP PKiKP 08 58 50.7 +0.3
baz=277
D57A Chemin Vers le 120.39 44 PKiKP PKPdf 08 58 50.0 -0.2
baz=281
K59A Cooperstown 120.39 49 PKiKP PKPdf 08 58 50.4 0.0
baz=278
N60A Cedar Hill Far 120.44 51 PKiKP PKPdf 08 58 50.3 -0.1
baz=276
J59A Piesco 120.55 48 PKiKP PKPdf 08 58 50.7 0.0
baz=278
SUMG Summit 120.55 9 i P PKiKP 08 58 50.9 +0.5
SUMG i 09 12 40.0

SUMG Summit 120.55 9 i P PKKPab 09 08 56.6 -0.3
SUMG Summit 120.55 9 PKiKP 08 58 50.4 0.0
SUMG Summit 120.55 9 i PKIKP PKiKP 08 58 50.9 +0.5
G58A Ormstown 120.61 46 PKiKP PKiKP 08 58 50.9 +0.1
baz=280
ARCES ARCESS Array B 120.62 345 PKP PKPdf 08 58 48.6 -1.4
comp=Z,52nm,0.5s,baz=70,slow=1.7,SNR=245
ARCES PKKPab PKKPab 09 08 55.5 -0.7
comp=Z,1.7nm,0.5s,baz=238,slow=2.2,SNR=16
ARCES ARCESS Array B 120.62 345 PKPdf 08 58 48.2 -1.8
ARE0 ARCESS Array S 120.62 345 ePdif Pdif 08 55 16.0 +0.2
ARE0 ePKPdf PKiKP 08 58 50.7 +0.6
ARE0 ePP PP 09 00 18.6 -0.3
ARE0 eSKSac SKSac 09 05 36.5 +0.4
ARE0 eSP SP 09 09 56.2 +0.3
ARE0 eSS SS 09 16 38.2 -0.3
ARE0 IVMs_BB IVMs_BB 09 39 04.3
comp=Z,1μm,21.4s
H58A Gabriels 120.64 47 PKiKP PKiKP 08 58 51.0 +0.1
baz=279
M60A Port Jervis 120.74 51 PKiKP PKiKP 08 58 51.9 +0.8
baz=277
ILULI Ilulissat 120.75 15 PKPdf 08 58 49.8 -0.4
ILULI Ilulissat 120.75 15 PKIKP PKPdf 08 58 49.8 -0.4
E58A La Victoria 120.92 45 PKiKP PKiKP 08 58 51.8 +0.4
baz=281
O61A Allentown 120.94 52 PKiKP PKiKP 08 58 52.1 +0.5
baz=276
H59A Cadyville 120.94 47 PKiKP PKiKP 08 58 52.2 +0.7
baz=280
L60A Shokan 120.96 50 PKiKP PKiKP 08 58 52.2 +0.6
baz=278
D58A Chemin du LacG 121.05 44 PKiKP PKiKP 08 58 52.4 +0.8
baz=282
KLMR Klimovskoe 121.06 333 ePKPdf PKPdf 08 58 48.5 -2.6
KLMR AMP 08 58 53.5
comp=Z,209nm,1.6s
KLMR PP PP 09 00 20.2 -1.9
KLMR SP SP 09 09 55.0 -5.3
KLMR SKKP 09 12 56.5
KLMR SS SS 09 16 42.6 -1.9
KLMR SS SS 09 16 42.6 -1.9
KLMR SSS SSS 09 21 00.9
KLMR SSS SSS 09 21 00.9
KLMR Klimovskoe 121.06 333 ePKIKP PKPdf 08 58 48.4 -2.6
KLMR 09 00 20.1
KLMR SP SP 09 09 55.0 -5.3
KLMR SS SS 09 16 42.6 -1.9
KLMR pmax pmax
comp=Z,209nm,1.6s
K60A Five Rivers En 121.11 49 PKiKP PKiKP 08 58 52.2 +0.4
baz=278
PAL Palisades 121.32 51 PKiKP PKiKP 08 58 53.4 +1.1
baz=277
I60A Shoreham 121.36 48 PKiKP PKiKP 08 58 53.0 +0.8
baz=280
F59A Saint Guilaume 121.36 45 PKiKP PKiKP 08 58 53.0 +0.8
baz=281
J60A Lant Hill Farm 121.36 48 PKiKP PKiKP 08 58 53.4 +1.1
baz=279
M61A Granite Spring 121.38 51 PKiKP PKiKP 08 58 53.5 +1.1
baz=278
E59A St. Maurice 121.42 44 PKiKP PKiKP 08 58 53.5 +1.3
baz=282
KTK1 Kautokeino 121.56 346 ePKPdf PKiKP 08 58 52.0 +0.1
K61A Williamstown 121.56 49 PKiKP PKiKP 08 58 53.6 +0.8
baz=279
H60A Morristown 121.66 47 PKiKP PKiKP 08 58 53.9 +1.0
baz=280
D59A Saint-Raymond 121.77 44 PKiKP PKiKP 08 58 53.6 +0.6
baz=282
F60A Warwick 121.91 45 PKiKP PKiKP 08 58 54.1 +0.8
baz=282
MAK Makhachkala 121.95 311 eP Pdif 08 55 20.1 -2.1
MAK i 08 58 53.2
MAK e 08 59 25.3
MAK e 09 00 26.8
MAK e 09 05 39.5
MAK ePS SP 09 10 07.7 -1.8
MAK pmax pmax
comp=Z,193nm,1.6s
J61A Chester 121.97 48 PKiKP PKiKP 08 58 54.6 +1.1
baz=280
AKT Akhty 122.01 310 ePKIKP PKiKP 08 58 53.8 0.0
AKT e 08 59 26.1
AKT e 09 00 28.2
AKT pmax pmax
comp=Z,58nm,1.2s
M62A Hamden 122.02 50 PKiKP PKiKP 08 58 54.1 +0.5
baz=278
L61B Northampton 122.02 49 PKiKP PKiKP 08 58 54.0 +0.4
baz=279
TRO Tromso 122.04 348 ePKPdf PKiKP 08 58 53.2 +0.3
TRO ePP PP 09 00 26.9 -1.6
TRO eSP SP 09 10 09.6 +1.2
TRO eSS SS 09 16 57.6 +1.2
TRO IVMs_BB IVMs_BB 09 42 02.4
comp=Z,1μm,18.9s
I61A Oroboro, Fairl 122.11 47 PKiKP PKiKP 08 58 54.5 +0.7
baz=280
E60A Ste Agathe de 122.17 44 PKiKP PKiKP 08 58 53.9 +0.2
baz=282
H61A Lyndonville 122.20 47 PKiKP PKiKP 08 58 54.2 +0.3
baz=281
LBNH Lisbon 122.26 47 PKiKP PKiKP 08 58 55.1 +1.1
baz=281
K62A Royalston 122.31 49 PKiKP PKiKP 08 58 54.8 +0.6
baz=280
G61A St-Isidore-de- 122.34 46 PKiKP PKiKP 08 58 55.1 +0.9
baz=282
D60A Saint Jean D'O 122.40 44 PKiKP PKiKP 08 58 54.6 +0.4
baz=283
SFJD Kangerlussuaq 122.46 17 i P PKPdf 08 58 53.3 -0.2
SFJD Kangerlussuaq 122.46 17 ePKIKP PKPdf 08 58 53.3 -0.2
SCHQ Schefferville 122.50 34 PKP PKPdf 08 58 53.6 -0.4
comp=Z,8.1nm,0.6s,baz=247,slow=3.3,SNR=16
SCHQ PKKPab PKKPab 09 08 49.0 +0.6
comp=Z,9.0nm,0.6s,baz=134,slow=2.9,SNR=21
J62A Henniker 122.52 48 PKiKP PKiKP 08 58 55.7 +1.0
baz=280
F61A St Evariste 122.56 45 PKiKP PKiKP 08 58 55.3 +0.7
baz=283
M63A Gales Ferry 122.65 50 PKiKP PKiKP 08 58 55.1 +0.2
baz=279
H62A Milan 122.74 46 PKiKP PKiKP 08 58 55.9 +0.9
baz=282
I62A Tamworth 122.75 47 PKiKP PKiKP 08 58 55.6 +0.6
baz=281
E61A Lac Etchemin 122.80 44 PKiKP PKiKP 08 58 55.9 +0.8
baz=283
D61A St Aubert, Com 122.82 43 PKiKP PKiKP 08 58 55.8 +0.8
baz=284
HRV Adam Dziewonsk 122.83 49 PKiKP PKiKP 08 58 55.3 +0.1
baz=280
L63A North Scituate 122.90 50 PKiKP PKiKP 08 58 56.0 +0.6
baz=280
SUR Sutherland 123.00 214 PKP PKiKP 08 58 55.9 -0.2
comp=Z,58nm,0.8s,baz=138,slow=2.1,SNR=47
SUR Sutherland 123.00 214 PKPdf 08 58 55.5 -0.5
SDV Santo Domingo 123.01 89 PKPdf 08 58 54.9 -1.6
G62A West of Eustis 123.04 46 PKiKP PKiKP 08 58 56.4 +0.8
baz=282
J63A Strafford 123.04 48 PKiKP PKiKP 08 58 56.2 +0.6
baz=281
GROC Groznyy 123.14 312 i PKIKP PKPdf 08 58 54.3 -1.3
GROC e 08 59 26.8
GROC e 09 05 54.2
GROC pmax pmax
comp=Z,52nm,0.8s
BOSA Boshof 123.20 220 i P PKiKP 08 58 58.5 +1.8
BOSA Boshof 123.20 220 PKP PKPdf 08 58 56.4 0.0
comp=Z,74nm,1.0s,baz=120,slow=3.0,SNR=35
BOSA Boshof 123.20 220 i P PKiKP 08 58 58.5 +1.8
I63A Otisfield 123.25 47 PKiKP PKiKP 08 58 56.9 +0.9
baz=282
M64A Tiverton 123.25 50 PKiKP PKiKP 08 58 56.5 +0.4
baz=280
L64A Middleborough 123.46 50 PKiKP PKiKP 08 58 57.0 +0.5
baz=280
D62A Allapoint, All 123.60 43 PKiKP PKiKP 08 58 57.3 +0.7
baz=285
G63A Kingsbury 123.69 46 PKiKP PKiKP 08 58 57.4 +0.5
baz=283
VRH Novokhopyorsk 123.75 322 ePKIKP PKiKP 08 58 56.8 +0.1
VRH pmax pmax
comp=Z,120nm,0.6s

PKME Peaks-Kenny Pk 123.88 45 PKiKP PKiKP 08 58 57.5 +0.3
baz=284
F63A Nahmakanta, Br 123.91 45 PKiKP PKiKP 08 58 58.3 +1.0
baz=284
I64A Boothbay 123.94 47 PKiKP PKiKP 08 58 57.7 +0.3
baz=282
H64A Troy 124.07 46 PKiKP PKiKP 08 58 58.0 +0.4
baz=283
MSNA Messina 124.09 229 i P PKiKP 08 58 59.7 +1.3
MSNA Messina 124.09 229 i P PKiKP 08 58 59.7 +1.3
M66A Nantucket 124.10 50 PKiKP PKiKP 08 58 58.0 +0.2
baz=280
E63A Oxbow 124.19 44 PKiKP PKiKP 08 58 58.4 +0.6
baz=285
STEI Steigen 124.21 348 ePKPdf PKiKP 08 58 57.1 0.0
STEI ePP PP 09 00 43.9 +0.8
STEI eSKSac SKSac 09 05 48.9 +1.0
STEI eSP SP 09 10 29.6 +2.1
STEI IVMs_BB IVMs_BB 09 42 25.0
comp=Z,1μm,34.0s
D63A Stockholm 124.23 43 PKiKP PKiKP 08 58 58.5 +0.6
baz=286
G64A Maxfield 124.25 45 PKiKP PKiKP 08 58 58.1 +0.2
baz=284
SCO Scoresbysund 124.32 4 PKPdf 08 58 57.0 0.0
SCO Scoresbysund 124.32 4 PKIKP PKPdf 08 58 57.0 0.0
LOF Lofoten 124.37 348 ePKPdf PKiKP 08 58 58.0 +0.5
LOF ePP PP 09 00 41.3 -2.8
LOF eSP SP 09 10 28.8 -0.2
LOF IVMs_BB IVMs_BB 09 41 48.1
comp=Z,822nm,17.9s
F64A Sherman 124.38 44 PKiKP PKiKP 08 58 58.4 +0.2
baz=285
GNI Garni 124.45 309 PKP PKPdf 08 58 58.5 0.0
comp=Z,29nm,0.9s,baz=197,slow=2.2,SNR=6.9
GNI Garni 124.45 309 i P PKiKP 08 58 59.5 +0.7
SNR=8.5
GNI Garni 124.45 309 PKiKP 08 58 58.7 0.0
GNI Garni 124.45 309 d iPKIKP PKiKP 08 58 59.0 +0.2
GNI pmax pmax
comp=Z,311nm,1.7s
SAML Samuel 124.46 112 PKPdf 08 58 58.0 -1.0
SAML Samuel 124.46 112 PKIKP PKPdf 08 58 58.0 -1.0
ZEI Tsey 124.58 312 i PKIKP PKPdf 08 58 56.5 -2.2
ZEI pmax pmax
comp=Z,37nm,1.1s
E64A Bridgewater 124.58 44 PKiKP PKiKP 08 58 58.8 +0.2
baz=286
NCK Nalchik 124.65 313 ⇑ iPKIKP PKiKP 08 58 59.4 +0.5
H65A Eastbrook 124.74 46 PKiKP PKiKP 08 58 58.9 0.0
baz=284
RAYN Ar Rayn 124.84 288 i P PKiKP 08 58 59.9 0.0
SNR=12
RAYN Ar Rayn 124.84 288 PKPdf 08 58 59.0 -0.4
RAYN Ar Rayn 124.84 288 PKIKP PKPdf 08 58 59.1 -0.4
VORR Voronezh 125.05 323 PKIKP PKPdf 08 58 57.0 -2.0
VORR pmax pmax
comp=Z,350nm,1.4s
OBN Obninsk 125.07 328 PKP PKiKP 08 58 59.2 0.0
comp=Z,8.2nm,0.4s,baz=21,slow=8.6,SNR=17
OBN Obninsk 125.07 328 PKPdf 08 58 58.6 -0.2
OBN Obninsk 125.07 328 c iPKIKP PKiKP 08 58 59.5 +0.3
OBN i 09 00 51.1
OBN e 09 05 52.9
OBN eSS SS 09 17 40.3 +4.8
OBN pmax pmax
comp=Z,218nm,1.7s
G65A Princeton 125.08 45 PKiKP PKiKP 08 59 00.3 +0.7
baz=285
KBZ Khabaz 125.09 313 PKP PKPdf 08 58 59.0 -0.3
comp=Z,11nm,0.9s,baz=95,slow=1.3,SNR=18
KBZ Khabaz 125.09 313 c iPKIKP PKPdf 08 58 58.3 -1.0
AKH Akhalkalaki 125.16 310 ⇑P PKiKP 08 59 01.3 +1.1
KIV Kislovodsk 125.19 313 i P PKiKP 08 59 01.1 +1.1
SNR=11
KIV Kislovodsk 125.19 313 PKPdf 08 58 59.4 -0.3
KIV Kislovodsk 125.19 313 eP Pdif 08 55 36.2 -0.5
KIV i 08 59 00.0
KIV e 09 00 49.7
KIV e 09 05 51.5
KIV ePS PS 09 10 51.0 -2.3
KIV eSS SS 09 17 37.0 -1.3
KIV pmax pmax
comp=Z,106nm,1.1s
KIV MLR MLR
comp=Z,4μm,23.0s
VSR Storozhevoye 125.25 323 ePKIKP PKPdf 08 58 58.9 -0.5
VSR pmax pmax
comp=Z,80nm,0.6s
NEY Neytrino 125.33 313 d iPKIKP PKPdf 08 58 59.9 -0.1
LBTB Lobatse 125.47 224 PKP PKPdf 08 59 00.3 -0.5
comp=Z,40nm,0.6s,baz=118,slow=3.7,SNR=33
PUL Pulkovo 125.52 335 d iPKIKP PKiKP 08 59 01.4 +1.4
PUL pmax pmax
comp=Z,188nm,0.8s
MOR8 Moi Rana 125.86 347 ePKPdf PKPdf 08 59 00.2 +0.1
MOR8 IVmB_BB 08 59 00.8
comp=Z,412nm,0.3s
MOR8 eSKPdf SKiKP 09 02 24.6 -0.4
MOR8 eSP SP 09 10 41.1 -1.0
MOR8 IVMs_BB IVMs_BB 09 43 59.9
comp=Z,1μm,28.8s
KONS Konsvik 125.86 348 ePKPdf PKiKP 08 59 00.6 +0.1
STOK Stokkvaagen 126.03 348 ePKPdf PKiKP 08 59 00.8 0.0
FINES FINESS Array B 126.10 338 PKhKP PKPpre 08 58 49.4
comp=Z,1.4nm,0.5s,baz=68,slow=5.3,SNR=4.2
FINES PKP PKPdf 08 59 00.4 -0.3
comp=Z,22nm,0.5s,baz=83,slow=1.7,SNR=58
FINES FINESS Array B 126.10 338 PKPpre 08 58 52.5
FINES PKPdf PKPdf 08 59 00.8 +0.1
FINES FINESS Array B 126.10 338 PKIKP PKPdf 08 59 00.8 +0.1
MATP Matopo 126.39 230 i P PKiKP 08 59 03.5 +0.4
MATP Matopo 126.39 230 PKhKP PKPpre 08 58 51.2
comp=Z,1.1nm,0.4s,baz=111,slow=6.4,SNR=4.6
MATP PKP PKPdf 08 59 01.3 -1.4
comp=Z,72nm,0.9s,baz=125,slow=1.9,SNR=62
MATP Matopo 126.39 230 i P PKiKP 08 59 03.5 +0.4
BATM Batumi 126.44 311 ⇑P PKiKP 08 59 02.8 +0.4
BATM Batumi 126.44 311 ⇑PKIKP PKiKP 08 59 02.8 +0.4
BCA Borcka 126.53 311 ⇑P PKPdf 08 59 01.4 -0.8
SOC Sochi 127.36 314 c iPKIKP PKiKP 08 59 04.3 +0.1
SOC i 09 01 06.1
SOC ePPP PPP 09 03 48.7
SOC e 09 05 54.6
SOC eSSS SSS 09 22 42.0
VSU Vasula 127.79 335 eP PKiKP 08 59 04.4 -0.2
VSU Vasula 127.79 335 c iPKIKP PKiKP 08 59 04.6 0.0
VSU pmax pmax
comp=Z,482nm,1.7s
NSS Namsos 127.81 347 ePKPdf PKiKP 08 59 04.6 +0.2
NSS eSKSac SKSac 09 05 59.7 +0.6
NSS eSP SP 09 10 58.6 -0.5
NSS eSS SS 09 18 11.2 +2.5
KMBO Kilima Mbogo 128.16 256 i P PKiKP 08 59 09.4 +2.4
KMBO Kilima Mbogo 128.16 256 PKP PKiKP 08 59 07.0 0.0
comp=Z,38nm,0.7s,baz=71,slow=2.4,SNR=56
KMBO Kilima Mbogo 128.16 256 i P PKiKP 08 59 09.4 +2.4
KMBO Kilima Mbogo 128.16 256 i P PKPdf 08 59 06.7 +0.3
SNR=43
KMBO Kilima Mbogo 128.16 256 PKPdf 08 59 06.6 +0.3
ANN Anapa 128.57 316 i PKIKP PKPdf 08 59 05.3 -0.6
ANN e 08 59 37.9
ANN e 09 01 14.1
ANN eSP SP 09 11 08.0 +0.7
ANN e 09 12 43.6
ANN eSS SS 09 18 15.6 -4.3
ANN pmax pmax
comp=Z,87nm,1.5s
ANN pmax pmax
comp=N,44nm,1.5s
ANN pmax pmax
comp=E,33nm,1.5s
ANN pmax pmax
comp=Z,513nm,6.8s
ANN MLR MLR
comp=N,3μm,24.0s
ANN MLR MLR
comp=Z,4μm,24.0s
SJG San Juan 128.72 79 PKPdf 08 59 06.2 -0.7
SJG San Juan 128.72 79 PKIKP PKPdf 08 59 06.2 -0.7
TBLU Trondheim 129.30 347 eP PKiKP 08 59 08.6 +1.1
TBLU ePP PP 09 01 15.2 -1.4
TBLU eSS SS 09 18 18.2 -8.9
LSZ Lusaka 129.67 235 i P PKiKP 08 59 11.2 +1.4

LSZ Lusaka 129.67 235 PKhKP PKPpre 08 58 56.7
comp=Z,2.2nm,0.5s,baz=169,slow=6.5,SNR=3.2
LSZ PKP PKiKP 08 59 10.0 +0.2
comp=Z,56nm,0.6s,baz=134,slow=1.4,SNR=72
LSZ PP PP 09 01 21.0 +0.5
comp=Z,16nm,1.1s,baz=131,slow=6.1,SNR=4.7
LSZ Lusaka 129.67 235 i P PKiKP 08 59 11.2 +1.4
LSZ Lusaka 129.67 235 PKPpre 08 58 59.9
LSZ PKPdf PKPdf 08 59 09.1 +0.1
MICGM Minsk 129.69 331⇓ePKP PKiKP 08 59 09.0 +0.5
MICGM PKPM 08 59 10.0
comp=Z,0.4nm,2.0s
MICGM epPKP pPKPdf 08 59 38.0 -2.6
MICGM ePP PP 09 01 16.0 -3.6
MICGM eSKP 09 02 31.0
MICGM ePKS 09 02 43.0
MICGM eSKS SKSdf 09 06 06.0 -1.7
MICGM eSS SS 09 18 30.0 -2.7
MICGM eSSS SSS 09 22 00.0
MICGM eLQ LQ 09 36 16.0
MICGM eLR LR 09 47 40.0
MNK Minsk 129.69 331 ePKIKP PKiKP 08 59 09.0 +0.5
MNK e 09 01 16.0
MNK e 09 06 06.0
MNK eSS SS 09 18 30.0 -2.7
MNK pmax pmax
comp=Z,380nm,2.0s
IZAR Zarasai 129.69 333 eP PKiKP 08 59 09.8 +1.3
ISAL Salakas 129.86 332 eP PKiKP 08 59 10.0 +1.2
ISAL IAML 08 59 10.9
comp=Z,4.7nm,0.5s
IIGN Ignalina 129.95 332 eP PKiKP 08 59 09.4 +0.4
IIGN IAML 08 59 12.0
comp=Z,18nm,0.5s
NACGM Naroch 129.97 331 ePKIKP PKPdf 08 59 08.0 -0.3
NACGM ePP PP 09 01 20.0 -1.4
NACGM eSKP 09 02 19.0
NACGM ePKS 09 02 32.0
NACGM eSKS SKSdf 09 06 12.0 +3.8
NACGM eSKKS SKKSac 09 08 06.0 -0.2
NACGM ePS SP 09 11 18.0 -0.5
NACGM eSS SS 09 19 03.0 +27
NACGM eSSS SSS 09 23 29.0
NACGM eLQ LQ 09 36 42.0
NACGM eLR LR 09 47 45.0
NACGM LRM MLR 09 57 53.0
comp=Z,9.3nm,22.0s
MOL Molde 130.48 348 ePKPdf PKiKP 08 59 10.2 +0.4
MOL eSKPdf SKiKP 09 02 33.9 -0.6
MOL eSP SP 09 11 22.4 +0.2
DOMB Dombas 130.63 347 ePKPdf PKiKP 08 59 10.0 -0.3
DOMB ePP PP 09 01 27.9 +2.5
DOMB eSKPdf SKiKP 09 02 34.1 -0.8
DOMB eSP SP 09 11 22.8 -0.9
DOMB eSS SS 09 18 48.2 +4.6
DOMB IVMs_BB IVMs_BB 09 47 00.6
comp=Z,1μm,3.6s
SIM Simferopol' 130.73 317 i PKIKP PKiKP 08 59 12.0 +1.1
SIM e 09 01 27.0
SIM ePS SP 09 11 16.0 -10
SIM pmax pmax
comp=Z,284nm,10.0s
PABE Paberze 130.85 333 eP PKiKP 08 59 11.0 +0.2
AKN Aaknes 130.94 348 ePKPdf PKiKP 08 59 11.5 +0.6
AKN eSKPdf SKPdf 09 02 34.5 +0.7
AKN eSP SP 09 11 23.6 -2.7
NB2 NORSAR Subarra 130.99 345 PKPdf PKPpre 08 58 59.3
comp=Z,48nm,1.2s,baz=31,slow=1.9
NOA NORSAR Array B 130.99 345 PKhKP PKPpre 08 58 58.2
comp=Z,3.0nm,0.7s,baz=55,slow=1.9,SNR=8.8
NOA PKP PKiKP 08 59 10.8 -0.2
comp=Z,12nm,0.6s,baz=34,slow=2.0,SNR=50
NOA SKPbc SKPab 09 02 24.8 +1.3
comp=Z,4.5nm,0.6s,baz=30,slow=3.0,SNR=13
DIKM Dikmen 131.07 313 ⇑P PKiKP 08 59 12.6 +0.8
ITZ Itezhi-Tezhi 131.09 233 i P PKPdf 08 59 11.8 +0.1
ITZ i 08 59 13.1
baz=159,slow=1.6
ITZ i S PP 09 01 29.6 0.0
ITZ Itezhi-Tezhi 131.09 233 i P PKPdf 08 59 11.5 -0.2
ITZ Itezhi-Tezhi 131.09 233 i P PKPdf 08 59 11.8 +0.1
ITZ i 08 59 13.1
baz=159,slow=1.6
ITZ i S PP 09 01 29.6 0.0
HFS Hagfors 131.09 343 SKPbc SKPab 09 02 25.3 +1.4
comp=Z,10nm,0.8s,baz=48,slow=2.1,SNR=6.0
AKASG Malin Array Be 131.10 326 PKhKP PKPpre 08 58 54.0
comp=Z,1.9nm,0.6s,baz=70,slow=2.5,SNR=4.8
AKASG PKP PKPdf 08 59 11.0 +0.4
comp=Z,6.9nm,0.6s,baz=46,slow=2.7,SNR=54
AKASG SKPbc SKPab 09 02 25.2 +1.0
comp=Z,9.5nm,0.8s,baz=48,slow=4.6,SNR=11
AKASG Malin Array Be 131.10 326 PKPpre 08 58 59.2
AKASG PKPdf PKiKP 08 59 11.2 -0.3
AKASG Malin Array Be 131.10 326 PKIKP PKiKP 08 59 11.2 -0.3
AKBB Malin Array Si 131.10 326 PKPdf 08 59 10.8 +0.3
AKBB Malin Array Si 131.10 326 i PKIKP PKPdf 08 59 10.9 +0.3
NC602 NORSAR Array S 131.17 345 ePKPdf PKPdf 08 59 10.9 -0.4
NC602 ePP PP 09 01 30.2 +1.4
NC602 eSKPdf SKiKP 09 02 34.9 +0.7
NC602 eSKSac SKSac 09 06 09.4 +0.4
NC602 eSS SS 09 18 53.2 +3.0
NC602 IVMs_BB IVMs_BB 09 41 41.5
comp=Z,1μm,4.5s
SEVA Sevastopol 131.17 317 ⇑P PKiKP 08 59 13.5 +1.7
PBUR Paburge 131.36 335 eP PKiKP 08 59 12.2 +0.4
PBUR IAML 08 59 14.4
comp=Z,44nm,0.6s
FOO Floro 131.85 349 ePKPdf PKiKP 08 59 13.8 +1.2
FOO eSKSac SKSac 09 06 11.4 +0.7
SKAR Skarslia 132.01 346 ePKPdf PKiKP 08 59 13.0 -0.1
SKAR IVmB_BB 08 59 13.3
comp=N,317nm,2.1s
SKAR IVmB_BB 08 59 13.8
comp=Z,634nm,2.3s
SKAR epPKPdf pPKPdf 08 59 43.4 -1.7
SKAR ePP PP 09 01 36.2 +1.9
SKAR eSKPdf SKiKP 09 02 36.3 -1.4
SKAR eSKSac SKSdf 09 06 11.7 -0.1
SKAR eSP SP 09 11 30.0 -5.6
SKAR eSS SS 09 19 03.5 +3.1
SKAR IVMs_BB IVMs_BB 09 45 03.0
comp=N,911nm,3.9s
ASF Jabal al Asfar 132.01 300 PKP PKiKP 08 59 14.7 +0.7
comp=N,8.8nm,0.9s,baz=348,slow=1.7,SNR=3.5
ASF SKPbc SKPab 09 02 31.0 +2.1
comp=N,8.5nm,0.9s,baz=49,slow=1.1,SNR=4.4
HYA Hoyanger 132.03 348 ePKPdf PKPdf 08 59 11.9 0.0
HYA ePP PP 09 01 33.0 -1.2
HYA eSKPdf SKPdf 09 02 32.0 -3.8
OSL Oslo 132.07 344 ePKPdf PKPdf 08 59 12.2 +0.2
OSL eSKPdf SKPab 09 02 32.4 +4.4
OSL eSKPdf SKPdf 09 02 34.3 -1.6
SUW Suwalki 132.17 332 ePKP PKiKP 08 59 13.5 0.0
SUW e 09 02 28.6
SUW eL L 09 43 22.9
comp=N,10μm,66.0s
SUW Suwalki 132.17 332 ePKIKP PKiKP 08 59 13.5 0.0
SUE Sulen 132.41 349 ePKPdf PKiKP 08 59 14.6 +0.8
SUE eSP SP 09 11 35.2 -3.6
KONO Kongsberg 132.60 345 ePKPdf PKiKP 08 59 13.8 -0.5
KONO ePP PP 09 01 38.9 +0.9
KONO ePKSdf PKSdf 09 02 48.6 -0.6
KONO eSP SP 09 11 43.8 +3.2
KONO eSS SS 09 19 11.0 +3.4
KONO IVMs_BB IVMs_BB 09 34 56.4
comp=Z,1μm,3.6s
BRTR Keskin Array B 132.84 311 PKhKP PKPpre 08 59 03.6
comp=Z,0.7nm,0.6s,baz=133,slow=3.2,SNR=4.5
BRTR PKP PKiKP 08 59 15.0 -0.6
comp=Z,13nm,1.0s,baz=134,slow=2.1,SNR=19
ASK Askoy 132.85 348 ePKPdf PKiKP 08 59 15.0 +0.3
SORM Soroca 132.90 323 ⇑P PKPpre 08 59 00.7
SORM Soroca 132.90 323 ⇑PKHKP PKPpre 08 59 00.7
BER Bergen 132.91 348 ePKPdf PKiKP 08 59 14.6 -0.2
BER ePP PP 09 01 41.8 +1.9
BER eSKSac SKSac 09 06 14.2 +0.7
BER eSP SKKPbc 09 11 44.4 -9.2
ODD1 Odda 133.07 347 ePKPdf PKiKP 08 59 16.1 +0.8
ODD1 eSKSac SKSac 09 06 14.4 +0.4
MMAI Mount Meron Ar 133.11 301 PKP PKiKP 08 59 15.8 -0.4
comp=Z,12nm,0.8s,baz=62,slow=6.8,SNR=5.5
MMAI SKPbc SKPab 09 02 33.9 +0.3

comp=Z,14nm,0.7s,baz=106,slow=4.7,SNR=11
KIS Kishinev 133.19 322 ⇓iPKP PKiKP 08 59 16.0 +0.2
comp=Z,300nm,2.0s
KIS ePKP sPKPdf 09 00 05.0 +4.4
KIS Kishinev 133.19 322 ePP PP 09 01 40.0 -2.5
KIS Kishinev 133.19 322 iPKS PKSab 09 02 44.0 -2.2
KIS eSKS SKSdf 09 06 04.0 -10
KIS eSKKS SKKSac 09 08 28.0 +1.6
KIS Kishinev 133.19 322 ePS PS 09 12 20.0 +18
KIS LRM MLR 09 58 40.0
comp=Z,700nm,17.0s
KIS Kishinev 133.19 322 ⇓iPKIKP PKiKP 08 59 16.0 +0.2
KIS e 09 00 05.0
KIS e 09 01 40.0
KIS e 09 06 04.0
KIS pmax pmax
comp=Z,300nm,2.0s
KIS MLR MLR
comp=Z,2μm,20.0s
MILM Milestii Mici 133.23 322 ⇑P PKPdf 08 59 14.9 +0.2
AFSR Afar-Bala (An 133.35 310 P PKPdf 08 59 11.3 -4.0
ANTO Ankara 133.41 311 ⇑P PKiKP 08 59 16.1 -0.5
ANTO Ankara 133.41 311 PKiKP 08 59 14.8 -0.6
ANTO Ankara 133.41 311 ⇑PKIKP PKiKP 08 59 16.1 -0.5
LOD Lodumlu 133.43 311 P PKPdf 08 59 14.9 -0.5
BLS5 Blasjo 133.55 347 ePKPdf PKPdf 08 59 14.4 -0.5
BLS5 ePP PP 09 01 47.3 +3.3
BLS5 eSKSac SKSac 09 06 16.1 +0.7
BDFB Brasilia 133.56 130 PKP PKiKP 08 59 18.3 +0.6
comp=Z,10nm,0.8s,baz=232,slow=4.3,SNR=9.1
BDFB PP PP 09 01 45.3 -0.1
comp=Z,6.4nm,1.0s,baz=194,slow=3.9,SNR=3.8
BDFB SKPbc SKPab 09 02 35.9 -0.2
comp=Z,18nm,0.7s,baz=223,slow=3.2,SNR=10
BDFB Brasilia 133.56 130 PKPdf 08 59 15.0 -1.4
KMY Karmoy 134.00 347 ePKPdf PKiKP 08 59 17.1 0.0
EIL Elat 134.02 297 PKP PKiKP 08 59 19.1 +1.1
comp=Z,15nm,0.6s,baz=315,slow=0.9,SNR=15
EIL PP PP 09 01 56.0 +7.3
comp=Z,12nm,1.0s,baz=33,slow=3.1,SNR=4.6
TLCR 134.04 319 ⇑P PKiKP 08 59 17.1 -0.5
TLCR 134.04 319 ⇑PKIKP PKiKP 08 59 17.1 -0.5
LADK Ladik-KONYA 134.25 309 P PKPdf 08 59 14.9 -2.2
SNART Snartemo 134.35 346 ePKPdf PKiKP 08 59 17.3 -0.5
SNART eSKPdf SKiKP 09 02 43.7 +1.2
LVV L'vov 134.36 327 iPKKP PKPdf 08 59 15.0 -1.7
LVV e 09 01 51.9
LVV eSS SS 09 20 12.7 +43
LVV MLR MLR
comp=E,1μm,21.0s
LVV MLR MLR
comp=N,1μm,22.0s
LVV MLR MLR
comp=Z,2μm,22.0s
KIZT Kizilcal 134.40 310 P PKiKP 08 59 18.1 -0.6
MBAR Mbarara 134.43 254 PKiKP 08 59 19.3 -0.3
MBAR Mbarara 134.43 254 PKIKP PKiKP 08 59 19.3 -0.3
TOPG Topolog 134.46 319 ⇑P PKPpre 08 59 06.1
GHRR 134.50 321 ⇑P PKPpre 08 59 08.1
HDMB Hadim 134.52 307 P PKPpre 08 59 10.3
BEL Belsk 134.69 331 ePKP PKiKP 08 59 18.7 0.0
BEL e 09 02 40.3
BEL eL L 09 52 36.6
comp=Z,3μm,26.9s
BEL Belsk 134.69 331 ePKIKP PKiKP 08 59 18.7 0.0
TESR Tescani 134.73 322 ⇑P PKPpre 08 59 06.3
BSD Bornholm Skovb 134.74 338 iP PKPdf 08 59 17.7 +0.5
BSD e 09 01 51.8
BSD Bornholm Skovb 134.74 338 ePKIKP PKPdf 08 59 17.7 +0.5
BSD e 09 01 51.8
TSUM Tsumeb 134.81 222 PKhKP PKPpre 08 59 09.6
comp=Z,9.2nm,1.0s,baz=129,slow=5.1,SNR=2.0
TSUM PKP PKPdf 08 59 18.8 +0.1
comp=Z,40nm,1.1s,baz=167,slow=4.5,SNR=4.4
TSUM Tsumeb 134.81 222 PKPpre 08 59 03.3
TSUM PKPdf PKPdf 08 59 18.5 -0.2
HARR Harsova 134.83 319 ⇑P PKPpre 08 59 03.7
HARR Harsova 134.83 319 ⇑PKHKP PKPpre 08 59 03.7
CIFT Cifteler, Eski 134.84 311 P PKPdf 08 59 16.9 -1.2
GAZI Gazipasa 134.86 306 P PKPdf 08 59 16.2 -1.9
GULT Gulveren 134.86 313 P PKPdf 08 59 15.5 -2.6
SRCK Saricakaya, Es 134.92 312 P PKPdf 08 59 15.9 -2.2
BURAR Bucovina Array 134.97 324 ⇑P PKPpre 08 59 09.9
BURAR Bucovina Array 134.97 324 PKPpre 08 59 07.2
BURAR PKPdf PKiKP 08 59 20.2 +0.6
BURAR Bucovina Array 134.97 324 ⇑PKIKP PKPdf 08 59 09.9 -8.2
COP Copenhagen 135.14 340 iP PKiKP 08 59 20.6 +1.1
COP e 09 01 57.3
COP Copenhagen 135.14 340 ePKIKP PKiKP 08 59 20.6 +1.1
COP e 09 01 57.3
KWP Kalwaria Pacla 135.16 328 ePKP PKPdf 08 59 17.8 -0.5
KWP e 09 02 43.0
KWP eL L 09 49 18.4
comp=Z,4μm,31.3s
KWP Kalwaria Pacla 135.16 328 ePKIKP PKPdf 08 59 17.8 -0.5
ICOR Ion Corvin 135.18 319 ⇑P PKiKP 08 59 21.4 +1.5
GKP Gorka Klasztor 135.24 335 ePKP PKPdf 08 59 19.4 -0.4
GKP e 09 02 38.8
GKP eL L 09 48 03.0
comp=Z,5μm,30.3s
GKP Gorka Klasztor 135.24 335 ePKIKP PKPdf 08 59 19.4 -0.4
HRT Hereke 135.31 313 P PKPdf 08 59 15.9 -3.0
OZUR 135.45 322 ⇑P PKiKP 08 59 21.2 +0.6
MUD Monsted U'grnd 135.49 343 iP PKiKP 08 59 21.7 +1.6
MUD Monsted U'grnd 135.49 343 iPKIKP PKiKP 08 59 21.7 +1.6
SHUT Suhut-Afyon 135.49 310 P PKPdf 08 59 20.6 -0.3
YLV Yalova 135.62 313 P PKiKP 08 59 17.9 -1.6
ISK Istanbul-Kandi 135.64 314 P PKPdf 08 59 19.4 0.0
ISK Istanbul-Kandi 135.64 314 P PKPdf 08 59 15.9 -3.5
MLR Muntele Rosu 135.67 321 PKhKP PKPpre 08 59 13.2
comp=Z,6.5nm,1.1s,baz=25,slow=15,SNR=5.9
MLR PKP PKPdf 08 59 19.0 -0.5
comp=Z,14nm,0.8s,baz=348,slow=6.5,SNR=12
MLR Muntele Rosu 135.67 321 ⇑P PKPpre 08 59 12.2
DOPR Dopca 135.76 322 ⇑P PKPpre 08 59 08.7
KOLS Kolonicke sedl 135.81 327 ePKIKP PKiKP 08 59 20.8 -0.3
KOLS Kolonicke sedl 135.81 327 ePKP PKiKP 08 59 20.8 -0.3
SULR 135.88 320 ⇓P PKiKP 08 59 22.5 +1.1
CTKS Kestanelik-??a 135.96 315 P PKPdf 08 59 18.6 -1.4
TVSB Tavsanli 135.97 312 P PKPdf 08 59 21.3 -0.6
ARMT Armutlu 135.98 313 P PKPdf 08 59 19.3 -0.8
UZH Uzhgorod 135.99 327 ePKIKP PKiKP 08 59 23.0 +1.6
UZH e 09 06 18.0
SB02 Marmara Sea 136.11 314 P PKPdf 08 59 18.6 -1.6
KORT Korkueli 136.15 308 P PKPpre 08 59 15.7
TRPA Tarpa 136.16 326 ⇑P PKPpre 08 59 13.1
OJC Ojcow 136.23 330 ePKP PKPdf 08 59 18.2 -2.0
OJC ePP PP 09 02 04.0 +2.6
OJC e 09 02 44.4
OJC eL L 09 45 28.4
comp=Z,4μm,45.3s
OJC Ojcow 136.23 330 ePKIKP PKPdf 08 59 18.2 -2.0
OJC e 09 02 04.0
VOIR 136.24 322 ⇑P PKiKP 08 59 22.5 +0.3
VOIR 136.24 322 ⇑PKIKP PKiKP 08 59 22.5 +0.3
CRVS Cervenica-Dubn 136.25 328 ePKIKP PKiKP 08 59 22.1 +0.1
CRVS Cervenica-Dubn 136.25 328 ePKP PKiKP 08 59 22.1 +0.1
MLA1 Latheron 136.30 353 eP PKiKP 08 59 18.1 -1.9
CJR Cluj-Napoca 136.39 324 ⇑P PKiKP 08 59 22.2 -0.3
CJR Cluj-Napoca 136.39 324 ⇑PKIKP PKiKP 08 59 22.2 -0.3
KCTX Karacabey (Bur 136.45 313 P PKPdf 08 59 21.4 +0.4
SIMA Simav-Kutahya 136.45 311 P PKPdf 08 59 17.6 -3.5
NIE Niedzica 136.51 329 ePKP PKPdf 08 59 21.0 +0.2
NIE ePP PP 09 02 05.5 +2.2
NIE e 09 02 43.6
NIE eL L 09 48 03.0
comp=Z,2μm,32.1s
NIE Niedzica 136.51 329 ePKIKP PKPdf 08 59 21.0 +0.2
NIE e 09 02 05.5
ARR Arges 136.52 322 ⇑P PKPdf 08 59 15.1 -5.9
ELL Elmali 136.56 308 P PKPdf 08 59 18.3 -3.1
COPA Copaceanca 136.80 320 ⇑P PKPdf 08 59 21.1 -0.3
MRMT Marmara Adasi 136.85 314 P PKPdf 08 59 22.3 +0.5
DRGR 136.85 325 ⇑P PKPdf 08 59 11.8 -10
EDRB Edirne 136.90 316 P PKPdf 08 59 16.6 -5.1
KULA Kula-Manisa 136.90 311 P PKPdf 08 59 21.3 -0.6
KULA Kula-Manisa 136.90 311 P PKPdf 08 59 17.3 -4.6
AKAS Kas 136.95 307 P PKPdf 08 59 16.3 -5.9
BALB Balikesir 137.03 313 P PKPdf 08 59 18.9 -3.1
KRBG Karabiga-Canak 137.14 314 P PKPdf 08 59 19.3 -2.9
RUE Ruedersdorf 137.21 336 eP PKiKP 08 59 23.1 -0.7
FETY Fethiye 137.22 308 P PKPdf 08 59 21.4 -1.1
FETY Fethiye 137.22 308 P PKPdf 08 59 18.3 -4.2
DEV Deva 137.26 323 ⇓P PKiKP 08 59 23.8 -0.3
DEV Deva 137.26 323 ⇓PKIKP PKiKP 08 59 23.8 -0.3
OKC Ostrava-Krasne 137.28 331 ePKPDF PKiKP 08 59 24.6 +0.6
OKC AMS AMS 09 53 50.0
comp=Z,2μm,21.8s
OKC Ostrava-Krasne 137.28 331 ePKIKP PKiKP 08 59 24.6 +0.6
OKC MLR MLR
comp=Z,2μm,21.8s
KSP Ksiaz 137.41 333 ePKP PKPdf 08 59 22.8 +0.4
KSP ePP PP 09 02 05.0 -3.7
KSP e 09 02 43.4
KSP eL L 09 45 49.2
comp=Z,4μm,35.9s
KSP Ksiaz 137.41 333 ePKIKP PKPdf 08 59 22.8 +0.4
KSP e 09 02 05.0
KPL Plockton 137.49 354 eP PKPdf 08 59 19.1 -3.2
DALY Dalyan (Mula) 137.49 308 P PKPdf 08 59 19.9 -3.0
TURN Turunc 137.51 309 P PKPdf 08 59 21.8 -1.2
LPK Lapseki 137.52 314 P PKPdf 08 59 19.9 -3.0
DRUM Mains of Drumt 137.54 352 eP PKPdf 08 59 19.7 -2.7
PLVB Pleven 137.55 319 ⇑P PKiKP 08 59 24.6 -0.2
ERIK Erikli-Kesan 137.57 315 P PKPdf 08 59 19.3 -3.6
MORC Moravsky Berou 137.60 331 ePKP PKPpre 08 59 15.0
MORC Moravsky Berou 137.60 331 ⇑P PKPpre 08 59 15.9
MORC Moravsky Berou 137.60 331 ⇑PKIKP PKPpre 08 59 15.9
GZR Gura Zlata 137.61 323 ⇑P PKPpre 08 59 14.3
OSTC Ostas 137.65 333 ePP PP 09 02 10.8 +0.6
YER Yerkesik 137.66 309 P PKPpre 08 59 18.3
AYDB Zeytinkoy-Aydi 137.67 310 P PKPpre 08 59 18.2
PSZ Piszkesteto 137.68 328 ⇑P PKiKP 08 59 25.2 +0.2
PSZ Piszkesteto 137.68 328 ⇑PKIKP PKiKP 08 59 25.2 +0.2
CHVC Chvalec 137.70 333 ePKPpre PKPpre 08 59 14.8
GELI Tayfur-Gelibol 137.71 314 P PKPdf 08 59 19.6 -3.6
KRLC Kraliky 137.74 332 ePKPpre PKPpre 08 59 17.9
KRLC ePKPDF PKiKP 08 59 24.9 -0.2
KRLC AMS AMS 09 58 10.0
comp=Z,2μm,19.4s
KRLC Kraliky 137.74 332 ePKIKP PKPdf 08 59 17.9 -5.2
KRLC MLR MLR
comp=Z,2μm,19.4s
SIRR Siria 137.74 325 ⇑P PKiKP 08 59 26.6 +1.4
DPC Dobruska-Polom 137.75 333 ePKPpre PKPpre 08 59 11.2
DPC ePP PP 09 02 10.8 0.0
DPC AMS AMS 10 01 20.0
comp=Z,2μm,18.0s
DPC Dobruska-Polom 137.75 333 ePKHKP PKPpre 08 59 11.2
DPC e 09 02 10.8
DPC MLR MLR
comp=Z,2μm,18.0s
SRE Strehaia 137.75 322 ⇑P PKiKP 08 59 26.0 +0.8
SRE Strehaia 137.75 322 ⇑PKIKP PKiKP 08 59 26.0 +0.8
UPC Upice 137.78 333 ePKP PKPpre 08 59 11.2
UPC ePP PP 09 02 12.5 +1.6
UPC AMS AMS 10 00 20.0
comp=Z,4μm,24.4s
VYHS Vyhne 137.85 329 ePKIKP PKiKP 08 59 25.6 +0.3
VYHS Vyhne 137.85 329 ePKP PKiKP 08 59 25.6 +0.3
DKL Dikili 137.95 312 P PKPpre 08 59 16.9
EZN Ezine 138.05 314 P PKPdf 08 59 23.2 -0.7
EZN Ezine 138.05 314 P PKPdf 08 59 22.4 -1.5
ARG Arkhangelos 138.09 308 P PKPdf 08 59 25.7 -0.4
BLCB Balcova 138.12 311 P PKPdf 08 59 21.0 -3.1
BZS Buzias 138.15 324 ⇑P PKPdf 08 59 19.8 -4.1
BZS Buzias 138.15 324 ⇑PKIKP PKPdf 08 59 19.8 -4.1
JAVC Velka Javorina 138.17 330 ePKP PKPdf 08 59 19.8 -4.1
BOZC Bozcaada 138.24 314 P PKPpre 08 59 17.3
SMTH Samothraki Isl 138.33 315 P PKPpre 08 59 16.2
DAT Datca 138.33 309 P PKPdf 08 59 24.2 -0.5
PRK Paraskevi 138.33 313 P PKPdf 08 59 23.8 -0.6
VRAC Vranov 138.37 331 ePKP PKPpre 08 59 16.1
VRAC Vranov 138.37 331 PKhKP PKPpre 08 59 17.9
comp=Z,9.3nm,0.9s,baz=73,slow=6.8,SNR=5.8
VRAC Vranov 138.37 331 ⇓P PKPpre 08 59 18.1
VRAC Vranov 138.37 331 ⇓PKIKP PKPpre 08 59 18.1
PVCC Panska Ves 138.38 334 ePKPpre PKPpre 08 59 14.6
PVCC ePP PP 09 02 17.6 +3.0
PVCC AMS AMS 10 00 30.0
comp=Z,2μm,21.0s
PVCC Panska Ves 138.38 334 ePKHKP PKPpre 08 59 14.6
PVCC e 09 02 17.6
PVCC MLR MLR
comp=Z,2μm,21.0s
BRG Berggiesshubel 138.38 335 ePKHKP PKPpre 08 59 16.4
BRG i 08 59 20.8
BRG e 09 02 17.5
BRG pmax pmax
comp=Z,23nm,0.7s
BRG pmax pmax
comp=Z,19nm,1.4s
BODT Bodrum 138.42 309 P PKPdf 08 59 19.9 -4.8
CLL Collm 138.43 336 iPKPpre PKPpre 08 59 15.9
CLL ePKPdf PKPdf 08 59 23.0 -1.2
CLL iPKiKP PKiKP 08 59 25.7 -0.6
comp=Z,120nm,1.5s
CLL esPKPdf sPKPdf 09 00 06.0 -3.7
CLL ePP PP 09 02 14.0 -0.8
CLL e 09 02 53.0
CLL e(PKSdf) 09 03 00.0
comp=Z,19nm,1.2s
CLL e 09 03 16.0
CLL e 09 03 40.0
CLL eSKSac SKSac 09 06 12.0 -16
CLL ePPPP 09 07 18.0
CLL eSKKSac SKKSac 09 08 48.0 -9.4
CLL e 09 11 18.0
CLL eSPP SPP 09 14 18.0
CLL e 09 15 36.0
CLL e 09 16 54.0
CLL eSS SS 09 20 00.0 -18
CLL esSS 09 21 06.0
CLL eSSS SSS 09 25 06.0
CLL eSSSS 09 29 30.0
CLL LmV 10 04 00.0
comp=Z,3μm,21.5s
CLL Collm 138.43 336 iPKHKP PKPpre 08 59 15.9
CLL e 08 59 23.0
CLL e 09 02 14.0
CLL MLR MLR
comp=Z,3μm,21.5s
ESY Stoneypath 138.53 352 eP PKPdf 08 59 21.6 -2.7
KRUC Moravsky 138.64 331 ePKP PKPdf 08 59 16.6 -8.1
SIGR SIGRI 138.64 313 P PKPdf 08 59 21.7 -3.3
MODS Modra-Piesok 138.70 330 ePKIKP PKPdf 08 59 24.0 -0.9
MODS Modra-Piesok 138.70 330 ePKP PKPdf 08 59 24.0 -0.9
GOPC GO Pecny, Ondr 138.75 333 ePKPpre PKPdf 08 59 20.4 -4.5
GOPC ePKPDF PKPdf 08 59 26.9 +2.0
GOPC AMS AMS 09 53 30.0
comp=Z,3μm,21.3s
GOPC GO Pecny, Ondr 138.75 333 ePKIKP PKPdf 08 59 20.4 -4.5
GOPC MLR MLR
comp=Z,3μm,21.3s
KAVA Kavala 138.78 316 P PKPdf 08 59 24.2 -1.0
PRA Prague 138.78 334 ePKPpre PKPpre 08 59 16.3
PRA AMS AMS 09 56 30.0
comp=Z,4μm,24.5s
PRA Prague 138.78 334 ePKHKP PKPpre 08 59 16.3
PRA MLR MLR
comp=Z,4μm,24.5s
PRU Pruhonice 138.80 333 ePKPpre PKPdf 08 59 20.3 -4.6
PRU ePKPDF PKiKP 08 59 26.8 -0.4
PRU ePP PP 09 02 20.0 +2.8
PRU AMS AMS 09 56 30.0
comp=Z,3μm,22.1s
PRU Pruhonice 138.80 333 ePKIKP PKPdf 08 59 20.3 -4.6
PRU e 09 02 20.0
PRU MLR MLR
comp=Z,3μm,22.1s
VTS Vitosha 138.81 319 ⇑P PKPdf 08 59 19.2 -6.2
VTS Vitosha 138.81 319 ⇑PKIKP PKPdf 08 59 19.2 -6.2
THAS Thassos island 138.82 316 P PKPdf 08 59 24.0 -1.3
CHOS Chios island 138.84 312 P PKPdf 08 59 19.4 -6.1
TREC Trest 138.89 332 AMS AMS 10 05 10.0
comp=Z,3μm,19.8s
EKA Eskdalemuir Ar 139.17 352 PKhKP PKPpre 08 59 18.1
comp=Z,8.9nm,0.6s,baz=8.0,slow=2.5,SNR=2.6
ESK Eskdalemuir 139.19 352 eP PKPdf 08 59 21.6 -3.9
MORH Mrgy, Hungar 139.43 326 eP PKPdf 08 59 15.9 -10
NKC Novy Kostel 139.49 335 ePKPpre PKPdf 08 59 20.0 -6.2
NKC ePP PP 09 02 21.1 -0.3
NKC AMS AMS 09 57 00.0
comp=Z,3μm,20.0s
NKC Novy Kostel 139.49 335 ePKIKP PKPdf 08 59 20.0 -6.2
NKC e 09 02 21.1
NKC MLR MLR
comp=Z,3μm,20.0s
CONA Conrad Observa 139.69 330 ePKPdf PKPdf 08 59 21.5 -5.3
comp=Z,23nm,1.3s,SNR=8.7
KHC Kasperske Hory 139.85 333 ePKPpre PKPdf 08 59 21.9 -5.1
KHC ePKPDF PKiKP 08 59 26.3 -3.1
KHC ePP PP 09 02 19.4 -4.4
KHC AMS AMS 10 00 50.0
comp=Z,3μm,23.6s
KHC Kasperske Hory 139.85 333 PKPpre 08 59 19.8
KHC Kasperske Hory 139.85 333 ePKIKP PKPdf 08 59 21.9 -5.1
KHC e 09 02 19.4
KHC MLR MLR
comp=Z,3μm,23.6s
KESW Keswick, Cumbr 139.89 351 eP PKPdf 08 59 24.8 -2.0
ZKR Zakros 139.93 307 P PKPdf 08 59 26.3 -1.2
TEKS Tekeris 139.97 324 eP PKPdf 08 59 27.1 -0.2
THE Thessaloniki 139.98 317 P PKPdf 08 59 26.6 -0.8
GERES GERESS Array B 140.02 333 PKhKP PKPpre 08 59 22.7
comp=Z,13nm,0.6s,baz=45,slow=2.1,SNR=40
GERES GERESS Array B 140.02 333 PKPpre 08 59 20.2
GERES GERESS Array B 140.02 333 PKHKP PKPpre 08 59 20.2
GRG Griva 140.19 317 P PKPdf 08 59 20.4 -7.4
HPK Haverah Park 140.26 350 eP PKPdf 08 59 24.5 -3.0
ARSA Arzberg 140.33 330 ePKPdf PKPdf 08 59 22.0 -5.8
comp=Z,12nm,1.2s
IOMK Kirk Michael 140.40 353 eP PKPdf 08 59 22.5 -5.2
BBLS Lazići 140.45 323 eP PKPdf 08 59 22.3 -6.0
LAST Lasithi 140.48 307 P PKPdf 08 59 23.1 -5.5
MOA Molln 140.50 331 ePKPdf PKPdf 08 59 24.0 -4.2
comp=Z,53nm,1.4s,SNR=9.2
WIM Isle of Man 140.53 353 eP PKPdf 08 59 27.6 -0.4
LIT Litokhoron 140.56 316 P PKPdf 08 59 21.9 -6.6
HAPS Han Pijesak,Bl 140.58 324 eP PKPdf 08 59 21.6 -6.9
LBWR Ladybower, Pea 140.81 350 eP PKPdf 08 59 24.8 -3.7
IDI Anoyia 140.88 308 PKP PKPdf 08 59 27.9 -1.4
comp=Z,12nm,0.4s,baz=82,slow=4.2,SNR=8.1
VILL Villia 140.89 313 P PKPdf 08 59 26.5 -2.7
FNA Florina 140.95 318 P PKPdf 08 59 23.6 -5.6
SOKA Soboth 140.97 330 ePKPdf PKPdf 08 59 24.2 -5.0
comp=Z,42nm,1.1s,SNR=23
UPM Unac-Piva 141.14 323 eP PKPdf 08 59 27.6 -2.1
BLY Banja Luka 141.16 326 ⇑P PKPdf 08 59 23.6 -5.8
BLY Banja Luka 141.16 326 eP PKPdf 08 59 23.0 -6.4
AGG Agios Georgios 141.18 315 P PKPdf 08 59 28.6 -1.1
OBKA Obir 141.32 330 ePKPdf PKPdf 08 59 25.2 -4.5
comp=Z,7.5nm,0.9s
WLF1 Llynfaes 141.33 352 eP PKPdf 08 59 25.6 -3.8
CRES Cresnjev 141.35 328 eP PKPdf 08 59 22.7 -7.0
VAM Vamos 141.36 308 P PKPdf 08 59 26.9 -3.2
PDG Podgorica 141.38 321 eP PKPdf 08 59 24.0 -5.9
MGRS Mrkonjic Grad 141.43 325 eP PKPdf 08 59 25.2 -4.7
YLL Llanberis 141.44 352 eP PKPdf 08 59 27.9 -1.7
KBA Koelnbreinsper 141.49 331 iPKPdf PKPdf 08 59 26.0 -4.2
comp=Z,39nm,1.0s,SNR=14
KBA Koelnbreinsper 141.49 331 PKIKP PKPdf 08 59 26.2 -4.0
BRY Bratogost 141.53 322 eP PKPdf 08 59 25.1 -5.2
FOEL Foel Wylfa 141.55 351 eP PKPdf 08 59 26.1 -3.8
DRME Dracevica, Mon 141.57 321 eP PKPdf 08 59 25.4 -4.8
TIR Tirane 141.62 319 PKPdf 08 59 26.1 -4.2
TIR Tirane 141.62 319 PKIKP PKPdf 08 59 26.1 -4.2
LJU Ljubljana 141.66 329 eP PKPdf 08 59 26.4 -3.9
ANX Ano Chora 141.67 314 P PKPdf 08 59 27.4 -3.2
MYKA Terra Mystica 141.67 331 ePKPdf PKPdf 08 59 25.8 -4.6
comp=Z,22nm,0.7s,SNR=13
TREB Trebinje 141.76 322 eP PKPdf 08 59 25.5 -5.0
KLV Kalavryta, Ach 141.76 313 P PKPdf 08 59 28.8 -2.0
HCY Herceg Novi 141.83 322 eP PKPdf 08 59 26.5 -4.2
HLM1 Long Mynd 141.86 350 eP PKPdf 08 59 27.7 -2.8
STON Ston 142.04 323 eP PKPdf 08 59 26.0 -5.0
WATA Walderalm 142.09 333 ePKPdf PKPdf 08 59 27.7 -3.5
comp=Z,114nm,1.4s,SNR=16
ABTA Abfaltersbach 142.12 332 ePKPdf PKPdf 08 59 26.6 -4.6
comp=Z,134nm,1.4s,SNR=32
WTTA Wattenberg 142.12 333 ePKPdf PKPdf 08 59 27.5 -3.8
comp=Z,220nm,1.7s,SNR=42
WTTA Wattenberg 142.12 333 PKIKP PKPdf 08 59 27.4 -3.8
MOTA Moosalm 142.29 333 ePKPdf PKPdf 08 59 27.6 -4.0
comp=Z,210nm,1.2s,SNR=51
RETA Reutte 142.32 334 ePKPdf PKPdf 08 59 28.9 -2.7
comp=Z,80nm,0.9s,SNR=20
SQTA Sankt Quirin 142.34 333 ePKPdf PKPdf 08 59 27.7 -3.9
comp=Z,254nm,1.4s,SNR=38
MCH1 Michaelchurch 142.38 350 eP PKPdf 08 59 28.4 -2.9
MONM Monmouth 142.50 350 eP PKPdf 08 59 29.0 -2.5
BFO Black Forest 142.63 337 PKPdf 08 59 27.8 -4.2
BFO Black Forest 142.63 337 PKIKP PKPdf 08 59 27.8 -4.2
SWN1 Swindon 142.64 349 eP PKPdf 08 59 28.9 -2.9
FETA Feichten 142.70 333 ePKPdf PKPdf 08 59 28.4 -3.9
comp=Z,178nm,1.0s,SNR=57
DAVA Damuels 142.85 334 ePKPdf PKPdf 08 59 30.9 -1.7
comp=Z,154nm,1.0s,SNR=35
CTI Castel Tesino 143.03 332 PKPbc 08 59 29.6 -0.4
CTI Castel Tesino 143.03 332 PKIKP PKPbc 08 59 29.6 -0.4
DAVOX Davos/Dischmat 143.25 334 PKP PKPdf 08 59 32.7 -0.7
comp=Z,298nm,0.6s,baz=236,slow=0.6,SNR=140
HTL Hartland 143.58 351 eP PKPbc 08 59 31.6 +0.4
MATE Matera 143.98 321 ⇑P PKPbc 08 59 32.4 -0.3
CCA1 Carnmenellis 144.48 352 eP PKPab 08 59 32.2 -1.5
PRMA PARMA 144.62 331 PKPdf 08 59 35.2 -0.2
TIP Timpagrande 144.80 319 ⇓P PKPbc 08 59 35.6 +0.2
AQU L'Aquila 144.80 326 eP PKPab 08 59 34.6 -0.6
JVM Valle D.L. Mar 144.91 348 eP PKPbc 08 59 32.8 -2.5
JSA Saint Aubin 144.93 348 eP PKPbc 08 59 31.4 -3.9
VAE Valguarnera 147.29 318 PKPbc PKPab 08 59 44.6 -0.3
comp=Z,16nm,0.4s,baz=103,slow=2.0,SNR=11
SHEL Horse Pasture 148.43 193 PKPdf 08 59 44.1 +1.3
SHEL Horse Pasture 148.43 193 PKIKP PKPdf 08 59 44.1 +1.3
RCBR Riachuelo 148.93 130 PKP PKPdf 08 59 43.9 +0.1
comp=Z,98nm,0.9s,baz=202,slow=3.7
RCBR PKPbc PKPbc 08 59 47.5 -0.3
comp=Z,98nm,0.9s,baz=226,slow=4.8,SNR=6.9
RCBR Riachuelo 148.93 130 PKPdf 08 59 43.5 -0.3
MAHO Mahon 151.21 332 PKP PKPdf 08 59 45.6 -0.9
MAHO Mahon 151.21 332 PP PP 09 03 33.7 +2.8
KEST Kesra 151.57 320 PKP PKPdf 08 59 48.0 +0.7
comp=Z,8.4nm,0.7s,baz=237,slow=4.5,SNR=9.2
KEST PKPbc PKiKP 08 59 54.4 +0.4
comp=Z,95nm,0.6s,baz=134,slow=1.0,SNR=77
CMAH Djebel Manchou 152.10 324 P PKPdf 08 59 49.1 +1.1
CAEH 'Ain El Ouahch 152.31 325 P PKPdf 08 59 49.8 +1.5
ABSA Djebel Ababsia 152.32 323 P PKPdf 08 59 49.5 +1.1
CKFL Kef-Lekhel 152.66 325 P PKPdf 08 59 49.9 +1.0
CASM Ain Smara 152.89 325 P PKPdf 08 59 50.6 +1.4
PBRG Braganca 152.89 350 ePKPdf PKPdf 08 59 47.8 -1.2
PBRG Braganca 152.89 350 ePKPbc PKiKP 08 59 57.6 +1.1
PBRG Braganca 152.89 350 ePKPab PKPab 09 00 08.5 +0.8
DFRA Djebel Bou Aff 153.02 326 P PKPdf 08 59 51.3 +1.9
CTEI Djebel Teioual 153.08 324 P PKPdf 08 59 50.7 +1.1
PCAB Cabril 153.17 352 ePKPdf PKPdf 08 59 48.7 -0.7
PCAB Cabril 153.17 352 ePKPbc PKiKP 08 59 58.3 +1.3
POLO Lamas de Olo 153.47 352 ePKPdf PKPdf 08 59 52.1 +2.2
POLO Lamas de Olo 153.47 352 ePKPbc PKiKP 08 59 59.0 +1.3
POLO Lamas de Olo 153.47 352 ePKPab PKPab 09 00 12.8 +2.6
SET Setif 153.53 326 P PKPdf 08 59 52.0 +1.8
PVRL Vila Real 153.56 352 ePKPdf PKPdf 08 59 52.5 +2.5
PVRL Vila Real 153.56 352 ePKPbc PKiKP 08 59 59.6 +1.7
PVRL Vila Real 153.56 352 ePKPab PKPab 09 00 13.3 +2.8
MVO Moncorvo 153.56 351 ePKPdf PKPdf 08 59 52.0 +2.0
MVO Moncorvo 153.56 351 ePKPbc PKiKP 09 00 00.2 +2.3
UCM Universidad Co 153.57 344 PKP PKPdf 08 59 48.4 -1.7
UCM Universidad Co 153.57 344 PP PP 09 03 46.4 +2.3
CKHR Kef el Ahmar 153.61 325 P PKPbc 08 59 55.1 -3.1
PVIS Viseu 154.13 352 ePKPdf PKPdf 08 59 52.1 +1.3
PVIS Viseu 154.13 352 ePKPbc PKiKP 09 00 00.9 +1.8
PVIS Viseu 154.13 352 ePKPab PKPab 09 00 18.4 +5.4
ESBB Sonseca Array 154.35 344 PKPdf 08 59 52.3 +1.2
ESBB PKiKP 09 00 01.6 +2.1
ESDC Sonseca Array 154.36 344 PKP PKPdf 08 59 50.7 -0.5
comp=Z,5.1nm,0.8s,baz=352,slow=3.2,SNR=18
ESDC PKPbc PKiKP 09 00 00.4 +0.8
comp=Z,9.1nm,0.7s,baz=8.1,slow=3.1,SNR=14
ESDC PKPab PKPab 09 00 15.6 +1.6
comp=Z,26nm,0.8s,baz=17,slow=3.8,SNR=13
ESDC PP PP 09 03 47.7 -0.8
comp=Z,6.9nm,1.0s,baz=21,slow=6.4,SNR=6.4
ESDC Sonseca Array 154.36 344 PKPdf 08 59 50.9 -0.3
ESDC PKPbc PKiKP 09 00 00.7 +1.1
ESDC PKPab PKPab 09 00 15.9 +1.9
MTE Manteigas 154.39 351 ePKPdf PKPdf 08 59 52.9 +1.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MTE	Manteigas	154.39	351	ePKPab	PKPab	09 00 19.6	+5.5
MTE	Manteigas	154.39	351	eLR	LR	09 57 42.1	
	comp=Z,2µm,22.0s						
PAB	San Pablo	154.57	345		PKPdf	08 59 53.1	+1.6
PAB	San Pablo	154.57	345	PKIKP	PKPdf	08 59 53.1	+1.6
PCAS	Casmilo, Conde	154.86	353	ePKPdf	PKPdf	08 59 56.1	+4.3
PCAS	Casmilo, Conde	154.86	353	ePKPbc	PKiKP	09 00 02.0	+1.5
PCBR	Castelo Branco	154.93	351	ePKPdf	PKPdf	08 59 53.5	+1.6
PCBR	Castelo Branco	154.93	351	ePKPab	PKPab	09 00 19.1	+2.8
PTOM	Tomar	155.28	352	ePKPdf	PKPdf	08 59 54.1	+1.7
PTOM	Tomar	155.28	352	ePKPbc	PKPdf	09 00 03.1	+11
PMRV	Marv??o	155.32	350	ePKPdf	PKPdf	08 59 53.4	+1.0
PMRV	Marv??o	155.32	350	ePKPbc	PKPdf	09 00 03.6	+11
PMRV	Marv??o	155.32	350	eLR	LR	09 59 08.7	
	comp=Z,1µm,22.0s						
CART	Cartagena	155.34	338	PKP	PKPdf	08 59 51.9	-0.6
CART	Cartagena	155.34	338	PP	PP	09 03 57.1	+3.0
SESP	Santiago Espad	155.39	341	P	PKPdf	08 59 54.4	+1.7
	SNR=7.2						
PMTG	Montargil	155.79	352	ePKPdf	PKPdf	08 59 56.6	+3.5
LIS	Lisbon	156.26	353	ePKPdf	PKPdf	08 59 53.4	-0.3
LIS				AMS	AMS	10 02 21.9	
	comp=E,4µm,17.8s						
EVO	Evora	156.29	351	ePKPdf	PKPdf	08 59 55.5	+1.8
EVO	Evora	156.29	351	PKP	PKPdf	08 59 51.2	-2.6
EVO	Evora	156.29	351	PP	PP	09 03 57.8	-1.3
PBEJ	Beja	156.76	351	ePKPab	PKPab	09 00 25.9	+1.6
PNCL	Nicolau / Gran	156.78	352	ePKPdf	PKPdf	08 59 56.3	+1.9
PCVE	Castro Verde	157.18	351	ePKPdf	PKPdf	08 59 56.3	+1.4
PCVE	Castro Verde	157.18	351	ePKPab	PKPab	09 00 27.9	+1.9
EMAL	Malaga-Limoner	157.21	343	PKP	PKPdf	08 59 54.1	-0.9
EMAL	Malaga-Limoner	157.21	343	PP	PP	09 04 06.2	+1.9
LIJA	Lijar	157.34	345	PKP	PKPdf	08 59 57.0	+1.7
PVAQ	Vaqueiros	157.35	350	ePKPdf	PKPdf	08 59 59.8	+4.7
PVAQ	Vaqueiros	157.35	350	ePKPab	PKPab	09 00 32.1	+5.3
PVAQ	Vaqueiros	157.35	350	eLR	LR	10 00 11.9	
	comp=E,2µm,20.0s						
PTEO	Sao Teotonio	157.36	352	ePKPab	PKPab	09 00 33.3	+6.5
MORF	Marmelete	157.59	352	ePKPdf	PKPdf	08 59 55.0	-0.5
MORF				AMS	AMS	10 02 54.8	
	comp=E,2µm,25.4s						
MORF	Marmelete	157.59	352	ePKPab	PKPab	09 00 33.5	+5.6
PFVI	Vila Bisbo	157.78	352	ePKPdf	PKPdf	08 59 57.8	+2.1
PFVI	Vila Bisbo	157.78	352	ePKPab	PKPab	09 00 31.1	+2.4
SFS	San Fernando	157.95	346	PKP	PKPdf	08 59 57.2	+1.3
SFS	San Fernando	157.95	346	PP	PP	09 04 11.5	+3.2
MELI	Melilla	158.08	338	PKP	PKPdf	08 59 54.8	-1.3
CEU	Ceuta	158.28	344	PKP	PKPdf	08 59 54.4	-1.9
CEU	Ceuta	158.28	344	PP	PP	09 04 11.9	+1.8
PVLZ	Peæn de	158.65	341	PKP	PKPdf	08 59 54.4	-2.4
PVLZ	Peæn de	158.65	341	PP	PP	09 04 13.3	+1.1
SICH	Sidi Chahed	159.95	342	P	PKPdf	09 00 01.0	+2.6
	SNR=6.9						
IFR	Ifrane	160.44	341	PKP	PKPdf	08 59 59.1	0.0
IFR	Ifrane	160.44	341	PP	PP	09 04 22.5	+0.3
MDT	Midelt	160.91	339	PKP	PKPdf	08 59 59.9	+0.3
	comp=E,44nm,1.2s,baz=221,slow=1.0,SNR=16						
MDT				PKPab	PKPab	09 00 43.8	+1.3
	comp=E,14nm,0.9s,baz=40,slow=4.3,SNR=9.2						
MDT	Midelt	160.91	339	P	PKPdf	09 00 00.9	+1.3
	SNR=13						
AVE	Averroes	161.26	346	PKP	PKPdf	08 59 56.1	-3.6
AVE	Averroes	161.26	346	PP	PP	09 04 14.8	-11
PMAR	Madeira	162.00	12	ePKPdf	PKPdf	09 00 03.2	+2.4
TZRR	Tazzarine	163.09	339	P	PKPdf	09 00 03.0	+1.2
	SNR=23						
OUZM	OUZ	163.36	342	P	PKPdf	09 00 05.0	+2.9
	SNR=16						
OUK	Oukaimeden	163.37	346	P	PKPdf	09 00 04.0	+1.6
	SNR=21						
ZGR	Zagora	163.72	338	P	PKPdf	09 00 04.0	+1.5
	SNR=32						
TTIG	Tnine Tigouga,	164.14	347	P	PKPdf	09 00 05.0	+2.2
	SNR=8.6						
TOA0	Torodi Ar. Sit	166.02	264		PKPdf	09 00 04.1	-0.6
TORD	Torodi Ar. Bea	166.02	264	PKP	PKPdf	09 00 04.0	-0.7
	comp=E,35nm,0.6s,baz=24,slow=0.6,SNR=120						
TORD				PKPab	PKPab	09 01 06.5	+0.9
	comp=E,25nm,0.9s,baz=100,slow=3.8,SNR=6.1						
TORD	Torodi Ar. Bea	166.02	264		PKPdf	09 00 03.0	-1.7
TORD					PKPab	09 01 06.0	+0.4
KIC	Kosan Boka	168.41	222	ePKP1	PKPdf	09 00 04.8	-1.7
	comp=E,887nm,1.6s						
LIC	Lamto	168.49	221	ePKP1	PKPdf	09 00 04.1	-2.4
	comp=E,851nm,1.7s						
DBIC	Dimbokro	168.72	223	PKP	PKPdf	09 00 06.2	-0.4
	comp=E,162nm,1.3s,baz=117,slow=0.7,SNR=44						
DBIC				PKPab	PKPab	09 01 18.8	+1.5
	comp=E,33nm,0.9s,baz=127,slow=7.6,SNR=7.7						
DBIC	Dimbokro	168.72	223		PKPdf	09 00 05.7	-1.0
DBIC					PKPab	09 01 19.1	+1.8
TIC	Toumodi	168.81	222	ePKP1	PKPdf	09 00 05.2	-1.6
	comp=E,613nm,1.4s						

HEL 07 08:56:34.3±0.0, 63°46N×24°08E, h0km, ML1.1(UPP), Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAF	Ylistaro	0.77	237	eP	Pg	08 56 47.8	-1.2
OUF	Merijarvi	0.95	17	eP	Pg	08 56 51.2	-1.3
OUF				eS	Sg	08 57 03.2	-1.6
OBF0	Syolatti, Pyha	1.04	4	eP	Pg	08 56 53.1	-1.1
OBF0				eSB	Sg	08 57 03.7	-0.4
SUF	Sumiainen	1.20	128	eP	Pg	08 56 55.8	-1.4
KEF	Keuruu	1.35	164	ePB	Pg	08 56 58.6	-1.5
KEF				eSB	Sg	08 57 16.4	-1.2
UMAU	Umeaa	1.58	287	eP	Pn	08 57 02.4	-1.0
UMAU				eS	Sn	08 57 23.6	-0.9
BURU	Burvik	1.64	315	ePG	Pn	08 57 03.9	-0.4
BURU				eSN	Sg	08 57 26.9	+0.1
KAF	Kangasniemi	1.70	142	ePN	Pn	08 57 04.9	-0.2
KAF				eSN	Sn	08 57 27.3	-0.2
ODEU	Stanfors	1.76	304	eP	Pn	08 57 05.2	-0.8
ODEU				eS	Sn	08 57 29.0	-0.2
OUL	Oulu	1.81	25	eSG	Sn	08 57 29.9	-0.4
FIA0	FINESS Array S	2.23	155	ePB	Pn	08 57 13.2	+0.8
FIA0				eSG	Sb	08 57 42.7	-0.8
LANU	Lannavaara	4.69	350	eSB	Sb	08 58 52.3	-1.9

TEH 07 08:56:40.1, 36°68N×54°54E, h8km, ML2.6, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGLO	Ghaloghah	0.59	253	ePg	Pg	08 56 51.3	-0.3
IGLO				eSg	Sb	08 57 01.6	0.0
IGLO				e		08 57 09.5	
IANJ	Anjilo	1.31	203	e		08 57 28.9	
IANJ				ePg	Pb	08 57 05.1	-0.1
ISHM	Shahmirzad	1.33	229	e		08 57 07.8	
ISHM				ePn	Pg	08 57 05.6	-0.1
IALA	Alasht	1.52	247	e		08 57 35.5	
IALA				ePn	Pg	08 57 09.0	-0.2
IFIR	Firoozkooh	1.78	235	ePn	Pb	08 57 13.4	+0.3
IPRN	Peran	1.82	257	ePn	Pb	08 57 13.9	+0.1
IPRN				eSg	Sg	08 57 40.7	+1.9
IPRN				e		08 57 45.5	
IDMV	Damavand	2.31	242	ePn	Pb	08 57 22.0	-0.1
IDMV				e		08 57 24.0	

BJI 07 08:56:39.1±0.0, 31°95N×90°34E, h9km, mB5.0/21, mb4.6/48, ML4.8/2, Ms4.7/26, Ms7 4.7/30
MOS 07 08:56:42.0±1.2, 32°01N×90°39E, h36km, mb4.9/35, Error ellipse: s-maj=8.2km s-min=4.8km az=112.5
NEIC 07 08:56:43.3±2.8, 32°05N±0°06×90°36E±0°10, h33km±4km, mb4.7/60, Error ellipse: s-maj=12.4km s-min=8.9km az=71.0
NDI 07 08:56:43.7±1.0, 32°00N×90°31E, h27km±56km, MS4.3, mb4.7(NEIC)
IDC 07 08:56:45.6±2.4, 32°08N×90°40E, h56km±22km, mb4.2/37, mb1 4.3/41, mb1mx4.1/70, mbtmp4.5/41, ML3.8/4, MS4.8/3, Ms1 4.8/3, ms1mx4.2/42, Error ellipse: s-maj=10.9km s-min=9.4km az=82.0

ISC 07 08:56:43.9±0.3, 32°02N±0°04×90°39E±0°04, h35km, n247, σ1§54/254, mb4.6/75, 9C-10D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	2.40	164	Pn	Pn	08 57 22.0	+0.9
LSA				Sn	Sn	08 57 50.4	+0.9
LSA	Lhasa	2.40	164		Pn	08 57 21.5	+0.4
LSA	Lhasa	2.40	164	P	Pn	08 57 21.5	+0.4
GTK	Tadong	4.93	199	eP	Pn	08 57 56.1	+0.4
GTK				i x	x	08 58 11.6	
TAPN	Taplejung	5.20	207	eP	Pn	08 57 59.1	-0.4
	200nm,0.7s						
ZIRO	ZIRO	5.39	145	eP	Pn	08 58 02.9	+0.9
ZIRO				ex	x	08 58 04.0	
ZIRO				ex	x	08 59 33.1	
GUN	Gumba	5.66	225	eP	Pn	08 58 05.3	-0.5
	249nm,0.4s						
JIRN	Jiri	5.67	221	eP	Pn	08 58 05.4	-0.6
	313nm,0.5s						
ODAN	Odare	5.76	208	eP	Pn	08 58 06.5	-0.6
	220nm,0.4s						
TEZP	TEZPUR	5.78	158	eP	Pn	08 58 07.5	+0.4
TEZP				ex	x	08 58 11.2	
TEZP				ex	x	08 59 41.5	
RAMN	Ramite	6.03	214	eP	Pn	08 58 09.2	-1.6
	546nm,0.4s						
KKN	Kakani	6.11	228	eP	Pn	08 58 10.6	-1.3
	206nm,0.5s						
PKI	Pulchoki	6.19	226	eP	Pn	08 58 11.8	-1.3
	202nm,0.6s						
PKIN	Phulchoki	6.19	226	eP	Pn	08 58 12.2	-0.9
	201nm,0.5s						
DMN	Daman	6.35	228	eP	Pn	08 58 13.5	-1.7
	136nm,0.4s						
GKN	Gorkha	6.39	233	eP	Pn	08 58 14.1	-1.6
	193nm,0.3s						
SHL	Shillong	6.56	168	eP	Pn	08 58 17.5	-0.5
SHL				ex	x	08 58 27.0	
SHL				ex	x	08 59 56.9	
LKP	Lekhapani	6.66	133	eP	Pn	08 58 19.6	+0.4
LKP				i x	x	08 58 50.1	
LKP				ex	x	09 00 17.4	
DANN	Dangsing	6.80	239	eP	Pn	08 58 19.5	-1.9
	376nm,0.8s						
KOHI	KOHIMA	7.07	152	eP	Pn	08 58 13.9	-11
KOHI				eS	Sn	08 59 43.5	-0.8
KOLN	Koldanda	7.25	236	eP	Pn	08 58 26.5	-1.1
	110nm,0.5s						
BOK	Bokaro	9.10	207	eP	Pn	08 58 51.5	-1.3
BRDH	Bariadhala	9.37	173	P	Pn	08 58 57.0	+0.6
	0.3nm,0.3s,baz=180,slow=24,SNR=12						
BRDH				S	Sn	09 00 45.0	+4.4
	0.4nm,0.3s,baz=180,slow=24,SNR=7.5						
GTA	Gaotai	10.63	43	P	Pn	08 59 14.1	+0.3
GTA				pP		08 59 17.8	
GTA				sP		08 59 20.1	
GTA				pmax	pmax		
	comp=Z,14nm,1.3s						
CD2	Chengdu	11.47	92	P	Pn	08 59 24.8	-0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LZH	Lanzhou	11.88	66	eP	Pn	08 59 32.1	+1.2
LZH				pP		08 59 35.3	
LZH				sP		08 59 38.7	
LZH				PP	PnPn	08 59 41.0	+2.4
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
LZH				pmax	pmax		
	comp=Z,69nm,5.0s						
LZH				LR	LR		
	comp=E,4µm,16.3s						
LZH				LR	LR		
	comp=Z,5µm,15.2s						
WMQ	Urumqi	11.98	351	eP	Pn	08 59 33.2	+1.1
WMQ				pP		08 59 36.4	
WMQ				sP		08 59 41.0	
WMQ				pmax	pmax		
	comp=Z,27nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,260nm,3.7s						
WMQ				LR	LR		
	comp=N,1µm,12.7s						
WMQ				LR	LR		
	comp=E,2µm,13.5s						
WMQ				LR	LR		
	comp=Z,1µm,14.9s						
WMQ	Urumqi	11.98	351		Pn	08 59 33.4	+1.3
WMQ	Urumqi	11.98	351	P	Pn	08 59 33.4	+1.3
BWNR	Bhubaneshwar	12.37	200	eP	Pn	08 59 31.0	-6.5
KMI	Kunming	12.84	119	P	Pn	08 59 46.5	+2.4
KMI				pP	P	08 59 50.4	-4.2
KMI				sP		08 59 51.9	
KMI				pmax	pmax		
	comp=Z,18nm,1.2s						
KMI				pmax	pmax		
	comp=Z,120nm,3.9s						
KMI	Kunming	12.84	119		Pn	08 59 46.1	+2.0
KMI	Kunming	12.84	119	P	Pn	08 59 46.1	+2.0
KSH	Kashi	13.88	307	P	Pn	09 00 00.0	+1.8
KSH				pP	P	09 00 04.9	-1.1
KSH				PP		09 00 11.1	
KSH				S	Sn	09 02 36.3	+5.2
KSH				SS	S	09 02 55.3	+3.0
KSH				pmax	pmax		
	comp=Z,33nm,0.9s						
KSH				pmax	pmax		
	comp=Z,300nm,5.9s						
PRZ	Przheval'sk	14.14	321	P	Pn	09 00 03.8	+2.0
PRZ	Przheval'sk	14.14	321	P	Pn	09 00 03.8	+2.0
PDGK	Podgornoye	14.20	326	i P	Pn	09 00 00.3	-2.2
PDGK				pmax	pmax		
	comp=Z,26nm,1.1s						
BHPL	Bhopal	14.42	236	ex	Pn	08 59 54.1	-11
NIL	Nilore	14.50	281		Pn	09 00 01.3	-5.3
NIL	Nilore	14.50	281	P	Pn	09 00 01.3	-5.3
KDJ	Kajisay	14.58	318	P	P	09 00 12.1	-1.7
KDJ	Kajisay	14.58	318	P	P	09 00 12.1	-1.7
ULHL	Ulahol	15.20	316	P	P	09 00 22.5	+1.9
	SNR=7.1						
CHTO	Chiang Mai	15.24	148		Pn	09 00 15.4	-1.1
CHTO	Chiang Mai	15.24	148	P	Pn	09 00 15.4	-1.1
CHTO				pmax	pmax		
	comp=Z,14nm,1.1s						
GYA	Guiyang	15.24	107⇑	iP	Pn	09 00 14.7	-2.0
GYA				S	Sn	09 03 01.8	-2.6
GYA				SS	S	09 03 19.1	-1.2
GYA				pmax	pmax		
	comp=Z,70nm,0.9s						
GYA				pmax	pmax		
	comp=Z,260nm,4.7s						
GYA				LR	LR		
	comp=Z,3µm,13.0s						
GYA				LR	LR		
	comp=Z,5µm,18.8s						
CM31	Chiang Mai Arr	15.55	148	Pn	Pn	09 00 19.3	-1.3
CMAR	Chiang Mai Arr	15.55	148	P	Pn	09 00 17.8	-2.8
	comp=Z,0.9nm,0.3s,baz=330,slow=13,SNR=9.5						
XAN	Xi'an	15.68	78	P	Pn	09 00 19.7	-2.5
XAN				pP	P	09 00 27.0	+1.1
XAN				pmax	pmax		
	comp=Z,26nm,1.5s						
XAN	Xi'an	15.68	78	P	Pn	09 00 19.4	-2.8
XAN				IAmb	IAmb	09 00 27.8	
	comp=Z,42nm,1.1s						
XAN	Xi'an	15.68	78	P	Pn	09 00 19.4	-2.8
XAN				pmax	pmax		
	comp=Z,42nm,1.1s						
KZA	Kyzart	15.69	314	P	P	09 00 28.4	+2.0
	SNR=18						
MK31	Makanchi Array	16.02	339	P	Pn	09 00 28.1	-1.4
MK31	Makanchi Array	16.02	339	i P	Pn	09 00 25.0	-1.4
MKAR	Makanchi Array	16.02	339	P	Pn	09 00 25.1	-1.2
	comp=Z,0.4nm,0.3s,baz=138,slow=13,SNR=15						
MKAR				LR	LR	09 07 42.0	
	comp=Z,2µm,20.4s,baz=38,slow=41						
MKAR	Makanchi Array	16.02	339		Pn	09 00 24.6	-1.8
MKAR	Makanchi Array	16.02	339	i P	Pn	09 00 27.2	+0.8
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SLVN	Son La	16.08	128	P	P	09 00 29.2	-1.2
SLVN				IAmb	IAmb	09 00 39.4	
	comp=Z,62nm,1.4s						
MAKZ	Makanchi	16.12	339	P	Pn	09 00 28.7	+1.0
MAKZ	Makanchi	16.12	339	i P	Pn	09 00 25.7	-2.1
MAKZ				pmax	pmax		
	comp=Z,16nm,1.2s						
KBK	Karagaybulak	16.21	315	P	P	09 00 34.6	+2.7
	SNR=14						
UCH	Uchtor	16.23	313	P	P	09 00 34.5	+2.2
	SNR=7.8						
ENH	Enshi	16.45	91	P	P	09 00 34.3	-0.1
ENH				IAmb	IAmb	09 00 52.4	
	comp=Z,66nm,1.0s						
AAK	Ala-Archa	16.47	315	P	P	09 00 33.9	-0.9
	comp=Z,0.4nm,0.3s,baz=113,slow=6.4,SNR=12						
AAK				LR	LR	09 07 35.9	
	comp=Z,2µm,21.9s,baz=332,slow=40						
AAK	Ala-Archa	16.47	315	P	P	09 00 37.2	+2.4
	SNR=9.2						
AAK	Ala-Archa	16.47	315	P	P	09 00 35.2	+0.5
AAK	Ala-Archa	16.47	315⇑	eP	Pn	09 00 33.0	+0.6
USP	Ospenovka	16.84	316	P	P	09 00 40.1	+1.4
	SNR=12						
KBL	Kabul	18.02	284	P	Pn	09 00 50.0	-1.8
KBL				IAmb	IAmb	09 00 59.2	
	comp=Z,49nm,1.1s						
KBL	Kabul	18.02	284	P	Pn	09 00 50.0	-1.8
KBL				pmax	pmax		
	comp=Z,49nm,1.1s						
PBKT	Sadao Pong	18.13	146	P	Pn	09 00 52.3	-0.7
TIY	Taiyuan	18.95	66	eP	P	09 01 02.1	+0.1
HHC	Hu-ho-hao-te	19.15	57	eP	Pn	09 01 06.6	+1.3
HHC				pP	pP	09 01 09.7	-5.1
HHC				sP	sP	09 01 13.8	-6.0
HHC				PP	PnPn	09 01 25.1	+6.8
HHC				pmax	pmax		
	comp=Z,7.0nm,1.5s						
HHC				pmax	pmax		
	comp=Z,360nm,5.9s						
HHC				LR	LR		
	comp=Z,2µm,19.1s						
HHC				LR	LR		
	comp=Z,3µm,16.0s						
HHC				LR	LR		
	comp=Z,1µm,12.1s						
KK31	Karatay Array	19.21	311	P	P	09 01 03.8	-0.9
KK31	Karatay Array	19.21	311	i P	Pn	09 01 06.4	+0.5
KKAR	Karatay Array	19.21	311	P	P	09 01 05.2	+0.4
KKAR	Karatay Array	19.21	311		Pn	09 01 05.5	-0.4
KKAR				IAmb	IAmb	09 01 13.7	
	comp=Z,11nm,1.1s						
KKAR	Karatay Array	19.21	311	P	Pn	09 01 05.5	-0.4
KKAR				pmax	pmax		
	comp=Z,11nm,1.1s						
TAS	Tashkent	19.26	305	P	P	09 01 05.6	+0.2
TAS				IAmb	IAmb	09 01 06.5	
	comp=Z,54nm,0.6s						
TAS	Tashkent	19.26	305	P	P	09 01 05.6	+0.2
TAS				pmax	pmax		
	comp=Z,54nm,0.6s						
SONM	Songino Array	19.95	33	P	Pn	09 01 13.9	-0.8
	comp=Z,0.9nm,0.3s,baz=217,slow=10,SNR=36						
SONM	Songino Array	19.95	33	P	P	09 01 13.8	+0.9
POO	Poona	20.06	232	eP	P	09 01 14.5	+0.2
POO				ex	x	13 17 43.0	
ULN	Ulaanbaatar	20.27	34	P	P	09 01 17.2	+0.7
ULN				IAmb	IAmb	09 01 23.5	
	comp=Z,46nm,1.2s						
ULN	Ulaanbaatar	20.27	34	P	P	09 01 17.2	+0.7
ULN				pmax	pmax		
	comp=Z,46nm,1.3s						
WHN	Wuhan	20.53	88	⇑P	Pn	09 01 21.9	+0.4
KURBB	Kurchatov Arra	20.57	338	P	P	09 01 18.9	-0.5
	comp=Z,16nm,0.7s,baz=148,slow=10,SNR=21						
KURBB				PcP	PcP	09 05 28.7	-0.7
	comp=Z,0.5nm,0.7s,baz=162,slow=1.7,SNR=2.6						
KURK	Kurchatov	20.62	338	P	P	09 01 19.2	-0.8
KURK				IAmb	IAmb	09 01 29.0	
	comp=Z,31nm,0.8s						
KURK	Kurchatov	20.62	338c	eP	P	09 01 19.7	-0.3
KURK				pmax	pmax		
	comp=Z,26nm,0.7s						
ZAK	Zakamensk	20.70	24	eP	P	09 01 21.7	+0.7
ZAK				pmax	pmax		
	comp=Z,17nm,1.3s						
MOY	Mondy	21.12	19	eP	P	09 01 26.9	+1.3
MOY				pmax	pmax		
	comp=Z,49nm,1.6s						
UBPT	Khong Chiam	21.60	137	P	P	09 01 29.4	-1.4
UBPT				IAmb	IAmb	09 01 36.9	
	comp=Z,31nm,0.9s						
QIZ	Qiongzhong	21.76	122	P	P	09 01 34.0	+1.5
QIZ				S	S	09 05 32.4	+1.0
TLY	Talaya	21.93	22⇓	eP	P	09 01 35.2	+1.1
TLY				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ZAA0	Zalesovo Array	22.28	351	P	P	09 01 37.5	-0.3
ZAA0				IAmb	IAmb	09 01 43.0	
	comp=Z,37nm,0.9s						
ZALV	Zalesovo Beam	22.28	351	P	P	09 01 37.3	-0.5
	comp=Z,16nm,0.8s,baz=174,slow=10,SNR=20						
ZALV	Zalesovo Beam	22.28	351	P	P	09 01 37.0	-0.9
BJI	Beijing	22.29	62	P	P	09 01 32.4	-5.6
TIA	Tai'an	22.50	72	P	P	09 01 46.1	+5.7
IRK	Irkutsk	22.61	23	eP	P	09 01 42.3	+0.9
IRK				pmax	pmax		
	comp=Z,43nm,2.7s						
HRA	Herat	23.64	283	P	P	09 01 51.3	-0.9
HRA				IAmb	IAmb	09 01 59.0	
	comp=Z,23nm,1.1s						
NJ2	Nanjing	24.11	82	eP	P	09 01 57.4	+1.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BVAR	Borovoye Array	25.49	331	P	P	09 02 07.6	-1.1
	comp=Z,13nm,0.9s,baz=142,slow=10,SNR=16						
BVAR				PcP	PcP	09 05 40.2	+0.6
	comp=Z,1.0nm,0.6s,baz=117,slow=5.0,SNR=3.9						
BRVK	Borovoye	25.56	331	P	P	09 02 08.3	-1.0
BRVK	Borovoye	25.56	331	i P	P	09 02 07.4	-1.9
BRVK				pmax	pmax		
	comp=Z,16nm,1.3s						
PALK	Pallekele	26.22	202	P	P	09 02 17.6	+2.0
	comp=Z,22nm,0.8s,baz=14,slow=11,SNR=10						
PALK	Pallekele	26.22	202⇑	eP	P	09 02 15.4	-0.2
PALK				pmax	pmax		
	comp=Z,36nm,0.9s						
GEYT	Alibeck	27.01	292	P	P	09 02 23.7	+1.1
	comp=Z,3.9nm,0.8s,baz=119,slow=5.1,SNR=3.8						
GEYT	Alibeck	27.01	292	P	P	09 02 24.7	+2.1
GYA0B	ALIBECK ARRAY	27.01	292	P	P	09 02 26.0	+3.4
ABKAR	Akbulak array	28.55	316	P	P	09 02 36.6	+0.4
CN2	Changchun	29.85	57	eP	P	09 02 48.5	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKTO	Aktyubinsk	30.18	317	P	P	09 02 50.5	-0.2
	comp=Z,4.7nm,0.8s,baz=96,slow=7.8,SNR=3.4						
BOD	Bodaibo	30.43	25	eP	P	09 02 53.3	+0.5
BOD				pmax	pmax		
	comp=Z,16nm,1.5s						
KSRS	Korea Array	31.18	69	P	P	09 02 58.5	-1.1
	comp=Z,1.2nm,0.6s,baz=288,slow=9.1,SNR=4.3						
SVE	Sverdlovsk	32.20	329⇓	eP	P	09 03 09.3	+0.9
SVE				pmax	pmax		
	comp=Z,42nm,0.9s						
ARU	Arti	32.90	327	P	P	09 03 13.7	-0.8
ARU				IAmb	IAmb	09 03 15.2	
	comp=Z,12nm,0.7s						
ARU	Arti	32.90	327c	iP	P	09 03 14.2	-0.2
ARU						09 04 18.6	
ARU				S	S	09 08 31.2	+1.6
ARU				SS	SnSn	09 10 25.6	-2.6
ARU				pmax	pmax		
	comp=Z,14nm,0.8s						
LKRN	Lenkeran, Azer	34.36	293	P	P	09 03 27.9	+0.5
USRK	Ussuriysk Ar.	34.57	57	P	P	09 03 29.4	+0.3
	comp=Z,0.3nm,0.3s,baz=216,slow=7.1,SNR=4.6						
USRK	Ussuriysk Ar.	34.57	57	P	P	09 03 28.6	-0.6
KLR	Kul'dur	35.28	49	P	P	09 03 35.5	+0.3
	comp=Z,6.0nm,0.8s,baz=275,slow=9.5,SNR=16						
KLR	Kul'dur	35.28	49⇓	eP	P	09 03 35.0	-0.2
KLR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SEKA	Sheki	35.55	297	P	P	09 03 39.5	+1.7
MNGR	Mingechevir, A	35.64	297	P	P	09 03 40.7	+2.3
GNI	Garni	37.43	296⇓	eP	P	09 03 54.3	+0.4
GNI				pmax	pmax		
	comp=Z,42nm,1.3s						
ZEI	Tsey	38.03	300	eP	P	09 03 58.9	-0.1
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KIRV	Kirov	38.24	326	P	P	09 03 60.0	-0.3
	comp=Z,30nm,0.7s,baz=232,slow=2.4,SNR=7.0						
KIRV				LR	LR	09 20 17.5	

comp=Z,4µm,18.3s,baz=84,slow=37
GRNR Gornyy 38.55 47⇓iP P 09 04 03.2 +0.2
GRNR pmax pmax
comp=Z,4.0nm,1.0s
YAK Yakutsk 39.18 28⇑eP P 09 04 08.7 +0.7
YAK pmax pmax
comp=Z,16nm,1.1s
MJAR Matsushiro Arr 39.46 70 P P 09 04 10.2 -0.6
comp=Z,2.6nm,0.8s,baz=282,slow=8.6,SNR=3.5
MJAR Matsushiro Arr 39.46 70 P P 09 04 10.7 -0.1
MJAR Matsushiro Arr 39.46 70 P P 09 04 10.7 -0.1
MJAR pmax pmax
comp=Z,2.0nm,1.0s
RAYN Ar Rayn 40.37 269 P 09 04 17.9 -0.7
RAYN Ar Rayn 40.37 269 P P 09 04 17.9 -0.7
RAYN pmax pmax
comp=Z,6.0nm,1.3s
PRGR Permogore 41.27 329 eP P 09 04 23.9 -1.5
PRGR pmax pmax
comp=Z,11nm,0.8s
YSS Yuzh-Sakhalins 42.30 54 eP P 09 04 24.3 -10
KLMR Klimovskoe 43.74 327 eP P 09 04 44.0 -1.5
KLMR AMP 09 04 49.4
comp=Z,30nm,1.2s
KLMR Klimovskoe 43.74 327 eP P 09 04 43.9 -1.5
KLMR pmax pmax
comp=Z,30nm,1.2s
OBN Obninsk 43.95 318 eP P 09 04 48.2 +1.0
OBN e 09 06 35.6
OBN pmax pmax
comp=Z,13nm,1.0s
OBN MLR MLR
comp=Z,1µm,20.0s
TIXI Tiksi 44.68 16 P P 09 04 52.2 -0.7
comp=Z,5.0nm,0.4s,baz=215,slow=4.2,SNR=12
TIXI Tiksi 44.68 16 P P 09 04 52.5 -0.3
TIXI IAmb IAmb 09 04 52.9
comp=Z,9.2nm,0.9s
TIXI Tiksi 44.68 16⇓eP P 09 04 52.2 -0.7
TIXI pmax pmax
comp=Z,7.0nm,0.9s
TMCR Tamitsa 45.45 331 eP P 09 04 56.6 -2.4
TMCR pmax pmax
comp=Z,26nm,0.9s
ILGA Ilgaz 45.72 298 P 09 05 01.4 -0.4
ILGA IAmb IAmb 09 05 15.4
comp=Z,10.0nm,0.9s
BRTR Keskin Array B 45.97 296 P P 09 05 03.3 -0.4
comp=Z,2.6nm,0.8s,baz=107,slow=7.0,SNR=4.9
BRTR Keskin Array B 45.97 296 P 09 05 03.6 0.0
BRTR Keskin Array B 45.97 296 iP P 09 05 03.7 0.0
BRTR pmax pmax
comp=Z,3.0nm,0.8s
LVZ Lovozero 47.98 335⇓eP P 09 05 18.6 -0.3
LVZ pmax pmax
comp=Z,42nm,1.2s
JOF Joensuu 48.02 328 P P 09 05 19.5 +0.3
JOF pmax pmax
comp=Z,12nm,0.9s
MA2 Magadan 48.10 36⇓eP P 09 05 20.2 +0.3
MA2 pmax pmax
comp=Z,16nm,1.4s
AKASG Malin Array Be 48.11 312 P P 09 05 18.2 -1.9
comp=Z,3.4nm,0.7s,baz=77,slow=7.3,SNR=5.8
AKASG Malin Array Be 48.11 312 P P 09 05 19.5 -0.6
AKASG Malin Array Be 48.11 312 P P 09 05 19.5 -0.6
AKASG pmax pmax
comp=Z,1.0nm,0.9s
SEY Seymchan 49.34 32⇑eP P 09 05 30.2 +0.9
ELL Elmali 49.42 293 P P 09 05 29.6 -0.9
ELL Elmali 49.42 293 P P 09 05 29.6 -0.9
ELL pmax pmax
comp=Z,128nm,0.8s
VSU Vasula 49.69 322⇓eP P 09 05 31.9 -0.1
VSU pmax pmax
comp=Z,81nm,1.2s
FINES FINESS Array B 50.23 326 P P 09 05 35.8 -0.3
comp=Z,5.2nm,0.7s,baz=77,slow=6.1,SNR=5.2
FINES FINESS Array B 50.23 326 P P 09 05 35.6 -0.6
FINES FINESS Array B 50.23 326 iP P 09 05 39.0 +2.9
FINES pmax pmax
comp=Z,5.0nm,0.7s
MLR Muntele Rosu 50.74 305 P P 09 05 40.8 +0.3
comp=Z,18nm,0.8s,baz=145,slow=5.5,SNR=6.7
MLR Muntele Rosu 50.74 305 P P 09 05 40.5 +0.1
MLR Muntele Rosu 50.74 305 P P 09 05 40.5 +0.1
MLR pmax pmax
comp=Z,20nm,0.8s
ARCES ARCESS Array B 51.63 336 P P 09 05 45.6 -1.0
comp=Z,5.5nm,0.9s,baz=102,slow=8.3,SNR=6.3
ARCES ARCESS Array B 51.63 336 P P 09 05 49.3 +2.7
ARCES ARCESS Array B 51.63 336 P P 09 05 49.3 +2.7
KARP Karpathos 51.87 292 P P 09 05 46.7 -2.2
SANT Santorini 52.98 294 P P 09 05 55.3 -1.8
IDI Anoyia 53.73 293 P P 09 06 01.0 -1.7
comp=Z,8.0nm,0.5s,baz=14,slow=12,SNR=6.0
AGG Agios Georgios 54.68 298 P 09 06 08.2 -1.3
AGG IAmb IAmb 09 06 16.3
comp=Z,8.4nm,0.8s
AGG Agios Georgios 54.68 298 P P 09 06 08.2 -1.3
AGG pmax pmax
comp=Z,8.0nm,0.8s
BILL Bilibino 55.48 26 P P 09 06 15.4 +0.6
BILL IAmb IAmb 09 06 22.3
comp=Z,14nm,1.1s
BILL Bilibino 55.48 26⇓eP P 09 06 15.5 +0.8
BILL pmax pmax
comp=Z,12nm,1.2s
BILL MLR MLR
comp=Z,2µm,19.0s
ITM Ithomi 55.49 296 P P 09 06 12.7 -2.7
HFS Hagfors 56.32 324 P P 09 06 18.8 -2.1
comp=Z,3.2nm,0.6s,baz=96,slow=10,SNR=2.3
NB2 NORSAR Subarra 57.41 325 P P 09 06 27.4 -1.3
comp=Z,1.9nm,0.7s,baz=82,slow=6.9
NOA NORSAR Array B 57.41 325 P P 09 06 26.8 -2.0
comp=Z,3.6nm,0.8s,baz=83,slow=6.9,SNR=5.2
GERES GERESS Array B 58.31 311 P P 09 06 34.8 -0.5
comp=Z,0.9nm,0.5s,baz=79,slow=6.2,SNR=4.4
GERES GERESS Array B 58.31 311 P P 09 06 34.3 -1.0
KMBO Kilima Mbogo 60.05 247 P P 09 06 47.9 0.0
comp=Z,1.8nm,0.6s,baz=55,slow=9.7,SNR=5.7
KMBO Kilima Mbogo 60.05 247 P P 09 06 48.6 +0.7
KMBO IAmb IAmb 09 06 55.2
comp=Z,5.2nm,1.1s
KMBO Kilima Mbogo 60.05 247 P P 09 06 48.6 +0.7
KMBO pmax pmax
comp=Z,5.0nm,1.1s
BMRD Maredsous 63.48 314 pP P 09 07 12.3 +2.1
OPO Ambohidratompo 65.14 226 P P 09 07 22.7 +1.1
comp=Z,12nm,0.8s,baz=46,slow=8.2,SNR=14
EKA Eskdalemuir Ar 66.24 321 P P 09 07 26.9 -1.2
comp=Z,1.0nm,0.5s,baz=62,slow=7.7,SNR=3.9
WRA Warramunga Arr 66.64 135 P P 09 07 30.5 -0.6
comp=Z,4.7nm,0.9s,baz=328,slow=6.5,SNR=8.1
WRA Warramunga Arr 66.64 135 P P 09 07 30.0 -1.2
WRAB Tennant Creek 66.64 135⇑eP P 09 07 32.7 +1.6
WRAB pmax pmax
comp=Z,10.0nm,1.1s
PMG Port Moresby 68.06 117 P P 09 07 43.5 +3.3
PMG pmax pmax
comp=Z,19nm,1.6s
AS31 Alice Springs 69.25 138 P P 09 07 47.8 +0.3
ASAR Alice Springs 69.25 138 P P 09 07 46.7 -0.8
comp=Z,4.2nm,0.9s,baz=318,slow=5.3,SNR=22
TOLK Toolik Lake Re 70.42 20 P P 09 07 54.6 +0.5
TOLK IAmb IAmb 09 07 58.6
comp=Z,9.4nm,1.0s
IMAR Indian Mountai 70.75 23 P P 09 07 56.5 +0.4
MLY Manley 72.33 23 P P 09 08 06.8 +1.1
MLY IAmb IAmb 09 08 08.7
comp=Z,12nm,1.4s
BMAR Burnt Mountain 72.64 19 P P 09 08 07.2 -0.3
FALS False Pass 72.94 36 P P 09 08 06.9 -2.4
PPLA Purkeypile 73.16 25 P P 09 08 11.2 +0.4
COLA College 73.37 22 P P 09 08 12.2 +0.4
COLA College 73.37 22 P P 09 08 12.2 +0.4
COLA pmax pmax
comp=Z,17nm,0.9s
ESDC Sonseca Array 73.40 307 P P 09 08 11.1 -1.5
comp=Z,1.4nm,0.6s,baz=59,slow=4.4,SNR=4.9
ESDC Sonseca Array 73.40 307 P P 09 08 11.0 -1.5
RES Resolute Bay 73.51 1 P P 09 08 12.1 -0.3
RES IAmb IAmb 09 08 18.2
comp=Z,7.5nm,1.2s
RES Resolute Bay 73.51 1 P P 09 08 12.1 -0.3
RES pmax pmax
comp=Z,8.0nm,1.3s
CCB Clear Creek Bu 73.54 22 P P 09 08 12.8 0.0
CCB IAmb IAmb 09 08 17.9
comp=Z,5.4nm,0.9s
IL31 73.75 22 P P 09 08 13.6 -0.4
IL31 IAmb IAmb 09 08 19.5
comp=Z,12nm,1.1s
ILAR Eielson Array 73.75 22 P P 09 08 13.1 -0.9
comp=Z,3.8nm,0.9s,baz=299,slow=5.2,SNR=21
ILAR Eielson Array 73.75 22 P P 09 08 13.2 -0.8
INK Inuvik 74.80 15 P P 09 08 19.2 -0.8
comp=Z,4.4nm,1.0s,baz=334,slow=5.3,SNR=9.0
INK Inuvik 74.80 15 P P 09 08 19.4 -0.6
INK IAmb IAmb 09 08 21.1
comp=Z,7.4nm,1.1s
INK Inuvik 74.80 15 P P 09 08 19.4 -0.6
INK pmax pmax
comp=Z,7.0nm,1.1s
RIDG Independent Ri 75.11 22 P P 09 08 21.2 -0.8
RIDG IAmb IAmb 09 08 23.2
comp=Z,18nm,1.3s
SCRK Sand Creek 75.22 22 P P 09 08 22.5 -0.2
SCRK IAmb IAmb 09 08 28.3
comp=Z,12nm,1.1s
EGAK Eagle 75.50 20 P P 09 08 24.4 +0.3
EGAK IAmb IAmb 09 08 31.3
comp=Z,8.9nm,1.2s
LSZ Lusaka 75.86 242 P P 09 08 25.4 -1.7
comp=Z,4.7nm,0.5s,baz=53,slow=5.5,SNR=10.0
LSZ Lusaka 75.86 242 P P 09 08 28.5 +1.4
LSZ IAmb IAmb 09 08 29.6
comp=Z,14nm,1.0s
LSZ Lusaka 75.86 242 P P 09 08 28.5 +1.4
LSZ pmax pmax
comp=Z,14nm,1.0s
BCAR Beaver Creek A 76.56 22 P P 09 08 30.9 +0.6
MCARA McCarthy VSAT 77.37 23 P P 09 08 36.1 +1.3
BARN Barnard Glacie 78.06 23 P P 09 08 39.9 +1.0
MATP Matopo 78.91 237 P P 09 08 42.2 -1.8
comp=Z,5.4nm,0.8s,baz=47,slow=6.3,SNR=7.8
STKA Stephens Creek 79.89 138 P P 09 08 47.5 -1.6
comp=Z,3.7nm,0.7s,baz=345,slow=8.2,SNR=9.1
STKA Stephens Creek 79.89 138 P P 09 08 49.9 +0.9
STKA Stephens Creek 79.89 138 P P 09 08 49.9 +0.9
STKA pmax pmax
comp=Z,3.0nm,1.4s
SKAG Skagway 81.33 22 P P 09 08 57.4 +1.0
SKAG IAmb IAmb 09 08 58.6
comp=Z,16nm,1.1s
TORD Torodi Ar. Bea 82.06 280 P P 09 08 59.1 -1.9
comp=Z,3.2nm,0.7s,baz=56,slow=4.6,SNR=6.9
TORD Torodi Ar. Bea 82.06 280 P P 09 08 59.9 -1.2
YKA Yellowknife Ar 83.70 11 P P 09 09 06.9 -1.8
comp=Z,2.5nm,0.9s,baz=335,slow=5.1,SNR=18
LBTB Lobatse 83.89 236 P P 09 09 11.8 +1.5
comp=Z,6.6nm,0.7s,baz=54,slow=3.1,SNR=5.4
LBTB Lobatse 83.89 236 P P 09 09 11.0 +0.6
LBTB Lobatse 83.89 236 P P 09 09 11.0 +0.6
LBTB pmax pmax
comp=Z,9.0nm,0.8s
TSUM Tsumeb 86.28 245 P P 09 09 23.8 +1.3
comp=Z,4.8nm,1.0s,baz=53,slow=8.5,SNR=5.0
TSUM Tsumeb 86.28 245 P P 09 09 24.9 +2.4
BOSA Boshof 86.40 233 P P 09 09 23.6 +0.7
comp=Z,4.2nm,0.7s,baz=44,slow=2.8,SNR=6.4
BOSA Boshof 86.40 233 P P 09 09 23.6 +0.7
TXAR Lajitas Array 117.54 14 PKP PKPdf 09 15 25.9 -0.6
comp=Z,0.4nm,0.5s,baz=73,slow=1.2,SNR=5.2
TXAR Lajitas Array 117.54 14 PKPdf PKiKP 09 15 29.3 +2.7
TXAR Lajitas Array 117.54 14 PKIKP PKPdf 09 15 26.0 -0.6
SNAA Sanae 121.04 202 PKPdf PKiKP 09 15 33.5 +1.6
SNAA Sanae 121.04 202 PKIKP PKiKP 09 15 33.5 +1.6
QSPA South Pole Qui 121.80 180 PKPdf PKPdf 09 15 33.0 -0.3
OTAV Otavalo 146.23 340 PKPbc 09 16 21.7 -0.2
OTAV Otavalo 146.23 340 PKP2 PKPbc 09 16 21.7 -0.2
CPUP Villa Florida 151.31 273 PKPbc PKPbc 09 16 31.9 -2.2
comp=Z,4.9nm,0.9s,baz=34,slow=3.6,SNR=7.7
CPUP Villa Florida 151.31 273 PKPbc 09 16 32.3 -1.8
PLCA Paso Flores 162.38 235 PKPab PKPab 09 17 27.6 -2.0
comp=Z,3.8nm,1.1s,baz=54,slow=2.8,SNR=2.9
PLCA Paso Flores 162.38 235 PKPab 09 17 27.2 -2.3

ATH 07 08:58:13.4, 38.71N×22.78E, h14km±3km, ML1.9/2, Error ellipse: s-maj=3.2km s-min=1.0km az=310.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AXAR	Agios Charalam	0.11	302	P	Pg	08 58 16.6	-0.1
AXAR				S	Sg	08 58 18.9	-0.1
AXAR				AML	AML	08 58 19.2	
	comp=E,1792µm,0.2s						
AXAR				AML	AML	08 58 19.2	
	comp=N,2847µm,0.2s						
LKR	Lokris	0.18	108	P	Pg	08 58 17.6	-0.2
LKR				S	Sg	08 58 21.3	+0.6
DLFA	Delphi	0.32	224	P	Pg	08 58 19.7	-0.3
DLFA				S	Sb	08 58 25.2	-0.6
PROD	Prodromos	0.46	168	P	Pg	08 58 22.2	-0.4
VIL2	Platees	0.63	142	P	Pb	08 58 26.3	+0.2
MRKA	Markates	0.64	90	P	Pg	08 58 26.0	+0.1
MRKA				S	Sb	08 58 34.8	-0.2
NEO	Neokhori	0.69	30	P	Pg	08 58 27.0	+0.1
NEO				AML	AML	08 58 41.2	
	comp=N,161µm,0.3s						
NEO				AML	AML	08 58 41.6	
	comp=E,126µm,0.3s						
LTK	Loutraki	0.70	168	P	Pg	08 58 26.6	-0.4
LTK				S	Sb	08 58 36.6	-0.2
SKIA	Skiathos	0.71	49	P	Pb	08 58 27.4	0.0
SKIA				S	Sg	08 58 36.6	+0.1

SKO 07 08:59:42.5, 38.14N×20.43E, h5km
THE 07 08:59:42.6, 38.24N×20.37E, h14km, ML4.3/8, Error ellipse: s-maj=1.2km s-min=0.5km az=268.0
PDG 07 08:59:42.0±0.2, 38.21N×20.37E, h20km, ML4.3/14, Error ellipse: s-maj=0.5km s-min=0.5km az=90.0
IDC 07 08:59:43.8±1.4, 38.64N×20.76E, h0km, mb4.0/13, mb1 4.1/15, mb1mx3.9/53, mbtmp4.0/15, ML3.8/2, MS3.9/1, Ms1 3.9/1, ms1mx3.4/48, Error ellipse: s-maj=27.9km s-min=14.6km az=37.0
ATH 07 08:59:43.0, 38.23N×20.46E, h13km±1km, ML4.1/11, Error ellipse: s-maj=1.7km s-min=0.8km az=251.0
BEO 07 08:59:43.4±0.7, 38.19N×20.30E, h15km±4km, ML4.1/9
NEIC 07 08:59:46.4±2.7, 38.30N±0.06×20.38E±0.06, h34km±3km, Error ellipse: s-maj=8.7km s-min=6.5km az=203.0

ISC 07 08:59:43.2±0.6, 38.24N±0.02×20.44E±0.02, h12km±3km, n204, σ1.29/250, mb4.4/21, 10C-5D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.02	332	P	Pg	08 59 45.4	0.0
KEF4				S	Sg	08 59 46.9	0.0
LXR1	Lixouri, Cepha	0.04	179	P	Pg	08 59 45.4	-0.1
LXR1				S	Sg	08 59 47.3	+0.2
LXRA	Lixouri, Kepha	0.04	180	P	Pg	08 59 45.5	0.0
LXRA				S	Sg	08 59 47.2	+0.1
KEF1	Kardakata, Kep	0.05	34	P	Pg	08 59 45.5	0.0
KEF1				S	Sg	08 59 47.2	0.0
ARGA	Argostoli. Kep	0.07	152	P	Pg	08 59 45.6	-0.2
ARGA				S	Sg	08 59 47.5	-0.1
CHV1	Chavriata, Kef	0.07	218	P	Pg	08 59 45.4	-0.4
CHV1				S	Sg	08 59 47.5	-0.1
ARG2	Argostoli	0.07	147	P	Pg	08 59 45.6	-0.2
ARG2				S	Sg	08 59 47.6	0.0
KEF3	Kipouria, Keph	0.08	243	P	Pg	08 59 45.6	-0.3
KEF3				S	Sg	08 59 47.4	-0.4
KEF2	Argostoli. Kep	0.08	152	P	Pg	08 59 45.7	-0.2
KEF2				S	Sg	08 59 47.7	-0.1
VLS	Valsamata	0.14	117	P	Pg	08 59 46.4	-0.2
VLS	Valsamata	0.14	117	P	Pg	08 59 46.4	-0.2
VLS				S	Sg	08 59 48.8	-0.2
VSK1	VASILIKIADES	0.20	30	P	Pg	08 59 47.7	+0.1
VSK1				S	Sg	08 59 51.2	+0.6
	176µm,0.4s						
KONA	Konidatara, Ke	0.21	29	P	Pg	08 59 47.9	0.0
KONA				S	Sg	08 59 51.8	+0.8
VLMS	Volimes, Zakyn	0.40	154	P	Pg	08 59 51.0	-0.3
VLMS				S	Sg	08 59 57.2	+0.6
VLMS				AML	AML	08 59 58.0	
VLMS				AML	AML	08 59 58.1	
EVGI	Lefkada island	0.42	24	P	Pg	08 59 51.4	-0.2
EVGI	Lefkada island	0.42	24	P	Pg	08 59 51.4	-0.2
MGNA	Meganis	0.50	34	P	Pg	08 59 52.7	-0.4
LKD2	Lefkada island	0.58	17	P	Pg	08 59 53.8	-0.7
LKD2				S	Sb	09 00 03.3	-0.1
	15µm,0.5s						
LKD2	Lefkada island	0.58	17	P	Pg	08 59 54.0	-0.5
LKD2				S	Sg	09 00 02.1	0.0
LKD2				AML	AML	09 00 09.9	
	comp=E,31860µm,0.4s						
LKD2				AML	AML	09 00 15.1	
	comp=N,27959µm,0.6s						
ZAK2	Zakynthos	0.58	141	P	Pg	08 59 54.4	-0.1
ZAK2				S	Sb	09 00 04.4	+1.0
	comp=N,231µm,0.6s						
AST1	Astakos	0.59	59	P	Pg	08 59 54.7	-0.1
AST1				S	Sb	09 00 04.4	+0.5
	comp=N,30µm,0.4s						
TSLK	Tsoukalades, L	0.61	16	P	Pg	08 59 54.5	-0.6
TSLK	Tsoukalades, L	0.61	16	P	Pg	08 59 54.5	-0.6
TSLK				AML	AML	09 00 10.9	
	comp=E,26640µm,0.6s						
TSLK				AML	AML	09 00 13.2	
	comp=N,33978µm,0.5s						
KRI1	kERI	0.65	152	P	Pg	08 59 54.9	-1.0
KRI1				S	Sb	09 00 05.7	+0.3
	comp=N,77µm,0.4s						
PDO	Prodromos	0.69	58	P	Pg	08 59 56.1	-0.5
PDO				S	Sb	09 00 07.4	+0.8
	comp=N,25µm,0.7s						
PDO	Prodromos	0.69	58	P	Pg	08 59 56.1	-0.5
PDO				AML	AML	09 00 08.8	
	comp=E,35183µm,0.6s						
PDO				AML	AML	09 00 14.2	
	comp=N,33208µm,0.5s						
RLS	Riolos of Patr	0.83	102	P	Pg	08 59 58.3	-1.0
RLS	Riolos of Patr	0.83	102	P	Pg	08 59 58.5	-0.8
RLS				AML	AML	09 00 15.8	
	comp=E,11065µm,0.6s						
RLS				AML	AML	09 00 19.5	
	comp=N,16865µm,0.6s						
PVO	Paravola	0.93	66	P	Pg	09 00 00.9	-0.3
PVO				S	Sn	09 00 16.1	+0.7
	comp=N,16µm,0.8s						
PVO	Paravola	0.93	66	P	Pg	09 00 00.9	-0.3
PVO				AML	AML	09 00 21.1	
	comp=E,31497µm,0.7s						
PVO				AML	AML	09 00 23.5	
	comp=N,31550µm,0.9s						
DRO	Drossia	1.04	106	P	Pb	09 00 02.7	-0.6
DRO				AML	AML	09 00 30.6	
	comp=E,25060µm,0.6s						
DRO				AML	AML	09 00 34.9	
	comp=N,34145µm,0.6s						
LAKA	Lakka	1.21	89	P	Pn	09 00 05.5	-0.5
LAKA				S	Sg	09 00 23.7	+1.3
	comp=N,6µm,0.8s						
LAKA	Lakka	1.21	89	P	Pn	09 00 05.5	-0.5
LAKA				AML	AML	09 00 29.5	
	comp=N,12020µm,0.7s						
LAKA				AML	AML	09 00 29.7	
	comp=E,12425µm,0.8s						
ANX	Ano Chora	1.22	73	P	Pn	09 00 05.7	-0.5
ANX	Ano Chora	1.22	73	P	Pn	09 00 05.6	-0.5
ANX				AML	AML	09 00 30.0	
	comp=E,20325µm,0.5s						
ANX				AML	AML	09 00 35.5	
	comp=N,25955µm,0.6s						
AMT	Artemida-Makis	1.23	125	P	Pn	09 00 05.9	-0.3
AMT				AML	AML	09 00 34.5	
	comp=N,17244µm,0.6s						
AMT				AML	AML	09 00 37.9	
	comp=E,27652µm,0.7s						
EVR	Evrytania	1.27	57	P	Pn	09 00 06.4	-0.4
SERG	Sergoula	1.28	82	P	Pn	09 00 06.3	-0.7
SERG	Sergoula	1.28	82	P	Pn	09 00 06.3	-0.7
TRIZ	Trizonia	1.29	84	P	Pn	09 00 06.3	-0.7
TRIZ	Trizonia	1.29	84	P	Pn	09 00 06.4	-0.7
IGT	Igoumenitsa	1.29	356	ePg	Pg	09 00 08.3	+0.2
IGT				eSg	Sg	09 00 25.4	+0.4
IGT	Igoumenitsa	1.29	356	P	Pb	09 00 07.6	+0.1
KALE	Kalithea	1.35	83	P	Pn	09 00 07.3	-0.6
KALE	Kalithea	1.35	83	P	Pn	09 00 07.3	-0.6
KALE				AML	AML	09 00 35.6	
	comp=N,9283µm,0.6s						
KALE				AML	AML	09 00 36.1	
	comp=E,9545µm,0.6s						
KLV	Kalavryta, Ach	1.36	98	P	Pn	09 00 08.0	-0.1
JAN	Janina	1.45	13	P	Pg	09 00 10.9	-0.2
MAKR	Makrakomi, Fth	1.54	59	P	Pb	09 00 11.4	-0.2
ITM	Ithomi	1.58	131	Pn	Pg	09 00 13.4	-0.3
AGG	Agios Georgios	1.68	62	P	Pg	09 00 15.0	-0.4
AGG	Agios Georgios	1.68	62	Pn	Pg	09 00 15.0	-0.4
THL	Klokotos Trika	1.81	42	P	Pb	09 00 16.0	-0.2
AXAR	Agios Charalam	1.82	72	P	Pg	09 00 17.4	-0.8
KPRO	Kipourio	1.86	23	P	Pb	09 00 16.9	-0.3
PROD	Prodromos	1.94	89	P	Pb	09 00 17.7	-0.8
LTK	Loutraki	2.01	95	P	Pb	09 00 18.8	-0.8
PENT	Pentalofos	2.03	15	P	Pb	09 00 19.7	-0.4
LKR	Lokris	2.05	78	P	Pb	09 00 19.3	-1.1
KZN	Kozani	2.31	26	P	Pb	09 00 23.3	-1.5
SCTE	Santa Cesarea	2.39	321	Pn	Pn	09 00 21.9	-0.2
LIT	Litokhoron	2.45	40		Pn	09 00 25.0	+2.0
FNA	Florina	2.64	16	ePn	Pn	09 00 27.2	+1.5
FNA	Florina	2.64	16	Pn	Pn	09 00 26.9	+1.2
OHR	Ohrid	2.88	5	iPn	Pn	09 00 31.1	+2.1
OHR				iSn	Sn	09 01 06.4	+2.8
OHR				eLg	Lg	09 01 12.3	
	comp=E,472nm,0.5s						
OHR	Ohrid	2.88	5	iP	Pn	09 00 31.2	+2.2
TIP	Timpagrande	3.03	289	⇓P	Pn	09 00 31.3	+0.2
TIP	Timpagrande	3.03	289	Pn	Pn	09 00 31.2	+0.2
TIR	Tirane	3.14	352	⇓P	Pn	09 00 33.7	+1.2
TIR	Tirane	3.14	352	Pn	Pn	09 00 33.3	+0.8
TAR1	Taranto	3.34	314	ePn	Pn	09 00 35.3	0.0
VAY	Valandovo	3.49	27	iPn	Pn	09 00 38.2	+1.0
VAY				iSn	Sn	09 01 20.5	+2.1
VAY				eLg	Lg	09 01 25.0	
	comp=E,171nm,0.8s						
VAY	Valandovo	3.49	27	iP	Pn	09 00 38.1	+0.9
CEL	Celeste	3.58	272	Pn	Pn	09 00 38.1	-0.4
STIP	Stip	3.70	21	iPn	Pn	09 00 42.6	+2.4
STIP	Stip	3.70	21	iP	Pn	09 00 42.7	+2.4
SRS	Serrai	3.77	39	ePn	Pn	09 00 42.0	+0.9
ULC	Ulcinj	3.83	347	ePn	Pn	09 00 41.2	-0.8
ULC				eSn	Sn	09 01 26.9	0.0
SG1	Sgolgore (BA)	3.90	313	⇑iPn	Pn	09 00 43.2	+0.3
BAI	Bari	3.97	317	⇓iPn	Pn	09 00 43.6	-0.2
DRME	Dracevica, Mon	4.06	347	ePn	Pn	09 00 44.7	-0.4
DRME	Dracevica, Mon	4.06	347	ePn	Pn	09 00 44.9	-0.2
DRME				eSn	Sn	09 01 32.3	-0.2
MMB	Musomiste	4.20	36	P	Pb	09 00 54.2	-2.7
APE	Apeiranthos	4.21	105	⇑P	Pn	09 00 52.7	-4.5
BUM	Brajici-Budva	4.23	344	⇓iPn	Pn	09 00 46.8	-0.7
BUM				iSn	Sn	09 01 35.4	-1.3
PDG	Podgorica	4.28	348	ePn	Pn	09 00 48.5	+0.3
PDG				eSn	Sn	09 01 37.8	-0.2
PDG	Podgorica	4.28	348	⇑P	Pn	09 00 49.0	+0.8
PDG	Podgorica	4.28	348	ePn	Pn	09 00 47.7	-0.5
PDG	Podgorica	4.28	348	Pn	Pn	09 00 48.4	+0.3
TTG	Podgorica	4.28	348	ePn	Pn	09 00 47.7	-0.5
TTG				eSn	Sn	09 01 37.3	-0.7
ACER	Acerenza	4.31	308	Pn	Pn	09 00 49.3	+0.8
PVY	Plav	4.37	355	ePn	Pn	09 00 48.9	-0.5
PVY				eSn	Sn	09 01 39.9	-0.4
CEME	Cevo	4.46	345	ePn	Pn	09 00 49.9	-0.7
CEME				eSn	Sn	09 01 41.3	-1.1
HCY	Herceg Novi	4.46	341	ePn	Pn	09 00 49.6	-1.0
HCY	Herceg Novi	4.46	341	ePn	Pn	09 00 49.4	-1.2
HCY				iSn	Sn	09 01 40.1	-2.3
BOSS	Bosilegrad	4.53	19	ePn	Pn	09 00 51.9	+0.3
IDI	Anoyia	4.63	128	Pn	Pn	09 00 54.9	+1.9
	comp=E,1.2nm,0.3s,baz=294,slow=17,SNR=3.8						
IDI				Sn	Sn	09 01 47.5	+0.8
	comp=E,4.0nm,0.3s,baz=302,slow=16,SNR=4.4						
IVA	Berane	4.65	355	ePn	Pn	09 00 52.6	-0.7
IVA				eSn	Sn	09 01 46.9	-0.2
KOME	Kolasin	4.66	352	ePn	Pn	09 00 53.8	+0.4
KOME				eSn	Sn	09 01 47.4	-0.1
NKME	Niksic	4.66	346	ePn	Pn	09 00 52.9	-0.5
NKME				eSn	Sn	09 01 46.5	-1.0

BARS	Barje	4.69	12	ePn	Pn	09 00 54.0	+0.2
BARS				eSn	Sn	09 01 47.5	-0.6
NKY	Niksic	4.70	347	ePn	Pn	09 00 53.4	-0.6
NKY				eSn	Sn	09 01 47.7	-0.8
TREB	Trebinje	4.75	341	ePn	Pn	09 00 53.6	-1.0
TREB				eSn	Sn	09 01 47.0	-2.5
TREB	Trebinje	4.75	341	ePn	Pn	09 00 53.5	-1.0
RZN	Rozhen	4.76	42	P	Pn	09 00 57.2	+2.3
VAE	Valguarnera	4.83	263	Sn	Sn	09 01 52.0	+0.4
	comp=E,8.8nm,0.3s,baz=133,slow=22,SNR=4.1						
VTS	Vitosha	4.87	25	ePn	Pn	09 00 56.7	+0.4
VTS				eSn	Sn	09 01 51.4	-1.3
VTS	Vitosha	4.87	25	⇑P	Pn	09 00 57.5	+1.1
VTS	Vitosha	4.87	25	P	Pn	09 00 57.2	+0.9
VTS	Vitosha	4.87	25		Pn	09 00 56.4	0.0
BRY	Bratogost	4.88	343	ePn	Pn	09 00 54.4	-2.1
BRY	Bratogost	4.88	343	⇑iPn	Pn	09 00 55.4	-1.1
BRY				eSn	Sn	09 01 51.6	-1.3
SELS	Selova	5.00	6	ePn	Pn	09 00 57.3	-0.8
SELS				eSn	Sn	09 01 54.3	-1.5
SJES	Sjenica	5.03	356	ePn	Pn	09 00 59.5	+1.0
SJES				eSn	Sn	09 01 55.3	-1.3
SGRT	San Giovanni R	5.03	316	Pn	Pn	09 00 57.8	-0.7
ALN	Alexandroupoli	5.08	57	Pn	Pn	09 01 00.0	+0.9
UPM	Unac-Piva	5.09	347	ePn	Pn	09 00 59.3	-0.2
UPM	Unac-Piva	5.09	347	ePn	Pn	09 00 58.9	-0.6
UPM				eSn	Sn	09 01 57.3	-1.0
KDZ	Kurdzhali	5.12	47	P	Pn	09 01 00.8	+1.1
PLE	Pljevlja	5.15	351	ePn	Pn	09 01 00.1	-0.1
PLE				iSn	Sn	09 01 58.6	-0.9
ZAPS	Zavoj	5.30	18	ePn	Pn	09 01 03.6	+1.4
WDD	Wied Dalam	5.30	245		Pn	09 01 00.8	-1.4
PAOL	Paolisi	5.32	303	Pn	Pn	09 01 03.8	+1.3
IVAS	Ivanjica	5.34	358	eSn	Sn	09 02 02.4	-1.7
RUDO	Rudo	5.43	352	ePn	Pn	09 01 01.4	-2.6
BOVS	Bovan	5.48	10	ePn	Pn	09 01 04.4	-0.2
BOVS				eSn	Sn	09 02 06.2	-1.2
GRUS	Gruza	5.65	2	ePn	Pn	09 01 07.3	+0.4
GRUS				eSn	Sn	09 02 10.9	-0.8
BBLS	Lazići	5.68	352	eSn	Sn	09 02 10.4	-2.1
BBLS	Lazići	5.68	352	ePn	Pn	09 01 07.9	+0.5
ZAGS	Zajecar	5.73	13	ePn	Pn	09 01 08.4	+0.3
DIVS	Divibare	5.86	357	ePn	Pn	09 01 09.3	-0.7
DIVS				eSn	Sn	09 02 14.1	-3.0
DIVS	Divibare	5.86	357	ePn	Pn	09 01 08.6	-1.4
HAPS	Han Pijesak,Bl	5.95	350	ePn	Pn	09 01 09.9	-1.3
TRUS	Trudelj	5.98	360	ePn	Pn	09 01 10.7	-0.8
KARP	Karpathos	6.02	114	Pn	Pn	09 01 14.4	+2.3
PLVB	Pleven	6.04	30	⇑P	Pn	09 01 14.2	+1.8
ELND	Elena	6.25	40	⇑P	Pn	09 01 16.8	+1.6
INTR	Introdacqua	6.26	309	Pn	Pn	09 01 16.3	+0.8
TEKS	Tekeris	6.34	354	ePn	Pn	09 01 15.3	-1.2
BLY	Banja Luka	6.95	340	ePn	Pn	09 01 24.7	-0.1
BLY	Banja Luka	6.95	340	Pn	Pn	09 01 24.2	-0.6
NRCA	Norcia	7.22	312		Pn	09 01 29.6	+1.0
GZR	Gura Zlata	7.36	13	⇑P	Pn	09 01 31.0	+0.5
MURB	Monte Urbino	7.83	312	Pn	Pn	09 01 38.9	+2.1
VOIR		7.97	24	⇑P	Pn	09 01 40.5	+1.6
MLR	Muntele Rosu	8.33	28	Pn	Pn	09 01 46.9	+3.1
	comp=E,0.5nm,0.3s,baz=199,slow=8.7,SNR=3.4						
MLR	Muntele Rosu	8.33	28	⇑P	Pn	09 01 45.8	+2.0
MLR	Muntele Rosu	8.33	28		Pn	09 01 45.3	+1.5
CRES	Cresnjev	8.44	336	ePn	Pn	09 01 43.5	-1.7
PLOR	Plostina	8.90	29	⇓P	Pn	09 01 54.0	+2.4
TRI	Trieste	8.96	328	Pn	Pn	09 01 51.2	-1.2
SOKA	Soboth	9.33	336	ePn	Pn	09 01 56.0	-1.5
	comp=E,9.9nm,0.6s						
OBKA	Obir	9.34	334	Pn	Pn	09 01 57.3	-0.3
	comp=E,5.1nm,0.2s						
TEOL	Teolo	9.66	320	Pn	Pn	09 02 00.2	-1.8
MYKA	Terra Mystica	9.77	331	Pn	Pn	09 02 03.9	+0.3
	comp=E,1.0nm,0.2s						
STAL	STALIGIAL	9.85	327	Pn	Pn	09 02 03.5	-1.0
CTI	Castel Tesino	10.17	323	Pn	Pn	09 02 07.4	-1.6
MSSA	Maissana	10.21	310	Pn	Pn	09 02 11.9	+2.3
KBA	Koelnbreinsper	10.26	332	Pn	Pn	09 02 10.8	+0.5
	comp=E,4.9nm,0.6s						
VYHS	Vyhne	10.32	354	eSN	Sn	09 04 02.0	-4.5
BRTR	Keskin Array B	10.39	78	Pn	Pn	09 02 15.7	+3.7
	comp=E,0.1nm,0.3s,baz=262,slow=13,SNR=3.1						
SALO	Salr	10.43	318	Pn	Pn	09 02 11.6	-1.0
MOA	Molln	10.61	337	ePn	Pn	09 02 15.0	0.0
	comp=E,3.3nm,0.2s						
FUORN	Ofenpass-Fuorn	11.25	321	Pn	Pn	09 02 25.4	+1.5
GERES	GERESS Array B	11.67	337	Pn	Pn	09 02 28.9	-0.6
	comp=E,0.4nm,0.3s,baz=161,slow=14,SNR=6.6						
GERES				Sn	Sn	09 04 35.0	-4.7
	comp=E,0.5nm,0.3s,baz=165,slow=24,SNR=4.4						
GERES	GERESS Array B	11.67	337		Pn	09 02 29.1	-0.4
SENIN	Lac Senin/Sane	12.66	314	Pn	Pn	09 02 43.0	-0.2
KIV	Kislovodsk	17.69	64	eP	P	09 03 52.4	+2.1
KIV				pmax	pmax		
	comp=Z,31nm,1.2s						
KBZ	Khabaz	17.80	65	P	Pn	09 03 50.6	-0.1
	comp=Z,0.2nm,0.3s,baz=254,slow=10,SNR=5.4						
KBZ	Khabaz	17.80	65	P	Pn	09 03 50.6	-0.1
MELI	Melilla	18.95	268	PP	Pn	09 04 11.8	+7.1
OBN	Obninsk	20.10	28	LR	LR	09 12 49.7	
	comp=Z,347nm,20.3s,baz=174,slow=40						
MDT	Midelt	21.06	263	P	P	09 04 33.1	+5.9
	comp=Z,3.3nm,0.9s,baz=96,slow=7.1,SNR=3.8						
HFS	Hagfors	22.33	351	P	P	09 04 39.5	-1.0
	comp=Z,5.4nm,0.7s,baz=146,slow=10,SNR=8.7						
EKA	Eskdalemuir Ar	23.34	325	P	P	09 04 50.6	-0.5
	comp=Z,7.2nm,0.8s,baz=124,slow=10,SNR=8.2						
ESK	Eskdalemuir	23.35	325	P	P	09 04 47.7	-3.5
NAO01	NORSAR Array S	23.41	348	P	P	09 04 54.4	+2.6
FINES	FINESS Array B	23.49	7	P	P	09 04 50.6	-1.9
	comp=Z,6.4nm,0.8s,baz=161,slow=8.8,SNR=6.2						
FINES	FINESS Array B	23.49	7	P	P	09 04 50.9	-1.7
FIA1	FINESS Array S	23.50	7	P	P	09 04 51.2	-1.4
FIA1				IAmb	IAmb	09 04 56.7	
	comp=Z,16nm,1.1s						
NC405	NORSAR Array S	23.54	349	P	P	09 04 53.1	+0.1
NC405				IAmb	IAmb	09 05 12.8	
	comp=Z,33nm,1.2s						
NB201	NORSAR Array S	23.54	349	P	P	09 04 53.3	+0.2
NB2	NORSAR Subarra	23.55	349	P	P	09 04 52.9	-0.2
	comp=Z,2.2nm,0.7s,baz=154,slow=11						
NOA	NORSAR Array B	23.55	349	P	P	09 04 52.8	-0.4
	comp=Z,0.7nm,0.5s,baz=161,slow=8.8,SNR=7.2						
NBO00	NORSAR Array S	23.61	348	P	P	09 04 55.5	+1.8
NBO00				IAmb	IAmb	09 05 00.0	
	comp=Z,34nm,1.1s						
NC204	NORSAR Array S	23.84	348	P	P	09 04 56.5	+0.5
NC204				IAmb	IAmb	09 05 15.0	
	comp=Z,21nm,1.1s						
AKTO	Aktyubinsk	29.20	53	P	P	09 05 42.0	-2.4
	comp=Z,1.5nm,0.7s,baz=329,slow=5.9,SNR=3.1						
GEYT	Alibeck	29.53	79	P	P	09 05 46.9	-0.6
	comp=Z,1.4nm,0.5s,baz=280,slow=8.1,SNR=2.7						
GEYT	Alibeck	29.53	79	P	P	09 05 48.2	+0.7
GYA0B	ALIBECK ARRAY	29.53	79	P	P	09 05 48.0	+0.5
GYA0B				IAmb	IAmb	09 06 00.5	
	comp=Z,3.8nm,0.6s						
BVAR	Borovoye Array	37.13	50	P	P	09 06 52.7	-0.7
	comp=Z,0.7nm,0.5s,baz=266,slow=6.5,SNR=4.7						
KK31	Karatay Array	37.83	66	P	P	09 07 00.3	+0.7
KKAR	Karatay Array	37.83	66	P	P	09 06 59.4	-0.1
KKAR	Karatay Array	37.83	66	P	P	09 07 00.4	+0.8
KKAR				IAmb	IAmb	09 07 01.6	
	comp=Z,3.3nm,0.6s						
KURBB	Kurchatov Arra	42.25	54	P	P	09 07 34.6	-1.4
	comp=Z,0.9nm,0.6s,baz=281,slow=8.7,SNR=7.2						
MK31	Makanchi Array	45.33	58	P	P	09 07 59.6	-1.4
MK31				IAmb	IAmb	09 08 02.6	
	comp=Z,3.1nm,0.6s						
MKAR	Makanchi Array	45.33	58	P	P	09 07 59.9	-1.1
	comp=Z,4.0nm,0.5s,baz=277,slow=7.0,SNR=31						
MKAR	Makanchi Array	45.33	58	P	P	09 07 60.0	-0.9
ZAA0	Zalesovo Array	45.70	48	P	P	09 08 02.3	-1.5
ZAA0				IAmb	IAmb	09 08 03.3	
	comp=Z,5.0nm,0.7s						
ZALV	Zalesovo Beam	45.70	48	P	P	09 08 02.6	-1.2
	comp=Z,4.3nm,0.5s,baz=272,slow=9.0,SNR=18						
GTA	Gaotai	59.85	62	eP	P	09 09 54.0	+5.2
GTA				pP	sP	09 09 59.8	+5.5
GTA				sP	pP	09 10 02.7	+9.1
SONM	Songino Array	60.47	51	P	P	09 09 51.2	-1.7
	comp=Z,0.4nm,0.4s,baz=287,slow=10,SNR=4.4						
CMAR	Chiang Mai Arr	69.94	82	P	P	09 10 56.9	+2.2
	comp=Z,1.4nm,0.3s,baz=309,slow=6.9,SNR=5.4						
DAWY	Dawson	76.79	351	P	P	09 11 35.3	+1.0
WRH	Wood River Hil	77.23	355	P	P	09 11 37.3	+0.7
WRH				IAmb	IAmb	09 11 47.0	
	comp=Z,9.4nm,1.4s						

ISK 07 09:18:15.0,39.68N×29.41E,ML1.8/4,Suspected Mining explosion.
DDA 07 09:18:15.4,39.68N×29.45E,h7km±3km,MD2.5
ISC 07 09:18:16.1±1.0,39.68N±0.03×29.46E±0.03,h0km,n11, σ0.71/18,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVSB	Tavsanli	0.23	180	PG	Pg	09 18 20.4	-0.1
TVSB				SG	Sg	09 18 24.5	+1.0
ULDT	Uludag	0.53	331	iP	Pg	09 18 26.0	-0.2
ULDT				iS	Sg	09 18 34.1	+1.1
GDZ	Gediz	0.59	179	iP	Pg	09 18 26.7	-0.7
GDZ				iS	Sg	09 18 36.3	+1.2
IGD	Bursa	0.62	341	iP	Pg	09 18 27.0	-0.9
DURS	Dursunbey	0.77	264	iP	Pg	09 18 30.0	-0.8
DURS				iS	Sg	09 18 41.6	+0.8
BORA	Eskisehir	0.79	75	PG	Pg	09 18 31.0	-0.2
BORA				SG	Sb	09 18 44.2	+0.2
BORA	Eskisehir	0.79	75	iP	Pg	09 18 30.5	-0.7
YLV	Yalova	0.89	356	PG	Pg	09 18 33.4	+0.3
SRCK	Saricakaya, Es	0.96	68	PG	Pb	09 18 35.2	-0.5
SRCK				SG	Sn	09 18 51.1	-0.2
SRCK	Saricakaya, Es	0.96	68	iP	Pg	09 18 34.3	-0.3
ARMT	Armutlu	1.00	333	PG	Pg	09 18 35.1	-0.1
ARMT				SG	Sb	09 18 49.8	-0.1

IDC 07 09:22:56.0±1.3,67.45N×33.52E,h0km,mb3.0/1, mb1 3.5/6,mb1mx3.2/41,mbtmp3.5/6,ML3.0/4,Error ellipse: s-maj=16.1km s-min=9.4km az=73.0
KOLA 07 09:22:56.4,67.65N×33.95E,M1.9,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)
NAO 07 09:22:56.1±1.1,67.34N×33.37E,ML3.1
UPP 07 09:23:01.8±3.7,67.55N×32.73E,h0km,ML1.5,Suspected explosion
ISC 07 09:22:54.4±1.2,67.44N±0.08×33.90E±0.08,h0km,n31, σ2.06/46,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APZ9	Apatity	0.23	305	Pg	Pg	09 23 00.4	+1.6
APZ9				Lg	Lg	09 23 03.2	
APZ9	Apatity	0.23	305	Pg	Pg	09 23 00.4	+1.6
APZ9				Sg	Sg	09 23 03.2	+1.4
APA0	Apatity Array	0.39	296	Pg	Pg	09 23 03.0	+1.2
APA0				Lg	Lg	09 23 08.0	
APA0	Apatity Array	0.39	296	Pg	Pg	09 23 03.0	+1.2
APA0				Sg	Sg	09 23 08.0	+1.2
KEV	Kevo	3.44	316	Pn	Pn	09 23 50.0	+1.0
KEV				Sn	Sn	09 24 28.6	-1.8
KEV				Lg	Lg	09 24 37.8	
KEV	Kevo	3.44	316	eP	Pn	09 23 49.8	+0.7
KEV				eS	Sn	09 24 28.0	-2.4
ARA0	ARCESS Array S	3.74	308	Pn	Pn	09 23 53.6	+0.4
	baz=123,slow=16						
ARA0				Sn	Sn	09 24 35.1	-2.8
	baz=121,slow=28						
ARA0				Lg	Lg	09 24 46.2	
	baz=116,slow=37						
ARA0	ARCESS Array S	3.74	308	Pn	Pn	09 23 53.6	+0.4
	baz=123,slow=16						
ARA0				Sn	Sn	09 24 35.1	-2.8
	baz=121,slow=28						
ARCES	ARCESS Array B	3.74	308	Pn	Pn	09 23 53.5	+0.3
	7.4nm,0.3s,baz=122,slow=15,SNR=509						
ARCES				Pg	Pb	09 24 00.2	-1.0
	2.8nm,0.3s,baz=119,slow=14,SNR=9.1						
ARCES				Sn	Sn	09 24 35.0	-3.0
	6.4nm,0.3s,baz=120,slow=24,SNR=20						
ARCES				Lg	Lg	09 24 46.6	
	12nm,0.3s,baz=119,slow=35,SNR=13						
HEF	Hetta	3.99	289	Pn	Pn	09 23 57.2	+0.6
HEF				Pg	Pb	09 24 07.1	+1.6
HEF				Sn	Sn	09 24 43.8	-0.3
HEF				Lg	Lg	09 24 57.2	
HEF	Hetta	3.99	289	eP	Pn	09 23 57.8	+1.1
HEF				eS	Sn	09 24 44.1	+0.1
PAJU	Pajala	4.21	269	P	Pn	09 24 00.9	+1.1
KTK1	Kautokeino	4.28	297	Pn	Pn	09 24 00.9	+0.3
KTK1				Pg	Pb	09 24 12.0	+1.7
KTK1				Sn	Sn	09 24 48.5	-2.6
KTK1				Lg	Lg	09 25 03.3	
KTK1	Kautokeino	4.28	297	eP	Pn	09 24 00.8	+0.2
KTK1				eS	Sn	09 24 48.9	-2.3
KTK1					IAML	09 25 06.5	
	comp=Z,27nm,0.4s						
LANU	Lannavaara	4.57	283	P	Pn	09 24 05.0	+0.3
ERTU	Ertsjaerv	4.68	264	P	Pn	09 24 07.6	+1.4
HAMF	Hammerfest	4.88	316	eP	Pn	09 24 09.0	+0.2
HAMF				eS	Sn	09 25 01.1	-4.7
HAMF					IAML	09 25 24.7	
	comp=Z,21nm,0.4s						
KIF	Kilpisjarvi	5.12	294	eP	Pn	09 24 12.7	+0.5
KIF				eS	Sn	09 25 08.4	-3.5
KUA	Kurravaara	5.19	282	P	Pn	09 24 13.8	+0.6
HARU	Harads	5.27	262	P	Pn	09 24 14.5	+0.3
RATU	Laukkuluspa	5.48	281	P	Pn	09 24 17.4	+0.3
I37NO	I37NO	5.91	293	i		10 01 10.0	
	baz=105,slow=324,SNR=1.3						
FIA0	FINESS Array S	6.90	213	Pn	Pn	09 24 33.5	-3.2
	baz=33,slow=14						
FIA0	FINESS Array S	6.90	213	Pn	Pn	09 24 33.5	-3.2
	baz=33,slow=14						
FINES	FINESS Array B	6.90	213	Pn	Pn	09 24 33.4	-3.2
	comp=Z,0.2nm,0.3s,baz=26,slow=14,SNR=7.4						
FINES				Lg	Lg	09 26 28.8	
	comp=Z,0.5nm,0.3s,baz=26,slow=29,SNR=2.2						
HFS	Hagfors	11.50	240	Pn	Pn	09 25 36.5	-3.1
	comp=Z,0.0nm,0.3s,baz=37,slow=14,SNR=2.3						
NB2	NORSAR Subarra	11.71	248	Pn	Pn	09 25 40.3	-2.2
NB2	NORSAR Subarra	11.71	248	Pn	Pn	09 25 40.3	-2.2
NOA	NORSAR Array B	11.71	248	Pn	Pn	09 25 39.8	-2.8
	comp=Z,0.0nm,0.3s,baz=47,slow=12,SNR=4.7						
SPITS	Spitsbergen Ar	11.88	342	Pn	Pn	09 25 41.4	-3.3
	baz=138,slow=15,SNR=5.5						
MKAR	Makanchi Array	32.18	105	P	P	09 29 26.4	+2.9
	comp=Z,0.1nm,0.4s,baz=342,slow=8.9,SNR=3.1						

SJA 07 09:31:28.0±1.1,22.72S×67.79W,h161km±7km,ML3.5, MW3.4
GUC 07 09:31:29.3±0.8,22.62S×68.08W,h175km±7km,ML3.5
IDC 07 09:31:33.0±9.4,22.33S×66.61W,h133km±154km,mb3.9/2, mb1 3.7/3,mb1mx3.3/16,mbtmp4.1/3,ML3.8/1,Error ellipse: s-maj=358.2km s-min=77.5km az=78.0
ISC 07 09:31:28.6±0.9,22.72S±0.04×67.85W±0.04,h165km±8km, n39,σ0.98/70,12C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.98	276	⇓iP	Pn	09 31 55.3	+0.2
LVC				iS	Sn	09 32 14.8	-0.6
LVC	Limon Verde	0.98	276	iP	Pn	09 31 55.4	+0.2
LVC				eS	Sn	09 32 14.8	-0.6
PB15	IPOC Station P	1.57	252	⇑iP	Pn	09 32 01.0	+0.8
PB15				iS	Sn	09 32 25.3	+0.7
PB15	IPOC Station P	1.57	252	iP	Pn	09 32 01.1	+0.9
PB15				eS	Sn	09 32 25.5	+0.9
PB09	IPOC Station P	1.58	305	⇑iP	Pn	09 32 01.0	+0.7
PB09				iS	Sn	09 32 24.4	-0.4
PB09					IAML	09 32 26.9	
	comp=E,250nm,0.3s						
PB09	IPOC Station P	1.58	305	iP	Pn	09 32 01.2	+0.9
PB09				iS	Sn	09 32 25.4	+0.6
PB09					IAML	09 32 26.0	
	comp=Z,208nm,0.4s						
PB06	IPOC Station P	1.59	270	⇑iP	Pn	09 32 00.8	+0.4
PB06				iS	Sn	09 32 24.6	-0.2
PB06					IAML	09 32 27.0	
	comp=N,258nm,0.3s						
PB06	IPOC Station P	1.59	270	iP	Pn	09 32 01.0	+0.6
PB06					IAML	09 32 04.1	
	comp=Z,187nm,0.2s						
PB06				eS	Sn	09 32 25.1	+0.3
PB03	IPOC Station P	1.88	290	⇑iP	Pn	09 32 03.9	+0.4
PB03				iS	Sn	09 32 29.7	-0.7
PB03					IAML	09 32 30.6	
	comp=E,321nm,0.2s						
PB03	IPOC Station P	1.88	290	iP	Pn	09 32 03.9	+0.4
PB03				eS	Sn	09 32 29.9	-0.5
PB07	IPOC Station P	2.13	297	⇑iP	Pn	09 32 06.7	+0.4
PB07				iS	Sn	09 32 34.3	-1.1
PB07					IAML	09 32 34.9	
	comp=N,932nm,0.3s						
PB07	IPOC Station P	2.13	297	iP	Pn	09 32 06.8	+0.5
PB07				iS	Sn	09 32 34.5	-0.9
PB04	IPOC Station P	2.16	280	⇑iP	Pn	09 32 07.0	+0.3
PB04				iS	Sn	09 32 35.2	-0.8
PB04					IAML	09 32 39.4	
	comp=N,202nm,0.4s						
PB04	IPOC Station P	2.16	280	iP	Pn	09 32 07.1	+0.5
PB04					IAML	09 32 07.7	
	comp=Z,328nm,0.5s						
PB04				eS	Sn	09 32 36.2	+0.2
PB05	IPOC Station P	2.17	266	⇑iP	Pn	09 32 07.1	+0.3
PB05				iS	Sn	09 32 35.1	-1.1
PB05					IAML	09 32 36.6	
	comp=N,197nm,0.3s						
PB05	IPOC Station P	2.17	266	iP	Pn	09 32 07.2	+0.5
PB05				eS	Sn	09 32 35.2	-1.0
YJA	Yavi	2.23	76	eP	Pn	09 32 07.7	-0.1
YJA				iS	Sn	09 32 36.5	-1.4
PB01	IPOC Station P	2.25	317	⇑iP	Pn	09 32 07.7	0.0
PB01				iS	Sn	09 32 37.0	-0.9
PB01					IAML	09 32 39.6	
	comp=E,464nm,0.3s						
PB01	IPOC Station P	2.25	317	eP	Pn	09 32 07.8	0.0
PB01				iS	Sn	09 32 37.1	-0.9
HJA	Humahuaca	2.30	103	eP	Pn	09 32 08.8	+0.3
HJA				eS	Sn	09 32 38.2	-1.2
PB02	IPOC Station P	2.35	306	⇑iP	Pn	09 32 08.9	+0.1
PB02				iS	Sn	09 32 38.5	-1.4
PB02	IPOC Station P	2.35	306	eP	Pn	09 32 09.0	+0.1
PB02				iS	Sn	09 32 38.3	-1.6
PB10	IPOC Station P	2.61	252	⇑iP	Pn	09 32 12.2	+0.4
PB10	IPOC Station P	2.61	252	iP	Pn	09 32 12.2	+0.4
PB10				eS	Sn	09 32 43.6	-1.6
PB08	IPOC Station P	2.84	334	⇑iP	Pn	09 32 15.7	+0.7
PB08				iS	Sn	09 32 50.9	-0.1
PB08					IAML	09 32 55.0	
	comp=E,180nm,0.6s						
PB08	IPOC Station P	2.84	334	iP	Pn	09 32 15.8	+0.7
PB08				eS	Sn	09 32 50.6	-0.3
PATCX	Punta Patache	2.85	311	⇑iP	Pn	09 32 14.3	-0.5
PATCX				iS	Sn	09 32 48.8	-2.0
PATCX					IAML	09 32 54.2	
	comp=E,283nm,0.2s						
PATCX	Punta Patache	2.85	311	eP	Pn	09 32 14.4	-0.5
PATCX				eS	Sn	09 32 48.8	-2.0
PB14	IPOC Station P	3.01	230	eP	Pn	09 32 17.4	+0.3
PB14				iS	Sn	09 32 53.6	-1.0
TA01	Diego Aracena	3.05	314	eP	Pn	09 32 16.5	-0.7
TA01				iS	Sn	09 32 52.8	-2.1
PB11	IPOC Station P	3.39	330	iP	Pn	09 32 21.0	-0.7
PB11				eS	Sn	09 33 01.0	-1.9
GO03	Copiap	5.31	203	iP	Pn	09 32 45.0	-1.5
LPAZ	La Paz	6.40	358	P	Pn	09 33 02.5	+0.9
	comp=E,1.2nm,0.3s,baz=141,slow=6.9,SNR=24						
LPAZ				S	Sn	09 34 13.2	-1.1
	comp=E,0.1nm,0.3s,baz=294,slow=20,SNR=3.1						
LPAZ	La Paz	6.40	358	iP	Pn	09 33 02.4	+0.9
GO04	Tololo Observa	7.88	199	iP	Pn	09 33 17.4	-3.2
ACCO	Cerro Coronel	7.91	188	iP	Pn	09 33 20.4	-0.6
AMOG	MOGNA	8.21	184	iP	Pn	09 33 23.7	-1.0
DBIC	Dimbokro	68.15	72	P	P	09 42 12.2	+0.7
	comp=E,3.4nm,0.9s,baz=252,slow=9.6,SNR=3.0						
TORD	Torodi Ar. Bea	76.85	70	P	P	09 43 03.6	+0.7
	comp=E,1.5nm,0.6s,baz=256,slow=5.1,SNR=13						

NCEDC 07 09:49:26.1±1.2,38.430N±0.010×122.23W±0.01, h9km±3km,Md2.6/62,Error ellipse: s-maj=1.6km s-min=1.4km az=130.0
NEIC 07 09:49:26.0±0.8,38.44N±0.02×122.22W±0.02,h19km±1km, Error ellipse: s-maj=2.6km s-min=2.4km az=87.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAPC	Atlas Peak	0.03	272		Pg	09 49 29.1	-0.2
NGVM		0.16	180		Pb	09 49 29.5	+0.5
CVS	Carmenet Viney	0.21	244		Pb	09 49 30.6	-0.1
CVS					Sb	09 49 34.0	+0.2
SNT	Sears Point	0.32	216		Pg	09 49 32.5	-0.4
NSHM	Saint Helena R	0.32	285		Pg	09 49 32.7	-0.2
NLHM	Lake Herman	0.32	171		Pg	09 49 32.5	-0.4
NLHM					Sb	09 49 38.0	0.0
NTYM	Taylor	0.35	262		Pg	09 49 33.3	-0.2
NHSM	Mount Saint He	0.38	305		Pg	09 49 33.8	-0.2
NDHM	Dunnigan Hills	0.40	36		Pn	09 49 36.3	-0.5
NMTM	Middletown	0.41	334		Pg	09 49 34.5	+0.1
MAC	Mark West Spri	0.41	286		Pg	09 49 34.5	0.0
HERB	Hercules	0.43	185		Pb	09 49 34.9	-0.1
CPIM	Pinole Ridge	0.45	180		Pb	09 49 35.5	+0.1
MNRC	McLaughlin Min	0.47	338		Pb	09 49 36.1	+0.3
CSPM	San Pablo Ridg	0.49	189		Pb	09 49 36.3	+0.4
GAXM	Alexander Vall	0.50	303		Pg	09 49 36.0	-0.2
CPMM	Point Molate	0.51	197		Pb	09 49 36.2	-0.1
GCRM	Castle Rock Sp	0.52	311		Pg	09 49 36.1	-0.3
BRIB	Briones	0.52	175		Pb	09 49 36.6	+0.1
GBGM	Boggs Mountain	0.52	316		Pb	09 49 36.6	0.0
CVPM	Vollmer Peak	0.55	181		Pb	09 49 37.3	+0.2
BDM	Black Diamond	0.56	150		Pb	09 49 37.1	0.0
VAK	Adit at Lawren	0.56	183		Pb	09 49 37.5	+0.3
BKS	Berkeley--Byer	0.56	182		Pb	09 49 37.2	0.0
BL67	Building 67, L	0.56	183		Pb	09 49 37.7	+0.4
BRK	Berkeley--Havi	0.56	184		Pb	09 49 37.5	+0.3
NMCNC	Mill Creek, So	0.57	286		Pb	09 49 37.4	0.0
GSGM	Seigler Mounta	0.58	318		Pb	09 49 38.0	+0.5
CRPB	Russellman Par	0.58	155		Pb	09 49 37.2	-0.2
GDXM	Geysers	0.58	309		Pb	09 49 36.8	-0.8
MCCM	Marconi Confer	0.60	241	Pg	Pb	09 49 37.6	-0.2
MCCM				Sg	Sb	09 49 44.7	-1.1
SMCB	Saint Mary's C	0.60	172		Pb	09 49 38.3	+0.3
CRHM	Round Hill Res	0.60	163		Pb	09 49 38.3	+0.3
NOLM	Olema	0.60	229		Pb	09 49 37.8	0.0
BGC	Bolinger Road	0.63	169		Pb	09 49 38.7	+0.2
CYBM	Yerba Buena Is	0.64	190		Pb	09 49 38.8	+0.2
GWKM	Walker Ridge	0.65	341		Pb	09 49 39.4	+0.5
CMCM	Mills College	0.66	177		Pb	09 49 39.0	+0.1
GACM	Adobe Creek	0.67	311		Pb	09 49 39.3	+0.1
JPRM	Presidio of Sa	0.67	198		Pb	09 49 39.3	0.0
GSSM	Skaggs Springs	0.68	293		Pb	09 49 39.6	+0.2
GMKM	Mount Konoctai	0.69	320		Pb	09 49 39.9	+0.2
GPMM	Pine Mountain	0.70	306		Pb	09 49 39.9	+0.1
GCVM	Cloverdale	0.71	298		Pb	09 49 40.5	-0.5
CLCB	Lake Chabot	0.71	170		Pb	09 49 40.1	+0.2
FTR	Fort Ross	0.75	277		Pb	09 49 41.0	+0.3
GHCM	House Creek	0.79	283		Pb	09 49 41.3	-0.1
CNIC	Niles Canyon	0.85	167		Pb	09 49 42.3	+0.1
JCPM	Coyote Point	0.85	186		Pb	09 49 42.4	+0.2
AASM	Arroyo Seco	0.87	90		Pb	09 49 41.7	-0.7
GDCM	Dry Creek	0.87	293		Pb	09 49 42.6	+0.1
SAC	San Andreas	0.87	191		Pb	09 49 42.5	0.0
GHLM	Highland Sprin	0.87	314		Pb	09 49 43.0	0.0
HOPS	Hopland Field	0.87	310		Pb	09 49 42.9	-0.1
HOPS	Hopland Field	0.87	310		Pb	09 49 43.0	+0.1
GFC	Funks Creek	0.89	356		Pb	09 49 43.1	-0.2
WENL	Wente Vineyard	0.89	156		Pb	09 49 43.0	+0.1
GSNM	Snow Mountain	0.92	304		Pb	09 49 43.4	+0.1
GTSM	Trough Springs	0.92	341		Pb	09 49 43.4	-0.1
OXMT	Ox Mountain	0.95	190		Pb	09 49 43.6	-0.2
CMJM	Mission San Jo	0.96	164		Pb	09 49 44.1	+0.1
FARB	Farallon Islan	0.96	220		Pb	09 49 43.9	-0.2
JHPM	Huddart Park	0.99	184		Pb	09 49 45.2	-0.1
JRSC	Jasper Ridge	1.03	181		Pb	09 49 45.4	0.0
JSFB	Stanford Teles	1.03	178		Pn	09 49 45.7	+0.2
OHCM	Honcut	1.06	32		Pb	09 49 44.1	-1.6
JFP	Foothills Park	1.08	179		Pn	09 49 46.2	+0.1
AFDM	Forest Hills D	1.10	62		Pb	09 49 45.3	-1.1
AFDM				Sg	Sb	09 50 00.3	0.0
GCK	Clark Valley	1.12	351		Pn	09 49 46.4	-0.2
MNHB	New Hogan Dam	1.14	104		Pn	09 49 45.6	-1.3
JSGM	Saratoga Golf	1.16	174		Pn	09 49 47.5	+0.1
MHC	Mount Hamilton	1.19	157		Pn	09 49 47.6	0.0
ORV	Oroville	1.25	26		Pn	09 49 47.2	-1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
ORV	Oroville	1.25	26		Pn	09 49 47.5	-0.9
ORV				Sn	Sn	09 50 04.7	0.0
JSTM	Santa Teresa H	1.27	165		Pn	09 49 48.8	+0.1
AMC	Almaden	1.31	167		Pn	09 49 49.5	+0.3
MCUB	Copperopolis B	1.34	110		Pn	09 49 49.4	-0.2
CMB	Columbia Colle	1.50	105		Pn	09 49 51.7	-0.1
CMB				Sn	Sb	09 50 12.1	+0.3
SAO	San Andreas Ge	1.78	160	Pn	Pn	09 49 55.5	-0.3
BEKR	Beckworth	2.03	45		Pn	09 50 00.2	+0.9
BEKR				Sn	Sb	09 50 28.5	+1.2
PNTR	Pine Nut	2.15	72	Pn	Pb	09 50 02.7	-1.6
WDC	Whiskeytown Da	2.15	353	Pn	Pn	09 49 59.4	-1.5
VCNR	Virginia City	2.18	66		Pg	09 50 10.7	+2.9
WAKR	Walker	2.18	87	Pn	Pn	09 50 02.9	+1.4
YERR	Yerington	2.39	76	Pn	Pn	09 50 05.8	+1.5
PAHR	Pah Rah Range	2.54	59	Pn	Pn	09 50 06.5	+0.2
OMMB	Old Mammoth Mi	2.67	107	Pn	Pn	09 50 08.1	-0.1
RYN	Ryan	2.90	85	Pn	Pn	09 50 12.7	+1.3
KVN	Kaiserville	3.27	78	Pn	Pn	09 50 17.9	+1.4
YBH	Yreka Blue Hor	3.31	354	Pn	Pn	09 50 17.0	+0.1

IDC 07 10:18:14.7±2.5, 7.29S×128.16E, h0km, mb3.4/1, mb1 3.5/3, mb1mx3.3/27, mbtmp3.3/3, ML3.3/2, MS4.0/1, Ms1 3.9/1, ms1mx3.2/17, Error ellipse: s-maj=292.4km s-min=31.5km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
WRA	Warramunga Arr	13.94	155	Pn	Pn	10 21 32.5	-1.1
	0.1nm,0.3s,baz=333,slow=14,SNR=7.2						
WRA				Sn	Sn	10 24 00.6	-8.7
	0.1nm,0.3s,baz=336,slow=22,SNR=5.3						
ASAR	Alice Springs	17.20	162	P	P	10 22 17.4	-0.8
	0.1nm,0.3s,baz=338,slow=9.8,SNR=7.6						
STKA	Stephens Creek	27.49	155	LR	LR	10 35 05.5	
	comp=Z,315nm,20.7s,baz=355,slow=37						
MKAR	Makanchi Array	67.48	328	P	P	10 29 12.5	0.0
	0.2nm,0.6s,baz=143,slow=6.4,SNR=2.8						

IDC 07 10:30:00.9±9.2, 38.15N×20.02E, h0km, mb3.8/4, mb1 3.8/5, mb1mx3.5/33, mbtmp3.7/5, ML3.2/1, Error ellipse: s-maj=170.1km s-min=58.8km az=39.0
ATH 07 10:30:04.7, 38.19N×20.45E, h8km, ML3.1/20, Error ellipse: s-maj=1.4km s-min=0.8km az=255.0
THE 07 10:30:05.1, 38.20N×20.43E, h6km, ML3.3/9, Error ellipse: s-maj=0.9km s-min=0.4km az=250.0
ISC 07 10:30:04.7±0.7, 38.20N±0.02×20.44E±0.03, h8km±4km, n68, σ0°64/92, mb3.7/4, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
LXR1	Lixouri, Cepha	0.00	348	P	Pg	10 30 05.9	-0.1
LXR1				S	Sg	10 30 06.7	-0.2
	2307μm,0.3s						
LXRA	Lixouri, Kepha	0.00	327	P	Pg	10 30 05.9	-0.1
LXRA				S	Sg	10 30 06.8	-0.1
ARG2	Argostoli	0.04	117	P	Pg	10 30 06.4	+0.2
ARG2				S	Sg	10 30 07.3	0.0
CHV1	Chavriata, Kef	0.05	252	P	Pg	10 30 06.6	+0.3
CHV1				S	Sg	10 30 07.6	+0.2
	541μm,0.3s						
KEF2	Argostoli. Kep	0.05	131	P	Pg	10 30 06.6	+0.3
KEF2				S	Sg	10 30 07.8	+0.3
KEF4	Livadi, Kephal	0.06	349	P	Pg	10 30 06.7	+0.2
KEF4				S	Sg	10 30 08.0	+0.3
KEF3	Kipouria, Keph	0.07	274	P	Pg	10 30 06.9	+0.3
KEF3				S	Sg	10 30 08.4	+0.5
KEF1	Kardakata, Kep	0.08	18	P	Pg	10 30 06.8	+0.1
KEF1				S	Sg	10 30 08.3	+0.1
VLS	Valsamata	0.12	100	P	Pg	10 30 07.5	+0.2
VLS				S	Sg	10 30 09.6	+0.4
	23μm,0.2s						
VLS	Valsamata	0.12	100	P	Pg	10 30 07.5	+0.2
VLS				S	Sg	10 30 09.6	+0.4
VLS				AML	AML	10 30 10.4	
	comp=E,43137μm,0.2s						
VLS				AML	AML	10 30 10.9	
	comp=N,45430μm,0.4s						
VSK1	VASILIKIADES	0.23	25	P	Pg	10 30 09.6	+0.3
VSK1				S	Sg	10 30 13.6	+1.1
	comp=N,6μm,0.2s						
KONA	Konidatara, Ke	0.25	25	P	Pg	10 30 10.0	+0.4
KONA				S	Sg	10 30 13.5	+0.5
VLMS	Volimes, Zakyn	0.37	151	P	Pg	10 30 12.4	+0.5
VLMS				S	Sg	10 30 16.8	+0.2
VLMS				AML	AML	10 30 20.8	
	comp=E,13005μm,0.4s						
VLMS				AML	AML	10 30 29.7	
	comp=N,16105μm,0.4s						
EVGI	Lefkada island	0.46	22	P	Pg	10 30 13.7	+0.1
EVGI				S	Sg	10 30 20.8	+1.3
EVGI	Lefkada island	0.46	22	P	Pg	10 30 13.6	+0.1
EVGI				S	Sg	10 30 20.1	+0.6
MGNA	Meganis	0.54	31	P	Pg	10 30 15.0	0.0
MGNA				AML	AML	10 30 24.1	
	comp=N,2212μm,0.2s						
MGNA				AML	AML	10 30 24.5	
	comp=E,3617μm,0.3s						
ZAK2	Zakynthos	0.55	138	P	Pb	10 30 16.3	-0.2
KRI1	kERI	0.61	151	P	Pg	10 30 16.4	-0.1
KRI1				S	Sb	10 30 25.8	-0.6
LKD2	Lefkada island	0.61	16	P	Pg	10 30 16.3	-0.3
LKD2	Lefkada island	0.61	16	P	Pg	10 30 16.3	-0.3
AST1	Astakos	0.62	56	P	Pg	10 30 16.8	+0.2
AST1				S	Sb	10 30 26.5	0.0
	comp=E,3μm,0.5s						
TSLK	Tsoukalades, L	0.65	15	P	Pg	10 30 16.9	-0.3
TSLK	Tsoukalades, L	0.65	15	P	Pg	10 30 16.6	-0.6
TSLK				S	Sg	10 30 26.0	+0.3
PDO	Prodromos	0.71	55	P	Pg	10 30 18.2	-0.1
PDO				S	Sb	10 30 29.1	-0.1
	comp=E,3μm,0.5s						
PDO	Prodromos	0.71	55	P	Pg	10 30 18.5	+0.1
PDO				S	Sb	10 30 28.8	-0.5
PDO				AML	AML	10 30 33.2	
	comp=E,3703μm,0.7s						
PDO				AML	AML	10 30 33.3	
	comp=N,3520μm,0.4s						
RLS	Riolos of Patr	0.82	99	P	Pg	10 30 20.3	-0.2
RLS				S	Sb	10 30 33.3	+0.8
	comp=N,822nm,0.6s						
RLS	Riolos of Patr	0.82	99	P	Pg	10 30 20.3	-0.2
RLS				AML	AML	10 30 37.7	
	comp=N,1386μm,0.6s						
RLS				AML	AML	10 30 38.4	
	comp=E,1850μm,0.7s						
PVO	Paravola	0.95	64	P	Pg	10 30 23.1	+0.2
PVO	Paravola	0.95	64	P	Pg	10 30 23.1	+0.2
PVO				AML	AML	10 30 45.2	
	comp=N,3103μm,0.9s						
PVO				AML	AML	10 30 46.0	
	comp=E,3873μm,0.7s						
DRO	Drossia	1.03	103	P	Pg	10 30 24.4	-0.1
DRO				S	Sb	10 30 39.1	+0.5
	comp=E,1μm,0.5s						
DRO	Drossia	1.03	103	P	Pg	10 30 24.2	-0.3
DRO				AML	AML	10 30 50.4	
	comp=E,3374μm,0.7s						
DRO				AML	AML	10 30 59.1	
	comp=N,1760μm,0.6s						
AMT	Artemida-Makis	1.21	123	P	Pb	10 30 27.6	-0.2
AMT				AML	AML	10 30 56.9	
	comp=N,1924μm,0.5s						
AMT				AML	AML	10 31 06.1	
	comp=E,2124μm,0.7s						
LAKA	Lakka	1.21	88	P	Pb	10 30 27.3	-0.6
LAKA				S	Sn	10 30 46.2	+1.5
	comp=E,632nm,0.6s						
LAKA	Lakka	1.21	88	P	Pb	10 30 27.3	-0.6
LAKA				S	Sg	10 30 43.4	-0.3
LAKA				AML	AML	10 30 53.5	
	comp=N,1376μm,0.6s						
LAKA				AML	AML	10 30 58.8	
	comp=E,1373μm,0.6s						
ANX	Ano Chora	1.23	71	P	Pb	10 30 27.7	-0.5
ANX	Ano Chora	1.23	71	P	Pb	10 30 27.7	-0.5
ANX				AML	AML	10 30 54.1	
	comp=E,2322μm,0.7s						
ANX				AML	AML	10 30 55.4	
	comp=N,2569μm,0.7s						
SERG	Sergoula	1.29	80	P	Pn	10 30 28.2	-0.9
SERG	Sergoula	1.29	80	P	Pn	10 30 28.4	-0.7
SERG				AML	AML	10 30 56.4	
	comp=E,1055μm,1.0s						
SERG				AML	AML	10 30 57.8	
	comp=N,1023μm,0.5s						
EVR	Evrytania	1.29	56	P	Pn	10 30 28.5	-0.6
EVR				AML	AML	10 31 01.6	
	comp=N,675μm,0.9s						
EVR				AML	AML	10 30 04.5	
	comp=E,734μm,0.8s						
TRIZ	Trizonia	1.30	82	P	Pn	10 30 28.4	-0.7
KALE	Kalithea	1.35	81	P	Pn	10 30 29.2	-0.7
KALE	Kalithea	1.35	81	P	Pn	10 30 29.4	-0.6
KALE				AML	AML	10 30 59.5	
	comp=N,1408μm,0.6s						
KALE				AML	AML	10 31 04.2	
	comp=E,1177μm,0.6s						
KLV	Kalavryta, Ach	1.36	96	P	Pn	10 30 30.0	0.0
KLV	Kalavryta, Ach	1.36	96	P	Pn	10 30 29.9	-0.2
KLV				AML	AML	10 31 00.6	
	comp=E,828μm,1.1s						
KLV				AML	AML	10 31 02.8	
	comp=N,996μm,0.9s						
MAKR	Makrakomi, Fth	1.56	58	P	Pg	10 30 34.3	-0.2
MAKR				AML	AML	10 31 04.1	
	comp=N,921μm,0.8s						
MAKR				AML	AML	10 31 09.0	
	comp=E,1431μm,1.0s						
ITM	Ithomi	1.56	130	P	Pn	10 30 33.2	+0.5
ITM				AML	AML	10 31 11.1	
	comp=N,702μm,0.6s						
ITM				AML	AML	10 31 15.7	
	comp=E,558μm,0.8s						
PYL	PYLOS	1.66	141	P	Pn	10 30 34.8	+0.6
AGG	Agios Georgios	1.69	60	P	Pg	10 30 37.4	+0.2
MEV	Metsovon	1.70	21	P	Pg	10 30 37.2	-0.1
VLX	Vlachokerasia	1.75	118	P	Pg	10 30 38.0	-0.1
VLX				AML	AML	10 31 20.0	
	comp=N,956μm,0.7s						
VLX				AML	AML	10 31 20.8	
	comp=E,1452μm,0.7s						
AXAR	Agios Charalam	1.83	71	P	Pg	10 30 39.3	-0.5
AXAR				AML	AML	10 31 19.1	
	comp=E,1789μm,0.9s						
AXAR				AML	AML	10 31 21.9	
	comp=N,1600μm,0.8s						
THL	Klokotos Trika	1.84	42	P	Pb	10 30 38.0	-0.5
THL				AML	AML	10 31 13.5	
	comp=N,397μm,0.7s						
THL				AML	AML	10 31 15.4	
	comp=E,572μm,0.9s						
KPRO	Kipourio	1.90	22	P	Pb	10 30 39.6	0.0
PROD	Prodromos	1.94	87	P	Pb	10 30 39.8	-0.5
LTK	Loutraki	2.00	94	P	Pb	10 30 40.7	-0.7
LOUT	Loutraki	2.01	95	P	Pb	10 30 41.1	-0.4
LKR	Lokris	2.06	77	P	Pb	10 30 41.3	-1.1
PENT	Pentalofos	2.07	15	P	Pb	10 30 42.1	-0.5
VIL2	Platees	2.23	89	P	Pb	10 30 44.2	-1.1
VIL2				AML	AML	10 31 32.8	
	comp=E,635μm,1.0s						
VIL2				AML	AML	10 31 36.9	
	comp=N,411μm,0.8s						
DID	Didima	2.32	106	P	Pb	10 30 45.8	-1.0
XOR	Xorichti	2.45	61	P	Pn	10 30 46.9	+1.9
MRKA	Markates	2.52	77	P	Pn	10 30 48.0	+2.0
VLY	Voula,Athens	2.67	96	P	Pn	10 30 50.0	+1.9
KBZ	Khabaz	17.82	65	P	P	10 34 14.8	+1.1
	comp=N,0.1nm,0.3s,baz=289,slow=11,SNR=3.7						
FINES	FINESS Array B	23.54	7	P	P	10 35 13.3	-1.7
	comp=N,1.2nm,0.7s,baz=180,slow=9.5,SNR=4.8						
MKAR	Makanchi Array	45.35	58	P	P	10 38 22.7	-0.6
	comp=N,0.6nm,0.5s,baz=274,slow=7.7,SNR=22						
ZALV	Zalesovo Beam	45.73	48	P	P	10 38 25.6	-0.5
	comp=N,2.0nm,0.5s,baz=279,slow=9.1,SNR=6.8						
SONM	Songino Array	60.49	51	P	P	10 40 15.2	0.0
	comp=N,0.4nm,0.6s,baz=298,slow=3.1,SNR=3.3						

IDC 07 10:42:45.8±3.0, 22.26S×170.48E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.9/41, mbtmp3.9/7, ML3.8/1, Error ellipse: s-maj=95.7km s-min=30.6km az=151.0
ISC 07 10:42:51.9±2.1, 22.1S±0.5×170.3E±0.2, h35km, n8, σ1°07/9, mb3.9/6, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
DZM	Mont Dzumac	3.58	270	Pn	Pn	10 43 45.0	-0.2
	7.5nm,0.3s,baz=107,slow=12,SNR=226						
DZM				Sn	Sn	10 44 26.1	-0.2
	19nm,0.3s,baz=98,slow=19,SNR=13						
ASAR	Alice Springs	33.52	260	P	P	10 49 28.2	-0.2
	0.4nm,0.6s,baz=86,slow=9.5,SNR=8.9						
WRA	Warramunga Arr	33.60	267	P	P	10 49 28.3	-0.9
	0.3nm,0.6s,baz=104,slow=7.7,SNR=4.7						
MJAR	Matsushiro Arr	65.76	332	P	P	10 53 33.2	-0.2
	1.9nm,0.6s,baz=159,slow=7.2,SNR=5.1						
CMAR	Chiang Mai Arr	80.60	294	P	P	10 55 03.4	+1.9
	1.0nm,0.6s,baz=138,slow=5.4						
SONM	Songino Array	90.12	323	P	P	10 55 49.1	+0.7
	0.9nm,1.0s,baz=122,slow=5.2,SNR=3.4						
ILAR	Eielson Array	92.69	17	P	P	10 55 58.5	-1.2
	0.3nm,0.7s,baz=234,slow=5.1,SNR=5.2						
GERES	GERESS Array B	147.50	331	PKPbc	PKPbc	11 02 32.0	-0.3
	0.7nm,0.5s,baz=57,slow=3.6,SNR=5.8						

MAN 07 10:46:34.5, 10.13N×124.23E, h11km, mb4.8, ML3.7, MS3.7
MAN INTENSITY III - MANDAUE CITY; INTENSITY II - TALIBON BOHOL.
IDC 07 10:46:35.1±1.1, 9.30N×122.73E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.7/44, mbtmp3.9/6, ML4.5/1, Error ellipse: s-maj=82.5km s-min=18.2km az=63.0
ISC 07 10:46:34.9±1.1, 10.08N±0.03×124.23E±0.03, h7km±9km, n20, σ1°44/32, mb3.9/5, 3C-6D, Leyte

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
LLP	Lapu-Lapu	0.35	312	⇓iP	Pg	10 46 41.6	-0.3
LLP				eS	Sg	10 46 47.3	+0.7
TBP	Tagbilaran	0.53	224	⇓iP	Pg	10 46 45.0	-0.2
TBP				iS	Sb	10 46 53.7	-0.7
MSLP	Maasin	0.62	85	eP	Pg	10 46 46.7	-0.2
MSLP				eS	Sb	10 46 55.9	-1.1
OCLP	Ormoc	1.04	21	eP	Pb	10 46 53.3	-1.9
OCLP				eS	Sb	10 47 08.2	-0.8
SNPH	Sibulan	1.23	234	⇑iP	Pn	10 46 58.0	-0.5
SNPH				iS	Sb	10 47 15.5	+1.1
CGP	Cagayan de Oro	1.68	164	⇓eP	Pn	10 47 03.4	-1.3
CGP				eS	Sg	10 47 28.8	0.0
GUIM	Jordan	1.71	289	eP	Pn	10 47 03.7	-1.4
GUIM				eS	Sn	10 47 26.6	-0.6
DCPH	Dipolog City	1.72	210	⇑eP	Pn	10 47 05.2	-0.1
RCP	Roxas	2.08	315	⇓eP	Pn	10 47 10.1	-0.1
RCP				eS	Sn	10 47 38.4	+2.1
BUKP	Musuan	2.33	159	eP	Pn	10 47 14.3	+0.5
BUKP				eS	Sg	10 47 50.0	+0.1
JAP	San Jose, Anti	2.35	287	⇑eP	Pn	10 47 15.8	+1.9
PAGZ	Pagadian	2.37	201	eP	Pn	10 47 13.5	-0.7
PAGZ				eS	Sb	10 47 45.2	-2.2
CTBH	Cotabato--PC H	2.84	180	⇓iP	Pn	10 47 21.1	+0.4
KCP	Kidapawan	3.16	164	⇓eP	Pn	10 47 26.9	+1.6
KCP				iS	Sg	10 48 19.7	+3.0
DAV	Davao City (W)	3.27	156	Pn	Pb	10 47 32.4	-0.9
	38nm,0.3s,baz=246,slow=18,SNR=2.9						
DAV				Sn	Sg	10 48 22.8	+2.7
	88nm,0.3s,baz=346,slow=15,SNR=4.1						
WRA	Warramunga Arr	31.45	162	P	P	10 52 55.7	-1.5
	1.6nm,1.1s,baz=335,slow=9.2,SNR=3.2						
ASAR	Alice Springs	34.84	164	P	P	10 53 25.9	-1.0
	1.6nm,0.8s,baz=335,slow=7.6,SNR=12						
SONM	Songino Array	40.53	341	P	P	10 54 17.9	+3.0
	0.5nm,0.7s,baz=142,slow=7.3,SNR=2.9						
STKA	Stephens Creek	44.91	159	P	P	10 54 50.1	-0.3
	2.1nm,0.7s,baz=315,slow=8.6,SNR=4.3						
MKAR	Makanchi Array	50.98	324	P	P	10 55 37.4	0.0
	1.3nm,0.8s,baz=128,slow=8.6,SNR=14						

IDC 07 10:58:29.6±3.6, 6.36S×147.88E, h0km, mb3.0/1, mb1 3.2/3, mb1mx3.1/35, mbtmp3.0/3, ML2.9/1, Error ellipse: s-maj=111.2km s-min=34.3km az=99.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
PMG	Port Moresby	3.11	193	Pn	Pn	10 59 21.4	+1.4
	0.5nm,0.3s,baz=17,slow=11,SNR=2.3						
PMG				Sn	Sn	11 00 00.6	+2.7
	2.2nm,0.3s,baz=344,slow=20,SNR=3.8						
WRA	Warramunga Arr	18.85	223	P	P	11 02 50.1	-1.2
	0.0nm,0.3s,baz=52,slow=10,SNR=3.3						
ASAR	Alice Springs	21.83	217	P	P	11 03 22.9	-1.0
	0.6nm,0.8s,baz=54,slow=9.0,SNR=5.2						
TORD	Torodi Ar. Bea	146.02	284	PKPbc	PKPdf	11 18 12.1	+0.4
	0.3nm,0.5s,baz=55,slow=2.5,SNR=2.8						

IDC 07 10:59:40.5±2.3, 1.94N×126.70E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/39, mbtmp3.3/3, Error ellipse: s-maj=207.8km s-min=25.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
WRA	Warramunga Arr	23.00	161	P	P	11 04 46.3	-0.8
	0.6nm,0.5s,baz=340,slow=10,SNR=5.8						
ASAR	Alice Springs	26.40	165	P	P	11 05 19.4	+0.5
	0.4nm,0.7s,baz=347,slow=12,SNR=5.4						
MKAR	Makanchi Array	59.01	326	P	P	11 09 42.2	0.0
	0.1nm,0.4s,baz=114,slow=7.7,SNR=3.7						

IDC 07 11:01:45.4±3.1, 10.55N×125.18E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/40, mbtmp3.6/4, Error ellipse: s-maj=279.1km s-min=26.8km az=64.0
MAN 07 11:01:47.5, 10.08N×124.25E, h5km, mb4.7, ML3.6, MS3.4
MAN INTENSITY II - TALIBON BOHOL.
ISC 07 11:01:47.7±1.2, 10.07N±0.03×124.29E±0.03, h8km±9km, n18, σ1°59/29, mb3.5/4, 5C-3D, Leyte

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
LLP	Lapu-Lapu	0.41	308	⇓iP	Pg	11 01 54.8	-0.9
LLP				iS	Sg	11 02 00.7	-0.3
TBP	Tagbilaran	0.56	229	⇑iP	Pg	11 01 58.1	-0.5
TBP				iS	Sg	11 02 05.9	-0.1
MSLP	Maasin	0.56	83	eP	Pb	11 01 59.9	-0.1
MSLP				eS	Sn	11 02 10.1	-1.5
OCLP	Ormoc	1.03	18	eP	Pg	11 02 07.0	-0.5
OCLP				eS	Sn	11 02 23.2	+0.1
SNPH	Sibulan	1.26	235	⇑iP	Pn	11 02 11.3	-0.5
SNPH				iS	Sb	11 02 28.4	+0.1
CGP	Cagayan de Oro	1.65	166	⇓eP	Pn	11 02 16.9	-0.2
CGP				eS	Sg	11 02 42.5	+1.6
DCPH	Dipolog City	1.74	212	⇑eP	Pn	11 02 18.0	-0.4
GUIM	Jordan	1.76	289	eP	Pn	11 02 17.0	-1.7
GUIM				eS	Sn	11 02 41.6	+0.3
RCP	Roxas	2.12	315	⇑eP	Pn	11 02 23.5	-0.1
RCP				eS	Sn	11 02 50.7	+0.4
BUKP	Musuan	2.30	161	eP	Pn	11 02 27.7	+1.5
BUKP				eS	Sb	11 02 58.7	+0.4
PAGZ	Pagadian	2.38	202	eP	Pn	11 02 26.7	-0.4
PAGZ				eS	Sn	11 02 57.9	+1.3
JAP	San Jose, Anti	2.40	287	⇑eP	Pb	11 02 33.0	+1.7
KCP	Kidapawan	3.14	165	⇓iP	Pn	11 02 41.4	-2.5
KCP				iS	Sn	11 03 10.8	-4.7
DAV	Davao City (W)	3.24	157	Sn	Sg	11 03 35.9	+4.0
	36nm,0.3s,baz=204,slow=18,SNR=4.1						
WRA	Warramunga Arr	31.42	162	P	P	11 08 09.5	-0.2
	0.5nm,1.0s,baz=347,slow=9.3,SNR=3.2						
ASAR	Alice Springs	34.82	164	P	P	11 08 40.0	+0.6
	0.4nm,0.4s,baz=340,slow=7.2,SNR=6.9						
STKA	Stephens Creek	44.87	159	P	P	11 10 03.9	+1.0
	1.5nm,0.7s,baz=356,slow=13,SNR=3.1						
MKAR	Makanchi Array	51.02	324	P	P	11 10 50.2	-0.3
	0.5nm,0.8s,baz=119,slow=7.3,SNR=5.0						

ATH 07 11:02:50.5, 38.21N×20.43E, h9km±1km, ML2.7/6, Error ellipse: s-maj=2.4km s-min=1.0km az=259.0
THE 07 11:02:51.0, 38.19N×20.44E, h5km, ML3.1/6, Error ellipse: s-maj=0.8km s-min=0.4km az=208.0
ISC 07 11:02:50.6±1.0, 38.21N±0.03×20.44E±0.03, h7km±5km, n33, σ0°57/49, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
LXR1	Lixouri, Cepha	0.01	194	P	Pg	11 02 51.8	0.0
LXR1				S	Sg	11 02 52.5	-0.1
	641μm,0.3s						
LXRA	Lixouri, Kepha	0.01	199	P	Pg	11 02 51.7	0.0
LXRA				S	Sg	11 02 52.6	0.0
ARG2	Argostoli	0.05	127	P	Pg	11 02 52.2	+0.1
ARG2				S	Sg	11 02 53.3	+0.2
	50μm,0.1s						
CHV1	Chavriata, Kef	0.05	243	P	Pg	11 02 52.4	+0.3
CHV1				S	Sg	11 02 53.5	+0.3
	120μm,0.3s						
KEF4	Livadi, Kephal	0.05	346	P	Pg	11 02 52.4	+0.3
KEF4				S	Sg	11 02 53.7	+0.4
KEF2	Argostoli. Kep	0.06	138	P	Pg	11 02 52.3	+0.1
KEF2				S	Sg	11 02 53.6	+0.3
KEF3	Kipouria, Keph	0.07	267	P	Pg	11 02 52.6	+0.1
KEF3				S	Sg	11 02 54.0	+0.3
KEF1	Kardakata, Kep	0.07	19	P	Pg	11 02 52.7	+0.2
KEF1				S	Sg	11 02 53.9	+0.1
VLS	Valsamata	0.12	104	P	Pg	11 02 53.3	+0.1
VLS				S	Sg	11 02 55.5	+0.4
	13μm,0.2s						
VLS	Valsamata	0.12	104	P	Pg	11 02 53.3	+0.1
VLS				S	Sg	11 02 55.4	+0.4
VLS				AML	AML	11 02 55.9	
	comp=N,31089μm,0.4s						
VLS				AML	AML	11 02 56.1	
	comp=E,19988μm,0.2s						
KONA	Konidatara, Ke	0.24	25	P	Pg	11 02 55.7	+0.3
KONA				S	Sg	11 02 59.6	+0.9
VLMS	Volimes, Zakyn	0.37	152	P	Pg	11 02 57.8	-0.1
VLMS				S	Sg	11 03 04.1	+1.3
VLMS				AML	AML	11 03 06.7	
	comp=N,3485μm,0.2s						
VLMS				AML	AML	11 03 07.2	
	comp=E,3434μm,0.2s						
EVGI	Lefkada island	0.45	22	P	Pg	11 02 59.5	+0.2
EVGI				S	Sb	11 03 06.8	-1.0
EVGI	Lefkada island	0.45	22	P	Pg	11 02 59.2	-0.1
MGNA	Meganis	0.53	31	P	Pg	11 03 00.5	-0.3
MGNA				S	Sg	11 03 08.6	+1.0
LKD2	Lefkada island	0.61	16	P	Pg	11 03 02.3	-0.1
LKD2	Lefkada island	0.61	16	P	Pg	11 03 02.2	-0.1
TSLK	Tsoukalades, L	0.64	15	P	Pg	11 03 02.6	-0.4
PDO	Prodromos	0.70	56	P	Pg	11 03 04.2	0.0
PDO	Prodromos	0.70	56	P	Pg	11 03 04.1	0.0
PDO				AML	AML	11 03 18.9	
	comp=E,1013μm,0.5s						
PDO				AML	AML	11 03 22.8	
	comp=N,1071μm,0.3s						
RLS	Riolos of Patr	0.82	100	P	Pg	11 03 06.4	0.0
RLS	Riolos of Patr	0.82	100	P	Pg	11 03 06.2	-0.2
PVO	Paravola	0.95	64	P	Pg	11 03 08.9	+0.1
PVO	Paravola	0.95	64	P	Pg	11 03 08.9	+0.1
PVO				AML	AML	11 03 26.0	
	comp=E,1298μm,0.4s						
PVO				AML	AML	11 03 27.6	
	comp=N,869μm,0.3s						
DRO	Drossia	1.03	104	P	Pg	11 03 10.5	0.0
DRO				AML	AML	11 03 34.0	
	comp=N,841μm,0.4s						
DRO				AML	AML	11 03 34.1	
	comp=E,896μm,0.4s						
LAKA	Lakka	1.21	88	P	Pg	11 03 13.1	-0.8
LAKA				S	Sn	11 03 32.3	+1.5
	comp=E,162nm,0.6s						
LAKA	Lakka	1.21	88	P	Pg	11 03 13.1	-0.8
LAKA				AML	AML	11 03 33.7	
	comp=E,365μm,0.5s						
LAKA				AML	AML	11 03 38.7	
	comp=N,261μm,0.4s						
SERG	Sergoula	1.29	80	P	Pn	11 03 14.2	-0.9
TRIZ	Trizonia	1.29	82	P	Pn	11 03 14.1	-1.0
TRIZ	Trizonia	1.29	82	P	Pn	11 03 14.1	-1.0
KALE	Kalithea	1.35	82	P	Pn	11 03 15.4	-0.6
KALE	Kalithea	1.35	82	P	Pn	11 03 15.4	-0.6
KLV	Kalavryta, Ach	1.36	96	P	Pn	11 03 15.7	-0.4
KLV				S	Sn	11 03 35.5	+1.1
	comp=N,90nm,0.6s						

IDC **07** *11:07:34.0±4.6, 14°.03S×174°.18E, h586km±62km, mb3.0/7, mb1 3.3/8, mb1mx3.0/29, mbtmp4.0/8, Error ellipse: s-maj=41.3km s-min=24.0km az=174.0*
NEIC **07** *11:07:34.3±1.7, 14°.4S±0°.1×174°.3E±0°.1, h598km±10km, mb4.3/12, Error ellipse: s-maj=22.2km s-min=16.6km az=149.0*
ISC 07 11:07:34.7±0.6, **14°.2S**±0°.1×**174°.2E**±0°.1, **h600**km, **n27**, σ0§77/27, **mb4.0**/14, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.10	134	P	P	11 09 07.4	-1.0
FUNA	Funafuti	7.47	42	P	P	11 09 29.6	+0.5
DZM	Mont Dzumac	10.74	222	P	P	11 10 01.1	+0.2
	2.1nm,0.3s,baz=67,slow=21,SNR=17						
DZM	Mont Dzumac	10.74	222	P	P	11 10 01.3	+0.4
NOUC	Port Laguerre	10.86	223	P	P	11 10 01.0	-0.9
KNTN	Kanton	17.95	52	P	P	11 11 10.3	+0.3
URZ	Urewera	24.10	174	P	P	11 12 06.6	+1.9
	5.0nm,0.8s,baz=282,slow=14,SNR=2.6						
EIDS	Eidsvold	24.38	239	P	P	11 12 07.4	-0.1
EIDS				IAmb	IAmb	11 12 09.8	
	comp=Z,13nm,1.1s						
ARMA	Armidale	26.30	228	P	P	11 12 23.1	-1.4
ARMA				IAmb	IAmb	11 12 31.3	
	comp=Z,12nm,1.3s						
TOO	Toolangi	34.52	222	P	P	11 13 34.1	-0.4
TOO				IAmb	IAmb	11 13 35.7	
	comp=Z,5.1nm,0.8s						
STKA	Stephens Creek	34.59	234	P	P	11 13 35.5	+0.3
	comp=Z,0.9nm,0.4s,baz=48,slow=7.9,SNR=6.0						
STKA	Stephens Creek	34.59	234	P	P	11 13 35.4	+0.2
WR0	Warramunga Arr	38.27	256	P	P	11 14 05.7	+0.2
WR0				IAmb	IAmb	11 14 24.7	
	comp=Z,11nm,1.4s						
WB0	Warramunga Arr	38.40	256	P	P	11 14 06.8	+0.3
WB0				IAmb	IAmb	11 14 18.4	
	comp=Z,3.9nm,1.1s						
WRA	Warramunga Arr	38.46	256	P	P	11 14 07.3	+0.3
	comp=Z,0.6nm,0.5s,baz=90,slow=8.1,SNR=14						
WRA	Warramunga Arr	38.46	256	P	P	11 14 06.5	-0.6
AS31	Alice Springs	39.14	250	P	P	11 14 12.6	+0.1
ASAR	Alice Springs	39.14	250	P	P	11 14 13.2	+0.6
	comp=Z,1.2nm,0.4s,baz=85,slow=8.6,SNR=21						
ASAR	Alice Springs	39.14	250	P	P	11 14 12.7	+0.2
BBOO	Buckleboo	39.30	235	P	P	11 14 13.1	-0.5
BBOO				IAmb	IAmb	11 14 22.0	
	comp=Z,16nm,1.4s						
MTN	Manton Dam	41.85	267	P	P	11 14 35.7	+1.7
NWAO	Narrogin (SRO)	54.79	240	P	P	11 16 09.0	-0.6
NWAO				IAmb	IAmb	11 16 20.3	
	comp=Z,41nm,1.5s						
ILAR	Eielson Array	84.08	16	P	P	11 19 03.2	+0.3
	comp=Z,0.3nm,0.5s,baz=235,slow=5.3,SNR=7.8						
ILAR	Eielson Array	84.08	16	P	P	11 19 02.6	-0.4
TXAR	Lajitas Array	90.17	60	P	P	11 19 32.7	+0.1
	comp=Z,0.6nm,0.7s,baz=212,slow=6.4,SNR=6.9						
TXAR	Lajitas Array	90.17	60	P	P	11 19 33.0	+0.5
YKA	Yellowknife Ar	94.06	26	P	P	11 19 48.5	-1.0
	comp=Z,0.4nm,0.9s,baz=271,slow=4.8,SNR=5.8						

IDC **07** *11:22:45.4±1.8, 19°.48S×177°.60W, h538km±31km, mb3.1/3, mb1 3.4/5, mb1mx3.0/35, mbtmp4.3/5, Error ellipse: s-maj=32.3km s-min=23.9km az=117.0*
NEIC **07** *11:22:46.0±1.3, 19°.17S±0°.07×177°.4W±0°.1, h565km±11km, mb4.3/13, Error ellipse: s-maj=20.0km s-min=8.9km az=103.0*
ISC 07 11:22:45.5±0.6, **19°.29S**±0°.09×**177°.44W**±0°.09, **h550**km, **n26**, σ1§30/29, **mb4.1**/7, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.55	289	P	P	11 24 15.7	+3.9
NIUE	Niue	7.11	89	P	P	11 24 35.2	+0.7
AFI	Afiamalu	7.62	46	P	P	11 24 39.8	+0.1
	9.9nm,0.3s,baz=126,slow=2.7,SNR=16						
AFI	Afiamalu	7.62	46	P	P	11 24 39.9	+0.1
AFI				S	S	11 26 11.2	-2.0
FUNA	Funafuti	11.19	343	P	P	11 25 16.4	+0.7
RAR	Rarotonga	16.69	100	P	P	11 26 11.9	+0.4
RAR				IAmb	IAmb	11 26 12.9	
	comp=Z,8.7nm,0.5s						
KNTN	Kanton	17.34	20	P	P	11 26 17.3	-0.2
URZ	Urewera	19.48	193	P	P	11 26 34.8	-1.9
	comp=Z,1.3nm,0.3s,baz=293,slow=1.7,SNR=12						
URZ	Urewera	19.48	193	P	P	11 26 36.7	0.0
URZ				IAmb	IAmb	11 26 45.4	
	comp=Z,11nm,0.8s						
BKZ	Black Stump Fm	20.49	194	P	P	11 26 46.6	+0.7
MLZ	Mavora Lakes	28.63	202	P	P	11 27 58.4	+0.5
TOO	Toolangi	37.04	233	P	P	11 29 09.8	+0.7
TOO				IAmb	IAmb	11 29 10.9	
	comp=Z,4.0nm,0.7s						
STKA	Stephens Creek	38.79	243	P	P	11 29 23.6	+0.1
	comp=Z,3.8nm,0.8s,baz=103,slow=6.8,SNR=7.2						
STKA	Stephens Creek	38.79	243	P	P	11 29 23.8	+0.4
BBOO	Buckleboo	43.56	242	P	P	11 30 01.2	0.0
BBOO				IAmb	IAmb	11 30 17.7	
	comp=Z,16nm,1.4s						
WR0	Warramunga Arr	45.11	261	P	P	11 30 12.8	-0.6
WB0	Warramunga Arr	45.27	261	P	P	11 30 13.7	-0.9
WB0				IAmb	IAmb	11 30 17.0	
	comp=Z,23nm,1.5s						
WRA	Warramunga Arr	45.30	261	P	P	11 30 13.8	-1.0
	comp=Z,1.1nm,0.5s,baz=97,slow=8.0,SNR=15						
WRA	Warramunga Arr	45.30	261	P	P	11 30 14.0	-0.8
AS31	Alice Springs	45.31	255	P	P	11 30 14.6	-0.3
ASAR	Alice Springs	45.32	255	P	P	11 30 14.5	-0.4
	comp=Z,2.2nm,0.7s,baz=89,slow=7.6,SNR=38						
ASAR				PcP	PcP	11 31 42.0	-0.9
	comp=Z,0.5nm,0.7s,baz=107,slow=4.0,SNR=5.1						
ASAR				S	S	11 36 12.6	-3.3
	comp=Z,0.5nm,0.5s,baz=92,slow=16,SNR=5.5						
ASAR	Alice Springs	45.32	255	P	P	11 30 13.9	-1.0
FITZ	Fitzroy Crossi	53.72	261	P	P	11 31 16.2	-0.5
FITZ				IAmb	IAmb	11 31 19.9	
	comp=Z,6.1nm,1.1s						
QSPA	South Pole Qui	70.77	180	P	P	11 33 07.2	+0.7
KSAR	Wonju Array Be	76.36	318	P	P	11 33 37.2	-1.2
BRTR	Keskin Array B	146.40	314	PKPbc	PKiKP	11 41 27.4	-0.3
	comp=Z,0.3nm,0.3s,baz=90,slow=1.4,SNR=2.9						

NORS **07** *11:25:46.9±0.0, 43°.53N×42°.85E, h14km, MPVA3.8*
ISC 07 11:25:46.8±1.0, **43°.53N**±0°.04×**42°.81E**±0°.04, **h14**km±9km, **n16**, σ0§95/32, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHA1	Shidzhatmaz	0.24	333	*i* Pg	Pg	11 25 52.2	+0.1
SHA1				*e*Sg	Sg	11 25 55.6	-0.1
NEY	Neytrino	0.29	193	*i* Pg	Pb	11 25 53.8	+0.1
NEY				*e*Sg	Sg	11 25 58.1	+1.1
KBTC	Kuba-Taba	0.52	56	*i* Pg	Pg	11 25 56.5	-0.6
KBTC				*e*Sg	Sg	11 26 03.6	-0.5
NCK	Nalchik	0.57	93	*e*Pg	Pg	11 25 57.7	-0.4
NCK				*e*Sg	Sg	11 26 05.3	-0.4
LSNR	Lesken	0.78	108	*e*Pg	Pg	11 26 01.5	-0.5
LSNR				*e*Sg	Sb	11 26 11.7	-0.9
DIGR	Digorskoe uzhe	0.85	138	*e*Pg	Pg	11 26 02.5	-0.7
DIGR				*e*Sg	Sg	11 26 13.1	-1.3
STDR	Stavd-Durt	0.93	99	*e*Pg	Pn	11 26 05.3	-0.1
STDR				*e*Sg	Sn	11 26 18.5	0.0
ONI	Oni	1.05	153	P	Pn	11 26 07.3	+0.2
ONI				S	Sn	11 26 21.6	0.0
ZEI	Tsey	1.09	132	*e*Pg	Pb	11 26 06.9	-0.6
ZEI				*e*Sg	Sb	11 26 20.6	-1.1
PRTR	Priterechnaya	1.09	78	*i* Pg	Pg	11 26 08.2	+0.4
PRTR				*e*Sg	Sn	11 26 23.3	+0.7
ARNR	Ardon	1.13	107	*e*Pg	Pg	11 26 08.9	+0.4
ARNR				*e*Sg	Sn	11 26 25.3	+1.8
BTKR	Batakoyurt	1.27	96	*i* Pg	Pg	11 26 11.8	+0.5
BTKR				*e*Sg	Sg	11 26 30.4	+2.5
LACR	Lac	1.30	122	*e*Pg	Pb	11 26 10.6	-0.4
LACR				*e*Sg	Sn	11 26 27.3	-0.4
TRKR	Terskaya	1.41	81	*e*Pg	Pg	11 26 13.2	-0.7
TRKR				*e*Sg	Sg	11 26 32.6	+0.4
KMGR	Komgaron	1.57	107	*e*Pg	Pg	11 26 16.9	-0.1
KMGR				*e*Sg	Sg	11 26 40.0	+2.5
GUDG	Gudauri	1.62	130	P	Pn	11 26 15.6	+0.3
GUDG				S	Sb	11 26 36.4	-0.6

JMA **07** *11:31:26.4±0.1, 38°.35N×142°.57E, h33km±2km, M3.4*
IDC **07** *11:31:32.7±3.9, 38°.28N×142°.53E, h85km±34km, mb3.1/6, mb1 3.3/8, mb1mx3.1/59, mbtmp3.4/8, Error ellipse: s-maj=35.8km s-min=21.4km az=84.0*
ISC 07 11:31:23.8±2.1, **38°.40N**±0°.06×**142°.64E**±0°.07, **h10**km±12km, **n28**, σ1§16/28, **mb3.5**/6, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.93	265	P	Pb	11 31 42.2	+0.1
JKMT	Kesennumamotoy	1.00	294	P	Pn	11 31 44.0	0.0
JKMT				S	Sb	11 31 56.5	0.0
JIO	Ouri	1.02	273	P	Pb	11 31 43.8	+0.3
JIO				S	Sg	11 31 56.3	-0.3
OFUJ	Ofunato	1.02	312	P	Pn	11 31 44.5	+0.3
OFUJ				S	Sb	11 31 57.4	+0.4
JMK	Ichinoseki	1.24	297	P	Pg	11 31 47.7	0.0
JOM	Ohasama	1.50	316	P	Pg	11 31 52.2	-0.4
JOM				S	Sb	11 32 11.1	+0.2
JMM	Marumori	1.55	250	P	Pn	11 31 50.8	-0.7
JOU	Okura	1.56	269	P	Pn	11 31 52.0	+0.4
JOU				*e*S	Sn	11 32 10.8	-1.0
JFK	Kawauchi	1.74	234	P	Pn	11 31 52.9	-1.3
JRG	Rokugo	1.85	303	P	Pb	11 31 57.5	-0.3
JYK	Kaneyama	1.86	287	P	Pn	11 31 56.7	+0.9
JFT	Otama	2.03	245	P	Pn	11 31 58.5	+0.4
JFT				*e*S	Sn	11 32 21.9	-1.5
JANG	Nango	2.15	336	P	Pb	11 32 03.1	+0.2
MAT	Matsushiro	3.99	244	P	Pn	11 32 27.8	+2.8
MAT				S	Sn	11 33 13.2	+1.3
MJAR	Matsushiro Arr	3.99	244	P	Pn	11 32 28.4	+3.3
	0.2nm,0.3s,baz=74,slow=13,SNR=10						
USRK	Ussuriysk Ar.	9.88	309	P	Pn	11 33 53.7	+7.8
	baz=122,slow=16,SNR=4.7						
SONM	Songino Array	27.86	302	P	P	11 37 12.8	-1.0
	0.2nm,0.4s,baz=104,slow=12,SNR=2.2						
H11N2	WAKE ISLAND Hy	28.07	125	T	T	12 06 31.1	
	baz=317,slow=75,SNR=32						
H11N1	WAKE ISLAND Hy	28.07	125	T	T	12 06 34.5	
	baz=317,slow=75,SNR=21						
H11N3	WAKE ISLAND Hy	28.08	125	T	T	12 06 33.4	
	baz=317,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	28.84	127	T	T	12 07 35.1	
	baz=318,slow=74,SNR=6.1						
H11S3	WAKE ISLAND Hy	28.84	127	T	T	12 07 34.9	
	baz=318						
H11S2	WAKE ISLAND Hy	28.86	127	T	T	12 07 37.1	
	baz=318,slow=74,SNR=5.6						
MKAR	Makanchi Array	44.23	301	P	P	11 39 33.7	+0.5
	0.4nm,0.7s,baz=81,slow=10,SNR=4.1						
ILAR	Eielson Array	47.82	33	P	P	11 40 01.9	+0.7
	0.3nm,0.7s,baz=268,slow=6.3,SNR=4.8						
BVAR	Borovoye Array	50.38	312	P	P	11 40 21.0	0.0
	0.3nm,0.5s,baz=63,slow=6.6,SNR=2.9						
WRA	Warramunga Arr	58.56	189	P	P	11 41 19.4	-1.2
	0.5nm,0.6s,baz=8.2,slow=7.0,SNR=5.9						
ASAR	Alice Springs	62.28	189	P	P	11 41 45.3	-0.8
	0.4nm,0.8s,baz=15,slow=12,SNR=3.8						

SNET **07** *11:42:22.6±1.9, 12°.97N×89°.57W, h33km±28km, ML3.8*
UCR **07** *11:42:22.8±1.9, 12°.96N×89°.58W, h35km±999km, ML3.8*
GCG **07** *11:42:23.5±0.7, 13°.02N×89°.71W, h13km±9km, MD4.0*
ISC 07 11:42:22.5±1.9, **12°.95N**±0°.08×**89°.58W**±0°.04, **h32**km±13km, **n55**, σ0§73/92, **8D**, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	Serv Nac Est T	0.80	25	*e*P	Pn	11 42 37.5	-0.3
SNET				*e*S	Sb	11 42 49.0	+0.2
SNET				IAML		11 42 53.6	
	comp=Z,3µm,0.2s						
SNET	Serv Nac Est T	0.80	25	*e*P	Pn	11 42 37.5	-0.3
SNET				*e*S	Sb	11 42 49.0	+0.2
SNET				IAML		11 42 53.6	
	comp=Z,3µm,0.2s						
UEES	Universidad Ev	0.83	24	⇓*i*P	Pn	11 42 37.9	-0.2
UEES				*e*S	Sb	11 42 49.3	-0.2
UEES				IAML		11 42 49.9	
	comp=Z,4µm,0.1s						
UEES	Universidad Ev	0.83	24	⇓*i*P	Pn	11 42 37.9	-0.2
UEES				*e*S	Sb	11 42 49.3	-0.2
UEES				IAML		11 42 49.9	
	comp=Z,4µm,0.1s						
BOQS	Boqueron	0.83	21	*i* P	Pn	11 42 38.0	-0.2
LFRS	El Faro	0.84	37	⇓*i*P	Pn	11 42 38.1	-0.2
OPAM	Oficina de Pla	0.84	26	*e*P	Pn	11 42 38.2	-0.1
OPAM				*e*S	Sb	11 42 50.1	+0.3
OPAM				IAML		11 42 57.5	
	comp=Z,3µm,0.2s						
OPAM	Oficina de Pla	0.84	26	*e*P	Pn	11 42 38.2	-0.1
OPAM				*e*S	Sb	11 42 50.1	+0.3
OPAM				IAML		11 42 57.5	
	comp=Z,3µm,0.2s						
UESS	Universidad de	0.85	26	*e*P	Pn	11 42 38.3	-0.1
UESS				*e*S	Sb	11 42 50.6	+0.6
UESS	Universidad de	0.85	26	*e*P	Pn	11 42 38.3	-0.1
UESS				*e*S	Sb	11 42 50.6	+0.6
AEIL	Aeropuerto Ilo	0.87	31	*e*P	Pb	11 42 39.1	-0.1
AEIL				*e*S	Sb	11 42 54.0	+3.5
AEIL				IAML		11 42 59.5	
	comp=Z,3µm,0.2s						
AEIL	Aeropuerto Ilo	0.87	31	*e*P	Pb	11 42 39.1	-0.1
AEIL				*e*S	Sb	11 42 54.0	+3.5
AEIL				IAML		11 42 59.5	
	comp=Z,3µm,0.2s						
CEVE	Cerro Verde	0.87	357	⇓*i*P	Pn	11 42 38.8	-0.1
CEVE				*e*S	Sb	11 42 50.9	+0.1
CEVE				IAML		11 42 52.3	
	comp=Z,8µm,0.4s						
CEVE	Cerro Verde	0.87	357	⇓*i*P	Pn	11 42 38.8	-0.1
CEVE				*e*S	Sb	11 42 50.9	+0.1
CEVE				IAML		11 42 52.3	
	comp=Z,8µm,0.4s						
SBLS	San Blas	0.88	357	⇓*i*P	Pn	11 42 38.9	-0.1
SBLS	San Blas	0.88	357	⇓*i*P	Pn	11 42 38.9	-0.1
SNJE	San Jose	0.91	358	*e*P	Pn	11 42 39.3	-0.1
SNJE	San Jose	0.91	358	*e*P	Pn	11 42 39.3	-0.1
LFU	La Fuente	0.91	30	*i* P	Pn	11 42 39.3	+0.1
LFU	La Fuente	0.91	30	*i* P	Pn	11 42 39.3	+0.1
LBRS	Las Brisas	0.94	34	⇓*i*P	Pn	11 42 39.8	+0.2
RTR	El Retiro	0.94	356	*e*P	Pn	11 42 39.8	0.0
RTR	El Retiro	0.94	356	*e*P	Pn	11 42 39.8	0.0
COEG	Centro de Oper	0.95	46	*i* P	Pn	11 42 39.5	-0.3
COEG				*e*S	Sn	11 42 52.4	+0.1
COEG				IAML		11 42 55.3	
	comp=Z,1µm,0.3s						
COEG	Centro de Oper	0.95	46	*i* P	Pn	11 42 39.5	-0.3
COEG				*e*S	Sn	11 42 52.4	+0.1
COEG				IAML		11 42 55.3	
	comp=Z,1µm,0.3s						
PAVA	Las Pavas	0.98	40	*i* P	Pn	11 42 40.4	+0.2
PAVA				*e*S	Sb	11 42 53.6	-0.2
PAVA				IAML		11 42 58.1	
	comp=Z,2µm,0.3s						
PAVA	Las Pavas	0.98	40	*i* P	Pn	11 42 40.4	+0.2
PAVA				*e*S	Sb	11 42 53.6	-0.2
PAVA				IAML		11 42 58.1	
	comp=Z,2µm,0.3s						
UNIC	Universidad Ca	1.02	2	*e*P	Pn	11 42 40.9	+0.1
UNIC				*e*S	Sb	11 42 54.8	-0.2
UNIC				IAML		11 42 56.0	
	comp=Z,594nm,0.1s						
UNIC	Universidad Ca	1.02	2	*e*P	Pn	11 42 40.9	+0.1
UNIC				*e*S	Sb	11 42 54.8	-0.2
UNIC				IAML		11 42 56.0	
	comp=Z,594nm,0.1s						
UESV	Universidad de	1.03	49	*i* P	Pn	11 42 40.6	-0.2
UESV				*e*S	Sn	11 42 54.0	-0.1
UESV				IAML		11 42 56.4	
	comp=Z,1µm,0.3s						
UESV	Universidad de	1.03	49	*i* P	Pn	11 42 40.6	-0.2
UESV				*e*S	Sn	11 42 54.0	-0.1
UESV				IAML		11 42 56.4	
	comp=Z,1µm,0.3s						
ALJI	Alcalda de J	1.05	69	*i* P	Pn	11 42 40.8	-0.3
ALJI				*e*S	Sn	11 42 54.5	-0.2
ALJI				IAML		11 42 57.9	
	comp=Z,1µm,0.2s						
ALJI	Alcalda de J	1.05	69	*i* P	Pn	11 42 40.8	-0.3
ALJI				*e*S	Sn	11 42 54.5	-0.2
ALJI				IAML		11 42 57.9	
	comp=Z,1µm,0.2s						
COEB	Comit de Eme	1.16	62	*i* P	Pn	11 42 42.5	-0.1
COEB				IAML		11 42 53.4	
	comp=Z,795nm,0.3s						
COEB				*e*S	Sn	11 42 57.1	-0.4
COEB	Comit de Eme	1.16	62	*i* P	Pn	11 42 42.5	-0.1
COEB				IAML		11 42 53.4	
	comp=Z,795nm,0.3s						
COEB				*e*S	Sn	11 42 57.1	-0.4
TECA	Tecapa	1.18	63	*e*P	Pn	11 42 43.0	0.0
TECA	Tecapa	1.18	63	*e*P	Pn	11 42 43.0	0.0
PACA	Pacayal	1.33	67	*e*P	Pn	11 42 45.1	+0.1
PACA				*e*S	Sn	11 43 02.4	+0.7
PACA				IAML		11 43 07.0	
	comp=Z,9µm,0.3s						
PACA	Pacayal	1.33	67	*e*P	Pn	11 42 45.1	+0.1
PACA				*e*S	Sn	11 43 02.4	+0.7
PACA				IAML		11 43 07.0	
	comp=Z,9µm,0.3s						
JUCU	Jucuar¡n	1.33	77	*e*P	Pn	11 42 45.1	+0.1
JUCU				*e*S	Sn	11 43 01.6	-0.1
JUCU				IAML		11 43 09.0	
	comp=Z,1µm,0.3s						
JUCU	Jucuar¡n	1.33	77	*e*P	Pn	11 42 45.1	+0.1
JUCU				*e*S	Sn	11 43 01.6	-0.1
JUCU				IAML		11 43 09.0	
	comp=Z,1µm,0.3s						
LCY	Lacayo	1.34	69	*e*P	Pn	11 42 46.1	+1.0
LCY	Lacayo	1.34	69	*e*P	Pn	11 42 46.1	+1.0
MTO3	Montecristo	1.45	8	*e*P	Pn	11 42 47.4	+0.6
MTO3	Montecristo	1.45	8	*e*P	Pn	11 42 47.4	+0.6
IXG	Ixpaco	1.47	325	*e*P	Pn	11 42 47.7	+0.6
FAGO	Alcalda de S	1.61	63	*e*P	Pn	11 42 49.1	+0.3
FAGO				*e*S	Sb	11 43 10.5	-1.3
FAGO	Alcalda de S	1.61	63	*e*P	Pn	11 42 49.1	+0.3
FAGO				*e*S	Sb	11 43 10.5	-1.3
LCND	La Caada	1.68	78	*e*P	Pn	11 42 50.0	+0.2
LCND				*e*S	Sn	11 43 10.9	+0.6
LCND				IAML		11 43 14.3	
	comp=Z,965nm,0.4s						
LCND	La Caada	1.68	78	*e*P	Pn	11 42 50.0	+0.2
LCND				*e*S	Sn	11 43 10.9	+0.6
LCND				IAML		11 43 14.3	
	comp=Z,965nm,0.4s						
CNCH	Conchagua	1.73	79	*e*P	Pn	11 42 50.6	0.0
CNCH				*e*S	Sn	11 43 12.0	+0.4
CNCH				IAML		11 43 19.7	
	comp=Z,3µm,0.4s						
CNCH	Conchagua	1.73	79	*e*P	Pn	11 42 50.6	0.0
CNCH				*e*S	Sn	11 43 12.0	+0.4
CNCH				IAML		11 43 19.7	
	comp=Z,3µm,0.4s						
NBG	Las Nubes	1.79	335	*e*P	Pb	11 42 53.6	-1.3
NBG				*e*S	Sb	11 43 15.9	-1.1
FUG	Fuego 3	1.93	321	*e*P	Pn	11 42 53.8	+0.5
FUG				*e*S	Sn	11 43 14.7	-1.8
STG3	Santiaguito 3,	2.60	312	*e*P	Pn	11 43 03.7	+1.1
STG3				*e*S	Sn	11 43 35.2	+1.9

PGC **07** *11:43:36.4±0.8, 50°.64N×130°.44W, h10km, MLSn3.1/38, Mw3.7/38, 213km west of Pt. Hardy, Bc Vancouver Island, Canada Region*
IDC **07** *11:43:40.1±1.5, 50°.82N×129°.75W, h0km, mb3.4/3, mb1 3.6/7, mb1mx3.4/34, mbtmp3.3/7, ML3.5/4, Error ellipse: s-maj=19.5km s-min=15.4km az=75.0*
ISC 07 11:43:36.2±3.4, **50°.69N**±0°.06×**130°.33W**±0°.06, **h12**km±24km, **n73**, σ1§67/86, **mb3.4**/3, **Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	Holberg	1.40	91	Pn	Pb	11 44 01.0	-1.3
HOLB				Sn	Sn	11 44 18.6	-1.3
BPBC	Brooks Peninsu	1.72	107	Pn	Pn	11 44 04.8	-1.2
BPBC				Sn	Sn	11 44 24.3	-3.6
PACB	Port Alice, BC	1.83	97	Pn	Pn	11 44 06.8	-0.6
PACB				Sn	Sn	11 44 28.2	-2.2
PHC	Port Hardy	1.84	88	Pn	Pn	11 44 07.3	-0.3
PHC				Sn	Sb	11 44 29.6	-3.1
HG3B	Hotspring	2.01	340	Pn	Pn	11 44 08.6	-1.3
HG3B				Sn	Sn	11 44 31.8	-3.2
MAYB	Maynard	2.03	97	Pn	Pn	11 44 10.0	-0.4
MAYB				Sn	Sn	11 44 33.8	-1.9
BBB	Bella Bella	2.04	42	Pn	Pn	11 44 10.3	0.0
	11nm,0.3s,baz=227,slow=10,SNR=50						
BBB				Sn	Sn	11 44 31.7	-4.0
	24nm,0.3s,baz=243,slow=17,SNR=10						
BBB	Bella Bella	2.04	42	Pn	Pn	11 44 10.3	0.0
BBB				Sn	Sn	11 44 33.7	-2.0
BNB	Barry Inlet	2.09	335	Pn	Pn	11 44 09.3	-1.8
BNB				Sn	Sn	11 44 34.8	-2.2
EDB	Eliza Dome	2.21	110	Pn	Pn	11 44 11.7	-1.0
EDB				Sn	Sn	11 44 37.1	-2.9
TLCB	Telegraph Cove	2.23	92	Pn	Pn	11 44 13.1	+0.2
TLCB				Sn	Sn	11 44 39.5	-0.8
WOSB	Woss	2.46	101	Pn	Pn	11 44 16.3	+0.1
HG1B	Mitchell Dam	2.51	334	Pn	Pn	11 44 15.7	-1.1
MOBC	Moresby Island	2.66	338	Pn	Pn	11 44 17.6	-1.3
MOBC				Sn	Sn	11 44 49.5	-1.6
NCRB	Newcastle Ridg	2.74	94	Pn	Pn	11 44 19.9	-0.2
ETB	Estevan Point	2.77	117	Pn	Pn	11 44 19.4	-1.0
BCBC	Bella Coola	2.80	52	Pn	Pn	11 44 21.0	+0.3
DIB	Dawson Inlet,	2.85	333	Pn	Pn	11 44 20.0	-1.4
H02S1	DAWSON INLET T	2.85	333	Pn	Pn	11 44 20.1	-1.3
	SNR=2611						
GDR	Gold River	2.90	107	Pn	Pn	11 44 21.8	-0.3
H02N1	VAN INLET T-PH	2.91	333	Pn	Pn	11 44 21.3	-1.1
	SNR=152						
VIB	Van Inlet	2.91	333	Pn	Pn	11 44 20.7	-1.6
VIB				Sn	Sn	11 44 54.7	-2.6
SPLB	Strathcona Par	3.10	103	Pn	Pn	11 44 25.3	+0.3
TOFB	Tofino	3.24	117	Pn	Pn	11 44 26.7	-0.1
CBB	Campbell River	3.25	100	Pn	Pn	11 44 27.3	+0.4
CBB				Sn	Sn	11 45 04.8	-0.6
BTB	Buttle Lake	3.33	110	Pn	Pn	11 44 28.1	-0.1
B012	Ucluelet	3.57	118	Pn	Pn	11 44 31.5	+0.2
OZB	Mount Ozzard	3.58	117	Pn	Pn	11 44 31.1	-0.4
NDB	Naden	3.64	335	Pn	Pn	11 44 31.6	-0.8
RUBB	Prince Rupert	3.64	1	Pn	Pn	11 44 32.4	+0.1
BFSB	Bamfield	3.84	117	Pn	Pn	11 44 35.7	+0.6
B928	Bamfield	3.84	117	Pn	Pn	11 44 35.7	+0.7
B927	Port Alberni	3.85	110	Pn	Pn	11 44 35.4	+0.2
TXB	Texada	3.91	102	Pn	Pn	11 44 36.4	+0.3
MGB	Mount Grey	4.02	113	Pn	Pn	11 44 37.3	-0.3
SHB	Sechelt	4.29	102	Pn	Pn	11 44 41.8	+0.4
SHB				Sn	Sn	11 45 31.3	-0.1
YOUB	Youbou, Lake C	4.32	112	Pn	Pn	11 44 42.6	+0.9
NLLB	Nanaimo Lost L	4.35	107	Pn	Pn	11 44 43.5	+1.5
UBRB	Upper Baezaeko	4.46	58	Pn	Pn	11 44 45.1	+1.4
WPB	Watts Point	4.69	100	Pn	Pn	11 44 48.0	+1.3
BIB	Bowen Island	4.70	103	Pn	Pn	11 44 47.6	+0.7
LZB	Mount Lazard	4.71	114	Pn	Pn	11 44 47.5	+0.4
GOBB	Galiano Island	4.75	109	Pn	Pn	11 44 49.0	+1.5
B010	North Saanich	4.91	112	Pn	Pn	11 44 50.4	+0.7
PGC	Sidney	4.91	112	Pn	Pn	11 44 50.8	+1.1
B011	North Saanich	4.91	112	Pn	Pn	11 44 50.8	+1.0
HNBB	Haney	5.20	103	Pn	Pn	11 44 54.8	+1.1
MCW	Mount Constitu	5.26	110	Pn	Pn	11 44 55.4	+0.7
FSB	Fort Saint Jam	5.27	42	Pn	Pn	11 44 56.2	+1.4
LLLB	Lillooet	5.38	88	Pn	Pn	11 44 57.1	+0.9
VDB	Vedder Mountai	5.57	104	Pn	Pn	11 45 00.3	+1.4
MBW	Mount Baker	5.79	106	Pn	Pn	11 45 03.6	+1.7
CMW	Cultus Mountai	5.80	110	Pn	Pn	11 45 04.7	+2.5
JCW	Jim Creek	6.02	111	Pn	Pn	11 45 07.2	+2.2
B06A	Marblemount	6.14	107	Pn	Pn	11 45 08.8	+2.1
GPW	Glacier Peak	6.53	110	Pn	Pn	11 45 14.5	+2.3
FMW	Mount Fremont	6.84	120	Pn	Pn	11 45 18.6	+2.1
LON	Longmire	6.88	122	Pn	Pn	11 45 19.3	+2.5
LTY	Liberty	7.22	115	Pn	Pn	11 45 24.2	+2.6
BMBC	Bull Mountain	7.26	39	Pn	Pn	11 45 24.2	+2.1
BMBC				Sn	Sn	11 46 44.6	0.0
B08A	Colville Reser	7.53	104	Pn	Pn	11 45 27.5	+1.8
DLBC	Dease Lake	7.77	1	Pn	Pn	11 45 30.2	+1.2
NBC5	NorthernBC 5	8.19	30	Pn	Pn	11 45 36.7	+1.9
NBC5				Sn	Sn	11 47 07.8	+0.6
NEW	Newport	8.94	101	Pn	Pn	11 45 45.5	+0.5
	0.2nm,0.3s,baz=307,slow=15,SNR=3.7						
YKA	Yellowknife Ar	14.60	30	Pn	Pn	11 46 59.5	-2.9
	0.2nm,0.3s,baz=224,slow=12,SNR=7.5						

PDAR Pinedale Array 16.26 111 Pn P 11 47 27.9 +0.4
0.1nm,0.3s,baz=312,slow=11,SNR=5.1
ILAR Eielson Array 16.57 335 Pn P 11 47 35.2 +4.6
0.0nm,0.3s,baz=143,slow=9.1,SNR=3.1
ULM Lac du Bonnet 21.82 78 P P 11 48 28.2 +0.2
0.7nm,0.4s,baz=280,slow=12,SNR=3.1
ANMO Albuquerque 23.39 123 P P 11 48 48.9 +4.0
0.9nm,0.8s,baz=325,slow=12,SNR=3.9
H11N2 WAKE ISLAND Hy 57.79 262 T T 12 55 54.8
baz=41,slow=75,SNR=416
H11N3 WAKE ISLAND Hy 57.79 262 T T 12 55 54.9
baz=41,slow=75,SNR=554
H11N1 WAKE ISLAND Hy 57.80 262 T T 12 55 56.0
baz=41,slow=75,SNR=322
SONM Songino Array 70.42 323 P P 11 54 56.3 +6.2
0.2nm,0.5s,baz=47,slow=6.7,SNR=2.8

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*BJI **07** 12:04:37.6±0.0, 19.23N×121.12E, h20km, mB5.0/53, mb4.6/63, ML4.3/1, Ms4.4/61, Ms7 4.2/57*
*MOS **07** 12:04:37.3±0.9, 19.04N×121.31E, h39km, mb5.0/49, Error ellipse: s-maj=7.8km s-min=4.9km az=102.2*
*NEIC **07** 12:04:39.0±2.0, 19.11N±0.05×121.15E±0.07, h35km±1km, mb4.9/120, Error ellipse: s-maj=11.9km s-min=9.2km az=272.0*
*MAN **07** 12:04:40.8, 19.03N×121.26E, h57km, mb5.4, ML4.4, MS4.7*
MAN INTENSITY IV - SANCHEZ MIRA CAGAYAN.
*IDC **07** 12:04:40.1±1.6, 19.01N×121.35E, h49km±14km, mb4.2/39, mb1 4.3/42, mb1mx4.2/64, mbtmp4.5/42, ML4.1/4, MS4.0/27, Ms1 4.1/27, ms1mx4.0/36, Error ellipse: s-maj=13.4km s-min=8.2km az=69.0*
*KLM **07** 12:04:44.0, 19.49N×120.88E, h93km, mb4.7*
ISC 07 12:04:39.8±0.6, 19.06N±0.02×121.19E±0.04, h43km±5km, n364, σ1.55/372, mb4.8/137, MS4.1/40, 17C-11D, Philippine Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

PIP Pasuquin 0.91 217⇓eP Pn 12 05 03.4 +7.2
PIP iS Sn 12 05 25.0 +17
SGCP Mt. Cagua 1.15 135 eP Pn 12 05 00.7 +1.3
SGCP eS Sn 12 05 15.9 +1.9
APYP Conner 1.19 178 eP Pn 12 04 59.3 -0.8
APYP eS Sn 12 05 17.5 +2.5
BBP Basco 1.55 28 eP Pn 12 05 06.1 +1.1
BBP eS Sn 12 05 27.6 +3.6
CAUP Cauayan 2.19 164 eP Pn 12 05 16.4 +2.6
BOLP Bolinao 2.93 205 eP Pn 12 05 25.9 +2.0
BOLP eS Sn 12 06 03.8 +5.9
SMPP San Manuel, Pa 2.94 190 eP Pn 12 05 23.6 -0.4
SMPP eS Sn 12 05 58.8 +0.7
BALP Baler 3.32 174 eP Pn 12 05 31.2 +1.9
BALP eS Sn 12 06 11.1 +3.5
PCPH Palayan 3.48 182 ep Pn 12 05 34.6 +3.1
TWG Pinlang 3.74 358 Pn 12 05 33.8 -1.3
TWG Sn Sn 12 06 15.9 -2.0
TPUB Ta-pu 4.25 353 Pn 12 05 41.2 -0.9
YULB Yu-li 4.31 1 Pn 12 05 42.2 -0.7
YULB Sn Sn 12 06 30.7 -1.3
SSLB Suanglung 4.71 357 Pn 12 05 47.7 -0.7
LQP Lukban 4.93 176⇑eP Pn 12 05 54.9 +3.2
TGY Tagaytay City 4.94 183 P Pn 12 05 52.5 +0.9
68nm,0.3s,baz=5.7,slow=10,SNR=14
TGY LR LR 12 08 25.4
comp=Z,2μm,18.6s,baz=10,slow=46
NACB Ninganchiao 5.10 4 Pn 12 05 53.5 -0.2
NACB Sn Sn 12 06 49.1 -2.3
GQP Guinayangan 5.26 167⇓eP Pn 12 05 58.3 +2.3
GQP eS Sn 12 06 55.1 -0.4
YHNB Yeheng 5.58 2 Pn 12 06 00.8 +0.3
YHNB Sn Sn 12 07 00.1 -3.4
YOJ Yonaguni jima 5.63 17 Pn 12 06 01.2 +0.2
YOJ Sn Sn 12 07 04.3 -0.2
YOJ Yonaguni jima 5.63 17 P Pn 12 06 01.2 +0.2
YOJ 12 07 04.3
TATO Taipei 5.89 3 Pn 12 06 05.0 +0.4
KNMB Chin-men Tao 5.97 335 Pn 12 06 03.3 -2.5
QZH Quanzhou 6.33 338 Pn Pn 12 06 08.3 -2.3
QZH Sn Sn 12 07 15.0 -6.7
QZH LR LR
comp=Z,2μm,19.0s
HKPS Hong Kong Po S 7.34 297 Pn 12 06 22.4 -2.1
JOW Kunigami 10.12 39 P Pn 12 07 03.0 +0.4
0.8nm,0.3s,baz=180,slow=13,SNR=18
JOW Kunigami 10.12 39 Pn 12 07 02.5 -0.1
QIZ Qiongzhong 10.73 272 P Pn 12 07 09.2 -1.8
QIZ S Sn 12 09 09.7 -0.2
QIZ pmax pmax
comp=Z,65nm,0.6s
QIZ LR LR
comp=N,830nm,15.3s
QIZ LR LR
comp=E,1μm,22.6s
QIZ LR LR
comp=Z,1μm,19.6s
QIZ Qiongzhong 10.73 272 Pn 12 07 08.8 -2.2
SSE Sheshan 11.98 360 Pn Pn 12 07 27.6 -0.5
KCP Kidapawan 12.56 162⇓iP Pn 12 07 38.7 +2.5
DAV Davao City (W) 12.66 160 LR LR 12 13 06.9
comp=Z,3μm,21.1s,baz=350,slow=40
WHN Wuhan 13.01 333 P Pn 12 07 39.6 -2.4
WHN S Sn 12 10 04.7 -0.6
WHN LR LR
comp=N,2μm,12.8s
WHN LR LR
comp=E,990nm,4.3s
WHN LR LR
comp=Z,3μm,20.3s
NJ2 Nanjing 13.11 351 eP Pn 12 07 44.5 +1.1
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
KKM Kota Kinabalu 13.82 201 Pn Pn 12 07 51.9 -1.4
DLV T Lat 14.14 242 Pn 12 07 54.4 -3.3
GYA Guiyang 15.28 301⇑iP Pn 12 08 12.7 -0.1
GYA PP pP 12 08 26.3 -0.1
GYA S Sn 12 11 03.4 +2.4
GYA pmax pmax
comp=Z,20nm,1.3s
GYA pmax pmax
comp=Z,240nm,5.4s
GYA LR LR
comp=N,670nm,14.3s
GYA LR LR
comp=E,660nm,13.0s
GYA LR LR
comp=Z,950nm,13.4s
ENH Enshi 15.41 319 Pn 12 08 13.8 -0.5
UBPT Khong Chiam 15.49 258 Pn 12 08 10.8 -4.5
SLVN Son La 16.39 281 Pn 12 08 24.3 -2.6
JNU Nakatsue 16.47 30 P Pn 12 08 28.8 +0.9
0.7nm,0.3s,baz=182,slow=6.4,SNR=6.1
JNU LR LR 12 15 07.7
comp=Z,326nm,20.0s,baz=194,slow=38
JNU Nakatsue 16.47 30 Pn 12 08 26.6 -1.2
JNU IAmb IAmb 12 08 41.5
comp=Z,74nm,1.0s
TIA Tai'an 17.46 349 P P 12 08 48.6 +7.7
TJN Taejon 18.09 16⇑eP P 12 08 47.5 -0.3
KMI Kunming 18.12 293 P Pn 12 08 50.8 +2.2
KMI pP pP 12 08 57.5 -0.6
KMI sP pwP 12 09 02.0 -0.3
KMI PP sP 12 09 04.6 +1.5
KMI S Sn 12 12 08.6 -1.6
KMI sS S 12 12 22.2 +8.0
KMI SS 12 12 30.6
KMI pmax pmax
comp=Z,19nm,1.8s
KMI pmax pmax
comp=Z,290nm,5.7s
KMI LR LR
comp=Z,530nm,13.1s
KMI LR LR
comp=Z,1μm,15.8s
KMI LR LR
comp=Z,1μm,17.9s
MRSI Marisa 18.48 178 P P 12 08 51.3 -1.0
comp=Z,45nm,1.0s
XAN Xi'an 18.50 326 P Pn 12 08 53.3 +0.4
XAN S S 12 12 22.5 +1.2
XAN pmax pmax
comp=Z,25nm,1.2s
XAN pmax pmax
comp=Z,420nm,4.5s
XAN LR LR
comp=Z,720nm,16.3s
XAN LR LR
comp=Z,300nm,18.4s
XAN LR LR
comp=Z,560nm,14.2s
XAN Xi'an 18.50 326 P P 12 08 52.6 +0.2
XAN Xi'an 18.50 326 P P 12 08 52.6 +0.2
XAN pmax pmax
comp=Z,53nm,1.4s
MPSI Mapaga 18.65 184 P P 12 08 54.3 +0.2
comp=Z,16nm,1.1s
SBUM Sibu 18.70 209 P P 12 08 54.7 0.0
KSAR Wonju Array Be 19.23 16 P P 12 09 00.2 -0.1
KSAR Wonju Array Be 19.23 16 P P 12 09 00.2 -0.1
KSRS Korea Array 19.25 16 P P 12 09 00.3 -0.2
comp=Z,0.8nm,0.3s,baz=198,slow=11,SNR=24
KSRS LR LR 12 17 19.6
comp=Z,446nm,19.8s,baz=196,slow=40
KS19 Wonju Array Si 19.28 16 P P 12 09 00.3 -0.6
PBKT Sadao Pong 19.41 266 P P 12 09 02.7 +0.2
CD2 Chengdu 19.69 310 P Pn 12 09 06.7 -0.5
CD2 sP pwP 12 09 17.0 -1.2
CD2 S Sn 12 12 48.3 +0.7
CD2 SS SnSn 12 13 09.6 +7.3
CD2 pmax pmax
comp=Z,60nm,1.4s
CD2 pmax pmax
comp=Z,430nm,7.9s
CD2 LR LR
comp=Z,1μm,17.8s
CD2 LR LR
comp=Z,1μm,15.7s
CD2 LR LR
comp=Z,1μm,17.8s
APSI Ampana 19.85 179 P Pn 12 09 10.8 +1.7
comp=Z,668nmcomp=Z,58nm,1.1s
LUWI Luwuk 20.04 175 P P 12 09 09.3 0.0
LUWI IAmb IAmb 12 09 22.1
comp=Z,63nm,0.7s
TIY Taiyuan 20.10 339 eP Pn 12 09 12.1 +0.1
TIY S Sn 12 12 55.6 -1.7
TIY pmax pmax
comp=Z,11nm,0.9s
TIY LR LR
comp=Z,360nm,9.7s
TIY LR LR
comp=Z,210nm,7.6s
TIY LR LR
comp=Z,790nm,16.1s
KSM Kuching 20.48 213 P P 12 09 14.5 +0.4
KSM IAmb IAmb 12 09 22.3
comp=Z,42nm,0.6s
KSM Kuching 20.48 213 P Pn 12 09 19.0 +2.5
BKB Balikpapan 20.63 192 P P 12 09 14.2 -1.5
JCJ Chichijima 20.88 64 P P 12 09 17.0 -1.5
comp=Z,24nm,0.4s,baz=325,slow=20,SNR=6.0
JCJ LR LR 12 16 07.2
comp=Z,337nm,18.7s,baz=252,slow=33
CHTO Chiang Mai 21.05 273 P P 12 09 20.5 +0.2
CHTO Chiang Mai 21.05 273 P P 12 09 20.5 +0.2
CHTO pmax pmax
comp=Z,25nm,1.2s
CM31 Chiang Mai Arr 21.08 272 P P 12 09 21.4 +0.8
CM31 IAmb IAmb 12 09 36.6
comp=Z,44nm,1.3s
CMAR Chiang Mai Arr 21.08 272 P P 12 09 21.6 +1.0
comp=Z,7.5nm,0.8s,baz=81,slow=8.7,SNR=39
CMAR PcP PcP 12 13 27.1 +1.1
comp=Z,5.4nm,0.9s,baz=57,slow=0.7,SNR=21
CMAR ScP ScP 12 16 57.8 -1.8
comp=Z,0.8nm,0.7s,baz=96,slow=0.5,SNR=5.9
CMAR LR LR 12 18 36.9
comp=Z,569nm,18.1s,baz=80,slow=39
CMAR Chiang Mai Arr 21.08 272ceP P 12 09 22.2 +1.6
CMAR pmax pmax
comp=Z,8.0nm,0.8s
STKI Sintang 21.15 208 P P 12 09 22.3 +1.0
comp=Z,40nm,1.5s
BJT Baijiatuau 21.33 349 P P 12 09 24.5 +1.4
BJT Baijiatuau 21.33 349 P P 12 09 24.5 +1.4
BJT pmax pmax
comp=Z,28nm,1.1s
BJI Beijing 21.35 349 P P 12 09 24.7 +1.4
BJI S S 12 13 20.6 +2.6
BJI pmax pmax
comp=Z,8.0nm,1.0s
BJI LR LR
comp=Z,360nm,15.9s
BJI LR LR
comp=Z,370nm,20.4s
BJI LR LR
comp=Z,220nm,22.6s
INU Inuyama 21.43 38 P P 12 09 25.0 +0.8
INU IAmb IAmb 12 09 38.7
comp=Z,49nm,0.8s
SANI Sanana 21.50 167 P P 12 09 25.7 +0.6
comp=Z,31nm,0.7s
JHJ Hachijo jima 2 21.74 46 LR LR 12 16 25.2
comp=Z,403nm,21.8s,baz=278,slow=32
TTSI Tana Toraja 22.01 184 P P 12 09 34.2 +3.7
comp=Z,24nm,0.7s
SIJI Sorong 22.14 152 P P 12 09 29.5 -2.5
comp=Z,7.5nm,0.4s,baz=18,slow=20,SNR=4.3
LZH Lanzhou 22.83 322 ⇓P P 12 09 40.7 +1.3
LZH sP pwP 12 09 52.5 -0.4
LZH S Sn 12 13 57.1 -5.9
LZH SS S 12 14 28.5 +43
LZH pmax pmax
comp=Z,26nm,1.2s
LZH pmax pmax
comp=Z,100nm,4.9s
LZH LR LR
comp=Z,610nm,14.8s
LZH LR LR
comp=Z,650nm,14.3s
LZH LR LR
comp=Z,730nm,15.8s
NLAI Namlea 22.91 165 P P 12 09 40.8 +0.7
comp=Z,2μmcomp=Z,46nm,0.8s
MAJO Matsushiro 22.95 37 P P 12 09 38.0 -2.5
MAJO Matsushiro 22.95 37 P P 12 09 38.0 -2.5
MAJO pmax pmax
comp=Z,28nm,1.3s
MAT Matsushiro 22.95 37 P P 12 09 37.4 -3.1
MAT S S 12 13 50.8 +3.1
MJAR Matsushiro Arr 22.96 37 P P 12 09 39.0 -1.5
comp=Z,5.8nm,0.7s,baz=219,slow=8.0,SNR=12
MJAR LR LR 12 17 27.0
comp=Z,114nm,20.5s,baz=225,slow=34
MJAR Matsushiro Arr 22.96 37 P P 12 09 39.8 -0.7
MJAR Matsushiro Arr 22.96 37 P P 12 09 39.8 -0.7
MJAR pmax pmax
comp=Z,10.0nm,1.1s
MJB9 Matsu-Tunnel 22.96 37 P P 12 09 37.8 -2.8
HHC Hu-ho-hao-te 23.23 341 eP P 12 09 43.1 -0.2
HHC pP pP 12 09 51.5 -2.1
HHC PP PnPn 12 10 15.4 +5.1
HHC S S 12 13 51.5 -0.8
HHC sS sS 12 14 03.6 -7.9
HHC PcS PcS 12 17 13.5 +4.1
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,100nm,3.8s
HHC LR LR
comp=Z,410nm,13.5s
HHC LR LR
comp=Z,90nm,9.2s
HHC LR LR
comp=Z,530nm,15.9s
GUMO Guam 23.35 100 LR LR 12 16 49.2
comp=Z,585nm,20.9s,baz=280,slow=31
BTO Baotou 23.52 338 eP P 12 09 47.3 +1.2
BTO S S 12 13 58.0 +1.0
JRMM Jerantut 23.70 233 P P 12 09 48.0 +0.1
KAPI Kappang 23.96 184 P P 12 09 51.5 +1.2
comp=Z,7.1nm,0.2s,baz=357,slow=5.9,SNR=4.8
KAPI LR LR 12 19 47.9
comp=Z,359nm,19.8s,baz=16,slow=38
MYKOM Kota Tinggi 24.15 227 P P 12 09 51.8 -0.2
MYKOM Kota Tinggi 24.15 227 P P 12 09 53.0 +1.0
KULM Kulim 24.26 238 P P 12 09 52.7 -0.4
KULM IAmb IAmb 12 10 11.3
comp=Z,33nm,1.2s
KULM Kulim 24.26 238 P P 12 09 53.0 -0.1
FAKI Fak Fak 24.40 152 P P 12 10 07.3 +13
FAKI Fak Fak 24.40 152 P P 12 09 52.9 -1.5
FAKI IAmb IAmb 12 10 07.9
comp=Z,18nm,0.8s
IPM Ipoh 24.44 236 P P 12 09 54.2 -0.6
IPM IAmb IAmb 12 10 13.2
comp=Z,19nm,0.9s
IPM Ipoh 24.44 236 P P 12 09 55.0 +0.2
MSHR Mys Shultsa 24.92 18⇓eP P 12 09 59.0 +0.2
TPI Tanjungpandan 25.44 213 P P 12 10 06.7 +2.9
comp=Z,22nm,0.9s
MDJ Mudanjiang 26.43 14 P P 12 10 15.2 +2.7
MDJ S S 12 14 49.6 +6.5
MDJ pmax pmax
comp=Z,21nm,1.3s
MDJ pmax pmax
comp=Z,140nm,4.6s
MDJ LR LR
comp=Z,490nm,15.0s
MDJ LR LR
comp=Z,310nm,14.1s
MDJ LR LR
comp=Z,550nm,18.4s
MDJ Mudanjiang 26.43 14 P P 12 10 12.0 -0.5
MDJ IAmb IAmb 12 10 16.3
comp=Z,18nm,1.0s
USA0B Ussuriysk Arra 26.65 17 P P 12 10 14.3 -0.2
USA0B Ussuriysk Arra 26.65 17⇑eP P 12 10 13.3 -1.1
USRK Ussuriysk Ar. 26.65 17 P P 12 10 14.3 -0.1
comp=Z,4.0nm,0.8s,baz=196,slow=8.3,SNR=8.4
USRK LR LR 12 21 25.0
comp=Z,140nm,19.7s,baz=189,slow=38
USRK Ussuriysk Ar. 26.65 17 P P 12 10 13.9 -0.5
USRK Ussuriysk Ar. 26.65 17 P P 12 10 13.9 -0.5
PSI Prapat 27.12 236 LR LR 12 20 41.3
comp=Z,342nm,18.9s,baz=72,slow=35
PSI Prapat 27.12 236 P P 12 10 19.2 0.0
PSI pmax pmax
comp=Z,11nm,0.9s
BKNI Bangkinang 27.16 229 P P 12 10 19.3 0.0
BKNI IAmb IAmb 12 10 20.4
comp=Z,31nm,0.9s
RPSI Rantau Prapat 27.19 236 P P 12 10 19.1 -0.4
GTA Gaotai 27.43 322 P P 12 10 22.9 +1.2
GTA pP pP 12 10 31.6 -1.2
GTA sP pwP 12 10 35.4 +0.4
GTA PcP PcP 12 13 40.3 +0.6
GTA S S 12 15 03.4 +4.1
GTA PcS PcS 12 17 21.1 -0.4
GTA pmax pmax
comp=Z,3.0nm,1.4s
GTA pmax pmax
comp=Z,120nm,5.5s
GTA LR LR
comp=Z,230nm,17.9s
GTA LR LR
comp=Z,290nm,16.5s
GTA LR LR
comp=Z,380nm,15.1s
KCSI Kotacane, Aceh 27.61 239 P P 12 10 21.5 -1.9
comp=Z,1μmcomp=Z,11nm,1.1s
SHL Shillong 27.84 289 P P 12 10 25.8 +0.2
SHL IAmb IAmb 12 10 44.8
comp=Z,22nm,1.1s
SHL Shillong 27.84 289 P P 12 10 25.8 +0.2
SHL pmax pmax
comp=Z,22nm,1.1s
PWJI Pagerwojo 28.46 200 P P 12 10 30.6 -0.3
comp=Z,24nm,0.9s
SOEI Soe 28.79 174 P P 12 10 34.4 +0.4
SOEI IAmb IAmb 12 10 45.7
comp=Z,23nm,1.0s
LSA Lhasa 29.26 297 P P 12 10 39.0 +0.5
LSA Lhasa 29.26 297 P P 12 10 39.0 +0.5
LSA pmax pmax
comp=Z,7.0nm,0.9s
ERM Erimo 29.52 34⇑eP P 12 10 37.7 -2.4
ERM pmax pmax
comp=Z,46nm,1.4s
ULN Ulaanbaatar 30.95 341 P P 12 10 53.5 +0.7
ULN IAmb IAmb 12 11 03.8
comp=Z,12nm,1.1s
ULN Ulaanbaatar 30.95 341 P P 12 10 53.6 +0.7
ULN pmax pmax
comp=Z,13nm,1.1s
SONM Songino Array 31.13 341 P P 12 10 55.8 +1.4
comp=Z,4.4nm,0.8s,baz=158,slow=9.4,SNR=30
SONM PcP PcP 12 13 48.6 -0.3
comp=Z,4.2nm,1.2s,baz=156,slow=4.1,SNR=4.4
SONM LR LR 12 24 35.3
comp=Z,595nm,18.9s,baz=167,slow=38
KLR Kul'dur 31.28 13 P P 12 10 55.7 +0.2
comp=Z,4.7nm,0.6s,baz=196,slow=7.3,SNR=12
KLR PcP PcP 12 13 49.0 -0.1
comp=Z,3.3nm,0.6s,baz=216,slow=2.3,SNR=8.1
KLR Kul'dur 31.28 13⇓iP P 12 10 55.2 -0.3
KLR pmax pmax
comp=Z,5.0nm,0.8s
YSS Yuzh-Sakhalins 32.96 28 P P 12 11 10.4 +0.2
YSS Yuzh-Sakhalins 32.96 28⇑eP P 12 11 10.5 +0.2
YSS e 12 11 30.1
YSS pmax pmax
comp=Z,30nm,1.2s
YSS MLR MLR
comp=Z,200nm,16.0s
MTN Manton Dam 33.18 162 P P 12 11 11.7 -0.8
GRNR Gornyy 33.87 17 eP P 12 11 15.4 -2.9
GRNR MLR MLR
comp=Z,110nm,15.0s
ZAK Zakamensk 34.35 340 eP P 12 11 23.8 +1.2
ZAK pmax pmax
comp=Z,7.0nm,1.1s
ZEA Zeya 34.93 6 eP P 12 11 27.2 -0.1
ZEA pmax pmax
comp=Z,35nm,1.0s
ZEA MLR MLR
comp=Z,400nm,16.0s
TLY Talaya 35.36 341 P P 12 11 31.7 +0.6
comp=Z,3.4nm,0.5s,baz=166,slow=13,SNR=4.1
TLY Talaya 35.36 341 P P 12 11 30.5 -0.6
TLY IAmb IAmb 12 11 40.9
comp=Z,8.3nm,0.8s
TLY Talaya 35.36 341 eP P 12 11 31.2 +0.1
TLY pmax pmax
comp=Z,18nm,0.7s
TLY MLR MLR
comp=Z,829nm,15.0s
IRK Irkutsk 35.67 342 eP P 12 11 40.1 +6.4
IRK pmax pmax
comp=Z,33nm,2.2s
FITZ Fitzroy Crossi 37.18 173 P P 12 11 45.2 -1.7
FITZ IAmb IAmb 12 11 48.3
comp=Z,13nm,1.2s
WMQ Urumqi 37.35 319 eP P 12 11 50.4 +2.1
WMQ pP pP 12 11 58.6 -1.1
WMQ pmax pmax
comp=Z,8.0nm,1.3s
WMQ pmax pmax
comp=Z,94nm,3.9s
WMQ LR LR
comp=Z,340nm,16.5s
WMQ LR LR
comp=Z,260nm,18.7s
WMQ LR LR
comp=Z,550nm,18.1s
RABL Rabaul 38.25 124 P P 12 11 55.2 -1.0
BOD Bodaibo 39.07 354 eP P 12 12 02.3 -0.1
BOD pmax pmax
comp=Z,11nm,1.6s
COEN Coen 39.31 145 P P 12 12 03.0 -1.9
COEN IAmb IAmb 12 12 18.9
comp=Z,20nm,1.2s
PSA00 Pilbara Seismi 40.40 182 P P 12 12 12.5 -1.4
WRAB Tennant Creek 40.84 161 P P 12 12 15.0 -2.6
WRAB Tennant Creek 40.84 161deP P 12 12 15.2 -2.4
WRAB pmax pmax
comp=Z,4.0nm,0.3s
WRA Warramunga Arr 40.85 161 P P 12 12 14.5 -3.1
comp=Z,4.6nm,0.5s,baz=343,slow=9.1,SNR=38
WRA PcP PcP 12 14 17.9 -0.1
comp=Z,4.7nm,0.5s,baz=342,slow=3.3,SNR=9.7
WRA Warramunga Arr 40.85 161 P P 12 12 15.3 -2.4
WRA PcP 12 14 18.2 +0.2

MK31 Makanchi Array 42.13 320 P P 12 12 29.4 +1.4
MK31 Makanchi Array 42.13 320 eP P 12 12 29.5 +1.6
MKAR Makanchi Array 42.13 320 P P 12 12 29.4 +1.5
comp=Z,3.5nm,0.8s,baz=110,slow=8.3,SNR=37
MKAR PcP PcP 12 14 22.1 +0.2
comp=Z,6.6nm,0.8s,baz=101,slow=5.1,SNR=9.8
MKAR LR LR 12 32 04.4
comp=Z,398nm,18.1s,baz=127,slow=39
MKAR Makanchi Array 42.13 320 P P 12 12 29.1 +1.1
MKAR PcP 12 14 22.2 +0.4
MKAR Makanchi Array 42.13 320ceP P 12 12 29.7 +1.8
MKAR pmax pmax
comp=Z,4.0nm,0.8s
MAKZ Makanchi 42.33 320 P P 12 12 30.9 +1.3
MAKZ Makanchi 42.33 320 P P 12 12 30.9 +1.3
MAKZ pmax pmax
comp=Z,17nm,1.4s
H11S3 WAKE ISLAND Hy 42.98 83 T T 12 58 18.1
baz=275,slow=76,SNR=129
H11S1 WAKE ISLAND Hy 42.99 83 T T 12 58 19.8
baz=275,slow=76,SNR=111
H11S2 WAKE ISLAND Hy 43.00 83 T T 12 58 19.4
baz=275,slow=76,SNR=91
H11N1 WAKE ISLAND Hy 43.01 81 T T 12 58 17.6
baz=277,slow=75,SNR=457
H11N2 WAKE ISLAND Hy 43.02 81 T T 12 58 21.3
baz=277,slow=75,SNR=32
H11N3 WAKE ISLAND Hy 43.03 81 T T 12 58 21.0
baz=277,slow=75,SNR=26
YAK Yakutsk 43.34 6 P P 12 12 36.9 -0.5
comp=Z,4.2nm,0.4s,baz=252,slow=2.4,SNR=5.9
YAK Yakutsk 43.34 6 P P 12 12 36.7 -0.7
YAK IAmb IAmb 12 12 43.1
comp=Z,13nm,0.7s
YAK Yakutsk 43.34 6 eP P 12 12 37.1 -0.3
YAK pmax pmax
comp=Z,11nm,0.9s
YAK pmax pmax
comp=N,8.0nm,0.9s
KSH Kashi 43.85 308 P P 12 12 46.7 +4.6
KSH PcP PcP 12 14 30.4 +2.5
KSH S S 12 19 16.6 +6.2
KSH SS SS 12 22 26.4 -1.2
KSH pmax pmax
comp=N,29nm,1.1s
KSH pmax pmax
comp=N,150nm,7.4s
KSH LR LR
comp=N,170nm,6.7s
KSH LR LR
comp=N,340nm,13.1s
KSH LR LR
comp=N,2μm,16.8s
PEA0B Petropavlovsk- 44.17 31 P P 12 12 43.5 -0.7
PEA0B Petropavlovsk- 44.17 31 P P 12 12 43.5 -0.7
PEA0B pmax pmax
comp=Z,89nm,1.5s
PETK Petropavlovsk- 44.17 31 P P 12 12 43.8 -0.5
comp=Z,5.3nm,0.7s,baz=207,slow=6.1,SNR=21
PETK LR LR 12 31 12.0
comp=Z,123nm,21.7s,baz=240,slow=36
PETK Petropavlovsk- 44.17 31 P P 12 12 43.5 -0.7
PETK Petropavlovsk- 44.17 31 P P 12 12 43.5 -0.7
AS31 Alice Springs 44.24 163 P P 12 12 43.6 -1.5
AS31 IAmb IAmb 12 12 46.3
comp=Z,5.8nm,0.4s
ASAR Alice Springs 44.24 163 P P 12 12 43.1 -2.1
comp=Z,7.8nm,0.4s,baz=345,slow=6.4,SNR=134
ASAR PcP PP 12 14 29.1 0.0
comp=Z,1.9nm,0.6s,baz=340,slow=3.1,SNR=3.8
ASAR ScP ScP 12 18 16.6 -1.2
comp=Z,1.2nm,0.9s,baz=339,slow=4.3,SNR=5.2
ASAR LR LR 12 34 19.3
comp=Z,100nm,18.2s,baz=314,slow=40
ASAR Alice Springs 44.24 163 P P 12 12 43.4 -1.8
ASAR PcP 12 14 29.2 0.0
ASAR Alice Springs 44.24 163 P P 12 12 43.4 -1.8
PET Petropavlovsk 44.59 32 P P 12 12 47.8 +0.2
PET Petropavlovsk 44.59 32 P P 12 12 47.8 +0.2
PET pmax pmax
comp=Z,94nm,1.5s
ZAA0 Zalesovo Array 44.60 330 P P 12 12 48.0 +0.3
ZALV Zalesovo Beam 44.60 330 P P 12 12 48.9 +1.2
comp=Z,3.8nm,0.7s,baz=110,slow=7.5,SNR=8.3
ZALV LR LR 12 32 33.4
comp=Z,345nm,18.8s,baz=113,slow=37
ZALV Zalesovo Beam 44.60 330 P P 12 12 48.4 +0.7
ZALV Zalesovo Beam 44.60 330 iP P 12 12 52.9 +5.2
ZALV pmax pmax
comp=Z,4.0nm,0.7s
NIL Nilore 44.96 299 P P 12 12 51.4 +0.5
NIL Nilore 44.96 299 P P 12 12 51.4 +0.5
NIL pmax pmax
comp=Z,39nm,0.9s
MA2 Magadan 45.73 21⇑eP P 12 12 56.9 +0.4
MA2 pmax pmax
comp=Z,18nm,1.3s
AAK Ala-Archa 45.75 311 P P 12 12 58.6 +1.4
comp=Z,0.6nm,0.6s,baz=165,slow=12,SNR=2.2
AAK PcP PcP 12 14 35.1 +0.7
comp=Z,4.3nm,0.6s,baz=137,slow=4.7,SNR=9.5
AAK Ala-Archa 45.75 311 P P 12 12 57.9 +0.7
AAK Ala-Archa 45.75 311⇓eP P 12 12 55.6 -1.6
AAK pmax pmax
comp=Z,2.0nm,1.3s
CTA Charters Tower 46.02 146 P P 12 12 57.2 -2.0
comp=Z,3.3nm,0.7s,baz=323,slow=13,SNR=4.4
KURK Kurchatov 46.10 323 P P 12 12 59.7 +0.1
KURK IAmb IAmb 12 13 07.8
comp=Z,7.1nm,0.8s
KURK Kurchatov 46.10 323 P P 12 13 00.8 +1.2
KURBB Kurchatov Arra 46.11 323 P P 12 13 01.0 +1.3
comp=Z,2.6nm,0.6s,baz=120,slow=7.9,SNR=23
KURBB PcP PcP 12 14 34.9 -0.4
comp=Z,2.7nm,1.0s,baz=117,slow=3.9,SNR=2.6
MORW Morawa 48.10 186 P P 12 13 14.0 -1.4
KBL Kabul 48.52 300 P P 12 13 19.5 +0.5
KBL IAmb IAmb 12 13 30.1
comp=Z,15nm,1.0s
KBL Kabul 48.52 300 P P 12 13 19.5 +0.5
KBL pmax pmax
comp=Z,15nm,1.0s
KK31 Karatay Array 48.70 311 iP P 12 13 21.8 +1.8
KKAR Karatay Array 48.70 311 P P 12 13 21.3 +1.3
KKAR PcP PcP 12 14 45.1 +0.4
KKAR Karatay Array 48.70 311 P P 12 13 21.0 +1.0
KKAR IAmb IAmb 12 13 32.9
comp=Z,12nm,1.2s
KKAR Karatay Array 48.70 311 P P 12 13 21.3 +1.3
SEY Seymchan 48.79 18⇑eP P 12 13 20.8 +0.5
BRVK Borovoye 51.77 323 P P 12 13 44.1 +1.1
BRVK IAmb IAmb 12 13 53.8
comp=Z,12nm,1.0s
BRVK Borovoye 51.77 323 P P 12 13 44.1 +1.1
BRVK pmax pmax
comp=Z,12nm,1.0s
NWAO Narrogin (SRO) 51.83 184 P P 12 13 42.9 -0.8
NWAO IAmb IAmb 12 13 44.3
comp=Z,29nm,1.4s
NWAO Narrogin (SRO) 51.83 184 P P 12 13 42.9 -0.8
NWAO pmax pmax
comp=Z,29nm,1.4s
TIXI Tiksi 52.78 3 P P 12 13 49.7 -0.5
TIXI Tiksi 52.78 3c iP P 12 13 49.5 -0.7
TIXI pmax pmax
comp=Z,92nm,1.7s
BBOO Buckleboo 53.50 164 P P 12 13 55.1 -0.9
HRA Herat 54.13 299 P P 12 14 00.9 -0.1
STKA Stephens Creek 54.29 159 P P 12 14 00.9 -0.9
comp=Z,1.7nm,0.5s,baz=331,slow=9.4,SNR=8.1
BILL Bilibino 56.50 19 P P 12 14 16.9 -0.3
BILL Bilibino 56.50 19ceP P 12 14 17.1 -0.1
BILL e 12 15 13.2
BILL pmax pmax
comp=Z,14nm,0.8s
BILL MLR MLR
comp=Z,129nm,22.0s
ABKAR Akbulak array 57.09 317 P P 12 14 22.4 +0.7
ARMA Armidale 57.25 149 P P 12 14 23.5 +0.3
ARMA IAmb IAmb 12 14 27.0
comp=Z,4.9nm,0.8s
GEYT Alibeck 57.49 303 P P 12 14 25.9 +1.0
GYA0B ALIBECK ARRAY 57.49 303 P P 12 14 25.4 +0.6
GYA0B IAmb IAmb 12 14 29.0
comp=Z,7.3nm,0.8s

SVE Sverdlovsk 58.21 326 eP P 12 14 30.7 +1.2
SVE pmax pmax
comp=Z,26nm,1.0s
AKTO Aktyubinsk 58.50 318 P P 12 14 31.6 0.0
comp=Z,3.7nm,0.9s,baz=90,slow=10.0,SNR=8.5
ARU Arti 59.24 325 P P 12 14 37.1 +0.5
comp=Z,1.7nm,0.2s,baz=119,slow=3.7,SNR=11
ARU Arti 59.24 325 P P 12 14 36.7 +0.2
ARU IAmb IAmb 12 14 46.5
comp=Z,11nm,0.9s
ARU Arti 59.24 325⇑eP P 12 14 36.8 +0.2
ARU pmax pmax
comp=Z,8.0nm,1.0s
CAN Canberra 60.18 154 P P 12 14 43.2 -0.1
CAN Canberra 60.18 154 P P 12 14 43.2 -0.1
CAN pmax pmax
comp=Z,31nm,1.5s
DZM Mont Dzumac 60.24 131 eLR LR 12 32 33.3
comp=Z,398nm,23.8s
DZM Mont Dzumac 60.24 131 P P 12 14 43.3 -0.8
comp=Z,4.4nm,0.6s,baz=254,slow=8.0,SNR=6.3
DZM Mont Dzumac 60.24 131 IAmb IAmb 12 14 43.5
comp=Z,20nm,1.3s
DZM P P 12 14 43.9 -0.2
GAMB Gambell 62.98 27 P P 12 15 01.9 +0.1
GAMB IAmb IAmb 12 15 04.2
comp=Z,21nm,1.4s
KIRV Kirov 64.44 327 P P 12 15 12.0 +0.5
comp=Z,9.0nm,0.6s,baz=68,slow=5.6,SNR=5.2
KIRV Kirov 64.44 327 eP P 12 15 11.9 +0.4
AKT Akhty 65.39 308 eP P 12 15 18.4 +0.2
AKT e 12 15 49.9
AKT pmax pmax
comp=Z,13nm,1.0s
ANM Nome 65.84 27 P P 12 15 20.8 +0.2
ANM IAmb IAmb 12 15 22.4
comp=Z,9.7nm,1.0s
ANM Nome 65.84 27 P P 12 15 20.8 +0.2
ANM pmax pmax
comp=Z,10.0nm,1.0s
PRGR Permogore 66.56 330 eP P 12 15 31.0 +5.8
PRGR pmax pmax
comp=Z,11nm,0.9s
MSVF Nonsavu 66.76 120 P P 12 15 27.5 +0.2
MSVF Nonsavu 66.76 120 P P 12 15 27.5 +0.2
MSVF pmax pmax
comp=Z,20nm,1.1s
RDOG Red Dog Mine 67.21 23 P P 12 15 29.7 +0.5
RDOG IAmb IAmb 12 15 30.4
comp=Z,20nm,1.4s
GNI Garni 67.77 306 P P 12 15 34.3 +0.8
comp=Z,5.4nm,0.4s,baz=52,slow=9.1,SNR=3.1
GNI Garni 67.77 306 P P 12 15 34.0 +0.5
GNI IAmb IAmb 12 15 53.1
comp=Z,14nm,1.1s
GNI Garni 67.77 306⇑eP P 12 15 34.3 +0.8
GNI pmax pmax
comp=Z,21nm,1.3s
ZEI Tsey 68.11 309 eP P 12 15 33.8 -1.8
ZEI pmax pmax
comp=Z,5.0nm,0.8s
AKH Akhalkalaki 68.56 308 P P 12 15 39.4 +0.9
AKH IAmb IAmb 12 15 41.0
comp=Z,8.8nm,0.9s
AKH Akhalkalaki 68.56 308 P P 12 15 39.4 +0.9
AKH pmax pmax
comp=Z,9.0nm,0.9s
KBZ Khabaz 68.73 310 P P 12 15 39.6 +0.4
comp=Z,5.9nm,1.0s,baz=107,slow=5.9,SNR=13
KBZ LR LR 12 49 58.2
comp=Z,187nm,19.3s,baz=62,slow=40
KBZ Khabaz 68.73 310⇑eP P 12 15 39.1 -0.1
VRH Novokhopyorsk 68.83 318 eP P 12 15 39.0 -0.7
VRH pmax pmax
comp=Z,10.0nm,1.0s
KIV Kislovodsk 68.86 311 P P 12 15 41.0 +0.8
KIV IAmb IAmb 12 15 42.0
comp=Z,11nm,0.7s
KIV Kislovodsk 68.86 311 P P 12 15 41.0 +0.8
KIV pmax pmax
comp=Z,11nm,0.7s
NEY Neytrino 68.92 310⇓eP P 12 15 40.6 0.0
NEY pmax pmax
comp=Z,2.0nm,0.8s
KLMR Klimovskoe 69.51 329 eP P 12 15 40.6 -3.1
KLMR AMP 12 16 01.0
comp=Z,35nm,1.5s
KLMR Klimovskoe 69.51 329 eP P 12 15 40.6 -3.1
KLMR pmax pmax
comp=Z,35nm,1.5s
RAYN Ar Rayn 69.91 289 P P 12 15 47.1 +0.1
RAYN IAmb IAmb 12 15 48.1
comp=Z,8.0nm,0.8s
RAYN Ar Rayn 69.91 289 P P 12 15 47.1 +0.1
RAYN pmax pmax
comp=Z,8.0nm,0.8s
TMCR Tamitsa 70.05 332 eP P 12 15 45.9 -1.1
VSR Storozhevoye 70.43 319 eP P 12 15 49.2 -0.4
VSR pmax pmax
comp=Z,7.0nm,0.6s
IMAR Indian Mountai 70.76 26 P P 12 15 51.7 +0.3
OBN Obninsk 71.54 323 eP P 12 15 56.3 +0.1
OBN e 12 16 06.8
OBN pmax pmax
comp=Z,6.0nm,0.8s
KDAK Kodiak Island 72.09 34 P P 12 15 59.0 -0.5
KDAK Kodiak Island 72.09 34 P P 12 15 59.0 -0.5
KDAK pmax pmax
comp=Z,22nm,0.8s
TOLK Toolik Lake Re 72.14 23 IAmb IAmb 12 16 00.7
comp=Z,14nm,1.2s
DAMY Dhamar 73.12 280 P P 12 16 06.5 -0.3
DAMY IAmb IAmb 12 16 19.4
comp=Z,26nm,1.5s
RND Reindeer 73.13 28 P P 12 16 05.2 -0.5
RND Reindeer 73.13 28 P P 12 16 05.2 -0.5
RND pmax pmax
comp=Z,32nm,0.9s
MDM Murphy Dome 73.16 26 IAmb IAmb 12 16 07.2
comp=Z,15nm,0.8s
PMR Palmer 73.28 30 IAmb IAmb 12 16 20.5
comp=Z,9.4nm,0.8s
WRH Wood River Hil 73.30 27 IAmb IAmb 12 16 08.2
comp=Z,15nm,0.8s
CCB Clear Creek Bu 73.39 27 IAmb IAmb 12 16 09.0
comp=Z,9.0nm,1.1s
ILAR Eielson Array 73.76 26 P P 12 16 08.1 -1.2
comp=Z,3.5nm,0.9s,baz=266,slow=5.3,SNR=14
ILAR LR LR 12 51 53.4
comp=Z,48nm,18.6s,baz=261,slow=38
ILAR Eielson Array 73.76 26 P P 12 16 07.9 -1.3
ILAR Eielson Array 73.76 26 P P 12 16 07.9 -1.3
HDA Harding Lake 73.80 27 IAmb IAmb 12 16 08.9
comp=Z,18nm,1.2s
BMAR Burnt Mountain 74.19 24 P P 12 16 12.5 +0.7
ARCES ARCESS Array B 74.28 339 P P 12 16 12.5 +0.3
comp=Z,5.3nm,0.5s,baz=73,slow=8.1,SNR=42
ARCES LR LR 12 52 52.0
comp=Z,130nm,18.3s,baz=157,slow=39
ARCES ARCESS Array B 74.28 339 P P 12 16 12.4 +0.1
ARE0 ARCESS Array S 74.28 339 P P 12 16 12.4 +0.2
PAX Paxson 74.72 28 IAmb IAmb 12 16 16.0
comp=Z,17nm,1.2s
SCRK Sand Creek 75.15 27 IAmb IAmb 12 16 18.3
comp=Z,16nm,1.3s
DOT Dot Lake 75.19 27 IAmb IAmb 12 16 18.2
comp=Z,12nm,1.0s
FIA1 FINESS Array S 75.87 330 P P 12 16 21.5 +0.1
FIA1 IAmb IAmb 12 16 22.8
comp=Z,8.2nm,0.9s
FINES FINESS Array B 75.87 330 P P 12 16 20.9 -0.5
comp=Z,5.6nm,0.9s,baz=57,slow=7.0,SNR=9.6
FINES LR LR 12 52 28.1
comp=Z,114nm,18.6s,baz=68,slow=38
FINES FINESS Array B 75.87 330 P P 12 16 21.0 -0.5
FINES FINESS Array B 75.87 330 iP P 12 16 19.7 -1.8
FINES pmax pmax
comp=Z,6.0nm,0.9s
EGAK Eagle 76.15 26 IAmb IAmb 12 16 23.9
comp=Z,14nm,0.9s
BRTR Keskin Array B 76.25 308 P P 12 16 24.2 0.0
comp=Z,0.7nm,0.6s,baz=126,slow=6.3,SNR=7.3
BRTR LR LR 12 54 16.4
comp=Z,49nm,21.6s,baz=74,slow=39
BRTR Keskin Array B 76.25 308 P P 12 16 23.9 -0.4
VSU Vasula 76.26 327deP P 12 16 23.9 +0.2

VSU pmax pmax
comp=Z,93nm,2.5s
BCAR Beaver Creek A 76.33 28 P P 12 16 24.4 +0.3
MICGM Minsk 76.59 323 e 12 17 34.0
AKASG Malin Array Be 76.71 319 P P 12 16 25.2 -1.3
comp=Z,3.2nm,0.7s,baz=61,slow=5.9,SNR=9.4
AKASG LR LR 12 53 45.4
comp=Z,74nm,18.3s,baz=70,slow=38
AKASG Malin Array Be 76.71 319 P P 12 16 25.3 -1.1
AKASG Malin Array Be 76.71 319ceP P 12 16 26.0 -0.5
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKBB Malin Array Si 76.71 319⇓eP P 12 16 26.0 -0.5
DAWY Dawson 77.09 26 IAmb IAmb 12 16 29.7
comp=Z,13nm,0.8s
NACGM Naroch 77.11 324 e P 12 16 28.0 -0.6
RPZ Rata Peaks 77.37 145 P P 12 16 29.2 -1.0
comp=Z,15nm,0.7s,baz=272,slow=3.3,SNR=7.5
RPZ Rata Peaks 77.37 145 P P 12 16 30.4 +0.2
EPYK Eagle Plains 77.45 24 IAmb IAmb 12 16 31.1
comp=Z,15nm,0.8s
EIL Elat 77.65 297 P P 12 16 33.1 +0.9
comp=Z,6.9nm,1.1s,baz=103,slow=4.4,SNR=6.2
INK Inuvik 77.96 22 IAmb IAmb 12 16 33.9
comp=Z,23nm,1.2s
SUW Suwalki 79.38 324 eP P 12 16 41.1 -0.1
SUW Suwalki 79.38 324 eP P 12 16 41.1 -0.1
VRI Vrincioaia 79.58 315 P P 12 16 43.7 +1.2
ELL Elmali 79.84 305 P P 12 16 44.0 -0.2
ELL Elmali 79.84 305 P P 12 16 44.0 -0.2
ELL pmax pmax
comp=Z,35nm,1.0s
BURAR Bucovina Array 80.07 317 P P 12 16 44.9 -0.3
BUR08 Bucovina Ar. S 80.07 317 P P 12 16 45.2 -0.1
WHY Whitehorse 80.19 29 IAmb IAmb 12 16 47.4
comp=Z,26nm,1.2s
MLR Muntele Rosu 80.22 315 P P 12 16 46.4 +0.3
comp=Z,4.0nm,0.7s,baz=135,slow=19,SNR=9.1
MLR Muntele Rosu 80.22 315 P P 12 16 47.1 +1.0
KWP Kalwaria Pacla 81.03 319 eP P 12 16 51.0 +0.8
KWP Kalwaria Pacla 81.03 319 eP P 12 16 51.0 +0.8
SIT Sitka 81.29 33 IAmb IAmb 12 16 53.2
comp=Z,17nm,0.8s
DAG Danmarks Havn 81.41 351 iP P 12 16 51.0 -0.7
comp=Z,9.4nm,1.0s
DAG Danmarks Havn 81.41 351 iP P 12 16 51.0 -0.7
DAG pmax pmax
comp=Z,9.0nm,1.0s
UZH Uzhgorod 81.61 319 eP P 12 16 53.0 -0.3
UZH e 12 17 05.0
ABPO Ambohimpanom 81.83 247 P P 12 16 54.8 -0.4
ABPO IAmb IAmb 12 16 56.6
comp=Z,8.5nm,0.9s
ABPO Ambohimpanom 81.83 247 P P 12 16 54.8 -0.4
ABPO pmax pmax
comp=Z,9.0nm,0.9s
HFS Hagfors 82.03 331 P P 12 16 54.5 -0.7
comp=Z,3.0nm,0.7s,baz=100,slow=6.2,SNR=7.7
OJC Ojcow 82.60 321 eP P 12 16 59.1 +0.6
OJC Ojcow 82.60 321 eP P 12 16 59.1 +0.6
NB2 NORSAR Subarra 82.75 333 P P 12 16 58.1 -1.0
comp=Z,0.8nm,0.6s,baz=59,slow=5.1
NOA NORSAR Array B 82.75 333 P P 12 16 58.0 -1.0
comp=Z,1.7nm,0.9s,baz=64,slow=4.9,SNR=6.3
NOA LR LR 12 56 55.8
comp=Z,332nm,19.2s,baz=65,slow=38
VTS Vitosha 82.97 313 IAmb IAmb 12 17 02.3
comp=Z,14nm,1.2s
VTS Vitosha 82.97 313 P P 12 17 01.6 +0.9
RES Resolute Bay 83.69 9 IAmb IAmb 12 17 04.1
comp=Z,9.9nm,0.8s
VYHS Vyhne 83.81 319 eP P 12 17 05.1 +0.3
VYHS pmax pmax
comp=Z,6.0nm,1.2s
VYHS Vyhne 83.81 319 eP P 12 17 05.1 +0.3
KSP Ksiaz 84.44 322 eP P 12 17 08.7 +0.8
KSP Ksiaz 84.44 322 eP P 12 17 08.7 +0.8
KMBO Kilima Mbogo 84.64 267 P P 12 17 10.5 +0.6
comp=Z,2.1nm,0.8s,baz=41,slow=8.4,SNR=4.5
KMBO LR LR 12 51 58.0
comp=Z,88nm,21.3s,baz=100,slow=34
KMBO Kilima Mbogo 84.64 267 P P 12 17 09.9 0.0
KMBO IAmb IAmb 12 17 12.4
comp=Z,6.8nm,1.1s
KMBO Kilima Mbogo 84.64 267 iP P 12 17 11.6 +1.7
KMBO pmax pmax
comp=Z,2.0nm,0.6s
VRAC Vranov 84.87 321 P P 12 17 10.9 +0.8
comp=Z,6.4nm,0.8s,slow=21,SNR=4.8
BRG Berggiesshubel 85.79 323 eP P 12 17 15.7 +1.1
BRG pmax pmax
comp=Z,12nm,1.4s
GERES GERESS Array B 86.80 321 P P 12 17 20.2 +0.5
comp=Z,1.3nm,0.8s,baz=43,slow=6.4,SNR=5.0
GERES GERESS Array B 86.80 321 P P 12 17 19.9 +0.1
GERES GERESS Array B 86.80 321 P P 12 17 19.9 +0.1
SUMG Summit 87.57 354 iP P 12 17 23.3 -0.1
SUMG Summit 87.57 354 iP P 12 17 23.3 -0.1
YKA Yellowknife Ar 87.67 23 P P 12 17 23.8 +0.2
comp=Z,13nm,0.8s,baz=311,slow=4.8,SNR=172
YKA PKKPbc PKKPbc 12 35 09.6 -3.4
comp=Z,0.3nm,0.4s,baz=130,slow=2.2,SNR=7.3
YKA Yellowknife Ar 87.67 23⇑eP P 12 17 23.6 0.0
YKA pmax pmax
comp=Z,13nm,0.8s
LLLB Lillooet 91.30 35 P P 12 17 41.3 +0.4
C09A Chrisman Ranch 94.83 36 IAmb IAmb 12 17 58.2
comp=Z,5.2nm,0.9s
PPT Papeete 94.89 107 LR LR 12 51 49.4
comp=Z,52nm,21.2s,baz=204,slow=30
D08A Wollman Farm, 94.90 37 IAmb IAmb 12 17 58.6
comp=Z,4.3nm,0.7s
PPT2 Papeete2 94.90 107 eLR LR 12 48 31.1
comp=Z,188nm,25.8s
NEW Newport 95.19 35 IAmb IAmb 12 18 00.3
comp=Z,3.5nm,0.8s
WALA Waterton Lakes 96.40 33 IAmb IAmb 12 18 05.8
comp=Z,7.2nm,1.1s
TBI Tubuai 96.78 112 eLR LR 12 49 23.3
comp=Z,146nm,30.0s
VNDA Vanda 99.25 172 LR LR 13 06 40.9
comp=Z,52nm,18.5s,baz=334,slow=38
TAOE Nuku Hiva Isla 100.97 96 eLR LR 12 51 31.2
comp=Z,278nm,25.5s
TORD Torodi Ar. Bea 112.35 294 PKiKP PKiKP 12 23 10.0 -2.0
comp=Z,1.4nm,1.0s,baz=22,slow=2.5,SNR=3.5
TORD PP PP 12 23 51.7 -5.8
comp=Z,0.5nm,0.8s,baz=46,slow=6.4,SNR=3.8
TORD PKKPbc PKKPbc 12 34 00.7 -0.9
comp=Z,0.8nm,0.6s,baz=276,slow=2.5,SNR=4.2
TXAR Lajitas Array 115.29 43 PKP PKPdf 12 23 17.6 +0.2
comp=Z,0.8nm,0.5s,baz=198,slow=0.9,SNR=19
TXAR Lajitas Array 115.29 43 PKPdf 12 23 17.5 +0.1
TXAR Lajitas Array 115.29 43 PKIKP PKPdf 12 23 17.5 +0.1
U40A Yellville 116.17 30 PKiKP 12 23 18.2 -0.6
WVT Waverly 118.62 27 PKPdf 12 23 23.0 -0.5
WVT Waverly 118.62 27 PKIKP PKPdf 12 23 23.0 -0.5
GO10 Punta Arenas 144.67 167 PKPdf 12 24 12.2 +0.6
SDV Santo Domingo 149.88 24 PKPdf 12 24 21.7 0.0
SDV PKPbc PKPbc 12 24 26.5 0.0
RUSC La Rusia 151.49 31 PKPdf PKPdf 12 24 23.7 -0.9
RUSC PKPbc 12 24 30.5 -0.3
ROSC El Rosal 151.76 34 PKPbc PKPbc 12 24 30.6 -0.6
comp=Z,19nm,0.6s,baz=31,slow=5.8,SNR=7.8
PLCA Paso Flores 156.17 157 PKPbc PKPdf 12 24 39.3 +9.4
comp=Z,2.5nm,0.9s,baz=237,slow=6.7,SNR=3.6
PLCA PKPab PKPab 12 24 58.0 +0.4
comp=Z,7.7nm,0.8s,baz=212,slow=4.8,SNR=9.1
PLCA Paso Flores 156.17 157 PKPdf 12 24 40.1 +10
PLCA PKPab 12 24 58.5 +0.9
PLCA Paso Flores 156.17 157 PKP2 PKPab 12 24 58.5 +0.9
PB11 IPOC Station P 169.74 96 PKPab 12 25 58.9 +0.9
LPAZ La Paz 170.70 74 PKP PKPdf 12 24 43.8 -1.0
comp=Z,0.6nm,0.3s,baz=3.1,slow=2.3,SNR=5.0
LPAZ La Paz 170.70 74 PKPdf 12 24 44.7 -0.1
LPAZ La Paz 170.70 74 PKIKP PKPdf 12 24 44.7 -0.1
CPUP Villa Florida 172.64 190 PKPab PKPab 12 26 10.0 0.0
comp=Z,2.7nm,0.8s,baz=152,slow=6.0,SNR=4.7

MIRAS 07 12:41:33.6±0.0, 54°.93N×61°.07E, h0km, ML2.6/3
ISC 07 12:41:32.6±1.3, 54°.87N±0°.06×61°.1E±0°.1, h10km, n7,
σ1♀82/10, 3C-1D, Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAUR	Kamensk Uralsk	1.59	9	eP	Pn	12 41 59.0	-1.8
	baz=9.1						
KAUR				eS	Sb	12 42 21.5	-0.7
	148nm,1.9s,baz=9.1						
ARU	Arti	2.11	319	eP	Pn	12 42 07.6	-0.3
	baz=318						
ARU				eS	Sb	12 42 36.0	-1.2
	32nm,0.7s,baz=318						
PR3R	Kungur	3.44	320	eS	Sn	12 43 08.6	+1.7
	baz=320						
PR7R	Sarany	3.91	342	eP	Pb	12 42 42.5	+1.0
	baz=342						
PR7R				eS	Sb	12 43 30.9	+2.0
	37nm,2.2s						
PR4R	Vlasy	4.27	318	eS	Sn	12 43 26.5	-1.0
	baz=317						
AKTO	Aktyubinsk	4.81	204	⇑Pg	Pb	12 42 54.9	-2.1
	2.5nm,1.1s						
AKTO				⇑Lg	Lg	12 43 53.1	
	6.3nm,0.8s						
AB31	Akbulak array	5.66	187	⇓Pg	Pb	12 43 13.6	+2.2
	1.2nm,0.6s,baz=348,slow=16,SNR=4.2						
AB31				⇑Lg	Lg	12 44 27.4	
	6.7nm,0.6s,baz=359,slow=27						

GUC 07 12:42:50.2±0.5, 20°.35S×69°.17W, h100km±2km, ML3.5
SJA 07 12:42:50.0±0.8, 20°.35S×69°.20W, h102km±4km, ML3.3, MW3.3
ISC 07 12:42:51.2±1.5, 20°.36S±0°.03×69°.24W±0°.06, h100km±9km, n29, σ0.80/57, 4C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.23	20	⇓iP	Pn	12 43 05.6	-0.5
PB08				eS	Sn	12 43 16.8	-0.4
PB08					IAML	12 43 18.2	
	comp=E,3µm,0.1s						
PB08	IPOC Station P	0.23	20	iP	Pn	12 43 05.7	-0.5
PB08				eS	Sn	12 43 16.9	-0.3
GO01	Chusmiza	0.69	3	eP	Pn	12 43 08.4	-0.8
GO01				eS	Sn	12 43 22.2	-0.4
PB01	IPOC Station P	0.72	199	⇑iP	Pn	12 43 08.8	-0.2
PB01				eS	Sn	12 43 22.7	+0.4
PB01					IAML	12 43 23.8	
	comp=E,2µm,0.2s						
PB01	IPOC Station P	0.72	199	iP	Pn	12 43 08.9	-0.1
PB01				eS	Sn	12 43 22.9	+0.7
PB11	IPOC Station P	0.72	327	eP	Pn	12 43 08.6	-0.5
PB11				eS	Sn	12 43 22.4	0.0
PB11	IPOC Station P	0.72	327	iP	Pn	12 43 08.7	-0.3
PB11				iS	Sn	12 43 22.7	+0.3
TA01	Diego Aracena	0.91	257	⇑iP	Pn	12 43 10.3	-0.4
TA01				eS	Sn	12 43 26.1	+0.8
PATCX	Punta Patache	0.97	242	⇑iP	Pn	12 43 11.4	-0.1
PATCX				eS	Sn	12 43 27.6	+0.9
PATCX	Punta Patache	0.97	242	iP	Pn	12 43 11.6	+0.1
PATCX				eS	Sn	12 43 27.9	+1.2
PSGC	Pisagua	1.13	312	eP	Pn	12 43 12.6	-0.7
PSGC				eS	Sn	12 43 29.3	-0.5
PSGCX	Pisagua	1.13	312	eP	Pn	12 43 12.6	-0.6
PSGCX				iS	Sn	12 43 30.3	+0.5
PB02	IPOC Station P	1.13	213	⇑iP	Pn	12 43 13.2	-0.1
PB02				eS	Sn	12 43 30.9	+1.0
PB02					IAML	12 43 31.8	
	comp=N,2µm,0.2s						
PB02	IPOC Station P	1.13	213	eP	Pn	12 43 13.5	+0.1
PB02				iS	Sn	12 43 31.3	+1.3
MNMC	Minye Minye	1.27	345	⇓iP	Pn	12 43 14.8	-0.3
MNMC				eS	Sn	12 43 33.5	+0.5
MNMC					IAML	12 43 36.8	
	comp=N,2µm,0.2s						
MNMCX	Minye Minye	1.27	345	eP	Pn	12 43 14.9	-0.2
MNMCX				eS	Sn	12 43 34.2	+1.2
PB09	IPOC Station P	1.43	180	eP	Pn	12 43 16.9	+0.1
PB09				iS	Sn	12 43 36.7	+0.5
PB09					IAML	12 43 39.0	
	comp=N,533nm,0.4s						
PB09	IPOC Station P	1.43	180	eP	Pn	12 43 17.0	+0.1
PB09				iS	Sn	12 43 37.7	+1.5
PB09					IAML	12 43 39.6	
	comp=Z,357nm,0.2s						
PB07	IPOC Station P	1.49	204	eP	Pn	12 43 17.3	-0.2
PB07				iS	Sn	12 43 37.4	0.0
PB07	IPOC Station P	1.49	204	eP	Pn	12 43 17.5	0.0
PB07				iS	Sn	12 43 38.0	+0.5
PB03	IPOC Station P	1.75	196	eP	Pn	12 43 20.6	-0.2
PB03				iS	Sn	12 43 42.6	-0.6
PB03	IPOC Station P	1.75	196	eP	Pn	12 43 20.6	-0.2
PB03				iS	Sn	12 43 43.0	-0.2
PB16	IPOC Station P	2.03	353	iP	Pn	12 43 25.2	+0.3
PB16				iS	Sn	12 43 51.9	+1.5
PB04	IPOC Station P	2.14	203	iP	Pn	12 43 27.4	+1.6
PB04				iS	Sn	12 43 50.6	-1.6
PB04					IAML	12 43 53.0	
	comp=Z,155nm,0.1s						
LVC	Limon Verde	2.26	172	eP	Pn	12 43 28.1	+0.5
LVC				eS	Sn	12 43 56.1	+0.8
PB06	IPOC Station P	2.35	188	eP	Pn	12 43 29.0	+0.4
PB06				iS	Sn	12 43 55.9	-1.3
PB06					IAML	12 43 56.7	
	comp=Z,108nm,0.3s						
PB05	IPOC Station P	2.63	200	eP	Pn	12 43 31.7	-0.6
PB05				iS	Sn	12 44 01.3	-2.5
PB15	IPOC Station P	2.84	184	eP	Pn	12 43 35.7	+0.6
PB15				eS	Sn	12 44 08.4	-0.4
PB10	IPOC Station P	3.37	201	iP	Pn	12 43 40.6	-1.4

NEIC 07 13:16:26.1±6.1, 74°.27N±0°.06×83°.5W±0°.2, h16km±6km, Error ellipse: s-maj=8.8km s-min=7.2km az=176.0
DNK 07 13:16:28.0±2.8, 74°.37N×84°.12W, h123km±47km, ML3.5, Hypocentre not reviewed by the ISC
OTT 07 13:16:28.7±0.2, 74°.32N×83°.48W, h18km, ML4.1/8, 41km southwest from Dundas Harbour, Nu Eastern Arctic Background Seismic Zone.
ISC 07 13:16:24.1±0.6, 74°.27N±0°.04×83°.44W±0°.04, h10km, n30, σ3.60/45, Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RES	Resolute Bay	3.11	283	PN	Pn	13 17 17.2	+4.1
RES				SN	Sn	13 17 51.2	+1.0
RES				Trac		13 17 54.8	
	comp=Z,63nm,0.1s						
RES	Resolute Bay	3.11	283		Pn	13 17 17.4	+4.4
TULEG	Thule	4.33	51	PN	Pn	13 17 33.3	+3.5
TULEG				SN	Sn	13 18 17.9	-2.4
TULEG				Trac		13 18 21.0	
	comp=Z,96nm,0.3s						
TULEG	Thule	4.33	51		Pn	13 17 33.1	+3.2
TULEG	Thule	4.33	51	iP		13 17 33.1	
TULEG				iS		13 18 18.4	
TULEG					IAML	13 18 21.6	
	comp=Z,63nm,0.3s						
ILON	Igloolik, Nuna	4.95	173	PN	Pn	13 17 42.9	+4.6
ILON				SN	Sn	13 18 36.4	+0.9
ILON				Trac		13 18 38.6	
	comp=Z,40nm,0.1s						
ILON	Igloolik, Nuna	4.95	173	Pn	Pn	13 17 42.9	+4.6
ILON				Sn	Sn	13 18 36.4	+0.9
EUNU	Eureka	5.86	355	PN	Pn	13 17 53.7	+2.9
EUNU				SN	Sn	13 18 55.4	-2.5
EUNU				Trac		13 18 58.2	
	comp=Z,26nm,0.3s						
EUNU	Eureka	5.86	355	Pn	Pn	13 17 53.7	+2.9
EUNU				Sn	Sn	13 18 55.4	-2.5
KULLO	Kullorsuaq	7.03	75	iP	Pn	13 18 10.5	+3.6
KULLO	Kullorsuaq	7.03	75	PN	Pn	13 18 10.4	+3.6
KULLO				SN	Sn	13 19 22.7	-4.0
KULLO				Trac		13 19 34.5	
	comp=Z,180nm,0.9s						
KULLO	Kullorsuaq	7.03	75	Pn	Pn	13 18 10.4	+3.6
KULLO				Sn	Sn	13 19 22.7	-4.0
KULLO	Kullorsuaq	7.03	75	iP		13 18 10.6	
KULLO					IAML	13 19 24.9	
	comp=Z,20nm,0.3s						
CB31	Cambridge Bay	8.50	244	PN	Pn	13 18 30.0	+3.1
CB31				SN	Sn	13 20 00.3	-2.4
CB31				Trac		13 20 04.0	
	comp=Z,38nm,0.2s						
CB31	Cambridge Bay	8.50	244	Pn	Pn	13 18 30.0	+3.1
CB31				Sn	Sn	13 20 00.3	-2.4
NUUG	Nuugaatsiaq	9.24	92	eP		13 18 40.7	
NUUG					IAML	13 20 22.7	
	comp=Z,4.0nm,0.4s						
FRB	Frobisher Bay	11.78	146	PN	Pn	13 19 13.4	+1.6
FRB				SN	Sn	13 21 17.1	-6.0
FRB				Trac		13 21 36.3	
	comp=Z,5.8nm,0.1s						
FRB	Frobisher Bay	11.78	146	Pn	Pn	13 19 13.4	+1.6
FRB				Sn	Sn	13 21 17.1	-6.0
KUKN	Kugluktuk,NWT	11.98	254	PN	Pn	13 19 16.6	+1.9
KUKN				SN	Sn	13 21 22.2	-5.9
KUKN				Trac		13 21 41.0	
	comp=Z,10nm,0.5s						
KUKN	Kugluktuk,NWT	11.98	254	Pn	Pn	13 19 16.6	+1.9
KUKN				Sn	Sn	13 21 22.2	-5.9
SUMG	Summit	12.71	75	iP	Pn	13 19 27.0	+2.1
SUMG	Summit	12.71	75	iP		13 19 27.0	
SUMG					IAML	13 21 43.1	
	comp=Z,13nm,0.3s						
C36M	Paulatuk	13.36	269	Pn	Pn	13 19 35.4	+2.1
NOR	Nord	14.66	32	iP	Pn	13 19 50.0	-1.1
NOR	Nord	14.66	32	iP		13 19 50.0	
NOR					IAML	13 22 42.1	
	comp=Z,0.8nm,0.4s						
DAG	Danmarks Havn	15.64	51	iP	Pn	13 20 01.0	-3.1
DAG	Danmarks Havn	15.64	51	iP		13 20 01.7	
FCC	Fort Churchill	16.09	200		Pn	13 20 10.4	+0.4
FCC				IAmb	IAmb	13 20 12.4	
	comp=Z,9.3nm,1.2s						
YKW3	Yellowknife Ar	16.11	240	PN	Pn	13 20 09.7	-0.5
YKW3				PN	P	13 20 11.9	-1.6
YKW3				SN	Sn	13 22 58.8	-10
YKW3				SN	S	13 22 58.9	-23
YKW3				Trac		13 23 13.9	
	comp=Z,1.5nm,0.2s						
YKW3				Trac		13 23 30.9	
	comp=Z,571nm,4.6s						
DBG	Daneborg	16.42	59	iP		13 20 12.8	
INK	Inuvik	16.63	275	PN	Pn	13 20 18.8	+2.0
INK				SN	Sn	13 23 11.3	-10
INK				Trac		13 23 22.0	
	comp=Z,356nm,5.3s						
INK	Inuvik	16.63	275	Pn	Pn	13 20 18.7	+2.0
INK				IAmb	IAmb	13 20 26.6	
	comp=Z,1.7nm,0.9s						
NOWN	Norman Wells,	16.97	261	PN	Pn	13 20 22.2	+1.1
NOWN				SN	Sn	13 23 20.8	-8.6
NOWN				Trac		13 23 24.7	
	comp=Z,216nm,3.5s						
NOWN	Norman Wells,	16.97	261	Pn	Pn	13 20 22.2	+1.1
NOWN				Sn	Sn	13 23 20.8	-8.6
KBS	Kingsbay	20.12	34	P	P	13 20 56.3	-1.2
KBS				IAmb	IAmb	13 21 09.9	
	comp=Z,36nm,1.3s						
BMAR	Burnt Mountain	20.23	282	P	P	13 21 01.4	+2.6
IMAR	Indian Mountai	23.73	287	P	P	13 21 37.9	+2.1

IDC 07 13:24:52.7±1.9, 31°.55S×178°.32W, h0km, mb4.3/2, mb1 4.4/3, mb1mx3.9/21, mbtmp4.2/3, ML3.4/1, Error ellipse: s-maj=45.1km s-min=41.6km az=56.0
NEIC 07 13:24:56.3±0.9, 31°.7S±0°.1×178°.2W±0°.3, h30km±9km, mb4.3/3, Error ellipse: s-maj=34.1km s-min=6.0km az=113.0
ISC 07 13:24:56.9±0.9, 31°.70S±0°.07×178°.0W±0°.1, h35km, n36, σ1.83/41, mb4.4/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.43	2	P	Pn	13 25 35.9	+1.8
GLKZ				S	Sn	13 25 59.7	-2.9
RAO	Raoul Island	2.44	2	Sn	Sn	13 26 04.0	+1.2
	111nm,0.3s,baz=210,slow=20,SNR=4.2						
RAO	Raoul Island	2.44	2	Pn	Pn	13 25 33.2	-1.0
RIZ	Raoul Island	2.45	2	S	Sn	13 26 02.5	-0.6
WMGZ	Waiomatatini S	6.78	205	P	Pn	13 26 35.8	+2.0
WMGZ				S	Sn	13 27 53.1	+3.4
PKGZ	Pakihiroa	6.96	206	P	Pn	13 26 35.3	-1.1
PKGZ				S	Sn	13 27 54.7	+0.3
HAZ	Te Kaha	6.96	209	P	Pn	13 26 37.1	+0.7
HAZ				S	Sn	13 27 57.0	+2.6
PUZ	Puketiti	7.06	205	P	Pn	13 26 37.5	-0.2
PUZ				S	Sn	13 27 56.6	-0.2
RUGZ	Raukumara Rang	7.19	208	P	Pn	13 26 40.6	+1.0
RUGZ				S	Sn	13 28 00.0	0.0
TWGZ	Tauwhareparae	7.25	206	P	Pn	13 26 40.8	+0.4
TWGZ				S	Sn	13 28 01.9	+0.4
CNGZ	Carnagh Statio	7.45	204	P	Pn	13 26 43.9	+0.9
TKGZ	Te Karaka	7.53	206	P	Pn	13 26 44.9	+0.7
MWZ	Matawai	7.56	208	P	Pn	13 26 43.4	-1.2
WCZ	Waipu Caves	7.64	234	P	Pn	13 26 52.1	+6.4
URZ	Urewera	7.67	210	Pn	Pn	13 26 45.1	-1.0
	0.6nm,0.3s,baz=293,slow=7.7,SNR=18						
URZ				Sn	Sn	13 28 07.4	-4.3
	0.5nm,0.3s,baz=60,slow=16,SNR=2.9						
URZ	Urewera	7.67	210	P	Pn	13 26 45.7	-0.4
RAGZ	Rawiri	7.75	208	P	Pn	13 26 48.5	+1.2
RIGZ	Rimuhau	7.80	205	P	Pn	13 26 48.7	+0.8
OUZ	Omahuta	7.84	241	P	Pn	13 26 52.9	+4.4
KBAZ	Karaka Road Bo	7.96	226	P	Pn	13 27 11.2	+21
MUGZ	Murupara	8.00	211	P	Pn	13 26 49.3	-1.3
SNGZ	Shannon Statio	8.02	207	P	Pn	13 26 51.4	+0.5
RAHZ	Arahi	8.24	208	P	Pn	13 26 55.8	+1.9
MTHZ	Maungataniwha	8.29	209	P	Pn	13 26 57.2	+2.6
BKZ	Black Stump Fm	8.70	210	P	Pn	13 26 59.8	-0.4
KWHZ	Kaweka Forest	8.94	209	P	Pn	13 26 58.4	-5.2
NIUE	Niue	14.53	32	Pn	Pn	13 28 20.9	+0.9
CAN	Canberra	27.67	253	P	P	13 30 38.2	-3.4
CAN				IAmb	IAmb	13 30 57.1	
	comp=Z,17nm,1.5s						
AS31	Alice Springs	43.05	268	P	P	13 32 51.8	-1.7
AS31				IAmb	IAmb	13 32 52.7	
	comp=Z,3.8nm,1.5s						
ASAR	Alice Springs	43.05	268	P	P	13 32 52.2	-1.3
	comp=Z,1.1nm,0.4s,baz=107,slow=7.4,SNR=53						
WR0	Warramunga Arr	43.97	274	P	P	13 32 59.7	-1.2
WB2	Warramunga Arr	44.14	273	P	P	13 33 01.1	-1.2
WRAB	Tennant Creek	44.15	274	P	P	13 33 00.4	-1.9
WRAB				IAmb	IAmb	13 33 02.0	
	comp=Z,6.2nm,1.0s						
WRA	Warramunga Arr	44.15	273	P	P	13 33 01.1	-1.3
	comp=Z,2.6nm,0.4s,baz=115,slow=7.8,SNR=61						
FINES	FINESS Array B	146.36	339	PKPbc	PKPdf	13 44 32.8	+0.8
	comp=Z,1.6nm,0.7s,baz=41,slow=3.5,SNR=8.1						
TORD	Torodi Ar. Bea	161.53	179	PKPab	PKPab	13 45 41.1	+2.0
	comp=Z,0.5nm,0.6s,baz=160,slow=4.6,SNR=2.7						

ATH 07 13:36:34.8, 38°.23N×20°.39E, h18km±1km, ML2.6/5, Error ellipse: s-maj=2.0km s-min=0.9km az=256.0
THE 07 13:36:35.0, 38°.21N×20°.35E, h16km, ML2.8/16, Error ellipse: s-maj=1.6km s-min=0.7km az=266.0
ISC 07 13:36:34.9±1.0, 38°.22N±0°.02×20°.37E±0°.05, h17km±3km, n39, σ0.49/67, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.02	232	P	Pg	13 36 38.0	+0.1
KEF3				S	Sg	13 36 40.1	+0.1
CHV1	Chavriata, Kef	0.04	166	P	Pg	13 36 38.1	+0.2
CHV1				S	Sg	13 36 40.4	+0.4
	46µm,0.3s						
LXR1	Lixouri, Cepha	0.06	107	P	Pg	13 36 38.2	+0.1
LXRA	Lixouri, Kepha	0.06	108	P	Pg	13 36 38.2	+0.2
LXRA				S	Sg	13 36 40.3	+0.1
KEF4	Livadi, Kephal	0.06	46	P	Pg	13 36 38.1	0.0
KEF4				S	Sg	13 36 40.4	+0.1
ARGA	Argostoli. Kep	0.09	115	P	Pg	13 36 38.4	0.0
ARGA				S	Sg	13 36 40.6	-0.1
KEF1	Kardakata, Kep	0.10	52	P	Pg	13 36 38.4	-0.1
KEF1				S	Sg	13 36 40.5	-0.4
ARG2	Argostoli	0.10	113	P	Pg	13 36 38.5	+0.1
ARG2				S	Sg	13 36 40.9	+0.1
	19µm,0.2s						
KEF2	Argostoli. Kep	0.10	119	P	Pg	13 36 38.6	+0.1
KEF2				S	Sb	13 36 40.8	+0.1
VLS	Valsamata	0.18	103	P	Pg	13 36 39.3	-0.1
VLS				S	Sg	13 36 42.5	0.0
	7µm,0.2s						
VLS	Valsamata	0.18	103	P	Pg	13 36 39.3	-0.1
VLS				S	Sg	13 36 42.3	-0.2
VLS				AML	AML	13 36 42.5	
	comp=E,15878µm,0.1s						
VLS				AML	AML	13 36 43.6	
	comp=N,9638µm,0.3s						
VSK1	VASILIKIADES	0.24	38	P	Pg	13 36 40.3	-0.2
VSK1				S	Sg	13 36 44.4	+0.1
	comp=N,5µm,0.3s						
KONA	Konidatara, Ke	0.26	37	P	Pg	13 36 40.6	-0.1
KONA				S	Sg	13 36 44.5	-0.2
VLMS	Volimes, Zakyn	0.41	146	P	Pg	13 36 43.2	-0.1
VLMS				S	Sg	13 36 49.0	0.0
VLMS				AML	AML	13 36 50.7	
	comp=N,6426µm,0.2s						
VLMS				AML	AML	13 36 51.0	
	comp=E,9214µm,0.2s						
EVGI	Lefkada island	0.46	29	P	Pg	13 36 43.9	-0.3
EVGI				S	Sb	13 36 51.1	0.0
EVGI	Lefkada island	0.46	29	P	Pg	13 36 43.9	-0.3
EVGI				S	Sg	13 36 50.3	-0.2
MGNA	Meganis	0.55	37	P	Pg	13 36 45.1	-0.7
LKD2	Lefkada island	0.61	21	P	Pg	13 36 46.4	-0.7
LKD2				S	Sn	13 36 59.0	+0.7
	comp=E,232nm,0.3s						
LKD2	Lefkada island	0.61	21	P	Pg	13 36 46.3	-0.7
LKD2				AML	AML	13 37 03.3	
	comp=N,399µm,0.3s						
LKD2				AML	AML	13 37 03.9	
	comp=E,476µm,0.4s						
TSLK	Tsoukalades, L	0.65	20	P	Pg	13 36 47.2	-0.4
TSLK	Tsoukalades, L	0.65	20	P	Pg	13 36 47.1	-0.6
TSLK				S	Sg	13 36 56.1	-0.1
KRI1	kERI	0.66	147	P	Pg	13 36 47.5	-0.3
KRI1				S	Sn	13 36 58.2	-1.0
	comp=E,835nm,0.2s						
PDO	Prodromos	0.74	59	P	Pb	13 36 49.1	-0.2
PDO				S	Sn	13 37 00.6	-0.8
	comp=E,540nm,0.5s						
PDO	Prodromos	0.74	59	P	Pb	13 36 49.1	-0.2
PDO				AML	AML	13 37 03.1	
	comp=N,677µm,0.2s						
PDO				AML	AML	13 37 03.6	
	comp=E,877µm,0.3s						
RLS	Riolos of Patr	0.88	100	P	Pb	13 36 51.1	-0.5
RLS	Riolos of Patr	0.88	100	P	Pb	13 36 51.2	-0.4
PVO	Paravola	0.99	66	P	Pb	13 36 53.6	+0.1
PVO				S	Sn	13 37 08.9	+1.4
	comp=E,242nm,0.3s						
PVO	Paravola	0.99	66	P	Pn	13 36 53.8	-0.1
PVO				AML	AML	13 37 10.2	
	comp=N,452µm,0.4s						
PVO				AML	AML	13 37 15.6	
	comp=E,507µm,0.3s						
DRO	Drossia	1.09	104	P	Pb	13 36 54.5	-0.7
AMT	Artemida-Makis	1.26	122	P	Pb	13 36 58.0	-0.1
AMT				S	Sn	13 37 14.4	+0.2
	comp=E,182nm,0.7s						
LAKA	Lakka	1.27	88	P	Pn	13 36 57.7	-0.1
ANX	Ano Chora	1.27	72	P	Pb	13 36 58.4	0.0
ANX				S	Sg	13 37 18.2	+2.0
	comp=E,608nm,0.3s						
IGT	Igoumenitsa	1.31	359	P	Pb	13 36 59.0	-0.1
IGT				S	Sg	13 37 18.4	+1.0
	comp=E,68nm,0.3s						
IGT	Igoumenitsa	1.31	359	P	Pb	13 36 59.1	+0.1
EVR	Evrytania	1.33	58	P	Pb	13 36 59.4	+0.1
EVR				S	Sg	13 37 18.2	+0.4
	comp=E,168nm,0.7s						
SERG	Sergoula	1.34	81	P	Pb	13 36 59.2	-0.3
SERG				S	Sb	13 37 16.6	+0.2
	comp=E,892nm,0.3s						
TRIZ	Trizonia	1.35	83	P	Pn	13 36 59.0	+0.2
TRIZ				S	Sb	13 37 17.4	+0.9
	comp=E,840nm,0.4s						
KALE	Kalithea	1.40	82	P	Pn	13 37 00.1	+0.4
KALE				S	Sn	13 37 17.1	-0.7
	comp=E,695nm,0.3s						
KLV	Kalavryta, Ach	1.41	96	P	Pb	13 37 00.6	-0.2
KLV				S	Sg	13 37 20.4	-0.2
	comp=E,162nm,0.6s						

ATH 07 13:36:55.7, 38°.69N×22°.75E, h13km±3km, ML2.6/16, Error ellipse: s-maj=3.0km s-min=0.9km az=286.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AXAR	Agios Charalam	0.10	317	P	Pg	13 36 58.6	0.0
AXAR				S	Sg	13 37 00.6	-0.2
AXAR				AML	AML	13 37 00.9	
	comp=E,24684µm,0.3s						
AXAR				AML	AML	13 37 01.1	
	comp=N,27917µm,0.4s						
LKR	Lokris	0.20	102	P	Pg	13 37 00.2	+0.1
LKR				S	Sg	13 37 03.4	+0.2
LKR				AML	AML	13 37 04.1	
	comp=E,10890µm,0.1s						
LKR				AML	AML	13 37 05.0	
	comp=N,14288µm,0.3s						
DLFA	Delphi	0.29	223	P	Pg	13 37 01.6	-0.1
DLFA				S	Sg	13 37 06.1	+0.4
PROD	Prodromos	0.45	164	P	Pg	13 37 04.4	-0.2
PROD				S	Sg	13 37 10.8	+0.2
PROD				AML	AML	13 37 13.8	
	comp=N,2159µm,0.2s						
PROD				AML	AML	13 37 13.9	
	comp=E,2513µm,0.2s						
AGG	Agios Georgios	0.46	315	P	Pg	13 37 04.5	-0.3
AGG	Agios Georgios	0.46	315	P	Pg	13 37 04.4	-0.4
AGG				S	Sg	13 37 11.1	+0.1
AGG				AML	AML	13 37 12.5	
	comp=E,2363µm,0.4s						
AGG				AML	AML	13 37 12.6	
	comp=N,1787µm,0.4s						
MAKR	Makrakomi, Fth	0.58	304	P	Pg	13 37 07.2	+0.3
MAKR				AML	AML	13 37 17.3	
	comp=N,1500µm,0.7s						
MAKR				AML	AML	13 37 20.9	
	comp=E,1072µm,0.5s						
VIL2	Platees	0.63	139	P	Pb	13 37 08.9	+0.3
VIL2				AML	AML	13 37 22.8	
	comp=N,1478µm,0.3s						
VIL2				AML	AML	13 37 27.1	
	comp=E,1294µm,0.6s						
MRKA	Markates	0.66	89	P	Pg	13 37 08.4	0.0
MRKA				S	Sb	13 37 17.9	-0.2
MRKA				AML	AML	13 37 21.5	
	comp=E,328µm,0.2s						
MRKA				AML	AML	13 37 24.7	
	comp=N,415µm,0.3s						
LTK	Loutraki	0.69	165	P	Pg	13 37 08.8	-0.3
LTK	Loutraki	0.69	165	P	Pg	13 37 08.9	-0.2
LTK				AML	AML	13 37 23.0	
	comp=N,1014µm,0.4s						
LTK				AML	AML	13 37 27.9	
	comp=E,744µm,0.6s						
NEO	Neokhori	0.72	31	P	Pg	13 37 09.4	-0.2
NEO				AML	AML	13 37 22.4	
	comp=N,2261µm,0.3s						
NEO				AML	AML	13 37 23.3	
	comp=E,1647µm,0.2s						
SKIA	Skiathos	0.73	50	P	Pg	13 37 10.0	+0.1
SKIA				S	Sg	13 37 19.8	+0.3
SKIA				AML	AML	13 37 21.4	
	comp=E,302µm,0.2s						
SKIA				AML	AML	13 37 25.2	
	comp=N,430µm,0.5s						
XOR	Xorichti	0.76	27	P	Pg	13 37 10.0	-0.3
XOR				AML	AML	13 37 24.0	
	comp=N,2004µm,0.2s						
XOR				AML	AML	13 37 24.5	
	comp=E,1150µm,0.3s						
EREA	Eretria	0.97	106	P	Pb	13 37 13.6	-0.7
EREA				AML	AML	13 37 32.8	
	comp=E,601µm,0.5s						
EREA				AML	AML	13 37 34.5	
	comp=N,429µm,0.3s						
AOS	Alonnisos	1.00	61	P	Pb	13 37 14.3	-0.6
ATH	Athens Observa	1.05	133	P	Pb	13 37 15.6	-0.1
ATH				AML	AML	13 37 35.0	
	comp=N,723µm,0.5s						
ATH				AML	AML	13 37 36.4	
	comp=E,797µm,0.3s						
PTL	Penteli	1.09	126	P	Pb	13 37 16.2	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PTL				AML	AML	13 37 35.7	
	comp=E,409μm,0.6s						
PTL				AML	AML	13 37 38.9	
	comp=N,324μm,0.6s						
ATHU	**Athens Univers**	**1.09**	**131**	P	Pn	13 37 17.0	+0.3
VLY	**Voula,Athens**	**1.18**	**135**	P	Pg	13 37 18.2	-0.1
VLY				AML	AML	13 37 37.5	
	comp=N,384μm,0.6s						
VLY				AML	AML	13 37 38.1	
	comp=E,352μm,0.3s						
DID	**Didima**	**1.25**	**162**	P	Pb	13 37 19.2	+0.1
DID				AML	AML	13 37 41.8	
	comp=E,202μm,0.6s						
DID				AML	AML	13 37 43.5	
	comp=N,332μm,0.5s						
KARY	**Karystos**	**1.48**	**116**	P	Pn	13 37 22.6	+0.5

IDC 07 13:39:35.0±1.4, 29°.41S×179°.11W, h334km±15km, mb3.1/3, mb1 3.4/4, mb1mx3.2/21, mbtmp4.0/4, Error ellipse: s-maj=36.5km s-min=24.5km az=43.0

ISC 07 13:39:34.6±0.9, **29°.71S**±0°.09×**179°.5W**±0°.1, **h300km, n60,** σ**1.34**/74, **mb3.3**/3, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**1.48**	**72**	P	**Pn**	**13 40 19.1**	**+1.4**
RIZ				S	**S**	**13 40 50.8**	**-1.1**
GLKZ	**Green Lake**	**1.48**	**73**	P	**Pn**	**13 40 20.4**	**+2.8**
GLKZ				S	**S**	**13 40 51.7**	**-0.2**
RAO	**Raoul Island**	**1.49**	**73**	P	**Pn**	**13 40 19.7**	**+2.0**
	175nm,0.3s,baz=286,slow=15,SNR=7.1						
RAO				S	**S**	**13 40 52.2**	**+0.2**
	84nm,0.3s,baz=246,slow=20,SNR=3.1						
MXZ	**Matakaoa Point**	**8.04**	**192**	P	**Pn**	**13 41 32.2**	**+3.7**
MXZ				S	**S**	**13 43 00.8**	**-0.1**
WMGZ	**Waiomatatini S**	**8.27**	**191**	P	**Pn**	**13 41 32.1**	**+0.8**
WMGZ				S	**S**	**13 43 06.8**	**+0.7**
HAZ	**Te Kaha**	**8.33**	**195**	P	**Pn**	**13 41 33.3**	**+1.2**
HAZ				S	**S**	**13 43 08.0**	**+0.5**
PKGZ	**Pakihiroa**	**8.40**	**193**	P	**Pn**	**13 41 33.6**	**+0.6**
PKGZ				S	**S**	**13 43 06.1**	**-3.0**
PUZ	**Puketiti**	**8.54**	**192**	P	**Pn**	**13 41 36.4**	**+1.7**
PUZ				S	**S**	**13 43 11.5**	**-0.8**
RUGZ	**Raukumara Rang**	**8.55**	**195**	P	**Pn**	**13 41 36.6**	**+1.6**
TWGZ	**Tauwhareparae**	**8.70**	**193**	P	**P**	**13 41 40.6**	**-1.1**
TWGZ				S	**S**	**13 43 17.4**	**+1.6**
OPRZ	**Ohinepanea**	**8.74**	**201**	P	**P**	**13 41 42.8**	**+0.6**
MARZ	**Manawahe**	**8.83**	**200**	P	**P**	**13 41 43.2**	**-0.1**
MWZ	**Matawai**	**8.94**	**195**	P	**Pn**	**13 41 39.1**	**-0.6**
MWZ				S	**S**	**13 43 20.7**	**-0.7**
CNGZ	**Carnagh Statio**	**8.95**	**191**	P	**Pn**	**13 41 39.8**	**+0.1**
URZ	**Urewera**	**8.97**	**197**	P	**P**	**13 41 43.5**	**-1.2**
	6.2nm,0.3s,baz=91,slow=9.6,SNR=62						
URZ				S	**S**	**13 43 22.5**	**+0.5**
	0.9nm,0.3s,baz=299,slow=19,SNR=4.2						
URZ	**Urewera**	**8.97**	**197**	P	**Pn**	**13 41 41.8**	**+1.8**
TKGZ	**Te Karaka**	**8.97**	**193**	P	**Pn**	**13 41 39.0**	**-1.0**
TKGZ				S	**S**	**13 43 21.5**	**-0.5**
RIGZ	**Rimuhau**	**9.25**	**193**	P	**Pn**	**13 41 43.3**	**-0.2**
RIGZ				S	**S**	**13 43 26.7**	**-1.7**
MUGZ	**Murupara**	**9.27**	**198**	P	**Pn**	**13 41 43.5**	**-0.1**
MUGZ				S	**S**	**13 43 30.3**	**+1.7**
RTZ	**Ruatahuna**	**9.34**	**197**	P	**Pn**	**13 41 42.9**	**-1.7**
PRRZ	**Plateau Road**	**9.39**	**200**	P	**P**	**13 41 48.2**	**-1.3**
SNGZ	**Shannon Statio**	**9.41**	**195**	P	**Pn**	**13 41 46.6**	**+1.2**
PRGZ	**Paritu Road**	**9.44**	**192**	P	**P**	**13 41 49.9**	**0.0**
TLZ	**Tolley Road**	**9.52**	**204**	P	**P**	**13 41 53.7**	**+2.8**
KNZ	**Kokohu**	**9.57**	**193**	P	**Pn**	**13 41 47.7**	**+0.4**
MTHZ	**Maungataniwha**	**9.60**	**197**	P	**Pn**	**13 41 49.9**	**+2.2**
RAHZ	**Arahi**	**9.60**	**196**	P	**Pn**	**13 41 49.2**	**+1.5**
MHGZ	**Mahia Peninsul**	**9.65**	**192**	P	**P**	**13 41 51.8**	**-0.5**
MRHZ	**Matea Rd**	**9.70**	**199**	P	**Pn**	**13 41 50.7**	**+1.8**
WHHZ	**Waihua**	**9.72**	**195**	P	**P**	**13 41 51.8**	**-1.2**
NMHZ	**Naumai**	**9.84**	**197**	P	**Pn**	**13 41 51.1**	**+0.4**
HATZ	**Hinemaiaia**	**9.85**	**200**	P	**P**	**13 41 53.2**	**-1.3**
ARHZ	**Aropaoanui**	**9.95**	**196**	P	**Pn**	**13 41 53.2**	**+1.2**
BKZ	**Black Stump Fm**	**9.99**	**198**	P	**Pn**	**13 41 51.4**	**-1.0**
MCHZ	**McNeill Hill**	**10.20**	**197**	P	**P**	**13 41 57.2**	**-1.2**
KWHZ	**Kaweka Forest**	**10.25**	**198**	P	**Pn**	**13 41 57.4**	**+1.7**
NGZ	**Ngauruhoe**	**10.26**	**202**	P	**P**	**13 41 58.8**	**-0.4**
CKHZ	**Cape Kidnapper**	**10.31**	**195**	P	**P**	**13 41 59.0**	**-0.6**
TUVZ	**Tukino**	**10.33**	**201**	P	**P**	**13 41 59.0**	**-1.0**
FWVZ	**Far West T-bar**	**10.35**	**202**	P	**P**	**13 41 59.5**	**-0.7**
BHHZ	**Black Hill Sta**	**10.41**	**199**	P	**Pn**	**13 41 57.8**	**+0.1**
MOVZ	**Moawhango**	**10.42**	**201**	P	**Pn**	**13 41 59.1**	**+1.3**
KRHZ	**Kereru**	**10.47**	**198**	P	**Pn**	**13 41 58.6**	**+0.2**
KAHZ	**Kahuranaki**	**10.48**	**195**	P	**Pn**	**13 41 59.4**	**+0.9**
MTVZ	**Mangateitei**	**10.49**	**202**	P	**P**	**13 42 00.8**	**-1.0**
PXZ	**Pawanui**	**10.71**	**195**	P	**Pn**	**13 42 00.8**	**-0.5**
PNHZ	**Pukenui**	**10.77**	**198**	P	**Pn**	**13 42 01.8**	**-0.2**
WPHZ	**Waipukurau**	**10.85**	**197**	P	**P**	**13 42 04.6**	**-1.0**
TSZ	**Takapari Road**	**10.96**	**198**	P	**Pn**	**13 42 04.5**	**+0.1**
PRHZ	**Porangahau**	**10.99**	**196**	P	**Pn**	**13 42 05.7**	**+1.0**
DVHZ	**Dannevirke**	**11.13**	**197**	P	**Pn**	**13 42 07.4**	**+0.9**
ANWZ	**Angora Road**	**11.21**	**196**	P	**P**	**13 42 08.8**	**-0.8**
POWZ	**Post Office Ro**	**11.33**	**199**	P	**Pn**	**13 42 09.3**	**+0.5**
PRWZ	**Pori Road**	**11.43**	**198**	P	**Pn**	**13 42 10.4**	**+0.3**
BFZ	**Birch Farm**	**11.48**	**196**	P	**Pn**	**13 42 10.8**	**+0.2**
CPWZ	**Castlepoint**	**11.70**	**196**	P	**Pn**	**13 42 14.2**	**+0.9**
ASAR	**Alice Springs**	**41.81**	**267**	P	**P**	**13 46 56.1**	**+0.3**
	0.5nm,0.5s,baz=102,slow=6.9,SNR=15						
WRA	**Warramunga Arr**	**42.74**	**272**	P	**P**	**13 47 03.7**	**+0.5**
	1.0nm,0.3s,baz=110,slow=7.9,SNR=27						
QSPA	**South Pole Qui**	**60.40**	**180**	P	**P**	**13 49 12.2**	**-0.3**
	0.5nm,0.5s,baz=39,slow=13,SNR=7.1						
FINES	**FINESS Array B**	**144.03**	**339**	PKP	**PKPab**	**13 58 27.9**	**-4.2**
	0.9nm,0.3s,baz=56,slow=3.7,SNR=9.9						

IDC 07 13:42:03.5±1.4, 38°.27N×20°.54E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.4/29, mbtmp3.6/4, MS3.1/2, Ms1 3.1/2, ms1mx2.6/37, Error ellipse: s-maj=65.9km s-min=24.7km az=129.0

ATH 07 13:42:04.2, 38°.19N×20°.38E, h9km±1km, ML3.3/22, Error ellipse: s-maj=1.5km s-min=0.8km az=250.0

THE 07 13:42:04.0, 38°.21N×20°.28E, h1km±3km, ML3.3/27, Error ellipse: s-maj=4.0km s-min=0.7km az=259.0

TIR 07 13:42:05.2, 38°.57N×21°.31E, h7km, Md4.2/6

ISC 07 13:42:03.1±0.8, **38°.24N**±0°.02×**20°.29E**±0°.02, **h7km**±5km, **n97,** σ**1.54**/143, **mb3.6**/4, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.06**	**132**	P	**Pg**	**13 42 05.8**	**+1.0**
KEF3				S	**Sg**	**13 42 06.8**	**+0.8**
CHV1	**Chavriata, Kef**	**0.09**	**130**	P	**Pg**	**13 42 05.7**	**+0.4**
KEF4	**Livadi, Kephal**	**0.11**	**82**	P	**Pg**	**13 42 06.3**	**+0.8**
KEF4				S	**Sg**	**13 42 07.8**	**+0.6**
LXR1	**Lixouri, Cepha**	**0.12**	**110**	P	**Pg**	**13 42 06.0**	**+0.2**
LXRA	**Lixouri, Kepha**	**0.12**	**110**	P	**Pg**	**13 42 06.1**	**+0.3**
LXRA				S	**Sg**	**13 42 07.3**	**-0.3**
KEF1	**Kardakata, Kep**	**0.15**	**76**	P	**Pg**	**13 42 06.8**	**+0.7**
KEF1				S	**Sg**	**13 42 08.6**	**+0.4**
ARGA	**Argostoli. Kep**	**0.16**	**114**	P	**Pg**	**13 42 06.7**	**+0.3**
ARGA				S	**Sg**	**13 42 08.5**	**-0.2**
ARG2	**Argostoli**	**0.17**	**113**	P	**Pg**	**13 42 06.9**	**+0.3**
ARG2				S	**Sg**	**13 42 08.6**	**-0.3**
	120μm,0.6s						
KEF2	**Argostoli. Kep**	**0.17**	**117**	P	**Pg**	**13 42 07.0**	**+0.4**
KEF2				S	**Sg**	**13 42 08.6**	**-0.4**
VLS	**Valsamata**	**0.24**	**106**	P	**Pg**	**13 42 08.0**	**0.0**
VLS				S	**Sg**	**13 42 11.0**	**-0.3**
	48μm,0.2s						
VLS	**Valsamata**	**0.24**	**106**	P	**Pg**	**13 42 08.0**	**0.0**
VLS				S	**Sg**	**13 42 10.7**	**-0.5**
VLS				AML	AML	13 42 11.0	
VLS				AML	AML	13 42 11.1	
	comp=E,75018μm,0.1s						
VSK1	**VASILIKIADES**	**0.27**	**52**	P	**Pb**	**13 42 09.6**	**-0.7**
VSK1				S	**Sb**	**13 42 14.2**	**-1.0**
	comp=E,19μm,0.4s						
KONA	**Konidatara, Ke**	**0.28**	**50**	P	**Pb**	**13 42 09.8**	**-0.8**
KONA				S	**Sb**	**13 42 14.3**	**-1.3**
VLMS	**Volimes, Zakyn**	**0.47**	**141**	P	**Pg**	**13 42 12.4**	**+0.2**
VLMS				S	**Sg**	**13 42 17.4**	**-0.9**
VLMS				AML	AML	13 42 24.6	
	comp=E,15154μm,0.3s						
VLMS				AML	AML	13 42 26.1	
	comp=N,21265μm,0.4s						
EVGI	**Lefkada island**	**0.47**	**37**	P	**Pb**	**13 42 13.6**	**-0.2**
EVGI				S	**Sb**	**13 42 21.3**	**+0.3**
	comp=N,5μm,0.9s						
EVGI	**Lefkada island**	**0.47**	**37**	P	**Pb**	**13 42 13.5**	**-0.3**
EVGI				S	**Sb**	**13 42 20.6**	**-0.4**
MGNA	**Meganis**	**0.57**	**43**	P	**Pb**	**13 42 14.8**	**-0.6**
MGNA				S	**Sb**	**13 42 23.3**	**-0.4**
MGNA				AML	AML	13 42 24.0	
	comp=N,12666μm,0.3s						
MGNA				AML	AML	13 42 24.2	
	comp=E,9719μm,0.2s						
LKD2	**Lefkada island**	**0.62**	**28**	P	**Pb**	**13 42 16.0**	**-0.2**
LKD2				S	**Sn**	**13 42 26.0**	**-2.5**
	comp=E,2μm,0.3s						
LKD2	**Lefkada island**	**0.62**	**28**	P	**Pb**	**13 42 16.1**	**-0.2**
LKD2				S	**Sn**	**13 42 25.5**	**-3.0**
LKD2				AML	AML	13 42 27.0	
	comp=N,4450μm,0.3s						
LKD2				AML	AML	13 42 27.1	
	comp=E,2972μm,0.3s						
TSLK	**Tsoukalades, L**	**0.65**	**26**	P	**Pn**	**13 42 16.7**	**-2.0**
TSLK				S	**Sn**	**13 42 28.0**	**-1.2**
	comp=E,2μm,0.3s						
TSLK	**Tsoukalades, L**	**0.65**	**26**	P	**Pn**	**13 42 16.7**	**-2.0**
TSLK				S	**Sn**	**13 42 26.9**	**-2.4**
ZAK2	**Zakynthos**	**0.66**	**133**	P	**Pg**	**13 42 16.0**	**+0.1**
ZAK2				S	**Sb**	**13 42 26.8**	**+0.5**
	comp=E,28μm,0.6s						
AST1	**Astakos**	**0.69**	**64**	P	**Pb**	**13 42 17.0**	**-0.5**
AST1				S	**Sb**	**13 42 26.9**	**-0.4**
	comp=E,3μm,0.3s						
KRI1	**kERI**	**0.71**	**144**	P	**Pg**	**13 42 16.5**	**-0.4**
KRI1				S	**Sb**	**13 42 28.5**	**+0.6**
	comp=E,8μm,0.8s						
PDO	**Prodromos**	**0.79**	**63**	P	**Pb**	**13 42 18.6**	**-0.5**
PDO				S	**Sn**	**13 42 32.2**	**-0.4**
	comp=E,3μm,0.3s						
PDO	**Prodromos**	**0.79**	**63**	P	**Pb**	**13 42 18.5**	**-0.6**
PDO				AML	AML	13 42 34.6	
	comp=E,4143μm,0.3s						
PDO				AML	AML	13 42 39.0	
	comp=N,4979μm,0.5s						
RLS	**Riolos of Patr**	**0.94**	**101**	P	**Pg**	**13 42 20.8**	**-0.4**
RLS				S	**Sn**	**13 42 36.2**	**-0.3**
	comp=N,1μm,1.1s						
RLS	**Riolos of Patr**	**0.94**	**101**	P	**Pg**	**13 42 20.9**	**-0.4**
RLS				S	**Sg**	**13 42 32.5**	**-1.1**
RLS				AML	AML	13 42 40.5	
	comp=E,2480μm,0.5s						
RLS				AML	AML	13 42 43.5	
	comp=N,1695μm,0.6s						
PVO	**Paravola**	**1.04**	**69**	P	**Pn**	**13 42 23.3**	**-0.8**
PVO				S	**Sn**	**13 42 40.3**	**+1.4**
	comp=N,2μm,0.6s						
PVO	**Paravola**	**1.04**	**69**	P	**Pn**	**13 42 23.2**	**-0.9**
PVO				AML	AML	13 42 46.5	
	comp=E,2828μm,0.3s						
PVO				AML	AML	13 42 48.1	
	comp=N,2937μm,0.5s						
DRO	**Drossia**	**1.16**	**104**	P	**Pb**	**13 42 24.8**	**-0.6**
DRO				S	**Sn**	**13 42 43.1**	**+1.3**
	comp=N,2μm,0.6s						
DRO	**Drossia**	**1.16**	**104**	P	**Pb**	**13 42 24.9**	**-0.6**
DRO				S	**Sb**	**13 42 39.8**	**-0.8**
DRO				AML	AML	13 42 48.6	
	comp=E,5266μm,0.8s						
DRO				AML	AML	13 42 49.1	
	comp=N,4650μm,0.5s						
IGT	**Igoumenitsa**	**1.29**	**1**	P	**Pg**	**13 42 27.8**	**0.0**
IGT				S	**Sg**	**13 42 45.6**	**+1.0**
	comp=N,430nm,0.5s						
IGT	**Igoumenitsa**	**1.29**	**1**	P	**Pg**	**13 42 29.2**	**+1.3**
AMT	**Artemida-Makis**	**1.33**	**122**	P	**Pg**	**13 42 28.7**	**+0.1**
AMT	**Artemida-Makis**	**1.33**	**122**	P	**Pb**	**13 42 28.4**	**0.0**
AMT				AML	AML	13 42 57.7	
	comp=N,4868μm,0.8s						
AMT				AML	AML	13 42 59.1	
	comp=E,6168μm,0.8s						
ANX	**Ano Chora**	**1.33**	**74**	P	**Pg**	**13 42 29.0**	**+0.4**
ANX				S	**Sg**	**13 42 48.9**	**+3.1**
	comp=E,2μm,0.7s						
ANX	**Ano Chora**	**1.33**	**74**	P	**Pb**	**13 42 27.9**	**-0.5**
ANX				AML	AML	13 42 54.7	
	comp=E,3140μm,0.7s						
ANX				AML	AML	13 42 56.0	
	comp=N,4014μm,0.8s						
LAKA	**Lakka**	**1.33**	**90**	P	**Pn**	**13 42 27.6**	**-0.5**
LAKA				S	**Sg**	**13 42 47.8**	**+1.9**
	comp=N,750nm,0.5s						
LAKA	**Lakka**	**1.33**	**90**	P	**Pn**	**13 42 27.4**	**-0.7**
LAKA				AML	AML	13 42 52.6	
	comp=N,1731μm,0.6s						
LAKA				AML	AML	13 42 57.3	
	comp=E,1396μm,0.7s						
EVR	**Evrytania**	**1.37**	**60**	P	**Pg**	**13 42 29.2**	**-0.1**
EVR				S	**Sg**	**13 42 48.5**	**+1.4**
	comp=E,480nm,1.2s						
EVR	**Evrytania**	**1.37**	**60**	P	**Pb**	**13 42 28.7**	**-0.4**
EVR				AML	AML	13 42 59.1	
	comp=E,863μm,0.5s						
EVR				AML	AML	13 43 00.4	
	comp=N,988μm,0.8s						
SERG	**Sergoula**	**1.40**	**82**	P	**Pn**	**13 42 28.5**	**-0.6**
SERG				S	**Sg**	**13 42 51.7**	**+3.6**
	comp=N,848nm,0.5s						
SERG	**Sergoula**	**1.40**	**82**	P	**Pb**	**13 42 28.7**	**-0.4**
SERG				AML	AML	13 42 57.2	
	comp=N,1967μm,0.5s						
SERG				AML	AML	13 43 07.6	
	comp=E,1328μm,0.6s						
TRIZ	**Trizonia**	**1.41**	**84**	P	**Pn**	**13 42 28.8**	**-0.3**
TRIZ				S	**Sg**	**13 42 50.9**	**+2.5**
	comp=E,952nm,0.6s						
TRIZ	**Trizonia**	**1.41**	**84**	P	**Pb**	**13 42 29.0**	**-0.7**
KALE	**Kalithea**	**1.46**	**84**	P	**Pn**	**13 42 29.5**	**-0.5**
KALE				S	**Sg**	**13 42 52.5**	**+2.4**
	comp=E,408nm,1.1s						
KALE	**Kalithea**	**1.46**	**84**	P	**Pn**	**13 42 29.5**	**-0.5**
KALE				AML	AML	13 43 02.5	
	comp=N,1006μm,0.6s						
KALE				AML	AML	13 43 03.7	
	comp=E,1068μm,1.0s						
JAN	**Janina**	**1.48**	**17**	P	**Pg**	**13 42 33.3**	**+1.9**
JAN				AML	AML	13 43 06.5	
	comp=E,1223μm,0.8s						
JAN				AML	AML	13 43 06.8	
	comp=N,925μm,1.2s						
KLV	**Kalavryta, Ach**	**1.48**	**97**	P	**Pb**	**13 42 30.6**	**-0.4**
KLV				S	**Sg**	**13 42 53.2**	**+2.5**
	comp=N,772nm,1.0s						
KLV	**Kalavryta, Ach**	**1.48**	**97**	P	**Pn**	**13 42 29.9**	**-0.3**
KLV				AML	AML	13 43 00.9	
	comp=N,1584μm,1.0s						
KLV				AML	AML	13 43 03.4	
	comp=E,1594μm,1.0s						
KEK	**Kerkira**	**1.52**	**346**	P	**Pg**	**13 42 31.5**	**-0.7**
KEK				S	**Sg**	**13 42 54.1**	**+2.2**
	comp=E,360nm,1.1s						
KASA	**Kassiopi**	**1.53**	**350**	P	**Pg**	**13 42 34.4**	**+2.0**
MAKR	**Makrakomi, Fth**	**1.63**	**61**	P	**Pg**	**13 42 33.6**	**-0.9**
MAKR				S	**Sg**	**13 42 56.3**	**+0.7**
	comp=E,762nm,0.6s						
MAKR	**Makrakomi, Fth**	**1.63**	**61**	P	**Pg**	**13 42 34.3**	**-0.1**
SRN	**Sarande**	**1.65**	**352**	*i* PN	**Pg**	**13 42 33.4**	**-1.4**
SRN				*i* SN	**Sg**	**13 42 59.1**	**+2.9**
ITM	**Ithomi**	**1.68**	**129**	P	**Pn**	**13 42 33.0**	**+0.1**
ITM	**Ithomi**	**1.68**	**129**	P	**Pb**	**13 42 33.3**	**-1.0**
ITM				AML	AML	13 43 12.6	
	comp=N,1100μm,1.4s						
ITM				AML	AML	13 43 12.8	
	comp=E,1312μm,1.3s						
PYL	**PYLOS**	**1.77**	**139**	P	**Pn**	**13 42 34.6**	**+0.5**
AGG	**Agios Georgios**	**1.78**	**63**	P	**Pg**	**13 42 37.3**	**+0.1**
AGG	**Agios Georgios**	**1.78**	**63**	P	**Pg**	**13 42 37.3**	**+0.1**
VLX	**Vlachokerasia**	**1.87**	**117**	P	**Pb**	**13 42 37.2**	**-0.4**
VLX	**Vlachokerasia**	**1.87**	**117**	P	**Pb**	**13 42 37.6**	**0.0**
VLX				AML	AML	13 43 14.7	
	comp=N,1757μm,0.7s						
VLX				AML	AML	13 43 17.6	
	comp=E,1497μm,0.8s						
THL	**Klokotos Trika**	**1.88**	**45**	P	**Pb**	**13 42 36.9**	**-0.9**
THL				S	**Sg**	**13 43 03.3**	**-0.4**
	comp=E,422nm,0.8s						
THL	**Klokotos Trika**	**1.88**	**45**	P	**Pg**	**13 42 38.5**	**-0.8**
THL				AML	AML	13 43 12.0	
	comp=E,847μm,0.8s						
THL				AML	AML	13 43 15.0	
	comp=N,877μm,0.8s						
KPRO	**Kipourio**	**1.90**	**26**	P	**Pg**	**13 42 38.8**	**-0.8**
KPRO				S	**Sg**	**13 43 05.9**	**+1.6**
	comp=N,565nm,1.1s						
KPRO	**Kipourio**	**1.90**	**26**	P	**Pg**	**13 42 39.8**	**+0.2**
AXAR	**Agios Charalam**	**1.93**	**74**	P	**Pb**	**13 42 38.9**	**+0.3**
AXAR				AML	AML	13 43 20.0	
	comp=N,2470μm,1.8s						
AXAR				AML	AML	13 43 35.5	
	comp=E,1462μm,0.9s						
PROD	**Prodromos**	**2.06**	**89**	P	**Pb**	**13 42 40.5**	**-0.3**
PROD				AML	AML	13 43 17.3	
	comp=N,744μm,0.8s						
PROD				AML	AML	13 43 17.9	
	comp=E,768μm,0.7s						
PENT	**Pentalofos**	**2.06**	**18**	P	**Pg**	**13 42 41.4**	**-1.2**
TPE	**Tepelena**	**2.06**	**354**	*i* PN	**Pg**	**13 42 41.9**	**-0.7**
TPE				*i* SN	**Sg**	**13 43 14.8**	**+5.5**
LTK	**Loutraki**	**2.12**	**95**	P	**Pn**	**13 42 39.8**	**+0.8**
LTK	**Loutraki**	**2.12**	**95**	P	**Pb**	**13 42 40.6**	**-1.3**
LKR	**Lokris**	**2.17**	**78**	P	**Pb**	**13 42 41.0**	**-1.6**
LKR				S	**Sb**	**13 43 09.0**	**-0.7**
	comp=E,172nm,0.9s						
VLO	**Vlora**	**2.31**	**345**	*i* PN	**Pg**	**13 42 48.9**	**+1.6**
VLO				*i* SN	**Sg**	**13 43 20.2**	**+2.9**
VIL2	**Platees**	**2.34**	**90**	P	**Pb**	**13 42 44.6**	**-1.1**
DID	**Didima**	**2.44**	**107**	P	**Pb**	**13 42 45.1**	**-2.3**
DID				S	**Sb**	**13 43 15.6**	**-2.1**
	comp=E,495nm,0.9s						
DID	**Didima**	**2.44**	**107**	P	**Pb**	**13 42 46.4**	**-1.1**
DID				AML	AML	13 43 25.1	
	comp=E,1171μm,1.0s						
DID				AML	AML	13 43 34.7	
	comp=N,688μm,0.9s						
XOR	**Xorichti**	**2.53**	**63**	P	**Pn**	**13 42 45.6**	**+1.0**
MRKA	**Markates**	**2.63**	**79**	P	**Pb**	**13 42 47.9**	**-2.6**
SKIA	**Skiathos**	**2.65**	**69**	P	**Pb**	**13 42 48.6**	**-2.3**
EREA	**Eretria**	**2.87**	**85**	P	**Pb**	**13 42 51.4**	**-3.2**
OHR	**Ohrid**	**2.89**	**8**	*i* Pn	**Pg**	**13 43 00.4**	**+1.8**
TIP	**Timpagrande**	**2.92**	**290**	P	**Pb**	**13 42 53.1**	**-2.4**
TIP				S	**Sb**	**13 43 27.0**	**-4.4**
AOS	**Alonnisos**	**2.96**	**71**	P	**Pb**	**13 42 53.3**	**-2.9**
TIR	**Tirane**	**3.12**	**354**	*i* PN	**Pb**	**13 42 59.4**	**+0.5**
TIR				*i* SN	**Sb**	**13 43 33.0**	**-4.0**
PHP	**Peshkopia**	**3.44**	**2**	*i* PN	**Pg**	**13 43 07.9**	**-1.2**
VAY	**Valandovo**	**3.54**	**29**	*i* Pn	**Pg**	**13 43 12.0**	**+1.0**
STIP	**Stip**	**3.74**	**22**	*i* Pn	**Pb**	**13 43 07.5**	**-2.0**
PUK	**Puka**	**3.81**	**356**	*i* PN	Pb	13 43 05.5	-5.2
SKO	**Skopje**	**3.83**	**13**	*i* Pn	**Pg**	**13 43 13.8**	**-2.7**
BCI	**Bajram Curri**	**4.12**	**358**	*i* PN	**Pn**	**13 43 09.4**	**+2.9**
BCI				*i* SN	**Sb**	**13 44 00.8**	**-5.2**
FINES	**FINESS Array B**	**23.50**	**7**	P	**P**	**13 47 14.1**	**+0.8**
	comp=N,1.5nm,0.8s,baz=182,slow=8.3,SNR=3.7						
FINES				LR	LR	13 57 50.3	
	comp=N,62nm,18.1s,baz=5.5,slow=40						
NOA	**NORSAR Array B**	**23.52**	**349**	LR	LR	13 57 26.6	
	comp=N,29nm,18.0s,baz=205,slow=39						
TORD	**Torodi Ar. Bea**	**29.97**	**218**	P	**P**	**13 48 14.9**	**+2.7**
	comp=N,0.4nm,0.5s,baz=38,slow=10.0,SNR=3.1						
MKAR	**Makanchi Array**	**45.42**	**58**	P	**P**	**13 50 22.3**	**-0.1**
	comp=N,0.4nm,0.5s,baz=274,slow=7.2,SNR=15						
ZALV	**Zalesovo Beam**	**45.78**	**48**	P	**P**	**13 50 25.2**	**+0.1**
	comp=N,0.4nm,0.3s,baz=278,slow=9.6,SNR=3.2						

IDC 07 13:42:17.9±3.2, 27°.94N×52°.86E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.4/32, mbtmp3.6/4, Error ellipse: s-maj=88.9km s-min=32.1km az=152.0

TEH 07 13:42:21.7, 28°.03N×53°.01E, h14km, ML3.1

ISC 07 13:42:19.8±1.0, **27°.90N**±0°.06×**52°.84E**±0°.08, **h14km, n20,** σ**1.35**/20, **mb3.6**/4, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.62**	**152**	*e*Pg	**Pn**	**13 42 35.3**	**+1.0**
LMD1				*e*		13 42 56.2	
JHRM	**Jahrom**	**0.89**	**47**	*e*Pg	**Pg**	**13 42 34.4**	**-2.7**
JHRM				*e*		13 42 57.8	
ISRV	**Sarvestan**	**1.50**	**9**	*e*Pg	**Pg**	**13 42 47.9**	**-0.9**
ISRV				*e*		13 43 14.0	
GHB	**Gharebagh**	**1.50**	**350**	*e*Pg	**Pb**	**13 42 48.3**	**+0.6**
GHB				*e*		13 43 15.3	
SHI	**Shiraz**	**1.76**	**351**	*e*Pg	**Pb**	**13 42 52.9**	**+0.8**
SHI				*e*		13 43 28.8	
IKAZ	**Kazeroun**	**2.07**	**335**	*e*Pn	**Pb**	**13 42 56.9**	**-0.6**
IKAZ				*e*		13 43 34.0	
KLNJ	**Kolanjah**	**3.29**	**341**	*e*Pn	**Pn**	**13 43 11.0**	**-0.3**
IMEH	**Mehriz**	**3.81**	**23**	*e*Pn	**Pn**	**13 43 20.1**	**+1.7**
NGRK	**Negar Kerman**	**3.83**	**62**	*e*Pn	**Pn**	**13 43 19.7**	**+0.9**
NGRK				*e*		13 43 25.0	
IRAM	**Ramesheh**	**3.92**	**354**	*e*Pn	**Pn**	**13 43 20.8**	**+0.9**
TVBK	**TV Kerman**	**4.02**	**58**	*e*Pn	**Pn**	**13 43 23.6**	**+2.3**
TVBK				*e*		13 43 48.1	
KHGB	**Koh Gabri**	**4.03**	**51**	*e*Pn	**Pn**	**13 43 22.8**	**+1.4**
KHGB				*e*		13 43 36.9	
ISAD	**Sadrabad**	**4.07**	**10**	*e*Pn	**Pn**	**13 43 23.5**	**+1.5**
IBAF	**Bafgh**	**4.38**	**32**	*e*Pn	**Pn**	**13 43 26.8**	**+0.7**
ICHK	**Chekchek**	**4.54**	**17**	*e*Pn	**Pn**	**13 43 30.0**	**+1.6**
IZEF	**Zefreh**	**5.00**	**355**	*e*Pn	**Pn**	**13 43 36.4**	**+1.6**
MKAR	**Makanchi Array**	**29.81**	**43**	P	**P**	**13 48 26.4**	**0.0**
	0.2nm,0.6s,baz=236,slow=9.5,SNR=3.1						
ZALV	**Zalesovo Beam**	**35.00**	**33**	P	**P**	**13 49 11.1**	**-0.5**
	0.7nm,0.4s,baz=245,slow=10,SNR=4.5						
FINES	**FINESS Array B**	**38.01**	**339**	P	**P**	**13 49 37.1**	**-0.1**
	1.1nm,0.7s,baz=139,slow=13,SNR=2.9						
TORD	**Torodi Ar. Bea**	**49.75**	**264**	P	**P**	**13 51 12.4**	**+0.3**
	0.3nm,0.5s,baz=48,slow=6.9,SNR=3.1						

MAN 07 13:55:27.2, 13°.69N×120°.55E, h102km, mb4.3, ML3.1, MS2.9, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.30**	**279**	*e*P	Pn	13 55 43.2	+1.2
LUBP				*e*S	Sn	13 55 55.8	+2.6
LQP	**Lukban**	**1.05**	**66**	⇑*e*P	Pn	13 55 44.3	-4.3
BOAC	**Boac**	**1.28**	**100**	*e*P	Pn	13 55 51.9	+1.0
SJMP	**San Jose**	**1.34**	**155**	*e*P	Pn	13 55 53.1	+1.4
SJMP				*e*S	Sn	13 56 11.5	+1.3
OTRP	**Odiongan**	**1.95**	**132**	*e*P	Pn	13 55 59.4	+0.2
OTRP				*e*S	Sn	13 56 23.4	-0.2
ENPP	**El Nido**	**2.70**	**204**	*e*P	Pn	13 56 09.7	+0.6
ENPP				*e*S	Sn	13 56 37.0	-4.2

NEIC 07 14:06:18.1±3.0, 9°.24S±0°.07×122°.52E±0°.08, h83km±7km, mb4.6/32, Error ellipse: s-maj=12.7km s-min=8.7km az=48.0

DJA 07 14:06:19.1±0.2, 9°S±2°×12°3E±°, h69km±5km, M4.7/30, mb4.9/30, mB5.2/13, MLv4.9/13, Mw(mB)4.6/13, Mwp5.4/1

IDC 07 14:06:20.6±1.3, 9°.16S×122°.62E, h97km±10km, mb4.2/21, mb1 4.3/24, mb1mx4.1/46, mbtmp4.6/24, MS3.3/16, Ms1 3.3/16, ms1mx3.1/33, Error ellipse: s-maj=17.2km s-min=9.0km az=67.0

KLM 07 14:06:21.0, 9°.78S×122°.56E, h122km, mb4.8

ISC 07 14:06:19.9±0.3, **9°.34S**±0°.04×**122°.60E**±0°.06, **h100km, n131,** σ**2.08**/133, **mb4.5**/31, **1D, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.70**	**104**	P	**Pn**	**14 06 49.4**	**+0.6**
SOEI	**Soe**	**1.70**	**104**		**Pn**	**14 06 50.1**	**+1.3**
BBSI	**Bau Bau**	**3.83**	**360**	P	**Pn**	**14 07 16.9**	**+0.1**
BKSI	**Bulukumba**	**4.68**	**328**	P	**Pn**	**14 07 27.8**	**-0.6**
PLAI	**Plampang**	**4.79**	**276**	P	**Pn**	**14 07 30.1**	**+0.3**
KAPI	**Kappang**	**5.14**	**327**	P	**Pn**	**14 07 35.1**	**+0.5**
	32nm,0.3s,baz=129,slow=5.8,SNR=82						
KAPI				S	**Sn**	**14 08 34.4**	**+1.7**
	baz=212,slow=22,SNR=3.2						
KAPI				LR	LR	14 09 46.5	
	comp=Z,322nm,21.7s,baz=171,slow=41						
KAPI	**Kappang**	**5.14**	**327**		**Pn**	**14 07 35.0**	**+0.4**
KDI	**Kendari**	**5.35**	**0**	P	**Pn**	**14 07 37.7**	**+0.3**
	0.9nm1μm120nm,0.7s						
BNSI	**Bone**	**5.49**	**333**	P	**Pn**	**14 07 40.3**	**+0.9**
	1.1nm3μm248nm,0.6s						
SPSI	**Sidrap Palu**	**6.03**	**332**	P	**Pn**	**14 07 47.0**	**+0.3**
	0.3nm1μm81nm,0.6s						
TTSI	**Tana Toraja**	**6.83**	**336**	P	**Pn**	**14 08 00.0**	**+2.4**
	0.3nm1μm77nm,0.8s						

IGBI	Denpasar	7.38	273	P	Pn	14 08 03.3	-1.7
	0.9nm2μm61nm,0.5s						
SRBI	Singaraja	7.40	279	P	Pn	14 08 04.2	-1.1
	0.3nm39nm,0.8s						
NLAI	Namlea	7.53	37	P	Pn	14 08 09.0	+1.9
	0.4nm2μm134nm,0.8s						
SANI	Sanana	7.99	25	P	Pn	14 08 14.7	+1.4
	51nm,0.7s						
LUWI	Luwuk	8.24	1	P	Pn	14 08 16.7	-0.1
	1μm103nm,0.9s						
LUWI	Luwuk	8.24	1		Pn	14 08 16.5	-0.3
JAGI	Jajag, Banyuwa	8.39	275	P	Pn	14 08 15.0	-3.7
	2μm45nm,0.8s						
JAGI	Jajag, Banyuwa	8.39	275		Pn	14 08 14.8	-4.0
APSI	Ampana	8.43	354	P	Pn	14 08 22.5	+3.2
	0.2nm586nm44nm,1.0s						
SAUI	Saumlaki	8.71	82		Pn	14 08 18.5	-4.7
KNRA	Kununurra	8.71	137		Pn	14 08 21.4	-1.7
MTN	Manton Dam	9.07	113		Pn	14 08 26.4	-1.6
GMJI	Gumukmas	9.11	276	P	Pn	14 08 24.7	-3.8
	46nm,1.1s						
FITZ	Fitzroy Crossi	9.20	162	P	Pn	14 08 29.0	-0.7
	2.7nm,0.3s,baz=356,slow=9.2,SNR=39						
FITZ				S	Sn	14 10 07.2	-4.2
	14nm,0.3s,baz=182,slow=9.9,SNR=17						
FITZ				LR	LR	14 12 30.8	
	comp=Z,95nm,20.3s,baz=330,slow=40						
FITZ	Fitzroy Crossi	9.20	162		Pn	14 08 29.0	-0.7
FITZ					Sn	14 10 08.5	-2.9
MRSI	Marisa	9.77	356	P	Pn	14 08 39.8	+2.2
	822nm24nm,0.9s						
FAKI	Fak Fak	11.52	57	P	Pn	14 09 00.0	-1.3
	23nm,0.9s						
FAKI	Fak Fak	11.52	57		Pn	14 09 01.5	+0.1
SWI	Sorong	12.05	46	P	Pn	14 09 08.3	-0.1
	26nm,0.8s						
SIJI	Sorong	12.05	46	P	Pn	14 09 08.3	-0.1
	0.7nm,0.3s,baz=233,slow=1.4,SNR=3.7						
PSA00	Pilbara Seismi	12.45	192		Pn	14 09 13.5	-0.1
PSA00	Pilbara Seismi	12.45	192	Pn	Pn	14 09 13.1	-0.5
RKPI	Ransiki, Papua	13.90	57	P	Pn	14 09 33.9	+1.2
	72nm,0.9s						
STKI	Sintang	14.48	310	P	P	14 09 43.6	-0.5
CISI	Cisompet, Garu	14.73	276	Pn	P	14 09 39.6	-3.7
LEM	Lembang	15.04	278	LR	LR	14 16 10.7	
	comp=Z,138nm,20.1s,baz=226,slow=39						
SPMM	Sapulut	15.23	336	P	P	14 09 57.0	+4.6
WRA	Warramunga Arr	15.49	134	P	Pn	14 09 49.8	-3.2
	3.9nm,0.3s,baz=220,slow=16,SNR=111						
WRA				S	Sn	14 12 34.8	-9.4
	3.5nm,0.3s,baz=307,slow=24,SNR=10						
WRA				LR	LR	14 17 04.3	
	comp=Z,147nm,20.6s,baz=310,slow=41						
WRA	Warramunga Arr	15.49	134		Pn	14 09 49.7	-3.2
WRAB	Tennant Creek	15.49	134		Pn	14 09 49.6	-3.3
WRAB				IAmb	IAmb	14 09 57.7	
	comp=Z,40nm,0.8s						
WB2	Warramunga Arr	15.50	134		Pn	14 09 49.6	-3.4
WB2				IAmb	IAmb	14 09 57.7	
	comp=Z,42nm,0.9s						
SBUM	Sibu	15.62	318	P	P	14 09 59.0	+2.3
WR0	Warramunga Arr	15.64	134		Pn	14 09 51.5	-3.4
WR0				IAmb	IAmb	14 09 59.5	
	comp=Z,53nm,0.9s						
SKMP	Bagumbayan, Su	15.87	7	eP	Pn	14 09 58.4	+0.7
KSM	Kuching	16.29	311	P	P	14 10 06.0	+2.0
KCP	Kidapawan	16.43	9	⇓iP	P	14 10 06.5	+0.8
PAGZ	Pagadian	17.09	3	eP	P	14 10 14.0	+1.1
AS31	Alice Springs	17.89	144	P	Pn	14 10 23.1	+0.7
ASAR	Alice Springs	17.89	144	P	Pn	14 10 22.2	+0.6
	comp=Z,5.5nm,0.3s,baz=315,slow=11,SNR=189						
ASAR				S	Sn	14 13 35.0	-7.0
	comp=Z,1.6nm,0.3s,baz=319,slow=23,SNR=7.2						
ASAR				ScP	ScP	14 18 22.4	+2.6
	comp=Z,0.3nm,0.3s,baz=356,slow=2.5,SNR=7.2						
ASAR				LR	LR	14 18 51.0	
	comp=Z,66nm,19.7s,baz=324,slow=42						
ASAR	Alice Springs	17.89	144	P	Pn	14 10 23.3	+0.9
KLSI		18.32	283	P	Pn	14 10 28.4	+0.8
	comp=Z,9.8nm,0.8s						
GENI	Genyem	18.71	70	P	P	14 10 28.5	-2.2
	comp=Z,46nm,0.9s						
MDSI	Maura Dua	18.90	284	P	Pn	14 10 34.2	-0.4
	comp=Z,8.2nm,0.9s						
MORW	Morawa	20.57	197	P	P	14 10 52.7	+1.9
MORW				IAmb	IAmb	14 10 53.4	
	comp=Z,31nm,1.1s						
COEN	Coen	20.67	105	P	P	14 10 53.7	+1.7
OTRP	Odiongan	21.57	358	eP	P	14 11 02.6	+1.1
MYKOM	Kota Tinggi	21.70	300	P	P	14 11 04.0	+1.0
FORT	Forrest	21.93	167	P	P	14 11 07.0	+1.7
LUBP	Lubang	23.04	354	eP	P	14 11 15.4	-1.4
TGY	Tagaytay City	23.35	356	P	P	14 11 19.8	+0.1
	comp=Z,100nm,0.3s,baz=223,slow=8.6,SNR=3.1						
TGY				LR	LR	14 22 33.2	
	comp=Z,28nm,18.3s,baz=196,slow=42						
JRMM	Jerantut	23.97	302	P	P	14 11 26.0	+0.7
NWAO	Narrogin (SRO)	23.99	191	P	P	14 11 27.6	+2.3
	comp=Z,6.7nm,0.4s,baz=26,slow=9.1,SNR=14						
NWAO				S	S	14 15 51.2	+16
	comp=Z,12nm,0.8s,baz=292,slow=13,SNR=3.6						
NWAO				LR	LR	14 21 20.7	
	comp=Z,57nm,19.7s,baz=30,slow=37						
NWAO	Narrogin (SRO)	23.99	191	P	P	14 11 26.9	+1.6
NWAO				IAmb	IAmb	14 11 28.3	
	comp=Z,18nm,1.1s						
NWAO	Narrogin (SRO)	23.99	191	P	P	14 11 26.7	+1.4
NWAO				IAmb	IAmb	14 11 28.3	
	comp=Z,26nm,1.1s						
PMG	Port Moresby	24.24	92	P	P	14 11 29.0	+1.3
	comp=Z,11nm,0.7s,baz=295,slow=5.0,SNR=8.6						
PMG				LR	LR	14 23 34.4	
	comp=Z,40nm,18.2s,baz=270,slow=43						
PMG	Port Moresby	24.24	92	P	P	14 11 28.5	+0.8
BALP	Baler	24.94	358	eP	P	14 11 31.8	-2.2
CTA	Charters Tower	25.22	118	P	P	14 11 38.4	+1.8
	comp=Z,12nm,1.1s,baz=317,slow=12,SNR=3.8						
CAUP	Cauayan	26.13	358	eP	P	14 11 47.1	+2.3
KULM	Kulim	26.26	303	P	P	14 11 46.0	-0.1
BBOO	Buckleboo	26.46	154	P	P	14 11 48.8	+1.0
BBOO				IAmb	IAmb	14 11 50.2	
	comp=Z,15nm,1.0s						
PSI	Prapat	26.49	296	LR	LR	14 23 34.7	
	comp=Z,88nm,18.9s,baz=76,slow=39						
APYP	Conner	27.06	357	eP	P	14 11 48.5	-4.6
STKA	Stephens Creek	28.52	145	P	P	14 12 08.4	+2.3
	comp=Z,8.6nm,0.6s,baz=316,slow=9.3,SNR=26						
STKA				LR	LR	14 25 02.9	
	comp=Z,57nm,18.4s,baz=344,slow=39						
STKA	Stephens Creek	28.52	145	P	P	14 12 08.6	+2.4
TPUB	Ta-pu	32.50	357	P	P	14 12 39.5	-1.7
YULB	Yu-li	32.55	358	P	P	14 12 39.8	-1.9
YULB				IAmb	IAmb	14 12 47.5	
	comp=Z,11nm,0.9s						
ARMA	Armidale	34.25	132	P	P	14 13 00.5	+3.9
TOO	Toolangi	34.89	147	P	P	14 13 05.5	+3.6
CAN	Canberra	35.35	141	P	P	14 13 09.6	+3.7
CAN				IAmb	IAmb	14 13 15.2	
	comp=Z,6.0nm,1.0s						
CMAR	Chiang Mai Arr	36.16	320	P	P	14 13 12.3	-0.6
	comp=Z,1.1nm,0.6s,baz=145,slow=7.1,SNR=9.0						
CMAR				ScP	ScP	14 19 15.2	+1.1
	comp=Z,0.8nm,0.5s,baz=179,slow=3.3,SNR=6.2						
CMAR				LR	LR	14 31 20.0	
	comp=Z,13nm,19.4s,baz=144,slow=42						
XAN	Xi'an	45.05	344	P	P	14 14 24.0	-1.9
XAN				pP	pwP	14 14 55.0	+3.5
XAN				sP	sP	14 15 12.5	+13
XAN	Xi'an	45.05	344	P	P	14 14 23.8	-2.1
XAN				IAmb	IAmb	14 14 26.4	
	comp=Z,10nm,0.9s						
KSRS	Korea Array	46.81	6	P	P	14 14 39.3	-0.3
	comp=Z,2.0nm,1.0s,baz=171,slow=5.5,SNR=3.7						
MJAR	Matsushiro Arr	47.94	17	P	P	14 14 47.2	-1.3
	comp=Z,7.8nm,0.8s,baz=183,slow=7.9,SNR=16						
LSA	Lhasa	49.23	323	P	P	14 14 58.2	-0.8
LSA				IAmb	IAmb	14 15 09.6	
	comp=Z,7.8nm,1.5s						
BJT	Baijiatuau	49.47	354	P	P	14 14 58.8	-1.2
BJT				IAmb	IAmb	14 15 01.4	
	comp=Z,7.1nm,0.8s						
GTA	Gaotai	52.92	338	eP	P	14 15 25.7	-0.3
USA0B	Ussuriysk Arra	53.96	8	P	P	14 15 31.5	-1.9
USRK	Ussuriysk Ar.	53.96	8	P	P	14 15 32.1	-1.3
	comp=Z,4.6nm,0.4s,baz=194,slow=6.7,SNR=19						
USRK	Ussuriysk Ar.	53.96	8	P	P	14 15 32.3	-1.1
RPZ	Rata Peaks	54.16	138	P	P	14 15 37.4	+2.5
	comp=Z,16nm,0.9s,baz=274,slow=4.7,SNR=7.8						
RPZ	Rata Peaks	54.16	138	P	P	14 15 35.5	+0.5
ASAJ	Asahikawa	56.21	17	P	P	14 15 49.8	+0.2
	comp=Z,6.4nm,0.5s,baz=213,slow=7.7,SNR=12						
JKA	Kamikawa-asahi	56.21	17	P	P	14 15 49.8	+0.2
ULN	Ulaanbaatar	58.60	348	P	P	14 16 05.6	-0.8
ULN				IAmb	IAmb	14 16 07.8	
	comp=Z,6.6nm,1.0s						
SONM	Songino Array	58.71	347	P	P	14 16 06.2	-0.9
	comp=Z,5.2nm,0.7s,baz=165,slow=8.4,SNR=29						
SONM	Songino Array	58.71	347	P	P	14 16 06.3	-0.9
KLR	Kul'dur	58.87	7	P	P	14 16 07.1	-1.0
	comp=Z,1.0nm,0.6s,baz=173,slow=0.4,SNR=6.6						
TLY	Talaya	62.94	347	P	P	14 16 36.0	+0.4
	comp=Z,1.9nm,0.5s,baz=165,slow=6.0,SNR=4.5						
MK31	Makanchi Array	66.42	331	P	P	14 16 57.8	-0.6
MK31				IAmb	IAmb	14 16 58.3	
	comp=Z,3.9nm,0.7s						
MKAR	Makanchi Array	66.42	331	P	P	14 16 57.8	-0.7
	comp=Z,4.9nm,0.6s,baz=136,slow=7.5,SNR=46						
MKAR	Makanchi Array	66.42	331	P	P	14 16 57.4	-1.1
MAKZ	Makanchi	66.58	331	P	P	14 16 57.6	-1.8
AAK	Ala-Archa	67.82	324	P	P	14 17 06.0	-1.5
AAK				IAmb	IAmb	14 17 07.5	
	comp=Z,3.9nm,0.7s						
ARSB	Arslanbob	67.94	322	P	P	14 17 07.6	-0.7
PETK	Petropavlovsk-	69.01	22	P	P	14 17 14.1	-0.5
	comp=Z,3.5nm,0.7s,baz=198,slow=7.7,SNR=8.7						
PETK	Petropavlovsk-	69.01	22	P	P	14 17 14.8	+0.2
MAW	Mawson	70.15	201	LR	LR	14 48 17.8	
	comp=Z,38nm,18.3s,baz=66,slow=36						
KKAR	Karatay Array	70.46	322	P	P	14 17 22.4	-1.3
ZAA0	Zalesovo Array	70.67	337	P	P	14 17 22.9	-1.8
ZAA0				IAmb	IAmb	14 17 24.8	
	comp=Z,9.6nm,1.4s						
ZALV	Zalesovo Beam	70.67	337	P	P	14 17 22.8	-1.9
	comp=Z,3.5nm,0.4s,baz=138,slow=4.8,SNR=18						
KURK	Kurchatov	70.91	332	P	P	14 17 25.1	-1.1
VNDA	Vanda	71.12	172	LR	LR	14 50 21.1	
	comp=Z,43nm,18.1s,baz=338,slow=37						
OPO	Ambohidratompo	73.33	253	LR	LR	14 45 12.0	
	comp=Z,68nm,18.6s,baz=296,slow=32						
SEY	Seymchan	75.61	14	P	P	14 17 53.9	+0.3
	comp=Z,6.0nm,0.5s,baz=211,slow=4.7,SNR=28						
GEYT	Alibeck	76.26	313	P	P	14 17 57.9	0.0
	comp=Z,0.7nm,0.3s,baz=206,slow=5.6,SNR=4.4						
GEYT				LR	LR	15 01 56.7	
	comp=Z,12nm,18.4s,baz=60,slow=44						
QSPA	South Pole Qui	80.66	180	P	P	14 18 24.0	+2.3
	comp=Z,3.3nm,0.6s,baz=307,slow=2.0,SNR=40						
QSPA	South Pole Qui	80.66	180	P	P	14 18 24.3	+2.6
TIXI	Tiksi	80.92	2	P	P	14 18 21.4	-1.2
	comp=Z,3.8nm,0.4s,baz=116,slow=2.2,SNR=9.6						
RAYN	Ar Rayn	82.05	295	P	P	14 18 28.8	-0.9
KBZ	Khabaz	89.03	314	LR	LR	15 07 20.8	
	comp=Z,13nm,18.5s,baz=28,slow=41						
ILAR	Eielson Array	98.60	26	P	Pdif	14 19 48.6	+1.3
	comp=Z,0.3nm,0.7s,baz=232,slow=6.3,SNR=4.2						
YKA	Yellowknife Ar	113.02	25	PKiKP	PKiKP	14 24 45.4	+0.3
	comp=Z,0.4nm,0.6s,baz=301,slow=1.7,SNR=5.5						
TORD	Torodi Ar. Bea	122.02	280	PKP	PKiKP	14 25 04.5	+0.6
	comp=Z,0.4nm,0.5s,baz=119,slow=2.4,SNR=3.5						
ULM	Lac du Bonnet	128.29	31	PKP	PKPdf	14 25 14.5	-0.3
	comp=Z,1.2nm,0.6s,baz=27,slow=6.8,SNR=3.7						
TXAR	Lajitas Array	132.41	59	PKP	PKiKP	14 25 25.1	+0.7
	comp=Z,0.7nm,0.9s,baz=248,slow=1.3,SNR=5.3						
TXAR				SKPbc	SKPab	14 28 43.0	+0.4
	comp=Z,1.4nm,0.7s,baz=255,slow=1.8,SNR=14						
SCHQ	Schefferville	134.01	8	PKP	PKiKP	14 25 27.2	+0.4
	comp=Z,2.3nm,0.9s,baz=39,slow=6.5,SNR=3.3						
SCHQ				SKPbc	SKPbc	14 28 46.0	+0.2
	comp=Z,1.0nm,0.7s,baz=301,slow=5.3,SNR=4.6						
CPUP	Villa Florida	144.54	180	PKP	PKPdf	14 25 46.6	+1.2
	comp=Z,1.5nm,0.6s,baz=105,slow=2.9,SNR=3.7						
LPAZ	La Paz	152.41	157	PKPbc	PKPbc	14 26 06.5	+0.4
	comp=Z,0.6nm,0.3s,baz=166,slow=4.2,SNR=3.2						
LPAZ				PKPab	PKPab	14 26 19.1	+2.7
	comp=Z,3.2nm,0.8s,baz=191,slow=3.3,SNR=8.1						

JMA **07** *14:08:29.9±0.2, 44.83N×141.52E, h264km±2km, M3.5*
IDC **07** *14:08:30.3±0.6, 44.81N×141.53E, h252km±8km, mb3.3/9, mb1 3.4/14, mb1mx3.2/58, mbtmp3.9/14, Error ellipse: s-maj=23.3km s-min=11.1km az=164.0*
SKHL **07** *14:08:30.3±0.8, 44.87N×141.34E, h246km±7km, mb5.0/1, msh4.5/3*
ISC 07 14:08:30.6±0.7, 44.77N±0.06×141.53E±0.06, h259km±6km, n38, σ1.02/54, mb3.3/9, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYG	Yagishiri	0.35	192	P	Pn	14 09 04.3	+0.1
JSS	Shosan	0.44	148	P	Pn	14 09 04.9	+0.5
JSS				eS	S	14 09 31.5	+0.5
JWK2	Keihoku	0.60	26	P	Pn	14 09 04.4	-0.4
JWK2				eS	S	14 09 30.7	-1.1
JRBN	Rebuntou	0.73	333	P	Pn	14 09 04.7	-0.5
JSE	Soyaes	0.77	76	P	Pn	14 09 05.1	-0.3
ASAJ	Asahikawa	1.01	130	P	Pn	14 09 06.7	+0.1
ASAJ				eS	S	14 09 34.8	-0.2
ASAJ	Asahikawa	1.01	130	P	Pn	14 09 06.7	+0.1
	52nm,0.3s,baz=281,slow=8.4,SNR=1254						
ASAJ				S	S	14 09 33.9	-1.2
	3.7nm,0.3s,baz=149,slow=32,SNR=6.2						
JHR	Hokuryu	1.04	172	P	Pn	14 09 07.4	+0.5
JHR				eS	S	14 09 36.1	+0.7
JKK2	Kamakawa 2	1.25	135	P	Pn	14 09 08.3	+0.2
JKK2				eS	S	14 09 37.9	+0.2
JAB	Ashibetsu	1.36	158	P	Pn	14 09 09.3	+0.4
JAB				eS	S	14 09 39.5	+0.5
JSK	Shakotan	1.61	209	P	Pn	14 09 10.6	0.0
JFR	Furan	1.78	154	P	Pn	14 09 12.0	0.0
JTKR	Abashiri--Toko	1.89	114	P	Pn	14 09 13.4	+0.6
JTKR				eS	S	14 09 47.1	+1.0
JEW	Eniwo	1.93	182	P	Pn	14 09 13.9	+0.6
JEW				eS	S	14 09 48.1	+1.1
JAR	Ashorobuto	2.19	132	P	Pn	14 09 16.1	+0.6
JAR				eS	S	14 09 51.6	+0.5
YSS	Yuzh-Sakhalins	2.34	21	eP	Pn	14 09 16.4	-0.5
YSS				AMB	AMB	14 09 16.9	
	40nm,1.2s						
YSS				eS	S	14 09 51.6	-2.0
YSS				A	A	14 09 53.3	
	120nm,0.7s						
YSS				A	A	14 09 53.3	
	60nm,0.7s						
JCH	Churui	2.53	148	P	Pn	14 09 17.5	-1.4
JCH				eS	S	14 09 54.3	-2.8
JNBK	Urakawa-nobuka	2.65	160	P	Pn	14 09 20.1	+0.1
JRA	Rausu	2.71	107	P	Pn	14 09 21.5	+0.9
JAK	Akkeshi	2.90	127	P	Pn	14 09 21.6	-0.9
JAK				eS	S	14 10 01.6	-2.1
JKB	Kayabe	2.91	187	P	Pn	14 09 21.8	-0.9
JKB				eS	S	14 10 02.3	-1.6
JOSM	Okushiri--Mats	3.08	210	P	Pn	14 09 24.1	-0.4
NMR	Nemuro--Hokkai	3.33	113	eP	Pn	14 09 28.7	+1.5
NMR				AMB	AMB	14 09 29.8	
	20nm,0.2s						
NMR				eS	S	14 10 13.7	+1.5
NMR				A	A	14 10 14.5	
	70nm,0.2s						
NMR				A	A	14 10 14.5	
	30nm,0.2s						
NEM2	Nemuro 2	3.35	113	P	Pn	14 09 26.9	-0.5
NEM2				eS	S	14 10 09.2	-3.2
USRK	Ussuriysk Ar.	6.85	269	P	Pn	14 10 09.4	0.0
	baz=86,slow=12,SNR=11						
KLR	Kul'dur	8.03	307	P	Pn	14 10 23.4	-0.9
	0.4nm,0.3s,baz=114,slow=13,SNR=15						
MJAR	Matsushiro Arr	8.60	198	P	Pn	14 10 30.2	-1.3
	0.2nm,0.3s,baz=20,slow=14,SNR=11						
PETK	Petropavlovsk-	13.49	46	P	P	14 11 33.3	+0.3
	0.4nm,0.3s,baz=216,slow=7.2,SNR=13						
SEY	Seymchan	19.24	15	P	P	14 12 35.1	-0.4
	1.2nm,0.3s,baz=200,slow=7.7,SNR=54						
SONM	Songino Array	24.34	290	P	P	14 13 25.0	0.0
	3.7nm,0.4s,baz=86,slow=8.9,SNR=27						
ZALV	Zalesovo Beam	37.13	305	P	P	14 15 15.7	-0.7
	0.4nm,0.4s,baz=67,slow=9.5,SNR=3.6						
MKAR	Makanchi Array	40.51	295	P	P	14 15 44.8	+0.3
	3.2nm,0.6s,baz=82,slow=9.3,SNR=44						
ILAR	Eielson Array	43.06	37	P	P	14 16 04.2	-0.5
	0.8nm,0.6s,baz=278,slow=9.2,SNR=16						
INK	Inuvik	47.55	30	P	P	14 16 39.3	-0.5
	0.4nm,0.3s,baz=300,slow=8.7,SNR=7.7						
YKA	Yellowknife Ar	57.15	32	P	P	14 17 50.3	+0.3
	0.5nm,0.5s,baz=305,slow=6.7,SNR=14						
GEYT	Alibeck	60.38	295	P	P	14 18 13.4	+0.7
	1.0nm,0.4s,baz=69,slow=7.9,SNR=3.3						
PDAR	Pinedale Array	72.25	47	P	P	14 19 28.7	+0.8
	0.4nm,0.6s,baz=266,slow=1.8,SNR=6.2						
BRTR	Keskin Array B	73.86	310	P	P	14 19 37.9	+0.7
	0.3nm,0.5s,baz=1.9,slow=4.3,SNR=2.8						

IDC **07** *14:12:51.2±1.6, 15.85S×173.96W, h103km±15km, mb4.2/12, mb1 4.3/14, mb1mx4.0/39, mbtmp4.5/14, MS2.8/2, Ms1 2.8/2, ms1mx2.5/27, Error ellipse: s-maj=29.2km s-min=11.4km az=142.0*
NEIC **07** *14:12:52.7±1.4, 15.82S±0.07×174.0W±0.1, h120km±8km, mb4.6/12, Error ellipse: s-maj=16.9km s-min=10.4km az=92.0*
ISC 07 14:12:52.4±0.5, 15.81S±0.09×173.98W±0.08, h115km, n40, σ0.81/35, mb4.5/15, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.85	49	P	Pn	14 13 37.1	+0.5
	197nm,0.3s,baz=25,slow=0.4,SNR=286						
AFI				S	Sn	14 14 09.2	-1.5
	448nm,0.3s,baz=33,slow=23,SNR=14						
AFI				LR	LR	14 14 27.1	
	comp=Z,231nm,21.1s,baz=281,slow=34						
AFI	Afiamalu	2.85	49		Pn	14 13 37.5	+0.8
AFI					Sn	14 14 09.2	-1.5
NIUE	Niue	5.05	131		Pn	14 14 06.4	+0.4
RAR	Rarotonga	14.50	114	LR	LR	14 20 17.0	
	comp=Z,34nm,21.8s,baz=281,slow=31						
DZM	Mont Dzumac	19.53	248	P	P	14 17 11.5	+0.4
	0.3nm,0.3s,baz=79,slow=18,SNR=3.5						
DZM	Mont Dzumac	19.53	248	P	P	14 17 10.8	-0.2
DZM				IAmb	IAmb	14 17 19.0	
	comp=Z,28nm,0.9s						
URZ	Urewera	23.70	198	P	P	14 17 53.7	-0.1
	comp=Z,4.3nm,0.3s,baz=254,slow=2.8,SNR=12						
URZ	Urewera	23.70	198	P	P	14 17 53.0	-0.8
URZ				IAmb	IAmb	14 18 03.6	
	comp=Z,22nm,0.9s						
CTA	Charters Tower	38.01	258	P	P	14 19 59.8	+0.1
	comp=Z,4.3nm,0.7s,baz=121,slow=5.9,SNR=2.4						
PMG	Port Moresby	38.41	275	P	P	14 20 03.6	+0.6
	comp=Z,7.3nm,1.0s,baz=26,slow=5.2,SNR=4.7						
PMG	Port Moresby	38.41	275	P	P	14 20 00.9	-2.1
PMG				IAmb	IAmb	14 20 05.2	
	comp=Z,13nm,1.1s						
H11S2	WAKE ISLAND Hy	39.03	330	T	T	15 01 24.3	
	baz=147,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	39.04	330	T	T	15 00 57.7	
	baz=147,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	39.05	330	T	T	15 01 29.2	
	baz=147,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	39.99	331	T	T	15 02 36.5	
	baz=147,slow=76,SNR=4.4						
H11N1	WAKE ISLAND Hy	40.00	331	T	T	15 02 08.6	
	baz=147,slow=76,SNR=3.7						
H11N2	WAKE ISLAND Hy	40.01	331	T	T	15 02 37.6	
	baz=147,slow=76,SNR=4.8						
STKA	Stephens Creek	43.35	240	P	P	14 20 42.9	-0.5
	comp=Z,5.8nm,0.6s,baz=91,slow=9.8,SNR=12						
STKA	Stephens Creek	43.35	240	P	P	14 20 43.1	-0.3
WB0	Warramunga Arr	49.17	257	P	P	14 21 29.0	-0.1
WB2	Warramunga Arr	49.20	257	P	P	14 21 28.5	-0.8
WRA	Warramunga Arr	49.21	257	P	P	14 21 28.6	-0.8
	comp=Z,4.8nm,0.4s,baz=99,slow=6.1,SNR=103						
WRA	Warramunga Arr	49.21	257	P	P	14 21 28.7	-0.8
AS31	Alice Springs	49.45	252	P	P	14 21 30.4	-0.8
AS31				IAmb	IAmb	14 21 32.0	
	comp=Z,9.2nm,0.8s						
ASAR	Alice Springs	49.45	252	P	P	14 21 30.2	-1.0
	comp=Z,44nm,0.8s,baz=86,slow=7.8,SNR=207						
ASAR	Alice Springs	49.45	252	P	P	14 21 29.9	-1.4
SIJI	Sorong	55.98	280	P	P	14 22 20.1	+0.7
	comp=Z,44nm,0.8s,baz=121,slow=4.3,SNR=19						
PETK	Petropavlovsk-	72.85	343	P	P	14 24 08.9	+0.4
	comp=Z,3.3nm,0.7s,baz=123,slow=7.9,SNR=7.9						
QSPA	South Pole Qui	74.24	180	P	P	14 24 17.3	+0.6
QSPA				IAmb	IAmb	14 24 18.1	
	comp=Z,8.0nm,0.8s						
TXAR	Lajitas Array	81.30	56	P	P	14 24 57.3	+0.8
	comp=Z,0.4nm,0.7s,baz=219,slow=8.2,SNR=5.2						
PD31	Pinedale Array	82.94	42	P	P	14 25 04.6	-0.3
PDAR	Pinedale Array	82.94	42	P	P	14 25 04.8	-0.1
	comp=Z,0.8nm,0.7s,baz=190,slow=4.1,SNR=7.3						
YHL	Hebgen Lake	82.95	40	P	P	14 25 05.3	+0.3
IL31		82.95	11	P	P	14 25 03.5	-0.6
IL31				IAmb	IAmb	14 25 11.0	
	comp=Z,3.3nm,1.4s						
ILAR	Eielson Array	82.95	11	P	P	14 25 04.2	+0.1
	comp=Z,0.5nm,0.5s,baz=227,slow=5.9,SNR=14						
IMAR	Indian Mountai	82.95	8	P	P	14 25 04.6	+0.4
CMAR	Chiang Mai Arr	92.21	288	P	P	14 25 51.0	+1.1
	comp=Z,1.3nm,0.8s,baz=109,slow=2.1,SNR=11						
ARCES	ARCESS Array B	124.93	352	PKP	PKPdf	14 31 38.2	-0.1
	comp=Z,1.9nm,0.7s,baz=18,slow=4.3,SNR=6.2						
KMBO	Kilima Mbogo	144.85	244	PKP	PKPdf	14 32 17.2	0.0
	comp=Z,4.4nm,1.1s,baz=5.0,slow=1.3,SNR=5.1						
BRTR	Keskin Array B	146.12	320	PKPbc	PKPbc	14 32 19.6	0.0
	comp=Z,5.0nm,0.9s,baz=101,slow=2.5,SNR=19						

SJA **07** *14:31:22.5±1.0, 32.73S×71.63W, h10km±7km, ML3.3, MW3.2*
GUC **07** *14:31:22.3±0.8, 32.72S×71.58W, h30km±4km, ML3.6*
ISC 07 14:31:22.7±1.1, 32.74S±0.03×71.64W±0.05, h10km, n34, σ1.59/59, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA01	Torpederas	0.28	182	eP	Pb	14 31 30.4	+0.5
VA01				iS	Sb	14 31 35.7	+1.0
ROC1	El Roble	0.57	115	iP	Pb	14 31 34.8	-0.2
ROC1				iS	Sb	14 31 43.0	-0.4
ROCH	El Roble	0.58	114	eP	Pb	14 31 34.5	-0.5
ROCH				iS	Sb	14 31 43.4	0.0
ROCH				IAML		14 31 44.2	
	comp=E,5μm,0.5s						
PEL	Peldehue	0.90	117	eP	Pg	14 31 39.5	-0.5
PEL				iS	Sg	14 31 51.8	+0.1
PEL				IAML		14 31 53.0	
	comp=N,4μm,0.5s						
PEL	Peldehue	0.90	117	iP	Pb	14 31 39.8	-0.6
PEL				iS	Sb	14 31 52.3	-0.1
MT05	Renca	1.00	131	eP	Pg	14 31 41.3	-0.6
MT05				iS	Sg	14 31 54.6	-0.3
CLCH	Cerro Calan	1.13	126	eP	Pb	14 31 43.4	-1.0
CLCH				iS	Sb	14 31 58.4	-0.8
CLCH				IAML		14 31 59.7	
	comp=E,5μm,0.4s						
MT01	Popeta	1.17	164	eP	Pb	14 31 43.7	-1.3
MT01				iS	Sb	14 31 59.1	-1.1
MT03	Universidad Ad	1.21	129	eP	Pn	14 31 44.7	-1.0
MT03				iS	Sb	14 32 00.9	-0.6
FCH	Farellones	1.27	118	eP	Pb	14 31 45.7	-1.1
FCH				iS	Sb	14 32 02.8	-0.8
CO02	Combarbal	1.62	20	eP	Pn	14 31 50.5	-0.9
CO02				iS	Sn	14 32 11.8	-0.6
LMEL	Las Melosas	1.63	133	eP	Pn	14 31 51.3	-0.4
LMEL				iS	Sn	14 32 12.9	+0.1
LMEL				IAML		14 32 18.2	
	comp=N,825nm,0.5s						
RTLS	Leoncito	2.19	65	eP	Pb	14 32 01.4	-1.2
RTLS				iP	Pb	14 32 01.5	-1.2
RTLS				IAML		14 32 12.3	
	comp=Z,210nm,0.5s						
RTLS				iS	Sb	14 32 31.0	+1.0
ARCO	CERRO ARCO	2.28	93	iP	Pb	14 32 03.2	-0.8
ARCO				IAML		14 32 05.5	
	comp=Z,152nm,0.4s						
ARCO				iS	Sb	14 32 33.3	+0.9
ASAL	Salagasta	2.37	87	eP	Pb	14 32 04.5	-1.0
ASAL				iS	Sg	14 32 37.0	-1.8
AAGR	Agrelo	2.39	99	eP	Pb	14 32 04.5	-1.4
GO04	Tololo Observa	2.66	16	eP	Pn	14 32 04.6	-1.2
GO04				iS	Sb	14 32 44.7	+1.4
RTCV	Cerro Valdivia	2.76	72	eP	Pb	14 32 09.6	-2.7
ZON	Zonda	2.78	65	eP	Pb	14 32 10.9	-1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZON				i S	Sb	14 32 48.1	+1.6
COIS	El Sosneado	2.91	145	i P	Pb	14 32 11.7	-3.0
COIS				i S	Sb	14 32 50.8	+0.4
LAMA	Las Malvinas	2.98	138	eP	Pn	14 32 12.1	+2.0
RTLL	Cerro Villicun	3.03	63	eP	Pn	14 32 12.3	+1.5
RTLL				i S	Sb	14 32 53.3	-0.5
RTLL				IAML		14 33 00.1	
	comp=Z,151nm,0.3s						
ACCO	Cerro Coronel	3.07	46	eP	Pb	14 32 13.9	-3.6
ACCO				i S	Sb	14 32 52.5	-2.6
CFA	Coronel Fontan	3.10	70	i P	Pn	14 32 13.4	+1.8
CFA				eS	Sb	14 32 56.0	+0.3
AROD	Rodeo	3.16	36	eP	Pn	14 32 14.5	+1.7
AROD				i S	Sb	14 32 59.3	+1.5
AMOG	MOGNA	3.22	57	eP	Pn	14 32 14.6	+1.2
RFA	San Rafael	3.33	128	i P	Pn	14 32 17.2	+2.3
ACDV	Cuesta del Vie	3.34	41	eP	Pn	14 32 17.8	+2.6
ACDV				IAML		14 33 20.8	
	comp=Z,45nm,0.6s						
MORA	Malargue	3.35	140	eP	Pn	14 32 17.7	+2.5
ACAN	Cantantal	3.79	84	eP	Pn	14 32 22.6	+1.4
AGUA	GUANDACOL	4.22	41	eP	Pn	14 32 29.0	+1.9
APLL	PUNTA DE LOS L	4.95	63	eP	Pn	14 32 38.0	+0.8
APLL				IAML		14 32 41.9	
	comp=Z,24nm,0.4s						
APLL				i S	Sn	14 33 37.1	+2.7
VCA	Vinchina	4.96	37	eP	Pn	14 32 39.1	+1.7
CYA	Choya	6.61	51	i P	Pn	14 33 02.9	+3.0
CYA				i S	Sn	14 34 18.8	+3.5

IDC 07 14:31:25.4±8.8, 15.75S×172.86W, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.6/28, mbtmp3.8/3, ML4.1/1, MS3.2/5, Ms1 3.2/5, ms1mx2.8/34, Error ellipse: s-maj=361.4km s-min=27.2km az=136.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.11	30	Pn	Pn	14 32 01.4	-0.6
	58nm,0.3s,baz=180,slow=1.3,SNR=133						
AFI				Sn	Sn	14 32 22.4	-6.6
	248nm,0.3s,baz=131,slow=17,SNR=11						
AFI				LR	LR	14 32 44.1	
	comp=Z,242nm,21.1s,baz=151,slow=37						
RAR	Rarotonga	13.55	116	LR	LR	14 38 37.1	
	comp=Z,54nm,19.0s,baz=260,slow=32						
WRA	Warramunga Arr	50.27	257	P	P	14 40 25.2	+1.3
	0.4nm,0.8s,baz=90,slow=8.1,SNR=2.8						
ASAR	Alice Springs	50.49	252	P	P	14 40 24.0	-1.6
	1.3nm,0.7s,baz=86,slow=8.2,SNR=29						
ASAR				LR	LR	15 00 11.5	
	comp=Z,30nm,20.7s,baz=114,slow=34						
FITZ	Fitzroy Crossi	58.64	258	LR	LR	15 04 20.5	
	comp=Z,27nm,18.8s,baz=136,slow=34						
PDAR	Pinedale Array	82.18	42	LR	LR	15 12 55.1	
	comp=Z,29nm,20.0s,baz=142,slow=30						
BRTR	Keskin Array B	146.75	321	PKPbc	PKPbc	14 51 09.8	0.0
	1.4nm,1.0s,baz=64,slow=2.0,SNR=5.3						

IDC 07 14:49:15.8±11.0, 18.60S×67.56W, h0km, mb4.0/2, mb1 3.9/3, mb1mx3.6/36, mbtmp3.9/3, ML2.9/1, Error ellipse: s-maj=292.7km s-min=30.7km az=57.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	2.36	347	Pn	Pn	14 49 56.9	+0.5
	3.1nm,0.3s,baz=222,slow=7.5,SNR=79						
LPAZ				Sn	Sn	14 50 26.6	+0.2
	0.6nm,0.3s,baz=356,slow=22,SNR=3.4						
DBIC	Dimbokro	66.70	74	P	P	15 00 10.1	+1.0
	1.5nm,0.5s,baz=218,slow=8.1,SNR=3.7						
TORD	Torodi Ar. Bea	75.19	70	P	P	15 00 59.9	-0.8
	0.3nm,0.6s,baz=243,slow=7.0,SNR=5.0						

IDC 07 14:52:55.3±9.6, 4.69S×153.31E, h145km±64km, mb3.2/3, mb1 3.5/4, mb1mx3.2/43, mbtmp3.8/4, Error ellipse: s-maj=107.6km s-min=36.8km az=102.0, New Ireland region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.69	232	P	Pn	14 54 44.2	-0.4
	3.1nm,0.3s,baz=26,slow=14,SNR=14						
PMG				S	Sn	14 56 12.0	+1.6
	0.3nm,0.3s,baz=136,slow=16,SNR=2.4						
WRA	Warramunga Arr	23.89	229	P	P	14 57 56.2	+0.3
	1.6nm,0.6s,baz=53,slow=9.8,SNR=14						
ASAR	Alice Springs	26.57	223	P	P	14 58 19.6	-0.5
	0.3nm,0.4s,baz=54,slow=9.0,SNR=9.5						
MKAR	Makanchi Array	80.58	319	P	P	15 04 52.0	+0.2
	0.4nm,0.9s,baz=109,slow=6.9,SNR=3.6						

ATH 07 14:56:59.2, 38.22N×20.40E, h15km, ML2.4/15, Error ellipse: s-maj=1.6km s-min=0.8km az=265.0
THE 07 14:56:59.8, 38.22N×20.40E, h12km±1km, ML2.6/9, Error ellipse: s-maj=1.5km s-min=0.6km az=225.0
ISC 07 14:56:59.8±0.9, 38.23N±0.02×20.42E±0.04, h12km±4km, n44, σ0.63/68, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.03	143	P	Pg	14 57 02.1	+0.2
LXR1				S	Sg	14 57 04.0	+0.6
LXRA	Lixouri, Kepha	0.03	145	P	Pg	14 57 02.1	+0.2
LXRA				S	Sg	14 57 03.9	+0.4
KEF4	Livadi, Kephal	0.03	12	P	Pg	14 57 01.9	-0.1
KEF4				S	Sg	14 57 03.6	+0.1
CHV1	Chavriata, Kef	0.05	212	P	Pg	14 57 02.2	+0.1
CHV1				S	Sg	14 57 03.8	+0.1
	53µm,0.1s						
KEF3	Kipouria, Keph	0.06	248	P	Pg	14 57 02.2	+0.1
KEF3				S	Sg	14 57 04.0	+0.0
ARGA	Argostoli. Kep	0.07	134	P	Pg	14 57 02.3	0.0
ARGA				S	Sg	14 57 04.1	+0.1
KEF1	Kardakata, Kep	0.07	40	P	Pg	14 57 02.2	0.0
KEF1				S	Sg	14 57 04.0	-0.1
ARG2	Argostoli	0.07	129	P	Pg	14 57 02.4	+0.1
ARG2				S	Sg	14 57 04.2	+0.1
	24µm,0.2s						
KEF2	Argostoli. Kep	0.08	136	P	Pg	14 57 02.5	+0.1
KEF2				S	Sg	14 57 04.3	-0.1
VLS	Valsamata	0.14	109	P	Pg	14 57 03.2	-0.1
VLS				S	Sg	14 57 05.7	-0.1
VLS	Valsamata	0.14	109	P	Pg	14 57 03.2	-0.1
VLS				S	Sg	14 57 05.9	+0.1
VLS				AML	AML	14 57 06.0	
	comp=N,13743µm,0.1s						
VLS				AML	AML	14 57 06.1	
	comp=E,26977µm,0.1s						
VSK1	VASILIKIADES	0.22	32	P	Pg	14 57 04.5	0.0
VSK1				S	Sg	14 57 08.7	+1.0
	comp=E,6µm,0.2s						
KONA	Konidatara, Ke	0.23	31	P	Pg	14 57 04.7	-0.1
KONA				S	Sg	14 57 08.7	+0.6
VLMS	Volimes, Zakyn	0.40	151	P	Pg	14 57 07.6	-0.1
VLMS				S	Sb	14 57 14.1	-0.7
VLMS				AML	AML	14 57 15.0	
	comp=N,22227µm,0.4s						
VLMS				AML	AML	14 57 15.6	
	comp=E,15459µm,0.1s						
EVGI	Lefkada island	0.44	25	P	Pg	14 57 08.1	-0.4
EVGI				S	Sg	14 57 14.5	+0.2
EVGI	Lefkada island	0.44	25	P	Pg	14 57 08.1	-0.4
EVGI				S	Sg	14 57 14.5	+0.2
MGNA	Meganis	0.52	34	P	Pg	14 57 09.4	-0.6
MGNA				S	Sb	14 57 17.8	-0.6
MGNA				AML	AML	14 57 18.4	
	comp=N,888µm,0.1s						
MGNA				AML	AML	14 57 18.8	
	comp=E,1329µm,0.1s						
LKD2	Lefkada island	0.59	19	P	Pg	14 57 10.5	-0.9
LKD2				S	Sb	14 57 21.0	+0.5
	comp=E,298nm,0.4s						
LKD2	Lefkada island	0.59	19	P	Pg	14 57 10.5	-0.9
LKD2				S	Sb	14 57 19.9	-0.6
LKD2				AML	AML	14 57 26.9	
	comp=N,558µm,0.2s						
LKD2				AML	AML	14 57 27.1	
	comp=E,558µm,0.3s						
TSLK	Tsoukalades, L	0.63	17	P	Pg	14 57 11.4	-0.6
TSLK	Tsoukalades, L	0.63	17	P	Pg	14 57 11.4	-0.6
TSLK				S	Sb	14 57 21.4	0.0
PDO	Prodromos	0.71	58	P	Pg	14 57 13.0	-0.5
PDO				S	Sb	14 57 23.9	+0.1
	comp=E,972nm,0.4s						
PDO	Prodromos	0.71	58	P	Pg	14 57 13.0	-0.5
PDO				S	Sb	14 57 23.9	+0.1
RLS	Riolos of Patr	0.85	101	P	Pg	14 57 15.3	-0.8
RLS				AML	AML	14 57 33.8	
	comp=N,424µm,0.4s						
RLS				AML	AML	14 57 34.0	
	comp=E,188µm,0.4s						
PVO	Paravola	0.96	66	P	Pb	14 57 17.8	-0.4
PVO				S	Sn	14 57 33.8	+1.2
	comp=E,472nm,0.3s						
PVO	Paravola	0.96	66	P	Pb	14 57 17.9	-0.4
PVO				AML	AML	14 57 34.4	
	comp=N,1019µm,0.3s						
PVO				AML	AML	14 57 38.8	
	comp=E,908µm,0.3s						
DRO	Drossia	1.06	105	P	Pb	14 57 19.0	-1.1
DRO				AML	AML	14 57 39.1	
	comp=N,481µm,0.3s						
DRO				AML	AML	14 57 46.7	
	comp=E,493µm,0.5s						
LAKA	Lakka	1.23	89	P	Pn	14 57 22.2	-0.6
LAKA				AML	AML	14 57 41.9	
	comp=N,295µm,0.5s						
LAKA				AML	AML	14 57 42.7	
	comp=E,182µm,0.4s						
AMT	Artemida-Makis	1.23	124	P	Pb	14 57 22.8	-0.2
AMT				AML	AML	14 57 53.4	
	comp=N,281µm,0.8s						
AMT				AML	AML	14 57 59.2	
	comp=E,277µm,0.5s						
ANX	Ano Chora	1.24	72	P	Pn	14 57 22.7	-0.3
ANX				S	Sg	14 57 42.0	+2.3
	comp=E,182nm,0.5s						
ANX	Ano Chora	1.24	72	P	Pn	14 57 22.7	-0.3
ANX				AML	AML	14 57 48.2	
	comp=N,445µm,0.4s						
ANX				AML	AML	14 57 52.0	
	comp=E,288µm,0.5s						
SERG	Sergoula	1.30	81	P	Pn	14 57 16.6	-7.2
SERG	Sergoula	1.30	81	P	Pb	14 57 24.0	-0.3
IGT	Igoumenitsa	1.31	357	P	Pg	14 57 24.6	-0.3
IGT				S	Sg	14 57 43.6	+1.7
	comp=E,95nm,0.6s						
IGT	Igoumenitsa	1.31	357	P	Pg	14 57 24.8	-0.1
IGT				AML	AML	14 57 46.6	
	comp=N,204µm,0.5s						
IGT				AML	AML	14 57 47.1	
	comp=E,178µm,0.7s						
TRIZ	Trizonia	1.31	83	P	Pn	14 57 17.1	-6.8
TRIZ	Trizonia	1.31	83	P	Pn	14 57 23.5	-0.4
KALE	Kalithea	1.37	82	P	Pn	14 57 24.3	-0.4
KALE				AML	AML	14 57 51.4	
	comp=E,140µm,0.3s						
KALE				AML	AML	14 57 58.8	
	comp=N,214µm,0.3s						
KLV	Kalavryta, Ach	1.38	97	P	Pn	14 57 24.6	-0.3
KLV				S	Sg	14 57 46.3	+2.1
	comp=N,50nm,0.4s						
KLV	Kalavryta, Ach	1.38	97	P	Pn	14 57 24.8	-0.1
KLV				AML	AML	14 57 48.4	
	comp=E,106µm,0.3s						
KLV				AML	AML	14 57 52.0	
	comp=N,110µm,0.3s						
MAKR	Makrakomi, Fth	1.56	59	P	Pg	14 57 29.9	+0.2
KEK	Kerkira	1.56	342	P	Pn	14 57 27.5	+0.1
KEK				AML	AML	14 58 00.7	
	comp=E,129µm,0.6s						
KEK				AML	AML	14 58 00.9	
	comp=N,144µm,0.5s						
PYL	PYLOS	1.69	141	P	Pn	14 57 29.7	+0.5
AGG	Agios Georgios	1.70	61	P	Pg	14 57 31.8	-0.6
AGG				AML	AML	14 58 05.2	
	comp=N,110µm,0.3s						
AGG				AML	AML	14 58 07.5	
	comp=E,120µm,0.5s						

NIED 07 15:39:00, 38.10N×143.00E, h5km, Mw3.6 Best double couple: Mo2.49000×10^14 NP1:φs302.00000°, δ83.00000°, λ-79.00000°. NP2:φs65.00000°, δ13.00000°, λ-146.00000°.
JMA 07 15:39:28.7±0.1, 38.11N×142.98E, h19km±3km, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.21	280	P	Pn	15 39 50.4	-0.2
JIKH				eS	Sn	15 40 06.4	0.0
JIO	Ouri	1.33	285	P	Pn	15 39 52.3	+0.1
JIO				eS	Sb	15 40 09.6	0.0
JKMT	Kesennumamotoy	1.37	301	P	Pn	15 39 52.9	+0.1
JKMT				S	Sn	15 40 10.6	+0.1
OFUJ	Ofunato	1.41	314	P	Pn	15 39 53.6	+0.2
OFUJ				eS	Sb	15 40 12.0	-0.1
JMK	Ichinoseki	1.62	302	P	Pn	15 39 56.7	+0.5
JMK				eS	Sn	15 40 17.0	+0.5
JMM	Marumori	1.75	263	P	Pn	15 39 58.3	+0.4
JFK	Kawauchi	1.83	247	P	Pn	15 39 59.0	-0.1
JFK				eS	Sn	15 40 22.5	+0.8
JOU	Okura	1.84	279	P	Pb	15 40 00.7	-1.1
JOM	Ohasama	1.90	316	P	Pn	15 40 01.1	+1.1
JOM				eS	Sb	15 40 25.6	-0.4
JFT	Otama	2.17	255	P	Pb	15 40 05.7	-1.8
JYK	Kaneyama	2.21	292	P	Pn	15 40 06.0	+1.7
JRG	Rokugo	2.24	306	P	Pb	15 40 06.7	-1.8

IDC 07 15:49:34.5±1.3, 6.55N×77.08W, h0km, mb3.4/1, mb1 3.7/2, mb1mx3.4/21, mbtmp3.6/2, ML2.6/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/17, Error ellipse: s-maj=63.4km s-min=34.8km az=48.0
RSNC 07 15:49:47.4±1.1, 6.79N×73.17W, h135km±5km, ML3.0, Mw3.3
ISC 07 15:49:45.8±1.0, 6.87N±0.03×73.17W±0.04, h145km±6km, n32, σ1.62/59, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.28	183	⇓eP	Pn	15 50 05.9	-0.2
BARC				eS	Sn	15 50 20.5	-1.0
BARC				i		15 50 21.7	
	comp=Z,456nm,0.1s						
BRRC	Barranca, Sant	0.59	294	eP	Pn	15 50 07.8	+0.7
BRRC				eS	Sn	15 50 23.2	-0.1
BRRC				i		15 50 26.3	
	comp=Z,303nm,0.2s						
BRRC				i		15 50 26.3	
	comp=Z,279nm,0.2s						
PAMC	Pamplona, Colo	0.66	45	eP	Pn	15 50 08.8	+0.6
PAMC				eS	Sn	15 50 25.3	+0.2
PAMC				i		15 50 30.6	
	comp=Z,86nm,0.2s						
RUSC	La Rusia	0.98	175	eP	Pn	15 50 09.9	-0.7
RUSC				eS	Sn	15 50 27.4	-1.9
RUSC				i		15 50 29.5	
	comp=Z,168nm,0.3s						
RUSC				i		15 50 30.1	
	comp=Z,140nm,0.4s						
PTBC	PUERTO BERRIO,	1.32	256	eP	Pn	15 50 12.6	-0.6
PTBC				eS	Sn	15 50 32.7	-1.4
PTBC				i		15 50 35.8	
	comp=Z,227nm,0.3s						
PTBC				i		15 50 35.9	
	comp=Z,201nm,0.3s						
OCAC	Ocana	1.37	354	eP	Pn	15 50 14.1	+0.2
OCAC				eS	Sn	15 50 35.7	+0.4
OCAC				i		15 50 39.3	
	comp=Z,172nm,0.3s						
OCAC				i		15 50 40.1	
	comp=Z,182nm,0.5s						
TAMC	Tame, Arauca	1.44	107	⇑eP	Pn	15 50 14.3	-0.1
TAMC				eS	Sn	15 50 35.2	-1.0
TAMC				i		15 50 36.2	
	comp=Z,168nm,0.2s						
TAMC				i		15 50 36.3	
	comp=Z,159nm,0.2s						
SPBC	San Pablo de B	1.51	217	eP	Pn	15 50 14.7	-0.5
SPBC				eS	Sn	15 50 36.1	-1.6
SPBC				i		15 50 38.9	
	comp=Z,154nm,0.3s						
SPBC				i		15 50 39.1	
	comp=Z,162nm,0.4s						
ZARC	Zaragoza, Cauc	1.79	290	eP	Pn	15 50 18.9	+0.7
ZARC				eS	Sn	15 50 43.5	+0.5
ZARC				i		15 50 51.8	
	comp=Z,156nm,0.2s						
ZARC				i		15 50 52.9	
	comp=Z,157nm,0.3s						
SMLC	San Martn de	2.12	335	eP	Pn	15 50 22.3	+0.2
SMLC				eS	Sn	15 50 51.7	+1.7
SMLC				i		15 50 53.0	
	comp=Z,104nm,0.3s						
SMLC				i		15 50 56.0	
	comp=Z,120nm,0.3s						
NORC	Norcasia	2.13	233	eP	Pn	15 50 22.5	+0.2
NORC				eS	Sn	15 50 49.0	-1.4
NORC				i		15 50 55.7	
	comp=Z,102nm,0.2s						
NORC				i		15 50 55.8	
	comp=Z,109nm,0.2s						
CHIC	Chingaza	2.30	194	eP	Pn	15 50 24.4	-0.3
CHIC				eS	Sn	15 50 52.7	-1.8
CHIC				i		15 51 02.8	
	comp=Z,37nm,0.6s						
CHIC				i		15 51 03.0	
	comp=Z,31nm,0.5s						
ROSC	El Rosal	2.32	210	Pn	Pn	15 50 26.8	+1.8
	comp=Z,15nm,0.3s,baz=244,slow=18,SNR=8.2						
ROSC				Sn	Sn	15 50 57.0	+2.0
	comp=Z,23nm,0.3s,baz=210,slow=23,SNR=11						
ROSC	El Rosal	2.32	210	eP	Pn	15 50 26.1	+1.2
ROSC				eS	Sn	15 50 56.6	+1.6
ROSC				i		15 50 59.8	
	comp=Z,65nm,0.3s						
ROSC				i		15 50 60.0	
	comp=Z,58nm,0.3s						
HELC	Santa Helena	2.44	254	eP	Pn	15 50 26.1	-0.3
HELC				eS	Sn	15 50 58.9	+1.4
HELC				i		15 51 05.3	
	comp=Z,92nm,0.3s						
HELC				i		15 51 05.5	
	comp=Z,86nm,0.3s						
UREC	San Jos de Ur	2.50	291	eP	Pn	15 50 26.4	-0.4
UREC				eS	Sn	15 50 58.1	-0.2
UREC				i		15 51 10.8	
	comp=Z,105nm,0.3s						
UREC				i		15 51 10.9	
	comp=Z,114nm,0.3s						
GUY2C	Guyana, Caldas	2.73	233	eP	Pn	15 50 30.6	+0.5
GUY2C				eS	Sn	15 51 03.1	-1.0
GUY2C				i		15 51 12.9	
	comp=Z,64nm,0.5s						
GUY2C				i		15 51 13.3	
	comp=Z,66nm,0.5s						
VILC	Villavicencio,	2.79	191	eP	Pn	15 50 31.0	+0.4
VILC				eS	Sn	15 51 02.1	-2.9
VILC				i		15 51 14.4	
	comp=Z,51nm,0.3s						
CBOC	Ciudad Bolivar	3.00	251	eP	Pn	15 50 34.4	+1.2
CBOC				eS	Sn	15 51 08.0	-1.7
CBOC				i		15 51 12.8	
	comp=Z,21nm,0.2s						
CBOC				i		15 51 44.7	
	comp=Z,28nm,0.1s						
DBBC	Dabeiba	3.02	273	eP	Pn	15 50 34.2	+0.8
DBBC				eS	Sn	15 51 05.3	-4.8
DBBC				i		15 51 18.0	
	comp=Z,62nm,0.3s						
CODC	Agustn Codazz	3.06	355	eP	Pn	15 50 34.4	+0.6
CODC				eS	Sn	15 51 10.1	-0.7
CODC				i		15 51 18.2	
	comp=Z,11nm,0.4s						
CODC				i		15 51 23.9	
	comp=Z,11nm,0.4s						
ARGC	Ariguani, Magd	3.15	340	eP	Pn	15 50 36.6	+1.6
ARGC				i		15 51 08.2	
	comp=Z,20nm,0.4s						
ARGC				eS	Sn	15 51 15.2	+2.1
ARGC				i		15 51 29.4	
	comp=Z,27nm,0.5s						
SDV	Santo Domingo	3.21	51	eP	Pn	15 50 35.9	-0.1
SDV				eS	Sn	15 51 12.0	-2.7
SDV				i		15 51 15.8	
	comp=Z,48nm,0.4s						
SDV				i		15 51 15.9	
	comp=Z,42nm,0.4s						
PRAC	Prado	3.57	209	eP	Pn	15 50 40.9	+0.4
PRAC				eS	Sn	15 51 21.8	-1.0
PRAC				i		15 51 28.2	
	comp=Z,38nm,0.4s						
PRAC				i		15 51 28.4	
	comp=Z,43nm,0.2s						
ORTC	Ortega, Tolima	3.60	215	eP	Pn	15 50 41.0	+0.2
ORTC				eS	Sn	15 51 22.7	-0.7
ORTC				i		15 51 27.5	
	comp=Z,21nm,0.6s						
ORTC				i		15 51 27.9	
	comp=Z,23nm,0.5s						
SJCC	San Jacinto, C	3.60	327	eP	Pn	15 50 40.3	-0.6
SJCC				eS	Sn	15 51 21.3	-2.3
SJCC				i		15 51 25.6	
	comp=Z,38nm,0.5s						
SJCC				i		15 51 26.0	
	comp=Z,35nm,0.3s						
SMRC	Santa Marta, M	4.39	346	eP	Pn	15 50 51.3	+0.1
SMRC				eS	Sn	15 51 37.0	-5.0
SMRC				i		15 51 52.6	
	comp=Z,16nm,1.4s						
CAPC	Capurgana	4.50	293	eP	Pn	15 50 50.9	-1.6
CAPC				eS	Sn	15 51 41.7	-2.8
CAPC				i		15 51 51.4	
	comp=Z,13nm,0.3s						
CAPC				i		15 52 08.7	
	comp=Z,41nm,1.7s						
LPIG	La Paz	39.50	300	LR	LR	16 11 45.7	
	comp=Z,35nm,21.0s,baz=14,slow=37						
YKA	Yellowknife Ar	63.20	340	P	P	15 59 57.6	-0.7
	comp=Z,0.3nm,0.6s,baz=138,slow=6.7,SNR=5.7						
ASAR	Alice Springs	149.10	234	PKPbc	PKPdf	16 09 15.4	+1.8
	comp=Z,0.3nm,0.6s,baz=122,slow=3.5,SNR=7.4						
WRA	Warramunga Arr	150.32	241	PKPbc	PKPdf	16 09 18.6	+3.0
	comp=Z,0.2nm,0.4s,baz=108,slow=2.9,SNR=6.8						

DJA 07 15:55:56.5±0.8, 1°S±3°×12°6E±°, h11km±7km, M4.3/18, mB4.8/6, mb4.5/7, MLv4.3/18, Mw(mB)4.1/6
NEIC 07 15:55:58.3±2.5, 1.31S±0.05×126.28E±0.06, h47km±9km, mb4.2/16, Error ellipse: s-maj=9.5km s-min=6.7km az=114.0
IDC 07 15:55:59.0±1.8, 1.34S×126.23E, h49km±19km, mb3.9/10, mb1 4.1/12, mb1mx3.8/38, mbtmp4.2/12, ML4.1/2, MS2.9/3, Ms1 2.9/3, ms1mx2.5/35, Error ellipse: s-maj=15.6km s-min=13.2km az=164.0
ISC 07 15:55:56.8±0.5, 1.31S±0.05×126.27E±0.05, h29km, n57, σ1.60/57, mb4.2/12, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SANI	Sanana	0.78	201	P	Pn	15 56 11.3	-0.6
LBMI	Labuha	1.40	61	P	Pn	15 56 21.2	+0.8
NLAI	Namlea	2.09	157	P	Pn	15 56 30.1	+0.3
TNTI	Ternate	2.34	28	P	Pn	15 56 35.6	+2.2
TNTI	Ternate	2.34	28		Pn	15 56 35.3	+2.0
TNTI				Sn	Sn	15 56 56.5	-4.8
KMSI	Cibinong	2.96	309	P	Pn	15 56 44.3	+2.5
MSAI	Masohi	3.34	127	P	Pn	15 56 49.1	+2.0
LUWI	Luwuk	3.51	274	P	Pn	15 56 49.4	0.0
LUWI	Luwuk	3.51	274		Pn	15 56 49.4	0.0
APSI	Ampana	4.64	275	P	Pn	15 57 05.4	+0.5
MRSI	Marisa	4.68	292	P	Pn	15 57 05.9	+0.4
BNDI	Bandanaira	4.83	131	P	Pn	15 57 09.1	+1.5
SWI	Sorong	5.01	85	P	Pn	15 57 12.4	+2.2
	0.3nm689nm57nm,0.7s						
SIJI	Sorong	5.02	85	P	Pn	15 57 11.6	+1.4
	4.8nm,0.3s,baz=73,slow=24,SNR=15						
SIJI				S	Sn	15 58 11.0	+3.8
	baz=112,slow=19,SNR=4.0						
FAKI	Fak Fak	6.19	105	P	Pn	15 57 25.8	-0.5
	0.1nm485nm30nm,0.7s						
FAKI	Fak Fak	6.19	105		Pn	15 57 25.8	-0.5
FAKI				Sn	Sn	15 58 33.8	-2.2
MPSI	Mapaga	6.58	284	P	Pn	15 57 32.9	+1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.1nm487nm21nm,0.6s						
TTSI	**Tana Toraja**	**6.67**	**255**	P	**Pn**	**15 57 34.0**	**+1.1**
	0.2nm2μm35nm,0.5s						
BNSI	**Bone**	**6.88**	**243**	P	**Pn**	**15 57 36.7**	**+1.0**
	0.1nm18nm,0.7s						
SPSI	**Sidrap Palu**	**7.01**	**248**	P	**Pn**	**15 57 40.0**	**+2.5**
	1.1nm4μm184nm,0.4s						
BKSI	**Bulukumba**	**7.31**	**237**	P	**Pn**	**15 57 45.3**	**+3.6**
KAPI	**Kappang**	**7.47**	**240**	P	**Pn**	**15 57 46.2**	**+2.3**
	3.9nm,0.3s,baz=58,slow=4.7,SNR=9.5						
KAPI				S	**Sn**	**15 59 07.6**	**-0.2**
	2.6nm,0.3s,baz=91,slow=22,SNR=3.0						
KAPI				LR	LR	16 00 44.6	
	comp=Z,78nm,18.0s,baz=90,slow=38						
KAPI	**Kappang**	**7.47**	**240**		**Pn**	**15 57 46.6**	**+2.7**
KSM	**Kuching**	**16.20**	**280**	P	**P**	**15 59 45.4**	**0.0**
KSM				IAmb	IAmb	16 00 00.4	
	comp=Z,21nm,1.4s						
FITZ	**Fitzroy Crossi**	**16.69**	**182**	P	**P**	**15 59 51.3**	**+0.5**
CISI	**Cisompet, Garu**	**19.41**	**251**	P	**P**	**16 00 18.4**	**-2.4**
WB0	**Warramunga Arr**	**19.99**	**157**	P	**P**	**16 00 26.2**	**-1.0**
WB0				IAmb	IAmb	16 00 43.6	
	comp=Z,20nm,1.3s						
WRAB	**Tennant Creek**	**20.12**	**157**	P	**P**	**16 00 27.0**	**-1.6**
WRAB				IAmb	IAmb	16 00 43.9	
	comp=Z,19nm,1.4s						
WRA	**Warramunga Arr**	**20.13**	**157**	P	**P**	**16 00 27.9**	**-0.8**
	comp=Z,5.2nm,0.8s,baz=340,slow=13,SNR=39						
WRA	**Warramunga Arr**	**20.13**	**157**	IAmb	IAmb	16 00 32.1	
	comp=Z,0.2nm,0.8s						
WB2	**Warramunga Arr**	**20.13**	**157**	P	**P**	**16 00 28.0**	**-0.7**
WB2				IAmb	IAmb	16 00 28.5	
	comp=Z,4.8nm,0.7s						
WR0	**Warramunga Arr**	**20.22**	**157**	P	**P**	**16 00 29.0**	**-0.7**
WR0				IAmb	IAmb	16 00 31.3	
	comp=Z,9.4nm,1.1s						
COEN	**Coen**	**20.92**	**128**	P	**P**	**16 00 37.8**	**+0.5**
PMG	**Port Moresby**	**22.28**	**112**	P	**P**	**16 00 53.8**	**+1.9**
	comp=Z,4.9nm,0.6s,baz=314,slow=18,SNR=3.6						
AS31	**Alice Springs**	**23.42**	**162**	P	**P**	**16 01 03.2**	**-0.4**
ASAR	**Alice Springs**	**23.42**	**162**	P	**P**	**16 01 03.0**	**-0.7**
	comp=Z,6.0nm,0.7s,baz=341,slow=12,SNR=102						
ASAR	**Alice Springs**	**23.42**	**162**	P	**P**	**16 01 03.2**	**-0.5**
PSI	**Prapat**	**27.64**	**279**	LR	LR	16 15 03.6	
	comp=Z,35nm,19.6s,baz=58,slow=42						
CMAR	**Chiang Mai Arr**	**33.29**	**307**	LR	LR	16 16 23.1	
	comp=Z,12nm,20.6s,baz=184,slow=37						
STKA	**Stephens Creek**	**33.67**	**156**	P	**P**	**16 02 35.3**	**0.0**
	comp=Z,1.4nm,0.4s,baz=338,slow=8.9,SNR=9.9						
STKA	**Stephens Creek**	**33.67**	**156**	IAmb	IAmb	16 02 37.1	
	comp=Z,0.4nm,0.9s						
GTA	**Gaotai**	**47.23**	**332**	*e*P	**P**	**16 04 28.7**	**+1.2**
GTA				pP	pP	16 04 34.3	-1.3
GTA				sP	pwP	16 04 36.9	-1.5
SONM	**Songino Array**	**51.93**	**343**	P	**P**	**16 05 03.5**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=157,slow=8.9,SNR=9.8						
SONM	**Songino Array**	**51.93**	**343**	IAmb	IAmb	16 05 04.0	
	comp=Z,1.0nm,0.7s						
PETK	**Petropavlovsk-**	**60.26**	**21**	P	**P**	**16 06 02.9**	**+0.5**
	comp=Z,7.9nm,1.0s,baz=181,slow=7.3,SNR=6.2						
MK31	**Makanchi Array**	**61.46**	**327**	P	**P**	**16 06 10.9**	**+0.2**
MK31				IAmb	IAmb	16 06 12.1	
	comp=Z,2.4nm,0.8s						
MKAR	**Makanchi Array**	**61.46**	**327**	P	**P**	**16 06 11.2**	**+0.4**
	comp=Z,3.3nm,0.8s,baz=118,slow=7.9,SNR=33						
MAKZ	**Makanchi**	**61.64**	**327**	P	**P**	**16 06 12.0**	**+0.1**
MAKZ				IAmb	IAmb	16 06 12.8	
	comp=Z,2.6nm,0.7s						
ZALV	**Zalesovo Beam**	**64.88**	**334**	P	**P**	**16 06 32.5**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=140,slow=5.8,SNR=5.8						
KURK	**Kurchatov**	**65.76**	**329**	P	**P**	**16 06 38.7**	**-0.3**
TIXI	**Tiksi**	**72.86**	**1**	P	**P**	**16 07 22.0**	**-0.5**
TIXI				IAmb	IAmb	16 07 22.6	
	comp=Z,3.8nm,0.7s						
ABKAR	**Akbulak array**	**75.77**	**322**	P	**P**	**16 07 39.2**	**-0.7**
ILAR	**Eielson Array**	**89.83**	**25**	P	**P**	**16 08 50.6**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=241,slow=5.1,SNR=13						
ILAR	**Eielson Array**	**89.83**	**25**	P	**P**	**16 08 50.4**	**-2.1**
INK	**Inuvik**	**94.99**	**22**	P	**P**	**16 09 15.5**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=320,slow=3.3,SNR=3.9						
TORD	**Torodi Ar. Bea**	**123.90**	**285**	PKP	**PKPdf**	**16 14 52.9**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=79,slow=1.5,SNR=3.6						
CPUP	**Villa Florida**	**152.30**	**173**	PKPbc	**PKiKP**	**16 15 51.6**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=334,slow=2.1,SNR=3.2						
CPUP				PKPab	**PKPab**	**16 16 00.9**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=146,slow=3.6,SNR=2.9						

ROM 07 15:59:10.7±0.1,**38.147N**±0.006×**15.101E**±0.006, **h16**km±1km,**ML2.3**/14,**6C-2D,Error ellipse: s-maj=0.6km s-min=0.4km az=2.0,Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOV	**Novara**	**0.12**	**167**	⇑P	Pg	15 59 14.6	+0.1
NOV				S	Sb	15 59 17.1	-0.2
NOV				AML	AML		
	comp=N,1340μm,1.6s						
NOV				AML	AML		
	comp=E,1660μm,0.3s						
NOV				AML	AML		
	comp=N,1335μm,1.6s						
MCSR	**Castroreale**	**0.14**	**125**	⇑P	Pg	15 59 14.6	-0.2
MCSR				S	Sg	15 59 17.7	+0.3
MCSR				AML	AML		
	comp=N,2625μm,0.2s						
MCSR				AML	AML		
	comp=E,3040μm,0.9s						
MILZ	**Milazzo**	**0.16**	**40**	P	Pb	15 59 16.4	+1.1
MILZ				S	Sb	15 59 19.2	+0.8
MILZ				AML	AML		
	comp=E,1650μm,0.4s						
MILZ				AML	AML		
	comp=N,624μm,1.2s						
MILZ				AML	AML		
	comp=E,1655μm,0.4s						
MILZ				AML	AML		
	comp=N,624μm,1.2s						
MPNC	**Port Mandanici**	**0.20**	**91**	⇑P	Pg	15 59 15.6	+0.1
MPNC				S	Sg	15 59 18.9	+0.2
MPNC				AML	AML		
	comp=N,1570μm,0.2s						
MPNC				AML	AML		
	comp=E,2190μm,0.4s						
AIO	**Antillo**	**0.20**	**149**	⇑P	Pb	15 59 15.9	-0.2
AIO				S	Sb	15 59 19.3	-0.4
AIO				AML	AML		
	comp=E,1238μm,0.2s						
AIO				AML	AML		
	comp=N,1036μm,0.2s						
MUCR	**Ucria**	**0.21**	**240**	⇓P	Pb	15 59 15.9	-0.2
MUCR				S	Sb	15 59 19.6	-0.3
MUCR				AML	AML		
	comp=E,1078μm,0.1s						
MUCR				AML	AML		
	comp=E,1078μm,0.1s						
MUCR				AML	AML		
	comp=N,1085μm,0.6s						
VPL	**Vulcano Piano**	**0.25**	**338**	⇑P	Pg	15 59 16.4	+0.1
VPL				S	Sg	15 59 20.3	+0.3
VPL				AML	AML		
	comp=E,6315μm,0.4s						
VPL				AML	AML		
	comp=N,5370μm,0.3s						
MCPD	**Capo d'Orlando**	**0.29**	**265**	S	Sg	15 59 21.4	+0.1
MCPD				AML	AML		
	comp=E,362μm,1.3s						
MCPD				AML	AML		
	comp=N,394μm,0.9s						
MSRU	**Castanea**	**0.34**	**70**	⇑P	Pg	15 59 17.9	0.0
MSRU				S	Sg	15 59 23.1	+0.4
MSRU				AML	AML		
	comp=N,902μm,0.2s						
MSRU				AML	AML		
	comp=E,946μm,0.6s						
MNO	**Monte Soro**	**0.39**	**236**	⇓P	Pb	15 59 19.7	+0.4
MNO				S	Sb	15 59 25.6	+0.6
MNO				AML	AML		
	comp=E,281μm,0.5s						
MNO				AML	AML		
	comp=N,285μm,0.8s						
MSFR	**San Fratello**	**0.42**	**254**	P	Pg	15 59 19.4	+0.2
MSFR				S	Sb	15 59 25.6	-0.3
MSFR				AML	AML		
	comp=N,168μm,0.5s						
MSFR				AML	AML		
	comp=E,149μm,0.4s						
MTTG	**Motta San Giov**	**0.49**	**107**	P	Pg	15 59 20.5	0.0
MTTG				S	Sb	15 59 28.2	+0.4
MTTG				AML	AML		
	comp=E,161μm,0.8s						
MTTG				AML	AML		
	comp=N,215μm,0.8s						
GMB	**Gambarie**	**0.57**	**88**	P	Pg	15 59 22.0	-0.1
GMB				S	Sb	15 59 30.7	+0.3
GMB				AML	AML		
	comp=E,981μm,0.4s						
GMB				AML	AML		
	comp=N,688μm,0.6s						
IFIL	**Filicudi I Eol**	**0.59**	**315**	P	Pg	15 59 22.2	-0.2
IACL	**Alicudi**	**0.70**	**304**	P	Pg	15 59 23.8	-0.7
IACL				AML	AML		
	comp=E,404μm,1.1s						
IACL				AML	AML		
	comp=N,270μm,0.3s						
MPAZ	**Palizzi**	**0.74**	**105**	P	Pg	15 59 24.8	-0.4
MPAZ				AML	AML		
	comp=E,108μm,0.8s						
MPAZ				AML	AML		
	comp=N,130μm,0.4s						
SOI	**Samo**	**0.76**	**95**	P	Pg	15 59 24.8	-0.7
JOPP	**Joppolo**	**0.77**	**53**	P	Pb	15 59 25.1	-0.6

ROM 07 15:59:42.5±0.2,**38.128N**±0.006×**15.111E**±0.007, **h16**km±1km,**Md1.1**/3,**3C-1D,Error ellipse: s-maj=0.7km s-min=0.3km az=356.0,Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOV	**Novara**	**0.10**	**169**	⇑P	Pb	15 59 46.2	0.0
NOV				S	Sb	15 59 48.7	+0.2
NOV				END			
MCSR	**Castroreale**	**0.13**	**120**	⇑P	Pg	15 59 46.2	-0.1
MCSR				S	Sb	15 59 49.3	0.0
MCSR				END			
MILZ	**Milazzo**	**0.17**	**33**	P	Pb	15 59 47.2	-0.1
MILZ				S	Sb	15 59 50.8	+0.3
AIO	**Antillo**	**0.18**	**148**	⇑P	Pb	15 59 47.6	0.0
AIO				S	Sb	15 59 51.0	+0.1
AIO				END			
MPNC	**Port Mandanici**	**0.19**	**85**	P	Pg	15 59 47.2	+0.1
MPNC				S	Sg	15 59 50.5	+0.2
MUCR	**Ucria**	**0.21**	**246**	⇓P	Pg	15 59 47.6	+0.2
MUCR				S	Sb	15 59 51.2	-0.4

IDC 07 16:02:08.7±2.2,**17.81S×175.71W,h0**km,**mb3.9/3,mb1 3.9/3,mb1mx3.6/34,mbtmp3.6/3,Error ellipse: s-maj=263.4km s-min=30.3km az=159.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.18**	**259**	P	P	16 10 43.7	+0.3
	0.6nm,0.7s,baz=96,slow=7.7,SNR=19						
ASAR	**Alice Springs**	**47.29**	**254**	P	P	16 10 43.6	-0.7
	1.9nm,0.8s,baz=86,slow=8.9,SNR=27						
ASAR				PcP	PcP	16 12 15.8	+0.2
	0.3nm,0.8s,baz=99,slow=4.9,SNR=5.0						
TXAR	**Lajitas Array**	**83.78**	**57**	P	P	16 14 40.2	-0.1
	0.1nm,0.4s,baz=260,slow=5.4,SNR=2.1						

*ANF **07** 16:06:38.5±1.9, 40.42N×126.97W, h0km, ML3.6/7, Error ellipse: s-maj=21.1km s-min=7.6km az=40.0*

*NEIC **07** 16:06:41.0±2.5, 40.55N±0.08×127.0W±0.2, h13km±12km, ML3.2/32, Error ellipse: s-maj=18.2km s-min=11.1km az=77.0*

*IDC **07** 16:06:46.2±2.6, 41.39N×126.83W, h0km, mb3.1/3, mb1 3.5/5, mb1mx3.3/35, mbtmp3.2/5, ML3.4/1, MS2.8/6, Ms1 2.8/6, ms1mx2.6/15, Error ellipse: s-maj=44.1km s-min=18.5km az=21.0*

ISC 07 16:06:40.5±1.7,**40.48N**±0.07×**127.1W**±0.1,**h16**km,**n53,** σ**0.95**/52,**mb3.1**/3,**Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCC	**Jacoby Creek,**	**2.32**	**81**	Pn	**Pn**	**16 07 17.3**	**-0.7**
JCC				IAML		16 07 53.4	
	comp=E,96nm,1.2s						
KHMM	**Horse Mountain**	**2.55**	**80**		**Pn**	**16 07 20.4**	**-1.0**
KHMM				IAML		16 07 58.7	
	comp=N,65nm,0.8s						
KHMM				IAML		16 08 11.0	
	comp=E,75nm,2.5s						
KMRM	**Mail Ridge**	**2.56**	**95**		**Pn**	**16 07 22.0**	**+0.6**
KMRM				IAML		16 08 00.2	
	comp=E,115nm,0.8s						
KMRM				IAML		16 08 00.3	
	comp=N,93nm,1.2s						
KRMB	**Red Mountain**	**2.60**	**65**	Pn	**Pn**	**16 07 21.5**	**-0.4**
KRMB				IAML		16 07 52.1	
	comp=E,64nm,2.2s						
KRMB				IAML		16 08 02.4	
	comp=N,57nm,3.4s						
KBO	**Bosley Butte**	**2.74**	**50**	Pn	**Pn**	**16 07 22.9**	**-1.0**
KCPM	**Cahto Peak**	**2.77**	**105**		**Pn**	**16 07 23.9**	**-0.5**
KCPM				IAML		16 08 02.1	
	comp=N,132nm,0.6s						
KCPM				IAML		16 08 03.4	
	comp=E,163nm,0.5s						
L02E	**Cave Junction**	**3.09**	**56**	P	**Pn**	**16 07 28.1**	**-0.6**
	baz=237,SNR=53						
KEBM	**Edson Butte**	**3.14**	**39**	Pn	**Pn**	**16 07 28.2**	**-1.1**
O02D	**Mt. Diablo Mer**	**3.27**	**94**	P	**Pn**	**16 07 29.9**	**-1.2**
	baz=276,SNR=26						
O02D				S	**Sn**	**16 08 09.8**	**0.0**
	baz=276						
M02C	**Callahan**	**3.31**	**73**	P	**Pn**	**16 07 31.2**	**-0.5**
	baz=254,SNR=11						
M02C				S	**Sn**	**16 08 10.9**	**+0.3**
	baz=254						
N02D	**Trinity Center**	**3.34**	**80**	P	**Pn**	**16 07 30.7**	**-1.4**
	baz=262,SNR=14						
N02D				S	**Sn**	**16 08 12.8**	**+1.4**
	baz=262						
K02D	**Willamette Mer**	**3.37**	**48**	P	**Pn**	**16 07 31.7**	**-0.8**
	baz=228,SNR=93						
HOPS	**Hopland Field**	**3.40**	**115**		**Pn**	**16 07 33.7**	**+0.8**
HOPS				IAML		16 08 23.5	
	comp=E,59nm,2.6s						
HOPS				IAML		16 09 43.2	
	comp=N,52nm,3.2s						
WDC	**Whiskeytown Da**	**3.44**	**87**		**Pn**	**16 07 33.8**	**+0.4**
YBH	**Yreka Blue Hor**	**3.51**	**68**	Pn	**Pn**	**16 07 35.7**	**+1.3**
	comp=N,4.9nm,0.3s,baz=271,slow=13,SNR=63						
YBH				Sn	**Sn**	**16 08 15.8**	**+0.1**
	baz=234,slow=12,SNR=1.9						
YBH				LR	LR	16 08 30.0	
	comp=N,77nm,20.5s,baz=300,slow=33						
YBH	**Yreka Blue Hor**	**3.51**	**68**		**Pn**	**16 07 35.0**	**+0.5**
J01E	**Myrtle Point**	**3.55**	**40**	S	**Sn**	**16 08 19.1**	**+2.6**
	baz=221						
GDXM	**Geysers**	**3.68**	**116**	Pn	**Pn**	**16 07 38.0**	**+1.2**
GDXM				IAML		16 10 02.6	
	comp=N,23nm,3.5s						
HUMO	**Hull Mountain**	**3.74**	**54**		**Pn**	**16 07 37.5**	**0.0**
HUMO				IAML		16 08 02.7	
	comp=N,27nm,1.4s						
L04D	**Klamath Falls**	**3.97**	**62**	P	**Pn**	**16 07 41.4**	**+0.6**
	baz=244,SNR=44						
MCCM	**Marconi Confer**	**3.98**	**124**		**Pn**	**16 07 40.1**	**-0.7**
MCCM				IAML		16 08 12.5	
	comp=N,54nm,2.2s						
O03E	**Paynes Creek**	**4.01**	**91**	P	**Pn**	**16 07 40.5**	**-0.8**
	baz=274,SNR=5.7						
M04C	**Macdoel**	**4.14**	**70**	P	**Pn**	**16 07 43.6**	**+0.3**
	baz=252,SNR=7.7						
I03D	**Drain, OR**	**4.24**	**39**	P	**Pn**	**16 07 44.1**	**-0.2**
	baz=221						
I02D	**Swisshome**	**4.33**	**32**	P	**Pn**	**16 07 45.7**	**+0.1**
	baz=213						
K04D	**Chiloquin, OR**	**4.51**	**60**	P	**Pn**	**16 07 48.5**	**+0.2**
	baz=242						
J04D	**Umpqua Nationa**	**4.61**	**52**	P	**Pn**	**16 07 49.8**	**+0.1**
	baz=234						
I04A	**Tendick Farm,**	**4.78**	**45**	P	**Pn**	**16 07 51.7**	**-0.2**
	baz=227,SNR=12						
COR	**Corvallis**	**4.95**	**33**	Pn	**Pn**	**16 07 53.7**	**-0.4**
K05A	**Summer Lake**	**5.13**	**62**		**Pn**	**16 07 57.5**	**+0.7**
K05A				IAML		16 08 55.9	
	comp=E,26nm,3.4s						
K05A				IAML		16 10 41.3	
	comp=N,24nm,4.5s						
J05D	**Fort Rock, OR**	**5.17**	**55**	P	**Pn**	**16 07 58.0**	**+0.7**
	baz=238,SNR=20						
PINE	**Pine Mountain**	**5.62**	**52**		**Pn**	**16 08 04.3**	**+0.8**
CMB	**Columbia Colle**	**5.71**	**113**	Pn	**Pn**	**16 08 05.2**	**+0.4**
SAO	**San Andreas Ge**	**5.74**	**128**		**Pn**	**16 08 05.1**	**0.0**
F04A	**Amboy**	**6.42**	**30**	Pn	**Pn**	**16 08 15.3**	**+1.1**
PMPB	**Monarch Peak**	**6.49**	**129**	Pn	**Pn**	**16 08 15.5**	**0.0**
E03A	**Lebam**	**6.57**	**21**	Pn	**Pn**	**16 08 17.6**	**+1.2**
I07A	**Izee**	**6.65**	**55**	Pn	**Pn**	**16 08 19.2**	**+1.5**
G06A	**Carlson Farm,**	**6.69**	**43**	Pn	**Pn**	**16 08 18.4**	**+0.3**
E04D	**Cinebar**	**6.89**	**27**	P	**Pn**	**16 08 22.6**	**+1.7**
	baz=209,SNR=12						
J08A	**Circle Bar Ran**	**7.01**	**63**	Pn	**Pn**	**16 08 21.4**	**-1.1**
LON	**Longmire**	**7.33**	**29**		**Pn**	**16 08 28.4**	**+1.5**
LTY	**Liberty**	**8.19**	**32**	Pn	**Pn**	**16 08 37.4**	**-1.4**
ISA	**Isabella, Lake**	**8.29**	**123**	Pn	**Pn**	**16 08 41.7**	**+1.6**
BMO	**Blue Mountains**	**8.40**	**55**	Pn	**Pn**	**16 08 41.6**	**0.0**
ELK	**Elko**	**8.99**	**84**	LR	LR	16 12 43.4	
	comp=N,55nm,19.3s,baz=230,slow=41						
NEW	**Newport**	**10.53**	**39**	LR	LR	16 13 00.2	
	comp=N,82nm,19.9s,baz=217,slow=38						
BBB	**Bella Bella**	**11.73**	**357**	LR	LR	16 12 41.5	
	comp=N,22nm,19.6s,baz=350,slow=33						
PDAR	**Pinedale Array**	**13.29**	**74**	Pn	**P**	**16 09 57.0**	**-1.3**
	baz=243,slow=7.0,SNR=2.2						
PDAR				LR	LR	16 15 28.3	
	comp=N,56nm,20.9s,baz=257,slow=40						
TXAR	**Lajitas Array**	**22.10**	**113**	P	P	16 11 46.5	+11
	comp=N,1.0nm,0.9s,baz=306,slow=7.7,SNR=6.3						
YKA	**Yellowknife Ar**	**23.29**	**15**	P	**P**	**16 11 46.7**	**-0.5**
	comp=N,0.2nm,0.6s,baz=203,slow=9.9,SNR=2.6						
ULM	**Lac du Bonnet**	**23.83**	**55**	LR	LR	16 21 25.6	
	comp=N,48nm,20.1s,baz=44,slow=38						
ILAR	**Eielson Array**	**26.91**	**341**	P	**P**	**16 12 20.9**	**+0.4**
	comp=N,0.4nm,0.8s,baz=153,slow=9.1,SNR=5.0						

*THE **07** 16:18:56.5, 38.10N×20.40E, h15km, ML3.5/9, Error ellipse: s-maj=1.1km s-min=0.4km az=258.0*

*ATH **07** 16:18:56.3, 38.10N×20.41E, h17km, ML3.0/21, Error ellipse: s-maj=1.9km s-min=0.8km az=62.0*

*BEO **07** 16:18:57.5±0.8, 38.05N×20.13E, h33km±4km, ML3.2/6*

ISC 07 16:18:56.0±0.9,**38.10N**±0.03×**20.38E**±0.04,**h17**km±4km,**n79,** σ**0.87**/108,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.10**	**346**	P	**Pg**	**16 18 60.0**	**+0.4**
KEF3				S	**Sg**	**16 19 02.5**	**+0.4**
KEF2	**Argostoli. Kep**	**0.10**	**53**	P	**Pg**	**16 18 59.6**	**0.0**
KEF2				S	**Sg**	**16 19 01.8**	**-0.3**
ARGA	**Argostoli. Kep**	**0.11**	**46**	P	**Pb**	**16 18 59.7**	**+0.1**
ARGA				S	**Sb**	**16 19 01.8**	**-0.2**
LXRA	**Lixouri, Kepha**	**0.11**	**25**	P	**Pb**	**16 18 60.0**	**+0.3**
LXRA				S	**Sg**	**16 19 02.6**	**+0.5**
LXR1	**Lixouri, Cepha**	**0.11**	**25**	P	**Pg**	**16 19 00.0**	**+0.3**
LXR1				S	**Sg**	**16 19 02.6**	**+0.5**
ARG2	**Argostoli**	**0.11**	**48**	P	**Pb**	**16 18 59.8**	**+0.1**
ARG2				S	**Sb**	**16 19 02.0**	**-0.2**
KEF4	**Livadi, Kephal**	**0.16**	**12**	P	**Pg**	**16 19 00.6**	**+0.3**
KEF4				S	**Sg**	**16 19 03.6**	**+0.4**
VLS	**Valsamata**	**0.18**	**66**	P	**Pg**	**16 19 00.5**	**-0.1**
VLS				S	**Sg**	**16 19 03.6**	**-0.1**
	39μm,0.1s						
VLS	**Valsamata**	**0.18**	**66**	P	**Pg**	**16 19 00.5**	**-0.1**
VLS				S	**Sg**	**16 19 03.2**	**-0.6**
VLS				AML	AML	16 19 03.7	
VLS				AML	AML	16 19 04.0	
	comp=E,51546μm,0.2s						
KEF1	**Kardakata, Kep**	**0.19**	**22**	P	**Pg**	**16 19 00.9**	**+0.2**
KEF1				S	**Sg**	**16 19 04.1**	**+0.2**
VLMS	**Volimes, Zakyn**	**0.32**	**135**	P	**Pg**	**16 19 02.7**	**-0.1**
VLMS				S	**Sg**	**16 19 07.3**	**-0.2**
VLMS				AML	AML	16 19 08.2	
	comp=E,14649μm,0.2s						
VLMS				AML	AML	16 19 14.1	
	comp=N,18278μm,0.3s						
VSK1	**VASILIKIADES**	**0.34**	**25**	P	**Pg**	**16 19 03.3**	**+0.1**
VSK1				S	**Sg**	**16 19 08.6**	**+0.6**
	comp=N,27μm,0.3s						
KONA	**Konidatara, Ke**	**0.35**	**25**	P	**Pg**	**16 19 03.5**	**+0.1**
KONA				S	**Sg**	**16 19 08.5**	**0.0**
ZAK2	**Zakynthos**	**0.52**	**127**	P	**Pg**	**16 19 06.3**	**0.0**
ZAK2				S	**Sb**	**16 19 14.2**	**+0.4**
	comp=N,11μm,0.4s						
KRI1	**kERI**	**0.56**	**142**	P	**Pg**	**16 19 06.8**	**-0.3**
KRI1				S	**Sb**	**16 19 15.6**	**+0.6**
	comp=N,6μm,0.4s						
EVGI	**Lefkada island**	**0.56**	**23**	P	**Pg**	**16 19 07.0**	**-0.2**
EVGI				S	**Sg**	**16 19 15.3**	**+0.6**
EVGI	**Lefkada island**	**0.56**	**23**	P	**Pg**	**16 19 07.2**	**0.0**
EVGI				S	**Sg**	**16 19 15.0**	**+0.3**
MGNA	**Meganis**	**0.64**	**30**	P	**Pg**	**16 19 08.4**	**-0.3**
MGNA				AML	AML	16 19 19.0	
	comp=E,3669μm,0.2s						
MGNA				AML	AML	16 19 19.3	
	comp=N,3112μm,0.2s						
LKD2	**Lefkada island**	**0.72**	**18**	P	**Pb**	**16 19 09.8**	**-0.3**
LKD2	**Lefkada island**	**0.72**	**18**	P	**Pb**	**16 19 09.9**	**-0.2**
LKD2				AML	AML	16 19 27.3	
	comp=E,2871μm,0.3s						
LKD2				AML	AML	16 19 29.6	
	comp=N,2150μm,0.4s						
TSLK	**Tsoukalades, L**	**0.75**	**17**	P	**Pb**	**16 19 10.6**	**0.0**
TSLK				S	**Sg**	**16 19 22.1**	**+1.4**
	comp=N,3μm,0.5s						
TSLK	**Tsoukalades, L**	**0.75**	**17**	P	**Pb**	**16 19 10.8**	**+0.1**
PDO	**Prodromos**	**0.80**	**52**	P	**Pb**	**16 19 11.2**	**-0.3**
PDO				S	**Sn**	**16 19 23.9**	**-0.1**
	comp=N,4μm,0.4s						
PDO	**Prodromos**	**0.80**	**52**	P	**Pb**	**16 19 11.2**	**-0.3**
PDO				AML	AML	16 19 31.6	
	comp=E,3507μm,0.4s						
PDO				AML	AML	16 19 31.6	
	comp=N,6989μm,0.5s						
RLS	**Riolos of Patr**	**0.86**	**93**	P	**Pg**	**16 19 13.0**	**+0.3**
RLS				S	**Sb**	**16 19 23.8**	**+0.2**
RLS	**Riolos of Patr**	**0.86**	**93**	P	**Pg**	**16 19 12.9**	**+0.1**
RLS				AML	AML	16 19 30.5	
	comp=N,1434μm,0.6s						
RLS				AML	AML	16 19 31.9	
	comp=E,826μm,0.5s						
PVO	**Paravola**	**1.04**	**60**	P	**Pb**	**16 19 15.6**	**+0.1**
PVO				S	**Sn**	**16 19 30.6**	**+0.8**
	comp=E,1μm,0.5s						
PVO	**Paravola**	**1.04**	**60**	P	**Pb**	**16 19 15.8**	**+0.4**
PVO				AML	AML	16 19 37.0	
	comp=E,2700μm,0.6s						
PVO				AML	AML	16 19 42.8	
	comp=N,2566μm,0.5s						
DRO	**Drossia**	**1.06**	**98**	P	**Pb**	**16 19 15.9**	**0.0**
DRO	**Drossia**	**1.06**	**98**	P	**Pb**	**16 19 16.2**	**+0.3**
DRO				AML	AML	16 19 46.1	
	comp=E,1823μm,0.3s						
DRO				AML	AML	16 19 47.9	
	comp=N,1881μm,0.4s						
AMT	**Artemida-Makis**	**1.20**	**118**	P	**Pg**	**16 19 19.3**	**+0.2**
AMT	**Artemida-Makis**	**1.20**	**118**	P	**Pg**	**16 19 19.1**	**0.0**
AMT				AML	AML	16 19 47.6	
	comp=N,1672μm,0.7s						
AMT				AML	AML	16 19 51.7	
	comp=E,1868μm,0.9s						
LAKA	**Lakka**	**1.27**	**83**	P	**Pg**	**16 19 19.7**	**+0.3**
LAKA				S	**Sg**	**16 19 37.3**	**+0.3**
	comp=E,260nm,0.6s						
LAKA	**Lakka**	**1.27**	**83**	P	**Pn**	**16 19 19.2**	**+0.2**
LAKA				AML	AML	16 19 44.4	
	comp=E,547μm,0.5s						
LAKA				AML	AML	16 19 49.5	
	comp=N,488μm,0.6s						
ANX	**Ano Chora**	**1.31**	**68**	P	**Pb**	**16 19 20.8**	**+0.7**
ANX	**Ano Chora**	**1.31**	**68**	P	**Pb**	**16 19 20.9**	**+0.8**
ANX				AML	AML	16 19 51.9	
	comp=N,1748μm,1.0s						
ANX				AML	AML	16 19 54.0	
	comp=E,1988μm,0.6s						
SERG	**Sergoula**	**1.35**	**76**	P	**Pn**	**16 19 20.5**	**+0.4**
SERG	**Sergoula**	**1.35**	**76**	P	**Pn**	**16 19 20.6**	**+0.4**
TRIZ	**Trizonia**	**1.36**	**78**	P	**Pn**	**16 19 20.6**	**+0.5**
TRIZ	**Trizonia**	**1.36**	**78**	P	**Pn**	**16 19 20.9**	**0.0**
ALIK	**Aliki, Aigiali**	**1.37**	**83**	P	**Pg**	**16 19 22.4**	**-0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EVR	Evrytania	1.38	54	P	Pb	16 19 21.5	+0.1
EVR	Evrytania	1.38	54	P	Pb	16 19 21.5	+0.1
EVR	comp=N,562µm,0.6s			AML	AML	16 19 46.0	
EVR	comp=E,509µm,0.8s			AML	AML	16 19 56.9	
KLV	Kalavryta, Ach	1.40	92	P	Pn	16 19 21.5	+0.7
KLV	Kalavryta, Ach	1.40	92	P	Pb	16 19 21.7	0.0
KLV	comp=E,288µm,0.7s			AML	AML	16 19 49.2	
KLV	comp=N,349µm,0.6s			AML	AML	16 19 52.4	
KALE	Kalithea	1.42	78	P	Pn	16 19 20.9	-0.1
KALE	Kalithea	1.42	78	P	Pb	16 19 22.2	+0.3
KALE	comp=E,430µm,0.4s			AML	AML	16 19 53.2	
KALE	comp=N,840µm,1.0s			AML	AML	16 19 54.6	
IGT	Igoumenitsa	1.43	358	P	Pb	16 19 22.3	+0.1
IGT	comp=N,480nm,0.6s			S	Sn	16 19 39.4	-0.1
IGT	Igoumenitsa	1.43	358	ePg	Pg	16 19 25.1	+1.6
IGT				eSg	Sg	16 19 44.5	+2.3
ITM	Ithomi	1.54	126	P	Pb	16 19 24.3	+0.3
ITM	Ithomi	1.54	126	P	Pb	16 19 24.4	+0.4
ITM	comp=E,366µm,0.5s			AML	AML	16 19 54.2	
ITM	comp=N,742µm,0.5s			AML	AML	16 19 54.6	
JAN	Janina	1.59	13	P	Pg	16 19 26.9	+0.2
JAN	comp=N,883µm,0.4s			AML	AML	16 19 53.0	
JAN	comp=E,851µm,0.7s			AML	AML	16 19 55.1	
PYL	PYLOS	1.62	138	P	Pb	16 19 25.4	0.0
KEK	Kerkira	1.67	344	P	Pn	16 19 25.9	+1.4
KEK	Kerkira	1.67	344	P	Pn	16 19 25.9	+1.4
KEK	comp=E,458µm,0.6s			AML	AML	16 20 06.0	
KEK	comp=N,428µm,0.7s			AML	AML	16 20 09.2	
KASA	Kassiopi	1.68	348	P	Pb	16 19 26.5	+0.1
VLX	Vlachokerasia	1.75	114	P	Pb	16 19 28.2	+0.5
AGG	Agios Georgios	1.78	58	P	Pb	16 19 28.9	+0.7
AGG	comp=E,504µm,0.6s			AML	AML	16 20 06.1	
AGG	comp=N,409µm,0.8s			AML	AML	16 20 07.9	
THL	Klokotos Trika	1.94	41	P	Pb	16 19 31.4	+0.5
THL	comp=E,328µm,0.5s			AML	AML	16 20 07.9	
THL	comp=N,428µm,0.7s			AML	AML	16 20 13.1	
PROD	Prodromos	1.99	85	P	Pb	16 19 31.8	0.0
PROD	comp=E,333µm,1.0s			AML	AML	16 20 12.7	
PROD	comp=N,384µm,1.0s			AML	AML	16 20 14.1	
LTK	Loutraki	2.04	91	P	Pb	16 19 31.7	-1.0
VIL2	Platees	2.28	86	P	Pb	16 19 35.5	-1.2
DID	Didima	2.34	104	P	Pb	16 19 36.6	-1.1
DID	comp=E,265µm,0.6s			AML	AML	16 20 21.2	
DID	comp=N,294µm,0.6s			AML	AML	16 20 25.6	
MRKA	Markates	2.59	76	P	Pn	16 19 39.0	+1.9
OHR	Ohrid	3.02	6	iPn	Pn	16 19 43.6	+0.6
VAY	Valandovo	3.63	27	iPn	Pb	16 19 56.8	-2.9
STIP	Stip	3.85	21	iPn	Pb	16 20 00.4	-2.9
PDG	Podgorica	4.41	349	ePn	Pn	16 20 01.5	-0.6
BOSS	Bosilegrad	4.67	19	ePn	Pn	16 20 07.4	+1.7
BARS	Barje	4.83	13	ePn	Pn	16 20 09.6	+1.7
TREB	Trebinje	4.86	342	ePn	Pn	16 20 07.9	-0.4
VTS	Vitosha	5.01	25	ePn	Pn	16 20 10.7	+0.2
VTS				eSn	Sn	16 21 07.6	-0.4
SJES	Sjenica	5.16	357	ePn	Pn	16 20 13.5	+0.9
ZAPS	Zavoj	5.44	18	ePn	Pn	16 20 18.2	+1.9
IVAS	Ivanjica	5.47	358	ePn	Pn	16 20 16.5	-0.2
IVAS				eSn	Sn	16 21 17.4	-1.9
BOVS	Bovan	5.62	10	ePn	Pn	16 20 19.2	+0.5
BOVS				eSn	Sn	16 21 21.2	-1.6
BBLS	Lazići	5.80	353	ePn	Pn	16 20 21.6	+0.3
BBLS				eSn	Sn	16 21 24.8	-2.7
ZAGS	Zajecar	5.87	13	ePn	Pn	16 20 22.5	+0.3
DIVS	Divibare	6.00	357	ePn	Pn	16 20 24.5	+0.5
DIVS				eSn	Sn	16 21 29.6	-2.7

TAP 07 16:22:26.6, 24.88N 122.34E, h11km, ML2.8, C
JMA 07 16:22:26.2±0.1, 24.82N 122.32E, h3km±2km, M2.6
ISC 07 16:22:26.5±1.0, 24.84N±0.03 122.33E±0.02, h9km±11km, n59, σ0.47/96, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1 baz=210	0.34	212	iP	Pb	16 22 34.1	-0.7
EOS1	baz=210			eS	Sb	16 22 40.2	0.0
TWB1	Santiao Chiao baz=292	0.35	299	P	Pg	16 22 33.1	-0.4
TWB1	baz=292			S	Sg	16 22 37.7	-0.5
NTC	Toucheng baz=267	0.45	272	eP	Pb	16 22 36.2	-0.5
NTC	baz=267			eS	Sb	16 22 42.6	-0.9
TIPB	Shuangxi baz=281	0.48	286	P	Pg	16 22 35.7	-0.1
TIPB	baz=281			S	Sb	16 22 43.5	-0.8
TWC	Suao baz=238	0.49	242	P	Pg	16 22 35.6	-0.5
TWC	baz=238			eS	Sg	16 22 43.7	+1.1
WFSB	Wu-fen Shan baz=291	0.55	295	eP	Pg	16 22 37.4	+0.2
WFSB	baz=291			eS	Sg	16 22 45.0	+0.6
TWE	Neicheng baz=255	0.61	259	iP	Pg	16 22 38.5	+0.1
TWE	baz=255			iS	Sg	16 22 47.0	+0.6
SLBB	Yuanshan baz=259	0.64	262	eP	Pb	16 22 39.4	-0.4
ENA	Nanau baz=230	0.67	233	eP	Pg	16 22 39.5	-0.1
ENA	baz=230			eS	Sb	16 22 50.4	+0.5
JYNG	Yonagunijimaku	0.68	124	P	Pg	16 22 39.5	-0.2
JYNG				eS	Sg	16 22 48.8	+0.2
ENTT	Nioudou baz=251	0.72	254	P	Pg	16 22 40.4	0.0
ENTT	baz=251			S	Sb	16 22 51.0	-0.3
YOJ	Yonaguni jima baz=123	0.72	121	eP	Pg	16 22 40.5	0.0
YOJ	baz=123			eS	Sg	16 22 50.1	+0.1
YOJ	Yonaguni jima	0.72	121	P	Pg	16 22 40.1	-0.4
YOJ				S	Sg	16 22 50.0	+0.1
NHDH	Xindian Distri baz=276	0.74	280	P	Pg	16 22 41.1	+0.3
NHDH	baz=276			iS	Sg	16 22 51.0	+0.5
NWLT	Wulai baz=262	0.75	265	iP	Pg	16 22 41.2	+0.1
NWLT	baz=262			eS	Sg	16 22 51.5	+0.6
YM01	YM01 baz=291	0.75	294	P	Pg	16 22 40.9	-0.2
YM01	baz=291			iS	Sg	16 22 51.1	+0.2
YM08	YM08 baz=294	0.76	298	P	Pg	16 22 40.6	-0.5
YM08	baz=294			eS	Sg	16 22 50.5	-0.5
YM11	YM11 baz=292	0.76	296	eP	Pg	16 22 41.2	+0.1
YM11	baz=292			iS	Sg	16 22 51.4	+0.3
YM05	YM05 baz=292	0.77	295	iP	Pg	16 22 41.0	-0.3
YM05	baz=292			iS	Sg	16 22 51.5	+0.2
YM10	YM10 baz=291	0.77	294	P	Pg	16 22 41.1	-0.2
YM10	baz=291			iS	Sg	16 22 51.5	+0.2
TATO	Taipei baz=277	0.78	280	eP	Pg	16 22 41.4	-0.1
TATO	baz=277			S	Sg	16 22 51.7	+0.1
NDT	Datong Townshi baz=250	0.78	253	eP	Pg	16 22 41.4	-0.1
NDT	baz=250			eS	Sg	16 22 52.3	+0.6
YM04	YM04 baz=290	0.79	294	iP	Pg	16 22 41.3	-0.4
YM04	baz=290			iS	Sg	16 22 52.0	+0.1
TWY	Chenhua baz=300	0.79	303	eP	Pg	16 22 41.7	-0.1
TWY	baz=300			eS	Sg	16 22 52.5	+0.4
YM03	YM03 baz=292	0.79	295	eP	Pg	16 22 41.6	-0.2
YM03	baz=292			S	Sg	16 22 52.2	0.0
ANP	Anpu baz=292	0.81	295	P	Pg	16 22 41.7	-0.5
ANP	baz=292			eS	Sg	16 22 52.8	0.0
PCYT	Pengchaiyu baz=342	0.82	344	eP	Pg	16 22 42.0	-0.3
YHNB	Yeheng baz=256	0.88	259	P	Pg	16 22 43.2	-0.4
YHNB	baz=256			eS	Sg	16 22 55.3	+0.3
NSK	Sanguang baz=257	0.90	260	eP	Pg	16 22 43.9	+0.1
NACB	Ninganchiao baz=224	0.94	225	eP	Pg	16 22 43.9	-0.8
NACB	baz=224			eS	Sg	16 22 56.5	-0.4
NNSB	Datong baz=243	0.95	245	iP	Pg	16 22 44.6	-0.3
NNSB	baz=243			eS	Sb	16 22 57.8	-0.2
NNSH	Datong baz=243	0.95	245	P	Pg	16 22 44.7	-0.2
NNSH	baz=243			eS	Sg	16 22 57.6	+0.3
NNS	Nan Shan baz=243	0.96	246	iP	Pg	16 22 44.6	-0.3
NNS	baz=243			eS	Sb	16 22 58.5	+0.3
ETLH	Xiulin Townshi baz=229	1.00	231	eP	Pg	16 22 45.0	-0.6
ETLH	baz=229			eS	Sg	16 22 58.9	+0.2
TWD	Chiawan baz=220	1.01	222	eP	Pg	16 22 45.3	-0.6
TWD	baz=220			eS	Sg	16 22 59.3	+0.3
WHF	Hehuan Shan baz=233	1.19	235	eP	Pg	16 22 49.0	-0.4
WHF	baz=233			eS	Sg	16 23 04.8	-0.2
TWT	Tachien baz=239	1.20	241	eP	Pg	16 22 49.2	-0.4
TWT	baz=239			eS	Sg	16 23 05.2	0.0
LIOB	Emei baz=259	1.21	261	eP	Pn	16 22 50.0	+0.3
TDCB	Techi baz=240	1.22	242	eP	Pg	16 22 49.2	-0.7
NSTT	Nanjuang baz=258	1.23	261	eP	Pb	16 22 49.9	0.0
CHGB	Renai baz=232	1.31	234	eP	Pn	16 22 51.2	+0.1
CHGB	baz=232			eS	Sb	16 23 08.2	-0.2
ESL	Shilin baz=217	1.31	219	P	Pn	16 22 50.4	-0.5
IRIF	Iriomote-Funau	1.37	111	P	Pb	16 22 52.2	-0.1
IRIF				eS	Sb	16 23 10.2	+0.3
OWD	Renai baz=229	1.37	230	eP	Pn	16 22 51.9	-0.1
OWD	baz=229			eS	Sb	16 23 10.0	-0.1
WHP	Taichung City baz=244	1.38	246	eP	Pb	16 22 52.5	0.0
DPDB	Guoxing baz=237	1.51	238	eP	Pn	16 22 54.0	+0.2
VWDT	VWDT baz=224	1.53	225	eP	Pn	16 22 54.4	+0.4
HGSD	Ruisui baz=211	1.57	212	eP	Pn	16 22 54.9	+0.3
SMLT	Sun Moon Lake baz=232	1.61	234	eP	Pb	16 22 57.0	+0.5
SSLB	Suanglung baz=229	1.63	230	eP	Pb	16 22 56.5	-0.3
TYC	Yuchr baz=234	1.63	236	eP	Pb	16 22 56.9	+0.1
YULB	Yu-li baz=212	1.72	213	eP	Pn	16 22 56.5	-0.2
TWF1	Yuli baz=211	1.75	213	eP	Pn	16 22 56.7	-0.4
WHYT	Xinyi Township baz=229	1.76	230	eP	Pb	16 22 59.1	0.0
CHN5	Tsauling baz=230	1.95	231	eP	Pb	16 23 01.5	-0.7
ELDTW	Lidau baz=215	2.03	216	eP	Pn	16 23 01.8	+0.7
CHN4	Tsaushan baz=226	2.17	227	eP	Pn	16 23 04.2	+1.4
TPUB	Ta-pu baz=224	2.18	226	eP	Pn	16 23 04.4	+1.4
WTP	Ta-pu baz=224	2.23	225	eP	Pn	16 23 05.3	+1.6

NIED 07 16:24:00, 23.90N 122.50E, h26km, Mw4.3 Best double couple: Mo3.30000×10^{15} NP1:φs66.00000°, δ80.00000°, λ86.00000°. NP2:φs269.00000°, δ11.00000°, λ112.00000°.
NEIC 07 16:24:42.6±2.2, 23.93N±0.05 122.62E±0.07, h4km±4km, mb4.5/20, Error ellipse: s-maj=9.7km s-min=5.6km az=122.0
IDC 07 16:24:42.4±0.6, 24.16N 122.72E, h0km, mb4.2/23, mb1 4.3/23, mb1mx4.2/41, mbtmp4.2/23, MS3.6/19, Ms1 3.6/19, ms1mx3.3/55, Error ellipse: s-maj=17.7km s-min=14.0km az=73.0
BJI 07 16:24:46.1±0.0, 24.04N 122.45E, h11km, mB4.6/17, mb4.3/35, ML4.0/6, Ms4.0/20, Ms7 3.9/21
TAP 07 16:24:46.5, 23.96N 122.52E, h28km, ML4.6, D
JMA 07 16:24:46.3±0.2, 23.94N 122.50E, h23km±3km, M4.2
MOS 07 16:24:48.0±1.1, 24.11N 122.77E, h58km, mb4.6/13, Error ellipse: s-maj=11.5km s-min=6.6km az=111.0
ISC 07 16:24:44.7±0.9, 23.93N±0.02 122.56E±0.02, h18km±3km, n234, σ1.13/326, mb4.4/46, MS3.6/17, 35C-11D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.63	34	P	Pn	16 24 58.9	+0.2
JYNG				eS	Sn	16 25 07.0	-1.2
YOJ	Yonaguni jima baz=47	0.67	38	⇓iP	Pn	16 24 59.6	+0.3
YOJ	baz=47			eS	Sn	16 25 08.7	-0.7
YOJ	Yonaguni jima	0.67	38	P	Pn	16 24 59.7	+0.3
YOJ				eS	Sn	16 25 08.6	-0.7
YOJ	Yonaguni jima	0.67	38		Pn	16 24 59.6	+0.3
YOJ	Yonaguni jima	0.67	38	P	Pn	16 24 59.9	+0.6
EOS1	EOS1 baz=329	0.73	327	⇓iP	Pn	16 25 00.2	+0.1
EOS1	baz=329			iS	Sn	16 25 10.7	-0.2
HWA	Hwalien baz=258	0.88	273	eP	Pn	16 25 02.3	+0.1
ENLB	Shoufeng baz=255	0.88	269	⇑iP	Pb	16 25 01.0	-0.5
ENLB	baz=255			S	Sb	16 25 13.4	+0.5
TWD	Chiawan baz=279	0.90	280	⇑iP	Pb	16 25 01.9	+0.2
TWD	baz=279			eS	Sb	16 25 13.1	-0.3
ENA	Nanau baz=304	0.90	304	P	Pn	16 25 02.4	-0.1
ENA	baz=304			eS	Sg	16 25 14.1	-0.1
NACB	Ninganchiao baz=270	0.92	286	⇑iP	Pg	16 25 02.5	-0.1
NACB	baz=270			eS	Sb	16 25 12.9	-1.1
NACB	Ninganchiao	0.92	286		Pb	16 25 02.4	+0.3
TWC	Suao baz=317	0.94	316	⇓iP	Pg	16 25 02.9	-0.2
TWC	baz=317			eS	Sb	16 25 14.3	-0.3
ETLH	Xiulin Townshi baz=273	1.03	286	⇑iP	Pb	16 25 04.1	+0.1
ETLH	baz=273			eS	Sg	16 25 18.0	-0.2
ESL	Shilin baz=262	1.04	264	iP	Pb	16 25 03.6	-0.6
ESL	baz=262			eS	Sb	16 25 16.6	-0.9
EGFH	Guangfu baz=255	1.07	256	eP	Pb	16 25 04.8	0.0
EGFH	baz=255			eS	Sb	16 25 17.5	-0.9
ILA	Ilan baz=308	1.12	318	⇓iP	Pg	16 25 06.7	+0.3
ILA	baz=308			eS	Sg	16 25 22.6	+1.5
HGSD	Ruisui baz=246	1.13	248	⇓iP	Pn	16 25 05.3	-0.4
HGSD	baz=246			eS	Sb	16 25 19.5	-0.7
TWE	Neicheng baz=315	1.14	314	⇑iP	Pg	16 25 06.7	-0.1
TWE	baz=315			eS	Sn	16 25 20.8	0.0
NTC	Toucheng baz=325	1.14	324	⇑iP	Pg	16 25 06.7	-0.1
NTC	baz=325			eS	Sn	16 25 20.8	-0.1
IRIF	Iriomote-Funau	1.14	69	P	Pg	16 25 08.1	+1.3
IRIF				S	Sg	16 25 23.4	+1.6
HATJ	Hateruma jima	1.14	83	P	Pg	16 25 08.0	+1.1
HATJ				eS	Sg	16 25 24.0	+2.1
ENTT	Nioudou baz=295	1.15	308	⇑iP	Pg	16 25 06.8	-0.3
ENTT	baz=295			eS	Sn	16 25 21.5	+0.2
NDT	Datong Townshi baz=292	1.17	305	⇑iP	Pg	16 25 07.1	-0.3
NDT	baz=292			eS	Sn	16 25 21.8	0.0
SLBB	Yuanshan baz=315	1.18	314	⇑iP	Pg	16 25 07.6	0.0
SLBB	baz=315			eS	Sg	16 25 23.1	0.0
NNSB	Datong baz=295	1.19	295	⇑iP	Pb	16 25 07.0	+0.2
NNSB	baz=295			eS	Sb	16 25 21.7	-0.1
NNSH	Datong baz=295	1.19	295	eP	Pb	16 25 07.0	+0.2
NNSH	baz=295			eS	Sb	16 25 20.9	-0.9
TWB1	Santiao Chiao baz=352	1.20	334	⇑iP	Pg	16 25 07.1	-0.8
TWB1	baz=352			eS	Sg	16 25 22.6	-1.0
NNS	Nan Shan baz=295	1.20	295	⇑iP	Pb	16 25 07.2	+0.2
NNS	baz=295			eS	Sn	16 25 22.5	-0.1
WHF	Hehuan Shan baz=280	1.21	281	⇑iP	Pn	16 25 07.0	-0.1
WHF	baz=280			eS	Sb	16 25 20.9	-1.8
EHY	Hungye baz=248	1.21	250	⇓iP	Pn	16 25 06.9	+0.1
EHY	baz=248			eS	Sb	16 25 22.5	0.0
TIPB	Shuangxi baz=328	1.24	327	⇑iP	Pg	16 25 08.0	-0.7
TIPB	baz=328			eS	Sg	16 25 24.4	-0.5
OWD	Renai baz=270	1.27	271	eP	Pn	16 25 07.7	0.0
OWD	baz=270			eS	Sb	16 25 22.4	-1.8
CHGB	Renai baz=275	1.28	276	⇑iP	Pn	16 25 08.1	+0.3
CHGB	baz=275			eS	Sb	16 25 23.3	-1.2
YULB	Yu-li baz=244	1.28	246	⇓iP	Pn	16 25 07.8	+0.1
YULB	baz=244			eS	Sn	16 25 22.2	-2.2
YULB	Yu-li	1.28	246		Pn	16 25 07.7	0.0
NWLT	Wulai baz=299	1.28	311	⇑iP	Pg	16 25 08.9	-0.7
NWLT	baz=299			eS	Sn	16 25 24.8	+0.3
TWF1	Yuli baz=242	1.30	244	eP	Pn	16 25 08.2	+0.2
TWF1	baz=242			eS	Sn	16 25 23.4	-1.4
TWT	Tachien baz=271	1.31	285	⇓iP	Pb	16 25 09.4	+0.5
TWT	baz=271			eS	Sb	16 25 26.0	+0.6
YHNB	Yeheng baz=305	1.31	304	⇑iP	Pb	16 25 09.1	+0.2
YHNB	baz=305			eS	Sn	16 25 25.0	-0.3
YHNB	Yeheng	1.31	304		Pb	16 25 08.6	-0.2
VWDT	VWDT baz=262	1.31	263	⇑iP	Pn	16 25 08.6	+0.4
VWDT	baz=262			S	Sn	16 25 24.4	-0.8
TDCB	Techi baz=273	1.32	284	⇑iP	Pb	16 25 09.1	0.0
TDCB	baz=273			eS	Sn	16 25 25.4	-0.3
NSK	Sanguang baz=304	1.33	304	⇑iP	Pb	16 25 09.3	+0.1
WFSB	Wu-fen Shan baz=329	1.34	328	⇑iP	Pb	16 25 09.6	+0.2
WFSB	baz=329			eS	Sg	16 25 27.9	-0.3
JKRS	Kuro-shima	1.36	77	P	Pg	16 25 11.3	+0.3
JKRS				eS	Sg	16 25 29.3	+0.6
FULB	Fuli baz=224	1.37	238	eP	Pn	16 25 08.7	-0.3
CHKT	Chengkung baz=220	1.38	233	eP	Pn	16 25 08.4	-0.6
CHKT	baz=220			eS	Sn	16 25 24.4	-2.3
NHDH	Xindian Distri baz=318	1.40	318	P	Pg	16 25 11.2	-0.5
NHDH	baz=318			eS	Sg	16 25 29.6	-0.4
TATO	Taipei baz=302	1.43	317	P	Pb	16 25 11.2	+0.3
TATO	baz=302			eS	Sb	16 25 29.5	+0.8
TATO	Taipei	1.43	317		Pb	16 25 11.3	+0.4
TAP1	Taipei baz=320	1.46	320	eP	Pb	16 25 11.1	-0.2
TAP1	baz=320			eS	Sg	16 25 31.1	-0.7
TAP	Taipei baz=320	1.47	319	eP	Pb	16 25 11.6	+0.1
TAP	baz=320			eS	Sg	16 25 31.6	-0.6
SSLB	Suanglung baz=264	1.48	265	eP	Pn	16 25 11.3	+0.8
SSLB	baz=264			eS	Sb	16 25 28.1	-1.3
SSLB	Suanglung	1.48	265		Pb	16 25 11.5	-0.2
DPDB	Guoxing baz=265	1.50	274	eP	Pb	16 25 11.7	-0.4
DPDB	baz=265			eS	Sn	16 25 29.3	-0.6
JIJ	Ishigaki jima	1.51	73	P	Pg	16 25 12.8	-1.0
JIJ				S	Sg	16 25 32.3	-1.1
WLTB	Daxi baz=307	1.51	308	⇑iP	Pb	16 25 12.7	+0.5
YM01	YM01 baz=324	1.51	323	eP	Pb	16 25 11.8	-0.5

YM01 eS Sg 16 25 32.2 -1.4
baz=324
WHP Taichung City 1.52 284 eP Pb 16 25 12.3 -0.1
baz=272
WHP eS Sn 16 25 30.6 +0.2
baz=272
SMLT Sun Moon Lake 1.52 269⇑iP Pn 16 25 12.0 +0.9
baz=268
SMLT eS Sn 16 25 30.3 -0.3
baz=268
YM10 YM10 1.52 323 eP Pb 16 25 11.9 -0.6
baz=323
YM11 YM11 1.52 324 eP Pb 16 25 11.8 -0.7
baz=324
YM05 YM05 1.53 324⇑iP Pb 16 25 11.8 -0.8
baz=324
YM05 eS Sb 16 25 31.3 -0.3
baz=324
YM08 YM08 1.54 325 eP Pn 16 25 11.6 +0.4
baz=325
YM04 YM04 1.54 323⇑iP Pb 16 25 11.9 -0.8
baz=323
YM04 eS Sb 16 25 32.3 +0.4
baz=323
YUS Yu-Shan 1.54 254 eP Pn 16 25 12.2 +0.5
baz=253
YUS eS Sn 16 25 30.8 -0.7
baz=253
YM03 YM03 1.55 323 eP Pb 16 25 13.0 0.0
baz=323
TYC Yuchr 1.56 269 P Pn 16 25 12.5 +0.9
baz=269
TYC eS Sn 16 25 30.9 -0.5
baz=269
TWS1 Kuangyinshan 1.56 318 eP Pb 16 25 12.9 -0.3
baz=336
TWS1 eS Sb 16 25 32.1 -0.6
baz=336
ANP Anpu 1.57 323 eP Pb 16 25 13.3 0.0
baz=323
TWH Lutao 1.57 220 eP Pn 16 25 11.6 -0.1
baz=217
TWH eS Sn 16 25 29.2 -2.4
baz=217
LIOB Emei 1.58 297⇑iP Pb 16 25 14.0 +0.5
baz=297
LIOB eS Sb 16 25 33.9 +0.7
baz=297
WHYT Xinyi Township 1.58 262 eP Pb 16 25 13.3 -0.2
baz=260
NSTT Nanjuang 1.59 296 iP Pb 16 25 13.9 +0.3
baz=296
NSTT eS Sb 16 25 33.3 0.0
baz=296
NTST Danshui 1.59 321 eP Pb 16 25 13.2 -0.5
baz=336
ELDTW Lidau 1.60 243 P Pn 16 25 12.2 0.0
baz=242
ELDTW eS Sn 16 25 30.0 -2.5
baz=242
TWY Chenhua 1.60 327 eP Pb 16 25 13.7 -0.1
baz=328
TWY eS Sg 16 25 35.1 -1.4
baz=328
NCU National Centr 1.63 310 eP Pb 16 25 14.1 -0.2
baz=310
NCU eS Sn 16 25 33.2 +0.2
baz=310
NCUH Zhongli 1.63 310 eP Pb 16 25 13.9 -0.3
baz=309
ALS Alishan 1.67 256 eP Pb 16 25 14.5 -0.5
baz=255
ALS eS Sn 16 25 34.1 -0.2
baz=255
SBCB Hsinchu 1.68 301 eP Pb 16 25 15.1 +0.1
baz=301
SBCB eS Sb 16 25 36.3 +0.5
baz=301
WJS Zhushan 1.68 267 eP Pb 16 25 15.5 +0.3
baz=266
WJS eS Sb 16 25 36.8 +0.7
baz=266
TWQ1 Liyutan 1.69 285 eP Pb 16 25 15.6 +0.3
baz=284
TWQ1 eS Sb 16 25 36.7 +0.5
baz=284
HSN Hsinchu 1.69 301 eP Pb 16 25 15.0 -0.4
baz=303
HSN eS Sb 16 25 35.6 -0.7
baz=303
NSY Sanyi 1.72 287 eP Pb 16 25 16.3 +0.6
baz=287
NSY eS Sb 16 25 37.5 +0.5
baz=287
WNT Mingjian 1.72 269 eP Pb 16 25 16.0 +0.2
baz=268
WNT eS Sn 16 25 36.0 +0.7
baz=268
JISG Ishigakijimahi 1.72 67 P Pb 16 25 15.4 -0.5
JISG eS Sb 16 25 38.2 +1.0
NMLH Miaoli 1.73 291 iP Pb 16 25 16.1 +0.2
baz=291
NMLH eS Sb 16 25 37.3 0.0
baz=291
TCU Taichung 1.74 278 P Pb 16 25 16.6 +0.4
baz=277
TCU eS Sb 16 25 38.3 +0.6
baz=277
PCYT Pengchaiyu 1.75 345 eP Pn 16 25 14.7 +0.5
baz=346
TTN Taitung 1.75 228 eP Pn 16 25 14.5 +0.3
baz=226
TWGBT Beinan 1.76 231 eP Pn 16 25 14.7 +0.5
baz=244
TWGBT eS Sn 16 25 34.4 -1.8
baz=244
CHN5 Tsauling 1.76 260 eP Pb 16 25 16.2 -0.4
baz=248
CHN5 eS Sn 16 25 37.3 +1.0
baz=248
TWG Pinlang 1.76 231 eP Pn 16 25 14.5 +0.2
baz=244
TWG eS Sn 16 25 34.9 -1.4
baz=244
TWG Pinlang 1.76 231 Pn 16 25 14.4 +0.1
PTSB Yuanli 1.77 287 eP Pb 16 25 17.0 +0.3
baz=286
WDJ Dajia District 1.81 284 eP Pb 16 25 17.0 -0.2
baz=283
WDJ eS Sb 16 25 39.0 -0.5
baz=283
STYT Tauyuan 1.82 246 eP Pn 16 25 16.4 +1.1
baz=235
STYT eS Sn 16 25 38.7 +0.7
baz=235
WCHH Zhanghua 1.84 275 eP Pb 16 25 17.8 -0.1
baz=274
WCHH eS Sb 16 25 40.8 +0.3
baz=274
WGK Gukeng 1.85 263 eP Pb 16 25 18.0 0.0
baz=262
WGK eS Sb 16 25 42.6 +1.8
baz=262
WDLH Douliu 1.87 263 eP Pb 16 25 18.4 0.0
baz=261
TPUB Ta-pu 1.88 251⇑iP Pb 16 25 18.0 -0.6
baz=240
TPUB eS Sb 16 25 41.6 -0.2
baz=240
TPUB Ta-pu 1.88 251 Pb 16 25 18.2 -0.4
CHN4 Tsaushan 1.90 253 eP Pb 16 25 18.5 -0.4
baz=252
CHN4 eS Sn 16 25 41.0 +1.3
baz=252
WTP Ta-pu 1.91 250 eP Pb 16 25 18.5 -0.6
baz=239
WTP eS Sn 16 25 41.6 +1.5
baz=239
ECL Taimali 1.99 228 eP Pn 16 25 17.2 -0.2
baz=238
SLGT Liugui 1.99 242 eP Pn 16 25 19.3 +1.8
baz=233
SLGT eS Sn 16 25 43.7 +1.7
baz=233
SGST Jiashian 2.00 245 eP Pn 16 25 19.0 +1.3
baz=245
SGST eS Sb 16 25 44.8 -0.5
baz=245

CHY Chiayi 2.01 258 eP Pb 16 25 19.6 -1.1
baz=257
CHY eS Sn 16 25 43.8 +1.5
baz=257
TWK Hsinying 2.02 251 eP Pb 16 25 19.9 -1.0
baz=250
TWK eS Sb 16 25 45.4 -0.3
baz=250
SNST Tainan City 2.02 250 eP Pb 16 25 20.4 -0.5
baz=249
SNST eS Sb 16 25 45.7 -0.1
baz=249
JTJ Tarama 2.08 70 P Pb 16 25 21.6 -0.3
JTJ eS Sb 16 25 47.8 +0.5
LAY Lan-yu 2.10 207 eP Pn 16 25 18.5 -0.5
baz=205
EAST Anshuo 2.21 226 eP Pn 16 25 19.4 -1.1
baz=225
EAST eS Sn 16 25 45.0 -2.4
baz=225
TAI1 Yung-k'ang 2.32 248 eS Sb 16 25 54.2 -0.1
baz=247
JIRB Irabujima 2.54 69 P Pb 16 25 27.6 -2.2
JIKM Ikemajima 2.64 67 P Pb 16 25 30.1 -1.4
QZH Quanzhou 3.76 286⇑iPn Pn 16 25 42.1 +0.3
QZH Sn Sn 16 26 22.6 -3.0
QZH smax smax
comp=N,430nm,0.3s
QZH smax smax
comp=E,330nm,0.4s
KNMB Chin-men Tao 3.85 279 Pn 16 25 43.4 +0.4
JOW Kunigami 5.92 60 Pn Pn 16 26 13.4 +1.9
0.6nm,0.3s,baz=154,slow=11,SNR=5.5
JOW Kunigami 5.92 60 Pn 16 26 12.4 +0.9
SSE Sheshan 7.24 351 Pn 16 26 30.1 +0.4
TGY Tagaytay City 9.90 189 LR LR 16 31 05.2
comp=Z,169nm,20.3s,baz=261,slow=38
JNU Nakatsue 11.71 37 LR LR 16 32 24.2
comp=Z,152nm,19.1s,baz=209,slow=40
KSRS Korea Array 14.24 18 Pn Pn 16 28 07.4 +1.9
0.5nm,0.3s,baz=202,slow=13,SNR=10
KSRS LR LR 16 34 27.1
comp=Z,171nm,18.1s,baz=192,slow=42
KS19 Wonju Array Si 14.27 17 P P 16 28 12.0 -1.0
GYA Guiyang 14.61 283 eP Pn 16 28 13.4 +2.6
GYA PP PnPn 16 28 24.7 +6.0
GYA S Sn 16 30 53.6 +1.2
GYA SS S 16 31 11.3 -0.1
GYA pmax pmax
comp=Z,10.0nm,1.3s
GYA pmax pmax
comp=Z,110nm,3.5s
GYA LR LR
comp=N,250nm,9.1s
GYA LR LR
comp=E,270nm,12.2s
GYA LR LR
comp=Z,340nm,9.1s
XAN Xi'an 15.60 313 P P 16 28 29.7 +1.8
XAN pmax pmax
comp=Z,9.0nm,0.7s
XAN pmax pmax
comp=Z,180nm,5.9s
XAN LR LR
comp=E,240nm,16.3s
XAN LR LR
comp=Z,330nm,15.2s
XAN Xi'an 15.60 313 P P 16 28 26.5 -1.4
XAN Xi'an 15.60 313 P P 16 28 26.5 -1.4
XAN pmax pmax
comp=Z,7.0nm,0.8s
BJT Baijiatuau 16.93 343 P P 16 28 43.1 +0.6
BJT pmax pmax
comp=Z,6.0nm,1.1s
DAV Davao City (W) 17.01 170 LR LR 16 35 18.5
comp=Z,133nm,21.4s,baz=316,slow=37
CD2 Chengdu 18.07 297 P P 16 28 55.9 +0.6
CD2 S Sn 16 32 16.8 +0.5
CD2 pmax pmax
comp=Z,10.0nm,0.7s
CD2 LR LR
comp=Z,260nm,11.3s
CD2 LR LR
comp=Z,450nm,14.2s
KMI Kunming 18.08 278 P P 16 28 58.0 +2.4
KMI pmax pmax
comp=Z,5.0nm,2.0s
KMI pmax pmax
comp=Z,110nm,6.5s
KMI LR LR
comp=Z,110nm,12.8s
KMI LR LR
comp=Z,340nm,13.6s
KMI LR LR
comp=Z,270nm,13.6s
CN2 Changchun 19.96 6 eP Pn 16 29 17.1 -0.5
LZH Lanzhou 20.20 311 eP Pn 16 29 21.2 +0.6
LZH pP sP 16 29 24.4 -0.4
LZH sP pwP 16 29 26.6 -0.6
LZH pmax pmax
comp=Z,12nm,1.1s
USRK Ussuriysk Ar. 21.64 19 P P 16 29 32.6 -1.4
comp=Z,3.1nm,0.7s,baz=195,slow=11,SNR=6.0
USRK LR LR 16 38 39.3
comp=Z,122nm,18.3s,baz=182,slow=39
USRK Ussuriysk Ar. 21.64 19 P P 16 29 33.1 -0.9
USRK Ussuriysk Ar. 21.64 19 P P 16 29 33.2 -0.9
CMAR Chiang Mai Arr 22.67 261 P P 16 29 48.8 +3.4
comp=Z,1.0nm,0.7s,baz=55,slow=7.3,SNR=9.2
CMAR LR LR 16 38 22.0
comp=Z,27nm,20.1s,baz=70,slow=36
GUMO Guam 23.46 112 LR LR 16 39 09.4
comp=Z,97nm,18.0s,baz=182,slow=37
GTA Gaotai 24.66 314 eP P 16 30 04.4 -0.2
GTA pP pP 16 30 08.9 -0.2
GTA sP sP 16 30 11.4 +0.5
GTA PcP PcP 16 33 42.8 +1.0
GTA pmax pmax
comp=Z,9.0nm,1.0s
GTA pmax pmax
comp=Z,68nm,3.6s
GTA LR LR
comp=Z,130nm,13.4s
GTA LR LR
comp=Z,190nm,13.7s
GTA LR LR
comp=Z,230nm,15.5s
ASAJ Asahikawa 25.97 34 P P 16 30 14.1 -2.2
comp=Z,3.2nm,0.4s,baz=255,slow=12,SNR=17
JKA Kamikawa-asahi 25.98 34 P P 16 30 14.1 -2.2
KLR Kul'dur 26.27 14 P P 16 30 16.8 -2.1
comp=Z,1.2nm,0.5s,baz=259,slow=10,SNR=6.3
KLR Kul'dur 26.27 14⇑eP P 16 30 16.7 -2.1
KLR pmax pmax
comp=Z,2.0nm,0.9s
ULN Ulaanbaatar 26.89 337 P P 16 30 23.9 -0.8
ULN IAmb IAmb 16 30 25.8
comp=Z,23nm,1.9s
ULN Ulaanbaatar 26.89 337 P P 16 30 23.9 -0.8
ULN pmax pmax
comp=Z,23nm,2.0s
SONM Songino Array 27.10 336 P P 16 30 25.9 -0.7
comp=Z,1.7nm,0.6s,baz=152,slow=9.6,SNR=16
SONM PcP PcP 16 33 47.7 +0.5
comp=Z,0.4nm,0.5s,baz=148,slow=3.3,SNR=4.0
SONM LR LR 16 42 21.7
comp=Z,163nm,21.3s,baz=167,slow=39
SONM Songino Array 27.10 336 P P 16 30 25.9 -0.7
SONM Songino Array 27.10 336 P P 16 30 26.0 -0.6
SONM 16 33 47.7
SONM pmax pmax
comp=Z,3.0nm,1.0s
YSS Yuzh-Sakhalins 28.10 30⇑iP P 16 30 31.6 -3.7
YSS pmax pmax
comp=Z,6.0nm,1.1s
TLY Talaya 31.29 337 LR LR 16 44 57.8
comp=Z,114nm,18.9s,baz=134,slow=39
WMQ Urumqi 34.74 313 eP P 16 31 38.4 +4.5
WMQ pmax pmax
comp=Z,9.0nm,1.1s
WMQ pmax pmax
comp=Z,89nm,4.3s
YAK Yakutsk 38.39 5 iP P 16 32 02.1 -2.6
YAK pmax pmax
comp=Z,6.0nm,0.8s
PETK Petropavlovsk- 39.38 33 LR LR 16 48 23.5

comp=Z,50nm,20.2s,baz=61,slow=36
MK31 Makanchi Array 39.40 316 P P 16 32 13.4 0.0
MK31 Makanchi Array 39.40 316 P P 16 32 13.4 0.0
MK31 pmax pmax
comp=Z,8.0nm,1.3s
MKAR Makanchi Array 39.40 316 P P 16 32 13.4 0.0
comp=Z,3.6nm,0.5s,baz=99,slow=10.0,SNR=103
MKAR PcP PcP 16 34 21.3 -0.2
comp=Z,0.5nm,0.7s,baz=97,slow=4.6,SNR=5.4
MKAR LR LR 16 49 51.1
comp=Z,68nm,19.8s,baz=83,slow=38
MKAR Makanchi Array 39.40 316 P P 16 32 12.6 -0.8
MKAR Makanchi Array 39.40 316ceP P 16 32 13.3 -0.1
MKAR pmax pmax
comp=Z,4.0nm,0.4s
MAKZ Makanchi 39.60 315 P P 16 32 15.4 +0.3
MAKZ IAmb IAmb 16 32 16.8
comp=Z,9.9nm,1.1s
MAKZ Makanchi 39.60 315 P P 16 32 15.4 +0.3
MAKZ pmax pmax
comp=Z,10.0nm,1.2s
ZAA0 Zalesovo Array 41.15 327 P P 16 32 25.8 -1.9
ZAA0 IAmb IAmb 16 32 27.2
comp=Z,4.3nm,0.7s
ZALV Zalesovo Beam 41.15 327 P P 16 32 26.7 -1.0
comp=Z,4.5nm,0.6s,baz=113,slow=7.4,SNR=22
ZALV PcP PcP 16 34 26.1 -0.8
comp=Z,1.1nm,0.5s,baz=144,slow=5.4,SNR=4.2
ZALV LR LR 16 52 14.0
comp=Z,23nm,18.6s,baz=181,slow=40
ZALV Zalesovo Beam 41.15 327 P P 16 32 26.0 -1.7
ZALV PcP 16 34 26.2 -0.6
ZALV Zalesovo Beam 41.15 327 P P 16 32 26.0 -1.7
KSH Kashi 42.09 303 P P 16 32 40.1 +4.2
KSH PP PcP 16 34 26.4 -4.0
KSH PcS PcS 16 38 22.7 +0.4
KSH S S 16 38 57.3 +2.6
KSH pmax pmax
comp=Z,25nm,1.2s
KSH LR LR
comp=Z,110nm,10.8s
KSH LR LR
comp=Z,160nm,6.1s
KSH LR LR
comp=Z,190nm,9.9s
NRN Naryn 42.36 306 P P 16 32 37.4 -0.8
NRN Naryn 42.36 306 P P 16 32 37.4 -0.8
NRN pmax pmax
comp=Z,13nm,0.8s
KURK Kurchatov 43.10 320 P P 16 32 43.4 -0.3
KURK IAmb IAmb 16 32 44.1
comp=Z,7.1nm,1.1s
KURK Kurchatov 43.10 320ceP P 16 32 43.1 -0.6
KURK pmax pmax
comp=Z,2.0nm,0.6s
KURBB Kurchatov Arra 43.12 320 P P 16 32 43.3 -0.5
comp=Z,1.1nm,0.4s,baz=106,slow=7.8,SNR=12
AAK Ala-Archa 43.66 307 P P 16 32 49.8 +1.2
comp=Z,4.1nm,0.8s,baz=99,slow=5.6,SNR=11
AAK Ala-Archa 43.66 307 P P 16 32 48.8 +0.2
AAK Ala-Archa 43.66 307⇓eP P 16 32 50.1 +1.5
AAK pmax pmax
comp=Z,14nm,2.5s
SEY Seymchan 43.79 19 P P 16 32 49.0 -0.1
comp=Z,5.6nm,0.3s,baz=54,slow=0.5,SNR=35
NIL Nilore 43.94 294 P P 16 32 51.5 +0.7
NIL pmax pmax
comp=Z,4.0nm,2.8s
WRAB Tennant Creek 45.09 164deP P 16 33 02.0 +2.1
WRAB pmax pmax
comp=Z,6.0nm,1.3s
WRA Warramunga Arr 45.09 164 P P 16 33 01.3 +1.3
comp=Z,2.7nm,0.8s,baz=344,slow=8.5,SNR=13
WRA Warramunga Arr 45.09 164 P P 16 33 00.7 +0.7
BTK Batken 46.10 303 P P 16 33 09.0 +1.0
BTK Batken 46.10 303 P P 16 33 09.0 +1.0
BTK pmax pmax
comp=Z,5.0nm,0.6s
KK31 Karatay Array 46.63 307 P P 16 33 13.4 +1.5
KK31 IAmb IAmb 16 33 14.2
comp=Z,3.6nm,0.7s
KK31 Karatay Array 46.63 307 P P 16 33 13.5 +1.5
KK31 pmax pmax
comp=Z,4.0nm,0.7s
KKAR Karatay Array 46.63 307 P P 16 33 13.3 +1.3
KKAR Karatay Array 46.63 307 P P 16 33 13.5 +1.5
KKAR IAmb IAmb 16 33 14.2
comp=Z,3.6nm,0.7s
KKAR Karatay Array 46.63 307 P P 16 33 13.5 +1.5
KKAR pmax pmax
comp=Z,4.0nm,0.7s
KBL Kabul 47.41 296 P P 16 33 18.4 -0.1
KBL Kabul 47.41 296 P P 16 33 18.4 -0.1
KBL pmax pmax
comp=Z,7.0nm,0.9s
TIXI Tiksi 47.88 3 LR LR 16 56 07.2
comp=Z,169nm,18.2s,baz=174,slow=40
TIXI Tiksi 47.88 3 P P 16 33 19.6 -1.6
TIXI IAmb IAmb 16 34 08.9
comp=Z,10nm,1.7s
TIXI Tiksi 47.88 3⇓eP P 16 33 19.1 -2.2
TIXI pmax pmax
comp=Z,7.0nm,2.5s
ASAR Alice Springs 48.58 166 P P 16 33 29.4 +2.1
comp=Z,1.9nm,0.8s,baz=353,slow=12,SNR=24
ASAR Alice Springs 48.58 166 P P 16 33 28.4 +1.2
ASAR Alice Springs 48.58 166 P P 16 33 28.4 +1.2
BRVK Borovoye 48.74 321 P P 16 33 28.2 0.0
BRVK IAmb IAmb 16 33 28.7
comp=Z,3.3nm,0.9s
BRVK Borovoye 48.74 321 P P 16 33 28.2 0.0
BRVK pmax pmax
comp=Z,3.0nm,1.0s
ABKAR Akbulak array 54.52 314 P P 16 34 11.8 +0.3
GEYT Alibeck 56.01 301 P P 16 34 24.1 +1.7
comp=Z,6.2nm,0.7s,baz=81,slow=3.8,SNR=18
GEYT LR LR 17 02 45.5
comp=Z,39nm,19.1s,baz=170,slow=41
ARU Arti 56.07 323 P P 16 34 21.8 -0.7
ARU IAmb IAmb 16 34 22.9
comp=Z,4.7nm,0.9s
ARU Arti 56.07 323c iP P 16 34 21.6 -0.9
ARU S S 16 42 09.3 -0.9
ARU SS SS 16 45 58.5 +2.3
ARU pmax pmax
comp=Z,11nm,1.7s
STKA Stephens Creek 58.40 161 P P 16 34 41.2 +2.0
comp=Z,0.8nm,0.5s,baz=318,slow=11,SNR=4.9
STKA Stephens Creek 58.40 161 P P 16 34 41.0 +1.8
STKA Stephens Creek 58.40 161 P P 16 34 41.0 +1.8
STKA pmax pmax
comp=Z,3.0nm,1.6s
ZEI Tsey 66.08 308 eP P 16 35 30.3 -0.7
ZEI pmax pmax
comp=Z,4.0nm,0.7s
KBZ Khabaz 66.62 309 P P 16 35 34.6 +0.5
comp=Z,3.1nm,0.9s,baz=156,slow=3.4,SNR=10
KBZ Khabaz 66.62 309ceP P 16 35 35.3 +1.2
KIV Kislovodsk 66.73 309 eP P 16 35 35.8 +0.8
KIV pmax pmax
comp=Z,19nm,1.0s
OBN Obninsk 68.48 322 LR LR 17 07 50.2
comp=Z,11nm,18.2s,baz=194,slow=38
ILAR Eielson Array 68.86 27 P P 16 35 46.4 -1.5
comp=Z,0.3nm,0.4s,baz=270,slow=5.0,SNR=9.0
BMAR Burnt Mountain 69.24 24 P P 16 35 51.1 +0.9
ARCES ARCESS Array B 70.24 338 P P 16 35 55.7 -0.7
comp=Z,1.5nm,0.6s,baz=66,slow=7.0,SNR=5.6
FINES FINESS Array B 72.30 330 P P 16 36 08.9 0.0
comp=Z,1.4nm,0.4s,baz=49,slow=5.9,SNR=24
FINES LR LR 17 11 19.3
comp=Z,73nm,20.1s,baz=60,slow=39
FINES FINESS Array B 72.30 330 P P 16 36 08.6 -0.3
FINES FINESS Array B 72.30 330 iP P 16 36 08.8 -0.1
FINES pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 73.89 319 P P 16 36 17.6 -0.9
comp=Z,0.5nm,0.4s,baz=70,slow=5.8,SNR=3.9
BR131 Keskin Array S 74.34 307 P P 16 36 21.9 +0.4
BR131 IAmb IAmb 16 36 22.6
comp=Z,3.4nm,0.8s
BR131 Keskin Array S 74.34 307 P P 16 36 21.9 +0.4
BR131 pmax pmax
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 74.34 307 P P 16 36 21.6 +0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,2.1nm,0.6s,baz=99,slow=6.4,SNR=16						
BRTR	Keskin Array B	74.34	307	cP	P	16 36 22.1	+0.5
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CSS	Mathiatis	76.11	302	P	P	16 36 31.3	-0.3
MLR	Muntele Rosu	77.73	314	LR	LR	17 16 10.9	
	comp=Z,135nm,20.2s,baz=310,slow=40						
HFS	Hagfors	78.40	331	LR	LR	17 15 00.7	
	comp=Z,175nm,18.5s,baz=80,slow=39						
NB2	NORSAR Subarra	79.03	333	P	P	16 36 46.8	-0.8
	comp=Z,0.7nm,0.5s,baz=54,slow=6.2						
NOA	NORSAR Array B	79.03	333	P	P	16 36 46.6	-0.9
	comp=Z,1.3nm,0.8s,baz=51,slow=2.1,SNR=5.4						
NOA				LR	LR	17 15 42.9	
	comp=Z,57nm,18.7s,baz=70,slow=39						
VYHS	Vyhne	80.98	319	eP	P	16 36 58.9	+0.6
VYHS	Vyhne	80.98	319	eP	P	16 36 58.9	+0.6
YKA	Yellowknife Ar	82.71	23	P	P	16 37 06.8	-0.3
	comp=Z,1.9nm,0.6s,baz=310,slow=5.1,SNR=44						
CLL	Collm	83.01	323	eP	P	16 37 08.0	-0.9
CLL	Collm	83.01	323	eP	P	16 37 08.0	-0.9
GERES	GERESS Array B	83.83	321	P	P	16 37 13.1	-0.2
	comp=Z,1.4nm,0.8s,baz=46,slow=3.9,SNR=6.4						
FFC	Flin Flon	92.85	24	P	P	16 37 56.4	+0.1
FFC				pmax	pmax		
	comp=Z,6.0nm,0.9s						

MAN 07 16:25:09.0, 10.°85N×122.°30E, h32km, mb4.4, ML3.3, MS3.0, 2C-2D, Panay

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAP	San Jose, Anti	0.36	253	⇓iP	Pn	16 25 18.6	+0.6
JAP				iS	Sn	16 25 37.3	+13
GUIM	Jordan	0.37	128	eP	Pn	16 25 17.9	-0.2
GUIM				eS	Sn	16 25 25.5	+1.3
RCP	Roxas	0.83	32	⇑eP	Pb	16 25 25.5	+0.5
RCP				eS	Sb	16 25 38.8	+2.9
CUYO	Cuyo Island	1.25	270	eP	Pn	16 25 31.0	+0.7
CUYO				eS	Sn	16 25 46.2	+0.1
OTRP	Odiongan	1.52	350	eP	Pn	16 25 34.4	+0.3
OTRP				eS	Sn	16 25 53.4	+0.6
LLP	Lapu-Lapu	1.73	108	⇑eP	Pb	16 25 38.9	-1.2
LLP				iS	Sb	16 26 03.2	+1.7
SNPH	Sibulan	1.76	148	⇓iP	Pb	16 25 40.2	-0.5
SNPH				iS	Sb	16 26 03.8	+1.3
SJMP	San Jose	1.97	324	eP	Pn	16 25 41.0	+0.9
SJMP				eS	Sn	16 26 03.8	0.0
OCLP	Ormoc	2.28	85	eP	Pn	16 25 45.2	+0.7
OCLP				eS	Sn	16 26 06.1	-5.4
BOAC	Boac	2.63	350	eP	Pn	16 25 49.3	+0.1
BOAC				eS	Sn	16 26 19.2	-0.8
ENPP	El Nido	2.84	277	eP	Pn	16 25 52.3	+0.2
ENPP				eS	Sn	16 26 24.1	-1.1
PAGZ	Pagadian	3.17	160	eP	Pn	16 25 58.7	+1.9
PAGZ				eS	Sn	16 26 35.5	+2.0

*UCR **07** 16:50:04.3±1.0, 13.°12N×88.°99W, h58km±9km, ML4.2, mb4.2(NEIC)*
*SNET **07** 16:50:04.2±0.9, 13.°13N×88.°98W, h58km±7km, ML4.2*
*NEIC **07** 16:50:05.8±2.5, 13.°26N±0.°06×88.°98W±0.°08, h67km±9km, Error ellipse: s-maj=13.5km s-min=4.4km az=58.0*
*INET **07** 16:50:06.2, 13.°72N×88.°80W, h55km, ML3.1*
*IDC **07** 16:50:08.5±2.1, 13.°44N×89.°03W, h93km±17km, mb3.4/3, mb1 3.7/7, mb1mx3.3/55, mbtmp3.8/7, MS2.4/4, Ms1 2.4/4, ms1mx2.2/26, Error ellipse: s-maj=45.5km s-min=18.7km az=36.0*
*GCG **07** 16:50:09.0±0.8, 13.°45N×89.°08W, h95km±52km, MD4.1*
ISC 07 16:50:04.9±1.0, **13.°20N**±0.°08×**88.°94W**±0.°04, **h63km**±6km, **n80**, σ**1.°12**/117, **mb1.4**/3, **1C-3D, El Salvador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ALJI	Alcalda de J	0.38	71	eP	Pn	16 50 15.8	-0.2
ALJI				eS	Sn	16 50 24.9	+0.8
ALJI	Alcalda de J	0.38	71	eP	Pn	16 50 15.8	-0.2
ALJI				eS	Sn	16 50 24.9	+0.8
COEG	Centro de Oper	0.42	8	⇓eP	Pn	16 50 16.4	0.0
COEG				eS	Sn	16 50 25.7	+0.9
COEG				IAML		16 50 30.0	
	comp=Z,16µm,0.5s						
COEG	Centro de Oper	0.42	8	⇓eP	Pn	16 50 16.4	0.0
COEG				eS	Sn	16 50 25.7	+0.9
COEG				IAML		16 50 30.0	
	comp=Z,16µm,0.5s						
LFRS	El Faro	0.43	344	eP	Pn	16 50 16.2	-0.5
UESV	Universidad de	0.45	19	eP	Pn	16 50 17.0	+0.2
UESV	Universidad de	0.45	19	eP	Pn	16 50 17.0	+0.2
COEB	Comit de Eme	0.49	54	eP	Pn	16 50 17.3	+0.1
COEB				eS	Sn	16 50 27.7	+1.5
COEB	Comit de Eme	0.49	54	eP	Pn	16 50 17.3	+0.1
COEB				eS	Sn	16 50 27.7	+1.5
PAVA	Las Pavas	0.51	0	eP	Pn	16 50 17.6	+0.3
PAVA				eS	Sn	16 50 28.1	+1.7
PAVA	Las Pavas	0.51	0	eP	Pn	16 50 17.6	+0.3
PAVA				eS	Sn	16 50 28.1	+1.7
TECA	Tecapa	0.51	56	eP	Pn	16 50 17.7	+0.2
TECA	Tecapa	0.51	56	eP	Pn	16 50 17.7	+0.2
AEIL	Aeropuerto Ilo	0.52	340	eP	Pn	16 50 17.5	0.0
AEIL				eS	Sn	16 50 27.4	+0.8
AEIL	Aeropuerto Ilo	0.52	340	eP	Pn	16 50 17.5	0.0
AEIL				eS	Sn	16 50 27.4	+0.8
LBRS	Las Brisas	0.54	349	eP	Pn	16 50 18.0	+0.3
UDBS	Universidad Do	0.55	337	eP	Pn	16 50 17.6	-0.2
UDBS				eS	Sn	16 50 27.1	-0.1
UDBS				IAML		16 50 33.0	
	comp=Z,7µm,0.3s						
UDBS	Universidad Do	0.55	337	eP	Pn	16 50 17.6	-0.2
UDBS				eS	Sn	16 50 27.1	-0.1
UDBS				IAML		16 50 33.0	
	comp=Z,7µm,0.3s						
UTEC	Universidad Te	0.56	333	eP	Pn	16 50 17.6	-0.2
UTEC	Universidad Te	0.56	333	eP	Pn	16 50 17.6	-0.2
SNET	Serv Nac Est T	0.56	329	eP	Pn	16 50 17.4	-0.5
SNET				eS	Sn	16 50 27.7	+0.3
SNET				IAML		16 50 28.8	
	comp=Z,8µm,0.2s						
SNET	Serv Nac Est T	0.56	329		Pn	16 50 17.4	-0.5
SNET	Serv Nac Est T	0.56	329	eP	Pn	16 50 17.4	-0.5
SNET				eS	Sn	16 50 27.7	+0.3
SNET				IAML		16 50 28.8	
	comp=Z,8µm,0.2s						
OPAM	Oficina de Pla	0.56	333	eP	Pn	16 50 17.4	-0.6
OPAM				eS	Sn	16 50 27.9	+0.5
OPAM	Oficina de Pla	0.56	333	eP	Pn	16 50 17.4	-0.6
OPAM				eS	Sn	16 50 27.9	+0.5
LFU	La Fuente	0.57	342	eP	Pn	16 50 18.1	+0.1
LFU	La Fuente	0.57	342	eP	Pn	16 50 18.1	+0.1
CUSC	Alcaldia de Cu	0.57	336	eP	Pn	16 50 17.9	-0.1
CUSC				eS	Sn	16 50 27.9	+0.3
CUSC				IAML		16 50 29.3	
	comp=Z,14µm,0.2s						
CUSC	Alcaldia de Cu	0.57	336	eP	Pn	16 50 17.9	-0.1
CUSC				eS	Sn	16 50 27.9	+0.3
CUSC				IAML		16 50 29.3	
	comp=Z,14µm,0.2s						
UESS	Universidad de	0.57	334	eP	Pn	16 50 17.9	-0.2
UESS				eS	Sn	16 50 28.6	+1.0
UESS				IAML		16 50 31.4	
	comp=Z,11µm,0.2s						
UESS	Universidad de	0.57	334	eP	Pn	16 50 17.9	-0.2
UESS				eS	Sn	16 50 28.6	+1.0
UESS				IAML		16 50 31.4	
	comp=Z,11µm,0.2s						
UEES	Universidad Ev	0.59	330	eP	Pn	16 50 18.0	-0.2
UEES				eS	Sn	16 50 28.4	+0.5
UEES				IAML		16 50 31.4	
	comp=Z,8µm,0.2s						
UEES	Universidad Ev	0.59	330	eP	Pn	16 50 18.0	-0.2
UEES				eS	Sn	16 50 28.4	+0.5
UEES				IAML		16 50 31.4	
	comp=Z,8µm,0.2s						
BOQS	Boqueron	0.62	328	⇓eP	Pn	16 50 18.6	-0.2
BOQS				eS	Sn	16 50 30.1	+1.3
PACA	Pacayal	0.65	66	eP	Pn	16 50 19.4	+0.4
PACA				eS	Sn	16 50 30.4	+1.1
PACA	Pacayal	0.65	66	eP	Pn	16 50 19.4	+0.4
PACA				eS	Sn	16 50 30.4	+1.1
LCY	Lacayo	0.66	71	eP	Pn	16 50 19.4	+0.3
LCY				eS	Sn	16 50 30.8	+1.4
LCY	Lacayo	0.66	71	eP	Pn	16 50 19.4	+0.3
LCY				eS	Sn	16 50 30.8	+1.4
JUCU	Jucuar¡n	0.67	86	eP	Pn	16 50 18.4	-0.7
JUCU				eS	Sn	16 50 29.6	0.0
JUCU	Jucuar¡n	0.67	86	eP	Pn	16 50 18.4	-0.7
JUCU				eS	Sn	16 50 29.6	0.0
CEVE	Cerro Verde	0.91	313	eP	Pn	16 50 21.8	-0.4
CEVE				eS	Sn	16 50 35.6	+0.6
CEVE				IAML		16 50 41.2	
	comp=Z,9µm,0.3s						
CEVE	Cerro Verde	0.91	313	eP	Pn	16 50 21.8	-0.4
CEVE				eS	Sn	16 50 35.6	+0.6
CEVE				IAML		16 50 41.2	
	comp=Z,9µm,0.3s						
SBLS	San Blas	0.92	314	eP	Pn	16 50 22.1	-0.2
SBLS	San Blas	0.92	314	eP	Pn	16 50 22.1	-0.2
SNJE	San Jose	0.93	316	eP	Pn	16 50 22.2	-0.2
SNJE	San Jose	0.93	316	eP	Pn	16 50 22.2	-0.2
LLGN	La Laguna	0.95	360	eP	Pn	16 50 23.1	+0.4
LLGN	La Laguna	0.95	360	eP	Pn	16 50 23.1	+0.4
RTR	El Retiro	0.97	315	eP	Pn	16 50 23.0	+0.1
RTR	El Retiro	0.97	315	eP	Pn	16 50 23.0	+0.1
UNIC	Universidad Ca	0.97	323	eP	Pn	16 50 23.1	+0.2
UNIC	Universidad Ca	0.97	323	eP	Pn	16 50 23.1	+0.2
LCND	La Caada	1.02	84	eP	Pn	16 50 23.4	0.0
LCND				eS	Sn	16 50 37.7	+0.5
LCND				IAML		16 50 40.5	
	comp=Z,3µm,0.3s						
LCND	La Caada	1.02	84	eP	Pn	16 50 23.4	0.0
LCND				eS	Sn	16 50 37.7	+0.5
LCND				IAML		16 50 40.5	
	comp=Z,3µm,0.3s						
CNCH	Conchagua	1.08	86	eP	Pn	16 50 24.0	-0.2
CNCH				eS	Sn	16 50 39.6	+1.1
CNCH	Conchagua	1.08	86	eP	Pn	16 50 24.0	-0.2
CNCH				eS	Sn	16 50 39.6	+1.1
MTO3	Montecristo	1.26	341	eP	Pn	16 50 27.3	+0.6
MTO3	Montecristo	1.26	341	eP	Pn	16 50 27.3	+0.6
IXG	Ixpaco	1.75	304	eP	Pn	16 50 33.5	+0.3
TGUH	Tegucigalpa,Un	1.83	62		Pn	16 50 35.1	+0.8
NBG	Las Nubes	1.94	315	eP	Pn	16 50 37.6	+1.8
MRL	Marmol	2.00	339	⇑eP	Pn	16 50 38.9	+2.3
PCG	Pacaya	2.01	306	eP	Pn	16 50 41.5	+4.8
FUG	Fuego 3	2.23	304	eP	Pn	16 50 42.0	+2.3
FUG				eS	Sn	16 51 07.9	+1.7
APG	El Apazote	2.32	321	P	Pn	16 50 41.1	+0.1
	comp=Z,3.7nm,0.3s,baz=151,slow=2.7,SNR=6.4						
APG				LR	LR	16 50 56.8	
	comp=Z,12nm,21.2s,baz=113,slow=23						
APG				S	Sn	16 51 02.4	-6.2
	comp=Z,11nm,0.3s,baz=339,slow=6.5,SNR=11						
ESTN	Estel	2.50	92		Pn	16 50 43.1	-0.3
STG3	Santiaguito 3,	2.96	301	eP	Pn	16 50 52.3	+2.5
STG3				eS	Sn	16 51 25.4	+1.2
JTS	Las Juntas de	4.86	126	P	Pn	16 51 23.0	+7.4
	comp=Z,7.2nm,0.3s,baz=342,slow=6.6,SNR=21						
JTS				S	Sn	16 52 24.3	+14
	comp=Z,3.1nm,0.3s,baz=17,slow=23,SNR=10						
JTS				LR	LR	16 53 35.5	
	comp=Z,57nm,20.4s,baz=142,slow=41						
JTS	Las Juntas de	4.86	126	Pn	Pn	16 51 17.5	+1.9
CMIG	Matias Romero	6.92	305	P	Pn	16 51 43.3	-0.4
	comp=Z,0.7nm,0.3s,baz=142,slow=8.4,SNR=5.2						
CMIG				S	Sn	16 53 00.9	-0.2
	comp=Z,1.2nm,0.3s,baz=63,slow=23,SNR=6.8						
CMIG				LR	LR	16 54 41.9	
	comp=Z,53nm,21.9s,baz=38,slow=41						
TEIG	Tepich	7.01	5	P	Pn	16 51 46.2	+1.2
	comp=Z,4.5nm,0.3s,baz=332,slow=0.8,SNR=28						
TEIG	Tepich	7.01	5	Pn	Pn	16 51 47.4	+2.4
ZAIG	Zacatecas	16.07	308	Pn	Pn	16 53 47.1	-0.1
GOGA	Godfrey	20.73	13	P	P	16 54 39.4	-0.8
TX31	Lajitas Ar. Si	21.08	322	P	P	16 54 45.3	+1.1
TXAR	Lajitas Array	21.08	322	P	P	16 54 44.6	+0.4
	comp=Z,0.8nm,0.6s,baz=145,slow=11,SNR=7.8						
TKL	Tuckaleechee C	22.84	11	LR	LR	17 05 27.3	
	comp=Z,20nm,18.1s,baz=112,slow=41						
YKA	Yellowknife Ar	52.51	345	P	P	16 59 10.0	-1.4
	comp=Z,1.4nm,0.7s,baz=144,slow=7.5,SNR=19						
RES	Resolute Bay	61.56	358	P	P	17 00 13.3	-1.8
	comp=Z,0.6nm,0.3s,baz=216,slow=1.3,SNR=6.5						
CMAR	Chiang Mai Arr	147.59	346	PKPbc	PKPdf	17 09 41.4	+1.0
	comp=Z,0.4nm,0.6s,baz=350,slow=4.2,SNR=5.7						

*BJI **07** 16:56:37.8±0.0, 30.°27S×176.°86W, h25km, mB5.8/7, mb5.1/11, Ms5.4/5, Ms7 5.0/2*
*IDC **07** 16:56:38.0±0.7, 30.°42S×177.°76W, h0km, mb5.0/7, mb1 5.0/9, mb1mx4.5/25, mbtmp4.8/9, ML3.8/2, MS3.6/9, Ms1 3.6/9, ms1mx3.4/27, Error ellipse: s-maj=24.7km s-min=17.3km az=103.0*
*NEIC **07** 16:56:39.1±3.0, 30.°48S±0.°05×177.°9W±0.°2, h10km±1km, mb5.0/35, Error ellipse: s-maj=23.1km s-min=7.2km az=99.0*
ISC 07 16:56:44.4±0.5, **30.°55S**±0.°05×**177.°88W**±0.°10, **h46km**, **n160**, σ**2.°66**/166, **mb5.1**/27, **MS3.7**/11, **1C-1D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.28	359	P	Pn	16 57 02.9	-2.9
GLKZ				S	Sn	16 57 14.7	-7.0
RAO	Raoul Island	1.29	359	Pn	Pn	16 57 02.9	-3.0
	709nm,0.3s,baz=56,slow=19,SNR=44						
RAO				Sn	Sn	16 57 16.2	-5.8
	6µm,0.3s,baz=98,slow=23,SNR=49						
RAO				LR	LR	16 57 19.4	
	comp=Z,165nm,21.8s,baz=156,slow=35						
RAO	Raoul Island	1.29	359		Pn	16 57 03.2	-2.8
RAO	Raoul Island	1.29	359		Sn	16 57 16.7	-5.3
RIZ	Raoul Island	1.30	358	P	Pn	16 57 03.1	-3.0
RIZ				S	Sn	16 57 16.3	-5.9
WMGZ	Waiomatatini S	7.88	202	P	Pn	16 58 35.0	-1.3
WMGZ				S	Sn	17 00 02.6	-1.5
HAZ	Te Kaha	8.04	205	P	Pn	16 58 36.8	-1.7
HAZ				S	Sn	17 00 11.4	+3.4
PKGZ	Pakihiroa	8.05	203	P	Pn	16 58 37.0	-1.8
PKGZ				S	Sn	17 00 05.0	-3.5
PUZ	Puketiti	8.16	202	P	Pn	16 58 38.4	-1.8
PUZ				S	Sn	17 00 09.7	-1.3
RUGZ	Raukumara Rang	8.26	205	P	Pn	16 58 39.8	-1.9
RUGZ				S	Sn	17 00 13.5	-0.2
TWGZ	Tauwhareparae	8.34	203	P	Pn	16 58 40.8	-1.9
TWGZ				S	Sn	17 00 14.5	-1.1
WCZ	Waipu Caves	8.44	228	P	Pn	16 58 52.5	+8.5
OUZ	Omahuta	8.55	235	P	Pn	16 58 54.3	+8.8
CNGZ	Carnagh Statio	8.55	201	P	Pn	16 58 43.4	-2.1
MWZ	Matawai	8.64	205	P	Pn	16 58 44.2	-2.6
MWZ				S	Sn	17 00 22.2	-0.8
URZ	Urewera	8.73	207	Pn	Pn	16 58 46.4	-1.7
	0.5nm,0.3s,baz=274,slow=4.3,SNR=22						
URZ				Sn	Sn	17 00 25.9	+0.8
	3.1nm,0.3s,baz=206,slow=21,SNR=10						
URZ	Urewera	8.73	207	Pn	Pn	16 58 45.0	-3.1
URZ				Sn	Sn	17 00 25.5	+0.3
URZ	Urewera	8.73	207	P	Pn	16 58 45.7	-2.3
URZ				S	Sn	17 00 23.7	-1.4
RAGZ	Rawiri	8.83	205	P	Pn	16 58 47.0	-2.4
RAGZ				S	Sn	17 00 26.0	-1.6
RIGZ	Rimuhau	8.89	203	P	Pn	16 58 47.5	-2.7
MUGZ	Murupara	9.06	208	P	Pn	16 58 49.4	-3.1
SNGZ	Shannon Statio	9.11	204	P	Pn	16 58 50.6	-2.5
RAHZ	Arahi	9.32	205	P	Pn	16 58 53.4	-2.6
MTHZ	Maungataniwha	9.35	206	P	Pn	16 58 55.4	-1.1
BKZ	Black Stump Fm	9.76	207	Pn	Pn	16 58 58.4	-3.7
BKZ				Sn	Sn	17 00 44.0	-6.4
BKZ	Black Stump Fm	9.76	207	P	Pn	16 58 58.4	-3.7
MCHZ	McNeill Hill	9.93	205	P	Pn	16 59 03.0	-1.3
HIZ	Hauiti	9.95	215	Pn	Pn	16 59 01.4	-3.3
HIZ	Hauiti	9.95	215	P	Pn	16 59 08.4	+3.7
KWHZ	Kaweka Forest	10.01	206	P	Pn	16 59 01.7	-3.9
BHHZ	Black Hill Sta	10.21	207	P	Pn	16 59 09.2	+0.9
TSZ	Takapari Road	10.74	206	P	Pn	16 59 09.9	-5.6
MRZ	Mangatainoka R	11.40	206	P	Pn	16 59 19.1	-5.5
MSWZ	Moikau Station	12.18	205		Pn	16 59 31.9	-3.4
MSWZ				Sn	Sn	17 01 40.1	-10
SNZO	South Karori	12.30	207	Pn	Pn	16 59 32.7	-4.1
SNZO					Sn	17 01 41.2	-11
PLWZ	Palliser	12.32	205	Pn	Pn	16 59 35.5	-1.5
PLWZ				Sn	Sn	17 01 44.2	-8.6
BHW	Baring Head	12.32	206	Pn	Pn	16 59 32.6	-4.4
BSWZ	Blackbirch Sta	12.98	209	Pn	Pn	16 59 44.1	-2.0
THZ	Tophouse	13.43	211	Pn	Pn	16 59 49.1	-3.2
THZ					Sn	17 02 13.5	-6.6
THZ	Tophouse	13.43	211	P	Pn	16 59 48.0	-4.3
KHZ	Kahutara	13.70	208	Pn	Pn	16 59 51.5	-4.4
KHZ	Kahutara	13.70	208	P	Pn	16 59 51.9	-3.9
GVZ	Greta Valley S	14.36	208	P	Pn	17 00 03.3	-1.6
LTZ	Lake Taylor	14.53	210	Pn	Pn	17 00 02.7	-4.5
LTZ	Lake Taylor	14.53	210	P	Pn	17 00 04.4	-2.8
OXZ	Oxford	15.07	209	P	Pn	17 00 12.2	-2.0
MQZ	McQueen's Vall	15.13	207	Pn	Pn	17 00 10.6	-4.4
MQZ				IAmb	IAmb	17 00 36.2	
	comp=Z,54nm,1.4s						
RPZ	Rata Peaks	15.81	211	Pn	Pn	17 00 22.9	-0.9
	comp=Z,0.6nm,0.3s,baz=334,slow=4.2,SNR=3.7						
RPZ				Sn	Sn	17 03 08.7	-9.2
	comp=Z,0.8nm,0.3s,baz=229,slow=20,SNR=4.0						
RPZ	Rata Peaks	15.81	211	Pn	Pn	17 00 24.2	+0.4
RPZ				IAmb	IAmb	17 00 55.1	
	comp=Z,134nm,2.0s						
RPZ	Rata Peaks	15.81	211	P	P	17 00 25.2	-1.8
FOZ	Fox Glacier	16.24	214	P	P	17 00 30.3	-1.3
FOZ				IAmb	IAmb	17 00 32.7	
	comp=Z,222nm,2.0s						
FOZ	Fox Glacier	16.24	214	P	P	17 00 30.1	-1.5
DZM	Mont Dzumac	16.38	297	eLR	LR	17 04 20.9	
	comp=Z,600nm,25.2s						
DZM	Mont Dzumac	16.38	297	Pn	P	17 00 32.7	-0.7
	comp=Z,0.2nm,0.3s,baz=165,slow=19,SNR=2.0						
DZM				LR	LR	17 05 36.9	
	comp=Z,339nm,18.5s,baz=88,slow=33						
DZM	Mont Dzumac	16.38	297	P	Pn	17 00 32.2	+1.0
NOUC	Port Laguerre	16.47	297	P	Pn	17 00 32.0	-0.3
ODZ	Otahua Downs	17.05	209		Pn	17 00 32.6	-6.8
JCZ	Jackson Bay	17.14	214	P	Pn	17 00 40.1	-0.4
AFI	Afiamalu	17.49	20	LR	LR	17 05 26.7	
	comp=Z,172nm,21.3s,baz=125,slow=30						
MSZ	Milford Sound	18.00	214	P	P	17 00 51.2	+0.1
MLZ	Mavora Lakes	18.42	213	P	P	17 00 51.1	-4.6
WHZ	Wether Hill Ro	18.89	212	P	P	17 00 57.7	-3.2
ARMA	Armidale	26.24	262		P	17 02 17.9	+2.6
TBI	Tubuai	26.28	81	eLR	LR	17 08 39.5	
	comp=Z,322nm,30.2s						
TBI	Tubuai	26.28	81	eT	T	17 28 38.9	
	comp=Z,26nm,0.3s						
EIDS	Eidsvold	27.84	273		P	17 02 31.3	+1.7
EIDS				IAmb	IAmb	17 02 35.2	
	comp=Z,41nm,1.6s						
CAN	Canberra	28.12	251	P	P	17 02 33.8	+1.7
CAN				IAmb	IAmb	17 02 35.8	
	comp=Z,16nm,0.8s						
PAE	Paea	28.75	70	eT	T	17 31 50.7	
	comp=Z,8.3nm,0.3s						
PPT2	Papeete2	28.79	70	eLR	LR	17 09 58.5	
	comp=Z,340nm,27.0s						
PPT2	Papeete2	28.79	70	eT	T	17 31 54.6	
	comp=Z,4.7nm,0.2s						
TVO	Taravao	28.95	71	eT	T	17 32 05.5	
	comp=Z,2.6nm,0.2s						
MEH	Mehetia	29.88	72	eT	T	17 33 13.7	
	comp=Z,11nm,0.2s						
TOO	Toolangi	31.00	247		P	17 02 58.3	+0.7
TOO				IAmb	IAmb	17 03 03.0	
	comp=Z,11nm,0.9s						
VAH	Vaihoa	31.64	68	eT	T	17 35 28.1	
	comp=Z,26nm,0.2s						
CTA	Charters Tower	33.92	279	P	P	17 03 25.5	+2.3
	comp=Z,33nm,0.6s,baz=103,slow=11,SNR=41						
STKA	Stephens Creek	34.54	257	P	P	17 03 30.8	+2.3
	comp=Z,41nm,0.7s,baz=101,slow=11,SNR=117						
STKA				LR	LR	17 16 34.4	
	comp=Z,125nm,18.4s,baz=36,slow=34						
STKA	Stephens Creek	34.54	257	P	P	17 03 30.8	+2.3
STKA				IAmb	IAmb	17 03 31.7	
	comp=Z,8.0nm,0.7s						
BBOO	Buckleboo	39.03	254	P	P	17 04 07.3	+0.7
BBOO				IAmb	IAmb	17 04 09.9	
	comp=Z,24nm,0.8s						
COEN	Coen	39.41	286		P	17 04 09.6	-0.3
AS31	Alice Springs	43.20	267	P	P	17 04 41.1	0.0
ASAR	Alice Springs	43.20	267	P	P	17 04 40.9	-0.2
	comp=Z,9.3nm,0.5s,baz=104,slow=7.1,SNR=319						
ASAR				ScP	ScP	17 10 20.7	+3.2
	comp=Z,1.1nm,1.1s,baz=116,slow=4.2,SNR=4.5						
ASAR				LR	LR	17 22 17.6	
	comp=Z,142nm,19.0s,baz=109,slow=36						
ASAR	Alice Springs	43.20	267	P	P	17 04 41.1	0.0
WR0	Warramunga Arr	44.02	272	P	P	17 04 47.6	-0.1
WR0				IAmb	IAmb	17 04 48.8	
	comp=Z,17nm,0.5s						
WB2	Warramunga Arr	44.19	272	P	P	17 04 48.7	-0.3
WB2				IAmb	IAmb	17 04 50.2	
	comp=Z,24nm,0.6s						
WRAB	Tennant Creek	44.20	272	P	P	17 04 48.7	-0.4
WRAB				IAmb	IAmb	17 04 50.2	
	comp=Z,17nm,0.6s						
WRA	Warramunga Arr	44.20	272	P	P	17 04 48.8	-0.4
	comp=Z,20nm,0.5s,baz=107,slow=8.0,SNR=310						
WRA				ScP	ScP	17 10 26.6	+5.1
	comp=Z,0.6nm,0.6s,baz=104,slow=3.8,SNR=3.2						
WRA				LR	LR	17 22 09.3	
	comp=Z,90nm,18.6s,baz=105,slow=35						
WRA	Warramunga Arr	44.20	272	P	P	17 04 48.5	-0.6
FORT	Forrest	46.11	255	P	P	17 05 04.0	-0.2
FORT				IAmb	IAmb	17 05 05.2	
	comp=Z,31nm,1.1s						
VNDA	Vanda	47.96	186	LR	LR	17 22 20.2	
	comp=Z,37nm,21.9s,baz=344,slow=32						
VNDA	Vanda	47.96	186	P	P	17 05 16.9	-1.1
MTN	Manton Dam	50.10	279	P	P	17 05 33.1	-2.1
KNRA	Kununurra	50.82	274	P	P	17 05 39.5	-1.0
FITZ	Fitzroy Crossi	52.46	270	P	P	17 05 53.3	+0.5
FITZ				IAmb	IAmb	17 06 33.7	
	comp=Z,51nm,1.9s						
CASY	Casey	55.06	208	P	P	17 06 11.6	+0.5
PSAD2	Pilbara Seismi	55.93	263	P	P	17 06 16.0	-2.1
PSAB3	Pilbara Seismi	56.03	263	P	P	17 06 17.3	-1.5
PSAB3				IAmb	IAmb	17 06 27.5	
	comp=Z,36nm,1.4s						
PSA00	Pilbara Seismi	56.05	263	P	P	17 06 16.9	-2.0
PSA00				IAmb	IAmb	17 07 22.5	
	comp=Z,42nm,1.5s						
PSAD3	Pilbara Seismi	56.08	263	P	P	17 06 17.5	-1.6
PSAD3				IAmb	IAmb	17 07 25.2	
	comp=Z,51nm,1.6s						
MORW	Morawa	56.59	253	P	P	17 06 22.0	-0.6
MORW				IAmb	IAmb	17 08 02.4	
	comp=Z,45nm,1.4s						
QSPA	South Pole Qui	59.56	180	P	P	17 06 45.6	+2.5
	comp=Z,10nm,1.0s,baz=1.3,slow=4.7,SNR=23						
QSPA	South Pole Qui	59.56	180	P	P	17 06 45.7	+2.6
SYO	Syowa Base	77.00	193	⇓eP	P	17 08 31.0	-0.8
SYO	Syowa Base	77.00	193	⇑ipP	P	17 08 32.6	+0.8
SNAA	Sanae	78.01	178	P	P	17 08 39.0	+1.4
SNAA	Sanae	78.01	178	P	P	17 08 39.2	+1.6
VNA3	Neumayer Olymp	78.15	176	P	P	17 08 41.0	+2.7
VNA2	Neumayer--Watz	78.59	177	P	P	17 08 42.2	+1.5
	baz=184,slow=4.9						
VNA1	Neumayer--Stat	78.82	176	P	P	17 08 49.5	+7.6
DLV	T Lat	82.30	289	P	P	17 09 01.3	-0.4
DLV				IAmb	IAmb	17 09 02.8	
	comp=Z,7.0nm,0.7s						
PEA0B	Petropavlovsk-	85.98	346	P	P	17 09 18.2	-1.0
PETK	Petropavlovsk-	85.98	346	P	P	17 09 19.8	+0.5
	comp=Z,6.8nm,0.7s,baz=138,slow=6.1,SNR=11						
PETK	Petropavlovsk-	85.98	346	P	P	17 09 18.4	-0.9
NJ2	Nanjing	86.42	311	eP	P	17 09 23.5	+1.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CN2	Changchun	90.32	323	eP	P	17 09 41.4	+1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NNA	Nana	93.28	106	LR	LR	17 42 34.1	
	comp=Z,23nm,21.8s,baz=218,slow=30						
CMAR	Chiang Mai Arr	93.54	289	P	P	17 09 57.5	+1.7
	comp=Z,0.6nm,0.8s,baz=124,slow=4.5,SNR=5.9						
ANMO	Albuquerque	93.59	51	LR	LR	17 44 48.0	
	comp=Z,28nm,18.7s,baz=236,slow=31						
KMI	Kunming	93.98	297	P	P	17 10 00.4	+2.5
KMI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ATAH	Atahualpa	94.52	101	LR	LR	17 42 20.6	
	comp=Z,25nm,19.6s,baz=321,slow=29						
CD2	Chengdu	96.25	302	P	P	17 10 08.0	+0.1

CD2 pmax pmax
comp=Z,10.0nm,0.5s
HHC Hu-ho-hao-te 96.41 314 eP P 17 10 09.4 +0.9
HHC pmax pmax
comp=Z,2.0nm,0.9s
HHC pmax pmax
comp=Z,72nm,4.4s
HHC LR LR
comp=Z,160nm,15.3s
HHC LR LR
comp=Z,120nm,13.6s
LZH Lanzhou 98.89 307 eP Pdif 17 10 21.0 +1.1
LZH PP PP 17 14 29.9 +7.5
LZH pmax pmax
comp=Z,18nm,1.1s
LZH pmax pmax
comp=Z,69nm,5.4s
WMQ Urumqi 113.39 308 ePKP PKiKP 17 15 16.9 -0.2
WMQ AMB AMB
comp=Z,79nm,4.3s
WMQ LR LR
comp=Z,110nm,16.5s
WMQ LR LR
comp=Z,260nm,20.3s
WMQ LR LR
comp=Z,450nm,25.5s
MK31 Makanchi Array 117.94 310 PKPdf 17 15 25.0 -0.7
MKAR Makanchi Array 117.94 310 PKP PKPdf 17 15 24.1 -1.6
comp=Z,0.9nm,0.8s,baz=215,slow=1.4,SNR=9.2
MKAR Makanchi Array 117.94 310 PKPdf 17 15 24.5 -1.2
KSH Kashi 120.40 301 PKP PKiKP 17 15 34.2 +3.3
KSH PP PP 17 17 04.5 +6.4
KSH PKS PKSdf 17 19 07.4 -0.1
KSH SKKS 17 23 56.6
KSH SS SS 17 33 37.8 +14
KSH LR LR
comp=Z,130nm,6.3s
KSH LR LR
comp=Z,110nm,6.8s
KBL Kabul 124.37 293 PKiKP 17 15 39.9 +0.9
KKAR Karatay Array 125.24 304 PKiKP 17 15 39.5 -0.3
ARU Arti 133.27 321 PKP PKiKP 17 15 55.5 -0.3
comp=Z,1.0nm,0.4s,baz=341,slow=13,SNR=7.4
GEYT Alibeck 133.71 295 PKP PKiKP 17 15 57.2 -0.2
comp=Z,2.2nm,0.9s,baz=235,slow=5.2,SNR=5.2
GEYT Alibeck 133.71 295 PKiKP 17 15 56.8 -0.6
AKTO Aktyubinsk 134.27 312 PKP PKPdf 17 15 56.7 0.0
comp=Z,1.9nm,0.8s,baz=79,slow=2.2,SNR=4.2
ARCES ARCESS Array B 138.75 348 PKhKP PKPpre 17 15 58.8
comp=Z,3.4nm,0.9s,baz=68,slow=2.6,SNR=5.3
ARCES PKP PKPdf 17 16 05.2 +0.8
comp=Z,3.4nm,0.9s,baz=340,slow=1.8,SNR=7.5
AKH Akhalkalaki 145.10 300 PKPdf 17 16 16.5 -0.3
KBZ Khabaz 145.28 304 PKPbc PKPbc 17 16 16.5 -0.1
comp=Z,3.2nm,0.7s,baz=77,slow=5.4,SNR=6.3
FIA1 FINESS Array S 145.31 340 PKPbc 17 16 15.0 -1.1
FINES FINESS Array B 145.32 340 PKPbc PKPbc 17 16 15.2 -1.0
comp=Z,11nm,0.5s,baz=55,slow=3.6,SNR=40
FINES FINESS Array B 145.32 340 PKPbc 17 16 14.9 -1.3
NC303 NORSAR Array S 148.71 351 PKPbc 17 16 24.6 -1.3
NB2 NORSAR Subarra148.91 351 PKP PKPbc 17 16 25.7 -0.7
comp=Z,1.9nm,0.6s,baz=15,slow=2.7
NOA NORSAR Array B 148.91 351 PKPbc PKPbc 17 16 25.9 -0.5
comp=Z,2.7nm,0.7s,baz=16,slow=4.3,SNR=11
HFS Hagfors 149.41 349 PKPbc PKPbc 17 16 26.8 -0.8
comp=Z,5.9nm,0.7s,baz=48,slow=2.2,SNR=11
ASF Jabal al Asfar 150.33 282 PKPbc PKPbc 17 16 31.0 +0.1
comp=Z,3.5nm,0.8s,baz=30,slow=3.7,SNR=3.8
AKASG Malin Array Be 151.48 323 PKPbc PKPbc 17 16 32.2 -0.6
comp=Z,8.5nm,0.7s,baz=47,slow=3.0,SNR=26
AKASG Malin Array Be 151.48 323 PKPbc 17 16 31.7 -1.1
AKBB Malin Array Si 151.48 323 PKPbc 17 16 31.7 -1.1
EIL Elat 151.63 277 PKPbc PKiKP 17 16 35.1 +0.7
comp=Z,8.0nm,0.7s,baz=152,slow=4.5,SNR=8.1
MMAI Mount Meron Ar 151.66 284 PKPbc PKiKP 17 16 34.5 +0.1
comp=Z,7.5nm,0.7s,baz=88,slow=6.8,SNR=22
ILGA Ilgaz 152.44 301 PKPbc 17 16 35.0 -0.7
BR131 Keskin Array S 152.76 298 PKPbc 17 16 34.2 -2.1
BRTR Keskin Array B 152.76 298 PKPbc PKPbc 17 16 35.8 -0.6
comp=Z,2.1nm,0.5s,baz=142,slow=4.9,SNR=14
BRTR PKPab sPKPdf 17 16 46.6 -0.4
comp=Z,1.7nm,0.7s,baz=140,slow=6.5,SNR=6.4
BRTR Keskin Array B 152.76 298 PKPbc 17 16 34.6 -1.7
CSS Mathiatis 153.44 288 PKPbc 17 16 36.4 -1.4
MDUB Mudurnu 154.44 301 PKPbc 17 16 39.1 -0.8
VYHS Vyhne 158.00 329 ePKP PKPab 17 17 12.5 +3.3
GERES GERESS Array B 159.71 338 PKP PKPbc 17 16 39.3 +1.4
comp=Z,0.4nm,0.3s,baz=272,slow=10,SNR=5.6
GERES PKPab PKPab 17 17 16.5 -0.2
comp=Z,0.4nm,0.6s,baz=248,slow=32,SNR=3.3
TORD Torodi Ar. Bea 162.68 179 PKPab PKPab 17 17 31.5 +1.2
comp=Z,1.6nm,0.6s,baz=176,slow=3.4,SNR=7.1
TORD Torodi Ar. Bea 162.68 179 PKPdf PKPdf 17 16 41.9 0.0
TORD PKPab 17 17 30.6 +0.3
DAVOX Davos/Dischmat 162.71 342 PKPab PKPab 17 17 31.7 +1.7
comp=Z,2.1nm,0.7s,baz=0.0,slow=9.1,SNR=3.6

PDG 07 17:01:23.2±0.5, 38.29N×20.28E, h12km, ML3.9/11, Error ellipse: s-maj=1.0km s-min=1.1km az=0.0
BEO 07 17:01:24.5±0.7, 38.20N×20.14E, h25km±4km, ML3.8/6
ATH 07 17:01:24.6, 38.29N×20.43E, h12km, ML3.4/30, Error ellipse: s-maj=1.4km s-min=0.6km az=266.0
THE 07 17:01:24.4, 38.29N×20.39E, h14km, ML3.5/10, Error ellipse: s-maj=0.8km s-min=0.3km az=251.0
NEIC 07 17:01:26.5±2.5, 38.30N±0.06×20.33E±0.06, h39km±13km, Error ellipse: s-maj=9.4km s-min=7.0km az=195.0
IDC 07 17:01:28.5±2.2, 38.37N×20.30E, h52km±20km, mb3.5/8, mb1 3.6/17, mb1mx3.4/43, mbtmp3.7/17, ML3.4/8, MS2.7/2, Ms1 2.7/2, ms1mx2.2/42, Error ellipse: s-maj=21.9km s-min=13.5km az=61.0
ISC 07 17:01:23.7±0.7, 38.32N±0.02×20.37E±0.03, h14km±4km, n248, σ1.64/307, mb3.8/11, 6C-5D, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.07 145 P Pg 17 01 26.7 +0.2
KEF4 S Sg 17 01 28.4 0.0
KEF1 Kardakata, Kep 0.09 117 P Pg 17 01 26.9 +0.2
KEF1 S Sg 17 01 28.8 +0.1
KEF3 Kipouria, Keph 0.12 189 P Pg 17 01 27.1 +0.1
KEF3 S Sg 17 01 29.3 +0.1
LXR1 Lixouri, Cepha 0.13 156 P Pg 17 01 27.3 +0.2
LXR1 S Sg 17 01 29.8 +0.3
LXRA Lixouri, Kepha 0.13 156 P Pg 17 01 27.3 +0.1
LXRA S Sg 17 01 29.7 +0.2
CHV1 Chavriata, Kef 0.13 176 P Pg 17 01 27.3 +0.1
CHV1 S Sg 17 01 29.6 0.0
ARGA Argostoli. Kep 0.16 149 P Pg 17 01 27.7 +0.1
ARGA S Sg 17 01 30.3 -0.1
ARG2 Argostoli 0.17 147 P Pg 17 01 27.8 +0.1
ARG2 S Sg 17 01 30.4 0.0
VSK1 VASILIKIADES 0.18 59 P Pb 17 01 28.6 -0.2
VSK1 S Sb 17 01 31.6 -0.5
51μm,0.2s
KEF2 Argostoli. Kep 0.18 149 P Pg 17 01 28.0 +0.1
KEF2 S Sg 17 01 30.5 -0.1
KONA Konidatara, Ke 0.19 56 P Pb 17 01 28.8 -0.1
KONA S Sb 17 01 31.9 -0.6
VLS Valsamata 0.22 129 P Pg 17 01 28.6 0.0
VLS S Sg 17 01 31.9 0.0
65μm,0.2s
VLS Valsamata 0.22 129 P Pg 17 01 28.6 0.0
VLS S Sg 17 01 31.3 -0.6
VLS AML AML 17 01 32.2
VLS AML AML 17 01 32.2
EVGI Lefkada island 0.38 36 P Pb 17 01 32.4 +0.2
EVGI S Sb 17 01 38.3 +0.4
EVGI Lefkada island 0.38 36 P Pb 17 01 32.2 +0.1
EVGI S Sb 17 01 37.9 +0.1
MGNA Meganis 0.47 44 P Pb 17 01 33.6 -0.1
MGNA S Sb 17 01 40.0 -0.6
MGNA AML AML 17 01 44.7
comp=N,7247μm,0.3s
MGNA AML AML 17 01 46.1
comp=E,7039μm,0.4s
VLMS Volimes, Zakyn 0.50 152 P Pg 17 01 33.2 -0.3
VLMS S Sg 17 01 40.2 0.0
VLMS AML AML 17 01 41.5
comp=E,15789μm,0.2s
VLMS AML AML 17 01 50.6
comp=N,21846μm,0.5s
LKD2 Lefkada island 0.52 25 P Pb 17 01 34.8 +0.1
LKD2 S Sb 17 01 42.3 +0.2
comp=N,3μm,0.6s
LKD2 Lefkada island 0.52 25 P Pb 17 01 34.7 +0.1
LKD2 S Sb 17 01 42.7 +0.6
LKD2 AML AML 17 01 50.2
comp=E,5260μm,0.3s
LKD2 AML AML 17 01 53.4
comp=N,5008μm,0.4s
TSLK Tsoukalades, L 0.55 24 P Pb 17 01 35.5 +0.3
TSLK S Sn 17 01 44.5 -1.7
comp=N,3μm,0.5s
TSLK Tsoukalades, L 0.55 24 P Pb 17 01 35.6 +0.4
TSLK S Sb 17 01 43.7 +0.7
AST1 Astakos 0.61 68 P Pg 17 01 36.0 +0.4
AST1 S Sb 17 01 44.4 -0.1
comp=N,9μm,0.4s
PDO Prodromos 0.70 66 P Pg 17 01 37.4 +0.1
PDO S Sn 17 01 48.8 -0.9
comp=N,6μm,0.6s
PDO Prodromos 0.70 66 P Pb 17 01 37.6 0.0
PDO S Sg 17 01 46.4 -0.1
PDO AML AML 17 01 52.2
comp=E,9483μm,0.6s
PDO AML AML 17 01 57.0
comp=N,9513μm,0.6s
RLS Riolos of Patr 0.90 106 P Pb 17 01 40.5 -0.6
RLS Riolos of Patr 0.90 106 P Pb 17 01 40.6 -0.5
PVO Paravola 0.95 71 P Pg 17 01 42.4 +0.3
PVO Paravola 0.95 71 P Pg 17 01 42.6 +0.4
PVO AML AML 17 02 05.8
comp=N,5628μm,0.5s
PVO AML AML 17 02 05.9
comp=E,8018μm,0.8s
UPR University Cam 1.11 91 P Pg 17 01 45.6 +0.5
DRO Drossia 1.12 109 P Pb 17 01 44.2 -0.6
DRO Drossia 1.12 109 P Pb 17 01 44.5 -0.3
DRO AML AML 17 02 07.7
comp=E,5599μm,0.7s
DRO AML AML 17 02 16.3
comp=N,4612μm,0.5s
IGT Igoumenitsa 1.21 359 P Pg 17 01 47.7 +0.6
IGT S Sg 17 02 05.5 +2.6
comp=N,1μm,0.3s
IGT Igoumenitsa 1.21 359 ePg Pg 17 01 49.7 +2.6
IGT eSg Sg 17 02 06.4 +3.5
IGT Igoumenitsa 1.21 359 P Pg 17 01 47.6 +0.5
IGT AML AML 17 02 08.2
comp=E,3063μm,0.4s
IGT AML AML 17 02 11.1
comp=N,1903μm,0.4s
ANX Ano Chora 1.25 77 P Pn 17 01 47.0 +0.2
ANX Ano Chora 1.25 77 P Pb 17 01 47.3 +0.2
ANX AML AML 17 02 11.9
comp=E,6281μm,0.6s
ANX AML AML 17 02 12.1
comp=N,7499μm,0.5s
LAKA Lakka 1.27 93 P Pn 17 01 47.0 0.0
LAKA S Sn 17 02 04.4 +0.6
comp=N,1μm,0.5s
LAKA Lakka 1.27 93 P Pn 17 01 47.1 0.0
LAKA AML AML 17 02 11.0
comp=N,2600μm,0.4s
LAKA AML AML 17 02 11.7
comp=E,1824μm,0.6s
EVR Evrytania 1.27 62 P Pb 17 01 47.5 0.0
EVR Evrytania 1.27 62 P Pb 17 01 47.8 +0.2
EVR AML AML 17 02 14.6
comp=E,2412μm,0.7s
EVR AML AML 17 02 14.7
comp=N,2383μm,0.7s
AMT Artemida-Makis 1.32 126 P Pb 17 01 48.9 +0.7
AMT Artemida-Makis 1.32 126 P Pb 17 01 49.0 +0.7
AMT AML AML 17 02 21.7
comp=N,3142μm,0.9s
AMT AML AML 17 02 22.9
comp=E,3345μm,0.7s
SERG Sergoula 1.33 85 P Pn 17 01 47.9 +0.1
SERG Sergoula 1.33 85 P Pn 17 01 48.0 +0.1
SERG AML AML 17 02 13.8
comp=E,2526μm,0.7s
SERG AML AML 17 02 15.9
comp=N,3103μm,0.6s
TRIZ Trizonia 1.34 87 P Pn 17 01 48.1 +0.2
TRIZ Trizonia 1.34 87 P Pn 17 01 48.1 +0.2
ALIK Aliki, Aigiali 1.37 92 P Pn 17 01 49.0 +0.6
JAN Janina 1.39 15 P Pg 17 01 51.1 +0.7
JAN S Sg 17 02 08.8 +0.3
comp=N,1μm,0.5s
JAN Janina 1.39 15 P Pg 17 01 51.3 +0.9
JAN AML AML 17 02 14.3
comp=N,2702μm,0.3s
JAN AML AML 17 02 17.5
comp=E,3228μm,0.7s
KALE Kalithea 1.39 86 P Pn 17 01 49.2 +0.5
KALE AML AML 17 02 18.6
comp=N,2118μm,0.9s
KALE AML AML 17 02 20.4
comp=E,1837μm,0.6s
KLV Kalavryta, Ach 1.43 100 P Pn 17 01 49.6 +0.4
KLV Kalavryta, Ach 1.43 100 P Pn 17 01 49.6 +0.4
KLV AML AML 17 02 22.9
comp=E,1375μm,0.7s
KLV AML AML 17 02 27.7
comp=N,1428μm,1.0s
KEK Kerkira 1.46 342 P Pg 17 01 51.2 -0.6
KEK Kerkira 1.46 342 P Pg 17 01 51.3 -0.5
KEK AML AML 17 02 21.3
comp=E,2167μm,0.4s
KEK AML AML 17 02 23.5
comp=N,2160μm,0.5s
KASA Kassiopi 1.47 347 P Pg 17 01 52.8 +1.0
MAKR Makrakomi, Fth 1.54 63 P Pg 17 01 53.0 -0.3
MAKR Makrakomi, Fth 1.54 63 P Pg 17 01 53.3 0.0
MAKR AML AML 17 02 19.9
comp=N,3884μm,0.5s
MAKR AML AML 17 02 24.0
comp=E,5271μm,0.4s
SRN Sarande 1.59 350 P Pb 17 01 52.8 0.0
SRN S Sg 17 02 14.5 -0.3
comp=E,735nm,0.5s
MEV Metsovon 1.61 24 P Pg 17 01 55.2 +0.6
ITM Ithomi 1.68 132 P Pb 17 01 55.6 +1.3
ITM Ithomi 1.68 132 Pb 17 01 55.3 +1.0
AGG Agios Georgios 1.69 65 P Pg 17 01 56.1 +0.1
AGG AML AML 17 02 30.1
comp=E,2927μm,0.5s
AGG AML AML 17 02 31.0
comp=N,1841μm,0.6s
AGG Agios Georgios 1.69 65 Pb 17 01 55.4 +0.9
THL Klokotos Trika 1.79 45 P Pb 17 01 56.9 +0.7
THL Klokotos Trika 1.79 45 P Pg 17 01 57.5 -0.5
THL AML AML 17 02 31.8
comp=N,2099μm,0.7s
THL AML AML 17 02 32.0
comp=E,2279μm,0.6s
PYL PYLOS 1.79 142 P Pb 17 01 57.3 +1.1
KPRO Kipourio 1.81 25 P Pb 17 01 57.3 +0.7
KPRO Kipourio 1.81 25 P Pg 17 01 58.0 -0.4
AXAR Agios Charalam 1.85 75 P Pb 17 01 58.1 +0.9
AXAR AML AML 17 02 33.5
comp=E,3340μm,0.7s
AXAR AML AML 17 02 33.7
comp=N,4194μm,0.5s
VLX Vlachokerasia 1.85 120 P Pb 17 01 58.4 +1.1
VLX AML AML 17 02 35.6
comp=E,2487μm,0.8s
VLX AML AML 17 02 42.8
comp=N,1281μm,0.7s
PROD Prodromos 1.99 91 P Pb 17 01 59.0 -0.7
PROD Prodromos 1.99 91 P Pb 17 01 59.8 +0.1
PROD AML AML 17 02 35.8
comp=N,934μm,1.3s
PROD AML AML 17 02 37.8
comp=E,1510μm,0.7s
LTK Loutraki 2.07 97 P Pb 17 02 00.2 -0.8
LTK Loutraki 2.07 97 P Pb 17 02 00.1 -0.8
LOUT Loutraki 2.08 98 P Pb 17 02 00.2 -1.0
LOUT Loutraki 2.08 98 P Pb 17 02 00.5 -0.7
LKR Lokris 2.09 80 P Pb 17 02 01.0 -0.3
LKR Lokris 2.09 80 P Pb 17 02 00.6 -0.8
LKR AML AML 17 02 38.6
comp=E,599μm,0.7s
LKR AML AML 17 02 40.0
comp=N,645μm,0.9s
NEST Nestorio 2.16 14 P Pb 17 02 03.2 +0.6
KZN Kozani 2.26 28 P Pb 17 02 04.3 -0.1
VIL2 Platees 2.28 92 P Pb 17 02 03.8 -0.9
VIL2 AML AML 17 02 52.7
comp=E,1318μm,0.8s
VIL2 AML AML 17 02 54.8
comp=N,702μm,0.6s
SCTE Santa Cesarea 2.29 320 Pn 17 02 02.6 +1.6
VILL Villia 2.32 93 P Pn 17 02 03.5 +2.0
KRND KRANIDI 2.39 112 P Pb 17 02 05.6 -0.8
KRND AML AML 17 02 52.3
comp=N,906μm,0.9s
KRND AML AML 17 03 02.8
comp=E,823μm,1.1s
DID Didima 2.41 109 P Pb 17 02 05.5 -1.3
DID AML AML 17 02 51.4
comp=E,807μm,0.7s
DID AML AML 17 02 58.5
comp=N,853μm,0.7s
LIT Litokhoron 2.42 42 P Pb 17 02 05.7 -1.4
LIT Litokhoron 2.42 42 P Pb 17 02 05.9 -1.2
LIT AML AML 17 02 48.1
comp=N,602μm,0.5s
LIT AML AML 17 02 50.1
comp=E,729μm,0.8s
LIT Litokhoron 2.42 42 Pb 17 02 05.5 -1.5
XOR Xorichti 2.44 64 P Pb 17 02 05.8 -1.6
XOR Xorichti 2.44 64 P Pb 17 02 05.7 -1.6
XOR AML AML 17 02 50.4
comp=E,675μm,0.7s
XOR AML AML 17 02 53.2
comp=N,904μm,0.8s
MRKA Markates 2.55 80 P Pn 17 02 07.2 +2.5
MRKA Markates 2.55 80 P Pn 17 02 07.0 +2.3
MRKA AML AML 17 03 00.4
comp=E,342μm,1.1s
MRKA AML AML 17 03 08.9
comp=N,466μm,1.2s
VLI Veliai 2.59 127 P Pb 17 02 09.3 -0.6
VLY Voula,Athens 2.74 99 P Pn 17 02 09.0 +1.8
VLY Voula,Athens 2.74 99 P Pn 17 02 09.6 +2.4
OHR Ohrid 2.81 7 iPn Pb 17 02 11.6 -2.1
AOS Alonnisos 2.87 72 P Pn 17 02 10.8 +1.8
TIP Timpagrande 2.95 288 ⇑P Pn 17 02 11.7 +1.5
TIP Timpagrande 2.95 288 Pn 17 02 11.4 +1.2
KTHA Kythira Island 2.97 133 P Pn 17 02 13.0 +2.5
PAIG Paliouri 3.03 57 P Pn 17 02 13.3 +2.1
TIR Tirane 3.05 353 ⇑P Pn 17 02 13.0 +1.5
TIR Tirane 3.05 353 Pn 17 02 12.6 +1.1
GRG Griva 3.07 30 P Pn 17 02 14.5 +2.8
TAR1 Taranto 3.25 314 ePn Pn 17 02 15.9 +1.7
KNT Kendrikon 3.44 34 P Pn 17 02 19.5 +2.6
VAY Valandovo 3.44 29 iPn Pn 17 02 18.6 +1.7
CEL Celeste 3.52 270 Pn Pn 17 02 18.7 +0.7
STIP Stip 3.65 22 iPn Pb 17 02 23.7 -4.3
SRS Serrai 3.74 41 ePn Pn 17 02 22.7 +1.7
ULC Ulcinj 3.74 347 ePn Pn 17 02 21.6 +0.6
ULC eSn Sn 17 03 05.7 +0.8
SG1 Sgolgore (BA) 3.81 313 ePn Pn 17 02 23.4 +1.5
BAI Bari 3.87 317 ePn Pn 17 02 24.1 +1.3
DRME Dracevica, Mon 3.97 347 ePn Pn 17 02 25.3 +1.2
DRME eSn Sn 17 03 12.6 +2.1
BUM Brajici-Budva 4.14 345 ePn Pn 17 02 27.1 +0.6
BUM eSn Sn 17 03 16.5 +1.8
MMB Musomiste 4.16 37 P Pn 17 02 28.0 +1.2
PDG Podgorica 4.20 349 ePn Pn 17 02 28.4 +1.2
PDG eSn Sn 17 03 15.8 -0.2
PDG Podgorica 4.20 349 ⇑P Pn 17 02 28.2 +1.0
PDG Podgorica 4.20 349 ePn Pn 17 02 26.6 -0.6
PDG Podgorica 4.20 349 Pn 17 02 28.0 +0.8
TTG Podgorica 4.20 349 ePn Pn 17 02 28.3 +1.1
TTG eSn Sn 17 03 18.4 +2.4
ACER Acerenza 4.22 307 Pn 17 02 29.1 +1.5
PVY Plav 4.28 356 ⇓iPn Pn 17 02 29.9 +1.3
PVY eSn Sn 17 03 20.9 +2.5
CEME Cevo 4.37 346 ePn Pn 17 02 29.9 +0.2
CEME eSn Sn 17 03 20.0 -0.4
HCY Herceg Novi 4.37 341 ePn Pn 17 02 28.5 -1.1
HCY Herceg Novi 4.37 341 ePn Pn 17 02 29.3 -0.3
BOSS Bosilegrad 4.47 20 ePn Pn 17 02 32.6 +1.5
SANT Santorini 4.50 114 Pn Pn 17 02 33.5 +2.1
IVA Berane 4.56 356 ePn Pn 17 02 33.5 +1.1
IVA eSn Sn 17 03 27.6 +2.4
KOME Kolasin 4.57 352 ePn Pn 17 02 34.2 +1.7
NKME Niksic 4.57 347 ePn Pn 17 02 33.0 +0.5
NKME eSn Sn 17 03 27.1 +1.7
NKY Niksic 4.61 347 ePn Pn 17 02 33.8 +0.8
NKY eSn Sn 17 03 27.0 +0.6
BARS Barje 4.63 13 ePn Pn 17 02 34.8 +1.6
TREB Trebinje 4.66 341 ePn Pn 17 02 33.5 -0.1
TREB eSn Sn 17 03 25.9 -1.5
TREB Trebinje 4.66 341 ePn Pn 17 02 33.2 -0.4
IDI Anoyia 4.72 128 P Pn 17 02 38.9 +4.4
comp=N,0.4nm,0.3s,baz=85,slow=20,SNR=3.8
IDI S Sn 17 03 32.8 +3.7
comp=N,0.9nm,0.3s,baz=278,slow=23,SNR=6.0
IDI LR LR 17 04 34.4
comp=N,41nm,21.6s,baz=284,slow=39
BRY Bratogost 4.79 344 ePn Pn 17 02 35.1 -0.4
BRY Bratogost 4.79 344 ePn Pn 17 02 35.7 +0.2
BRY eSn Sn 17 03 32.7 +1.9
VAE Valguarnera 4.79 262 P Pb 17 02 41.6 -5.7
comp=N,0.9nm,0.3s,baz=128,slow=6.5,SNR=2.7
VAE S Sn 17 03 35.5 +4.7
comp=N,1.9nm,0.3s,baz=312,slow=22,SNR=4.4
VTS Vitosha 4.82 26 ePn Pn 17 02 37.9 +2.0
VTS Vitosha 4.82 26 ⇓P Pn 17 02 38.3 +2.3
VTS Vitosha 4.82 26 P Pn 17 02 38.9 +3.0
VTS Vitosha 4.82 26 Pn 17 02 37.2 +1.3
SELS Selova 4.93 6 ePn Pn 17 02 38.1 +0.8
SELS eSn Sn 17 03 34.6 +0.4
SGRT San Giovanni R 4.94 315 Pn 17 02 38.8 +1.3
SJES Sjenica 4.95 357 ePn Pn 17 02 39.2 +1.5
SJES eSn Sn 17 03 34.9 +0.2
STON Ston 4.98 337 ePn Pn 17 02 38.6 +0.6
STON eSn Sn 17 03 33.1 -2.3
STON Ston 4.98 337 ePn Pn 17 02 38.3 +0.3
UPM Unac-Piva 5.00 348 ePn Pn 17 02 39.4 +0.9
UPM eSn Sn 17 03 37.8 +1.5
PLE Pljevlja 5.06 352 ePn Pn 17 02 40.4 +1.2
PLE eSn Sn 17 03 39.4 +1.8
ALN Alexandroupoli 5.08 58 Pn Pn 17 02 41.5 +2.1
KDZ Kurdzhali 5.11 48 P Pn 17 02 41.8 +2.0
PAOL Paolisi 5.23 303 Pn 17 02 42.2 +0.7
ZAPS Zavoj 5.24 18 ePn Pn 17 02 44.3 +2.7
IVAS Ivanjica 5.26 358 ePn Pn 17 02 42.3 +0.4
IVAS eSn Sn 17 03 43.2 +0.9
WDD Wied Dalam 5.29 244 Pn Pn 17 02 42.3 0.0
RUDO Rudo 5.35 352 ePn Pn 17 02 43.8 +0.7
BOVS Bovan 5.41 10 ePn Pn 17 02 44.7 +0.8
BOVS eSn Sn 17 03 45.5 -0.4
GRUS Gruza 5.57 3 eSn Sn 17 03 51.0 +1.1
CORL Corleone 5.59 268 Pn Pn 17 02 44.9 -1.5
BBLS Lazići 5.59 353 ePn Pn 17 02 46.8 +0.3
BBLS eSn Sn 17 03 48.1 -2.4
BBLS Lazići 5.59 353 ePn Pn 17 02 47.1 +0.6
CLTB Caltabellotta 5.70 265 Pn Pn 17 02 49.6 +1.6
DIVS Divibare 5.78 357 ePn Pn 17 02 49.3 +0.5
DIVS eSn Sn 17 03 53.2 -2.1
DIVS Divibare 5.78 357 ePn Pn 17 02 49.2 +0.1
HAPS Han Pijesak,Bl 5.86 350 ePn Pn 17 02 49.6 -0.6
TRUS Trudelj 5.90 0 eSn Sn 17 03 58.0 -0.1
KARP Karpathos 6.10 115 Pn Pn 17 02 55.6 +2.2
INTR Introdacqua 6.17 309 Pn 17 02 55.9 +1.4
ELND Elena 6.22 41 ⇑P Pn 17 02 57.1 +2.0
TEKS Tekeris 6.26 354 eSn Sn 17 04 05.2 -1.7
MGRS Mrkonjic Grad 6.58 339 ePn Pn 17 03 01.1 +1.2
AQU L'Aquila 6.68 309 Pn Pn 17 03 00.3 -1.0
BLY Banja Luka 6.86 341 ⇑P Pn 17 03 05.0 +1.2
BLY Banja Luka 6.86 341 ePn Pn 17 03 04.7 +1.0
BLY Banja Luka 6.86 341 Pn Pn 17 03 04.6 +0.8
NRCA Norcia 7.13 312 Pn 17 03 10.6 +3.0
GZR Gura Zlata 7.29 13 ⇑P Pn 17 03 11.1 +1.3
VOIR 7.92 25 ⇓P Pn 17 03 20.9 +2.4
MORH Mrgy, Hungar 8.00 351 ePn Pn 17 03 16.5 -2.9
MLR Muntele Rosu 8.28 28 P Pn 17 03 27.4 +4.0
comp=N,0.2nm,0.3s,baz=254,slow=1.5,SNR=5.2
MLR Muntele Rosu 8.28 28 ⇓P Pn 17 03 25.2 +1.8
MLR Muntele Rosu 8.28 28 Pn 17 03 23.5 +0.1
CRES Cresnjev 8.34 336 ePn Pn 17 03 24.6 +0.4
PLOR Plostina 8.85 30 ⇓P Pn 17 03 34.2 +3.0
TRI Trieste 8.87 328 Pn Pn 17 03 30.7 -0.7

KEST	**Kesra**	**9.19**	**257**	Pn	**Pn**	**17 03 34.9**	**-0.9**
SOKA	**Soboth**	**9.23**	**336**	iPn	**Pn**	**17 03 36.4**	**-0.1**
	comp=N,4.9nm,0.4s						
SOKA				eSn	**Sn**	**17 05 15.0**	**-5.2**
	comp=N,3.2nm,0.5s						
OBKA	**Obir**	**9.25**	**334**	iPn	**Pn**	**17 03 38.6**	**+1.9**
	comp=N,1.6nm,0.2s						
OBKA				iSn	**Sn**	**17 05 17.0**	**-3.4**
	comp=N,6.2nm,0.3s						
VLC	**Villacollemand**	**9.52**	**311**	Pn	**Pn**	**17 03 39.2**	**-1.0**
TEOL	**Teolo**	**9.57**	**320**	Pn	**Pn**	**17 03 39.8**	**-1.2**
PSZ	**Piszkesteto**	**9.60**	**358**	Pn	**Pn**	**17 03 41.1**	**-0.4**
ARSA	**Arzberg**	**9.61**	**340**	ePn	**Pn**	**17 03 41.7**	**+0.1**
	comp=N,0.6nm,0.2s						
STAL	**STALIGIAL**	**9.75**	**327**	Pn	**Pn**	**17 03 44.0**	**+0.5**
ANTO	**Ankara**	**9.78**	**77**	Pn	**Pn**	**17 03 45.2**	**+1.2**
BURAR	**Bucovina Array**	**9.95**	**19**	Pn	**Pn**	**17 03 46.1**	**-0.1**
CTI	**Castel Tesino**	**10.07**	**323**	Pn	**Pn**	**17 03 47.5**	**-0.4**
CTI					**Sn**	**17 05 35.6**	**-5.2**
KBA	**Koelnbreinsper**	**10.16**	**332**	iSn	**Sn**	**17 05 36.5**	**-6.5**
	comp=N,2.9nm,0.4s						
ABTA	**Abfaltersbach**	**10.22**	**328**	eSn	**Sn**	**17 05 37.6**	**-6.8**
	comp=N,5.2nm,0.6s						
VYHS	**Vyhne**	**10.23**	**354**	ePN	**Pn**	**17 03 49.9**	**-0.2**
VYHS				eSN	**Sn**	**17 05 35.9**	**-8.6**
SALO	**Salr**	**10.34**	**318**	Pn	**Pn**	**17 03 51.1**	**-0.4**
BRTR	**Keskin Array B**	**10.42**	**78**	P	**Pn**	**17 03 57.0**	**+4.2**
	comp=N,0.1nm,0.3s,baz=161,slow=27,SNR=2.9						
BRTR	**Keskin Array B**	**10.42**	**78**	Pn	**Pn**	**17 03 52.4**	**-0.4**
MOA	**Molln**	**10.52**	**337**	iPn	**Pn**	**17 03 55.4**	**+1.5**
	comp=N,2.2nm,0.3s						
MOA				eSn	**Sn**	**17 05 48.0**	**-3.5**
	comp=N,2.4nm,0.3s						
WTTA	**Wattenberg**	**11.00**	**327**	ePn	**Pn**	**17 04 02.4**	**+1.7**
	comp=N,2.6nm,0.5s						
WTTA				eSn	**Sn**	**17 05 59.7**	**-3.8**
	comp=N,4.6nm,0.6s						
WATA	**Walderalm**	**11.08**	**327**	ePn	**Pn**	**17 04 03.6**	**+1.8**
	comp=N,0.9nm,0.2s						
WATA				Sn	**Sn**	**17 06 00.2**	**-5.3**
	comp=N,5.7nm,0.5s						
SQTA	**Sankt Quirin**	**11.15**	**326**	ePn	**Pn**	**17 04 05.1**	**+2.4**
	comp=N,1.1nm,0.2s						
SQTA				iSn	**Sn**	**17 06 03.0**	**-4.1**
	comp=N,2.5nm,0.4s						
FETA	**Feichten**	**11.22**	**324**	Sn	**Sn**	**17 06 06.8**	**-2.2**
	comp=N,1.8nm,0.4s						
MOTA	**Moosalm**	**11.29**	**326**	eSn	**Sn**	**17 06 10.0**	**-0.7**
	comp=N,3.8nm,0.6s						
TUE	**Stuetta**	**11.52**	**319**	Pn	**Pn**	**17 04 05.9**	**-1.9**
GEC2	**GERESS Array S**	**11.57**	**338**	Pn	**Pn**	**17 04 07.3**	**-1.2**
GERES	**GERESS Array B**	**11.57**	**338**	P	**Pn**	**17 04 08.5**	**0.0**
	comp=N,0.2nm,0.3s,baz=151,slow=14,SNR=5.4						
SENIN	**Lac Senin/Sane**	**12.56**	**314**	Pn	**Pn**	**17 04 22.3**	**+0.2**
SENIN					**Sn**	**17 06 38.9**	**-3.0**
STU	**Stuttgart**	**13.21**	**326**	Pn	**Pn**	**17 04 30.3**	**-0.4**
BFO	**Black Forest**	**13.29**	**323**	Pn	**Pn**	**17 04 31.5**	**-0.3**
MMAI	**Mount Meron Ar**	**13.31**	**109**	P	**Pn**	**17 04 34.1**	**+1.8**
	comp=N,0.4nm,0.3s,baz=296,slow=14,SNR=3.5						
AKASG	**Malin Array Be**	**13.88**	**24**	P	**Pn**	**17 04 40.4**	**+0.5**
	comp=N,0.3nm,0.3s,baz=208,slow=13,SNR=3.2						
EIL	**Elat**	**14.84**	**121**	P	**P**	**17 04 57.1**	**-1.8**
	comp=N,0.2nm,0.3s,baz=7.0,slow=7.4,SNR=2.5						
KBZ	**Khabaz**	**17.82**	**65**	P	**P**	**17 05 33.7**	**+1.9**
	comp=N,0.0nm,0.3s,baz=290,slow=8.5,SNR=6.8						
GNI	**Garni**	**18.96**	**77**	P	**Pn**	**17 05 46.9**	**+1.6**
	comp=N,0.2nm,0.3s,baz=134,slow=2.0,SNR=6.1						
HFS	**Hagfors**	**22.24**	**351**	P	**P**	**17 06 21.2**	**+1.4**
	comp=N,5.3nm,0.8s,baz=171,slow=10,SNR=7.2						
PFVI	**Vila Bisbo**	**23.09**	**276**	P	**P**	**17 06 28.9**	**0.0**
NC602	**NORSAR Array S**	**23.12**	**349**	P	**P**	**17 06 28.9**	**-0.1**
FINES	**FINESS Array B**	**23.42**	**7**	P	**P**	**17 06 31.1**	**-1.0**
	comp=N,1.7nm,0.6s,baz=166,slow=9.6,SNR=14						
FIA1	**FINESS Array S**	**23.42**	**7**	P	**P**	**17 06 31.0**	**-1.0**
NC405	**NORSAR Array S**	**23.45**	**349**	P	**P**	**17 06 32.1**	**-0.3**
NB201	**NORSAR Array S**	**23.45**	**349**	P	**P**	**17 06 32.4**	**0.0**
NB2	**NORSAR Subarra**	**23.46**	**349**	P	**P**	**17 06 33.0**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=162,slow=10						
NOA	**NORSAR Array B**	**23.46**	**349**	P	**P**	**17 06 32.5**	**0.0**
	comp=Z,0.7nm,0.8s,baz=160,slow=9.9,SNR=3.7						
NBO00	**NORSAR Array S**	**23.52**	**348**	P	**P**	**17 06 33.6**	**+0.5**
NC303	**NORSAR Array S**	**23.61**	**349**	P	**P**	**17 06 34.0**	**+0.1**
NC204	**NORSAR Array S**	**23.75**	**348**	P	**P**	**17 06 35.7**	**+0.4**
TORD	**Torodi Ar. Bea**	**30.07**	**219**	P	**P**	**17 07 33.0**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=35,slow=9.6,SNR=4.4						
TORD	**Torodi Ar. Bea**	**30.07**	**219**	P	**P**	**17 07 32.0**	**-0.5**
ABKAR	**Akbulak array**	**30.26**	**56**	P	**P**	**17 07 33.9**	**-0.1**
KK31	**Karatay Array**	**37.85**	**66**	P	**P**	**17 08 40.1**	**+0.2**
KKAR	**Karatay Array**	**37.85**	**66**	P	**P**	**17 08 40.2**	**+0.3**
KKAR	**Karatay Array**	**37.85**	**66**	P	**P**	**17 08 40.0**	**+0.1**
KKAR				IAmb	IAmb	17 08 41.8	
	comp=Z,3.2nm,1.1s						
SPITS	**Spitsbergen Ar**	**40.01**	**359**	LR	LR	17 27 11.2	
	comp=Z,20nm,21.5s,baz=195,slow=39						
MK31	**Makanchi Array**	**45.33**	**58**	P	**P**	**17 09 40.4**	**-0.8**
MK31				IAmb	IAmb	17 09 44.8	
	comp=Z,3.7nm,1.6s						
MKAR	**Makanchi Array**	**45.33**	**58**	P	**P**	**17 09 40.9**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=276,slow=7.1,SNR=15						
MKAR	**Makanchi Array**	**45.33**	**58**	P	**P**	**17 09 40.5**	**-0.7**
ZAA0	**Zalesovo Array**	**45.69**	**48**	P	**P**	**17 09 43.2**	**-0.7**
ZAA0				IAmb	IAmb	17 09 44.3	
	comp=Z,2.8nm,0.5s						
ZALV	**Zalesovo Beam**	**45.69**	**48**	P	**P**	**17 09 43.9**	**0.0**
	comp=Z,2.3nm,0.4s,baz=275,slow=8.5,SNR=9.4						
ZALV	**Zalesovo Beam**	**45.69**	**48**	P	**P**	**17 09 43.0**	**-0.8**
SONM	**Songino Array**	**60.46**	**51**	P	**P**	**17 11 33.0**	**0.0**
	comp=Z,0.3nm,0.9s,baz=270,slow=7.2,SNR=3.9						
CMAR	**Chiang Mai Arr**	**69.99**	**82**	P	**P**	**17 12 34.7**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=310,slow=8.2,SNR=5.4						
ASAR	**Alice Springs**	**122.31**	**96**	PKP	**PKPdf**	**17 20 18.5**	**-0.1**
	comp=Z,0.5nm,1.1s,baz=327,slow=2.0,SNR=3.2						

ROM 07 17:03:06.8±0.2, 43°.391N±0°.005×12°.483E±0°.010, h6km±2km, ML1.0/2, 1C, Error ellipse: s-maj=0.7km s-min=0.5km az=58.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATVO	**AVT- Monte Val**	**0.06**	**261**	⇑P	Pg	17 03 08.3	0.0
ATVO				S	Sg	17 03 10.0	+0.5
ATPI	**Pietralunga -**	**0.08**	**315**	P	Pg	17 03 08.8	0.0
ATPI				S	Sg	17 03 10.6	+0.4
PIEI	**Pieia**	**0.15**	**15**	P	Pg	17 03 10.1	+0.2
PIEI				S	Sg	17 03 13.0	+1.0
PIEI				AML	AML		
	comp=N,71µm,0.3s						
PIEI				AML	AML		
	comp=E,75µm,0.9s						
BADI	**Badiali**	**0.21**	**304**	P	Pg	17 03 11.9	+1.0
BADI				S	Sg	17 03 15.3	+1.6
BADI				AML	AML		
	comp=E,60µm,1.6s						
BADI				AML	AML		
	comp=N,96µm,1.6s						
ATCC	**AVT- Casa Cast**	**0.24**	**151**	P	Pg	17 03 11.9	+0.5
ATCC				S	Sg	17 03 16.6	+2.1

NIED **07** *17:18:00, 37°.50N×141°.50E, h50km, Mw4.9 Best double couple: M0 2.81000×10^16 NP1: φs22.00000°, δ72.00000°, λ89.00000°. NP2: φs204.00000°, δ18.00000°, λ92.00000°.*

BJI **07** *17:18:31.4±0.0, 37°.58N×141°.39E, h61km, mB5.0/49, mb5.3/76, Ms4.4/69, Ms7 4.2/65*

MOS **07** *17:18:32.2±1.0, 37°.58N×141°.43E, h59km, mb5.5/39, MS4.3/8, Error ellipse: s-maj=5.4km s-min=3.7km az=103.5*

JMA **07** *17:18:32.8±0.1, 37°.52N×141°.47E, h48km±1km, M5.0 Broadband fault plane solution: P waves. NP1: φs203.00000°, δ27.00000°, λ101.00000°. NP2: φs11.00000°, δ63.00000°, λ85.00000°. Principal axes: T Plg71.0000°, Azm269.0000°; N Plg5.0000°, Azm13.0000°; P Plg18.0000°, Azm105.0000°;*

JMA Felt IV J1.

IDC **07** *17:18:33.4±1.3, 37°.54N×141°.46E, h53km±11km, mb4.9/43, mb1 4.9/51, mb1mx4.8/64, mbtmp5.1/51, MS4.1/31, Ms1 4.1/31, ms1mx4.0/42 Error ellipse: s-maj=10.2km s-min=7.1km az=108.0*

NEIC **07** *17:18:34.5±1.5, 37°.56N±0°.05×141°.36E±0°.09, h62km±4km, mb5.2/385, Error ellipse: s-maj=10.7km s-min=7.1km az=110.0*

GCMT **07** *17:18:35.5±0.3, 37°.55N±0°.02×141°.56E±0°.03, h52km±1km, MW5.0/91, Moment Tensor Solution. s61,c81; s91,c143; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.63±.17; Mθθ-0.89±.12; Mφφ-2.75±.11; Mrθ1.04±.09; Mθφ-1.09±.07; Mrφ1.94±.09; Best double couple: M0 4.08500×10^16 NP1: φs203.00000°, δ29.00000°, λ87.00000°. NP2: φs26.00000°, δ61.00000°, λ92.00000°. Principal axes: T 4.2750, Plg74.0000°, Azm300.0000°; N -0.3860, Plg1.0000°, Azm206.0000°; P -3.8940, Plg16.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM **07** *17:18:36.0, 37°.51N×141°.36E, h65km, mb5.2*

BGR **07** *17:18:37.5±0.0, 37°.61N×141°.31E, h33km, mb5.4*

ISC 07 17:18:33.5±0.4, 37°.55N±0°.03×141°.44E±0°.03, h57km±3km, h57km:pP-P, n1242, σ1.34/1332, mb5.2/371, MS4.2/47, 62C-58D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMST	**Minamisoumatoc**	**0.47**	**292**	⇓P	**Pn**	**17 18 44.0**	**-0.9**
JMST				S	**Sn**	**17 18 51.7**	**-1.5**
JFK	**Kawauchi**	**0.48**	**248**	⇓P	**Pn**	**17 18 43.9**	**-1.2**
JFK				S	**Sn**	**17 18 51.5**	**-2.0**
JMM	**Marumori**	**0.60**	**302**	⇓P	**Pn**	**17 18 45.9**	**-0.5**
JMM				S	**Sn**	**17 18 55.1**	**-0.7**
ONAJ	**Iwakimizuishiy**	**0.68**	**229**	⇓P	**Pn**	**17 18 46.0**	**-1.4**
ONAJ				S	**Sn**	**17 18 55.1**	**-2.4**
JIKH	**Ishinomakikobu**	**0.76**	**2**	⇓P	**Pn**	**17 18 47.7**	**-0.7**
JIKH				S	**Sn**	**17 18 58.0**	**-1.3**
JFFD	**Fukushimafurud**	**0.83**	**237**	⇓P	**Pn**	**17 18 48.3**	**-1.0**
JFT	**Otama**	**0.88**	**268**	⇓P	**Pn**	**17 18 49.8**	**0.0**
JFT				S	**Sn**	**17 19 01.7**	**-0.2**
JIO	**Ouri**	**0.91**	**356**	⇓P	**Pn**	**17 18 49.8**	**-0.4**
JIO				S	**Sn**	**17 19 01.5**	**-1.1**
JOU	**Okura**	**1.02**	**323**	⇓P	**Pn**	**17 18 51.4**	**-0.3**
JOU				S	**Sn**	**17 19 05.2**	**0.0**
JOFO	**Osakifurukawao**	**1.13**	**339**	⇓P	**Pn**	**17 18 53.3**	**+0.1**
JHO	**Hitachi**	**1.16**	**217**	P	**Pn**	**17 18 52.0**	**-1.6**
JKMT	**Kesennumamotoy**	**1.26**	**1**	⇓P	**Pn**	**17 18 54.6**	**-0.3**
JYS	**Shirataka**	**1.28**	**302**	⇓P	**Pn**	**17 18 55.2**	**+0.1**
JYS				S	**Sn**	**17 19 11.1**	**-0.2**
JSB	**Shiboa**	**1.34**	**245**	⇓P	**Pn**	**17 18 56.0**	**0.0**
JFY	**Yanaizu**	**1.39**	**265**	⇓P	**Pn**	**17 18 56.5**	**-0.1**
JFY				eS	**Sn**	**17 19 13.7**	**-0.2**
JMK	**Ichinoseki**	**1.41**	**353**	⇓P	**Pn**	**17 18 56.8**	**-0.1**
JMK				S	**Sn**	**17 19 14.4**	**-0.1**
OFUJ	**Ofunato**	**1.54**	**7**	⇓P	**Pn**	**17 18 58.3**	**-0.4**
JYK	**Kaneyama**	**1.61**	**328**	⇓P	**Pn**	**17 18 59.9**	**+0.3**
JNS	**Sasagawa**	**1.70**	**280**	⇓P	**Pn**	**17 19 01.0**	**+0.1**
JYA	**Atsumi**	**1.71**	**308**	⇓P	**Pn**	**17 19 01.4**	**+0.4**
JYYZ	**Yamagatayuza**	**1.89**	**322**	⇓P	**Pn**	**17 19 04.4**	**+1.0**
JOM	**Ohasama**	**1.93**	**357**	⇓P	**Pn**	**17 19 04.0**	**+0.1**
JAG	**Ashikaga**	**1.94**	**235**	⇓P	**Pn**	**17 19 03.8**	**-0.4**
JHK	**Hiroka**	**1.95**	**262**	⇓P	**Pn**	**17 19 04.4**	**+0.2**
JRG	**Rokugo**	**1.95**	**341**	⇓P	**Pn**	**17 19 04.9**	**+0.6**
JAW	**Awa shima**	**1.95**	**298**	⇓P	**Pn**	**17 19 04.4**	**+0.1**
JIZZ	**Izumozaki**	**2.17**	**270**	⇓P	**Pn**	**17 19 08.1**	**+0.9**
JTB	**Tobi-shima**	**2.21**	**319**	⇓P	**Pn**	**17 19 08.0**	**+0.2**
JYW	**Yuwa**	**2.21**	**335**	⇓P	**Pn**	**17 19 09.0**	**+1.2**
JRY	**Ryogami san**	**2.54**	**234**	⇓P	**Pn**	**17 19 12.2**	**-0.2**
JSGW	**Sagamiharawaka**	**2.64**	**223**	P	**Pn**	**17 19 12.8**	**-0.9**
JJN	**Nakama**	**2.65**	**261**	⇓P	**Pn**	**17 19 14.4**	**+0.6**
JAH	**Hinai**	**2.71**	**347**	⇓P	**Pn**	**17 19 15.9**	**+1.3**
MJAR	**Matsushiro Arr**	**2.77**	**250**	P	**Pn**	**17 19 16.1**	**+0.6**
	13nm,0.3s,baz=70,slow=14,SNR=378						
MJAR				S	**Sn**	**17 19 49.9**	**+2.1**
	27nm,0.3s,baz=97,slow=14,SNR=5.8						
MJAR				LR	LR	17 20 37.2	
	comp=Z,5µm,19.1s,baz=70,slow=45						
MJAR	**Matsushiro Arr**	**2.77**	**250**		**Pn**	**17 19 15.5**	**+0.1**
MAJO	**Matsushiro**	**2.77**	**250**		**Pn**	**17 19 16.4**	**+0.9**
MAJO	**Matsushiro**	**2.77**	**250**	d iP	**Pn**	**17 19 16.4**	**+0.9**
MAT	**Matsushiro**	**2.77**	**250**	P	**Pn**	**17 19 16.4**	**+0.9**
MAT	**Matsushiro**	**2.77**	**250**	P	**Pn**	**17 19 16.4**	**+0.9**
MAT				S	**Sn**	**17 19 48.2**	**+0.4**
MJB9	**Matsu-Tunnel**	**2.77**	**250**		**Pn**	**17 19 16.4**	**+0.9**
JNG	**Nsakai**	**2.91**	**248**	⇓P	**Pn**	**17 19 18.2**	**+0.8**
JIW	**Iwasaki**	**3.24**	**340**	⇓P	**Pn**	**17 19 22.9**	**+1.0**
JYZW	**Yoshizawa**	**3.93**	**231**	P	**Pn**	**17 19 32.4**	**+1.1**
INU	**Inuyama**	**4.18**	**240**		**Pn**	**17 19 36.3**	**+1.5**
JHJ2	**Mitsune**	**4.62**	**197**		**Pn**	**17 19 42.4**	**+1.6**
JHJ	**Hachijo jima 2**	**4.62**	**198**	P	**Pn**	**17 19 40.3**	**-0.5**
	142nm,0.3s,baz=94,slow=7.0,SNR=14						
JHJ				S	**Sn**	**17 20 31.0**	**-2.1**
	188nm,0.3s,baz=235,slow=23,SNR=7.6						
ERM	**Erimo**	**4.66**	**16**		**Pn**	**17 19 41.2**	**0.0**
ERM	**Erimo**	**4.66**	**16**	deP	**Pn**	**17 19 42.5**	**+1.3**
JKA	**Kamikawa-asahi**	**6.62**	**7**		**Pn**	**17 20 07.6**	**-0.5**
JKA					**Sn**	**17 21 22.3**	**+0.1**
ASAJ	**Asahikawa**	**6.62**	**7**	P	**Pn**	**17 20 07.6**	**-0.5**
	17nm,0.3s,baz=222,slow=8.8,SNR=71						
ASAJ				S	**Sn**	**17 21 22.3**	**+0.1**
	12nm,0.3s,baz=136,slow=33,SNR=5.7						
NMR	**Nemuro--Hokkai**	**6.67**	**28**	eP	**Pn**	**17 20 07.2**	**-1.6**
NMR				eS	**Sn**	**17 21 17.8**	**-5.6**
GRPR	**Tuman**	**7.23**	**26**	eP	**Pn**	**17 20 15.1**	**-1.4**
GRPR				eS	**Sn**	**17 21 31.9**	**-5.2**
GRPR				pmax	pmax		
	comp=E,169nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,242nm,0.4s						
GRPR				pmax	pmax		
	comp=N,56nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**7.30**	**26**	c iP	**Pn**	**17 20 18.8**	**+1.4**
SHO	**Shikotan**	**7.53**	**31**	eP	**Pn**	**17 20 17.3**	**-3.2**
SHO				eS	**Sn**	**17 21 38.4**	**-6.0**
SHO				pmax	pmax		
	comp=Z,26nm,0.5s						
SHO				pmax	pmax		
	comp=E,15nm,0.4s						
SHO				pmax	pmax		
	comp=N,21nm,0.6s						
TEY	**Ternei**	**8.32**	**336**	eP	**Pn**	**17 20 35.0**	**+3.7**
TEY				pmax	pmax		
	comp=N,510nm,0.7s						
TEY				pmax	pmax		
	comp=Z,510nm,0.6s						
TEY				pmax	pmax		
	comp=N,400nm,0.7s						
TEY				pmax	pmax		
	comp=Z,400nm,0.9s						
TEY				pmax	pmax		
	comp=E,310nm,0.7s						
KUR	**Kuril'sk**	**9.07**	**30**	eP	**Pn**	**17 20 40.6**	**-1.0**
KUR				i S	**Sn**	**17 22 16.7**	**-5.5**
KUR				pmax	pmax		
	comp=Z,100nm,0.5s						
KUR				pmax	pmax		
	comp=N,53nm,0.6s						
KUR				pmax	pmax		
	comp=E,47nm,0.4s						
KUR				smax	smax		
	comp=E,249nm,0.7s						
KUR				smax	smax		
	comp=N,188nm,0.6s						
VLA	**Vladivostok**	**9.17**	**310**	c iP	**Pn**	**17 20 45.8**	**+2.8**
MSHR	**Mys Shultsa**	**9.35**	**306**	⇓eP	**Pn**	**17 20 47.2**	**+1.8**
YSS	**Yuzh-Sakhalins**	**9.45**	**6**		**Pn**	**17 20 47.2**	**+0.4**
YSS	**Yuzh-Sakhalins**	**9.45**	**6**	⇑eP	**Pn**	**17 20 47.6**	**+0.8**
YSS				eS	**Sn**	**17 22 29.2**	**-2.3**
YSS				pmax	pmax		
	comp=Z,70nm,0.6s						
YSS				pmax	pmax		
	comp=N,60nm,0.5s						
YSS				smax	smax		
	comp=N,60nm,1.2s						
YSS				MLR	MLR		
	comp=Z,600nm,15.0s						
JNU	**Nakatsue**	**9.69**	**246**	P	**Pn**	**17 20 51.7**	**+1.5**
	comp=Z,3.3nm,0.3s,baz=92,slow=0.8,SNR=26						
JNU				LR	LR	17 25 00.0	
	comp=Z,2µm,20.8s,baz=58,slow=40						
JNU	**Nakatsue**	**9.69**	**246**		**Pn**	**17 20 52.3**	**+2.1**
USRK	**Ussuriysk Ar.**	**9.76**	**316**	P	**Pn**	**17 20 52.6**	**+1.6**
	baz=128,slow=12,SNR=94						
USRK				LR	LR	17 24 25.4	
	comp=Z,2µm,19.2s,baz=123,slow=36						
USRK	**Ussuriysk Ar.**	**9.76**	**316**		**Pn**	**17 20 52.1**	**+1.0**
USA0B	**Ussuriysk Arra**	**9.76**	**316**		**Pn**	**17 20 52.2**	**+1.1**
USA0B	**Ussuriysk Arra**	**9.76**	**316**	deP	**Pn**	**17 20 53.7**	**+2.6**
JCJ	**Chichijima**	**10.44**	**176**	P	**Pn**	**17 20 57.9**	**-2.6**
	comp=Z,22nm,0.3s,baz=281,slow=24,SNR=6.7						
JCJ				S	**Sn**	**17 22 48.7**	**-7.2**
	comp=Z,52nm,0.3s,baz=311,slow=23,SNR=6.4						
KSRS	**Korea Array**	**10.74**	**274**	P	**Pn**	**17 21 06.1**	**+1.6**
	comp=Z,4.3nm,0.3s,baz=92,slow=13,SNR=73						
KSRS				LR	LR	17 24 57.2	
	comp=Z,1µm,20.5s,baz=78,slow=36						
KSAR	**Wonju Array Be**	**10.77**	**274**		**Pn**	**17 21 08.0**	**+3.1**
KSAR	**Wonju Array Be**	**10.77**	**274**	P	**Pn**	**17 21 08.0**	**+3.1**
KS19	**Wonju Array Si**	**10.78**	**274**		**Pn**	**17 21 08.1**	**+3.0**
TJN	**Taejon**	**11.32**	**268**	⇑eP	**Pn**	**17 21 16.9**	**+4.4**
MDJ	**Mudanjiang**	**11.38**	**312**	P	**Pn**	**17 21 16.2**	**+2.9**
MDJ				S	**Sn**	**17 23 17.9**	**-0.9**
MDJ				ScS	**ScS**	**17 34 01.0**	**-4.8**
MDJ				pmax	pmax		
	comp=Z,90nm,1.1s						
MDJ				LR	LR		
	comp=Z,870nm,16.9s						
MDJ				LR	LR		
	comp=Z,1µm,16.9s						
MDJ				LR	LR		
	comp=Z,2µm,19.9s						
MDJ	**Mudanjiang**	**11.38**	**312**		**Pn**	**17 21 15.6**	**+2.3**
UGL	**Uglegorsk**	**11.54**	**2**	eP	**Pn**	**17 21 15.8**	**+0.5**
UGL				S	**Sn**	**17 23 15.7**	**-6.7**
UGL				pmax	pmax		
	comp=Z,35nm,1.3s						
UGL				smax	smax		
	comp=N,55nm,1.3s						
INCN	**Inchon**	**11.76**	**274**		**Pn**	**17 21 21.4**	**+2.9**
INCN	**Inchon**	**11.76**	**274**	P	**Pn**	**17 21 21.4**	**+2.9**
TYV	**Tymovskoe**	**13.34**	**3**	eP	**Pn**	**17 21 38.6**	**-1.3**
TYV				pmax	pmax		
	comp=Z,300nm,2.9s						
TYV				pmax	pmax		
	comp=Z,26nm,0.8s						
KLR	**Kul'dur**	**13.62**	**332**	P	**Pn**	**17 21 42.9**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=145,slow=11,SNR=16						
KLR				LR	LR	17 26 59.2	
	comp=Z,879nm,18.4s,baz=144,slow=37						
KLR	**Kul'dur**	**13.62**	**332**	⇓eP	**Pn**	**17 21 43.1**	**-0.7**
CN2	**Changchun**	**13.64**	**302**	⇑P	**Pn**	**17 21 45.0**	**+1.0**
CN2				esP	P	17 22 03.0	+12
CN2				eS	**Sn**	**17 24 15.0**	**+1.2**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,400nm,13.0s						
CN2				LR	LR		
	comp=Z,700nm,13.0s						
CN2				LR	LR		
	comp=Z,700nm,16.0s						
GRNR	**Gornyy**	**13.70**	**346**	⇑iP	**Pn**	**17 21 42.6**	**-2.1**
GRNR				eS	**Sn**	**17 24 12.3**	**-2.8**
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GRNR				smax	smax		
	comp=N,4.0nm,0.8s						
SNY	**Shenyang**	**14.40**	**293**	⇓P	**Pn**	**17 21 52.0**	**-2.1**
SNY				S	**Sn**	**17 24 32.0**	**-0.2**
SNY				pmax	pmax		
	comp=N,52nm,0.8s						
SNY				LR	LR		
	comp=N,840nm,13.1s						
SNY				LR	LR		
	comp=N,1µm,17.9s						
SNY				LR	LR		
	comp=N,2µm,16.5s						
JOW	**Kunigami**	**15.42**	**230**	P	**Pn**	**17 22 07.1**	**-0.3**
	comp=N,0.6nm,0.3s,baz=100,slow=17,SNR=11						
JOW	**Kunigami**	**15.42**	**230**	P	**P**	**17 22 11.7**	**+0.7**
DL2	**Dalian**	**15.63**	**281**	P	**Pn**	**17 22 08.2**	**-1.9**
DL2				pP	**P**	**17 22 17.5**	**+4.3**
DL2				sP	**pP**	**17 22 25.8**	**+0.1**
DL2				eS	**Sn**	**17 24 59.0**	**-3.2**
DL2				esS	**S**	**17 25 19.4**	**+4.8**
DL2				pmax	pmax		
	comp=N,140nm,0.7s						
DL2				pmax	pmax		
	comp=N,150nm,4.4s						
DL2				LR	LR		
	comp=N,420nm,10.0s						
DL2				LR	LR		
	comp=N,730nm,17.5s						
DL2				LR	LR		
	comp=N,770nm,19.4s						
SSE	**Sheshan**	**17.91**	**255**	P	**P**	**17 22 36.8**	**-1.6**
PEA0B	**Petropavlovsk-**	**19.24**	**31**	P	**Pn**	**17 22 54.2**	**-0.1**
PEA0B				IAmb	IAmb	17 23 09.6	
	comp=Z,119nm,1.6s						
PEA0B	**Petropavlovsk-**	**19.24**	**31**	P	**Pn**	**17 22 54.2**	**-0.1**
PEA0B				pmax	pmax		
	comp=Z,119nm,1.6s						
PETK	**Petropavlovsk-**	**19.24**	**31**	P	**Pn**	**17 22 54.3**	**0.0**
	comp=Z,0.4nm,0.3s,baz=192,slow=6.4,SNR=6.3						
PETK				LR	LR	17 30 01.7	
	comp=Z,176nm,21.2s,baz=238,slow=36						
PETK	**Petropavlovsk-**	**19.24**	**31**	P	**P**	**17 22 53.5**	**+0.7**
NJ2	**Nanjing**	**19.32**	**260**	eP	**P**	**17 22 52.7**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,34nm,0.9s						
NJ2				LR	LR		
	comp=Z,490nm,8.7s						
NJ2				LR	LR		
	comp=Z,270nm,7.4s						
NJ2				LR	LR		
	comp=Z,400nm,7.0s						
TIA	**Tai'an**	**19.49**	**273**	P	**P**	**17 22 54.9**	**-0.9**
TIA				S	**Sn**	**17 26 36.1**	**+0.7**
TIA				pmax	pmax		
	comp=Z,38nm,0.9s						
TIA				LR	LR		
	comp=Z,350nm,15.9s						
TIA				LR	LR		
	comp=Z,450nm,13.5s						
TIA				LR	LR		
	comp=Z,630nm,14.9s						
HIA	**Hailar**	**19.56**	**314**	P	**P**	**17 22 54.7**	**-1.8**
HIA	**Hailar**	**19.56**	**314**	P	**P**	**17 22 54.7**	**-1.8**
HIA				pmax	pmax		
	comp=Z,15nm,1.0s						
PET	**Petropavlovsk**	**19.57**	**32**	P	**Pn**	**17 22 57.5**	**-0.8**
PET				IAmb	IAmb	17 23 52.8	
	comp=Z,227nm,1.6s						
PET	**Petropavlovsk**	**19.57**	**32**	eP	**P**	**17 22 56.3**	**-0.2**
PET				eS	**S**	**17 26 24.4**	**-10**
PET				MLR	MLR		
	comp=Z,300nm,20.0s						
BJI	**Beijing**	**19.83**	**285**	P	**P**	**17 22 58.0**	**-1.4**
BJI				S	**S**	**17 26 35.7**	**-3.9**
BJI				pmax	pmax		
	comp=Z,23nm,1.1s						
BJI				LR	LR		
	comp=Z,290nm,14.3s						
BJI				LR	LR		
	comp=Z,250nm,18.1s						
BJI				LR	LR		
	comp=Z,380nm,27.1s						
BJT	**Baijiatuau**	**19.84**	**285**	P	**P**	**17 22 58.1**	**-1.4**
BJT				IAmb	IAmb	17 23 04.3	
	comp=Z,46nm,0.6s						
BJT	**Baijiatuau**	**19.84**	**285**	P	**P**	**17 22 58.2**	**-1.4**
BJT				pmax	pmax		
	comp=Z,46nm,0.6s						
YOJ	**Yonaguni jima**	**20.44**	**236**	P	**P**	**17 23 06.6**	**+0.5**
YOJ				IAmb	IAmb	17 23 59.0	
	comp=Z,255nm,1.3s						
YOJ	**Yonaguni jima**	**20.44**	**236**	P	**P**	**17 23 06.6**	**+0.5**
YOJ				pmax	pmax		
	comp=Z,255nm,1.3s						
TATO	**Taipei**	**21.11**	**239**	P	**P**	**17 23 12.0**	**-1.4**
TATO				IAmb	IAmb	17 23 37.2	
	comp=Z,293nm,1.6s						
YHNB	**Yeheng**	**21.39**	**239**	P	**P**	**17 23 14.2**	**-2.3**
YHNB				IAmb	IAmb	17 23 15.7	
	comp=Z,54nm,0.6s						
NACB	**Ninganchiao**	**21.57**	**237**	P	**P**	**17 23 14.8**	**-3.5**
SSLB	**Suanglung**	**22.26**	**238**	P	**P**	**17 23 21.7**	**-4.1**
SSLB				IAmb	IAmb	17 23 24.7	
	comp=Z,53nm,1.0s						
YULB	**Yu-li**	**22.30**	**236**	P	**P**	**17 23 21.2**	**-5.1**
YULB				IAmb	IAmb	17 23 34.6	
	comp=Z,37nm,0.6s						
TPUB	**Ta-pu**	**22.81**	**237**	P	**P**	**17 23 27.7**	**-3.9**

TPUB IAmb IAmb 17 23 29.1
comp=Z,92nm,0.6s
MA2 Magadan 22.85 12 P 17 23 31.4 -0.3
MA2 Magadan 22.85 12 P P 17 23 31.2 -0.4
MA2 IAmb IAmb 17 23 34.8
comp=Z,29nm,0.8s
MA2 Magadan 22.85 12 deP P 17 23 31.5 -0.2
MA2 pmax pmax
comp=Z,36nm,0.8s
TWG Pinlang 22.85 236 P P 17 23 29.5 -2.5
TIY Taiyuan 22.94 279 eP P 17 23 30.1 -2.8
TIY S S 17 27 38.1 -0.5
TIY pmax pmax
comp=Z,83nm,0.9s
TIY LR LR
comp=Z,120nm,10.6s
TIY LR LR
comp=Z,410nm,11.3s
TIY LR LR
comp=Z,550nm,18.3s
HHC Hu-ho-hao-te 23.33 287 eP P 17 23 34.5 -2.3
HHC pP pP 17 23 47.8 -2.3
HHC S S 17 27 40.9 -4.2
HHC sS Sn 17 28 05.7 -1.9
HHC pmax pmax
comp=Z,32nm,0.7s
HHC pmax pmax
comp=Z,74nm,4.5s
HHC LR LR
comp=Z,160nm,10.6s
HHC LR LR
comp=Z,240nm,12.8s
HHC LR LR
comp=Z,260nm,8.8s
WHN Wuhan 23.46 261 ⇓P P 17 23 37.1 -0.8
WHN S S 17 27 40.4 -6.6
WHN LR LR
comp=Z,2µm,29.6s
KNMB Chin-men Tao 23.60 243 P P 17 23 36.8 -2.4
KNMB IAmb IAmb 17 23 37.8
comp=Z,67nm,0.8s
GUMO Guam 24.05 172 LR LR 17 33 53.6
comp=Z,119nm,19.8s,baz=20,slow=38
CIT Chita 24.32 315 eP P 17 23 42.7 -3.0
CIT e 17 23 53.1
CIT e 17 24 03.4
CIT e 17 24 20.8
CIT pmax pmax
comp=Z,109nm,1.3s
BTO Baotou 24.51 287 eP P 17 23 46.3 -1.3
YAK Yakutsk 25.57 347 P P 17 23 56.6 -0.1
comp=Z,161nm,0.6s,baz=352,slow=1.5,SNR=210
YAK LR LR 17 34 27.6
comp=Z,479nm,18.6s,baz=164,slow=37
YAK Yakutsk 25.57 347 P P 17 23 56.4 -0.5
YAK Yakutsk 25.57 347c P P 17 23 56.7 -0.1
YAK e*PP sP 17 24 14.3 -3.4
YAK eS S 17 28 20.0 -0.3
YAK eSS SnSn 17 29 20.0 +1.3
YAK pmax pmax
comp=Z,293nm,0.9s
YAK pmax pmax
comp=N,121nm,1.0s
YAK pmax pmax
comp=E,42nm,1.0s
YAK smax smax
comp=N,116nm,2.2s
YAK smax smax
comp=E,51nm,1.9s
YAK MLR MLR
comp=Z,509nm,20.0s
YAK MLR MLR
comp=N,380nm,19.0s
SEY Seymchan 26.29 11 P P 17 24 02.9 -0.4
comp=N,13nm,0.8s,baz=210,slow=7.3,SNR=23
SEY Seymchan 26.29 11⇓eP P 17 24 05.0 +1.8
APYP Conner 26.43 228 eP P 17 24 03.3 -1.6
XAN Xi'an 26.53 272 P P 17 24 04.7 -1.2
XAN pP pP 17 24 20.8 +0.7
XAN sP sP 17 24 28.4 +1.5
XAN S S 17 28 34.9 -1.3
XAN pmax pmax
comp=N,83nm,0.6s
XAN pmax pmax
comp=N,200nm,4.1s
XAN LR LR
comp=N,220nm,14.1s
XAN LR LR
comp=N,220nm,14.1s
XAN LR LR
comp=N,280nm,19.5s
XAN Xi'an 26.53 272 P P 17 24 04.5 -1.4
XAN IAmb IAmb 17 24 10.6
comp=Z,62nm,0.6s
XAN Xi'an 26.53 272 P P 17 24 04.5 -1.4
XAN pmax pmax
comp=Z,62nm,0.6s
CAUP Cauayan 26.83 225 eP P 17 24 08.8 +0.2
ULN Ulaanbaatar 27.09 303 P P 17 24 10.3 -0.6
ULN IAmb IAmb 17 24 12.4
comp=Z,28nm,0.6s
ULN Ulaanbaatar 27.09 303 P P 17 24 10.3 -0.6
ULN pmax pmax
comp=Z,28nm,0.6s
BOD Bodaibo 27.11 327 eP P 17 24 10.3 -0.4
BOD pmax pmax
comp=Z,40nm,0.9s
ENH Enshi 27.40 264 P P 17 24 12.5 -1.2
SONM Songino Array 27.52 303 P P 17 24 14.4 -0.3
comp=Z,39nm,0.6s,baz=102,slow=8.9,SNR=264
SONM PcP PcP 17 27 31.6 +0.1
comp=Z,3.3nm,0.6s,baz=126,slow=2.1,SNR=9.1
SONM ScP ScP 17 31 09.3 +2.2
comp=Z,0.9nm,0.8s,baz=92,slow=4.5,SNR=4.2
SONM LR LR 17 35 36.4
comp=Z,301nm,18.1s,baz=60,slow=37
SONM Songino Array 27.52 303 P P 17 24 13.8 -0.9
SONM PcP 17 27 31.5 +0.1
SONM ScP ScP 17 31 08.0 +0.9
BALP Baler 27.94 224 eP P 17 24 16.5 -2.0
HKPS Hong Kong Po S 28.00 245 P P 17 24 19.6 +0.6
HKPS IAmb IAmb 17 24 24.8
comp=Z,34nm,0.9s
PVCP Virac 28.39 217 eP P 17 24 21.6 -1.0
H11N2 WAKE ISLAND Hy 28.40 122 T T 17 54 33.1
baz=315,slow=75,SNR=936
H11N1 WAKE ISLAND Hy 28.40 122 T T 17 54 37.3
baz=315,slow=75,SNR=1878
H11N3 WAKE ISLAND Hy 28.41 122 T T 17 54 37.7
baz=315,slow=75
H11S1 WAKE ISLAND Hy 29.12 124 T T 17 55 35.4
baz=316,slow=75,SNR=999
H11S3 WAKE ISLAND Hy 29.12 124 T T 17 55 34.5
baz=316,slow=75,SNR=1237
H11S2 WAKE ISLAND Hy 29.14 124 T T 17 55 30.6
baz=316,slow=75,SNR=1013
TGY Tagaytay City 29.63 223 P P 17 24 33.3 -0.3
comp=Z,142nm,0.6s,baz=74,slow=0.9,SNR=9.9
BOAC Boac 29.68 221 eP P 17 24 34.1 +0.2
ZAK Zakamensk 29.97 308 eP P 17 24 36.2 -0.2
ZAK pmax pmax
comp=Z,12nm,1.2s
LZH Lanzhou 30.00 279 ⇑P P 17 24 36.9 0.0
LZH pP pP 17 24 54.0 +2.8
LZH sP sP 17 25 00.2 +2.3
LZH PP PnPn 17 25 36.5 +1.0
LZH pmax pmax
comp=Z,28nm,1.4s
LZH pmax pmax
comp=Z,85nm,4.3s
LZH LR LR
comp=Z,210nm,15.7s
LZH LR LR
comp=Z,480nm,16.4s
LZH LR LR
comp=Z,750nm,16.4s
TLY Talaya 30.01 310 P P 17 24 36.9 +0.2
comp=Z,15nm,0.7s,baz=118,slow=5.1,SNR=24
TLY PcP PcP 17 27 38.6 +1.2
comp=Z,2.2nm,0.5s,baz=191,slow=10,SNR=3.1
TLY LR LR 17 37 09.1
comp=Z,463nm,19.9s,baz=108,slow=37
TLY Talaya 30.01 310 P P 17 24 36.3 -0.3
TLY Talaya 30.01 310 eP P 17 24 37.0 +0.3
TLY ePPP PPP 17 25 31.3
TLY eS S 17 29 21.9 -8.6
TLY pmax pmax
comp=Z,43nm,0.8s
TLY MLR MLR
comp=Z,1µm,18.0s
LUBP Lubang 30.31 224 eP P 17 24 34.9 -4.7
OCLP Ormoc 30.41 214 eP P 17 24 40.3 -0.1
OTRP Odiongan 30.51 220 eP P 17 24 40.9 -0.4
GYA Guiyang 31.33 260⇑iP P 17 24 48.0 -0.6
GYA pP pP 17 25 03.2 +0.2
GYA sP sP 17 25 10.8 +1.1
GYA PP PnPn 17 25 53.4 +0.6
GYA S S 17 29 48.5 -3.3
GYA sS sS 17 30 15.3 -0.7
GYA pmax pmax
comp=Z,90nm,0.9s
GYA pmax pmax
comp=Z,170nm,3.5s
MOY Mondy 31.62 310 eP P 17 24 51.1 +0.1
MOY pmax pmax
comp=Z,16nm,1.3s
CD2 Chengdu 31.70 269 P P 17 24 50.7 -1.0
CD2 sP sP 17 25 13.5 +0.7
CD2 S S 17 29 52.2 -5.1
CD2 sS sS 17 30 21.3 -0.2
CD2 pmax pmax
comp=Z,120nm,0.6s
CD2 pmax pmax
comp=Z,200nm,7.1s
CD2 LR LR
comp=Z,530nm,17.8s
CD2 LR LR
comp=Z,620nm,15.7s
CD2 LR LR
comp=Z,640nm,15.7s
GUIM Jordan 31.72 217 eP P 17 24 51.2 -0.7
BUSP Coron 31.76 222 eP P 17 24 52.1 -0.3
GTA Gaotai 32.43 286 ⇑P P 17 24 57.5 -0.7
GTA pP pP 17 25 13.0 +0.4
GTA sP sP 17 25 19.9 +0.6
GTA PcP PcP 17 27 45.3 +1.0
GTA S S 17 30 12.8 +4.0
GTA ScP ScP 17 31 25.5 +2.3
GTA PcS PcS 17 31 29.8 +0.3
GTA ScS ScS 17 35 22.6 0.0
GTA pmax pmax
comp=Z,17nm,0.8s
GTA pmax pmax
comp=Z,80nm,5.2s
GTA LR LR
comp=Z,270nm,18.9s
GTA LR LR
comp=Z,330nm,20.3s
GTA LR LR
comp=Z,510nm,22.7s
ENPP El Nido 32.84 223 eP P 17 25 01.8 0.0
QIZ Qiongzhong 33.16 245 P P 17 25 06.0 +1.4
QIZ pmax pmax
comp=Z,35nm,1.0s
QIZ LR LR
comp=Z,290nm,17.6s
QIZ LR LR
comp=Z,280nm,15.2s
QIZ LR LR
comp=Z,250nm,18.6s
QIZ Qiongzhong 33.16 245 P P 17 25 05.8 +1.2
QIZ IAmb IAmb 17 25 07.0
comp=Z,67nm,1.3s
MATI Mati 33.44 208 eP P 17 25 05.1 -1.9
BILL Bilibino 33.53 17 P P 17 25 06.5 -0.8
BILL IAmb IAmb 17 25 27.0
comp=Z,25nm,1.5s
BILL Bilibino 33.53 17⇓eP P 17 25 08.1 +0.8
BILL i 17 25 25.1
BILL i 17 27 48.1
BILL pmax pmax
comp=Z,4.0nm,1.1s
BILL MLR MLR
comp=Z,181nm,23.0s
PAGZ Pagadian 33.80 214 eP P 17 25 08.2 -1.9
KCP Kidapawan 33.84 210⇓eP P 17 25 11.2 +0.7
DDMP Don Marcelino, 34.42 208 eP P 17 25 10.8 -4.7
SKMP Bagumbayan, Su 34.50 211 eP P 17 25 17.3 +1.1
TIXI Tiksi 34.78 353 P P 17 25 18.3 +0.2
comp=Z,12nm,0.5s,baz=139,slow=5.8,SNR=37
TIXI Tiksi 34.78 353 P P 17 25 17.9 -0.1
TIXI IAmb IAmb 17 25 20.3
comp=Z,17nm,0.7s
TIXI Tiksi 34.78 353c iP P 17 25 17.8 -0.3
TIXI pmax pmax
comp=Z,25nm,1.0s
TIXI MLR MLR
comp=Z,227nm,17.0s
KMI Kunming 35.06 261 P P 17 25 20.9 -0.3
KMI pP sP 17 25 40.6 -1.8
KMI PP PP 17 26 43.0 +1.4
KMI S S 17 30 48.2 -1.7
KMI SS SnSn 17 33 00.6 -10
KMI pmax pmax
comp=Z,130nm,0.9s
KMI pmax pmax
comp=Z,160nm,3.6s
KMI LR LR
comp=Z,330nm,22.1s
KMI LR LR
comp=Z,310nm,21.8s
KMI LR LR
comp=Z,480nm,23.8s
KMI Kunming 35.06 261 P P 17 25 21.0 -0.3
KMI Kunming 35.06 261 P P 17 25 21.0 -0.3
KMI pmax pmax
comp=Z,109nm,0.9s
BATP Bataraza 35.72 223 eP P 17 25 26.5 -0.2
SLVN Son La 36.19 254 P P 17 25 30.8 0.0
SLVN IAmb IAmb 17 25 32.5
comp=Z,16nm,0.8s
GAMB Gambell 38.27 32 P P 17 25 49.0 +1.3
UBPT Khong Chiam 38.76 245 P P 17 25 53.3 +0.8
UBPT IAmb IAmb 17 25 54.5
comp=Z,43nm,1.0s
TNTI Ternate 38.83 203 P P 17 25 55.4 +2.3
TNTI IAmb IAmb 17 26 10.4
comp=Z,30nm,1.0s
KKM Kota Kinabalu 38.87 222 P P 17 25 54.6 +1.1
KKM IAmb IAmb 17 26 07.1
comp=Z,53nm,1.4s
DLV T Lat 38.97 238 P P 17 25 55.2 +0.7
SWI Sorong 39.36 196 P P 17 25 58.5 +1.0
comp=Z,15nm,0.8s
SIJI Sorong 39.37 196 P P 17 25 56.9 -0.6
comp=Z,6.2nm,0.8s,baz=30,slow=11,SNR=5.3
SMPI Sarmi 39.42 184 P P 17 26 14.5 +17
GENI Genyem 39.95 182 P P 17 26 18.6 +16
KMSI Cibinong 40.16 208 P P 17 26 04.9 +0.8
comp=Z,812nmcomp=Z,88nm,0.7s
WMQ Urumqi 40.63 296 P P 17 26 09.2 +1.4
WMQ pP pP 17 26 24.6 +2.1
WMQ sP sP 17 26 30.6 +1.4
WMQ pmax pmax
comp=Z,86nm,0.9s
WMQ pmax pmax
comp=Z,240nm,3.7s
WMQ LR LR
comp=Z,180nm,18.9s
WMQ LR LR
comp=Z,300nm,21.1s
WMQ LR LR
comp=Z,300nm,22.3s
WMQ Urumqi 40.63 296 P P 17 26 08.5 +0.6
WMQ Urumqi 40.63 296 P P 17 26 08.5 +0.6
WMQ pmax pmax
comp=Z,106nm,0.9s
MRSI Marisa 41.04 211 P P 17 26 12.6 +1.2
comp=Z,572nmcomp=Z,47nm,1.3s
ANM Nome 41.15 32 P P 17 26 13.7 +1.9
ANM Nome 41.15 32 P P 17 26 13.7 +1.9
ANM pmax pmax
comp=Z,10.0nm,1.0s
FAKI Fak Fak 41.16 194 P P 17 26 12.8 +0.5
comp=Z,21nm,0.7s
FAKI Fak Fak 41.16 194 P P 17 26 12.1 -0.2
PBKT Sadao Pong 41.25 251 P P 17 26 13.4 +0.3
PBKT IAmb IAmb 17 26 14.5
comp=Z,29nm,1.0s
PBKT PcP PcP 17 28 11.9 +0.8
CHTO Chiang Mai 41.44 255 P P 17 26 14.7 0.0
CHTO PcP PcP 17 28 12.5 +0.7
CHTO Chiang Mai 41.44 255 P P 17 26 14.7 0.0
CHTO 17 28 12.5
CHTO pmax pmax
comp=Z,12nm,0.7s
ZAA0 Zalesovo Array 41.59 312 P P 17 26 15.5 0.0
ZAA0 IAmb IAmb 17 26 17.4
comp=Z,53nm,0.9s
ZALV Zalesovo Beam 41.59 312 P P 17 26 15.8 +0.4
comp=Z,21nm,0.4s,baz=90,slow=7.4,SNR=154
ZALV PcP PcP 17 28 11.8 +0.2
comp=Z,10nm,0.6s,baz=104,slow=2.9,SNR=7.3
ZALV LR LR 17 44 15.4
comp=Z,445nm,18.0s,baz=82,slow=37
ZALV Zalesovo Beam 41.59 312 P P 17 26 15.2 -0.2
ZALV PcP 17 28 11.6 0.0
CM31 Chiang Mai Arr 41.65 255 P P 17 26 16.5 +0.1
CMAR Chiang Mai Arr 41.65 255 P P 17 26 16.6 +0.2
comp=Z,5.5nm,0.7s,baz=43,slow=8.8,SNR=38
CMAR PcP PcP 17 28 12.9 +0.5
comp=Z,2.5nm,0.7s,baz=0.4,slow=2.2,SNR=6.6
CMAR LR LR 17 44 36.9
comp=Z,176nm,19.9s,baz=58,slow=38
SANI Sanana 41.92 203 P P 17 26 16.5 -2.1
comp=Z,38nm,0.6s
LUWI Luwuk 42.10 209 P P 17 26 18.9 -1.2
comp=Z,60nm,1.2s
LUWI Luwuk 42.10 209 P P 17 26 19.0 -1.0
LUWI IAmb IAmb 17 26 40.7
comp=Z,74nm,1.3s
LSA Lhasa 42.18 275 P P 17 26 22.3 +1.0
LSA pmax pmax
comp=Z,50nm,0.9s
LSA Lhasa 42.18 275 iP P 17 26 22.2 +1.0
SNR=21
LSA Lhasa 42.18 275 P P 17 26 21.9 +0.7
LSA Lhasa 42.18 275 P P 17 26 21.9 +0.7
LSA pmax pmax
comp=Z,15nm,0.7s
APSI Ampana 42.42 210 P P 17 26 22.5 -0.1
comp=Z,476nmcomp=Z,41nm,1.1s
AAI Ambon 42.83 200 P P 17 26 27.2 +1.2
comp=Z,38nm,0.5s
AAI Ambon 42.83 200 P P 17 26 27.5 +1.5
AAI pmax pmax
comp=Z,38nm,0.5s
RDOG Red Dog Mine 43.04 27 P P 17 26 27.6 +0.5
SHL Shillong 43.43 269 P P 17 26 30.2 -0.9
SHL Shillong 43.43 269 P P 17 26 30.2 -0.9
SHL pmax pmax
comp=Z,53nm,0.6s
MK31 Makanchi Array 43.87 302 P P 17 26 34.4 +0.3
MK31 IAmb IAmb 17 26 36.1
comp=Z,51nm,0.8s
MK31 Makanchi Array 43.87 302 iP P 17 26 34.2 +0.1
MKAR Makanchi Array 43.87 302 P P 17 26 34.5 +0.4
comp=Z,43nm,0.7s,baz=84,slow=9.8,SNR=427
MKAR LR LR 17 46 08.5
comp=Z,176nm,18.9s,baz=79,slow=38
MKAR Makanchi Array 43.87 302 P P 17 26 34.2 +0.1
MKAR Makanchi Array 43.87 302ceP P 17 26 34.5 +0.4
MKAR pmax pmax
comp=Z,44nm,0.7s
SBUM Sibu 44.04 225 P P 17 26 35.7 0.0
SBUM Sibu 44.04 225 P P 17 26 36.0 +0.3
MAKZ Makanchi 44.07 302 P P 17 26 36.1 +0.3
MAKZ IAmb IAmb 17 26 37.9
comp=Z,52nm,0.9s
MAKZ Makanchi 44.07 302 P P 17 26 36.1 +0.3
MAKZ pmax pmax
comp=Z,52nm,0.9s
KURK Kurchatov 45.63 308 P P 17 26 48.2 +0.2
KURK Kurchatov 45.63 308c iP P 17 26 48.1 +0.1
KURK pmax pmax
comp=Z,102nm,0.8s
KURBB Kurchatov Arra 45.70 308 P P 17 26 48.8 +0.2
comp=Z,90nm,0.7s,baz=82,slow=8.1,SNR=454
KSM Kuching 45.92 226 P P 17 26 51.5 +0.8
KSM IAmb IAmb 17 26 52.8
comp=Z,20nm,0.9s
KSM Kuching 45.92 226 P P 17 26 51.0 +0.3
TAPN Taplejung 45.93 274 eP P 17 26 51.4 +0.4
comp=Z,68nm,0.4s
SPSI Sidrap Palu 45.95 211 P P 17 26 51.5 +0.6
comp=Z,21nm,1.0s
IMAR Indian Mountai 46.20 31 P P 17 26 53.4 +1.1
IMAR PcP PcP 17 28 29.6 +2.5
BNSI Bone 46.21 210 P P 17 26 53.6 +0.7
comp=Z,38nm,1.1s
OHAK Old Harbor 46.37 43 P P 17 26 55.8 +2.1
OHAK PcP PcP 17 28 30.0 +2.2
ODAN Odare 46.40 273 eP P 17 26 55.1 +0.4
STKI Sintang 46.42 224 P P 17 26 54.7 +0.1
comp=Z,24nm,1.0s
RSO Redoubt South 46.49 39 P P 17 26 57.4 +2.5
PDGK Podgornoye 46.55 297 iP P 17 26 54.5 -1.1
PDGK pmax pmax
comp=Z,30nm,0.7s
KDAK Kodiak Island 46.71 42 P P 17 26 57.4 +1.0
comp=Z,9.3nm,0.8s,baz=226,slow=7.5,SNR=4.1
KDAK Kodiak Island 46.71 42 P P 17 26 57.4 +1.0
KDAK PcP PcP 17 28 29.1 +0.1
PPLA Purkeypile 46.74 35 P P 17 26 59.0 +2.3
PPLA IAmb IAmb 17 27 21.0
comp=Z,51nm,1.4s
PPLA PcP PcP 17 28 30.9 +1.7
KAPI Kappang 46.91 210 P P 17 26 59.1 +0.7
comp=Z,28nm,0.9s,baz=291,slow=6.9,SNR=8.0
KAPI Kappang 46.91 210 P P 17 26 59.1 +0.7
KAPI IAmb IAmb 17 27 02.7
comp=Z,38nm,0.9s
RAMN Ramite 46.99 274 eP P 17 26 59.7 +0.4
comp=Z,115nm,0.6s
JIRN Jiri 46.99 275 eP P 17 27 00.0 +0.5
comp=Z,170nm,0.7s
PMG Port Moresby 47.01 172 P P 17 27 00.2 +1.0
PMG IAmb IAmb 17 27 18.2
comp=Z,25nm,1.4s
PMG Port Moresby 47.01 172 P P 17 27 00.2 +1.0
PMG pmax pmax
comp=Z,25nm,1.5s
BKSI Bulukumba 47.05 210 P P 17 26 58.8 -0.6
comp=Z,21nm,1.0s
GUN Gumba 47.13 275 eP P 17 27 00.9 +0.4
comp=Z,172nm,0.4s
BPAW Bear Paw Mtn. 47.29 34 P P 17 27 02.8 +2.0
BPAW IAmb IAmb 17 28 32.4
comp=Z,36nm,1.8s
MLY Manley 47.41 32 P P 17 27 04.1 +2.3
MLY PcP PcP 17 28 32.5 +1.0
BRLK Bradley Lake 47.45 39 P P 17 27 02.6 +0.4
BRLK PcP PcP 17 28 32.9 +1.2
PRZ Przheval'sk 47.55 297 P P 17 27 04.7 +1.3
PRZ Przheval'sk 47.55 297 P P 17 27 04.7 +1.3
PRZ pmax pmax
comp=Z,94nm,1.1s
TRF Thorofare Mount 47.60 34 P P 17 27 03.9 +0.5
TRF IAmb IAmb 17 28 40.8
comp=Z,54nm,1.7s
PKI Pulchoki 47.65 275 eP P 17 27 04.5 0.0
comp=Z,49nm,0.5s
KKN Kakani 47.66 275 eP P 17 27 04.8 +0.4
comp=Z,270nm,0.8s
PKIN Phulchoki 47.66 275 eP P 17 27 04.5 0.0
comp=Z,36nm,0.5s
COLD Coldfoot 47.70 29 P P 17 27 04.3 +0.4
DMN Daman 47.87 275 eP P 17 27 06.2 0.0
RC01 Rabbit Creek A 47.94 38 P P 17 27 08.0 +2.0
RC01 IAmb IAmb 17 27 57.7
comp=Z,56nm,1.4s
RC01 PcP PcP 17 28 34.9 +1.5
BWN Browne 47.95 33 P P 17 27 07.9 +1.9
TOLK Toolik Lake Re 48.01 27 P P 17 27 08.2 +1.9
TOLK IAmb IAmb 17 27 09.5
comp=Z,19nm,0.9s
TOLK PcP PcP 17 28 36.0 +2.4
TOLK Toolik Lake Re 48.01 27 P P 17 27 08.4 +2.0
baz=267
GKN Gorkha 48.07 276 eP P 17 27 07.8 +0.2
comp=Z,202nm,0.8s
SEW Seward 48.15 39 P P 17 27 09.1 +1.5
PMR Palmer 48.20 37 P P 17 27 09.4 +1.5
PMR IAmb IAmb 17 27 29.2
comp=Z,32nm,1.3s

PMR Palmer 48.20 37 P P 17 27 09.4 +1.5
PMR pmax pmax
comp=Z,32nm,1.3s
RND Reindeer 48.24 34 P P 17 27 08.2 -0.1
RND IAmb IAmb 17 28 01.1
comp=Z,44nm,1.6s
RND Reindeer 48.24 34 P P 17 27 08.2 -0.1
RND pmax pmax
comp=Z,44nm,1.6s
MDM Murphy Dome 48.47 32 P P 17 27 12.3 +2.3
MDM IAmb IAmb 17 27 13.1
comp=Z,17nm,1.0s
KDJ Kajisay 48.52 297 P P 17 27 11.9 +1.0
KDJ Kajisay 48.52 297 P P 17 27 11.9 +1.0
KDJ pmax pmax
comp=Z,142nm,1.6s
KNK Knik Glacier 48.54 37 P P 17 27 11.7 +1.2
KNK IAmb IAmb 17 27 39.7
comp=Z,50nm,1.4s
WRH Wood River Hil 48.55 33 P P 17 27 10.8 +0.3
WRH PcP PcP 17 28 35.1 -0.3
WRH IAmb IAmb 17 28 37.1
comp=Z,12nm,0.9s
SML Sawmill 48.57 37 P P 17 27 11.3 +0.5
DANN Dangsing 48.61 277 eP P 17 27 12.6 +0.7
comp=Z,495nm,0.6s
COLA College 48.64 32 P P 17 27 13.1 +1.9
COLA pmax pmax
comp=Z,13nm,0.9s
CCB Clear Creek Bu 48.66 33 P P 17 27 12.2 +0.8
CCB IAmb IAmb 17 28 08.1
comp=Z,32nm,1.8s
CCB PcP PcP 17 28 35.4 -0.5
POKR Poker Plat Res 48.81 32 P P 17 27 14.7 +2.2
baz=272,SNR=19
JRMM Jerantut 48.89 236 P P 17 27 15.0 +1.2
DHY Denali Highway 48.93 35 P P 17 27 14.0 +0.4
DHY IAmb IAmb 17 27 39.3
comp=Z,26nm,1.4s
DHY PcP PcP 17 28 38.9 +1.8
KOLN Koldanda 48.99 276 eP P 17 27 15.1 +0.4
HDA Harding Lake 49.04 33 P P 17 27 15.0 +0.7
HDA IAmb IAmb 17 27 16.8
comp=Z,21nm,1.1s
HDA Harding Lake 49.04 33 P P 17 27 16.0 +1.6
baz=273
SCM Sheep Creek Mo 49.04 37 P P 17 27 16.0 +1.5
SCM PcP PcP 17 28 39.0 +1.5
SCM Sheep Creek Mo 49.04 37 P P 17 27 16.0 +1.5
SCM 17 28 39.0
SCM pmax pmax
comp=Z,178nm,1.8s
IL31 49.05 33 P P 17 27 13.9 -0.5
IL31 IAmb IAmb 17 27 16.5
comp=Z,14nm,0.8s
ILAR Eielson Array 49.05 33 P P 17 27 15.3 +0.9
comp=Z,9.7nm,0.8s,baz=270,slow=6.3,SNR=83
ILAR Eielson Array 49.05 33 P P 17 27 15.1 +0.7
KULM Kulim 49.09 239 P P 17 27 15.5 +0.2
KULM IAmb IAmb 17 27 17.3
comp=Z,41nm,1.4s
KULM Kulim 49.09 239 P P 17 27 16.0 +0.7
BOOM Boomskoye usch 49.29 297 P P 17 27 17.8 +1.0
BOOM PcP PcP 17 28 39.8 +1.0
BOOM Boomskoye usch 49.29 297 P P 17 27 17.8 +1.0
BOOM 17 28 39.8
IPM Ipoh 49.43 238 P P 17 27 17.5 -0.4
IPM IAmb IAmb 17 27 21.0
comp=Z,31nm,0.7s
IPM PcP PcP 17 28 39.5 0.0
IPM Ipoh 49.43 238 P P 17 27 18.0 +0.1
FID Port Fidalgo 49.56 38 P P 17 27 19.3 +0.9
NRN Naryn 49.57 296 P P 17 27 19.7 +0.6
NRN IAmb IAmb 17 27 39.4
comp=Z,34nm,1.4s
NRN Naryn 49.57 296 P P 17 27 19.7 +0.6
NRN pmax pmax
comp=Z,34nm,1.4s
MYKOM Kota Tinggi 49.58 233 P P 17 27 19.9 +0.9
MYKOM IAmb IAmb 17 27 26.2
comp=Z,24nm,1.2s
MYKOM Kota Tinggi 49.58 233 P P 17 27 20.0 +1.0
PRP Porcupine Dome 49.59 32 P P 17 27 19.9 +1.2
PRP IAmb IAmb 17 27 21.5
comp=Z,11nm,0.9s
FYU Fort Yukon 49.66 30 P P 17 27 21.7 +2.8
BMAR Burnt Mountain 49.87 29 P P 17 27 23.0 +2.3
BMAR PcP PcP 17 28 41.9 +1.5
KZA Kyzart 49.91 297 P P 17 27 23.5 +1.8
SNR=20
KBK Karagaybulak 49.94 298 P P 17 27 22.8 +1.0
SNR=62
CHMS Chumysh 49.97 298 P P 17 27 22.5 +0.7
SNR=15
CHMS Chumysh 49.97 298 iP P 17 27 21.6 -0.2
CHMS pmax pmax
comp=Z,14nm,0.5s
RIDG Independent Ri 50.01 34 P P 17 27 22.1 +0.3
RIDG IAmb IAmb 17 27 45.5
comp=Z,26nm,1.4s
USP Ospenovka 50.07 299 P P 17 27 23.1 +0.6
SNR=26
FRU1 Bishkek 50.12 298 P P 17 27 23.4 +0.5
FRU1 PcP PcP 17 28 41.3 -0.4
KSH Kashi 50.22 294 P P 17 27 28.0 +4.2
KSH pP sP 17 27 44.0 -1.4
KSH PcP PcP 17 28 42.4 +0.2
KSH PP PP 17 29 27.3 +8.0
KSH S S 17 34 35.0 +3.2
KSH sS sS 17 35 02.7 +5.5
KSH ScS ScS 17 37 09.4 -0.5
KSH pmax pmax
comp=Z,25nm,0.8s
KSH pmax pmax
comp=Z,220nm,5.3s
KSH LR LR
comp=Z,220nm,7.6s
KSH LR LR
comp=Z,200nm,5.1s
KSH LR LR
comp=Z,620nm,7.5s
BVAR Borovoye Array 50.24 312 P P 17 27 24.1 +0.4
comp=Z,16nm,0.5s,baz=76,slow=7.7,SNR=114
BVAR PcP PcP 17 28 42.5 +0.6
comp=Z,14nm,0.6s,baz=76,slow=3.0,SNR=8.3
AAK Ala-Archa 50.26 298 P P 17 27 24.2 +0.1
comp=Z,43nm,0.7s,baz=108,slow=5.6,SNR=97
AAK Ala-Archa 50.26 298 P P 17 27 24.9 +0.7
SNR=9.4
AAK Ala-Archa 50.26 298 iP P 17 27 24.9 +0.7
SNR=37
AAK Ala-Archa 50.26 298 P P 17 27 24.1 -0.1
AAK Ala-Archa 50.26 298c iP P 17 27 24.6 +0.4
AAK pmax pmax
comp=Z,34nm,0.7s
BRVK Borovoye 50.30 312 P P 17 27 23.9 -0.1
BRVK IAmb IAmb 17 27 25.6
comp=Z,31nm,0.9s
BRVK PcP PcP 17 28 42.7 +0.6
BRVK Borovoye 50.30 312 iP P 17 27 23.2 -0.8
BRVK pmax pmax
comp=Z,26nm,0.8s
SCRK Sand Creek 50.37 34 P P 17 27 25.6 +1.1
SCRK IAmb IAmb 17 27 26.7
comp=Z,12nm,0.9s
DOT Dot Lake 50.37 34 P P 17 27 24.3 -0.2
DOT IAmb IAmb 17 27 30.5
comp=Z,54nm,1.9s
UCH Uchtor 50.38 297 P P 17 27 26.4 +1.0
SNR=13
GLB Gilahina Butte 50.76 37 P P 17 27 28.7 +1.3
GLB IAmb IAmb 17 29 16.9
comp=Z,43nm,1.6s
EKS2 Erkin-Say 50.76 298 P P 17 27 28.5 +0.6
SNR=22
VRDI Verde Repeater 50.96 37 P P 17 27 30.2 +1.1
VRDI IAmb IAmb 17 27 48.4
comp=Z,44nm,1.5s
AML Almayashu 50.99 298 P P 17 27 31.1 +1.2
SNR=24
MTN Manton Dam 51.05 193 P P 17 27 30.3 +0.3
MCARA McCarthy VSAT 51.14 37 P P 17 27 32.3 +2.0
CRQM Cirque 51.18 38 P P 17 27 30.5 -0.3
COEN Coen 51.26 178 P P 17 27 32.0 +0.4
TGL Tana Glacier 51.33 38 P P 17 27 32.8 +0.9
TGL PcP PcP 17 28 48.1 +2.2
WAX Waxell Ridge 51.37 38 P P 17 27 32.2 +0.2
WAX PcP PcP 17 28 48.7 +2.6
BCAR Beaver Creek A 51.46 35 P P 17 27 33.6 +0.9
EGAK Eagle 51.49 32 P P 17 27 33.4 +0.6
EGAK IAmb IAmb 17 28 02.8
comp=Z,15nm,1.1s
BALM Baldy 51.52 37 P P 17 27 33.1 -0.1
BALM IAmb IAmb 17 28 53.5
comp=Z,74nm,1.8s
LHMI Lhok Sumawe 51.71 243 P P 17 27 34.1 -1.0
ARSB Arslanbob 51.76 297 P P 17 27 36.4 +1.1
ARSB Arslanbob 51.76 297 P P 17 27 36.4 +1.1
ARSB pmax pmax
comp=Z,59nm,0.7s
BARN Barnard Glacie 51.84 37 P P 17 27 37.2 +1.4
BARN IAmb IAmb 17 29 22.2
comp=Z,57nm,1.8s
CTGM Chitina Glacie 52.02 37 P P 17 27 37.5 +0.5
CTGM IAmb IAmb 17 29 31.6
comp=Z,71nm,1.8s
PSI Prapat 52.07 239 P P 17 27 37.9 0.0
PSI pmax pmax
comp=Z,28nm,0.9s
RPSI Rantau Prapat 52.15 239 P P 17 27 37.9 -0.5
RPSI IAmb IAmb 17 27 39.2
comp=Z,28nm,0.9s
KCSI Kotacane, Aceh 52.34 241 P P 17 27 40.1 +0.3
comp=Z,20nm,0.9s
DAWY Dawson 52.36 33 P P 17 27 41.5 +2.1
BKNI Bangkinang 52.50 235 P P 17 27 41.1 +0.1
comp=Z,2μmcomp=Z,112nm,0.4s
MLSI Meulaboh, Aceh 52.77 242 P P 17 27 43.6 +0.6
comp=Z,5μmcomp=Z,75nm,0.9s
KK31 Karatay Array 52.89 300 P P 17 27 43.5 0.0
KK31 IAmb IAmb 17 27 47.0
comp=Z,37nm,0.8s
KK31 Karatay Array 52.89 300⇑eP P 17 27 42.9 -0.6
KK31 pmax pmax
comp=Z,12nm,0.6s
KKAR Karatay Array 52.89 300 P P 17 27 43.4 -0.2
KKAR PcP PcP 17 28 51.4 -0.6
KKAR Karatay Array 52.89 300 P P 17 27 43.3 -0.3
KKAR IAmb IAmb 17 27 47.0
comp=Z,37nm,0.8s
KKAR Karatay Array 52.89 300 P P 17 27 43.4 -0.2
KKAR 17 28 51.4
EPYK Eagle Plains 53.07 30 P P 17 27 46.0 +1.5
EPYK Eagle Plains 53.07 30 P P 17 27 47.0 +2.4
baz=280
UGM Wanagama 53.66 219 P P 17 27 49.2 -0.3
BTK Batken 53.74 296 P P 17 27 50.1 +0.1
BTK IAmb IAmb 17 27 54.9
comp=Z,36nm,1.0s
BTK Batken 53.74 296 P P 17 27 50.1 +0.1
BTK pmax pmax
comp=Z,36nm,1.0s
HYT Haines Junctio 53.88 37 P P 17 27 52.7 +2.0
HYT IAmb IAmb 17 28 13.3
comp=Z,24nm,1.1s
INK Inuvik 53.92 27 P P 17 27 51.0 +0.4
comp=Z,17nm,0.8s,baz=286,slow=6.5,SNR=57
INK Inuvik 53.92 27 P P 17 27 51.6 +0.9
INK IAmb IAmb 17 27 53.3
comp=Z,19nm,0.9s
INK Inuvik 53.92 27 P P 17 27 51.6 +0.9
INK pmax pmax
comp=Z,19nm,0.9s
KPJI Karang Pucung 53.99 221 P P 17 27 53.2 +1.4
comp=Z,58nm,0.9s
KLSI 54.14 227 P P 17 27 54.1 +1.1
comp=Z,14nm,0.8s
KNRA Kununurra 54.27 195 P P 17 27 54.5 +0.7
MDSI Maura Dua 54.30 228 P P 17 27 54.4 +0.3
comp=Z,669nmcomp=Z,35nm,1.3s
TAS Tashkent 54.35 298 P P 17 27 55.0 +0.7
TAS Tashkent 54.35 298 P P 17 27 55.0 +0.7
TAS pmax pmax
comp=Z,100nm,0.8s
NIL Nilore 54.48 288 P P 17 27 55.6 +0.3
NIL Nilore 54.48 288 P P 17 27 55.6 +0.3
NIL pmax pmax
comp=Z,60nm,1.0s
CISI Cisompet, Garu 54.77 222 P P 17 27 58.2 +0.7
SVE Sverdlovsk 54.78 318d iP P 17 27 58.1 +1.0
SVE pmax pmax
comp=Z,97nm,0.9s
SVE MLR MLR
comp=Z,405nm,18.0s
MNAI Manna 54.93 229 P P 17 27 59.6 +1.0
SISI Saibi 55.02 235 P P 17 27 59.2 -0.1
comp=Z,19nm,0.7s
WHY Whitehorse 55.16 37 P P 17 28 00.2 +0.2
WHY IAmb IAmb 17 28 03.5
comp=Z,16nm,1.2s
ARU Arti 55.99 318 P P 17 28 06.3 +0.4
comp=Z,16nm,0.4s,baz=84,slow=6.6,SNR=119
ARU Arti 55.99 318 P P 17 28 06.4 +0.6
ARU PcP PcP 17 29 03.4 -0.1
ARU Arti 55.99 318c iP P 17 28 06.2 +0.4
ARU *PP pP 17 28 23.0 +1.9
ARU 17 29 03.4
ARU 17 30 10.5
ARU S S 17 35 51.7 +2.2
ARU SS SS 17 39 33.8 -1.8
ARU pmax pmax
comp=Z,142nm,1.2s
ARU MLR MLR
comp=Z,379nm,19.0s
C36M Paulatuk 56.96 25 P P 17 28 13.5 +1.1
C36M IAmb IAmb 17 28 14.8
comp=Z,20nm,0.8s
KBL Kabul 57.25 291 P P 17 28 14.9 -0.5
KBL Kabul 57.25 291 P P 17 28 14.9 -0.5
KBL pmax pmax
comp=Z,57nm,1.0s
FITZ Fitzroy Crossi 57.31 198 P P 17 28 16.1 +0.6
FITZ IAmb IAmb 17 28 17.7
comp=Z,72nm,1.9s
MLH Mauna Loa 57.34 90 P P 17 28 16.5 +0.3
WB0 Warramunga Arr 57.39 188 P P 17 28 15.9 -0.2
WB0 IAmb IAmb 17 28 16.8
comp=Z,15nm,0.8s
WRAB Tennant Creek 57.56 188 P P 17 28 17.2 -0.1
WRAB IAmb IAmb 17 28 32.3
comp=Z,32nm,1.2s
WRAB Tennant Creek 57.56 188⇓eP P 17 28 17.5 +0.2
WRAB pmax pmax
comp=Z,20nm,1.7s
WR0 Warramunga Arr 57.57 188 P P 17 28 16.8 -0.5
WR0 IAmb IAmb 17 28 32.3
comp=Z,29nm,1.1s
WB2 Warramunga Arr 57.57 188 P P 17 28 16.9 -0.5
WB2 IAmb IAmb 17 28 18.1
comp=Z,17nm,0.8s
WRA Warramunga Arr 57.57 188 P P 17 28 17.1 -0.2
comp=Z,11nm,0.7s,baz=7.0,slow=8.6,SNR=105
WRA LR LR 17 52 19.9
comp=Z,58nm,20.8s,baz=340,slow=35
WRA Warramunga Arr 57.57 188 P P 17 28 16.7 -0.6
WRA Warramunga Arr 57.57 188 iP P 17 28 17.1 -0.2
WRA pmax pmax
comp=Z,12nm,0.7s
ABKAR Akbulak array 57.62 310 P P 17 28 17.4 -0.1
ABKAR Akbulak array 57.62 310 P P 17 28 17.5 0.0
ABKAR IAmb IAmb 17 28 18.5
comp=Z,48nm,0.7s
CRAG Craig 57.67 42 P P 17 28 20.2 +2.6
CRAG IAmb IAmb 17 28 57.7
comp=Z,28nm,1.4s
HYB Hyderabad 58.24 268 iP P 17 28 22.0 -0.3
AKTO Aktyubinsk 58.35 312 P P 17 28 22.5 0.0
comp=Z,26nm,0.6s,baz=63,slow=6.4,SNR=55
KIRV Kirov 59.85 323 P P 17 28 32.6 -0.1
comp=Z,94nm,0.5s,baz=62,slow=2.6,SNR=86
KIRV Kirov 59.85 323 iP P 17 28 33.3 +0.5
SPA0 Spitsbergen Ar 60.02 349 P P 17 28 35.2 +1.5
SPITS Spitsbergen Ar 60.02 349 P P 17 28 34.0 +0.3
comp=Z,10nm,0.9s,baz=100,slow=8.6,SNR=16
PRGR Permogore 60.35 327 eP P 17 28 34.6 -1.5
PRGR pmax pmax
comp=Z,69nm,1.0s
NOR Nord 60.54 356 iP P 17 28 37.8 +0.6
comp=Z,16nm,0.9s
NOR Nord 60.54 356 iP P 17 28 37.8 +0.6
NOR pmax pmax
comp=Z,16nm,0.9s
HSPB Hornsund (broa 60.95 348 eP P 17 28 40.9 +0.9
HSPB Hornsund (broa 60.95 348 eP P 17 28 40.9 +0.9
AS31 Alice Springs 61.30 188 P P 17 28 43.1 +0.1
ASAR Alice Springs 61.30 188 P P 17 28 43.2 +0.2
comp=Z,6.8nm,0.7s,baz=13,slow=6.3,SNR=98
ASAR LR LR 17 54 34.7
comp=Z,55nm,20.7s,baz=350,slow=35
ASAR Alice Springs 61.30 188 P P 17 28 42.8 -0.2
POO Poona 61.37 272 eP P 17 28 42.0 -1.8
LVZ Lovozero 61.65 336 P P 17 28 44.4 -0.5
LVZ Lovozero 61.65 336⇓eP P 17 28 45.0 +0.1
LVZ pmax pmax
comp=Z,24nm,0.9s
RES Resolute Bay 62.10 14 P P 17 28 48.0 +0.2
RES IAmb IAmb 17 28 49.4
comp=Z,19nm,0.8s
RES Resolute Bay 62.10 14 P P 17 28 48.0 +0.2
RES pmax pmax
comp=Z,19nm,0.9s
PSAD1 Pilbara Seismi 62.11 203 P P 17 28 48.7 +0.2
PSAD1 IAmb IAmb 17 28 49.3
comp=Z,26nm,1.0s
PSAC2 Pilbara Seismi 62.19 203 P P 17 28 49.0 -0.1
PSAC2 IAmb IAmb 17 29 08.2
comp=Z,62nm,1.7s
PSAC1 Pilbara Seismi 62.20 203 P P 17 28 48.8 -0.2
PSAB2 Pilbara Seismi 62.20 203 P P 17 28 49.3 +0.2
PSAB2 IAmb IAmb 17 28 50.4
comp=Z,20nm,1.1s
PSAA2 Pilbara Seismi 62.21 203 P P 17 28 49.2 0.0
PSAA2 IAmb IAmb 17 28 50.4
comp=Z,18nm,1.0s
PSA00 Pilbara Seismi 62.22 203 P P 17 28 49.6 +0.4
PSAA3 Pilbara Seismi 62.22 203 P P 17 28 48.4 -0.9
PSAB1 Pilbara Seismi 62.22 203 P P 17 28 48.2 -1.0
PSAB1 IAmb IAmb 17 30 56.7
comp=Z,27nm,1.2s
APA Apatity 62.23 336⇓iP P 17 28 48.8 0.0
APA pmax pmax
comp=Z,30nm,0.6s
PSAB3 Pilbara Seismi 62.24 203 P P 17 28 49.4 +0.1
TMCR Tamitsa 62.31 331 eP P 17 28 49.1 -0.2
TMCR pmax pmax
comp=Z,27nm,0.5s
HRA Herat 62.33 293 P P 17 28 50.5 +0.2
HRA IAmb IAmb 17 28 52.1
comp=Z,34nm,1.0s
PALK Pallekele 62.50 257 P P 17 28 50.8 -0.6
PALK IAmb IAmb 17 28 53.1
comp=Z,37nm,1.3s
PALK Pallekele 62.50 257⇓eP P 17 28 51.4 0.0
PALK pmax pmax
comp=Z,25nm,1.1s
KEV Kevo 62.97 339 P P 17 28 54.2 +0.6
KEV Kevo 62.97 339 P P 17 28 54.2 +0.6
KEV pmax pmax
comp=Z,44nm,0.9s
EIDS Eidsvold 63.23 170 P P 17 28 57.1 +1.2
EIDS IAmb IAmb 17 29 12.4
comp=Z,77nm,2.0s
KLMR Klimovskoe 63.33 328 eP P 17 28 54.6 -1.6
KLMR AMP 17 28 57.1
comp=Z,39nm,0.7s
KLMR ePP PP 17 31 13.4 -2.1
KLMR Klimovskoe 63.33 328 eP P 17 28 54.5 -1.6
KLMR e 17 31 13.4
KLMR pmax pmax
comp=Z,39nm,0.7s
YKA Yellowknife Ar 63.35 30 P P 17 28 57.2 +0.9
comp=Z,7.1nm,0.7s,baz=303,slow=6.8,SNR=98
YKA PP PP 17 31 15.2 -0.5
comp=Z,0.5nm,0.5s,baz=351,slow=12,SNR=4.7
ARCES ARCESS Array B 63.52 339 P P 17 28 58.1 +0.8
comp=Z,21nm,0.8s,baz=53,slow=7.5,SNR=34
ARCES LR LR 17 59 31.1
comp=Z,111nm,21.2s,baz=8.0,slow=39
ARCES ARCESS Array B 63.52 339 P P 17 28 57.6 +0.2
ARE0 ARCESS Array S 63.52 339 eP P 17 28 57.6 +0.2
ARE0 ARCESS Array S 63.52 339 P P 17 28 58.1 +0.8
GEYT Alibeck 63.60 299 P P 17 28 59.1 +0.7
comp=Z,27nm,0.6s,baz=39,slow=2.8,SNR=83
GEYT LR LR 17 59 14.0
comp=Z,95nm,18.4s,baz=230,slow=38
GEYT Alibeck 63.60 299 P P 17 28 58.6 +0.2
GYA0B ALIBECK ARRAY 63.60 299 P P 17 28 58.6 +0.2
DZM Mont Dzumac 63.80 154 eS S 17 37 24.0 -6.7
comp=Z,104nm,29.2s
DZM Mont Dzumac 63.80 154 eLR LR 17 48 00.1
comp=Z,283nm,21.4s
DZM Mont Dzumac 63.80 154 P P 17 29 00.7 +0.9
SGF Sodankyl 64.49 337 P P 17 29 03.5 -0.2
SGF pmax pmax
comp=Z,76nm,1.9s
TULEG Thule 64.59 8 P P 17 29 04.0 -0.2
TULEG IAmb IAmb 17 29 05.0
comp=Z,18nm,0.7s
MSF Maaselka 64.59 335 P P 17 29 03.6 -0.8
MSF pmax pmax
comp=Z,57nm,1.5s
GIRL Giralia 65.12 208 P P 17 29 09.1 +0.9
TRO Tromso 65.24 341 eP P 17 29 09.2 +0.7
DAG Danmarks Havn 65.27 355 iP P 17 29 09.1 +0.5
comp=Z,24nm,0.7s
DAG Danmarks Havn 65.27 355 iP P 17 29 09.1 +0.5
DAG pmax pmax
comp=Z,24nm,0.7s
JOF Joensuu 65.52 332 P P 17 29 11.0 +0.6
JOF pmax pmax
comp=Z,17nm,1.0s
LLLB Lillooet 65.87 44 P P 17 29 14.1 +1.1
LLLB IAmb IAmb 17 29 30.0
comp=Z,36nm,1.8s
OUL Oulu 66.14 335 P P 17 29 15.1 +0.7
OUL pmax pmax
comp=Z,63nm,0.9s
D03D Eldon 66.74 47 P P 17 29 20.8 +2.3
baz=301
B05A Bryant 66.94 46 P P 17 29 21.5 +1.7
baz=301
VRH Novokhopyorsk 67.21 318 eP P 17 29 20.8 -0.7
VRH pmax pmax
comp=Z,60nm,0.6s
STEI Steigen 67.39 341 eP P 17 29 22.8 +0.5
SUF Sumiainen 67.53 333 P P 17 29 23.9 +0.6
SUF pmax pmax
comp=Z,69nm,0.7s
OBN Obninsk 67.70 323 ⇓P P 17 29 24.8 +0.3
OBN Obninsk 67.70 323 P P 17 29 24.1 -0.3
OBN Obninsk 67.70 323c iP P 17 29 24.7 +0.3
OBN e 17 29 51.7
OBN pmax pmax
comp=Z,72nm,1.3s
OBN MLR MLR
comp=Z,117nm,15.0s
MNCI Minicoy 67.87 263 P P 17 29 26.2 +0.1
ARMA Armidale 68.28 171 P P 17 29 28.7 +0.3
ARMA IAmb IAmb 17 29 46.1
comp=Z,37nm,1.4s
FIA1 FINESS Array S 68.37 332 P P 17 29 28.7 +0.2
FINES FINESS Array B 68.37 332 P P 17 29 28.8 +0.3
comp=Z,36nm,0.6s,baz=30,slow=11,SNR=125
FINES LR LR 18 01 44.7
comp=Z,216nm,18.4s,baz=58,slow=38
FINES FINESS Array B 68.37 332 P P 17 29 29.0 +0.4
FINES FINESS Array B 68.37 332 P P 17 29 29.0 +0.4
B08A Colville Reser 68.46 45 P P 17 29 29.4 -0.1
B08A IAmb IAmb 17 29 46.5
comp=Z,22nm,1.5s
VAF Ylistaro 68.54 335 P P 17 29 30.4 +0.8
VAF pmax pmax
comp=Z,48nm,1.0s
VSR Storozhevoye 68.56 319 eP P 17 29 29.8 -0.1
VSR pmax pmax
comp=Z,100nm,1.1s
I03D Drain, OR 68.57 51 P P 17 29 31.9 +1.7
baz=302
VORD Divnogorie 68.63 318 eP P 17 29 30.0 -0.4
VORD pmax pmax
comp=Z,30nm,0.6s
AKT Akhty 68.79 306 eP P 17 29 31.8 +0.1
AKT e*PP pP 17 29 49.2 +1.8
AKT e 17 29 54.1
AKT e*SP PcP 17 29 56.5 +0.5

Sta	Name	Dist	Az	Onset	Phase	Time	Res
AKT				pmax	pmax		
	comp=Z,39nm,0.6s						
MOR8	Moi Rana	68.89	340	eP	P	17 29 30.9	-0.9
K02D	Willamette Mer	68.90	52	P	P	17 29 34.4	+2.1
	baz=302						
STKA	Stephens Creek	69.07	180	P	P	17 29 34.0	+0.9
	comp=Z,5.6nm,0.7s,baz=339,slow=7.4,SNR=14						
STKA	Stephens Creek	69.07	180	P	P	17 29 33.4	+0.3
GROC	Groznyy	69.10	309	eP	P	17 29 31.4	-2.0
GROC				e*PP	pP	17 29 50.5	+1.4
GROC				e		17 29 54.2	
GROC				e*SP	PcP	17 29 58.6	+1.5
GROC				pmax	pmax		
	comp=Z,22nm,1.0s						
FORT	Forrest	69.11	192	P	P	17 29 33.9	+0.5
SEKA	Sheki	69.27	306	P	P	17 29 34.6	0.0
C09A	Chrisman Ranch	69.36	45	P	P	17 29 36.0	+1.0
C09A				IAmb	IAmb	17 29 52.8	
	comp=Z,35nm,1.8s						
I05D	Terrebonne, OR	69.45	49	P	P	17 29 37.3	+1.6
	baz=303						
LKRN	Lenkeran, Azer	69.57	303	P	P	17 29 36.9	+0.5
J04D	Umpqua Nationa	69.58	51	P	P	17 29 37.8	+1.1
	baz=303						
MNGR	Mingechevir, A	69.58	306	P	P	17 29 36.9	+0.5
NEW	Newport	69.75	44	P	P	17 29 38.8	+1.4
NEW	Newport	69.75	44	P	P	17 29 38.8	+1.4
NEW				pmax	pmax		
	comp=Z,18nm,1.5s						
NEW	Newport	69.75	44	P	P	17 29 38.6	+1.2
	baz=304						
GOF	Gofitskoye	69.77	312	⇑eP	P	17 29 37.6	+0.1
PINE	Pine Mountain	69.99	50	P	P	17 29 41.0	+1.7
PINE				IAmb	IAmb	17 29 42.6	
	comp=Z,20nm,0.8s						
L04D	Klamath Falls	70.01	52	P	P	17 29 40.9	+1.6
	baz=303						
VSU	Vasula	70.02	329	eP	P	17 29 39.6	+0.8
VSU	Vasula	70.02	329c	iP	P	17 29 38.6	-0.2
VSU				pmax	pmax		
	comp=Z,134nm,0.8s						
J05D	Fort Rock, OR	70.09	50	P	P	17 29 41.7	+1.9
	baz=303						
M02C	Callahan	70.11	53	P	P	17 29 42.0	+2.2
	baz=303						
K04D	Chiloquin, OR	70.13	51	P	P	17 29 41.7	+1.8
	baz=303						
GANJ	Ganja	70.13	306	P	P	17 29 40.3	+0.4
E09A	Wood Farm, Sta	70.14	46	P	P	17 29 41.0	+1.2
SUMG	Summit	70.17	360	iP	P	17 29 41.0	+1.0
	comp=Z,65nm,1.0s						
SUMG	Summit	70.17	360	P	P	17 29 40.8	+0.7
SUMG				IAmb	IAmb	17 29 42.1	
	comp=Z,46nm,1.2s						
SUMG	Summit	70.17	360	iP	P	17 29 41.0	+1.0
SUMG				pmax	pmax		
	comp=Z,65nm,1.0s						
BBOO	Buckleboo	70.18	185	P	P	17 29 39.9	0.0
NCK	Nalchik	70.29	310	⇑eP	P	17 29 41.0	+0.2
NCK				pmax	pmax		
	comp=Z,34nm,1.1s						
MORW	Morawa	70.41	203	P	P	17 29 41.9	+0.4
MORW				IAmb	IAmb	17 29 58.1	
	comp=Z,77nm,1.6s						
N02D	Trinity Center	70.43	53	P	P	17 29 43.5	+1.7
	baz=303						
ZEI	Tsey	70.49	309	eP	P	17 29 40.0	-2.3
ZEI				pmax	pmax		
	comp=Z,17nm,0.8s						
M04C	Macdoel	70.53	52	P	P	17 29 43.7	+1.2
	baz=303						
TBLG	Delisi	70.55	308	P	P	17 29 42.5	+0.2
TBLG				IAmb	IAmb	17 29 44.2	
	comp=Z,31nm,1.1s						
TBLG	Delisi	70.55	308	P	P	17 29 42.6	+0.2
TBLG				pmax	pmax		
	comp=Z,31nm,1.1s						
KBZ	Khabaz	70.58	311	P	P	17 29 43.2	+0.7
	comp=Z,30nm,0.9s,baz=62,slow=5.4,SNR=94						
KBZ				LR	LR	18 03 36.3	
	comp=Z,122nm,18.6s,baz=54,slow=38						
KBZ	Khabaz	70.58	311c	iP	P	17 29 42.9	+0.4
KIV	Kislovodsk	70.59	311	⇑P	P	17 29 43.5	+0.8
KIV	Kislovodsk	70.59	311	iP	P	17 29 43.7	+1.0
	SNR=20						
KIV	Kislovodsk	70.59	311	P	P	17 29 43.2	+0.5
KIV	Kislovodsk	70.59	311	eP	P	17 29 43.2	+0.5
KIV				pmax	pmax		
	comp=Z,258nm,1.1s						
K05A	Summer Lake	70.61	51	P	P	17 29 44.9	+2.0
K05A				IAmb	IAmb	17 30 01.4	
	comp=Z,55nm,1.4s						
I07A	Izee	70.70	49	P	P	17 29 44.6	+1.2
NSS	Namsos	70.81	339	eP	P	17 29 43.8	+0.3
O02D	Mt. Diablo Mer	70.81	54	P	P	17 29 45.7	+1.6
	baz=303						
WBK	Wadi Bani Khal	70.84	284	P	P	17 29 45.6	+1.1
WBK				P	P	17 29 45.6	+1.1
NEY	Neytrino	70.96	310	⇑eP	P	17 29 45.5	+0.4
NEY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
F10A	Beach Ranch, E	70.98	46	P	P	17 29 45.7	+0.6
BANOM	Banah	71.06	288	iP	P	17 29 46.6	+0.8
	SNR=15						
BANOM	Banah	71.06	288	P	P	17 29 46.8	+1.0
SHME	Shamm	71.11	289	iP	P	17 29 46.6	+0.5
	SNR=19						
SMDO	Samad	71.30	285	P	P	17 29 48.7	+1.4
SMDO				P	P	17 29 48.7	+1.4
O03E	Paynes Creek	71.38	53	P	P	17 29 49.0	+1.5
	baz=304						
MDH	Madha	71.41	288	P	P	17 29 47.6	-0.2
GNI	Garni	71.42	307	P	P	17 29 48.4	+0.5
	comp=Z,15nm,0.9s,baz=288,slow=3.1,SNR=11						
GNI	Garni	71.42	307	iP	P	17 29 48.7	+0.8
	SNR=9.8						
GNI	Garni	71.42	307	P	P	17 29 48.7	+0.8
GNI				IAmb	IAmb	17 30 15.6	
	comp=Z,99nm,1.8s						
GNI	Garni	71.42	307	P	P	17 29 48.7	+0.8
GNI				pmax	pmax		
	comp=Z,99nm,1.8s						
MOD	Modoc Plateau	71.42	51	P	P	17 29 49.8	+1.9
NAX	Nakhchivan	71.47	305	P	P	17 29 48.5	+0.4
MSFE	Esma-Masafi	71.48	288	iP	P	17 29 48.9	+0.6
	SNR=18						
AKH	Akhalkalaki	71.50	308	P	P	17 29 49.4	+1.0
AKH				IAmb	IAmb	17 29 50.7	
	comp=Z,18nm,0.9s						
AKH	Akhalkalaki	71.50	308	P	P	17 29 49.4	+1.0
AKH				pmax	pmax		
	comp=Z,18nm,0.9s						
BMO	Blue Mountains	71.57	47	P	P	17 29 50.2	+1.6
BMO	Blue Mountains	71.57	47	P	P	17 29 50.2	+1.6
BMO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HOQ	Hoqain	71.58	286	P	P	17 29 49.5	+0.6
JTMT	Jette	71.61	44	P	P	17 29 50.6	+1.7
JMDO	Jabal Madar	71.64	284	P	P	17 29 49.9	+0.6
JMDO				P	P	17 29 49.9	+0.6
UOSS	Minazif	71.67	288	iP	P	17 29 49.7	+0.3
	SNR=18						
UOSS	Minazif	71.67	288	P	P	17 29 49.4	0.0
J08A	Circle Bar Ran	71.72	49	P	P	17 29 51.2	+1.6
HATD	Hatta, Dubai	71.79	288	iP	P	17 29 50.8	+0.6
	SNR=31						
HATD	Hatta, Dubai	71.79	288	P	P	17 29 51.1	+0.9
	SNR=5.9						
SOHO	SOHO	71.87	287	P	P	17 29 51.1	+0.5
	SNR=5.2						
ASHO	Ashiyiah	71.92	287	iP	P	17 29 51.4	+0.4
	SNR=11						
ASHO	Ashiyiah	71.92	287	P	P	17 29 51.4	+0.4
ORV	Oroville	71.98	54	P	P	17 29 52.4	+1.3
ORV	Oroville	71.98	54	P	P	17 29 52.4	+1.3
ORV				pmax	pmax		
	comp=Z,18nm,1.5s						
IZAR	Zarasai	71.99	327	eP	P	17 29 51.5	+0.7
BSY	Bisya	72.12	285	P	P	17 29 52.8	+0.5
BSY				P	P	17 29 52.8	+0.5
WVOR	Wild Horse Val	72.15	50	P	P	17 29 52.6	+0.4
WVOR	Wild Horse Val	72.15	50	P	P	17 29 52.6	+0.4
WVOR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ISAL	Salakas	72.16	327	eP	P	17 29 52.5	+0.7
ISAL				IAML		17 29 54.0	
	comp=Z,8.9nm,0.5s						
IIGN	Ignalina	72.26	327	eP	P	17 29 53.1	+0.7
IIGN				IAML		17 29 54.3	
	comp=Z,7.9nm,0.5s						
TBLU	Trondheim	72.28	339	eP	P	17 29 51.7	-0.7
NACGM	Naroch	72.31	327	e	P	17 29 52.0	-0.7
ARQ	Araqi	72.32	286	P	P	17 29 54.1	+0.7
	SNR=6.2						
ARQ				P	P	17 29 54.1	+0.7
	SNR=6.2						
MSO	Missoula	72.34	44	P	P	17 29 53.7	+0.5
MSO	Missoula	72.34	44	P	P	17 29 54.2	+1.0
	baz=306						
SLIT	Slitere, Latvi	72.35	330	eP	P	17 29 53.1	+0.3
ALNE	Al Ain	72.50	287	iP	P	17 29 54.8	+0.3
	SNR=12						
ASUD	Al Ashush, Dub	72.51	288	iP	P	17 29 54.8	+0.4
	SNR=8.8						
MHTO	MHTO	72.51	283	P	P	17 29 55.1	+0.6
	SNR=9.4						
MHTO				P	P	17 29 55.1	+0.6
	SNR=9.4						
BATM	Batumi	72.51	309	⇓P	P	17 29 54.9	+0.7
BATM	Batumi	72.51	309	P	P	17 29 54.9	+0.7
BEKR	Beckworth	72.53	53	P	P	17 29 53.6	-1.0
BEKR				IAmb	IAmb	17 32 00.7	
	comp=Z,19nm,0.7s						
SOC	Sochi	72.57	312	eP	P	17 29 53.3	-1.2
SOC				i*PP	PcP	17 30 12.9	+1.1
SOC				e		17 32 44.4	
SOC				ePPP	PPP	17 34 21.7	
SOC				eS	S	17 39 12.8	-1.9
SOC				eSS	SS	17 44 02.4	+8.6
SOC				pmax	pmax		
	comp=Z,27nm,0.8s						
SOC				MLR	MLR		
	comp=Z,199nm,17.0s						
BCA	Borcka	72.65	309	⇑P	P	17 29 55.7	+0.6
CAN	Canberra	72.84	174	P	P	17 29 57.8	+1.8
CAN				IAmb	IAmb	17 32 24.6	
	comp=Z,43nm,1.6s						
CAN	Canberra	72.84	174	P	P	17 29 57.8	+1.8
PABE	Paberze	73.11	328	eP	P	17 29 58.2	+0.7
PABE				IAML		17 29 59.7	
	comp=Z,19nm,0.6s						
ANN	Anapa	73.19	314	eP	P	17 29 58.3	+0.2
ANN				pmax	pmax		
	comp=Z,42nm,1.2s						
PAHR	Pah Rah Range	73.24	53	P	P	17 29 59.4	+0.6
PAHR				IAmb	IAmb	17 30 16.0	
	comp=Z,20nm,1.3s						
FFC	Flin Flon	73.26	33	P	P	17 29 59.1	+0.7
FFC				IAmb	IAmb	17 30 00.4	
	comp=Z,16nm,0.8s						
FFC	Flin Flon	73.26	33	P	P	17 29 59.1	+0.7
FFC				pmax	pmax		
	comp=Z,16nm,0.9s						
MFID	Camas Ranch	73.27	48	P	P	17 30 00.3	+1.5
PNTR	Pine Nut	73.46	53	P	P	17 30 00.3	+0.2
NC405	NORSAR Array S	73.51	337	P	P	17 29 60.0	+0.2
NC303	NORSAR Array S	73.53	337	eP	P	17 30 00.4	+0.6
NC303	NORSAR Array S	73.53	337	P	P	17 29 59.8	0.0
FCC	Fort Churchill	73.53	27	P	P	17 29 59.9	0.0
FCC				IAmb	IAmb	17 30 01.6	
	comp=Z,24nm,1.1s						
FCC	Fort Churchill	73.53	27	P	P	17 29 59.9	0.0
FCC				pmax	pmax		
	comp=Z,24nm,1.1s						
CMB	Columbia Colle	73.56	55	P	P	17 30 01.1	+0.7
CMB	Columbia Colle	73.56	55	P	P	17 30 01.2	+0.7
CMB				pmax	pmax		
	comp=Z,20nm,1.4s						
DOMB	Dombas	73.58	339	eP	P	17 30 00.8	+0.7
MOL	Molde	73.58	340	eP	P	17 30 00.9	+0.9
NWAO	Narrogin (SRO)	73.66	201	P	P	17 30 00.6	-0.2
NWAO				IAmb	IAmb	17 30 58.2	
	comp=Z,51nm,1.5s						
NWAO	Narrogin (SRO)	73.66	201	P	P	17 30 00.6	-0.2
NWAO				pmax	pmax		
	comp=Z,51nm,1.5s						
NC204	NORSAR Array S	73.68	338	P	P	17 30 01.2	+0.4
NB201	NORSAR Array S	73.69	337	P	P	17 30 00.6	-0.2
NB2	NORSAR Subarra	73.72	337	P	P	17 30 01.4	+0.4
	comp=Z,32nm,0.8s,baz=39,slow=6.2						
NB2	NORSAR Subarra	73.72	337	P	P	17 30 01.4	+0.4
	baz=39,slow=6.2						
NOA	NORSAR Array B	73.72	337	P	P	17 30 01.6	+0.6
	comp=Z,22nm,0.8s,baz=39,slow=5.9,SNR=69						
NOA				LR	LR	18 05 59.1	
	comp=Z,210nm,19.4s,baz=40,slow=39						
YERR	Yerington	73.75	53	P	P	17 30 02.1	+0.3
YERR				IAmb	IAmb	17 30 19.9	
	comp=Z,28nm,1.3s						
LRM	Limekiln Ridge	73.77	44	P	P	17 30 02.2	+0.4
NC602	NORSAR Array S	73.86	337	P	P	17 30 00.9	-0.8
NC602				IAmb	IAmb	17 30 02.6	
	comp=Z,59nm,1.2s						
NORES	NORESS Array B	73.86	337	P	P	17 30 02.0	+0.2
NORES				pmax	pmax		
	comp=Z,3.0nm,0.3s						
NBO00	NORSAR Array S	73.86	337	P	P	17 30 01.9	+0.1
EGMT	Eagleton	73.87	41	P	P	17 30 03.3	+1.1
EGMT				IAmb	IAmb	17 30 04.7	
	comp=Z,15nm,0.8s						
EGMT	Eagleton	73.87	41	P	P	17 30 03.6	+1.3
	baz=309						
WAKR	Walker	73.90	54	P	P	17 30 04.2	+1.5
AKASG	Malin Array Be	73.90	322	P	P	17 30 02.5	+0.2
	comp=Z,31nm,0.5s,baz=46,slow=6.1,SNR=187						
AKASG				LR	LR	18 05 45.6	
	comp=Z,172nm,18.5s,baz=35,slow=38						
AKASG	Malin Array Be	73.90	322	P	P	17 30 01.9	-0.4
AKBB	Malin Array Si	73.90	322	P	P	17 30 02.0	-0.2
AKBB				IAmb	IAmb	17 30 03.4	
	comp=Z,42nm,0.9s						
AKBB	Malin Array Si	73.90	322c	iP	P	17 30 02.3	+0.1
KIEV	Kiev	73.92	322	P	P	17 30 02.0	-0.3
DLMT	Dillon	73.96	45	P	P	17 30 03.9	+1.0
NAO01	NORSAR Array S	73.97	337	P	P	17 30 02.4	0.0
AKN	Aaknes	74.05	340	eP	P	17 30 03.2	+0.3
MCMT	McKenzie Canyo	74.15	45	P	P	17 30 03.5	-0.5
RYN	Ryan	74.41	53	P	P	17 30 06.1	+0.5
KVN	Kaiserville	74.43	53	P	P	17 30 07.2	+1.4
KVN	Kaiserville	74.43	53	P	P	17 30 07.2	+1.4
KVN				pmax	pmax		
	comp=Z,16nm,1.2s						
SUW	Suwalki	74.47	327	eP	P	17 30 05.9	+0.5
SUW	Suwalki	74.47	327	P	P	17 30 04.5	-1.0
SUW	Suwalki	74.47	327	eP	P	17 30 05.9	+0.5
OSL	Oslo	74.73	337	eP	P	17 30 07.5	+0.6
TOO	Toolangi	74.84	177	P	P	17 30 07.7	+0.1
TOO	Toolangi	74.84	177	P	P	17 30 07.7	+0.1
TOO				pmax	pmax		
	comp=Z,21nm,1.5s						
SKAR	Skarslia	74.88	338	eP	P	17 30 08.0	+0.2
QLMT	Earthquake Lak	74.94	45	P	P	17 30 09.2	+0.6
SIM	Simferopol'	74.98	315	eP	P	17 30 09.9	+1.3
SIM				pmax	pmax		
	comp=Z,30nm,0.9s						
YHL	Hebgen Lake	75.07	45	P	P	17 30 10.8	+1.3
HYA	Hoyanger	75.10	339	eP	P	17 30 09.8	+0.9
YHB	Horse Butte	75.12	45	P	P	17 30 11.8	+2.1
ELK	Elko	75.20	50	P	P	17 30 11.6	+1.3
ELK	Elko	75.20	50	P	P	17 30 11.6	+1.3
ELK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
YHH	Holmes Hill	75.29	45	P	P	17 30 12.1	+1.3
YMR	Madison River	75.30	45	P	P	17 30 11.7	+1.0
KONO	Kongsberg	75.31	337	eP	P	17 30 10.4	+0.2
KONO	Kongsberg	75.31	337	P	P	17 30 10.6	+0.4
KONO	Kongsberg	75.31	337	P	P	17 30 10.6	+0.4
KONO				pmax	pmax		
	comp=Z,163nm,1.8s						
GCMT	Greycliff	75.32	43	P	P	17 30 12.0	+1.3
SFJD	Kangerlussuaq	75.37	5	P	P	17 30 11.1	+0.7
SFJD				IAmb	IAmb	17 30 33.5	
	comp=Z,60nm,1.6s						
SFJD	Kangerlussuaq	75.37	5	P	P	17 30 11.1	+0.7
YNR	Norris Junctio	75.43	45	P	P	17 30 12.5	+0.9
SEVA	Sevastopol	75.48	315	⇑P	P	17 30 11.8	+0.4
YUF	Upper Falls	75.53	44	P	P	17 30 13.3	+1.2
SUE	Sulen	75.59	340	eP	P	17 30 13.0	+1.3
YNE	Yellowstone No	75.62	44	P	P	17 30 13.4	+0.8
YPP	Pitchstone Pla	75.64	45	P	P	17 30 13.5	+0.7
LKWY	Lake	75.68	45	P	P	17 30 15.5	+2.5
LKWY	Lake	75.68	45	P	P	17 30 15.5	+2.5
H17A	Grant Village	75.69	45	P	P	17 30 16.2	+3.2
H17A				IAmb	IAmb	17 30 17.6	
	comp=Z,15nm,0.8s						
H17A	Grant Village	75.69	45	P	P	17 30 16.1	+3.1
	baz=309						
YMP	Mirror Lake Pl	75.71	44	P	P	17 30 13.5	+0.3
PKM	Mcpherson Peak	75.75	57	P	P	17 30 14.8	+1.3
	baz=306						
IMW	Indian Meadow	75.80	45	P	P	17 30 15.1	+1.4
FLWY	Flagg Ranch	75.82	45	P	P	17 30 15.7	+2.0
FXWY	Fox Creek	75.91	46	P	P	17 30 16.1	+1.8
ASK	Askoy	75.94	339	eP	P	17 30 14.7	+1.0
RLMT	Red Lodge	75.96	44	P	P	17 30 15.4	+0.9
RLMT	Red Lodge	75.96	44	P	P	17 30 16.0	+1.6
	baz=310						
BER	Bergen	75.98	339	eP	P	17 30 15.0	+1.0
ODD1	Odda	76.00	338	eP	P	17 30 15.3	+1.1
MOOW	Moose Ponds	76.00	45	P	P	17 30 16.4	+1.6
SORM	Soroca	76.01	321	⇑P	P	17 30 14.5	+0.1
SORM	Soroca	76.01	321	P	P	17 30 14.4	+0.1
HVU	Hansel Valley	76.05	48	P	P	17 30 16.1	+1.1
HVU	Hansel Valley	76.05	48	P	P	17 30 16.1	+1.1
HVU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GRAC	Grapevine Rang	76.11	54	P	P	17 30 17.0	+1.7
	baz=307						
SNOW	Snow King Moun	76.17	46	P	P	17 30 16.1	+0.3
ISA	Isabella, Lake	76.18	56	P	P	17 30 15.8	+0.1
ISA	Isabella, Lake	76.18	56	P	P	17 30 15.8	+0.1
REDW	Red Top Meadow	76.18	46	P	P	17 30 16.3	+0.5
KVT	Kavak	76.25	311	P	P	17 30 17.4	+1.4
FRB	Frobisher Bay	76.27	13	P	P	17 30 16.4	+0.8
FRB				pmax	pmax		
	comp=Z,34nm,1.2s						
DIKM	Dikmen	76.36	312	⇑P	P	17 30 17.8	+1.3
DAC	Darwin (Calif)	76.39	55	P	P	17 30 17.0	-0.1
DAC	Darwin (Calif)	76.39	55	P	P	17 30 17.0	-0.1
DAC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
AHID	Auburn Hatcher	76.41	46	P	P	17 30 17.3	+0.2
BGU	Big Grassy Mou	76.42	49	P	P	17 30 18.1	+1.0
DGMT	Dagmar	76.43	39	P	P	17 30 17.1	+0.2
DGMT				IAmb	IAmb	17 30 18.9	
	comp=Z,15nm,0.8s						
R11A	Troy Canyon, C	76.43	52	P	P	17 30 18.4	+1.2
R11A	Troy Canyon, C	76.43	52	P	P	17 30 19.0	+1.7
	baz=307,SNR=9.1						
BLS5	Blasjo	76.45	338	eP	P	17 30 17.0	+0.3
SPUT	South Promonto	76.53	48	P	P	17 30 18.6	+0.8
MILM	Milestii Mici	76.57	319	⇑P	P	17 30 17.5	-0.1
LAO	LASA Array	76.57	41	P	P	17 30 18.7	+1.0
LAO				IAmb	IAmb	17 30 35.2	
	comp=Z,26nm,1.2s						
LAO	LASA Array	76.57	41	P	P	17 30 19.5	+1.8
	baz=311						
RAO	Raoul Island	76.58	144	P	P	17 30 19.6	+1.9
RAO	Raoul Island	76.58	144	P	P	17 30 19.6	+1.9
MPMC	Manual Prospec	76.59	55	P	P	17 30 19.7	+1.5
	baz=307						
DMTO	DMTO	76.71	282	P	P	17 30 18.8	0.0
TPNV	Topopah Spring	76.86	53	P	P	17 30 21.1	+1.5
TPNV	Topopah Spring	76.86	53	P	P	17 30 21.1	+1.5
TPNV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TPNV	Topopah Spring	76.86	53	P	P	17 30 21.3	+1.6
	baz=307,SNR=9.6						
BZK	Bozkurt	76.90	313	⇑P	P	17 30 20.4	+0.9
EDW2	Edwards Air Fo	76.96	56	P	P	17 30 21.7	+1.6
	baz=307						
KMY	Karmoy	76.98	339	eP	P	17 30 21.1	+1.4
LVV	L'vov	76.98	324	eP	P	17 30 20.5	+0.6
LVV				eS	S	17 39 59.2	-4.4
LVV				MLR	MLR		
	comp=N,120nm,17.0s						
LVV				MLR	MLR		
	comp=E,200nm,17.0s						
LVV				MLR	MLR		
	comp=Z,220nm,17.0s						
DUG	Dugway, Tooele	77.00	49	P	P	17 30 21.6	+1.2
DUG	Dugway, Tooele	77.00	49	P	P	17 30 21.6	+1.2
DUG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
DUG	Dugway, Tooele	77.00	49	P	P	17 30 22.3	+1.9
	baz=308						
BEL	Belsk	77.03	327	eP	P	17 30 21.4	+1.3
BEL	Belsk	77.03	327	eP	P	17 30 21.4	+1.3
IAS	Iasi	77.03	320	P	P	17 30 20.9	+0.7
IAS				pmax	pmax		
	comp=Z,27nm,0.8s						
SNART	Snartemo	77.11	337	eP	P	17 30 21.6	+1.2
BORG	Borgarnes	77.14	353	P	P	17 30 21.8	+1.3
BORG	Borgarnes	77.14	353	P	P	17 30 21.8	+1.3
TCUT	Toone Canyon	77.27	48	P	P	17 30 23.0	+1.0
BW06	Boulder Array	77.29	46	P	P	17 30 22.7	+0.6
BW06	Boulder Array	77.29	46	P	P	17 30 23.1	+1.0
	baz=310						
PD31	Pinedale Array	77.29	46	P	P	17 30 22.4	+0.3
PDAR	Pinedale Array	77.29	46	P	P	17 30 23.1	+1.1
	comp=Z,3.8nm,0.7s,baz=271,slow=2.3,SNR=37						
PDAR				LR	LR	18 00 48.8	
	comp=Z,34nm,21.3s,baz=328,slow=33						
PDAR	Pinedale Array	77.29	46	P	P	17 30 22.4	+0.3
CTU	Camp Tracy	77.33	48	P	P	17 30 22.8	+0.5
PSUT	Pine Spring	77.39	51	P	P	17 30 23.3	+0.6
GSC	Goldstone, Bar	77.49	55	P	P	17 30 23.9	+0.8
GSC	Goldstone, Bar	77.49	55	P	P	17 30 23.9	+0.8
GSC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
JLU	Jordanelle	77.56	48	P	P	17 30 23.7	0.0
NLU	North Lily Min	77.60	49	P	P	17 30 24.7	+0.9
ILGA	Ilgaz	77.64	312	P	P	17 30 25.2	+1.2
ILGA				IAmb	IAmb	17 30 26.6	
	comp=Z,30nm,0.8s						
KWP	Kalwaria Pacla	77.72	324	eP	P	17 30 25.5	+1.4
KWP	Kalwaria Pacla	77.72	324	P	P	17 30 24.5	+0.4
KWP	Kalwaria Pacla	77.72	324	eP	P	17 30 25.5	+1.4
SHPR	Sheep Range	77.82	53	P	P	17 30 26.0	+0.9
BUR08	Bucovina Ar. S	77.91	322	P	P	17 30 25.6	+0.4
BUR08				IAmb	IAmb	17 30 27.2	
	comp=Z,20nm,1.0s						
BURAR	Bucovina Array	77.92	322	⇑P	P	17 30 26.2	+0.9
BURAR	Bucovina Array	77.92	322	P	P	17 30 25.4	+0.1
BURAR	Bucovina Array	77.92	322	P	P	17 30 26.2	+0.9
GAZ	Gaziantep	77.93	308	P	P	17 30 25.9	+0.4
GAZ				IAmb	IAmb	17 30 27.9	
	comp=Z,28nm,0.9s						
TESR	Tescani	77.95	320	⇑P	P	17 30 26.1	+0.7
JURR	Jurilovca	77.96	318	⇓P	P	17 30 26.2	+0.8
TUQ	Turquoise Moun	77.98	55	P	P	17 30 27.4	+1.4
	baz=308						
TOPG	Topolog	78.15	318	⇓P	P	17 30 27.2	+0.8
PETR	Petresti	78.19	319	⇑P	P	17 30 28.7	+2.0
TCRU	Three Creeks R	78.21	50	P	P	17 30 29.1	+1.8
ODBI	Odobesti	78.25	319	⇑P	P	17 30 29.2	+2.2
CCUT	Cedar City	78.31	52	P	P	17 30 29.2	+1.4
VRI	Vrincioaia	78.35	320	⇑P	P	17 30 28.6	+1.0
VRI	Vrincioaia	78.35	320	P	P	17 30 29.0	+1.4
VRI				pmax	pmax		
	comp=Z,30nm,1.6s						
PLOR	Plostina	78.40	320	⇑P	P	17 30 28.9	+0.9
PLOR	Plostina	78.40	320	P	P	17 30 28.8	+0.9
TIRR	Tirgusor	78.41	318	P	P	17 30 26.4	-1.5
KOLS	Kolonicke sedl	78.42	324	eP	P	17 30 28.7	+0.8
KOLS				pmax	pmax		
	comp=Z,12nm,1.1s						
KOLS	Kolonicke sedl	78.42	324	eP	P	17 30 28.7	+0.8
MSU	Marysvale	78.44	50	P	P	17 30 30.0	+1.5
MSU	Marysvale	78.44	50	P	P	17 30 30.0	+1.5
SZCU	Shurtz Canyon	78.45	51	P	P	17 30 29.8	+1.3
HARR	Harsova	78.51	318	⇑P	P	17 30 29.3	+0.8
HARR	Harsova	78.51	318	P	P	17 30 29.2	+0.8
BR131	Keskin Array S	78.53	311	P	P	17 30 29.1	+0.2
BR131	Keskin Array S	78.53	311	P	P	17 30 29.7	+0.9
	SNR=12						
BR131	Keskin Array S	78.53	311	P	P	17 30 29.1	+0.2
BR131				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRTR	Keskin Array B	78.53	311	P	P	17 30 29.4	+0.5
	comp=Z,8.8nm,0.9s,baz=95,slow=4.0,SNR=36						
BRTR				LR	LR	18 09 53.1	

comp=Z,51nm,19.5s,baz=338,slow=39
BRTR Keskin Array B 78.53 311 P P 17 30 28.6 -0.2
GMRC Granite Mounta 78.55 55 P P 17 30 30.5 +1.4
baz=308
BISRR Bisoca 78.57 319 ⇓P P 17 30 30.6 +1.7
UZH Uzhgorod 78.62 324 ⇑iP P 17 30 29.3 +0.3
UZH e 17 30 36.3
UZH e 17 30 45.9
UZH i 17 30 49.5
OJC Ojcow 78.62 326 eP P 17 30 30.3 +1.3
OJC Ojcow 78.62 326 P P 17 30 29.3 +0.3
OJC IAmb IAmb 17 30 31.2
comp=Z,51nm,1.1s
OJC Ojcow 78.62 326 eP P 17 30 30.3 +1.3
OZUR 78.67 320 ⇑P P 17 30 31.1 +1.7
RDMU Red Mountain 78.69 47 P P 17 30 29.2 -0.6
P17A Butcher Ranch, 78.70 49 P P 17 30 30.6 +0.8
LCMT Little Creek M 78.72 52 P P 17 30 30.6 +0.7
MTPU Mount Pierson 78.73 51 P P 17 30 31.2 +0.9
PFO Pinyon Flats O 78.74 56 P P 17 30 30.8 +0.7
PFO Pinyon Flats O 78.74 56 P P 17 30 30.8 +0.7
PFO pmax pmax
comp=Z,18nm,1.4s
XPFO Pion Flat 78.74 56 P P 17 30 30.9 +0.8
Q16A Castle Valley 78.79 49 P P 17 30 30.4 -0.1
BELC Belle Mtn. Jos 78.81 56 P P 17 30 31.8 +1.3
baz=308
TRPA Tarpa 78.86 323 ⇑P P 17 30 31.5 +1.2
ANTO Ankara 78.94 312 P P 17 30 31.4 +0.5
ANTO IAmb IAmb 17 30 33.0
comp=Z,20nm,0.9s
ANTO Ankara 78.94 312 P P 17 30 31.5 +0.5
ANTO pmax pmax
comp=Z,20nm,1.0s
ICOR Ion Corvin 78.96 318 ⇓P P 17 30 32.5 +1.6
BR231 Keskin MP Arra 78.96 312 P P 17 30 30.9 -0.3
BR231 IAmb IAmb 17 30 33.2
comp=Z,17nm,0.9s
DOPR Dopca 78.97 320 ⇑P P 17 30 32.6 +1.6
KNB Kanab 78.98 52 P P 17 30 32.3 +0.9
KNB Kanab 78.98 52 P P 17 30 32.3 +0.9
KNB pmax pmax
comp=Z,24nm,1.4s
NIE Niedzica 78.98 325 eP P 17 30 32.4 +1.3
NIE Niedzica 78.98 325 eP P 17 30 32.3 +1.3
MLR Muntele Rosu 79.01 320 ⇑P P 17 30 32.3 +0.9
MLR Muntele Rosu 79.01 320 P P 17 30 31.1 -0.3
MLR IAmb IAmb 17 30 33.5
comp=Z,27nm,1.3s
MLR Muntele Rosu 79.01 320 P P 17 30 31.1 -0.3
MLR pmax pmax
comp=Z,27nm,1.3s
PKCU Pink Cliffs 79.03 51 P P 17 30 32.0 +0.2
SRU San Rafael Swe 79.06 49 P P 17 30 32.5 +0.6
SRU San Rafael Swe 79.06 49 P P 17 30 32.5 +0.6
SRU pmax pmax
comp=Z,11nm,0.9s
ULM Lac du Bonnet 79.06 33 P P 17 30 30.4 -1.0
comp=Z,6.3nm,0.8s,baz=311,slow=6.3,SNR=12
ULM Lac du Bonnet 79.06 33 P P 17 30 31.2 -0.3
ULM Lac du Bonnet 79.06 33⇑eP P 17 30 31.6 +0.2
K22A Casper 79.07 44 P P 17 30 32.4 +0.5
K22A IAmb IAmb 17 30 48.8
comp=Z,50nm,1.9s
K22A Casper 79.07 44 P P 17 30 33.0 +1.2
baz=312
MDND Maddock 79.09 37 P P 17 30 31.9 +0.2
MDND IAmb IAmb 17 30 33.9
comp=Z,22nm,0.8s
MDND Maddock 79.09 37 P P 17 30 32.6 +1.0
baz=315
BAR Barrett 79.16 57 P P 17 30 33.2 +0.9
BAR IAmb IAmb 17 31 33.8
comp=Z,26nm,1.4s
IRM Iron Mountain 79.27 55 P P 17 30 34.9 +2.0
baz=308
CJR Cluj-Napoca 79.34 322 ⇓P P 17 30 34.6 +1.5
CJR Cluj-Napoca 79.34 322 P P 17 30 34.6 +1.5
RSSD Black Hills 79.43 42 P P 17 30 34.1 +0.2
RSSD Black Hills 79.43 42 P P 17 30 34.1 +0.2
RSSD pmax pmax
comp=Z,7.0nm,1.0s
RSSD Black Hills 79.43 42 P P 17 30 34.4 +0.6
baz=313
MDUB Mudurnu 79.48 313 P P 17 30 33.7 -0.3
W13A Hualapai Mount 79.50 54 P P 17 30 34.1 -0.3
VOIR 79.50 320 ⇓P P 17 30 34.9 +0.9
VOIR 79.50 320 P P 17 30 35.0 +1.0
VOIR pmax pmax
comp=Z,11nm,1.4s
OKC Ostrava-Krasne 79.63 327 eP P 17 30 35.8 +1.3
OKC Ostrava-Krasne 79.63 327 eP P 17 30 35.8 +1.3
KSP Ksiaz 79.68 328 eP P 17 30 36.1 +1.4
KSP Ksiaz 79.68 328 eP P 17 30 36.1 +1.4
U15A North Rim 79.68 52 P P 17 30 37.1 +1.7
U15A IAmb IAmb 17 30 53.3
comp=Z,34nm,1.7s
DRGR 79.72 322 ⇑P P 17 30 36.0 +0.9
DRGR 79.72 322 P P 17 30 36.1 +0.9
DRGR pmax pmax
comp=Z,24nm,1.4s
O20A White River Ci 79.75 47 P P 17 30 36.5 +0.9
O20A White River Ci 79.75 47 P P 17 30 36.5 +0.9
baz=311
PDMCI Parker Dam,Lak 79.83 55 P P 17 30 37.3 +1.5
baz=309
Y12C Blythe 79.92 55 P P 17 30 36.5 +0.1
Y12C Blythe 79.92 55 P P 17 30 37.5 +1.1
baz=309
MORC Moravsky Berou 79.94 327 eP P 17 30 37.2 +0.9
MORC Moravsky Berou 79.94 327 ⇑P P 17 30 37.4 +1.1
MORC Moravsky Berou 79.94 327 P P 17 30 35.8 -0.5
MORC IAmb IAmb 17 30 38.5
comp=Z,20nm,1.0s
MORC Moravsky Berou 79.94 327 P P 17 30 35.8 -0.5
MORC pmax pmax
comp=Z,20nm,1.0s
DPC Dobruska-Polom 80.03 328 eP P 17 30 37.9 +1.1
DPC Dobruska-Polom 80.03 328 eP P 17 30 37.9 +1.1
KRLC Kraliky 80.05 327 eP P 17 30 37.8 +1.0
KRLC Kraliky 80.05 327 eP P 17 30 37.8 +1.0
GLA Glamis 80.16 56 P P 17 30 38.0 +0.2
GLA IAmb IAmb 17 33 25.2
comp=Z,17nm,0.5s
GLA Glamis 80.16 56 P P 17 30 38.0 +0.2
PSZ Piszkesteto 80.25 324 ⇑P P 17 30 39.2 +1.2
PSZ Piszkesteto 80.25 324 P P 17 30 38.6 +0.6
PSZ IAmb IAmb 17 30 40.4
comp=Z,30nm,1.0s
PSZ Piszkesteto 80.25 324 P P 17 30 38.6 +0.6
PSZ pmax pmax
comp=Z,30nm,1.0s
DEV Deva 80.27 321 P P 17 30 39.6 +1.6
DEV pmax pmax
comp=Z,16nm,1.0s
VYHS Vyhne 80.31 325 eP P 17 30 39.5 +1.2
VYHS pmax pmax
comp=Z,61nm,1.9s
VYHS Vyhne 80.31 325 eP P 17 30 39.5 +1.2
RAR Rarotonga 80.44 126 P P 17 30 39.9 +0.7
RAR IAmb IAmb 17 31 10.5
comp=Z,62nm,1.4s
RAR Rarotonga 80.44 126 P P 17 30 39.9 +0.7
RAR pmax pmax
comp=Z,62nm,1.4s
RAYN Ar Rayn 80.48 292 iP P 17 30 39.8 +0.2
SNR=19
RAYN Ar Rayn 80.48 292 P P 17 30 39.2 -0.4
RAYN IAmb IAmb 17 30 40.9
comp=Z,22nm,1.1s
RAYN Ar Rayn 80.48 292 P P 17 30 39.2 -0.4
RAYN pmax pmax
comp=Z,22nm,1.1s
AGMN Agassiz Nation 80.50 35 P P 17 30 38.4 -0.8
AGMN Agassiz Nation 80.50 35 P P 17 30 39.8 +0.5
baz=318
N23A Red Feather La 80.56 45 P P 17 30 41.1 +1.1
N23A IAmb IAmb 17 30 58.6
comp=Z,23nm,1.4s
N23A Red Feather La 80.56 45 P P 17 30 41.1 +1.1
baz=312
PHWY Pilot Hill 80.56 45 P P 17 30 40.2 +0.1
JAVC Velka Javorina 80.57 326 eP P 17 30 41.6 +1.9
BRG Berggiesshubel 80.62 329 eP P 17 30 40.4 +0.6
BRG e*PP pP 17 30 54.6 -1.3
BRG pmax pmax
comp=Z,16nm,0.9s
BRG pmax pmax
comp=Z,10.0nm,1.1s
PVCC Panska Ves 80.63 329 eP P 17 30 41.2 +1.3
PVCC Panska Ves 80.63 329 eP P 17 30 41.2 +1.3
CLL Collm 80.66 330 ⇑iP P 17 30 40.3 +0.3
comp=Z,29nm,0.9s
CLL epP pP 17 30 58.0 +1.9
CLL e 17 31 00.0
CLL esP sP 17 31 05.0 +2.6
CLL Lm MLR 18 09 00.0
comp=Z,100nm,20.0s
CLL Collm 80.66 330 P P 17 30 39.8 -0.2
CLL IAmb IAmb 17 30 41.6
comp=Z,30nm,1.0s
CLL Collm 80.66 330 ⇑iP P 17 30 40.3 +0.3
CLL e*PP pP 17 30 58.0 +1.9
CLL pmax pmax
comp=Z,29nm,0.9s
GZR Gura Zlata 80.68 321 P P 17 30 41.0 +0.7
SOCY Socotra 80.69 278 P P 17 30 38.8 -2.1
VRAC Vranov 80.70 327 eP P 17 30 41.5 +1.2
VRAC Vranov 80.70 327 ⇑P P 17 30 41.6 +1.3
VRAC Vranov 80.70 327 P P 17 30 41.7 +1.3
VRAC pmax pmax
comp=Z,23nm,1.3s
Y14A Wickenburg 80.79 54 P P 17 30 42.4 +1.3
ELND Elena 80.80 318 ⇑P P 17 30 41.7 +0.8
D32A Dogwood Acres, 80.82 36 P P 17 30 41.0 0.0
WUAZ Wupatki 80.83 52 P P 17 30 41.8 +0.3
WUAZ Wupatki 80.83 52 P P 17 30 42.1 +0.6
baz=310,SNR=6.3
SMOL Smolenice 80.93 326 eP P 17 30 43.1 +1.6
SMOL pmax pmax
comp=Z,9.0nm,0.8s
SMOL Smolenice 80.93 326 eP P 17 30 43.1 +1.6
KRUC Moravsky 80.97 327 eP P 17 30 42.6 +0.9
KRUC Moravsky 80.97 327 P P 17 30 42.9 +1.2
KRUC pmax pmax
comp=Z,28nm,1.2s
GOPC GO Pecny, Ondr 81.01 328 eP P 17 30 43.2 +1.2
GOPC GO Pecny, Ondr 81.01 328 eP P 17 30 43.2 +1.2
SRO Srobarova 81.05 325 eP P 17 30 43.6 +1.4
SRO pmax pmax
comp=Z,31nm,0.7s
SRO Srobarova 81.05 325 eP P 17 30 43.6 +1.4
PRU Pruhonice 81.06 328 eP P 17 30 43.2 +1.0
PRU Pruhonice 81.06 328 eP P 17 30 43.2 +1.0
BZS Buzias 81.09 322 ⇑P P 17 30 43.0 +0.5
BZS Buzias 81.09 322 P P 17 30 43.0 +0.5
BZS pmax pmax
comp=Z,17nm,1.2s
MODS Modra-Piesok 81.10 326 eP P 17 30 43.1 +0.6
MODS pmax pmax
comp=Z,19nm,1.1s
MODS Modra-Piesok 81.10 326 eP P 17 30 43.1 +0.6
SMCO Snowmass 81.11 47 P P 17 30 44.4 +1.2
PLVB Pleven 81.14 319 ⇓P P 17 30 43.7 +0.9
TREC Trest 81.19 328 eP P 17 30 44.1 +1.2
TREC Trest 81.19 328 eP P 17 30 44.1 +1.2
ASF Jabal al Asfar 81.24 304 P P 17 30 43.7 +0.2
comp=Z,8.4nm,0.9s,baz=348,slow=5.5,SNR=18
ASF PP PP 17 33 47.8 -1.3
comp=Z,2.0nm,0.6s,baz=231,slow=9.5,SNR=3.4
ISCO Idaho Springs 81.48 46 P P 17 30 45.7 +0.7
ISCO Idaho Springs 81.48 46 P P 17 30 45.7 +0.7
ISCO pmax pmax
comp=Z,22nm,1.8s
ISCO Idaho Springs 81.48 46 P P 17 30 46.0 +0.9
baz=312,SNR=5.4
X16A Lo Mia Camp, P 81.49 53 P P 17 30 46.2 +1.2
MVCO Mesa Verde 81.50 49 P P 17 30 46.2 +1.1
MVCO Mesa Verde 81.50 49 P P 17 30 46.2 +1.1
baz=311
PBCC Pribram 81.52 329 eP P 17 30 45.6 +1.0
ISP Isparta 81.61 312 P P 17 30 45.5 0.0
ISP Isparta 81.61 312 P P 17 30 45.5 0.0
ISP pmax pmax
comp=Z,36nm,0.5s
MMAI Moumt Meron Ar 81.69 305 P P 17 30 46.1 +0.2
comp=Z,26nm,0.8s,baz=42,slow=6.7,SNR=58
MMAI LR LR 18 09 51.5
comp=Z,163nm,21.8s,baz=30,slow=38
NKC Novy Kostel 81.72 330 P P 17 30 46.7 +1.0
NKC pmax pmax
comp=Z,7.0nm,1.3s
MOX Moxa 81.73 330 P P 17 30 46.4 +0.7
MOX pmax pmax
comp=Z,11nm,1.3s
CSS Mathiatis 81.76 308 P P 17 30 46.1 -0.1
CSS IAmb IAmb 17 30 47.5
comp=Z,19nm,0.7s
SUSD Miller 81.83 39 P P 17 30 47.1 +0.7
SUSD Miller 81.83 39 P P 17 30 47.6 +1.2
baz=316
SOP Sopron 81.94 326 P P 17 30 48.4 +1.5
SOP pmax pmax
comp=Z,29nm,1.1s
CONA Conrad Observa 82.06 326 iPcP P 17 30 49.0 +1.3
comp=Z,8.8nm,0.7s,SNR=9.2
MORH Mrgy, Hungar 82.08 324 ⇑iP P 17 30 47.8 +0.2
ALN Alexandroupoli 82.10 316 P P 17 30 48.3 +0.4
ALN Alexandroupoli 82.10 316 P P 17 30 48.3 +0.4
ALN pmax pmax
comp=Z,22nm,1.8s
W18A Petrified Fore 82.11 52 P P 17 30 48.3 0.0
KHC Kasperske Hory 82.12 328 eP P 17 30 48.6 +0.8
KHC Kasperske Hory 82.12 328 P P 17 30 47.9 +0.1
KHC Kasperske Hory 82.12 328c iP P 17 30 48.7 +0.9
KHC pmax pmax
comp=Z,39nm,1.0s
S22A 4UR Ranch, Cre 82.15 48 P P 17 30 49.7 +1.1
S22A 4UR Ranch, Cre 82.15 48 P P 17 30 50.0 +1.4
baz=312,SNR=11
214A Organ Pipe Nat 82.17 56 P P 17 30 49.2 +0.7
214A Organ Pipe Nat 82.17 56 P P 17 30 49.7 +1.2
baz=310
GEC2 GERESS Array S 82.29 328 P P 17 30 48.7 -0.1
GEC2 IAmb IAmb 17 30 49.8
comp=Z,9.4nm,0.7s
GEC2 GERESS Array S 82.29 328 P P 17 30 49.5 +0.7
GEC2 pmax pmax
comp=Z,18nm,1.7s
GERES GERESS Array B 82.29 328 P P 17 30 49.3 +0.5
comp=Z,7.5nm,0.6s,baz=38,slow=6.2,SNR=23
GERES LR LR 18 12 26.9
comp=Z,147nm,18.5s,baz=70,slow=39
GERES GERESS Array B 82.29 328 P P 17 30 48.8 0.0
Q24A Divide 82.31 46 P P 17 30 50.5 +1.1
Q24A Divide 82.31 46 P P 17 30 50.0 +0.6
baz=313
MANT Manisa 82.32 313 P P 17 30 49.7 +0.4
MANT IAmb IAmb 17 30 50.8
comp=Z,32nm,0.7s
X18A Snowflake 82.36 52 P P 17 30 50.5 +1.0
WET Wettzell 82.40 329 P P 17 30 50.3 +1.0
WET pmax pmax
comp=Z,18nm,1.7s
VTS Vitosha 82.41 319 ⇑P P 17 30 50.8 +1.2
VTS Vitosha 82.41 319 P P 17 30 50.3 +0.7
VTS IAmb IAmb 17 30 51.9
comp=Z,20nm,0.9s
VTS Vitosha 82.41 319 P P 17 30 50.3 +0.7
VTS pmax pmax
comp=Z,20nm,0.9s
GRA1 Grafenberg Arr 82.64 330 P P 17 30 51.2 +0.7
GRA1 IAmb IAmb 17 30 52.8
comp=Z,33nm,1.0s
GRF Grafenberg Arr 82.64 330 eP P 17 30 51.3 +0.8
comp=Z,25nm,0.9s,baz=42,slow=4.5
GRF Grafenberg Arr 82.64 330 P P 17 30 51.2 +0.7
GRF pmax pmax
comp=Z,33nm,1.0s
EKA Eskdalemuir Ar 82.66 341 P P 17 30 50.9 +0.5
EZN Ezine 82.68 315 P P 17 30 51.7 +0.8
OGNE Ogallala 82.69 43 P P 17 30 51.6 +0.6
OGNE IAmb IAmb 17 31 11.9
comp=Z,15nm,0.8s
ELL Elmali 82.69 311 P P 17 30 50.9 -0.3
ELL Elmali 82.69 311 P P 17 30 50.9 -0.3
ELL pmax pmax
comp=Z,71nm,0.9s
EYMN Ely 82.70 33 P P 17 30 51.0 +0.2
EYMN IAmb IAmb 17 30 52.4
comp=Z,13nm,0.9s
EYMN Ely 82.70 33 P P 17 30 51.3 +0.4
baz=320,SNR=7.0
ARSA Arzberg 82.73 326 ePcP P 17 30 51.9 +0.9
comp=Z,5.4nm,0.7s
MOA Molln 82.82 327 eP P 17 30 52.1 +0.6
comp=Z,12nm,1.2s
SDCO Great Sand Dun 82.93 47 P P 17 30 54.1 +1.5
SDCO Great Sand Dun 82.93 47 P P 17 30 54.1 +1.5
baz=313,SNR=8.7
DIVS Divibare 82.99 322 ⇑iP P 17 30 52.3 -0.2
TUC Tucson 83.26 54 P P 17 30 54.8 +0.6
TUC Tucson 83.26 54 P P 17 30 54.8 +0.6
TUC pmax pmax
comp=Z,4.0nm,1.2s
TUC Tucson 83.26 54 P P 17 30 55.3 +1.1
baz=311
SRS Serrai 83.28 318 P P 17 30 54.5 +0.5
SRS pmax pmax
comp=Z,16nm,1.2s
SOKA Soboth 83.38 326 ePcP P 17 30 55.1 +0.6
comp=Z,21nm,0.8s,SNR=9.8
BBLS Lazići 83.45 322 ⇑iP P 17 30 55.7 +0.8
ECSD EROS Data Cent 83.50 38 P P 17 30 55.4 +0.3
ECSD EROS Data Cent 83.50 38 P P 17 30 55.7 +0.6
baz=317,SNR=9.5
HAPS Han Pijesak,Bl 83.51 322 ⇑iP P 17 30 55.2 0.0
STIP Stip 83.61 319 iP P 17 30 55.6 -0.1
KNT Kendrikon 83.62 318 P P 17 30 56.3 +0.6
KNT pmax pmax
comp=Z,15nm,1.3s
RUDO Rudo 83.65 322 eP P 17 30 56.0 +0.2
VAY Valandovo 83.68 318 iP P 17 30 56.8 +0.8
E38A The Farm, Brul 83.70 34 P P 17 30 56.3 +0.3
E38A IAmb IAmb 17 30 57.3
comp=Z,19nm,0.8s
OBKA Obir 83.72 326 iP P 17 30 55.5 -0.8
comp=Z,5.1nm,0.7s
SKO Skopje 83.80 319 iP P 17 30 58.0 +1.4
KBA Koelnbreinsper 83.81 327 ePcP P 17 30 57.1 +0.3
comp=Z,14nm,0.8s
KBA Koelnbreinsper 83.81 327 P P 17 30 57.5 +0.7
KBA pmax pmax
comp=Z,16nm,0.9s
FUR Furstenfeldbru 83.82 329 P P 17 30 57.8 +1.1
FUR pmax pmax
comp=Z,57nm,0.8s
CRES Cresnjev 83.84 325 eP P 17 30 57.0 +0.2
CRES Cresnjev 83.84 325 eP P 17 30 57.0 +0.2
BLY Banja Luka 83.86 324 P P 17 30 57.1 +0.3
BLY IAmb IAmb 17 31 37.7
comp=Z,15nm,1.1s
T25A Trinidad 83.98 47 P P 17 30 59.2 +1.3
T25A IAmb IAmb 17 31 00.5
comp=Z,14nm,0.8s
T25A Trinidad 83.98 47 P P 17 30 58.8 +0.9
baz=313,SNR=10
GRG Griva 84.03 318 P P 17 30 58.4 +0.6
GRG pmax pmax
comp=Z,18nm,1.3s
PAIG Paliouri 84.07 317 P P 17 30 58.4 +0.4
PAIG pmax pmax
comp=Z,41nm,0.8s
ARG Arkhangelos 84.11 312 P P 17 30 59.5 +1.2
ARG pmax pmax
comp=Z,105nm,1.0s
EIL Elat 84.11 303 P P 17 30 59.0 +0.6
comp=Z,31nm,0.9s,baz=339,slow=5.2,SNR=23
EIL LR LR 18 12 14.6
comp=Z,102nm,20.7s,baz=108,slow=38
MGRS Mrkonjic Grad 84.16 324 ⇑iP P 17 30 59.5 +1.1
STU Stuttgart 84.17 331 P P 17 30 58.6 +0.2
STU IAmb IAmb 17 31 19.3
comp=Z,28nm,1.1s
STU Stuttgart 84.17 331 P P 17 30 58.6 +0.2
STU pmax pmax
comp=Z,28nm,1.1s
UPM Unac-Piva 84.18 322 eP P 17 31 00.3 +1.5
SPMN Marine on St. 84.20 35 P P 17 30 58.8 +0.2
SPMN IAmb IAmb 17 31 15.2
comp=Z,14nm,1.0s
ANMO Albuquerque 84.24 50 P P 17 31 00.6 +1.3
ANMO Albuquerque 84.24 50 P P 17 31 00.6 +1.3
ANMO pmax pmax
comp=Z,10.0nm,1.0s
ANMO Albuquerque 84.24 50 P P 17 31 00.3 +1.0
baz=312
WATA Walderalm 84.36 328 iPcP P 17 30 59.9 +0.4
comp=Z,4.1nm,0.6s
PMOR Pomariorio Ree 84.37 114 eT T 19 03 20.9
comp=Z,16nm,0.2s
WTTA Wattenberg 84.39 328 iPcP P 17 31 00.1 +0.4
comp=Z,6.8nm,0.7s
BGNE Belgrade 84.42 41 P P 17 30 59.5 -0.3
BGNE IAmb IAmb 17 31 01.4
comp=Z,37nm,1.2s
BGNE Belgrade 84.42 41 P P 17 30 59.9 +0.1
baz=317
ABTA Abfaltersbach 84.42 327 iP P 17 30 59.3 -0.6
comp=Z,14nm,1.3s
MOTA Moosalm 84.55 329 ePcP P 17 31 00.9 +0.4
comp=Z,24nm,1.4s
BMRD Maredsous 84.56 334 ⇑P P 17 31 00.1 -0.1
comp=Z,19nm,1.2s
RETA Reutte 84.57 329 ePcP P 17 31 01.4 +0.8
comp=Z,44nm,1.7s,SNR=6.8
PDG Podgorica 84.58 321 ⇑P P 17 31 01.0 +0.5
PDG Podgorica 84.58 321 ⇑iP P 17 31 01.0 +0.5
PDG Podgorica 84.58 321 P P 17 31 00.6 +0.1
BRY Bratogost 84.58 322 eP P 17 31 00.6 -0.2
BRY Bratogost 84.58 322 P P 17 31 01.5 +0.7
LIT Litokhoron 84.59 318 P P 17 31 00.4 -0.3
LIT Litokhoron 84.59 318 P P 17 31 00.4 -0.3
LIT pmax pmax
comp=Z,47nm,0.8s
WLF Walferdange 84.59 333 P P 17 31 00.6 +0.1
WLF IAmb IAmb 17 32 49.8
comp=Z,61nm,1.6s
WLF Walferdange 84.59 333 P P 17 31 00.6 +0.1
SQTA Sankt Quirin 84.60 328 iPcP P 17 31 01.3 +0.5
comp=Z,7.5nm,0.7s
D41A Chassel 84.63 32 P P 17 31 00.8 0.0
D41A IAmb IAmb 17 31 02.6
comp=Z,74nm,1.8s
STAL STALIGIAL 84.72 327 P P 17 31 00.3 -1.0
STAL IAmb IAmb 17 31 01.3
comp=Z,17nm,0.7s
OHR Ohrid 84.75 319 iP P 17 31 02.0 +0.5
DRME Dracevica, Mon 84.79 321 ⇑iP P 17 31 02.2 +0.6
SCHQ Schefferville 84.84 16 P P 17 31 02.8 +1.1
comp=Z,4.5nm,0.7s,baz=353,slow=6.1,SNR=12
SCHQ LR LR 18 10 48.6
comp=Z,83nm,20.1s,baz=350,slow=37
SCHQ Schefferville 84.84 16 P P 17 31 02.5 +0.9
319A Douglas 84.84 54 P P 17 31 03.2 +1.0
319A IAmb IAmb 17 31 04.9
comp=Z,9.9nm,0.9s
PPT Papeete 84.84 117 LR LR 18 05 07.3
comp=Z,134nm,20.3s,baz=223,slow=33
PPT2 Papeete2 84.86 117 eLR LR 17 57 47.6
comp=Z,351nm,29.2s
BFO Black Forest 84.87 331 P P 17 31 02.0 0.0
BFO IAmb IAmb 17 31 03.6
comp=Z,28nm,0.9s
BFO Black Forest 84.87 331 P P 17 31 02.0 0.0
BFO pmax pmax
comp=Z,28nm,0.9s
HCY Herceg Novi 84.94 321 eP P 17 31 02.2 -0.2
FETA Feichten 84.96 329 eP P 17 31 02.1 -0.5
comp=Z,10nm,0.7s
121A Cookes Peak, D 85.03 52 P P 17 31 04.7 +1.4
121A IAmb IAmb 17 31 06.2
comp=Z,9.7nm,0.8s
121A Cookes Peak, D 85.03 52 P P 17 31 04.7 +1.4
baz=312
TIR Tirane 85.06 320 P P 17 31 03.4 +0.4
TIR Tirane 85.06 320 P P 17 31 03.4 +0.4
TIR pmax pmax
comp=Z,29nm,0.7s
DAVA Damuels 85.09 329 ePcP P 17 31 03.8 +0.5
comp=Z,21nm,0.8s
KARP Karpathos 85.14 312 P P 17 31 03.5 -0.1
COWI Conover 85.15 33 P P 17 31 03.2 -0.1

COWI IAmb IAmb 17 31 04.9
comp=Z,10.0nm,0.8s
CDF Champ du Feu 85.20 331 *e*P **P 17 31 03.3 -0.4**
CDF pmax pmax
comp=Z,22nm,0.9s
G40A Rib Lake 85.33 34 P **P 17 31 04.9 +0.5**
G40A IAmb IAmb 17 31 06.0
comp=Z,12nm,0.8s
CTI Castel Tesino 85.34 328 P **P 17 31 03.7 -0.8**
CTI IAmb IAmb 17 31 04.8
comp=Z,8.8nm,0.8s
CTI Castel Tesino 85.34 328 P **P 17 31 03.7 -0.8**
CTI pmax pmax
comp=Z,9.0nm,0.8s
ECH Echery 85.41 331 P **P 17 31 03.7 -1.0**
ECH IAmb IAmb 17 31 05.9
comp=Z,18nm,0.8s
ECH Echery 85.41 331 P **P 17 31 03.7 -1.0**
ECH pmax pmax
comp=Z,18nm,0.8s
CBKS Cedar Bluff 85.44 43 P **P 17 31 05.2 +0.2**
CBKS IAmb IAmb 17 31 06.3
comp=Z,12nm,0.9s
CBKS Cedar Bluff 85.44 43 P **P 17 31 05.2 +0.2**
CBKS pmax pmax
comp=Z,12nm,1.0s
CBKS Cedar Bluff 85.44 43 P **P 17 31 05.6 +0.5**
baz=316
AGG Agios Georgios 85.45 317 P **P 17 31 04.0 -1.0**
AGG IAmb IAmb 17 31 05.2
comp=Z,8.8nm,0.7s
AGG Agios Georgios 85.45 317 P **P 17 31 04.0 -1.0**
AGG pmax pmax
comp=Z,9.0nm,0.7s
E43A Lone Tree Farm 85.83 31 P **P 17 31 07.2 +0.4**
E43A IAmb IAmb 17 31 08.2
comp=Z,11nm,0.7s
HINF Hinteralfeld 85.86 331 *e*P **P 17 31 06.1 -0.8**
HINF pmax pmax
comp=Z,68nm,1.8s
TEOL Teolo 85.88 327 P **P 17 31 06.8 -0.2**
TEOL IAmb IAmb 17 31 22.4
comp=Z,25nm,1.1s
HAU Haudompre 85.89 332 *e*P **P 17 31 06.3 -0.8**
HAU pmax pmax
comp=Z,12nm,0.7s
TUE Stuetta 85.97 329 P **P 17 31 07.3 -0.4**
TUE IAmb IAmb 17 31 33.3
comp=Z,16nm,0.9s
E44A Grand Marais A 86.07 31 P **P 17 31 07.9 0.0**
E44A IAmb IAmb 17 31 09.9
comp=Z,28nm,0.9s
E44A Grand Marais A 86.07 31 P **P 17 31 08.8 +0.9**
baz=324
MEH Mehetia 86.12 116 *e*T T 19 05 32.7
comp=Z,23nm,0.2s
IGT Igoumenitsa 86.15 318 P **P 17 31 09.6 +1.1**
IGT pmax pmax
comp=Z,23nm,1.6s
TAOE Nuku Hiva Isla 86.28 104 *e*LR LR 17 58 21.1
comp=Z,370nm,25.8s
MATQ Matagami 86.46 24 P **P 17 31 09.3 -0.4**
baz=330
SCIA State Center 86.53 38 P **P 17 31 11.1 +0.8**
SCIA IAmb IAmb 17 31 12.6
comp=Z,15nm,0.8s
SCIA State Center 86.53 38 P **P 17 31 11.2 +0.9**
baz=320
D46A Sault St. Mari 86.60 29 P **P 17 31 10.7 +0.1**
baz=326
IDI Anoyia 86.65 313 P **P 17 31 10.7 -0.4**
comp=Z,17nm,0.6s,baz=42,slow=10,SNR=22
SCTE Santa Cesarea 86.72 320 P **P 17 31 10.9 -0.4**
SGRT San Giovanni R 86.81 323 P **P 17 31 12.4 +0.6**
D47A Chapleau 86.82 29 P **P 17 31 11.4 -0.2**
baz=326
SENIN Lac Senin/Sane 86.88 330 P **P 17 31 13.3 +1.1**
KSU1 Kansas State U 86.91 41 P **P 17 31 12.2 0.0**
baz=318
E46A Sault Ste Mari 86.92 30 P **P 17 31 12.1 0.0**
E46A IAmb IAmb 17 31 13.8
comp=Z,15nm,1.1s
I42A Draeger Farm, 86.99 34 P **P 17 31 13.3 +0.8**
I42A IAmb IAmb 17 31 14.3
comp=Z,17nm,0.8s
ITM Ithomi 86.99 316 P **P 17 31 12.1 -0.6**
F45A CMU Biological 87.00 31 P **P 17 31 12.2 -0.2**
baz=325
H43A Windswept, Lux 87.03 33 P **P 17 31 13.1 +0.4**
MNTX Cornudas Mount 87.10 52 P **P 17 31 13.9 +0.7**
MNTX Cornudas Mount 87.10 52 P **P 17 31 14.5 +1.2**
baz=313
MSTX Muleshoe 87.13 49 P **P 17 31 14.2 +0.7**
MSTX IAmb IAmb 17 31 32.2
comp=Z,15nm,1.5s
AMTX Amarillo 87.13 47 P **P 17 31 13.7 +0.2**
AMTX IAmb IAmb 17 31 16.0
comp=Z,15nm,0.8s
AMTX Amarillo 87.13 47 P **P 17 31 14.9 +1.4**
baz=315
JFWS Jewell Farm 87.15 35 P **P 17 31 13.1 -0.2**
JFWS IAmb IAmb 17 31 14.6
comp=Z,12nm,0.9s
JFWS Jewell Farm 87.15 35 P **P 17 31 13.1 -0.2**
JFWS pmax pmax
comp=Z,12nm,1.0s
JFWS Jewell Farm 87.15 35 P **P 17 31 13.1 -0.2**
baz=322
MURB Monte Urbino 87.15 325 P **P 17 31 14.1 +0.7**
D48A Paudash Townsh 87.21 28 P **P 17 31 13.3 -0.2**
baz=327
NRCA Norcia 87.22 325 P **P 17 31 13.7 0.0**
E47A Iron Bridge 87.25 29 P **P 17 31 13.8 +0.1**
baz=326
LSQQ Lebel-sur-Quev 87.28 24 P **P 17 31 14.1 +0.4**
baz=330
L40A Anamosa 87.36 36 P **P 17 31 14.0 -0.3**
L40A IAmb IAmb 17 31 15.8
comp=Z,12nm,0.8s
LOR Lormes 87.43 333 P **P 17 31 15.5 +0.9**
LOR pmax pmax
comp=Z,20nm,2.6s
ACER Acerenza 87.45 322 P **P 17 31 13.5 -1.4**
G45A Suttons Bay 87.46 31 P **P 17 31 15.3 +0.5**
baz=324
INTR Introdacqua 87.49 324 P **P 17 31 13.7 -1.4**
FLN La Foliniere 87.65 336 *e*P **P 17 31 15.0 -0.5**
FLN pmax pmax
comp=Z,135nm,1.9s
E48A Lockeyer 87.66 28 P **P 17 31 15.9 +0.3**
baz=327
LDF La Druitiere 87.68 336 *e*P **P 17 31 15.9 +0.2**
LDF pmax pmax
comp=Z,38nm,1.3s
SSF Saint Saulge 87.74 333 *e*P **P 17 31 16.6 +0.6**
SSF pmax pmax
comp=Z,21nm,1.2s
LPL La Plagne 87.80 330 *e*P **P 17 31 16.7 +0.1**
LPL pmax pmax
comp=Z,79nm,2.0s
LPG La Plagne 87.81 330 *e*P **P 17 31 16.8 0.0**
LPG pmax pmax
comp=Z,15nm,0.8s
VLDQ Val d'Or 87.95 25 P **P 17 31 16.3 -0.6**
VLDQ IAmb IAmb 17 31 17.8
comp=Z,10nm,0.8s
SMF Signal de Mont 87.97 332 *e*P **P 17 31 17.8 +0.7**
SMF pmax pmax
comp=Z,90nm,2.0s
AVF Avril sur Loir 88.02 333 *e*P **P 17 31 17.1 -0.3**
AVF pmax pmax
comp=Z,17nm,0.9s
H46A Fife Lake 88.06 31 P **P 17 31 18.1 +0.5**
baz=325
G47A Hillman 88.08 30 P **P 17 31 18.2 +0.5**
baz=326
GRR Gorron 88.10 336 *e*P **P 17 31 17.5 -0.2**
GRR pmax pmax
comp=Z,78nm,1.5s
D51A Lot 18 Range I 88.17 27 P **P 17 31 18.4 +0.4**
baz=329
TIP Timpagrande 88.26 320 P **P 17 31 18.4 -0.3**
TIP IAmb IAmb 17 31 20.3
comp=Z,39nm,1.5s
F49A Sandfield 88.30 29 P **P 17 31 18.9 +0.2**
baz=327

H47A Mio 88.42 31 P **P 17 31 20.5 +1.2**
baz=326
D52A ZEK Kipawa Sen 88.60 26 P **P 17 31 20.0 -0.1**
baz=330
ORIF Oris-en-Rattie 88.63 330 *e*P **P 17 31 20.4 0.0**
ORIF pmax pmax
comp=Z,23nm,1.4s
SGMF Saint Gilles 88.76 337 *e*P **P 17 31 20.7 -0.1**
SGMF pmax pmax
comp=Z,82nm,1.5s
D53A Lac Vacive, Po 88.76 26 P **P 17 31 21.0 +0.1**
D53A IAmb IAmb 17 31 22.4
comp=Z,14nm,1.0s
D53A Lac Vacive, Po 88.76 26 P **P 17 31 21.0 +0.1**
baz=330
TBI Tubuai 88.77 121 *e*LR LR 17 59 28.3
comp=Z,275nm,26.8s
TBI Tubuai 88.77 121 *e*T T 19 08 50.3
comp=Z,63nm,0.3s
ROSF Rostrenen 88.91 337 *e*P **P 17 31 21.4 -0.1**
ROSF pmax pmax
comp=Z,132nm,1.6s
WMOK Wichita Mounta 88.91 46 P **P 17 31 22.6 +0.8**
WMOK IAmb IAmb 17 31 38.9
comp=Z,12nm,1.4s
WMOK Wichita Mounta 88.91 46 P **P 17 31 22.6 +0.8**
WMOK pmax pmax
comp=Z,12nm,1.5s
WMOK Wichita Mounta 88.91 46 P **P 17 31 23.0 +1.2**
baz=317
I48A Sherman Twp 88.96 31 P **P 17 31 23.0 +1.2**
baz=326
F51A Arnstein 88.96 27 P **P 17 31 22.0 +0.1**
baz=328
D54A Lac Fusel, La 89.05 25 P **P 17 31 22.1 -0.1**
baz=331
E52A Mattawa 89.11 27 P **P 17 31 22.5 0.0**
baz=329
QUIF Quistinic 89.25 337 *e*P **P 17 31 23.6 +0.5**
QUIF pmax pmax
comp=Z,235nm,2.1s
J47A Sumner 89.28 32 P **P 17 31 24.5 +1.2**
J47A IAmb IAmb 17 31 25.8
comp=Z,22nm,0.8s
J47A Sumner 89.28 32 P **P 17 31 24.6 +1.2**
baz=325
E53A Dumoine, Ponti 89.38 26 P **P 17 31 23.6 -0.1**
baz=330
MFF Saint Martin d 89.42 335 *e*P **P 17 31 23.9 0.0**
MFF pmax pmax
comp=Z,45nm,1.4s
HDIL Hopedale 89.44 36 P **P 17 31 25.1 +0.9**
baz=322
I49A Point Hope 89.52 30 P **P 17 31 25.4 +1.0**
baz=326
D55A Sainte-Anne-du 89.56 24 P **P 17 31 25.3 +0.7**
baz=332
J48A Bridge Port 89.66 31 P **P 17 31 26.1 +0.9**
J48A Bridge Port 89.66 31 P **P 17 31 26.6 +1.5**
baz=326
TUL1 Leonard 89.71 43 P **P 17 31 26.2 +0.7**
TUL1 IAmb IAmb 17 31 27.4
comp=Z,10nm,0.7s
TUL1 Leonard 89.71 43 P **P 17 31 26.5 +1.0**
baz=318
D56A ZEC Mazanza, M 89.76 24 P **P 17 31 26.2 +0.6**
baz=332
TX31 Lajitas Ar. Si 89.79 52 P **P 17 31 27.4 +1.2**
TX31 IAmb IAmb 17 31 28.3
comp=Z,6.3nm,0.8s
TX32 Lajitas Array 89.79 52 P **P 17 31 27.4 +1.2**
TX32 IAmb IAmb 17 31 28.3
comp=Z,6.4nm,0.8s
TXAR Lajitas Array 89.79 52 P **P 17 31 26.9 +0.7**
comp=Z,5.6nm,0.7s,baz=299,slow=3.3,SNR=69
TXAR LR LR 18 05 40.1
comp=Z,27nm,21.8s,baz=0.0,slow=32
TXAR Lajitas Array 89.79 52 P **P 17 31 26.7 +0.5**
J49A Marlette 89.87 31 P **P 17 31 27.2 +1.1**
baz=326
ABTX Abilene, Hawle 89.93 48 P **P 17 31 27.3 +0.6**
ABTX IAmb IAmb 17 31 28.9
comp=Z,12nm,1.1s
ABTX Abilene, Hawle 89.93 48 P **P 17 31 28.0 +1.4**
baz=316
K48A Perry 89.93 32 P **P 17 31 28.0 +1.6**
baz=326
RJF Les Rejaudoux 89.96 333 *e*P **P 17 31 26.4 -0.1**
RJF pmax pmax
comp=Z,43nm,1.3s
H52A Wyevale 90.06 28 P **P 17 31 27.7 +0.7**
baz=328
D57A Chemin Vers le 90.07 23 P **P 17 31 27.8 +0.9**
baz=333
E56A St. Veronique 90.12 24 P **P 17 31 28.0 +0.8**
baz=332
G53A Haliburton 90.12 27 P **P 17 31 28.2 +0.9**
baz=329
L47A Sherwood 90.15 33 P **P 17 31 28.3 +0.9**
baz=325
D58A Chemin du LacG 90.31 23 P **P 17 31 28.4 +0.3**
baz=334
HHAR Hobbs 90.42 42 P **P 17 31 28.9 0.0**
HHAR IAmb IAmb 17 31 30.2
comp=Z,5.8nm,0.7s
CCM Cathedral Cave 90.45 39 P **P 17 31 29.2 +0.3**
CCM IAmb IAmb 17 31 45.8
comp=Z,28nm,1.5s
CCM Cathedral Cave 90.45 39 P **P 17 31 29.3 +0.3**
CCM pmax pmax
comp=Z,28nm,1.5s
CCM Cathedral Cave 90.45 39 P **P 17 31 29.5 +0.6**
baz=321
M47A Cromwell 90.47 33 P **P 17 31 29.5 +0.5**
baz=325
L48A N Adams 90.50 32 P **P 17 31 30.1 +0.9**
baz=325
E57A Chemin Saint G 90.52 24 P **P 17 31 29.6 +0.5**
baz=333
LFF La Frestale 90.55 333 *e*P **P 17 31 29.4 +0.1**
LFF pmax pmax
comp=Z,375nm,2.4s
MGMO Mountain Grove 90.63 40 P **P 17 31 30.2 +0.4**
MGMO IAmb IAmb 17 31 31.2
comp=Z,5.6nm,0.8s
D59A Saint-Raymond 90.70 22 P **P 17 31 30.1 +0.2**
baz=334
M48A Edgerton 90.76 33 P **P 17 31 30.8 +0.5**
N47A Urbana 90.82 34 P **P 17 31 30.4 -0.2**
N47A IAmb IAmb 17 31 32.2
comp=Z,15nm,0.8s
N47A Urbana 90.82 34 P **P 17 31 31.0 +0.4**
baz=325
E58A La Victoria 90.83 23 P **P 17 31 31.3 +0.8**
baz=333
U40A Yellville 90.94 41 P **P 17 31 30.7 -0.5**
U40A Yellville 90.94 41 P **P 17 31 31.1 -0.1**
baz=320
D60A Saint Jean D'O 91.06 22 P **P 17 31 31.6 +0.1**
baz=335
M49A Liberty Center 91.08 32 P **P 17 31 32.5 +0.7**
baz=326
H55A Tweed 91.13 27 P **P 17 31 32.4 +0.4**
baz=330
N48A Decatur 91.13 33 P **P 17 31 32.6 +0.5**
baz=325
W39A Magazine 91.32 42 P **P 17 31 33.8 +0.8**
baz=319
JCT Junction City 91.37 49 P **P 17 31 33.2 -0.2**
JCT IAmb IAmb 17 31 35.1
comp=Z,8.3nm,0.7s
JCT Junction City 91.37 49 P **P 17 31 33.2 -0.2**
JCT pmax pmax
comp=Z,8.0nm,0.7s
JCT Junction City 91.37 49 P **P 17 31 34.3 +0.9**
baz=316
G57A Newington 91.40 25 P **P 17 31 33.7 +0.6**
baz=332
D62A Allapoint, All 91.44 20 P **P 17 31 33.8 +0.5**
baz=336
N49A Columbus Grove 91.45 33 P **P 17 31 34.2 +0.7**
baz=326
F59A Saint Guilaume 91.45 23 P **P 17 31 33.9 +0.5**
baz=334
WHTX Lake Whitney, 91.66 47 P **P 17 31 34.8 +0.1**
WHTX Lake Whitney, 91.66 47 P **P 17 31 35.4 +0.7**
baz=317

G58A Ormstown 91.67 24 P **P 17 31 35.4 +1.0**
baz=333
D63A Stockholm 91.73 20 P **P 17 31 35.7 +1.0**
baz=337
F61A St Evariste 91.89 22 P **P 17 31 36.5 +1.0**
baz=335
MIAR Mount Ida 91.93 43 P **P 17 31 36.4 +0.5**
MIAR IAmb IAmb 17 31 37.9
comp=Z,10nm,0.8s
MIAR Mount Ida 91.93 43 P **P 17 31 36.4 +0.5**
MIAR pmax pmax
comp=Z,10.0nm,0.8s
MIAR Mount Ida 91.93 43 P **P 17 31 37.5 +1.7**
baz=320
O49A Covington 91.98 33 P **P 17 31 37.0 +0.9**
baz=325
N50A Nevada 92.02 32 P **P 17 31 37.0 +0.8**
baz=326
WHAR Wooly Hollow 92.05 41 P **P 17 31 36.9 +0.5**
WHAR IAmb IAmb 17 31 37.9
comp=Z,12nm,0.8s
M52A Chesterland 92.12 31 P **P 17 31 37.7 +1.1**
baz=328
W41B Gary Mavity, V 92.16 41 P **P 17 31 37.6 +0.7**
baz=320
L53A Girard 92.21 30 P **P 17 31 37.8 +0.8**
baz=328
E63A Oxbow 92.21 20 P **P 17 31 37.4 +0.5**
baz=337
O50A Cable 92.33 33 P **P 17 31 38.8 +1.1**
baz=326
G61A St-Isidore-de- 92.35 23 P **P 17 31 38.1 +0.5**
baz=334
P49A Miami Univ. Ec 92.35 34 P **P 17 31 38.6 +0.8**
baz=325
X40A Basin Creek Fa 92.37 42 P **P 17 31 38.8 +1.0**
baz=320
E64A Bridgewater 92.38 20 P **P 17 31 37.7 0.0**
baz=337
Q48A North Vernon 92.39 35 P **P 17 31 38.9 +1.0**
baz=324
M53A WI Miller and 92.48 30 P **P 17 31 38.8 +0.5**
baz=328
ACSO Alum Creek Sta 92.53 32 P **P 17 31 39.5 +0.9**
baz=326
J57A Williamstown 92.54 26 P **P 17 31 39.1 +0.6**
baz=331
P50A Jamestown 92.70 33 P **P 17 31 40.1 +0.8**
baz=326
G62A West of Eustis 92.71 22 P **P 17 31 40.5 +1.2**
baz=335
L55A Hinsdale 92.72 28 P **P 17 31 40.6 +1.1**
baz=330
K57A Scipio Center 92.95 27 P **P 17 31 40.1 -0.3**
baz=331
J59A Piesco 93.01 25 P **P 17 31 41.5 +0.8**
baz=332
I60A Shoreham 93.08 24 P **P 17 31 41.9 +1.0**
baz=333
H62A Milan 93.10 23 P **P 17 31 42.4 +1.4**
baz=335
N54A Moraine State 93.16 30 P **P 17 31 42.3 +0.9**
baz=328
G64A Maxfield 93.19 21 P **P 17 31 42.1 +0.7**
baz=336
M55A Ridgway 93.20 29 P **P 17 31 42.2 +0.6**
baz=329
K58A Earlville 93.23 26 P **P 17 31 42.2 +0.5**
baz=332
T47A Sharon Grove 93.31 37 P **P 17 31 41.9 -0.3**
T47A IAmb IAmb 17 32 09.5
comp=Z,15nm,1.1s
Q51A Peebles 93.38 33 P **P 17 31 43.1 +0.7**
Q51A Peebles 93.38 33 P **P 17 31 43.4 +0.9**
baz=326
P52A Corning 93.39 32 P **P 17 31 43.1 +0.5**
baz=327
L57A Andrews Acres 93.47 28 P **P 17 31 44.1 +1.2**
baz=331
K59A Cooperstown 93.50 26 P **P 17 31 44.1 +1.1**
baz=332
O54A Avella 93.66 31 P **P 17 31 45.1 +1.3**
baz=328
N55A Marion Center 93.71 30 P **P 17 31 44.7 +0.7**
baz=329
H65A Eastbrook 93.85 21 P **P 17 31 44.7 +0.2**
baz=337
L59A Walton 93.95 26 P **P 17 31 45.5 +0.4**
baz=332
K60A Five Rivers En 93.97 25 P **P 17 31 45.6 +0.5**
baz=333
P54A Burton 94.11 31 P **P 17 31 46.2 +0.4**
baz=328
K61A Williamstown 94.14 25 P **P 17 31 45.7 -0.1**
baz=333
U49A Red Boiling Sp 94.33 36 P **P 17 31 47.2 +0.4**
baz=324
L60A Shokan 94.42 26 P **P 17 31 47.0 -0.1**
baz=332
Q54A Coxs Mills 94.48 32 P **P 17 31 48.1 +0.5**
baz=328
KEST Kesra 94.63 323 LR LR 18 19 38.4
comp=Z,132nm,18.3s,baz=302,slow=39
O60A Telford 95.47 27 P **P 17 31 52.2 +0.2**
baz=332
S55A Lewisburg 95.65 32 P **P 17 31 53.4 +0.4**
baz=328
T54A Tazewell 95.78 33 P **P 17 31 53.5 -0.1**
baz=327
TKL Tuckaleechee C 95.96 36 P **P 17 31 55.5 +1.1**
comp=Z,2.2nm,0.6s,baz=254,slow=20,SNR=3.5
R58A Rapidan 96.22 30 P **P 17 31 55.4 -0.1**
baz=330
M66A Nantucket 96.42 23 P **P 17 31 56.7 +0.4**
baz=335
ESDC Sonseca Array 96.84 334 LR LR 18 19 54.5
comp=Z,162nm,20.1s,baz=15,slow=38
X53A Estanollee 97.13 36 P Pdif 17 32 00.1 +0.4
baz=326
S60A Water View 97.27 30 P Pdif 17 32 00.4 +0.1
baz=331
U57A Blanch 97.27 32 P Pdif 17 32 00.7 +0.4
baz=329
U58A Oxford 97.64 32 P Pdif 17 32 02.2 +0.2
baz=329
V59A Middlesex 98.30 32 P **P 17 32 04.6 -0.3**
baz=329
TORD Torodi Ar. Bea 116.98 315 PKP **PKPdf 17 37 12.1 -0.2**
comp=Z,1.5nm,0.5s,baz=20,slow=1.4,SNR=11
TORD PP PP 17 38 12.5 -8.9
comp=Z,2.4nm,0.8s,baz=22,slow=6.6,SNR=7.4
TORD Torodi Ar. Bea 116.98 315 **PKPdf 17 37 11.5 -0.9**
LBTB Lobatse 124.72 263 **PKiKP 17 37 27.4 0.0**
LBTB Lobatse 124.72 263 PKIKP **PKiKP 17 37 27.4 0.0**
SDV Santo Domingo 124.92 40 PKP **PKiKP 17 37 28.1 -0.1**
comp=Z,7.6nm,0.8s,baz=277,slow=1.0,SNR=8.7
SDV Santo Domingo 124.92 40 **PKPdf 17 37 27.8 -0.1**
DBIC Dimbokro 125.93 317 PKP **PKPdf 17 37 29.8 +0.2**
comp=Z,5.2nm,0.6s,baz=350,slow=3.9,SNR=10
DBIC PP **PP 17 39 20.3 -1.9**
comp=Z,4.0nm,0.9s,baz=1.8,slow=10,SNR=4.2
DBIC Dimbokro 125.93 317 **PKPdf 17 37 29.3 -0.3**
DBIC **PP 17 39 18.8 -3.5**
TIC Toumodi 126.04 317 *e*PKIKP **PKPdf 17 37 29.5 -0.3**
KIC Kosan Boka 126.12 317 *e*PKIKP **PKPdf 17 37 29.7 -0.3**
comp=Z,6.1nm,0.6s
LIC Lamto 126.39 317 *e*PKIKP **PKPdf 17 37 30.0 -0.5**
comp=Z,13nm,0.8s
BOSA Boshof 126.69 260 PKP **PKiKP 17 37 31.2 0.0**
comp=Z,3.4nm,0.8s,baz=125,slow=2.0,SNR=4.4
BOSA Boshof 126.69 260 **PKPdf 17 37 30.7 0.0**
QSPA South Pole Qui 127.29 180 **PKPdf 17 37 30.5 -0.1**
SNAA Sanae 141.24 197 PKPdf **PKPdf 17 37 50.1 -6.4**
VNA2 Neumayer--Watz 142.81 196 PKPdf **PKPdf 17 37 56.9 -2.4**
baz=114,slow=2.3
VNA3 Neumayer Olymp 143.07 195 PKPdf PKPbc 17 37 56.6 -0.2
SAML Samuel 143.87 44 PKPbc 17 38 00.6 0.0
SAML Samuel 143.87 44 PKIKP PKPbc 17 38 00.6 0.0
LPAZ La Paz 146.41 59 PKPbc **PKPbc 17 38 09.7 +0.4**
comp=Z,6.0nm,0.7s,baz=309,slow=2.1,SNR=18
LPAZ La Paz 146.41 59 **PKPbc 17 38 09.1 -0.1**
LPAZ La Paz 146.41 59 PKP2 **PKPbc 17 38 09.1 -0.1**
MNMC Minye Minye 147.31 64 **PKPbc 17 38 11.1 -0.3**
PB11 IPOC Station P 147.67 65 **PKPdf 17 38 10.3 +1.0**
GO01 Chusmiza 147.94 65 **PKPbc 17 38 14.2 +0.9**
PB01 IPOC Station P 148.40 67 PKPbc **PKiKP 17 38 15.5 -0.5**
LVC Limon Verde 149.97 69 PKPbc **PKiKP 17 38 19.5 +0.4**

comp=Z,4.2nm,0.7s,baz=216,slow=4.1,SNR=4.2
LVC Limon Verde 149.97 69 **PKPbc** **17 38 18.5 +0.3**
LVC Limon Verde 149.97 69 PKP2 **PKPbc** **17 38 18.5 +0.3**
PLCA Paso Flores 155.06 107 PKPab **PKPab** **17 38 48.8 +4.1**
comp=Z,1.6nm,0.7s,baz=215,slow=6.7,SNR=2.9
BDFB Brasilia 156.63 24 PKPab **PKPab** **17 38 53.2 +1.4**
comp=Z,1.2nm,0.3s,baz=56,slow=3.8,SNR=3.5

GCG **07** *17:31:16.2±0.5, 13.06N×93.72W, h34km±648km, MD4.4*
NEIC **07** *17:31:33.2±2.8, 13.55N±0.07×92.33W±0.05, h12km±3km, mb4.3/20, Error ellipse: s-maj=10.0km s-min=7.1km az=168.0*
IDC **07** *17:31:33.3±2.1, 13.72N×92.36W, h0km, mb3.8/3, mb1 4.2/7, mb1mx3.8/39, mbtmp3.9/7, ML3.9/4, MS3.2/5, Ms1 3.2/5, ms1mx2.8/41, Error ellipse: s-maj=38.9km s-min=24.5km az=171.0*
MEX **07** *17:31:37.5±0.6, 13.78N×92.39W, h12km±141km, MD3.7*
UCR **07** *17:31:38.3±1.1, 13.80N×92.21W, h28km±6km, ML4.0, mb4.3(NEIC)*
SNET **07** *17:31:38.4±1.0, 13.79N×92.21W, h28km±5km, ML4.2*
ISC 07 17:31:36.2±2.3, 13.73N±0.09×92.34W±0.06, h25km±15km, n60, σ1.56/71, mb4.2/11, 2C, Off coast of Chiapas

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
ERG Entre ros, C 1.03 46⇑ iP **Pb** **17 31 56.0 +0.7**
THIG 1.18 3 eP **Pn** **17 31 55.9 -1.3**
THIG i S **Sn** **17 32 09.5 -2.9**
STG3 Santiaguito 3, 1.23 37 eP **Pn** **17 31 57.5 -0.5**
FUG Fuego 3 1.62 64 eP **Pn** **17 32 03.6 +0.3**
FUG eS Sb 17 32 40.9 +15
PCG Pacaya 1.80 68 eP **Pn** **17 32 06.9 +0.9**
IXG Ixpaco 1.89 76⇑ eP **Pn** **17 32 07.4 +0.3**
NBG Las Nubes 2.11 66 eP **Pn** **17 32 12.2 +2.0**
PCIG 2.14 337 eP **Pn** **17 32 08.8 -1.7**
PCIG eS **Sn** **17 32 33.3 -3.0**
APG El Apazote 2.21 55 Pn **Pn** **17 32 12.6 +1.0**
20nm,0.3s,baz=242,slow=7.5,SNR=123
APG LR LR 17 32 34.7
comp=Z,90nm,19.0s,baz=221,slow=28
APG Sn **Sb** **17 32 42.1 -0.7**
32nm,0.3s,baz=332,slow=12,SNR=5.6
CCIG Comitan 2.55 4 **Pn** **17 32 18.1 +2.0**
CCIG Sn **Sb** **17 32 52.7 +0.4**
CEVE Cerro Verde 2.64 88 eP **Pn** **17 32 17.9 +0.5**
CEVE eS **Sn** **17 32 49.0 +0.2**
CEVE IAML 17 33 04.5
comp=Z,1μm,0.4s
CEVE Cerro Verde 2.64 88 eP **Pn** **17 32 17.9 +0.5**
CEVE eS **Sn** **17 32 49.0 +0.2**
CEVE IAML 17 33 04.5
comp=Z,1μm,0.4s
SBLS San Blas 2.64 87 eP **Pn** **17 32 18.7 +1.3**
SBLS eS **Sn** **17 32 49.3 +0.4**
SBLS San Blas 2.64 87 eP **Pn** **17 32 18.7 +1.3**
SBLS eS **Sn** **17 32 49.3 +0.4**
SNJE San Jose 2.66 87 eP **Pn** **17 32 19.1 +1.4**
SNJE eS **Sn** **17 32 49.3 +0.1**
SNJE San Jose 2.66 87 eP **Pn** **17 32 19.1 +1.4**
SNJE eS **Sn** **17 32 49.3 +0.1**
MTO3 Montecristo 2.96 77 eP **Pn** **17 32 22.0 +0.1**
MTO3 Montecristo 2.96 77 eP **Pn** **17 32 22.0 +0.1**
SNET Serv Nac Est T 3.02 90 Pn **Pn** **17 32 20.8 -1.7**
LFRS El Faro 3.18 91 eP **Pn** **17 32 25.6 +0.7**
COEG Centro de Oper 3.36 91 eP **Pn** **17 32 27.9 +0.6**
COEG Centro de Oper 3.36 91 eP **Pn** **17 32 27.9 +0.6**
CMIG Matias Romero 4.15 324 Pn **Pn** **17 32 38.4 +0.3**
comp=Z,4.2nm,0.3s,baz=138,slow=13,SNR=9.1
CMIG Sn **Sn** **17 33 29.7 +3.9**
comp=Z,9.6nm,0.3s,baz=155,slow=13,SNR=4.7
TGUH Tegucigalpa,Un 4.93 86 Pn **Pn** **17 32 47.8 -1.1**
ESTN Estel 5.84 95 Pn **Pn** **17 32 59.6 -1.7**
TLIG Tlapa 7.11 303 Pn **Pn** **17 33 18.7 -0.2**
TEIG Tepich 7.54 30 Pn **Pn** **17 33 23.6 -1.0**
comp=Z,5.4nm,0.3s,baz=116,slow=14,SNR=27
TEIG Sn **Sn** **17 34 53.2 +3.9**
comp=Z,1.8nm,0.3s,baz=140,slow=16,SNR=4.5
TEIG LR LR 17 36 41.4
comp=Z,274nm,20.1s,baz=140,slow=41
TEIG Tepich 7.54 30 **Pn** **17 33 25.4 +0.8**
TEIG **Sn** **17 34 52.6 +3.3**
UNM Universidad Na 8.61 311 **Pn** **17 33 39.0 -0.5**
CBCY The Bluff, Cay 13.44 62 Pn **Pn** **17 34 42.1 -3.4**
DWPF Disney Wildern 17.55 34 **Pn** **17 35 39.5 +0.3**
TXAR Lajitas Array 18.75 328 P **P** **17 35 55.0 +1.0**
comp=Z,0.1nm,0.3s,baz=157,slow=12,SNR=8.4
TXAR Lajitas Array 18.75 328 **Pn** **17 35 55.8 +1.8**
TX31 Lajitas Ar. Si 18.75 328 P **Pn** **17 35 54.8 +0.8**
TX32 Lajitas Array 18.75 328 P **Pn** **17 35 55.1 +1.1**
LPIG La Paz 19.87 304 LR LR 17 44 01.8
comp=Z,70nm,18.4s,baz=220,slow=38
X37A Clayton 20.95 353 P **P** **17 36 18.1 +0.7**
X37A IAmb IAmb 17 36 25.0
comp=Z,8.5nm,1.0s
MNTX Cornudas Mount 21.52 328 P **P** **17 36 23.9 +0.4**
WMOK Wichita Mounta 21.72 346 P **P** **17 36 24.7 -0.9**
W35A Tecumseh 21.72 350 P **P** **17 36 23.6 -2.1**
MSTX Muleshoe 22.27 337 P **P** **17 36 31.2 -0.5**
MSTX IAmb IAmb 17 36 33.2
comp=Z,8.6nm,1.0s
LCAR Lake Charles 22.27 3 P **P** **17 36 28.2 -3.3**
LCAR IAmb IAmb 17 36 30.8
comp=Z,4.4nm,0.7s
AMTX Amarillo 22.70 340 P **P** **17 36 35.4 -0.8**
AMTX IAmb IAmb 17 36 37.8
comp=Z,11nm,0.7s
TKL Tuckaleechee C 23.16 18 LR LR 17 47 17.5
comp=Z,116nm,18.4s,baz=183,slow=41
S44A Carbondale 24.03 6 P **P** **17 36 47.2 -2.0**
S44A IAmb IAmb 17 36 48.4
comp=Z,8.3nm,0.7s
TZTN Tazewell 24.05 18 P **P** **17 36 46.8 -2.7**
CCM Cathedral Cave 24.25 2 P **P** **17 36 50.3 -1.0**
CCM IAmb IAmb 17 37 02.1
comp=Z,18nm,1.8s
CRPR Cabo Rojo, PR 24.62 77 P **P** **17 36 51.7 -3.2**
SJG San Juan 25.54 77 LR LR 17 48 02.2
comp=Z,56nm,18.5s,baz=106,slow=39
T25A Trinidad 25.69 337 P **P** **17 37 03.2 -1.5**
T25A IAmb IAmb 17 37 09.1
comp=Z,7.0nm,1.1s
S22A 4UR Ranch, Cre 27.18 334 P **P** **17 37 20.1 +1.9**
S22A IAmb IAmb 17 37 21.5
comp=Z,5.2nm,1.2s
MVCO Mesa Verde 27.48 331 P **P** **17 37 22.1 +1.3**
MVCO IAmb IAmb 17 37 25.1
comp=Z,5.6nm,1.0s
PDAR Pinedale Array 32.53 336 P **P** **17 38 06.8 +1.3**
comp=Z,0.5nm,0.8s,baz=181,slow=5.4,SNR=3.7
REDW Red Top Meadow 33.55 335 P **P** **17 38 15.1 +0.7**
MCMT McKenzie Canyo 35.58 335 P **P** **17 38 32.5 +0.5**
YKA Yellowknife Ar 51.22 347 P **P** **17 40 37.0 -0.4**
comp=Z,3.0nm,0.7s,baz=152,slow=7.4,SNR=36
YKA PcP **PcP** **17 41 54.0 +1.6**
comp=Z,0.5nm,0.7s,baz=156,slow=3.5,SNR=7.3
INK Inuvik 60.61 344 P **P** **17 41 44.7 +0.1**
ILAR Eielson Array 62.96 337 P **P** **17 42 01.1 +0.6**
comp=Z,0.8nm,0.7s,baz=146,slow=4.9,SNR=9.7
ILAR Eielson Array 62.96 337 P **P** **17 42 01.3 +0.8**
CMAR Chiang Mai Arr 146.14 341 PKPbc **PKPbc** **17 51 15.9 +0.7**
comp=Z,3.1nm,0.7s,baz=337,slow=3.5,SNR=30

IDC **07** *17:39:01.2±0.8, 38.42S×75.25W, h0km, mb4.1/7, mb1 4.2/10, mb1mx4.1/32, mbtmp4.1/10, ML4.3/2, MS3.4/5, Ms1 3.4/5, ms1mx3.2/18, Error ellipse: s-maj=28.0km s-min=19.5km az=80.0*
SJA **07** *17:39:02.7±0.7, 38.19S×75.29W, h40km±17km, ML4.0*
NEIC **07** *17:39:03.9±2.0, 38.20S±0.07×75.29W±0.2, h19km±3km, Error ellipse: s-maj=18.9km s-min=9.7km az=85.0*
GUC **07** *17:39:04.8±0.5, 38.13S×75.09W, h14km±203km, ML3.8*
ISC 07 17:39:06.2±0.6, 38.20S±0.05×75.16W±0.08, h35km, n62, σ1.28/71, mb4.2/12, MS3.8/3, 1D, Off coast of central Chile

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
BI04 Isla Mocha 1.02 102 eP **Pn** **17 39 21.7 -2.3**
BI04 i S **Sn** **17 39 34.4 -2.7**
BI04 IAML 17 39 35.7
comp=N,5μm,0.6s
CCHI Chillan 2.93 58 eP **Pn** **17 39 50.1 -0.1**
CCHI Chillan 2.93 58 i P **Pn** **17 39 50.3 +0.1**
CCHI i Sg **Sn** **17 40 25.2 +1.1**
CANA Caviahue 3.25 86⇓ iP **Pn** **17 39 55.4 +0.6**
CANA i Sg **Sn** **17 40 33.9 +1.5**
GO05 Huala 4.11 40 eP **Pn** **17 40 05.5 -1.0**
GO05 i S **Sn** **17 40 53.0 -0.4**
GO05 Huala 4.11 40 **Pn** **17 40 05.1 -1.4**
GO05 Huala 4.11 40 i P **Pn** **17 40 05.7 -0.8**
PLCA Paso Flores 4.37 127 Pn **Pn** **17 40 08.2 -1.9**
comp=N,7.1nm,0.3s,baz=318,slow=14,SNR=36
PLCA Sn **Sn** **17 41 01.0 +1.1**
comp=N,23nm,0.3s,baz=222,slow=7.0,SNR=9.7
PLCA Paso Flores 4.37 127 **Pn** **17 40 09.4 -0.7**
PLCA **Sn** **17 41 00.4 +0.5**
PLCA Paso Flores 4.37 127 i P **Pn** **17 40 11.0 +0.8**
PLCA i Sg **Sn** **17 41 01.3 +1.4**
PLCA IAML 17 41 04.3
comp=Z,153nm,1.0s
BO02 Sierra Bellavi 4.90 47 eP **Pn** **17 40 16.7 -0.7**
BO02 i S **Sn** **17 41 12.8 -0.1**
PUMA Malargue 5.32 61 i P **Pn** **17 40 24.0 +0.9**
COIS El Sosneado 5.44 57 i P **Pn** **17 40 25.3 +0.6**
PEL Peldehue 6.22 37 **Pn** **17 40 34.6 -1.0**
AAGR Agrelo 7.25 47 i P **Pn** **17 40 49.9 +0.2**
ARCO CERRO ARCO 7.37 45 i P **Pn** **17 40 51.5 0.0**
CFA Coronel Fontan 8.69 43 Pn **Pn** **17 41 08.3 -1.1**
comp=Z,1.8nm,0.3s,baz=219,slow=14,SNR=26
CFA Sn **Sn** **17 42 46.8 +0.6**
comp=Z,1.1nm,0.3s,baz=96,slow=13,SNR=3.8
CFA LR LR 17 44 36.5
comp=Z,100nm,21.3s,baz=186,slow=38
GO04 Tololo Observa 8.78 26 **Pn** **17 41 08.6 -2.3**
ACCO Cerro Coronel 9.11 35 i P **Pn** **17 41 15.3 -0.1**
AROD Rodeo 9.29 32 i P **Pn** **17 41 18.1 +0.2**
GO02 Mina Guanaco 13.83 22 **Pn** **17 42 17.9 -2.0**
PB04 IPOC Station P 16.39 17 P **P** **17 42 55.5 -0.7**
PB04 IAmb IAmb 17 42 59.5
comp=Z,28nm,0.9s
LVC Limon Verde 16.44 21 Pn **P** **17 42 57.0 0.0**
comp=Z,0.3nm,0.3s,baz=185,slow=11,SNR=4.0
LVC Limon Verde 16.44 21 P **P** **17 42 55.8 -1.2**
PB01 IPOC Station P 17.79 18 P **P** **17 43 11.0 -0.6**
PB11 IPOC Station P 18.99 16 P **P** **17 43 24.1 -0.7**
PB11 IAmb IAmb 17 43 39.6
comp=Z,24nm,1.6s
CPUP Villa Florida 19.13 57 P **Pn** **17 43 28.3 +1.0**
baz=239,slow=9.2,SNR=6.9
CPUP LR LR 17 51 21.3
comp=Z,91nm,20.0s,baz=228,slow=38
CPUP Villa Florida 19.13 57 P **Pn** **17 43 27.7 +0.4**
GO01 Chusmiza 19.18 17 P **Pn** **17 43 29.1 +0.7**
MNMC Minye Minye 19.61 16 P **Pn** **17 43 32.2 -1.1**
MNMC IAmb IAmb 17 43 35.7
comp=Z,32nm,1.6s
LPAZ La Paz 22.69 18 P **P** **17 44 07.9 +2.5**
comp=Z,2.4nm,0.9s,baz=239,slow=2.8,SNR=4.4
LPAZ La Paz 22.69 18 P **P** **17 44 07.2 +1.9**
LPAZ IAmb IAmb 17 44 09.7
comp=Z,6.0nm,1.2s
SIV San Ignacio 25.37 33 P **P** **17 44 32.6 +2.5**
comp=Z,3.3nm,0.8s,baz=255,slow=9.0,SNR=10
SAML Samuel 31.06 23 P **P** **17 45 19.6 -1.3**
SAML IAmb IAmb 17 45 34.2
comp=Z,4.6nm,1.3s
BDFB Brasilia 32.81 54 LR LR 17 58 27.1
comp=Z,65nm,21.3s,baz=194,slow=35
RUSC La Rusia 43.91 3 P **P** **17 47 11.4 +1.4**
SNAA Sanae 48.71 156 P **P** **17 47 46.2 -0.5**
QSPA South Pole Qui 52.04 180 P **P** **17 48 11.4 -0.6**
comp=Z,8.3nm,0.9s,baz=265,slow=0.7,SNR=23
QSPA South Pole Qui 52.04 180 P **P** **17 48 11.1 -1.0**
ANWB Willy Bob 56.98 15 P **P** **17 48 48.3 +0.1**
MAW Mawson 69.86 164 LR LR 18 18 45.9
comp=Z,50nm,19.9s,baz=55,slow=34
TXAR Lajitas Array 72.28 334 P **P** **17 50 29.7 +1.7**
comp=Z,0.7nm,0.7s,baz=158,slow=8.9,SNR=8.0
TXAR Lajitas Array 72.28 334 P **P** **17 50 29.2 +1.2**
CCM Cathedral Cave 77.32 347 P **P** **17 50 57.4 +0.6**
CCM IAmb IAmb 17 50 58.5
comp=Z,6.7nm,0.9s
T25A Trinidad 79.68 337 P **P** **17 51 11.6 +1.4**
T25A IAmb IAmb 17 51 13.4
comp=Z,6.7nm,1.1s
X16A Lo Mia Camp, P 79.72 330 P **P** **17 51 12.4 +2.0**
X16A IAmb IAmb 17 51 14.3
comp=Z,3.2nm,1.1s
BOSA Boshof 80.32 119 P **P** **17 51 13.9 0.0**
comp=Z,3.1nm,0.8s,baz=190,slow=7.8,SNR=4.2
BOSA Boshof 80.32 119 P **P** **17 51 14.0 0.0**
BOSA IAmb IAmb 17 51 15.2
comp=Z,9.7nm,1.1s
HRV Adam Dziewonsk 80.39 3 P **P** **17 51 14.1 +0.5**
DUG Dugway, Tooele 85.30 332 P **P** **17 51 40.7 +1.4**
DUG IAmb IAmb 17 51 44.9
comp=Z,5.6nm,1.2s
PDAR Pinedale Array 86.44 335 P **P** **17 51 46.2 +1.2**
comp=Z,0.7nm,0.8s,baz=134,slow=4.3,SNR=5.8
PDAR LR LR 18 25 39.1
comp=Z,41nm,18.5s,baz=90,slow=32
PDAR Pinedale Array 86.44 335 P **P** **17 51 45.5 +0.5**
TORD Torodi Ar. Bea 87.97 72 P **P** **17 51 53.2 +0.4**
comp=Z,0.5nm,0.8s,baz=273,slow=2.6,SNR=2.7
BRTR Keskin Array B 126.00 64 PKP **PKiKP** **17 58 04.8 0.0**
comp=Z,0.6nm,0.9s,baz=204,slow=2.7,SNR=4.5
BRTR Keskin Array B 126.00 64 PKPdf **PKiKP** **17 58 04.5 -0.3**
GEYT Alibeck 143.52 76 PKP **PKPdf** **17 58 35.2 -1.8**
comp=Z,2.3nm,0.8s,baz=204,slow=3.3,SNR=5.8
GEYT Alibeck 143.52 76 PKPbc 17 58 35.0 +0.6
KSH Kashi 157.52 78 PKP **PKPdf** **17 58 57.8 -0.8**
KSH sPKP 17 59 10.7
KSH PP **PP** **18 03 06.1 -4.3**
ZALV Zalesovo Beam 159.12 35 PKP **PKPdf** **17 58 59.8 0.0**
comp=Z,0.4nm,0.4s,baz=302,slow=3.3,SNR=4.8
ZALV PKPab **PKPab** **17 59 38.3 +1.5**
comp=Z,1.4nm,0.9s,baz=278,slow=4.3,SNR=5.8
ZALV Zalesovo Beam 159.12 35 **PKPdf** **17 58 59.4 -0.4**
ZALV **PKPab** **17 59 38.1 +1.3**
MKAR Makanchi Array 161.34 55 PKP **PKPdf** **17 59 03.1 +0.5**
comp=Z,2.4nm,1.3s,baz=242,slow=2.6,SNR=4.2
SONM Songino Array 170.30 354 PKP **PKPdf** **17 59 10.5 +0.6**
comp=Z,0.3nm,0.7s,baz=232,slow=1.6,SNR=3.5

CNRM **07** *18:08:03.9±2.5, 36.24N×11.82W, h0km, Error ellipse: s-maj=20.2km s-min=11.6km az=102.0*
MDD **07** *18:08:03.6±2.0, 36.98N×12.23W, h0km, mbLg3.1/10, Error ellipse: s-maj=16.1km s-min=11.3km az=80.0, PRXIMO*
INMG **07** *18:08:03.5±1.1, 36.66N×12.60W, h54km±18km, ML2.7, Error ellipse: s-maj=9.4km s-min=5.3km az=89.0*
ISC 07 18:07:57.5±1.9, 36.68N±0.04×12.36W±0.09, h10km, n70, σ2.97/96, Azores-Cape St. Vincent Ridge

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
PFVI Vila Bisbo 2.87 80 eP **Pn** **18 08 45.9 +2.7**
PFVI eS **Sn** **18 09 18.6 +0.8**
PFVI A A 18 09 21.1
15nm,0.7s
PFVI Vila Bisbo 2.87 80 P **Pn** **18 08 46.2 +3.0**
3.2nm,0.1s,SNR=4.0
PFVI S **Sn** **18 09 18.1 +0.3**
11nm,0.1s,SNR=7.9
PFVI Vila Bisbo 2.87 80 P **Pn** **18 08 45.4 +2.2**
PFVI S **Sn** **18 09 17.9 +0.1**
PTEO Sao Teotonio 3.03 72 eS **Sn** **18 09 22.2 +0.4**
PTEO A A 18 09 25.4
14nm,0.6s
PTEO Sao Teotonio 3.03 72 S **Sn** **18 09 22.2 +0.4**
6.9nm,0.6s
MORF Marmelete 3.03 77 eP **Pn** **18 08 49.2 +3.6**
MORF eS **Sn** **18 09 23.0 +1.0**
MORF A A 18 09 27.1
16nm,0.1s
MORF Marmelete 3.03 77 P **Pn** **18 08 49.2 +3.6**
MORF S **Sn** **18 09 23.0 +1.0**
16nm,0.1s
PMAFR Mafra 3.33 46 eP **Pn** **18 08 51.2 +1.6**
PMAFR eS **Sn** **18 09 28.6 -0.7**
PMAFR Mafra 3.33 46 P **Pn** **18 08 52.4 +2.8**
5.9nm,0.2s,SNR=7.9
PMAFR S **Sn** **18 09 28.3 -0.9**
26nm,0.2s,SNR=6.0
PNCL Nicolau / Gran 3.37 64 eP Pn **18 08 53.2 +3.1**
PNCL eS **Sn** **18 09 30.4 +0.3**
PNCL A A 18 09 33.1
7.9nm,0.1s
PNCL Nicolau / Gran 3.37 64 P **Pn** **18 08 53.2 +3.1**
PNCL S **Sn** **18 09 30.4 +0.3**
7.9nm,0.1s
PCVE Castro Verde 3.58 73 eP **Pn** **18 08 57.2 +4.2**
PCVE eS **Sn** **18 09 35.1 -0.3**
PCVE A A 18 09 38.4
5.1nm,0.2s
PCVE Castro Verde 3.58 73 P **Pn** **18 08 57.2 +4.2**
PCVE S **Sn** **18 09 35.1 -0.3**
5.1nm,0.2s
PBDV Barranco-do-Ve 3.59 80 eP **Pn** **18 08 57.8 +4.6**
PBDV eS **Sn** **18 09 37.5 +1.8**
PBDV A A 18 09 40.0
5.3nm,0.3s
PBDV Barranco-do-Ve 3.59 80 P **Pn** **18 08 57.8 +4.6**
PBDV S **Sn** **18 09 37.5 +1.8**
5.3nm,0.3s
PVAQ Vaqueiros 3.78 78 eP **Pn** **18 08 59.0 +3.2**
PVAQ eS **Sn** **18 09 41.1 +0.7**
PVAQ A A 18 09 43.7
7.4nm,0.3s
PVAQ Vaqueiros 3.78 78 P **Pn** **18 08 59.0 +3.2**
PVAQ S **Sn** **18 09 41.1 +0.7**
7.4nm,0.3s
PVAQ Vaqueiros 3.78 78 P **Pn** **18 08 59.5 +3.7**
PVAQ S **Sn** **18 09 40.7 +0.3**
PBEJ Beja 3.82 68 eS **Sn** **18 09 41.2 -0.2**
PBEJ A A 18 09 44.0
3.6nm,0.4s
PBEJ Beja 3.82 68 S **Sn** **18 09 41.2 -0.2**
1.8nm,0.4s
EVO Evora 3.92 60 eS **Sn** **18 09 43.0 -0.6**
EVO A A 18 09 49.6
10nm,0.1s
EVO Evora 3.92 60 P **Pb** **18 09 07.6 +1.1**
EVO S **Sn** **18 09 42.0 -1.6**
EVO Evora 3.92 60 eP **Pb** **18 09 07.6 +1.1**
EVO eS **Sn** **18 09 42.0 -1.6**
EGRO El Granado 3.99 76 P Pn 18 09 03.8 +5.1
1.9nm,0.1s,SNR=7.9
EGRO S **Sn** **18 09 45.1 -0.3**
1.7nm,0.1s,SNR=7.9
PMTG Montargil 4.05 53 eS **Sn** **18 09 47.9 +1.0**
PMTG A A 18 09 52.4
7.2nm,0.1s
PMTG Montargil 4.05 53 S **Sn** **18 09 47.9 +1.0**
7.2nm,0.1s
PTOM Tomar 4.28 45 eS **Sn** **18 09 51.3 -1.3**
PTOM A A 18 09 58.9
15nm,0.4s
PTOM Tomar 4.28 45 S **Sn** **18 09 51.3 -1.3**
7.6nm,0.4s
PESTR Estremoz 4.36 58 eP Pn 18 09 08.4 +4.6
PESTR eS **Sn** **18 09 53.2 -1.5**
PESTR A A 18 09 57.3
4.6nm,0.5s
PCAS Casmilo, Conde 4.53 41 eS **Sn** **18 09 56.6 -2.3**
PCAS A A 18 10 01.1
7.3nm,0.2s
PCAS Casmilo, Conde 4.53 41 S **Sn** **18 09 56.6 -2.3**
7.3nm,0.2s
EMIN Mina Concepcio 4.67 75 P **Pn** **18 09 11.2 +3.3**
0.5nm,0.1s,SNR=7.0
EMIN S **Sn** **18 10 00.8 -1.4**
1.1nm,0.1s,SNR=6.8
EBAD Badajoz 4.72 62 P **Pn** **18 09 11.1 +2.4**
1.9nm,0.1s,SNR=7.6
EBAD S **Sn** **18 10 01.5 -2.0**
1.4nm,0.0s,SNR=5.9
PMRV Marv??o 4.79 53 eP **Pn** **18 09 12.9 +3.3**
PMRV eS **Sn** **18 10 02.9 -2.2**
PMRV A A 18 10 04.4
7.0nm,0.2s
PMRV Marv??o 4.79 53 P **Pn** **18 09 12.9 +3.3**
PMRV S **Sn** **18 10 02.9 -2.2**
7.0nm,0.2s
PCBR Castelo Branco 4.97 49 eS **Sn** **18 10 07.8 -1.9**
PCBR A A 18 10 13.6
2.8nm,0.3s
PCBR Castelo Branco 4.97 49 S **Sn** **18 10 07.8 -1.9**
1.4nm,0.3s
ESPR Espera 5.22 86 P **Pn** **18 09 19.4 +3.8**
2.2nm,0.1s,SNR=5.4
MTE Manteigas 5.29 44 eS **Sn** **18 10 15.8 -2.0**
MTE A A 18 10 17.8
6.9nm,0.3s
MTE Manteigas 5.29 44 S **Sn** **18 10 15.8 -2.0**
3.5nm,0.3s
PVIS Viseu 5.33 40 eS **Sn** **18 10 15.1 -3.6**
PVIS A A 18 10 17.9
16nm,0.2s
PVIS Viseu 5.33 40 S **Sn** **18 10 15.1 -3.6**
8.1nm,0.2s
SRHM Skhour des Reh 5.58 137 S **Sn** **18 10 21.1 -3.7**
ZHG ZHG 5.69 123 S **Sn** **18 10 22.2 -5.3**
ECAB El Cabril 5.70 74 P **Pn** **18 09 25.3 +3.1**
0.5nm,0.1s,SNR=6.9
ECAB S **Sn** **18 10 25.9 -1.8**
0.1nm,0.1s
PVRL Vila Real 5.84 37 eS **Sn** **18 10 27.6 -3.7**
PVRL A A 18 10 31.2
9.3nm,0.2s
PVRL Vila Real 5.84 37 S **Sn** **18 10 27.6 -3.7**
4.7nm,0.2s
EPLA Plasencia 5.98 54 P Pn 18 09 32.7 +6.7
1.5nm,0.2s,SNR=7.9
EPLA S **Sn** **18 10 31.8 -2.8**
3.2nm,0.1s,SNR=6.2
PCAB Cabril 6.05 32 eS **Sn** **18 10 32.3 -3.9**
PCAB Cabril 6.05 32 S **Sn** **18 10 32.3 -3.9**
MVO Moncorvo 6.11 41 eS **Sn** **18 10 34.6 -3.2**
MVO A A 18 10 35.9
8.6nm,0.5s
MVO Moncorvo 6.11 41 S **Sn** **18 10 33.9 -3.9**
3.4nm,0.1s,SNR=7.7
EZAM Zamans 6.16 26 S **Sn** **18 10 32.5 -6.4**
24nm,0.5s,SNR=7.9
ELOB Lobios 6.16 31 S **Sn** **18 10 34.2 -5.0**
5.0nm,0.1s,SNR=6.5
EADA Adamuz 6.37 74 P Pn 18 09 37.4 +6.1
0.9nm,0.2s,SNR=7.9
EADA S **Sn** **18 10 41.7 -2.5**
0.4nm,0.2s,SNR=7.9
OUK Oukaimeden 6.61 144 P **Pn** **18 09 36.2 +1.2**
OUK S **Sn** **18 10 45.2 -5.4**
PBRG Braganca 6.72 39 eS **Sn** **18 10 48.8 -4.1**
PBRG Braganca 6.72 39 S **Sn** **18 10 48.8 -4.1**
ECAL Calabor 6.83 38 S **Sn** **18 10 51.2 -4.3**
3.2nm,0.2s,SNR=6.5
TTIG Tnine Tigouga, 6.93 151 P Pn 18 09 36.2 -3.0
PAB San Pablo 6.93 63 P Pn 18 09 46.2 +7.0
0.6nm,0.3s,SNR=7.9
PAB S **Sn** **18 10 54.0 -4.1**
0.1nm,0.2s,SNR=7.9
EAGO Agolada(Pontev 6.94 27 S **Sn** **18 10 51.6 -6.7**
3.3nm,0.2s,SNR=7.9
TISM Timmit 6.96 134 P **Pn** **18 09 38.0 -1.4**
TISM S Sn 18 10 48.8 -10
AKLM AKL 7.25 105 S **Sn** **18 11 04.0 -2.0**
ESDC Sonseca Array 7.26 63 Pn **Pn** **18 09 48.2 +4.6**
0.4nm,0.2s,baz=252,slow=13,SNR=4.6
ESDC S **Sn** **18 11 02.6 -3.5**
0.3nm,0.2s,baz=251,slow=23,SNR=3.8
MD31 MD31 7.32 119 P **Pn** **18 09 45.8 +1.3**
MD31 S **Sn** **18 11 02.4 -5.2**
OUZM OUZ 7.40 139 P **Pn** **18 09 47.3 +1.7**
OUZM S **Sn** **18 11 04.5 -5.3**
MDT Midelt 7.45 119 P **Pn** **18 09 48.0 +1.6**
MDT S **Sn** **18 11 06.8 -4.1**
EQES Quesada 7.49 79 S **Sn** **18 11 10.1 -1.9**
0.5nm,0.3s,SNR=7.9
GUD Guadarrama 7.54 56 S **Sn** **18 11 09.0 -4.2**
0.1nm,0.2s,SNR=7.9

IDC **07** *18:16:38.4±7.8, 5.02S×153.79E, h120km±57km, mb3.2/6, mb1 3.4/7, mb1mx3.3/30, mbtmp3.7/7, Error ellipse: s-maj=64.4km s-min=24.7km az=89.0*
ISC 07 18:16:36.3±1.5, 5.0S±0.2×153.9E±0.2, h105km, n8,

σ0§64/9, mb3.6/6, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.00	236	P	Pn	18 18 30.4	+0.6
	10nm,0.3s,baz=40,slow=9.8,SNR=38						
PMG				S	Sn	18 19 58.1	-0.5
	2.5nm,0.3s,baz=37,slow=20,SNR=3.8						
WRA	Warramunga Arr	24.15	230	P	P	18 21 43.1	+0.2
	1.4nm,0.5s,baz=56,slow=10,SNR=15						
ASAR	Alice Springs	26.76	224	P	P	18 22 05.9	-0.6
	0.3nm,0.6s,baz=54,slow=9.2,SNR=9.8						
STKA	Stephens Creek	29.13	202	P	P	18 22 27.7	+0.2
	0.9nm,0.6s,baz=34,slow=14,SNR=5.5						
CMAR	Chiang Mai Arr	58.95	295	P	P	18 26 25.2	0.0
	0.2nm,0.4s,baz=100,slow=5.8,SNR=3.2						
SONM	Songino Array	67.07	327	P	P	18 27 19.2	+0.7
	0.3nm,0.4s,baz=134,slow=6.2,SNR=2.7						
MKAR	Makanchi Array	81.19	319	P	P	18 28 40.0	-0.6
	0.4nm,0.8s,baz=116,slow=3.4,SNR=2.5						
TORD	Torodi Ar. Bea	151.41	288	PKPbc	PKPbc	18 36 18.3	-0.7
	0.2nm,0.3s,baz=88,slow=2.2,SNR=4.4						

KRNET **07** *18:23:09.4±0.1, 39.99N×75.55E, mb3.6*
SOME **07** *18:23:09.4, 40.08N×75.67E, h5km*
NNC **07** *18:23:13.3±1.0, 40.16N×75.67E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=7.9km s-min=5.7km az=161.0*
ISC 07 18:23:13.5±1.4, 40.17N±0.06×75.55E±0.03, h10km, n66, σ1§71/104, 28C-17D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn	1.31	15	⇓iP	Pn	18 23 37.0	-1.2
	baz=12						
NRN				⇓iS	Sn	18 23 56.9	+1.0
	baz=12						
KZA	Kyzart	1.92	353	⇑iP	Pb	18 23 47.8	-1.1
	baz=54						
KZA				⇑iS	Sg	18 24 15.8	+0.5
	baz=54						
KZA	Kyzart	1.92	353	P	Pb	18 23 48.5	-0.4
	SNR=43						
ULHL	Ulahol	2.14	14	⇓iP	Pb	18 23 50.8	+1.3
	baz=13						
ULHL				⇓iS	Sg	18 24 21.2	-1.1
	baz=13						
ULHL	Ulahol	2.14	14	P	Pb	18 23 51.6	-0.9
	SNR=87						
UCH	Uchtor	2.20	340	⇓iP	Pn	18 23 51.6	+1.1
	baz=41						
UCH				⇓iS	Sg	18 24 22.5	-1.8
	baz=41						
UCH	Uchtor	2.20	340	P	Pb	18 23 52.7	-1.0
	SNR=46						
ARSB	Arslanbob	2.27	301	⇑iP	Pn	18 23 51.6	+0.5
	baz=5.0						
ARSB				⇑iS	Sb	18 24 22.5	-0.2
	baz=5.0						
KDJ	Kajisay	2.32	32	⇓iP	Pn	18 23 52.8	+0.9
	baz=30						
KDJ				⇓iS	Sb	18 24 24.6	+0.4
	baz=30						
BOOM	Boomskoye usch	2.34	7	⇑iP	Pn	18 23 53.5	+1.3
	baz=7.0						
BOOM				⇑iS	Sb	18 24 25.7	+0.8
	baz=7.0						
AML	Almayashu	2.41	325	⇓iP	Pn	18 23 54.5	+1.2
	baz=27						
AML				⇓iS	Sb	18 24 27.0	-0.1
	baz=27						
AML	Almayashu	2.41	325	P	Pb	18 23 55.4	-1.8
	SNR=36						
KBK	Karagaybulak	2.53	350	⇓iP	Pn	18 23 56.0	+1.2
	baz=50						
KBK				⇓iS	Sb	18 24 30.5	+0.2
	baz=50						
KBK	Karagaybulak	2.53	350	P	Pb	18 23 57.8	-1.2
	SNR=15						
AAK	Ala-Archa	2.59	343	⇑iP	Pn	18 23 57.0	+1.4
	baz=44						
AAK				⇑iS	Sb	18 24 31.8	-0.3
	baz=44						
AAK	Ala-Archa	2.59	343	P	Pb	18 23 58.5	-1.7
	SNR=28						
AAK	Ala-Archa	2.59	343	⇑Pn	Pb	18 23 58.4	-1.7
	33nm,0.7s						
AAK				⇑Lg	Lg	18 24 33.8	
	122nm,1.1s						
FRU1	Bishkek	2.73	346	⇑iP	Pn	18 23 58.9	+1.5
	baz=46						
FRU1				⇑iS	Sb	18 24 34.9	-1.1
	baz=46						
EKS2	Erkin-Say	2.83	332	⇑iP	Pn	18 23 59.9	+1.1
	baz=34						
EKS2				⇑iS	Sb	18 24 36.9	-1.9
	baz=34						
EKS2	Erkin-Say	2.83	332	P	Pn	18 24 00.2	+1.4
	SNR=9.8						
KST	Kastek	2.89	6	eP	Pb	18 24 06.1	+0.9
	18nm,0.6s						
KST				eS	Sg	18 24 46.8	+0.5
	78nm,0.6s						
KST	Kastek	2.89	6	Pg	Pb	18 24 06.0	+0.9
	11nm,0.3s						
KST				Lg	Lg	18 24 46.8	
	78nm,0.6s						
CHMS	Chumysh	2.89	348	⇑iP	Pn	18 24 01.1	+1.5
	baz=49						
CHMS				⇑iS	Sb	18 24 38.6	-2.0
	baz=49						
CHMS	Chumysh	2.89	348	⇑Pn	Pn	18 24 02.0	+2.4
	2.4nm,0.3s						
CHMS				⇑Pg	Pb	18 24 06.0	+0.9
	14nm,0.6s						
CHMS				⇓Lg	Lg	18 24 47.1	
	42nm,0.8s						
IZV	Izvestkoviy	2.98	15	eP	Pb	18 24 07.6	+1.0
	33nm,0.5s						
IZV				eS	Sg	18 24 49.5	+0.4
	60nm,0.4s						
MTBS	Maitube	3.03	12	eP	Pb	18 24 08.4	+0.8
	13nm,0.4s						
MTBS				eS	Sg	18 24 51.0	+0.1
	26nm,0.3s						
MTBS	Maitube	3.03	12	Pg	Pb	18 24 08.1	+0.5
	5.6nm,0.3s						
MTBS				Lg	Lg	18 24 51.0	
	26nm,0.3s						
TNSS	Tian-Shan	3.05	20	eP	Pb	18 24 08.1	0.0
	15nm,0.4s						
TNSS				eS	Sg	18 24 51.2	-0.4
	39nm,0.4s						
TNSS	Tian-Shan	3.05	20	Pg	Pb	18 24 08.1	0.0
	6.9nm,0.4s						
TNSS				Lg	Lg	18 24 51.2	
	34nm,0.6s						
ANVS	Anan'yevo	3.06	31	⇓iP	Pn	18 24 03.5	+1.4
	baz=29						
ANVS				⇓iS	Sb	18 24 42.6	-3.0
	baz=29						
DGS	Degeres	3.08	3	eP	Pb	18 24 09.5	+1.1
	15nm,0.4s						
DGS				eS	Sg	18 24 52.6	+0.3
	77nm,0.7s						
DGS	Degeres	3.08	3	Pg	Pb	18 24 09.5	+1.1
	15nm,0.4s						
DGS				Lg	Lg	18 24 52.6	
	77nm,0.7s						
MRKS	Merke	3.11	327	eP	Pb	18 24 10.3	+1.3
	18nm,0.3s						
MRKS				eS	Sg	18 24 54.5	+1.1
	27nm,0.4s						
MRKS	Merke	3.11	327	Pg	Pb	18 24 10.3	+1.3
	18nm,0.3s						
MRKS				Lg	Lg	18 24 54.5	
	27nm,0.4s						
ARK	Arkit	3.17	302	⇑iP	Pn	18 24 03.7	+0.2
	baz=5.0						
ARK				⇑iS	Sn	18 24 43.5	+2.2
	baz=5.0						
USP	Ospenovka	3.19	346	⇑iP	Pn	18 24 05.3	+1.5
	baz=47						
USP				⇑iS	Sb	18 24 45.9	-3.4
	baz=47						
USP	Ospenovka	3.19	346	P	Pn	18 24 06.2	+2.4
	SNR=18						
MDOK	Medeo	3.20	20	eP	Pb	18 24 10.5	0.0
	8.4nm,0.5s						
MDOK				eS	Sg	18 24 55.1	-1.1
	51nm,0.9s						
MDOK	Medeo	3.20	20	Pn	Pn	18 24 05.3	+1.4
	20nm,1.0s						
MDOK				⇑Lg	Lg	18 24 54.6	
	77nm,1.0s						
MDOK	Medeo	3.20	20	Pg	Pb	18 24 10.5	0.0
	7.6nm,0.4s						
MDOK				Lg	Lg	18 24 55.1	
	51nm,0.9s						
KNDC	Almaty	3.23	19	⇑Pn	Pn	18 24 06.9	+2.7
	14nm,0.4s						
KNDC				⇑Lg	Lg	18 24 54.9	
	80nm,0.5s						
KOTS	Kotyrbulak	3.28	20	eP	Pb	18 24 12.6	+0.7
	27nm,0.5s						
KOTS				eS	Sg	18 24 57.9	-1.0
	194nm,0.6s						
KOTS	Kotyrbulak	3.28	20	Pg	Pb	18 24 12.6	+0.7
	27nm,0.5s						
KOTS				Lg	Lg	18 24 57.8	
	194nm,0.6s						
SGDS	Sogindy	3.35	348	Pg	Pb	18 24 14.5	+1.4
	6.8nm,0.5s						
SGDS				Lg	Lg	18 25 01.3	
	17nm,0.5s						
KRBS	Karabastau	3.53	2	eP	Pb	18 24 17.4	+1.4
	10nm,0.4s						
KRBS				eS	Sg	18 25 06.3	-0.4
	20nm,0.5s						
KRBS	Karabastau	3.53	2	Pg	Pb	18 24 17.4	+1.4
	4.1nm,0.4s						
KRBS				Lg	Lg	18 25 06.3	
	20nm,0.5s						
SATY	Saty	3.60	36	eP	Pb	18 24 18.0	+0.7
	16nm,0.9s						
SATY				eS	Sg	18 25 07.1	-1.9
	16nm,0.7s						
BTK	Batken	3.63	270	⇑iP	Pn	18 24 09.2	-0.6
	baz=73						
BTK				⇑iS	Sn	18 24 52.4	-0.3
	baz=73						
KUU	Kurty	3.77	9	eP	Pb	18 24 21.4	+1.3
	6.1nm,0.4s						
KUU				eS	Sg	18 25 13.2	-1.3
	58nm,0.7s						
KUU	Kurty	3.77	9	Pg	Pb	18 24 21.4	+1.3
	1.4nm,0.1s						
KUU				Lg	Lg	18 25 13.2	
	28nm,0.7s						
CHKK	Chushkaly	3.84	16	eP	Pb	18 24 22.8	+1.5
	7.5nm,0.7s						
CHKK				eS	Sg	18 25 15.3	-1.4
	79nm,0.7s						
KURS	Kuram	3.85	30	eP	Pb	18 24 22.0	+0.4
	9.5nm,0.6s						
KURS				eS	Sg	18 25 14.2	-3.0
	14nm,0.4s						
KURS	Kuram	3.85	30	Pg	Pb	18 24 22.0	+0.4
	9.5nm,0.6s						
KURS				Lg	Lg	18 25 14.2	
	14nm,0.4s						
UZB	Uzynbulak	3.95	40	eP	Pb	18 24 23.3	-0.1
	5.0nm,0.7s						
UZB				eS	Sg	18 25 16.4	-4.0
	10nm,0.5s						
UZB	Uzynbulak	3.95	40	Pg	Pb	18 24 23.3	-0.1
	5.0nm,0.7s						
UZB				Lg	Lg	18 25 16.4	
	10nm,0.5s						
KPKS	Kokpek	4.04	34	eP	Pb	18 24 24.5	-0.3
	6.5nm,0.2s						
KPKS				eS	Sb	18 25 18.5	+4.7
	48nm,0.5s						
SHLS	Shalkode	4.18	43	eP	Pg	18 24 32.4	-1.3
	4.8nm,0.5s						
SHLS				eS	Sg	18 25 32.4	+4.6
	15nm,0.6s						
SHLS	Shalkode	4.18	43	Pg	Pg	18 24 32.4	-1.3
	4.8nm,0.5s						
SHLS				Lg	Lg	18 25 32.4	
	15nm,0.6s						
PDGK	Podgornoye	4.32	42	⇓Pg	Pb	18 24 29.4	-0.2
	6.9nm,0.9s						
PDGK				⇓Lg	Lg	18 25 28.8	
	14nm,0.6s						
ARXS	Arharly	4.38	22	eP	Pb	18 24 32.3	+1.7
	5.8nm,0.4s						
ARXS				eS	Sg	18 25 31.4	-2.8
	11nm,0.5s						
ARXS	Arharly	4.38	22	Pg	Pb	18 24 32.3	+1.7
	5.8nm,0.4s						
ARXS				Lg	Lg	18 25 31.5	
	11nm,0.5s						
KK31	Karatay Array	4.78	309	Pn	Pn	18 24 26.2	+0.7
	0.3nm,0.4s,baz=122,slow=12,SNR=16						
KK31				Pg	Pb	18 24 39.7	+2.4
	1.3nm,0.4s,baz=123,slow=16,SNR=14						
KK31				⇑Lg	Lg	18 25 46.1	
	3.3nm,0.5s,baz=123,slow=27,SNR=3.1						
DJR	Jarkent	5.22	36	eP	Pb	18 24 47.1	+2.3
	0.5nm,0.1s						
DJR				eS	Sg	18 25 57.0	-3.9
	6.9nm,0.6s						
DJR	Jarkent	5.22	36	Pg	Pb	18 24 47.1	+2.3
	0.5nm,0.1s						
DJR				Lg	Lg	18 25 57.0	
	6.9nm,0.6s						
KAPS	Kapalarasan	5.83	27	eP	Pb	18 24 57.5	+2.2
	2.2nm,0.9s						
KAPS				eS	Sg	18 26 14.8	-5.8
	5.3nm,0.7s						
KAPS	Kapalarasan	5.83	27	Pg	Pb	18 24 57.5	+2.2
	2.2nm,0.9s						
KAPS				Lg	Lg	18 26 14.8	
	5.3nm,0.7s						

NEIC **07** *18:26:05.1±1.8, 23.20S±0.08×179.8W±0.1, h544km±7km, mb4.8/81, Error ellipse: s-maj=15.5km s-min=11.6km az=110.0*
IDC **07** *18:26:06.5±1.4, 23.17S×179.89W, h549km±14km, mb3.8/17, mb1 3.9/19, mb1mx3.8/33, mbtmp4.7/19, Error ellipse: s-maj=13.8km s-min=12.1km az=167.0*
ISC 07 18:26:05.4±0.4, 23.19S±0.06×179.71W±0.06, h550km, n194, σ1§31/201, mb4.8/55, 1C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.82	338	P	P	18 27 43.8	+1.2
NIUE	Niue	10.01	68	P	P	18 28 24.8	+1.4
	baz=9.9,SNR=6.7						
NIUE	Niue	10.01	68	P	P	18 28 23.9	+0.4
AFI	Afiamalu	11.91	41	P	P	18 28 40.6	-2.6
	3.8nm,0.3s,baz=225,slow=4.3,SNR=6.2						
AFI				S	S	18 30 46.1	-6.8
	1.4nm,0.3s,baz=168,slow=9.3,SNR=3.1						
AFI	Afiamalu	11.91	41	P	P	18 28 41.7	-1.5
DZM	Mont Dzumac	12.83	272	P	P	18 28 50.4	-2.3
	0.2nm,0.3s,baz=162,slow=19,SNR=2.4						
DZM	Mont Dzumac	12.83	272	P	P	18 28 52.1	-0.5
NOUC	Port Laguerre	12.96	272	P	P	18 28 52.7	-1.2
SANVU	Saraoutou	14.55	300	P	P	18 29 09.7	-0.6
URZ	Urewera	15.26	190	P	P	18 29 16.4	-1.0
	1.4nm,0.3s,baz=20,slow=15,SNR=11						
URZ				S	S	18 31 50.4	-4.7
	0.8nm,0.3s,baz=86,slow=18,SNR=7.7						
URZ	Urewera	15.26	190	P	P	18 29 14.4	-3.0
URZ				IAmb	IAmb	18 29 26.9	
	comp=Z,77nm,1.7s						
URZ					S	18 31 48.9	-6.2
HIZ	Hauiti	15.96	196	P	P	18 29 21.5	-2.8
BKZ	Black Stump Fm	16.25	191	P	P	18 29 23.6	-3.6
BKZ				IAmb	IAmb	18 29 37.3	
	comp=Z,51nm,1.6s						
MHEZ	Mangahewa	16.63	196	P	P	18 29 44.6	+14
OGWZ	Otaki Gorge	18.09	193	P	P	18 29 43.4	-0.5
DUWZ	D'Urville Isla	18.36	195	P	P	18 29 46.9	+0.6
MTW	Mount Morrison	18.36	192	P	P	18 29 45.9	-0.4
CAW	Cannon Point	18.39	193	P	P	18 29 46.9	+0.3
TRWZ	Traveller	18.56	191	P	P	18 29 48.2	0.0
MSWZ	Moikau Station	18.66	192	P	P	18 29 47.1	-2.0
MSWZ	Moikau Station	18.66	192	P	P	18 29 49.3	+0.3
TCW	Tory Channel	18.66	194	P	P	18 29 49.9	+0.8
SNZO	South Karori	18.66	193	P	P	18 29 49.0	-0.1
BHW	Baring Head	18.72	193	P	P	18 29 48.1	-1.5
BHW	Baring Head	18.72	193	P	P	18 29 49.8	+0.1
QRZ	Quartz Range	18.76	199	P	P	18 29 51.2	+1.2
QRZ	Quartz Range	18.76	199	P	P	18 29 51.4	+1.5
PLWZ	Palliser	18.80	192	P	P	18 29 50.1	-0.3
NNZ	Nelson	18.89	196	P	P	18 29 51.4	+0.3
TUWZ	Tuamarina	18.95	195	P	P	18 29 50.6	-1.1
TUWZ	Tuamarina	18.95	195	P	P	18 29 51.3	-0.3
BSWZ	Blackbirch Sta	19.23	195	P	P	18 29 54.9	+0.6
BSWZ	Blackbirch Sta	19.23	195	P	P	18 29 56.6	+2.3
THZ	Tophouse	19.52	197	P	P	18 29 57.2	+0.2
THZ	Tophouse	19.52	197	P	P	18 29 57.4	+0.4
DSZ	Denniston Nort	19.82	199	P	P	18 30 01.0	+1.4
KHZ	Kahutara	19.98	195	P	P	18 30 00.6	-0.4
KHZ	Kahutara	19.98	195	P	P	18 30 00.8	-0.2
LHI	Lord Howe Isla	20.57	242	P	P	18 30 07.4	+0.9
LHI				IAmb	IAmb	18 30 10.2	
	comp=Z,26nm,0.8s						
LTZ	Lake Taylor	20.64	197	P	P	18 30 06.6	-0.5
MQZ	McQueen's Vall	21.41	195	P	P	18 30 13.6	-0.3
MQZ				IAmb	IAmb	18 30 39.8	
	comp=Z,50nm,1.3s						
KNTN	Kanton	21.73	22	P	P	18 30 15.2	-2.0
RPZ	Rata Peaks	21.84	198	P	P	18 30 18.5	+0.6
	comp=Z,9.7nm,0.5s,baz=65,slow=0.8,SNR=10						
RPZ	Rata Peaks	21.84	198	P	P	18 30 17.4	-0.5
RPZ				IAmb	IAmb	18 30 43.1	
	comp=Z,58nm,1.5s						
FOZ	Fox Glacier	22.05	201	P	P	18 30 19.0	-0.7
FOZ				IAmb	IAmb	18 30 37.9	
	comp=Z,46nm,1.3s						
ODZ	Otahua Downs	23.18	198	P	P	18 30 29.6	-0.1
MLZ	Mavora Lakes	24.24	201	P	P	18 30 39.8	+0.5
MLZ				IAmb	IAmb	18 30 57.6	
	comp=Z,43nm,1.5s						
WHZ	Wether Hill Ro	24.76	201	P	P	18 30 43.2	-0.6
WHZ				IAmb	IAmb	18 30 46.9	
	comp=Z,34nm,1.1s						
ARMA	Armidale	26.52	248	P	P	18 31 01.3	+1.6
	baz=27,SNR=30						
ARMA	Armidale	26.52	248	P	P	18 31 01.1	+1.4
ARMA				IAmb	IAmb	18 31 02.2	
	comp=Z,17nm,1.1s						
EIDS	Eidsvold	26.69	259	P	P	18 31 01.7	+0.6
	baz=27,SNR=8.0						
EIDS	Eidsvold	26.69	259	P	P	18 31 01.7	+0.6
EIDS				IAmb	IAmb	18 31 02.5	
	comp=Z,20nm,0.9s						
MGCD	Mangrove Creek	27.50	242	P	P	18 31 09.9	+1.8
	baz=28,SNR=15						
RMQ	Roma	28.76	257	P	P	18 31 20.9	+1.7
	baz=29,SNR=17						
CNB	Canberra Magne	29.44	239	P	P	18 31 26.5	+1.4
	baz=30,SNR=29						
CAN	Canberra	29.73	239	P	P	18 31 28.9	+1.5
CAN				IAmb	IAmb	18 31 29.6	
	comp=Z,29nm,0.6s						
YNG	Young	29.95	241	P	P	18 31 30.6	+1.1
	baz=30,SNR=10						
MILA	Mila	30.11	236	P	P	18 31 32.2	+1.4
	baz=30,SNR=8.3						
CMSA	Cobar Meteorol	31.73	247	P	P	18 31 45.4	+0.8
	baz=32,SNR=86						
CTA	Charters Tower	31.74	269	P	P	18 31 45.6	+0.6
	comp=Z,89nm,0.4s,baz=95,slow=11,SNR=279						
QLP	Quilpie	32.81	257	P	P	18 31 54.4	+0.5
	baz=33,SNR=36						
TOO	Toolangi	33.05	236	P	P	18 31 57.0	+1.1
	baz=33,SNR=37						
TOO	Toolangi	33.05	236	P	P	18 31 57.0	+1.1
TOO				IAmb	IAmb	18 31 57.7	
	comp=Z,20nm,0.8s						
XMAS	Kiritimati	33.16	44	P	P	18 31 57.0	0.0
TAU	Tasmania Unive	33.61	226	P	P	18 32 01.3	+1.0
TAU				IAmb	IAmb	18 32 31.2	
	comp=Z,55nm,1.6s						
MTSU	Mount Surprise	33.97	272	P	P	18 32 04.3	+0.5
	baz=34,SNR=58						
PMG	Port Moresby	34.52	288	P	P	18 32 08.4	0.0
	comp=Z,52nm,0.7s,baz=91,slow=5.3,SNR=37						
PMG	Port Moresby	34.52	288	P	P	18 32 08.3	0.0
STKA	Stephens Creek	35.23	247	P	P	18 32 15.0	+0.8
	baz=35,SNR=28						
STKA	Stephens Creek	35.23	247	P	P	18 32 14.9	+0.8
	comp=Z,16nm,0.5s,baz=94,slow=10,SNR=62						
STKA	Stephens Creek	35.23	247	P	P	18 32 14.7	+0.6
COEN	Coen	36.27	278	P	P	18 32 23.6	+0.7
	baz=36,SNR=9.6						
COEN	Coen	36.27	278	P	P	18 32 23.2	+0.2
COEN				IAmb	IAmb	18 32 31.8	
	comp=Z,47nm,1.4s						
PATS	Pohnpei	36.77	322	P	P	18 32 27.5	+0.4
HTT	Hallett	37.60	245	P	P	18 32 34.0	+0.3
	baz=38,SNR=16						
QIS	Mount Isa	37.76	266	P	P	18 32 34.8	-0.3
	baz=38,SNR=5.1						
BBOO	Buckleboo	39.97	246	P	P	18 32 52.3	-0.4
	baz=40,SNR=17						
BBOO	Buckleboo	39.97	246	P	P	18 32 52.5	-0.3
BBOO				IAmb	IAmb	18 32 52.9	
	comp=Z,20nm,0.5s						
AS31	Alice Springs	42.41	260	P	P	18 33 12.2	-0.1
AS31				IAmb	IAmb	18 33 13.4	
	comp=Z,10.0nm,0.5s						
ASAR	Alice Springs	42.41	260	P	P	18 33 12.1	-0.3
	comp=Z,30nm,0.8s,baz=91,slow=7.7,SNR=225						
ASAR				ScP	ScP	18 37 53.3	+2.0
	comp=Z,2.4nm,0.9s,baz=103,slow=3.9,SNR=7.6						
ASAR				S	S	18 38 52.2	-2.4
	comp=Z,0.2nm,0.6s,baz=94,slow=15,SNR=2.7						
ASAR	Alice Springs	42.41	260	P	P	18 33 11.8	-0.5
ASAR					ScP	18 37 53.1	+1.8
WR0	Warramunga Arr	42.53	265	P	P	18 33 12.6	-0.7
WR0				IAmb	IAmb	18 33 13.0	
	comp=Z,14nm,0.7s						
WB2	Warramunga Arr	42.71	265	P	P	18 33 14.0	-0.7
WB2				IAmb	IAmb	18 33 14.8	
	comp=Z,37nm,0.8s						
WB0	Warramunga Arr	42.71	266	P	P	18 33 13.9	-0.8
WB0				IAmb	IAmb	18 33 14.8	
	comp=Z,35nm,0.7s						
WRAB	Tennant Creek	42.71	265	P	P	18 33 13.9	-0.7
WRAB				IAmb	IAmb	18 33 14.8	
	comp=Z,32nm,0.8s						
WRA	Warramunga Arr	42.72	265	P	P	18 33 13.9	-0.8
	comp=Z,30nm,0.7s,baz=93,slow=6.0,SNR=200						
WRA				ScP	ScP	18 37 54.6	+2.1
	comp=Z,4.1nm,0.8s,baz=101,slow=4.2,SNR=11						
WRA	Warramunga Arr	42.72	265	P	P	18 33 13.6	-1.1
KDU	Kakadu	46.49	274	P	P	18 33 43.1	-0.7
	baz=46,SNR=14						
FORT	Forrest	46.81	249	P	P	18 33 45.5	-0.4
	baz=47,SNR=82						
FORT	Forrest	46.81	249	P	P	18 33 45.6	-0.4
WRKA	Warakurna	47.25	257	P	P	18 33 49.0	-0.4
	baz=47,SNR=47						
MTN	Manton Dam	47.67	274	P	P	18 33 51.6	-1.0
	baz=48,SNR=18						
MTN	Manton Dam	47.67	274	P	P	18 33 51.7	-0.9
MTN				IAmb	IAmb	18 33 52.2	
	comp=Z,27nm,0.7s						
HMH	Humu'ula Sheep	48.67	31	P	P	18 34 01.4	+1.2
KNRA	Kununurra	48.96	269	P	P	18 34 02.1	0.0
	baz=49,SNR=11						
KNRA	Kununurra	48.96	269	P	P	18 34 02.2	0.0
FAKI	Fak Fak	50.63	286	P	P	18 34 14.1	-0.4
FITZ	Fitzroy Crossi	51.15	265	P	P	18 34 18.5	+0.3
	baz=51,SNR=19						
FITZ	Fitzroy Crossi	51.15	265	P	P	18 34 18.5	+0.3
	comp=Z,16nm,0.4s,baz=95,slow=6.4,SNR=36						
FITZ	Fitzroy Crossi	51.15	265	P	P	18 34 18.3	+0.1
FITZ				IAmb	IAmb	18 34 19.3	
	comp=Z,21nm,0.6s						
SIJI	Sorong	52.46	288	P	P	18 34 27.4	-0.3
	comp=Z,58nm,0.7s,baz=94,slow=5.8,SNR=45						
SWI	Sorong	52.47	288	P	P	18 34 27.7	-0.1
	comp=Z,801nmcomp=Z,98nm,0.8s						
SOEI	Soe	55.05	274	P	P	18 34 48.0	+1.9
	comp=Z,86nm,1.0s						
SOEI	Soe	55.05	274	P	P	18 34 46.6	+0.5
SOEI				IAmb	IAmb	18 34 57.1	
	comp=Z,59nm,0.8s						
KLBR	Kellerberrin	55.51	247	P	P	18 34 48.7	-0.2
	baz=56,SNR=31						
PSA00	Pilbara Seismi	55.55	259	P	P	18 34 47.2	-2.2
PSA00	Pilbara Seismi	55.55	259	P	P	18 34 49.0	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSA00				IAmb	IAmb	18 34 49.7	
	comp=Z,24nm,1.2s						
MEEK	Meekatharra	55.57	253	P	P	18 34 48.7	-0.8
	baz=56,SNR=12						
NWAO	Narrogin (SRO)	55.77	245	P	P	18 34 50.6	-0.1
	baz=56,SNR=18						
NWAO	Narrogin (SRO)	55.77	245	P	P	18 34 50.5	-0.3
	comp=Z,8.0nm,0.4s,baz=115,slow=6.6,SNR=26						
NWAO	Narrogin (SRO)	55.77	245	P	P	18 34 50.7	-0.1
NWAO				IAmb	IAmb	18 34 51.2	
	comp=Z,58nm,1.4s						
NWAO	Narrogin (SRO)	55.77	245	P	P	18 34 50.5	-0.1
NWAO				IAmb	IAmb	18 34 51.2	
	comp=Z,46nm,1.4s						
RKGY	Rocky Gully	55.78	243	P	P	18 34 50.9	+0.1
	baz=56,SNR=7.1						
BLDU	Ballidu	56.53	248	P	P	18 34 55.7	-0.3
	baz=56,SNR=33						
SANI	Sanana	56.60	284	P	P	18 34 55.5	-1.2
	comp=Z,23nm,0.7s						
MUN	Mundaring	56.76	246	P	P	18 34 57.8	+0.3
	baz=57,SNR=13						
MORW	Morawa	57.37	249	P	P	18 35 01.6	-0.1
	baz=57,SNR=14						
MORW	Morawa	57.37	249	P	P	18 35 01.7	-0.1
MORW				IAmb	IAmb	18 35 33.8	
	comp=Z,62nm,1.6s						
LUWI	Luwuk	59.92	283	P	P	18 35 19.2	0.0
LUWI				IAmb	IAmb	18 35 34.5	
	comp=Z,30nm,1.1s						
GIRL	Giralia	60.33	256	P	P	18 35 22.9	+1.1
	baz=60,SNR=3.7						
GIRL	Giralia	60.33	256	P	P	18 35 22.5	+0.8
BKSI	Bulukumba	60.53	277	P	P	18 35 22.5	-0.7
	comp=Z,25nm,0.7s						
CASY	Casey	60.86	206	P	P	18 35 23.9	-0.5
CASY				IAmb	IAmb	18 35 35.5	
	comp=Z,75nm,1.5s						
APSI	Ampana	60.99	282	P	P	18 35 26.6	+0.4
	comp=Z,20nm,0.9s						
KAPI	Kappang	60.99	277	P	P	18 35 25.5	-0.7
KAPI				IAmb	IAmb	18 35 38.2	
	comp=Z,54nm,1.6s						
MPSI	Mapaga	63.10	283	P	P	18 35 39.2	-0.7
	comp=Z,590nmcomp=Z,39nm,0.7s						
JAGI	Jajag, Banyuwa	64.81	271	P	P	18 35 49.5	-1.3
	comp=Z,28nm,1.0s						
JAGI	Jajag, Banyuwa	64.81	271	P	P	18 35 49.5	-1.3
JAGI				IAmb	IAmb	18 35 50.3	
	comp=Z,52nm,1.4s						
QSPA	South Pole Qui	66.89	180	P	P	18 36 04.8	+1.8
	comp=Z,5.9nm,0.6s,baz=165,slow=1.7,SNR=50						
QSPA	South Pole Qui	66.89	180	P	P	18 36 04.5	+1.5
PCJI	Pacitan	67.65	270	P	P	18 36 08.6	+0.2
	comp=Z,94nm,0.6s						
UGM	Wanagama	68.36	271	P	P	18 36 12.3	-0.4
KKM	Kota Kinabalu	68.95	287	P	P	18 36 16.1	-0.2
KKM				IAmb	IAmb	18 36 55.6	
	comp=Z,16nm,1.0s						
CISI	Cisompet, Garu	70.98	270	P	P	18 36 27.0	-1.4
MJAR	Matsushiro Arr	71.47	325	P	P	18 36 30.6	-0.1
	comp=Z,1.5nm,0.7s,baz=167,slow=5.9,SNR=5.0						
MJAR	Matsushiro Arr	71.47	325	P	P	18 36 30.5	-0.2
KSM	Kuching	72.25	280	P	P	18 36 35.4	-0.3
JNU	Nakatsue	73.17	318	P	P	18 36 40.0	-0.6
TWG	Pinlang	73.53	304	P	P	18 36 41.4	-1.4
YULB	Yu-li	73.68	305	P	P	18 36 42.4	-1.3
NACB	Ninganchiao	73.90	306	P	P	18 36 43.8	-1.1
NACB				IAmb	IAmb	18 36 46.2	
	comp=Z,27nm,1.1s						
TPUB	Ta-pu	74.14	304	P	P	18 36 45.6	-0.7
SSLB	Suanglung	74.17	305	P	P	18 36 45.3	-1.2
YHNB	Yeheng	74.35	306	P	P	18 36 47.4	-0.1
YHNB				IAmb	IAmb	18 36 47.5	
	comp=Z,36nm,1.1s						
KSRS	Korea Array	77.88	320	P	P	18 37 08.2	+1.7
	comp=Z,1.1nm,0.8s,baz=126,slow=7.3,SNR=3.8						
PETK	Petropavlovsk-	78.48	346	P	P	18 37 10.2	+0.7
	comp=Z,2.1nm,0.7s,baz=121,slow=5.6,SNR=3.5						
PETK	Petropavlovsk-	78.48	346	P	P	18 37 09.3	-0.1
HKPS	Hong Kong Po S	78.63	300	P	P	18 37 09.9	-1.1
HKPS				IAmb	IAmb	18 37 15.2	
	comp=Z,52nm,1.3s						
NJ2	Nanjing	80.40	311	*e*P	P	18 37 21.4	+1.4
IPM	Ipoh	81.92	278	P	P	18 37 28.6	+0.3
PFO	Pinyon Flats O	82.54	49	P	P	18 37 31.3	+0.1
XPFO	Pion Flat	82.54	49	P	P	18 37 31.3	+0.1
KULM	Kulim	82.59	279	P	P	18 37 31.9	+0.3
SYO	Syowa Base	83.76	193	⇑*e*PcP	PcP	18 37 40.0	+0.8
NVAR	Mina Array Bea	84.06	44	P	P	18 37 40.4	+1.6
	comp=Z,0.7nm,0.7s,baz=220,slow=8.3,SNR=5.2						
NVAR	Mina Array Bea	84.06	44	P	P	18 37 39.5	+0.7
SNAA	Sanae	85.37	179	P	P	18 37 44.4	0.0
SNAA	Sanae	85.37	179	P	P	18 37 44.5	+0.1
VNA3	Neumayer Olymp	85.56	177	P	P	18 37 45.4	+0.1
PINE	Pine Mountain	85.68	38	P	P	18 37 48.0	+1.5
TUC	Tucson	85.88	52	P	P	18 37 48.8	+1.3
VNA2	Neumayer--Watz	85.98	177	P	P	18 37 47.6	+0.4
	baz=194,slow=4.5						
U15A	North Rim	86.94	48	P	P	18 37 53.9	+1.2
PBKT	Sadao Pong	86.98	289	P	P	18 37 53.6	+0.7
XAN	Xi'an	88.51	308	P	P	18 38 01.0	+1.2
XAN	Xi'an	88.51	308	P	P	18 38 00.2	+0.4
XAN				IAmb	IAmb	18 38 26.2	
	comp=Z,16nm,1.7s						
SRU	San Rafael Swe	89.53	47	P	P	18 38 05.9	+1.3
CM31	Chiang Mai Arr	89.53	290	P	P	18 38 06.1	+1.3
CM31				IAmb	IAmb	18 38 07.5	
	comp=Z,6.2nm,1.0s						
CMAR	Chiang Mai Arr	89.53	290	P	P	18 38 06.6	+1.8
	comp=Z,3.2nm,0.9s,baz=131,slow=3.0,SNR=23						
CHTO	Chiang Mai	89.67	291	P	P	18 38 06.2	+0.7
CHTO				IAmb	IAmb	18 38 07.7	
	comp=Z,4.7nm,0.7s						
TX31	Lajitas Ar. Si	89.83	58	P	P	18 38 07.9	+1.8
TX32	Lajitas Array	89.83	58	P	P	18 38 08.0	+1.9
TXAR	Lajitas Array	89.84	58	P	P	18 38 08.3	+2.2
	comp=Z,1.5nm,0.7s,baz=212,slow=7.2,SNR=18						
TXAR	Lajitas Array	89.84	58	P	P	18 38 07.6	+1.5
HHC	Hu-ho-hao-te	90.11	315	*e*P	P	18 38 08.0	+0.9
HHC				pP	pP	18 40 01.2	-5.2
HHC				sP	sP	18 41 05.5	+4.4
CD2	Chengdu	90.91	303	P	P	18 38 11.3	+0.3
ILAR	Eielson Array	91.28	13	P	P	18 38 12.9	+1.1
	comp=Z,0.5nm,0.9s,baz=215,slow=6.2,SNR=2.6						
ILAR	Eielson Array	91.28	13	P	P	18 38 12.6	+0.7
PDAR	Pinedale Array	92.00	44	P	P	18 38 16.9	+0.9
	comp=Z,1.0nm,0.8s,baz=211,slow=3.0,SNR=9.0						
PDAR	Pinedale Array	92.00	44	P	P	18 38 16.4	+0.5
YHL	Hebgen Lake	92.05	41	P	P	18 38 15.4	-0.8
LZH	Lanzhou	93.15	308	*e*P	P	18 38 24.8	+3.5
LZH				pP	pP	18 40 21.3	+0.4
LZH				sP	sP	18 41 18.2	+2.7
LZH				PP	PP	18 42 13.0	-1.7
RLMT	Red Lodge	93.36	42	P	P	18 38 23.2	+1.1
RLMT				IAmb	IAmb	18 38 24.3	
	comp=Z,10nm,1.7s						
MKAR	Makanchi Array	111.87	313	PKiKP	PKiKP	18 43 36.8	-1.2
	comp=Z,0.2nm,0.6s,baz=34,slow=0.7,SNR=3.4						
MKAR	Makanchi Array	111.87	313		PKiKP	18 43 36.3	-1.7
AKASG	Malin Array Be	144.52	328	PKP	PKPdf	18 44 38.6	-0.5
	comp=Z,1.4nm,0.4s,baz=44,slow=4.2,SNR=19						
AKASG				SKPbc	SKPbc	18 47 26.2	-0.4
	comp=Z,1.8nm,0.7s,baz=45,slow=2.9,SNR=7.5						
AKASG	Malin Array Be	144.52	328		PKPbc	18 44 38.8	-0.5
AKBB	Malin Array Si	144.52	328		PKPdf	18 44 38.6	-0.6
BR131	Keskin Array S	147.35	308		PKPbc	18 44 47.2	-0.7
BRTR	Keskin Array B	147.35	308	PKPbc	PKPbc	18 44 47.5	-0.3
	comp=Z,1.3nm,0.6s,baz=113,slow=3.7,SNR=5.1						
BRTR	Keskin Array B	147.35	308		PKPbc	18 44 46.8	-1.1
KOLS	Kolonicke sedl	148.98	331	*e*PKP	PKPdf	18 44 47.9	+1.2
KOLS				*e*		18 44 53.0	
VYHS	Vyhne	150.77	334	*e*PKP	PKiKP	18 44 56.1	0.0
VYHS				*e*		18 45 06.0	
TORD	Torodi Ar. Bea	169.92	188	PKPab	PKPab	18 46 30.2	+0.8
	comp=Z,0.5nm,0.8s,baz=197,slow=3.2,SNR=2.9						

IDC 07 19:11:28.8±5.1, 38.38N×20.66E, h0km, mb3.5/4, mb1 3.5/5, mb1mx3.2/61, mbtmp3.5/5, ML2.0/1, Error ellipse: s-maj=106.1km s-min=31.3km az=54.0

ATH 07 19:11:28.9, 38.14N×20.37E, h14km, ML3.1/16, Error ellipse: s-maj=1.3km s-min=0.8km az=66.0

THE 07 19:11:28.5, 38.14N×20.31E, h12km, ML3.0/18, Error ellipse: s-maj=0.9km s-min=0.5km az=81.0

ISC 07 19:11:29.4±0.8, 38.14N±0.02×20.42E±0.03, h13km±4km, n82, σ1.59/134, mb3.6/4, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.05	324	P	Pg	19 11 31.4	-0.4
CHV1				S	Sg	19 11 33.4	-0.2
	154μm,0.5s						
KEF2	Argostoli. Kep	0.06	65	P	Pg	19 11 32.0	+0.1
KEF2				S	Sg	19 11 34.0	+0.3
ARGA	Argostoli. Kep	0.06	52	P	Pg	19 11 32.0	+0.1
ARGA				S	Sg	19 11 34.1	+0.4
LXRA	Lixouri, Kepha	0.06	12	P	Pg	19 11 31.8	-0.1
LXRA				S	Sg	19 11 34.1	+0.3
LXR1	Lixouri, Cepha	0.06	13	P	Pg	19 11 31.8	-0.1
LXR1				S	Sg	19 11 34.1	+0.4
ARG2	Argostoli	0.07	55	P	Pg	19 11 32.0	0.0
ARG2				S	Sg	19 11 34.3	+0.5
KEF3	Kipouria, Keph	0.09	317	P	Pg	19 11 31.7	-0.5
KEF3				S	Sg	19 11 33.8	-0.4
KEF4	Livadi, Kephal	0.12	1	P	Pg	19 11 32.4	-0.2
KEF4				S	Sg	19 11 35.0	+0.1
VLS	Valsamata	0.14	75	P	Pg	19 11 32.9	0.0
VLS				S	Sg	19 11 35.9	+0.6
VLS	Valsamata	0.14	75	P	Pg	19 11 32.9	0.0
VLS				S	Sg	19 11 36.0	+0.7
VLS				AML	AML	19 11 36.1	
	comp=E,53131μm,0.2s						
VLS				AML	AML	19 11 36.2	
	comp=N,34474μm,0.3s						
KEF1	Kardakata, Kep	0.14	16	P	Pg	19 11 32.6	-0.3
KEF1				S	Sg	19 11 35.4	0.0
VSK1	VASILIKIADES	0.29	23	P	Pg	19 11 35.2	-0.2
VSK1				S	Sg	19 11 40.2	+0.7
	comp=N,33μm,0.3s						
KONA	Konidatara, Ke	0.31	23	P	Pg	19 11 35.5	-0.2
KONA				S	Sb	19 11 40.6	-1.2
VLMS	Volimes, Zakyn	0.33	144	P	Pg	19 11 36.3	+0.2
VLMS				S	Sg	19 11 42.0	+1.5
VLMS				AML	AML	19 11 43.0	
	comp=E,16956μm,0.1s						
VLMS				AML	AML	19 11 45.4	
	comp=N,10721μm,0.2s						
FSK	Fiskardo	0.34	19	P	Pg	19 11 35.8	-0.4
FSK				S	Sg	19 11 41.2	+0.4
	comp=N,6μm,0.3s						
FSK	Fiskardo	0.34	19	P	Pg	19 11 36.0	-0.3
FSK				S	Sg	19 11 41.4	+0.5
FSK				AML	AML	19 11 41.6	
	comp=N,16422μm,0.2s						
FSK				AML	AML	19 11 41.9	
	comp=E,19797μm,0.1s						
EVGI	Lefkada island	0.51	21	P	Pg	19 11 39.1	-0.4
EVGI				S	Sb	19 11 47.2	-0.5
EVGI	Lefkada island	0.51	21	P	Pg	19 11 39.2	-0.4
EVGI				S	Sb	19 11 47.3	-0.5
KRI1	kERI	0.57	147	P	Pg	19 11 40.5	-0.1
KRI1				S	Sb	19 11 49.9	+0.6
MGNA	Meganis	0.59	29	P	Pg	19 11 40.5	-0.5
MGNA				S	Sb	19 11 50.1	+0.2
MGNA				AML	AML	19 11 50.2	
	comp=E,6127μm,0.1s						
MGNA				AML	AML	19 11 50.2	
	comp=N,4106μm,0.3s						
AST1	Astakos	0.66	53	P	Pb	19 11 42.1	-0.7
AST1				S	Sn	19 11 53.4	-1.3
	comp=N,4μm,0.5s						
LKD2	Lefkada island	0.67	16	P	Pg	19 11 41.5	-1.0
LKD2	Lefkada island	0.67	16	P	Pg	19 11 42.9	+0.4
LKD2				S	Sb	19 11 52.6	+0.3
LKD2				AML	AML	19 11 59.0	
	comp=E,2632μm,0.2s						
LKD2				AML	AML	19 11 59.5	
	comp=N,2557μm,0.4s						
TSLK	Tsoukalades, L	0.71	15	P	Pg	19 11 42.5	-0.6
TSLK	Tsoukalades, L	0.71	15	P	Pg	19 11 43.2	+0.1
TSLK				S	Sb	19 11 52.5	-0.8
TSLK				AML	AML	19 11 59.4	
	comp=E,1895μm,0.2s						
TSLK				AML	AML	19 12 04.1	
	comp=N,2238μm,0.4s						
PDO	Prodromos	0.75	52	P	Pb	19 11 43.9	-0.5
PDO				S	Sn	19 11 56.9	-0.2
	comp=N,3μm,0.5s						
PDO	Prodromos	0.75	52	P	Pb	19 11 43.6	-0.7
PDO				S	Sn	19 11 55.6	-1.4
RLS	Riolos of Patr	0.83	95	P	Pb	19 11 44.9	-0.8
RLS				S	Sn	19 11 59.8	+0.9
RLS	Riolos of Patr	0.83	95	P	Pb	19 11 45.0	-0.6
RLS				S	Sn	19 11 58.3	-0.5
RLS				AML	AML	19 12 04.3	
	comp=E,672μm,0.4s						
RLS				AML	AML	19 12 07.7	
	comp=N,730μm,0.5s						
PVO	Paravola	0.99	61	P	Pn	19 11 48.2	-0.8
PVO				S	Sn	19 12 05.2	+2.3
PVO	Paravola	0.99	61	P	Pn	19 11 48.4	-0.6
PVO				S	Sn	19 12 02.1	-0.8
PVO				AML	AML	19 12 10.9	
	comp=N,3242μm,0.6s						
PVO				AML	AML	19 12 11.0	
	comp=E,3083μm,0.4s						
DRO	Drossia	1.03	100	P	Pn	19 11 48.9	-0.7
DRO				S	Sn	19 12 06.6	+2.6
	comp=E,1μm,0.5s						
DRO	Drossia	1.03	100	P	Pn	19 11 49.2	-0.4
DRO				S	Sn	19 12 04.1	+0.1
DRO				AML	AML	19 12 11.7	
	comp=E,2764μm,0.4s						
DRO				AML	AML	19 12 14.1	
	comp=N,1581μm,0.3s						
AMT	Artemida-Makis	1.19	120	P	Pn	19 11 52.0	+0.3
AMT				S	Sn	19 12 18.4	+11
	comp=N,748nm,0.9s						
AMT	Artemida-Makis	1.19	120	P	Pn	19 11 52.9	+1.2
LAKA	Lakka	1.23	85	P	Pn	19 11 52.2	-0.2
LAKA				S	Sn	19 12 12.7	+3.8
	comp=N,278nm,0.7s						
LAKA	Lakka	1.23	85	P	Pn	19 11 52.0	-0.4
ANX	Ano Chora	1.26	69	P	Pn	19 11 53.1	+0.2
ANX				S	Sn	19 12 14.9	+5.1
	comp=N,1μm,0.8s						
ANX	Ano Chora	1.26	69	P	Pn	19 11 53.4	+0.5
ANX				S	Sn	19 12 11.0	+1.3
ANX				AML	AML	19 12 17.6	
	comp=N,3585μm,0.6s						
ANX				AML	AML	19 12 21.7	
	comp=E,1788μm,0.9s						
SERG	Sergoula	1.32	78	P	Pn	19 11 53.4	-0.1
SERG				S	Sn	19 12 16.6	+5.6
	comp=E,562nm,0.7s						
SERG	Sergoula	1.32	78	P	Pn	19 11 55.5	+1.9
SERG				S	Sn	19 12 12.5	+1.5
SERG				AML	AML	19 12 19.6	
	comp=E,1098μm,0.5s						
SERG				AML	AML	19 12 19.8	
	comp=N,931μm,0.7s						
TRIZ	Trizonia	1.32	80	P	Pn	19 11 53.2	-0.3
TRIZ				S	Sn	19 12 11.6	+0.6
TRIZ	Trizonia	1.32	80	P	Pn	19 11 53.5	0.0
EVR	Evrytania	1.34	54	P	Pn	19 11 53.9	0.0
EVR				S	Sn	19 12 14.9	+3.3
	comp=N,310nm,0.8s						
EVR	Evrytania	1.34	54	P	Pn	19 11 54.0	+0.1
ALIK	Aliki, Aigiali	1.34	84	P	Pn	19 11 54.2	+0.4
ALIK				S	Sn	19 12 15.1	+3.7
KLV	Kalavryta, Ach	1.37	94	P	Pn	19 11 54.6	+0.3
KLV				S	Sn	19 12 17.2	+4.9
	comp=N,192nm,0.5s						
KLV	Kalavryta, Ach	1.37	94	P	Pn	19 11 54.6	+0.3
KALE	Kalithea	1.38	79	P	Pn	19 11 54.1	-0.3
KALE				S	Sn	19 12 17.2	+4.7
KALE	Kalithea	1.38	79	P	Pn	19 11 56.1	+1.7
KALE				S	Sn	19 12 14.9	+2.4
KALE				AML	AML	19 12 25.9	
	comp=E,409μm,0.6s						
KALE				AML	AML	19 12 26.5	
	comp=N,978μm,0.8s						
IGT	Igoumenitsa	1.39	357	P	Pn	19 11 54.5	0.0
IGT				S	Sn	19 12 17.7	+4.9
	comp=N,300nm,0.2s						
IGT	Igoumenitsa	1.39	357	P	Pn	19 11 54.9	+0.4
IGT				S	Sb	19 12 14.7	+1.7
IGT				AML	AML	19 12 17.9	
	comp=N,638μm,0.2s						
IGT				AML	AML	19 12 20.9	
	comp=E,554μm,0.2s						
ITM	Ithomi	1.53	128	P	Pg	19 11 57.9	-0.9
MAKR	Makrakomi, Fth	1.60	56	P	Pg	19 11 59.4	-0.7
MAKR				S	Sn	19 12 21.4	+3.4
	comp=E,605nm,0.8s						
MAKR	Makrakomi, Fth	1.60	56	P	Pg	19 11 59.9	-0.2
MAKR				S	Sn	19 12 22.1	+4.1
MAKR				AML	AML	19 12 31.2	
	comp=N,1250μm,0.5s						
MAKR				AML	AML	19 12 35.3	
	comp=E,1158μm,0.7s						
PYL	PYLOS	1.63	139	P	Pn	19 11 59.0	+1.2
KEK	Kerkira	1.64	343	P	Pn	19 11 58.1	+0.1
KEK	Kerkira	1.64	343	P	Pn	19 11 58.3	+0.3
VLX	Vlachokerasia	1.73	116	P	Pg	19 12 01.9	-0.7
AGG	Agios Georgios	1.74	59	P	Pg	19 12 01.4	-1.3
AGG				S	Sg	19 12 26.4	+1.2
	comp=E,280nm,1.1s						
AGG	Agios Georgios	1.74	59	P	Pg	19 12 02.2	-0.5
AGG				S	Sg	19 12 24.8	-0.4
AGG				AML	AML	19 12 35.3	
	comp=N,546μm,0.5s						
AGG				AML	AML	19 12 35.5	
	comp=E,415μm,0.9s						
AXAR	Agios Charalam	1.86	70	P	Pg	19 12 03.6	-1.6
AXAR				AML	AML	19 12 42.5	
	comp=E,1099μm,0.9s						
AXAR				AML	AML	19 12 44.1	
	comp=N,1184μm,0.8s						
THL	Klokotos Trika	1.89	41	P	Pg	19 12 04.0	-1.6
THL				S	Sg	19 12 34.0	+3.9
	comp=N,172nm,0.6s						
THL	Klokotos Trika	1.89	41	P	Pg	19 12 03.7	-1.9
KPRO	Kipourio	1.95	22	P	Pg	19 12 05.7	-1.2
KPRO				S	Sg	19 12 32.2	-0.1
	comp=N,235nm,0.8s						
PROD	Prodromos	1.96	86	P	Pg	19 12 04.2	-2.8
LTK	Loutraki	2.01	93	P	Pb	19 12 04.7	-1.2
PENT	Pentalofos	2.13	15	P	Pb	19 12 07.9	0.0
PENT	Pentalofos	2.13	15	P	Pb	19 12 07.2	-0.7
VIL2	Platees	2.25	87	P	Pb	19 12 08.7	-1.1
NEST	Nestorio	2.32	12	P	Pb	19 12 10.5	-0.7
XOR	Xorichti	2.49	60	P	Pn	19 12 10.1	+0.5
XOR	Xorichti	2.49	60	P	Pb	19 12 12.2	-1.8
LIT	Litokhoron	2.53	39	P	Pn	19 12 11.9	+1.6
LIT				S	Sn	19 12 42.1	+1.1
	comp=N,88nm,0.6s						
OHR	Ohrid	2.98	5	*i* Pn	Pb	19 12 21.0	-1.4
VAY	Valandovo	3.58	27	*i* Pn	Pn	19 12 28.6	+3.9
STIP	Stip	3.80	20	*i* Pn	Pb	19 12 35.0	-1.3
IDI	Anoyia	4.58	127	Pn	Pn	19 12 39.2	+0.7
	comp=N,0.1nm,0.3s,baz=304,slow=15,SNR=1.8						
IDI				Sn	Sn	19 13 30.5	-1.1
	comp=N,0.3nm,0.3s,baz=311,slow=20,SNR=2.5						
FINES	FINESS Array B	23.59	7	P	P	19 16 38.4	-1.2
	comp=N,1.5nm,0.7s,baz=191,slow=11,SNR=5.4						
NOA	NORSAR Array B	23.64	349	P	P	19 16 39.4	-0.8
	comp=N,0.5nm,0.6s,baz=158,slow=11,SNR=2.7						
MKAR	Makanchi Array	45.39	58	P	P	19 19 46.5	-1.0
	comp=N,0.3nm,0.5s,baz=275,slow=7.1,SNR=9.0						
ZALV	Zalesovo Beam	45.77	48	P	P	19 19 49.4	-1.0
	comp=N,0.8nm,0.5s,baz=268,slow=9.0,SNR=4.2						

ROM 07 19:19:40.7±0.0, 43.434N±0.003×12.500E±0.003, h8km, ML1.9/14, 4C, Error ellipse: s-maj=0.2km s-min=0.2km az=226.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATPI	Pietralunga -	0.07	283	⇑P	Pg	19 19 43.0	+0.2
ATPI				S	Sg	19 19 44.4	+0.1
ATPI				AML	AML		
	comp=E,1028μm,0.7s						
ATPI				AML	AML		
	comp=N,884μm,0.1s						
ATPI				AML	AML		
	comp=E,2325μm,0.7s						
ATPI				AML	AML		
	comp=N,1680μm,0.4s						
ATFO	Monte Foce - G	0.09	142	⇑P	Pg	19 19 43.2	+0.2
ATFO				S	Sg	19 19 45.0	+0.4
ATFO				AML	AML		
	comp=E,656μm,0.5s						
ATFO				AML	AML		
	comp=N,547μm,1.6s						
ATFO				AML	AML		
	comp=E,1505μm,0.5s						
ATFO				AML	AML		
	comp=N,1205μm,0.4s						
ATVO	AVT- Monte Val	0.09	233	⇑P	Pg	19 19 43.1	+0.2
ATVO				S	Sg	19 19 44.8	+0.3
ATVO				AML	AML		
	comp=E,840μm,0.4s						
ATVO				AML	AML		
	comp=N,830μm,0.2s						
ATVO				AML	AML		
	comp=E,1520μm,0.4s						
ATVO				AML	AML		
	comp=N,1540μm,0.2s						
PIEI	Pieia	0.10	14	P	Pg	19 19 43.7	+0.5
PIEI				S	Sg	19 19 45.9	+0.9
PIEI				AML	AML		
	comp=E,1165μm,0.2s						
PIEI				AML	AML		
	comp=N,746μm,0.2s						
PIEI				AML	AML		
	comp=N,1580μm,0.2s						
PIEI				AML	AML		
	comp=E,2535μm,0.2s						
MURB	Monte Urbino	0.17	174	P	Pg	19 19 44.9	+0.7
MURB				S	Sg	19 19 48.0	+1.3
MURB				AML	AML		
	comp=E,426μm,1.0s						
MURB				AML	AML		
	comp=N,453μm,0.2s						
MURB				AML	AML		
	comp=E,950μm,1.3s						
MURB				AML	AML		
	comp=N,1060μm,0.3s						
CDCA	Citt' di Caste	0.20	277	P	Pg	19 19 45.4	+0.7
CDCA				S	Sg	19 19 49.0	+1.7
BADI	Badiali	0.20	292	⇑P	Pg	19 19 45.3	+0.6
BADI				S	Sg	19 19 48.9	+1.3
BADI				AML	AML		
	comp=E,736μm,0.1s						
BADI				AML	AML		
	comp=N,537μm,0.2s						
BADI				AML	AML		
	comp=N,948μm,0.4s						
BADI				AML	AML		
	comp=E,1205μm,0.2s						
SSFR	Montelago di S	0.21	89	P	Pg	19 19 45.5	+0.6
SSFR				S	Sg	19 19 49.3	+1.5
SSFR				AML	AML		
	comp=N,1035μm,0.2s						
SSFR				AML	AML		
	comp=E,1245μm,0.2s						
SSFR				AML	AML		
	comp=N,956μm,0.2s						
SSFR				AML	AML		
	comp=E,1200μm,0.8s						
FOSV	Fossato di Vic	0.24	126	P	Pg	19 19 46.0	+0.5
FOSV				S	Sg	19 19 50.0	+1.4
FOSV				AML	AML		
	comp=N,197μm,1.1s						
FOSV				AML	AML		
	comp=N,165μm,0.4s						
ATCC	AVT- Casa Cast	0.27	158	P	Pb	19 19 46.9	-0.8
ATCC				S	Sb	19 19 52.0	-0.4
ATCC				AML	AML		
	comp=E,262μm,0.6s						
ATCC				AML	AML		
	comp=N,235μm,0.3s						
ATCC				AML	AML		
	comp=E,572μm,0.6s						
ATCC				AML	AML		
	comp=N,376μm,0.3s						
PARC	Parchiule	0.29	319	P	Pg	19 19 47.2	+0.8
PARC				S	Sb	19 19 52.3	-0.7
PARC				AML	AML		
	comp=N,177μm,0.3s						

PARC AML AML
comp=E,132μm,0.7s
ARVD Arcevia 0.33 79 P Pg 19 19 47.8 +0.6
ARVD S Sb 19 19 53.4 -0.8
ARVD AML AML
comp=E,208μm,0.2s
ARVD AML AML
comp=N,162μm,0.1s
FSSB Fossombrone 0.33 38 P Pg 19 19 47.9 +0.7
FSSB S Sb 19 19 53.4 -0.8
FSSB AML AML
comp=N,462μm,0.4s
FSSB AML AML
comp=E,365μm,0.6s
CAFI Castiglion Fio 0.40 255 P Pg 19 19 49.2 +0.7
CAFI S Sb 19 19 55.6 -0.7
CAFI AML AML
comp=N,68μm,1.4s
CAFI AML AML
comp=E,69μm,0.9s
ASSB Assisi San Ben 0.41 163 P Pg 19 19 49.2 +0.5
ASSB S Sb 19 19 56.0 -0.5
ASSB AML AML
comp=E,97μm,0.4s
ASSB AML AML
comp=N,86μm,0.9s
EL6 Elcito 0.45 103 P Pg 19 19 49.7 +0.3
FDMO Fiordimonte 0.58 133 P Pg 19 19 52.3 +0.3
FDMO S Sb 19 20 01.9 +0.3

ROM 07 19:20:15.2±0.0, 43°.435N±0°.003×12°.495E±0°.003, h8km, ML1.9/15, 6C-2D, Error ellipse: s-maj=0.2km s-min=0.2km az=210.0, Central Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ATPI Pietralunga - 0.07 283 ⇑P Pg 19 20 17.4 +0.2
ATPI S Sg 19 20 19.1 +0.4
ATPI AML AML
comp=E,2330μm,0.7s
ATPI AML AML
comp=N,1675μm,0.4s
ATPI AML AML
comp=N,1680μm,0.4s
ATPI AML AML
comp=E,2325μm,0.7s
ATVO AVT- Monte Val 0.08 231 ⇑P Pg 19 20 17.6 +0.2
ATVO S Sg 19 20 19.4 +0.4
ATVO AML AML
comp=E,1520μm,0.4s
ATVO AML AML
comp=N,1540μm,0.2s
ATFO Monte Foce - G 0.09 141 ⇑P Pg 19 20 17.8 +0.3
ATFO S Sg 19 20 19.3 +0.1
ATFO AML AML
comp=E,1505μm,0.5s
ATFO AML AML
comp=N,1205μm,0.4s
PIEI Pieia 0.10 16 ⇑P Pg 19 20 18.2 +0.5
PIEI S Sg 19 20 20.4 +0.9
PIEI AML AML
comp=E,2535μm,0.2s
PIEI AML AML
comp=N,1580μm,0.2s
MURB Monte Urbino 0.17 173 AML AML
comp=E,890μm,1.2s
MURB AML AML
comp=N,1060μm,0.3s
MURB AML AML
comp=E,888μm,1.2s
MURB AML AML
comp=N,1125μm,1.4s
MURB AML AML
comp=N,1059μm,0.3s
MURB AML AML
comp=E,950μm,1.3s
MURB AML AML
comp=N,1060μm,0.3s
NARO Abbazia di Nar 0.19 19 P Pg 19 20 19.6 +0.5
NARO S Sg 19 20 22.6 +0.9
NARO AML AML
comp=N,332μm,1.6s
NARO AML AML
comp=E,398μm,0.2s
CDCA Citt' di Caste 0.19 277 ⇓P Pg 19 20 20.0 +0.8
CDCA S Sg 19 20 23.3 +1.5
BADI Badiali 0.20 292 ⇑P Pg 19 20 19.9 +0.6
BADI S Sg 19 20 23.5 +1.5
BADI AML AML
comp=E,1210μm,0.2s
BADI AML AML
comp=N,948μm,0.4s
BADI AML AML
comp=E,1205μm,0.2s
SSFR Montelago di S 0.21 89 P Pg 19 20 20.1 +0.6
SSFR S Sg 19 20 23.8 +1.4
SSFR AML AML
comp=E,1205μm,0.8s
SSFR AML AML
comp=N,1036μm,0.2s
SSFR AML AML
comp=N,960μm,0.2s
SSFR AML AML
comp=N,956μm,0.2s
SSFR AML AML
comp=E,1245μm,0.2s
SSFR AML AML
comp=E,1200μm,0.8s
SSFR AML AML
comp=N,1035μm,0.2s
FOSV Fossato di Vic 0.24 126 P Pg 19 20 20.6 +0.6
FOSV S Sg 19 20 25.2 +1.9
FOSV AML AML
comp=E,165μm,0.4s
FOSV AML AML
comp=E,165μm,0.4s
FOSV AML AML
comp=N,197μm,1.1s
PE3 Peglio 0.26 0 ⇑P Pn 19 20 24.3 -1.1
PE3 AML AML
comp=N,496μm,0.4s
PE3 AML AML
comp=E,402μm,0.4s
MPAG Monte Paganucc 0.27 45 P Pb 19 20 21.7 -0.8
MPAG S Sb 19 20 26.0 -1.2
MPAG AML AML
comp=E,150μm,1.3s
MPAG AML AML
comp=N,179μm,0.4s
MPAG AML AML
comp=N,179μm,0.4s
MPAG AML AML
comp=E,150μm,1.3s
PARC Parchiule 0.28 319 P Pg 19 20 21.6 +0.7
PARC S Sb 19 20 26.7 -0.8
PARC AML AML
comp=E,131μm,0.7s
PARC AML AML
comp=N,177μm,0.3s
PARC AML AML
comp=E,132μm,0.7s
SSP9 Sansepolcro 0.30 298 P Pb 19 20 22.0 -0.8
SSP9 S Sb 19 20 27.1 -0.9
FSSB Fossombrone 0.33 39 P Pb 19 20 22.6 -0.8
FSSB S Sb 19 20 28.0 -0.8
FSSB AML AML
comp=E,365μm,0.6s
FSSB AML AML
comp=N,462μm,0.4s
ARVD Arcevia 0.33 79 P Pg 19 20 22.4 +0.6
ARVD S Sb 19 20 28.0 -0.8
ARVD AML AML
comp=E,207μm,0.2s
ARVD AML AML
comp=N,162μm,0.1s
ARVD AML AML
comp=E,208μm,0.2s
CPGN Carpegna, Ital 0.39 341 S Sg 19 20 29.0 +1.0
CAFI Castiglion Fio 0.40 255 P Pg 19 20 23.7 +0.7
CAFI S Sb 19 20 30.0 -0.8
ASSB Assisi San Ben 0.41 163 P Pg 19 20 23.8 +0.5
ASSB S Sb 19 20 30.3 -0.9
ASSB AML AML
comp=E,97μm,0.4s
ASSB AML AML
comp=E,97μm,0.4s
ASSB AML AML
comp=N,86μm,0.9s
EL6 Elcito 0.46 103 P Pb 19 20 24.8 -0.7
EL6 S Sb 19 20 32.2 -0.3
FDMO Fiordimonte 0.59 132 P Pg 19 20 26.9 +0.3
FDMO S Sb 19 20 36.7 +0.4
ARRO Arrone 0.88 167 S Sg 19 20 39.0 -4.5
TERO Teramo 1.15 135 P Pg 19 20 27.2 -10
TERO S Sg 19 20 44.0 -8.2
TERO AML AML
comp=E,17μm,1.5s
TERO AML AML
comp=N,16μm,1.6s
MAON Monte Argentar 1.42 225 P Pn 19 20 41.1 -0.2
TRI Trieste 2.45 21 ⇓P Pb 19 20 58.7 -0.7

ATH 07 19:20:18.9, 38°.19N×20°.37E, h9km±1km, ML2.6/6, Error ellipse: s-maj=2.1km s-min=1.1km az=245.0
THE 07 19:20:18.9, 38°.17N×20°.34E, h5km, ML2.7/6, Error ellipse: s-maj=0.8km s-min=0.4km az=71.0
ISC 07 19:20:18.9±1.1, 38°.18N±0°.03×20°.35E±0°.04, h7km±4km, n48, σ0.52/76, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.02 79 P Pg 19 20 20.1 0.0
CHV1 S Sg 19 20 20.8 -0.2
KEF3 Kipouria, Keph 0.02 352 P Pg 19 20 20.5 +0.3
KEF3 S Sg 19 20 21.5 +0.4
LXRA Lixouri, Kepha 0.07 72 P Pg 19 20 20.7 0.0
LXRA S Sg 19 20 22.0 +0.1
LXR1 Lixouri, Cepha 0.07 72 P Pg 19 20 20.7 0.0
LXR1 S Sg 19 20 21.7 -0.2
ARGA Argostoli. Kep 0.10 91 P Pg 19 20 21.3 +0.2
ARGA S Sg 19 20 23.0 +0.3
ARG2 Argostoli 0.11 90 P Pg 19 20 21.6 +0.4
ARG2 S Sg 19 20 23.0 +0.2
KEF2 Argostoli. Kep 0.11 97 P Pg 19 20 21.5 +0.3
KEF2 S Sg 19 20 23.2 +0.3
KEF1 Kardakata, Kep 0.14 43 P Pg 19 20 21.8 0.0
KEF1 S Sg 19 20 24.2 +0.5
VLS Valsamata 0.19 90 P Pg 19 20 22.7 0.0
VLS S Sg 19 20 25.6 +0.4
8μm,0.1s
VLS Valsamata 0.19 90 P Pg 19 20 22.6 0.0
VLS S Sg 19 20 25.6 +0.4
VLS AML AML 19 20 25.8
comp=N,17139μm,0.2s
VLS AML AML 19 20 26.3
comp=E,12596μm,0.1s
VSK1 VASILIKIADES 0.28 36 P Pg 19 20 24.6 +0.1
VSK1 S Sg 19 20 29.3 +1.0
KONA Konidatara, Ke 0.30 35 P Pg 19 20 24.9 +0.1
KONA S Sg 19 20 29.6 +0.9
FSK Fiskardo 0.33 30 P Pg 19 20 25.2 -0.1
FSK S Sg 19 20 30.5 +0.9
comp=E,1μm,0.2s
VLMS Volimes, Zakyn 0.39 141 P Pg 19 20 27.1 +0.6
VLMS S Sg 19 20 31.9 +0.3
VLMS AML AML 19 20 34.8
comp=E,3579μm,0.3s
VLMS AML AML 19 20 36.1
comp=N,5409μm,0.3s
EVGI Lefkada island 0.50 28 P Pg 19 20 28.6 0.0
EVGI S Sg 19 20 36.2 +1.0
EVGI Lefkada island 0.50 28 P Pg 19 20 28.6 0.0
EVGI S Sg 19 20 36.2 +1.0
MGNA Meganis 0.59 36 P Pg 19 20 30.0 -0.2
KRI1 kERI 0.63 144 P Pg 19 20 31.1 0.0
KRI1 S Sb 19 20 40.5 -0.9
LKD2 Lefkada island 0.66 21 P Pg 19 20 31.1 -0.4
LKD2 S Sb 19 20 41.3 -0.8
LKD2 Lefkada island 0.66 21 P Pg 19 20 31.0 -0.4
LKD2 S Sg 19 20 40.4 +0.4
LKD2 AML AML 19 20 44.2
comp=E,451μm,0.5s
LKD2 AML AML 19 20 47.2
comp=N,574μm,0.6s
TSLK Tsoukalades, L 0.69 20 P Pg 19 20 31.9 -0.2
TSLK S Sb 19 20 42.6 -0.4
TSLK Tsoukalades, L 0.69 20 P Pg 19 20 31.5 -0.6
TSLK S Sg 19 20 41.0 0.0
TSLK AML AML 19 20 44.6
comp=E,509μm,0.3s
TSLK AML AML 19 20 45.1
comp=N,609μm,0.4s
PDO Prodromos 0.78 57 P Pg 19 20 33.4 -0.4
PDO S Sb 19 20 45.4 -0.1
PDO Prodromos 0.78 57 P Pg 19 20 33.5 -0.4
PDO AML AML 19 20 53.9
comp=E,682μm,0.5s
PDO AML AML 19 20 54.7
comp=N,781μm,0.4s
RLS Riolos of Patr 0.89 97 P Pg 19 20 35.7 -0.2
RLS S Sb 19 20 49.3 +0.6
RLS Riolos of Patr 0.89 97 P Pg 19 20 35.7 -0.2
PVO Paravola 1.02 64 P Pg 19 20 38.3 -0.1
PVO S Sb 19 20 52.8 +0.3
comp=N,368nm,0.7s
PVO Paravola 1.02 64 P Pg 19 20 38.4 -0.1
PVO AML AML 19 20 59.6
comp=E,680μm,0.4s
PVO AML AML 19 21 02.3
comp=N,649μm,0.4s
DRO Drossia 1.09 101 P Pg 19 20 39.5 -0.4
DRO S Sn 19 20 56.0 -0.1
comp=N,465nm,0.6s
DRO Drossia 1.09 101 P Pg 19 20 39.5 -0.4
AMT Artemida-Makis 1.25 121 P Pg 19 20 43.1 +0.2
LAKA Lakka 1.28 87 P Pn 19 20 42.6 -0.7
LAKA Lakka 1.28 87 P Pn 19 20 42.6 -0.7
ANX Ano Chora 1.30 71 P Pn 19 20 42.8 -0.8
ANX S Sn 19 21 02.5 +1.2
comp=N,358nm,0.5s
ANX Ano Chora 1.30 71 P Pn 19 20 43.1 -0.5
IGT Igoumenitsa 1.35 359 P Pb 19 20 44.4 -0.2
IGT S Sn 19 21 03.4 +0.9
comp=N,95nm,0.5s
IGT Igoumenitsa 1.35 359 P Pn 19 20 44.2 0.0
EVR Evrytania 1.36 57 P Pn 19 20 43.4 -1.0
SERG Sergoula 1.36 80 P Pn 19 20 43.7 -0.7
SERG Sergoula 1.36 80 P Pn 19 20 43.5 -0.9
TRIZ Trizonia 1.37 82 P Pn 19 20 43.7 -0.7
TRIZ Trizonia 1.37 82 P Pn 19 20 43.6 -0.7
KALE Kalithea 1.42 81 P Pn 19 20 44.4 -0.8
KALE Kalithea 1.42 81 P Pn 19 20 44.6 -0.7
KLV Kalavryta, Ach 1.43 95 P Pn 19 20 45.1 -0.1
KLV S Sg 19 21 05.2 +0.5
KLV Kalavryta, Ach 1.43 95 P Pn 19 20 45.2 -0.1
MAKR Makrakomi, Fth 1.62 59 P Pb 19 20 49.1 -0.1
AGG Agios Georgios 1.76 61 P Pb 19 20 51.7 +0.1

THR 07 19:43:28.6±0.3, 26°.38N×57°.39E, h14km±8km, ML4.0
MOS 07 19:43:28.9±1.4, 26°.43N×57°.71E, h11km, mb4.4/7, Error ellipse: s-maj=7.6km s-min=4.7km az=109.5
IDC 07 19:43:29.1±0.9, 26°.57N×57°.86E, h0km, mb3.8/21, mb1 3.9/25, mb1mx3.8/66, mbtmp3.8/25, ML2.8/3, MS3.1/13, Ms1 3.2/13, ms1mx2.9/55, Error ellipse: s-maj=17.4km s-min=15.6km az=7.0
NEIC 07 19:43:30.9±1.8, 26°.53N±0°.06×57°.62E±0°.10, h10km±2km, mb4.2/44, mb_Lg4.1(TEH), Error ellipse: s-maj=12.5km s-min=8.9km az=101.0
TEH 07 19:43:31.5, 26°.74N×57°.75E, h11km, ML4.1
DSN 07 19:43:31.1±2.9, 26°.58N×57°.87E, h10km, ML4.1/9, Error ellipse: s-maj=41.1km s-min=16.7km az=178.0
OMAN 07 19:43:33.5±1.0, 26°.68N×57°.95E, h50km±222km, ml4.0/19, Error ellipse: s-maj=143.5km s-min=23.2km az=279.0
ISC 07 19:43:31.5±1.4, 26°.69N±0°.03×57°.77E±0°.04, h13km±9km, n269, σ1.83/268, mb4.1/44, MS3.1/11, 17C-5D, Southern Iran

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JSK1 Jask 1.04 180 ePg Pn 19 43 53.3 +1.5
NIAN Nian 1.20 317 ePg Pg 19 43 54.5 -0.1
NIAN e 19 44 18.3
KHNJ Kahnooj 1.26 358 ePg Pn 19 43 53.5 -1.3
BANOM Banah 1.52 240 eP Pn 19 43 58.1 -0.2
SNR=265
BANOM S Sb 19 44 19.9 +1.2
BANOM Banah 1.52 240 P Pb 19 43 59.7 +0.2
SNR=729
BANOM S Sg 19 44 20.4 -0.1
BANOM Banah 1.52 240 ePn Pn 19 43 58.2 -0.2
BNDS Bandar-Abbas 1.59 297 ePg Pn 19 43 56.0 -3.4
BNDS Bandar-Abbas 1.59 297 ePg Pn 19 43 56.0 -3.4
GENO Geno 1.59 297 ePn Pb 19 44 00.7 -0.1
GENO e 19 44 34.5
SHME Shamm 1.59 247 eP Pn 19 44 00.2 +0.8
SNR=139
SHME Shamm 1.59 247 ePn Pn 19 44 00.1 +0.8
MDH Madha 1.91 224 eP Pn 19 44 01.9 -1.9
SNR=27
MDH Madha 1.91 224 P Pn 19 44 02.1 -1.6
SNR=27
MDH S Sn 19 44 28.9 +1.3
MDH Madha 1.91 224 ePn Pn 19 44 02.1 -1.6
MSFE Esma-Masafi 1.96 228 eP Pn 19 44 02.9 -1.6
SNR=62
MSFE Esma-Masafi 1.96 228 ePn Pn 19 44 02.8 -1.6
UMQ Umm Al-Quwin 2.22 239 ePn Pn 19 44 08.9 +1.0
UOSS Minazif 2.23 219 eP Pn 19 44 06.2 -2.0
SNR=32
UOSS Minazif 2.23 219 Pn 19 44 05.7 -2.5
UOSS Minazif 2.23 219 ePn Pn 19 44 06.0 -2.2
HATD Hatta, Dubai 2.37 219 eP Pn 19 44 09.5 -0.6
SNR=28
HATD Hatta, Dubai 2.37 219 P Pn 19 44 12.0 +2.0
HATD Hatta, Dubai 2.37 219 ePn Pn 19 44 08.1 -1.9
ASHO Ashiyiah 2.52 218 eP Pn 19 44 12.3 +0.1
SNR=19
ASHO Ashiyiah 2.52 218 P Pb 19 44 15.4 -1.2
SNR=29
ASHO S Sb 19 44 47.8 +0.2
ASHO Ashiyiah 2.52 218 ePn Pn 19 44 11.2 -1.0
NAZ Nazwa, Dubai 2.54 229 eP Pn 19 44 13.8 +1.5
SNR=54
NAZ Nazwa, Dubai 2.54 229 P Pn 19 44 15.0 +2.6
SNR=55
NAZ S Sb 19 44 50.3 +2.2
NAZ Nazwa, Dubai 2.54 229 ePn Pn 19 44 14.0 +1.6
CHBR Chabahar 2.67 113 ePn Pn 19 44 16.2 +2.0
CHBR Chabahar 2.67 113 ePn Pn 19 44 16.2 +2.0
FAQ Al Faqa, Dubai 2.75 226 eP Pn 19 44 17.3 +2.0
SNR=9.0
FAQ Al Faqa, Dubai 2.75 226 P Pb 19 44 19.5 -1.1
SNR=9.0
FAQ Al Faqa, Dubai 2.75 226 ePn Pn 19 44 16.6 +1.3
SOHO SOHO 2.77 204 P Pn 19 44 13.4 -2.2
SNR=62
SOHO SOHO 2.77 204 ePn Pn 19 44 13.2 -2.4
ASUD Al Ashush, Dub 3.01 227 i P Pn 19 44 20.3 +1.5
SNR=8.1
ASUD Al Ashush, Dub 3.01 227 P Pn 19 44 21.0 +2.2
ASUD Al Ashush, Dub 3.01 227 ePn Pn 19 44 20.6 +1.8
NGRK Negar Kerman 3.08 343 ePn Pb 19 44 22.8 -3.6
NGRK e 19 45 15.3
HOQ Hoqain 3.12 188 P Pn 19 44 18.6 -1.8
SNR=40
HOQ S Sn 19 44 55.4 -2.0
BIDO Bidbid 3.17 174 P Pn 19 44 19.8 -1.3
SNR=53
BIDO S Sn 19 44 56.5 -2.2
BIDO Bidbid 3.17 174 ePn Pn 19 44 19.2 -1.9
CHMN Cheshme madani 3.17 356 ePn Pb 19 44 24.4 -3.5
CHMN e 19 45 28.3
LAR1 LAR 3.17 289 ePn Pn 19 44 21.7 +0.5
ALNE Al Ain 3.19 215 i P Pn 19 44 21.5 +0.2
SNR=29
ALNE Al Ain 3.19 215 ePn Pn 19 44 22.1 +0.7
AJN Ajban 3.28 230 P Pn 19 44 24.6 +2.0
SNR=5.4
AJN Ajban 3.28 230 ePn Pn 19 44 23.2 +0.6
KRBR Kerman 3.40 345 ePn Pn 19 44 26.9 +2.4
KRBR IAML 19 45 27.8
comp=E,221nm,0.6s
KRBR IAML 19 45 35.1
comp=N,230nm,0.7s
KRBR Kerman 3.40 345 ePn Pn 19 44 26.9 +2.4
TVBK TV Kerman 3.40 345 ePn Pn 19 44 27.4 +2.8
TVBK e 19 44 40.6
ARQ Araqi 3.52 199 P Pn 19 44 27.0 +1.1
SNR=182
ARQ S Sn 19 45 10.9 +3.4
WSAR Wadi Sarin 3.52 167 Pn Pn 19 44 25.3 -0.6
comp=N,62nm,0.3s,baz=344,slow=6.3,SNR=150
WSAR Sn Sn 19 45 04.5 -3.0
comp=N,24nm,0.3s,baz=315,slow=20,SNR=14
SMDO Samad 3.62 176 P Pn 19 44 26.9 -0.5
SNR=56
SMDO S Sn 19 45 09.1 -1.0
KHGB Koh Gabri 3.85 343 ePn Pn 19 44 33.7 +3.1
SZD1 Zahaedan-tmp 3.91 44 ePn Pn 19 44 34.0 +2.6
ZHSF Zahedan 3.94 42 ePn Pb 19 44 37.1 -3.9
ZHSF Zahedan 3.94 42 ePn Pb 19 44 37.1 -3.9
BSY Bisya 3.96 188 P Pn 19 44 35.1 +3.2
SNR=27
BSY S Sn 19 45 20.9 +2.6
WBK Wadi Bani Khal 4.20 165 P Pn 19 44 34.4 -0.9
SNR=98
WBK S Sn 19 45 21.2 -3.1
JMDO Jabal Madar 4.31 176 P Pn 19 44 37.7 +1.0
SNR=24
JMDO S Sn 19 45 27.3 +0.4
UMZA Um Al Zommool 4.61 211 ePn Pn 19 44 40.1 -0.8
NHDN Nehbandan 5.10 23 ePn Pn 19 44 49.7 +2.0
GHWR Ruwais 5.19 240 ePn Pn 19 44 47.7 -1.1
IBAF Bafgh 5.25 339 ePn Pn 19 44 52.0 +2.2
GHB Gharebagh 5.34 301 ePn Pn 19 44 51.9 +0.7
IMEH Mehriz 5.44 330 ePn Pn 19 44 54.1 +1.6
MHTO MHTO 5.68 178 P Pn 19 44 57.8 +2.2
SNR=17
MHTO S Sn 19 45 58.7 -1.9
IKOO Kooshah 5.82 10 ePn Pn 19 44 59.9 +2.2
IKAZ Kazeroun 6.07 302 ePn Pn 19 45 01.4 +0.2
ITEG Tejag 6.25 8 ePn Pn 19 45 05.2 +1.7
ICHK Chekchek 6.26 333 ePn Pn 19 45 05.2 +1.4
ISAD Sadrabad 6.31 327 ePn Pn 19 45 06.6 +2.1
YZKH Yazd 6.32 335 ePn Pn 19 45 05.8 +1.4
TPRV Parvadeh(Tabas 6.39 352 ePn Pn 19 45 07.7 +2.3
IMON Monand 6.69 14 ePn Pn 19 45 12.3 +2.6
DQM DQM 6.73 182 P Pn 19 45 11.5 +1.5
DQM S Sn 19 46 24.7 -1.9
AFRZ Afriz 6.80 9 ePn Pn 19 45 14.2 +3.1
KLNJ Kolanjah 6.92 310 ePn Pn 19 45 13.1 +0.2
TKDS Koohdasht(Taba 6.93 356 ePn Pn 19 45 15.2 +2.4
IRAM Ramesheh 6.94 319 ePn Pn 19 45 13.3 +0.2
TABS Tabas 6.96 356 ePn Pn 19 45 16.3 +3.0
TABS Tabas 6.96 356 ePn Pn 19 45 16.3 +3.0
TNSJ Nastanj 7.32 352 ePn Pn 19 45 21.1 +2.9
ANAR Anarak 7.37 333 ePn Pn 19 45 20.3 +1.5
IZEF Zefreh 7.78 324 ePn Pn 19 45 25.2 +0.5
ROKH ROKH 8.13 315 ePn Pn 19 45 30.8 +1.3
JHBN Jahan bin 8.29 313 ePn Pn 19 45 32.5 +0.8
IPIR Pirpir 8.45 317 ePn Pn 19 45 33.9 0.0
IKLH Kolahrood 8.51 322 ePn Pn 19 45 35.6 +0.9
HRA Herat 8.59 26 Pn 19 45 40.4 +4.6
SHAO Shalim 8.85 193 P Pn 19 45 41.1 +2.0
SNR=9.5
QAM Ghamsar 8.92 324 ePn Pn 19 45 42.4 +2.1
DMTO DMTO 9.30 197 P Pn 19 45 44.7 -0.6
SNR=11
WHFO Wadi Hawf 9.47 204 P Pn 19 45 47.7 0.0
SNR=18
RBK Rabkut 9.72 201 P Pn 19 45 53.8 +2.8
SNR=6.9
IVRN Varamin 9.77 329 ePn Pn 19 45 53.6 +1.8
ABTO Aybut 10.17 205 P Pn 19 45 56.0 -1.3
SNR=13
HSAM Samen 10.89 316 ePn Pn 19 46 07.1 -0.2
IDOB Doab 10.89 333 ePn Pn 19 46 05.7 -1.6
GEYT Alibeck 11.21 1 Pn Pn 19 46 13.1 +1.6
comp=N,0.1nm,0.3s,baz=152,slow=13,SNR=2.9
GEYT LR LR 19 50 13.0
comp=N,15nm,21.6s,baz=190,slow=36
GEYT Alibeck 11.21 1 Pn Pn 19 46 13.7 +2.2
GYA0B ALIBECK ARRAY 11.21 1 Pn Pn 19 46 13.7 +2.2
IBZA Bozab 11.53 315 ePn Pn 19 46 18.8 +2.8
RAYN Ar Rayn 11.55 257 Pn 19 46 13.6 -2.6
RAYN Ar Rayn 11.55 257 P Pn 19 46 13.6 -2.6

IKOM Komasi 11.57 313 ePn Pn 19 46 15.5 -1.0
IGHG Ghaleghazi 12.29 311 ePn Pn 19 46 26.4 0.0
KBL Kabul 12.47 48 Pn 19 46 31.8 +3.0
KBL Kabul 12.47 48 P Pn 19 46 31.8 +3.0
IDHR Dehrash 12.63 312 ePn Pn 19 46 29.1 -1.9
THW Thamme Wali 13.58 60 P Pn 19 46 45.2 +1.4
CEP Cherat 14.13 56 P Pn 19 46 54.2 +2.7
SOCY Socotra 14.86 195 Pn Pn 19 46 56.4 -5.0
NIL Nilore 15.08 59 P 19 47 07.4 -2.1
NIL IAmb IAmb 19 47 11.5
comp=Z,11nm,0.8s
NIL Nilore 15.08 59 P P 19 47 07.4 -2.1
NIL pmax pmax
comp=Z,11nm,0.8s
CHCP Chirah Chowk 15.09 59 P P 19 47 07.1 +2.7
NAX Nakhchivan 16.14 324 P Pn 19 47 18.4 +0.3
MNGR Mingechevir, A 16.60 330 P P 19 47 24.8 -1.5
GANJ Ganja 16.85 329 P Pn 19 47 27.7 +0.7
SEKA Sheki 16.91 332 P Pn 19 47 28.2 +0.3
AKT Akhty 16.92 333⇑eP P 19 47 31.2 +1.2
BTK Batken 17.20 36 Pn 19 47 31.6 +0.1
BTK Batken 17.20 36 P Pn 19 47 31.6 +0.1
BTK pmax pmax
comp=Z,6.0nm,1.0s
GNI Garni 17.25 324 P P 19 47 34.2 +0.5
comp=Z,0.2nm,0.3s,baz=204,slow=18,SNR=3.8
GNI LR LR 19 55 26.2
comp=Z,75nm,20.0s,baz=113,slow=41
GNI Garni 17.25 324 Pn 19 47 31.8 -0.4
DAMY Dhamar 17.36 229 Pn Pn 19 47 29.3 -4.6
DAMY IAmb IAmb 19 47 50.4
comp=Z,14nm,0.7s
GNBR Gunib 17.99 333⇑eP P 19 47 43.6 +1.8
TBLG Delisi 18.44 328 P P 19 47 46.9 +0.2
TBLG Delisi 18.44 328 P P 19 47 46.9 +0.2
AKH Akhalkalaki 18.82 325 Pn 19 47 52.4 +0.9
AKH Akhalkalaki 18.82 325 P Pn 19 47 52.4 +0.9
AKH pmax pmax
comp=Z,4.0nm,0.8s
ASF Jabal al Asfar 18.97 292 P P 19 47 53.0 +0.3
comp=Z,0.2nm,0.3s,baz=86,slow=2.8,SNR=4.7
ASF S Sn 19 51 16.2 -10
comp=Z,0.1nm,0.3s,baz=90,slow=8.1,SNR=3.6
ASF Jabal al Asfar 18.97 292 P P 19 47 53.0 +0.3
ARSB Arslanbob 19.25 37 P Pn 19 47 57.6 +0.8
ARSB IAmb IAmb 19 48 03.7
comp=Z,12nm,1.2s
ARSB Arslanbob 19.25 37 P Pn 19 47 57.6 +0.8
ARSB pmax pmax
comp=Z,12nm,1.3s
KK31 Karatay Array 19.39 29 P Pn 19 47 57.6 -0.7
KK31 Karatay Array 19.39 29 P Pn 19 47 57.6 -0.7
KK31 pmax pmax
comp=Z,5.0nm,0.9s
KKAR Karatay Array 19.39 29 P Pn 19 47 58.2 -0.1
KKAR Karatay Array 19.39 29 P Pn 19 47 58.2 -0.1
KKAR pmax pmax
comp=Z,5.0nm,0.9s
ZEI Tsey 19.65 328 eP Pn 19 48 02.2 +0.7
ZEI pmax pmax
comp=Z,4.0nm,1.0s
KSH Kashi 19.86 45 P Pn 19 48 08.1 +4.1
KSH pP sP 19 48 13.5 +5.0
KSH S Sn 19 51 47.0 -0.2
KSH PcP PcP 19 52 30.9 +11
GAZ Gaziantep 20.30 306 P P 19 48 05.9 -1.2
GAZ IAmb IAmb 19 48 16.1
comp=Z,5.6nm,0.7s
EIL Elat 20.32 284 P Pn 19 48 09.4 0.0
comp=Z,5.5nm,0.7s,baz=116,slow=7.2,SNR=4.9
EIL LR LR 19 57 46.7
comp=Z,42nm,20.4s,baz=98,slow=42
NCK Nalchik 20.34 329⇑eP Pn 19 48 10.7 +1.2
NCK pmax pmax
comp=Z,3.0nm,0.7s
MMAI Mount Meron Ar 20.38 293 P Pn 19 48 09.9 -0.2
comp=Z,2.5nm,0.8s,baz=93,slow=16,SNR=5.7
MMAI LR LR 19 58 10.8
comp=Z,47nm,19.4s,baz=230,slow=43
NEY Neytrino 20.56 327⇑eP Pn 19 48 13.8 +1.5
NEY pmax pmax
comp=Z,1.0nm,0.9s
ATD Arta Tunnel 20.61 226 P P 19 48 07.7 -2.9
ATD IAmb IAmb 19 48 26.7
comp=Z,13nm,1.0s
KBZ Khabaz 20.84 328 P Pn 19 48 15.6 +0.3
comp=Z,2.1nm,0.9s,baz=129,slow=9.0,SNR=6.0
KBZ Khabaz 20.84 328⇑eP Pn 19 48 17.8 +2.5
SHA1 Shidzhatmaz 20.96 328⇓eP Pn 19 48 19.1 +2.1
AAK Ala-Archa 20.98 36 P P 19 48 15.0 +0.5
comp=Z,1.2nm,0.7s,baz=200,slow=15,SNR=2.3
AAK LR LR 19 57 04.4
comp=Z,46nm,18.9s,baz=208,slow=39
AAK Ala-Archa 20.98 36 P Pn 19 48 17.5 +0.4
AAK IAmb IAmb 19 48 26.5
comp=Z,5.3nm,0.8s
AAK Ala-Archa 20.98 36⇓eP Pn 19 48 18.5 +1.4
AAK pmax pmax
comp=Z,3.0nm,1.2s
PYA1 Pyatigorsk 21.01 329⇓eP P 19 48 18.1 +3.4
NRN Naryn 21.02 41 P P 19 48 16.3 +1.1
NRN Naryn 21.02 41 P P 19 48 16.3 +1.1
NRN pmax pmax
comp=Z,6.0nm,1.0s
KVAR Kislovodsk Arr 21.11 329 P P 19 48 18.0 +2.1
comp=Z,1.7nm,0.8s,baz=76,slow=20,SNR=5.9
KIV Kislovodsk 21.11 329 P P 19 48 17.4 +1.5
KIV IAmb IAmb 19 48 22.5
comp=Z,7.5nm,1.0s
KIV Kislovodsk 21.11 329 eP P 19 48 20.4 +4.5
KIV pmax pmax
comp=Z,24nm,1.1s
FRU1 Bishkek 21.17 36 P P 19 48 18.6 +2.1
FRU1 IAmb IAmb 19 48 44.4
comp=Z,17nm,1.3s
FRU1 Bishkek 21.17 36 P P 19 48 18.6 +2.1
FRU1 pmax pmax
comp=Z,17nm,1.3s
CSS Mathiatis 22.51 297 P P 19 48 30.8 0.0
CSS IAmb IAmb 19 48 36.2
comp=Z,6.2nm,0.8s
ABKAR Akbulak array 22.60 4 P P 19 48 32.8 +1.2
ABKAR Akbulak array 22.60 4 P P 19 48 32.4 +0.8
ABKAR IAmb IAmb 19 48 39.1
comp=Z,5.4nm,0.8s
AKTO Aktyubinsk 23.71 0 P P 19 48 43.8 +0.8
comp=Z,3.2nm,0.6s,baz=170,slow=11,SNR=14
AKTO LR LR 19 59 09.5
comp=Z,72nm,21.4s,baz=171,slow=40
BR131 Keskin Array S 23.92 309 P P 19 48 45.4 0.0
BR131 IAmb IAmb 19 48 50.3
comp=Z,4.2nm,0.8s
BR131 Keskin Array S 23.92 309ceP P 19 48 46.9 +1.6
BRTR Keskin Array B 23.92 309 P P 19 48 46.4 +1.0
comp=Z,3.7nm,0.7s,baz=126,slow=9.8,SNR=24
BRTR LR LR 19 59 56.0
comp=Z,81nm,19.6s,baz=95,slow=41
BRTR Keskin Array B 23.92 309 P P 19 48 45.0 -0.3
BRTR Keskin Array B 23.92 309 iP P 19 48 47.2 +1.9
BRTR pmax pmax
comp=Z,4.0nm,0.7s
ILGA Ilgaz 24.47 312 P P 19 48 49.4 -1.0
ILGA IAmb IAmb 19 49 08.6
comp=Z,9.2nm,1.3s
ELL Elmali 25.65 300 P P 19 48 59.2 -1.9
ELL Elmali 25.65 300 P P 19 48 59.2 -1.9
ELL pmax pmax
comp=Z,37nm,1.2s
MDUB Mudurnu 25.94 309 P P 19 49 04.2 +0.6
MANT Manisa 27.16 303 P P 19 49 14.2 -0.7
KARP Karpathos 27.56 296 P P 19 49 18.1 -0.2
MAKZ Makanchi 27.73 37 P P 19 49 22.6 +3.0
MAKZ IAmb IAmb 19 49 32.5
comp=Z,4.7nm,1.4s
MAKZ Makanchi 27.73 37 P P 19 49 22.6 +3.0
MAKZ pmax pmax
comp=Z,5.0nm,1.4s
MK31 Makanchi Array 27.89 38 P P 19 49 23.1 +2.0
MK31 Makanchi Array 27.89 38 P P 19 49 23.1 +2.0
MK31 pmax pmax
comp=Z,2.0nm,1.2s
MKAR Makanchi Array 27.89 38 P P 19 49 21.3 +0.2
comp=Z,0.5nm,0.8s,baz=235,slow=9.8,SNR=4.1
MKAR Makanchi Array 27.89 38 P P 19 49 23.7 +2.7
MKAR Makanchi Array 27.89 38 iP P 19 49 24.1 +3.0
MKAR pmax pmax
comp=Z,1.0nm,0.8s
BVAR Borovoye Array 27.95 16 P P 19 49 21.9 +0.4
comp=Z,0.5nm,0.4s,baz=202,slow=7.4,SNR=5.2
BRVK Borovoye 27.95 16 P P 19 49 22.8 +1.3
BRVK IAmb IAmb 19 50 16.2
comp=Z,2.2nm,0.7s
BRVK Borovoye 27.95 16 P P 19 49 22.8 +1.3
BRVK pmax pmax
comp=Z,2.0nm,0.7s
KURBB Kurchatov Arra 28.69 28 P P 19 49 29.4 +1.4
comp=Z,0.5nm,0.2s,baz=227,slow=8.6,SNR=3.5
KURK Kurchatov 28.80 28 P P 19 49 31.4 +2.4
KURK Kurchatov 28.80 28 P P 19 49 31.4 +2.4
KURK pmax pmax
comp=Z,2.0nm,1.2s
SANT Santorini 29.07 297 P P 19 49 30.4 -1.2
PALK Pallekele 29.12 127 LR LR 20 00 50.2
comp=Z,72nm,19.5s,baz=205,slow=36
WMQ Urumqi 29.61 47 eP P 19 49 40.4 +4.0
WMQ pP sP 19 49 44.5 +1.8
ARU Arti 29.73 1 LR LR 20 02 26.3
comp=Z,40nm,21.1s,baz=192,slow=38
KAAM Kaadhehdhoo 29.88 148 P P 19 49 37.7 -1.3
SORM Soroca 31.38 321 ⇑P P 19 49 50.2 -1.7
SORM Soroca 31.38 321 ⇑P P 19 49 50.2 -1.7
AGG Agios Georgios 32.01 302 P P 19 49 57.5 -0.1
AGG IAmb IAmb 19 50 23.9
comp=Z,8.0nm,1.3s
AGG Agios Georgios 32.01 302 P P 19 49 57.5 -0.1
AGG pmax pmax
comp=Z,8.0nm,1.3s
VOIR 32.09 314 ⇑P P 19 49 59.1 +0.8
VOIR 32.09 314 ⇑P P 19 49 59.1 +0.8
ARR Arges 32.33 314 ⇑P P 19 50 01.9 +1.5
AKASG Malin Array Be 32.38 325 P P 19 50 00.2 -0.4
comp=Z,3.5nm,0.7s,baz=128,slow=8.3,SNR=10.0
AKASG Malin Array Be 32.38 325 P P 19 50 01.6 +1.0
AKASG Malin Array Be 32.38 325 P P 19 50 01.6 +1.0
AKASG pmax pmax
comp=Z,1.0nm,0.8s
AKBB Malin Array Si 32.38 325 P P 19 50 00.4 -0.2
AKBB IAmb IAmb 19 50 04.1
comp=Z,6.5nm,0.7s
AKBB Malin Array Si 32.38 325⇓eP P 19 49 59.9 -0.7
BURAR Bucovina Array 32.95 318 P P 19 50 06.7 +0.9
BUR08 Bucovina Ar. S 32.97 318 P P 19 50 04.7 -1.3
BUR08 IAmb IAmb 19 50 36.6
comp=Z,4.8nm,1.4s
FNA Florina 33.12 304 P P 19 50 07.6 +0.3
FNA IAmb IAmb 19 50 12.3
comp=Z,14nm,1.5s
FNA Florina 33.12 304 P P 19 50 07.6 +0.3
FNA pmax pmax
comp=Z,14nm,1.5s
GZR Gura Zlata 33.55 313 ⇑P P 19 50 09.8 -1.3
GZR Gura Zlata 33.55 313 P P 19 50 09.7 -1.3
ZAA0 Zalesovo Array 33.77 29 P P 19 50 14.5 +1.8
ZAA0 IAmb IAmb 19 50 26.2
comp=Z,4.0nm,1.2s
ZALV Zalesovo Beam 33.77 29 P P 19 50 11.4 -1.3
comp=Z,0.4nm,0.3s,baz=250,slow=4.2,SNR=2.4
ZALV Zalesovo Beam 33.77 29 P P 19 50 14.3 +1.5
ZALV Zalesovo Beam 33.77 29 iP P 19 50 18.3 +5.6
ZALV pmax pmax
comp=Z,1.0nm,0.3s
DRGR 34.13 315 ⇑P P 19 50 17.5 +1.4
DRGR 34.13 315 ⇑P P 19 50 17.5 +1.4
BZS Buzias 34.39 313 ⇑P P 19 50 19.4 +1.2
BZS Buzias 34.39 313 ⇑P P 19 50 19.4 +1.2
KOLS Kolonicke sedl 35.30 318 eP P 19 50 27.5 +1.4
KOLS pmax pmax
comp=Z,9.0nm,1.3s
KOLS Kolonicke sedl 35.30 318 eP P 19 50 27.5 +1.4
CRVS Cervenica-Dubn 35.77 318 eP P 19 50 31.6 +1.5
CRVS pmax pmax
comp=Z,8.0nm,1.1s
CRVS Cervenica-Dubn 35.77 318 eP P 19 50 31.6 +1.5
GTA Gaotai 37.14 59 eP P 19 50 49.8 +7.7
GTA pP sP 19 50 55.8 +7.3
GTA sP pP 19 50 58.8 +12
VYHS Vyhne 37.20 316 eP P 19 50 43.2 +0.8
VYHS Vyhne 37.20 316 eP P 19 50 43.2 +0.8
OJC Ojcow 37.30 319 P P 19 50 43.7 +0.5
OJC IAmb IAmb 19 50 48.3
comp=Z,6.4nm,0.6s
OJC Ojcow 37.30 319 P P 19 50 43.7 +0.5
OJC pmax pmax
comp=Z,6.0nm,0.6s
CMAR Chiang Mai Arr 38.76 93 LR LR 20 09 35.9
comp=Z,32nm,20.0s,baz=275,slow=40
CONA Conrad Observa 38.88 314 eP P 19 50 56.3 -0.3
comp=Z,3.1nm,1.2s
MOA Molln 39.89 314 eP P 19 51 04.8 -0.1
comp=Z,4.5nm,1.0s
LZH Lanzhou 40.12 65 eP P 19 51 08.5 +1.2
LZH pP sP 19 51 12.8 -0.9
LZH sP pP 19 51 16.2 +4.3
LZH PP PP 19 52 37.7 -1.8
GERES GERESS Array B 40.53 315 P P 19 51 10.5 +0.1
comp=Z,1.2nm,0.6s,baz=122,slow=7.4,SNR=4.2
GERES GERESS Array B 40.53 315 P P 19 51 10.1 -0.3
KHC Kasperske Hory 40.69 315 P P 19 51 11.7 +0.1
KHC Kasperske Hory 40.69 315⇓eP P 19 51 11.7 +0.1
KHC pmax pmax
comp=Z,9.0nm,0.9s
FIA1 FINESS Array S 40.75 337 P P 19 51 12.2 +0.4
FINES FINESS Array B 40.75 337 P P 19 51 12.3 +0.4
comp=Z,1.3nm,0.5s,baz=139,slow=6.6,SNR=9.8
FINES FINESS Array B 40.75 337 P P 19 51 12.2 +0.3
FINES FINESS Array B 40.75 337 iP P 19 51 14.3 +2.5
FINES pmax pmax
comp=Z,1.0nm,0.5s
PBKT Sadao Pong 41.24 95 P P 19 51 16.6 +0.2
ZCCA Zocca 41.35 308 P P 19 51 16.8 -0.3
WTTA Wattenberg 41.46 312 epP P 19 51 18.4 +0.3
comp=Z,11nm,1.1s
WATA Walderalm 41.52 312 epP P 19 51 19.9 +1.3
comp=Z,15nm,1.7s
MOTA Moosalm 41.83 312 epP pP 19 51 24.4 -1.3
comp=Z,8.8nm,1.1s
TLY Talaya 42.49 41⇑eP P 19 51 28.5 +2.2
TLY pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 43.24 48 P P 19 51 32.4 -0.2
comp=Z,0.4nm,0.9s,baz=258,slow=5.7,SNR=3.0
SONM Songino Array 43.24 48 P P 19 51 34.6 +2.0
SONM Songino Array 43.24 48 P P 19 51 34.6 +2.0
HFS Hagfors 44.89 330 P P 19 51 46.5 +1.0
comp=Z,1.4nm,0.7s,baz=134,slow=13,SNR=4.8
NC405 NORSAR Array S 46.21 331 P P 19 51 56.1 +0.2
HHC Hu-ho-hao-te 46.22 58 eP P 19 51 57.7 +1.3
NB201 NORSAR Array S 46.36 331 P P 19 51 56.5 -0.7
NOA NORSAR Array B 46.39 331 P P 19 51 57.3 -0.1
comp=Z,1.0nm,0.7s,baz=114,slow=7.9,SNR=5.4
NOA LR LR 20 13 54.6
comp=Z,20nm,19.5s,baz=10,slow=39
ARCES ARCESS Array B 46.82 345 P P 19 52 02.5 +2.0
ARCES ARCESS Array B 46.82 345 P P 19 52 02.6 +2.0
EKA Eskdalemuir Ar 52.05 321 P P 19 52 41.3 +0.7
comp=Z,1.7nm,0.8s,baz=105,slow=7.5,SNR=3.2
TOA0 Torodi Ar. Sit 54.02 267 P P 19 52 54.8 -1.1
TOA0 IAmb IAmb 19 53 05.0
comp=Z,6.6nm,1.5s
TORD Torodi Ar. Bea 54.02 267 P P 19 52 55.4 -0.5
comp=Z,1.7nm,0.6s,baz=62,slow=7.0,SNR=12
TORD Torodi Ar. Bea 54.02 267 P P 19 52 55.9 0.0
KSRS Korea Array 59.19 61 LR LR 20 22 38.9
comp=Z,23nm,19.5s,baz=215,slow=40
JNU Nakatsue 62.55 65 LR LR 20 24 42.6
comp=Z,48nm,18.4s,baz=184,slow=40
ILAR Eielson Array 86.84 10 P P 19 56 15.2 -0.3
comp=Z,0.3nm,0.7s,baz=316,slow=4.6,SNR=2.5
ILAR Eielson Array 86.84 10 P P 19 56 15.6 +0.2
ILAR Eielson Array 86.84 10 P P 19 56 15.6 +0.2
WRA Warramunga Arr 87.48 114 P P 19 56 18.1 -1.1
comp=Z,0.4nm,1.0s,baz=324,slow=4.1,SNR=2.9

IDC 07 19:51:59.6±1.5, 9°.90S×159°.89E, h0km, mb4.1/12, mb1 4.2/12, mb1mx4.0/42, mbtmp4.0/12, MS3.6/4, Ms1 3.6/4, ms1mx2.8/34, Error ellipse: s-maj=50.5km s-min=18.7km az=121.0
NEIC 07 19:52:04.5±1.4, 9°.78S±0°.09×159°.66E±0°.09, h27km±6km, mb4.4/13, Error ellipse: s-maj=13.8km s-min=11.6km az=212.0
ISC 07 19:52:03.7±0.6, 9°.78S±0°.08×159°.70E±0°.08, h22km, n38, σ0°.84/35, mb4.0/16, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	0.42	35	iP	Pb	19 52 13.0	+0.5
HNR				iS	Sn	19 52 21.0	-0.6
HNR	Honiara	0.42	35		Pn	19 52 13.7	-0.8
SANVU	Saraoutou	9.24	128	Pn	Pn	19 54 16.9	+1.2
RABL	Rabaul	9.31	306	Pn	Pn	19 54 16.9	+0.1
PMG	Port Moresby	12.38	271	LR	LR	19 59 25.3	
comp=Z,137nm,18.4s,baz=145,slow=36							
COEN	Coen	16.70	254	Pn	Pn	19 55 56.2	-0.3
COEN				IAmb	IAmb	19 56 34.0	
comp=Z,43nm,1.5s							
EIDS	Eidsvold	17.54	207	P	Pn	19 56 07.0	+0.1
EIDS				IAmb	IAmb	19 56 09.3	
comp=Z,27nm,1.5s							
WR0	Warramunga Arr	26.30	244	P	P	19 57 37.9	-0.2
WR0				IAmb	IAmb	19 57 38.2	
comp=Z,10nm,1.2s							
WB0	Warramunga Arr	26.37	245	P	P	19 57 38.6	-0.1
WB0				IAmb	IAmb	19 58 09.1	
comp=Z,12nm,1.2s							
WRAB	Tennant Creek	26.46	245	P	P	19 57 38.5	-1.0
WB2	Warramunga Arr	26.47	245	P	P	19 57 39.3	-0.2
WB2				IAmb	IAmb	19 58 02.3	
comp=Z,14nm,1.3s							
WRA	Warramunga Arr	26.48	245	P	P	19 57 39.3	-0.3
comp=Z,1.8nm,0.9s,baz=73,slow=10,SNR=11							
WRA	Warramunga Arr	26.48	245	P	P	19 57 38.9	-0.8
GUMO	Guam	27.49	327	LR	LR	20 08 51.3	
comp=Z,26nm,18.1s,baz=107,slow=36							
STKA	Stephens Creek	27.66	215	P	P	19 57 50.1	0.0
comp=Z,1.6nm,0.6s,baz=69,slow=15,SNR=6.5							
STKA	Stephens Creek	27.66	215	P	P	19 57 50.2	0.0
AS31	Alice Springs	28.23	238	P	P	19 57 53.4	-2.0
ASAR	Alice Springs	28.23	238	P	P	19 57 54.5	-0.9
comp=Z,0.6nm,0.6s,baz=59,slow=10,SNR=13							
ASAR	Alice Springs	28.23	238	P	P	19 57 54.3	-1.1
NIUE	Niue	30.79	111	P	P	19 58 17.2	-0.8
BBOO	Buckleboo	31.64	220	P	P	19 58 25.1	-0.3
BBOO				IAmb	IAmb	19 58 29.3	
comp=Z,14nm,1.2s							
JHJ	Hachijo jima 2	46.69	337	LR	LR	20 17 50.8	
comp=Z,109nm,21.3s,baz=290,slow=33							
MJAR	Matsushiro Arr	50.31	337	P	P	20 00 58.0	-0.9
comp=Z,1.0nm,0.6s,baz=158,slow=7.8,SNR=3.7							
MJAR	Matsushiro Arr	50.31	337	P	P	20 00 57.4	-1.5
JKA	Kamikawa-asahi	55.84	345	P	P	20 01 40.4	+1.0
ASAJ	Asahikawa	55.84	345	P	P	20 01 40.4	+1.0
comp=Z,12nm,1.1s,baz=192,slow=1.5,SNR=4.8							
PETK	Petropavlovsk-	62.66	359	P	P	20 02 26.6	+0.1
comp=Z,2.7nm,0.7s,baz=157,slow=8.4,SNR=6.7							
PETK	Petropavlovsk-	62.66	359	P	P	20 02 26.9	+0.5
CMAR	Chiang Mai Arr	66.18	295	P	P	20 02 52.2	+2.0
comp=Z,0.8nm,0.9s,baz=124,slow=4.9,SNR=5.8							
SEY	Seymchan	72.71	356	P	P	20 03 30.1	+0.5
comp=Z,0.9nm,0.6s,baz=124,slow=3.6,SNR=4.0							
SONM	Songino Array	74.21	326	P	P	20 03 39.9	+0.9
comp=Z,0.8nm,0.6s,baz=143,slow=5.6,SNR=7.5							
SONM	Songino Array	74.21	326	P	P	20 03 39.1	+0.1
ILAR	Eielson Array	84.30	20	P	P	20 04 33.0	-0.5
comp=Z,1.7nm,0.4s,baz=241,slow=5.0,SNR=6.9							
ILAR	Eielson Array	84.30	20	P	P	20 04 32.9	-0.7
MKAR	Makanchi Array	88.57	318	P	P	20 04 55.2	+0.2
comp=Z,0.4nm,0.6s,baz=101,slow=5.9,SNR=6.0							
MKAR	Makanchi Array	88.57	318	P	P	20 04 54.9	-0.1
YKA	Yellowknife Ar	96.61	28	P	P	20 05 31.0	-0.7
comp=Z,0.2nm,0.6s,baz=264,slow=5.1,SNR=4.1							
SNAA	Sanae	97.90	186	LR	LR	20 44 17.2	
comp=Z,114nm,21.9s,baz=344,slow=32							

IDC 07 19:59:50.4±1.8, 61°.66N×151°.72W, h77km±31km, mb3.5/2, mb1 3.4/6, mb1mx3.1/60, mbtmp3.6/6, MS3.2/2, Ms1 3.1/2, ms1mx2.4/44, Error ellipse: s-maj=39.3km s-min=9.4km az=112.0
NEIC 07 19:59:52.5±1.2, 61°.72N±0°.04×151°.76W±0°.09, h102km±4km, Error ellipse: s-maj=6.2km s-min=5.6km az=123.0
AEIC 07 19:59:53.6±1.1, 61°.70N±0°.03×151°.78W±0°.09, h99km±4km, ML3.0/77, Error ellipse: s-maj=6.1km s-min=4.9km az=86.0
ISC 07 19:59:52.3±0.9, 61°.72N±0°.03×151°.74W±0°.03, h106km±7km, n103, σ0°.89/115, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKT	Skwentna	0.28	21		Pn	20 00 07.3	-0.3
SKT	Skwentna	0.28	21		Sn	20 00 18.1	-1.0
SPCG	Spurr Capps Gl	0.45	198		Pn	20 00 08.0	-0.6
SPCG					Sn	20 00 19.1	-1.6
SUA	Susitna One	0.54	117		Pn	20 00 09.3	+0.1
SUA	Susitna One	0.54	117		Sn	20 00 21.8	0.0
SPCR	Spurr Chakacha	0.56	204		Pn	20 00 08.6	-0.7
CAPN	Captain Cook N	0.99	163		Pn	20 00 14.7	+1.7
RC01	Rabbit Creek A	1.15	122		Pn	20 00 16.0	+1.2
RC01	Rabbit Creek A	1.15	122		Sn	20 00 32.4	+0.5
PPLA	Purkeypile	1.20	350		Pn	20 00 15.6	0.0
DFR	Drift River	1.22	203		Pn	20 00 15.6	-0.1
DFR					Sn	20 00 33.0	-0.3
RDJH	Redoubt Jeurge	1.24	205		Pn	20 00 16.1	+0.1
RDJH					Sn	20 00 33.7	-0.1
PMR	Palmer	1.25	94		Pn	20 00 15.7	-0.2
PMR	Palmer	1.25	94		Sn	20 00 33.5	-0.4
RDWB	Redoubt West	1.34	204		Pn	20 00 17.2	0.0
RDWB					Sn	20 00 35.5	-0.4
GHO	Glory Hole Cre	1.34	86		Pn	20 00 17.2	+0.1
GHO	Glory Hole Cre	1.34	86		Sn	20 00 36.4	+0.5
RSO	Redoubt South	1.35	202		Pn	20 00 17.3	0.0
SLKM	Skilak Lake	1.42	148		Pn	20 00 17.8	-0.2
KNK	Knik Glacier	1.60	99		Pn	20 00 20.0	-0.1
KNK	Knik Glacier	1.60	99		Sn	20 00 41.4	+0.1
HUR	Hurricane	1.60	37		Pn	20 00 20.7	+0.5
SML	Sawmill	1.62	85	Pn	Pn	20 00 20.4	-0.1
PWL	Port Wells	1.86	116		Pn	20 00 22.8	-0.5
PWL					Sn	20 00 46.5	-0.4
WAT1	Susitna Watana	1.86	52		Pn	20 00 23.9	+0.5
TRF	Thorofare Moun	1.87	20		Pn	20 00 24.1	+0.5
WAT2	Susitna Watana	1.93	48		Pn	20 00 24.9	+0.5
SEW	Seward	1.97	144		Pn	20 00 24.3	-0.3
BRLK	Bradley Lake	2.00	167	Pn	Pn	20 00 25.0	-0.2
BRLK					Sn	20 00 49.8	-0.4
BRSE	Bradley Lake S	2.04	166		Pn	20 00 25.2	-0.4
WAT6	Susitna Watana	2.07	63		Pn	20 00 26.5	+0.3
SCM	Sheep Creek Mo	2.10	85		Pn	20 00 26.4	-0.1
RND	Reindeer	2.16	37		Pn	20 00 27.3	+0.1
CHUM	Lake Minchumin	2.19	353		Pn	20 00 27.9	+0.3
TT01	Tatalina	2.33	303		Pn	20 00 29.1	-0.2
TTA	Tatalina	2.34	303		Pn	20 00 29.1	-0.4
GLI	Glacier Island	2.39	108	Pn	Pn	20 00 29.1	-1.1
GLI					Sn	20 00 56.6	-2.6
MCK	McKinley	2.40	31		Pn	20 00 30.4	+0.1
BPAW	Bear Paw Mtn.	2.42	8		Pn	20 00 30.4	-0.1
DHY	Denali Highway	2.45	54	Pn	Pn	20 00 31.4	+0.4
JPK	Jack Peak	2.56	103		Pn	20 00 31.8	-0.6
FID	Port Fidalgo	2.72	109	Pn	Pn	20 00 33.1	-1.4
FID					Sn	20 01 05.6	-1.4
HIN	Hinchinbrook I	2.87	115	Pn	Pn	20 00 35.0	-1.5
PS11	TAPS Pump St11	2.99	80		Pn	20 00 38.9	+0.9
NEA	Nenana	3.12	22	Pn	Pn	20 00 39.3	-0.4
EYAK	Cordova Ski Ar	3.13	109	Pn	Pn	20 00 38.7	-1.2
PAX	Paxson	3.19	64		Pn	20 00 41.3	+0.6
WRH	Wood River Hil	3.23	29		Pn	20 00 41.2	+0.1
MLY	Manley	3.36	7		Pn	20 00 43.0	+0.1
CCB	Clear Creek Bu	3.44	30		Pn	20 00 44.0	0.0
HDA	Harding Lake	3.47	37		Pn	20 00 44.1	-0.4
KAHC	Katmai Hardscr	3.48	209		Pn	20 00 45.3	+0.6
MID	Middleton Isla	3.52	128	Pn	Pn	20 00 45.5	+0.5
KARR	Katmai Rainbow	3.55	206		Pn	20 00 46.6	+1.0
PS08	TAPS Pump Stn8	3.61	36		Pn	20 00 46.3	+0.3
MDM	Murphy Dome	3.62	24		Pn	20 00 46.8	+0.3
COLA	College	3.62	27	Pn	Pn	20 00 45.4	-1.0
RIDG	Independent Ri	3.77	54		Pn	20 00 50.0	+1.5
IL31		3.77	33		Pn	20 00 48.7	+0.3

ILAR Eielson Array 3.77 33 P Pn 20 00 48.5 +0.1
3.5nm,0.3s,baz=223,slow=14,SNR=94
ILAR S Sn 20 01 29.8 -2.1
2.6nm,0.3s,baz=217,slow=23,SNR=6.4
ILAR Eielson Array 3.77 33 Pn 20 00 48.1 -0.3
GLB Gilahina Butte 3.80 91 Pn Pn 20 00 48.4 -0.5
KABU Katmai Buttres 3.89 209 Pn 20 00 50.9 +0.8
POKR Poker Flat Res 3.93 28 Pn 20 00 51.3 +0.8
MENT Mentasta 3.94 68 Pn Pn 20 00 49.5 -1.2
KDAK Kodiak Island 3.97 187 P Pn 20 00 49.6 -1.5
0.6nm,0.3s,baz=48,slow=5.0,SNR=12
KDAK S Sn 20 01 32.3 -4.3
3.3nm,0.3s,baz=303,slow=21,SNR=9.8
KDAK Kodiak Island 3.97 187 Pn Pn 20 00 50.7 -0.4
VRDI Verde Repeater 4.01 93 Pn Pn 20 00 51.0 -0.8
DOT Dot Lake 4.04 58 Pn 20 00 52.7 +0.7
MCARA McCarthy VSAT 4.18 91 Pn Pn 20 00 54.6 +0.6
SCRK Sand Creek 4.22 54 Pn 20 00 55.0 +0.4
CRQM Cirque 4.27 99 Pn Pn 20 00 56.0 +0.7
IM03 4.38 349 Pn 20 00 56.8 +0.3
IMAR Indian Mountai 4.38 349 Pn 20 00 56.8 +0.2
TGL Tana Glacier 4.41 99 Pn Pn 20 00 56.7 -0.5
TGL Sn 20 01 46.0 -1.6
PTPK Patty Peak 4.48 93 Pn 20 00 58.2 -0.1
BALM Baldy 4.57 94 Pn Pn 20 00 59.1 -0.2
BALM Sn 20 01 50.6 -0.7
OHAK Old Harbor 4.58 191 Pn Pn 20 00 59.0 -0.3
KIAG Kiagna River 4.59 96 Pn 20 00 58.8 -0.9
PRP Porcupine Dome 4.72 33 Pn 20 01 01.3 0.0
BCAR Beaver Creek A 4.83 69 Pn 20 01 02.3 -0.4
BARN Barnard Glacie 4.89 93 Pn Pn 20 01 04.3 +0.6
GRNC Granite Creek 4.93 97 Pn 20 01 03.8 -0.4
CTGM Chitina Glacie 5.07 94 Pn Pn 20 01 06.4 +0.4
COLD Coldfoot 5.58 6 Pn Pn 20 01 13.2 +0.5
COLD Sn 20 02 14.2 -1.2
FYU Fort Yukon 5.64 27 Pn Pn 20 01 13.9 +0.3
EGAK Eagle 5.68 53 Pn 20 01 14.0 -0.2
DAWY Dawson 6.12 62 Pn Pn 20 01 20.1 0.0
CHIR Chirikof Islan 6.25 201 Pn Pn 20 01 22.8 +0.9
CHGN Chignik 6.43 215 Pn Pn 20 01 24.4 +0.1
BM03 Burnt Mountain 6.50 25 Pn 20 01 25.3 +0.1
BMAR Burnt Mountain 6.51 25 Pn 20 01 25.4 0.0
ANM Nome 6.80 301 Pn Pn 20 01 29.3 -0.1
HYT Haines Junctio 6.92 91 Pn Pn 20 01 31.6 +0.5
TOLK Toolik Lake Re 7.01 7 Pn 20 01 33.3 +1.1
DHAK Deception Hill 7.20 105 Pn Pn 20 01 35.4 +0.6
INK Inuvik 10.12 41 P Pn 20 02 14.7 +0.5
0.3nm,0.3s,baz=242,slow=12,SNR=9.6
INK S Sn 20 04 02.8 -2.8
0.1nm,0.3s,baz=281,slow=8.2,SNR=2.1
INK Inuvik 10.12 41 Pn 20 02 15.0 +0.8
YKA Yellowknife Ar 17.24 71 P Pn 20 03 46.9 +0.7
0.0nm,0.3s,baz=280,slow=11,SNR=3.4
ULM Lac du Bonnet 32.25 85 LR LR 20 19 46.6
comp=Z,46nm,19.5s,baz=306,slow=37
MJAR Matsushiro Arr 49.30 273 LR LR 20 30 43.5
comp=Z,17nm,18.0s,baz=175,slow=38
SONM Songino Array 54.28 306 P P 20 09 09.1 +2.0
0.9nm,0.6s,baz=41,slow=6.2,SNR=8.6
ZALV Zalesovo Beam 56.35 324 P P 20 09 21.9 +0.2
0.6nm,0.5s,baz=29,slow=6.7,SNR=3.6

IDC **07** *20:11:18.3±1.7, 0°.83N×125°.39E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/39, mbtmp3.7/4, MS2.9/1, Ms1 2.9/1, ms1mx2.2/36, Error ellipse: s-maj=184.6km s-min=22.1km az=64.0*
DJA **07** *20:11:23.4±2.5, 1°N±5°×12°6E±°, h17km±25km, M3.6/8, MLv3.6/8*
NEIC **07** *20:11:25.9±0.9, 1°.26N±0°.10×126°.46E±0°.09, h71km±9km, mb4.4/11, Error ellipse: s-maj=13.7km s-min=12.6km az=192.0*
ISC 07 20:11:23.6±0.8, **1°.25N**±0°.09×**126°.23E**±0°.06, **h44**km, **n27**, σ0s.76/25, **mb3.9**/11, **Northern Molucca Sea**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
TNTI Ternate 1.23 112 P Pn 20 11 44.6 +0.2
TNTI Ternate 1.23 112 Pn 20 11 44.7 +0.2
LBMI Labuha 2.26 146 P Pn 20 11 59.7 +1.1
KMSI Cibinong 2.34 253 P Pn 20 11 59.2 -0.4
SANI Sanana 3.28 184 P Pn 20 12 13.6 +1.1
LUWI Luwuk 4.13 237 P Pn 20 12 24.9 +0.7
LUWI Luwuk 4.13 237 Pn Pn 20 12 29.2 +5.0
APSI Ampana 5.05 245 P Pn 20 12 37.9 +1.0
WB0 Warramunga Arr 22.37 159 P P 20 16 17.4 -0.8
WB0 IAmb IAmb 20 16 21.3
comp=Z,32nm,1.5s
WRA Warramunga Arr 22.51 160 P P 20 16 18.7 -1.0
comp=Z,1.1nm,0.3s,baz=335,slow=10,SNR=41
WB2 Warramunga Arr 22.52 160 P P 20 16 18.5 -1.2
WB2 IAmb IAmb 20 16 48.9
comp=Z,23nm,1.6s
TPUB Ta-pu 22.59 346 P P 20 16 21.6 +1.1
WR0 Warramunga Arr 22.60 159 P P 20 16 20.3 -0.4
WR0 IAmb IAmb 20 16 40.0
comp=Z,28nm,1.6s
AS31 Alice Springs 25.86 164 P P 20 16 50.9 -0.4
ASAR Alice Springs 25.86 164 P P 20 16 50.9 -0.4
comp=Z,0.6nm,0.6s,baz=344,slow=6.4,SNR=15
ASAR Alice Springs 25.86 164 P P 20 16 50.6 -0.8
BBOO Buckleboo 35.12 166 P P 20 18 13.0 0.0
BBOO IAmb IAmb 20 18 35.0
comp=Z,18nm,1.4s
STKA Stephens Creek 36.02 157 P P 20 18 20.2 -0.5
comp=Z,1.3nm,0.8s,baz=326,slow=8.1,SNR=3.5
STKA Stephens Creek 36.02 157 P P 20 18 19.9 -0.8
USRK Ussuriysk Ar. 43.08 6 LR LR 20 37 22.4
comp=Z,15nm,21.5s,baz=288,slow=36
MK31 Makanchi Array 59.31 326 P P 20 21 21.3 +0.3
MK31 IAmb IAmb 20 21 21.6
comp=Z,1.5nm,1.4s
MKAR Makanchi Array 59.31 326 P P 20 21 21.3 +0.2
comp=Z,0.4nm,0.5s,baz=119,slow=8.3,SNR=13
MKAR Makanchi Array 59.31 326 P P 20 21 21.1 +0.1
MAKZ Makanchi 59.49 326 P P 20 21 23.4 +1.0
MAKZ IAmb IAmb 20 21 36.7
comp=Z,1.0nm,1.1s
MSEY Mahe Island 70.92 265 P P 20 22 36.8 -0.3
UOSS Minazif 71.39 296 P P 20 22 38.9 -0.8
UOSS IAmb IAmb 20 22 40.9
comp=Z,11nm,1.1s
ABKAR Akbulak array 73.75 321 P P 20 22 53.5 +0.3

NEIC **07** *20:15:38.3±1.9, 4°.84S±0°.09×153°.78E±0°.09, h119km±6km, mb4.7/27, Error ellipse: s-maj=13.6km s-min=12.4km az=117.0*
IDC **07** *20:15:39.7±4.5, 4°.94S×153°.80E, h129km±36km, mb3.7/12, mb1 3.8/13, mb1mx3.7/36, mbtmp4.1/13, MS2.8/2, Ms1 2.8/2, ms1mx2.4/35, Error ellipse: s-maj=35.8km s-min=17.8km az=105.0*
ISC 07 20:15:36.8±0.5, **4°.86S**±0°.06×**153°.89E**±0°.07, **h105**km, **n65**, σ1s.02/67, **mb4.4**/21, **New Ireland region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
HNR Honiara 7.53 127 iP Pn 20 17 21.0 -2.9
PMG Port Moresby 8.06 236 P Pn 20 17 32.9 +1.8
8.6nm,0.3s,baz=54,slow=4.5,SNR=35
PMG S Sn 20 19 01.1 +0.4
1.4nm,0.3s,baz=4.4,slow=13,SNR=1.4
PMG LR LR 20 20 50.5
comp=Z,63nm,18.0s,baz=84,slow=39
PMG Port Moresby 8.06 236 Pn 20 17 32.5 +1.3
PMG Sn 20 18 59.5 -1.2
PATS Pohnpei 12.43 21 Pn Pn 20 18 29.5 -0.5
COEN Coen 13.90 229 Pn Pn 20 18 50.1 +0.7
SANVU Saraoutou 16.79 130 P P 20 19 27.5 +1.5
SANVU IAmb IAmb 20 19 55.5
comp=Z,78nm,1.6s
EIDS Eidsvold 20.57 187 P P 20 20 08.8 +1.5
EIDS IAmb IAmb 20 20 34.7
comp=Z,22nm,1.3s
DZM Mont Dzumac 20.99 146 P P 20 20 12.8 +0.9
DZM IAmb IAmb 20 20 36.0
comp=Z,36nm,1.5s
SIJI Sorong 22.94 279 P P 20 20 31.6 -0.7
comp=Z,2.0nm,0.3s,baz=49,slow=20,SNR=4.4
MTN Manton Dam 23.83 249 P P 20 20 39.8 -0.6
WR0 Warramunga Arr 24.09 230 P P 20 20 42.2 -0.5
WR0 IAmb IAmb 20 21 11.2
comp=Z,19nm,1.3s
WB0 Warramunga Arr 24.09 230 P P 20 20 41.3 -1.4
WRAB Tennant Creek 24.22 230 P P 20 20 43.8 -0.1
WB2 Warramunga Arr 24.22 230 P P 20 20 44.6 +0.6
WB2 IAmb IAmb 20 21 09.9
comp=Z,70nm,1.8s
WRA Warramunga Arr 24.23 230 P P 20 20 43.3 -0.7
comp=Z,6.8nm,0.7s,baz=55,slow=10.0,SNR=32
WRA Warramunga Arr 24.23 230 P P 20 20 43.7 -0.3
ARMA Armidale 25.51 185 P P 20 20 56.7 +1.1
AS31 Alice Springs 26.85 224 P P 20 21 07.7 0.0
ASAR Alice Springs 26.85 224 P P 20 21 07.7 0.0
comp=Z,2.8nm,0.7s,baz=54,slow=9.0,SNR=30
ASAR LR LR 20 30 57.9
comp=Z,16nm,20.0s,baz=104,slow=34
ASAR Alice Springs 26.85 224 P P 20 21 06.8 -0.9
LHI Lord Howe Isla 26.96 170 P P 20 21 09.8 +1.3
LHI IAmb IAmb 20 21 26.1
comp=Z,43nm,1.1s
STKA Stephens Creek 29.25 202 P P 20 21 28.8 -0.1
comp=Z,3.7nm,0.8s,baz=17,slow=8.7,SNR=9.2
STKA Stephens Creek 29.25 202 P P 20 21 28.5 -0.4
FITZ Fitzroy Crossi 30.59 242 P P 20 21 40.1 -0.8
comp=Z,6.3nm,0.8s,baz=52,slow=2.9,SNR=6.6
FITZ Fitzroy Crossi 30.59 242 P P 20 21 39.8 -1.1
FITZ IAmb IAmb 20 21 45.9
comp=Z,35nm,1.6s
LUWI Luwuk 31.30 276 P P 20 21 46.5 -0.7
LUWI IAmb IAmb 20 21 58.5
comp=Z,15nm,0.9s
BBOO Buckleboo 32.41 209 P P 20 21 56.6 -0.1
BBOO IAmb IAmb 20 22 06.1
comp=Z,10nm,1.1s
FORT Forrest 35.44 220 P P 20 22 22.4 -0.6
PSA00 Pilbara Seismi 36.94 240 P P 20 22 35.0 -1.0
TAU Tasmania Unive 38.34 188 P P 20 22 48.8 +1.4
JAGI Jajag, Banyuwa 39.62 263 P P 20 22 56.4 -2.1
LTZ Lake Taylor 41.14 159 P P 20 23 11.6 +1.0
LTZ IAmb IAmb 20 23 12.7
comp=Z,29nm,1.4s
MLZ Mavora Lakes 42.22 165 P P 20 23 19.8 +0.4
MLZ IAmb IAmb 20 23 33.6
comp=Z,36nm,1.4s
MORW Morawa 43.16 232 P P 20 23 26.2 -1.0
MORW IAmb IAmb 20 23 27.4
comp=Z,11nm,0.7s
CISI Cisompet, Garu 45.87 264 P P 20 23 47.3 -1.8
USRK Ussuriysk Ar. 52.66 340 P P 20 24 40.7 +0.5
comp=Z,0.6nm,0.5s,baz=143,slow=5.5,SNR=3.2
ENH Enshi 55.00 312 P P 20 24 57.6 0.0
ENH IAmb IAmb 20 24 58.6
comp=Z,25nm,1.7s
PETK Petropavlovsk- 57.84 3 P P 20 25 18.3 +1.1
comp=Z,4.4nm,0.8s,baz=151,slow=7.8,SNR=4.4
CMAR Chiang Mai Arr 58.89 295 P P 20 25 26.5 +1.3
comp=Z,0.3nm,0.7s,baz=115,slow=6.5,SNR=3.8
ULN Ulaanbaatar 66.62 328 P P 20 26 17.5 +1.3
SONM Songino Array 66.96 327 P P 20 26 18.9 +0.6
comp=Z,0.6nm,0.5s,baz=143,slow=6.6,SNR=4.8
SONM Songino Array 66.96 327 P P 20 26 18.1 -0.2
TAPN Taplejung 71.37 301 eP P 20 26 47.6 +1.4
ODAN Odare 71.51 300 eP P 20 26 48.2 +1.2
comp=Z,16nm,0.7s
RAMN Ramite 72.22 300 eP P 20 26 52.5 +1.3
JIRN Jiri 72.75 301 eP P 20 26 56.1 +1.6
GUN Gumba 73.08 301 eP P 20 26 57.0 +0.6
PKI Pulchoki 73.40 300 eP P 20 26 58.7 +0.4
PKIN Phulchoki 73.41 300 eP P 20 26 58.5 +0.2
comp=Z,4.2nm,0.4s
KKN Kakani 73.57 301 eP P 20 26 59.4 +0.3
comp=Z,5.7nm,0.4s
DMN Daman 73.67 300 eP P 20 27 00.5 +0.7
GKN Gorkha 74.17 301 eP P 20 27 02.9 +0.3
comp=Z,6.3nm,0.3s
KOLN Koldanda 75.00 300 eP P 20 27 07.7 +0.2
DANN Dangsing 75.01 301 eP P 20 27 08.0 +0.4
comp=Z,13nm,0.9s
MKAR Makanchi Array 81.09 319 P P 20 27 40.9 +0.4
comp=Z,0.4nm,0.4s,baz=95,slow=8.1,SNR=13
MKAR Makanchi Array 81.09 319 P P 20 27 40.8 +0.3
ILAR Eielson Array 81.81 22 P P 20 27 44.5 +0.7
comp=Z,0.1nm,0.5s,baz=256,slow=4.2,SNR=4.2
ILAR Eielson Array 81.81 22 P P 20 27 44.2 +0.3
ZALV Zalesovo Beam 81.81 326 P P 20 27 43.3 -0.7
comp=Z,0.6nm,0.4s,baz=120,slow=4.1,SNR=3.5
ZALV Zalesovo Beam 81.81 326 P P 20 27 43.1 -0.9
214A Organ Pipe Nat 95.34 58 pP 20 29 17.6 +1.4
121A Cookes Peak, D 99.61 58 pwP 20 29 44.1 +4.7
TORD Torodi Ar. Bea 151.36 289 PKPbc PKPbc 20 35 18.9 -0.4
comp=Z,0.6nm,0.3s,baz=93,slow=1.7,SNR=14
TORD PKPab PKPab 20 35 27.2 -0.5
comp=Z,0.5nm,0.5s,baz=60,slow=3.6,SNR=4.5
DBIC Dimbokro 158.78 276 PKPab PKPab 20 35 59.0 -0.5
comp=Z,1.6nm,0.8s,baz=90,slow=4.0,SNR=3.0
DBIC Dimbokro 158.78 276 PKPdf PKPdf 20 35 21.6 -1.7
DBIC PKPab 20 35 58.2 -1.4

DJA **07** *20:30:23.4±0.3, 4°N±3°×12°7E±°, h10km, M4.1/6, mB4.6/1, mb4.4/4, MLv4.0/6, Mw(mB)3.8/1*
IDC **07** *20:30:27.4±4.3, 3°.54N×126°.80E, h85km±49km, mb3.4/5, mb1 3.6/6, mb1mx3.3/37, mbtmp3.8/6, ML4.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.3/25, Error ellipse: s-maj=67.7km s-min=19.4km az=61.0*
NEIC **07** *20:30:27.2±1.8, 3°.4N±0°.1×126°.6E±0°.2, h83km±8km, mb4.5/16, Error ellipse: s-maj=13.9km s-min=13.9km az=66.0*
ISC 07 20:30:24.0±0.6, **3°.44N**±0°.07×**126°.5E**±0°.1, **h48**km, **n36**, σ1s.34/37, **mb4.3**/12, **1C**, **Talaud Islands**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
DDMP Don Marcelino, 2.77 343 eP Pn 20 31 05.3 -0.6
DDMP eS Sn 20 31 38.5 +0.4
TNTI Ternate 2.78 162 Pn Pn 20 31 07.2 +1.1
SKMP Bagumbayan, Su 3.63 328 eP Pn 20 31 18.8 +1.0
SKMP eS Sn 20 32 01.4 +2.0
KCP Kidapawan 3.82 338 ⇑iP Pn 20 31 24.0 +3.7
MRSI Marisa 5.42 237 P Pn 20 31 42.5 +0.1
SWI Sorong 6.39 132 P Pn 20 31 56.3 +0.7
0.1nm483nm20nm,0.4s
SIJI Sorong 6.40 132 P Pn 20 31 56.9 +1.1
5.3nm,0.3s,baz=333,slow=17,SNR=27
SIJI S Sn 20 33 08.1 +0.5
0.3nm,0.3s,baz=197,slow=19,SNR=1.8
NLAI Namlea 6.66 175 P Pn 20 32 01.0 +1.7
FAKI Fak Fak 8.53 138 Pn Pn 20 32 26.2 +1.1
KNRA Kununurra 19.12 173 Pn 20 34 45.3 +1.0
KNRA IAmb IAmb 20 35 23.8
comp=Z,82nm,1.6s
WB0 Warramunga Arr 24.33 162 P P 20 35 37.2 -0.2
WB0 IAmb IAmb 20 35 50.7
comp=Z,28nm,1.6s
WRAB Tennant Creek 24.47 162 P P 20 35 38.1 -0.6
WRAB IAmb IAmb 20 35 40.0
comp=Z,23nm,1.4s
WRA Warramunga Arr 24.48 162 P P 20 35 38.7 -0.1
comp=Z,1.3nm,0.3s,baz=342,slow=11,SNR=12
WRA Warramunga Arr 24.48 162 P P 20 35 38.6 -0.1
WB2 Warramunga Arr 24.48 162 P P 20 35 38.4 -0.4
WB2 IAmb IAmb 20 35 52.7
comp=Z,28nm,1.6s
WR0 Warramunga Arr 24.55 162 P P 20 35 38.9 -0.5
WR0 IAmb IAmb 20 36 04.4
comp=Z,37nm,1.6s
ASAR Alice Springs 27.89 165 P P 20 36 08.9 -0.6
comp=Z,0.8nm,1.0s,baz=337,slow=8.0,SNR=5.9
JNU Nakatsue 29.82 7 P P 20 36 27.1 +0.5
CMAR Chiang Mai Arr 30.83 301 P P 20 36 37.4 +1.7
comp=Z,0.3nm,0.5s,baz=116,slow=7.4,SNR=4.2
KSAR Wonju Array Be 33.87 2 P P 20 37 02.3 +0.3
BBOO Buckleboo 37.17 167 P P 20 37 30.4 -0.1
BBOO IAmb IAmb 20 37 50.5
comp=Z,25nm,1.4s
STKA Stephens Creek 37.94 159 P P 20 37 37.0 0.0
comp=Z,0.7nm,0.3s,baz=337,slow=11,SNR=6.1
STKA Stephens Creek 37.94 159 P P 20 37 37.2 +0.2
PALK Pallekele 45.74 277 LR LR 20 58 11.3
comp=Z,33nm,21.9s,baz=121,slow=36
SONM Songino Array 47.50 342 P P 20 38 54.2 -0.3
comp=Z,0.2nm,0.6s,baz=170,slow=9.5,SNR=2.1
SONM Songino Array 47.50 342 P P 20 38 54.9 +0.4
MK31 Makanchi Array 57.67 325 P P 20 40 07.9 -1.7
MK31 IAmb IAmb 20 40 26.6
comp=Z,1.9nm,0.9s
MKAR Makanchi Array 57.67 325 P P 20 40 08.0 -1.6
MAKZ Makanchi 57.85 325 P P 20 40 11.0 +0.1
KURK Kurchatov 61.87 328 P P 20 40 38.8 +0.5
KURK IAmb IAmb 20 40 39.8
comp=Z,2.6nm,0.7s
KHZ Kahutara 62.37 142 P P 20 40 40.2 -1.6
KKAR Karatay Array 63.29 317 P P 20 40 47.8 -0.2
BRVK Borovoye 67.51 327 P P 20 41 11.9 -3.2
QSPA South Pole Qui 93.34 180 P P 20 43 28.1 -5.6
U56A King 133.13 30 PKPdf 20 49 31.9 -3.1
S58A Poland Farm, P 133.22 27 PKPdf 20 49 34.0 -1.1

IDC **07** *20:36:25.7±0.6, 59°.62S×23°.53W, h0km, mb4.5/9, mb1 4.5/10, mb1mx4.3/31, mbtmp4.5/10, ML5.1/1, MS3.5/2, Ms1 3.4/2, ms1mx3.0/26, Error ellipse: s-maj=22.3km s-min=20.1km az=130.0*
NEIC **07** *20:36:30.4±1.4, 59°.65S±0°.03×23°.6W±0°.2, h31km±4km, mb4.8/12, Error ellipse: s-maj=14.1km s-min=4.0km az=88.0*
ISC 07 20:36:30.8±0.5, **59°.75S**±0°.09×**23°.39W**±0°.09, **h35**km, **n44**, σ1s.45/45, **mb4.5**/12, **2C**, **South Sandwich Islands region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
HOPE Hope Point 9.00 302 Pn Pn 20 38 40.0 +2.1
VNA1 Neumayer--Stat 12.59 156 P Pn 20 39 26.4 -0.6
VNA3 Neumayer Olymp 12.81 160 P Pn 20 39 28.5 -1.5
VNA2 Neumayer--Watz 12.98 156 P Pn 20 39 31.4 -1.0
baz=318,slow=14
SNAA Sanae 14.52 154 P Pn 20 39 52.1 -1.3
SNAA Sanae 14.52 154 Pn Pn 20 39 52.1 -1.3
9.0nm,0.3s,baz=322,slow=13,SNR=191
SNAA Sn Sn 20 42 20.3 -13
0.3nm,0.3s,baz=342,slow=20,SNR=2.3
SNAA Sanae 14.52 154 Pn 20 39 51.7 -1.7
SNAA Sn 20 42 22.2 -11
EFI East Falkland 20.93 277 P P 20 41 08.2 -1.8
USHA Ushuaia 24.45 262 P P 20 41 46.6 +0.8
8.0nm,0.9s,baz=158,slow=5.4,SNR=3.0
SYO Syowa Base 27.46 136⇑eX P 20 42 06.6 -6.3
SYO Syowa Base 27.46 136⇑eP P 20 42 12.8 -0.1
QSPA South Pole Qui 30.49 180 P P 20 42 42.6 +2.6
3.8nm,0.7s,baz=212,slow=2.3,SNR=19
QSPA South Pole Qui 30.49 180 P P 20 42 42.4 +2.3
QSPA IAmb IAmb 20 42 43.3
comp=Z,18nm,1.5s
PLCA Paso Flores 34.70 282 P P 20 43 16.2 -0.8
PLCA IAmb IAmb 20 43 32.8
comp=Z,14nm,1.7s
MAW Mawson 35.98 139 LR LR 20 57 35.9
comp=Z,42nm,18.5s,baz=232,slow=35
MAW Mawson 35.98 139 P P 20 43 29.5 +1.9
SUR Sutherland 39.94 67 P P 20 44 01.7 +0.2
comp=Z,15nm,1.2s,baz=238,slow=13,SNR=2.6
SUR Sutherland 39.94 67 P P 20 44 01.9 +0.4
SUR IAmb IAmb 20 44 15.3
comp=Z,61nm,1.5s
CFA Coronel Fontan 40.89 293 P P 20 44 06.8 -2.4
comp=Z,3.0nm,0.6s,baz=166,slow=6.7,SNR=6.9
BOSA Boshof 45.17 69 P P 20 44 44.0 -0.1
comp=Z,2.9nm,0.6s,baz=206,slow=8.2,SNR=8.3
BOSA Boshof 45.17 69 P P 20 44 44.2 +0.1
BOSA IAmb IAmb 20 44 57.1
comp=Z,24nm,1.5s
TSUM Tsumeb 49.97 54 P P 20 45 22.2 +0.9
TSUM IAmb IAmb 20 45 45.6
comp=Z,10nm,1.5s
LSZ Lusaka 58.03 63 P P 20 46 19.8 -0.4
LSZ IAmb IAmb 20 46 21.1
comp=Z,4.3nm,0.8s
DBIC Dimbokro 67.83 20 P P 20 47 25.1 +0.1
comp=Z,3.7nm,0.8s,baz=167,slow=7.8,SNR=5.4
DBIC Dimbokro 67.83 20 P P 20 47 24.9 -0.2
TOA0 Torodi Ar. Sit 75.42 25 P P 20 48 11.2 +0.5
TORD Torodi Ar. Bea 75.42 25 P P 20 48 11.1 +0.5
comp=Z,13nm,0.6s,baz=202,slow=6.5,SNR=86
TORD Torodi Ar. Bea 75.42 25 P P 20 48 10.5 -0.2
ROSC El Rosal 75.78 307 LR LR 21 23 17.2
comp=Z,41nm,19.5s,baz=31,slow=37
STKA Stephens Creek 87.87 167 P P 20 49 17.4 +1.0
comp=Z,1.8nm,0.7s,baz=167,slow=2.5,SNR=4.6
STKA Stephens Creek 87.87 167 P P 20 49 17.6 +1.2
ASAR Alice Springs 94.82 159 P P 20 49 48.5 -0.2
comp=Z,0.7nm,0.7s,baz=182,slow=4.6,SNR=11
ASAR Alice Springs 94.82 159 P P 20 49 49.0 +0.2
CMAR Chiang Mai Arr 121.89 109 PKP PKiKP 20 55 20.9 -0.2
comp=Z,1.4nm,0.7s,baz=231,slow=3.6,SNR=12
LSA Lhasa 127.45 94 PKiKP 20 55 32.7 +0.4
YKA Yellowknife Ar 140.25 313 PKP PKPdf 20 55 53.8 -0.2
comp=Z,1.6nm,0.7s,baz=124,slow=1.9,SNR=6.2
SONM Songino Array 148.82 90 PKPbc PKPbc 20 56 13.9 +0.3
comp=Z,5.7nm,0.7s,baz=254,slow=2.0,SNR=7.2
SONM Songino Array 148.82 90 PKPdf PKPdf 20 56 10.0 +0.4
SONM PKiKP 20 56 14.2 -0.7
INK Inuvik 149.93 316 PKPbc PKiKP 20 56 15.4 -0.9
comp=Z,7.1nm,0.6s,baz=84,slow=4.1,SNR=10
INK Inuvik 149.93 316 PKiKP 20 56 15.2 -1.1
KSRS Korea Array 151.12 128 PKPbc PKiKP 20 56 20.1 +0.3
comp=Z,3.5nm,0.7s,baz=180,slow=1.4,SNR=5.4
DOT Dot Lake 152.50 304 PKPdf PKPdf 20 56 14.7 +0.1
DOT PKiKP 20 56 21.5 -0.4
ILAR Eielson Array 154.02 305 PKPbc PKiKP 20 56 25.1 +0.2
comp=Z,2.1nm,0.9s,baz=127,slow=4.8,SNR=10
ILAR Eielson Array 154.02 305 PKPdf PKPdf 20 56 16.8 0.0
ILAR PKPbc 20 56 24.1 -0.8

MOS **07** *20:37:07.5±1.0, 6°.75N×72°.98W, h138km, mb5.1/66, Error ellipse: s-maj=5.1km s-min=3.8km az=90.3*
BJI **07** *20:37:09.1±0.0, 6°.70N×73°.00W, h160km, mB5.4/19*
NEIC **07** *20:37:10.9±1.9, 6°.69N±0°.05×72°.96W±0°.06, h159km±3km, mb5.4/611, Mwb5.2/15, Mwc5.3(GCMT), Mwr5.1(CAR), Error ellipse: s-maj=10.0km s-min=7.0km az=122.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr5.03; Mθθ-0.17; Mφφ-4.86; Mrθ-0.73; Mθφ0.05; Mφr-7.96; Fault plane solution: M0 9.40000×10¹⁶ NP1: φs184.33000°, δ74.17000°, λ92.60000°. NP2: φs354.87000°, δ16.04000°, λ80.90000°. Principal axes: T 9.4971, Plg61.0000°, Azm98.0000°; N -0.2052, Plg3.0000°, Azm4.0000°; P -9.2919, Plg29.0000°, Azm272.0000°;*
VAO **07** *20:37:11.3±0.6, 6°.69N×72°.98W, h154km±5km, mb5.5*
CAR **07** *20:37:11.2±0.0, 6°.74N×73°.12W, h176km, Error ellipse: s-maj=0.0km s-min=0.0km az=90.0*
IDC **07** *20:37:11.0±0.5, 6°.74N×72°.91W, h156km±4km, mb5.1/25, mb1 5.2/32, mb1mx5.2/33, mbtmp5.5/32, MS3.7/11, Ms1 3.7/11, ms1mx3.4/43, Error ellipse: s-maj=9.0km s-min=6.3km az=95.0*
RSNC **07** *20:37:11.9±1.3, 6°.80N×73°.16W, h156km±4km, ML5.6, Mw5.4, Fault plane solution: NP1:φs154.00000°, δ55.00000°, λ57.00000°.*
GCMT **07** *20:37:12.9±0.2, 6°.81N±0°.01×73°.07W±0°.01, h159km±1km, MW5.3/128, Moment Tensor Solution. s80,c106; s128,c197; Duration: 1s.1 Moment tensor: Scale 10¹⁷ Nm; Mrr0.56±.02; Mθθ0.24±.02; Mφφ-0.79±.03; Mrθ-0.15±.01; Mθφ-0.23±.02; Mφr-0.72±.02; Best double couple: M0 1.01500×10¹⁷ NP1:φs13.00000°, δ22.00000°, λ91.00000°. NP2:φs191.00000°, δ68.00000°, λ90.00000°. Principal axes: T 0.8730, Plg67.0000°, Azm101.0000°; N 0.2850, Plg0.0000°, Azm192.0000°; P -1.1570, Plg23.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC **07** *20:37:13, 6°.83N×73°.08W, h160km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.52; Mθθ0.23; Mφφ-0.76; Mrθ-0.17; Mθφ-0.26; Mφr-0.74; Fault plane solution: M0 1.05000×10¹⁷ NP1:φs16.00000°, δ21.00000°, λ93.00000°. NP2:φs192.00000°, δ69.00000°, λ89.00000°. Principal axes: T 0.8686, Plg66.0000°, Azm100.0000°; N 0.2941, Plg1.0000°, Azm193.0000°; P -1.1626, Plg24.0000°, Azm283.0000°;*
BGR **07** *20:37:17.1±0.0, 6°.80N×71°.54W, h33km, mb5.2*
OSPL **07** *20:37:20.8±3.9, 7°.48N×72°.37W, h90km±167km, ML5.7*
INET **07** *20:37:29.6, 6°.05N×75°.80W, h501km, ML5.2*

ISC 07 20:37:10.8±0.2, 6.79N±0.02×73.07W±0.03, h158km±1km, h159km:pP-P, n1891, σ1.59/2364, mb5.4/451, 65C-50D, Northern Colombia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

BARC Barichara 0.23 210⇓iP Pn 20 37 33.1 +0.6
BARC eS Sn 20 37 48.2 -0.7
BARC i 20 37 49.6
comp=Z,130μm,0.3s
PAMC Pamplona, Colo 0.66 34⇑iP Pn 20 37 35.9 +1.4
PAMC eS Sn 20 37 53.3 +0.7
PAMC i 20 37 54.7
comp=Z,71μm,0.7s
BRRC Barranca, Sant 0.71 296⇑iP Pn 20 37 34.9 +0.7
BRRC eS Sn 20 37 52.1 -0.1
BRRC i 20 37 56.9
comp=Z,52μm,0.5s
RUSC La Rusia 0.89 181 eS Sn 20 37 55.7 +0.3
TAMC Tame, Arauca 1.32 106⇓iP Pn 20 37 41.3 +2.1
TAMC eS Sn 20 38 02.7 +1.7
TAMC i 20 38 12.9
comp=Z,28μm,1.5s
PTBC PUERTO BERRIO, 1.40 260⇑iP Pn 20 37 39.5 -0.5
PTBC eS Sn 20 38 00.9 -1.6
PTBC i 20 38 02.3
comp=Z,48μm,0.4s
OCAC Ocana 1.46 350⇑iP Pn 20 37 41.1 +0.4
OCAC eS Sn 20 38 03.4 -0.4
OCAC i 20 38 08.5
comp=Z,36μm,0.6s
SPBC San Pablo de B 1.51 221⇑iP Pn 20 37 41.8 +0.7
SPBC eS Sn 20 38 03.7 -0.8
SPBC i 20 38 09.0
comp=Z,51μm,0.4s
ZARC Zaragoza, Cauc 1.91 291⇓iP Pn 20 37 45.2 -0.2
ZARC eS Sn 20 38 10.6 -1.4
NORC Norcasia 2.17 236⇑iP Pn 20 37 48.6 +0.2
NORC eS Sn 20 38 15.6 -1.8
NORC i 20 38 19.5
comp=Z,31μm,0.4s
CNOCA NORCASIA, CALD 2.17 236 eP Pn 20 37 48.9 +0.5
CNOCA eS Sn 20 38 16.4 -1.1
CNOCA i 20 38 19.5
comp=Z,29μm,0.4s
SMLC San Martn de 2.23 334⇑iP Pn 20 37 49.1 0.0
SMLC eS Sn 20 38 17.9 -0.8
SMLC i 20 38 26.6
comp=Z,21μm,1.0s
CHIC Chingaza 2.25 197⇑iP Pn 20 37 50.7 +1.0
CHIC eS Sn 20 38 19.4 -0.3
CHIC i 20 38 24.3
comp=Z,24μm,0.5s
CROSA EL ROSAL, CUND 2.30 213 eP Pn 20 37 52.6 +2.3
CROSA eS Sn 20 38 20.7 0.0
CROSA i 20 38 28.8
comp=Z,60μm,0.5s
ROSC El Rosal 2.31 213 P Pn 20 37 52.7 +2.3
comp=Z,5μm,0.3s,baz=32,slow=4.0,SNR=1517
ROSC S Sn 20 38 22.1 +1.1
comp=Z,7μm,0.3s,baz=46,slow=22,SNR=20
ROSC El Rosal 2.31 213⇑iP Pn 20 37 52.8 +2.5
ROSC eS Sn 20 38 20.5 -0.4
ROSC i 20 38 29.0
comp=Z,60μm,0.5s
ROSC El Rosal 2.31 213 Pn 20 37 52.7 +2.3
ROSC Sn 20 38 20.5 -0.4
HELC Santa Helena 2.52 256⇓iP Pn 20 37 51.7 -1.2
HELC eS Sn 20 38 24.2 -1.1
HELC i 20 38 30.5
comp=Z,52μm,1.1s
UREC San Jos de Ur 2.63 291⇓iP Pn 20 37 52.6 -1.2
UREC eS Sn 20 38 24.0 -3.2
UREC i 20 38 35.4
comp=Z,29μm,1.2s
VILC Villavicencio, 2.73 193⇓eP Pn 20 37 56.1 +0.8
comp=Z,29μm,0.5s
VILC eS Sn 20 38 29.7 -0.2
VILC i 20 38 34.5
comp=Z,29μm,0.5s
PTGC Puerto Gaitan, 2.74 160⇑iP Pn 20 37 56.0 +0.7
PTGC eS Sn 20 38 29.2 -0.5
PTGC i 20 38 34.0
comp=Z,16μm,0.5s
GUY2C Guyana, Caldas 2.77 236⇓iP Pn 20 37 56.7 +0.7
GUY2C eS Sn 20 38 30.5 -0.5
GUY2C i 20 38 40.8
comp=Z,32μm,0.6s
CMAN1 Manizales, Cal 2.98 235 eP Pn 20 38 00.5 +1.9
CMAN1 eS Sn 20 38 36.0 +0.5
CMAN1 i 20 38 48.7
comp=Z,50μm,0.4s
CBOC Ciudad Bolivar 3.07 253⇓iP Pn 20 38 00.2 +0.7
CBOC eS Sn 20 38 36.0 -1.3
CBOC i 20 38 53.7
comp=Z,14μm,0.6s
DBBC Dabeiba 3.13 274⇓iP Pn 20 38 00.2 +0.1
DBBC eS Sn 20 38 36.0 -2.4
CCODA Codazzi, Cesar 3.15 353⇑eP Pn 20 38 00.7 +0.4
comp=Z,12μm,0.4s
CCODA eS Sn 20 38 38.6 -0.2
CCODA i 20 38 48.0
comp=Z,12μm,0.4s
CODC Agustn Codazz 3.15 353⇑eP Pn 20 38 00.4 +0.1
comp=Z,7μm,0.4s
CODC eS Sn 20 38 38.5 -0.3
CODC i 20 38 48.0
comp=Z,7μm,0.4s
SDV Santo Domingo 3.19 49 P Pn 20 38 02.3 +1.2
comp=Z,3μm,0.3s,baz=249,slow=4.8,SNR=6629
SDV S Sn 20 38 38.5 -1.4
comp=Z,1μm,0.3s,baz=67,slow=22,SNR=17
SDV LR LR 20 39 19.8
comp=Z,855nm,21.1s,baz=220,slow=42
SDV Santo Domingo 3.19 49 eP Pn 20 38 01.9 +0.9
SDV eS Sn 20 38 40.1 +0.2
SDV Santo Domingo 3.19 49 Pn 20 38 02.2 +1.2
SDV Sn Sn 20 38 37.8 -2.1
ARGC Ariguani, Magd 3.26 339⇓iP Pn 20 38 03.1 +1.3
ARGC eS Sn 20 38 41.5 0.0
ARGC i 20 39 11.1
comp=Z,10μm,0.7s
PRAC Prado 3.55 211⇑iP Pn 20 38 05.8 +0.2
PRAC eS Sn 20 38 47.8 -0.3
PRAC i 20 38 52.7
comp=Z,10μm,0.6s
ORTC Ortega, Tolima 3.59 217⇑iP Pn 20 38 06.7 +0.6
ORTC eS Sn 20 38 48.1 -1.0
ORTC i 20 38 56.6
comp=Z,15μm,0.5s
PLMC San Jos del P 3.71 240 eP Pn 20 38 08.4 +0.9
PLMC eS Sn 20 38 50.7 -1.0
PLMC i 20 38 58.1
comp=Z,10μm,0.6s
SJCC San Jacinto, C 3.73 326⇓iP Pn 20 38 06.7 -1.0
SJCC eS Sn 20 38 47.5 -4.7
SJCC i 20 39 05.1
comp=Z,9μm,0.7s
LCBC Los crdobas, 3.86 302⇓iP Pn 20 38 08.2 -1.2
LCBC eS Sn 20 38 54.0 -1.1
LCBC i 20 39 03.4
comp=Z,14μm,1.0s
GUVC San Jose del G 4.24 174 eP Pn 20 38 14.6 +0.1
GUVC eS Sn 20 39 03.8 -0.3
GUVC i 20 39 07.9
comp=Z,12μm,0.4s
YOTC Yotoco, Valle 4.29 230 eP Pn 20 38 15.7 +0.5
YOTC Yotoco, Valle 4.29 230⇓iP Pn 20 38 15.1 -0.1
YOTC eS Sn 20 39 02.7 -2.7
SOLC Bahia Solano 4.35 263 eP Pn 20 38 16.5 +0.7
SOLC eS Sn 20 39 04.0 -2.5
SOLC i 20 39 12.6
comp=Z,6μm,0.5s
SOLC Bahia Solano 4.35 263⇓eP Pn 20 38 15.7 -0.1
SOLC eS Sn 20 39 05.5 -1.0
SOLC i 20 39 11.0
comp=Z,4μm,2.3s
SMRC Santa Marta, M 4.49 345 eP Pn 20 38 18.0 +0.3
SMRC eS Sn 20 39 04.9 -5.0
SMRC i 20 39 08.7
comp=Z,4μm,0.9s
SMRC Santa Marta, M 4.49 345⇑eP Pn 20 38 17.4 -0.2
SMRC eS Sn 20 39 04.6 -5.3
SMRC i 20 39 08.2

comp=Z,4μm,1.0s
CAPC Capurgana 4.62 294⇓iP Pn 20 38 16.8 -2.6
CAPC eS Sn 20 39 02.0 -11
CAPC i 20 39 11.4
comp=Z,5μm,0.9s
PIZC Pizarro, Choco 4.64 247⇓iP Pn 20 38 20.9 +1.3
PIZC eS Sn 20 39 13.1 -0.3
PIZC i 20 39 32.4
comp=Z,7μm,1.3s
MACC Macarena, Meta 4.68 190 eP Pn 20 38 19.8 -0.4
MACC eP Pn 20 38 19.8 -0.4
MACC eS Sn 20 39 10.2 -4.2
MACC eS Sn 20 39 10.2 -4.2
MACC Macarena, Meta 4.68 190⇑iP Pn 20 38 19.6 -0.6
MACC ⇑iP Pn 20 38 19.6 -0.6
MACC eS Sn 20 39 09.8 -4.6
MACC eS Sn 20 39 09.8 -4.6
MACC i 20 39 17.3
comp=Z,5μm,1.1s
MACC i 20 39 17.3
comp=Z,5μm,1.1s
PTAC Punta Ardita, 4.72 275 eP Pn 20 38 19.8 -0.9
PTAC eS Sn 20 39 13.1 -2.2
PTAC eS Sn 20 39 13.1 -2.2
PTAC i 20 39 16.1
comp=Z,11μm,0.3s
PTAC i 20 39 16.1
comp=Z,11μm,0.3s
URIC Uribia, Colomb 4.99 12 eP Pn 20 38 23.6 -0.6
URIC eP Pn 20 38 23.6 -0.6
URIC eS Sn 20 39 11.6 -10
URIC eS Sn 20 39 11.6 -10
URIC Uribia, Colomb 4.99 12⇓eP Pn 20 38 23.5 -0.7
URIC ⇓eP Pn 20 38 23.5 -0.7
URIC eS Sn 20 39 15.2 -6.5
URIC eS Sn 20 39 15.2 -6.5
URIC Uribia, Colomb 4.99 12 Pn 20 38 23.1 -1.2
POPC Popayan, Colom 5.55 221⇓iP Pn 20 38 32.4 +0.6
POPC ⇓iP Pn 20 38 32.4 +0.6
CFLOR Florencia 5.78 207 eP Pn 20 38 35.3 +0.6
CFLOR eP Pn 20 38 35.3 +0.6
CFLOR i 20 40 14.6
comp=Z,3μm,1.0s
CFLOR i 20 40 14.6
comp=Z,3μm,1.0s
FLOC Florencia 5.78 207⇑iP Pn 20 38 34.9 +0.1
FLOC ⇑iP Pn 20 38 34.9 +0.1
FLOC i 20 40 14.6
comp=Z,3μm,1.0s
FLOC i 20 40 14.6
comp=Z,3μm,1.0s
FLOC Florencia 5.78 207 Pn 20 38 34.8 0.0
BBAC Balboa, Cauca 6.31 222⇓iP Pn 20 38 41.8 -0.1
BBAC ⇓iP Pn 20 38 41.8 -0.1
BBAC eS Sn 20 39 51.4 -2.0
BBAC eS Sn 20 39 51.4 -2.0
BBAC i 20 39 56.5
comp=Z,1μm,0.5s
BBAC i 20 39 56.5
comp=Z,1μm,0.5s
GR1C Gorgona, Isla 6.32 234⇓eP Pn 20 38 40.7 -1.2
GR1C ⇓eP Pn 20 38 40.7 -1.2
GR1C eS Sn 20 39 47.2 -6.2
GR1C eS Sn 20 39 47.2 -6.2
PTLC Puerto Leguiza 6.80 195 eP Pn 20 38 52.0 +3.7
PTLC eP Pn 20 38 52.0 +3.7
PTLC i 20 40 51.2
comp=Z,1μm,0.7s
PTLC i 20 40 51.2
comp=Z,1μm,0.7s
CPAS1 Pasto 7.00 218 eP Pn 20 38 52.4 +1.1
CPAS1 eP Pn 20 38 52.4 +1.1
CPAS1 eS Sn 20 40 09.7 -0.4
CPAS1 eS Sn 20 40 09.7 -0.4
CPAS1 i 20 40 18.9
comp=Z,674nm,0.7s
CPAS1 i 20 40 18.9
comp=Z,674nm,0.7s
BCIP Isla Barro Col 7.11 290⇓eP Pn 20 38 50.5 -1.8
comp=Z,1μm,1.6s
BCIP ⇓eP Pn 20 38 50.5 -1.8
comp=Z,1μm,1.6s
BCIP eS Sn 20 40 08.0 -4.1
BCIP eS Sn 20 40 08.0 -4.1
BCIP i 20 40 29.5
comp=Z,1μm,1.6s
BCIP i 20 40 29.5
comp=Z,1μm,1.6s
BCIP Isla Barro Col 7.11 290 Pn 20 38 50.5 -1.8
BCIP Isla Barro Col 7.11 290 P Pn 20 38 50.5 -1.8
CTUM2 Tumaco 7.50 229 eP Pn 20 38 56.0 -1.5
CTUM2 eP Pn 20 38 56.0 -1.5
CTUM2 eS Sn 20 40 18.1 -3.3
CTUM2 eS Sn 20 40 18.1 -3.3
CTUM2 i 20 40 40.3
comp=Z,860nm,0.8s
CTUM2 i 20 40 40.3
comp=Z,860nm,0.8s
TUMC Tumaco 7.50 229⇓eP Pn 20 38 56.3 -1.2
TUMC ⇓eP Pn 20 38 56.3 -1.2
TUMC eS Sn 20 40 08.9 -12
TUMC eS Sn 20 40 08.9 -12
TUMC i 20 40 40.3
comp=Z,891nm,0.8s
TUMC i 20 40 40.3
comp=Z,891nm,0.8s
TUMC Tumaco 7.50 229 Pn 20 38 55.1 -2.4
OTAV Otavalo 8.44 220 eP Pn 20 39 10.3 -0.2
OTAV Otavalo 8.44 220 Pn 20 39 09.3 -1.2
OTAV Otavalo 8.44 220 P Pn 20 39 09.3 -1.2
PCRV Puerto La Cruz 8.99 67 P Pn 20 39 16.7 -0.7
comp=Z,60nm,0.3s,baz=231,slow=7.3,SNR=56
PCRV S Sn 20 40 53.1 -4.4
baz=215,slow=18,SNR=1.6
PLCV Puerto La Cruz 9.03 68 Pn 20 39 16.7 -1.2
PLCV Sn 20 40 53.1 -5.2
HDC Heredia 11.38 287 Pn 20 39 49.9 +0.9
JAKH Jacmel 11.39 3 iP Pn 20 39 50.5 +1.6
YHJ Yallahs 11.53 343 iP Pn 20 39 54.2 +3.5
PCJ Portland Cotta 11.59 340 iP Pn 20 39 54.7 +3.2
LGNH Logne 11.66 2 iP Pn 20 39 54.2 +1.9
LGNH Logne 11.66 2 Pn 20 39 53.4 +1.0
HOJ Hope 11.71 342 iP P 20 39 57.5 -2.4
CMJ Castle Mountai 11.73 344⇑iP Pn 20 39 55.9 +2.5
GWJ Greenwich 11.77 343 iP Pn 20 39 56.0 +2.1
STH Stony Hill 11.79 342⇑iP Pn 20 39 55.6 +1.4
BANI BANI 11.83 13 Pn 20 39 54.9 +0.1
TPP Pointe-a-Pierr 12.01 72 eP Pn 20 39 58.1 +1.1
TRN Trinidad (W) 12.15 71 eP Pn 20 39 59.2 +0.4
TRN Trinidad (W) 12.15 71 e P 20 40 05.5 +0.7
MTDJ Mount Denham 12.17 339 Pn 20 40 00.3 +1.1
BBJ Bamboo Saint A 12.23 341⇓iP P 20 40 03.5 -2.2
BBJ iS Sn 20 42 05.0 -10
SDDR Presa de Saban 12.24 8 iP Pn 20 40 01.7 +1.7
SDDR e S 20 42 08.2 -21
SDDR eS S 20 42 08.2 -21
SDDR IAML 20 42 17.3
comp=Z,75nm,0.5s
SDDR Presa de Saban 12.24 8 Pn 20 40 01.3 +1.3
JTS Las Juntas de 12.26 287 P Pn 20 40 01.6 +1.3
comp=Z,9.6nm,0.3s,baz=175,slow=11,SNR=60
JTS S Sn 20 42 17.0 +1.0
comp=Z,2.1nm,0.3s,baz=295,slow=17,SNR=1.5
JTS Las Juntas de 12.26 287 Pn 20 40 01.3 +1.1
JTS Las Juntas de 12.26 287 d iP Pn 20 40 01.1 +0.9
ESPN Las Esperanzas 12.31 297 Pn 20 40 00.2 -0.7
TBH Brigand Hill 12.42 72 eP P 20 40 06.6 -1.2
GRGR Grenville 12.44 64 Pn 20 40 02.3 -0.3
GRGR S 20 42 33.7 +0.3
DR12 Loma Pena Alta 12.45 16 Pn 20 40 00.6 -2.1
GRHS Sauteurs 12.49 64 eP P 20 40 07.1 -1.5
PCDR Punta Cana, DR 12.51 21 Pn Pn 20 39 59.6 -3.9
GRSS Sisters 12.55 63 eP Pn 20 40 04.3 +0.4
MLPR Magueyes Islan 12.57 27 Pn 20 40 00.3 -3.8
CRPR Cabo Rojo, PR 12.57 27 Pn 20 40 01.4 -2.7
MPR Mayaguez 12.74 26 iP Pn 20 40 04.3 -2.0
MPR eS Sn 20 42 17.0 -10
MPR Mayaguez 12.74 26 Pn 20 40 03.8 -2.5
ICMP Isla Caja de M 12.74 29 Pn 20 40 03.7 -2.7
SC01 Santiago de lo 12.76 10 iP P 20 40 12.1 +0.4
SC01 Santiago de lo 12.76 10 Pn 20 40 05.1 -1.6
OBIP Obispado Ponce 12.84 29 Pn 20 40 05.1 -2.5

AGPR Aguadilla, PR 12.97 26 Pn 20 40 07.9 -1.5
ACON Acoyapa 13.00 294 Pn 20 40 10.0 +0.2
IGPR InterUniversit 13.02 31 Pn 20 40 09.4 -0.5
AOPR Arecibo Observ 13.03 28 Pn 20 40 07.5 -2.6
PDPR Patillas Dam, 13.10 31 Pn 20 40 08.5 -2.5
SJG San Juan 13.12 30 P Pn 20 40 09.6 -1.6
comp=Z,50nm,0.3s,baz=199,slow=12,SNR=46
SJG S Sn 20 42 26.1 -10
comp=Z,1.2nm,0.3s,baz=3.5,slow=19,SNR=2.9
SJG San Juan 13.12 30 Pn 20 40 08.9 -2.3
SJG Sn 20 42 32.8 -3.8
TOSP Speyside 13.16 69 eP Pn 20 40 13.3 +1.5
TOSP Speyside 13.16 69 Pn 20 40 10.0 -1.8
TOSP S 20 42 44.2 -4.2
GTBY Guantanamo Bay 13.21 352 eP Pn 20 40 13.2 +0.8
GTBY eP Pn 20 40 13.2 +0.8
GTBY eS Sn 20 42 30.4 -8.3
GTBY eS Sn 20 42 30.4 -8.3
GTBY Guantanamo Bay 13.21 352 iP P 20 40 16.4 -0.1
GTBY Guantanamo Bay 13.21 352 Pn 20 40 12.2 -0.1
EMPR Esperanza - Ma 13.25 28 Pn 20 40 12.3 -0.6
FCV Fort Charlotte 13.25 61 eP P 20 40 17.2 +0.2
SVB Belmont 13.29 60 eP Pn 20 40 14.3 +0.8
SVB Belmont 13.29 60 eP P 20 40 16.4 -1.2
SVB Belmont 13.29 60 Pn Pn 20 40 14.3 +0.8
HUMP Col San Antoni 13.30 31 Pn 20 40 11.6 -1.9
GCPR Guaynabo City 13.32 30 Pn 20 40 11.0 -2.8
SVV Soufriere Volc 13.35 60 eP Pn 20 40 13.0 -1.2
SVCV St. Vincent, C 13.38 60 eP Pn 20 40 10.7 -4.0
CBYP Canovanas 13.40 31 Pn Pn 20 40 13.1 -1.8
CBYP P P 20 40 14.0 -4.8
MTP Monte Pirata 13.41 32 Pn 20 40 12.8 -2.2
CDVI St. Croix 13.57 36 Pn 20 40 14.5 -2.5
CUPR Culebra, Puert 13.73 33 Pn 20 40 17.1 -1.9
SLB Belfond 13.74 58 eP Pn 20 40 17.8 -1.3
MCLT Moule a Chique 13.77 59 eP P 20 40 22.1 -0.7
MCLT Moule a Chique 13.77 59 Pn 20 40 18.9 -0.6
SLBI Saint Lucia, B 13.89 58 eP P 20 40 26.0 +1.9
BIM Bigot 14.06 56 eP Pn 20 40 24.4 +1.2
TRMF Trois Ilets 14.09 56 eP Pn 20 40 24.0 +0.4
PCM Pelee Case Pet 14.11 55 eP P 20 40 28.9 +2.3
PML Morne Lenard 14.11 55 eP P 20 40 26.2 -0.4
FDF Fort de France 14.11 55 eP Pn 20 40 23.5 -0.4
FDF Fort de France 14.11 55 eP P 20 40 24.7 +0.9
FDF Fort de France 14.11 55 Pn 20 40 21.0 -2.9
FDF Fort de France 14.11 55 P Pn 20 40 21.0 -2.9
ZAM Aeronautique 14.13 56 eP P 20 40 26.8 0.0
GBMF Grand Be 14.13 55 eP Pn 20 40 25.5 +1.3
CXM Morne La Croix 14.14 55 eP P 20 40 26.3 -0.8
SVN Savane Anatole 14.16 55 eP P 20 40 26.4 -0.8
LPMF Morne Lapointe 14.18 56 eP P 20 40 26.5 -0.8
DSHT Scott's Head 14.20 53 eP Pn 20 40 19.3 -5.6
MPOM Morne Pois Mar 14.20 57 eP P 20 40 30.0 +2.4
DPMT Pointe Michel 14.22 53 eP Pn 20 40 23.0 -2.2
MDN Morne-Daniel 14.24 53 eP Pn 20 40 23.3 -2.1
MDN Morne-Daniel 14.24 53 e P 20 40 29.6 +1.5
MDN Morne-Daniel 14.24 53 e P 20 40 33.8 +5.7
DBCT Belle View Cho 14.25 53 eP Pn 20 40 26.7 +1.0
DBCT Belle View Cho 14.25 53 e P 20 40 32.8 +4.6
BBL Barber's Block 14.30 52 eP Pn 20 40 26.5 +0.2
MDPO Dominica; Chan 14.35 52 e P 20 40 26.8 +0.1
ILAM Ilet Lapin Mar 14.36 55 eP P 20 40 32.7 +3.4
DLPL La Plaine 14.37 53 eP Pn 20 40 27.1 +0.1
DLPL La Plaine 14.37 53 Pn Pn 20 40 26.4 -0.7
SABA Saba 14.41 41 eP Pn 20 40 27.3 -0.3
SABA Saba 14.41 41 eP P 20 40 29.7 -0.3
SABA Saba 14.41 41 Pn 20 40 26.5 -1.1
CBCY The Bluff, Cay 14.42 334 Pn 20 40 26.5 -1.1
DWS Wesley 14.45 52 eP Pn 20 40 21.4 -6.6
SEUS St. Eustatius 14.49 42 eP Pn 20 40 18.9 -10
SEUS St. Eustatius 14.49 42 e P 20 40 29.2 +0.7
SEUS St. Eustatius 14.49 42 Pn Pn 20 40 28.1 -0.5
MLYT Lee's Yard 14.51 46 eP Pn 20 40 28.5 -0.3
ESTN Estel 14.52 297 Pn 20 40 28.7 -0.3
NEV Hard Times 14.52 44 e Pn 20 40 27.9 -1.0
SKI Saint Kitts 14.54 43 eP Pn 20 40 17.1 -12
SKI Saint Kitts 14.54 43 e P 20 40 31.0 -0.4
SKI Saint Kitts 14.54 43 Pn 20 40 28.0 -1.2
SKI Saint Kitts 14.54 43 P Pn 20 40 28.0 -1.2
BCHC Barbados, Cave 14.65 63 eP P 20 40 32.8 +0.2
BBGH Gun Hill 14.72 64 eP P 20 40 35.4 +1.9
BBGH Gun Hill 14.72 64 Pn P 20 40 29.8 -1.7
FSCY Frank Sound, G 14.74 328 Pn 20 40 32.3 +0.7
GRTK Grand Turk 14.75 7 Pn 20 40 31.5 -0.2
BBSP Saint Philip 14.79 64 eP Pn 20 40 32.3 -0.1
ATAH Atahualpa 14.82 201 P Pn 20 40 34.0 +0.9
comp=Z,1.1nm,0.3s,baz=33,slow=4.3,SNR=5.5
ATAH S S 20 43 24.9 +0.9
comp=Z,0.5nm,0.3s,baz=86,slow=14,SNR=3.8
SMRT St. Maarten 14.84 40 eP Pn 20 40 32.0 -0.9
SMRT St. Maarten 14.84 40 e P 20 40 33.5 +0.7
SMRT St. Maarten 14.84 40 Pn 20 40 31.3 -1.6
BPA Boggy Peak 14.96 46 eP Pn 20 40 35.0 +0.6
ANWB Willy Bob 15.43 45 eP Pn 20 40 39.3 -0.9
ANWB Willy Bob 15.43 45 eP P 20 40 40.8 -0.4
ANWB Willy Bob 15.43 45 Pn 20 40 38.4 -1.8
ANWB IAmb IAmb 20 41 30.8
comp=Z,361nm,1.2s
TGUH Tegucigalpa,Un 15.72 298⇓iP Pn 20 40 44.3 +0.4
TGUH ⇓iP Pn 20 40 44.3 +0.4
TGUH Tegucigalpa,Un 15.72 298 P 20 40 44.6 0.0
SNET Serv Nac Est T 17.31 295 P 20 41 01.7 -0.4
SAML Samuel 18.48 148 eP P 20 41 15.1 +0.3
SAML Samuel 18.48 148 P P 20 41 14.0 -0.8
SAML Samuel 18.48 148 P P 20 41 14.0 -0.8
SAML pmax pmax
comp=Z,399nm,0.9s
PAYG Puerto Ayora 18.71 247 P Pn 20 41 19.1 -0.5
PAYG IAmb IAmb 20 41 24.5
comp=Z,312nm,0.9s
APG El Apazote 18.92 297 P P 20 41 20.4 +0.5
comp=Z,4.8nm,0.3s,baz=122,slow=4.8,SNR=58
NNA Nana 19.03 191 P P 20 41 21.8 +1.0
comp=Z,5.2nm,0.3s,baz=354,slow=9.0,SNR=46
NNA S S 20 44 51.1 +2.5
comp=Z,1.5nm,0.3s,baz=349,slow=14,SNR=3.0
NNA Nana 19.03 191 P P 20 41 20.6 -0.2
NNA IAmb IAmb 20 41 22.7
comp=Z,102nm,0.8s
NNA S 20 44 49.3 +0.7
NNA Nana 19.03 191 d iP P 20 41 21.0 +0.2
TEIG Tepich 19.90 314 P Pn 20 41 32.3 -1.2
comp=Z,382nm,0.5s,baz=142,slow=5.0,SNR=191
TEIG S S 20 45 09.4 +3.8
comp=Z,16nm,0.9s,baz=105,slow=20,SNR=2.7
TEIG Tepich 19.90 314 P P 20 41 31.4 +1.3
MDP Montagnes des 20.38 94 P Pn 20 41 37.7 -1.7
comp=Z,440nm,0.9s,baz=273,slow=10,SNR=50
MDP S S 20 45 17.6 +2.3
comp=Z,17nm,0.7s,baz=162,slow=19,SNR=1.7
CCIG Comitan 20.91 298 P P 20 41 40.6 -0.5
DWPF Disney Wildern 22.64 340 P P 20 41 59.4 +0.9
DWPF IAmb IAmb 20 42 42.2
comp=Z,155nm,0.8s
DWPF Disney Wildern 22.64 340 P P 20 42 00.7 +2.3
baz=158
LPAZ La Paz 23.45 168 P P 20 42 06.6 0.0
comp=Z,84nm,0.7s,baz=353,slow=9.3,SNR=118
LPAZ S S 20 46 06.5 -2.3
comp=Z,31nm,1.1s,baz=91,slow=18,SNR=4.6
LPAZ La Paz 23.45 168 eP P 20 42 06.3 -0.3
LPAZ La Paz 23.45 168 P P 20 42 05.8 -0.9
LPAZ IAmb IAmb 20 42 10.6
comp=Z,110nm,0.9s
LPAZ S 20 46 06.2 -2.6
CMIG Matias Romero 23.64 298 P P 20 42 05.3 -2.5
comp=Z,16nm,0.5s,baz=86,slow=5.9,SNR=34
CMIG PcP PcP 20 45 49.3 +1.2
comp=Z,12nm,0.9s,baz=69,slow=0.9,SNR=3.6
656A Willston 24.17 339 P P 20 42 15.0 +2.5
CLDB Colider 24.57 135 eP P 20 42 15.6 -0.7
456A Hilliard 25.25 342 P P 20 42 24.6 +2.4
456A IAmb IAmb 20 42 28.8
comp=Z,154nm,0.8s
SIV San Ignacio 25.56 152 P P 20 42 24.6 -0.6
comp=Z,99nm,0.9s,baz=341,slow=9.0,SNR=296
553A Crawfordville 25.61 337 P P 20 42 28.1 +2.6
MNMC Minye Minye 25.98 172 P P 20 42 27.6 -1.7
257A Skidaway Islan 26.13 345 P P 20 42 30.8 +0.6
TIGA Tifton 26.42 339 P P 20 42 33.7 +1.0
TIGA IAmb IAmb 20 42 36.3
comp=Z,88nm,0.7s

TIGA Tifton 26.42 339 P P 20 42 34.9 +2.1
baz=156
255A Hazlehurst 26.50 342 P P 20 42 35.1 +1.6
255A IAmb IAmb 20 43 35.7
comp=Z,73nm,1.0s
451A Vernon 26.52 335 P P 20 42 35.2 +1.5
GO01 Chusmiza 26.57 172 P P 20 42 33.2 -1.5
GO01 IAmb IAmb 20 42 37.3
comp=Z,128nm,1.0s
PB11 IPOC Station P 26.60 173 P P 20 42 32.8 -1.8
PB11 IAmb IAmb 20 42 37.1
comp=Z,96nm,0.8s
BBSR BB Station 26.62 16 P P 20 42 34.7 +0.2
BBSR IAmb IAmb 20 43 20.7
comp=Z,98nm,1.2s
158A Hollywood 26.65 347 P P 20 42 37.1 +2.3
baz=164
157A Early Branch 26.79 345 P P 20 42 38.5 +2.4
baz=162
CSU Charleston Sou 26.86 347 P P 20 42 37.3 +0.6
Z59A Georgetown, SC 26.94 348 P P 20 42 39.7 +2.3
baz=166
352A Blakely 26.95 337 P P 20 42 39.1 +1.6
352A pP 20 43 12.6 +2.1
NHSC New Hope 27.00 347 P P 20 42 39.5 +1.6
NHSC IAmb IAmb 20 42 41.9
comp=Z,153nm,1.2s
NHSC New Hope 27.00 347 P P 20 42 40.6 +2.6
baz=164,SNR=5.2
TLIG Tlapa 27.09 296 P P 20 42 40.7 +1.6
TLIG IAmb IAmb 20 42 48.5
comp=Z,246nm,1.4s
Z58A St. Stephen 27.14 348 P P 20 42 41.3 +2.1
baz=165
Z57A Bowman 27.31 346 P P 20 42 43.1 +2.4
baz=163,SNR=26
154A Montrose 27.34 341 P P 20 42 41.4 +0.5
154A Montrose 27.34 341 P P 20 42 43.3 +2.4
baz=158
Y60A Bolivia 27.50 351 P P 20 42 43.6 +1.2
Y60A pP 20 43 15.9 +0.1
Y60A Bolivia 27.50 351 P P 20 42 44.5 +2.1
baz=169,SNR=12
Z56A Williston 27.50 345 P P 20 42 43.9 +1.4
Z56A IAmb IAmb 20 42 45.5
comp=Z,75nm,0.6s
Z56A Williston 27.50 345 P P 20 42 44.6 +2.2
baz=162
BRAL Brewton 27.56 333 P P 20 42 44.4 +1.4
BRAL Brewton 27.56 333 P P 20 42 45.7 +2.8
baz=149
Y59A Loris 27.59 350 P P 20 42 44.6 +1.4
Y59A pP 20 43 16.0 -0.8
Y59A Loris 27.59 350 P P 20 42 45.5 +2.3
baz=167,SNR=6.1
Y58A Scranton 27.66 348 P P 20 42 45.2 +1.4
Y58A IAmb IAmb 20 43 34.0
comp=Z,50nm,0.8s
Y58A Scranton 27.66 348 P P 20 42 45.7 +1.9
baz=166
PB01 IPOC Station P 27.88 173 P P 20 42 44.3 -1.8
PB01 IAmb IAmb 20 42 46.6
comp=Z,76nm,0.9s
PB01 S 20 47 12.5 -5.5
250A Grady 27.92 336 P P 20 42 48.0 +1.8
250A IAmb IAmb 20 42 49.6
comp=Z,118nm,0.8s
Y57A Sumter 27.93 347 P P 20 42 46.2 +0.1
Y57A Sumter 27.93 347 P P 20 42 48.2 +2.1
baz=164
152A Waverly Hall 27.94 339 P P 20 42 48.3 +2.0
X60A Albert Glenn T 28.02 351 P P 20 42 48.9 +2.0
baz=169
Z53A Monticello 28.10 341 P P 20 42 49.9 +2.1
baz=157,SNR=12
X59A McDuffie Farm, 28.11 350 P P 20 42 49.5 +1.7
baz=168,SNR=7.6
GOGA Godfrey 28.19 341 P P 20 42 50.5 +2.0
GOGA IAmb IAmb 20 42 51.9
comp=Z,56nm,0.7s
GOGA Godfrey 28.19 341 P P 20 42 50.5 +2.0
GOGA pmax pmax
comp=Z,56nm,0.7s
GOGA Godfrey 28.19 341 P P 20 42 50.8 +2.2
baz=158,SNR=19
Y55A Saluda 28.21 344 P P 20 42 51.0 +2.3
baz=161,SNR=37
X58A Rowland 28.23 349 P P 20 42 50.1 +1.3
X58A IAmb IAmb 20 42 51.6
comp=Z,52nm,0.8s
X58A Rowland 28.23 349 P P 20 42 50.8 +1.9
baz=167,SNR=5.9
UNM Universidad Na 28.27 299 P P 20 42 51.5 +1.7
UNM Universidad Na 28.27 299 P P 20 42 51.5 +1.7
UNM pmax pmax
comp=Z,155nm,0.5s
X57A Johnson Farm, 28.29 348 P P 20 42 51.5 +2.1
baz=165
Z52A Williamson 28.30 340 P P 20 42 52.2 +2.7
baz=156,SNR=17
SALV Santo Antonio 28.36 143 eP P 20 42 50.2 0.0
Y54A Tignall 28.37 343 P P 20 42 52.3 +2.1
baz=160,SNR=9.8
JSC Jenkinsville 28.39 346 P P 20 42 52.2 +2.0
JSC IAmb IAmb 20 42 53.3
comp=Z,42nm,0.7s
JSC Jenkinsville 28.39 346 P P 20 42 52.2 +2.0
JSC pmax pmax
comp=Z,42nm,0.7s
W60A Pink Hill 28.45 352 P P 20 42 52.8 +2.0
baz=170
W61A Ground Anchor 28.48 353 P P 20 42 52.7 +1.6
baz=172
X56A White Oak 28.53 346 P P 20 42 53.6 +2.1
baz=163,SNR=18
BIRD Birdtown, Kers 28.55 347 P P 20 42 53.4 +1.8
HODGE Hodges 28.60 344 P P 20 42 54.1 +2.0
HODGE IAmb IAmb 20 42 55.3
comp=Z,78nm,0.6s
Y53A Monroe 28.64 342 P P 20 42 55.0 +2.5
baz=158,SNR=19
X55A Gracelyn & Ava 28.66 345 P P 20 42 54.9 +2.3
baz=162,SNR=20
W58A Raeford 28.66 349 P P 20 42 55.1 +2.5
baz=167,SNR=7.0
W59A Clinton 28.67 351 P P 20 42 54.7 +2.0
baz=169,SNR=5.3
Z51A Franklin 28.69 339 P P 20 42 55.1 +2.2
V62A Hyde County Ai 28.75 355 P P 20 42 55.7 +2.2
V62A Hyde County Ai 28.75 355 P P 20 42 55.2 +1.7
baz=174
Y52A Lilburn 28.80 341 P P 20 42 55.7 +1.8
Y52A IAmb IAmb 20 42 57.3
comp=Z,81nm,0.6s
Y52A Lilburn 28.80 341 P P 20 42 56.5 +2.6
baz=157,SNR=24
346A Big Creek Wild 28.88 330 P P 20 42 56.9 +2.2
Z50A Ashland 28.91 337 P P 20 42 57.3 +2.3
Z50A Ashland 28.91 337 P P 20 42 57.6 +2.7
baz=153,SNR=73
X54A Belton 28.93 344 P P 20 42 57.4 +2.4
baz=160,SNR=8.4
W57A Gilead 28.94 348 P P 20 42 56.1 +1.0
W57A Gilead 28.94 348 P P 20 42 56.7 +1.6
baz=166,SNR=7.0
PAULI Pauline 29.04 345 P P 20 42 58.0 +2.0
PAULI IAmb IAmb 20 42 59.2
comp=Z,64nm,0.7s
V61A Roper 29.04 354 P P 20 42 58.0 +2.0
V61A IAmb IAmb 20 42 59.1
comp=Z,81nm,0.9s
V61A Roper 29.04 354 P P 20 42 58.0 +2.0
baz=173
W56A Indian Trail 29.04 347 P P 20 42 57.9 +1.8
baz=164,SNR=8.6
V60A Jim Taylor Roa 29.09 353 P P 20 42 57.2 +0.7
V60A IAmb IAmb 20 42 59.3
comp=Z,80nm,0.7s
V60A Jim Taylor Roa 29.09 353 P P 20 42 58.4 +1.9
baz=171,SNR=5.3
X53A Estanollee 29.15 342 P P 20 42 59.3 +2.3
baz=159,SNR=7.7
Y51A Rockmart 29.17 339 P P 20 42 59.5 +2.3
baz=155,SNR=16
KMSC Kings Mountain 29.22 346 P P 20 42 59.7 +2.1
KMSC IAmb IAmb 20 43 00.7
comp=Z,49nm,0.6s
KMSC Kings Mountain 29.22 346 P P 20 42 59.9 +2.2
baz=163,SNR=16
V59A Middlesex 29.22 351 P P 20 42 59.5 +1.9
baz=169,SNR=17
W54A Cherokee Point 29.38 345 P P 20 43 01.7 +2.6
baz=161,SNR=10
V58A Windy Hill, Pi 29.39 350 P P 20 43 00.4 +1.3
V58A IAmb IAmb 20 43 01.7
comp=Z,33nm,0.7s
V58A Windy Hill, Pi 29.39 350 P P 20 43 00.8 +1.6
baz=168,SNR=9.3
X52A Dahlonega 29.43 342 P P 20 43 01.8 +2.3
baz=158,SNR=29
BG3 Lake Jocassee 29.50 343 P P 20 43 02.1 +1.9
BG3 IAmb IAmb 20 43 04.4
comp=Z,98nm,1.5s
LVC Limon Verde 29.50 172 ScP ScP 20 49 29.1 -0.4
comp=Z,8.1nm,0.7s,baz=280,slow=4.3,SNR=4.4
LVC Limon Verde 29.50 172 P P 20 43 00.1 -0.5
LVC Limon Verde 29.50 172 P P 20 43 00.1 -0.5
LVC pmax pmax
comp=Z,44nm,1.0s
U61A Possum Corner 29.56 354 P P 20 43 02.7 +2.1
U61A IAmb IAmb 20 43 03.5
comp=Z,95nm,0.7s
U61A Possum Corner 29.56 354 P P 20 43 02.6 +1.9
baz=173,SNR=5.5
344A Westbrook Farm 29.58 328 P P 20 43 02.9 +2.1
V57A Coltrane Farms 29.61 349 P P 20 43 02.7 +1.7
baz=166,SNR=15
Y49A Blount Mountai 29.63 337 P P 20 43 03.0 +1.6
V56A Mocksville 29.67 348 P P 20 43 03.8 +2.1
baz=165,SNR=20
X51A Calhoun 29.70 340 P P 20 43 03.6 +1.7
X51A IAmb IAmb 20 43 05.4
comp=Z,56nm,0.8s
X51A Calhoun 29.70 340 P P 20 43 04.0 +2.1
baz=156,SNR=14
W53A Cullowhee 29.73 343 P P 20 43 04.9 +2.6
baz=159,SNR=22
U59A Littleton 29.74 352 P P 20 43 03.1 +0.9
U59A Littleton 29.74 352 P P 20 43 03.8 +1.7
baz=170
U60A Pendleton 29.78 353 P P 20 43 04.3 +1.8
baz=172,SNR=7.1
V55A Taylorsville 29.87 347 P P 20 43 05.3 +1.9
V55A IAmb IAmb 20 43 06.9
comp=Z,62nm,0.7s
V55A Taylorsville 29.87 347 P P 20 43 06.0 +2.6
baz=164,SNR=21
U58A Oxford 29.89 351 P P 20 43 05.5 +2.0
baz=169,SNR=35
W52A Murphy 29.89 342 P P 20 43 05.9 +2.3
W52A Murphy 29.89 342 P P 20 43 06.2 +2.7
baz=158,SNR=36
FPAL Fort Paine 29.94 339 P P 20 43 06.1 +2.0
FPAL IAmb IAmb 20 43 07.2
comp=Z,43nm,0.7s
V54A Nebo 29.98 345 P P 20 43 06.9 +2.5
baz=162,SNR=19
U57A Blanch 30.05 350 P P 20 43 06.7 +1.7
baz=167,SNR=25
VBMS Vicksburg 30.08 330 P P 20 43 07.6 +2.4
VBMS Vicksburg 30.08 330 P P 20 43 07.6 +2.4
baz=144,SNR=16
V53A Saluda 30.10 344 P P 20 43 07.1 +1.6
V53A IAmb IAmb 20 43 09.4
comp=Z,46nm,0.7s
V53A Saluda 30.10 344 P P 20 43 08.2 +2.7
baz=160,SNR=23
MOIG Morelia 30.16 298 P P 20 43 07.6 +1.2
MOIG IAmb IAmb 20 43 09.7
comp=Z,77nm,1.0s
U56A King 30.17 348 P P 20 43 07.9 +1.9
U56A King 30.17 348 P P 20 43 08.2 +2.2
baz=165
PP1B Ponte de Pedra 30.17 144 eP P 20 43 06.8 +0.6
W51A Cleveland 30.21 341 P P 20 43 09.1 +2.6
baz=156,SNR=36
PB10 IPOC Station P 30.22 175 P P 20 43 06.6 0.0
T59A Double "B" Far 30.32 353 P P 20 43 08.6 +1.4
T59A IAmb IAmb 20 43 10.0
comp=Z,85nm,0.7s
T59A Double "B" Far 30.32 353 P P 20 43 09.2 +1.9
baz=171,SNR=30
TKL Tuckaleechee C 30.36 343 LR LR 20 56 51.3
comp=Z,152nm,18.3s,baz=156,slow=39
TKL Tuckaleechee C 30.36 343 P P 20 43 09.4 +1.6
TKL Tuckaleechee C 30.36 343 P P 20 43 09.4 +1.6
TKL pmax pmax
comp=Z,27nm,0.8s
342A Flagon Creek P 30.37 326 P P 20 43 09.2 +1.4
342A IAmb IAmb 20 43 11.5
comp=Z,100nm,1.2s
T60A Surry 30.39 354 P P 20 43 09.3 +1.4
T60A Surry 30.39 354 P P 20 43 09.8 +1.8
baz=173
441A DeRidder 30.40 324 P P 20 43 09.7 +1.6
441A IAmb IAmb 20 43 11.7
comp=Z,95nm,0.6s
X48A Hartselle 30.40 337 P P 20 43 10.0 +1.9
CPCT Cooper Cave 30.40 341 P P 20 43 10.4 +2.3
CPCT IAmb IAmb 20 43 11.6
comp=Z,77nm,0.7s
T58A Grand View Acr 30.43 351 P P 20 43 10.2 +1.9
baz=169,SNR=40
W50A Signal Mountai 30.43 340 P P 20 43 10.7 +2.3
W50A Signal Mountai 30.43 340 P P 20 43 10.9 +2.5
baz=155,SNR=37
U55A TA2, Sparta 30.46 347 P P 20 43 10.9 +2.3
baz=164,SNR=13
V52A Sevierville 30.48 343 P P 20 43 11.1 +2.3
V52A IAmb IAmb 20 43 12.6
comp=Z,71nm,1.1s
V52A Sevierville 30.48 343 P P 20 43 10.9 +2.1
baz=159,SNR=20
T57A Hurt 30.59 350 P P 20 43 11.3 +1.6
T57A IAmb IAmb 20 43 12.9
comp=Z,84nm,0.8s
T57A Hurt 30.59 350 P P 20 43 11.6 +1.9
baz=168,SNR=28
U54A Nelsons Funny 30.65 346 P P 20 43 12.2 +1.8
U54A Nelsons Funny 30.65 346 P P 20 43 12.9 +2.5
baz=163,SNR=56
V51A Loudon 30.68 342 P P 20 43 12.8 +2.3
V51A Loudon 30.68 342 P P 20 43 13.0 +2.6
baz=158,SNR=38
U53A Fall Branch 30.69 345 P P 20 43 13.0 +2.3
baz=161,SNR=26
W49A Belvidere 30.70 338 P P 20 43 12.7 +2.1
baz=154,SNR=20
ARAG Araguaiana, MT 30.71 137 eP P 20 43 10.9 -0.1
T56A Rocky Mt 30.76 349 P P 20 43 13.4 +2.2
baz=166,SNR=18
V50A Pikeville 30.79 341 P P 20 43 14.0 +2.5
baz=156,SNR=26
S61A Accomac 30.84 356 P P 20 43 14.5 +2.6
baz=175
143A Socs Landing, 30.91 329 P P 20 43 13.9 +1.4
143A IAmb IAmb 20 43 15.0
comp=Z,70nm,0.7s
U52A Thorn Hill 30.93 344 P P 20 43 15.0 +2.2
baz=160,SNR=23
S60A Water View 30.95 354 P P 20 43 15.2 +2.5
baz=173,SNR=5.7
T55A Pulaski 31.00 348 P P 20 43 15.8 +2.5
baz=165,SNR=15
BLA Blacksburg 31.01 349 P P 20 43 15.3 +1.8
BLA IAmb IAmb 20 43 17.4
comp=Z,93nm,1.2s
BLA Blacksburg 31.01 349 P P 20 43 15.3 +1.8
BLA pmax pmax
comp=Z,93nm,1.2s
BLA Blacksburg 31.01 349 P P 20 43 15.9 +2.4
baz=166,SNR=13
S58A Poland Farm, P 31.01 352 P P 20 43 15.0 +1.6
S58A IAmb IAmb 20 43 16.0
comp=Z,32nm,0.6s
S58A Poland Farm, P 31.01 352 P P 20 43 15.4 +2.0
baz=170
S59A Mechanicsville 31.07 353 P P 20 43 16.0 +2.2
baz=172,SNR=5.9
T54A Tazewell 31.11 347 P P 20 43 16.8 +2.4
baz=163,SNR=46
TZTN Tazewell 31.13 344 P P 20 43 16.9 +2.4
TZTN IAmb IAmb 20 43 18.2
comp=Z,111nm,1.3s
TZTN Tazewell 31.13 344 P P 20 43 16.8 +2.4
baz=160,SNR=16
V49A McMinnville 31.15 340 P P 20 43 16.9 +2.2
baz=155,SNR=39
T53A Wise 31.27 345 P P 20 43 18.1 +2.4
baz=162,SNR=22
PLAL Pickwick Lake 31.28 336 P P 20 43 17.5 +1.8
S57A Dark Hollow, R 31.29 351 P P 20 43 17.6 +1.8
S57A IAmb IAmb 20 43 18.7
comp=Z,84nm,0.7s
S57A Dark Hollow, R 31.29 351 P P 20 43 17.9 +2.1
baz=169,SNR=14
S56A Natural Bridge 31.31 350 P P 20 43 17.8 +1.8
baz=167
KVTX Kingsville 31.32 314 P P 20 43 17.8 +1.6
KVTX IAmb IAmb 20 43 19.0
comp=Z,104nm,0.8s
R58B Mineral 31.34 353 P P 20 43 17.3 +1.1
R58B PcP 20 46 07.3 +0.9
R58B Mineral 31.34 353 P P 20 43 18.2 +2.0
baz=171,SNR=9.7
U50A Jamestown 31.39 342 P P 20 43 19.3 +2.5
baz=157,SNR=26
OXF Oxford 31.44 334 P P 20 43 18.8 +1.6
OXF IAmb IAmb 20 43 20.0
comp=Z,114nm,1.1s
OXF Oxford 31.44 334 P P 20 43 18.8 +1.6
OXF pmax pmax
comp=Z,115nm,1.1s
OXF Oxford 31.44 334 P P 20 43 18.6 +1.4
baz=148,SNR=14
HKT Hockley 31.45 320 P P 20 43 18.2 +0.9
HKT Hockley 31.45 320 P P 20 43 18.2 +0.9
HKT pmax pmax
comp=Z,36nm,1.0s
V48A Smith Brothers 31.46 338 P P 20 43 19.6 +2.3
R61A Willards 31.46 357 P P 20 43 19.5 +2.1
baz=176
R59A King George, V 31.48 354 P P 20 43 20.0 +2.5
baz=172,SNR=16
R60A Leonardtown, M 31.50 355 P P 20 43 19.8 +2.1
baz=173
T52A Hallie 31.50 345 P P 20 43 20.0 +2.3
T52A Hallie 31.50 345 P P 20 43 20.2 +2.4
baz=161,SNR=42
CBN Corbin Frederi 31.51 354 P P 20 43 19.4 +1.7
CBN Corbin Frederi 31.51 354 P P 20 43 19.9 +2.1
baz=172
S55A Lewisburg 31.57 349 P P 20 43 20.9 +2.6
baz=166,SNR=27
CLTN Cedars of Leba 31.59 339 P P 20 43 20.6 +2.1
CLTN IAmb IAmb 20 43 21.7
comp=Z,44nm,0.6s
CLTN S 20 48 16.3 +0.6
CLTN ScP ScP 20 49 32.6 -3.1
T51A Gray 31.63 343 P P 20 43 21.5 +2.6
baz=159,SNR=58
R58A Rapidan 31.68 353 P P 20 43 21.6 +2.3
baz=170,SNR=24
R57A Stanardsville 31.75 352 P P 20 43 22.2 +2.3
baz=170,SNR=11
S54A Dingess, Beckl 31.76 348 P P 20 43 22.3 +2.3
S54A IAmb IAmb 20 43 23.5
comp=Z,77nm,0.8s
S54A Dingess, Beckl 31.76 348 P P 20 43 22.5 +2.4
baz=164,SNR=12
S53A Williamson 31.83 346 P P 20 43 22.8 +2.2
baz=163
GO02 Mina Guanaco 31.94 174 P P 20 43 20.3 -1.7
T50A Nancy 31.95 342 P P 20 43 24.0 +2.4
baz=157,SNR=26
R56A Bull Pasture M 31.99 351 P P 20 43 24.5 +2.4
baz=168,SNR=19
NATX Nacogdoches 31.99 324 P P 20 43 23.4 +1.3
NATX pP 20 43 57.3 +1.7
NATX Nacogdoches 31.99 324 P P 20 43 24.0 +1.9
baz=136,SNR=9.3
R55A Marlinton 31.99 349 P P 20 43 23.8 +1.7
R55A IAmb IAmb 20 43 25.7
comp=Z,63nm,0.8s
R55A Marlinton 31.99 349 P P 20 43 24.7 +2.6
baz=167,SNR=22
Q61A Milford 32.01 357 P P 20 43 24.5 +2.5
baz=176
R54A Victor 32.06 348 P P 20 43 24.9 +2.3
baz=165,SNR=13
CCAR Cane Creek 32.06 330 P P 20 43 24.5 +1.9
CCAR pP pP 20 43 57.6 +1.5
S52A Salyersville 32.06 345 P P 20 43 24.7 +2.0
baz=161,SNR=5.4
Z41A Richland Creek 32.08 328 P P 20 43 23.8 +1.0
Z41A IAmb IAmb 20 43 26.4
comp=Z,85nm,0.7s
Z41A pP pP 20 43 58.8 +2.6
Z41A Richland Creek 32.08 328 P P 20 43 24.1 +1.3
baz=141
Q59A Harwood 32.09 355 P P 20 43 25.1 +2.3
baz=173
X43A Marvell 32.12 332 P P 20 43 25.4 +2.3
X43A IAmb IAmb 20 43 26.6
comp=Z,75nm,0.6s
X43A Marvell 32.12 332 P P 20 43 24.9 +1.8
baz=145,SNR=5.5
Q60A Greensboro 32.16 356 P P 20 43 25.3 +1.8
Q60A Greensboro 32.16 356 P P 20 43 26.0 +2.5
baz=175,SNR=6.2
S51A Beattyville 32.16 344 P P 20 43 25.6 +2.1
S51A IAmb IAmb 20 43 27.1
comp=Z,72nm,0.8s
S51A Beattyville 32.16 344 P P 20 43 25.8 +2.3
baz=160
WVT Waverly 32.18 337 P P 20 43 25.2 +1.6
WVT pP pP 20 43 57.1 0.0
WVT S 20 48 26.5 +1.7
WVT ScP 20 49 37.2 -0.5
WVT Waverly 32.18 337 P P 20 43 25.2 +1.6
WVT S S 20 48 26.5 +1.7
WVT pmax pmax
comp=Z,251nm,1.1s
WVT Waverly 32.18 337 P P 20 43 25.4 +1.8
baz=152
MET Memphis--Engin 32.19 333 P P 20 43 24.1 +0.4
T49A Edmonton 32.24 341 P P 20 43 26.2 +2.0
T49A IAmb IAmb 20 43 27.2
comp=Z,78nm,0.6s
T49A Edmonton 32.24 341 P P 20 43 26.2 +2.0
baz=156,SNR=39
Q58A Fox Den Farm, 32.28 353 P P 20 43 26.6 +2.1
baz=171,SNR=17
R53A Hurricane 32.41 347 P P 20 43 27.5 +1.8
R53A IAmb IAmb 20 43 29.4
comp=Z,56nm,0.9s
R53A PcP 20 46 10.1 +0.7
R53A Hurricane 32.41 347 P P 20 43 27.9 +2.2
baz=163,SNR=8.6
S50A Richmond 32.43 343 P P 20 43 28.1 +2.3
baz=159,SNR=32
Q57A Strasburg 32.46 352 P P 20 43 28.7 +2.6
baz=170,SNR=9.9
ZAIG Zacatecas 32.54 302 P P 20 43 29.7 +2.3
ZAIG PcP 20 46 11.5 +1.1
WLAR White Oak Lake 32.57 328 P P 20 43 27.9 +0.8
R52A Catlettsburg 32.58 346 P P 20 43 28.9 +1.8
baz=162
SDMD Soldier's Deli 32.65 355 P P 20 43 29.5 +1.8
SDMD PcP 20 46 10.3 +0.3
T47A Sharon Grove 32.67 339 P P 20 43 29.5 +1.6
Q55A Buckhannon 32.68 350 P P 20 43 31.3 +3.2
baz=167,SNR=21
UTMT University of 32.77 336 P P 20 43 29.8 +1.0
P61A Hammonton 32.77 358 P P 20 43 30.7 +1.9
P61A IAmb IAmb 20 43 32.6
comp=Z,100nm,0.7s
P61A Hammonton 32.77 358 P P 20 43 30.6 +1.9
baz=177
P58A Pank, Wackersv 32.78 354 P P 20 43 30.7 +1.9
baz=172,SNR=7.2
R51A Hillsboro 32.78 345 P P 20 43 31.2 +2.3
baz=160,SNR=24
S49A Springfield 32.79 342 P P 20 43 31.0 +2.1
baz=157,SNR=66
Q54A Coxs Mills 32.81 349 P P 20 43 30.9 +1.8
Q54A IAmb IAmb 20 43 32.6
comp=Z,68nm,0.9s

Q54A Coxs Mills 32.81 349 P P 20 43 31.4 +2.3
baz=166,SNR=24
P59A Jarrettsville 32.81 355 P P 20 43 31.1 +2.0
baz=174,SNR=6.9
Q53A Leroy 32.83 348 P P 20 43 31.7 +2.5
baz=164,SNR=27
833A Chaparral WMA, 32.84 314 P P 20 43 29.4 -0.1
833A IAmb IAmb 20 43 30.7
comp=Z,61nm,0.8s
833A Chaparral WMA, 32.84 314 P P 20 43 29.9 +0.3
baz=126,SNR=12
P57A Homestead Farm 32.85 353 P P 20 43 31.6 +2.1
P57A IAmb IAmb 20 43 33.4
comp=Z,74nm,1.1s
P57A Homestead Farm 32.85 353 P P 20 43 32.3 +2.8
baz=171,SNR=18
GNAR Gosnell 32.93 334 P P 20 43 31.4 +1.2
GNAR pP 20 44 04.8 +1.0
P60A Greenville 32.96 356 P P 20 43 31.9 +1.6
P60A PcP 20 46 10.9 +0.1
P60A Greenville 32.96 356 P P 20 43 32.4 +2.0
baz=175,SNR=7.1
R50A Paris 32.97 344 P P 20 43 32.6 +2.1
R50A pP pP 20 44 07.1 +2.8
R50A Paris 32.97 344 P P 20 43 33.0 +2.5
baz=159,SNR=56
P56A Dayton Farm, R 32.98 352 P P 20 43 33.6 +3.0
baz=169,SNR=37
UALR University of 33.03 330 P P 20 43 32.1 +1.0
X40A Basin Creek Fa 33.05 329 P P 20 43 32.0 +0.8
X40A IAmb IAmb 20 43 33.8
comp=Z,86nm,0.8s
X40A pP pP 20 44 05.3 +0.4
X40A Basin Creek Fa 33.05 329 P P 20 43 32.7 +1.5
baz=142,SNR=53
PSUB Penn St. - Bra 33.06 357 P P 20 43 32.8 +1.6
PSUB IAmb IAmb 20 43 35.0
comp=Z,48nm,0.6s
Q52A Bidwell 33.09 347 P P 20 43 33.9 +2.3
baz=163,SNR=33
435B Jarrell 33.13 319 P P 20 43 32.9 +0.8
435B pP pP 20 44 05.0 -0.6
435B Jarrell 33.13 319 P P 20 43 33.5 +1.5
baz=131,SNR=14
P55A Reedsville 33.14 350 P P 20 43 34.8 +2.8
baz=168,SNR=12
PVMO Portageville 33.18 335 P P 20 43 34.2 +1.9
O61A Allentown 33.18 358 P P 20 43 34.4 +2.1
baz=177
MVL Millersville 33.19 355 P P 20 43 34.4 +2.0
MVL IAmb IAmb 20 43 35.7
comp=Z,36nm,0.6s
MVL PcP 20 46 12.0 +0.5
R49A Shelbyville 33.22 342 P P 20 43 34.3 +1.6
R49A IAmb IAmb 20 43 35.6
comp=Z,51nm,0.7s
R49A Shelbyville 33.22 342 P P 20 43 34.6 +1.9
baz=158,SNR=25
MCWV Mont Chateau 33.29 350 P P 20 43 35.3 +2.1
MCWV Mont Chateau 33.29 350 P P 20 43 36.0 +2.7
baz=168,SNR=11
W41B Gary Mavity, V 33.30 331 P P 20 43 34.5 +1.0
W41B IAmb IAmb 20 43 35.7
comp=Z,50nm,0.7s
W41B Gary Mavity, V 33.30 331 P P 20 43 34.8 +1.3
baz=144,SNR=36
P54A Burton 33.34 350 P P 20 43 36.3 +2.6
baz=166,SNR=24
BDFB Brasilia 33.36 132 P P 20 43 35.2 +1.0
comp=Z,144nm,0.6s,baz=296,slow=10,SNR=177
BDFB LR LR 20 58 27.7
comp=Z,388nm,18.1s,baz=314,slow=38
BDFB Brasilia 33.36 132 P P 20 43 35.0 +0.7
BDFB Brasilia 33.36 132 P P 20 43 35.0 +0.7
BDFB pmax pmax
comp=Z,174nm,0.8s
O58A Lewisberry 33.37 355 P P 20 43 36.5 +2.5
baz=173,SNR=24
Q50A Georgetown 33.40 344 P P 20 43 36.8 +2.6
baz=160,SNR=38
P53A Whipple 33.40 348 P P 20 43 36.4 +2.1
P53A IAmb IAmb 20 43 38.3
comp=Z,126nm,1.2s
P53A PcP 20 46 13.5 +1.4
P53A Whipple 33.40 348 P P 20 43 36.7 +2.4
baz=165,SNR=20
Q51A Peebles 33.41 345 P P 20 43 36.8 +2.5
Q51A Peebles 33.41 345 P P 20 43 36.7 +2.5
baz=161,SNR=43
WHAR Wooly Hollow 33.42 331 P P 20 43 35.6 +1.2
O60A Telford 33.45 357 P P 20 43 36.8 +2.2
baz=176,SNR=12
PAGS Pennsylvania G 33.45 355 P P 20 43 36.9 +2.2
PAGS IAmb IAmb 20 43 37.9
comp=Z,38nm,0.7s
MIAR Mount Ida 33.48 328 P P 20 43 35.3 +0.3
MIAR Mount Ida 33.48 328 P P 20 43 35.3 +0.3
MIAR pmax pmax
comp=Z,38nm,0.8s
MIAR Mount Ida 33.48 328 P P 20 43 35.8 +0.9
baz=141
O59A Robesonia 33.49 356 P P 20 43 37.3 +2.3
baz=174,SNR=6.9
WCI Wyandotte Cave 33.51 341 P P 20 43 37.1 +1.9
WCI Wyandotte Cave 33.51 341 P P 20 43 37.1 +1.9
WCI pmax pmax
comp=Z,150nm,0.7s
WCI Wyandotte Cave 33.51 341 P P 20 43 37.3 +2.1
baz=156
LCAR Lake Charles 33.52 333 P P 20 43 36.5 +1.2
LCAR IAmb IAmb 20 43 38.2
comp=Z,197nm,1.3s
LCAR pP pP 20 44 10.2 +1.2
LCAR sP sP 20 44 27.6 +0.4
O57A Amberson 33.52 354 P P 20 43 38.1 +2.7
baz=172,SNR=27
O56A Blue Knob Stat 33.70 352 P P 20 43 38.0 +1.2
O56A IAmb IAmb 20 43 40.6
comp=Z,89nm,0.8s
O56A Blue Knob Stat 33.70 352 P P 20 43 39.5 +2.7
baz=170,SNR=34
P52A Corning 33.70 347 P P 20 43 39.2 +2.4
baz=164,SNR=27
LUPA Lehigh Univers 33.73 357 P P 20 43 39.5 +2.5
LUPA sP sP 20 44 28.6 -1.3
O55A Ligonier 33.74 351 P P 20 43 39.8 +2.7
baz=169,SNR=22
USIN University of 33.74 339 P P 20 43 38.1 +0.9
USIN PP PP 20 44 57.1 +0.2
P51A Williamsport 33.77 346 P P 20 43 39.5 +2.1
P51A Williamsport 33.77 346 P P 20 43 39.7 +2.3
baz=162,SNR=24
BRNJ Basking Ridge 33.77 358 P P 20 43 40.0 +2.6
BRNJ IAmb IAmb 20 43 41.7
comp=Z,101nm,0.7s
BRNJ sP sP 20 44 30.2 +0.2
PBMO Poplar Bluff 33.80 334 P P 20 43 38.9 +1.2
PBMO pP pP 20 44 13.1 +1.7
Q49A Aurora 33.80 343 P P 20 43 39.8 +2.1
baz=158,SNR=17
N61A South Mountain 33.83 358 P P 20 43 40.4 +2.4
baz=178,SNR=12
WHTX Lake Whitney, 33.85 321 P P 20 43 39.5 +1.2
WHTX IAmb IAmb 20 43 40.4
comp=Z,63nm,0.8s
WHTX Lake Whitney, 33.85 321 P P 20 43 39.4 +1.2
baz=133,SNR=15
CPNY Central Park 33.86 359 P P 20 43 39.3 +1.1
O54A Avella 33.89 350 P P 20 43 40.4 +1.9
O54A Avella 33.89 350 P P 20 43 40.9 +2.4
baz=167,SNR=10
SSPA Standing Stone 33.97 353 P P 20 43 41.7 +2.5
SSPA IAmb IAmb 20 43 42.8
comp=Z,64nm,1.0s
SSPA PcP 20 46 15.0 +1.3
SSPA Standing Stone 33.97 353 P P 20 43 41.7 +2.5
baz=171
Q48A North Vernon 33.98 342 P P 20 43 41.2 +1.9
baz=157,SNR=28
N60A Cedar Hill Far 33.98 357 P P 20 43 41.5 +2.3
baz=176,SNR=35
N62A Caumsett State 34.00 359 P P 20 43 41.7 +2.4
baz=179
N63A Mattituck 34.05 1 P P 20 43 42.0 +2.2
baz=181
N57A Milroy 34.05 354 P P 20 43 42.0 +2.2
baz=172,SNR=28
N58A Sunbury 34.06 355 P P 20 43 40.8 +0.9
N58A IAmb IAmb 20 43 43.7
comp=Z,44nm,0.8s
N58A sP sP 20 44 31.4 -1.4
N58A Sunbury 34.06 355 P P 20 43 42.3 +2.4
baz=173,SNR=20
N59A State Game Lan 34.06 356 P P 20 43 42.2 +2.2
N59A IAmb IAmb 20 43 43.6
comp=Z,75nm,0.7s
N59A sP sP 20 44 32.5 -0.4
N59A State Game Lan 34.06 356 P P 20 43 42.6 +2.6
baz=175,SNR=34
P50A Jamestown 34.07 345 P P 20 43 42.2 +2.2
baz=161,SNR=37
PAL Palisades 34.08 359 P P 20 43 41.4 +1.4
PAL IAmb IAmb 20 43 42.8
comp=Z,65nm,0.6s
PAL pP pP 20 44 12.2 -2.0
PAL Palisades 34.08 359 P P 20 43 41.4 +1.4
PAL *PP pP 20 44 12.2 -2.0
PAL pmax pmax
comp=Z,65nm,0.6s
PAL Palisades 34.08 359 P P 20 43 41.8 +1.8
baz=178
W39A Magazine 34.09 329 P P 20 43 41.3 +1.0
W39A sP sP 20 44 31.9 -0.2
W39A Magazine 34.09 329 P P 20 43 41.7 +1.5
baz=141,SNR=80
S44A Carbondale 34.10 337 P P 20 43 41.7 +1.5
O52A Adamsville 34.10 348 P P 20 43 42.2 +2.0
O52A Adamsville 34.10 348 P P 20 43 42.7 +2.5
baz=164,SNR=36
O53A New Philadelph 34.10 349 P P 20 43 42.7 +2.4
baz=165,SNR=30
ODNJ Ogdensburg 34.17 358 P P 20 43 42.8 +2.0
ODNJ PcP 20 46 15.2 +0.9
WSPT Westport, CT 34.23 360 P P 20 43 42.8 +1.4
WSPT IAmb IAmb 20 43 44.8
comp=Z,31nm,0.6s
P49A Miami Univ. Ec 34.24 344 P P 20 43 43.2 +1.6
baz=159,SNR=10
N55A Marion Center 34.26 352 P P 20 43 44.2 +2.5
baz=169,SNR=38
GO03 Copiap 34.29 176 P P 20 43 41.7 -0.4
O51A Pataskala 34.30 347 P P 20 43 44.2 +2.2
baz=163,SNR=25
N56A West Decatur 34.30 353 P P 20 43 44.6 +2.6
baz=171,SNR=33
P48A Milroy 34.38 343 P P 20 43 43.8 +1.2
P48A Milroy 34.38 343 P P 20 43 43.9 +1.2
baz=158,SNR=11
M61A Granite Spring 34.38 359 P P 20 43 44.5 +1.9
baz=179,SNR=8.3
YLE Yale 34.38 0 P P 20 43 44.4 +1.8
YLE IAmb IAmb 20 43 52.0
comp=Z,45nm,0.7s
JCT Junction City 34.42 317 P P 20 43 43.7 +0.5
JCT IAmb IAmb 20 43 45.2
comp=Z,84nm,1.4s
JCT Junction City 34.42 317 P P 20 43 43.7 +0.5
JCT pmax pmax
comp=Z,84nm,1.5s
JCT Junction City 34.42 317 P P 20 43 43.8 +0.5
baz=128,SNR=11
M60A Port Jervis 34.42 358 P P 20 43 45.0 +2.0
baz=177,SNR=21
M66A Nantucket 34.42 4 P P 20 43 45.2 +2.3
baz=185
BLO Bloomington 34.45 341 P P 20 43 45.1 +1.8
BLO pP pP 20 44 20.0 +3.0
BLO sP sP 20 44 36.1 +0.9
BLO Bloomington 34.45 341 P P 20 43 45.1 +1.8
BLO pmax pmax
comp=Z,275nm,0.6s
ACSO Alum Creek Sta 34.46 347 P P 20 43 44.8 +1.4
ACSO IAmb IAmb 20 43 46.7
comp=Z,98nm,0.7s
ACSO sP sP 20 44 34.8 -1.4
ACSO Alum Creek Sta 34.46 347 P P 20 43 45.8 +2.4
baz=162,SNR=33
M63A Gales Ferry 34.48 1 P P 20 43 45.8 +2.3
baz=182,SNR=16
M62A Hamden 34.51 0 P P 20 43 45.8 +2.1
baz=180,SNR=9.1
O50A Cable 34.53 346 P P 20 43 46.3 +2.3
baz=161,SNR=44
U40A Yellville 34.55 331 P P 20 43 45.5 +1.3
U40A pP pP 20 44 18.4 +0.5
U40A Yellville 34.55 331 P P 20 43 45.5 +1.3
baz=144,SNR=259
M58A Price's Panora 34.57 355 P P 20 43 46.9 +2.6
baz=174,SNR=23
N53A Lisbon 34.58 350 P P 20 43 46.6 +2.2
N53A PcP 20 46 17.2 +1.8
N53A Lisbon 34.58 350 P P 20 43 46.6 +2.2
baz=166,SNR=12
OLIL Olney 34.58 339 P P 20 43 45.6 +1.2
OLIL sP sP 20 44 36.5 +0.1
OLIL PcP 20 46 15.2 -0.3
N54A Moraine State 34.58 351 P P 20 43 46.9 +2.5
N54A IAmb IAmb 20 43 48.0
comp=Z,106nm,0.9s
N54A Moraine State 34.58 351 P P 20 43 47.1 +2.7
baz=168,SNR=26
M57A Sunshine Farm, 34.59 355 P P 20 43 47.0 +2.5
M57A IAmb IAmb 20 43 48.2
comp=Z,95nm,0.9s
M57A Sunshine Farm, 34.59 355 P P 20 43 47.2 +2.7
baz=173,SNR=30
M64A Tiverton 34.65 2 P P 20 43 47.1 +2.2
baz=183,SNR=8.7
M59A Waymart 34.67 357 P P 20 43 47.3 +2.2
baz=176,SNR=19
M65A Busby, Falmout 34.69 3 P P 20 43 47.0 +1.7
baz=184
N52A McGinn's Farm, 34.74 348 P P 20 43 48.1 +2.3
baz=165,SNR=35
O49A Covington 34.75 345 P P 20 43 47.7 +1.9
O49A Covington 34.75 345 P P 20 43 47.8 +1.9
baz=160,SNR=16
IPMB Ipameri, GO 34.76 135 eP P 20 43 46.1 -0.1
KSCT Kent School, K 34.79 359 P P 20 43 48.1 +2.0
KSCT IAmb IAmb 20 43 49.2
comp=Z,96nm,1.4s
M56A Emporium 34.84 353 P P 20 43 48.6 +1.9
M56A Emporium 34.84 353 P P 20 43 49.2 +2.5
baz=171,SNR=47
M55A Ridgway 34.90 353 P P 20 43 49.0 +1.8
M55A IAmb IAmb 20 43 50.4
comp=Z,64nm,0.8s
M55A Ridgway 34.90 353 P P 20 43 49.5 +2.3
baz=170,SNR=30
MGMO Mountain Grove 34.92 333 P P 20 43 48.0 +0.6
MGMO IAmb IAmb 20 43 49.6
comp=Z,85nm,0.8s
MGMO pP pP 20 44 22.3 +1.1
MGMO sP sP 20 44 36.3 -3.1
L63A North Scituate 34.95 2 P P 20 43 49.5 +1.9
baz=182,SNR=7.4
N51A Ashland 34.98 348 P P 20 43 49.8 +2.0
N51A IAmb IAmb 20 43 50.9
comp=Z,53nm,0.8s
N51A PcP 20 46 17.3 +0.7
N51A Ashland 34.98 348 P P 20 43 50.0 +2.1
baz=164,SNR=7.9
BRYW Bryant College 35.01 2 P P 20 43 49.4 +1.4
N50A Nevada 35.01 347 P P 20 43 50.3 +2.2
baz=162,SNR=42
HHAR Hobbs 35.02 330 P P 20 43 48.7 +0.4
HHAR IAmb IAmb 20 43 49.8
comp=Z,78nm,0.6s
HHAR pP pP 20 44 23.3 +1.2
O48A Farmland 35.04 344 P P 20 43 49.8 +1.4
baz=159,SNR=19
L64A Middleborough 35.05 3 P P 20 43 50.0 +1.6
baz=184
L60A Shokan 35.07 358 P P 20 43 51.0 +2.4
baz=178,SNR=15
M54A Oil Creek Stat 35.07 351 P P 20 43 51.1 +2.5
M54A IAmb IAmb 20 43 52.0
comp=Z,166nm,1.1s
M54A sP sP 20 44 40.8 -0.7
M54A Oil Creek Stat 35.07 351 P P 20 43 51.1 +2.5
baz=168,SNR=42
P46A Rosedale 35.07 341 P P 20 43 50.3 +1.7
P46A pP pP 20 44 24.3 +1.8
P46A sP sP 20 44 41.6 +0.9
L62A Suffield 35.10 1 P P 20 43 50.9 +2.1
baz=180
M53A WI Miller and 35.16 350 P P 20 43 51.7 +2.3
baz=167,SNR=12
L58A Harry Jones Me 35.19 356 P P 20 43 52.1 +2.4
baz=175,SNR=38
L65A Cape Cod Natio 35.19 4 P P 20 43 51.7 +2.1
baz=185
CCM Cathedral Cave 35.22 335 P P 20 43 50.7 +0.8
CCM pP pP 20 44 25.4 +1.6
CCM Cathedral Cave 35.22 335 P P 20 43 50.7 +0.8
CCM *PP pP 20 44 25.4 +1.6
CCM pmax pmax
comp=Z,369nm,0.7s
CCM Cathedral Cave 35.22 335 P P 20 43 51.2 +1.3
baz=148
L57A Andrews Acres 35.22 355 P P 20 43 52.3 +2.4
baz=173,SNR=24
L61A Hillsdale 1, H 35.26 359 P P 20 43 52.7 +2.5
baz=179,SNR=22
ALLY Alegheny Colle 35.28 351 P P 20 43 52.5 +2.1
ALLY IAmb IAmb 20 43 53.7
comp=Z,95nm,0.7s
ALLY sP sP 20 44 42.9 -0.4
L59A Walton 35.30 357 P P 20 43 52.3 +1.8
L59A IAmb IAmb 20 43 53.8
comp=Z,44nm,0.8s
L59A Walton 35.30 357 P P 20 43 52.8 +2.3
baz=176,SNR=14
SLM Saint Louis 35.30 336 P P 20 43 51.6 +1.0
SLM Saint Louis 35.30 336 P P 20 43 51.6 +1.0
SLM pmax pmax
comp=Z,111nm,0.5s
M51A Elyria 35.34 348 P P 20 43 53.0 +2.1
baz=164,SNR=12
QUA2 Belchertown 35.35 1 P P 20 43 52.9 +1.9
BINY Binghamton 35.36 356 P P 20 43 53.2 +2.2
BINY IAmb IAmb 20 43 54.4
comp=Z,86nm,0.8s
BINY sP sP 20 44 43.0 -1.1
BINY Binghamton 35.36 356 P P 20 43 53.5 +2.4
baz=175,SNR=30
M52A Chesterland 35.38 349 P P 20 43 53.1 +1.8
M52A IAmb IAmb 20 43 54.5
comp=Z,76nm,0.8s
M52A sP sP 20 44 40.5 -3.3
M52A Chesterland 35.38 349 P P 20 43 53.6 +2.3
baz=166,SNR=13
N49A Columbus Grove 35.41 345 P P 20 43 52.8 +1.3
N49A IAmb IAmb 20 43 54.1
comp=Z,62nm,0.7s
N49A pP pP 20 44 25.9 +0.4
N49A sP sP 20 44 43.7 +0.1
N49A Columbus Grove 35.41 345 P P 20 43 53.3 +1.9
baz=161,SNR=28
PCMB Pacaembu 35.41 143 eP P 20 43 51.5 -0.3
L56A Greenwood 35.42 354 P P 20 43 53.4 +1.8
L56A IAmb IAmb 20 43 54.8
comp=Z,146nm,1.1s
L56A sP sP 20 44 44.6 0.0
L56A Greenwood 35.42 354 P P 20 43 53.9 +2.2
baz=172,SNR=28
BCX Boston College 35.44 2 P P 20 43 54.2 +2.5
BCX IAmb IAmb 20 43 54.9
comp=Z,129nm,1.0s
BCX pP pP 20 44 26.7 +0.4
WES Weston 35.48 2 P P 20 43 54.0 +2.0
WES IAmb IAmb 20 43 55.4
comp=Z,87nm,1.1s
WES pP 20 44 26.0 -0.7
WES Weston 35.48 2 P P 20 43 54.0 +2.0
WES *PP pP 20 44 26.0 -0.7
WES pmax pmax
comp=Z,87nm,1.1s
L61B Northampton 35.51 0 P P 20 43 54.3 +2.0
baz=180,SNR=9.6
TRCB Terra Rica 35.56 146 eP P 20 43 52.1 -0.9
L55A Hinsdale 35.56 353 P P 20 43 55.2 +2.4
baz=171,SNR=20
N48A Decatur 35.57 344 P P 20 43 54.5 +1.6
baz=159,SNR=28
HRV Adam Dziewonsk 35.59 2 P P 20 43 55.1 +2.1
HRV IAmb IAmb 20 43 56.4
comp=Z,51nm,0.7s
HRV pP pP 20 44 29.0 +1.3
HRV Adam Dziewonsk 35.59 2 P P 20 43 55.1 +2.1
HRV *PP pP 20 44 29.0 +1.3
HRV pmax pmax
comp=Z,51nm,0.7s
HRV Adam Dziewonsk 35.59 2 P P 20 43 55.5 +2.4
baz=182
M50A Fremont 35.59 347 P P 20 43 54.9 +1.9
M50A Fremont 35.59 347 P P 20 43 55.2 +2.1
baz=163,SNR=32
L53A Girard 35.59 351 P P 20 43 55.3 +2.2
baz=168,SNR=31
ABTX Abilene, Hawle 35.66 320 P P 20 43 54.3 +0.5
ABTX IAmb IAmb 20 43 56.3
comp=Z,117nm,0.8s
ABTX sP sP 20 44 43.6 -2.2
ABTX Abilene, Hawle 35.66 320 P P 20 43 54.9 +1.1
baz=130,SNR=38
K60A Five Rivers En 35.69 359 P P 20 43 56.2 +2.4
baz=178,SNR=7.0
TUL1 Leonard 35.69 327 P P 20 43 54.3 +0.3
TUL1 IAmb IAmb 20 43 55.4
comp=Z,94nm,0.7s
TUL1 pP pP 20 44 29.2 +1.3
TUL1 Leonard 35.69 327 P P 20 43 54.6 +0.6
baz=139,SNR=18
ERPA Erie 35.71 351 P P 20 43 55.9 +1.8
ERPA IAmb IAmb 20 43 59.5
comp=Z,89nm,0.6s
ERPA pP pP 20 44 29.5 +0.9
ERPA sP sP 20 44 45.1 -1.9
ERPA Erie 35.71 351 P P 20 43 56.3 +2.3
baz=168,SNR=12
SFIN Lafayette 35.73 342 P P 20 43 55.4 +1.2
SFIN pP pP 20 44 29.8 +1.6
SFIN sP sP 20 44 46.4 +0.1
SFIN Lafayette 35.73 342 P P 20 43 55.9 +1.7
baz=156,SNR=177
L54A Sinclairville 35.73 352 P P 20 43 56.6 +2.4
baz=169,SNR=31
K61A Williamstown 35.73 360 P P 20 43 56.5 +2.2
baz=180,SNR=8.5
K62A Royalston 35.73 1 P P 20 43 56.2 +1.9
K62A IAmb IAmb 20 43 57.5
comp=Z,80nm,1.0s
K62A Royalston 35.73 1 P P 20 43 56.4 +2.2
baz=181,SNR=15
N47A Urbana 35.77 344 P P 20 43 55.7 +1.2
N47A pP pP 20 44 29.4 +0.7
N47A sP sP 20 44 44.6 -2.3
N47A PP PP 20 45 14.8 -4.4
N47A Urbana 35.77 344 P P 20 43 56.1 +1.6
baz=158,SNR=35
K63A Dunstable 35.78 2 P P 20 43 56.9 +2.3
baz=182,SNR=13
TRY Troy 35.80 359 P P 20 43 56.8 +2.1
WVNY West Valley, N 35.80 353 P P 20 43 56.0 +1.1
WVNY IAmb IAmb 20 43 58.2
comp=Z,98nm,0.8s
K59A Cooperstown 35.87 358 P P 20 43 57.5 +2.1
baz=177,SNR=11
M49A Liberty Center 35.88 346 P P 20 43 57.3 +1.9
baz=161,SNR=13
K58A Earlville 35.90 357 P P 20 43 57.4 +1.8
K58A IAmb IAmb 20 43 58.8
comp=Z,73nm,0.6s
K58A Earlville 35.90 357 P P 20 43 57.9 +2.3
baz=176,SNR=25
P43A Skaggs, Pawnee 35.90 338 P P 20 43 56.5 +0.8
K57A Scipio Center 35.92 356 P P 20 43 57.9 +2.0
baz=174
K56A Middlesex 35.96 355 P P 20 43 58.3 +2.1
baz=173,SNR=11
O44A Mansfield 35.97 340 P P 20 43 57.4 +1.0
O44A IAmb IAmb 20 43 58.1
comp=Z,64nm,0.7s
K54A Basiliko Farm, 36.02 353 P P 20 43 58.9 +2.3
baz=170,SNR=15
K55A Perry 36.06 354 P P 20 43 59.0 +2.0

baz=171
M48A Edgerton 36.07 345 P P 20 43 58.4 +1.3
M48A Edgerton 36.07 345 P P 20 43 58.8 +1.7
baz=160,SNR=20
L50A Kingsville 36.15 348 P P 20 43 59.7 +1.9
baz=163,SNR=49
M47A Cromwell 36.19 344 P P 20 44 00.1 +1.9
baz=158,SNR=8.7
OKCFA Oklahoma City 36.24 325 P P 20 43 58.7 0.0
OKCFA IAmb IAmb 20 44 00.1
comp=Z,82nm,0.7s
CPUP Villa Florida 36.30 156 P P 20 43 55.9 -3.3
comp=Z,31nm,0.8s,baz=335,slow=8.7,SNR=57
CPUP ScP ScP 20 49 51.3 -1.2
comp=Z,9.1nm,0.9s,baz=345,slow=5.4,SNR=6.2
CPUP Villa Florida 36.30 156 P P 20 43 55.9 -3.3
CPUP ScP 20 49 50.7 -1.8
J62A Henniker 36.30 2 P P 20 44 01.4 +2.3
baz=182,SNR=5.9
J60A Lant Hill Farm 36.31 360 P P 20 44 01.6 +2.5
baz=179,SNR=17
J63A Strafford 36.38 2 P P 20 44 01.7 +2.0
baz=183,SNR=6.8
J61A Chester 36.41 1 P P 20 44 02.4 +2.4
baz=181,SNR=12
L49A Milan 36.43 347 P P 20 44 02.3 +2.1
baz=162,SNR=20
L48A N Adams 36.43 346 P P 20 44 01.7 +1.5
baz=161,SNR=10
ACCN Adirondack Com 36.45 359 P P 20 44 02.4 +2.0
K52A Tillsonburg 36.47 351 P P 20 44 02.8 +2.3
baz=167,SNR=8.1
J58A Remsen 36.47 357 P P 20 44 02.6 +2.0
J58A IAmb IAmb 20 44 03.7
comp=Z,58nm,0.7s
J58A Remsen 36.47 357 P P 20 44 02.7 +2.2
baz=176,SNR=21
J56A Wolcott 36.49 355 P P 20 44 02.1 +1.5
J56A IAmb IAmb 20 44 03.5
comp=Z,93nm,0.8s
J56A Wolcott 36.49 355 P P 20 44 02.6 +2.0
baz=174,SNR=7.0
TXAR Lajitas Array 36.52 312 P P 20 44 02.7 +1.4
comp=Z,54nm,0.6s,baz=127,slow=9.3,SNR=649
TXAR PcP PcP 20 46 23.9 +2.3
comp=Z,17nm,0.6s,baz=136,slow=4.9,SNR=9.7
TXAR ScP ScP 20 49 53.7 +0.2
comp=Z,2.6nm,0.9s,baz=129,slow=5.7,SNR=5.8
TXAR LR LR 21 02 07.0
comp=Z,59nm,19.2s,baz=0.0,slow=41
TXAR Lajitas Array 36.52 312 P P 20 44 02.3 +1.0
TXAR pP pP 20 44 35.9 +0.6
TXAR sP sP 20 44 53.5 +0.1
TXAR PcP 20 46 23.5 +1.9
TXAR ScP 20 49 53.5 0.0
TX31 Lajitas Ar. Si 36.52 312 P P 20 44 02.1 +0.9
TX31 IAmb IAmb 20 44 03.7
comp=Z,55nm,0.7s
TX31 pP pP 20 44 36.6 +1.3
TX32 Lajitas Array 36.52 312 P P 20 44 02.0 +0.7
TX32 IAmb IAmb 20 44 03.7
comp=Z,56nm,0.7s
TX32 pP 20 44 36.1 +0.8
WMOK Wichita Mounta 36.53 323 P P 20 44 01.2 0.0
WMOK IAmb IAmb 20 44 02.7
comp=Z,62nm,0.7s
WMOK Wichita Mounta 36.53 323 P P 20 44 01.2 0.0
WMOK pmax pmax
comp=Z,62nm,0.7s
WMOK Wichita Mounta 36.53 323 P P 20 44 01.6 +0.4
baz=134
MEDO Medina 36.54 353 P P 20 44 03.2 +2.2
J59A Piesco 36.55 358 P P 20 44 03.4 +2.2
J59A Piesco 36.55 358 P P 20 44 03.2 +2.0
baz=177,SNR=8.3
FFD Franklin Falls 36.55 2 P P 20 44 03.3 +2.1
FFD IAmb IAmb 20 44 04.5
comp=Z,83nm,1.2s
K51A Iona Station 36.55 350 P P 20 44 03.2 +2.0
baz=166,SNR=6.3
J57A Williamstown 36.56 356 P P 20 44 02.7 +1.5
J57A pP pP 20 44 35.8 -0.1
J57A sP sP 20 44 53.1 -1.2
J57A Williamstown 36.56 356 P P 20 44 03.3 +2.1
baz=175,SNR=22
J55A Hilton 36.57 354 P P 20 44 02.6 +1.3
J55A IAmb IAmb 20 44 04.2
comp=Z,94nm,0.7s
J55A Hilton 36.57 354 P P 20 44 03.2 +1.9
baz=172,SNR=6.8
AAM Ann Arbor 36.59 347 P P 20 44 03.5 +2.0
AAM Ann Arbor 36.59 347 P P 20 44 03.5 +2.0
AAM pmax pmax
comp=Z,140nm,0.6s
AAM Ann Arbor 36.59 347 P P 20 44 04.5 +3.0
baz=162
HDIL Hopedale 36.62 339 P P 20 44 02.0 +0.2
HDIL Hopedale 36.62 339 P P 20 44 02.4 +0.6
baz=152
L47A Sherwood 36.66 345 P P 20 44 03.6 +1.5
baz=160,SNR=41
J54A Appleton 36.66 353 P P 20 44 04.0 +1.9
J54A IAmb IAmb 20 44 05.1
comp=Z,41nm,0.7s
J54A Appleton 36.66 353 P P 20 44 04.4 +2.3
baz=171
HNH Hanover 36.77 1 P P 20 44 04.3 +1.3
I58A Old Forge 36.79 358 P P 20 44 05.4 +2.2
baz=177,SNR=46
GO04 Tololo Observa 36.82 177 P P 20 44 03.2 -0.6
K50A Casco 36.82 348 P P 20 44 05.3 +1.9
K50A Casco 36.82 348 P P 20 44 05.3 +1.9
baz=164,SNR=17
I59A Olmsteadville 36.86 359 P P 20 44 05.9 +2.1
baz=178,SNR=12
J52A Paris 36.88 351 P P 20 44 06.2 +2.2
baz=168,SNR=14
HPIG 36.89 307 P P 20 44 05.9 +1.4
HPIG IAmb IAmb 20 44 06.5
comp=Z,50nm,0.7s
HPIG pP pP 20 44 39.0 +0.4
I60A Shoreham 36.91 360 P P 20 44 06.4 +2.3
baz=180
M44A Midewin, Midew 36.94 341 P P 20 44 05.0 +0.5
M44A IAmb IAmb 20 44 06.6
comp=Z,85nm,1.1s
I62A Tamworth 36.97 2 P P 20 44 07.2 +2.6
baz=183
L46A Eue Claire 36.99 344 P P 20 44 06.3 +1.5
L46A Eue Claire 36.99 344 P P 20 44 06.5 +1.6
baz=158,SNR=21
I61A Oroboro, Fairl 37.00 1 P P 20 44 07.1 +2.1
baz=181,SNR=8.4
K49A Clarkson 37.00 347 P P 20 44 06.8 +1.8
baz=163,SNR=5.9
NCB Newcomb 37.05 359 P P 20 44 07.3 +2.0
I57A Carthage 37.07 357 P P 20 44 07.5 +2.0
baz=176,SNR=5.2
I64A Boothbay 37.10 4 P P 20 44 08.2 +2.4
baz=185,SNR=12
PECO Prince Edward 37.16 355 P P 20 44 07.4 +1.2
PECO IAmb IAmb 20 44 08.9
comp=Z,61nm,0.7s
K48A Perry 37.17 346 P P 20 44 08.0 +1.6
baz=162,SNR=26
I63A Otisfield 37.17 3 P P 20 44 08.3 +1.9
I63A IAmb IAmb 20 44 10.1
comp=Z,87nm,0.9s
I63A Otisfield 37.17 3 P P 20 44 08.7 +2.3
baz=184,SNR=10
K47A Vermontville 37.26 345 P P 20 44 08.6 +1.5
baz=160,SNR=28
LBNH Lisbon 37.31 1 P P 20 44 09.4 +1.9
LBNH IAmb IAmb 20 44 10.9
comp=Z,84nm,0.9s
LBNH Lisbon 37.31 1 P P 20 44 09.5 +1.9
LBNH pmax pmax
comp=Z,84nm,1.0s
LBNH Lisbon 37.31 1 P P 20 44 09.9 +2.2
baz=182
I53A Kortright Cn E 37.33 352 P P 20 44 09.8 +2.1
baz=169
N41A Harden Midland 37.33 337 P P 20 44 08.0 +0.2
VT1 Waterbury 37.39 0 P P 20 44 10.2 +1.9
VT1 IAmb IAmb 20 44 11.5
comp=Z,64nm,1.1s
VT1 pP pP 20 44 44.0 +0.7
K46A Dorr 37.47 345 P P 20 44 10.2 +1.3
baz=159,SNR=11
J49A Marlette 37.48 348 P P 20 44 10.6 +1.6
baz=163,SNR=32
H58A Gabriels 37.49 359 P P 20 44 10.9 +1.8
baz=178,SNR=15
I55A Frankford 37.49 355 P P 20 44 10.9 +1.8
baz=172,SNR=12
I51A Listowel 37.52 351 P P 20 44 11.4 +2.0
baz=167,SNR=37
J48A Bridge Port 37.56 347 P P 20 44 11.2 +1.5
J48A IAmb IAmb 20 44 12.4
comp=Z,94nm,0.7s
J48A pP pP 20 44 42.5 -2.0
J48A Bridge Port 37.56 347 P P 20 44 11.4 +1.7
baz=162,SNR=13
H57A Richville 37.58 357 P P 20 44 11.7 +1.9
baz=176,SNR=23
H61A Lyndonville 37.61 1 P P 20 44 12.2 +2.1
baz=182,SNR=6.9
L44A Lake County Fo 37.62 342 P P 20 44 10.3 +0.1
L44A IAmb IAmb 20 44 11.7
comp=Z,74nm,0.7s
L44A Lake County Fo 37.62 342 P P 20 44 11.0 +0.9
baz=155,SNR=5.2
H60A Morristown 37.62 0 P P 20 44 12.3 +2.1
baz=180,SNR=14
I52A Shelburne 37.65 352 P P 20 44 12.6 +2.2
baz=168
H62A Milan 37.67 2 P P 20 44 12.4 +1.8
H62A Milan 37.67 2 P P 20 44 12.7 +2.1
baz=183,SNR=7.2
LONY Lake Ozonia 37.70 358 P P 20 44 12.5 +1.6
LONY IAmb IAmb 20 45 28.5
comp=Z,72nm,1.1s
LONY Lake Ozonia 37.70 358 P P 20 44 12.9 +2.0
baz=177
H59A Cadyville 37.71 359 P P 20 44 12.9 +1.9
baz=179,SNR=7.2
WVL Waterville 37.74 4 P P 20 44 13.4 +2.3
WVL IAmb IAmb 20 44 14.5
comp=Z,62nm,0.9s
J47A Sunmer 37.75 346 P P 20 44 12.4 +1.2
J47A pP pP 20 44 46.9 +0.8
J47A Sunmer 37.75 346 P P 20 44 13.0 +1.8
baz=161,SNR=19
H56A Elgin 37.76 356 P P 20 44 13.5 +2.2
baz=175,SNR=22
H55A Tweed 37.78 355 P P 20 44 13.6 +2.1
baz=173,SNR=33
DELO Deloro Mine 37.79 355 P P 20 44 12.9 +1.3
DELO IAmb IAmb 20 44 14.2
comp=Z,68nm,0.6s
U32A Winter Ranch, 37.81 325 P P 20 44 12.2 +0.2
U32A pP pP 20 44 46.2 +0.1
U32A sP sP 20 45 00.6 -3.5
H63A New Sharon 37.81 4 P P 20 44 14.2 +2.4
baz=185,SNR=10
H64A Troy 37.85 4 P P 20 44 14.2 +2.1
baz=186,SNR=14
FRNY Flat Rock 37.90 359 P P 20 44 14.2 +1.7
FRNY pP pP 20 44 46.8 -0.7
FRNY sP sP 20 45 04.4 -1.5
H53A Bobcaygeon 37.94 354 P P 20 44 14.7 +1.8
baz=171,SNR=12
I49A Point Hope 37.98 349 P P 20 44 14.6 +1.5
I49A sP sP 20 45 02.9 -3.2
I49A Point Hope 37.98 349 P P 20 44 15.0 +1.8
baz=164,SNR=40
H65A Eastbrook 37.99 6 P P 20 44 15.2 +2.0
baz=188,SNR=9.5
L42A Oliver, Polo 38.03 340 P P 20 44 13.9 +0.2
J46A Howard City 38.06 345 P P 20 44 15.3 +1.5
baz=159,SNR=6.8
EMMW East Machias 38.09 6 P P 20 44 15.9 +1.9
G59A Clarenceville 38.14 360 P P 20 44 16.5 +2.0
baz=180,SNR=6.0
G60A Masonville 38.16 1 P P 20 44 16.8 +2.1
baz=181,SNR=17
H52A Wyevale 38.17 352 P P 20 44 16.7 +1.9
baz=169,SNR=26
H66A Whiting 38.18 7 P P 20 44 16.9 +2.1
baz=189,SNR=10
SADO Sadowa 38.20 353 ScP ScP 20 50 01.9 +2.6
comp=Z,5.5nm,0.8s,baz=252,slow=1.9,SNR=4.1
SADO Sadowa 38.20 353 P P 20 44 16.5 +1.5
SADO IAmb IAmb 20 44 17.6
comp=Z,82nm,0.8s
SADO ScP ScP 20 50 02.3 +3.0
G57A Newington 38.20 358 P P 20 44 17.0 +2.0
baz=177
G58A Ormstown 38.22 359 P P 20 44 17.3 +2.1
baz=178,SNR=13
K43A Burlington 38.23 342 P P 20 44 16.0 +0.8
PLVO Plevna 38.26 355 P P 20 44 17.4 +1.9
PLVO IAmb IAmb 20 44 18.4
comp=Z,82nm,0.7s
G63A Kingsbury 38.29 4 P P 20 44 18.0 +2.2
baz=185,SNR=11
J45A Montague 38.33 344 P P 20 44 17.6 +1.4
J45A pP pP 20 44 51.1 +0.7
J45A Montague 38.33 344 P P 20 44 17.5 +1.4
baz=158,SNR=9.8
G62A West of Eustis 38.34 3 P P 20 44 18.6 +2.4
G62A IAmb IAmb 20 44 19.8
comp=Z,113nm,0.8s
G62A pP pP 20 44 51.8 +0.6
G62A West of Eustis 38.34 3 P P 20 44 18.6 +2.4
baz=184,SNR=25
G61A St-Isidore-de- 38.37 2 P P 20 44 18.8 +2.4
baz=182,SNR=17
I48A Sherman Twp 38.40 348 P P 20 44 18.3 +1.6
baz=163,SNR=11
AMTX Amarillo 38.41 321 P P 20 44 17.9 +0.8
AMTX Amarillo 38.41 321 P P 20 44 18.3 +1.2
baz=130
I47A Gladwin 38.41 347 P P 20 44 18.1 +1.3
I47A IAmb IAmb 20 44 19.9
comp=Z,62nm,0.8s
I47A Gladwin 38.41 347 P P 20 44 18.5 +1.6
baz=161,SNR=6.8
G55A Calabogie 38.45 356 P P 20 44 18.9 +1.8
baz=174,SNR=31
CFA Coronel Fontan 38.46 173 P P 20 44 16.3 -1.1
comp=Z,57nm,1.0s,baz=339,slow=9.0,SNR=40
PKME Peaks-Kenny Pk 38.47 4 P P 20 44 18.5 +1.3
PKME Peaks-Kenny Pk 38.47 4 P P 20 44 19.0 +1.8
baz=186
G53A Haliburton 38.49 354 P P 20 44 19.3 +1.9
baz=171,SNR=31
G64A Maxfield 38.50 5 P P 20 44 19.4 +1.9
baz=187,SNR=18
KSU1 Kansas State U 38.54 330 P P 20 44 18.2 +0.3
baz=140
MSTX Muleshoe 38.54 319 P P 20 44 18.5 +0.4
MSTX IAmb IAmb 20 44 20.4
comp=Z,122nm,0.9s
MSTX ScP 20 50 01.1 +0.1
MSTX Muleshoe 38.54 319 P P 20 44 18.9 +0.7
baz=128,SNR=44
G65A Princeton 38.56 6 P P 20 44 19.4 +1.5
G65A Princeton 38.56 6 P P 20 44 20.2 +2.2
baz=189,SNR=22
GGN Saint George 38.56 7 P P 20 44 19.9 +1.9
I46A Reed City 38.56 346 P P 20 44 19.4 +1.3
baz=160,SNR=9.2
HAL Halifax 38.60 11 P P 20 44 20.1 +1.9
HAL IAmb IAmb 20 44 21.0
comp=Z,62nm,0.9s
HAL PcP 20 46 28.6 +1.2
HAL Halifax 38.60 11 P P 20 44 20.2 +1.9
HAL 20 46 28.6
HAL pmax pmax
comp=Z,63nm,0.9s
L40A Anamosa 38.64 338 P P 20 44 19.0 +0.2
L40A PP PP 20 45 47.6 -3.0
G54A Lake Saint Pet 38.70 354 P P 20 44 21.1 +1.8
baz=172,SNR=39
H48A Harrisville 38.81 348 P P 20 44 21.2 +1.1
H48A Harrisville 38.81 348 P P 20 44 21.6 +1.5
baz=164,SNR=10
I45A Fountain 38.85 345 P P 20 44 21.8 +1.3
I45A Fountain 38.85 345 P P 20 44 22.0 +1.5
baz=159
H47A Mio 38.90 347 P P 20 44 22.5 +1.7
baz=162,SNR=9.8
F59A Saint Guilaume 38.91 0 P P 20 44 22.8 +1.9
baz=180
F63A Nahmakanta, Br 38.92 4 P P 20 44 22.3 +1.3
F63A IAmb IAmb 20 44 24.2
comp=Z,47nm,0.7s
F63A PcP 20 46 29.5 +1.0
F63A Nahmakanta, Br 38.92 4 P P 20 44 22.9 +1.9
baz=186
F55A Otter Lake 39.00 356 P P 20 44 23.4 +1.8
baz=175
MNTX Cornudas Mount 39.03 314 P P 20 44 23.2 +1.0
MNTX pP pP 20 44 56.6 0.0
MNTX Cornudas Mount 39.03 314 P P 20 44 23.5 +1.4
baz=123
JFWS Jewell Farm 39.04 340 P P 20 44 22.6 +0.5
JFWS Jewell Farm 39.04 340 P P 20 44 22.6 +0.5
JFWS pmax pmax
comp=Z,298nm,0.7s
JFWS Jewell Farm 39.04 340 P P 20 44 23.0 +1.0
baz=152
F60A Warwick 39.04 1 P P 20 44 23.8 +1.8
baz=182,SNR=18
H46A Fife Lake 39.07 346 P P 20 44 23.6 +1.4
baz=161
F61A St Evariste 39.08 2 P P 20 44 24.0 +1.7
baz=183,SNR=11
VAO Valinhos 39.10 140 eP P 20 44 22.8 -0.1
F64A Sherman 39.14 5 P P 20 44 24.7 +1.9
F64A IAmb IAmb 20 44 25.7
comp=Z,86nm,0.8s
F64A Sherman 39.14 5 P P 20 44 24.7 +1.9
baz=187
RCBR Riachuelo 39.15 108 eP P 20 44 24.2 +0.8
RCBR Riachuelo 39.15 108 P P 20 44 24.0 +0.5
RCBR IAmb IAmb 20 44 25.4
comp=Z,82nm,1.1s
RCBR Riachuelo 39.15 108 P P 20 44 24.0 +0.5
RCBR pmax pmax
comp=Z,82nm,1.1s
GLMI Grayling 39.20 347 P P 20 44 24.8 +1.5
SPB Sao Paulo 39.23 141 eP P 20 44 23.3 -0.5
SPB Sao Paulo 39.23 141 P P 20 44 22.9 -1.0
SPB IAmb IAmb 20 44 24.2
comp=Z,64nm,0.7s
SCIA State Center 39.28 336 P P 20 44 24.8 +0.8
SCIA pP pP 20 44 59.8 +1.3
SCIA State Center 39.28 336 P P 20 44 25.3 +1.2
baz=147
TRQ Mont Tremblant 39.30 358 P P 20 44 26.0 +1.7
H45A Beulah 39.35 345 P P 20 44 26.0 +1.4
baz=159,SNR=11
G47A Hillman 39.37 348 P P 20 44 26.5 +1.8
baz=163
E58A La Victoria 39.43 360 P P 20 44 27.3 +2.1
baz=180
F51A Arnstein 39.44 352 P P 20 44 27.0 +1.7
baz=169
E60A Ste Agathe de 39.45 2 P P 20 44 26.8 +1.3
baz=182
I42A Draeger Farm, 39.48 342 P P 20 44 26.5 +0.8
E57A Chemin Saint G 39.48 359 P P 20 44 27.6 +1.9
baz=178
E59A St. Maurice 39.54 1 P P 20 44 28.2 +2.1
baz=181
E61A Lac Etchemin 39.55 3 P P 20 44 28.2 +1.9
baz=184
LMN Caledonia Moun 39.56 9 P P 20 44 27.8 +1.4
F49A Sandfield 39.59 350 P P 20 44 28.0 +1.4
baz=166
E55A Montcerf-Lytto 39.60 357 P P 20 44 28.6 +2.0
baz=175
E53A Dumoine, Ponti 39.64 355 P P 20 44 28.6 +1.6
baz=173
E52A Mattawa 39.64 354 P P 20 44 28.5 +1.5
baz=171
E56A St. Veronique 39.64 358 P P 20 44 28.7 +1.7
baz=177
G45A Suttons Bay 39.65 346 P P 20 44 28.5 +1.5
G45A pP pP 20 45 04.4 +2.4
G45A Suttons Bay 39.65 346 P P 20 44 28.6 +1.5
baz=160
E54A Lac Daplat, Po 39.65 356 P P 20 44 28.7 +1.6
baz=173
H43A Windswept, Lux 39.67 343 P P 20 44 28.0 +0.8
H43A IAmb IAmb 20 44 29.3
comp=Z,134nm,0.8s
H43A pP pP 20 45 04.3 +2.5
E63A Oxbow 39.69 5 P P 20 44 28.9 +1.6
E63A IAmb IAmb 20 44 30.4
comp=Z,131nm,0.8s
E63A Oxbow 39.69 5 P P 20 44 29.2 +1.9
baz=187
G46A Petoskey 39.72 347 P P 20 44 29.0 +1.3
baz=161
E64A Bridgewater 39.74 6 P P 20 44 29.6 +1.9
baz=188
GBN Guysborough 39.76 13 P P 20 44 28.8 +0.9
GBN IAmb IAmb 20 44 30.1
comp=Z,42nm,0.5s
F48A Evansville 39.76 350 P P 20 44 29.5 +1.5
baz=165
PEL Peldehue 39.78 177 P P 20 44 28.9 +0.6
PEL Peldehue 39.78 177 P P 20 44 29.0 +0.6
PEL pmax pmax
comp=Z,26nm,0.9s
CBKS Cedar Bluff 39.95 327 P P 20 44 29.3 -0.4
CBKS IAmb IAmb 20 44 31.9
comp=Z,219nm,1.4s
CBKS pP pP 20 45 05.2 +1.0
CBKS Cedar Bluff 39.95 327 P P 20 44 29.3 -0.4
CBKS pmax pmax
comp=Z,219nm,1.5s
CBKS Cedar Bluff 39.95 327 P P 20 44 30.4 +0.7
baz=136
PQI Presque Isle 39.97 5 P P 20 44 31.1 +1.5
D60A Saint Jean D'O 40.02 2 P P 20 44 32.1 +2.0
baz=183
I40A Norwalk 40.03 340 P P 20 44 30.3 +0.1
I40A IAmb IAmb 20 44 31.8
comp=Z,128nm,0.8s
D59A Saint-Raymond 40.08 1 P P 20 44 32.5 +1.9
baz=182
D57A Chemin Vers le 40.09 359 P P 20 44 32.4 +1.8
baz=179
D55A Sainte-Anne-du 40.13 357 P P 20 44 32.7 +1.7
baz=176
D56A ZEC Mazanza, M 40.14 358 P P 20 44 32.8 +1.7
baz=177
D58A Chemin du LacG 40.16 0 P P 20 44 33.1 +1.8
baz=180
PARB Paraibuna 40.20 139 eP P 20 44 31.6 -0.4
F45A CMU Biological 40.22 346 P P 20 44 33.3 +1.5
baz=161
D62A Allapoint, All 40.29 4 P P 20 44 34.2 +1.9
D62A Allapoint, All 40.29 4 P P 20 44 34.4 +2.1
baz=186
D52A ZEK Kipawa Sen 40.30 354 P P 20 44 34.5 +2.1
baz=172
E48A Lockeyer 40.31 350 P P 20 44 34.4 +1.9
baz=166
D63A Stockholm 40.32 5 P P 20 44 34.8 +2.2
baz=187
D54A Lac Fusel, La 40.33 356 P P 20 44 34.3 +1.7
baz=174
D53A Lac Vacive, Po 40.34 355 P P 20 44 34.5 +1.8
D53A IAmb IAmb 20 44 35.7
comp=Z,95nm,0.8s
D53A Lac Vacive, Po 40.34 355 P P 20 44 34.6 +1.9
baz=173
D61A St Aubert, Com 40.34 3 P P 20 44 35.3 +2.6
baz=184
SJMB Sao Joao De Ma 40.37 129 eP P 20 44 33.3 -0.1
LATQ La Tuque 40.45 0 P P 20 44 36.0 +2.4
LATQ IAmb IAmb 20 44 36.8
comp=Z,40nm,0.6s
E47A Iron Bridge 40.48 349 P P 20 44 35.7 +1.8
baz=164
D51A Lot 18 Range I 40.52 353 P P 20 44 36.0 +1.8
baz=170
E46A Sault Ste Mari 40.60 348 P P 20 44 36.0 +1.1
D50A G1974 Best Tow 40.65 353 P P 20 44 36.9 +1.7
baz=170
BSFB Barra de Sao F 40.71 129 eP P 20 44 35.8 -0.4
BATG Bathurst New B 40.78 7 P P 20 44 37.8 +1.4
D48A Paudash Townsh 40.93 351 P P 20 44 39.3 +1.7

baz=167
VAS01 Vassouras-RJ 40.95 136 eP P 20 44 37.5 -0.6
F42A Maple Grove Fa 40.95 344 P P 20 44 38.7 +0.9
F42A IAmb IAmb 20 44 39.8
comp=Z,122nm,0.7s
D47A Chapleau 41.03 350 P P 20 44 39.9 +1.4
baz=165
D46A Sault St. Mari 41.05 349 P P 20 44 39.9 +1.3
baz=163
BGNE Belgrade 41.06 331 P P 20 44 39.2 +0.4
BGNE IAmb IAmb 20 44 40.9
comp=Z,189nm,0.9s
BGNE Belgrade 41.06 331 P P 20 44 39.3 +0.4
baz=140
G40A Rib Lake 41.12 342 P P 20 44 39.9 +0.8
G40A IAmb IAmb 20 44 41.2
comp=Z,57nm,0.7s
E44A Grand Marais A 41.20 347 P P 20 44 40.8 +1.1
E44A IAmb IAmb 20 44 42.6
comp=Z,180nm,0.8s
E44A pP pP 20 45 15.0 +0.2
E44A Grand Marais A 41.20 347 P P 20 44 41.6 +1.8
baz=160
121A Cookes Peak, D 41.20 313 P P 20 44 41.9 +1.6
121A IAmb IAmb 20 44 44.1
comp=Z,105nm,1.1s
121A Cookes Peak, D 41.20 313 P P 20 44 42.5 +2.2
baz=121
E43A Lone Tree Farm 41.23 345 P P 20 44 40.8 +0.8
E43A IAmb IAmb 20 44 42.0
comp=Z,70nm,0.6s
VLDQ Val d'Or 41.34 356 P P 20 44 42.8 +1.9
VLDQ IAmb IAmb 20 44 44.3
comp=Z,99nm,1.2s
Y22D IRIS PASSCAL I 41.40 316 P P 20 44 44.0 +2.2
Y22D IAmb IAmb 20 45 35.6
comp=Z,71nm,0.9s
Y22D IRIS PASSCAL I 41.40 316 P P 20 44 43.7 +1.9
baz=123
T25A Trinidad 41.55 321 P P 20 44 45.2 +2.2
T25A IAmb IAmb 20 44 46.3
comp=Z,47nm,0.7s
T25A Trinidad 41.55 321 P P 20 44 45.5 +2.4
baz=129
COWI Conover 41.55 343 P P 20 44 43.7 +1.0
COWI IAmb IAmb 20 44 45.4
comp=Z,110nm,0.8s
COWI pP pP 20 45 18.5 +1.0
COWI sP sP 20 45 34.1 -1.3
ANMO Albuquerque 41.57 317 P P 20 44 44.7 +1.5
ANMO pP pP 20 45 18.8 +0.8
ANMO Albuquerque 41.57 317 P P 20 44 44.7 +1.5
ANMO *PP pP 20 45 18.8 +0.8
ANMO pmax pmax
comp=Z,60nm,1.4s
ANMO Albuquerque 41.57 317 P P 20 44 45.0 +1.8
baz=125
GO05 Huala 41.59 179 P P 20 44 42.0 -1.1
KSCO Kaye Shedlock' 41.70 325 P P 20 44 45.5 +1.3
KSCO IAmb IAmb 20 44 46.7
comp=Z,70nm,0.6s
KSCO Kaye Shedlock' 41.70 325 P P 20 44 45.5 +1.3
baz=133
319A Douglas 41.74 311 P P 20 44 46.5 +1.9
319A IAmb IAmb 20 44 47.6
comp=Z,85nm,0.7s
319A PcP PcP 20 46 38.2 +0.1
SPMN Marine on St. 41.95 339 P P 20 44 46.0 +0.1
SPMN PcP PcP 20 46 39.3 +0.9
SPMN Marine on St. 41.95 339 P P 20 44 46.4 +0.5
baz=150
HSIG 42.00 307 P P 20 44 47.4 +0.8
HSIG PcP 20 46 40.3 +1.5
ECSD EROS Data Cent 42.20 334 P P 20 44 48.2 +0.2
ECSD IAmb IAmb 20 44 49.7
comp=Z,113nm,1.1s
ECSD EROS Data Cent 42.20 334 P P 20 44 48.2 +0.2
baz=144
D41A Chassel 42.27 344 P P 20 44 49.0 +0.5
D41A pP pP 20 45 25.1 +1.8
SRIG Santa Rosalia 42.39 304 P P 20 44 51.6 +1.9
SRIG IAmb IAmb 20 44 53.7
comp=Z,296nm,1.9s
SDCO Great Sand Dun 42.60 321 P P 20 44 53.8 +2.1
SDCO IAmb IAmb 20 44 54.7
comp=Z,50nm,0.8s
SDCO pP pP 20 45 26.3 -0.2
SDCO Great Sand Dun 42.60 321 P P 20 44 54.0 +2.3
baz=128
OGNE Ogallala 42.70 327 P P 20 44 52.8 +0.6
OGNE IAmb IAmb 20 44 54.9
comp=Z,60nm,0.6s
OGNE PcP PcP 20 46 41.4 +0.3
OGNE Ogallala 42.70 327 P P 20 44 53.1 +0.8
baz=135
E38A The Farm, Brul 42.74 341 P P 20 44 53.1 +0.8
E38A IAmb IAmb 20 44 54.0
comp=Z,57nm,0.7s
Q24A Divide 43.15 323 P P 20 44 57.2 +1.1
TUC Tucson 43.31 311 P P 20 44 58.7 +1.5
TUC PcP PcP 20 46 44.7 +1.4
TUC Tucson 43.31 311 P P 20 44 58.7 +1.5
TUC 20 46 44.7
TUC pmax pmax
comp=Z,52nm,0.8s
TUC Tucson 43.31 311 P P 20 44 58.8 +1.5
baz=118
S22A 4UR Ranch, Cre 43.44 320 P P 20 45 00.2 +1.8
S22A IAmb IAmb 20 45 02.1
comp=Z,47nm,0.7s
S22A pP pP 20 45 34.8 +1.4
S22A sP sP 20 45 52.3 +1.0
S22A 4UR Ranch, Cre 43.44 320 P P 20 45 00.6 +2.2
baz=127
X18A Snowflake 43.77 314 P P 20 45 03.1 +2.1
X18A IAmb IAmb 20 45 04.2
comp=Z,56nm,0.8s
SUSD Miller 43.79 333 P P 20 45 00.9 +0.2
SUSD pP pP 20 45 35.3 -0.5
SUSD sP sP 20 45 50.1 -3.5
SUSD PcP PcP 20 46 45.0 +0.4
SUSD Miller 43.79 333 P P 20 45 01.4 +0.6
baz=141
EYMN Ely 43.91 342 P P 20 45 01.9 +0.2
EYMN S 20 51 20.8 -0.4
EYMN Ely 43.91 342 P P 20 45 02.7 +1.0
baz=153
W18A Petrified Fore 43.92 315 P P 20 45 04.3 +2.2
W18A IAmb IAmb 20 45 05.8
comp=Z,146nm,0.9s
W18A pP pP 20 45 37.3 0.0
W18A Petrified Fore 43.92 315 P P 20 45 04.4 +2.2
baz=121
ISCO Idaho Springs 43.96 323 P P 20 45 04.8 +1.8
ISCO IAmb IAmb 20 45 06.0
comp=Z,73nm,0.9s
ISCO pP pP 20 45 37.7 +0.1
ISCO PcP PcP 20 46 46.8 +1.2
ISCO Idaho Springs 43.96 323 P P 20 45 04.7 +2.1
ISCO pmax pmax
comp=Z,104nm,1.0s
ISCO Idaho Springs 43.96 323 P P 20 45 04.6 +2.0
baz=130
MVCO Mesa Verde 44.21 318 P P 20 45 06.0 +1.4
MVCO IAmb IAmb 20 45 07.8
comp=Z,153nm,1.4s
MVCO pP pP 20 45 40.0 +0.4
MVCO Mesa Verde 44.21 318 P P 20 45 06.3 +1.7
baz=124
DRLN Deer Lake 44.31 15 P P 20 45 05.3 +0.5
DRLN IAmb IAmb 20 45 07.2
comp=Z,71nm,0.8s
DRLN pP pP 20 45 41.4 +1.2
DRLN PcP PcP 20 46 46.7 +0.5
SMCO Snowmass 44.40 322 P P 20 45 08.0 +1.8
SMCO pP pP 20 45 43.2 +2.0
SMCO PcP PcP 20 46 47.6 +0.3
214A Organ Pipe Nat 44.69 309 P P 20 45 10.0 +1.8
214A IAmb IAmb 20 45 10.9
comp=Z,53nm,0.8s
214A pP pP 20 45 44.9 +1.6
214A Organ Pipe Nat 44.69 309 P P 20 45 09.9 +1.8
baz=116
X16A Lo Mia Camp, P 44.79 313 P P 20 45 10.7 +1.6
X16A pP pP 20 45 45.5 +1.2
PHWY Pilot Hill 44.84 325 P P 20 45 10.7 +1.2
PHWY pP pP 20 45 45.5 +0.8
PHWY PcP PcP 20 46 49.8 +1.2
N23A Red Feather La 44.86 324 P P 20 45 11.4 +1.8
N23A IAmb IAmb 20 45 13.2
comp=Z,271nm,1.6s
N23A pP pP 20 45 46.7 +1.9
N23A Red Feather La 44.86 324 P P 20 45 11.6 +2.0
baz=130
D32A Dogwood Acres, 45.13 337 P P 20 45 11.6 +0.2
WUAZ Wupatki 45.28 315 P P 20 45 14.7 +1.8
WUAZ IAmb IAmb 20 45 16.4
comp=Z,168nm,0.9s
WUAZ pP pP 20 45 50.7 +2.5
WUAZ Wupatki 45.28 315 P P 20 45 15.0 +2.1
baz=120
AGMN Agassiz Nation 45.67 339 P P 20 45 16.2 +0.6
AGMN IAmb IAmb 20 45 17.2
comp=Z,120nm,0.6s
AGMN PcP PcP 20 46 51.8 +0.8
AGMN Agassiz Nation 45.67 339 P P 20 45 16.6 +1.0
baz=147
Y14A Wickenburg 45.71 312 P P 20 45 17.5 +1.3
Y14A IAmb IAmb 20 45 19.2
comp=Z,95nm,0.7s
Y14A pP pP 20 45 52.4 +0.9
O20A White River Ci 45.75 322 P P 20 45 18.3 +1.6
O20A PcP PcP 20 46 51.7 0.0
O20A PP PP 20 47 09.0 +2.1
O20A White River Ci 45.75 322 P P 20 45 18.4 +1.8
baz=127
RSSD Black Hills 45.99 329 P P 20 45 18.9 +0.4
RSSD pP pP 20 45 53.3 -0.5
RSSD Black Hills 45.99 329 P P 20 45 19.5 +1.1
RSSD pmax pmax
comp=Z,53nm,0.7s
RSSD Black Hills 45.99 329 P P 20 45 19.4 +0.9
baz=135
RWWY Rawlins 46.10 324 P P 20 45 19.9 +0.5
RWWY IAmb IAmb 20 45 22.6
comp=Z,143nm,1.4s
RWWY pP pP 20 45 53.6 -1.1
K22A Casper 46.33 326 P P 20 45 22.1 +1.0
K22A pP pP 20 45 57.1 +0.7
K22A Casper 46.33 326 P P 20 45 22.3 +1.3
baz=131
U15A North Rim 46.38 315 P P 20 45 23.6 +1.9
U15A IAmb IAmb 20 45 25.3
comp=Z,122nm,1.1s
SRU San Rafael Swe 46.60 319 P P 20 45 24.2 +1.0
SRU pP 20 45 56.8 -1.9
SRU San Rafael Swe 46.60 319 P P 20 45 24.2 +1.0
SRU *PP pP 20 45 56.8 -1.9
SRU pmax pmax
comp=Z,123nm,1.2s
GLA Glamis 46.69 310 P P 20 45 25.3 +1.4
GLA IAmb IAmb 20 45 26.9
comp=Z,86nm,0.7s
GLA Glamis 46.69 310 P P 20 45 25.3 +1.4
GLA pmax pmax
comp=Z,86nm,0.7s
GLA Glamis 46.69 310 P P 20 45 25.6 +1.7
baz=115
PDMCI Parker Dam,Lak 46.71 312 P P 20 45 25.3 +1.3
baz=116
MDND Maddock 46.74 336 P P 20 45 24.6 +0.6
MDND Maddock 46.74 336 P P 20 45 25.1 +1.2
baz=142
Y12C Blythe 46.76 311 P P 20 45 25.2 +0.9
Y12C Blythe 46.76 311 P P 20 45 25.7 +1.4
baz=116
RDMU Red Mountain 46.83 322 P P 20 45 26.2 +1.2
RDMU pP pP 20 45 59.5 -1.0
W13A Hualapai Mount 46.88 313 P P 20 45 27.2 +1.7
W13A pP 20 46 02.0 +1.0
W13A PcP PcP 20 46 56.1 +0.3
W13A PP PP 20 47 19.6 +2.1
PKCU Pink Cliffs 46.90 316 P P 20 45 27.9 +2.1
Q16A Castle Valley 46.91 319 P P 20 45 27.3 +1.6
P17A Butcher Ranch, 46.94 320 P P 20 45 27.5 +1.7
P17A pP pP 20 46 00.2 -1.1
KNB Kanab 47.04 316 P P 20 45 28.4 +1.7
KNB Kanab 47.04 316 P P 20 45 28.4 +1.7
KNB pmax pmax
comp=Z,173nm,1.1s
MTPU Mount Pierson 47.12 317 P P 20 45 29.2 +1.7
MTPU pP pP 20 46 04.8 +1.8
MTPU PcP PcP 20 46 56.7 -0.1
TMUT Trail Mountain 47.14 319 P P 20 45 28.6 +1.0
NEE2 Needles Airpor 47.27 312 P P 20 45 29.6 +1.3
baz=116
LCMT Little Creek M 47.33 315 P P 20 45 30.5 +1.7
LCMT pP pP 20 46 04.8 +0.3
ULM Lac du Bonnet 47.33 340 P P 20 45 28.8 +0.3
comp=Z,131nm,0.4s,baz=149,slow=7.7,SNR=304
ULM PcP PcP 20 46 57.8 +1.0
comp=Z,18nm,0.6s,baz=265,slow=4.0,SNR=3.0
ULM LR LR 21 05 21.3
comp=Z,122nm,21.4s,baz=154,slow=36
ULM Lac du Bonnet 47.33 340 P P 20 45 28.6 +0.1
ULM PcP 20 46 56.7 -0.1
ULM Lac du Bonnet 47.33 340c iP P 20 45 28.6 +0.1
PLCA Paso Flores 47.35 177 P P 20 45 27.4 -1.3
comp=Z,48nm,1.0s,baz=24,slow=8.6,SNR=38
PLCA PcP PcP 20 46 57.0 -0.1
comp=Z,7.3nm,0.6s,baz=43,slow=2.0,SNR=3.8
PLCA ScP ScP 20 50 34.7 -1.6
comp=Z,5.2nm,0.9s,baz=357,slow=6.3,SNR=3.0
PLCA Paso Flores 47.35 177 eP P 20 45 27.9 -0.9
PLCA Paso Flores 47.35 177 P P 20 45 27.1 -1.6
PLCA PcP 20 46 54.6 -2.5
PLCA ScP 20 50 35.3 -1.0
MSU Marysvale 47.36 318 P P 20 45 30.9 +1.7
MSU Marysvale 47.36 318 P P 20 45 30.9 +1.7
SWSC Sam W. Stewart 47.40 309 P P 20 45 30.9 +1.7
baz=114
IRM Iron Mountain 47.40 311 P P 20 45 30.9 +1.6
baz=115
BC3 Big Chuckawall 47.42 310 P P 20 45 30.9 +1.3
baz=115
SZCU Shurtz Canyon 47.51 316 P P 20 45 31.8 +1.4
IKP In-Ko-Pah, Jac 47.52 309 P P 20 45 31.9 +1.5
baz=113
TCRU Three Creeks R 47.59 318 P P 20 45 32.8 +1.8
TCRU pP pP 20 46 07.2 +0.6
CCUT Cedar City 47.68 316 P P 20 45 33.4 +1.7
CCUT pP pP 20 46 07.8 +0.6
CCUT PcP PcP 20 46 58.9 +0.3
MPU Maple Canyon 47.81 320 P P 20 45 34.0 +1.4
MPU pP pP 20 46 08.0 -0.2
MONP2 Monument Peak 47.85 309 P P 20 45 34.5 +1.4
baz=113
BAR Barrett 47.97 308 P P 20 45 35.0 +1.3
BAR PcP PcP 20 47 00.2 +0.7
BELC Belle Mtn. Jos 47.98 310 P P 20 45 35.3 +1.4
baz=114
JLU Jordanelle 48.02 321 P P 20 45 35.8 +1.6
GMRC Granite Mounta 48.05 311 P P 20 45 35.8 +1.3
baz=116
NLU North Lily Min 48.06 319 P P 20 45 36.2 +1.6
NLU pP pP 20 46 10.5 +0.3
BW06 Boulder Array 48.13 324 P P 20 45 35.9 +0.8
BW06 IAmb IAmb 20 45 37.6
comp=Z,102nm,1.4s
BW06 pP pP 20 46 08.8 -1.9
BW06 PcP PcP 20 46 59.4 -0.8
BW06 Boulder Array 48.13 324 P P 20 45 36.1 +1.0
baz=128
PD31 Pinedale Array 48.13 324 P P 20 45 35.6 +0.5
PD31 IAmb IAmb 20 45 37.6
comp=Z,92nm,1.4s
PD31 PcP PcP 20 46 59.9 -0.2
PDAR Pinedale Array 48.13 324 P P 20 45 36.0 +1.0
comp=Z,27nm,0.6s,baz=126,slow=8.9,SNR=282
PDAR pP pP 20 46 10.9 +0.2
comp=Z,19nm,1.0s,baz=119,slow=12,SNR=3.0
PDAR PcP PcP 20 47 01.9 +1.8
comp=Z,9.2nm,0.5s,baz=135,slow=5.8,SNR=11
PDAR ScP ScP 20 50 40.6 +0.7
comp=Z,3.9nm,0.7s,baz=123,slow=5.9,SNR=6.7
PDAR P4KPbc 21 23 13.8
comp=Z,0.6nm,0.6s,baz=108,slow=4.9,SNR=4.0
PDAR Pinedale Array 48.13 324 P P 20 45 35.6 +0.5
PDAR pP pP 20 46 09.6 -1.1
PDAR PcP PcP 20 46 59.4 -0.8
PDAR ScP ScP 20 50 39.8 -0.2
SCHQ Schefferville 48.16 5 P P 20 45 36.1 +1.3
comp=Z,226nm,0.6s,baz=188,slow=6.3,SNR=277
SCHQ ScP ScP 20 50 40.0 +0.6
comp=Z,42nm,0.9s,baz=188,slow=2.2,SNR=15
SCHQ Schefferville 48.16 5 P P 20 45 35.6 +0.8
SCHQ ScP 20 50 40.4 +0.9
XPFO Pion Flat 48.16 310 P P 20 45 37.0 +1.6
XPFO PcP 20 47 00.9 +0.6
PFO Pinyon Flats O 48.17 310 P P 20 45 36.4 +1.1
PFO PcP PcP 20 47 00.6 +0.3
PFO Pinyon Flats O 48.17 310 deP P 20 45 36.7 +1.3
PFO pmax pmax
comp=Z,27nm,1.1s
PFO Pinyon Flats O 48.17 310 P P 20 45 36.8 +1.5
baz=114
CTU Camp Tracy 48.26 320 P P 20 45 37.7 +1.7
CTU pP 20 46 12.0 +0.4
TCUT Toone Canyon 48.28 321 P P 20 45 37.9 +1.6
TCUT pP pP 20 46 12.7 +0.8
109C Camp Elliot, M 48.38 309 P P 20 45 38.8 +1.9
109C Camp Elliot, M 48.38 309 P P 20 45 38.2 +1.4
baz=113
SHPR Sheep Range 48.45 314 P P 20 45 39.4 +1.9
SHPR pP pP 20 46 13.3 +0.1
SHPR PcP PcP 20 47 03.3 +2.0
PSUT Pine Spring 48.50 317 P P 20 45 40.0 +2.0
PSUT pP pP 20 46 14.0 +0.4
TUQ Turquoise Moun 48.53 312 P P 20 45 39.7 +1.6
baz=116
HEC Hector,Ludlow 48.57 311 P P 20 45 40.3 +1.9
baz=115
DUG Dugway, Tooele 48.67 319 P P 20 45 40.5 +1.4
DUG pP pP 20 46 14.6 -0.2
DUG PcP PcP 20 47 02.0 0.0
DUG Dugway, Tooele 48.67 319 P P 20 45 40.5 +1.4
DUG *PP pP 20 46 14.6 -0.2
DUG 20 47 02.0
DUG pmax pmax
comp=Z,40nm,0.8s
DUG Dugway, Tooele 48.67 319 P P 20 45 40.9 +1.8
baz=122
MURC Murrieta 48.73 309 P P 20 45 41.1 +1.6
baz=113
BBRC Big Bear Solar 48.78 310 P P 20 45 42.2 +2.1
baz=114
LAO LASA Array 48.89 330 P P 20 45 41.5 +0.9
LAO IAmb IAmb 20 45 42.4
comp=Z,53nm,0.7s
LAO LASA Array 48.89 330 P P 20 45 41.5 +0.9
baz=134
SHOC Shoshone, Teco 48.98 313 P P 20 45 43.2 +1.7
baz=116
SPUT South Promonto 49.04 321 P P 20 45 43.1 +1.1
AHID Auburn Hatcher 49.04 323 P P 20 45 42.8 +0.8
AHID IAmb IAmb 20 45 43.9
comp=Z,51nm,0.7s
AHID pP pP 20 46 17.2 -0.6
RRX Edison Barstow 49.09 311 P P 20 45 44.2 +1.9
baz=114
GSC Goldstone, Bar 49.12 312 P P 20 45 44.3 +1.7
GSC IAmb IAmb 20 45 45.6
comp=Z,57nm,0.8s
GSC pP pP 20 46 18.9 +0.5
GSC Goldstone, Bar 49.12 312 P P 20 45 44.3 +1.7
GSC Goldstone, Bar 49.12 312 P P 20 45 44.1 +1.6
baz=115
BGU Big Grassy Mou 49.20 320 P P 20 45 44.3 +1.1
BGU pP pP 20 46 19.2 +0.2
DGMT Dagmar 49.20 333 P P 20 45 44.3 +1.4
DGMT pP pP 20 46 19.8 +1.1
DGMT Dagmar 49.20 333 P P 20 45 44.8 +1.9
baz=137
REDW Red Top Meadow 49.25 324 P P 20 45 44.6 +1.1
REDW IAmb IAmb 20 45 46.3
comp=Z,207nm,1.2s
REDW pP pP 20 46 18.3 -1.1
REDW sP sP 20 46 37.4 +0.4
SNOW Snow King Moun 49.25 324 P P 20 45 45.0 +1.3
SNOW IAmb IAmb 20 45 47.1
comp=Z,83nm,1.0s
BFSC Mount Baldy Ra 49.33 310 P P 20 45 45.4 +1.1
baz=113
MOOW Moose Ponds 49.42 324 P P 20 45 45.5 +0.7
MOOW pP pP 20 46 20.5 -0.1
TPNV Topopah Spring 49.43 314 P P 20 45 47.1 +2.1
TPNV IAmb IAmb 20 45 48.5
comp=Z,62nm,1.0s
TPNV pP pP 20 46 20.1 -0.7
TPNV Topopah Spring 49.43 314 P P 20 45 47.0 +2.1
baz=117
RLMT Red Lodge 49.43 327 P P 20 45 45.9 +1.0
RLMT Red Lodge 49.43 327 P P 20 45 46.3 +1.3
baz=130
HVU Hansel Valley 49.51 321 P P 20 45 46.7 +1.3
HVU pP 20 46 21.2 -0.1
HVU Hansel Valley 49.51 321 P P 20 45 46.7 +1.3
HVU *PP pP 20 46 21.2 -0.1
HVU pmax pmax
comp=Z,36nm,0.6s
FXWY Fox Creek 49.52 324 P P 20 45 46.4 +0.8
SCI2 San Clemente I 49.54 308 P P 20 45 47.1 +1.4
baz=112
FLWY Flagg Ranch 49.59 325 P P 20 45 47.4 +1.2
CIS Catalina Islan 49.59 309 P P 20 45 47.4 +1.3
baz=112
R11A Troy Canyon, C 49.60 316 P P 20 45 47.5 +1.2
R11A pP pP 20 46 21.5 -0.6
R11A PcP PcP 20 47 07.3 +1.8
R11A PP PP 20 47 47.5 +5.3
R11A Troy Canyon, C 49.60 316 P P 20 45 48.0 +1.8
baz=118
FMP Fort Macarthur 49.62 309 P P 20 45 48.0 +1.8
baz=112
IMW Indian Meadow 49.62 324 P P 20 45 47.3 +0.9
IMW IAmb IAmb 20 45 48.9
comp=Z,59nm,0.6s
MWC Mount Wilson 49.63 310 P P 20 45 47.0 +0.4
MWC Mount Wilson 49.63 310 P P 20 45 47.0 +0.4
MWC pmax pmax
comp=Z,13nm,1.1s
YMP Mirror Lake Pl 49.69 326 P P 20 45 48.6 +1.7
PASC Pasadena Art C 49.71 310 P P 20 45 48.0 +1.1
PASC IAmb IAmb 20 45 50.2
comp=Z,147nm,2.0s
H17A Grant Village 49.71 325 P P 20 45 48.7 +1.6
H17A Grant Village 49.71 325 P P 20 45 48.6 +1.5
baz=128
LKWY Lake 49.72 325 P P 20 45 47.4 +0.3
LKWY Lake 49.72 325 P P 20 45 47.4 +0.3
LKWY pmax pmax
comp=Z,34nm,1.4s
YPP Pitchstone Pla 49.77 325 P P 20 45 48.6 +1.0
YNE Yellowstone No 49.77 326 P P 20 45 48.3 +0.8
EDW2 Edwards Air Fo 49.84 311 P P 20 45 49.3 +1.3
baz=114
LRMC Laurel Mtn Rad 49.85 311 P P 20 45 49.7 +1.6
baz=114
DECC Green Verdugo 49.85 310 P P 20 45 49.5 +1.4
baz=113
YUF Upper Falls 49.87 325 P P 20 45 50.2 +1.9
MPMC Manual Prospec 49.94 312 P P 20 45 50.1 +1.2
baz=115
YNR Norris Junctio 49.97 325 P P 20 45 50.3 +1.3
GCMT Greycliff 50.08 327 P P 20 45 49.4 -0.3
GCMT pP 20 46 26.9 +1.3
YMR Madison River 50.10 325 P P 20 45 51.2 +1.2
YHH Holmes Hill 50.11 325 P P 20 45 51.3 +1.2
YHH pP pP 20 46 25.9 -0.1
YHH PcP PcP 20 47 08.9 +1.5
DAC Darwin (Calif) 50.11 312 P P 20 45 51.7 +1.5
DAC Darwin (Calif) 50.11 312 P P 20 45 51.7 +1.5
GRAC Grapevine Rang 50.25 313 P P 20 45 53.1 +2.1
baz=116
YHB Horse Butte 50.28 325 P P 20 45 52.0 +0.7
OSI Osito Audit: C 50.29 310 P P 20 45 52.4 +1.0
OSI Osito Audit: C 50.29 310 P P 20 45 52.6 +1.3
baz=113
YHL Hebgen Lake 50.33 325 P P 20 45 52.0 +0.2
YHL pP pP 20 46 27.1 -0.6
BLG Laguna Peak, P 50.36 309 P P 20 45 53.4 +1.5
baz=112
SNCC San Nicolas Is 50.40 308 P P 20 45 53.9 +1.7

baz=111
QLMT Earthquake Lak 50.46 325 P P 20 45 53.5 +0.8
QLMT pP pP 20 46 28.5 -0.1
ISA Isabella, Lake 50.51 311 P P 20 45 54.1 +1.0
ISA PcP PcP 20 47 09.7 +0.9
ISA Isabella, Lake 50.51 311 P P 20 45 54.1 +1.0
ISA 20 47 09.7
ISA pmax pmax
comp=Z,13nm,0.8s
ISA Isabella, Lake 50.51 311 P P 20 45 54.6 +1.5
baz=114
CWC Cottonwood Cre 50.54 312 P P 20 45 54.9 +1.6
baz=115
ELK Elko 50.54 319 P P 20 45 53.5 +0.2
ELK pP pP 20 46 29.7 +0.3
ELK Elko 50.54 319 P P 20 45 53.5 +0.2
ELK pmax pmax
comp=Z,18nm,0.6s
ARVC Arvin 50.57 311 P P 20 45 55.0 +1.6
baz=113
SCZ2 Santa Cruz Isl 50.76 309 P P 20 45 56.5 +1.6
baz=112
TIN Tinemaha, Big 50.90 313 P P 20 45 57.9 +2.0
baz=115
SBC Santa Barbara 50.98 309 P P 20 45 58.2 +1.7
baz=112
VES Vestal, Richgr 51.04 311 P P 20 45 58.8 +1.9
baz=113
PKM Mcpherson Peak 51.22 310 P P 20 46 00.1 +1.5
baz=112
MCMT McKenzie Canyo 51.27 324 P P 20 45 59.4 +0.6
MCMT pP pP 20 46 34.0 -0.8
NV11 Mina Array Sit 51.44 315 P P 20 46 01.0 +1.0
DLMT Dillon 51.44 325 P P 20 46 01.6 +1.7
DLMT pP pP 20 46 35.4 -0.6
SMMC Simmler 51.52 310 P P 20 46 02.5 +2.0
baz=112
NVAR Mina Array Bea 51.54 315 P P 20 46 02.5 +1.6
comp=Z,20nm,0.6s,baz=122,slow=6.9,SNR=132
NVAR pP pP 20 46 39.0 +2.0
comp=Z,8.5nm,0.7s,baz=115,slow=6.9,SNR=3.7
NVAR PcP PcP 20 47 14.6 +1.8
comp=Z,10nm,0.6s,baz=123,slow=5.4,SNR=10
NVAR ScP ScP 20 50 56.3 +1.6
comp=Z,2.0nm,0.7s,baz=132,slow=4.7,SNR=4.0
NVAR LR LR 21 12 42.5
comp=Z,88nm,18.2s,baz=133,slow=41
NVAR P4KPbc 21 23 29.8
comp=Z,0.7nm,0.6s,baz=151,slow=4.1,SNR=4.5
NVAR Mina Array Bea 51.54 315 P P 20 46 01.4 +0.5
NVAR pP pP 20 46 37.5 +0.5
NVAR PcP PcP 20 47 14.3 +1.5
NVAR PP PP 20 47 55.1 -4.7
NVAR ScP 20 50 55.9 +1.2
EGMT Eagleton 51.56 329 P P 20 46 01.4 +0.7
EGMT IAmb IAmb 20 46 03.6
comp=Z,52nm,0.6s
EGMT pP pP 20 46 37.6 +0.8
EGMT Eagleton 51.56 329 P P 20 46 02.0 +1.3
baz=131
MLAC Mammoth, Mammo 51.58 313 P P 20 46 03.1 +1.9
baz=115
LRM Limekiln Ridge 51.63 326 P P 20 46 02.4 +0.9
LRM pP pP 20 46 39.2 +1.6
KVN Kaiserville 51.67 315 P P 20 46 03.0 +1.2
KVN pP pP 20 46 36.1 -1.8
KVN Kaiserville 51.67 315 P P 20 46 03.0 +1.2
KVN pmax pmax
comp=Z,41nm,1.0s
OMMB Old Mammoth Mi 51.69 313 P P 20 46 02.6 +0.5
RYN Ryan 51.78 315 P P 20 46 03.9 +1.3
RYN pP pP 20 46 39.4 +0.7
MFID Camas Ranch 52.28 321 P P 20 46 07.4 +1.3
MFID IAmb IAmb 20 46 09.6
comp=Z,62nm,0.7s
MFID pP pP 20 46 41.7 -0.6
MFID sP sP 20 46 59.3 -0.6
MFID PcP PcP 20 47 13.5 -1.8
WAKR Walker 52.38 314 P P 20 46 08.5 +1.5
WAKR IAmb IAmb 20 46 10.3
comp=Z,98nm,1.6s
YERR Yerington 52.44 315 P P 20 46 09.0 +1.5
YERR IAmb IAmb 20 46 10.5
comp=Z,185nm,1.5s
YERR pP 20 46 43.5 -0.2
PMPB Monarch Peak 52.47 311 P P 20 46 08.0 +0.4
PMPB pP pP 20 46 46.0 +2.3
PMPB PcP PcP 20 47 18.7 +2.7
PNTR Pine Nut 52.74 315 P P 20 46 10.8 +1.1
PNTR IAmb IAmb 20 46 12.8
comp=Z,45nm,0.8s
PNTR pP pP 20 46 47.8 +1.8
PAHR Pah Rah Range 52.85 316 P P 20 46 11.5 +1.0
PAHR pP pP 20 46 47.1 +0.4
VCNR Virginia City 52.86 315 P P 20 46 11.4 +0.8
VCNR IAmb IAmb 20 46 13.8
comp=Z,61nm,1.1s
CMB Columbia Colle 52.87 313 P P 20 46 10.9 +0.5
CMB Columbia Colle 52.87 313 P P 20 46 10.9 +0.5
CMB pmax pmax
comp=Z,9.0nm,0.9s
MSO Missoula 53.06 326 P P 20 46 12.8 +1.1
MSO pP pP 20 46 49.5 +1.4
MSO Missoula 53.06 326 P P 20 46 12.9 +1.1
baz=126
FFC Flin Flon 53.13 339 P P 20 46 12.2 +0.2
FFC IAmb IAmb 20 46 13.4
comp=Z,61nm,0.5s
FFC pP pP 20 46 48.2 -0.1
FFC Flin Flon 53.13 339 P P 20 46 12.2 +0.2
FFC *PP pP 20 46 48.2 -0.1
FFC pmax pmax
comp=Z,61nm,0.5s
SAO San Andreas Ge 53.15 311 P P 20 46 13.1 +0.6
SAO San Andreas Ge 53.15 311 P P 20 46 13.1 +0.6
SAO pmax pmax
comp=Z,23nm,1.0s
WVOR Wild Horse Val 53.59 319 P P 20 46 16.9 +1.2
WVOR IAmb IAmb 20 46 19.9
comp=Z,76nm,0.9s
WVOR pP pP 20 46 53.3 +1.3
WVOR Wild Horse Val 53.59 319 P P 20 46 17.2 +1.5
WVOR pmax pmax
comp=Z,110nm,1.3s
BEKR Beckworth 53.60 315 P P 20 46 17.2 +1.3
BEKR IAmb IAmb 20 46 18.7
comp=Z,73nm,1.4s
AFDM Forest Hills D 53.65 314 P P 20 46 17.2 +1.0
AFDM pP pP 20 46 53.8 +1.3
JTMT Jette 53.78 327 P P 20 46 18.5 +1.4
JTMT IAmb IAmb 20 46 19.6
comp=Z,63nm,0.7s
JTMT pP pP 20 46 54.3 +0.9
J08A Circle Bar Ran 53.92 320 P P 20 46 19.1 +1.0
J08A IAmb IAmb 20 46 21.1
comp=Z,63nm,1.2s
J08A pP pP 20 46 56.2 +1.6
BMO Blue Mountains 53.94 322 P P 20 46 18.7 +0.5
BMO Blue Mountains 53.94 322 P P 20 46 18.7 +0.5
BMO pmax pmax
comp=Z,16nm,0.6s
ORV Oroville 54.27 315 P P 20 46 21.7 +1.1
ORV IAmb IAmb 20 46 23.6
comp=Z,148nm,1.7s
ORV pP pP 20 46 56.7 -0.4
ORV sP sP 20 47 12.6 -1.9
ORV Oroville 54.27 315 P P 20 46 21.7 +1.1
ORV pmax pmax
comp=Z,148nm,1.7s
FCC Fort Churchill 54.31 347 P P 20 46 20.5 0.0
FCC Fort Churchill 54.31 347 P P 20 46 20.5 0.0
FCC pmax pmax
comp=Z,195nm,1.3s
WALA Waterton Lakes 54.36 328 P 20 46 21.6 +0.4
WALA pP pP 20 46 58.5 +0.8
WALA PcP PcP 20 47 23.3 +0.2
MOD Modoc Plateau 54.44 318 P P 20 46 21.6 -0.3
F10A Beach Ranch, E 54.48 323 P P 20 46 23.1 +1.0
F10A IAmb IAmb 20 46 23.7
comp=Z,59nm,0.6s
MCCM Marconi Confer 54.72 312 P P 20 46 25.3 +1.5
MCCM pP pP 20 47 03.1 +2.8
O03E Paynes Creek 54.78 315 P P 20 46 24.9 +0.5
baz=114

GDXM Geysers 54.91 313 P P 20 46 27.5 +2.2
GDXM IAmb IAmb 20 48 01.9
comp=Z,51nm,1.0s
I07A Izee 54.92 320 P P 20 46 25.9 +0.6
I07A IAmb IAmb 20 46 28.0
comp=Z,53nm,0.9s
I07A pP pP 20 47 02.3 +0.4
HOPS Hopland Field 55.18 313 P P 20 46 28.2 +1.1
HOPS IAmb IAmb 20 46 51.5
comp=Z,53nm,1.2s
K05A Summer Lake 55.20 318 P P 20 46 27.9 +0.5
K05A IAmb IAmb 20 47 32.1
comp=Z,48nm,1.2s
E09A Wood Farm, Sta 55.30 324 P P 20 46 29.2 +1.3
E09A IAmb IAmb 20 46 30.2
comp=Z,121nm,1.3s
WDC Whiskeytown Da 55.42 315 P P 20 46 27.8 -1.0
WDC Whiskeytown Da 55.42 315 P P 20 46 27.8 -1.0
WDC pmax pmax
comp=Z,16nm,0.9s
M04C Macdoel 55.43 317 P P 20 46 30.1 +1.1
baz=115
O02D Mt. Diablo Mer 55.43 315 P P 20 46 28.9 -0.1
baz=113
NEW Newport 55.65 326 P P 20 46 30.9 +0.6
NEW pP pP 20 47 06.5 -0.5
NEW Newport 55.65 326 P P 20 46 30.9 +0.6
NEW pmax pmax
comp=Z,25nm,0.7s
NEW Newport 55.65 326 P P 20 46 31.0 +0.6
baz=123
J05D Fort Rock, OR 55.67 319 P P 20 46 32.0 +1.2
baz=116
N02D Trinity Center 55.69 316 P P 20 46 30.4 -0.5
baz=114
PINE Pine Mountain 55.71 319 P P 20 46 32.8 +1.7
PINE pP pP 20 47 07.7 0.0
PINE PcP PcP 20 47 29.6 +1.1
K04D Chiloquin, OR 55.73 318 P P 20 46 32.1 +1.0
baz=116
KCPM Cahto Peak 55.81 314 P P 20 46 34.0 +2.3
KCPM IAmb IAmb 20 46 34.7
comp=Z,63nm,0.8s
E08A Dider Farm, El 55.83 323 P P 20 46 32.4 +0.8
L04D Klamath Falls 55.92 317 P P 20 46 33.3 +0.8
baz=115
M02C Callahan 55.96 316 P P 20 46 32.7 0.0
baz=114
YBH Yreka Blue Hor 56.00 317 P P 20 46 32.9 -0.1
YBH IAmb IAmb 20 46 33.6
comp=Z,27nm,0.6s
YBH pP pP 20 47 10.1 +0.4
YBH PcP PcP 20 47 29.9 +0.3
YBH Yreka Blue Hor 56.00 317 P P 20 46 32.9 -0.1
YBH pmax pmax
comp=Z,27nm,0.6s
D08A Wollman Farm, 56.04 324 P P 20 46 34.3 +1.2
D08A IAmb IAmb 20 46 35.2
comp=Z,30nm,0.8s
D08A pP pP 20 47 11.5 +1.7
C09A Chrisman Ranch 56.05 325 P P 20 46 34.4 +1.2
C09A pP pP 20 47 12.5 +2.6
F07A Phinny Hill Vi 56.06 322 P P 20 46 35.1 +1.9
F07A IAmb IAmb 20 46 35.7
comp=Z,48nm,0.6s
F07A PcP PcP 20 47 31.4 +1.8
HAWA Hanford 56.07 323 P P 20 46 34.8 +1.4
HAWA pP pP 20 47 10.7 +0.7
KMRM Mail Ridge 56.10 314 P P 20 46 35.6 +1.9
KMRM pP pP 20 47 12.2 +1.7
G06A Carlson Farm, 56.18 321 P P 20 46 36.5 +2.3
G06A pP pP 20 47 13.1 +2.1
G06A IAmb IAmb 20 47 15.5
comp=Z,139nm,1.4s
I05D Terrebonne, OR 56.21 320 P P 20 46 36.0 +1.5
baz=117
J04D Umpqua Nationa 56.23 318 P P 20 46 35.7 +1.0
baz=116
E07A Sunnyside 56.34 323 P P 20 46 36.7 +1.4
E07A pP pP 20 47 14.2 +2.2
KHMM Horse Mountain 56.36 315 P P 20 46 36.8 +1.0
KHMM IAmb IAmb 20 46 38.5
comp=Z,84nm,0.8s
HUMO Hull Mountain 56.52 317 P P 20 46 36.6 0.0
JCC Jacoby Creek, 56.55 315 P P 20 46 38.1 +1.3
JCC IAmb IAmb 20 46 40.2
comp=Z,99nm,1.1s
I04A Tendick Farm, 56.66 319 P P 20 46 38.2 +0.6
baz=116
L02E Cave Junction 56.78 317 P P 20 46 39.0 +0.6
baz=114
H04A Detroit Lake 56.91 320 P P 20 46 41.1 +1.8
B08A Colville Reser 56.95 325 P 20 46 40.7 +1.1
B08A IAmb IAmb 20 46 41.3
comp=Z,58nm,0.7s
B08A pP pP 20 47 16.9 +0.6
F05D White Salmon 57.00 321 P P 20 46 41.5 +1.6
baz=118
K02D Willamette Mer 57.04 317 P P 20 46 41.2 +0.8
baz=114
LTY Liberty 57.17 323 P P 20 46 42.9 +1.7
LTY IAmb IAmb 20 46 43.9
comp=Z,60nm,0.7s
LTY pP pP 20 47 18.6 +0.6
H04D Lebanon 57.19 320 P P 20 46 42.1 +0.8
baz=116
KBO Bosley Butte 57.23 317 P P 20 46 43.4 +1.7
KBO pP pP 20 47 20.1 +1.6
I03D Drain, OR 57.24 318 P P 20 46 42.4 +0.8
baz=115
J01E Myrtle Point 57.40 318 P P 20 46 44.2 +1.4
baz=114
KEBM Edson Butte 57.56 317 P P 20 46 46.5 +2.5
COR Corvallis 57.58 319 P P 20 46 45.5 +1.5
COR Corvallis 57.58 319 P P 20 46 45.5 +1.5
COR pmax pmax
comp=Z,287nm,1.6s
F04A Amboy 57.61 321 P P 20 46 45.4 +1.2
LON Longmire 57.62 322 P P 20 46 45.4 +1.1
LON Longmire 57.62 322 P P 20 46 45.4 +1.1
LON pmax pmax
comp=Z,21nm,0.8s
C06D Leavenworth 57.63 324 P P 20 46 45.2 +0.9
baz=119
I02D Swisshome 57.74 319 P P 20 46 46.5 +1.4
baz=115
G03D McMinnville, O 57.83 320 P P 20 46 47.2 +1.5
baz=116
GO09 Cerro Castillo 57.83 179 P P 20 46 45.4 -0.2
GO09 IAmb IAmb 20 46 46.9
comp=Z,35nm,0.8s
D05A Enumclaw 57.93 323 P P 20 46 46.9 +0.5
D05A IAmb IAmb 20 46 48.9
comp=Z,120nm,1.3s
D05A pP pP 20 47 23.8 +0.5
E04D Cinebar 57.99 322 P P 20 46 47.7 +0.9
baz=117
B06A Marblemount 58.27 324 P P 20 46 49.2 +0.5
F03A Seaside 58.33 321 P P 20 46 51.4 +2.2
F03A pP 20 47 29.2 +3.0
D04E Lakebay 58.40 322 P P 20 46 50.7 +1.1
baz=117
B05A Bryant 58.50 324 P P 20 46 50.6 +0.3
baz=118
E03A Lebam 58.60 321 P P 20 46 52.6 +1.6
E03A IAmb IAmb 20 46 53.4
comp=Z,68nm,0.8s
E03A pP 20 47 31.0 +3.1
D03D Eldon 58.75 323 P P 20 46 52.8 +0.7
baz=117
A04D Lummi Island 59.08 324 P P 20 46 54.8 +0.6
baz=118
NLWA Neilton Lookou 59.16 322 P P 20 46 56.9 +1.9
NLWA pP 20 47 34.6 +2.6
NLWA IAmb IAmb 20 47 36.2
comp=Z,118nm,1.2s
PGC Sidney 59.48 324 P P 20 46 58.9 +1.9
PGC pP pP 20 47 36.7 +2.6
LLLB Lillooet 59.52 326 P P 20 46 58.4 +1.0
LLLB IAmb IAmb 20 46 59.3
comp=Z,73nm,1.1s
LLLB pP pP 20 47 35.3 +0.9
EFI East Falkland 59.65 169 P P 20 46 56.6 -1.3
EFI East Falkland 59.65 169⇓eP P 20 46 56.7 -1.3
EFI pmax pmax

comp=Z,180nm,1.6s
ASCN Ascension 60.34 103 P P 20 47 03.1 -0.5
USHA Ushuaia 61.52 177 P P 20 47 10.2 -0.4
comp=Z,21nm,0.6s,baz=212,slow=3.4,SNR=18
SFJD Kangerlussuaq 62.05 10 P P 20 47 14.2 +0.2
comp=Z,34nm,0.7s,baz=202,slow=5.5,SNR=17
SFJD Kangerlussuaq 62.05 10 i P P 20 47 14.3 +0.2
SFJD Kangerlussuaq 62.05 10 P P 20 47 14.2 +0.2
SFJD IAmb IAmb 20 47 14.9
comp=Z,37nm,0.8s
SFJD Kangerlussuaq 62.05 10 i P P 20 47 14.3 +0.2
YKA Yellowknife Ar 63.31 340 P P 20 47 23.2 +0.7
comp=Z,125nm,0.6s,baz=134,slow=6.8,SNR=1033
YKA pP pP 20 48 01.4 +1.1
comp=Z,48nm,0.8s,baz=130,slow=6.8,SNR=3.8
YKA S S 20 55 42.0 +0.2
comp=Z,1.9nm,0.8s,baz=127,slow=14,SNR=5.3
YKA LR LR 21 15 10.3
comp=Z,72nm,21.0s,baz=0.0,slow=36
YKA P4KPbc 21 24 18.6
comp=Z,0.6nm,0.8s,baz=127,slow=4.2,SNR=6.9
BBB Bella Bella 63.71 326 LR LR 21 19 57.5
comp=Z,32nm,18.7s,baz=168,slow=40
BBB Bella Bella 63.71 326 P P 20 47 26.9 +1.5
BBB IAmb IAmb 20 47 28.0
comp=Z,57nm,0.9s
ILULI Ilulissat 63.99 9 P P 20 47 27.2 +0.4
ILULI Ilulissat 63.99 9 P P 20 47 27.2 +0.4
ILULI pmax pmax
comp=Z,131nm,0.7s
MOBC Moresby Island 66.25 326 P P 20 47 43.0 +1.2
MOBC IAmb IAmb 20 47 43.6
comp=Z,52nm,0.9s
MOBC pP 20 48 21.5 +1.9
DIB Dawson Inlet, 66.56 326 P P 20 47 45.3 +1.7
PESTR Estremoz 66.72 51 P P 20 47 44.5 -0.6
MTE Manteigas 67.04 49 P P 20 47 46.5 -0.6
MTE IAmb IAmb 20 48 26.2
comp=Z,104nm,1.6s
DLBC Dease Lake 67.37 331 PKP2bc 21 16 14.1
comp=Z,9.7nm,0.6s,baz=251,slow=1.3,SNR=5.3
DLBC Dease Lake 67.37 331 P P 20 47 50.4 +1.6
DLBC IAmb IAmb 20 47 51.6
comp=Z,73nm,1.1s
TIC Toumodi 67.52 86 eP P 20 47 49.0 -1.5
LIC Lamto 67.55 86 eP P 20 47 49.2 -1.5
comp=Z,398nm,0.7s
DBIC Dimbokro 67.68 86 P P 20 47 50.9 -0.6
comp=Z,159nm,0.8s,baz=268,slow=5.4,SNR=190
DBIC PKPPKP P'P'df 21 16 12.1 -2.3
comp=Z,2.0nm,0.9s,baz=323,slow=10,SNR=3.5
DBIC Dimbokro 67.68 86 P P 20 47 51.3 -0.2
DBIC Dimbokro 67.68 86 P P 20 47 51.3 -0.2
DBIC pmax pmax
comp=Z,161nm,0.8s
WRAK Wrangell Islan 67.69 329 P P 20 47 51.8 +1.0
KIC Kosan Boka 67.82 86 eP P 20 47 51.1 -1.3
comp=Z,547nm,0.8s
HOPE Hope Point 68.13 158 P P 20 47 52.6 -0.8
HOPE Hope Point 68.13 158 P P 20 47 52.6 -0.8
HOPE pmax pmax
comp=Z,360nm,1.7s
MDT Midelt 68.26 57 PKP2bc 21 16 08.7
comp=Z,2.4nm,0.8s,baz=86,slow=3.4,SNR=3.1
BORG Borgarnes 68.29 21 P P 20 47 55.9 +1.6
BORG Borgarnes 68.29 21 P P 20 47 55.9 +1.6
SUMG Summit 69.01 11 i P P 20 47 59.9 +0.8
comp=Z,890nm,0.7s
SUMG Summit 69.01 11 P P 20 47 59.9 +0.8
SUMG Summit 69.01 11 i P P 20 47 59.9 +0.8
SUMG pmax pmax
comp=Z,890nm,0.7s
RES Resolute Bay 69.01 354 P P 20 47 59.4 +0.8
RES Resolute Bay 69.01 354 P P 20 47 59.4 +0.8
RES pmax pmax
comp=Z,28nm,1.0s
PAB San Pablo 69.32 50 P P 20 48 00.6 -0.8
PAB San Pablo 69.32 50 P P 20 48 00.6 -0.8
JIS Juneau Island 69.42 330 P P 20 48 03.4 +2.0
JIS IAmb IAmb 20 48 04.1
comp=Z,36nm,0.7s
SIT Sitka 69.45 329 P P 20 48 03.7 +2.1
SIT IAmb IAmb 20 48 04.7
comp=Z,42nm,1.0s
SIT Sitka 69.45 329 P P 20 48 03.7 +2.1
SIT pmax pmax
comp=Z,42nm,1.0s
ESDC Sonseca Array 69.63 50 P P 20 48 02.4 -0.8
comp=Z,1.0nm,0.3s,baz=266,slow=6.1,SNR=19
ESDC PKP2bc 21 16 06.7
comp=Z,5.7nm,0.8s,baz=61,slow=2.9,SNR=23
ESDC Sonseca Array 69.63 50 P P 20 48 02.5 -0.7
ESDC P'P'df 21 16 05.4 -4.6
ESBB Sonseca Array 69.63 50 P P 20 48 02.5 -0.7
ESBB pP pP 20 48 42.6 +0.4
TULEG Thule 69.74 1 P P 20 48 04.1 +1.0
TULEG IAmb IAmb 20 48 05.1
comp=Z,167nm,1.5s
TULEG pP pP 20 48 43.5 +1.5
SKAG Skagway 70.30 331 P P 20 48 08.6 +1.8
SKAG IAmb IAmb 20 48 09.6
comp=Z,42nm,0.8s
SHEL Horse Pasture 70.35 110 P P 20 48 08.2 +0.2
SHEL IAmb IAmb 20 48 09.4
comp=Z,79nm,0.8s
SHEL Horse Pasture 70.35 110 P P 20 48 08.2 +0.2
SHEL pmax pmax
comp=Z,79nm,0.8s
WHY Whitehorse 70.53 333 P P 20 48 09.9 +1.5
C36M Paulatuk 70.64 343 P P 20 48 08.0 -0.7
QUIF Quistinic 71.55 42 eP P 20 48 16.3 +1.7
QUIF pmax pmax
comp=Z,108nm,1.6s
ROSF Rostrenen 71.56 41 eP P 20 48 15.5 +0.9
ROSF pmax pmax
comp=Z,97nm,1.4s
DHAK Deception Hill 71.57 330 P P 20 48 16.6 +2.0
DHAK IAmb IAmb 20 48 30.7
comp=Z,121nm,1.2s
PMSA Palmer Station 71.69 176 P P 20 48 14.5 -0.4
comp=Z,22nm,0.8s,baz=4.1,slow=5.0,SNR=4.3
PMSA Palmer Station 71.69 176 P P 20 48 12.9 -2.1
PMSA IAmb IAmb 20 50 15.2
comp=Z,109nm,1.4s
HYT Haines Junctio 71.80 332 P P 20 48 18.6 +2.6
IOMK Kirk Michael 72.02 35 eP P 20 48 17.8 +0.6
SJPF Ste Jean 72.14 47 eP P 20 48 18.6 +0.3
SJPF pmax pmax
comp=Z,23nm,0.9s
KPL Plockton 72.21 32 eP P 20 48 17.9 -0.4
KAC Achnashellach 72.44 32 eP P 20 48 19.4 -0.3
PGBU Glenifferbraes 72.44 33 eP P 20 48 19.8 +0.1
MCH1 Michaelchurch 72.44 38 eP P 20 48 19.9 0.0
ETSF Etsaut 72.60 47 eP P 20 48 20.6 -0.5
ETSF pmax pmax
comp=Z,69nm,2.0s
INVG Invergeldie, C 72.83 33 eP P 20 48 21.6 -0.4
PCA Pinnacle 72.87 331 P P 20 48 24.6 +2.3
ESK Eskdalemuir 73.03 34 eP P 20 48 23.6 +0.4
ESK IAmb IAmb 20 48 24.4
comp=Z,30nm,1.0s
ESK Eskdalemuir 73.03 34 P P 20 48 23.1 -0.1
ESK Eskdalemuir 73.03 34 P P 20 48 23.1 -0.1
ESK pmax pmax
comp=Z,45nm,1.2s
INK Inuvik 73.08 340 P P 20 48 24.2 +1.0
INK IAmb IAmb 20 48 25.2
comp=Z,55nm,0.7s
INK pP pP 20 49 01.9 0.0
INK Inuvik 73.08 340 P P 20 48 24.2 +1.0
INK pmax pmax
comp=Z,55nm,0.6s
GRR Gorron 73.15 42 eP P 20 48 23.0 -1.1
GRR pmax pmax
comp=Z,11nm,0.4s
EPF Esparros 73.27 47 eP P 20 48 23.3 -1.7
EPF pmax pmax
comp=Z,5.0nm,0.4s
MFF Saint Martin d 73.37 43 eP P 20 48 24.4 -1.0
MFF pmax pmax
comp=Z,17nm,0.6s
EDU Dundee 73.41 33 eP P 20 48 25.2 -0.3
EPYK Eagle Plains 73.43 338 P P 20 48 26.6 +1.2
EPYK IAmb IAmb 20 48 27.3
comp=Z,53nm,0.5s

EPYK pP pP 20 49 04.1 0.0
EPYK Eagle Plains 73.43 338 P P 20 48 26.6 +1.2
baz=112
FLN La Foliniere 73.46 41 eP P 20 48 24.9 -0.9
FLN pmax pmax
comp=Z,11nm,0.4s
LBWR Ladybower, Pea 73.48 36 eP P 20 48 25.7 -0.2
LBWR IAmb IAmb 20 48 27.1
comp=Z,37nm,0.6s
MCD Coleburn Disti 73.53 32 eP P 20 48 26.0 -0.1
CWF Charnwood Fore 73.60 37 eP P 20 48 26.3 -0.3
CWF IAmb IAmb 20 48 32.0
comp=Z,285nm,2.3s
CTGM Chitina Glacie 73.62 332 P P 20 48 29.0 +2.2
CTGM IAmb IAmb 20 48 30.0
comp=Z,62nm,0.8s
MLA1 Latheron 73.64 31 eP P 20 48 26.5 -0.2
LDF La Druitiere 73.67 41 eP P 20 48 26.0 -1.1
LDF pmax pmax
comp=Z,65nm,1.4s
DAWY Dawson 73.69 335 P P 20 48 28.1 +1.2
DAWY pP pP 20 49 05.9 +0.3
TOA0 Torodi Ar. Sit 73.69 78 P P 20 48 27.2 -0.6
TORD Torodi Ar. Bea 73.69 78 P P 20 48 26.7 -1.1
comp=Z,9.7nm,0.4s,baz=290,slow=5.8,SNR=14
TORD S SKiKP 20 57 43.2 +1.4
comp=Z,2.0nm,1.2s,baz=248,slow=7.6,SNR=3.8
TORD Torodi Ar. Bea 73.69 78 P P 20 48 26.8 -1.1
TORD pP pP 20 49 08.1 +0.7
LFF La Frestale 73.78 45 eP P 20 48 26.8 -1.0
LFF pmax pmax
comp=Z,37nm,1.2s
DRUM Mains of Drumt 73.78 33 eP P 20 48 27.8 +0.2
DRUM IAmb IAmb 20 48 33.9
comp=Z,241nm,1.8s
BARN Barnard Glacie 73.80 332 P P 20 48 30.0 +2.1
BARN IAmb IAmb 20 48 31.0
comp=Z,41nm,0.7s
BALM Baldy 74.12 332 P P 20 48 31.7 +2.1
BALM IAmb IAmb 20 48 32.7
comp=Z,42nm,0.8s
BALM pP pP 20 49 09.7 +1.5
WAX Waxell Ridge 74.21 331 P P 20 48 30.9 +0.8
TGL Tana Glacier 74.28 331 P P 20 48 32.2 +1.7
TGL IAmb IAmb 20 48 33.5
comp=Z,61nm,0.9s
TGL pP pP 20 49 09.4 +0.3
RJF Les Rejaudoux 74.36 45 eP P 20 48 29.9 -1.3
RJF pmax pmax
comp=Z,80nm,1.8s
BCAR Beaver Creek A 74.41 334 P P 20 48 33.1 +1.9
BCAR pP pP 20 49 10.8 +0.9
CRQM Cirque 74.42 331 P P 20 48 33.3 +1.8
MCARA McCarthy VSAT 74.53 332 P P 20 48 34.3 +2.5
MCARA IAmb IAmb 20 48 35.7
comp=Z,55nm,0.8s
EGAK Eagle 74.64 336 P P 20 48 33.7 +1.3
EGAK pP pP 20 49 12.5 +1.5
MTLF Montolieu 74.67 47 eP P 20 48 31.8 -1.2
MTLF pmax pmax
comp=Z,57nm,2.1s
VRDI Verde Repeater 74.69 332 P P 20 48 35.2 +2.2
VRDI IAmb IAmb 20 48 36.4
comp=Z,193nm,1.8s
VRDI pP pP 20 49 13.8 +2.1
CAF Calviac 74.71 45 eP P 20 48 31.9 -1.4
CAF pmax pmax
comp=Z,37nm,1.4s
GLB Gilahina Butte 74.91 332 P P 20 48 36.3 +2.2
GLB IAmb IAmb 20 48 37.1
comp=Z,75nm,1.2s
TCF Toulx Ste Croi 74.95 44 eP P 20 48 33.5 -1.1
TCF pmax pmax
comp=Z,69nm,1.8s
CLF Chambon-Foret 75.17 42 P P 20 48 36.7 +0.9
CLF IAmb IAmb 20 50 44.8
comp=Z,225nm,1.9s
MENT Mentasta 75.23 333 P P 20 48 37.6 +1.8
MENT pP pP 20 49 16.1 +1.5
BGF Bois d'Agland 75.42 44 eP P 20 48 35.9 -1.3
BGF pmax pmax
comp=Z,12nm,0.8s
DOT Dot Lake 75.56 334 IAmb IAmb 20 48 40.5
comp=Z,101nm,0.7s
DOT pP pP 20 49 16.4 -0.1
SCRK Sand Creek 75.60 335 P P 20 48 39.6 +1.5
SCRK IAmb IAmb 20 48 40.9
comp=Z,59nm,0.9s
SCRK pP pP 20 49 17.9 +1.0
EYAK Cordova Ski Ar 75.63 331 P P 20 48 40.2 +2.1
EYAK IAmb IAmb 20 49 21.0
comp=Z,309nm,2.0s
DAG Danmarks Havn 75.67 11⇑iP P 20 48 38.3 +0.2
comp=Z,84nm,0.8s
DAG Danmarks Havn 75.67 11⇑iP P 20 48 38.3 +0.2
DAG pmax pmax
comp=Z,84nm,0.8s
AVF Avril sur Loir 75.78 44 eP P 20 48 37.8 -1.5
AVF pmax pmax
comp=Z,38nm,1.8s
SSF Saint Saulge 75.91 43 eP P 20 48 38.6 -1.4
SSF pmax pmax
comp=Z,86nm,2.2s
RIDG Independent Ri 75.92 334 P P 20 48 41.6 +1.8
RIDG IAmb IAmb 20 48 43.1
comp=Z,122nm,1.0s
RIDG pP pP 20 49 17.7 -0.9
PAX Paxson 76.02 333 P P 20 48 41.9 +1.5
PAX IAmb IAmb 20 48 43.3
comp=Z,49nm,0.9s
PAX pP pP 20 49 19.6 +0.4
PAX Paxson 76.02 333 P P 20 48 41.9 +1.5
PAX pmax pmax
comp=Z,49nm,0.9s
FID Port Fidalgo 76.02 331 P P 20 48 42.0 +1.6
FID IAmb IAmb 20 48 43.3
comp=Z,80nm,1.0s
SMF Signal de Mont 76.11 44 eP P 20 48 39.8 -1.4
SMF pmax pmax
comp=Z,60nm,1.8s
LOR Lormes 76.17 43 eP P 20 48 40.1 -1.4
LOR pmax pmax
comp=Z,5.0nm,0.5s
GLI Glacier Island 76.34 331 P P 20 48 43.2 +1.0
GLI IAmb IAmb 20 49 15.2
comp=Z,180nm,1.7s
GLI pP pP 20 49 21.0 -0.1
VIVF Saint-Julien-l 76.55 46 eP P 20 48 43.5 -0.2
VIVF pmax pmax
comp=Z,8.0nm,0.9s
PRP Porcupine Dome 76.61 336 P P 20 48 44.8 +1.0
PRP IAmb IAmb 20 48 45.9
comp=Z,56nm,0.7s
PRP pP pP 20 49 23.0 +0.3
SCM Sheep Creek Mo 76.63 332 P P 20 48 45.6 +1.8
SCM pP pP 20 49 23.6 +0.8
SCM Sheep Creek Mo 76.63 332 P P 20 48 45.7 +1.8
SCM *PP pP 20 49 23.6 +0.8
SCM pmax pmax
comp=Z,183nm,1.0s
BAIF Baives 76.66 40 eP P 20 48 42.9 -1.2
BAIF pmax pmax
comp=Z,25nm,1.2s
BMAR Burnt Mountain 76.71 338 P P 20 48 46.0 +1.9
BMAR pP pP 20 49 24.1 +1.0
FYU Fort Yukon 76.74 337 P P 20 48 45.8 +1.5
FYU IAmb IAmb 20 48 46.7
comp=Z,80nm,1.2s
FYU pP pP 20 49 23.7 +0.5
DHY Denali Highway 76.89 333 P P 20 48 46.4 +1.0
DHY pP pP 20 49 25.2 +0.9
TAM Tamanrasset 76.91 68 P P 20 48 46.5 +0.2
TAM Tamanrasset 76.91 68 P P 20 48 46.5 +0.2
TAM pmax pmax
comp=Z,56nm,1.7s
DOU Dourbes 76.91 40 ⇑P P 20 48 44.8 -0.7
HDA Harding Lake 76.96 335 P P 20 48 46.1 +0.5
HDA IAmb IAmb 20 48 47.5
comp=Z,68nm,0.8s
HDA pP pP 20 49 23.8 -0.7
HDA Harding Lake 76.96 335 P P 20 48 46.4 +0.8
baz=102
IL31 77.01 335 P P 20 48 46.8 +1.0
IL31 pP pP 20 49 25.1 +0.3
ILAR Eielson Array 77.01 335 P P 20 48 46.6 +0.8
comp=Z,19nm,0.7s,baz=112,slow=4.4,SNR=135
ILAR PP PP 20 51 43.0 +1.8
comp=Z,2.4nm,0.6s,baz=109,slow=8.3,SNR=4.7
ILAR LR LR 21 23 55.5
comp=Z,71nm,19.3s,baz=120,slow=36
ILAR Eielson Array 77.01 335 P P 20 48 46.6 +0.8
ILAR pP pP 20 49 25.6 +0.7
ILAR PP 20 51 39.1 -2.1
BMRD Maredsous 77.03 40 P P 20 48 46.3 0.0
GIVF Givet 77.05 40 eP P 20 48 45.7 -0.7
GIVF pmax pmax
comp=Z,30nm,1.0s
KNK Knik Glacier 77.09 331 P P 20 48 48.0 +1.6
KNK IAmb IAmb 20 48 49.3
comp=Z,97nm,0.8s
KNK pP pP 20 49 25.1 -0.2
SML Sawmill 77.09 332 P P 20 48 47.9 +1.5
SML IAmb IAmb 20 48 49.3
comp=Z,102nm,1.1s
SML pP pP 20 49 24.9 -0.4
SML Sawmill 77.09 332 P P 20 48 47.9 +1.5
SML pmax pmax
comp=Z,102nm,1.1s
POKR Poker Plat Res 77.31 335 P P 20 48 48.6 +1.0
baz=101
SEW Seward 77.36 330 P P 20 48 48.8 +0.9
SEW IAmb IAmb 20 49 29.9
comp=Z,113nm,1.3s
GHO Glory Hole Cre 77.37 332 P P 20 48 49.4 +1.4
GHO pP pP 20 49 26.8 -0.1
CCB Clear Creek Bu 77.37 335 P P 20 48 48.9 +1.0
BCLA Clavier 77.39 40 P P 20 48 48.0 -0.2
ORIF Oris-en-Rattie 77.41 46 eP P 20 48 49.0 +0.4
ORIF pmax pmax
comp=Z,14nm,1.1s
PMR Palmer 77.44 332 P P 20 48 49.7 +1.5
PMR IAmb IAmb 20 48 50.3
comp=Z,51nm,0.8s
PMR pP 20 49 28.5 +1.3
PMR Palmer 77.44 332 P P 20 48 49.7 +1.5
PMR *PP pP 20 49 28.5 +1.3
PMR pmax pmax
comp=Z,51nm,0.8s
COLA College 77.44 335 P P 20 48 48.8 +0.6
COLA College 77.44 335 P P 20 48 48.8 +0.6
COLA pmax pmax
comp=Z,66nm,0.3s
TCOL CIGO, UAF Yank 77.44 335 P P 20 48 48.9 +0.7
baz=101
WRH Wood River Hil 77.46 335 P P 20 48 49.2 +0.9
RND Reindeer 77.61 333 P P 20 48 50.8 +1.5
RND pP pP 20 49 30.2 +2.0
RND Reindeer 77.61 333 P P 20 48 50.8 +1.5
RND *PP pP 20 49 30.2 +2.0
RND pmax pmax
comp=Z,140nm,0.8s
MDM Murphy Dome 77.61 335 P P 20 48 50.6 +1.4
MDM IAmb IAmb 20 48 52.0
comp=Z,53nm,0.9s
MDM pP pP 20 49 27.9 -0.4
RC01 Rabbit Creek A 77.65 331 P P 20 48 51.7 +2.2
RC01 IAmb IAmb 20 48 52.5
comp=Z,53nm,0.8s
CABF La Chapelle 77.65 44 eP P 20 48 51.0 +1.1
CABF pmax pmax
comp=Z,74nm,0.9s
MCK McKinley 77.70 334 P P 20 48 51.1 +1.5
MCK IAmb IAmb 20 48 52.1
comp=Z,16nm,1.2s
MCK McKinley 77.70 334 P P 20 48 51.2 +1.5
MCK pmax pmax
comp=Z,59nm,1.2s
MEM Membach 77.85 40 P P 20 48 51.0 +0.2
MEM Membach 77.85 40 P P 20 48 51.3 +0.5
MEM pmax pmax
comp=Z,28nm,1.2s
WLF Walferdange 77.88 41 P P 20 48 51.8 +0.8
WLF Walferdange 77.88 41 P P 20 48 50.1 -0.9
WLF Walferdange 77.88 41 P P 20 48 50.1 -0.9
WLF pmax pmax
comp=Z,43nm,1.0s
NEA Nenana 77.90 335 P P 20 48 51.8 +1.0
NEA IAmb IAmb 20 48 52.9
comp=Z,58nm,0.8s
FRF La Foret Royal 77.90 47 eP P 20 48 50.8 -0.4
FRF pmax pmax
comp=Z,81nm,1.6s
HAU Haudompre 77.90 42 eP P 20 48 50.8 -0.4
HAU pmax pmax
comp=Z,72nm,1.8s
BNI Bardonecchia 77.98 45 P P 20 48 52.0 +0.2
BNI Bardonecchia 77.98 45 P P 20 48 52.0 +0.2
BWN Browne 78.00 334 P P 20 48 51.9 +0.5
BWN IAmb IAmb 20 49 33.7
comp=Z,109nm,1.0s
BRLK Bradley Lake 78.03 330 P P 20 48 52.8 +1.1
LPL La Plagne 78.04 45 eP P 20 48 51.8 -0.5
LPL pmax pmax
comp=Z,19nm,1.3s
LPG La Plagne 78.05 45 eP P 20 48 51.3 -1.1
LPG pmax pmax
comp=Z,5.0nm,0.5s
SUA Susitna One 78.18 331 P P 20 48 53.8 +1.3
SUA IAmb IAmb 20 48 54.9
comp=Z,124nm,0.8s
SUA pP pP 20 49 32.4 +0.8
KMY Karmoy 78.22 31 eP P 20 48 52.7 +0.1
HINF Hinteralfeld 78.23 43 eP P 20 48 51.5 -1.5
HINF pmax pmax
comp=Z,135nm,2.2s
TRF Thorofare Moun 78.25 333 P P 20 48 54.1 +1.1
TRF IAmb IAmb 20 48 55.3
comp=Z,49nm,0.8s
TRF pP pP 20 49 31.9 0.0
FOO Floro 78.40 29 eP P 20 48 54.4 +0.8
ECH Echery 78.46 42 P P 20 48 53.9 -0.3
ECH Echery 78.46 42 P P 20 48 53.9 -0.3
ECH pmax pmax
comp=Z,24nm,1.0s
SENIN Lac Senin/Sane 78.47 44 P P 20 48 54.5 -0.1
CDF Champ du Feu 78.55 42 eP P 20 48 54.6 -0.2
CDF pmax pmax
comp=Z,16nm,1.0s
SKT Skwentna 78.62 332 P P 20 48 56.1 +1.3
SKT IAmb IAmb 20 48 57.5
comp=Z,146nm,1.3s
NOR Nord 78.64 7 iP P 20 48 55.0 +0.4
comp=Z,54nm,1.2s
NOR Nord 78.64 7 iP P 20 48 55.0 +0.4
NOR pmax pmax
comp=Z,54nm,1.2s
BPAW Bear Paw Mtn. 78.65 334 P P 20 48 55.4 +0.5
BPAW IAmb IAmb 20 48 57.1
comp=Z,58nm,0.9s
BPAW pP pP 20 49 34.1 +0.1
BPAW sP sP 20 49 49.3 -1.8
MLY Manley 78.67 335 P P 20 48 56.0 +0.9
MLY pP pP 20 49 33.2 -1.1
KDAK Kodiak Island 78.70 328 P P 20 48 55.8 +0.6
KDAK Kodiak Island 78.70 328 P P 20 48 55.8 +0.6
BUG Bochum--Univer 78.70 39 eP P 20 48 56.2 +0.8
comp=Z,24nm,0.8s,baz=269,slow=5.3
BUG Bochum--Univer 78.70 39 P P 20 48 54.1 -1.3
BUG pmax pmax
comp=Z,32nm,1.1s
COLD Coldfoot 78.80 337 P P 20 48 57.5 +1.8
TOLK Toolik Lake Re 78.80 339 P P 20 48 56.7 +0.9
TOLK Toolik Lake Re 78.80 339 P P 20 48 56.8 +1.1
baz=100
BLS5 Blasjo 78.86 31 eP P 20 48 56.3 +0.2
HYA Hoyanger 78.90 29 eP P 20 48 57.8 +1.5
ODD1 Odda 78.99 30 eP P 20 48 57.8 +0.9
OHAK Old Harbor 79.03 327 P P 20 48 57.8 +0.7
OHAK IAmb IAmb 20 48 58.6
comp=Z,44nm,0.7s
OHAK pP pP 20 49 37.6 +1.4
PPLA Purkeypile 79.03 333 P P 20 48 58.2 +1.0
PPLA pP pP 20 49 37.3 +1.0
RSO Redoubt South 79.04 330 P P 20 48 58.1 +0.7
IBBN Ibbenburen 79.05 38 eP P 20 48 58.2 +0.9
comp=Z,35nm,0.9s,baz=269,slow=5.3
SNART Snartemo 79.15 32 eP P 20 48 57.8 +0.1
BFO Black Forest 79.24 42 P P 20 48 58.2 -0.3
BFO Black Forest 79.24 42 P P 20 48 58.2 -0.3
BFO pmax pmax
comp=Z,11nm,0.9s
PPT Papeete 79.30 251 LR LR 21 14 46.3
comp=Z,63nm,20.4s,baz=204,slow=28
SLE Schleitheim 79.33 43 P P 20 48 58.9 -0.1
SLE pmax pmax
comp=Z,27nm,0.9s
TNS Taunus Mts 79.39 40 P P 20 49 00.6 +1.3
TNS pmax pmax
comp=Z,32nm,1.4s
AKN Aaknes 79.39 28 eP P 20 48 57.8 -1.2
STU Stuttgart 79.83 42 eP P 20 49 02.1 +0.4
comp=Z,39nm,0.9s,baz=269,slow=5.3
STU Stuttgart 79.83 42 P P 20 49 01.2 -0.4
STU Stuttgart 79.83 42 P P 20 49 01.2 -0.4
STU pmax pmax
comp=Z,33nm,0.8s
SKAR Skarslia 79.89 30 eP P 20 49 02.9 +1.1
TUE Stuetta 79.89 44 P P 20 49 02.5 +0.2
KEST Kesra 79.92 55 P P 20 49 02.5 0.0
comp=Z,11nm,0.9s,baz=252,slow=5.1,SNR=7.3
KEST Kesra 79.92 55 P P 20 49 02.2 -0.3
IMAR Indian Mountai 80.04 336 P P 20 49 02.9 +0.5
IMAR pP 20 49 40.5 -1.2
MUD Monsted U'grnd 80.09 34 iP P 20 49 03.4 +0.6
MUD Monsted U'grnd 80.09 34 eP P 20 49 03.4 +0.6
CHIR Chirikof Islan 80.24 325 P P 20 49 04.5 +0.9
DAVA Damuels 80.27 43 iP P 20 49 04.5 +0.2
comp=Z,43nm,0.8s,SNR=7.4
NPOC North of Pu'u 80.30 288 P P 20 49 05.6 +0.7
DOMB Dombas 80.35 28 eP P 20 49 05.7 +1.5
KONO Kongsberg 80.47 31 P P 20 49 05.7 +0.9
KONO IAmb IAmb 20 51 33.8
comp=Z,179nm,2.0s
KONO Kongsberg 80.47 31 P P 20 49 05.7 +0.9
FUORN Ofenpass-Fuorn 80.53 44 P P 20 49 05.7 0.0
CLZ Clausthal 80.65 39 eP P 20 49 07.0 +1.0
comp=Z,27nm,0.8s,baz=269,slow=5.3
BSEG Bad Segeberg 80.65 37 eP P 20 49 06.9 +1.0
comp=Z,28nm,0.8s,baz=269,slow=5.3
SALO Salr 80.71 45 P P 20 49 07.0 +0.5
SALO IAmb IAmb 20 50 15.8
comp=Z,271nm,2.0s
FETA Feichten 80.84 44 iP P 20 49 08.1 +0.8
comp=Z,34nm,1.0s,SNR=8.7
FETA ePKKPbc PKKPbc 21 07 45.7 -0.8
comp=Z,6.1nm,1.2s
RETA Reutte 80.87 43 iP P 20 49 07.6 +0.3
comp=Z,11nm,0.9s
TBLU Trondheim 80.97 27 eP P 20 49 09.6 +2.2
ZCCA Zocca 81.04 46 P P 20 49 08.0 -0.2
ZCCA IAmb IAmb 20 49 12.4
comp=Z,278nm,2.0s
OSL Oslo 81.05 30 eP P 20 49 08.5 +0.6
MOTA Moosalm 81.10 43 iP P 20 49 09.0 +0.4
comp=Z,14nm,0.7s
MOTA iPKKPbc PKKPbc 21 07 44.3 -1.5
comp=Z,8.2nm,1.3s
NBO00 NORSAR Array S 81.11 29 P P 20 49 08.9 +0.6
NBO00 IAmb IAmb 20 49 10.7
comp=Z,89nm,0.8s
NC204 NORSAR Array S 81.12 29 P P 20 49 08.8 +0.5
NC204 IAmb IAmb 20 49 10.6
comp=Z,74nm,0.9s
NAO01 NORSAR Array S 81.16 30 P P 20 49 09.6 +1.1
NAO01 IAmb IAmb 20 49 10.9
comp=Z,80nm,0.8s
SQTA Sankt Quirin 81.17 43 iP P 20 49 09.5 +0.5
comp=Z,18nm,0.8s
SQTA iPKKPbc PKKPbc 21 07 44.6 -1.1
comp=Z,5.6nm,0.8s
OSSC Osservatorio P 81.25 47 P P 20 49 07.6 -1.7
OSSC IAmb IAmb 20 51 52.9
comp=Z,111nm,1.7s
NB2 NORSAR Subarra 81.33 29 P P 20 49 10.4 +1.0
comp=Z,42nm,0.9s,baz=268,slow=5.6
NB2 NORSAR Subarra 81.33 29 P P 20 49 10.4 +1.0
baz=268,slow=5.6
NB2 NORSAR Subarra 81.33 29 P P 20 49 10.3 +0.9
NB2 pmax pmax
comp=Z,63nm,0.9s
NOA NORSAR Array B 81.33 29 P P 20 49 10.3 +1.0
comp=Z,27nm,0.8s,baz=268,slow=5.3,SNR=78
NOA LR LR 21 25 29.4
comp=Z,25nm,19.1s,baz=270,slow=36
NB201 NORSAR Array S 81.37 29 P P 20 49 10.0 +0.4
NB201 IAmb IAmb 20 49 12.1
comp=Z,114nm,1.2s
NC303 NORSAR Array S 81.41 29 P P 20 49 10.7 +0.9
NC303 IAmb IAmb 20 49 12.2
comp=Z,53nm,0.8s
MOX Moxa 81.42 40 eP P 20 49 10.6 +0.5
comp=Z,9.7nm,1.1s,baz=269,slow=5.3
MOX Moxa 81.42 40 P P 20 49 11.1 +1.0
MOX pmax pmax
comp=Z,10.0nm,1.1s
WATA Walderalm 81.42 43 iP P 20 49 10.0 -0.3
comp=Z,6.3nm,0.7s
WATA iPKKPbc PKKPbc 21 07 43.7 -1.4
comp=Z,3.9nm,0.8s
GRB1 Grafenberg Arr 81.45 41 P P 20 49 11.5 +1.2
GRB1 pmax pmax
comp=Z,45nm,1.0s
WTTA Wattenberg 81.46 43 iP P 20 49 10.3 -0.3
comp=Z,15nm,0.8s
WTTA iPKKPbc PKKPbc 21 07 44.0 -1.1
comp=Z,6.9nm,0.7s
NC602 NORSAR Array S 81.48 30 eP P 20 49 11.0 +0.8
NC602 NORSAR Array S 81.48 30 P P 20 49 10.9 +0.8
NC602 IAmb IAmb 20 50 25.7
comp=Z,251nm,2.0s
NORES NORESS Array B 81.48 30 P P 20 49 12.1 +2.0
NORES pmax pmax
comp=Z,1.0nm,0.3s
CTI Castel Tesino 81.49 45 P P 20 49 10.1 -0.6
CTI Castel Tesino 81.49 45 P P 20 49 10.1 -0.6
CTI pmax pmax
comp=Z,12nm,0.8s
TEOL Teolo 81.52 45 P P 20 49 10.8 +0.1
NC405 NORSAR Array S 81.57 29 P P 20 49 10.8 +0.1
NC405 IAmb IAmb 20 49 13.0
comp=Z,72nm,0.8s
MANZ Manzenberg 81.74 41 eP P 20 49 12.7 +0.9
comp=Z,21nm,0.8s,baz=269,slow=5.3
PLN Plauen 81.77 40 eP P 20 49 12.6 +0.7
comp=Z,18nm,0.9s,baz=269,slow=5.3
NSS Namsos 81.77 26 eP P 20 49 12.7 +1.1
ROTZ Rotzenmuhle 81.81 41 eP P 20 49 12.8 +0.7
comp=Z,12nm,1.1s,baz=269,slow=5.3
CHGN Chignik 81.81 326 P P 20 49 12.4 +0.4
CHGN IAmb IAmb 20 49 13.2
comp=Z,78nm,0.8s
GUNZ Gunzen 81.88 40 eP P 20 49 13.2 +0.7
comp=Z,13nm,1.0s,baz=269,slow=5.3
WERN Wernitzgruen 81.91 40 eP P 20 49 13.6 +0.9
comp=Z,15nm,1.0s,baz=269,slow=5.3
NKC Novy Kostel 81.96 40 eP P 20 49 13.3 +0.4
NKC Novy Kostel 81.96 40 eP P 20 49 13.3 +0.4
TANN Tannenbergstha 81.96 40 eP P 20 49 13.9 +0.9
comp=Z,42nm,0.9s,baz=269,slow=5.3
ABTA Abfaltersbach 82.07 44 iP P 20 49 14.1 +0.5
comp=Z,27nm,1.0s,SNR=6.3
MURB Monte Urbino 82.18 47 P P 20 49 12.6 -1.7
MURB IAmb IAmb 20 49 43.2
comp=Z,87nm,1.7s
STAL STALIGIAL 82.22 44 P P 20 49 14.6 +0.2
RJOB Jochberg 82.24 43 eP P 20 49 14.6 +0.1
comp=Z,15nm,0.7s,baz=269,slow=5.3
WET Wettzell 82.26 41 eP P 20 49 15.1 +0.6
comp=Z,21nm,1.3s,baz=269,slow=5.3
WET Wettzell 82.26 41 P P 20 49 14.8 +0.3
WET pmax pmax
comp=Z,18nm,1.0s
CLL Collm 82.29 39 eP P 20 49 15.4 +0.8
comp=Z,17nm,0.7s,baz=269,slow=5.3
CLL Collm 82.29 39⇓iP P 20 49 15.3 +0.8
comp=Z,17nm,0.7s
CLL Collm 82.29 39 P P 20 49 14.3 -0.3
CLL Collm 82.29 39⇓iP P 20 49 15.3 +0.8
CLL pmax pmax
comp=Z,17nm,0.7s
KONS Konsvik 82.29 24 eP P 20 49 15.0 +0.8
KBS Kingsbay 82.42 11 eP P 20 49 16.8 +2.1
KBS Kingsbay 82.42 11 P P 20 49 16.2 +1.5

KBS IAmb IAmb 20 49 18.0
comp=Z,62nm,0.9s
KBS Kingsbay 82.42 11 P **P 20 49 16.2 +1.5**
KBS pmax pmax
comp=Z,62nm,0.9s
LOF Lofoten 82.48 22 *e*P **P 20 49 16.2 +1.0**
CNBA Chernabura Isl 82.49 324 P **P 20 49 16.5 +0.9**
KBA Koelnbreinsper 82.63 43 *i* P **P 20 49 17.2 +0.5**
comp=Z,15nm,0.8s
KBA Koelnbreinsper 82.63 43 P **P 20 49 17.2 +0.5**
KBA pmax pmax
comp=Z,27nm,0.9s
KHC Kasperske Hory 82.72 41 *e*P **P 20 49 17.4 +0.5**
KHC Kasperske Hory 82.72 41 P **P 20 49 16.5 -0.4**
KHC Kasperske Hory 82.72 41⇑*e*P **P 20 49 18.0 +1.1**
KHC pmax pmax
comp=Z,39nm,1.0s
ROBS Robic 82.78 44 *i* P **P 20 49 17.3 +0.1**
GEC2 GERESS Array S 82.81 42 *e*P **P 20 49 18.0 +0.5**
comp=Z,18nm,0.7s,baz=269,slow=5.3
GEC2 GERESS Array S 82.81 42 P **P 20 49 17.2 -0.2**
GERES GERESS Array B 82.81 42 P **P 20 49 17.3 -0.2**
comp=Z,14nm,0.7s,baz=252,slow=2.7,SNR=38
GERES PKKPbc **PKKPbc 21 07 40.9 -1.1**
comp=Z,0.4nm,0.4s,baz=130,slow=1.5,SNR=3.6
MOR8 Moi Rana 82.83 24 *e*P **P 20 49 18.8 +1.7**
BRG Berggiesshubel 82.89 40 *e*P **P 20 49 18.6 +0.9**
comp=Z,14nm,0.8s,baz=269,slow=5.3
BRG Berggiesshubel 82.89 40 *e*P **P 20 49 18.5 +0.8**
BRG pmax pmax
comp=Z,14nm,0.8s
PBCC Pribram 82.97 41 *e*P **P 20 49 19.4 +1.2**
SDPT Sand Point 82.99 325 P **P 20 49 19.1 +1.0**
HSPB Hornsund (broa 83.11 13 *e*P **P 20 49 21.0 +2.7**
HSPB Hornsund (broa 83.11 13 *e*P **P 20 49 20.6 +2.3**
HSPB Hornsund (broa 83.11 13 *e*P **P 20 49 21.0 +2.7**
STEI Steigen 83.12 22 *e*P **P 20 49 19.9 +1.4**
MOA Molln 83.22 43 *i* P **P 20 49 20.0 +0.4**
comp=Z,17nm,0.8s
SPA0 Spitsbergen Ar 83.28 12 *e*P **P 20 49 20.9 +1.7**
SPA0 Spitsbergen Ar 83.28 12 P **P 20 49 20.7 +1.4**
SPA0 IAmb IAmb 20 49 21.7
comp=Z,123nm,1.1s
SPITS Spitsbergen Ar 83.28 12 P **P 20 49 20.6 +1.4**
SPITS pmax pmax
comp=Z,12nm,0.4s
PVCC Panska Ves 83.31 40 *e*P **P 20 49 20.4 +0.6**
PVCC Panska Ves 83.31 40 *e*P **P 20 49 20.4 +0.6**
PRU Pruhonice 83.31 40 *e*P **P 20 49 19.9 0.0**
PRU Pruhonice 83.31 40 *e*P **P 20 49 19.9 0.0**
GOPC GO Pecny, Ondr 83.47 41 *e*P **P 20 49 21.5 +0.7**
GOPC GO Pecny, Ondr 83.47 41 *e*P **P 20 49 21.5 +0.7**
LJU Ljubljana 83.49 44 *e*P **P 20 49 20.8 -0.1**
RDOG Red Dog Mine 83.69 338 P **P 20 49 22.5 +1.0**
RDOG IAmb IAmb 20 49 23.7
comp=Z,36nm,0.6s
RDOG pP **pP 20 50 01.4 +0.3**
SOKA Soboth 83.81 44 *i* P **P 20 49 22.6 0.0**
comp=Z,11nm,0.9s
TREC Trest 83.96 41 *e*P **P 20 49 24.1 +0.8**
TREC Trest 83.96 41 *e*P **P 20 49 24.1 +0.8**
ARSA Arzberg 84.11 43 *i* P **P 20 49 24.4 +0.3**
comp=Z,17nm,0.7s,SNR=5.7
UPC Upice 84.23 40 *e*P **P 20 49 24.8 +0.3**
UPC Upice 84.23 40 *e*P **P 20 49 24.8 +0.3**
CHVC Chvalec 84.25 40 *e*P **P 20 49 25.6 +0.9**
CONA Conrad Observa 84.29 43 *i* PcP **P 20 49 25.9 +0.9**
comp=Z,18nm,0.8s
OSTC Ostas 84.35 40 *e*P **P 20 49 26.2 +1.0**
TRO Tromso 84.38 21 *e*P **P 20 49 26.1 +1.2**
KSP Ksiaz 84.38 40 *e*P **P 20 49 26.7 +1.4**
KSP Ksiaz 84.38 40 *e*P **P 20 49 26.7 +1.4**
DPC Dobruska-Polom 84.43 40 *e*P **P 20 49 26.2 +0.6**
DPC *e*x x 20 50 13.9
DPC Dobruska-Polom 84.43 40 *e*P **P 20 49 26.2 +0.6**
DPC *e* 20 50 13.9
KRUC Moravsky 84.57 41 *e*P **P 20 49 26.0 -0.3**
VRAC Vranov 84.68 41 *e*P **P 20 49 26.7 -0.2**
VRAC Vranov 84.68 41 ⇑P **P 20 49 26.9 +0.1**
VRAC Vranov 84.68 41 P **P 20 49 27.0 +0.1**
VRAC pmax pmax
comp=Z,18nm,1.0s
KRLC Kraliky 84.75 40 *e*P **P 20 49 27.8 +0.6**
KRLC Kraliky 84.75 40 *e*P **P 20 49 27.8 +0.6**
SOP Sopron 84.78 43 P **P 20 49 27.2 -0.2**
SOP pmax pmax
comp=Z,12nm,0.9s
GKP Gorka Klasztor 84.79 37 *e*P **P 20 49 29.2 +1.9**
GKP Gorka Klasztor 84.79 37 *e*P **P 20 49 29.2 +1.9**
ANM Nome 84.91 334 P **P 20 49 28.7 +1.1**
ANM pP **pP 20 50 07.6 +0.3**
ANM Nome 84.91 334 P **P 20 49 28.7 +1.1**
ANM *PP **pP 20 50 07.6 +0.3**
ANM pmax pmax
comp=Z,42nm,1.4s
MODS Modra-Piesok 85.21 42 *e*P **P 20 49 29.5 0.0**
MODS pmax pmax
comp=Z,25nm,1.0s
MODS Modra-Piesok 85.21 42 *e*P **P 20 49 29.5 0.0**
MORC Moravsky Berou 85.26 41 *e*P **P 20 49 29.9 +0.1**
MORC Moravsky Berou 85.26 41 ⇓P **P 20 49 30.5 +0.7**
MORC Moravsky Berou 85.26 41 P **P 20 49 30.1 +0.3**
MORC Moravsky Berou 85.26 41 ⇓P **P 20 49 30.5 +0.7**
SMOL Smolenice 85.29 42 *e*P **P 20 49 31.0 +1.1**
SMOL pmax pmax
comp=Z,3.0nm,0.8s
SMOL Smolenice 85.29 42 *e*P **P 20 49 31.0 +1.1**
JAVC Velka Javorina 85.42 41 *e*P **P 20 49 31.8 +1.2**
TIP Timpagrande 85.62 51 P **P 20 49 30.3 -1.6**
OKC Ostrava-Krasne 85.65 40 *e*P **P 20 49 32.6 +1.0**
OKC Ostrava-Krasne 85.65 40 *e*P **P 20 49 32.6 +1.0**
HAMF Hammerfest 85.88 19 *e*P **P 20 49 33.5 +1.1**
VYHS Vyhne 86.23 42 *e*P **P 20 49 35.4 +0.8**
VYHS pmax pmax
comp=Z,12nm,0.9s
VYHS Vyhne 86.23 42 *e*P **P 20 49 35.4 +0.8**
BUD Budapest 86.46 43 P **P 20 49 36.4 +0.7**
BUD pmax pmax
comp=Z,20nm,0.9s
UNV Unalaska Valle 86.60 324 P **P 20 49 37.6 +1.4**
VAF Ylistaro 86.60 27 P **P 20 49 36.9 +0.9**
VAF pmax pmax
comp=Z,30nm,1.4s
OJC Ojcow 86.67 40 *e*P **P 20 49 37.7 +1.0**
OJC Ojcow 86.67 40 P **P 20 49 37.6 +1.0**
OJC Ojcow 86.67 40 *e*P **P 20 49 37.7 +1.0**
ARCES ARCESS Array B 86.68 20 P **P 20 49 36.7 +0.4**
comp=Z,29nm,0.7s,baz=275,slow=3.7,SNR=116
ARE0 ARCESS Array S 86.68 20 *e*P **P 20 49 37.2 +0.9**
ARE0 ARCESS Array S 86.68 20 P **P 20 49 37.0 +0.7**
NIE Niedzica 87.08 41 *e*P **P 20 49 40.4 +1.7**
NIE Niedzica 87.08 41 *e*P **P 20 49 40.4 +1.7**
BEL Belsk 87.09 38 *e*P **P 20 49 40.3 +1.7**
BEL Belsk 87.09 38 *e*P **P 20 49 40.3 +1.7**
KEV Kevo 87.15 20 P **P 20 49 39.0 +0.5**
KEV IAmb IAmb 20 49 40.2
comp=Z,72nm,1.1s
KEV Kevo 87.15 20 P **P 20 49 39.0 +0.5**
KEV pmax pmax
comp=Z,72nm,1.1s
PDG Podgorica 87.18 48 ⇑P **P 20 49 40.3 +1.1**
OUL Oulu 87.66 25 P **P 20 49 41.6 +0.6**
OUL pmax pmax
comp=Z,49nm,1.2s
TIR Tirane 87.76 49 P **P 20 49 43.1 +1.1**
TIR Tirane 87.76 49 P **P 20 49 43.1 +1.1**
GAMB Gambell 87.77 334 P **P 20 49 43.7 +2.2**
GAMB IAmb IAmb 20 49 44.5
comp=Z,54nm,0.8s
GAMB pP **pP 20 50 22.3 +0.9**
CRVS Cervenica-Dubn 87.91 41 *e*P **P 20 49 44.1 +1.5**
CRVS pmax pmax
comp=Z,38nm,1.6s
CRVS Cervenica-Dubn 87.91 41 *e*P **P 20 49 44.1 +1.5**
VNA3 Neumayer Olymp 88.13 163 P **P 20 49 42.8 -0.3**
VNA1 Neumayer--Stat 88.27 162 P **P 20 49 43.9 +0.2**
PABE Paberze 88.43 34 *e*P **P 20 49 45.7 +0.9**
PABE IAmb IAmb 20 49 46.9
comp=Z,37nm,0.9s
KOLS Kolonicke sedl 88.43 41 *e*P **P 20 49 45.6 +0.5**
KOLS pmax pmax
comp=Z,6.0nm,1.3s
KOLS Kolonicke sedl 88.43 41 *e*P **P 20 49 45.6 +0.5**

FINES FINESS Array B 88.44 28 P **P 20 49 45.1 +0.3**
comp=Z,24nm,0.9s,baz=290,slow=3.9,SNR=37
FINES PKiKP **PKiKP 20 54 45.1 +0.5**
comp=Z,1.0nm,0.5s,baz=253,slow=1.5,SNR=5.2
FINES PKKPbc **PKKPdf 21 07 25.3 +2.6**
comp=Z,1.6nm,0.6s,baz=111,slow=3.8,SNR=7.6
FINES FINESS Array B 88.44 28 P **P 20 49 45.1 +0.3**
FINES **pP 20 50 25.1 -0.5**
FINES **PKiKP 20 54 45.2 +0.5**
FINES **PKKPdf 21 07 25.2 +2.6**
FIA1 FINESS Array S 88.44 28 P **P 20 49 45.2 +0.4**
FIA1 IAmb IAmb 20 49 46.4
comp=Z,40nm,1.1s
FIA1 **pP 20 50 24.4 -1.2**
BZS Buzias 88.47 44 ⇑P **P 20 49 46.8 +1.5**
BZS Buzias 88.47 44 ⇑P **P 20 49 46.8 +1.5**
UZH Uzhgorod 88.49 41 *e*P P 20 49 57.7 +12
KWP Kalwaria Pacla 88.61 40 *e*P **P 20 49 47.9 +2.0**
KWP Kalwaria Pacla 88.61 40 P **P 20 49 47.0 +1.1**
KWP Kalwaria Pacla 88.61 40 P **P 20 49 47.0 +1.1**
KWP pmax pmax
comp=Z,118nm,0.6s
VNA2 Neumayer--Watz 88.65 163 P **P 20 49 45.3 -0.3**
baz=311,slow=6.1
MSF Maaselka 88.76 24 P **P 20 49 46.8 +0.6**
MSF pmax pmax
comp=Z,41nm,1.0s
FNA Florina 88.97 49 P **P 20 49 47.6 -0.2**
FNA Florina 88.97 49 P **P 20 49 47.6 -0.2**
FNA pmax pmax
comp=Z,10.0nm,0.7s
DRGR 89.05 43 ⇑P **P 20 49 49.5 +1.4**
DRGR 89.05 43 ⇑P **P 20 49 49.5 +1.4**
GZR Gura Zlata 89.31 45 ⇑P **P 20 49 50.1 +0.8**
GZR Gura Zlata 89.31 45 ⇑P **P 20 49 50.1 +0.8**
VSU Vasula 89.36 31 *e*P **P 20 49 48.9 -0.3**
VSU Vasula 89.36 31*de*P **P 20 49 49.8 +0.6**
VSU pmax pmax
comp=Z,147nm,1.0s
ISAL Salakas 89.62 34 *e*P **P 20 49 51.7 +1.2**
ISAL IAmb IAmb 20 49 53.4
comp=Z,14nm,0.9s
IZAR Zarasai 89.65 34 *e*P **P 20 49 51.6 +1.0**
CJR Cluj-Napoca 89.66 43 ⇑P **P 20 49 52.3 +1.4**
CJR Cluj-Napoca 89.66 43 ⇑P **P 20 49 52.3 +1.4**
IIGN Ignalina 89.72 34 *e*P **P 20 49 52.0 +1.1**
IIGN IAmb IAmb 20 49 53.9
comp=Z,23nm,0.8s
ITM Ithomi 89.91 53 P **P 20 49 52.6 +0.4**
ITM pP **pP 20 50 31.3 -1.8**
ITM IAmb IAmb 20 50 33.2
comp=Z,29nm,0.8s
LIT Litokhoron 89.91 50 P **P 20 49 52.2 0.0**
LIT Litokhoron 89.91 50 P **P 20 49 52.2 0.0**
LIT pmax pmax
comp=Z,9.0nm,0.9s
AGG Agios Georgios 89.95 51 P **P 20 49 52.4 0.0**
AGG IAmb IAmb 20 50 27.2
comp=Z,24nm,0.7s
AGG Agios Georgios 89.95 51 P **P 20 49 52.4 0.0**
AGG pmax pmax
comp=Z,24nm,0.7s
APA Apatity 89.98 22⇑*i*P **P 20 49 51.6 -0.3**
APA pmax pmax
comp=Z,15nm,0.8s
KNT Kendrikon 90.05 49 P **P 20 49 53.7 +0.9**
KNT pmax pmax
comp=Z,7.0nm,1.1s
VTS Vitosha 90.07 47 ⇑P **P 20 49 53.6 +0.5**
VTS Vitosha 90.07 47 P **P 20 49 53.1 +0.1**
VTS Vitosha 90.07 47 ⇑P **P 20 49 53.6 +0.5**
ARCR ARCALIA 90.11 43 ⇑P **P 20 49 54.1 +1.2**
NACGM Naroch 90.13 35 *e* **P 20 49 52.0 -0.8**
SNAA Sanae 90.30 163 P **P 20 49 53.0 -0.3**
SNAA Sanae 90.30 163 P **P 20 49 52.7 -0.6**
comp=Z,30nm,0.8s,baz=278,slow=5.0,SNR=84
SNAA Sanae 90.30 163 P **P 20 49 52.1 -1.2**
SNAA IAmb IAmb 20 49 53.9
comp=Z,37nm,0.9s
LVZ Lovozero 90.32 21 P **P 20 49 53.8 +0.2**
LVZ pP **pP 20 50 33.5 -1.1**
LVZ Lovozero 90.32 21⇑*e*P **P 20 49 54.0 +0.5**
LVZ pmax pmax
comp=Z,42nm,1.2s
JOF Joensuu 90.48 26 P **P 20 49 54.6 +0.3**
JOF pmax pmax
comp=Z,14nm,1.5s
BUR08 Bucovina Ar. S 90.57 42 P **P 20 49 55.8 +0.5**
SRS Serrai 90.58 49 P **P 20 49 55.7 +0.4**
SRS pmax pmax
comp=Z,7.0nm,1.2s
BURAR Bucovina Array 90.59 42 ⇑P **P 20 49 57.4 +2.1**
BURAR Bucovina Array 90.59 42 P **P 20 49 55.7 +0.4**
BURAR Bucovina Array 90.59 42 P **P 20 49 55.7 +0.4**
ARR Arges 90.60 44 ⇑P **P 20 49 56.7 +1.4**
PAIG Paliouri 90.84 50 P **P 20 49 54.7 -1.8**
PAIG pmax pmax
comp=Z,17nm,1.1s
PUL Pulkovo 90.86 29⇓*e*P **P 20 49 58.1 +2.0**
PUL pmax pmax
comp=Z,39nm,0.9s
PLVB Pleven 90.94 46 ⇑P **P 20 49 57.3 +0.4**
HUMR Humele 90.99 45 ⇓P **P 20 49 58.1 +1.0**
OZUR 91.26 43 ⇑P **P 20 50 01.9 +3.5**
PRAR RASCA 91.31 42 ⇓P **P 20 49 59.7 +1.2**
MLR Muntele Rosu 91.48 44 PKKPbc PKKPbc 21 07 20.1 -0.8
comp=Z,2.2nm,0.8s,baz=181,slow=6.6,SNR=4.7
MLR Muntele Rosu 91.48 44 ⇑P **P 20 50 01.0 +1.5**
MLR Muntele Rosu 91.48 44 P **P 20 49 58.8 -0.7**
MLR IAmb IAmb 20 50 01.1
comp=Z,25nm,0.9s
MLR Muntele Rosu 91.48 44 P **P 20 49 58.8 -0.7**
MLR pmax pmax
comp=Z,25nm,0.9s
PLOR Plostina 91.90 44 ⇑P **P 20 50 02.5 +1.2**
PLOR Plostina 91.90 44 ⇑P **P 20 50 02.5 +1.2**
ELND Elena 91.93 47 ⇑P **P 20 50 02.5 +1.0**
VRI Vrincioaia 91.95 44 ⇑P **P 20 50 03.4 +1.9**
VRI Vrincioaia 91.95 44 ⇑P **P 20 50 03.4 +1.9**
RAZG Razgrad 92.26 46 ⇑P **P 20 50 03.2 +0.2**
AKASG Malin Array Be 92.51 38 P **P 20 50 03.5 -0.4**
comp=Z,1.3nm,0.6s,baz=284,slow=3.7,SNR=10.0
AKASG PKKPbc **PKKPdf 21 07 16.3 +1.0**
comp=Z,2.5nm,0.7s,baz=78,slow=2.9,SNR=10
AKASG Malin Array Be 92.51 38 P **P 20 50 02.8 -1.2**
AKASG **PKKPdf 21 07 16.4 +1.0**
AKASG Malin Array Be 92.51 38 *i* P **P 20 50 02.5 -1.5**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKBB Malin Array Si 92.51 38 P **P 20 50 04.1 +0.1**
AKBB Malin Array Si 92.51 38 P **P 20 50 04.1 +0.1**
AKBB pmax pmax
comp=Z,6.0nm,1.2s
SORM Soroca 92.55 41 ⇑P **P 20 50 04.5 +0.3**
SORM Soroca 92.55 41 ⇑P **P 20 50 04.5 +0.3**
GSTR Great Sitkin T 92.59 323 P **P 20 50 05.2 +0.8**
APE Apeiranthos 92.76 52*de*P **P 20 50 04.9 -0.6**
APE pmax pmax
comp=Z,16nm,1.0s
TSUM Tsumeb 92.81 109 P **P 20 50 05.8 -0.3**
SANT Santorini 92.83 53 ⇑P **P 20 50 05.5 -0.4**
TMCR Tamitsa 92.93 24 *e*P **P 20 50 05.3 -0.3**
TMCR pmax pmax
comp=Z,31nm,1.3s
ADK Adak 93.02 323 P **P 20 50 06.9 +0.6**
ADK IAmb IAmb 20 50 12.2
comp=Z,54nm,1.0s
ADK Adak 93.02 323 P **P 20 50 06.9 +0.6**
ADK pmax pmax
comp=Z,55nm,1.0s
ICOR Ion Corvin 93.06 45 ⇑P **P 20 50 07.4 +0.8**
MILM Milestii Mici 93.13 42 ⇑P **P 20 50 07.7 +0.8**
JURR Jurilovca 93.67 44 ⇑P **P 20 50 09.7 +0.2**
KARP Karpathos 94.35 54 P **P 20 50 11.9 -0.9**
KARP IAmb IAmb 20 51 12.8
comp=Z,35nm,1.1s
NVL N'lazarevskaya 94.68 161 *e*P **P 20 50 12.6 -0.8**
NVL pmax pmax
comp=Z,10.0nm,0.7s
BILL Bilibino 94.68 341 P **P 20 50 14.5 +0.9**
BILL IAmb IAmb 20 50 15.9
comp=Z,25nm,1.0s
BILL pP **pP 20 50 54.2 +0.3**

BILL Bilibino 94.68 341*ce*P **P 20 50 15.0 +1.4**
BILL *i* *PP **pP 20 50 53.6 -0.3**
BILL *e* 20 54 03.9
BILL *e*S **SKSac 21 00 37.0 +3.2**
BILL *e*SS **SS 21 07 37.8 -1.5**
BILL pmax pmax
comp=Z,33nm,1.2s
OBN Obninsk 95.48 33 PKKPbc PKKPbc 21 07 09.0 -1.7
comp=Z,1.4nm,0.5s,baz=117,slow=6.8,SNR=4.5
OBN Obninsk 95.48 33 PKKPdf 21 07 08.7 -1.4
OBN Obninsk 95.48 33*de*P **P 20 50 17.7 +0.2**
OBN *e*S **SKSac 21 00 36.7 -1.7**
OBN pmax pmax
comp=Z,28nm,1.2s
QSPA South Pole Qui 96.80 180 P **P 20 50 23.1 -0.2**
PRGR Permogore 97.15 25 *e*P P 20 50 19.8 -5.1
PRGR pmax pmax
comp=Z,23nm,0.9s
BR131 Keskin Array S 98.36 48⇓*e*P Pdif 20 50 31.4 +0.3
BRTR Keskin Array B 98.36 48 P **P 20 50 30.4 -0.6**
comp=Z,1.0nm,1.0s,baz=259,slow=2.9,SNR=6.2
BRTR PKKPbc **PKKPbc 21 07 01.9 -0.6**
comp=Z,1.3nm,0.6s,baz=137,slow=5.1,SNR=8.6
BRTR Keskin Array B 98.36 48 P **P 20 50 30.0 -1.1**
BRTR **PKKPbc 21 07 01.4 -1.1**
BRTR Keskin Array B 98.36 48*ce*P Pdif 20 50 32.7 +1.6
BRTR pmax pmax
comp=Z,1.0nm,1.0s
TIXI Tiksi 100.39 353⇓*e*P **Pdif 20 50 40.0 +0.8**
KBZ Khabaz 103.55 42 PKiKP **PKiKP 20 55 12.2 +0.6**
comp=Z,1.5nm,0.9s,baz=303,slow=5.6,SNR=4.4
KBZ PKKPbc **PKKPbc 21 06 46.6 -1.0**
comp=Z,4.0nm,0.8s,baz=127,slow=1.9,SNR=14
ARU Arti 105.59 26 PKKPbc PKKPbc 21 06 40.2 -1.8
comp=Z,0.4nm,0.5s,baz=122,slow=2.0,SNR=5.2
ARU Arti 105.59 26 PKKPbc 21 06 39.9 -2.1
AKTO Aktyubinsk 109.09 31 PKKPbc PKKPbc 21 06 29.1 -1.8
comp=Z,3.8nm,0.3s,baz=109,slow=3.4,SNR=18
BRVK Borovoye 112.78 23*c i*PKIKP **PKiKP 20 55 27.7 -1.0**
BRVK pmax pmax
comp=Z,3.0nm,0.6s
BVAR Borovoye Array 112.85 23 PKKPbc PKKPbc 21 06 15.9 -2.9
comp=Z,3.3nm,0.9s,baz=154,slow=4.1,SNR=15
GEYT Alibeck 116.44 42 PKP **PKiKP 20 55 36.8 +0.6**
comp=Z,4.2nm,0.4s,baz=299,slow=3.3,SNR=20
GEYT SKP **SKPdf 20 58 57.8 +0.7**
comp=Z,1.8nm,0.6s,baz=248,slow=5.9,SNR=4.7
GEYT PKKPbc **PKKPbc 21 06 02.1 -3.9**
comp=Z,3.6nm,0.8s,baz=182,slow=4.5,SNR=9.8
GEYT Alibeck 116.44 42 **PKiKP 20 55 36.5 +0.3**
GEYT pPKPdf pPKPdf 20 56 21.2 +2.6
GEYT **SKiKP 20 58 57.4 +0.2**
GEYT **PKKPbc 21 06 01.6 -4.5**
ZAA0 Zalesovo Array 116.68 14 **PKiKP 20 55 36.6 +0.5**
ZALV Zalesovo Beam 116.68 14 PKP **PKiKP 20 55 36.6 +0.5**
comp=Z,27nm,0.6s,baz=277,slow=2.2,SNR=133
ZALV SKP **SKPdf 20 58 57.5 +0.6**
comp=Z,9.8nm,0.8s,baz=287,slow=2.2,SNR=13
ZALV PKKPbc **PKKPbc 21 06 00.9 -4.8**
comp=Z,0.7nm,0.3s,baz=176,slow=3.5,SNR=5.4
ZALV Zalesovo Beam 116.68 14 **PKiKP 20 55 36.4 +0.3**
ZALV pPKPdf pPKPdf 20 56 19.7 +1.3
ZALV **SKPdf 20 58 57.0 0.0**
ZALV **PKKPbc 21 06 00.6 -5.1**
ZEA Zeya 117.31 347 *e*PKIKP **PKiKP 20 55 38.2 +0.8**
KURK Kurchatov 117.72 20 **PKiKP 20 55 38.8 +0.5**
KURK pPKPdf **pPKPdf 20 56 20.9 +0.5**
KURK Kurchatov 117.72 20*c i*PKIKP **PKiKP 20 55 38.6 +0.4**
KURK pmax pmax
comp=Z,27nm,1.0s
YSS Yuzh-Sakhalins 117.78 333⇓*e*PKIKP **PKPdf 20 55 37.3 -1.1**
YSS pmax pmax
comp=Z,23nm,1.7s
KLR Kul'dur 120.14 341⇓*i*PKIKP **PKiKP 20 55 43.5 +0.5**
KK31 Karatay Array 120.35 30⇑*e*PKIKP **PKPdf 20 55 43.7 +0.1**
KK31 pmax pmax
comp=Z,1.0nm,0.3s
KKAR Karatay Array 120.35 30 **PKiKP 20 55 43.8 +0.1**
KKAR Karatay Array 120.35 30 PKIKP **PKiKP 20 55 43.8 +0.1**
DZM Mont Dzumac 120.75 248 PKP **PKiKP 20 55 46.5 +1.5**
comp=Z,12nm,0.8s,baz=66,slow=20,SNR=4.6
DZM Mont Dzumac 120.75 248 **PKiKP 20 55 45.9 +0.8**
HRA Herat 121.19 43 **PKPdf 20 55 45.7 0.0**
HRA pPKPdf **pPKPdf 20 56 26.2 -1.9**
MOY Mondy 121.55 4 *e*PKIKP **PKiKP 20 55 47.4 +1.5**
MOY pmax pmax
comp=Z,29nm,2.3s
TLY Talaya 121.69 2 **PKiKP 20 55 46.8 +0.7**
TLY Talaya 121.69 2 *i* PKIKP **PKiKP 20 55 47.1 +1.0**
TLY *e*SS SS 21 13 47.7 +5.4
TLY pmax pmax
comp=Z,14nm,0.6s
USP Ospenovka 122.14 28 P **PKiKP 20 55 48.5 +1.3**
SNR=5.7
MAKZ Makanchi 122.21 20 **PKPdf 20 55 46.9 -0.2**
MAKZ Makanchi 122.21 20 PKIKP **PKPdf 20 55 46.9 -0.2**
EKS2 Erkin-Say 122.27 28 P **PKiKP 20 55 49.3 +1.7**
SNR=11
MK31 Makanchi Array 122.33 20 **PKPdf 20 55 47.3 -0.1**
MK31 Makanchi Array 122.33 20 *i* PKIKP **PKPdf 20 55 47.2 -0.1**
MK31 pmax pmax
comp=Z,9.0nm,0.4s
MKAR Makanchi Array 122.33 20 PKP **PKPdf 20 55 47.3 0.0**
comp=Z,13nm,0.4s,baz=313,slow=2.3,SNR=315
MKAR SKP **SKPdf 20 59 08.6 +0.5**
comp=Z,5.6nm,0.8s,baz=332,slow=2.1,SNR=9.2
MKAR PKKPbc **PKKPbc 21 05 42.2 -2.7**
comp=Z,1.3nm,0.9s,baz=134,slow=5.2,SNR=8.3
MKAR Makanchi Array 122.33 20 **PKPdf 20 55 47.2 0.0**
MKAR pPKPdf **pPKPdf 20 56 27.5 -2.0**
MKAR **SKPdf 20 59 08.1 0.0**
MKAR **PKKPbc 21 05 41.5 -3.4**
CHMS Chumysh 122.47 28 P **PKiKP 20 55 48.8 +1.0**
SNR=6.9
FRU1 Bishkek 122.56 28 **PKPdf 20 55 48.1 +0.2**
FRU1 pPKPdf **pPKPdf 20 56 31.5 +1.1**
FRU1 Bishkek 122.56 28 PKIKP **PKPdf 20 55 48.1 +0.2**
AAK Ala-Archa 122.63 28 PKKPbc PKKPbc 21 05 42.6 -1.2
comp=Z,4.2nm,0.8s,baz=152,slow=2.9,SNR=11
AAK Ala-Archa 122.63 28 P **PKiKP 20 55 49.4 +1.0**
SNR=15
AAK Ala-Archa 122.63 28 **PKiKP 20 55 49.7 +1.3**
AAK pPKPdf **pPKPdf 20 56 32.7 +2.0**
AAK **PKKPbc 21 05 41.8 -2.0**
AAK Ala-Archa 122.63 28*c i*PKIKP **PKiKP 20 55 49.3 +0.9**
AAK pmax pmax
comp=Z,23nm,1.0s
AML Almayashu 122.64 29 P **PKiKP 20 55 50.3 +1.6**
SNR=9.4
BTK Batken 122.71 33 **PKiKP 20 55 48.8 +0.3**
BTK pPKPdf **pPKPdf 20 56 32.0 +1.2**
KBK Karagaybulak 122.82 28 P **PKiKP 20 55 50.1 +1.4**
SNR=9.5
UCH Uchtor 122.95 28 P **PKiKP 20 55 50.6 +1.2**
SNR=18
ZAK Zakamensk 122.97 3 *e*PKIKP **PKiKP 20 55 49.2 +0.5**
ZAK pmax pmax
comp=Z,11nm,1.1s
HIA Hailar 123.06 350 **PKiKP 20 55 49.0 +0.2**
HIA PP **PP 20 57 26.9 -1.9**
HIA Hailar 123.06 350 PKIKP **PKiKP 20 55 49.0 +0.2**
HIA 20 57 27.0
ULHL Ulahol 123.74 27 P **PKiKP 20 55 52.2 +1.5**
SNR=7.7
NRN Naryn 124.27 28 **PKiKP 20 55 52.5 +0.6**
NRN pPKPdf **pPKPdf 20 56 35.8 +1.8**
NRN Naryn 124.27 28 PKIKP **PKiKP 20 55 52.5 +0.6**
USA0B Ussuriysk Arra 124.43 338 **PKPdf 20 55 51.5 +0.2**
USA0B **pPKPdf 20 56 30.9 -2.6**
USA0B Ussuriysk Arra 124.43 338*d i*PKIKP **PKiKP 20 55 52.3 +0.7**
USRK Ussuriysk Ar. 124.43 338 PKP **PKiKP 20 55 52.2 +0.6**
comp=Z,28nm,0.9s,baz=254,slow=1.0,SNR=38
USRK pPKP **pPKPdf 20 56 33.0 -0.5**
comp=Z,7.0nm,0.8s,baz=274,slow=1.3,SNR=3.4
USRK Ussuriysk Ar. 124.43 338 **PKiKP 20 55 52.1 +0.4**
USRK **pPKPdf 20 56 30.7 -2.8**
MDJ Mudanjiang 124.91 340 PKP **PKiKP 20 55 53.1 +0.5**
MDJ PP **PP 20 57 44.6 +3.3**
MDJ Mudanjiang 124.91 340 **PKiKP 20 55 52.7 +0.1**
KBL Kabul 125.50 39 **PKPdf 20 55 54.1 +0.2**
KBL pPKPdf **pPKPdf 20 56 37.9 +1.4**
ULN Ulaanbaatar 125.58 360 **PKiKP 20 55 54.6 +0.6**
ULN Ulaanbaatar 125.58 360 PKIKP **PKiKP 20 55 54.6 +0.6**
SONM Songino Array 125.61 0 PKP **PKiKP 20 55 54.8 +0.7**

comp=Z,24nm,0.7s,baz=312,slow=1.1,SNR=129
SONM PKKPbc PKKPab 21 05 28.2 -3.0
comp=Z,0.8nm,0.8s,baz=167,slow=4.4,SNR=5.6
SONM Songino Array 125.61 0 PKiKP 20 55 54.6 +0.5
SONM Songino Array 125.61 0 PKIKP PKiKP 20 55 54.6 +0.5
KSH Kashi 125.75 29 PKP PKiKP 20 55 55.8 +1.2
KSH sPKP 20 56 51.8
KSH PP PP 20 57 52.0 +4.6
KSH PKS 20 59 30.7
KSH SKS SKSdf 21 02 42.9 -8.6
KSH SKKS SKKSac 21 04 26.7 -4.3
KSH SS SS 21 14 33.9 -0.9
KSH AMB AMB
comp=Z,110nm,4.7s
KSH LR LR
comp=Z,210nm,4.8s
KSH LR LR
comp=Z,120nm,6.3s
KSH LR LR
comp=Z,440nm,5.8s
WMQ Urumqi 126.70 17 ePKP PKPdf 20 55 55.7 -0.1
WMQ LR LR
comp=Z,740nm,22.7s
WMQ LR LR
comp=Z,710nm,24.1s
WMQ Urumqi 126.70 17 PKiKP 20 55 56.6 +0.3
WMQ Urumqi 126.70 17 PKIKP PKiKP 20 55 56.6 +0.3
CN2 Changchun 126.93 343 ePKP PKiKP 20 55 57.1 +0.5
MAJO Matsushiro 127.87 328 PKPdf 20 55 58.4 +0.2
MAJO pPKPdf pPKPdf 20 56 36.4 -4.0
MAJO Matsushiro 127.87 328 PKIKP PKPdf 20 55 58.4 +0.2
MAJO 20 56 36.4
MAT Matsushiro 127.87 328 PKP PKPdf 20 55 57.8 -0.4
MJAR Matsushiro Arr 127.87 328 PKP PKiKP 20 55 58.9 +0.2
comp=Z,9.8nm,0.8s,baz=158,slow=0.1,SNR=19
MJAR pPKP pPKPdf 20 56 40.3 0.0
comp=Z,5.2nm,0.8s,baz=230,slow=0.6,SNR=4.4
MJAR Matsushiro Arr 127.87 328 PKiKP 20 55 58.6 -0.2
MJAR pPKPdf 20 56 40.3 0.0
MJAR Matsushiro Arr 127.87 328 PKIKP PKiKP 20 55 58.6 -0.2
MJB9 Matsu-Tunnel 127.87 328 PKPdf 20 55 58.5 +0.3
MJB9 pPKPdf pPKPdf 20 56 39.2 -1.1
NIL Nilore 128.65 36 PKPdf 20 56 00.0 +0.2
NIL Nilore 128.65 36 PKIKP PKPdf 20 56 00.0 +0.2
DHRM DHARAMSHALA 131.43 35 eP PKPdf 20 56 03.5 -1.8
DHRM IAmb IAmb 20 56 07.9
comp=Z,18nm,0.9s
KS19 Wonju Array Si 131.79 338 PKiKP 20 56 06.3 -0.3
KSRS Korea Array 131.81 338 PKP PKiKP 20 56 07.0 +0.4
comp=Z,11nm,0.8s,baz=22,slow=2.0,SNR=22
KSRS PP PP 20 58 28.5 +1.9
comp=Z,3.5nm,0.9s,baz=12,slow=5.8,SNR=4.5
KSRS SKPbc SKPab 20 59 17.8 +0.1
comp=Z,8.8nm,0.9s,baz=26,slow=3.7,SNR=4.7
KSAR Wonju Array Be 131.84 338 PKPdf 20 56 04.1 -1.6
KSAR pPKPdf 20 56 47.0 -0.9
CAN Canberra 132.10 228 PKPdf 20 56 04.8 -1.5
CAN Canberra 132.10 228 PKIKP PKPdf 20 56 04.8 -1.5
HHC Hu-ho-hao-te 132.40 355 ePKP PKPdf 20 56 08.3 +0.4
HHC sPKP 20 57 04.3
BJT Baijiatuau 132.65 350 PKPdf 20 56 06.7 -0.4
BJT Baijiatuau 132.65 350 PKIKP PKPdf 20 56 06.7 -0.4
SMLA Simla 132.75 35 eP PKPdf 20 56 06.9 -0.6
SMLA i x x 20 56 52.5
BTO Baotou 132.75 357 ePKP PKPdf 20 56 03.9 -3.5
TOO Toolangi 133.50 223 PKPdf 20 56 09.2 +0.4
TOO Toolangi 133.50 223 PKIKP PKPdf 20 56 09.2 +0.4
GTA Gaotai 133.56 8 ⇑PKP PKiKP 20 56 10.1 -0.2
TIY Taiyuan 135.43 354 ePKP PKPdf 20 56 13.8 -0.3
TIA Tai'an 136.17 348 P PKPdf 20 56 05.1 -8.7
LZH Lanzhou 137.25 4 ePKP PKPdf 20 56 16.2 +0.1
LZH sPKP 20 57 15.2
LZH LR LR
comp=Z,130nm,18.1s
LZH LR LR
comp=Z,140nm,18.0s
LZH LR LR
comp=Z,150nm,20.2s
DANN Dangsing 138.52 32 eP pPKiKP 20 57 03.9 +0.6
comp=Z,104nm,0.8s
KOLN Koldanda 138.90 32 eP pPKiKP 20 57 03.9 -0.1
STKA Stephens Creek 139.17 228 PKhKP PKPpre 20 56 13.1
comp=Z,2.0nm,0.3s,baz=110,slow=4.9,SNR=12
STKA PKP PKPdf 20 56 20.5 +1.0
comp=Z,33nm,0.9s,baz=124,slow=1.9,SNR=30
STKA SKPbc SKPbc 20 59 39.8 -0.3
comp=Z,15nm,0.8s,baz=83,slow=3.5,SNR=10
STKA Stephens Creek 139.17 228 PKPpre 20 56 11.1
STKA PKPdf PKPdf 20 56 20.0 +0.6
STKA pPKPdf pPKPdf 20 57 00.8 -0.9
STKA SKPbc 20 59 39.0 -1.0
STKA Stephens Creek 139.17 228 PKIKP PKPdf 20 56 20.0 +0.6
STKA 20 57 00.8
GKN Gorkha 139.25 31 eP pPKiKP 20 57 04.7 0.0
XAN Xi'an 139.35 357 PKP PKPdf 20 56 13.0 -6.8
XAN Xi'an 139.35 357 PKPpre 20 56 11.2
XAN PKPdf PKPdf 20 56 20.6 +0.7
XAN pPKPdf pPKPdf 20 57 01.2 -0.9
XAN Xi'an 139.35 357 PKIKP PKPdf 20 56 20.5 +0.7
MANU Manus Island 139.43 275 PKPdf 20 56 21.5 +1.1
CTA Charters Tower 139.66 247 PKhKP PKPpre 20 56 11.9
comp=Z,4.4nm,0.6s,baz=76,slow=2.1,SNR=6.7
CTA PKP PKPdf 20 56 21.8 +1.1
comp=Z,20nm,0.7s,baz=147,slow=2.9,SNR=12
CTA SKPbc SKPbc 20 59 41.6 -0.1
comp=Z,18nm,0.9s,baz=50,slow=1.3,SNR=6.8
NJ2 Nanjing 139.73 344 ePKP PKPdf 20 56 21.4 +0.9
KKN Kakani 139.75 30 eP pPKiKP 20 57 05.5 -0.3
comp=Z,40nm,0.8s
DMN Daman 139.81 31 eP pPKiKP 20 57 05.8 -0.1
PKIN Phulchoki 139.98 30 eP pPKiKP 20 57 05.6 -0.7
PKI Pulchoki 140.00 30 eP pPKiKP 20 57 05.8 -0.6
comp=Z,36nm,0.9s
PMG Port Moresby 140.11 263 PKhKP PKPpre 20 56 16.3
comp=Z,7.4nm,0.7s,baz=20,slow=10,SNR=4.2
PMG SKPbc SKPbc 20 59 43.0 0.0
comp=Z,6.2nm,0.7s,baz=83,slow=5.3,SNR=3.1
LSA Lhasa 140.67 22 PKP PKPdf 20 56 16.6 -6.3
LSA Lhasa 140.67 22 PKPpre 20 56 16.1
LSA PKPdf PKiKP 20 56 24.4 -1.2
LSA pPKPdf pPKPdf 20 57 05.8 +0.4
LSA Lhasa 140.67 22 PKHKP PKPpre 20 56 16.1
LSA 20 56 24.4
LSA 20 57 05.8
RAMN Ramite 141.10 30 eP pPKiKP 20 57 08.0 -0.6
comp=Z,81nm,0.8s
ODAN Odare 141.56 29 eP pPKiKP 20 57 09.1 -0.4
WHN Wuhan 142.20 350 PKP PKPdf 20 56 24.4 -4.5
CD2 Chengdu 142.39 4 PKP PKPdf 20 56 23.5 -1.9
BBOO Buckleboo 142.55 222 PKPpre 20 56 20.6
HYB Hyderabad 143.06 49 i PKP PKPbc 20 56 24.0 -0.1
HYB epPKP pPKPdf 20 57 11.0 +1.9
BOK Bokaro 143.31 33 eP PKPdf 20 56 26.0 -1.1
BOK IAmb IAmb 20 56 28.9
comp=Z,43nm,1.1s
COEN Coen 143.68 256 PKPbc 20 56 26.5 +0.6
TEZP TEZPUR 144.07 22 eP PKPab 20 56 25.3 -0.8
TEZP IAmb IAmb 20 56 29.0
comp=Z,70nm,0.7s
SHL Shillong 144.66 24 PKPab 20 56 28.1 -0.5
SHL Shillong 144.66 24 PKIKP PKPab 20 56 28.2 -0.5
YOJ Yonaguni jima 145.21 334 PKPab 20 56 30.8 +0.4
YOJ Yonaguni jima 145.21 334 PKP2 PKPab 20 56 30.8 +0.4
KOHI KOHIMA 145.36 21 eP PKPdf 20 56 30.5 -0.3
KOHI IAmb IAmb 20 56 33.1
comp=Z,213nm,0.6s
YHNB Yeheng 145.71 336 PKPbc 20 56 31.8 -0.2
BWNR Bhubaneshwar 146.00 37 eP PKPdf 20 56 30.7 -1.1
BWNR IAmb IAmb 20 56 33.2
comp=Z,55nm,0.6s
NACB Ninganchiao 146.06 336 PKPbc 20 56 33.2 +0.3
NACB pPKPdf pPKPdf 20 57 13.7 -0.4
SSLB Suanglung 146.67 336 PKPdf 20 56 33.7 +0.8
SSLB pPKPdf pPKPdf 20 57 14.4 -0.8
YULB Yu-li 146.88 335 PKPdf 20 56 34.2 +0.9
GYA Guiyang 146.95 0 i PKPbc PKPbc 20 56 34.8 -0.8
GYA PKPab PKPab 20 56 40.2 +2.2
GYA pPKP pPKPab 20 57 18.2 -0.3
GYA SKKS 21 06 38.1
GYA AMB AMB
comp=Z,100nm,7.5s
KNMB Chin-men Tao 146.99 341 PKPbc 20 56 35.2 -0.3
KNMB pPKPdf pPKPab 20 57 18.4 +0.2
TPUB Ta-pu 147.23 336 PKPbc 20 56 35.8 -0.5
TPUB pPKPdf pPKPbc 20 57 18.5 +0.5
TWG Pinlang 147.48 335 PKPdf 20 56 34.9 +0.6
KMI Kunming 148.02 7 PKPbc PKPdf 20 56 35.8 +0.4
KMI Kunming 148.02 7 PKPdf 20 56 36.1 +0.7
KMI Kunming 148.02 7 PKIKP PKPdf 20 56 36.1 +0.7
FORT Forrest 148.99 217 PKPdf 20 56 36.4 -0.1
FORT PKPbc PKPbc 20 56 41.1 +0.4
AS31 Alice Springs 149.14 234 PKPdf 20 56 37.3 +0.3
AS31 PKPbc PKPbc 20 56 41.1 -0.3
ASAR Alice Springs 149.14 234 PKPbc PKPbc 20 56 41.4 +0.1
comp=Z,120nm,0.7s,baz=117,slow=2.9,SNR=274
ASAR Alice Springs 149.14 234 PKPdf 20 56 36.6 -0.4
ASAR PKPbc PKPbc 20 56 41.1 -0.3
ASAR pPKPdf pPKPdf 20 57 20.8 +1.5
SIMRM Sittwe 149.88 27 PKPdf PKPdf 20 56 38.1 -0.1
SIMRM PKiKP 20 56 44.7 +0.6
SIMRM pPKPbc 20 57 25.2 -0.4
WR0 Warramunga Arr 150.19 241 PKPdf 20 56 39.1 +0.4
WR0 PKPbc PKPbc 20 56 44.3 +0.3
HKPS Hong Kong Po S 150.26 346 PKPbc 20 56 42.4 -1.7
PALK Pallekele 150.34 62 PKP PKPdf 20 56 39.6 +0.5
comp=Z,8.9nm,1.0s,baz=297,slow=6.6,SNR=5.2
PALK PKPbc PKiKP 20 56 45.0 -0.2
comp=Z,74nm,0.9s,baz=290,slow=2.9,SNR=24
PALK Pallekele 150.34 62 PKPdf PKPdf 20 56 37.7 -1.5
PALK PKPbc 20 56 44.8 +0.3
WB2 Warramunga Arr 150.36 241 PKPdf 20 56 39.5 +0.5
WB2 PKPbc PKPbc 20 56 44.5 +0.2
WB2 pPKPbc 20 57 24.4 -2.0
WRA Warramunga Arr 150.37 241 PKP PKPdf 20 56 39.8 +0.8
comp=Z,106nm,0.7s,baz=108,slow=2.5,SNR=125
WRA PKPbc PKiKP 20 56 45.5 +0.4
comp=Z,64nm,0.6s,baz=103,slow=3.4,SNR=356
WRA Warramunga Arr 150.37 241 PKPdf 20 56 39.4 +0.4
WRA PKPbc PKPbc 20 56 44.4 0.0
WRA pPKPbc 20 57 26.4 -0.1
WB0 Warramunga Arr 150.39 242 PKPdf 20 56 39.8 +0.8
WB0 PKPbc PKPbc 20 56 44.4 0.0
WB0 pPKPbc 20 57 26.1 -0.4
SLVN Son La 151.89 6 PKPdf 20 56 43.2 +1.8
SLVN PKPbc PKiKP 20 56 49.7 +1.5
NWAO Narrogin (SRO) 152.29 199 PKP PKPdf 20 56 42.1 +0.6
comp=Z,26nm,1.0s,baz=11,slow=3.2,SNR=4.7
NWAO PKPbc PKiKP 20 56 48.6 0.0
comp=Z,30nm,0.9s,baz=133,slow=5.2,SNR=10
NWAO Narrogin (SRO) 152.29 199 PKPdf 20 56 41.2 -0.3
NWAO PKPbc PKPbc 20 56 48.4 0.0
NWAO pPKPbc 20 57 30.9 +0.4
NWAO Narrogin (SRO) 152.29 199 PKPdf 20 56 40.7 -0.9
NWAO PKPbc PKiKP 20 56 48.7 0.0
NWAO pPKPbc 20 57 31.2 +0.6
CHTO Chiang Mai 153.37 17 PKPdf 20 56 44.4 +0.9
CHTO PKPbc PKPbc 20 56 51.3 +0.1
CHTO Chiang Mai 153.37 17 PKIKP PKPdf 20 56 44.4 +0.9
CM31 Chiang Mai Arr 153.70 17 PKPdf 20 56 44.7 +0.7
CM31 PKPbc 20 56 53.3 +1.3
CMAR Chiang Mai Arr 153.70 17 PKP PKPdf 20 56 45.3 +1.3
comp=Z,22nm,0.8s,baz=306,slow=2.1,SNR=145
CMAR PKPbc PKiKP 20 56 53.1 +1.1
comp=Z,48nm,0.6s,baz=321,slow=3.2,SNR=91
DGPR DIGLIPUR 155.77 35 eP PKPdf 20 56 44.8 -2.1
DGPR IAmb IAmb 20 56 51.0
comp=Z,69nm,1.1s
PBKT Sadao Pong 156.05 14 PKPdf 20 56 48.3 +1.1
PBKT PKPab PKPab 20 57 14.9 -0.1
KNRA Kununurra 156.86 246 PKPab 20 57 19.6 +0.8
PBA Port Blair 156.87 38 PKPdf 20 56 49.9 +1.6
UBPT Khong Chiam 158.02 4 PKPdf 20 56 49.5 -0.2
UBPT PKPab PKPab 20 57 24.2 +0.7
FITZ Fitzroy Crossi 158.58 237 PKP PKPdf 20 56 50.7 +0.4
comp=Z,7.4nm,0.9s,baz=186,slow=6.5,SNR=4.7
FITZ PKPab PKPab 20 57 26.6 +0.4
comp=Z,27nm,0.8s,baz=169,slow=5.2,SNR=12
FITZ Fitzroy Crossi 158.58 237 PKPdf PKPdf 20 56 50.1 -0.2
FITZ PKPab 20 57 27.6 +1.4
AAI Ambon 158.61 277 PKP PKPdf 20 56 51.1 +0.6
NLAI Namlea 159.61 279 PKP PKPdf 20 56 52.5 +0.8
PSA00 Pilbara Seismi 160.72 219 PKPdf PKPdf 20 56 51.9 -0.9
PSA00 pPKPdf 20 57 34.2 -1.0
DLV T Lat 161.32 355 PKPdf 20 56 53.6 -0.1
DLV PKPab PKPab 20 57 39.1 +1.0
LHMI Lhok Sumawe 164.45 40 PKPdf 20 56 55.4 -1.2
KULM Kulim 166.46 28 PKPdf 20 56 57.9 -0.4
KULM PKPab PKPab 20 58 00.6 -0.1
KAPI Kappang 167.13 277 PKPab PKPab 20 58 06.2 +2.2
comp=Z,6.9nm,0.4s,baz=84,slow=18,SNR=2.9
KAPI Kappang 167.13 277 PKPab 20 58 04.2 +0.2
KAPI Kappang 167.13 277 PKP2 PKPab 20 58 04.2 +0.2
IPM Ipoh 167.34 28 PKPdf 20 56 58.7 -0.3
IPM PKPab PKPab 20 58 04.1 -0.5
PSI Prapat 167.56 40 PKPab PKPab 20 58 06.2 +0.4
comp=Z,5.6nm,0.7s,baz=310,slow=7.9,SNR=3.4
PSI Prapat 167.56 40 PKIKP PKPdf 20 56 58.3 -1.0
RPSI Rantau Prapat 167.64 41 PKPdf 20 56 58.3 -0.8
RPSI PKPab PKPab 20 58 05.4 -0.6
RPSI Rantau Prapat 167.64 41 PKPab 20 58 06.2 +0.2
SBUM Sibu 169.41 330 PKPdf 20 57 00.6 +0.3
SBUM PKPab 20 58 14.2 +0.5
MYKOM Kota Tinggi 170.94 20 PKPdf 20 57 00.5 -0.7
KSM Kuching 171.12 338 PKPdf 20 57 00.9 -0.4
CISI Cisompet, Garu 178.84 229 PKPdf 20 57 01.9 -1.6

IDC 07 20:42:31.6±9.9, 49.96N×114.94W, h0km, mb1 4.3/1, mb1mx3.4/46, mbtmp4.0/1, ML3.7/1, Error ellipse: s-maj=129.0km s-min=46.1km az=41.0, British Columbia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I56US	NEWPORT INFRAS	2.22	221	i		20 57 48.7	
	baz=39,slow=342,SNR=5.1						
I10CA	LAC DU BONNET	12.15	82	i		21 58 20.0	
	baz=272,slow=317,SNR=7.3						
YKA	Yellowknife Ar	12.57	1	Pn	Pn	20 45 27.4	-4.0
	0.5nm,0.3s,baz=183,slow=13,SNR=19						

NEIC 07 20:49:52.5±1.7, 43.60N±0.04×99.07W±0.08, h5km±2km, mb_Lg3.0/38, Error ellipse: s-maj=10.3km s-min=6.3km az=274.0
ANF 07 20:49:53.5±2.2, 43.66N×99.10W, h18km±15km, ML3.9/7, Error ellipse: s-maj=8.1km s-min=7.0km az=64.0
ISC 07 20:49:52.7±1.7, 43.66N±0.04×99.08W±0.05, h11km±13km, n43, σ1♀19/46, South Dakota

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUSD	Miller	0.79	6		Pg	20 50 08.3	+0.3
SUSD				Sg	Sb	20 50 20.4	+1.1
SUSD	Miller	0.79	6	P	Pg	20 50 08.4	+0.3
	baz=186						
SUSD				S	Sb	20 50 20.3	+1.0
	baz=186						
ECSD	EROS Data Cent	1.79	87		Pn	20 50 24.1	+0.6
ECSD				Sn	Sn	20 50 47.0	+0.8
ECSD	EROS Data Cent	1.79	87	P	Pn	20 50 23.8	+0.2
	baz=268						
ECSD				S	Sn	20 50 46.8	+0.5
	baz=268						
BGNE	Belgrade	2.35	163		Pn	20 50 31.5	+0.2
BGNE				Sn	Sn	20 51 01.4	+1.2
BGNE	Belgrade	2.35	163	P	Pn	20 50 31.6	+0.3
	baz=343						
BGNE				S	Sn	20 51 01.2	+1.1
	baz=343						
OGNE	Ogallala	3.49	220		Pn	20 50 47.0	0.0
OGNE				IAmb_Lg		20 51 48.2	
	comp=Z,45nm,0.9s						
OGNE	Ogallala	3.49	220	P	Pn	20 50 47.1	+0.1
	baz=38						
RSSD	Black Hills	3.62	279		Pn	20 50 50.6	+1.6
RSSD	Black Hills	3.62	279	Pb	Pb	20 50 56.6	-0.2
	baz=96						
RSSD				S	Sn	20 51 31.8	+0.1
	baz=96						
D32A	Dogwood Acres,	3.77	22	Pn	Pn	20 50 51.9	+1.1
D32A				IAmb_Lg		20 51 58.1	
	comp=Z,31nm,0.8s						
MDND	Maddock	4.21	355	Pn	Pn	20 50 56.5	-0.3
MDND	Maddock	4.21	355	P	Pn	20 50 56.5	-0.3
	baz=175						
MDND				S	Sn	20 51 46.0	-0.1
	baz=175						
SCIA	State Center	4.65	110	Pn	Pn	20 51 02.6	-0.4
SCIA				IAmb_Lg		20 52 26.5	
	comp=Z,25nm,0.8s						
SCIA	State Center	4.65	110	P	Pn	20 51 03.0	+0.1
	baz=294						
SCIA				S	Sn	20 51 57.2	+0.3
	baz=294						
SPMN	Marine on St.	4.76	69	Pn	Pn	20 51 02.5	-1.9
CBKS	Cedar Bluff	4.86	186	Pn	Pn	20 51 04.4	-1.5
CBKS				IAmb_Lg		20 52 29.9	
	comp=Z,28nm,0.8s						
KSU1	Kansas State U	4.91	157	IAmb_Lg		20 52 29.1	
	comp=Z,33nm,0.7s						
AGMN	Agassiz Nation	5.15	25	Pn	Pn	20 51 10.1	+0.3
AGMN				Sn	Sn	20 52 09.3	0.0
PHWY	Pilot Hill	5.27	246		Pn	20 51 10.2	-1.5
KSCO	Kaye Shedlock'	5.36	211		Pn	20 51 12.4	-0.3
KSCO				IAmb_Lg		20 52 47.2	
	comp=Z,22nm,0.7s						
K22A	Casper	5.54	262	Pn	Pn	20 51 13.4	-1.9
N23A	Red Feather La	5.79	244	Pn	Pn	20 51 16.9	-2.0
N23A				IAmb_Lg		20 53 02.0	
	comp=Z,21nm,0.8s						
LAO	LASA Array	5.89	303	Pn	Pn	20 51 19.6	-0.4
L40A	Anamosa	5.99	103	Pn	Pn	20 51 19.9	-1.4
DGMT	Dagmar	5.99	325	IAmb_Lg		20 53 09.8	
	comp=Z,26nm,0.7s						
I40A	Norwalk	6.13	85	Pn	Pn	20 51 20.8	-2.5
ISCO	Idaho Springs	6.23	234		Pn	20 51 24.5	-0.3
ISCO				IAmb_Lg		20 53 15.3	
	comp=Z,15nm,1.0s						
RWWY	Rawlins	6.31	255	Pn	Pn	20 51 25.4	-0.6
RWWY				IAmb_Lg		20 53 27.7	
	comp=Z,20nm,0.9s						
JFWS	Jewell Farm	6.49	94		Pn	20 51 27.5	-0.6
JFWS				IAmb_Lg		20 53 29.9	
	comp=Z,13nm,0.8s						
Q24A	Divide	6.55	226	Pn	Pn	20 51 27.8	-1.5
Q24A				IAmb_Lg		20 53 23.7	
	comp=Z,24nm,1.0s						
N41A	Harden Midland	6.78	113	Pn	Pn	20 51 29.9	-2.2
EYMN	Ely	6.81	48	Pn	Pn	20 51 32.7	+0.1
ULM	Lac du Bonnet	6.95	17		Pn	20 51 32.0	-2.4
U32A	Winter Ranch,	7.27	180	IAmb_Lg		20 53 37.8	
	comp=Z,12nm,0.7s						
SDCO	Great Sand Dun	7.66	222	Pn	Pn	20 51 45.1	+0.6
T25A	Trinidad	7.68	214		Pn	20 51 45.6	+0.9
TUL1	Leonard	8.14	161	IAmb_Lg		20 54 20.0	
	comp=Z,17nm,0.8s						
CCM	Cathedral Cave	8.15	131	Pn	Pn	20 51 50.0	-1.0
HHAR	Hobbs	8.35	150	Pn	Pn	20 51 50.9	-2.9
FLWY	Flagg Ranch	8.41	277	IAmb_Lg		20 54 32.4	
	comp=Z,9.6nm,1.1s						
EGMT	Eagleton	8.64	304	IAmb_Lg		20 54 39.5	
	comp=Z,19nm,0.8s						
PBMO	Poplar Bluff	9.53	133	IAmb_Lg		20 55 02.2	
	comp=Z,8.2nm,0.8s						

ISC 07 21:15:25.8±0.9, 49.82N±0.04×18.51E±0.02, h0km, n17, σ1♀03/29, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.24	275	ePG	Pg	21 15 31.2	+0.9
OKC				eSG	Sg	21 15 34.3	+0.9
	comp=Z,27nm,0.5s						
MORC	Moravsky Berou	0.63	267	ePG	Pg	21 15 38.4	+0.6
MORC				eSG	Sg	21 15 46.3	+0.3
OJC	Ojcow	0.92	64	ePg	Pg	21 15 42.1	-1.3
OJC				eSg	Sg	21 15 55.2	-0.1
JAVC	Velka Javorina	1.11	210	ePG	Pg	21 15 47.7	+0.8
KRLC	Kraliky	1.15	284	ePG	Pg	21 15 46.7	-1.1
KRLC				eSG	Sg	21 16 02.6	0.0
	comp=Z,12nm,0.3s						
NIE	Niedzica	1.23	108	ePg	Pg	21 15 49.4	+0.1
NIE				eSg	Sg	21 16 06.6	+1.4
VYHS	Vyhne	1.34	171	ePG	Pg	21 15 50.6	-0.8
VYHS				eSG	Sg	21 16 09.0	+0.2
VRAC	Vranov	1.35	249	ePG	Pg	21 15 51.2	-0.4
VRAC				eSG	Sg	21 16 08.9	-0.2
SMOL	Smolenice	1.49	209	eSG	Sg	21 16 10.8	-2.7
DPC	Dobruska-Polom	1.51	292	ePG	Pn	21 15 53.4	-0.7
DPC				eSG	Sb	21 16 13.9	-0.5
	comp=Z,7.6nm,0.7s						
KRUC	Moravsky	1.58	242	ePG	Pn	21 15 54.6	-0.4
KRUC				eSG	Sg	21 16 15.6	-0.8
OSTC	Ostas	1.65	297	ePG	Pn	21 15 56.0	-0.1
OSTC				eSG	Sg	21 16 18.4	-0.4
CHVC	Chvalec	1.76	297	ePG	Pn	21 15 57.8	+0.3
CHVC				eSG	Sb	21 16 21.1	-0.4
TREC	Trest	2.04	256	eSG	Sg	21 16 30.1	-1.1
GOPC	GO Pecny, Ondr	2.41	274	eSG	Sb	21 16 41.2	+0.8
PRU	Pruhonice	2.57	275	eSG	Sg	21 16 47.1	-1.3
KHC	Kasperske Hory	3.29	260	ePG	Pb	21 16 26.5	+1.5
KHC				eSG	Sg	21 17 09.4	-2.1

IDC 07 21:28:10.2±1.2, 72.45N×3.87E, h0km, mb3.4/4, mb1 3.6/9, mb1mx3.3/64, mbtmp3.6/9, ML3.1/5, MS3.0/6, Ms1 3.0/6, ms1mx2.6/43, Error ellipse: s-maj=24.8km s-min=19.7km az=52.0
NAO 07 21:28:10.6±2.8, 72.50N×4.41E, ML3.2
BER 07 21:28:13.8±2.7, 72.60N×4.37E, h10km, ML2.1, ML3.2(NAO), Confirmed Earthquake
ISC 07 21:28:11.8±1.0, 72.51N±0.08×4.6E±0.1, h10km, n46, σ1♀39/44, mb3.5/4, MS3.1/3, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOF	Lofoten	5.33	141	eP	Pn	21 29 32.8	+1.5
LOF				eS	Sn	21 30 26.9	-5.7
LOF				IAML		21 30 37.9	
	comp=Z,6.7nm,0.6s						
TRO	Tromso	5.48	115	eP	Pn	21 29 34.4	+1.0
STEI	Steigen	5.84	137	eP	Pn	21 29 39.4	+1.1
HAMF	Hammerfest	6.33	98	Pn	Pn	21 29 45.5	+0.6
HAMF	Hammerfest	6.33	98	eP	Pn	21 29 45.6	+0.7
KIF	Kilpisjarvi	6.40	115	eP	Pn	21 29 47.5	+1.6
SPA0	Spitsbergen Ar	6.42	22	Pn	Pn	21 29 45.7	-0.5
	baz=199,slow=22						
SPA0	Spitsbergen Ar	6.42	22	Pn	Pn	21 29 45.7	-0.5
	baz=199,slow=22						
SPITS	Spitsbergen Ar	6.42	22	Pn	Pn	21 29 45.9	-0.3
	baz=207,slow=17,SNR=8.7						
KBS	Kingsbay	6.70	12	Pn	Pn	21 29 49.2	-0.8
KBS	Kingsbay	6.70	12	Pn	Pn	21 29 49.2	-0.8
KONS	Konsvik	6.73	149	eP	Pn	21 29 51.3	+0.8
HOPEN	Hopen	6.75	44	Pn	Pn	21 29 51.3	+0.6
HOPEN	Hopen	6.75	44	Pn	Pn	21 29 51.3	+0.6
STOK	Stokkvaagen	6.87	150	eP	Pn	21 29 52.5	+0.1
MOR8	Moi Rana	7.25	147	eP	Pn	21 29 58.5	+0.9
ARA0	ARCESS Array S	7.42	103	Pn	Pn	21 30 00.6	+0.6
	baz=315,slow=14						
ARA0	ARCESS Array S	7.42	103	Pn	Pn	21 30 00.6	+0.6
	baz=315,slow=14						
ARCES	ARCESS Array B	7.42	103	Pn	Pn	21 30 01.1	+1.1
	comp=Z,0.8nm,0.3s,baz=314,slow=13,SNR=38						
ARE0	ARCESS Array S	7.42	103	eP	Pn	21 30 00.9	+1.0
HEF	Hetta	7.58	113	eP	Pn	21 30 03.7	+1.5
KEV	Kevo	7.75	100	eP	Pn	21 30 04.5	+0.1
NSS	Namsos	8.45	158	eP	Pn	21 30 15.9	+1.9
APA0	Apatity Array	10.78	103	Pn	Pn	21 30 45.5	-0.5
	baz=309,slow=16						
APA0	Apatity Array	10.78	103	Pn	Pn	21 30 45.5	-0.5
	baz=309,slow=16						
NC204	NORSAR Array S	11.53	165	eP	Pn	21 30 56.7	+0.5
NC303	NORSAR Array S	11.63	164	eP	Pn	21 30 58.3	+0.8
NB201	NORSAR Array S	11.80	164	eP	Pn	21 31 01.5	+1.6
NB2	NORSAR Subarra	11.80	164	Pn	Pn	21 31 01.5	+1.6
	baz=348,slow=14						
NB2	NORSAR Subarra	11.80	164	Pn	Pn	21 31 01.5	+1.6
	baz=348,slow=14						
NOA	NORSAR Array B	11.80	164	Pn	Pn	21 31 00.2	+0.2
	comp=Z,0.0nm,0.3s,baz=349,slow=14,SNR=6.7						
NOA				LR	LR	21 35 15.1	
	comp=Z,34nm,19.5s,baz=345,slow=36						
NRA0	NORESS Array S	12.13	164	Pn	Pn	21 31 05.0	+0.6
	baz=355,slow=16						
NRA0	NORESS Array S	12.13	164	Pn	Pn	21 31 05.0	+0.6
	baz=355,slow=16						

HFS	Hagfors	12.93	159	Pn	Pn	21 31 15.7	+0.4
	baz=349,slow=14						
HFS	Hagfors	12.93	159	Pn	Pn	21 31 15.5	+0.2
	comp=Z,0.6nm,0.3s,baz=354,slow=13,SNR=20						
HFS				LR	LR	21 36 20.6	
	comp=Z,34nm,19.2s,baz=255,slow=38						
HFS	Hagfors	12.93	159	Pn	Pn	21 31 15.7	+0.4
	baz=349,slow=14						
FIA0	FINESS Array S	13.80	132	Pn	Pn	21 31 28.1	+0.9
	baz=335,slow=12						
FIA0	FINESS Array S	13.80	132	Pn	Pn	21 31 28.1	+0.9
	baz=335,slow=12						
FINES	FINESS Array B	13.80	132	Pn	Pn	21 31 28.1	+0.9
	comp=Z,0.3nm,0.3s,baz=336,slow=11,SNR=16						
FINES				LR	LR	21 36 40.6	
	comp=Z,73nm,19.4s,baz=44,slow=37						
AKASG	Malin Array Be	24.44	140	P	P	21 33 31.9	+1.7
	comp=Z,0.4nm,0.4s,baz=344,slow=9.9,SNR=3.1						
FRB	Frobisher Bay	26.78	289	LR	LR	21 43 43.8	
	comp=Z,32nm,19.0s,baz=147,slow=35						
KBZ	Khabaz	34.05	127	LR	LR	21 49 08.7	
	comp=Z,30nm,18.7s,baz=60,slow=37						
KEST	Kesra	36.93	174	LR	LR	21 51 10.1	
	comp=Z,28nm,18.6s,baz=288,slow=37						
GEYT	Alibeck	43.48	112	P	P	21 36 17.3	+2.5
	comp=Z,0.4nm,0.4s,baz=355,slow=14,SNR=2.6						
TORD	Torodi Ar. Bea	59.36	183	P	P	21 38 14.3	+0.5
	comp=Z,0.5nm,1.0s,baz=2.2,slow=7.9,SNR=3.1						
TXAR	Lajitas Array	67.55	296	P	P	21 39 06.1	-2.0
	comp=Z,0.2nm,0.7s,baz=44,slow=6.6,SNR=3.9						

SNET 07 21:30:48.7±1.0, 12°.35N×89°.02W, h11km±8km, ML3.9
UCR 07 21:30:48.7±0.9, 12°.32N×89°.01W, h18km±3km, ML3.9
ISC 07 21:30:48.9±4.3, 12°.4N±0°.1×88°.98W±0°.06, h11km±18km, n18, σ0°.65/32, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TECA	Tecapa	1.22	23	eP	Pn	21 31 11.4	-0.7
TECA				eS	Sn	21 31 28.7	+0.1
TECA	Tecapa	1.22	23	eP	Pn	21 31 11.4	-0.7
TECA				eS	Sn	21 31 28.7	+0.1
LFRS	El Faro	1.25	356	eP	Pn	21 31 11.8	-0.6
LFRS				eS	Sg	21 31 29.8	+0.4
PACA	Pacayal	1.27	30	eP	Pn	21 31 12.1	-0.6
PACA				eS	Sn	21 31 30.7	+0.8
PACA				IAML		21 31 32.2	
	comp=Z,3µm,0.3s						
PACA	Pacayal	1.27	30	eP	Pn	21 31 12.1	-0.6
PACA				eS	Sn	21 31 30.7	+0.8
PACA				IAML		21 31 32.2	
	comp=Z,3µm,0.3s						
BLLM	Bellamira	1.29	34	eP	Pn	21 31 12.3	-0.6
BLLM	Bellamira	1.29	34	eP	Pn	21 31 12.3	-0.6
BOQS	Boqueron	1.39	348	eP	Pn	21 31 13.4	-1.1
BOQS				eS	Sb	21 31 33.3	+0.3
LCND	La Caada	1.42	48	eP	Pn	21 31 14.1	-0.5
LCND				eS	Sb	21 31 34.1	+0.6
LCND	La Caada	1.42	48	eP	Pn	21 31 14.1	-0.5
LCND				eS	Sb	21 31 34.1	+0.6
CEVE	Cerro Verde	1.58	337	eP	Pn	21 31 17.4	+0.2
CEVE				eS	Sb	21 31 38.8	+0.3
CEVE				IAML		21 31 48.1	
	comp=Z,1µm,0.3s						
CEVE	Cerro Verde	1.58	337	eP	Pn	21 31 17.4	+0.2
CEVE				eS	Sb	21 31 38.8	+0.3
CEVE				IAML		21 31 48.1	
	comp=Z,1µm,0.3s						
SBLS	San Blas	1.59	337	eP	Pn	21 31 16.6	-0.7
SBLS	San Blas	1.59	337	eP	Pn	21 31 16.6	-0.7
LLGN	La Laguna	1.79	1	eP	Pn	21 31 19.6	-0.2
LLGN				eS	Sb	21 31 43.6	-0.6
LLGN	La Laguna	1.79	1	eP	Pn	21 31 19.6	-0.2
LLGN				eS	Sb	21 31 43.6	-0.6
MTO3	Montecristo	2.06	350	eP	Pn	21 31 24.3	+0.7
MTO3				eS	Sb	21 31 51.1	-1.0
MTO3	Montecristo	2.06	350	eP	Pn	21 31 24.3	+0.7
MTO3				eS	Sb	21 31 51.1	-1.0

UCR 07 21:35:38.8±1.2, 9°.33N×85°.48W, h24km±4km, MD4.0, MW3.7, 1C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUAI	GUAI	0.94	358	⇑iP	Pb	21 35 55.2	-1.2
GUAI				iS	Sb	21 36 08.2	-0.2
JTS	Las Juntas de	1.09	28	eP	Pn	21 35 58.1	-0.5
JTS				eS	Sn	21 36 13.7	+0.8
NY14	Universidad de	1.31	358	iP	Pn	21 36 01.3	-0.3
NY14				iS	Sb	21 36 19.1	-0.1
ARE1	Arenal 1	1.35	33	eP	Pb	21 36 03.0	-0.5
COLC	Colonia	1.36	11	iP	Pn	21 36 02.1	-0.2
CUI	Cuipilapa	1.36	13	iP	Pn	21 36 02.2	-0.1
CUI				iS	Sn	21 36 20.1	+0.5
AMAS	Alto Masis	1.36	20	iP	Pn	21 36 02.2	-0.2
ACAL	Aguas Claras	1.37	18	iP	Pn	21 36 02.5	0.0
LIM1	Limonal	1.38	9	iP	Pn	21 36 02.4	-0.4
CEDE	Laguna Cedeo	1.38	33	eP	Pn	21 36 02.0	-0.6
LAPC	Finca la Perla	1.43	2	iP	Pn	21 36 03.0	-0.3
MESS	Mesas	1.43	11	iP	Pn	21 36 03.3	0.0
GB1A	Borinquen Arri	1.48	3	eP	Pn	21 36 03.6	-0.5
LCR2	La Lucha 2	1.51	74	eP	Pn	21 36 04.0	-0.6

NEIC 07 21:39:47.3±1.0, 4°.88S±0°.09×154°.06E±0°.08, h97km±6km, mb4.5/26, Error ellipse: s-maj=13.4km s-min=11.0km az=184.0
IDC 07 21:39:49.6±4.9, 5°.03S×154°.02E, h118km±40km, mb3.7/11, mb1 4.0/12, mb1mx3.7/33, mbtmp4.2/12, MS3.2/9, Ms1 3.2/9, ms1mx2.9/30, Error ellipse: s-maj=34.0km s-min=21.3km az=101.0
ISC 07 21:39:48.0±0.5, 4°.89S±0°.07×154°.05E±0°.07, h105km, n68, σ1°.00/60, mb4.2/23, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	2.00	290	Pn	Pn	21 40 19.6	-1.3
HNR	Honiara	7.39	128	Pn	Pn	21 41 32.7	-0.5
PMG	Port Moresby	8.18	236	P	Pn	21 41 45.1	+1.2
	17nm,0.3s,baz=48,slow=7.6,SNR=33						
PMG				S	Sn	21 43 12.7	-2.0
	5.7nm,0.3s,baz=22,slow=22,SNR=8.4						
PMG				LR	LR	21 44 51.4	
	comp=Z,67nm,21.1s,baz=82,slow=37						
PMG	Port Moresby	8.18	236		Pn	21 41 43.5	-0.4
PMG					Sn	21 43 14.4	-0.3
PATS	Pohnpei	12.40	20	Pn	Pn	21 42 40.2	-0.7
COEN	Coen	14.00	229	Pn	Pn	21 43 03.2	+1.3
DZM	Mont Dzumac	20.88	146	LR	LR	21 51 29.5	
	comp=Z,45nm,18.3s,baz=37,slow=34						
SIJI	Sorong	23.10	279	P	P	21 44 45.0	0.0
	4.5nm,0.6s,baz=15,slow=17,SNR=4.3						
MTN	Manton Dam	23.96	249	P	P	21 44 52.9	+0.1
MTN				IAmb	IAmb	21 44 56.8	
	comp=Z,34nm,1.1s						
WR0	Warramunga Arr	24.19	230	P	P	21 44 55.2	+0.3
WR0				IAmb	IAmb	21 44 57.0	
	comp=Z,8.9nm,0.8s						
WB0	Warramunga Arr	24.19	231	P	P	21 44 54.8	-0.1
WB0				IAmb	IAmb	21 44 56.4	
	comp=Z,7.2nm,0.7s						
WRAB	Tennant Creek	24.32	230	P	P	21 44 57.1	+1.1
WRA	Warramunga Arr	24.33	230	P	P	21 44 56.8	+0.6
	comp=Z,8.6nm,0.7s,baz=54,slow=9.9,SNR=16						
WRA	Warramunga Arr	24.33	230	P	P	21 44 55.9	-0.3
AS31	Alice Springs	26.94	224	P	P	21 45 19.6	-0.1
ASAR	Alice Springs	26.94	224	P	P	21 45 19.9	+0.1
	comp=Z,2.2nm,0.7s,baz=55,slow=9.0,SNR=27						
STKA	Stephens Creek	29.28	202	P	P	21 45 38.5	-1.9
	comp=Z,2.4nm,0.7s,baz=35,slow=14,SNR=6.9						
STKA	Stephens Creek	29.28	202	IAmb	IAmb	21 45 43.2	
	comp=Z,0.9nm,0.8s						
FITZ	Fitzroy Crossi	30.71	242	P	P	21 45 52.2	-1.0
	comp=Z,4.8nm,0.6s,baz=92,slow=6.8,SNR=7.0						
FITZ	Fitzroy Crossi	30.71	242	IAmb	IAmb	21 45 55.5	
	comp=Z,16nm,1.1s						
DAV	Davao City (W)	30.80	292	LR	LR	21 55 40.4	
	comp=Z,36nm,22.0s,baz=108,slow=31						
BBOO	Buckleboo	32.47	209	P	P	21 46 07.7	-0.8
BBOO				IAmb	IAmb	21 46 09.5	
	comp=Z,10nm,1.1s						
KNTN	Kanton	34.22	88	P	P	21 46 24.1	+0.1
FORT	Forrest	35.52	220	P	P	21 46 35.2	+0.3
PSA00	Pilbara Seismi	37.06	240	P	P	21 46 47.9	-0.3
PSA00				IAmb	IAmb	21 46 48.6	
	comp=Z,12nm,0.9s						
TPUB	Ta-pu	43.00	312	P	P	21 47 36.3	-1.0
TPUB				IAmb	IAmb	21 47 38.1	
	comp=Z,9.0nm,0.9s						
MORW	Morawa	43.27	232	P	P	21 47 38.6	-0.8
MORW				IAmb	IAmb	21 47 39.9	
	comp=Z,12nm,0.7s						
LEM	Lembang	46.22	265	LR	LR	22 11 38.9	
	comp=Z,44nm,18.1s,baz=15.5,slow=41						
KSRS	Korea Array	48.65	332	LR	LR	22 04 47.0	
	comp=Z,9.2nm,20.1s,baz=225,slow=31						
ENH	Enshi	55.13	312	P	P	21 49 09.9	+0.1
ENH				IAmb	IAmb	21 49 11.0	
	comp=Z,11nm,1.1s						
PSI	Prapat	55.60	277	LR	LR	22 15 47.8	
	comp=Z,51nm,18.5s,baz=288,slow=39						
PETK	Petropavlovsk-	57.86	3	LR	LR	22 09 37.8	
	comp=Z,24nm,21.2s,baz=234,slow=31						
CMAR	Chiang Mai Arr	59.04	295	P	P	21 49 38.7	+1.2
	comp=Z,0.7nm,0.8s,baz=112,slow=4.7,SNR=8.8						
SONM	Songino Array	67.07	327	P	P	21 50 31.7	+1.5
	comp=Z,0.8nm,0.6s,baz=140,slow=6.1,SNR=7.1						
SONM	Songino Array	67.07	327	IAmb	IAmb	21 50 33.1	
	comp=Z,1.0nm,0.8s						
SHL	Shillong	67.43	300	P	P	21 50 32.6	-0.4
SHL				IAmb	IAmb	21 50 35.0	
	comp=Z,3.2nm,0.8s						
LSA	Lhasa	69.32	304	P	P	21 50 44.5	-0.5
LSA				IAmb	IAmb	21 50 47.1	
	comp=Z,2.4nm,0.9s						
TAPN	Taplejung	71.52	301	eP	P	21 50 59.2	+0.9
	comp=Z,17nm,1.0s						
ODAN	Odare	71.66	300	eP	P	21 51 00.1	+1.0
	comp=Z,23nm,0.7s						
RAMN	Ramite	72.37	300	eP	P	21 51 04.2	+0.9
JIRN	Jiri	72.90	301	eP	P	21 51 04.2	-2.4
GUN	Gumba	73.23	301	eP	P	21 51 09.4	+0.9
	comp=Z,17nm,0.7s						
PKI	Pulchoki	73.55	300	eP	P	21 51 10.8	+0.4
PKIN	Phulchoki	73.56	300	eP	P	21 51 10.7	+0.3
KKN	Kakani	73.72	301	eP	P	21 51 11.9	+0.7
	comp=Z,11nm,0.7s						
DMN	Daman	73.82	300	eP	P	21 51 12.7	+0.8
	comp=Z,22nm,1.0s						
GKN	Gorkha	74.32	301	eP	P	21 51 15.3	+0.6
	comp=Z,20nm,0.9s						
KOLN	Koldanda	75.15	300	eP	P	21 51 19.8	+0.3
DANN	Dangsing	75.16	301	eP	P	21 51 19.6	0.0
MK31	Makanchi Array	81.21	319	P	P	21 51 52.9	+0.5
MKAR	Makanchi Array	81.21	319	P	P	21 51 51.6	-0.7
	comp=Z,1.2nm,0.8s,baz=94,slow=8.6,SNR=13						
MKAR	Makanchi Array	81.21	319	P	P	21 51 53.1	+0.7
MAKZ	Makanchi	81.42	319	P	P	21 51 54.0	+0.5
ILAR	Eielson Array	81.78	22	P	P	21 51 55.5	+0.6
	comp=Z,0.8nm,0.9s,baz=284,slow=5.1,SNR=5.5						
ZALV	Zalesovo Beam	81.92	326	P	P	21 51 55.7	-0.1
	comp=Z,0.7nm,0.5s,baz=108,slow=5.6,SNR=4.1						
SKAG	Skagway	84.49	29	P	P	21 52 06.6	-2.3
KURK	Kurchatov	84.61	322	P	P	21 52 10.0	+0.3
KURK				IAmb	IAmb	21 52 10.8	
	comp=Z,3.4nm,1.1s						
NIL	Nilore	85.05	304	P	P	21 52 13.2	+0.7
NIL				IAmb	IAmb	21 52 14.0	
	comp=Z,5.6nm,0.7s						
QSPA	South Pole Qui	85.07	180	P	P	21 52 14.2	+2.2
KMRM	Mail Ridge	87.22	49	P	P	21 52 23.2	+0.2
GDXM	Geysers	87.71	51	P	P	21 52 23.2	-2.1
NVAR	Mina Array Bea	91.16	52	LR	LR	22 25 48.7	
	comp=Z,17nm,20.6s,baz=298,slow=30						
YKA	Yellowknife Ar	94.92	28	P	P	21 53 00.1	+2.0
	comp=Z,0.3nm,0.8s,baz=251,slow=3.8,SNR=3.0						
TMUT	Trail Mountain	96.74	51	P	P	21 53 06.4	-1.0
PDAR	Pinedale Array	97.99	48	LR	LR	22 35 36.9	
	comp=Z,14nm,18.7s,baz=19,slow=34						
TORD	Torodi Ar. Bea	151.52	289	PKPbc	PKPbc	21 59 30.4	-0.4
	comp=Z,1.1nm,0.5s,baz=96,slow=2.2,SNR=24						
TORD				PKPab	PKPab	21 59 40.1	+0.5
	comp=Z,1.0nm,0.6s,baz=95,slow=4.8,SNR=5.3						
TORD	Torodi Ar. Bea	151.52	289		PKPbc	21 59 31.3	+0.4
DBIC	Dimbokro	158.94	276	PKPab	PKPab	22 00 11.8	+0.3
	comp=Z,1.3nm,0.6s,baz=135,slow=8.6,SNR=3.1						

IDC 07 21:51:30.9±1.3, 35°.09N×23°.58E, h0km, mb3.6/5, mb1 3.6/11, mb1mx3.4/52, mbtmp3.5/11, ML3.5/6, MS2.8/4, Ms1 2.8/4, ms1mx2.3/45, Error ellipse: s-maj=25.0km s-min=12.4km az=180.0
ISK 07 21:51:34.6, 35°.19N×23°.72E, h17km, ML3.4/19
ATH 07 21:51:34.7, 35°.19N×23°.68E, h21km±1km, ML3.6/7, Error ellipse: s-maj=2.1km s-min=0.8km az=233.0
THE 07 21:51:35.1, 35°.17N×23°.66E, h0km±1km, ML3.4/17, Error ellipse: s-maj=1.9km s-min=0.6km az=234.0
ISC 07 21:51:34.4±0.8, 35°.15N±0°.03×23°.64E±0°.03, h17km±5km, n123, σ1°.17/147, mb3.6/5, MS2.6/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.09	24	P	Pg	21 51 38.0	+0.1
KNDR				S	Sg	21 51 39.6	-0.6
	17µm,0.4s						
KNDR	Palaiochora Ch	0.09	24	PG	Pg	21 51 37.8	-0.1
KNDR				SG	Sg	21 51 41.4	+1.2
IMMV	Iera Moni Meta	0.42	42	P	Pg	21 51 42.8	-0.1
IMMV				S	Sg	21 51 49.0	+0.2
	10µm,0.3s						
IMMV	Iera Moni Meta	0.42	42	P	Pg	21 51 42.9	-0.1
IMMV				S	Sg	21 51 48.2	-0.6
IMMV				AML	AML	21 51 49.7	
	comp=E,24726µm,0.3s						
IMMV				AML	AML	21 51 50.0	
	comp=N,16425µm,0.3s						
IMMV	Iera Moni Meta	0.42	42	PG	Pg	21 51 42.6	-0.4
RODP	Rodopos	0.42	13	P	Pg	21 51 43.2	+0.1
RODP				S	Sb	21 51 50.1	+0.5
	comp=N,3µm,0.4s						
RODP	Rodopos	0.42	13	PG	Pg	21 51 42.9	-0.2
GVDS	Gavdos	0.48	129	P	Pg	21 51 43.7	-0.4
GVDS				S	Sb	21 51 52.1	+0.9
	comp=N,22µm,0.3s						
GVDS	Gavdos	0.48	129	PG	Pg	21 51 43.6	-0.5
GVDS				SG	Sb	21 51 51.2	0.0
GVD	Gavdhos	0.48	130	P	Pg	21 51 44.0	-0.1
GVD				S	Sg	21 51 51.0	+0.4
	comp=N,23µm,0.3s						
GVD	Gavdhos	0.48	130	P	Pg	21 51 44.1	-0.1
GVD				S	Sb	21 51 52.0	+0.8
GVD				AML	AML	21 51 53.7	
	comp=N,32785µm,0.3s						
GVD				AML	AML	21 51 53.9	
	comp=E,60282µm,0.3s						
GVD	Gavdhos	0.48	130	PG	Pg	21 51 44.0	-0.1
GVD				SG	Sb	21 51 51.6	+0.4
CHAN	Chania	0.50	42	P	Pg	21 51 44.2	-0.2
CHAN				S	Sg	21 51 51.1	0.0
	comp=E,2µm,0.4s						
VAM	Vamos	0.53	60	P	Pg	21 51 44.8	-0.1
VAM				S	Sb	21 51 52.5	-0.1
	comp=E,20µm,0.4s						
VAM	Vamos	0.53	60	P	Pg	21 51 44.7	-0.3
VAM				AML	AML	21 51 53.9	
	comp=E,21938µm,0.4s						
VAM				AML	AML	21 51 54.4	
	comp=N,17155µm,0.4s						
PRNS	Prines Rethymn	0.74	73	P	Pb	21 51 47.4	-1.4
PRNS				S	Sb	21 51 57.1	-1.6
ANKY	Antikythira Is	0.77	339	P	Pb	21 51 49.2	-0.1
ANKY				S	Sb	21 51 59.0	-0.5
	comp=N,2µm,0.6s						
ANKY	Antikythira Is	0.77	339	P	Pb	21 51 49.3	-0.1
ANKY				S	Sb	21 51 59.1	-0.5
ANKY				AML	AML	21 52 01.2	
	comp=N,2987µm,0.3s						
ANKY				AML	AML	21 52 09.7	
	comp=E,6389µm,0.9s						
TMBK	Timbaki Herakl	0.93	94	P	Pb	21 51 52.0	-0.1
TMBK				S	Sn	21 52 06.3	+0.7
	comp=E,1µm,0.4s						
SIVA	Sivas	0.97	97	P	Pb	21 51 52.6	-0.2
SIVA				S	Sn	21 52 08.3	+1.6
	comp=E,6µm,0.3s						
SIVA	Sivas	0.97	97	P	Pb	21 51 52.6	-0.2
IDI	Anoyia	1.03	82	Pg	Pb	21 51 53.1	-0.9
	comp=E,31nm,0.3s,baz=251,slow=15,SNR=166						
IDI				Lg	Lg	21 52 06.3	
	comp=E,91nm,0.3s,baz=156,slow=20,SNR=15						
IDI	Anoyia	1.03	82	P	Pb	21 51 53.2	-0.8
IDI				AML	AML	21 52 12.9	
	comp=E,1726µm,0.3s						
IDI				AML	AML	21 52 14.1	
	comp=N,2813µm,0.8s						
IDI	Anoyia	1.03	82	PG	Pb	21 51 53.3	-0.6
IDI				SG	Sb	21 52 07.2	-0.1
IACM	Heraklion	1.18	82	P	Pn	21 51 55.9	-0.3
IACM				S	Sg	21 52 14.2	+1.4
	comp=N,7µm,0.7s						
KSTL	Kastelli Herak	1.18	82	P	Pg	21 52 00.1	+2.8
KTHA	Kythira Island	1.20	337	P	Pb	21 51 57.0	+0.2
KTHA				S	Sg	21 52 14.2	+0.8
	comp=N,3µm,0.5s						
KTHA	Kythira Island	1.20	337	P	Pn	21 51 56.8	+0.3
KTHA				AML	AML	21 52 20.0	
	comp=N,5390µm,0.6s						
KTHA				AML	AML	21 52 20.5	
	comp=E,6312µm,0.5s						
KTHA	Kythira Island	1.20	337	PN	Pb	21 51 56.9	+0.2
HRKL	Herakleio	1.21	82	P	Pg	21 51 58.2	+0.4
HRKL	Herakleio	1.21	82	PN	Pb	21 51 57.1	+0.2
KTHR	Kythira	1.22	335	P	Pb	21 51 57.0	+0.2
KTHR				S	Sg	21 52 16.0	+1.9
	comp=E,1µm,0.3s						
LAST	Lasithi	1.51	89	P	Pn	21 52 01.4	+0.6
LAST				S	Sg	21 52 24.8	+1.7
	comp=E,298nm,0.5s						
LAST	Lasithi	1.51	89	P	Pn	21 52 01.3	+0.5
MNVA	Monemvasia	1.61	343	P	Pb	21 52 03.7	0.0
NPS	Neapolis	1.62	85	P	Pb	21 52 04.2	+0.3
NPS	Neapolis	1.62	85	P	Pb	21 52 04.1	+0.2
MHLO	Agia Marina, M	1.66	22	P	Pb	21 52 04.4	-0.1
MHLO				S	Sb	21 52 26.6	+1.4
	comp=E,2µm,0.7s						
MHLO	Agia Marina, M	1.66	22	P	Pb	21 52 03.8	-0.7
MHLO				AML	AML	21 52 31.1	
	comp=E,3968µm,0.4s						
MHLO				AML	AML	21 52 35.9	
	comp=N,3627µm,0.6s						
VLI	Veliai	1.67	340	P	Pb	21 52 05.0	+0.3
VLI	Veliai	1.67	340	P	Pb	21 52 04.8	+0.1
MHLA	Plaka, Milos I	1.72	22	P	Pn	21 52 04.5	+1.0
FRMA	Ierapetra Chan	1.72	94	P	Pg	21 52 08.0	+0.4
SAP1	Santorini-Akro	1.87	49	P	Pb	21 52 07.3	-0.9
SAP1	Santorini-Akro	1.87	49	P	Pb	21 52 06.6	+0.9
THR6	Thira Island,	1.87	49	P	Pb	21 52 07.4	-0.8
THR6	Thira Island,	1.87	49	P	Pb	21 52 07.2	-0.9
THR5	Thira Island,	1.88	47	P	Pb	21 52 07.6	-0.7
SAP3	Santorini-Thir	1.89	47	P	Pb	21 52 07.6	-0.9
THR3	Thira Island,	1.91	48	P	Pb	21 52 07.8	-1.0
THT1	Athinios (Pele	1.91	49	P	Pb	21 52 08.0	-0.8
THT1				S	Sb	21 52 32.5	+0.1
	comp=N,238nm,0.6s						
SANT	Santorini	1.92	50	P	Pb	21 52 08.0	-1.0
SANT	Santorini	1.92	50	P	Pn	21 52 07.7	+1.3
SANT	Santorini	1.92	50	PN	Pn	21 52 06.4	0.0
SAP4	Santorini-Oia	1.93	46	P	Pb	21 52 08.4	-0.8
SFIR	Foira Santorin	1.93	48	P	Pb	21 52 09.0	-0.2
THR7	Fira-Santorini	1.93	48	P	Pb	21 52 09.0	-0.2
SAP2K	Karterados	1.94	49	P	Pb	21 52 08.4	-0.9
THT2	Imerovigli	1.94	48	P	Pb	21 52 08.8	-0.5
THT2	Imerovigli	1.94	48	PN	Pn	21 52 06.9	+0.3
THR8	Santorini-Mono	1.95	49	P	Pb	21 52 08.4	-1.2
STIA	Sitia Lasithi	2.01	88	P	Pn	21 52 12.0	+1.5
IOSP	Ios island	2.06	40	P	Pn	21 52 09.8	+1.4
IOSP	Ios island	2.06	40	P	Pn	21 52 09.5	+1.1
ZKR	Zakros	2.11	90	P	Pn	21 52 12.5	+0.2
ZKR	Zakros	2.11	90	P	Pb	21 52 11.8	-0.5
ZKR	Zakros	2.11	90	PN	Pn	21 52 09.4	+0.4
SERI	Serifos	2.12	19	P	Pn	21 52 10.3	+1.1
SERI				S	Sb	21 52 37.7	-0.9
	comp=N,138nm,0.5s						
SERI	Serifos	2.12	19	P	Pn	21 52 10.2	+1.0
KRND	KRANIDI	2.27	350	P	Pn	21 52 13.6	-1.3
PYL	PYLOS	2.32	319	P	Pn	21 52 14.4	-1.5
DID	Didima	2.38	352	P	Pn	21 52 14.6	+1.9
DID	Didima	2.38	352	P	Pn	21 52 14.4	+1.8
VLX	Vlachokerasia	2.44	336	P	Pn	21 52 17.4	-0.5
APE	Apeiranthos	2.45	38	P	Pn	21 52 14.4	+0.6
APE	Apeiranthos	2.45	38	P	Pn	21 52 14.1	+0.4
APE	Apeiranthos	2.45	38	PN	Pn	21 52 14.3	+0.5
ITM	Ithomi	2.46	326	P	Pn	21 52 14.3	+0.6
ITM	Ithomi	2.46	326	PN	Pn	21 52 15.2	+1.5
AMGA	Amorgos Island	2.48	47	P	Pn	21 52 15.7	+1.6
AMGA	Amorgos Island	2.48	47	P	Pn	21 52 15.3	+1.2
VLY	Voula,Athens	2.70	3	P	Pn	21 52 18.8	+1.7
LOUT	Loutraki	2.88	350	P	Pn	21 52 22.0	+2.4
PTL	Penteli	2.90	4	P	Pn	21 52 22.1	+2.2
PTL	Penteli	2.90	4	P	Pn	21 52 21.6	+1.8
KARP	Karpathos	2.91	81	P	Pn	21 52 21.9	+1.9
KARP	Karpathos	2.91	81	P	Pn	21 52 21.1	+1.1
KARP	Karpathos	2.91	81	PN	Pn	21 52 20.6	+0.6
LTK	Loutraki	2.92	350	P	Pn	21 52 22.4	+2.3
KARY	Karystos	2.95	12	P	Pn	21 52 22.8	+2.3
VILL	Villia	3.02	355	P	Pn	21 52 23.4	+1.8
VIL2	Platees	3.07	355	P	Pn	21 52 23.3	+1.1
KLV	Kalavryta, Ach	3.13	338	P	Pn	21 52 26.4	+3.4
BODT	Bodrum	3.53	56	PN	Pn	21 52 29.6	+1.0
DAT	Datca	3.56	63	PN	Pn	21 52 29.9	+0.8
CHOS	Chios island	3.77	30	PN	Pn	21 52 32.9	+1.0
ARG	Arkhangelos	3.81	72	PN	Pn	21 52 33.2	+0.9
GCAM	G?zelcaml?	3.86	48	PN	Pn	21 52 34.2	+1.2
AGG	Agios Georgios	4.01	345	PN	Pn	21 52 36.4	+1.3
YER	Yerkesik	4.25	61	PN	Pn	21 52 39.6	+1.1
TURN	Turunc	4.38	65	PN	Pn	21 52 37.1	-3.0
DALY	Dalyan (Mula)	4.39	66	PN	Pn	21 52 41.7	+1.3
AYDB	Zeytinkoy-Aydi	4.42	50	PN	Pn	21 52 41.5	+0.7
SIGR	SIGRI	4.42	23	PN	Pn	21 52 42.1	+1.3
FETY	Fethiye	4.66	70	P	Pn	21 52 45.4	+1.3
FETY	Fethiye	4.66	70	PN	Pn	21 52 45.5	+1.3
AKAS	Kas	4.98	76	PN	Pn	21 52 49.7	+1.2
OUR	Ouranopolis	5.18	3	PN	Pn	21 52 53.5	+2.3
ELL	Elmali	5.33	71	PN	Pn	21 52 55.0	+1.6
FNA	Florina	5.90	343	PN	Pn	21 53 04.2	+3.0
BRTR	Keskin Array B	9.17	57	Pn	Pn	21 53 48.5	+2.5
	comp=N,0.2nm,0.3s,baz=239,slow=14,SNR=7.2						
MMAI	Mount Meron Ar	9.99	99	Pn	Pn	21 53 55.7	-1.6
	comp=N,0.4nm,0.3s,baz=297,slow=13,SNR=6.7						
MMAI				Sn	Sn	21 55 40.1	-8.8
	comp=N,0.3nm,0.3s,baz=272,slow=20,SNR=2.6						
EIL	Elat	11.01	117	Pn	Pn	21 54 09.3	-1.8
	comp=N,0.3nm,0.3s,baz=326,slow=1.8,SNR=6.4						
EIL				Sn	Sn	21 56 05.3	-8.6
	comp=N,0.4nm,0.3s,baz=233,slow=20,SNR=5.0						
EIL				LR	LR	21 59 19.2	
	comp=N,22nm,19.6s,baz=306,slow=42						
GERES	GERESS Array B	15.53	335	Pn	Pn	21 55 14.4	+1.7
	comp=N,0.2nm,0.3s,baz=142,slow=8.7,SNR=3.0						
AKASG	Malin Array Be	16.07	13	Pn	Pn	21 55 19.5	+0.1
	comp=N,0.6nm,0.3s,baz=206,slow=10.0,SNR=2.9						
KBZ	Khabaz	17.14	54	P	P	21 55 34.7	+0.1
	comp=N,0.1nm,0.3s,baz=292,slow=18,SNR=2.4						
HFS	Hagfors	25.82	349	P	P	21 57 03.0	-1.6
	comp=N,2.9nm,0.8s,baz=156,slow=11,SNR=4.4						
HFS				LR	LR	22 09 53.7	
	comp=N,19nm,18.6s,baz=250,slow=43						
FINES	FINESS Array B	26.36	3	P	P	21 57 08.6	-0.8
	comp=N,1.2nm,0.8s,baz=171,slow=9.8,SNR=2.3						
NOA	NORSAR Array B	27.11	347	LR	LR	22 10 32.2	
	comp=N,15nm,20.8s,baz=275,slow=42						
TORD	Torodi Ar. Bea	29.54	228	P	P	21 57 37.5	-0.8
	comp=N,0.1nm,0.5s,baz=33,slow=9.2,SNR=2.8						
SPITS	Spitsbergen Ar	43.25	358	LR	LR	22 18 52.7	
	comp=N,24nm,18.8s,baz=150,slow=38						
MKAR	Makanchi Array	44.82	56	P	P	21 59 45.1	-2.4
	comp=N,0.3nm,0.6s,baz=280,slow=4.1,SNR=3.7						
MKAR				PcP	PcP	22 01 29.3	+0.1
	comp=N,0.3nm,0.8s,baz=292,slow=4.5,SNR=2.3						
ZALV	Zalesovo Beam	45.91	46	P	P	21 59 54.2	-1.8
	comp=N,0.4nm,0.4s,baz=271,slow=8.6,SNR=2.4						

PAS 07 21:51:50.4±2.0, 32°.12N±0°.03×115°.79W±0°.01, h0km±6km, Error ellipse: s-maj=4.5km s-min=0.9km az=166.0
SCEDC 07 21:51:51.7, 32°.17N×115°.78W, h12km
NEIC 07 21:51:51.7±3.3, 32°.18N±0°.03×115°.76W±0°.03, h21km±4km,

Error ellipse: s-maj=4.5km s-min=3.4km az=46.0
*ANF **07** 21:51:51.9±0.7,32.24N×115.72W,h20km±5km,ML3.5/27,*
Error ellipse: s-maj=4.1km s-min=2.1km az=16.0
*ECX **07** 21:51:52.3±0.7,32.17N×115.79W,h6km±2km,MD3.5,*
ML3.7,Fault plane solution: NP1:φs14.00000°, δ58.00000°,λ-28.00000°.
*MEX **07** 21:51:53.1±0.4,32.25N×115.76W,h10km,MD3.5*
ISC 07 21:51:50.6±0.9,**32.19N**±0.02×**115.74W**±0.02,**h13**km±7km, **n123,**σ**1.11**/183,**5C-9D,California-Baja California border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ESJX	Sierra Juarez	0.26	224	⇑eP	Pg	21 51 56.4	+0.3
ESJX				eS	Sg	21 51 59.7	-0.1
ESJX	Sierra Juarez	0.26	224		Pg	21 51 56.3	+0.3
ESJX					Sg	21 51 59.7	-0.1
CPBX	Cerro Prieto	0.43	58	⇑eP	Pb	21 52 00.6	+0.5
CPBX				eS	Sb	21 52 07.5	+1.0
CPBX				IAML		21 52 10.6	
	comp=E,29μm,0.3s						
CPBX				⇓e		21 52 10.6	
CPBX				IAML		21 52 10.8	
	comp=N,16μm,0.4s						
CPBX				⇓e		21 52 10.8	
CPBX	Cerro Prieto	0.43	58		Pb	21 52 00.6	+0.5
ERMX	Rumorosa	0.44	326	⇓eP	Pb	21 51 59.8	-0.5
ERMX				eS	Sb	21 52 06.1	-0.6
SGL	Mount Signal	0.46	2		Pb	21 52 00.5	0.0
CEA0	Mexicali	0.46	7	eP	Pb	21 52 00.7	+0.1
CEA0				eS	Sb	21 52 08.1	+0.7
RMX	La Rumorosa	0.50	325		Pg	21 51 59.8	-0.7
RMX					Sg	21 52 05.4	-1.7
MBIG	Mexicali	0.51	65	⇑eP	Pn	21 52 02.5	-1.1
MBIG	Mexicali	0.51	65	iP	Pb	21 52 02.3	+1.0
MBIG				iS	Sb	21 52 09.5	+0.9
UABX	UABC, Campus M	0.51	30		Pb	21 52 02.1	+0.7
UABX					Sn	21 52 10.6	-1.5
ERPC	Ernies Place	0.55	7		Pb	21 52 02.8	+0.7
IKP	In-Ko-Pah, Jac	0.55	326	⇓iP	Pb	21 52 01.9	-0.4
IKP	In-Ko-Pah, Jac	0.55	326		Pb	21 52 01.9	-0.4
IKP					Sg	21 52 08.9	+0.1
IKP	In-Ko-Pah, Jac	0.55	326	P	Pb	21 52 01.8	-0.4
	baz=150,SNR=152						
IKP				S	Sg	21 52 09.0	+0.1
	baz=150						
WESC	Westside Schoo	0.56	1	⇓iP	Pb	21 52 02.8	+0.4
WESC	Westside Schoo	0.56	1		Pb	21 52 02.8	+0.4
WESC					Sn	21 52 11.9	-1.6
COK2	Cook Ranch 2	0.66	1		Pb	21 52 04.6	-1.0
COK2					Sn	21 52 15.0	-0.8
SNR	Schaffner Ranc	0.71	21		Pb	21 52 05.9	-0.5
SNR					Sn	21 52 17.2	0.0
SWSC	Sam W. Stewart	0.75	356	⇓eP	Pb	21 52 05.9	+0.3
SWSC	Sam W. Stewart	0.75	356		Pb	21 52 05.9	+0.3
SWSC					Sb	21 52 16.3	+0.6
SWSC	Sam W. Stewart	0.75	356	P	Pb	21 52 05.9	+0.3
	baz=179,SNR=225						
SWSC				Sn	Sn	21 52 17.6	-0.6
	baz=179						
SUP	Superstition M	0.76	355		Pb	21 52 06.1	+0.3
SUP					Sb	21 52 16.7	+0.6
CBX	Cerro Bola	0.79	279	⇑eP	Pb	21 52 06.0	-0.3
CBX				eS	Sg	21 52 16.1	-0.2
CBX				⇓e		21 52 17.2	
CBX				IAML		21 52 17.2	
	comp=N,4μm,0.3s						
CBX	Cerro Bola	0.79	279		Sb	21 52 16.4	-0.6
CBX	Cerro Bola	0.79	279	eP	Pg	21 52 05.8	-0.2
CBX				eS	Sg	21 52 16.1	-0.2
TKX	Tecate	0.82	297	eP	Pb	21 52 06.5	-0.3
TKX				eS	Sg	21 52 17.1	-0.3
TKX	Tecate	0.82	297		Pb	21 52 06.5	-0.3
TKX					Sg	21 52 17.1	-0.3
TJIG	Tijuana	0.83	287	eP	Pb	21 52 06.0	-0.6
TJIG				eS	Sg	21 52 16.6	-0.8
TJIG	Tijuana	0.83	287	eP	Pg	21 52 06.2	-0.4
TJIG				eS	Sg	21 52 16.9	-0.6
COA	Coachella	0.85	38		Pn	21 52 07.7	-0.5
MONP2	Monument Peak	0.91	321	⇓eP	Pb	21 52 08.3	0.0
MONP2	Monument Peak	0.91	321		Sb	21 52 19.9	-0.4
MONP2	Monument Peak	0.91	321	P	Pb	21 52 08.3	0.0
	baz=143,SNR=261						
MONP2				S	Sb	21 52 20.1	-0.3
	baz=143						
ERRC	Elmore Ranch	0.93	356		Pn	21 52 09.2	0.0
ECBX	El Chinero	0.93	141	eP	Pg	21 52 08.3	-0.1
ECBX				eS	Sb	21 52 21.0	+0.3
BAR	Barrett	0.93	302	⇓eP	Pb	21 52 08.3	-0.3
BAR				eS	Sb	21 52 20.0	-0.6
BAR	Barrett	0.93	302	Pg	Pb	21 52 08.3	-0.3
BAR	Barrett	0.93	302		Sb	21 52 19.9	-0.6
BAR	Barrett	0.93	302	Sg	Sb	21 52 20.1	-0.4
CLIC	Calipatria	0.96	11		Pn	21 52 09.7	-0.1
OLP	Otay Lakes Par	1.09	293	eP	Pb	21 52 10.9	-0.4
OLP	Otay Lakes Par	1.09	293		Pb	21 52 10.9	-0.4
OLP					Sb	21 52 24.9	-0.5
SALN	Salton City	1.10	349		Pg	21 52 12.3	+0.5
SALN					Sn	21 52 27.4	+0.5
GLA	Glamis	1.15	42		Pb	21 52 11.8	-0.6
GLA					Sb	21 52 26.1	-1.2
GLA	Glamis	1.15	42	P	Pb	21 52 11.9	-0.5
	baz=223,SNR=69						
GLA				S	Sb	21 52 26.5	-0.8
	baz=223						
SDRC	San Diego Road	1.15	298		Pb	21 52 11.9	-0.5
SDRC					Sb	21 52 26.7	-0.6
TJX	Tijuana	1.16	286		Pb	21 52 11.5	-0.9
TJX					Sb	21 52 26.2	-1.1
EML	El Monte Cty P	1.17	307	eP	Pn	21 52 12.3	-0.3
EML	El Monte Cty P	1.17	307		Pn	21 52 12.3	-0.3
EML					Sb	21 52 26.9	-0.7
SPIG	San Pedro Mart	1.17	168	eP	Pb	21 52 12.7	-0.1
SPIG				eS	Sg	21 52 28.5	+0.2
SPIG	San Pedro Mart	1.17	168	eP	Pb	21 52 12.8	+0.1
SPIG				eS	Sg	21 52 28.4	+0.1
SPX	San Pedro Mart	1.18	168	eP	Pb	21 52 12.8	-0.1
SPX				eS	Sb	21 52 28.2	0.0
SPX				IAML		21 52 32.6	
	comp=N,739nm,0.2s						
SPX				⇑e		21 52 32.6	
SPX	San Pedro Mart	1.18	168		Pb	21 52 12.8	-0.1
SPX					Sb	21 52 28.4	+0.1
SPX	San Pedro Mart	1.18	168	eP	Pb	21 52 12.5	-0.4
SPX				eS	Sb	21 52 28.2	0.0
FRK	Frink	1.21	4		Pn	21 52 12.4	-0.8
BORC	Borrego Spring	1.22	332		Pn	21 52 13.0	-0.3
BORC					Sb	21 52 29.0	-0.1
BATC	Bat Cave Butte	1.27	356		Pn	21 52 13.7	-0.3
DPP	Dos Picos Cty	1.29	309		Pb	21 52 31.0	-0.4
HWB	Hans Werner Br	1.32	309		Pb	21 52 15.1	-0.2
HWB					Sb	21 52 31.9	-0.4
109C	Camp Elliot, M	1.35	301		Pb	21 52 15.3	-0.4
109C					Sb	21 52 32.4	-0.4
109C	Camp Elliot, M	1.35	301	P	Pb	21 52 15.4	-0.3
	baz=122,SNR=30						
109C				S	Sb	21 52 32.4	-0.4
	baz=122						
SFX	San Felipe	1.38	146		Pn	21 52 14.6	-0.9
SFX					Sg	21 52 34.8	-0.2
CTCC	Cactus City	1.47	352		Pn	21 52 16.5	-0.4
BC3	Big Chuckawall	1.48	9		Pn	21 52 16.9	-0.1
BC3	Big Chuckawall	1.48	9	P	Pn	21 52 16.9	-0.1
	baz=191,SNR=54						
BC3				S	Sn	21 52 35.1	-1.2
	baz=191						
FRD	Ford Ranch, An	1.49	331		Pn	21 52 17.2	+0.1
FRD	Ford Ranch, An	1.49	331		Pn	21 52 17.2	+0.1
PLM	Palomar	1.50	321		Pb	21 52 17.8	-0.5
PLM					Sg	21 52 37.7	-1.0
BZNA	Buzz No.'s Pla	1.51	329		Pn	21 52 17.7	+0.2
TPFO	Pinon Flats	1.53	337	Sb	Sg	21 52 39.2	-0.8
	baz=158						
XPFO	Pion Flat	1.54	337		Pn	21 52 17.8	-0.1
XPFO					Sn	21 52 37.4	-0.4
PFO	Pinyon Flats O	1.54	337		Pn	21 52 17.8	-0.1
PFO					Sn	21 52 37.4	-0.4
PFO	Pinyon Flats O	1.54	337	P	Pn	21 52 17.8	-0.1
	baz=158,SNR=45						
PFO				Sb	Sg	21 52 39.5	-0.6
	baz=158						
SNDA	J Saunders Pla	1.54	332		Pn	21 52 18.1	+0.2
DNR	Dunn Ranch,Anz	1.56	332		Pb	21 52 18.7	-0.7
GORC	Green Oak Ranc	1.58	308		Pb	21 52 19.1	-0.6
BELC	Belle Mtn. Jos	1.82	353	P	Pn	21 52 21.9	+0.2
	baz=174,SNR=70						
MURC	Murrieta	1.86	319	P	Pn	21 52 22.7	+0.4
	baz=140,SNR=60						
MURC				Sb	Sb	21 52 48.5	+0.8
	baz=140						
IRM	Iron Mountain	2.02	14	P	Pn	21 52 25.5	+1.0
	baz=195,SNR=31						
BBRC	Big Bear Solar	2.29	335	P	Pn	21 52 29.3	+1.0
	baz=155,SNR=7.6						
BBRC				Sb	Sg	21 53 02.7	-1.5
	baz=155						
214A	Organ Pipe Nat	2.50	95		Pn	21 52 30.6	-0.3
214A	Organ Pipe Nat	2.50	95	eP	Pn	21 52 30.0	-0.9
214A	Organ Pipe Nat	2.50	95	P	Pn	21 52 30.7	-0.3
	baz=276						
214A				Sb	Sb	21 53 08.1	+2.1
	baz=276						
SCI2	San Clemente I	2.50	289	P	Pn	21 52 32.1	+1.2
	baz=108						
SCI2				Sb	Sg	21 53 08.0	-2.8
	baz=108						
CIAC	Catalina I. Ai	2.56	299		Pn	21 52 32.9	+1.2
CIS	Catalina Islan	2.56	299	P	Pn	21 52 32.7	+0.9
	baz=118,SNR=9.9						
CIS				S	Sn	21 53 03.9	+1.1
	baz=118						
GMRC	Granite Mounta	2.59	1	P	Pn	21 52 33.0	+0.7
	baz=182						
BFSC	Mount Baldy Ra	2.60	322	Pb	Pb	21 52 36.9	-0.2
	baz=142						
BFSC				Sb	Sb	21 53 10.2	+1.2
	baz=142						
FMP	Fort Macarthur	2.63	306	Sb	Sb	21 53 11.1	+1.4
	baz=126						
HEC	Hector,Ludlow	2.68	349	P	Pn	21 52 33.7	+0.2
	baz=170						
NEE2	Needles Airpor	2.73	20	P	Pn	21 52 34.9	+0.7
	baz=201						
NEE2				S	Sn	21 53 06.4	-0.7
	baz=201						
MWC	Mount Wilson	2.81	317		Pn	21 52 36.8	+1.4
PASC	Pasadena Art C	2.85	315		Pn	21 52 37.2	+1.5
DECC	Green Verdugo	2.99	314	Sb	Sb	21 53 22.2	+1.9
	baz=134						
GSC	Goldstone, Bar	3.23	344	Pn	Pn	21 52 42.2	+1.2
GSC					Pg	21 52 50.4	-2.0
EDW2	Edwards Air Fo	3.28	326	Sb	Sb	21 53 31.0	+2.5
	baz=145						
SNCC	San Nicolas Is	3.36	289	Pn	Pn	21 52 44.2	+1.4
SNCC	San Nicolas Is	3.36	289	S	Sn	21 53 24.0	+1.4
	baz=108						
BLG	Laguna Peak, P	3.38	305	Sb	Sb	21 53 34.4	+2.9
	baz=124						
OSI	Osito Audit: C	3.47	315	Sb	Sb	21 53 36.7	+2.5
	baz=134						
SCZ2	Santa Cruz Isl	3.73	300	S	Sn	21 53 33.5	+1.7
	baz=118						
ARVC	Arvin	3.90	319	Sb	Sb	21 53 49.8	+3.5
	baz=138						
ISA	Isabella, Lake	4.14	327	Pn	Pn	21 52 54.6	+1.0
ISA					Pb	21 53 06.2	+2.8
TUC	Tucson	4.20	87	Pn	Pn	21 52 56.2	+1.8
TUC					Pg	21 53 08.1	-2.9
X16A	Lo Mia Camp, P	4.23	57		Pn	21 52 56.3	+1.4
SHPR	Sheep Range	4.33	6	Pn	Pn	21 52 58.2	+1.9
SHPR					Pg	21 53 17.7	+4.2
DAC	Darwin (Calif)	4.35	340	Pn	Pn	21 52 58.3	+1.7
DAC					Pg	21 53 13.9	0.0
TPNV	Topopah Spring	4.76	355		Pn	21 53 04.2	+2.0
WUAZ	Wupatki	4.92	46		Pn	21 53 06.5	+2.2
LCMT	Little Creek M	5.23	22		Pn	21 53 10.9	+2.3
KNB	Kanab	5.38	26		Pn	21 53 13.7	+3.0
319A	Douglas	5.56	97	Pn	Pn	21 53 14.3	+1.2
CCUT	Cedar City	5.69	19	Pn	Pn	21 53 16.3	+1.3
W18A	Petrified Fore	5.79	58	Pn	Pn	21 53 16.0	-0.4
PMPB	Monarch Peak	5.80	315	Pn	Pn	21 53 17.6	+1.1
SZCU	Shurtz Canyon	5.81	21	Pn	Pn	21 53 14.7	-2.0
PKCU	Pink Cliffs	5.95	27	Pn	Pn	21 53 18.6	-0.1
OMMB	Old Mammoth Mi	6.04	335	Pn	Pn	21 53 18.7	-1.1
R11A	Troy Canyon, C	6.14	1	Pn	Pn	21 53 18.1	-3.1
PSUT	Pine Spring	6.51	13	Pn	Pn	21 53 26.6	+0.3
121A	Cookes Peak, D	6.74	85	Pn	Pn	21 53 29.6	+0.2
RYN	Ryan	6.81	341	Pn	Pn	21 53 29.4	-0.9
RYN					Pg	21 53 57.7	-3.3

*JMA **07** 22:11:11.8,23.23N×121.60E,h39km±2km,M3.3*
*TAP **07** 22:11:12.8,23.26N×121.55E,h37km,ML3.6,B*
ISC 07 22:11:12.7±0.9,**23.24N**±0.02×**121.60E**±0.02,**h32**km±6km, **n124,**σ**0.94**/206,**12C-6D,Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHKT	Chengkung	0.26	237	⇑P	Pn	22 11 19.9	-0.3
	baz=218						
CHKT				S	Sb	22 11 25.3	+0.6
	baz=218						
FULB	Fuli	0.29	261	⇑iP	Pn	22 11 20.2	-0.5
	baz=254						
FULB				eS	Sb	22 11 26.3	+0.9
	baz=254						
HGSD	Ruisui	0.30	327	⇑P	Pb	22 11 20.2	-0.1
	baz=335						
HGSD				eS	Sn	22 11 26.0	-0.2
	baz=335						
TWF1	Yuli	0.30	291	⇑P	Pb	22 11 20.6	+0.2
	baz=292						
TWF1				S	Sb	22 11 26.3	+0.6
	baz=292						
YULB	Yu-li	0.32	298	⇑P	Pb	22 11 20.6	-0.1
	baz=300						
YULB				S	Sn	22 11 26.1	-0.6
	baz=300						
EHY	Hungye	0.37	316	P	Pb	22 11 21.1	-0.2
	baz=307						
EHY				S	Sb	22 11 27.0	-0.2
	baz=307						
EGFH	Guangfu	0.45	339	P	Pb	22 11 22.3	-0.2
	baz=334						
EGFH				eS	Sb	22 11 29.1	-0.2
	baz=334						
ELDTW	Lidau	0.54	265	⇑iP	Pn	22 11 23.1	-1.1
	baz=255						
ELDTW				S	Sb	22 11 30.3	-1.5
	baz=255						
TWH	Lutao	0.54	192	⇑iP	Pn	22 11 23.6	-0.5
	baz=184						
TWH				S	Sb	22 11 31.6	0.0
	baz=184						
ESL	Shilin	0.59	345	eP	Pn	22 11 23.7	-1.1
	baz=341						
ESL				eS	Sn	22 11 31.7	-1.6
	baz=341						
TWGBT	Beinan	0.64	229	P	Pn	22 11 24.4	-1.1
	baz=234						
TWGBT				eS	Sn	22 11 33.0	-1.6
	baz=234						
TTN	Taitung	0.64	221	eP	Pn	22 11 25.1	-0.5
	baz=225						
TWG	Pinlang	0.64	229	P	Pn	22 11 24.5	-1.1
	baz=233						
TWG				eS	Sn	22 11 32.4	-2.2
	baz=233						
YUS	Yu-Shan	0.65	293	P	Pn	22 11 25.4	-0.6
	baz=293						
YUS				eS	Sb	22 11 33.5	-1.6
	baz=293						
ENLB	Shoufeng	0.66	360	eP	Pn	22 11 24.5	-1.2
	baz=15						
ENLB				eS	Sn	22 11 34.5	-0.5
	baz=15						
VWDT	VWDT	0.66	320	P	Pn	22 11 25.4	-0.4
	baz=323						
VWDT				eS	Sn	22 11 34.0	-1.1
	baz=323						
HWA	Hwalien	0.73	0	eP	Pn	22 11 26.2	-0.6
	baz=15						
ALS	Alishan	0.78	290	⇑P	Pn	22 11 27.8	0.0
	baz=290						
ALS				S	Sn	22 11 38.0	-0.5
	baz=290						
STYT	Tauyuan	0.78	264	⇑P	Pn	22 11 27.2	-0.3
	baz=261						
STYT				S	Sn	22 11 37.1	-1.0
	baz=261						
SSLB	Suanglung	0.81	313	⇓P	Pn	22 11 27.4	-0.4
	baz=315						
SSLB				eS	Sn	22 11 37.0	-1.7
	baz=315						
OWD	Renai	0.81	331	eP	Pn	22 11 27.5	-0.5
	baz=342						
OWD				eS	Sn	22 11 36.5	-2.5
	baz=342						
WHYT	Xinyi Township	0.82	303	eP	Pn	22 11 28.2	+0.1
	baz=309						
WHYT				eS	Sn	22 11 38.6	-0.5
	baz=309						
TWD	Chiawan	0.83	360	eP	Pn	22 11 27.5	-0.7
	baz=351						
TWD				S	Sn	22 11 38.8	-0.6
	baz=351						
ECL	Taimali	0.88	223	eP	Pn	22 11 27.4	-1.4
	baz=217						
ECL				eS	Sn	22 11 38.0	-2.4
	baz=217						
TPUB	Ta-pu	0.90	274	P	Pn	22 11 29.4	+0.3
	baz=272						
TPUB				eS	Sn	22 11 41.0	0.0
	baz=272						
CHGB	Renai	0.90	334	⇓P	Pn	22 11 29.0	-0.4
	baz=345						
CHGB				eS	Sn	22 11 39.9	-1.6
	baz=345						
WTP	Ta-pu	0.91	270	⇑iP	Pn	22 11 29.8	+0.5
	baz=268						
WTP				S	Sn	22 11 42.0	+0.8
	baz=268						
SLGT	Liugui	0.91	254	⇑eP	Pn	22 11 29.6	+0.3
	baz=251						
SLGT				eS	Sn	22 11 41.3	0.0
	baz=251						
CHN5	Tsauling	0.92	293	P	Pn	22 11 30.1	+0.6
	baz=293						
CHN5				eS	Sn	22 11 42.0	+0.4
	baz=293						
NACB	Ninganchiao	0.93	360	eP	Pn	22 11 28.8	-0.7
	baz=352						
NACB				eS	Sn	22 11 40.0	-1.7
	baz=352						
CHN4	Tsaushan	0.93	277	⇓iP	Pn	22 11 30.4	+0.8
	baz=276						
CHN4				S	Sn	22 11 42.4	+0.6
	baz=276						
TYC	Yuchr	0.95	314	⇓P	Pn	22 11 30.0	+0.3
	baz=325						
TYC				S	Sn	22 11 41.9	-0.3
	baz=325						
SGST	Jiashian	0.95	261	eP	Pn	22 11 29.4	-0.4
	baz=258						
SGST				S	Sn	22 11 42.3	0.0
	baz=258						
WHF	Hehuan Shan	0.95	341	eP	Pn	22 11 29.6	-0.6
	baz=345						
WHF				eS	Sn	22 11 41.5	-1.4
	baz=345						
ETLH	Xiulin Townshi	0.97	353	eP	Pn	22 11 29.7	-0.4
	baz=358						
WJS	Zhushan	0.99	306	eP	Pn	22 11 31.1	+0.8
	baz=308						
WJS				eS	Sn	22 11 43.8	+0.6
	baz=308						
CHN1	Nanshi	0.99	267	P	Pn	22 11 31.2	+0.8
	baz=265						
CHN1				S	Sb	22 11 44.5	+0.4
	baz=265						
DPDB	Guoxing	1.00	322	P	Pn	22 11 30.7	+0.1
	baz=332						
DPDB				eS	Sn	22 11 43.7	+0.1
	baz=332						
SNST	Tainan City	1.02	269	P	Pn	22 11 31.7	+1.0
	baz=267						
SNST				S	Sb	22 11 45.5	+0.6
	baz=267						
SSD	Sandimen	1.02	241	eP	Pn	22 11 30.8	+0.1
	baz=236						
SSD				eS	Sn	22 11 44.1	+0.1
	baz=236						
TWK	Hsinying	1.02	272	⇑P	Pn	22 11 31.6	+0.8
	baz=270						
TWK				S	Sn	22 11 45.2	+1.0
	baz=270						
WGK	Gukeng	1.05	295	P	Pn	22 11 32.3	+1.1
	baz=296						
WGK				S	Sb	22 11 46.4	+0.5
	baz=296						
WNT	Mingjian	1.05	307	eP	Pn	22 11 32.1	+0.9
	baz=309						
WNT				eS	Sb	22 11 45.9	+1.1
	baz=309						
WDLH	Douliu	1.07	295	eP	Pn	22 11 32.6	+1.2
	baz=295						
WDLH				eS	Sb	22 11 47.2	+0.7
	baz=295						
CHN2	Minshiung	1.07	286	eP	Pn	22 11 32.6	+1.1
	baz=286						
CHN2				eS	Sb	22 11 47.0	+0.5
	baz=286						
TDCB	Techi	1.09	338	⇓P	Pn	22 11 31.9	+0.1
	baz=349						
TDCB				eS	Sn	22 11 44.4	-1.4
	baz=349						
MASBT	Mashibuluo	1.09	235	eP	Pn	22 11 31.5	-0.2
	baz=224						
MASBT				eS	Sn	22 11 46.0	+0.3
	baz=224						
TAW	Tawu	1.09	217	eP	Pn	22 11 30.8	-0.9
	baz=210						
TAW				eS	Sn	22 11 43.9	-1.8
	baz=210						
EAST	Anshuo	1.10	219	eP	Pn	22 11 30.9	-1.1
	baz=206						
CHY	Chiayi	1.11	283	eP	Pn	22 11 33.0	+1.0
	baz=283						
CHY				eS	Sb	22 11 47.9	+0.3
	baz=283						
CHN3	Shinhua	1.15	262	eP	Pn	22 11 33.3	+0.8
	baz=272						
CHN3				eS	Sb	22 11 50.7	+2.1
	baz=272						
TWM1	Shoushan	1.16	249	eP	Pb	22 11 35.1	+0.8
	baz=245						
TWM1				eS	Sb	22 11 50.4	+1.3
	baz=245						
ENA	Nanau	1.19	6	eP	Pn	22 11 32.8	-0.3
	baz=22						
WHP	Taichung City	1.19	330	eP	Pn	22 11 34.5	+1.2
	baz=338						
LAY	Lan-yu	1.20	182	eP	Pn	22 11 32.2	-1.0
	baz=169						
NNSB	Datong	1.20	350	eP	Pn	22 11 33.1	-0.2
	baz=4.0						
NNSB				eS	Sn	22 11 46.9	-1.7
	baz=4.0						
NNSH	Datong	1.20	350	eP	Pn	22 11 32.9	-0.4
	baz=5.0						
NNS	Nan Shan	1.21	350	eP	Pn	22 11 33.5	0.0
	baz=4.0						
NNS				eS	Sn	22 11 48.2	-0.7
	baz=4.0						
SSPT	Xinbi	1.22	232	eP	Pn	22 11 33.8	+0.4
	baz=219						
WLGB	Puzi	1.22	281	eP	Pn	22 11 34.2	+0.8
	baz=281						
WLGB				eS	Sn	22 11 50.3	+1.4
	baz=281						
TCU	Taichung	1.24	317	eP	Pb	22 11 35.4	-0.1
	baz=320						
SCZT	Fangliau	1.25	226	eP	Pn	22 11 34.2	+0.3
	baz=213						
SNJT	Kaohsiung City	1.26	248	eP	Pb	22 11 35.7	-0.3
	baz=244						
WCHH	Zhanghua	1.27	311	eP	Pn	22 11 35.4	+1.2
	baz=313						
WCHH				eS	Sb	22 11 52.0	-0.1
	baz=313						
CHN8	Yiju	1.28	275	eP	Pn	22 11 35.3	+0.9
	baz=274						
CHN8				eS	Sn	22 11 51.7	+1.3
	baz=274						
RLNB	Erlin	1.31	300	eP	Pn	22 11 34.9	+0.2
	baz=301						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RLNB				eS	Sn	22 11 51.5	+0.5
	baz=301						
WSF	Szhu	1.33	288	eP	Pn	22 11 35.2	+0.2
	baz=288						
WSF				eS	Sn	22 11 51.9	+0.4
	baz=288						
TWQ1	Liyutan	1.34	326	eP	Pb	22 11 36.8	-0.4
	baz=329						
TWQ1				eS	Sn	22 11 53.4	+1.6
	baz=329						
NDT	Datong Townshi	1.36	357	eP	Pn	22 11 36.2	+0.8
	baz=2.0						
WTCT	Ta-ch'eng	1.36	297	eP	Pn	22 11 35.6	+0.2
	baz=298						
WTCT				eS	Sn	22 11 53.3	+0.9
	baz=298						
WSSB	Gushan	1.37	244	eP	Pn	22 11 36.9	+1.3
	baz=239						
WSSB				eS	Sb	22 11 55.6	+0.6
	baz=239						
TWC	Suao	1.38	9	eP	Pn	22 11 36.5	+0.8
	baz=15						
EOS1	EOS1	1.39	20	eP	Pn	22 11 35.8	0.0
	baz=35						
ENTT	Nioudou	1.39	359	eP	Pn	22 11 35.9	0.0
	baz=5.0						
NSY	Sanyi	1.40	327	eP	Pn	22 11 37.6	+1.6
	baz=330						
NSY				eS	Sb	22 11 55.8	0.0
	baz=330						
WDJ	Dajia District	1.41	322	eP	Pn	22 11 37.8	+1.7
	baz=324						
WDJ				eS	Sb	22 11 56.3	+0.2
	baz=324						
WLCH	Liuqiu	1.44	232	eP	Pb	22 11 40.5	+1.6
	baz=227						
YHNB	Yeheng	1.44	352	eP	Pn	22 11 36.9	+0.3
	baz=356						
YHNB				eS	Sn	22 11 53.5	-0.9
	baz=356						
NSK	Sanguang	1.45	351	eP	Pn	22 11 37.2	+0.6
	baz=355						
NSK				eS	Sn	22 11 54.1	-0.4
	baz=355						
PTSB	Yuanli	1.45	326	eP	Pn	22 11 38.3	+1.6
	baz=329						
TWE	Neicheng	1.47	2	eP	Pn	22 11 37.4	+0.4
	baz=9.0						
TSEB	Hengchuen, Pin	1.48	206	eP	Pn	22 11 38.5	+1.3
	baz=192						
TSEB				eS	Sn	22 11 55.5	+0.1
	baz=192						
TWKBT	Hengchun	1.49	210	eP	Pn	22 11 37.1	-0.1
	baz=192						
TWKBT				eS	Sn	22 11 55.0	-0.4
	baz=192						
TWK1	Hengchun	1.49	210	eP	Pn	22 11 37.0	-0.2
	baz=192						
TWK1				eS	Sn	22 11 54.7	-0.8
	baz=192						
NMLH	Miaoli	1.49	330	eP	Pn	22 11 38.5	+1.3
	baz=333						
NMLH				eS	Sn	22 11 57.4	+1.8
	baz=333						
NSTT	Nanjuang	1.49	338	P	Pn	22 11 38.4	+1.2
	baz=342						
NSTT				eS	Sn	22 11 55.8	+0.2
	baz=342						
LIOB	Emei	1.50	339	eP	Pn	22 11 38.6	+1.3
	baz=344						
SLBB	Yuanshan	1.51	1	eP	Pn	22 11 37.9	+0.4
	baz=7.0						
NWLT	Wulai	1.53	357	eP	Pn	22 11 38.2	+0.3
	baz=12						
NTC	Toucheng	1.62	7	eP	Pn	22 11 40.4	+1.4
	baz=24						
WLTB	Daxi	1.64	349	eP	Pn	22 11 40.8	+1.6
	baz=2.0						
WLTB				eS	Sn	22 12 01.0	+1.9
	baz=2.0						
SBCB	Hsinchu	1.64	340	eP	Pn	22 11 40.4	+1.1
	baz=345						
NHDH	Xindian Distri	1.71	358	eP	Pn	22 11 40.9	+0.6
	baz=4.0						
JYNG	Yonagunijimaku	1.72	45	P	Pn	22 11 40.0	-0.4
JYNG				eS	Sn	22 12 01.4	+0.1
TWA	Mucha	1.73	359	eP	Pn	22 11 41.5	+0.9
	baz=6.0						
TIPB	Shuangxi	1.73	7	eP	Pn	22 11 41.5	+0.9
	baz=3.0						
NCU	National Centr	1.76	348	eP	Pn	22 11 42.4	+1.5
	baz=353						
YOJ	Yonaguni jima	1.77	46	P	Pn	22 11 42.0	+0.9
YOJ				eS	Sn	22 12 03.2	+0.7
WDGT	Dungji	1.79	271	⇓P	Pn	22 11 41.1	-0.2
	baz=270						
WDGT				eS	Sn	22 12 01.3	-1.6
	baz=270						
NWF	Wu-fen Shan	1.83	5	eP	Pn	22 11 43.6	+1.6
	baz=11						
WFSB	Wu-fen Shan	1.83	5	eP	Pn	22 11 43.2	+1.3
	baz=11						
TWS1	Kuangyinshan	1.86	355	eP	Pn	22 11 43.2	+0.9
	baz=15						
PHUB	P'eng-hu	1.89	279	P	Pn	22 11 42.4	-0.3
	baz=278						
PHUB				eS	Sn	22 12 03.9	-1.4
	baz=278						
YM01	YM01	1.90	359	eP	Pn	22 11 44.8	+1.9
	baz=5.0						
YM10	YM10	1.91	359	eP	Pn	22 11 43.8	+0.8
	baz=5.0						
PNG	Penghu	1.91	280	P	Pn	22 11 42.9	-0.1
	baz=280						
YM11	YM11	1.92	359	eP	Pn	22 11 43.5	+0.3
	baz=6.0						
YM08	YM08	1.94	360	eP	Pn	22 11 44.4	+1.0
	baz=6.0						
VCHM	Qimei	2.00	269	eP	Pn	22 11 43.7	-0.5
	baz=269						
VCHM				eS	Sn	22 12 06.3	-1.8
	baz=269						
HATJ	Hateruma jima	2.18	68	P	Pn	22 11 47.1	+0.5
HATJ				S	Sn	22 12 12.5	0.0
IRIF	Iriomote-Funau	2.23	60	P	Pn	22 11 48.5	+1.1
IRIF				eS	Sn	22 12 14.3	+0.4
JKRS	Kuro-shima	2.42	65	P	Pn	22 11 50.7	+0.7
JKRS				S	Sn	22 12 19.1	+0.6
JIJ	Ishigaki jima	2.58	64	P	Pn	22 11 52.5	+0.3
JIJ				eS	Sn	22 12 21.6	-0.9
VWUC	VWUC	2.63	312	eP	Pn	22 11 52.6	-0.2
	baz=313						
PTTC	Pingtan	2.80	324	eP	Pn	22 11 55.2	-0.1
	baz=326						
PTTC				eS	Sn	22 12 26.4	-1.6
	baz=326						
JISG	Ishigakijimahi	2.82	61	P	Pn	22 11 55.7	+0.2
JISG				eS	Sn	22 12 26.9	-1.4
PTMZ	Houxiangcun	2.89	309	eP	Pn	22 11 56.1	-0.4
	baz=309						
JTJ	Tarama	3.16	63	P	Pn	22 12 01.0	+0.8
JTJ				S	Sn	22 12 36.8	0.0
KNMB	Chin-men Tao	3.18	293	eP	Pn	22 11 59.9	-0.6
	baz=293						
MATB	Ma-tsu	3.27	333	eP	Pn	22 12 01.3	-0.3
	baz=335						
MATB				eS	Sn	22 12 37.6	-1.8
	baz=335						
MHZQ	Yeshan	3.68	321	eP	Pn	22 12 07.3	0.0
	baz=322						
LYJJ	Jianjiangzhen	3.69	333	eP	Pn	22 12 06.8	-0.7
	baz=335						
AXDP	Jialang	3.71	297	eP	Pn	22 12 07.0	-0.7
	baz=297						
XPSS	Dashiqiu	3.89	341	eP	Pn	22 12 09.9	-0.3
	baz=343						
XPSS				eS	Sn	22 12 53.0	-1.8
	baz=343						

IDC 07 22:24:58.5±9.0,8.14S×128.46E,h231km±101km,mb2.8/1, mb1 3.1/4,mb1mx2.9/26,mbtmp3.6/4,Error ellipse: s-maj=71.5km s-min=39.8km az=40.0,Timor Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.27	195	P	Pn	22 27 19.2	-1.6
	0.2nm,0.3s,baz=63,slow=11,SNR=2.4						
FITZ				S	S	22 29 17.0	+0.8
	0.1nm,0.3s,baz=56,slow=15,SNR=2.0						
WRA	Warramunga Arr	13.04	155	P	P	22 27 56.8	-1.1
	0.1nm,0.3s,baz=341,slow=12,SNR=5.7						
WRA				S	S	22 30 22.0	+2.0
	0.1nm,0.3s,baz=333,slow=22,SNR=5.8						
ASAR	Alice Springs	16.30	162	P	P	22 28 34.1	+0.3
	0.3nm,0.3s,baz=348,slow=11,SNR=9.4						
MKAR	Makanchi Array	68.36	328	P	P	22 35 35.2	+0.1
	0.2nm,0.6s,baz=127,slow=7.7,SNR=5.0						

IDC 07 22:31:00.0±1.5,8.98S×125.03E,h0km,mb3.3/2, mb1 3.9/5,mb1mx3.6/34,mbtmp3.7/5,ML3.9/3,MS2.5/1, Ms1 2.5/1,ms1mx2.1/20,Error ellipse: s-maj=94.7km s-min=25.0km az=69.0

NEIC 07 22:31:07.0±2.0,9.46S±0.07×124.79E±0.09,h79km±8km, mb4.3/5,Error ellipse: s-maj=14.0km s-min=8.1km az=62.0

ISC 07 22:31:04.2±0.7,9.28S±0.08×125.00E±0.09,h35km,n22, σ2.70/23,mb4.0/4,Timor region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOEI	Soe	0.87	237		Pn	22 31 21.6	+1.5
KAPI	Kappang	6.71	309	Pn	Pn	22 32 42.9	+2.6
KNRA	Kununurra	7.34	150	Pn	Pn	22 32 53.6	+4.6
KNRA					Sn	22 34 11.8	+0.6
FITZ	Fitzroy Crossi	8.79	176	Pn	Pn	22 33 11.9	+3.0
	0.7nm,0.3s,baz=355,slow=11,SNR=22						
FITZ				Sn	Sn	22 34 43.1	-3.7
	3.7nm,0.3s,baz=81,slow=14,SNR=17						
FITZ	Fitzroy Crossi	8.79	176		Sn	22 34 43.3	-3.5
FAKI	Fak Fak	9.58	49	Pn	Pn	22 33 25.7	+6.0
JAGI	Jajag, Banyuwa	10.75	273	Pn	Pn	22 33 37.4	+1.6
WB0	Warramunga Arr	13.83	140	Pn	Pn	22 34 21.2	+3.4
WRA	Warramunga Arr	13.92	141	Pn	Pn	22 34 21.2	+2.1
	0.9nm,0.3s,baz=322,slow=14,SNR=42						
WRA				Sn	Sn	22 36 46.9	-5.7
	0.8nm,0.3s,baz=318,slow=25,SNR=6.6						
WR0	Warramunga Arr	14.06	140	Pn	Pn	22 34 24.2	+3.2
ASAR	Alice Springs	16.65	150	Pn	P	22 34 59.2	+2.1
	0.4nm,0.3s,baz=320,slow=11,SNR=26						
ASAR				Sn	Sn	22 37 58.4	-0.6
	0.6nm,0.3s,baz=313,slow=20,SNR=10						
ASAR	Alice Springs	16.65	150		P	22 34 58.4	+1.3
CISI	Cisompet, Garu	17.09	274		Pn	22 34 58.2	-2.4
SBUM	Sibu	17.26	312		P	22 35 03.8	-0.1
LEM	Lembang	17.39	277	LR	LR	22 42 04.2	
	comp=Z,18nm,20.3s,baz=34,slow=38						
DZM	Mont Dzumac	41.74	113	P	P	22 38 49.7	-0.7
DZM				IAmb	IAmb	22 38 53.2	
	comp=Z,7.5nm,1.1s						
MSWZ	Moikau Station	54.53	135	P	P	22 40 27.1	-1.8
SONM	Songino Array	59.20	346	P	P	22 41 01.8	-0.2
	comp=Z,0.3nm,0.5s,baz=160,slow=7.6,SNR=3.2						
SONM	Songino Array	59.20	346	P	P	22 41 00.8	-1.2
MKAR	Makanchi Array	67.54	330	P	P	22 41 56.2	-0.8
	comp=Z,0.2nm,0.7s,baz=131,slow=8.0,SNR=4.5						
MKAR	Makanchi Array	67.54	330	P	P	22 41 55.7	-1.3
KMBO	Kilima Mbogo	87.60	269	P	P	22 43 44.8	-5.2
KMBO				IAmb	IAmb	22 44 03.4	
	comp=Z,1.9nm,0.9s						

DJA 07 22:31:58.3±1.3,9°S±8°×11°0E±°,h10km±9km,M3.7/9, MLv3.7/9,Jawa

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UGM	Wanagama	0.81	19	P	Pb	22 32 14.6	+0.2
PCJI	Pacitan	1.03	62	P	Pg	22 32 18.0	-0.1
WOJI	Wonogiri, Jawa	1.06	38	P	Pg	22 32 18.2	-0.6
WOJI				S	Sg	22 32 32.4	-0.2
NGJI	Ngawi	1.77	42	P	Pn	22 32 29.8	+0.9
KPJI	Karang Pucung	1.88	315	P	Pn	22 32 31.1	+0.6
CMJI	Cimerak	2.00	296	P	Pn	22 32 31.5	-0.7
CISI	Cisompet, Garu	2.67	295	P	Pn	22 32 40.8	-0.6
CNJI	Cibinong	3.39	293	P	Pn	22 32 51.5	+0.2
JAGI	Jajag, Banyuwa	3.85	87	P	Pn	22 32 57.4	-0.3
PCI	Palu	12.27	52	P	Pn	22 35 03.8	+11

WEL 07 22:35:41.1,38°S±10°×18°0W±°,h33km,ML4.0/16, MLv3.9/53,Error ellipse: s-maj=0.0km s-min=0.0km az=177.2,

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.64	283	P	Pn	22 36 07.5	0.0
WMGZ				S	Sn	22 36 28.5	+1.0
PUZ	Puketiti	1.72	274	P	Pn	22 36 08.9	+0.2
PUZ				S	Sn	22 36 29.4	-0.1
CNGZ	Carnagh Statio	1.77	261	P	Pn	22 36 10.8	+1.5
MXZ	Matakaoa Point	1.80	291	P	Pn	22 36 09.6	-0.2
MXZ				S	Sn	22 36 31.1	-0.4
TWGZ	Tauwhareparae	1.93	270	P	Pn	22 36 12.3	+0.7
TWGZ				S	Sn	22 36 36.0	+1.3
TKGZ	Te Karaka	2.04	263	P	Pn	22 36 14.1	+0.9
TKGZ				S	Sn	22 36 39.2	+1.8
PRGZ	Paritu Road	2.11	250	P	Pb	22 36 16.5	-2.3
HAZ	Te Kaha	2.14	282	P	Pn	22 36 14.4	0.0
HAZ				S	Sn	22 36 39.4	-0.5
RIGZ	Rimuhau	2.15	256	P	Pn	22 36 15.7	+1.1
RIGZ				S	Sn	22 36 42.7	+2.6
MHGZ	Mahia Peninsul	2.18	244	P	Pn	22 36 17.0	+1.9
RUGZ	Raukumara Rang	2.18	276	P	Pn	22 36 15.4	+0.2
RUGZ				S	Sn	22 36 40.6	-0.6
MWZ	Matawai	2.28	266	P	Pn	22 36 17.2	+0.7
MWZ				S	Sn	22 36 43.3	-0.2
KNZ	Kokohu	2.30	249	P	Pn	22 36 18.4	+1.7
RAGZ	Rawiri	2.38	262	P	Pn	22 36 19.4	+1.4
RAGZ				S	Sn	22 36 46.5	+0.4
SNGZ	Shannon Statio	2.49	256	P	Pn	22 36 20.4	+1.1
SNGZ				S	Sn	22 36 49.9	+1.4
URZ	Urewera	2.61	268	P	Pn	22 36 22.3	+1.3
WHHZ	Waihua	2.64	250	P	Pn	22 36 23.1	+1.7
WHHZ				S	Sn	22 36 55.0	+2.6
RAHZ	Arahi	2.71	254	P	Pn	22 36 24.0	+1.6
RAHZ				S	Sn	22 36 55.9	+1.9
RTZ	Ruatahuna	2.74	261	P	Pn	22 36 23.8	+1.0
RTZ				S	Sn	22 36 56.6	+1.9
ARHZ	Aropaoanui	2.88	248	P	Pn	22 36 26.8	+2.1
ARHZ				S	Sn	22 37 02.0	+3.9
MTHZ	Maungataniwha	2.88	256	P	Pn	22 36 26.1	+1.3
MTHZ				S	Sn	22 37 00.1	+1.8
MUGZ	Murupara	2.89	264	P	Pn	22 36 26.3	+1.5
NMHZ	Naumai	2.97	252	P	Pn	22 36 28.1	+2.1
NMHZ				S	Sn	22 37 02.9	+2.5
OPRZ	Ohinepanea	3.08	276	P	Pn	22 36 27.6	+0.2
TARZ	Mount Tarawera	3.09	268	P	Pn	22 36 28.8	+1.1
MCHZ	McNeill Hill	3.16	246	P	Pn	22 36 31.1	+2.6
KAHZ	Kahuranaki	3.18	239	P	Pn	22 36 31.4	+2.5
BKZ	Black Stump Fm	3.22	252	P	Pn	22 36 31.6	+2.2
BKZ				S	Sn	22 37 07.9	+1.2
ALRZ	Allen Road	3.23	263	P	Pn	22 36 30.8	+1.3
KARZ	Kaharoa	3.30	272	P	Pn	22 36 30.9	+0.3
PXZ	Pawanui	3.31	236	P	Pn	22 36 31.6	+1.0
PXZ				S	Sn	22 37 10.4	+1.6
KWHZ	Kaweka Forest	3.35	248	P	Pn	22 36 33.0	+1.7
KWHZ				S	Sn	22 37 11.6	+1.7
KRHZ	Kereru	3.47	244	P	Pn	22 36 34.6	+1.8
BHHZ	Black Hill Sta	3.64	248	P	Pn	22 36 36.2	+1.1
PNHZ	Pukenui	3.70	241	P	Pn	22 36 37.0	+1.0
PNHZ				S	Sn	22 37 19.4	+0.9
KATZ	Kakaramea	3.78	257	P	Pn	22 36 39.2	+2.4
MOVZ	Moawhango	3.84	251	P	Pn	22 36 40.1	+2.1
KRVZ	Karewarewa	3.85	255	P	Pn	22 36 40.8	+2.7
WTVZ	West Tongariro	3.89	255	P	Pn	22 36 42.3	+3.6
NGZ	Ngauruhoe	3.90	254	P	Pn	22 36 42.4	+3.7
DVHZ	Dannevirke	3.91	237	P	Pn	22 36 39.4	+0.6
DVHZ				S	Sn	22 37 24.0	+0.5
TSZ	Takapari Road	3.93	241	P	Pn	22 36 40.0	+0.8
TSZ				S	Sn	22 37 25.6	+1.5
TRVZ	Turoa	3.96	253	P	Pn	22 36 43.0	+3.2
KUZ	Kuaotunu	4.02	290	P	Pn	22 36 39.6	-0.8
MTVZ	Mangateitei	4.04	252	P	Pn	22 36 42.5	+1.7
PRWZ	Pori Road	4.17	235	P	Pn	22 36 43.8	+1.4
POWZ	Post Office Ro	4.22	238	P	Pn	22 36 44.4	+1.4
MKAZ	Moumakai	4.32	283	P	Pn	22 36 44.7	+0.2
TIWZ	Tintock	4.34	233	P	Pn	22 36 46.0	+1.2
HIZ	Hauiti	4.39	264	P	Pn	22 36 51.2	+5.8
WAZ	Wanganui	4.51	248	P	Pn	22 36 49.8	+2.7
MBAZ	Motutapu North	4.63	286	P	Pn	22 36 49.6	+0.9
OGWZ	Otaki Gorge	4.82	236	P	Pn	22 36 51.8	+0.4
KIW	Kapiti Island	5.02	237	P	Pn	22 36 55.3	+1.2
KHEZ	Kahui Hut	5.13	256	P	Pn	22 37 02.3	+6.7
PKE	Pukeiti	5.13	257	P	Pn	22 36 59.3	+3.6
WCZ	Waipu Caves	5.37	293	P	Pn	22 36 59.4	+0.6
NNZ	Nelson	6.20	239	P	Pn	22 37 12.0	+1.6
OUZ	Omahuta	6.25	297	P	Pn	22 37 11.7	+0.8
KHZ	Kahutara	6.73	229	P	Pn	22 37 18.7	+1.1
THZ	Tophouse	6.77	236	P	Pn	22 37 20.4	+2.1

ISN 07 22:37:57.5±1.3,35.39N×46.30E,h0km±33km,ML2.5

TEH 07 22:37:59.0,35.38N×46.34E,h10km,ML2.8

ISC 07 22:37:58.8±1.0,35.39N±0.05×46.33E±0.04,h10km,n12, σ1.07/15,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IDHR	Dehrash	0.69	176	ePg	Pg	22 38 12.1	0.0
IDHR				eSg	Sb	22 38 22.8	+0.2
IDHR				e		22 38 25.4	
ILIN	Lien	0.70	132	ePg	Pg	22 38 12.2	-0.2
ILIN				e		22 38 26.7	
IVIS	Veis	0.96	153	ePg	Pg	22 38 16.7	-0.6
IVIS				e		22 38 34.9	
IGHG	Ghaleghazi	1.07	169	ePg	Pn	22 38 20.2	+0.1
IGHG				e		22 38 25.8	
MAHB	Mahabad	1.47	340	ePn	Pb	22 38 26.5	+0.3
MAHB				e		22 38 55.6	
IKOM	Komasi	1.55	141	ePn	Pg	22 38 28.8	+0.2
IKOM				e		22 38 56.6	
IBZA	Bozab	1.56	126	e	Pg	22 38 33.7	+5.0
IALM	Almabolaq	1.60	109	ePn	Pb	22 38 28.7	+0.1
IALM				e		22 38 54.2	
IKRK	Kirkuk	1.62	271	ePn	Pb	22 38 29.0	+0.2
IKRK				eSn	Sg	22 38 51.0	+0.1
IKRK				AML	AML	22 38 58.8	
	comp=N,61nm,0.4s						
IKRK				AML	AML	22 39 04.0	
	comp=E,79nm,0.5s						
HAGD	Aghdareh	2.38	103	ePn	Pg	22 38 43.7	-0.6
BHD	Baghdad	2.66	218	ePn	Pn	22 38 43.0	+1.4
BHD				eSn	Sb	22 39 17.0	-2.0
MSL	Mosul	2.80	292	ePn	Pn	22 38 45.0	+1.4
MSL				eSn	Sb	22 39 21.0	-2.2
MSL				AML	AML	22 39 33.7	
	comp=N,28nm,0.6s						
MSL				AML	AML	22 39 37.5	
	comp=E,26nm,0.6s						

GUC 07 23:01:30.9±0.6,21.34S×68.57W,h127km±4km,ML2.9

SJA 07 23:01:31.1±0.8,21.36S×68.68W,h134km±7km,ML2.9, MW3.0

ISC 07 23:01:33.0±1.8,21.34S±0.04×68.68W±0.07, h124km±14km,n20,σ0.74/32,5C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.69	229	⇑iP	Pn	23 01 52.4	-0.5
PB09				eS	Sn	23 02 08.7	+0.6
PB09	IPOC Station P	0.69	229	iP	Pn	23 01 52.4	-0.5
PB09				i Sg	Sn	23 02 08.6	+0.6
PB09				IAML		23 02 09.4	
	comp=Z,135nm,0.8s						
PB01	IPOC Station P	0.81	291	⇑iP	Pn	23 01 52.9	-0.9
PB01				i S	Sn	23 02 09.6	+0.1
PB01				IAML		23 02 11.6	
	comp=E,238nm,0.2s						
PB01	IPOC Station P	0.81	291	i Sg	Sn	23 02 09.8	+0.3
PB01				IAML		23 02 12.9	
	comp=Z,174nm,0.2s						
PB02	IPOC Station P	1.14	271	⇑iP	Pn	23 01 56.6	-0.3
PB02				i S	Sn	23 02 16.0	+1.0
PB02				IAML		23 02 19.3	
	comp=E,344nm,0.4s						
PB07	IPOC Station P	1.19	251	⇑iP	Pn	23 01 57.2	-0.3
PB07				i S	Sn	23 02 17.2	+1.1
PB07				IAML		23 02 17.5	
	comp=N,245nm,0.4s						
PB07	IPOC Station P	1.19	251	i Sg	Sn	23 02 16.4	+0.4
PB07				IAML		23 02 18.5	
	comp=Z,210nm,0.4s						
PB08	IPOC Station P	1.28	339	⇓iP	Pn	23 01 58.1	-0.6
PB08				i S	Sn	23 02 18.4	+0.3
PB08				IAML		23 02 19.0	
	comp=N,157nm,0.3s						
LVC	Limon Verde	1.28	190	⇑iP	Pn	23 01 57.4	-1.3
PATCX	Punta Patache	1.48	290	eP	Pn	23 02 00.6	0.0
PATCX				i S	Sn	23 02 22.9	+1.5
PATCX				IAML		23 02 24.1	
	comp=E,240nm,0.2s						
PB06	IPOC Station P	1.59	211	⇑iP	Pn	23 02 01.2	-0.7
PB06				i S	Sn	23 02 24.3	+0.4
PB06	IPOC Station P	1.59	211	iP	Pn	23 02 01.3	-0.7
PB06				IAML		23 02 27.3	
	comp=Z,48nm,0.2s						
TA01	Diego Aracena	1.61	299	eP	Pn	23 02 01.6	-0.3
TA01				eS	Sn	23 02 24.6	+0.6
TA01				IAML		23 02 26.5	
	comp=N,180nm,0.7s						
PB04	IPOC Station P	1.69	234	iP	Pn	23 02 02.5	-0.5
GO01	Chusmiza	1.74	344	eP	Pn	23 02 03.0	-1.0
GO01				eS	Sn	23 02 28.0	+0.5
PB15	IPOC Station P	2.00	202	eP	Pn	23 02 06.1	-0.7
PB15				eS	Sn	23 02 33.3	+0.5
PB15	IPOC Station P	2.00	202	iP	Pn	23 02 06.2	-0.7
PB15				IAML		23 02 37.5	
	comp=Z,285nm,0.2s						
PB05	IPOC Station P	2.06	223	iP	Pn	23 02 06.8	-0.8
PB05				IAML		23 02 43.4	
	comp=Z,21nm,0.6s						
MNMC	Minye Minye	2.37	338	eP	Pn	23 02 10.7	-0.8
MNMC				eS	Sn	23 02 41.4	+0.4
YJA	Yavi	3.05	106	iP	Pn	23 02 21.0	+0.5

NEIC 07 23:16:01.4±2.3,31.79N±0.02×114.98W±0.03,h13km±5km, Error ellipse: s-maj=4.9km s-min=1.6km az=56.0

PAS 07 23:16:01.4±1.8,31.79N±0.02×114.99W±0.03,h0km±1km, Error ellipse: s-maj=4.2km s-min=3.0km az=61.0

ECX 07 23:16:02.4±0.5,31.78N×114.99W,h4km±3km,MD2.8, ML3.0

MEX 07 23:16:03.6±0.5,31.72N×114.88W,h10km,MD3.6

ISC 07 23:16:01.2±1.1,31.76N±0.02×115.01W±0.03,h11km±9km, n42,σ0.86/64,2D,Baja California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ECBX	El Chinero	0.29	187	⇓iP	Pb	23 16 08.0	-0.4
ECBX				eS	Sb	23 16 12.8	-0.5
MBIG	Mexicali	0.66	346	iP	Pn	23 16 16.5	-0.1
MBIG				i S	Sb	23 16 25.1	+1.1
CPBX	Cerro Prieto	0.70	339	eP	Pg	23 16 14.5	-0.3
CPBX				eS	Sg	23 16 24.0	0.0
CPBX				IAML		23 16 26.1	
	comp=E,4μm,0.2s						
CPBX				e		23 16 26.1	
CPBX	Cerro Prieto	0.70	339		Pg	23 16 14.6	-0.3
CPBX					Sg	23 16 24.6	+0.6
SFX	San Felipe	0.74	169	eP	Pg	23 16 15.6	+0.2
SFX				eS	Sb	23 16 26.1	0.0
SFX	San Felipe	0.74	169		Pg	23 16 15.7	+0.2
SFX					Sb	23 16 26.4	+0.3
SPIG	San Pedro Mart	0.81	209	eP	Pg	23 16 16.9	-0.1
SPIG				eS	Sb	23 16 28.8	+0.1
SPIG	San Pedro Mart	0.81	209	eP	Pb	23 16 17.5	-0.1
SPIG				eS	Sb	23 16 28.8	+0.1
SPX	San Pedro Mart	0.82	208	eP	Pg	23 16 17.5	+0.3
SPX				eS	Sb	23 16 28.8	-0.2
SPX				IAML		23 16 30.1	
	comp=N,206nm,0.2s						
SPX	San Pedro Mart	0.82	208		Pg	23 16 17.4	+0.3
SPX					Sb	23 16 28.9	0.0
SPX	San Pedro Mart	0.82	208	eP	Pg	23 16 17.5	+0.3
SPX				eS	Sb	23 16 28.7	-0.2
ESJX	Sierra Juarez	0.83	287	eP	Pg	23 16 17.3	0.0
ESJX				eS	Sb	23 16 29.0	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ESJX	Sierra Juarez	0.83	287		Pg	23 16 17.4	0.0
ESJX					Sb	23 16 29.0	-0.1
SGL	Mount Signal	1.07	326	eP	Pb	23 16 21.2	-0.5
SGL	Mount Signal	1.07	326		Pb	23 16 21.2	-0.5
SGL					Sb	23 16 35.5	-0.2
ERPC	Ernies Place	1.12	331		Pg	23 16 23.0	+0.2
WESC	Westside Schoo	1.17	329		Sn	23 16 39.5	+0.1
IKP	In-Ko-Pah, Jac	1.28	314	eP	Pn	23 16 24.6	-0.6
IKP	In-Ko-Pah, Jac	1.28	314		Pn	23 16 24.8	-0.4
GLA	Glamis	1.29	7	Pg	Pn	23 16 24.4	-0.9
GLA					Pb	23 16 24.6	-1.0
GLA				Sg	Sb	23 16 41.5	-0.8
SQX	San Quintin	1.40	212	eP	Pn	23 16 25.3	-1.3
SQX				eS	Sn	23 16 44.5	-0.6
CBX	Cerro Bola	1.50	292	eP	Pb	23 16 28.9	-0.4
CBX				eS	Sg	23 16 49.5	-0.2
CBX				⇓e		23 16 50.7	
CBX					IAML	23 16 50.7	
	comp=E,151nm,0.4s						
CBX	Cerro Bola	1.50	292		Pn	23 16 27.2	-1.1
CBX	Cerro Bola	1.50	292	iP	Pb	23 16 29.1	-0.2
CBX				eS	Sn	23 16 48.3	+0.3
TJIG	Tijuana	1.56	296	iP	Pn	23 16 29.6	+0.7
TJIG				iS	Sn	23 16 48.9	-0.3
BAR	Barrett	1.68	303		Pn	23 16 29.1	-1.5
BAR				Sn	Sn	23 16 52.8	+0.7
OLP	Otay Lakes Par	1.83	298	eP	Pn	23 16 34.2	-0.5
214A	Organ Pipe Nat	1.88	84		Pn	23 16 32.0	-1.4
Y12C	Blythe	2.02	12	Pn	Pn	23 16 36.0	+0.7
109C	Camp Elliot, M	2.10	303	Pn	Pn	23 16 37.8	+1.5
XPFO	Pion Flat	2.21	327	Pn	Pn	23 16 36.4	-1.6
XPFO				Sn	Sb	23 17 08.3	-0.3
PFO	Pinyon Flats O	2.21	327		Pn	23 16 36.9	-1.1
Y14A	Wickenburg	2.75	37		Pn	23 16 42.7	-2.7
W13A	Hualapai Mount	3.46	16	Pn	Pn	23 16 56.0	+0.8
PASC	Pasadena Art C	3.59	313	Pn	Pn	23 16 58.1	+1.3
319A	Douglas	4.91	93	Pn	Pn	23 17 17.3	+2.2
DAC	Darwin (Calif)	4.99	335	Pn	Pn	23 17 17.9	+1.7
X18A	Snowflake	5.06	56	Pn	Pn	23 17 16.9	-0.4
U15A	North Rim	5.17	25	Pn	Pn	23 17 19.2	+0.3
KNB	Kanab	5.54	18	Pn	Pn	23 17 24.8	+0.9
CCUT	Cedar City	5.93	13	Pn	Pn	23 17 31.0	+1.8
121A	Cookes Peak, D	6.18	81	Pn	Pn	23 17 33.6	+1.1

UPA 07 23:21:55.5±1.4, 7.45N×81.04W, h1km±4km, MW3.8
UCR 07 23:21:56.6±3.3, 7.61N×81.08W, h1km±71km, MW3.7
ISC 07 23:21:55.5±1.2, 7.46N±0.06×81.07W±0.03, h3km±11km, n40, σ0§85/60, 7C-10D, Panama

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CACAO	El Cacao, Vera	0.23	120	⇑iP	Pg	23 21 60.0	-0.1
CACAO				iS	Sg	23 22 03.6	+0.4
GMAL	Guarumal, Vera	0.34	331	⇑iP	Pb	23 22 04.4	+0.2
GMAL				iS	Sb	23 22 11.6	+1.5
GMAL	Guarumal, Vera	0.34	331	eP	Pb	23 22 04.5	+0.2
PONU3	Ponuga, Veragu	0.43	12	⇓iP	Pb	23 22 05.8	+0.1
PONU3				iS	Sb	23 22 13.5	+0.9
RSUS3	Rio de Jesus,	0.53	350	⇓iP	Pb	23 22 06.8	-0.6
RSUS3				⇓iS	Sb	23 22 15.8	+0.4
OCU3	Ocu, Herrera	0.56	31	⇓iP	Pb	23 22 07.7	-0.2
OCU3				iS	Sb	23 22 16.9	+0.6
STIA3	Santiago, Vera	0.64	8	⇓iP	Pb	23 22 09.1	-0.2
STIA3				iS	Sb	23 22 19.0	+0.3
SFRA3	San Francisco,	0.79	7	⇓iP	Pb	23 22 11.6	-0.3
SFRA3				iS	Sn	23 22 23.6	-2.2
PVID3	Puerto Vidal,	0.79	317	eP	Pb	23 22 12.5	+0.5
PVID3				eS	Sn	23 22 24.8	-1.1
CHIT3	Chitre	0.81	53	⇓iP	Pg	23 22 11.2	+0.2
CHIT3				iS	Sb	23 22 24.1	+0.6
AZU	Azuero	0.85	67	⇓iP	Pg	23 22 11.6	-0.2
	baz=244,slow=16						
AZU				iS	Sb	23 22 24.3	-0.4
AZU	Azuero	0.85	67	eP	Pg	23 22 11.6	-0.2
AZU				eS	Sb	23 22 24.1	-0.6
CALO3	Calobre, Verag	0.88	15	⇓iP	Pb	23 22 13.0	-0.4
CNAZ3	Canazas, Verag	0.89	351	⇑iP	Pb	23 22 12.9	-0.8
CNAZ3				iS	Sb	23 22 25.7	-0.2
CRIS3	El Cristo, Coc	0.90	29	⇓eP	Pb	23 22 13.2	-0.6
NANC3	Nancito, Chiri	1.02	319	eP	Pg	23 22 15.0	-0.1
NANC3				iS	Sn	23 22 30.5	-1.0
VTON	El Valle, Cocl	1.48	40	⇑iP	Pn	23 22 22.9	-0.2
VTON				eS	Sn	23 22 44.8	+1.8
VTON				iS	Sb	23 22 45.9	+2.9
CHIR3	Chiriqui UPA,	1.56	307	⇑eP	Pn	23 22 23.5	-0.6
CHIR3				eS	Sb	23 22 46.4	+0.8
GUAL3	Gualaca, Chiri	1.62	311	eP	Pn	23 22 24.3	-0.7
PEDE3	Pedregal, Chir	1.63	304	eP	Pn	23 22 25.4	+0.3
PEDE3				eS	Sb	23 22 46.9	-0.2
LOMA3	Las Lomas, Chi	1.63	306	eP	Pn	23 22 25.8	+0.7
DVD	David	1.68	305	eP	Pn	23 22 25.7	-0.1
PTAR3	Potrerillos Ar	1.87	311	eP	Pn	23 22 29.3	+0.8
PTAR3				eS	Sg	23 22 55.7	0.0
ZANG	Zanguenga, Cho	1.90	39	eP	Pn	23 22 28.5	-0.3
ZANG				iS	Sn	23 22 53.5	+0.2
ZANG	Zanguenga, Cho	1.90	39	eP	Pb	23 22 30.7	-0.1
BCO2	Palmira	1.91	311	⇑eP	Pn	23 22 29.6	+0.5
BCO2				iS	Sg	23 22 56.1	-0.9
CHOR3	La Chorrera	1.92	42	eP	Pn	23 22 29.6	+0.5
CHOR3				eS	Sb	23 22 54.8	-0.8
SBAR3	San Bartolo, C	1.99	295	eP	Pn	23 22 30.6	+0.6
PINA	Piqa, Costa Ab	2.04	29	eP	Pn	23 22 31.2	+0.5
BCIP	Isla Barro Col	2.08	36	iP	Pn	23 22 32.8	-1.2
BCIP	Isla Barro Col	2.08	36	eP	Pb	23 22 32.7	-1.2
BRU2	Volcan	2.08	309	eP	Pn	23 22 32.1	+0.6
BRU2	Volcan	2.08	309	eP	Pn	23 22 32.1	+0.6
FLAM	Flamenco Islan	2.09	46	eP	Pn	23 22 31.5	0.0
MLIR	Monte Lirio	2.13	34	eP	Pn	23 22 32.8	+0.7
UPA	Univ. de Panam	2.14	45	eP	Pn	23 22 33.4	+1.3
UPA	Univ. de Panam	2.14	45	eP	Pb	23 22 33.7	-1.3
FRIJ	El Hiral	2.19	37	⇑eP	Pn	23 22 33.6	+0.8
CHPO	Chepo, Panama	2.57	49	eP	Pn	23 22 39.3	+1.2
CVTR	Volcan Turrial	3.68	314	eP	Pn	23 22 41.9	-12

NIED 07 23:31:00, 37.40N×141.90E, h5km, Mw4.0 Best double couple: M0 1.16000×10^15 NP1:φs74.00000°, δ81.00000°, λ-71.00000°. NP2:φs187.00000°, δ21.00000°, λ-156.00000°.
JMA 07 23:31:22.2±0.1, 37.41N×141.88E, h27km±2km, M4.2
IDC 07 23:31:27.7±2.8, 37.51N×141.70E, h43km±26km, mb3.5/12, mb1 3.7/15, mb1mx3.5/42, mbtmp3.7/15, ML2.9/3, MS3.1/5, Ms1 3.2/5, ms1mx2.7/42, Error ellipse: s-maj=22.9km s-min=19.2km az=117.0
ISC 07 23:31:22.1±2.0, 37.44N±0.04×141.79E±0.06, h7km±11km, n37, σ1§12/42, mb3.7/12, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.73	265	P	Pb	23 31 37.1	-0.1
JFK				S	Sb	23 31 47.6	+0.2
JMST	Minamisoumatoc	0.77	292	P	Pb	23 31 37.7	-0.1
JMST				eS	Sb	23 31 48.3	+0.3
ONAJ	Iwakimizuishiy	0.86	247	P	Pb	23 31 38.9	-0.5
ONAJ				S	Sb	23 31 50.9	-0.2
JMM	Marumori	0.90	299	P	Pb	23 31 39.8	-1.3
JMM				eS	Sb	23 31 52.5	+0.3
JIKH	Ishinomakikobu	0.91	344	P	Pb	23 31 39.6	-1.7
JIKH				S	Sb	23 31 52.1	-0.4
JIO	Ouri	1.07	341	P	Pb	23 31 42.1	-1.4
JIO				S	Sb	23 31 56.2	-1.0
JFT	Otama	1.16	274	P	Pn	23 31 44.4	+0.1
JFT				eS	Sn	23 32 00.5	-0.3
JHO	Hitachi	1.28	230	P	Pn	23 31 44.7	-1.7
JHO				eS	Sb	23 32 00.8	-2.3
JOU	Okura	1.28	317	P	Pg	23 31 46.6	-0.2
JOU				S	Sg	23 32 04.3	+0.9
JYS	Shirataka	1.57	300	P	Pg	23 31 51.9	-0.4
JYS				S	Sg	23 32 12.8	+0.1
JMK	Ichinoseki	1.58	344	P	Pn	23 31 49.7	-0.8
JMK				eS	Sn	23 32 10.3	-1.4
JFY	Yanaizu	1.66	270	P	Pb	23 31 52.3	-0.7
JFY				S	Sb	23 32 14.6	+0.5
MJAR	Matsushiro Arr	3.00	254	P	Pn	23 32 11.9	+1.8
	0.4nm,0.3s,baz=87,slow=18,SNR=11						
MJAR				S	Sb	23 32 50.7	-2.0
	1.1nm,0.3s,baz=78,slow=14,SNR=7.8						
MAT	Matsushiro	3.00	254	P	Pn	23 32 10.7	+0.6
MAT				S	Sn	23 32 44.7	-1.6
ASAJ	Asahikawa	6.70	5	P	Pn	23 33 00.8	0.0
	1.3nm,0.3s,baz=245,slow=19,SNR=4.3						
ASAJ				LR	LR	23 36 20.0	
	comp=Z,73nm,20.9s,baz=208,slow=44						
JNU	Nakatsue	9.90	247	LR	LR	23 37 34.7	
	comp=Z,46nm,20.8s,baz=44,slow=37						
USRK	Ussuriysk Ar.	10.03	315	P	Pn	23 33 49.4	+2.8
	baz=123,slow=12,SNR=4.4						
KSRS	Korea Array	11.02	274	LR	LR	23 37 38.9	
	comp=Z,44nm,21.3s,baz=94,slow=34						
SONM	Songino Array	27.81	303	P	P	23 37 12.0	+0.1
	1.1nm,0.9s,baz=100,slow=8.2,SNR=7.0						
H11N2	WAKE ISLAND Hy	28.10	122	T	T	00 06 36.0	
	baz=315,slow=75,SNR=366						
H11N1	WAKE ISLAND Hy	28.11	122	T	T	00 06 36.3	
	baz=315,slow=75,SNR=323						
H11N3	WAKE ISLAND Hy	28.12	122	T	T	00 06 37.3	
	baz=315,slow=75,SNR=319						
H11S1	WAKE ISLAND Hy	28.83	124	T	T	00 07 28.8	
	baz=316,slow=76,SNR=188						
H11S3	WAKE ISLAND Hy	28.83	124	T	T	00 07 29.6	
	baz=316,slow=76,SNR=228						
H11S2	WAKE ISLAND Hy	28.85	124	T	T	00 07 31.8	
	baz=316,slow=76,SNR=250						
ZALV	Zalesovo Beam	41.86	312	P	P	23 39 13.0	+0.4
	2.4nm,0.9s,baz=96,slow=7.6,SNR=8.1						
MKAR	Makanchi Array	44.16	302	P	P	23 39 30.5	-0.9
	1.5nm,0.9s,baz=86,slow=9.8,SNR=6.8						
ILAR	Eielson Array	48.99	33	P	P	23 40 09.2	+0.2
	0.6nm,0.9s,baz=277,slow=5.7,SNR=5.3						
WRA	Warramunga Arr	57.50	188	P	P	23 41 11.4	-0.6
	0.6nm,0.7s,baz=6.4,slow=7.2,SNR=3.5						
ASAR	Alice Springs	61.23	188	P	P	23 41 39.6	+1.9
	0.6nm,1.0s,baz=352,slow=4.7,SNR=3.5						
YKA	Yellowknife Ar	63.31	30	P	P	23 41 51.2	-0.1
	0.3nm,0.6s,baz=302,slow=6.6,SNR=4.3						
FINES	FINESS Array B	68.60	332	P	P	23 42 24.8	-0.5
	2.8nm,0.9s,baz=46,slow=12.9,SNR=6.5						
GNI	Garni	71.70	307	LR	LR	00 15 15.1	
	comp=Z,116nm,20.8s,baz=53,slow=37						
NOA	NORSAR Array B	73.93	337	P	P	23 42 57.0	-0.7
	0.6nm,0.7s,baz=39,slow=5.7,SNR=2.8						
NOA				LR	LR	00 19 05.6	
	comp=Z,21nm,18.1s,baz=260,slow=39						
NVAR	Mina Array Bea	74.51	53	P	P	23 43 03.4	+1.7
	0.4nm,0.5s,baz=290,slow=2.7,SNR=3.7						
PDAR	Pinedale Array	77.17	46	P	P	23 43 17.2	+0.4
	0.3nm,0.6s,baz=270,slow=4.1						
TXAR	Lajitas Array	89.64	53	P	P	23 44 21.1	+0.1
	0.2nm,0.7s,baz=323,slow=7.3,SNR=2.3						

UCR 07 23:33:11.9±1.3, 10.10N×84.14W, h78km±6km, MD3.8, Costa Rica

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HDC	Heredia	0.10	162	eP	Pn	23 33 23.7	+0.3
SJS	Escuela Geolog	0.18	150	eP	Pn	23 33 23.7	0.0
SRA1	San Ramn	0.33	268	eP	Pn	23 33 24.1	-0.3
LCR2	La Lucha 2	0.38	158	eP	Pn	23 33 24.9	+0.1
LCR2				eS	Sn	23 33 35.5	+1.2
CVTR	Volcan Turrial	0.39	101	eP	Pn	23 33 25.6	+0.5
CVTR				eS	Sn	23 33 36.2	+1.4
ARE1	Arenal 1	0.67	303	eP	Pn	23 33 27.4	+0.2
CEDE	Laguna Cedeo	0.67	305	eP	Pn	23 33 27.5	+0.2
JTS	Las Juntas de	0.82	284	eP	Pn	23 33 28.7	-0.1
EDDO	Dominical	0.88	162	eP	Pn	23 33 29.8	+0.3
CUI	Cuipilapa	1.15	299	iP	Pn	23 33 33.0	+0.2
MESS	Mesas	1.22	302	iP	Pn	23 33 33.5	-0.1
GUAI	GUAI	1.36	277	iP	Pn	23 33 35.9	+0.6
GUAI				iS	Sn	23 33 54.4	+1.4

KNET 07 23:34:47.1±0.5, 41.81N×74.51E, h10km±4km, ml2.4, Error ellipse: s-maj=4.8km s-min=2.0km az=4.0
KRNET 07 23:34:47.6±0.1, 41.79N×74.53E, h19km, mb3.1
NNC 07 23:34:48.7±0.7, 41.86N×74.50E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=4.7km s-min=3.2km az=50.0
SOME 07 23:34:48.6, 41.83N×74.55E, h15km
ISC 07 23:34:45.6±1.0, 41.73N±0.03×74.53E±0.02, h17km±8km, n68, σ1§44/113, 33C-28D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARLS	Aral	0.20	310	⇑iP	Pb	23 34 50.9	-0.1
	baz=98						
ARLS				⇑iS	Sg	23 34 53.1	-0.9
	baz=98						
UCH	Uchtor	0.50	358	iP	Pb	23 34 56.5	+0.4
	baz=59						
UCH				iS	Sg	23 35 02.8	+0.3
	baz=59						
UCH	Uchtor	0.50	358	⇑P	Pb	23 34 56.5	+0.4
	116nm,0.2s,SNR=654						
UCH				⇓S	Sg	23 35 02.4	-0.1
	442nm,0.2s						
KZA	Kyzart	0.64	57	⇑iP	Pn	23 34 59.6	-0.6
	baz=62						
KZA				⇑iS	Sb	23 35 08.1	+0.9
	baz=62						
KZA	Kyzart	0.64	57	⇑P	Pn	23 34 59.6	-0.6
	36nm,0.1s,SNR=142						
KZA				⇓S	Sb	23 35 08.2	+0.9
	154nm,0.1s						
AML	Almayashu	0.74	303	⇑iP	Pn	23 35 01.2	-0.4
	baz=99						
AML				⇑iS	Sb	23 35 11.2	+0.9
	baz=99						
AML	Almayashu	0.74	303	⇓P	Pn	23 35 01.2	-0.4
	83nm,0.3s,SNR=66						
AML				⇑S	Sb	23 35 10.9	+0.6
	69nm,0.2s						
AAK	Ala-Archa	0.91	358	⇑iP	Pn	23 35 03.9	+0.2
	baz=58						
AAK				⇑iS	Sb	23 35 15.4	+0.7
	baz=58						
AAK	Ala-Archa	0.91	358	P	Pn	23 35 04.0	+0.2
	32nm,0.1s,SNR=109						
AAK				⇑S	Sb	23 35 15.5	+0.7
	169nm,0.4s						
AAK	Ala-Archa	0.91	358	⇑P	Pn	23 35 03.8	+0.2
	17nm,0.3s						
AAK				⇓S	Sb	23 35 15.1	+0.3
	68nm,0.3s						
KBK	Karagaybulak	0.97	18	⇓iP	Pn	23 35 04.9	+0.2
	baz=20						
KBK				⇓iS	Sb	23 35 17.7	+0.9
	baz=20						
KBK	Karagaybulak	0.97	18	P	Pn	23 35 05.4	+0.7
	50nm,0.1s,SNR=272						
FRU1	Bishkek	1.08	4	⇑iP	Pg	23 35 06.8	+0.3
	baz=4.0						
FRU1				⇑iS	Sb	23 35 20.7	+1.0
	baz=4.0						
EKS2	Erkin-Say	1.09	329	⇓iP	Pg	23 35 07.1	+0.5
	baz=28						
EKS2				⇓iS	Sb	23 35 21.1	+1.2
	baz=28						
EKS2	Erkin-Say	1.09	329	⇓P	Pg	23 35 07.3	+0.6
	4.4nm,0.1s,SNR=28						
NRN	Naryn	1.14	105	⇑iP	Pg	23 35 09.4	+1.7
	baz=8.0						
NRN				⇑iS	Sn	23 35 24.8	+2.4
	baz=8.0						
ARSB	Arslanbob	1.23	251	⇓iP	Pg	23 35 11.0	+1.6
	baz=48						
ARSB				⇓iS	Sg	23 35 27.9	+2.4
	baz=48						
CHMS	Chumysh	1.28	7	⇓iP	Pg	23 35 10.5	+0.3
	baz=8.0						
CHMS				⇓iS	Sn	23 35 26.7	+1.3
	baz=8.0						
CHMS	Chumysh	1.28	7	⇑P	Pg	23 35 10.6	+0.4
	24nm,0.1s,SNR=24						
CHMS				⇓S	Sb	23 35 27.0	+1.7
	22nm,0.2s						
CHMS	Chumysh	1.28	7	⇑P	Pg	23 35 10.5	+0.3
	7.7nm,0.2s						
CHMS				⇑S	Sn	23 35 26.3	+0.8
	23nm,0.4s						
BOOM	Boomskoye usch	1.29	54	⇓iP	Pg	23 35 11.1	+0.6
	baz=56						
BOOM				⇓iS	Sg	23 35 28.3	+0.9
	baz=56						
ULHL	Ulahol	1.37	67	⇑iP	Pg	23 35 12.8	+0.7
	baz=70						
ULHL				⇑iS	Sg	23 35 30.5	+0.5
	baz=70						
ULHL	Ulahol	1.37	67	P	Pg	23 35 12.7	+0.6
	6.9nm,0.1s,SNR=74						
MRKS	Merke	1.40	317	⇑iP	Pg	23 35 12.9	+0.3
	18nm,0.2s						
MRKS				⇑iS	Sg	23 35 30.9	-0.1
	81nm,0.2s						
USP	Ospenovka	1.54	359	⇑iP	Pg	23 35 15.2	+0.1
	baz=59						
USP				⇑iS	Sb	23 35 34.6	+1.8
	baz=59						
USP	Ospenovka	1.54	359	⇑P	Pg	23 35 15.2	+0.1
	30nm,0.1s,SNR=20						
KST	Kastek	1.69	38	eP	Pg	23 35 19.4	+1.5
	13nm,0.1s						
KST				eS	Sg	23 35 41.7	+1.8
	32nm,0.5s						
DGS	Degeres	1.77	31	eP	Pg	23 35 19.7	+0.2
	15nm,0.4s						
DGS				eS	Sg	23 35 43.0	+0.5
	54nm,0.2s						
ARK	Arkit	1.92	273	⇓iP	Pg	23 35 22.4	-0.1
	baz=70						
ARK				⇓iS	Sg	23 35 47.4	-0.1
	baz=70						
MTBS	Maitube	1.98	44	eP	Pg	23 35 23.9	+0.3
	17nm,0.1s						
MTBS				eS	Sg	23 35 49.3	-0.1
	43nm,0.2s						
MTBS	Maitube	1.98	44	Pg	Pg	23 35 25.1	+1.5
	12nm,0.2s						
MTBS				Lg	Lg	23 35 51.8	
	43nm,0.2s						
KDJ	Kajisay	2.02	78	⇑iP	Pg	23 35 24.0	-0.3
	baz=80						
KDJ				⇑iS	Sg	23 35 50.0	-0.5
	baz=80						
IZV	Izvestkoviy	2.02	49	eP	Pg	23 35 24.9	+0.6
	29nm,0.2s						
IZV				eS	Sg	23 35 51.2	+0.6
	40nm,0.3s						
IZV	Izvestkoviy	2.02	49	Pg	Pg	23 35 24.9	+0.6
	14nm,0.2s						
IZV				Lg	Lg	23 35 51.2	
	44nm,0.3s						
KRBS	Karabastau	2.14	23	eP	Pg	23 35 26.4	-0.1
	63nm,0.3s						
KRBS				eS	Sg	23 35 54.4	0.0
	12nm,0.4s						
KRBS	Karabastau	2.14	23	Pg	Pg	23 35 26.9	+0.3
	36nm,0.2s						
KRBS				Lg	Lg	23 35 54.5	
	12nm,0.4s						
TNSS	Tian-Shan	2.21	53	eP	Pg	23 35 28.8	+0.8
	26nm,0.3s						
TNSS				eS	Sg	23 35 58.0	+1.1
	36nm,0.4s						
TNSS	Tian-Shan	2.21	53	Pg	Pg	23 35 28.8	+0.8
	7.5nm,0.2s						
TNSS				Lg	Lg	23 35 58.0	
	36nm,0.4s						
KNDC	Almaty	2.33	50	⇓Pg	Pg	23 35 30.6	+0.3
	8.6nm,0.3s						
KNDC				⇑Lg	Lg	23 36 01.3	
	54nm,0.6s						
MDOK	Medeo	2.35	52	⇓Pn	Pg	23 35 30.3	-0.3
	8.4nm,0.4s						
MDOK				⇑Lg	Lg	23 36 01.3	
	32nm,0.6s						
KOTS	Kotyrbulak	2.43	51	eP	Pg	23 35 32.3	+0.2
	43nm,0.3s						
KOTS				eS	Sg	23 36 04.3	+0.7
	57nm,0.4s						
KOTS	Kotyrbulak	2.43	51	Pg	Pg	23 35 32.3	+0.2
	43nm,0.3s						
KOTS				Lg	Lg	23 36 04.3	
	57nm,0.4s						
KTBS	Karatobe	2.54	38	eP	Pg	23 35 33.6	-0.6
	37nm,0.3s						
KTBS				eS	Sg	23 36 06.6	-0.5
	119nm,0.4s						
KTBS	Karatobe	2.54	38	Pg	Pg	23 35 33.6	-0.6
	37nm,0.3s						
KTBS				Lg	Lg	23 36 06.6	
	119nm,0.4s						
ANVS	Anan'yevo	2.55	65	⇓iP	Pb	23 35 31.1	+0.1
	baz=66						
ANVS				⇓iS	Sb	23 36 02.1	-0.1
	baz=66						
PRZ	Przheval'sk	2.97	74	⇓eP	Pb	23 35 36.9	-1.3
	baz=75						
PRZ				⇓iS	Sb	23 36 12.5	-1.8
	baz=75						
SATY	Saty	3.16	64	eP	Pg	23 35 45.4	-0.7
	17nm,0.5s						
SATY				eS	Sg	23 36 26.5	-0.6
	36nm,0.2s						
SATY	Saty	3.16	64	Pg	Pg	23 35 45.4	-0.7
	8.3nm,0.3s						
SATY				Lg	Lg	23 36 26.5	
	36nm,0.2s						
KURS	Kuram	3.21	56	eP	Pg	23 35 46.5	-0.6
	4.9nm,0.4s						
KURS				eS	Sg	23 36 28.2	-0.4
	22nm,0.7s						
KURS	Kuram	3.21	56	Pg	Pg	23 35 46.5	-0.6
	3.5nm,0.2s						
KURS				Lg	Lg	23 36 28.2	
	22nm,0.7s						
BTK	Batken	3.27	241	⇓iP	Pb	23 35 41.8	-1.5
	baz=40						
BTK				⇓iS	Sb	23 36 20.9	-2.0
	baz=40						
KK31	Karatay Array	3.28	296	⇓Pg	Pg	23 35 45.8	-2.5
	3.8nm,0.5s,baz=116,slow=16,SNR=25						
KK31				⇑Lg	Lg	23 36 29.1	
	4.8nm,0.3s,baz=119,slow=28,SNR=11						
IUG	Iuzhnay	3.38	279	eP	Pg	23 35 50.2	-0.2
	2.4nm,0.3s						
IUG				eS	Sg	23 36 34.4	+0.2
	25nm,0.7s						
IUG	Iuzhnay	3.38	279	Pg	Pg	23 35 50.2	-0.2
	2.4nm,0.3s						
IUG				Lg	Lg	23 36 34.4	
	25nm,0.7s						
ARXS	Arharly	3.46	43	eP	Pg	23 35 49.9	-2.0
	3.7nm,0.3s						
ARXS				eS	Sg	23 36 33.9	-2.9
	26nm,0.3s						
ARXS	Arharly	3.46	43	Pg	Pg	23 35 49.9	-2.0
	3.7nm,0.3s						
ARXS				Lg	Lg	23 36 33.9	
	26nm,0.3s						
KPKS	Kokpek	3.52	59	eP	Pg	23 35 51.6	-1.4
	13nm,0.3s						
KPKS				eS	Sg	23 36 37.3	-1.3
	65nm,0.4s						
UZB	Uzynbulak	3.61	65	eP	Pg	23 35 52.8	-1.9
	4.6nm,0.5s						
UZB				eS	Sg	23 36 39.3	-2.3
	24nm,0.3s						
UZB	Uzynbulak	3.61	65	Pg	Pg	23 35 52.8	-1.9
	3.0nm,0.5s						
UZB				Lg	Lg	23 36 39.3	
	24nm,0.3s						
MNBS	Baschi	3.69	49	eP	Pg	23 35 55.3	-0.8
	15nm,0.5s						
MNBS				eS	Sg	23 36 43.4	-0.5
	55nm,0.3s						
MNBS	Baschi	3.69	49	Pg	Pg	23 35 54.3	-1.9
	4.8nm,0.3s						
MNBS				Lg	Lg	23 36 41.6	
	44nm,0.4s						
SHLS	Shalkode	3.92	67	eP	Pg	23 36 03.9	+3.3
	11nm,0.6s						
SHLS				eS	Sg	23 36 58.0	+6.7
	12nm,0.3s						
SHLS	Shalkode	3.92	67	Pg	Pg	23 36 03.9	+3.3
	3.4nm,0.3s						
SHLS				Lg	Lg	23 36 58.0	
	12nm,0.3s						
PDGK	Podgornoye	4.00	65	Pg	Pg	23 35 59.7	-2.4
	1.0nm,0.5s						
PDGK				Lg	Lg	23 36 51.4	
	8.9nm,0.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
PDGK	**Podgornoye**	**4.00**	**65**	⇓Pg	**Pg**	**23 35 58.9**	**-3.2**
	1.9nm,0.5s						
PDGK				⇑Lg	Lg	23 36 53.7	
	15nm,0.8s						
DJR	**Jarkent**	**4.65**	**54**	eP	**Pg**	**23 36 12.9**	**-1.7**
	2.1nm,0.5s						
DJR				eS	**Sg**	**23 37 13.2**	**-1.6**
	8.2nm,0.5s						
DJR	**Jarkent**	**4.65**	**54**	Pg	**Pg**	**23 36 11.4**	**-3.1**
DJR				Lg	Lg	23 37 10.9	
KAPS	**Kapalarasan**	**4.99**	**43**	eP	**Pg**	**23 36 17.9**	**-3.2**
	2.3nm,0.5s						
KAPS				eS	**Sg**	**23 37 22.7**	**-3.0**
	4.4nm,0.6s						

*ATH **07** 23:35:05.1, 38.°24N×20.°40E, h16km, ML2.8/13, Error ellipse: s-maj=1.3km s-min=0.7km az=257.0*
*THE **07** 23:35:05.6, 38.°25N×20.°41E, h15km, ML2.8/12, Error ellipse: s-maj=0.9km s-min=0.4km az=265.0*
*BEO **07** 23:35:05.1±0.9, 38.°13N×20.°04E, h15km, ML3.0/4*
ISC 07 23:35:05.3±0.8, 38.°23N±0.°02×20.°41E±0.°03, h16km±3km, n70, σ0.°66/111, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.03**	**28**	P	**Pg**	**23 35 08.1**	**-0.1**
KEF4				S	**Sg**	**23 35 09.8**	**-0.3**
LXR1	**Lixouri, Cepha**	**0.04**	**142**	P	**Pg**	**23 35 08.4**	**+0.2**
LXR1				S	**Sg**	**23 35 10.4**	**+0.3**
LXRA	**Lixouri, Kepha**	**0.04**	**144**	P	**Pg**	**23 35 08.4**	**+0.2**
LXRA				S	**Sg**	**23 35 09.9**	**-0.2**
CHV1	**Chavriata, Kef**	**0.05**	**202**	P	**Pg**	**23 35 08.3**	**0.0**
CHV1				S	**Sg**	**23 35 10.2**	**0.0**
KEF3	**Kipouria, Keph**	**0.06**	**238**	P	**Pg**	**23 35 08.2**	**-0.1**
KEF3				S	**Sg**	**23 35 09.9**	**-0.3**
KEF1	**Kardakata, Kep**	**0.07**	**48**	P	**Pg**	**23 35 08.3**	**-0.1**
KEF1				S	**Sg**	**23 35 10.0**	**-0.5**
ARGA	**Argostoli. Kep**	**0.08**	**134**	P	**Pg**	**23 35 08.7**	**+0.2**
ARGA				S	**Sg**	**23 35 10.6**	**0.0**
ARG2	**Argostoli**	**0.08**	**130**	P	**Pg**	**23 35 08.7**	**+0.2**
ARG2				S	**Sg**	**23 35 10.9**	**+0.3**
KEF2	**Argostoli. Kep**	**0.09**	**137**	P	**Pb**	**23 35 08.8**	**+0.2**
KEF2				S	**Sg**	**23 35 10.5**	**-0.3**
VLS	**Valsamata**	**0.15**	**111**	P	**Pg**	**23 35 09.5**	**+0.1**
VLS				S	**Sg**	**23 35 12.5**	**+0.4**
	27µm,0.1s						
VLS	**Valsamata**	**0.15**	**111**	P	**Pg**	**23 35 09.5**	**+0.1**
VLS				S	**Sg**	**23 35 12.4**	**+0.2**
VLS				AML	AML	23 35 12.7	
	comp=N,46871µm,0.1s						
VLS				AML	AML	23 35 12.7	
	comp=E,56354µm,0.1s						
VSK1	**VASILIKIADES**	**0.21**	**35**	P	**Pg**	**23 35 10.3**	**0.0**
VSK1				S	**Sg**	**23 35 13.6**	**-0.1**
	comp=E,11µm,0.1s						
KONA	**Konidatara, Ke**	**0.23**	**34**	P	**Pg**	**23 35 10.6**	**0.0**
FSK	**Fiskardo**	**0.26**	**28**	P	**Pg**	**23 35 10.9**	**-0.1**
FSK				S	**Sb**	**23 35 15.1**	**-0.7**
	comp=E,11µm,0.1s						
FSK	**Fiskardo**	**0.26**	**28**	P	**Pg**	**23 35 10.9**	**-0.1**
FSK				S	**Sg**	**23 35 14.4**	**-0.4**
FSK				AML	AML	23 35 15.4	
	comp=N,11309µm,0.2s						
FSK				AML	AML	23 35 15.4	
	comp=E,33321µm,0.1s						
KFL	**Anninata**	**0.32**	**112**	P	**Pg**	**23 35 12.4**	**+0.3**
KFL				S	**Sg**	**23 35 17.2**	**+0.5**
KFL	**Anninata**	**0.32**	**112**	P	**Pg**	**23 35 12.4**	**+0.3**
KFL				S	**Sg**	**23 35 17.3**	**+0.5**
KFL				AML	AML	23 35 18.1	
	comp=N,18312µm,0.4s						
KFL				AML	AML	23 35 18.3	
	comp=E,19161µm,0.4s						
VLMS	**Volimes, Zakyn**	**0.41**	**150**	P	**Pg**	**23 35 13.6**	**0.0**
VLMS				S	**Sg**	**23 35 19.8**	**+0.6**
VLMS				AML	AML	23 35 21.0	
	comp=E,6575µm,0.2s						
VLMS				AML	AML	23 35 22.9	
	comp=N,7534µm,0.2s						
EVGI	**Lefkada island**	**0.43**	**27**	P	**Pg**	**23 35 13.9**	**-0.2**
EVGI				S	**Sg**	**23 35 19.9**	**-0.2**
EVGI	**Lefkada island**	**0.43**	**27**	P	**Pg**	**23 35 13.9**	**-0.2**
EVGI				S	**Sb**	**23 35 20.3**	**-0.7**
MGNA	**Meganis**	**0.52**	**35**	P	**Pg**	**23 35 15.1**	**-0.5**
MGNA				S	**Sb**	**23 35 23.1**	**-0.3**
MGNA				AML	AML	23 35 24.1	
	comp=E,2446µm,0.1s						
MGNA				AML	AML	23 35 25.0	
	comp=N,1419µm,0.1s						
LKD2	**Lefkada island**	**0.59**	**19**	P	**Pg**	**23 35 16.5**	**-0.5**
LKD2	**Lefkada island**	**0.59**	**19**	P	**Pg**	**23 35 16.7**	**-0.3**
LKD2				S	**Sb**	**23 35 25.0**	**-0.4**
LKD2				AML	AML	23 35 31.4	
	comp=N,930µm,0.2s						
LKD2				AML	AML	23 35 31.9	
	comp=E,1060µm,0.3s						
ZAK2	**Zakynthos**	**0.59**	**139**	P	**Pb**	**23 35 17.2**	**0.0**
ZAK2				S	**Sn**	**23 35 27.1**	**-1.2**
	comp=E,4µm,0.5s						
AST1	**Astakos**	**0.62**	**60**	P	**Pg**	**23 35 17.4**	**-0.1**
AST1				S	**Sb**	**23 35 26.3**	**+0.1**
	comp=E,1µm,0.2s						
TSLK	**Tsoukalades, L**	**0.62**	**18**	P	**Pg**	**23 35 17.4**	**-0.2**
TSLK				S	**Sg**	**23 35 25.7**	**-0.2**
	comp=E,532nm,0.4s						
TSLK	**Tsoukalades, L**	**0.62**	**18**	P	**Pg**	**23 35 17.4**	**-0.2**
TSLK				S	**Sg**	**23 35 25.6**	**-0.2**
TSLK				AML	AML	23 35 29.8	
	comp=N,1250µm,0.4s						
TSLK				AML	AML	23 35 30.6	
	comp=E,877µm,0.4s						
KRI1	**kERI**	**0.66**	**150**	P	**Pg**	**23 35 17.9**	**-0.3**
PDO	**Prodromos**	**0.71**	**59**	P	**Pg**	**23 35 18.9**	**-0.3**
PDO	**Prodromos**	**0.71**	**59**	P	**Pg**	**23 35 19.1**	**-0.2**
PDO				S	**Sg**	**23 35 28.6**	**-0.1**
PDO				AML	AML	23 35 34.4	
	comp=N,1469µm,0.3s						
PDO				AML	AML	23 35 35.6	
	comp=E,1576µm,0.4s						
RLS	**Riolos of Patr**	**0.85**	**101**	P	**Pb**	**23 35 21.4**	**-0.3**
RLS	**Riolos of Patr**	**0.85**	**101**	P	**Pb**	**23 35 21.6**	**-0.1**
RLS				S	**Sn**	**23 35 34.2**	**-0.6**
RLS				AML	AML	23 35 40.0	
	comp=N,676µm,0.5s						
RLS				AML	AML	23 35 40.1	
	comp=E,617µm,0.6s						
PVO	**Paravola**	**0.96**	**66**	P	**Pg**	**23 35 23.7**	**-0.2**
PVO				S	**Sb**	**23 35 35.3**	**-0.7**
	comp=E,570nm,0.3s						
PVO	**Paravola**	**0.96**	**66**	P	**Pg**	**23 35 23.9**	**0.0**
PVO				S	**Sg**	**23 35 36.9**	**+0.4**
PVO				AML	AML	23 35 40.0	
	comp=N,916µm,0.3s						
PVO				AML	AML	23 35 40.7	
	comp=E,1331µm,0.3s						
DRO	**Drossia**	**1.07**	**105**	P	**Pg**	**23 35 25.9**	**0.0**
DRO	**Drossia**	**1.07**	**105**	P	**Pb**	**23 35 25.5**	**+0.1**
DRO				S	**Sn**	**23 35 40.9**	**+0.8**
DRO				AML	AML	23 35 49.4	
	comp=N,1433µm,0.5s						
DRO				AML	AML	23 35 54.0	
	comp=E,1050µm,0.6s						
LAKA	**Lakka**	**1.24**	**89**	P	**Pb**	**23 35 28.3**	**0.0**
LAKA	**Lakka**	**1.24**	**89**	P	**Pb**	**23 35 28.1**	**+0.2**
ANX	**Ano Chora**	**1.24**	**73**	P	**Pn**	**23 35 28.3**	**-0.1**
ANX				S	**Sg**	**23 35 45.8**	**+0.2**
	comp=E,445nm,0.7s						
ANX	**Ano Chora**	**1.24**	**73**	P	**Pb**	**23 35 28.5**	**0.0**
ANX				S	**Sg**	**23 35 45.7**	**+0.2**
ANX				AML	AML	23 35 53.3	
	comp=E,973µm,0.8s						
ANX				AML	AML	23 35 54.5	
	comp=N,800µm,0.5s						
AMT	**Artemida-Makis**	**1.25**	**124**	P	**Pg**	**23 35 29.4**	**+0.1**
AMT	**Artemida-Makis**	**1.25**	**124**	P	**Pg**	**23 35 29.5**	**+0.2**
EVR	**Evrytania**	**1.29**	**58**	P	**Pn**	**23 35 29.0**	**+0.2**
EVR				S	**Sb**	**23 35 44.5**	**-1.2**
	comp=N,142nm,0.5s						
EVR	**Evrytania**	**1.29**	**58**	P	**Pb**	**23 35 29.2**	**-0.1**
IGT	**Igoumenitsa**	**1.30**	**357**	P	**Pb**	**23 35 29.5**	**+0.1**
IGT				S	**Sg**	**23 35 48.3**	**+0.2**
	comp=N,175nm,0.5s						
IGT	**Igoumenitsa**	**1.30**	**357**	ePg	**Pg**	**23 35 31.2**	**+0.8**
IGT				eSg	**Sg**	**23 35 50.2**	**+2.9**
IGT	**Igoumenitsa**	**1.30**	**357**	P	**Pb**	**23 35 29.3**	**-0.1**
IGT				S	**Sg**	**23 35 47.4**	**+0.1**
IGT				AML	AML	23 35 50.5	
	comp=E,359µm,0.5s						
IGT				AML	AML	23 35 51.2	
	comp=N,340µm,0.5s						
SERG	**Sergoula**	**1.31**	**82**	P	**Pn**	**23 35 28.9**	**-0.1**
SERG	**Sergoula**	**1.31**	**82**	P	**Pn**	**23 35 29.3**	**+0.3**
TRIZ	**Trizonia**	**1.32**	**84**	P	**Pn**	**23 35 29.2**	**+0.2**
TRIZ				S	**Sg**	**23 35 48.2**	**+0.3**
	comp=N,322nm,0.5s						
TRIZ	**Trizonia**	**1.32**	**84**	P	**Pb**	**23 35 29.7**	**+0.1**
ALIK	**Aliki, Aigiali**	**1.34**	**88**	P	**Pb**	**23 35 30.0**	**-0.1**
KALE	**Kalithea**	**1.37**	**83**	P	**Pn**	**23 35 30.1**	**+0.2**
KALE	**Kalithea**	**1.37**	**83**	P	**Pn**	**23 35 30.2**	**+0.3**
KLV	**Kalavryta, Ach**	**1.39**	**97**	P	**Pb**	**23 35 30.8**	**-0.1**
KLV				S	**Sn**	**23 35 47.1**	**-1.0**
	comp=N,125nm,0.7s						
KEK	**Kerkira**	**1.55**	**342**	P	**Pb**	**23 35 33.4**	**-0.3**
KEK	**Kerkira**	**1.55**	**342**	P	**Pb**	**23 35 33.4**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.56**	**59**	P	**Pb**	**23 35 34.4**	**+0.6**
ITM	**Ithomi**	**1.60**	**131**	P	**Pb**	**23 35 34.4**	**-0.1**
ITM	**Ithomi**	**1.60**	**131**	P	**Pb**	**23 35 34.9**	**+0.4**
PYL	**PYLOS**	**1.71**	**141**	P	**Pb**	**23 35 35.8**	**-0.5**
VILL	**Villia**	**2.29**	**91**	P	**Pn**	**23 35 43.0**	**+0.5**
FNA	**Florina**	**2.66**	**16**	ePn	**Pn**	**23 35 49.8**	**+2.3**
SKO	**Skopje**	**3.82**	**12**	ePn	**Pn**	**23 36 06.0**	**+2.6**
PDG	**Podgorica**	**4.29**	**349**	ePn	**Pn**	**23 36 09.4**	**-0.4**
PDG				eSn	**Sn**	**23 36 59.7**	**+0.3**
BOSS	**Bosilegrad**	**4.54**	**20**	ePn	**Pn**	**23 36 15.3**	**+1.9**
BARS	**Barje**	**4.70**	**13**	ePn	**Pn**	**23 36 17.0**	**+1.4**
TREB	**Trebinje**	**4.75**	**341**	ePn	**Pn**	**23 36 16.3**	**+0.1**
TREB				eSn	**Sn**	**23 37 09.0**	**-1.9**
SJES	**Sjenica**	**5.04**	**356**	ePn	**Pn**	**23 36 21.8**	**+1.6**
DIVS	**Divibare**	**5.87**	**357**	ePn	**Pn**	**23 36 32.2**	**+0.5**
DIVS				eSn	**Sn**	**23 37 37.4**	**-1.2**

*DRS **07** 23:41:58.9±0.0, 42.°74N×48.°35E, h17km*
*NORS **07** 23:41:59.0±0.0, 42.°66N×48.°07E, h18km, MPVA2.2*
*MOS **07** 23:41:59.3±0.0, 42.°65N×48.°04E, h10km, MPVA3.5*
ISC 07 23:41:59.5±1.8, 42.°73N±0.°05×48.°12E±0.°06, h7km±11km, n20, σ0.°94/37, Caspian Sea

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
MAK	**Makhachkala**	**0.51**	**298**	ePg	**Pb**	**23 42 10.4**	**-0.3**
MAK				eSg	**Sb**	**23 42 19.1**	**+0.8**
URKR	**Urkarakh**	**0.67**	**213**	i Pg	**Pb**	**23 42 12.5**	**-0.9**
URKR				eSg	**Sb**	**23 42 22.2**	**-0.7**
DRN	**Derbent**	**0.71**	**167**	i Pg	**Pb**	**23 42 14.0**	**-0.2**
DRN				eSg	**Sb**	**23 42 24.6**	**+0.4**
BUJR	**Buynaksk**	**0.75**	**278**	ePg	**Pb**	**23 42 14.7**	**-0.2**
BUJR				eSg	**Sb**	**23 42 25.7**	**+0.4**
KRNR	**Karanay**	**0.90**	**277**	ePg	**Pn**	**23 42 18.0**	**-0.6**
KRNR				eSg	**Sb**	**23 42 30.0**	**+0.4**
GNBR	**Gunib**	**0.92**	**249**	i Pg	**Pb**	**23 42 17.3**	**-0.4**
GNBR				eSg	**Sb**	**23 42 30.3**	**+0.2**
KMKR	**Kumukh**	**0.96**	**232**	ePg	**Pb**	**23 42 18.0**	**-0.6**
KMKR				i Sg	**Sb**	**23 42 31.5**	**0.0**
DBC	**Dubki**	**0.99**	**288**	i Pg	**Pb**	**23 42 18.5**	**-0.5**
DBC				eSg	**Sn**	**23 42 32.8**	**-1.3**
XNZR	**Khunzakh**	**1.06**	**260**	ePg	**Pn**	**23 42 20.1**	**-0.1**
XNZR				eSg	**Sn**	**23 42 35.6**	**-0.4**
KSMR	**Kasumkent**	**1.12**	**180**	ePg	**Pb**	**23 42 21.5**	**+0.3**
KSMR				eSg	**Sb**	**23 42 36.5**	**+0.4**
AKT	**Akhty**	**1.28**	**193**	ePg	**Pg**	**23 42 22.8**	**-1.2**
BTLR	**Botlikh**	**1.40**	**268**	ePg	**Pb**	**23 42 25.8**	**-0.2**
BTLR				eSg	**Sn**	**23 42 44.5**	**+0.3**
LGD	**Lagodekhi**	**1.65**	**238**	P	**Pg**	**23 42 31.0**	**-0.2**
LGD				S	**Sg**	**23 42 51.8**	**-0.9**
LGD	**Lagodekhi**	**1.65**	**238**	ePg	**Pb**	**23 42 30.1**	**-0.2**
LGD				eSg	**Sg**	**23 42 51.6**	**-0.9**
GROC	**Groznyy**	**1.77**	**286**	ePg	**Pg**	**23 42 32.7**	**-0.7**
GROC				eSg	**Sg**	**23 42 56.8**	**+0.5**
DDFL	**Dedoflistskaro**	**1.96**	**230**	P	**Pg**	**23 42 37.0**	**0.0**
DDFL				S	**Sg**	**23 43 06.1**	**+3.6**
LACR	**Lac**	**2.81**	**273**	ePn	**Pn**	**23 42 46.9**	**+1.9**
KBZ	**Khabaz**	**3.94**	**286**	ePn	**Pn**	**23 43 00.8**	**+0.5**
SHA1	**Shidzhatmaz**	**4.12**	**286**	ePn	**Pn**	**23 43 04.1**	**+1.2**
SHA1				eSn	**Sn**	**23 43 51.0**	**-0.4**
KIV0	**Kislovodsk Arr**	**4.14**	**289**	ePn	**Pn**	**23 43 03.6**	**+0.4**
KIV0				eSn	**Sn**	**23 43 50.9**	**-1.0**

*NCEDC **07** 23:48:24.5±2.0, 37.°43N±0.°02×121.°77W±0.°05, h10km±2km, Md2.4/84, Error ellipse: s-maj=5.7km s-min=2.1km az=67.0*
NEIC 07 23:48:24.2±1.2, 37.°41N±0.°03×121.°78W±0.°04, h17km±1km, Error ellipse: s-maj=5.2km s-min=3.5km az=61.0, Central California

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
CMLM	**Mount Lewis**	**0.12**	**58**		Pb	23 48 27.5	-0.6
MHC	**Mount Hamilton**	**0.13**	**124**		Pg	23 48 27.8	-0.5
MHC					Sb	23 48 30.3	-0.6
SCCB	**Santa Clara Co**	**0.14**	**209**		Pg	23 48 28.2	-0.1
CCOB	**Coe Ranch Numb**	**0.17**	**152**		Pb	23 48 29.1	+0.1
CCOB					Sb	23 48 33.1	+1.0
ARN	**Arnold Ranch**	**0.20**	**108**		Pg	23 48 28.9	-0.3
JSTM	**Santa Teresa H**	**0.21**	**185**		Pb	23 48 29.4	-0.1
WENL	**Wente Vineyard**	**0.21**	**4**		Pg	23 48 29.1	-0.1
CMMM	**Mount Mocho**	**0.23**	**79**		Pg	23 48 29.4	-0.2
CNIC	**Niles Canyon**	**0.24**	**322**		Pb	23 48 29.6	-0.1
JSGM	**Saratoga Golf**	**0.25**	**239**		Pb	23 48 30.5	+0.3
AMC	**Almaden**	**0.26**	**192**		Pb	23 48 30.3	-0.1
JLAB	**Laurel Hill**	**0.26**	**173**		Pb	23 48 30.3	-0.2
JUMM	**Mount Umunhum**	**0.27**	**201**		Pb	23 48 30.5	-0.2
CADM	**Anderson Res.**	**0.28**	**154**		Pb	23 48 30.8	+0.1
CYD1	**Coyote D'meter**	**0.29**	**300**		Pb	23 48 30.3	-0.3
JHLM	**Holstrom Ranch**	**0.31**	**188**		Pb	23 48 31.2	-0.1
JJRM	**Joaquin Road**	**0.34**	**259**		Pb	23 48 31.8	0.0
JRSC	**Jasper Ridge**	**0.37**	**269**		Pg	23 48 31.8	-0.1
HLPM	**Lions Peak**	**0.39**	**163**		Pb	23 48 32.7	+0.2
JTGM	**Trout Gulch Ro**	**0.39**	**192**		Pb	23 48 33.1	+0.4
CLCB	**Lake Chabot**	**0.40**	**325**		Pg	23 48 32.5	+0.1
JRGM	**Rodeo Gulch Ro**	**0.41**	**202**		Pb	23 48 33.0	+0.2
GHS	**Gilroy Hot Spr**	**0.41**	**140**		Pb	23 48 33.0	-0.1
CBSNC	**Byron Hot Spri**	**0.42**	**15**		Pb	23 48 33.5	+0.5
JBNB	**Ben Lomond Mou**	**0.42**	**226**		Pb	23 48 33.0	+0.2
JHPM	**Huddart Park**	**0.42**	**274**		Pb	23 48 32.9	+0.1
CDC	**Canada Road**	**0.45**	**149**		Pb	23 48 34.1	+0.5
JCPM	**Coyote Point**	**0.47**	**292**		Pb	23 48 33.6	-0.1
CRHM	**Round Hill Res**	**0.48**	**339**		Pb	23 48 34.9	+0.8
JELB	**Ellicott, Sant**	**0.49**	**185**		Pb	23 48 34.8	+0.6
CRPB	**Russellman Par**	**0.51**	**348**		Pb	23 48 34.8	+0.2
HFEM	**San Felipe**	**0.52**	**145**		Pb	23 48 35.0	+0.1
HCOM	**Corn Cob Canyo**	**0.53**	**174**		Pb	23 48 35.5	+0.5
HPCM	**Pacheco Lake**	**0.53**	**131**		Pb	23 48 35.1	0.0
SAC	**San Andreas**	**0.54**	**288**		Pb	23 48 34.8	-0.1
OCR	**O'Connell Ranc**	**0.54**	**157**		Pb	23 48 35.4	+0.3
BDM	**Black Diamond**	**0.54**	**353**		Pb	23 48 35.7	+0.4
ANZ	**Anzar Road**	**0.55**	**164**		Pb	23 48 35.9	+0.6
PACP	**Pacheco Peak**	**0.56**	**136**		Pb	23 48 35.6	0.0
BKS	**Berkeley--Byer**	**0.59**	**322**		Pb	23 48 36.0	0.0
CVPM	**Vollmer Peak**	**0.59**	**323**		Pb	23 48 36.4	+0.3
HBTM	**San Juan Bauti**	**0.59**	**162**		Pb	23 48 36.5	+0.4
HTUM	**Tustin Road**	**0.59**	**170**		Pb	23 48 36.4	+0.3
VAK	**Adit at Lawren**	**0.60**	**321**		Pg	23 48 35.9	-0.1
SFJWR	**San Luis Fatjo**	**0.60**	**127**		Pb	23 48 36.2	0.0
CYBM	**Yerba Buena Is**	**0.61**	**311**		Pg	23 48 35.9	-0.3
HERM	**Elkhorn Road**	**0.62**	**175**		Pb	23 48 36.9	+0.4
HJGM	**San Juan Grade**	**0.64**	**165**		Pb	23 48 37.1	+0.3
HLTM	**Lone Tree Road**	**0.65**	**145**		Pb	23 48 37.3	+0.3
CPIM	**Pinole Ridge**	**0.67**	**329**		Pb	23 48 38.0	+0.6
JPRM	**Presidio of Sa**	**0.67**	**305**		Pg	23 48 37.3	-0.1
FRP	**Fremont Peak**	**0.70**	**161**		Pb	23 48 38.4	+0.5
SAO	**San Andreas Ge**	**0.70**	**158**	Pg	Pn	23 48 38.6	-0.7
SAO					Pg	23 48 38.8	+0.8
HJSM	**John Smith Roa**	**0.71**	**147**		Pb	23 48 38.7	+0.6
BSLM	**Silva Ranch**	**0.72**	**152**		Pb	23 48 38.8	+0.5
BVYM	**Vineyard**	**0.72**	**156**		Pn	23 48 39.2	-0.4
CPMM	**Point Molate**	**0.73**	**317**		Pb	23 48 38.2	-0.2
BSRM	**Salinas Radio**	**0.77**	**164**		Pb	23 48 39.3	0.0
BCGM	**Cienega Road**	**0.78**	**154**		Pn	23 48 40.1	-0.4
HMOM	**Monterey**	**0.82**	**188**		Pn	23 48 40.1	-0.1
BPCNC	**Pine Canyon**	**0.85**	**172**		Pn	23 48 40.9	+0.2
SCZ	**Santa Cruz**	**0.87**	**160**		Pb	23 48 40.6	-0.1
BEHM	**Elkhorn Ranch**	**0.89**	**147**		Pn	23 48 42.2	+0.3
BJCM	**Johnson Can.**	**0.92**	**160**		Pb	23 48 41.5	-0.1
BEMM	**Emmet**	**0.93**	**144**		Pb	23 48 41.8	0.0
SNT	**Sears Point**	**0.94**	**325**		Pb	23 48 41.9	0.0
BRMM	**Rolling Bench**	**0.96**	**127**		Pb	23 48 42.9	+0.1
BAVM	**Antelope Valle**	**0.97**	**142**		Pn	23 48 42.7	+0.1
FARB	**Farallon Islan**	**1.01**	**287**		Pb	23 48 43.0	-0.2
NOLM	**Olema**	**1.02**	**308**		Pb	23 48 43.3	0.0
HAST	**Hastings Reser**	**1.04**	**170**		Pb	23 48 43.6	-0.1
BPIM	**Pinnacles**	**1.04**	**152**		Pb	23 48 43.4	-0.4
MNHB	**New Hogan Dam**	**1.06**	**46**		Pb	23 48 43.8	-0.2
BSMM	**Soledad Missio**	**1.07**	**165**		Pb	23 48 44.2	0.0
MCUB	**Copperopolis B**	**1.07**	**58**		Pb	23 48 44.1	-0.2
MYLM	**Yosemite Lake**	**1.08**	**91**		Pb	23 48 44.4	0.0
MCCM	**Marconi Confer**	**1.14**	**310**		Pb	23 48 45.3	0.0
CMB	**Columbia Colle**	**1.26**	**60**		Pb	23 48 47.7	+0.2
PMPB	**Monarch Peak**	**1.43**	**147**	Pn	Pn	23 48 49.8	+0.5
MHDM	**Hidden Dam**	**1.53**	**101**		Pn	23 48 51.5	-0.5
GDXM	**Geysers**	**1.61**	**330**	Pn	Pn	23 48 51.1	-0.7
AFDM	**Forest Hills D**	**1.66**	**22**	Pn	Pn	23 48 52.5	0.0
HOPS	**Hopland Field**	**1.88**	**327**	Pn	Pn	23 48 53.9	-1.6
RUBR	**Rubicon Trail**	**2.08**	**37**	Pn	Pn	23 48 58.7	+0.3
WAKR	**Walker**	**2.15**	**59**		Pb	23 49 02.9	+0.2
PNTR	**Pine Nut**	**2.39**	**45**	Pn	Pb	23 49 04.7	+1.9
MGNR	**McGee Canyon**	**2.48**	**80**		Pb	23 49 08.3	-0.1
YERR	**Yerington**	**2.54**	**51**	Pn	Pb	23 49 02.9	-1.9
ANTCA	**Antelope Range**	**2.60**	**78**		Pb	23 49 08.2	-2.2
BEKR	**Beckworth**	**2.69**	**24**	Pn	Pb	23 49 08.1	+1.3
RYN	**Ryan**	**2.84**	**64**	Pn	Pb	23 49 11.9	-2.6
NVAR	**Mina Array Bea**	**2.93**	**69**	Pn	Pb	23 49 13.2	-2.8

*IDC **08** 00:16:12.2±2.8, 37.°09N×71.°52E, h95km±23km, mb3.6/9, mb1 3.7/16, mb1mx3.4/44, mbtmp3.9/16, Error ellipse: s-maj=22.0km s-min=16.9km az=176.0*
*BJI **08** 00:16:12.9±0.0, 36.°99N×71.°68E, h119km, mB4.6/15, mb4.3/20*
*NEIC **08** 00:16:13.4±2.7, 37.°15N±0.°06×71.°46E±0.°09, h134km±7km, mb4.4/21, Error ellipse: s-maj=10.3km s-min=8.4km az=114.0*
*NNC **08** 00:16:14.2±1.1, 37.°27N×71.°34E, h117km±19km, mb3.6, mpv4.3, Error ellipse: s-maj=11.7km s-min=7.2km az=167.0*
ISC 08 00:16:11.3±0.4, 37.°05N±0.°05×71.°52E±0.°04, h106km, n117, σ2.°03/130, mb4.0/21, 10C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
BTK	**Batken**	**3.05**	**350**		**Pn**	**00 17 01.3**	**+3.4**
KBL	**Kabul**	**3.21**	**220**		Pn	00 17 05.4	+5.2
NIL	**Nilore**	**3.68**	**157**		Pn	00 17 11.2	+5.0
KSH	**Kashi**	**4.28**	**54**	P	**Pn**	**00 17 12.3**	**-2.1**
KSH				S	**Sn**	**00 17 54.9**	**-8.6**
KSH				smax	smax		
	comp=N,3µm,0.7s						
KSH				smax	smax		
	comp=E,1µm,0.4s						
ARSB	**Arslanbob**	**4.42**	**14**		**Pn**	**00 17 17.7**	**+1.4**
ARSB				Sn	**Sn**	**00 18 05.5**	**-1.1**
AML	**Almayashu**	**5.34**	**18**	P	**Pn**	**00 17 30.7**	**+1.7**
	SNR=165						
NRN	**Naryn**	**5.59**	**37**		**Pn**	**00 17 33.0**	**+0.7**
NRN				Sn	**Sn**	**00 18 33.8**	**-1.6**
UCH	**Uchtor**	**5.66**	**23**	P	**Pn**	**00 17 35.2**	**+1.8**
	SNR=31						
KZA	**Kyzart**	**5.79**	**29**	P	**Pn**	**00 17 36.5**	**+1.5**
	SNR=17						
EKS2	**Erkin-Say**	**5.87**	**17**	P	**Pn**	**00 17 37.9**	**+2.0**
	SNR=29						
AAK	**Ala-Archa**	**6.03**	**21**	P	**Pn**	**00 17 40.3**	**+2.2**
	18nm,0.3s,baz=170,slow=5.8,SNR=350						
AAK				S	**Sn**	**00 18 45.2**	**-0.6**
	7.4nm,0.3s,baz=317,slow=22,SNR=14						
AAK	**Ala-Archa**	**6.03**	**21**	P	**Pn**	**00 17 40.2**	**+2.2**
	SNR=73						
AAK	**Ala-Archa**	**6.03**	**21**	⇑P	**Pn**	**00 17 40.0**	**+1.9**
AAK				⇓S	**Sn**	**00 18 45.2**	**-0.6**
	57nm,0.7s						
AAK	**Ala-Archa**	**6.03**	**21**		**Pn**	**00 17 40.2**	**+2.1**
AAK				Sn	**Sn**	**00 18 45.7**	**-0.1**
KK31	**Karatay Array**	**6.09**	**353**	P	**Pn**	**00 17 40.6**	**+1.8**
	17nm,0.5s,baz=181,slow=12,SNR=187						
KK31				⇑S	**Sn**	**00 18 44.1**	**-3.1**
	9.1nm,0.4s,baz=166,slow=20,SNR=5.8						
KK31	**Karatay Array**	**6.09**	**353**		**Pn**	**00 17 40.8**	**+2.0**
KK31				Sn	**Sn**	**00 18 45.4**	**-1.7**
KKAR	**Karatay Array**	**6.09**	**353**		**Pn**	**00 17 40.3**	**+1.5**
KKAR				Sn	**Sn**	**00 18 45.0**	**-2.1**
KKAR	**Karatay Array**	**6.09**	**353**		**Pn**	**00 17 40.8**	**+2.0**
KKAR				Sn	**Sn**	**00 18 45.4**	**-1.7**
KBK	**Karagaybulak**	**6.19**	**24**	P	**Pn**	**00 17 42.4**	**+2.1**
	SNR=9.5						
DHRM	**DHARAMSHALA**	**6.20**	**139**	eP	**Pn**	**00 17 43.6**	**+3.1**
DHRM				eS	**Sn**	**00 18 49.8**	**-0.4**
DHRM				IAML		00 19 16.0	
	comp=E,95nm,0.3s						
DHRM				IAML		00 19 16.8	
	comp=N,57nm,0.4s						
FRU1	**Bishkek**	**6.23**	**22**		**Pn**	**00 17 43.3**	**+2.6**
FRU1					**Sn**	**00 18 52.2**	**+1.7**
ULHL	**Ulahol**	**6.34**	**34**	P	**Pn**	**00 17 43.7**	**+1.3**
	SNR=15						
CHMS	**Chumysh**	**6.44**	**22**	P	**Pn**	**00 17 45.5**	**+2.0**
	SNR=41						
CHMS	**Chumysh**	**6.44**	**22**	⇓P	**Pn**	**00 17 45.1**	**+1.6**
	comp=N,26nm,0.5s						
CHMS				⇑S	**Sn**	**00 18 55.3**	**-0.2**
	comp=N,47nm,0.7s						
USP	**Ospenovka**	**6.62**	**19**	P	**Pn**	**00 17 47.3**	**+1.4**
	SNR=17						
KDJ	**Kajisay**	**6.70**	**39**	P	**Pn**	**00 17 48.3**	**+1.2**
KST	**Kastek**	**6.89**	**28**	Lg	Lg	00 19 04.9	
	comp=N,21nm,0.6s						
MTBS	**Maitube**	**7.14**	**30**	P	**Pn**	**00 17 55.0**	**+1.9**
	comp=N,11nm,0.4s						
MDOK	**Medeo**	**7.43**	**33**	⇑P	**Pn**	**00 17 59.9**	**+2.8**
	comp=N,7.5nm,0.5s						
KNDC	**Almaty**	**7.44**	**32**	⇑P	**Pn**	**00 17 59.5**	**+2.4**
KOTS	**Cotyrbulak**	**7.51**	**33**	P	**Pn**	**00 18 00.2**	**+1.9**
	comp=N,18nm,0.5s						
SMLA	**Simla**	**7.54**	**140**	eP	**Pn**	**00 18 00.2**	**+1.8**
SMLA				eS	**Sn**	**00 19 18.3**	**-4.0**
SMLA				IAML		00 19 26.5	
	comp=N,111nm,0.6s						
SMLA				IAML		00 19 27.6	
	comp=E,126nm,0.5s						
PRZ	**Przheval'sk**	**7.58**	**42**	Pn	**Pn**	**00 18 00.8**	**+1.6**
KTBS	**Karatobe**	**7.73**	**29**	P	**Pn**	**00 18 03.0**	**+1.9**
	comp=E,4.0nm,0.5s						
CHKK	**Chushkaly**	**7.97**	**30**	P	**Pn**	**00 18 05.6**	**+1.3**
	comp=E,9.1nm,0.4s						
SATY	**Saty**	**7.99**	**39**	P	**Pn**	**00 18 05.7**	**+1.0**
	comp=E,6.7nm,0.5s						
HRA	**Herat**	**8.00**	**253**	Pn	**Pn**	**00 18 05.2**	**+0.3**
KURS	**Kuram**	**8.19**	**36**	P	**Pn**	**00 18 09.1**	**+1.7**
	comp=E,7.6nm,0.7s						
UZB	**Uzynbulak**	**8.37**	**41**	P	**Pn**	**00 18 10.5**	**+0.6**
	comp=E,8.1nm,0.7s						
ARXS	**Arharly**	**8.61**	**32**	P	**Pn**	**00 18 13.4**	**+0.3**
	comp=E,5.0nm,0.6s						
SHLS	**Shalkode**	**8.61**	**42**	P	**Pn**	**00 18 17.4**	**+4.3**
	comp=E,13nm,0.7s						
PDGK	**Podgornoye**	**8.74**	**42**	⇓P	**Pn**	**00 18 15.2**	**+0.3**
MNBS	**Baschi**	**8.76**	**35**	P	**Pn**	**00 18 15.7**	**+0.7**
	comp=E,6.1nm,0.5s						
JOSI	**Joshimath**	**9.31**	**132**	eP	**Pn**	**00 18 25.3**	**+2.6**
JOSI				eS	**Sn**	**00 19 59.7**	**-6.0**
JOSI				IAML		00 20 08.1	
	comp=N,2µm,1.1s						
JOSI				IAML		00 20 12.0	
	comp=E,104nm,0.8s						
TDK	**Taldyqorghan**	**9.49**	**31**	P	**Pn**	**00 18 25.4**	**+0.5**
	comp=E,30nm,0.7s						
KUDL	**Kundal**	**9.82**	**153**	eP	Pn	00 18 21.8	-7.6
KUDL				eS	Sn	00 20 01.9	-16
KAPS	**Kapalarasan**	**10.12**	**33**	P	**Pn**	**00 18 34.1**	**+0.6**
	comp=E,2.2nm,0.5s						
GEYT	**Alibeck**	**10.69**	**279**	P	**Pn**	**00 18 40.8**	**-0.4**
	comp=E,0.5nm,0.3s,baz=120,slow=9.0,SNR=12						
GEYT				S	**Sn**	**00 20 37.9**	**-0.9**
	comp=E,2.2nm,0.3s,baz=95,slow=15,SNR=13						
GEYT	**Alibeck**	**10.69**	**279**		**Pn**	**00 18 41.5**	**+0.3**

GEYT Sn Sn 00 20 37.5 -1.3
GYA0B ALIBECK ARRAY 10.69 279 ⇑P Pn 00 18 41.0 -0.2
GYA0B ⇑S Sn 00 20 37.0 -1.8
GYA0B ALIBECK ARRAY 10.69 279 Pn Pn 00 18 41.6 +0.4
GYA0B Sn 00 20 37.0 -1.8
MAKZ Makanchi 12.46 35 Pn 00 19 04.3 -0.5
MK31 Makanchi Array 12.60 36 P Pn 00 19 06.8 +0.3
comp=E,1.1nm,0.6s,baz=225,slow=12,SNR=24
MK31 Makanchi Array 12.60 36 Pn 00 19 06.9 +0.3
MKAR Makanchi Array 12.60 36 P Pn 00 19 06.5 -0.2
comp=E,0.2nm,0.3s,baz=220,slow=14,SNR=27
MKAR Makanchi Array 12.60 36 Pn 00 19 06.9 +0.3
DANN Dangsing 13.46 127 eP Pn 00 19 16.1 -2.2
comp=E,20nm,0.4s
KOLN Koldanda 13.77 129 eP Pn 00 19 20.1 -2.0
comp=E,16nm,0.4s
WMQ Urumqi 14.04 56 eP Pn 00 19 26.4 +0.9
GKN Gorkha 14.27 125 eP Pn 00 19 26.8 -1.7
comp=E,36nm,0.4s
KURBB Kurchatov Arra 14.47 18 P Pn 00 19 30.5 -0.3
comp=E,0.1nm,0.3s,baz=206,slow=10,SNR=13
KURBB Kurchatov Arra 14.47 18 ⇑P Pn 00 19 31.1 +0.3
comp=E,5.2nm,0.7s
KURK Kurchatov 14.58 18 P P 00 19 34.3 -1.3
AB31 Akbulak array 14.81 329 P P 00 19 34.2 -1.0
comp=E,0.7nm,0.3s,baz=2.5,slow=27,SNR=20
AB31 S Sn 00 22 14.0 -4.5
comp=E,1.5nm,0.4s,baz=156,slow=22,SNR=7.2
ABKAR Akbulak array 14.81 329 Pn Pn 00 19 35.0 -0.1
PKIN Phulchoki 15.05 125 eP Pn 00 19 36.5 -2.1
comp=E,10nm,0.4s
PKI Pulchoki 15.06 125 eP Pn 00 19 36.2 -2.6
comp=E,11nm,0.5s
GUN Gumba 15.15 123 eP Pn 00 19 37.8 -2.1
comp=E,19nm,0.4s
JIRN Jiri 15.52 123 eP Pn 00 19 42.3 -2.3
comp=E,80nm,0.4s
BVAR Borovoye Array 15.99 358 P Pn 00 19 49.9 0.0
comp=E,0.2nm,0.3s,baz=162,slow=14,SNR=5.4
BRVK Borovoye 16.03 357 Pn Pn 00 19 49.3 -1.1
AKTO Aktyubinsk 16.52 328 P P 00 19 59.4 +2.2
comp=E,0.4nm,0.3s,baz=142,slow=8.6,SNR=7.5
AKTO Aktyubinsk 16.52 328 ⇑P Pn 00 19 56.4 -0.1
comp=E,1.2nm,0.5s
AKTO ⇓S Sn 00 22 56.1 -3.6
comp=E,1.7nm,0.6s
UOSS Minazif 17.80 232 P P 00 20 10.1 -1.5
UOSS IAmb IAmb 00 20 17.6
comp=Z,9.0nm,1.1s
LSA Lhasa 17.94 108 P P 00 20 13.9 +0.4
ZAA0 Zalesovo Array 19.24 24 ⇑P Pn 00 20 28.5 -0.6
comp=Z,0.8nm,0.7s
ZAA0 Zalesovo Array 19.24 24 IAmb IAmb 00 20 30.9
comp=Z,5.9nm,0.7s
ZALV Zalesovo Beam 19.24 24 P P 00 20 27.8 +0.8
comp=Z,1.1nm,0.3s,baz=205,slow=11,SNR=27
ZALV Zalesovo Beam 19.24 24 P P 00 20 27.6 +0.6
GNI Garni 21.13 287 P P 00 20 53.4 +5.7
comp=Z,1.7nm,0.4s,baz=79,slow=10,SNR=5.4
GNI Garni 21.13 287 P P 00 20 46.6 -1.1
GTA Gaotai 22.32 75 ⇑P P 00 21 02.9 +2.7
GTA pmax pmax
comp=Z,9.0nm,0.8s
LZH Lanzhou 25.92 82 eP P 00 21 31.4 -2.3
LZH pP pP 00 22 02.8 +4.5
LZH sP sP 00 22 17.1 +5.8
LZH pmax pmax
comp=Z,13nm,1.1s
LZH pmax pmax
comp=Z,55nm,4.9s
CD2 Chengdu 27.34 93 P P 00 21 45.3 -1.1
SONM Songino Array 27.68 56 P P 00 21 51.6 +2.3
comp=Z,1.1nm,0.6s,baz=261,slow=9.2,SNR=12
SONM Songino Array 27.68 56 P P 00 21 51.2 +1.9
ULN Ulaanbaatar 28.12 56 P P 00 21 52.4 -0.9
ULN IAmb IAmb 00 21 55.8
comp=Z,2.0nm,0.7s
CMAR Chiang Mai Arr 30.36 120 P P 00 22 15.7 +2.5
comp=Z,1.0nm,0.3s,baz=306,slow=7.9,SNR=5.8
XAN Xi'an 30.45 84 P P 00 22 15.1 +1.2
XAN pmax pmax
comp=Z,3.0nm,1.1s
CSS Mathiatis 30.83 278 P P 00 22 16.4 -0.8
CSS IAmb IAmb 00 22 23.4
comp=Z,2.6nm,0.8s
HHC Hu-ho-hao-te 31.18 70 eP P 00 22 19.8 -0.6
HHC pmax pmax
comp=Z,4.0nm,0.8s
HHC pmax pmax
comp=Z,57nm,4.8s
PBKT Sadao Pong 33.06 120 P P 00 22 37.7 +0.9
KAAM Kaadhehdhoo 36.40 178 P P 00 23 06.8 +1.2
FINES FINESS Array B 37.26 326 P P 00 23 15.0 +2.6
comp=Z,2.2nm,0.8s,baz=120,slow=10.0,SNR=9.6
FINES FINESS Array B 37.26 326 P P 00 23 12.7 +0.3
ARCES ARCESS Array B 40.80 337 P P 00 23 44.1 +2.4
comp=Z,2.2nm,0.9s,baz=114,slow=8.1,SNR=6.4
CLL Collm 43.17 309 eP P 00 24 01.0 -0.3
NB2 NORSAR Subarra 44.19 323 P P 00 24 11.4 +2.0
comp=Z,0.5nm,0.5s,baz=93,slow=7.9
NOA NORSAR Array B 44.19 323 P P 00 24 11.4 +2.0
comp=Z,0.7nm,0.6s,baz=95,slow=7.8,SNR=4.9
TORD Torodi Ar. Bea 66.15 269 P P 00 26 49.1 +1.4
comp=Z,0.2nm,0.5s,baz=52,slow=6.4,SNR=4.7
FAKI Fak Fak 68.88 111 P P 00 26 59.9 -5.0
FAKI IAmb IAmb 00 27 02.8
comp=Z,15nm,1.1s
IMAR Indian Mountai 71.52 18 P P 00 27 18.8 -1.4
INK Inuvik 73.29 9 P P 00 27 32.3 +1.7
comp=Z,0.8nm,0.5s,baz=322,slow=4.3,SNR=7.6
PPLA Purkeypile 74.43 19 P P 00 27 37.2 -0.3
PPLA IAmb IAmb 00 27 49.1
comp=Z,23nm,1.4s
KNRA Kununurra 75.17 123 P P 00 27 41.9 -0.4
SCRK Sand Creek 75.46 15 P P 00 27 42.9 -0.5
RAGM Ragged Mountai 78.46 17 pP 00 28 33.4 +5.2
KDAK Kodiak Island 78.53 22 P P 00 28 00.6 0.0
CTGM Chitina Glacie 78.71 16 P P 00 27 58.4 -3.2
CTGM IAmb IAmb 00 28 05.1
comp=Z,18nm,1.5s
SII Sitkinak Islan 79.03 24 P P 00 28 02.5 -0.8
YKA Yellowknife Ar 80.68 3 P P 00 28 13.2 +1.1
comp=Z,0.5nm,0.5s,baz=348,slow=5.4,SNR=12
SCHQ Schefferville 81.75 337 P P 00 28 19.4 +1.4
comp=Z,1.3nm,0.6s,baz=223,slow=6.1,SNR=5.6
SCHQ Schefferville 81.75 337 P P 00 28 17.4 -0.5
SCHQ IAmb IAmb 00 28 34.1
comp=Z,9.2nm,1.5s
DRLN Deer Lake 82.92 329 P P 00 28 22.1 -2.0
DRLN IAmb IAmb 00 28 34.8
comp=Z,9.4nm,1.1s
DLBC Dease Lake 83.17 11 P P 00 28 24.2 -1.1
DLBC IAmb IAmb 00 28 31.4
comp=Z,23nm,1.0s
EMMW East Machias 90.56 332 P P 00 28 58.6 -2.7
NEW Newport 94.71 6 pP 00 29 57.0 +7.6

*IDC **08** 00:20:10.6±5.0, 13.°29N×86.°84W, h49km±74km, mb3.2/3, mb1 3.7/5, mb1mx3.3/31, mbtmp3.4/5, ML3.5/2, MS2.1/2, Ms1 2.1/2, ms1mx1.9/21, Error ellipse: s-maj=190.8km s-min=18.1km az=46.0*
*INET **08** 00:20:10.8, 12.°39N×87.°72W, h38km, ML3.3*
*UCR **08** 00:20:10.2±1.4, 12.°45N×87.°69W, h60km±19km, ML3.8, MW4.0*
*SNET **08** 00:20:11.1±0.9, 12.°45N×87.°80W, h28km±5km, ML3.8*
ISC 08 00:20:11.0±1.1, 12.°51N±0.°08×87.°65W±0.°05, h64km±11km, n35, σ0§78/48, mb3.4/4, 2D, Near coast of Nicaragua

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
CRIN San Cristobal 0.62 72 eP Pn 00 20 24.9 +0.3
CRIN eS Sn 00 20 35.5 +0.9
CNCH Conchagua 0.79 347 eP Pn 00 20 26.7 0.0
CNCH eS Sn 00 20 39.0 +0.8
CNCH Conchagua 0.79 347 eP Pn 00 20 26.7 0.0
CNCH eS Sn 00 20 39.0 +0.8
LCND La Caada 0.83 344 eP Pn 00 20 27.0 -0.1
LCND eS Sn 00 20 39.6 +0.6
LCND IAML 00 20 42.6
comp=Z,5µm,0.5s
LCND La Caada 0.83 344 eP Pn 00 20 27.0 -0.1
LCND eS Sn 00 20 39.6 +0.6
LCND IAML 00 20 42.6
comp=Z,5µm,0.5s
JUCU Jucuar¡n 0.95 322 eP Pn 00 20 27.7 -0.9
JUCU eS Sn 00 20 40.7 -0.9
JUCU IAML 00 20 45.7
comp=Z,2µm,0.3s
JUCU Jucuar¡n 0.95 322 eP Pn 00 20 27.7 -0.9
JUCU eS Sn 00 20 40.7 -0.9
JUCU IAML 00 20 45.7
comp=Z,2µm,0.3s
PACA Pacayal 1.16 326 eP Pn 00 20 31.3 -0.1
PACA eS Sn 00 20 47.1 +0.5
PACA Pacayal 1.16 326 eP Pn 00 20 31.3 -0.1
PACA eS Sn 00 20 47.1 +0.5
ALJI Alcalda de J 1.21 312 eS Sn 00 20 47.3 -0.4
ALJI IAML 00 20 49.9
comp=Z,2µm,0.2s
ALJI Alcalda de J 1.21 312 eS Sn 00 20 47.3 -0.4
ALJI IAML 00 20 49.9
comp=Z,2µm,0.2s
FAGO Alcalda de S 1.26 339 eP Pn 00 20 32.5 -0.2
FAGO Alcalda de S 1.26 339 eP Pn 00 20 32.5 -0.2
TECA Tecapa 1.29 320 eP Pn 00 20 32.9 -0.3
TECA Tecapa 1.29 320 eP Pn 00 20 32.9 -0.3
ESTN Estel 1.38 64 eP Pn 00 20 34.3 0.0
ESTN eS Sn 00 20 52.4 +0.6
MASN Masaya 1.55 109 eP Pn 00 20 35.9 -0.6
COEG Centro de Oper 1.63 313 eP Pn 00 20 37.7 +0.1
COEG eS Sn 00 20 57.6 -0.2
COEG IAML 00 21 02.1
comp=Z,846nm,0.4s
COEG Centro de Oper 1.63 313 eP Pn 00 20 37.7 +0.1
COEG eS Sn 00 20 57.6 -0.2
COEG IAML 00 21 02.1
comp=Z,846nm,0.4s
MATN Matagalpa 1.73 76 eP Pn 00 20 38.7 -0.3
PAVA Las Pavas 1.74 314 eP Pn 00 20 39.0 -0.1
PAVA eS Sn 00 21 01.2 +0.9
PAVA Las Pavas 1.74 314 eP Pn 00 20 39.0 -0.1
PAVA eS Sn 00 21 01.2 +0.9
LFRS El Faro 1.77 309 eP Pn 00 20 39.3 -0.2
LFRS eS Sn 00 21 01.0 -0.1
BOQS Boqueron 2.00 308 eP Pn 00 20 43.5 +0.7
ACON Acoyapa 2.48 102 ⇓iP Pn 00 20 48.1 -0.9
ESPN Las Esperanzas 3.29 95 ⇓eP Pn 00 20 59.9 -0.1
JTS Las Juntas de 3.44 129 P Pn 00 21 03.0 +0.8
comp=Z,25nm,0.3s,baz=5.5,slow=17,SNR=59
JTS S Sn 00 21 43.4 +1.6
comp=Z,2.2nm,0.3s,baz=6.0,slow=19,SNR=2.3
JTS LR LR 00 22 19.9
comp=Z,32nm,20.6s,baz=28,slow=37
JTS Las Juntas de 3.44 129 eP Pn 00 21 08.1 +5.9
APG El Apazote 3.69 313 P Pn 00 21 08.8 +3.0
comp=Z,0.7nm,0.3s,baz=165,slow=12,SNR=3.6
LCR2 La Lucha 2 4.51 127 eP Pn 00 21 15.9 -1.1
CMIG Matias Romero 8.35 304 LR LR 00 24 49.9
comp=Z,9.4nm,21.9s,baz=106,slow=32
TXAR Lajitas Array 22.41 321 P P 00 25 03.4 -1.0
comp=Z,0.9nm,0.6s,baz=138,slow=9.6,SNR=14
PDAR Pinedale Array 35.63 332 P P 00 27 01.9 -1.0
comp=Z,0.3nm,0.6s,baz=125,slow=8.6,SNR=3.6
NVAR Mina Array Bea 37.53 319 P P 00 27 20.0 +0.8
comp=Z,0.5nm,0.8s,baz=118,slow=11,SNR=2.3
YKA Yellowknife Ar 53.51 345 pP pP 00 29 41.4 +0.1
comp=Z,0.2nm,0.5s,baz=150,slow=6.8,SNR=3.4

*SJA **08** 00:34:17.1±0.6, 38.°46S×75.°12W, h33km, ML3.8*
*GUC **08** 00:34:29.8±0.5, 38.°07S×74.°01W, h18km±5km, ML3.5*
ISC 08 00:34:26.2±3.3, 38.°21S±0.°08×74.°4W±0.°1, h29km±16km, n22, σ1§32/28, 1C-2D, Off coast of central Chile

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
BI04 Isla Mocha 0.48 115 ⇓iP Pn 00 34 36.8 -0.3
BI04 iS Sb 00 34 41.5 -1.4
CCSP San Pedro de C 1.73 38 eP Pn 00 34 53.5 -0.8
CCSP IAML 00 35 26.2
comp=E,2µm,0.5s
LC01 Cunco 2.12 110 ⇑iP Pn 00 35 00.9 +1.2
LC01 iS Sn 00 35 24.0 -1.1
LC01 IAML 00 35 32.8
comp=N,406nm,0.5s
CCHI Chillan 2.47 50 eP Pn 00 35 04.7 +0.1
CCHI IAML 00 35 52.7
comp=E,847nm,0.5s
CCHI Chillan 2.47 50 eP Pn 00 35 06.0 +1.5
CCHI eS Sb 00 35 42.0 +2.1
CANA Caviahue 2.68 84 eP Pn 00 35 09.2 +1.6
CANA eS Sb 00 35 46.7 +0.6
BI02 San Fabin de 2.96 59 eP Pn 00 35 11.4 +0.2
BI02 eS Sn 00 35 43.2 -2.6
BI02 IAML 00 36 00.7
comp=N,179nm,0.6s
GO05 Huala 3.78 33 eP Pn 00 35 23.5 +0.9
GO05 eS Sn 00 36 05.0 -1.1
GO05 Huala 3.78 33 eP Pn 00 35 23.5 +0.9
COIS El Sosneado 4.98 53 eP Pn 00 35 40.8 +1.8
MT01 Popeta 5.05 32 eP Pn 00 35 40.5 +0.5
LMEL Las Melosas 5.54 39 eP Pn 00 35 48.1 +1.2
FCH Farellones 5.93 36 eP Pn 00 35 53.0 +0.7
ASAL Salagasta 7.24 41 iP Pn 00 36 10.7 +0.6
CFA Coronel Fontan 8.33 39 iP Pn 00 36 25.1 0.0
ACAN Cantantal 8.38 47 iP Pn 00 36 27.8 +2.0
RTLL Cerro Villicun 8.44 37 iP Pn 00 36 26.6 0.0
RTLL IAML 00 36 27.7
comp=Z,6.7nm,0.4s
GO04 Tololo Observa 8.57 22 ⇓iP Pn 00 36 29.4 +0.9
AMOG MOGNA 8.76 36 iP Pn 00 36 30.8 -0.1
ACCO Cerro Coronel 8.80 32 iP Pn 00 36 32.3 +0.5
AROD Rodeo 9.02 29 iP Pn 00 36 36.5 +1.7
APLL PUNTA DE LOS L 10.17 42 iP Pn 00 36 48.5 -1.8
APLL IAML 00 37 08.5
comp=Z,1.3nm,0.3s

*NEIC **08** 00:48:48.8±1.1, 6.°6N±0.°1×124.°2E±0.°1, h564km±11km, mb4.4/19, Error ellipse: s-maj=16.3km s-min=15.3km az=191.0*
*IDC **08** 00:48:53.7±4.6, 6.°52N×123.°96E, h615km±55km, mb3.0/5, mb1 3.1/5, mb1mx2.6/35, mbtmp4.0/5, Error ellipse: s-maj=88.9km s-min=19.4km az=58.0*
ISC 08 00:48:50.9±0.5, 6.°49N±0.°09×124.°1E±0.°1, h600km, n33, σ1§21/34, mb4.0/16, 1C, Mindanao

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
KCP Kidapawan 1.08 62 ⇑iP P 00 50 00.4 -2.0
KKM Kota Kinabalu 7.88 267 P P 00 50 46.3 -3.0
FAKI Fak Fak 12.38 139 P P 00 51 31.6 -2.0
SBUM Sibu 12.53 252 P P 00 51 33.3 -1.8
YHNB Yeheng 18.27 352 P P 00 52 29.8 +0.7
PBKT Sadao Pong 24.77 296 P P 00 53 27.1 -0.2
PBKT IAmb IAmb 00 53 27.9
comp=Z,3.7nm,0.9s
CMAR Chiang Mai Arr 27.27 298 P P 00 53 49.8 +0.6
comp=Z,1.0nm,0.3s,baz=116,slow=7.5,SNR=7.4
COEN Coen 27.75 137 P P 00 53 53.7 +0.2
ASAR Alice Springs 31.46 163 P P 00 54 27.8 +2.6
comp=Z,0.4nm,0.5s,baz=342,slow=7.1,SNR=5.8
FORT Forrest 37.25 174 P P 00 55 15.1 +1.8
FORT IAmb IAmb 00 56 46.1
comp=Z,18nm,0.8s
USA0B Ussuriysk Arra 38.18 9 P P 00 55 19.8 -0.9
USA0B IAmb IAmb 00 56 16.1
comp=Z,22nm,1.6s
USRK Ussuriysk Ar. 38.18 9 P P 00 55 19.6 -1.0
NWAO Narrogin (SRO) 39.75 189 P P 00 55 34.3 +1.0
NWAO IAmb IAmb 00 56 09.3
comp=Z,96nm,1.9s
NWAO Narrogin (SRO) 39.75 189 P P 00 55 33.9 +0.6
NWAO IAmb IAmb 00 56 09.2
comp=Z,114nm,1.9s
BBOO Buckleboo 40.70 165 P P 00 55 40.6 -0.4
BBOO IAmb IAmb 00 56 56.9
comp=Z,46nm,1.8s
MK31 Makanchi Array 53.82 325 P P 00 57 20.0 +1.2
MKAR Makanchi Array 53.82 325 P P 00 57 19.9 +1.1
comp=Z,2.2nm,0.4s,baz=120,slow=7.9,SNR=90
MKAR PcP PcP 00 58 15.9 +1.1
comp=Z,0.4nm,0.6s,baz=108,slow=4.0,SNR=3.6
MKAR Makanchi Array 53.82 325 P P 00 57 19.8 +0.9
MAKZ Makanchi 54.01 325 P P 00 57 21.1 +1.0
MAKZ IAmb IAmb 00 57 21.8
comp=Z,1.9nm,0.5s
NIL Nilore 54.20 307 P P 00 57 22.0 +0.2
KDJ Kajisay 54.57 318 P P 00 57 25.1 +0.7
KDJ IAmb IAmb 00 58 32.3
comp=Z,51nm,1.6s
NRN Naryn 55.06 317 P P 00 57 28.3 +0.3
NRN IAmb IAmb 00 58 48.3
comp=Z,11nm,1.8s
KBL Kabul 57.80 307 P P 00 57 47.2 +0.5
KURK Kurchatov 58.03 328 P P 00 57 48.6 +0.9
KURK IAmb IAmb 00 57 49.3
comp=Z,3.1nm,0.6s
KKAR Karatay Array 59.46 317 P P 00 57 57.7 +0.3
ATKA Atka Island 67.75 36 P P 00 58 49.0 -0.9
ABKAR Akbulak array 68.38 321 P P 00 58 54.0 +0.3
SOCY Socotra 69.29 281 P P 00 58 59.1 -0.9
SOCY IAmb IAmb 01 00 48.5
comp=Z,35nm,1.4s
RAYN Ar Rayn 77.03 293 P P 00 59 44.1 +0.2
MLY Manley 82.10 25 P P 01 00 09.8 +0.3
MLY IAmb IAmb 01 00 10.5
comp=Z,24nm,2.0s
BRTR Keskin Array B 86.27 309 P P 01 00 31.2 +0.5
comp=Z,0.4nm,0.7s,baz=117,slow=5.7,SNR=3.6
FINES FINESS Array B 88.19 332 P P 01 00 39.1 +0.2
comp=Z,2.1nm,1.0s,baz=128,slow=9.0,SNR=3.0
TORD Torodi Ar. Bea 119.59 289 PKP PKiKP 01 06 35.7 +1.0
comp=Z,0.2nm,0.4s,baz=114,slow=2.2,SNR=4.3

*IDC **08** 00:59:34.3±1.1, 3.°00N×128.°92E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.4/48, mbtmp3.6/5, MS2.4/1, Ms1 2.4/1, ms1mx2.1/33, Error ellipse: s-maj=72.0km s-min=21.8km az=71.0*
ISC 08 00:59:40.5±1.2, 3.°0N±0.°2×129.°1E±0.°3, h44km, n7, σ0§48/6, mb3.5/5, 1C, Halmahera

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
KCP Kidapawan 5.65 315 ⇑eP Pn 01 01 02.3 +0.3
WRA Warramunga Arr 23.35 167 P P 01 04 45.5 +0.4
1.9nm,1.0s,baz=343,slow=10,SNR=5.2
ASAR Alice Springs 26.89 170 P P 01 05 17.2 -0.3
0.6nm,0.8s,baz=358,slow=8.3,SNR=4.5
KSRS Korea Array 34.33 358 LR LR 01 20 20.1
comp=Z,5.6nm,18.4s,baz=65,slow=36
MKAR Makanchi Array 59.52 324 P P 01 09 39.1 -0.3
0.7nm,0.6s,baz=113,slow=8.1,SNR=13
KURBB Kurchatov Arra 63.65 327 P P 01 10 06.6 -0.5
0.8nm,0.8s,baz=123,slow=6.3
ILAR Eielson Array 84.77 25 P P 01 12 10.1 +0.2
0.2nm,0.5s,baz=250,slow=5.1,SNR=4.6

*BJI **08** 01:11:16.3±0.0, 39.°90N×53.°72E, h10km, mB4.8/32, mb4.5/39, Ms4.3/16, Ms7 4.1/13*
*MOS **08** 01:11:18.9±1.3, 39.°84N×54.°27E, h14km, mb4.7/30, Error ellipse: s-maj=4.8km s-min=3.2km az=35.8*
*TEH **08** 01:11:18.3, 39.°85N×54.°22E, h10km, ML4.7*
*NEIC **08** 01:11:19.5±1.7, 39.°79N±0.°07×54.°14E±0.°08, h5km±4km, mb4.7/69, Error ellipse: s-maj=10.1km s-min=8.3km az=199.0*
*THR **08** 01:11:19.0±0.3, 39.°77N×54.°05E, h15km, ML4.8*
*DSN **08** 01:11:21.2±0.7, 39.°67N×54.°05E, h10km, mb4.6/4, Error ellipse: s-maj=10.7km s-min=8.5km az=49.0*
*IDC **08** 01:11:23.3±2.1, 39.°72N×54.°04E, h32km±16km, mb4.2/26, mb1 4.3/38, mb1mx4.2/70, mbtmp4.4/38, ML3.5/8, MS3.7/33, Ms1 3.7/33, ms1mx3.6/40, Error ellipse: s-maj=12.3km s-min=7.7km az=159.0*
*NNC **08** 01:11:26.9±2.1, 40.°04N×54.°63E, h31km±17km, mb4.7, Error ellipse: s-maj=16.0km s-min=5.4km az=65.0*
ISC 08 01:11:23.1±0.3, 39.°85N±0.°04×54.°19E±0.°03, h32km, n436, σ1§88/440, mb4.6/81, MS3.8/28, 37C-35D, Turkmenistan

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
IMND Minoodasht 2.76 159 e 01 12 05.6
IMND ePn Pn 01 12 04.8 -0.3
GALA Gala 3.15 281 ePn Pn 01 12 12.4 +2.0
NDR Nardaran 3.30 284 ePn Pn 01 12 14.8 +2.3
BJRD Bojnurd 3.31 130 eP Pn 01 12 12.8 0.0
BJRD Bojnurd 3.31 130 ePn Pn 01 12 12.8 0.0
IGLO Ghaloghah 3.36 185 ePn Pn 01 12 12.0 -1.6
IGLO e 01 12 51.9
GOBA Gobu 3.46 281 ePn Pn 01 12 16.6 +1.8
GEYT Alibeck 3.62 121 Pn Pn 01 12 16.9 -0.1
56nm,0.3s,baz=302,slow=16,SNR=808
GEYT Sn Sn 01 12 57.6 -1.0
29nm,0.3s,baz=288,slow=19,SNR=5.1
GEYT Lg Lg 01 13 24.0
58nm,0.3s,baz=268,slow=33,SNR=7.3
GEYT LR LR 01 13 58.2
comp=Z,223nm,19.8s,baz=290,slow=42
GEYT Alibeck 3.62 121 Pn 01 12 16.2 -0.7
GEYT Alibeck 3.62 121 ePn Pn 01 12 16.8 -0.1
GYA0B ALIBECK ARRAY 3.62 121 ⇓Pn Pn 01 12 16.8 -0.1
GYA0B ⇑Sn Sn 01 12 58.8 +0.3
GYA0B ⇑Lg Lg 01 13 18.4
GYA0B ALIBECK ARRAY 3.62 121 Pn 01 12 16.8 -0.1
IPRN Peran 3.89 203 ePn Pn 01 12 18.5 -2.3
IALA Alasht 3.92 197 ePn Pn 01 12 20.1 -1.3
ALIB Äli-Bayra 3.99 273 ePn Pn 01 12 23.0 +1.0
ISFR Sfrayin 4.09 132 ePn Pn 01 12 24.6 +0.9
ISFR e 01 13 15.7
ISHM Shahmirzad 4.10 190 ePn Pn 01 12 23.1 -0.8
SIZA Siyzn 4.22 289 ePn Pn 01 12 27.9 +2.6
IEMG Emamgholi 4.26 123 ePn Pn 01 12 26.0 0.0
IEMG e 01 13 59.3
LKRN Lenkeran, Azer 4.35 257 P Pn 01 12 27.0 0.0
LKRN Lenkeran, Azer 4.35 257 ePn Pn 01 12 27.0 0.0
IFIR Firoozkooh 4.36 196 ePn Pn 01 12 27.3 -0.1
PQL Pirkuli 4.38 284 ePn Pn 01 12 29.5 +1.9
IANJ Anjilo 4.38 183 ePn Pn 01 12 28.0 +0.3
ASTR Astara 4.39 255 ePn Pn 01 12 27.5 0.0
QALM Alamut, Qazvin 4.41 220 ePn Pn 01 12 25.3 -2.8
SAAT Saatly 4.44 272 ePn Pn 01 12 29.8 +1.6
GLBA Clilabad 4.53 264 ePn Pn 01 12 29.7 +0.3
ILAS Lasjerd 4.57 193 ePn Pn 01 12 30.2 -0.1
IDMV Damavand 4.60 203 ePn Pn 01 12 30.2 -0.5
CHTH Charan 4.63 213 eP Pn 01 12 28.7 -2.3
CHTH Charan 4.63 213 ePn Pn 01 12 28.7 -2.3
IGZV Ghazvin 4.67 223 ePn Pn 01 12 28.9 -2.7
TEH Tehran 4.67 209 ePn Pn 01 12 30.5 -1.1
IAKL Akhelmad 4.84 131 ePn Pn 01 12 34.7 +0.7
DRN Derbent 4.94 298 eP Pn 01 12 36.2 +1.1
IHSB Hasanabad 4.98 209 ePn Pn 01 12 35.0 -0.7
IHSB e 01 12 44.5
GRMI Germi 4.99 260 eP Pn 01 12 33.9 -2.0
GRMI IAML 01 13 44.4
comp=E,221nm,0.4s
GRMI IAML 01 13 45.5
comp=N,239nm,0.6s
GRMI Germi 4.99 260 ePn Pn 01 12 33.9 -2.0
IMHD Mahdasht 5.01 215 ePn Pn 01 12 35.7 -0.5
AKT Akhty 5.18 290 eP Pn 01 12 39.0 +0.6
AKT eS Sn 01 13 40.4 +3.3
AKT pmax pmax
comp=Z,80nm,0.5s
AKT smax smax
comp=N,448nm,0.4s
AKT smax smax
comp=E,174nm,0.4s
AKT smax smax
comp=N,344nm,0.4s
IVRN Varamin 5.23 203 ePn Pn 01 12 38.9 -0.3
ZNJK Zanjan 5.37 235 eP Pn 01 12 39.3 -2.0
ZNJK IAML 01 13 39.0
comp=E,246nm,0.2s
ZNJK IAML 01 13 39.7
comp=N,297nm,0.4s
ZNJK Zanjan 5.37 235 ePn Pn 01 12 39.3 -2.0
ISRB Sarab 5.48 250 e Sn 01 13 44.2 -0.6
SEKA Sheki 5.50 286 P Pn 01 12 44.3 +1.5
MNGR Mingechevir, A 5.51 282 P Pn 01 12 44.6 +1.7
QABG Abgarm-Qazvin 5.52 223 ePn Pn 01 12 41.2 -2.1
IMOG Moghan 5.52 131 ePn Pn 01 12 43.8 +0.4
IRAZ Razeghan 5.58 219 ePn Pn 01 12 42.6 -1.5
IQOM Qom 5.59 207 ePn Pn 01 12 42.6 -1.6
IHSH Hashtrud 5.61 256 ePn Pn 01 12 49.6 +5.0
AHAR Ahar 5.71 258 ePn Pn 01 12 45.9 0.0
IHRS Heris 5.77 257 ePn Pn 01 12 45.8 -0.9

IHRS e 01 14 05.9
IMYA Miami 5.83 125 ePn Pn 01 12 47.4 -0.1
MAK Makhachkala 5.91 304 eP Pn 01 12 48.7 +0.3
MAK eS Sn 01 13 56.3 +1.4
MAK pmax pmax
comp=Z,186nm,1.0s
MAK MLR MLR
comp=Z,353nm,15.0s
TVRZ Varzaqan 6.00 259 ePn Pn 01 12 50.1 +0.3
GNBR Gunib 6.02 297dePn Pn 01 12 53.5 +3.6
GANJ Ganja 6.07 280 P Pn 01 12 51.4 +0.7
KRSH Karshahi 6.10 196 ePn Pn 01 12 49.6 -1.6
TNSJ Nastanj 6.19 161 ePn Pn 01 12 52.1 -0.3
JRKH Jarkhoshk 6.26 127 ePn Pn 01 12 53.0 -0.4
HAGD Aghdareh 6.43 220 ePn Pn 01 12 54.6 -1.3
ITBZ Tabriz 6.47 258 ePn Pn 01 12 56.5 +0.2
ITBZ e 01 14 36.4
QAM Ghamsar 6.47 201 ePn Pn 01 12 55.5 -0.8
HSRG Sareghieh 6.58 227 ePn Pn 01 12 57.0 -0.9
TABS Tabas 6.62 158 ePn Pn 01 12 57.8 -0.5
TABS Tabas 6.62 158 ePn Pn 01 12 57.8 -0.5
BTLR Botlikh 6.63 298ceP Pn 01 13 01.8 +3.5
TKDS Koohdasht(Taba 6.66 158 ePn Pn 01 12 59.1 +0.3
ANAR Anarak 6.66 183 ePn Pn 01 12 58.1 -0.8
IMRD Marand 6.68 263 ePn Pn 01 12 59.2 0.0
NAX Nakhchivan 6.76 267 P Pn 01 13 00.6 +0.4
IKLH Kolahrood 6.85 199 ePn Pn 01 13 00.4 -1.2
TPRV Parvadeh(Tabas 7.10 163 ePn Pn 01 13 05.0 +0.1
IZEF Zefreh 7.11 193 ePn Pn 01 13 04.1 -1.0
GROC Groznyy 7.13 301 eP Pn 01 13 07.7 +2.5
GROC eS Sn 01 14 28.8 +3.7
GROC pmax pmax
comp=Z,57nm,0.8s
GROC MLR MLR
comp=Z,367nm,1.0s
GNI Garni 7.26 275 Pn Pn 01 13 08.5 +1.3
comp=Z,2.3nm,0.3s,baz=30,slow=2.4,SNR=24
GNI LR LR 01 17 00.9
comp=Z,249nm,21.3s,baz=78,slow=47
GNI Garni 7.26 275 i P Pn 01 13 07.3 +0.2
SNR=19
GNI Garni 7.26 275 Pn 01 13 08.1 +1.0
GNI Garni 7.26 275 P Pn 01 13 08.1 +1.0
IBZA Bozab 7.38 225 ePn Pn 01 13 09.0 +0.2
TBLG Delisi 7.42 288 Pn 01 13 09.7 +0.6
TBLG Delisi 7.42 288 P Pn 01 13 09.7 +0.6
YZKH Yazd 7.46 177 eP Pn 01 13 08.7 -1.1
YZKH IAML 01 14 32.8
comp=E,234nm,0.5s
YZKH IAML 01 14 33.1
comp=N,233nm,0.6s
YZKH Yazd 7.46 177 ePn Pn 01 13 08.7 -1.1
AFRZ Afriz 7.49 147 ePn Pn 01 13 10.6 +0.3
ICHK Chekchek 7.60 179 ePn Pn 01 13 11.5 -0.3
IPIR Pirpir 7.63 201 ePn Pn 01 13 13.1 +0.7
IDOB Doab 7.74 220 ePn Pn 01 13 13.8 +0.1
IKOM Komasi 7.79 225 ePn Pn 01 13 14.9 +0.5
ITEG Tejag 7.85 151 ePn Pn 01 13 15.9 +0.6
ISAD Sadrabad 7.93 183 ePn Pn 01 13 15.6 -0.9
IDHR Dehrash 8.07 233 ePn Pn 01 13 19.5 +1.2
JHBN Jahan bin 8.12 202 ePn Pn 01 13 19.5 +0.4
IRAM Ramesheh 8.16 191 ePn Pn 01 13 19.2 -0.4
ZEI Tsey 8.28 294 eP Pn 01 13 22.4 +1.3
ZEI pmax pmax
comp=Z,16nm,0.6s
AKH Akhalkalaki 8.29 284 Pn 01 13 23.2 +2.0
AKH Akhalkalaki 8.29 284 P Pn 01 13 23.2 +2.0
IBAF Bafgh 8.32 172 ePn Pn 01 13 21.5 -0.2
IKOO Kooshah 8.37 151 ePn Pn 01 13 22.6 +0.1
HRA Herat 8.43 128 Pn 01 13 21.9 -1.3
IMEH Mehriz 8.45 178 ePn Pn 01 13 23.0 -0.6
NCK Nalchik 8.72 298⇓eP Pn 01 13 28.7 +1.7
KLNJ Kolanjah 9.08 194 ePn Pn 01 13 32.4 +0.2
NEY Neytrino 9.24 295⇑eP Pn 01 13 37.1 +2.8
PYA1 Pyatigorsk 9.27 301⇑eP Pn 01 13 34.9 +0.3
KBZ Khabaz 9.28 298 Pn Pn 01 13 33.9 -0.7
comp=Z,2.8nm,0.3s,baz=180,slow=2.0,SNR=48
KBZ LR LR 01 18 28.6
comp=Z,104nm,20.5s,baz=112,slow=46
SHA1 Shidzhatmaz 9.45 298⇓eP Pn 01 13 36.7 -0.4
KVAR Kislovodsk Arr 9.50 299 Sn Sn 01 15 18.2 -5.2
baz=263,slow=16,SNR=4.1
KIV Kislovodsk 9.51 299 i P Pn 01 13 37.5 -0.3
SNR=14
KIV Kislovodsk 9.51 299 Pn 01 13 38.3 +0.5
KIV Kislovodsk 9.51 299 eP Pn 01 13 38.2 +0.4
KIV eS Sn 01 15 26.8 +3.3
KIV pmax pmax
comp=Z,162nm,1.0s
KIV MLR MLR
comp=Z,112nm,11.0s
KHGB Koh Gabri 9.64 168 ePn Pn 01 13 39.7 -0.1
NHDN Nehbandan 9.69 149 ePn Pn 01 13 40.4 -0.1
GOF Gofitskoye 9.74 306⇑eP Pn 01 13 41.5 +0.6
GOF eS Sn 01 15 29.6 +0.5
GOF pmax pmax
comp=Z,55nm,0.7s
GOF smax smax
comp=N,242nm,0.8s
AB31 Akbulak array 10.25 22 Pn Pn 01 13 47.2 -0.7
comp=N,31nm,0.7s,baz=211,slow=14,SNR=263
AB31 Sn Sn 01 15 39.3 -2.4
comp=N,40nm,0.6s,baz=195,slow=23,SNR=6.0
AB31 Akbulak array 10.25 22 eP Pn 01 13 45.7 -2.2
AB31 S Sn 01 15 39.3 -2.4
ABKAR Akbulak array 10.25 22 Pn 01 13 46.1 -1.8
ABKAR Akbulak array 10.25 22 Pn 01 13 47.0 -0.9
CHMN Cheshme madani 10.34 164 ePn Pn 01 13 49.9 +0.4
ARXR Arkhyz 10.34 295⇓eP Pn 01 13 50.9 +1.6
NGRK Negar Kerman 10.40 168 ePn Pn 01 13 50.6 +0.3
AKTO Aktyubinsk 10.92 13 Pn Pn 01 13 57.5 +0.5
comp=N,4.7nm,0.3s,baz=206,slow=9.0,SNR=81
AKTO Sn Sn 01 15 52.7 -5.3
comp=N,5.7nm,0.3s,baz=202,slow=21,SNR=5.9
AKTO LR LR 01 19 26.8
comp=N,1μm,18.4s,baz=196,slow=44
AKTO Aktyubinsk 10.92 13 ⇓Pn Pn 01 13 57.7 +0.7
comp=N,44nm,0.9s
SOC Sochi 11.44 294 eP Pn 01 14 06.1 +1.9
SOC e 01 16 13.6
SOC pmax pmax
comp=Z,25nm,1.0s
SOC MLR MLR
comp=Z,68nm,10.0s
TAS Tashkent 11.58 78 Pn Pn 01 14 03.7 -2.5
TAS Tashkent 11.58 78 P Pn 01 14 03.7 -2.5
KK31 Karatay Array 12.66 70 Pn Pn 01 14 19.0 -1.9
comp=Z,8.7nm,0.5s,baz=257,slow=16,SNR=203
KK31 ⇑Sn Sn 01 16 34.6 -6.2
comp=Z,9.4nm,0.5s,baz=297,slow=28,SNR=4.9
KK31 Karatay Array 12.66 70 Pn 01 14 19.0 -1.9
KK31 Karatay Array 12.66 70 i P Pn 01 14 19.0 -1.9
KKAR Karatay Array 12.66 70 Pn 01 14 19.0 -1.9
KKAR Karatay Array 12.66 70 Pn 01 14 19.1 -1.9
KKAR Karatay Array 12.66 70 P Pn 01 14 19.1 -1.9
KKAR Karatay Array 12.66 70 ePn Pn 01 14 19.0 -1.9
BTK Batken 12.76 84 Pn 01 14 20.6 -1.7
BTK Batken 12.76 84 P Pn 01 14 20.7 -1.7
KBL Kabul 12.97 109 Pn 01 14 24.6 -0.7
KBL Kabul 12.97 109 P Pn 01 14 24.6 -0.7
ANN Anapa 13.34 297 eP Pn 01 14 31.5 +1.3
ANN eS Sn 01 17 00.9 +3.6
ANN pmax pmax
comp=Z,16nm,0.9s
GAZ Gaziantep 13.57 264 Pn Pn 01 14 33.8 +0.4
BANOM Banah 14.00 172 P Pn 01 14 38.5 -0.8
VRH Novokhopyorsk 14.30 327 eP Pn 01 14 42.0 -1.2
VRH pmax pmax
comp=Z,60nm,0.7s
ARSB Arslanbob 14.36 78 Pn 01 14 42.9 -1.3
ARSB Arslanbob 14.36 78 P Pn 01 14 42.9 -1.3
MSFE Esma-Masafi 14.55 173 P Pn 01 14 46.1 -0.7
NAZ Nazwa, Dubai 14.87 175 P Pn 01 14 50.0 -1.2
AML Almayashu 14.90 75 P Pn 01 14 50.6 -1.2
SNR=7.8
UOSS Minazif 14.96 173 P Pn 01 14 49.5 -2.8
UOSS Minazif 14.96 173 Pn 01 14 52.4 +0.1
EKS2 Erkin-Say 14.99 73 P Pn 01 14 53.6 +0.9
SNR=8.5
VSR Storozhevoye 15.46 322 eP Pn 01 14 55.7 -2.9
VSR pmax pmax
comp=Z,160nm,1.3s
UCH Uchtor 15.52 75 P Pn 01 14 58.7 -1.2

SNR=5.9
AAK Ala-Archa 15.52 73 Pn Pn 01 14 58.4 -1.3
comp=Z,0.6nm,0.3s,baz=216,slow=5.8,SNR=34
AAK LR LR 01 21 46.4
comp=Z,449nm,18.5s,baz=258,slow=40
AAK Ala-Archa 15.52 73 P Pn 01 15 00.7 +1.0
SNR=13
AAK Ala-Archa 15.52 73 i P Pn 01 15 00.7 +1.0
SNR=17
AAK Ala-Archa 15.52 73 ⇑Pn Pn 01 14 59.8 +0.1
comp=Z,19nm,0.8s
AAK ⇓Sn Sn 01 17 46.3 -4.3
comp=Z,24nm,0.9s
AAK ⇑Lg Lg 01 19 27.6
comp=Z,45nm,1.1s
AAK Ala-Archa 15.52 73 Pn 01 14 58.0 -1.7
AAK IAmb IAmb 01 15 09.5
comp=Z,70nm,1.5s
AAK Ala-Archa 15.52 73⇓eP Pn 01 14 58.4 -1.3
AAK pmax pmax
comp=Z,19nm,0.7s
USP Ospenovka 15.57 71 P Pn 01 14 59.7 -0.6
SNR=11
FRU1 Bishkek 15.63 72 Pn Pn 01 14 59.0 -2.1
FRU1 Bishkek 15.63 72 P Pn 01 14 59.0 -2.1
FRU1 pmax pmax
comp=Z,82nm,1.0s
ILGA Ilgaz 15.63 281 Pn Pn 01 15 02.0 +0.8
SIM Simferopol' 15.67 296ceP Pn 01 15 02.3 +0.9
SIM pmax pmax
comp=Z,28nm,0.5s
CHMS Chumysh 15.73 72 P Pn 01 15 01.2 -1.1
SNR=9.0
CHMS Chumysh 15.73 72 ⇑Pn Pn 01 15 03.2 +0.8
comp=Z,129nm,0.9s
CHMS ⇓Sn Sn 01 17 50.1 -5.5
comp=Z,21nm,1.1s
CHMS Chumysh 15.73 72 i P Pn 01 15 00.9 -1.4
CHMS pmax pmax
comp=Z,129nm,0.9s
VORR Voronezh 15.74 324 eP Pn 01 15 02.0 -0.3
VORR pmax pmax
comp=Z,250nm,1.2s
BR131 Keskin Array S 15.80 276 Pn 01 15 03.1 -0.2
BR131 Keskin Array S 15.80 276 P Pn 01 15 03.1 -0.2
BR131 pmax pmax
comp=Z,7.0nm,0.9s
BRTR Keskin Array B 15.80 276 Pn Pn 01 15 04.6 +1.2
comp=Z,0.1nm,0.3s,baz=94,slow=11,SNR=8.6
BRTR LR LR 01 22 17.0
comp=Z,63nm,20.3s,baz=82,slow=42
BRTR Keskin Array B 15.80 276 Pn 01 15 03.4 +0.1
BRTR Keskin Array B 15.80 276 P Pn 01 15 03.4 +0.1
KBK Karagaybulak 15.86 73 P Pn 01 15 05.5 +1.4
SNR=11
ASF Jabal al Asfar 15.94 247 Pn Pn 01 15 05.2 +0.1
comp=Z,0.1nm,0.3s,baz=51,slow=14,SNR=3.0
KZA Kyzart 16.06 75 P P 01 15 12.2 +2.2
SNR=5.2
ANTO Ankara 16.43 277 Pn Pn 01 15 10.4 -0.9
ANTO Ankara 16.43 277 P Pn 01 15 10.4 -0.9
ANTO pmax pmax
comp=Z,16nm,1.2s
BR231 Keskin MP Arra 16.45 277 Pn Pn 01 15 09.4 -2.1
NIL Nilore 16.47 106 Pn Pn 01 15 08.0 -3.8
NIL Nilore 16.47 106 P Pn 01 15 08.0 -3.8
NIL pmax pmax
comp=Z,16nm,1.0s
MMAI Mount Meron Ar 16.57 252 Pn P 01 15 14.8 -0.7
comp=Z,0.1nm,0.3s,baz=54,slow=14,SNR=3.4
MMAI LR LR 01 23 06.5
comp=Z,126nm,20.6s,baz=70,slow=43
NRN Naryn 16.62 78 Pn Pn 01 15 11.4 -2.6
NRN Naryn 16.62 78 P Pn 01 15 11.4 -2.6
NRN pmax pmax
comp=Z,25nm,1.0s
KSH Kashi 16.77 84 P P 01 15 17.1 -0.5
KSH sP pP 01 15 24.6 -1.5
KSH PP sP 01 15 31.6 +1.3
KSH S Sn 01 18 18.8 -2.1
KSH pmax pmax
comp=Z,41nm,0.7s
KSH pmax pmax
comp=Z,180nm,6.7s
KSH LR LR
comp=Z,140nm,6.1s
KSH LR LR
comp=Z,130nm,4.9s
ARU Arti 16.84 8 Pn Pn 01 15 14.1 -2.0
comp=Z,0.0nm,0.3s,baz=188,slow=8.0,SNR=22
ARU LR LR 01 23 06.0
comp=Z,798nm,20.3s,baz=190,slow=41
ARU Arti 16.84 8 Pn 01 15 15.4 -0.7
ARU Arti 16.84 8c iP Pn 01 15 13.4 -2.8
ARU S Sn 01 18 21.7 -0.4
ARU pmax pmax
comp=Z,24nm,0.8s
ARU MLR MLR
comp=Z,762nm,19.0s
WSAR Wadi Sarin 16.99 166 Pn Pn 01 15 16.4 -1.9
comp=Z,0.1nm,0.3s,baz=16,slow=13,SNR=3.6
WSAR LR LR 01 23 32.3
comp=Z,134nm,19.5s,baz=8.0,slow=43
BRVK Borovoye 17.19 34 ⇓Pn Pn 01 15 20.0 -0.6
BRVK ⇑Sn Sn 01 18 26.5 -4.2
BRVK Borovoye 17.19 34 Pn 01 15 19.7 -0.9
BRVK IAmb IAmb 01 15 25.0
comp=Z,76nm,1.1s
BRVK Borovoye 17.19 34 P Pn 01 15 19.7 -0.9
BRVK pmax pmax
comp=Z,76nm,1.2s
BVAR Borovoye Array 17.21 35 Pn Pn 01 15 20.1 -0.9
comp=Z,1.0nm,0.3s,baz=224,slow=10,SNR=56
BVAR Sn Sn 01 18 24.7 -6.5
comp=Z,1.4nm,0.3s,baz=232,slow=23,SNR=4.9
CSS Mathiatis 17.27 260 Pn Pn 01 15 20.1 -1.7
MDOK Medeo 17.43 72 ⇑Pn Pn 01 15 23.6 -0.2
comp=Z,26nm,1.3s
MDOK Medeo 17.43 72 P Pn 01 15 23.6 -0.2
SVE Sverdlovsk 17.50 12⇓eP Pn 01 15 24.6 +0.1
SVE eS S 01 18 43.8 -1.7
SVE pmax pmax
comp=Z,40nm,0.9s
MDUB Mudurnu 17.58 279 Pn Pn 01 15 23.6 -2.2
MDUB IAmb IAmb 01 16 00.7
comp=Z,55nm,1.0s
RAYN Ar Rayn 17.86 207 i P Pn 01 15 26.7 -2.5
SNR=41
RAYN Ar Rayn 17.86 207 Pn 01 15 26.3 -2.9
RAYN Ar Rayn 17.86 207 P Pn 01 15 26.3 -2.9
RAYN pmax pmax
comp=Z,35nm,1.0s
EIL Elat 18.76 243 P Pn 01 15 40.0 -0.1
comp=Z,0.1nm,0.3s,baz=234,slow=5.4,SNR=4.8
EIL LR LR 01 24 13.4
comp=Z,145nm,18.4s,baz=71,slow=41
KIRV Kirov 19.00 352 P P 01 15 41.9 +0.1
comp=Z,3.3nm,0.3s,baz=160,slow=9.4,SNR=21
KIRV LR LR 01 25 02.7
comp=Z,557nm,18.0s,baz=186,slow=43
KIRV Kirov 19.00 352 i P P 01 15 41.5 -0.3
PDGK Podgornoye 19.21 71 ⇑Pn Pn 01 15 45.8 +0.2
comp=Z,9.5nm,1.0s
PDGK Podgornoye 19.21 71 i P Pn 01 15 45.8 +0.2
PDGK pmax pmax
comp=Z,9.0nm,0.9s
OBN Obninsk 19.27 328 P P 01 15 44.3 -0.5
comp=Z,1.3nm,0.3s,baz=118,slow=2.7,SNR=11
OBN LR LR 01 24 39.9
comp=Z,73nm,19.2s,baz=138,slow=41
OBN Obninsk 19.27 328 P P 01 15 44.4 -0.5
OBN IAmb IAmb 01 16 11.2
comp=Z,41nm,0.7s
OBN Obninsk 19.27 328⇓eP P 01 15 44.4 -0.5
OBN eS Sn 01 19 15.1 -5.9
OBN pmax pmax
comp=Z,21nm,1.2s
OBN MLR MLR
comp=Z,288nm,16.0s
ELL Elmali 19.30 268 IAmb IAmb 01 16 28.8
comp=Z,37nm,0.7s
MOS Moscow 19.32 331 eP P 01 15 44.7 -0.6
MOS eS S 01 19 15.0 -7.0
MOS pmax pmax
comp=Z,93nm,1.0s
MOS MLR MLR

comp=Z,300nm,16.0s
JURR Jurilovca 19.32 293 ⇓P P 01 15 45.8 +0.3
TLCR 19.41 294 ⇑P P 01 15 46.9 +0.4
TLCR 19.41 294 P P 01 15 46.8 +0.4
TIRR Tirgusor 19.62 292 ⇓P Pn 01 15 49.7 -0.6
TIRR Tirgusor 19.62 292 P P 01 15 48.8 0.0
TIRR IAmb IAmb 01 15 51.4
comp=Z,41nm,1.0s
TIRR Tirgusor 19.62 292 P P 01 15 48.8 0.0
TIRR pmax pmax
comp=Z,41nm,1.0s
MILM Milestii Mici 19.70 299 ⇑P P 01 15 49.1 -0.4
KIS Kishinev 19.71 300 eP P 01 15 48.0 -1.7
KIS LRM MLR 01 26 04.0
comp=Z,300nm,15.0s
MANT Manisa 19.91 274 P P 01 15 51.7 -0.5
HARR Harsova 19.99 293 ⇓P P 01 15 52.9 +0.2
HARR Harsova 19.99 293 P P 01 15 52.9 +0.2
LEOM Leova 20.00 298 P Pn 01 15 54.9 +0.2
ICOR Ion Corvin 20.04 291 ⇓P Pn 01 15 55.0 -0.2
KURBB Kurchatov Arra 20.15 50 P Pn 01 15 56.1 -0.4
comp=Z,11nm,0.9s,baz=251,slow=12,SNR=39
KURBB Kurchatov Arra 20.15 50 ⇓Pn Pn 01 15 56.8 +0.3
comp=Z,31nm,1.1s
KURK Kurchatov 20.24 49 P Pn 01 15 56.6 -0.9
KURK IAmb IAmb 01 16 03.7
comp=Z,44nm,0.9s
KURK Kurchatov 20.24 49c iP Pn 01 15 57.2 -0.3
KURK pmax pmax
comp=Z,32nm,1.1s
SORM Soroca 20.28 303 ⇑P P 01 15 55.3 -0.6
SORM Soroca 20.28 303 P P 01 15 55.3 -0.6
GHRR 20.51 296 ⇓P P 01 15 58.6 +0.2
AKASG Malin Array Be 20.55 310 P P 01 15 58.6 -0.2
comp=Z,17nm,0.5s,baz=109,slow=9.6,SNR=97
AKASG LR LR 01 25 40.8
comp=Z,247nm,18.5s,baz=100,slow=42
AKASG Malin Array Be 20.55 310 P P 01 15 58.7 -0.1
AKASG Malin Array Be 20.55 310ceP P 01 15 58.7 -0.1
AKASG pmax pmax
comp=Z,17nm,0.5s
AKBB Malin Array Si 20.55 310 P P 01 15 58.4 -0.4
AKBB Malin Array Si 20.55 310d iP P 01 15 58.8 0.0
KIEV Kiev 20.55 310 P P 01 15 58.0 -0.8
IAS Iasi 20.59 300 P P 01 15 58.7 -0.6
IAS pmax pmax
comp=Z,18nm,0.8s
ODBI Odobesti 20.71 295 ⇓P Pn 01 16 02.5 -0.6
VRI Vrincioaia 20.95 296 ⇓P Pn 01 16 04.7 -1.2
VRI Vrincioaia 20.95 296 P Pn 01 16 04.6 -1.3
VRI pmax pmax
comp=Z,30nm,0.7s
PLOR Plostina 21.00 296 ⇑P P 01 16 04.6 +0.7
PLOR Plostina 21.00 296 P P 01 16 04.5 +0.7
TESR Tescani 21.09 297 ⇑P P 01 16 05.5 +0.8
SULR 21.18 292 ⇑P P 01 16 07.4 +1.8
MAKZ Makanchi 21.30 62 ⇓Pn P 01 16 08.4 +1.4
comp=Z,28nm,0.9s
MAKZ Makanchi 21.30 62 P P 01 16 08.0 +1.0
MAKZ IAmb IAmb 01 16 09.9
comp=Z,28nm,0.9s
MAKZ Makanchi 21.30 62 i P P 01 16 08.1 +1.1
MAKZ pmax pmax
comp=Z,28nm,0.9s
ELND Elena 21.42 287 ⇑P P 01 16 10.7 +2.4
MLR Muntele Rosu 21.46 294 P P 01 16 10.1 +1.2
comp=Z,20nm,0.8s,baz=341,slow=2.1,SNR=15
MLR Muntele Rosu 21.46 294 ⇑P P 01 16 10.0 +1.2
MLR Muntele Rosu 21.46 294 P P 01 16 09.4 +0.6
MLR IAmb IAmb 01 16 14.6
comp=Z,30nm,0.9s
MLR Muntele Rosu 21.46 294 P P 01 16 09.4 +0.6
MLR pmax pmax
comp=Z,30nm,0.9s
MK31 Makanchi Array 21.51 62 ⇑Pn P 01 16 10.7 +1.5
comp=Z,46nm,1.0s,baz=251,slow=8.3,SNR=225
MK31 Makanchi Array 21.51 62 IAmb IAmb 01 16 12.8
comp=Z,28nm,0.9s
MK31 Makanchi Array 21.51 62 i P P 01 16 11.1 +1.8
MKAR Makanchi Array 21.51 62 P P 01 16 11.1 +1.9
comp=Z,26nm,0.9s,baz=252,slow=9.6,SNR=168
MKAR LR LR 01 25 31.0
comp=Z,306nm,18.4s,baz=252,slow=39
MKAR Makanchi Array 21.51 62 P P 01 16 10.5 +1.3
MKAR Makanchi Array 21.51 62 P P 01 16 10.5 +1.3
PRAR RASCA 21.51 300 ⇑P P 01 16 09.8 +0.6
KMPD K-Podol'skiy 21.61 303 P P 01 16 09.0 -1.2
OZUR 21.63 296 ⇓P P 01 16 12.8 +2.2
KARP Karpathos 21.78 267 P P 01 16 12.2 0.0
SHAO Shalim 21.79 176 i P P 01 16 12.0 -0.4
SNR=6.8
DOPR Dopca 21.89 296 ⇑P P 01 16 14.9 +1.6
VOIR 22.08 294 ⇑P P 01 16 16.9 +1.5
VOIR 22.08 294 P P 01 16 17.3 +1.9
VOIR pmax pmax
comp=Z,26nm,1.0s
BURAR Bucovina Array 22.23 300 ⇓P P 01 16 18.6 +1.5
BURAR Bucovina Array 22.23 300 P P 01 16 17.2 +0.1
BURAR Bucovina Array 22.23 300 P P 01 16 18.5 +1.5
PLVB Pleven 22.33 289 ⇓P P 01 16 20.1 +2.0
ARR Arges 22.37 294 ⇑P P 01 16 20.5 +2.0
PRGR Permogore 22.43 349 eP P 01 16 18.3 -0.6
PRGR eS S 01 20 21.7 -1.4
PRGR pmax pmax
comp=Z,45nm,0.8s
ARCR ARCALIA 22.73 298 ⇑P P 01 16 25.4 +3.1
KLMR Klimovskoe 22.91 341 eP P 01 16 21.7 -2.2
KLMR eP P 01 16 21.7 -2.2
KLMR eP P 01 16 21.7 -2.2
KLMR AMP 01 16 29.7
comp=Z,181nm,0.8s
KLMR eS S 01 20 33.5 +2.1
KLMR eS S 01 20 33.5 +2.1
KLMR LQ LQ 01 25 11.2
KLMR LQ LQ 01 25 11.2
KLMR LR LR 01 25 21.9
KLMR AMP 01 27 27.7
comp=Z,396nm,10.6s
KLMR Klimovskoe 22.91 341 eP P 01 16 21.6 -2.3
KLMR eS S 01 20 33.5 +2.1
KLMR pmax pmax
comp=Z,181nm,0.8s
KLMR MLR MLR
comp=Z,396nm,11.0s
MICGM Minsk 22.93 318 eP P 01 16 23.0 -1.3
MICGM ePP sP 01 16 37.0 -0.1
MICGM ePPP PPP 01 16 47.0
MICGM eS S 01 20 30.0 -2.0
MICGM eSS Sn 01 20 49.0 +0.1
MICGM eSSS SSS 01 21 12.0
MNK Minsk 22.93 318 eP P 01 16 23.0 -1.3
MNK eS S 01 20 30.0 -2.0
MNK eSSS SSS 01 21 12.0
SRS Serrai 23.25 283 P P 01 16 30.9 +3.2
SRS pmax pmax
comp=Z,15nm,1.0s
VTS Vitosha 23.38 287 ⇓P P 01 16 32.1 +3.0
VTS Vitosha 23.38 287 IAmb IAmb 01 16 41.9
comp=Z,35nm,2.0s
VTS Vitosha 23.38 287 P P 01 16 33.2 +4.1
VTS pmax pmax
comp=Z,7.0nm,1.2s
BMR Baia Mare 23.39 300 ⇓P P 01 16 31.1 +2.2
BMR Baia Mare 23.39 300 P P 01 16 31.2 +2.2
BMR pmax pmax
comp=Z,121nm,0.9s
LVV L'vov 23.45 305 eP P 01 16 28.3 -1.2
LVV e 01 17 03.9
LVV eS S 01 20 35.2 -5.5
LVV pmax pmax
comp=Z,50nm,1.2s
LVV MLR MLR
comp=N,500nm,11.0s
LVV MLR MLR
comp=Z,300nm,10.0s
DEV Deva 23.61 295 P P 01 16 34.4 +3.3
DEV pmax pmax
comp=Z,22nm,1.0s
IDI Anoyia 23.61 268 P P 01 16 30.5 -0.8
comp=Z,4.3nm,0.6s,baz=126,slow=8.3,SNR=13
GZR Gura Zlata 23.68 294 ⇑P P 01 16 34.1 +2.2
NACGM Naroch 23.69 319 eP P 01 16 31.0 -0.7
NACGM eS S 01 20 52.0 +7.7

KNT Kendrikon 23.77 283 P P 01 16 34.6 +1.9
KNT pmax pmax
comp=Z,3.0nm,1.0s
DRGR 23.82 297 ⇑P P 01 16 35.0 +1.9
DRGR 23.82 297 P P 01 16 34.9 +1.7
DRGR pmax pmax
comp=Z,35nm,0.9s
TRPA Tarpa 24.09 301 ⇓P P 01 16 37.7 +2.1
IIGN Ignalina 24.18 319 eP P 01 16 36.6 +0.3
IIGN IAmb IAmb 01 16 46.5
comp=Z,13nm,0.6s
KWP Kalwaria Pacla 24.25 304 eP P 01 16 39.8 +2.8
KWP Kalwaria Pacla 24.25 304 eP P 01 16 39.8 +2.8
UZH Uzhgorod 24.33 302 eP P 01 16 39.2 +1.4
UZH i 01 16 45.2
ISAL Salakas 24.34 320 eP P 01 16 38.5 +0.7
IZAR Zarasai 24.36 320 eP P 01 16 38.5 +0.5
IZAR IAmb IAmb 01 16 47.6
comp=Z,9.9nm,0.7s
KOLS Kolonicke sedl 24.40 302 eP P 01 16 39.6 +1.2
KOLS e 01 16 48.6
KOLS Kolonicke sedl 24.40 302 eP P 01 16 39.6 +1.2
KOLS e 01 16 48.6
BZS Buzias 24.50 294 ⇑P P 01 16 43.2 +3.8
BZS Buzias 24.50 294 P P 01 16 43.3 +3.9
BZS pmax pmax
comp=Z,13nm,1.2s
AGG Agios Georgios 24.56 278 P P 01 16 39.9 -0.1
AGG IAmb IAmb 01 17 06.5
comp=Z,14nm,1.1s
AGG Agios Georgios 24.56 278 P P 01 16 39.9 -0.1
AGG pmax pmax
comp=Z,14nm,1.1s
CRVS Cervenica-Dubn 24.92 302 eP P 01 16 44.6 +1.4
CRVS Cervenica-Dubn 24.92 302 eP P 01 16 44.5 +1.4
PUL Pulkovo 24.94 331⇓eP P 01 16 46.0 +2.8
PUL pmax pmax
comp=Z,81nm,0.7s
FNA Florina 24.96 283 IAmb IAmb 01 16 58.2
comp=Z,20nm,1.1s
FNA Florina 24.96 283 P P 01 16 47.5 +3.8
FNA pmax pmax
comp=Z,20nm,1.0s
ZAA0 Zalesovo Array 24.99 45 ⇑P P 01 16 44.6 +1.0
comp=Z,4.2nm,1.1s
ZAA0 Zalesovo Array 24.99 45 IAmb IAmb 01 16 46.6
comp=Z,30nm,1.1s
ZALV Zalesovo Beam 24.99 45 P P 01 16 44.7 +1.0
comp=Z,19nm,0.7s,baz=256,slow=11,SNR=81
ZALV LR LR 01 27 55.1
comp=Z,327nm,18.3s,baz=242,slow=39
WMQ Urumqi 25.17 70 eP P 01 16 47.2 +1.6
WMQ pmax pmax
comp=Z,32nm,0.9s
WMQ pmax pmax
comp=Z,160nm,6.7s
WMQ LR LR
comp=Z,240nm,10.9s
WMQ LR LR
comp=Z,270nm,11.9s
WMQ LR LR
comp=Z,230nm,21.5s
SUW Suwalki 25.22 314 eP P 01 16 46.4 +0.6
SUW Suwalki 25.22 314 eP P 01 16 46.4 +0.6
PABE Paberze 25.40 318 eP P 01 16 47.4 0.0
VSU Vasula 25.57 326 eP P 01 16 49.4 +0.5
VSU IAmb IAmb 01 16 51.5
comp=Z,166nm,0.8s
VSU Vasula 25.57 326deP P 01 16 50.4 +1.5
NIE Niedzica 25.75 303 eP P 01 16 52.0 +1.3
NIE Niedzica 25.75 303 eP P 01 16 52.0 +1.3
PSZ Piszkesteto 25.83 300 P P 01 16 52.2 +0.7
PSZ Piszkesteto 25.83 300 P P 01 16 52.2 +0.7
PSZ pmax pmax
comp=Z,11nm,1.0s
IGT Igoumenitsa 25.97 280 P P 01 16 56.2 +3.4
IGT pmax pmax
comp=Z,28nm,0.8s
TMCR Tamitsa 26.14 344 eP P 01 16 55.0 +1.0
TMCR eS S 01 21 31.7 +8.5
TMCR pmax pmax
comp=Z,51nm,0.6s
OJC Ojcow 26.20 305 eP P 01 16 54.8 0.0
OJC Ojcow 26.20 305 IAmb IAmb 01 17 10.0
comp=Z,17nm,0.8s
OJC Ojcow 26.20 305 eP P 01 16 54.8 0.0
VYHS Vyhne 26.59 301 eP P 01 16 59.3 +1.0
VYHS Vyhne 26.59 301 eP P 01 16 59.3 +1.0
VYHS e 01 17 13.6
DAMY Dhamar 26.61 202 P P 01 16 59.0 0.0
DAMY IAmb IAmb 01 17 00.9
comp=Z,13nm,0.7s
PBUR Paburge 26.66 318 eP P 01 16 59.3 +0.5
OKC Ostrava-Krasne 27.20 304 eP P 01 17 10.4 +6.7
OKC Ostrava-Krasne 27.20 304 eP P 01 17 10.4 +6.7
MORC Moravsky Berou 27.58 303 eP P 01 17 07.9 +0.7
MORC Moravsky Berou 27.58 303 ⇓P P 01 17 09.1 +2.0
MORC Moravsky Berou 27.58 303 P P 01 17 11.1 +3.9
MORC pmax pmax
comp=Z,10.0nm,2.0s
FINES FINESS Array B 27.62 331 P P 01 17 08.0 +0.6
comp=Z,6.2nm,0.7s,baz=137,slow=10,SNR=18
FINES LR LR 01 29 33.2
comp=Z,218nm,18.8s,baz=131,slow=39
FINES FINESS Array B 27.62 331 P P 01 17 07.9 +0.6
FINES FINESS Array B 27.62 331 P P 01 17 07.9 +0.6
KRLC Kraliky 28.10 304 eP P 01 17 12.1 +0.2
KRLC Kraliky 28.10 304 eP P 01 17 12.1 +0.2
VRAC Vranov 28.14 302 LR LR 01 30 03.0
comp=Z,94nm,20.4s,baz=72,slow=40
DPC Dobruska-Polom 28.43 304 eP P 01 17 23.6 +8.8
DPC Dobruska-Polom 28.43 304 eP P 01 17 23.6 +8.8
ATD Arta Tunnel 29.95 203 LR LR 01 31 47.9
comp=Z,82nm,19.7s,baz=20,slow=41
BRG Berggiesshubel 29.99 305 eP P 01 17 29.3 +0.7
BRG e 01 17 38.4
BRG pmax pmax
comp=Z,14nm,1.4s
GERES GERESS Array B 30.01 301 P P 01 17 29.0 +0.1
comp=Z,0.7nm,0.6s,baz=90,slow=9.3,SNR=5.8
GERES LR LR 01 31 01.3
comp=Z,78nm,20.1s,baz=100,slow=39
GERES GERESS Array B 30.01 301 P P 01 17 29.5 +0.6
GERES GERESS Array B 30.01 301 P P 01 17 29.0 +0.1
KHC Kasperske Hory 30.10 302 eP P 01 17 30.5 +0.9
KHC ex x 01 17 38.4
KHC Kasperske Hory 30.10 302⇓eP P 01 17 30.1 +0.5
KHC pmax pmax
comp=Z,5.0nm,1.0s
CLL Collm 30.63 306 e(sP) sP 01 17 41.0 -6.3
CLL e 01 17 43.0
CLL ePPPP 01 18 49.0
CLL Lm MLR 01 31 00.0
comp=Z,100nm,19.5s
CLL Collm 30.63 306 eP P 01 17 41.0 +6.9
MOX Moxa 31.45 304 P P 01 17 45.3 +3.9
HFS Hagfors 32.27 322 P P 01 17 48.9 +0.4
comp=Z,4.7nm,0.8s,baz=118,slow=7.6,SNR=9.1
ARCES ARCESS Array B 33.38 342 P P 01 17 59.3 +1.1
comp=Z,2.5nm,0.6s,baz=135,slow=7.3,SNR=16
ARCES LR LR 01 33 24.9
comp=Z,199nm,20.7s,baz=154,slow=40
NC405 NORSAR Array S 33.52 324 P P 01 17 59.5 +0.1
NB2 NORSAR Subarra 33.73 323 P P 01 18 00.8 -0.5
comp=Z,9.8nm,1.1s,baz=109,slow=9.3
NOA NORSAR Array B 33.73 323 P P 01 18 01.1 -0.2
comp=Z,5.7nm,0.9s,baz=111,slow=8.6,SNR=14
NOA LR LR 01 33 07.3
comp=Z,258nm,18.6s,baz=105,slow=39
SHL Shillong 34.50 103 P P 01 18 08.8 +0.3
SHL IAmb IAmb 01 18 22.3
comp=Z,8.5nm,0.8s
SHL Shillong 34.50 103 P P 01 18 08.8 +0.3
SHL pmax pmax
comp=Z,8.0nm,0.8s
GTA Gaotai 34.84 76 P P 01 18 13.8 +2.5
GTA pP pP 01 18 18.7 -2.1
GTA sP sP 01 18 21.0 -3.6
GTA PcP PcP 01 20 48.4 +4.5
GTA pmax pmax
comp=Z,3.0nm,0.8s
GTA pmax pmax
comp=Z,73nm,5.2s
GTA LR LR
comp=Z,94nm,15.1s
GTA LR LR
comp=Z,110nm,14.1s
GTA LR LR
comp=Z,160nm,15.5s
SONM Songino Array 37.86 60 P P 01 18 38.5 +1.6
comp=Z,1.0nm,0.7s,baz=269,slow=10.0,SNR=6.6
SONM LR LR 01 35 38.3
comp=Z,109nm,19.2s,baz=336,slow=38
SONM Songino Array 37.86 60 P P 01 18 39.3 +2.4
ULN Ulaanbaatar 38.29 60 P P 01 18 41.9 +1.2
ULN pP pP 01 18 42.2 -7.9
ULN IAmb IAmb 01 18 44.1
comp=Z,28nm,1.6s
ULN Ulaanbaatar 38.29 60 P P 01 18 42.8 +2.2
ULN pmax pmax
comp=Z,28nm,1.6s
LZH Lanzhou 38.92 79 eP P 01 18 46.0 -0.1
LZH sP pP 01 18 56.0 +0.4
LZH PP PnPn 01 20 22.2 +4.3
LZH pmax pmax
comp=Z,15nm,1.4s
LZH pmax pmax
comp=Z,58nm,4.9s
LZH LR LR
comp=Z,210nm,15.7s
LZH LR LR
comp=Z,280nm,15.4s
LZH LR LR
comp=Z,350nm,16.4s
EKA Eskdalemuir Ar 40.44 312 P P 01 18 58.3 +0.1
comp=Z,3.2nm,0.5s,baz=97,slow=8.5,SNR=12
SPA0 Spitsbergen Ar 41.41 349 P P 01 19 06.8 +0.8
SPITS Spitsbergen Ar 41.41 349 P P 01 19 07.8 +1.8
comp=Z,21nm,0.8s,baz=149,slow=14,SNR=18
BOD Bodaibo 41.73 44 eP P 01 19 09.9 +1.1
BOD pmax pmax
comp=Z,10.0nm,0.8s
KMI Kunming 42.99 95 P P 01 19 27.2 +7.4
HHC Hu-ho-hao-te 43.05 69 eP P 01 19 20.9 +1.0
HHC pmax pmax
comp=Z,3.0nm,1.0s
HHC pmax pmax
comp=Z,36nm,4.6s
XAN Xi'an 43.55 80 P P 01 19 25.6 +1.6
XAN pP pP 01 19 34.0 +0.4
XAN pmax pmax
comp=Z,5.0nm,1.0s
XAN pmax pmax
comp=Z,140nm,4.7s
ESDC Sonseca Array 44.00 289 P P 01 19 27.0 -0.5
comp=Z,1.7nm,0.6s,baz=68,slow=7.9,SNR=9.7
ESDC Sonseca Array 44.00 289 P P 01 19 27.3 -0.2
DAG Danmarks Havn 47.67 343 i P P 01 19 57.0 +1.1
comp=Z,4.6nm,0.6s
DAG Danmarks Havn 47.67 343 i P P 01 19 57.0 +1.1
DAG pmax pmax
comp=Z,5.0nm,0.6s
TIXI Tiksi 47.94 24 P P 01 19 59.3 +1.3
comp=Z,2.6nm,0.6s,baz=285,slow=6.4,SNR=5.2
TIXI Tiksi 47.94 24 P P 01 19 58.7 +0.7
NOR Nord 48.05 349 i P P 01 19 59.9 +1.1
comp=Z,3.6nm,0.8s
NOR Nord 48.05 349 i P P 01 19 59.9 +1.1
NOR pmax pmax
comp=Z,4.0nm,0.8s
YAK Yakutsk 49.17 37⇓eP P 01 20 09.0 +1.4
YAK pmax pmax
comp=Z,5.0nm,0.8s
NJ2 Nanjing 51.91 77 eP P 01 20 28.5 -0.3
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
TORD Torodi Ar. Bea 53.07 255 P P 01 20 36.4 -1.2
comp=Z,0.9nm,0.5s,baz=40,slow=6.7,SNR=23
TORD LR LR 01 49 13.0
comp=Z,34nm,18.5s,baz=350,slow=43
TORD Torodi Ar. Bea 53.07 255 P P 01 20 36.6 -0.9
SUMG Summit 53.28 338 i P P 01 20 41.0 +2.2
SUMG Summit 53.28 338 i P P 01 20 41.0 +2.2
KLR Kul'dur 53.79 53⇓eP P 01 20 44.0 +1.6
KLR pmax pmax
comp=Z,4.0nm,0.9s
USA0B Ussuriysk Arra 55.91 58 P P 01 20 58.1 +0.3
USA0B IAmb IAmb 01 21 00.1
comp=Z,6.5nm,0.8s
USA0B Ussuriysk Arra 55.91 58⇑eP P 01 20 58.3 +0.5
USRK Ussuriysk Ar. 55.91 58 P P 01 20 58.4 +0.6
comp=Z,5.5nm,0.7s,baz=287,slow=6.5,SNR=19
USRK LR LR 01 46 54.0
comp=Z,212nm,18.8s,baz=297,slow=38
USRK Ussuriysk Ar. 55.91 58 P P 01 20 58.3 +0.5
USRK Ussuriysk Ar. 55.91 58 P P 01 20 58.3 +0.5
KSAR Wonju Array Be 56.05 67 P P 01 20 60.0 +1.1
KSAR Wonju Array Be 56.05 67 P P 01 21 00.0 +1.1
KSRS Korea Array 56.07 67 P P 01 20 60.0 +0.9
comp=Z,4.6nm,0.7s,baz=286,slow=6.1,SNR=11
KSRS LR LR 01 49 23.9
comp=Z,45nm,19.1s,baz=304,slow=41
KSRS Korea Array 56.07 67 P P 01 21 00.0 +0.9
BILL Bilibino 61.15 23 P P 01 21 35.0 +1.2
BILL IAmb IAmb 01 21 37.1
comp=Z,4.1nm,0.7s
BILL Bilibino 61.15 23⇓iP P 01 21 35.7 +1.8
BILL e*PP pP 01 21 41.3 -2.5
BILL e*SP sP 01 21 43.8 -3.9
BILL 01 22 20.0
BILL 01 23 57.0
BILL eS S 01 29 51.5 +0.8
BILL pmax pmax
comp=Z,4.0nm,0.7s
BILL MLR MLR
comp=Z,198nm,17.0s
DBIC Dimbokro 62.17 254 P P 01 21 40.8 -0.7
comp=Z,2.7nm,0.7s,baz=28,slow=9.5,SNR=6.5
DBIC LR LR 01 53 50.6
comp=Z,45nm,18.1s,baz=40,slow=41
KIC Kosan Boka 62.28 254 eP P 01 21 41.6 -0.7
comp=Z,2.5nm,0.7s
TIC Toumodi 62.30 255 eP P 01 21 41.6 -0.9
LIC Lamto 62.59 254 eP P 01 21 43.5 -0.8
comp=Z,2.3nm,0.3s
MJAR Matsushiro Arr 63.70 63 LR LR 01 51 46.3
comp=Z,84nm,18.4s,baz=315,slow=38
RES Resolute Bay 63.91 351 P P 01 21 54.5 +2.3
comp=Z,1.6nm,0.9s,baz=14,slow=8.3,SNR=5.7
RES Resolute Bay 63.91 351 P P 01 21 53.5 +1.3
RES Resolute Bay 63.91 351 P P 01 21 53.5 +1.3
RES pmax pmax
comp=Z,3.0nm,1.1s
PETK Petropavlovsk- 66.37 40 LR LR 01 53 31.3
comp=Z,82nm,18.4s,baz=243,slow=38
LBTB Lobatse 69.83 208 P P 01 22 31.1 +0.5
LBTB Lobatse 69.83 208 P P 01 22 31.1 +0.5
LBTB pmax pmax
comp=Z,13nm,0.8s
C36M Paulatuk 71.11 359 P P 01 22 38.6 +0.9
C36M IAmb IAmb 01 22 38.8
comp=Z,9.2nm,1.0s
COLD Coldfoot 71.64 10 IAmb IAmb 01 22 44.3
comp=Z,6.3nm,0.9s
INK Inuvik 72.00 3 P P 01 22 43.9 +0.7
comp=Z,4.3nm,1.1s,baz=19,slow=9.6,SNR=9.8
INK Inuvik 72.00 3 IAmb IAmb 01 22 46.3
comp=Z,5.8nm,1.1s
BMAR Burnt Mountain 72.09 8 P P 01 22 45.7 +1.9
IMAR Indian Mountai 72.30 12 P P 01 22 46.1 +1.1
SCHQ Schefferville 73.08 329 P P 01 22 50.2 +0.3
comp=Z,3.3nm,0.8s,baz=52,slow=8.4,SNR=4.6
BOSA Boshof 73.25 206 P P 01 22 50.7 -0.5
comp=Z,3.0nm,1.0s,baz=37,slow=10,SNR=2.6
BOSA LR LR 01 56 15.3
comp=Z,59nm,19.6s,baz=26,slow=37
MLY Manley 73.64 11 IAmb IAmb 01 22 55.8
comp=Z,12nm,1.0s
COLA College 74.18 10 P P 01 22 57.4 +1.3
COLA College 74.18 10 P P 01 22 57.4 +1.3
COLA pmax pmax
comp=Z,16nm,0.8s
IL31 74.40 9 IAmb IAmb 01 22 59.9
comp=Z,5.7nm,0.9s
ILAR Eielson Array 74.40 9 P P 01 22 58.2 +0.8
comp=Z,4.1nm,0.8s,baz=337,slow=4.6,SNR=36
ILAR LR LR 01 58 37.3
comp=Z,46nm,20.3s,baz=330,slow=38
BPAW Bear Paw Mtn. 74.48 11 IAmb IAmb 01 23 00.8
comp=Z,13nm,0.9s
HDA Harding Lake 74.74 9 IAmb IAmb 01 23 01.2
comp=Z,6.0nm,0.8s
EGAK Eagle 75.01 7 IAmb IAmb 01 23 03.6
comp=Z,9.0nm,0.9s
SCRK Sand Creek 75.51 8 IAmb IAmb 01 23 08.7
comp=Z,6.6nm,0.8s
DAWY Dawson 75.86 6 IAmb IAmb 01 23 08.9
comp=Z,9.0nm,0.9s
BCAR Beaver Creek A 76.63 7 P P 01 23 11.3 +1.0
YKA Yellowknife Ar 77.60 355 P P 01 23 16.1 +0.5
comp=Z,1.5nm,0.8s,baz=4.1,slow=6.1,SNR=16
YKA LR LR 02 01 22.4
comp=Z,52nm,21.8s,baz=0.0,slow=39
YKA Yellowknife Ar 77.60 355⇑eP P 01 23 16.2 +0.5
YKA pmax pmax
comp=Z,1.0nm,0.7s
HYT Haines Junctio 79.22 6 IAmb IAmb 01 23 28.0
comp=Z,13nm,1.0s
ULM Lac du Bonnet 86.50 341 LR LR 02 04 03.9
comp=Z,80nm,19.2s,baz=345,slow=36
PDAR Pinedale Array 96.45 348 LR LR 02 13 46.4
comp=Z,69nm,18.7s,baz=30,slow=39

MAN 08 01:15:42.7,12.°08N×123.°99E,h26km,mb4.2,ML3.0, MS2.6,1C-1D,Luzon

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CNP Catarman 0.78 57 eP Pb 01 15 57.5 -0.2
CNP eS Sn 01 16 09.7 +0.8
OCLP Ormoc 1.19 149 eP Pn 01 16 02.9 -0.7
OCLP eS Sn 01 16 18.5 -0.5
RCP Roxas 1.33 247⇑eP Pn 01 16 05.1 -0.4
RCP eS Sb 01 16 23.1 -0.5
LLP Lapu-Lapu 1.75 181⇓eP Pn 01 16 11.8 +0.4
LLP i S Sb 01 16 37.0 +1.2
OTRP Odiongan 1.95 278 eP Pn 01 16 14.5 +0.4
OTRP eS Sn 01 16 38.2 +0.5
GUIM Jordan 2.00 224 eP Pn 01 16 15.0 +0.3
GUIM eS Sn 01 16 37.7 -1.2
MSLP Maasin 2.11 156 eP Pn 01 16 18.0 +1.7
MSLP eS Sn 01 16 43.8 +2.1

IDC 08 01:28:21.5±1.4,66.°63S×107.°55E,h0km,mb3.9/3, mb1 4.1/4,mb1mx3.8/19,mbtmp3.9/4,ML4.1/1,MS3.4/3, Ms1 3.4/3,ms1mx3.1/15,Error ellipse: s-maj=63.4km s-min=24.5km az=114.0
NEIC 08 01:28:23.4±1.5,66.°8S±0.°2×108.°1E±0.°3,h15km±6km, mb4.4/5,Error ellipse: s-maj=28.7km s-min=10.9km az=148.0
ISC 08 01:28:22.6±1.1,66.°8S±0.°2×108.°0E±0.°1,h10km,n11, σ1§16/10,mb4.1/4,Antarctica

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CASY Casey 1.13 66 Pn Pb 01 28 43.7 -0.5
CASY Sn Sb 01 28 58.6 -0.3
MAW Mawson 17.23 246 P Pn 01 32 21.8 -1.1
0.6nm,0.3s,baz=123,slow=13,SNR=7.3
MAW LR LR 01 39 16.1
comp=Z,158nm,20.8s,baz=57,slow=38
MAW Mawson 17.23 246 IAmb IAmb 01 32 27.3
comp=Z,14nm,1.7s
VNDA Vanda 18.77 147 P P 01 32 40.8 -0.6
QSPA South Pole Qui 23.32 180 P P 01 33 31.9 +1.4
comp=Z,5.4nm,1.0s,baz=307,slow=5.0,SNR=9.3
QSPA LR LR 01 43 44.7
comp=Z,57nm,20.1s,baz=326,slow=39
QSPA South Pole Qui 23.32 180 P P 01 33 31.3 +0.7
QSPA IAmb IAmb 01 33 37.8
comp=Z,18nm,1.2s
ASAR Alice Springs 46.08 34 P P 01 36 46.8 +0.2
comp=Z,1.5nm,0.9s,baz=196,slow=6.6,SNR=3.9
AS31 Alice Springs 46.08 34 P P 01 36 48.8 +2.2
AS31 IAmb IAmb 01 38 00.4
comp=Z,6.5nm,1.9s
WRA Warramunga Arr 49.78 33 P P 01 37 15.1 -0.1
comp=Z,0.8nm,0.9s,baz=199,slow=7.2,SNR=8.5
LPAZ La Paz 97.14 184 LR LR 02 30 10.1
comp=Z,20nm,18.1s,baz=56,slow=38
PDAR Pinedale Array 148.50 121 PKPbc PKiKP 01 48 09.9 -0.4
comp=Z,0.3nm,0.6s,baz=197,slow=2.5,SNR=3.4

WEL 08 02:19:25.9,38.°S±3.°×17.°6E±.°,h217km±9km,M2.7/57, MLv2.7/57,Error ellipse: s-maj=0.0km s-min=0.0km az=102.2,North Island

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NGRZ Ngongotaha 0.06 66 P Pn 02 19 54.0 -0.2
KARZ Kaharoa 0.15 44 P Pn 02 19 53.9 -0.3
OMRZ Omania 0.20 84 P Pn 02 19 54.0 -0.3
HSRZ Hossack Road 0.21 151 P Pn 02 19 54.3 +0.1
GRRZ Galatos Road 0.22 181 P Pn 02 19 54.4 +0.1
HLRZ Highlands Stat 0.23 124 P Pn 02 19 54.7 +0.4
LIRZ Lichensteins R 0.25 60 P Pn 02 19 54.1 -0.2
HRRZ Handcock Road 0.29 153 P Pn 02 19 53.7 -0.7
KMRZ Kaimai 0.31 334 P Pn 02 19 54.3 -0.2
TARZ Mount Tarawera 0.33 109 P Pn 02 19 54.5 0.0
RRRZ Republican Roa 0.38 124 P Pn 02 19 54.2 -0.3
WPRZ Whakapapatarin 0.39 175 P Pn 02 19 53.8 -0.8
TGRZ Tauranga 0.41 16 P Pn 02 19 54.2 -0.5
OPRZ Ohinepanea 0.45 51 P Pn 02 19 54.2 -0.6
MARZ Manawahe 0.46 72 P Pn 02 19 54.5 -0.3
TLZ Tolley Road 0.50 246 P Pn 02 19 55.2 +0.3
MUGZ Murupara 0.62 124 P Pn 02 19 54.7 -0.6
TOZ Tahuroa Road 0.63 309 P Pn 02 19 55.5 +0.1
MRHZ Matea Rd 0.74 161 P Pn 02 19 55.7 -0.3
RATZ Rangitukua 0.79 200 P Pn 02 19 56.2 0.0
URZ Urewera 0.80 100 P Pn 02 19 55.4 -0.8
RTZ Ruatahuna 0.84 126 P Pn 02 19 56.1 -0.3
RITZ Rihia Road 0.87 193 P Pn 02 19 57.1 +0.5
KATZ Kakaramea 0.91 201 P Pn 02 19 57.1 +0.1
MTHZ Maungataniwha 0.92 142 P Pn 02 19 56.8 -0.1
KRVZ Karewarewa 1.03 201 P Pn 02 19 58.0 +0.3
HIZ Hauiti 1.06 248 P Pn 02 19 58.2 +0.5
WTVZ West Tongariro 1.07 202 P Pn 02 19 58.0 +0.1
BKZ Black Stump Fm 1.08 164 P Pn 02 19 57.9 0.0
TWVZ Taurewa 1.08 209 P Pn 02 19 58.1 +0.1
RAGZ Rawiri 1.09 170 P Pn 02 19 58.0 0.0
RAHZ Arahi 1.10 136 P Pn 02 19 58.5 +0.5
NMHZ Naumai 1.11 151 P Pn 02 19 59.0 +0.9
NGZ Ngauruhoe 1.12 201 P Pn 02 19 58.6 +0.3
MWZ Matawai 1.13 101 P Pn 02 19 57.9 -0.4
SNGZ Shannon Statio 1.16 125 P Pn 02 19 58.8 +0.4
TUVZ Tukino 1.19 197 P Pn 02 19 59.1 +0.3
RUGZ Raukumara Rang 1.24 83 P Pn 02 19 57.9 -1.3
MKAZ Moumakai 1.27 323 P Pn 02 19 59.6 +0.3
WHHZ Waihua 1.29 138 P Pn 02 19 60.0 +0.6
PKVZ Pokaka 1.31 207 P Pn 02 19 59.7 +0.2
MOVZ Moawhango 1.31 192 P Pn 02 19 59.4 -0.2
KWHZ Kaweka Forest 1.32 170 P Pn 02 20 00.1 +0.4
ARHZ Aropaoanui 1.33 149 P Pn 02 20 00.4 +0.8
MTVZ Mangateitei 1.35 202 P Pn 02 20 00.2 +0.3
BHHZ Black Hill Sta 1.36 182 P Pn 02 19 59.9 0.0
HAZ Te Kaha 1.37 75 P Pn 02 19 58.9 -1.0
MCHZ McNeill Hill 1.39 161 P Pn 02 20 01.1 +1.0
TKGZ Te Karaka 1.40 103 P Pn 02 20 00.5 +0.3
RIGZ Rimuhau 1.42 115 P Pn 02 20 00.8 +0.4
TWGZ Tauwhareparae 1.47 92 P Pn 02 20 01.4 +0.5
KNZ Kokohu 1.51 127 P Pn 02 20 00.7 -0.4
KRHZ Kereru 1.53 173 P Pn 02 20 01.7 +0.4
PKGZ Pakihiroa 1.57 82 P Pn 02 20 01.6 -0.1
PRGZ Paritu Road 1.60 120 P Pn 02 20 02.4 +0.5
CNGZ Carnagh Statio 1.68 103 P Pn 02 20 03.7 +1.0
PUZ Puketiti 1.69 89 P Pn 02 20 03.0 +0.2
CKHZ Cape Kidnapper 1.70 154 P Pn 02 20 03.7 +0.9
KAHZ Kahuranaki 1.77 161 P Pn 02 20 04.2 +0.8
PNHZ Pukenui 1.79 178 P Pn 02 20 03.8 +0.2
MXZ Matakaoa Point 1.82 73 P Pn 02 20 04.3 +0.4
WMGZ Waiomatatini S 1.84 81 P Pn 02 20 04.1 0.0
TSZ Takapari Road 1.93 184 P Pn 02 20 05.2 +0.2
WPHZ Waipukurau 1.95 173 P Pn 02 20 05.6 +0.5
PXZ Pawanui 1.99 163 P Pn 02 20 06.0 +0.6
OHWZ Ohakea 2.17 196 P Pn 02 20 13.8 +6.5
DVHZ Dannevirke 2.17 179 P Pn 02 20 07.3 0.0
PRHZ Porangahau 2.17 169 P Pn 02 20 07.8 +0.4
POWZ Post Office Ro 2.28 187 P Pn 02 20 08.2 -0.2
POWZ Post Office Ro 2.28 187 P S 02 20 38.9 -2.6

ANWZ Angora Road 2.35 173 P Pn 02 20 09.5 +0.4
PRWZ Pori Road 2.43 183 P S 02 20 38.2 -6.1
BFZ Birch Farm 2.55 178 P Pn 02 20 11.2 -0.1
BFZ Birch Farm 2.55 178 P S 02 20 38.4 -8.4
MRZ Mangatainoka R 2.56 189 P Pn 02 20 11.2 -0.3
TIWZ Tintock 2.65 184 P Pn 02 20 12.5 +0.1
TIWZ Tintock 2.65 184 P S 02 20 40.4 -8.4
CPWZ Castlepoint 2.78 179 P S 02 20 46.1 -5.2
OGWZ Otaki Gorge 2.78 195 P Pn 02 20 13.6 -0.2
HOWZ Holdsworth Sta 2.81 189 P Pn 02 20 13.7 -0.5
HOWZ Holdsworth Sta 2.81 189 P S 02 20 48.1 -3.7
KIW Kapiti Island 2.88 198 P Pn 02 20 14.4 -0.6
TMWZ Te Maipa 2.98 183 P S 02 20 48.5 -6.9
MTW Mount Morrison 3.06 189 P S 02 20 47.1 -10
TRWZ Traveller 3.28 186 P S 02 20 54.4 -7.3
PAWZ Paruwai Farm 3.29 189 P S 02 20 56.3 -5.6
MSWZ Moikau Station 3.35 191 P S 02 20 55.4 -7.7
TCW Tory Channel 3.39 204 P S 02 21 00.9 -3.0
BHW Baring Head 3.41 196 P S 02 20 56.3 -8.0
TUWZ Tuamarina 3.70 206 P S 02 21 06.9 -3.6
NNZ Nelson 3.74 214 P S 02 21 08.7 -2.6

NEIC 08 02:26:50.7±2.1, 22°.45S±0°.06×67°.40W±0°.04, h166km±8km, mb4.5/6, Error ellipse: s-maj=9.4km s-min=4.8km az=195.0
SJA 08 02:26:50.4±0.9, 22°.43S×67°.53W, h186km±7km, ML3.7, MW3.7
VAO 08 02:26:51.2±0.8, 22°.58S×67°.76W, h208km±18km, mb4.1
IDC 08 02:26:51.3±0.7, 22°.41S×67°.38W, h164km±8km, mb3.7/7, mb1 3.8/12, mb1mx3.7/24, mbtmp4.2/12, MS2.7/1, Ms1 2.7/1, ms1mx2.3/23, Error ellipse: s-maj=14.8km s-min=14.1km az=27.0
SCB 08 02:26:52.9±1.8, 22°.48S×67°.56W, h190km±14km, ML3.6/3, Error ellipse: s-maj=6.9km s-min=5.0km az=0.0
GUC 08 02:26:52.2±0.6, 22°.39S×67°.94W, h205km±7km, ML4.1
ISC 08 02:26:51.1±0.6, 22°.51S±0°.04×67°.52W±0°.03, h174km±6km, n100, σ1s.40/141, mb4.2/8, 10C-1D, Chile-Bolivia border region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
LVC Limon Verde 1.29 265 ⇓iP Pn 02 27 22.2 +1.2
LVC iS Sn 02 27 44.9 +1.0
LVC Limon Verde 1.29 265 P Pn 02 27 22.2 +1.2
231nm,0.3s,baz=70,slow=6.2,SNR=1867
LVC S Sn 02 27 44.7 +0.7
122nm,0.3s,baz=222,slow=17,SNR=35
LVC Limon Verde 1.29 265 eP Pn 02 27 22.2 +1.2
LVC Limon Verde 1.29 265 iP Pn 02 27 22.2 +1.2
LVC eS Sn 02 27 45.0 +1.0
PB09 IPOC Station P 1.74 294⇑iP Pn 02 27 26.5 +1.2
PB09 iS Sn 02 27 52.2 +0.6
PB09 IAML 02 27 55.7
comp=N,644nm,0.3s
PB09 IPOC Station P 1.74 294 iP Pn 02 27 26.5 +1.2
PB09 eS Sn 02 27 52.5 +1.0
PB09 IAML 02 27 53.3
comp=Z,828nm,0.5s
YJA Yavi 1.89 80 P Pn 02 27 28.0 +0.9
YJA Yavi 1.89 80 eP Pn 02 27 27.9 +0.9
YJA IAML 02 27 29.0
comp=Z,252nm,0.5s
YJA eS Sn 02 27 51.7 -3.0
PB06 IPOC Station P 1.90 264⇑iP Pn 02 27 27.7 +0.8
PB06 iS Sn 02 27 55.5 +1.0
PB06 IAML 02 27 59.9
comp=E,813nm,0.4s
PB06 IPOC Station P 1.90 264 P Pn 02 27 27.7 +0.8
PB06 IPOC Station P 1.90 264 iP Pn 02 27 27.8 +0.8
PB06 eS Sn 02 27 56.3 +1.8
PB06 IAML 02 27 59.9
comp=Z,430nm,0.1s
PB15 IPOC Station P 1.93 248⇑eP Pn 02 27 28.6 +1.4
PB15 S Sn 02 27 56.6 +1.5
PB15 IPOC Station P 1.93 248 iP Pn 02 27 28.7 +1.4
PB15 eS Sn 02 27 56.4 +1.3
HJA Humahuaca 2.07 110 iP Pn 02 27 30.8 +1.8
PB03 IPOC Station P 2.12 282⇑iP Pn 02 27 29.8 +0.5
PB03 iS Sn 02 27 58.1 -0.6
PB03 IAML 02 27 59.7
comp=E,2µm,0.3s
PB03 IPOC Station P 2.12 282 eP Pn 02 27 29.8 +0.5
PB03 eS Sn 02 27 58.1 -0.6
MOCB Mochara 2.15 55 P Pn 02 27 30.5 +0.5
MOCB S Sn 02 27 59.5 -0.5
PB07 IPOC Station P 2.33 289⇑iP Pn 02 27 32.0 +0.4
PB07 iS Sn 02 28 01.6 -1.4
PB07 IAML 02 28 03.6
comp=N,1µm,0.2s
PB07 IPOC Station P 2.33 289 eP Pn 02 27 32.1 +0.5
PB07 eS Sn 02 28 02.1 -0.9
PB01 IPOC Station P 2.34 308⇑iP Pn 02 27 31.9 +0.3
PB01 iS Sn 02 28 02.1 -1.0
PB01 IAML 02 28 03.5
comp=N,1µm,0.1s
PB01 IPOC Station P 2.34 308 P Pn 02 27 32.0 +0.3
PB01 S Sn 02 28 01.8 -1.3
PB01 AML AML 02 28 03.6
comp=N,247nm,0.3s
PB01 IPOC Station P 2.34 308 Pn 02 27 32.0 +0.3
PB01 Sn Sn 02 28 02.2 -0.9
PB04 IPOC Station P 2.44 274⇑iP Pn 02 27 33.4 +0.5
PB04 iS Sn 02 28 04.0 -1.2
PB04 IAML 02 28 06.5
comp=N,1µm,0.6s
PB04 IPOC Station P 2.44 274 P Pn 02 27 33.4 +0.5
PB04 IPOC Station P 2.44 274 Pn 02 27 33.4 +0.5
PB04 IPOC Station P 2.44 274 eP Pn 02 27 33.5 +0.5
PB04 IAML 02 27 34.3
comp=Z,842nm,0.4s
PB04 eS Sn 02 28 05.5 +0.2
PB05 IPOC Station P 2.50 262⇑eP Pn 02 27 34.2 +0.6
PB05 iS Sn 02 28 05.6 -0.9
PB05 IAML 02 28 07.8
comp=E,452nm,0.6s
PB05 IPOC Station P 2.50 262 iP Pn 02 27 34.3 +0.6
PB05 eS Sn 02 28 06.2 -0.3
PB02 IPOC Station P 2.50 298 P Pn 02 27 33.7 +0.1
PB02 S Sn 02 28 04.8 -1.8
PB02 AML AML 02 28 06.1
comp=E,185nm,0.4s
PB02 IPOC Station P 2.50 298 eP Pn 02 27 33.8 +0.1
PB02 eS Sn 02 28 05.5 -1.1
PB08 IPOC Station P 2.80 327⇑iP Pn 02 27 38.4 +0.8
PB08 iS Sn 02 28 13.4 -0.1
PB08 IAML 02 28 16.3
comp=N,529nm,0.3s
PB08 IPOC Station P 2.80 327 P Pn 02 27 38.3 +0.8
PB08 IPOC Station P 2.80 327 eP Pn 02 27 38.3 +0.8
PB08 eS Sn 02 28 13.4 -0.1
AZAP Zapla 2.83 128 iP Pn 02 27 39.0 +1.3
AZAP eS Sn 02 28 13.4 -0.5
SLA San Lorenzo 2.88 140 P Pn 02 27 40.4 +2.3
SLA San Lorenzo 2.88 140 iP Pn 02 27 40.5 +2.3
SLA IAML 02 27 41.1
comp=Z,21nm,0.6s
PATCX Punta Patache 2.97 304 eP Pn 02 27 38.8 -0.4
PATCX eS Sn 02 28 14.7 -1.9
PB10 IPOC Station P 2.97 250 P Pn 02 27 39.6 +0.5
PB10 IPOC Station P 2.97 250 Pn 02 27 39.1 +0.1
PB10 IPOC Station P 2.97 250 iP Pn 02 27 39.7 +0.7
PB10 eS Sn 02 28 16.2 -0.2
PB10 IAML 02 28 20.1
comp=Z,192nm,0.6s
GO01 Chusmiza 3.23 331 Pn 02 27 43.1 +0.3
GO02 Mina Guanaco 3.25 215 Pn 02 27 44.0 +1.2
GO02 Sn Sn 02 28 23.8 +0.5
PB14 IPOC Station P 3.38 231⇑iP Pn 02 27 45.2 +0.7
PB14 iS Sn 02 28 25.5 -0.6
PB14 IAML 02 28 27.1
comp=E,276nm,0.7s
PB14 IPOC Station P 3.38 231 eP Pn 02 27 45.4 +0.9
PB14 eS Sn 02 28 25.6 -0.6
PB11 IPOC Station P 3.38 324 P Pn 02 27 43.6 -0.6
PB11 IPOC Station P 3.38 324 Pn 02 27 43.6 -0.9
PB11 IPOC Station P 3.38 324 eP Pn 02 27 43.6 -0.6
PB11 eS Sn 02 28 23.7 -2.2
PSGCX Pisagua 3.78 320 eP Pn 02 27 47.6 -1.7
PSGCX eS Sn 02 28 31.7 -3.2
PSGC Pisagua 3.78 320 P Pn 02 27 47.9 -1.5
PSGC S Sn 02 28 30.8 -4.0
PSGC AML AML 02 28 31.6
comp=E,60nm,0.3s
MNMC Minye Minye 3.88 330 P Pn 02 27 50.6 -0.2
MNMC Minye Minye 3.88 330 Pn 02 27 50.1 -0.7
MNMC Sn Sn 02 28 35.5 -2.0
MNMCX Minye Minye 3.88 330 eP Pn 02 27 50.6 -0.2
MNMCX eS Sn 02 28 35.3 -2.1
AHML Horco Molle 4.70 155 P Pn 02 28 03.1 +2.0
AHML Horco Molle 4.70 155⇑iP Pn 02 28 03.4 +2.3
BS08 Valle Grande 5.11 39 P Pn 02 28 07.3 +0.5
GO03 Copiap 5.63 205 Pn 02 28 12.6 -0.7
BBOE La Paz, Chanca 5.68 356 P Pn 02 28 16.0 +1.5
BBOD La Paz, Gloria 5.93 350 P Pn 02 28 18.9 +1.2
LPAZ La Paz 6.21 355 P Pn 02 28 22.1 +0.5
comp=E,2.0nm,0.3s,baz=152,slow=7.0,SNR=35
LPAZ S Sn 02 29 29.5 -3.0
comp=E,0.3nm,0.3s,baz=321,slow=19,SNR=2.4
LPAZ La Paz 6.21 355 eP Pn 02 28 21.9 +0.5
LPAZ La Paz 6.21 355 P Pn 02 28 21.7 +0.1
VCA Vinchina 6.23 186 iP Pn 02 28 22.8 +1.6
VCA IAML 02 28 26.1
comp=Z,11nm,0.2s
ACLC CERRO LA CRUZ 6.91 176 iP Pn 02 28 31.0 +0.8
AROD Rodeo 7.83 193 iP Pn 02 28 43.4 +0.9
AROD eS Sn 02 30 10.9 +0.6
APLL PUNTA DE LOS L 7.91 174 iP Pn 02 28 43.1 -0.2
APLL eS Sn 02 30 07.5 -4.3
ACCO Cerro Coronel 8.16 189 iP Pn 02 28 47.2 +0.3
ACCO eS Sn 02 30 15.3 -3.2
GO04 Tololo Observa 8.18 200 Pn Pn 02 28 45.4 -1.7
GO04 Tololo Observa 8.18 200 eP Pn 02 28 45.5 -1.6
RTLL Cerro Villicun 8.83 185 iP Pn 02 28 54.8 -0.6
SIV San Ignacio 8.89 44 P Pn 02 28 53.0 -3.4
comp=Z,14nm,0.3s,baz=243,slow=8.0,SNR=184
SIV S Sn 02 30 26.2 -9.5
comp=Z,7.1nm,0.3s,baz=304,slow=21,SNR=11
SIV San Ignacio 8.89 44 P Pn 02 28 56.9 +0.5
CFA Coronel Fontan 9.08 184 P Pn 02 28 58.6 -0.1
comp=Z,1.0nm,0.3s,baz=349,slow=16,SNR=11
CFA S Sn 02 30 35.1 -4.9
comp=Z,1.3nm,0.3s,baz=117,slow=22,SNR=6.2
CFA LR LR 02 33 09.1
comp=Z,42nm,18.7s,baz=65,slow=41
CPUP Villa Florida 10.04 114 P Pn 02 29 10.6 -0.7
comp=Z,0.1nm,0.3s,baz=293,slow=10,SNR=6.8
PEL Peldehue 10.96 194 Pn 02 29 22.4 -0.9
PEL Peldehue 10.96 194 iP Pn 02 29 22.7 -0.6
COIS El Sosneado 12.69 188 iP Pn 02 29 41.4 -4.1
SALV Santo Antonio 12.96 62 eP Pn 02 29 50.9 +1.8
PUMA Malargue 13.05 187 iP Pn 02 29 46.8 -3.3
SAML Samuel 14.11 18 P Pn 02 30 04.2 +0.6
PTGB Pitanga 14.34 102 eP Pn 02 30 08.8 +0.3
ITAB Concordia 14.74 112 eP Pn 02 30 11.4 +0.2
PCMB Pacaembu 15.11 90 eP Pn 02 30 16.2 +0.3
ARAG Araguaiana, MT 16.31 68 eP Pn 02 30 30.6 0.0
RCLB Rio Claro- Sao 18.48 94 eP P 02 30 54.6 +0.5
IPMB Ipameri, GO 18.67 80 eP P 02 30 56.2 0.0
VAO Valinhos 18.97 95 eP P 02 30 59.1 -0.3
BDFB Brasilia 19.65 73 P P 02 31 06.7 -0.2
comp=Z,2.2nm,0.3s,baz=250,slow=12,SNR=17
BDFB Brasilia 19.65 73 P P 02 31 05.7 -1.2
BDFB IAmb IAmb 02 31 07.3
comp=Z,12nm,0.7s
PARB Paraibuna 20.19 97 eP P 02 31 12.2 -0.4
BSCB Bom Sucesso 21.18 90 eP P 02 31 23.1 0.0
TXAR Lajitas Array 62.19 324 P P 02 36 55.4 +1.0
comp=Z,0.4nm,0.7s,baz=152,slow=8.5,SNR=4.6
DBIC Dimbokro 67.80 72 P P 02 37 31.2 +0.4
comp=Z,2.0nm,0.6s,baz=227,slow=8.1,SNR=4.9
DBIC Dimbokro 67.80 72 IAmb IAmb 02 38 22.4
comp=Z,13nm,1.4s
PDAR Pinedale Array 75.62 329 P P 02 38 18.5 +1.3
comp=Z,0.4nm,0.7s,baz=134,slow=7.4,SNR=5.0
TOA0 Torodi Ar. Sit 76.49 69 P P 02 38 22.6 +0.3
TOA0 IAmb IAmb 02 38 23.4
comp=Z,7.6nm,1.1s
TORD Torodi Ar. Bea 76.49 69 P P 02 38 22.6 +0.2
comp=Z,4.1nm,0.6s,baz=258,slow=5.5,SNR=71
TORD Torodi Ar. Bea 76.49 69 P P 02 38 21.9 -0.5
ULM Lac du Bonnet 76.67 342 P P 02 38 23.3 +0.7
comp=Z,2.7nm,0.4s,baz=147,slow=5.2,SNR=7.9
BOSA Boshof 81.84 117 P P 02 38 52.8 +1.3
comp=Z,1.1nm,0.5s,baz=147,slow=6.2,SNR=3.7
YKA Yellowknife Ar 92.56 340 P P 02 39 43.3 +1.1
comp=Z,0.9nm,0.6s,baz=135,slow=4.3,SNR=20

NIED 08 02:34:00, 37°.10N×141°.20E, h50km, Mw4.7 Best double couple: Mo1.50000×10^16 NP1:φs21.00000°, δ77.00000°, λ90.00000°. NP2:φs200.00000°, δ13.00000°, λ89.00000°.
BJI 08 02:34:20.2±0.0, 37°.10N×141°.17E, h53km, mB5.0/48, mb5.0/67, Ms4.4/47, Ms7 4.3/35
BGR 08 02:34:21.6±0.0, 36°.78N×142°.35E, h33km, mb5.4
MOS 08 02:34:21.5±1.0, 37°.16N×141°.10E, h49km, mb5.3/95, MS4.0/7, Error ellipse: s-maj=6.4km s-min=3.5km az=110.7
JMA 08 02:34:22.4±0.1, 37°.07N×141°.18E, h51km±1km, M4.8 Broadband fault plane solution: P waves. NP1: φs211.00000°, δ21.00000°, λ103.00000°. NP2: φs17.00000°, δ70.00000°, λ85.00000°. Principal axes: T Plg65.0000°, Azm279.0000°; N Plg5.0000°, Azm19.0000°; P Plg25.0000°, Azm111.0000°;
JMA Felt IV J1.
IDC 08 02:34:23.1±0.4, 37°.06N×141°.09E, h52km±3km, mb4.5/27, mb1 4.7/33, mb1mx4.6/39, mbtmp4.8/33, MS3.9/37, Ms1 3.9/37, ms1mx3.8/50 Error ellipse: s-maj=12.0km s-min=7.3km az=107.0
NEIC 08 02:34:23.1±1.1, 37°.09N±0°.06×141°.12E±0°.10, h52km±4km, mb5.0/162, Error ellipse: s-maj=11.8km s-min=7.3km az=112.0
KLM 08 02:34:24.0, 36°.97N×141°.25E, h52km, mb5.0
GCMT 08 02:34:26.0±0.4, 37°.13N±0°.02×141°.26E±0°.04, h50km±1km, MW4.8/68, Moment Tensor Solution. s30, c37; s68, c80; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr1.86±.13; Mθθ-0.49±.10; Mφφ-1.38±.09; Mrθ0.54±.07; Mθφ-0.64±.07; Mφr1.21±.07; Best double couple: Mo2.22400×10^16 NP1:φs209.00000°, δ27.00000°, λ93.00000°. NP2: φs25.00000°, δ63.00000°, λ88.00000°. Principal axes: T 2.2980, Plg72.0000°, Azm292.0000°; N -0.1550, Plg2.0000°, Azm26.0000°; P -2.1500, Plg18.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 08 02:34:23.0±0.4, 37°.07N±0°.03×141°.25E±0°.04, h55km±2km, h55km:pP-P, n644, σ1s.36/655, mb5.0/209, MS4.1/41, 69C-35D, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
ONAJ Iwakimizuishiy 0.36 275 ⇓P Pn 02 34 31.6 -1.6
ONAJ iS Sn 02 34 38.0 -2.5
JFK Kawauchi 0.42 315 ⇓P Pn 02 34 32.3 -1.5
JFK S Sn 02 34 39.1 -2.4
JFFD Fukushimafurud 0.55 273 ⇓P Pn 02 34 33.6 -1.6
JFFD S Sn 02 34 41.4 -2.5
JHO Hitachi 0.71 230 ⇓P Pn 02 34 35.3 -1.8
JHO S Sn 02 34 44.3 -3.0
JFT Otama 0.85 302 ⇓P Pn 02 34 38.5 -0.5
JFT eS Sn 02 34 50.0 -0.6
JMM Marumori 0.87 336 ⇓P Pn 02 34 38.1 -1.1
JMM S Sn 02 34 49.5 -1.6
JFY Yanaizu 1.28 286 ⇓P Pn 02 34 43.6 -1.0
JOU Okura 1.38 341 ⇓P Pn 02 34 45.3 -0.6
JIO Ouri 1.39 3 ⇓P Pn 02 34 45.2 -0.8
JIO S Sn 02 35 01.3 -2.0
JYS Shirataka 1.48 321 ⇓P Pn 02 34 47.1 -0.3
JAG Ashikaga 1.58 247 ⇓P Pn 02 34 47.4 -1.2
JKT Katashina 1.63 260 ⇓P Pn 02 34 48.9 -0.5
JKT S Sn 02 35 09.6 +0.2
MJAR Matsushiro Arr 2.49 259 P Pn 02 35 00.9 -0.2
18nm,0.3s,baz=85,slow=16,SNR=389
MJAR LR LR 02 36 17.6
comp=Z,3µm,20.7s,baz=85,slow=49
MJAR Matsushiro Arr 2.49 259 Pn 02 35 00.4 -0.8
MJAR Matsushiro Arr 2.49 259 P Pn 02 35 00.4 -0.8
MAJO Matsushiro 2.50 259 Pn 02 35 00.9 -0.2
MAJO Matsushiro 2.50 259d iP Pn 02 35 01.2 0.0
MAT Matsushiro 2.50 259 P Pn 02 35 01.4 +0.2
MAT S Sn 02 35 31.4 +0.9
MJB9 Matsu-Tunnel 2.50 259 Pn 02 35 01.1 -0.1
INU Inuyama 3.83 245 Pn 02 35 19.5 +0.1
JHJ2 Mitsune 4.12 197 Pn Pn 02 35 24.2 +0.8
JHJ Hachijo jima 2 4.12 197 P Pn 02 35 23.4 0.0
270nm,0.3s,baz=62,slow=3.9,SNR=33
JHJ S Sn 02 36 08.5 -1.8
104nm,0.3s,baz=245,slow=23,SNR=6.7
JHJ LR LR 02 37 16.3
comp=Z,1µm,19.9s,baz=287,slow=42
ERM Erimo 5.16 16 Pn 02 35 37.6 0.0
ERM Erimo 5.16 16deP Pn 02 35 37.6 0.0
ERM pmax pmax
comp=Z,115nm,0.8s
ASAJ Asahikawa 7.12 8 P Pn 02 36 03.4 -1.0
comp=Z,25nm,0.3s,baz=220,slow=9.2,SNR=63
ASAJ S Sn 02 37 23.9 +0.1
comp=Z,9.5nm,0.3s,baz=215,slow=29,SNR=3.5
JKA Kamikawa-asahi 7.12 8 Pn 02 36 03.4 -1.0
JKA Sn 02 37 23.9 +0.1
NMR Nemuro--Hokkai 7.17 27 eP Pn 02 36 02.5 -2.6
NMR eS Sn 02 37 17.9 -7.1
GLVR Golovnino 7.42 25 eP Pn 02 36 07.3 -1.2
GLVR eS Sn 02 37 25.5 -5.7
GLVR pmax pmax
comp=E,93nm,0.4s
GLVR pmax pmax
comp=Z,150nm,0.4s
GLVR pmax pmax
comp=N,57nm,0.2s
GRPR Tuman 7.73 25 eP Pn 02 36 10.5 -2.3
GRPR eS Sn 02 37 32.3 -6.5
GRPR pmax pmax
comp=Z,278nm,0.3s
GRPR pmax pmax
comp=E,244nm,0.4s
GRPR pmax pmax
comp=N,133nm,0.2s
YUK Yuzh-Kuril'sk 7.79 25 eP Pn 02 36 10.9 -2.8
YUK eS Sn 02 37 33.6 -6.8
YUK pmax pmax
comp=N,73nm,0.2s
YUK pmax pmax
comp=E,23nm,0.2s
YUK pmax pmax
comp=Z,303nm,0.2s
SHO Shikotan 8.01 30 eP Pn 02 36 13.3 -3.4
SHO pmax pmax
comp=N,11nm,0.2s
SHO pmax pmax
comp=Z,17nm,0.2s
SHO pmax pmax
comp=E,17nm,0.3s
TEY Ternei 8.70 338⇑eP Pn 02 36 27.9 +1.9
TEY pmax pmax
comp=E,20nm,0.7s
TEY pmax pmax
comp=N,40nm,0.6s
TEY pmax pmax
comp=Z,30nm,0.6s
JNU Nakatsue 9.36 248 P Pn 02 36 36.8 +1.5
comp=Z,1.7nm,0.3s,baz=61,slow=4.2,SNR=13
JNU LR LR 02 40 39.9
comp=Z,444nm,20.9s,baz=68,slow=41
JNU Nakatsue 9.36 248 Pn 02 36 36.1 +0.8
KUR Kuril'sk 9.56 29⇑eP Pn 02 36 37.7 -0.1
KUR eS Sn 02 38 16.5 -7.2
KUR pmax pmax
comp=E,85nm,0.4s
KUR pmax pmax
comp=N,30nm,0.3s
KUR pmax pmax
comp=E,36nm,0.3s
KUR smax smax
comp=E,188nm,0.5s
KUR smax smax
comp=N,93nm,0.6s
YSS Yuzh-Sakhalins 9.94 6 Pn 02 36 42.0 -1.1
YSS Yuzh-Sakhalins 9.94 6⇓eP Pn 02 36 41.7 -1.4
YSS eS Sn 02 38 27.2 -5.9
YSS pmax pmax
comp=Z,30nm,0.8s
YSS MLR MLR
comp=Z,500nm,16.0s
USA0B Ussuriysk Arra 10.01 318 Pn 02 36 45.8 +1.8
USA0B Ussuriysk Arra 10.01 318 P Pn 02 36 45.8 +1.8
USRK Ussuriysk Ar. 10.01 318 P Pn 02 36 45.0 +1.0
baz=134,slow=14,SNR=114
USRK LR LR 02 40 21.2
comp=Z,888nm,19.5s,baz=130,slow=36
USRK Ussuriysk Ar. 10.01 318 Pn 02 36 45.7 +1.7
USRK Ussuriysk Ar. 10.01 318 P Pn 02 36 45.7 +1.7
KSRS Korea Array 10.63 276 P Pn 02 36 55.4 +2.8
comp=Z,1.0nm,0.3s,baz=88,slow=13,SNR=31
KSRS LR LR 02 40 43.5
comp=Z,853nm,20.3s,baz=86,slow=36
KSAR Wonju Array Be 10.66 276 Pn 02 36 54.7 +1.8
KSAR Wonju Array Be 10.66 276 P Pn 02 36 54.7 +1.8
KS19 Wonju Array Si 10.67 276 Pn 02 36 54.6 +1.4
MDJ Mudanjiang 11.60 314 P Pn 02 37 10.4 +4.6
MDJ Mudanjiang 11.60 314 Pn 02 37 07.7 +1.9
UGL Uglegorsk 12.02 3 eP Pn 02 37 10.1 -3.3
UGL S Sn 02 39 23.4 -0.4
UGL pmax pmax
comp=Z,33nm,0.9s
UGL smax smax
comp=N,56nm,0.4s
UGL MLR MLR
comp=E,2µm,16.0s
UGL MLR MLR
comp=Z,2µm,16.0s
CN2 Changchun 13.78 304 eP Pn 02 37 34.3 -1.1
CN2 eS Sn 02 40 11.6 +4.9
CN2 pmax pmax
comp=Z,10.0nm,1.3s
CN2 LR LR
comp=Z,270nm,13.0s
CN2 LR LR
comp=Z,470nm,13.0s
TYV Tymovskoe 13.83 4 eP Pn 02 37 33.9 -2.2
TYV pmax pmax
comp=Z,11nm,0.6s
KLR Kul'dur 13.98 333 P Pn 02 37 37.0 -1.1
comp=Z,1.0nm,0.3s,baz=161,slow=12,SNR=13
KLR LR LR 02 42 57.3
comp=Z,476nm,18.8s,baz=151,slow=37
KLR Kul'dur 13.98 333⇓eP Pn 02 37 36.8 -1.3
GRNR Gornyy 14.13 347⇑iP Pn 02 37 38.8 -1.3
GRNR eS Sn 02 40 14.1 -1.1
GRNR pmax pmax
comp=Z,10.0nm,0.6s
GRNR smax smax
comp=N,7.0nm,0.6s
GRNR MLR MLR
comp=Z,370nm,15.0s
SNY Shenyang 14.45 295 ⇑P P 02 37 47.3 -2.5
SNY pmax pmax
comp=Z,39nm,0.8s
SNY pmax pmax
comp=Z,200nm,4.6s
SNY LR LR
comp=Z,420nm,16.6s
SNY LR LR
comp=Z,610nm,21.0s
SNY LR LR
comp=Z,880nm,16.3s
DL2 Dalian 15.58 283 P Pn 02 37 58.8 -0.2
DL2 sP pP 02 38 16.2 +1.7
DL2 eS Sn 02 40 49.1 -1.5
DL2 pmax pmax
comp=Z,71nm,0.7s
DL2 LR LR
comp=Z,430nm,15.1s
DL2 LR LR
comp=Z,690nm,16.2s
NJ2 Nanjing 19.10 261 eP P 02 38 39.7 -1.5
NJ2 pmax pmax
comp=Z,20nm,0.9s
ZEA Zeya 19.29 334 eP P 02 38 41.0 -2.1
ZEA pmax pmax
comp=E,35nm,1.0s
ZEA pmax pmax
comp=N,49nm,0.6s
ZEA pmax pmax

comp=Z,61nm,0.8s
PETK Petropavlovsk- 19.72 30 P **Pn 02 38 48.8 -0.9**
comp=Z,0.3nm,0.3s,baz=206,slow=9.6,SNR=4.0
PETK LR LR 02 46 04.8
comp=Z,88nm,22.0s,baz=240,slow=35
HIA Hailar 19.79 315 P **P 02 38 47.1 -1.5**
HIA Hailar 19.79 315 P **P 02 38 47.1 -1.5**
HIA pmax pmax
comp=Z,12nm,0.7s
BJT Baijiatuau 19.82 286 P **P 02 38 48.2 -0.8**
BJT Baijiatuau 19.82 286 P **P 02 38 48.2 -0.8**
BJT pmax pmax
comp=Z,23nm,0.9s
PET Petropavlovsk 20.06 32⇑*e*P Pn 02 38 54.2 +0.5
PET pmax pmax
comp=Z,74nm,1.7s
TIY Taiyuan 22.87 280 *e*P **P 02 39 18.6 -3.3**
WHN Wuhan 23.23 262 P **P 02 39 23.4 -2.1**
WHN pP **pP 02 39 40.7 +2.4**
WHN S **S 02 43 30.2 -3.2**
WHN pmax pmax
comp=Z,28nm,0.5s
WHN LR LR
comp=Z,1μm,16.6s
HHC Hu-ho-hao-te 23.34 288 *e*P **P 02 39 23.8 -2.7**
HHC sP sP 02 39 47.7 +1.5
HHC PP **PnPn 02 39 55.2 +0.7**
HHC pmax pmax
comp=Z,33nm,4.0s
MA2 Magadan 23.35 12 LR LR 02 48 12.4
comp=Z,121nm,21.8s,baz=116,slow=36
MA2 Magadan 23.35 12 P **P 02 39 26.2 -0.1**
MA2 IAmb IAmb 02 39 40.0
comp=Z,30nm,0.7s
MA2 Magadan 23.35 12⇑*e*P **P 02 39 27.4 +1.1**
MA2 pmax pmax
comp=Z,47nm,1.3s
GUMO Guam 23.61 171 LR LR 02 50 50.8
comp=Z,30nm,19.2s,baz=317,slow=42
BTO Baotou 24.51 288 *e*P **P 02 39 35.7 -1.6**
YAK Yakutsk 26.01 348 P **P 02 39 50.0 -0.5**
comp=Z,23nm,0.4s,baz=22,slow=1.4,SNR=13
YAK Yakutsk 26.01 348 P **P 02 39 50.3 -0.1**
YAK IAmb IAmb 02 39 52.4
comp=Z,87nm,1.1s
YAK Yakutsk 26.01 348 *e*P **P 02 39 49.7 -0.8**
YAK *e**PP **pP 02 40 04.3 +0.2**
YAK *e* 02 40 27.3
YAK *e* 02 43 11.9
YAK *e*S **S 02 44 21.3 +4.2**
YAK *e**SS **sS 02 44 46.8 +6.5**
YAK pmax pmax
comp=Z,49nm,0.9s
YAK pmax pmax
comp=N,40nm,1.3s
YAK pmax pmax
comp=Z,170nm,3.1s
YAK pmax pmax
comp=N,252nm,3.8s
YAK pmax pmax
comp=E,89nm,3.0s
YAK smax smax
comp=N,268nm,3.8s
YAK smax smax
comp=E,173nm,4.3s
YAK MLR MLR
comp=Z,243nm,21.0s
YAK MLR MLR
comp=N,186nm,18.0s
YAK MLR MLR
comp=E,76nm,18.0s
XAN Xi'an 26.41 273 P **P 02 39 52.6 -1.9**
XAN PcP **PcP 02 43 19.6 +0.8**
XAN pmax pmax
comp=E,20nm,0.8s
XAN pmax pmax
comp=E,220nm,6.7s
XAN Xi'an 26.41 273 P **P 02 39 53.1 -1.4**
XAN Xi'an 26.41 273 P **P 02 39 53.1 -1.4**
XAN pmax pmax
comp=Z,18nm,0.9s
SEY Seymchan 26.78 11 P **P 02 39 58.5 +1.0**
comp=Z,23nm,0.9s,baz=194,slow=7.3,SNR=29
ENH Enshi 27.20 265 P **P 02 40 00.5 -1.2**
ENH IAmb IAmb 02 40 01.3
comp=Z,36nm,0.8s
ULN Ulaanbaatar 27.23 304 P **P 02 40 00.4 -1.5**
ULN **P 02 40 01.0 -0.9**
ULN IAmb IAmb 02 40 05.7
comp=Z,25nm,0.7s
ULN **PcP 02 43 20.6 0.0**
BOD Bodaibo 27.43 328 *e*P **P 02 40 02.3 -1.0**
BOD pmax pmax
comp=Z,27nm,0.8s
SONM Songino Array 27.66 304 P **P 02 40 04.4 -1.3**
comp=Z,12nm,0.5s,baz=105,slow=8.8,SNR=87
SONM PcP **PcP 02 43 22.1 +0.4**
comp=Z,3.0nm,0.6s,baz=129,slow=2.6,SNR=9.9
SONM ScP **ScP 02 46 58.9 +1.3**
comp=Z,1.1nm,1.0s,baz=114,slow=1.2,SNR=5.5
SONM LR LR 02 51 29.7
comp=Z,268nm,18.8s,baz=87,slow=37
SONM Songino Array 27.66 304 P **P 02 40 04.3 -1.4**
SONM Songino Array 27.66 304 **ScP 02 46 58.7 +1.1**
H11N2 WAKE ISLAND Hy 28.28 121 T T 03 10 27.6
baz=314,slow=75,SNR=145
H11N1 WAKE ISLAND Hy 28.29 121 T T 03 10 31.2
baz=314,slow=75,SNR=1636
H11N3 WAKE ISLAND Hy 28.30 121 T T 03 10 31.9
baz=314,slow=75,SNR=1316
H11S1 WAKE ISLAND Hy 28.99 123 T T 03 11 23.4
baz=316,slow=75,SNR=787
H11S3 WAKE ISLAND Hy 28.99 123 T T 03 11 29.5
baz=316,slow=75,SNR=695
H11S2 WAKE ISLAND Hy 29.01 123 T T 03 11 30.8
baz=316,slow=75,SNR=580
LZH Lanzhou 29.93 280 ⇑P **P 02 40 26.2 +0.2**
LZH pP pP 02 40 37.9 -2.0
LZH sP sP 02 40 44.9 -1.4
LZH PP **PnPn 02 41 25.8 +1.6**
LZH pmax pmax
comp=Z,30nm,1.0s
LZH pmax pmax
comp=Z,66nm,5.0s
LZH LR LR
comp=Z,230nm,13.6s
LZH LR LR
comp=Z,470nm,15.7s
LZH LR LR
comp=Z,630nm,16.8s
ZAK Zakamensk 30.14 308 *e*P **P 02 40 26.6 -1.1**
ZAK pmax pmax
comp=Z,8.0nm,0.9s
TLY Talaya 30.21 311 P **P 02 40 28.7 +0.5**
comp=Z,14nm,0.7s,baz=152,slow=5.3,SNR=7.4
TLY LR LR 02 53 12.2
comp=Z,248nm,19.1s,baz=114,slow=38
TLY Talaya 30.21 311 P **P 02 40 27.4 -0.7**
TLY IAmb IAmb 02 40 29.0
comp=Z,13nm,0.6s
TLY Talaya 30.21 311 *e*P **P 02 40 27.6 -0.5**
TLY *e*S **S 02 45 29.4 +5.8**
TLY pmax pmax
comp=Z,26nm,0.6s
TLY MLR MLR
comp=Z,762nm,16.0s
GYA Guiyang 31.09 260⇑*i*P **P 02 40 34.5 -1.8**
GYA pP pP 02 40 50.4 +0.2
GYA PP **PnPn 02 41 38.0 -1.4**
GYA S **S 02 45 36.4 -1.7**
GYA sS sS 02 46 03.7 +2.3
GYA SS **SnSn 02 47 24.4 +0.8**
GYA pmax pmax
comp=Z,30nm,0.9s
GYA pmax pmax
comp=Z,110nm,4.5s
CD2 Chengdu 31.54 270 P **P 02 40 39.3 -0.8**
CD2 S **S 02 45 42.3 -2.6**
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 LR LR
comp=Z,620nm,17.8s
MOY Mondy 31.81 310 *e*P **P 02 40 41.8 -0.6**
GTA Gaotai 32.42 287 ⇓P **P 02 40 46.7 -1.2**
GTA pP pP 02 40 58.8 -3.0
GTA sP sP 02 41 04.2 -4.0
GTA PcP **PcP 02 43 35.1 +0.9**
GTA ScP **ScP 02 47 15.2 +1.9**
GTA PcS **PcS 02 47 19.3 0.0**
GTA pmax pmax
comp=Z,12nm,0.7s
GTA pmax pmax
comp=Z,130nm,4.9s
GTA LR LR
comp=Z,170nm,16.5s
GTA LR LR
comp=Z,150nm,15.5s
QIZ Qiongzhong 32.82 245 P **P 02 40 50.7 -0.7**
QIZ S **S 02 46 03.9 -1.0**
DAV Davao City (W) 33.10 209 LR LR 02 53 30.8
comp=Z,87nm,21.5s,baz=28,slow=35
KCP Kidapawan 33.35 210⇓*e*P P 02 40 47.2 -8.9
BILL Bilibino 34.03 17 P **P 02 41 01.6 +0.2**
BILL Bilibino 34.03 17⇓*i*P **P 02 41 01.7 +0.3**
BILL *e**PP **pP 02 41 14.6 -0.6**
BILL 02 42 16.0
BILL *e* 02 43 38.1
BILL pmax pmax
comp=Z,9.0nm,1.3s
BILL MLR MLR
comp=Z,102nm,17.0s
KMI Kunming 34.84 261 P **P 02 41 08.1 -1.0**
KMI pP pP 02 41 20.2 -2.8
KMI sP sP 02 41 26.5 -3.0
KMI S **S 02 46 32.1 -4.3**
KMI sS sS 02 46 59.1 -0.7
KMI pmax pmax
comp=Z,31nm,1.1s
KMI pmax pmax
comp=Z,91nm,4.4s
KMI LR LR
comp=Z,290nm,35.6s
KMI LR LR
comp=Z,330nm,23.2s
TIXI Tiksi 35.24 353 P **P 02 41 11.2 -0.6**
comp=Z,5.1nm,0.4s,baz=146,slow=6.6,SNR=13
TIXI Tiksi 35.24 353 P **P 02 41 11.0 -0.7**
TIXI IAmb IAmb 02 41 12.3
comp=Z,14nm,1.1s
TIXI Tiksi 35.24 353⇑*e*P **P 02 41 11.2 -0.6**
TIXI pmax pmax
comp=Z,13nm,1.0s
SLVN Son La 35.91 255 P **P 02 41 17.6 -0.6**
UBPT Khong Chiam 38.42 245 P **P 02 41 39.3 -0.2**
SWI Sorong 38.86 196 P **P 02 41 43.6 +0.6**
comp=Z,18nm,0.8s
MRSI Marisa 40.55 211 P **P 02 41 57.5 +0.4**
comp=Z,2μmcomp=Z,34nm,1.4s
FAKI Fak Fak 40.66 194 P **P 02 41 58.6 +0.6**
FAKI IAmb IAmb 02 42 39.7
comp=Z,18nm,1.0s
WMQ Urumqi 40.70 297 *e*P **P 02 41 59.1 +0.8**
WMQ pP pP 02 42 12.3 -0.2
WMQ sP sP 02 42 22.0 +3.0
WMQ pmax pmax
comp=Z,64nm,0.7s
WMQ pmax pmax
comp=Z,200nm,4.9s
PBKT Sadao Pong 40.95 251 P **P 02 41 59.7 -0.7**
PBKT IAmb IAmb 02 42 01.2
comp=Z,20nm,1.1s
CHTO Chiang Mai 41.17 256 P **P 02 42 01.8 -0.5**
CHTO Chiang Mai 41.17 256 P **P 02 42 01.8 -0.5**
CHTO pmax pmax
comp=Z,8.0nm,0.7s
CMAR Chiang Mai Arr 41.38 255 P **P 02 42 03.5 -0.5**
comp=Z,3.5nm,0.6s,baz=43,slow=7.8,SNR=16
CMAR PcP **PcP 02 44 02.2 +0.8**
comp=Z,2.0nm,0.8s,baz=31,slow=2.0,SNR=7.5
CMAR LR LR 03 01 23.0
comp=Z,160nm,18.3s,baz=66,slow=39
CMAR Chiang Mai Arr 41.38 255*ce*P **P 02 42 04.0 0.0**
CMAR pmax pmax
comp=Z,4.0nm,0.6s
SANI Sanana 41.42 203 P **P 02 42 04.4 +0.1**
comp=Z,39nm,0.6s
MPSI Mapaga 41.54 213 P **P 02 42 05.2 -0.1**
comp=Z,807nmcomp=Z,8.9nm,0.8s
ANM Nome 41.64 31 P **P 02 42 06.9 +1.4**
ANM Nome 41.64 31 P **P 02 42 06.9 +1.4**
ANM pmax pmax
comp=Z,23nm,1.4s
ZAA0 Zalesovo Array 41.79 312 P **P 02 42 06.3 -0.6**
ZALV Zalesovo Beam 41.79 312 P **P 02 42 06.2 -0.7**
comp=Z,50nm,0.6s,baz=93,slow=6.7,SNR=172
ZALV PcP **PcP 02 44 02.0 -0.1**
comp=Z,8.1nm,0.5s,baz=97,slow=2.9,SNR=7.5
ZALV ScP **ScP 02 47 48.3 +0.5**
comp=Z,1.4nm,0.8s,baz=85,slow=5.1,SNR=3.7
ZALV LR LR 03 00 10.3
comp=Z,198nm,18.5s,baz=66,slow=37
ZALV Zalesovo Beam 41.79 312 **ScP 02 47 48.8 +1.0**
MSAI Masohi 41.81 199 P **P 02 42 07.5 0.0**
comp=Z,1μmcomp=Z,5.5nm,0.9s
APSI Ampana 41.93 210 P **P 02 42 08.4 0.0**
comp=Z,439nmcomp=Z,26nm,1.1s
LSA Lhasa 42.07 275 P **P 02 42 10.8 +0.7**
LSA pmax pmax
comp=Z,91nm,1.1s
LSA Lhasa 42.07 275 *i* P **P 02 42 11.2 +1.1**
SNR=5.8
LSA Lhasa 42.07 275 P **P 02 42 09.4 -0.6**
LSA IAmb IAmb 02 42 11.9
comp=Z,26nm,1.1s
LSA Lhasa 42.07 275 P **P 02 42 09.5 -0.6**
LSA pmax pmax
comp=Z,26nm,1.1s
AAI Ambon 42.33 200 P **P 02 42 12.1 +0.4**
comp=Z,42nm,0.7s
SHL Shillong 43.27 269 P **P 02 42 18.2 -1.3**
SHL IAmb IAmb 02 42 23.0
comp=Z,16nm,0.6s
SHL Shillong 43.27 269 P **P 02 42 18.3 -1.3**
SHL pmax pmax
comp=Z,16nm,0.6s
SMKI Samarinda 43.46 216 P **P 02 42 21.0 +0.1**
comp=Z,185nm,0.4s
RDOG Red Dog Mine 43.53 27 P **P 02 42 21.9 +1.0**
RDOG IAmb IAmb 02 42 23.6
comp=Z,37nm,1.5s
SBUM Sibu 43.59 225 P **P 02 42 21.4 -0.5**
SBUM Sibu 43.59 225 P **P 02 42 23.0 +1.1**
SBUM Sibu 43.59 225 P **P 02 42 23.0 +1.1**
SBUM Sibu 43.59 225 P **P 02 42 23.0 +1.1**
SBUM Sibu 43.59 225 P **P 02 42 23.0 +1.1**
SBUM Sibu 43.59 225 P **P 02 42 23.0 +1.1**
SBUM Sibu 43.59 225 P **P 02 42 23.0 +1.1**
MK31 Makanchi Array 43.99 302 P **P 02 42 24.4 -0.4**
MK31 IAmb IAmb 02 42 25.6
comp=Z,20nm,0.8s
MK31 Makanchi Array 43.99 302 *i* P **P 02 42 24.4 -0.4**
MKAR Makanchi Array 43.99 302 P **P 02 42 24.5 -0.4**
comp=Z,28nm,0.9s,baz=179,slow=10,SNR=201
MKAR PcP **PcP 02 44 09.6 -0.1**
comp=Z,3.2nm,0.7s,baz=78,slow=5.6,SNR=3.5
MKAR LR LR 03 02 00.8
comp=Z,81nm,18.9s,baz=74,slow=38
MKAR Makanchi Array 43.99 302 P **P 02 42 23.8 -1.1**
MAKZ Makanchi 44.20 302 P **P 02 42 26.3 -0.2**
MAKZ IAmb IAmb 02 42 27.4
comp=Z,22nm,0.8s
MAKZ Makanchi 44.20 302 *i* P **P 02 42 25.3 -1.2**
MAKZ pmax pmax
comp=Z,35nm,1.1s
SPSI Sidrap Palu 45.47 211 P **P 02 42 37.0 +0.2**
comp=Z,16nm,0.9s
KSM Kuching 45.48 226 P **P 02 42 37.5 +0.6**
KSM IAmb IAmb 02 42 39.6
comp=Z,27nm,0.9s
KSM Kuching 45.48 226 P **P 02 42 38.0 +1.0**
BNSI Bone 45.72 210 P **P 02 42 39.0 +0.1**
comp=Z,41nm,1.0s
TAPN Taplejung 45.80 274 *e*P **P 02 42 40.0 +0.1**
KURK Kurchatov 45.81 308 P **P 02 42 38.7 -0.5**
KURK Kurchatov 45.81 308*c i*P **P 02 42 38.5 -0.7**
KURK pmax pmax
comp=Z,39nm,0.6s
ODAN Odare 46.28 273 *e*P **P 02 42 43.2 -0.3**
KAPI Kappang 46.42 210 P **P 02 42 45.0 +0.7**
KAPI Kappang 46.42 210 P **P 02 42 45.1 +0.7**
KAPI pmax pmax
comp=Z,34nm,0.8s
BKSI Bulukumba 46.56 210 P **P 02 42 45.5 +0.1**
comp=Z,26nm,0.8s
PDGK Podgornoye 46.64 298 *i* P **P 02 42 44.9 -1.1**
PDGK pmax pmax
comp=Z,31nm,0.8s
IMAR Indian Mountai 46.69 31 P **P 02 42 47.0 +1.1**
IMAR **PcP 02 44 20.5 +1.8**
RAMN Ramite 46.87 274 *e*P **P 02 42 48.1 -0.1**
comp=Z,165nm,0.9s
JIRN Jiri 46.88 275 *e*P **P 02 42 48.7 +0.3**
comp=Z,130nm,0.7s
GUN Gumba 47.02 276 *e*P **P 02 42 49.4 0.0**
PKI Pulchoki 47.54 275 *e*P **P 02 42 52.9 -0.6**
KKN Kakani 47.55 276 *e*P **P 02 42 53.5 +0.1**
comp=Z,87nm,0.7s
DMN Daman 47.77 276 *e*P **P 02 42 54.9 -0.2**
KTH Kantishna Hill 47.79 34 pP 02 43 10.4 +1.4
GKN Gorkha 47.97 276 *e*P **P 02 42 56.5 -0.1**
JRMM Jerantut 48.50 237 P **P 02 43 01.0 +0.4**
TOLK Toolik Lake Re 48.50 27 IAmb IAmb 02 43 16.7
comp=Z,14nm,1.1s
TOLK Toolik Lake Re 48.50 27 P **P 02 43 01.6 +1.7**
baz=267
DANN Dangsing 48.51 277 *e*P **P 02 43 01.1 +0.2**
comp=Z,221nm,0.8s
KULM Kulim 48.72 240 P **P 02 43 03.0 +0.7**
KOLN Koldanda 48.89 277 *e*P **P 02 43 03.6 -0.2**
MDM Murphy Dome 48.96 32 P **P 02 43 05.2 +1.7**
MDM IAmb IAmb 02 43 06.3
comp=Z,22nm,1.1s
IPM Ipoh 49.05 238 P **P 02 43 03.4 -1.4**
IPM IAmb IAmb 02 43 05.2
comp=Z,9.1nm,0.6s
IPM Ipoh 49.05 238 P **P 02 43 05.0 +0.2**
SOEI Soe 49.23 202 P **P 02 43 05.8 -0.4**
comp=Z,57nm,0.8s
POKR Poker Plat Res 49.29 32 P **P 02 43 08.3 +2.3**
baz=272
HDA Harding Lake 49.53 33 IAmb IAmb 02 43 09.5
comp=Z,9.8nm,0.8s
HDA Harding Lake 49.53 33 P **P 02 43 08.7 +0.8**
baz=273
IL31 49.54 32 IAmb IAmb 02 43 09.6
comp=Z,8.4nm,0.7s
ILAR Eielson Array 49.54 32 P **P 02 43 08.7 +0.8**
comp=Z,7.9nm,0.7s,baz=266,slow=5.9,SNR=96
ILAR pP **pP 02 43 22.5 +0.2**
comp=Z,5.3nm,0.7s,baz=263,slow=6.1,SNR=12
ILAR Eielson Array 49.54 32 P **P 02 43 08.5 +0.6**
NRN Naryn 49.65 296 IAmb IAmb 02 43 15.5
comp=Z,8.4nm,0.9s
KZA Kyzart 49.99 297 P **P 02 43 13.1 +0.9**
SNR=10
KBK Karagaybulak 50.03 298 P **P 02 43 12.5 +0.3**
SNR=28
CHMS Chumysh 50.07 299 *i* P **P 02 43 11.8 -0.5**
CHMS pmax pmax
comp=Z,9.0nm,0.7s
USP Ospenovka 50.17 299 P **P 02 43 13.1 0.0**
SNR=12
FRU1 Bishkek 50.21 298 P **P 02 43 13.1 -0.3**
FRU1 Bishkek 50.21 298 P **P 02 43 13.1 -0.3**
FRU1 pmax pmax
comp=Z,33nm,1.2s
KSH Kashi 50.27 294 P **P 02 43 18.1 +4.1**
KSH PcP **PcP 02 44 35.0 +2.7**
KSH PP **PP 02 45 15.0 +5.4**
KSH S **S 02 50 26.2 +3.6**
KSH sS sS 02 50 52.5 +5.5
KSH ScS **ScS 02 52 58.6 -1.7**
KSH SS **SS 02 53 53.9 -2.4**
KSH pmax pmax
comp=Z,53nm,1.2s
KSH pmax pmax
comp=Z,360nm,7.4s
KSH LR LR
comp=Z,240nm,6.2s
KSH LR LR
comp=Z,250nm,6.5s
KSH LR LR
comp=Z,310nm,9.0s
AAK Ala-Archa 50.35 298 P **P 02 43 14.6 -0.1**
SNR=8.0
AAK Ala-Archa 50.35 298 *i* P **P 02 43 14.3 -0.3**
SNR=9.5
AAK Ala-Archa 50.35 298 P **P 02 43 14.5 -0.1**
AAK IAmb IAmb 02 43 26.8
comp=Z,11nm,1.1s
AAK Ala-Archa 50.35 298*c i*P **P 02 43 14.4 -0.3**
AAK pmax pmax
comp=Z,7.0nm,0.7s
BMAR Burnt Mountain 50.37 29 P **P 02 43 14.9 +0.7**
BRVK Borovoye 50.51 312 P **P 02 43 15.2 -0.2**
BRVK Borovoye 50.51 312 *i* P **P 02 43 14.5 -0.9**
BRVK pmax pmax
comp=Z,29nm,0.9s
SCRK Sand Creek 50.85 33 IAmb IAmb 02 43 34.4
comp=Z,13nm,1.0s
EKS2 Erkin-Say 50.85 299 P **P 02 43 18.3 -0.1**
SNR=8.3
AML Almayashu 51.07 298 P **P 02 43 21.0 +0.7**
SNR=28
MENT Mentasta 51.08 35 IAmb IAmb 02 43 37.2
comp=Z,20nm,1.2s
PSI Prapat 51.70 239 P **P 02 43 24.6 -0.3**
PSI pmax pmax
comp=Z,9.0nm,0.7s
RPSI Rantau Prapat 51.77 239 IAmb IAmb 02 43 30.4
comp=Z,9.2nm,0.6s
BCAR Beaver Creek A 51.94 34 P **P 02 43 27.2 +1.2**
EGAK Eagle 51.98 32 IAmb IAmb 02 43 28.7
comp=Z,8.9nm,1.1s
BKNI Bangkinang 52.10 235 P **P 02 43 27.4 -0.4**
KK31 Karatay Array 52.99 300 IAmb IAmb 02 43 36.3
comp=Z,28nm,1.1s
KK31 Karatay Array 52.99 300⇑*e*P **P 02 43 33.0 -1.1**
KK31 pmax pmax
comp=Z,30nm,1.1s
KKAR Karatay Array 52.99 300 P **P 02 43 32.9 -1.2**
KKAR Karatay Array 52.99 300 P **P 02 43 32.9 -1.2**
EPYK Eagle Plains 53.56 30 P **P 02 43 39.8 +1.8**
baz=280
BTK Batken 53.82 296 IAmb IAmb 02 43 44.8
comp=Z,15nm,1.0s
INK Inuvik 54.41 27 P **P 02 43 45.5 +1.4**
comp=Z,5.2nm,0.5s,baz=296,slow=6.6,SNR=56
INK pP **pP 02 43 59.5 +0.9**
comp=Z,6.4nm,0.9s,baz=298,slow=11,SNR=7.8
INK Inuvik 54.41 27 P **P 02 43 44.9 +0.8**
INK IAmb IAmb 02 44 01.1
comp=Z,11nm,1.1s
NIL Nilore 54.48 288 P **P 02 43 45.1 0.0**
NIL Nilore 54.48 288 P **P 02 43 45.2 0.0**
NIL pmax pmax
comp=Z,60nm,0.7s
SVE Sverdlovsk 55.03 319*d i*P **P 02 43 49.1 +0.4**
SVE pmax pmax
comp=Z,83nm,0.9s
ARU Arti 56.25 318 P **P 02 43 56.6 -0.8**
ARU Arti 56.25 318*c i*P **P 02 43 57.2 -0.2**
ARU *PP **sP 02 44 14.7 -3.7**
ARU 02 44 53.3
ARU 02 45 59.5
ARU S **S 02 51 43.9 +0.9**
ARU SS **SS 02 55 23.9 -5.7**
ARU pmax pmax
comp=Z,104nm,1.0s
WB0 Warramunga Arr 56.90 188 P **P 02 44 02.6 +0.2**
WRAB Tennant Creek 57.07 188⇑*e*P **P 02 44 03.8 +0.2**
WRAB pmax pmax
comp=Z,29nm,2.5s
WR0 Warramunga Arr 57.07 188 IAmb IAmb 02 44 18.4
comp=Z,22nm,0.9s
WRA Warramunga Arr 57.08 188 P **P 02 44 03.3 -0.4**
comp=Z,5.5nm,0.6s,baz=5.3,slow=7.4,SNR=24
WRA pP **pP 02 44 17.6 -0.8**
comp=Z,20nm,0.8s,baz=4.1,slow=7.3,SNR=20
WRA LR LR 03 05 55.6
comp=Z,40nm,21.7s,baz=200,slow=33
WRA Warramunga Arr 57.08 188 P **P 02 44 03.5 -0.2**
KBL Kabul 57.28 291 P **P 02 44 04.8 -0.6**
KBL Kabul 57.28 291 P **P 02 44 04.8 -0.6**
KBL pmax pmax

comp=Z,64nm,1.4s
C36M Paulatuk 57.45 25 IAmb IAmb 02 44 07.3
comp=Z,8.5nm,0.5s
C36M Paulatuk 57.45 25 P P 02 44 06.7 +1.0
baz=289
AB31 Akbulak array 57.81 310⇑eP P 02 44 07.5 -1.1
AB31 pmax pmax
comp=Z,18nm,0.5s
ABKAR Akbulak array 57.81 310 P P 02 44 07.9 -0.8
HYB Hyderabad 58.07 268 iP P 02 44 10.0 -0.9
HYB e 02 44 29.0
KIRV Kirov 60.14 323 iP P 02 44 24.4 -0.1
SPA0 Spitsbergen Ar 60.46 349 eP P 02 44 27.5 +0.9
PRGR Permogore 60.66 327 eP P 02 44 25.2 -2.9
PRGR e*PP pP 02 44 44.3 +1.4
PRGR e 02 45 09.8
PRGR pmax pmax
comp=Z,34nm,1.0s
AS31 Alice Springs 60.80 188 P P 02 44 29.5 0.0
ASAR Alice Springs 60.80 188 P P 02 44 29.2 -0.3
comp=Z,2.1nm,0.8s,baz=12,slow=7.8,SNR=24
ASAR pP pP 02 44 43.9 -0.5
comp=Z,10nm,0.8s,baz=15,slow=7.4,SNR=28
ASAR LR LR 03 10 20.7
comp=Z,28nm,19.2s,baz=343,slow=36
ASAR Alice Springs 60.80 188 P P 02 44 29.0 -0.5
RES Resolute Bay 62.60 14 IAmb IAmb 02 44 42.2
comp=Z,19nm,1.4s
RES Resolute Bay 62.60 14 P P 02 44 41.3 +0.4
RES pmax pmax
comp=Z,3.0nm,0.9s
APA Apatity 62.60 336⇓iP P 02 44 40.4 -0.6
APA pmax pmax
comp=Z,9.0nm,1.1s
TMCR Tamitsa 62.65 331 eP P 02 44 40.8 -0.6
TMCR pmax pmax
comp=Z,33nm,1.0s
KLMR Klimovskoe 63.66 328 eP P 02 44 44.7 -3.4
KLMR AMP 02 44 48.9
comp=Z,50nm,1.5s
KLMR ePP PP 02 47 06.7 -1.4
KLMR Klimovskoe 63.66 328 eP P 02 44 44.7 -3.4
KLMR e 02 47 06.6
KLMR pmax pmax
comp=Z,50nm,1.5s
GEYT Alibeck 63.70 299 P P 02 44 49.0 +0.1
comp=Z,23nm,0.8s,baz=41,slow=2.9,SNR=60
GEYT LR LR 03 15 15.3
comp=Z,55nm,18.5s,baz=115,slow=39
GEYT Alibeck 63.70 299 P P 02 44 49.0 +0.1
YKA Yellowknife Ar 63.84 30 P P 02 44 50.0 +0.7
comp=Z,3.8nm,0.8s,baz=303,slow=6.9,SNR=37
YKA pP pP 02 45 04.1 -0.2
comp=Z,2.6nm,0.7s,baz=299,slow=7.0,SNR=11
YKA LR LR 03 14 12.8
comp=Z,25nm,19.7s,baz=0.0,slow=37
ARCES ARCESS Array B 63.92 339 P P 02 44 50.0 +0.3
comp=Z,3.8nm,0.6s,baz=53,slow=7.3,SNR=29
ARCES LR LR 03 15 49.8
comp=Z,94nm,19.1s,baz=341,slow=39
ARE0 ARCESS Array S 63.92 339 eP P 02 44 49.9 +0.1
SGF Sodankyl 64.87 337 P P 02 44 56.2 +0.2
SGF pmax pmax
comp=Z,27nm,1.9s
TRO Tromso 65.64 341 eP P 02 45 00.4 -0.5
DAG Danmarks Havn 65.73 355⇑iP P 02 45 01.4 0.0
comp=Z,7.6nm,0.8s
DAG i 02 45 19.5
DAG Danmarks Havn 65.73 355⇑iP P 02 45 01.4 0.0
DAG i 02 45 19.5
DAG pmax pmax
comp=Z,8.0nm,0.8s
OUL Oulu 66.51 335 P P 02 45 06.9 +0.4
OUL pmax pmax
comp=Z,19nm,1.1s
MOS Moscow 67.14 323 eP P 02 45 09.6 -1.1
MOS e 02 45 25.7
MOS e 02 47 38.0
MOS pmax pmax
comp=Z,35nm,0.9s
D03D Eldon 67.18 47 P P 02 45 13.5 +2.4
baz=300
VRH Novokhopyorsk 67.46 318 eP P 02 45 11.7 -1.2
VRH pmax pmax
comp=Z,40nm,0.7s
STEI Steigen 67.79 341 eP P 02 45 14.3 -0.3
SUF Sumiainen 67.89 333 P P 02 45 15.5 +0.1
SUF pmax pmax
comp=Z,33nm,1.0s
OBN Obninsk 67.99 323 P P 02 45 16.0 -0.1
OBN Obninsk 67.99 323c iP P 02 45 15.7 -0.4
OBN e*PP pP 02 45 32.6 +1.5
OBN e 02 45 48.7
OBN SS SS 02 58 27.0 -5.8
OBN pmax pmax
comp=Z,31nm,1.0s
OBN MLR MLR
comp=Z,62nm,11.0s
STKA Stephens Creek 68.59 180 P P 02 45 20.6 +0.6
comp=Z,2.3nm,0.5s,baz=335,slow=12,SNR=6.2
STKA pP pP 02 45 35.5 +0.4
comp=Z,5.4nm,0.7s,baz=324,slow=7.6,SNR=5.4
STKA Stephens Creek 68.59 180 P P 02 45 20.5 +0.6
FORT Forrest 68.61 192 P P 02 45 20.4 +0.2
FINES FINESS Array B 68.72 332 P P 02 45 20.3 -0.2
comp=Z,20nm,0.7s,baz=59,slow=7.4,SNR=47
FINES LR LR 03 17 53.2
comp=Z,123nm,19.6s,baz=34,slow=38
FINES FINESS Array B 68.72 332 iP P 02 45 20.2 -0.4
FINES pmax pmax
comp=Z,20nm,0.7s
VSR Storozhevoye 68.82 319 eP P 02 45 20.8 -0.5
VSR pmax pmax
comp=Z,30nm,0.7s
VORD Divnogorie 68.89 318 eP P 02 45 20.8 -1.0
VORD pmax pmax
comp=Z,20nm,0.8s
AKT Akhty 68.95 307 eP P 02 45 21.4 -1.1
AKT e 02 45 46.4
AKT pmax pmax
comp=Z,25nm,0.6s
I03D Drain, OR 68.99 51 P P 02 45 25.0 +2.4
baz=302
GROC Groznyy 69.28 309 eP P 02 45 22.4 -1.9
GROC e*PP pP 02 45 38.8 -0.7
GROC e*SP PcP 02 45 46.2 -1.5
GROC e 02 47 56.5
GROC pmax pmax
comp=Z,17nm,0.7s
MOR8 Moi Rana 69.28 340 eP P 02 45 22.4 -1.6
G05D Wamic, OR 69.41 48 P P 02 45 27.0 +1.8
baz=302
SEKA Sheki 69.43 307 P P 02 45 24.5 -1.0
LKRN Lenkeran, Azer 69.70 304 P P 02 45 26.8 -0.2
MNGR Mingechevir, A 69.73 306 P P 02 45 26.8 -0.4
D08A Wollman Farm, 69.84 46 P P 02 45 29.4 +1.6
GOF Gofitskoye 69.97 312⇑eP P 02 45 28.7 +0.1
GOF pmax pmax
comp=Z,45nm,0.6s
NEW Newport 70.20 44 P P 02 45 30.8 +0.8
baz=304
GANJ Ganja 70.29 306 P P 02 45 30.2 -0.5
VSU Vasula 70.36 329 eP P 02 45 29.5 -1.2
VSU IAmb IAmb 02 45 32.0
comp=Z,85nm,0.9s
VSU Vasula 70.36 329deP P 02 45 30.9 +0.2
VSU pmax pmax
comp=Z,73nm,1.0s
PINE Pine Mountain 70.42 50 P P 02 45 33.1 +1.5
PINE IAmb IAmb 02 45 49.6
comp=Z,28nm,0.9s
L04D Klamath Falls 70.42 52 P P 02 45 32.4 +0.8
baz=303
J05D Fort Rock, OR 70.51 50 P P 02 45 33.6 +1.5
baz=303
SUMG Summit 70.65 360 iP P 02 45 33.8 +1.0
comp=Z,65nm,1.1s
SUMG Summit 70.65 360 P P 02 45 33.0 +0.3
SUMG IAmb IAmb 02 45 35.2
comp=Z,21nm,1.1s
SUMG Summit 70.65 360 iP P 02 45 33.8 +1.0
SUMG pmax pmax
comp=Z,65nm,1.1s
ZEI Tsey 70.67 309 eP P 02 45 31.5 -1.7
ZEI pmax pmax

comp=Z,11nm,0.8s
TBLG Delisi 70.72 308 IAmb IAmb 02 45 33.7
comp=Z,12nm,0.8s
KBZ Khabaz 70.78 311 P P 02 45 33.6 +0.1
comp=Z,23nm,0.9s,baz=62,slow=3.7,SNR=58
KBZ LR LR 03 21 23.3
comp=Z,77nm,18.3s,baz=51,slow=40
KBZ Khabaz 70.78 311c iP P 02 45 33.4 -0.1
KIV Kislovodsk 70.78 311 ⇑P P 02 45 34.7 +1.0
KIV Kislovodsk 70.78 311 iP P 02 45 33.2 -0.5
SNR=7.0
KIV Kislovodsk 70.78 311 P P 02 45 33.6 0.0
KIV Kislovodsk 70.78 311 eP P 02 45 33.7 0.0
KIV pmax pmax
comp=Z,191nm,1.1s
KIV MLR MLR
comp=Z,143nm,17.0s
BANOM Banah 71.07 289 iP P 02 45 35.9 +0.2
SNR=11
SHME Shamm 71.12 289 iP P 02 45 35.9 -0.1
SNR=9.4
NEY Neytrino 71.15 310⇓eP P 02 45 37.1 +1.1
NEY pmax pmax
comp=Z,2.0nm,0.9s
NSS Namsos 71.20 339 eP P 02 45 35.3 -0.4
O02D Mt. Diablo Mer 71.22 54 P P 02 45 38.7 +2.3
baz=303
MDH Madha 71.41 288 P P 02 45 37.0 -0.7
MSFE Esma-Masafi 71.48 288 iP P 02 45 38.5 +0.4
SNR=6.2
WALA Waterton Lakes 71.50 42 IAmb IAmb 02 45 56.5
comp=Z,44nm,2.0s
GNI Garni 71.58 307 LR LR 03 19 54.7
comp=Z,91nm,18.2s,baz=39,slow=38
GNI Garni 71.58 307 iP P 02 45 38.8 +0.2
SNR=8.0
GNI Garni 71.58 307 P P 02 45 38.3 -0.4
GNI IAmb IAmb 02 45 44.7
comp=Z,13nm,0.9s
GNI Garni 71.58 307ceP P 02 45 38.9 +0.2
GNI pmax pmax
comp=Z,61nm,1.3s
NAX Nakhchivan 71.62 305 P P 02 45 38.4 -0.4
UOSS Minazif 71.67 288 iP P 02 45 39.5 +0.2
SNR=10
UOSS Minazif 71.67 288 P P 02 45 38.7 -0.5
UOSS IAmb IAmb 02 45 40.0
comp=Z,22nm,0.7s
AKH Akhalkalaki 71.68 308 P P 02 45 40.2 +0.9
AKH pmax pmax
comp=Z,65nm,0.3s
HATD Hatta, Dubai 71.79 288 iP P 02 45 40.4 +0.4
SNR=14
ASHO Ashiyiah 71.92 288 iP P 02 45 40.8 0.0
SNR=11
IZAR Zarasai 72.31 327 eP P 02 45 42.0 -0.5
ISAL Salakas 72.47 327 eP P 02 45 43.0 -0.5
ALNE Al Ain 72.50 287 P P 02 45 44.4 +0.2
ASUD Al Ashush, Dub 72.51 288 P P 02 45 44.7 +0.4
WVOR Wild Horse Val 72.57 50 P P 02 45 45.6 +1.1
IIGN Ignalina 72.58 327 eP P 02 45 43.8 -0.3
IIGN IAmb IAmb 02 45 45.7
comp=Z,17nm,0.9s
NACGM Naroch 72.62 327 e P 02 45 45.0 +0.6
TBLU Trondheim 72.67 339 eP P 02 45 43.6 -0.9
SOC Sochi 72.77 312 eP P 02 45 43.7 -1.8
SOC ePPP PPP 02 50 14.2
SOC eS S 02 55 02.1 -5.0
SOC eSS SS 02 59 47.7 +0.8
SOC pmax pmax
comp=Z,21nm,0.8s
SOC MLR MLR
comp=Z,99nm,13.0s
ANN Anapa 73.41 314 eP P 02 45 49.0 -0.2
ANN pmax pmax
comp=Z,50nm,1.5s
PABE Paberze 73.44 328 eP P 02 45 49.4 +0.2
PABE IAmb IAmb 02 45 50.5
comp=Z,53nm,0.8s
MFID Camas Ranch 73.70 48 P P 02 45 52.4 +1.2
FFC Flin Flon 73.75 33 P P 02 45 51.9 +0.8
FFC Flin Flon 73.75 33 P P 02 45 51.9 +0.8
FFC pmax pmax
comp=Z,7.0nm,0.9s
NC303 NORSAR Array S 73.91 337 eP P 02 45 51.7 -0.2
PBUR Paburge 73.93 329 eP P 02 45 51.3 -0.8
DOMB Dombas 73.96 339 eP P 02 45 52.3 +0.1
HFS Hagfors 74.00 336 LR LR 03 20 33.2
comp=Z,137nm,19.3s,baz=69,slow=38
FCC Fort Churchill 74.03 26 P P 02 45 53.0 +0.4
FCC IAmb IAmb 02 45 54.2
comp=Z,24nm,1.3s
FCC Fort Churchill 74.03 26 P P 02 45 53.0 +0.4
FCC pmax pmax
comp=Z,25nm,1.3s
NB2 NORSAR Subarra 74.10 337 P P 02 45 53.3 +0.2
comp=Z,7.8nm,0.8s,baz=41,slow=6.2
NB2 NORSAR Subarra 74.10 337 P P 02 45 53.3 +0.2
baz=41,slow=6.2
NOA NORSAR Array B 74.10 337 P P 02 45 53.0 -0.1
comp=Z,12nm,0.8s,baz=39,slow=5.9,SNR=48
NOA LR LR 03 21 39.2
comp=Z,140nm,19.4s,baz=35,slow=38
AKASG Malin Array Be 74.19 322 P P 02 45 53.3 -0.4
comp=Z,16nm,0.6s,baz=46,slow=6.1,SNR=81
AKASG LR LR 03 21 31.9
comp=Z,137nm,18.2s,baz=25,slow=38
AKASG Malin Array Be 74.19 322 P P 02 45 53.3 -0.4
AKASG Malin Array Be 74.19 322 iP P 02 45 53.2 -0.4
AKASG pmax pmax
comp=Z,10.0nm,0.4s
AKBB Malin Array Si 74.19 322 IAmb IAmb 02 45 54.2
comp=Z,32nm,1.1s
AKBB Malin Array Si 74.19 322c iP P 02 45 53.1 -0.6
KIEV Kiev 74.20 322 P P 02 45 53.0 -0.7
NORES NORESS Array B 74.24 337 P P 02 45 53.7 -0.1
NORES pmax pmax
comp=Z,1.0nm,0.4s
EGMT Eagleton 74.33 41 IAmb IAmb 02 46 11.4
comp=Z,31nm,1.6s
EGMT Eagleton 74.33 41 P P 02 45 56.0 +1.3
baz=308
NAO01 NORSAR Array S 74.36 337 P P 02 45 54.4 -0.1
TOO Toolangi 74.37 176 P P 02 45 54.4 -0.4
TOO IAmb IAmb 02 47 26.7
comp=Z,33nm,1.8s
TOO Toolangi 74.37 176 P P 02 45 54.4 -0.4
TOO pmax pmax
comp=Z,33nm,1.8s
SUW Suwalki 74.79 327 P P 02 45 56.8 -0.3
SUW IAmb IAmb 02 45 58.4
comp=Z,31nm,0.9s
SUW Suwalki 74.79 327 P P 02 45 56.8 -0.3
SUW pmax pmax
comp=Z,31nm,0.9s
KVN Kaiserville 74.84 52 IAmb IAmb 02 46 15.1
comp=Z,12nm,1.1s
NVAR Mina Array Bea 75.07 53 P P 02 46 01.2 +1.8
comp=Z,1.6nm,0.7s,baz=283,slow=5.8,SNR=10
NVAR pP pP 02 46 15.6 +1.0
comp=Z,4.3nm,0.8s,baz=282,slow=6.3,SNR=12
SIM Simferopol' 75.21 315ceP P 02 45 59.9 +0.2
SIM pmax pmax
comp=Z,23nm,0.9s
KONO Kongsberg 75.69 337 eP P 02 46 01.9 -0.2
KONO Kongsberg 75.69 337⇓eP P 02 46 02.0 -0.2
KONO pmax pmax
comp=Z,26nm,1.7s
SHAO Shalim 75.96 282 iP P 02 46 04.4 0.0
SNR=9.7
H17A Grant Village 76.14 45 P P 02 46 08.5 +3.1
baz=309
SORM Soroca 76.28 321 ⇑P P 02 46 05.2 -0.5
SORM Soroca 76.28 321 P P 02 46 05.2 -0.5
RLMT Red Lodge 76.41 43 IAmb IAmb 02 46 09.3
comp=Z,15nm,1.6s
RLMT Red Lodge 76.41 43 P P 02 46 08.7 +1.8
baz=309
KVT Kavak 76.45 311 P P 02 46 07.6 +0.7
DIKM Dikmen 76.57 312 ⇑P P 02 46 08.7 +1.0
FRB Frobisher Bay 76.77 13 P P 02 46 08.7 +0.5
FRB pmax pmax
comp=Z,19nm,0.9s
MILM Milestii Mici 76.83 319 ⇑P P 02 46 08.1 -0.8
R11A Troy Canyon, C 76.84 52 P P 02 46 11.3 +1.9

baz=307
MPMC Manual Prospec 76.99 55 P P 02 46 10.8 +0.6
baz=307
LAO LASA Array 77.03 41 P P 02 46 11.6 +1.4
baz=311
BZK Bozkurt 77.12 313 ⇑P P 02 46 10.8 +0.2
TPNV Topopah Spring 77.26 53 P P 02 46 12.8 +1.1
TPNV IAmb IAmb 02 46 28.7
comp=Z,12nm,1.2s
TPNV Topopah Spring 77.26 53 P P 02 46 12.8 +1.1
TPNV pmax pmax
comp=Z,12nm,1.3s
TPNV Topopah Spring 77.26 53 P P 02 46 13.2 +1.5
baz=307
LVV L'vov 77.27 324 eP P 02 46 11.2 -0.1
IAS Iasi 77.30 320 P P 02 46 11.6 +0.1
IAS pmax pmax
comp=Z,18nm,0.8s
BEL Belsk 77.34 327 eP P 02 46 12.7 +1.0
BEL Belsk 77.34 327 eP P 02 46 12.7 +1.0
LEOM Leova 77.42 319 ⇑P P 02 46 12.5 +0.3
LEOM Leova 77.42 319 P P 02 46 12.4 +0.3
DUG Dugway, Tooele 77.43 49 P P 02 46 14.9 +2.3
DUG Dugway, Tooele 77.43 49 P P 02 46 14.6 +2.0
baz=308
BW06 Boulder Array 77.74 45 IAmb IAmb 02 48 35.5
comp=Z,17nm,1.9s
BW06 Boulder Array 77.74 45 P P 02 46 15.5 +1.1
baz=310
PDAR Pinedale Array 77.74 45 P P 02 46 15.2 +0.9
comp=Z,1.9nm,0.6s,baz=279,slow=1.6,SNR=29
PDAR pP pP 02 46 29.8 +0.1
comp=Z,2.9nm,1.0s,baz=299,slow=1.9,SNR=5.6
ILGA Ilgaz 77.85 312 P P 02 46 15.5 +0.4
ILGA IAmb IAmb 02 46 16.9
comp=Z,24nm,1.0s
BIR Birlad 77.88 319 ⇓P P 02 46 15.8 +1.0
BIR Birlad 77.88 319 P P 02 46 15.7 +1.0
KWP Kalwaria Pacla 78.02 324 eP P 02 46 16.6 +1.1
KWP Kalwaria Pacla 78.02 324 eP P 02 46 16.6 +1.1
GAZ Gaziantep 78.10 308 IAmb IAmb 02 46 18.1
comp=Z,20nm,1.0s
BUR08 Bucovina Ar. S 78.19 322 IAmb IAmb 02 46 17.9
comp=Z,11nm,0.8s
BURAR Bucovina Array 78.20 322 ⇑P P 02 46 17.0 +0.3
BURAR Bucovina Array 78.20 322 P P 02 46 16.9 +0.2
BURAR Bucovina Array 78.20 322 P P 02 46 17.0 +0.3
JURR Jurilovca 78.21 318 ⇓P P 02 46 16.6 0.0
TESR Tescani 78.22 320 ⇑P P 02 46 16.9 +0.2
SHPR Sheep Range 78.23 53 IAmb IAmb 02 46 34.4
comp=Z,25nm,1.9s
TOPG Topolog 78.40 318 ⇑P P 02 46 17.9 +0.2
PETR Petresti 78.45 319 ⇑P P 02 46 19.2 +1.3
ODBI Odobesti 78.51 319 ⇑P P 02 46 20.0 +1.7
VRI Vrincioaia 78.61 320 ⇓P P 02 46 19.5 +0.7
VRI Vrincioaia 78.61 320 P P 02 46 19.3 +0.4
VRI pmax pmax
comp=Z,27nm,0.8s
PLOR Plostina 78.66 320 ⇑P P 02 46 20.1 +0.9
PLOR Plostina 78.66 320 P P 02 46 20.1 +0.9
KOLS Kolonicke sedl 78.72 324 eP P 02 46 19.8 +0.4
KOLS pmax pmax
comp=Z,10.0nm,1.1s
KOLS Kolonicke sedl 78.72 324 eP P 02 46 19.8 +0.4
BR131 Keskin Array S 78.73 311c iP P 02 46 19.5 -0.2
BRTR Keskin Array B 78.73 311 P P 02 46 19.4 -0.4
comp=Z,6.6nm,0.7s,baz=93,slow=3.8,SNR=37
BRTR PP PP 02 49 17.2 -0.7
comp=Z,1.4nm,1.0s,baz=75,slow=6.1,SNR=4.5
BRTR LR LR 03 26 59.6
comp=Z,33nm,18.7s,baz=300,slow=40
BRTR Keskin Array B 78.73 311 P P 02 46 19.0 -0.8
BRTR Keskin Array B 78.73 311ceP P 02 46 19.6 -0.2
BRTR pmax pmax
comp=Z,7.0nm,0.7s
HARR Harsova 78.76 318 ⇓P P 02 46 19.9 +0.2
HARR Harsova 78.76 318 P P 02 46 19.8 +0.2
UZH Uzhgorod 78.92 324 eP P 02 46 20.0 -0.4
UZH e 02 46 33.4
OJC Ojcow 78.94 326 eP P 02 46 20.9 +0.4
OJC Ojcow 78.94 326 eP P 02 46 20.9 +0.4
OZUR 78.94 320 ⇓P P 02 46 21.8 +1.1
GMRC Granite Mounta 78.95 55 P P 02 46 22.4 +1.4
baz=308
CRVS Cervenica-Dubn 79.12 324 eP P 02 46 22.0 +0.4
CRVS pmax pmax
comp=Z,29nm,1.3s
CRVS Cervenica-Dubn 79.12 324 eP P 02 46 22.0 +0.4
ANTO Ankara 79.14 312 P P 02 46 21.6 -0.4
ANTO IAmb IAmb 02 46 23.9
comp=Z,14nm,0.6s
ANTO Ankara 79.14 312 P P 02 46 21.6 -0.4
TRPA Tarpa 79.15 323 ⇑P P 02 46 22.5 +0.8
ICOR Ion Corvin 79.21 318 ⇓P P 02 46 23.0 +0.8
DOPR Dopca 79.23 320 ⇓P P 02 46 23.3 +1.0
MLR Muntele Rosu 79.27 320 LR LR 03 24 21.4
comp=Z,154nm,18.6s,baz=90,slow=38
MLR Muntele Rosu 79.27 320 ⇑P P 02 46 22.8 +0.2
MLR Muntele Rosu 79.27 320 P P 02 46 22.0 -0.6
MLR pmax pmax
comp=Z,9.0nm,1.8s
NIE Niedzica 79.29 325 eP P 02 46 23.5 +1.0
NIE Niedzica 79.29 325 eP P 02 46 23.5 +1.0
RASA Rasa 79.50 318 ⇓P P 02 46 24.6 +0.9
ULM Lac du Bonnet 79.55 33 P P 02 46 24.1 +0.3
comp=Z,2.3nm,0.4s,baz=316,slow=7.7,SNR=8.3
ULM Lac du Bonnet 79.55 33 P P 02 46 24.1 +0.3
ULM Lac du Bonnet 79.55 33⇓eP P 02 46 24.5 +0.6
MONP2 Monument Peak 79.59 57 P P 02 46 26.5 +1.7
baz=308
CJR Cluj-Napoca 79.62 322 ⇑P P 02 46 25.4 +1.0
CJR Cluj-Napoca 79.62 322 P P 02 46 25.4 +1.0
VOIR 79.77 320 ⇑P P 02 46 26.1 +0.8
VOIR 79.77 320 P P 02 46 26.0 +0.7
VOIR pmax pmax
comp=Z,8.0nm,0.7s
KECS Kecovo 79.87 324 eP P 02 46 26.0 +0.3
KECS pmax pmax
comp=Z,8.0nm,1.1s
KECS Kecovo 79.87 324 eP P 02 46 26.0 +0.3
RSSD Black Hills 79.89 42 P P 02 46 27.0 +0.8
RSSD Black Hills 79.89 42 P P 02 46 27.0 +0.8
RSSD pmax pmax
comp=Z,19nm,2.0s
RSSD Black Hills 79.89 42 P P 02 46 26.8 +0.6
baz=313
OKC Ostrava-Krasne 79.95 327⇑eP P 02 46 26.4 +0.4
OKC Ostrava-Krasne 79.95 327 eP P 02 46 26.4 +0.4
BSEG Bad Segeberg 79.97 333 P P 02 46 26.9 +0.9
BSEG pmax pmax
comp=Z,18nm,1.0s
KSP Ksiaz 80.00 328 eP P 02 46 26.9 +0.6
KSP Ksiaz 80.00 328 eP P 02 46 26.9 +0.6
DRGR 80.01 322 ⇑P P 02 46 26.9 +0.3
DRGR 80.01 322 P P 02 46 27.0 +0.5
DRGR pmax pmax
comp=Z,24nm,1.8s
ARR Arges 80.03 320 ⇑P P 02 46 28.2 +1.5
U15A North Rim 80.09 52 IAmb IAmb 02 46 45.2
comp=Z,33nm,1.8s
O20A White River Ci 80.18 47 P P 02 46 29.4 +1.6
baz=311
OSTC Ostas 80.25 328⇑eP P 02 46 28.8 +1.1
MORC Moravsky Berou 80.26 327 eP P 02 46 28.1 +0.3
MORC Moravsky Berou 80.26 327 ⇑P P 02 46 28.4 +0.5
MORC Moravsky Berou 80.26 327 IAmb IAmb 02 46 29.3
comp=Z,16nm,1.0s
MORC Moravsky Berou 80.26 327 P P 02 46 28.3 +0.5
MORC pmax pmax
comp=Z,16nm,1.0s
CHVC Chvalec 80.29 328⇑iP P 02 46 28.5 +0.6
DPC Dobruska-Polom 80.36 328⇑eP P 02 46 29.1 +0.8
DPC Dobruska-Polom 80.36 328 eP P 02 46 29.1 +0.8
KRLC Kraliky 80.37 327⇑eP P 02 46 28.6 +0.2
KRLC Kraliky 80.37 327 eP P 02 46 28.6 +0.2
RAYN Ar Rayn 80.52 292 iP P 02 46 29.3 -0.3
SNR=24
RAYN Ar Rayn 80.52 292 P P 02 46 29.2 -0.5
RAYN IAmb IAmb 02 46 30.0
comp=Z,16nm,0.6s
RAYN Ar Rayn 80.52 292 P P 02 46 29.2 -0.5
RAYN pmax pmax
comp=Z,16nm,0.6s
DEV Deva 80.55 321 P P 02 46 29.8 +0.5

DEV pmax pmax
comp=Z,12nm,1.0s
PSZ Piszkesteto 80.55 324 ⇑P P 02 46 30.2 +0.7
PSZ Piszkesteto 80.55 324 IAmb IAmb 02 46 31.1
comp=Z,22nm,1.0s
PSZ Piszkesteto 80.55 324 P P 02 46 30.5 +1.1
PSZ pmax pmax
comp=Z,22nm,1.3s
GLA Glamis 80.55 56 IAmb IAmb 02 46 47.7
comp=Z,25nm,1.4s
GLA Glamis 80.55 56 P P 02 46 31.3 +1.6
baz=308
SOCY Socotra 80.60 278 P P 02 46 28.5 -1.7
VYHS Vyhne 80.62 325 eP P 02 46 30.6 +0.9
VYHS pmax pmax
comp=Z,12nm,0.9s
VYHS Vyhne 80.62 325 eP P 02 46 30.6 +0.9
JAVC Velka Javorina 80.88 326 eP P 02 46 32.6 +1.5
BRG Berggiesshubel 80.95 329 i P P 02 46 31.7 +0.3
BRG pmax pmax
comp=Z,17nm,1.0s
GZR Gura Zlata 80.95 321 ⇑P P 02 46 31.9 +0.2
PVCC Panska Ves 80.96 329⇑iP P 02 46 32.2 +0.7
PVCC Panska Ves 80.96 329⇑iP P 02 46 32.2 +0.7
CLL Collm 81.00 330⇑iP P 02 46 31.6 0.0
comp=Z,23nm,0.9s
CLL i PcP PcP 02 46 36.5 -1.5
CLL e 02 46 45.0
CLL i pP pP 02 46 48.5 +1.4
CLL ePP PP 02 49 37.0 +0.8
CLL Collm 81.00 330 IAmb IAmb 02 46 32.6
comp=Z,22nm,0.9s
CLL Collm 81.00 330⇑iP P 02 46 31.6 0.0
CLL pmax pmax
comp=Z,23nm,0.9s
N23A Red Feather La 81.00 45 P P 02 46 34.0 +1.8
baz=312
VRAC Vranov 81.02 327 eP P 02 46 32.4 +0.6
VRAC Vranov 81.02 327 ⇑P P 02 46 32.6 +0.7
VRAC Vranov 81.02 327 P P 02 46 32.7 +0.9
VRAC pmax pmax
comp=Z,19nm,1.4s
ELND Elena 81.05 318 ⇓P P 02 46 32.4 +0.3
VLAD Vladila 81.09 319 ⇑P P 02 46 32.4 +0.1
Y14A Wickenburg 81.20 54 P P 02 46 34.3 +1.2
SMOL Smolenice 81.24 326 eP P 02 46 34.0 +1.0
SMOL pmax pmax
comp=Z,7.0nm,0.8s
SMOL Smolenice 81.24 326 eP P 02 46 34.0 +1.0
WUAZ Wupatki 81.24 52 P P 02 46 35.3 +1.8
baz=310
KRUC Moravsky 81.29 327 eP P 02 46 33.6 +0.3
KRUC Moravsky 81.29 327 P P 02 46 33.9 +0.7
KRUC pmax pmax
comp=Z,19nm,1.2s
GOPC GO Pecny, Ondr 81.34 328⇑eP P 02 46 34.0 +0.5
GOPC GO Pecny, Ondr 81.34 328 eP P 02 46 34.0 +0.5
BZS Buzias 81.37 322 ⇑P P 02 46 33.6 -0.1
BZS Buzias 81.37 322 P P 02 46 33.7 -0.1
BZS pmax pmax
comp=Z,14nm,1.1s
PRU Pruhonice 81.38 328⇑eP P 02 46 34.2 +0.5
PRU Pruhonice 81.38 328 eP P 02 46 34.2 +0.5
PLVB Pleven 81.40 319 ⇑P P 02 46 34.1 +0.1
MODS Modra-Piesok 81.41 326 eP P 02 46 33.9 0.0
MODS pmax pmax
comp=Z,15nm,1.0s
MODS Modra-Piesok 81.41 326 eP P 02 46 33.9 0.0
TREC Trest 81.51 328 P P 02 46 35.3 +0.9
TREC pmax pmax
comp=Z,9.0nm,1.2s
CLZ Clausthal 81.61 332 P P 02 46 35.4 +0.5
CLZ pmax pmax
comp=Z,20nm,1.2s
MMAI Mount Meron Ar 81.84 305 LR LR 03 25 45.6
comp=Z,101nm,21.4s,baz=45,slow=38
PBCC Pribram 81.84 329⇑eP P 02 46 36.4 +0.2
ISCO Idaho Springs 81.92 46 P P 02 46 38.9 +1.7
baz=312
MVCO Mesa Verde 81.93 49 IAmb IAmb 02 46 56.9
comp=Z,17nm,1.6s
MVCO Mesa Verde 81.93 49 P P 02 46 38.1 +1.0
baz=311
CSS Mathiatis 81.94 308 P P 02 46 36.3 -0.6
CSS IAmb IAmb 02 46 39.3
comp=Z,16nm,0.7s
NKC Novy Kostel 82.06 330⇑eP P 02 46 37.2 -0.1
NKC Novy Kostel 82.06 330 eP P 02 46 37.2 -0.1
SOP Sopron 82.25 326 P P 02 46 39.2 +0.9
SOP pmax pmax
comp=Z,24nm,1.0s
CONA Conrad Observa 82.38 326 eP P 02 46 39.9 +0.8
comp=Z,5.9nm,0.8s
MORH Mrgy, Hungar 82.38 324 eP P 02 46 38.2 -0.8
KHC Kasperske Hory 82.44 328⇑iP P 02 46 39.6 +0.2
KHC Kasperske Hory 82.44 328ceP P 02 46 39.9 +0.5
KHC pmax pmax
comp=Z,32nm,1.0s
214A Organ Pipe Nat 82.57 56 P P 02 46 42.0 +1.6
baz=309
S22A 4UR Ranch, Cre 82.58 48 P P 02 46 42.8 +2.2
baz=312
GEC2 GERESS Array S 82.61 328 IAmb IAmb 02 46 41.2
comp=Z,14nm,1.1s
GEC2 GERESS Array S 82.61 328 P P 02 46 40.4 +0.1
GEC2 pmax pmax
comp=Z,13nm,1.0s
GERES GERESS Array B 82.61 328 P P 02 46 40.2 -0.1
comp=Z,5.2nm,0.6s,baz=38,slow=5.8,SNR=43
GERES LR LR 03 26 52.6
comp=Z,154nm,18.4s,baz=286,slow=38
VTS Vitosha 82.67 319 ⇑P P 02 46 41.4 +0.6
VTS Vitosha 82.67 319 IAmb IAmb 02 46 42.4
comp=Z,11nm,0.7s
VTS Vitosha 82.67 319 P P 02 46 41.6 +0.8
VTS pmax pmax
comp=Z,19nm,1.1s
WET Wettzell 82.73 329 P P 02 46 41.7 +0.9
WET pmax pmax
comp=Z,14nm,1.2s
Q24A Divide 82.75 46 P P 02 46 42.9 +1.4
baz=313
EZN Ezine 82.92 315 P P 02 46 43.6 +1.7
GRA1 Grafenberg Arr 82.97 330 IAmb IAmb 02 46 43.7
comp=Z,25nm,0.9s
GRF Grafenberg Arr 82.97 330 eP P 02 46 42.6 +0.5
comp=Z,23nm,0.9s,baz=42,slow=4.5
GRF Grafenberg Arr 82.97 330 P P 02 46 43.1 +1.0
GRF pmax pmax
comp=Z,30nm,1.1s
GRB1 Grafenberg Arr 83.03 330 P P 02 46 43.1 +0.7
GRB1 pmax pmax
comp=Z,33nm,1.0s
ARSA Arzberg 83.04 326 eP P 02 46 42.7 +0.3
comp=Z,3.0nm,0.7s
EKA Eskdalemuir Ar 83.06 340 LR LR 03 27 10.4
comp=Z,119nm,18.9s,baz=10.0,slow=38
MOA Molln 83.14 327 ePcP P 02 46 43.7 +0.7
comp=Z,4.7nm,0.8s
EYMN Ely 83.18 33 P P 02 46 42.7 -0.4
baz=320
DIVS Divibare 83.27 322 eP P 02 46 42.4 -1.4
SDCO Great Sand Dun 83.36 47 P P 02 46 45.8 +1.1
baz=312
SRS Serrai 83.53 318 P P 02 46 44.9 -0.2
SRS pmax pmax
comp=Z,14nm,1.1s
TUC Tucson 83.67 54 P P 02 46 47.7 +1.7
baz=310
SOKA Soboth 83.69 326 eP P 02 46 46.2 +0.3
comp=Z,14nm,1.2s,SNR=6.8
BBLS Lazići 83.73 322 eP P 02 46 46.7 +0.6
HAPS Han Pijesak,BI 83.79 322 eP P 02 46 46.0 -0.5
KNT Kendrikon 83.87 318 P P 02 46 47.0 +0.2
KNT pmax pmax
comp=Z,15nm,1.1s
STIP Stip 83.87 319 i P P 02 46 46.1 -0.8
RUDO Rudo 83.93 322 eP P 02 46 45.9 -1.2
VAY Valandovo 83.93 318 i P P 02 46 47.5 +0.3
VAY Valandovo 83.93 318 P P 02 46 47.5 +0.3
VAY pmax pmax
comp=Z,37nm,1.1s
ECSD EROS Data Cent 83.97 38 P P 02 46 47.2 -0.1
baz=317
OBKA Obir 84.04 326 eP P 02 46 47.1 -0.6

comp=Z,1.4nm,0.4s
SKO Skopje 84.06 319 i P P 02 46 47.4 -0.4
KBA Koelnbreinsper 84.13 327 ePcP P 02 46 49.2 +0.9
comp=Z,4.0nm,0.6s
PLE Pljevlja 84.13 321 P P 02 46 49.9 +1.7
CRES Cresnjev 84.15 325 eP P 02 46 47.7 -0.5
BLY Banja Luka 84.15 324 eP P 02 46 47.4 -0.9
FUR Furstenfeldbru 84.15 329 P P 02 46 47.9 -0.3
FUR pmax pmax
comp=Z,51nm,0.8s
E38A The Farm, Brul 84.18 34 IAmb IAmb 02 46 49.3
comp=Z,19nm,1.4s
EIL Elat 84.25 303 LR LR 03 27 44.6
comp=Z,50nm,19.7s,baz=108,slow=38
GRG Griva 84.28 318 P P 02 46 48.7 -0.3
GRG pmax pmax
comp=Z,13nm,1.0s
ARG Arkhangelos 84.31 312 P P 02 46 49.8 +0.6
ARG pmax pmax
comp=Z,61nm,0.9s
PMOR Pomariorio Ree 84.31 113 eT T 04 19 25.4
comp=Z,18nm,0.2s
T25A Trinidad 84.41 47 IAmb IAmb 02 47 07.0
comp=Z,7.7nm,0.8s
T25A Trinidad 84.41 47 P P 02 46 51.8 +1.8
baz=313
MGRS Mrkonjic Grad 84.45 323 eP P 02 46 49.1 -0.6
STU Stuttgart 84.51 330 P P 02 46 49.9 0.0
STU Stuttgart 84.51 330 P P 02 46 49.9 0.0
STU pmax pmax
comp=Z,21nm,0.8s
ANMO Albuquerque 84.67 50 P P 02 46 52.9 +1.7
ANMO Albuquerque 84.67 50 P P 02 46 52.9 +1.7
ANMO pmax pmax
comp=Z,6.0nm,0.9s
ANMO Albuquerque 84.67 50 P P 02 46 53.0 +1.7
baz=312
WATA Walderalm 84.68 328 i PcP P 02 46 51.2 +0.2
comp=Z,1.8nm,0.5s
ABTA Abfaltersbach 84.74 327 eP P 02 46 50.9 -0.4
comp=Z,4.3nm,0.8s
PPT Papeete 84.77 116 LR LR 03 15 49.5
comp=Z,128nm,21.4s,baz=192,slow=29
LIT Litokhoron 84.84 318 P P 02 46 51.7 -0.1
LIT pmax pmax
comp=Z,53nm,0.9s
PDG Podgorica 84.85 321 ⇑P P 02 46 51.8 +0.1
PDG Podgorica 84.85 321 eP P 02 46 51.3 -0.4
BRY Bratogost 84.86 322 eP P 02 46 51.1 -0.9
MOTA Moosalm 84.87 329 i PcP P 02 46 52.0 0.0
comp=Z,5.5nm,0.8s
RETA Reutte 84.90 329 ePcP P 02 46 52.3 +0.3
comp=Z,13nm,1.0s
SQTA Sankt Quirin 84.93 328 i P P 02 46 51.7 -0.5
comp=Z,4.0nm,0.6s
TIAR Tiarei 84.93 116 eT T 04 20 11.0
comp=Z,6.2nm,0.3s
FNA Florina 84.95 319 IAmb IAmb 02 46 52.8
comp=Z,19nm,1.2s
FNA Florina 84.95 319 P P 02 46 51.8 -0.6
FNA pmax pmax
comp=Z,15nm,1.1s
OHR Ohrid 85.02 319 i P P 02 46 52.3 -0.4
DRME Dracevica, Mon 85.07 321 eP P 02 46 51.8 -1.1
BFO Black Forest 85.21 331 P P 02 46 53.0 -0.5
BFO Black Forest 85.21 331 P P 02 46 53.0 -0.5
BFO pmax pmax
comp=Z,22nm,1.0s
APE Apeiranthos 85.26 314 ⇑P P 02 46 52.8 -1.2
APE Apeiranthos 85.26 314 P P 02 46 53.2 -0.8
APE pmax pmax
comp=Z,40nm,0.9s
FETA Feichten 85.28 329 ePcP P 02 46 54.0 0.0
comp=Z,4.8nm,0.8s
SCHQ Schefferville 85.34 16 P P 02 46 54.7 +0.7
comp=Z,6.7nm,1.0s,baz=14,slow=6.4,SNR=9.4
SCHQ Schefferville 85.34 16 P P 02 46 54.4 +0.4
SCHQ IAmb IAmb 02 46 55.7
comp=Z,6.0nm,0.9s
DAVA Damuels 85.42 329 i PcP P 02 46 54.9 +0.2
comp=Z,14nm,0.9s
121A Cookes Peak, D 85.44 52 P P 02 46 56.7 +1.5
baz=312
AGG Agios Georgios 85.69 317 IAmb IAmb 02 46 55.6
comp=Z,8.2nm,0.8s
ECH Echery 85.76 331 P P 02 46 54.8 -1.4
ECH pmax pmax
comp=Z,24nm,1.2s
FUORN Ofenpass-Fuorn 85.80 329 IAmb IAmb 02 46 57.9
comp=Z,18nm,0.9s
DAVOX Davos/Dischmat 85.83 329 LR LR 03 28 47.8
comp=Z,166nm,18.0s,baz=296,slow=38
E44A Grand Marais A 86.56 30 P P 02 47 01.0 +0.8
baz=324
DAMY Dhamar 86.70 286 P P 02 47 02.4 +0.7
DAMY IAmb IAmb 02 47 03.8
comp=Z,20nm,1.2s
IDI Anoyia 86.87 313 LR LR 03 30 29.2
comp=Z,53nm,18.5s,baz=358,slow=39
D46A Sault St. Mari 87.09 29 P P 02 47 03.1 +0.4
baz=326
D47A Chapleau 87.31 29 P P 02 47 03.9 +0.1
baz=326
LSQQ Lebel-sur-Quev 87.78 24 P P 02 47 06.5 +0.5
baz=330
VLDQ Val d'Or 88.44 25 P P 02 47 08.8 -0.3
VLDQ IAmb IAmb 02 47 09.8
comp=Z,19nm,1.4s
TBI Tubuai 88.66 121 eLR LR 03 15 30.3
comp=Z,202nm,27.5s
TBI Tubuai 88.66 121 eT T 04 24 50.4
comp=Z,59nm,0.3s
D53A Lac Vacive, Po 89.25 25 P P 02 47 13.3 +0.3
baz=330
WMOK Wichita Mounta 89.35 46 P P 02 47 14.9 +1.2
WMOK pmax pmax
comp=Z,6.0nm,2.9s
D54A Lac Fusel, La 89.55 25 P P 02 47 14.7 +0.3
baz=331
TX31 Lajitas Ar. Si 90.20 52 IAmb IAmb 02 47 35.9
comp=Z,14nm,1.9s
TX32 Lajitas Array 90.20 52 IAmb IAmb 02 47 35.9
comp=Z,15nm,1.9s
TXAR Lajitas Array 90.20 52 P P 02 47 19.1 +1.2
comp=Z,1.8nm,0.5s,baz=298,slow=3.1,SNR=35
TXAR pP pP 02 47 33.9 +0.3
comp=Z,0.9nm,0.5s,baz=304,slow=2.6,SNR=6.6
TXAR LR LR 03 21 40.4
comp=Z,26nm,21.6s,baz=0.0,slow=31
TXAR Lajitas Array 90.20 52 P P 02 47 18.4 +0.5
D56A ZEC Mazanza, M 90.26 24 P P 02 47 18.0 +0.3
baz=332
ABTX Abilene, Hawle 90.36 48 P P 02 47 19.9 +1.4
baz=316
D57A Chemin Vers le 90.56 23 P P 02 47 20.0 +0.8
baz=333
E57A Chemin Saint G 91.02 24 P P 02 47 21.6 +0.4
baz=333
U40A Yellville 91.40 41 IAmb IAmb 02 47 24.4
comp=Z,6.8nm,0.8s
U40A Yellville 91.40 41 P P 02 47 23.8 +0.6
baz=320
D60A Saint Jean D'O 91.56 21 P P 02 47 23.9 +0.3
baz=335
H06N1 SOCORRO T-PHAS92.19 64 T T 04 28 05.6
SNR=7.7
MIAR Mount Ida 92.38 42 P P 02 47 29.0 +1.2
baz=319
ESDC Sonseca Array 97.20 334 LR LR 03 35 08.2
comp=Z,93nm,19.2s,baz=340,slow=38
TORD Torodi Ar. Bea 117.21 315 PKP PKPdf 02 53 02.0 -0.7
comp=Z,0.8nm,0.5s,baz=18,slow=1.4,SNR=30
TORD Torodi Ar. Bea 117.21 315 PKPdf 02 53 02.3 -0.4
SDV Santo Domingo 125.38 40 PKPdf 02 53 18.8 +0.1
DBIC Dimbokro 126.17 317 PKP PKPdf 02 53 19.8 -0.1
comp=Z,3.3nm,0.6s,baz=10.0,slow=2.2,SNR=10
DBIC PP PP 02 55 10.8 -2.9
comp=Z,4.3nm,0.9s,baz=30,slow=8.1,SNR=3.5
BOSA Boshof 126.45 259 PKP PKPdf 02 53 20.3 +0.2
comp=Z,4.1nm,0.8s,baz=16,slow=4.6,SNR=6.1
SYO Syowa Base 128.18 207⇓eX PKiKP 02 53 36.0 +13
SAML Samuel 144.32 44 PKPdf 02 53 53.3 -0.2
SAML Samuel 144.32 44 PKIKP PKPdf 02 53 53.3 -0.2
LPAZ La Paz 146.79 59 PKPbc PKPbc 02 54 01.0 +0.8
comp=Z,6.1nm,0.5s,baz=353,slow=2.0,SNR=33
LPAZ pPKPbc pPKPbc 02 54 15.9 -0.3
comp=Z,6.9nm,0.9s,baz=348,slow=5.8,SNR=4.6

LPAZ La Paz 146.79 59 PKPbc 02 54 00.8 +0.6
LPAZ La Paz 146.79 59 PKP2 PKPbc 02 54 00.8 +0.6
MNMC Minye Minye 147.65 65 PKPbc 02 54 03.1 +0.9
PB11 IPOC Station P 148.01 66 PKPbc 02 54 03.6 +0.7
GO01 Chusmiza 148.28 65 PKPbc 02 54 04.7 +0.7

*IDC **08** 02:43:48.0±0.8, 29.27N×143.08E, h0km, mb4.0/12, mb1 4.2/14, mb1mx4.0/34, mbtmp4.0/14, ML3.7/2, MS3.4/3, Ms1 3.4/3, ms1mx2.6/40, Error ellipse: s-maj=24.0km s-min=19.7km az=109.0*
*NEIC **08** 02:43:49.5±1.6, 29.24N±0.04×143.08E±0.2, h10km±4km, mb4.4/10, Error ellipse: s-maj=19.9km s-min=5.7km az=86.0*
ISC 08 02:43:49.4±0.7, 29.20N±0.07×143.0E±0.1, h10km, n33, σ1.06/30, mb4.0/16, MS3.7/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	2.21	199	Pn	Pn	02 44 26.5	+0.3
	28nm,0.3s,baz=18,slow=22,SNR=12						
JCJ				Sn	Sn	02 44 52.0	-1.6
	76nm,0.3s,baz=265,slow=23,SNR=11						
MJAR	Matsushiro Arr	8.34	333	Pn	Pn	02 45 49.0	-1.4
	0.6nm,0.3s,baz=148,slow=11,SNR=27						
MJAR	Matsushiro Arr	8.34	333		Pn	02 45 51.2	+0.8
MAJO	Matsushiro	8.34	333		Pn	02 45 48.9	-1.5
MJB9	Matsu-Tunnel	8.35	333		Pn	02 45 48.5	-2.0
KSRS	Korea Array	15.02	307	Pn	P	02 47 25.1	-2.0
	0.3nm,0.3s,baz=110,slow=14,SNR=4.7						
KLR	Kul'dur	21.76	340	P	P	02 48 43.6	+2.5
	2.7nm,0.7s,baz=145,slow=7.6,SNR=9.9						
PETK	Petropavlovsk-	26.23	20	LR	LR	03 01 06.3	
	comp=Z,15nm,18.5s,baz=240,slow=40						
SONM	Songino Array	33.72	314	P	P	02 50 32.1	+1.1
	1.3nm,0.8s,baz=116,slow=7.9,SNR=8.2						
SONM	Songino Array	33.72	314	IAmb	IAmb	02 50 33.0	
	comp=Z,1.7nm,1.0s						
WRA	Warramunga Arr	49.56	191	P	P	02 52 41.5	+0.8
	comp=Z,0.7nm,0.6s,baz=12,slow=8.4,SNR=6.2						
MK31	Makanchi Array	49.70	308	P	P	02 52 42.3	+0.7
MKAR	Makanchi Array	49.70	308	P	P	02 52 42.3	+0.7
	comp=Z,2.5nm,0.7s,baz=92,slow=9.2,SNR=26						
MKAR	Makanchi Array	49.70	308	P	P	02 52 42.1	+0.6
MAKZ	Makanchi	49.91	308	P	P	02 52 43.5	+0.3
KURK	Kurchatov	52.03	313	P	P	02 52 59.2	+0.2
KURK				IAmb	IAmb	02 52 60.0	
	comp=Z,2.8nm,0.8s						
IL31		55.54	29	P	P	02 53 23.7	-0.7
ILAR	Eielson Array	55.54	29	P	P	02 53 23.2	-1.3
	comp=Z,1.4nm,0.6s,baz=260,slow=6.4,SNR=19						
BRVK	Borovoye	57.04	317	P	P	02 53 35.4	0.0
BRVK				IAmb	IAmb	02 53 36.9	
	comp=Z,6.8nm,1.5s						
KK31	Karatay Array	58.44	305	P	P	02 53 46.3	+0.8
KK31				IAmb	IAmb	02 53 47.4	
	comp=Z,2.5nm,0.7s						
KKAR	Karatay Array	58.44	305	P	P	02 53 46.0	+0.5
INK	Inuvik	60.83	25	P	P	02 54 01.2	-0.2
	comp=Z,1.3nm,0.5s,baz=288,slow=6.2,SNR=19						
AKTO	Aktyubinsk	65.02	315	LR	LR	03 24 08.1	
	comp=Z,50nm,18.2s,baz=315,slow=37						
KIRV	Kirov	67.35	325	LR	LR	03 25 14.8	
	comp=Z,70nm,19.2s,baz=264,slow=37						
YKA	Yellowknife Ar	69.97	29	P	P	02 54 59.9	-0.7
	comp=Z,0.8nm,0.6s,baz=292,slow=6.6,SNR=8.5						
FINES	FINESS Array B	76.37	334	P	P	02 55 38.5	0.0
	comp=Z,1.7nm,0.8s,baz=189,slow=32,SNR=5.8						
NVAR	Mina Array Bea	78.68	52	P	P	02 55 52.5	+0.3
	comp=Z,1.0nm,0.9s,baz=276,slow=6.6,SNR=4.7						
AKASG	Malin Array Be	81.33	324	P	P	02 56 05.6	-0.5
	comp=Z,0.4nm,0.4s,baz=48,slow=5.5,SNR=3.4						
NB2	NORSAR Subarra	81.92	338	P	P	02 56 08.5	-0.5
	comp=Z,0.5nm,0.6s,baz=41,slow=5.3						
NOA	NORSAR Array B	81.92	338	P	P	02 56 08.7	-0.3
	comp=Z,0.7nm,0.6s,baz=41,slow=5.2,SNR=3.5						
PDAR	Pinedale Array	82.23	45	P	P	02 56 10.8	-0.5
	comp=Z,0.4nm,0.8s,baz=197,slow=1.3,SNR=4.3						
RAYN	Ar Rayn	84.93	294	P	P	02 56 25.9	+0.6
TXAR	Lajitas Array	93.79	53	P	P	02 57 07.7	+0.5
	comp=Z,0.7nm,0.9s,baz=276,slow=3.6,SNR=4.5						

ISK 08 02:44:28.3, 37.03N×28.44E, h13km, ML1.8/11, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.17	310	PG	Pg	02 44 32.4	+0.1
YER				SG	Sg	02 44 35.7	+0.7
TURN	Turunc	0.20	140	PG	Pb	02 44 34.9	+1.1
TURN				SG	Sb	02 44 39.6	+2.1
DALY	Dalyan (Mula)	0.27	141	PG	Pg	02 44 34.2	+0.2
DALY				SG	Sb	02 44 38.8	-0.7
MRSB	Marmaris-Mugla	0.37	212	PG	Pg	02 44 35.9	+0.2
FETY	Fethiye	0.65	127	PG	Pb	02 44 41.4	-0.1
DAT	Datca	0.76	247	PG	Pg	02 44 43.1	+0.1
ARG	Arkhangelos	0.85	198	PG	Pn	02 44 45.5	-0.4
BODT	Bodrum	0.91	272	PG	Pb	02 44 45.9	0.0
AYDB	Zeytinkoy-Aydi	1.02	335	PG	Pn	02 44 48.2	-0.2
GCAM	G?zelcaml?	1.17	305	PN	Pg	02 44 50.9	0.0
AKAS	Kas	1.23	130	PN	Pg	02 44 52.6	+0.7

*DDA **08** 02:47:56.6, 41.43N×44.07E, h7km±3km, ML1.7*
*TIF **08** 02:47:56.2, 41.42N×44.09E, h14km*
*NORS **08** 02:47:56.2±0.0, 41.41N×44.21E, h1km, MPVA3.3*
ISC 08 02:47:56.7±0.9, 41.41N±0.02×44.07E±0.02, h11km±7km, n30, σ1.08/57, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRLG	Trialeti	0.13	12	P	Pg	02 48 00.1	+0.2
TRLG				S	Sg	02 48 02.2	0.0
KZRT	Kazreti	0.25	96	P	Pg	02 48 01.9	0.0
KZRT				S	Sg	02 48 05.2	-0.1
KZRT	Kazreti	0.25	96	i P	Pg	02 48 01.8	0.0
KZRT				i S	Sg	02 48 05.2	-0.1
BGD	Bogdanovka	0.38	247	P	Pb	02 48 05.0	-0.7
BGD				S	Sg	02 48 10.8	+1.4
AKH	Akhalkalaki	0.43	270	P	Pb	02 48 05.8	-0.7
AKH				S	Sg	02 48 12.2	+1.2
TBLG	Delisi	0.59	58	P	Pb	02 48 08.1	-1.0
TBLG				S	Sb	02 48 16.5	-1.1
TBLG	Delisi	0.59	58	i P	Pb	02 48 08.2	-1.0
TBLG				i S	Sb	02 48 16.5	-1.1
TBLG				IAML		02 48 17.0	
	comp=E,98nm,0.5s						
TBLG				IAML		02 48 17.0	
	comp=N,100nm,0.2s						
BTNK	Botanikuri	0.61	64	P	Pb	02 48 08.4	-1.1
BTNK				S	Sb	02 48 16.8	-1.3
BTNK	Botanikuri	0.61	64	i P	Pb	02 48 08.4	-1.1
BTNK				i S	Sb	02 48 16.8	-1.3
BTNK				IAML		02 48 17.0	
	comp=E,72nm,0.1s						
BTNK				IAML		02 48 17.0	
	comp=N,113nm,0.1s						
EAK	Akyaka	0.81	206	i P	Pg	02 48 12.2	0.0
EAK				IAML		02 48 23.0	
	comp=E,56nm,0.5s						
EAK				i S	Sb	02 48 23.6	-0.2
EAK				IAML		02 48 31.0	
	comp=N,43nm,0.4s						
EPOS	Posof	1.01	276	i P	Pb	02 48 16.4	+0.1
EPOS				IAML		02 49 00.0	
	comp=E,15nm,1.7s						
EPOS				IAML		02 49 00.0	
	comp=N,8.9nm,1.5s						
GUDG	Gudauri	1.09	16	P	Pg	02 48 16.6	-1.2
GUDG				S	Sb	02 48 31.8	-0.4
GUDG	Gudauri	1.09	16	ePg	Pg	02 48 16.6	-1.2
GUDG				eSg	Sb	02 48 31.9	-0.3
DIGO	Kars	1.13	208	i P	Pg	02 48 18.1	-0.2
DIGO				i S	Sg	02 48 33.2	+0.1
DIGO				IAML		02 48 34.0	
	comp=N,51nm,0.3s						
DIGO				IAML		02 48 35.0	
	comp=E,48nm,0.5s						
TKB	Tkibuli	1.23	320	P	Pn	02 48 20.1	+0.2
TKB				S	Sn	02 48 37.1	+0.5
ONI	Oni	1.26	339	P	Pn	02 48 20.3	-0.1
ONI				S	Sn	02 48 37.8	+0.3
ZEI	Tsey	1.38	355	ePg	Pg	02 48 22.9	-0.3
ZEI				eSg	Sn	02 48 42.3	+1.8

LACR	**Lac**	**1.42**	**7**	ePg	**Pg**	**02 48 23.4**	**-0.6**
LACR				eSg	**Sg**	**02 48 42.8**	**+0.3**
DIGR	**Digorskoe uzhe**	**1.53**	**346**	ePg	**Pg**	**02 48 25.9**	**-0.2**
DIGR				eSg	**Sg**	**02 48 47.7**	**+1.8**
DDFL	**Dedoflistskaro**	**1.54**	**88**	P	**Pg**	**02 48 26.5**	**+0.2**
DDFL				S	**Sg**	**02 48 51.5**	**+5.2**
DDFL	**Dedoflistskaro**	**1.54**	**88**	i P	**Pg**	**02 48 26.5**	**+0.2**
DDFL				S	**Sg**	**02 48 51.5**	**+5.2**
IGDI	**IGDIR**	**1.54**	**180**	i P	**Pb**	**02 48 25.2**	**-0.2**
IGDI				i S	**Sg**	**02 48 46.0**	**-0.4**
IGDI				IAML		02 48 46.0	
	comp=E,7.8nm,0.5s						
IGDI				IAML		02 48 46.0	
	comp=N,9.5nm,0.3s						
DAGI	**Agillar**	**1.66**	**259**	i P	**Pg**	**02 48 28.1**	**-0.3**
DAGI				i S	**Sg**	**02 48 51.2**	**+1.2**
DAGI				IAML		02 48 52.0	
	comp=N,8.9nm,0.7s						
DAGI				IAML		02 48 54.0	
	comp=E,6.3nm,0.5s						
KORR	**Kora**	**1.67**	**0**	ePg	**Pg**	**02 48 29.2**	**+0.5**
KORR				eSg	**Sg**	**02 48 51.1**	**+0.6**
LGD	**Lagodekhi**	**1.68**	**75**	P	**Sg**	**02 48 28.4**	**-0.6**
LGD				S	**Sg**	**02 48 52.0**	**+1.2**
BATM	**Batumi**	**1.79**	**277**	P	**Pb**	**02 48 29.8**	**+0.2**
BATM				S	**Sg**	**02 48 53.5**	**-0.8**
DBOC	**Borcka**	**1.81**	**269**	i P	**Pb**	**02 48 30.2**	**+0.3**
DBOC				i S	**Sg**	**02 48 54.0**	**-0.8**
DBOC				IAML		02 48 58.0	
	comp=E,6.0nm,0.4s						
DDEM	**Demirkent**	**1.82**	**254**	i P	**Pg**	**02 48 31.1**	**-0.6**
DDEM				IAML		02 48 58.0	
	comp=E,19nm,0.3s						
DDEM				IAML		02 48 59.0	
	comp=N,26nm,0.4s						
DBAD	**Bademkaya**	**1.83**	**258**	i P	**Pg**	**02 48 31.3**	**-0.5**
DBAD				i S	**Sg**	**02 48 55.5**	**-0.1**
DBAD				IAML		02 48 58.0	
	comp=N,9.1nm,0.4s						
DBAD				IAML		02 49 00.0	
	comp=E,5.1nm,0.4s						
LSNR	**Lesken**	**1.87**	**355**	ePg	**Pg**	**02 48 32.2**	**-0.4**
LSNR				eSg	**Sg**	**02 48 58.7**	**+1.8**

*RSNC **08** 03:00:05.6±1.0, 6°.81N×73°.16W, h152km±5km, ML3.8, Mw3.8*
*IDC **08** 03:00:05.3±0.7, 6°.72N×72°.90W, h165km±7km, mb3.2/4, mb1 3.5/6, mb1mx3.1/34, mbtmp3.8/6, Error ellipse: s-maj=25.8km s-min=7.4km az=132.0*
ISC 08 03:00:04.6±0.8, **6°.84N**±0°.03×**73°.15W**±0°.04, **h156**km±6km, **n44**, σ**1°54**/74, **mb3.4**/4, **11C-7D**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**189**	⇓i P	**Pn**	**03 00 26.1**	**+0.1**
BARC				eS	**Sn**	**03 00 41.4**	**-0.9**
BARC				i		03 00 44.0	
	comp=Z,3μm,0.5s						
BRRC	**Barranca, Sant**	**0.62**	**296**	⇑eP	**Pn**	**03 00 27.9**	**+0.7**
BRRC				eS	**Sn**	**03 00 44.4**	**-0.1**
BRRC				i		03 00 47.1	
	comp=Z,786nm,0.1s						
PAMC	**Pamplona, Colo**	**0.67**	**41**	⇓eP	**Pn**	**03 00 28.9**	**+0.9**
PAMC				i		03 00 48.1	
	comp=Z,1μm,0.4s						
RUSC	**La Rusia**	**0.94**	**176**	⇑i P	**Pn**	**03 00 30.0**	**0.0**
RUSC				eS	**Sn**	**03 00 48.5**	**-0.9**
RUSC				i		03 00 49.9	
	comp=Z,1μm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.34**	**257**	⇑i P	**Pn**	**03 00 32.5**	**-0.5**
PTBC				i		03 00 55.4	
	comp=Z,863nm,0.6s						
TAMC	**Tame, Arauca**	**1.40**	**106**	⇓i P	**Pn**	**03 00 34.6**	**+0.9**
TAMC				eS	**Sn**	**03 00 55.8**	**-0.1**
OCAC	**Ocana**	**1.40**	**353**	⇓eP	**Pn**	**03 00 34.3**	**+0.5**
OCAC				eS	**Sn**	**03 00 56.0**	**-0.3**
OCAC				i		03 01 00.3	
	comp=Z,618nm,0.7s						
SPBC	**San Pablo de B**	**1.50**	**218**	⇑i P	**Pn**	**03 00 34.9**	**+0.2**
SPBC				eS	**Sn**	**03 00 56.9**	**-0.9**
SPBC				i		03 00 59.5	
	comp=Z,1μm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.82**	**291**	⇓eP	**Pn**	**03 00 38.2**	**+0.1**
ZARC				eS	**Sn**	**03 01 03.2**	**-0.6**
ZARC				i		03 01 14.6	
	comp=Z,539nm,0.1s						
NORC	**Norcasia**	**2.13**	**234**	⇑eP	**Pn**	**03 00 41.7**	**0.0**
NORC				eS	**Sn**	**03 01 09.7**	**-0.5**
NORC				i		03 01 17.9	
	comp=Z,586nm,0.2s						
SMLC	**San Martn de**	**2.16**	**335**	eP	**Pn**	**03 00 42.0**	**+0.1**
SMLC				eS	**Sn**	**03 01 11.8**	**+1.1**
SMLC				i		03 01 17.4	
	comp=Z,936nm,0.1s						
CHIC	**Chingaza**	**2.27**	**195**	⇑i P	**Pn**	**03 00 44.0**	**+0.3**
CHIC				eS	**Sn**	**03 01 13.6**	**-0.2**
CHIC				i		03 01 16.7	
	comp=Z,407nm,0.4s						
ROSC	**El Rosal**	**2.30**	**211**	P	**Pn**	**03 00 45.9**	**+1.8**
	comp=Z,236nm,0.3s,baz=90,slow=14,SNR=516						
ROSC				S	**Sn**	**03 01 17.4**	**+3.0**
	comp=Z,167nm,0.3s,baz=9.6,slow=23,SNR=14						
HELC	**Santa Helena**	**2.45**	**255**	eP	**Pn**	**03 00 45.9**	**+0.1**
HELC				eS	**Sn**	**03 01 18.1**	**+0.5**
HELC				i		03 01 25.6	
	comp=Z,349nm,0.2s						
UREC	**San Jos de Ur**	**2.54**	**291**	⇑i P	**Pn**	**03 00 45.8**	**-0.7**
UREC				eS	**Sn**	**03 01 15.1**	**-3.7**
UREC				i		03 01 28.8	
	comp=Z,377nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.73**	**234**	eP	**Pn**	**03 00 50.0**	**+0.7**
GUY2C				i		03 01 32.1	
	comp=Z,401nm,0.3s						
VILC	**Villavicencio,**	**2.76**	**191**	⇓i P	**Pn**	**03 00 49.4**	**0.0**
VILC				i		03 01 26.4	
	comp=Z,420nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.81**	**159**	⇑eP	**Pn**	**03 00 49.3**	**-0.5**
PTGC				eS	**Sn**	**03 01 21.8**	**-3.0**
PTGC				i		03 01 27.4	
	comp=Z,434nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.01**	**251**	eP	**Pn**	**03 00 53.4**	**+0.9**
CBOC				eS	**Sn**	**03 01 28.6**	**-0.9**
CBOC				i		03 01 44.6	
	comp=Z,132nm,0.6s						
DBBC	**Dabeiba**	**3.05**	**274**	⇓eP	**Pn**	**03 00 53.5**	**+0.6**
DBBC				i		03 01 31.8	
	comp=Z,273nm,0.8s						
CODC	**Agustn Codazz**	**3.09**	**355**	eP	**Pn**	**03 00 53.4**	**0.0**
CODC				eS	**Sn**	**03 01 31.2**	**-0.1**
CODC				i		03 01 39.7	
	comp=Z,136nm,0.6s						
ARGC	**Ariguani, Magd**	**3.19**	**340**	eP	**Pn**	**03 00 56.7**	**+2.0**
ARGC				eS	**Sn**	**03 01 35.0**	**+1.4**
ARGC				i		03 01 46.4	
	comp=Z,221nm,0.3s						
SDV	**Santo Domingo**	**3.21**	**51**	P	**Pn**	**03 00 55.8**	**+0.6**
	comp=Z,23nm,0.3s,baz=197,slow=3.6,SNR=157						
SDV				S	**Sn**	**03 01 33.1**	**-1.2**
	comp=Z,72nm,0.3s,baz=47,slow=21,SNR=50						
PRAC	**Prado**	**3.55**	**209**	eP	**Pn**	**03 00 58.9**	**-0.4**
PRAC				i		03 01 48.1	
	comp=Z,250nm,0.3s						
ORTC	**Ortega, Tolima**	**3.58**	**216**	⇑eP	**Pn**	**03 00 60.0**	**+0.3**
ORTC				eS	**Sn**	**03 01 43.8**	**+1.3**
ORTC				i		03 01 49.0	
	comp=Z,189nm,0.3s						
SJCC	**San Jacinto, C**	**3.65**	**327**	eP	**Pn**	**03 00 59.8**	**-0.7**
SJCC				eS	**Sn**	**03 01 41.1**	**-2.9**
SJCC				i		03 01 45.5	
	comp=Z,92nm,0.4s						
PLMC	**San Jos del P**	**3.66**	**239**	⇑eP	**Pn**	**03 01 01.9**	**+1.2**
PLMC				eS	**Sn**	**03 01 46.6**	**+2.3**
PLMC				i		03 01 52.4	
	comp=Z,233nm,0.2s						
LCBC	**Los crdobas,**	**3.77**	**302**	eP	**Pn**	**03 01 01.3**	**-0.7**
LCBC				eS	**Sn**	**03 01 48.3**	**+1.6**
LCBC				i		03 01 52.0	
	comp=Z,87nm,0.3s						
GUVC	**San Jose del G**	**4.29**	**173**	eP	**Pn**	**03 01 08.6**	**-0.3**
GUVC				eS	**Sn**	**03 01 56.9**	**-2.1**
GUVC				i		03 01 59.4	
	comp=Z,230nm,0.1s						
SMRC	**Santa Marta, M**	**4.43**	**346**	eP	**Pn**	**03 01 10.1**	**-0.5**
SMRC				eS	**Sn**	**03 01 59.2**	**-3.0**
SMRC				i		03 02 02.5	
	comp=Z,106nm,0.2s						
CAPC	**Capurgana**	**4.54**	**293**	eP	**Pn**	**03 01 10.8**	**-1.2**
CAPC				eS	**Sn**	**03 01 59.9**	**-4.7**
PIZC	**Pizarro, Choco**	**4.59**	**246**	eP	**Pn**	**03 01 14.0**	**+1.3**
PIZC				eS	**Sn**	**03 02 06.9**	**+1.1**
PIZC				i		03 02 37.2	
	comp=Z,55nm,0.9s						
PTAC	**Punta Ardita,**	**4.64**	**274**	eP	**Pn**	**03 01 13.2**	**-0.2**
PTAC				i		03 02 08.7	
	comp=Z,94nm,0.3s						
MACC	**Macarena, Meta**	**4.71**	**189**	⇑eP	**Pn**	**03 01 13.1**	**-1.3**
MACC				eS	**Sn**	**03 02 03.9**	**-5.0**
MACC				i		03 02 10.6	
	comp=Z,89nm,0.8s						
URIC	**Uribia, Colomb**	**4.97**	**13**	eP	**Pn**	**03 01 16.1**	**-1.6**
URIC				eS	**Sn**	**03 02 13.3**	**-1.6**
POPC	**Popayan, Colom**	**5.53**	**220**	eP	**Pn**	**03 01 24.9**	**-0.5**
POPC				eS	**Sn**	**03 02 26.2**	**-2.4**
FLOC	**Florencia**	**5.79**	**206**	eP	**Pn**	**03 01 28.4**	**-0.2**
FLOC				i		03 03 10.9	
	comp=Z,23nm,0.8s						
BBAC	**Balboa, Cauca**	**6.29**	**221**	eP	**Pn**	**03 01 36.8**	**+1.3**
BBAC				eS	**Sn**	**03 02 45.0**	**-1.7**
BBAC				i		03 02 54.6	
	comp=Z,15nm,0.3s						
TXAR	**Lajitas Array**	**36.43**	**312**	P	**P**	**03 06 56.0**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=128,slow=9.5,SNR=5.5						
SCHQ	**Schefferville**	**48.13**	**5**	P	**P**	**03 08 30.1**	**+1.4**
	comp=Z,1.7nm,0.5s,baz=186,slow=6.8,SNR=8.8						
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**	**03 10 17.0**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=131,slow=7.0,SNR=6.5						
TORD	**Torodi Ar. Bea**	**73.76**	**78**	P	**P**	**03 11 20.8**	**-1.6**
	comp=Z,0.4nm,0.9s,baz=279,slow=6.7,SNR=3.2						
ASAR	**Alice Springs**	**149.10**	**234**	PKPbc	**PKPbc**	**03 19 34.6**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=121,slow=3.8,SNR=6.6						
WRA	**Warramunga Arr**	**150.32**	**241**	PKPbc	**PKPbc**	**03 19 38.0**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=107,slow=3.0,SNR=8.7						

*IDC **08** 03:15:01.5±3.4, 38°.35N×20°.44E, h0km, mb3.6/3, mb1 3.5/6, mb1mx3.3/47, mbtmp3.4/6, ML3.3/3, Error ellipse: s-maj=65.6km s-min=17.3km az=47.0*
*THE **08** 03:15:02.9, 38°.15N×20°.30E, h13km, ML3.5/15, Error ellipse: s-maj=1.2km s-min=0.6km az=79.0*
*PDG **08** 03:15:02.3±0.2, 38°.17N×20°.17E, h19km±1km, ML3.8/11, Error ellipse: s-maj=2.3km s-min=0.9km az=90.0*
*ATH **08** 03:15:03.1, 38°.16N×20°.35E, h18km±1km, ML3.5/13, Error ellipse: s-maj=1.6km s-min=0.9km az=253.0*
*BEO **08** 03:15:03.4±0.7, 38°.07N×20°.11E, h21km±4km, ML3.6/9*
ISC 08 03:15:02.9±0.9, **38°.15N**±0°.03×**20°.29E**±0°.03, **h16**km±4km, **n113**, σ**1°03**/172, **mb3.5**/4, **1C-3D**, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.07**	**38**	P	**Pg**	**03 15 06.3**	**+0.2**
KEF3				S	**Sg**	**03 15 08.5**	**+0.3**
CHV1	**Chavriata, Kef**	**0.08**	**62**	P	**Pg**	**03 15 06.2**	**+0.1**
CHV1				S	**Sg**	**03 15 08.2**	**0.0**
LXRA	**Lixouri, Kepha**	**0.13**	**65**	P	**Pg**	**03 15 06.7**	**0.0**
LXRA				S	**Sg**	**03 15 09.2**	**+0.1**
LXR1	**Lixouri, Cepha**	**0.13**	**65**	P	**Pg**	**03 15 06.6**	**0.0**
LXR1				S	**Sg**	**03 15 09.1**	**0.0**
KEF4	**Livadi, Kephal**	**0.15**	**43**	P	**Pg**	**03 15 07.0**	**0.0**
KEF4				S	**Sg**	**03 15 09.8**	**+0.2**
KEF2	**Argostoli. Kep**	**0.16**	**83**	P	**Pg**	**03 15 06.7**	**-0.3**
KEF2				S	**Sg**	**03 15 09.1**	**-0.7**
ARG2	**Argostoli**	**0.16**	**78**	P	**Pg**	**03 15 06.7**	**-0.3**
ARG2				S	**Sg**	**03 15 08.8**	**-1.0**
KEF1	**Kardakata, Kep**	**0.19**	**47**	P	**Pg**	**03 15 07.3**	**-0.2**
KEF1				S	**Sg**	**03 15 10.0**	**-0.7**
VLS	**Valsamata**	**0.24**	**82**	P	**Pg**	**03 15 07.6**	**-0.6**
VLS				S	**Sg**	**03 15 10.9**	**-1.0**
	94μm,0.1s						
VLS	**Valsamata**	**0.24**	**82**	P	**Pg**	**03 15 07.6**	**-0.6**
VLS				S	**Sg**	**03 15 10.9**	**-1.0**
VLS				AML	AML	03 15 11.0	
VLS				AML	AML	03 15 11.3	
VSK1	**VASILIKIADES**	**0.34**	**39**	P	**Pg**	**03 15 09.5**	**-0.5**
VSK1				S	**Sg**	**03 15 14.6**	**-0.2**
	21μm,0.2s						
KONA	**Konidatara, Ke**	**0.35**	**38**	P	**Pg**	**03 15 09.8**	**-0.5**
KONA				S	**Sg**	**03 15 14.6**	**-0.7**
KONA				AML	AML	03 15 15.2	
	comp=N,22900μm,0.3s						
KONA				AML	AML	03 15 15.5	
	comp=E,22686μm,0.2s						
FSK	**Fiskardo**	**0.38**	**34**	P	**Pg**	**03 15 10.1**	**-0.5**
FSK				S	**Sg**	**03 15 15.5**	**-0.4**
	comp=E,9μm,0.2s						
FSK	**Fiskardo**	**0.38**	**34**	P	**Pg**	**03 15 10.2**	**-0.5**
FSK				S	**Sg**	**03 15 15.6**	**-0.4**
FSK				AML	AML	03 15 17.2	
	comp=N,12206μm,0.3s						
FSK				AML	AML	03 15 17.4	
	comp=E,25082μm,0.2s						
KFL	**Anninata**	**0.39**	**95**	P	**Pg**	**03 15 10.1**	**-0.8**
KFL				S	**Sg**	**03 15 15.6**	**-0.8**
	comp=E,26μm,0.4s						
KFL	**Anninata**	**0.39**	**95**	P	**Pg**	**03 15 10.2**	**-0.8**
KFL				S	**Sg**	**03 15 15.6**	**-0.8**
KFL				AML	AML	03 15 15.8	
	comp=N,58838μm,0.5s						
KFL				AML	AML	03 15 16.0	
	comp=E,44156μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.40**	**132**	P	**Pg**	**03 15 10.6**	**-0.4**
VLMS				S	**Sg**	**03 15 16.8**	**+0.3**
VLMS				AML	AML	03 15 17.8	
	comp=N,15240μm,0.2s						
VLMS				AML	AML	03 15 21.6	
	comp=E,18307μm,0.3s						
EVGI	**Lefkada island**	**0.55**	**31**	P	**Pg**	**03 15 13.3**	**-0.6**
EVGI				S	**Sg**	**03 15 21.2**	**-0.1**
EVGI	**Lefkada island**	**0.55**	**31**	P	**Pg**	**03 15 13.4**	**-0.6**
EVGI				S	**Sg**	**03 15 21.2**	**-0.1**
ZAK2	**Zakynthos**	**0.60**	**126**	P	**Pg**	**03 15 14.2**	**-0.5**
ZAK2				S	**Sb**	**03 15 24.1**	**+1.0**
	comp=E,18μm,0.6s						
KRI1	**kERI**	**0.64**	**139**	P	**Pg**	**03 15 14.4**	**-1.0**
MGNA	**Meganis**	**0.64**	**37**	P	**Pg**	**03 15 14.8**	**-0.8**
MGNA				S	**Sg**	**03 15 23.6**	**-0.5**
MGNA				AML	AML	03 15 25.4	
	comp=N,5336μm,0.5s						
MGNA				AML	AML	03 15 27.4	
	comp=E,7027μm,0.6s						
LKD2	**Lefkada island**	**0.70**	**24**	P	**Pg**	**03 15 15.6**	**-1.1**
LKD2				S	**Sg**	**03 15 26.1**	**+0.1**
LKD2				AML	AML	03 15 34.3	
	comp=E,5372μm,0.2s						
LKD2				AML	AML	03 15 34.6	
	comp=N,4522μm,0.4s						
TSLK	**Tsoukalades, L**	**0.74**	**23**	P	**Pb**	**03 15 16.5**	**-0.8**
TSLK				S	**Sb**	**03 15 27.4**	**+0.3**
	comp=N,5μm,0.5s						
TSLK	**Tsoukalades, L**	**0.74**	**23**	P	**Pb**	**03 15 16.7**	**-0.6**
TSLK				S	**Sb**	**03 15 26.3**	**-0.7**
TSLK				AML	AML	03 15 32.9	
	comp=E,8537μm,0.4s						
TSLK				AML	AML	03 15 33.5	
	comp=N,9893μm,0.5s						
AST1	**Astakos**	**0.74**	**58**	P	**Pb**	**03 15 16.4**	**-1.0**
AST1				S	**Sn**	**03 15 28.7**	**-0.9**
	comp=N,6μm,0.4s						
PDO	**Prodromos**	**0.83**	**57**	P	**Pb**	**03 15 18.1**	**-0.9**
PDO				AML	AML	03 15 37.0	
	comp=E,9072μm,0.5s						
PDO				AML	AML	03 15 39.0	
	comp=N,10963μm,0.4s						
RLS	**Riolos of Patr**	**0.93**	**95**	P	**Pb**	**03 15 20.3**	**-0.3**
RLS				S	**Sn**	**03 15 34.3**	**0.0**
	comp=N,2μm,0.4s						
RLS	**Riolos of Patr**	**0.93**	**95**	P	**Pb**	**03 15 19.3**	**-1.3**
RLS				AML	AML	03 15 37.1	
	comp=N,3643μm,0.4s						
RLS				AML	AML	03 15 38.0	
	comp=E,2612μm,0.5s						
PVO	**Paravola**	**1.08**	**64**	P	**Pb**	**03 15 22.6**	**-0.5**
PVO				S	**Sg**	**03 15 39.1**	**+1.3**
PVO	**Paravola**	**1.08**	**64**	P	**Pb**	**03 15 22.8**	**-0.3**
PVO				AML	AML	03 15 43.5	
	comp=N,7307μm,0.6s						
PVO				AML	AML	03 15 43.5	
	comp=E,8659μm,0.5s						
DRO	**Drossia**	**1.14**	**99**	P	**Pn**	**03 15 23.6**	**-0.5**
DRO				S	**Sg**	**03 15 41.0**	**+1.3**
	comp=E,3μm,0.4s						
DRO	**Drossia**	**1.14**	**99**	P	**Pb**	**03 15 24.3**	**+0.1**
UPR	**University Cam**	**1.19**	**83**	P	**Pg**	**03 15 25.5**	**-0.3**
LAKA	**Lakka**	**1.33**	**85**	P	**Pn**	**03 15 26.6**	**-0.2**
LAKA				S	**Sb**	**03 15 45.2**	**+0.9**
	comp=E,760nm,0.5s						
LAKA	**Lakka**	**1.33**	**85**	P	**Pb**	**03 15 27.6**	**+0.1**
ANX	**Ano Chora**	**1.36**	**70**	P	**Pb**	**03 15 29.2**	**+0.2**
ANX				S	**Sg**	**03 15 46.2**	**-0.5**
	comp=E,3μm,0.5s						
ANX	**Ano Chora**	**1.36**	**70**	P	**Pb**	**03 15 28.0**	**0.0**
IGT	**Igoumenitsa**	**1.39**	**1**	P	**Pb**	**03 15 28.9**	**+0.5**
IGT	**Igoumenitsa**	**1.39**	**1**	ePg	**Pg**	**03 15 31.0**	**+1.4**
IGT				eSg	**Sg**	**03 15 49.5**	**+1.9**
IGT	**Igoumenitsa**	**1.39**	**1**	P	**Pg**	**03 15 29.1**	**-0.5**
IGT				AML	AML	03 15 54.9	
	comp=N,1275μm,0.5s						
IGT				AML	AML	03 15 56.5	
	comp=E,1543μm,0.6s						
SERG	**Sergoula**	**1.42**	**79**	P	**Pb**	**03 15 29.2**	**+0.3**
SERG	**Sergoula**	**1.42**	**79**	P	**Pb**	**03 15 29.1**	**+0.3**
EVR	**Evrytania**	**1.42**	**57**	P	**Pg**	**03 15 30.0**	**-0.2**
EVR				S	**Sg**	**03 15 49.7**	**+1.0**
	comp=E,550nm,0.6s						
EVR	**Evrytania**	**1.42**	**57**	P	**Pb**	**03 15 29.0**	**0.0**
TRIZ	**Trizonia**	**1.42**	**81**	P	**Pn**	**03 15 27.9**	**-0.1**
TRIZ	**Trizonia**	**1.42**	**81**	P	**Pb**	**03 15 28.8**	**-0.1**
ALIK	**Aliki, Aigiali**	**1.44**	**85**	P	**Pb**	**03 15 28.9**	**-0.4**
ALIK				S	**Sg**	**03 15 49.1**	**-0.2**
KLV	**Kalavryta, Ach**	**1.47**	**93**	P	**Pb**	**03 15 29.4**	**-0.5**
KLV				S	**Sg**	**03 15 49.6**	**-0.7**
	comp=E,500nm,0.7s						
KLV	**Kalavryta, Ach**	**1.47**	**93**	P	**Pb**	**03 15 29.7**	**-0.1**
KALE	**Kalithea**	**1.48**	**80**	P	**Pb**	**03 15 30.9**	**-0.4**
KALE				S	**Sg**	**03 15 50.5**	**0.0**
	comp=E,638nm,0.4s						
KALE	**Kalithea**	**1.48**	**80**	P	**Pb**	**03 15 30.1**	**+0.2**
JAN	**Janina**	**1.57**	**16**	P	**Pg**	**03 15 32.5**	**-0.6**
KEK	**Kerkira**	**1.61**	**346**	P	**Pb**	**03 15 32.0**	**-0.2**
KEK	**Kerkira**	**1.61**	**346**	P	**Pb**	**03 15 32.1**	**-0.2**
ITM	**Ithomi**	**1.62**	**126**	P	**Pb**	**03 15 31.6**	**-0.7**
MAKR	**Makrakomi, Fth**	**1.68**	**58**	P	**Pb**	**03 15 34.8**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.68**	**58**	P	**Pb**	**03 15 33.6**	**+0.2**
PYL	**PYLOS**	**1.70**	**137**	P	**Pb**	**03 15 33.7**	**0.0**
SRN	**Sarande**	**1.75**	**353**	P	**Pb**	**03 15 33.9**	**-0.6**
DLFA	**Delphi**	**1.77**	**78**	P	**Pb**	**03 15 34.5**	**-0.4**
AGG	**Agios Georgios**	**1.82**	**61**	P	**Pb**	**03 15 36.3**	**+0.5**
AGG				S	**Sb**	**03 15 58.1**	**-0.3**
	comp=E,787μm,0.5s						
FNA	**Florina**	**2.77**	**17**	ePn	**Pb**	**03 15 49.3**	**-2.6**
OHR	**Ohrid**	**2.99**	**7**	i Pn	**Pn**	**03 15 51.5**	**+1.9**
TIR	**Tirane**	**3.21**	**354**	ePn	**Pn**	**03 15 54.2**	**+1.5**
VAY	**Valandovo**	**3.62**	**28**	i Pn	**Pn**	**03 16 02.0**	**+3.7**
STIP	**Stip**	**3.83**	**22**	i Pn	**Pn**	**03 16 05.3**	**+4.2**
ULC	**Ulcinj**	**3.90**	**348**	ePn	**Pn**	**03 16 02.2**	**+0.1**
ULC				eSn	**Sn**	**03 16 47.7**	**+0.2**
SRS	**Serrai**	**3.91**	**40**	ePn	**Pn**	**03 16 04.5**	**+2.2**
DRME	**Dracevica, Mon**	**4.12**	**348**	ePn	**Pn**	**03 16 05.4**	**+0.2**
DRME	**Dracevica, Mon**	**4.12**	**348**	ePn	**Pn**	**03 16 05.2**	**0.0**
DRME				eSn	**Sn**	**03 16 53.3**	**+0.2**
BUM	**Brajici-Budva**	**4.29**	**346**	⇓i Pn	**Pn**	**03 16 06.9**	**-0.6**
BUM				eSn	**Sn**	**03 16 56.5**	**-0.6**
PDG	**Podgorica**	**4.35**	**350**	ePn	**Pn**	**03 16 08.7**	**+0.4**
PDG				eSn	**Sn**	**03 16 59.5**	**+0.9**
PDG	**Podgorica**	**4.35**	**350**	ePn	**Pn**	**03 16 06.2**	**-2.1**
TTG	**Podgorica**	**4.35**	**350**	ePn	**Pn**	**03 16 08.6**	**+0.3**
TTG				eSn	**Sn**	**03 16 58.2**	**-0.4**
PVY	**Plav**	**4.45**	**357**	⇓i Pn	**Pn**	**03 16 10.7**	**+0.9**
PVY				i Sn	**Sn**	**03 17 01.6**	**+0.3**
HCY	**Herceg Novi**	**4.51**	**343**	ePn	**Pn**	**03 16 10.2**	**-0.3**
HCY				i Sn	**Sn**	**03 17 01.8**	**-0.8**
CEME	**Cevo**	**4.52**	**347**	ePn	**Pn**	**03 16 10.5**	**-0.2**
CEME				eSn	**Sn**	**03 17 02.4**	**-0.5**
BOSS	**Bosilegrad**	**4.66**	**20**	ePn	**Pn**	**03 16 14.0**	**+1.5**
IDI	**Anoyia**	**4.67**	**126**	Pn	**Pn**	**03 16 13.4**	**+0.6**
	comp=E,0.3nm,0.3s,baz=303,slow=17,SNR=5.7						
IDI				Sn	**Sn**	**03 17 08.9**	**+2.4**
	comp=E,2.0nm,0.3s,baz=158,slow=23,SNR=9.8						
NKME	**Niksic**	**4.73**	**348**	ePn	**Pn**	**03 16 13.6**	**+0.1**
NKME				eSn	**Sn**	**03 17 07.6**	**-0.4**
IVA	**Berane**	**4.73**	**356**	ePn	**Pn**	**03 16 14.2**	**+0.6**
IVA				eSn	**Sn**	**03 17 08.4**	**+0.3**
KOME	**Kolasin**	**4.74**	**353**	⇑i Pn	**Pn**	**03 16 14.3**	**+0.6**
KOME				i Sn	**Sn**	**03 17 08.3**	**0.0**
TREB	**Trebinje**	**4.80**	**343**	ePn	**Pn**	**03 16 14.0**	**-0.5**
TREB				eSn	**Sn**	**03 17 09.2**	**-0.5**
TREB	**Trebinje**	**4.80**	**343**	ePn	**Pn**	**03 16 13.7**	**-0.8**
BARS	**Barje**	**4.81**	**14**	ePn	**Pn**	**03 16 15.5**	**+0.9**
BARS				eSn	**Sn**	**03 17 09.6**	**-0.3**
BRY	**Bratogost**	**4.94**	**345**	ePn	**Pn**	**03 16 16.3**	**-0.1**
BRY				i Sn	**Sn**	**03 17 12.5**	**-0.7**
VTS	**Vitosha**	**5.00**	**26**	ePn	**Pn**	**03 16 19.1**	**+1.7**
VTS				eSn	**Sn**	**03 17 15.1**	**+0.2**
SJES	**Sjenica**	**5.12**	**357**	ePn	**Pn**	**03 16 19.6**	**+0.7**
SJES				eSn	**Sn**	**03 17 16.9**	**-0.8**
STON	**Ston**	**5.12**	**338**	ePn	**Pn**	**03 16 18.9**	**+0.1**
STON				eSn	**Sn**	**03 17 15.6**	**-1.9**
STON	**Ston**	**5.12**	**338**	ePn	**Pn**	**03 16 18.6**	**-0.2**
PLD	**Plovdiv**	**5.20**	**39**	ePn	**Pn**	**03 16 22.2**	**+2.2**
PLE	**Pljevlja**	**5.22**	**353**	⇓i Pn	**Pn**	**03 16 21.0**	**+0.6**
PLE				eSn	**Sn**	**03 17 19.8**	**-0.5**
ZAPS	**Zavoj**	**5.42**	**18**	ePn	**Pn**	**03 16 24.4**	**+1.4**
IVAS	**Ivanjica**	**5.43**	**359**	ePn	**Pn**	**03 16 22.7**	**-0.4**
IVAS				eSn	**Sn**	**03 17 24.6**	**-0.6**
RUDO	**Rudo**	**5.51**	**353**	ePn	**Pn**	**03 16 23.7**	**-0.5**
BOVS	**Bovan**	**5.59**	**11**	ePn	**Pn**	**03 16 25.1**	**-0.2**
BOVS				eSn	**Sn**	**03 17 28.1**	**-1.0**
GRUS	**Gruza**	**5.75**	**3**	ePn	**Pn**	**03 16 28.0**	**+0.6**
BBLS	**Lazići**	**5.75**	**354**	eSn	**Sn**	**03 17 32.6**	**-0.7**
ZAGS	**Zajecar**	**5.85**	**14**	ePn	**Pn**	**03 16 30.1**	**+1.3**
DIVS	**Divibare**	**5.95**	**358**	ePn	**Pn**	**03 16 29.8**	**-0.6**
DIVS				eSn	**Sn**	**03 17 36.2**	**-2.0**
DIVS	**Divibare**	**5.95**	**358**	ePn	**Pn**	**03 16 29.3**	**-1.1**
HAPS	**Han Pijesak,BI**	**6.02**	**351**	ePn	**Pn**	**03 16 30.2**	**-1.1**
MGRS	**Mrkonjic Grad**	**6.71**	**340**	ePn	**Pn**	**03 16 41.6**	**+0.8**
BLY	**Banja Luka**	**7.00**	**342**	ePn	**Pn**	**03 16 44.3**	**-0.3**
MORH	**Mrgy, Hungar**	**8.16**	**352**	ePn	**Pn**	**03 17 00.1**	**-0.4**
CRES	**Cresnjev**	**8.47**	**336**	ePn	**Pn**	**03 17 04.4**	**-0.5**
BRTR	**Keskin Array B**	**10.52**	**77**	Pn	**Pn**	**03 17 37.1**	**+4.1**
	comp=E,0.1nm,0.3s,baz=262,slow=13,SNR=4.3						
GERES	**GERESS Array B**	**11.71**	**338**	Pn	**Pn**	**03 17 49.6**	**+0.3**
	comp=E,0.2nm,0.3s,baz=164,slow=14,SNR=8.5						
GERES				Sn	**Sn**	**03 19 54.8**	**-4.8**
	comp=E,0.2nm,0.3s,baz=151,slow=22,SNR=4.6						
HFS	**Hagfors**	**22.40**	**351**	P	**P**	**03 20 02.0**	**+1.6**
	comp=E,1.0nm,0.6s,baz=178,slow=9.9,SNR=4.6						
FINES	**FINESS Array B**	**23.60**	**7**	P	**P**	**03 20 12.1**	**-0.5**
	comp=E,0.7nm,0.7s,baz=186,slow=11,SNR=3.4						
MKAR	**Makanchi Array**	**45.47**	**58**	P	**P**	**03 23 20.2**	**-1.0**
	comp=E,0.4nm,0.5s,baz=274,slow=7.4,SNR=12						
ZALV	**Zalesovo Beam**	**45.85**	**48**	P	**P**	**03 23 22.9**	**-1.0**
	comp=E,0.9nm,0.4s,baz=278,slow=9.7,SNR=4.9						

*IDC **08** 03:19:51.1±1.2, 0°.21N×123°.34E, h0km, mb3.4/4, mb1 3.8/5, mb1mx3.5/37, mbtmp3.6/5, ML4.0/1, Error ellipse: s-maj=111.8km s-min=19.8km az=68.0*
*DJA **08** 03:20:06.8±0.5, 0°S±4°×12°3E±°, h111km±8km, M3.9/6, mb3.8/1, MLv4.0/6*
ISC 08 03:20:04.5±1.1, **0°.04N**±0°.09×**123°.50E**±0°.06, **h100**km, **n12**, σ**1°77**/14, **mb3.5**/4, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.30**	**214**	P	**Pn**	**03 20 30.4**	**+2.1**
LUWI				S	**Sn**	**03 20 47.3**	**+0.9**
MRSI	**Marisa**	**1.62**	**285**	P	**Pn**	**03 20 34.2**	**+2.0**
MRSI				S	**Sn**	**03 20 54.4**	**+1.1**
APSI	**Ampana**	**2.08**	**243**	P	**Pn**	**03 20 39.3**	**+1.2**
APSI				S	**Sn**	**03 21 03.5**	**-0.3**
SANI	**Sanana**	**3.24**	**130**	P	**Pn**	**03 20 55.0**	**+1.5**
MPSI	**Mapaga**	**3.62**	**275**	P	**Pn**	**03 21 00.4**	**+1.9**
NLAI	**Namlea**	**4.85**	**132**	P	**Pn**	**03 21 17.6**	**+2.4**
SPSI	**Sidrap Palu**	**5.45**	**223**	P	**Pn**	**03 21 23.5**	**+0.1**
FITZ	**Fitzroy Crossi**	**18.15**	**173**	P	**P**	**03 24 07.4**	**-1.7**
	0.4nm,0.3s,baz=18,slow=12,SNR=3.9						
WRA	**Warramunga Arr**	**22.52**	**152**	P	**P**	**03 24 54.1**	**-2.1**
	0.9nm,0.4s,baz=331,slow=10,SNR=16						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	25.64	158	P	P	03 25 25.2	+0.3
	0.3nm,0.4s,baz=345,slow=14,SNR=4.7						
SONM	Songino Array	49.87	345	P	P	03 28 45.8	-1.9
	0.5nm,0.5s,baz=154,slow=7.2,SNR=5.8						
MKAR	Makanchi Array	58.84	328	P	P	03 29 49.1	-3.6
	0.2nm,0.5s,baz=119,slow=8.2,SNR=7.7						

DJA 08 04:15:56.5±0.6, 7°S±4°×13°0E±2°4, h117km±41km, M4.1/4, mB5.0/1, mb4.0/1, MLv4.1/4, Mw(mB)4.3/1, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.71	137	P	Pn	04 16 26.3	+0.1
FAKI	Fak Fak	4.33	29	P	Pn	04 17 01.3	+0.9
FAKI				S	Sn	04 17 50.2	+0.2

IDC 08 04:21:39.8±1.2, 20°17N×120°37E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/34, mbtmp3.5/5, MS2.7/2, Ms1 2.7/2, ms1mx2.5/24, Error ellipse: s-maj=75.2km s-min=22.9km az=64.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	18.43	19	LR	LR	04 32 37.3	
	comp=Z,12nm,21.4s,baz=180,slow=36						
SONM	Songino Array	29.83	341	P	P	04 27 47.9	-0.8
	0.1nm,0.4s,baz=158,slow=9.3,SNR=4.1						
TLY	Talaya	34.07	341	LR	LR	04 44 24.3	
	comp=Z,23nm,21.2s,baz=66,slow=40						
MKAR	Makanchi Array	40.79	320	P	P	04 29 23.3	+0.4
	0.2nm,0.6s,baz=113,slow=10,SNR=3.1						
WRA	Warramunga Arr	42.15	160	P	P	04 29 33.9	-0.2
	0.4nm,0.8s,baz=341,slow=8.6,SNR=66						
KURBB	Kurchatov Arra	44.76	323	P	P	04 29 54.7	-0.3
	0.7nm,0.5s,baz=124,slow=7.5,SNR=8.0						
YKA	Yellowknife Ar	86.95	22	P	P	04 34 26.9	+0.4
	0.4nm,0.8s,baz=312,slow=4.3,SNR=4.1						

IDC 08 04:26:38.0±1.7, 8°67N×92°01E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.6/37, mbtmp3.8/7, ML4.3/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/42, Error ellipse: s-maj=60.4km s-min=20.5km az=62.0

NEIC 08 04:26:42.5±1.0, 8°7N±0°1×92°1E±0°2, h30km±8km, mb4.0/8, Error ellipse: s-maj=27.8km s-min=17.1km az=74.0

NDI 08 04:26:44.4±0.3, 8°98N×92°77E, h15km±39km, ML3.4, mb4.0(NEIC)

ISC 08 04:26:41.9±1.1, 8°8N±0°1×92°1E±0°2, h24km, n28, σ0§84/20, mb3.8/9, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	2.49	134	eP	Pn	04 27 21.8	+0.8
CMBY				eS	Sn	04 27 49.1	-1.6
CMBY				IAML		04 27 55.8	
	comp=N,166nm,0.7s						
CMBY				IAML		04 27 56.4	
	comp=E,223nm,0.3s						
PBA	Port Blair	2.96	12	Pn	Pn	04 27 29.9	+2.5
DGPR	DIGLIPUR	4.47	10	eP	Pn	04 27 48.5	+0.2
DGPR				ex	x	04 28 15.4	
DGPR				IAML		04 28 18.9	
	comp=N,163nm,0.1s						
DGPR				IAML		04 28 19.1	
	comp=E,127nm,0.1s						
PALK	Pallekele	11.39	263	LR	LR	04 33 37.9	
	comp=E,53nm,18.0s,baz=139,slow=37						
PBKT	Sadao Pong	11.62	47	Pn	Pn	04 29 25.5	-0.9
CMAR	Chiang Mai Arr	11.71	34	Pn	Pn	04 29 30.0	+2.4
	comp=E,0.5nm,0.3s,baz=227,slow=15,SNR=4.1						
SHL	Shillong	16.73	359	Pn	Pn	04 30 35.0	+0.1
LSA	Lhasa	20.86	358	P	P	04 31 22.1	-0.7
LSA				IAmb	IAmb	04 32 06.4	
	comp=Z,4.3nm,0.6s						
LEM	Lembang	21.87	135	LR	LR	04 39 19.4	
	comp=Z,109nm,21.4s,baz=227,slow=35						
H08S3	Diego Garcia H	25.44	231	T	T	04 58 43.8	
	baz=50,slow=76,SNR=132						
H08S2	Diego Garcia H	25.45	231	T	T	04 58 40.6	
	baz=50,slow=76,SNR=17						
H08S1	Diego Carcia H	25.46	231	T	T	04 58 45.2	
	baz=50,slow=76,SNR=11						
MK31	Makanchi Array	38.83	349	P	P	04 34 05.1	+0.1
MKAR	Makanchi Array	38.83	349	P	P	04 34 05.1	+0.1
	comp=Z,0.9nm,0.5s,baz=167,slow=8.5,SNR=15						
MKAR	Makanchi Array	38.83	349	P	P	04 34 04.8	-0.2
MAKZ	Makanchi	38.90	349	P	P	04 34 05.2	-0.5
MAKZ				IAmb	IAmb	04 34 16.6	
	comp=Z,1.6nm,0.7s						
KK31	Karatay Array	39.10	335	P	P	04 34 08.1	+0.7
KK31				IAmb	IAmb	04 34 31.3	
	comp=Z,2.5nm,1.1s						
KKAR	Karatay Array	39.10	335	P	P	04 34 07.0	-0.3
SONM	Songino Array	40.79	15	P	P	04 34 20.9	-0.6
	comp=Z,1.7nm,0.8s,baz=198,slow=9.6,SNR=14						
SONM	Songino Array	40.79	15	IAmb	IAmb	04 34 22.0	
	comp=Z,1.5nm,0.9s						
JNU	Nakatsue	43.20	50	LR	LR	04 55 19.5	
	comp=Z,30nm,20.5s,baz=348,slow=40						
KURBB	Kurchatov Arra	43.24	347	P	P	04 34 41.6	+0.4
	comp=Z,1.2nm,0.9s,baz=170,slow=7.0,SNR=12						
KURK	Kurchatov	43.30	348	P	P	04 34 41.6	-0.1
KURK	Kurchatov	43.30	348	IAmb	IAmb	04 34 56.6	
	comp=Z,5.9nm,1.4s						
WRA	Warramunga Arr	50.40	125	P	P	04 35 37.7	-0.1
	comp=Z,0.5nm,0.4s,baz=304,slow=8.6,SNR=7.1						
ASAR	Alice Springs	52.02	129	P	P	04 35 49.9	+0.1
	comp=Z,0.4nm,0.5s,baz=301,slow=7.0,SNR=8.1						
TIXI	Tiksi	66.78	12	P	P	04 37 30.7	-0.3
ARCES	ARCESS Array B	73.77	340	P	P	04 38 14.2	+0.4
	comp=Z,2.1nm,0.9s,baz=90,slow=3.8,SNR=4.3						

WEL 08 05:10:58.0, 40°S±1°×17°4E±°, h107km±3km, M3.7/95, ML3.9/8, MLv3.7/95, Error ellipse: s-maj=0.0km s-min=0.0km az=43.1, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.63	217	P	Pn	05 11 15.6	0.0
DUWZ				S	Sn	05 11 28.7	-0.1
KIW	Kapiti Island	0.68	147	P	Pn	05 11 16.3	+0.4
KIW				S	Sn	05 11 28.4	-1.0
OHWZ	Ohakea	0.69	83	P	Pn	05 11 16.8	+0.9
OHWZ				S	Sn	05 11 30.3	+0.8
WAZ	Wanganui	0.69	39	P	Pn	05 11 16.8	+0.7
WAZ				S	Sn	05 11 30.7	+1.1
OGWZ	Otaki Gorge	0.77	132	P	Pn	05 11 17.4	+0.7
OGWZ				S	Sn	05 11 30.4	-0.5
LREZ	Lake Rotokare	0.83	359	P	Pn	05 11 17.8	+0.5
LREZ				S	Sn	05 11 32.5	+0.7
TCW	Tory Channel	0.92	187	P	Pn	05 11 18.7	+0.6
TCW				S	Sn	05 11 32.9	-0.4
CAW	Cannon Point	0.95	149	P	Pn	05 11 19.2	+0.8
CAW				S	Sn	05 11 33.7	-0.2
MRZ	Mangatainoka R	0.96	113	P	Pn	05 11 19.1	+0.5
MRZ				S	Sn	05 11 33.2	-0.8
PREZ	Palmer Road	0.97	348	P	Pn	05 11 19.1	+0.3
PREZ				S	Sn	05 11 34.0	-0.3
NMEZ	Namu Road	0.97	335	P	Pn	05 11 18.9	+0.2
NMEZ				S	Sn	05 11 34.0	-0.3
WEL	Wellington	1.02	165	P	Pn	05 11 19.9	+0.7
HOWZ	Holdsworth Sta	1.03	126	P	Pn	05 11 19.8	+0.5
POWZ	Post Office Ro	1.04	96	P	Pn	05 11 19.8	+0.4
KHEZ	Kahui Hut	1.05	343	P	Pn	05 11 19.8	+0.2
NBEZ	Newall Road No	1.11	337	P	Pn	05 11 20.5	+0.4
DREZ	Durham Road	1.12	351	P	Pn	05 11 20.7	+0.4
PKE	Pukeiti	1.15	343	P	Pn	05 11 20.8	+0.2
BHW	Baring Head	1.16	163	P	Pn	05 11 21.2	+0.5
TUWZ	Tuamarina	1.19	197	P	Pn	05 11 21.3	+0.3
MTW	Mount Morrison	1.19	137	P	Pn	05 11 21.7	+0.6
VRZ	Vera Road	1.20	13	P	Pn	05 11 21.4	+0.3
TSZ	Takapari Road	1.21	79	P	Pn	05 11 21.4	+0.2
NNZ	Nelson	1.21	220	P	Pn	05 11 21.4	+0.2
PRWZ	Pori Road	1.21	103	P	Pn	05 11 22.1	+0.9
TIWZ	Tintock	1.22	114	P	Pn	05 11 22.0	+0.7
MTVZ	Mangateitei	1.22	42	P	Pn	05 11 21.8	+0.3
MHEZ	Mangahewa	1.22	357	P	Pn	05 11 22.2	+0.8
PKVZ	Pokaka	1.23	36	P	Pn	05 11 21.9	+0.3
MSWZ	Moikau Station	1.28	151	P	Pn	05 11 22.9	+0.7
TRVZ	Turoa	1.32	42	P	Pn	05 11 23.0	+0.2
PAWZ	Paruwai Farm	1.33	145	P	Pn	05 11 23.3	+0.7
DVHZ	Dannevirke	1.34	91	P	Pn	05 11 22.8	+0.1
FWVZ	Far West T-bar	1.36	40	P	Pn	05 11 23.4	+0.2
MOVZ	Moawhango	1.36	50	P	Pn	05 11 23.1	+0.1
TMWZ	Te Maipa	1.38	126	P	Pn	05 11 24.0	+0.8
TUVZ	Tukino	1.40	43	P	Pn	05 11 24.2	+0.5
PNHZ	Pukenui	1.42	75	P	Pn	05 11 23.7	0.0
PLWZ	Palliser	1.42	154	P	Pn	05 11 24.2	+0.5
NGZ	Ngauruhoe	1.44	40	P	Pn	05 11 24.2	+0.1
BFZ	Birch Farm	1.45	106	P	Pn	05 11 24.3	+0.4
TWVZ	Taurewa	1.45	33	P	Pn	05 11 24.0	-0.2
TRWZ	Traveller	1.46	139	P	Pn	05 11 25.3	+1.1
BSWZ	Blackbirch Sta	1.48	196	P	Pn	05 11 25.1	+0.7
WTVZ	West Tongariro	1.48	38	P	Pn	05 11 24.5	-0.1
CPWZ	Castlepoint	1.49	115	P	Pn	05 11 25.7	+1.2
BHHZ	Black Hill Sta	1.50	58	P	Pn	05 11 24.6	-0.1
KRVZ	Karewarewa	1.53	39	P	Pn	05 11 24.9	-0.2
QRZ	Quartz Range	1.53	249	P	Pn	05 11 24.5	-0.6
WPHZ	Waipukurau	1.57	82	P	Pn	05 11 25.8	+0.3
ANWZ	Angora Road	1.58	97	P	Pn	05 11 26.1	+0.5
KRHZ	Kereru	1.64	67	P	Pn	05 11 26.2	-0.2
KATZ	Kakaramea	1.65	37	P	Pn	05 11 26.5	-0.1
PRHZ	Porangahau	1.70	90	P	Pn	05 11 27.4	+0.3
RITZ	Rihia Road	1.72	41	P	Pn	05 11 27.7	+0.3
RATZ	Rangitukua	1.77	37	P	Pn	05 11 28.2	+0.2
KWHZ	Kaweka Forest	1.77	61	P	Pn	05 11 27.9	-0.2
HIZ	Hauiti	1.81	11	P	Pn	05 11 28.6	+0.1
THZ	Tophouse	1.86	217	P	Pn	05 11 29.3	+0.2
WATZ	Wairara	1.88	33	P	Pn	05 11 29.9	+0.4
PXZ	Pawanui	1.89	83	P	Pn	05 11 29.5	0.0
MCHZ	McNeill Hill	1.95	65	P	Pn	05 11 30.3	+0.1
KAHZ	Kahuranaki	1.95	76	P	Pn	05 11 30.3	0.0
BKZ	Black Stump Fm	1.96	55	P	Pn	05 11 30.4	0.0
KUTZ	Kaahu Road	2.11	32	P	Pn	05 11 32.3	+0.1
MRHZ	Matea Rd	2.13	47	P	Pn	05 11 31.6	-0.9
TLZ	Tolley Road	2.15	24	P	Pn	05 11 32.6	-0.2
NMHZ	Naumai	2.20	58	P	Pn	05 11 33.5	0.0
KHZ	Kahutara	2.22	197	P	Pn	05 11 34.1	+0.5
ARHZ	Aropaoanui	2.24	63	P	Pn	05 11 33.5	-0.4
MTHZ	Maungataniwha	2.36	53	P	Pn	05 11 34.8	-0.8
DSZ	Denniston Nort	2.45	233	P	Pn	05 11 36.3	-0.4
OMRZ	Omania	2.66	35	P	Pn	05 11 39.2	-0.3
TOZ	Tahuroa Road	2.70	19	P	Pn	05 11 39.6	-0.3
KNZ	Kokohu	2.82	64	P	Pn	05 11 40.0	-1.4
GVZ	Greta Valley S	2.86	201	P	Pn	05 11 41.7	-0.4
URZ	Urewera	2.92	47	P	Pn	05 11 41.2	-1.6
MHGZ	Mahia Peninsul	2.92	68	P	Pn	05 11 42.1	-0.8
TGRZ	Tauranga	2.94	30	P	Pn	05 11 43.1	0.0
LTZ	Lake Taylor	2.96	212	P	Pn	05 11 42.7	-0.7
PRGZ	Paritu Road	3.01	64	P	Pn	05 11 42.7	-1.4
RIGZ	Rimuhau	3.04	60	P	Pn	05 11 43.2	-1.2
MWZ	Matawai	3.11	52	P	Pn	05 11 43.6	-1.7
AMCZ	Amberley	3.17	204	P	Pn	05 11 45.3	-0.8
KBAZ	Karaka Road Bo	3.22	7	P	Pn	05 11 47.2	+0.4
AWAZ	Awhitu Peninsu	3.23	3	P	Pn	05 11 47.2	+0.2
MKAZ	Moumakai	3.24	11	P	Pn	05 11 46.8	-0.3
INZ	Inchbonnie	3.30	222	P	Pn	05 11 47.3	-0.5
ETAZ	East Tamaki Re	3.36	7	P	Pn	05 11 48.9	+0.2
RUGZ	Raukumara Rang	3.44	48	P	Pn	05 11 47.6	-2.3
OXZ	Oxford	3.51	210	P	Pn	05 11 48.8	-1.9
MBAZ	Motutapu North	3.54	6	P	Pn	05 11 51.1	-0.1
OKCZ	Okains Bay	3.57	196	P	Pn	05 11 50.4	-1.1
HAZ	Te Kaha	3.65	47	P	Pn	05 11 50.1	-2.4
MQZ	McQueen's Vall	3.65	201	P	Pn	05 11 50.6	-2.0
KUZ	Kuaotunu	3.69	16	P	Pn	05 11 52.3	-0.8
PKGZ	Pakihiroa	3.73	51	P	Pn	05 11 52.0	-1.6
AKCZ	Akaroa Harbour	3.75	197	P	Pn	05 11 52.4	-1.5
WVZ	Waitaha Valley	3.91	224	P	Pn	05 11 56.7	+0.7
FOZ	Fox Glacier	4.72	225	P	Pn	05 12 05.2	-1.7
LBZ	Lake Benmore	5.15	216	P	Pn	05 12 11.4	-1.4
ODZ	Otahua Downs	5.50	209	P	Pn	05 12 16.2	-1.3
JCZ	Jackson Bay	5.63	226	P	Pn	05 12 17.5	-1.9
TUZ	Tuapeka	6.65	210	P	Pn	05 12 32.5	-0.6
SYZ	Scrubby Hill	7.33	210	P	Pn	05 12 41.9	-0.3

IDC 08 05:24:05.7±3.9, 37°38N×72°23E, h195km±30km, mb3.3/5, mb1 3.4/10, mb1mx3.1/66, mbtmp4.0/10, MS3.4/1, Ms1 3.4/1, ms1mx2.5/32, Error ellipse: s-maj=39.9km s-min=20.5km az=160.0

NNC 08 05:24:11.4±2.5, 37°93N×72°27E, h218km±40km, mb2.9, mpv4.0, Error ellipse: s-maj=29.4km s-min=14.6km az=15.0

ISC 08 05:24:07.5±1.3, 37°6N±0°1×72°2E±0°1, h200km, n25, σ0§96/28, mb3.5/5, 4C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	4.63	14	P	Pn	05 25 18.4	+0.8
	SNR=592						
UCH	Uchtor	4.92	20	P	Pn	05 25 21.7	+0.5
	SNR=35						
KZA	Kyzart	5.02	27	P	Pn	05 25 22.3	-0.1
	SNR=21						
EKS2	Erkin-Say	5.16	13	P	Pn	05 25 25.5	+1.5
	SNR=14						
AAK	Ala-Archa	5.30	19	P	Pn	05 25 26.8	+1.0
	5.3nm,0.3s,baz=181,slow=7.4,SNR=67						
AAK				S	Sn	05 26 27.8	+0.2
	2.7nm,0.3s,baz=307,slow=23,SNR=11						
AAK	Ala-Archa	5.30	19	P	Pn	05 25 26.8	+1.0
	SNR=16						
AAK	Ala-Archa	5.30	19	⇑P	Pn	05 25 26.4	+0.6
	13nm,0.5s						
AAK				⇓S	Sn	05 26 26.8	-0.8
	31nm,0.9s						
KBK	Karagaybulak	5.44	22	P	Pn	05 25 28.9	+1.3
	SNR=9.7						
KK31	Karatay Array	5.62	347	P	Pn	05 25 30.8	+1.0
	3.0nm,0.2s,baz=157,slow=10,SNR=183						
KK31				S	Sn	05 26 33.2	-1.7
	8.9nm,0.3s,baz=164,slow=20,SNR=18						
CHMS	Chumysh	5.70	19	P	Pn	05 25 31.7	+0.9
	SNR=8.8						
CHMS	Chumysh	5.70	19	⇓P	Pn	05 25 31.0	+0.2
	14nm,0.7s						
CHMS				⇑S	Sn	05 26 34.6	-2.2
	16nm,0.8s						
MDOK	Medeo	6.64	32	⇑P	Pn	05 25 43.2	0.0
	7.1nm,0.5s						
MKAR	Makanchi Array	11.80	36	P	Pn	05 26 50.0	+0.2
	0.1nm,0.3s,baz=208,slow=12,SNR=4.1						
KURBB	Kurchatov Arra	13.75	17	P	P	05 27 16.7	+0.4
	0.1nm,0.3s,baz=204,slow=11,SNR=13						
AB31	Akbulak array	14.62	327	P	Pn	05 27 24.2	-0.6
	1.1nm,0.4s,baz=131,slow=12,SNR=25						
BVAR	Borovoye Array	15.45	356	P	P	05 27 35.7	+0.6
	0.5nm,0.3s,baz=158,slow=12,SNR=9.3						
AKTO	Aktyubinsk	16.33	326	P	Pn	05 27 46.4	+0.8
	1.4nm,0.3s,baz=115,slow=10,SNR=25						
AKTO	Aktyubinsk	16.33	326	⇑P	Pn	05 27 46.7	+1.1
	4.7nm,0.6s						
ZALV	Zalesovo Beam	18.48	24	P	P	05 28 08.7	+0.3
	0.7nm,0.3s,baz=222,slow=11,SNR=20						
SONM	Songino Array	26.90	57	P	P	05 29 30.4	+0.4
	0.3nm,0.5s,baz=262,slow=7.1,SNR=4.0						
ARCES	ARCESS Array B	40.48	337	P	P	05 31 27.1	+0.9
	2.0nm,0.8s,baz=96,slow=9.2,SNR=2.7						
JNU	Nakatsue	47.38	77	LR	LR	05 57 17.8	
	comp=Z,36nm,18.1s,baz=335,slow=42						
TORD	Torodi Ar. Bea	66.71	269	P	P	05 34 36.0	-1.3
	0.9nm,0.4s,baz=49,slow=5.9,SNR=32						
INK	Inuvik	72.63	10	P	P	05 35 12.7	+0.1
	0.6nm,0.6s,baz=316,slow=3.0,SNR=4.7						
YKA	Yellowknife Ar	80.07	3	P	P	05 35 54.1	-0.4
	0.4nm,0.5s,baz=350,slow=5.6,SNR=6.3						

IDC 08 05:36:19.7±1.3, 2°01N×125°97E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/41, mbtmp3.7/5, MS4.2/1, Ms1 4.2/1, ms1mx2.6/38, Error ellipse: s-maj=156.5km s-min=19.4km az=67.0

MAN 08 05:36:30.2, 3°26N×127°43E, h30km, mb4.4, ML3.3, MS3.1

ISC 08 05:36:25.7±1.1, 2°5N±0°2×127°2E±0°4, h53km, n9, σ3§61/11, mb3.9/5, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	3.85	338	eP	Pn	05 37 21.3	-1.1
DDMP				eS	Sn	05 37 59.7	-6.7
SKMP	Bagumbayan, Su	4.76	327	eP	Pn	05 37 35.5	+0.5
SKMP				eS	Sn	05 38 26.2	-2.7
KCP	Kidapawan	4.92	335	⇑iP	Pn	05 37 39.9	+2.7
KCP				iS	Sn	05 38 39.3	+6.5
WRA	Warramunga Arr	23.41	163	P	P	05 41 29.3	-0.9
	2.2nm,0.5s,baz=336,slow=11,SNR=26						
ASAR	Alice Springs	26.84	166	P	P	05 42 01.1	-0.3
	0.3nm,0.3s,baz=341,slow=9.3,SNR=11						
JCJ	Chichijima	28.35	29	LR	LR	05 51 29.0	
	comp=Z,472nm,21.8s,baz=118,slow=31						
STKA	Stephens Creek	36.85	159	P	P	05 43 29.0	0.0
	1.7nm,0.5s,baz=327,slow=5.8,SNR=5.8						
SONM	Songino Array	48.58	341	P	P	05 45 04.4	+0.5
	0.1nm,0.5s,baz=134,slow=6.4,SNR=3.6						
MKAR	Makanchi Array	58.80	325	P	P	05 46 18.9	+0.3
	0.4nm,0.4s,baz=118,slow=8.8,SNR=2.8						

IDC 08 05:40:06.9±1.1, 9°82S×159°71E, h0km, mb4.4/11, mb1 4.7/11, mb1mx4.3/45, mbtmp4.4/11, MS3.7/6, Ms1 3.7/6, ms1mx3.2/26, Error ellipse: s-maj=42.4km s-min=18.1km az=131.0

NEIC 08 05:40:13.4±2.3, 9°68S±0°08×159°7E±0°1, h41km±7km, mb5.1/36, Error ellipse: s-maj=17.9km s-min=11.4km az=108.0

BJI 08 05:40:15.7±0.0, 9°38S×159°10E, h40km, mB5.1/20, mb4.6/25, Ms4.9/6, Ms7 4.6/3

ISC 08 05:40:11.5±0.5, 9°74S±0°08×159°63E±0°10, h26km, n72, σ0§88/64, mb5.0/36, 1C, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	9.31	128		Pn	05 42 23.6	-0.5
PMG	Port Moresby	12.31	271	LR	LR	05 47 40.2	
	comp=Z,529nm,18.7s,baz=120,slow=37						
CTA	Charters Tower	16.51	230	Pn	P	05 44 06.7	+2.9
	0.5nm,0.3s,baz=64,slow=14,SNR=12						
PATS	Pohnpei	16.52	355	P	P	05 44 04.6	+0.6
COEN	Coen	16.64	254	P	P	05 44 05.2	-0.2
EIDS	Eidsvold	17.54	207	P	P	05 44 16.2	+1.0
ARMA	Armidale	21.89	199	P	P	05 45 03.8	+1.1
WR0	Warramunga Arr	26.26	244	P	P	05 45 44.6	-0.3
WR0				IAmb	IAmb	05 45 46.2	
	comp=Z,65nm,1.7s						
WB0	Warramunga Arr	26.33	245	P	P	05 45 45.6	+0.1
WB0				IAmb	IAmb	05 45 47.4	
	comp=Z,95nm,1.9s						
WB2	Warramunga Arr	26.42	245	P	P	05 45 45.8	-0.6
WB2				IAmb	IAmb	05 46 11.9	
	comp=Z,66nm,0.7s						
WRA	Warramunga Arr	26.43	245	P	P	05 45 46.1	-0.3
	comp=Z,12nm,0.9s,baz=71,slow=9.8,SNR=24						
WRA				LR	LR	05 56 24.7	
	comp=Z,177nm,18.3s,baz=70,slow=37						
WRA	Warramunga Arr	26.43	245	P	P	05 45 45.7	-0.7
CAN	Canberra	27.25	199	P	P	05 45 54.0	+0.3
CAN				IAmb	IAmb	05 46 03.3	
	comp=Z,27nm,1.4s						
STKA	Stephens Creek	27.65	215	P	P	05 45 56.6	-0.6
	comp=Z,6.6nm,0.7s,baz=51,slow=14,SNR=9.5						
STKA				LR	LR	05 57 03.9	
	comp=Z,109nm,18.6s,baz=25,slow=37						
STKA	Stephens Creek	27.65	215	P	P	05 45 56.6	-0.6
AS31	Alice Springs	28.20	237	P	P	05 46 01.0	-1.2
ASAR	Alice Springs	28.20	237	P	P	05 46 01.1	-1.1
	comp=Z,4.1nm,0.9s,baz=63,slow=9.7,SNR=31						
ASAR				LR	LR	05 57 07.4	
	comp=Z,93nm,18.3s,baz=79,slow=36						
ASAR	Alice Springs	28.20	237	P	P	05 46 00.6	-1.6
AFI	Afiamalu	28.28	101	LR	LR	05 56 00.6	
	comp=Z,72nm,21.7s,baz=278,slow=34						
H11S2	WAKE ISLAND Hy	28.91	14	T	T	06 15 02.5	
	baz=193,slow=76,SNR=36						
H11S3	WAKE ISLAND Hy	28.91	14	T	T	06 15 02.0	
	baz=193,slow=76,SNR=22						
H11S1	WAKE ISLAND Hy	28.93	14	T	T	06 14 51.1	
	baz=193,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	30.13	14	T	T	06 16 20.4	
	baz=193,slow=76,SNR=28						
H11N3	WAKE ISLAND Hy	30.14	14	T	T	06 16 24.9	
	baz=193,slow=76,SNR=20						
H11N2	WAKE ISLAND Hy	30.15	14	T	T	06 16 26.7	
	baz=193,slow=76,SNR=35						
BBOO	Buckleboo	31.62	220	P	P	05 46 32.0	-0.5
BBOO				IAmb	IAmb	05 46 33.1	
	comp=Z,28nm,0.9s						
FITZ	Fitzroy Crossi	33.98	252	P	P	05 46 52.7	-0.5
	comp=Z,3.1nm,0.7s,baz=63,slow=4.8,SNR=5.2						
FITZ	Fitzroy Crossi	33.98	252	P	P	05 46 52.8	-0.5
FITZ				IAmb	IAmb	05 47 35.8	
	comp=Z,43nm,1.7s						
MAJO	Matsushiro	50.26	338	P	P	05 49 04.5	-1.1
MAJO				IAmb	IAmb	05 50 32.9	
	comp=Z,48nm,1.7s						
NJ2	Nanjing	56.97	319	eP	P	05 49 55.5	+0.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PEA0B	Petropavlovsk-	62.62	359	P	P	05 50 33.8	+0.4
PETK	Petropavlovsk-	62.62	359	P	P	05 50 33.7	+0.3
	comp=Z,7.5nm,0.9s,baz=148,slow=8.6,SNR=4.1						
PETK	Petropavlovsk-	62.62	359	P	P	05 50 33.9	+0.5
XAN	Xi'an	64.87	315	P	P	05 50 48.4	-0.3
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KMI	Kunming	65.35	303	P	P	05 50 54.1	+1.9
KMI				pmax	pmax		
	comp=Z,17nm,1.2s						
CMAR	Chiang Mai Arr	66.10	295	P	P	05 50 58.0	+1.1
	comp=Z,1.6nm,0.3s,baz=118,slow=5.2,SNR=4.5						
HHC	Hu-ho-hao-te	67.03	322	eP	P	05 51 03.6	+1.0
HHC				pmax	pmax		
	comp=Z,4.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,98nm,5.3s						
HHC				LR	LR		
	comp=Z,250nm,16.6s						
HHC				LR	LR		
	comp=Z,240nm,15.3s						
CD2	Chengdu	67.08	309	P	P	05 51 05.0	+2.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LZH	Lanzhou	69.49	314	eP	P	05 51 16.7	-1.4
LZH				pP	pwP	05 51 31.2	+2.1
LZH				sP	PcP	05 51 37.0	-4.3
LZH				PP	PP	05 53 50.7	-1.4
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,68nm,4.9s						
LZH				LR	LR		
	comp=Z,220nm,15.0s						
LZH				LR	LR		
	comp=Z,220nm,15.2s						
LZH				LR	LR		
	comp=Z,350nm,18.1s						
GTA	Gaotai	73.88	316	P	P	05 51 45.4	+0.9
GTA				pP	PcP	05 51 59.2	-0.6
GTA				sP	pwP	05 52 04.3	+8.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,44nm,4.2s						
GTA				LR	LR		
	comp=Z,100nm,21.6s						
GTA				LR	LR		
	comp=Z,110nm,19.2s						
SONM	Songino Array	74.14	326	P	P	05 51 46.3	+0.5
	comp=Z,1.3nm,0.7s,baz=141,slow=5.5,SNR=11						
SONM	Songino Array	74.14	326	P	P	05 51 45.7	-0.1
YAK	Yakutsk	75.26	346	P	P	05 51 50.8	-0.9
YAK				IAmb	IAmb	05 51 53.7	
	comp=Z,17nm,0.6s						
BILL	Bilibino	77.73	3	P	P	05 52 05.4	-0.3
BILL				IAmb	IAmb	05 52 06.7	
	comp=Z,9.7nm,1.2s						
SVW2	Sparrevohn	78.88	20	P	P	05 52 12.3	+0.2
BRLK	Bradley Lake	79.68	23	P	P	05 52 16.5	-0.1
QSPA	South Pole Qui	80.25	180	P	P	05 52 20.6	+0.7
QSPA				IAmb	IAmb	05 53 41.4	
	comp=Z,33nm,1.9s						
SUA	Susitna One	80.84	22	P	P	05 52 22.2	-0.7
RC01	Rabbit Creek A	80.97	22	P	P	05 52 24.2	+0.7
PPLA	Purkeypile	81.28	20	P	P	05 52 24.5	-0.8
PPLA				IAmb	IAmb	05 53 11.0	
	comp=Z,53nm,1.5s						

RDOG	Red Dog Mine	82.05	13	P	P	05 52 29.4	+0.3
SCM	Sheep Creek Mo	82.34	22	P	P	05 52 30.9	+0.1
RND	Reindeer	82.76	21	P	P	05 52 33.0	0.0
RND				IAmb	IAmb	05 55 07.8	
	comp=Z,68nm,2.0s						
TGL	Tana Glacier	83.49	25	P	P	05 52 37.7	+0.9
VRDI	Verde Repeater	83.50	24	P	P	05 52 37.2	+0.2
VRDI				IAmb	IAmb	05 55 06.5	
	comp=Z,45nm,1.6s						
WRH	Wood River Hil	83.69	20	P	P	05 52 37.1	-0.5
WRH				IAmb	IAmb	05 54 34.0	
	comp=Z,20nm,1.6s						
CCB	Clear Creek Bu	83.90	20	P	P	05 52 38.0	-0.7
CCB				IAmb	IAmb	05 52 38.2	
	comp=Z,5.0nm,0.6s						
WMQ	Urumqi	83.96	316	eP	P	05 52 40.8	+1.2
WMQ				pP	sP	05 52 53.3	+2.7
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.9s						
WMQ				LR	LR		
	comp=Z,600nm,19.9s						
WMQ				LR	LR		
	comp=Z,280nm,22.7s						
CTGM	Chitina Glacie	84.22	25	P	P	05 52 41.0	+0.4
ILAR	Eielson Array	84.29	20	P	P	05 52 39.7	-1.0
	comp=Z,4.2nm,0.4s,baz=245,slow=5.1,SNR=11						
RIDG	Independent Ri	84.39	22	P	P	05 52 41.1	-0.3
RIDG				IAmb	IAmb	05 53 21.8	
	comp=Z,51nm,1.9s						
DOT	Dot Lake	84.63	22	P	P	05 52 42.6	+0.2
DOT				IAmb	IAmb	05 52 55.7	
	comp=Z,42nm,1.8s						
DIB	Dawson Inlet,	84.90	34	P	P	05 52 44.4	+0.4
DIB				IAmb	IAmb	05 55 29.9	
	comp=Z,48nm,1.7s						
BCAR	Beaver Creek A	85.16	23	P	P	05 52 45.5	+0.3
MK31	Makanchi Array	88.50	318	P	P	05 53 01.8	0.0
MKAR	Makanchi Array	88.50	318	P	P	05 53 01.6	-0.2
	comp=Z,0.9nm,0.5s,baz=99,slow=4.6,SNR=17						
MKAR	Makanchi Array	88.50	318	P	P	05 53 01.4	-0.4
NVAR	Mina Array Bea	89.84	51	P	P	05 53 09.5	+1.0
	comp=Z,0.3nm,0.4s,baz=242,slow=7.7,SNR=3.0						
NVAR				LR	LR	06 28 55.1	
	comp=Z,48nm,19.0s,baz=330,slow=33						
NVAR	Mina Array Bea	89.84	51	P	P	05 53 08.6	+0.1
SYO	Syowa Base	91.20	198⇑	epP	pP	05 53 27.4	+5.7
YKA	Yellowknife Ar	96.61	28	P	P	05 53 37.6	-1.3
	comp=Z,0.5nm,0.6s,baz=261,slow=5.0,SNR=7.2						
MODS	Modra-Piesok	130.22	328	ePKP	PKPdf	05 59 19.1	-0.4

NIED 08 06:16:00, 26.20N×128.40E, h14km, Mw4.0 Best double couple: $M_0$1.08000×10^{15} NP1:ϕ_s49.00000°, δ74.00000°, λ91.00000°. NP2:ϕ_s226.00000°, δ17.00000°, λ87.00000°.
IDC 08 06:16:24.0±0.8, 26.20N×128.17E, h0km, mb3.9/11, mb1 4.0/14, mb1mx3.8/35, mbtmp3.8/14, ML3.1/3, MS3.1/3, Ms1 3.1/3, ms1mx2.8/39, Error ellipse: s-maj=26.9km s-min=15.1km az=90.0
NEIC 08 06:16:25.9±1.6, 26.15N±0.04×128.2E±0.1, h14km±5km, mb4.5/17, Error ellipse: s-maj=15.5km s-min=5.4km az=100.0
JMA 08 06:16:27.9±0.3, 26.25N×128.35E, h29km±4km, M3.8
ISC 08 06:16:25.5±1.6, 26.15N±0.05×128.45E±0.05, h14km±9km, n56, σ1.57/66, mb4.2/20, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNTH	Nagotoyohara	0.53	314	P	Pg	06 16 36.3	+0.4
JNTH				S	Sg	06 16 42.8	-0.2
JJT3	Tamagusuku3	0.59	270	P	Pb	06 16 38.5	+0.8
JJT3				S	Sb	06 16 46.9	+0.9
JOW	Kunigami	0.70	347	P	Pg	06 16 39.6	+0.5
JOW				S	Sg	06 16 47.4	-0.9
JOW	Kunigami	0.70	347	Pn	Pg	06 16 39.7	+0.6
	257nm,0.3s,baz=151,slow=12,SNR=1734						
JOW				Sn	Sg	06 16 48.3	0.0
	176nm,0.3s,baz=82,slow=22,SNR=33						
JYRO	Yoronjima	0.87	0	P	Pb	06 16 42.3	-0.1
JYRO				S	Sb	06 16 52.8	-1.2
JIH	Iheya	0.98	334	P	Pb	06 16 44.2	-0.1
JIH				eS	Sb	06 16 57.6	+0.5
JAGN	Aguni-jima	1.17	292	P	Pn	06 16 46.6	-0.8
JOKE	Okinoerabujima	1.21	5	P	Pn	06 16 47.5	-0.6
JOKE				eS	Sb	06 17 03.2	-0.6
JKE	Kume jima 2	1.50	277	P	Pn	06 16 51.0	-1.0
JMZ	Minamidaito 2	2.52	97	P	Pn	06 17 04.9	-1.1
JMZ				S	Sn	06 17 32.6	-4.0
JKDJ	Kitadaitoujima	2.57	94	P	Pn	06 17 05.6	-1.2
JKDJ				eS	Sn	06 17 34.7	-3.2
YULB	Yu-li	7.05	249	Pn	Pn	06 18 04.1	-4.3
SSLB	Suanglung	7.19	253	Pn	Pn	06 18 07.0	-3.3
JNU	Nakatsue	7.26	16	Pn	Pn	06 18 12.8	+1.5
	0.6nm,0.3s,baz=4.6,slow=18,SNR=3.0						
JNU				Sn	Sn	06 19 31.5	-2.1
	0.2nm,0.3s,baz=168,slow=22,SNR=2.1						
JNU				LR	LR	06 21 25.1	
	comp=Z,148nm,18.2s,baz=298,slow=41						
JNU	Nakatsue	7.26	16		Pn	06 18 11.6	+0.2
TPUB	Ta-pu	7.65	250	Pn	Pn	06 18 14.8	-1.9
KSRS	Korea Array	11.28	358	Pn	Pn	06 19 07.1	+0.8
	0.2nm,0.3s,baz=13,slow=39,SNR=2.6						
KSRS				LR	LR	06 23 47.3	
	comp=Z,72nm,19.8s,baz=184,slow=40						
USRK	Ussuriysk Ar.	18.24	8	P	Pn	06 20 37.5	-0.7
	baz=194,slow=12,SNR=3.6						
USRK	Ussuriysk Ar.	18.24	8	P	P	06 20 39.7	+1.3
XAN	Xi'an	18.62	300	P	P	06 20 43.1	+0.5
SONM	Songino Array	27.73	327	P	P	06 22 14.2	+0.6
	1.1nm,0.4s,baz=136,slow=9.1,SNR=18						
SONM	Songino Array	27.73	327	P	P	06 22 14.2	+0.6
SHL	Shillong	32.84	277	P	P	06 22 56.1	-3.0
MA2	Magadan	36.82	19	LR	LR	06 39 05.7	
	comp=Z,26nm,18.6s,baz=284,slow=37						
MK31	Makanchi Array	41.73	312	P	P	06 24 12.8	-1.4
MKAR	Makanchi Array	41.73	312	P	P	06 24 12.7	-1.5
	1.6nm,0.6s,baz=92,slow=9.8,SNR=30						
MKAR				PcP	PcP	06 26 10.7	+0.2
	0.2nm,0.6s,baz=107,slow=1.5,SNR=2.4						
MKAR	Makanchi Array	41.73	312	P	P	06 24 12.8	-1.4
MAKZ	Makanchi	41.95	312	P	P	06 24 14.5	-1.4
ZALV	Zalesovo Beam	42.43	323	P	P	06 24 17.7	-2.0
	1.0nm,0.6s,baz=116,slow=6.5,SNR=4.8						
ZALV	Zalesovo Beam	42.43	323	P	P	06 24 18.7	-0.9
WB0	Warramunga Arr	46.01	172	P	P	06 24 51.2	+2.5
WB0				IAmb	IAmb	06 24 53.4	
	comp=Z,5.6nm,1.1s						
WRA	Warramunga Arr	46.17	172	P	P	06 24 50.6	+0.7
	comp=Z,0.8nm,0.8s,baz=354,slow=8.2,SNR=5.1						
WR0	Warramunga Arr	46.22	172	P	P	06 24 50.6	+0.4
WR0				IAmb	IAmb	06 24 52.4	
	comp=Z,9.6nm,1.4s						
KKAR	Karatay Array	49.61	305	P	P	06 25 16.5	-0.1
ASAR	Alice Springs	49.80	173	P	P	06 25 19.6	+1.5
	comp=Z,0.6nm,0.7s,baz=360,slow=8.5,SNR=7.0						
ASAR	Alice Springs	49.80	173	P	P	06 25 19.2	+1.2
BRVK	Borovoye	50.53	318	P	P	06 25 18.4	-0.5
BRVK				IAmb	IAmb	06 25 23.0	
	comp=Z,3.4nm,1.0s						
KBL	Kabul	51.31	294	P	P	06 25 27.9	-1.9
KBL				IAmb	IAmb	06 25 30.7	
	comp=Z,4.2nm,0.7s						
ABKAR	Akbulak array	56.84	313	P	P	06 26 09.5	-0.1
ILAR	Eielson Array	64.42	28	P	P	06 27 02.8	+1.8
	comp=Z,0.4nm,0.7s,baz=268,slow=5.9,SNR=4.6						
VRDI	Verde Repeater	66.55	32	P	P	06 27 15.5	+0.5
VRDI				IAmb	IAmb	06 27 20.3	
	comp=Z,16nm,1.2s						
KBZ	Khabaz	69.36	309	P	P	06 27 32.9	+0.1
	comp=Z,1.8nm,0.8s,baz=98,slow=7.1,SNR=3.5						
FIA1	FINESS Array S	73.03	331	P	P	06 27 53.8	-0.9
FINES	FINESS Array B	73.03	331	P	P	06 27 53.7	-1.0
	comp=Z,1.7nm,0.5s,baz=78,slow=5.5,SNR=14						
FINES	FINESS Array B	73.03	331	P	P	06 27 53.3	-1.4
RES	Resolute Bay	75.59	11	P	P	06 28 13.2	+3.7
RES				IAmb	IAmb	06 28 13.7	
	comp=Z,1.6nm,0.7s						
AKASG	Malin Array Be	75.72	320	P	P	06 28 09.3	-1.3
	comp=Z,0.5nm,0.3s,baz=62,slow=6.4,SNR=3.7						
AKASG	Malin Array Be	75.72	320	P	P	06 28 10.4	-0.1
AKBB	Malin Array Si	75.72	320	P	P	06 28 09.9	-0.7
AKBB				IAmb	IAmb	06 28 18.1	
	comp=Z,5.6nm,1.4s						
YKA	Yellowknife Ar	78.52	25	P	P	06 28 27.3	+1.2
	comp=Z,0.2nm,0.3s,baz=302,slow=5.8,SNR=7.2						
BKZ	Black Stump Fm	78.97	144	P	P	06 28 29.6	+0.7
NC405	NORSAR Array S	79.23	334	P	P	06 28 31.0	+0.9
NC405				IAmb	IAmb	06 28 36.1	
	comp=Z,17nm,1.1s						
BUR08	Bucovina Ar. S	79.42	318	P	P	06 28 31.3	-0.2
BUR08				IAmb	IAmb	06 28 34.1	
	comp=Z,3.4nm,1.4s						
BURAR	Bucovina Array	79.42	318	P	P	06 28 30.6	-0.9
NOA	NORSAR Array B	79.47	334	P	P	06 28 31.9	+0.5
	comp=Z,0.7nm,0.6s,baz=52,slow=5.7,SNR=3.4						
SUMG	Summit	81.13	356	iP	P	06 28 43.6	+3.0

IDC 08 06:32:16.3±0.9, 18.97N×145.71E, h0km, mb4.0/4, mb1 4.4/4, mb1mx3.7/39, mbtmp4.0/4, Error ellipse: s-maj=44.3km s-min=22.3km az=106.0
NEIC 08 06:32:48.1±0.9, 18.8N±0.1×145.2E±0.1, h286km±8km, mb4.1/16, Error ellipse: s-maj=19.4km s-min=14.9km az=62.0
ISC 08 06:32:41.0±0.6, 18.80N±0.09×145.3E±0.2, h214km, n26, σ0.52/26, mb4.1/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INU	Inuyama	18.06	338	P	Pn	06 36 38.5	-0.4
MDJ	Mudanjiang	28.91	336	P	P	06 38 20.7	+0.8
COEN	Coen	32.62	184	P	P	06 38 52.4	-0.3
WB0	Warramunga Arr	39.80	196	P	P	06 39 53.4	-0.1
WR0	Warramunga Arr	39.94	196	P	P	06 39 54.4	-0.2
WRAB	Tennant Creek	39.97	196	P	P	06 39 55.1	+0.2
WB2	Warramunga Arr	39.98	196	P	P	06 39 55.0	+0.1
WB2				IAmb	IAmb	06 39 57.0	
	comp=Z,14nm,1.5s						
WRA	Warramunga Arr	39.98	196	P	P	06 39 55.1	+0.1
	comp=Z,3.3nm,0.5s,baz=20,slow=11,SNR=46						
WRA	Warramunga Arr	39.98	196	P	P	06 39 54.6	-0.4
FITZ	Fitzroy Crossi	41.45	209	P	P	06 40 07.1	+0.1
FITZ				IAmb	IAmb	06 40 17.7	
	comp=Z,18nm,1.2s						
AS31	Alice Springs	43.65	195	P	P	06 40 24.4	-0.3
ASAR	Alice Springs	43.65	195	P	P	06 40 24.7	0.0
	comp=Z,0.7nm,0.7s,baz=20,slow=9.0,SNR=13						
ASAR	Alice Springs	43.65	195	P	P	06 40 24.2	-0.5
EIDS	Eidsvold	44.26	173	P	P	06 40 30.4	+1.0
EIDS				IAmb	IAmb	06 40 39.6	
	comp=Z,13nm,1.2s						
ARMA	Armidale	49.30	173	P	P	06 41 09.1	+0.5
ARMA				IAmb	IAmb	06 41 22.2	
	comp=Z,8.8nm,1.2s						
BBOO	Buckleboo	52.08	190	P	P	06 41 29.0	-0.1
BBOO				IAmb	IAmb	06 41 40.0	
	comp=Z,13nm,1.3s						
TOO	Toolangi	56.06	180	P	P	06 41 57.8	0.0
TOO				IAmb	IAmb	06 42 12.2	
	comp=Z,6.4nm,1.1s						
MKAR	Makanchi Array	58.14	314	P	P	06 42 12.8	+0.4
	comp=Z,0.2nm,0.7s,baz=87,slow=8.5,SNR=2.2						
IMAR	Indian Mountai	61.27	24	P	P	06 42 34.1	+0.8
MLY	Manley	62.18	26	P	P	06 42 39.7	+0.2
MLY				IAmb	IAmb	06 42 40.3	
	comp=Z,3.0nm,1.2s						
TOLK	Toolik Lake Re	63.63	22	P	P	06 42 49.7	+0.8
INK	Inuvik	69.42	23	P	P	06 43 25.9	+0.5
ABKAR	Akbulak array	73.03	317	P	P	06 43 46.7	-0.8
YKA	Yellowknife Ar	78.07	28	P	P	06 44 14.8	-1.0
	comp=Z,0.6nm,0.7s,baz=284,slow=5.6,SNR=9.7						
NVAR	Mina Array Bea	83.36	52	P	P	06 44 44.2	-0.4
	comp=Z,1.1nm,0.6s,baz=271,slow=5.3,SNR=8.3						
NV11	Mina Array Sit	83.47	52	P	P	06 44 45.0	-0.1
NV11				IAmb	IAmb	06 44 50.2	
	comp=Z,6.0nm,1.4s						

IDC 08 07:02:45.5±2.7, 15.58S×167.53E, h93km±24km, mb3.9/13, mb1 4.1/14, mb1mx3.9/36, mbtmp4.2/14, MS3.0/3, Ms1 3.0/3, ms1mx2.7/30, Error ellipse: s-maj=25.7km s-min=18.7km az=122.0
NEIC 08 07:02:45.8±2.2, 15.57S±0.07×167.6E±0.1, h100km±4km, mb4.6/18, Error ellipse: s-maj=15.2km s-min=8.4km az=63.0
ISC 08 07:02:46.2±0.6, 15.60S±0.06×167.6E±0.1, h100km, n56, σ0.99/55, mb4.4/20, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.37	294		Pn	07 03 00.5	-0.7
DZM	Mont Dzumac	6.52	189	P	Pn	07 04 20.1	+0.3
	17nm,0.3s,baz=110,slow=15,SNR=108						
DZM				S	Sn	07 05 32.5	-0.3
	15nm,0.3s,baz=84,slow=19,SNR=9.3						
DZM	Mont Dzumac	6.52	189	Pn	Pn	07 04 19.5	-0.3
DZM					Sn	07 05 32.7	-0.1
NOUC	Port Laguerre	6.58	190	Pn	Pn	07 04 20.3	-0.1
NOUC					Sn	07 05 33.3	-0.5
EIDS	Eidsvold	18.22	235		Pn	07 06 54.1	+1.4
RAO	Raoul Island	19.07	138	LR	LR	07 13 11.9	
	comp=Z,54nm,20.1s,baz=131,slow=33						
ARMA	Armidale	20.76	222	P	Pn	07 07 23.2	+0.6
CTA	Charters Tower	20.76	254	P	P	07 07 20.4	+1.1
	3.6nm,0.5s,baz=80,slow=13,SNR=6.0						
PMG	Port Moresby	20.83	285	LR	LR	07 13 31.4	
	comp=Z,64nm,18.5s,baz=46,slow=31						
COEN	Coen	23.63	271	P	P	07 07 48.8	+0.3
COEN				IAmb	IAmb	07 08 02.6	
	comp=Z,34nm,1.5s						
PATS	Pohnpei	24.10	337	P	P	07 07 54.5	+1.8
PATS				IAmb	IAmb	07 07 56.1	
	comp=Z,31nm,1.0s						
BKZ	Black Stump Fm	24.75	163	P	P	07 07 59.2	+0.7
BKZ				IAmb	IAmb	07 08 13.2	
	comp=Z,30nm,1.5s						
STKA	Stephens Creek	28.65	231	P	P	07 08 34.0	+0.4
	comp=Z,2.3nm,0.7s,baz=38,slow=8.8,SNR=5.0						
STKA	Stephens Creek	28.65	231	P	P	07 08 34.3	+0.7
WR0	Warramunga Arr	31.70	257	P	P	07 09 00.3	-0.4
WR0				IAmb	IAmb	07 09 11.2	
	comp=Z,11nm,1.4s						
WB0	Warramunga Arr	31.84	258	P	P	07 09 00.4	-1.4
WB0				IAmb	IAmb	07 09 01.3	
	comp=Z,4.8nm,0.7s						
WRA	Warramunga Arr	31.89	257	P	P	07 09 00.9	-1.5
	comp=Z,6.6nm,0.7s,baz=85,slow=9.9,SNR=20						
WRA				LR	LR	07 20 41.2	
	comp=Z,14nm,19.1s,baz=200,slow=34						
AS31	Alice Springs	32.63	250	P	P	07 09 07.9	-0.9
ASAR	Alice Springs	32.63	250	P	P	07 09 07.8	-1.0
	comp=Z,10nm,0.7s,baz=76,slow=9.0,SNR=109						
ASAR				ScP	ScP	07 15 28.5	+0.7
	comp=Z,1.7nm,0.9s,baz=82,slow=3.5,SNR=7.6						
ASAR	Alice Springs	32.63	250	P	P	07 09 07.9	-0.9
BBOO	Buckleboo	33.27	233	P	P	07 09 13.9	-0.4
BBOO				IAmb	IAmb	07 09 30.2	
	comp=Z,12nm,1.1s						
FAKI	Fak Fak	36.98	286	P	P	07 09 46.0	-0.3
FAKI				IAmb	IAmb	07 09 47.3	
	comp=Z,10.0nm,0.8s						
KNRA	Kununurra	37.32	264	P	P	07 09 47.9	-1.2
FORT	Forrest	39.10	240	P	P	07 10 03.1	-0.8
FITZ	Fitzroy Crossi	40.13	260	P	P	07 10 12.0	-0.7
FITZ				IAmb	IAmb	07 10 13.0	
	comp=Z,12nm,0.7s						
MJAR	Matsushiro Arr	58.80	333	P	P	07 12 33.4	-0.8
	comp=Z,1.0nm,0.5s,baz=158,slow=7.3,SNR=4.7						
MJAR	Matsushiro Arr	58.80	333	P	P	07 12 35.5	+1.4
MAJO	Matsushiro	58.80	333	P	P	07 12 33.7	-0.5
MJB9	Matsu-Tunnel	58.80	333	P	P	07 12 33.7	-0.5
USRK	Ussuriysk Ar.	67.78	333	P	P	07 13 33.9	+0.7
	comp=Z,1.8nm,0.6s,baz=141,slow=6.8,SNR=6.2						
USRK	Ussuriysk Ar.	67.78	333	P	P	07 13 33.7	+0.4
PETK	Petropavlovsk-	68.95	354	P	P	07 13 42.6	+2.3
QSPA	South Pole Qui	74.43	180	P	P	07 14 13.8	+0.5
CMAR	Chiang Mai Arr	75.56	294	P	P	07 14 21.6	+1.1
	comp=Z,0.9nm,0.3s,baz=122,slow=3.6,SNR=6.7						
ULN	Ulaanbaatar	83.00	324	P	P	07 15 01.9	+1.3
ULN				IAmb	IAmb	07 15 03.0	
	comp=Z,4.0nm,0.8s						
SONM	Songino Array	83.36	324	P	P	07 15 02.3	-0.1
	comp=Z,1.4nm,0.5s,baz=156,slow=7.5,SNR=8.4						
ILAR	Eielson Array	87.26	18	P	P	07 15 19.7	-1.5
	comp=Z,0.4nm,0.6s,baz=236,slow=5.5,SNR=7.7						
ILAR	Eielson Array	87.26	18	P	P	07 15 19.1	-2.1
NVAR	Mina Array Bea	87.63	49	P	P	07 15 25.7	+1.8
	comp=Z,0.2nm,0.4s,baz=266,slow=6.3,SNR=2.6						
MKAR	Makanchi Array	98.02	316	P	Pdif	07 16 11.7	+0.3
	comp=Z,0.5nm,0.7s,baz=94,slow=5.8,SNR=5.6						
YKA	Yellowknife Ar	98.19	27	P	P	07 16 10.3	-1.3
	comp=Z,0.2nm,0.6s,baz=259,slow=4.5,SNR=4.6						
ZALV	Zalesovo Beam	98.25	324	P	P	07 16 11.6	-0.5
	comp=Z,0.6nm,0.5s,baz=127,slow=4.4,SNR=3.7						
ZALV	Zalesovo Beam	98.25	324	P	Pdif	07 16 12.2	0.0
ARCES	ARCESS Array B	121.16	345	PKP	PKPdf	07 21 25.9	-0.9
	comp=Z,2.3nm,0.7s,baz=38,slow=2.3,SNR=9.9						
ARCES	ARCESS Array B	121.16	345		PKPdf	07 21 25.1	-1.7
FINES	FINESS Array B	126.63	338	PKP	PKiKP	07 21 37.5	-0.4
	comp=Z,4.1nm,1.0s,baz=77,slow=1.9,SNR=4.8						
FINES	FINESS Array B	126.63	338		PKPdf	07 21 37.0	-0.5
AKASG	Malin Array Be	131.60	326	PKP	PKiKP	07 21 47.9	-0.3
	comp=Z,0.3nm,0.4s,baz=52,slow=1.5,SNR=3.2						
AKASG	Malin Array Be	131.60	326		PKiKP	07 21 48.5	+0.3
BRTR	Keskin Array B	133.28	310	PKP	PKiKP	07 21 51.8	-0.4
	comp=Z,0.5nm,0.5s,baz=123,slow=4.6,SNR=3.3						
BRTR	Keskin Array B	133.28	310		PKiKP	07 21 51.5	-0.7
GERES	GERESS Array B	140.54	333	PKP	PKiKP	07 22 05.5	-1.1
	comp=Z,0.6nm,0.7s,baz=92,slow=2.3,SNR=4.3						
GERES	GERESS Array B	140.54	333		PKPdf	07 22 04.2	+0.2
KEST	Kesra	152.05	320	PKPbc	PKiKP	07 22 30.5	-0.2
	comp=Z,3.0nm,0.8s,baz=225,slow=2.0,SNR=4.2						
KEST	Kesra	152.05	320		PKPbc	07 22 30.0	-0.4
TORD	Torodi Ar. Bea	166.09	262	PKPab	PKPab	07 23 40.4	-1.1
	comp=Z,0.4nm,0.8s,baz=104,slow=5.0,SNR=3.7						

IDC 08 07:35:18.7±1.9, 2.33N×128.28E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/29, mbtmp3.7/4, MS3.2/1, Ms1 3.2/1, ms1mx2.4/32, Error ellipse: s-maj=151.7km s-min=22.5km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res
WRA	Warramunga Arr	22.92	165	P	P	07 40 25.4	+0.9
	1.4nm,0.3s,baz=344,slow=10,SNR=25						
ASAR	Alice Springs	26.42	168	P	P	07 40 56.7	-0.6
	0.2nm,0.3s,baz=350,slow=8.0,SNR=6.7						
ASAR				LR	LR	07 51 29.8	
	comp=Z,51nm,19.9s,baz=242,slow=37						
STKA	Stephens Creek	36.30	161	P	P	07 42 23.1	-1.1
	1.7nm,0.9s,baz=326,slow=7.3,SNR=3.4						
MKAR	Makanchi Array	59.58	325	P	P	07 45 24.6	+0.3
	0.4nm,0.4s,baz=113,slow=8.2,SNR=13						

IDC 08 08:21:27.6±1.4, 6.07S×103.57E, h0km, mb4.1/11, mb1 4.3/11, mb1mx4.0/43, mbtmp4.1/11, MS3.1/2, Ms1 3.1/2, ms1mx2.6/39, Error ellipse: s-maj=53.1km s-min=17.5km az=55.0
DJA 08 08:21:29.5±2.5, 6°S±23°×10°4E±°, h10km, M4.1/7, MLv4.1/7
NEIC 08 08:21:35.5±1.1, 6.0S±0.2×103.7E±0.1, h59km±7km, mb4.3/9, Error ellipse: s-maj=29.9km s-min=10.3km az=220.0
ISC 08 08:21:33.2±0.8, 6.1S±0.1×103.65E±0.10, h38km, n38, σ1.01/35, mb4.3/14, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.02	55	P	Pn	08 21 50.8	-0.2
LWLI	Liwa	1.16	20	P	Pn	08 21 54.0	+1.0
MDSI	Maura Dua	1.70	18	P	Pn	08 22 01.9	+1.6
KLSI		1.77	37	P	Pn	08 22 02.9	+1.5
MNAI	Manna	1.87	338	P	Pn	08 22 04.1	+1.4
MNAI	Manna	1.87	338	Pn	Pn	08 22 04.7	+2.0
KSI	Kapahiang	2.66	337	P	Pn	08 22 14.6	+1.0
CISI	Cisompet, Garu	4.38	109	Pn	Pn	08 22 36.8	-0.4
RGRI	Rengat	5.87	347	P	Pn	08 23 17.3	+20
UGM	Wanagama	7.05	105	Pn	Pn	08 23 16.6	+2.7
JAGI	Jajag, Banyuwa	10.68	103	Pn	Pn	08 24 05.3	+1.6
KAPI	Kappang	16.06	87	LR	LR	08 31 20.6	
	comp=Z,38nm,20.1s,baz=274,slow=37						
SOEI	Soe	20.73	101		P	08 26 10.9	+0.1
CMAR	Chiang Mai Arr	24.85	349	P	P	08 26 51.8	-0.5
	3.3nm,0.7s,baz=182,slow=9.0,SNR=14						
WB0	Warramunga Arr	32.81	117	P	P	08 28 03.9	+0.6
WB0				IAmb	IAmb	08 28 18.6	
	comp=Z,6.9nm,1.2s						
WRA	Warramunga Arr	32.82	118	P	P	08 28 04.0	+0.6
	comp=Z,3.0nm,0.4s,baz=345,slow=32,SNR=4.9						
WB2	Warramunga Arr	32.83	118	P	P	08 28 03.0	-0.5
WB2				IAmb	IAmb	08 28 22.2	
	comp=Z,4.8nm,1.1s						
ASAR	Alice Springs	33.92	124	P	P	08 28 13.7	+0.7
	comp=Z,0.3nm,0.8s,baz=297,slow=8.1,SNR=3.5						
STKA	Stephens Creek	43.72	131	P	P	08 29 35.2	+0.3
	comp=Z,0.4nm,0.3s,baz=273,slow=7.3,SNR=3.3						
STKA	Stephens Creek	43.72	131	P	P	08 29 35.2	+0.3
JNU	Nakatsue	46.80	32	LR	LR	08 50 41.5	
	comp=Z,34nm,19.1s,baz=238,slow=38						
KSRS	Korea Array	48.90	26	P	P	08 30 15.6	+0.2
	comp=Z,1.7nm,0.6s,baz=219,slow=7.8,SNR=6.6						
SONM	Songino Array	53.77	2	P	P	08 30 52.3	+0.4
	comp=Z,2.4nm,0.7s,baz=181,slow=8.5,SNR=20						
SONM	Songino Array	53.77	2	P	P	08 30 51.9	0.0
MK31	Makanchi Array	55.98	342	P	P	08 31 08.2	+0.4
MKAR	Makanchi Array	55.98	342	P	P	08 31 07.5	-0.3
	comp=Z,1.9nm,0.6s,baz=144,slow=8.7,SNR=22						
MKAR	Makanchi Array	55.98	342	P	P	08 31 07.2	-0.6
USRK	Ussuriysk Ar.	56.22	24	P	P	08 31 08.9	-0.6
	comp=Z,1.1nm,0.5s,baz=210,slow=6.8,SNR=6.3						
USRK	Ussuriysk Ar.	56.22	24	P	P	08 31 08.5	-1.0
ZAA0	Zalesovo Array	61.90	348	P	P	08 31 47.5	-1.2
ZAA0				IAmb	IAmb	08 31 49.2	
	comp=Z,2.8nm,0.8s						
ZALV	Zalesovo Beam	61.90	348	P	P	08 31 47.8	-0.9
	comp=Z,3.9nm,0.8s,baz=154,slow=4.4,SNR=12						
ABKAR	Akbulak array	66.98	331	P	P	08 32 21.6	-0.4
BKZ	Black Stump Fm	72.87	129	P	P	08 32 58.2	-0.4
KBZ	Khabaz	73.78	319	P	P	08 33 03.8	+0.2
	comp=Z,2.2nm,0.9s,baz=90,slow=5.1,SNR=3.8						
TIXI	Tiksi	79.36	8	P	P	08 33 33.1	-1.5
	comp=Z,2.5nm,0.3s,baz=195,slow=4.4,SNR=5.3						
TIXI	Tiksi	79.36	8	P	P	08 33 33.4	-1.2
TIXI				IAmb	IAmb	08 33 36.9	
	comp=Z,4.7nm,1.2s						
TXAR	Lajitas Array	145.38	45	PKPbc	PKPab	08 41 08.2	+0.2
	comp=Z,1.5nm,0.8s,baz=305,slow=1.3,SNR=17						
TXAR	Lajitas Array	145.38	45		PKPab	08 41 08.0	0.0

DJA 08 08:42:57.9±1.4, 9°S±8°×11°1E±°, h10km, M3.4/5, MLv3.4/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCJI	Pacitan	0.74	351	P	Pb	08 43 12.8	-0.1
PWJI	Pagerwojo	1.03	29	P	Pg	08 43 17.4	-0.4
PWJI				S	Sg	08 43 31.2	0.0
WOJI	Wonogiri, Jawa	1.15	341	P	Pb	08 43 19.0	-0.9
WOJI				S	Sg	08 43 35.1	+0.2
UGM	Wanagama	1.27	323	P	Pn	08 43 21.2	-0.6
UGM				S	Sb	08 43 38.2	-0.2
NGJI	Ngawi	1.56	6	P	Pg	08 43 28.4	+0.5

SNET 08 08:48:34.0±0.8, 13.12N×90.25W, h15km±7km, ML3.3
GCG 08 08:48:37.9±0.5, 13.45N×90.59W, h20km±58km, MD3.7
ISC 08 08:48:34.7±2.7, 13.2N±0.2×90.37W±0.10, h38km, n18, σ0.73/18, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.99	47	eP	Pn	08 48 51.6	-0.7
CEVE				IAML		08 49 10.8	
	comp=Z,1μm,0.3s						
SBLS	San Blas	1.00	46	eP	Pn	08 48 51.4	-1.0
IXG	Ixpaco	1.02	356⇑	iP	Pn	08 48 52.0	-0.7
RTR	El Retiro	1.02	43	eP	Pn	08 48 52.5	-0.3
SNJE	San Jose	1.03	46	eP	Pn	08 48 52.0	-0.9
SNET	Serv Nac Est T	1.23	64	eP	Pn	08 48 54.6	-0.9
UEES	Universidad Ev	1.24	63	IAML		08 49 14.4	
	comp=Z,486nm,0.1s						
PCG	Pacaya	1.26	349	eP	Pn	08 48 55.5	-0.5
OPAM	Oficina de Pla	1.27	64	eP	Pn	08 48 55.5	-0.5
LFU	La Fuente	1.36	64	eP	Pn	08 48 57.0	-0.3
FUG	Fuego 3	1.37	340	eP	Pn	08 48 56.9	-0.2
NBG	Las Nubes	1.43	1	eP	Pn	08 48 59.5	+1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAVA	Las Pavas	1.50	68	eP	Pn	08 48 59.2	0.0
COEG	Centro de Oper	1.52	72	eP	Pn	08 48 58.9	-0.6
COEB	Comit de Eme	1.82	79	eP	Pn	08 49 03.1	-0.6
COEB				IAML		08 49 29.3	
	comp=Z,193nm,0.4s						
TECA	Tecapa	1.85	79	eP	Pn	08 49 03.8	-0.3
TECA				eS	Sn	08 49 27.4	+1.1
STG3	Santiaguito 3,	1.94	323	eP	Pn	08 49 05.2	-0.2
PACA	Pacayal	2.02	81	eP	Pn	08 49 06.6	+0.2

IDC 08 09:14:49.7±4.4, 57.36N×156.36W, h55km±37km, mb3.5/8, mb1 3.6/11, mb1mx3.3/46, mbtmp3.7/11, ML3.4/3, Error ellipse: s-maj=40.1km s-min=27.8km az=11.0
AEIC 08 09:14:50±1.0, 56.92N±0.04×156.08W±0.06, h62km±7km, ML3.4/41, Error ellipse: s-maj=6.1km s-min=5.1km az=194.0
ISC 08 09:14:49.3±1.2, 56.89N±0.07×156.14W±0.05, h75km±9km, n99, σ1s14/96, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLK4	Peulik 4	0.75	351		Pn	09 15 05.2	-0.1
PLK3	Peulik 3	0.80	355		Pn	09 15 05.2	-0.5
PLK3					Sn	09 15 16.0	-1.9
PLBL	Peulik Blue Cr	0.89	336		Pn	09 15 06.4	-0.3
PLBL					Sn	09 15 18.4	-1.3
PLK1	Peulik 1	0.95	345		Pn	09 15 06.9	-0.5
CHIR	Chirikof Islan	1.11	165		Pn	09 15 09.5	+0.1
CHIR					Pn	09 15 09.6	+0.2
SII	Sitkinak Islan	1.13	106		Pn	09 15 11.7	+2.0
SII					Pn	09 15 14.0	+4.4
PLK5	Peulik 5	1.18	341		Pn	09 15 09.8	-0.4
ANCK	Angle Creek	1.36	15		Pn	09 15 12.1	-0.5
ACHA	Angle Creek He	1.39	18		Pn	09 15 12.6	-0.5
KABU	Katmai Buttres	1.46	18		Pn	09 15 13.8	-0.2
KABU					Sn	09 15 32.3	-0.2
KELA	Mount Kelaz	1.57	8		Pn	09 15 14.5	-0.9
OHAK	Old Harbor	1.59	77		Pn	09 15 15.4	-0.1
OHAK					Pn	09 15 15.6	0.0
OHAK					Sn	09 15 34.5	-1.0
VNSG	Veniaminof 6	1.80	246		Pn	09 15 19.5	+1.0
VNSG					Sn	09 15 41.7	+1.1
VNNF	Veniaminof 3	1.86	252		Pn	09 15 20.5	+1.3
KAHC	Katmai Hardscr	1.86	19		Pn	09 15 18.9	-0.4
VNSS	Veniaminof 8	1.95	251		Pn	09 15 21.6	+1.1
VNFG	Fog Glacier, M	1.98	254		Pn	09 15 21.9	+1.0
VNWF	Veniaminof 8	2.04	250		Pn	09 15 23.2	+1.6
KDAK	Kodiak Island	2.12	64	P	Pn	09 15 22.3	-0.4
	55nm,0.3s,baz=183,slow=3.7,SNR=969						
KDAK				S	Sn	09 15 47.2	-0.9
	19nm,0.3s,baz=209,slow=23,SNR=7.2						
KDAK	Kodiak Island	2.12	64		Pn	09 15 22.7	0.0
KDAK	Kodiak Island	2.12	64	Pn	Pn	09 15 22.6	-0.1
CNBA	Chernabura Isl	2.84	225		Pn	09 15 33.3	+0.9
SDPT	Sand Point	2.88	239	Pn	Pn	09 15 34.2	+1.4
SDPT					Pn	09 15 34.5	+1.7
SDPT					Sn	09 16 08.8	+2.5
BLHA	Black Hill	3.51	253		Pn	09 15 42.1	+0.7
HAG	Hague Volcano	3.59	246		Pn	09 15 44.3	+1.7
DT1	Dutton Round H	3.88	245		Pn	09 15 47.2	+0.7
RSO	Redoubt South	3.99	25		Pn	09 15 48.9	+0.7
BRLK	Bradley Lake	4.00	42		Pn	09 15 47.5	-0.6
RDWB	Redoubt West	4.00	24		Pn	09 15 48.4	+0.2
BRSE	Bradley Lake S	4.03	43		Pn	09 15 48.0	-0.6
DFR	Drift River	4.12	24		Pn	09 15 50.3	+0.4
SVW2	Sparrevohn	4.23	4		Pn	09 15 51.2	0.0
SLKM	Skilak Lake	4.76	38		Pn	09 15 57.8	-0.7
SEW	Seward	4.76	45		Pn	09 15 57.1	-1.4
SPCG	Spurr Capps Gl	4.90	24		Pn	09 16 00.7	+0.3
STLK	Strandline Lak	5.12	24		Pn	09 16 03.3	-0.1
RC01	Rabbit Creek A	5.35	36		Pn	09 16 07.2	+0.7
SUA	Susitna One	5.36	29		Pn	09 16 07.3	+0.6
PWL	Port Wells	5.67	42		Pn	09 16 09.6	-1.3
PMR	Palmer	5.93	34	Pn	Pn	09 16 12.8	-1.5
KNK	Knik Glacier	6.01	38		Pn	09 16 14.5	-1.1
TT01	Tatalina	6.04	1		Pn	09 16 15.9	+0.1
TTA	Tatalina	6.06	1		Pn	09 16 17.1	+0.9
GHO	Glory Hole Cre	6.13	34		Pn	09 16 17.3	+0.1
HIN	Hinchinbrook I	6.14	51		Pn	09 16 16.7	-0.5
FID	Port Fidalgo	6.33	48		Pn	09 16 18.3	-1.6
SML	Sawmill	6.34	36		Pn	09 16 20.6	+0.6
PPLA	Purkeypile	6.34	17		Pn	09 16 20.3	+0.2
EYAK	Cordova Ski Ar	6.53	52		Pn	09 16 21.9	-0.7
SCM	Sheep Creek Mo	6.69	39		Pn	09 16 24.3	-0.5
RAGM	Ragged Mountai	6.93	55		Pn	09 16 27.9	-0.3
GOAT	Goat Mountain	7.00	53		Pn	09 16 28.4	-0.6
WAT1	Susitna Watana	7.07	30		Pn	09 16 28.7	-1.3
HMT	Hamilton	7.10	56		Pn	09 16 30.0	-0.4
KTH	Kantishna Hill	7.17	19	Pn	Pn	09 16 30.9	-0.4
WAT2	Susitna Watana	7.17	29		Pn	09 16 29.9	-1.5
TRF	Thorofare Moun	7.19	21		Pn	09 16 31.4	-0.4
BERG	Berg Lake	7.38	56		Pn	09 16 33.0	-1.2
DHY	Denali Highway	7.59	32		Pn	09 16 37.0	-0.3
DHY				Sn	Sn	09 17 59.7	-2.0
KHIT	Khitrov Hills	7.60	57		Pn	09 16 36.2	-1.1
CRQM	Cirque	7.78	55	Pn	Pn	09 16 39.6	-0.2
WAX	Waxell Ridge	7.79	57	Pn	Pn	09 16 39.3	-0.5
WAX					Pn	09 16 39.6	-0.2
GLB	Gilahina Butte	7.80	49		Pn	09 16 38.7	-1.3
VRDI	Verde Repeater	7.85	51	Pn	Pn	09 16 40.7	-0.1
TGL	Tana Glacier	7.92	55		Pn	09 16 41.0	-0.5
PAX	Paxson	8.11	37	Pn	Pn	09 16 44.1	-0.1
MESA	MESA	8.12	60	Pn	Pn	09 16 44.5	+0.1
KIAG	Kiagna River	8.19	55		Pn	09 16 44.5	-0.9
BALM	Baldy	8.24	54		Pn	09 16 46.0	-0.1
PTPK	Patty Peak	8.26	53		Pn	09 16 45.3	-1.1
GRNC	Granite Creek	8.39	57		Pn	09 16 47.8	-0.4
CHX	Chaix Hills	8.49	62		Pn	09 16 49.2	-0.1
BARN	Barnard Glacie	8.56	55		Pn	09 16 50.3	-0.2
WRH	Wood River Hil	8.56	24		Pn	09 16 50.5	+0.2
CTGM	Chitina Glacie	8.67	56		Pn	09 16 51.9	0.0
RIDG	Independent Ri	8.85	34	Pn	Pn	09 16 54.7	+0.4
PCA	Pinnacle	8.91	62		Pn	09 16 55.1	0.0
ANM	Nome	8.92	333		Pn	09 16 56.3	+1.2
ILAR	Eielson Array	9.09	26	P	Pn	09 16 54.1	-3.5
	0.2nm,0.3s,baz=217,slow=12,SNR=12						
ILAR				S	Sn	09 18 29.2	-8.9
	0.1nm,0.3s,baz=201,slow=19,SNR=3.6						
ILAR	Eielson Array	9.09	26		Pn	09 16 57.5	0.0
IMAR	Indian Mountai	9.20	6	Pn	Pn	09 16 59.0	+0.1
YUK2	White River	9.22	52		Pn	09 16 59.2	-0.2
PNL	Peninsula	9.24	66		Pn	09 16 58.8	-0.8
YUK3	Moose Creek	9.38	52		Pn	09 17 02.2	+0.5
BC03		9.47	43		Pn	09 17 02.3	-0.4
BCAR	Beaver Creek A	9.47	43	Pn	Pn	09 17 02.5	-0.3
YUK7	Dusty Glacier	10.04	61		Pn	09 17 10.8	+0.2
DAWY	Dawson	10.92	42	Pn	Pn	09 17 22.4	-0.1
WHY	Whitehorse	11.64	62	Pn	Pn	09 17 32.5	+0.2
INK	Inuvik	15.34	33	P	Pn	09 18 19.6	-1.4
	0.1nm,0.3s,baz=160,slow=10,SNR=4.3						
INK				S	Sn	09 21 17.1	+7.3
	0.0nm,0.3s,baz=334,slow=30,SNR=6.0						
INK	Inuvik	15.34	33	Pn	Pn	09 18 22.1	+1.1
YKA	Yellowknife Ar	21.39	58	P	P	09 19 31.3	+0.9
	0.3nm,0.5s,baz=270,slow=9.9,SNR=4.1						
ARCES	ARCESS Array B	53.87	359	P	P	09 24 03.6	-0.4
	3.9nm,0.9s,baz=17,slow=6.6,SNR=2.7						
SONM	Songino Array	55.27	306	P	P	09 24 13.9	-0.7
	0.3nm,0.7s,baz=50,slow=7.7,SNR=3.0						
FINES	FINESS Array B	61.99	359	P	P	09 25 00.2	-0.6
	4.2nm,1.1s,baz=19,slow=8.8,SNR=3.3						
MKAR	Makanchi Array	65.80	320	P	P	09 25 25.7	-0.4
	0.1nm,0.6s,baz=32,slow=8.5,SNR=3.4						
EKA	Eskdalemuir Ar	66.00	17	P	P	09 25 27.4	+0.2
	2.3nm,0.8s,baz=345,slow=5.1,SNR=3.5						
AKASG	Malin Array Be	72.68	356	P	P	09 26 07.7	-0.8
	0.7nm,0.4s,baz=13,slow=6.5,SNR=4.6						
GERES	GERESS Array B	74.29	7	P	P	09 26 18.7	+0.6
	0.3nm,0.6s,baz=9.9,slow=8.0,SNR=2.6						

IDC 08 09:18:57.8±1.4, 6.83S×155.33E, h0km, mb3.7/6, mb1 4.0/7, mb1mx3.8/25, mbtmp3.7/7, ML2.1/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/22, Error ellipse: s-maj=58.4km s-min=24.9km az=135.0
NEIC 08 09:19:03.2±0.9, 7.14S±0.09×155.32E±0.08, h36km±5km, mb4.3/5, Error ellipse: s-maj=15.4km s-min=7.1km az=221.0
ISC 08 09:19:03.1±0.9, 7.1S±0.1×155.35E±0.10, h35km, n22, σ1s03/22, mb3.8/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	4.28	312	Pn	Pn	09 20 07.9	+2.1
RABL				Sn	Sn	09 20 55.3	+0.6
PMG	Port Moresby	8.42	254	Pn	Pn	09 21 04.3	+1.6
	1.2nm,0.3s,baz=79,slow=9.0,SNR=3.7						
PMG				Sn	Sn	09 22 36.6	-0.1
	1.2nm,0.3s,baz=79,slow=18,SNR=2.7						
PMG				LR	LR	09 24 00.8	
	comp=Z,78nm,20.4s,baz=3.0,slow=36						
PMG	Port Moresby	8.42	254		Pn	09 21 03.1	+0.4
PMG					Sn	09 22 35.7	-0.9
WR0	Warramunga Arr	23.89	236	P	P	09 24 11.7	-2.1
WR0				IAmb	IAmb	09 24 27.8	
	comp=Z,12nm,1.2s						
WB0	Warramunga Arr	23.92	236	P	P	09 24 13.7	-0.3
WRA	Warramunga Arr	24.05	236	P	P	09 24 15.7	+0.5
	comp=Z,0.9nm,0.7s,baz=60,slow=9.8,SNR=5.5						
WRA				PcP	PcP	09 27 57.8	+1.3
	comp=Z,0.5nm,0.5s,baz=61,slow=2.3,SNR=6.5						
WRA	Warramunga Arr	24.05	236	P	P	09 24 15.0	-0.2
ASAR	Alice Springs	26.37	229	P	P	09 24 37.1	+0.8
	comp=Z,0.4nm,0.5s,baz=56,slow=9.4,SNR=4.5						
H11S3	WAKE ISLAND Hy	27.78	24	T	T	09 53 11.1	
	baz=203,slow=75,SNR=19						
H11S2	WAKE ISLAND Hy	27.78	24	T	T	09 53 12.1	
	baz=203,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	27.80	24	T	T	09 53 20.2	
	baz=203,slow=75,SNR=12						
CMAR	Chiang Mai Arr	61.14	295	P	P	09 29 14.2	-0.3
	comp=Z,1.0nm,0.5s,baz=146,slow=7.4,SNR=5.1						
IMAR	Indian Mountai	81.71	19	P	P	09 31 17.9	+0.3
QSPA	South Pole Qui	82.88	180	P	P	09 31 24.4	+0.3
IL31		83.34	21	P	P	09 31 25.3	-0.7
IL31				IAmb	IAmb	09 31 40.3	
	comp=Z,4.1nm,1.4s						
ILAR	Eielson Array	83.34	21	P	P	09 31 24.9	-1.2
	comp=Z,0.3nm,0.7s,baz=238,slow=5.9,SNR=6.2						
MKAR	Makanchi Array	83.71	319	P	P	09 31 26.6	-1.9
	comp=Z,0.5nm,0.9s,baz=106,slow=4.0,SNR=4.2						
MKAR	Makanchi Array	83.71	319	P	P	09 31 27.8	-0.7
DOT	Dot Lake	83.82	23	P	P	09 31 29.8	+1.2
YKA	Yellowknife Ar	96.26	28	P	P	09 32 28.0	+0.4
	comp=Z,0.3nm,0.6s,baz=268,slow=4.6,SNR=5.7						
TORD	Torodi Ar. Bea	153.39	285	PKPbc	PKiKP	09 38 57.9	-1.0
	comp=Z,1.1nm,0.6s,baz=75,slow=2.2,SNR=6.8						
TORD	Torodi Ar. Bea	153.39	285	PKPbc	PKiKP	09 38 58.6	-0.3

ATH 08 09:58:48.7, 38.21N×20.40E, h12km, ML2.6/4, Error ellipse: s-maj=1.9km s-min=1.0km az=253.0
THE 08 09:58:48.5, 38.21N×20.41E, h13km, ML2.9/8, Error ellipse: s-maj=1.0km s-min=0.4km az=254.0
ISC 08 09:58:48.4±1.1, 38.21N±0.03×20.40E±0.05, h13km±5km, n33, σ0s32/52, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	211	P	Pg	09 58 50.6	-0.1
CHV1				S	Sg	09 58 52.4	+0.1
	46µm,0.2s						
LXRA	Lixouri, Kepha	0.03	99	P	Pg	09 58 50.8	0.0
LXRA				S	Sg	09 58 52.8	+0.4
LXR1	Lixouri, Cepha	0.03	97	P	Pg	09 58 50.9	+0.1
LXR1				S	Sg	09 58 52.8	+0.4
	79µm,0.3s						
KEF3	Kipouria, Keph	0.04	268	P	Pg	09 58 50.6	-0.2
KEF3				S	Sg	09 58 52.5	0.0
KEF4	Livadi, Kephal	0.06	21	P	Pg	09 58 51.0	0.0
KEF4				S	Sg	09 58 53.0	+0.2
ARGA	Argostoli. Kep	0.07	114	P	Pg	09 58 51.0	-0.1
ARGA				S	Sg	09 58 53.0	+0.1
ARG2	Argostoli	0.07	110	P	Pg	09 58 51.1	0.0
ARG2				S	Sg	09 58 53.1	+0.1
	27µm,0.1s						
KEF2	Argostoli. Kep	0.08	119	P	Pg	09 58 51.2	0.0
KEF2				S	Sg	09 58 53.0	-0.2
KEF1	Kardakata, Kep	0.09	38	P	Pg	09 58 51.4	0.0
KEF1				S	Sg	09 58 53.3	-0.1
VLS	Valsamata	0.15	100	P	Pg	09 58 52.0	-0.2
VLS				S	Sg	09 58 54.6	-0.1
	4µm,0.1s						
VLS	Valsamata	0.15	100	P	Pg	09 58 52.0	-0.2
VLS				S	Sg	09 58 54.7	-0.1
VLS				AML	AML	09 58 55.1	
	comp=N,6058µm,0.2s						
VLS				AML	AML	09 58 55.4	
	comp=E,8797µm,0.1s						
VSK1	VASILIKIADES	0.24	33	P	Pg	09 58 53.6	0.0
VSK1				S	Sg	09 58 57.7	+0.6
	comp=E,3µm,0.4s						
KONA	Konidatara, Ke	0.26	32	P	Pg	09 58 53.9	0.0
KONA				S	Sg	09 58 58.2	+0.6
FSK	Fiskardo	0.28	27	P	Pg	09 58 54.1	-0.3
FSK				S	Sg	09 58 58.1	-0.3
	comp=E,835nm,0.4s						
FSK	Fiskardo	0.28	27	P	Pg	09 58 54.2	-0.1
FSK				S	Sg	09 58 58.1	-0.3
VLMS	Volimes, Zakyn	0.39	147	P	Pg	09 58 56.1	-0.1
VLMS				S	Sg	09 59 02.4	+0.9
VLMS				AML	AML	09 59 03.0	
	comp=N,7964µm,0.4s						
VLMS				AML	AML	09 59 03.5	
	comp=E,8498µm,0.1s						
EVGI	Lefkada island	0.46	26	P	Pg	09 58 57.4	-0.2
EVGI				S	Sg	09 59 04.4	+0.6
EVGI	Lefkada island	0.46	26	P	Pg	09 58 57.3	-0.2
MGNA	Meganis	0.55	34	P	Pg	09 58 59.1	-0.1
LKD2	Lefkada island	0.62	19	P	Pg	09 59 00.6	+0.1
TSLK	Tsoukalades, L	0.65	18	P	Pb	09 59 02.0	+0.4
PDO	Prodromos	0.73	57	P	Pg	09 59 02.3	-0.3
PDO	Prodromos	0.73	57	P	Pg	09 59 02.2	-0.5
PDO				AML	AML	09 59 20.7	
	comp=E,532µm,0.5s						
PDO				AML	AML	09 59 25.0	
	comp=N,591µm,0.4s						
PVO	Paravola	0.98	65	P	Pb	09 59 06.9	-0.2
PVO				S	Sb	09 59 20.4	+0.4
	comp=N,270nm,0.5s						
PVO	Paravola	0.98	65	P	Pb	09 59 07.0	-0.2
PVO				AML	AML	09 59 29.3	
	comp=N,504µm,0.6s						
PVO				AML	AML	09 59 30.9	
	comp=E,533µm,0.6s						
DRO	Drossia	1.07	103	P	Pb	09 59 08.6	-0.2
LAKA	Lakka	1.25	88	P	Pn	09 59 10.7	-0.8
LAKA				S	Sg	09 59 28.8	+0.2
	comp=E,65nm,0.6s						
LAKA	Lakka	1.25	88	P	Pn	09 59 11.8	+0.2
ANX	Ano Chora	1.26	72	P	Pg	09 59 13.1	+0.4
SERG	Sergoula	1.32	80	P	Pn	09 59 12.4	-0.2
SERG	Sergoula	1.32	80	P	Pb	09 59 13.4	+0.3
KALE	Kalithea	1.38	82	P	Pg	09 59 15.1	+0.1
AGG	Agios Georgios	1.72	61	P	Pg	09 59 21.0	-0.4

THE 08 10:28:41.9, 38.27N×20.38E, h11km±1km, ML2.7/9, Error ellipse: s-maj=1.0km s-min=0.3km az=190.0
ATH 08 10:28:41.7, 38.27N×20.41E, h12km±1km, ML2.7/5, Error ellipse: s-maj=2.2km s-min=0.8km az=263.0
ISC 08 10:28:41.7±1.1, 38.27N±0.02×20.39E±0.05, h12km±5km, n38, σ0s35/63, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.03	123	P	Pg	10 28 43.7	-0.1
KEF4				S	Sg	10 28 44.9	-0.3
KEF1	Kardakata, Kep	0.06	86	P	Pg	10 28 43.9	-0.1
KEF1				S	Sg	10 28 45.4	-0.4
KEF3	Kipouria, Keph	0.08	206	P	Pg	10 28 44.4	+0.2
KEF3				S	Sg	10 28 46.1	0.0
LXR1	Lixouri, Cepha	0.08	154	P	Pg	10 28 44.5	+0.3
LXR1				S	Sg	10 28 46.5	+0.4
	55µm,0.3s						
LXRA	Lixouri, Kepha	0.08	155	P	Pg	10 28 44.5	+0.3
LXRA				S	Sg	10 28 46.4	+0.4
CHV1	Chavriata, Kef	0.09	185	P	Pg	10 28 44.6	+0.3
CHV1				S	Sg	10 28 46.5	+0.2
	22µm,0.3s						
ARGA	Argostoli. Kep	0.12	145	P	Pg	10 28 44.8	+0.2
ARGA				S	Sg	10 28 47.0	+0.1
ARG2	Argostoli	0.12	142	P	Pg	10 28 45.0	+0.3
ARG2				S	Sg	10 28 47.0	+0.1
KEF2	Argostoli. Kep	0.13	146	P	Pg	10 28 45.0	+0.1
KEF2				S	Sg	10 28 47.3	+0.1
VLS	Valsamata	0.18	122	P	Pg	10 28 45.8	0.0
VLS				S	Sg	10 28 48.7	+0.2
	6µm,0.2s						
VLS	Valsamata	0.18	122	P	Pg	10 28 45.7	0.0
VLS				S	Sg	10 28 48.8	+0.3
VLS				AML	AML	10 28 48.9	
	comp=N,16178µm,0.3s						
VLS				AML	AML	10 28 49.3	
	comp=E,7340µm,0.1s						
VSK1	VASILIKIADES	0.19	45	P	Pg	10 28 46.1	+0.2
VSK1				S	Sg	10 28 49.4	+0.6
	comp=E,4µm,0.2s						
KONA	Konidatara, Ke	0.21	43	P	Pg	10 28 46.3	+0.2
KONA				S	Sg	10 28 49.3	+0.1
FSK	Fiskardo	0.23	36	P	Pg	10 28 46.7	+0.2
FSK				S	Sg	10 28 50.4	+0.6
	comp=E,2µm,0.2s						
FSK	Fiskardo	0.23	36	P	Pg	10 28 46.7	+0.2
FSK				S	Sg	10 28 49.4	-0.3
FSK				AML	AML	10 28 50.9	
	comp=E,5297µm,0.2s						
FSK				AML	AML	10 28 53.7	
	comp=N,2158µm,0.4s						
EVGI	Lefkada island	0.40	31	P	Pg	10 28 50.0	+0.3
EVGI				S	Sb	10 28 56.6	-0.4
EVGI	Lefkada island	0.40	31	P	Pg	10 28 49.9	+0.2
EVGI				S	Sg	10 28 55.8	+0.7
VLMS	Volimes, Zakyn	0.45	152	P	Pg	10 28 50.6	+0.1
VLMS				S	Sg	10 28 57.2	+0.7
VLMS				AML	AML	10 28 59.0	
	comp=N,5515µm,0.8s						
VLMS				AML	AML	10 28 59.4	
	comp=E,3095µm,0.2s						
MGNA	Meganis	0.49	39	P	Pg	10 28 51.3	-0.1
MGNA				S	Sg	10 28 58.8	+0.9
LKD2	Lefkada island	0.56	22	P	Pg	10 28 52.4	-0.2
LKD2	Lefkada island	0.56	22	P	Pg	10 28 52.3	-0.2
TSLK	Tsoukalades, L	0.59	20	P	Pg	10 28 53.2	0.0
TSLK				S	Sb	10 29 02.4	+0.1
	comp=E,288nm,0.6s						
TSLK	Tsoukalades, L	0.59	20	P	Pg	10 28 53.1	0.0
AST1	Astakos	0.61	64	P	Pg	10 28 53.6	+0.1
AST1				S	Sb	10 29 03.4	+0.6
	comp=E,1µm,0.3s						
PDO	Prodromos	0.70	62	P	Pg	10 28 55.3	0.0
PDO	Prodromos	0.70	62	P	Pg	10 28 55.2	0.0
PDO				S	Sg	10 29 04.4	-0.1
PDO				AML	AML	10 29 08.3	
	comp=N,1428µm,0.4s						
PDO				AML	AML	10 29 09.7	
	comp=E,1540µm,0.5s						
PVO	Paravola	0.95	69	P	Pg	10 29 00.1	0.0
PVO				S	Sn	10 29 14.2	-0.3
	comp=E,345nm,0.6s						
PVO	Paravola	0.95	69	P	Pg	10 29 00.0	0.0
PVO				S	Sb	10 29 13.5	+0.7
PVO				AML	AML	10 29 16.8	
	comp=E,626µm,0.3s						
PVO				AML	AML	10 29 20.2	
	comp=N,614µm,0.7s						
DRO	Drossia	1.09	107	P	Pb	10 29 01.6	-0.8
ANX	Ano Chora	1.24	75	P	Pb	10 29 05.4	+0.2
LAKA	Lakka	1.25	91	P	Pn	10 29 04.6	-0.4
LAKA				S	Sn	10 29 21.9	+0.1
	comp=N,105nm,0.5s						
LAKA	Lakka	1.25	91	P	Pn	10 29 04.4	-0.7
SERG	Sergoula	1.32	83	P	Pn	10 29 06.0	0.0
SERG	Sergoula	1.32	83	P	Pn	10 29 05.9	-0.1
TRIZ	Trizonia	1.32	86	P	Pn	10 29 05.5	-0.5
TRIZ	Trizonia	1.32	86	P	Pn	10 29 05.6	-0.5
KLV	Kalavryta, Ach	1.40	99	P	Pn	10 29 07.3	+0.1
KLV	Kalavryta, Ach	1.40	99	P	Pn	10 29 07.4	+0.1

IDC 08 11:09:37.0±2.9, 4.58S×153.03E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/19, mbtmp3.7/3, Error ellipse: s-maj=95.8km s-min=47.3km az=114.0
NEIC 08 11:09:46.7±1.3, 4.49S±0.09×152.85E±0.07, h76km±9km, mb4.3/12, Error ellipse: s-maj=15.5km s-min=6.4km az=218.0
ISC 08 11:09:46.0±0.7, 4.57S±0.07×152.88E±0.08, h55km, n23, σ1s33/25, mb4.1/10, New Britain region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	0.81	298		Pn	11 10 02.5	+1.1
RABL				Sn	Sn	11 10 14.2	+1.6
MANU	Manus Island	6.05	294	Pn	Pn	11 11 13.2	+0.3
PMG	Port Moresby	7.44	229	Pn	Pn	11 11 34.0	+2.1
PMG				Sn	Sn	11 12 56.5	+1.5
HNR	Honiara	8.51	125	Pn	Pn	11 11 48.4	+1.7
PATS	Pohnpei	12.56	26	Pn	Pn	11 12 42.5	+0.4
DZM	Mont Dzumac	21.80	144	P	P	11 14 34.1	+0.5
DZM				IAmb	IAmb	11 14 38.5	
	comp=Z,27nm,1.5s						
MTN	Manton Dam	23.00	248	P	P	11 14 46.1	-0.2
MTN				IAmb	IAmb	11 15 05.4	
	comp=Z,40nm,1.4s						
WB0	Warramunga Arr	23.51	228	P	P	11 14 50.6	-0.7
WB0				IAmb	IAmb	11 15 00.6	
	comp=Z,6.0nm,1.1s						
WRAB	Tennant Creek	23.64	228	P	P	11 14 51.6	-0.9
WRAB				IAmb	IAmb	11 15 06.9	
	comp=Z,6.5nm,1.0s						
WRA	Warramunga Arr	23.66	228	P	P	11 14 51.7	-0.9
	comp=Z,1.4nm,0.5s,baz=56,slow=10,SNR=7.4						
WRA	Warramunga Arr	23.66	228	P	P	11 14 51.1	-1.5
KNRA	Kununurra	26.14	243	P	P	11 15 15.4	+0.1
AS31	Alice Springs	26.37	222	P	P	11 15 16.1	-1.2
ASAR	Alice Springs	26.37	222	P	P	11 15 16.1	-1.2
	comp=Z,0.4nm,0.5s,baz=55,slow=9.0,SNR=4.0						
ASAR	Alice Springs	26.37	222	P	P	11 15 15.7	-1.6
MSVF	Nonsavu	27.89	120	P	P	11 15 29.9	-1.1
MSVF				IAmb	IAmb	11 15 45.5	
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	29.15	200	P	P	11 15 40.6	-1.4
	comp=Z,0.7nm,0.5s,baz=8.4,slow=12,SNR=1.6						
STKA	Stephens Creek	29.15	200	P	P	11 15 41.1	-1.0
FITZ	Fitzroy Crossi	29.84	241	P	P	11 15 46.9	-1.3
FITZ				IAmb	IAmb	11 16 04.1	
	comp=Z,14nm,1.5s						
PSAC2	Pilbara Seismi	36.16	239	P	P	11 16 41.9	-1.5
QSPA	South Pole Qui	85.39	180	P	P	11 22 16.3	-1.0
QSPA				IAmb	IAmb	11 22 33.9	
	comp=Z,2.4nm,1.2s						
TORD	Torodi Ar. Bea	150.31	289	PKPbc	PKPbc	11 29 30.9	-1.2
	comp=Z,0.7nm,0.6s,baz=82,slow=2.4,SNR=4.1						
TORD	Torodi Ar. Bea	150.31	289		PKPdf	11 29 29.2	+2.2

SOME 08 11:19:32.9, 41.02N×70.52E, h5km
NNC 08 11:19:33.4±3.5, 40.92N×70.55E, h0km, mb3.1, mpv3.2, Error ellipse: s-maj=24.6km s-min=15.1km az=25.0
KRNET 08 11:19:36.1±0.1, 41.19N×70.26E, mb2.5
ISC 08 11:19:36.8±1.6, 41.15N±0.04×70.56E±0.04, h1km±12km, n14, σ1s70/26, 14C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IUG	Iuzhnay	1.07	338	eP	Pb	11 19 57.3	-0.8
	1.6nm,0.1s						
IUG				eS	Sn	11 20 14.8	+0.2
	30nm,0.3s						
IUG	Iuzhnay	1.07	338	P	Pn	11 19 58.4	-0.6
	2.9nm,0.2s						
IUG				S	Sn	11 20 16.8	+2.2
	30nm,0.3s						
BTK	Batken	1.11	170	⇓iP	Pb	11 19 58.8	-0.1
BTK				⇓iS	Sn	11 20 15.2	-0.4
	baz=59						
ARK	Arkit	1.24	58	⇑eP	Pg	11 20 02.3	+1.8
	baz=65						
ARK				⇑iS	Sn	11 20 21.7	+3.0
	baz=65						
JBG	Jabagly	1.27	359	P	Pg	11 20 01.6	+0.4
	40nm,0.1s						
JBG				S	Sn	11 20 22.0	+2.4
	36nm,0.3s						
ARSB	Arslanbob	1.83	84	⇑iP	Pg	11 20 12.6	+0.6

baz=85
ARSB ⇑iS Sg 11 20 38.1 +2.3
baz=85
KK31 Karatay Array 1.95 359 ⇑P Pn 11 20 10.9 -0.2
0.6nm,0.2s,baz=189,slow=16,SNR=28
KK31 ⇑S Sg 11 20 38.6 -0.9
0.5nm,0.2s,baz=181,slow=27,SNR=6.2
AML Almayashu 2.54 66⇑iP Pb 11 20 21.3 -2.2
baz=69
AML ⇑iS Sb 11 20 56.1 +0.7
baz=69
MRKS Merke 2.55 50 eP Pb 11 20 22.7 -0.6
6.4nm,0.3s
MRKS eS Sg 11 20 58.2 -0.4
4.9nm,0.4s
MRKS Merke 2.55 50 Pg Pb 11 20 22.7 -0.6
6.4nm,0.3s
MRKS Lg Lg 11 20 58.2
4.9nm,0.4s
EKS2 Erkin-Say 2.83 57⇑iP Pb 11 20 26.0 -2.3
baz=59
EKS2 ⇑iS Sb 11 21 03.5 -0.1
baz=59
ARLS Aral 2.91 75⇑eP Pb 11 20 27.5 -2.2
baz=76
ARLS ⇑iS Sb 11 21 04.8 -1.0
baz=76
UCH Uchtor 3.15 69⇑iP Pb 11 20 30.5 -3.4
baz=71
UCH ⇑iS Sb 11 21 10.9 -2.0
baz=71
AAK Ala-Archa 3.29 62 ⇓Pg Pb 11 20 35.4 -0.7
3.5nm,1.1s
AAK ⇓Lg Lg 11 21 20.7
3.1nm,1.1s

IDC 08 11:32:47.6±1.3, 23.48S×113.87W, h0km, mb4.1/6, mb1 4.4/6, mb1mx4.0/36, mbtmp4.1/6, MS3.3/2, Ms1 3.4/2, ms1mx3.2/19, Error ellipse: s-maj=74.1km s-min=38.6km az=105.0
NEIC 08 11:32:48.8±0.7, 23.6S±0.2×114.6W±0.1, h10km±1km, mb4.7/60, Error ellipse: s-maj=26.7km s-min=20.9km az=184.0
ISC 08 11:32:48.2±0.7, 23.6S±0.2×114.6W±0.1, h10km, n94, σ0§46/87, mb4.6/30, Easter Island region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TAOE Nuku Hiva Isla 28.48 297 P P 11 38 43.4 -0.4
GO03 Copiap 40.08 105 P P 11 40 23.6 -0.5
GO03 IAmb IAmb 11 40 40.8
comp=Z,16nm,1.2s
PLCA Paso Flores 40.57 126 LR LR 11 53 38.8
comp=Z,36nm,20.2s,baz=326,slow=31
PB04 IPOC Station P 40.86 97 P P 11 40 30.6 -0.1
PB11 IPOC Station P 41.85 94 P P 11 40 39.4 +0.5
PB11 IAmb IAmb 11 40 49.8
comp=Z,32nm,1.6s
LVC Limon Verde 41.93 98 P P 11 40 39.5 -0.2
TLIG Tlapa 43.83 22 P P 11 40 55.2 +0.4
TLIG IAmb IAmb 11 40 57.2
comp=Z,9.4nm,0.9s
LPAZ La Paz 44.17 89 LR LR 11 53 07.6
comp=Z,50nm,21.4s,baz=30,slow=28
LPAZ La Paz 44.17 89 P P 11 40 58.9 +0.7
ZAIG Zacatecas 47.58 15 P P 11 41 24.4 -0.1
ROSC El Rosal 48.43 60 P P 11 41 31.6 +0.2
ROSC IAmb IAmb 11 41 39.3
comp=Z,4.3nm,0.8s
HPIG 51.00 10 P P 11 41 50.8 +0.3
HSIG 52.45 4 P P 11 42 01.2 +0.1
HSIG IAmb IAmb 11 42 02.7
comp=Z,10nm,1.0s
833A Chaparral WMA, 53.69 17 P P 11 42 10.5 +0.2
TXAR Lajitas Array 53.69 12 P P 11 42 10.4 0.0
comp=Z,0.8nm,0.9s,baz=207,slow=9.1,SNR=7.6
TXAR Lajitas Array 53.69 12 P P 11 42 10.8 +0.4
319A Douglas 54.92 6 P P 11 42 19.4 +0.1
319A IAmb IAmb 11 42 21.2
comp=Z,9.5nm,1.0s
214A Organ Pipe Nat 55.28 2 P P 11 42 22.2 +0.4
214A IAmb IAmb 11 42 23.6
comp=Z,5.0nm,1.0s
JCT Junction City 55.64 16 P P 11 42 24.4 0.0
MNTX Cornudas Mount 55.71 10 P P 11 42 24.7 -0.2
MNTX IAmb IAmb 11 42 26.7
comp=Z,9.4nm,1.4s
TUC Tucson 55.73 4 P P 11 42 25.2 +0.1
113A Mohawk Valley, 56.07 1 P P 11 42 27.6 +0.2
121A Cookes Peak, D 56.22 7 P P 11 42 28.9 +0.2
121A IAmb IAmb 11 42 30.5
comp=Z,9.7nm,1.0s
435B Jarrell 56.51 18 P P 11 42 31.1 +0.6
435B IAmb IAmb 11 42 32.4
comp=Z,9.2nm,0.8s
X16A Lo Mia Camp, P 57.79 3 P P 11 42 39.9 0.0
X18A Snowflake 58.00 5 P P 11 42 42.0 +0.7
X18A IAmb IAmb 11 42 43.2
comp=Z,7.4nm,0.9s
NATX Nacogdoches 58.29 20 P P 11 42 43.2 0.0
MSTX Muleshoe 58.37 12 P P 11 42 43.5 -0.4
MSTX IAmb IAmb 11 42 44.2
comp=Z,8.3nm,0.8s
GSC Goldstone, Bar 58.63 358 P P 11 42 46.0 +0.5
GSC IAmb IAmb 11 42 46.6
comp=Z,6.3nm,1.2s
KNTN Kanton 58.87 282 P P 11 42 48.3 +0.7
DAC Darwin (Calif) 59.63 357 P P 11 42 52.4 -0.3
U15A North Rim 59.76 2 P P 11 42 53.5 -0.1
U15A IAmb IAmb 11 42 56.1
comp=Z,5.2nm,1.1s
SHPR Sheep Range 59.80 360 P P 11 42 54.5 +0.8
SHPR IAmb IAmb 11 42 55.9
comp=Z,6.6nm,0.9s
SDDR Presa de Saban 59.84 49 P P 11 42 53.7 -0.5
143A Socs Landing, 60.24 23 P P 11 42 56.6 0.0
KNB Kanab 60.33 2 P P 11 42 57.8 +0.4
CCUT Cedar City 60.85 1 P P 11 43 01.4 +0.3
SZCU Shurtz Canyon 60.90 1 P P 11 43 01.4 +0.1
OMMB Old Mammoth Mi 61.04 356 P P 11 43 02.5 +0.1
OMMB IAmb IAmb 11 43 05.9
comp=Z,7.2nm,1.0s
T25A Trinidad 61.19 9 P P 11 43 03.3 -0.1
T25A IAmb IAmb 11 43 04.6
comp=Z,6.4nm,1.2s
CMB Columbia Colle 61.56 355 P P 11 43 05.8 +0.3
250A Grady 61.58 27 P P 11 43 05.8 +0.1
SDCO Great Sand Dun 61.64 8 P P 11 43 06.5 0.0
SDCO IAmb IAmb 11 43 07.7
comp=Z,4.0nm,0.9s
R11A Troy Canyon, C 61.64 359 P P 11 43 06.5 +0.2
NV11 Mina Array Sit 61.81 357 P P 11 43 07.4 0.0
NV11 IAmb IAmb 11 43 09.2
comp=Z,7.2nm,1.1s
NVAR Mina Array Bea 61.81 357 P P 11 43 08.1 +0.6
comp=Z,2.9nm,0.8s,baz=189,slow=9.3,SNR=19
NVAR Mina Array Bea 61.81 357 P P 11 43 07.8 +0.3
PSUT Pine Spring 61.83 1 P P 11 43 07.7 +0.1
W41B Gary Mavity, V 62.20 21 IAmb IAmb 11 43 17.1
comp=Z,9.4nm,1.2s
Q16A Castle Valley 62.29 3 P P 11 43 10.9 +0.2
P17A Butcher Ranch, 62.86 3 P P 11 43 14.1 -0.4
U40A Yellville 63.10 20 IAmb IAmb 11 43 16.7
comp=Z,4.0nm,0.8s
DUG Dugway, Tooele 63.50 2 P P 11 43 18.2 -0.4
DUG IAmb IAmb 11 43 26.9
comp=Z,12nm,1.6s
RDMU Red Mountain 64.03 4 P P 11 43 22.2 -0.1
WVT Waverly 64.60 24 P P 11 43 25.4 -0.3
WVT IAmb IAmb 11 43 26.6
comp=Z,6.7nm,0.9s
V53A Saluda 66.21 28 P P 11 43 36.3 0.0
PDAR Pinedale Array 66.22 4 P P 11 43 35.7 -0.7
comp=Z,1.1nm,0.8s,baz=166,slow=6.2,SNR=11
PDAR Pinedale Array 66.22 4 P P 11 43 35.5 -0.9
J08A Circle Bar Ran 66.73 357 P P 11 43 39.9 +0.3
J08A IAmb IAmb 11 43 41.7
comp=Z,7.3nm,1.0s
YHH Holmes Hill 68.16 3 P P 11 43 48.5 -0.3
BMO Blue Mountains 68.18 358 P P 11 43 48.4 -0.3
Q51A Peebles 68.86 26 P P 11 43 52.8 -0.1
U59A Littleton 69.06 31 P P 11 43 54.6 +0.5
ULM Lac du Bonnet 75.40 12 P P 11 44 31.1 -0.7

comp=Z,1.9nm,0.7s,baz=245,slow=5.5,SNR=3.8
TRQ Mont Tremblant 78.43 27 P P 11 44 49.5 +0.4
YKA Yellowknife Ar 85.81 0 P P 11 45 27.5 +0.2
comp=Z,2.2nm,0.9s,baz=179,slow=5.0,SNR=26
H11S2 WAKE ISLAND Hy 87.38 291 T T 13 21 47.4
baz=116,slow=75,SNR=21
H11S1 WAKE ISLAND Hy 87.40 291 T T 13 21 47.0
baz=116,slow=75,SNR=9.1
H11S3 WAKE ISLAND Hy 87.40 291 T T 13 21 45.7
baz=116,slow=75,SNR=16
H11N3 WAKE ISLAND Hy 87.74 293 T T 13 22 07.8
baz=117,slow=76,SNR=7.4
H11N1 WAKE ISLAND Hy 87.76 293 T T 13 22 10.7
baz=117,slow=76,SNR=3.6
H11N2 WAKE ISLAND Hy 87.76 293 T T 13 22 09.3
baz=117,slow=76,SNR=20
SCHQ Schefferville 88.19 25 P P 11 45 38.1 -1.0
comp=Z,2.9nm,1.1s,baz=195,slow=12,SNR=3.0
SCHQ Schefferville 88.19 25 P P 11 45 38.7 -0.4
SCHQ IAmb IAmb 11 45 45.0
comp=Z,3.2nm,1.1s
BCAR Beaver Creek A 89.02 348 P P 11 45 42.7 -0.2
SONM Songino Array 139.51 317 PKP PKiKP 11 52 18.1 -0.2
comp=Z,0.5nm,0.9s,baz=90,slow=1.4,SNR=2.7
SONM Songino Array 139.51 317 PKPdf 11 52 15.1 -1.0
AKASG Malin Array Be 141.12 37 PKP PKPdf 11 52 18.9 +0.3
comp=Z,1.2nm,0.7s,baz=285,slow=2.6,SNR=4.1
AKASG Malin Array Be 141.12 37 PKPdf 11 52 19.6 +0.9
PBKT Sadao Pong 145.90 265 PKPbc 11 52 28.6 0.0
ZAA0 Zalesovo Array 146.36 339 PKPbc 11 52 28.8 -0.2
ZALV Zalesovo Beam 146.36 339 PKPbc PKPab 11 52 29.5 -0.3
comp=Z,1.3nm,0.6s,baz=71,slow=1.9,SNR=6.6
ZALV Zalesovo Beam 146.36 339 PKPdf 11 52 28.3 +0.5
ZALV PKPbc pPKPdf 11 52 30.1 0.0
CMAR Chiang Mai Arr 148.29 267 PKPbc PKPab 11 52 38.3 -0.2
comp=Z,2.6nm,0.9s,baz=75,slow=1.1,SNR=12
BR131 Keskin Array S 148.79 51 PKPdf 11 52 32.6 +0.2
BRTR Keskin Array B 148.79 51 PKPbc PKPbc 11 52 34.5 -1.8
comp=Z,3.1nm,0.8s,baz=222,slow=1.7,SNR=13
BRTR Keskin Array B 148.79 51 PKPdf 11 52 30.5 +0.5
BRTR PKPbc PKiKP 11 52 38.0 +0.3
CSS Mathiatis 149.99 61 PKPdf 11 52 35.2 +0.9
KURK Kurchatov 151.05 342 PKiKP 11 52 41.9 +0.1
KBZ Khabaz 152.73 37 PKPbc PKiKP 11 52 46.2 +0.8
comp=Z,3.7nm,0.9s,baz=284,slow=7.0,SNR=6.0
MK31 Makanchi Array 153.17 334 PKiKP 11 52 46.6 +0.3
MK31 PKPab PKPab 11 52 57.5 -0.3
MKAR Makanchi Array 153.17 334 PKPbc PKiKP 11 52 47.1 +0.8
comp=Z,1.8nm,0.7s,baz=40,slow=2.4,SNR=18
MKAR Makanchi Array 153.17 334 PKiKP 11 52 46.6 +0.3
MAKZ Makanchi 153.28 334 PKiKP 11 52 46.6 0.0

NNC 08 11:39:00.0±1.3, 39.31N×74.80E, h0km±4km, mb3.6, mpv3.2, 3C-7D, Error ellipse: s-maj=9.3km s-min=5.4km az=168.0, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AAK Ala-Archa 3.34 356 ⇓Pg Pb 11 40 00.6 +0.5
5.2nm,0.7s
AAK ⇓Lg Lg 11 40 44.5
6.6nm,0.7s
MRKS Merke 3.64 341 Pg Pg 11 40 07.6 -2.1
5.6nm,0.6s
MRKS Lg Lg 11 40 58.5
4.0nm,0.8s
KST Kastek 3.83 13 Pg Pb 11 40 08.9 +0.3
3.5nm,0.4s
KST Lg Lg 11 41 01.0
9.1nm,0.9s
IZV Izvestkoviy 3.97 20 Pg Pb 11 40 12.5 +1.6
4.2nm,0.6s
IZV Lg Lg 11 41 07.4
11nm,0.8s
DGS Degeres 4.00 10 Pg Pb 11 40 12.3 +0.9
2.6nm,0.6s
DGS Lg Lg 11 41 06.6
5.4nm,0.6s
TNSS Tian-Shan 4.06 23 Pg Pg 11 40 15.3 -2.6
2.0nm,0.2s
TNSS Lg Lg 11 41 12.1
4.6nm,0.3s
MDOK Medeo 4.21 23 ⇓Pg Pb 11 40 16.3 +1.3
3.6nm,1.0s
MDOK Lg Lg 11 41 12.7
8.6nm,0.8s
MDOK Medeo 4.21 23 Pg Pb 11 40 16.7 +1.7
1.9nm,0.4s
MDOK Lg Lg 11 41 14.4
7.4nm,0.9s
KOTS Kotyrbulak 4.29 23 Pg Pb 11 40 18.4 +2.0
8.4nm,0.4s
KOTS Lg Lg 11 41 17.0
30nm,0.7s
KRBS Karabastau 4.43 8 Pg Pg 11 40 22.1 -2.9
2.9nm,0.4s
KRBS Lg Lg 11 41 23.4
3.1nm,0.6s
KTBS Karatobe 4.62 17 Pg Pb 11 40 24.5 +2.5
1.1nm,0.3s
KTBS Lg Lg 11 41 27.8
6.7nm,0.9s
KUU Kurty 4.72 14 Pg Pb 11 40 25.6 +2.0
1.2nm,0.5s
KUU Lg Lg 11 41 29.5
4.3nm,0.7s
KK31 Karatay Array 4.99 321 ⇑Pn Pn 11 40 16.6 +0.5
0.2nm,0.2s,baz=130,slow=12,SNR=5.1
KK31 ⇓Pg Pb 11 40 31.2 +3.0
0.8nm,0.4s,baz=140,slow=17,SNR=5.6
KK31 ⇑Sn Sn 11 41 14.7 +0.3
2.3nm,0.7s,baz=138,slow=14,SNR=3.7
KK31 ⇓Lg Lg 11 41 37.3
0.9nm,0.4s,baz=137,slow=28,SNR=2.5
PDGK Podgornoye 5.35 40 ⇑Pg Pb 11 40 37.2 +2.8
1.8nm,0.5s
PDGK ⇓Sn Sn 11 41 25.2 +1.7
4.1nm,0.8s
PDGK ⇓Lg Lg 11 41 49.5
5.4nm,0.8s

ROM 08 11:43:12.3±0.3, 45.53N±0.04×14.81E±0.02, h5km, ML3.2/6, Error ellipse: s-maj=4.6km s-min=0.9km az=16.0
LJU 08 11:43:12.5, 45.74N×14.87E, h4km, ML2.6
KRSZO 08 11:43:12.8±0.7, 45.76N×14.88E, h5km±4km, ML2.5/14, Error ellipse: s-maj=1.9km s-min=1.6km az=16.0
IASPEI 08 11:43:12.6±0.9, 45.75N±0.02×14.87E±0.01, h5km±6km, Error ellipse: s-maj=2.8km s-min=2.0km az=6.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009
RHSSO 08 11:43:13.6±0.4, 45.77N×14.86E, h3km±2km, ML3.1/6
BEO 08 11:43:13.6±0.4, 45.78N×14.90E, h0km, ML2.8/4
LDG 08 11:43:13.0±0.1, 45.78N×14.97E, h2km, Ml2.9/19, Error ellipse: s-maj=4.5km s-min=2.9km az=174.0
PRU 08 11:43:14.7±0.0, 45.82N×14.90E, h8km
ISC 08 11:43:12.8±0.8, 45.77N±0.01×14.87E±0.01, h5km±5km, n217, σ1§39/462, 6C-6D, Northwestern Balkan Peninsula

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VISS Visnje 0.04 321 ⇓iPg Pg 11 43 13.8 -0.3
VISS iSg Sg 11 43 15.0 0.0
comp=Z,3μm,0.1s
VISS Visnje 0.04 321 Pg Pg 11 43 13.8 -0.3
VISS Pg Pg 11 43 13.8 -0.3
VISS Lg Lg 11 43 15.0
VISS Lg Lg 11 43 15.0
PDKS Podkum 0.30 17 iPg Pg 11 43 18.9 +0.2
PDKS eSg Sg 11 43 24.2 +1.5
comp=Z,618nm,0.3s
PDKS Podkum 0.30 17 Pg Pg 11 43 18.9 +0.2
PDKS Pg Pg 11 43 18.9 +0.2
PDKS eLg Lg 11 43 24.2
PDKS Lg Lg 11 43 24.2
VNDS Vrh nad Dolski 0.35 340 ⇓iPg Pg 11 43 20.0 +0.4
VNDS eSg Sg 11 43 25.3 +1.1
comp=Z,337nm,0.2s
VNDS Vrh nad Dolski 0.35 340 Pg Pg 11 43 20.0 +0.4
VNDS Pg Pb 11 43 20.2 -1.4
VNDS eLg Lg 11 43 25.3
VNDS Lg Lg 11 43 25.3
LEGS Legarje 0.36 60 iPg Pg 11 43 19.7 -0.1
LEGS eSg Sg 11 43 25.2 +0.7
LEGS Legarje 0.36 60 Pg Pg 11 43 19.7 -0.1
LEGS Pg Pg 11 43 19.7 -0.1
LEGS Lg Lg 11 43 25.2
LEGS eLg Lg 11 43 25.2
LJU Ljubljana 0.36 318 ePg Pg 11 43 20.0 +0.1
LJU eSg Sg 11 43 25.4 +0.8
LJU Ljubljana 0.36 318 iPg Pg 11 43 20.3 +0.4
LJU eSg Sg 11 43 25.4 +0.8
comp=Z,485nm,0.3s
LJU Ljubljana 0.36 318 ePg Pg 11 43 20.0 +0.1
LJU eSg Sg 11 43 25.5 +0.8
LJU Ljubljana 0.36 318 Pg Pg 11 43 20.0 +0.1
LJU Pg Pg 11 43 20.0 +0.1
LJU Pg Pg 11 43 20.3 +0.4
LJU Pb Pg 11 43 20.3 +0.4
LJU eLg Lg 11 43 25.4
LJU Lg Lg 11 43 25.4
LJU Lg Lg 11 43 25.4
LJU Lg Lg 11 43 25.5
BOJS Bojanci 0.38 135 ePg Pg 11 43 19.5 -0.7
BOJS eSg Sg 11 43 24.5 -0.6
BOJS Bojanci 0.38 135 iPg Pg 11 43 19.4 -0.8
BOJS iSg Sg 11 43 24.6 -0.5
comp=Z,757nm,0.3s
BOJS Bojanci 0.38 135 P Pg 11 43 19.3 -0.8
BOJS S Sg 11 43 24.6 -0.5
BOJS Bojanci 0.38 135 Pg Pg 11 43 19.3 -0.8
BOJS Pg Pg 11 43 19.3 -0.8
BOJS Pg Pg 11 43 19.4 -0.8
BOJS Pg Pn 11 43 19.5 -5.4
BOJS Lg Lg 11 43 24.5
BOJS Lg Lg 11 43 24.6
BOJS Lg Lg 11 43 24.6
BOJS Lg Lg 11 43 24.6
CRES Cresnjev 0.41 82 iPg Pg 11 43 20.1 -0.6
CRES eSg Sg 11 43 26.8 +0.6
comp=Z,753nm,0.3s
CRES Cresnjev 0.41 82 ePg Pg 11 43 20.2 -0.6
CRES eSg Sg 11 43 27.0 +0.8
CRES Cresnjev 0.41 82 Pg Pg 11 43 20.1 -0.6
CRES Pg Pg 11 43 20.1 -0.6
CRES Pg Pn 11 43 20.2 -5.2
CRES eLg Lg 11 43 26.8
CRES Lg Lg 11 43 26.8
CRES Sg Sg 11 43 27.0 +0.8
KNDS Knezji Dol 0.42 235 ⇓iPg Pg 11 43 20.5 -0.6
KNDS eSg Sg 11 43 26.8 +0.2
comp=Z,863nm,0.3s
KNDS Knezji Dol 0.42 235 Pg Pg 11 43 20.4 -0.6
KNDS Pg Pg 11 43 20.5 -0.6
KNDS Lg Lg 11 43 26.8
KNDS eLg Lg 11 43 26.8
CESS Cesta pri Krsk 0.46 64 iPg Pg 11 43 21.9 +0.3
CESS iSg Sg 11 43 29.0 +1.3
comp=Z,233nm,0.2s
CESS Cesta pri Krsk 0.46 64 Pg Pg 11 43 21.9 +0.3
CESS Pg Pg 11 43 21.9 +0.3
CESS Lg Lg 11 43 29.0
CESS Lg Lg 11 43 29.0
CRNS Crni Vrh 0.53 306 ⇑iPg Pg 11 43 23.0 0.0
CRNS iSg Sg 11 43 30.6 +0.7
comp=Z,508nm,0.3s
CRNS Crni Vrh 0.53 306 Pg Pg 11 43 22.9 0.0
CRNS Pg Pg 11 43 23.0 0.0
CRNS Lg Lg 11 43 30.6
CRNS Lg Lg 11 43 30.6
GCIS Gornji Cirnik 0.54 80 iPg Pg 11 43 22.9 -0.2
GCIS eSg Sg 11 43 30.8 +0.7
comp=Z,191nm,0.4s
GCIS Gornji Cirnik 0.54 80 Pg Pg 11 43 22.9 -0.2
GCIS Pg Pg 11 43 22.9 -0.2
GCIS eLg Lg 11 43 30.8
GCIS Lg Lg 11 43 30.8
DOBS Dobrina 0.56 48 iPg Pg 11 43 23.7 0.0
DOBS eSg Sb 11 43 32.4 -1.0
comp=Z,125nm,0.2s
DOBS Dobrina 0.56 48 Pg Pg 11 43 23.6 0.0
DOBS Pg Pg 11 43 23.7 0.0
DOBS eLg Lg 11 43 32.4
DOBS Lg Lg 11 43 32.4
GOLS Golise 0.58 65 ⇓iPg Pg 11 43 24.1 +0.2
GOLS eSg Sg 11 43 32.0 +0.6
comp=Z,416nm,0.3s
GOLS Golise 0.58 65 Pg Pg 11 43 24.1 +0.2
GOLS Pg Pg 11 43 24.1 +0.2
GOLS Lg Lg 11 43 32.0
GOLS eLg Lg 11 43 32.0
JAVS Javornik 0.58 282 ⇑iPg Pg 11 43 23.5 -0.5
JAVS iSg Sb 11 43 33.7 -0.3
comp=Z,221nm,0.3s
JAVS Javornik 0.58 282 Pg Pg 11 43 23.5 -0.5
JAVS Pg Pg 11 43 23.5 -0.5
JAVS Lg Lg 11 43 33.7
JAVS Lg Lg 11 43 33.7
SKDS Skadanscina 0.64 250 iPg Pg 11 43 24.3 -0.9
SKDS eSg Sg 11 43 33.3 -0.3
comp=Z,159nm,0.1s
SKDS Skadanscina 0.64 250 Pg Pg 11 43 24.3 -0.9
SKDS Pg Pg 11 43 24.3 -0.9
SKDS Lg Lg 11 43 33.3
SKDS eLg Lg 11 43 33.3
OBKA Obir 0.77 343 ePg Pg 11 43 27.8 +0.2
comp=Z,44nm,0.2s,SNR=118
OBKA Sg Sb 11 43 39.1 -0.4
comp=Z,330nm,0.3s
OBKA Obir 0.77 343 Pg Pg 11 43 27.8 +0.2
OBKA Pg Pg 11 43 27.8 +0.2
comp=Z,44nm,0.2s
OBKA x x 11 43 28.1
OBKA Lg Lg 11 43 39.1
OBKA Lg Lg 11 43 39.1
comp=Z,330nm,0.3s
PTJ Puntijarka 0.78 80 iPg Pb 11 43 29.0 +0.1
PTJ Sg Sb 11 43 40.1 +0.4
PTJ Puntijarka 0.78 80 Pg Pb 11 43 29.0 +0.1
PTJ Lg Lg 11 43 40.1
TRI Trieste 0.78 266 P Pg 11 43 26.9 -0.9
TRI S Sg 11 43 38.7 +0.8
TRI Trieste 0.78 266 x Pg 11 43 26.4 -1.4
TRI Pg Pg 11 43 26.9 -0.9
TRI Pg Pg 11 43 26.9 -0.9
TRI Lg Lg 11 43 38.0
TRI Sb Sg 11 43 38.7 +0.8
ZAG Zagreb 0.78 86 ePg Pb 11 43 29.1 +0.2
ZAG Sg Sn 11 43 41.5 -1.0
ZAG Zagreb 0.78 86 ePg Pg 11 43 28.4 +0.6
ZAG eSg Sb 11 43 39.7 0.0
ZAG Zagreb 0.78 86 Pg Pg 11 43 28.4 +0.6
ZAG x x 11 43 28.6
ZAG Pb Pn 11 43 29.9 -0.6
ZAG Lg Lg 11 43 39.7
ZAG Sb Sn 11 43 41.5 -1.0
GORS Gorjuse 0.82 312 ⇑iPg Pg 11 43 28.3 -0.3
GORS eSg Sb 11 43 40.7 -0.3
comp=Z,84nm,0.1s
GORS Gorjuse 0.82 312 Pg Pg 11 43 28.3 -0.3
GORS Pg Pg 11 43 28.3 -0.3
GORS eSb Sb 11 43 40.7 -0.3
GORS Sb Sb 11 43 40.7 -0.3
SOKA Soboth 0.91 7 ePg Pg 11 43 30.3 0.0
comp=Z,13nm,0.3s,SNR=59
SOKA eSg Sg 11 43 43.1 +0.9
comp=Z,182nm,0.7s
SOKA Soboth 0.91 7 Pg Pg 11 43 30.3 0.0
SOKA Pg Pg 11 43 30.3 0.0
comp=Z,13nm,0.3s
SOKA Lg Lg 11 43 43.1
SOKA Lg Lg 11 43 43.8
comp=Z,182nm,0.7s
CADS Cadrg 0.91 300 ⇑iPg Pg 11 43 29.5 -0.9
CADS eSg Sb 11 43 44.2 +0.6
comp=Z,335nm,0.3s
CADS Cadrg 0.91 300 Pg Pg 11 43 29.5 -0.9
CADS Pg Pg 11 43 29.5 -0.9
CADS eSb Sb 11 43 44.2 +0.6
CADS Sb Sb 11 43 44.2 +0.6
SABO M.te Sabotino 0.91 284 ⇓P Pg 11 43 29.9 -0.5

SABO				S	Sn	11 43 45.0	-0.8
SABO				AML	AML		
	comp=E,854µm,0.3s						
SABO				AML	AML		
	comp=N,920µm,0.8s						
SABO				AML	AML		
	comp=N,919µm,0.8s						
SABO	M.te Sabotino	0.91	284	Pg	Pg	11 43 29.9	-0.5
SABO				Pg	Pg	11 43 29.9	-0.5
SABO				Pg	Pg	11 43 29.9	-0.5
SABO				Sn	Sn	11 43 45.4	-0.5
ROBS	Robic	1.06	297	ePg	Pg	11 43 31.7	-1.5
ROBS				eSg	Sn	11 43 48.9	-0.6
	comp=Z,43nm,0.2s						
ROBS	Robic	1.06	297	ePg	Pg	11 43 31.7	-1.5
ROBS				Pg	Pg	11 43 31.7	-1.5
ROBS				Sb	Sn	11 43 48.9	-0.6
ROBS				eSb	Sn	11 43 48.9	-0.6
KALN	Kalnik	1.16	71	ePg	Pn	11 43 35.8	+0.1
KALN				Sg	Sn	11 43 52.5	+0.5
KALN	Kalnik	1.16	71	Pg	Pn	11 43 35.8	+0.1
KALN				Lg	Lg	11 43 52.5	
KOGS	Kog	1.17	54	ePg	Pn	11 43 35.2	-0.1
KOGS				eSg	Sn	11 43 52.0	-0.2
	comp=Z,236nm,0.6s						
KOGS	Kog	1.17	54	ePn	Pg	11 43 35.2	-0.1
KOGS				Pn	Pg	11 43 35.2	-0.1
KOGS				Sb	Sn	11 43 52.0	-0.2
KOGS				eSb	Sn	11 43 52.0	-0.2
NVLJ	Novalja	1.21	180	ePg	Pb	11 43 36.4	+0.2
NVLJ				Sg	Sn	11 43 53.1	+0.1
NVLJ	Novalja	1.21	180	Pn	Pb	11 43 36.4	+0.2
NVLJ				Sn	Sn	11 43 53.1	+0.1
PTCC	Patocco-Chiusa	1.23	301	P	Pg	11 43 36.4	-0.1
PTCC				S	Sn	11 43 55.3	+1.6
PTCC				AML	AML		
	comp=E,466µm,0.5s						
PTCC				AML	AML		
	comp=N,366µm,0.6s						
PTCC	Patocco-Chiusa	1.23	301	Pn	Pg	11 43 36.0	-0.5
PTCC				Pb	Pg	11 43 36.4	-0.1
PTCC				Pb	Pg	11 43 36.4	-0.1
PTCC				Sn	Sn	11 43 55.3	+1.6
GEPF	Gemona	1.31	293	⇑P	Pg	11 43 38.1	+0.2
GEPF				S	Sn	11 43 57.8	+2.3
GEPF				AML	AML		
	comp=E,571µm,0.3s						
GEPF				AML	AML		
	comp=N,450µm,0.5s						
GEPF	Gemona	1.31	293	Pn	Pg	11 43 38.1	+0.2
GEPF				Pn	Pg	11 43 38.1	+0.2
GEPF				Pn	Pg	11 43 38.1	+0.2
GEPF				Sn	Sn	11 43 57.8	+2.3
BEHE	Becsehely	1.50	62	ePg	Pn	11 43 40.5	+0.2
BEHE				eSg	Sg	11 44 01.7	+0.8
BEHE	Becsehely	1.50	62	Pn	Pn	11 43 40.5	+0.2
BEHE				ePg	Pg	11 43 42.1	+0.6
BEHE				x	x	11 43 42.2	
BEHE				Sn	Sg	11 44 01.7	+0.8
BEHE				eLg	Lg	11 44 02.8	
ARSA	Arzberg	1.54	17	ePn	Pn	11 43 41.5	+0.5
ARSA				eSn	Sg	11 44 02.4	0.0
ARSA	Arzberg	1.54	17	ePg	Pn	11 43 41.6	+0.5
	comp=N,22nm,0.4s,SNR=38						
ARSA				Sn	Sg	11 44 02.5	+0.1
	comp=N,51nm,0.4s						
ARSA	Arzberg	1.54	17	Pn	Pn	11 43 41.5	+0.5
ARSA				Pb	Pn	11 43 41.6	+0.5
ARSA				Pb	Pn	11 43 41.6	+0.5
	comp=N,22nm,0.4s						
ARSA				x	x	11 43 41.7	
ARSA				Sg	Sg	11 44 02.4	0.0
ARSA				Sb	Sg	11 44 02.5	0.0
ARSA				Sb	Sg	11 44 02.5	+0.1
	comp=N,51nm,0.4s						
STAL	STALIGIAL	1.58	289	⇓P	Pb	11 43 42.4	-0.2
STAL				AML	AML		
	comp=N,1000µm,1.4s						
STAL				AML	AML		
	comp=N,803µm,1.4s						
STAL				AML	AML		
	comp=E,986µm,0.6s						
STAL				AML	AML		
	comp=N,998µm,1.4s						
STAL				AML	AML		
	comp=E,1430µm,0.4s						
STAL				AML	AML		
	comp=N,804µm,1.4s						
STAL	STALIGIAL	1.58	289	Pg	Pb	11 43 42.4	-0.2
STAL				Pg	Pb	11 43 42.4	-0.2
STAL				Pg	Pb	11 43 42.4	-0.2
FVI	Forni Avoltri	1.67	300	P	Pn	11 43 43.6	+0.8
FVI				S	Sg	11 44 07.4	+0.9
FVI				AML	AML		
	comp=E,263µm,1.6s						
FVI				AML	AML		
	comp=N,418µm,0.5s						
FVI	Forni Avoltri	1.67	300	Pg	Pn	11 43 43.6	+0.8
FVI				Pg	Pn	11 43 43.6	+0.8
FVI				Pg	Pn	11 43 43.7	+0.8
FVI				Lg	Lg	11 44 07.4	
POLC	Polcenigo	1.68	280	P	Pn	11 43 43.5	+0.8
POLC				AML	AML		
	comp=E,1645µm,1.5s						
POLC				AML	AML		
	comp=N,1410µm,0.4s						
POLC	Polcenigo	1.68	280	Pb	Pn	11 43 43.5	+0.8
POLC				Pb	Pn	11 43 43.5	+0.8
POLC				Pb	Pn	11 43 43.6	+0.8
KBA	Koelnbreinsper	1.68	322	ePn	Pb	11 43 44.4	0.0
	comp=N,4.1nm,0.3s,SNR=122						
KBA				ePg	Pg	11 43 45.5	+0.5
	comp=N,28nm,0.4s,SNR=18						
KBA				eSg	Sg	11 44 07.4	+0.6
	comp=N,31nm,0.3s						
KBA	Koelnbreinsper	1.68	322	Pg	Pb	11 43 44.3	0.0
KBA				Pg	Pb	11 43 44.4	0.0
	comp=N,4.1nm,0.3s						
KBA				x	x	11 43 44.6	
KBA				Pb	Pg	11 43 45.5	+0.5
	comp=N,28nm,0.4s						
KBA				Sn	Sg	11 44 07.4	+0.6
KBA				Sn	Sg	11 44 07.4	+0.6
	comp=N,31nm,0.3s						
DUGI	Dugi Otok	1.79	176	iPn	Pn	11 43 45.2	+0.9
DUGI				Sn	Sg	11 44 10.1	-0.1
DUGI	Dugi Otok	1.79	176	Pn	Pn	11 43 45.2	+0.9
DUGI				Lg	Lg	11 44 10.6	
ABTA	Abfaltersbach	1.91	302	ePn	Pn	11 43 46.8	+0.8
	comp=N,2.7nm,0.2s,SNR=59						
ABTA				ePg	Pb	11 43 48.6	+0.4
	comp=N,16nm,0.3s,SNR=15						
ABTA				eSn	Sb	11 44 12.8	+0.6
	comp=N,67nm,0.5s						
ABTA	Abfaltersbach	1.91	302	Pn	Pn	11 43 46.8	+0.8
ABTA				Pn	Pn	11 43 46.8	+0.8
	comp=N,2.7nm,0.2s						
ABTA				Pg	Pb	11 43 48.6	+0.4
	comp=N,16nm,0.3s						
ABTA				Sb	Sb	11 44 12.8	+0.6
	comp=N,67nm,0.5s						
ABTA				Sb	Sb	11 44 12.8	+0.6
BLY	Banja Luka	1.93	121	ePn	Pn	11 43 47.3	+1.1
BLY				eSn	Sb	11 44 12.3	-0.4
BLY	Banja Luka	1.93	121	ePn	Pn	11 43 47.0	+0.8
BLY				eSn	Sb	11 44 12.1	-0.6
BLY	Banja Luka	1.93	121	Pn	Pn	11 43 47.0	+0.8
BLY				x	x	11 43 47.1	
BLY				Pb	Pn	11 43 47.3	+1.1
BLY				Sn	Sb	11 44 12.1	-0.6
BLY				Sb	Sb	11 44 12.3	-0.4
MORI	Morici	2.00	162	iPn	Pb	11 43 48.6	-1.0
MORI				Sn	Sb	11 44 15.9	+1.1
MORI	Morici	2.00	162	Pn	Pb	11 43 48.6	-1.0
MORI				Sn	Sb	11 44 15.9	+1.1
MGRS	Mrkonjic Grad	2.07	130	⇑iPn	Pn	11 43 49.4	+1.1
MGRS				eSn	Sb	11 44 15.9	-1.0
MGRS	Mrkonjic Grad	2.07	130	Pn	Pn	11 43 49.4	+1.1
MGRS				Sn	Sb	11 44 15.9	-1.0
KIJV	Kijevo	2.08	148	ePn	Pb	11 43 50.1	-0.9
KIJV				Sn	Sb	11 44 17.5	+0.5
KIJV	Kijevo	2.08	148	x	Pn	11 43 49.6	+1.3
KIJV				Pg	Pb	11 43 50.7	-0.3

KIJV				Sn	Sb	11 44 17.5	+0.5
MOA	Molln	2.12	349	ePn	Pn	11 43 50.4	+1.5
	comp=N,1.5nm,0.1s,SNR=16						
MOA				Sn	Sb	11 44 17.4	-0.9
	comp=N,6.6nm,0.3s						
MOA	Molln	2.12	349	Pn	Pn	11 43 50.4	+1.5
MOA				Pn	Pn	11 43 50.4	+1.5
	comp=N,1.5nm,0.1s						
MOA				x	x	11 43 50.6	
MOA				Sn	Sb	11 44 17.4	-0.9
MOA				Sn	Sb	11 44 17.4	-0.9
	comp=N,6.6nm,0.3s						
ZIRJ	Zirje	2.19	165	ePn	Pn	11 43 51.1	+1.2
ZIRJ				Sn	Sb	11 44 20.3	0.0
ZIRJ	Zirje	2.19	165	Pn	Pb	11 43 51.6	-1.3
ZIRJ				Sn	Sb	11 44 20.3	0.0
SOP	Sopron	2.23	31	x	Pn	11 43 51.6	+1.1
SOP				ePn	Pn	11 43 52.1	+1.6
SOP				eSn	Sn	11 44 19.4	+1.0
CONA	Conrad Observa	2.26	17	ePn	Pn	11 43 51.5	+0.6
	comp=N,3.6nm,0.3s,SNR=14						
CONA	Conrad Observa	2.26	17	Pn	Pn	11 43 51.5	+0.6
CONA				Pn	Pn	11 43 51.5	+0.6
	comp=N,3.6nm,0.3s						
MPLH	Magyarpolny	2.31	52	ePn	Pn	11 43 51.8	+0.3
RJOB	Jochberg	2.43	325	ePn	Pn	11 43 55.1	+1.9
RJOB				eSg	Sg	11 44 29.4	-1.5
RJOB	Jochberg	2.43	325	x	Pn	11 43 55.7	+2.5
RJOB				Pn	Pn	11 43 55.7	+2.5
RJOB				Lg	Lg	11 44 29.4	
CIMA	Civitanova Mar	2.61	200	Lg	Lg	11 44 45.0	
CIMA				Lg	Lg	11 44 45.0	
MORH	Mrgy, Hungar	2.67	79	x	Pn	11 43 54.4	-2.0
MORH				Pn	Pn	11 43 57.1	+0.7
MORH				Sn	Sn	11 44 30.1	+1.1
CPGN	Carpegna, Ital	2.68	224	Pg	Pg	11 44 05.4	+1.1
CPGN				Pg	Pg	11 44 05.4	+1.1
WTTA	Wattenberg	2.69	305	ePn	Pn	11 43 58.5	+1.7
	comp=N,13nm,0.2s						
WTTA				Sn	Sb	11 44 32.6	-2.2
	comp=N,22nm,0.4s						
WTTA	Wattenberg	2.69	305	Pn	Pn	11 43 58.5	+1.7
WTTA				Pn	Pn	11 43 58.5	+1.7
	comp=N,13nm,0.2s						
WTTA				x	x	11 43 59.1	
WTTA				Sn	Sb	11 44 32.6	-2.2
	comp=N,22nm,0.4s						
WTTA				Sn	Sb	11 44 32.6	-2.2
WATA	Walderalm	2.76	306	ePn	Pn	11 43 59.6	+1.8
	comp=N,2.3nm,0.2s,SNR=8.3						
WATA				eSg	Sg	11 44 44.1	+2.7
	comp=N,13nm,0.4s						
WATA	Walderalm	2.76	306	Pn	Pn	11 43 59.6	+1.8
WATA				Pn	Pn	11 43 59.6	+1.8
	comp=N,2.3nm,0.2s						
WATA				Lg	Lg	11 44 44.1	
WATA				Lg	Lg	11 44 44.1	
	comp=N,13nm,0.4s						
GAG1	Gagliole	2.84	208	Pg	Pg	11 44 11.4	+4.1
GAG1				Pg	Pg	11 44 11.4	+4.1
SQTA	Sankt Quirin	2.92	301	ePn	Pn	11 44 02.1	+2.2
	comp=N,9.8nm,0.3s						
SQTA				Sg	Sg	11 44 48.1	+1.6
	comp=N,10nm,0.3s						
SQTA	Sankt Quirin	2.92	301	Pn	Pn	11 44 02.1	+2.2
SQTA				Pn	Pn	11 44 02.1	+2.2
	comp=N,9.8nm,0.3s						
SQTA				Lg	Lg	11 44 48.1	
SQTA				Lg	Lg	11 44 48.1	
	comp=N,10nm,0.3s						
MAKA	Makarska	2.92	148	ePn	Pn	11 44 02.3	+2.4
MAKA				Sn	Sn	11 44 38.0	+2.7
MAKA	Makarska	2.92	148	Pn	Pn	11 44 02.3	+2.4
MAKA				Sn	Sn	11 44 38.0	+2.7
MAGA	Magasa	2.97	272	Sn	Sn	11 44 39.0	+2.2
MAGA				Sn	Sn	11 44 39.0	+2.2
MOTA	Moosalm	3.04	302	iPn	Pn	11 44 03.6	+2.0
	comp=N,1.8nm,0.2s						
MOTA				eSn	Sn	11 44 40.6	+2.1
	comp=N,6.8nm,0.3s						
MOTA	Moosalm	3.04	302	Pn	Pn	11 44 03.6	+2.0
MOTA				Pn	Pn	11 44 03.6	+2.0
	comp=N,1.8nm,0.2s						
MOTA				Sn	Sn	11 44 40.6	+2.1
MOTA				Sn	Sn	11 44 40.6	+2.1
	comp=N,6.8nm,0.3s						
MODS	Modra-Piesok	3.08	31	ePN	Pn	11 44 01.7	-0.4
MODS				eSN	Sn	11 44 36.6	-2.6
MODS				eSG	Sg	11 44 54.6	+3.0
MODS	Modra-Piesok	3.08	31	ePn	Pn	11 44 01.7	-0.4
MODS				eSn	Sn	11 44 36.6	-2.6
SRO	Srobarova	3.12	48	eSG	Sg	11 44 58.2	+5.1
SRO				eLG	Lg	11 45 01.7	
FETA	Feichten	3.13	295	ePn	Pn	11 44 05.4	+2.5
	comp=N,1.2nm,0.2s						
FETA				eSn	Sn	11 44 41.3	+0.6
	comp=N,3.4nm,0.4s						
FETA				eSg	Sg	11 44 54.6	+1.4
	comp=N,7.4nm,0.4s						
FETA	Feichten	3.13	295	Pn	Pn	11 44 05.3	+2.5
FETA				Pn	Pn	11 44 05.4	+2.5
	comp=N,1.2nm,0.2s						
FETA				Sn	Sn	11 44 41.3	+0.6
FETA				Sn	Sn	11 44 41.3	+0.6
	comp=N,3.4nm,0.4s						
FETA				Lg	Lg	11 44 54.6	
	comp=N,7.4nm,0.4s						
GEC2	GERESS Array S	3.17	346	ePn	Pn	11 44 04.6	+1.1
GEC2				ePg	Pg	11 44 12.6	-1.1
GEC2	GERESS Array S	3.17	346	Pn	Pn	11 44 04.6	+1.1
GEC2				Pg	Pg	11 44 12.6	-1.1
SMOL	Smolenice	3.25	32	ePN	Pn	11 44 04.7	+0.3
SMOL				eSN	Sn	11 44 43.1	-0.3
SMOL				eSG	Sg	11 45 00.8	+3.7
SMOL	Smolenice	3.25	32	ePn	Pn	11 44 04.7	+0.3
SMOL				eSn	Sn	11 44 43.1	-0.3
RETA	Reutte	3.31	303	iPn	Pn	11 44 06.3	+1.0
	comp=N,2.1nm,0.3s						
RETA	Reutte	3.31	303	Pb	Pn	11 44 06.3	+1.0
RETA				Pn	Pb	11 44 06.3	-5.7
	comp=N,2.1nm,0.3s						
MOMA	Monte Martano	3.40	210	Pg	Pg	11 44 23.0	+5.0
MOMA				Pg	Pg	11 44 23.0	+5.0
KRUC	Moravsky	3.45	17	ePN	Pn	11 44 07.6	+0.4
KRUC				ePG	Pg	11 44 17.1	-1.8
KRUC	Moravsky	3.45	17	Pn	Pn	11 44 07.6	+0.4
KRUC				x	x	11 44 08.1	
KRUC				Pg	Pg	11 44 17.1	-1.8
KHC	Kasperske Hory	3.47	346	ePN	Pn	11 44 08.2	+0.7
KHC				ePG	Pg	11 44 18.4	-0.9
KHC				eSN	Sn	11 44 49.5	+0.5
KHC				eSG	Sg	11 45 02.3	-2.0
	comp=N,9.4nm,0.6s						
KHC	Kasperske Hory	3.47	346	x	Pn	11 44 08.0	+0.5
KHC				ePb	Pn	11 44 08.2	+0.7
KHC				Pn	Pn	11 44 08.2	+0.7
KHC				Pg	Pg	11 44 18.4	-0.9
KHC				eSn	Sn	11 44 49.5	+0.5
KHC				Sn	Sn	11 44 49.5	+0.5
KHC				Sg	Sg	11 45 02.3	-2.0
	comp=N,9.4nm,0.6s						
STON	Ston	3.54	144	ePg	Pb	11 44 15.9	0.0
STON				Sg	Sg	11 45 05.2	-1.3
STON	Ston	3.54	144	ePn	Pn	11 44 09.9	+1.5
STON				eSn	Sn	11 44 50.6	0.0
STON	Ston	3.54	144	Pn	Pn	11 44 09.9	+1.5
STON				Pb	Pb	11 44 15.9	0.0
STON				Sn	Sn	11 44 50.6	0.0
STON				Sg	Sg	11 45 05.2	-1.3
JAVC	Velka Javorina	3.63	31	x	Pn	11 44 08.1	-1.6
JAVC				Pn	Pn	11 44 10.9	+1.2
WET	Wettzell	3.63	339	ePn	Pn	11 44 10.2	+0.5
WET	Wettzell	3.63	339	Pn	Pn	11 44 10.2	+0.5
GRAM	Graiana	3.64	251	Sn	Sn	11 44 52.0	-1.1
GRAM				Sn	Sn	11 44 52.0	-1.1
VRAC	Vranov	3.72	18	ePN	Pn	11 44 11.7	+0.8
VRAC				ePG	Pg	11 44 23.0	-1.1
VRAC	Vranov	3.72	18	Pn	Pn	11 44 11.7	+0.8
VRAC				Pg	Pg	11 44 23.0	-1.1
BBLS	Lazići	3.75	119	x	x	11 44 11.8	
BBLS				Pn	Pn	11 44 12.1	+0.8
BBLS				Pb	Pb	11 44 12.3	-7.2
BBLS				Sn	Sn	11 44 56.2	+0.4

DAVA	Damuels	3.76	295	ePn	Pn	11 44 11.0	-0.6
	comp=N,0.9nm,0.1s						
DAVA	Damuels	3.76	295	Pn	Pn	11 44 11.0	-0.6
DAVA				Pb	Pn	11 44 11.2	-0.5
	comp=N,0.9nm,0.1s						
DAVA				x	x	11 44 13.7	
UBR	Ueberruh	3.79	302	x	Pn	11 44 12.7	+0.8
UBR				Pn	Pn	11 44 13.5	+1.6
VYHS	Vyhne	3.84	43	ePN	Pn	11 44 12.7	+0.2
VYHS				eSN	Sn	11 44 55.8	-2.1
VYHS	Vyhne	3.84	43	ePn	Pn	11 44 12.7	+0.2
VYHS				eSn	Sn	11 44 55.8	-2.1
DBRK	Dubrovnik	3.90	142	ePn	Pn	11 44 15.6	+2.3
DBRK				Sn	Sn	11 45 03.1	+3.7
DBRK	Dubrovnik	3.90	142	Pn	Pn	11 44 15.6	+2.3
DBRK				Sn	Sn	11 45 03.8	+4.4
DIVS	Divibare	4.00	113	ePn	Pn	11 44 15.7	+0.9
DIVS	Divibare	4.00	113	ePn	Pn	11 44 15.6	+0.8
DIVS				eSn	Sn	11 45 02.0	-0.1
DIVS	Divibare	4.00	113	Pn	Pn	11 44 15.6	+0.8
DIVS				Pb	Pn	11 44 15.7	-8.1
DIVS				Sn	Sn	11 45 02.0	-0.1
GOPC	GO Pecny, Ondr	4.14	359	ePN	Pn	11 44 17.5	+0.8
GOPC				ePG	Pg	11 44 32.4	+0.2
GOPC	GO Pecny, Ondr	4.14	359	ePb	Pn	11 44 17.5	+0.8
GOPC				Pn	Pn	11 44 17.5	+0.8
GOPC				Pg	Pg	11 44 32.4	+0.2
TRUS	Trudelj	4.22	110	ePn	Pn	11 44 18.6	+0.8
TRUS	Trudelj	4.22	110	Pn	Pn	11 44 18.6	+0.8
PRU	Pruhonice	4.22	357	ePN	Pn	11 44 18.8	+1.0
PRU				ePG	Pg	11 44 34.1	+0.4
PRU	Pruhonice	4.22	357	ePn	Pn	11 44 18.8	+1.0
PRU				Pn	Pn	11 44 18.8	+1.0
PRU				Pg	Pg	11 44 34.1	+0.4
IVAS	Ivanjica	4.36	118	ePn	Pn	11 44 20.3	+0.6
IVAS	Ivanjica	4.36	118	Pn	Pn	11 44 20.3	+0.6
ROTZ	Rotzenmuhle	4.38	337	ePn	Pn	11 44 20.8	+0.8
ROTZ				ePg	Pg	11 44 35.7	-1.0
ROTZ				eSn	Sn	11 45 10.3	-1.1
ROTZ	Rotzenmuhle	4.38	337	Pn	Pn	11 44 20.8	+0.8
ROTZ				Pg	Pg	11 44 35.7	-1.0
ROTZ				Sn	Sn	11 45 10.3	-1.1
MORC	Moravsky Berou	4.39	23	ePN	Pn	11 44 20.8	+0.7
MORC				eSN	Sn	11 45 10.8	-0.9
MORC	Moravsky Berou	4.39	23	x	Pn	11 44 20.1	0.0
MORC				Pn	Pn	11 44 20.8	+0.7
MORC				Sn	Sn	11 45 10.8	-0.9
SJES	Sjenica	4.43	123	ePn	Pn	11 44 22.3	+1.6
SJES	Sjenica	4.43	123	Pn	Pn	11 44 22.3	+1.6
GRUS	Gruza	4.56	112	ePn	Pn	11 44 23.8	+1.3
GRUS	Gruza	4.56	112	Pn	Pn	11 44 23.8	+1.3
MANZ	Manzenberg	4.61	337	ePn	Pn	11 44 24.4	+1.3
MANZ	Manzenberg	4.61	337	Pn	Pn	11 44 24.4	+1.3
WERN	Wernitzgruen	4.82	341	ePn	Pn	11 44 26.8	+0.8
WERN				ePg	Pg	11 44 45.8	+0.7
WERN	Wernitzgruen	4.82	341	Pn	Pn	11 44 26.8	+0.8
WERN				Pg	Pg	11 44 45.8	+0.7
CHVC	Chvalec	4.88	9	ePN	Pn	11 44 26.2	-0.7
CHVC	Chvalec	4.88	9	Pn	Pn	11 44 26.2	-0.7
GUNZ	Gunzen	4.90	341	ePg	Pg	11 44 47.2	+0.6
GUNZ	Gunzen	4.90	341	Pg	Pg	11 44 47.2	+0.6
SELS	Selova	5.14	118	ePn	Pn	11 44 31.3	+0.8
SELS	Selova	5.14	118	Pn	Pn	11 44 31.3	+0.8
BFO	Black Forest	5.15	302	ePn	Pn	11 44 30.8	+0.2
BFO	Black Forest	5.15	302	Pn	Pn	11 44 30.8	+0.2
PGF	Pioggiola	5.32	235	ePn	Pn	11 44 31.4	-1.5
PGF				eSn	Sn	11 45 30.3	-4.2
	comp=N,4.6nm,0.4s						
PGF	Pioggiola	5.32	235	Pn	Pn	11 44 31.4	-1.5
PGF				Sn	Sn	11 45 30.3	-4.2
	comp=N,2.3nm,0.4s						
MOX	Moxa	5.34	337	ePn	Pn	11 44 33.5	+0.4
MOX	Moxa	5.34	337	Pn	Pn	11 44 33.5	+0.4
SBF	Sospel	5.63	253	ePn	Pn	11 44 36.5	-0.6
SBF	Sospel	5.63	253	eP	Pn	11 44 40.6	+3.5
SBF				eSn	Sn	11 45 40.0	-2.1
	comp=N,4.7nm,0.2s						
SBF	Sospel	5.63	253	Pn	Pn	11 44 36.5	-0.6
SBF				Pb	Pn	11 44 40.6	+3.5
SBF				Sn	Sn	11 45 40.0	-2.1
	comp=N,2.4nm,0.2s						
CLL	Collm	5.68	348	ePn	Pn	11 44 39.0	+1.3
CLL				e		11 45 59.0	
CLL				eSg	Sg	11 46 13.0	-2.0
	comp=Z,23nm,1.1s						
CLL	Collm	5.68	348	Pn	Pn	11 44 39.0	+1.3
CLL				x	x	11 45 59.0	
CLL				Lg	Lg	11 46 13.0	
	comp=Z,23nm,1.1s						
CDF	Champ du Feu	5.82	300	ePn	Pn	11 44 40.2	+0.4
CDF				eSn	Sn	11 45 45.9	-1.0
	comp=Z,0.7nm,0.3s						
CDF	Champ du Feu	5.82	300	Pn	Pn	11 44 40.2	+0.4
CDF				Sn	Sn	11 45 45.9	-1.0
	comp=Z,0.3nm,0.3s						
HINF	Hinteralfeld	5.87	293	ePn	Pn	11 44 40.5	0.0
HINF				eSn	Sn	11 45 46.9	-1.3
	comp=Z,2.6nm,0.3s						
HINF	Hinteralfeld	5.87	293	Pn	Pn	11 44 40.5	0.0
HINF				Sn	Sn	11 45 46.9	-1.3
	comp=Z,1.3nm,0.3s						
CABF	La Chapelle	6.16	281	ePn	Pn	11 44 44.8	+0.3
CABF				eSn	Sn	11 45 53.6	-1.6
	comp=Z,1.9nm,0.5s						
CABF	La Chapelle	6.16	281	Pn	Pn	11 44 44.8	+0.3
CABF				Sn	Sn	11 45 53.6	-1.6
	comp=Z,0.9nm,0.5s						
HAU	Haudompre	6.25	294	ePn	Pn	11 44 46.0	+0.3
HAU				eSn	Sn	11 45 56.7	-0.8
	comp=Z,1.9nm,0.2s						
HAU	Haudompre	6.25	294	Pn	Pn	11 44 46.0	+0.3
HAU				Sn	Sn	11 45 56.7	-0.8
	comp=Z,0.9nm,0.2s						
FRF	La Foret Royal	6.27	252	ePn	Pn	11 44 45.8	-0.1
FRF				eSn	Sn	11 45 54.4	-3.5
	comp=Z,2.3nm,0.3s						
FRF	La Foret Royal	6.27	252	Pn	Pn	11 44 45.8	-0.1
FRF				Sn	Sn	11 45 54.4	-3.5
	comp=Z,1.1nm,0.3s						
ORIF	Oris-en-Rattie	6.40	266	ePn	Pn	11 44 48.0	+0.3
ORIF				eSn	Sn	11 45 58.9	-2.2
	comp=Z,4.2nm,0.4s						
ORIF	Oris-en-Rattie	6.40	266	Pn	Pn	11 44 48.0	+0.3
ORIF				Sn	Sn	11 45 58.9	-2.2
	comp=Z,2.1nm,0.4s						
LMR	La Mourre	6.46	251	ePn	Pn	11 44 47.7	-0.7
LMR				eSn	Sn	11 45 57.3	-5.1
	comp=Z,5.4nm,0.3s						
LMR	La Mourre	6.46	251	Pn	Pn	11 44 47.7	-0.7
LMR				Sn	Sn	11 45 57.3	-5.1
	comp=Z,2.7nm,0.3s						
SMRF	Simiane la Rot	6.85	258	ePn	Pn	11 44 53.1	-0.8
SMRF	Simiane la Rot	6.85	258	eP	Pn	11 44 58.1	+4.2
SMRF				eSn	Sn	11 46 09.1	-3.1
	comp=Z,1.1nm,0.3s						
SMRF	Simiane la Rot	6.85	258	Pn	Pn	11 44 53.1	-0.8
SMRF				Pb	Pn	11 44 58.1	+4.2
SMRF				Sn	Sn	11 46 09.1	-3.1
	comp=Z,0.6nm,0.3s						
VIVF	Saint-Julien-l	7.25	266	ePn	Pn	11 44 59.5	+0.1
VIVF				eSn	Sn	11 46 18.1	-4.0
	comp=Z,0.7nm,0.3s						
VIVF	Saint-Julien-l	7.25	266	Pn	Pn	11 44 59.5	+0.1
VIVF				Sn	Sn	11 46 18.1	-4.0
	comp=Z,0.3nm,0.3s						
SMF	Signal de Mont	7.70	280	ePn	Pn	11 45 05.6	0.0
SMF				eSn	Sn	11 46 30.7	-2.5
	comp=Z,0.3nm,0.2s						
SMF	Signal de Mont	7.70	280	Pn	Pn	11 45 05.6	0.0
SMF				Sn	Sn	11 46 30.7	-2.5
	comp=Z,0.1nm,0.2s						
LOR	Lormes	7.74	285	ePn	Pn	11 45 06.7	+0.5
	baz=100						
LOR				eSn	Sn	11 46 31.8	-2.4
	comp=Z,2.7nm,0.4s,baz=106						
LOR	Lormes	7.74	285	Pn	Pn	11 45 06.7	+0.5
LOR				Sn	Sn	11 46 31.8	-2.4
	comp=Z,1.4nm,0.4s						
SSF	Saint Saulge	7.96	283	ePn	Pn	11 45 08.9	-0.2
SSF				eSn	Sn	11 46 36.3	-3.2
	comp=Z,0.3nm,0.2s						
SSF	Saint Saulge	7.96	283	Pn	Pn	11 45 08.9	-0.2
SSF				Sn	Sn	11 46 36.3	-3.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,0.1nm,0.2s						
LASF	**Ste Croix**	**8.00**	**262**	*e*Pn	**Pn**	**11 45 09.1**	**-0.6**
LASF				*e*Sn	**Sn**	**11 46 36.4**	**-4.1**
	comp=Z,0.4nm,0.2s						
LASF	**Ste Croix**	**8.00**	**262**	Pn	**Pn**	**11 45 09.1**	**-0.6**
LASF				Sn	**Sn**	**11 46 36.4**	**-4.1**
	comp=Z,0.2nm,0.2s						
AVF	**Avril sur Loir**	**8.05**	**281**	*e*Pn	**Pn**	**11 45 10.5**	**+0.2**
AVF				*e*Sn	**Sn**	**11 46 38.8**	**-2.8**
	comp=Z,0.9nm,0.3s						
AVF	**Avril sur Loir**	**8.05**	**281**	Pn	**Pn**	**11 45 10.5**	**+0.2**
AVF				Sn	**Sn**	**11 46 38.8**	**-2.8**
	comp=Z,0.5nm,0.3s						

*VIE **08** 11:46:25.5±0.4, 45.69N×14.85E, h2km, ml2.1/6, Error ellipse: s-maj=3.6km s-min=2.1km az=0.0 50 km SSE of Ljubljana*

LJU 08 11:46:26.5, 45.75N×14.87E, h3km, ML1.7, 2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VISS	**Visnje**	**0.06**	**338**	⇓*i*Pg	Pg	11 46 27.8	0.0
VISS				*i* Sg	Sg	11 46 28.9	+0.2
	comp=Z,507nm,0.1s						
VISS	**Visnje**	**0.06**	**338**	⇓*i*Pg	Pg	11 46 31.0	+3.2
VISS				*i* Sg	Sg	11 46 32.1	+3.4
	comp=Z,1μm,0.1s						
PDKS	**Podkum**	**0.33**	**16**	*i* Pg	Pg	11 46 33.0	+0.3
PDKS	**Podkum**	**0.33**	**16**	*i* Sg	Sb	11 46 41.3	+0.6
	comp=Z,61nm,0.1s						
BOJS	**Bojanci**	**0.36**	**132**	*i* Pg	Pg	11 46 33.5	0.0
BOJS				*i* Sg	Sg	11 46 38.6	+0.4
	comp=Z,22nm,0.1s						
BOJS	**Bojanci**	**0.36**	**132**	*i* Sg	Sb	11 46 41.7	+0.1
	comp=Z,30nm,0.1s						
LEGS	**Legarje**	**0.37**	**57**	*i* Pg	Pg	11 46 33.9	+0.2
LEGS				*i* Sg	Sg	11 46 39.2	+0.7
LEGS	**Legarje**	**0.37**	**57**	*i* Sg	Sb	11 46 42.5	+0.5
VNDS	**Vrh nad Dolski**	**0.37**	**342**	*i* Pg	Pg	11 46 34.1	+0.4
LJU	**Ljubljana**	**0.38**	**321**	*i* Sg	Sg	11 46 39.5	+0.7
	comp=Z,25nm,0.1s						
LJU	**Ljubljana**	**0.38**	**321**	*i* Sg	Sb	11 46 42.7	+0.5
	comp=Z,32nm,0.1s						
KNDS	**Knezji Dol**	**0.41**	**238**	*i* Pg	Pg	11 46 34.5	+0.2
CRES	**Cresnjev**	**0.42**	**79**	*i* Pg	Pg	11 46 34.2	-0.4
CRES				*i*		11 46 35.1	
CRES				*i* Sg	Sg	11 46 40.8	+0.9
	comp=Z,39nm,0.2s						
CRES	**Cresnjev**	**0.42**	**79**	*i* Sg	Sb	11 46 44.1	+0.9
	comp=Z,50nm,0.2s						
CRNS	**Crni Vrh**	**0.54**	**308**	*i* Pg	Pg	11 46 37.2	+0.3
GCIS	**Gornji Cirnik**	**0.54**	**77**	*i* Pg	Pg	11 46 37.2	+0.3
DOBS	**Dobrina**	**0.58**	**46**	*e*Pg	Pg	11 46 37.7	+0.1
JAVS	**Javornik**	**0.58**	**285**	*i* Pg	Pg	11 46 37.5	-0.2
GOLS	**Golise**	**0.59**	**63**	*i* Pg	Pg	11 46 38.2	+0.5
SKDS	**Skadanscina**	**0.63**	**252**	*i* Pg	Pg	11 46 38.5	-0.1
SKDS	**Skadanscina**	**0.63**	**252**	*i* Sg	Sb	11 46 51.2	+1.7
	comp=Z,12nm,0.1s						
PTJ	**Puntijarka**	**0.78**	**78**	*e*Pg	Pg	11 46 41.8	+0.3
PTJ				Sg	Sg	11 46 52.2	+0.6
OBKA	**Obir**	**0.79**	**344**	*e*Pg	Pg	11 46 42.3	+0.6
	comp=Z,3.7nm,0.1s						
OBKA				Sg	Sg	11 46 52.7	+0.7
	comp=Z,34nm,0.3s						
CADS	**Cadrg**	**0.93**	**302**	*i* Pg	Pg	11 46 43.9	-0.4
SOKA	**Soboth**	**0.94**	**7**	*e*Pg	Pg	11 46 44.4	0.0
	comp=Z,0.7nm,0.2s						
SOKA				*e*Sg	Sb	11 46 59.1	+0.8
	comp=Z,2.4nm,0.1s						
KALN	**Kalnik**	**1.17**	**70**	*e*Pg	Pn	11 46 50.3	+0.5
KALN				Sg	Sb	11 47 05.4	+0.5
NVLJ	**Novalja**	**1.19**	**180**	*e*Pg	Pn	11 46 50.1	+0.2
NVLJ				Sg	Sn	11 47 07.4	+0.9
ARSA	**Arzberg**	**1.57**	**16**	*e*Pn	Pn	11 46 55.5	+0.2
	comp=Z,1.8nm,0.3s						
ARSA				Sn	Sg	11 47 17.5	+0.6
	comp=Z,2.4nm,0.2s						
KBA	**Koelnbreinsper**	**1.70**	**322**	*e*Pg	Pg	11 46 59.2	+0.1
	comp=Z,2.5nm,0.3s						
KBA				Sg	Sg	11 47 22.8	+1.7
	comp=Z,3.9nm,0.3s						
DUGI	**Dugi Otok**	**1.76**	**176**	*e*Pn	Pb	11 46 59.6	+0.2
DUGI				Sn	Sg	11 47 24.4	+1.3
ABTA	**Abfaltersbach**	**1.92**	**302**	*e*Pg	Pb	11 47 02.3	+0.1
	comp=Z,0.7nm,0.2s						
ABTA				Sn	Sb	11 47 26.2	-0.3
	comp=Z,1.7nm,0.2s						
MORI	**Morici**	**1.97**	**162**	*e*Pn	Pb	11 47 02.7	-0.3
MORI				Sn	Sg	11 47 30.5	+0.6
KIJV	**Kijevo**	**2.06**	**147**	*e*Pn	Pb	11 47 04.4	0.0
KIJV				Sn	Sg	11 47 32.0	-0.5
MOA	**Molln**	**2.14**	**349**	*e*Pg	Pg	11 47 08.0	+0.4
	comp=Z,0.9nm,0.3s						
ZIRJ	**Zirje**	**2.17**	**165**	*e*Pn	Pb	11 47 05.3	-0.9
ZIRJ				Sn	Sb	11 47 34.3	+0.8

IDC 08 11:47:37.0±2.5**, 5.04S×152.22E, h0**km**, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.6**/26**, mbtmp3.9**/4**, ML2.2**/1**, Error ellipse: s-maj=72.8km s-min=38.8km az=127.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.63**	**229**	Pn	Pn	11 49 17.4	+1.7
	2.8nm,0.3s,baz=40,slow=16,SNR=7.0						
PMG				Sn	Sn	11 50 31.1	-1.0
	4.2nm,0.3s,baz=295,slow=12,SNR=8.4						
WRA	**Warramunga Arr**	**22.85**	**228**	P	P	11 52 42.5	+0.5
	1.0nm,0.3s,baz=52,slow=10,SNR=13						
ASAR	**Alice Springs**	**25.58**	**222**	P	P	11 53 08.2	+0.2
	1.1nm,0.5s,baz=58,slow=8.8,SNR=17						
STKA	**Stephens Creek**	**28.49**	**199**	P	P	11 53 33.1	-0.9
	1.4nm,0.8s,baz=29,slow=14,SNR=2.8						
TORD	**Torodi Ar. Bea**	**149.83**	**287**	PKPbc	PKPbc	12 07 29.6	-0.5
	0.2nm,0.3s,baz=61,slow=2.6,SNR=1.7						

*IASPEI **08** 11:58:22.2±0.9, 43.27N±0.02×19.87E±0.02, h7km±7km, Error ellipse: s-maj=3.3km s-min=2.3km az=114.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*RHSSO **08** 11:58:22.5±0.4, 43.27N×19.90E, h4km±3km, ML2.5/9*
*BEO **08** 11:58:23.3±0.2, 43.24N×19.92E, h2km±2km, ML2.5/15*
*PDG **08** 11:58:23.5±0.2, 43.23N×19.79E, h0km±11km, MD2.6/2, ML2.5/14, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*

ISC 08 11:58:22.5±0.9**, 43.26N**±0.02×**19.88E**±0.02**, h5**km±7km**, n51, σ1.04**/96**, 6C-3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJES	**Sjenica**	**0.07**	**91**	*e*Pg	**Pg**	**11 58 24.3**	**0.0**
SJES				*e*Sg	**Sg**	**11 58 25.8**	**+0.3**
PLE	**Pljevlja**	**0.36**	**281**	*e*Pg	**Pg**	**11 58 29.3**	**-0.2**
PLE				*e*Sg	**Sg**	**11 58 34.0**	**-0.3**
IVAS	**Ivanjica**	**0.37**	**33**	*e*Pg	**Pg**	**11 58 29.2**	**-0.6**
IVAS				*e*Sg	**Sg**	**11 58 34.2**	**-0.5**
IVA	**Berane**	**0.39**	**178**	*e*Pg	**Pg**	**11 58 30.2**	**+0.1**
IVA				*i* Sg	**Sg**	**11 58 35.6**	**+0.4**
KOME	**Kolasin**	**0.49**	**213**	*e*Pg	**Pg**	**11 58 31.3**	**-0.6**
KOME				*e*Sg	**Sg**	**11 58 38.6**	**+0.3**
RUDO	**Rudo**	**0.51**	**314**	⇑*i*Pg	**Pg**	**11 58 31.1**	**-1.3**
RUDO				*e*Sg	**Sg**	**11 58 38.9**	**-0.1**
PVY	**Plav**	**0.67**	**175**	⇑*i*Pg	**Pg**	**11 58 35.0**	**-0.4**
PVY				*i* Sg	**Sb**	**11 58 45.4**	**-0.9**
BBLS	**Lazići**	**0.69**	**331**	*e*Pg	**Pg**	**11 58 35.7**	**-0.1**
BBLS				*e*Sg	**Sb**	**11 58 46.5**	**+1.6**
BBLS	**Lazići**	**0.69**	**331**	⇓*i*Pg	**Pg**	**11 58 34.6**	**-1.2**
BBLS				*e*Sg	**Sg**	**11 58 45.6**	**+0.7**
UPM	**Unac-Piva**	**0.71**	**266**	⇑*i*Pg	**Pg**	**11 58 36.1**	**-0.1**
UPM				*e*Sg	**Sg**	**11 58 45.5**	**+0.1**
UPM	**Unac-Piva**	**0.71**	**266**	*e*Pg	**Pg**	**11 58 35.1**	**-1.1**
UPM				*e*Sg	**Sg**	**11 58 45.3**	**-0.1**
NKY	**Niksic**	**0.79**	**236**	*e*Pg	**Pg**	**11 58 36.4**	**-1.2**
NKY				*e*Sg	**Sg**	**11 58 48.2**	**+0.4**
NKME	**Niksic**	**0.84**	**234**	*e*Pg	**Pg**	**11 58 37.7**	**-0.9**
NKME				*i* Sg	**Sg**	**11 58 49.7**	**+0.3**
DIVS	**Divibare**	**0.84**	**6**	*e*Pg	**Pg**	**11 58 38.9**	**+0.3**
DIVS	**Divibare**	**0.84**	**6**	⇓*i*Pg	**Pg**	**11 58 37.0**	**-1.6**
DIVS				*e*Sg	**Sg**	**11 58 49.1**	**-0.5**
GRUS	**Gruza**	**0.87**	**44**	*e*Pg	**Pg**	**11 58 39.1**	**-0.2**
GRUS				*e*Sg	**Sb**	**11 58 51.9**	**-0.2**
SELS	**Selova**	**0.91**	**92**	*e*Pg	**Pg**	**11 58 39.1**	**-0.8**
SELS				*e*Sg	**Sg**	**11 58 51.4**	**-0.3**
PDG	**Podgorica**	**0.95**	**209**	*e*Pg	**Pg**	**11 58 39.7**	**-1.0**
PDG				*e*Sg	**Sb**	**11 58 54.2**	**0.0**
PDG	**Podgorica**	**0.95**	**209**	*e*Pg	**Pg**	**11 58 39.2**	**-1.5**
PDG				*e*Sg	**Sg**	**11 58 52.9**	**-0.1**
TTG	**Podgorica**	**0.95**	**209**	*e*Pg	**Pg**	**11 58 39.6**	**-1.1**
TTG				*i* Sg	**Sg**	**11 58 53.7**	**+0.7**
CEME	**Cevo**	**1.00**	**225**	*e*Pg	**Pg**	**11 58 40.5**	**-1.2**
CEME				*e*Sg	**Sg**	**11 58 55.3**	**+0.6**
TRUS	**Trudelj**	**1.03**	**22**	*e*Pg	**Pg**	**11 58 42.4**	**0.0**
TRUS				*e*Sg	**Sb**	**11 58 57.8**	**+1.1**
BRY	**Bratogost**	**1.04**	**250**	⇑*i*Pg	**Pg**	**11 58 41.7**	**-0.8**
BRY				*e*Sg	**Sg**	**11 58 56.1**	**+0.1**
BRY	**Bratogost**	**1.04**	**250**	*e*Pg	**Pg**	**11 58 41.3**	**-1.2**
BRY				*e*Sg	**Sg**	**11 58 55.4**	**-0.6**
HAPS	**Han Pijesak,BI**	**1.06**	**321**	*e*Pg	**Pg**	**11 58 40.9**	**-2.0**
HAPS				*e*Sg	**Sg**	**11 58 57.2**	**+0.5**
DRME	**Dracevica, Mon**	**1.19**	**206**	*e*Pg	**Pb**	**11 58 44.1**	**-1.4**
DRME				*e*Sg	**Sb**	**11 59 00.8**	**-0.3**
DRME	**Dracevica, Mon**	**1.19**	**206**	⇓*i*Pg	**Pb**	**11 58 44.5**	**-1.0**
DRME				*e*Sg	**Sn**	**11 59 02.2**	**0.0**
BUM	**Brajici-Budva**	**1.20**	**217**	*e*Pg	**Pb**	**11 58 44.7**	**-1.0**
BUM				*i* Sg	**Sg**	**11 59 02.4**	**+1.3**
TREB	**Trebinje**	**1.25**	**245**	*e*Pg	**Pn**	**11 58 46.0**	**-0.5**
TREB				*e*Sg	**Sb**	**11 59 02.9**	**+0.2**
TREB	**Trebinje**	**1.25**	**245**	⇑*i*Pg	**Pn**	**11 58 45.8**	**-0.7**
TREB				*e*Sg	**Sb**	**11 59 02.5**	**-0.2**
HCY	**Herceg Novi**	**1.30**	**232**	*e*Pg	**Pn**	**11 58 46.5**	**-0.8**
HCY				*e*Sg	**Sb**	**11 59 04.4**	**0.0**
HCY	**Herceg Novi**	**1.30**	**232**	*e*Pg	**Pn**	**11 58 46.0**	**-1.3**
HCY				*e*Sg	**Sg**	**11 59 05.5**	**+1.2**
TEKS	**Tekeris**	**1.31**	**349**	*e*Pg	**Pn**	**11 58 47.7**	**+0.3**
TEKS				*e*Sg	**Sb**	**11 59 05.8**	**+1.1**
TEKS	**Tekeris**	**1.31**	**349**	*e*Pg	**Pn**	**11 58 46.4**	**-1.0**
TEKS				*e*Sg	**Sb**	**11 59 04.2**	**-0.5**
ULC	**Ulcinj**	**1.38**	**200**	⇑*i*Pg	**Pn**	**11 58 48.6**	**+0.2**
ULC				*i* Sg	**Sg**	**11 59 09.1**	**+2.3**
BOVS	**Bovan**	**1.38**	**74**	*e*Pg	**Pb**	**11 58 48.7**	**-0.1**
BOVS				*e*Sg	**Sb**	**11 59 05.7**	**-1.1**
DBRK	**Dubrovnik**	**1.40**	**246**	*e*Pg	**Pn**	**11 58 48.6**	**0.0**
DBRK				Sg	**Sg**	**11 59 08.9**	**+1.4**
BARS	**Barje**	**1.49**	**107**	*e*Pg	**Pn**	**11 58 49.9**	**0.0**
BARS	**Barje**	**1.49**	**107**	*e*Pg	**Pg**	**11 58 55.6**	**+4.5**
BARS				*e*Sg	**Sg**	**11 59 09.7**	**-0.7**
BARS				*e*Sg	Sb	11 59 18.0	+8.2
STON	**Ston**	**1.64**	**257**	*e*Pn	**Pn**	**11 58 53.2**	**+1.3**
STON				Sg	**Sg**	**11 59 17.4**	**+2.2**
STON	**Ston**	**1.64**	**257**	*e*Sg	**Sg**	**11 59 16.4**	**+1.2**
STON	**Ston**	**1.64**	**257**	*e*Pn	**Pn**	**11 58 52.5**	**+0.6**
STON				*e*Sg	**Sb**	**11 59 15.6**	**+1.5**
KUBS	**Kucevo**	**1.74**	**48**	*e*Pg	**Pb**	**11 58 54.3**	**-0.5**
KUBS				*e*Sg	**Sb**	**11 59 17.3**	**+0.4**
ZAGS	**Zajecar**	**1.80**	**71**	*e*Pg	**Pb**	**11 58 55.4**	**-0.5**
ZAGS				*e*Sg	**Sg**	**11 59 19.5**	**-0.8**
ZAPS	**Zavoj**	**2.02**	**89**	*e*Pg	**Pb**	**11 58 58.5**	**-1.1**
ZAPS				*e*Sg	**Sb**	**11 59 25.3**	**+0.4**
BOSS	**Bosilegrad**	**2.06**	**111**	*e*Pn	**Pn**	**11 58 57.9**	**+0.2**
BOSS				*e*Sg	**Sg**	**11 59 27.2**	**-1.5**
MAKA	**Makarska**	**2.09**	**272**	*e*Pn	**Pb**	**11 59 02.4**	**+1.6**
MAKA				Sn	**Sg**	**11 59 30.3**	**+0.8**
MGRS	**Mrkonjic Grad**	**2.33**	**301**	*e*Pn	**Pn**	**11 59 01.4**	**0.0**
BLY	**Banja Luka**	**2.44**	**308**	*e*Pn	**Pn**	**11 59 03.6**	**+0.6**
BLY				*e*Sn	**Sn**	**11 59 33.5**	**+0.3**
KIJV	**Kijevo**	**2.63**	**288**	*i* Pn	**Pn**	**11 59 08.3**	**+2.8**
MORH	**Mrgy, Hungar**	**3.08**	**344**	*e*Pn	**Pn**	**11 59 12.0**	**+0.3**

IDC 08 12:04:51.7±3.3**, 26.61N×86.36E, h0**km**, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.2**/42**, mbtmp3.4**/4**, Error ellipse: s-maj=109.5km s-min=30.7km az=69.0, Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**20.40**	**352**	P	P	12 09 28.2	-2.0
	0.8nm,0.7s,baz=171,slow=11,SNR=9.5						
SONM	**Songino Array**	**26.38**	**31**	P	P	12 10 29.6	-0.1
	0.3nm,0.8s,baz=211,slow=10,SNR=2.1						
ZALV	**Zalesovo Beam**	**27.33**	**358**	P	P	12 10 39.5	+1.4
	0.2nm,0.3s,baz=188,slow=9.5,SNR=2.9						
WRA	**Warramunga Arr**	**65.62**	**130**	P	P	12 15 37.7	-0.2
	0.4nm,0.9s,baz=321,slow=6.5,SNR=1.5						

*NIED **08** 12:12:00, 43.70N×147.80E, h44km, Mw4.3 Best double couple: $M_0$2.75000×10[15] NP1:ϕ_s59.00000°, δ89.00000°, λ109.00000°. NP2:ϕ_s151.00000°, δ19.00000°, λ3.00000°.*
*BJI **08** 12:12:40.2±0.0, 43.91N×148.62E, h43km, mB5.0/21, mb4.5/35, Ms4.5/7, Ms7 4.2/5*
*SKHL **08** 12:12:44.7±0.3, 43.84N×148.22E, h63km±6km, mb4.9/12*
SKHL Felt (II-III) at Kuril'sk.
*MOS **08** 12:12:44.2±0.9, 43.91N×148.11E, h45km, mb4.8/29, Error ellipse: s-maj=6.7km s-min=5.4km az=112.0*
*JMA **08** 12:12:44.3±0.3, 43.68N×147.80E, h0km, M4.9*
JMA Felt I J1.
*NEIC **08** 12:12:45.3±1.4, 43.96N±0.07×148.1E±0.1, h35km±2km, mb4.6/55, Error ellipse: s-maj=14.8km s-min=11.1km az=128.0*
*IDC **08** 12:12:47.1±2.2, 43.96N×147.94E, h53km±19km, mb3.9/23, mb1 4.1/30, mb1mx4.0/41, mbtmp4.2/30, ML3.2/6, MS3.4/10, Ms1 3.4/10, ms1mx3.2/38, Error ellipse: s-maj=16.6km s-min=11.3km az=146.0*

ISC 08 12:12:45.2±0.6**, 43.91N**±0.05×**148.13E**±0.05**, h40**km±4km**, n294, σ1.26**/323**, mb4.5**/77**, MS3.7**/10**, 9C-25D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.94**	**268**	*i* P	**Pn**	**12 13 01.3**	**-0.6**
SHO				AMB	AMB	12 13 02.0	
	1μm,0.3s						
SHO				*e*S	**Sn**	**12 13 13.5**	**-0.7**
SHO				A	A	12 13 13.9	
	7μm,0.4s						
SHO				A	A	12 13 13.9	
	12μm,0.4s						
SHO	**Shikotan**	**0.94**	**268**	*d i*PN	**Pn**	**12 13 01.1**	**-0.8**
SHO				*e*S	**Sn**	**12 13 13.0**	**-1.2**
SHO				pmax	pmax		
	comp=Z,1μm,0.3s						
SHO				pmax	pmax		
	comp=N,387nm,0.2s						
SHO				pmax	pmax		
	comp=E,1μm,0.2s						
SHO				smax	smax		
	comp=E,12μm,0.4s						
SHO				smax	smax		
	comp=N,7μm,0.3s						
KUR	**Kuril'sk**	**1.34**	**352**	*i* P	**Pn**	**12 13 07.0**	**-0.4**
KUR				AMB	AMB	12 13 09.0	
	comp=N,701nm,0.2s						
KUR				*e*S	**Sn**	**12 13 24.0**	**0.0**
KUR				A	A	12 13 28.0	
	comp=N,4μm,0.4s						
KUR				A	A	12 13 28.0	
	comp=N,6μm,0.4s						
KUR	**Kuril'sk**	**1.34**	**352**	*c i*PN	**Pn**	**12 13 07.9**	**+0.5**
KUR				*e*S	**Sn**	**12 13 24.7**	**+0.7**
KUR				pmax	pmax		
	comp=Z,701nm,0.2s						
KUR				pmax	pmax		
	comp=N,273nm,0.1s						
KUR				pmax	pmax		
	comp=E,335nm,0.1s						
KUR				smax	smax		
	comp=E,6μm,0.3s						
KUR				smax	smax		
	comp=N,4μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.64**	**275**	*i* P	**Pn**	**12 13 11.0**	**-0.6**
YUK				AMB	AMB	12 13 15.0	
	comp=N,2μm,0.2s						
YUK				*i* S	**Sn**	**12 13 30.0**	**-1.5**
YUK				A	A	12 13 33.0	
	comp=N,4μm,0.3s						
YUK				A	A	12 13 33.0	
	comp=N,6μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.64**	**275**	*d i*PN	**Pn**	**12 13 11.2**	**-0.4**
GRPR	**Tuman**	**1.71**	**274**	*i* P	**Pn**	**12 13 12.0**	**-0.4**
GRPR				AMB	AMB	12 13 16.0	
	comp=N,1μm,0.4s						
GRPR				*i* S	**Sn**	**12 13 32.0**	**-1.0**
GRPR				A	A	12 13 33.0	
	comp=N,5μm,0.3s						
GRPR				A	A	12 13 33.0	
	comp=N,3μm,0.3s						
GRPR	**Tuman**	**1.71**	**274**	⇓*i*PN	**Pn**	**12 13 12.1**	**-0.4**
GRPR				*i* S	**Sn**	**12 13 32.4**	**-0.6**
GRPR				pmax	pmax		
	comp=Z,1μm,0.4s						
GRPR				pmax	pmax		
	comp=E,599nm,0.2s						
GRPR				pmax	pmax		
	comp=N,458nm,0.1s						
GRPR				smax	smax		
	comp=N,5μm,0.3s						
GRPR				smax	smax		
	comp=E,3μm,0.3s						
NEM2	**Nemuro 2**	**1.82**	**254**	⇓P	**Pn**	**12 13 12.8**	**-1.1**
NEM2				*e*S	**Sn**	**12 13 33.7**	**-2.0**
NMR	**Nemuro--Hokkai**	**1.82**	**254**	*i* P	**Pn**	**12 13 12.0**	**-2.1**
NMR				*i* S	**Sn**	**12 13 34.0**	**-1.9**
NMR	**Nemuro--Hokkai**	**1.82**	**254**	⇓*i*PN	**Pn**	**12 13 12.9**	**-1.2**
NMR				*i* S	**Sn**	**12 13 34.7**	**-1.2**
GLVR	**Golovnino**	**1.90**	**266**	*i* P	**Pn**	**12 13 15.0**	**0.0**
GLVR				AMB	AMB	12 13 16.0	
	comp=E,2μm,0.4s						
GLVR				*e*S	**Sn**	**12 13 37.0**	**-0.7**
GLVR				A	A	12 13 41.0	
	comp=E,1μm,0.3s						
GLVR	**Golovnino**	**1.90**	**266**	⇓*i*PN	**Pn**	**12 13 15.2**	**+0.2**
GLVR				*e*S	**Sn**	**12 13 37.5**	**-0.2**
GLVR				pmax	pmax		
	comp=E,407nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,2μm,0.4s						
GLVR				pmax	pmax		
	comp=N,323nm,0.2s						
GLVR				smax	smax		
	comp=N,15μm,0.3s						
JRA	**Rausu**	**2.17**	**272**	P	**Pn**	**12 13 19.4**	**+0.5**
JRA				*e*S	**Sn**	**12 13 45.8**	**+1.3**
JNSB	**Nemuroshibetsu**	**2.27**	**268**	P	**Pn**	**12 13 20.6**	**+0.5**
JKHN	**Kushirohamanak**	**2.31**	**250**	P	**Pn**	**12 13 20.4**	**-0.4**
JNK	**Nakash**	**2.49**	**264**	P	**Pn**	**12 13 23.4**	**+0.1**
JAK	**Akkeshi**	**2.66**	**251**	P	**Pn**	**12 13 25.0**	**-0.5**
JTKR	**Abashiri--Toko**	**3.05**	**273**	⇑P	**Pn**	**12 13 32.1**	**+1.2**
JAR	**Ashorobuto**	**3.23**	**261**	P	**Pn**	**12 13 34.2**	**+0.9**
JAR				*e*S	**Sn**	**12 14 11.4**	**+0.9**
JOB	**Onbets**	**3.29**	**254**	P	**Pn**	**12 13 34.4**	**+0.3**
JMP	**Maruseppu**	**3.45**	**273**	P	**Pn**	**12 13 37.7**	**+1.3**
JCH	**Churui**	**3.71**	**251**	P	**Pn**	**12 13 40.2**	**+0.2**
JCH				*e*S	**Sn**	**12 14 22.3**	**-0.2**
JKK2	**Kamakawa 2**	**3.89**	**271**	P	**Pn**	**12 13 44.7**	**+2.2**
JKA	**Kamikawa-asahi**	**4.00**	**275**	*e*P	**Pn**	**12 13 45.8**	**+1.9**
JKA	**Kamikawa-asahi**	**4.00**	**275**		**Pn**	**12 13 45.8**	**+1.9**
JKA					LR	12 14 42.5	
ASAJ	**Asahikawa**	**4.00**	**275**	P	**Pn**	**12 13 45.8**	**+1.9**
	comp=N,3.2nm,0.3s,baz=74,slow=14,SNR=32						
ASAJ				S	Sn	12 14 42.5	+13
	comp=N,14nm,0.3s,baz=0.9,slow=24,SNR=6.4						
ASAJ				LR	LR	12 15 28.2	
	comp=N,472nm,20.3s,baz=152,slow=42						
JFR	**Furan**	**4.09**	**261**	P	**Pn**	**12 13 47.2**	**+1.9**
JSE	**Soyaes**	**4.11**	**287**	⇑P	**Pn**	**12 13 46.9**	**+1.5**
ERM	**Erimo**	**4.11**	**244**		**Pn**	**12 13 47.2**	**+1.8**
ERM				Sn	**Sn**	**12 14 33.8**	**+1.5**
ERM	**Erimo**	**4.11**	**244**	*i* PN	**Pn**	**12 13 47.3**	**+1.8**
JNBK	**Urakawa-nobuka**	**4.26**	**249**	P	**Pn**	**12 13 47.4**	**-0.1**
JHR	**Hokuryu**	**4.64**	**270**	P	**Pn**	**12 13 55.8**	**+3.1**
JWK2	**Keihoku**	**4.67**	**290**	P	**Pn**	**12 13 56.2**	**+3.1**
YSS	**Yuzh-Sakhalins**	**4.86**	**311**	*i* P	**Pn**	**12 13 57.0**	**+1.3**
YSS				AMB	AMB	12 13 58.0	
	comp=N,20nm,0.4s						
YSS				*e*S	**Sn**	**12 14 51.0**	**+0.3**
YSS				A	A	12 14 54.0	
	comp=N,80nm,1.1s						
YSS	**Yuzh-Sakhalins**	**4.86**	**311**		**Pn**	**12 13 56.5**	**+0.7**
YSS				Sn	**Sn**	**12 14 49.0**	**-1.6**
YSS	**Yuzh-Sakhalins**	**4.86**	**311**	⇓*i*PN	**Pn**	**12 13 57.5**	**+1.8**
YSS				*e*S	**Sn**	**12 14 51.5**	**+0.8**
YSS				pmax	pmax		
	comp=Z,20nm,0.4s						
YSS				smax	smax		
	comp=N,80nm,1.1s						
YSS				MLR	MLR		
	comp=N,300nm,13.0s						
YSS				MLR	MLR		
	comp=E,200nm,13.0s						
YSS				MLR	MLR		
	comp=Z,500nm,13.0s						
JEW	**Eniwo**	**4.99**	**260**	P	**Pn**	**12 13 59.8**	**+2.3**
UGL	**Uglegorsk**	**6.65**	**323**	*e*P	**Pn**	**12 14 23.7**	**+3.4**
TYV	**Tymovskoe**	**7.89**	**334**	*e*P	**Pn**	**12 14 38.9**	**+1.6**
TYV				AMB	AMB	12 14 43.5	
	comp=Z,9.0nm,0.5s						
TYV				*e*S	**Sn**	**12 16 04.2**	**-0.9**
TYV				A	A	12 16 07.6	
	comp=Z,7.0nm,0.5s						
TYV	**Tymovskoe**	**7.89**	**334**	*e*PN	**Pn**	**12 14 39.2**	**+1.9**
TYV				*e*S	**Sn**	**12 16 09.7**	**+4.5**
TYV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TYV				smax	smax		
	comp=E,6.0nm,0.9s						
TEY	**Ternei**	**8.32**	**282**	*e*P	**Pn**	**12 14 45.6**	**+2.4**
TEY				AMB	AMB	12 14 50.8	
	comp=E,20nm,0.9s						
TEY	**Ternei**	**8.32**	**282**	⇑*e*PN	Pn	12 14 49.6	+6.4
TEY				pmax	pmax		
	comp=E,20nm,0.9s						
TEY				pmax	pmax		
	comp=Z,20nm,0.9s						
SKR	**Severo-Kuril's**	**8.68**	**36**	*e*P	**Pn**	**12 14 48.0**	**-0.1**
SKR				*e*S	**Sn**	**12 16 22.1**	**-2.5**
SKR	**Severo-Kuril's**	**8.68**	**36**	*e*PN	**Pn**	**12 14 48.5**	**+0.4**
SKR				MLR	MLR		
	comp=Z,300nm,14.0s						
OKH	**Okha**	**10.24**	**342**	*e*P	**Pn**	**12 15 11.3**	**+1.9**
MAJO	**Matsushiro**	**10.56**	**229**	Pn	**Pn**	**12 15 13.1**	**-0.9**
MAJO	**Matsushiro**	**10.56**	**229**	*i* PN	**Pn**	**12 15 17.2**	**+3.2**
MAT	**Matsushiro**	**10.56**	**229**	P	**Pn**	**12 15 12.6**	**-1.4**
MAT				*e*S	**Sn**	**12 17 12.0**	**+1.1**
MJAR	**Matsushiro Arr**	**10.56**	**229**	P	**Pn**	**12 15 13.2**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=32,slow=15,SNR=8.0						
MJAR				S	**Sn**	**12 17 14.6**	**+3.7**
	comp=Z,0.1nm,0.3s,baz=61,slow=17,SNR=3.4						
MJB9	**Matsu-Tunnel**	**10.56**	**229**	Pn	**Pn**	**12 15 12.9**	**-1.0**
PEA0B	**Petropavlovsk-**	**11.17**	**31**	Pn	**Pn**	**12 15 22.2**	**-0.1**
PEA0B	**Petropavlovsk-**	**11.17**	**31**	*i* PN	**Pn**	**12 15 21.6**	**-0.6**
PETK	**Petropavlovsk-**	**11.17**	**31**	P	**Pn**	**12 15 23.4**	**+1.2**
	comp=Z,1.4nm,0.3s,baz=201,slow=14,SNR=34						
PETK	**Petropavlovsk-**	**11.17**	**31**	Pn	**Pn**	**12 15 23.3**	**+1.1**
USA0B	**Ussuriysk Arra**	**11.62**	**277**	*i* PN	**Pn**	**12 15 28.9**	**+0.5**
USRK	**Ussuriysk Ar.**	**11.62**	**277**	P	**Pn**	**12 15 29.2**	**+0.8**
	baz=83,slow=13,SNR=4.7						
USRK				LR	LR	12 19 52.1	
	comp=Z,141nm,20.3s,baz=99,slow=37						
USRK	**Ussuriysk Ar.**	**11.62**	**277**	Pn	**Pn**	**12 15 28.4**	**0.0**
INU	**Inuyama**	**12.09**	**229**	Pn	**Pn**	**12 15 35.7**	**+0.9**
KLR	**Kul'dur**	**12.46**	**301**	P	Pn	12 15 45.0	+5.1
	comp=Z,0.1nm,0.3s,baz=106,slow=14,SNR=9.2						
KLR				LR	LR	12 20 33.5	
	comp=Z,197nm,18.9s,baz=76,slow=38						
KLR	**Kul'dur**	**12.46**	**301**	*e*P	**Pn**	**12 15 40.3**	**+0.5**
KLR	**Kul'dur**	**12.46**	**301**	*i* PN	**Pn**	**12 15 40.3**	**+0.5**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
EKMR	**Ekimchan**	**13.59**	**318**	*e*P	**Pn**	**12 15 54.5**	**-0.8**
EKMR				AMB	AMB	12 16 15.0	
	comp=Z,11nm,1.0s						
MA2	**Magadan**	**15.78**	**5**	P	**Pn**	**12 16 25.4**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=164,slow=18,SNR=4.0						
MA2				LR	LR	12 22 12.3	
	comp=Z,62nm,19.6s,baz=122,slow=36						
MA2	**Magadan**	**15.78**	**5**	*e*P	**Pn**	**12 16 25.1**	**+0.8**
MA2	**Magadan**	**15.78**	**5**	Pn	**Pn**	**12 16 25.1**	**+0.8**
MA2	**Magadan**	**15.78**	**5**	P	**Pn**	**12 16 25.1**	**+0.8**

MA2 pmax pmax
comp=Z,21nm,1.3s
BMKR Bomnak 16.53 318 eP Pn 12 16 32.5 -1.3
BMKR AMB AMB 12 16 39.8
comp=Z,10.0nm,1.0s
KSRS Korea Array 16.61 254 P Pn 12 16 35.4 +0.4
comp=Z,0.1nm,0.3s,baz=69,slow=11,SNR=6.4
KSRS LR LR 12 22 59.6
comp=Z,50nm,18.1s,baz=14,slow=37
ZEA Zeya 16.85 313 eP Pn 12 16 35.6 -2.3
ZEA AMB AMB 12 16 48.0
comp=Z,28nm,1.0s
ZEA Zeya 16.85 313 eP P 12 16 39.6 0.0
ZEA pmax pmax
comp=Z,28nm,1.4s
JNU Nakatsue 17.23 237 P P 12 16 46.2 +2.1
JNU IAmb IAmb 12 16 58.8
comp=Z,44nm,1.4s
KROS Kirovskiy 17.32 315 eP Pn 12 16 41.5 -2.3
KROS AMB AMB 12 16 48.8
comp=Z,3.0nm,0.7s
SEY Seymchan 19.22 6 P P 12 17 04.4 -1.2
comp=Z,0.3nm,0.3s,baz=213,slow=7.8,SNR=8.1
SEY Seymchan 19.22 6 i P P 12 17 03.4 -2.2
YAK Yakutsk 21.14 336 P P 12 17 23.9 -2.6
comp=Z,6.0nm,0.3s,baz=130,slow=0.9,SNR=8.9
YAK Yakutsk 21.14 336 P P 12 17 23.6 -2.9
YAK IAmb IAmb 12 17 25.0
comp=Z,17nm,0.8s
YAK Yakutsk 21.14 336 eP P 12 17 23.8 -2.6
YAK e 12 17 50.2
YAK eS S 12 21 16.4 -2.8
YAK e*SS sS 12 21 35.3 +1.7
YAK eSS SnSn 12 21 50.2 +7.9
YAK pmax pmax
comp=Z,14nm,0.9s
YAK pmax pmax
comp=N,3.0nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=Z,163nm,4.0s
YAK pmax pmax
comp=N,86nm,4.4s
YAK pmax pmax
comp=E,135nm,4.8s
YAK smax smax
comp=N,192nm,3.6s
YAK smax smax
comp=E,29nm,4.2s
BJT Baijiatuau 24.00 272 P P 12 17 55.6 -0.4
BJT Baijiatuau 24.00 272 P P 12 17 55.6 -0.4
BJT pmax pmax
comp=Z,8.0nm,0.7s
NJ2 Nanjing 25.80 253 eP P 12 18 12.2 -0.2
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
BILL Bilibino 26.02 15 eP P 12 18 13.1 -1.0
BILL Bilibino 26.02 15⇓eP P 12 18 12.7 -1.4
BILL e*PP sP 12 18 28.9 -0.7
BILL 12 21 39.9
BILL S S 12 22 41.3 -0.6
BILL MLR MLR
comp=Z,77nm,17.0s
HHC Hu-ho-hao-te 27.05 276 eP P 12 18 24.2 +0.4
HHC pmax pmax
comp=Z,49nm,4.8s
ULN Ulaanbaatar 28.62 293 eP P 12 18 36.8 -1.1
ULN Ulaanbaatar 28.62 293 P P 12 18 36.8 -1.1
ULN Ulaanbaatar 28.62 293 P P 12 18 36.8 -1.1
ULN pmax pmax
comp=Z,2.0nm,0.6s
H11N2 WAKE ISLAND Hy 28.76 141 T T 12 49 22.9
baz=332,slow=76,SNR=672
H11N1 WAKE ISLAND Hy 28.78 141 T T 12 49 33.8
baz=332,slow=76,SNR=641
H11N3 WAKE ISLAND Hy 28.78 141 T T 12 49 21.7
baz=332,slow=76,SNR=658
SONM Songino Array 29.07 293 P P 12 18 41.3 -0.5
comp=Z,1.1nm,0.5s,baz=90,slow=9.0,SNR=10
SONM Songino Array 29.07 293 P P 12 18 41.0 -0.8
SONM Songino Array 29.07 293 P P 12 18 41.0 -0.8
SONM pmax pmax
comp=Z,1.0nm,0.7s
TIXI Tiksi 29.36 348 i P P 12 18 41.4 -2.5
TIXI pmax pmax
comp=Z,1.0nm,1.5s
H11S1 WAKE ISLAND Hy 29.75 142 T T 12 50 41.4
baz=332,slow=76,SNR=1210
H11S3 WAKE ISLAND Hy 29.75 143 T T 12 50 35.4
baz=332,slow=76,SNR=1040
H11S2 WAKE ISLAND Hy 29.77 142 T T 12 50 42.7
baz=332,slow=76,SNR=1214
WHN Wuhan 29.80 255 P P 12 18 57.7 +9.4
GAMB Gambell 30.17 35 P P 12 18 51.8 +0.7
TLY Talaya 30.48 301 LR LR 12 31 05.7
comp=Z,79nm,19.2s,baz=356,slow=36
XAN Xi'an 31.78 265 P P 12 19 04.9 -0.8
XAN pP pP 12 19 12.5 -4.0
XAN pmax pmax
comp=Z,3.0nm,0.9s
LZH Lanzhou 34.48 272 eP P 12 19 30.8 +1.4
LZH pP pP 12 19 42.1 +2.1
LZH sP sP 12 19 48.4 +3.4
LZH PP PP 12 20 47.3 -0.5
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,68nm,4.9s
LZH LR LR
comp=Z,290nm,13.5s
LZH LR LR
comp=Z,310nm,13.3s
LZH LR LR
comp=Z,440nm,16.8s
GTA Gaotai 35.97 280 P P 12 19 42.6 +0.4
GTA pP sP 12 19 55.6 -2.2
GTA sP pP 12 20 01.6 +8.5
GTA pmax pmax
comp=Z,4.0nm,1.1s
GTA pmax pmax
comp=Z,64nm,5.8s
GTA LR LR
comp=Z,140nm,16.8s
GTA LR LR
comp=Z,180nm,17.2s
GTA LR LR
comp=Z,130nm,15.5s
SVW2 Sparrevohn 36.97 42 P P 12 19 51.8 +1.5
SVW2 IAmb IAmb 12 20 09.3
comp=Z,16nm,1.3s
CD2 Chengdu 37.13 265 P P 12 19 52.0 0.0
CD2 pmax pmax
comp=Z,10.0nm,0.8s
IMAR Indian Mountai 38.12 34 P P 12 20 00.9 +1.0
KDAK Kodiak Island 38.62 48 P P 12 20 05.4 +1.2
comp=Z,19nm,1.0s,baz=254,slow=15,SNR=2.3
KDAK LR LR 12 33 44.2
comp=Z,68nm,21.7s,baz=138,slow=32
KDAK Kodiak Island 38.62 48 P P 12 20 05.9 +1.7
MLY Manley 39.30 36 P P 12 20 11.9 +2.0
COLD Coldfoot 39.64 32 P P 12 20 14.0 +1.4
COLD IAmb IAmb 12 20 23.8
comp=Z,9.9nm,1.4s
TOLK Toolik Lake Re 39.99 30 P P 12 20 16.8 +1.2
HDA Harding Lake 40.93 37 P P 12 20 24.1 +0.7
HDA IAmb IAmb 12 20 26.6
comp=Z,12nm,1.4s
IL31 40.94 36 P P 12 20 24.6 +1.2
IL31 IAmb IAmb 12 20 37.9
comp=Z,11nm,1.4s
ILAR Eielson Array 40.94 36 P P 12 20 24.4 +1.0
comp=Z,2.5nm,0.6s,baz=269,slow=7.4,SNR=33
ILAR Eielson Array 40.94 36 P P 12 20 24.2 +0.7
ILAR Eielson Array 40.94 36 P P 12 20 24.2 +0.7
KMI Kunming 41.24 258 P P 12 20 24.7 -2.0
KMI pmax pmax
comp=Z,7.0nm,0.9s
ZAA0 Zalesovo Array 41.47 307 P P 12 20 27.1 -0.8
ZALV Zalesovo Beam 41.47 307 P P 12 20 27.1 -0.8
comp=Z,0.5nm,0.5s,baz=87,slow=7.9,SNR=2.9
ZALV PcP PcP 12 22 24.8 -0.2
comp=Z,1.6nm,0.6s,baz=104,slow=2.4,SNR=8.0
ZALV LR LR 12 38 14.9
comp=Z,96nm,18.1s,baz=320,slow=37

ZALV Zalesovo Beam 41.47 307 P P 12 20 27.4 -0.5
FYU Fort Yukon 41.58 34 P P 12 20 30.3 +1.7
SCRK Sand Creek 42.25 37 P P 12 20 35.0 +0.7
WMQ Urumqi 42.70 292 eP P 12 20 39.2 +1.1
WMQ pP sP 12 20 52.6 -1.3
WMQ pmax pmax
comp=Z,11nm,0.9s
WMQ pmax pmax
comp=Z,200nm,6.1s
WMQ LR LR
comp=Z,330nm,15.1s
WMQ Urumqi 42.70 292 P P 12 20 38.1 -0.1
WMQ IAmb IAmb 12 20 40.8
comp=Z,7.9nm,1.0s
WMQ Urumqi 42.70 292 P P 12 20 38.1 -0.1
WMQ pmax pmax
comp=Z,8.0nm,1.0s
BCAR Beaver Creek A 43.33 39 P P 12 20 44.7 +1.7
MK31 Makanchi Array 45.14 298 P P 12 20 57.2 -0.5
MK31 Makanchi Array 45.14 298 P P 12 20 57.2 -0.5
MK31 pmax pmax
comp=Z,5.0nm,1.0s
MKAR Makanchi Array 45.14 298 P P 12 20 57.1 -0.5
comp=Z,3.5nm,0.7s,baz=77,slow=8.6,SNR=45
MKAR PcP PcP 12 22 37.4 -0.1
comp=Z,0.5nm,0.6s,baz=64,slow=3.4,SNR=2.9
MKAR Makanchi Array 45.14 298 eP P 12 20 57.4 -0.3
MKAR Makanchi Array 45.14 298 i P P 12 20 57.4 -0.3
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MAKZ Makanchi 45.34 298 P P 12 20 58.7 -0.5
MAKZ Makanchi 45.34 298 P P 12 20 58.7 -0.5
MAKZ pmax pmax
comp=Z,4.0nm,0.9s
HYT Haines Junctio 45.74 41 P P 12 21 04.0 +1.7
HYT IAmb IAmb 12 21 18.9
comp=Z,12nm,1.0s
INK Inuvik 45.91 30 P P 12 21 04.8 +1.4
comp=Z,6.2nm,0.6s,baz=288,slow=6.4,SNR=45
INK Inuvik 45.91 30 P P 12 21 04.8 +1.4
INK IAmb IAmb 12 21 05.5
comp=Z,7.4nm,0.9s
KURK Kurchatov 46.03 304 eP P 12 21 03.9 -0.7
KURK Kurchatov 46.03 304 P P 12 21 04.1 -0.4
KURK IAmb IAmb 12 21 06.5
comp=Z,7.8nm,1.4s
KURK Kurchatov 46.03 304 i P P 12 21 03.9 -0.7
KURK pmax pmax
comp=Z,2.0nm,0.8s
CHTO Chiang Mai 48.01 255 P P 12 21 20.4 0.0
CHTO IAmb IAmb 12 21 33.8
comp=Z,6.5nm,1.0s
CHTO Chiang Mai 48.01 255 P P 12 21 20.4 0.0
CHTO pmax pmax
comp=Z,7.0nm,1.0s
CMAR Chiang Mai Arr 48.25 254 P P 12 21 21.8 -0.5
comp=Z,0.7nm,0.3s,baz=46,slow=6.4,SNR=7.1
CMAR LR LR 12 44 14.9
comp=Z,27nm,18.0s,baz=355,slow=39
SHL Shillong 48.75 267 P P 12 21 26.0 -0.3
SHL IAmb IAmb 12 21 27.6
comp=Z,6.1nm,0.8s
SHL Shillong 48.75 267 P P 12 21 26.0 -0.3
SHL pmax pmax
comp=Z,6.0nm,0.8s
C36M Paulatuk 49.01 28 P P 12 21 28.4 +1.0
BRVK Borovoye 50.00 310 eP P 12 21 35.1 -0.1
BRVK Borovoye 50.00 310 P P 12 21 35.1 -0.1
BRVK Borovoye 50.00 310 P P 12 21 35.1 -0.1
BRVK pmax pmax
comp=Z,3.0nm,0.9s
KDJ Kajisay 50.41 294 P P 12 21 38.4 -0.3
KDJ IAmb IAmb 12 21 39.8
comp=Z,7.5nm,1.0s
KDJ Kajisay 50.41 294 P P 12 21 38.4 -0.3
KDJ pmax pmax
comp=Z,8.0nm,1.0s
ULHL Ulahol 50.97 295 P P 12 21 43.3 +0.3
SNR=7.8
KBK Karagaybulak 51.62 296 P P 12 21 48.3 +0.5
SNR=7.8
USP Ospenovka 51.63 297 P P 12 21 48.1 +0.4
SNR=8.7
KZA Kyzart 51.70 295 P P 12 21 49.9 +1.2
SNR=7.5
AAK Ala-Archa 51.93 296 eP P 12 21 49.7 -0.4
AAK Ala-Archa 51.93 296 P P 12 21 50.0 0.0
AAK IAmb IAmb 12 21 50.9
comp=Z,9.6nm,1.4s
AAK Ala-Archa 51.93 296 i P P 12 21 49.7 -0.4
AAK pmax pmax
comp=Z,4.0nm,1.2s
EKS2 Erkin-Say 52.38 296 P P 12 21 53.7 +0.3
SNR=7.5
KSH Kashi 52.46 292 P P 12 21 57.7 +3.6
KSH sP sP 12 22 17.5 +7.6
KSH PcP PcP 12 23 08.9 +4.6
KSH S S 12 29 23.4 +5.8
KSH sS sS 12 29 48.7 +12
KSH ScS ScS 12 31 39.0 -1.6
KSH pmax pmax
comp=Z,4.0nm,0.6s
KSH pmax pmax
comp=Z,170nm,8.1s
KSH LR LR
comp=Z,130nm,8.0s
KSH LR LR
comp=Z,210nm,6.0s
KSH LR LR
comp=Z,140nm,10.7s
AML Almayashu 52.69 296 P P 12 21 56.7 +0.7
SNR=8.0
ARSB Arslanbob 53.55 295 P P 12 22 02.0 -0.1
ARSB Arslanbob 53.55 295 P P 12 22 02.0 -0.1
ARSB pmax pmax
comp=Z,15nm,0.8s
KK31 Karatay Array 54.27 298 IAmb IAmb 12 22 07.7
comp=Z,7.1nm,0.8s
KKAR Karatay Array 54.27 298 P P 12 22 06.6 -0.5
KKAR Karatay Array 54.27 298 P P 12 22 06.9 -0.2
KKAR IAmb IAmb 12 22 07.7
comp=Z,7.1nm,0.8s
KKAR Karatay Array 54.27 298 P P 12 22 06.9 -0.2
KKAR pmax pmax
comp=Z,7.0nm,0.8s
RES Resolute Bay 54.61 17 P P 12 22 08.7 -0.4
comp=Z,4.4nm,0.7s,baz=336,slow=9.5,SNR=24
RES Resolute Bay 54.61 17 IAmb IAmb 12 22 10.2
comp=Z,4.2nm,0.7s
ARU Arti 54.72 317 eP P 12 22 08.2 -1.9
ARU Arti 54.72 317 P P 12 22 09.8 -0.4
ARU IAmb IAmb 12 22 10.2
comp=Z,3.9nm,0.6s
ARU Arti 54.72 317 d iP P 12 22 09.7 -0.4
ARU 12 24 10.4
ARU S S 12 29 47.1 -0.3
ARU SS SS 12 33 30.7 +0.7
ARU pmax pmax
comp=Z,10.0nm,1.9s
YKA Yellowknife Ar 55.28 34 P P 12 22 15.3 +1.2
comp=Z,0.9nm,0.6s,baz=301,slow=7.2,SNR=12
YKA Yellowknife Ar 55.28 34 i P P 12 22 14.4 +0.3
YKA pmax pmax
comp=Z,1.0nm,0.6s
NIL Nilore 57.42 287 P P 12 22 30.1 +0.2
ABKAR Akbulak array 57.52 309 P P 12 22 30.0 -0.2
ABKAR Akbulak array 57.52 309 P P 12 22 30.1 -0.2
ABKAR IAmb IAmb 12 22 30.8
comp=Z,7.1nm,0.7s
KIRV Kirov 57.91 322 i P P 12 22 32.9 +0.1
ARCES ARCESS Array B 59.35 340 P P 12 22 41.2 -1.4
comp=Z,1.9nm,0.8s,baz=51,slow=7.4,SNR=8.6
KBL Kabul 59.80 290 P P 12 22 45.9 -0.7
KBL IAmb IAmb 12 22 46.5
comp=Z,8.4nm,1.1s
KBL Kabul 59.80 290 P P 12 22 45.9 -0.7
KBL pmax pmax
comp=Z,8.0nm,1.1s
SUMG Summit 63.73 2 i P P 12 23 12.9 +0.2
comp=Z,31nm,0.6s
SUMG Summit 63.73 2 P P 12 23 12.7 0.0
SUMG Summit 63.73 2 i P P 12 23 12.9 +0.2
SUMG pmax pmax
comp=Z,31nm,0.6s
WR0 Warramunga Arr 64.76 194 P P 12 23 19.3 -0.2

WR0 IAmb IAmb 12 23 20.0
comp=Z,4.1nm,1.0s
WRAB Tennant Creek 64.77 194 i P P 12 23 21.1 +1.5
WRAB pmax pmax
comp=Z,4.0nm,1.0s
WRA Warramunga Arr 64.78 194 P P 12 23 19.3 -0.4
comp=Z,0.4nm,0.5s,baz=11,slow=6.8,SNR=9.7
WRA Warramunga Arr 64.78 194 i P P 12 23 19.5 -0.1
GEYT Alibeck 64.98 299 P P 12 23 20.0 -1.0
comp=Z,1.5nm,0.4s,baz=33,slow=3.4,SNR=5.6
GEYT Alibeck 64.98 299 P P 12 23 20.8 -0.2
FIA1 FINESS Array S 65.06 333 P P 12 23 20.0 -0.9
FINES FINESS Array B 65.06 333 P P 12 23 19.4 -1.6
comp=Z,4.7nm,0.5s,baz=38,slow=8.0,SNR=48
FINES FINESS Array B 65.06 333 P P 12 23 19.9 -1.1
FINES FINESS Array B 65.06 333 i P P 12 23 20.0 -1.0
FINES pmax pmax
comp=Z,5.0nm,0.5s
KVN Kaiserville 66.63 58 P P 12 23 32.6 +0.9
KVN IAmb IAmb 12 23 46.9
comp=Z,5.5nm,1.1s
KVN Kaiserville 66.63 58 P P 12 23 32.7 +0.9
KVN pmax pmax
comp=Z,6.0nm,1.1s
NVAR Mina Array Bea 66.89 58 P P 12 23 34.9 +1.4
comp=Z,1.3nm,0.5s,baz=297,slow=7.4,SNR=12
NVAR Mina Array Bea 66.89 58 P P 12 23 34.8 +1.2
NV11 Mina Array Sit 66.98 58 P P 12 23 35.1 +1.1
ASAR Alice Springs 68.50 194 P P 12 23 44.1 +0.8
comp=Z,0.2nm,0.3s,baz=12,slow=6.6,SNR=7.2
R11A Troy Canyon, C 68.61 57 P P 12 23 45.0 +0.8
PDAR Pinedale Array 69.27 50 P P 12 23 49.1 +0.8
comp=Z,0.4nm,0.6s,baz=318,slow=2.0,SNR=5.1
PDAR Pinedale Array 69.27 50 P P 12 23 49.0 +0.7
NB2 NORSAR Subarra 69.71 339 P P 12 23 50.3 -0.2
comp=Z,1.3nm,0.5s,baz=29,slow=6.5
NOA NORSAR Array B 69.71 339 P P 12 23 50.2 -0.2
comp=Z,1.1nm,0.5s,baz=32,slow=6.6,SNR=19
NOA LR LR 12 57 52.1
comp=Z,41nm,18.1s,baz=255,slow=39
NORES NORESS Array B 69.89 339 P P 12 23 51.3 -0.2
KIV Kislovodsk 70.19 312 eP P 12 23 52.4 -1.4
KIV Kislovodsk 70.19 312 P P 12 23 54.3 +0.5
KIV Kislovodsk 70.19 312 eP P 12 23 52.4 -1.4
KIV pmax pmax
comp=Z,62nm,1.0s
KBZ Khabaz 70.22 312 P P 12 23 54.6 +0.7
comp=Z,10.0nm,0.8s,baz=68,slow=4.4,SNR=24
KBZ Khabaz 70.22 312 eP P 12 23 54.3 +0.4
KBZ Khabaz 70.22 312 c iP P 12 23 54.3 +0.4
KBZ pmax pmax
comp=Z,10.0nm,0.9s
ZEI Tsey 70.31 311 eP P 12 23 52.8 -1.9
ZEI pmax pmax
comp=Z,8.0nm,0.7s
SHA1 Shidzhatmaz 70.35 312 i P P 12 23 53.9 -1.1
NEY Neytrino 70.64 312 ceP P 12 23 57.0 +0.3
NEY pmax pmax
comp=Z,1.0nm,0.9s
GNI Garni 71.61 308 i P P 12 24 02.0 -0.6
GNI pmax pmax
comp=Z,18nm,1.0s
AKASG Malin Array Be 71.87 324 P P 12 24 03.2 -0.5
comp=Z,8.1nm,0.6s,baz=39,slow=6.2,SNR=33
AKASG Malin Array Be 71.87 324 P P 12 24 03.0 -0.7
AKASG Malin Array Be 71.87 324 i P P 12 24 03.2 -0.5
AKASG pmax pmax
comp=Z,6.0nm,0.5s
AKBB Malin Array Si 71.87 324 P P 12 24 03.3 -0.5
AKBB Malin Array Si 71.87 324 P P 12 24 03.3 -0.5
AKBB pmax pmax
comp=Z,10.0nm,0.8s
KMPD K-Podol'skiy 74.67 324 P P 12 24 19.0 -1.2
KWP Kalwaria Pacla 75.37 327 eP P 12 24 25.2 +0.9
KWP Kalwaria Pacla 75.37 327 eP P 12 24 25.2 +0.9
BUR08 Bucovina Ar. S 75.91 324 P P 12 24 27.8 +0.1
BUR08 IAmb IAmb 12 24 28.7
comp=Z,5.4nm,0.9s
BURAR Bucovina Array 75.93 324 ⇓P P 12 24 28.2 +0.5
BURAR Bucovina Array 75.93 324 P P 12 24 27.6 0.0
BURAR Bucovina Array 75.93 324 ⇓P P 12 24 28.2 +0.5
OJC Ojcow 76.02 329 eP P 12 24 28.5 +0.4
OJC Ojcow 76.02 329 P P 12 24 27.6 -0.4
OJC Ojcow 76.02 329 P P 12 24 27.6 -0.4
OJC pmax pmax
comp=Z,13nm,0.9s
KOLS Kolonicke sedl 76.10 327 eP P 12 24 28.9 +0.4
KOLS Kolonicke sedl 76.10 327 eP P 12 24 28.9 +0.4
TESR Tescani 76.17 323 ⇓P P 12 24 29.4 +0.4
TLCR 76.21 321 ⇓P P 12 24 29.4 +0.2
TLCR 76.21 321 ⇓P P 12 24 29.4 +0.2
CRVS Cervenica-Dubn 76.44 327 eP P 12 24 31.0 +0.5
CRVS pmax pmax
comp=Z,10.0nm,0.9s
CRVS Cervenica-Dubn 76.44 327 eP P 12 24 31.0 +0.5
NIE Niedzica 76.48 328 eP P 12 24 31.7 +1.0
NIE Niedzica 76.48 328 eP P 12 24 31.7 +1.0
TRPA Tarpa 76.63 326 ⇓P P 12 24 32.5 +1.0
TOPG Topolog 76.65 321 ⇓P P 12 24 31.5 -0.2
KSP Ksiaz 76.78 331 eP P 12 24 32.7 +0.4
KSP Ksiaz 76.78 331 eP P 12 24 32.7 +0.4
HARR Harsova 77.00 321 ⇓P P 12 24 34.0 +0.4
HARR Harsova 77.00 321 ⇓P P 12 24 34.0 +0.4
CHVC Chvalec 77.07 331 eP P 12 24 34.6 +0.6
DPC Dobruska-Polom 77.18 331 eP P 12 24 35.3 +0.7
DPC Dobruska-Polom 77.18 331 eP P 12 24 35.3 +0.7
MORC Moravsky Berou 77.22 330 ⇓P P 12 24 35.5 +0.7
MORC Moravsky Berou 77.22 330 P P 12 24 35.1 +0.3
MORC IAmb IAmb 12 24 36.3
comp=Z,7.7nm,0.8s
MORC Moravsky Berou 77.22 330 P P 12 24 35.1 +0.3
MORC pmax pmax
comp=Z,8.0nm,0.8s
SCHQ Schefferville 77.24 20 P P 12 24 35.1 +0.3
comp=Z,1.7nm,0.6s,baz=285,slow=8.1,SNR=6.4
SCHQ Schefferville 77.24 20 P P 12 24 35.2 +0.3
KRLC Kraliky 77.24 330 eP P 12 24 35.4 +0.4
KRLC Kraliky 77.24 330 eP P 12 24 35.4 +0.4
MLR Muntele Rosu 77.27 322 ⇑P P 12 24 36.8 +1.4
MLR Muntele Rosu 77.27 322 P P 12 24 35.7 +0.4
MLR IAmb IAmb 12 24 43.2
comp=Z,6.4nm,1.5s
MLR Muntele Rosu 77.27 322 P P 12 24 35.7 +0.4
MLR pmax pmax
comp=Z,6.0nm,1.5s
CLL Collm 77.50 333 ⇑i P P 12 24 35.9 -0.4
comp=Z,17nm,0.9s
CLL epP pP 12 24 48.0 -0.2
CLL ePP PP 12 27 30.0 -0.6
CLL Collm 77.50 333 P P 12 24 36.0 -0.4
CLL Collm 77.50 333 ⇑i P P 12 24 35.9 -0.4
CLL e*PP pP 12 24 48.0 -0.2
CLL pmax pmax
comp=Z,17nm,0.9s
BRG Berggiesshubel 77.56 332 eP P 12 24 37.2 +0.5
BRG pmax pmax
comp=Z,12nm,1.4s
DRGR 77.63 325 ⇓P P 12 24 37.5 +0.3
DRGR 77.63 325 ⇓P P 12 24 37.5 +0.3
VOIR 77.70 323 ⇓P P 12 24 38.7 +1.0
VOIR 77.70 323 ⇓P P 12 24 38.7 +1.0
BRTR Keskin Array B 77.95 314 P P 12 24 39.5 +0.3
comp=Z,0.9nm,0.6s,baz=63,slow=3.4,SNR=6.2
BRTR Keskin Array B 77.95 314 P P 12 24 39.1 -0.1
BRTR Keskin Array B 77.95 314 P P 12 24 39.1 -0.1
VRAC Vranov 77.95 330 ⇓P P 12 24 40.0 +1.1
VRAC Vranov 77.95 330 ⇓P P 12 24 40.0 +1.1
GOPC GO Pecny, Ondr 78.08 331 eP P 12 24 40.3 +0.7
GOPC GO Pecny, Ondr 78.08 331 eP P 12 24 40.3 +0.7
PRU Pruhonice 78.11 331 eP P 12 24 40.2 +0.5
PRU Pruhonice 78.11 331 eP P 12 24 40.2 +0.5
KRUC Moravsky 78.23 330 P P 12 24 41.1 +0.7
KRUC pmax pmax
comp=Z,7.0nm,0.9s
KHC Kasperske Hory 79.17 332 eP P 12 24 46.0 +0.3
KHC ePCP PcP 12 24 53.5 -0.4
KHC Kasperske Hory 79.17 332 P P 12 24 46.0 +0.3
KHC IAmb IAmb 12 24 46.9
comp=Z,3.1nm,0.6s
KHC Kasperske Hory 79.17 332 eP P 12 24 46.0 +0.3
KHC e 12 24 53.5
GERES GERESS Array B 79.37 331 P P 12 24 46.9 +0.1
comp=Z,1.4nm,0.5s,baz=39,slow=6.2,SNR=14

GERES	GERESS Array B	79.37	331	P	P	12 24 46.6	-0.2
GERES	GERESS Array B	79.37	331	P	P	12 24 46.6	-0.2
CONA	Conrad Observa	79.37	330	i P	P	12 24 47.7	+0.9
	comp=Z,2.1nm,0.6s						
MOA	Molln	80.01	330	i P	P	12 24 50.3	+0.1
	comp=Z,1.5nm,0.6s						
SOKA	Soboth	80.73	329	i P	P	12 24 54.1	-0.1
	comp=Z,3.0nm,0.7s						
KBA	Koelnbreinsper	81.00	331	i P	P	12 24 56.3	+0.6
	comp=Z,2.3nm,0.5s						
WATA	Walderalm	81.39	332	i P	P	12 24 58.1	+0.3
	comp=Z,1.7nm,0.3s						
WTTA	Wattenberg	81.44	332	i P	P	12 24 58.3	+0.2
	comp=Z,2.3nm,0.3s						
MOTA	Moosalm	81.55	332	i P	P	12 24 58.8	+0.2
	comp=Z,1.6nm,0.4s						
TX32	Lajitas Array	81.97	57	P	P	12 25 01.4	+0.4
TX32				IAmb	IAmb	12 25 16.6	
	comp=Z,7.8nm,1.4s						
TXAR	Lajitas Array	81.97	57	P	P	12 25 02.2	+1.1
	comp=Z,0.7nm,0.5s,baz=296,slow=3.9,SNR=15						
TXAR	Lajitas Array	81.97	57	P	P	12 25 01.7	+0.6
TXAR	Lajitas Array	81.97	57	P	P	12 25 01.7	+0.6
KARP	Karpathos	84.45	315	P	P	12 25 13.6	-0.1

ATH 08 12:41:40.6,38.38N×20.49E,h14km±1km,ML3.2/19,Error ellipse: s-maj=1.5km s-min=0.6km az=273.0
BEO 08 12:41:41.8±1.0,38.29N×20.41E,h34km±4km,ML3.6/5
THE 08 12:41:41.1,38.38N×20.48E,h8km±1km,ML3.2/19,Error ellipse: s-maj=1.1km s-min=0.3km az=277.0
ISC 08 12:41:40.6±0.8,38.39N±0.01×20.46E±0.02,h10km±4km, n73,σ1.16/113,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	VASILIKIADES	0.08	74	P	Pg	12 41 42.9	0.0
VSK1				S	Sg	12 41 44.6	0.0
	22µm,0.1s						
KONA	Konidatara, Ke	0.09	65	P	Pg	12 41 43.1	0.0
KONA				S	Sg	12 41 44.9	+0.2
FSK	Fiskardo	0.11	47	P	Pg	12 41 43.4	+0.2
FSK				S	Sg	12 41 45.6	+0.5
	17µm,0.1s						
FSK	Fiskardo	0.11	47	P	Pg	12 41 43.3	+0.2
FSK				S	Sg	12 41 45.4	+0.3
FSK				AML	AML	12 41 45.8	
	comp=E,41129µm,0.2s						
FSK				AML	AML	12 41 46.1	
	comp=N,30047µm,0.4s						
KEF1	Kardakata, Kep	0.11	177	P	Pg	12 41 43.4	+0.2
KEF1				S	Sg	12 41 45.2	+0.1
KEF4	Livadi, Kephal	0.13	194	P	Pg	12 41 43.8	+0.2
KEF4				S	Sg	12 41 46.7	+1.0
LXR1	Lixouri, Cepha	0.19	186	P	Pg	12 41 44.9	+0.4
LXR1				S	Sg	12 41 48.3	+1.2
KEF3	Kipouria, Keph	0.20	206	P	Pg	12 41 45.1	+0.3
KEF3				S	Sg	12 41 48.8	+1.1
ARG2	Argostoli	0.21	175	P	Pg	12 41 45.1	+0.2
ARG2				S	Sg	12 41 48.5	+0.7
ARGA	Argostoli. Kep	0.21	177	P	Pg	12 41 45.1	+0.2
ARGA				S	Sg	12 41 48.5	+0.7
CHV1	Chavriata, Kef	0.21	198	P	Pg	12 41 45.2	+0.3
CHV1				S	Sg	12 41 49.0	+1.1
KEF2	Argostoli. Kep	0.22	175	P	Pg	12 41 45.3	+0.2
KEF2				S	Sg	12 41 48.8	+0.6
VLS	Valsamata	0.23	155	P	Pg	12 41 45.3	0.0
VLS				S	Sg	12 41 48.5	0.0
	comp=N,7µm,0.3s						
VLS	Valsamata	0.23	155	P	Pg	12 41 45.4	0.0
VLS				S	Sg	12 41 49.1	+0.6
VLS				AML	AML	12 41 49.2	
	comp=E,16022µm,0.3s						
VLS				AML	AML	12 41 51.3	
	comp=N,15230µm,0.4s						
EVGI	Lefkada island	0.28	33	P	Pg	12 41 46.7	+0.5
EVGI				S	Sg	12 41 51.5	+1.5
EVGI	Lefkada island	0.28	33	P	Pg	12 41 46.6	+0.5
EVGI				S	Sg	12 41 51.2	+1.2
MGNA	Meganis	0.37	44	P	Pg	12 41 47.7	-0.2
MGNA				AML	AML	12 41 54.7	
	comp=N,19606µm,0.4s						
MGNA				AML	AML	12 41 54.9	
	comp=E,18556µm,0.4s						
LKD2	Lefkada island	0.43	21	P	Pg	12 41 49.2	+0.2
LKD2				S	Sg	12 41 55.9	+1.2
	comp=E,2µm,0.5s						
LKD2	Lefkada island	0.43	21	P	Pg	12 41 48.7	-0.3
LKD2				S	Sg	12 41 56.0	+1.3
TSLK	Tsoukalades, L	0.46	19	P	Pg	12 41 50.0	+0.4
TSLK				S	Sb	12 41 57.6	-0.2
	comp=E,4µm,0.5s						
TSLK	Tsoukalades, L	0.46	19	P	Pg	12 41 49.8	+0.2
TSLK				S	Sg	12 41 56.6	+0.9
AST1	Astakos	0.52	72	P	Pg	12 41 50.0	-0.6
AST1				S	Sb	12 41 59.3	+0.1
	comp=E,4µm,0.4s						
VLMS	Volimes, Zakyn	0.53	163	P	Pg	12 41 50.7	-0.2
VLMS				S	Sg	12 41 58.5	+0.6
PDO	Prodromos	0.60	69	P	Pg	12 41 52.2	-0.1
PDO	Prodromos	0.60	69	P	Pg	12 41 52.1	-0.1
PDO				AML	AML	12 42 10.3	
	comp=E,4545µm,0.7s						
PDO				AML	AML	12 42 13.4	
	comp=N,3847µm,0.6s						
ZAK2	Zakynthos	0.69	150	P	Pg	12 41 54.3	+0.4
ZAK2				S	Sb	12 42 04.5	+0.2
KRI1	kERI	0.78	159	P	Pg	12 41 54.8	-0.7
KRI1				S	Sg	12 42 06.1	+0.5
	comp=N,4µm,0.3s						
RLS	Riolos of Patr	0.85	112	P	Pg	12 41 56.8	-0.2
RLS	Riolos of Patr	0.85	112	P	Pg	12 41 56.5	-0.5
RLS				AML	AML	12 42 13.8	
	comp=N,1872µm,0.6s						
RLS				AML	AML	12 42 18.8	
	comp=E,1388µm,0.5s						
PVO	Paravola	0.86	74	P	Pg	12 41 57.4	+0.2
PVO				S	Sg	12 42 09.0	+0.5
	comp=E,2µm,0.5s						
PVO	Paravola	0.86	74	P	Pg	12 41 57.4	+0.2
PVO				AML	AML	12 42 17.6	
	comp=N,3415µm,0.4s						
PVO				AML	AML	12 42 18.3	
	comp=E,2932µm,0.6s						
DRO	Drossia	1.07	113	P	Pb	12 42 00.6	-0.7
DRO				S	Sn	12 42 18.0	+1.3
	comp=E,3µm,0.5s						
DRO	Drossia	1.07	113	P	Pb	12 42 00.4	-0.9
DRO				AML	AML	12 42 23.2	
	comp=N,6073µm,0.4s						
DRO				AML	AML	12 42 23.7	
	comp=E,5781µm,0.5s						
IGT	Igoumenitsa	1.15	355	P	Pb	12 42 02.3	-0.3
IGT				S	Sb	12 42 18.2	+0.6
	comp=E,1µm,0.4s						
IGT	Igoumenitsa	1.15	355	ePg	Pg	12 42 06.2	+3.6
IGT				eSg	Sn	12 42 20.6	+2.0
IGT	Igoumenitsa	1.15	355	P	Pb	12 42 02.0	-0.6
IGT				S	Sn	12 42 19.3	+0.7
IGT				AML	AML	12 42 22.7	
	comp=E,2520µm,0.5s						
IGT				AML	AML	12 42 23.7	
	comp=N,1531µm,0.3s						
ANX	Ano Chora	1.16	79	P	Pb	12 42 02.1	-0.7
ANX				S	Sn	12 42 19.6	+0.6
	comp=N,2µm,0.5s						
ANX	Ano Chora	1.16	79	P	Pb	12 42 02.1	-0.7
ANX				AML	AML	12 42 25.8	
	comp=N,3963µm,0.5s						
ANX				AML	AML	12 42 26.8	
	comp=E,3602µm,0.6s						
EVR	Evrytania	1.18	63	P	Pn	12 42 02.2	-1.1
EVR				S	Sn	12 42 22.6	+3.2
	comp=E,865nm,0.8s						
EVR	Evrytania	1.18	63	P	Pn	12 42 02.3	-0.9
EVR				AML	AML	12 42 29.0	
	comp=E,1499µm,0.7s						
EVR				AML	AML	12 42 29.9	
	comp=N,1930µm,0.9s						
LAKA	Lakka	1.20	97	P	Pn	12 42 02.5	-1.0
LAKA				AML	AML	12 42 29.5	
	comp=N,827µm,0.6s						
LAKA				AML	AML	12 42 35.9	
	comp=E,911µm,0.6s						
SERG	Sergoula	1.25	88	P	Pn	12 42 03.2	-1.0
SERG				S	Sg	12 42 22.8	+2.0
	comp=E,1µm,0.6s						
SERG	Sergoula	1.25	88	P	Pn	12 42 03.4	-0.8
SERG				AML	AML	12 42 28.4	
	comp=N,2198µm,0.5s						
SERG				AML	AML	12 42 30.6	
	comp=E,1854µm,0.8s						
TRIZ	Trizonia	1.27	90	P	Pn	12 42 03.5	-0.8
TRIZ				S	Sg	12 42 24.0	+2.8
	comp=E,835nm,0.7s						
TRIZ	Trizonia	1.27	90	P	Pn	12 42 03.5	-0.8
AMT	Artemida-Makis	1.30	131	P	Pg	12 42 05.8	+0.2
AMT				S	Sg	12 42 24.1	+1.6
	comp=E,1µm,0.8s						
AMT	Artemida-Makis	1.30	131	P	Pb	12 42 05.5	+0.3
AMT				AML	AML	12 42 36.1	
	comp=E,2093µm,0.5s						
AMT				AML	AML	12 42 36.6	
	comp=N,2652µm,0.7s						
JAN	Janina	1.30	13	P	Pg	12 42 06.3	+0.7
JAN				S	Sg	12 42 25.2	+2.7
	comp=N,922nm,0.6s						
KALE	Kalithea	1.32	89	P	Pn	12 42 04.3	-0.8
KALE				S	Sg	12 42 23.4	+0.5
	comp=N,695nm,0.8s						
KALE	Kalithea	1.32	89	P	Pn	12 42 04.4	-0.8
KALE				AML	AML	12 42 30.8	
	comp=N,1767µm,0.7s						
KALE				AML	AML	12 42 32.4	
	comp=E,1010µm,0.9s						
KLV	Kalavryta, Ach	1.37	104	P	Pn	12 42 05.3	-0.5
KLV				S	Sg	12 42 26.3	+1.6
	comp=E,355nm,0.7s						
KLV	Kalavryta, Ach	1.37	104	P	Pn	12 42 05.4	-0.5
KLV				AML	AML	12 42 39.2	
	comp=N,840µm,0.6s						
KLV				AML	AML	12 42 43.0	
	comp=E,624µm,0.7s						
KEK	Kerkira	1.42	339	P	Pb	12 42 07.8	+0.6
KEK	Kerkira	1.42	339	P	Pb	12 42 07.8	+0.6
KEK				AML	AML	12 42 35.6	
	comp=E,1066µm,0.4s						
KEK				AML	AML	12 42 40.6	
	comp=N,1008µm,0.6s						
AGG	Agios Georgios	1.59	66	P	Pb	12 42 10.2	+0.1
AGG				S	Sg	12 42 33.1	+1.3
	comp=N,472nm,0.8s						
AGG	Agios Georgios	1.59	66	P	Pb	12 42 09.9	-0.2
AGG				AML	AML	12 42 45.0	
	comp=N,798µm,0.9s						
AGG				AML	AML	12 42 48.3	
	comp=E,1008µm,0.7s						
THL	Klokotos Trika	1.69	45	P	Pb	12 42 12.0	+0.3
THL				AML	AML	12 42 44.4	
	comp=E,1287µm,0.9s						
THL				AML	AML	12 42 44.8	
	comp=N,1213µm,0.7s						
PYL	PYLOS	1.80	145	P	Pn	12 42 12.5	+0.8
PYL				AML	AML	12 42 55.1	
	comp=N,477µm,0.7s						
PYL				AML	AML	12 42 57.3	
	comp=E,483µm,0.7s						
LTK	Loutraki	2.00	100	P	Pb	12 42 16.3	-0.8
DID	Didima	2.36	111	P	Pn	12 42 20.8	+1.4
VLY	Voula,Athens	2.68	100	P	Pn	12 42 25.5	+1.7
OHR	Ohrid	2.73	5	i Pn	Pb	12 42 29.9	+0.3
TIR	Tirane	2.99	351	ePg	Pg	12 42 37.0	-0.9
SRS	Serrai	3.64	40	ePg	Pg	12 42 48.5	-1.8
PDG	Podgorica	4.14	348	eSn	Sn	12 43 30.9	-1.5
TREB	Trebinje	4.62	340	ePn	Pn	12 42 49.6	-0.8
TREB				eSn	Sn	12 43 40.7	-3.4
SELS	Selova	4.85	6	eSn	Sn	12 43 47.9	-2.1
STON	Ston	4.95	336	eSn	Sn	12 43 49.3	-2.9
IVAS	Ivanjica	5.19	357	ePn	Pn	12 42 58.1	-0.3
IVAS				eSn	Sn	12 43 56.7	-1.6
BOVS	Bovan	5.33	10	ePn	Pn	12 42 59.9	-0.3
ZAGS	Zajecar	5.58	13	ePn	Pn	12 43 03.2	-0.5
DIVS	Divibare	5.72	357	eSn	Sn	12 44 08.2	-3.1
TRUS	Trudelj	5.83	360	eSn	Sn	12 44 10.8	-3.2

MAN 08 12:42:24.7,6.55N×126.61E,h20km,mb4.5,ML3.4,MS3.2, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	0.53	318	eP	Pb	12 42 35.9	+0.6
MATI				eS	Sn	12 42 46.2	+0.8
DDMP	Don Marcelino,	1.00	244	eP	Pb	12 42 43.1	-0.2
DDMP				eS	Sn	12 42 58.0	+0.8
DMPH	Davao City--Mi	1.22	296	⇑eP	Pb	12 42 48.0	+0.9
DMPH				eS	Sn	12 43 06.8	+4.4
BUKP	Musuan	2.02	311	eP	Pn	12 42 58.0	+0.3
BUKP				eS	Sb	12 43 24.3	-1.3
SKMP	Bagumbayan, Su	2.06	269	eP	Pn	12 42 57.6	-0.6
SKMP				eS	Sn	12 43 23.8	+0.5

ROM 08 13:29:58.4±0.1,43.431N±0.003×12.500E±0.004, h8km,ML1.4/9,3C-2D,Error ellipse: s-maj=0.3km s-min=0.0km az=342.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATPI	Pietralunga -	0.07	285	⇑P	Pg	13 30 00.7	+0.2
ATPI				S	Sg	13 30 02.2	+0.3
ATPI				AML	AML		
	comp=E,366µm,0.5s						
ATPI				AML	AML		
	comp=N,278µm,1.0s						
ATPI				AML	AML		
	comp=N,278µm,1.0s						
ATPI				AML	AML		
	comp=E,367µm,0.5s						
ATFO	Monte Foce - G	0.08	141	P	Pg	13 30 00.9	+0.2
ATFO				S	Sg	13 30 02.5	+0.3
ATFO				AML	AML		
	comp=E,248µm,0.7s						
ATFO				AML	AML		
	comp=E,248µm,0.7s						
ATFO				AML	AML		
	comp=N,228µm,0.2s						
ATVO	AVT- Monte Val	0.08	234	⇑P	Pg	13 30 00.9	+0.3
ATVO				S	Sg	13 30 02.6	+0.5
ATVO				AML	AML		
	comp=E,568µm,0.2s						
ATVO				AML	AML		
	comp=N,467µm,0.1s						
ATVO				AML	AML		
	comp=E,568µm,0.2s						
ATVO				AML	AML		
	comp=N,468µm,0.1s						
PIEI	Pieia	0.11	14	⇑P	Pg	13 30 01.5	+0.5
PIEI				S	Sg	13 30 03.6	+0.8
PIEI				AML	AML		
	comp=E,584µm,0.3s						
PIEI				AML	AML		
	comp=E,584µm,0.3s						
PIEI				AML	AML		
	comp=N,380µm,0.4s						
MURB	Monte Urbino	0.17	174	P	Pg	13 30 02.6	+0.7
MURB				S	Sg	13 30 06.1	+1.7
MURB				AML	AML		
	comp=E,298µm,0.7s						
MURB				AML	AML		
	comp=N,356µm,0.2s						
MURB				AML	AML		
	comp=E,298µm,0.7s						
MURB				AML	AML		
	comp=N,355µm,0.2s						
FRON	Frontone	0.19	62	P	Pg	13 30 02.8	+0.5
FRON				S	Sg	13 30 06.2	+1.3
FRON				AML	AML		
	comp=E,82µm,1.5s						
FRON				AML	AML		
	comp=N,282µm,1.6s						
NARO	Abbazia di Nar	0.19	18	⇓P	Pg	13 30 02.8	+0.5
NARO				S	Sg	13 30 06.0	+1.0
NARO				AML	AML		
	comp=E,132µm,1.1s						
NARO				AML	AML		
	comp=N,92µm,0.2s						
ATMI	Monte Miggiano	0.20	240	⇓P	Pg	13 30 03.0	+0.6
BADI	Badiali	0.20	293	P	Pg	13 30 03.1	+0.6
BADI				S	Sg	13 30 06.7	+1.4
BADI				AML	AML		
	comp=E,173µm,1.5s						
BADI				AML	AML		
	comp=N,187µm,0.3s						
BADI				AML	AML		
	comp=E,174µm,1.5s						
BADI				AML	AML		
	comp=N,186µm,0.3s						
SSFR	Montelago di S	0.21	89	P	Pg	13 30 03.2	+0.6
SSFR				S	Sg	13 30 06.9	+1.4
SSFR				AML	AML		
	comp=E,210µm,0.2s						
SSFR				AML	AML		
	comp=N,202µm,0.2s						
ATTE	AVT- Monte Tez	0.26	205	P	Pg	13 30 04.2	+0.6
PARC	Parchiule	0.29	319	P	Pg	13 30 04.9	+0.7
PARC				S	Sb	13 30 10.3	-0.6

IDC 08 13:30:16.1±1.2,38.45N×20.48E,h0km,mb3.7/7, mb1 3.8/9,mb1mx3.5/36,mbtmp3.7/9,ML3.7/1,Error ellipse: s-maj=27.6km s-min=18.5km az=61.0
PDG 08 13:30:16.7±0.3,38.26N×20.33E,h17km,ML3.9/13,Error ellipse: s-maj=0.6km s-min=0.7km az=0.0
THE 08 13:30:17.6,38.29N×20.38E,h10km±1km,ML3.6/17,Error ellipse: s-maj=1.1km s-min=0.3km az=233.0
ATH 08 13:30:17.5,38.27N×20.39E,h12km,ML3.5/19,Error ellipse: s-maj=1.2km s-min=0.7km az=267.0
BEO 08 13:30:18.9±0.7,38.22N×20.11E,h26km±4km,ML3.7/14
ISC 08 13:30:17.3±0.7,38.28N±0.02×20.38E±0.02,h11km±4km, n137,σ1.39/194,mb3.8/7,13C-5D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.04	124	P	Pg	13 30 19.5	+0.1
KEF4				S	Sg	13 30 20.8	-0.1
KEF1	Kardakata, Kep	0.07	92	P	Pg	13 30 19.7	0.0
KEF1				S	Sg	13 30 21.1	-0.3
KEF3	Kipouria, Keph	0.08	199	P	Pg	13 30 20.1	+0.2
KEF3				S	Sg	13 30 22.0	+0.4
LXR1	Lixouri, Cepha	0.09	151	P	Pg	13 30 20.3	+0.4
LXR1				S	Sg	13 30 22.2	+0.4
CHV1	Chavriata, Kef	0.10	180	P	Pg	13 30 20.2	+0.2
CHV1				S	Sg	13 30 22.3	+0.4
ARGA	Argostoli. Kep	0.13	144	P	Pg	13 30 20.6	+0.2
ARGA				S	Sg	13 30 22.6	-0.1
ARG2	Argostoli	0.13	141	P	Pg	13 30 20.6	+0.1
ARG2				S	Sg	13 30 22.8	+0.1
KEF2	Argostoli. Kep	0.14	144	P	Pg	13 30 20.8	+0.1
KEF2				S	Sg	13 30 22.8	-0.3
VSK1	VASILIKIADES	0.19	48	P	Pg	13 30 21.9	+0.4
VSK1				S	Sg	13 30 24.9	+0.5
	107µm,0.3s						
VLS	Valsamata	0.19	122	P	Pg	13 30 21.4	-0.1
VLS				S	Sg	13 30 24.5	+0.1
	18µm,0.1s						
VLS	Valsamata	0.19	122	P	Pg	13 30 21.4	-0.1
VLS				S	Sg	13 30 24.1	-0.3
VLS				AML	AML	13 30 24.7	
	comp=N,50291µm,0.2s						
VLS				AML	AML	13 30 26.8	
	comp=E,18489µm,0.1s						
KONA	Konidatara, Ke	0.21	46	P	Pg	13 30 22.2	+0.4
KONA				S	Sg	13 30 25.1	+0.3
FSK	Fiskardo	0.23	38	P	Pg	13 30 22.5	+0.4
FSK				S	Sg	13 30 26.5	+1.1
FSK				AML	AML	13 30 26.8	
	comp=N,85819µm,0.3s						
FSK				AML	AML	13 30 27.1	
EVGI	Lefkada island	0.40	32	P	Pg	13 30 25.6	+0.3
EVGI				S	Sg	13 30 31.4	+0.7
EVGI	Lefkada island	0.40	32	P	Pg	13 30 25.7	+0.3
EVGI				S	Sb	13 30 31.7	-0.8
VLMS	Volimes, Zakyn	0.46	151	P	Pg	13 30 26.3	0.0
VLMS				S	Sg	13 30 33.2	+0.8
MGNA	Meganis	0.49	40	P	Pg	13 30 27.0	+0.1
MGNA				AML	AML	13 30 35.6	
	comp=N,11674µm,0.2s						
MGNA				AML	AML	13 30 38.0	
	comp=E,17079µm,0.5s						
LKD2	Lefkada island	0.55	23	P	Pg	13 30 28.0	-0.1
LKD2				S	Sg	13 30 36.1	+0.7
	comp=E,4µm,0.4s						
LKD2	Lefkada island	0.55	23	P	Pg	13 30 28.1	0.0
TSLK	Tsoukalades, L	0.58	21	P	Pg	13 30 28.7	0.0
TSLK				S	Sg	13 30 36.9	+0.5
	comp=E,7µm,0.6s						
TSLK	Tsoukalades, L	0.58	21	P	Pg	13 30 28.8	+0.1
TSLK				S	Sb	13 30 37.6	-0.2
AST1	Astakos	0.61	65	P	Pg	13 30 29.2	0.0
AST1				S	Sb	13 30 38.3	-0.3
	comp=E,14µm,0.4s						
ZAK2	Zakynthos	0.64	140	P	Pg	13 30 30.0	+0.3
ZAK2				S	Sb	13 30 40.8	+1.5
	comp=E,20µm,0.5s						
PDO	Prodromos	0.70	63	P	Pg	13 30 30.9	-0.1
PDO				S	Sb	13 30 40.7	-0.6
	comp=E,15µm,0.5s						
PDO	Prodromos	0.70	63	P	Pg	13 30 30.8	-0.2
PDO				S	Sb	13 30 41.1	-0.2
PDO				AML	AML	13 30 46.2	
	comp=E,20300µm,0.5s						
PDO				AML	AML	13 30 46.2	
	comp=N,19718µm,0.4s						
KRI1	kERI	0.71	151	P	Pg	13 30 30.3	-0.7
KRI1				S	Sb	13 30 41.6	+0.3
	comp=N,6µm,0.5s						
RLS	Riolos of Patr	0.88	104	P	Pg	13 30 33.7	-0.6
RLS	Riolos of Patr	0.88	104	P	Pg	13 30 34.0	-0.4
RLS				AML	AML	13 30 55.6	
	comp=E,3190µm,0.7s						
RLS				AML	AML	13 31 05.9	
	comp=N,2126µm,0.6s						
PVO	Paravola	0.96	69	P	Pb	13 30 35.8	-0.1
PVO				S	Sn	13 30 50.3	0.0
	comp=N,4µm,0.5s						
PVO	Paravola	0.96	69	P	Pb	13 30 35.8	-0.1
PVO				AML	AML	13 30 52.4	
	comp=E,8382µm,0.4s						
PVO				AML	AML	13 30 54.5	
	comp=N,5840µm,0.6s						
DRO	Drossia	1.10	107	P	Pb	13 30 37.8	-0.5
DRO	Drossia	1.10	107	P	Pb	13 30 38.0	-0.3
ANX	Ano Chora	1.25	75	P	Pn	13 30 40.4	-0.3
ANX				S	Sn	13 30 57.7	+0.1
	comp=N,3µm,1.0s						
ANX	Ano Chora	1.25	75	P	Pn	13 30 40.4	-0.3
ANX				AML	AML	13 31 06.6	
	comp=E,7800µm,0.9s						
ANX				AML	AML	13 31 06.8	
	comp=N,5659µm,0.7s						
IGT	Igoumenitsa	1.25	358	P	Pg	13 30 41.2	-0.2
IGT				S	Sg	13 30 58.9	+1.3
	comp=N,1µm,0.5s						
IGT	Igoumenitsa	1.25	358	ePg	Pg	13 30 43.4	+2.0
IGT				eSg	Sg	13 31 00.5	+2.9
IGT	Igoumenitsa	1.25	358	P	Pg	13 30 41.1	-0.2
LAKA	Lakka	1.26	91	P	Pn	13 30 40.3	-0.5
LAKA				S	Sn	13 30 59.3	+1.6
	comp=N,1µm,0.9s						
LAKA	Lakka	1.26	91	P	Pn	13 30 40.2	-0.5
LAKA				AML	AML	13 31 04.8	
	comp=E,2806µm,1.0s						
LAKA				AML	AML	13 31 06.7	
	comp=N,2342µm,0.8s						
EVR	Evrytania	1.29	60	P	Pn	13 30 41.0	-0.2
EVR	Evrytania	1.29	60	P	Pn	13 30 40.9	-0.4
EVR				AML	AML	13 31 07.1	
	comp=E,2031µm,0.6s						
EVR				AML	AML	13 31 11.6	
	comp=N,2380µm,0.8s						
AMT	Artemida-Makis	1.29	125	P	Pg	13 30 42.2	+0.2
AMT				S	Sg	13 31 00.1	+1.3
	comp=N,1µm,0.7s						
AMT	Artemida-Makis	1.29	125	P	Pg	13 30 42.0	0.0
SERG	Sergoula	1.32	84	P	Pn	13 30 41.6	-0.1
TRIZ	Trizonia	1.33	86	P	Pn	13 30 41.7	0.0
TRIZ				S	Sg	13 30 59.7	-0.5
	comp=N,2µm,0.5s						
TRIZ	Trizonia	1.33	86	P	Pn	13 30 41.7	0.0
ALIK	Aliki, Aigiali	1.36	90	P	Pb	13 30 42.7	0.0
KALE	Kalithea	1.39	85	P	Pb	13 30 42.9	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KALE	Kalithea	1.39	85	P	Pn	13 30 42.7	+0.1
KALE				AML	AML	13 31 09.2	
	comp=N,2405μm,0.5s						
KALE				AML	AML	13 31 11.2	
	comp=E,2143μm,0.7s						
KLV	Kalavryta, Ach	1.41	99	P	Pn	13 30 43.3	+0.3
KLV				S	Sg	13 31 03.0	+0.2
	comp=E,795nm,1.0s						
KLV	Kalavryta, Ach	1.41	99	P	Pn	13 30 43.0	+0.1
KLV				AML	AML	13 31 10.4	
	comp=N,1467μm,0.9s						
KLV				AML	AML	13 31 11.0	
	comp=E,1781μm,1.2s						
JAN	Janina	1.42	15	P	Pb	13 30 44.1	+0.3
JAN				S	Sb	13 31 02.5	+0.5
	comp=E,1μm,0.4s						
JAN	Janina	1.42	15	P	Pg	13 30 45.1	+0.5
KEK	Kerkira	1.50	343	P	Pb	13 30 45.2	+0.1
KEK				AML	AML	13 31 13.8	
	comp=E,1883μm,0.5s						
KEK				AML	AML	13 31 15.2	
	comp=N,1719μm,0.4s						
MAKR	Makrakomi, Fth	1.55	61	P	Pg	13 30 47.4	+0.3
MAKR				AML	AML	13 31 13.4	
	comp=N,3322μm,0.7s						
MAKR				AML	AML	13 31 18.6	
	comp=E,4673μm,0.6s						
MEV	Metsovon	1.64	23	P	Pg	13 30 48.9	+0.1
ITM	Ithomi	1.65	131	P	Pg	13 30 48.2	-0.6
PYL	PYLOS	1.75	142	P	Pb	13 30 49.2	-0.2
THL	Klokotos Trika	1.81	44	P	Pb	13 30 50.3	-0.1
THL				S	Sb	13 31 13.3	+0.3
	comp=E,1μm,0.9s						
THL	Klokotos Trika	1.81	44	P	Pb	13 30 50.5	+0.2
THL				AML	AML	13 31 26.1	
	comp=N,2410μm,0.7s						
THL				AML	AML	13 31 26.6	
	comp=E,2302μm,1.1s						
KPRO	Kipourio	1.84	24	P	Pb	13 30 51.7	+0.8
AXAR	Agios Charalam	1.85	74	P	Pg	13 30 52.1	-0.7
AXAR				AML	AML	13 31 29.2	
	comp=N,4870μm,0.7s						
AXAR				AML	AML	13 31 31.0	
	comp=E,4263μm,1.1s						
PROD	Prodromos	1.98	90	P	Pb	13 30 52.4	-0.9
PROD				AML	AML	13 31 27.6	
	comp=N,999μm,0.9s						
PROD				AML	AML	13 31 34.4	
	comp=E,1422μm,0.7s						
LTK	Loutraki	2.05	96	P	Pb	13 30 53.8	-0.8
LOUT	Loutraki	2.06	97	P	Pb	13 30 53.7	-1.0
LOUT				AML	AML	13 31 28.9	
	comp=E,190μm,0.8s						
LOUT				AML	AML	13 31 37.9	
	comp=N,160μm,0.6s						
LKR	Lokris	2.09	79	P	Pb	13 30 54.2	-0.9
LKR	Lokris	2.09	79	P	Pb	13 30 54.3	-0.9
NEST	Nestorio	2.19	13	P	Pb	13 30 57.0	0.0
VIL2	Platees	2.27	91	P	Pb	13 30 57.3	-1.0
VIL2				AML	AML	13 31 43.4	
	comp=E,1162μm,1.2s						
VIL2				AML	AML	13 31 46.2	
	comp=N,895μm,1.0s						
DID	Didima	2.39	108	P	Pn	13 30 58.2	+1.9
XOR	Xorichti	2.45	63	P	Pn	13 30 59.1	+2.0
MRKA	Markates	2.55	79	P	Pn	13 31 00.7	+2.1
MRKA				AML	AML	13 31 42.9	
	comp=N,440μm,1.2s						
MRKA				AML	AML	13 31 47.3	
	comp=E,330μm,0.7s						
VLY	Voula,Athens	2.73	98	P	Pb	13 31 04.2	-1.8
OHR	Ohrid	2.85	6	iPn	Pn	13 31 05.2	+2.5
KTHA	Kythira Island	2.94	133	P	Pn	13 31 06.5	+2.6
TIR	Tirane	3.09	353	ePn	Pn	13 31 07.3	+1.4
TIR				eSn	Sn	13 31 43.2	+0.4
VAY	Valandovo	3.47	28	iPn	Pb	13 31 15.1	-3.6
MATE	Matera	3.70	311	⇑P	Sn	13 31 55.4	-2.5
SRS	Serrai	3.76	40	ePn	Pn	13 31 17.5	+2.3
SKO	Skopje	3.78	12	iPn	Pg	13 31 28.9	-0.7
ULC	Ulcinj	3.78	347	ePn	Pn	13 31 15.6	+0.1
ULC				eSn	Sn	13 32 00.5	+0.6
DRME	Dracevica, Mon	4.01	347	ePn	Pn	13 31 18.7	+0.1
DRME				eSn	Sn	13 32 05.9	+0.4
BUM	Brajici-Budva	4.17	345	⇓Pn	Pn	13 31 20.8	-0.1
BUM				eSn	Sn	13 32 09.5	-0.2
PDG	Podgorica	4.23	349	ePn	Pn	13 31 22.0	+0.3
PDG				eSn	Sn	13 32 09.2	-1.8
PDG	Podgorica	4.23	349	⇑P	Pg	13 31 49.5	+11
TTG	Podgorica	4.23	349	ePn	Pn	13 31 22.5	+0.8
TTG				eSn	Sn	13 32 11.1	+0.1
PVY	Plav	4.32	356	ePn	Pn	13 31 23.6	+0.6
PVY				eSn	Sn	13 32 13.8	+0.4
HCY	Herceg Novi	4.41	341	ePn	Pn	13 31 24.2	+0.2
HCY				eSn	Sn	13 32 14.8	-0.5
CEME	Cevo	4.41	346	ePn	Pn	13 31 23.9	-0.2
CEME				eSn	Sn	13 32 14.3	-1.1
BOSS	Bosilegrad	4.50	20	ePn	Pn	13 31 27.3	+1.9
IVA	Berane	4.60	356	ePn	Pn	13 31 27.0	+0.2
IVA				eSn	Sn	13 32 20.9	+0.6
NKME	Niksic	4.61	347	⇑Pn	Pn	13 31 27.2	+0.3
NKME				eSn	Sn	13 32 20.7	+0.2
KOME	Kolasin	4.61	352	ePn	Pn	13 31 27.1	+0.1
KOME				eSn	Sn	13 32 20.8	+0.3
NKY	Niksic	4.65	347	⇓Pn	Pn	13 31 28.1	+0.6
NKY				eSn	Sn	13 32 20.6	-0.9
IDI	Anoyia	4.69	128	Pn	Pn	13 31 28.7	+0.6
	comp=E,0.1nm,0.3s,baz=308,slow=17,SNR=1.7						
IDI				Sn	Sn	13 32 26.2	+3.7
	comp=E,1.5nm,0.3s,baz=335,slow=23,SNR=11						
TREB	Trebinje	4.70	341	ePn	Pn	13 31 27.8	-0.2
TREB				eSn	Sn	13 32 19.8	-2.6
VAE	Valguarnera	4.79	262	Sn	Sn	13 32 25.9	+1.0
	comp=E,1.2nm,0.3s,baz=226,slow=14,SNR=2.0						
BRY	Bratogost	4.83	344	⇑Pn	Pn	13 31 30.1	+0.2
BRY				eSn	Sn	13 32 24.6	-1.2
VTS	Vitosha	4.85	26	ePn	Pn	13 31 32.1	+1.8
VTS				eSn	Sn	13 32 26.4	0.0
VTS	Vitosha	4.85	26	⇑P	Pb	13 31 39.1	-3.2
SELS	Selova	4.97	6	ePn	Pn	13 31 31.8	0.0
SELS				eSn	Sn	13 32 28.1	-1.1
SJES	Sjenica	4.99	357	ePn	Pn	13 31 32.7	+0.6
SJES				eSn	Sn	13 32 28.9	-0.9
STON	Ston	5.02	337	eSn	Sn	13 32 26.0	-4.4
PLE	Pljevlja	5.10	352	⇓Pn	Pn	13 31 34.3	+0.6
PLE				eSn	Sn	13 32 32.8	+0.2
ZAPS	Zavoj	5.27	18	ePn	Pn	13 31 37.8	+1.8
IVAS	Ivanjica	5.29	358	ePn	Pn	13 31 36.4	+0.1
IVAS				eSn	Sn	13 32 35.9	-1.4
BOVS	Bovan	5.44	10	ePn	Pn	13 31 38.7	+0.4
BOVS				eSn	Sn	13 32 39.8	-1.0
GRUS	Gruza	5.61	2	ePn	Pn	13 31 41.4	+0.8
GRUS				eSn	Sn	13 32 44.2	-0.7
BBLS	Lazići	5.63	353	ePn	Pn	13 31 41.6	+0.7
BBLS				eSn	Sn	13 32 43.9	-1.6
ZAGS	Zajecar	5.70	14	ePn	Pn	13 31 42.1	+0.3
DIVS	Divibare	5.82	357	ePn	Pn	13 31 44.8	+1.3
DIVS				eSn	Sn	13 32 46.8	-3.5
TRUS	Trudelj	5.94	0	eSn	Sn	13 32 51.1	-2.0
ELND	Elena	6.25	40	⇑P	Pn	13 31 47.5	-1.9
GZR	Gura Zlata	7.33	13	⇓P	Pn	13 32 06.9	+2.6
BZS	Buzias	7.39	7	⇑P	Pn	13 32 12.5	+7.5
VOIR		7.95	24	⇓P	Pn	13 32 14.5	+1.7
SIRR	Siria	8.04	6	⇑P	Pb	13 32 37.9	+1.4
MLR	Muntele Rosu	8.31	28	Pn	Pn	13 32 22.9	+5.1
	comp=E,0.3nm,0.3s,baz=206,slow=9.3,SNR=3.8						
MLR	Muntele Rosu	8.31	28	⇑P	Pn	13 32 23.0	+5.2
DOPR	Dopca	8.53	24	⇑P	Pn	13 32 22.4	+1.7
PLOR	Plostina	8.88	30	⇑P	Pn	13 32 27.6	+2.1
VRI	Vrincioaia	8.93	30	⇑P	Pn	13 32 33.1	+7.0
SOKA	Soboth	9.27	337	ePn	Pn	13 32 30.6	-0.4
	comp=E,1.7nm,0.4s						
SOKA				eSn	Sn	13 34 09.4	-5.8
	comp=E,2.8nm,0.7s						
OBKA	Obir	9.28	334	ePn	Pn	13 32 32.9	+1.9
	comp=E,2.1nm,0.3s						
OBKA				eSn	Sn	13 34 10.6	-4.9
	comp=E,12nm,0.7s						
BURAR	Bucovina Array	9.98	19	⇑P	Pn	13 32 28.7	-12
KBA	Koelnbreinsper	10.20	332	ePn	Pn	13 32 45.6	+1.9
	comp=E,1.2nm,0.4s						
KBA				eSn	Sn	13 34 33.1	-5.0
	comp=E,3.7nm,0.6s						
ABTA	Abfaltersbach	10.26	328	ePn	Pn	13 32 46.7	+2.3
	comp=E,1.1nm,0.3s						
ABTA				eSn	Sn	13 34 33.1	-6.2
	comp=E,5.1nm,0.6s						
MOA	Molln	10.55	337	ePn	Pn	13 32 49.7	+1.3
	comp=E,1.4nm,0.3s						
GERES	GERESS Array B	11.61	338	Pn	Pn	13 33 02.4	-0.6
	comp=E,0.2nm,0.3s,baz=153,slow=22,SNR=4.0						
HFS	Hagfors	22.28	351	P	P	13 35 13.5	-0.7
	comp=E,1.2nm,0.6s,baz=165,slow=12,SNR=4.7						
FINES	FINESS Array B	23.46	7	P	P	13 35 25.4	-1.0
	comp=E,6.1nm,0.9s,baz=186,slow=9.2,SNR=9.1						
NB2	NORSAR Subarra	23.50	349	P	P	13 35 28.8	+2.0
	comp=Z,0.5nm,0.6s,baz=163,slow=11						
NOA	NORSAR Array B	23.50	349	P	P	13 35 25.6	-1.3
	comp=Z,0.8nm,0.9s,baz=154,slow=9.8,SNR=2.6						
TORD	Torodi Ar. Bea	30.04	219	P	P	13 36 28.6	+2.3
	comp=Z,0.8nm,0.9s,baz=23,slow=9.9,SNR=4.0						
MKAR	Makanchi Array	45.34	58	P	P	13 38 34.7	-0.6
	comp=Z,0.6nm,0.6s,baz=278,slow=6.8,SNR=11						
ZALV	Zalesovo Beam	45.70	48	P	P	13 38 37.1	-0.9
	comp=Z,2.2nm,0.5s,baz=274,slow=9.5,SNR=10						
CMAR	Chiang Mai Arr	69.98	82	P	P	13 41 29.0	-0.1
	comp=Z,0.3nm,0.4s,baz=310,slow=7.0,SNR=3.5						

*NEIC **08** 13:33:55.6±1.2, 19.°11N±0.°09×66.°55W±0.°04, h34km±17km, Error ellipse: s-maj=13.4km s-min=5.2km az=184.0*
*RSPR **08** 13:33:57.5, 19.°06N×66.°56W, h45km±7km, MD2.8/5*
ISC 08 13:33:55.2±1.7, 19.°11N±0.°09×66.°58W±0.°04, h28km, n23, σ0.°58/27, 4C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.63	176	⇑eP	Pn	13 34 08.5	+0.2
EMPR	Esperanza - Ma	0.63	176		Pn	13 34 08.5	+0.2
AOPR	Arecibo Observ	0.78	192	⇑eP	Pn	13 34 10.4	+0.1
AOPR	Arecibo Observ	0.78	192	eS	Sn	13 34 20.8	-0.3
AOPR	Arecibo Observ	0.78	192		Pn	13 34 10.4	+0.1
AOPR					Sn	13 34 20.8	-0.3
AGPR	Aguadilla, PR	0.81	218	Pn	Pb	13 34 10.8	0.0
GCPR	Guaynabo City	0.93	149	Pn	Pb	13 34 13.6	+1.0
LSP	Las Mesas	1.05	207	⇑eP	Pn	13 34 14.3	+0.2
LSP	Las Mesas	1.05	207	eS	Sn	13 34 27.7	0.0
LSP	Las Mesas	1.05	207		Pn	13 34 14.3	+0.2
LSP					Sn	13 34 27.7	0.0
CRPR	Cabo Rojo, PR	1.21	205	⇑eP	Pn	13 34 16.5	+0.3
CRPR	Cabo Rojo, PR	1.21	205	eS	Sb	13 34 32.5	-0.1
CRPR	Cabo Rojo, PR	1.21	205		Sb	13 34 32.5	-0.1
MLPR	Magueyes Islan	1.22	201	⇓eP	Pn	13 34 16.0	-0.4
MLPR	Magueyes Islan	1.22	201	eS	Sn	13 34 31.2	-0.7
MLPR	Magueyes Islan	1.22	201		Pn	13 34 16.0	-0.4
MLPR					Sn	13 34 31.2	-0.7
MTP	Monte Pirata	1.40	136	⇓eP	Pn	13 34 19.4	+0.6
MTP	Monte Pirata	1.40	136	eS	Sn	13 34 35.5	-1.0
MTP	Monte Pirata	1.40	136		Pn	13 34 19.4	+0.6
MTP					Sn	13 34 35.5	-1.0
DR12	Loma Pena Alta	2.67	264	Pn	Pn	13 34 36.1	-0.3
SABA	Saba	3.50	115	Pn	Pn	13 34 47.0	-0.8
SDDR	Presa de Saban	4.46	269	Pn	Pn	13 35 02.3	+1.4
FDF	Fort de France	6.78	129	Pn	Pn	13 35 33.3	+0.4

INET 08 13:51:29.7, 11.°88N×86.°59W, h71km, ML3.5, Near coast of Nicaragua

IDC 08 13:52:25.0±12.0, 4.°67S×152.°61E, h182km±68km, mb2.9/4, mb1 3.1/5, mbmx3.0/31, mbtmp3.5/5, Error ellipse: s-maj=197.2km s-min=34.6km az=100.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.17	229	P	Pn	13 54 07.9	+0.5
	2.2nm,0.3s,baz=45,slow=12,SNR=4.0						
PMG				S	Sn	13 55 36.3	+7.9
	0.5nm,0.3s,baz=165,slow=21,SNR=1.9						
WRA	Warramunga Arr	23.39	228	P	P	13 57 17.6	-0.1
	0.8nm,0.6s,baz=53,slow=10,SNR=4.2						
ASAR	Alice Springs	26.12	222	P	P	13 57 42.0	-0.4
	0.3nm,0.4s,baz=54,slow=8.9,SNR=3.4						
SONM	Songino Array	66.11	328	P	P	14 02 52.7	-0.1
	0.4nm,1.0s,baz=122,slow=5.2,SNR=2.1						
MKAR	Makanchi Array	80.10	319	P	P	14 04 15.3	+0.5
	0.1nm,0.4s,baz=101,slow=7.2,SNR=2.0						

IDC 08 13:59:41.3±2.8, 6.°63S×129.°76E, h139km±39km, mb3.0/1, mb1 3.1/5, mb1mx2.9/36, mbtmp3.5/5, Error ellipse: s-maj=70.8km s-min=21.0km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.92	15	P	Pn	14 01 07.0	+0.2
	1.2nm,0.3s,baz=183,slow=10,SNR=9.4						
SIJI				S	Sn	14 02 09.1	-4.6
	2.8nm,0.3s,baz=217,slow=23,SNR=9.7						
FITZ	Fitzroy Crossi	12.09	199	P	Pn	14 02 29.0	-0.1
	0.2nm,0.3s,baz=28,slow=14,SNR=3.7						
FITZ				S	Sn	14 04 34.8	-7.8
	0.3nm,0.3s,baz=155,slow=12,SNR=1.5						
WRA	Warramunga Arr	13.96	162	P	Pn	14 02 52.2	-1.2
	0.2nm,0.3s,baz=346,slow=13,SNR=15						
WRA				S	Sn	14 05 18.2	-10
	0.2nm,0.3s,baz=346,slow=24,SNR=5.1						
ASAR	Alice Springs	17.40	167	P	Pn	14 03 36.0	+0.3
	0.1nm,0.3s,baz=342,slow=9.4,SNR=9.5						
ASAR				S	S	14 06 43.2	-6.1
	0.1nm,0.3s,baz=358,slow=29,SNR=3.3						
MKAR	Makanchi Array	67.78	327	P	P	14 10 24.2	-0.1
	0.2nm,0.4s,baz=114,slow=7.9,SNR=4.2						

*ISK **08** 14:01:55.3, 35.°80N×31.°07E, h3km, ML2.4/8*
*NIC **08** 14:01:55.2±0.0, 36.°51N×31.°19E, h31km±33km, Ml2.8/4*
*DDA **08** 14:01:58.3, 35.°98N×31.°10E, h18km±3km, ML1.8*
ISC 08 14:01:57.5±1.2, 35.°96N±0.°04×31.°09E±0.°03, h14km±10km, n24, σ1.°33/37, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.71	301	iP	Pn	14 02 12.3	-0.8
AKUM				iS	Sn	14 02 22.8	-1.0
AKUM				IAML		14 02 26.0	
	comp=E,98nm,0.5s						
ALAN	Alanya-ANTALYA	0.97	52	PN	Pn	14 02 16.9	+0.2
GAZI	Gazipasa	1.03	74	PN	Pn	14 02 17.2	-0.3
GAZI				SN	Sn	14 02 33.1	+1.3
GAZI	Gazipasa	1.03	74	iP	Pn	14 02 17.7	+0.2
GAZI				iS	Sn	14 02 32.4	+0.7
GAZI				IAML		14 02 34.0	
	comp=E,40nm,0.4s						
GAZI				IAML		14 02 35.0	
	comp=N,45nm,0.2s						
KEPZ	Antalya-Kepez	1.03	23	iP	Pn	14 02 17.9	+0.3
KEPZ				iS	Sn	14 02 31.6	-0.2
KEPZ				IAML		14 02 34.0	
	comp=N,19nm,0.5s						
KEPZ				IAML		14 02 36.0	
	comp=E,28nm,0.4s						
KORT	Korkueli	1.20	330	PN	Pg	14 02 21.2	+0.6
KORT				SN	Sn	14 02 40.8	+4.6
AKAS	Kas	1.24	283	iP	Pg	14 02 21.1	-0.2
AKMS	Akamas	1.38	132	P	Pg	14 02 24.1	+0.1
AKMS				S	Sg	14 02 45.1	+3.2
AKMS				AML	AML	14 02 49.1	
	comp=E,0.3nm,0.4s						
AKMS				AML	AML	14 02 49.1	
	comp=E,0.3nm,0.4s						
AKMS				AML	AML	14 02 49.7	
	comp=E,0.4nm,0.4s						
AKMS				AML	AML	14 02 49.7	
	comp=E,0.4nm,0.4s						
ALFC	Alefka	1.47	123	P	Pn	14 02 23.0	-0.5
ALFC				S	Sg	14 02 45.9	+1.3
ALFC				AML	AML	14 02 48.1	
	comp=E,0.2nm,0.3s						
ALFC				AML	AML	14 02 48.1	
	comp=E,0.2nm,0.3s						
ALFC				AML	AML	14 02 52.2	
	comp=E,0.3nm,0.5s						
ALFC				AML	AML	14 02 52.2	
	comp=E,0.3nm,0.5s						
HDMB	Hadim	1.51	48	PN	Pg	14 02 25.8	-0.6
HDMB				SN	Sg	14 02 48.0	+2.0
SEYD	Seydisehir-KON	1.56	22	PN	Pg	14 02 26.8	-0.7
TEKE	Tekeli-Mersin	1.65	83	PN	Pb	14 02 26.9	-0.7
TEKE				SN	Sg	14 02 49.5	-1.0
BERE	Bereket-Mersin	1.77	77	PN	Pb	14 02 28.9	-0.8
SZAC	Souni	1.89	129	P	Pn	14 02 29.7	+0.3
SZAC				S	Sg	14 02 58.7	+0.4
SZAC				AML	AML	14 03 05.5	
	comp=E,0.2nm,0.9s						
SZAC				AML	AML	14 03 05.5	
	comp=E,0.2nm,0.9s						
SZAC				AML	AML	14 03 07.8	
	comp=E,0.2nm,0.3s						
SZAC				AML	AML	14 03 07.8	
	comp=E,0.2nm,0.3s						
TEVE	Tevekalti-Mers	1.96	75	PN	Pb	14 02 31.9	-1.1
GULN	MERSIN_Gulnar	2.00	83	iP	Pb	14 02 32.8	-0.8
GULN				iS	Sb	14 02 57.7	-0.6
GULN				IAML		14 03 01.0	
	comp=N,6.9nm,0.4s						
GULN				IAML		14 03 04.0	
	comp=E,5.4nm,0.4s						
AKKU	Akkuyu-Mersin	2.00	84	PN	Pb	14 02 31.9	-1.7
IKL	Isikli	2.12	82	PN	Pn	14 02 33.0	+0.5
KEBE	Keben-Mersin	2.17	76	PN	Pn	14 02 34.2	+0.9
DOGA	KONYA_Doganhis	2.19	12	iP	Pg	14 02 37.8	-1.8
DOGA				iS	Sb	14 03 04.3	+0.1
DOGA				IAML		14 03 07.0	
	comp=E,14nm,0.8s						
MVOU	Mavrovouni	2.27	114	P	Pn	14 02 34.0	-0.7
MVOU				S	Sn	14 03 03.0	+0.5
MVOU				AML	AML	14 03 06.5	
	comp=E,0.1nm,0.4s						
MVOU				AML	AML	14 03 06.5	
	comp=E,0.1nm,0.4s						
TAVA	DENIZLI_Tavas	2.31	311	iP	Pn	14 02 36.0	+0.8
KERG	Konya-Eregli	2.84	58	iP	Pb	14 02 46.9	-1.1
KERG				IAML		14 03 31.0	
	comp=N,3.9nm,0.4s						
KERG				IAML		14 03 32.0	
	comp=E,4.1nm,0.7s						
KARP	Karpathos	3.22	264	P	Pn	14 02 46.4	-1.3

*SJA **08** 14:14:13.4±1.1, 24.°04S×67.°13W, h195km±9km, ML3.6, MW3.5*
*IDC **08** 14:14:15.4±1.6, 23.°89S×67.°01W, h172km±24km, mb3.2/1, mb1 3.2/6, mb1mx3.1/23, mbtmp3.6/6, Error ellipse: s-maj=30.7km s-min=20.9km az=96.0*
*GUC **08** 14:14:15.1±0.6, 24.°01S×67.°46W, h196km±10km, ML3.8*
ISC 08 14:14:14.5±0.9, 24.°03S±0.°05×67.°19W±0.°04, h184km±9km, n36, σ1.°08/61, 4C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.68	114	⇓iP	Pn	14 14 49.1	+0.4
SLA	San Lorenzo	1.68	114	iP	Pn	14 14 49.1	+0.4
SLA				iS	Sn	14 15 15.3	0.0
AZAP	Zapla	1.95	96	iP	Pn	14 14 51.3	-0.2
LVC	Limon Verde	2.12	311	eP	Pn	14 14 54.1	+0.6
LVC				eS	Sn	14 15 23.9	+0.1
LVC	Limon Verde	2.12	311	P	Pn	14 14 54.3	+0.7
	8.9nm,0.3s,baz=125,slow=6.8,SNR=31						
LVC				S	Sn	14 15 23.9	+0.1
	15nm,0.3s,baz=273,slow=21,SNR=7.0						
LVC	Limon Verde	2.12	311	iP	Pn	14 14 54.6	+1.0
LVC				iS	Sn	14 15 24.0	+0.1
PB15	IPOC Station P	2.25	291	⇑iP	Pn	14 14 55.7	+0.9
PB15				iS	Sn	14 15 26.2	+0.2
PB15	IPOC Station P	2.25	291	iP	Pn	14 14 55.8	+1.1
PB15				iS	Sn	14 15 26.6	+0.6
YJA	Yavi	2.41	40	eP	Pn	14 14 57.1	+0.3
YJA				eS	Sn	14 15 29.0	-0.7
GO02	Mina Guanaco	2.46	242	⇑iP	Pn	14 14 57.9	+0.6
GO02				iS	Sn	14 15 30.6	+0.1
GO02				IAML		14 15 32.0	
	comp=N,573nm,0.5s						
PB06	IPOC Station P	2.56	301	⇑iP	Pn	14 14 59.1	+0.9
PB06				iS	Sn	14 15 31.8	-0.5
PB06				IAML		14 15 33.6	
	comp=E,400nm,0.3s						
PB06	IPOC Station P	2.56	301	iP	Pn	14 14 59.2	+0.9
PB06				iS	Sn	14 15 32.0	-0.2
PB06				IAML		14 15 33.5	
	comp=Z,190nm,0.3s						
PB09	IPOC Station P	2.92	319	eP	Pn	14 15 03.8	+1.2
PB09				eS	Sn	14 15 40.1	+0.1
PB09				IAML		14 15 42.5	
	comp=E,147nm,0.3s						
PB09	IPOC Station P	2.92	319	iP	Pn	14 15 04.1	+1.5
PB09				iS	Sn	14 15 40.4	+0.4
PB09				IAML		14 15 43.3	
	comp=Z,98nm,0.3s						
PB14	IPOC Station P	2.99	258	eP	Pn	14 15 03.7	+0.1
PB14				eS	Sn	14 15 39.8	-1.9
PB14	IPOC Station P	2.99	258	iP	Pn	14 15 03.8	+0.3
PB14				iS	Sn	14 15 39.9	-1.9
PB05	IPOC Station P	3.01	292	eP	Pn	14 15 04.0	+0.5
PB05				iS	Sn	14 15 40.1	-1.7
PB05				IAML		14 15 43.8	
	comp=E,86nm,0.5s						
PB05	IPOC Station P	3.01	292	iP	Pn	14 15 04.2	+0.6
PB05				iS	Sn	14 15 39.9	-1.9
PB03	IPOC Station P	3.08	309	eP	Pn	14 15 04.9	+0.5
PB03				eS	Sn	14 15 42.0	-1.4
PB03				IAML		14 15 44.0	
	comp=N,338nm,0.3s						
PB03	IPOC Station P	3.08	309	eP	Pn	14 15 05.0	+0.5
PB03				eS	Sn	14 15 42.0	-1.4
PB10	IPOC Station P	3.13	279	⇑iP	Pn	14 15 05.5	+0.7
PB10				eS	Sn	14 15 43.4	-0.7
PB10				IAML		14 15 48.8	
	comp=E,80nm,0.3s						
PB10	IPOC Station P	3.13	279	iP	Pn	14 15 05.5	+0.7
PB10				iS	Sn	14 15 44.1	-0.1
PB04	IPOC Station P	3.21	301	eP	Pn	14 15 06.7	+0.7
PB04				eS	Sn	14 15 44.5	-1.7
PB04	IPOC Station P	3.21	301	eP	Pn	14 15 06.7	+0.7
PB04				iS	Sn	14 15 44.6	-1.7
PB04				IAML		14 15 49.2	
	comp=Z,150nm,0.2s						
AHML	Horco Molle	3.21	149	iP	Pn	14 15 05.9	-0.1
PB07	IPOC Station P	3.38	312	eP	Pn	14 15 08.5	+0.3
PB07				eS	Sn	14 15 48.1	-2.1
PB07	IPOC Station P	3.38	312	eP	Pn	14 15 08.7	+0.5
PB07				eS	Sn	14 15 48.3	-1.9
APLL	PUNTA DE LOS L	6.37	175	iP	Pn	14 15 45.2	-1.2
ACCO	Cerro Coronel	6.74	194	eP	Pn	14 15 51.2	-0.3
CFA	Coronel Fontan	7.60	187	P	Pn	14 16 06.0	+3.5
	comp=Z,0.3nm,0.3s,baz=25,slow=17,SNR=1.6						
LPAZ	La Paz	7.75	353	P	Pn	14 16 04.5	-0.7
	comp=Z,0.5nm,0.3s,baz=164,slow=11,SNR=5.2						
LPAZ				S	Sn	14 17 32.3	-0.5
	comp=Z,0.1nm,0.3s,baz=332,slow=15,SNR=1.9						
LPAZ	La Paz	7.75	353	iP	Pn	14 16 06.2	+1.0
SIV	San Ignacio	9.85	37	P	Pn	14 16 30.7	-1.4
	comp=Z,0.2nm,0.3s,baz=240,slow=8.1,SNR=2.7						
BDFB	Brasilia	19.86	69	P	P	14 18 31.3	-0.5
	comp=Z,0.8nm,0.3s,baz=240,slow=11,SNR=5.5						
TORD	Torodi Ar. Bea	76.74	69	P	P	14 25 46.2	+0.3
	comp=Z,0.4nm,0.6s,baz=256,slow=5.8,SNR=2.0						
MKAR	Makanchi Array	146.66	39	PKPbc	PKPbc	14 33 36.1	+1.6
	comp=Z,0.2nm,0.6s,baz=276,slow=4.2,SNR=2.2						

IDC 08 14:33:59.7±15.0, 0.°22N×125.°77E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.3/23, mbtmp3.6/3, Error ellipse: s-maj=237.1km s-min=160.3km az=161.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.73	158	P	P	14 38 52.6	-0.1
	0.8nm,0.4s,baz=336,slow=10,SNR=12						
ASAR	Alice Springs	25.03	162	P	P	14 39 26.3	+0.6
	0.3nm,0.3s,baz=340,slow=7.7,SNR=12						
STKA	Stephens Creek	35.27	156	P	P	14 40 55.5	-0.8
	0.7nm,0.5s,baz=336,slow=7.5,SNR=4.4						

*MOS **08** 14:59:42.8±1.5, 38.°04N×20.°22E, h13km, mb4.2/14, Error ellipse: s-maj=7.8km s-min=3.8km az=63.4*

IDC **08** *14:59:43.5±0.7, 38.27N×20.41E, h0km, mb4.0/17, mb1 3.9/24, mb1mx3.8/53, mbtmp3.9/24, ML3.6/6, MS3.2/1, Ms1 3.3/1, ms1mx2.5/49, Error ellipse: s-maj=15.3km s-min=15.1km az=158.0*

PDG **08** *14:59:44.4±0.4, 38.17N×20.31E, h11km, ML4.2/13, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*

ATH **08** *14:59:45.1, 38.16N×20.43E, h10km, ML3.7/34, Error ellipse: s-maj=1.2km s-min=0.7km az=20.0*

THE **08** *14:59:45.0, 38.18N×20.38E, h9km, ML3.8/17, Error ellipse: s-maj=1.0km s-min=0.5km az=259.0*

BEO **08** *14:59:46.0±0.7, 38.09N×20.14E, h24km±4km, ML3.9/10*

NEIC **08** *14:59:48.0±2.0, 38.14N±0.05×20.37E±0.06, h36km±4km, Error ellipse: s-maj=7.9km s-min=6.9km az=205.0*

ISC 08 14:59:45.2±0.5, **38.17N**±0.02×**20.37E**±0.02, **h16**km±2km, **n296**, σ1.68/364, **mb3.9**/25, **14C-10D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	36	P	Pg	14 59 47.0	-0.9
CHV1				S	Sg	14 59 48.4	-1.4
KEF3	Kipouria, Keph	0.04	339	P	Pg	14 59 47.4	-0.6
KEF3				S	Sg	14 59 49.3	-0.7
LXR1	Lixouri, Cepha	0.07	59	P	Pg	14 59 47.1	-1.1
LXR1				S	Sg	14 59 48.5	-1.7
ARGA	Argostoli. Kep	0.09	83	P	Pg	14 59 47.2	-1.2
ARGA				S	Sg	14 59 48.2	-2.4
KEF2	Argostoli. Kep	0.10	91	P	Pg	14 59 47.3	-1.2
KEF2				S	Sg	14 59 48.3	-2.3
ARG2	Argostoli	0.10	83	P	Pg	14 59 47.3	-1.2
ARG2				S	Sg	14 59 48.2	-2.4
KEF4	Livadi, Kephal	0.10	27	P	Pg	14 59 47.7	-0.8
KEF4				S	Sg	14 59 49.7	-1.1
KEF1	Kardakata, Kep	0.14	36	P	Pg	14 59 48.1	-0.9
KEF1				S	Sg	14 59 49.8	-1.7
VLS	Valsamata	0.18	86	P	Pg	14 59 48.4	-1.2
VLS				S	Sg	14 59 50.6	-1.9
	218μm,0.2s						
VLS	Valsamata	0.18	86	P	Pg	14 59 48.3	-1.2
VLS				S	Sg	14 59 50.6	-1.9
VLS				AML	AML	14 59 50.8	
VLS				AML	AML	14 59 51.1	
VLS	Valsamata	0.18	86	P	Pg	14 59 48.4	-1.2
VLS				S	Sg	14 59 50.6	-1.9
VSK1	VASILIKIADES	0.29	33	P	Pg	14 59 50.7	-0.7
VSK1				S	Sg	14 59 54.8	-0.7
	51μm,0.5s						
KONA	Konidatara, Ke	0.30	32	P	Pg	14 59 50.9	-0.7
KONA				S	Sg	14 59 55.2	-0.8
FSK	Fiskardo	0.33	28	P	Pg	14 59 51.4	-0.7
FSK				S	Sg	14 59 56.1	-0.7
	23μm,0.3s						
FSK	Fiskardo	0.33	28	P	Pg	14 59 51.4	-0.7
FSK				S	Sg	14 59 56.4	-0.4
FSK				AML	AML	14 59 57.0	
	comp=N,47148μm,0.3s						
FSK				AML	AML	14 59 60.0	
	comp=E,42763μm,0.2s						
VLMS	Volimes, Zakyn	0.37	141	P	Pg	14 59 52.3	-0.5
VLMS				S	Sg	14 59 57.6	-0.4
EVGI	Lefkada island	0.51	27	P	Pg	14 59 54.7	-0.6
EVGI				S	Sg	15 00 01.4	-0.7
EVGI	Lefkada island	0.51	27	P	Pg	14 59 54.6	-0.6
EVGI				S	Sg	15 00 01.8	-0.3
ZAK2	Zakynthos	0.57	132	P	Pb	14 59 56.2	-0.5
ZAK2				S	Sb	15 00 05.3	+0.8
	comp=E,34μm,0.8s						
MGNA	Meganis	0.59	34	P	Pg	14 59 55.7	-1.1
MGNA				S	Sg	15 00 04.3	-0.5
MGNA				AML	AML	15 00 05.5	
	comp=E,50318μm,0.4s						
MGNA				AML	AML	15 00 05.6	
	comp=N,21736μm,0.2s						
KRI1	kERI	0.62	145	P	Pg	14 59 56.4	-0.9
KRI1				S	Sg	15 00 04.9	-0.6
	comp=N,9μm,0.5s						
LKD2	Lefkada island	0.66	20	P	Pg	14 59 57.1	-1.1
LKD2				S	Sg	15 00 05.8	-1.2
	comp=N,6μm,0.5s						
LKD2	Lefkada island	0.66	20	P	Pg	14 59 57.1	-1.1
LKD2				AML	AML	15 00 12.6	
	comp=E,12070μm,0.3s						
LKD2				AML	AML	15 00 14.9	
	comp=N,11995μm,0.7s						
AST1	Astakos	0.68	56	P	Pg	14 59 57.5	-1.0
AST1				S	Sg	15 00 07.6	+0.1
	comp=N,12μm,0.4s						
TSLK	Tsoukalades, L	0.69	19	P	Pg	14 59 57.9	-0.9
TSLK				S	Sg	15 00 07.7	-0.3
	comp=N,8μm,0.5s						
TSLK	Tsoukalades, L	0.69	19	P	Pg	14 59 57.7	-1.0
PDO	Prodromos	0.77	56	P	Pg	14 59 59.2	-1.0
PDO				S	Sb	15 00 11.0	+0.4
	comp=N,16μm,0.6s						
PDO	Prodromos	0.77	56	P	Pg	14 59 59.1	-1.2
PDO				AML	AML	15 00 16.4	
	comp=N,24406μm,0.7s						
PDO				AML	AML	15 00 21.0	
	comp=E,19814μm,0.6s						
RLS	Riolos of Patr	0.88	97	P	Pg	15 00 00.8	-1.3
RLS				S	Sn	15 00 14.7	-0.5
	comp=E,3μm,0.5s						
RLS	Riolos of Patr	0.88	97	P	Pg	15 00 00.8	-1.3
RLS				AML	AML	15 00 17.4	
	comp=E,7132μm,0.3s						
RLS				AML	AML	15 00 20.5	
	comp=N,5332μm,0.7s						
PVO	Paravola	1.02	63	P	Pb	15 00 03.8	-0.6
PVO				S	Sn	15 00 19.3	+0.6
	comp=N,8μm,0.6s						
PVO	Paravola	1.02	63	P	Pb	15 00 03.9	-0.6
PVO				AML	AML	15 00 25.6	
	comp=N,15106μm,0.7s						
PVO				AML	AML	15 00 25.8	
	comp=E,17670μm,0.5s						
DRO	Drossia	1.08	101	P	Pb	15 00 04.9	-0.6
DRO	Drossia	1.08	101	P	Pb	15 00 04.4	-1.1
UPR	University Cam	1.12	84	P	Pb	15 00 06.0	-0.2
UPR				S	Sn	15 00 22.9	+1.5
UPR	University Cam	1.12	84	P	Pb	15 00 05.4	-0.8
AMT	Artemida-Makis	1.24	120	P	Pb	15 00 07.9	-0.3
AMT	Artemida-Makis	1.24	120	P	Pn	15 00 07.6	-0.3
AMT				AML	AML	15 00 36.5	
	comp=E,6045μm,1.3s						
AMT				AML	AML	15 00 37.1	
	comp=N,6559μm,0.8s						
ANX	Ano Chora	1.29	70	P	Pn	15 00 08.2	-0.5
ANX	Ano Chora	1.29	70	P	Pn	15 00 08.3	-0.4
ANX				AML	AML	15 00 32.4	
	comp=N,11227μm,0.6s						
ANX				AML	AML	15 00 33.8	
	comp=E,7900μm,0.6s						
SERG	Sergoula	1.35	79	P	Pn	15 00 08.9	-0.5
SERG				S	Sg	15 00 30.1	+1.3
	comp=E,2μm,0.5s						
SERG	Sergoula	1.35	79	P	Pn	15 00 09.0	-0.5
SERG				AML	AML	15 00 35.9	
	comp=E,4685μm,0.5s						
SERG				AML	AML	15 00 38.9	
	comp=N,4252μm,0.5s						
EVR	Evrytania	1.36	56	P	Pn	15 00 09.4	-0.2
EVR	Evrytania	1.36	56	P	Pn	15 00 09.2	-0.4
EVR				AML	AML	15 00 35.7	
	comp=N,4412μm,0.7s						
EVR				AML	AML	15 00 45.7	
	comp=E,3030μm,1.7s						
IGT	Igoumenitsa	1.36	359	P	Pb	15 00 10.3	-0.1
IGT				S	Sb	15 00 28.1	+0.5
	comp=E,2μm,0.6s						
IGT	Igoumenitsa	1.36	359	ePg	Pg	15 00 13.0	+1.6
IGT				eSg	Sg	15 00 31.6	+2.4
IGT	Igoumenitsa	1.36	359	P	Pb	15 00 10.1	-0.2
IGT				AML	AML	15 00 35.4	
	comp=E,3657μm,0.5s						
IGT				AML	AML	15 00 39.4	
	comp=N,4077μm,0.8s						
IGT	Igoumenitsa	1.36	359	P	Pg	15 00 13.0	+1.6
IGT				S	Sb	15 00 28.1	+0.5
ALIK	Aliki, Aigiali	1.38	86	P	Pn	15 00 10.0	+0.3
ALIK				S	Sg	15 00 29.9	+0.3
KLV	Kalavryta, Ach	1.41	94	P	Pn	15 00 10.4	+0.1
KLV				S	Sg	15 00 31.1	+0.3
	comp=N,1μm,0.8s						
KLV	Kalavryta, Ach	1.41	94	P	Pn	15 00 10.4	+0.1
KALE	Kalithea	1.41	80	P	Pn	15 00 09.9	-0.4
KALE				S	Sg	15 00 30.6	-0.2
	comp=N,2μm,0.7s						
KALE	Kalithea	1.41	80	P	Pn	15 00 09.9	-0.4
KALE				AML	AML	15 00 39.0	
	comp=E,3527μm,0.8s						
KALE				AML	AML	15 00 43.0	
	comp=N,4695μm,0.6s						
JAN	Janina	1.54	14	P	Pb	15 00 13.7	+0.4
JAN				S	Sg	15 00 33.9	-0.8
	comp=N,2μm,0.5s						
JAN	Janina	1.54	14	P	Pg	15 00 14.5	-0.2
JAN				AML	AML	15 00 40.5	
	comp=E,5065μm,0.6s						
JAN				AML	AML	15 00 43.6	
	comp=N,3535μm,0.8s						
JAN	Janina	1.54	14	P	Pb	15 00 13.7	+0.4
JAN				S	Sg	15 00 33.9	-0.8
ITM	Ithomi	1.58	128	P	Pb	15 00 13.5	-0.6
ITM	Ithomi	1.58	128	P	Pb	15 00 13.3	-0.7
ITM				AML	AML	15 00 48.2	
	comp=E,2301μm,1.2s						
ITM				AML	AML	15 00 50.0	
	comp=N,1994μm,0.8s						
ITM	Ithomi	1.58	128		Pb	15 00 13.9	-0.2
KEK	Kerkira	1.61	344	P	Pb	15 00 14.1	-0.4
KASA	Kassiopi	1.61	348	P	Pg	15 00 15.2	-1.0
KASA				AML	AML	15 00 43.3	
	comp=E,2812μm,0.3s						
KASA				AML	AML	15 00 44.4	
	comp=N,3018μm,0.3s						
MAKR	Makrakomi, Fth	1.62	58	P	Pg	15 00 15.6	-0.7
MAKR				AML	AML	15 00 45.5	
	comp=N,7157μm,0.6s						
MAKR				AML	AML	15 00 49.8	
	comp=E,7583μm,0.6s						
PYL	PYLOS	1.68	139	P	Pb	15 00 14.6	-1.0
PYL	PYLOS	1.68	139	P	Pb	15 00 14.8	-0.8
PYL				AML	AML	15 00 52.4	
	comp=E,1375μm,0.8s						
PYL				AML	AML	15 01 08.0	
	comp=N,838μm,0.6s						
DLFA	Delphi	1.70	79	P	Pb	15 00 16.9	+0.8
SRN	Sarande	1.73	351	P	Pb	15 00 15.9	-0.7
MEV	Metsovon	1.75	22	P	Pb	15 00 17.7	+0.7
AGG	Agios Georgios	1.76	60	P	Pb	15 00 17.9	+0.8
AGG	Agios Georgios	1.76	60	P	Pg	15 00 18.1	-0.9
AGG				AML	AML	15 00 47.1	
	comp=E,3276μm,0.9s						
AGG				AML	AML	15 00 51.7	
	comp=N,2683μm,0.6s						
AGG	Agios Georgios	1.76	60		Pg	15 00 18.0	-0.9
AGG	Agios Georgios	1.76	60	P	Pb	15 00 18.0	+0.8
VLX	Vlachokerasia	1.78	116	P	Pb	15 00 17.5	0.0
VLX	Vlachokerasia	1.78	116	P	Pb	15 00 18.0	+0.5
VLX				AML	AML	15 00 56.3	
	comp=E,2867μm,0.6s						
VLX				AML	AML	15 01 01.8	
	comp=N,2439μm,0.7s						
AXAR	Agios Charalam	1.90	71	P	Pb	15 00 20.0	+0.6
AXAR				AML	AML	15 00 55.6	
	comp=E,5604μm,0.5s						
AXAR				AML	AML	15 01 01.8	
	comp=N,7560μm,0.8s						
THL	Klokotos Trika	1.90	42	P	Pb	15 00 19.1	-0.3
THL	Klokotos Trika	1.90	42	P	Pb	15 00 18.9	-0.5
THL				AML	AML	15 00 55.0	
	comp=E,3790μm,0.6s						
THL				AML	AML	15 00 55.4	
	comp=N,2650μm,0.5s						
KPRO	Kipourio	1.95	23	P	Pb	15 00 20.4	+0.1
KPRO	Kipourio	1.95	23	P	Pb	15 00 20.5	+0.1
KPRO				AML	AML	15 00 54.3	
	comp=E,3507μm,0.9s						
KPRO				AML	AML	15 00 56.8	
	comp=N,3435μm,0.9s						
PROD	Prodromos	2.00	87	P	Pb	15 00 20.4	-0.7
PROD				AML	AML	15 00 54.5	
	comp=E,1989μm,0.5s						
PROD				AML	AML	15 00 56.8	
	comp=N,2032μm,0.7s						
LTK	Loutraki	2.06	93	P	Pb	15 00 21.0	-1.2
LTK	Loutraki	2.06	93	P	Pb	15 00 20.9	-1.2
LOUT	Loutraki	2.07	94	P	Pb	15 00 21.3	-1.0
LOUT				AML	AML	15 01 03.0	
	comp=E,285μm,0.7s						
LOUT				AML	AML	15 01 04.9	
	comp=N,282μm,0.9s						
PENT	Pentalofos	2.11	16	P	Pb	15 00 23.2	0.0
PENT	Pentalofos	2.11	16	P	Pb	15 00 23.3	+0.1
PENT				AML	AML	15 01 02.9	
	comp=E,1051μm,1.0s						
PENT				AML	AML	15 01 07.4	
	comp=N,1351μm,0.6s						
LKR	Lokris	2.12	76	P	Pb	15 00 22.2	-1.1
LKR	Lokris	2.12	76	P	Pb	15 00 22.2	-1.1
LKR				AML	AML	15 01 06.9	
	comp=E,968μm,0.6s						
LKR				AML	AML	15 01 07.5	
	comp=N,970μm,0.7s						
VIL2	Platees	2.29	88	P	Pb	15 00 24.3	-1.8
VIL2				AML	AML	15 01 15.0	
	comp=N,1393μm,0.8s						
VIL2				AML	AML	15 01 19.8	
	comp=E,1753μm,0.9s						
NEST	Nestorio	2.31	13	P	Pb	15 00 26.0	-0.4
NEST				AML	AML	15 01 09.5	
	comp=E,1141μm,0.6s						
NEST				AML	AML	15 01 16.0	
	comp=N,1206μm,0.6s						
VILL	Villia	2.32	89	P	Pn	15 00 24.6	+1.8
KRND	KRANIDI	2.34	109	P	Pb	15 00 24.9	-2.1
KRND				S	Sb	15 00 55.5	-0.1
	comp=N,938nm,0.7s						
KRND	KRANIDI	2.34	109	P	Pn	15 00 24.8	+1.8
KRND				AML	AML	15 01 10.2	
	comp=E,1917μm,0.7s						
KRND				AML	AML	15 01 15.5	
	comp=N,1778μm,0.7s						
DID	Didima	2.37	105	P	Pb	15 00 26.3	-1.2
KZN	Kozani	2.40	27	P	Pb	15 00 26.7	-1.3
KZN	Kozani	2.40	27	P	Pb	15 00 26.7	-1.3
KZN				AML	AML	15 01 08.0	
	comp=E,1279μm,0.6s						
KZN				AML	AML	15 01 09.2	
	comp=N,1236μm,0.5s						
KZN	Kozani	2.40	27	P	Pb	15 00 26.7	-1.3
SCTE	Santa Cesarea	2.41	323		Pn	15 00 25.3	+1.3
SCTE				Sn	Sb	15 00 55.5	-2.2
VLI	Veliai	2.50	124	P	Pb	15 00 28.6	-1.2
NEO	Neokhori	2.51	62	P	Pn	15 00 27.4	+2.1
NEO	Neokhori	2.51	62	P	Pn	15 00 27.5	+2.1
NEO				AML	AML	15 01 09.8	
	comp=E,1098μm,0.6s						
NEO				AML	AML	15 01 10.0	
	comp=N,1054μm,0.6s						
XOR	Xorichti	2.51	61	P	Pb	15 00 27.9	-2.0
XOR	Xorichti	2.51	61	P	Pn	15 00 27.5	+2.1
XOR				AML	AML	15 01 14.3	
	comp=N,1834μm,0.7s						
XOR				AML	AML	15 01 15.0	
	comp=E,1105μm,0.8s						
LIT	Litokhoron	2.54	40		Pb	15 00 28.4	-2.0
LIT	Litokhoron	2.54	40	P	Pb	15 00 28.4	-2.0
MRKA	Markates	2.59	77	P	Pn	15 00 28.4	+2.0
MRKA	Markates	2.59	77	P	Pn	15 00 28.2	+1.8
MRKA				AML	AML	15 01 18.6	
	comp=N,916μm,0.8s						
MRKA				AML	AML	15 01 26.6	
	comp=E,510μm,0.9s						
SKIA	Skiathos	2.62	67	P	Pn	15 00 28.4	+1.5
SKIA	Skiathos	2.62	67	P	Pn	15 00 28.9	+2.0
VLY	Voula,Athens	2.73	96	P	Pn	15 00 29.9	+1.6
VLY	Voula,Athens	2.73	96	P	Pn	15 00 29.9	+1.6
PTL	Penteli	2.76	91	P	Pn	15 00 30.6	+1.8
KTHA	Kythira Island	2.88	131	P	Pn	15 00 33.4	-2.7
AOS	Alonnisos	2.93	69	P	Pn	15 00 32.8	+1.7
OHR	Ohrid	2.96	6	iPn	Pb	15 00 34.6	-3.0
OHR				iSn	Sb	15 01 11.1	-2.5
OHR	Ohrid	2.96	6	P	Pb	15 00 36.4	-1.2
TIP	Timpagrande	3.00	291		Pn	15 00 33.8	+1.7
PAIG	Paliouri	3.12	55	P	Pn	15 00 36.1	+2.4
THE	Thessaloniki	3.18	38	P	Pb	15 00 38.9	-2.4
GRG	Griva	3.20	29	P	Pb	15 00 39.8	-1.8
TIR	Tirane	3.20	353	ePn	Pn	15 00 36.7	+1.9
TIR	Tirane	3.20	353		Pn	15 00 36.8	+1.9
TIR	Tirane	3.20	353	P	Pn	15 00 36.8	+1.9
TAR1	Taranto	3.36	316	ePn	Pn	15 00 38.5	+1.6
SOH	Sokhos	3.52	40	P	Pb	15 00 43.3	-3.8
CEL	Celeste	3.52	273	Pn	Pn	15 00 39.5	+0.1
CEL					Sn	15 01 20.9	+0.2
OUR	Ouranopolis	3.54	51	P	Pn	15 00 42.1	+2.6
KNT	Kendrikon	3.57	32	P	Pn	15 00 43.4	+3.4
VAY	Valandovo	3.58	28	iPn	Pn	15 00 43.9	+3.9
MATE	Matera	3.77	312	⇓P	Sg	15 01 44.0	-2.1
SRS	Serrai	3.86	39	ePn	Pn	15 00 47.0	+3.1
SRS	Serrai	3.86	39	P	Pn	15 00 47.0	+3.1
ULC	Ulcinj	3.89	348	ePn	Pn	15 00 44.6	+0.3
ULC				eSn	Sn	15 01 31.3	+1.6
SG1	Sgolgore (BA)	3.91	314	ePn	Pn	15 00 46.4	+1.8
BAI	Bari	3.98	319	ePn	Pn	15 00 46.9	+1.3
DRME	Dracevica, Mon	4.12	348	ePn	Pn	15 00 47.6	+0.2
DRME	Dracevica, Mon	4.12	348	ePn	Pn	15 00 48.0	+0.6
DRME				eSn	Sn	15 01 36.7	+1.5
APE	Apeiranthos	4.24	103	iP	Pn	15 00 52.1	+2.9
KKB	Krupnik	4.24	29	P	Pb	15 00 57.3	-2.1
BUM	Brajici-Budva	4.28	345	ePn	Pn	15 00 50.8	+1.1
BUM				eSn	Sn	15 01 40.5	+1.1
MMB	Musomiste	4.29	36	P	Pn	15 00 54.9	+5.1
ACER	Acerenza	4.31	309	Pn	Pn	15 00 52.9	+2.8
PDG	Podgorica	4.34	349	ePn	Pn	15 00 51.4	+0.9
PDG				eSn	Sn	15 01 40.7	-0.1
PDG	Podgorica	4.34	349	ePn	Pn	15 00 51.1	+0.6
PDG	Podgorica	4.34	349	Pn	Pn	15 00 51.2	+0.7
PDG					Sn	15 01 41.6	+0.8
TTG	Podgorica	4.34	349	ePn	Pn	15 00 51.3	+0.8
TTG				eSn	Sn	15 01 41.8	+1.0
PVY	Plav	4.43	356	⇑iPn	Pn	15 00 53.6	+1.7
PVY				eSn	Sn	15 01 45.2	+1.9
HCY	Herceg Novi	4.51	342	ePn	Pn	15 00 53.5	+0.7
HCY				eSn	Sn	15 01 46.2	+1.3
CEME	Cevo	4.51	346	ePn	Pn	15 00 53.2	+0.3
CEME				eSn	Sn	15 01 45.1	0.0
IDI	Anoyia	4.63	127	Pn	Pn	15 00 56.4	+1.8
	comp=E,0.5nm,0.3s,baz=302,slow=12,SNR=9.8						
IDI				Sn	Sn	15 01 47.4	-0.6
	comp=E,1.7nm,0.3s,baz=44,slow=15,SNR=3.7						
IVA	Berane	4.71	356	⇓iPn	Pn	15 00 56.8	+1.1
IVA				eSn	Sn	15 01 52.0	+1.9
NKME	Niksic	4.72	347	ePn	Pn	15 00 56.5	+0.7
NKME				eSn	Sn	15 01 51.7	+1.5
KOME	Kolasin	4.72	352	ePn	Pn	15 00 57.2	+1.4
KOME				eSn	Sn	15 01 52.3	+2.0
VAE	Valguarnera	4.76	264	Sn	Sn	15 01 51.0	-0.4
	comp=E,3.6nm,0.3s,baz=33,slow=5.5,SNR=4.8						
BARS	Barje	4.77	13	eSn	Sn	15 01 51.4	-0.1
TREB	Trebinje	4.80	342	ePn	Pn	15 00 56.7	-0.1
TREB				eSn	Sn	15 01 49.7	-2.4
TREB	Trebinje	4.80	342	ePn	Pn	15 00 56.1	-0.7
BRY	Bratogost	4.93	344	ePn	Pn	15 00 58.5	-0.2
BRY	Bratogost	4.93	344	P	Pn	15 01 02.4	+3.7
BRY	Bratogost	4.93	344	ePn	Pn	15 00 59.0	+0.3
BRY				eSn	Sn	15 01 56.6	+1.1
VTS	Vitosha	4.96	25	ePn	Pn	15 01 00.9	+1.8
VTS				eSn	Sn	15 01 56.0	-0.2
VTS	Vitosha	4.96	25	⇓P	Pb	15 01 13.1	+1.5
VTS	Vitosha	4.96	25	P	Pn	15 01 03.9	+4.8
VTS	Vitosha	4.96	25	Pn	Pn	15 01 00.3	+1.2
VTS	Vitosha	4.96	25	P	Pn	15 01 00.3	+1.2
SGRT	San Giovanni R	5.04	317		Pn	15 01 01.4	+1.2
SGRT					Sn	15 01 57.2	-1.0
SELS	Selova	5.08	6	ePn	Pn	15 01 00.9	+0.2
SJES	Sjenica	5.10	357	ePn	Pn	15 01 01.7	+0.7
SJES				eSn	Sn	15 01 59.7	+0.1
STON	Ston	5.12	337	ePn	Pn	15 01 01.2	0.0
STON				eSn	Sn	15 01 57.8	-2.1
STON	Ston	5.12	337	ePn	Pn	15 01 00.9	-0.3
UPM	Unac-Piva	5.15	348	ePn	Pn	15 01 02.5	+0.7
UPM				eSn	Sn	15 02 02.4	+1.4
ALN	Alexandroupoli	5.17	56	Pn	Pn	15 01 03.3	+1.5
ALN	Alexandroupoli	5.17	56	P	Pn	15 01 03.3	+1.5
PLE	Pljevlja	5.21	352	ePn	Pn	15 01 03.9	+1.3
PLE				eSn	Sn	15 02 03.9	+1.5
KDZ	Kurdzhali	5.21	47	P	Pn	15 01 03.7	+1.2
WDD	Wied Dalam	5.22	245	Pn	Pn	15 01 03.4	+0.8
PAOL	Paolisi	5.31	304		Pn	15 01 08.1	+4.2
IVAS	Ivanjica	5.41	358	ePn	Pn	15 01 05.1	-0.1
IVAS				eSn	Sn	15 02 06.2	-0.9
RUDO	Rudo	5.50	352	ePn	Pn	15 01 06.3	-0.1
BOVS	Bovan	5.56	10	ePn	Pn	15 01 07.2	0.0
BOVS				eSn	Sn	15 02 10.6	-0.1
GRUS	Gruza	5.72	3	ePn	Pn	15 01 10.3	+0.8
GRUS				eSn	Sn	15 02 15.2	+0.4
BBLS	Lazići	5.74	353	eSn	Sn	15 02 14.0	-1.4
BBLS	Lazići	5.74	353	ePn	Pn	15 01 09.7	-0.1
DIVS	Divibare	5.93	357	ePn	Pn	15 01 12.9	+0.5
DIVS				eSn	Sn	15 02 17.7	-2.4
DIVS	Divibare	5.93	357	ePn	Pn	15 01 12.1	-0.3
HAPS	Han Pijesak,Bl	6.01	350	ePn	Pn	15 01 12.2	-1.3
PLVB	Pleven	6.13	30	⇑P	Pn	15 01 17.6	+2.5
TEKS	Tekeris	6.41	355	ePn	Pn	15 01 19.0	+0.1
MGRS	Mrkonjic Grad	6.71	339	ePn	Pn	15 01 24.2	+1.1
BLY	Banja Luka	7.00	341	ePn	Pn	15 01 26.3	-0.7
NRCA	Norcia	7.23	312		Pn	15 01 33.5	+3.3
BZS	Buzias	7.50	7	⇑P	Pb	15 02 00.2	+5.3
ARR	Arges	7.87	23	⇑P	Pn	15 01 49.5	+11
VOIR		8.06	24	⇑P	Pn	15 01 43.8	+2.2
VOIR		8.06	24	⇑P	Pn	15 01 43.8	+2.2
MORH	Mrgy, Hungar	8.14	352	ePn	Pn	15 01 41.3	-1.4
MLR	Muntele Rosu	8.42	28	Pn	Pn	15 01 51.6	+5.1
	comp=E,0.4nm,0.3s,baz=248,slow=2.9,SNR=8.0						
MLR	Muntele Rosu	8.42	28	⇓P	Pn	15 01 49.5	+2.9
MLR	Muntele Rosu	8.42	28	⇓P	Pn	15 01 49.5	+2.9
CRES	Cresnjev	8.48	336	ePn	Pn	15 01 47.5	+0.2
DOPR	Dopca	8.64	24	⇑P	Pn	15 01 57.1	+7.6
HARR	Harsova	8.64	39	⇓P	Pn	15 01 43.1	-6.5
HARR	Harsova	8.64	39	⇓P	Pn	15 01 43.1	-6.4
TIRR	Tirgusor	8.72	41	P	Pn	15 01 49.2	-1.4
TIRR				pmax	pmax		
	comp=Z,244nm,2.0s						
BISRR	Bisoca	8.76	31	⇑P	Pn	15 01 52.4	+1.2
OZUR		8.88	25	⇓P	Pn	15 01 56.7	+3.8
LJU	Ljubljana	8.98	333	ePn	Pn	15 01 53.1	-1.1
PLOR	Plostina	8.99	29	⇓P	Pn	15 01 54.9	+0.6
PLOR	Plostina	8.99	29	⇓P	Pn	15 01 54.9	+0.6
VRI	Vrincioaia	9.03	30	⇑P	Pn	15 01 56.8	+1.9
VRI	Vrincioaia	9.03	30	⇑P	Pn	15 01 56.8	+1.9
SOKA	Soboth	9.37	337	iPn	Pn	15 01 59.2	-0.4
	comp=Z,6.4nm,0.4s						
SOKA				eSn	Sn	15 03 38.6	-6.1
	comp=Z,3.4nm,0.7s						
OBKA	Obir	9.38	335	ePn	Pn	15 02 01.7	+2.0
	comp=Z,3.8nm,0.3s						
OBKA				eSn	Sn	15 03 43.4	-1.6
	comp=Z,6.9nm,0.3s						
ARSA	Arzberg	9.75	340	ePn	Pn	15 02 04.5	-0.3
	comp=Z,1.7nm,0.3s						
STAL	STALIGIAL				Pn	15 02 06.7	+0.2
CTI	Castel Tesino	10.19	323		Pn	15 02 10.7	-0.1
CTI	Castel Tesino	10.19	323	P	Pn	15 02 10.7	-0.1
KBA	Koelnbreinsper	10.29	332	iPn	Pn	15 02 12.9	+0.5
	comp=Z,1.3nm,0.3s						
KBA				eSn	Sn	15 04 02.1	-5.3
	comp=Z,1.2nm,0.2s						
ABTA	Abfaltersbach	10.35	328	iSn	Sn	15 04 03.7	-4.9
	comp=Z,8.5nm,0.6s						
VYHS	Vyhne	10.38	354	eP	Pn	15 02 09.0	-4.4
VYHS				e		15 04 08.0	
VYHS	Vyhne	10.38	354	ePN	Pn	15 02 09.0	-4.4
VYHS				eSN	Sn	15 04 08.0	-1.4
BR131	Keskin Array S	10.46	77	iP	Pn	15 02 16.5	+2.0
BRTR	Keskin Array B	10.46	77	Pn	Pn	15 02 18.6	+4.0
	comp=Z,0.1nm,0.3s,baz=264,slow=13,SNR=4.3						
MOA	Molln	10.65	337	iPn	Pn	15 02 18.4	+1.3
	comp=Z,3.6nm,0.3s						
WATA	Walderalm	11.21	328	ePn	Pn	15 02 27.4	+2.7
	comp=Z,2.1nm,0.3s						
FUORN	Ofenpass-Fuorn	11.27	322	Pn	Pn	15 02 25.9	+0.2
FUORN				eSn	Sn	15 04 26.8	-4.6
FETA	Feichten	11.34	324	eSn	Sn	15 04 30.2	-2.8
	comp=Z,1.4nm,0.4s						
MOTA	Moosalm	11.41	326	ePn	Pn	15 02 29.4	+1.8
	comp=Z,3.3nm,0.5s						
MOTA				eSn	Sn	15 04 34.4	-0.5

comp=Z,3.3nm,0.5s
DAVOX Davos/Dischmat 11.57 321 Pn Pn 15 02 29.1 -0.7
comp=Z,0.1nm,0.3s,baz=131,slow=20,SNR=2.7
RETA Reutte 11.67 326 eSn Sn 15 04 39.0 -2.1
comp=Z,2.3nm,0.4s
GERES GERESS Array B 11.71 338 Pn Pn 15 02 30.8 -0.8
comp=Z,0.3nm,0.3s,baz=157,slow=14,SNR=8.5
GERES GERESS Array B 11.71 338 Pn 15 02 33.5 +1.9
GERES GERESS Array B 11.71 338 P Pn 15 02 33.5 +1.9
KHC Kasperske Hory 12.01 338 ePN Pn 15 02 36.2 +0.6
KHC eSN Sn 15 04 43.4 -5.7
KHC Kasperske Hory 12.01 338 eP Pn 15 02 36.2 +0.6
KHC e 15 04 43.4
AKASG Malin Array Be 14.02 24 Pn Pn 15 03 02.5 -0.6
comp=Z,0.2nm,0.3s,baz=211,slow=9.0,SNR=2.5
ANN Anapa 14.39 57 eP Pn 15 03 04.5 -3.7
ANN pmax pmax
comp=Z,56nm,1.1s
SOC Sochi 15.60 64 eP P 15 03 28.0 -0.4
SOC e 15 06 23.1
SOC pmax pmax
comp=Z,7.0nm,0.5s
SOC MLR MLR
comp=Z,137nm,8.0s
NEY Neytrino 17.68 66 iP P 15 03 52.4 +0.7
SHA1 Shidzhatmaz 17.71 65 iP P 15 03 53.7 +1.5
KIV Kislovodsk 17.78 64 eP P 15 03 53.1 +0.4
KIV pmax pmax
comp=Z,20nm,1.0s
KBZ Khabaz 17.88 65 P P 15 03 55.5 +1.8
comp=Z,0.1nm,0.3s,baz=282,slow=6.4,SNR=9.4
KBZ Khabaz 17.88 65 iP P 15 03 55.7 +2.0
KBZ pmax pmax
comp=Z,6.0nm,0.9s
ZEI Tsey 18.47 68 eP Pn 15 04 03.5 +2.9
ZEI pmax pmax
comp=Z,3.0nm,0.6s
VSR Storozhevoye 18.61 39 eP P 15 04 00.7 -1.0
VSR pmax pmax
comp=Z,6.0nm,0.8s
ESDC Sonseca Array 18.98 282 P Pn 15 04 06.3 -0.3
comp=Z,0.1nm,0.3s,baz=76,slow=11,SNR=3.5
GNI Garni 19.00 76 P Pn 15 04 07.1 +0.2
comp=Z,0.5nm,0.3s,baz=198,slow=6.9,SNR=6.0
GNI Garni 19.00 76 ceP Pn 15 04 07.6 +0.7
GNI pmax pmax
comp=Z,78nm,1.7s
VRH Novokhopyorsk 19.92 42 eP P 15 04 16.3 +0.3
VRH pmax pmax
comp=Z,10.0nm,0.6s
OBN Obninsk 20.19 28 ↑eP Pn 15 04 21.2 +0.4
OBN *SP pP 15 04 23.0 -0.4
OBN e 15 04 37.7
OBN e 15 04 53.2
OBN S S 15 07 59.0 -5.8
OBN pmax pmax
comp=Z,6.0nm,0.8s
VSU Vasula 20.73 9 iP P 15 04 24.4 -0.3
VSU pmax pmax
comp=Z,80nm,0.9s
HFS Hagfors 22.39 351 P P 15 04 43.0 +0.4
comp=Z,2.3nm,0.6s,baz=161,slow=11,SNR=7.8
HFS Hagfors 22.39 351 P P 15 04 43.0 +0.4
NORES NORESS Array B 23.27 349 P P 15 04 56.9 +5.2
NORES pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 23.57 7 P P 15 04 53.9 -0.9
comp=Z,2.4nm,0.6s,baz=168,slow=10,SNR=14
FINES FINESS Array B 23.57 7 P P 15 04 54.1 -0.6
FINES FINESS Array B 23.57 7 iP P 15 04 54.2 -0.6
FINES pmax pmax
comp=Z,2.0nm,0.6s
NB2 NORSAR Subarra 23.61 349 P P 15 04 55.4 +0.3
comp=Z,4.5nm,1.2s,baz=162,slow=9.3
NOA NORSAR Array B 23.61 349 P P 15 04 55.5 +0.3
comp=Z,1.2nm,0.9s,baz=152,slow=9.4,SNR=5.1
NOA LR LR 15 16 44.4
comp=Z,57nm,18.1s,baz=230,slow=43
KLMR Klimovskoe 25.70 22 eP P 15 05 12.1 -2.2
KLMR AMP 15 05 27.3
comp=Z,18nm,1.7s
KLMR Klimovskoe 25.70 22 eP P 15 05 12.0 -2.2
KLMR pmax pmax
comp=Z,18nm,1.7s
GEYT Alibeck 29.60 79 P P 15 05 49.6 +0.1
comp=Z,0.7nm,0.5s,baz=274,slow=7.9,SNR=2.4
TORD Torodi Ar. Bea 29.95 219 P P 15 05 54.0 +1.3
comp=Z,1.2nm,0.7s,baz=36,slow=9.5,SNR=6.8
TORD Torodi Ar. Bea 29.95 219 P P 15 05 53.1 +0.4
ARU Arti 31.15 42 P P 15 06 02.5 -0.4
comp=Z,0.9nm,0.4s,baz=233,slow=7.9,SNR=4.9
ARU Arti 31.15 42 P P 15 06 01.7 -1.3
ARU IAmb IAmb 15 06 04.8
comp=Z,2.7nm,0.5s
ARCES ARCESS Array B 31.55 3 P P 15 06 06.1 -0.3
comp=Z,1.1nm,0.6s,baz=188,slow=11,SNR=12
KKAR Karatay Array 37.91 66 P P 15 07 02.3 +0.7
KKAR Karatay Array 37.91 66 P P 15 07 02.3 +0.7
DBIC Dimbokro 38.80 222 P P 15 07 11.5 +2.2
comp=Z,1.6nm,0.5s,baz=1.4,slow=9.4,SNR=6.5
DBIC Dimbokro 38.80 222 P P 15 07 10.4 +1.1
DBIC IAmb IAmb 15 07 22.9
comp=Z,8.4nm,1.4s
DBIC Dimbokro 38.80 222 P P 15 07 10.4 +1.1
DBIC pmax pmax
comp=Z,8.0nm,1.4s
AAK Ala-Archa 40.87 66 iP P 15 07 26.2 -0.3
AAK pmax pmax
comp=Z,1.0nm,1.0s
KURK Kurchatov 42.38 53 ceP P 15 07 39.6 +1.1
KURK pmax pmax
comp=Z,3.0nm,1.3s
MK31 Makanchi Array 45.41 58 P P 15 08 02.7 -0.3
MK31 Makanchi Array 45.41 58 P P 15 08 02.7 -0.3
MK31 pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 45.41 58 P P 15 08 02.8 -0.3
comp=Z,1.5nm,0.5s,baz=274,slow=7.3,SNR=34
ZAA0 Zalesovo Array 45.79 48 P P 15 08 05.8 -0.1
ZALV Zalesovo Beam 45.79 48 P P 15 08 05.5 -0.3
comp=Z,5.8nm,0.5s,baz=276,slow=8.9,SNR=30
ZALV Zalesovo Beam 45.79 48 P P 15 08 05.9 0.0
TLY Talaya 57.38 47 iP P 15 09 31.9 -0.7
TLY pmax pmax
comp=Z,1.0nm,1.0s
TIXI Tiksi 59.70 20 iP P 15 09 47.9 -0.5
TIXI pmax pmax
comp=Z,2.0nm,1.5s
SONM Songino Array 60.56 51 P P 15 09 54.9 0.0
comp=Z,1.0nm,0.7s,baz=291,slow=7.5,SNR=8.9
SONM Songino Array 60.56 51 P P 15 09 53.6 -1.2
YAK Yakutsk 65.18 29 P P 15 10 25.2 0.0
comp=Z,4.2nm,0.5s,baz=83,slow=1.1,SNR=6.4
YAK Yakutsk 65.18 29 P P 15 10 24.3 -0.8
YAK Yakutsk 65.18 29 iP P 15 10 25.1 0.0
YAK pmax pmax
comp=Z,6.0nm,0.8s
CMAR Chiang Mai Arr 70.01 82 P P 15 10 56.2 -0.2
comp=Z,0.8nm,0.8s,baz=304,slow=7.5,SNR=4.7
CMAR Chiang Mai Arr 70.01 82 iP P 15 10 56.0 -0.4
CMAR pmax pmax
comp=Z,1.0nm,0.8s
BILL Bilibino 71.06 13 ↑eP P 15 11 04.6 +2.6
BILL *PP sP 15 11 09.0 0.0
BILL *SP pP 15 11 13.0 +5.9
BILL S S 15 20 09.0 -8.2
BILL pmax pmax
comp=Z,1.0nm,1.2s
BILL MLR MLR
comp=Z,66nm,18.0s
SEY Seymchan 72.19 21 iP P 15 11 09.0 +0.1
YKA Yellowknife Ar 73.36 340 P P 15 11 17.1 +1.3
comp=Z,0.3nm,0.6s,baz=32,slow=6.0,SNR=4.0
KLR Kul'dur 73.96 39 P P 15 11 20.0 +0.4
comp=Z,1.7nm,0.7s,baz=312,slow=7.1,SNR=8.5
KLR Kul'dur 73.96 39 iP P 15 11 19.4 -0.2
KLR pmax pmax
comp=Z,2.0nm,0.9s
ILAR Eielson Array 76.91 354 P P 15 11 37.6 +1.4
comp=Z,0.6nm,0.9s,baz=5.3,slow=4.1,SNR=4.8
KSRS Korea Array 79.43 51 P P 15 11 51.5 +0.8
comp=Z,0.8nm,0.6s,baz=318,slow=5.4,SNR=3.9
YSS Yuzh-Sakhalins 80.85 36 eP P 15 11 59.5 +1.3
ASAR Alice Springs 122.29 96 PKP PKPdf 15 18 39.6 -0.2
comp=Z,0.7nm,1.0s,baz=328,slow=3.3,SNR=3.5

SOME 08 15:11:06.2, 40.17N×73.48E, h15km
NNC 08 15:11:08.6±1.4, 40.25N×73.53E, h0km, mb3.8, mpv3.5,
Error ellipse: s-maj=11.0km s-min=5.4km az=173.0
KRNET 08 15:11:08.1±0.1, 40.20N×73.92E, h21km, mb3.2
ISC 08 15:11:09.5±1.1, 40.28N±0.05×73.65E±0.02, h10km, n69,
σ1º98/103, 21C-16D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob baz=28	1.16	334	⇑iP	Pn	15 11 33.2	+1.2
ARSB	baz=28			⇑iS	Sn	15 11 51.6	+3.7
ARLS	Aral baz=10.0	1.66	18	⇓iP	Pb	15 11 39.6	-0.7
ARLS	baz=10.0			⇓iS	Sg	15 12 02.6	-0.2
AML	Almayashu baz=55	1.85	1	⇑iP	Pb	15 11 43.9	+0.3
AML	baz=55			⇑iS	Sg	15 12 09.7	+0.7
AML	Almayashu SNR=46	1.85	1	P	Pg	15 11 44.1	-0.8
ARK	Arkit baz=18	1.98	320	⇓iP	Pg	15 11 46.9	-0.6
ARK	baz=18			⇓iS	Sg	15 12 15.1	+1.9
UCH	Uchtor baz=12	2.05	18	⇑iP	Pg	15 11 47.7	-1.2
UCH	baz=12			⇑iS	Sg	15 12 15.7	+0.3
UCH	Uchtor SNR=31	2.05	18	P	Pb	15 11 47.5	+0.4
NRN	Naryn baz=51	2.12	56	⇓iP	Pn	15 11 44.7	-0.7
NRN	baz=51			⇓iS	Sn	15 12 12.3	+0.4
KZA	Kyzart baz=28	2.16	33	⇑iP	Pb	15 11 49.5	+0.5
KZA	baz=28			⇑iS	Sg	15 12 18.8	-0.2
KZA	Kyzart SNR=17	2.16	33	P	Pg	15 11 50.1	-0.9
BTK	Batken baz=68	2.18	265	⇓iP	Pg	15 11 50.2	-1.2
BTK	baz=68			⇓iS	Sg	15 12 20.6	+0.9
EKS2	Erkin-Say baz=58	2.38	2	⇑iP	Pb	15 11 52.1	-0.4
EKS2	baz=58			⇑iS	Sb	15 12 22.8	+0.8
EKS2	Erkin-Say SNR=26	2.38	2	P	Pb	15 11 53.2	+0.7
AAK	Ala-Archa baz=10.0	2.44	15	⇑iP	Pb	15 11 53.2	-0.3
AAK	baz=10.0			⇑iS	Sb	15 12 24.2	+0.5
AAK	Ala-Archa SNR=37	2.44	15	P	Pg	15 11 54.6	-1.6
AAK	Ala-Archa 11nm,0.5s	2.44	15	⇑Pn	Pb	15 11 52.0	-1.5
AAK	48nm,0.7s			⇑Sn	Sb	15 12 24.8	+1.1
MRKS	Merke 48nm,0.4s	2.48	353	⇓iP	Pb	15 11 54.3	0.0
MRKS	64nm,0.6s			eS	Sg	15 12 28.2	-1.0
MRKS	Merke 48nm,0.4s	2.48	353	Pg	Pb	15 11 54.3	0.0
MRKS	64nm,0.6s			Lg	Lg	15 12 28.2	
KBK	Karagaybulak SNR=39	2.56	22	P	Pg	15 11 57.1	-1.6
ULHL	Ulahol baz=40	2.77	44	⇑iP	Pb	15 11 58.4	-0.8
ULHL	baz=40			⇑iS	Sb	15 12 34.0	+0.7
ULHL	Ulahol SNR=6.7	2.77	44	P	Sg	15 12 39.0	+0.5
BOOM	Boomskoye usch baz=33	2.80	37	⇓eP	Pn	15 11 56.2	+1.7
BOOM	baz=33			⇓iS	Sn	15 12 30.2	+1.8
CHMS	Chumysh SNR=10	2.84	17	P	Pb	15 11 59.6	-0.6
CHMS	Chumysh 8.8nm,0.8s	2.84	17	⇓Pn	Pn	15 11 57.0	+2.1
CHMS	25nm,0.8s			⇓Sn	Sb	15 12 34.0	-1.0
USP	Ospenovka SNR=7.5	3.05	12	P	Pb	15 12 03.1	-0.8
DZA	Taraz 72nm,0.1s	3.13	327	eP	Pb	15 12 03.9	-1.5
DZA	43nm,0.2s			eS	Sb	15 12 44.7	+1.0
DZA	Taraz 72nm,0.1s	3.13	327	Pg	Pb	15 12 03.9	-1.5
DZA	43nm,0.2s			Lg	Lg	15 12 45.1	
JBG	Jabagly 7.9nm,0.2s	3.17	313	Pg	Pb	15 12 04.0	-2.1
JBG	22nm,0.6s			Lg	Lg	15 12 44.6	
KST	Kastek 9.8nm,0.5s	3.26	31	eP	Pb	15 12 08.0	+0.5
KST	28nm,0.6s			eS	Sg	15 12 52.1	-2.0
KST	Kastek 9.8nm,0.5s	3.26	31	Pg	Pb	15 12 08.0	+0.5
KST	28nm,0.6s			Lg	Lg	15 12 52.2	
IUG	Iuzhnay 2.8nm,0.3s	3.31	305	eP	Pb	15 12 05.6	-2.7
IUG	46nm,0.6s			eS	Sb	15 12 47.4	-1.2
IUG	Iuzhnay 2.8nm,0.3s	3.31	305	Pg	Pb	15 12 05.6	-2.7
IUG	46nm,0.6s			Lg	Lg	15 12 47.4	
DGS	Degeres 10nm,0.6s	3.35	28	eP	Pb	15 12 10.6	+1.5
DGS	38nm,0.8s			eS	Sg	15 12 56.5	-0.8
DGS	Degeres 10nm,0.6s	3.35	28	Pg	Pb	15 12 10.6	+1.5
DGS	38nm,0.8s			Lg	Lg	15 12 56.5	
MTBS	Maitube 11nm,0.3s	3.52	35	eP	Pb	15 12 12.9	+0.9
MTBS	18nm,0.5s			eS	Sg	15 13 00.1	-2.5
MTBS	Maitube 11nm,0.3s	3.52	35	Pg	Pb	15 12 12.9	+0.9
MTBS	18nm,0.5s			Lg	Lg	15 13 00.1	
IZV	Izvestkoviy 6.4nm,0.6s	3.53	38	eP	Pb	15 12 13.7	+1.4
IZV	43nm,0.7s			eS	Sg	15 13 01.9	-1.2
IZV	Izvestkoviy 6.4nm,0.6s	3.53	38	Pg	Pb	15 12 13.7	+1.4
IZV	43nm,0.7s			Lg	Lg	15 13 01.9	
KK31	Karatay Array 0.2nm,0.3s,baz=129,slow=13,SNR=40	3.67	321	⇓Pn	Pn	15 12 08.5	+2.1
KK31	0.8nm,0.3s,baz=133,slow=13,SNR=22			⇑Pg	Pg	15 12 17.1	-2.7
KK31	6.2nm,0.5s,baz=133,slow=28,SNR=3.9			⇑Lg	Lg	15 13 05.4	
TNSS	Tian-Shan 6.3nm,0.1s	3.70	41	eP	Pb	15 12 16.6	+1.4
TNSS	21nm,0.3s			eS	Sg	15 13 06.7	-1.6
TNSS	Tian-Shan 9.7nm,0.4s	3.70	41	Pg	Pb	15 12 16.6	+1.4
TNSS	21nm,0.6s			Lg	Lg	15 13 06.0	
KRBS	Karabastau 11nm,0.5s	3.73	23	eP	Pb	15 12 17.5	+2.0
KRBS	3.5nm,0.7s			eS	Sg	15 13 07.8	-1.4
KRBS	Karabastau 11nm,0.5s	3.73	23	Pg	Pb	15 12 17.5	+2.0
KRBS	3.5nm,0.7s			Lg	Lg	15 13 07.6	
KNDC	Almaty	3.84	39	⇑Pg	Pg	15 12 20.7	-2.4
KNDC				⇓Lg	Lg	15 13 14.0	
MDOK	Medeo 4.5nm,0.5s	3.84	40	eP	Pb	15 12 19.4	+1.9
MDOK	11nm,0.8s			eS	Sg	15 13 11.2	-1.6
MDOK	Medeo 5.4nm,0.8s	3.84	40	⇑Pn	Pn	15 12 10.5	+1.7
MDOK	13nm,0.7s			Lg	Lg	15 13 14.2	
MDOK	Medeo 4.5nm,0.5s	3.84	40	Pg	Pb	15 12 19.4	+1.9
MDOK	11nm,0.8s			Lg	Lg	15 13 11.2	
KOTS	Kotyrbulak 17nm,0.5s	3.92	40	eP	Pb	15 12 20.5	+1.6
KOTS	21nm,0.4s			eS	Sg	15 13 13.3	-2.2
KOTS	Kotyrbulak 17nm,0.5s	3.92	40	Pg	Pb	15 12 20.5	+1.6
KOTS	21nm,0.4s			Lg	Lg	15 13 13.3	
KTBS	Karatobe 5.0nm,0.6s	4.10	32	eP	Pb	15 12 23.5	+1.6
KTBS	20nm,0.5s			eS	Sg	15 13 18.6	-2.6
KTBS	Karatobe 5.0nm,0.6s	4.10	32	Pg	Pb	15 12 23.5	+1.6
KTBS	20nm,0.5s			Lg	Lg	15 13 18.6	
KUU	Kurty 1.2nm,0.3s	4.12	28	eP	Pb	15 12 24.2	+2.0
KUU	11nm,0.7s			eS	Sg	15 13 19.7	-2.3
KUU	Kurty 2.4nm,0.2s	4.12	28	Pg	Pb	15 12 24.9	+2.7
KUU	9.0nm,0.3s			Lg	Lg	15 13 19.8	
CHKK	Chushkaly 1.0nm,0.1s	4.35	34	eP	Pb	15 12 28.7	+2.6
CHKK	6.1nm,0.3s			eS	Sg	15 13 27.3	-1.8
CHKK	Chushkaly 1.0nm,0.1s	4.35	34	Pg	Pb	15 12 28.7	+2.6
CHKK	6.1nm,0.3s			Lg	Lg	15 13 27.3	
SATY	Saty 6.5nm,0.6s	4.51	51	eP	Pg	15 12 32.6	-3.4
SATY	6.8nm,0.5s			eS	Sg	15 13 34.0	-0.5
SATY	Saty 6.5nm,0.6s	4.51	51	Pg	Pg	15 12 32.6	-3.4
SATY	6.8nm,0.5s			Lg	Lg	15 13 34.0	
KURS	Kuram 3.9nm,0.7s	4.65	45	eP	Pg	15 12 34.6	-4.0
KURS	5.0nm,0.9s			eS	Sg	15 13 37.5	-1.3
KURS	Kuram 3.9nm,0.7s	4.65	45	Pg	Pg	15 12 34.6	-4.0
KURS	5.0nm,0.9s			Lg	Lg	15 13 37.5	
KPKS	Kokpek 1.7nm,0.2s	4.92	48	eP	Pg	15 12 39.6	-4.2
KPKS	14nm,0.4s			eS	Sg	15 13 46.1	-1.5
UZB	Uzynbulak 2.4nm,0.5s	4.93	53	eP	Pb	15 12 38.7	+2.6
UZB	6.3nm,0.5s			eS	Sg	15 13 44.2	-3.8
UZB	Uzynbulak 2.4nm,0.5s	4.93	53	Pg	Pb	15 12 38.7	+2.6
UZB	6.3nm,0.5s			Lg	Lg	15 13 44.2	
ARXS	Arharly 3.7nm,0.7s	5.00	37	eP	Pb	15 12 40.9	+3.6
ARXS	13nm,0.7s			eS	Sg	15 13 47.9	-2.2
ARXS	Arharly 3.7nm,0.7s	5.00	37	Pg	Pb	15 12 40.9	+3.6
ARXS	13nm,0.7s			Lg	Lg	15 13 47.9	
SHLS	Shalkode 7.1nm,1.0s	5.21	55	Pg	Pg	15 12 50.0	+0.6
SHLS	11nm,0.8s			Lg	Lg	15 14 03.9	
PDGK	Podgornoye 1.3nm,0.6s	5.32	53	Pg	Pg	15 12 48.4	-3.0
PDGK	2.7nm,0.8s			Lg	Lg	15 14 01.1	
PDGK	Podgornoye 3.8nm,1.0s	5.32	53	⇓Pg	Pb	15 12 46.7	+4.0
PDGK	12nm,1.0s			⇑Lg	Lg	15 14 00.7	
DJR	Jarkent 0.4nm,0.1s	6.09	46	Pg	Pg	15 13 03.1	-3.0
DJR	4.8nm,1.0s			Lg	Lg	15 14 26.7	
KAPS	Kapalarasan 1.1nm,0.4s	6.53	38	Pg	Pg	15 13 10.3	-4.2
KAPS	2.2nm,0.5s			Lg	Lg	15 14 38.5	

GUC 08 15:13:24.9±0.7, 22.01S×68.82W, h118km±4km, ML2.7, 4C,
Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.45	299	⇑iP	Pn	15 13 42.9	+0.4
PB09				iS	Sn	15 13 56.6	+0.9
LVC	Limon Verde	0.60	188	eP	Pn	15 13 43.4	-0.4
LVC				eS	Sn	15 13 57.1	-0.9
LVC	Limon Verde	0.60	188	P	Pn	15 13 43.4	-0.4
LVC	comp=Z,178nm,0.7s			pmax	pmax		
PB03	IPOC Station P	0.86	267	⇑iP	Pn	15 13 46.2	+0.6
PB03				iS	Sn	15 14 02.4	+1.1
PB03	comp=E,170nm,0.1s			IAML		15 14 03.4	
PB06	IPOC Station P	0.98	225	⇑iP	Pn	15 13 47.2	+0.5
PB06				eS	Sn	15 14 04.0	+0.8
PB06	comp=E,388nm,0.3s			IAML		15 14 05.3	
PB07	IPOC Station P	1.03	286	⇑iP	Pn	15 13 48.0	+0.8
PB07				iS	Sn	15 14 05.5	+1.5
PB07	comp=E,215nm,0.1s			IAML		15 14 07.2	
PB01	IPOC Station P	1.15	327	eP	Pn	15 13 48.7	+0.4
PB01				iS	Sn	15 14 06.4	+0.3
PB01	comp=E,240nm,0.2s			IAML		15 14 07.8	
PB02	IPOC Station P	1.21	304	eP	Pn	15 13 49.8	+0.7
PB02				iS	Sn	15 14 08.3	+0.9
PB02	comp=E,232nm,0.3s			IAML		15 14 12.4	
PB04	IPOC Station P	1.27	255	eP	Pn	15 13 50.5	+0.7
PB04				iS	Sn	15 14 09.9	+1.3
PB04	comp=N,140nm,0.3s			IAML		15 14 11.3	
PB15	IPOC Station P	1.33	207	eP	Pn	15 13 51.1	+0.6
PB15				eS	Sn	15 14 11.4	+1.5
PB05	IPOC Station P	1.53	236	eP	Pn	15 13 53.3	+0.7
PB05				eS	Sn	15 14 14.4	+0.7
PB05	comp=N,64nm,0.5s			IAML		15 14 19.1	

SOME 08 15:19:17.7, 40.38N×73.67E, h0km
KRNET 08 15:19:17.2±0.1, 40.25N×73.73E, h19km, mb2.9
NNC 08 15:19:19.3±2.1, 40.32N×73.61E, h0km, mb3.4, mpv3.0,
Error ellipse: s-maj=16.3km s-min=11.5km az=159.0
ISC 08 15:19:17.8±1.4, 40.28N±0.06×73.72E±0.03, h10km, n32,
σ1º56/52, 23C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob baz=32	1.18	332	⇑iP	Pg	15 19 39.8	-0.7
ARSB	baz=32			⇑iS	Sn	15 19 57.5	+0.7
ARLS	Aral baz=16	1.64	16	⇑iP	Pg	15 19 48.3	-1.0
ARLS	baz=16			⇑iS	Sg	15 20 11.9	+1.3
AML	Almayashu baz=59	1.85	359	⇑iP	Pb	15 19 51.6	-0.3
AML	baz=59			⇑iS	Sg	15 20 17.3	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AML	Almayashu	1.85	359	P	Pg	15 19 53.1	-0.1
	SNR=28						
ARK	Arkit	2.01	319	⇑iP	Pb	15 19 53.9	-0.7
	baz=20						
ARK				⇑iS	Sg	15 20 21.9	-0.6
	baz=20						
UCH	Uchtor	2.03	17	⇑iP	Pb	15 19 55.3	+0.2
	baz=17						
UCH				⇑iS	Sg	15 20 22.5	-0.7
	baz=17						
UCH	Uchtor	2.03	17	P	Pg	15 19 55.5	-1.3
	SNR=14						
BTK	Batken	2.23	265	⇑eP	Pb	15 19 57.4	-0.9
	baz=66						
BTK				⇑iS	Sb	15 20 26.8	+0.7
	baz=66						
EKS2	Erkin-Say	2.38	1	⇑iP	Pb	15 20 00.3	-0.5
	baz=1.0						
EKS2				⇑iS	Sb	15 20 30.6	+0.4
	baz=1.0						
EKS2	Erkin-Say	2.38	1	P	Pg	15 20 02.2	-1.2
	SNR=9.3						
AAK	Ala-Archa	2.42	14	⇓eP	Pb	15 20 00.8	-0.8
	baz=13						
AAK				⇓iS	Sb	15 20 31.2	-0.4
	baz=13						
AAK	Ala-Archa	2.42	14	P	Pg	15 20 02.4	-1.9
	SNR=13						
AAK	Ala-Archa	2.42	14	⇑Pn	Pb	15 20 01.1	-0.5
	5.2nm,0.4s						
AAK				⇑Sn	Sb	15 20 32.6	+1.0
	15nm,0.6s						
MRKS	Merke	2.49	352	eP	Pb	15 20 02.6	0.0
	21nm,0.3s						
MRKS				eS	Sb	15 20 34.9	+1.5
	24nm,0.5s						
MRKS	Merke	2.49	352	Pg	Pb	15 20 01.9	-0.7
	21nm,0.3s						
MRKS				Lg	Lg	15 20 36.3	
	24nm,0.5s						
KBK	Karagaybulak	2.54	21	⇑eP	Pb	15 20 02.7	-1.0
	baz=21						
KBK				⇑iS	Sb	15 20 35.0	-0.1
	baz=21						
KBK	Karagaybulak	2.54	21	P	Pb	15 20 04.5	+0.8
	SNR=13						
CHMS	Chumysh	2.82	16	⇓Pn	Pb	15 20 06.6	-1.7
	4.5nm,0.9s						
CHMS				⇑Sn	Sb	15 20 42.0	-1.0
	6.4nm,0.8s						
KST	Kastek	3.23	31	eP	Pg	15 20 17.6	-2.1
	4.7nm,0.4s						
KST				eS	Sg	15 21 00.8	-0.7
	10nm,0.8s						
KST	Kastek	3.23	31	Pg	Pb	15 20 16.3	+0.9
	4.7nm,0.4s						
KST				Lg	Lg	15 21 00.9	
	10nm,0.8s						
DGS	Degeres	3.33	27	eP	Pg	15 20 19.1	-2.5
	4.5nm,0.6s						
DGS				eS	Sg	15 21 03.3	-1.5
	14nm,0.8s						
DGS	Degeres	3.33	27	Pg	Pb	15 20 18.2	+1.2
	4.5nm,0.6s						
DGS				Lg	Lg	15 21 04.2	
	14nm,0.8s						
IUG	Iuzhnay	3.35	305	eP	Pg	15 20 19.4	-2.5
	0.6nm,0.3s						
IUG				eS	Sg	15 21 03.5	-1.8
	22nm,0.5s						
IZV	Izvestkoviy	3.50	37	eP	Pg	15 20 22.8	-2.1
	2.0nm,0.4s						
IZV				eS	Sg	15 21 09.6	-0.8
	13nm,0.8s						
IZV	Izvestkoviy	3.50	37	Pg	Pb	15 20 21.3	+1.3
	2.0nm,0.4s						
IZV				Lg	Lg	15 21 09.5	
	14nm,0.7s						
KK31	Karatay Array	3.70	321	⇑Pn	Pn	15 20 17.4	+2.3
	0.1nm,0.3s,baz=130,slow=13,SNR=8.0						
KK31				Pg	Pb	15 20 24.7	+1.4
	0.5nm,0.3s,baz=128,slow=13,SNR=9.3						
KK31				⇓Lg	Lg	15 21 13.4	
	4.2nm,0.6s,baz=132,slow=28,SNR=4.1						
KRBS	Karabastau	3.71	23	eP	Pg	15 20 25.7	-3.2
	3.9nm,0.5s						
KRBS				eS	Sg	15 21 14.9	-2.0
	3.9nm,0.7s						
KRBS	Karabastau	3.71	23	Pg	Pb	15 20 24.5	+1.1
	3.9nm,0.5s						
KRBS				Lg	Lg	15 21 14.9	
	3.9nm,0.7s						
MDOK	Medeo	3.81	40	⇑Pn	Pn	15 20 20.2	+3.6
	1.0nm,0.3s						
MDOK				Sn	Sb	15 21 08.5	-2.9
	6.6nm,0.8s						
KTBS	Karatobe	4.08	32	eP	Pg	15 20 33.0	-2.9
	1.2nm,0.4s						
KTBS				eS	Sg	15 21 26.9	-1.8
	5.1nm,0.9s						
KTBS	Karatobe	4.08	32	Pg	Pg	15 20 32.0	+2.3
	1.2nm,0.4s						
KTBS				Lg	Lg	15 21 27.9	
	5.1nm,0.9s						
PDGK	Podgornoye	5.28	53	⇑Pg	Pg	15 20 57.3	-1.6
	1.4nm,0.7s						
PDGK				⇑Lg	Lg	15 22 10.2	
	3.5nm,0.9s						

*NEIC **08** 15:30:37.7±0.9, 51°.34N±0°.06×175°.33W±0°.07, h29km±9km, Error ellipse: s-maj=8.4km s-min=6.3km az=169.0*
*AEIC **08** 15:30:38.6±1.0, 51°.44N±0°.08×175°.35W±0°.05, h46km±7km, ML2.9/24, Error ellipse: s-maj=11.3km s-min=4.8km az=174.0*
*IDC **08** 15:30:41.1±3.4, 52°.55N×176°.58W, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.1/42, mbtmp3.2/3, ML3.2/1, Error ellipse: s-maj=101.2km s-min=35.2km az=1.0*
ISC 08 15:30:37.9±2.1, 51°.4N±0°.1×175°.34W±0°.06, h32km±13km, n27, σ0°.56/25, Andreanof Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSIG	Igitkin Island	0.72	330		Pn	15 30 51.9	0.0
GSIG					Sn	15 31 01.9	0.0
GSMY	Great Sitkin M	0.81	327		Pn	15 30 53.5	+0.3
GSCK	Great Sitkin C	0.83	322		Sn	15 31 05.0	+0.5
GSTD	Great Sitkin T	0.85	324		Pb	15 30 54.2	-0.2
GSTD					Sn	15 31 05.7	+0.4
GSTR	Great Sitkin T	0.86	329	Pn	Pn	15 30 53.5	-0.3
GSTR				Sn	Sn	15 31 06.1	+0.8
ADK	Adak	0.99	302	Pn	Pn	15 30 55.4	-0.2
ADAG	Mount Adagdak	1.00	308		Pb	15 30 56.5	-0.2
ATKA	Atka Island	1.10	40		Pn	15 30 57.1	0.0
KOFP	Korovin Flat P	1.19	40		Pn	15 30 59.1	+0.6
KOFP					Sb	15 31 14.9	-0.1
KOWE	Korovin West	1.21	33		Pn	15 30 58.9	+0.3
KIRH	Kanaga Island	1.22	297		Pn	15 30 59.2	+0.5
KIWB	Kanaga Island	1.23	294	Pn	Pn	15 30 59.0	+0.1
KIWB				Sn	Sn	15 31 14.7	+0.2
KIMD	Kanaga Island	1.25	289		Pn	15 30 59.1	-0.1
KIKV	Kanaga Island	1.25	295		Pn	15 30 59.8	+0.6
KICM	Kanaga Island	1.28	296		Pn	15 31 00.2	+0.6
TAPA	Tanaga Point A	1.61	287		Pn	15 31 04.6	+0.5
TAFP	Tanaga Falls P	1.73	289		Pn	15 31 06.5	+0.7
TASE	Tanaga Southea	1.75	287		Pn	15 31 07.0	+1.0
ILAR	Eielson Array	19.92	37	P	Pn	15 35 09.3	+0.8
	0.1nm,0.3s,baz=228,slow=9.7,SNR=5.6						
H11N2	WAKE ISLAND Hy	34.53	210	T	T	16 14 08.9	
	baz=18,slow=76,SNR=6.3						
H11N3	WAKE ISLAND Hy	34.54	210	T	T	16 14 04.8	
	baz=18,slow=76,SNR=5.6						
H11N1	WAKE ISLAND Hy	34.55	210	T	T	16 14 07.4	
	baz=18,slow=76,SNR=5.1						
H11S1	WAKE ISLAND Hy	35.74	210	T	T	16 15 44.5	
	baz=19						
H11S2	WAKE ISLAND Hy	35.75	210	T	T	16 15 41.8	
	baz=19						
H11S3	WAKE ISLAND Hy	35.75	210	T	T	16 15 40.7	
	baz=19						
PDAR	Pinedale Array	44.23	74	P	P	15 38 55.4	+11
	0.2nm,0.5s,baz=308,slow=4.4,SNR=3.6						
MKAR	Makanchi Array	61.72	310	P	P	15 40 51.6	-1.3
	0.2nm,0.4s,baz=48,slow=7.6,SNR=5.8						

*IDC **08** 17:12:16.7±1.1, 36°.69N×26°.64E, h0km, mb3.4/4, mb1 3.4/7, mb1mx3.2/49, mbtmp3.4/5, ML3.2/3, MS3.1/1, Ms1 3.2/1, ms1mx2.5/35, Error ellipse: s-maj=30.3km s-min=15.7km az=152.0*
*ISK **08** 17:12:17.9, 36°.74N×26°.63E, h17km, ML3.3/27*
*ATH **08** 17:12:17.9, 36°.74N×26°.65E, h28km±1km, ML3.3/14, Error ellipse: s-maj=1.7km s-min=0.8km az=7.0*
*THE **08** 17:12:18.7, 36°.76N×26°.65E, h8km±1km, ML3.4/7, Error ellipse: s-maj=1.9km s-min=0.2km az=139.0*
*DDA **08** 17:12:19.4, 36°.77N×26°.68E, h18km±1km, ML3.3*
ISC 08 17:12:18.9±0.9, 36°.73N±0°.02×26°.63E±0°.02, h15km±7km, n123, σ0°.75/146, mb3.4/5, 1C-2D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KOSK	Kos Island	0.28	86	P	Pg	17 12 24.5	-0.3
KOSK				S	Sg	17 12 28.3	-0.7
	11μm,0.3s						
KOSK	Kos Island	0.28	86	PG	Pg	17 12 24.6	-0.3
KOSK				SG	Sg	17 12 28.8	-0.2
NISR	Nisiros	0.42	106	P	Pg	17 12 27.1	-0.2
NISR				S	Sg	17 12 33.3	+0.2
NISR	Nisiros	0.42	106	P	Pg	17 12 27.1	-0.2
NISR				S	Sg	17 12 33.3	+0.2
NISR				AML	AML	17 12 33.6	
	comp=N,18909μm,0.3s						
NISR				AML	AML	17 12 34.6	
	comp=E,28850μm,0.2s						
AMGA	Amorgos Island	0.60	280	P	Pg	17 12 30.3	-0.3
AMGA				S	Sg	17 12 39.6	+1.1
	comp=E,4μm,0.3s						
AMGA	Amorgos Island	0.60	280	P	Pg	17 12 30.3	-0.3
AMGA				S	Sg	17 12 39.7	+1.1
AMGA				AML	AML	17 12 42.2	
	comp=E,8285μm,0.2s						
AMGA				AML	AML	17 12 43.6	
	comp=N,8077μm,0.4s						
BODT	Bodrum	0.64	59	P	Pg	17 12 30.8	-0.7
BODT				S	Sg	17 12 39.8	-0.2
BODT	Bodrum	0.64	59	PG	Pg	17 12 30.7	-0.7
BODT				SG	Sg	17 12 39.9	-0.1
BDRM	Kayabasi	0.74	63	iP	Pg	17 12 32.8	-0.5
BDRM				iS	Sg	17 12 42.2	-0.8
BDRM				IAML		17 12 46.0	
	comp=E,998nm,0.3s						
DAT	Datca	0.77	90	PG	Pg	17 12 33.7	-0.1
DAT	Datca	0.77	90	iP	Pg	17 12 33.7	-0.1
DAT				iS	Sg	17 12 44.1	+0.2
DIDI	Didim-Aydin	0.81	37	PG	Pg	17 12 34.2	-0.4
APE	Apeiranthos	0.94	291	P	Pg	17 12 36.8	-0.3
APE				S	Sg	17 12 50.2	+0.8
	comp=E,2μm,0.3s						
APE	Apeiranthos	0.94	291	P	Pg	17 12 36.6	-0.5
APE				S	Sg	17 12 50.1	+0.7
APE				AML	AML	17 12 51.4	
	comp=E,2974μm,0.3s						
APE				AML	AML	17 12 52.0	
	comp=N,5112μm,0.3s						
APE	Apeiranthos	0.94	291	⇓P	Pg	17 12 36.9	-0.2
APE	Apeiranthos	0.94	291	PG	Pg	17 12 36.8	-0.3
APE				SG	Sg	17 12 50.2	+0.8
THR8	Santorini-Mono	0.98	251	P	Pb	17 12 37.4	-0.2
THR8	Santorini-Mono	0.98	251	P	Pb	17 12 37.3	-0.3
SMG	Samos	0.99	10	P	Pb	17 12 37.1	-0.7
SMG				S	Sb	17 12 50.1	-0.6
	comp=N,3μm,0.3s						
SMG	Samos	0.99	10	P	Pb	17 12 36.8	-1.0
SMG				AML	AML	17 12 53.4	
	comp=N,5306μm,0.3s						
SMG				AML	AML	17 12 55.1	
	comp=E,8221μm,0.3s						
SAP2K	Karterados	1.00	252	P	Pb	17 12 37.7	-0.2
SANT	Santorini	1.01	249	P	Pb	17 12 37.9	-0.2
SANT				S	Sb	17 12 52.4	+1.3
	comp=E,2μm,0.3s						
SANT	Santorini	1.01	249	P	Pb	17 12 37.8	-0.3
SANT				AML	AML	17 12 55.3	
	comp=N,2027μm,0.4s						
SANT				AML	AML	17 12 56.0	
	comp=E,5823μm,0.2s						
SANT	Santorini	1.01	249	⇓P	Pb	17 12 38.2	+0.2
SANT	Santorini	1.01	249	PG	Pb	17 12 37.6	-0.5
THR7	Fira-Santorini	1.01	253	P	Pb	17 12 38.1	-0.1
THR7	Fira-Santorini	1.01	253	P	Pb	17 12 38.0	-0.1
THT2	Imerovigli	1.01	253	P	Pb	17 12 38.1	-0.1
THT2	Imerovigli	1.01	253	PG	Pb	17 12 38.1	-0.1
THT1	Athinios (Pele	1.02	251	P	Pb	17 12 37.9	-0.4
THR3	Thira Island,	1.04	252	P	Pb	17 12 38.4	-0.2
THR3	Thira Island,	1.04	252	P	Pb	17 12 38.4	-0.2
SAP4	Santorini-Oia	1.04	256	P	Pb	17 12 38.4	-0.2
THR6	Thira Island,	1.06	250	P	Pb	17 12 38.8	-0.1
THR6	Thira Island,	1.06	250	P	Pb	17 12 38.9	-0.1
SAP1	Santorini-Akro	1.06	250	P	Pb	17 12 38.6	-0.3
SAP1	Santorini-Akro	1.06	250	P	Pb	17 12 38.7	-0.2
SAP3	Santorini-Thir	1.07	254	P	Pb	17 12 38.8	-0.3
IOSP	Ios island	1.07	270	P	Pb	17 12 38.8	-0.4
IOSP				S	Sg	17 12 54.1	+0.4
	comp=E,1μm,0.4s						
IOSP	Ios island	1.07	270	P	Pb	17 12 38.8	-0.4
IOSP				S	Sb	17 12 53.6	+0.5
IOSP				AML	AML	17 12 57.1	
	comp=E,2922μm,0.4s						
IOSP				AML	AML	17 12 59.5	
	comp=N,2823μm,0.4s						
THR5	Thira Island,	1.07	253	P	Pb	17 12 39.2	0.0
THR5	Thira Island,	1.07	253	P	Pb	17 12 39.0	-0.2
GCAM	G?zelcaml?	1.08	26	PN	Pb	17 12 38.4	-1.0
GCAM	G?zelcaml?	1.08	26	iP	Pb	17 12 38.8	-0.6
GCAM				iS	Sb	17 12 53.6	+0.3
GCAM				IAML		17 12 58.0	
	comp=E,1μm,0.5s						
KARP	Karpathos	1.26	160	P	Pn	17 12 41.3	-0.8
KARP	Karpathos	1.26	160	P	Pn	17 12 41.2	-0.8
KARP				AML	AML	17 13 01.8	
	comp=E,1732μm,0.6s						
KARP				AML	AML	17 13 08.7	
	comp=N,1628μm,0.6s						
KARP	Karpathos	1.26	160	PN	Pn	17 12 41.4	-0.6
MRSB	Marmaris-Mugla	1.26	90	PN	Pn	17 12 41.4	-0.7
ARG	Arkhangelos	1.31	113	P	Pn	17 12 42.4	-0.3
ARG	Arkhangelos	1.31	113	P	Pn	17 12 42.4	-0.3
ARG				S	Sb	17 13 00.0	+0.1
ARG				AML	AML	17 13 02.2	
	comp=E,853μm,0.2s						
ARG				AML	AML	17 13 07.7	
	comp=N,666μm,0.4s						
ARG	Arkhangelos	1.31	113	PN	Pn	17 12 42.3	-0.5
DGB	zmir	1.33	9	iP	Pn	17 12 43.8	+0.7
DGB				iS	Sn	17 13 01.7	+1.2
DGB				IAML		17 13 05.0	
	comp=N,512nm,0.6s						
DGB				IAML		17 13 07.0	
	comp=E,442nm,0.5s						
GMLD	Gumuldur	1.36	10	PN	Pn	17 12 43.2	-0.2
AYDN	Tasoluk	1.36	47	iP	Pn	17 12 43.8	+0.2
AYDN				iS	Sn	17 13 00.0	-1.4
AYDN				IAML		17 13 12.0	
	comp=E,439nm,0.4s						
YER	Yerkesik	1.39	73	P	Pn	17 12 44.3	+0.5
YER	Yerkesik	1.39	73	PN	Pn	17 12 43.4	-0.4
TNSA	Tinos	1.42	305	P	Pn	17 12 44.5	+0.3
ZEY	zmir	1.51	356	iP	Pn	17 12 44.5	-1.0
ZEY				iS	Sg	17 13 08.1	+0.6
ZEY				IAML		17 13 10.0	
	comp=E,586nm,0.3s						
ZEY				IAML		17 13 11.0	
	comp=N,955nm,0.3s						
AYDB	Zeytinkoy-Aydi	1.58	39	PN	Pn	17 12 46.2	-0.3
STIA	Sitia Lasithi	1.59	196	P	Pn	17 12 46.0	-0.5
TURN	Turunc	1.59	84	PN	Pn	17 12 41.7	-4.9
TURN	Turunc	1.59	84	iP	Pn	17 12 41.8	-4.8
TURN				iS	Sn	17 12 58.6	-8.3
DALY	Dalyan (Mula)	1.63	86	PN	Pn	17 12 46.7	-0.4
DALY	Dalyan (Mula)	1.63	86	iP	Pb	17 12 49.1	+0.4
DALY				iS	Sg	17 13 13.4	+2.0
ZKR	Zakros	1.65	192	P	Pn	17 12 47.4	+0.1
ZKR	Zakros	1.65	192	P	Pn	17 12 46.9	-0.5
ZKR				AML	AML	17 13 18.8	
	comp=N,745μm,0.4s						
ZKR				AML	AML	17 13 22.5	
	comp=E,1221μm,0.5s						
ZKR	Zakros	1.65	192	PN	Pn	17 12 46.9	-0.5
NPS	Neapolis	1.68	210	P	Pn	17 12 47.6	-0.2
NPS	Neapolis	1.68	210	P	Pn	17 12 47.4	-0.4
NPS				AML	AML	17 13 16.1	
	comp=E,1824μm,0.6s						
NPS				AML	AML	17 13 18.4	
	comp=N,1360μm,0.6s						
BLCB	Balcova	1.68	11	PN	Pn	17 12 47.3	-0.6
CHOS	Chios island	1.71	345	P	Pn	17 12 47.8	-0.6
CHOS				S	Sn	17 13 09.0	-1.1
	comp=N,618nm,0.4s						
CHOS	Chios island	1.71	345	P	Pn	17 12 47.4	-1.0
CHOS				AML	AML	17 13 16.9	
	comp=E,1256μm,0.4s						
CHOS				AML	AML	17 13 22.6	
	comp=N,1223μm,0.4s						
CHOS	Chios island	1.71	345	PN	Pn	17 12 47.7	-0.6
SERI	Serifos	1.77	285	P	Pn	17 12 48.3	-0.7
MHLA	Plaka, Milos I	1.77	271	P	Pn	17 12 48.5	-0.5
MHLO	Agia Marina, M	1.79	269	P	Pn	17 12 49.3	+0.1
MHLO				AML	AML	17 13 21.3	
	comp=N,1948μm,0.5s						
MHLO				AML	AML	17 13 22.4	
	comp=E,2129μm,0.7s						
LAST	Lasithi	1.82	211	P	Pn	17 12 50.0	+0.2
LAST	Lasithi	1.82	211	P	Pn	17 12 49.4	-0.4
LAST				AML	AML	17 13 23.7	
	comp=E,625μm,0.5s						
LAST				AML	AML	17 13 24.7	
	comp=N,659μm,0.6s						
KRBN	Karaburun	1.86	358	PN	Pn	17 12 50.0	-0.3
HRKL	Herakleio	1.88	222	PN	Pn	17 12 50.3	-0.2
TAVA	DENIZLI_Tavas	1.97	67	iP	Pn	17 12 52.2	+0.3
TAVA				iS	Sb	17 13 20.1	+1.1
FETY	Fethiye	1.98	92	PN	Pn	17 12 51.8	-0.1
FETY	Fethiye	1.98	92	iP	Pn	17 12 53.5	+1.6
FETY				iS	Sb	17 13 19.9	+0.7
FOCM	Foa	1.98	2	PN	Pn	17 12 51.4	-0.5
IDI	Anoyia	2.01	225	Pn	Pn	17 12 52.2	-0.3
	comp=N,3.8nm,0.3s,baz=69,slow=8.9,SNR=78						
IDI				Sn	Sn	17 13 16.6	-0.8
	comp=N,19nm,0.3s,baz=295,slow=23,SNR=13						
IDI	Anoyia	2.01	225	P	Pn	17 12 51.7	-0.7
IDI				AML	AML	17 13 26.2	
	comp=N,497μm,0.5s						
IDI				AML	AML	17 13 30.1	
	comp=E,581μm,0.4s						
IDI	Anoyia	2.01	225	PN	Pn	17 12 51.9	-0.5
DENT	Denizli	2.18	61	PN	Pn	17 12 54.4	-0.3
GOMA	Golmarmara-Man	2.22	27	PN	Pn	17 12 55.2	-0.1
SIVA	Sivas	2.26	221	P	Pn	17 12 56.2	+0.4
AKS	Akhisar	2.34	23	PN	Pn	17 12 56.7	-0.2
DKL	Dikili	2.35	5	PN	Pn	17 12 56.5	-0.5
VAM	Vamos	2.37	237	P	Pn	17 12 57.0	-0.2
KULA	Kula-Manisa	2.40	42	PN	Pn	17 12 58.0	+0.2
AKAS	Kas	2.45	101	PN	Pn	17 12 58.4	-0.1
IMMV	Iera Moni Meta	2.49	240	P	Pn	17 12 58.6	-0.3
IMMV	Iera Moni Meta	2.49	240	PN	Pn	17 12 59.1	+0.2
PRK	Paraskevi	2.53	354	P	Pn	17 12 59.8	+0.4
SIGR	SIGRI	2.55	346	P	Pn	17 12 59.5	-0.3
SIGR	SIGRI	2.55	346	PN	Pn	17 12 59.2	-0.5
RODP	Rodopos	2.60	244	PN	Pn	17 13 00.5	+0.1
ELL	Elmali	2.64	89	PN	Pn	17 13 01.2	+0.1
STEP	BALIKESIR_Sava	2.78	18	iP	Pb	17 13 10.3	+2.0
GVDS	Gavdos	2.79	228	PN	Pn	17 13 03.3	+0.2
GVD	Gavdhos	2.80	228	P	Pn	17 13 04.7	+1.5
GVD	Gavdhos	2.80	228	PN	Pn	17 13 03.5	+0.3
KNDR	Palaiochora Ch	2.81	239	PN	Pn	17 13 03.8	+0.4
SIMA	Simav-Kutahya	3.00	38	PN	Pn	17 13 06.5	+0.5
KORT	Korkueli	3.00	84	PN	Pn	17 13 06.3	+0.2
BALB	Balikesir	3.07	18	PN	Pn	17 13 07.3	+0.4
EZN	Ezine	3.10	356	PN	Pn	17 13 07.4	+0.1
MMB	Musomiste	5.35	336	P	Pg	17 13 58.9	-2.4
KKB	Krupnik	5.82	333	P	Pb	17 13 59.2	-0.9
BRTR	Keskin Array B	6.28	59	Pn	Pn	17 13 53.3	+2.2
	comp=E,0.3nm,0.3s,baz=246,slow=16,SNR=7.6						
HUMR	Humele	7.89	351	⇑P	Pb	17 14 39.3	+4.0
MMAI	Mount Meron Ar	8.11	115	Pn	Pn	17 14 15.4	-0.8
	comp=E,0.6nm,0.3s,baz=306,slow=12,SNR=5.9						
EIL	Elat	9.91	133	Pn	Pn	17 14 39.1	-1.7
	comp=E,0.3nm,0.3s,baz=325,slow=3.9,SNR=13						
ESDC	Sonseca Array	24.16	286	P	P	17 17 34.8	+0.2
	comp=E,0.6nm,0.6s,baz=79,slow=10,SNR=3.9						
NB2	NORSAR Subarra	26.22	343	P	P	17 17 59.1	+6.1
	comp=Z,1.7nm,1.0s,baz=159,slow=9.3						
NOA	NORSAR Array B	26.22	343	LR	LR	17 29 30.2	
	comp=Z,43nm,19.5s,baz=225,slow=39						
TORD	Torodi Ar. Bea	32.41	230	P	P	17 18 48.4	0.0
	comp=Z,0.4nm,0.5s,baz=35,slow=9.1,SNR=3.5						
KURBB	Kurchatov Arra	39.22	52	P	P	17 19 45.5	-0.9
	comp=Z,0.3nm,0.6s,baz=280,slow=8.7,SNR=3.5						
MKAR	Makanchi Array	41.93	58	P	P	17 20 09.8	+0.9
	comp=Z,0.4nm,0.7s,baz=278,slow=7.8,SNR=4.7						

ROM 08 17:12:36.4±0.2, 43°.407N±0°.004×12°.488E±0°.007, h8km±1km, ML1.1/1, 1C, Error ellipse: s-maj=0.5km s-min=0.3km az=75.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATVO	AVT- Monte Val	0.06	247	⇑P	Pg	17 12 38.5	+0.2
ATVO				S	Sg	17 12 39.9	+0.3
ATVO				AML	AML		
	comp=E,166μm,0.1s						
ATVO				AML	AML		
	comp=N,192μm,0.2s						
ATPI	Pietralunga -	0.08	305	P	Pg	17 12 38.7	+0.3
ATPI				S	Sg	17 12 40.3	+0.4
PIEI	Pieia	0.13	15	P	Pg	17 12 39.8	+0.5
PIEI				S	Sg	17 12 42.4	+1.1
PIEI				AML	AML		
	comp=E,173μm,0.3s						
PIEI				AML	AML		
	comp=N,96μm,0.2s						
PIEI				AML	AML		
	comp=N,96μm,0.2s						
MURB	Monte Urbino	0.15	169	P	Pg	17 12 40.1	+0.6
MURB				S	Sg	17 12 42.2	+0.6
MURB				AML	AML		
	comp=E,118μm,1.5s						
MURB				AML	AML		
	comp=N,86μm,0.3s						
MURB				AML	AML		
	comp=E,118μm,1.5s						
MURB				AML	AML		
	comp=N,86μm,0.3s						
ATMI	Monte Miggiano	0.18	246	P	Pg	17 12 39.9	-0.1
ATMI				S	Sg	17 12 44.0	+1.5
BADI	Badiali	0.20	300	P	Pg	17 12 41.2	+0.7
BADI				S	Sg	17 12 45.0	+1.7
NARO	Abbazia di Nar	0.21	18	P	Pg	17 12 41.1	+0.4
NARO				S	Sg	17 12 44.7	+1.1
ATCC	AVT- Casa Cast	0.25	153	P	Pg	17 12 42.1	+0.8
ATCC				S	Sg	17 12 46.8	+2.2
ATCC				AML	AML		
	comp=E,56μm,1.6s						
ATCC				AML	AML		
	comp=N,69μm,1.6s						

*IDC **08** 17:12:47.9±0.8, 38°.34N×20°.38E, h0km, mb4.0/13, mb1 4.0/21, mb1mx3.8/59, mbtmp3.9/21, ML3.3/8, MS3.7/1, Ms1 3.7/1, ms1mx2.6/57, Error ellipse: s-maj=17.6km s-min=13.3km az=174.0*
*PDG **08** 17:12:49.3±0.4, 38°.25N×20°.36E, h16km, ML4.1/14, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*ATH **08** 17:12:49.8, 38°.24N×20°.43E, h13km, ML4.0/24, Error ellipse: s-maj=1.3km s-min=0.7km az=254.0*
*SKO **08** 17:12:50.9, 38°.20N×20°.17E, h12km*
*MED_RC **08** 17:12:50.0±0.9, 38°.21N×20°.35E, h14km±4km, MW4.1/6, Moment Tensor Solution. Mantle waves: s6,c6; Duration: 1s0 Moment tensor: Scale 10^15 Nm; Mrr1.16±.53; Mθθ-0.93±.39; Mφφ-0.23±.26; Mrθ0.24±.35; Mrφ1.10±.29; Mθφ0.64±.44; Best double couple: M0 1.67000×10^15 NP1: φs98.00000°, δ50.00000°, λ45.00000°. NP2: φs334.00000°, δ57.00000°, λ130.00000°. Principal axes: T 1.5900, Plg57.0000°, Azm301.0000°; N 0.1500, Plg33.0000°, Azm130.0000°; P -1.7500, Plg4.0000°, Azm37.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
*BEO **08** 17:12:50.6±0.7, 38°.15N×20°.26E, h25km±4km, ML3.9/11*

THE **08** 17:12:50.1, 38.26N×20.39E, h10km±1km, ML4.0/18, Error ellipse: s-maj=1.3km s-min=0.4km az=256.0
NEIC **08** 17:12:53.1±2.7, 38.30N±0.06×20.38E±0.06, h41km±7km, Error ellipse: s-maj=8.9km s-min=6.8km az=197.0
ISC 08 17:12:49.5±0.6, **38.25N**±0.02×**20.42E**±0.02, **h14**km±3km, **n267**, σ**1.58**/354, **mb4.2**/27, **10C-7D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.01	28	P	Pg	17 12 52.0	0.0
KEF4				S	Sg	17 12 53.3	-0.3
KEF1	Kardakata, Kep	0.05	56	P	Pg	17 12 52.5	+0.4
KEF1				S	Sg	17 12 53.6	-0.3
LXR1	Lixouri, Cepha	0.05	164	P	Pg	17 12 52.3	+0.2
LXR1				S	Sg	17 12 53.7	-0.2
CHV1	Chavriata, Kef	0.07	204	P	Pg	17 12 52.6	+0.3
CHV1				S	Sg	17 12 54.4	+0.2
KEF3	Kipouria, Keph	0.07	230	P	Pg	17 12 52.6	+0.3
KEF3				S	Sg	17 12 54.6	+0.4
ARGA	Argostoli. Kep	0.09	148	P	Pg	17 12 52.6	+0.1
ARGA				S	Sg	17 12 54.3	-0.2
ARG2	Argostoli	0.09	143	P	Pg	17 12 52.7	+0.2
ARG2				S	Sg	17 12 54.3	-0.2
KEF2	Argostoli. Kep	0.10	148	P	Pg	17 12 52.8	+0.2
KEF2				S	Sg	17 12 54.7	-0.1
VLS	Valsamata	0.15	119	P	Pg	17 12 53.5	+0.1
VLS				S	Sg	17 12 56.0	+0.1
	208μm,0.1s						
VLS	Valsamata	0.15	119	P	Pg	17 12 53.5	+0.1
VLS				S	Sg	17 12 56.1	+0.1
VLS				AML	AML	17 12 56.2	
VLS				AML	AML	17 12 56.5	
VSK1	VASILIKIADES	0.19	36	P	Pg	17 12 54.4	+0.4
VSK1				S	Sg	17 12 57.8	+0.8
	121μm,0.3s						
KONA	Konidatara, Ke	0.21	34	P	Pg	17 12 54.7	+0.4
KONA				S	Sg	17 12 58.2	+0.8
FSK	Fiskardo	0.24	28	P	Pg	17 12 55.0	+0.4
FSK				S	Sg	17 12 58.3	+0.1
	47μm,0.3s						
FSK	Fiskardo	0.24	28	P	Pg	17 12 55.1	+0.4
FSK				S	Sg	17 12 58.5	+0.4
FSK				AML	AML	17 12 59.6	
	comp=N,89575μm,0.4s						
FSK				AML	AML	17 12 60.0	
	comp=E,96193μm,0.3s						
EVGI	Lefkada island	0.41	27	P	Pg	17 12 58.2	+0.4
EVGI				S	Sb	17 13 05.1	+0.3
EVGI	Lefkada island	0.41	27	P	Pg	17 12 58.3	+0.4
EVGI				S	Sb	17 13 04.3	-0.5
VLMS	Volimes, Zakyn	0.42	153	P	Pg	17 12 58.2	+0.3
MGNA	Meganis	0.50	36	P	Pg	17 12 59.5	+0.1
MGNA				AML	AML	17 13 07.8	
MGNA				AML	AML	17 13 07.9	
	comp=N,50477μm,0.3s						
LKD2	Lefkada island	0.57	19	P	Pg	17 13 00.8	+0.1
LKD2				S	Sg	17 13 08.2	-0.1
	comp=N,12μm,0.6s						
LKD2	Lefkada island	0.57	19	P	Pg	17 13 00.7	-0.1
LKD2				AML	AML	17 13 16.0	
	comp=E,27689μm,0.6s						
LKD2				AML	AML	17 13 16.9	
	comp=N,20458μm,0.5s						
ZAK2	Zakynthos	0.60	140	P	Pb	17 13 01.9	+0.1
ZAK2				S	Sn	17 13 12.2	-0.9
AST1	Astakos	0.60	61	P	Pg	17 13 01.6	+0.3
AST1				S	Sb	17 13 11.3	+1.1
	comp=N,89μm,0.4s						
TSLK	Tsoukalades, L	0.60	18	P	Pg	17 13 01.4	+0.1
TSLK	Tsoukalades, L	0.60	18	P	Pg	17 13 01.5	+0.1
TSLK				S	Sg	17 13 09.8	+0.4
KRI1	kERI	0.67	152	P	Pg	17 13 02.3	-0.2
KRI1				S	Sb	17 13 13.2	+1.1
	comp=N,45μm,0.2s						
PDO	Prodromos	0.69	60	P	Pg	17 13 03.0	0.0
PDO				S	Sb	17 13 13.8	+0.9
	comp=N,41μm,0.5s						
PDO	Prodromos	0.69	60	P	Pg	17 13 03.2	+0.1
PDO				S	Sb	17 13 13.3	+0.5
PDO				AML	AML	17 13 14.8	
	comp=N,61827μm,0.5s						
PDO				AML	AML	17 13 16.3	
	comp=E,49628μm,0.4s						
RLS	Riolos of Patr	0.85	103	P	Pg	17 13 05.6	-0.4
RLS				S	Sb	17 13 18.3	+1.0
	comp=E,6μm,0.4s						
RLS	Riolos of Patr	0.85	103	P	Pg	17 13 05.6	-0.4
RLS				S	Sb	17 13 17.7	+0.4
RLS				AML	AML	17 13 27.2	
	comp=N,16210μm,0.5s						
RLS				AML	AML	17 13 27.6	
	comp=E,8917μm,0.4s						
PVO	Paravola	0.94	67	P	Pg	17 13 08.0	+0.2
PVO				S	Sn	17 13 22.9	+1.2
	comp=E,18μm,0.5s						
PVO	Paravola	0.94	67	P	Pn	17 13 08.2	-0.2
PVO				AML	AML	17 13 24.6	
	comp=N,39918μm,0.6s						
PVO				AML	AML	17 13 29.7	
	comp=E,35524μm,0.5s						
DRO	Drossia	1.06	106	P	Pb	17 13 09.2	-0.5
DRO	Drossia	1.06	106	P	Pb	17 13 09.3	-0.5
DRO				AML	AML	17 13 36.0	
	comp=N,20546μm,0.4s						
DRO				AML	AML	17 13 41.5	
	comp=E,23644μm,0.5s						
UPR	University Cam	1.08	88	P	Pg	17 13 10.6	+0.3
UPR				S	Sn	17 13 28.0	+3.0
UPR	University Cam	1.08	88	P	Pg	17 13 10.6	+0.3
LAKA	Lakka	1.23	90	P	Pn	17 13 12.3	0.0
LAKA				S	Sg	17 13 31.1	+1.9
	comp=E,6μm,0.3s						
LAKA	Lakka	1.23	90	P	Pn	17 13 12.4	0.0
LAKA				AML	AML	17 13 32.3	
	comp=E,10210μm,0.4s						
LAKA				AML	AML	17 13 32.5	
	comp=N,15417μm,0.4s						
ANX	Ano Chora	1.23	73	P	Pn	17 13 12.2	-0.2
ANX				AML	AML	17 13 36.7	
	comp=N,35965μm,0.6s						
ANX				AML	AML	17 13 38.5	
	comp=E,26396μm,0.5s						
AMT	Artemida-Makis	1.25	125	P	Pb	17 13 13.0	+0.1
AMT				S	Sg	17 13 31.1	+1.3
	comp=E,5μm,0.6s						
AMT	Artemida-Makis	1.25	125	P	Pb	17 13 12.9	+0.1
AMT				AML	AML	17 13 38.0	
	comp=E,10631μm,0.5s						
AMT				AML	AML	17 13 43.9	
	comp=N,10067μm,0.6s						
EVR	Evrytania	1.28	58	P	Pb	17 13 13.3	-0.1
EVR				AML	AML	17 13 38.6	
	comp=N,9837μm,0.7s						
EVR				AML	AML	17 13 45.4	
	comp=E,6682μm,0.6s						
IGT	Igoumenitsa	1.28	357	P	Pg	17 13 14.2	0.0
IGT				S	Sg	17 13 31.2	+0.3
	comp=E,3μm,0.5s						
IGT	Igoumenitsa	1.28	357	ePg	Pg	17 13 16.2	+2.0
IGT				eSg	Sg	17 13 34.1	+3.2
IGT	Igoumenitsa	1.28	357	P	Pb	17 13 13.7	+0.2
IGT				AML	AML	17 13 36.1	
	comp=N,5243μm,0.4s						
IGT				AML	AML	17 13 41.6	
	comp=E,6956μm,0.5s						
SERG	Sergoula	1.30	82	P	Pn	17 13 13.5	+0.2
SERG				AML	AML	17 13 39.1	
	comp=N,13863μm,0.5s						
SERG				AML	AML	17 13 41.1	
	comp=E,10084μm,0.4s						
TRIZ	Trizonia	1.30	84	P	Pn	17 13 13.5	+0.1
TRIZ				S	Sg	17 13 33.4	+1.8
	comp=E,6μm,0.5s						
TRIZ	Trizonia	1.30	84	P	Pn	17 13 13.4	0.0
KALE	Kalithea	1.36	84	P	Pn	17 13 14.3	+0.1
KALE				S	Sg	17 13 33.6	+0.2
	comp=E,4μm,0.7s						
KALE	Kalithea	1.36	84	P	Pn	17 13 14.4	+0.2
KALE				AML	AML	17 13 43.8	
	comp=E,7922μm,0.5s						
KALE				AML	AML	17 13 45.7	
	comp=N,8967μm,0.8s						
KLV	Kalavryta, Ach	1.38	98	P	Pn	17 13 14.7	+0.2
KLV				S	Sg	17 13 35.0	+1.0
	comp=N,2μm,0.5s						
KLV	Kalavryta, Ach	1.38	98	P	Pb	17 13 14.9	-0.2
JAN	Janina	1.44	13	P	Pg	17 13 17.8	+0.5
JAN				S	Sg	17 13 38.0	+1.9
	comp=N,3μm,0.7s						
JAN	Janina	1.44	13	P	Pg	17 13 17.5	+0.2
JAN				AML	AML	17 13 45.0	
	comp=E,7006μm,0.6s						
JAN				AML	AML	17 13 52.2	
	comp=N,6554μm,1.0s						
KEK	Kerkira	1.54	342	P	Pb	17 13 18.1	+0.3
KEK	Kerkira	1.54	342	P	Pb	17 13 18.1	+0.3
KASA	Kassiopi	1.54	346	P	Pb	17 13 18.1	+0.3
MAKR	Makrakomi, Fth	1.54	60	P	Pb	17 13 18.3	+0.4
MAKR				AML	AML	17 13 46.6	
	comp=N,12572μm,0.7s						
MAKR				AML	AML	17 13 51.4	
	comp=E,23917μm,0.6s						
ITM	Ithomi	1.60	131	P	Pb	17 13 19.3	+0.3
ITM				S	Sg	17 13 41.0	-0.2
	comp=E,1μm,0.6s						
ITM	Ithomi	1.60	131	P	Pb	17 13 18.8	-0.2
ITM	Ithomi	1.60	131		Pb	17 13 18.8	-0.2
DLFA	Delphi	1.65	81	P	Pg	17 13 21.2	0.0
MEV	Metsovon	1.66	22	P	Pg	17 13 21.1	-0.3
AGG	Agios Georgios	1.68	62	P	Pb	17 13 21.2	+0.8
AGG				AML	AML	17 13 52.2	
	comp=E,6490μm,0.7s						
AGG				AML	AML	17 13 55.7	
	comp=N,8605μm,0.4s						
AGG	Agios Georgios	1.68	62		Pg	17 13 21.7	-0.2
PYL	PYLOS	1.71	142	P	Pb	17 13 20.4	-0.4
PYL				S	Sb	17 13 42.3	+0.1
	comp=N,1μm,0.6s						
PYL	PYLOS	1.71	142	P	Pb	17 13 20.3	-0.5
KLMT	Kalamata	1.76	132	P	Pg	17 13 24.4	+1.0
VLX	Vlachokerasia	1.78	119	P	Pg	17 13 23.3	-0.5
VLX				AML	AML	17 14 05.7	
	comp=N,4884μm,0.8s						
VLX				AML	AML	17 14 07.5	
	comp=E,4840μm,0.7s						
THL	Klokotos Trika	1.81	43	P	Pb	17 13 22.8	+0.4
THL				AML	AML	17 13 58.3	
	comp=E,7793μm,0.5s						
THL				AML	AML	17 13 58.7	
	comp=N,5208μm,0.8s						
AXAR	Agios Charalam	1.83	73	P	Pb	17 13 23.7	+0.9
KPRO	Kipourio	1.85	23	P	Pg	17 13 24.2	-0.9
KPRO				AML	AML	17 14 02.2	
	comp=N,6756μm,1.2s						
KPRO				AML	AML	17 14 04.2	
	comp=E,5506μm,0.6s						
PROD	Prodromos	1.95	89	P	Pb	17 13 25.3	+0.4
PROD				AML	AML	17 13 57.8	
	comp=N,3347μm,0.4s						
PROD				AML	AML	17 14 04.3	
	comp=E,5268μm,0.7s						
PENT	Pentalofos	2.02	16	P	Pb	17 13 26.7	+0.6
LOUT	Loutraki	2.03	97	P	Pb	17 13 26.3	+0.1
LKR	Lokris	2.06	78	P	Pb	17 13 26.5	-0.3
NEST	Nestorio	2.21	13	P	Pb	17 13 29.6	+0.1
VIL2	Platees	2.24	90	P	Pb	17 13 28.7	-1.2
VIL2				AML	AML	17 14 14.3	
	comp=N,2705μm,0.9s						
VIL2				AML	AML	17 14 19.2	
	comp=E,4612μm,1.0s						
SCTE	Santa Cesarea	2.37	321		Pn	17 13 29.1	+1.2
NEO	Neokhori	2.43	63	P	Pb	17 13 32.0	-1.1
LIT	Litokhoron	2.45	40		Pb	17 13 31.8	-1.6
MRKA	Markates	2.53	79	P	Pb	17 13 32.7	-2.0
MRKA				AML	AML	17 14 18.4	
	comp=E,1344μm,0.6s						
MRKA				AML	AML	17 14 23.3	
	comp=N,1616μm,1.2s						
OHR	Ohrid	2.87	6	i Pn	Pb	17 13 39.5	-1.2
OHR				i Sn	Sb	17 14 14.2	-1.5
OHR				eLg	Lg	17 14 19.8	
	comp=N,356nm,1.0s						
TIP	Timpagrande	3.01	289	⇑P	Pn	17 13 38.4	+1.6
TIP	Timpagrande	3.01	289		Pn	17 13 38.3	+1.4
TIR	Tirane	3.12	352	ePn	Pn	17 13 40.5	+2.1
TIR	Tirane	3.12	352	⇓P	Pn	17 13 39.9	+1.5
TIR	Tirane	3.12	352		Pn	17 13 40.1	+1.8
TAR1	Taranto	3.33	314	ePn	Pn	17 13 42.8	+1.7
TAR1				Sn	Sn	17 14 21.4	+0.9
VAY	Valandovo	3.48	28	P	Pb	17 13 49.8	-1.2
VAY	Valandovo	3.48	28	i Pn	Pn	17 13 46.2	+2.8
VAY				i Sn	Sn	17 14 27.1	+2.7
VAY				eLg	Lg	17 14 27.2	
	comp=N,156nm,0.9s						
CEL	Celeste	3.56	272		Pn	17 13 45.3	+0.8
MATE	Matera	3.74	311	⇑P	Pn	17 13 48.4	+1.5
SRS	Serrai	3.77	40	ePn	Pn	17 13 50.2	+3.0
SKO	Skopje	3.80	12	i Pn	Pn	17 13 50.7	+3.0
SKO				i Sn	Sn	17 14 33.5	+1.4
SKO				eLg	Lg	17 14 34.9	
	comp=E,16nm,0.6s						
ULC	Ulcinj	3.82	347	ePn	Pn	17 13 48.4	+0.5
ULC				eSn	Sn	17 14 33.4	+0.8
SG1	Sgolgore (BA)	3.88	313	ePn	Pn	17 13 50.2	+1.4
BAI	Bari	3.95	317	ePn	Pn	17 13 50.8	+1.1
BAI				(Sn)	Sn	17 14 34.0	-1.8
DRME	Dracevica, Mon	4.04	347	ePn	Pn	17 13 51.9	+0.9
DRME	Dracevica, Mon	4.04	347	ePn	Pn	17 13 52.1	+1.1
DRME				eSn	Sn	17 14 39.3	+1.1
BUM	Brajici-Budva	4.21	344	ePn	Pn	17 13 54.0	+0.6
BUM				eSn	Sn	17 14 43.2	+0.8
PDG	Podgorica	4.27	348	ePn	Pn	17 13 55.7	+1.6
PDG				eSn	Sn	17 14 43.9	+0.2
PDG	Podgorica	4.27	348	⇑P	Pn	17 13 56.2	+2.1
PDG	Podgorica	4.27	348	ePn	Pn	17 13 53.5	-0.6
PDG	Podgorica	4.27	348	Pn	Pn	17 13 53.8	-0.3
PDG					Sn	17 14 44.4	+0.7
TTG	Podgorica	4.27	348	ePn	Pn	17 13 55.2	+1.1
TTG				eSn	Sn	17 14 44.8	+1.1
ACER	Acerenza	4.29	308		Pn	17 13 55.9	+1.5
PVY	Plav	4.35	356	⇓iPn	Pn	17 13 56.4	+1.0
PVY				eSn	Sn	17 14 47.1	+1.1
CEME	Cevo	4.44	346	ePn	Pn	17 13 56.9	+0.3
CEME				eSn	Sn	17 14 48.2	+0.1
HCY	Herceg Novi	4.44	341	ePn	Pn	17 13 56.6	+0.1
HCY				eSn	Sn	17 14 48.5	+0.5
BOSS	Bosilegrad	4.52	20	ePn	Pn	17 13 59.2	+1.6
BOSS				eSn	Sn	17 14 50.2	+0.2
IVA	Berane	4.63	355	ePn	Pn	17 14 00.0	+0.8
IVA				eSn	Sn	17 14 53.9	+1.0
KOME	Kolasin	4.65	352	ePn	Pn	17 13 59.7	+0.3
KOME				eSn	Sn	17 14 53.6	+0.4
NKME	Niksic	4.65	347	⇓iPn	Pn	17 13 59.9	+0.5
NKME				eSn	Sn	17 14 54.0	+0.9
IDI	Anoyia	4.65	128	Sn	Sn	17 14 57.7	+4.4
	comp=E,5.5nm,0.3s,baz=343,slow=19,SNR=4.9						
BARS	Barje	4.68	13	ePn	Pn	17 14 01.2	+1.4
BARS				eSn	Sn	17 14 54.6	+0.6
NKY	Niksic	4.69	347	ePn	Pn	17 14 00.6	+0.7
NKY				eSn	Sn	17 14 54.4	+0.2
TREB	Trebinje	4.73	341	ePn	Pn	17 14 00.2	-0.3
TREB				eSn	Sn	17 14 53.3	-1.9
TREB	Trebinje	4.73	341	ePn	Pn	17 14 00.4	-0.1
VAE	Valguarnera	4.82	263	Pn	Pn	17 14 01.9	+0.1
	comp=E,0.8nm,0.3s,baz=39,slow=13,SNR=2.9						
VAE				Sn	Sn	17 15 00.3	+3.0
	comp=E,4.2nm,0.3s,baz=342,slow=20,SNR=7.3						
BRY	Bratogost	4.86	343	ePn	Pn	17 14 04.1	+1.7
BRY	Bratogost	4.86	343	ePn	Pn	17 14 03.0	+0.6
BRY				eSn	Sn	17 14 58.6	+0.1
VTS	Vitosha	4.86	25	ePn	Pn	17 14 02.8	+0.4
VTS				eSn	Sn	17 14 59.4	+0.8
VTS	Vitosha	4.86	25	⇑P	Pn	17 14 02.9	+0.4
VTS	Vitosha	4.86	25	P	Pn	17 14 02.6	+0.1
VTS	Vitosha	4.86	25		Pn	17 14 02.5	+0.1
SELS	Selova	4.99	6	ePn	Pn	17 14 04.6	+0.5
SGRT	San Giovanni R	5.01	316		Pn	17 14 05.4	+1.0
SJES	Sjenica	5.02	356	ePn	Pn	17 14 06.0	+1.5
SJES				eSn	Sn	17 15 01.8	-0.5
STON	Ston	5.06	337	ePn	Pn	17 14 05.3	+0.4
STON				eSn	Sn	17 15 01.6	-1.6
STON	Ston	5.06	337	ePn	Pn	17 14 04.1	-0.8
UPM	Unac-Piva	5.08	347	ePn	Pn	17 14 06.5	+1.1
UPM	Unac-Piva	5.08	347	⇓iPn	Pn	17 14 05.9	+0.5
UPM				eSn	Sn	17 15 04.3	+0.3
ALN	Alexandroupoli	5.09	57	Pn	Pn	17 14 06.9	+1.6
PLE	Pljevlja	5.13	352	⇓iPn	Pn	17 14 06.7	+0.6
PLE				eSn	Sn	17 15 05.7	+0.5
ZAPS	Zavoj	5.29	18	ePn	Pn	17 14 08.9	+0.7
ZAPS				eSn	Sn	17 15 09.4	+0.4
WDD	Wied Dalam	5.29	245	Pn	Pn	17 14 08.6	+0.4
PAOL	Paolisi	5.30	303		Pn	17 14 10.1	+1.8
IVAS	Ivanjica	5.32	358	ePn	Pn	17 14 08.7	0.0
IVAS				eSn	Sn	17 15 09.0	-0.8
RUDO	Rudo	5.42	352	ePn	Pn	17 14 09.3	-0.7
BOVS	Bovan	5.47	10	ePn	Pn	17 14 11.3	+0.7
BOVS				eSn	Sn	17 15 11.9	-1.3
CORL	Corleone	5.63	269	Pn	Pn	17 14 13.8	+1.0
GRUS	Grus	5.64	2	ePn	Pn	17 14 13.9	+1.0
BBLS	Lazići	5.66	353	ePn	Pn	17 14 13.7	+0.4
BBLS				eSn	Sn	17 15 17.3	-0.9
BBLS	Lazići	5.66	353	ePn	Pn	17 14 13.3	0.0
MPEP	Malo Peshtene	5.69	25	P	Pb	17 14 24.8	-3.7
ZAGS	Zajecar	5.72	13	ePn	Pn	17 14 15.4	+1.3
CLTB	Caltabellotta	5.74	265	Pn	Pn	17 14 17.4	+3.0
DIVS	Divibare	5.85	357	ePn	Pn	17 14 16.1	+0.2
DIVS				eSn	Sn	17 15 21.7	-1.1
DIVS	Divibare	5.85	357	ePn	Pn	17 14 15.7	-0.2
HAPS	Han Pijesak,BI	5.93	350	ePn	Pn	17 14 16.7	-0.4
PLVB	Pleven	6.04	31	⇑P	Pn	17 14 19.0	+0.5
MGRS	Mrkonjic Grad	6.65	339	ePn	Pn	17 14 27.9	+1.0
AQU	L'Aquila	6.75	310	Pn	Pn	17 14 28.5	+0.3
BLY	Banja Luka	6.93	341	ePn	Pn	17 14 32.8	+2.1
NRCA	Norcia	7.20	312		Pn	17 14 36.9	+2.4
GZR	Gura Zlata	7.35	13	⇑P	Pn	17 14 37.5	+1.0
BZS	Buzias	7.41	7	⇑P	Pn	17 14 39.0	+1.7
MURB	Monte Urbino	7.81	312	Pn	Pn	17 14 45.5	+2.7
VOIR		7.97	24	⇓P	Pn	17 14 46.3	+1.4
MORH	Mrgy, Hungar	8.07	351	ePn	Pn	17 14 45.2	-1.0
BOJS	Bojanci	8.21	334	ePn	Pn	17 14 49.0	+0.8
MLR	Muntele Rosu	8.32	28	Pn	Pn	17 14 54.2	+4.3
	comp=E,0.3nm,0.3s,baz=254,slow=14,SNR=5.4						
MLR				Sn	Sn	17 16 26.9	+3.1
	baz=148,slow=19,SNR=1.7						
MLR	Muntele Rosu	8.32	28	⇑P	Pn	17 14 50.7	+0.8
MLR	Muntele Rosu	8.32	28		Pn	17 14 52.4	+2.5
CRES	Cresnjev	8.42	336	ePn	Pn	17 14 51.3	+0.2
CRES	Cresnjev	8.42	336	ePn	Pn	17 14 50.3	-0.8
DOPR	Dopca	8.55	24	⇓P	Pn	17 14 56.7	+3.8
MDUB	Mudurnu	8.64	72	Pn	Pn	17 14 57.2	+3.0
BISRR	Bisoca	8.67	31	⇑P	Pn	17 14 54.5	-0.1
OSSC	Osservatorio P	8.72	310	Pn	Pn	17 14 57.8	+2.6
LJU	Ljubljana	8.93	333	ePn	Pn	17 14 57.2	-0.9
VRI	Vrincioaia	8.94	30	⇑P	Pn	17 14 58.9	+0.7
KEST	Kesra	9.21	258	Pn	Pn	17 15 03.1	+1.1
	comp=E,0.2nm,0.3s,baz=123,slow=17,SNR=2.5						
KEST				Sn	Sn	17 16 45.6	+0.1
	comp=E,0.1nm,0.3s,baz=233,slow=20,SNR=3.3						
SOKA	Soboth	9.31	336	i Pn	Pn	17 15 03.1	-0.3
	comp=E,3.0nm,0.4s						
SOKA				eSn	Sn	17 16 41.8	-6.2
	comp=E,4.9nm,0.5s						
OBKA	Obir	9.32	334	ePn	Pn	17 15 05.6	+2.0
	comp=E,2.1nm,0.2s						
OBKA				eSn	Sn	17 16 45.2	-3.0
	comp=E,8.5nm,0.5s						
TEOL	Teolo	9.64	320	Pn	Pn	17 15 08.7	+0.8
TEOL					Sn	17 16 51.6	-4.4
ARSA	Arzberg	9.69	340	ePn	Pn	17 15 09.1	+0.6
	comp=E,1.3nm,0.3s						
ARSA				eSn	Sn	17 16 51.7	-5.3
	comp=E,1.1nm,0.3s						
STAL	STALIGIAL	9.83	327	Pn	Pn	17 15 10.7	+0.3
PRMA	PARMA	9.98	314	Pn	Pn	17 15 14.0	+1.5
BURAR	Bucovina Array	9.99	19	Pn	Pn	17 15 15.5	+2.7
CTI	Castel Tesino	10.15	323		Pn	17 15 15.0	+0.1
ABTA	Abfaltersbach	10.30	328	ePn	Pn	17 15 17.0	+0.1
	comp=E,1.4nm,0.3s						
ABTA				eSn	Sn	17 17 08.4	-3.8
	comp=E,4.7nm,0.5s						
VYHS	Vyhne	10.30	354	eSN	Sn	17 17 05.7	-6.5
BR131	Keskin Array S	10.40	78	Pn	Pn	17 15 21.0	+2.6
BRTR	Keskin Array B	10.40	78	Pn	Pn	17 15 22.4	+4.0
	comp=E,0.2nm,0.3s,baz=264,slow=12,SNR=4.7						
BRTR	Keskin Array B	10.40	78	Pn	Pn	17 15 22.5	+4.1
SALO	Salr	10.41	318	Pn	Pn	17 15 17.9	-0.6
MOA	Molln	10.59	337	ePn	Pn	17 15 22.0	+1.1
	comp=E,1.8nm,0.3s						
MOA				eSn	Sn	17 17 14.0	-5.3
	comp=E,2.5nm,0.3s						
WTTA	Wattenberg	11.07	327	ePn	Pn	17 15 30.1	+2.4
	comp=E,1.2nm,0.2s						
WTTA				eSn	Sn	17 17 28.6	-2.7
	comp=E,4.1nm,0.5s						
WATA	Walderalm	11.16	327	ePn	Pn	17 15 30.0	+1.3
	comp=E,2.0nm,0.4s						
WATA				eSn	Sn	17 17 28.2	-5.1
	comp=E,2.5nm,0.3s						
FUORN	Ofenpass-Fuorn	11.23	321	Pn	Pn	17 15 31.3	+1.5
FETA	Feichten	11.29	324	eSn	Sn	17 17 35.2	-1.5
	comp=E,1.9nm,0.6s						
MOTA	Moosalm	11.37	326	i Pn	Pn	17 15 33.7	+2.1
	comp=E,1.8nm,0.4s						
MOTA				eSn	Sn	17 17 37.6	-0.9
	comp=E,3.0nm,0.5s						
DAVOX	Davos/Dischmat	11.53	321	Pn	Pn	17 15 35.8	+2.0
	comp=E,0.2nm,0.3s,baz=151,slow=19,SNR=2.9						
DAVOX				Sn	Sn	17 17 40.9	-1.5
	comp=E,0.2nm,0.3s,baz=139,slow=20,SNR=3.4						
RETA	Reutte	11.63	326	ePn	Pn	17 15 38.0	+2.9
	comp=E,1.4nm,0.6s						
RETA				eSn	Sn	17 17 40.0	-4.7
	comp=E,1.7nm,0.4s						
GEC2	GERESS Array S	11.65	338	Pn	Pn	17 15 35.1	-0.3
GERES	GERESS Array B	11.65	338	Pn	Pn	17 15 35.3	-0.1
	comp=E,0.3nm,0.3s,baz=158,slow=14,SNR=8.5						
GERES				Sn	Sn	17 17 38.1	-7.2
	comp=E,0.3nm,0.3s,baz=153,slow=22,SNR=4.2						
GERES	GERESS Array B	11.65	338	Pn	Pn	17 15 34.8	-0.6
MORC	Moravsky Berou	11.71	351	Pn	Pn	17 15 35.1	-1.1
KHC	Kasperske Hory	11.94	338	ePN	Pn	17 15 39.5	+0.1
KHC				eSN	Sn	17 17 47.1	-5.3
KHC	Kasperske Hory	11.94	338	Pn	Pn	17 15 37.6	-1.8
SENIN	Lac Senin/Sane	12.64	314	Pn	Pn	17 15 48.6	-0.4
MMAI	Mount Meron Ar	13.26	109	Pn	Pn	17 15 58.5	+1.1
	comp=E,0.8nm,0.3s,baz=299,slow=15,SNR=3.8						
MMAI				Sn	Sn	17 18 17.7	-7.0
	comp=E,1.1nm,0.3s,baz=310,slow=32,SNR=2.6						
AKASG	Malin Array Be	13.93	24	Pn	Pn	17 16 06.0	-0.4
	comp=E,0.3nm,0.3s,baz=208,slow=12,SNR=2.5						
EIL	Elat	14.77	121	Pn	P	17 16 22.9	-1.1
	comp=E,0.7nm,0.3s,baz=340,slow=14,SNR=7.5						
EIL				Sn	Sn	17 18 51.0	-11
	comp=E,0.6nm,0.3s,baz=20,slow=19,SNR=4.3						
KIV	Kislovodsk	17.70	64	P	P	17 16 56.3	-0.2
KBZ	Khabaz	17.81	65	Pn	P	17 16 59.9	+2.4
	comp=E,0.1nm,0.3s,baz=287,slow=8.1,SNR=8.9						
AKH	Akhalkalaki	17.99	73	P	P	17 17 02.0	+2.2
GNI	Garni	18.93	77	P	P	17 17 12.3	+1.5
	comp=E,0.9nm,0.3s,baz=339,slow=1.9,SNR=15						
GNI	Garni	18.93	77	P	Pn	17 17 12.0	+1.1
GNI				IAmb	IAmb	17 17 13.8	
	comp=Z,19nm,0.8s						
TBLG	Delisi	18.94	72	P	Pn	17 17 11.2	+0.5
TBLG				IAmb	IAmb	17 17 13.7	
	comp=Z,9.8nm,0.6s						
ESDC	Sonseca Array	19.00	282	P	P	17 17 10.8	0.0
HFS	Hagfors	22.32	351	P	P	17 17 45.6	-0.9
	comp=Z,5.2nm,1.1s,baz=100,slow=13,SNR=6.5						
KONO	Kongsberg	22.51	346	P	P	17 17 46.9	-1.6
KONO				IAmb	IAmb	17 18 06.3	
	comp=Z,23nm,1.1s						
NC602	NORSAR Array S	23.19	349	P	P	17 17 54.8	-0.9
FINES	FINESS Array B	23.48	7	P	P	17 17 57.3	-1.3
	comp=Z,1.7nm,0.6s,baz=181,slow=10,SNR=10						
FINES	FINESS Array B	23.48	7	P	P	17 17 56.8	-1.7
FIA1	FINESS Array S	23.48	7	P	P	17 17 55.7	-2.8
FIA1				IAmb	IAmb	17 18 19.0	
	comp=Z,19nm,1.2s						
NC405	NORSAR Array S	23.53	349	P	P	17 17 57.1	-1.9
NC405				IAmb	IAmb	17 18 02.0	
	comp=Z,13nm,1.0s						
NB201	NORSAR Array S	23.53	349	P	P	17 17 57.0	-2.1
NB2	NORSAR Subarra	23.53	349	P	P	17 17 57.9	-1.2
	comp=Z,15nm,1.7s,baz=153,slow=10						
NOA	NORSAR Array B	23.53	349	P	P	17 17 59.0	-0.1
	comp=Z,0.9nm,0.6s,baz=149,slow=9.8,SNR=5.8						
NB000	NORSAR Array S	23.59	348	P	P	17 17 56.8	-2.8
NC303	NORSAR Array S	23.68	349	P	P	17 17 59.5	-1.1
NC303				IAmb	IAmb	17 18 00.1	

	comp=Z,17nm,1.0s						
NC204	**NORSAR Array S**	**23.83**	**348**	P	**P**	**17 18 00.6**	**-1.3**
GEYT	**Alibeck**	**29.54**	**79**	P	**P**	**17 18 54.6**	**+0.9**
	comp=Z,2.3nm,0.5s,baz=270,slow=7.4,SNR=9.1						
GEYT	**Alibeck**	**29.54**	**79**	P	**P**	**17 18 53.2**	**-0.5**
GYA0B	**ALIBECK ARRAY**	**29.54**	**79**	P	**P**	**17 18 51.7**	**-2.0**
GYA0B				IAmb	IAmb	17 18 55.2	
	comp=Z,5.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**30.04**	**219**	P	**P**	**17 18 59.5**	**+1.3**
	comp=Z,1.4nm,0.8s,baz=29,slow=7.4,SNR=6.8						
ABKAR	**Akbulak array**	**30.27**	**56**	P	**P**	**17 19 00.1**	**+0.1**
ARCES	**ARCESS Array B**	**31.46**	**3**	P	**P**	**17 19 10.1**	**-0.2**
	comp=Z,5.0nm,1.0s,baz=193,slow=10,SNR=4.0						
ARCES	**ARCESS Array B**	**31.46**	**3**	P	**P**	**17 19 09.9**	**-0.4**
UOSS	**Minazif**	**33.03**	**103**	P	**P**	**17 19 24.4**	**-0.1**
BRVK	**Borovoye**	**37.07**	**50**	P	**P**	**17 20 00.0**	**+1.0**
BVAR	**Borovoye Array**	**37.13**	**50**	P	**P**	**17 19 59.9**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=256,slow=6.0,SNR=4.4						
KK31	**Karatay Array**	**37.84**	**66**	P	**P**	**17 20 05.6**	**-0.1**
KK31				IAmb	IAmb	17 20 08.9	
	comp=Z,4.0nm,0.6s						
KKAR	**Karatay Array**	**37.84**	**66**	P	**P**	**17 20 05.3**	**-0.4**
KKAR	**Karatay Array**	**37.84**	**66**	P	**P**	**17 20 05.6**	**-0.1**
KKAR				IAmb	IAmb	17 20 08.9	
	comp=Z,4.0nm,0.6s						
BTK	**Batken**	**38.70**	**71**	P	**P**	**17 20 13.2**	**+0.1**
BTK				IAmb	IAmb	17 20 17.2	
	comp=Z,3.0nm,0.6s						
SOCY	**Socotra**	**39.58**	**122**	P	**P**	**17 20 19.1**	**-1.5**
SOCY				IAmb	IAmb	17 20 34.2	
	comp=Z,17nm,1.2s						
ARSB	**Arslanbob**	**40.00**	**68**	P	**P**	**17 20 23.9**	**-0.1**
ARSB				IAmb	IAmb	17 20 33.3	
	comp=Z,4.7nm,0.9s						
AAK	**Ala-Archa**	**40.80**	**66**	LR	LR	17 42 48.7	
	comp=Z,99nm,20.4s,baz=318,slow=44						
AAK	**Ala-Archa**	**40.80**	**66**	P	**P**	**17 20 30.7**	**+0.1**
NRN	**Naryn**	**42.18**	**67**	P	**P**	**17 20 42.3**	**+0.2**
KURBB	**Kurchatov Arra**	**42.25**	**54**	P	**P**	**17 20 42.0**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=279,slow=8.9,SNR=6.6						
KURK	**Kurchatov**	**42.30**	**53**	P	**P**	**17 20 41.6**	**-0.9**
KURK				IAmb	IAmb	17 20 45.6	
	comp=Z,2.8nm,1.1s						
MAKZ	**Makanchi**	**45.12**	**58**	P	**P**	**17 21 04.8**	**-0.5**
MK31	**Makanchi Array**	**45.33**	**58**	P	**P**	**17 21 06.4**	**-0.6**
MK31				IAmb	IAmb	17 21 09.8	
	comp=Z,1.6nm,0.7s						
MK31				PcP	**PcP**	**17 22 47.2**	**+0.7**
MKAR	**Makanchi Array**	**45.33**	**58**	P	**P**	**17 21 07.1**	**0.0**
	comp=Z,2.4nm,0.5s,baz=278,slow=7.6,SNR=35						
MKAR	**Makanchi Array**	**45.33**	**58**	P	**P**	**17 21 06.3**	**-0.8**
MKAR				PcP	**PcP**	**17 22 47.3**	**+0.8**
ZAA0	**Zalesovo Array**	**45.70**	**48**	P	**P**	**17 21 09.4**	**-0.4**
ZALV	**Zalesovo Beam**	**45.70**	**48**	P	**P**	**17 21 09.8**	**-0.1**
	comp=Z,4.0nm,0.5s,baz=275,slow=8.7,SNR=25						
ZALV	**Zalesovo Beam**	**45.70**	**48**	P	**P**	**17 21 09.3**	**-0.5**
WMQ	**Urumqi**	**49.79**	**61**	eP	**P**	**17 21 43.4**	**+1.6**
LSA	**Lhasa**	**57.99**	**76**	P	**P**	**17 22 43.2**	**-0.2**
LSA				IAmb	IAmb	17 22 43.5	
	comp=Z,2.4nm,0.7s						
SCHQ	**Schefferville**	**58.35**	**317**	P	**P**	**17 22 44.3**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=66,slow=18,SNR=2.3						
SCHQ	**Schefferville**	**58.35**	**317**	P	**P**	**17 22 44.1**	**0.0**
GTA	**Gaotai**	**59.86**	**62**	eP	**P**	**17 22 55.0**	**+0.1**
GTA				pP	sP	17 23 08.8	+7.7
GTA				sP	pP	17 23 14.9	+16
SONM	**Songino Array**	**60.47**	**51**	P	**P**	**17 22 59.1**	**+0.1**
	comp=Z,1.1nm,0.9s,baz=286,slow=8.4,SNR=7.5						
SONM	**Songino Array**	**60.47**	**51**	P	**P**	**17 22 58.7**	**-0.3**
LZH	**Lanzhou**	**64.24**	**63**	eP	**P**	**17 23 24.4**	**0.0**
LZH				pP	sP	17 23 40.1	+9.5
LZH				sP	PcP	17 23 46.0	-13
LZH				PP	PP	17 25 56.3	+11
HHC	**Hu-ho-hao-te**	**67.06**	**55**	eP	**P**	**17 23 41.2**	**-1.3**
CM31	**Chiang Mai Arr**	**69.96**	**82**	P	**P**	**17 24 00.7**	**0.0**
CM31				IAmb	IAmb	17 24 11.1	
	comp=Z,6.9nm,1.5s						
CMAR	**Chiang Mai Arr**	**69.96**	**82**	P	**P**	**17 24 00.8**	**0.0**
	comp=Z,1.2nm,0.7s,baz=302,slow=7.5,SNR=17						
MEDO	**Medina**	**70.65**	**310**	P	**P**	**17 24 06.0**	**+1.4**
NJ2	**Nanjing**	**76.85**	**60**	eP	**P**	**17 24 40.0**	**-1.2**
ASAR	**Alice Springs**	**122.26**	**96**	PKP	**PKiKP**	**17 31 44.5**	**0.0**
	comp=Z,0.6nm,1.1s,baz=318,slow=1.5,SNR=3.1						

*IDC **08** 17:21:27.6±1.3, 8°.12S×108°.93E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.5/52, mbtmp3.7/7, Error ellipse: s-maj=77.3km s-min=17.9km az=51.0*
*DJA **08** 17:21:36.8±0.5, 8°S±5°×10°9E±°, h10km, M4.1/9, MLv4.1/9*
*NEIC **08** 17:21:39.4±1.1, 8°.1S±0°.1×109°.22E±0°.02, h89km±7km, mb4.2/10, Error ellipse: s-maj=16.7km s-min=3.1km az=180.0*
ISC 08 17:21:40.2±0.6, **8°.15S**±0°.09×**109°.26E**±0°.04, **h100km, n37, σ1.66**/40, **mb3.9**/12, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KPJI	**Karang Pucung**	**0.87**	**338**	P	**Pn**	**17 21 58.1**	**-1.2**
KPJI				S	**Sn**	**17 22 13.7**	**+0.1**
CMJI	**Cimerak**	**0.89**	**294**	P	**Pn**	**17 21 56.4**	**-3.0**
UGM	**Wanagama**	**1.27**	**79**	P	**Pn**	**17 22 01.7**	**-2.0**
UGM				S	**Sn**	**17 22 18.0**	**-3.5**
UGM	**Wanagama**	**1.27**	**79**		**Pn**	**17 22 01.2**	**-2.5**
UGM				Sn	**Sn**	**17 22 17.1**	**-4.4**
CISI	**Cisompet, Garu**	**1.55**	**292**	P	**Pn**	**17 22 05.6**	**-1.5**
CISI				S	**Sn**	**17 22 25.5**	**-2.1**
CISI	**Cisompet, Garu**	**1.55**	**292**		**Pn**	**17 22 05.2**	**-1.9**
SMRI	**Semarang**	**1.60**	**47**	P	**Pn**	**17 22 08.0**	**+0.3**
SMRI	**Semarang**	**1.60**	**47**		**Pn**	**17 22 08.2**	**+0.5**
WOJI	**Wonogiri, Jawa**	**1.67**	**79**	P	**Pn**	**17 22 07.1**	**-1.5**
PCJI	**Pacitan**	**1.89**	**92**	P	**Pn**	**17 22 10.0**	**-1.4**
CNJI	**Cibinong**	**2.27**	**291**	P	**Pn**	**17 22 14.8**	**-1.5**
NGJI	**Ngawi**	**2.31**	**71**	P	**Pn**	**17 22 17.6**	**+0.8**
SKJI	**Sukabumi**	**2.91**	**293**	P	**Sn**	**17 23 01.7**	**+2.5**
DBJI	**Dramaga**	**2.95**	**302**	P	Pn	17 22 29.4	+4.0
JAGI	**Jajag, Banyuwa**	**4.85**	**94**	Pn	**Pn**	**17 22 51.1**	**+0.2**
JAGI				Sn	**Sn**	**17 23 44.7**	**-1.2**
KNRA	**Kununurra**	**20.48**	**113**	P	Pn	17 26 11.1	-2.2
WB0	**Warramunga Arr**	**26.94**	**118**	P	**P**	**17 27 13.8**	**+1.3**
WB0				IAmb	IAmb	17 27 24.9	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**26.96**	**118**	P	**P**	**17 27 13.5**	**+0.9**
	comp=Z,0.7nm,0.9s,baz=287,slow=9.4,SNR=9.0						
WRA				PcP	**PcP**	**17 30 33.0**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=309,slow=2.0,SNR=4.2						
WB2	**Warramunga Arr**	**26.97**	**118**	P	**P**	**17 27 13.7**	**+1.0**
WB2				IAmb	IAmb	17 27 18.4	
	comp=Z,22nm,1.6s						
WR0	**Warramunga Arr**	**27.14**	**118**	P	**P**	**17 27 15.4**	**+1.2**
WR0				IAmb	IAmb	17 27 20.3	
	comp=Z,7.5nm,1.4s						
AS31	**Alice Springs**	**28.20**	**126**	P	**P**	**17 27 24.4**	**+0.7**
ASAR	**Alice Springs**	**28.20**	**126**	P	**P**	**17 27 24.9**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=303,slow=9.2,SNR=23						
ASAR				PcP	**PcP**	**17 30 36.5**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=304,slow=1.9,SNR=6.3						
BBOO	**Buckleboo**	**34.90**	**138**	P	**P**	**17 28 23.0**	**+0.7**
H08S2	**Diego Garcia H**	**36.42**	**268**	T	T	18 07 03.0	
	baz=94						
H08S3	**Diego Garcia H**	**36.43**	**268**	T	T	18 07 03.8	
	baz=94						
H08S1	**Diego Garcia H**	**36.44**	**268**	T	T	18 07 04.8	
	baz=94						
STKA	**Stephens Creek**	**38.21**	**133**	P	**P**	**17 28 52.0**	**+1.5**
	comp=Z,0.9nm,0.4s,baz=306,slow=7.9,SNR=4.9						
STKA	**Stephens Creek**	**38.21**	**133**	P	**P**	**17 28 51.9**	**+1.5**
SONM	**Songino Array**	**55.80**	**358**	P	**P**	**17 31 07.5**	**+0.5**
	comp=Z,0.3nm,0.9s,baz=177,slow=8.1,SNR=2.6						
SONM	**Songino Array**	**55.80**	**358**	P	**P**	**17 31 07.4**	**+0.4**
SONM				PcP	**PcP**	**17 32 05.9**	**+1.0**
MKAR	**Makanchi array**	**59.74**	**339**	P	**P**	**17 31 33.4**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=150,slow=7.4,SNR=5.4						
ZALV	**Zalesovo Beam**	**65.22**	**344**	P	**P**	**17 32 08.3**	**-2.4**
	comp=Z,0.3nm,0.3s,baz=122,slow=5.2,SNR=2.6						
ZALV	**Zalesovo Beam**	**65.22**	**344**	P	**P**	**17 32 09.7**	**-1.1**
ABKAR	**Akbulak array**	**71.55**	**328**	P	**P**	**17 32 49.7**	**-0.6**
ABKAR	**Akbulak array**	**71.55**	**328**	P	**P**	**17 32 50.4**	**0.0**
ABKAR				IAmb	IAmb	17 32 51.1	
	comp=Z,2.4nm,0.9s						
QSPA	**South Pole Qui**	**81.85**	**180**	P	**P**	**17 33 49.0**	**+0.8**
QSPA				IAmb	IAmb	17 34 15.9	
	comp=Z,4.8nm,1.4s						
BRTR	**Keskin Array B**	**84.26**	**311**	P	**P**	**17 34 01.1**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=120,slow=5.1,SNR=4.8						

IDC 08 17:21:51.8±4.8, **4°.57S**×**153°.04E, h0km, mb3.4**/4, **mb1 3.6**/4, **mb1mx3.3**/46, **mbtmp3.4**/4, **Error ellipse: s-maj=144.6km s-min=28.7km az=106.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.77**	**228**	P	P	17 27 07.5	+1.2
	0.9nm,0.6s,baz=55,slow=10,SNR=9.8						
ASAR	**Alice Springs**	**26.48**	**222**	P	P	17 27 30.3	-0.7
	0.3nm,0.6s,baz=54,slow=9.2,SNR=6.8						
SONM	**Songino Array**	**66.26**	**328**	P	P	17 32 42.4	+0.4
	0.2nm,0.5s,baz=112,slow=6.4,SNR=2.7						
MKAR	**Makanchi Array**	**80.31**	**319**	P	P	17 34 03.9	-1.0
	0.3nm,0.9s,baz=112,slow=6.7,SNR=2.7						

IDC 08 17:26:06.9±4.1, **4°.44S**×**104°.49E, h0km, mb3.1**/4, **mb1 3.4**/4, **mb1mx3.1**/56, **mbtmp3.2**/4, **Error ellipse: s-maj=188.0km s-min=23.5km az=54.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**23.40**	**347**	P	P	17 31 19.2	+1.6
	0.2nm,0.5s,baz=183,slow=9.1,SNR=4.2						
WRA	**Warramunga Arr**	**32.90**	**120**	P	P	17 32 43.7	+0.5
	0.3nm,0.3s,baz=303,slow=9.1,SNR=10.0						
ASAR	**Alice Springs**	**34.21**	**127**	P	P	17 32 53.9	-0.6
	0.4nm,0.9s,baz=298,slow=7.7,SNR=6.1						
MKAR	**Makanchi Array**	**54.66**	**341**	P	P	17 35 36.3	-1.4
	0.1nm,0.4s,baz=161,slow=9.2,SNR=3.4						

*IDC **08** 17:29:20.4±1.4, 37°.06N×142°.30E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.4/57, mbtmp3.6/7, ML3.2/2, Error ellipse: s-maj=33.9km s-min=20.1km az=75.0*
*JMA **08** 17:29:26.5±0.3, 37°.03N×141°.85E, h49km, M3.4*
ISC 08 17:29:24.1±1.2, **37°.09N**±0°.07×**142°.03E**±0°.08, **h19km, n20, σ1.63**/19, **mb3.7**/5, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.96**	**287**	P	**Pn**	**17 29 42.1**	**-0.6**
ONAJ	**Iwakimizuishiy**	**0.98**	**271**	P	**Pb**	**17 29 41.9**	**-0.7**
ONAJ				eS	**Sb**	**17 29 52.6**	**-2.6**
JMST	**Minamisoumatoc**	**1.11**	**305**	P	**Pg**	**17 29 44.7**	**-0.9**
JMST				S	**Sb**	**17 29 58.6**	**-0.1**
JMM	**Marumori**	**1.25**	**309**	P	**Pb**	**17 29 46.7**	**-0.4**
JHO	**Hitachi**	**1.26**	**248**	P	**Pn**	**17 29 45.8**	**-1.0**
JFT	**Otama**	**1.42**	**288**	P	**Pb**	**17 29 49.7**	**-0.2**
MJAR	**Matsushiro Arr**	**3.11**	**261**	Pn	**Pn**	**17 30 14.8**	**+2.6**
	1.6nm,0.3s,baz=89,slow=15,SNR=66						
MJAR				Sn	**Sb**	**17 30 54.5**	**-1.9**
	0.8nm,0.3s,baz=19,slow=26,SNR=5.1						
MAT	**Matsushiro**	**3.11**	**261**	P	**Pn**	**17 30 14.4**	**+2.2**
MAT				S	**Sn**	**17 30 52.7**	**+3.8**
ASAJ	**Asahikawa**	**7.03**	**3**	Pn	**Pn**	**17 31 06.3**	**+0.3**
	0.5nm,0.3s,baz=190,slow=14,SNR=13						
ASAJ				Sn	**Sn**	**17 32 26.6**	**+1.2**
	0.2nm,0.3s,baz=131,slow=19,SNR=3.0						
H11N2	**WAKE ISLAND Hy**	**27.76**	**122**	T	T	18 04 23.1	
	baz=314,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy**	**27.77**	**122**	T	T	18 04 25.8	
	baz=314,slow=75,SNR=19						
H11N3	**WAKE ISLAND Hy**	**27.77**	**122**	T	T	18 04 32.1	
	baz=314,slow=75,SNR=18						
SONM	**Songino Array**	**28.16**	**304**	P	**P**	**17 35 15.7**	**+0.4**
	0.8nm,1.0s,baz=106,slow=11,SNR=4.4						
H11S1	**WAKE ISLAND Hy**	**28.48**	**124**	T	T	18 05 16.6	
	baz=316,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	**28.48**	**124**	T	T	18 05 15.2	
	baz=316,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**28.50**	**124**	T	T	18 05 09.2	
	baz=316,slow=76,SNR=11						
MKAR	**Makanchi Array**	**44.51**	**302**	P	**P**	**17 37 35.1**	**+0.8**
	0.4nm,0.8s,baz=87,slow=9.9,SNR=7.3						
KURBB	**Kurchatov Arra**	**46.35**	**308**	P	**P**	**17 37 48.9**	**+0.1**
	0.5nm,0.4s,baz=84,slow=7.7,SNR=4.3						
WRA	**Warramunga Arr**	**57.19**	**189**	P	**P**	**17 39 08.8**	**-1.1**
	0.8nm,0.7s,baz=6.2,slow=7.2,SNR=8.9						
ASAR	**Alice Springs**	**60.91**	**189**	P	**P**	**17 39 35.5**	**-0.2**
	0.4nm,0.6s,baz=7.3,slow=7.2,SNR=7.8						

*BJI **08** 17:40:55.3±0.0, 36°.24N×18°.61E, h35km, mB4.8/5, mb4.5/10*
*IDC **08** 17:40:56.2±2.1, 36°.76N×19°.05E, h0km, mb3.9/5, mb1 3.8/9, mb1mx3.5/32, mbtmp3.7/9, ML3.4/4, Error ellipse: s-maj=42.1km s-min=24.3km az=21.0*
*NEIC **08** 17:40:57.5±3.0, 36°.42N±0°.08×18°.92E±0°.04, h14km±5km, mb4.6/7, Error ellipse: s-maj=11.3km s-min=4.9km az=180.0*
*PDG **08** 17:40:58.6±0.2, 36°.60N×18°.90E, h23km±3km, ML4.6/12, Error ellipse: s-maj=3.5km s-min=1.4km az=90.0*
*BEO **08** 17:40:59.1±0.8, 36°.59N×18°.84E, h13km, ML4.2/11*
*HLW **08** 17:41:03.4, 36°.61N×20°.23E, h10km±22km, Md4.4, Ml4.2*
*GII **08** 17:41:09.1±0.3, 36°.29N×20°.12E, h47km, mb4.3/1, MD4.1/1*
ISC 08 17:40:56.4±0.7, **36°.52N**±0°.06×**18°.98E**±0°.05, **h10km, n157, σ2.25**/196, **mb4.5**/10, **3D, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**2.45**	**74**	P	**Pn**	**17 41 38.7**	**+2.2**
ITM				S	**Sn**	**17 42 06.8**	**+0.2**
ITM	**Ithomi**	**2.45**	**74**		**Pb**	**17 41 38.8**	**-1.8**
CEL	**Celeste**	**3.01**	**306**		**Pn**	**17 41 46.5**	**+2.3**
TIP	**Timpagrande**	**3.18**	**327**		**Pn**	**17 41 48.4**	**+1.8**
IGT	**Igoumenitsa**	**3.19**	**19**	ePn	**Pn**	**17 41 49.0**	**+2.4**
IGT				eSn	**Sn**	**17 42 25.8**	**+1.1**
KTHA	**Kythira Island**	**3.31**	**93**	eP	**Pn**	**17 41 49.9**	**+1.7**
SCTE	**Santa Cesarea**	**3.57**	**354**	Pn	**Pn**	**17 41 53.8**	**+2.0**
AGG	**Agios Georgios**	**3.64**	**46**	eP	**Pn**	**17 41 57.0**	**+4.1**
AGG	**Agios Georgios**	**3.64**	**46**	Pn	**Pb**	**17 41 58.1**	**-2.9**
AGG					**Sn**	**17 42 38.9**	**+2.9**
WDD	**Wied Dalam**	**3.67**	**261**		**Pn**	**17 41 54.3**	**+1.1**
WDD					**Sn**	**17 42 34.1**	**-2.3**
RODP	**Rodopos**	**3.99**	**102**	eP	**Pn**	**17 41 58.2**	**+0.6**
KNDR	**Palaiochora Ch**	**4.03**	**107**	eP	**Pn**	**17 41 58.0**	**-0.2**
IMMV	**Iera Moni Meta**	**4.19**	**103**	eP	**Pn**	**17 42 01.8**	**+1.4**
TAR1	**Taranto**	**4.21**	**342**	ePn	**Pn**	**17 42 02.6**	**+1.9**
TAR1				Sn	**Sn**	**17 42 49.5**	**-0.4**
GVD	**Gavdhos**	**4.48**	**110**	eP	**Pn**	**17 42 05.1**	**+0.7**
GVDS	**Gavdos**	**4.48**	**110**	eP	**Pn**	**17 42 04.6**	**+0.2**
LIT	**Litokhoron**	**4.52**	**37**		**Pn**	**17 42 08.9**	**+4.0**
SG1	**Sgolgore (BA)**	**4.67**	**338**	ePn	**Pn**	**17 42 08.6**	**+1.6**
SG1				(Sn)	**Sn**	**17 42 58.8**	**-2.5**
AOS	**Alonnisos**	**4.69**	**54**	eP	**Pn**	**17 42 10.7**	**+3.4**
CLTB	**Caltabellotta**	**4.73**	**285**		**Pn**	**17 42 10.7**	**+2.9**
CORL	**Corleone**	**4.73**	**289**		**Pn**	**17 42 11.3**	**+3.5**
OHR	**Ohrid**	**4.80**	**17**	i Pn	**Pn**	**17 42 12.4**	**+3.6**
BAI	**Bari**	**4.86**	**341**	ePn	**Pn**	**17 42 11.5**	**+1.9**
BAI				Sn	**Sn**	**17 43 02.6**	**-3.3**
TIR	**Tirane**	**4.87**	**8**	ePn	**Pn**	**17 42 10.3**	**+0.6**
TIR	**Tirane**	**4.87**	**8**	Pn	**Pn**	**17 42 11.4**	**+1.8**
ACER	**Acerenza**	**4.88**	**332**	Pn	**Pn**	**17 42 12.5**	**+2.7**
ACER					**Sn**	**17 43 05.1**	**-1.3**
IDI	**Anoyia**	**4.95**	**103**	Pn	**Pn**	**17 42 11.8**	**+0.9**
	5.8nm,0.3s,baz=318,slow=20,SNR=20						
IDI				Sn	**Sn**	**17 43 05.7**	**-2.6**
	12nm,0.3s,baz=274,slow=16,SNR=12						
IDI	**Anoyia**	**4.95**	**103**	ePn	**Pn**	**17 42 12.1**	**+1.2**
SANT	**Santorini**	**5.23**	**90**	eP	**Pn**	**17 42 15.9**	**+1.3**
SANT	**Santorini**	**5.23**	**90**	Pn	**Pn**	**17 42 17.0**	**+2.4**
APE	**Apeiranthos**	**5.29**	**82**	eP	**Pn**	**17 42 17.1**	**+1.6**
ULC	**Ulcinj**	**5.44**	**2**	ePn	**Pn**	**17 42 18.7**	**+1.2**
ULC				eSn	**Sn**	**17 43 18.8**	**-1.4**
OUR	**Ouranopolis**	**5.47**	**44**	eP	**Pn**	**17 42 21.2**	**+3.3**
VAY	**Valandovo**	**5.55**	**29**	i Pn	**Pn**	**17 42 22.5**	**+3.4**
DRME	**Dracevica, Mon**	**5.66**	**2**	ePn	**Pn**	**17 42 22.2**	**+1.6**
DRME				eSn	**Sn**	**17 43 24.4**	**-1.2**
PAOL	**Paolisi**	**5.67**	**324**	Pn	**Pn**	**17 42 23.2**	**+2.5**
BUM	**Brajici-Budva**	**5.77**	**359**	ePn	**Pn**	**17 42 23.3**	**+1.1**
BUM				eSn	**Sn**	**17 43 26.7**	**-1.8**
SGRT	**San Giovanni R**	**5.80**	**335**	Pn	**Pn**	**17 42 24.1**	**+1.6**
SGRT					**Sn**	**17 43 25.6**	**-3.5**
SRS	**Serrai**	**5.83**	**37**	ePn	**Pn**	**17 42 25.1**	**+2.2**
PDG	**Podgorica**	**5.91**	**2**	ePn	**Pn**	**17 42 25.1**	**+1.2**
PDG				eSn	**Sn**	**17 43 29.3**	**-2.3**
PDG	**Podgorica**	**5.91**	**2**	Pn	**Pn**	**17 42 25.4**	**+1.5**
PDG					**Sn**	**17 43 29.2**	**-2.3**
TTG	**Podgorica**	**5.91**	**2**	ePn	**Pn**	**17 42 25.0**	**+1.2**
TTG				eSn	**Sn**	**17 43 30.2**	**-1.4**
HCY	**Herceg Novi**	**5.93**	**357**	ePn	**Pn**	**17 42 24.9**	**+0.6**
CEME	**Cevo**	**6.02**	**360**	ePn	**Pn**	**17 42 26.1**	**+0.6**
CEME				eSn	**Sn**	**17 43 32.3**	**-2.2**
ZKR	**Zakros**	**6.05**	**101**	eP	**Pn**	**17 42 26.5**	**+0.6**
PVY	**Plav**	**6.11**	**7**	⇓iPn	**Pn**	**17 42 28.7**	**+1.8**
PVY				i Sn	**Sn**	**17 43 35.5**	**-1.4**
TREB	**Trebinje**	**6.21**	**356**	ePn	**Pn**	**17 42 28.7**	**+0.6**
TREB				eSn	**Sn**	**17 43 37.2**	**-1.9**
NKME	**Niksic**	**6.24**	**360**	ePn	**Pn**	**17 42 29.4**	**+0.9**
NKME				eSn	**Sn**	**17 43 38.2**	**-1.7**
KOME	**Kolasin**	**6.33**	**4**	⇓iPn	**Pn**	**17 42 31.6**	**+1.7**
KOME				eSn	**Sn**	**17 43 40.8**	**-1.5**
BRY	**Bratogost**	**6.38**	**357**	⇓iPn	**Pn**	**17 42 32.2**	**+1.6**
BRY				i Sn	**Sn**	**17 43 41.3**	**-2.3**
IVA	**Berane**	**6.38**	**6**	ePn	**Pn**	**17 42 32.0**	**+1.5**
IVA				i Sn	**Sn**	**17 43 41.9**	**-1.6**
STON	**Ston**	**6.42**	**352**	ePn	**Pn**	**17 42 31.6**	**+0.7**
STON				eSn	**Sn**	**17 43 40.5**	**-3.7**
BOSS	**Bosilegrad**	**6.55**	**23**	ePn	**Pn**	**17 42 34.4**	**+1.6**
BOSS				eSn	**Sn**	**17 43 46.3**	**-1.3**
BARS	**Barje**	**6.66**	**18**	ePn	**Pn**	**17 42 35.5**	**+1.3**
BARS				eSn	**Sn**	**17 43 47.4**	**-2.7**
UPM	**Unac-Piva**	**6.67**	**360**	ePn	**Pn**	**17 42 36.2**	**+1.6**
UPM				eSn	**Sn**	**17 43 48.8**	**-2.0**
KARP	**Karpathos**	**6.70**	**96**	eP	**Pn**	**17 42 35.5**	**+0.6**
KARP	**Karpathos**	**6.70**	**96**	Pn	**Pn**	**17 42 36.5**	**+1.7**
KARP				Sn	**Sn**	**17 43 47.1**	**-4.2**
INTR	**Introdacqua**	**6.75**	**326**	Pn	**Pn**	**17 42 38.2**	**+2.7**
SJES	**Sjenica**	**6.78**	**6**	ePn	**Pn**	**17 42 36.3**	**+0.3**
SJES				eSn	**Sn**	**17 43 51.3**	**-1.9**
PLE	**Pljevlja**	**6.81**	**3**	ePn	**Pn**	**17 42 37.5**	**+1.1**
PLE				eSn	**Sn**	**17 43 52.0**	**-2.0**
SELS	**Selova**	**6.89**	**13**	ePn	**Pn**	**17 42 38.8**	**+1.3**
RDO	**Rodhopi**	**6.89**	**46**	eP	**Pn**	**17 42 39.9**	**+2.4**
DAT	**Datca**	**6.92**	**86**	eP	**Pn**	**17 42 38.7**	**+0.8**
VTS	**Vitosha**	**6.92**	**27**	ePn	**Pn**	**17 42 39.2**	**+1.2**
VTS				eSn	**Sn**	**17 43 53.8**	**-3.0**
VTS	**Vitosha**	**6.92**	**27**	Pn	**Pn**	**17 42 38.7**	**+0.7**
VTS				Sn	**Sn**	**17 43 57.1**	**+0.3**
IVAS	**Ivanjica**	**7.10**	**7**	ePn	**Pn**	**17 42 40.7**	**+0.3**
IVAS				eSn	**Sn**	**17 43 57.9**	**-3.3**
KDZ	**Kurdzhali**	**7.16**	**42**	eP	**Pn**	**17 42 42.7**	**+1.5**
SLUM	**Salum**	**7.21**	**132**	P	**Pn**	**17 42 40.6**	**-1.2**
	baz=139						
SLUM				S	Sn	17 43 50.7	-13
	baz=139						
SLUM				AMP		17 44 00.0	
	baz=139						
AYDB	**Zeytinkoy-Aydi**	**7.25**	**76**	eP	**Pn**	**17 42 43.7**	**+1.2**
BBLS	**Lazići**	**7.34**	**2**	eSn	**Sn**	**17 44 04.3**	**-2.8**
ARG	**Arkhangelos**	**7.39**	**90**	eP	**Pn**	**17 42 44.9**	**+0.6**
GRUS	**Gruza**	**7.48**	**10**	ePn	**Pn**	**17 42 46.8**	**+1.3**
GRUS				eSn	**Sn**	**17 44 07.2**	**-3.1**
DIVS	**Divibare**	**7.61**	**6**	eSn	**Sn**	**17 44 10.2**	**-3.5**
ZAGS	**Zajecar**	**7.70**	**18**	ePn	**Pn**	**17 42 49.2**	**+0.7**
TURN	**Turunc**	**7.74**	**85**	eP	**Pn**	**17 42 45.6**	**-3.5**
NRCA	**Norcia**	**7.76**	**326**	Pn	**Pn**	**17 42 52.4**	**+3.0**
DALY	**Dalyan (Mula)**	**7.78**	**85**	eP	**Pn**	**17 42 50.6**	**+1.0**
KEST	**Kesra**	**7.83**	**267**	Pn	**Pn**	**17 42 52.7**	**+2.2**
	0.5nm,0.3s,baz=72,slow=15,SNR=6.4						
KEST				Sn	**Sn**	**17 44 17.1**	**-2.3**
	0.3nm,0.3s,baz=45,slow=20,SNR=4.3						
KEST	**Kesra**	**7.83**	**267**	Pn	**Pn**	**17 42 51.2**	**+0.7**
FETY	**Fethiye**	**8.13**	**86**	eP	**Pn**	**17 42 55.1**	**+0.6**
BLY	**Banja Luka**	**8.33**	**351**	Pn	**Pn**	**17 42 58.7**	**+1.5**
AKAS	**Kas**	**8.58**	**89**	eP	**Pn**	**17 43 00.9**	**+0.2**
ELL	**Elmali**	**8.79**	**85**	eP	**Pn**	**17 43 04.1**	**+0.5**
ELL	**Elmali**	**8.79**	**85**		**Pn**	**17 43 07.1**	**+3.4**
SWA2		**9.07**	**141**	P	**Pn**	**17 43 07.5**	**+0.1**
	baz=147						
SWA2				AMP		17 44 00.0	
	baz=147						
KORT	**Korkueli**	**9.14**	**84**	eP	**Pn**	**17 43 08.7**	**+0.3**
ISP	**Isparta**	**9.30**	**79**	Pn	**Pn**	**17 43 13.5**	**+2.8**
ZCCA	**Zocca**	**9.91**	**325**	Pn	**Pn**	**17 43 19.3**	**+0.3**
TEOL	**Teolo**	**10.41**	**330**	Pn	**Pn**	**17 43 26.6**	**+0.8**
OBKA	**Obir**	**10.52**	**343**	i Pn	**Pn**	**17 43 30.3**	**+3.1**
	0.8nm,0.2s						
OBKA				i Sn	**Sn**	**17 45 20.5**	**-4.6**
	3.5nm,0.2s						
TIRR	**Tirgusor**	**10.69**	**39**	Pn	**Pn**	**17 43 32.0**	**+2.5**
GAZI	**Gazipasa**	**10.76**	**88**	eP	**Pn**	**17 43 29.7**	**-0.8**
STAL	**STALIGIAL**	**10.80**	**336**	Pn	**Pn**	**17 43 32.5**	**+1.4**
HDMB	**Hadim**	**10.85**	**84**	eP	**Pn**	**17 43 31.3**	**-0.6**
CTI	**Castel Tesino**	**10.99**	**332**	Pn	**Pn**	**17 43 34.9**	**+1.1**
ARSA	**Arzberg**	**11.02**	**348**	i Pn	**Pn**	**17 43 35.3**	**+1.2**
	0.6nm,0.2s						
ARSA				i Sn	**Sn**	**17 45 29.8**	**-7.6**
	2.5nm,0.5s						
TEKE	**Tekeli-Mersin**	**11.41**	**88**	eP	**Pn**	**17 43 38.7**	**-0.7**
BERE	**Bereket-Mersin**	**11.48**	**87**	eP	**Pn**	**17 43 39.4**	**-1.1**
AKKU	**Akkuyu-Mersin**	**11.76**	**87**	eP	**Pn**	**17 43 43.3**	**-0.9**
CSS	**Mathiatis**	**11.77**	**93**	eP	**Pn**	**17 43 42.4**	**-1.9**
CSS	**Mathiatis**	**11.77**	**93**	Pn	**Pn**	**17 43 42.6**	**-1.7**
CSS	**Mathiatis**	**11.77**	**93**	Pn	**Pn**	**17 43 42.5**	**-1.9**
MOA	**Molln**	**11.84**	**344**	i Pn	**Pn**	**17 43 47.5**	**+2.2**
	0.9nm,0.3s						
MOA				i Sn	**Sn**	**17 45 49.9**	**-7.6**
	1.1nm,0.3s						
IKL	**Isikli**	**11.86**	**87**	eP	**Pn**	**17 43 44.9**	**-0.7**
KEBE	**Keben-Mersin**	**11.86**	**86**	eP	**Pn**	**17 43 44.9**	**-0.8**
BRTR	**Keskin Array B**	**11.98**	**70**	Pn	**Pn**	**17 43 48.2**	**+0.9**
	0.1nm,0.3s,baz=249,slow=12,SNR=3.1						
BRTR	**Keskin Array B**	**11.98**	**70**	Pn	**Pn**	**17 43 50.5**	**+3.1**
FUORN	**Ofenpass-Fuorn**	**12.01**	**330**	Pn	**Pn**	**17 43 49.8**	**+2.0**
BURAR	**Bucovina Array**	**12.01**	**21**	Pn	**Pn**	**17 43 51.3**	**+3.7**
SQTA	**Sankt Quirin**	**12.15**	**334**	i Pn	**Pn**	**17 43 52.8**	**+3.2**
	0.7nm,0.2s						
HFRF	**Wahat Farafira**	**12.25**	**137**	P	**Pn**	**17 43 50.0**	**-1.0**
	baz=141						
GLL	**Jalalah**	**12.72**	**119**	P	**Pn**	**17 43 54.7**	**-2.6**
	baz=122						
GERES	**GERESS Array B**	**12.91**	**344**	Pn	**Pn**	**17 43 58.8**	**-1.1**
	0.1nm,0.3s,baz=171,slow=14,SNR=3.0						
GERES				Sn	Sn	17 46 13.1	-11
	0.1nm,0.3s,baz=164,slow=22,SNR=4.9						
GERES	**GERESS Array B**	**12.91**	**344**		**Pn**	**17 43 59.4**	**-0.6**
KHC	**Kasperske Hory**	**13.21**	**344**	ePN	**Pn**	**17 44 04.8**	**+0.9**
KHC				eSN	Sn	17 46 21.6	-9.2
RSH		**13.46**	**110**	P	**Pn**	**17 44 04.4**	**-3.1**
	baz=112						
HNTI	**Hanita**	**13.74**	**100**	Pn	**Pn**	**17 44 08.8**	**-2.5**
OFRI	**`Ofer**	**13.75**	**102**	Pn	**Pn**	**17 44 08.5**	**-2.9**
SLTI	**Sal'it**	**13.93**	**103**	Pn	**Pn**	**17 44 11.0**	**-2.9**
MMAI	**Mount Meron Ar**	**13.95**	**100**	Pn	**Pn**	**17 44 11.6**	**-2.6**
	3.8nm,0.3s,baz=293,slow=12,SNR=22						
MMA0B	**Mount Meron ar**	**13.95**	**100**	Pn	**Pn**	**17 44 11.2**	**-3.0**
KZIT	**Kziot**	**14.00**	**109**	Pn	**Pn**	**17 44 11.7**	**-3.1**
KSDI	**Kefar Szold**	**14.09**	**99**	Pn	**Pn**	**17 44 13.2**	**-2.9**
KSDI				Sn	Sn	17 46 38.8	-14
AMAZ	**Amatzia**	**14.12**	**106**	Pn	**Pn**	**17 44 13.9**	**-2.6**
AMAZ				Sn	Sn	17 46 38.8	-14
NATI	**Neve Ativ**	**14.13**	**98**	Pn	**Pn**	**17 44 13.3**	**-3.3**
MMLI	**Mount Malkishu**	**14.16**	**102**	Pn	**Pn**	**17 44 14.2**	**-2.8**
HMDT	**Nahal Hemdat**	**14.31**	**102**	Pn	**Pn**	**17 44 16.2**	**-2.9**
YTIR	**Yattir**	**14.35**	**106**	Pn	**Pn**	**17 44 16.2**	**-3.4**
YTIR				Sn	Sn	17 46 44.7	-14
DSI	**Dead Sea**	**14.46**	**105**	Pn	**Pn**	**17 44 19.0**	**-2.2**
DAMI2	**DAM2**	**14.68**	**107**	Pn	**Pn**	**17 44 22.0**	**-2.1**
GHAJ	**Ghor Haditha**	**14.72**	**106**	Pn	**Pn**	**17 44 22.2**	**-2.4**
PRNI	**Paran**	**14.72**	**110**	Pn	**Pn**	**17 44 22.4**	**-2.3**
ZFRI	**Zfri**	**14.76**	**109**	Pn	**Pn**	**17 44 21.6**	**-3.5**
HRFI	**Mount Harif**	**14.90**	**111**	Pn	**Pn**	**17 44 25.2**	**-1.9**
MBRI	**Mt Berech**	**14.93**	**112**	Pn	**Pn**	**17 44 24.8**	**-2.8**
EIL	**Elat**	**15.02**	**112**	Pn	**Pn**	**17 44 26.9**	**-1.8**
	1.5nm,0.3s,baz=346,slow=4.5,SNR=27						
EIL				Sn	Sn	17 46 59.4	-16
	0.3nm,0.3s,baz=72,slow=20,SNR=3.4						
EIL	**Elat**	**15.02**	**112**	Pn	**Pn**	**17 44 26.1**	**-2.6**
CLL	**Collm**	**15.39**	**346**	ePP	**P**	**17 44 43.0**	**+4.9**
CLL				e		17 44 54.0	
ESK	**Eskdalemuir**	**24.14**	**328**	P	**P**	**17 46 13.0**	**+0.7**
FINES	**FINESS Array B**	**25.34**	**8**	P	**P**	**17 46 22.8**	**-0.4**
	2.4nm,1.0s,baz=177,slow=11,SNR=4.5						
FINES	**FINESS Array B**	**25.34**	**8**	P	**P**	**17 46 24.3**	**+1.2**
FIA1	**FINESS Array S**	**25.34**	**8**	P	**P**	**17 46 24.4**	**+1.2**
FIA1				IAmb	IAmb	17 46 52.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,13nm,1.1s						
LVZ	**Lovozero**	**32.65**	**11**	P	**P**	**17 47 30.4**	**+2.2**
ARCES	**ARCESS Array B**	**33.26**	**4**	P	**P**	**17 47 33.7**	**+0.2**
	comp=Z,1.4nm,0.9s,baz=193,slow=11,SNR=2.8						
MK31	**Makanchi Array**	**47.23**	**57**	P	**P**	**17 49 29.4**	**0.0**
MKAR	**Makanchi Array**	**47.23**	**57**	P	**P**	**17 49 29.4**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=275,slow=7.4,SNR=19						
MKAR	**Makanchi Array**	**47.23**	**57**	P	**P**	**17 49 29.2**	**-0.2**
ZAA0	**Zalesovo Array**	**47.71**	**47**	P	**P**	**17 49 33.2**	**+0.2**
ZAA0				IAmb	IAmb	17 49 33.6	
	comp=Z,3.8nm,0.6s						
ZALV	**Zalesovo Beam**	**47.71**	**47**	P	**P**	**17 49 33.1**	**0.0**
	comp=Z,4.3nm,0.5s,baz=275,slow=8.5,SNR=22						
ZALV	**Zalesovo Beam**	**47.71**	**47**	P	**P**	**17 49 33.3**	**+0.2**
WMQ	**Urumqi**	**51.65**	**59**	*e*P	**P**	**17 50 06.8**	**+3.5**
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,66nm,7.9s						
SCHQ	**Schefferville**	**58.85**	**318**	P	**P**	**17 50 54.5**	**-0.5**
SONM	**Songino Array**	**62.46**	**49**	P	**P**	**17 51 19.0**	**-1.0**
	comp=Z,0.6nm,0.9s,baz=281,slow=5.6,SNR=5.1						
SONM	**Songino Array**	**62.46**	**49**	P	**P**	**17 51 18.9**	**-1.0**
LZH	**Lanzhou**	**66.05**	**62**	*e*P	**P**	**17 51 42.5**	**-1.2**
LZH				pP	pwP	17 51 54.5	+4.1
LZH				sP	PcP	17 52 00.6	-14
LZH				PP	**PP**	**17 54 14.7**	**+5.9**
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
LZH				pmax	pmax		
	comp=Z,59nm,5.0s						
HHC	**Hu-ho-hao-te**	**68.99**	**54**	*e*P	**P**	**17 52 01.3**	**-0.8**
HHC				pmax	pmax		
	comp=Z,80nm,6.3s						
NJ2	**Nanjing**	**78.72**	**59**	*e*P	**P**	**17 52 59.1**	**0.0**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						

*ANF **08** 17:44:53.2±0.8, 39.78N×123.16W, h8km, ML3.0/5, Error ellipse: s-maj=6.6km s-min=5.4km az=18.0*
*IASPEI **08** 17:44:54.2±1.1, 39.84N±0.02×123.16W±0.03, h9km±8km, Error ellipse: s-maj=3.7km s-min=2.9km az=83.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*NEIC **08** 17:44:54.4±2.0, 39.82N±0.02×123.19W±0.02, h11km±6km, Error ellipse: s-maj=2.2km s-min=1.7km az=160.0*
*NCEDC **08** 17:44:54.1±1.7, 39.82N±0.02×123.18W±0.02, h8km±7km, ML3.0/18, Error ellipse: s-maj=2.3km s-min=2.2km az=61.0*
ISC 08 17:44:54.3±1.1, **39.83N**±0.02×**123.17W**±0.02, **h8**km±8km, **n96, σ0.91**/100, **Near coast of northern California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBNM	**Bluenose Ridge**	**0.07**	**344**		**Pg**	**17 44 56.6**	**+0.1**
KIPM	**Iron Peak**	**0.24**	**266**		**Pg**	**17 44 58.9**	**-0.3**
KFPM	**Farley Peak**	**0.27**	**227**		**Pg**	**17 44 59.5**	**-0.2**
KBSM	**Bell Springs**	**0.34**	**286**		**Pg**	**17 45 01.0**	**-0.1**
KCPM	**Cahto Peak**	**0.35**	**247**		**Pg**	**17 45 01.2**	**0.0**
GVV	**Valley View**	**0.38**	**97**		**Pg**	**17 45 02.3**	**+0.4**
GASB	**Alder Springs**	**0.39**	**116**		**Pg**	**17 45 02.2**	**+0.3**
GTC	**Three Chop Rid**	**0.52**	**215**		**Pg**	**17 45 04.5**	**+0.1**
LBPM	**Beegum Peak**	**0.54**	**24**		**Pg**	**17 45 05.2**	**+0.4**
KMRM	**Mail Ridge**	**0.57**	**314**		**Pg**	**17 45 05.6**	**+0.1**
KMRM	**Mail Ridge**	**0.57**	**314**		**Sb**	**17 45 15.6**	**+0.6**
GCK	**Clark Valley**	**0.63**	**116**		**Pb**	**17 45 07.5**	**0.0**
GNAM	**Navarro Ridge**	**0.72**	**210**		**Pg**	**17 45 08.2**	**0.0**
KCSM	**Cold Springs**	**0.76**	**340**		**Pb**	**17 45 09.4**	**-0.4**
KCRM	**Chalk Rock**	**0.78**	**321**		**Pb**	**17 45 09.8**	**-0.4**
GHLM	**Highland Sprin**	**0.79**	**172**		**Pb**	**17 45 09.7**	**-0.7**
GHOM	**Hamilton Openi**	**0.83**	**200**		**Pb**	**17 45 10.8**	**-0.2**
HOPS	**Hopland Field**	**0.83**	**175**		**Pb**	**17 45 10.6**	**-0.4**
KHBM	**Hayfork Bally**	**0.83**	**357**		**Pb**	**17 45 10.1**	**-0.3**
GFC	**Funks Creek**	**0.84**	**126**		**Pn**	**17 45 11.8**	**-0.6**
GSNM	**Snow Mountain**	**0.88**	**181**		**Pb**	**17 45 11.5**	**-0.4**
LTCM	**Tuscan Springs**	**0.89**	**64**		**Pg**	**17 45 11.6**	**+0.2**
WDC	**Whiskeytown Da**	**0.89**	**32**		**Pg**	**17 45 11.3**	**-0.2**
GWKM	**Walker Ridge**	**0.93**	**146**		**Pb**	**17 45 12.6**	**-0.1**
KMPM	**Mount Pierce**	**0.94**	**309**		**Pb**	**17 45 12.4**	**-0.5**
GACM	**Adobe Creek**	**0.98**	**166**		**Pb**	**17 45 13.5**	**-0.1**
GPMM	**Pine Mountain**	**0.99**	**170**		**Pb**	**17 45 13.4**	**-0.4**
GGUM	**Gualala**	**1.00**	**195**		**Pg**	**17 45 12.6**	**-0.9**
GSGM	**Seigler Mounta**	**1.02**	**159**		**Pn**	**17 45 14.5**	**-0.4**
GDXM	**Geysers**	**1.06**	**164**		**Pn**	**17 45 15.0**	**-0.5**
GDCM	**Dry Creek**	**1.06**	**183**		**Pb**	**17 45 14.7**	**-0.2**
MNRC	**McLaughlin Min**	**1.10**	**149**		**Pn**	**17 45 16.8**	**+0.7**
KCTM	**Capetown**	**1.11**	**306**		**Pg**	**17 45 15.0**	**-0.5**
GCRM	**Castle Rock Sp**	**1.11**	**161**		**Pn**	**17 45 16.5**	**+0.3**
LGPM	**Granite Peak**	**1.12**	**13**		**Pn**	**17 45 15.3**	**-0.5**
KHMM	**Horse Mountain**	**1.13**	**338**		**Pg**	**17 45 15.5**	**-0.6**
O03E	**Paynes Creek**	**1.15**	**65**		**Pg**	**17 45 15.1**	**-1.3**
O03E	**Paynes Creek**	**1.15**	**65**	P	**Pg**	**17 45 15.0**	**-1.3**
	baz=246,SNR=179						
O03E				S	**Sn**	**17 45 33.2**	**+0.5**
	baz=246						
NMTM	**Middletown**	**1.16**	**151**		**Pn**	**17 45 17.3**	**+0.4**
N02D	**Trinity Center**	**1.20**	**17**		**Pb**	**17 45 16.7**	**-0.7**
N02D	**Trinity Center**	**1.20**	**17**	P	**Pb**	**17 45 16.4**	**-0.9**
	baz=198,SNR=350						
N02D				S	**Sn**	**17 45 34.4**	**+0.4**
	baz=198						
GHCM	**House Creek**	**1.22**	**181**		**Pn**	**17 45 18.7**	**+1.1**
MGL	**Magalia**	**1.24**	**90**		**Pn**	**17 45 16.0**	**-2.0**
NMCNC	**Mill Creek, So**	**1.25**	**171**		**Pg**	**17 45 18.6**	**+0.3**
LBKM	**Bonanza King**	**1.31**	**17**		**Pn**	**17 45 18.6**	**-0.5**
ORV	**Oroville**	**1.32**	**101**		**Pn**	**17 45 16.9**	**-2.1**
PAM	**Palermo**	**1.33**	**106**		**Pn**	**17 45 16.9**	**-2.2**
OHCM	**Honcut**	**1.39**	**110**		**Pn**	**17 45 18.0**	**-1.9**
LMEM	**Manzanita Entr**	**1.42**	**59**		**Pn**	**17 45 19.0**	**-1.5**
LRDM	**Redding Peak**	**1.46**	**63**		**Pn**	**17 45 19.7**	**-1.3**
KOMM	**Orleans Mounta**	**1.47**	**352**		**Pn**	**17 45 20.2**	**-0.9**
M02C	**Callahan**	**1.58**	**9**		**Pn**	**17 45 22.6**	**-0.1**
M02C	**Callahan**	**1.58**	**9**	P	**Pn**	**17 45 22.5**	**-0.3**
	baz=189,SNR=47						
M02C				S	**Sb**	**17 45 44.6**	**+0.6**
	baz=189						
HATC	**Hat Creek Radi**	**1.64**	**52**		**Pn**	**17 45 23.9**	**+0.4**
MCCM	**Marconi Confer**	**1.69**	**172**	Pn	**Pn**	**17 45 22.7**	**-1.4**
LBCM	**Butte Creek Ri**	**1.72**	**53**		**Pn**	**17 45 24.5**	**-0.2**
KRMB	**Red Mountain**	**1.79**	**342**	Pn	**Pn**	**17 45 24.2**	**-1.3**
LBFM	**Black Fox Moun**	**1.81**	**32**		**Pn**	**17 45 26.5**	**+0.6**
LAMM	**Antelope Mount**	**1.83**	**13**		**Pn**	**17 45 26.5**	**+0.3**
LMPM	**Military Pass**	**1.83**	**24**		**Pb**	**17 45 27.6**	**-0.6**
LTIM	**Timbered Crate**	**1.86**	**43**		**Pn**	**17 45 27.3**	**+0.7**
AFDM	**Forest Hills D**	**1.92**	**117**		**Pn**	**17 45 26.3**	**-0.9**
YBH	**Yreka Blue Hor**	**1.94**	**10**		**Pn**	**17 45 27.8**	**+0.2**
LHEM	**Herd Peak**	**1.94**	**22**		**Pn**	**17 45 28.6**	**+0.8**
B040	**Montague**	**2.08**	**16**		**Pn**	**17 45 30.1**	**+0.5**
BEKR	**Beckworth**	**2.16**	**88**		**Pn**	**17 45 31.7**	**+0.9**
BGC	**Bolinger Road**	**2.18**	**156**		**Pb**	**17 45 33.2**	**-0.9**
DONR	**Donner Summit**	**2.25**	**101**		**Pn**	**17 45 32.8**	**+0.7**
IND	**Independence**	**2.26**	**99**		**Pn**	**17 45 33.6**	**+1.5**
LOY	**Loyalton**	**2.27**	**93**		**Pn**	**17 45 33.4**	**+1.2**
KBF	**Kyburz Flat**	**2.31**	**97**		**Pn**	**17 45 34.0**	**+1.3**
L02E	**Cave Junction**	**2.35**	**352**	P	**Pn**	**17 45 32.7**	**-0.5**
	baz=172,SNR=37						
RUBR	**Rubicon Trail**	**2.46**	**107**		**Pn**	**17 45 34.9**	**0.0**
L04D	**Klamath Falls**	**2.48**	**15**		**Pn**	**17 45 36.0**	**+0.9**
L04D	**Klamath Falls**	**2.48**	**15**	P	**Pn**	**17 45 35.7**	**+0.7**
	baz=196,SNR=25						
MPK	**Martis Peak**	**2.48**	**101**		**Pn**	**17 45 36.8**	**+1.5**
PEAR	**Peavine Mounta**	**2.48**	**94**		**Pn**	**17 45 36.8**	**+1.6**
KBO	**Bosley Butte**	**2.52**	**342**	Pn	**Pn**	**17 45 34.8**	**-0.8**
VCNR	**Virginia City**	**2.77**	**100**	Pn	**Pn**	**17 45 38.5**	**-0.6**
HUMO	**Hull Mountain**	**2.78**	**3**		**Pn**	**17 45 39.6**	**+0.4**
CMB	**Columbia Colle**	**2.81**	**129**		**Pn**	**17 45 40.3**	**+0.7**
PNTR	**Pine Nut**	**2.86**	**104**		**Pn**	**17 45 40.1**	**-0.3**
K02D	**Willamette Mer**	**2.89**	**353**	P	**Pn**	**17 45 40.7**	**-0.1**
	baz=173,SNR=59						
K02D				S	**Sn**	**17 46 16.6**	**+0.9**
	baz=173						
PAHR	**Pah Rah Range**	**2.92**	**91**		**Pn**	**17 45 40.5**	**-0.7**
MOD	**Modoc Plateau**	**3.00**	**45**		**Pn**	**17 45 41.6**	**-0.7**
YERR	**Yerington**	**3.16**	**104**		**Pn**	**17 45 43.7**	**-0.8**
KEBM	**Edson Butte**	**3.17**	**344**	Pn	**Pn**	**17 45 43.4**	**-1.1**
J01E	**Myrtle Point**	**3.38**	**351**	P	**Pn**	**17 45 47.7**	**+0.4**
	baz=170						
RYN	**Ryan**	**3.80**	**107**		**Pn**	**17 45 52.2**	**-1.0**
KVN	**Kaiserville**	**4.00**	**100**		**Pn**	**17 45 55.1**	**-0.9**
NVAR	**Mina Array Bea**	**4.03**	**109**		**Pn**	**17 45 55.1**	**-1.4**
PMPB	**Monarch Peak**	**4.06**	**152**	Pn	**Pn**	**17 45 55.2**	**-1.6**
NV11	**Mina Array Sit**	**4.14**	**108**		**Pn**	**17 45 57.3**	**-0.6**
PINE	**Pine Mountain**	**4.30**	**22**	Pn	**Pn**	**17 46 02.0**	**+1.8**
G06A	**Carlson Farm,**	**5.72**	**18**	Pn	**Pn**	**17 46 21.6**	**+2.0**
R11A	**Troy Canyon, C**	**6.08**	**102**	Pn	**Pn**	**17 46 26.6**	**+2.0**

*SJA **08** 17:56:52.6±0.6, 32.06S×72.02W, h10km, ML3.0, MW3.2*
*GUC **08** 17:56:54.3±0.6, 32.10S×71.84W, h34km±3km, ML3.2*
ISC 08 17:56:49.6±2.8, **32.03S**±0.05×**72.0W**±0.1, **h0**km±15km, **n19, σ1.35**/30, **1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**1.17**	**45**⇓	*e*P	**Pn**	**17 57 14.6**	**+1.4**
CO02				*e*S	**Sn**	**17 57 29.8**	**-0.1**
CO02				IAML		17 57 35.7	
	comp=E,2μm,0.2s						
PEL	**Peldehue**	**1.55**	**136**	*e*P	**Pn**	**17 57 19.0**	**+0.5**
PEL				*e*S	**Sn**	**17 57 37.9**	**-1.6**
PEL				IAML		17 57 39.5	
	comp=N,369nm,0.2s						
MT05	**Renca**	**1.71**	**143**	*e*P	**Pn**	**17 57 21.6**	**+0.8**
MT05				*e*S	**Sn**	**17 57 42.6**	**-0.7**
MT05				IAML		17 57 46.2	
	comp=E,770nm,0.3s						
CLCH	**Cerro Calan**	**1.82**	**139**	*e*P	**Pn**	**17 57 23.5**	**+1.2**
CLCH				*e*S	**Sn**	**17 57 45.7**	**-0.4**
CLCH				IAML		17 57 48.8	
	comp=E,599nm,0.4s						
MT03	**Universidad Ad**	**1.91**	**140**	*e*P	**Pn**	**17 57 24.6**	**+1.1**
MT03				*e*S	**Sn**	**17 57 48.4**	**+0.1**
MT03				IAML		17 57 49.7	
	comp=N,810nm,0.4s						
FCH	**Farellones**	**1.92**	**133**	*i*P	**Pn**	**17 57 24.8**	**+1.0**
FCH				*i*S	**Sn**	**17 57 48.3**	**-0.6**
FCH				IAML		17 57 50.7	
	comp=N,196nm,0.3s						
MT01	**Popeta**	**1.93**	**162**	*e*P	**Pn**	**17 57 24.3**	**+0.6**
MT01				*e*S	**Sn**	**17 57 46.8**	**-1.8**
MT01				IAML		17 57 55.2	
	comp=N,213nm,0.5s						
RTLS	**Leoncito**	**2.29**	**85**	*e*P	**Pg**	**17 57 33.8**	**+0.3**
RTLS				*e*S	**Sg**	**17 58 04.1**	**+1.0**
RTLS				IAML		17 58 04.8	
	comp=Z,85nm,0.3s						
LMEL	**Las Melosas**	**2.34**	**141**	*e*P	**Pn**	**17 57 31.2**	**+1.7**
LMEL				*e*S	**Sn**	**17 57 58.5**	**-0.6**
LMEL				IAML		17 58 09.4	
	comp=N,176nm,0.3s						
ARCO	**CERRO ARCO**	**2.69**	**108**	*e*P	**Pb**	**17 57 38.9**	**+0.1**
ARCO				IAML		17 57 43.4	
	comp=Z,64nm,0.5s						
ARCO				*e*S	**Sb**	**17 58 13.3**	**+0.9**
ASAL	**Salagasta**	**2.71**	**103**	*e*P	**Pb**	**17 57 39.3**	**+0.2**
AROD	**Rodeo**	**2.83**	**50**	*e*P	**Pb**	**17 57 42.2**	**+1.0**
AAGR	**Agrelo**	**2.85**	**113**	*e*P	**Pb**	**17 57 41.6**	**+0.2**
AAGR				*e*S	**Sb**	**17 58 17.7**	**+0.7**
ACCO	**Cerro Coronel**	**2.87**	**61**	*e*P	**Pb**	**17 57 42.5**	**+0.6**
ACCO				*e*S	**Sg**	**17 58 19.9**	**-2.0**
RTCV	**Cerro Valdivia**	**2.92**	**88**	*e*P	**Pb**	**17 57 42.2**	**-0.4**
AMOG	**MOGNA**	**3.16**	**71**	*e*P	**Pb**	**17 57 45.6**	**-1.1**
AGUA	**GUANDACOL**	**3.92**	**51**	*e*P	**Pb**	**17 57 56.9**	**-2.8**
ACAN	**Cantantal**	**4.06**	**95**	*e*P	**Pb**	**17 57 58.5**	**-3.6**
APLL	**PUNTA DE LOS L**	**4.94**	**72**	*e*P	Pn	17 58 10.8	+5.8

*ANF **08** 18:13:06.9±0.2, 34.07N×118.28W, h15km±1km, ML3.0/33, Error ellipse: s-maj=1.2km s-min=1.2km az=17.0*
*IASPEI **08** 18:13:07.3±0.8, 34.08N±0.01×118.28W±0.01, h15km±4km, Error ellipse: s-maj=2.1km s-min=2.0km az=24.5, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*SCEDC **08** 18:13:08.0, 34.07N×118.29W, h9km*
*NEIC **08** 18:13:07.5±1.3, 34.092N±0.009×118.281W±0.010, h17km±1km, Error ellipse: s-maj=1.4km s-min=1.1km az=191.0*
*PAS **08** 18:13:08.0±1.6, 34.071N±0.008×118.289W±0.009, h9km±1km, ML2.9/228, Error ellipse: s-maj=1.1km s-min=1.0km az=190.0*
ISC 08 18:13:07.6±0.7, **34.07N**±0.01×**118.29W**±0.01, **h15**km±4km, **n164, σ0.76**/239, **Southern California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GR2C	**Griffith Obs.**	**0.05**	**345**		**Pg**	**18 13 09.6**	**-0.8**
USC	**University of**	**0.05**	**181**		**Pg**	**18 13 10.2**	**-0.1**
USC					**Sg**	**18 13 12.4**	**+0.3**
BHPC	**Baldwin Hills**	**0.10**	**219**		**Pg**	**18 13 11.1**	**+0.2**
BHPC					**Sb**	**18 13 14.0**	**+0.3**
LCGC	**La Cienega, Cu**	**0.10**	**228**		**Pg**	**18 13 11.1**	**+0.3**
LCGC					**Sb**	**18 13 14.2**	**+0.4**
HLLC	**North Hollywoo**	**0.12**	**330**		**Pg**	**18 13 10.7**	**-0.4**
HLLC					**Sg**	**18 13 13.1**	**-0.4**
WTT2	**Watts, South G**	**0.12**	**169**		**Pg**	**18 13 11.8**	**+0.7**
WTT2					**Sb**	**18 13 15.1**	**+0.7**
PASC	**Pasadena Art C**	**0.13**	**39**		**Pg**	**18 13 10.7**	**-0.6**
PASC					**Sg**	**18 13 12.9**	**-0.8**
GVRC	**Garvey Reservo**	**0.14**	**98**		**Pg**	**18 13 11.4**	**+0.1**
DJJ	**Donna J Jenkin**	**0.15**	**284**		**Pg**	**18 13 10.8**	**-0.6**
DJJ	**Donna J Jenkin**	**0.15**	**284**		**Pg**	**18 13 10.8**	**-0.6**
DJJ					**Sg**	**18 13 13.4**	**-0.6**
GSA	**Caltech--GSA**	**0.15**	**63**		**Pg**	**18 13 11.2**	**-0.2**
GSA					**Sg**	**18 13 13.8**	**-0.1**
GSA	**Caltech--GSA**	**0.15**	**63**		**Pg**	**18 13 11.2**	**-0.2**
CACC	**Caltech Cellar**	**0.15**	**64**		**Pg**	**18 13 11.2**	**-0.2**
CACC					**Sg**	**18 13 13.8**	**-0.3**
DECC	**Green Verdugo**	**0.19**	**347**		**Pg**	**18 13 11.7**	**-0.4**
DECC					**Sg**	**18 13 14.6**	**-0.4**
DECC	**Green Verdugo**	**0.19**	**347**	P	**Pg**	**18 13 11.6**	**-0.5**
	baz=168,SNR=305						
DECC				S	**Sg**	**18 13 14.6**	**-0.4**
	baz=168						
MWC	**Mount Wilson**	**0.24**	**51**		**Pg**	**18 13 12.7**	**-0.3**
MWC					**Sg**	**18 13 16.5**	**-0.2**
IR2C	**Iron Canyon**	**0.33**	**343**		**Pg**	**18 13 14.2**	**-0.3**
CHFC	**Chilao Flat St**	**0.34**	**39**		**Pg**	**18 13 14.3**	**-0.3**
CHFC					**Sg**	**18 13 19.1**	**-0.3**
RPV	**Rancho Palos V**	**0.34**	**197**		**Pg**	**18 13 14.7**	**+0.2**
RPV					**Sg**	**18 13 19.7**	**+0.4**
FMP	**Fort Macarthur**	**0.36**	**181**		**Pg**	**18 13 14.8**	**0.0**
FMP					**Sg**	**18 13 19.9**	**+0.2**
FMP	**Fort Macarthur**	**0.36**	**181**	P	**Pg**	**18 13 14.9**	**0.0**
	baz=0.6,SNR=5.3						
FMP				S	**Sg**	**18 13 19.5**	**-0.3**
	baz=0.6						
PEM	**Pine Mountain**	**0.36**	**74**		**Pg**	**18 13 14.6**	**-0.3**
FULC	**Fullerton**	**0.36**	**123**		**Pb**	**18 13 15.9**	**+0.2**
BREC	**Barre Substati**	**0.36**	**136**		**Pb**	**18 13 15.9**	**+0.1**
BLCC	**Black Canyon**	**0.37**	**298**		**Pg**	**18 13 14.2**	**-0.8**
OAT	**Oat Mountain**	**0.39**	**315**		**Pg**	**18 13 15.9**	**+0.4**
PSRC	**Puddingstone R**	**0.40**	**87**		**Pg**	**18 13 15.4**	**-0.2**
PSRC					**Sg**	**18 13 21.2**	**+0.1**
AGOC	**Agoura**	**0.41**	**281**		**Pg**	**18 13 15.4**	**-0.4**
XTL	**Crystal Lake,**	**0.42**	**57**		**Pg**	**18 13 15.8**	**-0.3**
CHNC	**Chino**	**0.51**	**98**		**Pg**	**18 13 17.6**	**0.0**
CHNC					**Sg**	**18 13 23.5**	**-0.9**
SSK	**Sunset Peak**	**0.51**	**74**		**Pg**	**18 13 17.4**	**-0.4**
BFSC	**Mount Baldy Ra**	**0.55**	**72**		**Pg**	**18 13 17.8**	**-0.6**
BFSC					**Sg**	**18 13 25.3**	**-0.4**
BFSC	**Mount Baldy Ra**	**0.55**	**72**	P	**Pg**	**18 13 17.8**	**-0.6**
	baz=252,SNR=45						
BFSC				S	**Sg**	**18 13 25.1**	**-0.6**
	baz=252						
LEOC	**Leona Valley**	**0.56**	**358**		**Pg**	**18 13 18.1**	**-0.6**
MLSC	**Mira Loma**	**0.60**	**96**		**Pg**	**18 13 19.1**	**-0.3**
MLSC					**Sg**	**18 13 27.3**	**-0.2**
ALPC	**Antelope**	**0.62**	**359**		**Pg**	**18 13 19.2**	**-0.5**
ALPC					**Sg**	**18 13 27.5**	**-0.4**
PYR	**Pyramid**	**0.62**	**323**		**Pg**	**18 13 20.1**	**+0.2**
CRNC	**Corona**	**0.63**	**108**		**Pg**	**18 13 20.0**	**+0.1**
BLG	**Laguna Peak, P**	**0.65**	**274**		**Pg**	**18 13 19.3**	**-1.0**
BLG	**Laguna Peak, P**	**0.65**	**274**	P	**Pg**	**18 13 19.2**	**-1.0**
	baz=93,SNR=22						
BLG				S	**Sg**	**18 13 28.6**	**-0.4**
	baz=93						
OSI	**Osito Audit: C**	**0.65**	**326**		**Pg**	**18 13 20.4**	**0.0**
OSI	**Osito Audit: C**	**0.65**	**326**	P	**Pg**	**18 13 20.6**	**+0.1**
	baz=146,SNR=12						
OSI				S	**Sg**	**18 13 29.5**	**+0.4**
	baz=146						
BTPC	**Burnt Peak**	**0.66**	**339**		**Pg**	**18 13 20.0**	**-0.5**
SS2	**San Sevaine**	**0.67**	**78**		**Pg**	**18 13 20.4**	**-0.2**
CIAC	**Catalina I. Ai**	**0.68**	**189**		**Pg**	**18 13 20.7**	**0.0**
CIAC					**Sb**	**18 13 31.2**	**+0.9**
CIS	**Catalina Islan**	**0.68**	**189**	P	**Pg**	**18 13 20.8**	**0.0**
	baz=8.9,SNR=37						
CIS				S	**Sb**	**18 13 31.0**	**+0.6**
	baz=8.9						
SBB	**Saddle Back Bu**	**0.72**	**32**		**Pg**	**18 13 21.0**	**-0.8**
SBB					**Sg**	**18 13 30.5**	**-0.9**
RVR	**Riverside**	**0.76**	**96**		**Pg**	**18 13 21.7**	**-0.7**
RVR					**Sg**	**18 13 31.6**	**-0.8**
STCC	**Santa Clara**	**0.78**	**288**		**Pg**	**18 13 22.7**	**-0.2**
CSP	**Cedar Springs**	**0.80**	**73**		**Pg**	**18 13 22.6**	**-0.6**
RSBC	**Riverside Bore**	**0.80**	**97**		**Pg**	**18 13 22.6**	**-0.6**
CLTC	**Calectric**	**0.80**	**88**		**Pb**	**18 13 24.1**	**+0.7**
EDW2	**Edwards Air Fo**	**0.84**	**16**		**Pg**	**18 13 23.2**	**-0.9**
EDW2					**Sg**	**18 13 35.0**	**-0.1**
EDW2	**Edwards Air Fo**	**0.84**	**16**	P	**Pg**	**18 13 23.1**	**-0.9**
	baz=197,SNR=39						
EDW2				S	**Sb**	**18 13 35.6**	**+0.3**
	baz=197						
SBI	**Santa Barbara**	**0.85**	**227**		**Pb**	**18 13 24.1**	**-0.1**
SBI					**Sg**	**18 13 36.8**	**+1.4**
HLNC	**Highland**	**0.89**	**86**		**Pb**	**18 13 24.3**	**-0.4**
THC	**Tehachapi Micr**	**0.89**	**340**		**Pb**	**18 13 24.5**	**-0.5**
VTV	**Victorville**	**0.93**	**58**		**Pb**	**18 13 25.1**	**-0.5**
VTV					**Sb**	**18 13 37.3**	**-0.5**
PEC	**Perris**	**0.95**	**100**		**Pb**	**18 13 24.9**	**-0.9**
PEC					**Sb**	**18 13 38.4**	**+0.1**
CFT	**Crafton Hills**	**0.97**	**92**		**Pb**	**18 13 25.7**	**-0.5**
CFT					**Sb**	**18 13 38.6**	**-0.4**
MURC	**Murrieta**	**1.02**	**117**		**Pb**	**18 13 26.4**	**-0.7**
MURC					**Sg**	**18 13 41.0**	**+0.4**
MURC	**Murrieta**	**1.02**	**117**	P	**Pb**	**18 13 26.2**	**-0.8**
	baz=298,SNR=109						
MURC				S	**Sb**	**18 13 40.7**	**+0.5**
	baz=298						
MPI	**Mount Pinos, F**	**1.03**	**316**		**Sb**	**18 13 41.0**	**+0.2**
TJR	**Tejon Ranch**	**1.03**	**339**		**Pb**	**18 13 26.5**	**-0.6**
TJR					**Sb**	**18 13 40.4**	**-0.1**
BTL	**Butler Peak**	**1.08**	**80**		**Pb**	**18 13 27.6**	**-0.6**
BBSC	**Beaumont Base**	**1.09**	**97**		**Pb**	**18 13 27.9**	**-0.4**
SCI2	**San Clemente I**	**1.11**	**191**		**Pb**	**18 13 27.7**	**-0.8**
SCI2	**San Clemente I**	**1.11**	**191**	P	**Pb**	**18 13 27.7**	**-0.8**
	baz=11,SNR=9.8						
SCI2				S	**Sb**	**18 13 42.5**	**-0.3**
	baz=11						
HMTC	**Hemet**	**1.12**	**108**		**Pb**	**18 13 27.9**	**-1.0**
SCZ2	**Santa Cruz Isl**	**1.12**	**267**	P	**Pb**	**18 13 27.7**	**-1.1**
	baz=86,SNR=7.4						
SCZ2				S	**Sn**	**18 13 45.0**	**+0.9**
	baz=86						
BACC	**Bachelor Mtn.**	**1.13**	**113**		**Pb**	**18 13 28.3**	**-0.6**
DGR	**Domenigoni Val**	**1.14**	**111**		**Pb**	**18 13 28.1**	**-1.0**
DGR					**Sb**	**18 13 44.0**	**+0.2**
ARVC	**Arvin**	**1.15**	**337**		**Sb**	**18 13 44.1**	**+0.2**
ARVC	**Arvin**	**1.15**	**337**	P	**Pn**	**18 13 28.9**	**-0.3**
	baz=157,SNR=14						
ARVC				S	**Sb**	**18 13 43.9**	**0.0**
	baz=157						
BBRC	**Big Bear Solar**	**1.15**	**80**		**Pb**	**18 13 28.9**	**-0.4**
BBRC					**Sb**	**18 13 44.5**	**+0.4**
BBRC	**Big Bear Solar**	**1.15**	**80**	P	**Pb**	**18 13 29.0**	**-0.3**
	baz=261,SNR=19						
BBRC				S	**Sb**	**18 13 44.3**	**+0.1**
	baz=261						
POB	**Polly Butte**	**1.20**	**108**		**Pn**	**18 13 29.0**	**-1.0**
TEJ	**El Tejon**	**1.20**	**344**		**Pn**	**18 13 29.7**	**-0.3**
SBC	**Santa Barbara**	**1.24**	**288**	P	**Pn**	**18 13 30.0**	**-0.5**
	baz=107						
SBC				S	**Sn**	**18 13 47.1**	**+0.2**
	baz=107						
GORC	**Green Oak Ranc**	**1.27**	**136**		**Pn**	**18 13 29.8**	**-1.1**
GORC					**Sn**	**18 13 47.8**	**+0.2**
BCW	**Bitter Crk WRg**	**1.27**	**313**		**Pn**	**18 13 30.8**	**-0.3**
BCW					**Sn**	**18 13 48.4**	**+0.5**
SNCC	**San Nicolas Is**	**1.32**	**232**		**Pn**	**18 13 30.4**	**-1.1**
SNCC					**Sn**	**18 13 49.5**	**+0.6**
SNCC	**San Nicolas Is**	**1.32**	**232**	P	**Pn**	**18 13 30.5**	**-1.0**
	baz=51						
SNCC				S	**Sn**	**18 13 49.4**	**+0.4**
	baz=51						
RRX	**Edison Barstow**	**1.33**	**53**	Pg	**Pb**	**18 13 32.4**	**+0.1**
	baz=233,SNR=5.6						
RRX				Sg	**Sg**	**18 13 50.7**	**+0.1**
	baz=233						
BLKC	**Black Mountain**	**1.34**	**41**		**Pn**	**18 13 32.3**	**+0.4**
CRY	**Cary Ranch**	**1.38**	**111**		**Pn**	**18 13 32.2**	**-0.3**
CRY					**Sn**	**18 13 50.5**	**-0.1**
PLM	**Palomar**	**1.38**	**121**		**Pn**	**18 13 32.3**	**-0.3**
PLM					**Sb**	**18 13 51.2**	**+0.3**
RMR	**Rimrock**	**1.43**	**84**		**Pn**	**18 13 33.7**	**+0.5**
BAKC	**Calstate**	**1.44**	**332**		**Sb**	**18 13 53.0**	**+0.7**
BZNA	**Buzz No.'s Pla**	**1.47**	**113**		**Pn**	**18 13 33.3**	**-0.4**
BZNA					**Sg**	**18 13 54.4**	**-0.5**
DNR	**Dunn Ranch,Anz**	**1.47**	**110**		**Pn**	**18 13 33.4**	**-0.3**
SYP	**Santa Ynez Pea**	**1.47**	**288**		**Sb**	**18 13 53.8**	**+0.4**
SNDA	**J Saunders Pla**	**1.48**	**110**		**Pn**	**18 13 33.7**	**-0.3**
SNDA					**Sb**	**18 13 54.2**	**+0.5**
LRMC	**Laurel Mtn Rad**	**1.49**	**19**		**Sb**	**18 13 54.2**	**+0.3**
LRMC	**Laurel Mtn Rad**	**1.49**	**19**	Pb	**Pn**	**18 13 34.4**	**+0.3**
	baz=200						
PKM	**Mcpherson Peak**	**1.50**	**303**		**Pn**	**18 13 34.7**	**+0.4**
PKM	**Mcpherson Peak**	**1.50**	**303**	Pb	**Pn**	**18 13 34.5**	**+0.3**
	baz=123,SNR=22						
PKM				Sb	**Sb**	**18 13 54.8**	**+0.4**
	baz=123						
WOFM	**Oak Flat**	**1.50**	**347**		**Pb**	**18 13 35.2**	**-0.2**
FRD	**Ford Ranch, An**	**1.51**	**112**		**Pb**	**18 13 35.5**	**0.0**
FRD					**Sn**	**18 13 53.8**	**0.0**
FRD	**Ford Ranch, An**	**1.51**	**112**		**Pn**	**18 13 34.0**	**-0.3**
HWB	**Hans Werner Br**	**1.52**	**133**		**Sn**	**18 13 53.4**	**-0.5**
109C	**Camp Elliot, M**	**1.54**	**140**		**Pn**	**18 13 33.5**	**-1.1**
109C	**Camp Elliot, M**	**1.54**	**140**	P	**Pn**	**18 13 33.4**	**-1.1**
	baz=320						
DPP	**Dos Picos Cty**	**1.55**	**133**		**Pn**	**18 13 34.0**	**-0.7**
DPP					**Sn**	**18 13 53.8**	**-0.8**
FIGC	**Figueroa Mtn.**	**1.55**	**295**		**Pn**	**18 13 35.6**	**+0.7**
EW2	**E Wide Canyon**	**1.56**	**94**		**Pn**	**18 13 35.7**	**+0.7**
EW2					**Sn**	**18 13 54.0**	**-1.0**
BLAC	**Blackrock camp**	**1.57**	**89**		**Pb**	**18 13 36.2**	**-0.3**
PFO	**Pinyon Flats O**	**1.59**	**106**		**Pb**	**18 13 35.2**	**-0.2**
PFO	**Pinyon Flats O**	**1.59**	**106**		**Pb**	**18 13 36.0**	**+0.7**
PFO					**Sb**	**18 13 56.9**	**+0.1**
PFO	**Pinyon Flats O**	**1.59**	**106**	P	**Pn**	**18 13 35.1**	**-0.2**
	baz=287,SNR=28						
PFO				Sb	**Sb**	**18 13 56.8**	**+0.1**
	baz=287						
XPFO	**Pion Flat**	**1.59**	**106**		**Pn**	**18 13 35.2**	**-0.1**
XPFO	**Pion Flat**	**1.59**	**106**		**Pn**	**18 13 35.8**	**+0.4**
XPFO					**Sb**	**18 13 56.7**	**-0.1**
ISA	**Isabella, Lake**	**1.60**	**354**		**Pn**	**18 13 35.6**	**+0.1**
ISA	**Isabella, Lake**	**1.60**	**354**	Pb	**Pn**	**18 13 36.0**	**+0.5**
	baz=174,SNR=13						
GTM	**Goat Mountain**	**1.61**	**81**		**Pn**	**18 13 34.2**	**-1.5**
GTM					**Pb**	**18 13 37.1**	**-0.1**
WORM	**Onyx Ranch**	**1.62**	**1**		**Pn**	**18 13 35.8**	**0.0**
WASM	**Alta Sierra Ca**	**1.68**	**352**		**Pn**	**18 13 37.9**	**-0.5**
EML	**El Monte Cty P**	**1.68**	**134**		**Pn**	**18 13 35.9**	**-0.6**
EML					**Sn**	**18 13 57.0**	**-0.8**
HDB	**Hidalgo Marine**	**1.69**	**78**		**Pn**	**18 13 39.0**	**+0.6**
BSM	**San Miguel Isl**	**1.71**	**270**		**Pn**	**18 13 37.2**	**+0.2**
BSM					**Sn**	**18 13 59.6**	**+0.9**
GSC	**Goldstone, Bar**	**1.73**	**44**		**Pn**	**18 13 37.6**	**+0.3**
GSC	**Goldstone, Bar**	**1.73**	**44**		**Sn**	**18 13 57.9**	**-1.4**
GSC	**Goldstone, Bar**	**1.73**	**44**	Pb	**Pn**	**18 13 37.9**	**+0.6**
	baz=225,SNR=52						
SDRC	**San Diego Road**	**1.74**	**139**		**Pn**	**18 13 36.5**	**-0.8**
BORC	**Borrego Spring**	**1.75**	**117**		**Pn**	**18 13 38.4**	**+0.9**
BORC					**Sn**	**18 13 58.8**	**-0.8**
HEC	**Hector,Ludlow**	**1.78**	**64**		**Sn**	**18 14 00.1**	**-0.4**
HEC	**Hector,Ludlow**	**1.78**	**64**	Pn	**Pn**	**18 13 38.2**	**+0.2**

	baz=245						
HEC				Pg	Pb	18 13 41.0	+0.9
	baz=245,SNR=21						
HEC				Sb	Sb	18 14 02.2	0.0
	baz=245						
TPC	Twentynine Pal	1.86	88		Pb	18 13 41.2	-0.1
SMMC	Simmler	1.88	312	P	Pn	18 13 40.0	+0.7
	baz=131						
SMMC				S	Sb	18 14 04.6	-0.4
	baz=131						
BELC	Belle Mtn. Jos	1.90	91	Pn	Pn	18 13 39.8	+0.2
	baz=273,SNR=99						
BELC				Pg	Pb	18 13 42.2	+0.1
	baz=273						
BELC				Sb	Sb	18 14 07.2	+1.5
	baz=273						
BAR	Barrett	1.93	135		Pn	18 13 39.2	-0.8
MONP2	Monument Peak	1.95	127	P	Pn	18 13 40.1	-0.3
	baz=308,SNR=30						
MONP2				Sb	Sb	18 14 07.1	-0.2
	baz=308						
CTCC	Cactus City	1.95	102		Pb	18 13 43.1	+0.2
CBKC	Canebrake	2.06	124		Pb	18 13 44.4	-0.3
MPMC	Manual Prospec	2.09	18	P	Pn	18 13 42.7	+0.4
	baz=198,SNR=20						
CRR	Carrizo Plain	2.27	121		Pb	18 13 48.0	-0.2
DAC	Darwin (Calif)	2.27	14		Pn	18 13 46.0	+1.1
GMRC	Granite Mounta	2.28	71	Pg	Pb	18 13 49.6	+1.0
	baz=252,SNR=20						
GMRC				Sb	Sg	18 14 19.7	-1.3
	baz=252						
IKP	In-Ko-Pah, Jac	2.31	127	Pb	Pb	18 13 47.8	-1.2
	baz=309,SNR=14						
IKP				Sb	Sb	18 14 17.9	+0.5
	baz=309						
SWSC	Sam W. Stewart	2.36	118	Pb	Pb	18 13 49.7	-0.1
	baz=299,SNR=7.5						
SWSC				Sb	Sb	18 14 21.0	+2.2
	baz=299						
TUQ	Turquoise Moun	2.37	54	Sb	Sg	18 14 22.4	-1.6
	baz=236						
BC3	Big Chuckawall	2.39	99	Pb	Pb	18 13 50.6	+0.1
	baz=281,SNR=14						
CCX	Cicese	2.58	148		Pb	18 13 53.9	+0.2
IRM	Iron Mountain	2.61	87	Pb	Pb	18 13 54.8	+0.8
	baz=269,SNR=24						
ESJX	Sierra Juarez	2.84	136		Pb	18 13 56.5	-1.8
PMPB	Monarch Peak	2.97	317	Pn	Pn	18 13 54.5	+0.1
GLA	Glamis	3.06	108		Pn	18 13 56.5	+1.0
Y12C	Blythe	3.14	95		Pn	18 13 57.7	+1.0
Y12C					Sb	18 14 44.8	+3.4
TPNV	Topopah Spring	3.32	29		Pn	18 14 00.2	+1.0
TPNV	Topopah Spring	3.32	29	P	Pn	18 14 00.8	+1.6
	baz=211						
SHPR	Sheep Range	3.53	46		Pn	18 14 03.7	+1.7
SHPR					LR	18 14 58.9	
OMMB	Old Mammoth Mi	3.58	351	Pn	Pn	18 14 04.5	+1.6
OMMB					Sb	18 14 57.0	+2.6
SAO	San Andreas Ge	3.73	317	Pn	Pn	18 14 05.1	+0.4
W13A	Hualapai Mount	3.77	73		Pn	18 14 05.9	+0.4
CMB	Columbia Colle	4.31	337	Pn	Pn	18 14 11.0	-1.6
Y14A	Wickenburg	4.39	90	Pn	Pn	18 14 15.2	+1.4
RYN	Ryan	4.55	358	Pn	Pn	18 14 17.2	+1.0
R11A	Troy Canyon, C	4.79	26	Pn	Pn	18 14 21.6	+2.1
LCMT	Little Creek M	5.05	53	Pn	Pn	18 14 25.1	+2.1
CCUT	Cedar City	5.30	48	Pn	Pn	18 14 26.9	+0.5
KNB	Kanab	5.34	55	Pn	Pn	18 14 29.1	+2.2
U15A	North Rim	5.44	63	Pn	Pn	18 14 29.6	+1.1
X16A	Lo Mia Camp, P	5.68	85	Pn	Pn	18 14 30.9	-0.7
PSUT	Pine Spring	5.71	37		Pn	18 14 34.2	+2.0

IDC 08 18:41:24.1±2.1, 3°.06N×126°.37E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/37, mbtmp3.6/4, Error ellipse: s-maj=197.5km s-min=25.2km az=65.0

NEIC 08 18:41:24.9±1.5, 3°.1N±0°.1×126°.3E±0°.3, h11km±6km, mb4.3/11, Error ellipse: s-maj=43.5km s-min=8.2km az=66.0

MAN 08 18:41:28.0, 3°.38N×126°.49E, h0km, mb4.5, ML3.4, MS3.2

ISC 08 18:41:28.7±0.8, 3°.4N±0°.1×127°.1E±0°.3, h35km, n24, σ1.64/26, mb4.2/8, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.61	173	Pn	Pn	18 42 06.0	-2.4
DDMP	Don Marcelino,	3.02	334	eP	Pn	18 42 14.7	+0.6
DDMP				eS	Sn	18 42 50.4	+1.4
DAV	Davao City (W)	3.95	338	Pn	Pn	18 42 26.7	-0.1
SKMP	Bagumbayan, Su	4.00	321	eP	Pn	18 42 27.8	+0.2
SKMP				eS	Sn	18 43 11.5	-1.7
CTBH	Cotabato--PC H	4.73	324	⇑iP	Pn	18 42 41.1	+3.5
BUKP	Musuan	4.89	336	eP	Pn	18 42 41.4	+1.6
FAKI	Fak Fak	8.13	140	Pn	Pn	18 43 27.0	+2.8
YULB	Yu-li	20.66	345	P	P	18 46 03.9	-1.7
TPUB	Ta-pu	20.76	343	P	P	18 46 05.3	-1.3
WB0	Warramunga Arr	24.11	163	P	P	18 46 39.9	-1.4
WB0				IAmb	IAmb	18 46 51.6	
	comp=Z,16nm,1.4s						
WRAB	Tennant Creek	24.25	163	P	P	18 46 41.9	-0.7
WRAB				IAmb	IAmb	18 46 54.7	
	comp=Z,14nm,1.3s						
WRA	Warramunga Arr	24.26	163	P	P	18 46 41.9	-0.8
	comp=Z,1.9nm,0.6s,baz=341,slow=9.8,SNR=13						
WRA	Warramunga Arr	24.26	163	P	P	18 46 41.4	-1.3
WB2	Warramunga Arr	24.26	163	P	P	18 46 41.5	-1.2
WB2				IAmb	IAmb	18 46 43.2	
	comp=Z,13nm,1.2s						
WR0	Warramunga Arr	24.33	163	P	P	18 46 41.1	-2.2
AS31	Alice Springs	27.70	166	P	P	18 47 14.2	+0.4
ASAR	Alice Springs	27.70	166	P	P	18 47 12.7	-1.1
	comp=Z,0.4nm,0.8s,baz=343,slow=11,SNR=4.3						
ASAR	Alice Springs	27.70	166	P	P	18 47 11.8	-2.0
STKA	Stephens Creek	37.69	160	P	P	18 48 41.4	+0.5
	comp=Z,1.9nm,0.8s,baz=329,slow=13,SNR=3.5						
STKA	Stephens Creek	37.69	160	P	P	18 48 41.7	+0.8
STKA				IAmb	IAmb	18 49 03.5	
	comp=Z,3.6nm,1.6s						
ULN	Ulaanbaatar	47.55	342	P	P	18 50 02.8	+1.9
ULN				IAmb	IAmb	18 50 03.1	
	comp=Z,6.7nm,1.6s						
MK31	Makanchi Array	58.03	325	P	P	18 51 16.6	-1.6
MKAR	Makanchi Array	58.03	325	P	P	18 51 18.2	0.0
	comp=Z,0.2nm,0.5s,baz=115,slow=8.3,SNR=4.1						
MKAR	Makanchi Array	58.03	325	P	P	18 51 18.0	-0.2

IDC 08 18:59:07.9±4.4, 5°.62S×155°.51E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/31, mbtmp3.5/3, Error ellipse: s-maj=153.7km s-min=40.8km az=113.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.02	233	P	P	19 04 32.7	-1.2
	1.0nm,1.0s,baz=59,slow=9.7,SNR=2.6						
ASAR	Alice Springs	27.47	227	P	P	19 04 57.1	+1.1
	0.5nm,0.8s,baz=57,slow=9.8,SNR=5.1						
MKAR	Makanchi Array	82.72	318	P	P	19 11 34.5	+0.7
	0.4nm,0.7s,baz=112,slow=6.4,SNR=4.9						
TORD	Torodi Ar. Bea	153.12	288	PKPbc	PKPbc	19 19 07.7	-1.1
	0.3nm,0.6s,baz=104,slow=3.1,SNR=2.9						

IDC 08 19:05:44.1±2.8, 7°.16S×129°.43E, h114km±29km, mb3.5/7, mb1 3.8/11, mb1mx3.5/37, mbtmp4.1/11, Error ellipse: s-maj=32.2km s-min=16.3km az=77.0

DJA 08 19:05:45.4±0.3, 7°.3S±3°×13°.0E±°, h133km±10km, M4.8/13, mb4.9/13, mB5.4/6, MLv4.7/7, Mw(mB)4.8/6

NEIC 08 19:05:45.1±2.9, 7°.10S±0°.06×129°.62E±0°.06, h130km±9km, mb4.4/14, Error ellipse: s-maj=9.3km s-min=6.8km az=214.0

ISC 08 19:05:45.3±0.5, 7°.19S±0°.04×129°.62E±0°.05, h139km, n51, σ2.23/55, mb3.9/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.84	115		Pn	19 06 19.5	+1.6
SAUI				Sn	Sn	19 06 42.9	0.0
AAI	Ambon	3.76	338	P	Pn	19 06 44.4	+2.3
MSAI	Masohi	3.88	350	P	Pn	19 06 46.6	+2.9
NLAI	Namlea	4.66	327	P	Pn	19 06 55.5	+1.5
FAKI	Fak Fak	4.99	32		Pn	19 06 57.4	-1.0
FAKI				Sn	Sn	19 07 50.5	-4.9
MTN	Manton Dam	5.81	165		Pn	19 07 20.3	+11
MTN				Sn	Sn	19 08 17.0	+2.0
SOEI	Soe	5.87	244	P	Pn	19 07 10.6	+0.3
	2.0nm6μm531nm,0.8s						
SOEI	Soe	5.87	244		Pn	19 07 12.3	+2.0
SOEI				Sn	Sn	19 08 17.3	+0.6
SANI	Sanana	6.26	325	P	Pn	19 07 15.2	-0.2
	0.2nm58nm,0.7s						
SIJI	Sorong	6.49	15	P	Pn	19 07 17.5	-1.1
	7.6nm,0.3s,baz=175,slow=21,SNR=66						
SIJI				S	Sn	19 08 24.3	-7.2
	31nm,0.3s,baz=146,slow=23,SNR=20						
LBMI	Labuha	6.84	342	P	Pn	19 07 07.7	-16
BBSI	Bau Bau	7.21	283	P	Pn	19 07 27.7	-0.4
	0.0nm13nm,1.1s						
RKPI	Ransiki, Papua	7.25	39	P	Pn	19 07 27.5	-1.2
	2.9nm106nm,0.7s						
KNRA	Kununurra	8.47	186		Pn	19 07 44.6	-0.5
KNRA				Sn	Sn	19 09 13.2	-6.0
BAKI	Biak	8.80	48	P	Pn	19 07 50.8	+1.3
	59nm,0.7s						
WAMI	Wamena	9.63	71	P	Pn	19 08 03.2	+2.6
	1μm128nm,0.7s						
KAPI	Kappang	10.04	282	Pn	Pn	19 08 08.9	+2.8
APSI	Ampana	10.10	308	P	Pn	19 07 50.5	-16
GENI	Genyem	11.46	67	P	Pn	19 08 25.8	+0.9
	2μm36nm,0.5s						
FITZ	Fitzroy Crossi	11.51	199	P	Pn	19 08 24.4	-1.1
	3.9nm,0.3s,baz=26,slow=8.6,SNR=63						
FITZ				S	Sn	19 10 22.5	-10
	7.7nm,0.3s,baz=263,slow=19,SNR=10						
PLAI	Plampang	11.84	261	P	Pn	19 08 29.7	-0.2
	1μm80nm,0.7s						
WRAB	Tennant Creek	13.47	161		Pn	19 08 49.9	-1.1
WRA	Warramunga Arr	13.48	161	P	Pn	19 08 48.4	-2.6
	2.1nm,0.3s,baz=333,slow=13,SNR=125						
WRA				S	Sn	19 11 11.4	-8.7
	3.9nm,0.3s,baz=352,slow=22,SNR=5.4						
WRA	Warramunga Arr	13.48	161		Pn	19 08 49.6	-1.5
WR0	Warramunga Arr	13.56	160		Pn	19 08 50.1	-2.0
COEN	Coen	14.92	118	Pn	Pn	19 09 08.9	-0.4
JAGI	Jajag, Banyuwa	15.37	264	Pn	Pn	19 09 12.6	-2.4
JAGI				IAmb	IAmb	19 09 25.9	
	comp=Z,50nm,1.3s						
AS31	Alice Springs	16.89	166	P	P	19 09 33.6	+0.3
AS31				IAmb	IAmb	19 09 41.5	
	comp=Z,12nm,0.4s						
ASAR	Alice Springs	16.89	166	P	P	19 09 33.4	+0.1
	comp=Z,4.1nm,0.3s,baz=339,slow=9.8,SNR=336						
ASAR				S	Sn	19 12 35.4	-6.7
	comp=Z,1.0nm,0.3s,baz=356,slow=26,SNR=4.5						
ASAR	Alice Springs	16.89	166	P	P	19 09 33.7	+0.5
PSA00	Pilbara Seismi	17.13	212	P	Pn	19 09 37.2	+0.8
PSA00				IAmb	IAmb	19 09 46.6	
	comp=Z,11nm,0.9s						
PMG	Port Moresby	17.50	98	P	Pn	19 09 44.2	+3.4
	comp=Z,1.9nm,0.3s,baz=108,slow=1.4,SNR=10						
PMG	Port Moresby	17.50	98	P	P	19 09 40.9	+0.9
PMG				IAmb	IAmb	19 09 49.8	
	comp=Z,9.8nm,0.6s						
UGM	Wanagama	18.94	267	P	P	19 09 56.1	+0.3
SBUM	Sibu	19.83	298	P	P	19 10 06.3	+1.0
CISI	Cisompet, Garu	21.62	268	P	P	19 10 25.1	+0.4
BBOO	Buckleboo	26.18	168	P	P	19 11 08.3	+1.4
BBOO				IAmb	IAmb	19 11 09.6	
	comp=Z,32nm,1.4s						
STKA	Stephens Creek	26.98	157	P	P	19 11 16.2	+2.1
	comp=Z,2.0nm,0.4s,baz=338,slow=8.6,SNR=8.1						
STKA	Stephens Creek	26.98	157	P	P	19 11 15.5	+1.4
NWAO	Narrogin (SRO)	28.07	203	P	P	19 11 23.9	+0.1
YULB	Yu-li	31.47	345	P	P	19 11 54.2	+0.4
YULB				IAmb	IAmb	19 11 57.1	
	comp=Z,28nm,1.5s						
CMAR	Chiang Mai Arr	39.56	311	P	P	19 13 03.9	+0.8
	comp=Z,0.5nm,0.7s,baz=147,slow=7.2,SNR=3.1						
USRK	Ussuriysk Ar.	51.20	2	P	P	19 14 34.8	+0.5
	comp=Z,1.0nm,0.5s,baz=185,slow=7.2,SNR=5.4						
SONM	Songino Array	58.50	342	P	P	19 15 27.3	+0.3
	comp=Z,0.3nm,0.5s,baz=164,slow=7.1,SNR=6.8						
SONM	Songino Array	58.50	342	P	P	19 15 27.9	+0.9
MK31	Makanchi Array	68.18	327	P	P	19 16 32.1	+1.5
MKAR	Makanchi Array	68.18	327	P	P	19 16 31.8	+1.2
	comp=Z,0.7nm,0.3s,baz=117,slow=8.1,SNR=32						
MKAR	Makanchi Array	68.18	327	P	P	19 16 32.1	+1.5
MAKZ	Makanchi	68.36	327	P	P	19 16 31.8	+0.1
MAKZ				IAmb	IAmb	19 16 40.5	
	comp=Z,3.5nm,1.4s						
ZALV	Zalesovo Beam	71.59	334	P	P	19 16 51.8	+0.6
	comp=Z,0.4nm,0.4s,baz=129,slow=11,SNR=2.5						
KURBB	Kurchatov Arra	72.47	329	P	P	19 16 57.6	+1.0
	comp=Z,0.4nm,0.6s,baz=128,slow=5.4,SNR=5.2						

IDC 08 19:14:44.7±3.5, 14°.94S×167°.40E, h98km±26km, mb4.0/8, mb1 4.1/9, mb1mx3.8/38, mbtmp4.4/9, Error ellipse: s-maj=38.0km s-min=24.3km az=88.0

NEIC 08 19:14:48.4±1.6, 15°.17S±0°.09×167°.6E±0°.1, h135km±5km, mb4.5/27, Error ellipse: s-maj=15.2km s-min=12.3km az=62.0

ISC 08 19:14:48.3±0.8, 15°.17S±0°.06×167°.5E±0°.1, h129km, n46, σ1.09/49, mb4.5/18, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.39	224		Pn	19 15 06.4	-0.2
SANVU				Sn	Sn	19 15 23.0	+2.4
DZM	Mont Dzumac	6.94	188	P	Pn	19 16 27.1	-0.5
	2.8nm,0.3s,baz=129,slow=23,SNR=32						
DZM				S	Sn	19 17 46.6	+1.4
	15nm,0.3s,baz=132,slow=22,SNR=11						
DZM	Mont Dzumac	6.94	188		Pn	19 16 27.3	-0.2
DZM				Sn	Sn	19 17 45.2	+0.1
NOUC	Port Laguerre	6.99	189		Pn	19 16 28.4	+0.3
NOUC				Sn	Sn	19 17 46.6	+0.4
EIDS	Eidsvold	18.42	234	P	Pn	19 18 55.0	-0.3
EIDS				IAmb	IAmb	19 18 58.8	
	comp=Z,22nm,0.7s						
PMG	Port Moresby	20.66	284	P	P	19 19 16.7	-1.3
	comp=Z,10nm,1.0s,baz=277,slow=17,SNR=2.9						
PMG	Port Moresby	20.66	284	P	P	19 19 17.2	-0.8
CTA	Charters Tower	20.81	253	P	P	19 19 21.0	+1.4
	comp=Z,5.7nm,0.9s,baz=250,slow=12,SNR=5.3						
ARMA	Armidale	21.04	221	P	P	19 19 22.8	+0.8
ARMA				IAmb	IAmb	19 19 25.8	
	comp=Z,18nm,1.1s						
MANU	Manus Island	23.75	301	P	P	19 19 49.4	+0.5
BKZ	Black Stump Fm	25.18	163	P	P	19 20 01.6	-0.2
BKZ				IAmb	IAmb	19 20 07.3	
	comp=Z,30nm,1.3s						
CAN	Canberra	26.04	216	P	P	19 20 09.6	0.0
CAN				IAmb	IAmb	19 20 13.4	
	comp=Z,9.4nm,1.0s						
TUWZ	Tuamarina	26.76	169	P	P	19 20 15.1	-0.8
LTZ	Lake Taylor	27.83	172	P	P	19 20 25.3	-0.1
STKA	Stephens Creek	28.88	230	P	P	19 20 35.6	+0.7
	comp=Z,9.2nm,0.3s,baz=62,slow=9.5,SNR=38						
STKA	Stephens Creek	28.88	230	P	P	19 20 35.3	+0.4
WB0	Warramunga Arr	31.87	257	P	P	19 21 00.2	-1.2
WB0				IAmb	IAmb	19 21 17.1	
	comp=Z,11nm,1.4s						
WB2	Warramunga Arr	31.91	257	P	P	19 21 00.2	-1.7
WB2				IAmb	IAmb	19 21 01.4	
	comp=Z,4.9nm,0.8s						
WRA	Warramunga Arr	31.93	257	P	P	19 21 00.3	-1.6
	comp=Z,2.4nm,0.6s,baz=83,slow=8.2,SNR=17						
WRA	Warramunga Arr	31.93	257	P	P	19 21 00.8	-1.2
AS31	Alice Springs	32.72	250	P	P	19 21 08.1	-0.7
AS31				IAmb	IAmb	19 21 09.1	
	comp=Z,5.2nm,0.5s						
ASAR	Alice Springs	32.72	250	P	P	19 21 08.0	-0.9
	comp=Z,12nm,0.7s,baz=77,slow=9.2,SNR=166						
ASAR				ScP	ScP	19 27 26.9	+3.1
	comp=Z,0.5nm,0.6s,baz=188,slow=9.9,SNR=8.0						
ASAR	Alice Springs	32.72	250	P	P	19 21 07.2	-1.6
BBOO	Buckleboo	33.48	233	P	P	19 21 15.5	+0.2
FAKI	Fak Fak	36.79	286	P	P	19 21 43.7	-0.2
FAKI				IAmb	IAmb	19 21 45.7	
	comp=Z,3.9nm,0.8s						
KNRA	Kununurra	37.30	264	P	P	19 21 47.4	-0.7
FITZ	Fitzroy Crossi	40.14	260	P	P	19 22 11.7	-0.2
FITZ				IAmb	IAmb	19 22 24.8	
	comp=Z,12nm,1.2s						
PSA00	Pilbara Seismi	45.52	255	P	P	19 22 55.2	-0.1
PSA00				IAmb	IAmb	19 23 04.3	
	comp=Z,25nm,1.3s						
NWAO	Narrogin (SRO)	48.71	239	P	P	19 23 19.4	-0.4
	comp=Z,12nm,0.9s,baz=130,slow=10,SNR=2.8						
NWAO	Narrogin (SRO)	48.71	239	P	P	19 23 18.9	-0.9
MORW	Morawa	49.27	245	P	P	19 23 24.9	+0.8
MORW				IAmb	IAmb	19 23 40.0	
	comp=Z,17nm,1.1s						
CISI	Cisompet, Garu	58.84	270	P	P	19 24 33.6	-0.4
KSM	Kuching	58.90	281	P	P	19 24 34.0	-0.3
KSM				IAmb	IAmb	19 24 46.5	
	comp=Z,9.1nm,1.0s						
UNV	Unalaska Valle	72.25	16	P	P	19 25 58.4	-0.7
QSPA	South Pole Qui	74.86	180	P	P	19 26 14.2	-0.4
CMAR	Chiang Mai Arr	75.32	294	P	P	19 26 15.9	-2.0
	comp=Z,0.5nm,0.5s,baz=145,slow=5.5,SNR=3.3						
CHTO	Chiang Mai	75.45	294	P	P	19 26 18.8	+0.2
HHC	Hu-ho-hao-te	76.05	320	eP	P	19 26 23.0	+1.3
ULN	Ulaanbaatar	82.61	324	P	P	19 26 56.6	-0.6
SONM	Songino Array	82.97	324	P	P	19 26 57.7	-1.3
	comp=Z,0.2nm,0.4s,baz=147,slow=5.9,SNR=5.9						
SONM	Songino Array	82.97	324	P	P	19 26 59.2	+0.1
BILL	Bilibino	82.98	360	P	P	19 26 58.6	+0.2
BILL				IAmb	IAmb	19 26 59.9	
	comp=Z,5.5nm,1.5s						
GTA	Gaotai	83.12	314	eP	P	19 27 02.5	+2.5
GTA				pP	sP	19 27 40.8	-5.4
GTA				sP	pP	19 27 54.3	+22
MKAR	Makanchi Array	97.66	316	P	Pdif	19 28 08.2	-0.2
	comp=Z,0.4nm,0.7s,baz=94,slow=5.7,SNR=4.0						
MKAR	Makanchi Array	97.66	316	P	Pdif	19 28 08.6	+0.2
ARCES	ARCESS Array B	120.72	345	PKP	PKiKP	19 33 23.9	-0.6
	comp=Z,3.0nm,0.9s,baz=42,slow=1.5,SNR=1.8						

IDC 08 19:21:09.3±2.5, 36°.56N×71°.17E, h221km±23km, mb3.4/10, mb1 3.4/16, mb1mx3.1/48, mbtmp3.9/16, Error ellipse: s-maj=20.0km s-min=15.2km az=170.0

NEIC 08 19:21:11.2±1.4, 36°.69N±0°.06×71°.23E±0°.09, h237km±8km, mb4.0/21, Error ellipse: s-maj=10.9km s-min=8.8km az=104.0

NNC 08 19:21:14.4±2.6, 37°.00N×71°.22E, h216km±30km, mb2.7, mpv3.6, Error ellipse: s-maj=25.2km s-min=15.0km az=21.0

ISC 08 19:21:10.8±0.4, 36°.68N±0°.04×71°.28E±0°.05, h237km, n90, σ1.42/100, mb3.9/16, 8C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.81	221		Pn	19 22 00.7	+0.1
KBL				S	S	19 22 37.0	-2.8
CEP	Cherat	2.90	170	P	Pn	19 22 02.2	+0.7
CEP				S	S	19 22 38.0	-3.4
BTK	Batken	3.39	354		Pn	19 22 07.9	+1.0
BTK				S	S	19 22 49.4	-1.8
CHCP	Chirah Chowk	3.42	151	P	Pn	19 22 08.6	+1.3
NIL	Nilore	3.42	151		Pn	19 22 08.9	+1.6
NIL				S	S	19 22 50.6	-1.3
THW	Thamme Wali	3.89	174	P	Pn	19 22 13.1	+0.2
ARSB	Arslanbob	4.82	15		Pn	19 22 23.9	-0.1
ARSB				S	S	19 23 19.2	-3.0
SARP	Sargodha	4.88	166	P	Pn	19 22 24.6	-0.2
TAS	Tashkent	4.89	342	Pn	Pn	19 22 24.6	-0.2
JMU	Jammu	4.95	142	ex	x	19 23 21.0	
THN	Thein Dam	5.59	138	eP	Pn	19 22 35.0	+1.4
THN				eS	S	19 23 39.0	-0.5
NRN	Naryn	6.00	36		Pn	19 22 38.2	-0.6
DHRM	DHARAMSHALA	6.06	135	eP	Pn	19 22 40.1	+0.5
DHRM				eS	S	19 23 48.3	-2.1
DHRM				IAML		19 24 16.7	
	comp=N,126nm,0.5s						
DHRM				IAML		19 24 16.9	
	comp=E,98nm,0.7s						
KK31	Karatay Array	6.44	355	⇑P	Pn	19 22 43.8	-0.4
	comp=E,6.9nm,0.4s,baz=175,slow=12,SNR=166						
KK31				⇑S	S	19 23 54.4	-4.4
	comp=E,11nm,0.5s,baz=186,slow=25,SNR=17						
KK31	Karatay Array	6.44	355		Pn	19 22 43.7	-0.4
KKAR	Karatay Array	6.44	355		Pn	19 22 43.8	-0.4
KKAR	Karatay Array	6.44	355		Pn	19 22 43.8	-0.4
AAK	Ala-Archa	6.44	22	P	Pn	19 22 44.6	+0.3
	comp=E,1.6nm,0.3s,baz=156,slow=2.1,SNR=23						
AAK	Ala-Archa	6.44	22	⇑P	Pn	19 22 44.6	+0.3
	comp=E,2.9nm,0.6s						
AAK				⇑S	S	19 23 56.5	-2.5
	comp=E,12nm,0.5s						
AAK	Ala-Archa	6.44	22		Pn	19 22 44.8	+0.5
CHMS	Chumysh	6.85	22	⇑P	Pn	19 22 48.6	-0.7
	comp=E,2.3nm,0.9s						
CHMS				⇑S	S	19 24 04.3	-3.9
	comp=E,12nm,0.8s						
SMLA	Simla	7.38	137	eP	Pn	19 22 56.7	+0.5
SMLA				eS	S	19 24 16.8	-3.9
SMLA				IAML		19 24 20.2	
	comp=N,80nm,0.4s						
SMLA				IAML		19 24 20.2	
	comp=E,56nm,0.3s						
HRA	Herat	7.72	255		Pn	19 23 00.5	-0.1
JOSI	Joshimath	9.21	129	eP	Pn	19 23 20.1	+0.4
JOSI				eS	S	19 24 58.1	-5.6
JOSI				IAML		19 25 03.2	
	comp=E,52nm,0.4s						
JOSI				IAML		19 25 05.0	
	comp=N,63nm,0.9s						
KUDL	Kundal	9.58	151	eP	Pn	19 23 14.4	-10
KUDL				eS	S	19 24 55.2	-17
KUDL				IAML		19 25 01.3	
	comp=E,56nm,0.1s						
SONA	Sohna	9.72	148	IAML		19 25 02.1	
	comp=Z,6.1nm,0.4s						
GEYT	Alibeck	10.56	281	P	Pn	19 23 33.8	-2.9
	comp=Z,0.3nm,0.3s,baz=110,slow=13,SNR=6.8						
GEYT	Alibeck	10.56	281		Pn	19 23 34.3	-2.3
GYA0B	ALIBECK ARRAY	10.56	281	Pn	Pn	19 23 33.7	-2.9
MAKZ	Makanchi	12.88	35	⇑P	Pn	19 24 05.5	0.0
	comp=Z,0.7nm,0.4s						
MAKZ	Makanchi	12.88	35		Pn	19 24 05.6	+0.1
MKAR	Makanchi Array	13.01	36	P	P	19 24 08.8	-0.4
	comp=Z,0.2nm,0.3s,baz=209,slow=10,SNR=15						
MKAR	Makanchi Array	13.01	36		Pn	19 24 08.0	+0.9
MK31	Makanchi Array	13.01	36	⇓P	P	19 24 10.3	+1.0
	comp=Z,0.2nm,0.3s,baz=211,slow=9.5,SNR=15						
MK31	Makanchi Array	13.01	36		Pn	19 24 08.1	+1.0
DANN	Dangsing	13.40	125	eP	Pn	19 24 12.1	-0.2
	comp=Z,23nm,0.4s						
KOLN	Koldanda	13.69	127	eP	Pn	19 24 15.8	0.0
	comp=Z,11nm,0.2s						
GKN	Gorkha	14.21	124	eP	Pn	19 24 22.5	+0.4
	comp=Z,39nm,0.3s						
DMN	Daman	14.78	124	eP	Pn	19 24 29.3	+0.2
	comp=Z,27nm,0.6s						
KKN	Kakani	14.78	123	eP	Pn	19 24 28.9	-0.2
KURBB	Kurchatov Arra	14.88	18	P	P	19 24 30.4	+0.6
	comp=Z,0.0nm,0.3s,baz=209,slow=10.0,SNR=3.1						
PKIN	Phulchoki	15.00	123	eP	P	19 24 31.5	-0.2
	comp=Z,32nm,0.4s						
PKI	Pulchoki	15.01	123	eP	P	19 24 31.5	-0.4
	comp=Z,26nm,0.3s						
AB31	Akbulak array	15.04	330	P	Pn	19 24 32.5	+0.8
	comp=Z,0.7nm,0.2s,baz=145,slow=9.4,SNR=32						
AB31				⇓S	S	19 27 17.7	0.0
	comp=Z,3.0nm,1.1s						
ABKAR	Akbulak array	15.04	330	P	Pn	19 24 32.0	+0.3
ABKAR	Akbulak array	15.04	330		Pn	19 24 32.5	+0.7
ABKAR				IAmb	IAmb	19 24 36.1	
	comp=Z,2.5nm,0.7s						
GUN	Gumba	15.11	121	eP	P	19 24 33.0	0.0
	comp=Z,20nm,0.4s						
JIRN	Jiri	15.48	121	eP	P	19 24 38.1	+1.0
	comp=Z,53nm,0.4s						
RAMN	Ramite	16.22	122	eP	P	19 24 46.5	+1.4
	comp=Z,22nm,0.5s						
BVAR	Borovoye Array	16.36	358	P	P	19 24 46.6	+0.5
	comp=Z,0.3nm,0.3s,baz=171,slow=10,SNR=7.3						
BRVK	Borovoye	16.39	358	P	P	19 24 47.0	+0.6
TAPN	Taplejung	16.73	119	eP	Pn	19 24 53.0	+0.6
	comp=Z,19nm,0.5s						
AKTO	Aktyubinsk	16.74	329	P	P	19 24 50.8	+0.5
	comp=Z,1.2nm,0.3s,baz=141,slow=10.0,SNR=16						
AKTO	Aktyubinsk	16.74	329	⇑P	P	19 24 51.1	+0.8
	comp=Z,2.9nm,0.5s						
UOSS	Minazif	17.43	232	P	P	19 24 57.8	-0.3
UOSS				IAmb	IAmb	19 24 59.0	
	comp=Z,6.6nm,1.0s						

LSA	Lhasa	18.01	107	P	P	19 25 05.8	+1.0
LSA				IAmb	IAmb	19 25 09.6	
	comp=Z,3.5nm,0.9s						
ZAA0	Zalesovo Array	19.66	24	P	P	19 25 22.5	+0.7
ZALV	Zalesovo Beam	19.66	24	P	P	19 25 21.7	0.0
	comp=Z,0.6nm,0.3s,baz=209,slow=12,SNR=11						
ZALV	Zalesovo Beam	19.66	24	P	P	19 25 22.8	+1.1
SHL	Shillong	20.78	116	P	P	19 25 34.5	+0.2
SHL				IAmb	IAmb	19 25 36.9	
	comp=Z,8.5nm,1.0s						
ARU	Arti	21.54	341	P	P	19 25 41.5	+0.2
	comp=Z,0.7nm,0.4s,baz=145,slow=7.7,SNR=4.9						
ARU	Arti	21.54	341	P	P	19 25 42.1	+0.8
RAYN	Ar Rayn	25.78	247	P	P	19 26 20.6	+0.4
BRTR	Keskin Array B	29.60	288	P	P	19 26 54.7	+0.6
	comp=Z,0.6nm,0.6s,baz=111,slow=9.3,SNR=5.1						
BRTR	Keskin Array B	29.60	288	P	P	19 26 54.1	0.0
CMAR	Chiang Mai Arr	30.34	119	P	P	19 27 01.7	+1.1
	comp=Z,0.3nm,0.7s,baz=302,slow=10,SNR=4.3						
BUR08	Bucovina Ar. S	35.39	303	P	P	19 27 44.5	+0.3
BUR08				IAmb	IAmb	19 27 50.9	
	comp=Z,4.0nm,1.4s						
LVZ	Lovozero	37.38	338	P	P	19 28 00.8	+0.3
FIA1	FINESS Array S	37.46	326	P	P	19 28 01.9	+0.6
FINES	FINESS Array B	37.46	326	P	P	19 28 02.0	+0.8
	comp=Z,1.5nm,0.4s,baz=122,slow=9.4,SNR=28						
FINES	FINESS Array B	37.46	326	P	P	19 28 01.8	+0.6
ARCES	ARCESS Array B	41.07	337	P	P	19 28 32.0	+1.1
	comp=Z,1.9nm,0.4s,baz=116,slow=8.3,SNR=40						
ARCES	ARCESS Array B	41.07	337	P	P	19 28 31.6	+0.8
ARE0	ARCESS Array S	41.07	337	P	P	19 28 31.8	+0.9
NC405	NORSAR Array S	44.14	323	P	P	19 28 56.1	+0.4
NB2	NORSAR Subarra	44.38	323	P	P	19 28 57.4	-0.2
	comp=Z,0.9nm,0.4s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.38	323	P	P	19 28 57.7	+0.1
	comp=Z,0.2nm,0.3s,baz=104,slow=7.1,SNR=9.2						
KS19	Wonju Array Si	44.55	71	P	P	19 28 59.7	+0.4
TIXI	Tiksi	45.52	22	P	P	19 29 07.0	+0.7
TIXI				IAmb	IAmb	19 29 07.8	
	comp=Z,2.9nm,0.3s						
KEST	Kesra	49.20	288	P	P	19 29 36.2	+1.0
KEST				IAmb	IAmb	19 29 40.5	
	comp=Z,4.4nm,1.1s						
ESDC	Sonseca Array	57.58	298	P	P	19 30 36.6	+0.6
	comp=Z,1.4nm,0.8s,baz=56,slow=7.0,SNR=4.3						
ABPO	Ambohimpanom	59.88	206	P	P	19 30 54.1	+2.1
ABPO				IAmb	IAmb	19 31 01.0	
	comp=Z,4.3nm,1.0s						
LSZ	Lusaka	65.74	226	P	P	19 31 30.7	+0.1
LSZ				IAmb	IAmb	19 31 33.2	
	comp=Z,3.5nm,1.2s						
TOA0	Torodi Ar. Sit	65.95	269	P	P	19 31 30.1	-1.8
TOA0				IAmb	IAmb	19 31 39.3	
	comp=Z,5.0nm,1.5s						
TORD	Torodi Ar. Bea	65.95	269	P	P	19 31 30.2	-1.7
	comp=Z,1.5nm,0.6s,baz=49,slow=5.8,SNR=13						
TORD	Torodi Ar. Bea	65.95	269	P	P	19 31 30.3	-1.7
IMAR	Indian Mountai	71.93	18	P	P	19 32 08.2	+0.4
C36M	Paulatuk	73.68	6	P	P	19 32 18.6	+0.6
INK	Inuvik	73.69	9	P	P	19 32 19.2	+1.1
	comp=Z,1.3nm,0.5s,baz=8.3,slow=6.1,SNR=4.5						
YKA	Yellowknife Ar	81.06	3	P	P	19 32 59.3	+0.4
	comp=Z,0.6nm,0.5s,baz=350,slow=5.3,SNR=8.8						

WEL 08 19:24:59.1,38°.9S±0°.7×177°.2E±0°.8,h37^{km}±1^{km},M3.6/62, ML3.8/61,MLv3.6/62,Error ellipse: s-maj=0.0km s-min=0.0km az=106.7,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAHZ	Arahi	0.09	289	P	Pn	19 25 05.2	-0.2
RAHZ				S	Sn	19 25 10.4	+0.7
WHHZ	Waihua	0.14	165	P	Pn	19 25 05.8	-5.0
WHHZ				S	Sn	19 25 11.9	-10
SNGZ	Shannon Statio	0.20	36	P	Pn	19 25 06.3	-2.1
SNGZ				S	Sn	19 25 12.2	-5.3
MTHZ	Maungataniwha	0.29	289	P	Pn	19 25 06.7	-0.6
MTHZ				S	Sn	19 25 12.8	-1.9
NMHZ	Naumai	0.33	243	P	Pn	19 25 07.7	+0.2
NMHZ				S	Sn	19 25 14.8	+0.3
ARHZ	Aropaoanui	0.35	205	P	Pn	19 25 08.2	+0.7
ARHZ				S	Sn	19 25 15.9	+1.5
RTZ	Ruatahuna	0.37	334	P	Pn	19 25 07.9	+0.1
RTZ				S	Sn	19 25 15.0	+0.3
KNZ	Kokohu	0.39	102	P	Pn	19 25 08.5	+0.7
KNZ				S	Sn	19 25 16.3	+1.7
RAGZ	Rawiri	0.48	22	P	Pn	19 25 09.8	+0.3
RAGZ				S	Sn	19 25 18.3	+1.5
RIGZ	Rimuhau	0.51	62	P	Pn	19 25 10.5	+0.6
PRGZ	Paritu Road	0.54	88	P	Pn	19 25 10.8	+0.4
MUGZ	Murupara	0.57	325	P	Pn	19 25 10.6	-0.2
BKZ	Black Stump Fm	0.58	248	P	Pn	19 25 11.0	-0.1
MHGZ	Mahia Peninsul	0.60	111	P	Pn	19 25 11.3	+0.1
MRHZ	Matea Rd	0.61	280	P	Pn	19 25 11.5	0.0
MCHZ	McNeill Hill	0.63	217	P	Pn	19 25 12.1	+0.5
MWZ	Matawai	0.67	24	P	Pn	19 25 12.4	+0.3
URZ	Urewera	0.69	355	P	Pn	19 25 12.3	0.0
CKHZ	Cape Kidnapper	0.72	187	P	Pn	19 25 12.9	+0.2
TKGZ	Te Karaka	0.72	46	P	Pn	19 25 13.3	+0.6
ALRZ	Allen Road	0.76	300	P	Pn	19 25 13.5	+0.2
KWHZ	Kaweka Forest	0.76	231	P	Pn	19 25 13.7	+0.3
PRRZ	Plateau Road	0.77	305	P	Pn	19 25 13.4	+0.1
RRRZ	Republican Roa	0.80	319	P	Pn	19 25 13.9	0.0
HATZ	Hinemaiaia	0.86	273	P	Pn	19 25 14.9	+0.3
KAHZ	Kahuranaki	0.88	196	P	Pn	19 25 15.3	+0.3
TARZ	Mount Tarawera	0.89	323	P	Pn	19 25 15.4	+0.3
HRRZ	Handcock Road	0.90	308	P	Pn	19 25 15.2	0.0
EDRZ	Edgecumbe	0.91	337	P	Pn	19 25 15.4	+0.1
WPRZ	Whakapapatarin	0.91	298	P	Pn	19 25 15.6	+0.3
CNGZ	Carnagh Statio	0.92	60	P	Pn	19 25 16.4	+1.0
KRHZ	Kereru	0.94	222	P	Pn	19 25 15.7	-0.1
HLRZ	Highlands Stat	0.95	316	P	Pn	19 25 16.3	+0.4
HSRZ	Hossack Road	0.97	310	P	Pn	19 25 16.2	0.0
MKRZ	Makatiti	0.98	325	P	Pn	19 25 17.5	+1.1
WHTZ	Whakaora	1.00	286	P	Pn	19 25 17.0	+0.4
BHHZ	Black Hill Sta	1.03	238	P	Pn	19 25 17.2	+0.2
GRRZ	Galatos Road	1.03	305	P	Pn	19 25 17.4	+0.4
RITZ	Rihia Road	1.04	268	P	Pn	19 25 17.9	+0.8
MARZ	Manawahe	1.04	337	P	Pn	19 25 17.5	+0.4
RUGZ	Raukumara Rang	1.05	22	P	Pn	19 25 18.2	+0.9
OMRZ	Omania	1.05	322	P	Pn	19 25 17.3	0.0
UTU	Utuhina	1.09	314	P	Pn	19 25 18.3	+0.4
WHRZ	Whale Island	1.10	351	P	Pn	19 25 18.2	+0.3
RATZ	Rangitukua	1.11	274	P	Pn	19 25 18.7	+0.6
PXZ	Pawanui	1.11	193	P	Pn	19 25 17.3	-0.8
NGRZ	Ngongotaha	1.15	317	P	Pn	19 25 19.0	+0.4
KUTZ	Kaahu Road	1.16	293	P	Pn	19 25 18.9	+0.1
WATZ	Wairara	1.16	281	P	Pn	19 25 19.0	+0.2
KATZ	Kakaramea	1.17	268	P	Pn	19 25 19.5	+0.6
KARZ	Kaharoa	1.18	321	P	Pn	19 25 18.8	-0.3
OPRZ	Ohinepanea	1.21	335	P	Pn	19 25 18.9	-0.5
MOVZ	Moawhango	1.21	247	P	Pn	19 25 20.0	+0.5
PUZ	Puketiti	1.21	44	P	Pn	19 25 19.5	+0.1
KRVZ	Karewarewa	1.22	262	P	Pn	19 25 20.2	+0.6
PNHZ	Pukenui	1.23	218	P	Pn	19 25 19.2	-0.6
TUVZ	Tukino	1.24	254	P	Pn	19 25 21.1	+1.1
NGZ	Ngauruhoe	1.26	259	P	Pn	19 25 21.1	+0.9
WTVZ	West Tongariro	1.26	262	P	Pn	19 25 20.9	+0.7
WPHZ	Waipukurau	1.26	207	P	Pn	19 25 19.7	-0.5
PKGZ	Pakihiroa	1.27	34	P	Pn	19 25 20.8	+0.5
HAZ	Te Kaha	1.27	22	P	Pn	19 25 20.5	+0.2
WHVZ	Whangaehu Hut	1.29	254	P	Pn	19 25 21.6	+0.9
DRZ	Dome Shelter	1.31	255	P	Pn	19 25 22.6	+1.5
FWVZ	Far West T-bar	1.31	256	P	Pn	19 25 21.6	+0.6
TRVZ	Turoa	1.32	254	P	Pn	19 25 22.0	+0.7
TWVZ	Taurewa	1.37	264	P	Pn	19 25 21.8	+0.1
PRHZ	Porangahau	1.39	198	P	Pn	19 25 20.8	-1.0
MTVZ	Mangateitei	1.41	251	P	Pn	19 25 23.6	+1.4
TGRZ	Tauranga	1.42	329	P	Pn	19 25 21.9	-0.3
WIZ	White Island	1.42	0	P	Pn	19 25 22.3	+0.1
TLZ	Tolley Road	1.43	295	P	Pn	19 25 22.7	+0.2
TSZ	Takapari Road	1.46	220	P	Pn	19 25 22.4	-0.6
KMRZ	Kaimai	1.47	318	P	Pn	19 25 22.6	-0.4
PKVZ	Pokaka	1.47	256	P	Pn	19 25 24.2	+1.1
WMGZ	Waiomatatini S	1.48	41	P	Pn	19 25 23.1	0.0
DVHZ	Dannevirke	1.57	210	P	Pn	19 25 22.9	-1.4
ANWZ	Angora Road	1.61	200	P	Pn	19 25 23.9	-1.0
MXZ	Matakaoa Point	1.64	33	P	Pn	19 25 26.1	+0.8
TOZ	Tahuroa Road	1.80	312	P	Pn	19 25 27.8	+0.3
PRWZ	Pori Road	1.86	210	P	Pn	19 25 27.1	-1.3
HIZ	Hauiti	1.88	283	P	Pn	19 25 29.0	+0.5
BFZ	Birch Farm	1.88	202	P	Pn	19 25 26.9	-1.8
WAZ	Wanganui	1.89	244	P	Pn	19 25 29.7	+1.0
VRZ	Vera Road	1.90	264	P	Pn	19 25 29.8	+0.9
TIWZ	Tintock	2.09	208	P	Pn	19 25 30.1	-1.4
MRZ	Mangatainoka R	2.12	215	P	Pn	19 25 30.0	-1.9
HOWZ	Holdsworth Sta	2.34	213	P	Pn	19 25 32.6	-2.4
TMWZ	Te Maipa	2.38	204	P	Pn	19 25 33.2	-2.4
KUZ	Kuaotunu	2.48	332	P	Pn	19 25 37.1	+0.2
KHEZ	Kahui Hut	2.49	261	P	Pn	19 25 39.5	+2.3
PKE	Pukeiti	2.50	263	P	Pn	19 25 39.0	+1.7
MTW	Mount Morrison	2.56	210	P	Pn	19 25 35.5	-2.6
KIW	Kapiti Island	2.59	222	P	Pn	19 25 36.6	-1.9
ETAZ	East Tamaki Re	2.67	317	P	Pn	19 25 40.7	+1.2
WIAZ	Waiheke Island	2.69	322	P	Pn	19 25 40.8	+0.9
CAW	Cannon Point	2.71	216	P	Pn	19 25 37.2	-2.8
TRWZ	Traveller	2.71	205	P	Pn	19 25 37.2	-2.8
AWAZ	Awhitu Peninsu	2.75	312	P	Pn	19 25 41.6	+1.0
PAWZ	Paruwai Farm	2.78	208	P	Pn	19 25 37.9	-3.1
MBAZ	Motutapu North	2.83	319	P	Pn	19 25 43.0	+1.3
MSWZ	Moikau Station	2.88	210	P	Pn	19 25 39.6	-2.8
WTAZ	Waiatarua	2.88	313	P	Pn	19 25 43.7	+1.2
ABAZ	Army Bay	2.99	321	P	Pn	19 25 45.3	+1.4
PLWZ	Palliser	3.01	209	P	Pn	19 25 41.1	-3.1
DUWZ	D'Urville Isla	3.12	233	P	Pn	19 25 45.3	-0.4
TUWZ	Tuamarina	3.51	224	P	Pn	19 25 48.5	-2.5
NNZ	Nelson	3.70	231	P	Pn	19 25 51.6	-2.0
WCZ	Waipu Caves	3.76	322	P	Pn	19 25 54.9	+0.4
QRZ	Quartz Range	4.05	241	P	Pn	19 25 57.0	-1.4
THZ	Tophouse	4.32	228	P	Pn	19 25 59.4	-2.8
OUZ	Omahuta	4.70	321	P	Pn	19 26 09.0	+1.7
LTZ	Lake Taylor	5.35	223	P	Pn	19 26 14.0	-2.3

NEIC 08 19:29:25.4±1.0,4°.89S±0°.08×153°.82E±0°.09,h101^{km}±3^{km}, mb4.1/16,Error ellipse: s-maj=13.6km s-min=11.6km az=77.0

IDC 08 19:29:27.6±5.1,4°.92S×153°.78E,h122^{km}±41^{km},mb3.6/10, mb1 3.8/11,mb1mx3.6/31,mbtmp4.0/11,Error ellipse: s-maj=42.4km s-min=19.8km az=100.0

ISC 08 19:29:25.6±0.6,4°.86S±0°.07×153°.81E±0°.09,h105^{km},n41, σ0ˢ60/44,mb4.0/17,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.77	292	Pn	Pn	19 29 54.8	-0.8
RABL				Sn	Sn	19 30 18.2	-0.1
MANU	Manus Island	7.01	293	Pn	Pn	19 31 06.7	+0.9
PMG	Port Moresby	8.00	235	P	Pn	19 31 20.0	+0.8
	15nm,0.3s,baz=62,slow=7.3,SNR=46						
PMG				S	Sn	19 32 48.9	+0.9
	4.7nm,0.3s,baz=342,slow=21,SNR=4.8						
PMG	Port Moresby	8.00	235		Pn	19 31 19.2	0.0
PMG				Sn	Sn	19 32 47.7	-0.4
PATS	Pohnpei	12.45	21	Pn	Pn	19 32 18.3	-0.9
WR0	Warramunga Arr	24.03	230	P	P	19 34 31.6	+0.6
WB0	Warramunga Arr	24.03	230	P	P	19 34 31.4	+0.4
WB0				IAmb	IAmb	19 34 42.5	
	comp=Z,6.0nm,1.1s						
WB2	Warramunga Arr	24.16	230	P	P	19 34 32.6	+0.3
WB2				IAmb	IAmb	19 34 42.8	
	comp=Z,11nm,1.2s						
WRA	Warramunga Arr	24.17	230	P	P	19 34 32.4	0.0
	comp=Z,3.9nm,0.6s,baz=54,slow=9.9,SNR=26						
WRA	Warramunga Arr	24.17	230	P	P	19 34 31.9	-0.5
AS31	Alice Springs	26.80	224	P	P	19 34 56.1	-0.1
ASAR	Alice Springs	26.80	224	P	P	19 34 56.0	-0.1
	comp=Z,2.4nm,0.4s,baz=55,slow=9.2,SNR=8.2						
ASAR	Alice Springs	26.80	224	P	P	19 34 56.2	+0.1
KNRA	Kununurra	26.85	245	P	P	19 34 56.7	0.0
KNRA				IAmb	IAmb	19 35 07.2	
	comp=Z,20nm,1.1s						
STKA	Stephens Creek	29.22	202	P	P	19 35 17.2	-0.3
	comp=Z,3.2nm,0.7s,baz=28,slow=14,SNR=8.8						
STKA	Stephens Creek	29.22	202	P	P	19 35 16.9	-0.7
FITZ	Fitzroy Crossi	30.52	242	P	P	19 35 28.8	-0.4
FITZ				IAmb	IAmb	19 35 30.5	
	comp=Z,11nm,1.4s						
BSWZ	Blackbirch Sta	40.84	157	P	P	19 36 56.9	-0.2
RPZ	Rata Peaks	41.59	161	P	P	19 37 03.0	-0.1
CISI	Cisompet, Garu	45.79	264	P	P	19 37 36.2	-1.2
PETK	Petropavlovsk-	57.84	3	P	P	19 39 08.0	+1.8
	comp=Z,2.2nm,0.8s,baz=182,slow=7.2,SNR=1.7						
PETK	Petropavlovsk-	57.84	3	P	P	19 39 06.7	+0.6
CMAR	Chiang Mai Arr	58.81	295	P	P	19 39 13.9	+0.4
	comp=Z,0.5nm,0.8s,baz=113,slow=5.4,SNR=4.9						
SONM	Songino Array	66.91	327	P	P	19 40 06.8	-0.1
	comp=Z,0.7nm,0.6s,baz=146,slow=6.1,SNR=4.3						
SONM	Songino Array	66.91	327	P	P	19 40 07.2	+0.4
LSA	Lhasa	69.10	304	P	P	19 40 21.4	+0.1
LSA				IAmb	IAmb	19 40 38.6	
	comp=Z,3.8nm,1.5s						
SBA	Scott Base	73.27	177	P	P	19 40 46.2	+1.2
IMAR	Indian Mountai	80.10	19	P	P	19 41 24.3	+0.7
MK31	Makanchi Array	81.03	319	P	P	19 41 29.6	+0.6
MKAR	Makanchi Array	81.03	319	P	P	19 41 29.1	0.0
	comp=Z,0.6nm,0.7s,baz=92,slow=8.1,SNR=7.1						
MKAR	Makanchi Array	81.03	319	P	P	19 41 29.6	+0.6
MAKZ	Makanchi	81.24	319	P	P	19 41 30.8	+0.7
MAKZ				IAmb	IAmb	19 41 33.4	
	comp=Z,3.0nm,1.4s						
ZALV	Zalesovo Beam	81.76	326	P	P	19 41 32.6	0.0
	comp=Z,0.5nm,0.5s,baz=122,slow=6.6,SNR=3.0						
ZALV	Zalesovo Beam	81.76	326	P	P	19 41 32.9	+0.2
ILAR	Eielson Array	81.83	22	P	P	19 41 32.6	-0.2
	comp=Z,0.4nm,0.7s,baz=234,slow=6.0,SNR=2.6						
ILAR	Eielson Array	81.83	22	P	P	19 41 33.0	+0.2
QSPA	South Pole Qui	85.11	180	P	P	19 41 49.2	-0.5
QSPA				IAmb	IAmb	19 42 04.7	
	comp=Z,4.5nm,1.4s						
MAW	Mawson	85.91	203	P	P	19 41 53.1	-0.4
	comp=Z,3.4nm,0.9s,baz=111,slow=8.6,SNR=2.4						
MAW	Mawson	85.91	203	P	P	19 41 53.3	-0.3
MAW				IAmb	IAmb	19 41 55.2	
	comp=Z,2.9nm,1.4s						
TORD	Torodi Ar. Bea	151.28	289	PKPbc	PKPbc	19 49 07.5	-0.6
	comp=Z,1.0nm,0.7s,baz=61,slow=2.1,SNR=6.2						
TORD	Torodi Ar. Bea	151.28	289		PKPbc	19 49 07.9	-0.1

GUC 08 19:39:42.4±0.6,31°.65S×70°.53W,h105^{km}±8^{km},ML3.2

SJA 08 19:39:43.3±0.4,31°.64S×70°.20W,h104^{km}±8^{km},ML2.8, MW3.2

ISC 08 19:39:44.2±2.3,31°.65S±0°.04×70°.28W±0°.06,h98^{km}±27^{km}, n14,σ0ˢ63/23,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	Leoncito	0.85	100	eP	Pn	19 40 03.4	+0.1
RTLS				IAML		19 40 19.5	
	comp=Z,98nm,0.2s						
VA03	San Esteban	1.14	191	eP	Pn	19 40 05.7	-0.4
VA03				iS	Sn	19 40 23.2	+0.5
VA03				IAML		19 40 24.5	
	comp=E,670nm,0.4s						
ACCO	Cerro Coronel	1.48	45	eP	Pn	19 40 10.5	0.0
ACCO				eS	Sn	19 40 31.1	+0.6
RTCV	Cerro Valdivia	1.50	99	eP	Pn	19 40 10.0	-0.4
RTCV				eS	Sn	19 40 29.9	-0.4
PEL	Peldehue	1.53	193	eP	Pn	19 40 09.8	-1.0
PEL				iS	Sn	19 40 30.5	-0.5
GO04	Tololo Observa	1.54	343	eP	Pn	19 40 10.7	-0.4
GO04				iS	Sn	19 40 31.6	+0.2
GO04				IAML		19 40 35.5	
	comp=N,640nm,0.4s						
ASAL	Salagasta	1.55	128	eP	Pn	19 40 10.8	-0.2
AROD	Rodeo	1.63	25	eP	Pn	19 40 13.0	+0.6
ARCO	CERRO ARCO	1.65	137	eP	Pn	19 40 12.2	-0.2
ARCO				IAML		19 40 13.3	
	comp=Z,132nm,0.3s						
FCH	Farellones	1.68	180	eP	Pn	19 40 12.8	-0.2
FCH				iS	Sn	19 40 35.7	+1.1
FCH				IAML		19 40 37.4	
	comp=N,163nm,0.2s						
AMOG	MOGNA	1.69	66	eP	Pn	19 40 12.3	-0.5
AMOG				eS	Sn	19 40 33.8	-0.7
MT03	Universidad Ad	1.85	186	eP	Pn	19 40 14.4	-0.6
MT03				iS	Sn	19 40 38.5	+0.2
AAGR	Agrelo	1.89	140	eP	Pn	19 40 15.6	+0.1
LMEL	Las Melosas	2.20	178	eP	Pn	19 40 19.4	-0.1
LMEL				iS	Sn	19 40 47.8	+1.5

NEIC 08 19:50:36.4±1.7,60°.43S±0°.07×45°.2W±0°.1,h24^{km}±3^{km}, mb6.0/125,Ms_20 5.5/667,Mwb5.6/38,Mww5.7, Mwc5.8(GCMT),Error ellipse: s-maj=10.8km s-min=7.9km az=138.0

MOS 08 19:50:36.9±0.9,60°.43S×45°.36W,h10^{km},mb5.8/25, MS5.5/30,Error ellipse: s-maj=18.9km s-min=7.4km az=95.0

NEIC 08 19:50:37,60°.43S×45°.19W,h25^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.46; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$0.47; $M_{r\theta}$-3.33; $M_{\theta\phi}$0.61; $M_{\phi r}$1.08; Fault plane solution: $M_0$3.59000×10^{17} NP1:ϕ_s202.03000°, δ6.45000°, λ-173.70000°. NP2:ϕ_s105.77000°, δ89.29000°, λ-83.59000°. Principal axes: T 3.1418, Plg44.0000°, Azm189.0000°; N 0.7676, Plg6.0000°, Azm286.0000°; P -3.9094, Plg45.0000°, Azm22.0000°;

NEIC 08 19:50:37,60°.53S×45°.44W,h36^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.86; $M_{\theta\theta}$1.74; $M_{\phi\phi}$-0.87; $M_{r\theta}$-4.25; $M_{\theta\phi}$-0.63; $M_{\phi r}$0.55; Fault plane solution: $M_0$4.58000×10^{17} NP1:ϕ_s300.00000°, δ9.00000°, λ-67.00000°. NP2:ϕ_s97.00000°, δ81.00000°, λ-93.00000°. Principal axes: T 4.9977, Plg36.0000°, Azm190.0000°; N -0.9899, Plg4.0000°, Azm97.0000°; P -4.0078, Plg54.0000°, Azm2.0000°;

BJI 08 19:50:37.0±0.0,60°.41S×45°.24W,h20^{km},mB5.7/27, Ms5.8/41,Ms7 5.6/40

NEIC 08 19:50:40,60°.63S×45°.44W,h34^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.75; $M_{\theta\theta}$1.64; $M_{\phi\phi}$-0.89; $M_{r\theta}$-4.88; $M_{\theta\phi}$-0.37; $M_{\phi r}$1.55; Fault plane solution: $M_0$5.33000×10^{17} NP1:ϕ_s251.00000°, δ8.00000°, λ-127.00000°. NP2:ϕ_s108.00000°, δ84.00000°, λ-85.00000°. Principal axes: T 5.7069, Plg38.0000°, Azm194.0000°; N -0.8674, Plg5.0000°, Azm288.0000°; P -4.8396, Plg51.0000°, Azm24.0000°;

IDC 08 19:50:40.3±1.0,60°.48S×45°.41W,h51^{km}±7^{km},mb5.4/30, mb1 5.3/31,mb1mx5.3/33,mbtmp5.6/31,MS5.4/23, Ms1 5.4/23,ms1mx5.4/24 Error ellipse: s-maj=12.8km s-min=8.4km az=70.0

GCMT 08 19:50:41.4±0.1,60°.60S±0°.01×45°.35W±0°.02,h34^{km}, MW5.8/145,Moment Tensor Solution. s129,c230; s145,c273; Duration: 1ˢ8 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.85±.04; $M_{\theta\theta}$1.50±.04; $M_{\phi\phi}$-0.64±.04; $M_{r\theta}$-4.95±.15; $M_{\theta\phi}$-0.48±.03; $M_{\phi r}$1.65±.07; Best double couple: $M_0$5.36300×10^{17} NP1:ϕ_s265.00000°, δ7.00000°, λ-113.00000°. NP2:ϕ_s109.00000°, δ83.00000°, λ-87.00000°. Principal axes: T 5.7220, Plg38.0000°, Azm196.0000°; N -0.7190, Plg3.0000°, Azm288.0000°; P -5.0050, Plg51.0000°, Azm22.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 08 19:50:34.4±0.2,60°.43S±0°.04×45°.33W±0°.04,h10^{km}, h10^{km}:pP-P,n1049,σ1ˢ58/805,mb5.9/89,MS5.5/381, 32C-84D,Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	7.79	42		Pn	19 52 28.4	+0.7
HOPE				Sn	Sn	19 53 54.2	-1.6
HOPE	Hope Point	7.79	42	P	Pn	19 52 28.4	+0.7
HOPE						19 53 54.2	
PMSA	Palmer Station	9.65	235	P	Pn	19 52 53.8	+0.8
	7.3nm,0.3s,baz=43,slow=11,SNR=36						
PMSA				S	Sn	19 54 36.8	-4.6
	2.5nm,0.3s,baz=12,slow=21,SNR=1.1						
PMSA				LR	LR	19 56 13.0	
	comp=Z,29μm,19.9s,baz=103,slow=35						
PMSA	Palmer Station	9.65	235		Pn	19 52 55.0	+2.0
PMSA				Sn	Sn	19 54 40.0	-1.3
EFI	East Falkland	11.27	315		Pn	19 53 19.0	+3.7
EFI	East Falkland	11.27	315	d iP	Pn	19 53 17.7	+2.3
USHA	Ushuaia	13.54	284	P	Pn	19 53 51.5	+5.2
	4.1nm,0.3s,baz=323,slow=7.8,SNR=16						
USHA				LR	LR	19 57 20.7	
	comp=Z,4μm,19.7s,baz=113,slow=30						
GO10	Punta Arenas	15.78	286	P	P	19 54 22.3	+1.9
GO10				Sn	Sn	19 57 14.8	+3.6
GO09	Cerro Castillo	17.59	289	P	P	19 54 42.0	+1.5
VNA3	Neumayer Olymp	17.83	142	P	P	19 54 46.0	+3.1
VNA1	Neumayer--Stat	18.09	140	P	P	19 54 48.9	+3.1
VNA2	Neumayer--Watz	18.44	140	P	P	19 54 52.5	+2.8
	baz=291,slow=16						
SNAA	Sanae	20.05	141	P	Pn	19 55 09.9	+0.9
SNAA	Sanae	20.05	141	P	P	19 55 09.5	+2.2
	157nm,1.0s,baz=289,slow=8.1,SNR=187						
SNAA				LR	LR	20 01 59.6	
	comp=Z,11μm,18.3s,baz=289,slow=34						
SNAA				ScP	ScP	20 02 53.2	-5.0
	14nm,0.9s,baz=300,slow=1.3,SNR=7.2						
SNAA	Sanae	20.05	141	P	P	19 55 09.4	+2.1
SNAA					ScP	20 02 52.8	-5.4
SNAA	Sanae	20.05	141	c iP	P	19 55 09.7	+2.4
NVL	N'lazarevskaya	24.72	138	eP	P	19 55 54.7	-0.6
NVL				ePPP	PPP	19 56 31.8	
NVL				eS	S	20 00 14.6	-2.2
NVL				pmax	pmax		
	comp=Z,119nm,1.2s						
NVL				MLR	MLR		
	comp=Z,8μm,17.0s						
PLCA	Paso Flores	25.12	310	P	P	19 55 59.3	+0.1
	comp=Z,219nm,0.9s,baz=177,slow=9.1,SNR=185						
PLCA				ScP	ScP	20 03 08.5	-3.4
	comp=Z,13nm,0.8s,baz=173,slow=4.1,SNR=8.3						
PLCA				LR	LR	20 05 48.7	
	comp=Z,9μm,20.4s,baz=174,slow=36						
PLCA	Paso Flores	25.12	310	eP	P	19 55 59.4	+0.1
PLCA	Paso Flores	25.12	310	P	P	19 55 59.3	+0.1
PLCA				IAmb	IAmb	19 56 01.9	
	comp=Z,242nm,0.8s						
PLCA					ScP	20 03 08.1	-3.8
PLCA	Paso Flores	25.12	310	eP	P	19 55 59.8	+0.5
LPA	La Plata	26.81	337	eP	P	19 56 08.7	-5.8
LPA				pPP		19 57 02.5	
LPA				PPP	PPP	19 57 10.7	
LPA				PCP	PcP	19 59 32.2	-4.8
LPA				S	S	20 00 46.2	-4.2
LPA				SS	ScP	20 02 56.6	-20
PLTB	Pedras Altas	29.19	345	eP	P	19 56 37.8	+2.0
QSPA	South Pole Qui	29.81	180	P	P	19 56 43.3	+2.0
	comp=Z,448nm,1.0s,baz=178,slow=3.3,SNR=557						
QSPA				ScP	ScP	20 03 22.7	-3.1
	comp=Z,7.1nm,0.8s,baz=61,slow=6.3,SNR=3.1						
QSPA				LR	LR	20 09 44.4	
	comp=Z,9μm,19.4s,baz=176,slow=38						
QSPA	South Pole Qui	29.81	180	P	P	19 56 43.1	+1.8
QSPA	South Pole Qui	29.81	180	IAMs_20	IAMs_20	20 09 43.2	
	comp=Z,8μm,19.0s						
CPSB	Capacapa Do Su	30.51	346	eP	P	19 56 49.5	+2.0
GO05	Huala	30.68	314	P	P	19 56 49.2	+0.2
GO05				ScP	ScP	20 03 25.0	-3.9
CNLB	Canela	31.33	351	eP	P	19 56 57.1	+2.3
ITQB	Itaqui	31.68	341	eP	P	19 56 59.4	+1.6
PEL	Peldehue	31.94	317	P	P	19 57 00.8	+0.6
PEL	Peldehue	31.94	317	P	P	19 57 00.8	+0.6
PEL				pmax	pmax		
	comp=Z,343nm,0.9s						
PEL				MLR	MLR		
	comp=Z,3μm,22.0s						
VA03	San Esteban	32.24	318	⇓iP	P	19 57 03.9	+1.0
CFA	Coronel Fontan	32.57	322	P	P	19 57 05.0	-0.7
	comp=Z,123nm,0.7s,baz=165,slow=9.2,SNR=102						
CFA				ScP	ScP	20 03 32.2	-3.2
	comp=Z,24nm,0.8s,baz=156,slow=3.3,SNR=9.1						
ITAB	Concordia	33.51	349	eP	P	19 57 16.2	+2.4
SYO	Syowa Base	34.33	140	⇓iP	P	19 57 20.6	0.0
SYO	Syowa Base	34.33	140	⇓ipP	P	19 57 23.0	+2.4
SYO	Syowa Base	34.33	140	⇓isP	sP	19 57 28.8	+4.2
GO04	Tololo Observa	34.71	319	P	P	19 57 25.0	+0.5
CPUP	Villa Florida	35.06	341	P	P	19 57 28.6	+1.3
	comp=Z,31nm,0.9s,baz=169,slow=7.9,SNR=58						
CPUP				ScP	ScP	20 03 40.9	-3.3
	comp=Z,22nm,0.9s,baz=135,slow=4.9,SNR=6.0						
CPUP				LR	LR	20 10 35.0	
	comp=Z,8μm,21.4s,baz=172,slow=34						
CPUP	Villa Florida	35.06	341	eP	P	19 57 28.5	+1.2
CPUP	Villa Florida	35.06	341	P	P	19 57 28.5	+1.2
CPUP				IAmb	IAmb	19 57 30.3	
	comp=Z,347nm,1.9s						
CPUP					ScP	20 03 40.9	-3.3

PTGB Pitanga 35.99 350 eP P 19 57 36.9 +1.4
SPB Sao Paulo 36.84 357 eP P 19 57 44.4 +1.9
SPB Sao Paulo 36.84 357 P P 19 57 44.2 +1.7
SPB IAmb IAmb 19 57 45.6
comp=Z,219nm,0.9s
SPB IAMs_20 IAMs_20 20 10 22.9
comp=Z,10µm,21.0s
GO03 Copiap 36.93 322⇓iP P 19 57 44.3 +0.9
GO03 Copiap 36.93 322 P P 19 57 44.2 +0.9
GO03 IAMs_20 IAMs_20 20 12 45.9
comp=Z,9µm,21.0s
PARB Paraibuna 37.06 360 eP P 19 57 46.1 +1.6
FRTB Fartura 37.17 354 eP P 19 57 46.7 +1.2
ESAR Angra dos Reis 37.38 1 eP P 19 57 48.9 +1.8
VAO Valinhos 37.41 358 eP P 19 57 49.1 +1.6
TRCB Terra Rica 37.95 349 eP P 19 57 53.2 +1.2
RCLB Rio Claro- Sao 38.01 357 eP P 19 57 54.3 +1.8
VAS01 Vassouras-RJ 38.14 3 eP P 19 57 55.0 +1.4
PCMB Pacaembu 39.01 351 eP P 19 58 01.9 +1.1
GO02 Mina Guanaco 39.01 324⇓iP P 19 58 02.4 +1.2
GO02 Mina Guanaco 39.01 324 P P 19 58 02.5 +1.2
GO02 S 20 03 56.0 -4.2
GO02 IAMs_20 IAMs_20 20 13 44.2
comp=Z,10µm,22.0s
BSCB Bom Sucesso 39.39 1 eP P 19 58 05.7 +1.5
PB14 IPOC Station P 39.76 323⇓iP P 19 58 07.8 +0.3
AQDB Aquidauana 40.58 345 eP P 19 58 14.7 +0.8
PB15 IPOC Station P 40.82 325⇓iP P 19 58 17.4 +1.2
ITRB Iturama 40.84 353 eP P 19 58 17.1 +1.0
PB10 IPOC Station P 40.85 323 iP P 19 58 17.0 +0.8
PB10 IPOC Station P 40.85 323 P P 19 58 17.3 +1.1
PB10 IAMs_20 IAMs_20 20 14 38.9
comp=Z,8µm,22.0s
LVC Limon Verde 41.23 326 P P 19 58 21.3 +1.5
comp=Z,108nm,0.8s,baz=169,slow=7.1,SNR=79
LVC PP PP 19 59 58.3 +3.5
comp=Z,44nm,1.0s,baz=164,slow=12,SNR=3.1
LVC ScP ScP 20 04 04.7 -3.4
comp=Z,12nm,0.8s,baz=154,slow=6.2,SNR=3.4
LVC Limon Verde 41.23 326 eP P 19 58 21.1 +1.4
LVC Limon Verde 41.23 326 P P 19 58 21.0 +1.2
LVC ScP 20 04 05.3 -2.8
LVC Limon Verde 41.23 326 P P 19 58 21.0 +1.2
LVC pmax pmax
comp=Z,139nm,0.9s
LVC MLR MLR
comp=Z,5µm,21.0s
VNDA Vanda 41.28 189 P P 19 58 20.6 +1.4
comp=Z,58nm,1.2s,baz=166,slow=7.1,SNR=8.4
VNDA PcP PcP 20 00 18.6 +1.1
comp=Z,18nm,0.9s,baz=152,slow=4.6,SNR=3.5
VNDA LR LR 20 17 42.9
comp=Z,6µm,18.3s,baz=142,slow=39
VNDA Vanda 41.28 189 P P 19 58 20.8 +1.6
VNDA IAmb IAmb 19 58 22.9
comp=Z,315nm,1.6s
PB05 IPOC Station P 41.37 324⇓iP P 19 58 21.4 +0.8
BSFB Barra de Sao F 41.67 6 eP P 19 58 24.2 +1.3
SJMB Sao Joao De Ma 41.78 6 eP P 19 58 24.7 +0.9
PB04 IPOC Station P 41.85 324⇓iP P 19 58 25.7 +1.1
PB04 IPOC Station P 41.85 324 P P 19 58 25.4 +0.9
PB04 IAMs_20 IAMs_20 20 15 23.2
comp=Z,6µm,21.0s
C2SB Chapadao do Su 41.95 349 eP P 19 58 26.4 +1.2
PB03 IPOC Station P 42.00 325⇓iP P 19 58 27.0 +1.2
MAW Mawson 42.05 147 P P 19 58 27.0 +1.6
comp=Z,54nm,0.9s,baz=227,slow=9.4,SNR=40
MAW PcP PcP 20 00 19.9 -0.1
comp=Z,32nm,0.8s,baz=239,slow=8.0,SNR=3.7
MAW LR LR 20 15 43.0
comp=Z,12µm,18.3s,baz=236,slow=36
PB07 IPOC Station P 42.34 325⇓iP P 19 58 29.9 +1.3
IPMB Ipameri, GO 42.44 356 eP P 19 58 30.2 +0.9
PB02 IPOC Station P 42.73 325⇓iP P 19 58 33.2 +1.5
PB01 IPOC Station P 42.88 326⇑iP P 19 58 34.2 +1.3
PB01 IPOC Station P 42.88 326 P P 19 58 34.2 +1.3
PATCX Punta Patache 43.28 325⇓iP P 19 58 37.5 +1.4
PP1B Ponte de Pedra 43.32 347 eP P 19 58 37.6 +1.2
GO01 Chusmiza 44.11 327⇓iP P 19 58 44.9 +1.6
GO01 Chusmiza 44.11 327 P P 19 58 44.9 +1.6
GO01 IAmb IAmb 19 58 46.2
comp=Z,369nm,0.9s
PB11 IPOC Station P 44.15 326 P P 19 58 44.1 +0.9
MNMC Minye Minye 44.73 326⇓iP P 19 58 49.8 +1.8
MNMC Minye Minye 44.73 326 P P 19 58 49.6 +1.6
BDFB Brasilia 44.76 356 P P 19 58 49.0 +0.9
comp=Z,103nm,0.9s,baz=172,slow=6.6,SNR=101
BDFB LR LR 20 15 54.4
comp=Z,4µm,21.4s,baz=167,slow=34
BDFB Brasilia 44.76 356 P P 19 58 48.8 +0.8
BDFB IAmb IAmb 19 58 50.2
comp=Z,149nm,1.0s
BDFB IAMs_20 IAMs_20 20 14 58.8
comp=Z,7µm,22.0s
BDFB Brasilia 44.76 356 P P 19 58 48.8 +0.8
BDFB pmax pmax
comp=Z,149nm,1.0s
BDFB MLR MLR
comp=Z,7µm,22.0s
ARAG Araguaiana, MT 44.90 351 eP P 19 58 50.0 +0.9
SALV Santo Antonio 45.09 346 eP P 19 58 52.0 +1.4
SIV San Ignacio 45.82 339 P P 19 58 57.1 +0.8
comp=Z,69nm,0.8s,baz=180,slow=7.5,SNR=267
SIV PcP PcP 20 00 34.5 +0.8
comp=Z,30nm,0.9s,baz=212,slow=2.9,SNR=3.2
SIV ScP ScP 20 04 23.2 -3.1
comp=Z,4.4nm,0.8s,baz=210,slow=12,SNR=3.3
LPAZ La Paz 47.06 329 P P 19 59 08.0 +1.2
comp=Z,35nm,0.6s,baz=155,slow=5.5,SNR=94
LPAZ LR LR 20 20 22.4
comp=Z,3µm,19.5s,baz=170,slow=38
LPAZ La Paz 47.06 329 P P 19 59 08.0 +1.2
LPAZ La Paz 47.06 329 P P 19 59 07.8 +1.0
PEXB Peixe 48.28 356 eP P 19 59 16.1 +0.5
CLDB Colider 50.07 347 eP P 19 59 28.9 -0.3
SUR Sutherland 50.76 88 P P 19 59 36.6 +2.0
comp=Z,20nm,0.5s,baz=204,slow=8.3,SNR=64
SUR ScP ScP 20 04 43.9 -3.5
comp=Z,16nm,1.1s,baz=237,slow=2.9,SNR=3.3
SUR Sutherland 50.76 88 P P 19 59 36.1 +1.5
SUR Sutherland 50.76 88 IAMs_20 IAMs_20 20 15 45.9
comp=Z,5µm,21.0s
CASY Casey 52.34 168 P P 19 59 46.7 +1.0
CASY IAmb IAmb 19 59 57.7
comp=Z,192nm,1.1s
SHEL Horse Pasture 52.77 50 P P 19 59 50.3 +0.8
SHEL IAmb IAmb 19 59 52.3
comp=Z,326nm,1.0s
SHEL Horse Pasture 52.77 50 IAMs_20 IAMs_20 20 16 36.3
comp=Z,5µm,20.0s
SHEL Horse Pasture 52.77 50 P P 19 59 50.3 +0.8
SHEL pmax pmax
comp=Z,326nm,1.0s
SHEL MLR MLR
comp=Z,5µm,20.0s
SAML Samuel 53.08 338⇓iP P 19 59 52.6 +0.9
SAML Samuel 53.08 338 eP P 19 59 52.7 +0.9
SAML Samuel 53.08 338 P P 19 59 52.5 +0.8
SAML IAmb IAmb 19 59 53.3
comp=Z,106nm,0.8s
SAML Samuel 53.08 338 IAMs_20 IAMs_20 20 22 01.7
comp=Z,5µm,22.0s
SAML Samuel 53.08 338 P P 19 59 52.5 +0.8
SAML pmax pmax
comp=Z,107nm,0.8s
SAML MLR MLR
comp=Z,5µm,22.0s
NBLI Livramento-PB 53.32 10 eP P 19 59 54.2 +0.6
NNA Nana 53.63 321 P P 19 59 56.4 +0.5
comp=Z,166nm,1.1s,baz=166,slow=6.8,SNR=32
NNA Nana 53.63 321 P P 19 59 56.2 +0.3
NNA IAmb IAmb 19 59 58.3
comp=Z,231nm,1.1s
NNA Nana 53.63 321 diP P 19 59 55.8 -0.1
NNA pmax pmax
comp=Z,333nm,1.0s
NNA MLR MLR
comp=Z,4µm,19.0s
NBPA Parau_RN 54.90 10 eP P 20 00 05.7 +0.6
RCBR Riachuelo 54.94 11 eP P 20 00 06.3 +0.9
comp=Z,150nm,1.0s,baz=171,slow=7.9,SNR=36
RCBR Riachuelo 54.94 11 eP P 20 00 06.6 +1.2
RCBR Riachuelo 54.94 11 P P 20 00 06.3 +0.9
RCBR IAmb IAmb 20 00 07.9
comp=Z,264nm,1.1s
RCBR Riachuelo 54.94 11 IAMs_20 IAMs_20 20 20 55.1
comp=Z,6µm,20.0s
BOSA Boshof 56.04 89 iP P 20 00 14.2 +0.9
BOSA Boshof 56.04 89 P P 20 00 14.1 +0.8
comp=Z,18nm,0.5s,baz=209,slow=6.3,SNR=57
BOSA ScP ScP 20 05 05.9 -4.4
comp=Z,11nm,1.0s,baz=208,slow=6.0,SNR=4.2
BOSA LR LR 20 19 22.3
comp=Z,4µm,21.8s,baz=210,slow=31
BOSA Boshof 56.04 89 iP P 20 00 14.2 +0.9
BOSA Boshof 56.04 89 P P 20 00 13.3 0.0
BOSA IAmb IAmb 20 00 24.8
comp=Z,110nm,1.1s
BOSA Boshof 56.04 89 P P 20 00 13.3 0.0
BOSA pmax pmax
comp=Z,110nm,1.1s
H10S2 ASCENSION HYDR56.23 37 T T 21 03 07.4
baz=16,slow=74,SNR=14
H10S3 ASCENSION HYDR56.23 37 T T 21 03 07.2
baz=204,slow=74,SNR=4.7
NBMO Morrinhos-CE 57.12 6 eP P 20 00 21.6 +0.7
ASCN Ascension 57.29 37 P P 20 00 22.8 +0.7
ASCN IAmb IAmb 20 00 24.9
comp=Z,185nm,0.9s
H10N3 ASCENSION HYDR57.34 37 T T 21 04 27.0
baz=202,slow=75,SNR=15
H10N1 ASCENSION HYDR57.34 37 T T 21 04 26.7
baz=202,slow=75,SNR=19
H10N2 ASCENSION HYDR57.35 37 T T 21 04 27.7
baz=202,slow=75,SNR=20
ATAH Atahualpa 58.69 321 P P 20 00 34.7 +2.3
comp=Z,79nm,0.9s,baz=175,slow=5.6,SNR=39
LBTB Lobatse 59.19 87 ScP ScP 20 05 20.6 -3.6
comp=Z,24nm,0.9s,baz=212,slow=5.4,SNR=11
LBTB Lobatse 59.19 87 P P 20 00 35.6 +0.1
LBTB IAmb IAmb 20 00 46.9
comp=Z,100nm,1.0s
LBTB ScP 20 05 20.7 -3.5
LBTB Lobatse 59.19 87 P P 20 00 35.6 +0.1
LBTB pmax pmax
comp=Z,100nm,1.0s
TSUM Tsumeb 60.18 76 iP P 20 00 43.7 +1.3
TSUM Tsumeb 60.18 76 LR LR 20 21 04.1
comp=Z,640nm,21.9s,baz=209,slow=30
TSUM Tsumeb 60.18 76 iP P 20 00 43.7 +1.3
TSUM Tsumeb 60.18 76 P P 20 00 43.2 +0.8
MCQ Macquarie Isla 63.80 196 P P 20 01 06.6 +0.5
MCQ IAmb IAmb 20 01 17.5
comp=Z,263nm,1.4s
MCQ Macquarie Isla 63.80 196 P P 20 01 06.6 +0.5
MCQ pmax pmax
comp=Z,263nm,1.4s
MCQ MLR MLR
comp=Z,6µm,21.0s
MATP Matopo 64.48 87 iP P 20 01 11.5 +0.3
MATP Matopo 64.48 87 iP P 20 01 11.5 +0.3
PTLC Puerto Leguiza 64.58 327⇓iP P 20 01 09.9 -1.7
OTAV Otavalo 65.68 323⇓iP P 20 01 20.5 +1.1
OTAV Otavalo 65.68 323 P P 20 01 19.8 +0.4
OTAV IAmb IAmb 20 01 22.1
comp=Z,176nm,0.9s
OTAV Otavalo 65.68 323 IAMs_20 IAMs_20 20 30 54.7
comp=Z,4µm,22.0s
OTAV Otavalo 65.68 323 P P 20 01 19.8 +0.4
OTAV pmax pmax
comp=Z,176nm,0.9s
OTAV MLR MLR
comp=Z,4µm,22.0s
FLOC Florencia 66.16 327⇓iP P 20 01 22.2 +0.2
FLOC ⇓iP P 20 01 22.8 +0.8
FLOC Florencia 66.16 327 P P 20 01 22.2 +0.2
MACC Macarena, Meta 66.22 329 eP P 20 01 21.8 -0.5
GUVC San Jose del G 66.29 330 eP P 20 01 21.1 -1.7
GCUF Volcan Galeras 66.29 325⇓iP P 20 01 24.6 +1.3
BBAC Balboa, Cauca 67.02 325 eP P 20 01 27.7 0.0
ITZ Itezhi-Tezhi 67.23 82⇓iP P 20 01 30.1 +1.0
TUMC Tumaco 67.26 323⇓iP P 20 01 29.4 +0.4
TUMC Tumaco 67.26 323 P P 20 01 29.3 +0.3
POPC Popayan, Colom 67.35 326⇓iP P 20 01 30.3 +0.5
PTGC Puerto Gaitan, 67.76 331⇓iP P 20 01 31.9 -0.2
PRAC Prado 67.99 328⇓iP P 20 01 34.1 +0.5
VILC Villavicencio, 68.06 329⇑iP P 20 01 34.7 +0.5
GR1C Gorgona, Isla 68.22 324⇓iP P 20 01 35.7 +0.7
ORTC Ortega, Tolima 68.27 328⇓eP P 20 01 35.7 +0.4
ORTC ⇓iP P 20 01 35.8 +0.4
CHIC Chingaza 68.57 329⇓iP P 20 01 37.5 -0.1
YOTC Yotoco, Valle 68.64 327⇓iP P 20 01 37.5 -0.3
LSZ Lusaka 68.70 83 P P 20 01 39.3 +1.1
LSZ IAmb IAmb 20 01 50.5
comp=Z,133nm,1.1s
LSZ Lusaka 68.70 83 IAMs_20 IAMs_20 20 27 18.3
comp=Z,3µm,21.0s
LSZ Lusaka 68.70 83 P P 20 01 39.3 +1.1
LSZ pmax pmax
comp=Z,133nm,1.1s
LSZ MLR MLR
comp=Z,3µm,21.0s
PAYG Puerto Ayora 68.83 311 P P 20 01 39.2 +0.4
ANIL Santa Ana 68.87 328⇓iP P 20 01 39.6 +0.2
ROSC El Rosal 68.92 329 P P 20 01 40.8 +1.0
comp=Z,29nm,0.6s,baz=206,slow=3.1,SNR=17
ROSC LR LR 20 34 02.1
comp=Z,3µm,19.0s,baz=182,slow=38
ROSC El Rosal 68.92 329⇓iP P 20 01 41.0 +1.2
ROSC El Rosal 68.92 329 P P 20 01 40.5 +0.6
ROSC IAmb IAmb 20 02 12.2
comp=Z,120nm,1.2s
ROSC IAMs_20 IAMs_20 20 33 50.8
comp=Z,4µm,20.0s
TOLC Tolima 68.94 328 eP P 20 01 40.2 +0.3
CTAB Cerro Tablazo, 69.06 329 eP P 20 01 42.2 +1.4
CTAU Tausa, Cundina 69.20 329 eP P 20 01 47.6 +5.9
RREF El Recreo 69.25 328⇓iP P 20 01 43.0 +0.9
PLMC San Jos del P 69.50 327⇓iP P 20 01 43.2 +0.2
GUY2C Guyana, Caldas 69.56 328⇓iP P 20 01 43.9 0.0
GUY2C ⇓iP P 20 01 43.9 0.0
RUSC La Rusia 69.62 330⇓iP P 20 01 43.6 -0.7
RUSC La Rusia 69.62 330 P P 20 01 43.9 -0.4
SPBC San Pablo de B 69.64 329⇓iP P 20 01 42.7 -1.2
NORC Norcasia 69.76 328⇓iP P 20 01 43.3 -1.3
TAMC Tame, Arauca 69.84 332⇓iP P 20 01 45.2 +0.2
PIZC Pizarro, Choco 69.86 326⇓eP P 20 01 46.6 +1.4
ELOV Elorza 69.87 334⇓iP P 20 01 45.8 +0.6
BARC Barichara 70.32 330 eP P 20 01 45.7 -2.6
CBOC Ciudad Bolivar 70.35 327⇓iP P 20 01 47.9 -0.5
CBOC ⇓iP P 20 01 48.2 -0.1
HELC Santa Helena 70.53 328⇓iP P 20 01 48.6 -1.1
PTBC PUERTO BERRIO, 70.59 329⇓iP P 20 01 47.8 -1.8
PYZ Puysegur Point 70.61 203 P P 20 01 49.0 -0.5
PYZ IAmb IAmb 20 01 59.9
comp=Z,142nm,1.1s
WHZ Wether Hill Ro 70.62 204 IAmb IAmb 20 02 00.7
comp=Z,132nm,1.1s
ODZ Otahua Downs 70.87 206 P P 20 01 51.0 0.0
ODZ IAmb IAmb 20 02 01.8
comp=Z,113nm,1.3s
PAMC Pamplona, Colo 70.92 331 eP P 20 01 49.9 -2.3
BRRC Barranca, Sant 70.95 330⇓iP P 20 01 49.9 -1.9
SOLC Bahia Solano 71.07 326 eP P 20 01 54.1 +1.6
MLZ Mavora Lakes 71.09 204 P P 20 01 52.6 +0.2
MLZ IAmb IAmb 20 02 05.0
comp=Z,104nm,1.2s
SOCV Socops 71.41 333⇓iP P 20 01 54.7 +0.1
DBBC Dabeiba 71.50 328⇓iP P 20 01 55.5 +0.2
ZARC Zaragoza, Cauc 71.61 329⇓iP P 20 01 54.8 -1.0
OCAC Ocana 71.94 331 eP P 20 01 56.0 -2.0
SDV Santo Domingo 71.94 334 P P 20 01 58.3 +0.3
comp=Z,38nm,0.8s,baz=224,slow=3.5,SNR=49
SDV Santo Domingo 71.94 334⇓iP P 20 01 58.3 +0.3
SDV Santo Domingo 71.94 334 eP P 20 01 57.7 -0.3
SDV Santo Domingo 71.94 334 IAMs_20 IAMs_20 20 33 59.7
comp=Z,4µm,22.0s
UREC San Jos de Ur 72.03 328⇓eP P 20 01 57.3 -1.0
PCRV Puerto La Cruz 72.03 340 P P 20 01 59.5 +1.2
comp=Z,42nm,0.7s,baz=164,slow=4.0,SNR=15
RPZ Rata Peaks 72.04 207 P P 20 01 58.0 -0.2
comp=Z,64nm,0.9s,baz=162,slow=3.6,SNR=14
RPZ LR LR 20 33 04.1
comp=Z,4µm,18.0s,baz=198,slow=35
RPZ Rata Peaks 72.04 207 P P 20 01 57.9 -0.2
RPZ IAmb IAmb 20 02 09.4
comp=Z,147nm,1.2s
FOZ Fox Glacier 72.49 206 P P 20 02 00.9 +0.2
FOZ IAmb IAmb 20 02 12.0
comp=Z,276nm,1.6s
TOSP Speyside 72.51 344 P P 20 02 00.6 -0.6
TOSP IAmb IAmb 20 03 59.0
comp=Z,195nm,1.6s
TOSP IAMs_20 IAMs_20 20 39 51.9
comp=Z,3µm,20.0s
LTZ Lake Taylor 72.65 208 P P 20 02 01.7 -0.2
LTZ IAmb IAmb 20 02 03.4
comp=Z,87nm,0.9s
SMLC San Martn de 72.67 330⇓iP P 20 02 00.7 -1.4
KHZ Kahutara 72.69 209 IAMs_20 IAMs_20 20 29 27.5
comp=Z,4µm,20.0s
MSWZ Moikau Station 73.21 211 P P 20 02 04.8 -0.4
BSWZ Blackbirch Sta 73.27 210 P P 20 02 05.6 +0.1
AZU Azuero 73.38 324⇓iP P 20 02 07.0 +0.7
SNZO South Karori 73.45 210 P P 20 02 06.4 -0.1
SNZO IAmb IAmb 20 02 07.6
comp=Z,110nm,1.0s
SNZO South Karori 73.45 210 IAMs_20 IAMs_20 20 31 42.6
comp=Z,3µm,20.0s
THZ Tophouse 73.46 209 P P 20 02 06.6 -0.1
GRGR Grenville 73.48 343 P P 20 02 06.6 -0.3
GRGR IAMs_20 IAMs_20 20 34 59.4
comp=Z,4µm,21.0s
TUWZ Tuamarina 73.53 210 P P 20 02 06.9 -0.1
LIC Lamto 73.58 42 eP P 20 02 07.6 0.0
comp=Z,409nm,0.7s
CODC Agustn Codazz 73.61 331 iP P 20 02 05.8 -1.9
ARGC Ariguani, Magd 73.73 330⇓iP P 20 02 09.1 +0.7
KIC Kosan Boka 73.81 42 eP P 20 02 08.8 -0.1
comp=Z,162nm,0.8s
TIC Toumodi 73.98 42 eP P 20 02 10.0 +0.1
SJCC San Jacinto, C 74.00 329⇓iP P 20 02 10.4 +0.4
DBIC Dimbokro 74.06 42 P P 20 02 11.6 +1.2
comp=Z,78nm,0.9s,baz=178,slow=6.8,SNR=113
DBIC LR LR 20 27 09.1
comp=Z,6µm,21.4s,baz=186,slow=30
DBIC Dimbokro 74.06 42 P P 20 02 11.3 +1.0
DBIC IAmb IAmb 20 02 12.4
comp=Z,110nm,0.9s
DBIC Dimbokro 74.06 42 P P 20 02 11.3 +1.0
DBIC pmax pmax
comp=Z,111nm,1.0s
UPA Univ. de Panam 74.30 325⇓iP P 20 02 11.5 -0.2
QRZ Quartz Range 74.44 209 P P 20 02 11.3 -1.0
QRZ IAmb IAmb 20 02 12.6
comp=Z,499nm,1.9s
SVB Belmont 74.55 344 IAMs_20 IAMs_20 20 35 41.6
comp=Z,3µm,21.0s
BCIP Isla Barro Col 74.56 325 P P 20 02 13.4 +0.3
BCIP Isla Barro Col 74.56 325 P P 20 02 13.5 +0.3
BCIP pmax pmax
comp=Z,868nm,1.8s
BCIP MLR MLR
comp=Z,1µm,19.0s
ABPO Ambohimpanom 74.91 102 P P 20 02 15.6 0.0
ABPO Ambohimpanom 74.91 102 P P 20 02 15.6 0.0
ABPO pmax pmax
comp=Z,51nm,1.4s
MCLT Moule a Chique 74.94 344 P P 20 02 15.0 -0.3
URIC Uribia, Colomb 74.97 333 P P 20 02 15.6 0.0
BKZ Black Stump Fm 75.00 212 P P 20 02 16.2 +0.4
BKZ IAmb IAmb 20 02 29.1
comp=Z,211nm,1.8s
BKZ IAMs_20 IAMs_20 20 30 49.9
comp=Z,3µm,20.0s
URZ Urewera 75.69 213 P P 20 02 20.5 +1.0
comp=Z,17nm,0.8s,baz=135,slow=0.6,SNR=7.3
URZ LR LR 20 31 10.8
comp=Z,2µm,21.0s,baz=153,slow=32
URZ Urewera 75.69 213 P P 20 02 19.4 -0.1
URZ IAMs_20 IAMs_20 20 37 25.0
comp=Z,3µm,18.0s
FDF Fort de France 75.97 344 P P 20 02 21.1 -0.3
FDF IAmb IAmb 20 02 24.2
comp=Z,273nm,1.2s
FDF IAMs_20 IAMs_20 20 36 26.4
comp=Z,3µm,21.0s
FDF Fort de France 75.97 344 P P 20 02 21.1 -0.3
FDF pmax pmax
comp=Z,273nm,1.2s
FDF MLR MLR
comp=Z,3µm,21.0s
MXZ Matakaoa Point 76.01 214 P P 20 02 21.1 -0.3
MXZ IAmb IAmb 20 02 36.8
comp=Z,469nm,1.8s
MXZ IAMs_20 IAMs_20 20 35 30.6
comp=Z,3µm,20.0s
HIZ Hauiti 76.05 211 IAMs_20 IAMs_20 20 41 02.4
comp=Z,3µm,18.0s
TAU Tasmania Unive 76.50 190 P P 20 02 23.7 -0.4
TAU Tasmania Unive 76.50 190 P P 20 02 23.7 -0.4
TAU pmax pmax
comp=Z,81nm,0.9s
TAU MLR MLR
comp=Z,7µm,19.0s
DLPL La Plaine 76.58 344 P P 20 02 24.6 -0.1
DLPL IAMs_20 IAMs_20 20 37 33.3
comp=Z,3µm,22.0s
HDC Heredia 76.64 321 P P 20 02 25.4 +0.1
TBI Tubuai 76.65 246 eS S 20 12 11.5 -0.1
comp=Z,2µm,26.0s
TBI Tubuai 76.65 246 eLQ LQ 20 22 54.4
comp=Z,1µm,26.0s
TBI eLR LR 20 26 07.3
comp=Z,7µm,27.0s,baz=156
RER Riviere de l'E 77.14 110 P P 20 02 27.4 -0.8
RER IAmb IAmb 20 04 36.0
comp=Z,194nm,1.3s
SACV Santiago Islan 77.14 22 P P 20 02 28.0 +0.1
SACV Santiago Islan 77.14 22 IAMs_20 IAMs_20 20 35 03.3
comp=Z,2µm,19.0s
JTS Las Juntas de 77.18 320 P P 20 02 29.0 +0.8
comp=Z,125nm,0.8s,baz=130,slow=1.7,SNR=28
JTS Las Juntas de 77.18 320 P P 20 02 29.0 +0.8
JTS IAmb IAmb 20 02 30.1
comp=Z,148nm,0.9s
JTS Las Juntas de 77.18 320diP P 20 02 28.5 +0.3
JTS pmax pmax
comp=Z,139nm,0.9s
JTS MLR MLR
comp=Z,765nm,21.0s
SKI Saint Kitts 78.75 343 P P 20 02 36.6 -0.2
SKI IAMs_20 IAMs_20 20 42 39.1
comp=Z,2µm,18.0s
SKI Saint Kitts 78.75 343 P P 20 02 36.7 -0.2
SKI pmax pmax
comp=Z,429nm,1.0s
SKI MLR MLR
comp=Z,2µm,18.0s
ESPN Las Esperanzas 78.76 321 P P 20 02 36.7 -0.3
ESPN IAmb IAmb 20 02 38.0
comp=Z,151nm,0.8s
ACON Acoyapa 78.82 320 P P 20 02 36.9 -0.4
ACON IAmb IAmb 20 02 38.2
comp=Z,179nm,1.1s
SEUS St. Eustatius 78.95 343 IAMs_20 IAMs_20 20 37 54.1
comp=Z,3µm,22.0s
ANWB Willy Bob 78.95 344 P P 20 02 37.3 -0.6
ANWB IAMs_20 IAMs_20 20 38 25.2
comp=Z,2µm,21.0s
CDVI St. Croix 79.47 341 P P 20 02 40.7 0.0
SMRT St. Maarten 79.51 343 P P 20 02 40.4 -0.5
SMRT IAmb IAmb 20 02 41.8
comp=Z,244nm,1.1s
SMRT IAMs_20 IAMs_20 20 38 09.0
comp=Z,3µm,22.0s
ICMP Isla Caja de M 79.90 340 P P 20 02 42.1 -0.9
MTP Monte Pirata 79.94 340 P P 20 02 42.9 -0.3
PDPR Patillas Dam, 79.94 340 P P 20 02 42.7 -0.6
PDPR IAmb IAmb 20 02 43.6
comp=Z,84nm,0.8s
HUMP Col San Antoni 80.03 340 P P 20 02 42.9 -0.8
SJG San Juan 80.06 340 P P 20 02 43.0 -0.9
SJG San Juan 80.06 340 IAMs_20 IAMs_20 20 37 38.5
comp=Z,2µm,21.0s
SJG San Juan 80.06 340 P P 20 02 43.0 -0.9
SJG pmax pmax
comp=Z,64nm,1.2s
SJG MLR MLR
comp=Z,2µm,21.0s
OBIP Obispado Ponce 80.07 339 P P 20 02 43.2 -0.7
OBIP IAmb IAmb 20 02 44.5
comp=Z,120nm,1.1s

MLPR Magueyes Islan 80.07 339 P P 20 02 42.7 -1.2
CUPR Culebra, Puert 80.10 341 P P 20 02 44.0 -0.1
CRPR Cabo Rojo, PR 80.12 339 P P 20 02 43.8 -0.4
CRPR IAmb IAmb 20 02 45.0
comp=Z,248nm,0.9s
CBYP Canovanas 80.16 340 P P 20 02 44.1 -0.4
CBYP IAmb IAmb 20 02 45.3
comp=Z,120nm,1.1s
GCPR Guaynabo City 80.24 340 P P 20 02 44.0 -0.8
GCPR IAmb IAmb 20 02 45.2
comp=Z,193nm,1.6s
ESTN Estel 80.27 320 P P 20 02 44.7 -0.6
ESTN IAmb IAmb 20 02 55.3
comp=Z,163nm,1.2s
MPR Mayaguez 80.33 339 P P 20 02 45.3 0.0
AOPR Arecibo Observ 80.39 339 P P 20 02 45.0 -0.7
BANI BANI 81.11 336 P P 20 02 49.7 0.0
DR12 Loma Pena Alta 81.30 337 P P 20 02 50.1 -0.6
TVO Taravao 81.38 249 eP P 20 02 51.0 -0.3
comp=Z,56nm,1.1s
TGUH Tegucigalpa,Un 81.46 319⇓iP P 20 02 51.5 -0.1
TGUH Tegucigalpa,Un 81.46 319 P P 20 02 51.5 -0.1
TGUH IAmb IAmb 20 03 01.7
comp=Z,411nm,1.6s
LGNH Logne 81.70 334 P P 20 02 53.3 +0.6
PPT2 Papeete2 81.70 249 eS S 20 13 04.3 -1.3
comp=Z,608nm,25.2s
PPT2 Papeete2 81.70 249 eLR LR 20 28 27.3
comp=Z,7µm,23.2s,baz=156
PPT Papeete 81.72 249 LR LR 20 30 34.3
comp=Z,3µm,21.3s,baz=168,slow=29
SNET Serv Nac Est T 81.76 317 P P 20 02 52.6 -0.6
SDDR Presa de Saban 81.88 335 P P 20 02 53.4 -0.2
SDDR IAMs_20 IAMs_20 20 41 10.9
comp=Z,3µm,22.0s
TOO Toolangi 81.95 189 P P 20 02 54.0 -0.1
TOO pmax pmax
comp=Z,88nm,0.9s
PCJ Portland Cotta 82.03 330⇓iP P 20 02 56.0 +1.6
HOJ Hope 82.18 330⇑iP P 20 02 57.5 +2.3
SC01 Santiago de lo 82.19 336 P P 20 02 55.4 +0.2
SC01 IAmb IAmb 20 02 57.4
comp=Z,227nm,0.9s
SC01 IAMs_20 IAMs_20 20 40 29.3
comp=Z,2µm,22.0s
STH Stony Hill 82.26 330⇓iP P 20 02 57.6 +1.9
MCJ Malvern 82.34 329⇓iP P 20 02 57.8 +1.6
TOA0 Torodi Ar. Sit 82.35 46 P P 20 02 57.2 +1.0
TOA0 IAmb IAmb 20 02 59.1
comp=Z,185nm,1.1s
TORD Torodi Ar. Bea 82.35 46 P P 20 02 57.7 +1.5
comp=Z,95nm,1.0s,baz=211,slow=5.3,SNR=330
TORD S S 20 13 09.8 -2.2
comp=Z,2.3nm,1.1s,baz=190,slow=7.5,SNR=6.1
TORD PKPPKP P'P'df 20 29 35.5 +11
comp=Z,2.3nm,1.2s,baz=33,slow=3.5,SNR=3.9
TORD LR LR 20 32 02.6
comp=Z,6µm,21.4s,baz=215,slow=30
TORD Torodi Ar. Bea 82.35 46 P P 20 02 56.5 +0.3
MTDJ Mount Denham 82.59 329⇓iP P 20 02 58.6 +1.2
MTDJ Mount Denham 82.59 329 P P 20 02 58.7 +1.2
MTDJ IAmb IAmb 20 03 09.2
comp=Z,218nm,1.1s
MTDJ IAMs_20 IAMs_20 20 40 51.8
comp=Z,2µm,21.0s
MBAR Mbarara 82.62 78 P P 20 02 59.8 +1.8
MBAR IAmb IAmb 20 03 13.4
comp=Z,213nm,1.8s
MBAR IAMs_20 IAMs_20 20 35 03.3
comp=Z,3µm,21.0s
MBAR Mbarara 82.62 78 iP P 20 03 00.4 +2.4
MBAR pmax pmax
comp=Z,45nm,1.5s
BBJ Bamboo Saint A 82.67 330⇓iP P 20 02 59.1 +1.3
VAH Vaihoa 82.83 252 eP P 20 02 58.7 -0.1
comp=Z,151nm,1.2s
RAR Rarotonga 83.06 239 P P 20 02 60.0 0.0
comp=Z,26nm,1.0s,baz=258,slow=4.7,SNR=4.3
RAR LR LR 20 32 04.9
comp=Z,802nm,21.5s,baz=156,slow=30
RAR Rarotonga 83.06 239 P P 20 02 59.9 -0.1
RAR Rarotonga 83.06 239 P P 20 03 00.0 0.0
GTBY Guantanamo Bay 83.63 332⇓iP P 20 03 03.5 +0.8
GTBY Guantanamo Bay 83.63 332 P P 20 03 03.2 +0.5
GTBY IAmb IAmb 20 03 04.5
comp=Z,146nm,1.1s
GTBY IAMs_20 IAMs_20 20 41 39.5
comp=Z,2µm,20.0s
CAN Canberra 83.87 192 P P 20 03 03.7 -0.4
CAN Canberra 83.87 192 P P 20 03 03.7 -0.4
CAN pmax pmax
comp=Z,47nm,0.9s
CAN MLR MLR
comp=Z,4µm,22.0s
GRTK Grand Turk 84.30 336 IAMs_20 IAMs_20 20 41 11.1
comp=Z,3µm,21.0s
CBCY The Bluff, Cay 84.61 328 P P 20 03 08.3 +0.7
TAOE Nuku Hiva Isla 84.74 261 eS S 20 13 35.8 -0.8
comp=Z,381nm,26.6s
TAOE Nuku Hiva Isla 84.74 261 eLR LR 20 29 46.0
comp=Z,2µm,31.2s
CCIG Comitan 85.17 315 P P 20 03 10.6 -0.2
CCIG IAmb IAmb 20 03 21.1
comp=Z,170nm,1.6s
CCIG IAMs_20 IAMs_20 20 36 20.5
comp=Z,2µm,19.0s
KMBO Kilima Mbogo 85.36 84 P P 20 03 15.7 +3.7
comp=Z,5.3nm,0.9s,baz=196,slow=5.8,SNR=14
KMBO LR LR 20 38 10.9
comp=Z,2µm,19.4s,baz=210,slow=33
KMBO Kilima Mbogo 85.36 84 IAMs_20 IAMs_20 20 37 58.5
comp=Z,2µm,20.0s
NWAO Narrogin (SRO) 85.89 165 P P 20 03 12.9 -1.3
comp=Z,48nm,1.1s,baz=210,slow=6.0,SNR=7.1
NWAO Narrogin (SRO) 85.89 165 P P 20 03 13.1 -1.1
NWAO IAmb IAmb 20 03 24.5
comp=Z,137nm,1.3s
NWAO Narrogin (SRO) 85.89 165 P P 20 03 13.1 -1.1
NWAO pmax pmax
comp=Z,137nm,1.3s
NWAO MLR MLR
comp=Z,6µm,19.0s
LHI Lord Howe Isla 86.22 201 IAMs_20 IAMs_20 20 39 58.3
comp=Z,3µm,19.0s
BBOO Buckleboo 87.10 181 P P 20 03 19.1 -1.0
BBOO IAmb IAmb 20 03 20.6
comp=Z,137nm,1.4s
TEIG Tepich 87.56 320⇓iP P 20 03 22.6 +0.4
TEIG Tepich 87.56 320 P P 20 03 22.3 +0.1
STKA Stephens Creek 87.86 186 P P 20 03 23.2 -0.6
comp=Z,19nm,0.8s,baz=158,slow=5.1,SNR=31
STKA LR LR 20 42 15.5
comp=Z,7µm,19.2s,baz=164,slow=35
STKA Stephens Creek 87.86 186 P P 20 03 23.2 -0.6
STKA IAMs_20 IAMs_20 20 42 03.3
comp=Z,1µm,19.0s
ARMA Armidale 88.42 195 P P 20 03 29.4 +2.7
ARMA IAMs_20 IAMs_20 20 38 07.2
comp=Z,2µm,21.0s
TLIG Tlapa 88.69 310 P P 20 03 28.8 +1.0
TLIG IAMs_20 IAMs_20 20 46 08.7
comp=Z,2µm,18.0s
UNM Universidad Na 90.53 310 IAMs_20 IAMs_20 20 47 01.6
comp=Z,2µm,20.0s
TAM Tamanrasset 92.60 46 P P 20 03 48.0 +2.1
TAM Tamanrasset 92.60 46 P P 20 03 48.1 +2.1
DWPF Disney Wildern 93.03 329 IAMs_20 IAMs_20 20 47 25.6
comp=Z,2µm,20.0s
DWPF Disney Wildern 93.03 329 P P 20 03 48.4 +0.8
baz=163
EIDS Eidsvold 93.47 195 P P 20 03 51.4 +1.4
BBSR BB Station 93.82 344 IAMs_20 IAMs_20 20 46 33.1
comp=Z,2µm,20.0s
DZM Mont Dzumac 93.83 209 eP P 20 03 51.1 -0.8
comp=Z,105nm,1.4s
DZM Mont Dzumac 93.83 209 eSKSac SKSac 20 14 25.2 -1.5
comp=Z,2µm,25.8s
DZM Mont Dzumac 93.83 209 ePS PS 20 16 17.4 +1.9
comp=Z,595nm,26.5s
DZM eSS SS 20 21 21.2 +2.6
comp=Z,1µm,26.0s
DZM Mont Dzumac 93.83 209 eLR LR 20 34 04.3
comp=Z,4µm,29.4s
DZM Mont Dzumac 93.83 209 P P 20 03 51.9 +0.1
DZM IAmb IAmb 20 03 53.7
comp=Z,73nm,1.4s

NOUC Port Laguerre 93.84 209 P P 20 03 51.7 0.0
NOUC IAmb IAmb 20 03 53.5
comp=Z,210nm,1.9s
NOUC IAMs_20 IAMs_20 20 42 06.4
comp=Z,2µm,20.0s
656A Willston 94.52 328 IAMs_20 IAMs_20 20 52 26.9
comp=Z,2µm,20.0s
MSVF Nonsavu 94.63 221 P P 20 03 54.6 -1.0
MSVF Nonsavu 94.63 221 iP P 20 03 55.0 -0.6
MSVF pmax pmax
comp=Z,26nm,1.1s
ZAIG Zacatecas 94.95 309 P P 20 03 57.7 +0.7
ZAIG IAMs_20 IAMs_20 20 45 14.6
comp=Z,2µm,20.0s
456A Hilliard 95.67 329 IAMs_20 IAMs_20 20 49 12.9
comp=Z,2µm,20.0s
553A Crawfordville 95.80 327 P P 20 04 01.3 +1.0
553A IAMs_20 IAMs_20 20 51 11.0
comp=Z,2µm,20.0s
ASAR Alice Springs 96.21 179 P P 20 04 01.3 -1.4
comp=Z,25nm,0.9s,baz=175,slow=3.8,SNR=167
ASAR PP PP 20 07 54.2 -0.6
comp=Z,5.7nm,0.9s,baz=188,slow=4.3,SNR=6.4
ASAR PKKPbc PKKPdf 20 20 44.8 -0.5
comp=Z,1.3nm,0.6s,baz=3.2,slow=2.0,SNR=14
ASAR LR LR 20 46 36.2
comp=Z,2µm,21.6s,baz=176,slow=35
ASAR Alice Springs 96.21 179 P P 20 04 01.2 -1.5
AS31 Alice Springs 96.21 179 P P 20 04 01.4 -1.3
451A Vernon 96.57 326 IAMs_20 IAMs_20 20 53 25.3
comp=Z,2µm,20.0s
257A Skidaway Islan 96.61 330 IAMs_20 IAMs_20 20 46 58.4
comp=Z,2µm,22.0s
TIGA Tifton 96.76 328 P P 20 04 04.8 +0.1
TIGA IAmb IAmb 20 04 06.2
comp=Z,32nm,0.8s
TIGA IAMs_20 IAMs_20 20 48 56.3
comp=Z,2µm,21.0s
TIGA Tifton 96.76 328 P P 20 04 04.6 0.0
baz=162
255A Hazlehurst 96.93 329 IAMs_20 IAMs_20 20 49 07.9
comp=Z,2µm,22.0s
158A Hollywood 97.14 331 P P 20 04 07.6 +1.3
baz=163
352A Blakely 97.16 327 IAMs_20 IAMs_20 20 48 10.9
comp=Z,2µm,22.0s
157A Early Branch 97.28 330 P P 20 04 07.9 +1.0
baz=163
156A Sylvania 97.38 330 P P 20 04 08.5 +1.1
baz=163
BRAL Brewton 97.46 325 P P 20 04 08.8 +1.0
baz=161
NHSC New Hope 97.49 331 P P 20 04 08.7 +0.8
baz=163
KVTX Kingsville 97.56 315 IAMs_20 IAMs_20 20 54 32.8
comp=Z,1µm,18.0s
Z58A St. Stephen 97.62 331 P P 20 04 09.3 +0.8
baz=164
154A Montrose 97.75 329 IAMs_20 IAMs_20 20 52 52.4
comp=Z,2µm,19.0s
154A Montrose 97.75 329 P P 20 04 09.5 +0.4
baz=162
Z57A Bowman 97.80 331 P P 20 04 09.9 +0.6
baz=163
Y60A Bolivia 97.89 333 IAMs_20 IAMs_20 20 46 53.1
comp=Z,2µm,22.0s
Z56A Williston 97.99 330 IAMs_20 IAMs_20 20 52 09.7
comp=Z,2µm,19.0s
250A Grady 98.00 326 P P 20 04 10.1 -0.1
250A IAmb IAmb 20 04 11.8
comp=Z,94nm,1.1s
250A IAMs_20 IAMs_20 20 51 45.1
comp=Z,2µm,20.0s
Y59A Loris 98.03 332 IAMs_20 IAMs_20 20 52 12.7
comp=Z,2µm,20.0s
Y59A Loris 98.03 332 P P 20 04 11.4 +1.1
baz=164
Y58A Scranton 98.13 332 IAMs_20 IAMs_20 20 49 48.5
comp=Z,2µm,21.0s
152A Waverly Hall 98.22 327 IAMs_20 IAMs_20 20 54 19.1
comp=Z,2µm,19.0s
Y57A Sumter 98.41 331 IAMs_20 IAMs_20 20 49 51.9
comp=Z,1µm,20.0s
Y57A Sumter 98.41 331 P P 20 04 12.8 +0.8
baz=163
Z53A Monticello 98.50 328 P P 20 04 12.1 -0.4
baz=162
GOGA Godfrey 98.60 329 IAMs_20 IAMs_20 20 50 33.0
comp=Z,1µm,20.0s
GOGA Godfrey 98.60 329 P P 20 04 13.1 +0.2
GOGA pmax pmax
comp=Z,29nm,1.1s
GOGA Godfrey 98.60 329 P P 20 04 12.8 -0.1
baz=162
Z52A Williamson 98.64 328 P P 20 04 13.1 +0.1
baz=162
X58A Rowland 98.67 332 IAMs_20 IAMs_20 20 52 32.9
comp=Z,2µm,20.0s
X58A Rowland 98.67 332 P P 20 04 13.2 0.0
baz=164
Y55A Saluda 98.69 330 P P 20 04 13.9 +0.6
baz=163
833A Chaparral WMA, 98.81 314 P P 20 04 14.5 +0.6
baz=156
Y54A Tignall 98.83 329 P P 20 04 14.3 +0.4
baz=162
Z51A Franklin 98.96 327 IAMs_20 IAMs_20 20 56 37.6
comp=Z,2µm,18.0s
X56A White Oak 99.02 331 P Pdif 20 04 15.5 +0.8
baz=163
BIRD Birdtown, Kers 99.03 331 IAMs_20 IAMs_20 20 50 49.2
comp=Z,1µm,20.0s
ATD Arta Tunnel 99.03 83 IAMs_20 IAMs_20 20 44 42.1
comp=Z,2µm,22.0s
Y53A Monroe 99.05 329 P Pdif 20 04 14.7 -0.2
baz=162
W59A Clinton 99.06 333 P Pdif 20 04 16.3 +1.5
baz=164
HKT Hockley 99.06 317 iP Pdif 20 04 14.5 -0.4
HKT pmax pmax
comp=Z,7.0nm,1.0s
HODGE Hodges 99.07 330 P Pdif 20 04 15.7 +0.7
HODGE IAMs_20 IAMs_20 20 52 35.4
comp=Z,2µm,21.0s
W58A Raeford 99.10 332 P Pdif 20 04 15.9 +0.8
baz=164
Z50A Ashland 99.10 326 P Pdif 20 04 15.1 -0.1
Z50A IAmb IAmb 20 04 16.3
comp=Z,36nm,1.0s
Z50A IAMs_20 IAMs_20 20 54 14.4
comp=Z,1µm,20.0s
Z50A Ashland 99.10 326 P Pdif 20 04 15.4 +0.2
baz=161
Y52A Lilburn 99.18 328 IAMs_20 IAMs_20 20 50 51.4
comp=Z,2µm,20.0s
Y52A Lilburn 99.18 328 P Pdif 20 04 15.9 +0.4
baz=162
CTA Charters Tower 99.22 191 P Pdif 20 04 15.6 -0.7
comp=Z,9.2nm,0.9s,baz=97,slow=8.0,SNR=5.7
CTA PP PP 20 08 18.8 +0.8
comp=Z,5.3nm,0.9s,baz=266,slow=6.2,SNR=3.6
CTAO Charters Tower 99.22 191 IAMs_20 IAMs_20 20 50 06.2
comp=Z,2µm,20.0s
V61A Roper 99.25 335 IAMs_20 IAMs_20 20 48 02.1
comp=Z,1µm,20.0s
V60A Jim Taylor Roa 99.37 334 IAMs_20 IAMs_20 20 47 52.3
comp=Z,2µm,22.0s
V60A Jim Taylor Roa 99.37 334 P Pdif 20 04 17.1 +0.9
baz=165
X54A Belton 99.40 330 P Pdif 20 04 17.0 +0.6
baz=162
W57A Gilead 99.40 332 IAMs_20 IAMs_20 20 47 35.1
comp=Z,2µm,22.0s
VBMS Vicksburg 99.46 322 P Pdif 20 04 18.3 +1.6
baz=159
Y51A Rockmart 99.48 327 P Pdif 20 04 16.3 -0.5
baz=161
W56A Indian Trail 99.52 331 P Pdif 20 04 16.5 -0.4
baz=163
V59A Middlesex 99.59 333 P Pdif 20 04 18.4 +1.2
baz=164
X53A Estanollee 99.59 329 P Pdif 20 04 16.8 -0.5
baz=162
KMSC Kings Mountain 99.71 331 IAMs_20 IAMs_20 20 51 04.3
comp=Z,1µm,20.0s
KMSC Kings Mountain 99.71 331 P Pdif 20 04 18.4 +0.6
baz=163
U61A Possum Corner 99.74 335 IAMs_20 IAMs_20 20 48 11.1

comp=Z,2µm,21.0s
Y49A Blount Mountai 99.81 326 IAMs_20 IAMs_20 20 57 21.5
comp=Z,1µm,19.0s
V58A Windy Hill, Pi 99.81 333 IAMs_20 IAMs_20 20 49 47.0
comp=Z,1µm,20.0s
V58A Windy Hill, Pi 99.81 333 P Pdif 20 04 18.9 +0.7
baz=164
X52A Dahlonega 99.84 329 P Pdif 20 04 18.8 +0.4
baz=162
W54A Cherokee Point 99.86 330 P Pdif 20 04 19.2 +0.8
baz=162
HPIG 99.91 308 IAMs_20 IAMs_20 20 53 14.8
comp=Z,2µm,19.0s
WR7 Warramunga Arr 99.91 180 IAMs_20 IAMs_20 20 48 14.2
comp=Z,2µm,21.0s
WR2 Warramunga Arr 99.92 180 IAMs_20 IAMs_20 20 50 25.4
comp=Z,2µm,20.0s
WR1 Warramunga Arr 99.92 180 IAMs_20 IAMs_20 20 50 26.5
comp=Z,2µm,20.0s
WRA Warramunga Arr 99.92 180 P Pdif 20 04 17.6 -1.8
comp=Z,10nm,0.9s,baz=182,slow=4.1,SNR=29
WRA PP PP 20 08 22.0 -1.2
comp=Z,13nm,1.2s,baz=182,slow=6.2,SNR=6.5
WRA PKKPbc PKKPbc 20 20 37.0 +1.2
comp=Z,0.9nm,0.9s,baz=2.3,slow=3.1,SNR=8.3
WRA LR LR 20 50 45.8
comp=Z,2µm,18.2s,baz=175,slow=36
WRA Warramunga Arr 99.92 180 Pdif 20 04 17.6 -1.8
WRAB Tennant Creek 99.93 180 iP Pdif 20 04 18.1 -1.3
WRAB pmax pmax
comp=Z,17nm,1.0s
U59A Littleton 100.05 334 IAMs_20 IAMs_20 20 48 13.3
comp=Z,2µm,22.0s
U59A Littleton 100.05 334 P Pdif 20 04 20.1 +0.9
baz=164
V57A Coltrane Farms 100.05 332 P Pdif 20 04 19.6 +0.3
baz=164
X51A Calhoun 100.06 328 IAMs_20 IAMs_20 20 51 42.0
comp=Z,2µm,20.0s
X51A Calhoun 100.06 328 P Pdif 20 04 19.6 +0.3
baz=161
WB0 Warramunga Arr 100.09 180 Pdif 20 04 19.0 -1.1
V56A Mocksville 100.15 332 P Pdif 20 04 20.5 +0.8
baz=163
W53A Cullowhee 100.19 329 P Pdif 20 04 20.4 +0.3
baz=162
FPAL Fort Paine 100.23 327 IAMs_20 IAMs_20 20 51 30.3
comp=Z,2µm,21.0s
U58A Oxford 100.26 333 P Pdif 20 04 21.0 +0.8
baz=164
W52A Murphy 100.31 329 IAMs_20 IAMs_20 20 54 13.3
comp=Z,1µm,20.0s
W52A Murphy 100.31 329 P Pdif 20 04 21.2 +0.7
baz=162
V55A Taylorsville 100.36 331 IAMs_20 IAMs_20 20 48 33.5
comp=Z,2µm,22.0s
V55A Taylorsville 100.36 331 P Pdif 20 04 21.4 +0.8
baz=163
435B Jarrell 100.42 316 P Pdif 20 04 21.7 +0.7
baz=157
U57A Blanch 100.47 333 P Pdif 20 04 21.8 +0.7
baz=164
X48A Hartselle 100.54 326 IAMs_20 IAMs_20 20 56 05.5
comp=Z,1µm,20.0s
V53A Saluda 100.58 330 P Pdif 20 04 22.2 +0.5
baz=162
T60A Surry 100.58 335 IAMs_20 IAMs_20 20 48 32.4
comp=Z,1µm,22.0s
W51A Cleveland 100.59 328 P Pdif 20 04 22.0 +0.3
baz=161
T59A Double "B" Far 100.59 334 IAMs_20 IAMs_20 20 47 48.7
comp=Z,2µm,22.0s
T59A Double "B" Far 100.59 334 P Pdif 20 04 22.8 +1.2
baz=164
U56A King 100.63 332 IAMs_20 IAMs_20 20 50 38.7
comp=Z,1µm,22.0s
U56A King 100.63 332 P Pdif 20 04 21.9 0.0
baz=163
W50A Signal Mountai 100.78 328 IAMs_20 IAMs_20 20 51 43.6
comp=Z,2µm,21.0s
W50A Signal Mountai 100.78 328 P Pdif 20 04 22.8 +0.2
baz=161
CPCT Cooper Cave 100.80 328 IAMs_20 IAMs_20 20 50 23.3
comp=Z,2µm,22.0s
TKL Tuckaleechee C 100.81 329 IAMs_20 IAMs_20 20 53 53.4
comp=Z,2µm,20.0s
S61A Accomac 100.88 336 IAMs_20 IAMs_20 20 49 07.3
comp=Z,2µm,21.0s
JCT Junction City 100.92 314 P Pdif 20 04 23.3 -0.1
baz=156
V52A Sevierville 100.94 329 IAMs_20 IAMs_20 20 54 04.8
comp=Z,1µm,20.0s
V52A Sevierville 100.94 329 P Pdif 20 04 23.4 +0.1
baz=162
U55A TA2, Sparta 100.94 331 P Pdif 20 04 24.0 +0.7
baz=163
W49A Belvidere 100.95 327 P Pdif 20 04 22.3 -1.0
baz=161
T57A Hurt 101.00 333 P Pdif 20 04 21.9 -1.5
baz=164
V51A Loudon 101.09 329 IAMs_20 IAMs_20 20 53 47.0
comp=Z,1µm,20.0s
U54A Nelsons Funny 101.14 331 P Pdif 20 04 24.3 +0.1
baz=162
V50A Pikevile 101.16 328 P Pdif 20 04 23.9 -0.4
baz=161
U53A Fall Branch 101.18 330 P Pdif 20 04 24.1 -0.2
baz=162
OXF Oxford 101.27 324 IAMs_20 IAMs_20 20 56 39.8
comp=Z,1µm,20.0s
TXAR Lajitas Array 101.29 311 P Pdif 20 04 24.8 -0.4
comp=Z,1.7nm,0.9s,baz=150,slow=7.5,SNR=16
TXAR PKKPbc PKKPbc 20 20 33.9 +1.2
comp=Z,1.2nm,0.8s,baz=280,slow=1.8,SNR=10
S58A Poland Farm, P 101.32 334 IAMs_20 IAMs_20 20 48 21.9
comp=Z,2µm,21.0s
PLAL Pickwick Lake 101.33 325 IAMs_20 IAMs_20 20 55 17.3
comp=Z,2µm,20.0s
U52A Thorn Hill 101.40 330 P Pdif 20 04 27.2 +1.9
baz=162
CCAR Cane Creek 101.42 322 IAMs_20 IAMs_20 20 57 54.8
comp=Z,1µm,19.0s
R61A Willards 101.44 336 IAMs_20 IAMs_20 20 48 23.2
comp=Z,2µm,21.0s
BLA Blacksburg 101.47 332 P Pdif 20 04 26.1 +0.5
baz=163
V49A McMinnville 101.47 327 P Pdif 20 04 25.2 -0.4
baz=161
WHTX Lake Whitney, 101.48 317 P Pdif 20 04 26.1 +0.4
baz=156
U51A La Follette 101.55 329 P Pdif 20 04 26.4 +0.4
baz=162
TZTN Tazewell 101.59 329 IAMs_20 IAMs_20 20 54 35.1
comp=Z,1µm,21.0s
R58B Mineral 101.62 334 IAMs_20 IAMs_20 20 48 57.8
comp=Z,1µm,21.0s
S57A Dark Hollow, R 101.66 333 IAMs_20 IAMs_20 20 49 02.9
comp=Z,2µm,22.0s
R59A King George, V 101.68 335 P Pdif 20 04 28.3 +1.9
baz=165
V48A Smith Brothers 101.69 327 IAMs_20 IAMs_20 20 52 50.9
comp=Z,2µm,20.0s
X43A Marvell 101.71 323 P Pdif 20 04 27.4 +0.7
baz=159
U50A Jamestown 101.80 328 P Pdif 20 04 27.4 +0.3
baz=161
CLTN Cedars of Leba 101.89 327 IAMs_20 IAMs_20 20 54 20.1
comp=Z,2µm,20.0s
T52A Hallie 101.98 330 IAMs_20 IAMs_20 20 54 55.5
comp=Z,1µm,19.0s
MET Memphis--Engin 101.99 324 IAMs_20 IAMs_20 20 56 51.9
comp=Z,1µm,20.0s
T51A Gray 102.09 329 P Pdif 20 04 28.8 +0.5
baz=162
U49A Red Boiling Sp 102.14 328 P Pdif 20 04 28.7 +0.1
baz=161
Q60A Greensboro 102.19 336 IAMs_20 IAMs_20 20 47 50.0
comp=Z,2µm,22.0s
X40A Basin Creek Fa 102.27 321 IAMs_20 IAMs_20 20 58 17.4
comp=Z,1µm,20.0s
WVT Waverly 102.33 326 IAMs_20 IAMs_20 20 52 08.9
comp=Z,1µm,22.0s
WVT Waverly 102.33 326 P Pdif 20 04 28.8 -0.7
baz=160
T50A Nancy 102.37 329 P Pdif 20 04 30.2 +0.6
baz=161
R56A Bull Pasture M 102.38 333 P Pdif 20 04 30.0 +0.3
baz=164

R55A Marlinton 102.42 333 IAMs_20 IAMs_20 20 49 32.1
comp=Z,2µm,22.0s
MIAR Mount Ida 102.56 321 IAMs_20 IAMs_20 20 58 54.9
comp=Z,1µm,20.0s
MIAR Mount Ida 102.56 321 P Pdif 20 04 30.7 +0.2
baz=158
T49A Edmonton 102.63 328 IAMs_20 IAMs_20 20 51 39.7
comp=Z,1µm,21.0s
T49A Edmonton 102.63 328 P Pdif 20 04 30.7 0.0
baz=161
P61A Hammonton 102.64 337 IAMs_20 IAMs_20 20 49 55.7
comp=Z,2µm,22.0s
S51A Beattyville 102.64 330 P Pdif 20 04 31.1 +0.3
baz=162
W41B Gary Mavity, V 102.73 322 P Pdif 20 04 31.0 -0.2
baz=158
Q57A Strasburg 102.76 334 P Pdif 20 04 32.0 +0.7
baz=164
GNAR Gosnell 102.80 324 IAMs_20 IAMs_20 20 55 49.3
comp=Z,1µm,20.0s
ABTX Abilene, Hawle 102.81 315 P Pdif 20 04 32.0 +0.3
baz=156
S50A Richmond 102.88 329 P Pdif 20 04 33.1 +1.3
baz=161
P59A Jarrettsville 102.90 336 P Pdif 20 04 33.6 +1.7
baz=165
P60A Greenville 102.93 336 IAMs_20 IAMs_20 20 52 30.6
comp=Z,2µm,20.0s
P60A Greenville 102.93 336 P Pdif 20 04 33.4 +1.4
baz=165
Q56A Snyder Ridge, 102.94 334 P Pdif 20 04 33.4 +1.3
baz=164
T47A Sharon Grove 102.94 327 IAMs_20 IAMs_20 20 55 15.0
comp=Z,2µm,20.0s
P58A Pank, Wackersv 102.96 335 P Pdif 20 04 32.9 +0.8
baz=164
PSUB Penn St. - Bra 103.01 337 IAMs_20 IAMs_20 20 52 38.6
comp=Z,2µm,20.0s
Q55A Buckhannon 103.09 333 P Pdif 20 04 33.5 +0.7
baz=163
P57A Homestead Farm 103.11 335 IAMs_20 IAMs_20 20 51 39.2
comp=Z,1µm,22.0s
P57A Homestead Farm 103.11 335 P Pdif 20 04 33.5 +0.8
baz=164
S49A Springfield 103.21 328 P Pdif 20 04 33.8 +0.5
baz=161
W39A Magazine 103.22 321 IAMs_20 IAMs_20 20 58 59.5
comp=Z,1µm,19.0s
W39A Magazine 103.22 321 P Pdif 20 04 34.1 +0.7
baz=158
LCAR Lake Charles 103.23 323 IAMs_20 IAMs_20 21 00 07.7
comp=Z,1µm,19.0s
Q54A Coxs Mills 103.25 332 IAMs_20 IAMs_20 20 50 00.1
comp=Z,2µm,22.0s
MVL Millersville 103.26 336 IAMs_20 IAMs_20 20 52 09.2
comp=Z,1µm,20.0s
O60A Telford 103.38 337 P Pdif 20 04 34.8 +0.8
baz=165
O58A Lewisberry 103.49 336 P Pdif 20 04 35.1 +0.6
baz=164
P55A Reedsville 103.53 333 P Pdif 20 04 35.5 +0.9
baz=163
O59A Robesonia 103.53 336 P Pdif 20 04 37.8 +3.2
baz=165
PAGS Pennsylvania G 103.55 336 IAMs_20 IAMs_20 20 52 30.0
comp=Z,2µm,20.0s
BRNJ Basking Ridge 103.57 338 IAMs_20 IAMs_20 20 50 07.3
comp=Z,2µm,21.0s
R49A Shelbyville 103.66 329 IAMs_20 IAMs_20 20 56 00.9
comp=Z,2µm,19.0s
MCWV Mont Chateau 103.67 333 P Pdif 20 04 35.9 +0.6
baz=163
PBMO Poplar Bluff 103.68 324 IAMs_20 IAMs_20 20 56 42.5
comp=Z,1µm,20.0s
PAL Palisades 103.76 338 IAMs_20 IAMs_20 20 49 11.3
comp=Z,2µm,21.0s
P54A Burton 103.76 333 P Pdif 20 04 36.3 +0.6
baz=163
WSPT Westport, CT 103.81 339 IAMs_20 IAMs_20 20 50 13.8
comp=Z,1µm,22.0s
N60A Cedar Hill Far 103.85 337 P Pdif 20 04 36.5 +0.5
baz=165
P53A Whipple 103.86 332 IAMs_20 IAMs_20 20 50 42.2
comp=Z,2µm,22.0s
P53A Whipple 103.86 332 P Pdif 20 04 36.2 +0.1
baz=162
WCI Wyandotte Cave 103.89 328 P Pdif 20 04 36.6 +0.4
baz=160
Q51A Peebles 103.89 330 IAMs_20 IAMs_20 20 52 51.1
comp=Z,1µm,21.0s
Q51A Peebles 103.89 330 P Pdif 20 04 36.7 +0.4
baz=162
M62A Hamden 104.00 339 P Pdif 20 04 37.4 +0.7
baz=166
U40A Yellville 104.01 322 P Pdif 20 04 36.5 -0.4
baz=158
USIN University of 104.01 327 IAMs_20 IAMs_20 20 51 46.2
comp=Z,2µm,22.0s
M61A Granite Spring 104.03 338 P Pdif 20 04 37.5 +0.7
baz=166
N59A State Game Lan 104.03 337 P Pdif 20 04 37.5 +0.6
baz=165
N58A Sunbury 104.14 336 IAMs_20 IAMs_20 20 52 04.5
comp=Z,2µm,20.0s
SSPA Standing Stone 104.19 335 IAMs_20 IAMs_20 20 51 32.8
comp=Z,2µm,21.0s
S44A Carbondale 104.19 325 IAMs_20 IAMs_20 20 57 58.2
comp=Z,1µm,19.0s
KSCT Kent School, K 104.38 339 IAMs_20 IAMs_20 20 52 46.8
comp=Z,2µm,19.0s
WMOK Wichita Mounta 104.43 317 P Pdif 20 04 38.9 +0.1
baz=156
N56A West Decatur 104.54 335 P Pdif 20 04 39.6 +0.4
baz=164
EPT El Paso 104.55 310 IAMs_20 IAMs_20 20 47 00.9
comp=Z,2µm,20.0s
P50A Jamestown 104.56 330 P Pdif 20 04 39.6 +0.4
baz=161
N55A Marion Center 104.56 334 P Pdif 20 04 39.7 +0.4
baz=164
O52A Adamsville 104.56 332 IAMs_20 IAMs_20 20 51 13.8
comp=Z,2µm,22.0s
O52A Adamsville 104.56 332 P Pdif 20 04 39.8 +0.6
baz=162
MGMO Mountain Grove 104.57 323 IAMs_20 IAMs_20 20 55 57.1
comp=Z,1µm,21.0s
M57A Sunshine Farm, 104.70 336 IAMs_20 IAMs_20 20 52 11.4
comp=Z,2µm,20.0s
P48A Milroy 104.82 329 IAMs_20 IAMs_20 20 52 00.8
comp=Z,1µm,22.0s
BLO Bloomington 104.84 328 IAMs_20 IAMs_20 20 56 33.1
comp=Z,1µm,19.0s
OLIL Olney 104.85 327 IAMs_20 IAMs_20 20 54 00.4
comp=Z,2µm,21.0s
ACSO Alum Creek Sta 104.95 331 IAMs_20 IAMs_20 20 51 24.0
comp=Z,2µm,22.0s
M56A Emporium 105.06 335 IAMs_20 IAMs_20 20 51 46.9
comp=Z,2µm,21.0s
SOCY Socotra 105.11 92 IAMs_20 IAMs_20 20 55 13.3
comp=Z,1µm,18.0s
L59A Walton 105.12 338 IAMs_20 IAMs_20 20 51 32.3
comp=Z,2µm,22.0s
M55A Ridgway 105.17 335 IAMs_20 IAMs_20 20 52 05.8
comp=Z,2µm,21.0s
O49A Covington 105.23 330 IAMs_20 IAMs_20 20 53 21.6
comp=Z,2µm,22.0s
BINY Binghamton 105.31 337 IAMs_20 IAMs_20 20 51 02.4
comp=Z,2µm,20.0s
ESDC Sonseca Array 105.36 32 PP PP 20 09 04.5 -0.6
comp=Z,3.8nm,1.0s,baz=201,slow=7.9,SNR=4.6
TRY Troy 105.39 339 IAMs_20 IAMs_20 20 52 54.4
comp=Z,2µm,20.0s
M54A Oil Creek Stat 105.40 334 IAMs_20 IAMs_20 20 53 01.0
comp=Z,1µm,22.0s
P46A Rosedale 105.44 328 IAMs_20 IAMs_20 20 52 12.0
comp=Z,1µm,21.0s
N51A Ashland 105.45 332 IAMs_20 IAMs_20 20 50 42.4
comp=Z,2µm,22.0s
L56A Greenwood 105.56 336 IAMs_20 IAMs_20 20 52 37.1
comp=Z,2µm,21.0s
121A Cookes Peak, D 105.72 309 IAMs_20 IAMs_20 20 49 01.8
comp=Z,1µm,19.0s
KEST Kesra 105.75 44 PP PP 20 09 08.9 +0.9
comp=Z,24nm,1.3s,baz=183,slow=24,SNR=4.6
HAL Halifax 105.76 347 IAMs_20 IAMs_20 20 52 22.2
comp=Z,2µm,20.0s
K58A Earlville 105.78 337 IAMs_20 IAMs_20 20 50 39.0
comp=Z,2µm,22.0s

ACCN Adirondack Com 106.02 339 IAMs_20 IAMs_20 20 52 51.2
comp=Z,2µm,22.0s
WVNY West Valley, N 106.03 335 IAMs_20 IAMs_20 20 53 58.7
comp=Z,2µm,20.0s
ERPA Erie 106.06 334 IAMs_20 IAMs_20 20 55 23.1
comp=Z,1µm,20.0s
M50A Fremont 106.07 331 IAMs_20 IAMs_20 20 51 02.8
comp=Z,2µm,22.0s
P43A Skaggs, Pawnee 106.09 326 IAMs_20 IAMs_20 20 55 04.2
comp=Z,2µm,21.0s
SFIN Lafayette 106.12 328 IAMs_20 IAMs_20 20 58 33.1
comp=Z,2µm,19.0s
N47A Urbana 106.23 329 IAMs_20 IAMs_20 20 54 08.0
comp=Z,1µm,20.0s
J59A Piesco 106.25 338 IAMs_20 IAMs_20 20 53 53.2
comp=Z,2µm,20.0s
O44A Mansfield 106.27 327 IAMs_20 IAMs_20 20 57 49.2
comp=Z,1µm,20.0s
J58A Remsen 106.29 338 IAMs_20 IAMs_20 20 49 45.4
comp=Z,2µm,22.0s
J57A Williamstown 106.48 337 IAMs_20 IAMs_20 20 53 26.3
comp=Z,1µm,21.0s
J56A Wolcott 106.52 337 IAMs_20 IAMs_20 20 51 16.3
comp=Z,2µm,22.0s
M48A Edgerton 106.55 330 IAMs_20 IAMs_20 20 52 19.5
comp=Z,1µm,22.0s
GGN Saint George 106.64 344 IAMs_20 IAMs_20 20 53 32.4
comp=Z,2µm,20.0s
NCB Newcomb 106.69 339 IAMs_20 IAMs_20 20 53 32.9
comp=Z,2µm,21.0s
TUC Tucson 106.70 306 IAMs_20 IAMs_20 20 57 35.8
comp=Z,1µm,20.0s
Y22D IRIS PASSCAL I 106.76 310 IAMs_20 IAMs_20 20 52 09.2
comp=Z,1µm,18.0s
J54A Appleton 106.87 335 IAMs_20 IAMs_20 20 53 38.9
comp=Z,2µm,20.0s
HDIL Hopedale 106.88 326 IAMs_20 IAMs_20 20 58 13.1
comp=Z,2µm,20.0s
AAM Ann Arbor 107.07 331 IAMs_20 IAMs_20 20 51 22.1
comp=Z,2µm,22.0s
PKME Peaks-Kenny Pk 107.13 343 IAMs_20 IAMs_20 20 50 28.5
comp=Z,2µm,20.0s
PECO Prince Edward 107.17 337 IAMs_20 IAMs_20 20 54 12.8
comp=Z,1µm,21.0s
K50A Casco 107.27 332 IAMs_20 IAMs_20 20 58 03.5
comp=Z,1µm,19.0s
M44A Midewin, Midew 107.31 328 IAMs_20 IAMs_20 20 53 47.7
comp=Z,1µm,22.0s
ANMO Albuquerque 107.36 311 IAMs_20 IAMs_20 20 47 34.1
comp=Z,1µm,22.0s
N41A Harden Midland 107.45 325 IAMs_20 IAMs_20 20 55 49.4
comp=Z,2µm,21.0s
F64A Sherman 107.58 343 IAMs_20 IAMs_20 20 52 03.4
comp=Z,2µm,21.0s
WDD Wied Dalam 107.68 48 IAMs_20 IAMs_20 20 55 57.3
comp=Z,2µm,20.0s
KSU1 Kansas State U 107.69 320 IAMs_20 IAMs_20 21 03 20.9
comp=Z,1µm,21.0s
DELO Deloro Mine 107.86 336 IAMs_20 IAMs_20 20 57 11.9
comp=Z,1µm,20.0s
L44A Lake County Fo 108.02 328 IAMs_20 IAMs_20 20 55 34.4
comp=Z,2µm,21.0s
J48A Bridge Port 108.04 331 IAMs_20 IAMs_20 20 52 19.9
comp=Z,2µm,22.0s
E63A Oxbow 108.14 343 IAMs_20 IAMs_20 20 52 22.1
comp=Z,2µm,21.0s
J47A Sumner 108.23 331 IAMs_20 IAMs_20 20 53 32.7
comp=Z,2µm,22.0s
PLVO Plevna 108.25 337 IAMs_20 IAMs_20 20 54 06.3
comp=Z,1µm,22.0s
X18A Snowflake 108.32 308 IAMs_20 IAMs_20 20 49 01.7
comp=Z,1µm,20.0s
PQI Presque Isle 108.33 344 IAMs_20 IAMs_20 20 52 25.1
comp=Z,2µm,21.0s
SADO Sadowa 108.41 335 PP PP 20 09 26.6 -0.8
comp=Z,7.0nm,1.0s,baz=221,slow=3.2,SNR=6.3
SADO Sadowa 108.41 335 IAMs_20 IAMs_20 20 53 15.5
comp=Z,2µm,22.0s
I49A Point Hope 108.42 332 IAMs_20 IAMs_20 20 56 49.0
comp=Z,1µm,20.0s
T25A Trinidad 108.56 314 IAMs_20 IAMs_20 20 55 30.9
comp=Z,948nm,18.0s
K43A Burlington 108.62 328 IAMs_20 IAMs_20 20 55 28.3
comp=Z,1µm,21.0s
W18A Petrified Fore 108.76 309 IAMs_20 IAMs_20 20 59 16.2
comp=Z,1µm,19.0s
J45A Montague 108.81 330 IAMs_20 IAMs_20 20 56 02.1
comp=Z,1µm,21.0s
X16A Lo Mia Camp, P 108.81 307 IAMs_20 IAMs_20 20 58 34.7
comp=Z,1µm,20.0s
D62A Allapoint, All 108.88 343 IAMs_20 IAMs_20 20 53 15.6
comp=Z,2µm,21.0s
I47A Gladwin 108.89 331 IAMs_20 IAMs_20 20 52 00.5
comp=Z,1µm,22.0s
CISI Cisompet, Garu 108.99 152 IAMs_20 IAMs_20 20 48 40.5
comp=Z,2µm,22.0s
SCIA State Center 109.23 324 IAMs_20 IAMs_20 21 02 25.6
comp=Z,1µm,19.0s
H48A Harrisville 109.26 332 IAMs_20 IAMs_20 20 55 08.1
comp=Z,2µm,21.0s
JFWS Jewell Farm 109.33 327 IAMs_20 IAMs_20 20 54 42.1
comp=Z,2µm,22.0s
I45A Fountain 109.33 330 IAMs_20 IAMs_20 20 54 09.0
comp=Z,2µm,22.0s
Y12C Blythe 109.47 304 IAMs_20 IAMs_20 20 58 44.2
comp=Z,1µm,22.0s
KSCO Kaye Shedlock' 109.60 316 IAMs_20 IAMs_20 21 01 00.6
comp=Z,1µm,20.0s
GLMI Grayling 109.68 331 IAMs_20 IAMs_20 20 57 56.2
comp=Z,1µm,20.0s
H43A Windswept, Lux 110.12 329 IAMs_20 IAMs_20 20 54 54.0
comp=Z,1µm,20.0s
MVCO Mesa Verde 110.12 311 IAMs_20 IAMs_20 20 50 24.4
comp=Z,1µm,22.0s
G45A Suttons Bay 110.13 331 IAMs_20 IAMs_20 20 59 40.2
comp=Z,1µm,20.0s
CEL Celeste 110.33 47 IAMs_20 IAMs_20 20 51 15.6
comp=Z,2µm,20.0s
D53A Lac Vacive, Po 110.33 337 IAMs_20 IAMs_20 20 55 06.4
comp=Z,2µm,20.0s
I40A Norwalk 110.34 327 IAMs_20 IAMs_20 20 56 49.7
comp=Z,1µm,21.0s
RAYN Ar Rayn 110.56 79 IAMs_20 IAMs_20 20 51 15.5
comp=Z,2µm,22.0s
E46A Sault Ste Mari 111.06 332 IAMs_20 IAMs_20 20 57 10.8
comp=Z,2µm,20.0s
F42A Maple Grove Fa 111.42 329 IAMs_20 IAMs_20 20 57 53.3
comp=Z,1µm,20.0s
TIP Timpagrande 111.46 48 ⇑P PKiKP 20 09 23.2 +15
TIP Timpagrande 111.46 48 IAMs_20 IAMs_20 20 54 16.4
comp=Z,2µm,20.0s
ITM Ithomi 111.67 52 IAMs_20 IAMs_20 20 50 18.1
comp=Z,1µm,20.0s
E44A Grand Marais A 111.68 331 IAMs_20 IAMs_20 20 55 35.1
comp=Z,2µm,20.0s
E43A Lone Tree Farm 111.71 330 IAMs_20 IAMs_20 20 57 41.4
comp=Z,1µm,20.0s
ECSD EROS Data Cent 111.91 322 IAMs_20 IAMs_20 20 59 32.6
comp=Z,1µm,22.0s
COWI Conover 111.99 329 IAMs_20 IAMs_20 20 55 23.5
comp=Z,2µm,22.0s
SPMN Marine on St. 112.17 326 IAMs_20 IAMs_20 20 56 37.2
comp=Z,1µm,22.0s
O20A White River Ci 112.60 312 IAMs_20 IAMs_20 20 52 33.9
comp=Z,1µm,20.0s
PMBI Palembang 112.67 147 IAMs_20 IAMs_20 20 50 45.3
comp=Z,1µm,21.0s
D41A Chassel 112.74 329 IAMs_20 IAMs_20 20 59 17.3
comp=Z,1µm,20.0s
DAC Darwin (Calif) 112.92 303 IAMs_20 IAMs_20 21 04 52.4
comp=Z,964nm,20.0s
E38A The Farm, Brul 113.10 327 IAMs_20 IAMs_20 20 56 44.8
comp=Z,2µm,22.0s
SUSD Miller 113.28 321 IAMs_20 IAMs_20 21 00 38.6
comp=Z,1µm,20.0s
AGG Agios Georgios 113.43 52 IAMs_20 IAMs_20 20 51 26.4
comp=Z,1µm,21.0s
PALK Pallekele 113.50 119 IAMs_20 IAMs_20 21 07 17.1
comp=Z,1µm,18.0s
KAPI Kappang 113.71 164 IAMs_20 IAMs_20 20 55 23.7
comp=Z,2µm,20.0s
RABL Rabaul 114.13 199 IAMs_20 IAMs_20 20 54 41.7
comp=Z,2µm,21.0s
EYMN Ely 114.32 328 IAMs_20 IAMs_20 20 58 28.0
comp=Z,1µm,20.0s
DUG Dugway, Tooele 114.37 309 IAMs_20 IAMs_20 21 02 45.9
comp=Z,1µm,20.0s
LIT Litokhoron 114.42 51 IAMs_20 IAMs_20 20 52 07.7

comp=Z,1µm,20.0s
CSS Mathiatis 114.53 62 IAMs_20 IAMs_20 20 56 26.4
comp=Z,1µm,20.0s
RSSD Black Hills 114.63 317 IAMs_20 IAMs_20 21 05 32.6
comp=Z,1µm,20.0s
BKNI Bangkinang 114.71 142 IAMs_20 IAMs_20 20 52 03.2
comp=Z,1µm,20.0s
NVAR Mina Array Bea 115.05 304 PKP PKPdf 20 09 15.4 +0.3
comp=Z,1.7nm,0.8s,baz=174,slow=2.6,SNR=9.6
NVAR PKKPbc PKKPbc 20 19 51.1 +1.7
comp=Z,0.9nm,0.7s,baz=321,slow=3.0,SNR=4.8
D32A Dogwood Acres, 115.12 324 IAMs_20 IAMs_20 20 58 03.3
comp=Z,2µm,22.0s
PDG Podgorica 115.22 48 IAMs_20 IAMs_20 20 57 38.9
comp=Z,2µm,18.0s
PD31 Pinedale Array 115.38 313 PKPdf 20 09 14.7 -0.9
PDAR Pinedale Array 115.38 313 PKP PKPdf 20 09 14.9 -0.6
comp=Z,1.4nm,0.5s,baz=133,slow=5.0,SNR=24
PDAR PKKPbc PKKPbc 20 19 48.9 +0.5
comp=Z,0.7nm,0.7s,baz=66,slow=2.4,SNR=5.6
PDAR Pinedale Array 115.38 313 PKPdf 20 09 14.7 -0.9
KVN Kaiserville 115.49 305 PKPdf 20 09 16.5 +0.6
KVN Kaiserville 115.49 305 PKIKP PKPdf 20 09 16.5 +0.6
KVN MLR MLR
comp=Z,600nm,20.0s
CMB Columbia Colle 115.58 302 PKPdf 20 09 15.4 -0.4
CMB Columbia Colle 115.58 302 PKIKP PKPdf 20 09 15.5 -0.4
CMB MLR MLR
comp=Z,700nm,21.0s
ISP Isparta 115.73 58 IAMs_20 IAMs_20 20 53 43.6
comp=Z,1µm,22.0s
ELK Elko 115.79 308 PKP PKPdf 20 09 16.7 +0.2
comp=Z,2.9nm,0.9s,baz=188,slow=2.0,SNR=10
AGMN Agassiz Nation 115.83 325 IAMs_20 IAMs_20 21 00 36.2
comp=Z,2µm,21.0s
AHID Auburn Hatcher 115.94 312 IAMs_20 IAMs_20 21 08 23.4
comp=Z,957nm,20.0s
SCHQ Schefferville 116.18 346 PKP PKPdf 20 09 15.2 -1.2
comp=Z,5.6nm,0.7s,baz=168,slow=1.7,SNR=12
DAVA Damuels 116.32 39 ePKPdf PKPdf 20 09 17.3 +0.1
comp=Z,1.1nm,0.2s
RUBR Rubicon Trail 116.34 303 IAMs_20 IAMs_20 21 06 20.0
comp=Z,1µm,21.0s
FETA Feichten 116.34 39 ePKPdf PKPdf 20 09 16.7 -0.5
comp=Z,0.9nm,0.6s
REDW Red Top Meadow 116.37 312 IAMs_20 IAMs_20 20 54 52.6
comp=Z,934nm,20.0s
MDND Maddock 116.53 322 IAMs_20 IAMs_20 21 01 18.7
comp=Z,2µm,21.0s
AFDM Forest Hills D 116.59 302 PKPdf 20 09 17.9 +0.1
MOOW Moose Ponds 116.66 312 IAMs_20 IAMs_20 21 03 40.4
comp=Z,961nm,20.0s
ABTA Abfaltersbach 116.67 41 ePKPdf PKPdf 20 09 16.9 -0.8
comp=Z,1.6nm,0.7s
SQTA Sankt Quirin 116.67 40 ePKPdf PKPdf 20 09 17.4 -0.4
comp=Z,2.2nm,0.5s
MOTA Moosalm 116.75 39 ePKPdf PKPdf 20 09 17.3 -0.7
comp=Z,1.2nm,0.4s
RETA Reutte 116.77 39 iPKPdf PKPdf 20 09 17.4 -0.4
comp=Z,0.7nm,0.3s
WTTA Wattenberg 116.85 40 iPKPdf PKPdf 20 09 17.8 -0.4
comp=Z,3.8nm,0.7s
VTS Vitosha 116.87 50 ⇓P PKPdf 20 09 18.0 -0.4
VTS Vitosha 116.87 50 ⇓PKIKP PKPdf 20 09 18.0 -0.4
MYKOM Kota Tinggi 116.92 145 IAMs_20 IAMs_20 21 04 53.9
comp=Z,1µm,19.0s
FLWY Flagg Ranch 116.93 313 PKPdf 20 09 18.7 +0.2
FLWY IAMs_20 IAMs_20 20 55 33.6
comp=Z,1µm,20.0s
UOSS Minazif 117.02 87 IAMs_20 IAMs_20 20 56 52.4
comp=Z,1µm,20.0s
BEKR Beckworth 117.11 303 PKPdf 20 09 18.5 -0.5
OBKA Obir 117.13 42 iPKPdf PKPdf 20 09 18.4 -0.2
comp=Z,0.4nm,0.2s
H17A Grant Village 117.16 313 IAMs_20 IAMs_20 20 55 35.5
comp=Z,2µm,20.0s
KBA Koelnbreinsper 117.23 41 ePKPdf PKPdf 20 09 17.7 -1.2
comp=Z,1.8nm,0.7s
LKWY Lake 117.24 313 IAMs_20 IAMs_20 21 08 06.7
comp=Z,2µm,19.0s
RLMT Red Lodge 117.32 314 IAMs_20 IAMs_20 21 08 12.7
comp=Z,1µm,19.0s
SOKA Soboth 117.44 42 iPKPdf PKPdf 20 09 18.1 -1.1
comp=Z,0.7nm,0.5s
BMRD Maredsous 117.53 34 PKPdf PKPdf 20 09 19.7 +0.6
ULM Lac du Bonnet 117.60 326 PKP PKPdf 20 09 17.7 -1.6
comp=Z,4.3nm,0.9s,baz=351,slow=3.1,SNR=7.3
ULM PKKPbc PKKPbc 20 19 40.0 -0.4
comp=Z,1.8nm,0.5s,baz=335,slow=5.5,SNR=6.3
ULM Lac du Bonnet 117.60 326 IAMs_20 IAMs_20 21 00 28.0
comp=Z,2µm,20.0s
LHMI Lhok Sumawe 117.99 136 IAMs_20 IAMs_20 21 02 32.6
comp=Z,1µm,20.0s
LUWI Luwuk 118.01 166 IAMs_20 IAMs_20 21 05 33.7
comp=Z,1µm,19.0s
PLVB Pleven 118.06 51 ⇓P PKPdf 20 09 20.0 -0.4
GAZ Gaziantep 118.10 64 IAMs_20 IAMs_20 20 55 14.7
comp=Z,1µm,22.0s
ARSA Arzberg 118.10 42 ePKPdf PKPdf 20 09 20.1 -0.3
comp=Z,1.2nm,0.4s
MOA Molln 118.21 41 ePKPdf PKPdf 20 09 19.9 -0.7
comp=Z,2.6nm,0.9s
KSM Kuching 118.29 152 IAMs_20 IAMs_20 20 54 22.0
comp=Z,2µm,22.0s
MFID Camas Ranch 118.29 309 IAMs_20 IAMs_20 21 05 24.6
comp=Z,980nm,21.0s
DGMT Dagmar 118.51 320 IAMs_20 IAMs_20 21 03 34.3
comp=Z,1µm,21.0s
IPM Ipoh 118.63 141 PKPdf 20 09 21.2 -1.3
IPM IAMs_20 IAMs_20 21 00 55.2
comp=Z,1µm,19.0s
BRTR Keskin Array B 118.65 60 PKP PKPdf 20 09 21.0 -0.9
comp=Z,3.6nm,0.8s,baz=193,slow=3.9,SNR=21
BRTR PP PP 20 10 37.5 -2.9
comp=Z,3.2nm,1.0s,baz=205,slow=5.5,SNR=3.9
BRTR PKKPbc PKKPbc 20 19 38.8 +2.2
comp=Z,0.5nm,0.8s,baz=72,slow=4.0,SNR=3.5
BRTR Keskin Array B 118.65 60 PKPdf 20 09 20.9 -0.9
BRTR Keskin Array B 118.65 60 PKIKP PKPdf 20 09 20.9 -0.9
BR131 Keskin Array S 118.66 60 PKPdf 20 09 21.1 -0.9
BR131 Keskin Array S 118.66 60 iPKIKP PKPdf 20 09 20.6 -1.3
CONA Conrad Observa 118.81 42 iPKPdf PKPdf 20 09 20.9 -0.9
comp=Z,1.5nm,0.6s
SIJI Sorong 118.82 176 PKP PKPdf 20 09 22.3 -0.6
comp=Z,9.4nm,0.6s,baz=21,slow=5.6,SNR=9.2
BZS Buzias 118.83 47 ⇓P PKPdf 20 09 20.4 -1.4
BZS Buzias 118.83 47 ⇓PKIKP PKPdf 20 09 20.4 -1.4
GERES GERESS Array B 118.90 40 PKP PKPdf 20 09 20.8 -1.2
comp=Z,3.7nm,0.8s,baz=204,slow=1.3,SNR=30
GERES SKP SKPdf 20 12 51.0 -6.0
comp=Z,5.5nm,1.1s,baz=222,slow=1.8,SNR=5.4
GERES PKKPbc PKKPbc 20 19 37.3 +1.5
comp=Z,0.3nm,0.5s,baz=336,slow=2.9,SNR=3.5
GERES GERESS Array B 118.90 40 PKPdf 20 09 20.3 -1.7
GERES GERESS Array B 118.90 40 PKIKP PKPdf 20 09 20.3 -1.7
GZR Gura Zlata 119.06 48 ⇓P PKPdf 20 09 21.8 -0.6
GZR Gura Zlata 119.06 48 ⇓PKIKP PKPdf 20 09 21.8 -0.6
KHC Kasperske Hory 119.11 40 ePKPDF PKPdf 20 09 21.4 -0.9
KHC Kasperske Hory 119.11 40 ePKIKP PKPdf 20 09 21.4 -0.9
KULM Kulim 119.27 140 IAMs_20 IAMs_20 21 02 55.3
comp=Z,1µm,20.0s
MODS Modra-Piesok 119.67 43 ePKIKP PKiKP 20 09 25.0 +1.6
MODS Modra-Piesok 119.67 43 ePKP PKiKP 20 09 25.0 +1.6
SBUM Sibu 119.67 154 IAMs_20 IAMs_20 20 58 21.5
comp=Z,1µm,21.0s
TREC Trest 119.87 41 ePKPDF PKPdf 20 09 23.6 -0.1
TREC Trest 119.87 41 ePKIKP PKPdf 20 09 23.6 -0.1
VOIR 119.95 50 ⇑P PKPdf 20 09 23.5 -0.6
VOIR 119.95 50 ⇑PKIKP PKPdf 20 09 23.5 -0.6
KRUC Moravsky 119.96 42 ePKP PKPdf 20 09 23.3 -0.6
KRUC ePP PP 20 10 49.2 +0.1
EGMT Eagleton 119.99 316 IAMs_20 IAMs_20 21 02 24.3
comp=Z,957nm,22.0s
PRU Pruhonice 120.16 40 ePKPDF PKPdf 20 09 23.9 -0.3
PRU ex x 20 09 43.0
PRU AMS AMS 20 54 40.0
comp=Z,2µm,23.1s
PRU Pruhonice 120.16 40 ePKIKP PKPdf 20 09 23.9 -0.3
PRU MLR MLR
comp=Z,2µm,23.1s
GOPC GO Pecny, Ondr 120.18 40 ePKPDF PKPdf 20 09 23.8 -0.5
GOPC GO Pecny, Ondr 120.18 40 ePKIKP PKPdf 20 09 23.8 -0.5
JAVC Velka Javorina 120.22 43 ePKP PKPdf 20 09 25.3 +0.8
JAVC ePP PP 20 10 52.2 +1.3
DRGR 120.23 48 ⇑P PKPdf 20 09 24.3 -0.3
DRGR 120.23 48 ⇑PKIKP PKPdf 20 09 24.3 -0.3

VRAC	Vranov	120.24	42	ePKP	PKPdf	20 09 24.0	-0.4
VRAC				ePP	PP	20 10 51.0	-0.1
VRAC	Vranov	120.24	42	⇑P	PKPdf	20 09 24.2	-0.2
VRAC	Vranov	120.24	42	⇑PKIKP	PKPdf	20 09 24.2	-0.2
VYHS	Vyhne	120.30	44	ePKIKP	PKPdf	20 09 24.0	-0.6
VYHS	Vyhne	120.30	44	ePKP	PKPdf	20 09 24.0	-0.6
MLR	Muntele Rosu	120.34	51	⇓P	PKPdf	20 09 24.1	-0.8
MLR	Muntele Rosu	120.34	51	⇓PKIKP	PKPdf	20 09 24.1	-0.8
MSO	Missoula	120.47	312	IAMs_20	IAMs_20	21 04 10.1	
	comp=Z,1µm,22.0s						
HUMO	Hull Mountain	120.47	303	IAMs_20	IAMs_20	21 08 04.3	
	comp=Z,1µm,22.0s						
DOPR	Dopca	120.53	50	⇑P	PKPdf	20 09 25.6	+0.5
PINE	Pine Mountain	120.63	305		PKPdf	20 09 26.1	+0.5
PVCC	Panska Ves	120.64	40	ePKPDF	PKPdf	20 09 25.1	0.0
PVCC	Panska Ves	120.64	40	ePKIKP	PKPdf	20 09 25.1	0.0
BRG	Berggiesshubel	120.74	39	ePKIKP	PKPdf	20 09 25.0	-0.3
BRG				pmax	pmax		
	comp=Z,13nm,1.1s						
CLL	Collm	120.83	38	i PKPdf	PKPdf	20 09 24.9	-0.5
	comp=Z,10.0nm,0.8s						
CLL				i		20 09 26.9	
CLL				e(sPKPdf)		20 09 38.0	
CLL				ePP		20 11 05.0	
CLL				ePS	PS	20 20 54.0	+8.7
CLL				ePPS	PPS	20 22 18.0	
CLL				eSS	SS	20 27 30.0	+4.1
CLL				Lm	MLR	20 57 00.0	
	comp=Z,2µm,19.3s						
CLL	Collm	120.83	38	i PKIKP	PKPdf	20 09 24.9	-0.5
CLL				e		20 09 38.0	
CLL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CLL				MLR	MLR		
	comp=Z,2µm,19.3s						
JURR	Jurilovca	120.88	53	⇑P	PKPdf	20 09 24.8	-0.9
PLOR	Plostina	120.91	51	⇑P	PKPdf	20 09 24.0	-1.9
PLOR	Plostina	120.91	51	⇑PKIKP	PKPdf	20 09 24.0	-1.9
VRI	Vrincioaia	120.96	51	⇑P	PKPdf	20 09 24.8	-1.1
VRI	Vrincioaia	120.96	51	⇑PKIKP	PKPdf	20 09 24.8	-1.1
MORC	Moravsky Berou	120.96	42	ePKP	PKPdf	20 09 25.7	-0.1
MORC				ePP	PP	20 10 56.4	+0.4
MORC	Moravsky Berou	120.96	42	⇑P	PKPdf	20 09 25.9	+0.1
MORC	Moravsky Berou	120.96	42	⇑PKIKP	PKPdf	20 09 25.9	+0.1
DPC	Dobruska-Polom	121.05	41	ePKPDF	PKPdf	20 09 25.8	-0.2
DPC	Dobruska-Polom	121.05	41	ePKIKP	PKPdf	20 09 25.8	-0.2
UPC	Upice	121.09	41	AMS	AMS	20 58 20.0	
	comp=Z,3µm,18.0s						
CHVC	Chvalec	121.17	41	ePKPDF	PKPdf	20 09 26.0	-0.2
CHVC				ex	x	20 09 42.8	
OSTC	Ostas	121.19	41	ePKPDF	PKPdf	20 09 26.3	+0.1
OSTC				AMS	AMS	20 58 40.0	
	comp=Z,3µm,17.2s						
OKC	Ostrava-Krasne	121.22	43	ePKPDF	PKPdf	20 09 26.3	+0.1
OKC				AMS	AMS	20 57 40.0	
	comp=Z,2µm,17.3s						
OKC	Ostrava-Krasne	121.22	43	ePKIKP	PKPdf	20 09 26.3	+0.1
OKC				MLR	MLR		
	comp=Z,2µm,17.3s						
TRPA	Tarpa	121.30	47	⇑P	PKPdf	20 09 26.3	-0.1
JTMT	Jette	121.36	312	IAMs_20	IAMs_20	21 05 15.8	
	comp=Z,1µm,21.0s						
TESR	Tescani	121.46	50	⇓P	PKPdf	20 09 26.1	-0.8
KSP	Ksiaz	121.47	41	eP	PKPdf	20 09 26.9	+0.2
KSP	Ksiaz	121.47	41	ePKIKP	PKPdf	20 09 26.9	+0.2
CRVS	Cervenica-Dubn	121.56	45	ePKIKP	PKPdf	20 09 26.5	-0.5
CRVS	Cervenica-Dubn	121.56	45	ePKP	PKPdf	20 09 26.5	-0.5
NIE	Niedzica	121.59	44	eP	PKPdf	20 09 26.2	-0.9
NIE	Niedzica	121.59	44	ePKIKP	PKPdf	20 09 26.2	-0.9
UZH	Uzhgorod	121.63	46c	i PKIKP	PKPdf	20 09 25.2	-1.9
UZH				e*PP	sPKPdf	20 09 42.0	+10
UZH				e		20 10 58.5	
G06A	Carlson Farm,	121.70	307	IAMs_20	IAMs_20	21 10 30.9	
	comp=Z,987nm,20.0s						
BURAR	Bucovina Array	121.84	49	⇑P	PKPdf	20 09 27.7	0.0
BURAR	Bucovina Array	121.84	49		PKPdf	20 09 27.2	-0.5
BURAR	Bucovina Array	121.84	49	⇑PKIKP	PKPdf	20 09 27.7	0.0
KOLS	Kolonicke sedl	121.88	46	ePKIKP	PKPdf	20 09 27.6	0.0
KOLS	Kolonicke sedl	121.88	46	ePKP	PKPdf	20 09 27.6	0.0
OJC	Ojcow	122.10	43	eP	PKPdf	20 09 27.5	-0.4
OJC	Ojcow	122.10	43		PKPdf	20 09 27.2	-0.7
OJC	Ojcow	122.10	43	PKIKP	PKPdf	20 09 27.2	-0.7
HAWA	Hanford	122.22	308	IAMs_20	IAMs_20	21 12 35.6	
	comp=Z,916nm,20.0s						
WALA	Waterton Lakes	122.33	314	IAMs_20	IAMs_20	21 03 00.4	
	comp=Z,2µm,22.0s						
PBA	Port Blair	122.40	129	IAMs_20	IAMs_20	20 57 39.7	
	comp=Z,1µm,20.0s						
D08A	Wollman Farm,	122.53	309	IAMs_20	IAMs_20	20 56 59.9	
	comp=Z,958nm,22.0s						
KWP	Kalwaria Pacla	122.62	46	eP	PKPdf	20 09 28.8	-0.2
KWP	Kalwaria Pacla	122.62	46	ePKIKP	PKPdf	20 09 28.8	-0.2
SEVA	Sevastopol	122.63	56	⇑P	PKPdf	20 09 28.6	-0.6
MILM	Milestii Mici	122.64	52	⇑P	PKPdf	20 09 28.2	-0.8
KIS	Kishinev	122.70	51	ePKP	PKPdf	20 09 28.0	-1.2
KIS				eL	L	20 49 00.0	
KIS				LRM	MLR	20 59 36.0	
	comp=Z,900nm,20.0s						
KIS	Kishinev	122.70	51	ePKIKP	PKPdf	20 09 28.0	-1.2
KIS				e		20 09 38.0	
KIS				e		20 11 07.0	
KIS				MLR	MLR		
	comp=Z,900nm,20.0s						
NEW	Newport	122.85	311	PKP	PKPdf	20 09 29.2	-0.4
	comp=Z,7.4nm,0.8s,baz=128,slow=4.0,SNR=17						
C09A	Chrisman Ranch	122.90	310	IAMs_20	IAMs_20	21 06 50.5	
	comp=Z,994nm,21.0s						
F04A	Amboy	122.99	306	IAMs_20	IAMs_20	21 07 45.9	
	comp=Z,830nm,19.0s						
KMPD	K-Podol'skiy	123.10	49	PKIKP	PKPdf	20 09 28.0	-1.9
SIM	Simferopol'	123.15	56c	ePKIKP	PKPdf	20 09 30.4	+0.3
SIM				pmax	pmax		
	comp=Z,26nm,0.9s						
LVV	L'vov	123.25	46	i PKIKP	PKPdf	20 09 28.3	-1.9
LVV				e		20 11 08.8	
LVV				e		20 16 36.3	
FFC	Flin Flon	123.30	325		PKPdf	20 09 29.3	-0.8
FFC	Flin Flon	123.30	325	IAMs_20	IAMs_20	21 05 57.8	
	comp=Z,1µm,20.0s						
FFC	Flin Flon	123.30	325	PKIKP	PKPdf	20 09 29.3	-0.8
FFC				MLR	MLR		
	comp=Z,2µm,20.0s						
F03A	Seaside	123.45	305	IAMs_20	IAMs_20	21 09 00.1	
	comp=Z,1µm,21.0s						
SORM	Soroca	123.46	50	⇑P	PKPdf	20 09 29.6	-1.0
SORM	Soroca	123.46	50	⇑PKIKP	PKPdf	20 09 29.6	-1.0
BCA	Borcka	123.55	64	⇓P	PKPdf	20 09 30.7	-0.4
BATM	Batumi	123.71	64	⇑P	PKPdf	20 09 31.1	-0.2
BATM	Batumi	123.71	64	PKIKP	PKPdf	20 09 31.1	-0.2
B08A	Colville Reser	123.76	310	IAMs_20	IAMs_20	21 06 29.4	
	comp=Z,1µm,21.0s						
GKP	Gorka Klasztor	123.84	40	eP	PKPdf	20 09 29.7	-1.4
GKP	Gorka Klasztor	123.84	40	ePKIKP	PKPdf	20 09 29.7	-1.4
GNI	Garni	123.93	67		PKPdf	20 09 31.7	-0.3
GNI	Garni	123.93	67	i PKIKP	PKPdf	20 09 31.3	-0.7
GNI				pmax	pmax		
	comp=Z,26nm,1.0s						
E03A	Lebam	123.95	305	IAMs_20	IAMs_20	21 09 06.8	
	comp=Z,950nm,20.0s						
AKH	Akhalkalaki	124.37	66	IAMs_20	IAMs_20	21 00 14.7	
	comp=Z,913nm,21.0s						
SOC	Sochi	124.43	61	i PKIKP	PKPdf	20 09 32.7	+0.1
SOC				e		20 11 20.1	
SOC				ePPP	PPP	20 14 00.1	
SOC				e		20 16 31.9	
SOC				ePS	PS	20 21 11.4	-6.0
SOC				eSSS	SSS	20 32 50.5	
SOC				pmax	pmax		
	comp=Z,13nm,0.6s						
B06A	Marblemount	124.72	308	IAMs_20	IAMs_20	21 07 46.8	
	comp=Z,989nm,20.0s						
NLWA	Neilton Lookou	124.76	306	IAMs_20	IAMs_20	21 13 31.7	
	comp=Z,855nm,20.0s						
FCC	Fort Churchill	124.79	332		PKPdf	20 09 31.2	-1.6
FCC	Fort Churchill	124.79	332	PKIKP	PKPdf	20 09 31.2	-1.6
FRB	Frobisher Bay	125.09	348	PKP	PKPdf	20 09 32.3	-0.9
	comp=Z,22nm,0.7s,baz=125,slow=3.8,SNR=41						
NEY	Neytrino	125.48	64	i PKIKP	PKPdf	20 09 35.0	+0.1
KIEV	Kiev	125.87	49	PKIKP	PKPdf	20 09 34.0	-1.1
AKASG	Malin Array Be	125.88	49	PKP	PKPdf	20 09 33.7	-1.4
	comp=Z,9.9nm,0.7s,baz=246,slow=1.4,SNR=53						
AKASG				PP	PP	20 11 26.8	-2.3
	comp=Z,7.9nm,1.0s,baz=222,slow=6.3,SNR=12						
AKASG				SKPbc	SKPbc	20 12 44.7	
	comp=Z,2.3nm,0.7s,baz=222,slow=3.3,SNR=5.1						
AKASG	Malin Array Be	125.88	49		PKPdf	20 09 33.8	-1.3
KBZ	Khabaz	125.94	64	PKP	PKPdf	20 09 33.8	-1.7
	comp=Z,5.6nm,0.8s,baz=207,slow=5.0,SNR=11						
KBZ				PP	PP	20 11 28.7	-0.8
	comp=Z,7.5nm,0.9s,baz=287,slow=3.5,SNR=3.8						
KIV	Kislovodsk	126.03	63		PKPdf	20 09 34.9	-0.9
KIV	Kislovodsk	126.03	63	i PKIKP	PKPdf	20 09 35.6	-0.2
KIV				e		20 11 30.4	
KIV				ePS	PS	20 21 32.8	+1.1
KIV				eSS	SS	20 28 34.2	+2.0
KIV				pmax	pmax		
	comp=Z,46nm,1.1s						
NCK	Nalchik	126.07	64	i PKIKP	PKPdf	20 09 35.0	-0.8
AKT	Akhty	126.36	69	ePKIKP	PKPdf	20 09 36.9	+0.3
AKT				e		20 11 34.3	
AKT				pmax	pmax		
	comp=Z,43nm,1.0s						
SUW	Suwalki	126.42	43	eP	PKPdf	20 09 34.9	-1.2
SUW	Suwalki	126.42	43	ePKIKP	PKPdf	20 09 34.9	-1.2
LLLB	Lillooet	126.56	310	IAMs_20	IAMs_20	21 11 05.4	
	comp=Z,932nm,21.0s						
GROC	Groznyy	126.83	66	i PKIKP	PKPdf	20 09 36.4	-0.8
GROC				e		20 11 34.4	
GROC				e		20 16 48.2	
GROC				pmax	pmax		
	comp=Z,43nm,1.2s						
SFJD	Kangerlussuaq	127.18	357	PKP	PKPdf	20 09 36.9	-0.2
	comp=Z,8.3nm,0.8s,baz=156,slow=4.1,SNR=4.6						
SFJD	Kangerlussuaq	127.18	357		PKPdf	20 09 36.7	-0.4
SFJD	Kangerlussuaq	127.18	357	PKIKP	PKPdf	20 09 36.7	-0.4
MAK	Makhachkala	127.42	67	i PKIKP	PKiKP	20 09 40.5	+1.6
MAK				e		20 11 40.1	
MAK				pmax	pmax		
	comp=Z,539nm,1.5s						
PBUR	Paburge	127.65	41	eP	PKPdf	20 09 34.2	-4.1
DLV	T Lat	127.89	147	IAMs_20	IAMs_20	21 01 06.8	
	comp=Z,1µm,22.0s						
PABE	Paberze	127.90	42	eP	PKPdf	20 09 37.9	-0.9
NACGM	Naroch	128.38	45	e	PKPdf	20 09 38.0	-1.8
NACGM				eLQ	LQ	20 53 08.0	
NACGM				eLR	LR	20 56 05.0	
MICGM	Minsk	128.44	45	eP	PKPdf	20 09 39.0	-0.9
MICGM				eLR	LR	20 53 10.0	
MNK	Minsk	128.44	45	ePKIKP	PKPdf	20 09 39.0	-0.9
GEYT	Alibeck	128.52	79	PKP	PKPdf	20 09 40.0	-0.7
	comp=Z,6.0nm,0.9s,baz=235,slow=5.2,SNR=14						
GEYT				SKPbc	SKPbc	20 12 55.5	
	comp=Z,14nm,1.2s,baz=256,slow=6.0,SNR=7.1						
GEYT	Alibeck	128.52	79		PKPdf	20 09 40.0	-0.7
GYA0B	ALIBECK ARRAY	128.52	79	IAMs_20	IAMs_20	21 05 24.2	
	comp=Z,1µm,20.0s						
IIGN	Ignalina	128.54	44	eP	PKPdf	20 09 39.8	-0.3
IIGN				IAmb	IAmb	20 09 41.2	
	comp=Z,17nm,1.1s						
ASHT	Ashkhabad	128.66	80	IAMs_20	IAMs_20	21 05 56.9	
	comp=Z,1µm,19.0s						
ISAL	Salakas	128.69	44	eP	PKPdf	20 09 39.4	-1.0
ISAL				IAmb	IAmb	20 09 41.5	
	comp=Z,23nm,1.2s						
NB2	NORSAR Subarra	128.71	31	PKPdf	PKPdf	20 09 39.8	-0.5
	comp=Z,60nm,1.7s,baz=202,slow=1.9						
NB2	NORSAR Subarra	128.71	31	PKPdf	PKPdf	20 09 39.8	-0.5
	baz=202,slow=1.9						
NOA	NORSAR Array B	128.71	31	PKP	PKPdf	20 09 39.5	-0.8
	comp=Z,7.0nm,0.9s,baz=224,slow=2.6,SNR=13						
NOA				SKPbc	SKPbc	20 12 54.7	
	comp=Z,3.8nm,0.8s,baz=210,slow=3.9,SNR=9.0						
NB201	NORSAR Array S	128.74	31		PKPdf	20 09 39.9	-0.5
IZAR	Zarasai	128.87	44	eP	PKPdf	20 09 39.4	-1.3
PBKT	Sadao Pong	129.93	136		PKPdf	20 09 42.3	-1.7
PBKT				IAMs_20	IAMs_20	21 04 39.0	
	comp=Z,993nm,21.0s						
VORD	Divnogorie	130.04	55	ePKIKP	PKPdf	20 09 42.0	-1.1
VORD				e		20 11 54.4	
VORD				pmax	pmax		
	comp=Z,30nm,1.0s						
VSR	Storozhevoye	130.18	55	ePKIKP	PKPdf	20 09 42.1	-1.2
VSR				e		20 11 55.3	
VSR				pmax	pmax		
	comp=Z,40nm,0.8s						
BBB	Bella Bella	130.23	307	IAMs_20	IAMs_20	21 14 49.4	
	comp=Z,1µm,20.0s						
VORR	Voronezh	130.54	55	ePKIKP	PKPdf	20 09 43.0	-1.0
VORR				pmax	pmax		
	comp=Z,250nm,1.2s						
CM31	Chiang Mai Arr	130.96	133		PKPdf	20 09 44.6	-1.3
CMAR	Chiang Mai Arr	130.96	133	PKP	PKPdf	20 09 45.0	-0.8
	comp=Z,6.6nm,0.8s,baz=221,slow=3.7,SNR=40						
CMAR				SKPbc	SKPbc	20 13 03.6	-6.3
	comp=Z,5.6nm,1.0s,baz=220,slow=3.2,SNR=9.3						
CMAR				PKKP	PKKPdf	20 19 46.1	+4.3
	comp=Z,0.3nm,0.7s,baz=349,slow=2.0,SNR=4.1						
VSU	Vasula	131.18	42	eP	PKPdf	20 09 44.4	-0.6
VSU				IAmb	IAmb	20 09 45.5	
	comp=Z,153nm,1.1s						
VRH	Novokhopyorsk	131.21	57	ePKIKP	PKPdf	20 09 44.2	-1.1
VRH				e		20 12 01.0	
VRH				pmax	pmax		
	comp=Z,80nm,1.5s						
CHTO	Chiang Mai	131.28	133		PKPdf	20 09 45.6	-0.9
CHTO	Chiang Mai	131.28	133	IAMs_20	IAMs_20	21 00 21.9	
	comp=Z,905nm,22.0s						
CHTO	Chiang Mai	131.28	133	PKIKP	PKPdf	20 09 45.6	-0.9
CHTO				MLR	MLR		
	comp=Z,900nm,22.0s						
OBN	Obninsk	132.11	50	PKP	PKPdf	20 09 46.0	-0.9
	comp=Z,4.0nm,0.6s,baz=80,slow=1.2,SNR=13						
OBN				SKPbc	SKPbc	20 13 07.0	-5.8
	comp=Z,5.5nm,0.7s,baz=188,slow=4.9,SNR=6.2						
OBN	Obninsk	132.11	50		PKPdf	20 09 46.4	-0.4
OBN	Obninsk	132.11	50c	i PKIKP	PKPdf	20 09 45.0	-1.8
OBN				e		20 09 55.5	
OBN				i		20 09 58.9	
OBN						20 16 49.0	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,1µm,17.0s						
MOBC	Moresby Island	132.50	305	IAMs_20	IAMs_20	21 14 35.5	
	comp=Z,977nm,20.0s						
NIL	Nilore	132.60	96		PKPdf	20 09 48.2	-0.4
NIL	Nilore	132.60	96	PKIKP	PKPdf	20 09 48.2	-0.4
NIL				MLR	MLR		
	comp=Z,600nm,19.0s						
DIB	Dawson Inlet,	132.75	305	IAMs_20	IAMs_20	21 19 55.0	
	comp=Z,1µm,20.0s						
SUMG	Summit	132.81	3	i P	PKPdf	20 09 47.7	-0.5
SUMG	Summit	132.81	3		PKPdf	20 09 47.1	-1.1
SUMG	Summit	132.81	3	PKIKP	PKPdf	20 09 47.1	-1.1
MOS	Moscow	132.97	50	i PKIKP	PKPdf	20 09 46.4	-2.1
MOS				e		20 12 12.1	
MOS				pmax	pmax		
	comp=Z,73nm,1.6s						
FINES	FINESS Array B	133.27	39	PKhKP	PKPpre	20 09 32.0	
	comp=Z,3.1nm,0.9s,baz=186,slow=1.9,SNR=5.6						
FINES				PKP	PKPdf	20 09 47.7	-1.2
	comp=Z,9.4nm,0.7s,baz=111,slow=4.7,SNR=4.1						
FINES				SKPbc	SKPbc	20 13 11.0	-5.6
	comp=Z,21nm,0.6s,baz=222,slow=2.4,SNR=36						
FINES	FINESS Array B	133.27	39		PKPdf	20 09 47.9	-1.0
FIA1	FINESS Array S	133.28	39		PKPdf	20 09 48.3	-0.5
YKA	Yellowknife Ar	133.43	323	PKhKP	PKPpre	20 09 34.4	
	comp=Z,0.8nm,0.6s,baz=133,slow=2.9,SNR=9.8						
YKA				PKP	PKPdf	20 09 48.8	-0.3
	comp=Z,6.6nm,0.6s,baz=146,slow=2.1,SNR=38						
YKA				PP	PP	20 12 16.8	-1.4
	comp=Z,3.1nm,1.0s,baz=134,slow=5.1,SNR=4.4						
SHL	Shillong	134.55	121		PKPdf	20 09 52.1	-0.6
SHL				IAMs_20	IAMs_20	21 12 12.5	
	comp=Z,1µm,18.0s						
SHL	Shillong	134.55	121	PKIKP	PKPdf	20 09 52.1	-0.6
SHL				MLR	MLR		
	comp=Z,1µm,18.0s						
KULLO	Kullorsuaq	134.97	356	i P	PKPdf	20 09 50.9	-0.8
	comp=Z,28nm,0.8s						
KULLO	Kullorsuaq	134.97	356	i PKIKP	PKPdf	20 09 50.9	-0.8
KULLO				pmax	pmax		
	comp=Z,28nm,0.8s						
QIZ	Qiongzhong	135.02	146	PKP	PKPdf	20 09 54.5	+1.0
QIZ				PP	PP	20 12 28.7	+0.7
QIZ				SS	SS	20 30 25.1	+3.8
QIZ				LR	LR		
	comp=Z,810nm,23.5s						
QIZ				LR	LR		
	comp=Z,640nm,19.6s						
QIZ				LR	LR		
	comp=Z,1µm,23.0s						
QIZ	Qiongzhong	135.02	146	IAMs_20	IAMs_20	21 02 22.5	
	comp=Z,1µm,22.0s						
WRAK	Wrangell Islan	135.03	308	IAMs_20	IAMs_20	21 16 05.5	
	comp=Z,1µm,20.0s						
SLVN	Son La	135.35	137	IAMs_20	IAMs_20	21 05 04.4	
	comp=Z,1µm,22.0s						
DLBC	Dease Lake	135.59	312	PKP	PKPdf	20 09 53.8	+0.4
	comp=Z,6.9nm,0.8s,baz=167,slow=4.1,SNR=4.1						
SARN	Sarigan	135.60	195	IAMs_20	IAMs_20	21 06 17.4	
	comp=Z,1µm,22.0s						
SIT	Sitka	136.65	307	IAMs_20	IAMs_20	21 12 16.3	
	comp=Z,991nm,22.0s						
KLMR	Klimovskoe	137.34	46	ePKPdf	PKPdf	20 09 53.9	-2.6
KLMR				AMP		20 09 59.5	
	comp=Z,58nm,1.7s						
KLMR				ePP	PP	20 12 40.8	-2.0
KLMR				LR	LR	20 58 09.2	
KLMR				AMP		21 05 41.8	
	comp=Z,2µm,24.6s						
KLMR	Klimovskoe	137.34	46	ePKIKP	PKPdf	20 09 53.8	-2.7
KLMR				e		20 12 40.7	
KLMR				pmax	pmax		
	comp=Z,58nm,1.7s						
AKTO	Aktyubinsk	137.80	68	PKhKP	PKPpre	20 09 46.5	
	comp=Z,4.7nm,0.9s,baz=11,slow=2.2,SNR=6.0						
AKTO				PKP	PKPdf	20 09 58.2	+0.5
	comp=Z,8.9nm,0.9s,baz=122,slow=1.6,SNR=11						
LSA	Lhasa	137.82	117	P	PKPdf	20 09 48.4	-11
ABKAR	Akbulak array	137.87	70		PKPdf	20 09 58.4	+0.5
DAG	Danmarks Havn	137.97	9	i P	PKPdf	20 09 56.3	-0.9
	comp=Z,13nm,0.8s						
DAG	Danmarks Havn	137.97	9	i PKIKP	PKPdf	20 09 56.3	-0.9
DAG				pmax	pmax		
	comp=Z,13nm,0.8s						
SKAG	Skagway	138.29	310	IAMs_20	IAMs_20	21 15 15.5	
	comp=Z,1µm,22.0s						
KMI	Kunming	138.44	134	PKP	PKPdf	20 09 59.5	-0.5
KMI				sPKP		20 10 09.3	
KMI				PP	PP	20 12 56.0	+6.2
KMI				SKKS		20 19 43.3	
KMI				SS	SS	20 30 59.4	-3.4
KMI				LR	LR		
	comp=Z,830nm,23.0s						
KMI				LR	LR		
	comp=Z,330nm,20.8s						
KMI				LR	LR		
	comp=Z,1µm,23.8s						
KMI	Kunming	138.44	134	IAMs_20	IAMs_20	21 08 34.4	
	comp=Z,1µm,22.0s						
ARSB	Arslanbob	138.45	89		PKPdf	20 09 57.9	-1.5
ARSB				IAMs_20	IAMs_20	21 06 16.9	
	comp=Z,1µm,21.0s						
ARSB	Arslanbob	138.45	89	PKIKP	PKPdf	20 09 57.9	-1.5
ARSB				MLR	MLR		
	comp=Z,1µm,21.0s						
KKAR	Karatay Array	138.55	85		PKPpre	20 09 49.4	
KKAR	Karatay Array	138.55	85	PKHKP	PKPpre	20 09 49.4	
KSH	Kashi	138.56	93	PKP	PKPdf	20 09 49.6	-10
KSH				sPKP		20 10 06.2	
KSH				PP	PP	20 12 52.6	+1.8
KSH				PKS		20 13 24.6	
KSH				SKS	SKSdf	20 17 00.6	-9.3
KSH				SKKS		20 18 29.5	
RES	Resolute Bay	138.73	342	PKhKP	PKPpre	20 09 48.2	
	comp=Z,3.2nm,1.0s,baz=163,slow=3.8,SNR=8.7						
RES	Resolute Bay	138.73	342		PKPdf	20 09 58.2	-0.4
RES	Resolute Bay	138.73	342	PKIKP	PKPdf	20 09 58.2	-0.4
RES				MLR	MLR		
	comp=Z,2µm,22.0s						
WHY	Whitehorse	138.92	311		PKPdf	20 09 59.3	-0.2
WHY				IAMs_20	IAMs_20	21 16 45.1	
	comp=Z,1µm,21.0s						
TMCR	Tamitsa	139.06	42	ePKIKP	PKPdf	20 09 59.5	0.0
TMCR				pmax	pmax		
	comp=Z,33nm,1.3s						
ARCES	ARCESS Array B	139.07	30	PKhKP	PKPpre	20 09 48.7	
	comp=Z,7.2nm,0.6s,baz=219,slow=2.2,SNR=27						
ARCES				SKPbc	SKPbc	20 13 28.0	-6.2
	comp=Z,20nm,1.0s,baz=197,slow=2.5,SNR=7.0						
ARCES	ARCESS Array B	139.07	30		PKPdf	20 09 58.8	-0.7
ARCES	ARCESS Array B	139.07	30	PKIKP	PKPdf	20 09 58.8	-0.7
DHAK	Deception Hill	139.16	308	IAMs_20	IAMs_20	21 18 30.6	
	comp=Z,1µm,21.0s						
HKPS	Hong Kong Po S	139.25	150	IAMs_20	IAMs_20	21 08 10.7	
	comp=Z,964nm,21.0s						
KIRV	Kirov	139.57	54	PKhKP	PKPpre	20 09 51.2	
	comp=Z,4.8nm,0.6s,baz=23,slow=4.4,SNR=4.1						
APA	Apatity	139.87	36⇓	i PKHKP	PKPpre	20 09 51.2	
APA				pmax	pmax		
	comp=Z,12nm,0.8s						
HYT	Haines Junctio	140.01	310	IAMs_20	IAMs_20	21 17 19.9	
	comp=Z,1µm,21.0s						
NRN	Naryn	140.03	91		PKPdf	20 10 00.7	-1.8
NRN				IAMs_20	IAMs_20	21 14 58.1	
	comp=Z,818nm,20.0s						
NRN	Naryn	140.03	91	PKIKP	PKPdf	20 10 00.7	-1.8
NRN				MLR	MLR		
	comp=Z,800nm,20.0s						
PRGR	Permogore	140.07	48	ePKHKP	PKPpre	20 09 52.2	
PRGR				pmax	pmax		
	comp=Z,21nm,1.0s						
AAK	Ala-Archa	140.18	89		PKPdf	20 09 59.5	-3.0
AAK	Ala-Archa	140.18	89	PKIKP	PKPdf	20 09 59.5	-3.0
FRU1	Bishkek	140.38	88	IAMs_20	IAMs_20	21 23 35.9	
	comp=Z,704nm,21.0s						
GYA	Guiyang	141.03	138	PKP	PKPdf	20 09 58.4	-6.1
GYA				PP	PP	20 12 44.3	-21
GYA				SKKS		20 19 33.2	
C36M	Paulatuk	141.03	326		PKPpre	20 09 56.8	
CTGM	Chitina Glacie	141.56	309	IAMs_20	IAMs_20	21 17 20.1	
	comp=Z,1µm,21.0s						
ARU	Arti	142.01	61	PKhKP	PKPpre	20 09 58.7	
	comp=Z,3.2nm,0.6s,baz=244,slow=2.4,SNR=24						
ARU	Arti	142.01	61		PKPdf	20 10 06.5	+1.4
ARU	Arti	142.01	61	i PKHKP	PKPpre	20 09 59.2	
ARU				MLR	MLR		
	comp=Z,1µm,22.0s						
VRDI	Verde Repeater	142.54	308	IAMs_20	IAMs_20	21 16 26.0	
	comp=Z,1µm,22.0s						
NOR	Nord	142.64	7	i P	PKPdf	20 10 01.4	-4.2
	comp=Z,9.9nm,1.0s						
NOR	Nord	142.64	7	i PKIKP	PKPdf	20 10 01.4	-4.2
NOR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GLB	Gilahina Butte	142.81	308	IAMs_20	IAMs_20	21 17 51.0	
	comp=Z,1µm,22.0s						
EPYK	Eagle Plains	143.08	318	IAMs_20	IAMs_20	21 17 13.8	
	comp=Z,1µm,21.0s						
INK	Inuvik	143.15	322	PKhKP	PKPpre	20 10 02.5	
	comp=Z,24nm,0.9s,baz=85,slow=4.3,SNR=28						
INK				SKPbc	SKPbc	20 13 40.6	-4.0
	comp=Z,22nm,1.0s,baz=115,slow=4.9,SNR=6.5						
SVE	Sverdlovsk	143.16	62	i PKIKP	PKPab	20 10 03.5	+0.7
SVE				pmax	pmax		
	comp=Z,73nm,1.5s						
SVE				MLR	MLR		
	comp=Z,1µm,18.0s						
GLI	Glacier Island	143.78	306	IAMs_20	IAMs_20	21 18 12.9	
	comp=Z,1µm,20.0s						
CD2	Chengdu	144.06	131	PKP	PKPab	20 10 07.0	-0.2
CD2				sPKP		20 10 16.8	
CD2				SKS	SKSdf	20 17 18.4	-0.6
CD2				SKKS	SKKSac	20 20 19.6	+3.2
CD2				AMB	AMB		
	comp=Z,330nm,5.5s						
CD2				LR	LR		
	comp=Z,860nm,15.7s						
CD2				LR	LR		
	comp=Z,720nm,21.4s						
CD2				LR	LR		
	comp=Z,1µm,21.4s						
KDAK	Kodiak Island	144.29	299	PKP	PKPab	20 10 07.8	+0.7
	comp=Z,12nm,0.8s,baz=210,slow=2.6,SNR=7.2						
KDAK				SKPbc	SKPbc	20 13 44.3	-3.4
	comp=Z,22nm,0.7s,baz=152,slow=2.4,SNR=8.4						
KDAK	Kodiak Island	144.29	299		PKPab	20 10 08.1	+0.9
SML	Sawmill	144.80	307	IAMs_20	IAMs_20	21 20 52.7	
	comp=Z,1000nm,20.0s						
PMR	Palmer	145.00	306	IAMs_20	IAMs_20	21 21 17.0	
	comp=Z,1µm,20.0s						
BRVK	Borovoye	145.26	73		PKPbc	20 10 10.3	-0.4
BRVK	Borovoye	145.26	73	PKIKP	PKPbc	20 10 10.3	-0.4

ENH Enshi 145.48 139 PKPdf 20 10 10.8 -1.3
ENH IAMs_20 IAMs_20 21 08 59.8
comp=Z,1μm,22.0s
ILAR Eielson Array 145.80 312 PKPbc PKPdf 20 10 11.8 +0.3
comp=Z,86nm,1.0s,baz=329,slow=1.4,SNR=246
ILAR SKPbc SKPbc 20 13 47.0 -4.0
comp=Z,7.3nm,0.8s,baz=160,slow=1.9,SNR=4.6
CCB Clear Creek Bu 146.08 311 IAMs_20 IAMs_20 21 18 11.4
comp=Z,1μm,21.0s
JOW Kunigami 146.13 170 PKPbc PKPdf 20 10 13.8 +0.5
comp=Z,2.2nm,0.6s,baz=148,slow=13,SNR=6.1
COLA College 146.21 311 PKPdf 20 10 13.3 +1.2
COLA College 146.21 311 PKP2 PKPdf 20 10 13.4 +1.2
COLA MLR MLR
comp=Z,1μm,20.0s
BMAR Burnt Mountain 146.28 317 PKPdf 20 10 11.1 -1.2
MDM Murphy Dome 146.39 311 IAMs_20 IAMs_20 21 22 57.7
comp=Z,1μm,22.0s
NEA Nenana 146.52 311 IAMs_20 IAMs_20 21 19 33.3
comp=Z,1μm,22.0s
MAKZ Makanchi 146.88 90 PKPdf 20 10 12.8 -1.2
MAKZ Makanchi 146.88 90 PKIKP PKPdf 20 10 12.8 -1.2
BPAW Bear Paw Mtn. 147.02 309 PKPdf 20 10 15.4 +1.8
BPAW IAMs_20 IAMs_20 21 20 32.3
comp=Z,1μm,21.0s
MKAR Makanchi Array 147.03 90 PKPbc PKPdf 20 10 16.0 +1.8
comp=Z,30nm,0.7s,baz=243,slow=2.6,SNR=264
MKAR Makanchi Array 147.03 90 PKPdf 20 10 12.5 -1.7
MKAR Makanchi Array 147.03 90 PKIKP PKPdf 20 10 12.5 -1.7
WHN Wuhan 147.18 146 PKPbc PKPdf 20 10 16.1 +1.2
WHN PKPab sPKPab 20 10 26.9 +3.7
WHN LR LR
comp=Z,2μm,22.9s
WMQ Urumqi 147.58 99 PKPbc PKPbc 20 10 18.4 +0.5
WMQ LR LR
comp=Z,580nm,29.1s
WMQ LR LR
comp=Z,800nm,29.2s
WMQ LR LR
comp=Z,550nm,22.9s
WMQ Urumqi 147.58 99 PKPbc 20 10 18.5 +0.5
WMQ Urumqi 147.58 99 PKP2 PKPbc 20 10 18.5 +0.5
KURK Kurchatov 147.82 82 PKPdf 20 10 14.1 -1.2
KURK PKPbc PKPbc 20 10 18.3 0.0
KURK Kurchatov 147.82 82 IAMs_20 IAMs_20 21 13 21.9
comp=Z,1μm,20.0s
KURK Kurchatov 147.82 82 PKP2 PKPbc 20 10 18.3 0.0
KURK MLR MLR
comp=Z,1μm,20.0s
COLD Coldfoot 148.14 315 PKPbc 20 10 19.8 +1.1
TTA Tatalina 148.46 305 PKPbc PKPbc 20 10 19.9 +0.2
TTA Tatalina 148.46 305 PKP2 PKPbc 20 10 19.9 +0.2
LZH Lanzhou 148.68 127 ⇑PKPbc PKPbc 20 10 21.2 0.0
LZH pPKP sPKPab 20 10 30.6 +1.3
LZH LR LR
comp=Z,740nm,19.5s
LZH LR LR
comp=Z,550nm,17.4s
LZH LR LR
comp=Z,1μm,20.1s
XAN Xi'an 148.74 136 PKPbc PKPdf 20 10 20.3 +2.8
XAN PKPab sPKPab 20 10 30.6 +1.1
XAN SS SS 20 33 02.6 +1.6
XAN LR LR
comp=Z,440nm,17.3s
XAN LR LR
comp=Z,550nm,16.3s
XAN LR LR
comp=Z,830nm,21.7s
XAN Xi'an 148.74 136 PKPdf 20 10 20.3 +2.8
XAN Xi'an 148.74 136 IAMs_20 IAMs_20 21 22 48.0
comp=Z,904nm,20.0s
XAN Xi'an 148.74 136 PKP2 PKPdf 20 10 20.3 +2.8
XAN MLR MLR
comp=Z,900nm,20.0s
SSE Sheshan 149.32 157 PKPbc 20 10 22.3 -0.5
NJ2 Nanjing 149.75 153 ePKPbc PKPbc 20 10 23.0 -0.8
NJ2 PKPab pPKPab 20 10 32.9 +0.5
NJ2 PP PP 20 14 05.9 +8.8
NJ2 AMB AMB
comp=Z,470nm,5.7s
NJ2 LR LR
comp=Z,890nm,17.3s
NJ2 LR LR
comp=Z,860nm,14.2s
NJ2 LR LR
comp=Z,950nm,16.8s
GTA Gaotai 149.81 118 PKPbc PKPbc 20 10 23.5 -0.4
GTA SS SS 20 33 14.8 +1.2
GTA LR LR
comp=Z,650nm,21.3s
GTA LR LR
comp=Z,430nm,23.7s
GTA LR LR
comp=Z,990nm,21.0s
ZAA0 Zalesovo Array 152.80 81 PKPdf 20 10 20.4 -2.6
ZALV Zalesovo Beam 152.80 81 PKP PKPdf 20 10 20.1 -2.9
comp=Z,1.2nm,0.8s,baz=193,slow=5.9,SNR=8.5
ZALV PKPab sPKPdf 20 10 28.9 +1.4
comp=Z,9.7nm,0.8s,baz=244,slow=4.1,SNR=34
ZALV Zalesovo Beam 152.80 81 PKPdf 20 10 20.4 -2.6
ZALV sPKPdf 20 10 29.2 +1.7
ZALV Zalesovo Beam 152.80 81 PKIKP PKPdf 20 10 20.4 -2.6
ZALV 20 10 29.2
RDOG Red Dog Mine 152.99 313 PKPbc 20 10 30.2 0.0
TIY Taiyuan 153.26 138 ePKPbc PKPbc 20 10 31.2 -0.6
TIY AMB AMB
comp=Z,300nm,6.4s
TIY LR LR
comp=Z,250nm,5.7s
TIY LR LR
comp=Z,320nm,6.6s
TIY LR LR
comp=Z,1μm,25.6s
TIA Tai'an 153.28 147 PKPbc PKPbc 20 10 31.2 -0.6
BTO Baotou 154.99 131 ePKPbc PKPdf 20 10 25.4 -1.3
GAMB Gambell 155.31 301 PKPdf 20 10 27.6 +1.4
HHC Hu-ho-hao-te 155.76 134 ePKP PKPdf 20 10 27.3 -0.5
HHC LR LR
comp=Z,470nm,20.3s
HHC LR LR
comp=Z,400nm,21.3s
HHC LR LR
comp=Z,690nm,20.7s
MJAR Matsushiro Arr 155.99 187 PKPbc PKPdf 20 10 35.5 +7.4
comp=Z,4.6nm,0.8s,baz=187,slow=3.4,SNR=8.9
BJT Baijiatuau 156.55 142 IAMs_20 IAMs_20 21 20 41.8
comp=Z,800nm,21.0s
BJI Beijing 156.57 142 PKP PKPdf 20 10 32.3 +3.6
BJI PP PP 20 14 38.0 +2.2
BJI SS SS 20 34 31.0 +4.3
BJI LR LR
comp=Z,560nm,17.5s
BJI LR LR
comp=Z,440nm,16.0s
BJI LR LR
comp=Z,660nm,23.8s
KSRS Korea Array 156.61 166 PKPbc PKPdf 20 10 38.4 +10
comp=Z,8.1nm,1.0s,baz=222,slow=1.5,SNR=13
KSRS PKPab PKPab 20 10 56.8 -1.1
comp=Z,10.0nm,0.8s,baz=192,slow=4.3,SNR=14
SONM Songino Array 159.39 115 PKP PKPdf 20 10 31.0 -1.0
comp=Z,1.8nm,1.0s,baz=195,slow=1.4,SNR=8.1
SONM PKPab PKPab 20 11 10.4 +0.5
comp=Z,20nm,1.0s,baz=233,slow=3.0,SNR=23
SONM Songino Array 159.39 115 PKPdf 20 10 31.4 -0.7
SONM PKPab 20 11 10.2 +0.2
MOY Mondy 159.46 100 ePKIKP PKPdf 20 10 31.3 -0.7
MOY pmax pmax
comp=Z,57nm,2.7s
ULN Ulaanbaatar 159.71 116 PKPdf 20 10 32.4 -0.1
ULN PKPab PKPab 20 11 11.5 +0.1
ULN Ulaanbaatar 159.71 116 PKIKP PKPdf 20 10 32.4 -0.1
ULN 20 11 11.5
ULN MLR MLR
comp=Z,1μm,20.0s
ZAK Zakamensk 159.74 106 ePKIKP PKPdf 20 10 28.6 -3.8
ZAK pmax pmax
comp=Z,10.0nm,1.5s
TLY Talaya 160.76 103 ePKIKP PKPdf 20 10 34.0 +0.7
TLY pmax pmax
comp=Z,61nm,1.6s
IRK Irkutsk 161.41 103 ePKIKP PKPdf 20 10 27.7 -6.3
IRK pmax pmax
comp=Z,59nm,2.6s

YUK Yuzh-Kuril'sk 162.25 207 ePKIKP PKPdf 20 10 32.6 -2.5
YUK eSS SS 20 35 22.1 -4.4
CN2 Changchun 162.45 157 eP PKPab 20 11 23.5 +0.4
USRK Ussuriysk Ar. 163.67 173 PKPab PKPab 20 11 27.5 -1.0
comp=Z,18nm,0.9s,baz=206,slow=3.8,SNR=18
USRK Ussuriysk Ar. 163.67 173 PKPab 20 11 27.6 -0.8
MDJ Mudanjiang 163.88 167 PKP PKPdf 20 10 43.3 +6.6
MDJ SS SS 20 35 45.3 +2.1
MDJ AMB AMB
comp=Z,810nm,8.5s
MDJ LR LR
comp=Z,1μm,21.4s
MDJ LR LR
comp=Z,810nm,19.7s
MDJ LR LR
comp=Z,2μm,19.4s
BILL Bilibino 164.46 313⇑ePKIKP PKPdf 20 10 31.0 -5.4
BILL e 20 10 39.7
BILL e 20 10 43.8
BILL pmax pmax
comp=Z,13nm,1.5s
TEY Ternei 164.54 185⇓ePKIKP PKPdf 20 10 41.0 +3.8
TEY pmax pmax
comp=Z,10.0nm,1.7s
PETK Petropavlovsk- 165.46 250 PKPab PKPab 20 11 36.0 -0.3
comp=Z,6.3nm,0.8s,baz=96,slow=7.6,SNR=5.4
PETK Petropavlovsk- 165.46 250 PKP2 PKPab 20 11 36.0 -0.3
YSS Yuzh-Sakhalins 165.70 203 PKPab 20 11 37.6 +0.3
YSS Yuzh-Sakhalins 165.70 203 i PKIKP PKPdf 20 10 36.8 -1.3
YSS e 20 11 37.7
YSS e 20 15 23.4
YSS e 20 28 59.0
YSS pmax pmax
comp=Z,30nm,1.3s
YSS pmax pmax
comp=Z,30nm,1.4s
HIA Hailar 165.94 136 PKPab 20 11 37.8 -0.7
HIA Hailar 165.94 136 PKP2 PKPab 20 11 37.8 -0.7
TIXI Tiksi 168.49 9 PKPab 20 11 48.7 -0.4
TIXI Tiksi 168.49 9 PKP2 PKPab 20 11 48.7 -0.4
BOD Bodaibo 169.08 95 ePKIKP PKPdf 20 10 37.7 -2.5
BOD pmax pmax
comp=Z,15nm,1.7s
GRNR Gornyy 170.27 187⇓i PKP2 PKPab 20 11 57.1 -0.4
GRNR pmax pmax
comp=Z,10.0nm,1.1s
ZEA Zeya 172.18 146 i PKIKP PKPdf 20 10 41.0 -1.0
ZEA e 20 17 42.0
ZEA pmax pmax
comp=Z,63nm,2.0s
YAK Yakutsk 177.10 54 PKPdf PKPdf 20 10 43.3 0.0
YAK PKPab 20 12 27.8 +0.2
YAK Yakutsk 177.10 54 ePKIKP PKPdf 20 10 36.4 -6.9
YAK e 20 12 26.8
YAK pmax pmax
comp=Z,4.0nm,1.1s
YAK pmax pmax
comp=N,3.0nm,2.0s
YAK pmax pmax
comp=E,2.0nm,1.2s

SJA 08 19:58:10.7±0.4, 30°.13S×69°.03W, h123km±3km, ML4.1, MW4.2
NEIC 08 19:58:11.4±1.6, 30°.17S±0°.06×69°.15W±0°.08, h127km±4km, Error ellipse: s-maj=11.0km s-min=7.2km az=62.0
IDC 08 19:58:12.8±1.6, 30°.18S×68°.98W, h132km±14km, mb4.0/7, mb1 4.0/8, mb1mx3.8/44, mbtmp4.4/8, Error ellipse: s-maj=26.2km s-min=22.3km az=69.0
ISC 08 19:58:11.5±0.7, 30°.12S±0°.04×69°.12W±0°.04, h125km±5km, n50, σ0s.85/67, mb4.2/8, Chile-Argentina border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

ACDV Cuesta del Vie 0.05 185 eS Sn 19 58 41.4 -0.3
ACDV Cuesta del Vie 0.05 185 i P Pn 19 58 29.2 +0.5
ACDV IAML 19 58 29.3
comp=Z,4μm,0.1s
ACDV eS Sn 19 58 42.1 +0.4
AROD Rodeo 0.32 261 eP Pn 19 58 29.8 +0.4
AROD Rodeo 0.32 261 i P Pn 19 58 30.0 +0.5
ACCO Cerro Coronel 0.47 175 eP Pn 19 58 30.3 +0.1
AGUA GUANDACOL 0.83 41 i P Pn 19 58 33.9 +1.4
AGUA eS Sn 19 58 49.5 +1.1
AMOG MOGNA 0.98 147 eP Pn 19 58 34.0 +0.2
AMOG i S Sn 19 58 51.0 +0.4
RTLL Cerro Villicun 1.33 156 i P Pn 19 58 37.5 +0.2
RTLL eS Sn 19 58 56.6 -0.4
RTLL IAML 19 58 56.9
comp=Z,630nm,0.3s
GO04 Tololo Observa 1.46 267 Pn Pn 19 58 39.2 +0.3
GO04 Sn Sn 19 59 00.1 +0.2
GO04 Tololo Observa 1.46 267 eP Pn 19 58 39.3 +0.3
GO04 eS Sn 19 59 00.2 +0.3
ZON Zonda 1.47 165 i P Pn 19 58 39.1 +0.2
ZON IAML 19 58 59.7
comp=Z,240nm,0.2s
ZON i S Sn 19 58 59.8 -0.1
CFA Coronel Fontan 1.66 153 P Pn 19 58 41.6 +0.5
comp=Z,101nm,0.3s,baz=293,slow=9.1,SNR=749
CFA S Sn 19 59 03.6 -0.2
comp=Z,308nm,0.3s,baz=280,slow=23,SNR=61
CFA Coronel Fontan 1.66 153 eP Pn 19 58 41.6 +0.5
CFA eS Sn 19 59 03.5 -0.2
RTLS Leoncito 1.68 185 eP Pn 19 58 42.0 +0.4
RTLS eS Sn 19 59 05.1 +0.5
RTLS IAML 19 59 07.2
comp=Z,1μm,0.2s
RTLS Leoncito 1.68 185 i P Pn 19 58 42.1 +0.5
RTLS i S Sn 19 59 04.8 +0.2
RTLS IAML 19 59 07.2
comp=Z,1μm,0.2s
RTCV Cerro Valdivia 1.81 164 eS Sn 19 59 06.1 -0.7
RTCV Cerro Valdivia 1.81 164 i P Pn 19 58 43.5 +0.7
RTCV i S Sn 19 59 07.0 +0.1
APLL PUNTA DE LOS L 2.25 98 i P Pn 19 58 49.0 +0.6
APLL eS Sn 19 59 16.1 -0.5
APLL IAML 19 59 17.3
comp=Z,803nm,0.1s
ASAL Salagasta 2.48 175 eP Pn 19 58 52.0 +0.8
GO03 Copiap 2.70 338 Pn Pn 19 58 54.6 +0.5
GO03 Sn Sn 19 59 26.3 -0.6
ACAN Cantantal 2.71 143 eP Pn 19 58 54.9 +0.8
ARCO CERRO ARCO 2.72 177 eP Pn 19 58 54.9 +0.5
ARCO eS Sn 19 59 28.8 +1.4
ARCO IAML 19 59 30.5
comp=Z,310nm,0.4s
AAGR Agrelo 2.97 175 eP Pn 19 58 58.4 +0.8
PEL Peldehue 3.30 204 Pn Pn 19 59 00.8 -1.0
CYA Choya 3.34 61 eP Pn 19 59 01.2 -0.3
AHML Horco Molle 4.70 46 eP Pn 19 59 19.9 -0.7
AHML Horco Molle 4.70 46 i P Pn 19 59 19.8 -0.7
GO02 Mina Guanaco 4.95 355 Pn Pn 19 59 24.3 +0.1
GO05 Huala 5.43 205 Pn Pn 19 59 26.5 -3.7
PB10 IPOC Station P 6.70 349 Pn Pn 19 59 47.0 -0.4
LVC Limon Verde 7.48 1 Pn Pn 19 59 56.4 -1.9
PB01 IPOC Station P 9.04 358 Pn Pn 20 00 18.3 -0.8
CPUP Villa Florida 11.06 73 P Pn 20 00 44.5 -1.5
comp=Z,0.8nm,0.3s,baz=245,slow=11,SNR=6.3
CPUP Villa Florida 11.06 73 Pn 20 00 44.4 -1.7
SNAA Sanae 54.27 159 P P 20 07 24.4 +0.1
comp=Z,1.7nm,0.8s,baz=270,slow=9.1,SNR=4.5
SNAA Sanae 54.27 159 P P 20 07 24.4 +0.1
DBIC Dimbokro 71.57 71 P P 20 09 19.9 +0.4
comp=Z,3.5nm,0.5s,baz=212,slow=8.1,SNR=11
DBIC Dimbokro 71.57 71 P P 20 09 19.6 +0.1
DBIC IAmb IAmb 20 09 38.6
comp=Z,12nm,1.4s
BOSA Boshof 79.64 117 P P 20 10 04.2 -1.3
comp=Z,1.6nm,0.4s,baz=218,slow=5.2,SNR=4.0
BOSA Boshof 79.64 117 P P 20 10 04.7 -0.8
TOA0 Torodi Ar. Sit 80.53 69 P P 20 10 10.4 +0.3
TOA0 IAmb IAmb 20 10 11.2
comp=Z,4.7nm,0.5s
TORD Torodi Ar. Bea 80.53 69 P P 20 10 10.4 +0.2
comp=Z,3.0nm,0.5s,baz=273,slow=6.3,SNR=27
TORD Torodi Ar. Bea 80.53 69 P P 20 10 09.9 -0.2
PDAR Pinedale Array 81.50 331 P P 20 10 15.8 +0.7
comp=Z,1.3nm,0.9s,baz=84,slow=3.7,SNR=2.2
ELK Elko 82.43 326 P P 20 10 20.5 +0.5
comp=Z,2.0nm,0.8s,baz=157,slow=1.2,SNR=3.9
ULM Lac du Bonnet 83.46 343 P P 20 10 26.7 +2.0
comp=Z,1.3nm,0.4s,baz=151,slow=3.2,SNR=3.9

WRA Warramunga Arr 125.35 207 PKP PKPdf 20 16 57.9 -0.3
comp=Z,0.4nm,0.5s,baz=154,slow=1.8,SNR=8.4
ZALV Zalesovo Beam 149.63 31 PKPbc PKiKP 20 17 46.4 -0.4
comp=Z,2.1nm,0.5s,baz=306,slow=3.5,SNR=9.3
MKAR Makanchi Array 152.31 45 PKPbc PKPbc 20 17 52.4 0.0
comp=Z,0.7nm,0.6s,baz=14,slow=1.6,SNR=7.8
MKAR PKPab PKPab 20 18 03.0 +0.2
comp=Z,1.4nm,0.5s,baz=302,slow=3.0,SNR=16
MKAR Makanchi Array 152.31 45 PKPbc 20 17 52.5 +0.1
MKAR PKPab 20 18 03.4 +0.5

NEIC 08 20:05:18.9±1.9, 16°.19N±0°.04×98°.30W±0°.03, h12km±7km, Error ellipse: s-maj=6.9km s-min=1.6km az=221.0
MEX 08 20:05:21.2±0.7, 16°.27N×98°.27W, h8km±3km, MD4.1
ISC 08 20:05:19.5±1.1, 16°.26N±0°.05×98°.27W±0°.03, h17km±6km, n28, σ1s.35/50, Near coast of Guerrero

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

PNIG Pinotepa 0.19 45 Pg 20 05 24.4 +0.1
PNIG Sg 20 05 27.6 +0.1
PNIG Pinotepa 0.19 45 eP Pg 20 05 24.4 +0.1
PNIG i P Pg 20 05 24.4 +0.1
PNIG i S Sg 20 05 27.6 +0.1
YOIG Yosondua 0.91 49 eP Pb 20 05 36.2 -1.0
YOIG i S Sb 20 05 47.7 -1.5
PEIG Puerto Escondi 1.11 103 eP Pb 20 05 39.2 -1.0
PEIG eS Sb 20 05 53.1 -1.4
TLIG Tlapa 1.33 348 Pn 20 05 42.0 -1.4
TLIG Pg 20 05 47.8 +2.5
TLIG Sn Sn 20 05 59.6 -1.3
TLIG Tlapa 1.33 348 Pn 20 05 42.1 -1.4
TLIG Sn 20 05 58.4 -2.6
TLIG Tlapa 1.33 348 eP Pn 20 05 42.1 -1.4
TLIG i S Sn 20 05 58.4 -2.6
HLIG Huajuapan de L 1.63 16 eP Pn 20 05 46.3 -1.4
HLIG eS Sn 20 06 06.1 -1.8
ACP2 Acapulco 1.67 292 Pn 20 05 48.0 -0.1
ACP2 Sn 20 06 07.0 -2.2
ACP2 Acapulco 1.67 292 i P Pn 20 05 48.0 -0.1
ACP2 i S Sn 20 06 07.0 -2.2
VHO Vista Hermosa 1.68 61 eP Pn 20 05 47.7 -0.7
VHO i S Sn 20 06 08.6 -1.1
OXBJ Oaxaca 1.69 61 Pn 20 05 47.7 -0.8
OXBJ Oaxaca 1.69 61 eP Pn 20 05 47.7 -0.8
CAIG El Cayaco 2.07 293 Pn 20 05 52.3 -1.3
CAIG Sn 20 06 18.0 -1.1
CAIG El Cayaco 2.07 293 eP Pn 20 05 52.3 -1.3
CAIG i S Sn 20 06 18.0 -1.1
MEIG Mezcala 2.10 322 Pn 20 05 53.7 -0.5
MEIG Sn 20 06 18.9 -1.1
MEIG Mezcala 2.10 322 eP Pn 20 05 53.7 -0.5
MEIG i S Sn 20 06 18.9 -1.1
HUIG Huatulco 2.13 103 Pn 20 05 53.7 -0.7
HUIG Sn 20 06 20.9 +0.3
HUIG Huatulco 2.13 103 eP Pn 20 05 53.7 -0.7
HUIG eS Sn 20 06 20.9 +0.3
PLIG Platanillo 2.43 331 Pn 20 05 59.2 +0.6
PLIG Sn 20 06 29.9 +1.9
PLIG Platanillo 2.43 331 eP Pn 20 05 59.2 +0.6
PLIG i S Sn 20 06 29.9 +1.9
UNM Universidad Na 3.18 344 Pn Pn 20 06 10.1 +1.0
MOIG Morelia 4.39 321 Pn 20 06 27.2 +1.4
CCIG Comitan 5.89 89 Pn Pn 20 06 47.5 +1.2
CCIG Sn Sn 20 07 56.2 +2.7
ZAIG Zacatecas 7.64 329 Pn Pn 20 07 10.7 +0.2
HPIG 12.65 328 Pn Pn 20 08 20.2 +1.1
HKT Hockley 13.81 9 Pn Pn 20 08 35.3 +0.7
TX32 Lajitas Array 13.93 340 Pn Pn 20 08 37.1 +0.7

IDC 08 20:20:41.5±1.7, 16°.41S×173°.32W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/25, mbtmp3.9/4, Error ellipse: s-maj=59.0km s-min=29.2km az=120.0
NEIC 08 20:20:43.1±1.3, 16°.28S±0°.06×172°.91W±0°.09, h35km±2km, mb4.4/6, Error ellipse: s-maj=15.6km s-min=9.2km az=113.0
ISC 08 20:20:43.2±0.8, 16°.33S±0°.06×172°.86W±0°.09, h32km, n23, σ1s.60/19, mb4.3/5, Samoa Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

AFI Afiamalu 2.62 24 Pn Pn 20 21 22.9 -0.5
16nm,0.3s,baz=241,slow=2.7,SNR=16
AFI Sn Sn 20 21 54.2 +0.1
79nm,0.3s,baz=100,slow=17,SNR=11
AFI Afiamalu 2.62 24 Pn 20 21 23.1 -0.3
AFI Sn Sn 20 21 51.0 -3.2
NIUE Niue 3.91 135 Pn 20 21 41.7 +0.6
NIUE Sn Sn 20 22 23.2 -2.7
MSVF Nonsavu 8.81 260 Pn Pn 20 22 48.0 -0.5
DZM Mont Dzumac 20.36 250 P Pn 20 25 16.5 -3.0
DZM IAmb IAmb 20 25 29.8
comp=Z,15nm,1.1s
URZ Urewera 23.57 200 P P 20 25 51.5 +0.6
comp=Z,4.0nm,0.4s,baz=237,slow=1.3,SNR=10
URZ Urewera 23.57 200 P P 20 25 50.6 -0.3
BKZ Black Stump Fm 24.59 200 P P 20 26 00.6 0.0
LTZ Lake Taylor 29.28 203 P P 20 26 43.4 +0.8
H11S2 WAKE ISLAND Hy 40.02 329 T T 21 10 25.4
baz=149,slow=75,SNR=4.0
H11S3 WAKE ISLAND Hy 40.03 329 T T 21 10 24.5
baz=149,slow=75,SNR=3.0
H11S1 WAKE ISLAND Hy 40.04 329 T T 21 10 27.0
baz=149,slow=75,SNR=2.8
H11N3 WAKE ISLAND Hy 40.97 330 T T 21 11 37.3
baz=149,slow=74,SNR=2.9
H11N1 WAKE ISLAND Hy 40.97 330 T T 21 11 39.4
baz=3.4,slow=74,SNR=3.2
H11N2 WAKE ISLAND Hy 40.99 330 T T 21 11 38.3
BBOO Buckleboo 48.81 241 P P 20 29 25.2 -0.5
WB0 Warramunga Arr 50.11 258 P P 20 29 34.4 -1.4
WB0 IAmb IAmb 20 29 38.5
comp=Z,9.4nm,1.4s
WRA Warramunga Arr 50.15 257 P P 20 29 35.5 -0.5
comp=Z,0.4nm,0.7s,baz=97,slow=6.6,SNR=8.1
AS31 Alice Springs 50.33 253 P P 20 29 36.3 -1.1
ASAR Alice Springs 50.33 253 P P 20 29 36.6 -0.8
comp=Z,2.3nm,0.6s,baz=88,slow=8.2,SNR=43
ASAR Alice Springs 50.33 253 P P 20 29 35.9 -1.5
ILAR Eielson Array 83.25 11 P P 20 33 09.9 +3.8
comp=Z,0.2nm,0.9s,baz=184,slow=4.3,SNR=3.4
BRTR Keskin Array B 147.20 321 PKPbc PKiKP 20 40 26.5 +0.4
comp=Z,0.1nm,0.3s,baz=343,slow=4.5,SNR=2.9

HEL 08 20:46:37.4±0.5, 68°.01N×34°.05E, h0km, ML1.9, Explosion
NAO 08 20:46:39.8±1.4, 67°.59N×33°.80E, ML2.7
ISC 08 20:46:41.1±1.9, 67°.67N±0°.04×33°.60E±0°.10, h0km, n25, σ1s.12/45, Baltic States-Belarus-Northwestern Russia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

APZ9 Apatity 0.13 216 Pg Pg 20 46 43.5 0.0
APZ9 Lg Lg 20 46 46.1
APZ9 Apatity 0.13 216 Pg Pg 20 46 43.5 0.0
APZ9 Sg Sg 20 46 46.1 +1.0
APA0 Apatity Array 0.24 255 Pg Pg 20 46 45.8 +0.2
baz=93,slow=16
APA0 Lg Lg 20 46 50.0
baz=80,slow=56
APA0 Rg Rg 20 46 51.0
APA0 Apatity Array 0.24 255 Pg Pg 20 46 45.8 +0.2
baz=93,slow=16
APA0 Sg Sg 20 46 50.0 +1.2
baz=80,slow=56
APA0 Rg Rg 20 46 51.0
VRF Varrio 1.52 275 PN Pn 20 47 08.6 -0.9
VRF MSG 20 47 28.2
comp=Z,7.2nm,0.2s
VRF SG Sn 20 47 29.7 -0.3
KU6 Riekki 2.21 223 PN Pn 20 47 19.3 +0.4
baz=40
KU6 SN Sb 20 47 50.5 +0.8
KU6 MSG 20 47 53.3
comp=Z,5.7nm,0.2s
MSF Maaselka 2.52 228 PN Pn 20 47 24.9 +1.6
MSF SN Sb 20 47 59.5 +0.7
SGF Sodankyl 2.72 268 PB Pn 20 47 26.4 +0.4
SGF SB Sb 20 48 04.9 +0.4
RNF Rovaniemi 3.15 254 PN Pn 20 47 31.8 0.0

RNF				SN	Sn	20 48 10.9	+0.9
KEV	Kevo	3.19	314	Pn	Pn	20 47 32.5	+0.2
KEV				Sn	Sn	20 48 10.7	-0.3
KEV	Kevo	3.19	314	PG	Pn	20 47 32.7	+0.3
KEV				MSG		20 48 08.3	
	comp=Z,3.1nm,0.2s						
KEV	Kevo	3.19	314	eP	Pn	20 47 32.7	+0.3
KEV				eS	Sn	20 48 10.5	-0.5
ARA0	ARCESS Array S	3.51	306	Pn	Pn	20 47 36.6	-0.2
	baz=123,slow=16						
ARA0				Pg	Pb	20 47 44.9	+1.0
	baz=120,slow=16						
ARA0				Sn	Sn	20 48 17.7	-1.2
	baz=118,slow=28						
ARA0				Lg	Lg	20 48 29.8	
	baz=113,slow=37						
ARA0	ARCESS Array S	3.51	306	Pn	Pn	20 47 36.6	-0.2
	baz=123,slow=16						
ARA0				Pg	Pb	20 47 44.9	+1.0
	baz=120,slow=16						
ARA0				Sn	Sn	20 48 17.7	-1.2
	baz=118,slow=28						
ARE0	ARCESS Array S	3.51	306	PB	Pn	20 47 36.3	-0.5
ARE0				SB	Sn	20 48 18.3	-0.6
HEF	Hetta	3.81	286	Pn	Pn	20 47 40.6	-0.3
HEF				Pg	Pb	20 47 49.8	+0.8
HEF				Sn	Sn	20 48 25.2	-1.1
HEF				Lg	Lg	20 48 38.9	
HEF	Hetta	3.81	286	PN	Pn	20 47 40.6	-0.3
HEF	Hetta	3.81	286	eP	Pn	20 47 39.5	-1.4
HEF				eS	Sn	20 48 24.3	-2.0
TOF	Tornio	3.99	251	PG	Pb	20 47 53.3	+1.1
OUL	Oulu	4.04	234	PB	Pb	20 47 49.3	-3.7
	baz=48						
KTK1	Kautokeino	4.07	294	Pn	Pn	20 47 45.2	+0.7
KTK1				Pg	Pb	20 47 53.9	+0.3
KTK1				Sn	Sn	20 48 31.5	-1.3
KTK1				Lg	Lg	20 48 45.6	
KTK1	Kautokeino	4.07	294	eS	Sn	20 48 31.5	-1.3
KTK1				IAML		20 48 53.2	
	comp=Z,8.0nm,0.5s						
KIF	Kilpisjarvi	4.92	292	Pn	Pn	20 47 55.6	-0.6
KIF				Sn	Sn	20 48 51.0	-2.8
KIF				Lg	Lg	20 49 12.9	
KIF	Kilpisjarvi	4.92	292	eP	Pn	20 47 55.3	-0.9
KIF				eS	Sn	20 48 52.2	-1.5
FIA0	FINESS Array S	7.04	211	Lg	Lg	20 50 15.9	
	baz=22,slow=28						

NEIC **08** *20:53:31.5±2.9, 8.°89S±0.°05×120.°37E±0.°05, h124km±9km, mb4.4/23, Error ellipse: s-maj=8.1km s-min=7.1km az=119.0*

IDC **08** *20:53:32.5±1.6, 8.°70S×120.°55E, h133km±15km, mb3.9/5, mb1 4.1/11, mb1mx3.7/36, mbtmp4.4/11, MS4.2/2, Ms1 4.1/2, ms1mx3.5/32, Error ellipse: s-maj=26.3km s-min=9.3km az=61.0*

DJA **08** *20:53:32.8±0.2, 9.°S±3.°×12.°0E±.°, h121km±5km, M4.5/12, mB5.3/2, mb4.7/12, MLv4.4/12, Mw(mB)4.8/2*

ISC 08 20:53:33.1±0.5, 8.°92S±0.°04×120.°41E±0.°04, h150km, n69, σ2.°43/76, mb4.4/11, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
WSI	Waingapu	0.76	188	P	Pn	20 53 54.1	-1.9
PLAI	Plampang	2.60	272	P	Pn	20 54 14.4	-1.1
BKSI	Bulukumba	3.58	355	P	Pn	20 54 25.8	-2.1
SOEI	Soe	3.90	103	P	Pn	20 54 31.0	-1.2
SOEI	Soe	3.90	103		Pn	20 54 30.9	-1.2
SOEI				Sn	Sn	20 55 15.8	-2.3
KAPI	Kappang	3.93	350	P	Pn	20 54 30.6	-1.9
	6.2nm,0.3s,baz=170,slow=7.9,SNR=14						
KAPI				S	Sn	20 55 12.8	-5.8
	5.0nm,0.3s,baz=66,slow=23,SNR=3.6						
KAPI	Kappang	3.93	350		Pn	20 54 29.8	-2.6
KAPI				Sn	Sn	20 55 14.3	-4.3
BBSI	Bau Bau	4.03	32	P	Pn	20 54 32.0	-1.7
BNSI	Bone	4.50	356	P	Pn	20 54 38.3	-1.6
SPSI	Sidrap Palu	4.96	353	P	Pn	20 54 45.0	-1.0
IGBI	Denpasar	5.20	279	P	Pn	20 54 48.1	-1.1
	1.7nm6μm246nm,0.9s						
SRBI	Singaraja	5.20	279	P	Pn	20 54 48.5	-0.7
	0.5nm161nm,0.9s						
TTSI	Tana Toraja	5.86	354	P	Pn	20 54 57.0	-1.0
	0.1nm22nm,0.6s						
JAGI	Jajag, Banyuwa	6.20	274	P	Pn	20 55 00.2	-2.3
	0.8nm3μm71nm,0.5s						
JAGI	Jajag, Banyuwa	6.20	274		Pn	20 54 60.0	-2.5
JAGI				Sn	Sn	20 56 07.6	-4.8
NLAI	Namlea	8.72	50	P	Pn	20 55 35.5	-0.7
	69nm,1.4s						
SANI	Sanana	8.80	39	P	Pn	20 55 36.7	-0.5
	18nm,1.3s						
UGM	Wanagama	9.83	275	Pn	Pn	20 55 50.2	-0.7
UGM				Sn	Sn	20 57 36.4	-3.5
SMRI	Semarang	10.04	280	Pn	Pn	20 55 51.6	-2.2
FITZ	Fitzroy Crossi	10.45	151	P	Pn	20 55 58.8	-0.3
	0.8nm,0.3s,baz=326,slow=9.8,SNR=12						
FITZ				S	Sn	20 57 50.5	-4.3
	3.6nm,0.3s,baz=207,slow=20,SNR=11						
FITZ	Fitzroy Crossi	10.45	151		Pn	20 55 59.1	0.0
FITZ				Sn	Sn	20 57 50.7	-4.0
KNRA	Kununurra	10.57	130		Pn	20 55 58.6	-2.2
KNRA				Sn	Sn	20 57 48.4	-9.4
SAUI	Saumlaki	10.82	86	Pn	Pn	20 56 01.4	-2.6
SAUI				Sn	Sn	20 57 54.9	-8.8
MTN	Manton Dam	11.23	111	Pn	P	20 56 15.4	-2.1
MTN				Sn	Sn	20 58 11.4	-2.4
CISI	Cisompet, Garu	12.53	275	Pn	Pn	20 56 24.0	-2.5
PSA00	Pilbara Seismi	12.60	182	Pn	Pn	20 56 27.8	+0.6
PSA00				Sn	Sn	20 58 40.0	-6.4
LEM	Lembang	12.84	278	P	Pn	20 56 30.6	+0.1
	3.9nm,0.3s,baz=138,slow=21,SNR=7.4						
FAKI	Fak Fak	13.20	64		Pn	20 56 32.3	-2.6
FAKI				Sn	Sn	20 59 00.5	-0.6
CNJI	Cibinong	13.24	276	P	P	20 56 49.5	+10
SWI	Sorong	13.45	54	P	Pn	20 56 39.2	+1.1
	24nm,0.8s						
SIJI	Sorong	13.45	54	P	Pn	20 56 35.3	-2.8
	0.4nm,0.3s,baz=134,slow=9.7,SNR=3.7						
SIJI				S	Sn	20 59 09.8	+2.7
	0.1nm,0.3s,baz=219,slow=23,SNR=1.6						
DBJI	Dramaga	13.73	279	P	Pn	20 56 42.1	+0.3
	70nm,0.9s						
GIRL	Giralia	14.88	203		P	20 57 07.4	+9.4
KKM	Kota Kinabalu	15.44	344		P	20 57 05.3	+0.9
KKM				IAmb	IAmb	20 57 13.3	
	comp=Z,21nm,1.4s						
WB0	Warramunga Arr	17.30	130	P	Pn	20 57 25.5	-0.3
WRA	Warramunga Arr	17.37	131	P	Pn	20 57 25.5	-0.1
	comp=Z,2.6nm,0.3s,baz=228,slow=13,SNR=74						
WRA				S	S	21 00 28.2	-11
	comp=Z,1.9nm,0.3s,baz=299,slow=23,SNR=16						
WRA	Warramunga Arr	17.37	131	P	Pn	20 57 25.7	+0.1
WRAB	Tennant Creek	17.37	131	P	Pn	20 57 27.2	+0.6
WRAB				IAmb	IAmb	20 57 30.3	
	comp=Z,8.8nm,0.6s						
WB2	Warramunga Arr	17.38	131	P	Pn	20 57 26.5	-0.2
WB2				IAmb	IAmb	20 57 30.3	
	comp=Z,8.7nm,0.6s						
WR0	Warramunga Arr	17.53	130	P	Pn	20 57 28.7	+0.2
WR0				IAmb	IAmb	20 57 31.0	
	comp=Z,14nm,0.8s						
MNAI	Manna	17.91	284	P	Pn	20 57 31.4	-0.2
AS31	Alice Springs	19.55	140	P	Pn	20 57 51.8	-0.3
AS31				IAmb	IAmb	20 57 56.3	
	comp=Z,20nm,0.6s						
ASAR	Alice Springs	19.55	140	P	Pn	20 57 51.8	-0.4
	comp=Z,6.9nm,0.3s,baz=319,slow=11,SNR=515						
ASAR				S	S	21 01 24.1	+2.1
	comp=Z,0.7nm,0.3s,baz=323,slow=24,SNR=10						
COEN	Coen	22.86	105	P	P	20 58 24.9	+1.1
COEN				IAmb	IAmb	20 58 27.9	
	comp=Z,8.1nm,0.5s						
FORT	Forrest	22.90	163	P	P	20 58 25.7	+1.8
IPM	Ipoh	23.46	304	P	P	20 58 31.0	+1.7
NWAO	Narrogin (SRO)	24.07	187	P	P	20 58 37.3	+2.6
	comp=Z,9.0nm,0.7s,baz=30,slow=10,SNR=4.9						
NWAO	Narrogin (SRO)	24.07	187	P	P	20 58 36.1	+1.5
KULM	Kulim	24.23	305	P	P	20 58 37.7	+1.5
KULM				IAmb	IAmb	20 58 41.5	
	comp=Z,13nm,1.2s						
CTAO	Charters Tower	27.33	117	P	P	20 59 05.9	+1.7
CTAO				IAmb	IAmb	20 59 06.4	
	comp=Z,10nm,1.2s						
BBOO	Buckleboo	27.84	151	P	P	20 59 10.5	+1.9
STKA	Stephens Creek	30.15	142	P	P	20 59 31.9	+2.8
	comp=Z,11nm,0.5s,baz=316,slow=9.3,SNR=38						
STKA	Stephens Creek	30.15	142	P	P	20 59 31.9	+2.8
ARMA	Armidale	36.15	131		P	21 00 30.6	+9.3
ARMA				IAmb	IAmb	21 00 31.8	
	comp=Z,9.3nm,1.1s						
CAN	Canberra	37.05	139	P	P	21 00 29.1	+0.3
CAN				IAmb	IAmb	21 00 37.8	
	comp=Z,13nm,1.3s						
RPZ	Rata Peaks	55.92	137	LR	LR	21 27 41.3	
	comp=Z,280nm,18.8s,baz=300,slow=37						
RPZ	Rata Peaks	55.92	137	P	P	21 02 57.7	+2.1
SONM	Songino Array	57.85	349	P	P	21 03 09.5	+0.4
	comp=Z,0.8nm,0.6s,baz=165,slow=9.3,SNR=8.9						
SONM	Songino Array	57.85	349	P	P	21 03 10.1	+1.0
MKAR	Makanchi Array	65.02	332	P	P	21 03 56.6	-0.5
	comp=Z,0.3nm,0.5s,baz=137,slow=7.8,SNR=9.6						
ZAA0	Zalesovo Array	69.46	338	P	P	21 04 25.0	0.0
ZALV	Zalesovo Beam	69.46	338	P	P	21 04 24.5	-0.5
	comp=Z,2.1nm,0.6s,baz=149,slow=4.1,SNR=12						
ZALV	Zalesovo Beam	69.46	338	P	P	21 04 25.1	+0.1
QSPA	South Pole Qui	81.08	180	P	P	21 05 34.6	+3.3
KBZ	Khabaz	87.20	315	LR	LR	21 54 07.3	
	comp=Z,87nm,18.5s,baz=33,slow=42						
SNAA	Sanae	91.45	195	P	P	21 06 25.8	+3.8
SNAA				IAmb	IAmb	21 06 26.6	
	comp=Z,4.4nm,0.9s						
H09N1	TRISTAN DA CUN	116.34	221	T	T	23 18 19.2	
	SNR=14						
TORD	Torodi Ar. Bea	119.81	280	PKP	PKiKP	21 12 08.6	+2.0
	comp=Z,0.3nm,0.4s,baz=33,slow=2.0,SNR=2.5						
CPUP	Villa Florida	144.90	184	PKPbc	PKiKP	21 12 55.9	-1.0
	comp=Z,2.8nm,0.7s,baz=194,slow=4.3,SNR=6.1						

IDC 08 21:18:57.3±5.9, 20.°12S×169.°00E, h101km±66km, mb3.4/3, mb1 3.6/4, mb1mx3.3/25, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=164.0km s-min=46.1km az=148.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
DZM	Mont Dzumac	3.08	230	P	Pn	21 19 43.6	-0.7
	12nm,0.3s,baz=38,slow=19,SNR=327						
DZM				S	Sn	21 20 20.9	+0.5
	20nm,0.3s,baz=131,slow=22,SNR=9.2						
WRA	Warramunga Arr	32.53	264	P	P	21 25 18.4	-0.4
	0.9nm,1.0s,baz=97,slow=7.5,SNR=1.9						
ASAR	Alice Springs	32.70	257	P	P	21 25 20.5	+0.2
	0.9nm,0.6s,baz=88,slow=8.7,SNR=16						
SONM	Songino Array	87.78	323	P	P	21 31 34.6	-0.4
	0.4nm,0.9s,baz=134,slow=6.2,SNR=3.1						
GERES	GERESS Array B	145.15	331	PKPbc	PKPbc	21 38 22.4	-0.4
	0.6nm,0.6s,baz=35,slow=4.9,SNR=6.7						

IDC **08** *21:42:29.6±3.4, 24.°95N×124.°01E, h111km±31km, mb3.3/10, mb1 3.5/10, mb1mx3.3/43, mbtmp3.7/10, Error ellipse: s-maj=24.9km s-min=17.0km az=68.0*

JMA **08** *21:42:30.7±0.1, 24.°80N×123.°92E, h97km±2km, M3.6*

ISC 08 21:42:28.9±0.8, 24.°9N±0.°1×123.°91E±0.°06, h109km±10km, n23, σ0.°79/34, mb3.6/10, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
JISG	Ishigakijimahi	0.45	126	P	Pn	21 42 45.8	+0.4
JISG				S	Sn	21 42 57.0	-0.7
JIJ	Ishigaki jima	0.53	156	P	Pn	21 42 45.9	0.0
JIJ				S	Sn	21 42 57.2	-1.4
IRIF	Iriomote-Funau	0.54	198	P	Pn	21 42 46.1	+0.1
IRIF				S	Sn	21 42 57.9	-0.8
JKRS	Kuro-shima	0.62	171	P	Pn	21 42 46.9	+0.3
JKRS				S	Sn	21 42 58.9	-0.9
JTJ	Tarama	0.75	106	P	Pn	21 42 48.5	+0.9
JTJ				S	Sn	21 43 01.4	-0.3
HATJ	Hateruma jima	0.80	187	P	Pn	21 42 48.4	+0.3
HATJ				eS	Sn	21 43 01.9	-0.6
YOJ	Yonaguni jima	0.91	245	P	Pn	21 42 49.9	+0.8
YOJ				eS	Sn	21 43 03.9	-0.4
JYNG	Yonagunijimaku	0.96	246	P	Pn	21 42 50.4	+0.7
JYNG				eS	Sn	21 43 05.6	+0.3
JIRB	Irabujima	1.15	91	P	Pn	21 42 52.3	+0.7
JIRB				S	Sn	21 43 08.4	-0.4
JIKM	Ikemajima	1.22	86	P	Pn	21 42 53.6	+1.2
JIKM				S	Sn	21 43 10.4	+0.3
JMJ2	Miyako jima3	1.29	95	P	Pn	21 42 54.5	+1.2
JMJ2				S	Sn	21 43 12.1	+0.4
JOGS	Gusukube	1.36	94	P	Pn	21 42 55.4	+1.3
JOGS				S	Sn	21 43 13.6	+0.5
JOW	Kunigami	4.40	62	P	Pn	21 43 33.3	-0.4
	0.2nm,0.3s,baz=138,slow=12,SNR=1.4						
JOW				S	Sn	21 44 21.9	-2.0
	0.7nm,0.3s,baz=99,slow=16,SNR=3.0						
ASAJ	Asahikawa	24.53	34	P	P	21 47 37.6	-0.6
	2.2nm,0.7s,baz=219,slow=6.5,SNR=1.3						
SONM	Songino Array	26.80	333	P	P	21 47 58.8	-0.1
	0.4nm,0.7s,baz=153,slow=9.0,SNR=5.0						
MKAR	Makanchi Array	39.62	314	P	P	21 49 50.3	+0.5
	0.4nm,0.4s,baz=102,slow=8.0,SNR=26						
ZALV	Zalesovo Beam	41.07	325	P	P	21 50 01.4	-0.2
	0.8nm,0.4s,baz=116,slow=8.2,SNR=5.4						
WRA	Warramunga Arr	45.67	166	P	P	21 50 39.7	+0.8
	0.3nm,0.5s,baz=347,slow=8.6,SNR=1.8						
ASAR	Alice Springs	49.19	168	P	P	21 51 07.2	+1.0
	0.4nm,0.5s,baz=351,slow=8.0,SNR=8.9						
ILAR	Eielson Array	67.48	28	P	P	21 53 13.0	+0.2
	0.2nm,0.5s,baz=280,slow=6.4,SNR=6.0						
FINES	FINESS Array B	72.12	330	P	P	21 53 41.9	+0.7
	0.4nm,0.4s,baz=47,slow=6.0,SNR=9.2						
NOA	NORSAR Array B	78.78	333	P	P	21 54 19.6	+0.2
	1.0nm,0.9s,baz=56,slow=7.1,SNR=1.8						
YKA	Yellowknife Ar	81.38	24	P	P	21 54 32.6	-0.6
	0.5nm,0.7s,baz=307,slow=5.4,SNR=7.2						

KRSC **08** *21:46:38.9±0.8, 55.°20N×162.°62E, h68km±21km, ML4.0*

IDC **08** *21:46:41.2±1.6, 56.°07N×160.°32E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.3/40, mbtmp3.6/5, ML2.6/1, Error ellipse: s-maj=40.0km s-min=24.1km az=124.0*

ISC 08 21:46:40.6±1.0, 55.°23N±0.°04×162.°63E±0.°04, h72km±11km, n43, σ1.°09/62, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
KBTR	Krutoberegovo	0.99	6	eP	Pn	21 46 58.6	-0.4
KBTR				eS	Sn	21 47 12.9	+0.2
KBG	Krutoberegovo	1.03	2	eP	Pn	21 46 59.2	-0.3
KBG				eS	Sn	21 47 14.0	+0.4
TUMD	Tumrok D	1.28	270	eP	Pn	21 47 01.7	-1.0
TUMD				eS	Sn	21 47 18.4	-0.9
ZLN	Zelenaya	1.30	308	eP	Pn	21 47 03.3	+0.2
ZLN				eS	Sn	21 47 21.2	+1.2
BZGR	Bezymyannyi-Gr	1.31	304	eP	Pn	21 47 03.3	+0.1
BZGR				eS	Sn	21 47 21.1	+0.9
KZV	Kizimen	1.34	266	eP	Pn	21 47 03.2	-0.5
KZV				eS	Sn	21 47 19.9	-1.2
CIRR	Tsirk	1.39	311	eP	Pn	21 47 04.5	+0.2
BZMR	Bezymyannaya	1.41	301	eS	Sn	21 47 25.5	+3.0
TUMR	Tumrok	1.42	273	eP	Pn	21 47 04.7	0.0
TUMR				eS	Sn	21 47 22.3	-0.5
KMNR	Kamenistaya	1.46	292	eP	Pn	21 47 05.2	0.0
KMNR				eS	Sn	21 47 23.9	+0.2
KIRR	Kirishev	1.49	300	eP	Pn	21 47 07.9	+2.3
KLY	Klyuchi	1.56	315	eP	Pn	21 47 05.3	-1.0
KLY				eS	Sn	21 47 24.6	-1.2
BDR	Baidarnaya	1.56	330	eP	Pn	21 47 06.7	+0.2
BDR				eS	Sn	21 47 27.9	+1.8
SRKR	Sorokina	1.65	331	eP	Pn	21 47 07.8	+0.2
KOZ	Kozyrevsk	1.77	299	eP	Pn	21 47 09.9	+0.7
KOZ				eS	Sn	21 47 32.0	+1.1
BKI	Bering	1.92	89	eP	Pn	21 47 11.8	+0.7
BKI				eS	Sn	21 47 34.1	-0.2
KII	Karymskiy	2.20	238	eP	Pn	21 47 15.6	+0.6
ESO	Esso	2.34	289	eP	Pn	21 47 16.6	-0.2
ESO				eS	Sn	21 47 42.8	-1.7
SPN	Mys Shipunski	2.63	217	eP	Pn	21 47 20.1	-0.6
SPN				eS	Sn	21 47 49.7	-1.8
NLC	Nalytchevo	2.82	224	eP	Pn	21 47 24.0	+0.7
NLC				eS	Sn	21 47 56.1	-0.1
SDLR	Sedlovina	2.94	230	eP	Pn	21 47 26.0	+0.9
SDLR				eS	Sn	21 48 00.4	+1.1
KRER	Koryakskii	2.98	231	eP	Pn	21 47 27.0	+1.3
SMAR	Somma	2.99	230	eP	Pn	21 47 26.7	+0.9
SMAR				eS	Sn	21 48 00.2	-0.4
KRX	Arik	2.99	233	eP	Pn	21 47 26.6	+0.8
KRX				eS	Sn	21 48 01.0	+0.4
AVH	Avacha	3.01	231	eP	Pn	21 47 27.5	+1.5
AVH				eS	Sn	21 48 01.4	+0.4
UGLR	Uglovaya	3.01	229	eP	Pn	21 47 27.1	+1.0
KOK	Koryaka	3.04	232	eP	Pn	21 47 27.5	+1.1
DALK	Dalny	3.17	228	eP	Pn	21 47 28.7	+0.6
DALK				eS	Sn	21 48 04.1	-0.6
PET	Petropavlovsk	3.22	228	eP	Pn	21 47 29.7	+1.0
PET				eS	Sn	21 48 05.6	-0.2
KRMR	Karymshinskiy	3.58	230	eP	Pn	21 47 34.9	+1.3
KRMR				eS	Sn	21 48 14.7	0.0
PETK	Petropavlovsk-	3.59	236	Pn	Pn	21 47 34.8	+1.0
	3.4nm,0.3s,baz=63,slow=18,SNR=70						
PETK				Sn	Sn	21 48 15.7	+0.6
	0.7nm,0.3s,baz=88,slow=20,SNR=1.2						
RUS	Russkaya	3.71	223	eP	Pn	21 47 36.5	+1.0
MTVR	Mutnovka	3.81	226	eP	Pn	21 47 38.1	+1.2
APC	Apacha	3.96	237	eP	Pn	21 47 40.6	+1.7
ASAK	Asacha	4.00	226	eP	Pn	21 47 41.2	+1.8
OSSR	Ossora	4.04	3	eP	Pn	21 47 40.0	+0.1
ILAR	Eielson Array	26.26	48	P	P	21 52 21.7	+13
	0.2nm,0.7s,baz=257,slow=8.2,SNR=2.6						
H11N2	WAKE ISLAND Hy	35.59	173	T	T	22 31 01.8	
	baz=355,slow=76,SNR=17						
H11N3	WAKE ISLAND Hy	35.60	173	T	T	22 31 03.7	
	baz=355,slow=76,SNR=15						
H11N1	WAKE ISLAND Hy	35.60	173	T	T	22 31 04.6	
	baz=355,slow=76,SNR=21						
MKAR	Makanchi Array	48.58	295	P	P	21 55 13.9	-2.4
	0.1nm,0.4s,baz=56,slow=7.0,SNR=7.8						
ARCES	ARCESS Array B	51.71	342	P	P	21 55 41.4	+1.7
	2.8nm,1.0s,baz=26,slow=17,SNR=1.4						
FINES	FINESS Array B	58.74	337	P	P	21 56 30.6	+0.3
	1.1nm,0.5s,baz=40,slow=8.7,SNR=16						

IDC 08 21:49:44.9±12.0, 18.°91S×168.°10E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.6/30, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=217.2km s-min=43.9km az=86.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
DZM	Mont Dzumac	3.50	206	Pn	Pn	21 50 40.0	-0.7
	3.1nm,0.3s,baz=65,slow=10,SNR=76						
DZM				Sn	Sn	21 51 22.9	-0.1
	5.9nm,0.3s,baz=129,slow=22,SNR=12						
STKA	Stephens Creek	27.12	236	P	P	21 55 30.8	+1.2
	1.7nm,0.6s,baz=54,slow=12,SNR=3.0						
WRA	Warramunga Arr	31.83	262	P	P	21 56 10.5	-1.1
	0.3nm,0.8s,baz=91,slow=8.3,SNR=1.0						
ASAR	Alice Springs	32.16	255	P	P	21 56 14.8	+0.2
	0.7nm,0.4s,baz=83,slow=8.3,SNR=17						

IDC **08** *22:17:47.7±68.0, 23.°64N×124.°40E, h0km, mb3.6/3, mb1 3.6/3, mb1mx3.2/57, mbtmp3.6/3, MS3.5/1, Ms1 3.5/1, ms1mx2.7/36, Error ellipse: s-maj=1221.0km s-min=178.4km az=132.0*

JMA **08** *22:18:03.2±0.2, 24.°97N×123.°45E, h18km, M2.7*

ISC 08 22:18:03.7±2.1, 24.°94N±0.°06×123.°45E±0.°04, h20km±7km, n12, σ0.°45/19, mb3.6/3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
YOJ	Yonaguni jima	0.62	220	P	Pb	22 18 15.6	-0.2
YOJ				eS	Sb	22 18 24.1	0.0
IRIF	Iriomote-Funau	0.65	157	P	Pb	22 18 16.3	-0.1
IRIF				eS	Sb	22 18 25.2	+0.2
JYNG	Yonagunijimaku	0.67	223	P	Pb	22 18 16.4	-0.2
JYNG				S	Sb	22 18 25.1	-0.4
JIJ	Ishigaki jima	0.85	132	P	Pb	22 18 19.1	-0.7
JIJ				S	Sb	22 18 30.4	-0.4
JISG	Ishigakijimahi	0.86	114	P	Pb	22 18 19.4	-0.5
JISG				eS	Sb	22 18 31.0	0.0
JKRS	Kuro-shima	0.86	144	P	Pb	22 18 19.9	-0.1
JKRS				eS	Sb	22 18 31.9	+0.7
HATJ	Hateruma jima	0.94	160	P	Pb	22 18 21.1	-0.1
HATJ				eS	Sg	22 18 34.3	0.0
JTJ	Tarama	1.18	104	P	Pb	22 18 25.2	-0.1
JTJ				eS	Sn	22 18 40.8	+0.3
SONM	Songino Array	26.54	334	P	P	22 23 41.2	+1.0
	0.4nm,0.8s,baz=153,slow=10.0,SNR=4.1						
LEM	Lembang	35.14	208	LR	LR	22 39 18.3	
	comp=Z,64nm,18.5s,baz=155,slow=38						
MKAR	Makanchi Array	39.26	314	P	P	22 25 30.6	-0.3
	1.1nm,0.9s,baz=106,slow=9.1,SNR=9.1						
ZALV	Zalesovo Beam	40.76	326	P	P	22 25 42.9	-0.4
	0.8nm,0.6s,baz=106,slow=9.4,SNR=4.4						

NEIC **08** *22:23:25.8±1.3, 20.°5S±0.°1×178.°1W±0.°1, h544km±6km, mb4.5/94, Error ellipse: s-maj=15.6km s-min=13.0km az=145.0*

IDC **08** *22:23:28.6±1.8, 20.°83S×178.°17W, h579km±19km, mb3.9/19, mb1 4.0/21, mb1mx3.8/37, mbtmp4.8/21, Error ellipse: s-maj=14.5km s-min=9.9km az=146.0*

ISC 08 22:23:24.6±0.3, 20.°50S±0.°06×178.°04W±0.°06, h534km, n218, σ1.°18/217, mb4.5/68, 26C-5D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
MSVF	Nonsavu	4.61	306	P	P	22 24 52.5	+2.1
NIUE	Niue	7.77	81	P	P	22 25 21.2	+1.5
AFI	Afiamalu	8.88	43	P	P	22 25 29.9	-1.1
	12nm,0.3s,baz=102,slow=2.0,SNR=16						
AFI				S	S	22 27 06.8	-7.9
	9.5nm,0.3s,baz=203,slow=23,SNR=13						
AFI	Afiamalu	8.88	43	P	P	22 25 30.0	-1.0
FUNA	Funafuti	12.20	347	P	P	22 26 05.0	-0.4
DZM	Mont Dzumac	14.54	261	P	P	22 26 29.8	+0.1
	1.4nm,0.3s,baz=66,slow=22,SNR=13						
DZM	Mont Dzumac	14.54	261	P	P	22 26 30.4	+0.6
NOUC	Port Laguerre	14.68	261	P	P	22 26 31.6	+0.6
SANVU	Saraoutou	14.91	287	P	P	22 26 33.6	+0.1
RAR	Rarotonga	17.09	96	P	P	22 26 57.0	+2.0
RAR				IAmb	IAmb	22 27 11.6	
	comp=Z,21nm,1.1s						
MXZ	Matakaoa Point	17.29	190	P	P	22 26 57.7	+1.0
URZ	Urewera	18.19	192	P	P	22 27 02.4	-2.4
	comp=Z,1.2nm,0.3s,baz=346,slow=4.9,SNR=7.1						
URZ				S	S	22 29 56.7	-7.4
	comp=Z,0.3nm,0.3s,baz=213,slow=20,SNR=2.5						
URZ	Urewera	18.19	192	P	P	22 27 04.1	-0.7
URZ				IAmb	IAmb	22 27 04.7	
	comp=Z,18nm,0.9s						
KNTN	Kanton	18.67	20	P	P	22 27 09.1	-0.4
HIZ	Hauiti	18.97	197	P	P	22 27 14.2	+2.2
BKZ	Black Stump Fm	19.19	193	P	P	22 27 14.2	+0.2
QRZ	Quartz Range	21.79	200	P	P	22 27 37.5	0.0
QRZ				IAmb	IAmb	22 27 48.3	
	comp=Z,18nm,0.9s						
TUWZ	Tuamarina	21.94	196	P	P	22 27 38.3	-0.6
THZ	Tophouse	22.54	198	P	P	22 27 43.5	-0.8
THZ				IAmb	IAmb	22 27 48.5	
	comp=Z,21nm,1.2s						
WHZ	Wether Hill Ro	27.82	201	P	P	22 28 31.8	+1.0
WHZ				IAmb	IAmb	22 28 32.8	
	comp=Z,9.3nm,0.8s						
EIDS	Eidsvold	28.81	254	P	P	22 28 40.3	+0.6
EIDS				IAmb	IAmb	22 28 40.9	
	comp=Z,16nm,0.6s						
ARMA	Armidale	29.03	244	P	P	22 28 43.3	+1.6
ARMA				IAmb	IAmb	22 28 43.7	
	comp=Z,13nm,0.8s						
CTA	Charters Tower	33.45	264	P	P	22 29 20.2	+0.6
	comp=Z,59nm,0.5s,baz=94,slow=11,SNR=85						
PMG	Port Moresby	35.30	283	P	P	22 29 35.5	+0.3
	comp=Z,44nm,0.9s,baz=99,slow=6.6,SNR=17						
PMG	Port Moresby	35.30	283	P	P	22 29 35.4	+0.3
PATS	Pohnpei	35.75	317	P	P	22 29 38.7	-0.2
PATS				IAmb	IAmb	22 29 52.4	
	comp=Z,21nm,1.0s						
TOO	Toolangi	35.86	234	P	P	22 29 40.4	+0.9
TOO				IAmb	IAmb	22 29 41.0	
	comp=Z,7.7nm,0.8s						
TAU	Tasmania Unive	36.59	224	P	P	22 29 46.0	+0.5
TAU				IAmb	IAmb	22 29 49.9	

comp=Z,24nm,1.0s
STKA Stephens Creek 37.75 244 P P 22 29 54.3 -0.8
comp=Z,7.2nm,0.6s,baz=96,slow=12,SNR=8.3
STKA Stephens Creek 37.75 244 P P 22 29 55.5 +0.3
BBOO Buckleboo 42.51 244 P P 22 30 33.3 +0.1
BBOO IAmb IAmb 22 30 33.7
comp=Z,16nm,0.8s
WR0 Warramunga Arr 44.37 262 IAmb IAmb 22 30 49.0
comp=Z,38nm,1.1s
GENI Genyem 44.45 288 P P 22 30 48.8 +0.3
comp=Z,118nm,0.8s
AS31 Alice Springs 44.48 257 IAmb IAmb 22 30 49.5
comp=Z,14nm,0.7s
ASAR Alice Springs 44.48 257 P P 22 30 48.8 +0.1
comp=Z,51nm,0.6s,baz=98,slow=7.6,SNR=564
ASAR PcP PcP 22 32 20.9 +0.3
comp=Z,2.9nm,0.6s,baz=95,slow=3.8,SNR=4.5
ASAR S S 22 36 41.3 -3.9
comp=Z,4.1nm,0.9s,baz=95,slow=16,SNR=16
ASAR Alice Springs 44.48 257 P P 22 30 48.6 -0.1
WB2 Warramunga Arr 44.55 262 pP 22 32 25.2 -0.1
WRAB Tennant Creek 44.55 262 P P 22 30 48.6 -0.6
WRA Warramunga Arr 44.56 262 P P 22 30 48.8 -0.6
comp=Z,23nm,0.6s,baz=98,slow=7.8,SNR=164
WRA S S 22 36 40.8 -5.6
comp=Z,1.3nm,0.9s,baz=95,slow=13,SNR=2.6
KHU Kahuku 45.20 31 P P 22 30 54.9 +0.5
KHLU Kahalu`u 45.37 30 P P 22 30 56.0 +0.5
AIN Ainahou 45.39 31 P P 22 30 56.8 +1.0
HUH Hualalai 45.48 30 P P 22 30 56.6 0.0
HUH IAmb IAmb 22 31 08.8
comp=Z,22nm,0.8s
MLH Mauna Loa 45.53 31 P P 22 30 57.8 +0.9
HMH Humu'ula Sheep 45.57 30 P P 22 30 58.2 +0.8
KEKH Kekaha 45.87 24 P P 22 30 59.3 +0.1
FORT Forrest 49.26 247 P P 22 31 24.3 -0.3
KNRA Kununurra 50.62 266 P P 22 31 34.6 -0.1
FAKI Fak Fak 51.46 283 P P 22 31 40.8 -0.2
FAKI IAmb IAmb 22 31 42.2
comp=Z,17nm,0.8s
FITZ Fitzroy Crossi 52.99 262 P P 22 31 52.2 +0.4
comp=Z,7.8nm,0.6s,baz=114,slow=4.0,SNR=11
FITZ Fitzroy Crossi 52.99 262 P P 22 31 52.0 +0.2
SIJI Sorong 53.20 285 P P 22 31 53.6 +0.2
comp=Z,104nm,0.7s,baz=94,slow=5.7,SNR=53
SWI Sorong 53.21 285 P P 22 31 53.5 +0.1
comp=Z,1μmcomp=Z,163nm,0.9s
AAI Ambon 54.88 280 P P 22 32 05.0 -0.3
comp=Z,44nm,1.0s
NLAI Namlea 56.06 280 P P 22 32 13.4 -0.1
comp=Z,46nm,0.7s
SOEI Soe 56.46 272 P P 22 32 17.3 +0.9
comp=Z,137nm,0.8s
TNTI Ternate 57.42 285 P P 22 32 22.6 -0.2
comp=Z,44nm,0.9s
TNTI Ternate 57.42 285 P P 22 32 22.7 -0.2
TNTI IAmb IAmb 22 32 24.0
comp=Z,37nm,0.9s
SANI Sanana 57.54 281 P P 22 32 23.4 -0.2
comp=Z,38nm,0.9s
PSA00 Pilbara Seismi 57.63 257 IAmb IAmb 22 32 24.6
comp=Z,27nm,0.8s
NWAO Narrogin (SRO) 58.33 243 P P 22 32 28.6 -0.1
NWAO IAmb IAmb 22 32 32.8
comp=Z,22nm,1.1s
NWAO Narrogin (SRO) 58.33 243 P P 22 32 29.1 +0.3
NWAO IAmb IAmb 22 32 32.8
comp=Z,18nm,1.1s
MORW Morawa 59.79 248 P P 22 32 38.1 -0.5
GIRL Giralia 62.51 255 P P 22 32 57.2 +0.7
JAGI Jajag, Banyuwa 66.34 270 P P 22 33 19.7 -1.2
JAGI IAmb IAmb 22 33 20.6
comp=Z,31nm,1.0s
QSPA South Pole Qui 69.56 180 P P 22 33 41.6 +1.8
KKM Kota Kinabalu 69.72 285 P P 22 33 41.2 -0.4
KKM IAmb IAmb 22 33 43.0
comp=Z,11nm,0.7s
UGM Wanagama 69.92 269 P P 22 33 41.9 -0.8
MJAR Matsushiro Arr 70.19 324 P P 22 33 43.1 -0.7
comp=Z,4.0nm,0.5s,baz=138,slow=6.1,SNR=23
MJAR Matsushiro Arr 70.19 324 P P 22 33 43.5 -0.2
MAJO Matsushiro 70.19 324 P P 22 33 43.6 -0.2
MAT Matsushiro 70.19 324 P P 22 33 43.9 +0.1
MAT eS S 22 42 13.8 +0.9
MJB9 Matsu-Tunnel 70.19 324 P P 22 33 43.8 0.0
MJB9 IAmb IAmb 22 33 44.1
comp=Z,7.5nm,0.8s
KSM Kuching 73.37 278 P P 22 34 03.2 +0.4
KSM IAmb IAmb 22 34 03.9
comp=Z,12nm,0.7s
YULB Yu-li 73.47 303 P P 22 34 01.8 -1.3
NACB Ninganchiao 73.64 304 P P 22 34 03.2 -0.8
NACB IAmb IAmb 22 34 16.8
comp=Z,23nm,1.0s
ASAJ Asahikawa 73.71 332 P P 22 34 06.0 +2.0
comp=Z,12nm,0.7s,baz=222,slow=4.9,SNR=16
SSLB Suanglung 73.94 304 P P 22 34 05.1 -0.8
TPUB Ta-pu 73.94 303 P P 22 34 05.1 -0.8
TPUB IAmb IAmb 22 34 05.1
comp=Z,23nm,0.8s
KSRS Korea Array 76.86 319 P P 22 34 22.9 +1.1
comp=Z,2.1nm,0.5s,baz=130,slow=6.1,SNR=12
KSAR Wonju Array Be 76.88 319 P P 22 34 22.5 +0.7
SAO San Andreas Ge 78.06 43 P P 22 34 28.5 +0.2
KMRM Mail Ridge 78.78 39 P P 22 34 33.8 +1.7
KMRM IAmb IAmb 22 34 35.9
comp=Z,21nm,0.9s
USRK Ussuriysk Ar. 78.94 326 P P 22 34 34.0 +1.3
comp=Z,6.2nm,0.7s,baz=119,slow=3.9,SNR=11
DLV T Lat 79.08 287 IAmb IAmb 22 34 36.5
comp=Z,9.4nm,0.9s
NJ2 Nanjing 79.85 310 eP P 22 34 38.8 +1.0
RUBR Rubicon Trail 80.24 42 P P 22 34 40.5 +0.5
YBH Yreka Blue Hor 80.32 39 P P 22 34 41.0 +0.8
YBH IAmb IAmb 22 34 43.1
comp=Z,6.9nm,0.8s
GLA Glamis 80.46 49 P P 22 34 39.9 -1.2
GLA IAmb IAmb 22 34 49.4
comp=Z,7.0nm,0.7s
PNTR Pine Nut 80.61 42 P P 22 34 42.4 +0.4
PNTR IAmb IAmb 22 34 44.3
comp=Z,14nm,0.8s
NVAR Mina Array Bea 81.06 43 P P 22 34 45.9 +1.6
comp=Z,2.6nm,0.8s,baz=225,slow=8.6,SNR=14
KVN Kaiserville 81.54 43 P P 22 34 47.7 +1.0
MOD Modoc Plateau 81.85 40 P P 22 34 48.8 +0.7
MOD IAmb IAmb 22 34 50.7
comp=Z,8.2nm,1.1s
KLR Kul'dur 82.51 329 P P 22 34 52.4 +1.2
comp=Z,2.1nm,0.8s,baz=104,slow=7.7,SNR=6.6
PINE Pine Mountain 82.61 38 P P 22 34 52.6 +0.5
PINE IAmb IAmb 22 34 55.0
comp=Z,12nm,0.9s
TUC Tucson 83.01 52 P P 22 34 54.3 +0.1
IPM Ipoh 83.09 277 P P 22 34 54.6 -0.3
IPM IAmb IAmb 22 34 56.4
comp=Z,18nm,0.7s
WVOR Wild Horse Val 83.16 40 P P 22 34 55.9 +1.1
X16A Lo Mia Camp, P 83.58 50 P P 22 34 58.1 +1.0
I07A Izee 83.62 38 IAmb IAmb 22 34 59.6
comp=Z,6.8nm,1.0s
LCMT Little Creek M 83.64 47 P P 22 34 58.2 +0.9
319A Douglas 83.68 53 P P 22 34 58.5 +0.9
319A IAmb IAmb 22 35 01.1
comp=Z,6.0nm,0.9s
KULM Kulim 83.73 278 P P 22 34 57.4 -0.7
KULM IAmb IAmb 22 34 59.8
comp=Z,9.5nm,0.7s
U15A North Rim 83.99 48 P P 22 35 00.2 +1.0
PSUT Pine Spring 84.03 45 P P 22 35 00.2 +0.9
GAMB Gambell 84.15 3 P P 22 34 59.4 +0.4
RPSI Rantau Prapat 84.41 275 P P 22 35 00.1 -1.4
RPSI IAmb IAmb 22 35 02.1
comp=Z,10.0nm,0.8s
PSI Prapat 84.45 275 P P 22 35 00.6 -1.2
comp=Z,10nm,0.9s,baz=86,slow=3.9,SNR=6.7
SUA Susitna One 84.57 13 P P 22 35 01.4 +0.1
HMT Hamilton 85.10 16 P P 22 35 03.6 -0.1
HMT IAmb IAmb 22 35 21.3
comp=Z,27nm,1.2s
GHO Glory Hole Cre 85.24 13 P P 22 35 04.6 +0.1
GHO IAmb IAmb 22 35 05.2
comp=Z,7.6nm,0.8s
BMO Blue Mountains 85.34 39 P P 22 35 05.9 +0.5
ENH Enshi 86.01 304 P P 22 35 08.4 -0.4
ENH IAmb IAmb 22 35 10.7
comp=Z,14nm,0.8s
F10A Beach Ranch, E 86.03 38 P P 22 35 09.2 +0.5
F10A IAmb IAmb 22 35 10.5
comp=Z,9.1nm,0.8s
MNTX Cornudas Mount 86.79 55 P P 22 35 13.3 +0.8
TX31 Lajitas Ar. Si 87.09 57 P P 22 35 14.5 +0.4
TXAR Lajitas Array 87.09 57 P P 22 35 15.8 +1.7
comp=Z,1.7nm,0.9s,baz=230,slow=6.6,SNR=10
TXAR Lajitas Array 87.09 57 P P 22 35 16.1 +2.0
PBKT Sadao Pong 87.58 289 IAmb IAmb 22 35 19.2
comp=Z,8.0nm,1.0s
PAYG Puerto Ayora 87.67 90 P P 22 35 16.6 -0.4
MCMT McKenzie Canyo 87.98 40 P P 22 35 18.1 0.0
CCB Clear Creek Bu 88.03 13 P P 22 35 16.6 -0.8
CCB IAmb IAmb 22 35 17.8
comp=Z,3.9nm,0.5s
XAN Xi'an 88.10 307 P P 22 35 19.6 +1.0
XAN Xi'an 88.10 307 P P 22 35 18.8 +0.2
XAN IAmb IAmb 22 35 20.6
comp=Z,11nm,0.8s
VNA3 Neumayer Olymp 88.14 176 P P 22 35 18.4 +0.2
IMAR Indian Mountai 88.17 10 P P 22 35 17.8 -0.3
SCRK Sand Creek 88.28 14 P P 22 35 19.3 +0.5
ILAR Eielson Array 88.33 13 P P 22 35 18.7 -0.2
comp=Z,0.8nm,0.4s,baz=218,slow=5.4,SNR=14
ILAR Eielson Array 88.33 13 P P 22 35 18.6 -0.3
REDW Red Top Meadow 88.46 42 P P 22 35 20.2 -0.1
REDW IAmb IAmb 22 35 23.2
comp=Z,3.5nm,1.0s
FXWY Fox Creek 88.49 42 P P 22 35 20.4 -0.1
VNA2 Neumayer--Watz 88.58 177 P P 22 35 20.7 +0.5
baz=201,slow=3.7
PD31 Pinedale Array 88.99 43 P P 22 35 23.6 +0.7
PDAR Pinedale Array 88.99 43 P P 22 35 23.8 +0.9
comp=Z,1.1nm,0.6s,baz=206,slow=3.5,SNR=11
PDAR Pinedale Array 88.99 43 P P 22 35 23.6 +0.7
SMCO Snowmass 89.01 47 pP 22 37 22.3 +2.4
KMI Kunming 89.31 297 P P 22 35 26.7 +2.0
HHC Hu-ho-hao-te 89.33 314 eP P 22 35 23.1 -1.1
DAWY Dawson 89.47 16 P P 22 35 24.8 +0.5
WALA Waterton Lakes 89.61 36 P P 22 35 25.7 +0.3
CM31 Chiang Mai Arr 90.08 290 P P 22 35 29.1 +1.1
CM31 IAmb IAmb 22 35 30.7
comp=Z,10nm,0.9s
CMAR Chiang Mai Arr 90.08 290 P P 22 35 29.8 +1.7
comp=Z,7.2nm,0.8s,baz=127,slow=3.0,SNR=53
CMAR PP PP 22 39 13.3 +2.0
comp=Z,0.3nm,0.3s,baz=140,slow=8.1,SNR=4.8
CHTO Chiang Mai 90.21 290 P P 22 35 29.3 +0.7
LZH Lanzhou 92.74 307 eP P 22 35 41.4 +1.2
LZH pP pwP 22 37 41.3 +0.4
LZH sP sP 22 38 43.6 +13
LZH PP PP 22 39 40.6 +8.7
SONM Songino Array 95.73 319 P P 22 35 53.7 +0.2
comp=Z,0.5nm,0.8s,baz=143,slow=5.9,SNR=3.7
SONM Songino Array 95.73 319 IAmb IAmb 22 35 56.7
comp=Z,0.6nm,0.8s
ZALV Zalesovo Beam 110.47 321 PKiKP PKiKP 22 40 54.9 -1.1
comp=Z,0.9nm,0.6s,baz=194,slow=1.4,SNR=5.5
MKAR Makanchi Array 111.17 313 PKiKP PKiKP 22 40 56.1 -1.5
comp=Z,0.9nm,0.6s,baz=67,slow=1.8,SNR=12
KURBB Kurchatov Arra 114.02 317 PKiKP PKPdf 22 41 00.8 -2.1
comp=Z,0.8nm,0.4s,baz=97,slow=1.8,SNR=11
BVAR Borovoye Array 119.06 320 PKP PKPdf 22 41 11.9 -0.6
comp=Z,2.7nm,0.6s,baz=130,slow=1.6,SNR=25
ARU Arti 125.18 325 PKP PKPdf 22 41 23.8 -0.3
comp=Z,1.1nm,0.5s,baz=183,slow=1.9,SNR=4.8
AKTO Aktyubinsk 127.04 318 PKP PKPdf 22 41 27.9 0.0
comp=Z,1.5nm,0.7s,baz=89,slow=4.8,SNR=6.0
ARCES ARCESS Array B 128.92 350 PKP PKPdf 22 41 30.7 -0.2
comp=Z,3.0nm,0.8s,baz=47,slow=2.5,SNR=6.1
ARCES ARCESS Array B 128.92 350 PKPdf PKPdf 22 41 31.0 +0.1
FINES FINESS Array B 135.76 344 PKhKP PKPpre 22 41 34.2
comp=Z,3.6nm,0.9s,baz=184,slow=7.6,SNR=1.7
HFS Hagfors 139.54 351 PKhKP PKPpre 22 41 44.1
comp=Z,1.4nm,0.4s,baz=96,slow=4.5,SNR=11
AKASG Malin Array Be 143.00 331 PKhKP PKPpre 22 41 54.6
comp=Z,5.0nm,0.5s,baz=42,slow=4.4,SNR=41
MBAR Mbarara 144.88 237 PKPab 22 42 03.5 +0.2
EKA Eskdalemuir Ar 145.01 5 PKPbc PKPbc 22 42 01.8 +0.3
comp=Z,1.9nm,0.7s,baz=344,slow=2.7,SNR=4.2
GAZ Gaziantep 145.18 306 PKPab 22 42 03.6 -0.2
SORM Soroca 145.19 329 ⥣P PKPbc 22 42 01.8 -0.4
BZK Bozkurt 145.54 316 ⥣P PKPbc 22 42 04.1 +0.6
KWP Kalwaria Pacla 146.57 335 PKPbc 22 42 06.5 +0.4
ASF Jabal al Asfar 146.74 298 PKPbc PKPbc 22 42 07.1 -0.2
comp=Z,5.7nm,0.9s,baz=351,slow=2.9,SNR=11
BRTR Keskin Array B 146.81 312 PKPbc PKPbc 22 42 07.0 -0.3
comp=Z,2.8nm,0.6s,baz=142,slow=4.5,SNR=20
BUR08 Bucovina Ar. S 147.03 331 PKPbc 22 42 08.4 +0.8
BURAR Bucovina Array 147.04 331 ⥣P PKPbc 22 42 08.5 +0.9
BURAR Bucovina Array 147.04 331 PKPbc 22 42 08.4 +0.8
GHRR 147.07 327 ⥣P PKiKP 22 42 08.8 -0.6
TOPG Topolog 147.32 324 ⥣P PKPbc 22 42 08.8 +0.6
VRI Vrincioaia 147.55 327 ⥣P PKPbc 22 42 09.3 +0.5
HARR Harsova 147.69 324 ⥥P PKPbc 22 42 10.1 -0.6
MMAI Mount Meron Ar 147.78 300 PKPbc PKPbc 22 42 10.5 +0.6
comp=Z,8.6nm,0.6s,baz=67,slow=6.4,SNR=43
TRPA Tarpa 147.82 334 ⥣P PKPbc 22 42 10.0 +0.6
OZUR 147.86 328 ⥥P PKPbc 22 42 09.9 +0.2
MANR Mangalia 147.87 322 ⥣P PKiKP 22 42 10.6 -0.5
OSTC Ostas 147.96 343⥣ePKP PKiKP 22 42 10.5 -0.6
CHVC Chvalec 147.98 343⥣ePKP PKPbc 22 42 08.7 -1.1
CLL Collm 148.06 347⥥iPKPbc PKPbc 22 42 10.3 +0.4
comp=Z,11nm,0.8s
CLL ePKPab PKPab 22 42 14.0 -0.7
CLL epPKPab pPKPab 22 44 18.0 +3.0
CLL Collm 148.06 347 PKPbc 22 42 10.4 +0.5
UPC Upice 148.06 343⥣ePKP PKPbc 22 42 10.5 +0.5
DPC Dobruska-Polom 148.12 342⥣ePKP PKiKP 22 42 10.9 -0.6
DPC ePKPAB PKPab 22 42 15.3 +0.3
DOPR Dopca 148.15 328 ⥣P PKiKP 22 42 11.3 -0.4
MLR Muntele Rosu 148.20 327 ⥣P PKPbc 22 42 10.8 +0.1
KRLC Kraliky 148.23 342⥣ePKP PKPbc 22 42 10.9 +0.4
PVCC Panska Ves 148.42 345⥣ePKP PKPbc 22 42 11.2 +0.3
CJR Cluj-Napoca 148.45 331 ⥥P PKiKP 22 42 12.2 -0.1
VOIR 148.69 328 ⥥P PKPbc 22 42 12.3 +0.4
DRGR 148.79 332 ⥣P PKPbc 22 42 12.2 +0.2
EIL Elat 148.84 294 PKPbc PKPbc 22 42 12.1 -0.5
comp=Z,5.2nm,0.7s,baz=303,slow=2.7,SNR=4.5
CSS Mathiatis 148.87 304 PKPbc 22 42 12.4 -0.1
PRU Pruhonice 148.92 344⥣ePKP PKPbc 22 42 12.4 +0.3
GOPC GO Pecny, Ondr 148.93 344 ePKP PKPbc 22 42 12.5 +0.3
ARR Arges 148.95 328 ⥣P PKiKP 22 42 13.7 +0.3
TREC Trest 149.30 343⥣ePKP PKPbc 22 42 13.0 -0.1
HUMR Humele 149.36 327 ⥣P PKPbc 22 42 13.4 0.0
GZR Gura Zlata 149.82 330 ⥣P PKPbc 22 42 14.4 -0.1
KHC Kasperske Hory 149.96 345⥣ePKP PKiKP 22 42 15.2 -0.1
KHC ePKPAB PKPab 22 42 23.7 +1.0
BZS Buzias 150.18 332 ⥣P PKPbc 22 42 15.1 -0.2
GERES GERESS Array B 150.19 344 PKPbc PKPbc 22 42 15.3 -0.1
comp=Z,1.6nm,0.6s,baz=86,slow=5.5,SNR=3.6
GERES GERESS Array B 150.19 344 PKPbc 22 42 15.4 +0.1
PLVB Pleven 150.34 325 ⥣P PKiKP 22 42 16.2 0.0
CONA Conrad Observa 150.42 341 i PKiKP PKiKP 22 42 16.4 0.0
comp=Z,3.2nm,0.5s
MANT Manisa 150.88 314 PKPbc 22 42 16.8 -0.6
MOA Molln 150.96 343 i PKiKP PKPbc 22 42 17.1 0.0
comp=Z,1.1nm,0.4s
VTS Vitosha 151.60 326 ⥣P PKiKP 22 42 19.1 0.0
VTS Vitosha 151.60 326 PKPbc 22 42 18.3 -0.5
SOKA Soboth 151.79 341 i PKiKP PKPbc 22 42 18.5 -0.5
comp=Z,1.0nm,0.4s
KBA Koelnbreinsper 151.91 343 i PKiKP PKPbc 22 42 18.7 -0.7
comp=Z,1.2nm,0.5s
WATA Walderalm 152.11 346 i PKiKP PKPbc 22 42 19.6 -0.2
comp=Z,1.6nm,0.5s
RETA Reutte 152.15 347 i PKiKP PKPbc 22 42 19.6 -0.2
comp=Z,1.0nm,0.6s
WTTA Wattenberg 152.17 346 i PKiKP PKPbc 22 42 20.0 0.0
comp=Z,2.5nm,0.5s
MOTA Moosalm 152.21 347 i PKiKP PKPbc 22 42 19.8 -0.2
comp=Z,1.4nm,0.5s
SQTA Sankt Quirin 152.31 346 i PKiKP PKPbc 22 42 20.2 0.0
comp=Z,1.8nm,0.7s
ABTA Abfaltersbach 152.44 344 i PKiKP PKPbc 22 42 19.9 -0.5
comp=Z,4.1nm,0.6s
FETA Feichten 152.60 347 i PKiKP PKiKP 22 42 21.0 0.0
comp=Z,1.1nm,0.5s
DAVOX Davos/Dischmat 153.00 348 PKPbc PKPbc 22 42 21.2 -0.6
comp=Z,2.2nm,0.6s,baz=282,slow=8.0,SNR=5.9
TORD Torodi Ar. Bea 172.68 178 PKP PKPdf 22 42 31.9 -1.3
comp=Z,1.4nm,0.9s,baz=244,slow=0.6,SNR=6.4
TORD PKPab PKPab 22 44 01.4 -1.0
comp=Z,0.5nm,0.9s,baz=160,slow=4.7,SNR=3.8

NIED ***08*** *22:25:00, 25.00N×123.50E, h5km, Mw4.2 Best double couple: Mo2.03000×10[15] NP1:φs61.00000°, δ64.00000°, λ-103.00000°. NP2:φs270.00000°, δ29.00000°, λ-65.00000°.*

JMA ***08*** *22:25:19.6±0.1, 24.98N×123.45E, h20km±3km, M3.6*

NEIC ***08*** *22:25:25.9±2.1, 25.07N±0.07×123.27E±0.07, h57km±7km, mb4.3/26, Error ellipse: s-maj=10.9km s-min=8.8km az=155.0*

IDC ***08*** *22:25:30.2±7.7, 25.06N×123.39E, h99km±75km, mb3.6/13, mb1 3.7/13, mb1mx3.4/58, mbtmp4.0/13, MS3.5/11, Ms1 3.5/11, ms1mx3.2/45, Error ellipse: s-maj=25.4km s-min=15.3km az=64.0*

ISC 08 22:25:19.4±1.3, 24.99N±0.05×123.46E±0.02, h10km±9km, n84, σ1.22/85, mb4.1/24, MS3.5/8, Southwestern Ryukyu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
YOJ Yonaguni jima 0.67 218 P Pg 22 25 32.1 -0.2
YOJ eS Sg 22 25 40.4 -0.6
YOJ Yonaguni jima 0.67 218 Pg 22 25 32.6 +0.3
IRIF Iriomote-Funau 0.70 160 P Pg 22 25 32.8 0.0
IRIF S Sg 22 25 42.5 +0.6
JYNG Yonagunijimaku 0.71 221 P Pg 22 25 33.0 -0.2
JYNG eS Sg 22 25 42.3 -0.2
JISG Ishigakijimahi 0.87 117 P Pg 22 25 35.7 -0.4
JISG eS Sg 22 25 47.6 +0.2
JIJ Ishigaki jima 0.88 135 P Pg 22 25 35.7 -0.6
JIJ eS Sg 22 25 46.9 -0.8
JKRS Kuro-shima 0.90 146 P Pg 22 25 36.4 -0.3
JKRS S Sg 22 25 48.4 0.0
HATJ Hateruma jima 0.98 161 P Pg 22 25 37.6 -0.6
HATJ eS Sg 22 25 49.7 -1.3
JTJ Tarama 1.18 107 P Pb 22 25 41.2 -0.6
JTJ eS Sb 22 25 57.1 0.0
JIRB Irabujima 1.56 96 P Pn 22 25 47.2 +0.1
JIRB eS Sn 22 26 07.0 -0.4
JIKM Ikemajima 1.62 92 P Pn 22 25 48.2 +0.2
JMJ2 Miyako jima3 1.71 98 P Pn 22 25 49.3 +0.1
JMJ2 eS Sn 22 26 10.7 -0.5
JOGS Gusukube 1.78 97 P Pn 22 25 50.8 +0.6
TATO Taipei 1.79 270 Pn Pb 22 25 52.8 +0.5
NACB Ninganchiao 1.89 245 Pb 22 25 54.5 +0.6
YHNB Yeheng 1.92 261 Pn 22 25 52.6 +0.4
YULB Yu-li 2.54 232 Pb 22 26 04.0 -1.0
SSLB Suanglung 2.58 243 Pb 22 26 04.1 -1.7
TWG Pinlang 3.07 226 Pn Pb 22 26 11.3 -2.8
TPUB Ta-pu 3.09 238 Pn 22 26 10.9 +2.7
KNMB Chin-men Tao 4.64 265 Pn Pn 22 26 32.1 +2.5
JOW Kunigami 4.71 66 Pn Pb 22 26 39.2 -2.8
SSE Sheshan 6.41 342 Pn Pn 22 26 52.5 -1.3
HKPS Hong Kong Po S 8.96 254 Pn Pn 22 27 29.8 +0.9
JNU Nakatsue 10.38 37 LR LR 22 32 37.6
comp=Z,130nm,20.5s,baz=214,slow=41
JNU Nakatsue 10.38 37 Pn Pn 22 27 51.5 +3.2
KSRS Korea Array 12.99 16 P P 22 28 35.5 +0.9
0.2nm,0.3s,baz=199,slow=12,SNR=12
KSRS LR LR 22 34 17.9
comp=Z,121nm,18.8s,baz=215,slow=41
DAV Davao City (W) 17.93 173 LR LR 22 37 43.6
comp=Z,133nm,18.2s,baz=346,slow=41
USRK Ussuriysk Ar. 20.39 18 P Pn 22 29 59.0 +0.7
1.1nm,0.7s,baz=168,slow=7.4,SNR=2.8
USRK Ussuriysk Ar. 20.39 18 P P 22 29 57.4 +1.1
GUMO Guam 23.13 115 LR LR 22 39 38.6
comp=Z,162nm,18.8s,baz=68,slow=36
ERM Erimo 23.53 39 P P 22 30 31.2 +1.6
ASAJ Asahikawa 24.64 34 P P 22 30 39.4 -0.6
3.5nm,0.7s,baz=217,slow=17,SNR=4.5
JKA Kamikawa-asahi 24.64 34 P P 22 30 39.4 -0.6
KLR Kul'dur 25.05 13 P P 22 30 45.5 +1.8
2.1nm,0.7s,baz=252,slow=3.4,SNR=8.7
KLR LR LR 22 41 53.4
comp=Z,91nm,19.3s,baz=277,slow=39
ULN Ulaanbaatar 26.26 335 P P 22 30 56.3 +1.4
SONM Songino Array 26.50 334 P P 22 30 57.4 +0.4
1.9nm,0.8s,baz=145,slow=9.2,SNR=18
SONM LR LR 22 43 12.7
comp=Z,46nm,20.8s,baz=208,slow=40
SONM Songino Array 26.50 334 P P 22 30 58.6 +1.6
TLY Talaya 30.65 336 P P 22 31 34.6 +0.7
1.6nm,0.6s,baz=267,slow=4.3,SNR=4.5
TLY Talaya 30.65 336 P P 22 31 34.5 +0.6
YAK Yakutsk 37.27 5 LR LR 22 48 42.7
comp=Z,68nm,18.7s,baz=294,slow=37
MK31 Makanchi Array 39.23 314 P P 22 32 48.5 +0.6
MK31 IAmb IAmb 22 32 54.9
comp=Z,3.0nm,0.9s
MKAR Makanchi Array 39.23 314 P P 22 32 48.5 +0.6
comp=Z,2.8nm,0.8s,baz=102,slow=10,SNR=26
MKAR Makanchi Array 39.23 314 P P 22 32 47.8 -0.1
MAKZ Makanchi 39.44 314 P P 22 32 50.3 +0.6
MAKZ IAmb IAmb 22 32 56.7
comp=Z,4.0nm,0.8s
MA2 Magadan 39.46 22 LR LR 22 49 37.2
comp=Z,75nm,18.1s,baz=334,slow=37
ZAA0 Zalesovo Array 40.73 326 P P 22 33 00.1 -0.1
ZAA0 IAmb IAmb 22 33 06.4
comp=Z,3.7nm,0.8s
ZALV Zalesovo Beam 40.73 326 P P 22 33 00.0 -0.1
comp=Z,3.4nm,0.7s,baz=117,slow=7.1,SNR=15
ZALV LR LR 22 50 57.5
comp=Z,92nm,20.6s,baz=252,slow=38
ZALV Zalesovo Beam 40.73 326 P P 22 33 00.5 +0.3
KURK Kurchatov 42.83 319 P P 22 33 17.8 +0.4
KURK IAmb IAmb 22 33 18.6
comp=Z,5.2nm,1.1s
KURBB Kurchatov Arra 42.85 319 P P 22 33 18.1 +0.4
comp=Z,1.6nm,0.7s,baz=111,slow=8.8,SNR=12
WRA Warramunga Arr 45.90 166 P P 22 33 43.0 +0.8
comp=Z,1.4nm,0.7s,baz=347,slow=7.9,SNR=3.1
WRA Warramunga Arr 45.90 166 IAmb IAmb 22 33 51.3
comp=Z,0.4nm,0.8s
WR0 Warramunga Arr 45.96 165 P P 22 33 42.5 -0.2
WR0 IAmb IAmb 22 33 51.3
comp=Z,7.9nm,1.0s
KKAR Karatay Array 46.65 306 P P 22 33 47.7 -0.4
TIXI Tiksi 46.79 2 LR LR 22 56 29.9
comp=Z,95nm,18.1s,baz=178,slow=40
TIXI Tiksi 46.79 2 P P 22 33 48.1 -0.5
TIXI IAmb IAmb 22 34 01.1
comp=Z,4.4nm,0.9s
BVAR Borovoye Array 48.38 320 P P 22 34 00.1 -1.2
comp=Z,0.5nm,0.5s,baz=104,slow=8.4,SNR=6.9
BRVK Borovoye 48.45 320 P P 22 34 01.9 0.0
AS31 Alice Springs 49.41 167 P P 22 34 12.5 +2.9
ASAR Alice Springs 49.42 167 P P 22 34 11.4 +1.9
comp=Z,0.8nm,0.6s,baz=352,slow=6.6,SNR=4.6
ABKAR Akbulak array 54.37 314 P P 22 34 46.5 +0.2
GAMB Gambell 56.78 29 P P 22 35 00.3 -3.0
GAMB IAmb IAmb 22 35 10.5
comp=Z,1.8nm,1.0s
DZM Mont Dzumac 62.69 135 P P 22 35 45.2 +0.6
PPLA Purkeypile 65.52 30 P P 22 36 03.1 +0.2
SKT Skwentna 65.94 31 P P 22 36 05.8 +0.4
KTH Kantishna Hill 66.00 29 P P 22 36 06.3 +0.4
KTH IAmb IAmb 22 36 14.6
comp=Z,6.4nm,1.1s
SUA Susitna One 66.39 32 P P 22 36 08.7 +0.3
SOCY Socotra 66.47 273 P P 22 36 05.4 -4.2
SCM Sheep Creek Mo 67.93 31 P P 22 36 18.3 +0.1
SCM IAmb IAmb 22 36 28.0
comp=Z,4.1nm,1.0s
BMAR Burnt Mountain 67.94 25 P P 22 36 19.1 +1.0
RIDG Independent Ri 68.63 29 P P 22 36 22.8 +0.3
SCRK Sand Creek 68.95 28 P P 22 36 24.3 -0.2
EYAK Cordova Ski Ar 68.96 32 P P 22 36 25.1 +0.7
EYAK IAmb IAmb 22 36 36.2
comp=Z,3.8nm,0.8s
DOT Dot Lake 68.99 29 P P 22 36 24.5 -0.2
GLB Gilahina Butte 69.65 31 P P 22 36 28.6 -0.2
HMT Hamilton 69.72 32 P P 22 36 29.2 0.0
BCAR Beaver Creek A 70.14 29 P P 22 36 32.0 +0.2
BARN Barnard Glacie 70.76 31 P P 22 36 33.7 -2.1
BARN IAmb IAmb 22 36 42.8
comp=Z,5.6nm,1.1s
CTGM Chitina Glacie 70.94 31 P P 22 36 37.4 +0.5
CTGM IAmb IAmb 22 36 39.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,2.9nm,0.9s						
FINES	FINESS Array B	71.80	330	P	P	22 36 40.7	-1.1
BRTR	Keskin Array B	74.36	307	P	P	22 36 56.0	-1.6
	comp=Z,0.7nm,0.8s,baz=59,slow=4.4,SNR=3.8						
YKA	Yellowknife Ar	81.42	23	P	P	22 37 36.3	+0.1
	comp=Z,0.7nm,0.7s,baz=308,slow=4.8,SNR=9.0						
NVAR	Mina Array Bea	94.42	44	LR	LR	23 15 46.2	
	comp=Z,36nm,20.2s,baz=344,slow=32						

*ATH **08** 22:31:03.2, 38°.31N×20°.46E, h14km, ML3.1/24, Error ellipse: s-maj=1.4km s-min=0.7km az=268.0*
*THE **08** 22:31:03.3, 38°.32N×20°.43E, h12km, ML3.2/15, Error ellipse: s-maj=0.7km s-min=0.2km az=272.0*
*BEO **08** 22:31:04.0±0.9, 38°.24N×20°.22E, h27km±5km, ML3.2/4*
*IDC **08** 22:31:07.6±5.1, 38°.41N×20°.67E, h42km±55km, mb3.6/5, mb1 3.6/6, mb1mx3.2/55, mbtmp3.8/6, ML2.4/1, Error ellipse: s-maj=31.8km s-min=25.4km az=118.0*
ISC 08 22:31:03.0±0.7, **38°.33N**±0°.02×**20°.45E**±0°.02, **h12**km±4km, **n123**, σ1°.16/160, **mb3.8**/5, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.07	192	P	Pg	22 31 05.6	0.0
KEF4				S	Sg	22 31 07.5	0.0
VSK1	VASILIKIADES	0.12	50	P	Pg	22 31 06.6	+0.4
VSK1				S	Sg	22 31 09.1	+0.5
	49μm,0.2s						
LXR1	Lixouri, Cepha	0.13	182	P	Pg	22 31 06.4	+0.1
LXR1				S	Sg	22 31 09.2	+0.6
KONA	Konidatara, Ke	0.14	46	P	Pg	22 31 06.8	+0.4
KONA				S	Sg	22 31 09.4	+0.5
KEF3	Kipouria, Keph	0.15	211	P	Pg	22 31 06.5	-0.1
KEF3				S	Sg	22 31 09.2	+0.1
ARG2	Argostoli	0.15	167	P	Pg	22 31 06.8	+0.1
ARG2				S	Sg	22 31 09.3	+0.1
ARGA	Argostoli. Kep	0.15	170	P	Pg	22 31 06.7	+0.1
ARGA				S	Sg	22 31 09.3	+0.1
CHV1	Chavriata, Kef	0.15	199	P	Pg	22 31 06.7	0.0
CHV1				S	Sg	22 31 09.8	+0.6
FSK	Fiskardo	0.16	36	P	Pb	22 31 07.2	-0.7
FSK				S	Sg	22 31 09.8	+0.4
	20μm,0.2s						
FSK	Fiskardo	0.16	36	P	Pb	22 31 07.0	-0.9
FSK				S	Sg	22 31 10.1	+0.7
FSK				AML	AML	22 31 10.5	
	comp=N,23458μm,0.2s						
FSK				AML	AML	22 31 10.6	
	comp=E,57009μm,0.3s						
KEF2	Argostoli. Kep	0.17	169	P	Pg	22 31 06.9	0.0
KEF2				S	Sg	22 31 09.6	0.0
VLS	Valsamata	0.19	143	P	Pg	22 31 07.4	+0.1
VLS				S	Sg	22 31 10.6	+0.4
	comp=E,31μm,0.1s						
VLS	Valsamata	0.19	143	P	Pg	22 31 07.3	+0.1
VLS				S	Sg	22 31 10.5	+0.4
VLS				AML	AML	22 31 10.8	
	comp=N,51446μm,0.2s						
VLS				AML	AML	22 31 10.9	
	comp=E,67769μm,0.1s						
EVGI	Lefkada island	0.34	30	P	Pb	22 31 10.2	-0.7
EVGI				S	Sb	22 31 15.7	-0.5
EVGI	Lefkada island	0.34	30	P	Pb	22 31 10.2	-0.7
EVGI				S	Sb	22 31 15.5	-0.7
KFL	Anninata	0.35	129	P	Pg	22 31 10.1	0.0
MGNA	Meganis	0.42	40	P	Pb	22 31 11.7	-0.7
MGNA				S	Sb	22 31 17.7	-1.1
MGNA				AML	AML	22 31 19.7	
	comp=N,4855μm,0.2s						
MGNA				AML	AML	22 31 20.6	
	comp=E,4723μm,0.1s						
VLMS	Volimes, Zakyn	0.48	159	P	Pg	22 31 12.4	-0.1
VLMS				S	Sg	22 31 19.0	0.0
VLMS				AML	AML	22 31 29.2	
	comp=N,8760μm,0.4s						
VLMS				AML	AML	22 31 31.4	
	comp=E,6605μm,0.3s						
LKD2	Lefkada island	0.49	20	P	Pg	22 31 12.7	+0.1
LKD2	Lefkada island	0.49	20	P	Pb	22 31 13.3	-0.3
TSLK	Tsoukalades, L	0.52	18	P	Pb	22 31 13.5	-0.6
TSLK	Tsoukalades, L	0.52	18	P	Pb	22 31 13.5	-0.6
AST1	Astakos	0.55	67	P	Pb	22 31 14.0	-0.5
AST1				S	Sb	22 31 23.1	+0.8
	comp=E,7μm,0.2s						
PDO	Prodromos	0.64	65	P	Pb	22 31 15.5	-0.6
PDO	Prodromos	0.64	65	P	Pb	22 31 15.9	-0.2
PDO				AML	AML	22 31 29.4	
	comp=N,6756μm,0.3s						
PDO				AML	AML	22 31 31.4	
	comp=E,5844μm,0.6s						
ZAK2	Zakynthos	0.65	146	P	Pg	22 31 15.7	0.0
KRI1	kERI	0.73	156	P	Pg	22 31 16.6	-0.6
KRI1				S	Sb	22 31 28.2	+0.7
	comp=E,5μm,0.3s						
RLS	Riolos of Patr	0.85	108	P	Pg	22 31 18.9	-0.6
RLS	Riolos of Patr	0.85	108	P	Pb	22 31 19.4	-0.3
RLS				AML	AML	22 31 38.4	
	comp=E,1701μm,0.7s						
RLS				AML	AML	22 31 43.3	
	comp=N,1848μm,0.4s						
PVO	Paravola	0.90	71	P	Pn	22 31 20.7	-0.7
PVO				S	Sn	22 31 34.0	-0.3
	comp=N,2μm,0.4s						
PVO	Paravola	0.90	71	P	Pn	22 31 20.9	-0.5
PVO				AML	AML	22 31 40.5	
	comp=N,3202μm,0.5s						
PVO				AML	AML	22 31 41.0	
	comp=E,5716μm,0.6s						
DRO	Drossia	1.07	110	P	Pb	22 31 23.1	-0.3
DRO	Drossia	1.07	110	P	Pn	22 31 23.8	0.0
DRO				AML	AML	22 31 45.4	
	comp=N,3632μm,0.3s						
DRO				AML	AML	22 31 46.9	
	comp=E,4360μm,0.3s						
ANX	Ano Chora	1.19	77	P	Pb	22 31 25.1	-0.4
ANX	Ano Chora	1.19	77	P	Pg	22 31 25.9	0.0
ANX				AML	AML	22 31 49.6	
	comp=E,3934μm,0.6s						
ANX				AML	AML	22 31 49.9	
	comp=N,3813μm,0.4s						
IGT	Igoumenitsa	1.20	356	P	Pn	22 31 25.6	-0.1
IGT				S	Sn	22 31 42.4	+0.5
	comp=N,380nm,0.3s						
IGT	Igoumenitsa	1.20	356	*e*Pg	Pg	22 31 28.5	+2.3
IGT				*e*Sg	Sn	22 31 44.6	+2.7
IGT	Igoumenitsa	1.20	356	P	Pg	22 31 26.6	+0.4
IGT				AML	AML	22 31 46.2	
	comp=E,929μm,0.3s						
IGT				AML	AML	22 31 46.9	
	comp=N,699μm,0.6s						
LAKA	Lakka	1.21	94	P	Pn	22 31 25.5	-0.3
LAKA				S	Sn	22 31 43.7	+1.6
	comp=N,452nm,0.4s						
LAKA	Lakka	1.21	94	P	Pb	22 31 25.4	-0.5
LAKA				AML	AML	22 31 51.4	
	comp=E,1048μm,0.6s						
LAKA				AML	AML	22 31 53.2	
	comp=N,758μm,0.7s						
EVR	Evrytania	1.22	61	P	Pg	22 31 25.8	-0.7
EVR				S	Sn	22 31 45.2	+2.8
	comp=N,485nm,0.6s						
EVR	Evrytania	1.22	61	P	Pg	22 31 26.0	-0.5
EVR				AML	AML	22 31 49.5	
	comp=E,960μm,0.4s						
EVR				AML	AML	22 31 53.1	
	comp=N,1120μm,0.9s						
SERG	Sergoula	1.27	86	P	Pn	22 31 26.2	-0.4
SERG				S	Sg	22 31 45.2	+1.2
	comp=N,808nm,0.5s						
SERG	Sergoula	1.27	86	P	Pn	22 31 26.0	-0.6
SERG				AML	AML	22 31 51.4	
	comp=N,1268μm,0.3s						
SERG				AML	AML	22 31 52.9	
	comp=E,1938μm,0.4s						
AMT	Artemida-Makis	1.28	128	P	Pg	22 31 28.9	+1.3
AMT				S	Sg	22 31 45.2	+1.0
	comp=E,992nm,0.5s						
AMT	Artemida-Makis	1.28	128	P	Pg	22 31 27.9	+0.3
AMT				AML	AML	22 31 55.2	
	comp=N,2137μm,0.5s						
AMT				AML	AML	22 31 57.7	
	comp=E,1463μm,0.5s						
TRIZ	Trizonia	1.28	88	P	Pn	22 31 26.4	-0.3
TRIZ				S	Sg	22 31 46.3	+2.0
	comp=E,770nm,0.3s						
TRIZ	Trizonia	1.28	88	P	Pn	22 31 26.4	-0.3
ALIK	Aliki, Aigiali	1.31	93	P	Pn	22 31 27.0	-0.1
KALE	Kalithea	1.33	87	P	Pn	22 31 27.1	-0.4
KALE	Kalithea	1.33	87	P	Pn	22 31 27.3	-0.2
KALE				AML	AML	22 31 54.9	
	comp=E,851μm,0.5s						
KALE				AML	AML	22 31 58.2	
	comp=N,1207μm,0.6s						
JAN	Janina	1.36	13	P	Pg	22 31 29.3	+0.1
JAN				S	Sg	22 31 47.2	+0.3
	comp=N,388nm,0.4s						
JAN	Janina	1.36	13	P	Pg	22 31 29.8	+0.6
JAN				AML	AML	22 31 55.0	
	comp=E,844μm,0.3s						
JAN				AML	AML	22 31 56.1	
	comp=N,884μm,0.4s						
KLV	Kalavryta, Ach	1.37	101	P	Pn	22 31 28.0	0.0
KLV				S	Sg	22 31 47.8	+0.5
	comp=N,355nm,0.4s						
KLV	Kalavryta, Ach	1.37	101	P	Pb	22 31 28.3	-0.3
KLV				AML	AML	22 31 56.3	
	comp=N,845μm,0.5s						
KLV				AML	AML	22 31 56.4	
	comp=E,471μm,0.7s						
KEK	Kerkira	1.47	340	P	Pn	22 31 29.7	+0.4
KEK	Kerkira	1.47	340	P	Pb	22 31 30.3	+0.1
MAKR	Makrakomi, Fth	1.49	62	P	Pg	22 31 31.1	-0.5
MAKR	Makrakomi, Fth	1.49	62	P	Pg	22 31 31.4	-0.2
MAKR				AML	AML	22 32 03.0	
	comp=E,1956μm,0.4s						
MAKR				AML	AML	22 32 08.1	
	comp=N,1456μm,0.6s						
MEV	Metsovon	1.58	23	P	Pg	22 31 33.6	+0.3
AGG	Agios Georgios	1.63	64	P	Pg	22 31 33.5	-0.8
AGG				S	Sg	22 31 55.2	-0.3
	comp=N,465nm,0.8s						
AGG	Agios Georgios	1.63	64	P	Pg	22 31 34.4	+0.1
AGG				AML	AML	22 32 03.1	
	comp=E,910μm,0.9s						
AGG				AML	AML	22 32 04.4	
	comp=N,928μm,0.8s						
ITM	Ithomi	1.64	134	P	Pb	22 31 33.6	+0.4
ITM	Ithomi	1.64	134	P	Pb	22 31 33.4	+0.1
ITM				AML	AML	22 32 06.7	
	comp=E,596μm,0.5s						
ITM				AML	AML	22 32 12.5	
	comp=N,827μm,0.8s						
THL	Klokotos Trika	1.74	44	P	Pg	22 31 35.4	-1.0
THL	Klokotos Trika	1.74	44	P	Pb	22 31 34.9	+0.1
THL				AML	AML	22 32 10.4	
	comp=E,777μm,0.6s						
THL				AML	AML	22 32 10.8	
	comp=N,601μm,0.6s						
PYL	PYLOS	1.76	144	P	Pn	22 31 34.4	+1.1
PYL	PYLOS	1.76	144	P	Pb	22 31 34.7	-0.6
KPRO	Kipourio	1.77	23	P	Pb	22 31 35.8	+0.3
KPRO	Kipourio	1.77	23	P	Pg	22 31 36.4	-0.7
AXAR	Agios Charalam	1.79	75	P	Pg	22 31 37.4	0.0
AXAR				AML	AML	22 32 15.6	
	comp=N,1754μm,0.8s						
AXAR				AML	AML	22 32 16.2	
	comp=E,1421μm,1.0s						
VLX	Vlachokerasia	1.81	121	P	Pb	22 31 36.6	+0.5
VLX	Vlachokerasia	1.81	121	P	Pb	22 31 36.3	+0.2
VLX				AML	AML	22 32 14.9	
	comp=N,946μm,0.6s						
VLX				AML	AML	22 32 15.9	
	comp=E,888μm,0.6s						
PROD	Prodromos	1.93	91	P	Pb	22 31 38.0	-0.2
PROD	Prodromos	1.93	91	P	Pb	22 31 37.9	-0.2
PROD				AML	AML	22 32 11.6	
	comp=N,455μm,0.3s						
PROD				AML	AML	22 32 15.1	
	comp=E,724μm,0.6s						
PENT	Pentalofos	1.94	16	P	Pb	22 31 38.5	+0.2
PENT	Pentalofos	1.94	16	P	Pb	22 31 38.8	+0.5
LTK	Loutraki	2.01	98	P	Pb	22 31 38.7	-0.8
LTK	Loutraki	2.01	98	P	Pb	22 31 38.6	-0.9
LOUT	Loutraki	2.02	99	P	Pb	22 31 38.2	-1.5
LKR	Lokris	2.03	80	P	Pb	22 31 38.9	-0.9
LKR	Lokris	2.03	80	P	Pb	22 31 39.1	-0.7
NEST	Nestorio	2.13	12	P	Pb	22 31 41.8	+0.1
VIL2	Platees	2.23	92	P	Pb	22 31 41.9	-1.2
DID	Didima	2.36	110	P	Pb	22 31 43.4	-2.0
DID	Didima	2.36	110	P	Pb	22 31 43.9	-1.5
LIT	Litokhoron	2.38	41	P	Pb	22 31 43.7	-2.1
NEO	Neokhori	2.38	65	P	Pb	22 31 43.6	-2.2
NEO	Neokhori	2.38	65	P	Pb	22 31 43.6	-2.2
XOR	Xorichti	2.38	63	P	Pn	22 31 43.4	+1.5
XOR	Xorichti	2.38	63	P	Pb	22 31 43.6	-2.3
MRKA	Markates	2.49	80	P	Pb	22 31 45.3	-2.5
VLI	Veliai	2.55	128	P	Pb	22 31 47.0	-1.7
ATHU	Athens Univers	2.66	97	P	Pn	22 31 47.3	+1.6
VLY	Voula,Athens	2.69	99	P	Pn	22 31 47.6	+1.6
PTL	Penteli	2.71	95	P	Pn	22 31 48.1	+1.7
OHR	Ohrid	2.79	6	*i* Pn	Pn	22 32 00.3	+3.8
OHR				*i* Sn	Sb	22 32 24.3	-2.7
AOS	Alonnisos	2.81	72	P	Pn	22 31 49.1	+1.3
TIR	Tirane	3.05	352	*e*Pn	Pn	22 31 51.3	+0.3
VAY	Valandovo	3.41	28	*e*Pn	Pn	22 31 58.3	+2.4
VAY				*e*Sn	Sn	22 32 38.3	+2.1
VAY	Valandovo	3.41	28	*i* Pn	Pg	22 32 13.9	+5.7
VAY				*i* Sn	Sn	22 32 38.6	+2.5
STIP	Stip	3.62	21	*i* Pn	Pb	22 32 02.9	-3.9
SRS	Serrai	3.69	40	*e*Pn	Pn	22 32 01.4	+1.5
PDG	Podgorica	4.20	348	*e*Pn	Pn	22 32 05.9	-0.8
PDG				*e*Sn	Sn	22 32 55.6	0.0
BARS	Barje	4.60	13	*e*Pn	Pn	22 32 13.9	+1.5
TREB	Trebinje	4.66	341	*e*Pn	Pn	22 32 12.3	-0.9
TREB				*e*Sn	Sn	22 33 04.4	-2.8
IDI	Anoyia	4.68	129	P	Pn	22 32 15.4	+1.8
	comp=E,0.2nm,0.3s,baz=147,slow=21,SNR=1.3						
IDI				S	Sn	22 33 07.2	-0.6
	comp=E,0.7nm,0.3s,baz=51,slow=19,SNR=1.3						
SELS	Selova	4.91	6	*e*Pn	Pn	22 32 17.5	+0.9
SJES	Sjenica	4.94	356	*e*Pn	Pn	22 32 18.3	+1.2
STON	Ston	4.99	336	*e*Pn	Pn	22 32 17.7	0.0
STON				*e*Sn	Sn	22 33 12.6	-2.7
IVAS	Ivanjica	5.25	358	*e*Pn	Pn	22 32 21.3	0.0
BOVS	Bovan	5.38	10	*e*Pn	Pn	22 32 23.4	+0.3
SOKA	Soboth	9.25	336	*i* Pn	Pn	22 33 14.9	-1.2
	comp=E,0.9nm,0.2s						
OBKA	Obir	9.26	334	*i* Pn	Pn	22 33 16.2	-0.1
	comp=E,1.1nm,0.2s						
OBKA				*e*Sn	Sn	22 34 57.0	-3.5
	comp=E,1.3nm,0.3s						
ARSA	Arzberg	9.62	340	*e*Pn	Pn	22 33 20.5	-0.7
	comp=E,0.9nm,0.4s						
MOA	Molln	10.53	337	*e*Pn	Pn	22 33 34.1	+0.5
	comp=E,0.7nm,0.2s						
WTTA	Wattenberg	11.02	327	*e*Pn	Pn	22 33 41.2	+0.7
	comp=E,0.8nm,0.3s						
WATA	Walderalm	11.10	327	*e*Pn	Pn	22 33 41.9	+0.3
	comp=E,0.7nm,0.3s						
FINES	FINESS Array B	23.40	7	P	P	22 36 10.2	-1.2
	comp=E,2.8nm,0.9s,baz=185,slow=12,SNR=4.1						
TORD	Torodi Ar. Bea	30.11	219	P	P	22 37 14.6	+2.1
	comp=E,0.8nm,0.9s,baz=17,slow=9.4,SNR=3.8						
ARCES	ARCESS Array B	31.38	3	P	P	22 37 24.9	+1.6
	comp=E,1.6nm,0.8s,baz=169,slow=14,SNR=1.3						
MKAR	Makanchi Array	45.27	58	P	P	22 39 19.4	-1.0
	comp=Z,0.3nm,0.4s,baz=277,slow=7.0,SNR=15						
ZALV	Zalesovo Beam	45.63	48	P	P	22 39 21.8	-1.3
	comp=E,1.0nm,0.4s,baz=281,slow=7.9,SNR=7.9						

*BJI **08** 22:34:50.0±0.0, 18°.40N×146°.40E, h70km, mB4.9/15, mb4.5/23, Ms4.4/2, Ms7 4.3/2*
*GCMT **08** 22:34:51.6±0.4, 18°.37N±0°.02×146°.58E±0°.03, h66km±4km, MW4.8/65, Moment Tensor Solution. s15,c17; s65,c93; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.71±.18; Mθθ1.36±.14; Mφφ-2.07±.12; Mrθ-1.11±.08; Mrφ-0.75±.11; Mθφ0.72±.09; Best double couple: M0 2.37000×10^16 NP1:φs231.00000°,δ57.00000°,λ160.00000°. NP2: φs332.00000°,δ73.00000°,λ35.00000°. Principal axes: T 2.4270, Plg36.0000°, Azm196.0000°; N -0.1180, Plg52.0000°, Azm355.0000°; P -2.3130, Plg10.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **08** 22:34:52.6±1.2, 18°.42N×146°.23E, h101km±10km, mb4.1/31, mb1 4.2/33, mb1mx4.1/51, mbtmp4.4/33, MS3.6/15, Ms1 3.6/15, ms1mx3.4/40 Error ellipse: s-maj=14.6km s-min=6.7km az=93.0*
*NEIC **08** 22:34:52.6±1.5, 18°.34N±0°.07×146°.35E±0°.10, h100km±5km, mb4.6/170, Error ellipse: s-maj=13.3km s-min=10.8km az=101.0*
ISC 08 22:34:52.4±0.3, **18°.36N**±0°.04×**146°.38E**±0°.07, **h100**km, **n252**, σ0°.94/242, **mb4.6**/118, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	Sarigan	1.75	199		Pn	22 35 20.2	-1.6
ANA2	Anatahan	2.10	198	Pn	Pn	22 35 25.6	-0.8
GUMO	Guam	4.96	197	P	Pn	22 36 04.8	+0.2
	90nm,0.3s,baz=9.7,slow=3.3,SNR=28						
GUMO				S	Sn	22 37 00.5	-0.3
	8.4nm,0.3s,baz=302,slow=22,SNR=3.6						
JHJ	Hachijo jima 2	15.85	339	LR	LR	22 43 28.8	
	comp=Z,244nm,19.5s,baz=142,slow=33						
PATS	Pohnpei	16.32	133		Pn	22 38 34.4	-1.3
INU	Inuyama	18.86	336	P	P	22 39 04.6	-0.1
WAKE	Wake Island	19.21	84	P	P	22 39 08.4	-0.3
H11S3	WAKE ISLAND Hy	19.27	86	T	T	23 00 08.6	
	baz=274,slow=74,SNR=16						
H11S1	WAKE ISLAND Hy	19.28	86	T	T	23 00 05.0	
	baz=274,slow=74,SNR=23						
H11S2	WAKE ISLAND Hy	19.29	86	T	T	23 00 02.7	
	baz=274,slow=74,SNR=23						
H11N1	WAKE ISLAND Hy	19.44	83	T	T	23 00 19.6	
	baz=267,slow=74,SNR=18						
H11N2	WAKE ISLAND Hy	19.44	83	T	T	23 00 18.7	
	baz=267,slow=74,SNR=23						
H11N3	WAKE ISLAND Hy	19.45	83	T	T	23 00 21.8	
	baz=267,slow=74,SNR=16						
MJAR	Matsushiro Arr	19.50	340	P	P	22 39 09.9	-1.7
	0.1nm,0.3s,baz=156,slow=9.8,SNR=12						
MJAR				S	S	22 42 43.2	-3.3
	0.0nm,0.3s,baz=264,slow=13,SNR=2.3						
MJAR				LR	LR	22 46 18.2	
	comp=Z,100nm,19.2s,baz=85,slow=35						
MAJO	Matsushiro	19.50	340	P	P	22 39 11.7	+0.1
MJB9	Matsu-Tunnel	19.50	340	P	P	22 39 12.0	+0.3
MANU	Manus Island	20.30	177	P	Pn	22 39 22.2	-1.1
SMPI	Sarmi	21.58	201	P	P	22 39 41.5	+7.3
GENI	Genyem	21.70	197	P	P	22 39 33.5	-2.0
	98nm,1.2s						
DAV	Davao City (W)	23.16	244	LR	LR	22 47 19.3	
	comp=Z,148nm,20.9s,baz=62,slow=32						
ERM	Erimo	23.74	354	P	P	22 39 56.6	+1.2
ERM				IAmb	IAmb	22 40 10.1	
	comp=Z,55nm,1.1s						
SWI	Sorong	24.21	220	P	P	22 40 00.6	+0.7
	comp=Z,1μmcomp=Z,108nm,1.2s						
SIJI	Sorong	24.21	219	P	P	22 40 00.5	+0.5
	comp=Z,74nm,1.0s,baz=25,slow=9.1,SNR=42						
SSLB	Suanglung	24.32	287	P	P	22 40 02.0	+1.1
SSLB				IAmb	IAmb	22 40 14.3	
	comp=Z,19nm,1.1s						
TPUB	Ta-pu	24.55	286	P	P	22 40 01.8	-1.3
TPUB				IAmb	IAmb	22 40 18.6	
	comp=Z,16nm,1.1s						
TGY	Tagaytay City	24.79	264	LR	LR	22 47 48.2	
	comp=Z,170nm,19.5s,baz=316,slow=32						
KSRS	Korea Array	24.98	323	P	P	22 40 05.5	-1.2
	comp=Z,3.0nm,0.7s,baz=147,slow=8.3,SNR=12						
KSRS				LR	LR	22 49 06.5	
	comp=Z,174nm,20.1s,baz=114,slow=34						
KSAR	Wonju Array Be	24.99	323	P	P	22 40 06.2	-0.6
KS19	Wonju Array Si	25.04	323	P	P	22 40 06.9	-0.4
KS19				IAmb	IAmb	22 40 13.5	
	comp=Z,22nm,1.1s						
FAKI	Fak Fak	25.32	215	P	P	22 40 10.4	+0.4
ASAJ	Asahikawa	25.88	354	P	P	22 40 15.6	+0.8
	comp=Z,16nm,0.7s,baz=238,slow=10.0,SNR=11						
ASAJ				LR	LR	22 50 33.1	
	comp=Z,100nm,20.8s,baz=184,slow=36						
PMG	Port Moresby	27.60	178	P	P	22 40 30.7	+0.3
	comp=Z,63nm,0.9s,baz=355,slow=5.9,SNR=26						
PMG	Port Moresby	27.60	178	P	P	22 40 30.8	+0.3
NJ2	Nanjing	28.30	304	*e*P	P	22 40 37.7	+1.1
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AAI	Ambon	28.30	221	P	P	22 40 37.5	+0.7
	comp=Z,1μmcomp=Z,57nm,0.8s						
USA0B	Ussuriysk Arra	28.46	338	P	P	22 40 38.5	+0.6
USRK	Ussuriysk Ar.	28.46	338	P	P	22 40 37.8	-0.1
	comp=Z,2.2nm,0.6s,baz=132,slow=9.4,SNR=7.0						
USRK	Ussuriysk Ar.	28.46	338	P	P	22 40 38.1	+0.2
LUWI	Luwuk	30.18	233	P	P	22 40 53.0	-0.4
HKPS	Hong Kong Po S	30.45	283	P	P	22 40 56.1	+0.3
KKM	Kota Kinabalu	31.86	251	IAmb	IAmb	22 41 10.1	
	comp=Z,13nm,0.7s						
COEN	Coen	32.27	186	P	P	22 41 12.2	+0.5
KLR	Kul'dur	32.99	342	P	P	22 41 17.8	+0.1
	comp=Z,14nm,0.6s,baz=156,slow=6.1,SNR=67						
KLR				ScP	ScP	22 47 35.7	+1.1
	comp=Z,0.7nm,0.5s,baz=224,slow=2.2,SNR=3.6						
TTSI	Tana Toraja	33.72	234	P	P	22 41 26.6	+2.2
	comp=Z,56nm,0.8s						
SPSI	Sidrap Palu	34.35	232	P	P	22 41 31.1	+1.2
	comp=Z,42nm,0.9s						
BNSI	Bone	34.38	231	P	P	22 41 31.8	+1.6
	comp=Z,1μmcomp=Z,57nm,0.8s						
MTN	Manton Dam	34.46	207	P	P	22 41 27.0	-3.8
BKSI	Bulukumba	34.99	230	P	P	22 41 37.2	+1.8
	comp=Z,37nm,0.8s						
KAPI	Kappang	35.05	231	P	P	22 41 37.1	+1.2
	comp=Z,26nm,0.8s,baz=151,slow=15,SNR=11						
KAPI	Kappang	35.05	231	P	P	22 41 37.0	+1.0
PETK	Petropavlovsk-	35.79	12	LR	LR	22 54 29.2	
	comp=Z,96nm,20.7s,baz=239,slow=33						
SBUM	Sibu	37.02	249	P	P	22 41 51.9	-0.9
HHC	Hu-ho-hao-te	37.30	314	*e*P	P	22 41 55.1	+0.1
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,35nm,5.3s						
KNRA	Kununurra	38.01	208	P	P	22 42 01.2	+0.2
CTA	Charters Tower	38.21	180	P	P	22 42 02.9	+0.3
	comp=Z,6.6nm,0.4s,baz=359,slow=9.2,SNR=6.7						
SANVU	Saraoutou	39.36	147	P	P	22 42 12.2	-0.1
WR0	Warramunga Arr	39.81	198	IAmb	IAmb	22 42 19.0	
	comp=Z,11nm,0.7s						
WRAB	Tennant Creek	39.84	198	P	P	22 42 16.9	+0.6
WRA	Warramunga Arr	39.85	198	P	P	22 42 16.6	+0.2
	comp=Z,20nm,0.9s,baz=18,slow=9.3,SNR=27						
WRA				LR	LR	22 58 48.4	
	comp=Z,102nm,21.8s,baz=290,slow=36						
WRA	Warramunga Arr	39.85	198	P	P	22 42 16.2	-0.2
SLVN	Son La	39.98	282	P	P	22 42 18.1	+0.5
LZH	Lanzhou	41.37	304	*e*P	P	22 42 27.9	-1.1
LZH				pP	pP	22 42 50.9	-0.4
LZH				sP	sP	22 43 01.4	-0.9
LZH				PP	PP	22 44 08.8	+2.4
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				pmax	pmax		
	comp=Z,69nm,4.9s						
LZH				LR	LR		
	comp=Z,220nm,15.0s						
LZH				LR	LR		
	comp=Z,220nm,15.2s						
LZH				LR	LR		
	comp=Z,350nm,18.1s						
FITZ	Fitzroy Crossi	41.57	211	P	P	22 42 30.8	+0.2
	comp=Z,20nm,0.6s,baz=21,slow=7.5,SNR=31						
PBKT	Sadao Pong	43.27	275	P	P	22 42 45.2	+0.8
ULN	Ulaanbaatar	43.44	322	P	P	22 42 46.5	+1.0
ASAR	Alice Springs	43.51	197	P	P	22 42 46.1	-0.1
	comp=Z,3.0nm,0.6s,baz=21,slow=9.1,SNR=30						
ASAR				PcP	PcP	22 44 31.9	-0.6
	comp=Z,1.8nm,0.7s,baz=22,slow=3.2,SNR=5.0						
ASAR				ScP	ScP	22 48 15.3	+0.4
	comp=Z,1.0nm,0.8s,baz=5.6,slow=5.2,SNR=4.7						
ASAR				S	S	22 49 08.0	+0.2
	comp=Z,1.1nm,0.9s,baz=17,slow=18,SNR=4.9						
ASAR				LR	LR	23 00 52.8	
	comp=Z,62nm,21.9s,baz=3.5,slow=36						
ASAR	Alice Springs	43.51	197	P	P	22 42 46.3	+0.1
SONM	Songino Array	43.81	321	P	P	22 42 47.7	-0.8
	comp=Z,1.1nm,0.6s,baz=138,slow=8.7,SNR=11						
SONM				ScP	ScP	22 48 14.8	-1.3
	comp=Z,1.6nm,0.8s,baz=151,slow=4.7,SNR=7.6						
SONM				LR	LR	23 00 52.0	
	comp=Z,110nm,19.9s,baz=218,slow=36						

SONM Songino Array 43.81 321 P P 22 42 48.9 +0.3
SONM ScP 22 48 14.6 -1.4
UGM Wanagama 43.97 237 P P 22 42 49.6 -0.4
DZM Mont Dzumac 44.72 153 P P 22 42 57.4 +1.5
DZM IAmb IAmb 22 42 58.8
comp=Z,19nm,1.1s
SEY Seymchan 44.73 4 P P 22 42 55.7 +0.3
comp=Z,1.5nm,0.5s,baz=186,slow=11,SNR=5.1
MYKOM Kota Tinggi 44.83 253 P P 22 42 56.6 -0.3
MYKOM IAmb IAmb 22 42 59.2
comp=Z,12nm,0.9s
CMAR Chiang Mai Arr 44.91 278 P P 22 42 58.0 +0.4
comp=Z,0.7nm,0.7s,baz=67,slow=7.8,SNR=6.6
CMAR ScP ScP 22 48 20.4 -0.5
comp=Z,0.4nm,0.7s,baz=95,slow=1.4,SNR=4.2
CMAR LR LR 23 00 36.3
comp=Z,44nm,20.2s,baz=51,slow=34
KPJI Karang Pucung 44.91 239 P P 22 42 59.4 +1.9
comp=Z,26nm,0.8s
YAK Yakutsk 45.17 349 P P 22 42 58.7 -0.3
comp=Z,24nm,0.6s,baz=350,slow=0.4,SNR=15
YAK Yakutsk 45.17 349 P P 22 42 59.1 +0.2
ATKA Atka Island 45.71 33 P P 22 43 03.0 -0.3
KULM Kulim 46.46 260 P P 22 43 09.8 +0.1
KULM IAmb IAmb 22 43 22.5
comp=Z,11nm,1.1s
PSA00 Pilbara Seismi 47.43 214 P P 22 43 17.7 +0.6
PSA00 Pilbara Seismi 47.43 214 IAmb IAmb 22 43 18.8
comp=Z,18nm,0.8s
ARMA Armidale 48.76 174 P P 22 43 27.7 +0.4
ARMA IAmb IAmb 22 43 30.0
comp=Z,15nm,1.1s
STKA Stephens Creek 50.16 185 P P 22 43 37.9 +0.1
comp=Z,2.7nm,0.4s,baz=350,slow=8.3,SNR=6.5
STKA LR LR 23 04 39.7
comp=Z,36nm,20.1s,baz=19,slow=36
BBOO Buckleboo 51.83 191 P P 22 43 50.1 -0.2
CAN Canberra 53.44 177 P P 22 44 02.7 +0.5
TIXI Tiksi 54.28 353 P P 22 44 07.3 -0.5
comp=Z,0.6nm,0.4s,baz=140,slow=7.9,SNR=4.9
WMQ Urumqi 55.02 311 eP P 22 44 15.7 +1.9
WMQ pP pP 22 44 36.3 -0.8
WMQ pmax pmax
comp=Z,11nm,1.1s
WMQ pmax pmax
comp=Z,55nm,4.9s
ANM Nome 56.26 23 P P 22 44 23.6 +1.4
NWAO Narrogin (SRO) 58.11 209 P P 22 44 35.5 -0.1
NWAO IAmb IAmb 22 44 39.6
comp=Z,4.7nm,0.7s
ZAA0 Zalesovo Array 58.68 323 P P 22 44 40.4 +1.1
ZAA0 IAmb IAmb 22 44 56.7
comp=Z,2.1nm,0.7s
ZALV Zalesovo Beam 58.68 323 P P 22 44 38.0 -1.3
comp=Z,0.9nm,0.4s,baz=106,slow=5.3,SNR=6.6
ZALV ScP ScP 22 49 18.0 -1.6
comp=Z,0.9nm,0.7s,baz=97,slow=3.4,SNR=2.9
ZALV LR LR 23 08 48.4
comp=Z,61nm,18.6s,baz=344,slow=35
ZALV Zalesovo Beam 58.68 323 P P 22 44 42.1 +2.8
MKAR Makanchi Array 59.16 314 P P 22 44 41.8 -1.1
comp=Z,0.4nm,0.5s,baz=87,slow=8.2,SNR=10
MKAR ScP ScP 22 49 20.6 -1.5
comp=Z,0.7nm,0.7s,baz=86,slow=5.3,SNR=4.5
MKAR Makanchi Array 59.16 314 P P 22 44 42.4 -0.4
KDAK Kodiak Island 59.29 33 P P 22 44 43.6 +0.1
MAKZ Makanchi 59.38 314 P P 22 44 43.9 -0.4
MAKZ IAmb IAmb 22 45 01.8
comp=Z,2.3nm,0.7s
BRLK Bradley Lake 60.65 31 P P 22 44 52.3 -0.4
BRLK IAmb IAmb 22 44 57.4
comp=Z,12nm,1.0s
PPLA Purkeypile 60.90 27 P P 22 44 55.2 +0.6
PPLA IAmb IAmb 22 45 03.8
comp=Z,13nm,1.2s
IMAR Indian Mountai 61.27 24 P P 22 44 57.9 +1.1
KTH Kantishna Hill 61.64 27 P P 22 45 00.1 +0.6
BPAW Bear Paw Mtn. 61.77 26 P P 22 44 60.0 -0.3
BPAW IAmb IAmb 22 45 03.0
comp=Z,10nm,0.9s
TRF Thorofare Moun 61.89 27 IAmb IAmb 22 45 04.5
comp=Z,11nm,0.9s
KURK Kurchatov 61.96 318 P P 22 45 01.3 -0.4
KURK IAmb IAmb 22 45 13.5
comp=Z,3.5nm,0.6s
KURBB Kurchatov Arra 62.01 318 P P 22 45 00.5 -1.5
comp=Z,1.7nm,0.4s,baz=94,slow=7.4,SNR=13
GHO Glory Hole Cre 62.07 29 P P 22 45 02.5 +0.2
GHO IAmb IAmb 22 45 15.1
comp=Z,13nm,1.1s
MLY Manley 62.15 25 IAmb IAmb 22 45 05.6
comp=Z,6.7nm,0.9s
SML Sawmill 62.35 29 P P 22 45 05.2 +1.0
RND Reindeer 62.50 27 P P 22 45 05.0 -0.2
RND IAmb IAmb 22 45 11.8
comp=Z,4.7nm,0.9s
SCM Sheep Creek Mo 62.82 29 P P 22 45 08.4 +1.0
MID Middleton Isla 62.83 32 P P 22 45 08.3 +0.9
HIN Hinchinbrook I 62.93 31 P P 22 45 09.4 +1.4
FID Port Fidalgo 63.01 31 P P 22 45 08.5 -0.1
FID IAmb IAmb 22 45 17.8
comp=Z,17nm,1.1s
DHY Denali Highway 63.07 28 P P 22 45 09.7 +0.6
WRH Wood River Hil 63.09 26 IAmb IAmb 22 45 13.1
comp=Z,7.5nm,1.0s
MDM Murphy Dome 63.15 26 P P 22 45 10.2 +0.8
MDM IAmb IAmb 22 45 23.3
comp=Z,4.3nm,0.6s
MXZ Matakaoa Point 63.22 152 P P 22 45 10.1 -0.1
CCB Clear Creek Bu 63.25 26 P P 22 45 09.9 -0.1
URZ Urewera 63.28 153 P P 22 45 10.3 -0.2
URZ IAmb IAmb 22 45 15.3
comp=Z,16nm,1.0s
EYAK Cordova Ski Ar 63.32 31 P P 22 45 10.7 +0.1
IL31 63.66 26 IAmb IAmb 22 45 13.5
comp=Z,5.5nm,1.0s
ILAR Eielson Array 63.66 26 P P 22 45 12.3 -0.4
comp=Z,3.8nm,0.9s,baz=259,slow=5.4,SNR=25
ILAR Eielson Array 63.66 26 P P 22 45 12.8 0.0
QRZ Quartz Range 63.70 158 P P 22 45 14.3 +1.1
QRZ IAmb IAmb 22 45 21.2
comp=Z,7.9nm,0.9s
BKZ Black Stump Fm 63.78 154 P P 22 45 14.6 +0.7
BKZ IAmb IAmb 22 45 17.5
comp=Z,13nm,0.8s
PAX Paxson 63.90 28 P P 22 45 15.1 +0.6
PAX IAmb IAmb 22 45 16.6
comp=Z,6.0nm,1.0s
HMT Hamilton 64.02 31 P P 22 45 15.5 +0.3
HMT IAmb IAmb 22 45 16.1
comp=Z,11nm,0.9s
RIDG Independent Ri 64.32 27 P P 22 45 18.1 +0.9
RIDG IAmb IAmb 22 45 18.9
comp=Z,15nm,1.1s
GLB Gilahina Butte 64.40 30 P P 22 45 18.9 +1.1
GLB IAmb IAmb 22 45 20.7
comp=Z,13nm,1.1s
VRDI Verde Repeater 64.54 30 P P 22 45 19.4 +0.5
VRDI IAmb IAmb 22 45 25.3
comp=Z,18nm,1.2s
CRQM Cirque 64.62 31 P P 22 45 19.2 -0.1
CRQM IAmb IAmb 22 45 22.8
comp=Z,13nm,0.9s
DOT Dot Lake 64.65 28 IAmb IAmb 22 45 21.1
comp=Z,4.9nm,0.8s
THZ Tophouse 64.66 158 P P 22 45 20.4 +0.9
SCRK Sand Creek 64.74 27 P P 22 45 20.0 0.0
SCRK IAmb IAmb 22 45 24.2
comp=Z,9.8nm,1.1s
MCARA McCarthy VSAT 64.77 30 P P 22 45 21.1 +1.1
TGL Tana Glacier 64.78 31 P P 22 45 20.1 -0.2
TGL IAmb IAmb 22 45 29.3
comp=Z,13nm,1.2s
SNZO South Karori 64.92 157 P P 22 45 20.6 -0.5
BSWZ Blackbirch Sta 64.96 158 P P 22 45 20.8 -0.7
BALM Baldy 65.05 31 P P 22 45 22.8 +0.8
BALM IAmb IAmb 22 45 24.1
comp=Z,5.9nm,1.0s
BMAR Burnt Mountain 65.17 23 P P 22 45 24.2 +1.6
FOZ Fox Glacier 65.23 161 P P 22 45 23.3 +0.1
LTZ Lake Taylor 65.34 159 P P 22 45 23.9 -0.1
LTZ IAmb IAmb 22 45 31.9
comp=Z,9.8nm,1.0s
PLWZ Palliser 65.35 157 P P 22 45 22.7 -1.4
BARN Barnard Glacie 65.38 31 P P 22 45 23.9 -0.3
BARN IAmb IAmb 22 45 33.1
comp=Z,6.8nm,1.1s
KHZ Kahutara 65.46 158 P P 22 45 25.0 +0.4
CTGM Chitina Glacie 65.53 31 P P 22 45 25.0 -0.2
CTGM IAmb IAmb 22 45 28.1
comp=Z,16nm,1.2s
BCAR Beaver Creek A 65.57 28 P P 22 45 25.6 +0.4
RPZ Rata Peaks 65.78 161 P P 22 45 26.0 -0.8
MQZ McQueen's Vall 66.29 159 P P 22 45 30.1 +0.1
MQZ IAmb IAmb 22 45 33.2
comp=Z,10nm,0.9s
MLZ Mavora Lakes 66.43 163 P P 22 45 31.1 +0.2
MLZ IAmb IAmb 22 45 42.5
comp=Z,13nm,1.2s
DAWY Dawson 66.75 27 P P 22 45 33.9 +1.1
DAWY IAmb IAmb 22 45 34.9
comp=Z,5.7nm,1.1s
ODZ Otahua Downs 66.86 162 P P 22 45 33.1 -0.4
ODZ IAmb IAmb 22 45 35.9
comp=Z,7.2nm,1.1s
BVAR Borovoye Array 67.15 321 P P 22 45 34.2 -1.2
comp=Z,3.0nm,0.4s,baz=98,slow=7.7,SNR=18
BRVK Borovoye 67.21 321 P P 22 45 35.1 -0.8
HYT Haines Junctio 67.38 31 P P 22 45 37.9 +0.9
HYT IAmb IAmb 22 45 40.2
comp=Z,9.2nm,0.9s
KKAR Karatay Array 67.48 310 P P 22 45 37.2 -0.6
INK Inuvik 69.43 23 P P 22 45 49.8 +0.4
comp=Z,4.4nm,0.8s,baz=265,slow=9.1,SNR=11
INK PcP PcP 22 46 09.9 -2.1
comp=Z,1.2nm,0.5s,baz=308,slow=0.4,SNR=3.7
INK Inuvik 69.43 23 P P 22 45 50.3 +0.9
KBL Kabul 69.60 301 P P 22 45 52.4 +1.0
C36M Paulatuk 72.82 22 P P 22 46 10.1 +0.3
ARU Arti 73.72 325 P P 22 46 14.5 -0.8
comp=Z,0.3nm,0.3s,baz=127,slow=15,SNR=3.1
ARU Arti 73.72 325 P P 22 46 13.2 -2.1
ABKAR Akbulak array 74.03 317 P P 22 46 16.8 -0.5
AKTO Aktyubinsk 75.05 319 P P 22 46 21.9 -1.3
comp=Z,0.9nm,0.6s,baz=90,slow=9.3,SNR=3.1
YKA Yellowknife Ar 77.98 28 P P 22 46 40.3 +0.8
comp=Z,3.5nm,0.8s,baz=288,slow=5.5,SNR=30
YKA LR LR 23 20 53.2
comp=Z,77nm,19.9s,baz=0.0,slow=35
LTY Liberty 78.70 44 P P 22 46 44.5 +0.6
PINE Pine Mountain 79.41 47 P P 22 46 48.6 +0.6
PINE IAmb IAmb 22 46 51.9
comp=Z,8.3nm,0.9s
RES Resolute Bay 79.60 14 P P 22 46 49.4 +1.3
E09A Wood Farm, Sta 80.57 44 P P 22 46 54.7 +0.8
NEW Newport 80.73 42 P P 22 46 55.3 +0.5
WVOR Wild Horse Val 81.41 48 P P 22 46 58.6 0.0
BMO Blue Mountains 81.62 46 P P 22 47 00.3 +0.6
PNTR Pine Nut 81.67 52 P P 22 46 59.8 -0.5
PNTR IAmb IAmb 22 47 18.0
comp=Z,8.2nm,1.0s
KLMR Klimovskoe 82.06 332 eP P 22 47 02.9 +1.4
KLMR AMP 22 47 23.0
comp=Z,29nm,1.9s
KEV Kevo 82.45 342 P P 22 47 03.1 -0.2
KEV IAmb IAmb 22 47 12.3
comp=Z,14nm,1.1s
WALA Waterton Lakes 82.50 41 P P 22 47 04.7 +0.5
RYN Ryan 82.61 52 P P 22 47 05.0 0.0
RYN IAmb IAmb 22 47 08.6
comp=Z,4.8nm,1.0s
JTMT Jette 82.70 42 P P 22 47 05.1 -0.2
KVN Kaiserville 82.80 51 P P 22 47 06.6 +0.5
KVN IAmb IAmb 22 47 08.9
comp=Z,6.7nm,1.1s
NVAR Mina Array Bea 82.84 52 P P 22 47 07.2 +0.9
comp=Z,3.5nm,0.8s,baz=265,slow=6.1,SNR=19
NVAR Mina Array Bea 82.84 52 P P 22 47 06.8 +0.4
NV11 Mina Array Sit 82.95 52 P P 22 47 06.9 +0.1
NV11 IAmb IAmb 22 47 10.3
comp=Z,4.4nm,0.9s
ARCES ARCESS Array B 83.01 342 P P 22 47 06.3 0.0
comp=Z,2.0nm,0.5s,baz=65,slow=7.1,SNR=16
ARCES ARCESS Array B 83.01 342 P P 22 47 06.8 +0.5
ARE0 ARCESS Array S 83.01 342 P P 22 47 06.4 +0.1
MFID Camas Ranch 83.07 47 P P 22 47 07.5 +0.2
MFID IAmb IAmb 22 47 09.6
comp=Z,5.8nm,1.1s
ELK Elko 84.35 49 P P 22 47 14.5 +0.4
LRM Limekiln Ridge 84.54 44 P P 22 47 15.4 +0.5
MCMT McKenzie Canyo 84.62 45 P P 22 47 15.5 +0.2
TPNV Topopah Spring 84.85 53 P P 22 47 16.5 0.0
TPNV IAmb IAmb 22 47 20.4
comp=Z,3.9nm,0.8s
R11A Troy Canyon, C 84.89 51 P P 22 47 17.6 +0.9
QLMT Earthquake Lak 85.57 44 P P 22 47 21.3 +1.3
YHL Hebgen Lake 85.72 44 P P 22 47 21.5 +0.7
YHB Horse Butte 85.75 44 P P 22 47 21.2 +0.3
PFO Pinyon Flats O 85.77 56 P P 22 47 20.9 -0.2
PFO IAmb IAmb 22 47 24.0
comp=Z,4.1nm,1.0s
XPFO Pion Flat 85.78 56 P P 22 47 21.1 0.0
XPFO IAmb IAmb 22 47 24.0
comp=Z,3.9nm,0.9s
SHPR Sheep Range 85.82 53 P P 22 47 22.0 +0.7
BAR Barrett 85.91 57 P P 22 47 20.8 -0.9
BAR IAmb IAmb 22 47 23.7
comp=Z,6.4nm,1.1s
YMR Madison River 85.94 44 P P 22 47 23.1 +1.3
YHH Holmes Hill 85.97 44 P P 22 47 22.9 +0.8
PSUT Pine Spring 86.11 51 P P 22 47 24.0 +1.2
YNR Norris Junctio 86.11 44 P P 22 47 24.8 +2.1
SPUT South Promonto 86.14 48 P P 22 47 22.6 -0.2
YPP Pitchstone Pla 86.19 45 P P 22 47 22.2 -1.0
YUF Upper Falls 86.22 44 P P 22 47 23.1 -0.1
FXWY Fox Creek 86.28 45 P P 22 47 23.7 +0.1
FXWY IAmb IAmb 22 47 29.7
comp=Z,4.4nm,1.1s
DUG Dugway, Tooele 86.28 49 IAmb IAmb 22 47 26.3
comp=Z,3.0nm,0.8s
H17A Grant Village 86.30 44 P P 22 47 25.6 +1.9
H17A IAmb IAmb 22 47 30.2
comp=Z,7.5nm,1.1s
TBLG Delisi 86.32 313 P P 22 47 22.7 -0.8
TBLG IAmb IAmb 22 47 39.1
comp=Z,3.3nm,0.9s
FLWY Flagg Ranch 86.33 45 P P 22 47 24.4 +0.6
FLWY IAmb IAmb 22 47 30.4
comp=Z,7.3nm,0.8s
LKWY Lake 86.35 44 P P 22 47 24.0 +0.1
LKWY IAmb IAmb 22 47 39.3
comp=Z,5.2nm,1.1s
GCMT Greycliff 86.36 43 P P 22 47 24.8 +1.0
MOOW Moose Ponds 86.42 45 P P 22 47 24.8 +0.6
YNE Yellowstone No 86.44 44 P P 22 47 25.2 +0.9
YMP Mirror Lake Pl 86.44 44 P P 22 47 24.2 -0.2
AHID Auburn Hatcher 86.55 46 P P 22 47 25.3 +0.4
AHID IAmb IAmb 22 47 30.7
comp=Z,5.2nm,1.0s
HWUT Hardware Ranch 86.65 47 P P 22 47 25.6 +0.2
HWUT IAmb IAmb 22 47 31.5
comp=Z,8.0nm,1.1s
CCUT Cedar City 86.81 52 P P 22 47 26.7 +0.4
RLMT Red Lodge 86.88 43 P P 22 47 25.8 -0.6
RLMT IAmb IAmb 22 47 32.4
comp=Z,6.4nm,0.9s
NLU North Lily Min 86.90 49 P P 22 47 25.9 -0.7
TCUT Toone Canyon 86.94 48 P P 22 47 27.2 +0.3
SZCU Shurtz Canyon 87.00 51 P P 22 47 27.2 0.0
FFC Flin Flon 87.03 33 P P 22 47 28.1 +1.4
FFC IAmb IAmb 22 47 32.3
comp=Z,7.3nm,1.1s
JLU Jordanelle 87.10 48 P P 22 47 27.4 -0.2
MSU Marysvale 87.34 50 P P 22 47 30.1 +1.3
KNB Kanab 87.41 52 P P 22 47 29.9 +0.8
FIA1 FINESS Array S 87.46 335 P P 22 47 29.3 +0.7
FIA1 IAmb IAmb 22 47 30.6
comp=Z,11nm,1.1s
FINES FINESS Array B 87.46 335 P P 22 47 26.5 -2.0
comp=Z,2.2nm,0.7s,baz=74,slow=4.8,SNR=22
FINES FINESS Array B 87.46 335 P P 22 47 28.4 -0.1
PD31 Pinedale Array 87.60 46 P P 22 47 29.7 -0.3
PDAR Pinedale Array 87.60 46 P P 22 47 31.0 +1.0
comp=Z,0.5nm,0.7s,baz=115,slow=1.3,SNR=4.3
TMUT Trail Mountain 87.76 49 P P 22 47 31.0 +0.1
Q16A Castle Valley 87.93 50 P P 22 47 30.5 -1.0
U15A North Rim 88.02 52 P P 22 47 32.2 +0.1
U15A IAmb IAmb 22 47 38.4
comp=Z,4.4nm,1.1s
SRU San Rafael Swe 88.32 49 P P 22 47 35.0 +1.6
Y14A Wickenburg 88.36 55 P P 22 47 34.4 +0.9
Y14A IAmb IAmb 22 47 38.0
comp=Z,3.0nm,0.8s
RDMU Red Mountain 88.44 48 P P 22 47 33.9 0.0
WUAZ Wupatki 89.04 53 P P 22 47 37.2 +0.4
WUAZ IAmb IAmb 22 47 43.3
comp=Z,6.4nm,1.1s
214A Organ Pipe Nat 89.23 57 P P 22 47 38.6 +1.0
214A IAmb IAmb 22 47 41.4
comp=Z,5.1nm,1.1s
O20A White River Ci 89.55 48 P P 22 47 39.7 +0.5
O20A IAmb IAmb 22 47 44.0
comp=Z,6.4nm,1.1s
N23A Red Feather La 90.83 46 P P 22 47 45.5 +0.3
AKASG Malin Array Be 91.95 326 P P 22 47 48.1 -1.7
comp=Z,0.2nm,0.2s,baz=316,slow=9.2,SNR=2.7
ULM Lac du Bonnet 92.51 35 P P 22 47 53.0 +0.5
comp=Z,2.3nm,0.8s,baz=273,slow=6.9,SNR=4.4
ULM Lac du Bonnet 92.51 35 IAmb IAmb 22 47 54.9
comp=Z,3.8nm,1.0s
BRTR Keskin Array B 94.81 314 P P 22 48 02.0 -1.5
comp=Z,0.4nm,0.7s,baz=103,slow=4.6,SNR=2.7
EIL Elat 98.50 305 LR LR 23 39 01.2
comp=Z,36nm,18.5s,baz=280,slow=39
MODS Modra-Piesok 99.56 328 ePDIFF Pdif 22 48 23.1 -1.4
SNAA Sanae 123.72 191 PKPdf PKPdf 22 53 38.0 +0.1
VNA2 Neumayer--Watz 125.15 190 PKPdf PKiKP 22 53 41.2 +0.3
baz=154,slow=0.7
PLCA Paso Flores 141.30 133 PKP PKPdf 22 54 09.4 -2.4
comp=Z,1.2nm,0.7s,baz=266,slow=5.0,SNR=4.6
PB11 IPOC Station P 145.95 98 PKPab 22 54 22.9 +0.8
LPAZ La Paz 147.02 92 PKPbc PKPbc 22 54 25.6 +0.4
comp=Z,3.9nm,0.7s,baz=338,slow=2.2,SNR=9.7
LPAZ La Paz 147.02 92 PKiKP 22 54 27.7 +0.1

*NCEDC **08** 23:03:58.4±1.6, 36.77N±0.03×121.28W±0.04, h8km±5km, ML3.0/28, Error ellipse: s-maj=5.1km s-min=4.4km az=98.0*

NEIC 08 23:03:58.7±2.1, 36.75N±0.03×121.37W±0.05, h19km±2km, Error ellipse: s-maj=5.6km s-min=3.9km az=74.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSLM	Silva Ranch	0.03	30		Pg	23 04 00.8	-1.3
BVYM	Vineyard	0.04	274		Pg	23 04 01.7	-0.4
SAO	San Andreas Ge	0.06	285		Pg	23 04 02.1	-0.2
SAO	San Andreas Ge	0.06	285		Pg	23 04 02.2	0.0
SAO				Sg	Sg	23 04 04.9	+0.3
HJSM	John Smith Roa	0.09	39		Pg	23 04 00.4	-2.0
FRP	Fremont Peak	0.10	274		Pg	23 04 02.5	0.0
BLRM	Lewis Ranch	0.11	136		Pg	23 04 01.8	-0.8
BJOM	Mount Johnson	0.13	159		Pg	23 04 02.3	-0.5
BJOM					Sg	23 04 05.0	-0.5
BSRM	Salinas Radio	0.14	236		Pg	23 04 03.2	+0.2
HLTM	Lone Tree Road	0.15	20		Pb	23 04 01.4	+0.1
SCZ	Santa Cruz	0.15	190		Sg	23 04 05.9	-0.1
HJGM	San Juan Grade	0.17	287		Pg	23 04 03.7	+0.4
BEHM	Elkhorn Ranch	0.18	117		Pb	23 04 01.8	-0.7
OCR	O'Connell Ranc	0.20	327		Pg	23 04 03.8	0.0
HFEM	San Felipe	0.24	354		Pb	23 04 03.5	-0.6
PACP	Pacheco Peak	0.27	14		Pg	23 04 03.8	-1.1
PACP					Sb	23 04 07.6	-1.4
BPCNC	Pine Canyon	0.27	230		Pb	23 04 05.6	+0.8
CDC	Canada Road	0.29	342		Pg	23 04 04.9	-0.3
HCAM	Canada Road	0.29	342		Pg	23 04 04.9	-0.3
BPIM	Pinnacles	0.30	148		Pg	23 04 04.7	-0.7
BBGB	Big Mountain B	0.31	122		Pg	23 04 04.4	-1.2
HPCM	Pacheco Lake	0.32	14		Pg	23 04 04.7	-1.0
BBNM	San Benito	0.34	135		Pg	23 04 05.4	-0.5
SFJWR	San Luis Fatjo	0.34	28		Pg	23 04 04.5	-1.5
SLD	San Luis Dam	0.35	20		Pg	23 04 04.8	-1.4
SLD					Sg	23 04 09.4	-1.8
GHS	Gilroy Hot Spr	0.35	350		Pg	23 04 05.7	-0.6
HLPM	Lions Peak	0.36	325		Pg	23 04 06.1	-0.2
BSMM	Soledad Missio	0.37	187		Pg	23 04 06.7	0.0
HAST	Hastings Reser	0.39	202		Pb	23 04 07.2	+0.1
JELB	Ellicott, Sant	0.41	296		Pg	23 04 07.9	+0.5
LRV	Little Rabbit	0.43	139		Pg	23 04 07.1	-0.4
BRMM	Rolling Bench	0.45	79		Pg	23 04 06.8	-1.1
CADM	Anderson Res.	0.46	334		Pg	23 04 08.0	-0.2
HMOM	Monterey	0.46	252		Pb	23 04 09.2	+0.9
BCWM	Chews Ridge	0.47	200		Pb	23 04 08.8	+0.3
BMSM	Mercy Hot Spri	0.47	101		Pg	23 04 06.9	-1.4
JTGM	Trout Gulch Ro	0.49	305		Pb	23 04 09.3	+0.5
SCKWR	San Luis Creek	0.50	29		Pg	23 04 07.9	-0.9
JLAB	Laurel Hill	0.50	324		Pg	23 04 08.7	-0.2
JHLM	Holstrom Ranch	0.52	314		Pg	23 04 09.2	0.0
JRGM	Rodeo Gulch Ro	0.56	301		Pg	23 04 10.0	+0.1
AMC	Almaden	0.56	317		Pg	23 04 09.9	0.0
LRC	Lone Oak Road	0.56	152		Pg	23 04 09.4	-0.5
CCOB	Coe Ranch Numb	0.57	335		Pg	23 04 10.3	+0.3
JSTM	Santa Teresa H	0.57	323		Pb	23 04 10.0	-0.1
JUMM	Mount Umunhum	0.59	314		Pg	23 04 10.6	0.0
BPOM	Post Ranch	0.61	212		Pg	23 04 11.3	+0.5
BAPM	Anderson Peak	0.61	201		Pg	23 04 11.3	+0.4
ARN	Arnold Ranch	0.61	348		Pg	23 04 10.5	-0.3
MHC	Mount Hamilton	0.63	340		Pg	23 04 10.9	-0.3
MOBB	Monterey Bay O	0.64	265		Pn	23 04 13.0	+0.4
SCCB	Santa Clara Co	0.67	324		Pg	23 04 12.1	+0.2
PCCM	Crazy Canyon	0.68	166		Pg	23 04 12.1	0.0
PMPB	Monarch Peak	0.70	139		Pb	23 04 11.9	-0.4
CMMM	Mount Mocho	0.71	352		Pb	23 04 12.4	-0.2
JBNB	Ben Lomond Mou	0.73	301		Pb	23 04 12.9	0.0
CMLM	Mount Lewis	0.76	343		Pb	23 04 13.4	-0.1
JSGM	Saratoga Golf	0.76	315		Pb	23 04 13.9	+0.2
PSAM	San Ardo	0.82	151		Pb	23 04 14.1	-0.2
PAPM	Alder Peak	0.83	180		Pb	23 04 15.1	+0.1
JJRM	Joaquin Road	0.89	312		Pb	23 04 15.7	+0.1
JFP	Foothills Park	0.90	313		Pb	23 04 15.6	0.0
JSFB	Stanford Teles	0.92	316		Pb	23 04 15.9	-0.1
WENL	Wente Vineyard	0.93	341		Pb	23 04 16.2	0.0
JRSC	Jasper Ridge	0.95	314		Pb	23 04 16.3	-0.4
PHSB	Hesperia Broad	0.96	164		Pn	23 04 16.9	-0.2
PARM	Anticline Ridg	0.97	121		Pn	23 04 16.7	-0.1
CNIC	Niles Canyon	0.98	331		Pn	23 04 17.2	+0.1
PWMM	Westland Maint	0.98	108		Pn	23 04 16.8	-0.4
MYLM	Yosemite Lake	0.99	50		Pn	23 04 15.7	-1.5
JHPM	Huddart Park	1.02	313		Pn	23 04 17.8	0.0
PANM	San Antonio Re	1.03	159		Pn	23 04 18.0	0.0
PKD	Bear Valley Ra	1.04	140		Pn	23 04 17.7	-0.5
PVCM	Vineyard Canyo	1.06	140		Pn	23 04 18.3	-0.2
PPO	Portuguese Can	1.07	145		Pn	23 04 18.5	-0.1
PSTM	Stockdale Moun	1.07	139		Pn	23 04 18.1	-0.5
PHCM	Hearst Castle	1.08	171		Pn	23 04 19.1	+0.3
CBSNC	Byron Hot Spri	1.09	349		Pn	23 04 20.6	+0.8
JCPM	Coyote Point	1.13	318		Pn	23 04 18.9	-0.6
CLCB	Lake Chabot	1.13	331		Pn	23 04 19.4	-0.2
CTM	Castle Mountai	1.17	134		Pn	23 04 20.3	0.0
PHFM	Heflinger Ranc	1.17	138		Pn	23 04 19.9	-0.1
RAMR	Ramage Ranch	1.18	160		Pn	23 04 20.2	-0.1
SAC	San Andreas	1.18	315		Pn	23 04 20.1	-0.1
PCMM	Cholame Hills	1.22	140		Pn	23 04 20.1	-0.6
PKEM	Kettleman Hill	1.23	124		Pb	23 04 21.1	-0.1
GHC	Gold Hill	1.23	138		Pn	23 04 20.8	-0.1
MHDM	Hidden Dam	1.24	72		Pn	23 04 19.5	-1.5
CRPB	Russelman Par	1.24	340		Pn	23 04 22.2	-0.5
PCBM	Cambria	1.25	168		Pb	23 04 21.5	-0.2
BLDC	Black Mountain	1.27	163		Pn	23 04 22.0	0.0
BLDC	Black Mountain	1.27	163		Pn	23 04 21.9	0.0
BDM	Black Diamond	1.27	342		Pn	23 04 21.7	-0.3
PSNM	Stone Corral	1.29	137		Pn	23 04 22.0	+0.2
PMCM	McMillan Canyo	1.30	141		Pn	23 04 22.1	+0.2
TCHL	Shandon	1.31	143		Pn	23 04 23.1	+0.3
ARDC	Alexander Ranc	1.32	166		Pn	23 04 22.2	+0.1
BKS	Berkeley--Byer	1.32	329		Pn	23 04 21.9	-0.2
CVPM	Vollmer Peak	1.32	329		Pn	23 04 22.0	-0.2
CYBM	Yerba Buena Is	1.32	324		Pn	23 04 22.1	0.0
BRIB	Briones	1.32	332		Pn	23 04 21.7	-0.5
VAK	Adit at Lawren	1.33	328		Pn	23 04 21.6	-0.7
FRI	Friant	1.35	79		Pn	23 04 21.3	-1.3
MCUB	Copperopolis B	1.36	26		Pn	23 04 21.5	-1.3
JPRM	Presidio of Sa	1.37	320		Pn	23 04 23.2	+0.4
TRAM	Private Proper	1.39	140		Pn	23 04 24.0	-0.1
PTAM	Tassajara Cree	1.45	158		Pn	23 04 24.0	-0.1
CPMM	Point Molate	1.46	326		Pn	23 04 23.4	-0.6
TSCN	Private Proper	1.46	145		Pn	23 04 24.5	+0.5
MMIM	Miami Mountain	1.46	62		Pn	23 04 23.4	-0.9
MNHB	New Hogan Dam	1.47	17		Pn	23 04 23.2	-1.0

CMB	Columbia Colle	1.50	31		Pn	23 04 24.0	-0.8
CMB	Columbia Colle	1.50	31		Pn	23 04 24.4	-0.4
CMB					Sn	Sn	23 04 42.9	-1.0
VPDC	Valencia Peak	1.56	165		Pn	23 04 25.6	+0.2
DPD	Davis Peak	1.58	162		Pn	23 04 26.0	+0.2
SNT	Sears Point	1.67	329		Pn	23 04 26.6	-0.3
AASM	Arroyo Seco	1.69	7		Pn	23 04 26.5	-0.8
KCC	Kaiser Creek	1.74	70		Pn	23 04 27.9	0.0
CVS	Carmenet Viney	1.81	332		Pn	23 04 28.7	-0.2
MCCM	Marconi Confer	1.84	320		Pn	23 04 29.1	-0.2
MCCM	Marconi Confer	1.84	320		Pn	23 04 28.9	-0.3
HELL	Mitchell Peak,	1.89	91		Pn	23 04 28.9	-1.2
MRHM	Rocky Hill	1.90	103		Pn	23 04 28.6	-1.5
PMLM	Mount Lospe	1.95	161		Pn	23 04 29.9	-0.9
MRDM	Red Cones	2.03	65		Pn	23 04 33.0	+0.8
OMMB	Old Mammoth Mi	2.08	65		Pn	23 04 33.4	+0.5
OMMB				Sn	Sn	23 04 59.5	+1.0
MDCM	Deadman Creek	2.09	62		Pn	23 04 33.9	+0.9
MLCM	Laurel Creek C	2.14	65		Pb	23 04 35.5	-1.6
MEMM	East Mammoth H	2.15	64		Pn	23 04 35.4	+1.7
MGPM	Gravel Pit	2.16	65		Pn	23 04 35.2	+1.3
LMCR	Lookout Mounta	2.17	62		Pn	23 04 34.5	+0.5
MDRNC	Doe Ridge	2.21	66		Pb	23 04 36.5	-1.7
NMCNC	Mill Creek, So	2.21	327		Pn	23 04 33.7	-0.7
AFDM	Forest Hills D	2.22	8		Pn	23 04 34.8	+0.3
AFDM	Forest Hills D	2.22	8	Sn	Sn	23 05 01.6	+0.1
SCHCA	Scheelite	2.23	73		Pn	23 04 36.3	+1.4
FIGC	Figueroa Mtn.	2.31	150		Pn	23 04 36.9	+1.1
MTUM	Tungsten Hills	2.33	74		Pn	23 04 37.9	+1.7
WAKR	Walker	2.33	41		Pn	23 04 36.7	+0.5
ORC	Owens River	2.34	67		Pn	23 04 38.4	+2.0
GDXM	Geysers	2.35	332	Pn	Pn	23 04 37.2	+0.9
GHCM	House Creek	2.35	323		Pn	23 04 36.0	-0.4
GSGM	Seigler Mounta	2.37	334		Pn	23 04 37.1	+0.6
MRCM	Red Rock Canyo	2.47	67		Pb	23 04 40.5	-2.0
RUBR	Rubicon Trail	2.49	22	Pn	Pn	23 04 39.2	+0.7
POCCA	Poleta Canyon	2.55	75		Pb	23 04 41.6	-2.3
MLNR	Milner Canyon	2.56	70		Pb	23 04 42.3	-1.9
HCK	Huntoon Valley	2.58	58		Pb	23 04 43.2	-1.1
ISA	Isabella, Lake	2.58	114		Pn	23 04 40.6	+1.0
HOPS	Hopland Field	2.62	330	Pn	Pn	23 04 39.6	-0.4
PNTR	Pine Nut	2.73	30		Pn	23 04 42.5	+0.8
YERR	Yerington	2.80	36	Pn	Pn	23 04 43.5	+0.8
ORV	Oroville	2.81	358		Pn	23 04 43.7	+1.2
VCNR	Virginia City	2.88	28	Pn	Pn	23 04 41.1	-2.7
VCNR				Pg	Pg	23 04 52.3	-1.8
RYN	Ryan	2.94	49		Pn	23 04 44.7	+0.2
NVAR	Mina Array Bea	2.96	54	Pn	Pn	23 04 45.9	+1.1
OSI	Osito Audit: C	3.03	134	Pn	Pn	23 04 46.8	+1.1
NV11	Mina Array Sit	3.06	56	Pn	Pn	23 04 46.3	+0.1
NV11					Pb	23 04 51.6	-1.0
DAC	Darwin (Calif)	3.08	98	Pn	Pn	23 04 47.1	+0.6
DAC					Pg	23 04 56.8	-0.9
BEKR	Beckworth	3.21	14	Pn	Pn	23 04 48.9	+0.6
PAHR	Pah Rah Range	3.34	27	Pn	Pn	23 04 50.0	-0.1
KVN	Kaiserville	3.46	47	Pn	Pn	23 04 52.3	+0.5
KVN					Pb	23 04 58.3	-1.2
PASC	Pasadena Art C	3.66	134	Pn	Pn	23 04 52.3	-2.0
MWC	Mount Wilson	3.69	132	Pn	Pn	23 04 55.2	+0.3
SNCC	San Nicolas Is	3.81	156	Pn	Pn	23 04 55.4	-0.9
KMRM	Mail Ridge	3.92	333	Pn	Pn	23 04 58.1	0.0
WDC	Whiskeytown Da	3.94	347	Pn	Pn	23 04 58.7	+0.7
GSC	Goldstone, Bar	3.97	110	Pn	Pn	23 04 57.1	-1.6
TPNV	Topopah Spring	4.11	86	Pn	Pn	23 04 60.0	-0.7
TPNV					Pg	23 05 15.6	-1.8
R11A	Troy Canyon, C	4.87	69	Pn	Pn	23 05 11.0	-0.1
R11A					Pg	23 05 28.3	-3.6
SHPR	Sheep Range	5.00	91	Pn	Pn	23 05 12.9	0.0
PFO	Pinyon Flats O	5.09	126	Pn	Pn	23 05 14.3	+0.2
XPFO	Pion Flat	5.10	126	Pn	Pn	23 05 13.5	-0.7
KRMB	Red Mountain	5.16	338	Pn	Pn	23 05 15.3	+0.3

*THE **08** 23:04:17.2, 38.12N×20.40E, h7km, ML2.8/8, Error ellipse: s-maj=1.0km s-min=0.5km az=311.0*
*ATH **08** 23:04:17.6, 38.15N×20.42E, h8km±1km, ML2.9/7, Error ellipse: s-maj=1.7km s-min=0.8km az=258.0*
ISC 08 23:04:16.1±1.1, 38.14N±0.03×20.38E±0.04, h13km±4km, n53, σ0.65/80, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.04	5	P	Pg	23 04 19.3	+0.8
CHV1				S	Sg	23 04 20.6	+0.4
KEF3	Kipouria, Keph	0.07	339	P	Pg	23 04 19.7	+1.0
KEF3				S	Sg	23 04 21.0	+0.5
LXR1	Lixouri, Cepha	0.08	39	P	Pg	23 04 19.4	+0.6
LXR1				S	Sg	23 04 20.8	+0.1
ARGA	Argostoli. Kep	0.09	67	P	Pg	23 04 19.2	+0.3
ARGA				S	Sg	23 04 20.5	-0.4
KEF2	Argostoli. Kep	0.09	75	P	Pg	23 04 19.2	+0.3
KEF2				S	Sg	23 04 20.5	-0.5
ARG2	Argostoli	0.09	67	P	Pg	23 04 19.3	+0.3
ARG2				S	Sg	23 04 20.4	-0.6
KEF4	Livadi, Kephal	0.12	18	P	Pb	23 04 20.2	-0.2
KEF4				S	Sg	23 04 21.6	0.0
KEF1	Kardakata, Kep	0.15	29	P	Pb	23 04 20.6	-0.3
VLS	Valsamata	0.17	78	P	Pg	23 04 20.4	+0.3
VLS				S	Sg	23 04 22.7	-0.2
	19μm,0.3s						
VLS	Valsamata	0.17	78	P	Pg	23 04 20.4	+0.3
VLS				S	Sg	23 04 22.6	-0.2
VLS				AML	AML	23 04 23.0	
	comp=E,54642μm,0.1s						
VLS				AML	AML	23 04 23.3	
	comp=N,18031μm,0.2s						
VSK1	VASILIKIADES	0.30	29	P	Pb	23 04 23.2	-0.3
VSK1				S	Sb	23 04 27.9	-0.6
	comp=N,5μm,0.3s						
KONA	Konidatara, Ke	0.32	28	P	Pb	23 04 23.5	-0.3
KONA				S	Sg	23 04 28.0	+0.9
KFL	Anninata	0.33	96	P	Pg	23 04 23.2	+0.4
KFL	Anninata	0.33	96	P	Pg	23 04 23.4	+0.6
FSK	Fiskardo	0.35	25	P	Pb	23 04 23.9	-0.4
FSK				S	Sb	23 04 28.9	-0.8
	comp=N,2μm,0.3s						
VLMS	Volimes, Zakyn	0.35	140	P	Pb	23 04 24.2	0.0
VLMS				S	Sg	23 04 28.7	+0.8
VLMS				AML	AML	23 04 34.8	
	comp=N,7814μm,0.3s						
VLMS				AML	AML	23 04 37.0	
	comp=E,6395μm,0.3s						
EVGI	Lefkada island	0.53	25	P	Pb	23 04 27.2	-0.1
EVGI				S	Sb	23 04 35.0	+0.2
EVGI	Lefkada island	0.53	25	P	Pb	23 04 27.2	-0.1
EVGI				S	Sb	23 04 34.2	-0.6
KRI1	kERI	0.59	144	P	Pg	23 04 27.0	-0.7
MGNA	Meganis	0.61	32	P	Pb	23 04 28.6	-0.1
MGNA				S	Sb	23 04 36.7	-0.4
MGNA				AML	AML	23 04 38.3	
	comp=N,1576μm,0.2s						
MGNA				AML	AML	23 04 38.5	
	comp=E,2368μm,0.3s						
LKD2	Lefkada island	0.68	19	P	Pb	23 04 30.1	+0.1
LKD2	Lefkada island	0.68	19	P	Pb	23 04 30.0	+0.1
LKD2				S	Sb	23 04 39.4	+0.1
LKD2				AML	AML	23 04 53.4	
	comp=E,1219μm,0.6s						
LKD2				AML	AML	23 04 56.6	
	comp=N,1081μm,0.8s						
AST1	Astakos	0.69	54	P	Pb	23 04 30.0	0.0
AST1				S	Sb	23 04 40.4	+1.0
	comp=N,1μm,0.4s						
TSLK	Tsoukalades, L	0.72	18	P	Pn	23 04 31.0	-1.0
TSLK	Tsoukalades, L	0.72	18	P	Pn	23 04 31.0	-1.0
PDO	Prodromos	0.78	54	P	Pb	23 04 31.6	0.0
PDO	Prodromos	0.78	54	P	Pb	23 04 31.8	+0.1
PDO				S	Sb	23 04 41.9	-0.2
PDO				AML	AML	23 04 49.9	
	comp=N,3239μm,0.4s						
PDO				AML	AML	23 04 50.0	
	comp=E,2681μm,0.5s						
RLS	Riolos of Patr	0.86	95	P	Pg	23 04 33.0	+0.2
RLS				S	Sn	23 04 45.8	-0.7
	comp=E,340nm,0.7s						
RLS	Riolos of Patr	0.86	95	P	Pg	23 04 33.3	+0.5
RLS				S	Sg	23 04 44.5	+0.4
RLS				AML	AML	23 04 51.5	
	comp=E,813μm,0.8s						
RLS				AML	AML	23 04 52.3	
	comp=N,448μm,0.4s						
PVO	Paravola	1.02	62	P	Pg	23 04 36.5	+0.7
PVO				S	Sn	23 04 51.7	+1.3
	comp=N,1μm,0.5s						
PVO	Paravola	1.02	62	P	Pg	23 04 36.4	+0.6
PVO				S	Sn	23 04 50.4	0.0
PVO				AML	AML	23 04 54.9	
	comp=E,2375μm,0.4s						
PVO				AML	AML	23 04 59.2	
	comp=N,2402μm,0.5s						
DRO	Drossia	1.07	100	P	Pg	23 04 37.1	+0.3
DRO	Drossia	1.07	100	P	Pg	23 04 37.1	+0.3
UPR	University Cam	1.12	82	P	Pg	23 04 38.8	+1.1
UPR				S	Sg	23 04 54.0	+1.7
AMT	Artemida-Makis	1.22	120	P	Pg	23 04 40.8	+1.3
AMT				S	Sg	23 04 57.5	+2.1
	comp=N,530nm,0.8s						
AMT	Artemida-Makis	1.22	120	P	Pg	23 04 40.8	+1.3
LAKA	Lakka	1.27	85	P	Pg	23 04 40.5	0.0
ANX	Ano Chora	1.29	69	P	Pg	23 04 41.0	0.0
ANX	Ano Chora	1.29	69	P	Pg	23 04 41.1	+0.1
SERG	Sergoula	1.35	78	P	Pb	23 04 41.2	-0.1
TRIZ	Trizonia	1.35	80	P	Pb	23 04 41.2	-0.2
TRIZ	Trizonia	1.35	80	P	Pb	23 04 41.3	0.0
EVR	Evrytania	1.36	55	P	Pg	23 04 42.3	-0.1
EVR	Evrytania	1.36	55	P	Pg	23 04 42.7	+0.3
ALIK	Aliki, Aigiali	1.37	85	P	Pg	23 04 42.3	-0.2
ALIK				S	Sg	23 05 02.0	+1.7
IGT	Igoumenitsa	1.39	359	P	Pg	23 04 43.8	+0.9
IGT	Igoumenitsa	1.39	359	P	Pg	23 04 43.7	+0.9
KLV	Kalavryta, Ach	1.40	93	P	Pb	23 04 42.6	+0.3
KLV				S	Sg	23 05 01.4	+0.1
	comp=N,155nm,0.7s						
KALE	Kalithea	1.41	79	P	Pb	23 04 42.4	0.0
KALE	Kalithea	1.41	79	P	Pb	23 04 42.4	0.0
MAKR	Makrakomi, Fth	1.63	57	P	Pg	23 04 47.2	-0.2
PYL	PYLOS	1.65	139	P	Pg	23 04 47.4	-0.5
AGG	Agios Georgios	1.77	60	P	Pg	23 04 49.5	-0.5

*IDC **08** 23:16:35.1±0.5, 55.28N×162.53E, h0km, mb4.3/35, mb1 4.4/39, mb1mx4.3/68, mbtmp4.3/39, ML4.0/4, MS4.0/21, Ms1 4.0/21, ms1mx3.8/52, Error ellipse: s-maj=14.7km s-min=10.1km az=150.0*
*MOS **08** 23:16:35.2±1.4, 55.17N×162.88E, h45km, mb4.9/25, MS3.6/6, Error ellipse: s-maj=5.4km s-min=3.5km az=85.1*
*KRSC **08** 23:16:35.6±1.6, 55.14N×162.88E, h6km±20km, ML5.3, FELT [III] at GMS Semyachiki; [II] at Ust-Kamchatsk.*
*NEIC **08** 23:16:40.8±1.6, 55.16N±0.07×162.7E±0.1, h36km±3km, mb4.7/156, Error ellipse: s-maj=10.9km s-min=8.4km az=152.0*
*BJI **08** 23:16:41.7±0.0, 55.17N×162.16E, h42km, mB4.9/14, mb4.4/28, Ms4.6/10, Ms7 4.4/7*
ISC 08 23:16:36.1±1.4, 55.21N±0.03×162.79E±0.03, h2km±8km, n429, σ1.74/442, mb4.7/131, MS4.1/26, 4C-7D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.00	1	eP	Pb	23 16 56.9	+0.7
KBTR	Krutoberegovo	1.00	1	PN	Pb	23 16 56.9	+0.7
KBG	Krutoberegovo	1.05	357	eP	Pn	23 16 58.8	+0.9
KBG				eS	Sn	23 17 14.6	+1.5
KBG	Krutoberegovo	1.05	357	PN	Pn	23 16 58.8	+0.9
KBG				S	Sn	23 17 14.6	+1.5
TUMD	Tumrok D	1.37	271	eP	Pn	23 17 01.6	-0.7
TUMD				eS	Sg	23 17 19.7	-0.4
ZLN	Zelenaya	1.39	307	eP	Pn	23 17 02.9	+0.3
ZLN	Zelenaya	1.39	307	PN	Pn	23 17 02.9	+0.3
BZGR	Bezymyannyi-Gr	1.40	303	eP	Pn	23 17 03.1	+0.3
BZGR				eS	Sn	23 17 22.8	+1.0
BZGR	Bezymyannyi-Gr	1.40	303	PN	Pn	23 17 03.1	+0.3
BZGR				S	Sn	23 17 22.8	+1.0
KZV	Kizimen	1.44	267	eP	Pn	23 17 02.7	-0.6
KZV				eS	Sg	23 17 20.8	-1.4
KZV	Kizimen	1.44	267	PN	Pn	23 17 02.7	-0.6
KZV				S	Sg	23 17 20.8	-1.4
CIRR	Tsirk	1.47	309	eP	Pn	23 17 03.9	+0.1
CIRR	Tsirk	1.47	309	PN	Pn	23 17 03.9	+0.1
LGNR	Loginova	1.48	307	eP	Pn	23 17 04.6	+0.6
LGNR	Loginova	1.48	307	PN	Pn	23 17 04.6	+0.6
BZMR	Bezymyannaya	1.50	300	eP	Pn	23 17 04.4	+0.3
BZMR	Bezymyannaya	1.50	300	PN	Pn	23 17 04.4	+0.3
TUMR	Tumrok	1.52	274	eP	Pn	23 17 04.2	-0.2
TUMR				eS	Sn	23 17 24.9	+0.2
TUMR	Tumrok	1.52	274	PN	Pn	23 17 04.2	-0.2
TUMR				S	Sn	23 17 24.9	+0.2
KMNR	Kamenistaya	1.55	292	eP	Pn	23 17 05.1	+0.2
KMNR	Kamenistaya	1.55	292	PN	Pn	23 17 05.1	+0.2
SMKR	Semkarok	1.57	332	eP	Pn	23 17 05.9	+0.9
SMKR	Semkarok	1.57	332	PN	Pn	23 17 05.9	+0.9
KIRR	Kirishev	1.58	299	eP	Pn	23 17 05.7	+0.4
KIRR	Kirishev	1.58	299	PN	Pn	23 17 05.7	+0.4
KRSR	Krestovskiy	1.62	310	eP	Pn	23 17 05.6	-0.1
KRSR	Krestovskiy	1.62	310	PN	Pn	23 17 05.6	-0.1
BDR	Baidarnaya	1.63	327	eP	Pn	23 17 06.7	+0.8
BDR				eS	Sg	23 17 28.9	+0.4
BDR	Baidarnaya	1.63	327	PN	Pn	23 17 06.7	+0.8
BDR				S	Sg	23 17 28.9	+0.4
KLY	Klyuchi	1.64	313	eP	Pn	23 17 05.1	-0.9
KLY	Klyuchi	1.64	313	PN	Pn	23 17 05.1	-0.9
KPT	Kopyto	1.65	299	eP	Pn	23 17 07.6	+1.5
KPT	Kopyto	1.65	299	PN	Pn	23 17 07.6	+1.5
SRKR	Sorokina	1.71	328	eP	Pn	23 17 07.8	+0.7
SRKR	Sorokina	1.71	328	PN	Pn	23 17 07.8	+0.7
BKI	Bering	1.82	89	eP	Pn	23 17 08.4	-0.1
BKI				eS	Sn	23 17 30.1	-2.0
BKI	Bering	1.82	89	PN	Pn	23 17 08.4	-0.1
BKI				S	Sn	23 17 30.1	-2.0
KOZ	Kozyrevsk	1.86	298	eP	Pn	23 17 10.4	+1.4
KOZ	Kozyrevsk	1.86	298	PN	Pn	23 17 10.4	+1.4
SRDR	Sredinnyy	2.06	304	eP	Pn	23 17 12.9	+1.1
SRDR				eS	Sb	23 17 40.4	0.0
SRDR	Sredinnyy	2.06	304	PN	Pn	23 17 12.9	+1.1
SRDR				S	Sb	23 17 40.4	0.0
KII	Karymskiy	2.27	240	eP	Pn	23 17 15.0	+0.3
KII	Karymskiy	2.27	240	PN	Pn	23 17 15.0	+0.3
ESO	Esso	2.43	289	eP	Pn	23 17 16.9	0.0
ESO	Esso	2.43	289	PN	Pn	23 17 16.9	0.0
SPN	Mys Shipunski	2.67	219	eP	Pn	23 17 19.5	-0.6
SPN				eS	Sn	23 17 51.5	-1.4
SPN	Mys Shipunski	2.67	219	PN	Pn	23 17 19.5	-0.6
SPN				S	Sn	23 17 51.5	-1.4
NLC	Nalytchevo	2.87	226	eP	Pn	23 17 23.5	+0.6
NLC				eS	Sn	23 17 59.4	+1.4
NLC	Nalytchevo	2.87	226	PN	Pn	23 17 23.5	+0.6
NLC				S	Sn	23 17 59.4	+1.4
SDLR	Sedlovina	3.00	231	eP	Pn	23 17 25.6	+0.9
SDLR				eS	Sn	23 18 04.1	+2.8
SDLR	Sedlovina	3.00	231	PN	Pn	23 17 25.6	+0.9
SDLR				S	Sn	23 18 04.1	+2.8
KRER	Koryakskii	3.04	233	eP	Pn	23 17 27.4	+2.0
KRER	Koryakskii	3.04	233	PN	Pn	23 17 27.4	+2.0
SMAR	Somma	3.04	232	eP	Pn	23 17 26.3	+0.8
SMAR				eS	Sn	23 18 04.5	+1.9
SMAR	Somma	3.04	232	PN	Pn	23 17 26.3	+0.8
SMAR				S	Sn	23 18 04.5	+1.9
KRX	Arik	3.05	234	eP	Pn	23 17 27.9	+2.4
KRX				eS	Sn	23 18 06.6	+3.9
KRX	Arik	3.05	234	PN	Pn	23 17 27.9	+2.4
KRX				S	Sn	23 18 06.6	+3.9
UGLR	Uglovaya	3.07	231	eP	Pn	23 17 26.9	+1.2
UGLR				eS	Sn	23 18 06.5	+3.4
UGLR	Uglovaya	3.07	231	PN	Pn	23 17 26.9	+1.2
UGLR				S	Sn	23 18 06.5	+3.4
AVH	Avacha	3.07	232	eP	Pn	23 17 27.0	+1.3
AVH				eS	Sn	23 18 07.1	+4.0
AVH	Avacha	3.07	232	PN	Pn	23 17 27.0	+1.3
AVH				S	Sn	23 18 07.1	+4.0
KOK	Koryaka	3.10	233	eP	Pn	23 17 28.3	+2.2
KOK	Koryaka	3.10	233	PN	Pn	23 17 28.3	+2.2
DALK	Dalny	3.22	229	eP	Pn	23 17 29.0	+1.3
DALK				eS	Sn	23 18 08.4	+1.8
DALK	Dalny	3.22	229	PN	Pn	23 17 29.0	+1.3
DALK				S	Sn	23 18 08.4	+1.8
PET	Petropavlovsk	3.27	230	eP	Pn	23 17 30.5	+2.1
PET				eS	Sn	23 18 10.8	+3.0
PET	Petropavlovsk	3.27	230		Pn	23 17 29.6	+1.2
PET				Sn	Sn	23 18 10.2	+2.4
PET	Petropavlovsk	3.27	230⇑	iPN	Pn	23 17 30.3	+1.9
PET				eS	Sn	23 18 10.6	+2.8
PET				pmax	pmax		
	comp=Z,3μm,0.6s						
PET				smax	smax		
	comp=N,4μm,0.8s						
PET				smax	smax		
	comp=E,4μm,0.6s						
PET				MLR	MLR		
	comp=Z,2μm,12.0s						
PET				MLR	MLR		
	comp=Z,1μm,13.0s						
KRMR	Karymshinskiy	3.64	231	eP	Pn	23 17 36.3	+2.9
KRMR				eS	Sn	23 18 22.5	+5.7
KRMR	Karymshinskiy	3.64	231	PN	Pn	23 17 36.3	+2.9
KRMR				S	Sn	23 18 22.5	+5.7
PEA0B	Petropavlovsk-	3.66	237		Pn	23 17 35.8	+2.1
PEA0B	Petropavlovsk-	3.66	237	i PN	Pn	23 17 35.4	+1.7
PETK	Petropavlovsk-	3.66	237	Pn	Pn	23 17 33.1	-0.6
	comp=Z,21nm,0.3s,baz=65,slow=17,SNR=136						
PETK				Sn	Sn	23 18 19.9	+2.5
	comp=Z,13nm,0.3s,baz=55,slow=24,SNR=3.5						
PETK	Petropavlovsk-	3.66	237		Pn	23 17 35.8	+2.1
PETK	Petropavlovsk-	3.66	237	PN	Pn	23 17 35.8	+2.1
RUS	Russkaya	3.76	224	eP	Pn	23 17 36.2	+1.1
RUS				eS	Sn	23 18 20.0	+0.1
RUS	Russkaya	3.76	224	PN	Pn	23 17 36.2	+1.1
GRL	Gorelyy	3.85	228	eP	Pn	23 17 39.8	+3.3
GRL	Gorelyy	3.85	228	PN	Pn	23 17 39.8	+3.3
MTVR	Mutnovka	3.86	227	eP	Pn	23 17 38.7	+2.1
MTVR	Mutnovka	3.86	227	PN	Pn	23 17 38.7	+2.1
APC	Apacha	4.03	238	eP	Pn	23 17 41.4	+2.6
APC	Apacha	4.03	238	PN	Pn	23 17 41.4	+2.6
ASAK	Asacha	4.05	228	eP	Pn	23 17 41.3	+2.1
ASAK				eS	Sn	23 18 29.3	+2.1
ASAK	Asacha	4.05	228	PN	Pn	23 17 41.3	+2.1
ASAK				S	Sn	23 18 29.3	+2.1
OSSR	Ossora	4.06	2	eP	Pn	23 17 40.5	+1.4
OSSR	Ossora	4.06	2	PN	Pn	23 17 40.5	+1.4
PALN	Palana	4.18	340	eP	Pb	23 17 46.7	-3.7
PALN	Palana	4.18	340	PN	Pb	23 17 46.7	-3.7
KDTR	Khodutka, Kamc	4.42	222	eP	Pn	23 17 45.1	+1.0
KDTR				eS	Sn	23 18 37.8	+1.8
KDTR	Khodutka, Kamc	4.42	222	PN	Pn	23 17 45.1	+1.0
KDTR				S	Sn	23 18 37.8	+1.8
PAU	Pauzhetka	5.18	226	eP	Pn	23 17 56.9	+2.3
PAU	Pauzhetka	5.18	226	PN	Pn	23 17 56.9	+2.3
TILK	Tilichiki	5.55	17	eP	Pn	23 18 02.1	+2.5
TILK	Tilichiki	5.55	17	PN	Pn	23 18 02.1	+2.5
SKR	Severo-Kuril's	6.07	224	eP	Pn	23 18 11.2	+4.5
SKR	Severo-Kuril's	6.07	224	ePN	Pn	23 18 09.0	+2.3
SKR				eS	Sn	23 19 21.8	+5.2
SKR				pmax	pmax		
	comp=Z,257nm,0.7s						
SKR				smax	smax		
	comp=N,327nm,0.7s						
SKR				smax	smax		
	comp=E,442nm,0.8s						
SKR				MLR	MLR		
	comp=Z,300nm,16.0s						
SMY	Shemya	7.12	106	Pn	Pn	23 18 24.0	+2.8
SMY	Shemya	7.12	106	PN	Pn	23 18 24.0	+2.8
KMSK	Kamenskaya	7.49	12	eP	Pn	23 18 28.9	+2.6
KMSK	Kamenskaya	7.49	12	PN	Pn	23 18 28.9	+2.6
MA2	Magadan	7.83	309	Pn	Pn	23 18 33.4	+2.5
	comp=Z,0.6nm,0.3s,baz=74,slow=15,SNR=3.5						
MA2				LR	LR	23 21 48.5	
	comp=Z,1μm,20.0s,baz=111,slow=41						
MA2	Magadan	7.83	309	eP	Pn	23 18 33.9	+3.0
MA2	Magadan	7.83	309	PN	Pn	23 18 33.9	+3.0
SEY	Seymchan	9.41	330	Pn	Pn	23 18 55.0	+2.5
	comp=Z,0.1nm,0.3s,baz=18,slow=19,SNR=3.0						
SEY	Seymchan	9.41	330	i PN	Pn	23 18 54.0	+1.5
TYV	Tymovskoe	12.86	259	ePN	Pn	23 19 45.1	+5.3
TYV				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TYV				pmax	pmax		
	comp=Z,300nm,4.2s						
GSTR	Great Sitkin T	12.92	95	Pn	Pn	23 19 41.5	+0.9
BILL	Bilibino	12.98	6		Pn	23 19 45.8	+4.4
BILL	Bilibino	12.98	6	i PN	Pn	23 19 46.4	+5.1
YSS	Yuzh-Sakhalins	15.02	245		Pn	23 20 08.2	-1.0
YSS	Yuzh-Sakhalins	15.02	245⇓	iP	P	23 20 14.3	-0.5
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				MLR	MLR		
	comp=Z,400nm,13.0s						
YSS				MLR	MLR		
	comp=N,300nm,16.0s						
YSS				MLR	MLR		
	comp=E,500nm,15.0s						
SHO	Shikotan	15.32	229	eP	Pn	23 20 10.6	-2.6
SHO				eS	Sn	23 22 57.5	-5.8
SHO				pmax	pmax		
	comp=Z,9.0nm,0.3s						
SHO				MLR	MLR		
	comp=Z,171nm,11.0s						
GAMB	Gambell	15.43	46	Pn	Pn	23 20 17.2	+2.6
YUK	Yuzh-Kuril'sk	15.61	231	P	Pn	23 20 15.5	-1.6
YUK				eS	Sn	23 23 08.4	-2.1
YUK				MLR	MLR		
	comp=Z,218nm,16.0s						
NMR	Nemuro--Hokkai	16.20	230	eP	Pn	23 20 21.9	-2.7
NMR				eS	Sn	23 23 20.5	-4.2
GRNR	Gornyy	16.44	265	eP	Pn	23 20 24.8	-2.9
GRNR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
JKA	Kamikawa-asahi	17.08	238		Pn	23 20 35.2	-0.6
ASAJ	Asahikawa	17.08	238	Pn	Pn	23 20 35.2	-0.6
	comp=Z,0.7nm,0.3s,baz=54,slow=11,SNR=11						
UNV	Unalaska Valle	17.80	82	P	P	23 20 47.1	+1.5
UNV				IAmb	IAmb	23 21 05.2	
	comp=Z,57nm,1.2s						
ANM	Nome	18.31	46	P	P	23 20 52.7	+1.6
ANM	Nome	18.31	46	P	P	23 20 52.7	+1.6
ANM				pmax	pmax		
	comp=Z,11nm,1.2s						
YAK	Yakutsk	18.38	305	P	Pn	23 20 50.8	-1.0
	comp=Z,0.1nm,0.3s,baz=23,slow=0.9,SNR=2.1						
YAK	Yakutsk	18.38	305	P	Pn	23 20 52.3	+0.6
YAK	Yakutsk	18.38	305	eP	P	23 20 53.3	+1.4
YAK				eS	Sn	23 24 17.2	-0.1
YAK				pmax	pmax		
	comp=Z,18nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.2s						
YAK				smax	smax		
	comp=E,131nm,3.8s						
YAK				smax	smax		
	comp=N,101nm,3.1s						
YAK				MLR	MLR		
	comp=Z,618nm,18.0s						
YAK				MLR	MLR		
	comp=E,490nm,18.0s						
YAK				MLR	MLR		
	comp=N,224nm,18.0s						
ERM	Erimo	18.43	232	P	P	23 20 50.8	-1.7
ERM				IAmb	IAmb	23 20 60.0	
	comp=Z,26nm,0.6s						
ERM	Erimo	18.43	232	P	P	23 20 50.8	-1.7
ERM				pmax	pmax		
	comp=Z,26nm,0.6s						
KLR	Kul'dur	19.82	265	P	P	23 21 07.6	-0.2
	comp=Z,0.2nm,0.3s,baz=61,slow=11,SNR=4.7						
KLR	Kul'dur	19.82	265	i P	P	23 21 04.0	-3.8
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
RDOG	Red Dog Mine	20.39	37	P	P	23 21 14.9	+0.9
RDOG				IAmb	IAmb	23 21 32.6	
	comp=Z,39nm,0.9s						
ZEA	Zeya	20.57	281	eP	P	23 21 18.1	+2.2
ZEA				pmax	pmax		
	comp=Z,14nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,500nm,14.0s						
TIXI	Tiksi	21.89	332	P	P	23 21 29.0	-1.0
	comp=Z,20nm,0.7s,baz=125,slow=11,SNR=51						
TIXI				LR	LR	23 30 55.9	
	comp=Z,610nm,18.6s,baz=154,slow=40						
TIXI	Tiksi	21.89	332	P	P	23 21 30.2	+0.2
TIXI				IAmb	IAmb	23 21 47.5	
	comp=Z,35nm,0.8s						
TIXI	Tiksi	21.89	332	i P	P	23 21 29.2	-0.8

TIXI pmax pmax
comp=Z,19nm,0.9s
USRK Ussuriysk Ar. 22.57 254 P P 23 21 36.1 -1.4
comp=Z,1.1nm,0.5s,baz=45,slow=13,SNR=4.6
IMAR Indian Mountai 23.38 45 P P 23 21 46.4 +0.7
RSO Redoubt South 23.87 59 P P 23 21 52.6 +1.9
PPLA Purkeypile 23.94 53 P P 23 21 52.8 +1.4
OHAK Old Harbor 24.19 67 P P 23 21 53.8 +0.2
OHAK IAmb IAmb 23 22 08.5
comp=Z,34nm,1.1s
SKT Skwentna 24.30 55 P P 23 21 52.0 -2.6
SKT IAmb IAmb 23 22 11.0
comp=Z,17nm,1.0s
KDAK Kodiak Island 24.43 65 P P 23 21 55.6 -0.2
comp=Z,6.7nm,0.4s,baz=5.6,slow=3.2,SNR=17
KDAK Kodiak Island 24.43 65 P P 23 21 56.0 +0.2
KDAK IAmb IAmb 23 22 03.1
comp=Z,18nm,0.9s
BPAW Bear Paw Mtn. 24.45 50 P P 23 21 56.1 +0.1
KTH Kantishna Hill 24.49 51 P P 23 21 57.3 +0.9
KTH IAmb IAmb 23 22 11.4
comp=Z,20nm,0.9s
MLY Manley 24.56 48 P P 23 21 57.5 +0.5
SUA Susitna One 24.72 56 P P 23 21 58.8 +0.3
TRF Thorofare Moun 24.78 52 P P 23 21 59.8 +0.7
BRLK Bradley Lake 24.90 60 P P 23 21 59.6 -0.5
BRLK IAmb IAmb 23 22 13.7
comp=Z,18nm,1.1s
COLD Coldfoot 24.91 43 IAmb IAmb 23 22 19.1
comp=Z,21nm,1.2s
MJB9 Matsu-Tunnel 25.10 232 P P 23 22 01.8 -0.3
MJAR Matsushiro Arr 25.10 232 P P 23 22 00.2 -1.8
comp=Z,31nm,1.0s,baz=21,slow=8.3,SNR=39
MJAR LR LR 23 33 22.0
comp=Z,163nm,19.8s,baz=55,slow=40
MJAR Matsushiro Arr 25.10 232 P P 23 22 01.8 -0.3
MJAR Matsushiro Arr 25.10 232 P P 23 22 01.8 -0.3
MJAR pmax pmax
comp=Z,9.0nm,0.8s
MAJO Matsushiro 25.10 232 P P 23 22 01.6 -0.5
MAJO Matsushiro 25.10 232 i P P 23 22 00.5 -1.6
MAJO pmax pmax
comp=Z,39nm,0.9s
MAT Matsushiro 25.10 232 P P 23 22 01.4 -0.7
MAT S S 23 26 27.2 -0.1
BWN Browne 25.11 50 P P 23 22 04.0 +2.1
RC01 Rabbit Creek A 25.25 57 P P 23 22 04.3 +1.1
NEA Nenana 25.27 49 P P 23 22 03.1 -0.3
NEA IAmb IAmb 23 22 19.5
comp=Z,18nm,0.9s
MCK McKinley 25.37 51 P P 23 22 05.0 +0.8
MCK IAmb IAmb 23 22 19.7
comp=Z,18nm,0.9s
MCK McKinley 25.37 51 P P 23 22 05.0 +0.8
MCK pmax pmax
comp=Z,18nm,0.9s
RND Reindeer 25.42 52 P P 23 22 04.7 -0.1
RND IAmb IAmb 23 22 19.2
comp=Z,22nm,1.0s
RND Reindeer 25.42 52 P P 23 22 04.7 -0.1
RND pmax pmax
comp=Z,22nm,1.0s
SEW Seward 25.55 59 P P 23 22 06.1 +0.3
SEW IAmb IAmb 23 22 21.6
comp=Z,15nm,0.8s
GHO Glory Hole Cre 25.55 55 P P 23 22 06.7 +0.8
MDM Murphy Dome 25.63 48 P P 23 22 07.2 +0.6
KNK Knik Glacier 25.82 56 P P 23 22 08.3 0.0
KNK IAmb IAmb 23 22 23.9
comp=Z,21nm,1.1s
CCB Clear Creek Bu 25.82 49 P P 23 22 08.8 +0.5
CCB IAmb IAmb 23 22 23.4
comp=Z,36nm,1.2s
SML Sawmill 25.82 55 P P 23 22 09.6 +1.2
SML IAmb IAmb 23 22 24.0
comp=Z,17nm,0.9s
DHY Denali Highway 26.12 52 P P 23 22 11.1 -0.1
DHY IAmb IAmb 23 22 25.1
comp=Z,15nm,1.0s
HDA Harding Lake 26.20 49 P P 23 22 11.8 0.0
HDA IAmb IAmb 23 22 28.1
comp=Z,12nm,0.8s
IL31 26.21 48 IAmb IAmb 23 22 31.4
comp=Z,14nm,0.9s
ILAR Eielson Array 26.21 48 P P 23 22 12.0 +0.2
comp=Z,8.1nm,0.9s,baz=265,slow=8.1,SNR=57
ILAR LR LR 23 32 59.2
comp=Z,141nm,18.1s,baz=268,slow=38
ILAR Eielson Array 26.21 48 P P 23 22 12.9 +1.1
ILAR Eielson Array 26.21 48 P P 23 22 12.9 +1.1
SCM Sheep Creek Mo 26.29 55 P P 23 22 13.2 +0.5
SCM IAmb IAmb 23 22 28.7
comp=Z,19nm,0.7s
SCM Sheep Creek Mo 26.29 55 P P 23 22 13.2 +0.5
SCM pmax pmax
comp=Z,19nm,0.7s
GLI Glacier Island 26.56 57 P P 23 22 11.7 -3.3
GLI IAmb IAmb 23 22 25.5
comp=Z,23nm,1.0s
BOD Bodaibo 26.58 296 eP P 23 22 13.9 -1.3
BOD pmax pmax
comp=Z,17nm,1.4s
INU Inuyama 26.63 232 P P 23 22 15.6 -0.3
INU IAmb IAmb 23 22 34.9
comp=Z,15nm,0.9s
HIA Hailar 26.68 275 P P 23 22 16.6 +0.3
HIA Hailar 26.68 275 i P P 23 22 13.0 -3.3
HIA pmax pmax
comp=Z,19nm,0.9s
FYU Fort Yukon 26.84 44 P P 23 22 19.3 +1.8
FID Port Fidalgo 26.88 57 P P 23 22 18.1 +0.2
FID IAmb IAmb 23 22 28.3
comp=Z,16nm,1.2s
HIN Hinchinbrook I 26.94 58 P P 23 22 18.9 +0.5
PAX Paxson 26.99 52 P P 23 22 20.3 +1.2
PAX Paxson 26.99 52 P P 23 22 20.3 +1.2
PAX pmax pmax
comp=Z,10.0nm,1.2s
BMAR Burnt Mountain 27.10 42 P P 23 22 20.8 +0.9
RIDG Independent Ri 27.18 50 P P 23 22 20.4 -0.3
RIDG IAmb IAmb 23 22 34.6
comp=Z,19nm,1.0s
EYAK Cordova Ski Ar 27.27 58 P P 23 22 22.3 +0.9
SCRK Sand Creek 27.53 50 P P 23 22 24.1 +0.2
SCRK IAmb IAmb 23 22 37.1
comp=Z,31nm,1.2s
MENT Mentasta 27.79 52 P P 23 22 26.9 +0.8
MENT IAmb IAmb 23 22 40.4
comp=Z,6.6nm,0.4s
RAGM Ragged Mountai 27.82 58 P P 23 22 27.7 +1.2
GLB Gilahina Butte 28.01 55 P P 23 22 29.0 +0.9
GLB IAmb IAmb 23 22 43.8
comp=Z,16nm,1.1s
HMT Hamilton 28.04 58 P P 23 22 29.2 +0.9
HMT IAmb IAmb 23 22 33.1
comp=Z,11nm,1.0s
VRDI Verde Repeater 28.23 56 P P 23 22 30.8 +0.6
SUCK Suckling Hills 28.33 58 P P 23 22 32.5 +1.6
MCARA McCarthy VSAT 28.40 55 P P 23 22 33.3 +1.8
CRQM Cirque 28.48 56 P P 23 22 33.9 +1.4
CRQM IAmb IAmb 23 22 48.8
comp=Z,18nm,0.8s
TGL Tana Glacier 28.63 56 P P 23 22 34.2 +0.5
BCAR Beaver Creek A 28.64 51 P P 23 22 35.1 +1.3
EGAK Eagle 28.65 48 IAmb IAmb 23 22 47.7
comp=Z,19nm,1.1s
WAX Waxell Ridge 28.69 57 P P 23 22 35.3 +1.1
WAX IAmb IAmb 23 22 53.7
comp=Z,14nm,1.1s
BALM Baldy 28.79 56 P P 23 22 36.0 +0.9
BARN Barnard Glacie 29.11 56 P P 23 22 39.2 +1.1
CTGM Chitina Glacie 29.29 56 P P 23 22 40.9 +1.3
CTGM IAmb IAmb 23 22 59.8
comp=Z,9.3nm,0.9s
KSRS Korea Array 29.49 248 LR LR 23 34 50.6
comp=Z,135nm,18.7s,baz=45,slow=37
KSAR Wonju Array Be 29.52 248 P P 23 22 41.4 -0.2
KSAR Wonju Array Be 29.52 248 P P 23 22 41.4 -0.2
DAWY Dawson 29.52 49 P P 23 22 41.8 +0.3
PCA Pinnacle 30.03 57 P P 23 22 46.9 +0.8
EPYK Eagle Plains 30.27 44 P P 23 22 49.4 +1.3
EPYK IAmb IAmb 23 23 02.1
comp=Z,11nm,0.8s
HYT Haines Junctio 31.13 55 IAmb IAmb 23 23 16.8
comp=Z,11nm,0.9s
INK Inuvik 31.22 40 P P 23 22 57.2 +0.8
comp=Z,1.6nm,0.4s,baz=268,slow=7.5,SNR=18
INK Inuvik 31.22 40 P P 23 22 57.4 +1.0
INK IAmb IAmb 23 23 10.6
comp=Z,13nm,0.8s
INK Inuvik 31.22 40 P P 23 22 57.4 +1.0
INK pmax pmax
comp=Z,13nm,0.8s
JNU Nakatsue 31.36 238 P P 23 22 58.0 +0.1
comp=Z,4.4nm,0.6s,baz=44,slow=3.9,SNR=5.5
JNU LR LR 23 36 31.1
comp=Z,214nm,18.7s,baz=12,slow=38
JNU Nakatsue 31.36 238 P P 23 22 57.7 -0.3
JNU IAmb IAmb 23 22 58.9
comp=Z,10nm,1.1s
WHY Whitehorse 32.41 54 P P 23 23 08.8 +1.7
WHY IAmb IAmb 23 23 23.6
comp=Z,9.3nm,0.8s
C36M Paulatuk 34.40 37 P P 23 23 24.7 +0.5
TLY Talaya 34.49 289 P P 23 23 26.0 +0.8
comp=Z,1.3nm,0.3s,baz=48,slow=16,SNR=3.3
TLY Talaya 34.49 289 P P 23 23 24.8 -0.4
TLY Talaya 34.49 289 P P 23 23 24.8 -0.4
TLY pmax pmax
comp=Z,3.0nm,0.6s
ULN Ulaanbaatar 34.60 281 P P 23 23 25.7 -0.7
ULN Ulaanbaatar 34.60 281 P P 23 23 25.7 -0.7
ULN pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 34.99 282 P P 23 23 28.2 -1.5
comp=Z,1.0nm,0.7s,baz=58,slow=8.3,SNR=9.3
SONM PcP PcP 23 26 00.4 -1.3
comp=Z,0.6nm,0.5s,baz=47,slow=1.3,SNR=6.7
SONM LR LR 23 38 06.0
comp=Z,116nm,20.8s,baz=355,slow=37
SONM Songino Array 34.99 282 P P 23 23 28.2 -1.5
H11N2 WAKE ISLAND Hy 35.55 173 T T 00 02 46.0
baz=357,slow=76,SNR=180
H11N3 WAKE ISLAND Hy 35.57 173 T T 00 02 47.2
baz=357,slow=76,SNR=236
H11N1 WAKE ISLAND Hy 35.57 173 T T 00 02 44.6
baz=357,slow=76,SNR=5.5
HHC Hu-ho-hao-te 36.27 268 eP P 23 23 40.9 +0.2
HHC pmax pmax
comp=Z,4.0nm,1.0s
HHC pmax pmax
comp=Z,180nm,4.8s
NJ2 Nanjing 38.44 251 eP P 23 23 59.4 +0.4
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
YKA Yellowknife Ar 40.54 45 P P 23 24 16.7 +0.5
comp=Z,2.4nm,0.8s,baz=299,slow=8.1,SNR=22
RES Resolute Bay 40.76 23 P P 23 24 18.4 +0.5
RES Resolute Bay 40.76 23 P P 23 24 18.4 +0.5
RES pmax pmax
comp=Z,5.0nm,0.8s
WHN Wuhan 42.06 254 P P 23 24 27.4 -1.7
XAN Xi'an 42.51 263 P P 23 24 37.2 +4.5
XAN pP pwP 23 24 45.8 +8.2
XAN LR LR
comp=Z,390nm,20.6s
ZALV Zalesovo Beam 42.98 302 P P 23 24 35.2 -1.1
comp=Z,1.3nm,0.7s,baz=63,slow=7.2,SNR=5.7
ZALV PcP PcP 23 26 25.0 -1.6
comp=Z,2.5nm,0.9s,baz=65,slow=12,SNR=6.6
ZALV LR LR 23 44 36.2
comp=Z,210nm,18.6s,baz=55,slow=39
ZALV Zalesovo Beam 42.98 302 P P 23 24 35.1 -1.3
LLLB Lillooet 43.61 63 P P 23 24 42.0 +0.5
LZH Lanzhou 43.94 269 eP P 23 24 43.3 -1.2
LZH pP pwP 23 24 54.5 +5.2
LZH sP pP 23 24 59.8 +16
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,64nm,5.0s
LZH LR LR
comp=Z,360nm,14.1s
LZH LR LR
comp=Z,280nm,14.1s
LZH LR LR
comp=Z,510nm,14.6s
GTA Gaotai 43.95 276 eP P 23 24 46.5 +2.0
GTA pP pwP 23 24 59.7 +10
GTA sP pP 23 25 04.4 +21
GTA pmax pmax
comp=Z,74nm,5.3s
GTA LR LR
comp=Z,350nm,17.9s
GTA LR LR
comp=Z,230nm,15.5s
GTA LR LR
comp=Z,440nm,16.5s
KBS Kingsbay 44.99 352 P P 23 24 53.8 +1.7
KBS Kingsbay 44.99 352 P P 23 24 53.8 +1.7
KBS pmax pmax
comp=Z,14nm,0.9s
SPA0 Spitsbergen Ar 45.30 351 P P 23 24 54.5 -0.1
SPITS Spitsbergen Ar 45.30 351 LR LR 23 44 37.3
comp=Z,261nm,18.1s,baz=25,slow=37
WMQ Urumqi 47.77 289 eP P 23 25 15.7 +1.2
WMQ pmax pmax
comp=Z,17nm,1.3s
WMQ pmax pmax
comp=Z,110nm,6.7s
KURK Kurchatov 47.97 302 P P 23 25 12.9 -3.0
KURK IAmb IAmb 23 25 20.1
comp=Z,7.9nm,0.9s
KURK Kurchatov 47.97 302 i P P 23 25 10.6 -5.2
KURK pmax pmax
comp=Z,1.0nm,0.9s
KURBB Kurchatov Arra 48.07 302 P P 23 25 13.1 -3.5
comp=Z,1.2nm,0.4s,baz=55,slow=7.8,SNR=16
DAG Danmarks Havn 48.28 0 i P P 23 25 17.0 -0.9
DAG Danmarks Havn 48.28 0 i P P 23 25 17.0 -0.9
WALA Waterton Lakes 48.61 61 P 23 25 30.6 +10
MK31 Makanchi Array 48.67 296 IAmb IAmb 23 25 25.8
comp=Z,5.7nm,0.8s
MK31 Makanchi Array 48.67 296 i P P 23 25 18.6 -2.8
MKAR Makanchi Array 48.67 296 P P 23 25 17.9 -3.5
comp=Z,0.7nm,0.5s,baz=48,slow=6.7,SNR=19
MKAR LR LR 23 47 06.7
comp=Z,309nm,19.8s,baz=360,slow=38
MKAR Makanchi Array 48.67 296 i P P 23 25 18.7 -2.7
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MAKZ Makanchi 48.82 296 P P 23 25 19.7 -2.9
MAKZ IAmb IAmb 23 25 27.5
comp=Z,9.4nm,1.1s
MAKZ Makanchi 48.82 296 P P 23 25 19.7 -2.9
MAKZ pmax pmax
comp=Z,9.0nm,1.1s
BMO Blue Mountains 49.65 67 P P 23 25 29.7 +0.7
BMO Blue Mountains 49.65 67 P P 23 25 29.7 +0.7
BMO pmax pmax
comp=Z,2.0nm,0.9s
MOD Modoc Plateau 50.05 72 P P 23 25 33.6 +1.5
BRVK Borovoye 50.34 308 P P 23 25 32.8 -1.2
BRVK IAmb IAmb 23 25 39.1
comp=Z,5.4nm,0.8s
BRVK Borovoye 50.34 308 P P 23 25 32.8 -1.2
BRVK pmax pmax
comp=Z,5.0nm,0.8s
WVOR Wild Horse Val 50.58 70 P P 23 25 36.0 -0.2
WVOR Wild Horse Val 50.58 70 P P 23 25 36.0 -0.2
WVOR pmax pmax
comp=Z,3.0nm,1.0s
FCC Fort Churchill 50.84 41 IAmb IAmb 23 25 52.7
comp=Z,7.7nm,0.9s
SUMG Summit 51.66 8 i P P 23 25 43.0 -1.1
SUMG Summit 51.66 8 P P 23 25 43.6 -0.5
SUMG Summit 51.66 8 P P 23 25 43.6 -0.5
SUMG pmax pmax
comp=Z,5.0nm,1.1s
AFDM Forest Hills D 51.73 75 P P 23 25 44.6 0.0
ARCES ARCESS Array B 51.76 342 P P 23 25 43.8 -0.6
comp=Z,4.0nm,0.9s,baz=11,slow=9.6,SNR=3.7
ARE0 ARCESS Array S 51.76 342 P P 23 25 44.9 +0.5
SVE Sverdlovsk 51.82 317 eP P 23 25 50.5 +5.5
KMI Kunming 52.74 261 P P 23 25 50.0 -2.6
KMI pP pwP 23 26 05.4 +8.0
KMI sP pP 23 26 10.9 +19
KMI S S 23 33 12.3 -9.2
KMI pmax pmax
comp=Z,7.0nm,1.8s
KMI pmax pmax
comp=Z,160nm,6.5s
KMI LR LR
comp=Z,420nm,20.3s
KMI LR LR
comp=Z,310nm,22.6s
KMI LR LR
comp=Z,150nm,8.7s
YHB Horse Butte 52.89 63 P 23 26 02.6 +9.2
ARU Arti 52.91 318 P P 23 25 49.8 -3.3
comp=Z,1.2nm,0.5s,baz=117,slow=4.5
ARU LR LR 23 50 55.0
comp=Z,544nm,18.1s,baz=39,slow=39
ARU Arti 52.91 318 IAmb IAmb 23 25 58.8
comp=Z,7.8nm,1.0s
ARU Arti 52.91 318 d i P P 23 25 50.0 -3.1
ARU S S 23 33 13.8 -8.8
ARU pmax pmax
comp=Z,4.0nm,0.8s
YHH Holmes Hill 53.04 63 P P 23 25 55.2 +0.6
KVN Kaiserville 53.24 73 P P 23 25 56.7 +0.7
KVN IAmb IAmb 23 26 11.8
comp=Z,7.5nm,1.0s
KVN Kaiserville 53.24 73 P P 23 25 56.7 +0.7
KVN pmax pmax
comp=Z,7.0nm,1.0s
RYN Ryan 53.31 73 P P 23 25 57.1 +0.6
RYN IAmb IAmb 23 26 12.1
comp=Z,5.8nm,1.0s
YNE Yellowstone No 53.32 62 P P 23 25 56.3 -0.3
PRGR Permogore 53.49 328 eP P 23 25 59.7 +2.4
PRGR pmax pmax
comp=Z,6.0nm,0.7s
NVAR Mina Array Bea 53.57 73 P P 23 25 59.8 +1.3
KIRV Kirov 54.63 324 i P P 23 26 03.1 -2.5
FRB Frobisher Bay 54.92 25 P P 23 26 06.8 -0.9
FRB pmax pmax
comp=Z,11nm,0.9s
USP Ospenovka 55.10 297 P P 23 26 12.4 +3.0
SNR=7.2
PDAR Pinedale Array 55.13 64 P P 23 26 08.8 -1.0
comp=Z,0.8nm,0.7s,baz=312,slow=2.9,SNR=7.1
CHMS Chumysh 55.17 297 P P 23 26 14.7 +4.8
SNR=6.4
DUG Dugway, Tooele 55.27 68 IAmb IAmb 23 26 27.0
comp=Z,5.8nm,1.0s
DUG Dugway, Tooele 55.27 68 P P 23 26 13.0 +2.2
DUG pmax pmax
comp=Z,9.0nm,0.9s
KBK Karagaybulak 55.31 296 P P 23 26 16.0 +4.9
SNR=6.9
AAK Ala-Archa 55.56 297 P P 23 26 10.5 -2.4
comp=Z,2.8nm,0.9s,baz=38,slow=4.6,SNR=7.0
AAK Ala-Archa 55.56 297 P P 23 26 17.7 +4.9
SNR=9.1
AAK Ala-Archa 55.56 297 P P 23 26 12.4 -0.5
AAK Ala-Archa 55.56 297 i P P 23 26 08.5 -4.3
AAK pmax pmax
comp=Z,15nm,1.0s
KLMR Klimovskoe 55.91 330 eP P 23 26 13.5 -1.3
KLMR AMP 23 26 17.5
comp=Z,23nm,1.9s
KLMR ePP PP 23 28 20.3 +1.4
KLMR Klimovskoe 55.91 330 eP P 23 26 13.5 -1.3
KLMR e 23 28 20.3
KLMR pmax pmax
comp=Z,23nm,1.9s
EKS2 Erkin-Say 55.91 297 P P 23 26 20.3 +5.0
SNR=8.5
ULM Lac du Bonnet 56.23 49 P P 23 26 16.7 -0.6
comp=Z,1.5nm,0.5s,baz=298,slow=8.4,SNR=3.9
RDMU Red Mountain 56.71 66 P P 23 26 22.1 +0.9
KSH Kashi 57.05 293 P P 23 26 30.3 +6.8
KSH sP pwP 23 26 39.0 +11
KSH PcP PcP 23 27 24.6 +6.2
KSH PP PP 23 28 34.9 +5.1
KSH PcS PcS 23 31 20.2 +0.8
KSH S S 23 34 23.3 +4.5
KSH sS pS 23 34 33.9 +16
KSH pmax pmax
comp=Z,14nm,1.3s
KSH pmax pmax
comp=Z,91nm,5.4s
KSH LR LR
comp=Z,80nm,4.5s
KSH LR LR
comp=Z,100nm,4.1s
KSH LR LR
comp=Z,500nm,10.6s
SRU San Rafael Swe 57.28 67 P P 23 26 25.1 0.0
SRU San Rafael Swe 57.28 67 P P 23 26 25.2 0.0
SRU pmax pmax
comp=Z,15nm,1.1s
ARSB Arslanbob 57.28 296 P P 23 26 23.6 -1.5
ARSB IAmb IAmb 23 26 31.8
comp=Z,6.7nm,0.8s
ARSB Arslanbob 57.28 296 P P 23 26 23.7 -1.5
ARSB pmax pmax
comp=Z,7.0nm,0.8s
AKTO Aktyubinsk 57.56 313 P P 23 26 24.1 -2.6
comp=Z,1.7nm,0.5s,baz=57,slow=1.5,SNR=8.1
O20A White River Ci 57.72 65 P P 23 26 29.0 +0.7
N23A Red Feather La 58.35 63 P P 23 26 34.4 +1.7
FIA1 FINESS Array S 58.79 337 P P 23 26 33.6 -1.5
FINES FINESS Array B 58.79 337 P P 23 26 33.7 -1.5
comp=Z,5.1nm,0.4s,baz=35,slow=8.3,SNR=78
FINES LR LR 23 54 11.8
comp=Z,127nm,22.0s,baz=10.0,slow=38
ISCO Idaho Springs 59.33 64 P P 23 26 40.1 +0.5
ISCO IAmb IAmb 23 26 55.7
comp=Z,5.9nm,0.9s
ISCO Idaho Springs 59.33 64 P P 23 26 40.2 +0.5
ISCO pmax pmax
comp=Z,6.0nm,0.9s
CHTO Chiang Mai 59.87 259 P P 23 26 41.4 -1.8
CHTO Chiang Mai 59.87 259 P P 23 26 41.4 -1.8
CHTO pmax pmax
comp=Z,4.0nm,1.2s
CMAR Chiang Mai Arr 60.15 259 P P 23 26 42.2 -2.9
comp=Z,1.0nm,0.3s,baz=20,slow=7.3,SNR=6.5
CMAR LR LR 23 54 27.6
comp=Z,77nm,19.8s,baz=52,slow=38
CMAR Chiang Mai Arr 60.15 259 i P P 23 26 43.2 -2.0
CMAR pmax pmax
comp=Z,1.0nm,0.3s
X16A Lo Mia Camp, P 60.26 72 P P 23 26 45.9 -0.1
X16A IAmb IAmb 23 27 01.2
comp=Z,5.0nm,1.1s
ECSD EROS Data Cent 60.79 55 P P 23 26 48.9 -0.4
ECSD IAmb IAmb 23 26 58.2
comp=Z,4.9nm,1.1s
OBN Obninsk 61.57 328⇑eP P 23 26 52.6 -1.7
OBN e 23 26 59.8
OBN 23 27 31.0
OBN pmax pmax
comp=Z,7.0nm,1.1s
NC303 NORSAR Array S 61.73 345 P P 23 26 54.4 -1.0
NC204 NORSAR Array S 61.78 345 P P 23 26 55.6 -0.1
NC405 NORSAR Array S 61.79 345 P P 23 26 55.8 +0.1
NB2 NORSAR Subarra 61.94 345 P P 23 26 54.5 -2.3
comp=Z,1.6nm,0.7s,baz=18,slow=6.9
NOA NORSAR Array B 61.94 345 P P 23 26 54.8 -2.0
comp=Z,0.8nm,0.6s,baz=18,slow=6.8,SNR=4.1
NOA LR LR 23 55 13.5
comp=Z,91nm,19.4s,baz=10.0,slow=38
ANMO Albuquerque 62.54 68 i P P 23 27 00.9 -0.5
ANMO pmax pmax
comp=Z,3.0nm,1.1s
SCHQ Schefferville 63.03 30 P P 23 27 03.0 -1.1
comp=Z,3.1nm,0.6s,baz=328,slow=7.0,SNR=6.8
FAKI Fak Fak 63.15 215 P P 23 27 04.9 -0.5
FAKI IAmb IAmb 23 27 05.2
comp=Z,5.6nm,0.9s
VRH Novokhopyorsk 63.20 323 eP P 23 27 01.8 -3.5
VRH pmax pmax
comp=Z,3.0nm,0.5s
VSR Storozhevoye 64.06 324 eP P 23 27 09.5 -1.5
VSR pmax pmax
comp=Z,3.0nm,0.5s
VORD Divnogorie 64.23 324 eP P 23 27 11.9 -0.2
VORD pmax pmax
comp=Z,4.0nm,0.7s
L42A Oliver, Polo 65.32 51 P P 23 27 18.4 -1.0
L42A IAmb IAmb 23 27 33.7

comp=Z,6.4nm,0.8s
VLDQ Val d'Or 65.32 40 P P 23 27 17.7 -1.5
MNTX Cornudas Mount 65.61 69 P P 23 27 20.6 -0.9
MNTX IAmb IAmb 23 27 36.1
comp=Z,6.2nm,0.9s
PMG Port Moresby 65.69 197 P P 23 27 20.5 -1.4
PMG Port Moresby 65.69 197 P P 23 27 20.5 -1.4
PMG pmax pmax
comp=Z,7.0nm,0.7s
D53A Lac Vacive, Po 66.09 41 P P 23 27 23.9 -0.3
D53A IAmb IAmb 23 27 36.8
comp=Z,5.0nm,0.8s
WMOK Wichita Mounta 66.70 63 P P 23 27 28.9 +0.6
WMOK pmax pmax
comp=Z,17nm,1.0s
GEYT Alibeck 67.25 304 P P 23 27 30.5 -1.4
comp=Z,1.4nm,0.7s,baz=2.9,slow=5.9,SNR=4.1
GEYT LR LR 00 00 39.5
comp=Z,145nm,18.1s,baz=50,slow=39
GEYT Alibeck 67.25 304 P P 23 27 30.7 -1.1
GYA0B ALIBECK ARRAY 67.25 304 P P 23 27 30.3 -1.5
AKASG Malin Array Be 67.59 330 P P 23 27 31.3 -2.5
comp=Z,3.6nm,0.4s,baz=29,slow=6.7,SNR=9.1
SFIN Lafayette 67.78 51 P P 23 27 35.6 +0.6
HHAR Hobbs 67.89 58 P P 23 27 35.4 -0.5
HHAR IAmb IAmb 23 27 49.1
comp=Z,9.8nm,1.1s
N47A Urbana 67.99 50 P P 23 27 34.4 -2.0
N47A IAmb IAmb 23 27 49.2
comp=Z,4.9nm,0.7s
MGMO Mountain Grove 67.99 56 P P 23 27 36.2 -0.3
MGMO IAmb IAmb 23 27 51.8
comp=Z,6.2nm,0.9s
P46A Rosedale 68.35 51 P P 23 27 38.8 +0.2
U40A Yellville 68.35 57 P P 23 27 38.3 -0.5
U40A IAmb IAmb 23 27 52.0
comp=Z,7.1nm,0.9s
TX31 Lajitas Ar. Si 68.38 70 P P 23 27 39.1 -0.1
TX31 IAmb IAmb 23 27 53.4
comp=Z,6.6nm,0.9s
TX32 Lajitas Array 68.38 70 P P 23 27 38.9 -0.3
TX32 IAmb IAmb 23 27 53.4
comp=Z,6.9nm,0.9s
TXAR Lajitas Array 68.38 70 P P 23 27 39.4 +0.2
comp=Z,1.3nm,0.6s,baz=299,slow=4.4,SNR=16
TXAR Lajitas Array 68.38 70 P P 23 27 39.6 +0.5
TXAR Lajitas Array 68.38 70 P P 23 27 39.6 +0.5
KBZ Khabaz 69.06 318 P P 23 27 42.5 -0.5
comp=Z,2.1nm,1.0s,baz=22,slow=7.5,SNR=3.9
KBZ LR LR 00 00 21.9
comp=Z,227nm,21.4s,baz=354,slow=38
KBZ Khabaz 69.06 318 i P P 23 27 38.6 -4.4
KBZ pmax pmax
comp=Z,3.0nm,0.9s
D62A Allapoint, All 69.13 35 P P 23 27 43.4 -0.1
SHA1 Shidzhatmaz 69.15 318 i P P 23 27 39.6 -4.3
MIAR Mount Ida 69.45 59 P P 23 27 45.9 +0.3
MIAR IAmb IAmb 23 27 59.6
comp=Z,11nm,1.1s
MIAR Mount Ida 69.45 59 P P 23 27 45.9 +0.3
MIAR pmax pmax
comp=Z,11nm,1.2s
WHAR Wooly Hollow 69.48 58 P P 23 27 45.8 0.0
WHAR IAmb IAmb 23 27 59.2
comp=Z,8.8nm,1.1s
JCT Junction City 69.53 66 P P 23 27 45.6 -0.6
JCT Junction City 69.53 66 P P 23 27 45.6 -0.6
JCT pmax pmax
comp=Z,11nm,1.0s
WHTX Lake Whitney, 69.54 63 P P 23 27 45.8 -0.4
WHTX IAmb IAmb 23 27 55.1
comp=Z,4.5nm,0.8s
W41B Gary Mavity, V 69.59 58 P P 23 27 46.5 0.0
J57A Williamstown 69.84 42 P P 23 27 47.1 -0.7
J57A IAmb IAmb 23 27 48.9
comp=Z,6.4nm,0.9s
X40A Basin Creek Fa 69.86 58 P P 23 27 47.0 -1.1
X40A IAmb IAmb 23 28 02.5
comp=Z,7.2nm,1.1s
WCI Wyandotte Cave 69.89 52 P P 23 27 47.5 -0.8
WCI IAmb IAmb 23 28 02.2
comp=Z,9.5nm,1.1s
WCI Wyandotte Cave 69.89 52 P P 23 27 47.5 -0.8
WCI pmax pmax
comp=Z,10.0nm,1.1s
KULM Kulim 70.02 250 P P 23 27 45.4 -3.9
KULM IAmb IAmb 23 27 58.9
comp=Z,9.1nm,1.1s
SORM Soroca 70.15 329 ⇓P P 23 27 47.4 -2.3
KWP Kalwaria Pacla 70.33 334 P P 23 27 49.9 -0.9
KWP Kalwaria Pacla 70.33 334 P P 23 27 49.9 -0.9
F64A Sherman 70.44 35 P P 23 27 51.7 +0.2
F64A IAmb IAmb 23 28 05.2
comp=Z,9.2nm,1.0s
OJC Ojcow 70.49 336 P P 23 27 52.0 +0.3
OJC IAmb IAmb 23 27 58.1
comp=Z,5.5nm,1.0s
OJC Ojcow 70.49 336 P P 23 27 52.1 +0.3
OJC pmax pmax
comp=Z,6.0nm,1.0s
ACCN Adirondack Com 70.73 40 P P 23 27 53.4 0.0
ACCN IAmb IAmb 23 28 07.0
comp=Z,7.4nm,0.9s
WVT Waverly 70.91 54 P P 23 27 54.8 +0.3
WVT pmax pmax
comp=Z,7.0nm,0.7s
CLL Collm 70.92 340 esP P 23 28 10.0 +16
KOLS Kolonicke sedl 71.08 334 eP P 23 27 58.6 +3.2
KOLS Kolonicke sedl 71.08 334 eP P 23 27 58.6 +3.2
BRG Berggiesshubel 71.15 340 eP P 23 28 02.9 +7.2
BRG pmax pmax
comp=Z,8.0nm,1.2s
DPC Dobruska-Polom 71.15 338 eP P 23 27 59.9 +4.1
DPC Dobruska-Polom 71.15 338 P P 23 27 59.2 +3.4
DPC pmax pmax
comp=Z,27nm,1.1s
KRLC Kraliky 71.31 338 eP P 23 28 00.2 +3.4
KRLC Kraliky 71.31 338 eP P 23 28 00.2 +3.4
GNI Garni 71.36 314 P P 23 27 58.9 +1.5
comp=Z,2.6nm,0.8s,baz=238,slow=20,SNR=2.7
GNI Garni 71.36 314 IAmb IAmb 23 28 13.3
comp=Z,4.8nm,0.9s
GNI Garni 71.36 314 i P P 23 27 52.6 -4.8
GNI pmax pmax
comp=Z,15nm,1.1s
OXF Oxford 71.49 56 P 23 28 11.6 +14
BURAR Bucovina Array 71.51 331 ⇓P P 23 27 56.5 -1.6
BURAR Bucovina Array 71.51 331 ⇓P P 23 27 56.2 -1.9
PLAL Pickwick Lake 71.74 55 P 23 28 12.5 +13
PRU Pruhonice 71.87 339 eP P 23 28 03.5 +3.4
PRU Pruhonice 71.87 339 eP P 23 28 03.5 +3.4
ARCR ARCALIA 72.23 332 ⇑P P 23 28 02.1 -0.2
VYHS Vyhne 72.33 336 eP P 23 28 02.3 -0.7
VYHS Vyhne 72.33 336 eP P 23 28 02.2 -0.7
KHC Kasperske Hory 72.88 339 eP P 23 28 06.7 +0.5
KHC Kasperske Hory 72.88 339 eP P 23 28 06.7 +0.5
DRGR 72.94 330 ⇑P P 23 28 05.6 -1.1
PSI Prapat 73.03 250 P P 23 28 04.1 -3.5
comp=Z,2.8nm,0.3s,baz=46,slow=6.7,SNR=5.9
PSI Prapat 73.03 250 P P 23 28 07.7 +0.1
PSI pmax pmax
comp=Z,7.0nm,0.8s
RPSI Rantau Prapat 73.11 250 P P 23 28 07.7 -0.2
RPSI IAmb IAmb 23 28 09.6
comp=Z,6.8nm,0.8s
GERES GERESS Array B 73.12 339 P P 23 28 06.3 -1.5
comp=Z,0.3nm,0.6s,baz=24,slow=7.3,SNR=3.5
GERES LR LR 00 06 16.8
comp=Z,268nm,18.1s,baz=296,slow=41
MLR Muntele Rosu 73.25 330 P P 23 28 07.0 -1.6
comp=Z,2.1nm,0.5s,baz=301,slow=6.3,SNR=12
MLR Muntele Rosu 73.25 330 ⇓P P 23 28 07.9 -0.6
MLR Muntele Rosu 73.25 330 IAmb IAmb 23 28 21.9
comp=Z,5.2nm,0.8s
MLR Muntele Rosu 73.25 330 P P 23 28 07.0 -1.6
VOIR 73.55 330 ⇓P P 23 28 09.3 -0.9
VOIR 73.55 330 P P 23 28 09.5 -0.8
Z50A Ashland 74.17 54 P 23 28 26.3 +12
GZR Gura Zlata 74.22 332 ⇓P P 23 28 12.6 -1.6
BZS Buzias 74.32 333 P P 23 28 16.4 +1.7
BZS pmax pmax
comp=Z,7.0nm,1.1s
BRTR Keskin Array B 75.97 322 P P 23 28 22.7 -1.8
comp=Z,0.7nm,0.5s,baz=62,slow=2.4,SNR=8.2
BRTR LR LR 00 04 41.4
comp=Z,133nm,18.3s,baz=296,slow=38
WRA Warramunga Arr 78.68 207 P P 23 28 38.5 -1.0
comp=Z,3.9nm,0.8s,baz=22,slow=5.8,SNR=10
WRA LR LR 00 01 06.4
comp=Z,35nm,21.8s,baz=130,slow=34
FITZ Fitzroy Crossi 79.54 216 P P 23 28 43.3 -0.9
comp=Z,17nm,1.1s,baz=2.6,slow=6.0,SNR=4.1
FITZ Fitzroy Crossi 79.54 216 IAmb IAmb 23 28 44.2
comp=Z,12nm,1.0s
MMAI Mount Meron Ar 81.26 318 P P 23 28 52.0 -1.6
comp=Z,1.4nm,0.6s,baz=44,slow=6.4,SNR=7.9
AS31 Alice Springs 82.35 207 P P 23 28 59.2 0.0
ASAR Alice Springs 82.35 207 P P 23 28 58.4 -0.9
comp=Z,6.6nm,0.8s,baz=17,slow=5.3,SNR=38
EIL Elat 84.40 316 LR LR 00 13 28.8
comp=Z,97nm,18.1s,baz=38,slow=40
ESDC Sonseca Array 84.81 350 P P 23 29 11.2 -0.7
comp=Z,0.2nm,0.4s,baz=354,slow=4.2,SNR=3.0
RAYN Ar Rayn 85.18 305 P P 23 29 11.6 -2.4
RAYN Ar Rayn 85.18 305 P P 23 29 11.6 -2.4
RAYN pmax pmax
comp=Z,8.0nm,0.6s
STKA Stephens Creek 88.62 198 P P 23 29 30.1 -0.1
comp=Z,4.9nm,0.9s,baz=341,slow=12,SNR=3.5
STKA LR LR 00 09 39.9
comp=Z,27nm,18.6s,baz=6.2,slow=36
STKA Stephens Creek 88.62 198 IAmb IAmb 23 29 31.8
comp=Z,2.0nm,1.1s
ESPN Las Esperanzas 92.65 64 P P 23 29 49.3 -0.2

IDC 08 23:22:06.0±9.6, 4.63S×153.14E, h166km±64km, mb3.3/5, mb1 3.5/6, mb1mx3.2/40, mbtmp3.9/6, Error ellipse: s-maj=112.6km s-min=31.5km az=101.0
NEIC 08 23:22:05.8±1.5, 4.5S±0.1×152.8E±0.1, h150km±5km, mb4.0/8, Error ellipse: s-maj=18.2km s-min=16.8km az=200.0
ISC 08 23:22:05.9±0.8, 4.41S±0.09×152.82E±0.10, h150km, n20, σ1.96/20, mb3.6/8, New Britain region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RABL Rabaul 0.69 289 Pn Pn 23 22 28.6 +0.3
PMG Port Moresby 7.49 228 P Pn 23 23 53.5 +0.9
11nm,0.3s,baz=53,slow=7.0,SNR=15
PMG S Sn 23 25 19.7 +3.4
1.7nm,0.3s,baz=352,slow=17,SNR=1.5
PMG Port Moresby 7.49 228 Pn 23 23 52.7 +0.1
HNR Honiara 8.66 126 Pn Pn 23 24 08.2 +0.1
PATS Pohnpei 12.45 26 Pn Pn 23 24 58.8 +0.8
CTAO Charters Tower 16.84 202 P P 23 25 51.6 -0.9
CTAO IAmb IAmb 23 25 56.3
comp=Z,26nm,1.1s
SANVU Saraoutou 17.90 129 P P 23 26 04.0 -0.2
MTN Manton Dam 23.00 247 P P 23 26 52.3 -5.5
WB0 Warramunga Arr 23.57 228 P P 23 27 01.4 -1.5
WB0 IAmb IAmb 23 27 20.4
comp=Z,3.7nm,0.8s
WR0 Warramunga Arr 23.57 228 P P 23 27 02.4 -0.7
WRAB Tennant Creek 23.70 228 P P 23 27 02.0 -2.1
WRAB IAmb IAmb 23 27 06.1
comp=Z,8.9nm,1.0s
WRA Warramunga Arr 23.71 228 P P 23 27 04.6 +0.3
comp=Z,2.9nm,0.8s,baz=52,slow=10.0,SNR=7.5
AS31 Alice Springs 26.45 222 P P 23 27 27.6 -1.5
ASAR Alice Springs 26.45 222 P P 23 27 28.1 -0.9
comp=Z,0.9nm,0.8s,baz=54,slow=8.8,SNR=15
MKAR Makanchi Array 80.04 319 P P 23 34 00.8 +1.9
comp=Z,0.4nm,0.8s,baz=93,slow=8.5,SNR=4.3
KURK Kurchatov 83.47 322 P P 23 34 16.3 -0.4
KURK Kurchatov 83.47 322 IAmb IAmb 23 34 30.3
comp=Z,0.5nm,0.8s
KURBB Kurchatov Arra 83.50 322 P P 23 34 16.3 -0.5
comp=Z,0.3nm,0.7s,baz=91,slow=5.1,SNR=2.5
BVAR Borovoye Array 88.94 323 P P 23 34 43.4 0.0
comp=Z,0.6nm,0.8s,baz=90,slow=4.4,SNR=5.6
TORD Torodi Ar. Bea 150.20 289 PKPbc PKPdf 23 41 37.4 +2.4
comp=Z,0.7nm,0.7s,baz=54,slow=2.6,SNR=4.4

VIE 08 23:33:57.8±0.9, 50.22N×18.82E, h0km, mb2.2/3, ml2.9/6, Error ellipse: s-maj=7.8km s-min=7.2km az=132.0 12 km WSW of Katowice Suspected Mining induced.
IPEC 08 23:33:57.7±0.1, 50.28N×18.89E, h0km, ML2.5/4, Error ellipse: s-maj=1.8km s-min=0.7km az=166.0
BGR 08 23:33:58.9±0.3, 50.24N×18.86E, h1km, ML3.1/7, Error ellipse: s-maj=8.9km s-min=4.4km az=2.0
PRU 08 23:33:58.2±0.0, 50.26N×18.85E, h0km
IDC 08 23:33:59.6±1.9, 50.23N×18.73E, h0km, mb1 3.6/4, mb1mx3.1/39, mbtmp3.4/4, ML2.8/3, Error ellipse: s-maj=38.5km s-min=8.7km az=132.0
ISC 08 23:33:56.6±0.7, 50.26N±0.03×18.87E±0.02, h0km, n61, σ1.39/100, 7C-4D, Poland

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
OJC Ojcow 0.60 93 ePg Pg 23 34 09.3 +1.2
OJC eSg Sg 23 34 17.2 +1.3
OJC Ojcow 0.60 93 i Pg Pg 23 34 09.2 +1.1
OJC eSg Sg 23 34 16.9 +1.1
OKC Ostrava-Krasne 0.63 228 ePG Pb 23 34 10.6 +0.2
OKC eSG Sb 23 34 19.2 -0.5
comp=Z,68nm,0.4s
OKC Ostrava-Krasne 0.63 228 ePg Pb 23 34 10.7 +0.2
OKC eSg Sb 23 34 19.6 -0.2
MORC Moravsky Berou 0.98 241 ePG Pb 23 34 16.9 +0.4
MORC eSG Sg 23 34 29.0 +0.9
MORC Moravsky Berou 0.98 241 ePg Pb 23 34 16.8 +0.4
MORC eSg Sb 23 34 30.2 +0.3
MORC Moravsky Berou 0.98 241 ⇓P Pb 23 34 17.3 +0.9
MORC ⇑S Sb 23 34 30.1 +0.1
MORC Moravsky Berou 0.98 241 ePg Pb 23 34 16.8 +0.4
baz=59
MORC eSg Sg 23 34 28.9 +0.9
81nm,0.2s,baz=59
NIE Niedzica 1.25 132 ePg Pg 23 34 21.2 +0.6
NIE eSg Sb 23 34 38.4 +0.5
KRLC Kraliky 1.35 263 ePG Pg 23 34 22.9 +0.4
KRLC eSG Sg 23 34 40.9 +0.9
comp=Z,68nm,0.2s
JAVC Velka Javorina 1.60 210 ePN Pb 23 34 27.5 +0.4
JAVC eSG Sg 23 34 48.9 +0.9
JAVC Velka Javorina 1.60 210 ePn Pb 23 34 27.5 +0.4
baz=29
JAVC eSg Sg 23 34 48.9 +0.9
30nm,0.4s,baz=29
DPC Dobruska-Polom 1.63 274 ePG Pn 23 34 27.8 +1.2
DPC eSG Sg 23 34 50.0 +1.0
comp=Z,84nm,0.5s
DPC Dobruska-Polom 1.63 274 ePn Pn 23 34 27.8 +1.2
DPC eSn Sg 23 34 50.0 +1.0
OSTC Ostas 1.72 281 ePG Pn 23 34 29.2 +1.4
OSTC eSG Sg 23 34 53.1 +1.2
41nm,0.3s
KSP Ksiaz 1.74 291 ePn Pn 23 34 29.3 +1.1
KSP ePg Pg 23 34 31.5 +1.5
KSP eSg Sg 23 34 54.8 +2.2
KSP Ksiaz 1.74 291 ePb Pn 23 34 29.2 +1.1
KSP ePg Pg 23 34 31.4 +1.5
KSP eSg Sg 23 34 54.7 +2.1
VRAC Vranov 1.75 238 ePN Pn 23 34 29.5 +1.2
VRAC eSG Sg 23 34 53.4 +0.5
VRAC Vranov 1.75 238 Pn Pn 23 34 29.3 +1.0
2.1nm,0.3s,baz=72,slow=12,SNR=26
VRAC Lg Lg 23 34 52.1
22nm,0.3s,baz=154,slow=20,SNR=25
VRAC Vranov 1.75 238 ⇑P Pn 23 34 29.4 +1.2
VRAC ⇑S Sg 23 34 53.1 +0.2
VRAC Vranov 1.75 238 ePn Pn 23 34 29.4 +1.2
baz=56
VRAC eSg Sg 23 34 53.3 +0.4
34nm,0.2s,baz=56
STHS Stebnicka Huta 1.75 118 ePG Pb 23 34 29.9 +0.2
STHS eSN Sg 23 34 55.2 +2.2
STHS eLG Lg 23 34 59.6
VYHS Vyhne 1.77 181 ePN Pn 23 34 28.8 +0.4
VYHS eSN Sn 23 34 52.1 +0.5
CHVC Chvalec 1.83 281 ePG Pn 23 34 30.6 +1.3
CHVC eSG Sb 23 34 55.6 +1.2
69nm,0.2s
UPC Upice 1.84 279 ePG Pb 23 34 30.2 +0.8
UPC eSG Sg 23 34 57.0 +1.2
comp=Z,37nm,0.3s
SMOL Smolenice 1.98 209 eSN Sn 23 34 57.9 +1.0
KRUC Moravsky 2.00 234 ePN Pn 23 34 31.9 +0.2
KRUC eSG Sg 23 35 01.1 +0.2
KRUC Moravsky 2.00 234 eSg Sg 23 35 01.1 +0.2
24nm,0.2s,baz=52
KECS Kecovo 2.07 149 ePN Pn 23 34 32.8 +0.2
KECS eSN Sn 23 34 58.4 -0.6
KECS eLG Lg 23 35 14.6
MODS Modra-Piesok 2.15 209 ePN Pn 23 34 34.6 +0.8
MODS eSN Sn 23 35 02.3 +1.1
CRVS Cervenica-Dubn 2.17 128 ePN Pb 23 34 37.3 +0.6
CRVS eSG Sg 23 35 06.7 +0.5
CRVS eLG Lg 23 35 08.0
PSZ Piszkesteto 2.44 163 ⇑P Pn 23 34 38.0 +0.3
KOLS Kolonicke sedl 2.58 120 ePN Pb 23 34 45.4 +1.6
KOLS eSN Sn 23 35 12.6 +0.8
GOPC GO Pecny, Ondr 2.65 264 eSG Sb 23 35 20.2 +2.2
PVCC Panska Ves 2.76 277 eSG Sg 23 35 26.1 +0.8
comp=Z,56nm,0.3s
PRU Pruhonice 2.80 266 eSG Sb 23 35 24.4 +2.2
comp=Z,20nm,0.3s
CONA Conrad Observa 3.06 221 i Pn Pn 23 34 46.7 +0.5
0.3nm,0.2s
CONA eSn Sn 23 35 23.9 +0.4
4.2nm,0.2s
BRG Berggiesshubel 3.20 283 ePg Pg 23 34 57.9 0.0
BRG eSg Sg 23 35 40.1 +0.8
TRPA Tarpa 3.22 130 ⇑P Pn 23 34 48.3 0.0
KHC Kasperske Hory 3.61 254 ePG Pb 23 35 04.1 +2.7
KHC eSG Sg 23 35 51.3 -1.3
comp=Z,24nm,0.4s
GERES GERESS Array B 3.65 249 Pn Pn 23 34 55.7 +1.4
0.2nm,0.3s,baz=62,slow=13,SNR=4.2
GERES Pg Pg 23 35 05.4 -1.0
0.8nm,0.3s,baz=67,slow=18,SNR=8.9
GERES Lg Lg 23 35 50.0
2.9nm,0.3s,baz=63,slow=24,SNR=8.5
ARSA Arzberg 3.73 218 ePn Pn 23 34 55.6 +0.1
0.4nm,0.2s
CLL Collm 3.87 288 ePg Pg 23 35 12.0 +1.3
CLL eSg Sg 23 36 02.0 +1.3
comp=Z,15nm,0.7s
MOA Molln 3.87 233 i Pn Pn 23 34 57.8 +0.5
comp=Z,0.5nm,0.1s
MOA eSn Sn 23 35 43.5 +0.1
comp=Z,1.0nm,0.2s
WET Wettzell 4.04 256 eSg Sg 23 36 03.3 -3.1
TANN Tannenbergstha 4.11 275 eSg Sg 23 36 07.3 -1.1
NKC Novy Kostel 4.12 272 eSG Sg 23 36 08.0 -0.9
comp=Z,15nm,0.4s
DRGR 4.31 142 ⇑P Pn 23 35 04.0 +0.6
CJR Cluj-Napoca 4.74 137 ⇓P Pn 23 35 10.4 +1.0
KBA Koelnbreinsper 4.85 231 eSn Sn 23 36 07.7 -0.2
comp=Z,1.2nm,0.2s
BURAR Bucovina Array 4.95 120 ⇓P Pn 23 35 13.2 +0.9
BZS Buzias 5.00 157 ⇑P Pn 23 35 13.6 +0.7
BSD Bornholm Skovb 5.42 335 i P Pn 23 35 19.2 +0.6
BSD eS Sn 23 36 17.5 -4.2
GZR Gura Zlata 5.53 150 ⇓P Pn 23 35 21.7 +1.5
WATA Walderalm 5.63 242 Sg Sg 23 36 54.9 -2.6
WTTA Wattenberg 5.64 241 Sg Sg 23 36 56.9 -0.8
comp=Z,6.2nm,0.5s
MOTA Moosalm 5.90 243 Sg Sg 23 37 05.3 -0.7
comp=Z,14nm,0.6s
RETA Reutte 6.02 246 Sg Sg 23 37 08.6 -1.4
comp=Z,9.1nm,0.6s
DAVOX Davos/Dischmat 6.91 243 Pn Pn 23 35 41.5 +2.3
DAVOX Lg Lg 23 37 35.1
comp=Z,0.4nm,0.3s,baz=194,slow=22,SNR=2.6
FINES FINESS Array B 11.91 17 Pn Pn 23 36 45.6 -1.8
comp=Z,0.3nm,0.3s,baz=202,slow=12,SNR=13
FINES Sn Sn 23 38 54.3 -6.6
comp=Z,0.2nm,0.3s,baz=203,slow=21,SNR=5.5
ARCES ARCESS Array B 19.60 7 Pn P 23 38 24.4 -1.7
comp=Z,0.1nm,0.3s,baz=188,slow=13,SNR=1.9

ATH 08 23:42:36.9, 38.16N×20.42E, h12km±1km, ML2.8/6, Error ellipse: s-maj=2.2km s-min=1.0km az=240.0
THE 08 23:42:36.8, 38.15N×20.37E, h12km, ML2.9/9, Error ellipse: s-maj=1.0km s-min=0.6km az=239.0
ISC 08 23:42:37.0±1.0, 38.16N±0.03×20.40E±0.04, h13km±4km, n49, σ0.49/71, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.03 332 P Pg 23 42 39.1 -0.2
CHV1 S Sg 23 42 40.9 0.0
LXR1 Lixouri, Cepha 0.05 36 P Pg 23 42 39.5 +0.1
LXR1 S Sg 23 42 41.6 +0.4
KEF3 Kipouria, Keph 0.06 318 P Pg 23 42 39.4 -0.1
KEF3 S Sg 23 42 40.7 -0.6
KEF2 Argostoli. Kep 0.07 84 P Pg 23 42 39.5 0.0
KEF2 S Sg 23 42 41.0 -0.4
ARG2 Argostoli 0.07 74 P Pg 23 42 39.6 0.0
ARG2 S Sg 23 42 41.3 -0.2
VLS Valsamata 0.15 83 P Pg 23 42 40.5 -0.1
VLS S Sg 23 42 43.2 0.0
9µm,0.2s
VLS Valsamata 0.15 83 P Pg 23 42 40.5 -0.1
VLS S Sg 23 42 43.1 -0.2
VLS AML AML 23 42 43.5
comp=E,23623µm,0.2s
VLS AML AML 23 42 45.8
comp=N,11904µm,0.2s
VSK1 VASILIKIADES 0.28 27 P Pg 23 42 42.8 0.0
VSK1 S Sg 23 42 47.6 +0.8
comp=N,10µm,0.2s
KFL Anninata 0.31 99 P Pg 23 42 43.1 -0.2
KFL S Sg 23 42 48.4 +0.8
comp=N,5µm,0.3s
FSK Fiskardo 0.33 23 P Pg 23 42 43.5 -0.1
FSK S Sg 23 42 48.8 +0.7
comp=N,4µm,0.2s
FSK Fiskardo 0.33 23 P Pg 23 42 43.5 -0.1
FSK S Sg 23 42 47.6 -0.5
FSK AML AML 23 42 49.4
comp=E,11565µm,0.2s
FSK AML AML 23 42 49.5
comp=N,5958µm,0.2s
VLMS Volimes, Zakyn 0.35 143 P Pg 23 42 43.6 -0.4
VLMS S Sg 23 42 49.1 +0.3
VLMS AML AML 23 42 50.3
comp=N,11155µm,0.3s
VLMS AML AML 23 42 52.4
comp=E,5708µm,0.3s
EVGI Lefkada island 0.50 24 P Pg 23 42 46.7 -0.2
EVGI S Sb 23 42 54.7 -0.3
EVGI Lefkada island 0.50 24 P Pg 23 42 46.7 -0.2
EVGI S Sg 23 42 53.1 -0.5
LKD2 Lefkada island 0.66 18 P Pg 23 42 49.7 -0.2
LKD2 S Sb 23 42 59.8 +0.3
comp=E,555nm,0.3s
LKD2 Lefkada island 0.66 18 P Pg 23 42 49.3 -0.6
LKD2 S Sb 23 42 59.8 +0.3
LKD2 AML AML 23 43 06.7
comp=E,1294µm,0.3s
LKD2 AML AML 23 43 07.1
comp=N,952µm,0.4s
AST1 Astakos 0.66 55 P Pg 23 42 49.4 -0.5
AST1 S Sb 23 42 59.7 +0.2
comp=N,1µm,0.3s
TSLK Tsoukalades, L 0.69 17 P Pg 23 42 50.5 0.0
TSLK Tsoukalades, L 0.69 17 P Pg 23 42 49.2 -1.3
PDO Prodromos 0.76 54 P Pg 23 42 51.2 -0.5
PDO Prodromos 0.76 54 P Pg 23 42 51.1 -0.5
RLS Riolos of Patr 0.85 96 P Pg 23 42 52.7 -0.7
RLS S Sn 23 43 07.2 +0.3
comp=N,192nm,0.3s
RLS Riolos of Patr 0.85 96 P Pg 23 42 52.6 -0.8
RLS S Sg 23 43 03.9 -0.6
RLS AML AML 23 43 11.7
comp=E,447µm,0.5s
RLS AML AML 23 43 13.2
comp=N,347µm,0.3s
PVO Paravola 1.00 62 P Pg 23 42 55.9 -0.2
PVO S Sn 23 43 12.0 +1.4
comp=N,982nm,0.3s
PVO Paravola 1.00 62 P Pb 23 42 55.8 -0.3
DRO Drossia 1.05 101 P Pb 23 42 56.6 -0.5
DRO Drossia 1.05 101 P Pb 23 42 56.4 -0.7
AMT Artemida-Makis 1.21 121 P Pb 23 43 00.6 +0.3
AMT Artemida-Makis 1.21 121 P Pb 23 42 59.9 +0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AMT				S	Sn	23 43 17.4	+1.5
AMT				AML	AML	23 43 29.3	
	comp=N,721μm,0.6s						
AMT				AML	AML	23 43 29.9	
	comp=E,520μm,0.7s						
ANX	Ano Chora	1.27	70	P	Pn	23 43 00.7	+0.1
ANX	Ano Chora	1.27	70	P	Pn	23 43 00.4	-0.2
SERG	Sergoula	1.33	78	P	Pn	23 43 00.7	-0.6
SERG	Sergoula	1.33	78	P	Pn	23 43 01.2	-0.1
TRIZ	Trizonia	1.33	81	P	Pn	23 43 00.7	-0.5
TRIZ	Trizonia	1.33	81	P	Pn	23 43 00.8	-0.5
EVR	Evrytania	1.34	55	P	Pg	23 43 02.7	0.0
EVR	Evrytania	1.34	55	P	Pg	23 43 02.5	-0.2
IGT	Igoumenitsa	1.37	358	P	Pb	23 43 02.5	0.0
IGT				S	Sn	23 43 19.3	-0.6
	comp=E,95nm,0.3s						
IGT	Igoumenitsa	1.37	358	P	Pn	23 43 02.2	+0.3
KLV	Kalavryta, Ach	1.39	94	P	Pn	23 43 02.3	+0.2
KLV	Kalavryta, Ach	1.39	94	P	Pn	23 43 02.0	-0.1
KALE	Kalithea	1.39	80	P	Pn	23 43 01.7	-0.4
ITM	Ithomi	1.56	128	P	Pb	23 43 05.3	-0.3
ITM	Ithomi	1.56	128	P	Pb	23 43 05.1	-0.5
MAKR	Makrakomi, Fth	1.60	57	P	Pb	23 43 06.8	+0.3
KEK	Kerkira	1.62	343	P	Pn	23 43 05.7	+0.4
AGG	Agios Georgios	1.74	60	P	Pn	23 43 08.9	+0.1
THL	Klokotos Trika	1.89	41	P	Pb	23 43 11.5	+0.2
NEST	Nestorio	2.31	12	P	Pb	23 43 17.9	-0.6

THE 09 00:08:35.6,38.14N×20.38E,h11km,ML2.9/7,Error ellipse: s-maj=1.0km s-min=0.7km az=237.0
ATH 09 00:08:35.5,38.15N×20.41E,h14km±1km,ML2.9/10,Error ellipse: s-maj=2.4km s-min=1.2km az=247.0
ISC 09 00:08:35.3±1.2,38.13N±0.03×20.38E±0.05,h12km±5km, n43,σ0.56/65,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.05	360	P	Pg	00 08 37.8	+0.1
CHV1				S	Sg	00 08 39.6	+0.1
KEF3	Kipouria, Keph	0.08	339	P	Pg	00 08 38.1	+0.2
KEF3				S	Sg	00 08 40.0	+0.1
LXR1	Lixouri, Cepha	0.08	33	P	Pg	00 08 38.2	+0.2
LXR1				S	Sg	00 08 40.4	+0.4
ARGA	Argostoli. Kep	0.09	60	P	Pg	00 08 38.2	+0.1
ARGA				S	Sg	00 08 39.8	-0.2
KEF2	Argostoli. Kep	0.09	68	P	Pg	00 08 38.2	0.0
KEF2				S	Sg	00 08 39.8	-0.4
ARG2	Argostoli	0.10	61	P	Pg	00 08 38.2	0.0
ARG2				S	Sg	00 08 40.3	+0.1
VLS	Valsamata	0.17	75	P	Pg	00 08 39.2	-0.1
VLS				S	Sg	00 08 42.0	0.0
	10μm,0.2s						
VLS	Valsamata	0.17	75	P	Pg	00 08 39.2	-0.1
VLS				S	Sg	00 08 42.0	0.0
VLS				AML	AML	00 08 42.2	
	comp=E,26335μm,0.2s						
VLS				AML	AML	00 08 44.5	
	comp=N,12685μm,0.2s						
VSK1	VASILIKIADES	0.31	27	P	Pg	00 08 41.5	-0.2
VSK1				S	Sg	00 08 46.4	+0.4
KFL	Anninata	0.32	94	P	Pg	00 08 42.0	+0.1
KFL				S	Sb	00 08 47.2	-0.9
KFL	Anninata	0.32	94	P	Pb	00 08 42.6	-0.4
KFL				S	Sg	00 08 46.9	+0.7
KONA	Konidatara, Ke	0.33	27	P	Pg	00 08 41.8	-0.2
KONA				S	Sg	00 08 46.9	+0.4
VLMS	Volimes, Zakyn	0.34	139	P	Pg	00 08 42.5	+0.3
VLMS				S	Sb	00 08 48.0	-0.6
VLMS				AML	AML	00 08 49.0	
	comp=N,12971μm,0.4s						
VLMS				AML	AML	00 08 51.1	
	comp=E,5960μm,0.4s						
FSK	Fiskardo	0.36	23	P	Pg	00 08 42.1	-0.4
FSK				S	Sg	00 08 47.5	+0.2
	comp=E,5μm,0.2s						
FSK	Fiskardo	0.36	23	P	Pg	00 08 42.1	-0.4
FSK				S	Sg	00 08 47.3	0.0
FSK				AML	AML	00 08 48.1	
	comp=E,12942μm,0.2s						
FSK				AML	AML	00 08 48.2	
	comp=N,7155μm,0.2s						
EVGI	Lefkada island	0.53	24	P	Pg	00 08 45.9	+0.1
EVGI				S	Sg	00 08 53.4	+0.5
EVGI	Lefkada island	0.53	24	P	Pg	00 08 45.3	-0.3
MGNA	Meganis	0.61	31	P	Pg	00 08 46.6	-0.8
LKD2	Lefkada island	0.69	18	P	Pg	00 08 48.5	-0.3
LKD2				S	Sb	00 08 59.3	+0.5
	comp=N,605nm,0.3s						
LKD2	Lefkada island	0.69	18	P	Pg	00 08 48.4	-0.3
LKD2				AML	AML	00 09 05.4	
	comp=E,1340μm,0.3s						
LKD2				AML	AML	00 09 05.8	
	comp=N,1094μm,0.4s						
TSLK	Tsoukalades, L	0.72	17	P	Pb	00 08 49.9	0.0
TSLK				S	Sb	00 08 59.4	-0.3
	comp=N,425nm,0.2s						
TSLK	Tsoukalades, L	0.72	17	P	Pb	00 08 49.8	-0.1
PDO	Prodromos	0.78	53	P	Pb	00 08 49.9	-0.6
PDO				S	Sb	00 09 02.2	+0.8
	comp=N,1μm,0.3s						
PDO	Prodromos	0.78	53	P	Pg	00 08 49.9	-0.6
PDO				AML	AML	00 09 09.4	
	comp=E,1463μm,0.3s						
PDO				AML	AML	00 09 11.9	
	comp=N,1909μm,0.5s						
RLS	Riolos of Patr	0.86	95	P	Pg	00 08 51.5	-0.5
RLS				AML	AML	00 09 09.3	
	comp=E,510μm,0.6s						
RLS				AML	AML	00 09 11.8	
	comp=N,391μm,0.5s						
PVO	Paravola	1.02	61	P	Pb	00 08 54.4	-0.5
PVO				S	Sn	00 09 10.9	+1.2
	comp=N,1μm,0.3s						
PVO	Paravola	1.02	61	P	Pb	00 08 54.5	-0.4
PVO				AML	AML	00 09 11.6	
	comp=E,2405μm,0.3s						
PVO				AML	AML	00 09 11.6	
	comp=N,1762μm,0.3s						
DRO	Drossia	1.06	99	P	Pb	00 08 55.1	-0.6
DRO	Drossia	1.06	99	P	Pb	00 08 55.3	-0.4
DRO				AML	AML	00 09 17.7	
	comp=E,1333μm,0.6s						
DRO				AML	AML	00 09 19.7	
	comp=N,1280μm,0.4s						
AMT	Artemida-Makis	1.21	119	P	Pn	00 08 58.1	+0.1
AMT				AML	AML	00 09 23.2	
	comp=E,583μm,0.9s						
AMT				AML	AML	00 09 28.0	
	comp=N,778μm,0.7s						
LAKA	Lakka	1.26	85	P	Pn	00 08 58.4	-0.4
ANX	Ano Chora	1.29	69	P	Pn	00 08 58.7	-0.6
ANX				S	Sg	00 09 19.8	+2.7
	comp=N,492nm,0.5s						
ANX	Ano Chora	1.29	69	P	Pb	00 08 59.6	0.0
ANX				AML	AML	00 09 23.8	
	comp=N,1371μm,0.6s						
ANX				AML	AML	00 09 28.0	
	comp=E,650μm,0.5s						
SERG	Sergoula	1.35	77	P	Pn	00 08 59.0	-0.9
SERG	Sergoula	1.35	77	P	Pn	00 08 59.5	-0.5
TRIZ	Trizonia	1.35	80	P	Pn	00 08 59.4	-0.5
TRIZ				S	Sg	00 09 19.2	+0.3
TRIZ	Trizonia	1.35	80	P	Pn	00 08 59.4	-0.5
EVR	Evrytania	1.37	55	P	Pn	00 09 00.4	+0.1
ALIK	Aliki, Aigiali	1.37	84	P	Pn	00 09 00.0	-0.2
KLV	Kalavryta, Ach	1.40	93	P	Pn	00 09 00.9	+0.2
KLV	Kalavryta, Ach	1.40	93	P	Pn	00 09 00.9	+0.2
KALE	Kalithea	1.41	79	P	Pn	00 09 00.1	-0.7
KALE	Kalithea	1.41	79	P	Pn	00 09 00.3	-0.5

IDC 09 00:18:01.2±1.3,40.24N×19.98E,h0km,mb3.5/7, mb1 3.6/10,mb1mx3.4/47,mbtmp3.5/10,ML3.3/3,Error ellipse: s-maj=20.0km s-min=19.1km az=76.0
TIR 09 00:18:02.2,40.12N×20.08E,h19km,Md3.4/7
PDG 09 00:18:02.3±0.6,40.16N×19.73E,h0km±11km,ML3.4/12, Error ellipse: s-maj=0.8km s-min=1.2km az=0.0
BEO 09 00:18:02.5±0.6,39.92N×19.59E,h24km±4km,ML2.9/4
SKO 09 00:18:02.2,39.93N×19.50E,h23km
ATH 09 00:18:03.3,40.12N×19.90E,h15km±2km,ML2.9/12,Error ellipse: s-maj=2.3km s-min=1.2km az=194.0
THE 09 00:18:04.0,40.10N×19.94E,h0km±2km,ML3.0/8,Error ellipse: s-maj=2.7km s-min=0.8km az=304.0
ISC 09 00:18:02.7±0.9,40.10N±0.02×19.84E±0.02,h9km±7km, n115,σ1.31/154,mb3.5/6,1C-1D,Albania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TPE	Tepelena	0.24	34	P	Pg	00 18 07.3	-0.1
TPE				S	Sg	00 18 10.8	+0.1
	10μm,0.2s						
TPE	Tepelena	0.24	34	iPG	Pg	00 18 07.4	-0.1
TPE				iSG	Sg	00 18 10.8	+0.1
SRN	Sarande	0.25	150	P	Pg	00 18 08.1	+0.5
SRN				S	Sg	00 18 12.5	+1.4
	5μm,0.4s						
SRN	Sarande	0.25	150	iPG	Pg	00 18 08.2	+0.5
SRN				iSG	Sg	00 18 12.8	+1.7
KASA	Kassiopi	0.36	168	P	Pg	00 18 10.2	+0.4
KASA				S	Sb	00 18 16.3	-0.7
KASA				AML	AML	00 18 16.9	
	comp=E,6129μm,0.4s						
KASA				AML	AML	00 18 18.8	
	comp=N,6043μm,0.3s						
KEK	Kerkira	0.39	185	P	Pb	00 18 11.0	-0.7
KEK				S	Sb	00 18 17.5	-0.2
	comp=N,2μm,0.4s						
KEK	Kerkira	0.39	185	P	Pb	00 18 11.1	-0.6
KEK				S	Sb	00 18 17.8	0.0
KEK				AML	AML	00 18 20.6	
	comp=N,4786μm,0.3s						
KEK				AML	AML	00 18 20.7	
	comp=E,3715μm,0.4s						
VLO	Vlora	0.45	325	P	Pb	00 18 13.4	+0.6
VLO				S	Sb	00 18 21.7	+2.0
	comp=E,6μm,0.5s						
VLO	Vlora	0.45	325	iPG	Pb	00 18 13.7	+0.8
VLO				iSG	Sb	00 18 22.7	+3.0
IGT	Igoumenitsa	0.68	146	P	Pg	00 18 16.0	+0.2
IGT				S	Sg	00 18 25.1	+0.4
	comp=E,780nm,0.4s						
IGT	Igoumenitsa	0.68	146	ePg	Pg	00 18 16.1	+0.2
IGT				eSg	Sb	00 18 26.6	+0.3
IGT	Igoumenitsa	0.68	146	P	Pg	00 18 16.0	+0.2
IGT				S	Sb	00 18 25.5	-0.8
IGT				AML	AML	00 18 31.6	
	comp=N,1498μm,0.4s						
IGT				AML	AML	00 18 34.1	
	comp=E,1625μm,0.6s						
JAN	Janina	0.90	119	P	Pb	00 18 20.3	-0.1
JAN				S	Sb	00 18 32.8	+0.3
	comp=E,2μm,0.4s						
JAN	Janina	0.90	119	P	Pb	00 18 20.5	+0.1
JAN				S	Sg	00 18 31.7	+0.2
JAN				AML	AML	00 18 37.1	
	comp=E,2580μm,0.3s						
JAN				AML	AML	00 18 38.5	
	comp=N,4163μm,0.4s						
NEST	Nestorio	0.98	71	P	Pg	00 18 20.7	-0.8
NEST				S	Sb	00 18 35.3	+0.4
	comp=N,725nm,0.7s						
NEST	Nestorio	0.98	71	P	Pg	00 18 20.9	-0.6
NEST				AML	AML	00 18 38.8	
	comp=E,1553μm,0.5s						
NEST				AML	AML	00 18 40.5	
	comp=N,1390μm,0.9s						
PENT	Pentalofos	1.00	84	P	Pg	00 18 21.4	-0.5
PENT	Pentalofos	1.00	84	P	Pg	00 18 21.4	-0.5
PENT				AML	AML	00 18 44.6	
	comp=E,1088μm,0.7s						
PENT				AML	AML	00 18 47.1	
	comp=N,1225μm,0.4s						
SCTE	Santa Cesarea	1.05	269	P	Pn	00 18 24.7	+1.1
MEV	Metsovon	1.11	106	P	Pb	00 18 24.4	+0.2
KPRO	Kipourio	1.18	96	P	Pb	00 18 24.6	-0.7
KPRO	Kipourio	1.18	96	P	Pb	00 18 24.5	-0.8
KPRO				AML	AML	00 18 48.5	
	comp=E,1627μm,0.4s						
KPRO				AML	AML	00 18 50.0	
	comp=N,1954μm,0.4s						
OHR	Ohrid	1.25	36	iPn	Pg	00 18 27.1	+0.4
OHR				iSn	Sb	00 18 47.6	+4.3
OHR				eLg	Lg	00 18 50.2	
	comp=E,466nm,0.5s						
TIR	Tirane	1.25	1	ePg	Pg	00 18 27.8	+1.2
TIR				eSg	Sn	00 18 48.7	+5.4
TIR	Tirane	1.25	1	iPN	Pn	00 18 26.6	+0.3
TIR				iSN	Sb	00 18 43.2	+0.6
TIR	Tirane	1.25	1	P	Pb	00 18 26.9	+0.4
TIR				AML	AML	00 18 54.6	
	comp=E,1694μm,0.3s						
TIR				AML	AML	00 18 54.8	
	comp=N,2940μm,0.6s						
KZN	Kozani	1.50	81	P	Pb	00 18 30.5	-0.1
KZN				S	Sg	00 18 51.8	+1.1
	comp=N,495nm,0.6s						
KZN	Kozani	1.50	81	P	Pb	00 18 30.8	+0.1
KZN				AML	AML	00 18 59.0	
	comp=E,1241μm,0.4s						
KZN				AML	AML	00 18 59.6	
	comp=N,700μm,0.5s						
PHP	Peshkopia	1.65	16	iPN	Pb	00 18 32.9	-0.4
PHP				iSN	Sb	00 18 54.8	+0.6
THL	Klokotos Trika	1.76	107	P	Pb	00 18 35.5	+0.4
THL				AML	AML	00 19 06.1	
	comp=N,372μm,1.2s						
THL				AML	AML	00 19 06.3	
	comp=E,472μm,0.8s						
CGL1	Ceglie Messapi	1.89	288	ePn	Pg	00 18 38.6	-0.3
ULC	Ulcinj	1.92	347	ePn	Pn	00 18 35.8	+0.3
ULC				eSn	Sb	00 19 02.5	+0.6
EVR	Evrytania	1.93	127	P	Pb	00 18 37.9	-0.1
PUK	Puka	1.94	1	iPN	Pb	00 18 37.5	-0.8
PUK				iSN	Sb	00 19 04.2	+1.5
TAR1	Taranto	2.00	283	ePn	Pg	00 18 40.4	-0.6
LIT	Litokhoron	2.03	89	P	Pb	00 18 38.7	-1.1
MAKR	Makrakomi, Fth	2.08	121	P	Pb	00 18 40.5	-0.1
GRG	Griva	2.13	65	P	Pb	00 18 40.6	-0.9
GRG				AML	AML	00 19 16.4	
	comp=N,356μm,0.6s						
GRG				AML	AML	00 19 21.1	
	comp=E,320μm,0.8s						
DRME	Dracevica, Mon	2.14	347	ePn	Pn	00 18 39.6	+1.0
DRME	Dracevica, Mon	2.14	347	ePn	Pn	00 18 39.3	+0.7
DRME				eSn	Sb	00 19 08.3	-0.1
AGG	Agios Georgios	2.21	118	P	Pb	00 18 41.8	-0.9
NOCI	Noci	2.23	289	P	Pn	00 18 41.1	+1.3
SKO	Skopje	2.23	32	iPn	Pb	00 18 43.1	0.0
SKO				iSn	Sb	00 19 12.8	+1.9
SKO				eLg	Lg	00 19 18.0	
	comp=E,12nm,0.6s						
BCI	Bajram Curri	2.27	4	iPN	Pn	00 18 42.4	+1.9
BCI				iSN	Sb	00 19 11.7	-0.4
BUM	Brajici-Budva	2.31	342	ePn	Pn	00 18 41.4	+0.4
BUM				eSn	Sb	00 19 12.0	-1.3
PDG	Podgorica	2.37	350	ePn	Pn	00 18 42.7	+1.0
PDG	Podgorica	2.37	350	ePn	Pn	00 18 41.7	0.0
TTG	Podgorica	2.37	350	ePn	Pn	00 18 42.0	+0.3
TTG				eSn	Sb	00 19 14.0	-0.9
STIP	Stip	2.39	47	iPn	Pb	00 18 46.2	+0.4
VAY	Valandovo	2.41	59	iPn	Pn	00 18 43.9	+1.6
VAY				iSn	Sb	00 19 16.4	+0.4
VAY				eLg	Lg	00 19 21.6	
	comp=E,35nm,0.6s						
BAI	Bari	2.47	295	ePn	Pn	00 18 45.2	+2.1
PVY	Plav	2.50	2	ePn	Pn	00 18 44.3	+0.7
PVY				eSn	Sb	00 19 17.0	-1.6
SG1	Sgolgore (BA)	2.52	288	ePn	Pn	00 18 44.7	+0.9
HORT	Hortiatis	2.54	78	P	Pn	00 18 44.8	+0.7
HORT				AML	AML	00 19 21.6	
	comp=E,113μm,0.6s						
HORT				AML	AML	00 19 31.7	
	comp=N,76μm,0.5s						
CEME	Cevo	2.54	344	ePn	Pn	00 18 44.1	-0.1
CEME				iSn	Sn	00 19 17.7	+2.4
TIP	Timpagrande	2.55	250	P	Pn	00 18 45.2	+0.9
HCY	Herceg Novi	2.56	337	ePn	Pn	00 18 44.2	-0.1
HCY	Herceg Novi	2.56	337	⇑iPn	Pn	00 18 44.4	+0.1
HCY				iSn	Sn	00 19 17.9	+2.3
KNT	Kendrikon	2.56	64	P	Pn	00 18 45.5	+1.1
XOR	Xorichti	2.69	105	P	Pn	00 18 47.2	+1.1
NKME	Niksic	2.75	346	ePn	Pn	00 18 47.0	0.0
NKME				eSn	Sn	00 19 23.1	+2.7
KOME	Kolasin	2.76	355	ePn	Pn	00 18 47.7	+0.5
KOME				eSn	Sn	00 19 23.6	+2.9
IVA	Berane	2.77	1	ePn	Pn	00 18 48.6	+1.3
IVA				eSn	Sb	00 19 24.1	-2.4
SOH	Sokhos	2.78	74	P	Pn	00 18 48.5	+1.1
TREB	Trebinje	2.85	337	ePn	Pn	00 18 48.2	-0.1
TREB				eSn	Sn	00 19 22.4	-0.3
TREB	Trebinje	2.85	337	ePn	Pn	00 18 48.0	-0.3
SKIA	Skiathos	2.95	107	P	Pn	00 18 50.7	+0.9
PAIG	Paliouri	2.96	92	P	Pn	00 18 50.6	+0.8
BRY	Bratogost	2.97	341	ePn	Pn	00 18 47.6	-2.5
BRY	Bratogost	2.97	341	⇓iPn	Pn	00 18 50.5	+0.4
BRY				eSn	Sn	00 19 27.9	+2.0
SRS	Serrai	3.03	69	ePn	Pn	00 18 52.2	+1.3
SRS				eSn	Sn	00 19 30.7	+3.4
SRS	Serrai	3.03	69	P	Pn	00 18 51.0	+0.2
BARS	Barje	3.10	28	ePn	Pn	00 18 52.7	+1.0
BOSS	Bosilegrad	3.12	39	ePn	Pn	00 18 53.5	+1.5
SJES	Sjenica	3.16	2	ePn	Pn	00 18 54.0	+1.3
UPM	Unac-Piva	3.18	348	ePn	Pn	00 18 54.1	+1.0
UPM				eSn	Sn	00 19 33.5	+2.3
OUR	Ouranopolis	3.18	84	P	Pn	00 18 52.9	0.0
STON	Ston	3.20	331	ePn	Pn	00 18 52.7	-0.5
PLE	Pljevlja	3.25	354	ePn	Pn	00 18 54.9	+1.0
PLE				iSn	Sn	00 19 34.6	+1.9
AOS	Alonnisos	3.26	105	P	Pn	00 18 55.2	+1.3
SELS	Selova	3.26	17	ePn	Pn	00 18 54.8	+0.8
IVAS	Ivanjica	3.48	4	ePn	Pn	00 18 57.5	+0.4
RUDO	Rudo	3.54	354	ePn	Pn	00 18 54.3	-3.5
BBLS	Lazići	3.78	355	ePn	Pb	00 19 06.0	-3.6
BOVS	Bovan	3.80	21	ePn	Pn	00 19 02.3	+0.9
ZAPS	Zavoj	3.80	33	ePn	Pn	00 19 02.4	+1.0
GRUS	Gruza	3.84	10	ePn	Pn	00 19 03.5	+1.5
DIVS	Divibare	4.00	2	ePn	Pn	00 19 05.0	+0.8
DIVS	Divibare	4.00	2	ePn	Pn	00 19 04.5	+0.3
HAPS	Han Pijesak,BI	4.04	351	ePn	Pn	00 19 04.4	-0.4
MGRS	Mrkonjic Grad	4.78	336	ePn	Pn	00 19 15.7	+0.9
BLY	Banja Luka	5.05	338	ePn	Pn	00 19 19.2	+0.7
MORH	Mrgy, Hungar	6.18	352	ePn	Pn	00 19 31.3	-2.7
CRES	Cresnjev	6.56	332	ePn	Pn	00 19 38.6	-0.8
MLR	Muntele Rosu	7.01	38	Pn	Pn	00 19 43.9	-1.7
	comp=N,0.1nm,0.3s,baz=215,slow=19,SNR=2.2						
LJU	Ljubljana	7.10	329	ePn	Pn	00 19 46.9	+0.2
SOKA	Soboth	7.45	334	iPn	Pn	00 19 51.3	-0.3
	comp=N,1.9nm,0.3s						
OBKA	Obir	7.48	331	ePn	Pn	00 19 50.8	-1.1
	comp=N,1.6nm,0.2s						
ARSA	Arzberg	7.80	338	ePn	Pn	00 19 56.5	+0.1
	comp=N,0.9nm,0.2s						
KBA	Koelnbreinsper	8.42	328	ePn	Pn	00 20 06.1	+1.2
	comp=N,0.5nm,0.3s						
ABTA	Abfaltersbach	8.52	324	Pn	Pn	00 20 06.0	-0.2
	comp=N,0.3nm,0.2s						
MOA	Molln	8.73	334	ePn	Pn	00 20 09.6	+0.6
	comp=N,0.9nm,0.2s						
WTTA	Wattenberg	9.30	323	ePn	Pn	00 20 17.1	+0.1
	comp=N,1.3nm,0.3s						
WATA	Walderalm	9.38	323	ePn	Pn	00 20 18.4	+0.3
	comp=N,0.6nm,0.2s						
SQTA	Sankt Quirin	9.47	322	ePn	Pn	00 20 20.2	+0.8
	comp=N,1.7nm,0.3s						
MOTA	Moosalm	9.61	322	Pn	Pn	00 20 21.9	+0.6
	comp=N,0.7nm,0.3s						
GERES	GERESS Array B	9.78	335	Pn	Pn	00 20 22.5	-1.0
	comp=N,0.3nm,0.3s,baz=158,slow=13,SNR=11						
MMAI	Mount Meron Ar	14.36	115	Pn	Pn	00 21 24.0	-2.2
	comp=N,0.2nm,0.3s,baz=304,slow=13,SNR=2.6						
HFS	Hagfors	20.42	351	P	P	00 22 40.1	+0.2
	comp=N,1.4nm,0.7s,baz=170,slow=8.8,SNR=4.5						
NOA	NORSAR Array B	21.63	349	P	P	00 22 52.2	-0.8
	comp=N,0.6nm,0.6s,baz=161,slow=11,SNR=2.5						
FINES	FINESS Array B	21.71	8	P	P	00 22 52.5	-1.3
	comp=N,0.9nm,0.5s,baz=186,slow=11,SNR=9.7						
ARCES	ARCESS Array B	29.65	4	P	P	00 24 06.3	-1.9
	comp=N,2.4nm,0.9s,baz=185,slow=10.0,SNR=3.9						
TORD	Torodi Ar. Bea	31.23	216	P	P	00 24 24.0	+1.4
	comp=N,0.4nm,0.9s,baz=6.4,slow=8.8,SNR=3.2						
MKAR	Makanchi Array	44.77	60	P	P	00 26 15.2	-1.3
	comp=N,0.3nm,0.4s,baz=283,slow=7.0,SNR=9.9						
ZALV	Zalesovo Beam	44.83	49	P	P	00 26 15.5	-1.3
	comp=N,0.4nm,0.4s,baz=267,slow=10,SNR=3.1						

IDC 09 00:22:23.5±1.0,29.38N×139.82E,h398km±16km,mb2.6/4, mb1 2.9/8,mb1mx2.7/43,mbtmp3.6/8,Error ellipse: s-maj=56.7km s-min=13.2km az=63.0,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	3.08	137	P	Pn	00 23 28.9	+1.5
	13nm,0.3s,baz=294,slow=19,SNR=2.8						
JCJ				S	S	00 24 18.6	-0.4
	36nm,0.3s,baz=258,slow=21,SNR=6.6						
JNU	Nakatsue	8.52	298	P	P	00 24 25.1	+0.5
	0.3nm,0.3s,baz=108,slow=13,SNR=2.5						
KSRS	Korea Array	12.78	312	P	P	00 25 12.1	+0.4
	0.2nm,0.3s,baz=127,slow=10,SNR=3.5						
USRK	Ussuriysk Ar.	16.05	339	P	P	00 25 48.8	+1.6
	baz=158,slow=11,SNR=6.3						
SONM	Songino Array	31.63	315	P	P	00 28 10.8	-0.7
	0.3nm,0.5s,baz=116,slow=6.8,SNR=6.1						
MKAR	Makanchi Array	47.42	308	P	P	00 30 18.8	-1.1
	0.1nm,0.4s,baz=81,slow=8.9,SNR=3.1						
MKAR				PcP	PcP	00 31 43.1	+0.1
	0.2nm,0.8s,baz=90,slow=4.3,SNR=2.4						
WRA	Warramunga Arr	49.32	187	P	P	00 30 34.4	+0.1
	0.7nm,0.4s,baz=4.3,slow=7.8,SNR=20						
ASAR	Alice Springs	53.05	187	P	P	00 31 01.4	-0.2
	0.3nm,0.5s,baz=5.2,slow=7.2,SNR=7.6						

IDC 09 00:28:15.6±13.0,19.71S×178.48W,h477km±157km, mb2.8/5,mb1 3.2/5,mb1mx3.0/19,mbtmp3.6/5,Error ellipse: s-maj=145.2km s-min=42.6km az=163.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.27	256	P	P	00 35 42.1	0.0
	0.2nm,0.4s,baz=89,slow=7.8,SNR=3.0						
WRA	Warramunga Arr	44.27	261	P	P	00 35 41.7	-0.3
	0.3nm,0.3s,baz=97,slow=7.6,SNR=9.4						
TXAR	Lajitas Array	87.01	58	P	P	00 40 10.0	+0.1
	0.3nm,0.6s,baz=224,slow=5.0,SNR=4.1						
ILAR	Eielson Array	87.65	13	P	P	00 40 12.1	+0.2
	0.3nm,0.6s,baz=215,slow=5.0,SNR=4.1						
PDAR	Pinedale Array	88.70	43	P	P	00 40 17.3	-0.4
	0.3nm,0.5s,baz=204,slow=3.3,SNR=4.1						
AKASG	Malin Array Be	142.11	331	PKhKP	PKPpre	00 46 48.1	
	1.0nm,0.4s,baz=41,slow=4.2,SNR=8.9						
BRTR	Keskin Array B	145.98	313	PKPbc	PKPbc	00 47 00.8	-0.8
	0.5nm,0.6s,baz=73,slow=1.8,SNR=4.0						

IDC 09 00:52:56.1±2.6,36.19N×69.67E,h159km±23km,mb3.4/15, mb1 3.5/20,mb1mx3.3/43,mbtmp3.9/20,Error ellipse: s-maj=18.7km s-min=12.2km az=9.0
BJI 09 00:52:57.3±0.0,36.47N×69.68E,h174km,mB4.7/8, mb4.2/19
NEIC 09 00:52:57.8±2.2,36.38N±0.06×69.64E±0.09,h173km±7km, mb4.2/20,Error ellipse: s-maj=10.3km s-min=9.0km az=109.0
MOS 09 00:52:57.8±1.0,36.41N×69.75E,h181km,mb4.2/11,Error ellipse: s-maj=7.5km s-min=4.9km az=79.1
NNC 09 00:52:59.2±3.3,36.65N×69.50E,h156km±80km,mb3.8, mpv4.8,Error ellipse: s-maj=38.2km s-min=12.3km az=161.0
ISC 09 00:52:57.5±0.4,36.36N±0.05×69.66E±0.04,h173km,n153, σ1.56/172,mb3.9/32,13C-8D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	Kabul	1.88	196	P	Pn	00 53 34.6	+1.5
KBL	Kabul	1.88	196	PN	Pn	00 53 34.6	+1.5
CEP	Cherat	3.13	143	⇓P	Pn	00 53 49.4	+1.8
BTK	Batken	3.80	13		Pn	00 53 57.5	+1.6
BTK	Batken	3.80	13	PN	Pn	00 53 57.5	+1.6
THW	Thamme Wali	3.95	154	⇓P	Pn	00 53 58.7	+0.9
NIL	Nilore	4.00	131		Pn	00 54 00.1	+1.7
NIL	Nilore	4.00	131	PN	Pn	00 54 00.1	+1.7
CHCP	Chirah Chowk	4.00	131	P	Pn	00 54 00.3	+1.9
TAS	Tashkent	4.97	357		Pn	00 54 11.9	+1.1

TAS Sn 00 55 05.6 -2.8
TAS Tashkent 4.97 357 PN Pn 00 54 11.9 +1.1
ARSB Arslanbob 5.59 27 Pn 00 54 19.1 0.0
ARSB Arslanbob 5.59 27 PN Pn 00 54 19.1 0.0
KSH Kashi 5.90 56 P Pn 00 54 19.1 -4.1
KSH S Sn 00 55 18.8 -12
KSH smax smax
comp=N,1μm,0.8s
KSH smax smax
comp=E,1μm,1.1s
THN Thein Dam 6.35 126 eP Pn 00 54 31.0 +1.9
THN eS Sn 00 55 39.0 -2.1
HRA Herat 6.37 254 Pn 00 54 24.0 -5.5
AML Almayashu 6.56 27 P Pn 00 54 32.4 +0.3
SNR=146
KK31 Karatay Array 6.77 5 P Pn 00 54 34.3 -0.2
5.5nm,0.4s,baz=174,slow=13,SNR=207
KK31 ⇓S Sn 00 55 44.9 -6.0
8.8nm,0.3s,baz=184,slow=23,SNR=7.7
KK31 Karatay Array 6.77 5 Pn 00 54 34.6 +0.1
KK31 Karatay Array 6.77 5 PN Pn 00 54 34.2 -0.2
KKAR Karatay Array 6.77 5 Pn 00 54 34.4 -0.1
KKAR Karatay Array 6.77 5 Pn 00 54 34.6 +0.1
KKAR Karatay Array 6.77 5 PN Pn 00 54 34.6 +0.1
DHRM DHARAMSHALA 6.85 125 eP Pn 00 54 36.0 +0.1
DHRM eS Sn 00 55 49.3 -4.0
DHRM IAML 00 55 52.6
comp=N,243nm,0.2s
DHRM IAML 00 55 54.2
comp=E,368nm,0.1s
UCH Uchtor 6.96 31 P Pn 00 54 37.8 +0.4
SNR=230
EKS2 Erkin-Say 7.05 26 P Pn 00 54 38.9 +0.6
SNR=25
NRN Naryn 7.08 42 Pn 00 54 37.4 -1.5
NRN Naryn 7.08 42 PN Pn 00 54 37.4 -1.5
KZA Kyzart 7.17 36 P Pn 00 54 40.2 0.0
SNR=22
AAK Ala-Archa 7.30 29 P Pn 00 54 42.2 +0.6
comp=E,14nm,0.3s,baz=198,slow=8.8,SNR=281
AAK S Sn 00 56 01.6 -2.1
comp=E,4.8nm,0.3s,baz=337,slow=19,SNR=11
AAK Ala-Archa 7.30 29 P Pn 00 54 42.2 +0.6
SNR=44
AAK Ala-Archa 7.30 29 ⇓P Pn 00 54 42.0 +0.4
comp=E,60nm,0.5s
AAK ⇑S Sn 00 56 00.7 -3.0
comp=E,68nm,0.7s
AAK Ala-Archa 7.30 29 i PN Pn 00 54 42.0 +0.4
AAK pmax pmax
comp=Z,96nm,0.7s
FRU1 Bishkek 7.50 29 Pn 00 54 45.1 +1.0
FRU1 Sn 00 56 09.8 +1.4
FRU1 Bishkek 7.50 29 PN Pn 00 54 45.1 +1.0
FRU1 S Sn 00 56 09.8 +1.4
KBK Karagaybulak 7.50 31 P Pn 00 54 45.1 +0.8
SNR=31
CHMS Chumysh 7.70 29 P Pn 00 54 47.2 +0.3
SNR=91
CHMS Chumysh 7.70 29 ⇑P Pn 00 54 46.7 -0.2
comp=Z,102nm,0.6s
CHMS ⇓S Sn 00 56 10.6 -2.7
comp=Z,84nm,0.8s
CHMS Chumysh 7.70 29 i PN Pn 00 54 46.6 -0.2
CHMS pmax pmax
comp=Z,102nm,0.6s
ULHL Ulahol 7.78 39 P Pn 00 54 48.4 +0.4
SNR=11
USP Ospenovka 7.84 27 P Pn 00 54 48.6 -0.1
SNR=20
SMLA Simla 8.14 128 eP Pn 00 54 52.2 -0.5
SMLA eS Sn 00 56 18.4 -5.3
SMLA IAML 00 56 21.6
comp=N,79nm,0.5s
SMLA IAML 00 56 22.9
comp=E,107nm,0.5s
KDJ Kajisay 8.20 43 Pn Pn 00 54 52.4 -1.1
KDJ Kajisay 8.20 43 PN Pn 00 54 52.4 -1.1
KNDC Almaty 8.86 37 ⇑P Pn 00 55 02.9 +0.8
comp=E,33nm,0.9s
KNDC ⇓S Sn 00 56 38.5 -2.3
comp=E,43nm,1.1s
KNDC Almaty 8.86 37 PN Pn 00 55 02.9 +0.8
MDOK Medeo 8.86 38 ⇑P Pn 00 55 02.4 +0.2
comp=E,31nm,0.6s
MDOK ⇑S Sn 00 56 42.1 +1.1
comp=E,8.1nm,0.7s
MDOK Medeo 8.86 38 PN Pn 00 55 02.4 +0.2
MDOK S Sn 00 56 42.8 +1.8
PRZ Przheval'sk 9.11 45 Pn Pn 00 55 05.5 -0.1
PRZ Przheval'sk 9.11 45 PN Pn 00 55 05.5 -0.1
GEYT Alibeck 9.35 283 P Pn 00 55 07.8 -0.8
comp=E,0.7nm,0.3s,baz=108,slow=9.8,SNR=12
GEYT S Sn 00 56 48.9 -3.9
comp=E,0.4nm,0.3s,baz=69,slow=20,SNR=3.3
GEYT Alibeck 9.35 283 Pn 00 55 08.2 -0.4
GYA0B ALIBECK ARRAY 9.35 283 ⇓P Pn 00 55 06.6 -2.0
GYA0B ⇑S Sn 00 56 49.4 -3.3
GYA0B ALIBECK ARRAY 9.35 283 P Pn 00 55 07.8 -0.9
KUDL Kundal 10.02 143 eP Pn 00 55 07.5 -10
KUDL eS Sn 00 56 50.5 -18
KUDL IAML 00 56 56.9
AYAN Aya Nagar 10.07 139 eP Pn 00 55 18.4 +0.3
JOSI Joshimath 10.09 122 eP Pn 00 55 18.1 -0.4
JOSI eS Sn 00 57 01.1 -10
JOSI IAML 00 57 14.1
comp=N,122nm,0.8s
JOSI IAML 00 57 15.2
comp=E,115nm,0.6s
PDGK Podgornoye 10.27 44 ⇓P Pn 00 55 19.1 -1.6
comp=E,3.8nm,0.8s
PDGK ⇑S Sn 00 57 10.3 -4.4
comp=E,12nm,1.1s
PDGK Podgornoye 10.27 44 i P Pn 00 55 19.0 -1.7
PDGK pmax pmax
comp=Z,4.0nm,0.7s
MAKZ Makanchi 13.91 38 Pn 00 56 07.0 -0.2
MAKZ Makanchi 13.91 38 P Pn 00 56 07.0 -0.2
MK31 Makanchi Array 14.05 38 ⇑P Pn 00 56 08.6 -0.4
comp=Z,2.2nm,0.6s,baz=225,slow=14,SNR=48
MK31 Makanchi Array 14.05 38 Pn 00 56 09.0 0.0
MK31 Makanchi Array 14.05 38 P Pn 00 56 09.0 0.0
MKAR Makanchi Array 14.05 38 P Pn 00 56 08.8 -0.2
comp=Z,0.2nm,0.3s,baz=219,slow=14,SNR=22
MKAR Makanchi Array 14.05 38 Pn 00 56 09.3 +0.2
MKAR Makanchi Array 14.05 38 i P Pn 00 56 09.5 +0.5
MKAR pmax pmax
comp=Z,1.0nm,0.6s
DANN Dangsing 14.33 120 eP Pn 00 56 11.2 -1.7
comp=Z,41nm,0.6s
KOLN Koldanda 14.58 122 eP Pn 00 56 14.5 -1.4
AB31 Akbulak array 14.71 334 i P Pn 00 56 17.4 +0.3
AB31 S Sn 00 58 50.4 -11
ABKAR Akbulak array 14.71 334 P Pn 00 56 16.3 -0.8
GKN Gorkha 15.16 119 eP Pn 00 56 22.1 -0.9
KURBB Kurchatov Arra 15.62 21 P Pn 00 56 27.8 -0.5
comp=Z,0.1nm,0.3s,baz=211,slow=11,SNR=7.8
WMQ Urumqi 15.67 56 eP P 00 56 30.5 +1.0
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ pmax pmax
comp=Z,220nm,7.1s
WMQ LR LR
comp=Z,260nm,28.5s
WMQ LR LR
comp=Z,770nm,29.2s
WMQ LR LR
comp=Z,35nm,25.7s
DMN Daman 15.73 119 eP Pn 00 56 29.2 -0.9
KURK Kurchatov 15.73 21 P Pn 00 56 29.3 -0.3
KURK Kurchatov 15.73 21 ceP Pn 00 56 28.5 -1.1
KURK pmax pmax
comp=Z,10.0nm,2.5s
KKN Kakani 15.74 118 eP Pn 00 56 29.4 -0.8
comp=Z,97nm,0.9s
PKIN Phulchoki 15.95 119 eP Pn 00 56 32.1 -0.7
comp=Z,61nm,0.7s
PKI Pulchoki 15.96 119 eP Pn 00 56 32.1 -0.9
comp=Z,124nm,1.0s
GUN Gumba 16.10 117 eP P 00 56 34.0 -0.7
comp=Z,86nm,0.8s
UOSS Minazif 16.21 229 P 00 56 35.8 +0.2
UOSS IAmb IAmb 00 56 48.0
comp=Z,16nm,1.2s
AKTO Aktyubinsk 16.39 333 P Pn 00 56 38.5 +0.9
comp=Z,0.1nm,0.3s,baz=127,slow=11,SNR=9.7
AKTO S S 00 59 35.3 -3.4
comp=Z,0.1nm,0.3s,baz=120,slow=20,SNR=1.9
AKTO Aktyubinsk 16.39 333 ⇑P Pn 00 56 38.0 +0.4
comp=Z,6.0nm,1.2s
JIRN Jiri 16.47 117 eP P 00 56 39.0 +0.2
comp=Z,74nm,0.6s
BVAR Borovoye Array 16.67 2 P Pn 00 56 40.7 -0.3
comp=Z,0.3nm,0.3s,baz=163,slow=10,SNR=13
BRVK Borovoye 16.70 1 P P 00 56 40.8 +0.1
BRVK Borovoye 16.70 1 P P 00 56 40.8 +0.1
BRVK pmax pmax
comp=Z,3.0nm,1.1s
RAMN Ramite 17.18 118 eP P 00 56 46.9 +0.4
comp=Z,51nm,0.6s
TAPN Taplejung 17.75 115 eP Pn 00 56 54.4 +0.1
comp=Z,51nm,0.6s
ODAN Odare 17.80 117 eP Pn 00 56 54.7 -0.2
comp=Z,63nm,0.9s
LSA Lhasa 19.18 104 P Pn 00 57 11.0 -0.3
LSA pmax pmax
comp=Z,104nm,0.8s
GNI Garni 19.91 289 P Pn 00 57 20.3 +0.6
comp=Z,1.2nm,0.3s,baz=20,slow=1.5,SNR=28
GNI Garni 19.91 289 P Pn 00 57 18.0 -1.6
GNI Garni 19.91 289 ceP Pn 00 57 18.8 -0.8
GNI pmax pmax
comp=Z,76nm,1.3s
TBLG Delisi 20.06 293 P P 00 57 17.2 -0.1
TBLG IAmb IAmb 00 57 21.8
comp=Z,5.0nm,0.8s
TBLG Delisi 20.06 293 P P 00 57 17.2 -0.1
TBLG pmax pmax
comp=Z,5.0nm,0.8s
ZAA0 Zalesovo Array 20.50 26 P P 00 57 22.6 +0.7
ZAA0 IAmb IAmb 00 57 25.6
comp=Z,5.8nm,0.7s
ZALV Zalesovo Beam 20.50 26 P P 00 57 22.5 +0.6
comp=Z,4.6nm,0.5s,baz=222,slow=12,SNR=19
AKH Akhalkalaki 20.95 292 P P 00 57 26.5 -0.5
AKH IAmb IAmb 00 57 33.4
comp=Z,8.3nm,1.0s
AKH Akhalkalaki 20.95 292 P P 00 57 26.5 -0.5
AKH pmax pmax
comp=Z,8.0nm,1.0s
NCK Nalchik 21.17 298 i P P 00 57 31.5 +2.4
NCK pmax pmax
comp=Z,4.0nm,0.9s
KBZ Khabaz 21.71 298 i P P 00 57 35.8 +1.0
KBZ pmax pmax
comp=Z,2.0nm,1.0s
NEY Neytrino 21.75 297 i P P 00 57 37.6 +2.1
SHL Shillong 21.83 113 P P 00 57 36.5 +0.1
SHL Shillong 21.83 113 P P 00 57 36.5 +0.1
SHL pmax pmax
comp=Z,12nm,0.6s
SHA1 Shidzhatmaz 21.88 298 i P P 00 57 37.4 +0.5
GTA Gaotai 23.94 74 P P 00 57 57.4 +1.6
GTA sP PP 00 58 54.7 +1.1
GTA pmax pmax
comp=Z,5.0nm,1.4s
RAYN Ar Rayn 24.46 245 P P 00 58 02.0 +1.5
RAYN Ar Rayn 24.46 245 P P 00 58 02.0 +1.5
RAYN pmax pmax
comp=Z,3.0nm,0.8s
LZH Lanzhou 27.50 80 eP P 00 58 28.1 +0.2
LZH pP pP 00 59 03.6 -0.9
LZH PP PnPn 00 59 19.6 -3.5
LZH sP sP 00 59 24.8 -0.1
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,68nm,5.4s
BRTR Keskin Array B 28.45 288 P P 00 58 38.5 +2.2
comp=Z,0.9nm,0.7s,baz=98,slow=8.9,SNR=7.3
BRTR pP pP 00 59 10.3 -1.9
comp=Z,0.5nm,0.8s,baz=99,slow=11,SNR=2.2
BRTR Keskin Array B 28.45 288 P P 00 58 37.1 +0.8
SONM Songino Array 29.30 55 P P 00 58 45.5 +1.8
comp=Z,2.0nm,0.8s,baz=260,slow=9.7,SNR=21
SONM Songino Array 29.30 55 P P 00 58 44.5 +0.8
OBN Obninsk 29.35 320 ⇑eP P 00 58 45.3 +1.5
OBN e*PP pP 00 59 21.2 +1.4
OBN e 00 59 41.8
OBN pmax pmax
comp=Z,5.0nm,0.7s
CMAR Chiang Mai Arr 31.34 117 P P 00 59 02.2 +0.4
comp=Z,1.2nm,0.3s,baz=300,slow=9.2,SNR=5.0
ELL Elmali 31.78 283 P P 00 59 06.4 +0.8
ELL Elmali 31.78 283 P P 00 59 06.4 +0.8
ELL pmax pmax
comp=Z,28nm,1.4s
XAN Xi'an 32.02 82 P P 00 59 08.5 +0.9
AKASG Malin Array Be 32.20 309 P P 00 59 10.3 +1.4
comp=Z,0.3nm,0.4s,baz=81,slow=7.2,SNR=3.4
HHC Hu-ho-hao-te 32.82 69 eP P 00 59 15.8 +1.1
HHC pmax pmax
comp=Z,3.0nm,0.8s
HHC pmax pmax
comp=Z,120nm,5.5s
MLR Muntele Rosu 33.91 299 P P 00 59 27.4 +3.4
MLR pmax pmax
comp=Z,5.0nm,2.7s
PBKT Sadao Pong 34.03 117 P P 00 59 25.3 +0.1
PBKT IAmb IAmb 00 59 28.1
comp=Z,3.3nm,0.7s
BURAR Bucovina Array 34.46 303 P P 00 59 27.5 -1.2
BURAR Bucovina Array 34.46 303 P P 00 59 27.5 -1.2
VOIR 34.54 299 P P 00 59 31.8 +2.4
APE Apeiranthos 35.15 285 P P 00 59 36.6 +2.0
APE pmax pmax
comp=Z,40nm,1.6s
VTS Vitosha 36.01 295 P P 00 59 44.4 +2.3
VTS pmax pmax
comp=Z,4.0nm,2.1s
FINES FINESS Array B 37.00 327 P P 00 59 50.6 +0.6
comp=Z,1.1nm,0.9s,baz=119,slow=11,SNR=2.4
WHN Wuhan 37.48 86 P P 00 59 59.1 +4.7
ARCES ARCESS Array B 40.87 338 P P 01 00 23.2 +1.2
comp=Z,1.8nm,0.9s,baz=102,slow=8.4,SNR=2.3
KULM Kulim 42.00 130 P P 01 00 30.1 -1.7
NOA NORSAR Array B 43.84 323 P P 01 00 47.3 +1.1
comp=Z,0.6nm,0.8s,baz=98,slow=7.9,SNR=2.6
KSRS Korea Array 45.94 70 P P 01 01 03.5 +0.5
comp=Z,1.3nm,0.7s,baz=275,slow=7.0,SNR=4.7
TIXI Tiksi 46.31 22 P P 01 01 06.5 +1.2
TIXI Tiksi 46.31 22 ceP P 01 01 05.5 +0.1
TIXI pmax pmax
comp=Z,3.0nm,0.9s
MBAR Mbarara 51.55 233 P P 01 01 47.6 +1.4
MBAR Mbarara 51.55 233 P P 01 01 47.6 +1.4
PESTR Estremoz 59.47 298 P P 01 02 43.9 +1.7
PESTR IAmb IAmb 01 02 45.4
comp=Z,3.7nm,1.0s
TOA0 Torodi Ar. Sit 64.64 268 P P 01 03 16.6 -0.3
TOA0 IAmb IAmb 01 03 33.6
comp=Z,3.5nm,1.3s
TORD Torodi Ar. Bea 64.64 268 P P 01 03 16.2 -0.7
comp=Z,0.9nm,0.8s,baz=48,slow=5.6,SNR=8.9
TORD pP pP 01 03 55.0 -2.8
comp=Z,0.7nm,0.8s,baz=51,slow=5.4,SNR=2.9
TORD Torodi Ar. Bea 64.64 268 P P 01 03 15.9 -1.0
FAKI Fak Fak 70.04 109 P P 01 03 49.8 -1.1
FAKI IAmb IAmb 01 03 55.1
comp=Z,4.8nm,1.0s
IMAR Indian Mountai 72.63 17 P P 01 04 06.1 +0.5
LBTB Lobatse 73.86 221 P P 01 04 14.2 +0.8
LBTB IAmb IAmb 01 04 32.3
comp=Z,6.7nm,1.4s
LBTB Lobatse 73.86 221 P P 01 04 14.2 +0.8
LBTB pmax pmax
comp=Z,7.0nm,1.4s
INK Inuvik 74.21 9 P P 01 04 16.4 +1.7
comp=Z,0.8nm,0.6s,baz=348,slow=4.3,SNR=6.3
ILAR Eielson Array 75.20 15 P P 01 04 21.6 +1.0
comp=Z,0.7nm,1.0s,baz=316,slow=6.3,SNR=4.9
KNK Knik Glacier 77.76 18 P P 01 04 35.8 +0.8
KNK IAmb IAmb 01 04 39.8
comp=Z,8.4nm,1.3s
YKA Yellowknife Ar 81.43 2 P P 01 04 55.4 +0.7
comp=Z,0.2nm,0.5s,baz=354,slow=5.7,SNR=4.1
WRA Warramunga Arr 82.84 121 P P 01 05 01.5 -1.2
comp=Z,1.0nm,1.0s,baz=328,slow=5.0,SNR=5.0
ASAR Alice Springs 85.06 124 P P 01 05 12.8 -1.1
comp=Z,0.6nm,0.6s,baz=319,slow=5.1,SNR=12

*NEIC **09** 01:26:36.9±1.4, 4°.42S±0°.08×142°.35E±0°.08, h117km±7km, mb4.5/47, Error ellipse: s-maj=12.1km s-min=11.5km az=167.0*
*IDC **09** 01:26:37.5±2.8, 4°.45S×142°.36E, h122km±28km, mb3.9/15, mb1 4.0/19, mb1mx4.0/30, mbtmp4.3/19, MS3.1/2, Ms1 3.2/2, ms1mx2.7/24, Error ellipse: s-maj=17.3km s-min=14.0km az=63.0*
*DJA **09** 01:26:37.1±0.3, 4°S±4°×142°E±°, h105km±5km, M4.9/25, mb4.9/25, mB5.4/11, MLv5.0/6, Mw(mB)4.8/11, Mwp5.3/1*
ISC 09 01:26:35.9±0.4, **4°.48S**±0°.05×**142°.32E**±0°.05, **h105km, n118,** σ1§63/111, **mb4.6**/34, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	Genyem	2.85	311	P	Pn	01 27 19.9	+0.2
SMPI	Sarmi	4.37	304	P	Pn	01 27 41.6	+1.5
MMPI	Merauke	4.40	206	P	Pn	01 27 43.2	+2.6
MANU	Manus Island	5.59	65		Pn	01 27 56.8	+0.2
PMG	Port Moresby	6.86	136	P	Pn	01 28 15.3	+1.4
	73nm,0.3s,baz=8.3,slow=3.0,SNR=100						
PMG				S	Sn	01 29 27.7	-2.8
	1.2nm,0.3s,baz=86,slow=19,SNR=3.3						
PMG	Port Moresby	6.86	136		Pn	01 28 14.9	+1.0
COEN	Coen	9.46	175		Pn	01 28 51.4	+2.2
FAKI	Fak Fak	10.17	278		Pn	01 28 57.8	-1.0
SAUI	Saumlaki	11.49	252	Pn	Pn	01 29 16.4	-0.3
SIJI	Sorong	11.61	288	P	Pn	01 29 19.6	+1.2
	5.7nm,0.3s,baz=69,slow=11,SNR=23						
SIJI				S	Sn	01 31 20.8	-5.2
	1.2nm,0.3s,baz=308,slow=19,SNR=2.9						
SWI	Sorong	11.61	288	P	Pn	01 29 19.6	+1.2
	80nm,0.6s						
MTN	Manton Dam	13.83	232		Pn	01 29 48.2	+0.7
NLAI	Namlea	15.23	274	P	P	01 30 09.2	+1.3
	1μm80nm,0.7s						
LBMI	Labuha	15.28	284	P	P	01 30 08.1	-0.4
	3μm45nm,1.1s						
CTA	Charters Tower	15.98	166	P	Pn	01 30 14.7	-0.1
	0.3nm,0.3s,baz=343,slow=14,SNR=3.3						
SANI	Sanana	16.48	278	P	P	01 30 22.4	+0.6
	738nm56nm,1.0s						
WB0	Warramunga Arr	17.05	206		P	01 30 29.7	+1.7
WB0				IAmb	IAmb	01 30 47.3	
	comp=Z,23nm,1.2s						
WR0	Warramunga Arr	17.15	206	P	P	01 30 29.8	+0.7
WR0				IAmb	IAmb	01 30 47.1	
	comp=Z,24nm,0.5s						
WRAB	Tennant Creek	17.21	206	P	P	01 30 30.3	+0.5
WRAB				IAmb	IAmb	01 30 49.7	
	comp=Z,17nm,0.7s						
WB2	Warramunga Arr	17.22	206	P	P	01 30 30.2	+0.3
WB2				IAmb	IAmb	01 30 47.6	
	comp=Z,19nm,0.7s						
WRA	Warramunga Arr	17.23	206	P	P	01 30 30.1	+0.1
	comp=Z,2.4nm,0.3s,baz=26,slow=13,SNR=28						
WRA				S	Sn	01 33 33.4	-8.5
	comp=Z,0.5nm,0.3s,baz=29,slow=23,SNR=3.6						
WRA	Warramunga Arr	17.23	206	P	P	01 30 29.9	-0.1
KNRA	Kununurra	17.36	229	P	P	01 30 32.2	+0.8
SOEI	Soe	18.66	253	P	Pn	01 30 48.9	+1.5
	comp=Z,177nm,0.7s						
SOEI	Soe	18.66	253	P	Pn	01 30 47.9	+0.5
KMSI	Cibinong	19.00	285	P	P	01 30 50.2	+0.8
	comp=Z,135nm,0.9s						
PATS	Pohnpei	19.52	55	P	P	01 30 54.7	-0.5
BBSI	Bau Bau	19.70	266	P	P	01 30 58.1	+1.0
	comp=Z,10nm,1.0s						
LUWI	Luwuk	19.82	279	P	Pn	01 31 01.3	+0.4
	comp=Z,5μmcomp=Z,118nm,0.8s						
LUWI	Luwuk	19.82	279	P	P	01 30 59.5	+1.1
AS31	Alice Springs	20.73	202	P	P	01 31 09.3	+1.1
ASAR	Alice Springs	20.73	202	P	P	01 31 09.0	+0.8
	comp=Z,3.7nm,0.5s,baz=32,slow=10,SNR=47						
ASAR				S	S	01 34 49.6	-4.4
	comp=Z,3.4nm,0.8s,baz=22,slow=21,SNR=4.8						
ASAR				LR	LR	01 39 19.9	
	comp=Z,59nm,20.3s,baz=148,slow=37						
ASAR	Alice Springs	20.73	202	P	P	01 31 09.2	+1.1
APSI	Ampana	20.95	279	P	P	01 31 12.4	+1.9
	comp=Z,2μmcomp=Z,771nmcomp=Z,65nm,1.2s						
MRSI	Marisa	20.95	283	P	P	01 31 11.2	+0.7
	comp=Z,966nmcomp=Z,86nm,0.7s						
FITZ	Fitzroy Crossi	21.20	229	P	P	01 31 13.3	+0.2
	comp=Z,7.2nm,0.6s,baz=31,slow=10,SNR=11						
BKSI	Bulukumba	22.13	267	P	P	01 31 26.8	+3.7
	comp=Z,2μmcomp=Z,189nm,0.8s						
BNSI	Bone	22.14	269	P	P	01 31 26.6	+3.3
	comp=Z,77nm,0.7s						
EIDS	Eidsvold	22.41	159	P	P	01 31 27.2	+1.3
EIDS				IAmb	IAmb	01 31 29.2	
	comp=Z,23nm,0.7s						
WSI	Waingapu	22.45	256	P	P	01 31 28.8	+2.4
	comp=Z,14μmcomp=Z,596nm,0.5s						
SPSI	Sidrap Palu	22.49	270	P	P	01 31 30.0	+3.1
	comp=Z,64nm,0.7s						
KAPI	Kappang	22.50	268	P	P	01 31 27.4	+0.5
	comp=Z,7.7nm,0.7s,baz=118,slow=14,SNR=2.7						
KAPI	Kappang	22.50	268	P	P	01 31 27.7	+0.8
KAPI				IAmb	IAmb	01 31 38.2	
	comp=Z,17nm,0.8s						
TTSI	Tana Toraja	22.50	273	P	P	01 31 30.0	+3.1
	comp=Z,2μmcomp=Z,37nm,1.1s						
MPSI	Mapaga	22.90	281	P	P	01 31 31.9	+0.9
	comp=Z,16nm,0.5s						
STKA	Stephens Creek	27.27	181	P	P	01 32 10.7	+0.3
	comp=Z,1.3nm,0.5s,baz=27,slow=10.0,SNR=4.6						
STKA	Stephens Creek	27.27	181	P	P	01 32 11.0	+0.7
NOUC	Port Laguerre	29.10	129	P	P	01 32 25.9	-1.0
NOUC				IAmb	IAmb	01 32 38.2	
	comp=Z,7.2nm,0.8s						
DZM	Mont Dzumac	29.19	129	P	P	01 32 29.4	+1.7
	comp=Z,5.3nm,0.5s,baz=217,slow=15,SNR=11						
DZM	Mont Dzumac	29.19	129	P	P	01 32 28.2	+0.5
DZM				IAmb	IAmb	01 32 40.9	
	comp=Z,8.7nm,0.9s						
SBUM	Sibu	30.85	282	P	P	01 32 43.0	+0.6
TARA	Tarawa	31.12	80	P	P	01 32 43.8	-1.0
CAN	Canberra	31.31	169	P	P	01 32 47.4	+1.2
YULB	Yu-li	34.47	324	P	P	01 33 12.2	-1.6
KNMB	Chin-men Tao	37.01	322	P	P	01 33 35.2	-0.4
MJAR	Matsushiro Arr	40.99	355	P	P	01 34 06.9	-1.7
	comp=Z,0.5nm,0.3s,baz=175,slow=6.5,SNR=4.6						
MJAR	Matsushiro Arr	40.99	355	P	P	01 34 07.2	-1.3
NJ2	Nanjing	42.64	330	eP	P	01 34 22.1	+0.1
KSRS	Korea Array	43.82	343	P	P	01 34 31.6	+0.2
	comp=Z,1.4nm,0.5s,baz=156,slow=8.5,SNR=6.6						
WHN	Wuhan	43.91	324	P	P	01 34 34.5	+2.2
RPSI	Rantau Prapat	43.94	279	P	P	01 34 32.4	-0.4
RPSI				IAmb	IAmb	01 34 33.5	
	comp=Z,9.7nm,0.9s						
TUWZ	Tuamarina	46.41	147	P	P	01 34 52.6	+0.7
ENH	Enshi	46.70	320	P	P	01 34 53.8	-0.6
ENH				IAmb	IAmb	01 34 55.6	
	comp=Z,10nm,0.8s						
CMAR	Chiang Mai Arr	48.44	299	P	P	01 35 08.4	+0.4
	comp=Z,3.0nm,0.7s,baz=115,slow=6.2,SNR=15						
CMAR				LR	LR	01 59 22.7	
	comp=Z,18nm,18.2s,baz=175,slow=41						
CHTO	Chiang Mai	48.58	300	P	P	01 35 08.5	-0.6
USRK	Ussuriysk Ar.	49.34	350	P	P	01 35 14.9	+0.4
	comp=Z,1.2nm,0.8s,baz=151,slow=9.7,SNR=3.6						
XAN	Xi'an	49.61	323	P	P	01 35 16.6	-0.2
XAN				pP	pP	01 35 31.7	-10
XAN				sP	sP	01 35 38.5	-15
XAN	Xi'an	49.61	323	P	P	01 35 16.1	-0.6
XAN				IAmb	IAmb	01 35 17.1	
	comp=Z,3.9nm,0.8s						
HHC	Hu-ho-hao-te	53.17	331	eP	P	01 35 45.0	+1.7
LZH	Lanzhou	54.07	322	eP	P	01 35 51.5	+1.5
LZH				pP	pP	01 36 18.1	+2.8
LZH				sP	sP	01 36 30.4	+3.4
LZH				PP	PP	01 38 00.4	+7.7
GTA	Gaotai	58.64	322	P	P	01 36 23.6	+1.2
GTA				pP	pP	01 36 46.8	-1.3
GTA				sP	sP	01 36 58.9	-0.8
PETK	Petropavlovsk-	58.83	11	P	P	01 36 22.7	-0.5
	comp=Z,5.9nm,0.8s,baz=173,slow=6.2,SNR=12						
LSA	Lhasa	59.62	308	P	P	01 36 30.5	+0.7
LSA				IAmb	IAmb	01 36 32.3	
	comp=Z,6.0nm,1.0s						
SONM	Songino Array	60.88	333	P	P	01 36 38.3	+0.8
	comp=Z,0.4nm,0.5s,baz=150,slow=5.5,SNR=5.2						
SONM	Songino Array	60.88	333	IAmb	IAmb	01 36 38.7	

comp=Z,1.8nm,1.4s
TAPN Taplejung 61.44 304 eP P 01 36 42.8 +0.9
comp=Z,17nm,0.5s
ODAN Odare 61.52 304 eP P 01 36 43.3 +0.9
comp=Z,32nm,0.9s
RAMN Ramite 62.20 304 eP P 01 36 48.0 +1.0
comp=Z,14nm,0.5s
JIRN Jiri 62.80 304 eP P 01 36 52.2 +1.1
comp=Z,21nm,0.5s
GUN Gumba 63.15 304 eP P 01 36 54.3 +0.9
comp=Z,25nm,0.7s
PKI Pulchoki 63.42 304 eP P 01 36 55.7 +0.6
KKN Kakani 63.60 304 eP P 01 36 57.2 +1.0
DMN Daman 63.68 304 eP P 01 36 57.8 +1.0
GKN Gorkha 64.21 304 eP P 01 37 01.2 +1.1
comp=Z,28nm,0.5s
KOLN Koldanda 64.99 303 eP P 01 37 06.4 +1.1
DANN Dangsing 65.06 304 eP P 01 37 06.4 +0.6
comp=Z,27nm,0.8s
WMQ Urumqi 68.64 321 eP P 01 37 28.7 +0.8
MK31 Makanchi Array 73.39 322 P P 01 37 56.2 -0.4
MKAR Makanchi Array 73.39 322 P P 01 37 56.8 +0.3
comp=Z,2.0nm,0.8s,baz=100,slow=8.4,SNR=20
MKAR Makanchi Array 73.39 322 P P 01 37 56.2 -0.4
MAKZ Makanchi 73.59 322 P P 01 37 57.5 -0.2
NIL Nilore 75.26 306 P P 01 38 08.0 +0.2
NIL IAmb IAmb 01 38 09.2
comp=Z,6.0nm,0.6s
ZALV Zalesovo Beam 75.28 329 P P 01 38 06.7 -0.6
comp=Z,1.2nm,0.5s,baz=111,slow=4.3,SNR=6.9
AAK Ala-Archa 76.98 315 P P 01 38 17.1 -0.3
KURK Kurchatov 77.23 324 P P 01 38 17.9 -0.5
KKAR Karatay Array 79.91 315 P P 01 38 33.0 -0.3
OHAK Old Harbor 80.25 30 P P 01 38 34.3 -0.5
KDAK Kodiak Island 80.83 29 P P 01 38 37.5 -0.3
RDOG Red Dog Mine 81.70 18 P P 01 38 41.8 -0.5
RDOG IAmb IAmb 01 38 43.2
comp=Z,8.4nm,1.1s
IMAR Indian Mountai 83.77 22 P P 01 38 52.2 -0.8
MLY Manley 84.52 23 IAmb IAmb 01 38 57.6
comp=Z,9.8nm,1.2s
GLI Glacier Island 84.58 28 P P 01 38 55.9 -1.4
MCK McKinley 84.76 25 IAmb IAmb 01 38 57.4
comp=Z,11nm,0.9s
SCM Sheep Creek Mo 84.79 27 P P 01 38 57.7 -0.7
WRH Wood River Hil 85.37 24 IAmb IAmb 01 39 00.2
comp=Z,6.7nm,0.8s
IL31 85.96 24 IAmb IAmb 01 39 02.6
comp=Z,6.8nm,0.8s
ILAR Eielson Array 85.96 24 P P 01 39 01.9 -2.2
comp=Z,5.9nm,0.7s,baz=259,slow=4.7,SNR=74
ILAR Eielson Array 85.96 24 P P 01 39 01.5 -2.6
DOT Dot Lake 86.79 25 IAmb IAmb 01 39 08.2
comp=Z,5.8nm,1.0s
BCAR Beaver Creek A 87.62 26 P P 01 39 11.6 -0.6
BMAR Burnt Mountain 87.69 22 P P 01 39 12.4 0.0
EGAK Eagle 88.31 25 IAmb IAmb 01 39 15.8
comp=Z,4.8nm,0.8s
DAWY Dawson 88.89 26 IAmb IAmb 01 39 19.0
comp=Z,4.8nm,0.9s
PINE Pine Mountain 97.95 47 P P 01 39 58.7 -1.8
YKA Yellowknife Ar 99.99 27 P Pdif 01 40 06.2 -2.7
comp=Z,0.2nm,0.5s,baz=296,slow=5.3,SNR=3.4
LPAZ La Paz 143.50 125 PKP PKPbc 01 45 57.9 +0.3
comp=Z,2.4nm,0.4s,baz=221,slow=1.3,SNR=9.8
LPAZ La Paz 143.50 125 PKPbc 01 45 58.4 +0.8
CPUP Villa Florida 143.94 149 PKP PKPbc 01 45 58.0 +0.1
comp=Z,1.1nm,0.6s,baz=207,slow=2.3,SNR=4.2

IDC 09 01:50:00.0±1.4, 7.53S×156.40E, h0km, mb4.2/6, mb1 4.2/7, mb1mx3.9/30, mbtmp4.2/7, MS3.5/4, Ms1 3.5/4, ms1mx3.0/38, Error ellipse: s-maj=39.4km s-min=25.5km az=113.0

ISC 09 01:50:06.4±1.2, 7.6S±0.2×156.4E±0.1, h45km, n16, σ1§71/9, mb4.2/6, Bougainville-Solomon Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 9.33 258 Pn Pn 01 52 15.8 -2.5
baz=159,slow=18,SNR=1.9
PMG Sn Sn 01 54 04.7 +2.8
0.8nm,0.3s,baz=320,slow=8.5,SNR=2.3
PMG LR LR 01 55 34.9
comp=Z,201nm,18.2s,baz=106,slow=36
WRA Warramunga Arr 24.68 238 P P 01 55 22.6 -0.7
1.6nm,0.7s,baz=62,slow=9.7,SNR=10
ASAR Alice Springs 26.88 231 P P 01 55 42.9 -0.3
0.3nm,0.8s,baz=58,slow=9.5,SNR=6.0
ASAR LR LR 02 06 16.6
comp=Z,54nm,18.7s,baz=246,slow=36
H11S3 WAKE ISLAND Hy 27.80 21 T T 02 24 05.4
baz=202,slow=75,SNR=72
H11S2 WAKE ISLAND Hy 27.80 21 T T 02 24 05.6
baz=202,slow=75,SNR=28
H11S1 WAKE ISLAND Hy 27.82 21 T T 02 24 06.6
baz=202,slow=75,SNR=56
H11N1 WAKE ISLAND Hy 29.00 21 T T 02 25 45.6
baz=194
H11N3 WAKE ISLAND Hy 29.01 21 T T 02 25 47.7
baz=194
H11N2 WAKE ISLAND Hy 29.02 21 T T 02 25 48.1
baz=194
SONM Songino Array 70.56 327 P P 02 01 18.0 +1.1
1.8nm,0.8s,baz=138,slow=6.6,SNR=14
TIXI Tiksi 81.11 351 LR LR 02 35 03.3
comp=Z,26nm,21.4s,baz=352,slow=33
QSPA South Pole Qui 82.42 180 P P 02 02 24.9 +1.1
2.8nm,1.0s,baz=350,slow=2.7,SNR=5.7
MAW Mawson 84.42 203 LR LR 02 37 27.5
comp=Z,77nm,18.2s,baz=242,slow=34
MKAR Makanchi Array 84.75 318 P P 02 02 36.0 +0.1
5.7nm,0.8s,baz=106,slow=5.6,SNR=66
ZALV Zalesovo Beam 85.43 326 P P 02 02 38.4 -0.7
4.6nm,0.7s,baz=110,slow=5.4,SNR=14
TORD Torodi Ar. Bea 154.52 285 PKPbc PKPbc 02 10 02.9 -0.4
0.5nm,0.9s,baz=129,slow=3.2,SNR=3.9

ROM 09 01:52:20.6±0.0, 43.342N±0.002×12.526E±0.003, h8km, ML2.5/25, 15C-4D, Error ellipse: s-maj=0.2km s-min=0.1km az=31.0, Central Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ATFO Monte Foce - G 0.04 54 ⇑P Pg 01 52 22.2 0.0
ATFO S Sg 01 52 23.5 0.0
ATFO AML AML
comp=E,21700µm,1.5s
ATFO AML AML
comp=N,21700µm,0.4s
MURB Monte Urbino 0.08 181 ⇑P Pg 01 52 23.1 +0.4
MURB S Sg 01 52 24.9 +0.7
MURB AML AML
comp=E,18250µm,0.3s
MURB AML AML
comp=E,20700µm,0.3s
MURB AML AML
comp=N,13050µm,1.1s
MURB AML AML
comp=E,18250µm,0.3s
MURB AML AML
comp=N,12600µm,1.0s
ATVO AVT- Monte Val 0.10 295 ⇑P Pg 01 52 23.2 +0.3
ATVO S Sg 01 52 25.1 +0.6
ATVO AML AML
comp=N,12950µm,0.2s
ATVO AML AML
comp=E,12050µm,0.9s
ATPI Pietralunga - 0.14 320 ⇑P Pg 01 52 24.1 +0.5
ATPI S Sg 01 52 26.9 +1.1
ATPI AML AML
comp=E,4305µm,0.8s
ATPI AML AML
comp=N,4695µm,0.3s
ATPI AML AML
comp=N,4700µm,0.3s
ATCC AVT- Casa Cast 0.18 152 P Pg 01 52 25.0 +0.8
ATCC S Sg 01 52 28.8 +2.1
ATCC AML AML
comp=E,4550µm,0.5s
ATCC AML AML
comp=N,4730µm,1.1s
ATCC AML AML
comp=N,4735µm,1.1s
FOSV Fossato di Vic 0.18 105 P Pg 01 52 24.8 +0.5
FOSV S Sg 01 52 28.1 +1.4
FOSV AML AML
comp=N,1480µm,0.6s
FOSV AML AML
comp=E,1280µm,0.4s
ATMI Monte Miggiano 0.19 268 ⇑P Pg 01 52 25.1 +0.6
ATMI S Sg 01 52 28.7 +1.6
ATMI AML AML
comp=N,4720µm,0.3s
ATMI AML AML
comp=E,4000µm,0.7s
ATMI AML AML
comp=N,4715µm,0.3s
ATMI AML AML
comp=E,3995µm,0.7s
ATTE AVT- Monte Tez 0.19 221 P Pg 01 52 25.0 +0.5
ATTE S Sg 01 52 28.4 +1.2
ATTE AML AML
comp=E,2940µm,1.0s
ATTE AML AML
comp=N,1640µm,0.3s
PIEI Pieia 0.19 2 ⇑P Pg 01 52 25.1 +0.6
PIEI S Sg 01 52 28.9 +1.7
PIEI AML AML
comp=N,6005µm,0.2s
PIEI AML AML
comp=E,9225µm,0.2s
SSFR Montelago di S 0.21 63 ⇑P Pg 01 52 25.4 +0.6
SSFR S Sg 01 52 29.3 +1.6
SSFR AML AML
comp=N,4790µm,0.3s
SSFR AML AML
comp=E,8365µm,0.3s
SSFR AML AML
comp=N,4040µm,0.3s
SSFR AML AML
comp=E,8845µm,0.3s
SSFR AML AML
comp=N,4795µm,0.3s
FRON Frontone 0.23 40 P Pg 01 52 25.7 +0.6
FRON S Sg 01 52 29.7 +1.5
FRON AML AML
comp=E,1985µm,0.3s
FRON AML AML
comp=N,3115µm,0.5s
CDCA Citt' di Caste 0.24 299 P Pg 01 52 26.0 +0.6
CDCA S Sg 01 52 30.3 +1.7
CDCA AML AML
comp=E,4355µm,0.4s
CDCA AML AML
comp=N,8455µm,1.6s
CDCA AML AML
comp=E,2035µm,0.3s
CDCA AML AML
comp=N,2675µm,0.8s
CDCA AML AML
comp=N,2680µm,0.8s
CDCA AML AML
comp=E,2034µm,0.3s
CDCA AML AML
comp=N,8455µm,1.6s
CDCA AML AML
comp=E,4350µm,0.4s
BADI Badiali 0.27 309 P Pg 01 52 26.5 +0.6
BADI S Sb 01 52 31.3 -1.1
BADI AML AML
comp=N,4705µm,0.9s
BADI AML AML
comp=N,4710µm,0.9s
BADI AML AML
comp=E,6340µm,1.6s
NARO Abbazia di Nar 0.27 8 ⇑P Pg 01 52 26.4 +0.5
NARO S Sb 01 52 31.1 -1.4
NARO AML AML
comp=E,1174µm,0.5s
NARO AML AML
comp=N,1055µm,1.3s
ASSB Assisi San Ben 0.32 162 ⇓P Pg 01 52 27.2 +0.4
ASSB S Sb 01 52 32.6 -1.1
ASSB AML AML
comp=E,912µm,1.1s
ASSB AML AML
comp=N,868µm,1.5s
ARVD Arcevia 0.34 63 ⇑P Pg 01 52 27.8 +0.6
ARVD S Sb 01 52 33.7 -0.8
ARVD AML AML
comp=E,897µm,0.6s
ARVD AML AML
comp=N,558µm,1.3s
PE3 Peglio 0.35 356 P Pb 01 52 28.6 -0.6
PE3 S Sb 01 52 34.8 -0.1
PE3 AML AML
comp=N,2135µm,0.3s
PE3 AML AML
comp=E,1630µm,0.4s
SSP9 Sansepolcro 0.37 309 ⇑P Pg 01 52 28.5 +0.7
SSP9 S Sb 01 52 34.9 -0.5
PARC Parchiule 0.37 326 ⇓P Pg 01 52 28.6 +0.8
PARC S Sb 01 52 34.9 -0.5
PARC AML AML
comp=E,1235µm,0.3s
PARC AML AML
comp=N,1180µm,0.2s
FSSB Fossombrone 0.40 27 P Pg 01 52 28.8 +0.5
FSSB S Sb 01 52 35.8 -0.4
FSSB AML AML
comp=E,1470µm,0.4s
FSSB AML AML
comp=N,1845µm,0.3s
EL6 Elcito 0.42 92 AML AML
comp=E,1097µm,0.4s
EL6 AML AML
comp=N,1605µm,0.5s
CESI CESI - Serrava 0.44 140 ⇑P Pg 01 52 29.6 +0.6
CESI S Sb 01 52 37.0 -0.3
CESI AML AML
comp=E,146µm,0.4s
CESI AML AML
comp=E,146µm,0.4s
CESI AML AML
comp=N,238µm,0.4s
CPGN Carpegna, Ital 0.48 342 P Pb 01 52 32.0 +0.6
CING Cingoli 0.49 86 ⇑P Pg 01 52 30.5 +0.5
CING S Sb 01 52 38.7 -0.1
CING AML AML
comp=N,413µm,0.3s
CING AML AML
comp=E,397µm,0.5s
CRE Caprese Michel 0.50 304 P Pg 01 52 30.6 +0.3
CRE S Sb 01 52 38.1 -1.2
CRE AML AML
comp=E,502µm,1.4s
CRE AML AML
comp=N,556µm,1.1s
CRE AML AML
comp=N,556µm,1.1s
FDMO Fiordimonte 0.51 126 ⇑P Pg 01 52 30.7 +0.3
FDMO S Sb 01 52 39.1 -0.3
FDMO AML AML
comp=N,319µm,0.5s
FDMO AML AML
comp=E,290µm,0.2s
MGAB Montegabbione 0.53 215 ⇑P Pg 01 52 31.3 +0.5
MGAB AML AML
comp=E,1380µm,1.1s
MGAB AML AML
comp=N,1565µm,0.4s
MGAB AML AML
comp=N,1820µm,0.4s
MGAB AML AML
comp=E,1385µm,1.1s
MGAB AML AML
comp=E,1370µm,1.1s
MGAB AML AML
comp=N,1815µm,0.4s
MGAB AML AML
comp=N,1570µm,0.4s
MOMA Monte Martano 0.54 177 P Pg 01 52 31.6 +0.6
SACS San Casciano d 0.67 223 P Pb 01 52 34.1 -0.5
SACS AML AML
comp=E,364µm,0.3s
SACS AML AML
comp=N,425µm,1.3s
SACS AML AML
comp=E,339µm,0.3s
SACS AML AML
comp=N,444µm,1.6s
ASQU Asqua 0.70 311 ⇓P Pb 01 52 34.6 -0.5
ASQU AML AML
comp=N,421µm,0.5s
ASQU AML AML
comp=E,240µm,0.3s
ARRO Arrone 0.78 167 P Pn 01 52 37.2 -0.7
ARRO AML AML
comp=E,144µm,0.6s
ARRO AML AML
comp=N,162µm,1.5s
ARRO AML AML
comp=E,145µm,0.6s
ARRO AML AML
comp=N,160µm,1.5s
LNSS Leonessa 0.83 153 ⇑P Pg 01 52 36.5 0.0
LNSS AML AML
comp=E,256µm,0.6s
LNSS AML AML
comp=N,358µm,0.5s
LNSS AML AML
comp=N,358µm,0.5s
LNSS AML AML
comp=E,255µm,0.6s
GUMA Gualdo di Mace 1.07 105 P Pg 01 52 33.8 -7.2
GUMA AML AML
comp=N,634µm,1.0s
GUMA AML AML
comp=E,810µm,0.6s
GUMA AML AML
comp=N,634µm,1.0s
GUMA AML AML
comp=E,756µm,0.7s
GUMA AML AML
comp=N,609µm,0.7s
GUMA AML AML
comp=E,810µm,0.6s
SARO Sassorosso 1.75 299 ⇓P Pg 01 52 54.1 -0.1
DUGI Dugi Otok 1.95 70 ePn Pn 01 52 54.5 +0.6
DUGI Sn Sb 01 53 21.2 +0.4
NVLJ Novalja 2.09 53 ePn Pn 01 52 56.8 +1.0
NVLJ Sn Sn 01 53 22.9 +0.9
ZIRJ Zirje 2.29 81 ePn Pn 01 52 59.4 +0.7
ZIRJ Sn Sb 01 53 29.3 -1.3
MORI Morici 2.37 76 ePn Pn 01 53 01.4 +1.7
MORI Sn Sb 01 53 31.6 -1.3
KIJV Kijevo 2.89 75 i Pn Pn 01 53 09.2 +2.3
KIJV Sn Sn 01 53 44.5 +2.6
MAKA Makarska 3.28 89 ePn Pn 01 53 14.3 +2.1
MAKA Sn Sn 01 53 54.4 +3.0
ABTA Abfaltersbach 3.41 360 ePn Pn 01 53 16.5 +2.4
comp=E,1.9nm,0.5s
OBKA Obir 3.48 24 Pn Pn 01 53 18.6 +3.6
comp=E,0.4nm,0.3s
SOKA Soboth 3.78 27 Pg Pg 01 53 31.8 -1.1
comp=E,0.4nm,0.3s
KBA Koelnbreinsper 3.78 9 ePn Pn 01 53 21.6 +2.3
comp=E,0.5nm,0.2s
KBA eSn Sn 01 54 07.3 +3.2
comp=E,1.7nm,0.3s
STON Ston 3.82 95 ePn Pn 01 53 22.7 +3.1
STON Sn Sn 01 54 06.9 +2.2
FETA Feichten 3.89 342 Pn Pn 01 53 24.8 +4.0
comp=E,0.8nm,0.5s
WTTA Wattenberg 3.97 351 ePn Pn 01 53 24.3 +2.3
comp=E,0.4nm,0.2s
SQTA Sankt Quirin 3.99 347 ePn Pb 01 53 26.7 -4.4
comp=E,0.8nm,0.2s
SQTA Sn Sb 01 54 14.5 -5.1
comp=E,3.0nm,0.4s
WATA Walderalm 4.05 351 ePn Pn 01 53 27.0 +4.0
comp=E,0.9nm,0.2s
MOTA Moosalm 4.13 346 Pn Pb 01 53 29.3 -4.2
comp=E,0.7nm,0.3s
MOTA Sn Sn 01 54 17.9 +5.4
comp=E,0.9nm,0.3s
RETA Reutte 4.33 344 ePn Pn 01 53 30.1 +3.4
comp=E,0.7nm,0.2s
MOA Molln 4.67 15 ePn Pn 01 53 33.5 +2.1
comp=E,0.7nm,0.3s

ROM 09 01:52:51.8±0.1, 43.345N±0.004×12.527E±0.005, h5km±1km, Md1.1/4, 2C-2D, Error ellipse: s-maj=0.4km s-min=0.0km az=51.0, Central Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ATFO Monte Foce - G 0.04 57 ⇑P Pg 01 52 53.1 0.0
ATFO S Sg 01 52 54.0 0.0
ATFO END
MURB Monte Urbino 0.08 181 ⇑P Pg 01 52 53.8 +0.1
MURB S Sg 01 52 55.5 +0.5
MURB END
ATVO AVT- Monte Val 0.10 293 P Pg 01 52 54.0 +0.1
ATVO S Sg 01 52 55.9 +0.6
ATVO END
ATPI Pietralunga - 0.14 319 P Pg 01 52 55.0 +0.3
ATPI S Sg 01 52 57.7 +1.1
FOSV Fossato di Vic 0.18 106 ⇓P Pg 01 52 55.8 +0.4
FOSV S Sg 01 52 59.2 +1.5
FOSV END
ATCC AVT- Casa Cast 0.18 153 P Pg 01 52 55.8 +0.3
ATCC S Sg 01 52 59.5 +1.7
PIEI Pieia 0.19 2 ⇓P Pg 01 52 56.2 +0.5
PIEI S Sg 01 52 59.8 +1.6
SSFR Montelago di S 0.21 64 P Pg 01 52 56.2 +0.2
SSFR S Sg 01 52 60.0 +1.3
MCIV Monte Civitell 0.84 228 S Sb 01 53 21.0 +0.4

MDD 09 01:58:55.8±0.4, 36.97N×3.95W, h0km, mbLg2.6/18, Error ellipse: s-maj=3.9km s-min=1.9km az=0.0, PRXIMO
SFS 09 01:58:55.0, 36.90N×3.90W, ML2.3, ALHAMA DE GRANADA
INMG 09 01:58:55.8±1.4, 36.95N×3.95W, h0km±3km, ML2.3, Error ellipse: s-maj=1.9km s-min=1.6km az=157.0
CNRM 09 01:59:00.6±1.4, 36.79N×3.58W, h82km±36km, Error ellipse: s-maj=9.3km s-min=5.0km az=56.0

ISC 09 01:58:55.7±1.1, 36.94N±0.03×3.87W±0.02, h9km±9km, n44, σ1§76/64, 1D, Strait of Gibraltar

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
EGOR Sierra Gorda, 0.25 311 ⇓Pg Pg 01 58 59.3 -1.6
62nm,0.1s,SNR=18
EGOR Lg Lg 01 59 02.3
820nm,0.1s,SNR=7.9
EQUE Quentar 0.43 53 Pg Pg 01 59 04.2 0.0
16nm,0.1s,SNR=34
EQUE Lg Lg 01 59 10.9
323nm,0.1s,SNR=5.0
EMAL Malaga-Limoner 0.48 248 eP Pg 01 59 04.0 -1.1
EMAL eS Sg 01 59 10.1 -1.3
EBER Berja 0.79 93 Pg Pn 01 59 12.0 -1.0
14nm,0.2s,SNR=80
EBER Lg Lg 01 59 23.0
112nm,0.3s
EMIJ Mijas 0.82 243 Pg Pg 01 59 09.6 -1.8
2.2nm,0.1s,SNR=119
EMIJ Lg Lg 01 59 19.7
127nm,0.3s,SNR=18
GORA Gorafe 0.85 51 Pg Pb 01 59 12.5 -0.2
9.9nm,0.1s,SNR=4.0
GORA Lg Lg 01 59 24.7
31nm,0.1s,SNR=7.9
EQES Quesada 1.07 36 Pg Pn 01 59 16.5 -0.4
4.0nm,0.1s,SNR=80
EQES Lg Lg 01 59 31.2
44nm,0.2s
LIJA Lijar 1.23 269 eP Pg 01 59 20.7 +1.5
LIJA eS Sn 01 59 40.8 +5.0
ENIJ Nijar 1.33 88 Pg Pg 01 59 21.3 +0.1
1.5nm,0.1s,SNR=7.9
ENIJ Lg Lg 01 59 39.7
20nm,0.3s,SNR=7.9
EADA Adamuz 1.34 336 Pg Pn 01 59 19.8 -0.9
4.9nm,0.1s,SNR=67
EADA Lg Lg 01 59 36.6
34nm,0.1s,SNR=11
HORN Hornachuelos 1.43 310 P Pg 01 59 28.1 +5.1
HORN S Sg 01 59 48.6 +7.1
SESP Santiago Espad 1.58 42 Pg Pb 01 59 24.7 -0.3
20nm,0.2s,SNR=7.9
SESP Lg Lg 01 59 47.4

	40nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**1.58**	**42**	P	**Pg**	**01 59 25.8**	**-0.2**
SESP				S	**Sg**	**01 59 48.6**	**+2.2**
ESPR	**Espera**	**1.59**	**268**	Lg	Lg	01 59 43.9	
	SNR=7.9						
ECAB	**El Cabril**	**1.67**	**313**	Pg	**Pn**	**01 59 24.0**	**-1.1**
	0.4nm,0.2s,SNR=25						
ECAB				Lg	Lg	01 59 46.8	
	3.3nm,0.1s,SNR=11						
TLOR	**Lorca, Murcia**	**1.88**	**67**	Lg	Lg	01 59 56.9	
	SNR=7.9						
EMUR	**La Murta**	**2.28**	**66**	Pn	**Pb**	**01 59 35.5**	**-1.5**
	1.9nm,0.2s,SNR=10						
EMUR				Lg	Lg	02 00 06.4	
	27nm,0.6s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.38**	**291**	Pn	**Pn**	**01 59 33.5**	**-1.3**
	1.1nm,0.2s,SNR=11						
EMIN				Sn	**Sn**	**02 00 02.1**	**-2.0**
	1.1nm,0.1s,SNR=7.9						
EMIN				Lg	Lg	02 00 10.1	
	5.3nm,0.3s						
ETOB	**Tobarra**	**2.50**	**47**	Pn	**Pn**	**01 59 37.8**	**+1.2**
	0.5nm,0.2s,SNR=9.7						
ETOB				Pg	**Pg**	**01 59 42.1**	**-1.5**
	0.9nm,0.2s,SNR=7.9						
ETOB				Sn	**Sn**	**02 00 07.2**	**-0.1**
	0.8nm,0.2s						
ETOB				Lg	Lg	02 00 16.7	
	15nm,0.4s,SNR=6.4						
PAB	**San Pablo**	**2.62**	**352**	Pn	**Pn**	**01 59 38.7**	**+0.5**
	1.0nm,0.3s,SNR=7.9						
PAB				Sn	**Sn**	**02 00 07.2**	**-3.1**
	0.2nm,0.2s,SNR=7.9						
PAB				Lg	Lg	02 00 17.2	
	7.3nm,0.4s,SNR=7.9						
ESDC	**Sonseca Array**	**2.73**	**359**	Pn	**Pn**	**01 59 39.7**	**+0.1**
	0.4nm,0.2s,baz=181,slow=12,SNR=8.2						
ESDC				Pg	**Pg**	**01 59 47.6**	**-0.4**
	0.7nm,0.3s,baz=175,slow=17,SNR=16						
ESDC				Sn	**Sn**	**02 00 10.2**	**-2.6**
	0.6nm,0.2s,baz=199,slow=16,SNR=3.7						
ESDC				Lg	Lg	02 00 22.2	
	2.5nm,0.3s,baz=178,slow=28,SNR=9.1						
JBK	**JBK**	**2.81**	**157**	P	**Pn**	**01 59 42.0**	**+1.1**
JBK				S	**Sn**	**02 00 13.8**	**-1.3**
EBAD	**Badajoz**	**3.08**	**307**	Pn	**Pn**	**01 59 44.6**	**+0.3**
	0.7nm,0.3s,SNR=7.9						
EBAD				Sn	**Sn**	**02 00 18.4**	**-2.9**
	4.0nm,0.2s,SNR=7.9						
EBAD				Lg	Lg	02 00 30.9	
	7.7nm,0.3s,SNR=5.0						
PVAQ	**Vaqueiros**	**3.11**	**280**	ePn	**Pn**	**01 59 43.6**	**-1.2**
PVAQ				eSn	**Sn**	**02 00 20.6**	**-1.4**
PVAQ				A	A	02 00 35.4	
	6.7nm,0.7s						
PVAQ	**Vaqueiros**	**3.11**	**280**	Pn	**Pn**	**01 59 43.6**	**-1.2**
PVAQ				Sn	**Sn**	**02 00 20.6**	**-1.4**
	6.7nm,0.7s						
PVAQ	**Vaqueiros**	**3.11**	**280**	P	**Pb**	**01 59 51.3**	**+0.3**
PVAQ				S	**Sb**	**02 00 31.7**	**+2.7**
EBEN2	**Beniarda presa**	**3.39**	**58**	Pn	**Pn**	**01 59 50.4**	**+1.7**
	2.4nm,0.3s,SNR=7.9						
EBEN2				Sn	**Sn**	**02 00 29.9**	**+0.9**
	0.4nm,0.1s,SNR=7.9						
UCM	**Universidad Co**	**3.40**	**8**	eP	**Pg**	**01 59 59.3**	**-1.4**
UCM				eS	**Sg**	**02 00 41.4**	**-3.3**
PESTR	**Estremoz**	**3.51**	**304**	ePn	**Pn**	**01 59 50.7**	**+0.3**
PESTR				eSn	**Sn**	**02 00 30.5**	**-1.6**
PESTR				A	A	02 00 51.8	
	5.7nm,0.6s						
PESTR	**Estremoz**	**3.51**	**304**	P	**Pb**	**01 59 57.3**	**-0.7**
PESTR				S	**Sb**	**02 00 41.2**	**+0.5**
EVO	**Evora**	**3.65**	**297**	ePn	**Pn**	**01 59 51.9**	**-0.3**
EVO	**Evora**	**3.65**	**297**	Pn	**Pn**	**01 59 51.9**	**-0.3**
GUD	**Guadarrama**	**3.70**	**357**	Pg	**Pg**	**02 00 04.7**	**-1.9**
	0.4nm,0.2s,SNR=7.9						
GUD				Lg	Lg	02 00 49.9	
	1.6nm,0.3s,SNR=5.5						
PMRV	**Marv??o**	**3.72**	**313**	ePn	**Pn**	**01 59 53.9**	**+0.6**
PMRV				A	A	02 00 58.1	
	5.4nm,0.7s						
PMRV	**Marv??o**	**3.72**	**313**	Pn	**Pn**	**01 59 53.9**	**+0.6**
PNCL	**Nicolau / Gran**	**3.88**	**289**	eSn	**Sn**	**02 00 39.7**	**-1.4**
PNCL	**Nicolau / Gran**	**3.88**	**289**	Sn	**Sn**	**02 00 39.7**	**-1.4**
PMTG	**Montargil**	**4.04**	**303**	eSn	**Sn**	**02 00 46.0**	**+1.0**
PMTG				A	A	02 01 20.6	
	5.3nm,0.8s						
PMTG	**Montargil**	**4.04**	**303**	Sn	**Sn**	**02 00 46.0**	**+1.0**
	5.3nm,0.8s						
PCBR	**Castelo Branco**	**4.05**	**317**	ePn	**Pn**	**01 59 58.1**	**+0.4**
PCBR	**Castelo Branco**	**4.05**	**317**	Pn	**Pn**	**01 59 58.1**	**+0.4**
ETOR	**Torete**	**4.12**	**20**	Pn	**Pn**	**01 59 59.8**	**+1.0**
	2.3nm,0.3s,SNR=7.9						
ETOR				Pg	**Pb**	**02 00 09.9**	**+1.5**
	1.7nm,0.2s,SNR=7.9						
ETOR				Sn	**Sn**	**02 00 45.7**	**-1.5**
	2.5nm,0.2s,SNR=7.9						
ETOR				Lg	Lg	02 01 07.0	
	21nm,0.3s,SNR=7.9						
MD31	**MD31**	**4.13**	**190**	P	**Pn**	**01 59 59.0**	**0.0**
MD31				S	**Sn**	**02 00 46.9**	**-0.5**
MDT	**Midelt**	**4.16**	**189**	P	**Pn**	**01 59 58.3**	**-1.1**
MDT				S	**Sn**	**02 00 48.0**	**-0.2**

IDC ***09*** *02:16:01.6±0.7, 35.96N×97.35W, h0km, mb3.9/5, mb1 4.1/13, mb1mx3.8/53, mbtmp3.9/13, ML3.9/8, MS3.5/16, Ms1 3.5/16, ms1mx3.4/45, Error ellipse: s-maj=12.2km s-min=9.2km az=142.0*

NEIC ***09*** *02:16:01.5±1.7, 35.94N±0.02×97.27W±0.04, h5km±1km, Error ellipse: s-maj=5.3km s-min=3.3km az=93.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.45; $M_{\theta\theta}$1.67; $M_{\phi\phi}$-1.22; $M_{r\theta}$-0.09; $M_{\theta\phi}$0.91; $M_{\phi r}$0.70; Fault plane solution: $M_0$1.89000×10^{15} NP1: ϕ_s212.25000°, δ73.49000°, λ-158.30000°. NP2: ϕ_s115.80000°, δ69.24000°, λ-17.69000°. Principal axes: T 1.9403, Plg3.0000°, Azm343.0000°; N -0.1048, Plg63.0000°, Azm248.0000°; P -1.8355, Plg27.0000°, Azm75.0000°;*

TUL ***09*** *02:16:02±1.8, 35.89N±0.04×97.29W±0.04, h5km±1km, ML4.1, mb4.2/22(NEIC), Mwr4.1/50(NEIC) Error ellipse: s-maj=7.1km s-min=4.8km az=166.0*

ANF ***09*** *02:16:02.0±0.3, 35.87N×97.27W, h0km, ML5.2/12, Error ellipse: s-maj=5.6km s-min=3.4km az=170.0*

ISC 09 02:16:01.5±0.5**, 36.02N**±0.03×**97.29W**±0.03**, h10**km**, n238,** σ**1**s**60**/249**, MS3.6**/8**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.38**	**190**		**Pg**	**02 16 07.3**	**-1.6**
OK009	**Oakdale Elemen**	**0.45**	**194**		**Pg**	**02 16 08.9**	**-1.4**
OK001	**Jones High Sch**	**0.46**	**180**	Pg	**Pg**	**02 16 08.8**	**-1.7**
OKCFA	**Oklahoma City**	**0.62**	**192**	Pg	**Pg**	**02 16 11.0**	**-2.5**
OKCSW	**OKLAHOMA CITY**	**0.63**	**191**	Pg	**Pg**	**02 16 11.6**	**-2.1**
FNO	**Franklin**	**0.77**	**187**	Pg	**Pg**	**02 16 14.3**	**-2.0**
W35A	**Tecumseh**	**0.93**	**158**	Pg	**Pg**	**02 16 17.0**	**-2.5**
TUL1	**Leonard**	**1.22**	**95**		**Pn**	**02 16 24.4**	**-0.2**
TUL1	**Leonard**	**1.22**	**95**	P	**Pn**	**02 16 24.5**	**-0.2**
	baz=270						
TUL1				S	**Sn**	**02 16 41.7**	**+0.5**
	baz=270						
U32A	**Winter Ranch,**	**1.43**	**285**		**Pg**	**02 16 28.8**	**-0.1**
WMOK	**Wichita Mounta**	**1.77**	**224**		**Pn**	**02 16 32.0**	**-0.1**
WMOK				Sn	**Sn**	**02 16 54.1**	**-0.6**
WMOK	**Wichita Mounta**	**1.77**	**224**	P	**Pn**	**02 16 32.5**	**+0.3**
	baz=46						
WMOK				S	**Sn**	**02 16 54.7**	**0.0**
	baz=46						
HHAR	**Hobbs**	**2.73**	**84**		**Pn**	**02 16 47.0**	**+1.6**
HHAR				Sg	**Sg**	**02 17 27.4**	**-1.7**
W39A	**Magazine**	**2.98**	**105**		**Pn**	**02 16 50.0**	**+1.3**
W39A					LR	02 17 36.3	
W39A	**Magazine**	**2.98**	**105**	P	**Pn**	**02 16 50.2**	**+1.4**
	baz=285						
W39A				S	**Sn**	**02 17 26.1**	**+1.6**
	baz=285						
KSU1	**Kansas State U**	**3.12**	**10**	P	**Pb**	**02 16 54.5**	**-2.6**
	baz=190						
KSU1				S	**Sb**	**02 17 33.6**	**-1.6**
	baz=190						
MIAR	**Mount Ida**	**3.38**	**115**		**Pn**	**02 16 55.0**	**+0.7**
MIAR	**Mount Ida**	**3.38**	**115**	P	**Pn**	**02 16 55.6**	**+1.3**
	baz=295						
MIAR				S	**Sn**	**02 17 35.3**	**+0.9**
	baz=295						
CBKS	**Cedar Bluff**	**3.40**	**326**		**Pn**	**02 16 58.2**	**+3.5**
CBKS	**Cedar Bluff**	**3.40**	**326**	P	**Pb**	**02 16 58.4**	**-3.5**
	baz=146						
CBKS				S	**Sb**	**02 17 40.6**	**-2.6**
	baz=146						
U40A	**Yellville**	**3.61**	**83**		**Pn**	**02 16 58.2**	**+0.8**
U40A				Sg	**Sg**	**02 17 54.4**	**-3.0**
U40A	**Yellville**	**3.61**	**83**	P	**Pn**	**02 16 58.9**	**+1.4**
	baz=264						
U40A				S	**Sn**	**02 17 43.3**	**+3.2**
	baz=264						
AMTX	**Amarillo**	**3.76**	**254**		**Pn**	**02 17 01.6**	**+2.0**
AMTX	**Amarillo**	**3.76**	**254**	P	**Pn**	**02 17 01.6**	**+2.0**
	baz=73						
ABTX	**Abilene, Hawle**	**3.91**	**211**		**Pn**	**02 17 01.1**	**-0.6**
ABTX					LR	02 18 01.4	
ABTX	**Abilene, Hawle**	**3.91**	**211**	P	**Pn**	**02 17 01.3**	**-0.3**
	baz=30						
X40A	**Basin Creek Fa**	**3.96**	**111**		**Pn**	**02 17 03.2**	**+0.9**
X40A					LR	02 18 05.8	
X40A	**Basin Creek Fa**	**3.96**	**111**	P	**Pn**	**02 17 04.0**	**+1.7**
	baz=292						
WHTX	**Lake Whitney,**	**4.02**	**182**		**Pn**	**02 17 02.6**	**-0.6**
WHTX				Sg	**Sb**	**02 18 03.5**	**+2.4**
WHTX	**Lake Whitney,**	**4.02**	**182**	P	**Pn**	**02 17 02.6**	**-0.6**
	baz=1.9						
WHAR	**Wooly Hollow**	**4.14**	**99**		**Pn**	**02 17 06.1**	**+1.3**
W41B	**Gary Mavity, V**	**4.20**	**100**	Pn	**Pn**	**02 17 06.6**	**+1.0**
W41B	**Gary Mavity, V**	**4.20**	**100**	P	**Pn**	**02 17 06.8**	**+1.2**
	baz=281						
MGMO	**Mountain Grove**	**4.20**	**73**		**Pn**	**02 17 07.5**	**+1.9**
UALR	**University of**	**4.23**	**106**		**Pn**	**02 17 06.9**	**+0.9**
Z41A	**Richland Creek**	**4.62**	**125**		**Pn**	**02 17 11.2**	**-0.1**
NATX	**Nacogdoches**	**4.78**	**152**		**Pn**	**02 17 12.7**	**-0.9**
MSTX	**Muleshoe**	**4.94**	**247**		**Pn**	**02 17 16.4**	**+0.5**
LCAR	**Lake Charles**	**4.97**	**88**		**Pn**	**02 17 16.4**	**+0.2**
LCAR				Sn	**Sn**	**02 18 16.8**	**+3.0**
CCAR	**Cane Creek**	**5.00**	**113**		**Pn**	**02 17 17.0**	**+0.5**
KSCO	**Kaye Shedlock'**	**5.18**	**307**		**Pn**	**02 17 21.3**	**+2.1**
435B	**Jarrell**	**5.23**	**183**		**Pn**	**02 17 18.9**	**-0.9**
435B					**Pb**	**02 17 31.9**	**-1.1**
435B					**Pg**	**02 17 38.0**	**-3.7**
CCM	**Cathedral Cave**	**5.25**	**65**		**Pn**	**02 17 20.4**	**+0.5**
CCM				Sn	**Sn**	**02 18 22.5**	**+2.0**
BGNE	**Belgrade**	**5.42**	**353**		**Pn**	**02 17 24.6**	**+2.2**
X43A	**Marvell**	**5.46**	**104**		**Pn**	**02 17 23.3**	**+0.5**
PBMO	**Poplar Bluff**	**5.59**	**80**		**Pn**	**02 17 25.8**	**+1.2**
T25A	**Trinidad**	**5.83**	**283**		**Pn**	**02 17 30.3**	**+2.0**
143A	**Socs Landing,**	**5.89**	**123**	Pn	**Pn**	**02 17 28.8**	**0.0**
GNAR	**Gosnell**	**5.90**	**88**		**Pn**	**02 17 30.1**	**+1.2**
JCT	**Junction City**	**5.91**	**202**		**Pn**	**02 17 28.3**	**-0.9**
MET	**Memphis--Engin**	**6.07**	**96**	Pn	**Pn**	**02 17 32.2**	**+1.0**
MET					LR	02 19 12.6	
OGNE	**Ogallala**	**6.16**	**324**		**Pn**	**02 17 35.5**	**+2.9**
HKT	**Hockley**	**6.18**	**168**		**Pn**	**02 17 31.9**	**-0.9**
SLM	**Saint Louis**	**6.20**	**63**		**Pn**	**02 17 34.5**	**+1.5**
SLM					**Sn**	**02 18 45.8**	**+1.9**
SLM				Sg	**Sg**	**02 19 16.2**	**-4.3**
342A	**Flagon Creek P**	**6.21**	**137**	Pn	**Pn**	**02 17 32.7**	**-0.6**
441A	**DeRidder**	**6.28**	**146**	Pn	**Pn**	**02 17 33.3**	**-0.9**
OXF	**Oxford**	**6.62**	**101**		**Pn**	**02 17 39.0**	**+0.1**
OXF					LR	02 19 29.1	
S44A	**Carbondale**	**6.66**	**73**		**Pn**	**02 17 40.0**	**+0.6**
S44A				Sg	**Sg**	**02 19 29.9**	**-5.2**
SCIA	**State Center**	**6.68**	**27**		**Pn**	**02 17 41.1**	**+1.4**
VBMS	**Vicksburg**	**6.78**	**122**	Pn	**Pn**	**02 17 41.1**	**+0.1**
SDCO	**Great Sand Dun**	**6.80**	**287**		**Pn**	**02 17 44.6**	**+3.0**
SDCO				Sg	**Sg**	**02 19 35.1**	**-4.7**
N41A	**Harden Midland**	**6.89**	**45**		**Pn**	**02 17 45.2**	**+2.7**
N41A				Pg	**Pg**	**02 18 10.5**	**-2.8**
Q24A	**Divide**	**6.90**	**298**		**Pn**	**02 17 45.1**	**+2.2**
Q24A				Pg	**Pg**	**02 18 10.5**	**-3.2**
344A	**Westbrook Farm**	**7.12**	**128**	Pn	**Pn**	**02 17 44.3**	**-1.3**
P43A	**Skaggs, Pawnee**	**7.13**	**57**		**Pn**	**02 17 47.0**	**+1.2**
ANMO	**Albuquerque**	**7.55**	**264**	Pn	**Pn**	**02 17 52.5**	**+0.7**
	0.4nm,0.3s,baz=87,slow=14,SNR=10						
ANMO				Pg	Pg	02 18 19.6	-6.5
	2.3nm,0.3s,baz=84,slow=17,SNR=19						
ANMO				Lg	Lg	02 19 55.2	
	5.5nm,0.3s,baz=351,slow=17,SNR=3.2						
ANMO				LR	LR	02 20 56.8	
	comp=Z,495nm,18.3s,baz=82,slow=39						
ANMO	**Albuquerque**	**7.55**	**264**		**Pn**	**02 17 52.1**	**+0.2**
ANMO				Pg	**Pg**	**02 18 23.6**	**-2.5**
ISCO	**Idaho Springs**	**7.58**	**302**		**Pn**	**02 17 53.8**	**+1.4**
ISCO				Pg	**Pg**	**02 18 23.9**	**-2.7**
PLAL	**Pickwick Lake**	**7.59**	**95**		**Pn**	**02 17 52.8**	**+0.7**
L40A	**Anamosa**	**7.66**	**36**		**Pn**	**02 17 54.8**	**+1.7**
WVT	**Waverly**	**7.66**	**86**		**Pn**	**02 17 53.7**	**+0.5**
ECSD	**EROS Data Cent**	**7.72**	**4**		**Pn**	**02 17 55.8**	**+1.9**
HDIL	**Hopedale**	**7.75**	**52**		**Pn**	**02 17 55.8**	**+1.4**
OLIL	**Olney**	**7.80**	**67**		**Pn**	**02 17 55.9**	**+0.8**
S22A	**4UR Ranch, Cre**	**7.83**	**286**		**Pn**	**02 17 57.4**	**+1.6**
833A	**Chaparral WMA,**	**7.88**	**194**		**Pn**	**02 17 54.4**	**-1.8**
USIN	**University of**	**7.94**	**73**		**Pn**	**02 17 58.6**	**+1.6**
MNTX	**Cornudas Mount**	**7.99**	**240**		**Pn**	**02 17 58.1**	**+0.5**
346A	**Big Creek Wild**	**7.99**	**123**	Pn	**Pn**	**02 17 56.9**	**-0.8**
O44A	**Mansfield**	**8.09**	**57**		**Pn**	**02 18 00.5**	**+1.5**
Y22D	**IRIS PASSCAL I**	**8.13**	**259**	Pn	**Pn**	**02 18 00.3**	**+0.6**
Y22D				Pg	Pg	02 18 30.7	-6.4
T47A	**Sharon Grove**	**8.26**	**80**		**Pn**	**02 18 02.2**	**+0.9**
PHWY	**Pilot Hill**	**8.28**	**312**		**Pn**	**02 18 03.6**	**+1.7**
N23A	**Red Feather La**	**8.35**	**308**		**Pn**	**02 18 05.4**	**+2.6**
L42A	**Oliver, Polo**	**8.42**	**43**		**Pn**	**02 18 05.5**	**+2.0**
V48A	**Smith Brothers**	**8.50**	**89**	Pn	**Pn**	**02 18 06.0**	**+1.3**
SUSD	**Miller**	**8.51**	**352**		**Pn**	**02 18 07.6**	**+2.9**
X48A	**Hartselle**	**8.53**	**98**	Pn	**Pn**	**02 18 06.3**	**+1.3**
TX31	**Lajitas Ar. Si**	**8.56**	**221**		**Pn**	**02 18 04.4**	**-1.2**
TX32	**Lajitas Array**	**8.56**	**221**		**Pn**	**02 18 04.6**	**-1.0**
TXAR	**Lajitas Array**	**8.56**	**221**	Pn	**Pn**	**02 18 04.1**	**-1.5**
	0.7nm,0.3s,baz=44,slow=11,SNR=27						
TXAR				Lg	Lg	02 20 25.7	
	12nm,0.3s,baz=36,slow=28,SNR=9.0						
TXAR	**Lajitas Array**	**8.56**	**221**		**Pn**	**02 18 04.5**	**-1.1**
TXAR				Pg	Pg	02 18 39.6	-5.9
P46A	**Rosedale**	**8.75**	**63**		**Pn**	**02 18 09.3**	**+1.3**
JFWS	**Jewell Farm**	**8.77**	**36**		**Pn**	**02 18 09.6**	**+1.2**
CLTN	**Cedars of Leba**	**8.88**	**86**		**Pn**	**02 18 10.4**	**+0.6**
M44A	**Midewin, Midew**	**9.00**	**51**		**Pn**	**02 18 12.6**	**+1.2**
WCI	**Wyandotte Cave**	**9.06**	**73**		**Pn**	**02 18 13.2**	**+0.9**
MVCO	**Mesa Verde**	**9.09**	**281**	Pn	**Pn**	**02 18 15.0**	**+2.0**
BLO	**Bloomington**	**9.11**	**67**		**Pn**	**02 18 14.5**	**+1.6**
SFIN	**Lafayette**	**9.13**	**58**		**Pn**	**02 18 14.9**	**+1.7**
Y49A	**Blount Mountai**	**9.19**	**100**		**Pn**	**02 18 14.6**	**+0.4**
121A	**Cookes Peak, D**	**9.35**	**251**	Pn	**Pn**	**02 18 17.1**	**+0.5**
I40A	**Norwalk**	**9.38**	**31**	Pn	**Pn**	**02 18 18.7**	**+2.0**
T49A	**Edmonton**	**9.52**	**80**		**Pn**	**02 18 19.5**	**+0.8**
L44A	**Lake County Fo**	**9.53**	**47**		**Pn**	**02 18 20.1**	**+1.3**
O20A	**White River Ci**	**9.56**	**299**	Pn	**Pn**	**02 18 20.7**	**+1.4**
RWWY	**Rawlins**	**9.58**	**309**	Pn	**Pn**	**02 18 21.2**	**+1.5**
RSSD	**Black Hills**	**9.60**	**330**		**Pn**	**02 18 22.8**	**+3.0**
K43A	**Burlington**	**9.62**	**43**		**Pn**	**02 18 21.3**	**+1.3**
FPAL	**Fort Paine**	**9.66**	**95**	Pn	**Pn**	**02 18 21.3**	**+0.6**
K22A	**Casper**	**9.74**	**316**		**Pn**	**02 18 24.2**	**+2.4**
Z50A	**Ashland**	**9.77**	**103**		**Pn**	**02 18 22.1**	**+0.1**
W50A	**Signal Mountai**	**9.79**	**91**	Pn	**Pn**	**02 18 22.3**	**-0.1**
SPMN	**Marine on St.**	**9.80**	**19**	Pn	**Pn**	**02 18 23.8**	**+1.3**
BRAL	**Brewton**	**9.82**	**117**	Pn	**Pn**	**02 18 21.7**	**-1.0**
R49A	**Shelbyville**	**9.94**	**73**		**Pn**	**02 18 25.6**	**+1.3**
250A	**Grady**	**10.00**	**111**		**Pn**	**02 18 24.8**	**-0.4**
P48A	**Milroy**	**10.01**	**66**		**Pn**	**02 18 26.1**	**+0.8**
I42A	**Draeger Farm,**	**10.15**	**37**		**Pn**	**02 18 28.1**	**+0.9**
W18A	**Petrified Fore**	**10.18**	**269**	Pn	**Pn**	**02 18 28.6**	**+0.8**
X51A	**Calhoun**	**10.27**	**95**	Pn	**Pn**	**02 18 29.3**	**+0.4**
N47A	**Urbana**	**10.31**	**58**	Pn	**Pn**	**02 18 29.4**	**0.0**
CPCT	**Cooper Cave**	**10.40**	**89**		**Pn**	**02 18 31.1**	**+0.4**
L46A	**Eue Claire**	**10.44**	**52**		**Pn**	**02 18 32.1**	**+0.9**
V51A	**Loudon**	**10.50**	**87**		**Pn**	**02 18 32.2**	**+0.1**
R50A	**Paris**	**10.59**	**74**		**Pn**	**02 18 33.4**	**+0.1**
RDMU	**Red Mountain**	**10.66**	**299**		**Pn**	**02 18 35.8**	**+1.3**
G40A	**Rib Lake**	**10.69**	**28**		**Pn**	**02 18 36.0**	**+1.4**
152A	**Waverly Hall**	**10.92**	**104**		**Pn**	**02 18 38.0**	**+0.2**
W52A	**Murphy**	**10.93**	**91**	Pn	**Pn**	**02 18 39.0**	**+1.0**
SRU	**San Rafael Swe**	**10.94**	**290**		**Pn**	**02 18 40.6**	**+2.3**
TKL	**Tuckaleechee C**	**10.98**	**88**	Pn	**Pn**	**02 18 39.1**	**+0.4**
	0.3nm,0.3s,baz=248,slow=8.1,SNR=8.2						
TKL				Lg	Lg	02 21 43.8	
	5.6nm,0.3s,baz=191,slow=18,SNR=3.8						
TKL				LR	LR	02 22 14.0	
	comp=Z,82nm,21.1s,baz=274,slow=34						
TKL	**Tuckaleechee C**	**10.98**	**88**	Pn	**Pn**	**02 18 39.6**	**+1.0**
319A	**Douglas**	**11.01**	**249**	Pn	**Pn**	**02 18 38.5**	**-0.6**
O49A	**Covington**	**11.02**	**64**		**Pn**	**02 18 39.4**	**+0.2**
451A	**Vernon**	**11.06**	**116**	Pn	**Pn**	**02 18 39.5**	**-0.2**
S51A	**Beattyville**	**11.10**	**78**		**Pn**	**02 18 41.2**	**+1.0**
D32A	**Dogwood Acres,**	**11.11**	**1**	Pn	**Pn**	**02 18 41.8**	**+1.5**
TZTN	**Tazewell**	**11.11**	**83**	Pn	**Pn**	**02 18 41.3**	**+0.9**
V52A	**Sevierville**	**11.11**	**87**		**Pn**	**02 18 41.0**	**+0.6**
H43A	**Windswept, Lux**	**11.13**	**38**	Pn	**Pn**	**02 18 40.9**	**+0.2**
P17A	**Butcher Ranch,**	**11.19**	**292**	Pn	**Pn**	**02 18 44.2**	**+2.5**
M48A	**Edgerton**	**11.23**	**57**		**Pn**	**02 18 43.5**	**+1.5**
352A	**Blakely**	**11.24**	**110**	Pn	**Pn**	**02 18 41.7**	**-0.5**
N49A	**Columbus Grove**	**11.38**	**61**		**Pn**	**02 18 43.8**	**-0.3**
Q16A	**Castle Valley**	**11.40**	**289**	Pn	**Pn**	**02 18 46.8**	**+2.2**
E38A	**The Farm, Brul**	**11.41**	**20**		**Pn**	**02 18 45.2**	**+0.7**
WUAZ	**Wupatki**	**11.45**	**272**	Pn	**Pn**	**02 18 45.5**	**+0.3**
Q51A	**Peebles**	**11.47**	**71**		**Pn**	**02 18 45.5**	**+0.1**
HPIG		**11.53**	**221**	Pn	**Pn**	**02 18 44.9**	**-1.5**
PD31	**Pinedale Array**	**11.63**	**309**		**Pn**	**02 18 49.0**	**+1.2**
PDAR	**Pinedale Array**	**11.63**	**309**	Pn	**Pn**	**02 18 48.9**	**+1.2**
	0.8nm,0.3s,baz=129,slow=15,SNR=25						
PDAR				Pg		02 19 36.3	
	1.0nm,0.3s,baz=115,slow=15,SNR=3.6						
PDAR				Lg	Lg	02 22 08.7	
	1.0nm,0.3s,baz=113,slow=28,SNR=3.1						
PDAR				LR	LR	02 23 50.8	
	comp=Z,237nm,18.4s,baz=110,slow=40						
PDAR	**Pinedale Array**	**11.63**	**309**		**Pn**	**02 18 48.4**	**+0.7**
I45A	**Fountain**	**11.65**	**43**		**Pn**	**02 18 48.6**	**+0.9**
P51A	**Williamsport**	**11.78**	**69**		**Pn**	**02 18 49.4**	**-0.2**
COWI	**Conover**	**11.79**	**29**		**Pn**	**02 18 49.6**	**-0.1**
F42A	**Maple Grove Fa**	**11.93**	**33**		**Pn**	**02 18 51.3**	**-0.4**
J47A	**Sunmer**	**12.01**	**49**		**Pn**	**02 18 52.5**	**-0.1**
JLU	**Jordanelle**	**12.02**	**297**	Pn	**Pn**	**02 18 54.7**	**+1.6**
ACSO	**Alum Creek Sta**	**12.03**	**65**		**Pn**	**02 18 52.5**	**-0.4**
AAM	**Ann Arbor**	**12.29**	**55**		**Pn**	**02 18 56.5**	**0.0**
M50A	**Fremont**	**12.36**	**60**		**Pn**	**02 18 56.9**	**-0.5**
LAO	**LASA Array**	**12.58**	**331**		**Pn**	**02 19 02.5**	**+2.0**
G45A	**Suttons Bay**	**12.62**	**41**	Pn	**Pn**	**02 19 00.2**	**-0.7**
AHID	**Auburn Hatcher**	**12.62**	**306**	Pn	**Pn**	**02 19 02.7**	**+1.5**
I47A	**Gladwin**	**12.63**	**47**	Pn	**Pn**	**02 19 00.9**	**-0.3**
EYMN	**Ely**	**12.66**	**18**		**Pn**	**02 19 00.8**	**-0.8**
N51A	**Ashland**	**12.67**	**63**		**Pn**	**02 19 01.8**	**+0.1**
J48A	**Bridge Port**	**12.68**	**51**		**Pn**	**02 19 01.6**	**-0.3**
SZCU	**Shurtz Canyon**	**12.76**	**282**	Pn	**Pn**	**02 19 05.0**	**+1.8**
D41A	**Chassel**	**12.81**	**28**	Pn	**Pn**	**02 19 02.6**	**-1.0**
RLMT	**Red Lodge**	**12.85**	**319**		**Pn**	**02 19 05.8**	**+1.4**
E43A	**Lone Tree Farm**	**12.91**	**34**	Pn	**Pn**	**02 19 04.2**	**-0.8**
S54A	**Dingess, Beckl**	**12.91**	**77**		**Pn**	**02 19 04.7**	**-0.4**
FXWY	**Fox Creek**	**13.00**	**310**		**Pn**	**02 19 08.1**	**+1.7**
GLMI	**Grayling**	**13.05**	**44**		**Pn**	**02 19 06.0**	**-0.9**
P53A	**Whipple**	**13.05**	**70**		**Pn**	**02 19 06.3**	**-0.6**
YNE	**Yellowstone No**	**13.18**	**317**		**Pn**	**02 19 10.4**	**+1.5**
K50A	**Casco**	**13.19**	**55**		**Pn**	**02 19 07.9**	**-0.9**
Q54A	**Coxs Mills**	**13.40**	**72**		**Pn**	**02 19 10.9**	**-0.8**
DGMT	**Dagmar**	**13.44**	**340**		**Pn**	**02 19 12.5**	**+0.3**
YMR	**Madison River**	**13.52**	**314**	Pn	**Pn**	**02 19 15.7**	**+2.1**
E44A	**Grand Marais A**	**13.59**	**35**		**Pn**	**02 19 13.7**	**-0.6**
M52A	**Chesterland**	**13.59**	**61**		**Pn**	**02 19 12.4**	**-1.9**
H48A	**Harrisville**	**13.72**	**47**	Pn	**Pn**	**02 19 14.3**	**-1.7**
N53A	**Lisbon**	**13.76**	**65**		**Pn**	**02 19 15.3**	**-1.3**
R55A	**Marlinton**	**13.88**	**76**		**Pn**	**02 19 17.3**	**-1.1**
QLMT	**Earthquake Lak**	**13.89**	**314**	Pn	**Pn**	**02 19 19.2**	**+0.7**
ULM	**Lac du Bonnet**	**14.26**	**4**	Pn	**Pn**	**02 19 21.4**	**-1.9**
	1.5nm,0.3s,baz=180,slow=12,SNR=12						
ULM				Sn	Sn	02 21 52.5	-9.0
	0.7nm,0.3s,baz=116,slow=17,SNR=3.3						
ULM				Lg	Lg	02 23 29.1	
	1.8nm,0.3s,baz=279,slow=19,SNR=3.4						
ULM				LR	LR	02 24 59.7	
	comp=Z,271nm,18.1s,baz=176,slow=38						
N54A	**Moraine State**	**14.42**	**65**		**Pn**	**02 19 24.2**	**-1.4**
ALLY	**Alegheny Colle**	**14.49**	**62**	Pn	**Pn**	**02 19 27.0**	**+0.4**
Q56A	**Snyder Ridge,**	**14.68**	**73**	Pn	**Pn**	**02 19 29.8**	**+0.6**
MCMT	**McKenzie Canyo**	**14.74**	**311**	Pn	**Pn**	**02 19 32.0**	**+1.9**
ERPA	**Erie**	**14.74**	**60**	Pn	**Pn**	**02 19 31.8**	**+1.7**
S57A	**Dark Hollow, R**	**14.78**	**78**		**Pn**	**02 19 29.6**	**-1.0**
M54A	**Oil Creek Stat**	**14.80**	**63**		**Pn**	**02 19 30.5**	**-0.3**
ELK	**Elko**	**14.84**	**294**	Lg	Lg	02 23 50.9	
	0.1nm,0.3s,baz=229,slow=20,SNR=2.2						
LRM	**Limekiln Ridge**	**15.05**	**315**	Pn	**P**	**02 19 42.6**	**+2.8**
EGMT	**Eagleton**	**15.13**	**326**	Pn	**Pn**	**02 19 36.2**	**+1.0**
M55A	**Ridgway**	**15.44**	**64**	Pn	**Pn**	**02 19 37.9**	**-1.5**
M55A				IAmb	IAmb	02 19 46.0	
	comp=Z,19nm,0.9s						
PFO	**Pinyon Flats O**	**15.93**	**267**	LR	LR	02 26 06.1	
	comp=Z,119nm,20.0s,baz=80,slow=38						
SADO	**Sadowa**	**16.33**	**52**	Pn	**Pn**	**02 19 50.7**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=268,slow=16,SNR=2.5						
SADO				Sn	**Sn**	**02 22 44.7**	**-7.2**
	comp=Z,1.2nm,0.3s,baz=272,slow=18,SNR=3.2						
SADO				Lg	Lg	02 24 28.8	
	comp=Z,1.2nm,0.3s,baz=293,slow=15,SNR=7.8						
SADO				LR	LR	02 25 16.4	
	comp=Z,79nm,21.0s,baz=259,slow=34						
SADO	**Sadowa**	**16.33**	**52**	Pn	**Pn**	**02 19 50.6**	**-0.2**
LPIG	**La Paz**	**16.35**	**227**	LR	LR	02 26 14.7	
	comp=Z,91nm,21.0s,baz=40,slow=38						
L56A	**Greenwood**	**16.48**	**62**	Pn	**Pn**	**02 19 51.8**	**-1.0**
L56A				IAmb	IAmb	02 19 57.6	
	comp=Z,22nm,0.9s						
N59A	**State Game Lan**	**17.54**	**67**		**P**	**02 20 07.8**	**+0.6**
TEIG	**Tepich**	**17.62**	**151**	P	**P**	**02 20 09.8**	**+1.7**
	comp=Z,0.9nm,0.3s,baz=320,slow=12,SNR=5.8						
TEIG				S	Sn	02 23 08.5	-15
	comp=Z,0.4nm,0.3s,baz=142,slow=19,SNR=2.7						
TEIG	**Tepich**	**17.62**	**151**	IAmb	IAmb	02 20 43.6	
	comp=Z,30nm,1.2s						
BINY	**Binghamton**	**17.63**	**63**	Pn	**P**	**02 20 08.7**	**+0.6**
BINY				IAmb	IAmb	02 20 10.6	
	comp=Z,13nm,0.8s						
LUPA	**Lehigh Univers**	**17.79**	**69**		**P**	**02 20 10.4**	**+0.5**
J57A	**Williamstown**	**17.94**	**59**	Pn	**Pn**	**02 20 10.1**	**-0.9**
J57A				IAmb	IAmb	02 20 14.2	
	comp=Z,12nm,0.8s						
VCNR	**Virginia City**	**17.99**	**287**	Pn	**Pn**	**02 20 11.2**	**-0.7**
P61A	**Hammonton**	**18.13**	**72**	Pn	**Pn**	**02 20 12.4**	**-1.0**
D53A	**Lac Vacive, Po**	**18.31**	**47**		**Pn**	**02 20 15.0**	**-0.5**
D53A				IAmb	IAmb	02 20 47.3	
	comp=Z,22nm,1.4s						
L59A	**Walton**	**18.31**	**64**		**P**	**02 20 16.1**	**+0.4**
L59A				IAmb	IAmb	02 20 19.1	
	comp=Z,20nm,0.9s						
BRNJ	**Basking Ridge**	**18.41**	**69**	P	**Pn**	**02 20 16.8**	**+0.1**
PAL	**Palisades**	**18.94**	**68**	P	**Pn**	**02 20 23.0**	**-0.2**
PAL				IAmb	IAmb	02 20 25.7	
	comp=Z,12nm,0.8s						
CMIG	**Matias Romero**	**18.98**	**173**	P	**Pn**	**02 20 24.0**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=328,slow=5.7,SNR=4.2						
FFC	**Flin Flon**	**18.98**	**352**	P	**Pn**	**02 20 24.7**	**+1.1**
FFC				IAmb	IAmb	02 21 12.8	
	comp=Z,27nm,1.9s						
VLDQ	**Val d'Or**	**18.98**	**44**	P	**P**	**02 20 21.7**	**-1.3**
VLDQ				IAmb	IAmb	02 20 22.4	
	comp=Z,14nm,0.8s						
NEW	**Newport**	**19.06**	**316**	Lg	Lg	02 26 06.6	
	comp=Z,0.1nm,0.3s,baz=34,slow=19,SNR=3.5						
NEW				LR	LR	02 27 37.0	
	comp=Z,86nm,18.1s,baz=117,slow=36						
NCB	**Newcomb**	**19.33**	**59**	P	**Pn**	**02 20 27.4**	**-0.5**
KSCT	**Kent School, K**	**19.36**	**66**	P	**Pn**	**02 20 28.5**	**+0.2**
TRY	**Troy**	**19.42**	**63**	P	**Pn**	**02 20 29.4**	**+0.4**
TRY				IAmb	IAmb	02 20 41.4	
	comp=Z,12nm,0.8s						
TRQ	**Mont Tremblant**	**19.87**	**52**	P	**Pn**	**02 20 33.6**	**-0.7**
YBH	**Yreka Blue Hor**	**20.56**	**294**	P	Pn	02 20 43.4	+0.8
	comp=Z,3.3nm,0.9s,baz=129,slow=6.5,SNR=2.9						
YBH	**Yreka Blue Hor**	**20.56**	**294**	IAmb	IAmb	02 21 32.8	
	comp=Z,29nm,1.7s						
APG	**El Apazote**	**21.81**	**162**	LR	LR	02 31 10.3	
	comp=Z,77nm,21.6s,baz=27,slow=42						
FCC	**Fort Churchill**	**22.85**	**4**	P	**P**	**02 21 08.2**	**+3.6**
JTS	**Las Juntas de**	**27.96**	**153**	LR	LR	02 35 11.7	
	comp=Z,69nm,18.9s,baz=88,slow=41						
SCHQ	**Schefferville**	**28.13**	**38**	P	**P**	**02 21 55.1**	**+1.6**
	comp=Z,2.2nm,0.5s,baz=234,slow=8.2,SNR=9.6						
YKA	**Yellowknife Ar**	**28.61**	**343**	P	**P**	**02 21 59.9**	**+2.2**
	comp=Z,0.4nm,0.6s,baz=142,slow=8.3,SNR=7.9						
YKA				LR	LR	02 33 56.7	
	comp=Z,154nm,18.4s,baz=0.0,slow=38						
ILAR	**Eielson Array**	**41.04**	**330**	P	**P**	**02 23 47.7**	**+3.0**
	comp=Z,0.6nm,0.8s,baz=96,slow=6.7,SNR=5.4						
ILAR				LR	LR	02 41 06.6	

comp=Z,51nm,18.4s,baz=168,slow=37
NOA NORSAR Array B 67.28 30 LR LR 02 56 17.7
comp=Z,76nm,18.6s,baz=235,slow=36
PETK Petropavlovsk- 70.09 322 LR LR 02 59 08.8
comp=Z,34nm,18.2s,baz=61,slow=37
FINES FINESS Array B 72.59 25 P P 02 27 30.5 +2.0
comp=Z,3.7nm,1.0s,baz=328,slow=6.8,SNR=5.3
GERES GERESS Array B 75.66 40 LR LR 03 02 50.0
comp=Z,129nm,18.6s,baz=291,slow=37
KSRS Korea Array 95.73 325 LR LR 03 15 32.0
comp=Z,33nm,18.2s,baz=341,slow=37

IDC 09 02:18:49.7±1.4, 17.°79S×178.°54W, h572km±16km, mb3.5/11, mb1 3.7/13, mb1mx3.4/45, mbtmp4.4/13, Error ellipse: s-maj=44.0km s-min=10.9km az=152.0
NEIC 09 02:18:49.4±1.8, 17.°9S±0.°3×178.°4W±0.°2, h577km±9km, mb4.2/5, Error ellipse: s-maj=52.5km s-min=16.0km az=150.0
ISC 09 02:18:49.8±1.0, 18.°0S±0.°3×178.°5W±0.°2, h579km, n21, σ0.s98/23, mb3.9/13, Fiji Islands region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
MSVF Nonsavu 3.34 273 P P 02 20 11.2 +1.7
AFI Afiamalu 7.57 59 P P 02 20 42.8 -1.7
3.4nm,0.3s,baz=125,slow=6.1,SNR=4.0
AFI S S 02 22 19.9 +1.5
1.3nm,0.3s,baz=101,slow=22,SNR=1.8
DZM Mont Dzumac 14.78 251 P P 02 21 55.7 -0.9
0.7nm,0.3s,baz=62,slow=23,SNR=6.8
CTA Charters Tower 33.40 261 P P 02 24 41.2 -0.6
4.6nm,0.6s,baz=98,slow=10,SNR=8.2
PMG Port Moresby 34.42 280 P P 02 24 50.7 +0.4
12nm,0.6s,baz=100,slow=6.6,SNR=8.2
PMG Port Moresby 34.42 280 P P 02 24 51.8 +1.5
STKA Stephens Creek 38.58 241 P P 02 25 24.8 +0.6
4.1nm,0.5s,baz=83,slow=7.5,SNR=18
STKA Stephens Creek 38.58 241 IAmb IAmb 02 25 25.6
comp=Z,1.6nm,1.0s
WRA Warramunga Arr 44.59 260 P P 02 26 10.8 -0.9
comp=Z,3.3nm,0.5s,baz=90,slow=7.9,SNR=41
AS31 Alice Springs 44.74 254 P P 02 26 12.3 -0.6
AS31 IAmb IAmb 02 26 13.7
comp=Z,7.1nm,0.5s
ASAR Alice Springs 44.74 254 P P 02 26 12.8 -0.1
comp=Z,25nm,0.6s,baz=88,slow=8.6,SNR=357
ASAR PcP PcP 02 27 42.0 -0.5
comp=Z,0.3nm,0.5s,baz=97,slow=4.6,SNR=3.3
ASAR ScP ScP 02 30 41.1 +0.9
comp=Z,0.5nm,0.9s,baz=100,slow=4.8,SNR=3.0
ASAR Alice Springs 44.74 254 P P 02 26 12.2 -0.7
YBH Yreka Blue Hor 78.58 39 P P 02 29 52.1 -0.3
comp=Z,2.4nm,1.0s,baz=180,slow=3.0,SNR=5.6
SEY Seymchan 83.80 347 P P 02 30 18.1 -0.4
comp=Z,1.5nm,0.6s,baz=114,slow=8.0,SNR=4.0
IL31 85.93 13 P P 02 30 28.0 -0.7
IL31 IAmb IAmb 02 32 13.2
comp=Z,12nm,1.8s
ILAR Eielson Array 85.93 13 P P 02 30 27.9 -0.9
comp=Z,0.6nm,0.4s,baz=220,slow=5.1,SNR=21
TXAR Lajitas Array 86.05 58 P P 02 30 32.0 +1.7
comp=Z,1.9nm,0.7s,baz=219,slow=5.6,SNR=5.0
PDAR Pinedale Array 87.41 43 P P 02 30 37.0 +0.4
comp=Z,1.1nm,0.6s,baz=234,slow=3.0,SNR=7.0
YKA Yellowknife Ar 94.38 25 P P 02 31 07.6 -0.3
comp=Z,0.3nm,0.5s,baz=236,slow=4.6,SNR=3.7
ARCES ARCESS Array B 126.34 350 PKP PKPdf 02 36 46.3 -0.5
comp=Z,2.7nm,0.9s,baz=304,slow=0.7,SNR=2.8
GERES GERESS Array B 147.64 345 PKPbc PKPbc 02 37 29.9 0.0
comp=Z,0.5nm,0.5s,baz=9.5,slow=3.2,SNR=6.5

IDC 09 02:30:41.2±1.4, 38.°30N×20.°45E, h0km, mb3.5/4, mb1 3.5/5, mb1mx3.3/37, mbtmp3.4/5, ML3.5/1, Error ellipse: s-maj=32.1km s-min=24.1km az=109.0
ATH 09 02:30:43.9, 38.°23N×20.°47E, h13km, ML3.1/21, Error ellipse: s-maj=1.3km s-min=0.7km az=258.0
THE 09 02:30:43.8, 38.°25N×20.°40E, h13km, ML3.6/11, Error ellipse: s-maj=1.2km s-min=0.5km az=265.0
BEO 09 02:30:43.8±0.8, 38.°13N×20.°13E, h24km±4km, ML3.3/7
ISC 09 02:30:43.4±0.7, 38.°22N±0.°02×20.°46E±0.°03, h17km±3km, n104, σ1.s15/143, mb3.6/4, Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
LXR1 Lixouri, Cepha 0.03 232 P Pg 02 30 46.4 +0.1
LXR1 S Sg 02 30 48.4 +0.1
ARGA Argostoli. Kep 0.04 162 P Pg 02 30 46.5 +0.1
ARGA S Sg 02 30 48.3 0.0
ARG2 Argostoli 0.04 152 P Pg 02 30 46.6 +0.2
ARG2 S Sg 02 30 48.4 0.0
KEF4 Livadi, Kephal 0.05 324 P Pg 02 30 46.3 -0.2
KEF4 S Sg 02 30 48.1 -0.4
KEF2 Argostoli. Kep 0.05 159 P Pg 02 30 46.7 +0.2
KEF2 S Sg 02 30 48.2 -0.3
KEF1 Kardakata, Kep 0.06 6 P Pg 02 30 46.4 -0.2
KEF1 S Sg 02 30 48.1 -0.5
CHV1 Chavriata, Kef 0.07 243 P Pg 02 30 46.6 0.0
CHV1 S Sg 02 30 48.7 0.0
KEF3 Kipouria, Keph 0.09 262 P Pg 02 30 46.7 -0.1
KEF3 S Sg 02 30 48.9 -0.2
VLS Valsamata 0.11 111 P Pg 02 30 47.2 +0.2
VLS S Sg 02 30 49.8 +0.4
72µm,0.1s
VLS Valsamata 0.11 111 P Pg 02 30 47.3 +0.3
VLS S Sg 02 30 49.6 +0.3
VLS AML AML 02 30 49.9
comp=N,90217µm,0.2s
VLS AML AML 02 30 50.0
VSK1 VASILIKIADES 0.21 22 P Pb 02 30 48.5 -0.3
VSK1 S Sg 02 30 51.7 0.0
comp=N,36µm,0.3s
KONA Konidatara, Ke 0.23 22 P Pb 02 30 48.8 -0.4
KONA S Sg 02 30 52.0 -0.1
FSK Fiskardo 0.26 18 P Pg 02 30 49.1 0.0
FSK S Sg 02 30 53.2 +0.2
comp=N,25µm,0.2s
FSK Fiskardo 0.26 18 P Pg 02 30 49.2 0.0
FSK S Sg 02 30 53.0 0.0
FSK AML AML 02 30 53.6
comp=N,42802µm,0.2s
FSK AML AML 02 30 53.7
comp=E,55065µm,0.2s
KFL Anninata 0.28 112 P Pb 02 30 50.1 +0.1
KFL S Sg 02 30 55.2 +1.6
comp=E,25µm,0.3s
VLMS Volimes, Zakyn 0.37 155 P Pb 02 30 51.8 +0.1
VLMS S Sb 02 30 57.9 +0.7
VLMS AML AML 02 30 59.0
comp=N,21406µm,0.3s
VLMS AML AML 02 30 59.4
comp=E,14177µm,0.2s
EVGI Lefkada island 0.43 20 P Pb 02 30 52.3 -0.4
EVGI S Sb 02 30 59.0 +0.1
EVGI Lefkada island 0.43 20 P Pb 02 30 52.3 -0.4
EVGI S Sg 02 30 58.4 +0.3
MGNA Meganis 0.51 30 P Pb 02 30 53.6 -0.3
MGNA S Sb 02 31 01.1 0.0
MGNA AML AML 02 31 01.9
comp=N,13513µm,0.1s
MGNA AML AML 02 31 01.9
comp=E,10434µm,0.1s
ZAK2 Zakynthos 0.55 141 P Pn 02 30 55.5 -1.0
ZAK2 S Sn 02 31 05.4 +0.1
comp=E,11µm,0.4s
AST1 Astakos 0.59 56 P Pb 02 30 55.3 0.0
AST1 S Sn 02 31 05.0 -1.3
comp=E,9µm,0.4s
LKD2 Lefkada island 0.59 15 P Pg 02 30 54.9 -0.3
LKD2 S Sg 02 31 02.3 -0.8
LKD2 Lefkada island 0.59 15 P Pb 02 30 55.3 -0.1
LKD2 S Sb 02 31 03.7 +0.2
LKD2 AML AML 02 31 09.8
comp=E,3990µm,0.2s
LKD2 AML AML 02 31 11.1
comp=N,2830µm,0.3s
KRI1 kERI 0.62 153 P Pb 02 30 56.0 +0.2
KRI1 S Sn 02 31 06.6 -0.4
comp=N,6µm,0.2s
TSLK Tsoukalades, L 0.63 14 P Pg 02 30 55.5 -0.3
TSLK S Sg 02 31 03.5 -0.6
comp=N,1µm,0.5s
TSLK Tsoukalades, L 0.63 14 P Pg 02 30 55.8 0.0
PDO Prodromos 0.68 56 P Pb 02 30 57.0 +0.1
PDO S Sn 02 31 08.1 -0.5
comp=N,5µm,0.3s
PDO Prodromos 0.68 56 P Pb 02 30 57.0 +0.1
PDO S Sb 02 31 06.2 +0.1
PDO AML AML 02 31 08.5
comp=E,7041µm,0.3s
PDO AML AML 02 31 11.2
comp=N,7196µm,0.3s
RLS Riolos of Patr 0.81 101 P Pn 02 30 59.3 -0.7
RLS S Sn 02 31 12.4 +0.8
RLS Riolos of Patr 0.81 101 P Pn 02 30 59.3 -0.7
RLS AML AML 02 31 14.5
comp=E,997µm,0.5s
RLS AML AML 02 31 19.4
comp=N,1225µm,0.6s
PVO Paravola 0.93 64 P Pn 02 31 01.7 0.0
PVO Paravola 0.93 64 P Pn 02 31 01.9 +0.2
PVO AML AML 02 31 17.8
comp=E,5393µm,0.3s
PVO AML AML 02 31 18.4
comp=N,3886µm,0.3s
DRO Drossia 1.02 105 P Pn 02 31 03.1 +0.1
DRO S Sn 02 31 20.1 +3.2
comp=N,855nm,0.4s
DRO Drossia 1.02 105 P Pn 02 31 03.2 +0.3
LAKA Lakka 1.19 88 P Pg 02 31 06.1 -0.4
LAKA S Sn 02 31 24.3 +3.0
comp=N,330nm,0.4s
LAKA Lakka 1.19 88 P Pg 02 31 06.1 -0.4
LAKA AML AML 02 31 31.0
comp=N,827µm,0.5s
LAKA AML AML 02 31 35.4
comp=E,564µm,0.9s
AMT Artemida-Makis 1.20 124 P Pg 02 31 07.1 +0.5
AMT AML AML 02 31 36.3
comp=E,1416µm,0.5s
AMT AML AML 02 31 37.5
comp=N,1275µm,0.8s
ANX Ano Chora 1.21 71 P Pg 02 31 06.4 -0.3
ANX Ano Chora 1.21 71 P Pg 02 31 06.5 -0.3
ANX AML AML 02 31 31.9
comp=E,1797µm,0.4s
ANX AML AML 02 31 36.8
comp=N,1834µm,1.0s
EVR Evrytania 1.27 56 P Pg 02 31 07.2 -0.7
EVR AML AML 02 31 36.0
comp=E,659µm,0.6s
EVR AML AML 02 31 37.7
comp=N,699µm,1.0s
SERG Sergoula 1.27 81 P Pg 02 31 07.2 -0.7
SERG Sergoula 1.27 81 P Pg 02 31 07.1 -0.7
SERG AML AML 02 31 31.8
comp=N,1042µm,0.5s
SERG AML AML 02 31 32.6
comp=E,1309µm,0.6s
TRIZ Trizonia 1.27 83 P Pg 02 31 07.1 -0.9
TRIZ Trizonia 1.27 83 P Pg 02 31 07.2 -0.9
ALIK Aliki, Aigiali 1.30 88 P Pg 02 31 07.8 -0.7
IGT Igoumenitsa 1.32 356 ePg Pg 02 31 10.1 +1.2
IGT eSg Sg 02 31 28.1 +2.0
IGT Igoumenitsa 1.32 356 P Pb 02 31 08.3 +0.5
IGT AML AML 02 31 31.0
comp=E,1088µm,0.3s
IGT AML AML 02 31 37.5
comp=N,724µm,0.5s
KALE Kalithea 1.33 82 P Pg 02 31 07.9 -1.2
KALE Kalithea 1.33 82 P Pg 02 31 08.0 -1.1
KALE AML AML 02 31 35.0
comp=E,746µm,0.6s
KALE AML AML 02 31 37.3
comp=N,890µm,0.5s
KLV Kalavryta, Ach 1.34 97 P Pg 02 31 08.7 -0.6
KLV S Sg 02 31 29.1 +2.3
KLV Kalavryta, Ach 1.34 97 P Pg 02 31 08.8 -0.5
KLV AML AML 02 31 35.4
comp=N,464µm,0.5s
KLV AML AML 02 31 35.6
comp=E,320µm,0.4s
JAN Janina 1.47 12 P Pg 02 31 11.4 -0.3
JAN AML AML 02 31 37.6
comp=E,952µm,0.5s
JAN AML AML 02 31 37.7
comp=N,739µm,0.3s
MAKR Makrakomi, Fth 1.53 58 P Pg 02 31 12.3 -0.6
MAKR AML AML 02 31 44.5
comp=N,1050µm,0.5s
MAKR AML AML 02 31 46.4
comp=E,992µm,0.4s
ITM Ithomi 1.56 131 P Pg 02 31 13.0 -0.3
KEK Kerkira 1.58 341 P Pn 02 31 11.9 +1.2
PYL PYLOS 1.66 142 P Pg 02 31 14.2 -1.2
AGG Agios Georgios 1.67 61 P Pg 02 31 14.8 -0.7
AGG AML AML 02 31 48.4
comp=N,530µm,0.3s
AGG AML AML 02 31 51.1
comp=E,576µm,0.5s
MEV Metsovon 1.68 21 P Pg 02 31 15.4 -0.2
AXAR Agios Charalam 1.81 72 P Pg 02 31 17.6 -0.6
THL Klokotos Trika 1.81 41 P Pg 02 31 17.1 -1.1
THL AML AML 02 31 47.6
comp=N,341µm,0.7s
THL AML AML 02 31 52.7
comp=E,425µm,0.8s
KPRO Kipourio 1.87 22 P Pb 02 31 18.1 +0.9
PROD Prodromos 1.92 88 P Pg 02 31 18.7 -1.6
LTK Loutraki 1.98 95 P Pg 02 31 19.4 -2.1
LOUT Loutraki 1.99 96 P Pb 02 31 19.3 +0.1
LKR Lokris 2.04 77 P Pb 02 31 20.4 +0.3
LKR AML AML 02 31 48.4
comp=E,457µm,0.2s
LKR AML AML 02 31 48.5
comp=N,318µm,0.3s
PENT Pentalofos 2.05 15 P Pb 02 31 20.5 +0.3
VIL2 Platees 2.21 89 P Pb 02 31 23.0 0.0
NEST Nestorio 2.24 12 P Pb 02 31 23.3 -0.3
DID Didima 2.31 107 P Pb 02 31 24.7 +0.1
KZN Kozani 2.32 26 P Pb 02 31 24.0 -0.9
NEO Neokhori 2.42 62 P Pb 02 31 25.6 -0.9
XOR Xorichti 2.42 61 P Pb 02 31 25.3 -1.2
LIT Litokhoron 2.46 39 P Pb 02 31 26.4 -0.7
MRKA Markates 2.50 78 P Pb 02 31 25.7 -2.2
SKIA Skiathos 2.53 67 P Pb 02 31 27.1 -1.4
ATHU Athens Univers 2.63 94 P Pb 02 31 28.2 -1.9
VLY Voula,Athens 2.66 97 P Pb 02 31 28.2 -2.3
PTL Penteli 2.69 93 P Pb 02 31 28.5 -2.6
AOS Alonnisos 2.84 69 P Pb 02 31 30.8 -2.9
OHR Ohrid 2.90 5 iPn Pn 02 31 32.2 +3.2
PAIG Paliouri 3.03 55 P Pn 02 31 33.0 +2.3
GRG Griva 3.12 28 P Pn 02 31 34.6 +2.7
TIR Tirane 3.16 352 ePn Pn 02 31 34.0 +1.6
OUR Ouranopolis 3.45 51 P Pn 02 31 39.2 +2.8
KNT Kendrikon 3.49 32 P Pn 02 31 39.7 +2.8
STIP Stip 3.72 20 iPn Pn 02 31 44.5 +4.4
PDG Podgorica 4.31 348 ePn Pn 02 31 47.9 -0.3
PDG eSn Sn 02 32 37.2 -0.9
BARS Barje 4.71 12 ePn Pn 02 31 55.0 +1.3
BARS eSn Sn 02 32 48.1 +0.1
TREB Trebinje 4.78 341 ePn Pn 02 31 54.1 -0.5
TREB eSn Sn 02 32 46.9 -2.7
VTS Vitosha 4.88 25 ePn Pn 02 31 58.3 +2.1
VTS eSn Sn 02 32 54.1 +1.7
SELS Selova 5.02 5 ePn Pn 02 31 58.1 +0.1
SJES Sjenica 5.05 356 ePn Pn 02 31 59.7 +1.2
SJES eSn Sn 02 32 56.1 -0.5
IVAS Ivanjica 5.36 358 ePn Pn 02 32 02.6 -0.1
BOVS Bovan 5.50 9 ePn Pn 02 32 05.0 +0.5
BOVS eSn Sn 02 33 06.8 -0.5
GRUS Gruza 5.67 2 ePn Pn 02 32 07.0 +0.1
DIVS Divibare 5.89 357 ePn Pn 02 32 09.6 -0.4
DIVS eSn Sn 02 33 15.4 -1.7
TRUS Trudelj 6.00 360 ePn Pn 02 32 11.3 -0.2
SOKA Soboth 9.36 336 ePn Pn 02 32 57.2 -0.3
comp=N,0.5nm,0.3s
MOA Molln 10.64 337 ePn Pn 02 33 15.6 +0.6
comp=N,0.2nm,0.2s
GERES GERESS Array B 11.70 337 Pn Pn 02 33 29.7 +0.1
comp=N,0.1nm,0.3s,baz=161,slow=15,SNR=3.3
FINES FINESS Array B 23.52 7 P P 02 35 51.2 -1.1
comp=N,1.2nm,0.7s,baz=196,slow=8.4,SNR=3.6
TORD Torodi Ar. Bea 30.03 219 P P 02 36 52.4 +0.8
comp=N,0.3nm,0.9s,baz=30,slow=12,SNR=4.3
MKAR Makanchi Array 45.32 58 P P 02 39 00.5 +0.1
comp=N,0.3nm,0.4s,baz=276,slow=7.0,SNR=6.2
ZALV Zalesovo Beam 45.70 48 P P 02 39 03.1 -0.1
comp=N,0.8nm,0.5s,baz=272,slow=7.8,SNR=4.1

ATH 09 02:45:52.4, 38.°14N×20.°39E, h14km±1km, ML2.8/5, Error ellipse: s-maj=1.9km s-min=1.0km az=245.0
THE 09 02:45:52.8, 38.°14N×20.°39E, h13km, ML2.7/6, Error ellipse: s-maj=1.2km s-min=0.6km az=256.0
ISC 09 02:45:52.7±1.0, 38.°14N±0.°03×20.°40E±0.°05, h13km±4km, n42, σ0.s48/63, Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
CHV1 Chavriata, Kef 0.04 341 P Pg 02 45 55.0 -0.1
CHV1 S Sg 02 45 56.8 -0.1
LXR1 Lixouri, Cepha 0.06 29 P Pg 02 45 55.3 0.0
LXR1 S Sg 02 45 57.5 +0.3
ARGA Argostoli. Kep 0.07 62 P Pg 02 45 55.3 -0.1
ARGA S Sg 02 45 57.1 -0.2
KEF3 Kipouria, Keph 0.07 326 P Pg 02 45 55.2 -0.2
KEF3 S Sg 02 45 57.1 -0.2
KEF2 Argostoli. Kep 0.07 73 P Pg 02 45 55.4 0.0
KEF2 S Sg 02 45 57.3 0.0
ARG2 Argostoli 0.08 64 P Pg 02 45 55.4 -0.1
ARG2 S Sg 02 45 57.5 +0.1
KEF4 Livadi, Kephal 0.12 10 P Pg 02 45 55.8 -0.1
KEF4 S Sg 02 45 58.3 +0.2
KEF1 Kardakata, Kep 0.14 23 P Pg 02 45 56.2 -0.1
KEF1 S Sg 02 45 58.8 0.0
VLS Valsamata 0.15 78 P Pg 02 45 56.3 -0.1
VLS S Sg 02 45 59.3 +0.2
2µm,0.1s
VLS Valsamata 0.15 78 P Pg 02 45 56.4 -0.1
VLS S Sg 02 45 59.1 0.0
VSK1 VASILIKIADES 0.29 26 P Pg 02 45 58.7 -0.1
VSK1 S Sg 02 46 03.8 +0.8
3µm,0.4s
KFL Anninata 0.31 96 P Pg 02 45 59.0 -0.1
KFL S Sg 02 46 04.2 +0.9
4µm,0.3s
KFL Anninata 0.31 96 P Pg 02 45 58.9 -0.1
KFL S Sb 02 46 04.4 -0.6
KONA Konidatara, Ke 0.31 26 P Pg 02 45 59.0 -0.2
KONA S Sg 02 46 04.1 +0.7
VLMS Volimes, Zakyn 0.34 142 P Pg 02 45 59.6 0.0
VLMS S Sg 02 46 04.8 +0.5
VLMS AML AML 02 46 06.0
comp=N,23612µm,0.2s
VLMS AML AML 02 46 06.5
comp=E,17184µm,0.2s
FSK Fiskardo 0.34 22 P Pg 02 45 59.3 -0.3
FSK S Sg 02 46 04.7 +0.4
comp=E,835nm,0.4s
FSK Fiskardo 0.34 22 P Pg 02 45 59.4 -0.3
FSK S Sg 02 46 04.2 -0.1
EVGI Lefkada island 0.52 23 P Pg 02 46 02.3 -0.6
EVGI S Sb 02 46 10.7 -0.4
EVGI Lefkada island 0.52 23 P Pg 02 46 01.9 -1.0
EVGI S Sb 02 46 10.6 -0.5
KRI1 kERI 0.58 145 P Pg 02 46 03.8 -0.3
KRI1 S Sb 02 46 13.0 +0.1
comp=E,2µm,0.2s
MGNA Meganis 0.60 31 P Pg 02 46 03.9 -0.5
LKD2 Lefkada island 0.68 17 P Pg 02 46 05.5 -0.4
LKD2 Lefkada island 0.68 17 P Pg 02 46 05.5 -0.4
TSLK Tsoukalades, L 0.71 16 P Pb 02 46 07.5 +0.6
TSLK Tsoukalades, L 0.71 16 P Pb 02 46 07.5 +0.6
PDO Prodromos 0.77 53 P Pg 02 46 07.2 -0.4
PDO Prodromos 0.77 53 P Pg 02 46 07.1 -0.4
PDO AML AML 02 46 28.1
comp=E,950µm,0.5s
PDO AML AML 02 46 30.5
comp=N,907µm,0.6s
RLS Riolos of Patr 0.85 96 P Pg 02 46 08.8 -0.3
PVO Paravola 1.00 62 P Pb 02 46 11.7 -0.2
PVO Paravola 1.00 62 P Pb 02 46 11.6 -0.3
PVO AML AML 02 46 28.8
comp=E,982µm,0.3s
PVO AML AML 02 46 28.8
comp=N,784µm,0.3s
DRO Drossia 1.05 100 P Pb 02 46 12.4 -0.4
DRO S Sn 02 46 29.6 +1.9
comp=N,345nm,0.5s
DRO Drossia 1.05 100 P Pb 02 46 12.2 -0.6
DRO AML AML 02 46 37.7
comp=N,732µm,0.5s
DRO AML AML 02 46 42.2
comp=E,704µm,0.4s
ANX Ano Chora 1.28 69 P Pn 02 46 16.2 -0.1
ANX AML AML 02 46 41.0
comp=N,563µm,0.5s
ANX AML AML 02 46 48.8
comp=E,392µm,0.5s
SERG Sergoula 1.33 78 P Pn 02 46 16.8 -0.2
TRIZ Trizonia 1.34 80 P Pn 02 46 16.7 -0.4
KLV Kalavryta, Ach 1.39 94 P Pb 02 46 18.2 -0.3
IGT Igoumenitsa 1.39 358 P Pg 02 46 18.9 -0.5
KALE Kalithea 1.39 79 P Pn 02 46 17.7 -0.1
ITM Ithomi 1.55 128 P Pb 02 46 20.9 -0.3
AGG Agios Georgios 1.75 59 P Pb 02 46 25.4 +0.7
THL Klokotos Trika 1.90 41 P Pb 02 46 27.2 0.0
PROD Prodromos 1.97 86 P Pb 02 46 27.4 -1.1

WEL 09 02:51:01.7, 37°S±7°×17°7E±°, h255km±7km, MLv4.1/104, Error ellipse: s-maj=0.0km s-min=0.0km az=178.8, Off east coast of North Island

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KUZ Kuaotunu 1.19 263 P Pn 02 51 38.0 -0.3
HAZ Te Kaha 1.23 158 P Pn 02 51 38.0 -0.5
HAZ S S 02 52 06.5 -1.1
MXZ Matakaoa Point 1.30 137 P Pn 02 51 38.7 -0.3
MXZ S S 02 52 06.7 -1.7
OPRZ Ohinepanea 1.33 202 P Pn 02 51 39.5 +0.4
TGRZ Tauranga 1.34 214 P Pn 02 51 40.2 +1.0
RUGZ Raukumara Rang 1.40 164 P Pn 02 51 39.0 -0.8
RUGZ S S 02 52 05.8 -4.2
GRZ Great Barrier 1.45 284 P Pn 02 51 39.6 -0.4
PKGZ Pakihiroa 1.45 151 P Pn 02 51 40.2 +0.1
WMGZ Waiomatatini S 1.55 141 P Pn 02 51 40.8 +0.1
WMGZ S S 02 52 09.2 -2.4
KARZ Kaharoa 1.59 208 P Pn 02 51 42.3 +1.2
OMRZ Omania 1.63 204 P Pn 02 51 42.8 +1.4
URZ Urewera 1.64 182 P Pn 02 51 41.1 -0.4
URZ S S 02 52 10.8 -2.1
WIAZ Waiheke Island 1.67 263 P Pn 02 51 42.0 +0.3
TWGZ Tauwhareparae 1.68 158 P Pn 02 51 42.4 +0.6
TWGZ S S 02 52 12.0 -1.6
PUZ Puketiti 1.68 150 P Pn 02 51 41.7 -0.1
PUZ S S 02 52 10.6 -3.0
MKAZ Moumakai 1.70 253 P Pn 02 51 42.7 +0.7
MWZ Matawai 1.74 171 P Pn 02 51 42.2 0.0
MWZ S S 02 52 11.9 -2.5
TOZ Tahuroa Road 1.75 230 P Pn 02 51 43.3 +1.0
RRRZ Republican Roa 1.80 197 P Pn 02 51 43.7 +0.8
ETAZ East Tamaki Re 1.85 259 P Pn 02 51 44.0 +0.8
MBAZ Motutapu North 1.85 265 P Pn 02 51 43.8 +0.6
HSRZ Hossack Road 1.85 204 P Pn 02 51 45.9 +2.7
MUGZ Murupara 1.89 190 P Pn 02 51 43.4 -0.1
TKGZ Te Karaka 1.89 164 P Pn 02 51 43.7 +0.2
TKGZ S S 02 52 14.1 -2.6
HRRZ Handcock Road 1.92 202 P Pn 02 51 44.7 +1.0
GRRZ Galatos Road 1.94 206 P Pn 02 51 45.2 +1.3
PRRZ Plateau Road 1.99 199 P Pn 02 51 44.7 +0.3
EPAZ Eden Park BICE 1.99 262 P Pn 02 51 45.0 +0.7
HBAZ Herne Bay Bore 2.00 263 P Pn 02 51 45.1 +0.7
RTZ Ruatahuna 2.00 185 P Pn 02 51 44.4 -0.2
CNGZ Carnagh Statio 2.03 157 P Pn 02 51 45.3 +0.5
ALRZ Allen Road 2.06 199 P Pn 02 51 45.4 +0.4
AWAZ Awhitu Peninsu 2.10 257 P Pn 02 51 45.9 +0.6
RIGZ Rimuhau 2.13 168 P Pn 02 51 46.0 +0.3
TLZ Tolley Road 2.16 217 P Pn 02 51 47.6 +1.6
KUTZ Kaahu Road 2.17 210 P Pn 02 51 47.6 +1.6
SNGZ Shannon Statio 2.17 177 P Pn 02 51 46.1 +0.1
MTHZ Maungataniwha 2.25 187 P Pn 02 51 46.6 -0.3
MRHZ Matea Rd 2.30 195 P Pn 02 51 47.2 -0.1
RAHZ Arahi 2.30 182 P Pn 02 51 47.5 +0.2
PRGZ Paritu Road 2.37 167 P Pn 02 51 48.6 +0.7
WATZ Wairara 2.39 209 P Pn 02 51 49.0 +0.8
WCZ Waipu Caves 2.40 285 P Pn 02 51 48.3 0.0

KNZ	**Kokohu**	**2.43 171**	P	Pn	02 51 48.3 -0.2		
HATZ	**Hinemaiaia**	**2.44 201**	P	Pn	02 51 49.3 +0.8		
WHHZ	**Waihua**	**2.46 179**	P	Pn	02 51 48.9 +0.2		
NMHZ	**Naumai**	**2.50 187**	P	Pn	02 51 49.5 +0.2		
MHGZ	**Mahia Peninsul**	**2.59 168**	P	Pn	02 51 50.7 +0.5		
BKZ	**Black Stump Fm**	**2.61 192**	P	Pn	02 51 49.6 -0.7		
KATZ	**Kakaramea**	**2.64 206**	P	Pn	02 51 53.4 +2.6		
ARHZ	**Aropauanui**	**2.65 183**	P	Pn	02 51 50.8 +0.1		
HIZ	**Hauiti**	**2.66 224**	P	Pn	02 51 52.5 +1.7		
TWVZ	**Taurewa**	**2.82 209**	P	Pn	02 51 53.2 +0.6		
NGZ	**Ngauruhoe**	**2.85 206**	P	Pn	02 51 53.6 +0.6		
MCHZ	**McNeill Hill**	**2.85 188**	P	Pn	02 51 52.9 +0.1		
KWHZ	**Kaweka Forest**	**2.87 192**	P	Pn	02 51 52.9 -0.2		
FWVZ	**Far West T-bar**	**2.94 206**	P	Pn	02 51 54.5 +0.5		
WHVZ	**Whangaehu Hut**	**2.95 205**	P	Pn	02 51 54.1 0.0		
TRVZ	**Turoa**	**2.98 205**	P	Pn	02 51 54.5 +0.1		
BHHZ	**Black Hill Sta**	**3.01 197**	P	Pn	02 51 53.7 -0.8		
MOVZ	**Moawhango**	**3.01 202**	P	Pn	02 51 53.7 -0.8		
CKHZ	**Cape Kidnapper**	**3.04 182**	P	Pn	02 51 54.6 -0.2		
PKVZ	**Pokaka**	**3.04 208**	P	Pn	02 51 54.9 0.0		
MTVZ	**Mangateitei**	**3.08 206**	P	Pn	02 51 53.8 -1.6		
KRHZ	**Kereru**	**3.09 192**	P	Pn	02 51 54.7 -0.7		
VRZ	**Vera Road**	**3.16 217**	P	Pn	02 51 57.6 +1.5		
KAHZ	**Kahuranaki**	**3.18 184**	P	Pn	02 51 56.2 -0.2		
OUZ	**Omahuta**	**3.24 294**	P	Pn	02 51 56.8 -0.2		
MHEZ	**Mangahewa**	**3.35 222**	P	Pn	02 52 02.6 +4.5		
PNHZ	**Pukenui**	**3.38 193**	P	Pn	02 51 57.5 -1.1		
PXZ	**Pawanui**	**3.42 184**	P	Pn	02 51 58.1 -0.9		
WPHZ	**Waipukurau**	**3.50 190**	P	Pn	02 51 58.9 -0.9		
WAZ	**Wanganui**	**3.59 208**	P	Pn	02 52 00.6 -0.3		
LREZ	**Lake Rotokare**	**3.60 217**	P	Pn	02 52 02.5 +1.6		
PKE	**Pukeiti**	**3.62 224**	P	Pn	02 52 03.8 +2.5		
KHEZ	**Kahui Hut**	**3.67 222**	P	Pn	02 52 05.0 +3.1		
PRHZ	**Porangahau**	**3.67 187**	P	Pn	02 52 01.2 -0.7		
NBEZ	**Newall Road No**	**3.73 224**	P	Pn	02 52 05.6 +3.1		
DVHZ	**Dannevirke**	**3.77 192**	P	Pn	02 52 01.4 -1.5		
NMEZ	**Namu Road**	**3.83 222**	P	Pn	02 52 06.6 +3.0		
ANWZ	**Angora Road**	**3.88 188**	P	Pn	02 52 03.2 -1.0		
POWZ	**Post Office Ro**	**3.93 196**	P	Pn	02 52 03.6 -1.2		
PRWZ	**Pori Road**	**4.05 193**	P	Pn	02 52 05.0 -1.1		
BFZ	**Birch Farm**	**4.13 190**	P	Pn	02 52 05.6 -1.4		
MRZ	**Mangatainoka R**	**4.23 197**	P	Pn	02 52 06.6 -1.7		
TIWZ	**Tintock**	**4.28 193**	P	Pn	02 52 08.0 -0.9		
CPWZ	**Castlepoint**	**4.36 190**	P	Pn	02 52 08.9 -0.8		
HOWZ	**Holdsworth Sta**	**4.47 197**	P	Pn	02 52 09.2 -2.0		
OGWZ	**Otaki Gorge**	**4.49 200**	P	Pn	02 52 09.5 -1.8		
TMWZ	**Te Maipa**	**4.60 192**	P	Pn	02 52 11.4 -1.3		
KIW	**Kapiti Island**	**4.60 202**	P	Pn	02 52 10.8 -1.9		
MTW	**Mount Morrison**	**4.72 196**	P	Pn	02 52 12.1 -2.1		
CAW	**Cannon Point**	**4.78 200**	P	Pn	02 52 12.6 -2.3		
DUWZ	**D'Urville Isla**	**4.90 210**	P	Pn	02 52 14.4 -1.9		
TRWZ	**Traveller**	**4.92 193**	P	Pn	02 52 14.5 -2.0		
PAWZ	**Paruwai Farm**	**4.96 196**	P	Pn	02 52 15.1 -1.9		
MSWZ	**Moikau Station**	**5.03 197**	P	Pn	02 52 16.0 -1.9		
WEL	**Wellington**	**5.03 201**	P	Pn	02 52 15.7 -2.1		
TCW	**Tory Channel**	**5.12 206**	P	Pn	02 52 16.8 -2.2		
PLWZ	**Palliser**	**5.17 196**	P	Pn	02 52 17.8 -1.8		
TUWZ	**Tuamarina**	**5.43 207**	P	Pn	02 52 20.5 -2.3		
NNZ	**Nelson**	**5.47 212**	P	Pn	02 52 20.8 -2.5		
QRZ	**Quartz Range**	**5.57 220**	P	Pn	02 52 21.9 -2.6		
BSWZ	**Blackbirch Sta**	**5.71 206**	P	Pn	02 52 24.7 -1.5		
THZ	**Tophouse**	**6.13 212**	P	Pn	02 52 29.0 -2.4		
KHZ	**Kahutara**	**6.45 205**	P	Pn	02 52 33.1 -2.1		
DSZ	**Denniston Nort**	**6.62 218**	P	Pn	02 52 35.2 -2.3		
GVZ	**Greta Valley S**	**7.11 206**	P	Pn	02 52 41.2 -2.4		
LTZ	**Lake Taylor**	**7.23 210**	P	Pn	02 52 42.2 -3.0		
AMCZ	**Amberley**	**7.42 207**	P	Pn	02 52 45.6 -2.0		
OKCZ	**Okains Bay**	**7.77 203**	P	Pn	02 52 49.7 -2.3		
OXZ	**Oxford**	**7.78 209**	P	Pn	02 52 49.6 -2.5		
MQZ	**McQueen's Vall**	**7.89 205**	P	Pn	02 52 50.1 -3.3		
AKCZ	**Akaroa Harbour**	**7.95 203**	P	Pn	02 52 52.1 -2.2		
WVZ	**Waitaha Valley**	**8.14 216**	P	Pn	02 52 54.1 -2.5		
RPZ	**Rata Peaks**	**8.51 212**	P	Pn	02 52 58.7 -2.5		
FOZ	**Fox Glacier**	**8.93 217**	P	Pn	02 53 03.9 -2.6		
LBZ	**Lake Benmore**	**9.42 212**	P	Pn	02 53 10.6 -2.1		
ODZ	**Otahua Downs**	**9.77 208**	P	Pn	02 53 15.4 -1.7		
JCZ	**Jackson Bay**	**9.83 218**	P	Pn	02 53 15.3 -2.7		
WKZ	**Wanaka**	**10.28 215**	P	Pn	02 53 20.7 -2.9		
HHSZ	**Highcliff Hill**	**10.50 206**	P	Pn	02 53 25.6 -0.8		
MLZ	**Mavora Lakes**	**11.11 215**	P	Pn	02 53 32.0 -1.9		
WHZ	**Wether Hill Ro**	**11.58 214**	P	Pn	02 53 37.3 -2.5		
SYZ	**Scrubby Hill**	**11.60 209**	P	Pn	02 53 39.5 -0.4		
APZ	**The Paps**	**12.30 211**	P	Pn	02 53 47.0 -1.6		

IDC 09 02:59:20.8±3.5, 4°.95S×154°.12E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.4/22, mbtmp3.3/4, Error ellipse: s-maj=116.6km s-min=29.4km az=107.0, Bougainville-Solomon Islands region

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res
WRA	**Warramunga Arr**	**24.35 231**	P	P	03 04 41.4	+0.7
	0.8nm,0.9s,baz=56,slow=10,SNR=5.6					
ASAR	**Alice Springs**	**26.94 224**	P	P	03 05 04.6	+0.4
	0.2nm,0.4s,baz=54,slow=9.1,SNR=3.8					
SONM	**Songino Array**	**67.16 327**	P	P	03 10 17.6	+0.8
	0.2nm,0.5s,baz=141,slow=5.5,SNR=2.7					
MKAR	**Makanchi Array**	**81.31 319**	P	P	03 11 39.2	0.0
	0.3nm,0.8s,baz=93,slow=7.2,SNR=2.6					
TORD	**Torodi Ar. Bea**	**151.60 289**	PKPbc	PKPbc	03 19 16.4	-1.9
	0.3nm,0.7s,baz=58,slow=2.4,SNR=2.4					

*SSNC **09** 03:00:57.7±1.3, 19°.37N×73°.75W, h7km±23km, MD3.1, ML2.1, MW2.8*

*OSPL **09** 03:00:59.7±2.8, 18°.71N×74°.22W, h31km±110km, ML2.0*

ISC 09 03:00:54.4±2.2, 19°.2N±0°.1×73°.89W±0°.09, h5km±17km, n9, σ1§62/15, 1D, Haiti region

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res
MASC	**Masc**	**0.99 341**	*e*Pg	**Pg**	**03 01 13.6**	**+0.3**
MASC			*e*Sg	**Sg**	**03 01 24.6**	**-1.6**
MASC			IAML		03 01 27.2	
	comp=E,69nm,0.1s					
MASC			IAML		03 01 27.2	
	comp=N,48nm,0.1s					
GTBY	**Guantanamo Bay**	**1.34 301**	*i* P	**Pn**	**03 01 21.5**	**+1.7**
GTBY			*e*S	**Sb**	**03 01 38.8**	**+1.2**
GTBY			IAML		03 01 42.5	
	comp=Z,23nm,0.1s					
LGNH	**Logne**	**1.41 121**	*e*S	**Sb**	**03 01 39.0**	**-0.6**
GTMO	**Guantanamo**	**1.45 306**	*e*P	**Pn**	**03 01 20.7**	**-0.6**
GTMO			*e*S	**Sn**	**03 01 37.1**	**-3.6**
GTMO			IAML		03 01 42.3	
	comp=E,54nm,0.2s					
GTMO			IAML		03 01 42.3	
	comp=N,62nm,0.1s					
MOAC	**Moa**	**1.74 325**	*e*P	**Pn**	**03 01 27.2**	**+1.9**
MOAC			*e*S	**Sn**	**03 01 48.7**	**+0.8**
MOAC			IAML		03 01 49.5	
	comp=N,15nm,0.2s					
MOAC			IAML		03 01 49.6	
	comp=E,26nm,0.2s					
RCC	**Rio Carpintero**	**1.86 294**	⇓*e*P	**Pn**	**03 01 28.3**	**+1.3**
RCC			*e*S	**Sn**	**03 01 51.3**	**+0.3**
RCC			IAML		03 01 58.0	
	comp=N,18nm,0.2s					
RCC			IAML		03 01 58.1	
	comp=E,10nm,0.2s					
SDDR	**Presa de Saban**	**2.47 95**	*i* P	**Pg**	**03 01 42.1**	**+0.4**
SDDR			IAML		03 02 10.5	
	comp=Z,3.8nm,0.4s					
LMGC	**Las Mercedes**	**3.05 286**	*e*P	**Pn**	**03 01 44.1**	**+0.8**
LMGC			*e*S	**Sn**	**03 02 19.6**	**-0.7**
LMGC			IAML		03 02 26.7	
	comp=N,13nm,0.1s					
LMGC			IAML		03 02 26.7	
	comp=E,6.6nm,0.1s					
CCCC	**Cccc**	**4.13 299**	*e*P	**Pn**	**03 01 57.2**	**-1.0**
CCCC			*e*S	Sn	03 02 39.6	-7.4
CCCC			IAML		03 02 43.2	
	comp=E,0.6nm,0.1s					
CCCC			IAML		03 02 43.3	
	comp=N,0.4nm,0.1s					

*IDC **09** 03:18:09.6±1.2, 49°.65N×18°.57E, h0km, mb1 3.4/5, mb1mx3.1/38, mbtmp3.3/5, ML2.6/5, Error ellipse: s-maj=21.5km s-min=8.2km az=150.0*

*IPEC **09** 03:18:09.4±0.1, 49°.82N×18°.59E, h0km, ML2.9/3, Error ellipse: s-maj=1.0km s-min=0.5km az=161.0*

*BGR **09** 03:18:10.9±0.4, 49°.93N×18°.51E, h1km, ML3.4/13, Error ellipse: s-maj=8.9km s-min=3.3km az=173.0*

ISC 09 03:18:09.2±0°.7, 49°.84N±0°.03×18°.53E±0°.02, h0km, n67, σ1§22/110, 2C-2D, Czech and Slovak Republics

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.25 270**	*e*PG	**Pg**	**03 18 15.4**	**+1.5**
OKC			*e*SG	**Sg**	**03 18 17.9**	**+0.8**
	comp=Z,507nm,0.5s					
OKC	**Ostrava-Krasne**	**0.25 270**	*e*Pg	**Pg**	**03 18 15.6**	**+1.7**
OKC			*e*Sg	**Sg**	**03 18 20.1**	**+3.0**
MORC	**Moravsky Berou**	**0.64 265**	*e*PG	**Pg**	**03 18 22.6**	**+1.1**
MORC			*e*SG	**Sg**	**03 18 31.1**	**+1.3**
MORC	**Moravsky Berou**	**0.64 265**	*e*Pg	**Pg**	**03 18 22.6**	**+1.1**
MORC			*e*Sg	**Sg**	**03 18 31.8**	**+2.0**
MORC	**Moravsky Berou**	**0.64 265**	*e*Pg	**Pg**	**03 18 22.5**	**+1.1**
	baz=86					
MORC			*e*Sg	**Sg**	**03 18 31.1**	**+1.3**
	347nm,0.5s,baz=86					
OJC	**Ojcow**	**0.90 65**	*e*Pg	**Pg**	**03 18 26.7**	**+0.2**
OJC			*e*Sg	**Sg**	**03 18 39.3**	**+1.1**
OJC	**Ojcow**	**0.90 65**	*e*Pg	**Pg**	**03 18 26.2**	**-0.2**
OJC			*e*Sg	**Sg**	**03 18 38.7**	**+0.6**
JAVC	**Velka Javorina**	**1.13 210**	*e*PG	**Pg**	**03 18 32.1**	**+1.3**
KRLC	**Kraliky**	**1.15 282**	*e*PG	**Pg**	**03 18 31.0**	**-0.3**
KRLC			*e*SG	**Sg**	**03 18 47.0**	**+0.8**
	comp=Z,287nm,0.3s					
NIE	**Niedzica**	**1.23 109**	*e*Pg	**Pg**	**03 18 32.7**	**+0.1**
NIE			*e*Sg	**Sg**	**03 18 50.9**	**+2.4**
VYHS	**Vyhne**	**1.36 171**	*e*PG	**Pn**	**03 18 35.1**	**-0.4**
VYHS			*e*SG	**Sg**	**03 18 53.2**	**+0.3**
VRAC	**Vranov**	**1.37 248**	*e*PG	**Pg**	**03 18 35.3**	**-0.1**
VRAC			*e*SG	**Sg**	**03 18 53.1**	**0.0**
VRAC	**Vranov**	**1.37 248**	Pg	**Pg**	**03 18 35.1**	**-0.3**
	22nm,0.3s,baz=69,slow=14,SNR=120					
VRAC			Lg	Lg	03 18 53.5	
	66nm,0.3s,baz=119,slow=17,SNR=31					
VRAC	**Vranov**	**1.37 248**	*e*Pg	**Pg**	**03 18 35.3**	**-0.1**
	baz=68					
VRAC			*e*Sg	**Sg**	**03 18 53.1**	**0.0**
	145nm,0.3s,baz=68					
DPC	**Dobruska-Polom**	**1.51 291**	*e*PG	**Pn**	**03 18 37.7**	**+0.1**
DPC			*e*SG	**Sg**	**03 18 58.0**	**+0.3**
	comp=Z,127nm,0.3s					
DPC	**Dobruska-Polom**	**1.51 291**	*e*Pn	**Pn**	**03 18 37.6**	**+0.1**
DPC			*e*Sg	**Sb**	**03 18 58.4**	**+0.6**
SMOL	**Smolenice**	**1.51 209**	*e*PG	**Pn**	**03 18 37.2**	**-0.3**
SMOL			*e*SG	**Sn**	**03 18 55.8**	**-2.1**
SMOL			*e*LG	Lg	03 19 00.5	
KRUC	**Moravsky**	**1.60 242**	*e*PG	**Pn**	**03 18 39.0**	**+0.3**
KRUC			*e*SG	**Sn**	**03 19 00.1**	**+0.1**
KRUC	**Moravsky**	**1.60 242**	*e*Pg	**Pn**	**03 18 38.9**	**+0.3**
	baz=61					
KRUC			*e*Sg	**Sn**	**03 19 00.1**	**+0.1**
	110nm,0.2s,baz=61					
OSTC	**Ostas**	**1.65 297**	*e*PG	**Pn**	**03 18 39.7**	**+0.2**
OSTC			*e*SG	**Sg**	**03 19 02.7**	**+0.5**
	comp=Z,163nm,0.8s					
MODS	**Modra-Piesok**	**1.68 210**	*e*PG	**Pn**	**03 18 39.0**	**-0.9**
MODS			*e*SG	**Sn**	**03 19 01.0**	**-1.1**
MODS			*e*LG	Lg	03 19 03.9	
KSP	**Ksiaz**	**1.75 306**	*e*Pn	**Pn**	**03 18 41.0**	**+0.3**
KSP	**Ksiaz**	**1.75 306**	*e*Pb	**Pn**	**03 18 40.6**	**-0.2**
KSP			*e*Pg	**Pb**	**03 18 43.0**	**+0.9**
KSP			*e*Sg	**Sg**	**03 19 06.4**	**+1.0**
UPC	**Upice**	**1.75 293**	*e*PG	**Pn**	**03 18 42.2**	**+1.4**
UPC			*e*SG	**Sg**	**03 19 06.0**	**+0.6**
	comp=Z,96nm,0.5s					
CHVC	**Chvalec**	**1.76 296**	*e*PG	**Pn**	**03 18 40.7**	**-0.2**
CHVC			*e*SG	**Sg**	**03 19 06.1**	**+0.5**
	comp=Z,92nm,0.5s					
STHS	**Stebnicka Huta**	**1.81 102**	*e*PN	**Pn**	**03 18 43.1**	**+1.4**
STHS			*e*SN	**Sb**	**03 19 08.9**	**+2.3**
STHS			*e*LG	Lg	03 19 16.0	
KECS	**Kecovo**	**1.87 136**	*e*PN	**Pn**	**03 18 41.9**	**-0.5**
KECS			*e*SN	**Sn**	**03 19 06.6**	**-0.1**
KECS			*e*LG	Lg	03 19 10.3	
ZST	**Bratislava**	**1.90 210**	*e*PN	**Pn**	**03 18 42.1**	**-0.7**
ZST			*e*SN	**Sn**	**03 19 05.3**	**-2.0**
SRO	**Srobarova**	**2.03 184**	*e*PN	**Pn**	**03 18 45.3**	**+0.7**
SRO			*e*SN	**Sn**	**03 19 10.4**	**-0.3**
SRO			*e*LG	Lg	03 19 19.3	
TREC	**Trest**	**2.05 256**	*e*PN	**Pn**	**03 18 44.8**	**-0.2**
TREC			*e*PG	**Pb**	**03 18 47.0**	**-0.4**
TREC			*e*SG	**Sn**	**03 19 14.3**	**+3.0**
	comp=Z,80nm,0.2s					
CRVS	**Cervenica-Dubn**	**2.13 115**	*e*PN	**Pn**	**03 18 47.5**	**+1.4**
GOPC	**GO Pecny, Ondr**	**2.42 273**	*e*PN	**Pn**	**03 18 49.9**	**-0.1**
GOPC			*e*SG	**Sb**	**03 19 25.9**	**+1.9**
	comp=Z,37nm,0.5s					
PRU	**Pruhonice**	**2.58 275**	*e*PN	**Pn**	**03 18 52.8**	**+0.6**
PRU			*e*SN	**Sn**	**03 19 24.2**	**-0.1**
PRU			*e*SG	**Sb**	**03 19 31.1**	**+2.5**
	comp=Z,41nm,0.4s					
CONA	**Conrad Observa**	**2.60 224**	Pn	**Pn**	**03 18 52.0**	**-0.5**
	2.2nm,0.3s,SNR=8.2					
CONA			Sn	**Sn**	**03 19 22.8**	**-2.1**
	20nm,0.4s					
KOLS	**Kolonicke sedl**	**2.61 109**	*e*PN	**Pn**	**03 18 53.5**	**+0.9**
PVCC	**Panska Ves**	**2.64 287**	*e*PN	**Pn**	**03 18 52.9**	**-0.1**
PVCC			*e*PG	**Pb**	**03 18 57.6**	**+0.3**
PVCC			*e*SG	**Sg**	**03 19 33.8**	**-0.1**
	comp=Z,84nm,0.4s					
PRA	**Prague**	**2.66 277**	*e*PG	**Pb**	**03 18 58.4**	**+0.8**
PRA			*e*SG	**Sb**	**03 19 34.1**	**-0.4**
	comp=Z,110nm,1.0s					
PBCC	**Pribram**	**2.94 269**	*e*SG	**Sg**	**03 19 43.4**	**-0.3**
BRG	**Berggiesshubel**	**3.11 291**	*e*Pg	**Pb**	**03 19 07.1**	**+1.7**
BRG			*e*Sg	**Sg**	**03 19 48.5**	**-0.7**
TRPA	**Tarpa**	**3.15 121**	⇓P	**Sg**	**03 19 50.6**	**+0.4**
ARSA	**Arzberg**	**3.27 219**	*e*Pn	**Pn**	**03 19 02.7**	**+0.9**
	1.0nm,0.3s					
KHC	**Kasperske Hory**	**3.31 259**	*e*PN	**Pn**	**03 19 02.5**	**+0.3**
KHC			*e*SG	**Sg**	**03 19 54.5**	**-0.8**
	comp=Z,65nm,0.9s					
GEC2	**GERESS Array S**	**3.31 254**	*e*Pn	**Pn**	**03 19 02.8**	**+0.5**
GERES	**GERESS Array B**	**3.31 254**	Pn	**Pn**	**03 19 02.0**	**-0.3**
	0.5nm,0.3s,baz=72,slow=14,SNR=14					
GERES			Pg	**Pb**	**03 19 10.0**	**+1.2**
	2.8nm,0.3s,baz=67,slow=18,SNR=50					
GERES			Sn	**Sn**	**03 19 42.1**	**-0.2**
	2.5nm,0.3s,baz=66,slow=22,SNR=6.3					
GERES			Lg	Lg	03 19 51.5	
	8.1nm,0.3s,baz=67,slow=28,SNR=14					
MOA	**Molln**	**3.45 236**	*e*Pn	**Pn**	**03 19 03.7**	**-0.5**
	1.1nm,0.2s,SNR=4.8					
MOA			*e*Sn	**Sn**	**03 19 44.4**	**-1.3**
	5.4nm,0.3s					
WET	**Wettzell**	**3.75 261**	*e*Pn	**Pn**	**03 19 08.6**	**+0.3**
CLL	**Collm**	**3.82 295**	*e*Pg	**Pg**	**03 19 22.0**	**-0.3**
CLL			*e*Sg	**Sg**	**03 20 10.0**	**-1.7**
	comp=Z,42nm,0.7s					
CLL	**Collm**	**3.82 295**	*e*Sg	**Sg**	**03 20 09.4**	**-2.4**
BMR	**Baia Mare**	**3.94 122**	⇓P	**Sn**	**03 19 56.9**	**-0.8**
NKC	**Novy Kostel**	**3.94 278**	*e*PN	**Pn**	**03 19 11.8**	**+0.9**
NKC			*e*SG	**Sg**	**03 20 14.1**	**-1.6**
	comp=Z,35nm,0.5s					
TANN	**Tannenbergstha**	**3.95 281**	*e*Sg	**Sg**	**03 20 14.7**	**-1.2**
WERN	**Wernitzgruen**	**3.99 279**	*e*Sg	**Sg**	**03 20 16.8**	**-0.5**
GUNZ	**Gunzen**	**4.02 280**	*e*Sg	**Sg**	**03 20 18.2**	**-0.2**
ROTZ	**Rotzenmuhle**	**4.10 271**	*e*Sg	**Sg**	**03 20 20.5**	**-0.2**
DRGR		**4.13 136**	⇑P	**Sn**	**03 19 59.5**	**-3.2**
KBA	**Koelnbreinsper**	**4.42 233**	*e*Pn	**Pn**	**03 19 17.9**	**+0.3**
	comp=Z,1.5nm,0.3s					
KBA			*e*Sn	**Sn**	**03 20 09.5**	**-0.4**
	comp=Z,2.9nm,0.2s					
GRF	**Grafenberg Arr**	**4.74 271**	*e*Sg	**Sg**	**03 20 39.1**	**-2.3**
BURAR	**Bucovina Array**	**4.95 114**	⇑P	**Sn**	**03 20 23.9**	**+1.0**
WTTA	**Wattenberg**	**5.25 243**	*e*Pn	**Pn**	**03 19 30.6**	**+1.5**
	comp=Z,0.3nm,0.2s					
BSD	**Bornholm Skovb**	**5.72 339**	*i* P	**Pn**	**03 19 34.9**	**-0.4**
TNS	**Taunus Mts**	**6.51 277**	*e*Sg	**Sg**	**03 21 38.4**	**+0.3**
BFO	**Black Forest**	**6.87 261**	*e*Sg	**Sg**	**03 21 48.7**	**-0.9**
AKASG	**Malin Array Be**	**6.91 79**	Pn	**Pn**	**03 19 49.6**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=262,slow=14,SNR=3.4					
AKASG			Lg	Lg	03 21 39.6	
	comp=Z,0.6nm,0.3s,baz=263,slow=28,SNR=3.7					
COP	**Copenhagen**	**6.92 330**	*i* P	Pb	03 20 05.6	-4.6
HFS	**Hagfors**	**10.68 347**	Pn	**Pn**	**03 20 41.0**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=158,slow=12,SNR=4.2					
NOA	**NORSAR Array B**	**11.96 343**	Pn	**Pn**	**03 20 58.2**	**-2.6**
	comp=Z,0.0nm,0.3s,baz=165,slow=12,SNR=2.8					
FINES	**FINESS Array B**	**12.37 17**	Pn	**Pn**	**03 21 02.8**	**-3.6**
	comp=Z,0.2nm,0.3s,baz=202,slow=12,SNR=8.3					

*ATH **09** 03:30:34.2, 38°.15N×20°.40E, h15km, ML3.6/9, Error ellipse: s-maj=1.8km s-min=0.9km az=246.0*

*BEO **09** 03:30:34.7±0.7, 38°.06N×20°.04E, h24km±4km, ML3.7/9*

*THE **09** 03:30:34.2, 38°.15N×20°.35E, h13km, ML3.7/11, Error ellipse: s-maj=1.0km s-min=0.5km az=76.0*

*IDC **09** 03:30:38.5±2.1, 38°.19N×20°.29E, h57km±22km, mb3.6/8, mb1 3.5/14, mb1mx3.3/47, mbtmp3.6/14, ML3.1/6, Error ellipse: s-maj=20.6km s-min=19.6km az=128.0*

ISC 09 03:30:34.0±0°.7, 38°.14N±0°.02×20°.36E±0°.03, h14km±3km, n142, σ1§58/198, mb3.8/8, 11C-10D, Greece

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.05 25**	P	**Pg**	**03 30 36.7**	**0.0**
CHV1			S	**Sg**	**03 30 38.6**	**+0.2**
KEF3	**Kipouria, Keph**	**0.07 355**	P	**Pg**	**03 30 36.9**	**+0.1**
KEF3			S	**Sg**	**03 30 38.8**	**+0.1**
LXR1	**Lixouri, Cepha**	**0.09 46**	P	**Pg**	**03 30 37.1**	**+0.1**
LXR1			S	**Sg**	**03 30 39.2**	**+0.1**
ARGA	**Argostoli. Kep**	**0.10 68**	P	**Pg**	**03 30 37.1**	**-0.1**
ARGA			S	**Sg**	**03 30 38.7**	**-0.7**
KEF2	**Argostoli. Kep**	**0.11 75**	P	**Pg**	**03 30 37.1**	**-0.1**
KEF2			S	**Sg**	**03 30 39.0**	**-0.4**
ARG2	**Argostoli**	**0.11 69**	P	**Pg**	**03 30 37.2**	**-0.1**
ARG2			S	**Sg**	**03 30 39.1**	**-0.4**
KEF4	**Livadi, Kephal**	**0.13 25**	P	**Pg**	**03 30 37.6**	**0.0**
KEF4			S	**Sg**	**03 30 40.0**	**+0.1**
KEF1	**Kardakata, Kep**	**0.17 33**	P	**Pg**	**03 30 38.0**	**0.0**
KEF1			S	**Sg**	**03 30 40.4**	**-0.3**
VLS	**Valsamata**	**0.19 78**	P	**Pg**	**03 30 38.1**	**-0.3**
VLS			S	**Sg**	**03 30 41.0**	**-0.4**
	56µm,0.2s					
VLS	**Valsamata**	**0.19 78**	P	**Pg**	**03 30 38.1**	**-0.3**
VLS			S	**Sg**	**03 30 40.8**	**-0.5**
VLS			AML	AML	03 30 41.1	
VLS			AML	AML	03 30 42.5	
	comp=N,60522µm,0.2s					
VSK1	**VASILIKIADES**	**0.32 31**	P	**Pg**	**03 30 40.4**	**-0.1**
VSK1			S	**Sg**	**03 30 45.2**	**+0.2**
	comp=N,44µm,0.3s					
KONA	**Konidatara, Ke**	**0.33 31**	P	**Pg**	**03 30 40.7**	**-0.1**
KONA			S	**Sg**	**03 30 45.7**	**+0.3**
KFL	**Anninata**	**0.34 95**	P	**Pg**	**03 30 40.8**	**-0.2**
KFL			S	**Sg**	**03 30 46.0**	**+0.3**
	comp=N,40µm,0.3s					
KFL	**Anninata**	**0.34 95**	P	**Pg**	**03 30 40.7**	**-0.2**
KFL			S	**Sg**	**03 30 46.0**	**+0.3**
VLMS	**Volimes, Zakyn**	**0.36 137**	P	**Pg**	**03 30 41.3**	**+0.1**
VLMS			S	**Sb**	**03 30 47.0**	**-0.6**
VLMS			AML	AML	03 30 47.7	
VLMS			AML	AML	03 30 48.2	
	comp=E,65703µm,0.2s					
FSK	**Fiskardo**	**0.36 27**	P	**Pg**	**03 30 41.0**	**-0.3**
FSK			S	**Sg**	**03 30 46.5**	**+0.2**
	comp=E,21µm,0.2s					
FSK	**Fiskardo**	**0.36 27**	P	**Pg**	**03 30 41.1**	**-0.3**
FSK			S	**Sg**	**03 30 46.2**	**-0.1**
EVGI	**Lefkada island**	**0.54 26**	P	**Pg**	**03 30 44.2**	**-0.4**
EVGI			S	**Sb**	**03 30 52.3**	**-0.5**
EVGI	**Lefkada island**	**0.54 26**	P	**Pg**	**03 30 44.2**	**-0.4**
EVGI			S	**Sg**	**03 30 51.8**	**0.0**
ZAK2	**Zakynthos**	**0.56 129**	P	**Pg**	**03 30 45.1**	**+0.2**
ZAK2			S	**Sb**	**03 30 54.6**	**+1.4**
KRI1	**kERI**	**0.60 142**	P	**Pg**	**03 30 45.4**	**-0.3**
KRI1			S	**Sb**	**03 30 54.7**	**+0.2**
MGNA	**Meganis**	**0.62 33**	P	**Pg**	**03 30 45.5**	**-0.6**
MGNA			S	**Sg**	**03 30 54.5**	**+0.1**
MGNA			AML	AML	03 30 55.6	
	comp=E,13509µm,0.3s					
MGNA			AML	AML	03 30 55.7	
	comp=N,9138µm,0.2s					
LKD2	**Lefkada island**	**0.69 20**	P	**Pg**	**03 30 46.9**	**-0.6**
LKD2			S	**Sb**	**03 30 58.1**	**+0.9**
LKD2	**Lefkada island**	**0.69 20**	P	**Pg**	**03 30 47.0**	**-0.5**
LKD2			AML	AML	03 31 04.3	
	comp=E,6776µm,0.3s					
LKD2			AML	AML	03 31 04.7	
	comp=N,5611µm,0.4s					
AST1	**Astakos**	**0.70 55**	P	**Pg**	**03 30 47.0**	**-0.7**
AST1			S	**Sb**	**03 30 57.9**	**+0.4**
	comp=N,9µm,0.3s					
TSLK	**Tsoukalades, L**	**0.72 19**	P	**Pg**	**03 30 47.7**	**-0.4**
TSLK			S	**Sb**	**03 30 59.2**	**+1.0**
	comp=N,2µm,0.4s					
TSLK	**Tsoukalades, L**	**0.72 19**	P	**Pg**	**03 30 47.6**	**-0.5**
PDO	**Prodromos**	**0.80 55**	P	**Pg**	**03 30 48.7**	**-0.7**
PDO	**Prodromos**	**0.80 55**	P	**Pg**	**03 30 48.7**	**-0.7**
PDO			AML	AML	03 31 08.3	
	comp=E,8544µm,0.3s					
PDO			AML	AML	03 31 10.8	
	comp=N,12016µm,0.5s					
RLS	**Riolos of Patr**	**0.88 95**	P	**Pb**	**03 30 50.1**	**-0.9**
RLS			S	**Sn**	**03 31 04.4**	**-0.1**
RLS	**Riolos of Patr**	**0.88 95**	P	**Pb**	**03 30 50.2**	**-0.9**
RLS			AML	AML	03 31 08.2	
	comp=E,3657µm,0.7s					
RLS			AML	AML	03 31 10.8	
	comp=N,3254µm,0.3s					
PVO	**Paravola**	**1.04 62**	P	**Pb**	**03 30 53.3**	**-0.4**
PVO			S	**Sn**	**03 31 10.0**	**+1.7**
	comp=N,6µm,0.3s					
PVO	**Paravola**	**1.04 62**	P	**Pb**	**03 30 53.4**	**-0.2**
PVO			AML	AML	03 31 10.5	
	comp=E,13819µm,0.3s					
PVO			AML	AML	03 31 10.5	
	comp=N,10129µm,0.3s					
DRO	**Drossia**	**1.09 99**	P	**Pb**	**03 30 53.9**	**-0.6**
DRO	**Drossia**	**1.09 99**	P	**Pb**	**03 30 54.0**	**-0.6**
UPR	**University Cam**	**1.14 82**	P	**Pg**	**03 30 55.6**	**-0.3**
UPR	**University Cam**	**1.14 82**	P	**Pg**	**03 30 55.9**	**0.0**
AMT	**Artemida-Makis**	**1.23 119**	P	**Pb**	**03 30 57.1**	**+0.1**
AMT			S	**Sg**	**03 31 14.8**	**+1.1**
	comp=N,2µm,0.8s					
AMT	**Artemida-Makis**	**1.23 119**	P	**Pn**	**03 30 56.7**	**0.0**
AMT			AML	AML	03 31 22.1	
	comp=E,4306µm,0.8s					
AMT			AML	AML	03 31 26.8	
	comp=N,4615µm,0.9s					
LAKA	**Lakka**	**1.28 85**	P	**Pn**	**03 30 57.2**	**-0.2**
LAKA			S	**Sg**	**03 31 15.6**	**+0.2**
	comp=N,1µm,0.7s					
LAKA	**Lakka**	**1.28 85**	P	**Pn**	**03 30 57.3**	**-0.2**
ANX	**Ano Chora**	**1.31 69**	P	**Pn**	**03 30 57.7**	**-0.2**
ANX	**Ano Chora**	**1.31 69**	P	**Pn**	**03 30 57.7**	**-0.2**
SERG	**Sergoula**	**1.37 78**	P	**Pn**	**03 30 58.2**	**-0.4**
SERG			S	**Sg**	**03 31 17.9**	**-0.2**
	comp=N,1µm,0.4s					
SERG	**Sergoula**	**1.37 78**	P	**Pn**	**03 30 58.3**	**-0.3**
SERG			AML	AML	03 31 24.8	
	comp=E,2411µm,0.4s					
SERG			AML	AML	03 31 25.0	
	comp=N,3294µm,0.4s					
TRIZ	**Trizonia**	**1.37 80**	P	**Pn**	**03 30 58.3**	**-0.3**
TRIZ	**Trizonia**	**1.37 80**	P	**Pn**	**03 30 58.4**	**-0.2**
EVR	**Evrytania**	**1.38 55**	P	**Pn**	**03 30 58.8**	**-0.1**
ALIK	**Aliki, Aigiali**	**1.39 84**	P	**Pn**	**03 30 59.0**	**+0.1**
IGT	**Igoumenitsa**	**1.39 359**	*e*Pg	**Pb**	**03 31 02.3**	**+1.5**
IGT			*e*Sg	**Sg**	**03 31 21.7**	**+2.8**
IGT	**Igoumenitsa**	**1.39 359**	P	**Pb**	**03 31 00.1**	**+0.3**
KLV	**Kalavryta, Ach**	**1.42 93**	P	**Pn**	**03 30 59.6**	**+0.2**
KLV	**Kalavryta, Ach**	**1.42 93**	P	**Pn**	**03 30 59.6**	**+0.2**
KALE	**Kalithea**	**1.43 79**	P	**Pn**	**03 30 59.2**	**-0.3**
KALE			S	**Sg**	**03 31 22.4**	**+2.4**
	comp=N,1µm,0.5s					
KALE	**Kalithea**	**1.43 79**	P	**Pn**	**03 30 59.2**	**-0.3**
JAN	**Janina**	**1.56 14**	P	**Pb**	**03 31 03.5**	**-0.6**
ITM	**Ithomi**	**1.57 127**	P	**Pb**	**03 31 02.7**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.64 57**	P	**Pb**	**03 31 03.7**	**-0.3**
AGG	**Agios Georgios**	**1.78 60**	P	**Pb**	**03 31 06.5**	**+0.1**
AXAR	**Agios Charalam**	**1.92 70**	P	**Pb**	**03 31 08.6**	**0.0**
THL	**Klokotos Trika**	**1.93 42**	P	**Pb**	**03 31 08.9**	**+0.1**
KPRO	**Kipourio**	**1.98 23**	P	**Pb**	**03 31 10.0**	**+0.2**
PROD	**Prodromos**	**2.01 86**	P	**Pb**	**03 31 09.2**	**-1.0**
LTK	**Loutraki**	**2.06 92**	P	**Pb**	**03 31 09.8**	**-1.4**
LKR	**Lokris**	**2.14 75**	P	**Pb**	**03 31 10.9**	**-1.6**
PENT	**Pentalofos**	**2.14 16**	P	**Pb**	**03 31 12.0**	**-0.7**
DID	**Didima**	**2.37 105**	P	**Pn**	**03 31 14.2**	**+1.8**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEO	Neokhori	2.53	62	P	Pn	03 31 16.6	+1.9
OHR	Ohrid	2.99	6	iPn	Pn	03 31 23.6	+2.7
TIP	Timpagrande	3.00	291	⇑P	Sn	03 31 58.1	+1.2
TIR	Tirane	3.23	353	ePn	Pn	03 31 25.7	+1.5
TIR				eSn	Sn	03 32 03.5	+1.1
VAY	Valandovo	3.61	28	iPn	Pn	03 31 31.1	+1.7
MATE	Matera	3.78	313	⇓P	Pn	03 31 33.0	+1.3
MATE				⇑S	Sn	03 32 14.7	-1.3
STIP	Stip	3.82	21	iPn	Pn	03 31 36.0	+3.7
SKO	Skopje	3.92	12	iPn	Pn	03 31 36.1	+2.4
SG1	Sgolgore (BA)	3.92	315	ePn	Pn	03 31 35.2	+1.5
SG1				Sn	Sn	03 32 20.1	+0.6
BAI	Bari	4.00	319	ePn	Pn	03 31 36.3	+1.5
BAI				Sn	Sn	03 32 21.5	+0.1
DRME	Dracevica, Mon	4.14	348	ePn	Pn	03 31 36.9	+0.1
APE	Apeiranthos	4.25	103	⇑P	Pb	03 31 45.0	-3.4
PDG	Podgorica	4.37	349	ePn	Pn	03 31 40.6	+0.8
PDG				eSn	Sn	03 32 29.7	-0.8
PDG	Podgorica	4.37	349	⇓P	Pn	03 31 40.2	+0.3
PDG				⇑S	Sn	03 32 30.7	+0.2
PDG	Podgorica	4.37	349	ePn	Pn	03 31 39.2	-0.6
HCY	Herceg Novi	4.53	342	ePn	Pn	03 31 41.7	-0.4
IDI	Anoyia	4.62	127	P	Pn	03 31 46.6	+3.2
	comp=N,0.1nm,0.3s,baz=125,slow=12,SNR=2.3						
IDI				S	Sn	03 32 33.8	-3.1
	comp=N,1.1nm,0.3s,baz=279,slow=19,SNR=2.6						
BOSS	Bosilegrad	4.65	20	ePn	Pn	03 31 45.1	+1.4
VAE	Valguarnera	4.75	264	P	Pn	03 31 46.8	+1.6
	comp=N,0.5nm,0.3s,baz=5.7,slow=10,SNR=2.3						
VAE				S	Sn	03 32 37.4	-2.7
	comp=N,1.5nm,0.3s,baz=221,slow=16,SNR=3.0						
BARS	Barje	4.80	13	ePn	Pn	03 31 46.5	+0.6
TREB	Trebinje	4.82	342	ePn	Pn	03 31 45.4	-0.7
TREB				eSn	Sn	03 32 39.3	-2.4
TREB	Trebinje	4.82	342	ePn	Pn	03 31 45.3	-0.8
BRY	Bratogost	4.96	344	ePn	Pn	03 31 47.2	-0.9
VTS	Vitosha	4.99	25	ePn	Pn	03 31 50.3	+1.8
VTS				eSn	Sn	03 32 47.1	+1.1
VTS	Vitosha	4.99	25	⇓P	Pn	03 31 50.3	+1.8
VTS				⇑S	Sn	03 32 47.1	+1.1
SELS	Selova	5.11	6	ePn	Pn	03 31 50.3	+0.2
SJES	Sjenica	5.13	357	ePn	Pn	03 31 51.2	+0.8
SJES				eSn	Sn	03 32 48.0	-1.4
STON	Ston	5.14	338	ePn	Pn	03 31 50.4	-0.1
STON				eSn	Sn	03 32 45.8	-3.8
STON	Ston	5.14	338	ePn	Pn	03 31 49.6	-0.9
IVAS	Ivanjica	5.43	358	ePn	Pn	03 31 54.1	-0.5
RUDO	Rudo	5.53	353	ePn	Pn	03 31 55.8	0.0
BOVS	Bovan	5.59	10	ePn	Pn	03 31 56.5	-0.1
BOVS				eSn	Sn	03 33 00.1	-0.4
GRUS	Gruza	5.75	3	ePn	Pn	03 32 00.5	+1.6
GRUS				eSn	Sn	03 33 03.4	-1.2
BBLS	Lazići	5.77	353	eSn	Sn	03 33 02.9	-2.2
BBLS	Lazići	5.77	353	ePn	Pn	03 32 00.9	+1.8
DIVS	Divibare	5.96	357	ePn	Pn	03 32 01.6	-0.2
DIVS				eSn	Sn	03 33 07.6	-2.3
DIVS	Divibare	5.96	357	ePn	Pn	03 32 01.2	-0.6
HAPS	Han Pijesak,Bl	6.04	350	ePn	Pn	03 32 00.9	-2.0
PLVB	Pleven	6.16	30	⇓P	Pn	03 32 06.8	+2.4
ELND	Elena	6.37	40	⇑P	Pn	03 32 09.7	+2.3
ELND				⇓S	Sn	03 33 20.1	+0.3
MGRS	Mrkonjic Grad	6.74	340	ePn	Pn	03 32 11.6	-0.8
BLY	Banja Luka	7.02	341	⇑P	Pn	03 32 16.8	+0.5
BLY				⇑S	Sn	03 33 33.8	-2.1
BLY	Banja Luka	7.02	341	ePn	Pn	03 32 15.7	-0.6
GZR	Gura Zlata	7.47	13	⇑P	Pn	03 32 25.0	+2.5
GZR				⇑S	Sn	03 33 45.8	-1.2
BZS	Buzias	7.53	7	⇓P	Pn	03 32 26.8	+3.5
BZS				⇓S	Sn	03 33 43.3	-5.1
VOIR		8.09	24	⇓P	Pn	03 32 32.9	+1.9
MORH	Mrgy, Hungar	8.17	352	ePn	Pn	03 32 30.8	-1.2
MLR	Muntele Rosu	8.45	28	P	Pn	03 32 39.1	+3.1
	comp=N,0.1nm,0.3s,baz=254,slow=15,SNR=6.9						
MLR	Muntele Rosu	8.45	28	⇓P	Pn	03 32 36.7	+0.7
CRES	Cresnjev	8.50	336	ePn	Pn	03 32 36.3	-0.3
LJU	Ljubljana	9.01	333	ePn	Pn	03 32 43.9	+0.4
PLOR	Plostina	9.02	29	⇑P	Pn	03 32 45.2	+1.6
VRI	Vrincioaia	9.06	30	⇓P	Pn	03 32 46.3	+2.0
SOKA	Soboth	9.39	337	ePn	Pn	03 32 48.3	-0.6
	comp=N,1.7nm,0.4s						
SOKA				Sn	Sn	03 34 27.0	-7.3
	comp=N,2.3nm,0.5s						
OBKA	Obir	9.40	335	Pn	Pn	03 32 49.5	+0.5
	comp=N,1.4nm,0.2s						
ARSA	Arzberg	9.77	340	Pn	Pn	03 32 54.5	+0.4
	comp=N,2.2nm,0.8s						
KBA	Koelnbreinsper	10.31	332	Pn	Pn	03 33 01.7	+0.1
	comp=N,0.7nm,0.3s						
KBA				Sn	Sn	03 34 50.7	-6.4
	comp=N,1.0nm,0.3s						
ABTA	Abfaltersbach	10.37	329	Pn	Pn	03 33 03.2	+1.0
	comp=N,0.5nm,0.5s						
BRTR	Keskin Array B	10.47	77	P	Pn	03 33 07.4	+3.6
	comp=N,0.0nm,0.3s,baz=260,slow=12,SNR=2.5						
MOA	Molln	10.68	337	ePn	Pn	03 33 06.9	+0.5
	comp=N,1.3nm,0.2s						
MOA				eSn	Sn	03 35 01.0	-4.7
	comp=N,1.9nm,0.4s						
WTTA	Wattenberg	11.14	328	ePn	Pn	03 33 15.1	+2.1
	comp=N,2.2nm,0.5s						
WATA	Walderalm	11.22	328	ePn	Pn	03 33 16.3	+2.3
	comp=N,0.9nm,0.2s						
SQTA	Sankt Quirin	11.29	326	ePn	Pn	03 33 18.2	+3.3
	comp=N,0.5nm,0.2s						
MOTA	Moosalm	11.43	327	Pn	Pn	03 33 18.9	+2.0
	comp=N,0.6nm,0.2s						
GERES	GERESS Array B	11.74	338	P	Pn	03 33 21.0	+0.1
	comp=N,0.2nm,0.3s,baz=154,slow=13,SNR=5.3						
GERES				S	Sn	03 35 25.1	-6.6
	comp=N,0.3nm,0.3s,baz=158,slow=24,SNR=5.1						
AKASG	Malin Array Be	14.05	24	P	Pn	03 33 54.4	+1.9
	comp=N,0.4nm,0.3s,baz=208,slow=11,SNR=2.5						
HFS	Hagfors	22.42	351	P	P	03 35 32.9	+1.0
	comp=N,2.3nm,0.5s,baz=157,slow=12,SNR=14						
FINES	FINESS Array B	23.60	7	P	P	03 35 42.8	-1.3
	comp=N,1.2nm,0.4s,baz=176,slow=9.3,SNR=17						
NB2	NORSAR Subarra	23.63	349	P	P	03 35 44.4	0.0
	comp=Z,3.4nm,1.0s,baz=159,slow=9.3						
NOA	NORSAR Array B	23.63	349	P	P	03 35 44.1	-0.3
	comp=Z,1.0nm,1.0s,baz=157,slow=9.2,SNR=4.7						
TORD	Torodi Ar. Bea	29.92	219	P	P	03 36 41.8	+0.3
	comp=Z,0.6nm,0.9s,baz=25,slow=8.7,SNR=3.5						
ARCES	ARCESS Array B	31.58	3	P	P	03 36 54.7	-1.0
	comp=Z,3.0nm,1.0s,baz=185,slow=9.6,SNR=5.0						
MKAR	Makanchi Array	45.43	58	P	P	03 38 51.2	-1.0
	comp=Z,1.0nm,0.4s,baz=272,slow=7.5,SNR=26						
ZALV	Zalesovo Beam	45.81	48	P	P	03 38 54.1	-0.9
	comp=Z,2.2nm,0.4s,baz=272,slow=8.9,SNR=10						
SONM	Songino Array	60.58	50	P	P	03 40 43.6	-0.5
	comp=Z,0.3nm,0.6s,baz=287,slow=7.0,SNR=3.7						

IDC 09 03:30:57.1±1.5, 3°.39N×127°.32E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/37, mbtmp3.6/5, Error ellipse: s-maj=162.4km s-min=20.3km az=68.0
MAN 09 03:31:18.5, 4°.37N×127°.70E, h2km, mb4.4, ML3.2, MS3.0
ISC 09 03:30:58.4±1.1, 3°.5N±0°.2×127°.4E±0°.4, h10km, n9, σ2s49/10, mb3.7/5, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	3.08	327	eP	Pg	03 32 02.9	+5.3
DDMP				eS	Sg	03 32 35.4	-2.2
SKMP	Bagumbayan, Su	4.13	316	eP	Pg	03 32 19.2	+1.5
KCP	Kidapawan	4.17	326	⇑iP	Pg	03 32 20.9	+2.4
BUKP	Musuan	4.93	332	eP	Pb	03 32 27.0	+2.1
BUKP				eS	Sb	03 33 19.6	-4.7
WRA	Warramunga Arr	24.28	164	P	P	03 36 16.0	-0.2
	1.2nm,0.5s,baz=338,slow=10,SNR=2.4						
ASAR	Alice Springs	27.75	167	P	P	03 36 47.5	0.0
	0.9nm,0.4s,baz=354,slow=7.9,SNR=31						
STKA	Stephens Creek	37.69	160	P	P	03 38 12.3	-1.9
	0.6nm,0.5s,baz=346,slow=12,SNR=3.8						
SONM	Songino Array	47.72	341	P	P	03 39 35.9	+0.3
	0.2nm,0.7s,baz=142,slow=7.3,SNR=2.4						
MKAR	Makanchi Array	58.12	325	P	P	03 40 53.0	+0.7
	0.4nm,0.4s,baz=117,slow=8.1,SNR=8.8						

MEX 09 03:45:25.8±0.5, 14°.43N×92°.95W, h20km±127km, MD3.8
GCG 09 03:45:25.2±0.8, 15°.79N×92°.38W, h35km±999km, MD3.9
ISC 09 03:45:24.0±4.1, 14°.5N±0°.2×93°.0W±0°.1, h25km±18km, n7, σ0s80/11, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.79	57	iP	Pb	03 45 39.2	+0.2
THIG				iS	Sb	03 45 48.9	-0.4
PCIG		1.24	348	eP	Pn	03 45 45.5	-0.3
PCIG				iS	Sn	03 46 01.1	-0.6
STG3	Santiaguito 3,	1.35	80	eP	Pn	03 45 47.5	-0.1
STG3				eS	Sn	03 46 05.6	+0.8
CCIG	Comitan	1.95	24	eP	Pn	03 45 58.7	+2.9
FUG	Fuego 3	2.04	91	eP	Pn	03 45 57.6	+0.6
FUG				eS	Sn	03 46 20.3	-1.5
PCG	Pacaya	2.27	92	eS	Sn	03 46 27.5	-0.1
TGIG		2.29	356	eP	Pn	03 46 00.7	+0.4
TGIG				iS	Sn	03 46 28.4	+0.7

IDC 09 03:47:16.3±12.0, 18°.65N×144°.96E, h472km±152km, mb2.8/6, mb1 3.1/6, mb1mx2.8/40, mbtmp3.7/6, Error ellipse: s-maj=57.8km s-min=21.9km az=73.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.74	196	P	P	03 54 06.8	-0.4
	3.2nm,0.6s,baz=19,slow=8.9,SNR=29						
SONM	Songino Array	42.75	322	P	P	03 54 30.3	-0.7
	0.1nm,0.3s,baz=118,slow=7.7,SNR=3.0						
ASAR	Alice Springs	43.42	195	P	P	03 54 36.5	+0.1
	0.7nm,0.4s,baz=16,slow=6.5,SNR=27						
MKAR	Makanchi Array	57.99	314	P	P	03 56 23.6	+0.7
	0.2nm,0.6s,baz=96,slow=7.1,SNR=3.5						
YKA	Yellowknife Ar	78.36	28	P	P	03 58 26.9	+0.1
	0.2nm,0.6s,baz=288,slow=5.8,SNR=3.2						
FINES	FINESS Array B	86.64	335	P	P	03 59 08.0	-0.7
	1.4nm,0.8s,baz=67,slow=4.7,SNR=6.1						

THE 09 03:47:37.2, 38°.17N×20°.41E, h13km, ML3.0/7, Error ellipse: s-maj=1.0km s-min=0.5km az=257.0
ATH 09 03:47:37.2, 38°.17N×20°.42E, h12km±1km, ML2.8/4, Error ellipse: s-maj=2.2km s-min=1.0km az=247.0
ISC 09 03:47:36.9±1.2, 38°.17N±0°.03×20°.41E±0°.05, h14km±5km, n28, σ0s33/47, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	304	P	Pg	03 47 39.5	0.0
CHV1				S	Sg	03 47 41.2	0.0
	25μm,0.2s						
LXR1	Lixouri, Cepha	0.04	39	P	Pg	03 47 39.7	+0.1
LXR1				S	Sg	03 47 41.6	+0.3
	38μm,0.2s						
KEF3	Kipouria, Keph	0.06	305	P	Pg	03 47 39.5	-0.2
KEF3				S	Sg	03 47 41.5	0.0
KEF2	Argostoli. Kep	0.06	94	P	Pg	03 47 39.8	+0.1
KEF2				S	Sg	03 47 41.1	-0.5
ARG2	Argostoli	0.06	83	P	Pg	03 47 39.7	0.0
ARG2				S	Sg	03 47 41.5	-0.1
	37μm,0.1s						
KEF4	Livadi, Kephal	0.09	9	P	Pg	03 47 39.9	-0.1
KEF4				S	Sg	03 47 41.9	-0.1
KEF1	Kardakata, Kep	0.12	25	P	Pg	03 47 40.3	-0.1
KEF1				S	Sg	03 47 42.4	-0.3
VLS	Valsamata	0.14	87	P	Pg	03 47 40.6	-0.1
VLS				S	Sg	03 47 43.3	+0.1
VLS	Valsamata	0.14	87	P	Pg	03 47 40.6	-0.1
VLS				S	Sg	03 47 42.5	-0.7
VLS				AML	AML	03 47 43.5	
	comp=N,18826μm,0.2s						
VLS				AML	AML	03 47 43.7	
	comp=E,21837μm,0.1s						
VSK1	VASILIKIADES	0.27	27	P	Pg	03 47 42.7	0.0
VSK1				S	Sg	03 47 46.8	+0.2
	comp=E,2μm,0.1s						
KFL	Anninata	0.31	101	P	Pg	03 47 43.3	0.0
KFL				S	Sg	03 47 48.1	+0.4
	comp=E,3μm,0.3s						
KFL	Anninata	0.31	101	P	Pg	03 47 43.4	0.0
KFL				S	Sg	03 47 47.6	-0.1
KFL				AML	AML	03 47 48.9	
	comp=E,7770μm,0.3s						
KFL				AML	AML	03 47 49.0	
	comp=N,5470μm,0.2s						
FSK	Fiskardo	0.31	23	P	Pg	03 47 43.4	-0.1
FSK				S	Sg	03 47 48.1	+0.2
	comp=N,1μm,0.1s						
FSK	Fiskardo	0.31	23	P	Pg	03 47 43.3	-0.1
FSK				S	Sg	03 47 47.4	-0.4
FSK				AML	AML	03 47 48.7	
	comp=N,1691μm,0.2s						
FSK				AML	AML	03 47 48.7	
	comp=E,3066μm,0.1s						
VLMS	Volimes, Zakyn	0.36	145	P	Pg	03 47 44.2	0.0
VLMS				S	Sg	03 47 49.5	+0.4
VLMS				AML	AML	03 47 50.5	
	comp=E,5837μm,0.2s						
VLMS				AML	AML	03 47 52.8	
	comp=N,3654μm,0.2s						
EVGI	Lefkada island	0.49	23	P	Pg	03 47 46.5	-0.2
EVGI				S	Sb	03 47 54.1	-0.3
EVGI	Lefkada island	0.49	23	P	Pg	03 47 46.5	-0.2
EVGI				S	Sb	03 47 54.1	-0.3
KRI1	kERI	0.60	147	P	Pg	03 47 47.7	-1.0
KRI1				S	Sb	03 47 58.1	+0.5
	comp=N,698nm,0.3s						
LKD2	Lefkada island	0.65	18	P	Pg	03 47 49.4	-0.3
LKD2	Lefkada island	0.65	18	P	Pg	03 47 49.2	-0.4
TSLK	Tsoukalades, L	0.68	17	P	Pg	03 47 50.4	+0.2
TSLK	Tsoukalades, L	0.68	17	P	Pg	03 47 50.5	+0.2
PDO	Prodromos	0.74	55	P	Pg	03 47 51.1	-0.4
PDO	Prodromos	0.74	55	P	Pg	03 47 51.0	-0.4
RLS	Riolos of Patr	0.84	97	P	Pg	03 47 53.2	-0.1
PVO	Paravola	0.99	63	P	Pb	03 47 55.7	-0.1
PVO	Paravola	0.99	63	P	Pb	03 47 55.7	-0.1
PVO				S	Sn	03 48 10.9	+0.9
DRO	Drossia	1.05	102	P	Pb	03 47 56.8	-0.1

IDC 09 03:48:17.0±5.2, 12°.39S×169°.82E, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.7/31, mbtmp4.1/4, Error ellipse: s-maj=149.0km s-min=47.8km az=119.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	32.39	229	P	P	03 54 48.7	+0.1
	2.1nm,0.4s,baz=61,slow=8.5,SNR=8.4						
WRA	Warramunga Arr	34.84	253	P	P	03 55 10.5	+0.4
	0.7nm,0.6s,baz=85,slow=9.3,SNR=3.2						
ASAR	Alice Springs	35.85	247	P	P	03 55 18.4	-0.4
	0.5nm,0.4s,baz=76,slow=9.9,SNR=13						
ZALV	Zalesovo Beam	96.98	324	P	P	04 01 50.1	-0.3
	0.8nm,0.5s,baz=103,slow=3.1,SNR=4.6						

NIED 09 03:50:00, 37°.00N×141°.20E, h53km, Mw4.1 Best double couple: Mo1.38000×10^15 NP1:φs28.00000°, δ74.00000°, λ92.00000°. NP2:φs199.00000°, δ16.00000°, λ81.00000°.
JMA 09 03:50:18.7±0.1, 37°.02N×141°.15E, h52km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φs191.00000°, δ23.00000°, λ83.00000°. NP2:φs18.00000°, δ67.00000°, λ93.00000°. Principal axes: T Plg68.0000°, Azm294.0000°; N Plg3.0000°, Azm197.0000°; P Plg22.0000°, Azm106.0000°;
JMA Felt III J1.
NEIC 09 03:50:20.2±0.8, 37°.08N±0°.09×141°.1E±0°.1, h56km±7km, mb4.3/13 Error ellipse: s-maj=18.5km s-min=9.7km az=127.0
IDC 09 03:50:21.8±2.6, 36°.99N×141°.04E, h71km±22km, mb3.7/17, mb1 3.8/20, mb1mx3.7/40, mbtmp4.0/20, MS3.2/5, Ms1 3.3/5, ms1mx2.9/48, Error ellipse: s-maj=20.3km s-min=16.5km az=100.0
ISC 09 03:50:18.6±1.1, 37°.00N±0°.04×141°.23E±0°.06, h44km±8km, n73, σ1s04/80, mb4.1/21, 14D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.36	286	⇓P	Pn	03 50 27.9	0.0
ONAJ				S	Sn	03 50 34.1	-0.3
JFK	Kawauchi	0.46	323	⇓P	Pn	03 50 29.1	0.0
JFK				iS	Sn	03 50 36.0	-0.5
JHO	Hitachi	0.66	234	⇓P	Pn	03 50 31.3	-0.2
JHO				S	Sn	03 50 39.7	-1.1
JMST	Minamisoumatoc	0.77	340	⇓P	Pn	03 50 32.7	-0.4
JMST				S	Sn	03 50 42.5	-1.1
JHYU	Hitachinakayam	0.84	218	⇓P	Pn	03 50 33.6	-0.4
JFT	Otama	0.88	306	⇓P	Pn	03 50 35.0	+0.4
JFT				S	Sn	03 50 46.4	+0.2
JMM	Marumori	0.93	338	⇓P	Pn	03 50 35.1	-0.1
JMM				S	Sn	03 50 46.8	-0.6
JSB	Shiboa	1.05	269	⇓P	Pn	03 50 36.9	0.0
JYT	Yasato	1.13	227	⇓P	Pn	03 50 37.6	-0.4
JIHU	Itakohorinouch	1.18	209	P	Pn	03 50 39.2	+0.6
JYAR	Yonezawaarcadi	1.25	317	P	Pn	03 50 39.5	-0.2
JFY	Yanaizu	1.28	289	⇓P	Pn	03 50 39.9	-0.2
JIKH	Ishinomakikobu	1.32	8	P	Pn	03 50 40.5	-0.1
JOU	Okura	1.43	342	⇓P	Pn	03 50 42.3	+0.1
JOU				eS	Sn	03 51 00.7	+0.9
JIO	Ouri	1.45	4	⇓P	Pn	03 50 42.4	0.0
JIO				eS	Sn	03 50 59.3	-0.9
JYS	Shirataka	1.53	323	P	Pn	03 50 43.8	+0.4
JAG	Ashikaga	1.54	249	⇓P	Pn	03 50 43.3	-0.2
JAG				S	Sn	03 51 02.1	-0.1
JKT	Katashina	1.60	262	⇓P	Pn	03 50 44.9	+0.4
JKT				eS	Sn	03 51 04.8	+0.7
MJAR	Matsushiro Arr	2.46	260	P	Pn	03 50 57.0	+0.6
	3.4nm,0.3s,baz=85,slow=15,SNR=135						
MJAR				S	Sn	03 51 30.5	+5.3
	3.3nm,0.3s,baz=247,slow=25,SNR=6.1						
MJAR	Matsushiro Arr	2.46	260		Pn	03 50 56.1	-0.2
MAJO	Matsushiro	2.47	260		Pn	03 50 57.0	+0.6
MAT	Matsushiro	2.47	260	P	Pn	03 50 57.3	+1.0
MAT				S	Sn	03 51 26.0	+0.8
MJB9	Matsu-Tunnel	2.47	260		Pn	03 50 57.1	+0.8
INU	Inuyama	3.78	245		Pn	03 51 16.1	+1.7
ERM	Erimo	5.22	16	Pn	Pn	03 51 35.0	+0.9
ERM					Sn	03 52 33.3	+0.3
ASAJ	Asahikawa	7.18	8	P	Pn	03 52 00.9	-0.1
	2.2nm,0.3s,baz=225,slow=9.0,SNR=15						
ASAJ				S	Sn	03 53 23.2	+1.9
	1.5nm,0.3s,baz=22,slow=19,SNR=5.6						
JKA	Kamikawa-asahi	7.18	8		Pn	03 52 00.9	-0.1
JKA					Sn	03 53 23.2	+1.9
JNU	Nakatsue	9.32	249	LR	LR	03 55 57.6	
	comp=Z,95nm,18.5s,baz=54,slow=37						
USRK	Ussuriysk Ar.	10.05	319	P	Pn	03 52 41.4	+1.2
	baz=139,slow=12,SNR=7.9						
USRK				LR	LR	03 56 17.3	
	comp=Z,95nm,19.2s,baz=176,slow=36						
USRK	Ussuriysk Ar.	10.05	319		Pn	03 52 45.5	+5.3
KSRS	Korea Array	10.62	276	P	Pn	03 52 51.4	+3.3
	0.2nm,0.3s,baz=88,slow=14,SNR=3.4						
KSRS				LR	LR	03 56 27.3	
	comp=Z,122nm,20.5s,baz=4.0,slow=35						
SEY	Seymchan	26.85	11	P	P	03 55 56.0	+1.3
	1.5nm,0.7s,baz=209,slow=11,SNR=3.7						
SONM	Songino Array	27.68	304	P	P	03 56 02.0	-0.5
	1.0nm,0.6s,baz=100,slow=8.5,SNR=9.4						
SONM				PcP	PcP	03 59 19.0	+0.4
	0.2nm,0.6s,baz=123,slow=2.6,SNR=2.4						
SONM	Songino Array	27.68	304	IAmb	IAmb	03 56 04.2	
	comp=Z,0.9nm,0.8s						
H11N2	WAKE ISLAND Hy	28.26	120	T	T	04 26 22.2	
	baz=314,slow=75,SNR=224						
H11N1	WAKE ISLAND Hy	28.27	121	T	T	04 26 23.4	
	baz=314,slow=75,SNR=260						
H11N3	WAKE ISLAND Hy	28.28	120	T	T	04 26 22.6	
	baz=314,slow=75,SNR=212						
H11S1	WAKE ISLAND Hy	28.97	123	T	T	04 27 08.0	
	baz=315,slow=76,SNR=141						
H11S3	WAKE ISLAND Hy	28.97	123	T	T	04 26 46.0	
	baz=315,slow=76,SNR=102						
H11S2	WAKE ISLAND Hy	28.98	123	T	T	04 27 04.2	
	baz=315,slow=76,SNR=80						
CMAR	Chiang Mai Arr	41.34	255	LR	LR	04 16 18.5	
	comp=Z,18nm,20.6s,baz=175,slow=38						
ZAA0	Zalesovo Array	41.83	312	P	P	03 58 03.5	-0.4
ZAA0				IAmb	IAmb	03 58 04.0	
	comp=Z,5.8nm,1.1s						
ZALV	Zalesovo Beam	41.83	312	P	P	03 58 03.6	-0.2
	comp=Z,3.5nm,0.5s,baz=96,slow=6.4,SNR=15						
ZALV	Zalesovo Beam	41.83	312	P	P	03 58 03.1	-0.7
MK31	Makanchi Array	44.01	302	P	P	03 58 20.9	-0.8
MKAR	Makanchi Array	44.01	302	P	P	03 58 21.3	-0.4
	comp=Z,1.3nm,0.6s,baz=87,slow=9.8,SNR=16						
MKAR				PcP	PcP	04 00 06.2	-0.4
	comp=Z,0.7nm,0.9s,baz=101,slow=5.1,SNR=3.4						
MKAR	Makanchi Array	44.01	302	P	P	03 58 20.8	-0.9
MAKZ	Makanchi	44.22	302	P	P	03 58 22.9	-0.5
MAKZ				IAmb	IAmb	03 58 23.7	
	comp=Z,4.7nm,1.1s						
KURK	Kurchatov	45.83	308	P	P	03 58 35.3	-0.7
ILAR	Eielson Array	49.60	32	P	P	03 59 06.0	+0.9
	comp=Z,0.3nm,0.6s,baz=264,slow=5.7,SNR=6.5						
KK31	Karatay Array	53.01	300	P	P	03 59 30.1	-0.9
KK31				IAmb	IAmb	03 59 32.8	
	comp=Z,3.9nm,1.3s						
KKAR	Karatay Array	53.01	300	P	P	03 59 29.6	-1.4
INK	Inuvik	54.48	27	P	P	03 59 42.1	+0.8
	comp=Z,0.6nm,0.8s,baz=272,slow=5.0,SNR=3.2						
NIL	Nilore	54.48	288	P	P	03 59 41.0	-0.9
ARU	Arti	56.28	319	P	P	03 59 53.8	-0.7
WRA	Warramunga Arr	57.01	188	P	P	03 59 59.8	-0.1
	comp=Z,0.8nm,0.7s,baz=8.6,slow=7.6,SNR=3.0						
KBL	Kabul	57.29	291	P	P	04 00 01.1	-1.1
KBL				IAmb	IAmb	04 00 02.6	
	comp=Z,2.4nm,0.8s						
ABKAR	Akbulak array	57.84	310	P	P	04 00 04.5	-1.1
ASAR	Alice Springs	60.74	188	P	P	04 00 25.6	-0.2
	comp=Z,0.3nm,0.8s,baz=11,slow=9.2,SNR=4.3						
GEYT	Alibeck	63.72	299	P	P	04 00 45.2	-0.6
YKA	Yellowknife Ar	63.91	30	P	P	04 00 47.4	+0.9
	comp=Z,0.5nm,0.7s,baz=300,slow=6.4,SNR=5.9						
ARCES	ARCESS Array B	63.97	339	P	P	04 00 46.5	-0.4
	comp=Z,5.1nm,1.0s,baz=53,slow=8.2,SNR=7.0						
FINES	FINESS Array B	68.77	332	P	P	04 01 17.2	-0.5
	comp=Z,4.0nm,0.7s,baz=42,slow=9.3,SNR=13						
KBZ	Khabaz	70.81	311	P	P	04 01 30.9	+0.4
	comp=Z,1.6nm,0.7s,baz=36,slow=8.7,SNR=3.6						
NB2	NORSAR Subarra	74.16	337	P	P	04 01 49.9	-0.3
	comp=Z,1.3nm,0.7s,baz=41,slow=5.9						
NOA	NORSAR Array B	74.16	337	P	P	04 01 49.6	-0.5
	comp=Z,1.7nm,0.7s,baz=39,slow=5.8,SNR=7.7						
NOA				LR	LR	04 37 42.7	
	comp=Z,40nm,18.3s,baz=300,slow=38						
AKASG	Malin Array Be	74.23	322	P	P	04 01 49.9	-0.8
	comp=Z,1.2nm,0.4s,baz=47,slow=5.9,SNR=11						
BUR08	Bucovina Ar. S	78.23	322	P	P	04 02 13.6	0.0
BURAR	Bucovina Array	78.24	322	P	P	04 02 13.7	0.0
BRTR	Keskin Array B	78.76	311	P	P	04 02 16.4	-0.4
	comp=Z,0.7nm,0.8s,baz=46,slow=4.8,SNR=2.9						
GERES	GERESS Array B	82.66	328	P	P	04 02 37.0	-0.4
	comp=Z,0.8nm,0.4s,baz=41,slow=5.7,SNR=11						
TXAR	Lajitas Array	90.26	52	P	P	04 03 16.2	+1.2
	comp=Z,0.3nm,0.6s,baz=302,slow=2.9,SNR=6.0						
TORD	Torodi Ar. Bea	117.25	315	PKP	PKPdf	04 08 58.5	-1.1
	comp=Z,0.3nm,0.7s,baz=4.2,slow=2.1,SNR=3.6						

THE 09 04:06:37.3, 38°.25N×20°.36E, h11km±1km, ML2.8/5, Error ellipse: s-maj=1.5km s-min=0.6km az=217.0
ATH 09 04:06:37.8, 38°.26N×20°.44E, h9km±2km, ML2.8/5, Error ellipse: s-maj=2.8km s-min=1.0km az=265.0
ISC 09 04:06:37.9±1.3, 38°.26N±0°.02×20°.42E±0°.06, h9km±5km, n25, σ0s52/45, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.00	98	P	Pg	04 06 39.2	-0.2
KEF4				S	Sg	04 06 40.1	-0.4
KEF1	Kardakata, Kep	0.04	64	P	Pg	04 06 39.5	-0.1
KEF1				S	Sg	04 06 40.5	-0.4
LXR1	Lixouri, Cepha	0.06	166	P	Pg	04 06 39.9	+0.1
LXR1				S	Sg	04 06 41.8	+0.6
CHV1	Chavriata, Kef	0.08	202	P	Pg	04 06 40.1	0.0
ARG2	Argostoli	0.10	146	P	Pg	04 06 40.3	0.0
ARG2				S	Sg	04 06 42.3	+0.3
KEF2	Argostoli. Kep	0.11	150	P	Pg	04 06 40.5	0.0
KEF2				S	Sg	04 06 42.0	-0.3
VLS	Valsamata	0.16	121	P	Pg	04 06 41.2	-0.1
VLS				S	Sg	04 06 44.0	+0.4
	6μm,0.1s						
VLS	Valsamata	0.16	121	P	Pg	04 06 41.1	-0.1
VLS				S	Sg	04 06 43.3	-0.3

VLS AML AML 04 06 44.1
comp=N,15459µm,0.2s
VLS AML AML 04 06 44.5
comp=E,6443µm,0.1s
VSK1 VASILIKIADES 0.19 37 P Pg 04 06 41.9 +0.1
VSK1 S Sg 04 06 45.4 +0.9
comp=E,4µm,0.3s
FSK Fiskardo 0.23 29 P Pg 04 06 42.5 0.0
FSK S Sg 04 06 46.7 +1.0
FSK Fiskardo 0.23 29 P Pg 04 06 42.6 0.0
FSK S Sg 04 06 45.5 -0.2
KFL Anninata 0.33 117 P Pg 04 06 44.3 0.0
KFL Anninata 0.33 117 P Pg 04 06 44.1 -0.2
KFL S Sg 04 06 49.0 +0.4
KFL AML AML 04 06 50.0
comp=N,4307µm,0.4s
KFL AML AML 04 06 50.2
comp=E,12731µm,0.3s
EVGI Lefkada island 0.41 27 P Pg 04 06 45.8 -0.1
EVGI S Sg 04 06 52.6 +1.4
EVGI Lefkada island 0.41 27 P Pg 04 06 45.7 -0.2
EVGI S Sg 04 06 51.0 -0.2
VLMS Volimes, Zakyn 0.43 153 P Pg 04 06 45.9 -0.3
VLMS S Sg 04 06 52.3 +0.4
VLMS AML AML 04 06 53.7
comp=E,4617µm,0.4s
VLMS AML AML 04 06 54.0
comp=N,6964µm,0.4s
TSLK Tsoukalades, L 0.59 18 P Pg 04 06 48.4 -1.0
AST1 Astakos 0.60 62 P Pg 04 06 49.4 0.0
AST1 S Sb 04 06 59.1 +0.1
PDO Prodromos 0.69 60 P Pg 04 06 50.9 -0.3
PDO S Sb 04 07 02.6 +0.9
comp=N,910nm,0.4s
PDO Prodromos 0.69 60 P Pg 04 06 50.5 -0.6
PDO S Sg 04 07 00.6 +0.4
PDO AML AML 04 07 03.1
comp=E,1320µm,0.5s
PDO AML AML 04 07 04.0
comp=N,1216µm,0.3s
RLS Riolos of Patr 0.85 103 P Pg 04 06 53.8 -0.4
PVO Paravola 0.94 67 P Pg 04 06 55.9 0.0
PVO S Sn 04 07 11.6 +0.8
comp=N,402nm,0.4s
PVO Paravola 0.94 67 P Pg 04 06 55.5 -0.5
PVO S Sg 04 07 07.3 -0.9
PVO AML AML 04 07 12.8
comp=E,869µm,0.4s
PVO AML AML 04 07 17.1
comp=N,755µm,0.4s
DRO Drossia 1.06 106 P Pg 04 06 57.9 -0.4
DRO S Sn 04 07 14.6 +0.7
comp=N,475nm,0.7s
TRIZ Trizonia 1.30 85 P Pn 04 07 01.3 -0.9

SJA 09 04:06:59.6±0.9, 22.05S×69.78W, h81km±5km, ML4.2, MW4.0
NEIC 09 04:07:01.0±1.6, 22.03S±0.04×69.79W±0.06, h73km±6km, Error ellipse: s-maj=9.2km s-min=5.4km az=115.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; Mrr-0.07; Mθθ-0.63; Mφφ0.70; Mrθ-1.25; Mrφ-0.27; Mθφ1.20; Fault plane solution: Mo1.88000×10^{15} NP1:φs36.3400°, δ21.6600°, λ-5.7200°. NP2:φs131.6600°, δ87.8900°, λ-111.5600°. Principal axes: T 1.9629, Plg39.0000°, Azm241.0000°; N -0.1898, Plg22.0000°, Azm132.0000°; P -1.7731, Plg43.0000°, Azm21.0000°;
GUC 09 04:07:00.9±0.8, 22.04S×69.75W, h72km±3km, ML4.3
IDC 09 04:07:02.3±1.4, 22.13S×69.65W, h87km±9km, mb3.6/5, mb1 3.7/9, mb1mx3.6/31, mbtmp3.9/9, MS2.8/1, Ms1 2.9/1, ms1mx2.4/19, Error ellipse: s-maj=26.1km s-min=14.8km az=84.0
ISC 09 04:07:00.8±0.7, 22.06S±0.03×69.80W±0.04, h77km±5km, n79, σ1.23/101, mb4.0/5, 2C-16D, Northern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

PB03 IPOC Station P 0.05 81 ⇓iP Pn 04 07 11.8 -0.1
PB03 iS Sn 04 07 19.4 -0.7
PB03 IPOC Station P 0.05 81 eP Pn 04 07 11.9 -0.1
PB03 eS Sn 04 07 19.3 -0.8
PB07 IPOC Station P 0.34 347 ⇓iP Pn 04 07 13.2 +0.1
PB07 iS Sn 04 07 21.9 -0.3
PB07 IAML 04 07 22.1
comp=N,55µm,0.1s
PB04 IPOC Station P 0.42 229 ⇓iP Pn 04 07 14.4 +0.6
PB04 iS Sn 04 07 24.2 +0.9
PB04 IAML 04 07 25.0
comp=E,42µm,0.2s
PB04 IPOC Station P 0.42 229 Pn 04 07 13.8 0.0
PB04 Sn Sn 04 07 24.1 +0.8
PB04 IPOC Station P 0.42 229 iP Pn 04 07 14.4 +0.6
PB04 eS Sn 04 07 24.3 +0.9
PB04 IAML 04 07 25.0
comp=Z,31µm,0.2s
PB09 IPOC Station P 0.58 64 ⇑iP Pn 04 07 15.0 -0.2
PB09 iS Sn 04 07 25.0 -0.8
PB09 IAML 04 07 25.8
comp=N,17µm,0.3s
PB09 IPOC Station P 0.58 64 iP Pn 04 07 15.0 -0.2
PB09 eS Sn 04 07 25.2 -0.6
PB09 IAML 04 07 25.7
comp=Z,21µm,0.3s
PB06 IPOC Station P 0.68 162 ⇓iP Pn 04 07 16.1 0.0
PB06 iS Sn 04 07 27.3 -0.2
PB06 IAML 04 07 29.0
comp=N,9µm,0.2s
PB06 IPOC Station P 0.68 162 iP Pn 04 07 16.2 0.0
PB06 IAML 04 07 16.8
comp=Z,6µm,0.2s
PB06 eS Sn 04 07 28.2 +0.7
PB02 IPOC Station P 0.74 353 ⇑iP Pn 04 07 16.9 +0.2
PB02 iS Sn 04 07 28.5 +0.1
PB02 IPOC Station P 0.74 353 eP Pn 04 07 16.9 +0.2
PB02 eS Sn 04 07 28.6 +0.1
PB05 IPOC Station P 0.88 205 ⇓iP Pn 04 07 19.0 +0.8
PB05 iS Sn 04 07 32.6 +1.4
PB05 IAML 04 07 33.5
comp=N,11µm,0.5s
PB05 IPOC Station P 0.88 205 iP Pn 04 07 19.3 +1.0
PB05 eS Sn 04 07 32.8 +1.5
LVC Limon Verde 0.99 124 ⇓iP Pn 04 07 20.4 +0.5
LVC iS Sn 04 07 34.4 +0.3
LVC Limon Verde 0.99 124 P Pn 04 07 20.4 +0.5
comp=N,343nm,0.3s,baz=356,slow=5.8,SNR=5250
LVC S Sn 04 07 34.5 +0.3
LVC LR LR 04 07 50.1
comp=N,327nm,20.8s,baz=182,slow=57
LVC Limon Verde 0.99 124 ⇓iP Pn 04 07 20.4 +0.5
LVC eS Sn 04 07 34.2 +0.1
PB01 IPOC Station P 1.05 16 ⇓iP Pn 04 07 20.3 0.0
PB01 iS Sn 04 07 34.7 -0.2
PB01 IAML 04 07 36.0
comp=E,37µm,0.3s
PB01 IPOC Station P 1.05 16 Pn Pn 04 07 19.8 -0.5
PB01 Sn Sn 04 07 34.2 -0.7
PB01 IPOC Station P 1.05 16 eP Pn 04 07 20.4 0.0
PB01 eS Sn 04 07 34.8 -0.2
PB15 IPOC Station P 1.19 165 ⇓iP Pn 04 07 22.6 +0.5
PB15 iS Sn 04 07 39.0 +0.8
PB15 IPOC Station P 1.19 165 ⇓iP Pn 04 07 22.7 +0.5
PB15 eS Sn 04 07 39.7 +1.6
PATCX Punta Patache 1.27 345 ⇓iP Pn 04 07 23.3 +0.2
PATCX iS Sn 04 07 40.5 +0.6
PATCX Punta Patache 1.27 345 eP Pn 04 07 23.3 +0.2
PATCX eS Sn 04 07 40.4 +0.6
TA01 Diego Aracena 1.52 347 ⇓iP Pn 04 07 26.1 -0.2
TA01 iS Sn 04 07 46.3 +0.8
PB10 IPOC Station P 1.61 205 ⇓iP Pn 04 07 27.5 +0.1
PB10 IAML 04 07 54.8
comp=E,2µm,0.4s
PB10 IPOC Station P 1.61 205 Pn 04 07 27.3 -0.1
PB10 IPOC Station P 1.61 205 iP Pn 04 07 27.6 +0.1
PB10 eS Sn 04 07 45.5 -2.0
PB10 IAML 04 08 00.5
comp=Z,1µm,0.4s
PB08 IPOC Station P 2.00 18 ⇓iP Pn 04 07 33.3 +0.4
PB08 iS Sn 04 07 58.1 +0.7
PB08 IAML 04 07 59.6
comp=E,2µm,0.2s
PB08 IPOC Station P 2.00 18 eP Pn 04 07 33.3 +0.4
PB11 IPOC Station P 2.29 3 ⇓iP Pn 04 07 36.0 -0.6
PB11 iS Sn 04 08 03.8 -0.1
PB11 IPOC Station P 2.29 3 Pn 04 07 35.8 -0.8
PB11 IPOC Station P 2.29 3 eP Pn 04 07 36.2 -0.5
GO01 Chusmiza 2.44 14 Pn 04 07 38.9 -0.1
PB14 IPOC Station P 2.62 192 iP Pn 04 07 40.7 -0.5
PB14 IAML 04 08 31.9
comp=Z,805nm,0.4s
MNMC Minye Minye 2.92 4 ⇓iP Pn 04 07 44.9 -0.3
MNMC Minye Minye 2.92 4 Pn 04 07 45.0 -0.3
GO02 Mina Guanaco 3.10 176 Pn 04 07 48.4 +0.7
YJA Yavi 3.98 93 iP Pn 04 08 03.9 +4.1
AZAP Zapla 4.86 117 iP Pn 04 08 14.6 +3.0
GO03 Copiap 5.53 184 Pn 04 08 21.0 +0.5
GO03 Copiap 5.53 184 iP Pn 04 08 18.8 -1.8
LPAZ La Paz 5.95 16 P Pn 04 08 28.9 +2.0
comp=Z,12nm,0.3s,baz=206,slow=6.2,SNR=218
LPAZ S Sn 04 09 37.6 +3.6
baz=236,slow=20,SNR=1.6
LPAZ LR LR 04 11 03.4
comp=Z,88nm,21.7s,baz=159,slow=40
LPAZ La Paz 5.95 16 Pn 04 08 28.4 +1.5
LPAZ La Paz 5.95 16 iP Pn 04 08 28.9 +2.0
AHML Horco Molle 6.22 140 iP Pn 04 08 33.2 +3.2
ACLC CERRO LA CRUZ 7.78 161 iP Pn 04 08 51.5 +0.1
AROD Rodeo 8.08 178 iP Pn 04 08 55.9 +0.2
GO04 Tololo Observa 8.13 186 Pn Pn 04 08 56.1 -0.2
GO04 Tololo Observa 8.13 186 iP Pn 04 08 53.2 -3.2
ACCO Cerro Coronel 8.52 176 iP Pn 04 09 01.1 -0.6
APLL PUNTA DE LOS L 8.81 161 iP Pn 04 09 03.7 -1.7
APLL IAML 04 09 17.2
comp=Z,5.2nm,0.3s
RTLL Cerro Villicun 9.31 173 iP Pn 04 09 10.3 -2.0
CFA Coronel Fontan 9.61 172 P Pn 04 09 15.7 -0.6
comp=Z,1.1nm,0.3s,baz=2.4,slow=14,SNR=15
CFA S Sn 04 11 16.2 +14
comp=Z,1.2nm,0.3s,baz=234,slow=16,SNR=2.5
CFA Coronel Fontan 9.61 172 iP Pn 04 09 14.5 -1.8
RTLS Leoncito 9.71 177 eS Pn 04 09 17.2 -0.7
RTCV Cerro Valdivia 9.83 174 eP Pn 04 09 18.3 -1.0
SIV San Ignacio 10.22 55 P Pn 04 09 22.0 -2.7
comp=Z,1.3nm,0.3s,baz=257,slow=10,SNR=35
ARCO CERRO ARCO 10.77 176 iP Pn 04 09 34.2 +1.9
ARCO IAML 04 10 16.9
comp=Z,5.3nm,0.6s
CPUP Villa Florida 12.15 113 P Pn 04 09 51.9 +1.0
comp=Z,0.2nm,0.3s,baz=150,slow=2.1,SNR=2.7
PLCA Paso Flores 18.63 182 P Pn 04 11 13.9 +0.5
comp=Z,0.1nm,0.3s,baz=20,slow=15,SNR=3.4
PLCA Paso Flores 18.63 182 IAmb IAmb 04 11 47.1
comp=Z,24nm,1.7s
BDFB Brasilia 21.57 77 P P 04 11 44.0 -0.4
comp=Z,2.0nm,0.6s,baz=117,slow=3.7,SNR=4.8
BDFB Brasilia 21.57 77 IAmb IAmb 04 11 55.7
comp=Z,28nm,2.0s
FLOC Florencia 24.18 346 P P 04 12 10.6 +0.4
RUSC La Rusia 27.96 353 P P 04 12 44.9 +0.1
TXAR Lajitas Array 60.62 326 P P 04 17 05.1 +1.2
comp=Z,0.3nm,0.7s,baz=159,slow=11,SNR=5.1
DBIC Dimbokro 69.69 74 P P 04 18 02.3 -0.5
comp=Z,1.8nm,0.6s,baz=213,slow=8.7,SNR=5.1
TORD Torodi Ar. Bea 78.32 71 P P 04 18 52.5 -0.7
comp=Z,3.3nm,0.4s,baz=254,slow=5.2,SNR=52
YKA Yellowknife Ar 91.44 341 P P 04 19 58.6 +0.7
comp=Z,0.4nm,0.8s,baz=145,slow=4.4,SNR=3.8
H11S2 WAKE ISLAND Hy127.12 277 T T 06 45 51.2
baz=105,slow=75,SNR=143
H11S1 WAKE ISLAND Hy127.13 277 T T 06 45 50.2
baz=105,slow=75,SNR=114
H11S3 WAKE ISLAND Hy127.14 277 T T 06 45 52.6
baz=105,slow=75,SNR=104
H11N3 WAKE ISLAND Hy127.22 279 T T 06 45 56.8
baz=104,slow=75,SNR=87
H11N2 WAKE ISLAND Hy127.23 279 T T 06 45 57.9
baz=104,slow=75,SNR=63
H11N1 WAKE ISLAND Hy127.24 279 T T 06 45 58.0
baz=104,slow=75,SNR=63
KSH Kashi 146.09 51 PKPbc PKPab 04 26 34.2 +1.0
KSH pPKP sPKPab 04 27 03.3 +0.3
KSH PP PP 04 29 55.2 -2.4
MKAR Makanchi Array 146.57 36 PKPbc PKPbc 04 26 33.3 -0.2
comp=Z,1.0nm,0.7s,baz=326,slow=3.0,SNR=8.2
LZH Lanzhou 164.96 20 ePKP PKPdf 04 26 52.6 -3.9
LZH pPKP pPKPdf 04 27 18.0 -0.9
LZH sPKP 04 27 31.2

ISK 09 04:14:01.4, 41.45N×44.07E, h13km, ML2.4/9
TIF 09 04:14:01.2, 41.42N×44.09E, h13km
NORS 09 04:14:02.5±0.0, 41.51N×43.96E, h7km, MPVA3.4
ISC 09 04:14:02.1±0.9, 41.42N±0.02×44.08E±0.02, h9km±7km, n30, σ0.85/53, Western Caucasus

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

TRLG Trialeti 0.12 7 P Pg 04 14 05.1 0.0
TRLG S Sg 04 14 07.2 0.0
KZRT Kazreti 0.24 98 P Pg 04 14 06.8 -0.2
KZRT S Sg 04 14 10.3 0.0
BGD Bogdanovka 0.40 247 P Pg 04 14 09.9 0.0
BGD S Sg 04 14 15.6 +0.4
AKH Akhalkalaki 0.44 269 P Pg 04 14 10.8 0.0
AKH S Sg 04 14 17.0 +0.3
AKH Akhalkalaki 0.44 269 PG Pg 04 14 10.8 0.0
AKH SG Sg 04 14 16.9 +0.2
TBLG Delisi 0.58 58 PG Pg 04 14 13.1 -0.3
TBLG SG Sg 04 14 21.5 +0.5
BTNK Botanikuri 0.60 64 P Pg 04 14 13.4 -0.3
BTNK S Sg 04 14 21.8 +0.3
GUDG Gudauri 1.08 16 P Pg 04 14 21.5 -1.5
TKB Tkibuli 1.23 319 P Pg 04 14 25.2 -0.6
TKB S Sn 04 14 42.0 -0.3
ONI Oni 1.26 338 P Pn 04 14 25.3 -0.6
ONI S Sn 04 14 42.8 -0.2
ONI Oni 1.26 338 PN Pn 04 14 24.6 -1.3
ONI SN Sg 04 14 41.9 -0.8
GNI Garni 1.36 158 PN Pb 04 14 27.6 -0.3
GNI SN Sn 04 14 45.4 -0.3
ZEI Tsey 1.37 354 ePg Pg 04 14 28.0 -0.5
ZEI eSg Sg 04 14 47.0 +0.7
LACR Lac 1.42 6 ePg Pb 04 14 28.0 -0.7
LACR eSg Sg 04 14 49.1 +1.5
TASB TASBURUN-IGDIR 1.44 175 PN Pn 04 14 28.1 -0.3
DIGR Digorskoe uzhe 1.52 346 ePg Pg 04 14 30.9 -0.4
DIGR eSg Sg 04 14 51.7 +0.6
DDFL Dedoflistskaro 1.53 88 P Pg 04 14 31.5 0.0
DDFL S Sg 04 14 52.5 +1.2
SENK Senkaya-Erzuru 1.57 237 PN Pn 04 14 30.2 -0.1
KORR Kora 1.67 360 ePg Pg 04 14 34.2 +0.2
KORR eSg Sg 04 14 58.1 +2.5
LGD Lagodekhi 1.67 75 P Pg 04 14 33.6 -0.5
LGD S Sg 04 14 56.1 +0.3
ARNR Ardon 1.77 5 ePg Pg 04 14 37.7 +1.7
ARNR eSg Sg 04 15 01.3 +2.5
BCA Borcka 1.85 272 PN Pn 04 14 33.7 -0.3
LSNR Lesken 1.87 354 ePg Pg 04 14 37.9 0.0
LSNR eSg Sg 04 15 04.1 +2.0
BTLR Botlikh 2.02 51 ePg Pg 04 14 40.4 -0.5
BTLR eSg Sg 04 15 06.4 -0.6
AGRB Hanur-Agry 2.02 205 PN Pn 04 14 36.5 0.0
NEY Neytrino 2.09 332 ePg Pg 04 14 41.0 -1.1
NEY eSg Sb 04 15 06.9 +0.6
GROC Groznyy 2.19 35 ePg Pg 04 14 43.5 -0.6
GROC eSg Sg 04 15 12.9 +0.5
KOPR Koprukoy-ERZUR 2.22 231 PN Pn 04 14 39.1 0.0
CHOM Cayeli-Rize 2.52 264 PN Pn 04 14 43.2 -0.1
AKT Akhty 2.74 88 ePn Pb 04 14 51.4 +0.1
AKT eSn Sb 04 15 25.9 +0.9

IDC 09 04:21:40.6±1.7, 18.29S×176.93W, h277km±17km, mb3.8/11, mb1 4.0/12, mb1mx3.7/32, mbtmp4.4/12, Error ellipse: s-maj=19.9km s-min=10.5km az=122.0
NEIC 09 04:21:42.9±1.0, 18.3S±0.2×176.9W±0.2, h302km±6km, mb4.0/7, Error ellipse: s-maj=26.9km s-min=20.4km az=150.0
ISC 09 04:21:42.6±0.5, 18.22S±0.09×176.89W±0.10, h300km, n46, σ1.40/47, mb4.0/11, Fiji Islands region

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MSVF Nonsavu 4.84 275 Pn 04 23 06.0 +7.6
AFI Afiamalu 6.52 50 P Pn 04 23 18.6 +0.2
13nm,0.3s,baz=99,slow=1.2,SNR=8.8
AFI S S 04 24 34.1 -1.5
22nm,0.3s,baz=31,slow=18,SNR=7.6
AFI Afiamalu 6.52 50 Pn 04 23 19.6 +1.3
AFI S 04 24 34.9 -0.7
NIUE Niue 6.66 98 Pn 04 23 20.6 +0.6
KUZ Kuaotunu 19.57 198 P P 04 25 50.9 +1.9
HAZ Te Kaha 20.02 192 P P 04 25 52.0 -1.7
PKGZ Pakihiroa 20.09 192 P P 04 25 54.4 0.0
PUZ Puketiti 20.23 191 P P 04 25 57.4 +1.5
RUGZ Raukumara Rang 20.24 192 P P 04 25 55.9 -0.2
TWGZ Tauwhareparae 20.39 192 P P 04 25 57.3 -0.2
MWZ Matawai 20.63 193 P P 04 26 00.8 +0.9
URZ Urewera 20.65 193 P P 04 25 57.0 -3.0
5.4nm,0.3s,baz=255,slow=6.8,SNR=8.5
URZ S S 04 29 33.2 +1.8
4.8nm,0.5s,baz=128,slow=22,SNR=6.2
URZ Urewera 20.65 193 P P 04 25 57.4 -2.6
RIGZ Rimuhau 20.94 192 P P 04 26 02.2 -0.7
NMHZ Naumai 21.52 193 P P 04 26 06.6 -1.7
PKVZ Pokaka 22.05 196 P P 04 26 17.5 +4.4
ARMA Armidale 31.04 241 P P 04 27 34.4 +1.0
STKA Stephens Creek 39.75 242 P P 04 28 47.5 +0.6
13nm,0.5s,baz=88,slow=9.7,SNR=35
STKA Stephens Creek 39.75 242 P P 04 28 47.6 +0.6
STKA IAmb IAmb 04 28 48.4
comp=Z,5.6nm,1.1s
BBOO Buckleboo 44.52 242 P P 04 29 25.0 -0.3
WRA Warramunga Arr 45.99 260 P P 04 29 36.4 -0.6
comp=Z,1.1nm,0.3s,baz=98,slow=7.0,SNR=29
AS31 Alice Springs 46.09 254 P P 04 29 37.5 -0.2
AS31 IAmb IAmb 04 29 38.4
comp=Z,5.2nm,0.7s
ASAR Alice Springs 46.10 254 P P 04 29 37.5 -0.3
comp=Z,16nm,0.5s,baz=90,slow=8.4,SNR=370
ASAR Alice Springs 46.10 254 P P 04 29 36.4 -1.3
MJAR Matsushiro Arr 69.02 322 P P 04 32 16.3 0.0
comp=Z,3.3nm,0.7s,baz=153,slow=6.0,SNR=7.8
MJAR Matsushiro Arr 69.02 322 IAmb IAmb 04 32 22.2
comp=Z,2.9nm,0.9s
QSPA South Pole Qui 71.84 180 P P 04 32 32.4 -0.6
PETK Petropavlovsk- 74.35 344 P P 04 32 48.1 +0.6
comp=Z,2.3nm,0.6s,baz=105,slow=9.1,SNR=5.0
SEY Seymchan 84.40 346 P P 04 33 41.7 +0.6
comp=Z,1.3nm,0.3s,baz=111,slow=2.9,SNR=7.0
TXAR Lajitas Array 84.95 57 P P 04 33 47.0 +2.2
comp=Z,1.2nm,0.9s,baz=221,slow=7.8,SNR=11
TXAR Lajitas Array 84.95 57 P P 04 33 46.5 +1.7
ILAR Eielson Array 85.87 12 P P 04 33 48.5 +0.2
comp=Z,0.8nm,0.7s,baz=225,slow=5.8,SNR=17
SNAA Sanae 90.25 178 P P 04 34 07.3 -1.9
VNA3 Neumayer Olymp 90.34 176 P P 04 34 08.1 -1.5
VNA2 Neumayer--Watz 90.79 177 P P 04 34 10.4 -1.2
baz=206,slow=3.5
INK Inuvik 91.81 15 P P 04 34 16.6 +0.5
comp=Z,0.2nm,0.4s,baz=242,slow=4.1,SNR=4.3
INK Inuvik 91.81 15 IAmb IAmb 04 36 01.3
comp=Z,8.1nm,1.6s
YKA Yellowknife Ar 94.01 24 P P 04 34 26.7 +0.3
comp=Z,0.3nm,0.6s,baz=244,slow=4.6,SNR=5.3
BRTR Keskin Array B 146.01 315 PKPbc PKPbc 04 40 47.5 -0.3
comp=Z,0.8nm,0.7s,baz=112,slow=3.7,SNR=5.5
CLL Collm 146.06 349 iPKPbc PKPab 04 40 47.5 -1.0
comp=Z,9.0nm,0.8s
CLL ePKPab PKiKP 04 40 51.0 +0.8
OSTC Ostas 146.07 345 ePKP PKPab 04 40 47.5 -1.1
DPC Dobruska-Polom 146.24 345 ePKP PKPab 04 40 48.7 -0.6
KRLC Kraliky 146.37 344 ePKP PKPab 04 40 48.8 -1.1
PRU Pruhonice 147.00 346 ePKP PKiKP 04 40 50.4 -1.8
KHC Kasperske Hory 148.02 347 ePKP PKiKP 04 40 53.2 -1.2
GERES GERESS Array B 148.26 347 PKPbc PKiKP 04 40 53.8 -1.2
comp=Z,1.2nm,0.6s,baz=17,slow=2.6,SNR=11

IDC 09 04:29:14.7±4.0, 37.37N×72.31E, h159km±27km, mb3.4/4, mb1 3.3/9, mb1mx3.0/54, mbtmp3.7/9, Error ellipse: s-maj=48.2km s-min=20.8km az=142.0
NNC 09 04:29:19.8±10.0, 37.99N×71.95E, h0km, mb3.5, mpv3.0, Error ellipse: s-maj=90.9km s-min=72.0km az=160.0
ISC 09 04:29:14.7±1.6, 37.4N±0.1×72.2E±0.1, h150km, n13, σ1.50/16, mb3.6/4, 1C-2D, Tajikistan

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AAK Ala-Archa 5.49 18 P Pn 04 30 37.1 +2.5
1.1nm,0.3s,baz=177,slow=7.2,SNR=13
AAK S Sn 04 31 37.3 +0.2
0.6nm,0.3s,baz=122,slow=7.1,SNR=6.7
AAK Ala-Archa 5.49 18 Pn Pn 04 30 36.7 +2.1
1.2nm,0.4s
AAK ⇑Sn Sn 04 31 36.0 -1.1
4.4nm,0.8s
KK31 Karatay Array 5.82 348 Pn Pn 04 30 41.1 +2.3
0.5nm,0.2s,baz=173,slow=14,SNR=24
KK31 ⇓Sn Sn 04 31 41.9 -2.8
6.3nm,0.3s,baz=183,slow=25,SNR=31
GEYT Alibeck 11.19 277 P Pn 04 31 50.6 +0.2
0.5nm,0.3s,baz=113,slow=10,SNR=5.2
MKAR Makanchi Array 11.96 35 P Pn 04 31 59.9 -0.4
0.0nm,0.3s,baz=225,slow=12,SNR=2.4
AB31 Akbulak array 14.79 327 ⇓P P 04 32 38.6 +0.2
0.3nm,0.4s
BVAR Borovoye Array 15.65 356 P P 04 32 46.8 -1.1
0.1nm,0.3s,baz=161,slow=12,SNR=4.1
AKTO Aktyubinsk 16.50 326 P Pn 04 32 58.5 +1.1
0.3nm,0.3s,baz=154,slow=11,SNR=5.2
ZALV Zalesovo Beam 18.67 24 P P 04 33 20.7 -0.2
0.3nm,0.3s,baz=221,slow=8.8,SNR=3.5
FINES FINESS Array B 37.27 325 P P 04 36 11.7 +0.1
3.3nm,1.0s,baz=126,slow=9.3,SNR=4.1
ARCES ARCESS Array B 40.67 337 P P 04 36 39.7 -0.1
1.2nm,0.7s,baz=107,slow=8.9,SNR=7.8
TORD Torodi Ar. Bea 66.72 269 P P 04 39 49.1 -0.7
0.4nm,0.4s,baz=46,slow=5.5,SNR=16
INK Inuvik 72.83 10 P P 04 40 25.4 -0.9
0.3nm,0.4s,baz=0.9,slow=3.9,SNR=3.8

PDG 09 04:34:04.3±0.5, 38.15N×20.31E, h12km±1km, ML4.1/13, Error ellipse: s-maj=1.1km s-min=1.1km az=0.0
BEO 09 04:34:04.5±0.6, 38.05N×20.17E, h10km±3km, ML3.9/11
THE 09 04:34:05.3, 38.08N×20.39E, h13km±1km, ML3.9/13, Error ellipse: s-maj=1.3km s-min=0.6km az=266.0
ATH 09 04:34:05.4, 38.11N×20.43E, h15km, ML3.7/15, Error ellipse: s-maj=1.7km s-min=0.8km az=239.0
NEIC 09 04:34:07.1±1.7, 38.08N±0.06×20.32E±0.07, h31km±9km, Error ellipse: s-maj=9.5km s-min=7.1km az=201.0
IDC 09 04:34:08.6±1.1, 38.06N×20.29E, h49km±16km, mb3.5/10, mb1 3.6/17, mb1mx3.4/46, mbtmp3.7/17, MS3.7/4, MS2.2/1, Ms1 3.2/2, ms1mx2.7/33, Error ellipse: s-maj=15.7km s-min=9.5km az=8.0
ISC 09 04:34:05.2±0.7, 38.10N±0.02×20.36E±0.02, h16km±4km, n251, σ1.32/332, mb3.8/13, 21C-21D, Greece

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CHV1 Chavriata, Kef 0.09 12 P Pg 04 34 08.4 0.0
CHV1 S Sg 04 34 10.8 +0.3
KEF3 Kipouria, Keph 0.10 356 P Pb 04 34 08.9 +0.1
KEF3 S Sb 04 34 11.4 +0.1
LXR1 Lixouri, Cepha 0.12 32 P Pg 04 34 08.8 0.0
LXR1 S Sg 04 34 11.4 +0.3
KEF2 Argostoli. Kep 0.12 57 P Pg 04 34 08.4 -0.4
KEF2 S Sg 04 34 10.5 -0.7
ARGA Argostoli. Kep 0.12 50 P Pg 04 34 08.5 -0.3
ARGA S Sg 04 34 10.5 -0.7
ARG2 Argostoli 0.13 52 P Pg 04 34 08.6 -0.3
ARG2 S Sg 04 34 10.6 -0.7
VLS Valsamata 0.20 67 P Pg 04 34 09.2 -0.7
VLS S Sg 04 34 12.1 -1.0
112µm,0.1s
VLS Valsamata 0.20 67 P Pg 04 34 09.2 -0.7
VLS S Sg 04 34 11.9 -1.2
VLS AML AML 04 34 12.7
VLS AML AML 04 34 13.4
VLS Valsamata 0.20 67 P Pg 04 34 09.2 -0.7
KEF1 Kardakata, Kep 0.20 26 P Pg 04 34 09.7 -0.2
KEF1 S Sg 04 34 12.9 -0.2
VLMS Volimes, Zakyn 0.33 133 P Pg 04 34 11.5 -0.5
VLMS S Sg 04 34 16.4 -0.3
VLMS AML AML 04 34 17.2
VLMS AML AML 04 34 17.5

	comp=N,65734µm,0.2s						
KFL	Anninata	0.34	88	P	Pg	04 34 11.5	-0.7
KFL				S	Sg	04 34 16.4	-0.6
	comp=N,42µm,0.4s						
KFL	Anninata	0.34	88	P	Pg	04 34 11.5	-0.7
KFL				S	Sg	04 34 16.3	-0.7
VSK1	VASILIKIADES	0.35	27	P	Pg	04 34 12.0	-0.4
VSK1				S	Sg	04 34 17.6	+0.2
	comp=N,53µm,0.5s						
KONA	Konidatara, Ke	0.37	27	P	Pg	04 34 12.3	-0.4
KONA				S	Sg	04 34 17.4	-0.5
FSK	Fiskardo	0.39	24	P	Pg	04 34 12.7	-0.5
FSK				S	Sg	04 34 18.6	-0.1
	comp=N,21µm,0.2s						
FSK	Fiskardo	0.39	24	P	Pg	04 34 12.7	-0.5
ZAK2	Zakynthos	0.53	126	P	Pg	04 34 15.2	-0.4
ZAK2				S	Sg	04 34 22.6	-0.1
	comp=N,43µm,0.4s						
KRI1	kERI	0.57	140	P	Pg	04 34 15.4	-1.0
KRI1				S	Sb	04 34 24.3	-0.3
	comp=N,21µm,0.5s						
EVGI	Lefkada island	0.57	24	P	Pg	04 34 15.8	-0.7
EVGI				S	Sb	04 34 24.7	0.0
EVGI	Lefkada island	0.57	24	P	Pg	04 34 16.0	-0.5
EVGI				S	Sg	04 34 24.3	+0.1
MGNA	Meganis	0.65	31	P	Pg	04 34 17.1	-0.9
AST1	Astakos	0.72	52	P	Pb	04 34 18.1	-1.3
LKD2	Lefkada island	0.73	19	P	Pg	04 34 18.6	-0.8
LKD2	Lefkada island	0.73	19	P	Pg	04 34 18.8	-0.6
LKD2				AML	AML	04 34 36.2	
	comp=E,11481µm,0.3s						
LKD2				AML	AML	04 34 36.4	
	comp=N,10007µm,0.4s						
TSLK	Tsoukalades, L	0.76	18	P	Pb	04 34 19.4	-0.7
TSLK				S	Sn	04 34 32.5	0.0
	comp=N,11µm,0.5s						
TSLK	Tsoukalades, L	0.76	18	P	Pb	04 34 19.6	-0.5
PDO	Prodromos	0.82	52	P	Pb	04 34 19.8	-1.2
PDO				S	Sn	04 34 33.1	-0.8
	comp=N,19µm,0.5s						
PDO	Prodromos	0.82	52	P	Pb	04 34 20.0	-1.1
PDO				AML	AML	04 34 39.7	
	comp=E,20040µm,0.5s						
PDO				AML	AML	04 34 40.5	
	comp=N,34003µm,0.5s						
RLS	Riolos of Patr	0.88	92	P	Pb	04 34 20.9	-1.1
RLS				S	Sb	04 34 33.2	-0.2
	comp=N,3µm,0.7s						
RLS	Riolos of Patr	0.88	92	P	Pb	04 34 21.1	-0.9
RLS				AML	AML	04 34 41.7	
	comp=N,3998µm,0.5s						
RLS				AML	AML	04 34 46.0	
	comp=E,6024µm,0.7s						
PVO	Paravola	1.05	60	P	Pb	04 34 24.4	-0.6
PVO				S	Sn	04 34 41.4	+1.8
	comp=E,5µm,0.7s						
PVO	Paravola	1.05	60	P	Pb	04 34 24.6	-0.4
PVO				AML	AML	04 34 48.2	
	comp=N,11006µm,0.8s						
PVO				AML	AML	04 34 51.9	
	comp=E,11210µm,0.5s						
DRO	Drossia	1.08	97	P	Pb	04 34 25.3	-0.2
DRO				S	Sg	04 34 40.8	+0.7
	comp=E,4µm,0.4s						
DRO	Drossia	1.08	97	P	Pb	04 34 25.3	-0.2
AMT	Artemida-Makis	1.21	117	P	Pn	04 34 27.3	-0.2
AMT	Artemida-Makis	1.21	117	P	Pn	04 34 27.5	+0.1
AMT				AML	AML	04 34 56.1	
	comp=E,10681µm,0.9s						
AMT				AML	AML	04 34 56.6	
	comp=N,12717µm,1.1s						
LAKA	Lakka	1.28	83	P	Pn	04 34 28.6	+0.1
LAKA				S	Sb	04 34 44.0	-1.3
	comp=N,2µm,1.0s						
LAKA	Lakka	1.28	83	P	Pn	04 34 28.5	+0.1
LAKA				AML	AML	04 34 57.4	
	comp=N,3454µm,0.8s						
LAKA				AML	AML	04 34 58.7	
	comp=E,2770µm,1.0s						
ANX	Ano Chora	1.32	68	P	Pb	04 34 29.6	-0.1
ANX				AML	AML	04 35 00.9	
	comp=N,16738µm,0.8s						
ANX				AML	AML	04 35 01.1	
	comp=E,9548µm,0.9s						
SERG	Sergoula	1.37	76	P	Pn	04 34 28.9	-0.8
SERG	Sergoula	1.37	76	P	Pn	04 34 29.4	-0.3
SERG				AML	AML	04 35 01.9	
	comp=N,5945µm,0.7s						
SERG				AML	AML	04 35 03.9	
	comp=E,4650µm,0.6s						
TRIZ	Trizonia	1.38	78	P	Pn	04 34 29.3	-0.4
TRIZ	Trizonia	1.38	78	P	Pn	04 34 29.5	-0.2
EVR	Evrytania	1.40	54	P	Pn	04 34 30.2	+0.1
EVR	Evrytania	1.40	54	P	Pn	04 34 30.3	+0.1
KLV	Kalavryta, Ach	1.42	92	P	Pn	04 34 29.7	-0.6
KLV	Kalavryta, Ach	1.42	92	P	Pn	04 34 30.7	+0.4
IGT	Igoumenitsa	1.43	359	P	Pb	04 34 31.2	-0.3
IGT				S	Sb	04 34 50.2	+0.7
	comp=E,2µm,0.6s						
IGT	Igoumenitsa	1.43	359	eP	Pg	04 34 32.2	-0.5
IGT				eS	Sg	04 34 51.3	-0.1
IGT	Igoumenitsa	1.43	359	P	Pb	04 34 31.2	-0.3
IGT				AML	AML	04 35 00.9	
	comp=N,3416µm,0.4s						
IGT				AML	AML	04 35 01.6	
	comp=E,3939µm,0.7s						
KALE	Kalithea	1.43	78	P	Pn	04 34 30.2	-0.4
KALE	Kalithea	1.43	78	P	Pn	04 34 30.4	-0.1
KALE				AML	AML	04 35 03.6	
	comp=N,6338µm,1.0s						
KALE				AML	AML	04 35 10.3	
	comp=E,2548µm,0.8s						
ITM	Ithomi	1.55	126	P	Pb	04 34 33.2	-0.3
ITM	Ithomi	1.55	126		Pb	04 34 33.1	-0.4
JAN	Janina	1.60	14	P	Pb	04 34 34.4	0.0
MAKR	Makrakomi, Fth	1.66	56	P	Pb	04 34 35.8	+0.4
MAKR	Makrakomi, Fth	1.66	56	P	Pb	04 34 35.8	+0.4
KEK	Kerkira	1.67	345	⇑P	Pb	04 34 34.7	-0.8
AGG	Agios Georgios	1.80	59	P	Pb	04 34 38.2	+0.4
AGG	Agios Georgios	1.80	59	P	Pb	04 34 38.4	+0.7
AGG				AML	AML	04 35 12.2	
	comp=N,2254µm,1.0s						
AGG				AML	AML	04 35 18.8	
	comp=E,3927µm,0.9s						
AGG	Agios Georgios	1.80	59		Pb	04 34 37.5	-0.2
THL	Klokotos Trika	1.95	41	P	Pb	04 34 40.1	-0.3
THL				AML	AML	04 35 18.4	
	comp=E,1702µm,0.7s						
THL				AML	AML	04 35 18.8	
	comp=N,1920µm,0.8s						
PROD	Prodromos	2.01	85	P	Pb	04 34 40.5	-0.9
PROD				AML	AML	04 35 23.3	
	comp=N,2795µm,0.8s						
PROD				AML	AML	04 35 27.7	
	comp=E,2356µm,0.9s						
KPRO	Kipourio	2.01	23	P	Pb	04 34 41.2	-0.2
LTK	Loutraki	2.06	91	P	Pb	04 34 41.0	-1.2
LKR	Lokris	2.15	74	P	Pb	04 34 42.2	-1.5
PENT	Pentalofos	2.18	16	P	Pb	04 34 43.5	-0.8
VIL2	Platees	2.30	86	P	Pb	04 34 44.8	-1.4
DID	Didima	2.35	104	P	Pn	04 34 45.0	+1.8
NEST	Nestorio	2.37	13	P	Pb	04 34 46.7	-0.9
SCTE	Santa Cesarea	2.46	324	⇑P	Pn	04 34 45.2	+0.6
SCTE				S	Sn	04 35 15.4	+1.1
SCTE	Santa Cesarea	2.46	324		Pn	04 34 45.0	+0.4
KZN	Kozani	2.46	26	P	Pb	04 34 47.2	-1.9
NEO	Neokhori	2.54	61	P	Pb	04 34 48.2	-2.3
LIT	Litokhoron	2.60	39		Pn	04 34 47.6	+1.1
ATHU	Athens Univers	2.71	92	P	Pn	04 34 49.7	+1.6
TIP	Timpagrande	3.02	292	⇓P	Pn	04 35 00.0	+1.4
TIP				⇓S	Sn	04 35 30.2	+2.0
TIP	Timpagrande	3.02	292	⇑P	Pn	04 34 53.5	+1.1
TIP				S	Sn	04 35 27.7	-0.6
TIP	Timpagrande	3.02	292		Pn	04 34 52.4	0.0
SERS	Sersale	3.02	289	⇑P	Pn	04 34 53.8	+1.3
SERS				S	Sn	04 35 28.1	-0.4
OHR	Ohrid	3.03	6	⇓iPn	Pn	04 34 55.1	+2.6
PIPA	Pietrapaola	3.10	298	P	Pn	04 34 54.6	+1.3
PLAC	Placanica	3.10	278	⇑P	Pn	04 34 54.5	+0.9
PLAC				S	Sn	04 35 31.1	+0.8
TIR	Tirane	3.27	353	ePn	Pn	04 34 57.2	+1.4
TIR	Tirane	3.27	353	P	Pn	04 34 57.1	+1.4
TIR	Tirane	3.27	353		Pn	04 34 56.9	+1.2

CELI	Celico	3.28	295	P	Pn	04 34 57.0	+1.0
CGL1	Ceglie Messapi	3.39	320	ePn	Pn	04 34 58.3	+0.9
TAR1	Taranto	3.40	316	ePn	Pn	04 34 59.0	+1.5
MPAZ	Palizzi	3.44	269	P	Pn	04 34 58.5	+0.4
MPAZ				S	Sn	04 35 37.6	-1.0
CAR1	CAROLEI	3.44	291	P	Pn	04 35 00.5	+2.3
CAR1				S	Sn	04 35 39.4	+0.7
CEL	Celeste	3.52	274	Pn	Pn	04 34 58.8	-0.5
CEL					Sn	04 35 39.6	-1.0
JOPP	Joppolo	3.55	280	P	Pn	04 35 00.7	+1.0
SALB	San Lorenzo Be	3.60	301	P	Pn	04 35 01.9	+1.5
VAY	Valandovo	3.64	27	⇓iPn	Pn	04 35 04.6	+3.8
NOCI	Noci	3.70	318	P	Pn	04 35 02.6	+0.9
T0702	Acquaformosa (	3.71	297	⇓P	Pn	04 35 04.6	+2.7
MATE	Matera	3.81	313	⇓P	Pn	04 35 04.3	+1.2
MSRU	Castanea	3.83	274	⇑P	Pn	04 35 03.9	+0.4
MSRU				S	Sn	04 35 46.3	-1.7
STIP	Stip	3.86	21	iPn	Pn	04 35 06.8	+2.9
SRS	Serrai	3.92	39	ePn	Pn	04 35 06.1	+1.5
SG1	Sgolgore (BA)	3.95	315	ePn	Pn	04 35 06.5	+1.4
ULC	Ulcinj	3.95	348	ePn	Pn	04 35 04.1	-1.1
ULC				eSn	Sn	04 35 51.4	+0.2
PUK	Puka	3.96	355	⇓P	Pn	04 35 06.4	+1.1
SKO	Skopje	3.96	12	⇓iPn	Pn	04 35 06.5	+1.3
BAI	Bari	4.03	319	ePn	Pn	04 35 06.9	+0.7
MCSR	Castroreale	4.03	271	P	Pn	04 35 07.2	+0.8
AMUR	Altamura	4.04	315	P	Pn	04 35 07.2	+0.8
AGST	Augusta-Monte	4.16	260	P	Pn	04 35 06.5	-1.4
DRME	Dracevica, Mon	4.18	348	ePn	Pn	04 35 08.5	+0.3
DRME	Dracevica, Mon	4.18	348	ePn	Pn	04 35 08.6	+0.3
DRME				eSn	Sn	04 35 57.1	+0.3
HAGA	Augusta	4.21	260	P	Pn	04 35 07.0	-1.6
HAGA				S	Sn	04 35 53.6	-3.8
HAVL	Avola	4.31	256	⇑P	Pn	04 35 08.9	-1.2
HAVL				S	Sn	04 35 57.4	-2.8
BUM	Brajici-Budva	4.34	346	ePn	Pn	04 35 10.5	-0.1
BUM				eSn	Sn	04 36 00.3	-0.6
ACER	Acerenza	4.35	310	P	Pn	04 35 12.2	+1.6
ACER	Acerenza	4.35	310		Pn	04 35 12.1	+1.5
MRVN	Minervino Murg	4.37	314	P	Pn	04 35 11.9	+1.0
MRVN				S	Sn	04 36 00.5	-1.0
HPAC	Pachino	4.41	253	⇓P	Pn	04 35 11.7	+0.3
HPAC				S	Sn	04 36 02.3	0.0
PDG	Podgorica	4.41	349	ePn	Pn	04 35 11.5	+0.1
PDG				eSn	Sn	04 36 02.5	+0.1
PDG	Podgorica	4.41	349	⇓P	Pn	04 35 11.6	+0.1
PDG				⇓S	Sn	04 35 55.4	-6.9
PDG	Podgorica	4.41	349	ePn	Pn	04 35 11.4	+0.1
PDG	Podgorica	4.41	349		Pn	04 35 11.2	-0.2
TTG	Podgorica	4.41	349	ePn	Pn	04 35 11.2	-0.2
TTG				eSn	Sn	04 36 02.7	+0.3
HLNI	Lentini	4.41	262	⇑P	Pn	04 35 10.0	-1.5
HLNI				S	Sn	04 35 58.8	-3.7
SANT	Santorini	4.42	111	Pn	Pn	04 35 09.7	-1.9
MEU	Monte Lauro	4.42	259	P	Pn	04 35 11.7	-0.1
MEU				S	Sn	04 36 02.0	-1.0
MCPD	Capo d'Orlando	4.44	272	P	Pn	04 35 12.4	+0.6
PVY	Plav	4.50	356	ePn	Pn	04 35 13.9	+1.1
PVY				eSn	Sn	04 36 05.1	+0.2
MSFR	San Fratello	4.55	271	P	Pn	04 35 14.6	+1.1
HCY	Herceg Novi	4.57	342	ePn	Pn	04 35 12.9	-0.8
HCY	Herceg Novi	4.57	342	ePn	Pn	04 35 12.8	-0.9
HCY				eSn	Sn	04 36 06.3	-0.1
HVZN	Vizzini	4.57	260	⇑P	Pn	04 35 13.1	-0.7
HVZN				S	Sn	04 36 03.9	-2.7
CEME	Cevo	4.58	347	ePn	Pn	04 35 13.1	-0.7
CEME				eSn	Sn	04 36 06.8	+0.1
IDI	Anoyia	4.60	126	P	Pn	04 35 16.4	+2.3
	comp=E,0.9nm,0.3s,baz=281,slow=8.7,SNR=12						
IDI				S	Sn	04 36 08.5	+1.4
	comp=E,5.5nm,0.3s,baz=161,slow=22,SNR=11						
BOSS	Bosilegrad	4.68	20	ePn	Pn	04 35 16.4	+1.2
VAE	Valguarnera	4.75	264	P	Pn	04 35 18.3	+2.1
	comp=E,0.7nm,0.3s,baz=149,slow=7.3,SNR=7.6						
VAE				S	Sn	04 36 11.2	+0.2
	comp=E,4.2nm,0.3s,baz=94,slow=7.5,SNR=8.6						
HBSP	Bosco Santo Pi	4.76	260	P	Pn	04 35 15.5	-0.7
HBSP				S	Sn	04 36 09.5	-1.5
IVA	Berane	4.78	356	⇓iPn	Pn	04 35 17.4	+0.8
IVA				eSn	Sn	04 36 11.9	+0.2
NKME	Niksic	4.79	347	ePn	Pn	04 35 16.5	-0.1
NKME				eSn	Sn	04 36 12.0	+0.2
KOME	Kolasin	4.79	353	ePn	Pn	04 35 17.2	+0.5
KOME				eSn	Sn	04 36 11.9	-0.1
BARS	Barje	4.84	13	ePn	Pn	04 35 18.1	+0.7
BARS				eSn	Sn	04 36 13.0	-0.1
TREB	Trebinje	4.86	342	ePn	Pn	04 35 17.0	-0.7
TREB				eSn	Sn	04 36 12.0	-1.6
TREB	Trebinje	4.86	342	ePn	Pn	04 35 16.9	-0.7
MSAG	Monte S. Angel	4.97	318	⇑P	Pn	04 35 20.2	+1.0
BRY	Bratogost	4.99	344	ePn	Pn	04 35 19.1	-0.5
BRY	Bratogost	4.99	344	ePn	Pn	04 35 18.6	-1.0
BRY				eSn	Sn	04 36 16.5	-0.6
VTS	Vitosha	5.02	25	ePn	Pn	04 35 21.0	+1.0
VTS				eSn	Sn	04 36 18.4	+0.7
VTS	Vitosha	5.02	25	⇑P	Pn	04 35 21.2	+1.3
VTS				⇓S	Pg	04 35 39.5	-1.8
VTS	Vitosha	5.02	25		Pn	04 35 20.4	+0.4
SGRT	San Giovanni R	5.09	317		Pn	04 35 21.3	+0.5
SELS	Selova	5.15	6	ePn	Pn	04 35 21.4	-0.2
CLTA	Licata	5.16	261	P	Pn	04 35 22.5	+0.7
SJES	Sjenica	5.17	357	ePn	Pn	04 35 22.6	+0.7
SJES				eSn	Sn	04 36 21.2	0.0
STON	Ston	5.18	338	ePn	Pn	04 35 21.6	-0.4
STON				eSn	Sn	04 36 20.4	-1.0
STON	Ston	5.18	338	⇓P	Pn	04 35 21.7	-0.3
STON	Ston	5.18	338	ePn	Pn	04 35 21.6	-0.4
WDD	Wied Dalam	5.19	246	⇓P	Pn	04 35 22.8	+0.7
WDD	Wied Dalam	5.19	246	Pn	Pn	04 35 22.1	0.0
PLD	Plovdiv	5.21	38	ePn	Pn	04 35 24.6	+2.3
UPM	Unac-Piva	5.22	348	ePn	Pn	04 35 23.4	+0.7
UPM	Unac-Piva	5.22	348	ePn	Pn	04 35 22.7	0.0
UPM				eSn	Sn	04 36 22.2	-0.4
PLE	Pljevlja	5.28	352	ePn	Pn	04 35 24.2	+0.7
PLE				eSn	Sn	04 36 23.7	-0.3
PAOL	Paolisi	5.35	305	P	Pn	04 35 27.0	+2.7
PAOL	Paolisi	5.35	305		Pn	04 35 26.3	+1.9
MELA	Melanico ??? S	5.40	313	⇓P	Pn	04 35 26.7	+1.7
ZAPS	Zavoj	5.45	18	ePn	Pn	04 35 27.1	+1.3
IVAS	Ivanjica	5.47	358	ePn	Pn	04 35 25.7	-0.4
IVAS				eSn	Sn	04 36 27.3	-1.5
RUDO	Rudo	5.56	353	ePn	Pn	04 35 27.2	-0.1
BOVS	Bovan	5.62	10	ePn	Pn	04 35 27.8	-0.3
BOVS				eSn	Sn	04 36 31.8	-0.6
GRUS	Gruza	5.79	3	ePn	Pn	04 35 30.2	-0.2
GRUS				eSn	Sn	04 36 36.4	-0.1
BBLS	Lazići	5.81	353	ePn	Pn	04 35 30.8	+0.1
BBLS				eSn	Sn	04 36 35.4	-1.6
BBLS	Lazići	5.81	353	ePn	Pn	04 35 31.1	+0.4
DIVS	Divibare	6.00	357	ePn	Pn	04 35 33.0	-0.4
DIVS				eSn	Sn	04 36 39.7	-2.1
DIVS	Divibare	6.00	357	ePn	Pn	04 35 32.8	-0.6
HAPS	Han Pijesak,Bl	6.08	350	ePn	Pn	04 35 32.2	-2.2
TRUS	Trudelj	6.12	0	ePn	Pn	04 35 34.4	-0.5
TRUS				eSn	Sn	04 36 43.1	-1.5
CAFR	Castel Frentan	6.18	314	⇑P	Pn	04 35 36.5	+0.8
PLVB	Pleven	6.20	30	⇑P	Pn	04 35 37.9	+1.9
PLVB				⇑S	Pg	04 36 04.5	+0.8
INTR	Introdacqua	6.31	310		Pn	04 35 39.0	+1.4
ELND	Elena	6.40	39	⇑P	Pn	04 35 40.5	+1.8
TEKS	Tekeris	6.47	355	ePn	Pn	04 35 39.1	-0.7
TEKS	Tekeris	6.47	355	ePn	Pn	04 35 38.8	-1.0
MGRS	Mrkonjic Grad	6.78	340	ePn	Pn	04 35 44.9	+0.9
AQU	L'Aquila	6.81	311	Pn	Pn	04 35 48.1	+3.7
AQU	L'Aquila	6.81	311		Pn	04 35 45.1	+0.7
DOB	Doboj	6.84	346	ePn	Pn	04 35 42.6	-2.2
BLY	Banja Luka	7.06	341	⇓P	Pn	04 35 47.3	-0.5
BLY	Banja Luka	7.06	341	⇑P	Pn	04 35 48.4	+0.6
BLY	Banja Luka	7.06	341	ePn	Pn	04 35 47.5	-0.3
BLY	Banja Luka	7.06	341		Pn	04 35 47.7	-0.1
GZR	Gura Zlata	7.51	13	⇓P	Pn	04 35 53.2	-0.9
BZS	Buzias	7.57	7	⇑P	Pn	04 35 54.0	-0.8
ARR	Arges	7.93	22	⇑P	Pn	04 36 01.1	+1.2
VOIR		8.13	24	⇑P	Pn	04 36 03.8	+1.3
MORH	Mrgy, Hungar	8.21	352	ePn	Pn	04 36 02.3	-1.3
BOJS	Bojanci	8.32	334	ePn	Pn	04 36 05.7	+0.6
MLR	Muntele Rosu	8.48	28	P	Pn	04 36 10.5	+3.1
	comp=E,0.2nm,0.3s,baz=181,slow=6.2,SNR=7.8						
MLR	Muntele Rosu	8.48	28	⇓P	Pn	04 36 08.5	+1.1
MLR	Muntele Rosu	8.48	28		Pn	04 36 07.6	+0.1

CRES	Cresnjev	8.54	336	ePn	Pn	04 36 07.3	-0.8
DOPR	Dopca	8.71	24	⇓P	Pn	04 36 12.1	+1.7
LJU	Ljubljana	9.04	333	ePn	Pn	04 36 15.2	+0.2
PLOR	Plostina	9.05	29	⇑P	Pn	04 36 16.1	+1.0
VRI	Vrincioaia	9.09	29	⇑P	Pn	04 36 17.1	+1.4
KEST	Kesra	9.13	258	P	Pn	04 36 18.2	+1.9
	comp=E,0.3nm,0.3s,baz=26,slow=12,SNR=5.1						
KEST				S	Sn	04 37 58.3	-0.5
	comp=E,0.2nm,0.3s,baz=278,slow=22,SNR=7.7						
SOKA	Soboth	9.43	337	ePn	Pn	04 36 19.8	-0.6
	comp=E,9.5nm,0.5s,SNR=20						
SOKA				Sn	Sn	04 38 00.2	-5.9
	comp=E,4.6nm,0.7s						
OBKA	Obir	9.44	335	ePn	Pn	04 36 20.9	+0.4
	comp=E,4.8nm,0.3s,SNR=6.8						
TEOL	Teolo	9.73	321	Pn	Pn	04 36 24.4	-0.1
ARSA	Arzberg	9.81	340	ePn	Pn	04 36 25.6	+0.1
	comp=E,3.5nm,0.3s						
STAL	STALIGIAL	9.93	328	Pn	Pn	04 36 26.5	-0.7
BURAR	Bucovina Array	10.15	19	⇓P	Pn	04 36 38.3	+8.0
CTI	Castel Tesino	10.24	324		Pn	04 36 31.5	0.0
KBA	Koelnbreinsper	10.35	332	ePn	Pn	04 36 33.1	0.0
	comp=E,2.0nm,0.3s,SNR=6.4						
KBA				Sn	Sn	04 38 25.1	-3.7
	comp=E,5.0nm,0.8s						
CONA	Conrad Observa	10.36	343	Pn	Pn	04 36 32.8	-0.3
	comp=E,1.1nm,0.4s						
ABTA	Abfaltersbach	10.40	329	ePn	Pn	04 36 33.2	-0.5
	comp=E,1.9nm,0.4s						
ABTA				Sn	Sn	04 38 27.0	-2.9
	comp=E,5.4nm,0.7s						
VYHS	Vyhne	10.45	354	ePN	Pn	04 36 34.1	-0.2
VYHS				ePG		04 37 21.5	
VYHS				eSN	Sn	04 38 27.8	-3.2
BRTR	Keskin Array B	10.48	77	P	Pn	04 36 37.5	+2.7
	comp=E,0.0nm,0.3s,baz=76,slow=32,SNR=3.1						
MOA	Molln	10.71	337	ePn	Pn	04 36 38.0	+0.1
	comp=E,3.2nm,0.3s,SNR=12						
MOA				Sn	Sn	04 38 32.0	-5.5
	comp=E,2.6nm,0.5s						
WTTA	Wattenberg	11.18	328	ePn	Pn	04 36 45.1	+0.7
	comp=E,3.0nm,0.4s,SNR=6.4						
WATA	Walderalm	11.26	328	ePn	Pn	04 36 46.7	+1.2
	comp=E,3.1nm,0.4s,SNR=7.6						
SQTA	Sankt Quirin	11.33	327	Pn	Pn	04 36 48.5	+2.1
	comp=E,1.9nm,0.2s						
FETA	Feichten	11.39	325	Pn	Pn	04 36 50.4	+3.1
	comp=E,0.5nm,0.3s						
MOTA	Moosalm	11.47	327	ePn	Pn	04 36 49.8	+1.5
	comp=E,2.8nm,0.5s						
MOTA				Sn	Sn	04 38 56.0	-0.1
	comp=E,5.0nm,0.6s						
RETA	Reutte	11.73	326	ePn	Pn	04 36 53.8	+2.0
	comp=E,0.5nm,0.3s						
GERES	GERESS Array B	11.77	338	P	Pn	04 36 52.1	-0.4
	comp=E,0.5nm,0.3s,baz=159,slow=14,SNR=20						
GERES	GERESS Array B	11.77	338	Pn	Pn	04 36 51.5	-0.9
KHC	Kasperske Hory	12.07	338	ePN	Pn	04 36 55.2	-1.2
KHC				eSN	Sn	04 39 06.5	-4.1
PRU	Pruhonice	12.60	343	ePN	Pn	04 37 03.4	-0.2
SUW	Suwalki	16.04	6	Pn	Pn	04 37 50.6	+0.8
KIV	Kislovodsk	17.81	64	Pn	Pn	04 38 11.5	-0.8
KBZ	Khabaz	17.92	65	P	Pn	04 38 19.2	+5.1
	comp=E,0.1nm,0.3s,baz=266,slow=7.6,SNR=5.3						
KBZ				LR	LR	04 47 29.5	
	comp=E,78nm,21.4s,baz=323,slow=44						
GNI	Garni	19.02	76	P	Pn	04 38 28.0	+0.8
	comp=E,0.4nm,0.3s,baz=236,slow=16,SNR=2.7						
GNI				LR	LR	04 47 11.7	
	comp=E,80nm,18.2s,baz=286,slow=41						
HFS	Hagfors	22.46	351	P	P	04 39 04.0	+0.7
	comp=E,3.8nm,0.5s,baz=164,slow=12,SNR=14						
FINES	FINESS Array B	23.64	7	P	P	04 39 16.0	+0.7
	comp=E,1.6nm,0.6s,baz=182,slow=9.0,SNR=10						
NB2	NORSAR Subarra	23.67	349	P	P	04 39 15.1	-0.7
	comp=Z,25nm,2.0s,baz=162,slow=9.3						
NOA	NORSAR Array B	23.67	349	P	P	04 39 15.8	+0.1
	comp=Z,0.4nm,0.6s,baz=156,slow=9.1,SNR=4.5						
KIRV	Kirov	27.79	33	P	P	04 39 52.7	-0.4
	comp=Z,6.3nm,0.5s,baz=258,slow=1.4,SNR=4.3						
TORD	Torodi Ar. Bea	29.89	219	P	P	04 40 11.3	-0.9
	comp=Z,0.3nm,0.5s,baz=36,slow=8.8,SNR=2.8						
ARCES	ARCESS Array B	31.62	3	P	P	04 40 27.1	+0.1
	comp=Z,1.4nm,0.9s,baz=192,slow=11,SNR=3.4						
KK31	Karatay Array	37.95	66	P	P	04 41 22.6	+0.6
KK31				IAmb	IAmb	04 41 29.9	
	comp=Z,2.3nm,0.9s						
KKAR	Karatay Array	37.95	66	P	P	04 41 21.8	-0.1
KURBB	Kurchatov Arra	42.38	53	P	P	04 41 57.5	-1.0
	comp=Z,0.6nm,0.3s,baz=280,slow=8.7,SNR=5.6						
MK31	Makanchi Array	45.45	58	P	P	04 42 22.8	-0.5
MKAR	Makanchi Array	45.45	58	P	P	04 42 22.4	-1.0
	comp=Z,0.3nm,0.4s,baz=272,slow=8.0,SNR=7.0						
MKAR	Makanchi Array	45.45	58	P	P	04 42 22.8	-0.5
ZAA0	Zalesovo Array	45.84	48	P	P	04 42 26.8	+0.6
ZAA0				IAmb	IAmb	04 42 37.1	
	comp=Z,2.4nm,0.7s						
ZALV	Zalesovo Beam	45.84	48	P	P	04 42 25.2	-1.0
	comp=Z,1.7nm,0.6s,baz=282,slow=8.1,SNR=6.1						
ZALV	Zalesovo Beam	45.84	48	P	P	04 42 26.8	+0.6
SONM	Songino Array	60.61	50	P	P	04 44 15.5	+0.4
	comp=Z,0.6nm,0.8s,baz=277,slow=6.7,SNR=3.2						
YKA	Yellowknife Ar	73.42	340	P	P	04 45 35.1	-1.0
	comp=Z,0.4nm,0.6s,baz=21,slow=4.0,SNR=8.9						

GCMT ***09*** *04:57:06.3±0.3, 55.°53S±0.°03×28.°18W±0.°03, h20km±1km, MW4.9/76, Moment Tensor Solution. s25,c31; s76,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.41±.20; $M_{\theta\theta}$-1.22±.15; $M_{\phi\phi}$2.63±.14; $M_{r\theta}$0.65±.31; $M_{\theta\phi}$2.19±.10; $M_{\phi r}$0.81±.24; Best double couple: $M_0$3.05800×10^{16} NP1:ϕ_s339.00000°,δ68.00000°,λ-174.00000°. NP2: ϕ_s247.00000°,δ84.00000°,λ-22.00000°. Principal axes: T 3.8160, Plg11.0000°, Azm295.0000°; N -1.5140, Plg67.0000°, Azm53.0000°; P -2.3010, Plg19.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***09*** *04:57:06.3±1.4, 55.°4S±0.°1×28.°4W±0.°1, h31km±3km, mb4.8/25 Error ellipse: s-maj=18.4km s-min=11.2km az=196.0*

IDC ***09*** *04:57:08.9±4.7, 55.°45S×28.°32W, h53km±42km, mb4.3/11, mb1 4.4/13, mb1mx4.2/26, mbtmp4.6/13, ML4.8/2, MS4.0/18, Ms1 4.0/18, ms1mx3.9/28, Error ellipse: s-maj=19.8km s-min=14.2km az=56.0*

ISC 09 04:57:07.6±0.3**, 55.°43S**±0.°07×**28.°42W**±0.°08**, h45**km**, n97, σ1.°18**/88**, mb4.8**/18**, MS4.1**/17**, 2C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	4.80	281		Pn	04 58 15.1	-2.2
VNA1	Neumayer--Stat	17.63	158	P	P	05 01 13.0	+3.0
VNA3	Neumayer Olymp	17.81	160	P	P	05 01 12.0	0.0
VNA2	Neumayer--Watz	18.03	158	P	Pn	05 01 14.0	-0.4
	baz=317,slow=12						
SNAA	Sanae	19.59	156	P	P	05 01 30.9	-0.7
SNAA	Sanae	19.59	156	P	P	05 01 30.7	-0.9
	3.7nm,0.3s,baz=296,slow=11,SNR=119						
SNAA				S	Sn	05 05 14.1	+2.2
	0.0nm,0.3s,baz=203,slow=21,SNR=2.2						
SNAA				LR	LR	05 08 48.0	
	comp=Z,256nm,18.6s,baz=324,slow=36						
SNAA	Sanae	19.59	156	P	P	05 01 30.4	-1.2
PMSA	Palmer Station	19.79	227	P	Pn	05 01 35.4	-0.1
	2.2nm,0.3s,baz=66,slow=5.4,SNR=8.0						
PMSA				LR	LR	05 08 09.4	
	comp=Z,311nm,19.1s,baz=106,slow=33						
H09N1	TRISTAN DA CUN	21.39	37	T	T	05 25 18.0	
	SNR=8.5						
USHA	Ushuaia	22.67	255	LR	LR	05 09 11.9	
	comp=Z,371nm,18.3s,baz=101,slow=32						
PLCA	Paso Flores	31.21	280	P	P	05 03 22.6	+0.2
	1.5nm,0.9s,baz=159,slow=8.0,SNR=4.0						
PLCA				PcP	PcP	05 06 17.0	+0.8
	1.1nm,0.8s,baz=124,slow=0.9,SNR=5.5						
PLCA				LR	LR	05 16 02.3	
	comp=Z,175nm,19.8s,baz=164,slow=36						
PLCA	Paso Flores	31.21	280	IAmb	IAmb	05 04 27.3	
	comp=Z,22nm,1.8s						
SYO	Syowa Base	32.50	142	⇑eP	P	05 03 31.7	-1.7
SYO	Syowa Base	32.50	142	⇑ipP	P	05 03 38.4	+5.0
QSPA	South Pole Qui	34.82	180	P	P	05 03 54.0	+0.2

comp=Z,7.9nm,0.6s,baz=205,slow=1.3,SNR=90
QSPA South Pole Qui 34.82 180 P P 05 03 54.4 +0.6
CPUP Villa Florida 35.88 312 P P 05 04 03.3 +0.2
comp=Z,5.8nm,0.6s,baz=148,slow=7.7,SNR=29
CPUP LR LR 05 17 40.7
comp=Z,164nm,19.6s,baz=157,slow=34
CPUP Villa Florida 35.88 312 P P 05 04 03.3 +0.2
PEL Peldehue 36.77 290 P P 05 04 10.0 -0.7
GO04 Tololo Observa 39.15 292 P P 05 04 30.6 -0.4
MAW Mawson 41.06 144 P P 05 04 47.1 +1.0
comp=Z,4.0nm,0.8s,baz=237,slow=5.1,SNR=3.5
MAW LR LR 05 20 10.6
comp=Z,158nm,18.3s,baz=240,slow=34
BDFB Brasilia 42.48 331 P P 05 05 00.7 +2.3
comp=Z,2.4nm,0.8s,baz=162,slow=9.6,SNR=3.3
BDFB LR LR 05 21 28.4
comp=Z,270nm,18.5s,baz=148,slow=34
BDFB Brasilia 42.48 331 IAmb IAmb 05 06 21.2
comp=Z,22nm,1.7s
GO02 Mina Guanaco 42.59 298 P P 05 04 59.8 +0.3
LVC Limon Verde 44.39 301 P P 05 05 15.8 +1.8
PB01 IPOC Station P 46.00 301 P P 05 05 26.4 0.0
PB01 IAmb IAmb 05 05 33.2
comp=Z,12nm,1.0s
BOSA Boshof 46.50 78 P P 05 05 29.9 -0.6
comp=Z,4.5nm,0.8s,baz=200,slow=7.9,SNR=7.4
BOSA LR LR 05 21 10.2
comp=Z,556nm,18.8s,baz=212,slow=31
BOSA Boshof 46.50 78 P P 05 05 30.1 -0.3
BOSA IAmb IAmb 05 06 53.4
comp=Z,21nm,1.8s
GO01 Chusmiza 47.03 303 P P 05 05 35.6 +0.6
GO01 IAmb IAmb 05 05 47.0
comp=Z,10.0nm,0.8s
VNDA Vanda 47.16 183 P P 05 05 35.4 +0.6
comp=Z,11nm,0.9s,baz=193,slow=7.1,SNR=8.0
VNDA LR LR 05 23 28.8
comp=Z,125nm,18.0s,baz=188,slow=34
H10S2 ASCENSION HYDR47.62 19 T T 05 57 39.3
baz=30,slow=74,SNR=16
H10S3 ASCENSION HYDR47.62 19 T T 05 57 35.8
baz=190,slow=74,SNR=13
MNMC Minye Minye 47.68 303 P P 05 05 40.0 +0.2
H10N1 ASCENSION HYDR48.74 19 T T 05 58 51.7
baz=189,slow=76,SNR=7.0
H10N3 ASCENSION HYDR48.74 19 T T 05 59 08.6
baz=189,slow=76,SNR=14
H10N2 ASCENSION HYDR48.76 18 T T 05 59 07.0
baz=189,slow=76,SNR=11
LPAZ La Paz 49.45 306 P P 05 05 54.9 +1.0
comp=Z,8.0nm,0.6s,baz=125,slow=5.3,SNR=39
LPAZ LR LR 05 26 45.2
comp=Z,56nm,21.8s,baz=144,slow=36
LPAZ La Paz 49.45 306 P P 05 05 54.0 +0.2
LBTB Lobatse 49.51 75 P P 05 05 53.5 -0.1
LBTB IAmb IAmb 05 05 56.4
comp=Z,8.0nm,0.8s
TSUM Tsumeb 50.00 63 P P 05 05 57.6 +0.2
SAML Samuel 53.87 316 P P 05 06 25.8 -0.3
SAML IAmb IAmb 05 06 26.7
comp=Z,4.5nm,0.7s
ATAH Atahualpa 62.28 301 LR LR 05 35 22.8
comp=Z,89nm,20.5s,baz=153,slow=37
LIC Lamto 64.43 26 eP P 05 07 38.8 -0.3
comp=Z,2.9nm,0.3s
KIC Kosan Boka 64.64 26 eP P 05 07 40.2 -0.2
comp=Z,7.7nm,0.9s
TIC Toumodi 64.84 26 eP P 05 07 41.6 -0.2
DBIC Dimbokro 64.91 26 P P 05 07 42.5 +0.3
comp=Z,2.1nm,0.6s,baz=174,slow=7.1,SNR=7.1
DBIC LR LR 05 30 25.0
comp=Z,123nm,20.5s,baz=312,slow=31
DBIC Dimbokro 64.91 26 IAmb IAmb 05 07 45.5
comp=Z,12nm,1.3s
ROSC El Rosal 70.95 311 LR LR 05 40 28.6
comp=Z,103nm,19.3s,baz=211,slow=37
MBAR Mbarara 72.50 64 P P 05 08 30.2 +0.4
TOA0 Torodi Ar. Sit 72.87 31 P P 05 08 32.0 +0.3
TORD Torodi Ar. Bea 72.87 31 P P 05 08 32.0 +0.4
comp=Z,13nm,0.8s,baz=201,slow=6.6,SNR=131
TORD LR LR 05 35 09.8
comp=Z,138nm,18.4s,baz=205,slow=31
TORD Torodi Ar. Bea 72.87 31 P P 05 08 31.8 +0.2
SDV Santo Domingo 73.08 316 P P 05 08 33.2 0.0
SDV IAmb IAmb 05 08 48.5
comp=Z,15nm,1.1s
TAM Tamanrasset 83.12 31 P P 05 09 30.0 +1.5
TAM IAmb IAmb 05 09 34.6
comp=Z,10nm,1.2s
URZ Urewera 84.16 200 LR LR 05 44 01.1
comp=Z,74nm,18.9s,baz=172,slow=33
STKA Stephens Creek 92.62 172 LR LR 05 51 09.8
comp=Z,102nm,18.1s,baz=204,slow=35
KEST Kesra 96.38 30 LR LR 05 49 13.2
comp=Z,169nm,18.6s,baz=236,slow=32
ASAR Alice Springs 99.78 164 P Pdif 05 10 45.5 -1.4
comp=Z,0.5nm,0.7s,baz=181,slow=4.5,SNR=8.8
ASAR LR LR 05 51 51.7
comp=Z,85nm,21.9s,baz=186,slow=33
VYHS Vyhne 110.87 32 ePDIFF Pdif 05 11 38.8 +3.5
SZCU Shurtz Canyon 117.20 297 PKP PKiKP 05 15 49.1 +1.8
PDAR Pinedale Array 119.42 303 PKP PKPdf 05 15 50.5 -0.9
comp=Z,0.3nm,0.5s,baz=144,slow=5.0,SNR=6.5
HWUT Hardware Ranch 119.51 301 PKiKP 05 15 52.0 +0.3
FXWY Fox Creek 120.78 303 PKiKP 05 15 54.3 +0.2
FINES FINESS Array B 124.16 28 PKP PKPdf 05 15 59.5 -0.1
comp=Z,2.3nm,0.5s,baz=164,slow=2.3,SNR=32
CMAR Chiang Mai Arr 125.94 111 PKP PKPdf 05 16 04.0 -0.4
comp=Z,0.5nm,0.4s,baz=230,slow=1.9,SNR=4.5
ABKAR Akbulak array 127.59 56 PKPdf 05 16 06.5 -0.1
KSH Kashi 129.07 75 PKP PKPdf 05 16 10.0 +0.1
KSH PP PP 05 18 17.5 -1.5
KSH PKS PKSdf 05 19 44.3 -2.2
KSH SKKS 05 25 13.6
ARCES ARCESS Array B 130.63 22 PKP PKPdf 05 16 12.0 +0.2
comp=Z,7.5nm,0.9s,baz=197,slow=1.3,SNR=12
YKA Yellowknife Ar 135.25 319 PKP PKPdf 05 16 20.7 +0.1
comp=Z,1.1nm,0.5s,baz=134,slow=2.0,SNR=17
MKAR Makanchi Array 137.35 72 PKP PKPdf 05 16 24.1 -1.0
comp=Z,0.5nm,0.9s,baz=243,slow=0.5,SNR=3.7
WMQ Urumqi 138.46 79 ePKP PKiKP 05 16 28.6 -0.8
WMQ LR LR
comp=Z,660nm,29.3s
CD2 Chengdu 138.50 106 PKP PKPdf 05 16 28.0 +0.2
LZH Lanzhou 142.40 101 ePKP PKPdf 05 16 32.6 -2.2
LZH pPKP PKiKP 05 16 40.9 +3.0
LZH sPKP 05 16 45.7
GTA Gaotai 142.45 93 ePKP PKiKP 05 16 41.4 +3.6
ZALV Zalesovo Beam 142.72 64 PKP PKiKP 05 16 31.9 -2.6
comp=Z,0.7nm,0.4s,baz=224,slow=4.1,SNR=4.4
ZALV Zalesovo Beam 142.72 64 PKPdf 05 16 31.4 -3.2
HYT Haines Junctio 143.86 308 PKPdf 05 16 35.8 -0.7
INK Inuvik 144.89 321 PKPdf 05 16 37.8 -0.1
EPYK Eagle Plains 145.50 317 PKPab 05 16 39.8 +0.1
BCAR Beaver Creek A 146.56 311 PKPbc 05 16 42.4 -0.3
EGAK Eagle 146.81 314 PKPab 05 16 44.2 -0.4
NJ2 Nanjing 147.26 122 ePKPbc PKPdf 05 16 43.7 +0.6
RIDG Independent Ri 148.08 311 PKiKP 05 16 48.0 -0.6
BMR Burnt Mountain 148.76 318 PKiKP 05 16 49.4 -0.4
FYU Fort Yukon 148.86 316 PKiKP 05 16 50.1 +0.2
ILAR Eielson Array 149.19 313 PKPbc PKPbc 05 16 49.9 +0.3
comp=Z,14nm,0.9s,baz=121,slow=1.6,SNR=65
CCB Clear Creek Bu 149.55 312 PKPbc 05 16 50.5 +0.1
MCK McKinley 149.84 310 PKPbc 05 16 51.8 -0.4
HHC Hu-ho-hao-te 150.05 102 ePKPbc PKPbc 05 16 50.5 -2.1
SUA Susitna One 150.12 305 PKiKP 05 16 53.8 +0.9
KTH Kantishna Hill 150.67 310 PKiKP 05 16 54.1 +0.2
BPAW Bear Paw Mtn. 150.80 311 PKiKP 05 16 54.2 +0.1
COLD Coldfoot 150.89 317 PKiKP 05 16 54.4 +0.2
PPLA Purkeypile 151.11 308 PKPdf 05 16 49.8 +1.3
PPLA PKiKP 05 16 55.4 +0.4
SONM Songino Array 151.38 86 PKPbc PKPbc 05 16 55.4 -0.1
comp=Z,3.1nm,0.6s,baz=219,slow=3.9,SNR=25
SONM PKPab PKPab 05 17 04.4 +0.5
comp=Z,1.7nm,0.7s,baz=224,slow=4.0,SNR=5.2
SONM PP PP 05 20 33.2 -2.5
comp=Z,0.4nm,0.9s,baz=268,slow=3.9,SNR=3.5
SONM Songino Array 151.38 86 PKPbc 05 16 55.1 -0.4
IMAR Indian Mountai 152.20 314 PKiKP 05 16 57.3 +0.4

IDC 09 05:28:56.8±0.8, 14.°51N×93.°78W, h0km, mb4.2/16, mb1 4.4/21, mb1mx4.2/39, mbtmp4.2/21, ML3.8/5, MS3.6/4, Ms1 3.6/4, ms1mx3.1/32, Error ellipse: s-maj=20.0km

s-min=10.7km az=46.0
MEX 09 05:28:59.0±0.7, 14.°32N×93.°89W, h10km, MD4.4
NEIC 09 05:29:01.4±2.5, 14.°43N±0.°06×93.°81W±0.°05, h34km±2km, Error ellipse: s-maj=10.3km s-min=6.2km az=213.0
GCG 09 05:29:05.6±0.4, 15.°31N×93.°46W, h35km±999km, MD4.6
ISC 09 05:28:58.8±2.7, 14.°53N±0.°05×93.°77W±0.°05, h12km±16km, n258, σ1§21/265, mb4.4/62, Near coast of Chiapas

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PCIG 1.28 24 Pb 05 29 22.4 -0.4
PCIG Sn 05 29 40.9 +1.4
PCIG 1.28 24 iP Pb 05 29 22.4 -0.4
PCIG iS Sn 05 29 40.9 +1.4
THIG 1.50 75 Pn 05 29 25.0 -0.6
THIG Sb 05 29 45.6 0.0
THIG 1.50 75 eP Pn 05 29 25.0 -0.6
THIG iS Sb 05 29 45.6 0.0
ERG Entre ros, C 2.13 92 eP Pb 05 29 37.3 -0.1
STG3 Santiaguito 3, 2.13 85 eP Pn 05 29 34.6 +0.2
TGIG 2.32 15 Pn 05 29 38.1 +1.3
TGIG Sb 05 30 07.5 -1.7
TGIG 2.32 15 eP Pn 05 29 38.1 +1.3
TGIG iS Sb 05 30 07.5 -1.7
CCIG Comitan 2.34 42 Pb 05 29 39.6 -1.5
CCIG Comitan 2.34 42 Pb 05 29 39.6 -1.5
CCIG Sb 05 30 10.4 +0.4
CCIG Comitan 2.34 42 eP Pb 05 29 39.6 -1.5
CCIG eS Sb 05 30 10.4 +0.4
CMIG Matias Romero 2.76 337 Pn Pn 05 29 42.3 -0.6
11nm,0.3s,baz=152,slow=11,SNR=144
CMIG Sn Sn 05 30 14.6 -1.7
39nm,0.3s,baz=92,slow=21,SNR=11
CMIG LR LR 05 30 14.7
comp=Z,212nm,20.8s,baz=200,slow=28
CMIG Lg Lg 05 30 25.9
23nm,0.3s,baz=142,slow=22,SNR=6.5
CMIG Matias Romero 2.76 337 Pn 05 29 42.3 -0.6
CMIG Sn 05 30 14.6 -1.7
FUG Fuego 3 2.83 91 eP Pb 05 29 47.1 -2.4
FUG eS Sn 05 30 19.2 +1.0
APG El Apazote 3.23 81 Pn Pn 05 29 50.5 +1.0
5.7nm,0.3s,baz=299,slow=9.1,SNR=78
APG Sn Sn 05 30 28.7 +0.7
24nm,0.3s,baz=284,slow=10.0,SNR=4.5
APG Lg Lg 05 30 40.6
34nm,0.3s,baz=329,slow=11,SNR=4.6
NBG Las Nubes 3.31 89 eP Pn 05 29 53.1 +2.4
TLIG Tlapa 5.51 304 Pn 05 30 20.8 -0.1
TGUH Tegucigalpa,Un 6.31 94 Pn Pn 05 30 32.5 +0.6
ESTN Estel 7.32 100 Pn 05 30 46.4 +0.6
TEIG Tepich 7.71 42 Pn Pn 05 30 51.1 +0.1
7.0nm,0.3s,baz=16,slow=1.4,SNR=35
TEIG Sn Sn 05 32 19.5 +1.1
3.9nm,0.3s,baz=139,slow=20,SNR=3.2
TEIG LR LR 05 34 13.8
comp=Z,763nm,20.0s,baz=141,slow=41
TEIG Tepich 7.71 42 Pn 05 30 50.8 -0.3
ACON Acoyapa 8.74 106 Pn Pn 05 31 06.5 +1.3
MOIG Morelia 8.75 307 Pn 05 31 07.4 +1.9
JTS Las Juntas de 9.59 115 Pn Pn 05 31 17.8 +1.0
0.3nm,0.3s,baz=158,slow=21,SNR=3.7
JTS Las Juntas de 9.59 115 Pn 05 31 13.2 -3.6
ZAIG Zacatecas 11.69 316 Pn 05 31 45.7 -0.1
833A Chaparral WMA, 14.68 340 Pn Pn 05 32 28.7 +2.2
HKT Hockley 15.46 353 Pn 05 32 38.1 +1.4
435B Jarrell 16.55 348 Pn 05 32 51.3 +0.5
435B IAmb IAmb 05 33 07.6
comp=Z,21nm,0.8s
435B Jarrell 16.55 348 P P 05 32 54.7 +1.3
baz=166
HPIG 16.60 320 Pn 05 32 51.1 -0.6
JCT Junction City 16.82 342 Pn 05 32 55.7 +1.4
JCT Junction City 16.82 342 P P 05 32 57.3 +0.9
baz=159,SNR=9.4
344A Westbrook Farm 17.07 9 Pn Pn 05 32 57.4 +0.1
NATX Nacogdoches 17.17 357 Pn P 05 33 01.0 +0.8
TX31 Lajitas Ar. Si 17.34 330 P Pn 05 33 01.9 +0.9
TX32 Lajitas Array 17.34 330 Pn 05 33 01.6 +0.6
TXAR Lajitas Array 17.34 330 P Pn 05 33 01.7 +0.8
comp=Z,0.1nm,0.3s,baz=153,slow=12,SNR=22
WHTX Lake Whitney, 17.70 350 P Pn 05 33 05.4 +0.1
WHTX Lake Whitney, 17.70 350 P Pn 05 33 05.3 +0.1
baz=168
553A Crawfordville 17.80 27 P P 05 33 07.7 +0.5
553A IAmb IAmb 05 33 21.4
comp=Z,41nm,1.1s
143A Socs Landing, 18.21 6 P Pn 05 33 11.7 +0.1
143A IAmb IAmb 05 33 20.3
comp=Z,38nm,1.2s
ABTX Abilene, Hawle 18.79 344 P Pn 05 33 19.2 +0.5
ABTX IAmb IAmb 05 33 24.0
comp=Z,14nm,0.8s
ABTX Abilene, Hawle 18.79 344 P Pn 05 33 19.1 +0.5
baz=162,SNR=9.7
MIAR Mount Ida 19.93 0 P P 05 33 30.9 +0.4
MIAR IAmb IAmb 05 33 36.2
comp=Z,17nm,0.8s
MIAR Mount Ida 19.93 0 P P 05 33 30.3 -0.3
baz=180,SNR=8.5
Z50A Ashland 19.95 20 P Pn 05 33 32.4 -0.2
X43A Marvell 20.07 7 P Pn 05 33 33.9 0.0
MNTX Cornudas Mount 20.12 330 P P 05 33 33.4 +0.6
MNTX Cornudas Mount 20.12 330 P P 05 33 34.1 +1.4
baz=145,SNR=20
UALR University of 20.20 3 P P 05 33 33.4 0.0
UALR IAmb IAmb 05 33 43.3
comp=Z,14nm,0.9s
GUY2C Guyana, Caldas 20.33 115 eP P 05 33 36.0 +0.3
PTBC PUERTO BERRIO, 20.57 111 eP P 05 33 37.7 +0.1
W39A Magazine 20.57 360 P Pn 05 33 41.1 +1.3
W39A IAmb IAmb 05 33 42.4
comp=Z,16nm,0.8s
W39A Magazine 20.57 360 P Pn 05 33 41.9 +2.1
baz=180,SNR=9.1
W41B Gary Mavity, V 20.60 4 P P 05 33 37.9 +0.1
NORC Norcasia 20.61 114 eP P 05 33 39.9 +1.7
WMOK Wichita Mounta 20.62 348 P P 05 33 38.3 +0.2
WMOK Wichita Mounta 20.62 348 P P 05 33 39.2 +1.1
baz=166
WHAR Wooly Hollow 20.71 3 P P 05 33 38.6 -0.4
WHAR IAmb IAmb 05 33 51.5
comp=Z,15nm,1.2s
W35A Tecumseh 20.72 353 P Pn 05 33 41.3 -0.2
X48A Hartselle 20.74 16 P P 05 33 39.4 0.0
FNO Franklin 20.89 352 P P 05 33 42.1 +1.0
MSTX Muleshoe 21.00 339 P P 05 33 43.0 +0.7
MSTX IAmb IAmb 05 33 51.3
comp=Z,19nm,0.8s
MSTX Muleshoe 21.00 339 P P 05 33 43.0 +0.7
baz=155,SNR=9.0
OKCSW OKLAHOMA CITY 21.04 352 P P 05 33 43.4 +0.7
OKCFA Oklahoma City 21.06 352 P P 05 33 43.4 +0.6
OKCFA IAmb IAmb 05 33 47.0
comp=Z,34nm,1.0s
ORTC Ortega, Tolima 21.09 118 eP P 05 33 45.2 +1.9
Y52A Lilburn 21.16 23 P P 05 33 43.8 -0.1
Y52A IAmb IAmb 05 34 00.7
comp=Z,10nm,0.7s
SPBC San Pablo de B 21.29 113 eP P 05 33 47.2 +1.7
TUL1 Leonard 21.36 355 P P 05 33 47.9 +1.8
TUL1 IAmb IAmb 05 33 49.8
comp=Z,9.7nm,0.7s
TUL1 Leonard 21.36 355 P P 05 33 48.1 +2.0
baz=174
ROSC El Rosal 21.43 115 P P 05 33 48.8 +1.4
comp=Z,7.8nm,0.7s,baz=294,slow=20,SNR=9.1
ROSC El Rosal 21.43 115 eP P 05 33 47.9 +0.5
ROSC El Rosal 21.43 115 P P 05 33 47.8 +0.3
ROSC IAmb IAmb 05 34 03.2
comp=Z,17nm,0.9s
HSIG 21.46 315 P P 05 33 48.1 +0.9
HSIG IAmb IAmb 05 34 00.3
comp=Z,16nm,1.3s
AMTX Amarillo 21.48 342 P P 05 33 47.9 +0.4
AMTX IAmb IAmb 05 33 52.0
comp=Z,19nm,0.8s
AMTX Amarillo 21.48 342 P P 05 33 48.2 +0.7
baz=158
PRAC Prado 21.49 118 eP P 05 33 49.9 +2.2
LCAR Lake Charles 21.57 6 P P 05 33 43.4 -5.0
W49A Belvidere 21.58 17 P P 05 33 48.7 +0.3
baz=200
HHAR Hobbs 21.66 360 P P 05 33 51.0 +1.7

BARC Barichara 21.70 109 eP P 05 33 52.0 +1.8
U40A Yellville 21.75 2 P P 05 33 51.9 +1.7
U40A IAmb IAmb 05 33 52.6
comp=Z,16nm,0.8s
U40A Yellville 21.75 2 P P 05 33 51.7 +1.5
baz=182,SNR=18
PAMC Pamplona, Colo 21.87 107 eP P 05 33 53.2 +1.0
319A Douglas 21.98 322 P P 05 33 53.3 +0.4
319A IAmb IAmb 05 34 09.7
comp=Z,14nm,1.1s
121A Cookes Peak, D 22.01 327 P P 05 33 54.7 +1.4
121A Cookes Peak, D 22.01 327 P P 05 33 56.2 +2.9
baz=141,SNR=25
V48A Smith Brothers 22.02 15 P P 05 33 52.6 -0.6
FLOC Florencia 22.04 124 P P 05 33 53.0 -0.6
CHIC Chingaza 22.05 115 eP P 05 33 55.4 +1.4
RUSC La Rusia 22.07 111 eP P 05 33 54.5 +0.1
RUSC La Rusia 22.07 111 P P 05 33 54.9 +0.4
WVT Waverly 22.15 13 P P 05 33 54.2 -0.4
WVT Waverly 22.15 13 P P 05 33 54.8 +0.3
baz=195
U32A Winter Ranch, 22.25 349 P P 05 33 55.2 -0.5
U32A IAmb IAmb 05 33 58.3
comp=Z,15nm,0.8s
PBMO Poplar Bluff 22.35 7 P P 05 33 55.6 -1.1
PBMO IAmb IAmb 05 33 58.2
comp=Z,11nm,0.8s
CLTN Cedars of Leba 22.48 16 P P 05 33 57.5 -0.6
MGMO Mountain Grove 22.57 3 P P 05 33 59.4 +0.4
MGMO IAmb IAmb 05 34 15.0
comp=Z,25nm,1.3s
W54A Cherokee Point 22.97 25 P P 05 34 03.5 +0.3
baz=210
U49A Red Boiling Sp 23.02 17 P P 05 34 02.9 -0.9
baz=200
TAMC Tame, Arauca 23.04 108 eP P 05 34 04.5 +0.3
T47A Sharon Grove 23.14 14 P P 05 34 04.5 -0.5
T47A IAmb IAmb 05 34 05.5
comp=Z,14nm,0.8s
U50A Jamestown 23.21 19 P P 05 34 04.8 -0.9
baz=202
ANMO Albuquerque 23.32 333 P P 05 34 08.2 +1.1
comp=Z,1.8nm,0.7s,baz=148,slow=12,SNR=10
ANMO Albuquerque 23.32 333 P P 05 34 07.7 +0.6
ANMO Albuquerque 23.32 333 P P 05 34 08.2 +1.1
baz=147
SDV Santo Domingo 23.33 101 P P 05 34 07.1 -0.2
comp=Z,6.2nm,0.7s,baz=306,slow=5.2,SNR=10
SDV Santo Domingo 23.33 101 P P 05 34 07.5 +0.2
SDV IAmb IAmb 05 34 09.6
comp=Z,5.8nm,0.7s
S44A Carbondale 23.41 9 P P 05 34 07.7 0.0
U51A La Follette 23.44 20 P P 05 34 07.2 -0.9
baz=204
CCM Cathedral Cave 23.54 5 P P 05 34 08.1 -0.9
CCM IAmb IAmb 05 34 08.5
comp=Z,5.5nm,0.7s
CCM Cathedral Cave 23.54 5 P P 05 34 07.6 -1.3
baz=186
TUC Tucson 23.54 322 P P 05 34 11.4 +2.3
TUC IAmb IAmb 05 34 12.2
comp=Z,10nm,1.0s
TUC Tucson 23.54 322 P P 05 34 10.9 +1.7
baz=134
TZTN Tazewell 23.75 21 P P 05 34 11.1 +0.1
TZTN IAmb IAmb 05 34 24.9
comp=Z,24nm,1.4s
USIN University of 23.96 12 P P 05 34 12.4 -0.6
V55A Taylorsville 24.03 26 P P 05 34 14.3 +0.6
S49A Springfield 24.35 16 P P 05 34 15.5 -1.1
baz=200
T25A Trinidad 24.43 339 P P 05 34 18.9 +1.2
T25A IAmb IAmb 05 34 20.8
comp=Z,12nm,0.8s
T25A Trinidad 24.43 339 P P 05 34 20.0 +2.3
baz=154,SNR=6.4
S50A Richmond 24.51 18 P P 05 34 17.1 -1.0
baz=202
WCI Wyandotte Cave 24.51 14 P P 05 34 17.5 -0.7
WCI Wyandotte Cave 24.51 14 P P 05 34 17.3 -0.8
baz=198
214A Organ Pipe Nat 24.57 318 P P 05 34 18.1 -0.7
214A IAmb IAmb 05 34 30.4
comp=Z,6.3nm,0.9s
214A Organ Pipe Nat 24.57 318 P P 05 34 20.3 +1.5
baz=130
KSU1 Kansas State U 24.60 355 P P 05 34 18.4 -0.6
baz=173
OLIL Olney 24.62 11 P P 05 34 17.9 -1.2
X18A Snowflake 24.70 327 P P 05 34 22.0 +1.9
X18A IAmb IAmb 05 34 24.0
comp=Z,6.8nm,0.8s
CBKS Cedar Bluff 24.75 349 P P 05 34 19.9 -0.4
CBKS IAmb IAmb 05 34 20.8
comp=Z,9.7nm,0.8s
CBKS Cedar Bluff 24.75 349 P P 05 34 20.5 +0.2
baz=166
Q48A North Vernon 25.31 15 P P 05 34 24.2 -1.2
baz=198
SDCO Great Sand Dun 25.36 338 P P 05 34 27.3 +1.2
SDCO IAmb IAmb 05 34 28.8
comp=Z,9.1nm,1.4s
SDCO Great Sand Dun 25.36 338 P P 05 34 27.6 +1.4
baz=152,SNR=7.1
BLO Bloomington 25.36 13 P P 05 34 25.1 -0.7
BLO IAmb IAmb 05 34 26.5
comp=Z,11nm,0.7s
X16A Lo Mia Camp, P 25.43 324 P P 05 34 27.7 +0.9
P46A Rosedale 25.64 12 P P 05 34 27.9 -0.4
S22A 4UR Ranch, Cre 25.86 336 P P 05 34 32.7 +1.9
baz=150
Y14A Wickenburg 26.01 321 P P 05 34 33.1 +1.2
Y14A IAmb IAmb 05 34 47.7
comp=Z,10nm,1.5s
MVCO Mesa Verde 26.12 333 P P 05 34 34.4 +1.4
MVCO IAmb IAmb 05 34 35.5
comp=Z,6.2nm,0.9s
MVCO Mesa Verde 26.12 333 P P 05 34 34.8 +1.8
baz=146
WUAZ Wupatki 26.20 326 P P 05 34 35.1 +1.4
WUAZ IAmb IAmb 05 34 47.2
comp=Z,9.0nm,1.0s
WUAZ Wupatki 26.20 326 P P 05 34 35.5 +1.8
baz=138
HDIL Hopedale 26.22 8 P P 05 34 31.0 -2.5
HDIL IAmb IAmb 05 34 33.5
comp=Z,10nm,0.8s
HDIL Hopedale 26.22 8 P P 05 34 33.2 -0.4
baz=190
Q24A Divide 26.32 340 P P 05 34 36.1 +1.2
SFIN Lafayette 26.40 12 P P 05 34 34.0 -1.2
baz=194
P50A Jamestown 26.47 17 P P 05 34 34.4 -1.5
baz=202
PDMCI Parker Dam,Lak 26.95 321 P P 05 34 42.0 +1.8
baz=132
ISCO Idaho Springs 27.23 340 P P 05 34 44.4 +1.3
ISCO IAmb IAmb 05 34 45.3
comp=Z,7.1nm,0.8s
ISCO Idaho Springs 27.23 340 P P 05 34 44.4 +1.3
baz=154,SNR=10.0
SCIA State Center 27.28 1 P P 05 34 42.5 -0.6
SCIA State Center 27.28 1 P P 05 34 42.7 -0.4
baz=181
OGNE Ogallala 27.28 346 P P 05 34 44.2 +1.0
N48A Decatur 27.31 15 P P 05 34 42.3 -1.1
baz=199
W13A Hualapai Mount 27.33 322 P P 05 34 45.4 +1.5
BC3 Big Chuckawall 27.36 318 P P 05 34 45.5 +1.4
baz=129,SNR=5.3
U15A North Rim 27.38 326 P P 05 34 46.0 +1.6
IRM Iron Mountain 27.48 319 P P 05 34 46.8 +1.7
baz=130
KNB Kanab 28.10 326 P P 05 34 52.9 +2.1
GMRC Granite Mounta 28.21 320 P P 05 34 53.4 +1.7
baz=130
SZCU Shurtz Canyon 28.67 327 P P 05 34 57.7 +1.8
CCUT Cedar City 28.78 326 P P 05 34 59.8 +2.9
P17A Butcher Ranch, 28.98 332 P P 05 35 00.2 +1.6
ECSD EROS Data Cent 29.20 356 P P 05 34 59.5 -0.7
ECSD IAmb IAmb 05 35 00.3
comp=Z,8.9nm,0.7s
ECSD EROS Data Cent 29.20 356 P P 05 34 59.5 -0.7
baz=174,SNR=11
RWWY Rawlins 29.46 339 P P 05 35 02.9 0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSUT	Pine Spring	29.77	327	P	P	05 35 07.3	+1.7
K22A	Casper	30.10	341	P	P	05 35 09.6	+1.1
K22A				IAmb	IAmb	05 35 10.5	
	comp=Z,5.1nm,0.9s						
K22A	Casper	30.10	341	P	P	05 35 09.5	+1.1
	baz=155						
MPMC	Manual Prospec	30.17	320	P	P	05 35 10.7	+1.5
	baz=129						
SPMN	Marine on St.	30.60	1	P	P	05 35 12.0	-0.6
SPMN	Marine on St.	30.60	1	P	P	05 35 11.8	-0.9
	baz=182,SNR=7.2						
TCUT	Toone Canyon	30.61	333	P	P	05 35 14.7	+1.6
RSSD	Black Hills	30.76	345	P	P	05 35 15.4	+1.1
RSSD				IAmb	IAmb	05 35 16.2	
	comp=Z,2.9nm,0.8s						
RSSD	Black Hills	30.76	345	P	P	05 35 15.8	+1.5
	baz=160						
PD31	Pinedale Array	31.25	337	P	P	05 35 19.7	+1.1
PDAR	Pinedale Array	31.25	337	P	P	05 35 19.8	+1.1
	comp=Z,0.5nm,0.7s,baz=133,slow=8.7,SNR=7.2						
AHID	Auburn Hatcher	31.85	335	P	P	05 35 25.1	+1.2
E38A	The Farm, Brul	32.03	3	P	P	05 35 24.6	-0.6
E38A				IAmb	IAmb	05 35 42.8	
	comp=Z,9.0nm,1.2s						
ELK	Elko	32.13	328	P	P	05 35 27.1	+0.6
ELK				IAmb	IAmb	05 35 29.2	
	comp=Z,3.1nm,0.9s						
REDW	Red Top Meadow	32.25	336	P	P	05 35 28.9	+1.4
SNOW	Snow King Moun	32.30	337	P	P	05 35 29.2	+1.3
MOOW	Moose Ponds	32.54	337	P	P	05 35 30.2	+0.2
FXWY	Fox Creek	32.55	336	P	P	05 35 31.0	+0.9
LKWY	Lake	33.11	338	P	P	05 35 36.7	+1.7
LKWY				IAmb	IAmb	05 35 53.2	
	comp=Z,5.7nm,1.1s						
YMP	Mirror Lake Pl	33.17	338	P	P	05 35 39.6	+4.0
RLMT	Red Lodge	33.20	340	P	P	05 35 36.2	+0.5
RLMT				IAmb	IAmb	05 35 37.2	
	comp=Z,4.8nm,0.8s						
RLMT	Red Lodge	33.20	340	P	P	05 35 36.8	+1.1
	baz=152,SNR=7.0						
YNE	Yellowstone No	33.35	339	P	P	05 35 38.1	+1.0
MDND	Maddock	33.57	353	P	P	05 35 38.4	-0.3
MDND	Maddock	33.57	353	P	P	05 35 38.3	-0.3
	baz=170						
YHL	Hebgen Lake	33.64	337	P	P	05 35 40.9	+1.3
AGMN	Agassiz Nation	33.71	357	P	P	05 35 38.4	-1.5
AGMN				IAmb	IAmb	05 35 42.0	
	comp=Z,6.6nm,0.8s						
LAO	LASA Array	33.71	344	P	P	05 35 40.8	+0.8
LAO				IAmb	IAmb	05 35 40.8	
	comp=Z,6.5nm,1.0s						
LAO	LASA Array	33.71	344	P	P	05 35 40.2	+0.2
	baz=158						
GCMT	Greycliff	33.92	340	P	P	05 35 42.9	+1.0
MCMT	McKenzie Canyo	34.26	336	P	P	05 35 47.2	+2.2
DLMT	Dillon	34.61	336	P	P	05 35 49.5	+1.5
DLMT				IAmb	IAmb	05 35 50.6	
	comp=Z,5.7nm,0.8s						
DGMT	Dagmar	34.92	348	P	P	05 35 50.7	+0.3
ULM	Lac du Bonnet	35.66	358	P	P	05 35 54.8	-1.9
	comp=Z,3.3nm,0.7s,baz=186,slow=9.2,SNR=10						
ULM	Lac du Bonnet	35.66	358	P	P	05 35 54.8	-1.9
ULM				IAmb	IAmb	05 35 58.1	
	comp=Z,3.6nm,0.8s						
J08A	Circle Bar Ran	35.68	328	P	P	05 35 58.7	+1.6
J08A				IAmb	IAmb	05 36 07.7	
	comp=Z,7.5nm,0.9s						
EGMT	Eagleton	35.93	342	P	P	05 35 59.8	+0.7
EGMT				IAmb	IAmb	05 36 01.0	
	comp=Z,7.4nm,0.9s						
EGMT	Eagleton	35.93	342	P	P	05 36 00.3	+1.2
	baz=153						
MSO	Missoula	36.35	336	P	P	05 36 03.6	+0.8
MSO				IAmb	IAmb	05 36 04.0	
	comp=Z,6.1nm,1.1s						
MSO	Missoula	36.35	336	P	P	05 36 04.1	+1.3
	baz=146						
F10A	Beach Ranch, E	37.04	333	P	P	05 36 08.8	+0.1
F10A				IAmb	IAmb	05 36 10.0	
	comp=Z,6.3nm,0.8s						
LSQQ	Lebel-sur-Quev	37.09	18	P	P	05 36 07.4	-1.5
	baz=208						
JTMT	Jette	37.24	337	P	P	05 36 11.4	+1.0
JTMT				IAmb	IAmb	05 36 13.5	
	comp=Z,4.0nm,0.8s						
NEW	Newport	38.78	335	P	P	05 36 24.5	+1.2
	baz=142						
C09A	Chrisman Ranch	38.90	334	P	P	05 36 25.2	+0.9
LPAZ	La Paz	39.74	139	P	P	05 36 31.2	-1.1
	comp=Z,0.8nm,0.6s,baz=289,slow=10,SNR=5.2						
LPAZ	La Paz	39.74	139	P	P	05 36 31.5	-0.8
LON	Longmire	39.76	330	P	P	05 36 31.9	+0.4
LON				IAmb	IAmb	05 36 34.5	
	comp=Z,5.4nm,0.8s						
FCC	Fort Churchill	44.15	360	P	P	05 37 06.4	-0.7
FCC				IAmb	IAmb	05 37 06.8	
	comp=Z,5.9nm,0.8s						
LVC	Limon Verde	44.22	146	P	P	05 37 05.9	-2.7
LVC				IAmb	IAmb	05 37 15.4	
	comp=Z,7.9nm,1.2s						
SCHQ	Schefferville	45.34	22	LR	LR	05 56 56.8	
	comp=Z,165nm,20.3s,baz=0.5,slow=37						
BBB	Bella Bella	46.47	331	LR	LR	05 59 18.0	
	comp=Z,58nm,18.0s,baz=161,slow=39						
YKA	Yellowknife Ar	50.13	348	P	P	05 37 53.6	-0.1
	comp=Z,9.1nm,0.7s,baz=156,slow=7.2,SNR=117						
BDFB	Brasilia	54.25	122	P	P	05 38 24.2	-1.0
	comp=Z,4.7nm,0.8s,baz=278,slow=11,SNR=6.4						
BDFB	Brasilia	54.25	122	P	P	05 38 24.4	-0.8
BDFB				IAmb	IAmb	05 38 29.4	
	comp=Z,4.6nm,0.7s						
BCAR	Beaver Creek A	58.87	337	P	P	05 38 57.9	+0.5
PLCA	Paso Flores	59.05	160	P	P	05 38 59.6	+0.8
	comp=Z,1.9nm,0.9s,baz=4.8,slow=7.5,SNR=4.5						
INK	Inuvik	59.45	344	P	P	05 39 01.0	-0.2
DOT	Dot Lake	60.05	337	P	P	05 39 06.3	+0.9
RES	Resolute Bay	60.15	360	P	P	05 39 05.3	-0.6
RES				IAmb	IAmb	05 39 06.2	
	comp=Z,3.3nm,0.8s						
ILULI	Ilulissat	60.84	16	P	P	05 39 12.8	+2.1
HDA	Harding Lake	61.53	337	P	P	05 39 15.5	+0.1
HDA				IAmb	IAmb	05 39 15.8	
	comp=Z,4.7nm,0.9s						
HDA	Harding Lake	61.53	337	P	P	05 39 15.6	+0.1
	baz=118						
PRP	Porcupine Dome	61.54	338	P	P	05 39 15.2	-0.5
IL31		61.68	337	P	P	05 39 16.3	-0.1
ILAR	Eielson Array	61.68	337	P	P	05 39 16.5	0.0
	comp=Z,2.5nm,0.7s,baz=149,slow=4.4,SNR=33						
ILAR	Eielson Array	61.68	337	P	P	05 39 16.3	-0.2
RND	Reindeer	61.83	335	P	P	05 39 18.5	+0.9
BMAR	Burnt Mountain	62.21	340	P	P	05 39 20.3	+0.3
TRF	Thorofare Moun	62.43	335	P	P	05 39 22.2	+0.5
MLY	Manley	63.27	337	P	P	05 39 27.4	+0.3
SUMG	Summit	66.18	16	*i* P	P	05 39 46.0	-0.5
	comp=Z,16nm,0.8s						
SUMG	Summit	66.18	16	P	P	05 39 46.4	-0.1
DAG	Danmarks Havn	72.54	13	*i* P	P	05 40 24.0	-1.3
NOR	Nord	73.83	9	*i* P	P	05 40 31.2	-1.6
BILL	Bilibino	80.33	338	P	P	05 41 10.1	+0.5
ESDC	Sonseca Array	80.73	51	P	P	05 41 11.7	-0.7
	comp=Z,1.0nm,0.7s,baz=299,slow=4.9,SNR=4.8						
ESDC	Sonseca Array	80.73	51	P	P	05 41 12.4	+0.1
NB2	NORSAR Subarra	84.49	28	P	P	05 41 32.0	+0.5
	comp=Z,13nm,1.0s,baz=291,slow=5.1						
NB2	NORSAR Subarra	84.49	28	P	P	05 41 32.0	+0.5
	baz=291,slow=5.1						
NOA	NORSAR Array B	84.49	28	P	P	05 41 32.4	+0.9
	comp=Z,3.9nm,0.8s,baz=292,slow=5.1,SNR=12						
ARCES	ARCESS Array B	86.16	18	P	P	05 41 39.1	-0.5
	comp=Z,3.1nm,0.8s,baz=341,slow=6.9,SNR=4.6						
ARCES	ARCESS Array B	86.16	18	P	P	05 41 40.8	+1.1
DBIC	Dimbokro	87.30	84	P	P	05 41 45.5	-0.8
	comp=Z,2.2nm,0.8s,baz=96,slow=8.2,SNR=3.0						
DBIC	Dimbokro	87.30	84	P	P	05 41 46.1	-0.2
GERES	GERESS Array B	90.28	39	P	P	05 42 00.0	+0.2
	comp=Z,1.1nm,0.8s,baz=328,slow=4.7,SNR=5.1						
TORD	Torodi Ar. Bea	91.91	76	P	P	05 42 06.8	-1.1
	comp=Z,0.7nm,0.9s,baz=306,slow=5.0,SNR=3.6						
VYHS	Vyhne	93.52	38	*e*P	P	05 42 15.0	+0.3
LZH	Lanzhou	126.97	342	*e*PKP	PKiKP	05 48 06.0	+2.0
LZH				pPKP	sPKPdf	05 48 14.6	+6.5
LZH				sPKP		05 48 17.8	
CMAR	Chiang Mai Arr	144.91	339	PKP	PKPab	05 48 35.2	-0.6
	comp=Z,4.1nm,0.9s,baz=339,slow=3.6,SNR=19						

IDC 09 05:33:55.7±3.4, 10°.17S×163°.36E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.7/31, mbtmp3.8/4, ML4.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/30, Error ellipse: s-maj=173.7km s-min=29.9km az=137.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.45	282	P	Pg	05 35 02.0	+0.2
HNR				S	Sg	05 35 55.0	+8.4
PMG	Port Moresby	15.99	271	LR	LR	05 43 23.4	
	comp=Z,100nm,20.1s,baz=120,slow=36						
CTA	Charters Tower	19.22	237	P	Pn	05 38 23.6	+1.2
	0.5nm,0.3s,baz=73,slow=13,SNR=5.4						
WRA	Warramunga Arr	29.62	247	P	P	05 40 03.1	+0.1
	0.9nm,0.4s,baz=79,slow=9.2,SNR=20						
ASAR	Alice Springs	31.13	241	P	P	05 40 15.3	-1.1
	0.6nm,0.7s,baz=61,slow=9.9,SNR=11						
ILAR	Eielson Array	83.45	19	P	P	05 46 24.9	+0.1
	0.2nm,0.6s,baz=241,slow=4.6,SNR=5.4						

KRNET 09 05:37:35.1±0.1, 40°.02N×76°.13E, mb2.5, 14C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NRN	Naryn	1.42	356	⇑*i*P	Pg	05 38 01.6	-0.7
	baz=55						
NRN				⇑*i*S	Sg	05 38 20.9	+0.2
	baz=55						
KZA	Kyzart	2.16	342	⇑*i*P	Pb	05 38 14.4	-1.0
	baz=42						
KZA				⇑*i*S	Sb	05 38 42.9	-0.1
	baz=42						
KDJ	Kajisay	2.26	20	⇑*i*P	Pb	05 38 15.4	-1.5
	baz=21						
KDJ				⇑*i*S	Sb	05 38 44.9	-0.5
	baz=21						
ARLS	Aral	2.29	324	⇑*i*P	Pn	05 38 15.2	+0.8
	baz=24						
ARLS				⇑*i*S	Sb	05 38 45.6	-0.9
	baz=24						
BOOM	Boomskoye usch	2.48	357	⇑*i*P	Pb	05 38 19.2	-1.4
	baz=57						
BOOM				⇑*i*S	Sb	05 38 50.1	-1.6
	baz=57						
UCH	Uchtor	2.52	332	⇓*i*P	Pn	05 38 19.4	+1.6
	baz=32						
UCH				⇓*i*S	Sb	05 38 51.9	-1.4
	baz=32						
KBK	Karagaybulak	2.78	342	⇑*i*P	Pn	05 38 23.2	+2.1
	baz=42						
KBK				⇑*i*S	Sn	05 38 57.7	+2.2
	baz=42						
AML	Almayashu	2.80	320	⇑*i*P	Pn	05 38 23.0	+1.4
	baz=20						
AML				⇑*i*S	Sn	05 38 58.3	+2.0
	baz=20						

*NNC **09** 05:38:01.4±4.0, 40°.85N×75°.59E, h0km, mb2.8, mpv2.5, Error ellipse: s-maj=27.5km s-min=19.6km az=166.0*
*SOME **09** 05:38:04.1, 40°.95N×75°.50E, h15km*
ISC 09 05:37:60.0±3.4, 40°.8N±0°.1×75°.59E±0°.06, h4km±17km, n23, σ1.59/33, 3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	2.02	336	⇓Pg	Pn	05 38 31.8	-3.1
	1.0nm,0.6s						
AAK				⇓Lg	Lg	05 39 04.6	
	7.2nm,0.7s						
KST	Kastek	2.27	7	*e*P	Pg	05 38 44.9	+1.5
	1.9nm,0.4s						
KST				*e*S	Sg	05 39 14.3	+1.4
	7.8nm,0.8s						
KST	Kastek	2.27	7	Pg	Pg	05 38 44.9	+1.5
	1.9nm,0.4s						
KST				Lg	Lg	05 39 14.3	
	7.8nm,0.8s						
IZV	Izvestkoviy	2.37	18	*e*P	Pg	05 38 45.4	0.0
	2.7nm,0.9s						
IZV				*e*S	Sg	05 39 15.2	-0.9
	6.9nm,0.4s						
IZV	Izvestkoviy	2.37	18	Pg	Pg	05 38 45.4	0.0
	2.7nm,0.9s						
IZV				Lg	Lg	05 39 15.2	
	6.9nm,0.4s						
DGS	Degeres	2.45	3	*e*P	Pg	05 38 47.3	+0.3
	0.7nm,0.3s						
DGS				*e*S	Sg	05 39 18.5	-0.3
	4.1nm,0.4s						
DGS	Degeres	2.45	3	Pg	Pg	05 38 47.3	+0.3
	0.7nm,0.3s						
DGS				Lg	Lg	05 39 18.5	
	4.1nm,0.4s						
TNSS	Tian-Shan	2.46	24	*e*P	Pb	05 38 46.2	+1.2
	1.0nm,0.5s						
TNSS				*e*S	Sb	05 39 16.5	+0.7
	5.1nm,0.6s						
TNSS	Tian-Shan	2.46	24	Pg	Pb	05 38 46.2	+1.2
	1.0nm,0.5s						
TNSS				Lg	Lg	05 39 16.8	
	5.1nm,0.6s						
MDOK	Medeo	2.61	24	*e*P	Pb	05 38 48.1	+0.7
	0.8nm,0.1s						
MDOK				*e*S	Sb	05 39 19.6	-0.2
	7.3nm,0.7s						
MDOK	Medeo	2.61	24	Pg	Pn	05 38 42.2	-0.9
	0.9nm,0.6s						
MDOK				⇓Lg	Lg	05 39 20.2	
	5.3nm,0.7s						
MDOK	Medeo	2.61	24	Pg	Pb	05 38 48.1	+0.7
	0.8nm,0.1s						
MDOK				Lg	Lg	05 39 20.3	
	7.3nm,0.7s						
MRKS	Merke	2.63	319	*e*P	Pb	05 38 49.3	+1.6
	1.0nm,0.3s						
MRKS				*e*S	Sb	05 39 21.8	+1.3
	2.7nm,0.4s						
MRKS	Merke	2.63	319	Pg	Pb	05 38 49.3	+1.6
	1.0nm,0.3s						
MRKS				Lg	Lg	05 39 21.8	
	2.7nm,0.4s						
KOTS	Kotyrbulak	2.69	24	*e*P	Pb	05 38 50.1	+1.3
	2.3nm,0.4s						
KOTS				*e*S	Sb	05 39 23.3	+1.1
	26nm,0.5s						
KOTS	Kotyrbulak	2.69	24	Pg	Pb	05 38 50.1	+1.3
	2.3nm,0.4s						
KOTS				Lg	Lg	05 39 23.3	
	26nm,0.5s						
SGDS	Sogindy	2.75	345	Pg	Pg	05 38 52.9	+0.1
	2.0nm,0.6s						
SGDS				Lg	Lg	05 39 28.2	
	3.0nm,0.7s						
KRBS	Karabastau	2.90	1	*e*P	Pg	05 38 54.9	-0.7
	0.8nm,0.3s						
KRBS				*e*S	Sg	05 39 31.5	-1.7
	2.0nm,0.6s						
KRBS	Karabastau	2.90	1	Pg	Pg	05 38 54.9	-0.7
	0.8nm,0.3s						
KRBS				Lg	Lg	05 39 31.5	
	2.0nm,0.6s						
KTBS	Karatobe	3.03	15	*e*P	Pb	05 38 56.7	+2.2
	1.5nm,0.5s						
KTBS				*e*S	Sg	05 39 34.7	-2.6
	7.3nm,0.4s						
KTBS	Karatobe	3.03	15	Pg	Pb	05 38 56.7	+2.2
	1.5nm,0.5s						
KTBS				Lg	Lg	05 39 34.7	
	7.3nm,0.4s						
KUU	Kurty	3.15	10	*e*P	Pb	05 38 59.2	+2.7
	2.6nm,4.0s						
KUU				*e*S	Sg	05 39 38.9	-2.2
	5.6nm,0.6s						
KUU	Kurty	3.15	10	Pg	Pb	05 38 59.2	+2.7
	2.6nm,4.0s						
KUU				Lg	Lg	05 39 38.9	
	5.6nm,0.6s						

*JMA **09** 05:54:29.7, 24°.15N×122°.11E, h46km±1km, M2.4*
*TAP **09** 05:54:30.3, 24°.22N×122°.11E, h45km, ML3.2, C*
ISC 09 05:54:29.8±1.0, 24°.17N±0°.02×122°.13E±0°.02, h33km±6km, n102, σ0.66/176, 4D, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.38	0	P	Pn	05 54 39.5	+0.5
	baz=3.0						
EOS1				*e*S	Sn	05 54 46.5	+1.3
	baz=3.0						
ENA	Nanau	0.44	307	⇓*i*P	Pn	05 54 40.2	+0.4
	baz=309						
ENA				*e*S	Sn	05 54 47.0	+0.4
	baz=309						
NACB	Ninganchiao	0.48	271	*i* P	Pn	05 54 40.6	+0.2
	baz=264						
NACB				*e*S	Sn	05 54 48.5	+0.7
	baz=264						
TWD	Chiawan	0.49	260	P	Pn	05 54 40.8	+0.3
	baz=245						
TWD				*e*S	Sn	05 54 48.8	+0.9
	baz=245						
TWC	Suao	0.51	330	⇓*i*P	Pn	05 54 40.7	0.0
	baz=336						
TWC				*e*S	Sb	05 54 48.0	+0.1
	baz=336						
HWA	Hwalien	0.51	249	*e*P	Pn	05 54 41.4	+0.6
	baz=242						
HWA				*e*S	Sn	05 54 50.6	+2.2
	baz=242						
ENLB	Shoufeng	0.55	241	*e*P	Pb	05 54 41.0	-0.1
	baz=229						
ENLB				*e*S	Sn	05 54 50.0	+0.8
	baz=229						
ETLH	Xiulin Townshi	0.59	274	P	Pb	05 54 42.0	+0.1
	baz=269						
ETLH				*e*S	Sn	05 54 51.1	+0.6
	baz=269						
ILA	Ilan	0.69	330	*e*P	Pb	05 54 44.1	+0.7
	baz=329						
TWE	Neicheng	0.69	323	⇓*i*P	Pb	05 54 43.7	+0.2
	baz=322						
TWE				*e*S	Sn	05 54 53.1	+0.2
	baz=322						
ENTT	Nioudou	0.69	313	⇓*i*P	Pn	05 54 43.5	+0.2
	baz=304						
ENTT				*e*S	Sb	05 54 52.3	-0.6
	baz=304						
NDT	Datong Townshi	0.71	308	*e*P	Pb	05 54 43.9	+0.1
	baz=301						
NDT				*e*S	Sn	05 54 54.0	+0.7
	baz=301						
ESL	Shilin	0.72	241	*e*P	Pn	05 54 43.8	0.0
	baz=237						
ESL				*e*S	Sn	05 54 54.0	+0.4
	baz=237						
NNSB	Datong	0.73	291	P	Pn	05 54 44.0	+0.2
	baz=287						
NNSB				*e*S	Sn	05 54 54.3	+0.4
	baz=287						
NNSH	Datong	0.73	291	P	Pn	05 54 44.1	+0.2
	baz=287						
NNSH				*e*S	Sn	05 54 54.3	+0.4
	baz=287						
NTC	Toucheng	0.74	339	*e*P	Pb	05 54 44.2	0.0
	baz=347						
NTC				*e*S	Sn	05 54 54.6	+0.6
	baz=347						
SLBB	Yuanshan	0.74	323	P	Pb	05 54 44.5	+0.2
	baz=321						
SLBB				*e*S	Sn	05 54 55.7	+1.7
	baz=321						
NNS	Nan Shan	0.74	292	P	Pn	05 54 44.3	+0.3
	baz=288						
NNS				*e*S	Sb	05 54 54.4	+0.1
	baz=288						
WHF	Hehuan Shan	0.79	269	P	Pn	05 54 45.1	+0.2
	baz=255						
WHF				*e*S	Sb	05 54 55.6	-0.2
	baz=255						
JYNG	Yonagunijimaku	0.80	69	P	Pb	05 54 45.0	-0.3
JYNG				S	Sb	05 54 56.0	+0.2
EGFH	Guangfu	0.81	232	*e*P	Pn	05 54 45.1	+0.3
	baz=222						
EGFH				*e*S	Sb	05 54 56.5	+0.5
	baz=222						
NWLT	Wulai	0.83	317	P	Pb	05 54 45.8	-0.1
	baz=315						
NWLT				*e*S	Sn	05 54 56.4	0.0
	baz=315						
TIPB	Shuangxi	0.85	341	*e*P	Pn	05 54 45.8	+0.3
	baz=341						
TIPB				*e*S	Sn	05 54 56.4	-0.4
	baz=341						
TWB1	Santiao Chiao	0.85	352	*e*P	Pn	05 54 45.3	-0.2
	baz=352						
TWB1				*e*S	Sn	05 54 55.3	-1.4
	baz=352						
YHNB	Yeheng	0.85	306	P	Pn	05 54 45.8	+0.3
	baz=304						
YHNB				*e*S	Sn	05 54 56.1	-0.7
	baz=304						
YOJ	Yonaguni jima	0.86	70	*e*P	Pn	05 54 45.7	+0.1
	baz=73						
YOJ				*e*S	Sb	05 54 57.6	+0.1
	baz=73						
YOJ	Yonaguni jima	0.86	70	P	Pn	05 54 45.8	+0.2
YOJ				*e*S	Sb	05 54 57.6	+0.1
NSK	Sanguang	0.86	306	P	Pn	05 54 46.0	+0.3
	baz=294						
NSK				*e*S	Sn	05 54 57.2	0.0
	baz=294						
CHGB	Renai	0.88	263	*e*P	Pn	05 54 46.3	+0.3
	baz=250						
CHGB				*e*S	Sb	05 54 58.7	+0.5
	baz=250						
TDCB	Techi	0.89	276	*e*P	Pb	05 54 46.9	+0.1
	baz=272						
TDCB				*e*S	Sb	05 54 58.3	+0.4
	baz=272						
OWD	Renai	0.89	257	P	Pn	05 54 46.6	+0.4
	baz=253						
OWD				*e*S	Sn	05 54 57.5	-0.5
	baz=253						
HGSD	Ruisui	0.93	224	*e*P	Pn	05 54 46.6	+0.1
	baz=215						
HGSD				*e*S	Sn	05 54 59.2	+0.5
	baz=215						
TWA	Mucha	0.95	329	*e*P	Pb	05 54 47.7	0.0
	baz=328						
TWA				*e*S	Sb	05 55 00.7	+0.6
	baz=328						
NWF	Wu-fen Shan	0.95	341	P	Pn	05 54 47.1	+0.2
	baz=352						
NWF				*e*S	Sn	05 54 58.8	-0.7
	baz=352						
WFSB	Wu-fen Shan	0.95	341	*e*P	Pn	05 54 47.2	+0.3
	baz=352						
WFSB				*e*S	Sn	05 54 59.3	-0.1
	baz=352						
NDHH	Xindian Distri	0.96	326	*e*P	Pb	05 54 47.8	-0.2
	baz=324						
NDHH				*e*S	Sb	05 55 00.8	+0.3
	baz=324						
EHY	Hungye	0.99	228	*e*P	Pn	05 54 47.3	0.0
	baz=225						
EHY				*e*S	Sn	05 55 00.5	+0.3
	baz=225						
VWDT	VWDT	0.99	246	*i* P	Pb	05 54 48.1	-0.3
	baz=233						
VWDT				*e*S	Sb	05 55 01.1	0.0
	baz=233						
TATO	Taipei	0.99	324	*e*P	Pn	05 54 47.5	+0.1
	baz=323						
TATO				*e*S	Sn	05 55 00.9	+0.6
	baz=323						
WLTB	Daxi	1.05	311	*e*P	Pb	05 54 49.3	-0.2
	baz=302						
WLTB				*e*S	Sb	05 55 03.7	+0.8
	baz=302						
YULB	Yu-li	1.08	225	*e*P	Pn	05 54 48.6	0.0
	baz=234						
YULB				*e*S	Sn	05 55 02.5	0.0
	baz=234						
WHP	Taichung City	1.08	276	*e*P	Pb	05 54 50.2	+0.1
	baz=274						
WHP				*e*S	Sb	05 55 03.6	-0.3
	baz=274						
YM01	YM01	1.10	333	*e*P	Pb	05 54 49.8	-0.5

baz=331
YM01 eS Sn 05 55 03.2 +0.2
baz=331
DPDB Guoxing 1.10 263 eP Pb 05 54 50.0 -0.4
baz=255
DPDB eS Sb 05 55 04.2 -0.3
baz=255
YM10 YM10 1.11 333 eP Pn 05 54 49.1 0.0
baz=332
YM10 eS Sn 05 55 03.8 +0.5
baz=332
YM11 YM11 1.11 333 eP Pn 05 54 48.0 -1.1
baz=333
YM05 YM05 1.12 333 eP Pn 05 54 49.4 +0.2
baz=332
LIOB Emei 1.12 295 i P Pb 05 54 50.6 0.0
baz=293
LIOB eS Sb 05 55 04.9 0.0
baz=293
YM04 YM04 1.12 332 eP Pn 05 54 49.0 -0.2
baz=330
YM04 eS Sn 05 55 03.4 -0.1
baz=330
NSTT Nanjuang 1.12 295 eP Pb 05 54 50.9 +0.2
baz=292
TWS1 Kuangyinshan 1.13 325 eP Pn 05 54 49.9 +0.5
baz=324
SSLB Suanglung 1.14 251 eP Pn 05 54 50.0 +0.6
baz=248
SSLB eS Sn 05 55 04.1 +0.2
baz=248
YM03 YM03 1.14 332 eP Pn 05 54 49.9 +0.4
baz=331
SMLT Sun Moon Lake 1.16 256 P Pb 05 54 50.7 -0.6
baz=248
SMLT eS Sb 05 55 05.5 -0.5
baz=248
TYC Yuchr 1.19 258 P Pb 05 54 51.3 -0.5
baz=248
TYC eS Sb 05 55 06.5 -0.4
baz=248
FULB Fuli 1.23 219 P Pn 05 54 50.8 +0.1
baz=206
FULB eS Sn 05 55 06.5 +0.3
baz=206
TWQ1 Liyutan 1.25 279 eP Pb 05 54 53.5 +0.7
baz=277
TWQ1 eS Sb 05 55 08.8 +0.2
baz=277
WHYT Xinyi Township 1.25 248 P Pb 05 54 52.5 -0.4
baz=246
WHYT eS Sb 05 55 09.4 +0.7
baz=246
YUS Yu-Shan 1.27 238 eP Pb 05 54 52.9 -0.5
baz=235
NSY Sanyi 1.27 282 eP Pb 05 54 53.1 0.0
baz=280
NSY eS Sb 05 55 09.4 +0.2
baz=280
WJS Zhushan 1.32 255 P Pb 05 54 54.0 -0.1
baz=249
WJS eS Sb 05 55 11.2 +0.5
baz=249
TCU Taichung 1.32 269 eP Pb 05 54 54.0 0.0
baz=268
TCU eS Sb 05 55 11.7 +0.9
baz=268
WNT Mingjian 1.35 258 eP Pb 05 54 54.6 +0.2
baz=256
WNT eS Sb 05 55 12.2 +0.8
baz=256
WDJ Dajia District 1.37 278 eS Sb 05 55 11.9 -0.1
baz=276
ALS Alishan 1.37 242 P Pb 05 54 54.5 -0.6
baz=230
ELDTW Lidau 1.41 226 eP Pn 05 54 53.5 +0.2
baz=224
WCHH Zhanghua 1.43 267 eP Pb 05 54 56.1 +0.2
baz=277
CHN5 Tsauling 1.44 247 eP Pb 05 54 55.6 -0.5
baz=235
CHN5 eS Sb 05 55 14.4 +0.3
baz=235
IRIF Iriomote-Funau 1.47 83 P Pn 05 54 54.3 +0.3
IRIF eS Sn 05 55 12.4 +0.2
WGK Gukeng 1.51 252 eP Pb 05 54 57.4 +0.2
baz=250
WGK eS Sb 05 55 15.6 -0.4
baz=250
WDLH Douliu 1.53 252 eP Pb 05 54 57.0 -0.5
baz=251
WDLH eS Sb 05 55 16.8 +0.2
baz=251
HATJ Hateruma jima 1.54 94 P Pn 05 54 55.6 +0.7
HATJ eS Sn 05 55 14.6 +0.8
TWH Lutao 1.57 202 eP Pn 05 54 55.7 +0.4
baz=201
TWH eS Sn 05 55 13.4 -1.0
baz=201
STYT Tauyuan 1.60 232 eP Pn 05 54 57.4 +1.5
baz=222
STYT eS Sn 05 55 16.9 +1.5
baz=222
TPUB Ta-pu 1.62 238 eP Pb 05 54 58.0 -1.0
baz=237
TPUB eS Sb 05 55 18.9 -0.3
baz=237
CHN4 Tsaushan 1.62 240 eP Pb 05 54 58.3 -0.8
baz=228
CHN4 eS Sb 05 55 20.5 +1.3
baz=228
CHN2 Minshiung 1.64 248 eP Pb 05 54 58.7 -0.7
baz=245
RLNB Erlin 1.64 261 eP Pb 05 54 58.3 -1.1
baz=259
RLNB eS Sb 05 55 19.8 +0.1
baz=259
TWGBT Beinan 1.65 216 eP Pn 05 54 56.2 -0.3
baz=215
TWGBT eS Sn 05 55 15.8 -0.8
baz=215
TWG Pinlang 1.65 216 eP Pn 05 54 56.3 -0.2
baz=215
TWG eS Sn 05 55 15.2 -1.5
baz=215
WTP Ta-pu 1.66 237 eP Pb 05 54 58.6 -1.1
baz=235
WTP eS Sb 05 55 21.0 +0.6
baz=235
CHY Chiayi 1.69 247 eP Pb 05 54 59.3 -1.0
baz=235
CHY eS Sb 05 55 22.3 +1.0
baz=235
JKRS Kuro-shima 1.72 87 P Pn 05 54 58.4 +1.0
JKRS S Sn 05 55 19.3 +1.0
TWK Hsinying 1.75 240 eP Pb 05 54 59.9 -1.3
baz=237
CHN1 Nanshi 1.76 237 eP Pb 05 54 59.6 +1.6
baz=235
SNST Tainan City 1.77 238 eP Pn 05 54 59.9 +1.8
baz=236
SGST Jiashian 1.78 233 eP Pn 05 54 59.4 +1.1
baz=231
SLGT Liugui 1.79 230 eP Pb 05 55 01.0 -1.0
baz=228
JIJ Ishigaki jima 1.85 83 P Pn 05 55 00.2 +1.0
JIJ S Sn 05 55 20.9 -0.6
ECL Taimali 1.90 215 eP Pn 05 55 01.4 +1.6
baz=213
JISG Ishigakijimahi 2.04 78 P Pn 05 55 02.1 +0.3
JISG eS Sn 05 55 25.7 -0.4
MASBT Mashibuluo 2.07 222 eP Pn 05 55 03.2 +1.0
baz=221
EAST Anshuo 2.13 214 eP Pn 05 55 03.3 +0.2
baz=204
LAY Lan-yu 2.18 194 eP Pn 05 55 03.5 -0.3
baz=185
SCZT Fangliau 2.26 218 eP Pn 05 55 06.8 +2.0
baz=212
JTJ Tarama 2.40 78 P Pn 05 55 07.8 +1.1
JTJ S Sn 05 55 35.0 +0.1
PTTC Pingtan 2.52 302 eP Pn 05 55 07.4 -1.0
baz=300
JIRB Irabujima 2.85 76 eS Sn 05 55 46.4 +0.2
PTMZ Houxiangcun 2.87 288 eP Pn 05 55 13.2 0.0
baz=287
XPSS Dashiqiu 3.26 328 eP Pn 05 55 18.1 -0.5
baz=326
MHZQ Yeshan 3.40 305 eP Pn 05 55 19.3 -1.2
baz=303
KNMB Chin-men Tao 3.42 276 eP Pn 05 55 20.6 -0.2
baz=263

NEIC 09 06:02:29.8±2.6, 9.92N±0.04×71.60W±0.05, h31km±4km, mb4.4/15, Mwr4.1(CAR), Error ellipse: s-maj=7.3km s-min=5.8km az=53.0
IDC 09 06:02:31.8±1.6, 9.94N×71.65W, h48km±17km, mb3.6/12, mb1 3.9/14, mb1mx3.6/36, mbtmp3.9/14, ML3.5/2, MS3.2/3, Ms1 3.2/3, ms1mx2.7/33, Error ellipse: s-maj=16.4km s-min=12.3km az=60.0
ISC 09 06:02:26.6±0.4, 9.96N±0.03×71.66W±0.04, h8km, n98, σ1.77/103, mb4.2/16, 2D, Lake Maracaibo

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DABV Dabajuro 1.39 46 eP Pg 06 02 54.6 +1.3
SDV Santo Domingo 1.47 136 P Pb 06 02 54.5 +0.1
415nm,0.3s,baz=243,slow=4.4,SNR=6880
SDV S Sg 06 03 14.1 +0.1
2µm,0.3s,baz=36,slow=20,SNR=53
SDV LR LR 06 03 40.6
comp=Z,241nm,18.8s,baz=275,slow=47
SDV Santo Domingo 1.47 136 Pg 06 02 55.4 +0.5
SDV Sg Sb 06 03 13.2 -0.1
CODC Agustn Codazz 1.76 269 ⇓iP Pn 06 02 58.5 +1.1
URIC Uribia, Colomb 1.76 349 eP Pn 06 02 57.9 +0.5
URIC Uribia, Colomb 1.76 349 eP Pn 06 02 57.7 +0.3
URIC Uribia, Colomb 1.76 349 Pg 06 03 00.4 0.0
URIC Sg 06 03 24.2 +1.0
OCAC Ocana 2.37 224 eP Pn 06 03 08.4 +2.5
ARGC Ariguani, Magd 2.55 268⇓eP Pn 06 03 09.5 +1.2
SMLC San Martn de 2.65 244 eP Pb 06 03 15.5 +1.2
SMRC Santa Marta, M 2.79 296 eP Pb 06 03 17.8 +1.0
PAMC Pamplona, Colo 2.80 202 eP Pn 06 03 14.0 +1.8
SJCC San Jacinto, C 3.47 269 eP Pn 06 03 23.1 +2.1
TAMC Tame, Arauca 3.51 182 eP Pg 06 03 36.0 +2.1
BARC Barichara 3.67 204 eP Pn 06 03 26.0 +2.1
ZARC Zaragoza, Cauc 4.00 232 eP Pn 06 03 31.3 +3.0
RUSC La Rusia 4.28 199 eP Pn 06 03 31.3 -1.3
RUSC La Rusia 4.28 199 Pn 06 03 34.0 +1.4
PTBC PUERTO BERRIO, 4.38 219 eP Pn 06 03 36.0 +2.4
UREC San Jos de Ur 4.41 240 eP Pn 06 03 35.3 +1.3
LCBC Los crdobas, 4.77 257 eP Pb 06 03 47.9 -2.7
SPBC San Pablo de B 4.91 209 eP Pn 06 03 40.6 -0.2
HELC Santa Helena 5.36 226 eP Pn 06 03 53.2 +6.0
DBBC Dabeiba 5.37 237 eP Pn 06 03 55.2 +8.1
NORC Norcasia 5.41 216 eP Pn 06 03 49.6 +1.9
CHIC Chingaza 5.68 201 eP Pn 06 03 53.2 +1.5
ROSC El Rosal 5.73 208 P Pn 06 03 56.3 +3.9
9.1nm,0.3s,baz=93,slow=14,SNR=20
ROSC S Sb 06 05 10.5 -5.7
13nm,0.3s,baz=184,slow=22,SNR=1.8
ROSC El Rosal 5.73 208 eP Pn 06 03 55.9 +3.5
ROSC El Rosal 5.73 208 Pn 06 03 52.7 +0.3
PTGC Puerto Gaitan, 5.75 185 eP Pn 06 03 51.4 -0.8
CBOC Ciudad Bolivar 5.93 227 eP Pn 06 03 59.9 +4.9
GUY2C Guyana, Caldas 5.97 218 eP Pn 06 03 58.3 +2.5
PCRV Puerto La Cruz 6.92 88 P Pn 06 04 10.5 +2.1
3.9nm,0.3s,baz=270,slow=3.6,SNR=21
PCRV S Sn 06 05 28.4 +1.0
2.0nm,0.3s,baz=274,slow=23,SNR=2.9
PLCV Puerto La Cruz 6.96 88 Pn 06 04 10.5 +1.5
PLCV Sn 06 05 28.4 -0.1
PRAC Prado 6.99 208 eP Pn 06 04 09.7 +0.3
ORTC Ortega, Tolima 6.99 211 eP Pn 06 04 10.7 +1.3
MACC Macarena, Meta 8.06 196 eP Pn 06 04 21.7 -2.5
BCIP Isla Barro Col 8.10 265 Pn Pn 06 04 25.5 +0.8
SDDR Presa de Saban 8.97 2 Pn 06 04 39.5 +2.8
DR12 Loma Pena Alta 9.05 14 Pn Pn 06 04 37.0 -0.7
PCDR Punta Cana, DR 9.07 20 Pn Pn 06 04 39.0 +1.0
MLPR Magueyes Islan 9.13 29 Pn Pn 06 04 37.3 -1.4
CRPR Cabo Rojo, PR 9.13 28 Pn Pn 06 04 38.3 -0.5
FLOC Florencia 9.22 206 Pn 06 04 39.4 -0.6
MPR Mayaguez 9.30 28 Pn Pn 06 04 42.5 +1.5
ICMP Isla Caja de M 9.32 32 Pn Pn 06 04 40.4 -0.9
OBIP Obispado Ponce 9.41 31 Pn Pn 06 04 40.0 -2.6
AOPR Arecibo Observ 9.60 29 Pn Pn 06 04 44.5 -0.7
PDPR Patillas Dam, 9.70 34 Pn Pn 06 04 45.1 -1.3
SJG San Juan 9.70 33 P Pn 06 04 45.1 -1.5
2.0nm,0.3s,baz=193,slow=16,SNR=5.9
SJG S Sn 06 06 30.8 -5.0
1.9nm,0.3s,baz=358,slow=20,SNR=3.6
SJG LR LR 06 09 06.4
comp=Z,90nm,18.8s,baz=224,slow=41
SJG San Juan 9.70 33 Pn Pn 06 04 45.2 -1.4
HUMP Col San Antoni 9.89 34 Pn Pn 06 04 47.4 -1.8
GCPR Guaynabo City 9.90 32 Pn Pn 06 04 48.0 -1.3
CBYP Canovanas 9.99 34 Pn Pn 06 04 49.1 -1.5
MTDJ Mount Denham 9.99 326 Pn Pn 06 04 52.3 +1.6
MTP Monte Pirata 10.02 36 Pn Pn 06 04 49.0 -2.0
CDVI St. Croix 10.23 40 Pn 06 04 52.1 -1.7
CUPR Culebra, Puert 10.34 36 Pn Pn 06 04 53.4 -2.0
GTBY Guantanamo Bay 10.45 342 Pn Pn 06 04 57.7 +0.8
SVB Belmont 10.71 71 Pn Pn 06 04 59.6 -0.9
FDF Fort de France 11.31 64 Pn Pn 06 05 06.5 -2.1
OTAV Otavalo 11.79 215 Pn 06 05 17.8 +2.2
ATAH Atahualpa 18.26 202 LR LR 06 15 09.1
comp=Z,95nm,21.6s,baz=24,slow=42
TEIG Tepich 19.00 304 LR LR 06 15 26.5
comp=Z,69nm,19.1s,baz=322,slow=41
SAML Samuel 20.59 156 Pn 06 07 08.7 +0.2
LPAZ La Paz 26.32 172 P P 06 08 04.4 +0.7
0.7nm,0.4s,baz=8.1,slow=7.1,SNR=3.8
LPAZ La Paz 26.32 172 P P 06 08 04.6 +0.9
SIV San Ignacio 27.84 158 P P 06 08 15.9 -0.9
1.0nm,0.6s,baz=3.8,slow=12,SNR=7.1
U40A Yellville 32.55 327 P P 06 08 59.4 +1.0
U40A IAmb IAmb 06 08 59.4
comp=Z,3.2nm,0.7s
WVNY West Valley, N 32.89 351 P P 06 09 02.7 +1.5
BDFB Brasilia 34.58 137 P P 06 09 15.8 -0.5
comp=Z,2.7nm,0.6s,baz=315,slow=6.2,SNR=6.1
BDFB Brasilia 34.58 137 P P 06 09 16.1 -0.2
BDFB IAmb IAmb 06 09 16.9
comp=Z,6.5nm,1.1s
I49A Point Hope 35.21 346 P P 06 09 22.5 +1.1
GGN Saint George 35.27 6 P P 06 09 23.6 +1.8
TXAR Lajitas Array 35.59 307 P P 06 09 25.5 +0.6
comp=Z,0.2nm,0.6s,baz=121,slow=8.5,SNR=2.1
L40A Anamosa 36.30 335 P P 06 09 30.7 0.0
L40A IAmb IAmb 06 09 41.2
comp=Z,12nm,1.4s
I42A Draeger Farm, 36.97 339 P P 06 09 36.5 +0.1
I42A IAmb IAmb 06 09 54.6
comp=Z,6.8nm,1.1s
EYMN Ely 41.39 340 P P 06 10 13.2 -0.1
EYMN IAmb IAmb 06 10 27.5
comp=Z,3.6nm,0.8s
ULM Lac du Bonnet 44.88 338 P P 06 10 41.0 -0.5
comp=Z,3.2nm,0.6s,baz=151,slow=9.7,SNR=7.6
ULM Lac du Bonnet 44.88 338 P P 06 10 41.1 -0.5
ULM IAmb IAmb 06 10 50.0
comp=Z,4.2nm,0.8s
SCHQ Schefferville 44.92 4 P P 06 10 41.9 +0.2
comp=Z,2.6nm,0.6s,baz=194,slow=5.6,SNR=8.7
SCHQ Schefferville 44.92 4 P P 06 10 42.5 +0.7
SCHQ IAmb IAmb 06 10 52.5
comp=Z,3.4nm,0.9s
PDAR Pinedale Array 46.47 321 P P 06 10 54.8 +0.3
comp=Z,0.6nm,0.5s,baz=122,slow=10,SNR=9.4
PDAR Pinedale Array 46.47 321 P P 06 10 55.0 +0.5
FXWY Fox Creek 47.85 322 P P 06 11 05.9 +0.6
NVAR Mina Array Bea 50.39 312 P P 06 11 25.6 +0.8
comp=Z,0.5nm,0.7s,baz=119,slow=6.5,SNR=4.2
YKA Yellowknife Ar 60.85 339 P P 06 12 38.6 -0.7
comp=Z,2.0nm,0.7s,baz=127,slow=7.3,SNR=24
INK Inuvik 70.59 340 P P 06 13 41.5 -0.5
comp=Z,1.4nm,0.6s,baz=98,slow=5.4,SNR=11
INK Inuvik 70.59 340 P P 06 13 42.0 -0.1
INK IAmb IAmb 06 13 45.5
comp=Z,6.5nm,1.4s
TORD Torodi Ar. Bea 71.72 79 P P 06 13 50.3 +0.4
comp=Z,0.3nm,0.6s,baz=267,slow=8.7,SNR=2.5
GERES GERESS Array B 79.53 42 P P 06 14 34.5 +0.3
comp=Z,0.3nm,0.6s,baz=243,slow=8.7,SNR=3.2
KSH Kashi 122.32 29 PKP PKPdf 06 21 22.7 -0.3
KSH sPKP 06 21 37.3
KSH PP PP 06 22 58.9 +1.3
KSH PKS PKSdf 06 24 57.4 -2.4
KSH SKS SKSdf 06 28 21.1 -15
KSH SKKS SKKSac 06 29 45.7 -13
KSH Kashi 122.32 29 SS SS 06 39 33.8 -3.7
LZH Lanzhou 134.00 5 ePKP PKPdf 06 21 39.8 -5.6
LZH pPKP sPKPdf 06 21 52.3 +3.2
LZH sPKP 06 21 56.9
CMAR Chiang Mai Arr 150.28 18 PKPbc PKPbc 06 22 18.5 -0.9
comp=Z,0.8nm,0.3s,baz=15,slow=3.7,SNR=3.9
CMAR PKPab PKPab 06 22 26.3 +0.9
comp=Z,0.6nm,0.3s,baz=314,slow=3.6,SNR=6.2
ASAR Alice Springs 152.06 238 PKPbc PKPbc 06 22 21.5 -2.0
comp=Z,0.4nm,0.7s,baz=130,slow=2.9,SNR=5.2
ASAR PKPab PKPab 06 22 30.8 -2.1
comp=Z,2.1nm,0.6s,baz=116,slow=2.7,SNR=13
ASAR Alice Springs 152.06 238 PKiKP 06 22 28.1 +4.3
WRA Warramunga Arr 153.03 245 PKPbc PKPbc 06 22 24.7 -1.0
comp=Z,0.8nm,0.4s,baz=101,slow=2.8,SNR=6.4
WRA PKPab PKPab 06 22 35.7 -1.4
comp=Z,1.2nm,0.6s,baz=115,slow=1.6,SNR=5.3

IDC 09 06:33:45.4±2.3, 5.03S×129.68E, h244km±30km, mb2.9/1, mb1 3.1/5, mb1mx2.9/33, mbtmp3.7/5, Error ellipse: s-maj=53.4km s-min=13.7km az=78.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 4.43 21 P Pn 06 34 55.1 +1.0
15nm,0.3s,baz=228,slow=23,SNR=113
SIJI S S 06 35 48.3 -0.4
12nm,0.3s,baz=235,slow=24,SNR=12
FITZ Fitzroy Crossi 13.57 197 P Pn 06 36 47.6 -1.0
0.4nm,0.3s,baz=294,slow=14,SNR=3.2
FITZ S S 06 39 12.4 -6.7
0.2nm,0.3s,baz=266,slow=21,SNR=2.4
WRA Warramunga Arr 15.50 163 P Pn 06 37 12.1 +0.2
0.2nm,0.3s,baz=344,slow=13,SNR=4.8
WRA S S 06 40 00.6 -1.6
0.5nm,0.3s,baz=213,slow=17,SNR=6.7
ASAR Alice Springs 18.97 168 P P 06 37 50.7 +1.7
0.2nm,0.3s,baz=349,slow=12,SNR=11
ASAR S S 06 41 10.8 -0.4
0.1nm,0.3s,baz=350,slow=24,SNR=6.3
MKAR Makanchi Array 66.42 327 P P 06 44 08.4 -0.1
0.3nm,0.5s,baz=112,slow=7.2,SNR=5.6

ATH 09 06:59:58.6, 35.22N×23.18E, h34km±3km, ML3.7/7, Error ellipse: s-maj=3.8km s-min=1.2km az=42.0
HLW 09 06:59:59.7, 35.25N×23.78E, h30km±37km, Md4.0, Ml4.0
ISK 09 06:59:59.4, 35.23N×23.36E, h58km, ML3.9/9
IDC 09 07:00:00.9±2.1, 35.35N×23.09E, h66km±20km, mb3.4/8, mb1 3.4/12, mb1mx3.2/43, mbtmp3.6/12, MS3.3/1, Ms1 3.3/1, ms1mx2.5/31, Error ellipse: s-maj=22.6km s-min=18.5km az=173.0
THE 09 07:00:04.4, 35.25N×23.21E, h18km±1km, ML3.5/10, Error ellipse: s-maj=2.3km s-min=1.0km az=197.0
DDA 09 07:00:06.6, 35.79N×23.40E, h10km±3km, MW3.8
GII 09 07:00:06.9±0.0, 34.64N×24.15E, h20km, mb4.0/2, MD3.8/2
ISC 09 06:59:57.9±1.0, 35.18N±0.04×23.20E±0.05, h41km±10km, n84, σ2.33/107, mb3.6/8, Crete

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KNDR Palaiochora Ch 0.41 82 P Pn 07 00 07.9 +0.5
KNDR S Sn 07 00 15.4 +1.2
15µm,0.4s
KNDR Palaiochora Ch 0.41 82 PG Pn 07 00 08.0 +0.5
KNDR SG Sn 07 00 16.4 +2.2
RODP Rodopos 0.60 50 P Pn 07 00 10.8 +0.8
RODP S Sn 07 00 17.7 -0.9
2µm,0.4s
ANKY Antikythira Is 0.69 7 P Pn 07 00 11.7 +0.4
ANKY S Sn 07 00 22.2 +1.3
6µm,0.5s
ANKY Antikythira Is 0.69 7 P Pn 07 00 12.1 +0.8
ANKY S Sn 07 00 21.9 +0.9
ANKY AML AML 07 00 23.7
comp=N,12913µm,0.6s
ANKY AML AML 07 00 24.9
comp=E,12207µm,0.4s
IMMV Iera Moni Meta 0.70 66 P Pn 07 00 12.4 +1.0
IMMV S Sn 07 00 23.1 +2.0
comp=E,6µm,0.6s
IMMV Iera Moni Meta 0.70 66 P Pn 07 00 12.4 +1.0
IMMV S Sn 07 00 23.1 +2.0
IMMV AML AML 07 00 26.1
comp=E,13306µm,0.8s
IMMV AML AML 07 00 31.0
comp=N,10353µm,0.5s
IMMV Iera Moni Meta 0.70 66 PG Pn 07 00 12.4 +1.0
IMMV SG Sn 07 00 22.1 +1.0
CHAN Chania 0.77 63 P Pn 07 00 13.7 +1.4
CHAN S Sn 07 00 25.0 +2.2
comp=N,2µm,0.6s
GVD Gavdhos 0.81 114 P Pn 07 00 15.0 +2.2
GVD Gavdhos 0.81 114 P Pn 07 00 15.0 +2.2
GVD S Sn 07 00 27.2 +3.6
GVD AML AML 07 00 36.4
comp=E,13815µm,0.5s
GVD AML AML 07 00 36.7
comp=N,11652µm,0.4s
GVD Gavdhos 0.81 114 PG Pn 07 00 14.4 +1.6
GVDS Gavdos 0.81 114 P Pn 07 00 14.6 +1.8
VAM Vamos 0.85 74 P Pn 07 00 15.2 +1.7
VAM S Sn 07 00 27.1 +2.4
comp=N,6µm,0.7s
VAM Vamos 0.85 74 P Pn 07 00 15.1 +1.7
VAM S Sn 07 00 27.2 +2.4
VAM AML AML 07 00 28.6
comp=E,12113µm,0.6s
VAM AML AML 07 00 31.4
comp=N,15044µm,0.6s
KTHA Kythira Island 1.08 354 P Pn 07 00 18.4 +1.7
KTHA S Sn 07 00 32.5 +2.0
comp=N,3µm,0.4s
KTHA Kythira Island 1.08 354 P Pn 07 00 18.3 +1.7
KTHA S Sn 07 00 32.9 +2.4
KTHA AML AML 07 00 36.3
comp=E,9280µm,0.4s
KTHA AML AML 07 00 37.1
comp=N,4097µm,0.4s
KTHA Kythira Island 1.08 354 PG Pn 07 00 18.8 +2.2
KTHA SG Sn 07 00 33.1 +2.6
PRNS Prines Rethymn 1.08 80 P Pn 07 00 18.6 +2.0
PRNS S Sn 07 00 32.2 +1.8
KTHR Kythira 1.09 352 P Pn 07 00 18.4 +1.6
KTHR S Sn 07 00 33.2 +2.5
comp=N,3µm,0.4s
TMBK Timbaki Herakl 1.29 94 P Pn 07 00 22.3 +2.9
SIVA Sivas 1.33 96 P Pn 07 00 22.7 +2.7
SIVA S Sn 07 00 41.2 +4.7
comp=N,3µm,0.6s
SIVA Sivas 1.33 96 P Pn 07 00 23.4 +3.3
SIVA AML AML 07 00 46.5
comp=E,5374µm,0.6s
SIVA AML AML 07 00 56.1
comp=N,5010µm,0.6s
IDI Anoyia 1.39 85 P Pn 07 00 23.3 +2.4
comp=N,32nm,0.3s,baz=272,slow=16,SNR=84
IDI S Sn 07 00 44.3 +6.2
comp=N,66nm,0.3s,baz=213,slow=22,SNR=15
IDI Anoyia 1.39 85 P Pn 07 00 23.3 +2.4
IDI S Sn 07 00 42.2 +4.1
IDI AML AML 07 00 46.4
comp=E,1382µm,0.6s
IDI AML AML 07 00 46.5
comp=N,1876µm,0.6s
MNVA Monemvasia 1.51 355 P Pn 07 00 25.5 +3.0
KSTL Kastelli Herak 1.54 85 P Pn 07 00 30.0 +7.2
IACM Heraklion 1.54 85 P Pn 07 00 25.9 +3.1
VLI Veliai 1.55 352 P Pn 07 00 25.9 +2.8
VLI S Sn 07 00 45.1 +3.1
comp=N,1µm,0.7s
VLI Veliai 1.55 352 P Pn 07 00 24.6 +1.6
HRKL Herakleio 1.56 85 P Pn 07 00 27.0 +3.8
MHLO Agia Marina, M 1.80 33 P Pn 07 00 29.8 +3.4
LAST Lasithi 1.87 90 P Pn 07 00 30.4 +2.9
LAST Lasithi 1.87 90 P Pn 07 00 30.7 +3.2
NPS Neapolis 1.98 87 P Pn 07 00 31.9 +3.0
PYL PYLOS 2.08 326 P Pn 07 00 31.9 +1.6
THR6 Thira Island, 2.14 56 P Pn 07 00 32.8 +1.7
SANT Santorini 2.19 56 i P Pn 07 00 39.6 +7.7

SANT *i* S Sn 07 00 58.4 +0.6
KRND KRANIDI 2.20 359 P **Pn 07 00 34.8 +2.8**
ITM Ithomi 2.25 333 PN **Pn 07 00 35.9 +3.3**
DID Didima 2.33 1 P **Pn 07 00 35.8 +2.1**
STIA Sitia Lasithi 2.37 89 P **Pn 07 00 38.2 +3.9**
ZKR Zakros 2.48 91 P **Pn 07 00 39.1 +3.4**
ZKR Zakros 2.48 91 PN **Pn 07 00 36.9 +1.2**
APE Apeiranthos 2.67 44 PN **Pn 07 00 39.7 +1.2**
APE SN Sn 07 01 09.1 -0.5
APE Apeiranthos 2.67 44 *i* P Pn 07 00 48.1 +10
APE *i* S **Sn 07 01 08.3 -1.3**
KARP Karpathos 3.26 82 PN **Pn 07 00 48.1 +1.5**
BODT Bodrum 3.83 59 PN **Pn 07 00 55.7 +1.4**
AGG Agios Georgios 3.90 350 *i* P **Pn 07 00 56.7 +1.3**
AGG *i* S **Sn 07 01 36.8 -3.1**
SLUM Salum 4.04 155 P **Pn 07 00 58.9 +1.6**
baz=161
SLUM AMP 07 01 00.0
baz=161
SLUM S **Sn 07 01 40.3 -3.1**
baz=161
ARG Arkhangelos 4.14 74 PN **Pn 07 01 00.4 +1.8**
YER Yerkesik 4.56 63 PN **Pn 07 01 06.2 +1.8**
AYDB Zeytinkoy-Aydi 4.68 52 PN **Pn 07 01 08.3 +2.2**
LIT Litokhoron 4.95 354 *i* P **Pn 07 01 09.7 0.0**
TAVA DENIZLI_Tavas 5.15 62 *i* P **Pn 07 01 14.9 +2.4**
KHAL Karahalli 5.97 56 *i* P **Pn 07 01 25.1 +1.2**
SWA2 6.22 161 P **Pn 07 01 28.3 +1.2**
baz=166
SWA2 AMP 07 02 00.0
baz=166
KOT Kottamia 8.97 123 P **Pn 07 02 02.9 -2.0**
baz=125
KOT AMP 07 03 00.0
baz=125
GLL Jalalah 9.11 125 P **Pn 07 02 05.4 -1.4**
baz=128
HFRF Wahat Farafira 9.12 150 P **Pn 07 02 06.9 0.0**
baz=153
BRTR Keskin Array B 9.46 58 P **Pn 07 02 13.8 +2.1**
comp=N,0.1nm,0.3s,baz=226,slow=13,SNR=9.3
NBNS Bani Suef 9.49 131 P **Pn 07 02 11.6 -0.4**
baz=134
NBNS AMP 07 03 00.0
baz=134
KZIT Kziot 10.32 111 Pn **Pn 07 02 21.4 -2.0**
KZIT Sn Sn 07 04 06.9 -11
MMAI Mount Meron Ar 10.35 99 P **Pn 07 02 26.6 +2.7**
comp=N,3.2nm,0.3s,baz=169,slow=23,SNR=4.1
NATI Neve Ativ 10.56 97 Pn **Pn 07 02 26.4 -0.2**
NATI Sn **Sn 07 04 15.6 -7.9**
HMDT Nahal Hemdat 10.67 102 Pn **Pn 07 02 26.9 -1.3**
HMDT Sn Sn 07 04 16.3 -10
DSI Dead Sea 10.80 106 Pn **Pn 07 02 27.5 -2.5**
KRMI Paran Flat 10.95 114 Pn **Pn 07 02 31.3 -0.7**
KRMI Sn Sn 07 04 22.2 -11
PRNI Paran 11.04 113 Pn **Pn 07 02 31.7 -1.6**
PRNI Sn Sn 07 04 23.9 -12
HRFI Mount Harif 11.22 114 Pn **Pn 07 02 33.0 -2.7**
HRFI Sn Sn 07 04 28.6 -11
MBRI Mt Berech 11.25 115 Pn **Pn 07 02 34.6 -1.6**
MBRI Sn Sn 07 04 30.1 -11
EIL Elat 11.35 116 P **Pn 07 02 36.3 -1.1**
comp=N,0.5nm,0.3s,baz=321,slow=3.0,SNR=7.4
EIL S Sn 07 04 32.8 -10
comp=N,1.2nm,0.3s,baz=156,slow=6.1,SNR=6.9
EIL Elat 11.35 116 Pn **Pn 07 02 34.7 -2.7**
EIL Sn Sn 07 04 29.9 -13
GERES GERESS Array B 15.36 336 P **Pn 07 03 30.2 -1.4**
comp=N,0.1nm,0.3s,baz=164,slow=15,SNR=3.1
AKASG Malin Array Be 16.12 14 P **Pn 07 03 42.4 +1.0**
comp=N,0.5nm,0.3s,baz=204,slow=12,SNR=3.3
KVAR Kislovodsk Arr 17.37 54 LR LR 07 13 13.6
comp=N,92nm,18.1s,baz=107,slow=46
HFS Hagfors 25.73 349 P **P 07 05 23.6 -0.5**
comp=N,1.1nm,0.4s,baz=138,slow=9.8,SNR=7.9
FINES FINESS Array B 26.35 3 P **P 07 05 29.0 -0.8**
comp=N,0.7nm,0.5s,baz=146,slow=12,SNR=5.1
NOA NORSAR Array B 27.00 347 P **P 07 05 35.7 +0.1**
comp=N,0.1nm,0.3s,baz=156,slow=9.8,SNR=4.1
TORD Torodi Ar. Bea 29.30 227 P **P 07 05 58.1 +1.6**
comp=N,0.3nm,0.5s,baz=30,slow=9.0,SNR=3.0
KURBB Kurchatov Arra 42.36 51 P **P 07 07 47.1 -0.7**
comp=N,0.7nm,0.2s,baz=276,slow=8.7,SNR=4.0
MKAR Makanchi Array 45.10 56 P **P 07 08 09.2 -0.8**
comp=N,0.3nm,0.3s,baz=266,slow=7.4,SNR=9.9
ZALV Zalesovo Beam 46.15 46 P **P 07 08 17.1 -1.0**
comp=N,0.6nm,0.3s,baz=276,slow=9.1,SNR=3.5
SONM Songino Array 60.71 50 P **P 07 10 06.3 +1.1**
comp=N,0.1nm,0.4s,baz=295,slow=7.6,SNR=2.8

ROM 09 07:22:12.6±0.1, 38°.122N±0°.004×15°.640E±0°.002, h11km, Md1.1/3, Error ellipse: s-maj=0.4km s-min=0.2km az=182.0, Sicily

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

MTTG Motta San Giov 0.13 160 P Pg 07 22 16.4 +0.7
MTTG S Sg 07 22 18.6 +0.7
MTTG AML AML
comp=E,1021μm,0.3s
MTTG AML AML
comp=N,948μm,0.5s
MTTG END
MTTG END
GMB Gambarie 0.16 73 P Pg 07 22 16.9 +0.7
GMB S Sg 07 22 19.7 +0.9
GMB AML AML
comp=E,2400μm,1.0s
GMB AML AML
comp=N,2485μm,0.6s
GMB END
GMB END
MSCL Scilla 0.16 47 P Pg 07 22 16.9 +0.6
MSCL S Sg 07 22 19.6 +0.8
MSRU Castanea 0.17 324 P Pg 07 22 17.1 +0.7
MSRU S Sg 07 22 20.4 +1.2
MPNC Port Mandanici 0.23 276 P Pg 07 22 17.8 +0.5
MPNC S Sg 07 22 21.7 +1.1
CEL Celeste 0.24 55 P Pg 07 22 18.2 +0.6
CEL S Sg 07 22 22.1 +1.0
MCSR Castroreale 0.31 259 P Pg 07 22 19.5 +0.5
MCSR S Sb 07 22 25.0 -0.4
MCSR AML AML
comp=E,1255μm,0.4s
MCSR AML AML
comp=N,1435μm,0.3s
MCSR END
SOI Samo 0.33 98 P Pg 07 22 19.6 +0.3
SOI S Sb 07 22 25.1 -0.8
SOI AML AML
comp=N,324μm,0.2s
SOI AML AML
comp=E,232μm,0.3s
SOI END
MPAZ Palizzi 0.34 120 P Pg 07 22 19.8 +0.4
MPAZ S Sb 07 22 25.0 -1.0
MPAZ AML AML
comp=E,259μm,0.3s
MPAZ AML AML
comp=N,324μm,0.2s
MPAZ END

ROM 09 07:22:39.2±0.1, 38°.112N±0°.004×15°.639E±0°.003, h13km±1km, ML1.9/9, 3C-1D, Error ellipse: s-maj=0.4km s-min=0.2km az=341.0, Sicily

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

MTTG Motta San Giov 0.12 158 ⇓P Pb 07 22 43.0 -0.4
MTTG S Sg 07 22 45.2 +0.5
MTTG AML AML
comp=N,948μm,0.5s
MTTG AML AML
comp=E,1021μm,0.3s
GMB Gambarie 0.16 70 P Pg 07 22 43.5 +0.4
GMB S Sg 07 22 46.5 +0.6
GMB AML AML
comp=E,2395μm,1.0s
GMB AML AML
comp=N,2485μm,0.6s
GMB AML AML
comp=E,2400μm,1.0s
GMB AML AML
comp=N,2480μm,0.6s
MSCL Scilla 0.17 45 P Pg 07 22 43.6 +0.4
MSCL S Sg 07 22 46.4 +0.4
MSRU Castanea 0.18 326 P Pg 07 22 43.8 +0.4
MSRU S Sb 07 22 47.1 -0.9
MPNC Port Mandanici 0.23 278 ⇑P Pg 07 22 44.5 +0.4
MPNC S Sg 07 22 48.1 +0.6
CEL Celeste 0.25 54 P Pg 07 22 45.0 +0.4
CEL S Sg 07 22 49.0 +0.9
CEL AML AML
comp=N,346μm,0.2s
CEL AML AML
comp=N,418μm,0.2s
CEL AML AML
comp=E,372μm,1.0s
CEL AML AML
comp=E,442μm,1.0s
CEL AML AML
comp=N,346μm,0.2s
MCSR Castroreale 0.31 261 ⇑P Pg 07 22 46.1 +0.5
MCSR S Sb 07 22 51.2 -0.6
MCSR AML AML
comp=E,1255μm,0.4s
MCSR AML AML
comp=N,1435μm,0.3s
MPAZ Palizzi 0.33 119 P Pg 07 22 46.4 +0.4
MPAZ S Sg 07 22 51.3 +0.9
MPAZ AML AML
comp=E,259μm,0.3s
MPAZ AML AML
comp=N,324μm,0.2s
SOI Samo 0.33 97 P Pg 07 22 46.2 +0.2
SOI AML AML
comp=E,232μm,0.3s
SOI AML AML
comp=N,324μm,0.2s
NOV Novara 0.41 258 AML AML
comp=E,317μm,1.4s
NOV AML AML
comp=N,306μm,0.3s
JOPP Joppolo 0.53 21 P Pg 07 22 49.9 +0.3
JOPP S Sb 07 22 57.5 -0.6
JOPP AML AML
comp=E,94μm,1.4s
JOPP AML AML
comp=N,124μm,0.2s
JOPP AML AML
comp=E,94μm,1.4s
JOPP AML AML
comp=N,124μm,0.2s
MUCR Ucria 0.61 264 P Pb 07 22 51.5 -0.3
PLAC Placanica 0.71 62 AML AML
comp=N,70μm,0.3s
PLAC AML AML
comp=E,103μm,0.5s
HLNI Lentini 0.98 219 ⇑P Pn 07 22 59.3 +0.7

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*SSNC **09** 07:49:17.9±1.4, 19°.25N×73°.64W, h7km±29km, MD2.8, ML1.6, MW2.3*
*OSPL **09** 07:49:19.0±0.3, 18°.63N×73°.99W, h88km±8km, ML1.8*
ISC 09 07:49:18.6±1.3, 19°.4N±0°.1×73°.65W±0°.07, h32km±15km, n7, σ0§81/13, Haiti region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

MASC Masc 0.98 326 *i* Pg **Pn 07 49 36.5 +0.4**
MASC *i* Sg **Sb 07 49 49.1 -0.5**
MASC IAML 07 49 52.0
comp=E,22nm,0.2s
MASC IAML 07 49 52.1
comp=N,20nm,0.2s
LGNH Logne 1.30 130 *i* P **Pn 07 49 41.3 +0.8**
LGNH *e*S **Sb 07 49 58.0 -0.8**
GTBY Guantanamo Bay 1.49 293 *i* P **Pb 07 49 45.7 +0.1**
GTBY *e*S **Sb 07 50 05.3 +1.2**
GTBY IAML 07 50 08.7
comp=Z,6.9nm,0.5s
GTMO Guantanamo 1.57 297 *i* P **Pn 07 49 43.5 -0.8**
GTMO *i* S **Sn 07 50 04.1 +0.6**
RCC Rio Carpintero 2.03 289 *e*P **Pn 07 49 50.5 0.0**
RCC *e*S **Sn 07 50 14.9 +0.1**
RCC IAML 07 50 21.4
comp=N,4.8nm,0.1s
RCC IAML 07 50 22.3
comp=E,5.0nm,0.1s
SDDR Presa de Saban 2.27 99 *e*S **Sb 07 50 26.1 -0.4**
SDDR IAML 07 50 31.9
comp=Z,5.8nm,0.4s
LMGC Las Mercedes 3.24 283 *i* P **Pn 07 50 07.0 -0.1**
LMGC *i* S **Sn 07 50 43.4 -1.2**

IDC 09 07:59:54.7±2.3, 0°.48N×126°.61E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.2/37, mbtmp3.2/3, Error ellipse: s-maj=206.2km s-min=26.8km az=65.0, Northern Molucca Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

WRA Warramunga Arr 21.67 160 P P 08 04 46.8 -0.3
0.7nm,0.7s,baz=338,slow=11,SNR=13
ASAR Alice Springs 25.03 164 P P 08 05 20.9 +0.2
0.1nm,0.3s,baz=346,slow=12,SNR=7.9
MKAR Makanchi Array 60.16 326 P P 08 10 04.2 -0.1
0.1nm,0.3s,baz=121,slow=7.9,SNR=4.4

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*IDC **09** 08:08:33.2±3.9, 14°.86N×93°.59W, h39km±30km, mb3.3/4, mb1 3.6/9, mb1mx3.4/47, mbtmp3.5/9, ML3.2/5, Error ellipse: s-maj=50.5km s-min=22.8km az=34.0*
ISC 09 08:08:34.4±1.3, 14°.9N±0°.1×93°.58W±0°.08, h57km, n9, σ1§41/11, mb3.6/4, Near coast of Chiapas

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

CMIG Matias Romero 2.53 331 Pn **Pn 08 09 10.6 -2.5**
1.2nm,0.3s,baz=174,slow=13,SNR=25
CMIG Sn **Sn 08 09 42.6 -0.2**
3.9nm,0.3s,baz=121,slow=14,SNR=5.7
APG El Apazote 3.02 87 Pn **Pn 08 09 18.8 -1.1**
1.6nm,0.3s,baz=221,slow=13,SNR=10
TEIG Tepich 7.34 43 Pn **Pn 08 10 19.3 +0.4**
0.9nm,0.3s,baz=221,slow=9.3,SNR=14
TEIG Sn **Sn 08 11 39.6 -1.3**
baz=316,slow=20,SNR=2.0
JTS Las Juntas de 9.58 117 Pn **Pn 08 10 48.3 -1.4**
0.4nm,0.3s,baz=304,slow=12,SNR=2.6
TXAR Lajitas Array 17.14 329 P **P 08 12 32.0 +0.9**
0.0nm,0.3s,baz=147,slow=12,SNR=3.3
NVAR Mina Array Bea 32.03 322 P **P 08 14 57.5 +1.6**
0.2nm,0.5s,baz=130,slow=9.6,SNR=3.1
YKA Yellowknife Ar 49.83 347 P **P 08 17 22.1 +0.6**
0.9nm,0.7s,baz=156,slow=7.0,SNR=9.8
INK Inuvik 59.17 344 P **P 08 18 29.1 +0.1**
0.5nm,0.6s,baz=144,slow=5.7,SNR=4.0
ILAR Eielson Array 61.44 337 P **P 08 18 45.5 +0.9**
0.3nm,0.8s,baz=139,slow=5.6,SNR=3.3

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*GCG **09** 08:14:37.7±0.6, 16°.25N×93°.74W, h0km±866km, MD4.7*
*MEX **09** 08:14:46.2±0.7, 14°.29N×93°.91W, h10km, MD4.5*
*NEIC **09** 08:14:48.5±1.9, 14°.47N±0°.07×93°.81W±0°.05, h28km±5km, Error ellipse: s-maj=10.3km s-min=6.8km az=207.0*
*IDC **09** 08:14:50.9±2.8, 14°.70N×93°.62W, h38km±22km, mb4.0/21, mb1 4.2/26, mb1mx4.0/56, mbtmp4.2/26, ML3.8/5, MS3.6/10, Ms1 3.6/10, ms1mx3.4/33, Error ellipse: s-maj=26.0km s-min=11.8km az=48.0*
ISC 09 08:14:48.8±0.5, 14°.54N±0°.05×93°.80W±0°.05, h30km, n279, σ1§17/274, mb4.4/62, MS3.8/7, Near coast of Chiapas

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

PCIG 1.28 26 **Pn 08 15 09.9 -0.9**
PCIG **Sb 08 15 29.0 +0.4**
PCIG 1.28 26 *i* P **Pn 08 15 09.9 -0.9**
PCIG *i* S **Sb 08 15 29.0 +0.4**
THIG 1.52 76 **Pn 08 15 13.0 -1.1**
THIG **Sn 08 15 33.7 +0.8**
THIG 1.52 76 *e*P **Pn 08 15 13.0 -1.1**
THIG *i* S **Sn 08 15 33.7 +0.8**
ERG Entre ros, C 2.16 92 *e*P **Pn 08 15 23.4 +0.6**
STG3 Santiaguito 3, 2.16 85 *e*P **Pn 08 15 21.3 -1.7**
TGIG 2.32 16 **Pn 08 15 25.9 +0.9**
TGIG **Sb 08 15 56.3 -2.0**
TGIG 2.32 16 *e*P **Pn 08 15 25.9 +0.9**
TGIG *e*S **Sb 08 15 56.3 -2.0**
CCIG Comitan 2.36 43 **Pn 08 15 27.4 +1.7**
CMIG Matias Romero 2.74 338 Pn **Pn 08 15 29.8 -1.1**
7.0nm,0.3s,baz=170,slow=11,SNR=161
CMIG LR LR 08 16 01.3
comp=Z,259nm,19.8s,baz=186,slow=26
CMIG Sn **Sn 08 16 01.6 -1.4**
75nm,0.3s,baz=94,slow=16,SNR=13
CMIG Matias Romero 2.74 338 **Pn 08 15 29.8 -1.1**
CMIG **Sn 08 16 01.6 -1.4**
FUG Fuego 3 2.86 92 *e*S **Sb 08 16 13.3 -0.8**
PCG Pacaya 3.09 92 *e*S **Sb 08 16 19.9 -0.8**
APG El Apazote 3.25 81 Pn **Pn 08 15 38.1 0.0**
6.6nm,0.3s,baz=310,slow=8.6,SNR=57
IXG Ixpaco 3.27 96 *e*P **Pn 08 15 38.3 0.0**
SNET Serv Nac Est T 4.51 100 Pn **Pn 08 15 55.0 -0.2**
TLIG Tlapa 5.48 304 **Pn 08 16 08.3 -0.4**
TGUH Tegucigalpa,Un 6.34 94 **Pn 08 16 23.1 +2.7**
UNM Universidad Na 7.01 313 Pn **Pn 08 16 30.0 +0.2**
ESTN Estel 7.36 100 **Pn 08 16 34.0 -0.4**
TEIG Tepich 7.73 42 Pn **Pn 08 16 38.9 -0.5**
4.9nm,0.3s,baz=0.8,slow=0.8,SNR=57
TEIG Sn **Sn 08 18 03.8 -2.1**
baz=139,slow=20,SNR=3.5
TEIG LR LR 08 20 01.5
comp=Z,876nm,19.7s,baz=318,slow=41
TEIG Tepich 7.73 42 Pn **Pn 08 16 39.5 +0.1**
MOIG Morelia 8.72 307 **Pn 08 16 51.8 -1.4**
ACON Acoyapa 8.78 106 **Pn 08 16 55.0 +1.2**
JTS Las Juntas de 9.62 115 Pn **Pn 08 17 04.3 -1.0**
0.5nm,0.3s,baz=282,slow=20,SNR=3.1
JTS Las Juntas de 9.62 115 **Pn 08 17 03.8 -1.5**
HDC Heredia 10.48 114 Pn **Pn 08 17 16.6 -0.7**
ZAIG Zacatecas 11.66 316 Pn **Pn 08 17 33.0 -0.6**
833A Chaparral WMA, 14.67 340 **Pn 08 18 15.3 +1.0**
833A Chaparral WMA, 14.67 340 P **Pn 08 18 16.2 +1.9**
baz=158
HKT Hockley 15.45 353 **P 08 18 28.6 -0.3**
PAYG Puerto Ayora 15.51 167 Pn **Pn 08 18 21.6 -4.1**
MTDJ Mount Denham 16.03 75 Pn **Pn 08 18 33.1 +0.8**
MTDJ IAmb IAmb 08 18 42.1
comp=Z,66nm,1.4s
441A DeRidder 16.14 2 Pn **Pn 08 18 34.9 +1.3**
441A IAmb IAmb 08 18 46.3
comp=Z,29nm,1.2s
435B Jarrell 16.54 348 **Pn 08 18 38.8 +0.2**
HPIG 16.57 320 **Pn 08 18 38.8 -0.5**
JCT Junction City 16.80 342 **Pn 08 18 41.8 -0.2**
JCT IAmb IAmb 08 18 51.0
comp=Z,28nm,1.0s
JCT Junction City 16.80 342 P **P 08 18 43.4 -0.6**
baz=159,SNR=15
342A Flagon Creek P 16.81 4 Pn **Pn 08 18 41.4 -0.7**
NATX Nacogdoches 17.16 358 P **P 08 18 47.2 -0.6**
346A Big Creek Wild 17.23 13 P **P 08 18 48.7 0.0**
346A IAmb IAmb 08 19 05.3
comp=Z,26nm,1.0s
TX31 Lajitas Ar. Si 17.32 330 P **Pn 08 18 48.6 0.0**
TX32 Lajitas Array 17.32 330 P **Pn 08 18 48.8 +0.2**
TXAR Lajitas Array 17.32 330 P **Pn 08 18 49.3 +0.7**
comp=Z,0.1nm,0.3s,baz=148,slow=9.7,SNR=15
TXAR LR LR 08 26 18.8
comp=Z,47nm,19.2s,baz=0.0,slow=40
TXAR Lajitas Array 17.32 330 P **Pn 08 18 49.0 +0.5**
BRAL Brewton 17.67 19 P **P 08 18 53.2 -0.2**
BRAL IAmb IAmb 08 19 06.8
comp=Z,41nm,1.1s
WHTX Lake Whitney, 17.69 350 P **P 08 18 53.8 +0.1**
143A Socs Landing, 18.21 6 P **P 08 19 01.2 +1.8**
143A IAmb IAmb 08 19 08.5
comp=Z,36nm,0.9s
Z41A Richland Creek 18.65 3 P **Pn 08 19 06.3 +1.5**
Z41A IAmb IAmb 08 19 15.6
comp=Z,33nm,1.1s
352A Blakely 18.71 24 P **Pn 08 19 05.4 -0.1**
352A IAmb IAmb 08 19 14.8
comp=Z,24nm,1.1s
ABTX Abilene, Hawle 18.77 345 P **Pn 08 19 06.2 -0.1**
ABTX Abilene, Hawle 18.77 345 P **Pn 08 19 07.0 +0.7**
baz=162,SNR=6.1
CCAR Cane Creek 19.38 5 P **Pn 08 19 15.0 +1.5**
MIAR Mount Ida 19.92 1 P **P 08 19 18.7 +0.6**
MIAR IAmb IAmb 08 19 23.8
comp=Z,18nm,0.8s
MIAR Mount Ida 19.92 1 P **P 08 19 18.6 +0.4**
baz=181,SNR=10
Z50A Ashland 19.95 20 P **Pn 08 19 19.8 -0.6**
X43A Marvell 20.06 7 P **P 08 19 20.7 +1.0**
X43A Marvell 20.06 7 P Pn 08 19 25.6 +4.0
baz=188
MNTX Cornudas Mount 20.10 330 P **P 08 19 21.0 +0.8**
MNTX Cornudas Mount 20.10 330 P Pn 08 19 21.4 -0.7
baz=146,SNR=6.3
UALR University of 20.19 3 P **P 08 19 21.7 +0.6**
UALR IAmb IAmb 08 19 26.0
comp=Z,12nm,0.8s
OXF Oxford 20.27 11 P Pn 08 19 24.3 +0.1
OXF IAmb IAmb 08 19 34.6
comp=Z,32nm,1.1s
Y49A Blount Mountai 20.36 18 P Pn 08 19 24.4 -0.7
GUY2C Guyana, Caldas 20.36 115 *e*P Pn 08 19 31.4 +5.5
Z52A Williamson 20.43 23 P Pn 08 19 25.1 -0.8
baz=207
154A Montrose 20.46 27 P Pn 08 19 25.8 -0.5
154A IAmb IAmb 08 19 33.4
comp=Z,32nm,1.1s
154A Montrose 20.46 27 P Pn 08 19 25.4 -0.9
baz=211
W39A Magazine 20.57 0 P Pn 08 19 27.9 +0.4
W39A IAmb IAmb 08 19 30.0
comp=Z,19nm,0.8s
W39A Magazine 20.57 0 P Pn 08 19 29.3 +1.7
baz=180,SNR=11
W41B Gary Mavity, V 20.59 4 P **P 08 19 25.9 +0.5**
W41B IAmb IAmb 08 19 40.4
comp=Z,15nm,1.1s
W41B Gary Mavity, V 20.59 4 P Pn 08 19 29.2 +1.4
baz=184
PTBC PUERTO BERRIO, 20.59 111 *e*P **P 08 19 25.6 -0.1**
WMOK Wichita Mounta 20.61 348 P **P 08 19 25.6 -0.1**
WMOK IAmb IAmb 08 19 36.7
comp=Z,17nm,1.4s
WMOK Wichita Mounta 20.61 348 P **P 08 19 26.1 +0.4**
baz=166,SNR=10
WHAR Wooly Hollow 20.70 3 P **P 08 19 26.7 0.0**
WHAR IAmb IAmb 08 19 44.0
comp=Z,14nm,1.0s
W35A Tecumseh 20.71 353 P **P 08 19 26.9 +0.1**
X48A Hartselle 20.74 16 P **P 08 19 27.3 +0.2**
X48A IAmb IAmb 08 19 38.8
comp=Z,30nm,1.1s
Y51A Rockmart 20.83 21 P **P 08 19 29.4 +1.3**
baz=204
FNO Franklin 20.88 352 P **P 08 19 29.3 +0.7**
MSTX Muleshoe 20.98 339 P **P 08 19 29.6 -0.2**
MSTX Muleshoe 20.98 339 P **P 08 19 30.7 +0.9**
baz=155,SNR=11
PLAL Pickwick Lake 21.00 13 P **P 08 19 28.4 -1.4**
PLAL IAmb IAmb 08 19 41.8
comp=Z,21nm,1.2s
GOGA Godfrey 21.00 25 P Pn 08 19 31.6 -1.0
OKCSW OKLAHOMA CITY 21.03 352 P **P 08 19 31.3 +1.1**
OKCFA Oklahoma City 21.04 352 P **P 08 19 30.8 +0.5**
ORTC Ortega, Tolima 21.12 118 *e*P **P 08 19 33.0 +1.6**
Y52A Lilburn 21.16 23 P **P 08 19 32.7 +1.0**
Y52A IAmb IAmb 08 19 48.5
comp=Z,16nm,0.9s
FPAL Fort Paine 21.24 19 P **P 08 19 33.0 +0.5**
SPBC San Pablo de B 21.32 112 *e*P **P 08 19 33.8 +0.3**
TUL1 Leonard 21.35 356 P **P 08 19 34.7 +1.0**
TUL1 IAmb IAmb 08 19 47.8
comp=Z,13nm,0.8s
TUL1 Leonard 21.35 356 P **P 08 19 36.2 +2.5**
baz=175,SNR=5.9
HSIG 21.44 315 P **P 08 19 34.7 +0.1**
ROSC El Rosal 21.46 115 P **P 08 19 38.2 +2.8**
comp=Z,7.0nm,0.7s,baz=347,slow=7.3,SNR=5.8
ROSC El Rosal 21.46 115 P **P 08 19 34.0 -1.4**
ROSC IAmb IAmb 08 19 45.6
comp=Z,22nm,0.9s
AMTX Amarillo 21.46 342 P **P 08 19 35.5 +0.5**

AMTX Amarillo 21.46 342 P P 08 19 36.1 +1.1
baz=159
PRAC Prado 21.52 118 eP P 08 19 37.1 +1.3
LCAR Lake Charles 21.57 6 P P 08 19 35.7 -0.3
LCAR IAmb IAmb 08 19 51.3
comp=Z,12nm,1.1s
W49A Belvidere 21.58 17 P P 08 19 36.3 +0.1
baz=200,SNR=7.7
HHAR Hobbs 21.65 360 P P 08 19 38.4 +1.5
U40A Yellville 21.74 2 P P 08 19 39.5 +1.7
U40A IAmb IAmb 08 19 40.2
comp=Z,17nm,0.8s
U40A Yellville 21.74 2 P P 08 19 39.3 +1.5
baz=182,SNR=19
PAMC Pamplona, Colo 21.90 107 eP P 08 19 39.1 -1.1
319A Douglas 21.95 322 P P 08 19 41.0 +0.7
319A IAmb IAmb 08 19 49.6
comp=Z,14nm,1.1s
121A Cookes Peak, D 21.98 327 P P 08 19 43.0 +2.4
121A Cookes Peak, D 21.98 327 P P 08 19 43.6 +2.9
baz=141,SNR=23
V48A Smith Brothers 22.02 15 P P 08 19 39.6 -1.2
FLOC Florencia 22.07 124 P P 08 19 41.9 +0.3
CHIC Chingaza 22.08 115 eP P 08 19 44.5 +2.4
RUSC La Rusia 22.10 111 eP P 08 19 41.6 -0.8
RUSC La Rusia 22.10 111 P P 08 19 42.2 -0.3
WVT Waverly 22.15 13 P P 08 19 42.3 0.0
WVT Waverly 22.15 13 P P 08 19 42.8 +0.6
baz=195
U32A Winter Ranch, 22.24 349 P P 08 19 43.7 +0.5
U32A IAmb IAmb 08 19 45.8
comp=Z,18nm,0.8s
PBMO Poplar Bluff 22.35 7 P P 08 19 45.2 +0.9
PBMO IAmb IAmb 08 19 59.0
comp=Z,28nm,1.2s
CLTN Cedars of Leba 22.48 16 P P 08 19 45.1 -0.7
MGMO Mountain Grove 22.56 3 P P 08 19 47.2 +0.5
MGMO IAmb IAmb 08 19 48.3
comp=Z,14nm,0.9s
Y22D IRIS PASSCAL I 22.79 331 P P 08 19 51.3 +2.1
TKL Tuckaleechee C 22.87 21 P P 08 19 49.7 -0.3
comp=Z,4.2nm,1.0s,baz=169,slow=10,SNR=3.0
TKL Tuckaleechee C 22.87 21 P P 08 19 52.0 +2.1
TKL IAmb IAmb 08 19 53.4
comp=Z,18nm,1.5s
W54A Cherokee Point 22.97 25 P P 08 19 51.6 +0.7
baz=210
U49A Red Boiling Sp 23.02 17 P P 08 19 50.6 -0.9
baz=200
T47A Sharon Grove 23.14 14 P P 08 19 51.5 -1.1
T47A IAmb IAmb 08 19 53.0
comp=Z,15nm,0.8s
ANMO Albuquerque 23.30 333 P P 08 19 55.3 +0.8
comp=Z,2.5nm,0.8s,baz=150,slow=11,SNR=14
ANMO Albuquerque 23.30 333 P P 08 19 55.5 +0.9
ANMO Albuquerque 23.30 333 P P 08 19 55.7 +1.2
baz=148
SDV Santo Domingo 23.36 101 P P 08 19 55.4 +0.2
comp=Z,4.4nm,0.7s,baz=290,slow=5.6,SNR=6.7
SDV Santo Domingo 23.36 101 P P 08 19 55.1 -0.1
SDV IAmb IAmb 08 20 07.8
comp=Z,7.0nm,0.8s
S44A Carbondale 23.41 9 P P 08 19 54.2 -1.1
TUC Tucson 23.52 322 P P 08 19 58.1 +1.5
TUC IAmb IAmb 08 19 59.6
comp=Z,12nm,1.1s
TUC Tucson 23.52 322 P P 08 19 58.8 +2.3
baz=135
CCM Cathedral Cave 23.53 5 P P 08 19 55.3 -1.2
CCM IAmb IAmb 08 20 13.7
comp=Z,16nm,1.3s
CCM Cathedral Cave 23.53 5 P P 08 19 55.5 -1.0
baz=186
USIN University of 23.95 12 P P 08 20 00.1 -0.4
S49A Springfield 24.35 17 P P 08 20 02.8 -1.4
baz=200
T25A Trinidad 24.41 339 P P 08 20 06.7 +1.7
T25A IAmb IAmb 08 20 08.2
comp=Z,16nm,0.9s
T25A Trinidad 24.41 339 P P 08 20 07.4 +2.4
baz=154,SNR=11
WCI Wyandotte Cave 24.51 14 P P 08 20 04.6 -1.0
WCI Wyandotte Cave 24.51 14 P P 08 20 05.2 -0.4
baz=198
214A Organ Pipe Nat 24.54 318 P P 08 20 07.1 +1.1
214A IAmb IAmb 08 20 17.7
comp=Z,8.4nm,1.0s
214A Organ Pipe Nat 24.54 318 P P 08 20 07.5 +1.4
baz=130
KSU1 Kansas State U 24.59 355 P P 08 20 05.4 -0.9
baz=173,SNR=5.9
OLIL Olney 24.62 11 P P 08 20 05.1 -1.4
U55A TA2, Sparta 24.66 25 P P 08 20 06.8 -0.3
baz=211
X18A Snowflake 24.67 327 P P 08 20 08.9 +1.6
X18A IAmb IAmb 08 20 11.4
comp=Z,6.7nm,0.8s
CBKS Cedar Bluff 24.74 349 P P 08 20 08.3 +0.6
CBKS IAmb IAmb 08 20 22.4
comp=Z,17nm,1.0s
W18A Petrified Fore 25.01 328 P P 08 20 11.0 +0.5
W18A IAmb IAmb 08 20 14.0
comp=Z,7.8nm,1.0s
Q48A North Vernon 25.31 15 P P 08 20 11.7 -1.1
baz=198
SDCO Great Sand Dun 25.34 338 P P 08 20 14.7 +1.2
SDCO Great Sand Dun 25.34 338 P P 08 20 15.2 +1.7
baz=153,SNR=7.4
BLO Bloomington 25.36 13 P P 08 20 12.4 -0.8
X16A Lo Mia Camp, P 25.41 324 P P 08 20 15.7 +1.6
Y14A Wickenburg 25.98 321 P P 08 20 20.1 +1.0
MVCO Mesa Verde 26.10 333 P P 08 20 21.8 +1.5
MVCO P P 08 20 22.1 +1.8
MVCO IAmb IAmb 08 20 22.9
comp=Z,6.2nm,0.9s
MVCO Mesa Verde 26.10 333 P P 08 20 22.1 +1.8
baz=146,SNR=5.2
WUAZ Wupatki 26.18 326 P P 08 20 21.8 +0.8
WUAZ IAmb IAmb 08 20 35.2
comp=Z,9.5nm,1.0s
WUAZ Wupatki 26.18 326 P P 08 20 22.2 +1.2
baz=138
HDIL Hopedale 26.21 8 P P 08 20 20.1 -0.9
HDIL IAmb IAmb 08 20 21.0
comp=Z,18nm,1.1s
HDIL Hopedale 26.21 8 P P 08 20 20.3 -0.7
baz=190
Q24A Divide 26.31 340 P P 08 20 23.8 +1.5
SFIN Lafayette 26.40 12 P P 08 20 21.6 -1.1
baz=195
PDMCI Parker Dam,Lak 26.93 321 P P 08 20 29.2 +1.6
baz=132
ISCO Idaho Springs 27.21 340 P P 08 20 31.1 +0.7
ISCO IAmb IAmb 08 20 32.8
comp=Z,6.6nm,0.8s
ISCO Idaho Springs 27.21 340 P P 08 20 32.1 +1.6
baz=154,SNR=15
OGNE Ogallala 27.27 346 P P 08 20 31.5 +0.9
OGNE Ogallala 27.27 346 P P 08 20 31.9 +1.2
baz=162
SCIA State Center 27.27 1 P P 08 20 30.0 -0.6
SCIA State Center 27.27 1 P P 08 20 30.5 -0.1
baz=181
N48A Decatur 27.31 15 P P 08 20 30.0 -1.0
baz=199
BC3 Big Chuckawall 27.34 318 P P 08 20 33.1 +1.7
baz=129
U15A North Rim 27.36 326 P P 08 20 32.8 +1.0
IRM Iron Mountain 27.46 319 P P 08 20 34.0 +1.6
baz=130
L40A Anamosa 27.51 4 P P 08 20 31.4 -1.3
L40A IAmb IAmb 08 20 41.3
comp=Z,13nm,1.2s
KNB Kanab 28.08 326 P P 08 20 39.2 +1.2
GMRC Granite Mounta 28.18 320 P P 08 20 40.7 +1.7
baz=130
JFWS Jewell Farm 28.44 5 P P 08 20 40.0 -1.0
baz=187
SZCU Shurtz Canyon 28.65 327 P P 08 20 43.0 -0.2
CCUT Cedar City 28.76 326 P P 08 20 45.3 +1.1
P17A Butcher Ranch, 28.96 332 P P 08 20 46.9 +1.0
SHPR Sheep Range 29.03 323 P P 08 20 48.3 +1.8
ECSD EROS Data Cent 29.19 356 P P 08 20 47.1 -0.6
ECSD IAmb IAmb 08 20 47.9
comp=Z,9.3nm,0.7s
ECSD EROS Data Cent 29.19 356 P P 08 20 47.0 -0.6
baz=174,SNR=15
RWWY Rawlins 29.44 339 P P 08 20 51.5 +1.3
PSUT Pine Spring 29.75 327 P P 08 20 54.8 +1.8
K22A Casper 30.08 341 P P 08 20 56.4 +0.6
K22A IAmb IAmb 08 20 57.5
comp=Z,8.5nm,1.1s
K22A Casper 30.08 341 P P 08 20 57.2 +1.4
baz=155
SUSD Miller 30.12 353 P P 08 20 55.8 -0.1
MPMC Manual Prospec 30.15 320 P P 08 20 58.1 +1.6
baz=129
R11A Troy Canyon, C 30.55 325 P P 08 21 00.4 +0.4
R11A Troy Canyon, C 30.55 325 P P 08 21 01.9 +1.9
baz=135
SPMN Marine on St. 30.59 1 P P 08 20 58.0 -2.1
SPMN Marine on St. 30.59 1 P P 08 20 59.3 -0.8
baz=182
GRAC Grapevine Rang 30.67 321 P P 08 21 03.6 +2.7
baz=131
RSSD Black Hills 30.75 345 P P 08 21 01.7 0.0
RSSD Black Hills 30.75 345 P P 08 21 03.0 +1.3
baz=160
PD31 Pinedale Array 31.23 337 P P 08 21 06.7 +0.7
PDAR Pinedale Array 31.23 337 P P 08 21 06.6 +0.7
comp=Z,1.1nm,0.9s,baz=130,slow=11,SNR=8.7
PDAR Pinedale Array 31.23 337 P P 08 21 06.4 +0.4
AHID Auburn Hatcher 31.83 335 P P 08 21 12.2 +1.0
AHID IAmb IAmb 08 21 24.6
comp=Z,6.9nm,1.1s
NV11 Mina Array Sit 32.08 322 P P 08 21 14.5 +1.1
NV11 IAmb IAmb 08 21 16.2
comp=Z,6.4nm,1.0s
ELK Elko 32.11 328 P P 08 21 15.3 +1.6
ELK IAmb IAmb 08 21 25.5
comp=Z,4.5nm,0.9s
NVAR Mina Array Bea 32.17 322 P P 08 21 16.5 +2.2
comp=Z,3.8nm,0.8s,baz=139,slow=9.1,SNR=29
NVAR Mina Array Bea 32.17 322 P P 08 21 15.9 +1.6
REDW Red Top Meadow 32.23 336 P P 08 21 15.7 +0.9
REDW IAmb IAmb 08 21 27.5
comp=Z,9.5nm,1.1s
SNOW Snow King Moun 32.28 337 P P 08 21 16.3 +1.1
FXWY Fox Creek 32.53 336 P P 08 21 18.5 +1.1
FXWY IAmb IAmb 08 21 31.0
comp=Z,6.0nm,1.2s
SADO Sadowa 32.60 20 LR LR 08 36 30.5
comp=Z,195nm,18.1s,baz=212,slow=40
LKWY Lake 33.09 338 P P 08 21 24.5 +2.2
RLMT Red Lodge 33.18 340 P P 08 21 24.7 +1.6
RLMT IAmb IAmb 08 21 40.8
comp=Z,6.5nm,1.0s
RLMT Red Lodge 33.18 340 P P 08 21 24.3 +1.2
baz=152,SNR=5.4
YNE Yellowstone No 33.33 339 P P 08 21 25.0 +0.6
YMR Madison River 33.38 337 P P 08 21 27.4 +2.5
MDND Maddock 33.56 353 P P 08 21 25.4 -0.6
MDND Maddock 33.56 353 P P 08 21 26.1 0.0
baz=170
YHL Hebgen Lake 33.62 337 P P 08 21 29.2 +2.2
QLMT Earthquake Lak 33.70 337 P P 08 21 29.1 +1.5
AGMN Agassiz Nation 33.70 358 P P 08 21 26.2 -1.1
AGMN IAmb IAmb 08 21 35.4
comp=Z,11nm,1.1s
NCB Newcomb 33.76 26 P P 08 21 28.8 +0.9
NCB IAmb IAmb 08 21 31.3
comp=Z,10nm,1.3s
GCMT Greycliff 33.90 340 P P 08 21 30.3 +1.0
MCMT McKenzie Canyo 34.24 336 P P 08 21 34.4 +2.0
DLMT Dillon 34.59 336 P P 08 21 37.4 +2.1
DLMT IAmb IAmb 08 21 38.1
comp=Z,6.7nm,1.0s
DGMT Dagmar 34.91 348 P P 08 21 38.4 +0.6
ULM Lac du Bonnet 35.65 358 P P 08 21 42.2 -1.8
comp=Z,3.3nm,0.7s,baz=178,slow=9.2,SNR=11
ULM LR LR 08 38 10.5
comp=Z,64nm,18.6s,baz=150,slow=39
ULM Lac du Bonnet 35.65 358 P P 08 21 42.0 -2.1
ULM IAmb IAmb 08 21 51.1
comp=Z,6.0nm,0.9s
J08A Circle Bar Ran 35.66 329 P P 08 21 45.5 +1.1
J08A IAmb IAmb 08 21 55.2
comp=Z,8.6nm,1.0s
EGMT Eagleton 35.91 342 P P 08 21 47.4 +0.9
EGMT IAmb IAmb 08 21 48.6
comp=Z,13nm,1.1s
EGMT Eagleton 35.91 342 P P 08 21 47.7 +1.3
baz=153
MSO Missoula 36.33 336 P P 08 21 50.4 +0.3
MSO IAmb IAmb 08 22 00.7
comp=Z,5.3nm,1.0s
MSO Missoula 36.33 336 P P 08 21 50.5 +0.4
baz=146
YBH Yreka Blue Hor 36.88 323 LR LR 08 38 03.5
comp=Z,149nm,18.3s,baz=150,slow=38
F10A Beach Ranch, E 37.02 333 P P 08 21 56.5 +0.6
F10A IAmb IAmb 08 21 58.0
comp=Z,6.0nm,0.9s
NEW Newport 38.76 335 P P 08 22 10.6 +0.1
comp=Z,1.8nm,0.7s,baz=135,slow=8.6,SNR=5.3
NEW LR LR 08 40 58.8
comp=Z,85nm,19.0s,baz=121,slow=40
NEW Newport 38.76 335 P P 08 22 11.6 +1.0
C09A Chrisman Ranch 38.88 334 P P 08 22 12.1 +0.6
FFC Flin Flon 40.60 353 P P 08 22 26.2 +0.5
RPN Rapa Nui 44.08 200 LR LR 08 36 19.0
comp=Z,31nm,21.1s,baz=38,slow=29
FCC Fort Churchill 44.14 360 P P 08 22 53.8 -0.7
FCC IAmb IAmb 08 22 54.4
comp=Z,6.2nm,0.8s
YKA Yellowknife Ar 50.11 348 P P 08 23 41.1 +0.1
comp=Z,8.1nm,0.7s,baz=156,slow=7.2,SNR=87
YKA PcP PcP 08 24 60.0 -0.2
comp=Z,0.4nm,0.7s,baz=165,slow=3.0,SNR=3.4
DLBC Dease Lake 51.46 337 P P 08 23 52.8 +1.4
comp=Z,4.2nm,0.8s,baz=182,slow=5.1,SNR=4.7
DLBC Dease Lake 51.46 337 P P 08 23 52.9 +1.6
DLBC IAmb IAmb 08 23 54.0
comp=Z,7.3nm,1.0s
CPUP Villa Florida 53.93 139 P P 08 24 10.1 +0.2
comp=Z,0.6nm,0.4s,baz=0.0,slow=10,SNR=2.7
CPUP Villa Florida 53.93 139 P P 08 24 08.8 -1.1
CPUP IAmb IAmb 08 24 22.5
comp=Z,10.0nm,1.5s
BDFB Brasilia 54.28 122 P P 08 24 14.0 +1.2
comp=Z,3.0nm,0.8s,baz=269,slow=12,SNR=3.8
BDFB Brasilia 54.28 122 P P 08 24 12.3 -0.5
BCAR Beaver Creek A 58.85 337 P P 08 24 45.1 +0.5
PLCA Paso Flores 59.07 160 P P 08 24 47.7 +1.4
comp=Z,1.2nm,0.8s,baz=312,slow=8.2,SNR=3.8
INK Inuvik 59.44 344 P P 08 24 48.5 +0.1
comp=Z,3.8nm,0.7s,baz=123,slow=6.8,SNR=26
INK Inuvik 59.44 344 P P 08 24 48.9 +0.5
INK IAmb IAmb 08 24 49.2
comp=Z,4.9nm,0.8s
DOT Dot Lake 60.03 337 P P 08 24 53.0 +0.3
RES Resolute Bay 60.14 360 P P 08 24 52.6 -0.5
comp=Z,2.9nm,0.7s,baz=195,slow=7.2,SNR=19
RES Resolute Bay 60.14 360 P P 08 24 53.0 -0.2
RES IAmb IAmb 08 24 53.2
comp=Z,3.8nm,0.8s
PAX Paxson 60.24 336 P P 08 24 54.9 +0.7
PAX IAmb IAmb 08 24 58.2
comp=Z,5.0nm,0.9s
HDA Harding Lake 61.51 337 P P 08 25 03.0 +0.3
baz=118
PRP Porcupine Dome 61.52 338 P P 08 25 03.1 +0.2
IL31 61.66 337 P P 08 25 03.6 0.0
ILAR Eielson Array 61.66 337 P P 08 25 04.0 +0.3
comp=Z,2.6nm,0.9s,baz=142,slow=4.3,SNR=32
RND Reindeer 61.81 335 P P 08 25 05.8 +1.0
BMAR Burnt Mountain 62.19 340 P P 08 25 07.7 +0.4
MLY Manley 63.25 337 P P 08 25 14.8 +0.4
SUMG Summit 66.18 16 iP P 08 25 34.0 +0.2
comp=Z,22nm,0.9s
SUMG Summit 66.18 16 P P 08 25 33.7 -0.1
DAG Danmarks Havn 72.54 13 iP P 08 26 12.0 -0.5
NOR Nord 73.83 9 iP P 08 26 19.8 -0.3
EKA Eskdalemuir Ar 78.54 36 P P 08 26 46.4 -1.0
comp=Z,2.9nm,0.9s,baz=261,slow=5.0,SNR=5.0
BILL Bilibino 80.31 338 P P 08 26 56.8 +0.1
BILL IAmb IAmb 08 26 58.1
comp=Z,5.6nm,0.9s
ESDC Sonseca Array 80.74 51 P P 08 26 59.3 -0.5
comp=Z,1.6nm,0.8s,baz=317,slow=5.7,SNR=5.2
ESDC Sonseca Array 80.74 51 P P 08 26 59.7 0.0
NB2 NORSAR Subarra 84.50 28 P P 08 27 19.5 +0.7
comp=Z,14nm,1.1s,baz=291,slow=4.8
NB2 NORSAR Subarra 84.50 28 P P 08 27 19.5 +0.7
baz=291,slow=4.8
NOA NORSAR Array B 84.50 28 P P 08 27 19.9 +1.1
comp=Z,3.5nm,0.8s,baz=292,slow=4.9,SNR=9.7
NOA LR LR 09 04 27.3
comp=Z,67nm,18.8s,baz=245,slow=35
ARCES ARCESS Array B 86.16 18 P P 08 27 26.9 0.0
comp=Z,3.6nm,0.9s,baz=297,slow=4.0,SNR=3.4
SEY Seymchan 87.54 335 P P 08 27 33.9 +0.2
comp=Z,1.4nm,0.7s,baz=108,slow=8.1,SNR=5.0
FINES FINESS Array B 90.74 25 LR LR 09 09 35.8
comp=Z,128nm,18.7s,baz=250,slow=36
TORD Torodi Ar. Bea 91.94 76 P P 08 27 53.2 -2.1
comp=Z,0.5nm,0.8s,baz=305,slow=4.7,SNR=2.7
HHC Hu-ho-hao-te 120.08 338 eP PKPdf 08 33 37.1 -0.1
LZH Lanzhou 126.95 342 ePKP PKiKP 08 33 51.4 +0.3
LZH pPKP pPKPdf 08 34 00.7 +1.0
LZH sPKP 08 34 03.6
WRA Warramunga Arr 133.84 256 PKP PKiKP 08 34 06.0 +0.9
comp=Z,0.9nm,0.9s,baz=98,slow=2.3,SNR=3.2
ASAR Alice Springs 134.20 251 PKP PKiKP 08 34 07.0 +1.2
comp=Z,0.6nm,1.1s,baz=46,slow=2.7,SNR=3.2
CMAR Chiang Mai Arr 144.89 339 PKP PKPab 08 34 22.5 -0.5
comp=Z,3.1nm,0.7s,baz=327,slow=4.5,SNR=12

MOS ***09*** *08:22:58.2±1.6, 38°.15N×20°.34E, h11km, mb5.0/47, Error ellipse: s-maj=4.9km s-min=2.8km az=76.2*
BJI ***09*** *08:22:58.2±0.0, 38°.49N×20°.32E, h8km, mB5.2/29, mb4.8/44, Ms4.8/8, Ms7 4.6/7*
ATH ***09*** *08:22:58.6, 38°.18N×20°.37E, h11km, ML4.3/19, Error ellipse: s-maj=1.6km s-min=0.8km az=64.0*
SKO ***09*** *08:22:58.6, 38°.09N×20°.17E, h5km*
PDG ***09*** *08:22:58.1±0.4, 38°.18N×20°.29E, h12km, ML4.4/14, Error ellipse: s-maj=1.0km s-min=1.0km az=0.0*
IDC ***09*** *08:22:58.9±0.4, 38°.29N×20°.50E, h0km, mb4.5/42, mb1 4.4/56, mb1mx4.4/79, mbtmp4.4/56, ML3.9/13, MS3.9/30, Ms1 3.9/30, ms1mx3.7/49, Error ellipse: s-maj=10.4km s-min=9.2km az=161.0*
THE ***09*** *08:22:59.1, 38°.19N×20°.35E, h9km, ML4.5/12, Error ellipse: s-maj=0.9km s-min=0.4km az=260.0*
NEIC ***09*** *08:22:59.2±1.5, 38°.18N±0°.05×20°.39E±0°.05, h10km±2km, Error ellipse: s-maj=6.9km s-min=5.5km az=175.0*
BEO ***09*** *08:22:59.1±0.7, 38°.05N×20°.03E, h24km±4km, ML4.3/9*
GCMT ***09*** *08:23:01.1±0.4, 38°.09N±0°.03×20°.29E±0°.02, h24km±1km, MW4.8/58, Moment Tensor Solution. s20,c21; s58,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.47±.19; $M_{\theta\theta}$0.82±.11; $M_{\phi\phi}$-2.28±.12; $M_{r\theta}$-0.21±.18; $M_{\theta\phi}$0.02±.07; $M_{\phi r}$0.03±.12; Best double couple: $M_0$1.90500×10^{16} NP1:ϕ_s195.00000°, δ47.00000°, λ112.00000°. NP2: ϕ_s344.00000°, δ48.00000°, λ68.00000°. Principal axes: T 1.5300, Plg74.0000°, Azm181.0000°; N 0.7570, Plg16.0000°, Azm359.0000°; P -2.2800, Plg1.0000°, Azm90.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
HLW ***09*** *08:23:01.1, 38°.34N×21°.35E, h33km±93km, Md5.2, Ml5.0*
MED_RC ***09*** *08:23:02.0±0.3, 38°.21N×20°.35E, h10km, MW4.7/18, Moment Tensor Solution. Mantle waves: s18,c33; Duration: 1s.1 Moment tensor: Scale 10^{16}Nm; M_{rr}0.26±.08; $M_{\theta\theta}$0.96±.08; $M_{\phi\phi}$-1.22±.05; $M_{r\theta}$-0.76±.22; $M_{\theta\phi}$-0.19±.05; $M_{\phi r}$0.39±.20; Best double couple: $M_0$1.41000×10^{16} NP1:ϕ_s225.00000°, δ56.00000°, λ165.00000°. NP2:ϕ_s323.00000°, δ77.00000°, λ35.00000°. Principal axes: T 1.5000, Plg33.0000°, Azm189.0000°; N -0.1800, Plg53.0000°, Azm341.0000°; P -1.3100, Plg14.0000°, Azm90.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
BGR ***09*** *08:23:03.4±1.0, 38°.19N×20°.07E, h15km Error ellipse: s-maj=25.6km s-min=15.6km az=59.0*
ISC 09 08:22:59.6±0.5, **38°.19N**±0°.02×**20°.41E**±0°.02, **h9**km±2km, **n550**, σ**2s.03**/639, **mb4.7**/99, **MS4.0**/33, **23C-20D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	265	P	Pg	08 23 00.6	-0.7
CHV1				S	Sg	08 23 02.5	+0.1
LXR1	Lixouri, Cepha	0.03	53	P	Pg	08 23 01.0	-0.3
LXR1				S	Sg	08 23 02.6	+0.1
ARGA	Argostoli. Kep	0.05	99	P	Pg	08 23 01.3	-0.2
ARGA				S	Sg	08 23 03.3	+0.4
KEF3	Kipouria, Keph	0.05	289	P	Pg	08 23 00.9	-0.7
KEF3				S	Sg	08 23 01.7	-1.3
ARG2	Argostoli	0.06	97	P	Pg	08 23 01.4	-0.2
ARG2				S	Sg	08 23 03.6	+0.6
ARG2	Argostoli	0.06	97		Pg	08 23 01.4	-0.2
KEF2	Argostoli. Kep	0.06	109	P	Pg	08 23 01.5	-0.1
KEF2				S	Sg	08 23 02.9	-0.2
KEF4	Livadi, Kephal	0.07	7	P	Pg	08 23 01.4	-0.4
KEF4				S	Sg	08 23 03.1	-0.2
KEF1	Kardakata, Kep	0.10	27	P	Pg	08 23 01.9	-0.2
KEF1				S	Sg	08 23 03.9	-0.1
VLS	Valsamata	0.14	93	P	Pg	08 23 02.6	-0.2
VLS				S	Sg	08 23 05.7	+0.8
	304μm,0.3s						
VLS	Valsamata	0.14	93	P	Pg	08 23 02.5	-0.2
VLS				S	Sg	08 23 05.5	+0.6
VLS	Valsamata	0.14	93		Pg	08 23 02.6	-0.2
VLS	Valsamata	0.14	93	P	Pg	08 23 02.6	-0.2
VSK1	VASILIKIADES	0.25	28	P	Pg	08 23 04.7	0.0
VSK1				S	Sg	08 23 09.1	+0.9
	230μm,0.4s						
KONA	Konidatara, Ke	0.27	28	P	Pg	08 23 05.0	-0.1
KONA				S	Sg	08 23 09.0	+0.3
VLMS	Volimes, Zakyn	0.37	147	P	Pg	08 23 06.6	-0.3
VLMS				S	Sg	08 23 11.9	+0.2
VLMS				AML	AML	08 23 14.6	
VLMS				AML	AML	08 23 14.7	
EVGI	Lefkada island	0.47	24	P	Pg	08 23 08.7	-0.2
EVGI				S	Sg	08 23 16.2	+1.1
EVGI	Lefkada island	0.47	24	P	Pg	08 23 08.7	-0.2
EVGI	Lefkada island	0.47	24		Pg	08 23 08.7	-0.2
ZAK2	Zakynthos	0.55	136	P	Pg	08 23 10.6	+0.3
ZAK2				S	Sb	08 23 19.6	+0.2
	459μm,0.8s						
ZAK2	Zakynthos	0.55	136		Pg	08 23 10.6	+0.3
MGNA	Meganis	0.56	32	P	Pg	08 23 09.9	-0.5
MGNA				AML	AML	08 23 19.2	
	comp=E,76364μm,0.2s						
MGNA				AML	AML	08 23 20.3	
	comp=N,59242μm,0.2s						
KRI1	kERI	0.61	148	P	Pg	08 23 10.9	-0.6
KRI1				S	Sb	08 23 21.3	+0.1
	comp=N,108μm,0.7s						
KRI1	kERI	0.61	148		Pg	08 23 10.9	-0.6
LKD2	Lefkada island	0.63	18	P	Pg	08 23 11.1	-0.8
LKD2				S	Sg	08 23 20.8	+0.6
	comp=N,13μm,0.3s						
LKD2	Lefkada island	0.63	18	P	Pg	08 23 11.1	-0.8
LKD2				AML	AML	08 23 32.4	
	comp=N,27710μm,0.4s						
LKD2				AML	AML	08 23 47.7	
	comp=E,26324μm,0.6s						
LKD2	Lefkada island	0.63	18		Pg	08 23 11.1	-0.8
AST1	Astakos	0.64	56	P	Pg	08 23 11.9	-0.1
AST1				S	Sb	08 23 22.0	0.0
	comp=E,67μm,0.4s						
AST1	Astakos	0.64	56		Pg	08 23 11.9	-0.1
TSLK	Tsoukalades, L	0.67	17	P	Pg	08 23 11.9	-0.6
TSLK				S	Sb	08 23 22.7	-0.1
TSLK	Tsoukalades, L	0.67	17	P	Pg	08 23 11.7	-0.8
TSLK	Tsoukalades, L	0.67	17		Pg	08 23 11.9	-0.6
PDO	Prodromos	0.73	56	P	Pg	08 23 13.5	-0.3
PDO				S	Sb	08 23 25.4	+0.7
	comp=E,46μm,0.6s						
PDO	Prodromos	0.73	56	P	Pg	08 23 13.3	-0.5
PDO				AML	AML	08 23 30.7	
	comp=E,50610μm,0.4s						
PDO				AML	AML	08 23 39.7	
	comp=N,79722μm,0.6s						
PDO	Prodromos	0.73	56		Pg	08 23 13.5	-0.3
RLS	Riolos of Patr	0.84	98	P	Pg	08 23 15.3	-0.5
RLS				S	Sb	08 23 28.6	+0.8
	comp=N,13μm,0.5s						
RLS	Riolos of Patr	0.84	98	P	Pg	08 23 15.3	-0.5

RLS				AML	AML	08 23 32.2	
	comp=N,24179µm,0.4s						
RLS				AML	AML	08 23 38.2	
	comp=E,31027µm,0.6s						
RLS	**Riolos of Patr**	**0.84**	**98**		**Pg**	**08 23 15.3**	**-0.5**
PVO	**Paravola**	**0.97**	**63**	P	**Pg**	**08 23 18.1**	**-0.2**
PVO				AML	AML	08 23 35.6	
	comp=E,52566µm,0.4s						
PVO				AML	AML	08 23 45.9	
	comp=N,52406µm,0.8s						
AMT	**Artemida-Makis**	**1.22**	**122**	P	**Pn**	**08 23 22.1**	**-0.7**
AMT				AML	AML	08 23 52.5	
	comp=N,92224µm,0.7s						
AMT				AML	AML	08 23 54.7	
	comp=E,71244µm,0.9s						
LAKA	**Lakka**	**1.23**	**87**	P	**Pn**	**08 23 22.3**	**-0.8**
LAKA				S	**Sn**	**08 23 42.0**	**+2.1**
	comp=E,12µm,1.0s						
LAKA	**Lakka**	**1.23**	**87**	P	**Pn**	**08 23 22.3**	**-0.8**
LAKA				AML	AML	08 23 50.3	
	comp=N,24208µm,0.9s						
LAKA				AML	AML	08 23 53.8	
	comp=E,23738µm,0.9s						
LAKA	**Lakka**	**1.23**	**87**		**Pn**	**08 23 22.3**	**-0.8**
ANX	**Ano Chora**	**1.25**	**71**	P	**Pn**	**08 23 22.9**	**-0.5**
ANX				AML	AML	08 23 51.6	
	comp=E,44920µm,0.5s						
ANX				AML	AML	08 23 58.0	
	comp=N,45129µm,0.6s						
SERG	**Sergoula**	**1.31**	**80**	P	**Pn**	**08 23 23.4**	**-0.7**
SERG				AML	AML	08 23 49.9	
	comp=N,29070µm,0.6s						
SERG				AML	AML	08 23 53.6	
	comp=E,17866µm,0.8s						
EVR	**Evrytania**	**1.32**	**56**	P	**Pn**	**08 23 23.7**	**-0.6**
EVR				AML	AML	08 24 02.1	
	comp=E,12501µm,0.7s						
EVR				AML	AML	08 24 03.8	
	comp=N,12299µm,0.9s						
TRIZ	**Trizonia**	**1.32**	**82**	P	**Pn**	**08 23 23.4**	**-0.8**
TRIZ				S	**Sg**	**08 23 45.0**	**+3.0**
	comp=N,15µm,0.6s						
TRIZ	**Trizonia**	**1.32**	**82**	P	**Pn**	**08 23 23.4**	**-0.8**
ALIK	**Aliki, Aigiali**	**1.34**	**86**	P	**Pn**	**08 23 24.1**	**-0.4**
IGT	**Igoumenitsa**	**1.35**	**357**	*e*Pg	**Pg**	**08 23 28.0**	**+2.5**
IGT				*e*Sg	**Sg**	**08 23 45.8**	**+2.8**
IGT	**Igoumenitsa**	**1.35**	**357**	P	**Pn**	**08 23 23.9**	**-0.7**
IGT				AML	AML	08 23 49.4	
	comp=E,13289µm,0.5s						
IGT				AML	AML	08 23 52.9	
	comp=N,8997µm,0.4s						
IGT	**Igoumenitsa**	**1.35**	**357**	P	**Pg**	**08 23 25.6**	**+0.1**
KALE	**Kalithea**	**1.38**	**81**	P	**Pn**	**08 23 24.4**	**-0.6**
KALE				S	**Sg**	**08 23 46.2**	**+2.4**
	comp=N,11µm,0.5s						
KALE	**Kalithea**	**1.38**	**81**	P	**Pn**	**08 23 24.4**	**-0.6**
KALE				AML	AML	08 23 52.4	
	comp=N,24040µm,0.5s						
KALE				AML	AML	08 23 57.6	
	comp=E,18531µm,0.5s						
KLV	**Kalavryta, Ach**	**1.38**	**95**	P	**Pn**	**08 23 24.8**	**-0.3**
KLV				S	**Sg**	**08 23 45.0**	**+1.0**
	comp=E,8µm,1.2s						
KLV	**Kalavryta, Ach**	**1.38**	**95**	P	**Pn**	**08 23 24.5**	**-0.5**
KLV				AML	AML	08 24 05.2	
	comp=E,13382µm,1.4s						
KLV				AML	AML	08 24 09.4	
	comp=N,16884µm,1.2s						
JAN	**Janina**	**1.51**	**13**	P	**Pb**	**08 23 27.4**	**-0.4**
JAN				AML	AML	08 24 08.9	
	comp=E,11742µm,0.8s						
JAN				AML	AML	08 24 11.6	
	comp=N,8840µm,1.1s						
ITM	**Ithomi**	**1.57**	**129**	P	**Pn**	**08 23 27.9**	**+0.3**
ITM				AML	AML	08 24 01.3	
	comp=N,22960µm,1.0s						
ITM				AML	AML	08 24 09.1	
	comp=E,21356µm,0.7s						
ITM	**Ithomi**	**1.57**	**129**		**Pn**	**08 23 27.7**	**+0.1**
ITM				Sn	**Sb**	**08 23 49.3**	**+0.6**
MAKR	**Makrakomi, Fth**	**1.58**	**58**	P	**Pb**	**08 23 29.2**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.58**	**58**	P	**Pb**	**08 23 29.0**	**0.0**
MAKR				AML	AML	08 24 03.1	
	comp=N,19200µm,0.8s						
MAKR				AML	AML	08 24 08.0	
	comp=E,18302µm,0.6s						
KEK	**Kerkira**	**1.60**	**343**	P	**Pn**	**08 23 28.0**	**0.0**
KASA	**Kassiopi**	**1.60**	**347**	P	**Pn**	**08 23 28.2**	**+0.1**
DLFA	**Delphi**	**1.66**	**79**	P	**Pb**	**08 23 30.3**	**-0.1**
PYL	**PYLOS**	**1.67**	**140**	P	**Pn**	**08 23 29.3**	**+0.4**
AGG	**Agios Georgios**	**1.72**	**60**	P	**Pb**	**08 23 32.2**	**+0.8**
AGG	**Agios Georgios**	**1.72**	**60**	P	**Pb**	**08 23 31.6**	**+0.2**
AGG	**Agios Georgios**	**1.72**	**60**	*e*P	**Pn**	**08 23 30.5**	**+0.8**
AGG	**Agios Georgios**	**1.72**	**60**		**Pg**	**08 23 32.5**	**-0.1**
AGG	**Agios Georgios**	**1.72**	**60**	P	**Pg**	**08 23 32.5**	**-0.1**
AXAR	**Agios Charalam**	**1.86**	**71**	P	**Pb**	**08 23 34.1**	**+0.4**
THL	**Klokotos Trika**	**1.86**	**42**	P	**Pb**	**08 23 33.5**	**-0.3**
PROD	**Prodromos**	**1.96**	**87**	P	**Pb**	**08 23 34.8**	**-0.7**
LTK	**Loutraki**	**2.02**	**94**	P	**Pb**	**08 23 35.7**	**-0.8**
LOUT	**Loutraki**	**2.03**	**95**	P	**Pb**	**08 23 35.5**	**-1.2**
LKR	**Lokris**	**2.08**	**76**	P	**Pn**	**08 23 36.1**	**+1.4**
LKR	**Lokris**	**2.08**	**76**	P	**Pb**	**08 23 36.5**	**-1.1**
PENT	**Pentalofos**	**2.08**	**15**	P	**Pb**	**08 23 36.9**	**-0.8**
VIL2	**Platees**	**2.25**	**88**	P	**Pn**	**08 23 38.8**	**+1.8**
DID	**Didima**	**2.34**	**106**	P	**Pn**	**08 23 39.2**	**+1.0**
KZN	**Kozani**	**2.37**	**26**	P	**Pn**	**08 23 40.4**	**+1.8**
SCTE	**Santa Cesarea**	**2.42**	**322**		**Pn**	**08 23 38.8**	**-0.5**
SCTE				Sn	**Sn**	**08 24 07.9**	**-1.0**
NEO	**Neokhori**	**2.47**	**62**	P	**Pn**	**08 23 41.9**	**+1.9**
LIT	**Litokhoron**	**2.50**	**40**		**Pn**	**08 23 42.6**	**+2.1**
LIT	**Litokhoron**	**2.50**	**40**	P	**Pn**	**08 23 42.6**	**+2.1**
MRKA	**Markates**	**2.55**	**77**	P	**Pn**	**08 23 42.6**	**+1.5**
ATH	**Athens Observa**	**2.62**	**94**	P	**Pn**	**08 23 43.7**	**+1.7**
ATH				AML	AML	08 24 33.3	
	comp=N,6842µm,1.2s						
ATH				AML	AML	08 24 41.0	
	comp=E,7683µm,1.1s						
ATHU	**Athens Univers**	**2.67**	**94**	P	**Pn**	**08 23 44.1**	**+1.4**
PTL	**Penteli**	**2.73**	**92**	P	**Pn**	**08 23 44.8**	**+1.2**
PTL				AML	AML	08 24 45.0	
	comp=E,4782µm,0.8s						
PTL				AML	AML	08 24 45.2	
	comp=N,4776µm,1.8s						
KTHA	**Kythira Island**	**2.86**	**132**	*e*P	**Pn**	**08 23 47.2**	**+1.8**
AOS	**Alonnisos**	**2.89**	**69**	*e*P	**Pn**	**08 23 47.6**	**+1.9**
OHR	**Ohrid**	**2.94**	**6**	*i* Pn	**Pn**	**08 23 48.6**	**+2.1**
OHR				*i* Sn	**Sb**	**08 24 26.8**	**-1.3**
OHR				*e*Lg	Lg	08 24 37.4	
	comp=N,494nm,0.8s						
OHR	**Ohrid**	**2.94**	**6**	P	**Pb**	**08 23 49.9**	**-2.3**
TIP	**Timpagrande**	**3.03**	**290**	⇓P	**Pn**	**08 23 47.3**	**-0.4**
TIP	**Timpagrande**	**3.03**	**290**		**Pn**	**08 23 47.0**	**-0.8**
TIP				Sn	**Sn**	**08 24 21.4**	**-2.7**
PAIG	**Paliouri**	**3.08**	**55**	P	**Pb**	**08 23 52.5**	**-2.1**
THE	**Thessaloniki**	**3.14**	**38**	P	**Pn**	**08 23 52.5**	**+3.2**
GRG	**Griva**	**3.17**	**28**	P	**Pn**	**08 23 52.1**	**+2.5**
KARY	**Karystos**	**3.18**	**92**	P	**Pn**	**08 23 50.7**	**+1.0**
TIR	**Tirane**	**3.19**	**353**	*e*Pn	**Pn**	**08 23 50.2**	**+0.3**
TIR	**Tirane**	**3.19**	**353**	⇓P	**Pn**	**08 23 50.1**	**+0.3**
TIR	**Tirane**	**3.19**	**353**		**Pn**	**08 23 51.0**	**+1.1**
TIR	**Tirane**	**3.19**	**353**		**Pn**	**08 23 51.0**	**+1.1**
CGL1	**Ceglie Messapi**	**3.35**	**318**	*e*Pn	**Pn**	**08 23 51.5**	**-0.7**
TAR1	**Taranto**	**3.37**	**315**	*e*Pn	**Pn**	**08 23 52.0**	**-0.3**
SOH	**Sokhos**	**3.48**	**40**	P	**Pn**	**08 23 56.6**	**+2.6**
OUR	**Ouranopolis**	**3.50**	**51**	*e*P	**Pn**	**08 23 54.3**	**+0.1**
OUR	**Ouranopolis**	**3.50**	**51**	P	**Pb**	**08 23 58.6**	**-3.2**
KNT	**Kendrikon**	**3.54**	**32**	P	**Pn**	**08 23 57.1**	**+2.4**
VAY	**Valandovo**	**3.55**	**27**	*i* Pn	**Pn**	**08 23 57.0**	**+2.2**
VAY				*i* Sn	**Sn**	**08 24 40.7**	**+3.9**
VAY				*e*Lg	Lg	08 24 41.5	
	comp=E,282nm,0.8s						
VAY	**Valandovo**	**3.55**	**27**	P	**Pn**	**08 23 57.6**	**+2.8**
CEL	**Celeste**	**3.56**	**273**		**Pn**	**08 23 54.0**	**-1.1**
RODP	**Rodopos**	**3.75**	**133**	*e*P	**Pn**	**08 23 59.2**	**+1.6**
STIP	**Stip**	**3.76**	**21**	*i* Pn	**Pn**	**08 24 00.0**	**+2.3**
MATE	**Matera**	**3.78**	**312**	⇓P	**Pn**	**08 23 58.2**	**+0.2**
SRS	**Serrai**	**3.82**	**39**	*e*Pn	**Pn**	**08 24 00.0**	**+1.4**
SRS	**Serrai**	**3.82**	**39**	P	**Pn**	**08 24 01.3**	**+2.7**
SKO	**Skopje**	**3.86**	**11**	*e*Pn	**Pn**	**08 23 59.6**	**+0.4**
SKO	**Skopje**	**3.86**	**11**	P	**Pn**	**08 24 02.5**	**+3.3**
ULC	**Ulcinj**	**3.88**	**347**	P	**Pn**	**08 23 59.1**	**-0.3**
ULC	**Ulcinj**	**3.88**	**347**	*e*Pn	**Pn**	**08 23 58.4**	**-1.0**
ULC				*e*Sn	**Sn**	**08 24 43.5**	**-1.6**
SG1	**Sgolgore (BA)**	**3.92**	**314**	*e*Pn	**Pn**	**08 23 59.7**	**-0.3**
BAI	**Bari**	**3.99**	**318**	*e*Pn	**Pn**	**08 24 00.4**	**-0.5**
DRME	**Dracevica, Mon**	**4.11**	**347**	*e*Pn	**Pn**	**08 24 01.7**	**-0.8**
DRME	**Dracevica, Mon**	**4.11**	**347**	*e*Pn	**Pn**	**08 24 01.7**	**-0.8**
DRME				*e*Sn	**Sn**	**08 24 50.2**	**-0.4**
APE	**Apeiranthos**	**4.21**	**104**	⇑P	**Pn**	**08 24 05.7**	**+1.7**
APE	**Apeiranthos**	**4.21**	**104**	*e*P	**Pn**	**08 24 07.5**	**+3.5**
APE	**Apeiranthos**	**4.21**	**104**	⇓*e*P	**Pn**	**08 24 06.0**	**+2.0**
BUM	**Brajici-Budva**	**4.27**	**345**	*e*Pn	**Pn**	**08 24 03.7**	**-1.2**
BUM				*e*Sn	**Sn**	**08 24 54.4**	**-0.4**
ACER	**Acerenza**	**4.33**	**308**		**Pn**	**08 24 06.2**	**+0.6**
PDG	**Podgorica**	**4.33**	**349**	*e*Pn	**Pn**	**08 24 04.7**	**-0.9**
PDG				*e*Sn	**Sn**	**08 24 54.4**	**-1.8**
PDG	**Podgorica**	**4.33**	**349**	⇑P	**Pn**	**08 24 04.9**	**-0.7**
PDG	**Podgorica**	**4.33**	**349**	*e*Pn	**Pn**	**08 24 03.3**	**-2.3**
PDG	**Podgorica**	**4.33**	**349**		**Pn**	**08 24 04.6**	**-1.0**
PDG				Sn	**Sn**	**08 24 55.6**	**-0.5**
TTG	**Podgorica**	**4.33**	**349**	*e*Pn	**Pn**	**08 24 04.7**	**-0.9**
TTG				*e*Sn	**Sn**	**08 24 55.5**	**-0.7**
THT2	**Imerovigli**	**4.36**	**112**	*e*P	**Pn**	**08 24 09.6**	**+3.6**
SIGR	**SIGRI**	**4.38**	**75**	*e*P	**Pn**	**08 24 08.9**	**+2.6**
SANT	**Santorini**	**4.41**	**113**	*e*P	**Pn**	**08 24 10.2**	**+3.4**
SANT	**Santorini**	**4.41**	**113**		**Pn**	**08 24 06.1**	**-0.7**
PVY	**Plav**	**4.42**	**356**	*e*Pn	**Pn**	**08 24 07.3**	**+0.4**
PVY				*e*Sn	**Sn**	**08 24 58.7**	**+0.2**
CHOS	**Chios island**	**4.44**	**86**	*e*P	**Pn**	**08 24 10.4**	**+3.2**
HCY	**Herceg Novi**	**4.50**	**342**	*e*Pn	**Pn**	**08 24 05.6**	**-2.4**
HCY	**Herceg Novi**	**4.50**	**342**	P	**Pn**	**08 24 07.7**	**-0.3**
HCY	**Herceg Novi**	**4.50**	**342**	*e*Pn	**Pn**	**08 24 06.3**	**-1.7**
HCY				*e*Sn	**Sn**	**08 24 58.4**	**-2.0**
CEME	**Cevo**	**4.50**	**346**	*e*Pn	**Pn**	**08 24 06.7**	**-1.3**
CEME				*e*Sn	**Sn**	**08 24 59.0**	**-1.5**
BOSS	**Bosilegrad**	**4.59**	**19**	*e*Pn	**Pn**	**08 24 09.7**	**+0.6**
IDI	**Anoyia**	**4.61**	**127**	Pn	**Pn**	**08 24 09.4**	**-0.1**
	comp=E,2.2nm,0.3s,baz=321,slow=12,SNR=26						
IDI				Sn	**Sn**	**08 25 08.8**	**+5.5**
	comp=E,15nm,0.3s,baz=357,slow=24,SNR=16						
BOZC	**Bozcaada**	**4.69**	**68**	*e*P	**Pn**	**08 24 12.9**	**+2.3**
IVA	**Berane**	**4.70**	**355**	*e*Pn	**Pn**	**08 24 10.4**	**-0.3**
IVA				*e*Sn	**Sn**	**08 25 05.2**	**-0.2**
KOME	**Kolasin**	**4.71**	**352**	*e*Pn	**Pn**	**08 24 10.7**	**-0.2**
KOME				*e*Sn	**Sn**	**08 25 05.5**	**-0.2**
NKME	**Niksic**	**4.71**	**347**	⇓*i*Pn	**Pn**	**08 24 10.0**	**-0.9**
NKME				*e*Sn	**Sn**	**08 25 04.5**	**-1.1**
NKY	**Niksic**	**4.75**	**347**	P	**Pn**	**08 24 14.8**	**+3.4**
NKY	**Niksic**	**4.75**	**347**	*e*Pn	**Pn**	**08 24 10.5**	**-0.9**
NKY				*e*Sn	**Sn**	**08 25 05.9**	**-0.7**
BARS	**Barje**	**4.75**	**13**	*e*Pn	**Pn**	**08 24 11.5**	**+0.2**
TREB	**Trebinje**	**4.79**	**341**	*e*Pn	**Pn**	**08 24 09.8**	**-2.1**
TREB				*e*Sn	**Sn**	**08 25 03.9**	**-3.7**
TREB	**Trebinje**	**4.79**	**341**	*e*Pn	**Pn**	**08 24 09.9**	**-2.0**
VAE	**Valguarnera**	**4.80**	**263**	Pn	**Pn**	**08 24 12.9**	**+0.8**
	comp=E,2.8nm,0.3s,baz=169,slow=13,SNR=7.5						
VAE				Sn	**Sn**	**08 25 13.5**	**+5.5**
	comp=E,15nm,0.3s,baz=194,slow=22,SNR=6.7						
EZN	**Ezine**	**4.89**	**69**	*e*P	**Pn**	**08 24 15.8**	**+2.6**
BRY	**Bratogost**	**4.92**	**344**	*e*Pn	**Pn**	**08 24 12.3**	**-1.6**
BRY	**Bratogost**	**4.92**	**344**	P	**Pn**	**08 24 14.8**	**+0.9**
BRY	**Bratogost**	**4.92**	**344**	*e*Pn	**Pn**	**08 24 12.7**	**-1.2**
BRY				*e*Sn	**Sn**	**08 25 09.1**	**-1.9**
VTS	**Vitosha**	**4.92**	**25**	*e*Pn	**Pn**	**08 24 14.9**	**+1.0**
VTS				*e*Sn	**Sn**	**08 25 12.5**	**+1.5**
VTS	**Vitosha**	**4.92**	**25**	⇑P	**Pn**	**08 24 14.9**	**+1.0**
VTS	**Vitosha**	**4.92**	**25**		**Pn**	**08 24 15.3**	**+1.4**
VTS				Sn	**Sn**	**08 25 11.9**	**+0.9**
VTS	**Vitosha**	**4.92**	**25**	P	**Pn**	**08 24 15.3**	**+1.4**
VTS				S	**Sn**	**08 25 11.9**	**+0.9**
RDO	**Rodhopi**	**4.94**	**52**	*e*P	**Pn**	**08 24 14.6**	**+0.7**
SELS	**Selova**	**5.06**	**6**	*e*Pn	**Pn**	**08 24 14.7**	**-0.9**
SJES	**Sjenica**	**5.08**	**356**	*e*Pn	**Pn**	**08 24 16.0**	**0.0**
SJES				*e*Sn	**Sn**	**08 25 13.6**	**-1.3**
PLD	**Plovdiv**	**5.11**	**39**	*e*Pn	**Pn**	**08 24 18.0**	**+1.7**
PLD	**Plovdiv**	**5.11**	**39**	P	**Pn**	**08 24 21.1**	**+4.8**
PLD				pmax	pmax		
	comp=Z,4.0nm,0.8s						
STON	**Ston**	**5.12**	**337**	*e*Pn	**Pn**	**08 24 14.9**	**-1.5**
STON				*e*Sn	**Sn**	**08 25 11.8**	**-3.7**
STON	**Ston**	**5.12**	**337**	*e*Pn	**Pn**	**08 24 14.7**	**-1.7**
ALN	**Alexandroupoli**	**5.13**	**56**	*e*P	**Pn**	**08 24 18.3**	**+1.8**
ALN	**Alexandroupoli**	**5.13**	**56**		**Pn**	**08 24 17.5**	**+1.0**
ALN	**Alexandroupoli**	**5.13**	**56**	P	**Pn**	**08 24 17.5**	**+1.0**
UPM	**Unac-Piva**	**5.14**	**348**	*e*Pn	**Pn**	**08 24 16.1**	**-0.8**
UPM	**Unac-Piva**	**5.14**	**348**	*e*Pn	**Pn**	**08 24 16.1**	**-0.8**
UPM				*e*Sn	**Sn**	**08 25 15.4**	**-1.0**
DKL	**Dikili**	**5.16**	**78**	*e*P	**Pn**	**08 24 20.9**	**+3.9**
GELI	**Tayfur-Gelibol**	**5.20**	**63**	*e*P	**Pn**	**08 24 19.7**	**+2.2**
PLE	**Pljevlja**	**5.20**	**352**	*e*Pn	**Pn**	**08 24 17.3**	**-0.3**
PLE				*e*Sn	**Sn**	**08 25 17.4**	**-0.3**
WDD	**Wied Dalam**	**5.26**	**245**		**Pn**	**08 24 16.9**	**-1.5**
WDD				Sn	**Sn**	**08 25 15.3**	**-3.8**
PAOL	**Paolisi**	**5.33**	**304**		**Pn**	**08 24 19.6**	**+0.1**
ERIK	**Erikli-Kesan**	**5.33**	**60**	*e*P	**Pn**	**08 24 20.5**	**+1.1**
ZAPS	**Zavoj**	**5.36**	**18**	*e*Pn	**Pn**	**08 24 21.7**	**+2.0**
IVAS	**Ivanjica**	**5.39**	**358**	*e*Pn	**Pn**	**08 24 19.1**	**-1.1**
IVAS				*e*Sn	**Sn**	**08 25 19.4**	**-3.0**
GCAM	**G?zelcaml?**	**5.41**	**93**	*e*P	**Pn**	**08 24 24.5**	**+4.0**
BOVS	**Bovan**	**5.53**	**10**	*e*Pn	**Pn**	**08 24 21.6**	**-0.5**
BODT	**Bodrum**	**5.59**	**99**	*e*P	**Pn**	**08 24 27.0**	**+4.1**
CORL	**Corleone**	**5.62**	**269**		**Pn**	**08 24 23.0**	**-0.4**
UKOP	**Uzunkopru-Edir**	**5.63**	**57**	*e*P	**Pn**	**08 24 25.3**	**+1.9**
GRUS	**Gruza**	**5.70**	**2**	*e*Pn	**Pn**	**08 24 23.4**	**-1.0**
GRUS				*e*Sn	**Sn**	**08 25 28.5**	**-1.5**
CLTB	**Caltabellotta**	**5.72**	**266**		**Pn**	**08 24 25.3**	**+0.4**
BBLS	**Lazići**	**5.73**	**353**	*e*Pn	**Pn**	**08 24 24.3**	**-0.5**
BBLS				*e*Sn	**Sn**	**08 25 28.1**	**-2.6**
BBLS	**Lazići**	**5.73**	**353**	*e*Pn	**Pn**	**08 24 24.5**	**-0.3**
DAT	**Datca**	**5.88**	**102**	*e*P	**Pn**	**08 24 31.1**	**+4.1**
AYDB	**Zeytinkoy-Aydi**	**5.91**	**90**	*e*P	**Pn**	**08 24 31.1**	**+3.7**
DIVS	**Divibare**	**5.92**	**357**	*e*Pn	**Pn**	**08 24 26.2**	**-1.3**
DIVS				*e*Sn	**Sn**	**08 25 31.6**	**-3.8**
DIVS	**Divibare**	**5.92**	**357**	*e*Pn	**Pn**	**08 24 25.9**	**-1.6**
HAPS	**Han Pijesak,Bl**	**6.00**	**350**	*e*Pn	**Pn**	**08 24 26.8**	**-1.8**
BALB	**Balikesir**	**6.00**	**74**	*e*P	**Pn**	**08 24 31.4**	**+2.9**
KARP	**Karpathos**	**6.02**	**114**	*e*P	**Pn**	**08 24 32.8**	**+4.0**
KARP	**Karpathos**	**6.02**	**114**		**Pn**	**08 24 29.5**	**+0.7**
TRUS	**Trudelj**	**6.03**	**360**	*e*Pn	**Pn**	**08 24 28.0**	**-1.0**
TRUS				*e*Sn	**Sn**	**08 25 36.5**	**-1.6**
MRMT	**Marmara Adasi**	**6.07**	**64**	*e*P	**Pn**	**08 24 31.8**	**+2.3**
PLVB	**Pleven**	**6.10**	**30**	⇑P	**Pn**	**08 24 31.6**	**+1.7**
INTR	**Introdacqua**	**6.28**	**309**		**Pn**	**08 24 31.9**	**-0.7**
ELND	**Elena**	**6.30**	**40**	⇓P	**Pn**	**08 24 33.9**	**+1.2**
TEKS	**Tekeris**	**6.39**	**354**	*e*Pn	**Pn**	**08 24 32.6**	**-1.3**
TEKS				*e*Sn	**Sn**	**08 25 42.6**	**-4.4**
TEKS	**Tekeris**	**6.39**	**354**	*e*Pn	**Pn**	**08 24 31.7**	**-2.2**
MANT	**Manisa**	**6.41**	**85**	Pn	**Pn**	**08 24 34.8**	**+0.4**
ARG	**Arkhangelos**	**6.46**	**105**	*e*P	**Pn**	**08 24 38.8**	**+3.9**
MGRS	**Mrkonjic Grad**	**6.71**	**339**	*e*Pn	**Pn**	**08 24 37.8**	**-0.5**
AQU	**L'Aquila**	**6.79**	**310**	*e*Pn	**Pn**	**08 24 40.3**	**+0.9**
AQU	**L'Aquila**	**6.79**	**310**		**Pn**	**08 24 38.7**	**-0.7**
AQU	**L'Aquila**	**6.79**	**310**	P	**Pn**	**08 24 38.7**	**-0.7**
BLY	**Banja Luka**	**6.99**	**341**	⇑P	**Pn**	**08 24 42.5**	**+0.4**
BLY	**Banja Luka**	**6.99**	**341**	*e*Pn	**Pn**	**08 24 41.5**	**-0.6**
BLY	**Banja Luka**	**6.99**	**341**		**Pn**	**08 24 40.5**	**-1.6**
NRCA	**Norcia**	**7.24**	**312**		**Pn**	**08 24 45.0**	**-0.6**
GZR	**Gura Zlata**	**7.42**	**13**	⇓P	**Pn**	**08 24 48.0**	**0.0**
BZS	**Buzias**	**7.48**	**7**	⇑P	**Pn**	**08 24 48.6**	**-0.2**
BZS	**Buzias**	**7.48**	**7**	P	**Pn**	**08 24 50.6**	**+1.8**
BZS				pmax	pmax		
	comp=Z,22nm,1.1s						
ELL	**Elmali**	**7.69**	**98**		**Pn**	**08 24 51.9**	**+0.1**
ELL	**Elmali**	**7.69**	**98**	P	**Pn**	**08 24 51.9**	**+0.1**
SLUM	**Salum**	**7.75**	**148**	P	**Pn**	**08 24 51.4**	**-1.2**
	baz=154						
SLUM				AMP		08 26 00.0	
	baz=154						
SLUM				S	Sn	08 26 08.3	-12
	baz=154						
ARR	**Arges**	**7.84**	**22**	⇑P	**Pn**	**08 24 54.6**	**+0.8**
MURB	**Monte Urbino**	**7.85**	**313**		**Pn**	**08 24 55.8**	**+1.9**
VOIR		**8.03**	**24**	⇑P	**Pn**	**08 24 57.8**	**+1.3**
VOIR		**8.03**	**24**	P	**Pn**	**08 24 58.1**	**+1.7**
VOIR				pmax	pmax		
	comp=Z,24nm,0.9s						
MORH	**Mrgy, Hungar**	**8.13**	**351**	*e*Pn	**Pn**	**08 24 55.3**	**-2.4**
MLR	**Muntele Rosu**	**8.38**	**28**	Pn	**Pn**	**08 25 02.7**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=219,slow=13,SNR=3.1						
MLR	**Muntele Rosu**	**8.38**	**28**	⇑P	**Pn**	**08 25 02.1**	**+0.7**
MLR	**Muntele Rosu**	**8.38**	**28**		**Pn**	**08 25 00.8**	**-0.5**
CRES	**Cresnjev**	**8.48**	**336**	*e*Pn	**Pn**	**08 25 00.4**	**-2.1**
KNDS	**Knezji Dol**	**8.60**	**330**	*i* Pn	**Pn**	**08 25 03.3**	**-1.0**
DOPR	**Dopca**	**8.61**	**24**	⇑P	**Pn**	**08 25 05.9**	**+1.5**
BEHE	**Becsehely**	**8.71**	**343**	*e*Pn	**Pn**	**08 25 04.2**	**-1.4**
BISRR	**Bisoca**	**8.73**	**31**	⇓P	**Pn**	**08 25 10.5**	**+4.5**
DRGR		**8.77**	**10**	⇓P	**Pn**	**08 25 06.8**	**+0.3**
DRGR		**8.77**	**10**	P	**Pn**	**08 25 07.1**	**+0.6**
DRGR				pmax	pmax		
	comp=Z,11nm,0.9s						
OZUR		**8.85**	**25**	⇑P	**Pn**	**08 25 09.6**	**+1.9**
PLOR	**Plostina**	**8.95**	**29**	⇓P	**Pn**	**08 25 11.3**	**+2.2**
LJU	**Ljubljana**	**8.98**	**333**	*e*Pn	**Pn**	**08 25 08.0**	**-1.5**
VRI	**Vrincioaia**	**9.00**	**29**	⇑P	**Pn**	**08 25 11.6**	**+2.0**
VRI	**Vrincioaia**	**9.00**	**29**	P	**Pn**	**08 25 13.1**	**+3.5**
VRI				pmax	pmax		
	comp=Z,40nm,1.1s						
KEST	**Kesra**	**9.19**	**258**	Pn	**Pn**	**08 25 14.5**	**+2.1**
	comp=Z,0.6nm,0.3s,baz=47,slow=7.6,SNR=5.4						
KEST				Sn	**Sn**	**08 26 52.8**	**-3.2**
	comp=Z,0.4nm,0.3s,baz=62,slow=17,SNR=3.2						
KEST				LR	LR	08 29 33.3	
	comp=Z,525nm,18.5s,baz=358,slow=42						
SOKA	**Soboth**	**9.37**	**337**	*e*Pn	**Pn**	**08 25 12.9**	**-1.9**
	comp=Z,5.6nm,0.2s,SNR=9.7						
SOKA				*e*Sn	**Sn**	**08 26 53.6**	**-6.7**
	comp=Z,14nm,0.6s						
OBKA	**Obir**	**9.38**	**334**	*e*Pn	**Pn**	**08 25 14.8**	**-0.1**
	comp=Z,14nm,0.3s,SNR=18						
TEOL	**Teolo**	**9.69**	**320**		**Pn**	**08 25 17.6**	**-1.6**
PSZ	**Piszkesteto**	**9.73**	**358**		**Pn**	**08 25 18.3**	**-1.5**
PSZ	**Piszkesteto**	**9.73**	**358**	P	**Pn**	**08 25 22.4**	**+2.6**
PSZ				pmax	pmax		
	comp=Z,22nm,1.3s						
ARSA	**Arzberg**	**9.74**	**340**	*e*Pn	**Pn**	**08 25 18.0**	**-1.9**
	comp=Z,4.3nm,0.3s						
SWA2		**9.86**	**153**	P	**Pn**	**08 25 18.5**	**-2.9**
	baz=158						
SWA2				S	Sn	08 26 59.9	-12
	baz=158						
SWA2				AMP		08 27 00.0	
	baz=158						
STAL	**STALIGIAL**	**9.88**	**327**		**Pn**	**08 25 20.4**	**-1.4**
BURAR	**Bucovina Array**	**10.06**	**19**	⇓P	**Pn**	**08 25 25.6**	**+1.3**
BURAR	**Bucovina Array**	**10.06**	**19**		**Pn**	**08 25 27.7**	**+3.4**
BURAR	**Bucovina Array**	**10.06**	**19**	P	**Pn**	**08 25 27.7**	**+3.4**
TRPA	**Tarpa**	**10.06**	**8**	⇑P	**Pn**	**08 25 24.1**	**-0.1**
BUR08	**Bucovina Ar. S**	**10.08**	**19**	Pn	**Pn**	**08 25 23.3**	**-1.3**
CTI	**Castel Tesino**	**10.20**	**323**		**Pn**	**08 25 24.4**	**-1.8**
CTI	**Castel Tesino**	**10.20**	**323**	P	**Pn**	**08 25 24.4**	**-1.8**
CONA	**Conrad Observa**	**10.29**	**343**	Pn	**Pn**	**08 25 26.1**	**-1.3**
	comp=Z,0.7nm,0.2s						
KBA	**Koelnbreinsper**	**10.29**	**332**	*e*Pn	**Pn**	**08 25 26.5**	**-1.1**
	comp=Z,4.0nm,0.3s,SNR=5.6						
KBA				*e*Sn	**Sn**	**08 27 17.5**	**-5.7**
	comp=Z,21nm,0.8s						
KBA	**Koelnbreinsper**	**10.29**	**332**	P	**Pn**	**08 25 27.5**	**-0.1**
KBA				pmax	pmax		
	comp=Z,22nm,1.2s						
ABTA	**Abfaltersbach**	**10.35**	**328**	*e*Pn	**Pn**	**08 25 26.8**	**-1.5**
	comp=Z,2.6nm,0.2s,SNR=6.9						
ABTA				Sn	**Sn**	**08 27 16.8**	**-7.6**
	comp=Z,16nm,0.5s						
VYHS	**Vyhne**	**10.37**	**354**	*e*P	**Pn**	**08 25 27.4**	**-1.0**
VYHS	**Vyhne**	**10.37**	**354**	*e*PN	**Pn**	**08 25 27.4**	**-1.0**
VYHS				*e*SN	**Sn**	**08 27 17.5**	**-7.2**
BR131	**Keskin Array S**	**10.42**	**77**		**Pn**	**08 25 28.2**	**-1.0**
BR131	**Keskin Array S**	**10.42**	**77**	P	**Pn**	**08 25 28.2**	**-1.0**
BRTR	**Keskin Array B**	**10.42**	**77**	Pn	**Pn**	**08 25 32.5**	**+3.3**
	comp=Z,0.3nm,0.3s,baz=261,slow=13,SNR=11						
BRTR				LR	LR	08 30 25.2	
	comp=Z,670nm,21.1s,baz=247,slow=43						
BRTR	**Keskin Array B**	**10.42**	**77**		**Pn**	**08 25 28.6**	**-0.6**
MODS	**Modra-Piesok**	**10.44**	**348**	*e*SN	**Sn**	**08 27 21.1**	**-5.3**
SALO	**Salr**	**10.46**	**318**		**Pn**	**08 25 28.1**	**-1.6**
MOA	**Molln**	**10.65**	**337**	*e*Pn	**Pn**	**08 25 31.9**	**-0.4**
	comp=Z,3.6nm,0.2s,SNR=6.6						
MOA				*e*Sn	**Sn**	**08 27 26.2**	**-5.5**
	comp=Z,13nm,0.6s						
KIS	**Kishinev**	**10.76**	**32**	*e*P	Pn	08 25 47.0	+13
KIS				LRM	MLR	08 29 38.0	
	comp=Z,500nm,12.0s						
KIS	**Kishinev**	**10.76**	**32**	*e*P	Pn	08 25 47.0	+13
KIS				MLR	MLR		
	comp=Z,500nm,12.0s						
KOLS	**Kolonicke sedl**	**10.83**	**7**	*e*P	**Pn**	**08 25 37.0**	**+2.3**
KOLS	**Kolonicke sedl**	**10.83**	**7**	*e*PN	**Pn**	**08 25 37.0**	**+2.3**
JAVC	**Velka Javorina**	**10.85**	**350**	*e*Pn	**Pn**	**08 25 36.0**	**+0.9**
JAVC				*e*Sn	**Sn**	**08 27 32.1**	**-4.5**
JAVC	**Velka Javorina**	**10.85**	**350**	*e*PN	**Pn**	**08 25 36.0**	**+0.9**
CSS	**Mathiatis**	**10.87**	**103**		**Pn**	**08 25 35.6**	**+0.2**
RJOB	**Jochberg**	**11.05**	**332**	*e*Pn	**Pn**	**08 25 37.8**	**-0.1**
RJOB				*e*Sn	**Sn**	**08 27 35.3**	**-6.2**
WTTA	**Wattenberg**	**11.13**	**327**	*e*Pn	**Pn**	**08 25 38.5**	**-0.5**
	comp=Z,7.9nm,0.3s,SNR=9.2						
WTTA				Sn	**Sn**	**08 27 39.1**	**-4.4**
	comp=Z,22nm,0.6s						
WTTA	**Wattenberg**	**11.13**	**327**	P	**Pn**	**08 25 39.7**	**+0.7**
WTTA				pmax	pmax		
	comp=Z,22nm,1.6s						
WATA	**Walderalm**	**11.21**	**327**	*e*Pn	**Pn**	**08 25 40.0**	**0.0**
	comp=Z,1.9nm,0.2s,SNR=8.8						
WATA				Sn	**Sn**	**08 27 40.8**	**-4.7**
	comp=Z,20nm,0.6s						
NIE	**Niedzica**	**11.23**	**360**	*e*P	**Pn**	**08 25 42.5**	**+2.3**
NIE	**Niedzica**	**11.23**	**360**	*e*P	**Pn**	**08 25 42.5**	**+2.3**
FUORN	**Ofenpass-Fuorn**	**11.28**	**322**		**Pn**	**08 25 40.0**	**-1.1**
SQTA	**Sankt Quirin**	**11.28**	**326**	*e*Pn	**Pn**	**08 25 41.4**	**+0.4**
	comp=Z,14nm,0.5s,SNR=4.9						
FETA	**Feichten**	**11.34**	**324**	Pn	**Pn**	**08 25 42.6**	**+0.7**
	comp=Z,9.2nm,0.8s						
MOTA	**Moosalm**	**11.42**	**326**	*e*Pn	**Pn**	**08 25 43.4**	**+0.5**
	comp=Z,3.5nm,0.4s,SNR=5.8						
MOTA				Sn	**Sn**	**08 27 47.0**	**-3.7**
	comp=Z,8.0nm,0.5s						
VRAC	**Vranov**	**11.45**	**347**	Pn	**Pn**	**08 25 43.0**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=170,slow=12,SNR=4.3						
VRAC				Sn	**Sn**	**08 27 46.1**	**-5.2**
	comp=Z,0.4nm,0.3s,baz=92,slow=12,SNR=2.5						
VRAC				LR	LR	08 30 17.5	
	comp=Z,242nm,19.2s,baz=176,slow=39						
VRAC	**Vranov**	**11.45**	**347**	P	**Pn**	**08 25 43.0**	**-0.3**
RETA	**Reutte**	**11.68**	**326**	*e*Pn	**Pn**	**08 25 47.3**	**+0.9**
	comp=Z,1.9nm,0.4s						
RETA				Sn	**Sn**	**08 27 53.7**	**-3.2**
	comp=Z,7.8nm,0.7s						
GEC2	**GERESS Array S**	**11.71**	**338**	*e*Pn	**Pn**	**08 25 45.7**	**-1.2**
GEC2				*e*Sn	**Sn**	**08 27 50.2**	**-7.4**
GEC2	**GERESS Array S**	**11.71**	**338**		**Pn**	**08 25 45.6**	**-1.3**
GEC2	**GERESS Array S**	**11.71**	**338**	P	**Pn**	**08 25 47.2**	**+0.3**
GEC2				pmax	pmax		
	comp=Z,17nm,1.6s						
GERES	**GERESS Array B**	**11.71**	**338**	Pn	**Pn**	**08 25 46.1**	**-0.8**
	comp=Z,1.5nm,0.3s,baz=157,slow=14,SNR=27						
GERES				Sn	**Sn**	**08 27 49.2**	**-8.5**
	comp=Z,0.9nm,0.3s,baz=150,slow=22,SNR=4.1						
GERES	**GERESS Array B**	**11.71**	**338**		**Pn**	**08 25 45.0**	**-1.8**
MORC	**Moravsky Berou**	**11.77**	**351**	*e*PG	Pn	08 25 40.7	-6.9
MORC				*e*SG		08 25 48.6	
DAVA	**Damuels**	**11.93**	**323**	*e*Pn	**Pn**	**08 25 50.2**	**+0.2**
	comp=Z,2.5nm,0.3s						
FUR	**Furstenfeldbru**	**11.99**	**329**	P	**Pn**	**08 25 49.2**	**-1.4**
FUR				pmax	pmax		
	comp=Z,33nm,0.9s						
KHC	**Kasperske Hory**	**12.00**	**338**	*e*Pn	**Pn**	**08 25 50.4**	**-0.4**
KHC				*e*Sn	**Sn**	**08 27 56.3**	**-8.4**
KHC	**Kasperske Hory**	**12.00**	**338**	*e*PN	**Pn**	**08 25 50.1**	**-0.7**
KHC				*e*SN	Sn	08 27 55.6	-9.1
KHC	**Kasperske Hory**	**12.00**	**338**		**Pn**	**08 25 50.0**	**-0.8**
KHC	**Kasperske Hory**	**12.00**	**338**	⇑*e*P	**Pn**	**08 25 50.4**	**-0.4**
PLONS	**Plons/SG**	**12.01**	**321**	*e*Sn	**Sn**	**08 27 57.0**	**-8.0**
WET	**Wettzell**	**12.23**	**336**	P	**Pn**	**08 25 56.3**	**+2.4**
WET				pmax	pmax		
	comp=Z,13nm,1.1s						
PRU	**Pruhonice**	**12.53**	**342**	*e*PN	**Pn**	**08 25 58.0**	**+0.1**
PRU	**Pruhonice**	**12.53**	**342**	*e*P	**Pn**	**08 25 58.0**	**+0.1**
SENIN	**Lac Senin/Sane**	**12.68**	**314**		**Pn**	**08 26 00.5**	**+0.2**
GLL	**Jalalah**	**12.71**	**129**	P	**Pn**	**08 25 56.3**	**-4.3**
	baz=132						
HFRF	**Wahat Farafira**	**12.85**	**147**	P	**Pn**	**08 25 58.6**	**-3.8**
	baz=150						
HFRF				AMP		08 28 00.0	
	baz=150						
SLE	**Schleitheim**	**12.94**	**322**	*e*Sn	Sn	08 28 15.4	-12
ROTZ	**Rotzenmuhle**	**12.99**	**336**	*e*Pn	**Pn**	**08 26 02.7**	**-1.5**
BALST	**Balsthal**	**13.06**	**318**	*e*Pn	**Pn**	**08 26 06.0**	**+0.8**
NBNS	**Bani Suef**	**13.16**	**133**	P	Pn	08 26 01.5	-5.3
	baz=136						

NBNS AMP 08 28 00.0
baz=136
MANZ Manzenberg 13.21 336 ePn Pn 08 26 07.0 -0.2
MMAI Mount Meron Ar 13.24 108 Pn Pn 08 26 06.5 -1.3
comp=Z,2.2nm,0.3s,baz=306,slow=14,SNR=4.0
MMAI Sn Sn 08 28 26.9 -8.3
comp=Z,1.5nm,0.3s,baz=300,slow=23,SNR=3.3
MMAI LR LR 08 32 54.6
comp=Z,247nm,18.1s,baz=300,slow=45
GRA1 Grafenberg Arr 13.26 333 Pn Pn 08 26 04.9 -3.0
GRF Grafenberg Arr 13.26 333 P Pn 08 26 04.9 -3.0
ECH Echery 13.91 320 Pn Pn 08 26 15.2 -1.5
ECH Echery 13.91 320 P Pn 08 26 15.3 -1.5
MOX Moxa 13.94 336 ePn Pn 08 26 16.4 -0.8
MOX Moxa 13.94 336 P Pn 08 26 19.6 +2.4
MOX pmax pmax
comp=Z,11nm,1.0s
AKASG Malin Array Be 13.99 24 Pn Pn 08 26 16.5 -1.4
comp=Z,0.7nm,0.3s,baz=212,slow=12,SNR=5.4
AKASG Malin Array Be 13.99 24 Pn 08 26 17.7 -0.2
AKASG Malin Array Be 13.99 24 P Pn 08 26 17.7 -0.2
AKBB Malin Array Si 13.99 24 Pn 08 26 16.3 -1.6
AKBB Malin Array Si 13.99 24 P Pn 08 26 16.3 -1.6
CLL Collm 14.13 341 eP Pn 08 26 24.0 -3.4
ANN Anapa 14.35 57 eP Pn 08 26 19.8 -3.1
ANN eS Sn 08 28 59.1 -3.0
ANN pmax pmax
comp=Z,68nm,1.0s
EIL Elat 14.74 121 Pn Pn 08 26 29.3 +1.0
comp=Z,0.8nm,0.3s,baz=343,slow=1.9,SNR=6.0
EIL Sn Sn 08 29 03.4 -8.4
comp=Z,1.3nm,0.3s,baz=326,slow=17,SNR=4.6
ASF Jabal al Asfar 14.75 109 Pn Pn 08 26 28.3 -0.1
comp=Z,0.4nm,0.3s,baz=267,slow=12,SNR=3.0
ASF Sn Sn 08 29 10.7 -1.3
comp=Z,0.2nm,0.3s,baz=279,slow=14,SNR=3.0
WLF Walferdange 15.37 323 x P 08 26 40.8 -0.4
WLF Walferdange 15.37 323 P P 08 26 42.2 +1.0
WLF PnPn sP 08 26 45.4 +0.4
WLF x x 08 26 47.4
WLF Walferdange 15.37 323 P P 08 26 44.9 +3.6
WLF pmax pmax
comp=Z,130nm,1.3s
SOC Sochi 15.55 64 eP P 08 26 44.7 +1.4
SOC pmax pmax
comp=Z,64nm,1.0s
SOC MLR MLR
comp=Z,323nm,14.0s
SUW Suwalki 15.94 6 eP P 08 26 48.9 +1.3
SUW Suwalki 15.94 6 Pn Pn 08 26 43.2 -0.8
SUW IAmb IAmb 08 26 58.8
comp=Z,78nm,1.0s
SUW Suwalki 15.94 6 P P 08 26 46.5 -1.1
SUW pmax pmax
comp=Z,85nm,0.9s
BSEG Bad Segeberg 17.21 339 P P 08 27 06.5 +4.9
BSEG pmax pmax
comp=Z,29nm,1.7s
NACGM Naroch 17.27 12 e P 08 27 02.0 -0.3
NEY Neytrino 17.64 66⇑eP P 08 27 08.9 +2.3
KIV Kislovodsk 17.73 64 eP P 08 27 09.6 +2.0
KIV eS Sn 08 30 28.2 +3.8
KIV pmax pmax
comp=Z,118nm,1.0s
KIV MLR MLR
comp=Z,353nm,14.0s
KBZ Khabaz 17.84 65 P Pn 08 27 07.8 -0.2
comp=Z,0.4nm,0.3s,baz=296,slow=9.7,SNR=16
GOF Gofitskoye 18.23 61⇑eP P 08 27 16.4 +3.5
GOF pmax pmax
comp=Z,19nm,0.6s
NCK Nalchik 18.30 66⇑eP P 08 27 16.2 +2.4
ZEI Tsey 18.43 68 eP Pn 08 27 15.6 +0.2
ZEI pmax pmax
comp=Z,38nm,1.3s
VORD Divnogorie 18.48 40 eP P 08 27 15.6 -0.1
VORD pmax pmax
comp=Z,20nm,1.4s
VSR Storozhevoye 18.57 39 eP P 08 27 15.8 -0.8
VSR pmax pmax
comp=Z,20nm,1.4s
GNI Garni 18.95 76 P P 08 27 20.2 -1.0
comp=Z,1.1nm,0.3s,baz=189,slow=2.8,SNR=28
GNI LR LR 08 36 41.0
comp=Z,309nm,18.1s,baz=280,slow=44
GNI Garni 18.95 76 P Pn 08 27 21.9 +0.1
GNI Garni 18.95 76ceP Pn 08 27 21.7 -0.1
GNI pmax pmax
comp=Z,507nm,1.7s
TBLG Delisi 18.96 72 P Pn 08 27 22.4 +0.6
TBLG IAmb IAmb 08 27 32.6
comp=Z,45nm,1.1s
TBLG Delisi 18.96 72 P Pn 08 27 22.4 +0.6
TBLG pmax pmax
comp=Z,45nm,1.1s
ESDC Sonseca Array 19.01 282 P Pn 08 27 22.3 0.0
comp=Z,0.3nm,0.3s,baz=80,slow=10,SNR=7.1
ESDC LR LR 08 34 37.4
comp=Z,286nm,18.8s,baz=75,slow=37
GROC Groznyy 19.86 67 eP Pn 08 27 33.8 +1.4
GROC eS Sn 08 31 17.5 +2.0
GROC pmax pmax
comp=Z,43nm,0.6s
GROC MLR MLR
comp=Z,50nm,6.0s
VRH Novokhopyorsk 19.88 42 eP Pn 08 27 32.3 -0.3
VRH pmax pmax
comp=Z,20nm,0.6s
OBN Obninsk 20.16 28 P P 08 27 33.6 -0.3
comp=Z,2.9nm,0.5s,baz=209,slow=19,SNR=4.2
OBN Obninsk 20.16 28 P P 08 27 33.4 -0.6
OBN Obninsk 20.16 28⇓eP Pn 08 27 35.9 +0.1
OBN e 08 27 52.7
OBN eS S 08 31 09.0 -11
OBN pmax pmax
comp=Z,26nm,1.2s
OBN MLR MLR
comp=Z,214nm,13.0s
VSU Vasula 20.70 9⇓eP P 08 27 39.7 -0.1
VSU pmax pmax
comp=Z,102nm,0.7s
MOS Moscow 21.02 28 eP P 08 27 43.8 +0.5
MOS e 08 28 11.2
MOS pmax pmax
comp=Z,91nm,1.8s
MDT Midelt 21.04 263 P P 08 27 43.5 -0.3
comp=Z,2.5nm,0.8s,baz=84,slow=12,SNR=3.4
MDT LR LR 08 36 47.5
comp=Z,230nm,20.0s,baz=71,slow=39
MAK Makhachkala 21.08 68 eP P 08 27 39.3 -4.8
MAK eS S 08 31 30.7 -8.0
MAK pmax pmax
comp=Z,228nm,0.8s
MAK MLR MLR
comp=Z,107nm,10.0s
AKT Akhty 21.20 72 eP P 08 27 45.9 +0.4
AKT e 08 28 03.2
AKT e 08 31 49.1
AKT pmax pmax
comp=Z,123nm,1.0s
PMRV Marv??o 21.67 282 eP P 08 27 51.7 +1.2
comp=Z,71nm,1.7s
PCBR Castelo Branco 21.70 283 eP P 08 27 51.6 +0.8
MTE Manteigas 21.72 285 eP P 08 27 51.7 +0.7
comp=Z,138nm,1.8s
PVAQ Vaqueiros 22.21 277 eP P 08 27 58.6 +2.3
comp=Z,81nm,1.9s
PMTG Montargil 22.36 281 eP P 08 28 00.1 +2.3
comp=Z,68nm,1.7s
HFS Hagfors 22.38 351 P P 08 27 57.6 -0.3
comp=Z,3.1nm,0.4s,baz=162,slow=12,SNR=24
HFS LR LR 08 37 00.7
comp=Z,194nm,19.9s,baz=6.0,slow=38
PBDV Barranco-do-Ve 22.41 276 eP P 08 27 59.0 +0.5
PTOM Tomar 22.44 283 eP P 08 27 59.3 +0.6
comp=Z,120nm,1.8s
PUL Pulkovo 22.51 13⇓eP P 08 28 00.3 +1.0
NC602 NORSAR Array S 23.25 349 P P 08 28 07.2 +0.2
NC602 IAmb IAmb 08 28 24.4
comp=Z,22nm,0.9s
EKA Eskdalemuir Ar 23.37 325 P P 08 28 07.4 -0.9
comp=Z,27nm,0.9s,baz=125,slow=10,SNR=17
NAO01 NORSAR Array S 23.46 348 P P 08 28 07.4 -1.7
FINES FINESS Array B 23.55 7 P P 08 28 08.3 -1.6
comp=Z,6.5nm,0.6s,baz=172,slow=9.7,SNR=25
FINES PcP PcP 08 31 56.9 +2.0
comp=Z,2.8nm,0.8s,baz=197,slow=4.4,SNR=4.0
FINES LR LR 08 37 53.4
comp=Z,148nm,18.7s,baz=262,slow=38
FINES FINESS Array B 23.55 7 P P 08 28 08.9 -1.0
FINES FINESS Array B 23.55 7 P P 08 28 08.9 -1.0
FIA1 FINESS Array S 23.55 7 P P 08 28 09.5 -0.5
FIA1 IAmb IAmb 08 28 16.0
comp=Z,38nm,1.3s
NB201 NORSAR Array S 23.59 349 P P 08 28 10.7 +0.2
NB2 NORSAR Subarra 23.59 349 P P 08 28 09.0 -1.5
comp=Z,2.6nm,0.6s,baz=163,slow=10
NOA NORSAR Array B 23.59 349 P P 08 28 09.7 -0.8
comp=Z,5.0nm,0.8s,baz=163,slow=9.7,SNR=9.9
NBO00 NORSAR Array S 23.65 348 P P 08 28 10.6 -0.5
NC303 NORSAR Array S 23.75 349 P P 08 28 12.1 +0.2
NC204 NORSAR Array S 23.89 348 P P 08 28 14.2 +0.9
SUF Sumiainen 24.81 6 P P 08 28 26.1 +4.4
SUF pmax pmax
comp=Z,32nm,1.3s
KLMR Klimovskoe 25.66 22 eP P 08 28 27.5 -1.9
KLMR AMP 08 28 33.9
comp=Z,37nm,1.8s
KLMR Klimovskoe 25.66 22 eP P 08 28 27.5 -1.9
KLMR pmax pmax
comp=Z,37nm,1.8s
RAYN Ar Rayn 25.92 117 P P 08 28 32.1 -0.1
RAYN Ar Rayn 25.92 117 P P 08 28 32.1 -0.1
RAYN pmax pmax
comp=Z,11nm,1.3s
KIRV Kirov 27.70 33 P P 08 28 46.9 -0.9
comp=Z,8.4nm,0.8s,baz=225,slow=1.4,SNR=3.7
KIRV LR LR 08 40 07.8
comp=Z,123nm,20.3s,baz=47,slow=37
PRGR Permogore 28.19 26 eP P 08 28 48.2 -4.0
PRGR pmax pmax
comp=Z,12nm,0.7s
AKTO Aktyubinsk 29.24 53 P P 08 29 00.7 -1.0
comp=Z,2.2nm,0.7s,baz=248,slow=9.7,SNR=8.9
AKTO LR LR 08 42 18.5
comp=Z,174nm,20.0s,baz=273,slow=40
AKTO Aktyubinsk 29.24 53 iP P 08 29 00.4 -1.3
AKTO pmax pmax
comp=Z,4.0nm,0.9s
GEYT Alibeck 29.56 79 P P 08 29 04.3 -0.4
comp=Z,3.3nm,0.7s,baz=280,slow=9.8,SNR=7.7
GEYT LR LR 08 43 16.1
comp=Z,114nm,19.1s,baz=340,slow=41
GEYT Alibeck 29.56 79 P P 08 29 04.4 -0.2
GYA0B ALIBECK ARRAY 29.56 79 P P 08 29 05.0 +0.3
TOA0 Torodi Ar. Sit 29.98 219 P P 08 29 07.5 -1.0
TORD Torodi Ar. Bea 29.98 219 P P 08 29 09.1 +0.6
comp=Z,8.1nm,0.9s,baz=33,slow=7.4,SNR=26
TORD Torodi Ar. Bea 29.98 219 P P 08 29 08.0 -0.5
AB31 Akbulak array 30.31 56 iP P 08 29 09.4 -1.7
ABKAR Akbulak array 30.31 56 P P 08 29 10.3 -0.8
APA Apatity 30.32 10⇓iP P 08 29 05.4 -5.6
APA pmax pmax
comp=Z,4.0nm,1.0s
APA MLR MLR
comp=Z,700nm,13.0s
ARU Arti 31.11 42 P P 08 29 17.7 -0.4
ARU IAmb IAmb 08 29 19.9
comp=Z,11nm,1.2s
ARU Arti 31.11 42diP P 08 29 18.7 +0.6
ARU 08 30 16.4
ARU S S 08 34 25.6 +2.1
ARU SS SnSn 08 36 02.5 -2.0
ARU pmax pmax
comp=Z,16nm,1.6s
ARCES ARCESS Array B 31.53 3 P P 08 29 20.4 -1.3
comp=Z,2.4nm,0.7s,baz=193,slow=11,SNR=9.9
ARCES PcP PcP 08 32 16.7 +2.6
comp=Z,4.3nm,1.1s,baz=183,slow=1.8,SNR=4.5
ARCES LR LR 08 44 27.8
comp=Z,215nm,21.6s,baz=181,slow=41
ARCES ARCESS Array B 31.53 3 P P 08 29 21.4 -0.2
ARCES ARCESS Array B 31.53 3 P P 08 29 21.4 -0.2
SVE Sverdlovsk 32.32 42⇓eP P 08 29 29.0 +0.2
SVE pmax pmax
comp=Z,21nm,0.9s
BRVK Borovoye 37.12 50 P P 08 30 10.4 +0.2
BRVK Borovoye 37.12 50 P P 08 30 10.4 +0.2
BRVK pmax pmax
comp=Z,7.0nm,1.0s
KK31 Karatay Array 37.87 66 P P 08 30 16.2 -0.6
KK31 IAmb IAmb 08 30 21.7
comp=Z,9.6nm,0.8s
KK31 Karatay Array 37.87 66 iP P 08 30 15.7 -1.1
KKAR Karatay Array 37.87 66 P P 08 30 16.0 -0.7
KKAR Karatay Array 37.87 66 P P 08 30 16.2 -0.6
KKAR IAmb IAmb 08 30 21.7
comp=Z,9.6nm,0.8s
KKAR Karatay Array 37.87 66 P P 08 30 16.2 -0.6
KKAR pmax pmax
comp=Z,10.0nm,0.9s
BTK Batken 38.73 71 P P 08 30 23.8 -0.3
BTK IAmb IAmb 08 30 27.4
comp=Z,13nm,1.1s
BTK Batken 38.73 71 P P 08 30 23.8 -0.3
BTK pmax pmax
comp=Z,13nm,1.1s
DBIC Dimbokro 38.84 223 P P 08 30 24.8 -0.3
comp=Z,10nm,1.0s,baz=23,slow=9.9,SNR=9.3
DBIC LR LR 08 46 13.2
comp=Z,102nm,18.3s,baz=12,slow=36
DBIC Dimbokro 38.84 223 P P 08 30 23.9 -1.2
TIC Toumodi 38.95 223 ePKP1 P 08 30 27.6 +1.6
KBL Kabul 38.98 80 P P 08 30 24.9 -1.4
KBL Kabul 38.98 80 P P 08 30 25.0 -1.4
KBL pmax pmax
comp=Z,5.0nm,1.1s
KIC Kosan Boka 39.04 222 ePKP1 P 08 30 28.4 +1.6
comp=Z,2.3nm,0.5s
LIC Lamto 39.30 222 ePKP1 P 08 30 28.4 -0.6
comp=Z,12nm,0.7s
ARSB Arslanbob 40.03 68 P P 08 30 33.6 -1.4
ARSB Arslanbob 40.03 68 P P 08 30 33.6 -1.4
ARSB pmax pmax
comp=Z,13nm,1.1s
SPITS Spitsbergen Ar 40.14 359 P P 08 30 34.6 -0.7
comp=Z,1.7nm,0.5s,baz=164,slow=16,SNR=5.7
AAK Ala-Archa 40.83 66 P P 08 30 42.5 +0.8
comp=Z,4.6nm,0.8s,baz=231,slow=6.6,SNR=13
AAK PP PP 08 32 15.8 +0.1
comp=Z,4.1nm,1.0s,baz=246,slow=7.6,SNR=3.6
AAK Ala-Archa 40.83 66 P P 08 30 41.2 -0.5
AAK Ala-Archa 40.83 66⇓eP P 08 30 43.1 +1.4
AAK pmax pmax
comp=Z,7.0nm,1.0s
KMBO Kilima Mbogo 42.09 154 LR LR 08 48 18.8
comp=Z,110nm,21.6s,baz=52,slow=36
NRN Naryn 42.21 67 P P 08 30 51.5 -1.6
NRN Naryn 42.21 67 P P 08 30 51.5 -1.6
NRN pmax pmax
comp=Z,6.0nm,0.9s
KURBB Kurchatov Arra 42.29 53 P P 08 30 52.3 -1.0
comp=Z,5.2nm,0.8s,baz=283,slow=8.7,SNR=36
KURBB PP PP 08 32 30.8 -0.3
comp=Z,1.7nm,0.8s,baz=278,slow=11,SNR=3.5
KURBB PcP PcP 08 32 49.5 +2.6
comp=Z,1.6nm,1.0s,baz=267,slow=3.9,SNR=5.2
KURK Kurchatov 42.34 53 P P 08 30 52.0 -1.7
KURK Kurchatov 42.34 53⇑eP P 08 30 53.5 -0.2
KURK pmax pmax
comp=Z,18nm,1.7s
NIL Nilore 42.56 79 P P 08 30 55.8 +0.1
NIL IAmb IAmb 08 30 58.9
comp=Z,13nm,0.9s
NIL Nilore 42.56 79 P P 08 30 55.8 +0.1
NIL pmax pmax
comp=Z,13nm,0.9s
KSH Kashi 42.70 70 P P 08 30 55.5 -1.5
KSH sP sP 08 31 04.6 +3.5
KSH PcP PcP 08 32 47.3 -1.4
KSH PcS PcS 08 36 37.8 -3.1
KSH S S 08 37 13.8 -6.8
KSH ScS ScS 08 40 52.5 -6.1
KSH pmax pmax
comp=Z,13nm,1.4s
KSH pmax pmax
comp=Z,190nm,5.0s
KSH LR LR
comp=Z,240nm,7.7s
KSH LR LR
comp=Z,160nm,7.9s
KSH LR LR
comp=Z,130nm,8.6s
SUMG Summit 44.78 339 iP P 08 31 16.7 +3.1
comp=Z,24nm,0.9s
SUMG Summit 44.78 339 P P 08 31 13.0 -0.6
SUMG IAmb IAmb 08 31 20.4
comp=Z,9.2nm,1.0s
SUMG Summit 44.78 339 iP P 08 31 16.7 +3.1
SUMG pmax pmax
comp=Z,24nm,0.9s
MAKZ Makanchi 45.16 58 P P 08 31 14.6 -1.9
MAKZ IAmb IAmb 08 31 18.5
comp=Z,7.1nm,1.0s
MAKZ Makanchi 45.16 58 P P 08 31 14.6 -1.9
MAKZ pmax pmax
comp=Z,7.0nm,1.0s
MK31 Makanchi Array 45.37 58 P P 08 31 16.3 -1.8
MK31 IAmb IAmb 08 31 20.6
comp=Z,8.9nm,0.9s
MK31 Makanchi Array 45.37 58 eP P 08 31 16.8 -1.4
MKAR Makanchi Array 45.37 58 P P 08 31 16.9 -1.3
comp=Z,7.1nm,0.7s,baz=275,slow=7.2,SNR=109
MKAR LR LR 08 54 05.6
comp=Z,90nm,19.3s,baz=287,slow=41
MKAR Makanchi Array 45.37 58 P P 08 31 16.7 -1.4
NOR Nord 45.46 353 iP P 08 31 19.4 +1.0
NOR Nord 45.46 353 iP P 08 31 19.4 +1.0
ZAA0 Zalesovo Array 45.75 48 P P 08 31 19.8 -1.2
ZALV Zalesovo Beam 45.75 48 P P 08 31 19.8 -1.2
comp=Z,14nm,0.8s,baz=273,slow=9.0,SNR=36
ZALV LR LR 08 51 08.3
comp=Z,158nm,18.0s,baz=282,slow=37
ZALV Zalesovo Beam 45.75 48 P P 08 31 19.6 -1.4
WMQ Urumqi 49.83 61 eP P 08 31 58.8 +5.9
WMQ pP sP 08 32 03.1 +6.0
WMQ pmax pmax
comp=Z,8.0nm,0.7s
WMQ pmax pmax
comp=Z,150nm,10.9s
WMQ LR LR
comp=Z,460nm,21.5s
WMQ LR LR
comp=Z,630nm,28.9s
TULEG Thule 53.06 343 P P 08 32 15.8 -0.7
TULEG IAmb IAmb 08 32 19.3
comp=Z,12nm,1.0s
LSZ Lusaka 53.68 171 P P 08 32 23.0 +1.1
comp=Z,3.8nm,0.9s,baz=8.3,slow=9.9,SNR=5.3
LSZ Lusaka 53.68 171 P P 08 32 21.4 -0.5
LSZ IAmb IAmb 08 32 26.3
comp=Z,7.8nm,1.1s
LSZ Lusaka 53.68 171 P P 08 32 23.0 +1.1
MOY Mondy 55.81 48 eP P 08 32 39.8 +2.8
TLY Talaya 57.34 47 P P 08 32 49.0 +1.1
comp=Z,6.4nm,0.9s,baz=269,slow=7.0,SNR=15
TLY Talaya 57.34 47 P P 08 32 48.5 +0.6
TLY IAmb IAmb 08 32 51.9
comp=Z,12nm,1.0s
TLY Talaya 57.34 47 eP P 08 32 49.1 +1.3
TLY pmax pmax
comp=Z,44nm,1.5s
TLY MLR MLR
comp=Z,218nm,10.0s
ZAK Zakamensk 57.62 49 eP P 08 32 49.4 -0.5
ZAK pmax pmax
comp=Z,6.0nm,1.0s
SCHQ Schefferville 58.40 317 P P 08 32 57.0 +1.9
comp=Z,4.2nm,0.9s,baz=43,slow=5.2,SNR=6.1
SCHQ LR LR 08 56 47.3
comp=Z,118nm,19.1s,baz=46,slow=35
SCHQ Schefferville 58.40 317 P P 08 32 55.2 +0.1
SCHQ IAmb IAmb 08 32 58.0
comp=Z,6.9nm,1.0s
TIXI Tiksi 59.67 20 P P 08 33 05.2 +1.5
comp=Z,2.5nm,0.4s,baz=321,slow=5.7,SNR=14
TIXI Tiksi 59.67 20 P P 08 33 04.6 +0.9
TIXI IAmb IAmb 08 33 06.8
comp=Z,7.7nm,1.1s
TIXI Tiksi 59.67 20⇑eP P 08 33 06.1 +2.4
TIXI pmax pmax
comp=Z,14nm,1.7s
RES Resolute Bay 59.74 344 P P 08 33 03.6 -0.5
RES IAmb IAmb 08 33 07.9
comp=Z,12nm,1.4s
RES Resolute Bay 59.74 344 P P 08 33 03.6 -0.5
RES pmax pmax
comp=Z,12nm,1.4s
GTA Gaotai 59.90 62 P P 08 33 05.3 -0.7
GTA pP pP 08 33 09.6 +0.6
GTA sP sP 08 33 12.4 +2.2
GTA PP PP 08 35 15.1 -2.7
GTA pmax pmax
comp=Z,3.0nm,1.3s
GTA pmax pmax
comp=Z,130nm,4.2s
GTA LR LR
comp=Z,110nm,17.9s
GTA LR LR
comp=Z,130nm,19.9s
GTA LR LR
comp=Z,120nm,16.1s
SONM Songino Array 60.52 51 P P 08 33 09.2 -0.9
comp=Z,6.8nm,0.9s,baz=280,slow=7.8,SNR=30
SONM LR LR 09 00 01.7
comp=Z,133nm,19.2s,baz=275,slow=37
SONM Songino Array 60.52 51 P P 08 33 09.6 -0.5
SONM Songino Array 60.52 51 P P 08 33 09.6 -0.5
SONM pmax pmax
comp=Z,7.0nm,1.0s
SHL Shillong 60.63 79 P P 08 33 09.3 -1.9
SHL Shillong 60.63 79 P P 08 33 09.3 -1.9
SHL pmax pmax
comp=Z,11nm,1.1s
LZH Lanzhou 64.28 63 ⇑P P 08 33 37.3 +1.8
LZH pP sP 08 33 42.9 +3.2
LZH sP pP 08 33 46.8 +8.3
LZH PP PP 08 35 58.1 +1.6
LZH pmax pmax
comp=Z,22nm,1.1s
LZH pmax pmax
comp=Z,100nm,4.3s
LZH LR LR
comp=Z,220nm,15.0s
LZH LR LR
comp=Z,220nm,15.2s
LZH LR LR
comp=Z,350nm,18.1s
YAK Yakutsk 65.14 29 P P 08 33 39.0 -1.4
comp=Z,8.3nm,0.6s,baz=98,slow=1.7,SNR=6.6
YAK Yakutsk 65.14 29 P P 08 33 38.9 -1.5
YAK Yakutsk 65.14 29 iP P 08 33 41.9 +1.5
YAK pmax pmax
comp=Z,19nm,0.8s
BOSA Boshof 66.61 175 P P 08 33 52.5 +2.2
comp=Z,4.3nm,1.1s,baz=329,slow=4.0,SNR=4.6
BOSA LR LR 09 05 58.1
comp=Z,279nm,18.4s,baz=12,slow=39
WES Weston 66.68 306 P P 08 33 54.3 +3.6
WES pmax pmax
comp=Z,34nm,1.3s
HHC Hu-ho-hao-te 67.10 55 eP P 08 33 56.4 +2.8
HHC pP sP 08 34 02.2 +4.4
HHC S S 08 42 51.5 +3.7
HHC pmax pmax
comp=Z,5.0nm,1.0s
HHC pmax pmax
comp=Z,110nm,6.7s
HIA Hailar 67.57 44 P P 08 33 56.2 -0.1
HIA Hailar 67.57 44 P P 08 33 56.2 -0.1
HIA pmax pmax
comp=Z,30nm,1.4s
XAN Xi'an 68.90 63 P P 08 34 06.3 +1.4
XAN pmax pmax
comp=Z,10.0nm,1.1s
XAN pmax pmax
comp=Z,160nm,6.1s
XAN Xi'an 68.90 63 P P 08 34 03.1 -1.8
XAN Xi'an 68.90 63 P P 08 34 03.1 -1.8
XAN pmax pmax
comp=Z,8.0nm,0.9s
ZEA Zeya 68.92 38 eP P 08 34 06.1 +1.5
ZEA pmax pmax
comp=Z,18nm,1.2s
CHTO Chiang Mai 69.77 82 P P 08 34 09.7 -0.7
CHTO IAmb IAmb 08 34 12.2

comp=Z,5.2nm,0.9s
CHTO Chiang Mai 69.77 82 P P 08 34 09.7 -0.7
CHTO pmax pmax
comp=Z,5.0nm,0.9s
CMAR Chiang Mai Arr 69.97 82 P P 08 34 11.9 +0.2
comp=Z,3.4nm,0.8s,baz=303,slow=7.3,SNR=18
CMAR LR LR 09 10 32.0
comp=Z,47nm,19.6s,baz=300,slow=41
CMAR Chiang Mai Arr 69.97 82 iP P 08 34 11.8 +0.1
CMAR pmax pmax
comp=Z,4.0nm,0.8s
SADO Sadowa 70.19 312 P P 08 34 14.4 +1.8
comp=Z,15nm,1.3s,baz=81,slow=7.5,SNR=4.2
BILL Bilibino 71.03 13 P P 08 34 17.5 +0.1
BILL Bilibino 71.03 13⇑eP P 08 34 19.5 +2.2
BILL e 08 34 36.2
BILL e 08 36 52.4
BILL pmax pmax
comp=Z,16nm,1.3s
BILL MLR MLR
comp=Z,101nm,17.0s
INK Inuvik 72.04 350 P P 08 34 23.0 -0.4
comp=Z,3.0nm,1.1s,baz=350,slow=12,SNR=6.4
INK Inuvik 72.04 350 P P 08 34 22.9 -0.5
INK IAmb IAmb 08 34 26.2
comp=Z,11nm,1.4s
SEY Seymchan 72.16 21 P P 08 34 24.2 0.0
comp=Z,2.1nm,0.8s,baz=294,slow=2.9,SNR=5.8
SEY Seymchan 72.16 21⇑eP P 08 34 26.5 +2.3
YKA Yellowknife Ar 73.35 340 P P 08 34 31.6 +0.3
comp=Z,5.3nm,1.1s,baz=35,slow=5.4,SNR=19
YKA Yellowknife Ar 73.35 340 iP P 08 34 31.1 -0.2
YKA pmax pmax
comp=Z,3.0nm,1.0s
M52A Chesterland 73.38 310 P P 08 34 30.4 -1.5
KLR Kul'dur 73.92 39 P P 08 34 34.8 -0.1
comp=Z,13nm,0.9s,baz=317,slow=6.7,SNR=25
KLR Kul'dur 73.92 39⇓eP P 08 34 35.2 +0.3
KLR pmax pmax
comp=Z,22nm,1.0s
WHN Wuhan 74.66 63 P P 08 34 34.8 -4.7
FFC Flin Flon 75.13 330 eP P 08 34 44.6 +2.8
ULM Lac du Bonnet 75.64 324 P P 08 34 44.9 +0.1
comp=Z,8.1nm,0.8s,baz=39,slow=4.4,SNR=17
ULM LR LR 09 08 37.2
comp=Z,119nm,19.7s,baz=24,slow=36
ULM Lac du Bonnet 75.64 324 P P 08 34 44.7 -0.2
E38A The Farm, Brul 75.95 319 P P 08 34 45.8 -0.9
E38A IAmb IAmb 08 34 49.7
comp=Z,7.3nm,1.0s
IMAR Indian Mountai 76.06 358 P P 08 34 48.0 +1.1
NJ2 Nanjing 76.89 60 eP P 08 34 54.3 +2.1
NJ2 pmax pmax
comp=Z,15nm,0.5s
ILAR Eielson Array 76.89 354 P P 08 34 52.8 +1.1
comp=Z,1.3nm,0.9s,baz=355,slow=4.2,SNR=14
ILAR Eielson Array 76.89 354 P P 08 34 51.4 -0.3
USRK Ussuriysk Ar. 77.33 43 P P 08 34 53.6 -0.9
comp=Z,8.6nm,0.9s,baz=275,slow=4.3,SNR=9.4
USRK LR LR 09 12 58.4
comp=Z,112nm,19.0s,baz=312,slow=39
ANM Nome 77.48 3 P P 08 34 57.7 +2.7
ANM pmax pmax
comp=Z,22nm,1.4s
MCK McKinley 78.07 355 P P 08 35 01.0 +2.7
MCK pmax pmax
comp=Z,22nm,1.3s
BCAR Beaver Creek A 78.09 352 P P 08 34 58.2 -0.3
KSAR Wonju Array Be 79.38 51 P P 08 35 05.0 -1.0
KSAR Wonju Array Be 79.38 51 P P 08 35 05.0 -1.0
KSRS Korea Array 79.39 51 P P 08 35 05.6 -0.4
comp=Z,4.6nm,0.8s,baz=319,slow=5.2,SNR=8.0
KSRS LR LR 09 13 05.6
comp=Z,51nm,18.6s,baz=330,slow=38
ECSD EROS Data Cent 80.53 319 P P 08 35 11.5 -0.6
ECSD IAmb IAmb 08 35 15.5
comp=Z,10nm,1.0s
YSS Yuzh-Sakhalins 80.81 36⇓iP P 08 35 16.4 +2.9
YSS e 08 35 23.2
YSS pmax pmax
comp=Z,50nm,1.1s
YSS MLR MLR
comp=Z,100nm,15.0s
ASAJ Asahikawa 82.83 38 P P 08 35 24.0 -0.2
comp=Z,6.5nm,0.7s,baz=259,slow=2.8,SNR=4.6
JKA Kamikawa-asahi 82.83 38 P P 08 35 24.0 -0.2
BDFB Brasilia 83.44 244 P P 08 35 29.7 +1.8
comp=Z,2.5nm,0.8s,baz=90,slow=7.1,SNR=3.1
BDFB LR LR 09 13 22.5
comp=Z,53nm,18.1s,baz=6.3,slow=36
RSSD Black Hills 83.91 323 P P 08 35 33.6 +3.5
RSSD pmax pmax
comp=Z,8.0nm,1.1s
MIAR Mount Ida 85.24 311 P P 08 35 39.8 +3.1
MIAR pmax pmax
comp=Z,13nm,1.1s
SDV Santo Domingo 85.40 278 P P 08 35 40.6 +2.6
comp=Z,8.1nm,0.9s,baz=346,slow=1.3,SNR=7.0
NEW Newport 86.01 333 P P 08 35 41.5 +1.1
comp=Z,4.5nm,0.8s,baz=12,slow=3.0,SNR=9.0
MJAR Matsushiro Arr 86.04 46 P P 08 35 41.3 +0.6
comp=Z,6.7nm,0.9s,baz=316,slow=4.3,SNR=11
MJAR LR LR 09 16 20.7
comp=Z,83nm,18.8s,baz=125,slow=37
C09A Chrisman Ranch 86.81 334 P P 08 35 44.1 -0.2
PDAR Pinedale Array 87.49 326 P P 08 35 49.7 +1.7
comp=Z,0.7nm,0.8s,baz=76,slow=7.8,SNR=7.7
PDAR LR LR 09 16 48.6
comp=Z,119nm,18.4s,baz=36,slow=37
WMOK Wichita Mounta 88.13 314 P P 08 35 54.2 +3.3
WMOK pmax pmax
comp=Z,12nm,1.2s
BMO Blue Mountains 88.97 331 P P 08 35 54.1 -0.6
BMO IAmb IAmb 08 35 57.4
comp=Z,4.8nm,0.9s
BMO Blue Mountains 88.97 331 P P 08 35 54.1 -0.6
BMO pmax pmax
comp=Z,5.0nm,1.0s
SRU San Rafael Swe 90.85 324 P P 08 36 05.0 +1.2
SRU pmax pmax
comp=Z,8.0nm,1.0s
DUG Dugway, Tooele 91.01 326 P P 08 36 07.6 +3.2
DUG pmax pmax
comp=Z,5.0nm,1.0s
ELK Elko 91.60 328 P P 08 36 11.1 +3.8
ELK pmax pmax
comp=Z,4.0nm,1.1s
ANMO Albuquerque 92.14 319 P P 08 36 12.8 +3.0
comp=Z,0.3nm,0.3s,baz=27,slow=4.5,SNR=3.2
NVAR Mina Array Bea 94.82 329 P P 08 36 23.8 +1.7
comp=Z,0.8nm,0.8s,baz=46,slow=4.3,SNR=4.1
TXAR Lajitas Array 94.91 313 P P 08 36 24.7 +2.2
comp=Z,0.9nm,0.9s,baz=54,slow=4.6,SNR=7.7
TXAR LR LR 09 20 59.1
comp=Z,37nm,18.2s,baz=0.0,slow=37
CPUP Villa Florida 96.98 242 LR LR 09 20 54.5
comp=Z,99nm,20.2s,baz=42,slow=36
LPAZ La Paz 98.76 256 LR LR 09 23 55.3
comp=Z,56nm,18.9s,baz=55,slow=37
ASAR Alice Springs 122.26 96 PKP PKPdf 08 41 54.3 -0.9
comp=Z,0.6nm,0.7s,baz=309,slow=1.6,SNR=4.8

IDC 09 08:30:10.1±2.7, 14.73N×93.69W, h0km, mb3.6/4, mb1 3.8/8, mb1mx3.6/46, mbtmp3.5/8, ML3.3/4, MS2.5/1, Ms1 2.5/1, ms1mx2.2/32, Error ellipse: s-maj=48.9km s-min=25.6km az=16.0
NEIC 09 08:30:12.7±2.3, 14.7N±0.1×93.77W±0.09, h23km±11km, mb4.2/7, Error ellipse: s-maj=22.7km s-min=3.3km az=211.0
ISC 09 08:30:13.8±1.5, 14.6N±0.1×93.75W±0.08, h36km, n21, σ2.31/22, mb4.0/6, Near coast of Chiapas

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CCIG Comitan 2.27 43 Pn Pn 08 30 51.5 +2.5
CMIG Matias Romero 2.69 336 Pn Pn 08 30 53.7 -0.9
2.7nm,0.3s,baz=174,slow=14,SNR=84
CMIG Sn Sn 08 31 26.5 +0.5
7.0nm,0.3s,baz=104,slow=23,SNR=8.0
APG El Apazote 3.20 83 Pn Pn 08 31 01.3 -0.5
1.1nm,0.3s,baz=200,slow=11,SNR=12
TEIG Tepich 7.64 42 Pn Pn 08 32 01.8 -0.9
1.9nm,0.3s,baz=240,slow=1.8,SNR=15
TEIG Sn Sn 08 33 28.0 0.0
0.5nm,0.3s,baz=310,slow=21,SNR=2.9
TEIG LR LR 08 34 49.8
comp=Z,31nm,18.1s,baz=108,slow=37
TEIG Tepich 7.64 42 Pn 08 32 01.7 -1.0
TXAR Lajitas Array 17.28 330 P P 08 34 13.9 +0.2
0.0nm,0.3s,baz=129,slow=13,SNR=4.6
TXAR Lajitas Array 17.28 330 Pn Pn 08 34 11.8 -0.7
121A Cookes Peak, D 21.95 327 P P 08 35 08.0 +3.3
T47A Sharon Grove 23.06 14 P P 08 35 10.2 -5.8
CCM Cathedral Cave 23.45 5 P P 08 35 19.1 -0.9
CCM IAmb IAmb 08 35 20.4
comp=Z,5.0nm,0.8s
CCM Cathedral Cave 23.45 5 P P 08 35 19.1 -0.9
CCM pmax pmax
comp=Z,5.0nm,0.8s
SRU San Rafael Swe 28.52 332 P P 08 36 06.0 -0.3
MSU Marysvale 28.84 329 P P 08 36 13.1 +4.0
MSU Marysvale 28.84 329 P P 08 36 13.0 +3.9
PSUT Pine Spring 29.71 327 P P 08 36 16.6 -0.2
R11A Troy Canyon, C 30.52 325 P P 08 36 21.2 -2.7
R11A IAmb IAmb 08 36 21.7
comp=Z,5.4nm,1.4s
NVAR Mina Array Bea 32.14 322 P P 08 36 40.4 +2.1
comp=Z,0.6nm,0.7s,baz=135,slow=10,SNR=4.0
YKA Yellowknife Ar 50.05 348 P P 08 39 04.9 +0.2
comp=Z,1.0nm,0.6s,baz=156,slow=7.3,SNR=16
INK Inuvik 59.38 344 P P 08 40 12.8 +0.7
comp=Z,0.6nm,0.6s,baz=143,slow=6.2,SNR=5.4
INK Inuvik 59.38 344 IAmb IAmb 08 40 19.4
comp=Z,3.0nm,1.3s
ILAR Eielson Array 61.61 337 P P 08 40 28.6 +1.1
comp=Z,0.3nm,0.8s,baz=123,slow=6.6,SNR=3.4

IDC 09 08:33:12.3±2.9, 24.63S×179.83E, h486km±30km, mb3.3/10, mb1 3.5/11, mb1mx3.3/36, mbtmp4.2/11, Error ellipse: s-maj=23.4km s-min=21.3km az=84.0
NEIC 09 08:33:15.3±1.2, 24.65S±0.04×179.7E±0.2, h520km±10km, mb4.2/14, Error ellipse: s-maj=22.3km s-min=4.9km az=95.0
ISC 09 08:33:14.9±0.7, 24.65S±0.08×179.9E±0.1, h517km, n52, σ1.53/54, mb3.8/16, South of Fiji Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSVF Nonsavu 7.08 346 P P 08 35 00.7 -2.0
KUZ Kuaotunu 12.58 195 P P 08 35 59.4 +0.2
DZM Mont Dzumac 12.60 279 P P 08 36 00.2 +0.4
WIAZ Waiheke Island 12.77 197 P P 08 36 01.8 +0.5
MBAZ Motutapu North 12.82 198 P P 08 36 04.1 +2.4
MXZ Matakaoa Point 12.95 186 P P 08 36 03.4 +0.3
ETAZ East Tamaki Re 12.98 198 P P 08 36 04.3 +0.8
MKAZ Moumakai 13.06 197 P P 08 36 04.6 +0.3
HAZ Te Kaha 13.19 187 P P 08 36 05.2 -0.4
RUGZ Raukumara Rang 13.41 187 P P 08 36 07.3 -0.9
URZ Urewera 13.77 189 P P 08 36 08.0 -3.8
1.9nm,0.3s,baz=87,slow=4.4,SNR=11
URZ S S 08 38 37.4 -0.3
1.0nm,0.3s,baz=230,slow=22,SNR=8.0
URZ Urewera 13.77 189 P P 08 36 10.5 -1.3
URZ Urewera 13.77 189 P P 08 36 08.8 -3.0
MWZ Matawai 13.79 188 P P 08 36 11.9 -0.2
RAHZ Arahi 14.42 189 P P 08 36 17.5 -1.1
HIZ Hauiti 14.47 196 P P 08 36 22.9 +3.8
BKZ Black Stump Fm 14.76 190 P P 08 36 18.1 -4.1
TWVZ Taurewa 14.86 194 P P 08 36 23.1 -0.2
SANVU Saraoutou 15.00 305 P P 08 36 26.6 +1.6
BHHZ Black Hill Sta 15.15 191 P P 08 36 23.2 -3.1
QRZ Quartz Range 17.26 199 P P 08 36 46.5 -0.9
LTZ Lake Taylor 19.15 197 P P 08 37 02.5 -2.2
RPZ Rata Peaks 20.35 199 P P 08 37 14.9 -0.7
6.8nm,0.5s,baz=56,slow=0.4,SNR=8.1
STKA Stephens Creek 34.34 249 P P 08 39 18.0 -0.2
1.3nm,0.5s,baz=92,slow=9.5,SNR=4.4
STKA Stephens Creek 34.34 249 P P 08 39 18.1 -0.2
BBOO Buckleboo 39.05 248 P P 08 39 56.0 -1.0
BBOO IAmb IAmb 08 39 59.5
comp=Z,24nm,1.4s
AS31 Alice Springs 41.80 261 P P 08 40 18.6 -0.6
ASAR Alice Springs 41.80 261 P P 08 40 18.4 -0.8
comp=Z,0.9nm,0.3s,baz=92,slow=6.7,SNR=38
WR0 Warramunga Arr 42.05 267 P P 08 40 20.0 -1.2
WR0 IAmb IAmb 08 40 33.4
comp=Z,2.6nm,1.1s
WB2 Warramunga Arr 42.23 267 P P 08 40 21.6 -1.0
WB2 IAmb IAmb 08 40 33.3
comp=Z,20nm,1.4s
WRAB Tennant Creek 42.23 267 P P 08 40 21.5 -1.1
WRAB IAmb IAmb 08 40 25.6
comp=Z,15nm,1.4s
WB0 Warramunga Arr 42.24 267 P P 08 40 21.5 -1.2
WB0 IAmb IAmb 08 40 22.0
comp=Z,7.5nm,0.8s
WRA Warramunga Arr 42.24 267 P P 08 40 21.4 -1.3
comp=Z,4.3nm,0.6s,baz=97,slow=8.5,SNR=47
WRA ScP ScP 08 45 08.7 +2.5
comp=Z,0.9nm,1.0s,baz=101,slow=4.1,SNR=4.6
WRA Warramunga Arr 42.24 267 P P 08 40 21.4 -1.3
KNRA Kununurra 48.57 270 P P 08 41 10.4 -0.7
QSPA South Pole Qui 65.44 180 P P 08 43 07.5 +1.3
QSPA IAmb IAmb 08 43 07.9
comp=Z,3.7nm,0.8s
MJAR Matsushiro Arr 72.44 326 P P 08 43 47.8 -0.8
comp=Z,1.8nm,0.8s,baz=130,slow=6.8,SNR=4.4
MJAR Matsushiro Arr 72.44 326 P P 08 43 48.2 -0.5
KSRS Korea Array 78.74 320 P P 08 44 24.0 +0.5
comp=Z,0.9nm,0.6s,baz=140,slow=6.4,SNR=4.1
USRK Ussuriysk Ar. 81.32 327 P P 08 44 37.6 +0.7
comp=Z,0.5nm,0.4s,baz=177,slow=6.6,SNR=3.6
SNAA Sanae 83.93 179 P P 08 44 49.9 +0.1
SNAA IAmb IAmb 08 45 07.3
comp=Z,3.2nm,1.3s
CMAR Chiang Mai Arr 89.67 290 P P 08 45 19.3 +1.3
comp=Z,0.4nm,0.3s,baz=137,slow=3.6,SNR=5.5
SEY Seymchan 89.97 348 P P 08 45 18.1 -0.1
comp=Z,0.6nm,0.5s,baz=72,slow=22,SNR=3.9
TXAR Lajitas Array 90.92 58 P P 08 45 25.0 +1.3
comp=Z,0.4nm,0.7s,baz=221,slow=6.6,SNR=5.9
TXAR Lajitas Array 90.92 58 P P 08 45 25.5 +1.9
MKAR Makanchi Array 112.57 312 PKiKP PKiKP 08 50 50.9 -1.2
comp=Z,0.1nm,0.4s,baz=175,slow=1.5,SNR=4.8
ARCES ARCESS Array B 132.59 348 PKP PKPdf 08 51 30.2 +0.5
comp=Z,6.9nm,1.1s,baz=51,slow=4.3,SNR=5.0
FINES FINESS Array B 139.11 341 PKhKP PKPpre 08 51 32.7
comp=Z,0.8nm,0.6s,baz=2.6,slow=4.2,SNR=5.8
FINES PKP PKPdf 08 51 41.7 -0.3
comp=Z,0.6nm,0.4s,baz=54,slow=3.3,SNR=6.2
NOA NORSAR Array B 142.79 351 PKhKP PKPpre 08 51 45.6
comp=Z,0.7nm,0.9s,baz=20,slow=5.2,SNR=2.6
AKASG Malin Array Be 145.53 327 PKPbc PKPdf 08 51 54.0 +0.3
comp=Z,0.7nm,0.3s,baz=44,slow=4.0,SNR=10
BRTR Keskin Array B 147.93 306 PKPbc PKPbc 08 52 00.7 -1.4
comp=Z,0.6nm,0.6s,baz=141,slow=6.1,SNR=3.7
BRTR PKPab PKPab 08 52 06.5 0.0
comp=Z,0.7nm,0.4s,baz=118,slow=4.7,SNR=4.6
TORD Torodi Ar. Bea 168.43 189 PKPab PKPab 08 53 35.4 0.0
comp=Z,0.6nm,0.8s,baz=169,slow=3.8,SNR=2.7

NCEDC 09 08:44:27.2±1.5, 40.50N±0.04×125.52W±0.07, h2km±7km, Md2.7/26, Error ellipse: s-maj=8.5km s-min=5.9km az=69.0
ANF 09 08:44:28.3±0.8, 40.70N×125.33W, h5km, ML2.8/2, Error ellipse: s-maj=7.4km s-min=4.9km az=39.0
ISC 09 08:44:24.4±2.5, 40.53N±0.06×125.7W±0.1, h5km±13km, n43, σ1.24/52, Off coast of northern California

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KCTM Capetown 1.02 93 Pb 08 44 45.5 +0.1
KCTM Sn 08 44 59.6 -0.4
KMPM Mount Pierce 1.19 95 Pb 08 44 47.7 +0.3
KMPM Sn 08 45 03.4 -0.8
JCC Jacoby Creek, 1.28 77 Pg 08 44 48.2 -0.6
KCRM Chalk Rock 1.41 94 Pg 08 44 51.1 -0.4
KHMM Horse Mountain 1.51 76 Pg 08 44 51.9 -1.4
KHMM Sn Sn 08 45 10.9 -1.4
KMRM Mail Ridge 1.53 101 Pn 08 44 53.0 +0.7
KMRM Sn Sn 08 45 13.1 +0.4
KCSM Cold Springs 1.64 89 Pn 08 44 54.5 +0.5
KRMB Red Mountain 1.66 53 Pn Pb 08 44 55.7 +0.3
KBSM Bell Springs 1.70 110 Pn 08 44 55.0 +0.3
KCPM Cahto Peak 1.81 117 Pn 08 44 56.6 +0.3
KIPM Iron Peak 1.82 113 Pn 08 44 56.7 +0.2
KHBM Hayfork Bally 1.87 85 Pn 08 44 57.0 -0.2
KFPM Farley Peak 1.94 117 Pn 08 44 58.1 +0.1
GTC Three Chop Rid 1.98 124 Pn 08 44 58.6 +0.1
KBNM Bluenose Ridge 2.00 108 Pn 08 44 59.5 +0.6
KBO Bosley Butte 2.00 32 Pn Pn 08 44 58.7 -0.2
LBPM Beegum Peak 2.14 95 Pn 08 45 01.0 +0.3
KRKM Rackout Spring 2.14 116 Pn 08 45 00.5 -0.3
LGPM Granite Peak 2.19 79 Pn 08 45 01.3 -0.2
GHOM Hamilton Openi 2.21 132 Pn 08 45 01.5 -0.3
L02E Cave Junction 2.25 43 P Pn 08 45 02.6 +0.4
baz=222,SNR=31
L02E S Sn 08 45 27.8 -2.5
baz=222
N02D Trinity Center 2.29 78 Pn 08 45 02.7 -0.2
N02D Trinity Center 2.29 78 P Pn 08 45 02.8 -0.1
baz=258,SNR=15
N02D Sb Sn 08 45 31.5 -0.1
baz=258
M02C Callahan 2.30 67 S Sn 08 45 30.4 -1.3
baz=247
WDC Whiskeytown Da 2.38 88 Pn 08 45 05.1 +1.0
GVV Valley View 2.41 107 Pn 08 45 05.5 +0.9
GASB Alder Springs 2.43 110 Pn 08 45 05.2 +0.4
HOPS Hopland Field 2.52 127 Pn Pn 08 45 06.8 +0.8
YBH Yreka Blue Hor 2.53 61 Pn Pn 08 45 08.7 +2.4
KEBM Edson Butte 2.54 23 Pn Pn 08 45 06.3 0.0
K02D Willamette Mer 2.63 34 P Pn 08 45 07.9 +0.3
baz=213,SNR=155
K02D S Sn 08 45 37.6 -2.3
baz=213
HUMO Hull Mountain 2.90 44 Pn Pn 08 45 12.2 +0.9
J01E Myrtle Point 2.93 26 P Pn 08 45 12.1 +0.5
baz=205
O03E Paynes Creek 2.96 93 P Pn 08 45 12.2 +0.1
baz=275,SNR=35
O03E S Sn 08 45 47.6 -0.4
baz=275
L04D Klamath Falls 3.04 55 Pb Pn 08 45 16.3 +3.1
baz=236,SNR=17
ORV Oroville 3.34 106 Pn Pn 08 45 18.1 +0.8
I03D Drain, OR 3.60 28 P Pn 08 45 21.6 +0.8
baz=208,SNR=30
I03D S Sn 08 46 02.1 -1.7
baz=208
I02D Swisshome 3.82 20 P Pn 08 45 24.3 +0.5
baz=200
BEKR Beckworth 4.12 98 Pn 08 45 29.4 +1.3
PINE Pine Mountain 4.79 46 Pn Pn 08 45 39.9 +2.6
G06A Carlson Farm, 5.98 37 Pn Pn 08 45 56.0 +2.5
NV11 Mina Array Sit 6.18 107 Pn Pn 08 45 57.5 +1.1
E03A Lebam 6.20 14 Pn Pn 08 46 00.0 +3.5

NIED 09 09:05:00, 24.90N×123.70E, h119km, Mw4.0 Best double couple: Mo1.25000×10^15 NP1:φs66.00000°, δ88.00000°, λ-88.00000°. NP2:φs205.00000°, δ3.00000°, λ-131.00000°.
NEIC 09 09:05:17.4±1.9, 24.86N±0.08×123.69E±0.07, h99km±5km, mb4.7/25, Error ellipse: s-maj=11.3km s-min=8.4km az=155.0
IDC 09 09:05:18.5±2.6, 24.98N×123.73E, h106km±25km, mb3.7/14, mb1 3.8/15, mb1mx3.6/36, mbtmp4.0/15, Error ellipse: s-maj=18.8km s-min=12.2km az=71.0
JMA 09 09:05:18.4±0.1, 24.88N×123.66E, h94km±2km, M3.8
ISC 09 09:05:17.9±0.6, 24.86N±0.05×123.64E±0.03, h102km±5km, n73, σ0.98/93, mb4.5/27, Southwestern Ryukyu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
IRIF Iriomote-Funau 0.53 171 P Pn 09 05 33.7 -0.4
IRIF S Sn 09 05 45.6 -0.7
JISG Ishigakijimahi 0.67 114 P Pn 09 05 34.8 -0.4
JISG S Sn 09 05 47.4 -0.8
JIJ Ishigaki jima 0.67 137 P Pn 09 05 34.9 -0.4
JIJ S Sn 09 05 47.3 -1.0
YOJ Yonaguni jima 0.70 236 P Pn 09 05 35.6 +0.1
YOJ S Sn 09 05 48.1 -0.6
YOJ Yonaguni jima 0.70 236 Pn Pn 09 05 35.6 +0.1
YOJ Sn Sn 09 05 47.6 -1.1
JKRS Kuro-shima 0.70 152 P Pn 09 05 35.6 0.0
JKRS S Sn 09 05 48.4 -0.4
JYNG Yonagunijimaku 0.75 238 P Pn 09 05 36.2 +0.2
JYNG S Sn 09 05 49.2 -0.4
HATJ Hateruma jima 0.81 169 P Pn 09 05 36.6 0.0
HATJ S Sn 09 05 50.7 +0.1
JTJ Tarama 0.99 102 P Pn 09 05 38.4 +0.1
JTJ S Sn 09 05 53.6 -0.1
JIRB Irabujima 1.39 91 P Pn 09 05 42.7 -0.2
JIRB S Sn 09 06 02.6 +0.7
JIKM Ikemajima 1.46 87 P Pn 09 05 43.7 -0.1
JIKM S Sn 09 06 03.2 -0.2
JMJ2 Miyako jima3 1.54 94 P Pn 09 05 44.8 +0.1
JMJ2 eS Sn 09 06 05.7 +0.6
JOGS Gusukube 1.61 93 P Pn 09 05 46.0 +0.4
JOGS eS Sn 09 06 07.4 +0.8
TATO Taipei 1.96 274 Pn Pn 09 05 51.6 +1.6
NACB Ninganchiao 1.99 250 Pn 09 05 50.0 -0.4
NACB Sn 09 06 14.7 -0.5
YHNB Yeheng 2.07 265 Pn 09 05 53.0 +1.5
YHNB Sn 09 06 19.3 +2.1
YULB Yu-li 2.59 236 Pn 09 05 57.6 -0.8
YULB Sn 09 06 26.1 -3.3
SSLB Suanglung 2.67 247 Pn 09 05 59.0 -0.4
SSLB Sn 09 06 29.2 -2.2
TWG Pinlang 3.11 230 Pn 09 06 03.5 -1.6
TWG Sn 09 06 38.8 -2.8
TPUB Ta-pu 3.16 241 Pn 09 06 07.6 +1.7
TPUB Sn 09 06 43.8 +0.9
JOW Kunigami 4.61 64 P Pn 09 06 24.5 -0.9
1.2nm,0.3s,baz=138,slow=13,SNR=40
JOW S Sn 09 07 15.7 -2.2
0.4nm,0.3s,baz=99,slow=18,SNR=2.7
JOW Kunigami 4.61 64 Pn 09 06 23.8 -1.6
SSE Sheshan 6.58 341 Pn Pn 09 06 52.6 +0.6
KSRS Korea Array 13.08 15 P Pn 09 08 18.7 -1.0
0.1nm,0.3s,baz=174,slow=19,SNR=3.1
ANA2 Anatahan 22.30 108 P P 09 10 09.2 +2.1
CMAR Chiang Mai Arr 23.80 259 P P 09 10 22.8 +1.3
0.5nm,0.4s,baz=59,slow=7.0,SNR=3.4
KLR Kul'dur 25.14 13 P P 09 10 33.2 -0.2
0.8nm,0.5s,baz=215,slow=7.7,SNR=5.9
SONM Songino Array 26.69 334 P P 09 10 47.4 -0.1
0.9nm,0.5s,baz=148,slow=9.7,SNR=9.7
SONM Songino Array 26.69 334 P P 09 10 47.8 +0.3
MTN Manton Dam 38.18 168 P P 09 12 27.1 -0.5
MK31 Makanchi Array 39.44 314 P P 09 12 37.6 -0.4
MKAR Makanchi Array 39.44 314 P P 09 12 37.5 -0.4
2.2nm,0.3s,baz=100,slow=9.5,SNR=76
MAKZ Makanchi 39.65 314 P P 09 12 39.7 0.0
MAKZ IAmb IAmb 09 12 40.4
comp=Z,3.3nm,0.5s
KNRA Kununurra 40.60 172 P P 09 12 48.0 +0.4
ZALV Zalesovo Beam 40.93 326 P P 09 12 50.0 0.0
comp=Z,1.3nm,0.4s,baz=113,slow=8.7,SNR=7.9
ZALV Zalesovo Beam 40.93 326 P P 09 12 49.8 -0.3
COEN Coen 43.03 152 P P 09 13 09.1 +1.5
COEN IAmb IAmb 09 13 09.8
comp=Z,12nm,0.9s
KURK Kurchatov 43.04 319 P P 09 13 07.0 -0.3
WB0 Warramunga Arr 45.57 166 P P 09 13 28.2 +0.4
WB0 IAmb IAmb 09 13 29.3
comp=Z,13nm,1.1s
WRA Warramunga Arr 45.73 166 P P 09 13 29.8 +0.8
comp=Z,5.3nm,0.8s,baz=349,slow=8.1,SNR=16
WRA Warramunga Arr 45.73 166 P P 09 13 29.5 +0.4
WB2 Warramunga Arr 45.73 166 P P 09 13 29.5 +0.4
WB2 IAmb IAmb 09 13 31.1
comp=Z,6.0nm,0.7s
WR0 Warramunga Arr 45.79 166 P P 09 13 29.9 +0.4
WR0 IAmb IAmb 09 13 31.1
comp=Z,8.8nm,1.1s
PSA00 Pilbara Seismi 46.30 185 P P 09 13 33.1 -0.3
PSA00 IAmb IAmb 09 13 44.1
comp=Z,36nm,1.4s
KKAR Karatay Array 46.86 307 P P 09 13 38.8 +1.1
AS31 Alice Springs 49.25 168 P P 09 13 57.6 +1.3
ASAR Alice Springs 49.25 168 P P 09 13 57.7 +1.4
comp=Z,3.1nm,0.5s,baz=352,slow=8.2,SNR=73
ASAR PcP PcP 09 15 18.4 +0.6
comp=Z,0.3nm,0.5s,baz=352,slow=3.6,SNR=3.1
ASAR Alice Springs 49.25 168 P P 09 13 57.4 +1.2

ABKAR	Akbulak array	54.58	314	P	P	09 14 35.1	-0.4
BBOO	Buckleboo	58.56	168	P	P	09 15 04.2	+0.4
STKA	Stephens Creek	58.97	162	P	P	09 15 07.0	+0.3
	comp=Z,1.4nm,0.5s,baz=354,slow=6.9,SNR=4.4						
STKA	Stephens Creek	58.97	162	P	P	09 15 07.2	+0.5
PPLA	Purkeypile	65.55	30	P	P	09 15 51.1	+0.6
PPLA				IAmb	IAmb	09 15 57.7	
	comp=Z,12nm,1.4s						
MLY	Manley	65.92	28	P	P	09 15 53.7	+1.0
KDAK	Kodiak Island	66.06	36	P	P	09 15 53.5	-0.1
SOCY	Socotra	66.64	273	P	P	09 15 56.7	-1.4
SOCY				IAmb	IAmb	09 15 59.4	
	comp=Z,12nm,1.2s						
CCB	Clear Creek Bu	67.22	28	P	P	09 16 00.9	0.0
ILAR	Eielson Array	67.58	28	P	P	09 16 02.4	-0.8
	comp=Z,0.2nm,0.4s,baz=284,slow=7.0,SNR=7.5						
ARCES	ARCESS Array B	69.75	338	P	P	09 16 16.3	-0.2
	comp=Z,3.5nm,1.0s,baz=76,slow=7.5,SNR=4.0						
CTGM	Chitina Glacie	70.97	31	P	P	09 16 25.0	+0.7
CTGM				IAmb	IAmb	09 16 31.4	
	comp=Z,12nm,1.3s						
PCA	Pinnacle	71.73	32	P	P	09 16 26.8	-2.0
PCA				IAmb	IAmb	09 16 42.8	
	comp=Z,21nm,1.3s						
FIA1	FINESS Array S	71.99	330	P	P	09 16 29.7	-0.5
FIA1				IAmb	IAmb	09 16 37.5	
	comp=Z,18nm,1.4s						
FINES	FINESS Array B	71.99	330	P	P	09 16 29.6	-0.6
	comp=Z,1.0nm,0.5s,baz=62,slow=5.5,SNR=13						
FINES	FINESS Array B	71.99	330	P	P	09 16 29.2	-1.0
NB201	NORSAR Array S	78.63	333	P	P	09 17 07.8	-0.4
NB201				IAmb	IAmb	09 17 10.3	
	comp=Z,12nm,0.9s						
NB2	NORSAR Subarra	78.67	333	P	P	09 17 07.6	-0.9
	comp=Z,0.8nm,0.5s,baz=53,slow=6.2						
NOA	NORSAR Array B	78.67	333	P	P	09 17 08.1	-0.5
	comp=Z,0.5nm,0.5s,baz=66,slow=9.3,SNR=5.7						
NC204	NORSAR Array S	78.73	333	P	P	09 17 08.4	-0.5
NC204				IAmb	IAmb	09 17 11.3	
	comp=Z,53nm,1.4s						
YKA	Yellowknife Ar	81.47	24	P	P	09 17 23.1	-0.3
	comp=Z,0.6nm,0.6s,baz=308,slow=4.8,SNR=9.8						
GERES	GERESS Array B	83.73	321	P	P	09 17 35.2	-0.5
	comp=Z,0.6nm,0.8s,baz=30,slow=6.0,SNR=2.7						
SDV	Santo Domingo	143.69	24	PKPdf	PKPab	09 24 39.9	+1.1
RUSC	La Rusia	145.37	30	PKPdf	PKPbc	09 24 45.0	-0.2
HOPE	Hope Point	147.10	202	PKPbc	PKPbc	09 24 48.7	+0.1

*SJA **09** 09:07:21.0±0.6, 38°.15S×76°.22W, h30km, ML4.0, MW4.2*
*GUC **09** 09:07:44.1±0.5, 37°.41S×74°.33W, h33km±3km, ML3.6*
ISC 09 09:07:45.2±2.1, 37°.50S±0°.07×74°.3W±0°.1, h35km, n22, σ1s.27/26, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI04	Isla Mocha	0.97	160	eP	Pn	09 07 59.7	-2.7
BI04				iS	Sn	09 08 16.0	+1.0
BI04					IAML	09 08 17.4	
	comp=N,4μm,0.4s						
CCSP	San Pedro de C	1.16	56	eP	Pn	09 08 03.5	-1.4
CCSP				iS	Sn	09 08 17.9	-1.5
CCSP					IAML	09 08 25.5	
	comp=E,3μm,0.3s						
CCHI	Chillan	1.99	64	eP	Pn	09 08 16.2	-0.2
CCHI				iS	Sn	09 08 40.6	+0.5
CCHI					IAML	09 08 54.9	
	comp=N,810nm,0.7s						
CCHI	Chillan	1.99	64	iP	Pn	09 08 16.2	-0.2
BI02	San Fabin de	2.56	72	eP	Pn	09 08 24.1	-0.3
BI02				iS	Sn	09 08 54.8	+0.4
BI02					IAML	09 09 05.9	
	comp=E,186nm,0.5s						
CANA	Caviahue	2.60	100	iP	Pn	09 08 24.8	-0.2
GO05	Huala	3.14	38	iP	Pn	09 08 32.2	0.0
GO05				iS	Sn	09 09 26.3	+18
PUMA	Malargue	4.39	64	iP	Pn	09 08 52.1	+2.7
COIS	El Sosneado	4.49	59	iP	Pn	09 08 51.7	+0.9
PEL	Peldehue	5.25	35	iP	Pn	09 09 01.3	0.0
AAGR	Agrelo	6.28	47	iP	Pn	09 09 17.5	+2.1
ARCO	CERRO ARCO	6.39	45	iP	Pn	09 09 18.3	+1.2
ARCO					IAML	09 09 52.2	
	comp=Z,4.6nm,0.4s						
ASAL	Salagasta	6.64	44	iP	Pn	09 09 21.4	+1.1
RTCV	Cerro Valdivia	7.36	42	iP	Pn	09 09 30.1	-0.1
CFA	Coronel Fontan	7.72	42	eP	Pn	09 09 34.8	-0.4
RTLL	Cerro Villicun	7.81	40	iP	Pn	09 09 36.5	0.0
RTLL					IAML	09 09 36.8	
	comp=Z,14nm,0.4s						
ACAN	Cantantal	7.83	50	iP	Pn	09 09 36.7	0.0
GO04	Tololo Observa	7.86	23	iP	Pn	09 09 37.5	+0.1
AMOG	MOGNA	8.12	38	iP	Pn	09 09 40.4	-0.3
ACCO	Cerro Coronel	8.14	34	iP	Pn	09 09 41.9	+0.6
AROD	Rodeo	8.34	30	iP	Pn	09 09 45.5	+1.5
APLL	PUNTA DE LOS L	9.58	45	iP	Pn	09 09 58.4	-2.4
APLL					IAML	09 11 39.7	
	comp=Z,2.8nm,0.1s						

*KNET **09** 09:18:53.0±0.2, 42°.24N×74°.08E, h18km±1km, ml2.3, Error ellipse: s-maj=1.9km s-min=1.4km az=8.0*
*NNC **09** 09:18:53.9±0.8, 42°.24N×74°.11E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=6.8km s-min=4.0km az=131.0*
*KRNET **09** 09:18:53.4±0.1, 42°.23N×74°.07E, h20km, mb2.9*
*SOME **09** 09:18:53.9, 42°.25N×74°.08E, h10km*
ISC 09 09:18:53.8±0.8, 42°.24N±0°.02×74°.08E±0°.02, h16km±7km, n62, σ1s.28/111, 35C-17D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	0.30	250	⇑iP	Pg	09 18 59.8	-0.7
	baz=51						
AML				⇑iS	Sg	09 19 04.3	-0.8
	baz=51						
AML	Almayashu	0.30	250	⇑P	Pg	09 18 59.8	-0.7
	38nm,0.1s,SNR=38						
AML				⇓S	Sg	09 19 04.6	-0.5
	105nm,0.2s						
UCH	Uchtor	0.32	92	⇑iP	Pg	09 19 00.5	-0.4
	baz=90						
UCH				⇑iS	Sg	09 19 05.6	-0.1
	baz=90						
UCH	Uchtor	0.32	92	P	Pg	09 19 00.5	-0.4
	56nm,0.2s,SNR=494						
UCH				⇑S	Sg	09 19 05.9	+0.2
	368nm,0.1s						
ARLS	Aral	0.42	154	⇓iP	Pg	09 19 01.8	-0.6
	baz=51						
ARLS				⇓iS	Sg	09 19 07.4	-0.8
	baz=51						
EKS2	Erkin-Say	0.48	332	⇓iP	Pg	09 19 03.0	-0.5
	baz=34						
EKS2				⇓iS	Sg	09 19 09.9	-0.1
	baz=34						
EKS2	Erkin-Say	0.48	332	P	Pg	09 19 03.0	-0.5
	13nm,0.1s,SNR=108						
EKS2				⇑S	Sg	09 19 10.1	+0.1
	57nm,0.2s						
AAK	Ala-Archa	0.51	37	⇑iP	Pg	09 19 03.8	-0.2
	baz=38						
AAK				⇑iS	Sg	09 19 10.9	+0.1
	baz=38						
AAK	Ala-Archa	0.51	37	P	Pg	09 19 03.8	-0.2
	42nm,0.2s,SNR=139						
AAK				⇑S	Sg	09 19 11.1	+0.3
	230nm,0.3s						
AAK	Ala-Archa	0.51	37	⇑P	Pg	09 19 03.7	-0.2
	22nm,0.3s						
AAK				⇑S	Sg	09 19 11.0	+0.1
	206nm,0.5s						
FRU1	Bishkek	0.70	35	⇑iP	Pb	09 19 07.1	-0.7
	baz=35						
FRU1				⇑iS	Sb	09 19 17.1	-0.1
	baz=35						
KBK	Karagaybulak	0.77	57	⇓iP	Pb	09 19 08.3	-0.6
	baz=57						
KBK				⇓iS	Sg	09 19 19.2	+0.1
	baz=57						
KBK	Karagaybulak	0.77	57	P	Pb	09 19 08.5	-0.5
	32nm,0.1s,SNR=22						
KBK				⇓S	Sg	09 19 19.4	+0.3
	164nm,0.3s						
KZA	Kyzart	0.89	100	⇑iP	Pb	09 19 10.3	-0.8
	baz=99						
KZA				⇑iS	Sb	09 19 22.6	-0.2
	baz=99						
KZA	Kyzart	0.89	100	⇑P	Pb	09 19 10.4	-0.7
	26nm,0.2s,SNR=9.2						
KZA				⇑S	Sg	09 19 22.8	0.0
	174nm,0.2s						
CHMS	Chumysh	0.91	33	⇑iP	Pb	09 19 10.7	-0.5
	baz=33						
CHMS				⇑iS	Sb	09 19 23.0	-0.1
	baz=33						
CHMS	Chumysh	0.91	33	P	Pb	09 19 10.8	-0.5
	10nm,0.2s,SNR=26						
CHMS				⇑S	Sb	09 19 23.2	+0.1
	40nm,0.2s						
CHMS	Chumysh	0.91	33	⇓P	Pb	09 19 10.8	-0.5
	4.2nm,0.3s						
CHMS				⇑S	Sb	09 19 23.1	-0.1
	30nm,0.4s						
USP	Ospenovka	1.07	17	⇑iP	Pb	09 19 13.5	-0.6
	baz=17						
USP				⇑iS	Sb	09 19 28.1	+0.2
	baz=17						
USP	Ospenovka	1.07	17	⇓P	Pb	09 19 13.8	-0.3
	15nm,0.3s,SNR=34						
USP				⇑S	Sn	09 19 28.2	-0.7
	48nm,0.2s						
ARSB	Arslanbob	1.23	222	⇓iP	Pn	09 19 15.9	-0.6
	baz=22						
ARSB				⇓iS	Sb	09 19 32.0	-0.4
	baz=22						
SGDS	Sogindy	1.28	18	P	Pn	09 19 17.2	+0.1
	7.3nm,0.1s						
SGDS				S	Sn	09 19 33.9	-0.1
	73nm,0.2s						
BOOM	Boomskoye usch	1.40	79	⇑iP	Pb	09 19 19.2	-0.5
	baz=79						
BOOM				⇑iS	Sb	09 19 38.0	+0.5
	baz=79						
DGS	Degeres	1.60	51	eP	Pb	09 19 23.3	+0.2
	baz=51						
DGS				eS	Sg	09 19 44.3	-1.2
	baz=51						
DGS	Degeres	1.60	51	eP	Pb	09 19 23.3	+0.2
	4.8nm,0.2s						
DGS				eS	Sg	09 19 44.3	-1.2
	30nm,0.4s						
DGS	Degeres	1.60	51	P	Pb	09 19 23.3	+0.2
	4.8nm,0.2s						
DGS				S	Sg	09 19 44.3	-1.2
	30nm,0.4s						
KST	Kastek	1.61	59	eP	Pb	09 19 23.3	+0.1
	7.9nm,0.2s						
KST				eS	Sb	09 19 44.1	+0.8
	51nm,0.3s						
KST	Kastek	1.61	59	P	Pb	09 19 23.3	+0.1
	7.9nm,0.2s						
KST				S	Sg	09 19 44.8	-0.9
	51nm,0.3s						
ULHL	Ulahol	1.61	89	⇑iP	Pb	09 19 23.0	-0.2
	baz=89						
ULHL				⇑iS	Sb	09 19 44.3	+0.9
	baz=89						
ULHL	Ulahol	1.61	89	⇑P	Pb	09 19 22.7	-0.5
	5.7nm,0.2s,SNR=19						
ARK	Arkit	1.64	255	⇓iP	Pb	09 19 23.3	-0.4
	baz=55						
ARK				⇓iS	Sb	09 19 44.5	+0.4
	baz=55						
NRN	Naryn	1.65	119	⇑iP	Pb	09 19 23.5	-0.5
	baz=19						
NRN				⇑iS	Sb	09 19 45.0	+0.4
	baz=19						
KRBS	Karabastau	1.87	38	eP	Pb	09 19 28.3	+0.6
	5.6nm,0.2s						
KRBS				eS	Sg	09 19 52.8	-1.2
	24nm,0.5s						
MTBS	Maitube	1.95	62	eP	Pb	09 19 29.5	+0.4
	7.2nm,0.3s						
MTBS				eS	Sg	09 19 54.9	-1.7
	32nm,0.2s						
MTBS	Maitube	1.95	62	Pg	Pb	09 19 29.5	+0.4
	7.2nm,0.3s						
MTBS				Lg	Lg	09 19 55.3	
	32nm,0.2s						
IZV	Izvestkoviy	2.03	66	eP	Pb	09 19 30.9	+0.4
	11nm,0.7s						
IZV				eS	Sg	09 19 57.4	-1.9
	20nm,0.5s						
IZV	Izvestkoviy	2.03	66	Pg	Pb	09 19 30.9	+0.4
	11nm,0.7s						
IZV				Lg	Lg	09 19 57.4	
	20nm,0.5s						
TNSS	Tian-Shan	2.26	68	eP	Pb	09 19 35.2	+0.7
	13nm,0.5s						
TNSS				eS	Sg	09 20 04.8	-1.8
	22nm,0.5s						
TNSS	Tian-Shan	2.26	68	Pg	Pb	09 19 35.2	+0.7
	13nm,0.5s						
TNSS				Lg	Lg	09 20 05.3	
	22nm,0.5s						
KDJ	Kajisay	2.31	92	⇓iP	Pn	09 19 33.0	+1.6
	baz=91						
KDJ				⇓iS	Sb	09 20 01.8	-1.7
	baz=91						
KUU	Kurty	2.34	44	eP	Pb	09 19 35.8	+0.2
	2.9nm,0.3s						
KUU				eS	Sb	09 20 06.1	+1.8
	41nm,0.4s						
KUU	Kurty	2.34	44	Pg	Pb	09 19 35.8	+0.2
	2.5nm,0.3s						
KUU				Lg	Lg	09 20 06.1	
	43nm,0.6s						
MDOK	Medeo	2.38	66	eP	Pb	09 19 36.7	+0.4
	6.4nm,0.3s						
MDOK				eS	Sb	09 20 07.4	+1.9
	22nm,0.6s						
MDOK	Medeo	2.38	66	⇓Pg	Pb	09 19 36.3	0.0
	5.0nm,0.4s						
MDOK				⇑Lg	Lg	09 20 09.2	
	19nm,0.6s						
KTBS	Karatobe	2.41	51	eP	Pb	09 19 37.1	+0.2
	2.2nm,0.1s						
KTBS				eS	Sb	09 20 08.1	+1.7
	66nm,0.5s						
KTBS	Karatobe	2.41	51	Pg	Pb	09 19 37.1	+0.2
	2.2nm,0.1s						
KTBS				Lg	Lg	09 20 08.6	
	66nm,0.5s						
KOTS	Kotyrbulak	2.45	65	eP	Pb	09 19 37.8	+0.2
	15nm,0.3s						
KOTS				eS	Sb	09 20 09.2	+1.7
	56nm,0.5s						
KOTS	Kotyrbulak	2.45	65	Pg	Pb	09 19 37.8	+0.2
	15nm,0.3s						
KOTS				Lg	Lg	09 20 09.2	
	56nm,0.5s						
CHKK	Chushkaly	2.68	52	eP	Pb	09 19 42.4	+1.0
	3.3nm,0.2s						
CHKK				eS	Sg	09 20 17.0	-2.8
	30nm,0.2s						
CHKK	Chushkaly	2.68	52	Pg	Pb	09 19 42.4	+1.0
	3.3nm,0.2s						
CHKK				Lg	Lg	09 20 17.0	
	30nm,0.2s						
KK31	Karatay Array	2.77	289	Pn	Pb	09 19 42.6	-0.3
	1.1nm,0.3s,baz=107,slow=16,SNR=45						
KK31				Lg	Lg	09 20 17.4	
	7.7nm,0.4s,baz=121,slow=20,SNR=21						
IUG	Iuzhnay	3.01	270	eP	Pb	09 19 48.8	+1.7
	1.6nm,0.2s						
IUG				eS	Sg	09 20 28.0	-2.5
	50nm,0.6s						
IUG	Iuzhnay	3.01	270	Pg	Pb	09 19 48.8	+1.7
	1.6nm,0.2s						
KURS	Kuram	3.26	66	eP	Pg	09 19 53.9	-2.3
	2.7nm,0.4s						
KURS				eS	Sg	09 20 36.8	-1.7
	6.3nm,0.7s						
BTK	Batken	3.29	230	⇑iP	Pn	09 19 46.1	+1.4
	baz=30						
BTK				⇑iS	Sn	09 20 24.6	+1.1
	baz=30						
SATY	Saty	3.30	74	eP	Pb	09 19 53.5	+1.5
	6.7nm,0.4s						
SATY				eS	Sg	09 20 36.4	-3.4
	9.3nm,0.4s						
SATY	Saty	3.30	74	Pg	Pb	09 19 53.5	+1.5
	4.3nm,0.4s						
SATY				Lg	Lg	09 20 36.4	
	9.9nm,0.3s						
ZHN	Zhinishke	3.34	72	eP	Pg	09 19 55.5	-2.4
	4.7nm,0.1s						
ZHN				eS	Sg	09 20 39.5	-1.7
	3.7nm,0.2s						
ARXS	Arharly	3.38	53	eP	Pb	09 19 55.1	+1.7
	2.0nm,0.4s						
ARXS				eS	Sg	09 20 38.7	-3.6
	15nm,0.5s						
KPKS	Kokpek	3.60	69	eP	Pb	09 19 58.7	+1.5
	7.4nm,0.4s						
KPKS				eS	Sg	09 20 45.2	-4.3
	17nm,0.4s						
SHLS	Shalkode	4.07	75	eP	Pg	09 20 13.2	+1.4
	2.9nm,0.3s						
SHLS				eS	Sg	09 21 09.8	+5.2
	7.9nm,0.7s						
PDGK	Podgornoye	4.13	73	Pg	Pb	09 20 07.9	+1.7
	0.7nm,0.4s						
PDGK				Lg	Lg	09 21 01.2	
	3.8nm,0.5s						

*THE **09** 09:23:49.2, 38°.18N×20°.38E, h10km, ML2.6/1, Error ellipse: s-maj=1.5km s-min=0.5km az=200.0*
*ATH **09** 09:23:49.5, 38°.19N×20°.39E, h9km±1km, ML2.8/2, Error ellipse: s-maj=1.9km s-min=1.1km az=254.0*
ISC 09 09:23:49.3±1.9, 38°.20N±0°.04×20°.39E±0°.05, h10km±7km, n19, σ0s.18/30, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	191	P	Pg	09 23 50.9	-0.1
CHV1				S	Sg	09 23 52.1	-0.1
KEF3	Kipouria, Keph	0.03	275	P	Pg	09 23 51.0	-0.1
KEF3				S	Sg	09 23 52.4	0.0
LXR1	Lixouri, Cepha	0.04	89	P	Pg	09 23 51.2	0.0
LXR1				S	Sg	09 23 52.8	+0.3
KEF4	Livadi, Kephal	0.07	28	P	Pg	09 23 51.5	+0.1
KEF4				S	Sg	09 23 53.0	0.0
ARGA	Argostoli. Kep	0.08	108	P	Pg	09 23 51.5	0.0
ARGA				S	Sg	09 23 53.0	-0.2
ARG2	Argostoli	0.08	105	P	Pg	09 23 51.6	0.0
ARG2				S	Sg	09 23 53.2	-0.1
KEF2	Argostoli. Kep	0.09	114	P	Pg	09 23 51.7	0.0
KEF2				S	Sg	09 23 53.4	0.0
KEF1	Kardakata, Kep	0.10	41	P	Pg	09 23 52.1	+0.1
KEF1				S	Sg	09 23 53.9	+0.2
VLS	Valsamata	0.16	98	P	Pg	09 23 52.7	-0.1
VLS				S	Sg	09 23 55.5	+0.2
	3μm,0.1s						
VLS	Valsamata	0.16	98	P	Pg	09 23 52.7	-0.1
VLS				S	Sg	09 23 55.6	+0.3
VLS				AML	AML	09 23 56.0	
	comp=E,7632μm,0.1s						
VLS				AML	AML	09 23 56.5	
	comp=N,4479μm,0.1s						
VLMS	Volimes, Zakyn	0.39	146	P	Pg	09 23 57.1	+0.1
VLMS				S	Sg	09 24 02.5	+0.4
VLMS				AML	AML	09 24 04.0	
	comp=N,8824μm,0.6s						
VLMS				AML	AML	09 24 05.7	
	comp=E,5061μm,0.2s						
EVGI	Lefkada island	0.47	27	P	Pg	09 23 58.5	0.0
EVGI	Lefkada island	0.47	27	P	Pg	09 23 58.6	+0.1
TSLK	Tsoukalades, L	0.66	19	P	Pg	09 24 01.9	-0.2
PDO	Prodromos	0.74	57	P	Pg	09 24 03.3	-0.3
PDO	Prodromos	0.74	57	P	Pg	09 24 03.5	-0.1
RLS	Riolos of Patr	0.86	99	P	Pg	09 24 05.7	-0.3
PVO	Paravola	0.99	65	P	Pg	09 24 08.2	-0.1
PVO	Paravola	0.99	65	P	Pg	09 24 08.2	-0.1

*IDC **09** 09:25:21.1±2.4, 72°.89N×5°.69E, h0km, mb3.0/1, mb1 3.5/6, mb1mx3.2/44, mbtmp3.5/6, ML2.9/5, MS3.1/3, Ms1 3.1/3, ms1mx2.8/23, Error ellipse: s-maj=31.5km s-min=21.2km az=85.0*
*NAO **09** 09:25:23.7±8.0, 72°.90N×5°.58E, h24km±71km, ML2.9*
*BER **09** 09:25:24.3±2.9, 72°.95N×5°.66E, h10km, ML2.1, ML2.9(NAO), Confirmed Earthquake*
ISC 09 09:25:22.9±1.5, 72°.88N±0°.07×6°.1E±0°.1, h11km, n37, σ1s.42/43, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO1	Bjornoya	3.98	60	Pn	Pn	09 26 24.0	+0.4
BJO1	Bjornoya	3.98	60	eP	Pn	09 26 24.3	+0.6
BJO1					IAML	09 27 15.8	
	comp=Z,14nm,0.6s						
TRO	Tromso	5.25	122	eP	Pn	09 26 42.9	+1.7
TRO				eS	Sn	09 27 37.2	-4.4
TRO					IAML	09 27 45.7	
	comp=Z,3.4nm,0.6s						
LOF	Lofoten	5.38	149	eP	Pn	09 26 44.1	+1.3
LOF				eS	Sn	09 27 41.8	-2.8
LOF					IAML	09 27 44.9	
	comp=Z,7.5nm,0.7s						
STEI	Steigen	5.83	144	eP	Pn	09 26 50.3	+1.2
STEI				eS	Sn	09 27 53.9	-2.1
STEI					IAML	09 28 00.7	
	comp=Z,2.5nm,0.4s						
SPA0	Spitsbergen Ar	5.90	21	Pn	Pn	09 26 49.4	-0.6
	baz=194,slow=28						
SPA0	Spitsbergen Ar	5.90	21	Pn	Pn	09 26 49.4	-0.6
	baz=194,slow=28						
SPITS	Spitsbergen Ar	5.90	21	Pn	Pn	09 26 48.2	-1.9
	baz=204,slow=17,SNR=25						
HAMF	Hammerfest	5.94	104	Pn	Pn	09 26 51.6	+1.0
HAMF	Hammerfest	5.94	104	Pn	Pn	09 26 51.6	+1.0
KIF	Kilpisjarvi	6.17	122	eP	Pn	09 26 55.5	+1.7
KBS	Kingsbay	6.24	10	Pn	Pn	09 26 52.8	-1.8
KBS	Kingsbay	6.24	10	eP	Pn	09 26 54.0	-0.6
KTK1	Kautokeino	6.80	116	eP	Pn	09 27 04.1	+1.7
KONS	Konsvik	6.85	156	eP	Pn	09 27 03.7	+0.6
STOK	Stokkvaagen	7.00	157	eP	Pn	09 27 06.2	+1.1
ARA0	ARCESS Array S	7.08	109	Pn	Pn	09 27 07.8	+1.6
	baz=322,slow=12						
ARA0				Sn	Sn	09 28 26.8	+0.2
	baz=312,slow=22						
ARA0	ARCESS Array S	7.08	109	Pn	Pn	09 27 07.8	+1.6
	baz=322,slow=12						
ARA0				Sn	Sn	09 28 26.8	+0.2
	baz=312,slow=22						
ARCES	ARCESS Array B	7.08	109	Pn	Pn	09 27 07.3	+1.1
	comp=Z,0.2nm,0.3s,baz=317,slow=12,SNR=14						
ARCES				Sn	Sn	09 28 27.0	+0.4
	comp=Z,0.3nm,0.3s,baz=310,slow=19,SNR=3.2						
ARCES				LR	LR	09 29 46.4	
	comp=Z,143nm,19.7s,baz=169,slow=37						
HEF	Hetta	7.33	119	eP	Pn	09 27 11.7	+2.0
MOR8	Moi Rana	7.33	153	eP	Pn	09 27 10.3	+0.6
KEV	Kevo	7.38	105	eP	Pn	09 27 10.6	+0.3
NSS	Namsos	8.65	163	eP	Pn	09 27 28.8	+1.1
APA0	Apatity Array	10.43	107	Pn	Pn	09 27 52.8	+0.7
APA0	Apatity Array	10.43	107	Pn	Pn	09 27 52.8	+0.7
NB2	NORSAR Subarra	12.05	168	Pn	Pn	09 28 15.6	+1.2
	baz=352,slow=14						
NB2	NORSAR Subarra	12.05	168	Pn	Pn	09 28 15.6	+1.2
	baz=352,slow=14						
NOA	NORSAR Array B	12.05	168	Pn	Pn	09 28 15.1	+0.7
	comp=Z,0.0nm,0.3s,baz=349,slow=14,SNR=3.8						
NOA				LR	LR	09 33 17.1	
	comp=Z,54nm,18.3s,baz=265,slow=39						
NRA0	NORESS Array S	12.38	167	Pn	Pn	09 28 18.8	+0.1
	baz=352,slow=8.6						
NRA0	NORESS Array S	12.38	167	Pn	Pn	09 28 18.8	+0.1
	baz=352,slow=8.6						
HFS	Hagfors	13.13	163	Pn	Pn	09 28 29.3	+0.2
	baz=355,slow=14						
HFS	Hagfors	13.13	163	Pn	Pn	09 28 29.2	+0.2
	comp=Z,0.3nm,0.3s,baz=353,slow=14,SNR=13						
HFS	Hagfors	13.13	163	Pn	Pn	09 28 29.3	+0.2
	baz=355,slow=14						
FIA0	FINESS Array S	13.73	136	Pn	Pn	09 28 38.2	+1.1
	baz=335,slow=12						
FIA0	FINESS Array S	13.73	136	Pn	Pn	09 28 38.2	+1.1
	baz=335,slow=12						
FINES	FINESS Array B	13.73	136	Pn	Pn	09 28 38.2	+1.1
	comp=Z,0.2nm,0.3s,baz=339,slow=12,SNR=11						
FINES				LR	LR	09 33 34.4	
	comp=Z,106nm,19.7s,baz=302,slow=36						
AKASG	Malin Array Be	24.44	143	P	P	09 30 43.2	+2.0
	comp=Z,0.6nm,0.6s,baz=346,slow=9.6,SNR=2.7						

IDC 09 09:55:01.3±1.5,**2.81N**×**127.51E**,**h0**km,**mb3.4**/4, **mb1 3.6**/4,**mb1mx3.3**/41,**mbtmp3.4**/4,**MS3.2**/1,**Ms1 3.2**/1, **ms1mx2.3**/22,**Error ellipse: s-maj=138.7km s-min=20.6km az=70.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**22.05**	**244**	LR	LR	10 09 52.3	
	comp=Z,59nm,20.8s,baz=190,slow=40						
WRA	**Warramunga Arr**	**23.59**	**164**	P	P	10 00 13.3	-0.7
	0.4nm,0.3s,baz=343,slow=10,SNR=13						
ASAR	**Alice Springs**	**27.05**	**167**	P	P	10 00 45.9	+0.2
	0.4nm,0.3s,baz=346,slow=7.0,SNR=16						
SONM	**Songino Array**	**48.41**	**341**	P	P	10 03 45.3	-0.1
	0.2nm,0.5s,baz=134,slow=6.2,SNR=2.0						
MKAR	**Makanchi Array**	**58.75**	**325**	P	P	10 05 01.4	+0.2
	0.2nm,0.4s,baz=124,slow=7.1,SNR=6.6						

THE 09 09:57:26.4,38.18N×20.35E,h9km,ML2.6/3,Error ellipse: s-maj=1.1km s-min=0.7km az=79.0
ATH 09 09:57:26.6,38.19N×20.37E,h10km±1km,ML2.8/2,Error ellipse: s-maj=1.8km s-min=1.2km az=245.0
ISC 09 09:57:26.5±1.2,**38.19N**±0.03×**20.37E**±0.05,**h11**km±4km, **n32**,σ**0.49**/48,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.01**	**105**	P	**Pg**	**09 57 28.2**	**-0.1**
CHV1				S	**Sg**	**09 57 29.4**	**-0.2**
KEF3	**Kipouria, Keph**	**0.02**	**317**	P	**Pg**	**09 57 28.4**	**0.0**
KEF3				S	**Sg**	**09 57 29.7**	**0.0**
LXR1	**Lixouri, Cepha**	**0.06**	**76**	P	**Pg**	**09 57 28.6**	**0.0**
LXR1				S	**Sg**	**09 57 30.2**	**0.0**
KEF4	**Livadi, Kephal**	**0.08**	**32**	P	**Pg**	**09 57 28.9**	**0.0**
KEF4				S	**Sg**	**09 57 30.9**	**+0.2**
ARGA	**Argostoli. Kep**	**0.09**	**96**	P	**Pg**	**09 57 28.9**	**0.0**
ARGA				S	**Sg**	**09 57 30.8**	**0.0**
ARG2	**Argostoli**	**0.10**	**95**	P	**Pg**	**09 57 29.0**	**0.0**
ARG2				S	**Sg**	**09 57 30.6**	**-0.3**
KEF2	**Argostoli. Kep**	**0.10**	**103**	P	**Pg**	**09 57 29.0**	**0.0**
KEF2				S	**Sg**	**09 57 30.8**	**-0.1**
KEF1	**Kardakata, Kep**	**0.12**	**42**	P	**Pg**	**09 57 29.4**	**0.0**
KEF1				S	**Sg**	**09 57 31.6**	**+0.1**
VLS	**Valsamata**	**0.17**	**93**	P	**Pg**	**09 57 30.1**	**-0.2**
VLS				S	**Sg**	**09 57 32.9**	**0.0**
VLS	**Valsamata**	**0.17**	**93**	P	**Pg**	**09 57 30.1**	**-0.2**
VLS				S	**Sg**	**09 57 32.9**	**0.0**
VLS				AML	AML	09 57 33.2	
	comp=N,6804μm,0.2s						
VLS				AML	AML	09 57 33.4	
	comp=E,4936μm,0.1s						
VSK1	**VASILIKIADES**	**0.27**	**35**	P	**Pg**	**09 57 32.1**	**+0.1**
VSK1				S	**Sg**	**09 57 36.4**	**+0.7**
KONA	**Konidatara, Ke**	**0.29**	**34**	P	**Pg**	**09 57 32.3**	**0.0**
VLMS	**Volimes, Zakyn**	**0.39**	**143**	P	**Pg**	**09 57 34.1**	**-0.1**
VLMS				S	**Sg**	**09 57 40.2**	**+0.9**
VLMS				AML	AML	09 57 41.2	
	comp=N,9991μm,0.6s						
VLMS				AML	AML	09 57 42.1	
	comp=E,5802μm,0.3s						
EVGI	**Lefkada island**	**0.49**	**27**	P	**Pg**	**09 57 35.9**	**-0.1**
EVGI				S	**Sb**	**09 57 43.9**	**-0.5**
EVGI	**Lefkada island**	**0.49**	**27**	P	**Pg**	**09 57 35.9**	**-0.1**
MGNA	**Meganis**	**0.57**	**35**	P	**Pg**	**09 57 37.6**	**-0.1**
KRI1	**kERI**	**0.63**	**146**	P	**Pg**	**09 57 38.0**	**-0.7**
KRI1				S	**Sg**	**09 57 48.3**	**+1.3**
	comp=E,2μm,0.3s						
LKD2	**Lefkada island**	**0.64**	**21**	P	**Pg**	**09 57 38.0**	**-1.0**
LKD2	**Lefkada island**	**0.64**	**21**	P	**Pg**	**09 57 38.5**	**-0.5**
TSLK	**Tsoukalades, L**	**0.68**	**19**	P	**Pg**	**09 57 39.0**	**-0.6**
PDO	**Prodromos**	**0.76**	**57**	P	**Pg**	**09 57 40.8**	**-0.4**
PDO	**Prodromos**	**0.76**	**57**	P	**Pg**	**09 57 40.9**	**-0.3**
RLS	**Riolos of Patr**	**0.88**	**98**	P	**Pg**	**09 57 42.7**	**-0.6**
RLS	**Riolos of Patr**	**0.88**	**98**	P	**Pg**	**09 57 42.7**	**-0.6**
PVO	**Paravola**	**1.01**	**64**	P	**Pg**	**09 57 45.5**	**-0.3**
PVO				S	**Sb**	**09 58 00.5**	**+1.3**
	comp=E,282nm,0.3s						
PVO	**Paravola**	**1.01**	**64**	P	**Pg**	**09 57 45.6**	**-0.2**
DRO	**Drossia**	**1.08**	**102**	P	**Pg**	**09 57 46.5**	**-0.8**
LAKA	**Lakka**	**1.27**	**87**	P	**Pn**	**09 57 49.4**	**-0.8**
LAKA				S	**Sn**	**09 58 08.1**	**+0.8**
	comp=E,82nm,0.4s						
IGT	**Igoumenitsa**	**1.34**	**359**	P	**Pn**	**09 57 51.2**	**-0.1**
SERG	**Sergoula**	**1.35**	**80**	P	**Pn**	**09 57 51.0**	**-0.3**
KLV	**Kalavryta, Ach**	**1.41**	**95**	P	**Pn**	**09 57 51.9**	**-0.3**
AGG	**Agios Georgios**	**1.75**	**61**	P	**Pg**	**09 57 59.9**	**-0.1**

THE 09 10:05:19.6,38.27N×20.37E,h11km,ML3.1/10,Error ellipse: s-maj=1.0km s-min=0.3km az=249.0
ATH 09 10:05:19.8,38.27N×20.39E,h9km±1km,ML3.1/4,Error ellipse: s-maj=1.7km s-min=0.9km az=238.0
ISC 09 10:05:19.6±1.0,**38.26N**±0.02×**20.39E**±0.04,**h12**km±5km, **n30**,σ**0.41**/52,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.03**	**101**	P	**Pg**	**10 05 21.5**	**-0.2**
KEF4				S	**Sg**	**10 05 23.0**	**-0.3**
KEF1	**Kardakata, Kep**	**0.06**	**77**	P	**Pg**	**10 05 21.7**	**-0.3**
KEF1				S	**Sg**	**10 05 23.1**	**-0.6**
KEF3	**Kipouria, Keph**	**0.07**	**210**	P	**Pg**	**10 05 22.1**	**+0.1**
KEF3				S	**Sg**	**10 05 24.0**	**+0.2**
LXR1	**Lixouri, Cepha**	**0.07**	**149**	P	**Pg**	**10 05 22.1**	**0.0**
LXR1				S	**Sg**	**10 05 24.0**	**+0.1**
	168μm,0.3s						
CHV1	**Chavriata, Kef**	**0.08**	**185**	P	**Pg**	**10 05 22.3**	**+0.1**
CHV1				S	**Sg**	**10 05 24.3**	**+0.3**
	124μm,0.2s						
ARGA	**Argostoli. Kep**	**0.11**	**141**	P	**Pg**	**10 05 22.6**	**0.0**
ARGA				S	**Sg**	**10 05 24.7**	**0.0**
ARG2	**Argostoli**	**0.11**	**138**	P	**Pg**	**10 05 22.7**	**+0.1**
ARG2				S	**Sg**	**10 05 24.8**	**+0.1**
	43μm,0.2s						
KEF2	**Argostoli. Kep**	**0.12**	**142**	P	**Pg**	**10 05 22.8**	**0.0**
KEF2				S	**Sg**	**10 05 25.1**	**+0.1**
VLS	**Valsamata**	**0.18**	**119**	P	**Pg**	**10 05 23.5**	**-0.1**
VLS				S	**Sg**	**10 05 26.5**	**+0.1**
	10μm,0.2s						
VLS	**Valsamata**	**0.18**	**119**	P	**Pg**	**10 05 23.5**	**-0.1**
VLS				S	**Sg**	**10 05 26.4**	**+0.1**
VLS				AML	AML	10 05 26.7	
	comp=N,22540μm,0.3s						
VLS				AML	AML	10 05 26.7	
	comp=E,18502μm,0.2s						
VSK1	**VASILIKIADES**	**0.20**	**43**	P	**Pg**	**10 05 23.8**	**-0.2**
VSK1				S	**Sg**	**10 05 27.5**	**+0.5**
	comp=E,5μm,0.1s						
KONA	**Konidatara, Ke**	**0.21**	**41**	P	**Pg**	**10 05 24.1**	**-0.1**
KONA				S	**Sg**	**10 05 27.7**	**+0.3**
EVGI	**Lefkada island**	**0.41**	**30**	P	**Pg**	**10 05 27.7**	**-0.2**
EVGI				S	**Sg**	**10 05 33.9**	**+0.5**
EVGI	**Lefkada island**	**0.41**	**30**	P	**Pg**	**10 05 27.7**	**-0.2**
EVGI				S	**Sg**	**10 05 34.2**	**+0.8**
VLMS	**Volimes, Zakyn**	**0.44**	**151**	P	**Pg**	**10 05 28.5**	**+0.1**
VLMS				S	**Sb**	**10 05 35.6**	**-0.4**
VLMS				AML	AML	10 05 36.4	
	comp=N,24011μm,0.4s						
VLMS				AML	AML	10 05 36.7	
	comp=E,15116μm,0.2s						
MGNA	**Meganis**	**0.50**	**39**	P	**Pg**	**10 05 29.1**	**-0.3**
LKD2	**Lefkada island**	**0.56**	**22**	P	**Pg**	**10 05 30.2**	**-0.5**
LKD2				S	**Sg**	**10 05 38.7**	**+0.5**
	comp=E,325nm,0.6s						
LKD2	**Lefkada island**	**0.56**	**22**	P	**Pg**	**10 05 30.3**	**-0.4**
TSLK	**Tsoukalades, L**	**0.60**	**20**	P	**Pg**	**10 05 30.7**	**-0.6**
TSLK				S	**Sb**	**10 05 40.3**	**-0.2**
	comp=E,408nm,0.6s						
TSLK	**Tsoukalades, L**	**0.60**	**20**	P	**Pg**	**10 05 30.7**	**-0.6**
AST1	**Astakos**	**0.61**	**63**	P	**Pg**	**10 05 31.5**	**+0.1**
AST1				S	**Sb**	**10 05 40.8**	**-0.1**
	comp=E,1μm,0.2s						
KRI1	**kERI**	**0.69**	**151**	P	**Pg**	**10 05 32.3**	**-0.7**
KRI1				S	**Sb**	**10 05 43.6**	**+0.6**
	comp=E,3μm,0.4s						
PDO	**Prodromos**	**0.71**	**61**	P	**Pg**	**10 05 33.1**	**-0.3**
PDO				S	**Sb**	**10 05 44.0**	**+0.4**
PDO	**Prodromos**	**0.71**	**61**	P	**Pg**	**10 05 33.0**	**-0.3**
RLS	**Riolos of Patr**	**0.87**	**103**	P	**Pg**	**10 05 35.8**	**-0.6**
RLS				S	**Sb**	**10 05 49.1**	**+0.8**
RLS				AML	AML	10 05 57.7	
	comp=N,799μm,0.5s						
RLS				AML	AML	10 05 58.0	
	comp=E,950μm,0.6s						
PVO	**Paravola**	**0.96**	**68**	P	**Pg**	**10 05 37.9**	**-0.2**
PVO				S	**Sb**	**10 05 52.1**	**+1.3**
	comp=E,612nm,0.6s						
PVO	**Paravola**	**0.96**	**68**	P	**Pg**	**10 05 38.1**	**0.0**
DRO	**Drossia**	**1.09**	**106**	P	**Pb**	**10 05 39.9**	**-0.4**
DRO				AML	AML	10 06 04.9	
	comp=E,2258μm,0.8s						
DRO				AML	AML	10 06 05.6	
	comp=N,1345μm,0.7s						
IGT	**Igoumenitsa**	**1.27**	**358**	P	**Pn**	**10 05 43.3**	**+0.1**
IGT	**Igoumenitsa**	**1.27**	**358**	P	**Pg**	**10 05 43.8**	**-0.2**

NNC 09 10:08:51.9±1.3,40.37N×77.60E,h0km,mb3.2,mpv2.9, Error ellipse: s-maj=8.7km s-min=5.8km az=172.0
KRNET 09 10:08:51.8±0.1,40.34N×77.53E,mb2.8
SOME 09 10:08:52.1,40.45N×77.62E,h0km
ISC 09 10:08:48.5±2.6,**40.3N**±0.1×**77.58E**±0.04,**h10**km,**n36**, σ**1.37**/62,**21C-9D**,**Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.88**	**351**	⇑*i*P	**Pg**	**10 09 25.0**	**+0.4**
	baz=46						
KDJ				⇑*i*S	**Sg**	**10 09 50.1**	**+1.1**
	baz=46						
KDJ	**Kajisay**	**1.88**	**351**	⇑*i*P	**Pg**	**10 09 25.2**	**+0.6**
	baz=52						
KDJ				⇑*i*S	**Sg**	**10 09 49.8**	**+0.8**
	baz=52						
ULHL	**Ulahol**	**2.22**	**333**	*i* P	**Pg**	**10 09 31.7**	**+0.7**
	baz=29						
ULHL				*i* S	**Sg**	**10 10 00.2**	**+0.4**
	baz=29						
ULHL	**Ulahol**	**2.22**	**333**	⇑*i*P	**Pg**	**10 09 30.9**	**-0.1**
	baz=33						
ULHL				⇑*i*S	**Sg**	**10 09 58.8**	**-1.0**
	baz=33						
PRZ	**Przheval'sk**	**2.29**	**15**	⇑*i*P	**Pb**	**10 09 30.6**	**+0.5**
	baz=12						
PRZ				⇑*i*S	**Sb**	**10 09 59.4**	**+0.8**
	baz=12						
PRZ	**Przheval'sk**	**2.29**	**15**	⇑*i*P	**Pg**	**10 09 32.1**	**-0.4**
	baz=17						
PRZ				⇑*i*S	**Sg**	**10 10 01.6**	**-0.6**
	baz=17						
ANVS	**Anan'yevo**	**2.51**	**1**	⇓*i*P	**Pb**	**10 09 34.6**	**+0.8**
	baz=58						
ANVS				⇓*i*S	**Sb**	**10 10 06.3**	**+1.5**
	baz=58						
ANVS	**Anan'yevo**	**2.51**	**1**	⇓*i*P	**Pb**	**10 09 34.7**	**+0.9**
	baz=2.0						
ANVS				⇓*i*S	**Sg**	**10 10 06.9**	**-2.3**
	baz=2.0						
KZA	**Kyzart**	**2.52**	**316**	⇑*i*P	**Pb**	**10 09 36.2**	**+2.0**
	baz=13						
KZA				⇑*i*S	**Sg**	**10 10 09.0**	**-0.6**
	baz=13						
KZA	**Kyzart**	**2.52**	**316**	⇑*e*P	**Pb**	**10 09 35.3**	**+1.1**
	baz=16						
KZA				⇑*i*S	**Sb**	**10 10 07.1**	**+1.7**
	baz=16						
BOOM	**Boomskoye usch**	**2.54**	**331**	⇓*i*P	**Pb**	**10 09 35.7**	**+1.4**
	baz=28						
BOOM				⇓*i*S	**Sg**	**10 10 08.1**	**-2.0**
	baz=28						
BOOM	**Boomskoye usch**	**2.54**	**331**	⇓*i*P	**Pb**	**10 09 35.2**	**+0.9**
	baz=32						
BOOM				⇓*i*S	**Sb**	**10 10 06.8**	**+1.2**
	baz=32						
TNSS	**Tian-Shan**	**2.80**	**350**	Pg	**Pg**	**10 09 42.1**	**-0.2**
	5.8nm,0.5s						
TNSS				Lg	Lg	10 10 18.4	
	16nm,0.6s						
SATY	**Saty**	**2.85**	**12**	*e*P	**Pg**	**10 09 43.0**	**-0.2**
	8.2nm,0.6s						
SATY				*e*S	**Sg**	**10 10 19.7**	**-0.5**
	14nm,1.1s						
SATY	**Saty**	**2.85**	**12**	Pg	**Pg**	**10 09 43.0**	**-0.2**
	5.5nm,0.3s						
SATY				Lg	Lg	10 10 19.9	
	8.2nm,0.3s						
IZV	**Izvestkoviy**	**2.86**	**346**	*e*P	**Pg**	**10 09 43.8**	**+0.5**
	2.7nm,0.5s						
IZV				*e*S	**Sg**	**10 10 21.1**	**+0.8**
	14nm,0.5s						
MDOK	**Medeo**	**2.92**	**352**	*e*P	**Pg**	**10 09 43.3**	**-1.1**
	1.8nm,0.2s						
MDOK				*e*S	**Sg**	**10 10 20.1**	**-2.1**
	14nm,0.5s						
MDOK	**Medeo**	**2.92**	**352**	Pg	**Pb**	**10 09 42.2**	**+1.4**
	1.6nm,0.4s						
MDOK				Lg	Lg	10 10 21.8	
	12nm,0.8s						
ARLS	**Aral**	**2.93**	**304**	⇑*e*P	**Pb**	**10 09 40.7**	**-0.3**
	baz=3.0						
ARLS				⇑*i*S	**Sb**	**10 10 15.9**	**-1.1**
	baz=3.0						
MTBS	**Maitube**	**2.98**	**344**	*e*P	**Pg**	**10 09 46.4**	**+0.7**
	3.9nm,0.2s						
MTBS				*e*S	**Sg**	**10 10 25.4**	**+1.0**
	11nm,0.4s						
KST	**Kastek**	**3.02**	**337**	*e*P	**Pg**	**10 09 46.2**	**-0.3**
	3.3nm,0.3s						
KST				*e*S	**Sg**	**10 10 24.9**	**-0.8**
	8.6nm,0.6s						
KST	**Kastek**	**3.02**	**337**	Pg	**Pg**	**10 09 46.2**	**-0.3**
	2.2nm,0.4s						
KST				Lg	Lg	10 10 25.6	
	8.3nm,0.5s						
UZB	**Uzynbulak**	**3.07**	**20**	*e*P	**Pg**	**10 09 47.1**	**-0.2**
	4.1nm,1.3s						
UZB				*e*S	**Sg**	**10 10 26.8**	**-0.3**
	3.9nm,0.5s						
KURS	**Kuram**	**3.24**	**8**	*e*P	**Pg**	**10 09 49.0**	**-1.7**
	2.8nm,0.3s						
KURS				*e*S	**Sg**	**10 10 29.8**	**-2.9**
	4.2nm,0.7s						
DGS	**Degeres**	**3.26**	**336**	*e*P	**Pg**	**10 09 50.4**	**-0.6**
	0.8nm,0.3s						
DGS				*e*S	**Sg**	**10 10 32.5**	**-0.8**
	7.6nm,0.8s						
DGS	**Degeres**	**3.26**	**336**	Pg	**Pg**	**10 09 50.4**	**-0.6**
	1.1nm,0.5s						
DGS				Lg	Lg	10 10 33.0	
	7.5nm,0.7s						
AAK	**Ala-Archa**	**3.31**	**317**	⇑Pg	**Pg**	**10 09 50.8**	**-1.2**
	2.7nm,0.8s						
AAK				⇑Lg	Lg	10 10 34.4	
	4.4nm,0.8s						
PDGK	**Podgornoye**	**3.37**	**24**	Pg	**Pg**	**10 09 51.2**	**-1.9**
	0.8nm,0.5s						
PDGK				Lg	Lg	10 10 34.4	
	3.9nm,0.7s						
PDGK	**Podgornoye**	**3.37**	**24**	⇑Pg	**Pb**	**10 09 51.0**	**+2.5**
	1.0nm,0.5s						
PDGK				⇑Lg	Lg	10 10 35.6	
	3.4nm,0.5s						
CHMS	**Chumysh**	**3.45**	**323**	⇑Pg	**Pg**	**10 09 53.3**	**-1.4**
	1.9nm,0.6s						
CHMS				⇓Lg	Lg	10 10 38.8	
	2.6nm,0.7s						
KTBS	**Karatobe**	**3.50**	**349**	*e*P	**Pg**	**10 09 53.6**	**-2.0**
	0.9nm,0.8s						
KTBS				*e*S	**Sg**	**10 10 38.0**	**-3.0**
	16nm,0.5s						
CHKK	**Chushkaly**	**3.61**	**353**	*e*P	**Pg**	**10 09 56.7**	**-0.9**
	1.3nm,0.2s						
CHKK				*e*S	**Sg**	**10 10 43.1**	**-1.2**
	8.3nm,0.3s						
KRBS	**Karabastau**	**3.71**	**338**	*e*P	**Pg**	**10 09 59.0**	**-0.5**
	1.0nm,0.6s						
KRBS				*e*S	**Sg**	**10 10 47.1**	**-0.5**
	4.4nm,0.8s						
KUU	**Kurty**	**3.73**	**346**	*e*P	**Pg**	**10 09 57.9**	**-2.2**
	2.4nm,1.7s						
KUU				*e*S	**Sg**	**10 10 45.1**	**-3.4**
	5.0nm,0.7s						
ARXS	**Arharly**	**3.94**	**3**	*e*P	**Pg**	**10 10 02.6**	**-1.5**
	1.4nm,0.3s						
ARXS				*e*S	**Sg**	**10 10 53.0**	**-2.2**
	8.2nm,0.6s						
ARXS	**Arharly**	**3.94**	**3**	Pg	**Pg**	**10 10 02.5**	**-1.5**
	1.4nm,0.5s						
ARXS				Lg	Lg	10 10 53.7	
	8.1nm,0.5s						

SOME 09 10:36:19.9,41.47N×83.68E,h0km
NNC 09 10:36:22.3±2.9,41.54N×83.63E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=22.3km s-min=12.5km az=160.0
ISC 09 10:36:25.1±2.6,**41.6N**±0.1×**83.53E**±0.08,**h10**km,**n19**, σ**2.13**/26,**2C-2D**,**Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.37**	**298**	*e*P	**Pb**	**10 37 22.8**	**-2.2**
	16nm,0.4s						
SHLS				*e*S	**Sb**	**10 38 08.1**	**+1.9**
	317nm,0.6s						
PDGK	**Podgornoye**	**3.43**	**301**	Pg	**Pb**	**10 37 26.6**	**+0.5**
	1.9nm,0.5s						
PDGK				Lg	Lg	10 38 16.2	
	65nm,0.8s						
UZB	**Uzynbulak**	**3.66**	**296**	*e*P	**Pb**	**10 37 31.6**	**+1.6**
	3.5nm,0.6s						
UZB				*e*S	**Sg**	**10 38 23.6**	**+0.9**
	74nm,0.4s						
UZB	**Uzynbulak**	**3.66**	**296**	Pg	**Pb**	**10 37 30.7**	**+0.8**
	6.5nm,0.7s						
UZB				Lg	Lg	10 38 23.1	
	94nm,0.6s						
DJR	**Jarkent**	**3.85**	**316**	*e*P	**Pg**	**10 37 35.9**	**-2.8**
	1.4nm,0.3s						
DJR				*e*S	**Sg**	**10 38 30.7**	**+2.2**
	14nm,0.5s						
DJR	**Jarkent**	**3.85**	**316**	Pg	**Pb**	**10 37 34.3**	**+1.2**
	1.6nm,0.6s						
DJR				Lg	Lg	10 38 29.8	
	15nm,0.5s						
KPKS	**Kokpek**	**4.02**	**299**	*e*P	**Pb**	**10 37 37.6**	**+1.6**
	12nm,0.5s						
KPKS				*e*S	**Sg**	**10 38 33.8**	**-0.3**
	91nm,0.5s						
SATY	**Saty**	**4.05**	**292**	*e*P	**Pb**	**10 37 38.5**	**+1.9**
	18nm,0.8s						
SATY				*e*S	**Sg**	**10 38 35.4**	**+0.2**
	77nm,0.6s						
SATY	**Saty**	**4.05**	**292**	Pg	**Pb**	**10 37 37.0**	**+0.4**
	18nm,0.8s						
SATY				Lg	Lg	10 38 34.4	
	77nm,0.6s						
ZHN	**Zhinishke**	**4.07**	**294**	*e*P	**Pg**	**10 37 39.7**	**-3.3**
	4.5nm,0.1s						
ZHN				*e*S	**Sg**	**10 38 37.3**	**+1.5**
	40nm,0.7s						
KURS	**Kuram**	**4.37**	**297**	*e*P	**Pb**	**10 37 43.2**	**+1.3**
	4.2nm,0.7s						
KURS				*e*S	**Sg**	**10 38 43.3**	**-2.0**
	16nm,0.7s						
KAPS	**Kapalarasan**	**4.75**	**322**	*e*P	**Pg**	**10 37 52.4**	**-3.6**
	6.1nm,0.6s						
KAPS				*e*S	**Sb**	**10 38 58.8**	**+1.4**
	10nm,0.6s						
KAPS	**Kapalarasan**	**4.75**	**322**	Pg	**Pb**	**10 37 51.3**	**+2.9**
	6.1nm,0.6s						
KAPS				Lg	Lg	10 38 58.8	
	10nm,0.6s						
MDOK	**Medeo**	**5.04**	**290**	Pg	**Pg**	**10 38 02.2**	**+0.7**
	2.9nm,0.6s						
MDOK				Lg	Lg	10 39 03.9	
	32nm,1.2s						
MK31	**Makanchi Array**	**5.24**	**351**	Pn	**Pn**	**10 37 43.4**	**0.0**
	0.1nm,0.4s,baz=132,slow=22,SNR=4.9						
MK31				Pg	**Pb**	**10 37 58.1**	**+1.5**
	3.1nm,0.7s,baz=176,slow=15,SNR=28						
MK31				Lg	Lg	10 39 09.8	
	10nm,0.7s,baz=162,slow=28,SNR=3.8						
MAKZ	**Makanchi**	**5.29**	**348**	⇑Pg	**Pg**	**10 38 02.2**	**-4.2**
	1.4nm,0.5s						
MAKZ				⇓Lg	Lg	10 39 14.0	
	4.7nm,0.8s						
ZSN	**Zaisan**	**5.89**	**9**	Pg	**Pb**	**10 38 10.8**	**+2.9**
	5.4nm,0.3s						
ZSN				Lg	Lg	10 39 32.1	
	9.4nm,0.7s						
CHMS	**Chumysh**	**6.65**	**285**	⇓Lg	Lg	10 39 54.3	
	11nm,0.8s						
AAK	**Ala-Archa**	**6.79**	**282**	⇑Lg	Lg	10 39 59.0	
	10nm,0.6s						

ATH 09 10:40:19.9,38.15N×20.36E,h11km±1km,ML2.6/3,Error ellipse: s-maj=2.0km s-min=1.0km az=72.0
THE 09 10:40:20.2,38.19N×20.38E,h11km±1km,ML2.6/9,Error ellipse: s-maj=1.4km s-min=0.6km az=230.0
ISC 09 10:40:20.2±1.6,**38.17N**±0.04×**20.39E**±0.05,**h11**km±5km, **n24**,σ**0.42**/45,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.01**	**350**	P	**Pg**	**10 40 22.0**	**-0.2**
CHV1				S	**Sg**	**10 40 23.4**	**-0.2**
	39μm,0.2s						
KEF3	**Kipouria, Keph**	**0.04**	**320**	P	**Pg**	**10 40 22.2**	**-0.2**
KEF3				S	**Sg**	**10 40 24.0**	**+0.1**
LXR1	**Lixouri, Cepha**	**0.05**	**52**	P	**Pg**	**10 40 22.4**	**0.0**
LXR1				S	**Sg**	**10 40 24.4**	**+0.4**
	43μm,0.1s						
ARGA	**Argostoli. Kep**	**0.07**	**83**	P	**Pg**	**10 40 22.6**	**0.0**
ARGA				S	**Sg**	**10 40 24.1**	**-0.2**
KEF2	**Argostoli. Kep**	**0.08**	**92**	P	**Pg**	**10 40 22.7**	**0.0**
KEF2				S	**Sg**	**10 40 24.6**	**+0.1**
ARG2	**Argostoli**	**0.08**	**83**	P	**Pg**	**10 40 22.7**	**0.0**
ARG2				S	**Sg**	**10 40 24.2**	**-0.3**
	18μm,0.1s						
KEF4	**Livadi, Kephal**	**0.10**	**19**	P	**Pg**	**10 40 23.0**	**+0.1**
KEF4				S	**Sg**	**10 40 25.4**	**+0.5**
KEF1	**Kardakata, Kep**	**0.13**	**32**	P	**Pg**	**10 40 23.4**	**0.0**
KEF1				S	**Sg**	**10 40 25.7**	**+0.1**
VLS	**Valsamata**	**0.16**	**87**	P	**Pg**	**10 40 23.6**	**-0.2**
VLS				S	**Sg**	**10 40 26.6**	**+0.2**
	5μm,0.1s						
VLS	**Valsamata**	**0.16**	**87**	P	**Pg**	**10 40 23.7**	**-0.1**
VLS				S	**Sg**	**10 40 26.7**	**+0.2**
VLS				AML	AML	10 40 26.7	
	comp=N,8451μm,0.1s						
VLS				AML	AML	10 40 27.0	
	comp=E,10507μm,0.1s						
VSK1	**VASILIKIADES**	**0.28**	**30**	P	**Pg**	**10 40 25.9**	**0.0**
VSK1				S	**Sg**	**10 40 30.0**	**+0.3**
	comp=E,2μm,0.1s						
KONA	**Konidatara, Ke**	**0.29**	**30**	P	**Pg**	**10 40 26.2**	**0.0**
KONA				S	**Sg**	**10 40 31.4**	**+1.2**
VLMS	**Volimes, Zakyn**	**0.36**	**143**	P	**Pg**	**10 40 27.1**	**-0.3**
VLMS				S	**Sg**	**10 40 32.9**	**+0.6**
VLMS				AML	AML	10 40 33.5	
	comp=E,4728μm,0.1s						
VLMS				AML	AML	10 40 38.0	
	comp=N,2403μm,0.4s						
EVGI	**Lefkada island**	**0.50**	**25**	P	**Pg**	**10 40 29.6**	**-0.3**
EVGI				S	**Sg**	**10 40 36.5**	**-0.1**
EVGI	**Lefkada island**	**0.50**	**25**	P	**Pg**	**10 40 29.7**	**-0.3**
EVGI				S	**Sb**	**10 40 37.8**	**-0.5**
MGNA	**Meganis**	**0.58**	**33**	P	**Pg**	**10 40 31.0**	**-0.5**
MGNA				S	**Sb**	**10 40 40.6**	**0.0**
MGNA				AML	AML	10 40 40.8	
	comp=N,462μm,0.1s						
MGNA				AML	AML	10 40 41.0	
	comp=E,417μm,0.1s						
LKD2	**Lefkada island**	**0.66**	**19**	P	**Pg**	**10 40 32.4**	**-0.5**
LKD2				S	**Sg**	**10 40 41.6**	**+0.1**
	comp=E,100nm,0.3s						
LKD2	**Lefkada island**	**0.66**	**19**	P	**Pg**	**10 40 32.4**	**-0.5**
AST1	**Astakos**	**0.67**	**56**	P	**Pg**	**10 40 32.6**	**-0.5**
AST1				S	**Sb**	**10 40 43.0**	**0.0**
	comp=E,352nm,0.1s						
TSLK	**Tsoukalades, L**	**0.69**	**18**	P	**Pg**	**10 40 32.9**	**-0.6**
TSLK				S	**Sg**	**10 40 42.3**	**-0.3**
	comp=E,120nm,0.8s						
TSLK	**Tsoukalades, L**	**0.69**	**18**	P	**Pg**	**10 40 33.1**	**-0.4**
RLS	**Riolos of Patr**	**0.86**	**97**	P	**Pg**	**10 40 37.0**	**+0.3**
RLS				S	**Sg**	**10 40 48.5**	**+0.5**
	comp=E,72nm,0.4s						
RLS	**Riolos of Patr**	**0.86**	**97**	P	**Pg**	**10 40 36.5**	**-0.2**
IGT	**Igoumenitsa**	**1.36**	**358**	P	**Pg**	**10 40 46.5**	**+0.1**
IGT				S	**Sg**	**10 41 05.4**	**+1.4**

JMA 09 10:41:03.2±0.3,24.70N×122.86E,h130km±3km,M1.9
TAP 09 10:41:03.3,24.71N×122.94E,h122km±1km,ML2.8,D
ISC 09 10:41:04.7±1.8,**24.72N**±0.07×**122.88E**±0.03,

h115km±12km**, n51,** σ0§58/86**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.27**	**167**	P	**Pn**	**10 41 21.1**	**+0.1**
YOJ	**Yonaguni jima**	**0.28**	**154**	eP	**Pn**	**10 41 20.1**	**-0.9**
	baz=165						
YOJ				eS	**Sn**	**10 41 32.9**	**-0.4**
	baz=165						
EOS1	**EOS1**	**0.70**	**256**	P	**Pn**	**10 41 23.6**	**+0.2**
	baz=258						
EOS1				S	**Sn**	**10 41 39.5**	**+1.9**
	baz=258						
TWB1	**Santiao Chiao**	**0.86**	**290**	eP	**Pn**	**10 41 24.3**	**-0.6**
	baz=289						
IRIF	**Iriomote-Funau**	**0.86**	**116**	P	**Pn**	**10 41 25.1**	**+0.1**
IRIF				eS	**Sn**	**10 41 41.0**	**+0.7**
TWC	**Suao**	**0.94**	**264**	P	**Pn**	**10 41 25.5**	**-0.2**
	baz=264						
TWC				S	**Sn**	**10 41 41.1**	**-0.5**
	baz=264						
TIPB	**Shuangxi**	**0.99**	**285**	eP	**Pn**	**10 41 25.9**	**-0.3**
	baz=284						
TIPB				eS	**Sn**	**10 41 42.5**	**+0.1**
	baz=284						
ILA	**Ilan**	**1.03**	**273**	eS	**Sn**	**10 41 43.9**	**+0.8**
	baz=273						
NWF	**Wu-fen Shan**	**1.06**	**290**	eP	**Pn**	**10 41 25.7**	**-1.3**
	baz=289						
HATJ	**Hateruma jima**	**1.07**	**128**	eS	**Sn**	**10 41 45.2**	**+1.3**
ENA	**Nanau**	**1.07**	**255**	eP	**Pn**	**10 41 26.6**	**-0.4**
	baz=255						
ENA				S	**Sn**	**10 41 44.4**	**+0.5**
	baz=255						
TWE	**Neicheng**	**1.10**	**270**	P	**Pn**	**10 41 27.3**	**0.0**
	baz=270						
TWE				eS	**Sn**	**10 41 44.8**	**+0.4**
	baz=270						
SLBB	**Yuanshan**	**1.13**	**272**	S	**Sn**	**10 41 45.4**	**+0.3**
	baz=272						
JKRS	**Kuro-shima**	**1.14**	**115**	P	**Pn**	**10 41 28.2**	**+0.5**
JKRS				S	**Sn**	**10 41 46.0**	**+0.9**
ENTT	**Nioudou**	**1.20**	**267**	P	**Pn**	**10 41 28.5**	**+0.2**
	baz=266						
ENTT				eS	**Sn**	**10 41 46.0**	**-0.3**
	baz=266						
TWA	**Mucha**	**1.20**	**283**	eS	**Sn**	**10 41 47.5**	**+1.0**
	baz=282						
JIJ	**Ishigaki jima**	**1.21**	**107**	P	**Pn**	**10 41 28.3**	**-0.1**
JIJ				S	**Sn**	**10 41 45.9**	**-0.5**
NDT	**Datong Townshi**	**1.25**	**265**	P	**Pn**	**10 41 29.4**	**+0.5**
	baz=265						
NDT				S	**Sn**	**10 41 48.0**	**+0.8**
	baz=265						
NWLT	**Wulai**	**1.25**	**273**	eS	**Sn**	**10 41 47.9**	**+0.4**
	baz=273						
YM11	**YM11**	**1.27**	**291**	eP	**Pn**	**10 41 29.1**	**-0.1**
	baz=290						
NACB	**Ninganchiao**	**1.29**	**245**	eP	**Pn**	**10 41 28.1**	**-1.2**
	baz=246						
NACB				eS	**Sn**	**10 41 47.9**	**-0.2**
	baz=246						
JISG	**Ishigakijimahi**	**1.31**	**95**	P	**Pn**	**10 41 29.2**	**-0.4**
JISG				eS	**Sn**	**10 41 48.1**	**-0.4**
TWD	**Chiawan**	**1.33**	**242**	P	**Pn**	**10 41 30.3**	**+0.5**
	baz=242						
TWD				S	**Sn**	**10 41 48.4**	**-0.5**
	baz=242						
YHNB	**Yeheng**	**1.37**	**268**	P	**Pn**	**10 41 30.2**	**-0.1**
	baz=268						
YHNB				S	**Sn**	**10 41 49.4**	**-0.4**
	baz=268						
ETLH	**Xiulin Townshi**	**1.37**	**248**	P	**Pn**	**10 41 30.2**	**-0.2**
	baz=249						
ETLH				S	**Sn**	**10 41 49.6**	**-0.3**
	baz=249						
NNSB	**Datong**	**1.39**	**258**	P	**Pn**	**10 41 30.8**	**+0.1**
	baz=258						
NNSB				eS	**Sn**	**10 41 50.3**	**0.0**
	baz=258						
NNSH	**Datong**	**1.39**	**258**	eP	**Pn**	**10 41 30.4**	**-0.2**
	baz=258						
NNSH				eS	**Sn**	**10 41 50.7**	**+0.3**
	baz=258						
NNS	**Nan Shan**	**1.40**	**259**	P	**Pn**	**10 41 30.6**	**-0.1**
	baz=259						
NNS				S	**Sn**	**10 41 50.7**	**+0.2**
	baz=259						
WHF	**Hehuan Shan**	**1.58**	**249**	iP	**Pn**	**10 41 32.9**	**-0.3**
	baz=249						
WHF				S	**Sn**	**10 41 54.1**	**-0.6**
	baz=249						
ESL	**Shilin**	**1.60**	**236**	iP	**Pn**	**10 41 32.1**	**-0.8**
	baz=236						
ESL				S	**Sn**	**10 41 54.1**	**-0.4**
	baz=236						
TDCB	**Techi**	**1.63**	**254**	eP	**Pn**	**10 41 33.6**	**+0.1**
	baz=254						
TDCB				eS	**Sn**	**10 41 55.2**	**-0.2**
	baz=254						
JTJ	**Tarama**	**1.66**	**92**	P	**Pn**	**10 41 33.4**	**-0.3**
JTJ				S	**Sn**	**10 41 55.3**	**-0.5**
CHGB	**Renai**	**1.69**	**248**	P	**Pn**	**10 41 34.4**	**+0.1**
	baz=248						
CHGB				S	**Sn**	**10 41 56.8**	**0.0**
	baz=248						
EGFH	**Guangfu**	**1.69**	**232**	P	**Pn**	**10 41 33.2**	**-0.8**
	baz=233						
EGFH				eS	**Sn**	**10 41 56.2**	**-0.2**
	baz=233						
LIOB	**Emei**	**1.69**	**268**	P	**Pn**	**10 41 34.0**	**-0.1**
	baz=268						
LIOB				eS	**Sn**	**10 41 55.8**	**-0.8**
	baz=268						
NSTT	**Nanjuang**	**1.71**	**268**	eS	**Sn**	**10 41 56.6**	**-0.3**
	baz=267						
OWD	**Renai**	**1.73**	**244**	eP	**Pn**	**10 41 34.4**	**-0.3**
	baz=245						
OWD				eS	**Sn**	**10 41 57.1**	**-0.4**
	baz=245						
HGSD	**Ruisui**	**1.80**	**228**	eP	**Pn**	**10 41 35.3**	**-0.1**
	baz=228						
HGSD				eS	**Sn**	**10 41 58.9**	**-0.1**
	baz=228						
WHP	**Taichung City**	**1.81**	**256**	P	**Pn**	**10 41 36.3**	**+0.6**
	baz=256						
WHP				S	**Sn**	**10 41 60.0**	**+0.7**
	baz=256						
VWDT	**VWDT**	**1.85**	**239**	P	**Pn**	**10 41 36.3**	**+0.2**
	baz=239						
VWDT				S	**Sn**	**10 41 59.8**	**-0.2**
	baz=239						
EHY	**Hungye**	**1.86**	**230**	P	**Pn**	**10 41 35.3**	**-0.9**
	baz=230						
EHY				eS	**Sn**	**10 42 00.2**	**-0.1**
	baz=230						
DPDB	**Guoxing**	**1.91**	**249**	eP	**Pn**	**10 41 37.0**	**+0.3**
	baz=249						
DPDB				eS	**Sn**	**10 42 01.5**	**+0.2**
	baz=249						
YULB	**Yu-li**	**1.96**	**228**	P	**Pn**	**10 41 36.5**	**-0.9**
	baz=228						
YULB				eS	**Sn**	**10 42 01.5**	**-0.8**
	baz=228						
TWF1	**Yuli**	**1.98**	**227**	eP	**Pn**	**10 41 37.2**	**-0.5**
	baz=227						
SSLB	**Suanglung**	**1.98**	**243**	eP	**Pn**	**10 41 38.2**	**+0.4**
	baz=243						
SSLB				eS	**Sn**	**10 42 03.8**	**+0.8**
	baz=243						
FULB	**Fuli**	**2.09**	**224**	eP	**Pn**	**10 41 38.8**	**-0.4**
	baz=225						
WHYT	**Xinyi Township**	**2.11**	**242**	eP	**Pn**	**10 41 40.3**	**+0.9**
	baz=242						
ALS	**Alishan**	**2.24**	**238**	eP	**Pn**	**10 41 42.0**	**+0.7**
	baz=238						
ELDTW	**Lidau**	**2.28**	**229**	eP	**Pn**	**10 41 41.8**	**+0.2**
	baz=229						
ELDTW				eS	**Sn**	**10 42 09.5**	**-0.4**
	baz=229						
CHN5	**Tsauling**	**2.30**	**241**	eP	**Pn**	**10 41 42.2**	**+0.4**
	baz=241						
TPUB	**Ta-pu**	**2.49**	**236**	eP	**Pn**	**10 41 45.4**	**+1.2**
	baz=236						

*IDC **09** 10:54:48.1±1.2, 14°66N×60°57W, h0km, mb3.6/8, mb1 4.0/11, mb1mx3.7/43, mbtmp3.8/11, ML4.2/2, Error ellipse: s-maj=25.4km s-min=18.1km az=87.0*
*NEIC **09** 10:54:48.3±1.8, 14°53N±0°02×60°46W±0°04, h10km±1km, Error ellipse: s-maj=6.1km s-min=3.8km az=266.0*
*TRN **09** 10:54:49.3, 14°45N×60°66W, h24km, MD3.8*
ISC 09 10:54:48.8±1.2**, 14°50N**±0°02×**60°51W**±0°04**, h13**km±7km**,** **n129,** σ**1§30**/162**, mb4.1**/14**, 9C-4D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPOM	**Morne Pois Mar**	**0.35**	**261**	⇓eP	**Pb**	**10 54 56.9**	**+0.1**
MVM	**Montagne Vaucl**	**0.38**	**278**	⇓eP	**Pb**	**10 54 57.6**	**+0.2**
ILAM	**Ilet Lapin Mar**	**0.45**	**308**	⇑eP	**Pb**	**10 54 59.2**	**+0.6**
LPMF	**Morne Lapointe**	**0.45**	**280**	⇓eP	**Pb**	**10 54 58.6**	**0.0**
ZAM	**Aeronautique**	**0.51**	**278**	⇓eP	**Pb**	**10 54 59.5**	**-0.1**
TRMF	**Trois Ilets**	**0.53**	**274**	⇑eP	**Pb**	**10 55 00.0**	**+0.1**
BIM	**Bigot**	**0.55**	**272**	⇑eP	**Pb**	**10 55 00.3**	**0.0**
SLBI	**Saint Lucia, B**	**0.66**	**224**	⇑iP	**Pg**	**10 55 01.4**	**-0.2**
SLBI				eS	**Sg**	**10 55 10.2**	**0.0**
SLBI	**Saint Lucia, B**	**0.66**	**224**		**Pg**	**10 55 01.4**	**-0.2**
SLBI					**Sg**	**10 55 10.2**	**0.0**
FDF	**Fort de France**	**0.67**	**291**	eP	**Pb**	**10 55 02.4**	**+0.1**
FDF				eS	**Sb**	**10 55 10.8**	**-0.7**
FDF	**Fort de France**	**0.67**	**291**		**Pg**	**10 55 02.1**	**+0.3**
FDF				Sg	**Sg**	**10 55 09.8**	**-0.8**
GBMF	**Grand Be**	**0.70**	**295**	eP	**Pg**	**10 55 02.8**	**+0.3**
CXM	**Morne La Croix**	**0.71**	**296**	eP	**Pb**	**10 55 03.2**	**+0.1**
PML	**Morne Lenard**	**0.71**	**293**	eP	**Pg**	**10 55 03.0**	**+0.3**
SVN	**Savane Anatole**	**0.73**	**298**	⇑eP	**Pb**	**10 55 03.3**	**0.0**
PCM	**Pelee Case Pet**	**0.75**	**295**	⇑eP	**Pg**	**10 55 03.6**	**+0.2**
MCLT	**Moule a Chique**	**0.89**	**208**	⇑iP	**Pb**	**10 55 05.0**	**-1.1**
MCLT				eS	**Sg**	**10 55 19.0**	**+1.3**
MCLT	**Moule a Chique**	**0.89**	**208**		**Pb**	**10 55 04.6**	**-1.5**
MCLT	**Moule a Chique**	**0.89**	**208**		**Sg**	**10 55 19.0**	**+1.3**
DSTT	**Stowe**	**1.07**	**314**	eP	**Pn**	**10 55 09.6**	**+0.1**
DSTT				eS	**Sn**	**10 55 24.8**	**+0.6**
DSTT	**Stowe**	**1.07**	**314**		**Pn**	**10 55 09.6**	**+0.1**
DSTT					**Sn**	**10 55 24.8**	**+0.6**
DSHT	**Scott's Head**	**1.10**	**310**	eP	**Pb**	**10 55 09.8**	**+0.1**
DSHT	**Scott's Head**	**1.10**	**310**		**Pb**	**10 55 09.8**	**+0.1**
DBCT	**Belle View Cho**	**1.12**	**314**	eP	**Pb**	**10 55 10.1**	**+0.1**
DBCT				eS	**Sn**	**10 55 24.7**	**-0.7**
DBCT	**Belle View Cho**	**1.12**	**314**		**Pb**	**10 55 10.1**	**+0.1**
DBCT					**Sn**	**10 55 24.7**	**-0.7**
DPMT	**Pointe Michel**	**1.13**	**312**	eP	**Pb**	**10 55 10.3**	**+0.1**
DPMT				eS	**Sn**	**10 55 25.0**	**-0.7**
DPMT	**Pointe Michel**	**1.13**	**312**		**Pb**	**10 55 10.3**	**+0.1**
DPMT					**Sn**	**10 55 25.0**	**-0.7**
MDN	**Morne-Daniel**	**1.18**	**314**	eP	**Pn**	**10 55 11.1**	**+0.1**
MDN				eS	**Sg**	**10 55 26.9**	**-0.2**
MDN	**Morne-Daniel**	**1.18**	**314**		**Pn**	**10 55 11.1**	**+0.1**
MDN					**Sg**	**10 55 26.9**	**-0.2**
DWS	**Wesley**	**1.32**	**324**	⇑eP	**Pn**	**10 55 13.3**	**+0.4**
DWS				eS	**Sg**	**10 55 30.9**	**-0.5**
DWS	**Wesley**	**1.32**	**324**		**Pn**	**10 55 13.3**	**+0.4**
DWS					**Sg**	**10 55 30.9**	**-0.5**
SVV	**Soufriere Volc**	**1.36**	**211**	eP	**Pn**	**10 55 12.6**	**-0.9**
SVV				eS	**Sn**	**10 55 30.0**	**-1.3**
SVV	**Soufriere Volc**	**1.36**	**211**		**Pn**	**10 55 12.5**	**-0.9**
SVV					**Sn**	**10 55 30.0**	**-1.3**
SVCV	**St. Vincent, C**	**1.37**	**207**	eP	**Pn**	**10 55 12.3**	**-1.3**
SVCV	**St. Vincent, C**	**1.37**	**207**		**Pn**	**10 55 12.3**	**-1.3**
MDPO	**Dominica; Chan**	**1.41**	**320**	eP	**Pb**	**10 55 14.8**	**-0.1**
MDPO				eS	**Sb**	**10 55 32.8**	**0.0**
SVB	**Belmont**	**1.42**	**211**	⇑eP	**Pn**	**10 55 13.3**	**-0.9**
SVB				eS	**Sn**	**10 55 30.9**	**-1.8**
SVB	**Belmont**	**1.42**	**211**		**Pn**	**10 55 13.4**	**-0.9**
SVB	**Belmont**	**1.42**	**211**		**Sn**	**10 55 30.9**	**-1.8**
BCHC	**Barbados, Cave**	**1.60**	**148**	eP	**Pn**	**10 55 18.1**	**+1.4**
BCHC				eS	**Sb**	**10 55 40.3**	**+2.0**
BBGH	**Gun Hill**	**1.63**	**146**	eP	**Pn**	**10 55 18.7**	**+1.5**
BBGH				eS	**Sb**	**10 55 41.1**	**+2.0**
BBGH	**Gun Hill**	**1.63**	**146**	Pn	**Pn**	**10 55 17.7**	**+0.6**
BBGH	**Gun Hill**	**1.63**	**146**		**Sb**	**10 55 41.1**	**+2.0**
TDBA	**Terre de Bas,**	**1.73**	**321**	eP	**Pb**	**10 55 19.6**	**-0.8**
H05N1	**Guadeloupe/Mar**	**1.88**	**344**	Pn	**Pn**	**10 55 20.4**	**-0.3**
H05N1				Sn	**Sn**	**10 55 43.3**	**-1.0**
CBE	**Ff, Capester**	**1.89**	**326**	eP	**Pn**	**10 55 21.4**	**+0.6**
ABD	**La Joyeuse, An**	**2.18**	**334**	eP	**Pn**	**10 55 25.5**	**+0.7**
GRSS	**Sisters**	**2.44**	**206**	eP	**Pn**	**10 55 28.1**	**-0.1**
GRSS				eS	**Sn**	**10 55 55.9**	**-2.1**
GRSS	**Sisters**	**2.44**	**206**		**Pn**	**10 55 28.1**	**-0.1**
GRSS					**Sn**	**10 55 55.9**	**-2.1**
GRSS	**Sisters**	**2.44**	**206**		**Pn**	**10 55 28.4**	**+0.2**
GRSS					**Sn**	**10 55 58.8**	**+0.9**
GRHS	**Sauteurs**	**2.52**	**206**	eP	**Pn**	**10 55 28.4**	**-0.9**
GRHS				eS	**Sn**	**10 55 58.8**	**-1.0**
GRGR	**Grenville**	**2.60**	**206**	eP	**Pn**	**10 55 30.8**	**+0.2**
GRGR				eS	**Sn**	**10 56 01.0**	**-1.1**
GRGR	**Grenville**	**2.60**	**206**		**Pn**	**10 55 30.8**	**+0.2**
GRGR	**Grenville**	**2.60**	**206**		**Sn**	**10 56 01.0**	**-1.1**
MLYT	**Lee's Yard**	**2.74**	**324**	eP	**Pn**	**10 55 34.0**	**+1.5**
MLYT				eS	**Sn**	**10 56 06.4**	**+0.8**
BPA	**Boggy Peak**	**2.85**	**333**	eP	**Pn**	**10 55 34.6**	**+0.7**
BPA				eS	**Sn**	**10 56 08.4**	**+0.3**
BPA	**Boggy Peak**	**2.85**	**333**		**Pn**	**10 55 34.6**	**+0.7**
BPA					**Sn**	**10 56 08.4**	**+0.3**
TOSP	**Speyside**	**3.18**	**181**	eP	**Pn**	**10 55 38.9**	**+0.4**
TOSP				eS	**Sn**	**10 56 16.3**	**0.0**
TOSP	**Speyside**	**3.18**	**181**	Pn	**Pn**	**10 55 40.7**	**+2.2**
TOSP	**Speyside**	**3.18**	**181**		**Sn**	**10 56 16.3**	**0.0**
NVBH	**Bath Hotel, Ne**	**3.30**	**322**	eP	**Pn**	**10 55 40.6**	**+0.5**
NVBH	**Bath Hotel, Ne**	**3.30**	**322**		**Pn**	**10 55 40.6**	**+0.5**
NVDO	**Nevis, Disaste**	**3.31**	**322**	e	**Pb**	**10 55 45.1**	**-2.2**
NVRH	**Round Hill, Ne**	**3.35**	**323**	eP	**Pn**	**10 55 41.1**	**+0.4**
NVRH	**Round Hill, Ne**	**3.35**	**323**		**Pn**	**10 55 41.1**	**+0.4**
ANWB	**Willy Bob**	**3.38**	**339**	eP	**Pn**	**10 55 42.5**	**+1.2**
ANWB				eS	**Sn**	**10 56 21.0**	**-0.3**
ANWB	**Willy Bob**	**3.38**	**339**		**Pn**	**10 55 42.5**	**+1.2**
ANWB					**Sn**	**10 56 21.0**	**-0.3**
SKOC	**St. Kitts, UWI**	**3.51**	**323**	eP	**Pn**	**10 55 43.8**	**+0.8**
SKI	**Saint Kitts**	**3.54**	**323**	eP	**Pn**	**10 55 43.8**	**+0.2**
SKI				eS	**Sn**	**10 56 24.9**	**-0.4**
SKI	**Saint Kitts**	**3.54**	**323**	Pn	**Pn**	**10 55 46.5**	**+3.0**
SKI	**Saint Kitts**	**3.54**	**323**		**Sn**	**10 56 24.9**	**-0.4**
SEUS	**St. Eustatius**	**3.81**	**322**	eS	**Sn**	**10 56 31.4**	**-0.4**
SEUS	**St. Eustatius**	**3.81**	**322**		**Sn**	**10 56 31.4**	**-0.4**
TRN	**Trinidad (W)**	**3.93**	**193**	eP	**Pn**	**10 55 48.3**	**-0.5**
TRN	**Trinidad (W)**	**3.93**	**193**		**Pn**	**10 55 48.3**	**-0.5**
SABA	**Saba**	**4.07**	**320**	eP	**Pn**	**10 55 51.3**	**+0.6**
SABA	**Saba**	**4.07**	**320**		**Pn**	**10 55 51.3**	**+0.6**
TPP	**Pointe-a-Pierr**	**4.26**	**193**	eP	**Pn**	**10 55 54.4**	**+1.1**
TPP	**Pointe-a-Pierr**	**4.26**	**193**		**Pn**	**10 55 54.4**	**+1.1**
SMRT	**St. Maarten**	**4.31**	**325**	eP	**Pb**	**10 56 04.4**	**0.0**
SMRT				eS	**Sn**	**10 56 43.2**	**-1.0**
SMRT	**St. Maarten**	**4.31**	**325**	Pn	**Pn**	**10 55 55.6**	**+1.5**
SMRT	**St. Maarten**	**4.31**	**325**		**Sn**	**10 56 43.2**	**-1.0**
PLCV	**Puerto La Cruz**	**5.87**	**223**		**Pn**	**10 56 16.9**	**+1.3**
PLCV					**Sn**	**10 57 29.1**	**+6.4**
PCRV	**Puerto La Cruz**	**5.89**	**224**	Pn	**Pn**	**10 56 16.9**	**+1.0**
	4.0nm,0.3s,baz=38,slow=11,SNR=28						
PCRV				Sn	**Sn**	**10 57 29.1**	**+5.8**
	0.8nm,0.3s,baz=175,slow=18,SNR=2.0						
CUPR	**Culebra, Puert**	**5.95**	**310**	Pn	**Pn**	**10 56 19.9**	**+3.4**
MTP	**Monte Pirata**	**6.02**	**307**	Pn	**Pn**	**10 56 19.1**	**+1.5**
HUMP	**Col San Antoni**	**6.28**	**306**	Pn	**Pn**	**10 56 22.4**	**+1.2**
PDPR	**Patillas Dam,**	**6.35**	**304**	Pn	**Pn**	**10 56 22.5**	**+0.5**
SJG	**San Juan**	**6.50**	**304**	Pn	**Pn**	**10 56 25.1**	**+1.0**
	8.5nm,0.3s,baz=305,slow=8.7,SNR=20						
SJG				Sn	**Sn**	**10 57 36.1**	**-2.1**
	3.9nm,0.3s,baz=280,slow=23,SNR=5.9						
SJG	**San Juan**	**6.50**	**304**		**Pn**	**10 56 25.7**	**+1.5**
GCPR	**Guaynabo City**	**6.56**	**306**	Pn	**Pn**	**10 56 27.3**	**+2.3**
AOPR	**Arecibo Observ**	**7.11**	**303**	Pn	**Pn**	**10 56 34.8**	**+2.2**
MLPR	**Magueyes Islan**	**7.17**	**300**	Pn	**Pn**	**10 56 33.6**	**+0.3**
CRPR	**Cabo Rojo, PR**	**7.24**	**300**	Pn	**Pn**	**10 56 35.2**	**+1.0**
MPR	**Mayaguez**	**7.36**	**301**	Pn	**Pn**	**10 56 37.4**	**+1.5**
SDV	**Santo Domingo**	**11.38**	**242**	Pn	**Pn**	**10 57 31.3**	**+0.1**
	0.3nm,0.3s,baz=48,slow=12,SNR=2.8						
SDV	**Santo Domingo**	**11.38**	**242**	Pn	**Pn**	**10 57 31.4**	**+0.2**
MDP	**Montagnes des**	**12.13**	**140**	Pn	**Pn**	**10 57 38.5**	**-2.9**
	0.2nm,0.3s,baz=320,slow=15,SNR=3.3						
MDP				Sn	Sn	10 59 44.2	-12
	1.2nm,0.3s,baz=60,slow=21,SNR=6.7						
M57A	**Sunshine Farm,**	**30.39**	**335**	P	**P**	**11 01 00.6**	**0.0**
M57A				IAmb	IAmb	11 01 11.8	
	comp=Z,15nm,1.5s						
LPAZ	**La Paz**	**31.50**	**194**	P	**P**	**11 01 14.9**	**+3.6**
	comp=Z,0.9nm,0.8s,baz=8.2,slow=9.2,SNR=2.5						
LPAZ	**La Paz**	**31.50**	**194**	P	**P**	**11 01 13.7**	**+2.4**
RCBR	**Riachuelo**	**31.68**	**128**	P	**P**	**11 01 09.0**	**-3.2**
RCBR				IAmb	IAmb	11 01 11.2	
	comp=Z,29nm,1.4s						
TRQ	**Mont Tremblant**	**33.76**	**342**	P	**P**	**11 01 32.2**	**+2.0**
WMOK	**Wichita Mounta**	**39.89**	**307**	P	**P**	**11 02 22.7**	**+0.2**
WMOK				IAmb	IAmb	11 02 29.2	
	comp=Z,6.5nm,1.4s						
ECSD	**EROS Data Cent**	**42.39**	**321**	P	**P**	**11 02 42.6**	**-0.3**
ECSD				IAmb	IAmb	11 03 00.2	
	comp=Z,7.3nm,1.4s						
TXAR	**Lajitas Array**	**42.43**	**298**	P	**P**	**11 02 44.0**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=123,slow=9.8,SNR=2.8						
TXAR	**Lajitas Array**	**42.43**	**298**	P	**P**	**11 02 43.6**	**+0.1**
HPIG		**43.80**	**294**	P	**P**	**11 02 55.4**	**+0.6**
HPIG				IAmb	IAmb	11 03 07.7	
	comp=Z,5.3nm,1.4s						
MNTX	**Cornudas Mount**	**44.35**	**301**	P	**P**	**11 02 59.8**	**+0.8**
ULM	**Lac du Bonnet**	**45.75**	**329**	P	**P**	**11 03 09.2**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=139,slow=7.4,SNR=5.5						
ULM	**Lac du Bonnet**	**45.75**	**329**	P	**P**	**11 03 09.5**	**-0.2**
ULM				IAmb	IAmb	11 03 10.2	
	comp=Z,1.7nm,0.7s						
LAO	**LASA Array**	**49.76**	**320**	P	**P**	**11 03 42.6**	**+1.6**
LAO				IAmb	IAmb	11 03 59.5	
	comp=Z,10nm,1.5s						
PDAR	**Pinedale Array**	**50.52**	**314**	P	**P**	**11 03 47.2**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=120,slow=10,SNR=5.8						
PDAR	**Pinedale Array**	**50.52**	**314**	P	**P**	**11 03 47.1**	**0.0**
H10N3	**ASCENSION HYDR**	**50.74**	**113**	T	T	11 58 39.2	
	baz=296,slow=75,SNR=66						
FCC	**Fort Churchill**	**50.74**	**338**	P	**P**	**11 03 48.7**	**+0.6**
H10N2	**ASCENSION HYDR**	**50.75**	**113**	T	T	11 58 39.7	
	baz=296,slow=75,SNR=72						
H10N1	**ASCENSION HYDR**	**50.76**	**113**	T	T	11 58 40.8	
	baz=296,slow=75,SNR=96						
H10S3	**ASCENSION HYDR**	**51.09**	**114**	T	T	11 59 12.4	
	baz=285,slow=75,SNR=19						
H10S2	**ASCENSION HYDR**	**51.10**	**114**	T	T	11 59 08.7	
	baz=295,slow=75,SNR=17						
BGU	**Big Grassy Mou**	**52.49**	**311**	P	**P**	**11 04 02.7**	**+0.9**
ILULI	**Ilulissat**	**55.00**	**4**	P	**P**	**11 04 17.9**	**-1.5**
NVAR	**Mina Array Bea**	**55.99**	**307**	P	**P**	**11 04 27.9**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=82,slow=10,SNR=2.9						
NEW	**Newport**	**57.24**	**318**	P	**P**	**11 04 35.6**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=104,slow=9.8						
NEW	**Newport**	**57.24**	**318**	P	**P**	**11 04 35.6**	**-0.3**
NEW				IAmb	IAmb	11 04 47.8	
	comp=Z,2.9nm,1.2s						
TORD	**Torodi Ar. Bea**	**60.25**	**83**	P	**P**	**11 04 58.9**	**+1.6**
	comp=Z,0.6nm,0.8s,baz=304,slow=5.1,SNR=2.9						
YKA	**Yellowknife Ar**	**61.05**	**335**	P	**P**	**11 05 02.2**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=110,slow=7.5,SNR=11						
WAX	**Waxell Ridge**	**73.74**	**329**	P	**P**	**11 06 21.5**	**-1.0**
KARP	**Karpathos**	**79.86**	**56**	P	**P**	**11 06 56.0**	**-1.4**

*NIED **09** 10:54:00, 38°10N×141°90E, h56km, Mw4.2 Best double couple: M₀1.89000×10^15 NP1:φs182.00000°, δ56.00000°, λ76.00000°. NP2:φs26.00000°, δ37.00000°, λ110.00000°.*
*MOS **09** 10:54:50.3±0.9, 38°29N×141°91E, h51km, mb4.5/32, Error ellipse: s-maj=7.5km s-min=4.9km az=83.9*
*JMA **09** 10:54:51.3±0.1, 38°14N×141°92E, h57km±1km, M4.2*
JMA Felt III J1.
*IDC **09** 10:54:52.2±1.8, 38°17N×141°85E, h62km±15km, mb3.9/24, mb1 4.0/31, mb1mx4.0/52, mbtmp4.1/31, MS3.0/7, Ms1 3.0/7, ms1mx2.8/36, Error ellipse: s-maj=15.5km s-min=10.4km az=117.0*
*NEIC **09** 10:54:53.0±1.9, 38°15N±0°06×142°0E±0°1, h65km±6km, mb4.5/78, Error ellipse: s-maj=13.6km s-min=7.8km az=115.0*
ISC 09 10:54:50.7±0.7**, 38°11N**±0°04×**142°13E**±0°04**, h52**km±5km**,** **n240,** σ**1§63**/263**, mb4.4**/75**, 8C-19D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.56**	**291**	⇑P	**Pn**	**10 55 02.0**	**-0.7**
JIKH				S	**Sn**	**10 55 09.4**	**-2.0**
JIO	**Ouri**	**0.70**	**300**	⇓P	**Pn**	**10 55 03.7**	**-0.8**
JIO				S	**Sn**	**10 55 12.4**	**-2.2**
JKMT	**Kesennumamotoy**	**0.87**	**324**	⇓P	**Pn**	**10 55 06.2**	**-0.5**
JKMT				S	**Sn**	**10 55 16.8**	**-1.6**
JMM	**Marumori**	**1.08**	**257**	⇓P	**Pn**	**10 55 08.1**	**-1.4**
JMM				S	**Sn**	**10 55 20.6**	**-2.9**
JMK	**Ichinoseki**	**1.10**	**320**	⇓P	**Pn**	**10 55 09.3**	**-0.5**
JMK				S	**Sn**	**10 55 22.3**	**-1.7**
JOU	**Okura**	**1.18**	**283**	⇓P	**Pn**	**10 55 09.7**	**-1.2**
JOU				S	**Sn**	**10 55 23.3**	**-2.7**
JFK	**Kawauchi**	**1.24**	**234**	⇓P	**Pn**	**10 55 10.8**	**-0.9**
JFK				S	**Sn**	**10 55 25.3**	**-2.1**
JOM	**Ohasama**	**1.51**	**335**	⇓P	**Pn**	**10 55 15.2**	**-0.1**
JOM				S	**Sn**	**10 55 33.3**	**-0.6**
JFT	**Otama**	**1.54**	**248**	⇓P	**Pn**	**10 55 15.1**	**-0.6**
JFT				S	**Sn**	**10 55 33.0**	**-1.6**
JYK	**Kaneyama**	**1.61**	**301**	⇓P	**Pn**	**10 55 15.6**	**-1.0**
JYK				eS	**Sn**	**10 55 33.5**	**-2.7**
JYS	**Shirataka**	**1.63**	**275**	P	**Pn**	**10 55 16.0**	**-1.0**
JYS				eS	**Sn**	**10 55 34.6**	**-2.3**
JRG	**Rokugo**	**1.74**	**318**	⇓P	**Pn**	**10 55 18.0**	**-0.4**
JRG				S	**Sn**	**10 55 38.7**	**-0.7**
JYA	**Atsumi**	**1.96**	**285**	⇓P	**Pn**	**10 55 20.5**	**-1.0**
JYA				S	**Sn**	**10 55 43.1**	**-1.8**
MJAR	**Matsushiro Arr**	**3.50**	**245**	P	**Pn**	**10 55 42.8**	**+0.3**
	2.5nm,0.3s,baz=285,slow=12,SNR=140						
MJAR				S	**Sn**	**10 56 25.0**	**+2.4**
	1.0nm,0.3s,baz=9.9,slow=15,SNR=4.5						
MJAR				LR	LR	10 57 20.0	
	comp=Z,314nm,21.6s,baz=85,slow=45						
MAJO	**Matsushiro**	**3.50**	**245**		**Pn**	**10 55 43.1**	**+0.6**
MAJO	**Matsushiro**	**3.50**	**245**	c iP	**Pn**	**10 55 43.3**	**+0.8**
MAT	**Matsushiro**	**3.50**	**245**	P	**Pn**	**10 55 43.1**	**+0.6**
MAT				S	**Sn**	**10 56 25.4**	**+2.7**
MJB9	**Matsu-Tunnel**	**3.50**	**245**		**Pn**	**10 55 43.3**	**+0.7**
ERM	**Erimo**	**3.98**	**11**		**Pn**	**10 55 49.5**	**+0.3**
ERM	**Erimo**	**3.98**	**11**	⇓eP	**Pn**	**10 55 49.4**	**+0.3**
INU	**Inuyama**	**4.95**	**238**		**Pn**	**10 56 03.1**	**+0.7**
JHJ2	**Mitsune**	**5.33**	**201**	Pn	**Pn**	**10 56 09.9**	**+2.2**
JHJ	**Hachijo jima 2**	**5.33**	**202**	P	**Pn**	**10 56 08.6**	**+0.9**
	141nm,0.3s,baz=69,slow=23,SNR=3.5						
JHJ				S	**Sn**	**10 57 03.6**	**-4.2**
	49nm,0.3s,baz=109,slow=22,SNR=2.7						
NMR	**Nemuro--Hokkai**	**5.92**	**26**	⇑iP	**Pn**	**10 56 14.5**	**-1.2**
NMR				eS	**Sn**	**10 57 17.2**	**-5.0**
ASAJ	**Asahikawa**	**6.01**	**3**	P	**Pn**	**10 56 17.1**	**+0.2**
	4.2nm,0.3s,baz=221,slow=11,SNR=47						
ASAJ				S	**Sn**	**10 57 21.7**	**-2.7**
	3.5nm,0.3s,baz=91,slow=34,SNR=4.4						
JKA	**Kamikawa-asahi**	**6.01**	**3**		**Pn**	**10 56 17.1**	**+0.2**
JKA					**Sn**	**10 57 21.7**	**-2.7**
GLVR	**Golovnino**	**6.18**	**23**	eP	**Pn**	**10 56 19.7**	**+0.4**
GLVR				eS	**Sn**	**10 57 24.6**	**-3.9**
GRPR	**Tuman**	**6.49**	**24**	eP	**Pn**	**10 56 22.3**	**-1.2**
GRPR				eS	**Sn**	**10 57 30.8**	**-5.3**
YUK	**Yuzh-Kuril'sk**	**6.56**	**24**	⇑eP	**Pn**	**10 56 27.2**	**+2.8**
SHO	**Shikotan**	**6.76**	**30**	eP	**Pn**	**10 56 25.8**	**-1.4**
SHO				eS	**Sn**	**10 57 36.2**	**-6.7**
SHO				pmax	pmax		
	comp=Z,10.0nm,0.2s						
KUR	**Kuril'sk**	**8.31**	**29**	eP	**Pn**	**10 56 49.5**	**+1.1**
KUR				eS	**Sn**	**10 58 16.6**	**-4.2**
KUR				smax	smax		
	comp=E,138nm,0.5s						
KUR				smax	smax		
	comp=N,50nm,0.4s						
YSS	**Yuzh-Sakhalins**	**8.85**	**3**	⇓iP	**Pn**	**10 56 56.4**	**+0.6**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MSHR	**Mys Shultsa**	**9.49**	**302**	⇓iP	**Pn**	**10 57 04.9**	**+0.3**
USA0B	**Ussuriysk Arra**	**9.77**	**312**	Pn	**Pn**	**10 57 08.6**	**+0.2**
USA0B	**Ussuriysk Arra**	**9.77**	**312**	P	**Pn**	**10 57 08.6**	**+0.2**
USRK	**Ussuriysk Ar.**	**9.77**	**312**	P	**Pn**	**10 57 08.5**	**+0.1**
	baz=124,slow=14,SNR=36						
USRK				LR	LR	11 00 23.3	
	comp=Z,129nm,20.9s,baz=154,slow=35						
USRK	**Ussuriysk Ar.**	**9.77**	**312**	Pn	**Pn**	**10 57 08.0**	**-0.4**
JNU	**Nakatsue**	**10.42**	**245**	P	**Pn**	**10 57 17.3**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=340,slow=9.8,SNR=4.2						
JNU				LR	LR	11 01 41.4	
	comp=Z,167nm,18.4s,baz=56,slow=40						
JNU	**Nakatsue**	**10.42**	**245**	Pn	**Pn**	**10 57 18.9**	**+1.5**
KSRS	**Korea Array**	**11.27**	**271**	P	**Pn**	**10 57 27.6**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=81,slow=14,SNR=7.0						
KSRS				LR	LR	11 01 49.4	

comp=Z,60nm,18.9s,baz=51,slow=38
KSAR Wonju Array Be 11.30 271 Pn Pn 10 57 32.0 +2.7
KSAR Wonju Array Be 11.30 271 P Pn 10 57 32.0 +2.7
KS19 Wonju Array Si 11.30 271 Pn Pn 10 57 30.6 +1.2
KLR Kul'dur 13.40 329 Pn Pn 10 57 57.3 -0.7
comp=Z,0.2nm,0.3s,baz=148,slow=8.9,SNR=4.8
KLR LR LR 11 02 29.9
comp=Z,65nm,19.7s,baz=147,slow=35
KLR Kul'dur 13.40 329⇓eP Pn 10 57 56.5 -1.5
KLR pmax pmax
comp=Z,11nm,2.3s
PETK Petropavlovsk- 18.47 31 P Pn 10 59 04.4 +1.7
comp=Z,0.1nm,0.3s,baz=197,slow=9.0,SNR=3.6
PETK LR LR 11 07 02.7
comp=Z,30nm,19.2s,baz=239,slow=39
PETK Petropavlovsk- 18.47 31 P Pn 10 59 04.2 +1.5
ZEA Zeya 18.68 332 eP P 10 59 03.8 -0.6
ZEA pmax pmax
comp=Z,12nm,0.5s
NJ2 Nanjing 19.96 259 eP Pn 10 59 19.5 -1.1
BJI Beijing 20.22 284 P P 10 59 17.8 -3.5
MA2 Magadan 22.19 12 P P 10 59 44.0 +1.8
comp=Z,2.7nm,0.5s,baz=187,slow=8.1,SNR=3.7
MA2 LR LR 11 09 18.2
comp=Z,32nm,18.5s,baz=82,slow=39
MA2 Magadan 22.19 12⇓eP P 10 59 43.1 +0.9
MA2 pmax pmax
comp=Z,45nm,2.1s
YULB Yu-li 23.07 236 P P 10 59 55.7 +3.8
YULB IAmb IAmb 11 00 14.6
comp=Z,24nm,1.2s
HHC Hu-ho-hao-te 23.69 286 eP P 10 59 58.2 +0.4
WHN Wuhan 24.09 260 P P 10 59 58.7 -2.6
YAK Yakutsk 25.16 346 P P 11 00 10.0 -0.7
comp=Z,3.3nm,0.3s,baz=60,slow=0.8,SNR=3.8
YAK Yakutsk 25.16 346 P P 11 00 09.6 -1.1
YAK IAmb IAmb 11 00 12.0
comp=Z,7.3nm,0.6s
YAK Yakutsk 25.16 346⇑iP P 11 00 09.7 -1.0
YAK pmax pmax
comp=Z,6.0nm,0.6s
SEY Seymchan 25.63 11 P P 11 00 16.5 +1.6
comp=Z,4.5nm,0.8s,baz=196,slow=6.4,SNR=6.8
SEY Seymchan 25.63 11⇓eP P 11 00 15.9 +0.9
BOD Bodaibo 26.94 326 eP P 11 00 25.7 -1.2
BOD pmax pmax
comp=Z,4.0nm,1.8s
XAN Xi'an 27.06 272 P P 11 00 26.0 -2.3
XAN pP sP 11 01 06.5 +19
XAN Xi'an 27.06 272 P P 11 00 25.9 -2.3
XAN Xi'an 27.06 272 P P 11 00 26.0 -2.3
XAN pmax pmax
comp=Z,6.0nm,0.8s
ULN Ulaanbaatar 27.24 302 P P 11 00 29.7 -0.2
ULN Ulaanbaatar 27.24 302 P P 11 00 29.7 -0.2
ULN pmax pmax
comp=Z,3.0nm,0.8s
SONM Songino Array 27.68 302 P P 11 00 32.3 -1.4
comp=Z,1.6nm,0.7s,baz=104,slow=9.8,SNR=13
SONM PcP PcP 11 03 48.8 -0.8
comp=Z,0.2nm,0.5s,baz=112,slow=2.0,SNR=3.3
SONM Songino Array 27.68 302 P P 11 00 33.1 -0.6
SONM Songino Array 27.68 302 P P 11 00 33.2 -0.6
SONM pmax pmax
comp=Z,2.0nm,0.9s
ENH Enshi 28.00 264 P P 11 00 34.7 -2.1
H11N2 WAKE ISLAND Hy 28.24 123 T T 11 31 02.1
baz=316,slow=76,SNR=319
H11N1 WAKE ISLAND Hy 28.25 124 T T 11 31 07.4
baz=316,slow=76,SNR=394
H11N3 WAKE ISLAND Hy 28.25 123 T T 11 31 06.0
baz=316,slow=76,SNR=348
H11S1 WAKE ISLAND Hy 28.99 126 T T 11 31 59.4
baz=318,slow=76,SNR=138
H11S3 WAKE ISLAND Hy 28.99 126 T T 11 31 56.4
baz=318,slow=76,SNR=211
H11S2 WAKE ISLAND Hy 29.01 126 T T 11 31 57.5
baz=318,slow=76,SNR=153
ZAK Zakamensk 30.07 307 eP P 11 00 52.8 -2.1
ZAK pmax pmax
comp=Z,3.0nm,0.9s
LZH Lanzhou 30.46 278 eP P 11 00 59.7 +1.0
LZH pP pP 11 01 12.4 +0.6
LZH sP sP 11 01 22.5 +4.6
LZH PP PP 11 02 04.1 -3.9
GTA Gaotai 32.81 286 eP P 11 01 17.7 -1.5
GTA pP sP 11 01 36.2 -2.3
GTA sP pP 11 01 47.1 +15
BILL Bilibino 32.84 16⇑eP P 11 01 19.8 +0.9
BILL e 11 02 33.1
BILL pmax pmax
comp=Z,4.0nm,1.3s
BILL MLR MLR
comp=Z,138nm,22.0s
TIXI Tiksi 34.30 353⇓eP P 11 01 31.0 -0.5
TIXI pmax pmax
comp=Z,3.0nm,1.8s
WMQ Urumqi 40.87 296 eP P 11 02 27.9 +0.4
WMQ pP sP 11 02 45.4 -1.7
WMQ sP pP 11 02 53.6 +13
WMQ Urumqi 40.87 296 P P 11 02 28.0 +0.4
WMQ Urumqi 40.87 296 P P 11 02 28.0 +0.4
WMQ pmax pmax
comp=Z,14nm,0.7s
ZAA0 Zalesovo Array 41.62 311 P P 11 02 32.8 -0.7
ZAA0 IAmb IAmb 11 02 34.3
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 41.62 311 P P 11 02 32.7 -0.8
comp=Z,2.4nm,0.5s,baz=79,slow=8.3,SNR=10.0
ZALV Zalesovo Beam 41.62 311 P P 11 02 32.4 -1.0
CMAR Chiang Mai Arr 42.32 255 P P 11 02 39.0 -0.6
comp=Z,0.6nm,0.3s,baz=109,slow=13,SNR=4.8
CMAR Chiang Mai Arr 42.32 255 P P 11 02 39.0 -0.6
MK31 Makanchi Array 44.04 301 P P 11 02 52.4 -0.8
MK31 IAmb IAmb 11 02 53.6
comp=Z,4.4nm,0.7s
MK31 Makanchi Array 44.04 301 P P 11 02 52.4 -0.8
MK31 pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 44.04 301 P P 11 02 52.5 -0.7
comp=Z,4.6nm,0.6s,baz=86,slow=9.9,SNR=77
MKAR Makanchi Array 44.04 301 P P 11 02 52.4 -0.8
MKAR Makanchi Array 44.04 301 iP P 11 02 53.0 -0.2
MKAR pmax pmax
comp=Z,5.0nm,0.5s
MAKZ Makanchi 44.25 301 P P 11 02 53.0 -1.8
MAKZ IAmb IAmb 11 02 55.4
comp=Z,5.2nm,0.7s
MAKZ Makanchi 44.25 301 P P 11 02 53.1 -1.8
MAKZ pmax pmax
comp=Z,5.0nm,0.7s
IMAR Indian Mountai 45.44 31 P P 11 03 05.1 +1.1
KURK Kurchatov 45.73 307 P P 11 03 06.2 -0.2
KURK Kurchatov 45.73 307⇑eP P 11 03 05.3 -1.2
KURK pmax pmax
comp=Z,6.0nm,0.7s
KDAK Kodiak Island 45.92 43 P P 11 03 09.1 +1.2
KDAK Kodiak Island 45.92 43 P P 11 03 09.1 +1.2
KDAK pmax pmax
comp=Z,31nm,1.3s
TAPN Taplejung 46.44 273 eP P 11 03 14.5 +1.7
comp=Z,7.0nm,0.4s
KTH Kantishna Hill 46.54 35 P P 11 03 15.5 +2.7
KTH IAmb IAmb 11 03 15.8
comp=Z,6.6nm,1.0s
MLY Manley 46.64 33 P P 11 03 15.8 +2.3
TRF Thorofare Moun 46.82 35 P P 11 03 18.3 +3.2
TRF IAmb IAmb 11 03 34.7
comp=Z,11nm,1.4s
ODAN Odare 46.92 273 eP P 11 03 16.4 -0.1
comp=Z,11nm,0.4s
RC01 Rabbit Creek A 47.16 38 P P 11 03 19.9 +2.3
RC01 IAmb IAmb 11 03 24.9
comp=Z,12nm,1.4s
MCK McKinley 47.42 34 P P 11 03 21.3 +1.7
MCK IAmb IAmb 11 03 29.1
comp=Z,6.4nm,1.4s
MCK McKinley 47.42 34 P P 11 03 21.3 +1.7
MCK pmax pmax
comp=Z,6.0nm,1.4s
PMR Palmer 47.42 37 P P 11 03 21.0 +1.4
PMR IAmb IAmb 11 03 32.5
comp=Z,5.4nm,1.3s
PMR Palmer 47.42 37 P P 11 03 21.0 +1.4
PMR pmax pmax
comp=Z,5.0nm,1.3s
RND Reindeer 47.47 35 P P 11 03 21.8 +1.7
RND IAmb IAmb 11 03 31.8
comp=Z,8.5nm,1.4s
RND Reindeer 47.47 35 P P 11 03 21.8 +1.7
RND pmax pmax
comp=Z,9.0nm,1.4s
GUN Gumba 47.62 275 eP P 11 03 21.4 -0.7
comp=Z,20nm,0.4s
WRH Wood River Hil 47.77 33 P P 11 03 23.7 +1.4
WRH IAmb IAmb 11 03 41.0
comp=Z,11nm,1.5s
CCB Clear Creek Bu 47.89 33 P P 11 03 23.9 +0.7
PKI Pulchoki 48.15 275 eP P 11 03 25.7 -0.4
comp=Z,4.9nm,0.4s
SCM Sheep Creek Mo 48.27 37 P P 11 03 27.9 +1.7
SCM Sheep Creek Mo 48.27 37 P P 11 03 27.9 +1.7
SCM pmax pmax
comp=Z,8.0nm,1.0s
HDA Harding Lake 48.27 33 P P 11 03 27.6 +1.4
HDA IAmb IAmb 11 03 27.8
comp=Z,3.6nm,0.8s
IL31 48.28 33 P P 11 03 27.4 +1.3
IL31 IAmb IAmb 11 03 28.0
comp=Z,3.5nm,0.8s
ILAR Eielson Array 48.28 33 P P 11 03 27.3 +1.1
comp=Z,2.8nm,0.7s,baz=269,slow=6.6,SNR=37
ILAR Eielson Array 48.28 33 P P 11 03 27.5 +1.3
ILAR Eielson Array 48.28 33 P P 11 03 27.5 +1.3
KDJ Kajisay 48.76 296 P P 11 03 30.9 +0.4
KDJ Kajisay 48.76 296 P P 11 03 30.9 +0.4
KDJ pmax pmax
comp=Z,6.0nm,0.8s
DANN Dangsing 49.08 277 eP P 11 03 32.4 -0.8
comp=Z,66nm,0.8s
BMAR Burnt Mountain 49.12 29 P P 11 03 35.4 +2.7
KOLN Koldanda 49.48 276 eP P 11 03 33.3 -2.8
SCRK Sand Creek 49.60 34 P P 11 03 37.3 +0.9
SCRK IAmb IAmb 11 03 38.3
comp=Z,4.2nm,0.9s
VRDI Verde Repeater 50.18 37 P P 11 03 42.9 +1.9
MCARA McCarthy VSAT 50.36 37 P P 11 03 44.1 +2.0
AAK Ala-Archa 50.49 298 P P 11 03 43.0 -0.6
AAK Ala-Archa 50.49 298⇓eP P 11 03 43.3 -0.3
AAK pmax pmax
comp=Z,2.0nm,0.7s
BCAR Beaver Creek A 50.69 35 P P 11 03 46.1 +1.5
BALM Baldy 50.74 37 P P 11 03 46.9 +1.8
BALM IAmb IAmb 11 03 53.5
comp=Z,8.0nm,1.2s
MTN Manton Dam 51.72 194 P P 11 03 53.4 +0.6
ARSB Arslanbob 51.99 297 P P 11 03 57.0 +2.1
ARSB IAmb IAmb 11 04 16.1
comp=Z,3.4nm,0.8s
ARSB Arslanbob 51.99 297 P P 11 03 57.0 +2.1
ARSB pmax pmax
comp=Z,3.0nm,0.9s
EPYK Eagle Plains 52.31 30 P P 11 03 59.0 +2.3
KK31 Karatay Array 53.08 300 P P 11 04 03.5 +0.8
KK31 Karatay Array 53.08 300 P P 11 04 03.5 +0.8
KK31 pmax pmax
comp=Z,2.0nm,0.7s
KKAR Karatay Array 53.08 300 P P 11 04 02.6 -0.1
KKAR Karatay Array 53.08 300 P P 11 04 03.3 +0.5
KKAR IAmb IAmb 11 04 06.7
comp=Z,1.8nm,0.7s
KKAR Karatay Array 53.08 300 P P 11 04 03.3 +0.5
KKAR pmax pmax
comp=Z,2.0nm,0.7s
HYT Haines Junctio 53.10 37 P P 11 04 06.5 +3.8
HYT IAmb IAmb 11 04 06.5
comp=Z,4.4nm,1.0s
INK Inuvik 53.17 28 P P 11 04 04.4 +1.5
INK Inuvik 53.17 28 P P 11 04 04.4 +1.5
INK pmax pmax
comp=Z,2.0nm,0.8s
WHY Whitehorse 54.39 37 P P 11 04 14.8 +2.7
WHY IAmb IAmb 11 04 24.2
comp=Z,9.0nm,1.5s
ARU Arti 55.94 318c iP P 11 04 23.7 +0.5
ARU 11 06 25.9
ARU S S 11 12 08.5 +1.5
ARU SS SS 11 15 55.7 +2.8
ARU pmax pmax
comp=Z,19nm,4.0s
C36M Paulatuk 56.22 25 P P 11 04 26.3 +1.3
ABKAR Akbulak array 57.69 310 P P 11 04 34.8 -0.8
WB0 Warramunga Arr 58.02 189 P P 11 04 37.3 -1.0
WR0 Warramunga Arr 58.20 188 P P 11 04 39.3 -0.1
WB2 Warramunga Arr 58.20 189 P P 11 04 39.0 -0.6
WRA Warramunga Arr 58.20 189 P P 11 04 39.1 -0.4
comp=Z,0.8nm,0.4s,baz=10,slow=4.8,SNR=25
WRA Warramunga Arr 58.20 189 P P 11 04 39.4 -0.2
RES Resolute Bay 61.42 15 P P 11 05 01.1 +0.1
RES IAmb IAmb 11 05 03.7
comp=Z,5.9nm,1.2s
RES Resolute Bay 61.42 15 P P 11 05 01.1 +0.1
RES pmax pmax
comp=Z,6.0nm,1.2s
AS31 Alice Springs 61.93 189 P P 11 05 04.6 -0.4
ASAR Alice Springs 61.93 189 P P 11 05 05.1 +0.1
comp=Z,1.1nm,0.6s,baz=357,slow=5.2,SNR=28
ASAR Alice Springs 61.93 189 P P 11 05 04.6 -0.4
YKA Yellowknife Ar 62.59 31 P P 11 05 09.7 +0.7
comp=Z,1.0nm,0.6s,baz=301,slow=6.9,SNR=18
YKA PcP PcP 11 05 48.6 +1.0
comp=Z,0.5nm,0.5s,baz=305,slow=4.4,SNR=7.7
DAG Danmarks Havn 64.75 355 P P 11 05 22.3 -0.7
FIA1 FINESS Array S 68.13 332 P P 11 05 44.2 -0.6
FINES FINESS Array B 68.13 332 P P 11 05 44.2 -0.6
comp=Z,2.1nm,0.7s,baz=45,slow=12,SNR=8.5
FINES PcP sP 11 06 07.7 +2.7
comp=Z,2.2nm,0.9s,baz=35,slow=3.4,SNR=4.6
FINES FINESS Array B 68.13 332 P P 11 05 44.4 -0.4
NEW Newport 68.96 45 P P 11 05 52.3 +1.9
comp=Z,1.3nm,0.7s,baz=299,slow=7.5,SNR=3.5
NEW Newport 68.96 45 P P 11 05 51.9 +1.6
WALA Waterton Lakes 70.26 43 P P 11 06 00.1 +1.7
WALA IAmb IAmb 11 06 00.8
comp=Z,3.2nm,0.8s
KIV Kislovodsk 70.63 311 eP P 11 05 58.1 -2.6
KIV pmax pmax
comp=Z,15nm,1.1s
BMO Blue Mountains 70.78 48 P P 11 06 03.5 +1.9
BMO Blue Mountains 70.78 48 P P 11 06 03.5 +1.9
BMO pmax pmax
comp=Z,2.0nm,0.9s
FFC Flin Flon 72.49 33 P P 11 06 12.2 +0.6
FFC IAmb IAmb 11 06 13.3
comp=Z,4.2nm,0.8s
FFC Flin Flon 72.49 33 P P 11 06 12.2 +0.6
FFC pmax pmax
comp=Z,4.0nm,0.9s
FCC Fort Churchill 72.79 27 P P 11 06 13.8 +0.6
FCC IAmb IAmb 11 06 14.4
comp=Z,6.9nm,1.3s
FCC Fort Churchill 72.79 27 P P 11 06 13.8 +0.6
FCC pmax pmax
comp=Z,7.0nm,1.3s
EGMT Eagleton 73.09 42 P P 11 06 16.5 +1.1
EGMT IAmb IAmb 11 06 17.2
comp=Z,5.1nm,0.8s
DLMT Dillon 73.18 45 P P 11 06 18.0 +1.9
DLMT IAmb IAmb 11 06 18.6
comp=Z,3.4nm,0.8s
NC204 NORSAR Array S 73.36 338 P P 11 06 16.6 -0.1
NOA NORSAR Array B 73.42 337 P P 11 06 16.0 -1.0
comp=Z,1.0nm,0.8s,baz=40,slow=6.0,SNR=3.2
KVN Kaiserville 73.66 53 P P 11 06 20.8 +1.8
KVN IAmb IAmb 11 06 21.8
comp=Z,6.7nm,1.2s
KVN Kaiserville 73.66 53 P P 11 06 20.8 +1.8
KVN pmax pmax
comp=Z,7.0nm,1.2s
AKASG Malin Array Be 73.80 322 P P 11 06 18.4 -1.0
comp=Z,0.6nm,0.3s,baz=44,slow=7.2,SNR=2.8
NVAR Mina Array Bea 73.89 54 P P 11 06 22.6 +2.2
comp=Z,1.4nm,0.8s,baz=283,slow=6.9,SNR=7.0
NVAR Mina Array Bea 73.89 54 P P 11 06 22.3 +1.9
MOOW Moose Ponds 75.22 46 P P 11 06 30.3 +2.3
FRB Frobisher Bay 75.60 14 P P 11 06 29.4 -0.1
R11A Troy Canyon, C 75.65 52 P P 11 06 32.4 +1.8
TPNV Topopah Spring 76.08 54 P P 11 06 33.9 +0.9
TPNV IAmb IAmb 11 06 35.7
comp=Z,3.9nm,0.8s
TPNV Topopah Spring 76.08 54 P P 11 06 33.9 +0.9
TPNV pmax pmax
comp=Z,4.0nm,0.9s
DUG Dugway, Tooele 76.22 50 P P 11 06 35.9 +2.2
DUG IAmb IAmb 11 06 36.5
comp=Z,2.9nm,0.7s
DUG Dugway, Tooele 76.22 50 P P 11 06 35.9 +2.2
DUG pmax pmax
comp=Z,3.0nm,0.7s
PD31 Pinedale Array 76.51 46 P P 11 06 36.7 +1.2
PD31 IAmb IAmb 11 06 37.4
comp=Z,2.8nm,0.6s
PDAR Pinedale Array 76.51 46 P P 11 06 36.8 +1.4
comp=Z,2.8nm,0.6s,baz=267,slow=1.7,SNR=38
PDAR Pinedale Array 76.51 46 P P 11 06 36.6 +1.2
CCUT Cedar City 77.53 52 P P 11 06 44.1 +2.9
BURAR Bucovina Array 77.82 322 P P 11 06 42.4 -0.1
BURAR Bucovina Array 77.82 322 P P 11 06 42.4 -0.1
RDMU Red Mountain 77.91 48 P P 11 06 45.1 +1.8
P17A Butcher Ranch, 77.92 49 P P 11 06 45.1 +1.8
MTPU Mount Pierson 77.95 51 P P 11 06 44.4 +0.7
SRU San Rafael Swe 78.28 49 P P 11 06 47.0 +1.7
SRU San Rafael Swe 78.28 49 P P 11 06 47.0 +1.7
SRU pmax pmax
comp=Z,4.0nm,0.7s
ULM Lac du Bonnet 78.29 34 P P 11 06 45.6 +0.7
comp=Z,0.7nm,0.3s,baz=306,slow=8.9,SNR=4.0
ULM Lac du Bonnet 78.29 34 P P 11 06 44.6 -0.4
BRTR Keskin Array B 78.56 312 P P 11 06 45.1 -1.7
comp=Z,0.3nm,0.6s,baz=91,slow=4.8,SNR=2.7
BRTR Keskin Array B 78.56 312 P P 11 06 47.1 +0.3
BRTR Keskin Array B 78.56 312 P P 11 06 47.2 +0.3
U15A North Rim 78.90 52 P P 11 06 50.3 +1.3
Y14A Wickenburg 80.02 55 P P 11 06 55.6 +0.8
VYHS Vyhne 80.16 326 eP P 11 06 53.7 -1.5
VYHS Vyhne 80.16 326 eP P 11 06 53.7 -1.5
CLL Collm 80.45 330 eP P 11 06 56.0 -0.6
X16A Lo Mia Camp, P 80.71 53 P P 11 06 60.0 +1.3
KRUC Moravsky 80.80 327 P P 11 06 58.6 0.0
GERES GERESS Array B 82.10 329 P P 11 07 05.1 -0.5
comp=Z,0.3nm,0.5s,baz=27,slow=6.6,SNR=3.5
GERES GERESS Array B 82.10 329 P P 11 07 04.5 -1.1
E38A The Farm, Brul 82.93 34 P P 11 07 10.3 +0.4
E38A IAmb IAmb 11 07 10.7
comp=Z,4.7nm,0.7s
ANMO Albuquerque 83.46 50 P P 11 07 13.6 +0.6
comp=Z,1.9nm,0.9s,baz=351,slow=7.5,SNR=4.7
ANMO Albuquerque 83.46 50 P P 11 07 14.7 +1.6
ANMO Albuquerque 83.46 50 P P 11 07 14.7 +1.6
ANMO pmax pmax
comp=Z,4.0nm,1.2s
D41A Chassel 83.86 32 P P 11 07 15.5 +0.8
D41A IAmb IAmb 11 07 32.3
comp=Z,8.9nm,1.5s
SCHQ Schefferville 84.15 16 P P 11 07 15.9 -0.1
comp=Z,2.0nm,0.8s,baz=0.0,slow=10,SNR=3.2
SCHQ Schefferville 84.15 16 P P 11 07 15.5 -0.4
SCHQ IAmb IAmb 11 07 28.8
comp=Z,4.8nm,1.2s
COWI Conover 84.38 33 P P 11 07 17.6 +0.3
COWI IAmb IAmb 11 07 32.7
comp=Z,3.8nm,1.1s
G40A Rib Lake 84.56 34 P P 11 07 18.8 +0.6
G40A IAmb IAmb 11 07 19.4
comp=Z,2.6nm,0.8s
TX31 Lajitas Ar. Si 89.02 53 P P 11 07 42.0 +1.7
TX31 IAmb IAmb 11 07 42.2
comp=Z,1.9nm,0.8s
TX32 Lajitas Array 89.02 53 P P 11 07 41.5 +1.2
TX32 IAmb IAmb 11 07 42.2
comp=Z,2.1nm,0.6s
TXAR Lajitas Array 89.02 53 P P 11 07 41.6 +1.3
comp=Z,1.8nm,0.5s,baz=289,slow=3.0,SNR=34
U40A Yellville 90.15 41 P P 11 07 45.5 +0.1
MIAR Mount Ida 91.14 43 P P 11 07 50.8 +0.8
MIAR pmax pmax
comp=Z,6.0nm,0.7s
WVT Waverly 92.87 38 P P 11 07 58.4 +0.5
TKL Tuckaleechee C 95.18 36 P P 11 08 09.2 +0.5
comp=Z,2.8nm,1.0s,baz=0.0,slow=7.1,SNR=4.4
TKL Tuckaleechee C 95.18 36 P P 11 08 09.8 +1.2
TKL Tuckaleechee C 95.18 36 P P 11 08 09.8 +1.2
TKL pmax pmax
comp=Z,13nm,1.4s
LPAZ La Paz 145.66 59 PKPbc PKPab 11 14 25.1 0.0
comp=Z,3.8nm,0.5s,baz=341,slow=1.2,SNR=18
MNMC Minye Minye 146.57 64 PKPdf PKPab 11 14 28.3 +0.2
PB11 IPOC Station P 146.94 65 PKPab 11 14 29.0 -0.4
PB01 IPOC Station P 147.88 67 PKPbc PKPbc 11 14 31.4 +1.0

IDC **09** *11:03:21.9±1.4, 30.48S×177.80W, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.9/34, mbtmp4.0/5, ML2.8/1, Error ellipse: s-maj=36.9km s-min=22.6km az=100.0*

NEIC **09** *11:03:25.3±2.2, 30.27S±0.05×178.2W±0.2, h10km±1km, mb4.5/8, Error ellipse: s-maj=29.4km s-min=3.9km az=106.0*

ISC 09 11:03:28.2±0.8, **30.37S**±0.08×**178.0W**±0.2, **h46km, n21,** σ**1.66**/23, **mb4.3**/7, **Kermadec Islands**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
RAO Raoul Island 1.12 4 Pn Pn 11 03 47.1 -0.4
88nm,0.3s,baz=270,slow=20,SNR=5.5
RAO Sn Sn 11 03 59.4 -2.4
180nm,0.3s,baz=96,slow=18,SNR=7.7
RAO Raoul Island 1.12 4 Pn 11 03 47.2 -0.3
URZ Urewera 8.84 206 Pn Pn 11 05 30.4 -3.0
0.1nm,0.3s,baz=351,slow=16,SNR=3.7
URZ Sn Sn 11 07 08.4 -3.2
0.9nm,0.3s,baz=214,slow=19,SNR=11
BKZ Black Stump Fm 9.87 206 Pn Pn 11 05 49.2 +1.7
RAR Rarotonga 18.75 65 P Pn 11 07 44.8 +0.6
PYZ Puysegur Point 19.78 213 P P 11 07 53.6 -0.8
STKA Stephens Creek 34.48 257 P P 11 10 13.6 +1.7
3.3nm,0.8s,baz=76,slow=9.2,SNR=4.2
STKA Stephens Creek 34.48 257 P P 11 10 14.5 +2.6
STKA IAmb IAmb 11 10 14.5
comp=Z,1.5nm,1.3s
AS31 Alice Springs 43.11 267 P P 11 11 25.6 +1.4
ASAR Alice Springs 43.11 267 P P 11 11 25.3 +1.0
comp=Z,0.5nm,0.4s,baz=106,slow=7.3,SNR=15
ASAR Alice Springs 43.11 267 P P 11 11 24.7 +0.4
WR0 Warramunga Arr 43.92 272 P P 11 11 30.7 0.0
WR0 IAmb IAmb 11 11 35.1
comp=Z,12nm,1.4s
WRAB Tennant Creek 44.09 272 P P 11 11 33.3 +1.1
WRAB IAmb IAmb 11 11 50.9
comp=Z,9.1nm,1.4s
WRA Warramunga Arr 44.10 272 P P 11 11 33.2 +1.0
comp=Z,1.1nm,0.5s,baz=109,slow=8.0,SNR=14
WRA Warramunga Arr 44.10 272 P P 11 11 31.0 -1.2
WB0 Warramunga Arr 44.12 272 P P 11 11 33.2 +0.8
WB0 IAmb IAmb 11 11 40.9
comp=Z,12nm,1.4s
QSPA South Pole Qui 59.74 180 P P 11 13 28.1 0.0
comp=Z,1.1nm,0.8s,baz=328,slow=0.3,SNR=5.1
QSPA South Pole Qui 59.74 180 P P 11 13 30.8 +2.7
QSPA IAmb IAmb 11 13 48.4
comp=Z,9.7nm,1.4s
FINES FINESS Array B 145.12 340 PKPbc PKPdf 11 22 59.5 -0.4
comp=Z,1.6nm,0.7s,baz=43,slow=4.4,SNR=10
FINES FINESS Array B 145.12 340 PKPbc 11 22 58.8 -0.6
AKASG Malin Array Be 151.28 323 PKPbc PKiKP 11 23 16.4 -0.4
comp=Z,0.4nm,0.4s,baz=48,slow=2.2,SNR=4.1

IDC 09 11:05:17.4±6.3, **4.69S**×**134.38E, h0km, mb3.3/1, mb1 3.5/3, mb1mx3.3/31, mbtmp3.3/3, ML2.9/2, Error ellipse: s-maj=343.2km s-min=33.9km az=79.0, Irian Jaya region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
WRA Warramunga Arr 15.16 180 Pn Pn 11 08 54.8 +1.8
0.1nm,0.3s,baz=358,slow=14,SNR=2.9
ASAR Alice Springs 18.87 181 P P 11 09 38.5 -0.9
0.1nm,0.3s,baz=5.3,slow=10,SNR=6.5
MKAR Makanchi Array 68.80 324 P P 11 16 23.6 +0.1
0.1nm,0.4s,baz=119,slow=7.0,SNR=3.1

NEIC **09** *11:05:55.2±1.6, 64.394N±0.008×152.55W±0.08,* *h9km±5km, Error ellipse: s-maj=5.0km s-min=1.1km az=97.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.12; $M_{\theta\theta}$-1.71; $M_{\phi\phi}$2.83; $M_{r\theta}$-0.19; $M_{\theta\phi}$-1.19; $M_{\phi r}$0.77; Fault plane solution: $M_0$2.85000×10^{14} NP1:ϕ_s300.69000°,δ83.10000°,λ172.46000°. NP2: ϕ_s31.60000°,δ82.52000°,λ6.96000°. Principal axes: T 3.2677, Plg10.0000°, Azm256.0000°; N -1.2652, Plg80.0000°, Azm78.0000°; P -2.0025, Plg0.0000°, Azm346.0000°;*

*AEIC **09** 11:05:55±1.6, 64.°43N±0.°03×152.°55W±0.°07, h14km±6km, ML3.6/84, Mwr3.6/23(NEIC) Error ellipse: s-maj=4.9km s-min=3.6km az=225.0*

*IDC **09** 11:05:57.4±3.2, 64.°37N×152.°31W, h0km, mb3.6/1, mb1 3.6/3, mb1mx3.2/58, mbtmp3.2/3, ML2.9/2, MS3.3/3, Ms1 3.2/3, ms1mx2.8/32, Error ellipse: s-maj=33.7km s-min=26.2km az=135.0*

ISC 09 11:05:54.2±1.4, **64.°46N**±0.°03×**152.°53W**±0.°04, **h3**km±10km, **n88**, σ**0.s88**/96, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHUM	**Lake Minchumin**	**0.59**	**171**		**Pg**	**11 06 05.8**	**+0.4**
CHUM					**Sg**	**11 06 14.7**	**+1.6**
BPAW	**Bear Paw Mtn.**	**0.76**	**118**		**Pb**	**11 06 09.6**	**-0.6**
BPAW					**Sg**	**11 06 19.1**	**+0.4**
MLY	**Manley**	**0.96**	**53**		**Pn**	**11 06 14.1**	**-0.6**
MLY					**Sn**	**11 06 27.8**	**-1.0**
CAST	**Castle Rocks**	**1.06**	**169**		**Pg**	**11 06 14.2**	**-0.4**
KTH	**Kantishna Hill**	**1.16**	**141**		**Pg**	**11 06 16.3**	**0.0**
KTH					**Sg**	**11 06 30.2**	**-1.1**
BWN	**Browne**	**1.37**	**101**		**Pb**	**11 06 21.2**	**+0.8**
BWN					**Sn**	**11 06 40.9**	**+2.1**
TRF	**Thorofare Moun**	**1.42**	**135**		**Pn**	**11 06 20.3**	**-0.7**
TRF					**Sg**	**11 06 38.8**	**-0.9**
NEA	**Nenana**	**1.50**	**84**		**Pn**	**11 06 21.2**	**-0.8**
PPLA	**Purkeypile**	**1.58**	**174**		**Pn**	**11 06 22.4**	**-0.9**
PPLA	**Purkeypile**	**1.58**	**174**		**Sn**	**11 06 43.7**	**-0.5**
IM03		**1.61**	**342**		**Pb**	**11 06 24.2**	**-0.3**
IMAR	**Indian Mountai**	**1.61**	**342**		**Pb**	**11 06 24.1**	**-0.6**
MCK	**McKinley**	**1.74**	**113**		**Pn**	**11 06 25.1**	**-0.2**
MCK					**Sn**	**11 06 48.3**	**+0.3**
PS06	**TAPS Pump Stn6**	**1.83**	**39**		**Pn**	**11 06 27.1**	**+0.6**
MDM	**Murphy Dome**	**1.91**	**73**		**Pn**	**11 06 27.0**	**-0.7**
WRH	**Wood River Hil**	**1.92**	**88**		**Pn**	**11 06 27.0**	**-0.8**
RND	**Reindeer**	**1.94**	**121**		**Pn**	**11 06 27.6**	**-0.6**
RND					**Sn**	**11 06 50.8**	**-2.2**
HUR	**Hurricane**	**1.97**	**138**		**Pn**	**11 06 29.1**	**+0.6**
CCB	**Clear Creek Bu**	**2.05**	**83**		**Pn**	**11 06 28.8**	**-0.7**
TCOL	**CIGO, UAF Yank**	**2.05**	**76**		**Pn**	**11 06 29.1**	**-0.5**
COLA	**College**	**2.05**	**76**		**Pn**	**11 06 29.1**	**-0.5**
TTA	**Tatalina**	**2.18**	**227**		**Pn**	**11 06 30.1**	**-1.4**
TT01	**Tatalina**	**2.20**	**226**		**Pn**	**11 06 30.3**	**-1.4**
POKR	**Poker Plat Res**	**2.28**	**71**		**Pn**	**11 06 32.3**	**-0.4**
WAT2	**Susitna Watana**	**2.31**	**129**		**Pn**	**11 06 33.4**	**+0.1**
WAT1	**Susitna Watana**	**2.42**	**131**		**Pn**	**11 06 34.7**	**+0.1**
HDA	**Harding Lake**	**2.42**	**89**		**Pn**	**11 06 35.2**	**+0.5**
IL31		**2.45**	**80**		**Pn**	**11 06 34.2**	**-0.9**
ILAR	**Eielson Array**	**2.45**	**80**	Pn	**Pn**	**11 06 34.1**	**-1.0**
	2.1nm,0.3s,baz=264,slow=13,SNR=56						
ILAR				Pg	**Pg**	**11 06 40.9**	**-0.3**
	26nm,0.3s,baz=266,slow=16,SNR=146						
ILAR				LR	LR	11 07 06.5	
	comp=Z,98nm,19.0s,baz=120,slow=29						
ILAR				Lg	Lg	11 07 12.4	
	76nm,0.3s,baz=259,slow=31,SNR=21						
ILAR	**Eielson Array**	**2.45**	**80**		**Pn**	**11 06 33.6**	**-1.5**
ILAR					**Pg**	**11 06 41.0**	**-0.2**
PS08	**TAPS Pump Stn8**	**2.47**	**86**		**Pn**	**11 06 35.6**	**+0.2**
PS05	**TAPS Pump Stn5**	**2.48**	**17**		**Pn**	**11 06 36.5**	**+1.0**
SKT	**Skwentna**	**2.53**	**169**		**Pn**	**11 06 36.0**	**-0.2**
DHY	**Denali Highway**	**2.68**	**119**		**Pn**	**11 06 38.5**	**+0.2**
WAT6	**Susitna Watana**	**2.86**	**129**		**Pn**	**11 06 40.6**	**-0.2**
COLD	**Coldfoot**	**2.94**	**18**		**Pn**	**11 06 43.2**	**+1.4**
SUA	**Susitna One**	**3.12**	**164**		**Pn**	**11 06 44.4**	**+0.1**
GHO	**Glory Hole Cre**	**3.16**	**147**		**Pn**	**11 06 45.0**	**+0.1**
PRP	**Porcupine Dome**	**3.16**	**67**		**Pn**	**11 06 45.0**	**0.0**
PS10	**TAPS Pump St10**	**3.16**	**106**		**Pn**	**11 06 45.4**	**+0.6**
SPCG	**Spurr Capps Gl**	**3.19**	**176**		**Pn**	**11 06 45.5**	**+0.1**
SPBG	**Spurr Blockage**	**3.21**	**179**		**Pn**	**11 06 46.0**	**+0.3**
CKN	**Chakachatna No**	**3.25**	**177**		**Pn**	**11 06 46.5**	**+0.3**
PMR	**Palmer**	**3.27**	**150**		**Pn**	**11 06 46.6**	**+0.3**
SML	**Sawmill**	**3.27**	**143**		**Pn**	**11 06 46.1**	**-0.3**
RIDG	**Independent Ri**	**3.45**	**99**		**Pn**	**11 06 48.9**	**0.0**
PAX	**Paxson**	**3.48**	**112**		**Pn**	**11 06 49.8**	**+0.5**
SCM	**Sheep Creek Mo**	**3.54**	**136**		**Pn**	**11 06 50.1**	**0.0**
KNK	**Knik Glacier**	**3.58**	**147**		**Pn**	**11 06 51.6**	**+1.0**
RC01	**Rabbit Creek A**	**3.62**	**158**		**Pn**	**11 06 52.1**	**+1.0**
FYU	**Fort Yukon**	**3.70**	**52**		**Pn**	**11 06 52.4**	**+0.1**
SCRK	**Sand Creek**	**3.76**	**94**		**Pn**	**11 06 52.1**	**-1.2**
DOT	**Dot Lake**	**3.81**	**99**		**Pn**	**11 06 53.2**	**-0.6**
DFR	**Drift River**	**3.88**	**181**		**Pn**	**11 06 54.8**	**-0.1**
RDWB	**Redoubt West**	**3.99**	**182**		**Pn**	**11 06 56.0**	**-0.4**
RSO	**Redoubt South**	**4.02**	**182**		**Pn**	**11 06 58.0**	**+1.3**
RED	**Redoubt Volcan**	**4.06**	**182**		**Pn**	**11 06 56.9**	**-0.4**
PWL	**Port Wells**	**4.10**	**150**		**Pn**	**11 06 58.7**	**+1.0**
MENT	**Mentasta**	**4.21**	**107**		**Pn**	**11 06 59.3**	**+0.1**
GLI	**Glacier Island**	**4.38**	**143**		**Pn**	**11 07 02.4**	**+0.8**
BM03	**Burnt Mountain**	**4.40**	**44**		**Pn**	**11 07 01.9**	**+0.1**
BMAR	**Burnt Mountain**	**4.41**	**44**		**Pn**	**11 07 01.9**	**-0.1**
SEW	**Seward**	**4.60**	**160**		**Pn**	**11 07 05.6**	**+1.0**
FID	**Port Fidalgo**	**4.66**	**140**		**Pn**	**11 07 05.6**	**+0.2**
BRLK	**Bradley Lake**	**4.78**	**170**		**Pn**	**11 07 08.6**	**+1.5**
BRSE	**Bradley Lake S**	**4.81**	**169**		**Pn**	**11 07 07.4**	**-0.1**
EGAK	**Eagle**	**4.90**	**81**		**Pn**	**11 07 08.5**	**-0.2**
HIN	**Hinchinbrook I**	**4.95**	**143**		**Pn**	**11 07 10.6**	**+1.2**
BC03		**4.97**	**101**		**Pn**	**11 07 09.8**	**+0.2**
BCAR	**Beaver Creek A**	**4.97**	**101**		**Pn**	**11 07 09.1**	**-0.6**
GLB	**Gilahina Butte**	**5.00**	**123**		**Pn**	**11 07 11.7**	**+1.5**
EYAK	**Cordova Ski Ar**	**5.03**	**138**		**Pn**	**11 07 10.2**	**-0.2**
VRDI	**Verde Repeater**	**5.27**	**124**		**Pn**	**11 07 15.3**	**+1.3**
MCARA	**McCarthy VSAT**	**5.33**	**121**		**Pn**	**11 07 15.1**	**+0.6**
RDOG	**Red Dog Mine**	**5.53**	**315**		**Pn**	**11 07 19.6**	**+2.3**
ANM	**Nome**	**5.55**	**277**		**Pn**	**11 07 18.0**	**+0.4**
BVCY	**Beaver Creek**	**5.62**	**106**		**Pn**	**11 07 18.6**	**-0.1**
CRQM	**Cirque**	**5.71**	**126**		**Pn**	**11 07 19.9**	**0.0**
DAWY	**Dawson**	**5.74**	**88**		**Pn**	**11 07 20.3**	**0.0**
TGL	**Tana Glacier**	**5.82**	**125**		**Pn**	**11 07 21.4**	**0.0**
INK	**Inuvik**	**8.53**	**55**		**Pn**	**11 07 59.0**	**+0.6**
C36M	**Paulatuk**	**12.11**	**54**	Pn	**Pn**	**11 08 47.4**	**0.0**
YKA	**Yellowknife Ar**	**16.88**	**79**	Pn	**Pn**	**11 09 52.2**	**-1.1**
	0.1nm,0.3s,baz=292,slow=11,SNR=5.2						
WALA	**Waterton Lakes**	**25.64**	**108**	P	**P**	**11 11 23.6**	**-1.2**
ULM	**Lac du Bonnet**	**32.44**	**88**	LR	LR	11 25 29.6	
	comp=Z,59nm,20.6s,baz=22,slow=36						
PDAR	**Pinedale Array**	**32.52**	**111**	P	**P**	**11 12 29.4**	**+3.3**
	0.9nm,1.0s,baz=327,slow=7.8,SNR=5.1						
PDAR	**Pinedale Array**	**32.52**	**111**	P	**P**	**11 12 25.7**	**-0.4**
GERES	**GERESS Array B**	**66.52**	**10**	LR	LR	11 47 59.9	
	comp=Z,78nm,18.2s,baz=300,slow=38						

*THE **09** 11:24:34.8, 38.°21N×20.°38E, h7km±1km, ML2.8/7, Error ellipse: s-maj=1.7km s-min=0.5km az=208.0*

*ATH **09** 11:24:34.8, 38.°21N×20.°39E, h7km±2km, ML3.0/3, Error ellipse: s-maj=2.2km s-min=1.0km az=232.0*

ISC 09 11:24:34.8±1.1, **38.°21N**±0.°03×**20.°39E**±0.°04, **h7**km±5km, **n28**, σ**0.s52**/46, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.03**	**197**	P	**Pg**	**11 24 36.2**	**+0.1**
CHV1				S	**Sg**	**11 24 37.2**	**+0.1**
KEF3	**Kipouria, Keph**	**0.03**	**262**	P	**Pg**	**11 24 36.4**	**+0.2**
KEF3				S	**Sg**	**11 24 37.5**	**+0.3**
LXR1	**Lixouri, Cepha**	**0.04**	**101**	P	**Pg**	**11 24 36.1**	**-0.1**
LXR1				S	**Sg**	**11 24 37.3**	**0.0**
KEF4	**Livadi, Kephal**	**0.06**	**27**	P	**Pg**	**11 24 36.5**	**0.0**
ARGA	**Argostoli. Kep**	**0.08**	**114**	P	**Pg**	**11 24 36.7**	**0.0**
ARGA				S	**Sg**	**11 24 38.1**	**+0.1**
ARG2	**Argostoli**	**0.08**	**111**	P	**Pg**	**11 24 36.8**	**0.0**
ARG2				S	**Sg**	**11 24 38.4**	**+0.2**
	31μm,0.1s						
KEF2	**Argostoli. Kep**	**0.09**	**120**	P	**Pg**	**11 24 37.0**	**+0.1**
KEF2				S	**Sg**	**11 24 38.6**	**+0.2**
KEF1	**Kardakata, Kep**	**0.09**	**42**	P	**Pg**	**11 24 37.0**	**0.0**
KEF1				S	**Sg**	**11 24 38.6**	**+0.1**
VLS	**Valsamata**	**0.16**	**101**	P	**Pg**	**11 24 38.0**	**-0.1**
VLS				S	**Sg**	**11 24 40.6**	**+0.3**
	15μm,0.1s						
VLS	**Valsamata**	**0.16**	**101**	P	**Pg**	**11 24 38.0**	**-0.1**
VLS				S	**Sg**	**11 24 40.6**	**+0.3**
VLS				AML	AML	11 24 40.7	
	comp=N,29330μm,0.2s						
VLS				AML	AML	11 24 40.9	
	comp=E,30754μm,0.1s						
VSK1	**VASILIKIADES**	**0.24**	**34**	P	**Pg**	**11 24 39.8**	**+0.2**
VSK1				S	**Sg**	**11 24 43.6**	**+0.7**
	comp=E,7μm,0.3s						
KONA	**Konidatara, Ke**	**0.26**	**33**	P	**Pg**	**11 24 40.1**	**+0.2**
VLMS	**Volimes, Zakyn**	**0.39**	**147**	P	**Pg**	**11 24 42.4**	**-0.1**
VLMS				S	**Sg**	**11 24 49.0**	**+1.4**
VLMS				AML	AML	11 24 51.1	
	comp=N,7091μm,0.4s						
VLMS				AML	AML	11 24 53.9	
	comp=E,4289μm,0.3s						
EVGI	**Lefkada island**	**0.46**	**27**	P	**Pg**	**11 24 43.8**	**+0.1**
EVGI				S	**Sb**	**11 24 51.2**	**-1.1**
EVGI	**Lefkada island**	**0.46**	**27**	P	**Pg**	**11 24 43.8**	**+0.1**
EVGI				S	**Sg**	**11 24 51.0**	**+1.2**
MGNA	**Meganis**	**0.55**	**35**	P	**Pg**	**11 24 45.2**	**-0.2**
MGNA				S	**Sg**	**11 24 53.5**	**+1.0**
MGNA				AML	AML	11 24 54.3	
	comp=E,2401μm,0.4s						
MGNA				AML	AML	11 24 54.5	
	comp=N,1790μm,0.3s						
LKD2	**Lefkada island**	**0.62**	**20**	P	**Pg**	**11 24 46.3**	**-0.3**
LKD2				S	**Sg**	**11 24 54.5**	**-0.2**
	comp=N,368nm,0.5s						
LKD2	**Lefkada island**	**0.62**	**20**	P	**Pg**	**11 24 46.4**	**-0.3**
TSLK	**Tsoukalades, L**	**0.65**	**18**	P	**Pg**	**11 24 47.2**	**-0.1**
TSLK				S	**Sg**	**11 24 56.0**	**+0.2**
	comp=N,350nm,0.2s						
TSLK	**Tsoukalades, L**	**0.65**	**18**	P	**Pg**	**11 24 47.1**	**-0.1**
RLS	**Riolos of Patr**	**0.86**	**100**	P	**Pg**	**11 24 50.8**	**-0.5**
PVO	**Paravola**	**0.98**	**65**	P	**Pg**	**11 24 53.5**	**-0.1**
PVO				S	**Sb**	**11 25 07.9**	**+0.7**
	comp=N,542nm,0.5s						
PVO	**Paravola**	**0.98**	**65**	P	**Pg**	**11 24 53.4**	**-0.2**
LAKA	**Lakka**	**1.25**	**88**	P	**Pn**	**11 24 57.7**	**-1.0**
LAKA				S	**Sn**	**11 25 16.9**	**+1.2**
	comp=N,195nm,0.4s						
IGT	**Igoumenitsa**	**1.32**	**358**	P	**Pn**	**11 24 59.3**	**-0.4**
IGT	**Igoumenitsa**	**1.32**	**358**	P	**Pn**	**11 24 59.2**	**-0.4**
TRIZ	**Trizonia**	**1.33**	**83**	P	**Pn**	**11 24 59.0**	**-0.7**
KLV	**Kalavryta, Ach**	**1.40**	**96**	P	**Pn**	**11 25 00.1**	**-0.6**

*LDG **09** 11:37:12.7±0.0, 45.°60N×7.°05E, h8km, Md2.8/2, Ml2.9/35, Error ellipse: s-maj=0.9km s-min=0.7km az=87.0*

*ROM **09** 11:37:13.0±0.1, 45.°557N±0.°003×7.°068E±0.°008, h12km, ML2.5/15, Error ellipse: s-maj=0.5km s-min=0.3km az=84.0*

*GEN **09** 11:37:13.0, 45.°58N×7.°05E, h8km±1km, Ml2.7*

*ZUR **09** 11:37:13.4, 45.°57N×7.°05E, h2km±2km, MLh2.6/12, Error ellipse: s-maj=5.2km s-min=1.0km az=230.0*

*STR **09** 11:37:13.6±0.8, 46°N±2°×°±°, h2km±5km, MLv2.6/7*

ISC 09 11:37:13.0±0.8, **45.°58N**±0.°01×**7.°04E**±0.°01, **h16**km±4km, **n113**, σ**1.s97**/180, **16C-5D**, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSD	**Lago del Serru**	**0.14**	**152**	⇑Pg	**Pg**	**11 37 16.4**	**-0.8**
	12nm,SNR=92						
LSD				⇑Pg	**Pg**	**11 37 16.4**	**-0.8**
LSD				Sg	**Sg**	**11 37 18.3**	**-1.6**
LSD	**Lago del Serru**	**0.14**	**152**	P	**Pg**	**11 37 16.4**	**-0.8**
LSD				S	**Sg**	**11 37 18.3**	**-1.6**
LSD				AML	AML		
	comp=E,25650μm,0.1s						
LSD				AML	AML		
	comp=N,15550μm,0.1s						
LSD				AML	AML		
	comp=E,25650μm,0.1s						
LSD				AML	AML		
	comp=N,15550μm,0.1s						
LSD	**Lago del Serru**	**0.14**	**152**	P	**Pg**	**11 37 16.4**	**-0.8**
LSD				S	**Sg**	**11 37 18.3**	**-1.6**
LPG	**La Plagne**	**0.22**	**248**	ePg	**Pg**	**11 37 17.8**	**-0.5**
LPG				eSg	**Sg**	**11 37 20.7**	**-1.2**
	comp=N,953nm,0.2s						
LPL	**La Plagne**	**0.23**	**254**	ePg	**Pg**	**11 37 17.9**	**-0.5**
LPL				eSg	**Sg**	**11 37 20.6**	**-1.4**
	comp=N,493nm,0.3s						
RSL	**Roselend**	**0.31**	**290**	Pg	**Pg**	**11 37 19.6**	**-0.1**
RSL				Sg	**Sg**	**11 37 24.1**	**-0.2**
RSL	**Roselend**	**0.31**	**290**	⇑Pg	**Pg**	**11 37 19.4**	**-0.3**
	comp=N,0.4nm,SNR=3.1						
RSL				⇑Pg	**Pg**	**11 37 19.4**	**-0.3**
RSP	**Reno Superiore**	**0.46**	**160**	⇑Pg	**Pg**	**11 37 21.8**	**-0.4**
	comp=N,1.7nm,SNR=8.7						
RSP				⇑Pg	**Pg**	**11 37 21.8**	**-0.4**
RSP	**Reno Superiore**	**0.46**	**160**	P	**Pg**	**11 37 21.9**	**-0.4**
RSP				S	**Sg**	**11 37 27.9**	**-0.7**
RSP				AML	AML		
	comp=N,1455μm,0.3s						
RSP				AML	AML		
	comp=E,1205μm,1.0s						
RSP	**Reno Superiore**	**0.46**	**160**	P	**Pg**	**11 37 21.9**	**-0.4**
RSP				S	**Sg**	**11 37 27.8**	**-0.7**
SEMOS	**Emosson Stauma**	**0.49**	**351**	⇑Pg	**Pg**	**11 37 22.8**	**-0.2**
	comp=E,1.4nm,SNR=7.1						
TRAV	**Traversella**	**0.50**	**98**	Pg	**Pg**	**11 37 22.8**	**-0.3**
	comp=E,1.9nm,SNR=14						
TRAV				Pg	**Pg**	**11 37 22.8**	**-0.3**
TRAV	**Traversella**	**0.50**	**98**	⇓P	**Pg**	**11 37 22.8**	**-0.3**
TRAV				S	**Sg**	**11 37 29.2**	**-0.5**
TRAV				AML	AML		
	comp=E,1260μm,0.2s						
TRAV				AML	AML		
	comp=N,1855μm,0.3s						
TRAV	**Traversella**	**0.50**	**98**	P	**Pg**	**11 37 22.8**	**-0.3**
TRAV				S	**Sg**	**11 37 29.0**	**-0.7**
OGSI	**Sixt**	**0.53**	**338**	Pg	**Pg**	**11 37 23.1**	**-0.4**
	comp=N,0.9nm,SNR=5.3						
DIX	**Grande Dixence**	**0.56**	**27**	⇑Pg	**Pg**	**11 37 23.6**	**-0.6**
	comp=N,1.5nm,SNR=8.7						
DIX				⇑Pg	**Pg**	**11 37 23.6**	**-0.6**
DIX	**Grande Dixence**	**0.56**	**27**	P	**Pg**	**11 37 23.6**	**-0.6**
DIX				S	**Sg**	**11 37 31.5**	**-0.3**
DIX				AML	AML		
	comp=N,742μm,0.3s						
DIX				AML	AML		
	comp=E,808μm,0.2s						
DIX				AML	AML		
	comp=N,742μm,0.3s						
SALAN	**Lac Salanfe**	**0.57**	**355**	⇑Pg	**Pg**	**11 37 24.1**	**-0.2**
	comp=N,0.6nm,SNR=2.7						
SALAN				⇑Pg	**Pg**	**11 37 24.1**	**-0.2**
BNI	**Bardonecchia**	**0.59**	**206**	⇓P	**Pg**	**11 37 24.1**	**-0.5**
BNI				S	**Sg**	**11 37 32.1**	**-0.4**
BNI				AML	AML		
	comp=N,515μm,0.9s						
BNI				AML	AML		
	comp=N,487μm,0.9s						
BNI				AML	AML		
	comp=E,478μm,0.2s						
BNI				AML	AML		
	comp=E,382μm,0.2s						
GRYON	**Gryon**	**0.67**	**4**	⇑Pg	**Pg**	**11 37 26.1**	**-0.2**
	comp=E,0.7nm,SNR=4.4						
GRYON				⇑Pg	**Pg**	**11 37 26.1**	**-0.2**
GDM	**Grand'Maison**	**0.75**	**240**	Pg	**Pg**	**11 37 27.4**	**-0.3**
GDM				Sg	**Sg**	**11 37 37.7**	**0.0**
BHB	**Bricherasio**	**0.76**	**168**	P	**Pg**	**11 37 27.5**	**-0.2**
BHB				S	**Sg**	**11 37 37.0**	**-0.7**
BHB				AML	AML		
	comp=E,506μm,1.1s						
BHB				AML	AML		
	comp=N,795μm,0.1s						
BHB	**Bricherasio**	**0.76**	**168**	P	**Pg**	**11 37 27.5**	**-0.2**
BHB				S	**Sg**	**11 37 36.9**	**-0.9**
MMK	**Mattmark**	**0.80**	**54**	P	**Pg**	**11 37 27.5**	**-1.1**
MMK				AML	AML		
	comp=N,320μm,0.2s						
MMK				AML	AML		
	comp=E,212μm,0.5s						
MMK				AML	AML		
	comp=N,320μm,0.1s						
OG02	**Monnetier-Morn**	**0.81**	**315**	Pg	**Pb**	**11 37 29.5**	**+0.8**
OG02				Sg	**Sg**	**11 37 39.9**	**+0.3**
GRN	**Grenoble**	**0.97**	**250**	Pg	**Pb**	**11 37 32.1**	**+0.6**
ORIF	**Oris-en-Rattie**	**1.05**	**232**	ePg	**Pg**	**11 37 32.9**	**-0.5**
ORIF				eSg	**Sg**	**11 37 46.4**	**-0.8**
	comp=N,97nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.05**	**232**	Pg	**Pg**	**11 37 33.1**	**-0.4**
PZZ	**Stroppo**	**1.07**	**177**	P	**Pg**	**11 37 32.9**	**-0.9**
PZZ				S	**Sg**	**11 37 46.1**	**-1.8**
PZZ				AML	AML		
	comp=E,498μm,1.3s						
PZZ				AML	AML		
	comp=N,546μm,0.7s						
PZZ	**Stroppo**	**1.07**	**177**	P	**Pg**	**11 37 32.9**	**-0.9**
PZZ				S	**Sg**	**11 37 46.1**	**-1.8**
DOI	**San Damiano**	**1.09**	**172**	P	**Pg**	**11 37 32.9**	**-1.2**
DOI				AML	AML		
	comp=E,300μm,1.1s						
DOI				AML	AML		
	comp=N,374μm,0.4s						
GIMEL	**St. Georges /**	**1.10**	**331**	AML	AML		
	comp=N,103μm,1.5s						
GIMEL				AML	AML		
	comp=E,167μm,0.5s						
SURF	**Saint Ours**	**1.11**	**188**	Pg	**Pg**	**11 37 33.8**	**-0.7**
OG35	**Corcelles**	**1.13**	**295**	Pg	**Pn**	**11 37 35.2**	**+1.0**
OGAG	**Argentiere**	**1.18**	**198**	Pg	Pg	11 37 29.6	-6.2
OGAG				Sg	Sg	11 37 41.2	-10
CABF	**La Chapelle**	**1.23**	**328**	eP	**Pb**	**11 37 36.6**	**+0.8**
CABF				eSg	**Sg**	**11 37 50.9**	**-1.8**
	comp=E,54nm,0.2s						
VARE	**Varese**	**1.24**	**76**	P	**Pb**	**11 37 36.0**	**-0.1**
VARE				AML	AML		
	comp=E,306μm,1.3s						
VARE				AML	AML		
	comp=N,284μm,1.6s						
STV	**Sant Anna di V**	**1.35**	**171**	P	**Pn**	**11 37 36.7**	**-0.5**
ENR	**Entracque**	**1.38**	**169**	P	**Pn**	**11 37 37.3**	**-0.3**
ENR				AML	AML		
	comp=N,142μm,0.9s						
ENR				AML	AML		
	comp=N,142μm,0.9s						
ENR				AML	AML		
	comp=E,124μm,1.4s						
FUSIO	**Fusio**	**1.43**	**52**	P	**Pn**	**11 37 39.3**	**+1.0**
FUSIO				AML	AML		
	comp=E,96μm,1.6s						
FUSIO				AML	AML		
	comp=N,125μm,0.3s						
MUGIO	**Muggio**	**1.44**	**76**	P	**Pn**	**11 37 39.4**	**+1.0**
MUGIO				AML	AML		
	comp=E,103μm,0.9s						
MUGIO				AML	AML		
	comp=N,128μm,1.6s						
GBOS	**Grotte di Boss**	**1.45**	**157**	P	**Pn**	**11 37 39.3**	**+0.7**
OGDI	**Digne**	**1.56**	**200**	Pg	**Pg**	**11 37 43.5**	**+0.5**
BNALP	**Bannalp**	**1.61**	**36**	P	**Pb**	**11 37 42.6**	**+0.2**
CHMF	**Charmoille**	**1.69**	**351**	P	**Pn**	**11 37 43.6**	**+1.7**
CHMF				Pn	**Pb**	**11 37 44.9**	**+1.2**
CHMF				Sn	**Sb**	**11 38 06.5**	**+1.8**
SBF	**Sospel**	**1.74**	**171**	eP	**Pn**	**11 37 43.9**	**+1.3**
SBF	**Sospel**	**1.74**	**171**	ePg	**Pb**	**11 37 45.0**	**+0.4**
SBF				eSg	**Sg**	**11 38 08.0**	**-1.0**
	comp=N,42nm,0.3s						
LOMF	**Lomont**	**1.78**	**355**	P	**Pn**	**11 37 44.9**	**+1.9**
LOMF				Pn	**Pb**	**11 37 45.8**	**+0.6**
SSB	**Saint Sauveur**	**1.79**	**261**	Pn	**Pn**	**11 37 45.0**	**+1.8**
VIVF	**Saint-Julien-l**	**1.82**	**247**	ePn	**Pn**	**11 37 43.3**	**-0.4**
VIVF	**Saint-Julien-l**	**1.82**	**247**	ePg	**Pb**	**11 37 46.8**	**+0.8**
VIVF				eSg	**Sg**	**11 38 11.0**	**-0.7**
	comp=N,40nm,0.3s						
MDI	**Monti di Nese**	**1.88**	**83**	⇓P	**Pn**	**11 37 46.3**	**+1.8**
MDI				S	**Sg**	**11 38 15.0**	**+1.4**
MDI				AML	AML		
	comp=N,131μm,0.5s						
MDI				AML	AML		
	comp=E,146μm,0.9s						
SMRF	**Simiane la Rot**	**1.92**	**214**	ePn	**Pn**	**11 37 44.6**	**-0.3**
SMRF	**Simiane la Rot**	**1.92**	**214**	ePg	**Pb**	**11 37 48.5**	**+1.0**
SMRF				eSn	**Sn**	**11 38 07.8**	**-0.9**
SMRF				eSg	**Sg**	**11 38 13.9**	**-0.7**
	comp=E,32nm,0.4s						
FRF	**La Foret Royal**	**2.04**	**188**	ePn	**Pn**	**11 37 46.1**	**-0.5**
FRF	**La Foret Royal**	**2.04**	**188**	ePg	**Pb**	**11 37 50.5**	**+0.9**
FRF				eSg	**Sg**	**11 38 17.3**	**-1.3**
	comp=E,61nm,0.4s						
MSSA	**Maissana**	**2.17**	**125**	S	**Sg**	**11 38 22.0**	**-0.6**
PLONS	**Plons/SG**	**2.19**	**47**	P	**Pb**	**11 37 52.7**	**+0.5**
HINF	**Hinteralfeld**	**2.24**	**357**	eP	**Pn**	**11 37 50.2**	**+0.8**
HINF	**Hinteralfeld**	**2.24**	**357**	ePg	**Pb**	**11 37 53.8**	**+0.7**
HINF				eSn	**Sn**	**11 38 14.3**	**-2.4**
HINF				eSg	**Sb**	**11 38 22.3**	**+1.7**
	comp=E,14nm,0.3s						
LMR	**La Mourre**	**2.28**	**190**	ePn	**Pn**	**11 37 49.8**	**-0.1**
LMR	**La Mourre**	**2.28**	**190**	ePg	**Pb**	**11 37 55.1**	**+1.4**
LMR				eSg	**Sg**	**11 38 24.7**	**-1.5**
	comp=E,21nm,0.3s						
DAVOX	**Davos/Dischmat**	**2.31**	**58**	⇑P	**Pb**	**11 37 54.1**	**-0.2**
SMF	**Signal de Mont**	**2.47**	**297**	eP	**Pn**	**11 37 54.0**	**+1.5**
SMF	**Signal de Mont**	**2.47**	**297**	ePg	**Pb**	**11 37 58.1**	**+1.2**
SMF				eSg	**Sb**	**11 38 29.4**	**+2.3**
	comp=E,12nm,0.2s						
HAU	**Haudompre**	**2.47**	**349**	eP	**Pn**	**11 37 53.6**	**+1.0**
HAU	**Haudompre**	**2.47**	**349**	ePg	**Pb**	**11 37 58.0**	**+1.0**
HAU				eSg	**Sb**	**11 38 29.0**	**+1.8**
	comp=E,21nm,0.3s						
MAGA	**Magasa**	**2.52**	**84**	⇑P	**Pg**	**11 38 00.0**	**-1.3**
DAVA	**Damuels**	**2.60**	**48**	Pg	**Pg**	**11 38 02.0**	**-0.8**
	comp=E,7.9nm,0.3s,SNR=8.0						
ERBM	**Eremo**	**2.66**	**115**	S	**Sn**	**11 38 28.0**	**+0.9**
MNTV	**Mantova**	**2.68**	**98**	⇑P	**Pb**	**11 37 59.6**	**-0.8**
LASF	**Ste Croix**	**2.72**	**238**	eP	**Pn**	**11 37 58.1**	**+2.1**
LASF				eSn	**Sn**	**11 38 27.2**	**-1.3**
	comp=E,19nm,0.3s						
LOR	**Lormes**	**2.77**	**309**	eP	**Pn**	**11 37 58.4**	**+1.7**
	baz=127						
LOR	**Lormes**	**2.77**	**309**	ePg	**Pb**	**11 38 03.2**	**+1.0**
	baz=134						
LOR				eSg	**Sb**	**11 38 39.2**	**+3.3**
	comp=E,10nm,0.2s,baz=129						
SBPO	**S.Benedetto Po**	**2.79**	**100**	S	**Sb**	**11 38 36.0**	**-0.2**
AVF	**Avril sur Loir**	**2.83**	**297**	eP	**Pn**	**11 37 59.5**	**+2.0**
AVF	**Avril sur Loir**	**2.83**	**297**	ePg	**Pb**	**11 38 05.0**	**+1.8**
AVF				eSg	**Sb**	**11 38 41.2**	**+3.6**
	comp=E,7.0nm,0.3s						
CDF	**Champ du Feu**	**2.84**	**3**	eP	**Pn**	**11 37 58.6**	**+0.9**
CDF	**Champ du Feu**	**2.84**	**3**	ePg	**Pb**	**11 38 04.7**	**+1.4**
CDF				eSg	**Sb**	**11 38 40.1**	**+2.3**
	comp=E,9.5nm,0.4s						
SSF	**Saint Saulge**	**2.86**	**302**	eP	**Pn**	**11 37 59.6**	**+1.7**
SSF	**Saint Saulge**	**2.86**	**302**	ePg	**Pb**	**11 38 05.2**	**+1.5**
SSF				eSn	**Sn**	**11 38 30.2**	**-1.8**
SSF				eSg	**Sb**	**11 38 42.0**	**+3.6**
	comp=E,5.7nm,0.2s						
FETA	**Feichten**	**2.93**	**59**	Pn	**Pb**	**11 38 04.2**	**-0.7**
	comp=E,1.2nm,0.2s						
SFTF	**Sexfontaines**	**2.96**	**333**	ePn	**Pn**	**11 37 57.7**	**-1.6**
	baz=149						
SFTF	**Sexfontaines**	**2.96**	**333**	ePg	**Pb**	**11 38 07.2**	**+1.8**
	baz=156						
SFTF				eSn	**Sn**	**11 38 32.1**	**-2.4**
SFTF				eSg	**Sb**	**11 38 44.1**	**+2.8**
	comp=E,5.8nm,0.2s						
BGF	**Bois d'Agland**	**3.08**	**290**	eP	**Pn**	**11 38 02.9**	**+2.0**
BGF	**Bois d'Agland**	**3.08**	**290**	ePg	**Pb**	**11 38 09.6**	**+2.2**
BGF				eSn	**Sn**	**11 38 34.9**	**-2.5**
BGF				eSg	**Sg**	**11 38 49.2**	**-2.7**
	comp=E,9.5nm,0.3s						
PAGF	**Fort de Pagny**	**3.11**	**344**	ePn	**Pn**	**11 38 00.3**	**-1.0**
PAGF	**Fort de Pagny**	**3.11**	**344**	ePg	**Pb**	**11 38 09.6**	**+1.8**
	baz=163						
PAGF				eSn	**Sn**	**11 38 34.9**	**-3.2**
PAGF				eSg	**Sb**	**11 38 49.2**	**+3.7**
	comp=E,3.3nm,0.2s,baz=161						
RETA	**Reutte**	**3.20**	**52**	ePn	**Pn**	**11 38 06.3**	**+3.7**
	comp=E,2.1nm,0.3s						
MEZF	**Maizieres J'vi**	**3.22**	**336**	ePn	**Pn**	**11 38 01.1**	**-1.8**
MEZF	**Maizieres J'vi**	**3.22**	**336**	ePg	**Pb**	**11 38 11.8**	**+2.0**
	baz=154						
MEZF				eSg	**Sb**	**11 38 53.1**	**+4.3**
	comp=E,14nm,0.3s,baz=157						
CTI	**Castel Tesino**	**3.26**	**80**	P	**Pn**	**11 38 06.6**	**+3.2**
TEOL	**Teolo**	**3.26**	**92**	⇓P	**Pb**	**11 38 11.7**	**+1.5**
TEOL				⇓P	**Pg**	**11 38 15.5**	**0.0**
MOTA	**Moosalm**	**3.32**	**56**	ePn	**Pn**	**11 38 08.1**	**+3.8**
	comp=E,0.9nm,0.2s						
SQTA	**Sankt Quirin**	**3.32**	**59**	ePn	**Pb**	**11 38 08.8**	**-2.7**
	comp=E,1.4nm,0.2s						

PGF Pioggiola 3.34 154 ePn Pn 11 38 04.0 -0.6
PGF eSn Sn 11 38 42.2 -1.8
comp=E,8.8nm,0.3s
TCF Toulx Ste Croi 3.44 284 eP Pn 11 38 07.9 +1.9
TCF eSg Sb 11 38 59.9 +4.7
comp=E,10nm,0.3s
HYF Humbligny 3.48 301 ePn Pn 11 38 05.6 -0.8
HYF eSg Sb 11 39 01.1 +4.9
CAF Calviac 3.58 261 ePn Pn 11 38 06.5 -1.3
CAF Calviac 3.58 261 eP Pn 11 38 10.3 +2.5
CAF eSn Sn 11 38 47.8 -1.8
CAF eSg Sg 11 39 04.6 -3.2
comp=E,5.3nm,0.4s
WATA Walderalm 3.59 59 ePn Pn 11 38 12.4 +4.4
comp=E,0.4nm,0.1s
WTTA Wattenberg 3.60 60 ePn Pn 11 38 12.6 +4.5
comp=E,1.5nm,0.3s
RJF Les Rejaudoux 3.90 268 eP Pn 11 38 14.5 +2.3
RJF eSg Sg 11 39 14.3 -3.9
comp=E,4.8nm,0.3s
MTLF Montolieu 4.12 239 eP Pn 11 38 17.5 +2.3
MTLF eSn Sn 11 38 59.9 -3.0
MTLF eSg Sg 11 39 22.4 -2.7
comp=E,1.9nm,0.4s
LFF La Frestale 4.50 264 ePn Pn 11 38 19.7 -0.6
LFF eSg Sg 11 39 33.4 -3.9
comp=E,8.8nm,0.5s
FOSV Fossato di Vic 4.69 117 P Pg 11 38 39.3 -3.5
BAIF Baives 4.87 338 eP Pn 11 38 27.7 +2.2
BAIF eSg Sg 11 39 44.4 -4.8
comp=E,1.1nm,0.3s
MFF Saint Martin d 5.10 284 ePn Pn 11 38 26.8 -1.9
MFF Saint Martin d 5.10 284 eP Pn 11 38 31.0 +2.3
MFF eSg Sg 11 39 52.2 -4.5
comp=E,1.6nm,0.3s
LDF La Druitiere 5.75 304 eP Pn 11 38 40.2 +2.7
LDF eSg Sg 11 40 11.7 -5.6
comp=E,1.5nm,0.3s
FLN La Foliniere 6.04 305 ePn Pn 11 38 40.2 -1.3
FLN eSg Sg 11 40 19.9 -6.7
comp=E,2.2nm,0.3s
GRR Gorron 6.09 300 eP Pn 11 38 45.1 +2.9
GRR eSg Sg 11 40 22.8 -5.5
comp=E,11nm,0.5s
VYHS Vyhne 8.57 66 ePN Pn 11 39 15.6 -0.6

IDC 09 11:37:34.3±1.8, 25.40S×178.56W, h0km, mb3.5/2, mb1 4.1/4, mb1mx3.8/21, mbtmp4.1/4, ML4.7/2, Error ellipse: s-maj=39.6km s-min=30.1km az=81.0
NEIC 09 11:37:40.7±1.7, 26.04S±0.06×176.9W±0.2, h144km±10km, mb4.3/10, Error ellipse: s-maj=21.7km s-min=8.1km az=103.0
ISC 09 11:37:41.2±0.8, 25.97S±0.09×176.9W±0.1, h150km, n20, σ2.06/22, mb4.1/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.40	195	Pn	Pn	11 38 34.7	+1.1
	61nm,0.3s,baz=274,slow=19,SNR=3.1						
RAO				Sn	Sn	11 39 21.4	+7.2
	132nm,0.3s,baz=73,slow=19,SNR=5.3						
RAO	Raoul Island	3.40	195		Pn	11 38 32.5	-1.1
RAO					Sn	11 39 24.5	+10
NIUE	Niue	9.40	45	Pn	Pn	11 39 53.6	+0.2
NIUE				Sn	Sn	11 41 40.8	+3.1
MSVF	Nonsavu	9.44	329	Pn	Pn	11 39 56.4	+2.4
AFI	Afiamalu	12.92	23	Pn	Pn	11 40 40.9	+1.3
	3.3nm,0.3s,baz=188,slow=7.1,SNR=3.5						
AFI				Sn	Sn	11 42 57.0	-5.7
	1.3nm,0.3s,baz=120,slow=20,SNR=2.0						
AFI	Afiamalu	12.92	23		Pn	11 40 41.4	+1.8
AS31	Alice Springs	44.51	262	P	P	11 45 38.4	+0.3
ASAR	Alice Springs	44.51	262	P	P	11 45 36.4	-1.7
	0.2nm,0.4s,baz=92,slow=7.0,SNR=15						
WR0	Warramunga Arr	44.92	267	P	P	11 45 40.8	-0.5
WR0				IAmb	IAmb	11 45 43.5	
	comp=Z,6.6nm,1.2s						
WB2	Warramunga Arr	45.09	267	P	P	11 45 42.4	-0.3
WB2				IAmb	IAmb	11 46 00.2	
	comp=Z,5.5nm,1.2s						
WRAB	Tennant Creek	45.10	267	P	P	11 45 42.3	-0.4
WRAB				IAmb	IAmb	11 45 52.7	
	comp=Z,9.6nm,1.4s						
WRA	Warramunga Arr	45.10	267	P	P	11 45 40.3	-2.5
	comp=Z,0.4nm,0.3s,baz=103,slow=7.4,SNR=14						
WRA	Warramunga Arr	45.10	267	P	P	11 45 41.7	-1.1
WB0	Warramunga Arr	45.11	267	P	P	11 45 41.5	-1.3
WB0				IAmb	IAmb	11 45 50.2	
	comp=Z,10nm,1.4s						
KEKH	Kekaha	50.49	21		P	11 46 24.6	+0.6
OPA	Opana	50.79	23	P	P	11 46 23.9	-2.4
KNRA	Kununurra	51.51	270	P	P	11 46 31.6	-0.3
KNRA				IAmb	IAmb	11 46 42.4	
	comp=Z,32nm,1.1s						
MAW	Mawson	76.79	200	P	P	11 49 16.2	+0.4
NB2	NORSAR Subarra	144.51	353	PKP	PKiKP	11 57 00.7	-2.2
	comp=Z,0.9nm,0.6s,baz=11,slow=3.5						
BRTR	Keskin Array B	151.07	306	PKPbc	PKPab	11 57 26.4	+1.4
	comp=Z,1.2nm,1.1s,baz=98,slow=3.2,SNR=4.3						

OMAN 09 11:59:22.5±0.1, 27.35N×58.22E, h74km, ml3.5/8, Error ellipse: s-maj=2.5km s-min=0.9km az=32.0
IDC 09 11:59:25.3±2.3, 26.77N×54.61E, h0km, mb3.4/6, mb1 3.5/6, mb1mx3.3/41, mbtmp3.5/6, Error ellipse: s-maj=59.3km s-min=24.1km az=162.0
TEH 09 11:59:29.1, 26.86N×54.62E, h18km, ML3.4
ISC 09 11:59:26.8±0.7, 26.69N±0.04×54.54E±0.04, h10km, n39, σ1.40/39, mb3.3/6, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	LAR	0.99	351	ePg	Pg	11 59 45.0	-0.9
LAR1				e		12 00 12.3	
LMD1	Lamerd	1.39	298	ePg	Pg	11 59 55.2	+1.7
LMD1				e		12 00 24.4	
SHME	Shamm	1.57	113	ePg	Pg	11 59 57.7	+0.8
GENO	Geno	1.62	64	ePn	Pn	11 59 56.7	+1.1
GENO				e		12 00 29.8	
BANOM	Banah	1.75	115	P	Pg	12 00 00.4	0.0
	SNR=12						
BANOM				S	Sg	12 00 24.6	+1.4
BANOM	Banah	1.75	115	ePn	Pg	12 00 00.4	0.0
MSFE	Esma-Masafi	1.97	132	ePn	Pg	12 00 03.9	-0.6
NAZ	Nazwa, Dubai	1.97	149	P	Pg	12 00 08.2	+3.6
NAZ	Nazwa, Dubai	1.97	149	ePn	Pg	12 00 05.8	+1.2
JHRM	Jahrom	2.00	335	ePn	Pg	12 00 02.0	+1.2
MDH	Madha	2.10	131	P	Pb	12 00 05.1	+0.2
MDH	Madha	2.10	131	ePn	Pb	12 00 05.2	+0.2
FAQ	Al Faqa, Dubai	2.15	154	P	Pg	12 00 16.0	+7.9
NIAN	Nian	2.22	66	ePn	Pn	12 00 04.7	+1.0
NIAN				e		12 00 49.8	
UOSS	Minazif	2.29	139	P	Pb	12 00 09.1	+0.8
UOSS	Minazif	2.29	139	ePn	Pb	12 00 08.7	+0.4
HATD	Hatta, Dubai	2.34	142	ePn	Pg	12 00 10.6	-1.1
ASHO	Ashiyiah	2.42	145	P	Pb	12 00 11.6	+1.1
	SNR=11						
ASHO	Ashiyiah	2.42	145	ePn	Pb	12 00 11.5	+1.0
KHNJ	Kahnooj	3.08	65	ePn	Pn	12 00 16.4	+0.8
SOHO	SOHO	3.11	144	P	Pn	12 00 16.2	+0.2
SOHO	SOHO	3.11	144	ePn	Pb	12 00 20.5	-1.8
NGRK	Negar Kerman	3.52	33	ePn	Pn	12 00 22.3	+0.3
TVBK	TV Kerman	3.83	30	ePn	Pn	12 00 27.2	+1.1
TVBK				e		12 00 49.0	
IKAZ	Kazeroun	3.90	323	ePn	Pn	12 00 28.4	+1.3
IKAZ				e		12 01 20.9	
UMZA	Um Al Zommool	3.99	172	ePn	Pb	12 00 33.5	-3.8
KHGB	Koh Gabri	4.05	24	ePn	Pn	12 00 30.6	+1.5
KHGB				e		12 01 26.5	
CHMN	Cheshme madani	4.12	39	ePn	Pn	12 00 32.5	+2.3
CHMN				e		12 00 33.8	
IMEH	Mehriz	4.69	1	ePn	Pn	12 00 39.1	+1.2
IBAF	Bafgh	4.97	10	ePn	Pn	12 00 42.4	+0.7
KLNJ	Kolanjah	5.02	330	ePn	Pn	12 00 48.1	+1.2
ISAD	Sadrabad	5.26	352	ePn	Pn	12 00 48.0	+2.2
IRAM	Ramesheh	5.44	340	ePn	Pn	12 00 48.7	+0.5
BRTR	Keskin Array B	21.73	312	P	P	12 04 18.1	-0.4
	0.8nm,0.9s,baz=122,slow=12,SNR=4.4						
MKAR	Makanchi Array	29.71	40	P	P	12 05 32.6	-0.4
	0.3nm,0.7s,baz=224,slow=9.7,SNR=3.7						
ZALV	Zalesovo Beam	35.21	31	P	P	12 06 19.9	-1.2
	1.4nm,0.5s,baz=242,slow=9.5,SNR=6.4						
FINES	FINESS Array B	39.67	339	P	P	12 06 58.3	-0.5
	0.7nm,0.7s,baz=140,slow=9.2,SNR=3.7						
SONM	Songino Array	45.38	48	P	P	12 07 44.4	-1.2
	0.2nm,0.6s,baz=263,slow=8.6,SNR=3.3						
TORD	Torodi Ar. Bea	51.15	266	P	P	12 08 30.8	+0.5
	0.2nm,0.5s,baz=63,slow=9.9,SNR=2.2						

NIED 09 12:08:00, 31.80N×141.90E, h5km, Mw3.9 Best double couple: M0 7.11000×10^14 NP1:φs358.00000°, δ51.00000°, λ79.00000° NP2:φs194.00000°, δ40.00000°, λ103.00000°.
IDC 09 12:08:01.7±0.9, 31.71N×141.97E, h0km, mb3.8/11, mb1 3.9/15, mb1mx3.8/60, mbtmp3.8/15, ML3.4/4, MS2.9/2, Ms1 3.0/2, ms1mx2.6/42, Error ellipse: s-maj=25.6km s-min=16.8km az=74.0
NEIC 09 12:08:04.6±2.2, 31.7N±0.1×141.9E±0.1, h17km±2km, mb4.5/20, Error ellipse: s-maj=15.9km s-min=13.7km az=127.0
JMA 09 12:08:06.2±0.5, 31.84N×141.92E, h62km, M3.8
ISC 09 12:08:06.7±0.7, 31.79N±0.07×141.93E±0.08, h29km, n62, σ1.50/67, mb4.2/19, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.96	291	P	Pn	12 08 37.4	-0.5
JHJ2	Mitsune	2.22	307	Pn	Pn	12 08 39.9	-1.6
BSO1	Boso 1	2.96	345	P	Pn	12 08 50.9	-0.3
BSO3	Boso 3	3.23	339	P	Pn	12 08 56.4	+1.3
BSO4	Boso 4	3.46	338	P	Pn	12 08 59.1	+0.7
JOD2	Odawara 2	4.20	326	P	Pn	12 09 07.2	-1.5
JHU	Hanno	4.61	332	P	Pn	12 09 14.2	-0.2
JHU				eS	Sn	12 10 05.6	-1.4
JYT	Yasato	4.65	342	P	Pn	12 09 15.4	+0.4
JRY	Ryogami san	4.91	330	P	Pn	12 09 18.8	+0.3
JRY				eS	Sn	12 10 14.7	+0.3
JHO	Hitachi	4.94	347	P	Pn	12 09 17.5	-1.4
JHO				eS	Sn	12 10 11.8	-3.2
JAG	Ashikaga	5.06	337	P	Pn	12 09 20.1	-0.4
JAG				eS	Sn	12 10 17.1	-0.9
INU	Inuyama	5.42	312	Pn	Pn	12 09 30.2	+4.7
MJAR	Matsushiro Arr	5.65	328	Pn	Pn	12 09 28.6	-0.1
	0.4nm,0.3s,baz=145,slow=12,SNR=21						
MJAR				Sn	Sn	12 10 33.5	+0.8
	0.2nm,0.3s,baz=105,slow=24,SNR=2.9						
MJAR				LR	LR	12 11 51.8	
	comp=Z,100nm,21.5s,baz=185,slow=40						
MJAR	Matsushiro Arr	5.65	328		Pn	12 09 29.5	+0.8
MAJO	Matsushiro	5.66	328		Pn	12 09 30.4	+1.6
MJB9	Matsu-Tunnel	5.66	328		Pn	12 09 30.4	+1.6
JMK	Ichinoseki	7.17	356	P	Pn	12 09 48.5	-1.0
JMK				eS	Sn	12 11 04.8	-5.1
ASAJ	Asahikawa	12.31	2	Pn	Pn	12 10 58.1	-1.9
	0.7nm,0.3s,baz=252,slow=9.0,SNR=12						
JKA	Kamikawa-asahi	12.31	2		Pn	12 10 58.1	-1.9
KSRS	Korea Array	12.84	300	Pn	Pn	12 11 07.6	+0.5
	0.1nm,0.3s,baz=107,slow=13,SNR=3.1						
YOJ	Yonaguni jima	18.20	251	Pn	Pn	12 12 14.3	-2.9
KLR	Kul'dur	19.03	339	P	P	12 12 25.7	-0.5
	0.2nm,0.3s,baz=235,slow=5.1,SNR=5.2						
YULB	Yu-li	20.09	251	P	P	12 12 36.0	-2.0
YULB				IAmb	IAmb	12 12 37.0	
	comp=Z,65nm,1.5s						
TPUB	Ta-pu	20.67	251	P	P	12 12 43.8	-0.5
ULN	Ulaanbaatar	30.91	311	P	P	12 14 23.0	+2.2
SONM	Songino Array	31.32	311	P	P	12 14 25.9	+1.5
	comp=Z,1.1nm,0.9s,baz=115,slow=8.7,SNR=7.8						
SONM	Songino Array	31.32	311	P	P	12 14 26.3	+1.8
CMAR	Chiang Mai Arr	40.87	262	LR	LR	12 33 01.7	
	comp=Z,17nm,18.2s,baz=264,slow=37						
ZALV	Zalesovo Beam	45.88	316	P	P	12 16 24.9	-1.3
	comp=Z,0.3nm,0.3s,baz=101,slow=9.7,SNR=3.1						
ZALV	Zalesovo Beam	45.88	316	P	P	12 16 25.5	-0.7
MK31	Makanchi Array	47.42	306	P	P	12 16 38.3	-0.1
MK31				IAmb	IAmb	12 16 39.2	
	comp=Z,3.0nm,1.2s						
MKAR	Makanchi Array	47.42	306	P	P	12 16 38.4	0.0
	comp=Z,1.5nm,0.8s,baz=88,slow=9.4,SNR=14						
MKAR	Makanchi Array	47.42	306	P	P	12 16 38.3	-0.1
MAKZ	Makanchi	47.63	306	P	P	12 16 40.2	+0.1
MAKZ				IAmb	IAmb	12 16 49.8	
	comp=Z,2.4nm,1.1s						
KURK	Kurchatov	49.62	312	P	P	12 16 55.2	-0.1
KURK				IAmb	IAmb	12 16 55.8	
	comp=Z,5.7nm,0.9s						
KURBB	Kurchatov Arra	49.68	312	P	P	12 16 55.0	-0.7
	comp=Z,1.7nm,0.6s,baz=88,slow=6.8,SNR=19						
WB0	Warramunga Arr	51.77	189	P	P	12 17 09.9	-1.9
WB0				IAmb	IAmb	12 17 28.6	
	comp=Z,14nm,1.4s						
SUA	Susitna One	51.86	34	P	P	12 17 14.0	+1.8
WRAB	Tennant Creek	51.94	189	P	P	12 17 12.0	-1.0
WRAB				IAmb	IAmb	12 17 12.5	
	comp=Z,6.9nm,1.0s						
WR0	Warramunga Arr	51.94	189	P	P	12 17 11.3	-1.7
WR0				IAmb	IAmb	12 17 12.6	
	comp=Z,4.1nm,0.9s						
WB2	Warramunga Arr	51.95	189	P	P	12 17 11.9	-1.2
WRA	Warramunga Arr	51.95	189	P	P	12 17 11.7	-1.4
	comp=Z,2.1nm,0.7s,baz=6.8,slow=7.8,SNR=22						
WRA	Warramunga Arr	51.95	189	P	P	12 17 11.9	-1.2
ILAR	Eielson Array	53.74	30	P	P	12 17 26.0	+0.1
	comp=Z,0.5nm,0.9s,baz=266,slow=5.2,SNR=4.0						
ILAR	Eielson Array	53.74	30	P	P	12 17 26.7	+0.8
BVAR	Borovoye Array	54.50	315	P	P	12 17 32.0	+0.4
	comp=Z,0.8nm,0.7s,baz=80,slow=11,SNR=3.6						
SCRK	Sand Creek	55.00	31	P	P	12 17 35.4	+0.2
AS31	Alice Springs	55.68	189	P	P	12 17 40.2	-0.2
ASAR	Alice Springs	55.68	189	P	P	12 17 39.1	-1.3
	comp=Z,0.6nm,0.6s,baz=12,slow=8.0,SNR=7.1						
ASAR	Alice Springs	55.68	189	P	P	12 17 38.7	-1.7
KKAR	Karatay Array	56.24	303	P	P	12 17 44.4	+0.1
INK	Inuvik	58.88	26	P	P	12 18 02.3	-0.1
	comp=Z,1.0nm,1.0s,baz=231,slow=6.5,SNR=2.6						
INK	Inuvik	58.88	26	P	P	12 18 02.2	-0.1
INK				IAmb	IAmb	12 18 08.3	
	comp=Z,6.3nm,1.5s						
ABKAR	Akbulak array	61.72	313	P	P	12 18 21.2	-0.9
ARCES	ARCESS Array B	69.05	340	P	P	12 19 11.4	+2.1
FINES	FINESS Array B	73.66	333	P	P	12 19 37.7	+0.5
	comp=Z,3.3nm,1.0s,baz=42,slow=4.3,SNR=4.0						
FINES	FINESS Array B	73.66	333	P	P	12 19 37.6	+0.4
NV11	Mina Array Sit	77.91	52	P	P	12 20 03.7	+1.6
REDW	Red Top Meadow	79.93	45	P	P	12 20 13.1	-0.1
REDW				IAmb	IAmb	12 20 23.8	
	comp=Z,8.1nm,1.1s						
RAYN	Ar Rayn	83.08	293	P	P	12 20 31.2	+1.2
RAYN				IAmb	IAmb	12 20 31.6	
	comp=Z,2.5nm,0.6s						
TXAR	Lajitas Array	92.96	53	P	P	12 21 17.7	+0.1
	comp=Z,0.2nm,0.6s,baz=287,slow=2.2,SNR=4.3						
TXAR	Lajitas Array	92.96	53	P	P	12 21 19.2	+1.6

VAO 09 12:12:11.2±3.3, 16.93S×71.08W, h172km±7km, mb4.1
NEIC 09 12:12:20.9±3.0, 17.42S±0.06×69.9W±0.1, h141km±7km, mb4.3/11, Error ellipse: s-maj=15.0km s-min=8.1km az=104.0
IDC 09 12:12:22.6±1.4, 17.42S×69.79W, h138km±10km, mb4.0/7, mb1 4.0/11, mb1mx3.7/43, mbtmp4.5/11, Error ellipse: s-maj=18.6km s-min=14.4km az=117.0
GUC 09 12:12:22.9±0.6, 17.52S×69.84W, h135km±4km, ML3.6
ISC 09 12:12:21.1±0.7, 17.47S±0.04×69.94W±0.06, h136km±6km, n63, σ1.76/78, mb4.3/11, 2D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.95	154	i P	Pn	12 12 45.9	+1.1
PB16				i S	Sn	12 13 03.5	+0.7
PB16				IAML		12 13 05.4	
	comp=E,467nm,0.5s						
AP01	Chacalluta	0.97	203	⇓i P	Pn	12 12 45.3	+1.0
AP01				i S	Sn	12 13 02.7	+0.8
MNMC	Minye Minye	1.68	169	i P	Pn	12 12 53.2	+1.2
MNMC				i S	Sn	12 13 16.3	+0.7
MNMC				IAML		12 13 20.4	
	comp=E,1μm,0.2s						
MNMC	Minye Minye	1.68	169		Pn	12 12 53.1	+1.2
MNMC				Sn	Sn	12 13 16.1	+0.5
LPAZ	La Paz	2.10	56	P	Pn	12 12 57.9	+0.7
	comp=E,28nm,0.3s,baz=250,slow=7.7,SNR=392						
LPAZ				S	Sn	12 13 24.0	-0.8
	comp=E,3.6nm,0.3s,baz=319,slow=11,SNR=6.9						
LPAZ	La Paz	2.10	56	eP	Pn	12 12 57.8	+0.7
LPAZ	La Paz	2.10	56		Pn	12 12 57.7	+0.5
LPAZ				Sn	Sn	12 13 22.6	-2.1
PSGC	Pisagua	2.12	185	i P	Pn	12 12 57.4	+0.4
PSGC				i S	Sn	12 13 24.4	-0.1
PB11	IPOC Station P	2.29	173	i P	Pn	12 12 59.9	+0.8
PB11				i S	Sn	12 13 28.6	+0.2
PB11				IAML		12 13 30.2	
	comp=N,371nm,0.4s						
PB11	IPOC Station P	2.29	173		Pn	12 12 59.8	+0.6
PB11				Sn	Sn	12 13 28.4	+0.1
GO01	Chusmiza	2.30	162		Pn	12 13 00.8	+1.3
PB08	IPOC Station P	2.76	164	⇓i P	Pn	12 13 06.4	+1.2
PB08				i S	Sn	12 13 39.6	+0.4
PB08				IAML		12 13 40.8	
	comp=E,336nm,0.4s						
PB01	IPOC Station P	3.58	173		Pn	12 13 15.2	-0.4
PB01				Sn	Sn	12 13 54.8	-3.0
PB04	IPOC Station P	4.84	182		Pn	12 13 32.0	-0.3
LVC	Limon Verde	5.20	169	P	Pn	12 13 38.2	+0.8
	comp=E,12nm,0.3s,baz=6.3,slow=9.3,SNR=94						
LVC				S	Sn	12 14 32.7	-4.0
	comp=E,19nm,0.3s,baz=270,slow=20,SNR=19						
LVC	Limon Verde	5.20	169	eP	Pn	12 13 38.5	+1.1
LVC	Limon Verde	5.20	169		Pn	12 13 38.3	+1.0
LVC				Sn	Sn	12 14 33.3	-3.4
PB10	IPOC Station P	6.04	185		Pn	12 13 46.9	-1.3
PB10				Sn	Sn	12 14 51.6	-4.6
GO02	Mina Guanaco	7.66	178		Pn	12 14 08.9	-1.3
NNA	Nana	8.62	308	P	Pn	12 14 23.7	+0.8
	comp=E,1.9nm,0.3s,baz=143,slow=10,SNR=5.0						
NNA				S	Sn	12 15 55.6	-3.0
	comp=E,1.4nm,0.3s,baz=205,slow=17,SNR=3.4						
NNA	Nana	8.62	308		Pn	12 14 22.8	-0.1
SIV	San Ignacio	8.63	81	P	Pn	12 14 20.7	-2.3
	comp=E,12nm,0.3s,baz=275,slow=12,SNR=191						
SAML	Samuel	10.72	39		Pn	12 14 47.8	-3.3
SALV	Santo Antonio	13.74	86	eP	Pn	12 15 32.3	+1.9
CFA	Coronel Fontan	14.16	174	P	P	12 15 37.3	-1.7
	comp=E,1.6nm,0.3s,baz=2.4,slow=11,SNR=25						
CFA				S	Sn	12 18 04.6	-7.6
	comp=E,0.1nm,0.3s,baz=342,slow=20,SNR=1.9						
PP1B	Ponte de Pedra	14.37	93	eP	P	12 15 41.4	0.0
CLDB	Colider	15.20	66	eP	Pn	12 15 47.6	-1.2
PTGB	Pitanga	18.16	116	eP	P	12 16 23.5	+0.2
FRTB	Fartura	19.97	110	eP	P	12 16 43.9	+1.0
PLTB	Pedras Altas	20.53	137	eP	P	12 16 48.5	-0.3
IPMB	Ipameri, GO	20.71	95	eP	P	12 16 49.1	-1.8
BDFB	Brasilia	21.10	88	P	P	12 16 55.6	+0.4
	comp=E,5.3nm,0.5s,baz=264,slow=11,SNR=9.5						
BDFB	Brasilia	21.10	88	P	P	12 16 55.2	+0.1
BDFB				IAmb	IAmb	12 16 56.7	
	comp=Z,7.4nm,0.7s						
SPB	Sao Paulo	21.93	110	eP	P	12 17 02.0	-1.8
PLCA	Paso Flores	23.19	181	P	P	12 17 18.5	+2.7
	comp=Z,4.0nm,0.7s,baz=221,slow=11,SNR=16						
PLCA	Paso Flores	23.19	181	P	P	12 17 18.6	+2.7
RUSC	La Rusia	23.42	352	P	P	12 17 19.2	+0.5
CBYP	Canovanas	35.75	7	P	P	12 19 05.1	-1.9
TRQ	Mont Tremblant	63.53	356	P	P	12 22 35.4	-1.4
SNAA	Sanae	66.39	161	P	P	12 22 57.1	+2.0
SNAA				IAmb	IAmb	12 23 12.4	
	comp=Z,5.0nm,1.4s						
LIC	Lamto	68.28	76	eP	P	12 23 07.2	-0.7
	comp=Z,4.8nm,0.4s						
TIC	Toumodi	68.44	75	eP	P	12 23 08.3	-0.6
KIC	Kosan Boka	68.59	76	eP	P	12 23 09.5	-0.4
	comp=Z,17nm,0.6s						
DBIC	Dimbokro	68.60	75	P	P	12 23 09.7	-0.2
	comp=Z,12nm,0.6s,baz=228,slow=6.3,SNR=32						
DBIC	Dimbokro	68.60	75	P	P	12 23 09.5	-0.4
ULM	Lac du Bonnet	71.20	343	P	P	12 23 26.5	+1.5
	comp=Z,1.7nm,0.3s,baz=140,slow=8.8,SNR=5.4						
ULM	Lac du Bonnet	71.20	343	P	P	12 23 25.6	+0.6
ULM				IAmb	IAmb	12 23 26.9	
	comp=Z,2.9nm,0.5s						
QSPA	South Pole Qui	72.70	180	P	P	12 23 37.2	+3.2
TOA0	Torodi Ar. Sit	76.97	72	P	P	12 23 58.9	-0.5
TOA0				IAmb	IAmb	12 23 59.8	
	comp=Z,6.5nm,0.8s						
TORD	Torodi Ar. Bea	76.97	72	P	P	12 23 59.0	-0.3
	comp=Z,6.6nm,0.6s,baz=252,slow=5.2,SNR=36						
TORD	Torodi Ar. Bea	76.97	72	P	P	12 23 58.2	-1.1
FCC	Fort Churchill	78.51	347	P	P	12 24 01.6	-5.2
ESDC	Sonseca Array	83.68	45	P	P	12 24 35.5	+0.7
	comp=Z,0.7nm,0.6s,baz=245,slow=5.2,SNR=3.7						
ESDC	Sonseca Array	83.68	45	P	P	12 24 33.8	-1.0
YKA	Yellowknife Ar	87.08	341	P	P	12 24 52.0	+1.0
	comp=Z,0.6nm,0.6s,baz=133,slow=4.7,SNR=9.4						
ASAR	Alice Springs	132.94	210	PKP	PKiKP	12 31 22.9	+0.5
	comp=Z,0.2nm,0.7s,baz=128,slow=0.9,SNR=3.6						
ZALV	Zalesovo Beam	138.68	22	PKPdf	PKPdf	12 31 28.1	-2.6
MKAR	Makanchi Array	142.85	32	PKP	PKPdf	12 31 39.2	+0.7
	comp=Z,0.1nm,0.5s,baz=338,slow=3.1,SNR=2.2						
MKAR	Makanchi Array	142.85	32		PKPdf	12 31 38.9	+0.3
KSH	Kashi	143.19	46	PKP	PKPdf	12 31 40.7	+1.2
KSH				pPKP	pPKPdf	12 32 09.1	-8.3
KSH				PP	PP	12 34 53.0	+1.8
SONM	Songino Array	149.57	5	PKPbc	PKiKP	12 31 56.8	+1.2
	comp=Z,0.3nm,0.6s,baz=331,slow=1.2,SNR=5.0						
SONM	Songino Array	149.57	5	PKPbc	PKiKP	12 31 57.0	+1.3
LZH	Lanzhou	160.66	15	ePKP	PKPdf	12 32 05.0	-0.4
LZH				pPKP	pPKPdf	12 32 30.0	-13
LZH				sPKP		12 32 40.7	

ATH 09 12:29:26.3, 38.21N×20.41E, h9km±1km, ML2.9/5, Error ellipse: s-maj=1.7km s-min=0.9km az=240.0
THE 09 12:29:26.3, 38.22N×20.41E, h10km±1km, ML2.9/4, Error ellipse: s-maj=1.3km s-min=0.5km az=252.0
ISC 09 12:29:26.3±1.0, 38.21N±0.02×20.43E±0.04, h10km±4km, n30, σ0.49/48, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.01	137	P	Pg	12 29 28.0	+0.1
LXRA	Lixouri, Kepha	0.01	141	P	Pg	12 29 28.0	+0.1
LXRA				S	Sg	12 29 29.5	+0.4
CHV1	Chavriata, Kef	0.04	233	P	Pg	12 29 28.0	-0.1
CHV1				S	Sg	12 29 29.6	+0.1
KEF4	Livadi, Kephal	0.05	358	P	Pg	12 29 28.1	-0.1
ARGA	Argostoli. Kep	0.05	129	P	Pg	12 29 28.3	+0.1
ARGA				S	Sg	12 29 29.5	-0.1
ARG2	Argostoli	0.06	124	P	Pg	12 29 28.4	+0.1
ARG2				S	Sg	12 29 30.1	+0.4
KEF3	Kipouria, Keph	0.06	263	P	Pg	12 29 28.1	-0.2
KEF3				S	Sg	12 29 29.7	-0.1
KEF2	Argostoli. Kep	0.07	133	P	Pg	12 29 28.5	+0.2
KEF2				S	Sg	12 29 30.1	+0.3
KEF1	Kardakata, Kep	0.08	27	P	Pg	12 29 28.5	0.0
KEF1				S	Sg	12 29 30.1	0.0
VLS	Valsamata	0.13	104	P	Pg	12 29 29.4	+0.1
VLS				S	Sg	12 29 31.9	+0.4
	18μm,0.1s						
VLS	Valsamata	0.13	104	P	Pg	12 29 29.4	+0.1
VLS				S	Sg	12 29 31.9	+0.4
VLS				AML	AML	12 29 32.1	
	comp=E,44083μm,0.1s						
VLS				AML	AML	12 29 32.4	
	comp=N,23842μm,0.1s						
VSK1	VASILIKIADES	0.23	28	P	Pg	12 29 31.0	+0.1
VSK1				S	Sg	12 29 34.9	+0.8
	comp=N,13μm,0.3s						
KONA	Konidatara, Ke	0.24	28	P	Pg	12 29 31.2	0.0
KONA				S	Sg	12 29 35.3	+0.7
VLMS	Volimes, Zakyn	0.38	151	P	Pg	12 29 33.8	0.0
VLMS				S	Sg	12 29 40.2	+1.4
VLMS				AML	AML	12 29 41.1	
	comp=E,9977μm,0.2s						
VLMS				AML	AML	12 29 43.1	
	comp=N,7378μm,0.2s						
EVGI	Lefkada island	0.45	24	P	Pg	12 29 34.9	-0.2
EVGI				S	Sb	12 29 42.3	-0.8
EVGI	Lefkada island	0.45	24	P	Pg	12 29 34.9	-0.2
EVGI				S	Sg	12 29 41.9	+0.9
MGNA	Meganis	0.53	33	P	Pg	12 29 36.1	-0.4
MGNA				AML	AML	12 29 44.9	
	comp=E,4119μm,0.4s						
MGNA				AML	AML	12 29 45.0	
	comp=N,3159μm,0.4s						

LKD2 Lefkada island 0.60 17 P Pg 12 29 38.0 0.0
LKD2 S Sg 12 29 46.0 0.0
comp=N,765nm,0.7s
LKD2 Lefkada island 0.60 17 P Pg 12 29 37.8 -0.3
LKD2 S Sg 12 29 46.1 0.0
LKD2 AML AML 12 29 54.7
comp=N,1348μm,0.4s
LKD2 AML AML 12 29 55.7
comp=E,1601μm,0.7s
KRI1 kERI 0.63 150 P Pg 12 29 38.0 -0.4
KRI1 S Sb 12 29 48.5 +0.3
TSLK Tsoukalades, L 0.64 16 P Pg 12 29 38.2 -0.5
TSLK Tsoukalades, L 0.64 16 P Pg 12 29 38.2 -0.5
RLS Riolos of Patr 0.83 100 P Pg 12 29 42.0 -0.3
RLS Riolos of Patr 0.83 100 P Pg 12 29 42.1 -0.2
RLS AML AML 12 29 57.7
comp=E,702μm,0.4s
RLS AML AML 12 30 01.7
comp=N,534μm,0.3s
PVO Paravola 0.95 64 P Pg 12 29 44.5 -0.1
TRIZ Trizonia 1.30 83 P Pn 12 29 49.7 -0.9
IGT Igoumenitsa 1.32 357 P Pg 12 29 53.3 +1.6
IGT Igoumenitsa 1.32 357 P Pg 12 29 52.1 +0.4
KLV Kalavryta, Ach 1.37 96 P Pn 12 29 51.5 -0.1
KLV S Sn 12 30 10.2 +0.4
comp=N,132nm,0.7s
AGG Agios Georgios 1.70 61 P Pg 12 29 58.8 -0.1

IDC 09 12:33:16.4±3.5, 4.92S×145.65E, h206km±44km, mb3.1/5, mb1 3.4/7, mb1mx3.2/28, mbtmp3.7/7, Error ellipse: s-maj=44.0km s-min=21.8km az=124.0, Near north coast of New Guinea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 4.70 162 P Pn 12 34 28.2 +1.0
2.4nm,0.3s,baz=29,slow=4.8,SNR=10
PMG S S 12 35 23.0 +0.3
2.3nm,0.3s,baz=26,slow=20,SNR=14
WRA Warramunga Arr 18.56 215 P P 12 37 18.1 0.0
0.6nm,0.3s,baz=38,slow=9.9,SNR=45
ASAR Alice Springs 21.81 210 P P 12 37 53.0 +0.5
1.2nm,0.5s,baz=45,slow=7.3,SNR=58
FITZ Fitzroy Crossi 23.54 235 P P 12 38 07.8 -0.6
2.7nm,0.6s,baz=51,slow=13,SNR=4.4
CMAR Chiang Mai Arr 51.56 298 P P 12 42 02.0 0.0
0.4nm,0.4s,baz=120,slow=5.5,SNR=4.1
MKAR Makanchi Array 75.82 321 P P 12 44 39.9 -0.1
0.4nm,0.9s,baz=97,slow=4.9,SNR=3.1
ILAR Eielson Array 85.03 23 P P 12 45 28.5 0.0
0.3nm,0.8s,baz=246,slow=5.2,SNR=4.5

IDC 09 12:43:40.8±2.7, 0.55S×123.36E, h24km±16km, mb4.2/19, mb1 4.3/21, mb1mx4.1/46, mbtmp4.3/21, ML4.1/2, MS3.7/7, Ms1 3.7/7, ms1mx3.3/32, Error ellipse: s-maj=18.2km s-min=12.7km az=62.0
NEIC 09 12:43:43.4±2.9, 0.73S±0.07×123.36E±0.04, h46km±6km, mb4.7/38, Error ellipse: s-maj=9.8km s-min=5.6km az=180.0
DJA 09 12:43:44.2±0.2, 1°S±3°×12°3E±°, h43km±5km, M4.7/24, mb4.8/24, mB5.2/12, MLv4.8/18, Mw(mB)4.5/12
KLM 09 12:43:44.0, 0.82S×123.63E, h61km, mb4.7
ISC 09 12:43:44.2±0.3, 0.65S±0.04×123.41E±0.04, h54km, n152, σ1§79/160, mb4.5/36, MS3.7/5, 1C, Minahassa Peninsula, Sulawesi

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LUWI Luwuk 0.75 238 P Pn 12 43 54.6 -4.1
LUWI Luwuk 0.75 238 Pn 12 43 54.9 -3.8
LUWI Sn 12 44 04.6 -4.7
KMSI Cibinong 1.34 25 P Pn 12 44 04.5 -2.1
APSI Ampana 1.78 261 P Pn 12 44 12.5 0.0
MRSI Marisa 1.84 307 P Pn 12 44 10.3 -3.1
SANI Sanana 2.93 118 P Pn 12 44 26.5 -1.9
KDI Kendari 3.38 193 P Pn 12 44 33.4 -1.1
MPSI Mapaga 3.64 286 P Pn 12 44 39.3 +1.2
LBMI Labuha 4.09 90 P Pn 12 44 43.5 -0.8
TNTI Ternate 4.20 70 P Pn 12 44 48.1 +2.3
TNTI Ternate 4.20 70 Pn 12 44 45.7 -0.1
NLAI Namlea 4.50 125 P Pn 12 44 50.0 +0.1
BBSI Bau Bau 4.88 190 P Pn 12 44 53.8 -1.3
SPSI Sidrap Palu 4.91 228 P Pn 12 44 55.0 -0.4
BNSI Bone 4.98 221 P Pn 12 44 56.8 +0.4
AAI Ambon 5.66 122 P Pn 12 44 59.9 -5.9
KAPI Kappang 5.67 220 Pn Pn 12 45 06.0 0.0
14nm,0.3s,baz=51,slow=3.1,SNR=52
KAPI Sn Sn 12 46 09.0 -0.7
8.6nm,0.3s,baz=104,slow=5.5,SNR=7.2
KAPI LR LR 12 47 42.6
comp=Z,741nm,18.9s,baz=54,slow=42
KAPI Kappang 5.67 220 Pn 12 45 05.8 -0.1
BKSI Bulukumba 5.69 215 P Pn 12 45 06.2 +0.1
0.5nm930nm68nm,0.6s
MSAI Masohi 6.13 116 P Pn 12 45 13.9 +1.6
0.2nm18nm,0.8s
SMKI Samarinda 6.20 272 P Pn 12 45 11.1 -2.1
1.1nm4μm138nm,0.4s
BKB Balikpapan 6.54 265 P Pn 12 45 19.2 +1.4
BKB Balikpapan 6.54 265 Pn 12 45 18.6 +0.8
DDMP Don Marcelino, 7.09 19 eP Pn 12 45 25.9 +0.5
DDMP eS Sn 12 46 44.4 -0.3
SKMP Bagumbayan, Su 7.21 9 eP Pn 12 45 24.8 -2.2
SKMP eS Sn 12 46 41.9 -5.7
BNDI Bandanaira 7.55 121 P Pn 12 45 31.7 0.0
0.9nm3μm204nm,1.0s
KBKI Kotabaru 7.70 250 P Pn 12 45 33.5 -0.3
0.2nm368nm31nm,0.6s
SWI Sorong 7.86 92 P Pn 12 45 36.5 +0.6
0.2nm41nm,0.9s
CTBH Cotabato--PC H 7.86 6 ⇑iP Pn 12 45 35.8 -0.1
SIJI Sorong 7.86 92 Pn Pn 12 45 35.5 -0.6
1.1nm,0.3s,baz=270,slow=16,SNR=5.5
SIJI Sn Sn 12 47 03.6 0.0
0.2nm,0.3s,baz=210,slow=20,SNR=1.9
DAV Davao City (W) 7.96 16 LR LR 12 48 38.2
comp=Z,426nm,21.9s,baz=214,slow=38
DAV Davao City (W) 7.96 16 Pn Pn 12 45 40.9 +3.5
MATI Mati 8.06 21 eP Pn 12 45 40.8 +2.1
MATI eS Sn 12 47 09.5 +1.0
PAGZ Pagadian 8.44 360 eP Pn 12 45 41.8 -2.0
PAGZ eS Sn 12 47 09.9 -7.8
BUKP Musuan 8.63 11 eP Pn 12 45 46.8 +0.2
BUKP eS Sn 12 47 19.5 -3.0
SPMM Sapulut 8.74 308 P Pn 12 45 54.0 +5.9
SOEI Soe 9.09 175 P Pn 12 45 51.5 -1.4
5μm147nm,1.3s
FAKI Fak Fak 9.12 104 P Sn 12 47 30.3 -4.3
FAKI Fak Fak 9.12 104 Pn 12 45 51.8 -1.5
KKM Kota Kinabalu 9.78 313 Pn 12 46 05.6 +3.2
PLAI Plampang 9.87 214 P Pn 12 46 20.8 +17
SAUI Saumlaki 10.72 133 P Pn 12 46 16.2 +1.0
64nm,1.0s
SAUI Saumlaki 10.72 133 Pn 12 46 16.4 +1.2
SBUM Sibu 11.60 285 Pn 12 46 28.9 +1.7
MTN Manton Dam 14.34 148 P P 12 47 08.3 -1.7
WOJI Wonogiri, Jawa 14.35 240 P Pn 12 47 02.9 -1.6
124nm,0.7s
UGM Wanagama 14.73 240 P P 12 47 23.5 +9.1
KPJI Karang Pucung 15.89 245 P P 12 47 30.4 +3.2
PMBI Palembang 18.76 263 P Pn 12 48 00.8 +0.9
DLV T Lat 19.39 311 P Pn 12 48 08.1 +0.4
MDSI Maura Dua 19.58 258 P Pn 12 48 10.3 +0.6
MYKOM Kota Tinggi 19.70 277 P Pn 12 48 10.7 -0.5
MYKOM IAmb IAmb 12 48 12.5
comp=Z,42nm,0.7s
MYKOM Kota Tinggi 19.70 277 P P 12 48 12.0 +0.8
JRMM Jerantut 21.39 282 P P 12 48 30.0 +2.4
WB0 Warramunga Arr 21.84 151 P P 12 48 31.9 -0.4
WB0 IAmb IAmb 12 48 39.6
comp=Z,34nm,0.9s
WRAB Tennant Creek 21.96 151 P P 12 48 33.9 +0.3
WRAB IAmb IAmb 12 48 49.5
comp=Z,31nm,1.4s
WRA Warramunga Arr 21.96 152 P P 12 48 33.4 -0.3
comp=Z,14nm,0.8s,baz=326,slow=11,SNR=27
WRA ScP ScP 12 56 08.3 +4.4
comp=Z,0.8nm,0.8s,baz=320,slow=2.5,SNR=4.9
WRA Warramunga Arr 21.96 152 P P 12 48 34.6 +1.0
WB2 Warramunga Arr 21.97 151 P P 12 48 33.0 -0.7
WB2 IAmb IAmb 12 48 49.5
comp=Z,33nm,1.2s
WR0 Warramunga Arr 22.07 151 P P 12 48 34.2 -0.6
WR0 IAmb IAmb 12 48 49.6
comp=Z,37nm,1.1s
BKNI Bangkinang 22.39 272 P P 12 48 39.3 +1.0
IPM Ipoh 22.93 283 P P 12 48 44.0 -0.1
IPM IAmb IAmb 12 48 47.0
comp=Z,25nm,0.7s
IPM Ipoh 22.93 283 P P 12 48 45.0 +0.9
PDSI Padang 22.94 269 P P 12 48 43.7 -0.5
comp=Z,26nm,0.7s
KULM Kulim 23.48 285 P P 12 48 48.5 -0.8
KULM Kulim 23.48 285 P P 12 48 51.0 +1.7
UBPT Khong Chiam 23.77 312 P P 12 48 52.4 +0.5
RPSI Rantau Prapat 24.70 278 P P 12 49 00.8 +0.3
RPSI IAmb IAmb 12 49 02.2
comp=Z,20nm,1.1s
AS31 Alice Springs 25.05 157 P P 12 49 03.2 -0.4
ASAR Alice Springs 25.05 157 P P 12 49 04.9 +1.3
comp=Z,6.8nm,0.8s,baz=328,slow=6.7,SNR=36
ASAR PcP PcP 12 52 37.3 -0.1
comp=Z,1.2nm,0.7s,baz=205,slow=1.9,SNR=3.1
ASAR ScP ScP 12 56 16.1 +4.0
comp=Z,0.7nm,0.8s,baz=350,slow=3.4,SNR=4.2
ASAR LR LR 12 59 48.7
comp=Z,127nm,18.0s,baz=292,slow=38
ASAR Alice Springs 25.05 157 P P 12 49 04.5 +0.8
ASAR PcP 12 52 38.4 +0.9
PMG Port Moresby 25.19 111 P P 12 49 05.8 +0.8
comp=Z,5.6nm,0.6s,baz=299,slow=13,SNR=3.3
PMG Port Moresby 25.19 111 P P 12 49 06.0 +1.1
YHNB Yeheng 25.24 356 P P 12 49 08.7 +3.3
KCSI Kotacane, Aceh 25.95 279 P P 12 49 11.6 -0.3
comp=Z,11nm,0.8s
PBKT Sadao Pong 27.97 309 P P 12 49 31.8 +1.8
CM31 Chiang Mai Arr 30.64 310 P P 12 49 55.6 +1.9
CM31 IAmb IAmb 12 49 57.9
comp=Z,10nm,0.8s
CMAR Chiang Mai Arr 30.64 310 P P 12 49 54.3 +0.6
comp=Z,8.4nm,0.8s,baz=138,slow=7.2,SNR=55
CMAR PcP PcP 12 52 53.0 +1.9
comp=Z,2.0nm,0.7s,baz=170,slow=1.7,SNR=7.0
CMAR ScP ScP 12 56 31.9 +2.6
comp=Z,0.9nm,0.8s,baz=165,slow=2.7,SNR=5.4
CMAR LR LR 13 04 22.8
comp=Z,152nm,18.1s,baz=134,slow=41
CHTO Chiang Mai 30.85 310 P P 12 49 57.2 +1.7
CHTO IAmb IAmb 12 49 59.6
comp=Z,15nm,0.8s
GYA Guiyang 31.41 330 eP P 12 50 02.8 +2.3
WHN Wuhan 32.19 345 P P 12 50 16.9 +10
NJ2 Nanjing 32.80 353 eP P 12 50 15.3 +2.8
ENH Enshi 33.48 338 P P 12 50 20.1 +1.6
STKA Stephens Creek 35.50 153 P P 12 50 36.0 +0.2
comp=Z,2.9nm,0.7s,baz=310,slow=8.8,SNR=4.0
STKA Stephens Creek 35.50 153 P P 12 50 36.6 +0.8
CD2 Chengdu 36.52 331 eP P 12 50 46.0 +1.3
XAN Xi'an 37.09 340 P P 12 50 49.9 +0.4
XAN pP sP 12 51 08.4 -0.9
XAN sP pP 12 51 16.7 +14
KSRS Korea Array 38.14 6 LR LR 13 07 17.0
comp=Z,54nm,20.0s,baz=222,slow=37
MJAR Matsushiro Arr 39.47 19 P P 12 51 08.4 -1.1
comp=Z,2.5nm,0.7s,baz=187,slow=9.3,SNR=7.7
MJAR Matsushiro Arr 39.47 19 P P 12 51 09.6 +0.2
ARMA Armidale 39.94 140 P P 12 51 13.2 -0.3
ARMA IAmb IAmb 12 51 28.8
comp=Z,10nm,0.9s
SHL Shillong 40.09 313 P P 12 51 14.8 -0.1
LZH Lanzhou 40.83 335 eP P 12 51 24.5 +3.6
LZH pP pP 12 51 36.4 +1.8
LZH sP sP 12 51 42.8 +2.0
LZH PP PnPn 12 53 00.1 -0.3
HHC Hu-ho-hao-te 42.68 347 eP P 12 51 38.9 +3.0
LSA Lhasa 43.10 317 P P 12 51 41.9 +2.0
LSA IAmb IAmb 12 51 47.7
comp=Z,7.5nm,0.6s
PALK Pallekele 43.32 281 LR LR 13 11 07.4
comp=Z,120nm,21.0s,baz=98,slow=38
ODAN Odare 44.15 311 eP P 12 51 49.6 +1.5
comp=Z,23nm,0.7s
TAPN Taplejung 44.18 312 eP P 12 51 49.7 +1.3
comp=Z,29nm,0.8s
RAMN Ramite 44.80 311 eP P 12 51 55.1 +1.8
comp=Z,46nm,0.7s
USRK Ussuriysk Ar. 45.30 9 P P 12 51 55.5 -1.2
comp=Z,2.0nm,0.8s,baz=189,slow=6.0,SNR=3.2
USRK Ussuriysk Ar. 45.30 9 P P 12 51 56.8 +0.2
GTA Gaotai 45.35 334 eP P 12 51 58.9 +1.6
GTA pP sP 12 52 14.3 -3.0
GTA sP pP 12 52 21.4 +10
JIRN Jiri 45.48 311 eP P 12 52 00.2 +1.4
comp=Z,60nm,0.6s
GUN Gumba 45.85 311 eP P 12 52 02.9 +1.2
comp=Z,54nm,0.6s
PKI Pulchoki 46.02 311 eP P 12 52 03.4 +0.3
comp=Z,16nm,0.8s
PKIN Phulchoki 46.04 311 eP P 12 52 03.9 +0.8
comp=Z,11nm,0.5s
KKN Kakani 46.24 311 eP P 12 52 05.7 +1.1
DMN Daman 46.27 310 eP P 12 52 06.0 +1.0
comp=Z,21nm,0.8s
GKN Gorkha 46.83 311 eP P 12 52 10.2 +1.0
comp=Z,33nm,0.7s
KOLN Koldanda 47.51 310 eP P 12 52 15.4 +0.9
comp=Z,39nm,0.7s
DANN Dangsing 47.67 310 eP P 12 52 16.6 +0.7
comp=Z,74nm,0.7s
SONM Songino Array 50.51 345 P P 12 52 36.7 -0.3
comp=Z,1.4nm,0.7s,baz=162,slow=9.2,SNR=14
SONM LR LR 13 15 31.8
comp=Z,107nm,18.9s,baz=210,slow=38
SONM Songino Array 50.51 345 P P 12 52 37.2 +0.2
WMQ Urumqi 54.55 329 eP P 12 53 09.6 +2.6
NIL Nilore 58.11 311 P P 12 53 32.7 +0.2
KSH Kashi 58.93 318 P P 12 53 40.5 +2.3
KSH pP pP 12 53 52.0 -0.7
KSH PcP PcP 12 54 39.4 +12
KSH PcS PcS 12 58 24.5 -4.4
KSH S S 13 01 40.9 +0.3
KSH Kashi 58.93 318 SS SS 13 05 39.2 +4.1
MK31 Makanchi Array 59.37 328 P P 12 53 40.7 -0.3
MK31 IAmb IAmb 12 53 47.6
comp=Z,5.6nm,1.4s
MKAR Makanchi Array 59.37 328 P P 12 53 40.8 -0.2
comp=Z,2.1nm,0.6s,baz=119,slow=8.8,SNR=24
MKAR Makanchi Array 59.37 328 P P 12 53 40.5 -0.5
MAKZ Makanchi 59.55 328 P P 12 53 41.4 -0.8
PETK Petropavlovsk- 60.72 23 P P 12 53 50.4 +0.4
comp=Z,2.5nm,0.8s,baz=212,slow=10,SNR=2.8
PETK Petropavlovsk- 60.72 23 P P 12 53 51.3 +1.2
AAK Ala-Archa 61.49 321 P P 12 53 56.4 +0.7
KBL Kabul 61.67 310 P P 12 53 56.7 -0.4
YAK Yakutsk 62.70 3 P P 12 54 02.2 -0.9
ZALV Zalesovo Beam 63.06 336 P P 12 54 05.1 -0.7
comp=Z,0.7nm,0.4s,baz=123,slow=7.3,SNR=5.3
ZALV Zalesovo Beam 63.06 336 P P 12 54 05.3 -0.4
KURK Kurchatov 63.73 330 P P 12 54 08.9 -1.4
KURK IAmb IAmb 12 54 16.5
comp=Z,5.0nm,0.7s
KKAR Karatay Array 64.27 320 P P 12 54 12.4 -1.5
SOCY Socotra 70.04 283 P P 12 54 50.9 -0.3
SOCY IAmb IAmb 12 54 57.0
comp=Z,21nm,1.4s
GEYT Alibeck 71.11 311 P P 12 54 56.6 -0.6
comp=Z,3.0nm,1.0s,baz=104,slow=4.7,SNR=5.4
GEYT Alibeck 71.11 311 P P 12 54 56.9 -0.4
TIXI Tiksi 72.26 2 P P 12 55 01.9 -1.5
TIXI IAmb IAmb 12 55 16.2
comp=Z,7.7nm,0.5s
ABKAR Akbulak array 73.49 322 P P 12 55 09.8 -1.2
AKH Akhalkalaki 82.86 312 P P 12 56 03.0 -0.3
AKH IAmb IAmb 12 56 05.5
comp=Z,13nm,1.4s
KBZ Khabaz 83.58 314 P P 12 56 06.7 -0.1
comp=Z,1.6nm,0.8s,baz=177,slow=6.7,SNR=4.1
BRTR Keskin Array B 90.23 310 P P 12 56 37.8 -1.7
comp=Z,1.3nm,0.9s,baz=134,slow=7.2,SNR=7.1
BRTR Keskin Array B 90.23 310 P P 12 56 37.1 -2.4
ILAR Eielson Array 90.45 25 P P 12 56 38.8 -1.0
comp=Z,0.4nm,0.6s,baz=238,slow=5.1,SNR=9.7
AKASG Malin Array Be 93.15 321 P P 12 56 50.5 -2.0
comp=Z,0.2nm,0.3s,baz=66,slow=5.3,SNR=3.7
AKASG Malin Array Be 93.15 321 P P 12 56 50.5 -2.0
FINES FINESS Array B 94.08 331 P P 12 56 54.6 -1.9
comp=Z,1.3nm,0.7s,baz=46,slow=4.0,SNR=2.8
FINES FINESS Array B 94.08 331 P P 12 56 55.5 -1.0
MATP Matopo 94.38 250 P P 12 56 58.7 -0.3
comp=Z,5.4nm,0.9s,baz=94,slow=5.2,SNR=12
LSZ Lusaka 94.87 255 P P 12 57 01.0 -0.3
comp=Z,1.3nm,0.5s,baz=111,slow=5.1,SNR=5.5
LSZ Lusaka 94.87 255 P P 12 57 00.5 -0.8
LSZ IAmb IAmb 12 57 02.4
comp=Z,3.9nm,1.1s
TORD Torodi Ar. Bea 120.97 285 PKP PKiKP 13 02 31.9 +0.1
comp=Z,1.8nm,0.6s,baz=73,slow=1.6,SNR=13
SCHQ Schefferville 125.34 7 PKP PKiKP 13 02 39.8 +0.4
comp=Z,4.0nm,0.9s,baz=231,slow=12,SNR=4.4
SCHQ Schefferville 125.34 7 PKPdf 13 02 39.0 0.0
TXAR Lajitas Array 126.88 53 PKP PKiKP 13 02 43.8 +0.5
comp=Z,0.3nm,0.7s,baz=236,slow=1.4,SNR=4.3
TXAR Lajitas Array 126.88 53 PKiKP 13 02 44.4 +1.1

IDC 09 12:45:36.3±2.1, 0.57S×123.36E, h38km±16km, mb4.1/12, mb1 4.3/15, mb1mx4.0/47, mbtmp4.3/15, ML4.4/3, MS3.5/1, Ms1 3.4/1, ms1mx2.9/29, Error ellipse: s-maj=22.5km s-min=14.2km az=53.0
DJA 09 12:45:36.1±0.2, 1°S±3°×12°3E±°, h10km, M5.0/18, mB5.7/4, mb5.3/7, MLv4.8/18, Mw(mB)5.2/4
NEIC 09 12:45:37.9±3.0, 0.73S±0.08×123.31E±0.05, h44km±6km, mb4.6/30, Error ellipse: s-maj=11.6km s-min=6.8km az=168.0
ISC 09 12:45:39.2±0.4, 0.73S±0.05×123.31E±0.04, h54km, n85, σ1§90/97, mb4.5/24, Minahassa Peninsula, Sulawesi

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LUWI Luwuk 0.62 240 P Pn 12 45 48.3 -3.8
LUWI S Sn 12 45 58.4 -3.1
LUWI Luwuk 0.62 240 Pn Pn 12 45 48.1 -4.0
LUWI Sn 12 45 58.3 -3.1
KMSI Cibinong 1.46 27 P Pn 12 46 00.1 -3.1
APSI Ampana 1.67 264 P Pn 12 46 06.2 +0.1
APSI S Sn 12 46 27.9 +1.5
MRSI Marisa 1.82 311 P Pn 12 46 07.1 -1.0
SANI Sanana 2.98 116 P Pn 12 46 19.9 -4.1
KDI Kendari 3.28 192 P Pn 12 46 26.6 -1.5
MPSI Mapaga 3.57 287 P Pn 12 46 34.6 +2.5
LBMI Labuha 4.19 89 P Pn 12 46 37.9 -2.7
NLAI Namlea 4.53 123 P Pn 12 46 43.7 -1.6
SPSI Sidrap Palu 4.78 228 P Pn 12 46 49.1 +0.4
BBSI Bau Bau 4.78 189 P Pn 12 46 48.9 +0.1
BNSI Bone 4.85 221 P Pn 12 46 51.1 +1.4
KAPI Kappang 5.54 220 Pn Pn 12 46 59.9 +0.7
23nm,0.3s,baz=18,slow=3.9,SNR=9.6
KAPI Sn Sn 12 48 03.3 +1.7
16nm,0.3s,baz=68,slow=2.0,SNR=5.7
KAPI Kappang 5.54 220 Pn Pn 12 46 59.5 +0.3
KAPI Sn 12 48 04.2 +2.6
BKSI Bulukumba 5.56 215 P Pn 12 46 59.8 +0.4
0.5nm118nm,0.7s
AAI Ambon 5.70 121 P Pn 12 47 01.6 +0.3
1.8nm5μm490nm,0.6s
MSAI Masohi 6.19 115 P Pn 12 47 07.5 -0.5
0.2nm38nm,0.9s
BKB Balikpapan 6.43 265 P Pn 12 47 12.6 +1.2
2.6nm7μm634nm,0.8s
BKB Balikpapan 6.43 265 Pn 12 47 12.2 +0.8
BNDI Bandanaira 7.59 120 P Pn 12 47 26.1 -1.1
SIJI Sorong 7.96 91 Pn Pn 12 47 30.8 -1.5
6.7nm,0.3s,baz=259,slow=9.3,SNR=7.2
SIJI Sn Sn 12 48 58.0 -3.0
baz=240,slow=20,SNR=2.2
SOEI Soe 9.02 174 Pn Pn 12 47 48.0 +1.1
KKM Kota Kinabalu 9.77 314 Pn 12 48 00.8 +3.6
SBUM Sibu 11.53 286 Pn 12 48 27.0 +5.9
MTN Manton Dam 14.32 148 P P 12 49 02.0 -2.8
FITZ Fitzroy Crossi 17.41 173 P Pn 12 49 38.5 0.0
0.4nm,0.3s,baz=0.3,slow=9.8,SNR=3.1
FITZ Fitzroy Crossi 17.41 173 P P 12 49 39.0 -0.1
DLV T Lat 19.37 311 P Pn 12 50 01.7 -0.7
MYKOM Kota Tinggi 19.62 277 P Pn 12 50 04.5 -0.6
MYKOM IAmb IAmb 12 50 05.9
comp=Z,31nm,0.8s
WB0 Warramunga Arr 21.81 151 P P 12 50 26.1 -0.9
WB0 IAmb IAmb 12 50 30.7
comp=Z,31nm,1.0s
WRAB Tennant Creek 21.93 151 P P 12 50 27.3 -1.0
WRAB IAmb IAmb 12 50 42.2
comp=Z,40nm,1.3s
WRA Warramunga Arr 21.94 151 P P 12 50 27.1 -1.2
comp=Z,19nm,0.9s,baz=329,slow=11,SNR=8.6
WRA Warramunga Arr 21.94 151 P P 12 50 26.9 -1.4
WB2 Warramunga Arr 21.94 151 P P 12 50 26.4 -2.0
WB2 IAmb IAmb 12 50 32.4
comp=Z,27nm,1.1s
WR0 Warramunga Arr 22.05 151 P P 12 50 27.8 -1.7
IPM Ipoh 22.86 283 P P 12 50 38.5 +0.3
IPM IAmb IAmb 12 50 39.5
comp=Z,16nm,0.7s
KULM Kulim 23.41 285 P P 12 50 43.2 -0.4
KULM IAmb IAmb 12 50 44.2
comp=Z,11nm,0.8s
TWG Pinlang 23.51 355 P P 12 50 46.0 +1.5
COEN Coen 23.65 125 P P 12 50 45.6 -0.2
COEN IAmb IAmb 12 50 46.3
comp=Z,16nm,0.8s
UBPT Khong Chiam 23.75 313 IAmb IAmb 12 50 48.2
comp=Z,41nm,1.4s
UBPT P P 12 50 48.4 +1.6
TPUB Ta-pu 24.03 354 P P 12 50 50.2 +0.9
AS31 Alice Springs 25.01 156 P P 12 50 58.6 +0.3
ASAR Alice Springs 25.01 157 P P 12 50 57.9 -0.4
comp=Z,12nm,0.8s,baz=328,slow=7.3,SNR=12
ASAR ScP ScP 12 58 08.2 +1.2
comp=Z,0.4nm,0.8s,baz=336,slow=3.4,SNR=3.1
ASAR Alice Springs 25.01 157 P P 12 50 58.4 +0.2
PMG Port Moresby 25.25 111 P P 12 51 00.2 -0.3
comp=Z,10nm,0.7s,baz=295,slow=8.2,SNR=4.1
PMG Port Moresby 25.25 111 P P 12 51 00.2 -0.3
PMG IAmb IAmb 12 51 10.0
comp=Z,11nm,0.7s
PBKT Sadao Pong 27.95 309 P P 12 51 26.4 +1.6
CM31 Chiang Mai Arr 30.62 310 P P 12 51 49.8 +1.4
CM31 IAmb IAmb 12 51 51.4
comp=Z,7.1nm,0.8s
CMAR Chiang Mai Arr 30.62 310 P P 12 51 48.0 -0.5
comp=Z,4.6nm,0.8s,baz=136,slow=7.4,SNR=12
CMAR PcP PcP 12 54 45.6 -0.4
comp=Z,0.9nm,0.6s,baz=175,slow=1.6,SNR=6.3
CMAR ScP ScP 12 58 26.2 +1.9
comp=Z,0.5nm,0.4s,baz=122,slow=3.4,SNR=4.8
CHTO Chiang Mai 30.82 310 P P 12 51 50.5 +0.3
CHTO IAmb IAmb 12 51 53.1
comp=Z,8.5nm,0.8s
NJ2 Nanjing 32.88 353 eP P 12 52 10.8 +2.7
STKA Stephens Creek 35.47 153 P P 12 52 30.4 -0.3
comp=Z,2.9nm,0.7s,baz=337,slow=9.9,SNR=3.2
STKA LR LR 13 09 06.3
comp=Z,67nm,18.4s,baz=21,slow=40
STKA Stephens Creek 35.47 153 P P 12 52 30.3 -0.3
CD2 Chengdu 36.54 331 eP P 12 52 41.5 +1.6
ARMA Armidale 39.94 140 P P 12 53 10.2 +1.7
ARMA IAmb IAmb 12 53 15.1
comp=Z,18nm,1.4s
SHL Shillong 40.07 313 P P 12 53 09.3 -0.4
SHL IAmb IAmb 12 53 10.6
comp=Z,15nm,1.0s
LZH Lanzhou 40.87 336 eP P 12 53 21.3 +5.1
LZH pP sP 12 53 33.8 -2.6
LZH sP pP 12 53 40.5 +10
LZH PP PcP 12 55 08.1 -8.1
HHC Hu-ho-hao-te 42.74 347 eP P 12 53 35.9 +4.6
LSA Lhasa 43.09 317 P P 12 53 35.6 +0.8
LSA IAmb IAmb 12 53 43.9
comp=Z,5.4nm,0.6s
GTA Gaotai 45.38 334 P P 12 53 55.7 +3.2
GTA pP pP 12 54 03.7 -2.9
GTA sP sP 12 54 07.9 -4.9
SONM Songino Array 50.56 345 P P 12 54 31.0 -1.4
comp=Z,1.7nm,0.9s,baz=160,slow=9.0,SNR=2.8
SONM Songino Array 50.56 345 P P 12 54 30.7 -1.8
WMQ Urumqi 54.57 329 eP P 12 55 04.8 +2.7
KSH Kashi 58.92 318 P P 12 55 34.1 +0.9
KSH pP pP 12 55 49.5 +1.6
KSH PP PP 12 57 47.5 +3.5
KSH S S 13 03 33.7 -1.8

KSH ScS ScS 13 05 16.0 -2.8
MK31 Makanchi Array 59.39 328 P P 12 55 35.8 -0.4
MKAR Makanchi Array 59.39 328 P P 12 55 34.4 -1.7
comp=Z,1.0nm,0.5s,baz=127,slow=7.8,SNR=6.2
MKAR ScP ScP 13 00 20.0 +0.1
comp=Z,0.5nm,0.8s,baz=134,slow=5.2,SNR=3.7
MKAR Makanchi Array 59.39 328 P P 12 55 35.7 -0.4
MKAR ScP 13 00 19.6 -0.3
QRZ Quartz Range 59.74 138 P P 12 55 40.0 +1.4
RPZ Rata Peaks 60.25 142 P P 12 55 41.1 -0.9
comp=Z,8.3nm,0.8s,baz=270,slow=4.7,SNR=3.3
RPZ Rata Peaks 60.25 142 P P 12 55 43.3 +1.3
AAK Ala-Archa 61.49 321 P P 12 55 51.6 +0.9
KBL Kabul 61.65 310 P P 12 55 49.5 -2.4
ZALV Zalesovo Beam 63.10 336 P P 12 55 57.4 -3.6
comp=Z,0.9nm,0.7s,baz=116,slow=6.6,SNR=2.8
ZALV Zalesovo Beam 63.10 336 P P 12 56 01.2 +0.2
KK31 Karatay Array 64.27 320 P P 12 56 04.4 -4.6
SOCY Socotra 69.97 283 P P 12 56 44.4 -1.3
ABKAR Akbulak array 73.49 322 P P 12 57 06.2 +0.1
BRTR Keskin Array B 90.21 310 P P 12 58 31.1 -3.3
comp=Z,0.5nm,0.7s,baz=140,slow=6.4,SNR=3.8
BRTR Keskin Array B 90.21 310 P P 12 58 32.1 -2.2
ILAR Eielson Array 90.57 25 P P 12 58 32.3 -3.0
comp=Z,0.4nm,0.8s,baz=247,slow=4.6,SNR=3.8
ILAR Eielson Array 90.57 25 P P 12 58 34.9 -0.4
MATP Matopo 94.26 250 P P 12 58 52.4 -1.1
comp=Z,1.9nm,0.5s,baz=128,slow=6.6,SNR=6.3
TORD Torodi Ar. Bea 120.89 285 PKP PKPdf 13 04 24.7 -1.9
comp=Z,0.9nm,0.8s,baz=50,slow=2.0,SNR=4.0
TORD Torodi Ar. Bea 120.89 285 PKPdf PKPdf 13 04 25.6 -1.0

NEIC 09 13:05:23.0±2.0, 17.84S±0.10×175.1W±0.1, h227km±6km, mb4.9/41, Error ellipse: s-maj=15.8km s-min=13.8km az=120.0
IDC 09 13:05:26.4±3.5, 18.06S×175.08W, h252km±31km, mb3.9/9, mb1 4.0/9, mb1mx3.7/32, mbtmp4.5/9, Error ellipse: s-maj=24.1km s-min=14.6km az=106.0
ISC 09 13:05:23.1±0.5, 17.81S±0.08×175.08W±0.07, h228km, n79, σ1.45/80, mb4.8/25, Tonga Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AFI Afiamalu 5.01 40 P Pn 13 06 39.3 +0.8
95nm,0.3s,baz=197,slow=3.6,SNR=113
AFI S S 13 07 33.9 -4.4
108nm,0.3s,baz=42,slow=22,SNR=8.6
AFI Afiamalu 5.01 40 Pn 13 06 38.9 +0.3
NIUE Niue 5.05 105 Pn 13 06 39.5 +0.6
MSVF Nonsavu 6.54 270 Pn Pn 13 07 04.5 +6.4
RAR Rarotonga 14.83 106 P Pn 13 08 41.2 -0.9
0.4nm,0.3s,baz=253,slow=6.7,SNR=6.3
RAR Rarotonga 14.83 106 Pn 13 08 41.4 -0.7
MXZ Matakaoa Point 20.52 195 P P 13 09 43.7 -0.3
MXZ Matakaoa Point 20.52 195 P P 13 09 46.0 +1.9
KUZ Kuaotunu 20.54 201 P P 13 09 45.3 +1.1
ABAZ Army Bay 20.73 203 P Pn 13 09 49.5 -2.7
WMGZ Waiomatatini S 20.74 195 P P 13 09 48.5 +2.2
WIAZ Waiheke Island 20.79 203 P P 13 09 48.2 +1.3
HAZ Te Kaha 20.84 196 P P 13 09 47.4 0.0
MBAZ Motutapu North 20.86 203 P P 13 09 49.1 +1.5
PKGZ Pakihiroa 20.89 195 P Pn 13 09 51.3 -2.9
PUZ Puketiti 21.02 195 P P 13 09 49.7 +0.4
WTAZ Waiatarua 21.12 204 P P 13 09 52.4 +2.0
KBAZ Karaka Road Bo 21.15 203 P P 13 09 51.8 +1.2
CNGZ Carnagh Statio 21.42 195 P P 13 09 48.9 -4.4
URZ Urewera 21.49 197 P P 13 09 53.1 -0.9
37nm,0.6s,baz=18,slow=2.7,SNR=31
URZ S S 13 13 32.5 -4.2
6.9nm,0.8s,baz=150,slow=20,SNR=4.0
URZ Urewera 21.49 197 P P 13 09 52.9 -1.1
URZ IAmb IAmb 13 09 55.8
comp=Z,36nm,0.6s
HIZ Hauiti 22.43 201 P P 13 10 03.2 +0.4
BKZ Black Stump Fm 22.51 197 P P 13 10 02.3 -1.3
MSWZ Moikau Station 24.95 197 P P 13 10 26.3 +0.7
SNZO South Karori 25.01 198 P P 13 10 25.8 -0.4
QRZ Quartz Range 25.30 202 P P 13 10 28.6 -0.2
TUWZ Tuamarina 25.36 200 P P 13 10 28.9 -0.4
THZ Tophouse 26.00 201 P P 13 10 34.6 -0.5
KHZ Kahutara 26.38 199 P P 13 10 36.4 -2.0
LTZ Lake Taylor 27.12 201 P P 13 10 43.1 -2.0
LTZ IAmb IAmb 13 10 48.3
comp=Z,17nm,0.8s
MQZ McQueen's Vall 27.82 199 P P 13 10 49.7 -1.5
MQZ IAmb IAmb 13 11 36.9
comp=Z,67nm,1.4s
RPZ Rata Peaks 28.36 201 P P 13 10 55.2 -0.8
comp=Z,6.9nm,0.7s,baz=37,slow=5.6,SNR=9.2
RPZ Rata Peaks 28.36 201 P P 13 10 55.1 -1.0
RPZ IAmb IAmb 13 11 00.9
comp=Z,68nm,1.8s
FOZ Fox Glacier 28.65 203 P P 13 10 57.5 -1.0
FOZ IAmb IAmb 13 11 43.3
comp=Z,58nm,1.4s
ODZ Otahua Downs 29.67 201 P P 13 11 06.6 -1.0
ODZ IAmb IAmb 13 12 04.2
comp=Z,56nm,1.8s
MLZ Mavora Lakes 30.85 203 P P 13 11 16.4 -1.6
MLZ IAmb IAmb 13 11 20.7
comp=Z,76nm,1.9s
WHZ Wether Hill Ro 31.36 203 P P 13 11 21.4 -1.0
WHZ IAmb IAmb 13 11 25.1
comp=Z,12nm,0.8s
PYZ Puysegur Point 32.07 204 P P 13 11 28.1 -0.4
ARMA Armidale 32.75 241 P P 13 11 35.6 +0.7
ARMA IAmb IAmb 13 11 41.5
comp=Z,51nm,1.6s
CTA Charters Tower 36.59 260 P P 13 12 08.5 +0.8
comp=Z,4.7nm,0.9s,baz=86,slow=11,SNR=3.6
TOO Toolangi 39.71 232 P P 13 12 33.4 -0.2
COEN Coen 40.27 269 P P 13 12 39.2 +0.8
COEN IAmb IAmb 13 14 06.0
comp=Z,61nm,1.9s
STKA Stephens Creek 41.46 242 P P 13 12 48.2 +0.3
comp=Z,9.4nm,1.0s,baz=88,slow=12,SNR=10
STKA Stephens Creek 41.46 242 P P 13 12 48.2 +0.3
BBOO Buckleboo 46.23 241 P P 13 13 25.7 -0.1
BBOO IAmb IAmb 13 14 49.1
comp=Z,136nm,1.9s
WR0 Warramunga Arr 47.57 259 P P 13 13 34.9 -1.4
WB0 Warramunga Arr 47.73 259 P P 13 13 37.3 -0.3
WB2 Warramunga Arr 47.75 259 P P 13 13 37.3 -0.4
WRAB Tennant Creek 47.75 259 P P 13 13 37.9 +0.2
WRA Warramunga Arr 47.76 259 P P 13 13 37.8 0.0
comp=Z,2.7nm,0.5s,baz=98,slow=6.8,SNR=42
WRA S S 13 20 12.5 -4.3
comp=Z,1.3nm,1.1s,baz=102,slow=15,SNR=3.1
WRA Warramunga Arr 47.76 259 P P 13 13 36.7 -1.1
AS31 Alice Springs 47.86 254 P P 13 13 38.6 +0.1
ASAR Alice Springs 47.87 254 P P 13 13 38.8 +0.3
comp=Z,23nm,0.7s,baz=88,slow=8.9,SNR=326
ASAR S S 13 20 14.3 -3.9
comp=Z,2.3nm,0.9s,baz=87,slow=15,SNR=13
ASAR Alice Springs 47.87 254 P P 13 13 38.2 -0.4
MTN Manton Dam 51.97 267 P P 13 14 09.5 +0.1
MTN IAmb IAmb 13 14 51.1
comp=Z,109nm,1.8s
FORT Forrest 52.91 245 P P 13 14 17.2 +1.1
FORT IAmb IAmb 13 14 48.5
comp=Z,66nm,1.2s
KNRA Kununurra 53.65 263 P P 13 14 22.5 +0.9
FITZ Fitzroy Crossi 56.17 260 P P 13 14 40.2 +0.5
FITZ IAmb IAmb 13 15 33.9
comp=Z,36nm,1.6s
SBA Scott Base 60.74 184 P P 13 15 12.2 +2.0
VNDA Vanda 60.83 186 P P 13 15 11.9 +1.1
NWAO Narrogin (SRO) 62.05 242 P P 13 15 18.6 -1.2
UNV Unalaska Valle 71.74 5 P P 13 16 20.0 -0.1
KKM Kota Kinabalu 71.80 283 P P 13 16 20.9 -0.6
KKM IAmb IAmb 13 18 42.1
comp=Z,16nm,1.1s
QSPA South Pole Qui 72.25 180 P P 13 16 23.5 +0.2
QSPA IAmb IAmb 13 16 24.6
comp=Z,12nm,0.9s
YBH Yreka Blue Hor 76.48 38 P P 13 16 49.2 +1.3
YBH IAmb IAmb 13 17 49.8
comp=Z,41nm,1.9s
BEKR Beckworth 76.74 40 P P 13 16 49.0 -0.6
OHAK Old Harbor 76.93 12 P P 13 16 49.9 0.0
TXAR Lajitas Array 83.28 56 P P 13 17 26.2 +1.6
comp=Z,0.2nm,0.8s,baz=246,slow=6.8,SNR=3.1
MAW Mawson 85.01 199 P P 13 17 32.8 +0.3
comp=Z,5.3nm,0.6s,baz=140,slow=8.3,SNR=7.6
ILAR Eielson Array 85.11 12 P P 13 17 33.6 +0.7
comp=Z,0.2nm,0.5s,baz=219,slow=5.5,SNR=6.8
ILAR Eielson Array 85.11 12 P P 13 17 33.4 +0.4
CMAR Chiang Mai Arr 91.84 289 P P 13 18 08.2 +2.4
comp=Z,0.7nm,0.7s,baz=111,slow=2.2,SNR=6.8
MKAR Makanchi Array 111.34 314 PKiKP PKiKP 13 23 29.5 -0.4
comp=Z,0.2nm,0.6s,baz=131,slow=3.7,SNR=4.0
MKAR Makanchi Array 111.34 314 PKiKP 13 23 29.2 -0.7
CLL Collm 145.96 351 ePKPbc PKPbc 13 24 36.0 +0.2
BRTR Keskin Array B 146.91 317 PKPbc PKPbc 13 24 39.9 +0.8
comp=Z,1.4nm,0.8s,baz=151,slow=3.4,SNR=7.4
BRTR Keskin Array B 146.91 317 PKPbc 13 24 39.0 -0.1
GERES GERESS Array B 148.23 349 PKPbc PKPbc 13 24 43.0 +0.7
comp=Z,0.6nm,0.6s,baz=0.0,slow=3.1,SNR=5.1
GERES GERESS Array B 148.23 349 PKPbc 13 24 42.4 +0.2

ATH 09 13:32:51.5, 38.37N×20.44E, h10km±2km, ML2.6/5, Error ellipse: s-maj=2.3km s-min=0.7km az=131.0
THE 09 13:32:51.5, 38.36N×20.43E, h8km, ML2.5/6, Error ellipse: s-maj=0.9km s-min=0.4km az=89.0
ISC 09 13:32:51.5±0.9, 38.37N±0.02×20.45E±0.04, h11km±5km, n28, σ0.47/48, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF1 Kardakata, Kep 0.09 168 P Pg 13 32 53.9 -0.1
KEF1 S Sg 13 32 56.0 +0.1
VSK1 VASILIKIADES 0.10 64 P Pg 13 32 54.1 -0.1
VSK1 S Sg 13 32 55.8 -0.4
KEF4 Livadi, Kephal 0.11 190 P Pg 13 32 54.4 +0.1
KEF4 S Sg 13 32 56.4 +0.1
KONA Konidatara, Ke 0.11 58 P Pg 13 32 54.2 -0.2
KONA S Sg 13 32 56.2 -0.3
ARG2 Argostoli 0.19 170 P Pg 13 32 55.7 +0.1
ARG2 S Sg 13 32 58.6 +0.3
ARGA Argostoli. Kep 0.19 173 P Pg 13 32 55.8 +0.2
KEF2 Argostoli. Kep 0.20 171 P Pg 13 32 55.9 +0.1
KEF2 S Sg 13 32 59.3 +0.6
VLS Valsamata 0.22 149 P Pg 13 32 55.5 -0.6
VLS S Sg 13 32 59.5 +0.3
VLS Valsamata 0.22 149 P Pg 13 32 55.8 -0.3
VLS S Sg 13 32 59.5 +0.3
VLS AML AML 13 33 01.4
comp=N,6675μm,0.3s
VLS AML AML 13 33 01.5
comp=E,6456μm,0.1s
EVGI Lefkada island 0.30 33 P Pg 13 32 57.7 0.0
EVGI S Sg 13 33 02.5 +0.7
EVGI Lefkada island 0.30 33 P Pg 13 32 57.6 0.0
EVGI S Sg 13 33 02.3 +0.6
MGNA Meganis 0.40 43 P Pg 13 32 59.1 -0.3
MGNA S Sg 13 33 05.2 +0.6
MGNA AML AML 13 33 05.7
comp=E,3817μm,0.1s
MGNA AML AML 13 33 06.1
comp=N,3108μm,0.1s
LKD2 Lefkada island 0.45 21 P Pg 13 33 00.2 -0.2
LKD2 S Sg 13 33 06.8 +0.3
comp=N,402nm,0.2s
LKD2 Lefkada island 0.45 21 P Pg 13 33 00.3 -0.2
LKD2 S Sg 13 33 06.9 +0.4
LKD2 AML AML 13 33 08.5
comp=E,795μm,0.2s
LKD2 AML AML 13 33 09.3
comp=N,874μm,0.2s
TSLK Tsoukalades, L 0.49 19 P Pg 13 33 00.9 -0.2
TSLK S Sg 13 33 08.4 +0.9
comp=N,502nm,0.3s
TSLK Tsoukalades, L 0.49 19 P Pg 13 33 00.9 -0.2
VLMS Volimes, Zakyn 0.52 161 P Pg 13 33 01.2 -0.4
VLMS S Sg 13 33 09.4 +1.0
VLMS AML AML 13 33 10.2
comp=N,7416μm,0.4s
VLMS AML AML 13 33 13.9
comp=E,4206μm,0.3s
KRI1 kERI 0.76 157 P Pg 13 33 05.5 -0.7
KRI1 S Sb 13 33 17.4 +0.3
comp=E,1μm,0.3s
RLS Riolos of Patr 0.86 111 P Pg 13 33 07.7 -0.4
RLS Riolos of Patr 0.86 111 P Pg 13 33 07.5 -0.6
RLS AML AML 13 33 28.0
comp=N,377μm,0.4s
RLS AML AML 13 33 29.3
comp=E,347μm,0.4s
PVO Paravola 0.88 73 P Pg 13 33 08.3 -0.2
PVO S Sb 13 33 21.6 +0.9
comp=E,545nm,0.5s
PVO Paravola 0.88 73 P Pg 13 33 08.4 -0.2
IGT Igoumenitsa 1.17 356 P Pb 13 33 13.1 -0.7
IGT S Sn 13 33 30.4 +0.6
comp=E,75nm,0.3s
TRIZ Trizonia 1.28 89 P Pn 13 33 14.3 -1.0
TRIZ S Sn 13 33 33.1 +0.7
comp=E,238nm,0.3s
KLV Kalavryta, Ach 1.38 103 P Pn 13 33 16.4 -0.4
KLV S Sg 13 33 35.9 0.0
KEK Kerkira 1.44 340 P Pg 13 33 18.7 -0.4
AGG Agios Georgios 1.61 65 P Pb 13 33 21.7 +0.4
AGG Agios Georgios 1.61 65 P Pg 13 33 22.2 -0.2

NIED 09 13:34:00, 43.40N×147.10E, h74km, Mw4.5 Best double couple: M0 5.39000×10^15 NP1:φs26.00000°, δ82.00000°, λ100.00000°. NP2:φs154.00000°, δ13.00000°, λ38.00000°.
JMA 09 13:34:27.9±0.2, 43.41N×147.11E, h63km±4km, M4.7
JMA Felt II J1.
MOS 09 13:34:27.3±0.9, 43.48N×147.06E, h74km, mb5.1/61, Error ellipse: s-maj=6.6km s-min=4.1km az=119.8
MOS Felt (II-III) at Malokuril'skoye, (II) at Goryachiy Plyazh, Yuzhno-Kuril'sk.
SKHL 09 13:34:28.5±0.1, 43.49N×147.12E, h77km±3km, mb5.4/12
SKHL Felt (II) at Yushno-Kuril'sk, Goryachiy Plyazh; (II-III) at Malokuril'skoye.
NEIC 09 13:34:28.9±1.9, 43.55N±0.07×147.1E±0.1, h71km±5km, mb4.9/115, Error ellipse: s-maj=11.4km s-min=9.6km az=133.0
IDC 09 13:34:30.0±2.4, 43.54N×147.02E, h79km±20km, mb4.4/31, mb1 4.5/36, mb1mx4.3/48, mbtmp4.6/36, MS3.4/11, Ms1 3.4/11, ms1mx3.1/41, Error ellipse: s-maj=14.5km s-min=11.4km az=156.0
BJI 09 13:34:29.5±0.0, 43.52N×146.87E, h87km, mB5.0/35, mb4.9/54, Ms4.5/15, Ms7 4.2/12
ISC 09 13:34:28.0±0.5, 43.54N±0.04×147.07E±0.04, h65km±3km, h66km:pP-P, n502, σ1.44/545, mb4.8/152, 23C-48D, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SHO Shikotan 0.38 332 iP Pn 13 34 40.0 +0.8
SHO AMB AMB 13 34 40.7
7μm,0.3s
SHO AMB AMB 13 34 40.7
3μm,0.3s
SHO AMB AMB 13 34 40.7
28μm,0.3s
SHO iS Sn 13 34 49.1 +1.7
SHO A A 13 34 49.5
10μm,0.4s
SHO A A 13 34 49.5
85μm,0.4s
SHO Shikotan 0.38 332 d iPN Pn 13 34 40.2 +1.0
SHO iS Sn 13 34 48.8 +1.4
SHO pmax pmax
comp=N,7μm,0.3s
SHO pmax pmax
comp=Z,28μm,0.3s
SHO pmax pmax
comp=E,3μm,0.2s
SHO smax smax
comp=N,101μm,0.3s
SHO smax smax
comp=E,85μm,0.4s
NEM2 Nemuro 2 0.98 260 ⇓P Pn 13 34 46.1 +0.1
NEM2 eS Sn 13 35 00.0 +0.6
NMR Nemuro--Hokkai 0.99 261 iP Pn 13 34 46.0 -0.1
NMR iS Sn 13 34 59.0 -0.6
NMR Nemuro--Hokkai 0.99 261 ⇓iPN Pn 13 34 46.1 -0.1
NMR iS Sn 13 34 59.8 +0.2
YUK Yuzh-Kuril'sk 1.01 300 iP Pn 13 34 47.1 +0.7
YUK AMB AMB 13 34 47.4
comp=E,1μm,0.4s
YUK AMB AMB 13 34 47.4
comp=E,2μm,0.4s
YUK AMB AMB 13 34 47.4
comp=E,15μm,0.4s
YUK iS Sn 13 35 01.1 +1.2
YUK A A 13 35 02.0
comp=E,25μm,0.4s
YUK A A 13 35 02.0
comp=E,25μm,0.4s
YUK Yuzh-Kuril'sk 1.01 300 d iPN Pn 13 34 47.0 +0.7
GRPR Tuman 1.05 296 iP Pn 13 34 47.0 +0.2
GRPR AMB AMB 13 34 47.0
comp=E,2μm,0.4s
GRPR AMB AMB 13 34 47.0
comp=E,3μm,0.4s
GRPR AMB AMB 13 34 47.0
comp=E,10μm,0.4s
GRPR iS Sn 13 35 01.0 +0.2
GRPR A A 13 35 02.0
comp=E,15μm,0.3s
GRPR A A 13 35 02.0
comp=E,21μm,0.3s
GRPR Tuman 1.05 296 ⇓iPN Pn 13 34 47.5 +0.7
GRPR iS Sn 13 35 01.5 +0.7
GRPR pmax pmax
comp=Z,10μm,0.5s
GRPR pmax pmax
comp=N,2μm,0.3s
GRPR pmax pmax
comp=E,3μm,0.3s
GRPR smax smax
comp=N,15μm,0.2s
GRPR smax smax
comp=E,21μm,0.4s
GLVR Golovnino 1.15 281 iP Pn 13 34 49.0 +0.9
GLVR AMB AMB 13 34 49.0
comp=E,950nm,0.4s
GLVR AMB AMB 13 34 49.0
comp=E,1μm,0.4s
GLVR AMB AMB 13 34 49.0
comp=E,10μm,0.4s
GLVR iS Sn 13 35 04.0 +0.9
GLVR A A 13 35 10.0
comp=E,7μm,0.3s
GLVR A A 13 35 10.0
comp=E,33μm,0.3s
GLVR Golovnino 1.15 281 ⇓iPN Pn 13 34 49.0 +0.9
GLVR iS Sn 13 35 04.6 +1.5
GLVR pmax pmax
comp=Z,10μm,0.4s
GLVR pmax pmax
comp=N,949nm,0.3s
GLVR pmax pmax
comp=E,1μm,0.2s
GLVR smax smax
comp=E,33μm,0.3s
GLVR smax smax
comp=N,7μm,0.2s
JKHN Kushirohamanak 1.47 253 ⇓P Pn 13 34 52.8 +0.5
JKHN eS Sn 13 35 10.3 -0.3
JRA Rausu 1.47 287 ⇓P Pn 13 34 53.5 +1.2
JNSB Nemuroshibetsu 1.52 280 P Pn 13 34 54.1 +1.1
JNSB eS Sn 13 35 13.8 +1.9
JNK Nakash 1.71 272 ⇓P Pn 13 34 56.0 +0.4
JNK eS Sn 13 35 16.4 -0.1
KUR Kuril'sk 1.79 18 iP Pn 13 34 58.2 +1.6
KUR iS Sn 13 35 19.5 +1.1
KUR A A 13 35 21.9
comp=N,2μm,0.3s
KUR A A 13 35 21.9
comp=N,439nm,0.3s
KUR Kuril'sk 1.79 18 d iPN Pn 13 34 58.2 +1.6
KUR iS Sn 13 35 19.5 +1.1
KUR smax smax
comp=N,2μm,0.3s
KUR smax smax
comp=E,439nm,0.2s
JAK Akkeshi 1.82 254 ⇓P Pn 13 34 57.2 +0.2
JAK eS Sn 13 35 18.3 -0.8
JTKR Abashiri--Toko 2.33 282 ⇓P Pn 13 35 05.7 +1.7
JTKR eS Sn 13 35 34.0 +2.4
JAR Ashorobuto 2.42 265 ⇓P Pn 13 35 06.2 +1.0
JAR eS Sn 13 35 34.5 +0.8
JOB Onbets 2.45 256 P Pn 13 35 06.1 +0.5
JOB eS Sn 13 35 34.2 -0.2
JMP Maruseppu 2.73 281 ⇓P Pn 13 35 11.2 +1.8
JCH Churui 2.87 253 ⇓P Pn 13 35 11.3 0.0
JCH eS Sn 13 35 43.9 -0.8
JKK2 Kamakawa 2 3.15 278 ⇓P Pn 13 35 17.3 +2.1
ERM Erimo 3.26 244 P Pn 13 35 18.4 +1.8
ERM Erimo 3.26 244 dePN Pn 13 35 18.6 +2.0
JFR Furan 3.29 265 P Pn 13 35 18.6 +1.6
JFR eS Sn 13 35 55.1 +0.2
JKA Kamikawa-asahi 3.29 282 eP Pn 13 35 19.5 +2.5
JKA Kamikawa-asahi 3.29 282 Pn 13 35 19.5 +2.5
JKA Sn 13 36 02.5 +7.5
ASAJ Asahikawa 3.29 282 P Pn 13 35 19.4 +2.4
ASAJ Asahikawa 3.29 282 P Pn 13 35 19.5 +2.4
comp=E,18nm,0.3s,baz=134,slow=9.4,SNR=338
ASAJ S Sn 13 36 02.5 +7.5
comp=E,33nm,0.3s,baz=90,slow=33,SNR=6.3
JNBK Urakawa-nobuka 3.41 250 ⇓P Pn 13 35 18.8 +0.1
JSE Soyaes 3.52 295 ⇓P Pn 13 35 22.2 +2.0
JBT2 Biratori 2 3.53 259 P Pn 13 35 20.7 +0.4
YSS Yuzh-Sakhalins 4.58 320 iP Pn 13 35 37.2 +2.6
YSS AMB AMB 13 35 38.0
comp=E,260nm,0.5s
YSS eS Sn 13 36 28.5 +2.0
YSS A A 13 36 31.1
comp=E,230nm,0.5s
YSS A A 13 36 31.1
comp=E,330nm,0.5s
YSS Yuzh-Sakhalins 4.58 320 P Pn 13 35 36.6 +2.0
YSS Yuzh-Sakhalins 4.58 320 k iPN Pn 13 35 37.2 +2.6
YSS eS Sn 13 36 28.5 +2.0
YSS pmax pmax
comp=N,150nm,0.5s
YSS pmax pmax
comp=E,130nm,0.5s
YSS pmax pmax
comp=Z,260nm,0.5s
YSS smax smax
comp=N,230nm,0.5s
YSS smax smax
comp=E,330nm,0.6s
UGL Uglegorsk 6.54 330 eP Pn 13 36 04.3 +2.9
UGL AMB AMB 13 36 09.0
comp=E,430nm,1.0s
UGL eS Sn 13 37 17.8 +3.4
UGL Uglegorsk 6.54 330 ePN Pn 13 36 05.1 +3.7
UGL eS Sn 13 37 16.6 +2.2
UGL pmax pmax
comp=Z,43nm,1.1s
UGL smax smax
comp=N,83nm,0.7s
UGL smax smax
comp=E,49nm,1.0s
UGL smax smax
comp=N,500nm,3.8s
TYV Tymovskoe 7.92 339 eP Pn 13 36 22.9 +2.6
TYV AMB AMB 13 36 26.0
comp=N,76nm,0.7s
TYV eS Sn 13 37 48.0 -0.3
TYV A A 13 37 56.0
comp=N,13nm,1.0s
TYV Tymovskoe 7.92 339 ePN Pn 13 36 23.4 +3.1
TYV eS Sn 13 37 55.8 +7.5
TYV pmax pmax
comp=Z,8.0nm,0.7s
TYV smax smax
comp=E,13nm,1.3s
SKR Severo-Kuril's 9.44 38 eP Pn 13 36 40.8 -0.2
SKR eS Sn 13 38 22.0 -3.4
MJB9 Matsu-Tunnel 9.74 227 Pn 13 36 44.5 -0.8
MAJO Matsushiro 9.74 227 Pn 13 36 44.4 -0.9
MAJO Matsushiro 9.74 227 ⇓ePN Pn 13 36 45.6 +0.3
MAJO pmax pmax
comp=Z,12nm,0.8s
MAT Matsushiro 9.74 227 P Pn 13 36 44.4 -0.9
MAT S Sn 13 38 34.4 +1.3
MJAR Matsushiro Arr 9.74 227 P Pn 13 36 44.5 -0.8
comp=Z,0.2nm,0.3s,baz=31,slow=15,SNR=17

MJAR S Sn 13 38 34.4 +1.3
comp=Z,0.1nm,0.3s,baz=55,slow=12,SNR=2.9
MJAR Matsushiro Arr 9.74 227 Pn 13 36 44.1 -1.1
GRNR Gornyy 10.24 319 eP Pn 13 36 54.9 +2.9
GRNR AMB AMB 13 36 55.8
comp=Z,4.0nm,0.7s
GRNR AMB AMB 13 36 55.8
comp=Z,6.0nm,0.7s
GRNR Gornyy 10.24 319⇓iPN Pn 13 36 54.9 +2.9
GRNR eS Sn 13 38 52.4 +7.4
GRNR pmax pmax
comp=Z,6.0nm,0.6s
GRNR smax smax
comp=N,3.0nm,0.5s
GRNR MLR MLR
comp=Z,60nm,11.0s
OKH Okha 10.39 346 eP Pn 13 36 58.6 +4.6
USA0B Ussuriysk Arra 10.91 279 Pn Pn 13 37 02.3 +1.1
USA0B Ussuriysk Arra 10.91 279 PN Pn 13 37 02.3 +1.1
USRK Ussuriysk Ar. 10.91 279 P Pn 13 37 01.7 +0.5
baz=82,slow=14,SNR=11
USRK LR LR 13 41 24.4
comp=Z,106nm,18.2s,baz=108,slow=38
USRK Ussuriysk Ar. 10.91 279 Pn Pn 13 37 02.2 +1.0
USRK Ussuriysk Ar. 10.91 279 PN Pn 13 37 02.2 +1.0
INU Inuyama 11.28 227 Pn Pn 13 37 07.5 +1.3
PEA0B Petropavlovsk- 11.89 33 Pn Pn 13 37 13.3 -1.2
PEA0B Petropavlovsk- 11.89 33⇓ePN Pn 13 37 13.4 -1.1
PETK Petropavlovsk- 11.89 33 P Pn 13 37 13.0 -1.5
comp=Z,0.7nm,0.3s,baz=182,slow=11,SNR=18
PETK LR LR 13 41 52.5
comp=Z,80nm,18.9s,baz=241,slow=37
PETK Petropavlovsk- 11.89 33 Pn Pn 13 37 12.6 -1.9
PETK Petropavlovsk- 11.89 33 PN Pn 13 37 12.6 -1.9
KLR Kul'dur 12.01 304 P Pn 13 37 17.7 +1.6
comp=Z,0.7nm,0.3s,baz=128,slow=11,SNR=12
KLR LR LR 13 41 42.4
comp=Z,135nm,19.6s,baz=111,slow=36
KLR Kul'dur 12.01 304 eP Pn 13 37 18.6 +2.5
KLR Kul'dur 12.01 304⇑ePN Pn 13 37 18.6 +2.5
PET Petropavlovsk 12.21 35 Pn Pn 13 37 16.6 -2.3
PET Petropavlovsk 12.21 35 PN Pn 13 37 16.6 -2.3
MDJ Mudanjiang 12.62 281 Pn Pn 13 37 22.3 -2.2
EKMR Ekimchan 13.37 320 eP Pn 13 37 34.0 -0.6
EKMR AMB AMB 13 37 45.2
comp=Z,11nm,0.6s
KSRS Korea Array 15.77 254 P Pn 13 38 05.5 -0.5
comp=Z,0.1nm,0.3s,baz=63,slow=14,SNR=3.3
KSRS LR LR 13 44 03.6
comp=Z,85nm,18.8s,baz=64,slow=36
KSAR Wonju Array Be 15.80 254 P P 13 38 07.8 -1.2
KSAR Wonju Array Be 15.80 254 P P 13 38 07.8 -1.2
MA2 Magadan 16.22 7 P P 13 38 14.8 +1.4
comp=Z,0.8nm,0.3s,baz=180,slow=15,SNR=5.1
MA2 LR LR 13 43 31.3
comp=Z,45nm,20.3s,baz=143,slow=33
MA2 Magadan 16.22 7 eP Pn 13 38 12.2 +0.8
MA2 Magadan 16.22 7 Pn 13 38 12.2 +0.8
MA2 Magadan 16.22 7 P Pn 13 38 12.2 +0.8
MA2 pmax pmax
comp=Z,69nm,1.9s
BMKR Bomnak 16.30 320 eP Pn 13 38 10.0 -2.4
BMKR AMB AMB 13 38 14.0
comp=Z,8.0nm,0.7s
JNU Nakatsue 16.39 236 P P 13 38 18.0 +2.4
comp=Z,0.6nm,0.3s,baz=19,slow=4.5,SNR=8.6
JNU LR LR 13 44 38.5
comp=Z,136nm,19.8s,baz=63,slow=37
JNU Nakatsue 16.39 236 P P 13 38 16.7 +1.1
JNU IAmb IAmb 13 38 59.3
comp=Z,122nm,2.0s
ZEA Zeya 16.55 315 eP Pn 13 38 14.5 -1.1
ZEA AMB AMB 13 38 19.1
comp=Z,17nm,1.0s
ZEA Zeya 16.55 315 eP Pn 13 38 15.2 -0.4
ZEA pmax pmax
comp=Z,17nm,1.0s
KROS Kirovskiy 17.05 317 eP Pn 13 38 19.8 -2.0
KROS AMB AMB 13 38 23.0
comp=Z,14nm,1.0s
HIA Hailar 19.64 297 P P 13 38 50.5 -0.7
HIA Hailar 19.64 297 P P 13 38 50.5 -0.7
HIA pmax pmax
comp=Z,17nm,0.7s
SEY Seymchan 19.68 7 P P 13 38 49.4 -2.0
comp=Z,0.8nm,0.3s,baz=178,slow=9.0,SNR=15
YAK Yakutsk 21.17 337 P P 13 39 04.2 -3.3
comp=Z,14nm,0.3s,baz=152,slow=0.5,SNR=20
YAK Yakutsk 21.17 337 P P 13 39 03.9 -3.6
YAK IAmb IAmb 13 39 07.9
comp=Z,45nm,0.7s
YAK Yakutsk 21.17 337 eP P 13 39 02.8 -4.7
YAK e 13 39 24.1
YAK eS S 13 42 51.2 -7.9
YAK e*SS Sn 13 43 10.4 +1.0
YAK e 13 50 30.7
YAK pmax pmax
comp=Z,27nm,0.8s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK smax smax
comp=E,80nm,3.0s
YAK smax smax
comp=N,22nm,1.8s
BJI Beijing 23.23 272 eP P 13 39 28.5 -0.9
BJI S S 13 43 36.8 +0.6
BJI pmax pmax
comp=N,16nm,0.9s
BJI LR LR
comp=N,150nm,5.2s
BJI LR LR
comp=N,310nm,5.0s
BJT Baijiatuau 23.25 272 P P 13 39 28.4 -1.1
BJT Baijiatuau 23.25 272 P P 13 39 28.4 -1.1
BJT pmax pmax
comp=Z,15nm,1.0s
NJ2 Nanjing 24.95 252 eP P 13 39 44.4 -0.8
NJ2 pmax pmax
comp=Z,5.0nm,0.6s
BOD Bodaibo 25.05 316 eP P 13 39 42.7 -3.1
BOD pmax pmax
comp=Z,5.0nm,1.3s
HHC Hu-ho-hao-te 26.32 276 iP P 13 39 58.9 +1.2
HHC pmax pmax
comp=Z,8.0nm,1.0s
HHC pmax pmax
comp=Z,120nm,5.3s
BILL Bilibino 26.58 16 eP P 13 40 00.4 +0.9
BILL Bilibino 26.58 16⇓eP P 13 40 00.1 +0.6
BILL e 13 40 41.0
BILL eS S 13 44 33.2 +4.0
BILL pmax pmax
comp=Z,5.0nm,1.3s
BILL MLR MLR
comp=Z,56nm,19.0s
BTO Baotou 27.52 277 eP P 13 40 09.0 +0.7
ULN Ulaanbaatar 28.06 293 eP P 13 40 14.1 +0.9
ULN Ulaanbaatar 28.06 293 P P 13 40 14.1 +0.9
ULN IAmb IAmb 13 40 15.1
comp=Z,32nm,0.7s
ULN Ulaanbaatar 28.06 293 P P 13 40 14.1 +0.9
ULN pmax pmax
comp=Z,31nm,0.7s
SONM Songino Array 28.50 293 P P 13 40 18.3 +1.2
comp=Z,26nm,0.7s,baz=89,slow=8.3,SNR=175
SONM Songino Array 28.50 293 P P 13 40 16.7 -0.4
WHN Wuhan 28.96 254 P P 13 40 21.7 +0.5
H11N2 WAKE ISLAND Hy 28.98 139 T T 14 11 14.0
baz=330,slow=75,SNR=45
H11N1 WAKE ISLAND Hy 28.99 139 T T 14 11 17.0
baz=330,slow=75,SNR=91
H11N3 WAKE ISLAND Hy 28.99 139 T T 14 11 13.3
baz=330,slow=75,SNR=77
TIXI Tiksi 29.56 348 P P 13 40 21.8 -4.2
comp=Z,1.0nm,0.4s,baz=98,slow=3.0,SNR=4.1
TIXI Tiksi 29.56 348 IAmb IAmb 13 40 28.2
comp=Z,16nm,2.0s
TIXI Tiksi 29.56 348 P P 13 40 21.8 -4.2
TIXI pmax pmax
comp=Z,16nm,2.0s
H11S1 WAKE ISLAND Hy 29.94 140 T T 14 12 24.3
baz=330,slow=76,SNR=1044
H11S3 WAKE ISLAND Hy 29.94 140 T T 14 12 21.7
baz=330,slow=76,SNR=59
H11S2 WAKE ISLAND Hy 29.95 140 T T 14 12 19.3
baz=330,slow=76,SNR=24
TLY Talaya 30.01 301 P P 13 40 30.3 0.0
comp=Z,4.4nm,0.7s,baz=113,slow=4.7,SNR=8.9
TLY Talaya 30.01 301 eP P 13 40 30.7 +0.4
TLY Talaya 30.01 301 P P 13 40 30.2 0.0
TLY Talaya 30.01 301⇓eP P 13 40 30.7 +0.4
TLY pmax pmax
comp=Z,5.0nm,0.7s
ZAK Zakamensk 30.30 299 eP P 13 40 32.8 -0.2
ZAK Zakamensk 30.30 299 eP P 13 40 32.8 -0.2
ZAK pmax pmax
comp=Z,8.0nm,0.9s
GAMB Gambell 30.91 35 P P 13 40 39.6 +1.6
XAN Xi'an 30.98 265 P P 13 40 38.9 -0.2
XAN PcP PcP 13 43 36.8 +3.1
XAN pmax pmax
comp=Z,14nm,0.7s
XAN pmax pmax
comp=Z,270nm,5.9s
XAN Xi'an 30.98 265 P P 13 40 38.7 -0.4
XAN IAmb IAmb 13 40 46.4
comp=Z,10nm,0.6s
XAN Xi'an 30.98 265 P P 13 40 38.7 -0.4
XAN pmax pmax
comp=Z,11nm,0.6s
MOY Mondy 31.66 301 eP P 13 40 45.3 +0.4
MOY Mondy 31.66 301 eP P 13 40 45.3 +0.4
MOY pmax pmax
comp=Z,15nm,1.6s
ENH Enshi 32.56 259 P P 13 40 52.3 -0.7
LZH Lanzhou 33.72 272 ⇑P P 13 41 04.1 +0.9
LZH pP sP 13 41 27.9 +1.2
LZH sP pP 13 41 39.1 +20
LZH PP PP 13 42 20.0 -0.4
LZH pmax pmax
comp=Z,21nm,1.1s
LZH pmax pmax
comp=Z,120nm,5.0s
LZH LR LR
comp=Z,230nm,13.0s
LZH LR LR
comp=Z,250nm,13.8s
LZH LR LR
comp=Z,280nm,14.2s
ANM Nome 33.80 35 P P 13 41 04.5 +1.3
ANM Nome 33.80 35 P P 13 41 04.5 +1.3
ANM pmax pmax
comp=Z,6.0nm,1.1s
GTA Gaotai 35.27 280 P P 13 41 17.4 +0.9
GTA pP sP 13 41 39.4 -0.7
GTA sP pP 13 41 52.4 +20
GTA pmax pmax
comp=Z,8.0nm,1.1s
CD2 Chengdu 36.33 264 eP P 13 41 25.0 -0.5
CD2 pmax pmax
comp=Z,10.0nm,0.5s
GYA Guiyang 36.81 256 eP P 13 41 29.7 -0.1
GYA pmax pmax
comp=Z,10.0nm,0.9s
CHIR Chirikof Islan 37.97 51 P P 13 41 41.0 +2.0
IMAR Indian Mountai 38.85 34 P P 13 41 46.6 +0.3
OHAK Old Harbor 39.11 48 P P 13 41 49.4 +0.8
PPLA Purkeypile 39.38 39 P P 13 41 52.9 +2.0
SKT Skwentna 39.70 40 P P 13 41 54.4 +0.9
SKT IAmb IAmb 13 42 02.3
comp=Z,41nm,1.9s
KTH Kantishna Hill 39.95 38 P P 13 41 54.5 -1.1
KTH IAmb IAmb 13 42 22.2
comp=Z,10nm,0.9s
MLY Manley 40.05 36 P P 13 41 55.3 -1.0
MLY IAmb IAmb 13 43 24.0
comp=Z,24nm,1.9s
BRLK Bradley Lake 40.13 44 P P 13 41 58.2 +1.1
TRF Thorofare Moun 40.24 38 P P 13 41 59.6 +1.6
TRF IAmb IAmb 13 42 01.2
comp=Z,46nm,2.0s
COLD Coldfoot 40.36 32 P P 13 41 59.9 +1.0
BWN Browne 40.59 37 P P 13 42 03.3 +2.5
BWN IAmb IAmb 13 42 29.5
comp=Z,64nm,1.8s
RC01 Rabbit Creek A 40.60 42 P P 13 42 02.6 +1.8
RC01 IAmb IAmb 13 43 22.1
comp=Z,51nm,1.8s
NEA Nenana 40.76 36 P P 13 42 04.1 +2.0
MCK McKinley 40.84 38 P P 13 42 03.4 +0.5
MCK IAmb IAmb 13 42 28.1
comp=Z,33nm,1.7s
MCK McKinley 40.84 38 P P 13 42 03.4 +0.5
MCK pmax pmax
comp=Z,33nm,1.7s
PMR Palmer 40.85 41 P P 13 42 02.7 -0.2
PMR IAmb IAmb 13 43 23.8
comp=Z,44nm,2.0s
PMR Palmer 40.85 41 P P 13 42 02.7 -0.2
PMR pmax pmax
comp=Z,44nm,2.0s
ZAA0 Zalesovo Array 41.08 307 P P 13 42 04.9 0.0
ZAA0 IAmb IAmb 13 42 06.9
comp=Z,13nm,0.7s
ZALV Zalesovo Beam 41.08 307 P P 13 42 04.8 -0.1
comp=Z,12nm,0.5s,baz=82,slow=6.9,SNR=40
ZALV PcP PcP 13 44 03.5 +0.1
comp=Z,2.1nm,0.5s,baz=70,slow=3.7,SNR=4.4
MDM Murphy Dome 41.11 36 P P 13 42 06.6 +1.5
MDM IAmb IAmb 13 42 26.3
comp=Z,32nm,1.8s
WRH Wood River Hil 41.19 37 P P 13 42 07.0 +1.3
WRH IAmb IAmb 13 42 17.2
comp=Z,22nm,1.8s
SML Sawmill 41.22 41 P P 13 42 07.0 +0.9
SML IAmb IAmb 13 42 32.2
comp=Z,17nm,0.9s
SML Sawmill 41.22 41 P P 13 42 06.0 0.0
SML pmax pmax
comp=Z,17nm,0.9s
COLA College 41.28 36 P P 13 42 07.2 +0.9
COLA IAmb IAmb 13 42 12.2
comp=Z,12nm,0.7s
COLA College 41.28 36 P P 13 42 07.2 +0.9
COLA pmax pmax
comp=Z,12nm,0.7s
CCB Clear Creek Bu 41.30 36 P P 13 42 08.0 +1.4
CCB IAmb IAmb 13 43 16.8
comp=Z,26nm,2.0s
DHY Denali Highway 41.57 39 P P 13 42 09.7 +0.7
HDA Harding Lake 41.68 37 P P 13 42 10.5 +0.8
SCM Sheep Creek Mo 41.69 41 P P 13 42 12.4 +2.5
SCM IAmb IAmb 13 42 45.5
comp=Z,31nm,1.4s
SCM Sheep Creek Mo 41.69 41 P P 13 42 12.4 +2.5
SCM pmax pmax
comp=Z,31nm,1.4s
IL31 41.69 36 P P 13 42 10.8 +1.1
ILAR Eielson Array 41.69 36 P P 13 42 11.5 +1.7
comp=Z,1.9nm,0.5s,baz=256,slow=5.0,SNR=39
ILAR Eielson Array 41.69 36 P P 13 42 11.1 +1.3
ILAR Eielson Array 41.69 36 P P 13 42 11.1 +1.3
GLI Glacier Island 41.90 42 P P 13 42 12.0 +0.5
WMQ Urumqi 42.12 292 eP P 13 42 14.7 +1.0
WMQ pP sP 13 42 34.9 -2.7
WMQ pmax pmax
comp=Z,15nm,0.9s
WMQ pmax pmax
comp=Z,53nm,3.7s
WMQ LR LR
comp=Z,420nm,29.2s
WMQ LR LR
comp=Z,740nm,29.2s
WMQ LR LR
comp=Z,350nm,28.9s
WMQ Urumqi 42.12 292 P P 13 42 13.1 -0.6
WMQ IAmb IAmb 13 42 16.9
comp=Z,43nm,1.3s
WMQ Urumqi 42.12 292 P P 13 42 13.1 -0.6
WMQ pmax pmax
comp=Z,43nm,1.3s
PRP Porcupine Dome 42.23 35 P P 13 42 15.2 +0.8
FYU Fort Yukon 42.31 33 P P 13 42 16.4 +1.6
FYU IAmb IAmb 13 42 17.8
comp=Z,15nm,0.7s
BMAR Burnt Mountain 42.54 32 P P 13 42 18.1 +1.4
RIDG Independent Ri 42.65 38 P P 13 42 18.0 +0.3
RIDG IAmb IAmb 13 42 31.2
comp=Z,36nm,1.9s
DOT Dot Lake 43.01 38 P P 13 42 21.2 +0.6
SCRK Sand Creek 43.01 37 P P 13 42 20.3 -0.3
VRDI Verde Repeater 43.61 41 P P 13 42 27.0 +1.4
VRDI IAmb IAmb 13 42 49.9
comp=Z,57nm,1.8s
CRQM Cirque 43.84 42 P P 13 42 29.2 +1.8
CRQM IAmb IAmb 13 43 23.7
comp=Z,46nm,1.5s
TGL Tana Glacier 43.99 42 P P 13 42 29.3 +0.8
TGL IAmb IAmb 13 42 44.6
comp=Z,38nm,1.6s
BCAR Beaver Creek A 44.10 38 P P 13 42 30.9 +1.6
EGAK Eagle 44.14 36 P P 13 42 30.7 +1.2
BALM Baldy 44.17 41 P P 13 42 31.4 +1.4
BARN Barnard Glacie 44.49 41 P P 13 42 30.9 -1.8
BARN IAmb IAmb 13 43 32.2
comp=Z,25nm,1.5s
MK31 Makanchi Array 44.63 298 P P 13 42 34.3 +0.5
MK31 Makanchi Array 44.63 298 iP P 13 42 34.5 +0.7
MKAR Makanchi Array 44.63 298 P P 13 42 34.5 +0.7
comp=Z,34nm,0.5s,baz=81,slow=9.0,SNR=715
MKAR LR LR 14 01 30.5
comp=Z,68nm,18.5s,baz=334,slow=36
MKAR Makanchi Array 44.63 298 P P 13 42 34.2 +0.4
MAKZ Makanchi 44.83 298 P P 13 42 35.8 +0.4
MAKZ Makanchi 44.83 298 iP P 13 42 35.8 +0.4
MAKZ pmax pmax
comp=Z,51nm,0.9s
DAWY Dawson 45.00 37 P P 13 42 37.7 +1.2
UBPT Khong Chiam 45.20 245 P P 13 42 40.1 +1.5
UBPT IAmb IAmb 13 42 53.5
comp=Z,20nm,1.6s
KURK Kurchatov 45.60 304 eP P 13 42 41.5 +0.1
KURK Kurchatov 45.60 304 P P 13 42 41.1 -0.3
KURK IAmb IAmb 13 42 42.6
comp=Z,26nm,0.8s
KURK Kurchatov 45.60 304 c iP P 13 42 41.5 +0.1
KURK pmax pmax
comp=Z,36nm,1.0s
EPYK Eagle Plains 45.73 33 P P 13 42 42.3 +0.1
EPYK IAmb IAmb 13 42 45.4
comp=Z,12nm,0.8s
DLV T Lat 45.78 238 P P 13 42 44.1 +0.8
DLV IAmb IAmb 13 42 45.7
comp=Z,9.3nm,0.8s
LSA Lhasa 46.14 272 P P 13 42 47.7 +1.3
LSA Lhasa 46.14 272 P P 13 42 47.3 +0.9
LSA IAmb IAmb 13 42 48.8
comp=Z,19nm,0.7s
LSA Lhasa 46.14 272 P P 13 42 47.3 +0.9
LSA pmax pmax
comp=Z,19nm,0.7s
HYT Haines Junctio 46.53 41 P P 13 42 48.3 -0.4
HYT IAmb IAmb 13 43 15.6
comp=Z,15nm,0.9s
INK Inuvik 46.61 30 P P 13 42 50.2 +1.1
comp=Z,8.3nm,0.6s,baz=294,slow=6.8,SNR=105
INK Inuvik 46.61 30 P P 13 42 50.1 +1.1
INK IAmb IAmb 13 42 51.0
comp=Z,16nm,1.2s
INK Inuvik 46.61 30 P P 13 42 50.1 +1.1
INK pmax pmax
comp=Z,16nm,1.2s
CHTO Chiang Mai 47.17 254 P P 13 42 54.3 +0.3
CHTO Chiang Mai 47.17 254 P P 13 42 54.3 +0.3
CHTO pmax pmax
comp=Z,4.0nm,0.8s
CMAR Chiang Mai Arr 47.41 254 P P 13 42 57.0 +1.1
comp=Z,1.4nm,0.6s,baz=42,slow=7.5,SNR=15
CMAR LR LR 14 02 53.6
comp=Z,28nm,20.3s,baz=35,slow=36
CMAR Chiang Mai Arr 47.41 254 iP P 13 42 57.0 +1.1
CMAR pmax pmax
comp=Z,2.0nm,0.7s
PDGK Podgornoye 47.80 294 iP P 13 42 58.5 -0.3
PDGK pmax pmax
comp=Z,9.0nm,0.6s
WHY Whitehorse 47.81 41 P P 13 43 00.3 +1.6
WHY IAmb IAmb 13 44 43.2
comp=Z,30nm,1.9s
SHL Shillong 47.97 267 P P 13 43 00.2 -0.1
SHL Shillong 47.97 267 P P 13 43 00.3 -0.1
SHL pmax pmax
comp=Z,26nm,0.4s
MRSI Marisa 48.39 215 P P 13 43 02.9 -0.5
comp=Z,11nm,0.9s
MRSI pP pP 13 43 22.2 +2.6
comp=Z,11nm,0.9s
BRVK Borovoye 49.64 310 eP P 13 43 12.2 -0.4
BRVK Borovoye 49.64 310 P P 13 43 12.2 -0.4
BRVK IAmb IAmb 13 43 14.0
comp=Z,18nm,0.9s
BRVK Borovoye 49.64 310 P P 13 43 12.2 -0.4
BRVK pmax pmax
comp=Z,18nm,0.9s
C36M Paulatuk 49.69 28 P P 13 43 13.1 +0.4
C36M IAmb IAmb 13 43 13.9
comp=Z,8.6nm,0.5s
KDJ Kajisay 49.86 294 P P 13 43 15.2 +0.6
KDJ Kajisay 49.86 294 P P 13 43 15.2 +0.6
KDJ pmax pmax
comp=Z,42nm,1.5s
TAPN Taplejung 49.96 272 eP P 13 43 16.4 +0.7
comp=Z,33nm,0.7s
ODAN Odare 50.48 271 eP P 13 43 20.5 +0.9
comp=Z,14nm,0.4s
BOOM Boomskoye usch 50.52 295 P P 13 43 20.5 +0.9
BOOM Boomskoye usch 50.52 295 P P 13 43 20.5 +0.9
JIRN Jiri 50.89 273 eP P 13 43 23.5 +0.7
NRN Naryn 50.96 294 P P 13 43 23.0 -0.1
NRN Naryn 50.96 294 P P 13 43 23.0 -0.1
NRN pmax pmax
comp=Z,7.0nm,1.2s
GUN Gumba 50.97 273 eP P 13 43 23.9 +0.5
comp=Z,158nm,0.8s
RAMN Ramite 51.00 272 eP P 13 43 23.9 +0.4
comp=Z,122nm,0.8s
KBK Karagaybulak 51.09 296 P P 13 43 25.0 +1.1
SNR=15
USP Ospenovka 51.11 296 P P 13 43 24.9 +1.0
SNR=13
KZA Kyzart 51.16 295 P P 13 43 26.5 +1.7
SNR=9.4
SBUM Sibu 51.29 227 P P 13 43 26.6 +1.2
AAK Ala-Archa 51.40 296 P P 13 43 26.8 +0.6
SNR=5.8
AAK Ala-Archa 51.40 296 eP P 13 43 26.8 +0.6
AAK Ala-Archa 51.40 296 P P 13 43 25.7 -0.5
AAK IAmb IAmb 13 43 27.9
comp=Z,28nm,1.6s
AAK Ala-Archa 51.40 296⇑eP P 13 43 26.8 +0.6
AAK pmax pmax
comp=Z,17nm,1.5s
KKN Kakani 51.47 274 eP P 13 43 27.8 +0.8
PKI Pulchoki 51.51 273 eP P 13 43 27.6 +0.2
PKIN Phulchoki 51.51 273 eP P 13 43 27.6 +0.2
DMN Daman 51.70 274 eP P 13 43 29.3 +0.5
GKN Gorkha 51.82 274 eP P 13 43 29.9 +0.4
comp=Z,40nm,0.3s
EKS2 Erkin-Say 51.86 296 P P 13 43 30.4 +0.8
SNR=5.6
KSH Kashi 51.89 292 P P 13 43 34.4 +4.5
KSH pP sP 13 43 56.6 +2.5
KSH PcP PcP 13 44 45.0 +3.2
KSH S S 13 50 47.6 -0.1
KSH sS sS 13 51 29.5 +13
KSH ScS ScS 13 53 07.6 -6.3
KSH SS SS 13 54 21.9 -2.9
KSH pmax pmax
comp=Z,9.0nm,1.2s
KSH pmax pmax
comp=Z,100nm,6.9s
KSH LR LR
comp=Z,130nm,6.7s
KSH LR LR
comp=Z,160nm,6.3s
KSH LR LR
comp=Z,110nm,8.8s
AML Almayashu 52.16 296 P P 13 43 33.4 +1.2
SNR=9.1
DANN Dangsing 52.26 275 eP P 13 43 33.8 +0.9
KOLN Koldanda 52.70 275 eP P 13 43 36.8 +0.6
ARSB Arslanbob 53.01 295 P P 13 43 39.1 +0.9
ARSB Arslanbob 53.01 295 P P 13 43 39.1 +0.9

ARSB pmax pmax
comp=Z,21nm,0.8s
SVE Sverdlovsk 53.26 317 eP P 13 43 39.8 +0.3
SVE Sverdlovsk 53.26 317deP P 13 43 39.8 +0.3
SVE pmax pmax
comp=Z,30nm,0.9s
HATHI Halema'uma'u T 53.56 98 P P 13 43 42.8 +0.4
KK31 Karatay Array 53.76 298 P P 13 43 43.7 +0.2
KK31 IAmb IAmb 13 43 44.4
comp=Z,9.0nm,0.6s
KK31 Karatay Array 53.76 298 i P P 13 43 43.6 +0.1
KKAR Karatay Array 53.76 298 P P 13 43 43.5 0.0
KKAR Karatay Array 53.76 298 P P 13 43 43.7 +0.2
KKAR IAmb IAmb 13 43 44.3
comp=Z,9.0nm,0.6s
KKAR Karatay Array 53.76 298 P P 13 43 43.7 +0.2
KKAR pmax pmax
comp=Z,9.0nm,0.6s
ARU Arti 54.47 317 eP P 13 43 48.1 -0.3
ARU Arti 54.47 317 P P 13 43 47.8 -0.6
ARU Arti 54.47 317d iP P 13 43 48.0 -0.3
ARU *PP pP 13 44 02.6 -2.7
ARU 13 45 47.0
ARU S S 13 51 24.0 +2.0
ARU SS SS 13 55 01.9 -2.5
ARU pmax pmax
comp=Z,46nm,1.4s
NOR Nord 54.81 357 i P P 13 43 48.8 -1.7
comp=Z,4.7nm,0.7s
NOR Nord 54.81 357 i P P 13 43 48.8 -1.7
NOR pmax pmax
comp=Z,5.0nm,0.7s
SPA0 Spitsbergen Ar 54.98 349 eP P 13 43 49.8 -2.0
SPA0 Spitsbergen Ar 54.98 349 P P 13 43 50.0 -1.8
SPITS Spitsbergen Ar 54.98 349 P P 13 43 50.0 -1.8
SPITS pmax pmax
comp=Z,2.0nm,0.3s
BTK Batken 55.07 295 P P 13 43 53.1 0.0
BTK IAmb IAmb 13 43 54.4
comp=Z,6.7nm,0.7s
BTK Batken 55.07 295 P P 13 43 53.1 0.0
BTK pmax pmax
comp=Z,7.0nm,0.7s
RES Resolute Bay 55.19 17 P P 13 43 53.3 0.0
comp=Z,12nm,0.6s,baz=338,slow=6.8,SNR=105
RES Resolute Bay 55.19 17 P P 13 43 52.6 -0.7
RES IAmb IAmb 13 43 54.1
comp=Z,14nm,0.6s
KULM Kulim 55.80 241 P P 13 43 59.1 +0.7
KULM IAmb IAmb 13 44 17.8
comp=Z,11nm,1.0s
YKA Yellowknife Ar 56.01 34 P P 13 43 60.0 +0.6
comp=Z,2.5nm,0.6s,baz=300,slow=7.0,SNR=24
YKA Yellowknife Ar 56.01 34 P P 13 44 00.0 +0.6
IPM Ipoh 56.19 240 P P 13 44 01.7 +0.4
IPM IAmb IAmb 13 45 36.3
comp=Z,9.9nm,1.2s
NIL Nilore 56.80 287 P P 13 44 06.1 +0.6
NIL Nilore 56.80 287 P P 13 44 06.1 +0.6
AB31 Akbulak array 57.15 309 eP P 13 44 07.8 +0.1
ABKAR Akbulak array 57.15 309 P P 13 44 07.6 0.0
ABKAR Akbulak array 57.15 309 P P 13 44 07.7 0.0
ABKAR IAmb IAmb 13 44 09.4
comp=Z,64nm,1.5s
PRGR Permogore 57.71 326 eP P 13 44 10.5 -0.9
PRGR pmax pmax
comp=Z,23nm,0.6s
MTN Manton Dam 57.97 198 P P 13 44 13.9 +0.3
LVZ Lovozero 57.97 336 P P 13 44 13.2 0.0
LVZ Lovozero 57.97 336⇑eP P 13 44 14.1 +0.9
LVZ pmax pmax
comp=Z,36nm,1.4s
TULEG Thule 58.05 9 P P 13 44 12.5 -1.0
KEV Kevo 58.89 339 P P 13 44 18.3 -1.2
KEV Kevo 58.89 339 P P 13 44 18.3 -1.2
KEV pmax pmax
comp=Z,108nm,1.6s
TMCR Tamitsa 59.13 331 eP P 13 44 20.8 -0.4
TMCR pmax pmax
comp=Z,13nm,0.6s
KBL Kabul 59.21 290 P P 13 44 20.7 -1.8
KBL IAmb IAmb 13 44 22.7
comp=Z,14nm,0.8s
KBL Kabul 59.21 290 P P 13 44 20.7 -1.8
KBL pmax pmax
comp=Z,14nm,0.8s
ARCES ARCESS Array B 59.43 340 P P 13 44 22.1 -1.1
comp=Z,5.2nm,0.7s,baz=55,slow=7.3,SNR=27
ARCES ARCESS Array B 59.43 340 P P 13 44 22.2 -1.0
ARE0 ARCESS Array S 59.43 340 eP P 13 44 22.6 -0.7
ARE0 ARCESS Array S 59.43 340 P P 13 44 22.8 -0.5
DAG Danmarks Havn 59.63 356 i P P 13 44 23.5 -1.0
comp=Z,3.0nm,0.6s
DAG Danmarks Havn 59.63 356 i P P 13 44 23.5 -1.0
DAG pmax pmax
comp=Z,3.0nm,0.6s
KTK1 Kautokeino 60.37 340 eP P 13 44 28.2 -1.5
KLMR Klimovskoe 60.59 328 eP P 13 44 29.2 -2.1
KLMR AMP 13 44 32.0
comp=Z,28nm,0.9s
KLMR Klimovskoe 60.59 328 eP P 13 44 29.1 -2.2
KLMR pmax pmax
comp=Z,28nm,0.9s
TRO Tromso 60.94 342 eP P 13 44 32.6 -1.0
STEI Steigen 63.12 342 eP P 13 44 47.5 -0.6
HRA Herat 63.89 293 P P 13 44 54.8 +0.7
SUF Sumiainen 64.09 334 P P 13 44 54.6 0.0
SUF pmax pmax
comp=Z,24nm,2.3s
SUMG Summit 64.12 2⇑iP P 13 44 55.9 +0.7
SUMG Summit 64.12 2 P P 13 44 55.3 +0.1
SUMG IAmb IAmb 13 44 56.9
comp=Z,20nm,1.1s
SUMG Summit 64.12 2⇑iP P 13 44 55.9 +0.7
WRA Warramunga Arr 64.24 193 P P 13 44 55.3 -0.8
comp=Z,1.3nm,0.7s,baz=11,slow=6.8,SNR=9.6
WRA Warramunga Arr 64.24 193 i P P 13 44 55.7 -0.4
WRA pmax pmax
comp=Z,2.0nm,0.7s
GEYT Alibeck 64.49 299 P P 13 44 58.2 +0.5
comp=Z,5.5nm,0.5s,baz=28,slow=3.5,SNR=23
GEYT LR LR 14 12 54.2
comp=Z,40nm,19.9s,baz=345,slow=36
GEYT Alibeck 64.49 299 P P 13 44 57.9 +0.1
GYA0B ALIBECK ARRAY 64.49 299 P P 13 44 58.0 +0.2
GYA0B IAmb IAmb 13 44 59.3
comp=Z,9.8nm,0.7s
MOS Moscow 64.59 324 eP P 13 44 57.4 -0.6
MOR8 Moi Rana 64.72 341 eP P 13 44 57.2 -1.5
FIA1 FINESS Array S 65.04 333 P P 13 45 00.1 -0.7
FINES FINESS Array B 65.04 333 P P 13 45 00.3 -0.5
comp=Z,23nm,0.6s,baz=42,slow=7.8,SNR=103
FINES FINESS Array B 65.04 333 P P 13 45 00.1 -0.7
OBN Obninsk 65.45 324 eP P 13 45 04.0 +0.4
OBN Obninsk 65.45 324deP P 13 45 03.6 0.0
OBN e 13 47 25.7
OBN pmax pmax
comp=Z,41nm,1.3s
OBN MLR MLR
comp=Z,63nm,10.0s
VRH Novokhopyorsk 65.64 318 eP P 13 45 04.3 -0.6
VRH pmax pmax
comp=Z,40nm,1.6s
FFC Flin Flon 65.90 36 P P 13 45 06.6 +0.1
FFC Flin Flon 65.90 36 P P 13 45 06.6 +0.1
FFC pmax pmax
comp=Z,4.0nm,0.9s
FCC Fort Churchill 66.23 30 P P 13 45 08.5 -0.1
FCC Fort Churchill 66.23 30 P P 13 45 08.5 -0.1
FCC pmax pmax
comp=Z,4.0nm,0.6s
NSS Namsos 66.66 341 eP P 13 45 11.3 +0.1
VSR Storozhevoye 66.86 319 eP P 13 45 12.7 0.0
VSR pmax pmax
comp=Z,20nm,0.5s
VORD Divnogorie 66.96 319 eP P 13 45 13.3 0.0
VORD pmax pmax
comp=Z,10.0nm,0.5s
VSU Vasula 66.99 330 eP P 13 45 12.5 -0.9
VSU Vasula 66.99 330⇓eP P 13 45 13.8 +0.4
NVAR Mina Array Bea 67.74 58 P P 13 45 20.0 +1.2
comp=Z,0.8nm,0.5s,baz=297,slow=7.0,SNR=11
NVAR Mina Array Bea 67.74 58 P P 13 45 19.4 +0.6
ASAR Alice Springs 67.96 193 P P 13 45 20.5 +0.6

comp=Z,1.1nm,0.8s,baz=11,slow=6.3,SNR=12
AKT Akhty 68.64 307 eP P 13 45 24.9 +0.7
AKT e*PP pP 13 45 42.2 +0.5
AKT e 13 45 46.8
AKT pmax pmax
comp=Z,10.0nm,0.6s
GOF Gofitskoye 68.95 313⇑eP P 13 45 26.9 +1.0
GOF pmax pmax
comp=Z,74nm,0.6s
IZAR Zarasai 69.18 329 eP P 13 45 27.6 +0.5
IZAR IAmb IAmb 13 45 28.4
comp=Z,10nm,0.6s
ISAL Salakas 69.36 329 eP P 13 45 28.9 +0.6
ISAL IAmb IAmb 13 45 30.7
comp=Z,11nm,0.6s
FRB Frobisher Bay 69.40 16 P P 13 45 28.1 -0.2
FRB pmax pmax
comp=Z,13nm,1.8s
IIGN Ignalina 69.49 328 eP P 13 45 29.7 +0.6
IIGN IAmb IAmb 13 45 31.1
comp=Z,22nm,0.5s
NC303 NORSAR Array S 69.58 339 eP P 13 45 29.3 -0.3
NC303 NORSAR Array S 69.58 339 P P 13 45 29.4 -0.2
NC405 NORSAR Array S 69.59 339 P P 13 45 29.4 -0.3
NCK Nalchik 69.67 311⇓eP P 13 45 31.7 +1.2
NCK pmax pmax
comp=Z,9.0nm,0.3s
NC204 NORSAR Array S 69.70 339 P P 13 45 30.0 -0.4
NB201 NORSAR Array S 69.75 339 P P 13 45 30.3 -0.3
NB2 NORSAR Subarra 69.78 339 P P 13 45 30.9 0.0
comp=Z,6.1nm,0.6s,baz=31,slow=6.5
NB2 NORSAR Subarra 69.78 339 P P 13 45 30.9 0.0
baz=31,slow=6.5
NOA NORSAR Array B 69.78 339 P P 13 45 30.8 0.0
comp=Z,13nm,0.7s,baz=32,slow=6.5,SNR=73
NOA LR LR 14 20 15.5
comp=Z,48nm,18.9s,baz=225,slow=39
KVAR Kislovodsk Arr 69.86 312 P P 13 45 33.5 +1.8
comp=Z,8.2nm,0.7s,baz=88,slow=23,SNR=9.8
KIV Kislovodsk 69.86 312 P P 13 45 32.7 +1.0
KIV Kislovodsk 69.86 312 eP P 13 45 33.7 +2.0
KIV Kislovodsk 69.86 312 P P 13 45 32.4 +0.6
KIV IAmb IAmb 13 45 34.4
comp=Z,22nm,0.7s
KIV Kislovodsk 69.86 312 eP P 13 45 33.4 +1.7
KIV pmax pmax
comp=Z,82nm,1.0s
KIV MLR MLR
comp=Z,190nm,18.0s
KBZ Khabaz 69.90 312 P P 13 45 32.8 +1.0
comp=Z,16nm,0.8s,baz=68,slow=3.5,SNR=33
KBZ Khabaz 69.90 312 eP P 13 45 31.5 -0.3
NORES NORESS Array B 69.95 339 P P 13 45 31.5 -0.3
NORES pmax pmax
comp=Z,2.0nm,0.3s
ZEI Tsey 69.97 310 eP P 13 45 32.1 -0.4
ZEI Tsey 69.97 310 eP P 13 45 32.1 -0.4
ZEI pmax pmax
comp=Z,11nm,0.6s
PD31 Pinedale Array 70.09 50 P P 13 45 33.4 +0.1
PD31 pP 13 45 51.9 +1.1
PDAR Pinedale Array 70.09 50 P P 13 45 34.5 +1.2
comp=Z,0.3nm,0.5s,baz=158,slow=1.0,SNR=6.4
PDAR Pinedale Array 70.09 50 P P 13 45 33.3 -0.1
TBLG Delisi 70.19 309 P P 13 45 34.1 +0.5
TBLG Delisi 70.19 309 P P 13 45 34.2 +0.5
PABE Paberze 70.22 330 eP P 13 45 33.4 -0.1
PABE IAmb IAmb 13 45 34.3
comp=Z,19nm,0.7s
NEY Neytrino 70.31 311⇑eP P 13 45 36.0 +1.4
NEY pmax pmax
comp=Z,2.0nm,0.6s
AKH Akhalkalaki 71.11 309 P P 13 45 39.2 -0.2
AKH IAmb IAmb 13 45 42.1
comp=Z,16nm,1.4s
AKH Akhalkalaki 71.11 309 P P 13 45 39.2 -0.2
AKH pmax pmax
comp=Z,16nm,1.4s
GNI Garni 71.23 308 P P 13 45 41.1 +0.9
comp=Z,5.7nm,0.8s,baz=198,slow=3.2,SNR=4.0
GNI Garni 71.23 308 IAmb IAmb 13 46 11.3
comp=Z,22nm,1.3s
GNI Garni 71.23 308⇓eP P 13 45 41.6 +1.4
GNI pmax pmax
comp=Z,33nm,1.3s
SUW Suwalki 71.66 329 P P 13 45 40.7 -1.6
AKASG Malin Array Be 71.72 324 P P 13 45 42.6 -0.1
comp=Z,8.7nm,0.4s,baz=40,slow=6.2,SNR=56
AKASG Malin Array Be 71.72 324 P P 13 45 41.9 -0.9
AKBB Malin Array Si 71.72 324 P P 13 45 41.9 -0.8
AKBB IAmb IAmb 13 45 43.4
comp=Z,16nm,0.7s
AKBB Malin Array Si 71.72 324 P P 13 45 41.9 -0.8
AKBB pmax pmax
comp=Z,16nm,0.7s
BATM Batumi 71.98 310 ⇓P P 13 45 45.5 +1.0
BATM Batumi 71.98 310 P P 13 45 45.4 +1.0
BCA Borcka 72.12 310 ⇑P P 13 45 45.5 +0.2
BSD Bornholm Skovb 73.66 334 i P P 13 45 54.3 +0.2
BSD Bornholm Skovb 73.66 334 i P P 13 45 54.3 +0.2
SORM Soroca 74.01 322 ⇑P P 13 45 56.3 0.0
SORM Soroca 74.01 322 P P 13 45 56.3 0.0
BEL Belsk 74.26 329 eP P 13 45 58.9 +1.2
BEL Belsk 74.26 329 eP P 13 45 58.9 +1.2
MILM Milestii Mici 74.71 321 ⇑P P 13 46 00.4 0.0
KWP Kalwaria Pacla 75.25 326 eP P 13 46 04.5 +1.0
KWP Kalwaria Pacla 75.25 326 P P 13 46 03.4 -0.2
KWP Kalwaria Pacla 75.25 326 eP P 13 46 04.5 +1.0
DIKM Dikmen 75.41 314 ⇑P P 13 46 05.4 +0.9
BUR08 Bucovina Ar. S 75.76 324 P P 13 46 06.9 +0.3
BUR08 IAmb IAmb 13 46 07.7
comp=Z,8.4nm,0.6s
BURAR Bucovina Array 75.78 324 ⇓P P 13 46 07.5 +0.8
BURAR Bucovina Array 75.78 324 P P 13 46 06.7 0.0
BURAR Bucovina Array 75.78 324 P P 13 46 07.5 +0.8
OJC Ojcow 75.93 328 eP P 13 46 08.2 +0.8
OJC Ojcow 75.93 328 P P 13 46 06.6 -0.8
OJC IAmb IAmb 13 46 08.9
comp=Z,23nm,1.1s
OJC Ojcow 75.93 328 eP P 13 46 08.2 +0.8
KOLS Kolonicke sedl 75.98 326 eP P 13 46 08.2 +0.5
KOLS pmax pmax
comp=Z,6.0nm,1.0s
KOLS Kolonicke sedl 75.98 326 eP P 13 46 08.2 +0.5
TESR Tescani 75.99 322 ⇑P P 13 46 08.4 +0.6
TLCR 76.01 320 ⇓P P 13 46 08.6 +0.7
TLCR 76.01 320 P P 13 46 08.5 +0.7
CRVS Cervenica-Dubn 76.33 326 eP P 13 46 10.4 +0.7
CRVS pmax pmax
comp=Z,11nm,1.2s
CRVS Cervenica-Dubn 76.33 326 eP P 13 46 10.4 +0.7
NIE Niedzica 76.38 327 eP P 13 46 10.9 +0.9
NIE Niedzica 76.38 327 eP P 13 46 10.9 +0.9
ODBI Odobesti 76.38 321 ⇑P P 13 46 11.5 +1.5
TOPG Topolog 76.44 320 ⇑P P 13 46 10.6 +0.3
VRI Vrincioaia 76.45 322 ⇓P P 13 46 11.5 +1.1
VRI Vrincioaia 76.45 322 P P 13 46 11.6 +1.1
VRI pmax pmax
comp=Z,7.0nm,0.8s
PLOR Plostina 76.50 322 ⇑P P 13 46 11.6 +0.9
PLOR Plostina 76.50 322 P P 13 46 11.6 +0.9
TRPA Tarpa 76.50 325 ⇓P P 13 46 11.9 +1.3
BISRR Bisoca 76.70 321 P P 13 46 12.1 +0.2
KSP Ksiaz 76.72 330 eP P 13 46 12.8 +0.9
KSP Ksiaz 76.72 330 eP P 13 46 12.8 +0.9
TIRR Tirgusor 76.74 320 ⇑P P 13 46 12.5 +0.4
TIRR Tirgusor 76.74 320 P P 13 46 12.4 +0.4
HARR Harsova 76.79 320 ⇓P P 13 46 13.2 +0.9
HARR Harsova 76.79 320 P P 13 46 13.2 +0.9
DOPR Dopca 76.97 322 ⇑P P 13 46 14.5 +1.1
OSTC Ostas 76.99 330 eP P 13 46 14.3 +0.9
CHVC Chvalec 77.02 330 eP P 13 46 14.0 +0.4
MLR Muntele Rosu 77.09 322 P P 13 46 14.0 -0.2
comp=Z,5.9nm,0.5s,baz=171,slow=12,SNR=7.7
MLR Muntele Rosu 77.09 322 P P 13 46 15.2 +1.0
MLR Muntele Rosu 77.09 322 P P 13 46 14.0 -0.2
UPC Upice 77.10 330 eP P 13 46 14.6 +0.6
UPC Upice 77.10 330 eP P 13 46 14.6 +0.6
DPC Dobruska-Polom 77.12 330 eP P 13 46 15.0 +0.8
DPC Dobruska-Polom 77.12 330 eP P 13 46 15.0 +0.8
MORC Moravsky Berou 77.14 329 eP P 13 46 14.9 +0.6
MORC Moravsky Berou 77.14 329 ⇓P P 13 46 15.3 +1.0
MORC Moravsky Berou 77.14 329 P P 13 46 13.6 -0.7

MORC IAmb IAmb 13 46 17.0
comp=Z,11nm,1.2s
MORC Moravsky Berou 77.14 329 P P 13 46 13.6 -0.7
MORC pmax pmax
comp=Z,11nm,1.2s
KRLC Kraliky 77.18 330 eP P 13 46 15.2 +0.7
KRLC Kraliky 77.18 330 eP P 13 46 15.2 +0.7
ICOR Ion Corvin 77.29 320 ⇓P P 13 46 16.6 +1.4
CLL Collm 77.48 332⇑iP P 13 46 16.0 -0.1
comp=Z,36nm,1.5s
CLL Collm 77.48 332 P P 13 46 15.5 -0.6
CLL IAmb IAmb 13 46 18.0
comp=Z,14nm,0.6s
CLL Collm 77.48 332⇑iP P 13 46 16.0 -0.1
CLL pmax pmax
comp=Z,36nm,1.5s
DRGR 77.49 324 ⇓P P 13 46 17.0 +0.7
DRGR 77.49 324 P P 13 46 17.1 +0.8
DRGR pmax pmax
comp=Z,12nm,1.1s
BRG Berggiesshubel 77.53 332 P P 13 46 16.9 +0.6
BRG pmax pmax
comp=Z,8.0nm,0.9s
VOIR 77.53 322 ⇓P P 13 46 18.0 +1.3
VOIR 77.53 322 P P 13 46 17.9 +1.3
VOIR pmax pmax
comp=Z,11nm,1.4s
BR131 Keskin Array S 77.65 314 P P 13 46 17.2 -0.2
BR131 Keskin Array S 77.65 314 P P 13 46 17.2 -0.2
BR131 pmax pmax
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 77.65 314 P P 13 46 17.9 +0.5
comp=Z,2.7nm,0.8s,baz=78,slow=3.5,SNR=15
BRTR Keskin Array B 77.65 314 P P 13 46 17.2 -0.2
BRTR Keskin Array B 77.65 314 i P P 13 46 18.0 +0.5
BRTR pmax pmax
comp=Z,3.0nm,0.8s
VYHS Vyhne 77.70 328 eP P 13 46 18.2 +0.8
VYHS Vyhne 77.70 328 eP P 13 46 18.2 +0.8
ARR Arges 77.77 322 ⇑P P 13 46 19.3 +1.4
SCHQ Schefferville 77.84 19 P P 13 46 18.3 +0.3
comp=Z,2.9nm,0.5s,baz=235,slow=14,SNR=9.0
SCHQ Schefferville 77.84 19 IAmb IAmb 13 48 27.3
comp=Z,32nm,1.9s
JAVC Velka Javorina 77.85 329 eP P 13 46 19.8 +1.6
VRAC Vranov 77.88 329 eP P 13 46 19.0 +0.6
VRAC Vranov 77.88 329 P P 13 46 19.2 +0.8
comp=Z,7.8nm,1.0s,baz=36,slow=4.0,SNR=8.3
VRAC Vranov 77.88 329 ⇓P P 13 46 19.5 +1.1
GOPC GO Pecny, Ondr 78.03 331 eP P 13 46 19.4 +0.2
GOPC GO Pecny, Ondr 78.03 331 eP P 13 46 19.4 +0.2
PRU Pruhonice 78.06 331 eP P 13 46 19.8 +0.5
PRU Pruhonice 78.06 331 eP P 13 46 19.8 +0.5
KRUC Moravsky 78.16 329 eP P 13 46 20.5 +0.6
KRUC Moravsky 78.16 329 P P 13 46 20.8 +0.9
KRUC pmax pmax
comp=Z,12nm,0.9s
EKA Eskdalemuir Ar 78.31 343 P P 13 46 20.9 +0.2
comp=Z,5.4nm,0.5s,baz=29,slow=5.2,SNR=24
MODS Modra-Piesok 78.39 328 eP P 13 46 19.6 -1.7
MODS Modra-Piesok 78.39 328 eP P 13 46 19.5 -1.7
COPA Copaceanca 78.47 321 ⇓P P 13 46 22.1 +0.4
GZR Gura Zlata 78.56 324 ⇑P P 13 46 22.6 +0.3
GZR Gura Zlata 78.56 324 P P 13 46 22.5 +0.3
BZS Buzias 78.88 324 ⇓P P 13 46 23.9 -0.1
BZS Buzias 78.88 324 P P 13 46 24.4 +0.5
BZS pmax pmax
comp=Z,9.0nm,1.6s
KHC Kasperske Hory 79.12 331 eP P 13 46 25.6 +0.3
KHC epP pP 13 46 40.7 -2.4
KHC esP sP 13 46 50.8 +0.6
KHC Kasperske Hory 79.12 331⇓eP P 13 46 25.5 +0.3
KHC pmax pmax
comp=Z,19nm,0.7s
CONA Conrad Observa 79.30 329 eP P 13 46 26.7 +0.5
comp=Z,3.3nm,0.9s
GERES GERESS Array B 79.32 331 P P 13 46 26.6 +0.2
comp=Z,0.9nm,0.4s,baz=35,slow=5.6,SNR=14
GERES LR LR 14 28 31.4
comp=Z,71nm,19.9s,baz=322,slow=41
GERES GERESS Array B 79.32 331 P P 13 46 26.1 -0.3
WET Wettzell 79.35 331 P P 13 46 27.5 +1.0
WET pmax pmax
comp=Z,9.0nm,1.3s
GRF Grafenberg Arr 79.45 333 eP P 13 46 27.1 +0.1
comp=Z,9.7nm,1.0s,baz=31,slow=4.6
MOA Molln 79.95 330 eP P 13 46 30.0 +0.3
comp=Z,1.8nm,0.7s
MEM Membach 80.30 336 P P 13 46 31.7 +0.2
VTS Vitosha 80.55 322 ⇓P P 13 46 34.5 +1.3
VTS Vitosha 80.55 322 P P 13 46 34.1 +0.9
VTS IAmb IAmb 13 46 35.1
comp=Z,11nm,0.9s
VTS Vitosha 80.55 322 P P 13 46 34.1 +0.9
VTS pmax pmax
comp=Z,11nm,0.9s
SOKA Soboth 80.65 329 eP P 13 46 33.8 +0.2
comp=Z,3.6nm,0.6s
KBA Koelnbreinsper 80.94 330 ePcP P 13 46 36.6 +1.4
comp=Z,4.2nm,0.6s
ASF Jabal al Asfar 81.31 306 P P 13 46 38.5 +1.1
comp=Z,15nm,1.4s,baz=1.4,slow=3.9,SNR=8.0
WATA Walderalm 81.35 331 eP P 13 46 37.8 +0.4
comp=Z,2.6nm,0.4s
WTTA Wattenberg 81.39 331 eP P 13 46 38.0 +0.4
comp=Z,4.4nm,0.5s
RETA Reutte 81.50 332 ePcP P 13 46 38.8 +0.7
comp=Z,1.4nm,0.6s
MOTA Moosalm 81.51 331 eP P 13 46 38.3 +0.1
comp=Z,3.9nm,0.5s
MMAI Mount Meron Ar 81.57 308 P P 13 46 39.9 +1.2
comp=Z,12nm,0.5s,baz=41,slow=7.7,SNR=25
RAYN Ar Rayn 82.04 295 P P 13 46 41.4 +0.1
RAYN Ar Rayn 82.04 295 P P 13 46 41.4 +0.1
RAYN pmax pmax
comp=Z,4.0nm,1.0s
PDG Podgorica 82.46 324 ⇓P P 13 46 43.1 0.0
TXAR Lajitas Array 82.81 56 P P 13 46 45.8 +0.5
comp=Z,0.4nm,0.5s,baz=298,slow=3.4,SNR=11
TXAR Lajitas Array 82.81 56 P P 13 46 45.4 +0.1
TXAR Lajitas Array 82.81 56 P P 13 46 45.4 +0.1
EIL Elat 84.28 306 P P 13 46 53.8 +1.1
comp=Z,7.8nm,0.6s,baz=50,slow=6.1,SNR=8.3
IDI Anoyia 85.53 316 P P 13 46 58.6 -0.4
comp=Z,5.5nm,0.4s,baz=54,slow=10,SNR=9.6
ESDC Sonseca Array 93.13 338 P P 13 47 34.3 -0.5
comp=Z,0.1nm,0.3s,baz=30,slow=4.6,SNR=4.5
TORD Torodi Ar. Bea 115.33 322 PKP PKiKP 13 53 01.3 -1.1
comp=Z,0.3nm,0.3s,baz=7.7,slow=1.7,SNR=6.8
TORD PP PP 13 54 02.7 -0.4
comp=Z,0.9nm,0.8s,baz=9.6,slow=11,SNR=4.3
DBIC Dimbokro 123.93 326 PKP PKPdf 13 53 18.4 -0.6
comp=Z,1.4nm,0.6s,baz=197,slow=1.7,SNR=5.4
SIV San Ignacio 143.58 50 PKP PKPdf 13 53 54.5 -1.1
comp=Z,1.1nm,0.6s,baz=278,slow=7.1,SNR=4.1
BDFB Brasilia 149.36 29 PKPbc PKPbc 13 54 10.0 +0.2
comp=Z,3.5nm,0.5s,baz=258,slow=3.2,SNR=5.4
VNA2 Neumayer--Watz 149.76 196 PKPdf PKiKP 13 54 09.7 -0.3
baz=121,slow=1.9
CFA Coronel Fontan 149.80 79 PKPbc PKPbc 13 54 10.8 +0.3
comp=Z,1.2nm,0.4s,baz=292,slow=7.5,SNR=3.5
VNA3 Neumayer Olymp 149.95 195 PKPdf PKPbc 13 54 09.8 +0.3
PLCA Paso Flores 152.11 97 PKPbc PKiKP 13 54 17.2 +1.3
comp=Z,1.3nm,1.0s,baz=3.6,slow=5.1,SNR=4.8

IDC 09 13:48:06.6±1.5,20.90S×68.96W,h92km±16km,mb3.4/4, mb1 3.5/7,mb1mx3.4/27,mbtmp3.8/7,Error ellipse: s-maj=29.7km s-min=14.8km az=103.0
GUC 09 13:48:06.4±0.7,21.05S×69.00W,h107km±4km,ML3.8
ISC 09 13:48:07.2±0.8,21.03S±0.04×69.01W±0.07,h108km±7km, n23,σ0.92/38,mb3.5/3,10C-3D,Northern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PB01 IPOC Station P 0.45 268⇓iP Pn 13 48 23.3 -0.3
PB01 i S Sn 13 48 35.5 -0.4
PB01 IAML 13 48 37.5
comp=E,7μm,0.2s
PB09 IPOC Station P 0.79 196⇓iP Pn 13 48 26.3 -0.1
PB09 eS Sn 13 48 40.8 -0.1
PB09 IAML 13 48 43.4
comp=E,3μm,0.2s
PB02 IPOC Station P 0.88 251⇑iP Pn 13 48 27.1 0.0
PB02 i S Sn 13 48 42.2 +0.1

PB02 IAML 13 48 43.5
comp=E,12μm,0.2s
PB08 IPOC Station P 0.89 351⇓iP Pn 13 48 27.8 +0.2
PB08 iS **Sn 13 48 43.6 +0.7**
PB08 IAML 13 48 44.9
comp=E,3μm,0.7s
PB07 IPOC Station P 1.07 230⇑iP Pn 13 48 28.9 -0.3
PB07 iS **Sn 13 48 45.7 -0.1**
PB07 IAML 13 48 46.4
comp=N,5μm,0.1s
PATCX Punta Patache 1.09 281⇑iP Pn 13 48 29.3 +0.1
PATCX iS **Sn 13 48 46.4 +0.4**
PATCX IAML 13 48 48.6
comp=E,6μm,0.5s
TA01 Diego Aracena 1.19 293⇑iP Pn 13 48 30.1 -0.2
TA01 iS **Sn 13 48 47.6 -0.1**
TA01 IAML 13 48 49.2
comp=N,2μm,0.4s
PB03 IPOC Station P 1.23 214⇑iP Pn 13 48 30.5 -0.4
PB03 iS **Sn 13 48 48.4 -0.4**
PB03 IAML 13 48 51.1
comp=N,2μm,0.1s
GO01 Chusmiza 1.36 353 eP Pn 13 48 33.1 +0.3
GO01 iS **Sn 13 48 52.8 +0.6**
GO01 IAML 13 48 55.0
comp=N,1μm,0.1s
PB11 IPOC Station P 1.40 334⇑iP Pn 13 48 32.8 -0.2
PB11 iS **Sn 13 48 52.6 +0.3**
PB11 IAML 13 48 54.6
comp=E,2μm,0.2s
LVC Limon Verde 1.57 177 P Pn 13 48 35.3 +0.1
comp=E,13nm,0.3s,baz=44,slow=6.6,SNR=55
LVC S **Sn 13 48 57.0 +0.6**
comp=E,142nm,0.3s,baz=27,slow=13,SNR=70
LVC LR LR 13 49 36.4
comp=E,35nm,18.1s,baz=228,slow=53
PB04 IPOC Station P 1.68 219⇑iP Pn 13 48 35.7 -0.5
PB04 iS **Sn 13 48 57.8 -0.5**
PB04 IAML 13 49 02.2
comp=N,1μm,0.2s
PB06 IPOC Station P 1.75 197⇑iP Pn 13 48 36.7 -0.5
PB06 iS **Sn 13 48 59.5 -0.3**
PB06 IAML 13 49 04.6
comp=E,1μm,0.3s
PSGC Pisagua 1.77 324⇑iP Pn 13 48 36.6 -0.7
PSGC eS **Sn 13 48 59.1 -1.1**
PSGC IAML 13 49 02.5
comp=N,405nm,0.2s
PB05 IPOC Station P 2.12 211⇑iP Pn 13 48 41.0 -0.8
PB05 iS **Sn 13 49 06.5 -1.8**
PB05 IAML 13 49 08.2
comp=E,484nm,0.4s
LPAZ La Paz 4.79 10 P Pn 13 49 17.1 -0.6
comp=E,0.9nm,0.3s,baz=179,slow=3.0,SNR=20
SIV San Ignacio 9.04 58 P Pn 13 50 11.1 -3.8
comp=E,4.4nm,0.3s,baz=252,slow=11,SNR=74
PLCA Paso Flores 19.68 183 P Pn 13 52 31.6 +1.2
comp=E,0.1nm,0.3s,baz=13,slow=12,SNR=5.0
BDFB Brasilia 20.63 78 P Pn 13 52 38.4 +0.1
comp=E,2.4nm,0.5s,baz=250,slow=15,SNR=4.5
TXAR Lajitas Array 60.19 325 P P 13 58 04.4 +0.4
comp=E,0.1nm,0.4s,baz=146,slow=8.3,SNR=3.7
TORD Torodi Ar. Bea 77.29 70 P P 13 59 51.9 +1.6
comp=E,0.3nm,0.4s,baz=254,slow=5.7,SNR=3.7
YKA Yellowknife Ar 90.72 341 P P 14 00 57.0 -0.4
comp=E,0.2nm,0.6s,baz=138,slow=4.7,SNR=3.8
MKAR Makanchi Array 145.31 35 PKPbc PKPab 14 07 31.8 -0.7
comp=E,0.6nm,0.6s,baz=325,slow=3.4,SNR=7.8

DJA 09 13:50:55.3±0.3, 3°S±3°×12°8E±°, h10km, M3.8/12, mB4.7/2, mb4.3/4, MLv3.6/12, Mw(mB)3.9/2, Seram

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AAI Ambon 0.72 154 P Pg 13 51 09.6 +0.3
AAI S Sb 13 51 19.8 -0.2
NLAI Namlea 0.81 255 P Pg 13 51 11.1 +0.2
MSAI Masohi 1.09 107 P Pg 13 51 17.0 +0.3
SANI Sanana 2.13 297 P Pn 13 51 28.6 -2.3
LBMI Labuha 2.41 351 P Pn 13 51 35.0 +0.2
BNDI Bandanaira 2.51 126 P Pn 13 51 36.6 +0.5
SWI Sorong 4.00 58 P Pn 13 51 56.6 -0.2
FAKI Fak Fak 4.36 89 P Pn 13 52 01.3 -0.4
APSI Ampana 6.57 289 P Pn 13 52 33.0 +0.9
0.2nm792nm66nm,0.5s
MRSI Marisa 6.88 300 P Pn 13 52 36.0 -0.4
MPSI Mapaga 8.65 293 P Pn 13 53 02.6 +1.9

JMA 09 13:53:08.0±0.1, 24°64N×123°35E, h13km±4km, M1.6, Southwestern Ryukyu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
YOJ Yonaguni jima 0.36 240 P Pg 13 53 15.2 0.0
YOJ S Sg 13 53 20.5 +0.5
JYNG Yonagunijimaku 0.41 243 P Pg 13 53 16.3 +0.1
JYNG eS Sg 13 53 21.8 0.0
IRIF Iriomote-Funau 0.46 131 P Pg 13 53 17.0 -0.1
IRIF eS Sg 13 53 23.1 -0.2
HATJ Hateruma jima 0.71 144 P Pg 13 53 21.7 -0.2
HATJ eS Sg 13 53 31.0 -0.3
JKRS Kuro-shima 0.72 124 P Pg 13 53 21.8 -0.2
JKRS S Sb 13 53 32.0 -0.2
JIJ Ishigaki jima 0.77 111 P Pg 13 53 22.3 -0.7
JIJ S Sg 13 53 32.5 -0.7
JISG Ishigakijimahi 0.88 93 P Pb 13 53 25.1 0.0
JISG eS Sg 13 53 36.1 -0.3
JTJ Tarama 1.23 90 eS Sb 13 53 45.5 -1.4

TAP 09 13:53:22.7, 24°45N×121°43E, h2km, ML1.0, B, Taiwan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NNSB Datong 0.05 244 P Pg 13 53 24.4 +0.6
baz=243
NNSB S Sg 13 53 25.4 +1.0
baz=243
NNSH Datong 0.05 243 eP Pg 13 53 24.2 +0.4
baz=243
NNSH eS Sg 13 53 25.3 +0.9
baz=243
NNS Nan Shan 0.05 260 P Pg 13 53 24.1 +0.3
baz=254
NNS S Sg 13 53 25.4 +0.8
baz=254
NDT Datong Townshi 0.17 27 eP Pg 13 53 27.3 +1.2
baz=26
NDT eS Sg 13 53 30.6 +2.3
baz=26
ENTT Nioudou 0.23 33 P Pg 13 53 28.6 +1.4
baz=35
ENTT eS Sg 13 53 32.4 +2.2
baz=35
NSK Sanguang 0.23 344 eP Pg 13 53 28.6 +1.4
baz=345
NSK eS Sg 13 53 32.6 +2.3
baz=345
ETLH Xiulin Townshi 0.25 168 eP Pg 13 53 28.6 +1.2
baz=168
ETLH eS Sg 13 53 33.3 +2.6
baz=168
ENA Nanau 0.29 94 eP Pb 13 53 29.8 -0.8
baz=94
NACB Ninganchiao 0.31 151 eP Pb 13 53 30.4 -0.6
baz=150
WHF Hehuan Shan 0.34 206 eS Sb 13 53 36.7 -1.0
baz=205

IDC 09 14:09:52.1±1.5, 23°22S×112°07W, h0km, mb3.7/2, mb1 4.2/2, mb1mx3.7/29, mbtmp3.7/29, Error ellipse: s-maj=89.8km s-min=58.1km az=101.0
NEIC 09 14:09:53.4±1.5, 23°3S±0°3×111°7W±0°2, h10km±6km, mb4.5/2, Error ellipse: s-maj=44.4km s-min=18.1km az=145.0
ISC 09 14:09:52.7±1.6, 23°4S±0°4×111°8W±0°3, h10km, n16, σ0ˢ88/10, mb4.1/4, Easter Island region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ROSC El Rosal 46.08 57 P **P 14 18 17.5 -0.1**
ROSC IAmb IAmb 14 18 19.9
comp=Z,7.9nm,0.6s
X18A Snowflake 57.62 2 P **P 14 19 44.0 +0.8**
X18A IAmb IAmb 14 19 44.9
comp=Z,1.8nm,0.8s
NVAR Mina Array Bea 61.79 354 P **P 14 20 12.8 +0.9**
comp=Z,0.9nm,0.8s,baz=180,slow=9.0,SNR=5.9
YKA Yellowknife Ar 85.61 359 P **P 14 22 29.2 -1.6**
comp=Z,0.1nm,0.3s,baz=199,slow=3.3,SNR=2.9
H11S2 WAKE ISLAND Hy 89.75 290 T T 16 02 13.4
baz=115,slow=75,SNR=12
H11S1 WAKE ISLAND Hy 89.76 290 T T 16 02 15.9
baz=115,slow=75,SNR=9.9
H11S3 WAKE ISLAND Hy 89.77 290 T T 16 02 16.3
baz=115,slow=75,SNR=8.9
H11N3 WAKE ISLAND Hy 90.09 291 T T 16 02 15.6
baz=116
H11N1 WAKE ISLAND Hy 90.10 291 T T 16 02 17.9
baz=116
H11N2 WAKE ISLAND Hy 90.10 291 T T 16 02 16.6
baz=116
BRTR Keskin Array B 146.58 53 PKPbc **PKPab 14 29 36.2 +0.4**
comp=Z,0.9nm,0.8s,baz=300,slow=2.8,SNR=4.2
ZALV Zalesovo Beam 147.01 342 PKPbc **PKPdf 14 29 34.0 +0.7**
comp=Z,0.4nm,0.5s,baz=8.5,slow=2.9,SNR=4.0
ZALV Zalesovo Beam 147.01 342 **PKPbc 14 29 34.6 -0.7**
CMAR Chiang Mai Arr 150.91 266 PKPbc **PKiKP 14 29 47.2 +0.2**
comp=Z,1.9nm,1.0s,baz=61,slow=0.6,SNR=11
KBZ Khabaz 150.92 40 PKPbc **PKiKP 14 29 46.7 +0.5**
comp=Z,2.2nm,0.8s,baz=278,slow=7.1,SNR=4.0
MKAR Makanchi Array 154.04 338 PKPbc **PKiKP 14 29 52.5 -0.2**
comp=Z,0.3nm,0.9s,baz=48,slow=2.1,SNR=2.5

IDC 09 14:20:32.5±2.1, 2°85N×127°45E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/41, mbtmp3.4/3, Error ellipse: s-maj=151.3km s-min=26.1km az=67.0, Northern Molucca Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 23.64 164 P P 14 25 45.6 0.0
0.9nm,0.6s,baz=344,slow=11,SNR=9.3
ASAR Alice Springs 27.09 167 P P 14 26 17.4 +0.2
0.6nm,1.0s,baz=344,slow=7.8,SNR=4.9
MKAR Makanchi Array 58.69 325 P P 14 30 31.7 -0.2
0.1nm,0.5s,baz=114,slow=7.2,SNR=5.5

IDC 09 14:47:14.9±1.8, 5°82S×152°37E, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.7/43, mbtmp3.8/5, ML1.9/1, Error ellipse: s-maj=70.9km s-min=22.6km az=123.0
ISC 09 14:47:20.9±1.9, 5°8S±0°3×152°3E±0°4, h38km, n6, σ0ˢ80/7, mb3.7/4, New Britain region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 6.19 235 Pn **Pn 14 48 50.5 +0.7**
1.6nm,0.3s,baz=42,slow=10.0,SNR=8.8
PMG Sn **Sn 14 49 58.8 -0.6**
0.6nm,0.3s,baz=24,slow=18,SNR=4.3
WRA Warramunga Arr 22.38 230 P **P 14 52 16.7 +0.6**
1.8nm,0.9s,baz=54,slow=9.6,SNR=8.2
ASAR Alice Springs 25.04 223 P **P 14 52 41.0 -0.8**
2.5nm,0.7s,baz=57,slow=8.0,SNR=27
SONM Songino Array 66.91 328 P **P 14 58 09.3 -0.2**
0.4nm,0.9s,baz=134,slow=4.2,SNR=2.5
ILAR Eielson Array 83.30 22 P **P 14 59 43.8 +0.4**
1.1nm,0.7s,baz=249,slow=5.6,SNR=20
TORD Torodi Ar. Bea 150.10 286 PKPbc **PKPbc 15 07 08.0 -0.7**
0.4nm,0.6s,baz=78,slow=2.1,SNR=2.4

BJI 09 14:56:37.7±0.0, 5°88S×154°83E, h52km, mB5.6/72, mb5.3/77, Ms5.6/87, Ms7 5.3/81
MOS 09 14:56:37.8±1.0, 5°90S×154°38E, h39km, mb5.6/55, MS5.2/13, Error ellipse: s-maj=6.7km s-min=5.1km az=115.4
IDC 09 14:56:38.8±1.6, 5°97S×154°42E, h33km±11km, mb5.0/42, mb1 5.1/43, mb1mx5.0/50, mbtmp5.2/43, ML5.2/1, MS5.3/42, Ms1 5.3/42, ms1mx5.2/47, Error ellipse: s-maj=11.9km s-min=8.4km az=81.0
NEIC 09 14:56:39.1±1.9, 5°97S±0°04×154°44E±0°06, h42km±3km, mb5.6/238, Ms_20 5.9/626, Mwb5.8/45, Mwc6.0/18, Mww6.0, Mwc6.0(GCMT), Error ellipse: s-maj=8.6km s-min=6.5km az=83.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr7.64; Mθθ-3.89; Mφφ-3.75; Mrθ-0.36; Mφθ2.08; Mφr1.33; Fault plane solution: M0 7.07000×10¹⁷ NP1: φs130.33000°, δ40.14000°, λ83.58000°. NP2: φs318.70000°, δ50.16000°, λ95.39000°. Principal axes: T 7.7951, Plg83.0000°, Azm265.0000°; N -1.7898, Plg4.0000°, Azm135.0000°; P -6.0053, Plg5.0000°, Azm45.0000°;
DJA 09 14:56:42.7±0.5, 6°S±3°×15°4E±°, h62km±4km, M5.7/86, mB6.0/71, mb5.5/86, MLv6.3/1, Mw5.9/45, Mw(mB)5.6/71, Mwp5.8/56
NEIC 09 14:56:43, 6°07S×154°22E, h50km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr1.01; Mθθ-0.43; Mφφ-0.58; Mrθ0.12; Mφθ0.63; Mφr-0.28; Fault plane solution: M0 1.12000×10¹⁸ NP1: φs312.00000°, δ38.00000°, λ81.00000°. NP2: φs144.00000°, δ53.00000°, λ97.00000°. Principal axes: T 1.0586, Plg81.0000°, Azm86.0000°; N 0.1213, Plg6.0000°, Azm320.0000°; P -1.1799, Plg8.0000°, Azm229.0000°;
GCMT 09 14:56:45.1±0.1, 6°18S×154°28E, h46km, MW5.9/166, Moment Tensor Solution. s166,c351; s154,c474; Duration: 2ˢ2 Moment tensor: Scale 10¹⁸Nm; Mrr0.94±.01; Mθθ-0.50±.01; Mφφ-0.44±.01; Mrθ-0.03±.01; Mφθ0.51±.00; Mφr-0.01±.01; Best double couple: M0 0.96100×10¹⁸ NP1: φs135.00000°, δ45.00000°, λ93.00000°. NP2: φs311.00000°, δ45.00000°, λ87.00000°. Principal axes: T 0.9440, Plg88.0000°, Azm145.0000°; N 0.0330, Plg2.0000°, Azm313.0000°; P -0.9780, Plg0.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function
NEIC 09 14:56:45, 6°17S×154°38E, h47km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr0.97; Mθθ-0.51; Mφφ-0.46; Mrθ-0.06; Mφθ0.56; Mφr-0.01; Fault plane solution: M0 1.01000×10¹⁸ NP1: φs136.00000°, δ44.00000°, λ94.00000°. NP2: φs311.00000°, δ46.00000°, λ86.00000°. Principal axes: T 0.9731, Plg87.0000°, Azm153.0000°; N 0.0694, Plg3.0000°, Azm313.0000°; P -1.0425, Plg1.0000°, Azm43.0000°;
KLM 09 14:56:48.0, 6°09S×154°39E, h110km, mb5.8
NEIC 09 14:56:53.5, 6°27S×153°77E, h47km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr1.07; Mθθ-0.56; Mφφ-0.51; Mrθ0.06; Mφθ0.69; Mφr-0.25; Fault plane solution: M0 1.18000×10¹⁸ NP1: φs305.67000°, δ40.20000°, λ77.61000°. NP2: φs141.72000°, δ50.92000°, λ100.28000°. Principal axes: T 1.1087, Plg80.0000°, Azm101.0000°; N 0.1380, Plg8.0000°, Azm315.0000°; P -1.2466, Plg5.0000°, Azm224.0000°;
ISC 09 14:56:40.9±0.4, 6°03S±0°03×154°47E±0°04, h55km±3km, h55km: pP-P, n1048, σ1ˢ79/865, mb5.5/257, MS5.9/393, 21C-12D, Bougainville-Solomon Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RABL Rabaul 2.94 308 Pn **Pn 14 57 22.8 -2.4**
HNR Honiara 6.39 122 iP **Pn 14 58 17.0 +4.5**
HNR iS Sn 14 59 40.0 +16
HNR Honiara 6.39 122 **Pn 14 58 13.3 +0.8**
HNR Honiara 6.39 122 P **Pn 14 58 13.3 +0.8**
PMG Port Moresby 7.99 245 Pn **Pn 14 58 35.6 +1.2**
16nm,0.3s,baz=73,slow=7.8,SNR=40
PMG Sn **Sn 15 00 05.0 +1.7**
59nm,0.3s,baz=48,slow=20,SNR=9.1
PMG LR LR 15 01 37.3
comp=Z,52μm,21.9s,baz=42,slow=38
PMG Port Moresby 7.99 245 **Pn 14 58 34.0 -0.4**
PMG Port Moresby 7.99 245 ceP **Pn 14 58 34.6 +0.2**
PMG pmax pmax
comp=Z,2μm,0.8s
MANU Manus Island 8.12 299 Pn **Pn 14 58 34.7 -1.6**
PATS Pohnpei 13.35 17 P **Pn 14 59 47.9 +0.2**
baz=13,SNR=32
PATS Pohnpei 13.35 17 **Pn 14 59 46.2 -1.5**
COEN Coen 13.62 234 P **Pn 14 59 50.7 -0.9**
baz=14,SNR=7.4
COEN Coen 13.62 234 **Pn 14 59 50.6 -0.9**
MMPI Merauke 14.18 259 P **Pn 15 00 00.6 +1.6**
GENI Genyem 14.67 283 P **Pn 15 00 06.3 +0.9**
comp=Z,16μmcomp=Z,6μmcomp=Z,219nm,1.0s
MTSU Mount Surprise 15.59 219 P **Pn 15 00 18.9 +1.6**
baz=16,SNR=34
SANVU Saraoutou 15.61 128 P **P 15 00 21.0 +0.2**
CTA Charters Tower 16.09 209 Pn **P 15 00 25.5 -0.7**
comp=Z,1.0nm,0.3s,baz=35,slow=13,SNR=15
CTA Sn **S 15 03 28.8 -3.5**
comp=Z,0.1nm,0.3s,baz=85,slow=11,SNR=1.4
CTA LR LR 15 05 55.1
comp=Z,16μm,21.8s,baz=24,slow=34
CTA Charters Tower 16.09 209 P **P 15 00 28.0 +1.8**
CTA pmax pmax
comp=Z,123nm,1.6s
CTAO Charters Tower 16.09 209 P **P 15 00 27.9 +1.8**
CTAO pmax pmax
comp=Z,116nm,1.6s
SMPI Sarmi 16.23 284 P **Pn 15 00 26.3 +0.9**
comp=Z,5μmcomp=Z,279nm,1.6s
EIDS Eidsvold 19.50 189 P **Pn 15 01 05.6 +0.3**
baz=20,SNR=24
EIDS Eidsvold 19.50 189 P **P 15 01 04.5 +0.9**
EIDS IAmb IAmb 15 01 24.9
comp=Z,357nm,0.8s
NOUC Port Laguerre 19.65 146 P **P 15 01 05.7 +0.4**
DZM Mont Dzumac 19.70 145 eP **P 15 01 07.0 +1.0**
comp=Z,1μm,1.3s
DZM eLQ LQ 15 05 00.6
DZM eLR LR 15 05 47.6
comp=Z,36μm,26.2s
DZM Mont Dzumac 19.70 145 P **P 15 01 07.0 +1.0**
comp=Z,7.4nm,0.3s,baz=269,slow=8.2,SNR=58
DZM S **Sn 15 04 49.4 +0.8**
comp=Z,0.1nm,0.3s,baz=73,slow=19,SNR=1.6
DZM Mont Dzumac 19.70 145 P **P 15 01 06.8 +0.8**
KWAJ Kwajalein Atol 19.72 42 P **P 15 01 07.0 +0.9**
KWAJ Kwajalein Atol 19.72 42 P **P 15 01 07.0 +0.9**
KWAJ pmax pmax
comp=Z,733nm,0.7s
TARA Tarawa 19.83 69 P **P 15 01 07.9 +0.6**
QIS Mount Isa 20.41 224 P Pn 15 01 15.3 -0.8
baz=20,SNR=18
RKPI Ransiki, Papua 20.74 282 P **P 15 01 17.9 +0.7**
comp=Z,6μmcomp=Z,229nm,0.8s
RMQ Roma 21.06 194 P **P 15 01 21.8 +1.2**
baz=21,SNR=57
GUMO Guam 21.70 334 P **P 15 01 27.2 -0.3**
comp=Z,187nm,1.0s,baz=184,slow=12,SNR=7.5
GUMO S **S 15 05 26.1 +1.3**
comp=Z,82nm,0.9s,baz=123,slow=18,SNR=3.1
GUMO LR LR 15 09 24.4
comp=Z,3μm,18.2s,baz=154,slow=35
FAKI Fak Fak 22.37 277 P **P 15 01 35.2 +0.5**
comp=Z,19μmcomp=Z,5μmcomp=Z,166nm,0.9s
FAKI Fak Fak 22.37 277 P **P 15 01 34.0 -0.7**
QLP Quilpie 22.65 204 P **P 15 01 38.8 +1.2**
baz=23,SNR=30
KDU Kakadu 22.68 251 P **P 15 01 37.3 -0.7**
baz=23,SNR=13
SAUI Saumlaki 23.08 264 P **P 15 01 43.5 +1.3**
comp=Z,31μmcomp=Z,32μmcomp=Z,850nm,0.8s
SAUI Saumlaki 23.08 264 P **P 15 01 42.0 -0.1**
SIJI Sorong 23.72 282 P **P 15 01 49.1 +0.9**
comp=Z,70nm,0.9s,baz=94,slow=8.7,SNR=24
SIJI S **S 15 06 02.0 +2.4**
comp=Z,7.7nm,0.9s,baz=47,slow=19,SNR=2.0
SIJI LR LR 15 12 39.2
comp=Z,7μm,21.0s,baz=137,slow=41
SWI Sorong 23.73 282 P **P 15 01 48.9 +0.6**
comp=Z,12μmcomp=Z,4μmcomp=Z,128nm,0.8s
SWI Sorong 23.73 282 P **P 15 01 49.3 +1.0**
SWI pmax pmax
comp=Z,129nm,0.8s
WR0 Warramunga Arr 23.81 233 P **P 15 01 49.3 +0.3**
WR0 IAmb IAmb 15 02 31.4
comp=Z,153nm,1.0s
WB0 Warramunga Arr 23.82 233 P **P 15 01 48.9 -0.2**
WB0 IAmb IAmb 15 02 14.1
comp=Z,247nm,1.4s
ANA2 Anatahan 23.86 339 P **P 15 01 49.3 -0.2**
WRAB Tennant Creek 23.94 233 P **P 15 01 49.5 -0.7**
WRAB IAmb IAmb 15 02 21.9
comp=Z,128nm,0.8s
WRAB Tennant Creek 23.94 233 P **P 15 01 49.5 -0.7**
WRAB pmax pmax
comp=Z,128nm,0.8s
WB2 Warramunga Arr 23.95 233 P **P 15 01 50.5 +0.3**
WB2 IAmb IAmb 15 02 22.0
comp=Z,118nm,0.7s
WRA Warramunga Arr 23.96 233 P **P 15 01 50.0 -0.4**
comp=Z,33nm,0.9s,baz=60,slow=9.7,SNR=87
WRA S **S 15 06 01.6 -1.8**
comp=Z,3.0nm,0.8s,baz=52,slow=13,SNR=2.5
WRA ScP **ScP 15 09 07.5 +1.7**
comp=Z,4.8nm,0.9s,baz=56,slow=1.6,SNR=3.8
WRA LR LR 15 10 56.0
comp=Z,19μm,21.7s,baz=55,slow=36
WRA Warramunga Arr 23.96 233 P **P 15 01 50.2 -0.2**
WRA Warramunga Arr 23.96 233 iP **P 15 01 50.0 -0.4**
WRA pmax pmax
comp=Z,33nm,0.9s
MTN Manton Dam 23.98 252 P **P 15 01 52.6 +2.0**
baz=24,SNR=6.5
MTN Manton Dam 23.98 252 P **P 15 01 50.6 -0.1**
MTN IAmb IAmb 15 02 20.9
comp=Z,229nm,1.3s
SARN Sarigan 24.17 339 P **P 15 01 52.6 +0.3**
ARMA Armidale 24.41 186 P **P 15 01 55.6 +1.2**
baz=24,SNR=66
ARMA Armidale 24.41 186 P **P 15 01 55.1 +0.7**
ARMA IAmb IAmb 15 01 58.5
comp=Z,137nm,0.8s
BNDI Bandanaira 24.51 272 P **P 15 01 55.8 +0.4**
comp=Z,15μmcomp=Z,7μmcomp=Z,391nm,0.7s
MSAI Masohi 25.59 275 P **P 15 02 06.0 +0.7**
comp=Z,668nmcomp=Z,30nm,0.7s
LHI Lord Howe Isla 25.72 171 P **P 15 02 08.4 +2.2**
baz=26,SNR=4.3
LHI Lord Howe Isla 25.72 171 P **P 15 02 07.7 +1.5**
MSVF Nonsavu 25.80 119 P **P 15 02 07.6 +0.4**
MSVF Nonsavu 25.80 119⇓eP P 15 02 08.3 +1.1
AAI Ambon 26.29 274 P **P 15 02 11.7 +0.1**
comp=Z,11μmcomp=Z,3μmcomp=Z,237nm,0.8s
AAI Ambon 26.29 274 P **P 15 02 12.3 +0.7**
AAI pmax pmax
comp=Z,237nm,0.8s
AS31 Alice Springs 26.44 226 P **P 15 02 11.8 -1.1**
ASAR Alice Springs 26.44 226 P **P 15 02 12.3 -0.5**
comp=Z,21nm,0.8s,baz=58,slow=9.3,SNR=99
ASAR PcP **PcP 15 05 37.1 -0.1**
comp=Z,17nm,0.5s,baz=55,slow=2.9,SNR=7.2
ASAR S **S 15 06 45.2 +2.3**
comp=Z,9.1nm,1.2s,baz=26,slow=21,SNR=3.1
ASAR ScP **ScP 15 09 15.1 +2.3**
comp=Z,3.0nm,0.7s,baz=74,slow=2.1,SNR=4.5
ASAR LR LR 15 12 21.6
comp=Z,17μm,21.6s,baz=97,slow=36
ASAR Alice Springs 26.44 226 P **P 15 02 12.5 -0.4**
CMSA Cobar Meteorol 26.67 197 P **P 15 02 16.2 +1.4**
baz=27,SNR=28
KNRA Kununurra 26.98 247 P **P 15 02 19.1 +1.4**
baz=27,SNR=14
KNRA Kununurra 26.98 247 P **P 15 02 17.5 -0.2**
KNRA IAmb IAmb 15 02 46.7
comp=Z,108nm,0.8s
H11S3 WAKE ISLAND Hy 27.19 26 T T 15 30 24.2
baz=207,slow=74,SNR=669
H11S2 WAKE ISLAND Hy 27.19 26 T T 15 30 23.7
baz=207,slow=74,SNR=830
H11S1 WAKE ISLAND Hy 27.20 26 T T 15 30 24.8
baz=207,slow=74,SNR=293
MGCD Mangrove Creek 27.22 186 P **P 15 02 21.7 +2.0**
baz=27,SNR=7.6
NLAI Namlea 27.42 275 P **P 15 02 23.8 +2.0**
comp=Z,3μmcomp=Z,116nm,0.5s
LBMI Labuha 27.44 280 P **P 15 02 23.9 +1.9**
comp=Z,4μmcomp=Z,182nm,1.1s
RIV Riverview 27.83 186 P **P 15 02 27.3 +2.2**
baz=28,SNR=6.2
TNTI Ternate 27.89 283 P **P 15 02 24.2 -1.8**
STKA Stephens Creek 28.39 203 P **P 15 02 30.8 +0.6**
baz=28,SNR=26

STKA Stephens Creek 28.39 203 P P 15 02 30.9 +0.7
comp=Z,24nm,1.0s,baz=0.4,slow=8.7,SNR=24
STKA ScP ScP 15 09 21.6 +3.1
comp=Z,9.1nm,1.0s,baz=63,slow=2.3,SNR=2.9
STKA LR LR 15 13 43.5
comp=Z,13µm,21.1s,baz=16,slow=36
STKA Stephens Creek 28.39 203 P P 15 02 29.2 -1.0
SANI Sanana 28.68 277 P P 15 02 33.7 +0.7
comp=Z,9µmcomp=Z,2µmcomp=Z,104nm,1.5s
YNG Young 28.68 191 P P 15 02 34.9 +2.1
baz=29,SNR=6.5
CNB Canberra Magne 29.52 188 P P 15 02 41.5 +1.2
baz=30,SNR=6.2
CAN Canberra 29.58 189 P P 15 02 41.0 +0.3
CAN IAmb IAmb 15 03 44.8
comp=Z,109nm,1.4s
CAN Canberra 29.58 189 P P 15 02 41.1 +0.3
CAN pmax pmax
comp=Z,109nm,1.4s
CAN MLR MLR
comp=Z,14µm,21.0s
SOEI Soe 30.14 261 P P 15 02 46.9 +0.8
comp=Z,7µmcomp=Z,126nm,0.8s
MNI Manado 30.50 283 P P 15 02 50.4 +1.2
MNI pmax pmax
comp=Z,105nm,0.5s
FITZ Fitzroy Crossi 30.58 244 P P 15 02 50.0 +0.2
baz=31,SNR=19
FITZ Fitzroy Crossi 30.58 244 P P 15 02 50.0 +0.2
comp=Z,41nm,0.8s,baz=62,slow=7.4,SNR=17
FITZ Fitzroy Crossi 30.58 244 P P 15 02 49.4 -0.4
FITZ IAmb IAmb 15 03 09.0
comp=Z,88nm,0.8s
HTT Hallett 30.85 206 P P 15 02 51.9 -0.2
baz=31,SNR=12
MILA Mila 31.26 188 P P 15 02 57.5 +1.9
baz=31,SNR=9.2
WRKA Warakurna 31.40 230 P P 15 02 57.3 +0.3
baz=32,SNR=34
DAV Davao City (W) 31.63 294⇑iP P 15 02 58.8 -0.3
BBOO Buckleboo 31.69 210 P P 15 03 00.6 +1.2
baz=32,SNR=11
BBOO Buckleboo 31.69 210 P P 15 03 00.2 +0.8
BBSI Bau Bau 31.74 269 P P 15 03 03.0 +2.9
comp=Z,912nmcomp=Z,24nm,0.9s
LUWI Luwuk 32.02 278 P P 15 03 01.8 -0.7
KCP Kidapawan 32.05 293⇓eP P 15 03 03.1 +0.2
SKMP Bagumbayan, Su 32.37 292 eP P 15 03 05.1 -0.5
BUKP Musuan 32.43 295 eP P 15 03 06.2 +0.1
TOO Toolangi 32.44 193 P P 15 03 08.6 +2.6
baz=33,SNR=4.6
APSI Ampana 33.14 278 P P 15 03 13.6 +1.2
comp=Z,4µmcomp=Z,3µmcomp=Z,312nm,1.2s
MSLP Maasin 33.59 298 eP P 15 03 15.4 -0.8
PAGZ Pagadian 33.94 294 eP P 15 03 19.9 +0.6
WSI Waingapu 34.04 262 P P 15 03 20.8 +0.7
comp=Z,11µmcomp=Z,886nm,1.5s
AFI Afiamalu 34.12 106 P P 15 03 22.4 +1.5
comp=Z,35nm,1.1s,baz=187,slow=16,SNR=3.7
AFI LR LR 15 15 22.6
comp=Z,5µm,20.2s,baz=280,slow=33
AFI Afiamalu 34.12 106 IAmb IAmb 15 03 49.3
comp=Z,120nm,1.4s
BKSI Bulukumba 34.19 269 P P 15 03 21.1 -0.3
comp=Z,7µmcomp=Z,2µmcomp=Z,63nm,1.0s
BNSI Bone 34.26 271 P P 15 03 22.7 +0.6
comp=Z,2µmcomp=Z,95nm,1.0s
KAPI Kappang 34.57 270 LR LR 15 21 14.1
comp=Z,2µm,18.6s,baz=84,slow=43
KAPI Kappang 34.57 270 P P 15 03 24.0 -0.8
KAPI IAmb IAmb 15 03 30.4
comp=Z,82nm,0.9s
KAPI Kappang 34.57 270 P P 15 03 24.0 -0.8
KAPI pmax pmax
comp=Z,82nm,0.9s
SPSI Sidrap Palu 34.63 272 P P 15 03 25.3 0.0
comp=Z,7µmcomp=Z,1µmcomp=Z,89nm,1.4s
RAO Raoul Island 34.83 135 LR LR 15 15 34.0
comp=Z,5µm,21.5s,baz=327,slow=32
FORT Forrest 34.94 222 P P 15 03 28.6 +0.9
baz=35,SNR=7.5
FORT Forrest 34.94 222 P P 15 03 26.3 -1.4
JCJ Chichijima 35.01 341 P P 15 03 28.4 0.0
comp=Z,194nm,0.7s,baz=234,slow=5.0,SNR=6.7
JCJ LR LR 15 14 57.6
comp=Z,2µm,21.3s,baz=164,slow=32
MPSI Mapaga 35.09 279 P P 15 03 28.3 -0.9
comp=Z,6µmcomp=Z,2µmcomp=Z,109nm,0.9s
PLAI Plampang 35.48 263 P P 15 03 40.0 -1.2
comp=Z,6µmcomp=Z,2µmcomp=Z,194nm,0.8s
PSAD2 Pilbara Seismi 36.79 242 IAMs_20 IAMs_20 15 19 03.6
comp=Z,15µm,20.0s
PSAC2 Pilbara Seismi 36.83 242 IAMs_20 IAMs_20 15 19 15.6
comp=Z,16µm,21.0s
MOO Moorlands 36.83 189 P P 15 03 45.2 +1.4
baz=37,SNR=8.2
PSAD1 Pilbara Seismi 36.85 242 IAMs_20 IAMs_20 15 19 16.2
comp=Z,14µm,20.0s
PSAB2 Pilbara Seismi 36.86 242 IAMs_20 IAMs_20 15 19 16.4
comp=Z,13µm,20.0s
PSAA3 Pilbara Seismi 36.87 242 IAMs_20 IAMs_20 15 19 16.8
comp=Z,14µm,20.0s
PSAA2 Pilbara Seismi 36.88 242 IAMs_20 IAMs_20 15 19 05.3
comp=Z,14µm,20.0s
PSAB3 Pilbara Seismi 36.88 242 IAMs_20 IAMs_20 15 19 16.9
comp=Z,14µm,20.0s
PSA00 Pilbara Seismi 36.88 242 P P 15 03 44.4 -0.1
PSA00 IAmb IAmb 15 03 46.4
comp=Z,116nm,1.2s
PSA00 IAMs_20 IAMs_20 15 19 05.9
comp=Z,14µm,20.0s
PSA00 Pilbara Seismi 36.88 242 P P 15 03 45.1 +0.6
PSA00 IAmb IAmb 15 04 10.6
comp=Z,20nm,0.8s
PSAA1 Pilbara Seismi 36.89 242 IAMs_20 IAMs_20 15 19 06.2
comp=Z,15µm,21.0s
PSAB1 Pilbara Seismi 36.90 242 IAMs_20 IAMs_20 15 19 06.4
comp=Z,15µm,21.0s
PSAC1 Pilbara Seismi 36.90 242 IAMs_20 IAMs_20 15 19 17.4
comp=Z,15µm,21.0s
PSAC3 Pilbara Seismi 36.91 242 IAMs_20 IAMs_20 15 19 06.8
comp=Z,14µm,20.0s
PSAD3 Pilbara Seismi 36.96 242 IAMs_20 IAMs_20 15 19 18.1
comp=Z,14µm,20.0s
HIZ Hauiti 37.24 153 P P 15 03 48.0 +0.7
TAU Tasmania Unive 37.27 189 P P 15 03 48.2 +0.8
TAU IAmb IAmb 15 03 51.7
comp=Z,87nm,0.8s
TAU Tasmania Unive 37.27 189 P P 15 03 48.2 +0.8
TAU pmax pmax
comp=Z,87nm,0.8s
SMKI Samarinda 37.60 277 P P 15 03 52.4 +1.7
comp=Z,7µmcomp=Z,187nm,0.5s
BOAC Boac 37.75 301 eP P 15 03 52.1 +0.3
BKB Balikpapan 37.79 276 P P 15 03 54.8 +2.6
comp=Z,7µmcomp=Z,5µmcomp=Z,290nm,1.1s
BKB Balikpapan 37.79 276 P P 15 03 51.8 -0.5
SJMP San Jose 37.91 299 eP P 15 03 54.1 +0.9
URZ Urewera 38.10 151 P P 15 03 55.1 +0.6
comp=Z,42nm,0.5s,baz=311,slow=3.0,SNR=30
URZ LR LR 15 18 24.6
comp=Z,3µm,21.5s,baz=338,slow=34
URZ Urewera 38.10 151 P P 15 03 55.0 +0.5
MXZ Matakaoa Point 38.16 149 P P 15 03 55.9 +0.9
QRZ Quartz Range 38.23 158 P P 15 03 57.5 +1.9
QRZ IAmb IAmb 15 04 01.7
comp=Z,107nm,1.1s
KBKI Kotabaru 38.27 272 P P 15 03 56.8 +0.5
comp=Z,275nmcomp=Z,26nm,0.8s
BKZ Black Stump Fm 38.52 152 P P 15 03 58.1 0.0
BKZ IAmb IAmb 15 04 26.3
comp=Z,67nm,0.7s
TGY Tagaytay City 38.83 301 P P 15 04 02.9 +1.9
comp=Z,210nm,0.7s,baz=139,slow=5.0,SNR=6.9
TGY LR LR 15 18 09.7
comp=Z,6µm,20.9s,baz=123,slow=33
BALP Baler 39.10 304 eP P 15 04 02.8 -0.4
PALP Palanan 39.11 306 eP P 15 04 03.4 +0.1
THZ Tophouse 39.18 158 P P 15 04 03.2 -0.4
THZ IAmb IAmb 15 04 06.9
comp=Z,90nm,0.7s
LUBP Lubang 39.24 300 eP P 15 04 02.0 -2.4
TUWZ Tuamarina 39.29 157 P P 15 04 04.3 -0.2
BATP Bataraza 39.41 292 eP P 15 04 05.7 -0.2
BSWZ Blackbirch Sta 39.51 157 P P 15 04 06.0 -0.3
CAUP Cauayan 39.53 306 eP P 15 04 08.2 +1.4
KMBL Kambalda 39.57 226 P P 15 04 07.0 0.0
baz=40,SNR=13
FOZ Fox Glacier 39.72 162 P P 15 04 08.3 +0.3
MSWZ Moikau Station 39.81 155 P P 15 04 08.7 -0.1
LTZ Lake Taylor 39.84 159 P P 15 04 08.9 -0.3
LTZ IAmb IAmb 15 04 14.4
comp=Z,119nm,0.9s
KHZ Kahutara 39.98 158 P P 15 04 10.4 +0.2
KHZ IAmb IAmb 15 04 12.4
comp=Z,77nm,0.8s
KKM Kota Kinabalu 40.03 287 P P 15 04 09.8 -1.3
KKM IAmb IAmb 15 05 31.5
comp=Z,70nm,0.9s
SMPP San Manuel, Pa 40.05 304 eP P 15 04 09.7 -1.5
JAGI Jajag, Banyuwa 40.06 264 P P 15 04 11.0 -0.3
comp=Z,6µmcomp=Z,88nm,0.9s
JAGI Jajag, Banyuwa 40.06 264 P P 15 04 08.4 -2.8
JAGI IAmb IAmb 15 04 39.6
comp=Z,104nm,1.0s
RPZ Rata Peaks 40.27 161 P P 15 04 14.3 +1.7
comp=Z,80nm,0.7s,baz=277,slow=2.7,SNR=61
RPZ LR LR 15 20 08.3
comp=Z,5µm,19.2s,baz=322,slow=35
RPZ Rata Peaks 40.27 161 P P 15 04 13.0 +0.4
RPZ IAmb IAmb 15 04 17.6
comp=Z,104nm,0.9s
APYP Conner 40.49 307 eP P 15 04 12.3 -2.4
MQZ McQueen's Vall 40.79 160 P P 15 04 16.7 -0.1
MQZ IAmb IAmb 15 04 24.0
comp=Z,334nm,2.0s
ABRA Dolores 40.80 306 eP P 15 04 16.8 -0.5
MLZ Mavora Lakes 40.94 165 P P 15 04 17.6 -0.5
MLZ IAmb IAmb 15 04 21.1
comp=Z,75nm,0.9s
ODZ Otahua Downs 41.34 163 P P 15 04 20.4 -1.0
ODZ IAMs_20 IAMs_20 15 19 39.4
comp=Z,13µm,20.0s
PYZ Puysegur Point 41.36 167 P P 15 04 21.3 -0.2
JHJ Hachijo jima 2 41.36 341 LR LR 15 18 46.5
comp=Z,2µm,21.4s,baz=169,slow=32
JOW Kunigami 41.37 323 P P 15 04 21.4 -0.4
comp=Z,5.1nm,0.7s,baz=154,slow=13,SNR=10
JOW Kunigami 41.37 323 P P 15 04 21.2 -0.6
WHZ Wether Hill Ro 41.39 166 P P 15 04 21.9 +0.1
GIRL Giralia 42.16 243 IAMs_20 IAMs_20 15 22 22.1
comp=Z,13µm,20.0s
KLBR Kellerberrin 42.72 229 P P 15 04 32.7 -0.1
baz=43,SNR=25
MORW Morawa 42.91 233 P P 15 04 34.9 +0.4
baz=43,SNR=16
MORW Morawa 42.91 233 P P 15 04 33.0 -1.4
MORW IAmb IAmb 15 04 38.9
comp=Z,175nm,1.4s
MORW IAMs_20 IAMs_20 15 22 52.2
comp=Z,11µm,20.0s
PCJI Pacitan 43.00 264 P P 15 04 35.9 +0.5
comp=Z,4µmcomp=Z,300nm,1.3s
SBUM Sibu 43.03 280 P P 15 04 35.8 +0.2
SBUM IAmb IAmb 15 04 39.1
comp=Z,77nm,1.1s
SBUM Sibu 43.03 280 P P 15 04 37.0 +1.4
BLDU Ballidu 43.05 231 P P 15 04 35.8 +0.2
baz=43,SNR=12
YOJ Yonaguni jima 43.11 316 P P 15 04 35.7 -0.3
YOJ Yonaguni jima 43.11 316 P P 15 04 35.7 -0.3
YOJ pmax pmax
comp=Z,289nm,0.4s
WOJI Wonogiri, Jawa 43.25 265 P P 15 04 38.7 +1.3
comp=Z,3µmcomp=Z,73nm,1.2s
STKI Sintang 43.34 276 P P 15 04 39.7 +1.6
comp=Z,7µmcomp=Z,192nm,1.1s
TWG Pinlang 43.46 312 P P 15 04 37.6 -1.4
YULB Yu-li 43.65 313 P P 15 04 39.6 -0.8
YULB IAmb IAmb 15 04 43.4
comp=Z,84nm,0.9s
UGM Wanagama 43.65 265 P P 15 04 41.4 +0.7
comp=Z,6µmcomp=Z,219nm,2.2s
UGM Wanagama 43.65 265 P P 15 04 40.2 -0.5
NWAO Narrogin (SRO) 43.75 227 P P 15 04 41.6 +0.4
baz=44,SNR=3.8
NWAO Narrogin (SRO) 43.75 227 P P 15 04 41.4 +0.2
comp=Z,30nm,1.1s,baz=72,slow=9.4,SNR=4.4
NWAO Narrogin (SRO) 43.75 227 P P 15 04 40.4 -0.8
NWAO IAmb IAmb 15 05 21.6
comp=Z,100nm,1.6s
NWAO Narrogin (SRO) 43.75 227 IAMs_20 IAMs_20 15 22 50.6
comp=Z,13µm,21.0s
NACB Ninganchiao 43.92 314 P P 15 04 41.0 -1.6
NACB IAmb IAmb 15 04 45.0
comp=Z,100nm,0.9s
MUN Mundaring 44.06 229 P P 15 04 43.5 -0.2
baz=44,SNR=8.3
TPUB Ta-pu 44.08 313 P P 15 04 42.4 -1.5
TPUB IAmb IAmb 15 04 47.7
comp=Z,100nm,0.8s
SSLB Suanglung 44.14 313 P P 15 04 42.7 -1.7
SSLB IAmb IAmb 15 04 56.0
comp=Z,66nm,0.7s
INU Inuyama 44.32 339 P P 15 04 44.4 -1.2
YHNB Yeheng 44.38 315 P P 15 04 45.8 -0.6
TATO Taipei 44.50 315 P P 15 04 46.9 -0.3
KSM Kuching 44.72 278 P P 15 04 48.4 -0.8
KSM Kuching 44.72 278 P P 15 04 50.0 +0.8
RKGY Rocky Gully 44.78 225 P P 15 04 49.2 -0.1
baz=45,SNR=9.3
JNU Nakatsue 44.92 332 P P 15 04 50.1 -0.4
comp=Z,83nm,0.7s,baz=100,slow=5.0,SNR=19
JNU LR LR 15 23 21.6
comp=Z,708nm,18.4s,baz=148,slow=36
JNU Nakatsue 44.92 332 P P 15 04 48.7 -1.8
JNU IAmb IAmb 15 04 53.9
comp=Z,103nm,0.8s
MJAR Matsushiro Arr 45.01 341 P P 15 04 49.2 -1.9
comp=Z,13nm,0.7s,baz=164,slow=8.4,SNR=26
MJAR PcP PcP 15 06 30.9 -0.6
comp=Z,6.7nm,0.8s,baz=177,slow=4.3,SNR=5.4
MJAR LR LR 15 24 28.4
comp=Z,1µm,18.4s,baz=170,slow=37
MJAR Matsushiro Arr 45.01 341 P P 15 04 48.9 -2.2
MJAR Matsushiro Arr 45.01 341 IAmb IAmb 15 06 32.7
comp=Z,8.4nm,1.0s
MAJO Matsushiro 45.01 341 P P 15 04 49.2 -2.0
MAJO Matsushiro 45.01 341⇓iP P 15 04 51.8 +0.7
MAJO pmax pmax
comp=Z,26nm,1.0s
MAT Matsushiro 45.01 341 P P 15 04 49.7 -1.4
MAT eS S 15 11 12.6 -13
MJB9 Matsu-Tunnel 45.01 341 P P 15 04 49.3 -1.9
KPJI Karang Pucung 45.24 266 P P 15 04 54.6 +1.3
comp=Z,3µmcomp=Z,129nm,0.8s
CMJI Cimerak 45.71 265 P P 15 04 57.0 0.0
comp=Z,156nm,0.9s
CISI Cisompet, Garu 46.34 265 P P 15 05 01.6 -0.5
comp=Z,6µmcomp=Z,5µmcomp=Z,399nm,0.6s
CISI Cisompet, Garu 46.34 265 P P 15 05 02.0 -0.1
KNMB Chin-men Tao 46.41 312 P P 15 05 02.1 -0.3
QZH Quanzhou 46.55 313 ⇑P P 15 05 04.1 +0.7
QZH S S 15 11 54.2 +5.9
QZH pmax pmax
comp=Z,110nm,1.1s
QZH LR LR
comp=Z,1µm,17.5s
QZH LR LR
comp=Z,2µm,21.8s
QZH LR LR
comp=Z,3µm,28.9s
LEM Lembang 46.55 266 P P 15 05 03.5 -0.4
comp=Z,43nm,0.7s,baz=119,slow=6.9,SNR=9.6
RAR Rarotonga 46.76 113 LR LR 15 21 37.7
comp=Z,3µm,22.0s,baz=281,slow=32
TPI Tanjungpandan 46.78 272 P P 15 05 06.1 +0.6
comp=Z,1µmcomp=Z,73nm,1.1s
CNJI Cibinong 47.02 266 P P 15 05 07.2 -0.1
comp=Z,4µmcomp=Z,323nm,0.7s
XMAS Kiritimati 48.68 82 IAMs_20 IAMs_20 15 23 02.0
comp=Z,14µm,20.0s
SSE Sheshan 48.73 321 P P 15 05 21.0 +0.7
SSE S S 15 12 20.8 +1.6
SSE pmax pmax
comp=Z,470nm,8.8s
SSE LR LR
comp=Z,730nm,27.3s
SSE LR LR
comp=Z,800nm,23.2s
DLV T Lat 49.09 291 P P 15 05 23.1 -0.4
TJN Taejon 49.25 331 deP P 15 05 24.6 +0.5
KASI Kota Agung 49.71 268 P P 15 05 26.7 -1.4
comp=Z,4µmcomp=Z,59nm,1.0s
KSRS Korea Array 49.85 332 P P 15 05 28.6 -0.1
comp=Z,23nm,0.7s,baz=150,slow=5.7,SNR=36
KSRS LR LR 15 25 02.5
comp=Z,870nm,20.8s,baz=148,slow=34
KSAR Wonju Array Be 49.86 332 P P 15 05 27.6 -1.1
KSAR Wonju Array Be 49.86 332 P P 15 05 27.6 -1.1
KS19 Wonju Array Si 49.91 332 P P 15 05 27.9 -1.3
MDSI Maura Dua 50.09 269 P P 15 05 30.4 -0.6
comp=Z,1µmcomp=Z,50nm,1.5s
YUK Yuzh-Kuril'sk 50.44 352 eP P 15 05 27.2 -5.8
YUK ePPP PPP 15 08 25.9
YUK eS S 15 12 31.4 -11
YUK eSSS SSS 15 17 37.1
INCN Inchon 50.48 331 P P 15 05 31.7 -1.8
INCN Inchon 50.48 331 P P 15 05 31.7 -1.8
INCN pmax pmax
comp=Z,123nm,0.7s
INCN MLR MLR
comp=Z,2µm,20.0s
QIZ Qiongzhong 50.52 301 P P 15 05 35.9 +1.8
QIZ sP pP 15 05 52.1 +3.8
QIZ S S 15 12 45.8 +1.2
QIZ pmax pmax
comp=Z,36nm,0.8s
QIZ pmax pmax
comp=Z,920nm,2.9s
QIZ LR LR
comp=Z,2µm,20.1s
QIZ LR LR
comp=Z,3µm,20.1s
QIZ LR LR
comp=Z,4µm,22.1s
NJ2 Nanjing 50.85 320 eP P 15 05 37.2 +0.9
NJ2 S S 15 12 48.9 +0.2
NJ2 sS sS 15 13 10.4 -2.2
NJ2 pmax pmax
comp=Z,13nm,0.6s
NJ2 pmax pmax
comp=Z,1µm,6.4s
NJ2 LR LR
comp=Z,2µm,20.4s
NJ2 LR LR
comp=Z,2µm,13.3s
NJ2 LR LR
comp=Z,4µm,21.5s
JKA Kamikawa-asahi 51.05 349 P P 15 05 37.2 -0.4
ASAJ Asahikawa 51.05 349 P P 15 05 37.2 -0.4
comp=Z,39nm,0.7s,baz=230,slow=16,SNR=27
ASAJ LR LR 15 24 55.2
comp=Z,3µm,20.8s,baz=180,slow=33
MYKOM Kota Tinggi 51.14 277 P P 15 05 38.1 -0.8
MYKOM IAmb IAmb 15 05 41.3
comp=Z,101nm,1.1s
MYKOM Kota Tinggi 51.14 277 P P 15 05 40.0 +1.1
KUR Kuril'sk 51.38 354 c iP P 15 05 42.1 +2.1
KUR e 15 06 55.2
KUR e 15 07 34.2
KUR ePPP PPP 15 08 37.4
KUR S S 15 13 02.0 +6.5
KEKH Kekaha 52.81 57 IAMs_20 IAMs_20 15 23 21.4
comp=Z,8µm,21.0s
JRMM Jerantut 52.85 279 P P 15 05 52.0 +0.4
WHN Wuhan 52.89 316 P P 15 05 52.1 +0.5
WHN S S 15 13 25.2 +8.4
WHN pmax pmax
comp=Z,92nm,1.2s
WHN pmax pmax
comp=Z,2µm,12.1s
WHN LR LR
comp=Z,3µm,14.4s
WHN LR LR
comp=Z,7µm,25.5s
WHN LR LR
comp=Z,11µm,33.0s
UBPT Khong Chiam 52.96 294 P P 15 05 52.1 -0.2
UBPT IAmb IAmb 15 06 08.2
comp=Z,78nm,1.5s
SDSI Sungai Dareh 53.16 273 P P 15 05 54.5 +0.6
comp=Z,3µmcomp=Z,138nm,1.5s
BKNI Bangkinang 53.71 275 P P 15 05 58.0 +0.1
comp=Z,5µmcomp=Z,3µmcomp=Z,204nm,0.9s
BKNI Bangkinang 53.71 275 P P 15 05 56.4 -1.5
YSS Yuzh-Sakhalins 53.77 350 P P 15 05 56.5 -1.1
YSS Yuzh-Sakhalins 53.77 350 eP P 15 05 57.2 -0.5
YSS e*PP pP 15 06 12.3 +0.1
YSS e 15 07 02.5
YSS e 15 07 56.7
YSS eS S 15 13 21.6 -6.5
YSS pmax pmax
comp=Z,30nm,0.7s
YSS pmax pmax
comp=Z,300nm,7.3s
USA0B Ussuriysk Arra 53.95 340 P P 15 05 58.7 -0.4
USA0B Ussuriysk Arra 53.95 340 P P 15 05 58.7 -0.4
USA0B pmax pmax
comp=Z,28nm,0.8s
USRK Ussuriysk Ar. 53.95 340 P P 15 05 58.1 -1.0
comp=Z,18nm,0.6s,baz=187,slow=6.4,SNR=32
USRK LR LR 15 25 37.8
comp=Z,2µm,21.9s,baz=146,slow=32
USRK Ussuriysk Ar. 53.95 340 P P 15 05 58.3 -0.8
USRK Ussuriysk Ar. 53.95 340 P P 15 05 58.3 -0.8
KIP Kipapa 53.99 58 P P 15 05 59.5 -0.3
KIP Kipapa 53.99 58 P P 15 05 59.5 -0.3
KIP pmax pmax
comp=Z,195nm,1.4s
DL2 Dalian 54.08 328 P P 15 06 00.1 0.0
DL2 eS S 15 13 33.8 +1.2
DL2 pmax pmax
comp=Z,54nm,0.8s
DL2 pmax pmax
comp=Z,680nm,11.7s
DL2 LR LR
comp=Z,1µm,31.6s
DL2 LR LR
comp=Z,2µm,23.9s
DL2 LR LR
comp=Z,3µm,23.9s
PDSI Padang 54.13 273 P P 15 05 59.7 -1.3
comp=Z,2µmcomp=Z,875nmcomp=Z,55nm,1.2s
IPM Ipoh 54.38 280 P P 15 06 01.2 -1.6
IPM Ipoh 54.38 280 P P 15 06 03.0 +0.2
TIA Tai'an 54.69 323 P P 15 06 04.7 +0.1
TIA S S 15 13 39.6 -1.4
TIA pmax pmax
comp=Z,16nm,1.2s
TIA pmax pmax
comp=Z,680nm,8.8s
TIA LR LR
comp=Z,930nm,20.6s
TIA LR LR
comp=Z,840nm,23.5s
TIA LR LR
comp=Z,3µm,23.1s
KULM Kulim 54.90 281 P P 15 06 05.0 -1.5
KULM IAmb IAmb 15 06 07.6
comp=Z,52nm,1.0s
KULM Kulim 54.90 281 P P 15 06 07.0 +0.5
KHLH Kahului Airpor 55.12 59 IAMs_20 IAMs_20 15 26 03.9
comp=Z,10µm,19.0s
MDJ Mudanjiang 55.16 339 P P 15 06 08.2 +0.3
MDJ pP pP 15 06 22.4 -0.1
MDJ sP sP 15 06 28.6 -0.1
MDJ PP PP 15 08 12.3 +0.5
MDJ S S 15 13 48.2 +1.2
MDJ sS sS 15 14 12.4 +2.3
MDJ pmax pmax
comp=Z,26nm,0.8s
MDJ pmax pmax
comp=Z,630nm,4.8s
MDJ LR LR
comp=Z,1µm,27.1s
MDJ LR LR
comp=Z,1µm,21.4s
MDJ LR LR
comp=Z,2µm,29.9s
MDJ Mudanjiang 55.16 339 P P 15 06 07.0 -0.9
MDJ IAmb IAmb 15 06 12.4
comp=Z,114nm,1.8s
KHU Kahuku 55.19 62 IAMs_20 IAMs_20 15 26 15.7
comp=Z,7µm,20.0s
MWH Moku'aweowe 55.29 61 P P 15 06 07.3 -2.6
SNY Shenyang 55.36 332 ⇑P P 15 06 03.5 -5.8

SNY PP PP 15 08 12.3 -1.3
SNY S S 15 13 50.4 +0.7
SNY sS sS 15 14 13.7 +0.9
SISI Saibi 55.44 273 P P 15 06 11.3 +0.8
comp=Z,4μmcomp=Z,1μmcomp=Z,60nm,1.4s
POHA Pohakuloa 55.45 61 IAMs_20 IAMs_20 15 29 46.7
comp=Z,7μm,18.0s
NPH North Pit 55.54 62 P P 15 06 09.3 -1.9
RIM Rim 55.54 62 P P 15 06 10.4 -0.9
PPT Papeete 55.77 107 LR LR 15 28 15.8
comp=Z,711nm,18.2s,baz=280,slow=34
PPT2 Papeete2 55.77 107 eS S 15 13 53.8 -2.4
comp=Z,2μm,26.0s
PPT2 eLQ LQ 15 20 11.2
comp=Z,4μm,29.8s
PPT2 eLR LR 15 22 35.9
comp=Z,5μm,27.5s,baz=289
CN2 Changchun 56.10 335 eP P 15 06 14.2 -0.4
CN2 epP pP 15 06 27.9 -1.4
CN2 eS S 15 13 59.0 -0.6
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,500nm,7.0s
CN2 LR LR
comp=Z,910nm,17.0s
CN2 LR LR
comp=Z,1μm,17.0s
CN2 LR LR
comp=Z,2μm,22.0s
RPSI Rantau Prapat 56.14 277 P P 15 06 14.1 -1.4
RPSI Rantau Prapat 56.14 277 P P 15 06 14.1 -1.4
PSI Prapat 56.16 277 P P 15 06 14.1 -1.6
comp=Z,25nm,0.9s,baz=92,slow=7.4,SNR=20
PSI LR LR 15 35 48.3
comp=Z,984nm,19.3s,baz=134,slow=42
ENH Enshi 56.21 313 P P 15 06 14.8 -0.9
GYA Guiyang 56.46 307 ⇑iP P 15 06 18.6 +0.9
GYA pP pP 15 06 31.6 -0.6
GYA PP PP 15 08 26.2 +2.3
GYA S S 15 14 02.9 -2.3
GYA sS sS 15 14 27.2 -1.0
GYA SS SS 15 17 52.9 -0.4
GYA pmax pmax
comp=Z,50nm,1.2s
GYA pmax pmax
comp=Z,780nm,6.7s
GYA LR LR
comp=Z,1μm,20.4s
GYA LR LR
comp=Z,3μm,21.0s
GYA LR LR
comp=Z,5μm,22.3s
TBI Tubuai 56.54 114 eS S 15 14 05.9 -0.2
comp=Z,1μm,28.0s
TBI eLQ LQ 15 20 30.0
comp=Z,3μm,44.2s
TBI eLR LR 15 22 55.6
comp=Z,14μm,29.5s,baz=286
SLVN Son La 56.55 300 P P 15 06 16.1 -2.2
KCSI Kotacane, Aceh 57.41 278 P P 15 06 22.9 -1.6
comp=Z,952nmcomp=Z,53nm,1.6s
PBKT Sadao Pong 57.47 294 P P 15 06 24.3 -0.5
PBKT IAmb IAmb 15 06 40.9
comp=Z,66nm,1.3s
TYV Tymovskoe 57.58 351 eP P 15 06 24.9 0.0
TYV e 15 14 19.2
TYV pmax pmax
comp=Z,19nm,0.8s
BJT Baijiatuau 57.83 326 P P 15 06 26.2 -0.7
BJT Baijiatuau 57.83 326 P P 15 06 26.2 -0.7
BJT pmax pmax
comp=Z,18nm,0.6s
BJI Beijing 57.84 326 eP P 15 06 27.1 +0.1
BJI sP sP 15 06 50.6 +2.6
BJI S S 15 14 18.1 -4.4
BJI pmax pmax
comp=Z,24nm,0.6s
BJI pmax pmax
comp=Z,540nm,9.8s
BJI LR LR
comp=Z,910nm,20.6s
BJI LR LR
comp=Z,1μm,18.4s
BJI LR LR
comp=Z,2μm,25.1s
TPTI 57.95 278 P P 15 06 27.0 -1.3
comp=Z,287nmcomp=Z,9.1nm,1.1s
KLR Kul'dur 58.50 343 P P 15 06 30.5 -0.9
comp=Z,35nm,0.7s,baz=157,slow=4.5,SNR=50
KLR S S 15 14 37.1 +6.3
comp=Z,2.1nm,1.1s,baz=64,slow=23,SNR=5.8
KLR Kul'dur 58.50 343 deP P 15 06 30.9 -0.5
KLR pmax pmax
comp=Z,34nm,0.6s
TIY Taiyuan 58.52 321 eP P 15 06 32.7 +0.8
TIY S S 15 14 26.1 -5.6
TIY pmax pmax
comp=Z,12nm,0.7s
TIY pmax pmax
comp=Z,450nm,8.4s
TIY LR LR
comp=Z,3μm,27.5s
TIY LR LR
comp=Z,1μm,17.0s
TIY LR LR
comp=Z,2μm,21.5s
XAN Xi'an 58.66 316 P P 15 06 32.2 -0.7
XAN S S 15 14 30.4 -3.2
XAN sS pS 15 14 53.2 +2.9
XAN pmax pmax
comp=Z,77nm,0.9s
XAN pmax pmax
comp=Z,830nm,8.6s
XAN LR LR
comp=Z,2μm,21.7s
XAN LR LR
comp=Z,1μm,23.9s
XAN LR LR
comp=Z,3μm,21.7s
XAN Xi'an 58.66 316 P P 15 06 31.2 -1.7
XAN IAmb IAmb 15 06 37.3
comp=Z,56nm,0.7s
XAN Xi'an 58.66 316 P P 15 06 31.2 -1.7
XAN pmax pmax
comp=Z,56nm,0.7s
GRNR Gornyy 58.68 347 ⇓iP P 15 06 33.7 +1.0
GRNR eS S 15 14 36.5 +3.3
GRNR pmax pmax
comp=Z,6.0nm,0.9s
GRNR smax smax
comp=N,4.0nm,0.9s
GRNR MLR MLR
comp=Z,570nm,13.0s
MLSI Meulaboh, Aceh 58.88 279 P P 15 06 34.0 -0.8
comp=Z,7μmcomp=Z,138nm,1.4s
PET Petropavlovsk 58.94 3 eP P 15 06 38.5 +4.1
PET eS S 15 14 43.6 +7.2
PET pmax pmax
comp=Z,600nm,13.0s
PET pmax pmax
comp=Z,45nm,1.1s
PEA0B Petropavlovsk- 58.98 2 P P 15 06 34.2 -0.5
PEA0B Petropavlovsk- 58.98 2 ⇑eP P 15 06 36.8 +2.1
PETK Petropavlovsk- 58.98 2 P P 15 06 34.6 -0.1
comp=Z,9.4nm,0.8s,baz=160,slow=7.3,SNR=18
PETK LR LR 15 28 15.0
comp=Z,3μm,21.6s,baz=184,slow=32
KMI Kunming 59.05 304 P P 15 06 37.3 +1.3
KMI pP pP 15 06 51.5 +0.9
KMI sP sP 15 06 57.1 +0.4
KMI S S 15 14 39.0 -0.4
KMI SS SS 15 18 37.8 +3.5
KMI pmax pmax
comp=Z,130nm,1.3s
KMI pmax pmax
comp=Z,980nm,7.9s
KMI LR LR
comp=Z,1μm,20.3s
KMI LR LR
comp=Z,930nm,17.8s
KMI LR LR
comp=Z,2μm,20.1s
KMI Kunming 59.05 304 P P 15 06 34.4 -1.6
KMI Kunming 59.05 304 P P 15 06 34.4 -1.6
KMI pmax pmax
comp=Z,115nm,1.0s
CM31 Chiang Mai Arr 59.91 295 P P 15 06 40.6 -1.1
CM31 IAmb IAmb 15 06 45.0
comp=Z,75nm,1.1s
CMAR Chiang Mai Arr 59.91 295 P P 15 06 42.4 +0.6
comp=Z,24nm,0.9s,baz=114,slow=4.6,SNR=106
CMAR S 15 15 00.9 +11
comp=Z,0.6nm,0.8s,baz=110,slow=11,SNR=7.9
CMAR LR LR 15 32 39.7
comp=Z,1μm,19.5s,baz=120,slow=36
CMAR PKPPKP 15 36 07.2
comp=Z,1.5nm,1.0s,baz=254,slow=2.6,SNR=4.4
CMAR PKP2bc 15 36 20.9
comp=Z,2.5nm,1.0s,baz=286,slow=3.7,SNR=11
CHTO Chiang Mai 60.02 296 P P 15 06 41.6 -0.9
CHTO Chiang Mai 60.02 296 P P 15 06 41.6 -0.9
CHTO pmax pmax
comp=Z,215nm,1.8s
NKL Nikolayevsk 60.10 350 eP P 15 06 41.3 -1.1
NKL e 15 08 55.1
NKL pmax pmax
comp=Z,20nm,0.9s
NKL pmax pmax
comp=N,4.0nm,0.7s
NKL pmax pmax
comp=Z,80nm,3.1s
CD2 Chengdu 60.80 310 ⇑P P 15 06 48.2 +0.5
CD2 pP pP 15 07 03.7 +1.4
CD2 sP sP 15 07 12.6 +4.2
CD2 PP PP 15 09 07.8 +5.5
CD2 S S 15 15 00.7 -0.6
CD2 sS sS 15 15 28.7 +3.0
CD2 SS SS 15 19 03.5 +2.3
CD2 pmax pmax
comp=Z,100nm,0.7s
CD2 pmax pmax
comp=Z,1μm,8.0s
CD2 LR LR
comp=Z,4μm,20.1s
CD2 LR LR
comp=Z,5μm,23.0s
CD2 LR LR
comp=Z,6μm,22.6s
SMY Shemya 60.87 14 IAMs_20 IAMs_20 15 29 58.9
comp=Z,6μm,21.0s
HHC Hu-ho-hao-te 61.02 324 eP P 15 06 50.1 +1.1
HHC sP sP 15 07 14.4 +4.5
HHC S S 15 15 03.8 0.0
HHC SS SS 15 19 05.1 +0.7
HHC pmax pmax
comp=Z,10.0nm,0.9s
HHC pmax pmax
comp=Z,250nm,6.1s
HHC LR LR
comp=Z,890nm,20.1s
HHC LR LR
comp=Z,840nm,19.4s
HHC LR LR
comp=Z,2μm,19.6s
BTO Baotou 61.78 323 eP P 15 06 54.0 -0.2
BTO S S 15 15 11.0 -2.5
HIA Hailar 62.84 335 P P 15 07 00.1 -0.9
HIA IAmb IAmb 15 07 04.5
comp=Z,42nm,0.8s
HIA Hailar 62.84 335 P P 15 07 00.1 -0.9
HIA pmax pmax
comp=Z,43nm,0.8s
HIA MLR MLR
comp=Z,2μm,21.0s
LZH Lanzhou 63.27 315 ⇑P P 15 07 05.3 +1.0
LZH pP pP 15 07 19.3 +0.3
LZH sP sP 15 07 24.4 -0.6
LZH S S 15 15 32.2 -0.3
LZH sS pS 15 15 50.8 +0.7
LZH SS SS 15 19 45.3 +5.3
LZH pmax pmax
comp=Z,68nm,1.1s
LZH pmax pmax
comp=Z,340nm,4.9s
LZH LR LR
comp=Z,2μm,18.0s
LZH LR LR
comp=Z,2μm,18.6s
LZH LR LR
comp=Z,3μm,18.6s
ZEA Zeya 63.81 342 eP P 15 07 07.1 -0.2
ZEA e 15 07 21.8
ZEA eS S 15 15 36.0 -2.2
ZEA e 15 16 12.0
ZEA pmax pmax
comp=N,47nm,1.0s
ZEA pmax pmax
comp=Z,61nm,1.0s
ZEA pmax pmax
comp=Z,700nm,11.0s
ZEA pmax pmax
comp=Z,500nm,11.0s
ZEA smax smax
comp=E,400nm,16.0s
ATKA Atka Island 63.86 21 IAMs_20 IAMs_20 15 28 26.3
comp=Z,7μm,22.0s
DGPR DIGLIPUR 64.03 288 eP P 15 07 09.5 0.0
TAOE Nuku Hiva Isla 64.82 97 eS S 15 15 51.3 -1.1
comp=Z,594nm,27.9s
TAOE Nuku Hiva Isla 64.82 97 eLR LR 15 26 45.3
comp=Z,4μm,24.1s
MA2 Magadan 65.47 358 P P 15 07 18.1 +0.1
comp=Z,21nm,0.8s,baz=180,slow=10,SNR=10
MA2 Magadan 65.47 358 P P 15 07 17.6 -0.4
MA2 IAmb IAmb 15 07 51.6
comp=Z,43nm,1.1s
MA2 Magadan 65.47 358 deP P 15 07 18.4 +0.4
MA2 pmax pmax
comp=Z,32nm,1.0s
LKP Lekhapani 65.61 303 eP P 15 07 19.4 -0.2
LKP IAmb IAmb 15 07 34.0
comp=Z,46nm,0.8s
NIKH Nikolski High 66.47 23 IAMs_20 IAMs_20 15 32 03.2
comp=Z,9μm,21.0s
ZIRO ZIRO 67.34 303 eP P 15 07 30.8 -0.1
ZIRO IAmb IAmb 15 07 35.9
comp=Z,85nm,1.0s
CASY Casey 67.34 198 IAMs_20 IAMs_20 15 32 51.3
comp=Z,7μm,21.0s
GTA Gaotai 67.69 317 P P 15 07 33.4 +0.6
GTA pP pP 15 07 47.5 0.0
GTA sP sP 15 07 54.2 +0.7
GTA S S 15 16 26.7 +0.3
GTA sS sS 15 16 51.4 -0.2
GTA SS SS 15 20 47.5 -1.0
GTA pmax pmax
comp=Z,43nm,1.1s
GTA pmax pmax
comp=Z,740nm,7.0s
GTA LR LR
comp=Z,960nm,20.3s
GTA LR LR
comp=Z,1μm,22.0s
GTA LR LR
comp=Z,2μm,23.4s
ULN Ulaanbaatar 67.92 328 P P 15 07 33.4 -0.7
ULN Ulaanbaatar 67.92 328 P P 15 07 33.4 -0.7
ULN MLR MLR
comp=Z,2μm,21.0s
UNV Unalaska Valle 68.05 24 IAMs_20 IAMs_20 15 34 21.4
comp=Z,7μm,20.0s
SONM Songino Array 68.25 327 P P 15 07 35.4 -0.7
comp=Z,22nm,1.0s,baz=139,slow=5.2,SNR=60
SONM S S 15 16 37.1 +4.3
comp=Z,3.0nm,1.1s,baz=134,slow=8.9,SNR=6.3
SONM PKP2bc 15 35 56.0
comp=Z,2.0nm,1.1s,baz=305,slow=0.7,SNR=7.7
SONM LR LR 15 38 49.5
comp=Z,1μm,18.5s,baz=134,slow=37
SONM Songino Array 68.25 327 P P 15 07 35.0 -1.2
SHL Shillong 68.36 300 ⇑iP P 15 07 37.6 +0.2
SHL Shillong 68.36 300 P P 15 07 36.1 -1.2
SHL Shillong 68.36 300 P P 15 07 36.1 -1.2
SHL pmax pmax
comp=Z,252nm,0.9s
AKUT Akutan 68.56 24 IAMs_20 IAMs_20 15 31 27.7
comp=Z,7μm,22.0s
SEY Seymchan 68.79 359 P P 15 07 39.0 +0.1
comp=Z,9.7nm,1.0s,baz=152,slow=5.8,SNR=14
SEY Seymchan 68.79 359 ⇓eP P 15 07 39.9 +0.9
FALS False Pass 70.03 24 IAMs_20 IAMs_20 15 32 00.7
comp=Z,8μm,22.0s
LSA Lhasa 70.30 304 P P 15 07 50.6 +1.0
LSA pmax pmax
comp=Z,82nm,0.8s
LSA Lhasa 70.30 304 P P 15 07 48.9 -0.7
LSA IAmb IAmb 15 07 52.5
comp=Z,74nm,0.9s
LSA Lhasa 70.30 304 P P 15 07 48.9 -0.7
LSA pmax pmax
comp=Z,74nm,0.9s
YAK Yakutsk 70.51 348 P P 15 07 49.4 -0.1
comp=Z,19nm,0.7s,baz=204,slow=0.5,SNR=28
YAK S S 15 17 03.7 +5.2
comp=Z,3.7nm,0.5s,baz=111,slow=24,SNR=13
YAK Yakutsk 70.51 348 P P 15 07 48.7 -0.9
YAK IAmb IAmb 15 07 51.1
comp=Z,48nm,0.8s
YAK Yakutsk 70.51 348 eP P 15 07 49.1 -0.5
YAK e*PP pP 15 07 59.0 -5.7
YAK e 15 08 12.4
YAK e 15 10 28.8
YAK ePPP PPP 15 12 14.3
YAK eS S 15 16 56.6 -1.9
YAK e 15 17 47.4
YAK eSS SS 15 21 25.2 -5.7
YAK eSSS SSS 15 24 39.6
YAK pmax pmax
comp=Z,45nm,0.9s
YAK pmax pmax
comp=N,20nm,1.3s
YAK pmax pmax
comp=E,8.0nm,1.4s
YAK pmax pmax
comp=Z,197nm,5.2s
YAK pmax pmax
comp=E,156nm,4.8s
YAK pmax pmax
comp=N,190nm,4.6s
YAK smax smax
comp=N,365nm,6.3s
YAK smax smax
comp=E,328nm,5.9s
YAK MLR MLR
comp=Z,1μm,23.0s
YAK MLR MLR
comp=N,558nm,19.0s
YAK MLR MLR
comp=E,438nm,21.0s
ZAK Zakamensk 71.41 328 eP P 15 07 55.2 -0.2
ZAK pmax pmax
comp=Z,52nm,1.2s
BOD Bodaibo 71.53 339 eP P 15 07 55.1 -0.8
BOD e 15 17 14.5
BOD pmax pmax
comp=Z,30nm,1.7s
VNDA Vanda 71.55 178 P P 15 07 56.5 +0.7
comp=Z,13nm,0.7s,baz=328,slow=6.6,SNR=15
VNDA LR LR 15 35 05.6
comp=Z,1μm,19.9s,baz=2.5,slow=32
SDPT Sand Point 71.60 25 P P 15 07 56.5 +0.2
CNBA Chernabura Isl 71.63 26 IAMs_20 IAMs_20 15 35 10.2
comp=Z,6μm,21.0s
GTK Tadong 71.69 301 eP P 15 07 58.2 +0.5
TLY Talaya 71.97 329 P P 15 07 58.9 +0.2
comp=Z,16nm,0.8s,baz=171,slow=5.3,SNR=9.8
TLY S S 15 17 23.1 +7.1
comp=Z,1.1nm,0.5s,baz=13,slow=20,SNR=9.5
TLY Talaya 71.97 329 P P 15 07 58.2 -0.5
TLY Talaya 71.97 329 eP P 15 07 57.7 -1.0
TLY e 15 08 12.0
TLY eS S 15 17 20.1 +4.1
TLY pmax pmax
comp=Z,59nm,0.9s
TLY MLR MLR
comp=Z,2μm,19.0s
IRK Irkutsk 71.99 330 eP P 15 07 58.9 +0.1
IRK e 15 17 21.2
IRK pmax pmax
comp=Z,77nm,2.0s
BWNR Bhubaneshwar 72.33 293 eP P 15 08 02.4 +1.0
BWNR IAmb IAmb 15 08 04.3
comp=Z,190nm,0.3s
TAPN Taplejung 72.46 301 eP P 15 08 01.9 -0.6
comp=Z,393nm,1.1s
ODAN Odare 72.60 300 eP P 15 08 02.8 -0.4
comp=Z,579nm,1.0s
BOK Bokaro 73.10 297 eP P 15 08 07.1 +1.1
BOK IAmb IAmb 15 08 09.5
comp=Z,118nm,1.1s
RAMN Ramite 73.30 300 eP P 15 08 07.6 +0.2
comp=Z,190nm,1.2s
MOY Mondy 73.33 329 eP P 15 08 07.9 +1.0
MOY pmax pmax
comp=Z,66nm,2.5s
CHLP Challavanipeta 73.54 291 eP P 15 08 09.4 +0.8
CHLP IAmb IAmb 15 08 11.3
comp=Z,117nm,0.9s
CHLP eS SKiKP 15 17 34.0 -0.6
CHLP IVMs_BB IVMs_BB 15 35 17.8
comp=Z,347nm,26.6s
JIRN Jiri 73.85 301 eP P 15 08 10.3 -0.4
comp=Z,412nm,1.1s
CHIR Chirikof Islan 74.02 27 IAMs_20 IAMs_20 15 37 25.2
comp=Z,5μm,20.0s
GAMB Gambell 74.12 15 P P 15 08 11.3 +0.3
GAMB IAMs_20 IAMs_20 15 34 59.4
comp=Z,5μm,22.0s
GUN Gumba 74.18 301 eP P 15 08 12.2 -0.5
comp=Z,532nm,1.0s
BILL Bilibino 74.37 5 P P 15 08 11.3 -1.2
BILL IAmb IAmb 15 08 17.5
comp=Z,44nm,0.8s
BILL Bilibino 74.37 5 c iP P 15 08 12.3 -0.2
BILL e 15 10 59.4
BILL i PPP PPP 15 12 46.4
BILL i S S 15 17 38.9 -3.5
BILL pmax pmax
comp=Z,46nm,0.8s
BILL MLR MLR
comp=Z,1μm,20.0s
PKI Pulchoki 74.49 301 eP P 15 08 13.8 -0.7
comp=Z,362nm,1.1s
PKIN Phulchoki 74.50 301 eP P 15 08 13.4 -1.0
comp=Z,268nm,1.1s
KKN Kakani 74.66 301 eP P 15 08 14.9 -0.4
comp=Z,265nm,1.0s
DMN Daman 74.76 301 eP P 15 08 15.5 -0.4
comp=Z,552nm,1.0s
PALK Pallekele 74.77 279 P P 15 08 16.1 +0.1
comp=Z,15nm,0.8s,baz=74,slow=5.0,SNR=11
PALK Pallekele 74.77 279 P P 15 08 15.6 -0.4
SII Sitkinak Islan 75.11 27 P P 15 08 17.1 +0.1
GKN Gorkha 75.26 301 eP P 15 08 18.0 -0.7
comp=Z,537nm,1.1s
PVM Polavaram 75.55 289 eP P 15 08 20.3 0.0
PVM IAmb IAmb 15 08 22.1
comp=Z,42nm,0.9s
PVM eS S 15 17 57.7 +0.3
PVM IVMs_BB IVMs_BB 15 34 53.3
comp=Z,417nm,28.9s
OHAK Old Harbor 75.90 26 P P 15 08 22.0 +0.5
KOLN Koldanda 76.09 300 eP P 15 08 22.6 -0.9
comp=Z,442nm,0.9s
DANN Dangsing 76.10 301 eP P 15 08 22.6 -1.1
comp=Z,292nm,0.9s
MDRS Chennai 76.11 285 eP P 15 08 24.2 +0.7
MDRS IAmb IAmb 15 08 28.6
comp=Z,72nm,1.4s
MYLAV Mylavaram 76.39 289 eP P 15 08 25.4 +0.3
MYLAV IAmb IAmb 15 08 27.1
comp=Z,44nm,1.0s
MYLAV eS S 15 18 03.6 -3.1
MYLAV IVMs_BB IVMs_BB 15 35 50.3
comp=Z,425nm,27.4s
ANM Nome 76.46 17 P P 15 08 25.8 +1.3
ANM IAmb IAmb 15 08 29.7
comp=Z,38nm,0.8s
ANM Nome 76.46 17 P P 15 08 25.8 +1.3
ANM pmax pmax
comp=Z,38nm,0.8s
KDAK Kodiak Island 76.53 26 LR LR 15 36 52.3
comp=Z,3μm,21.8s,baz=242,slow=32
KDAK Kodiak Island 76.53 26 P P 15 08 25.1 +0.1
KDAK IAmb IAmb 15 08 29.8
comp=Z,86nm,0.8s
KDAK Kodiak Island 76.53 26 IAMs_20 IAMs_20 15 35 56.7

comp=Z,5µm,22.0s
KDAK Kodiak Island 76.53 26 P P 15 08 25.1 +0.1
KDAK pmax pmax
comp=Z,86nm,0.9s
SKHT Srikalahasti 76.74 286 eP P 15 08 27.5 +0.4
SKHT IAmb IAmb 15 08 29.0
comp=Z,37nm,1.2s
SKHT eS S 15 18 08.3 -2.3
SKHT IVMs_BB IVMs_BB 15 37 50.8
comp=Z,261nm,30.2s
ADKI Addanki 76.86 288 eP P 15 08 27.6 -0.1
ADKI IAmb IAmb 15 08 29.6
comp=Z,47nm,1.0s
ADKI eS S 15 18 09.6 -2.2
ADKI IVMs_BB IVMs_BB 15 42 58.0
comp=Z,222nm,26.6s
GGR Gangavaram 76.99 290 eP P 15 08 28.1 -0.5
GGR IAmb IAmb 15 08 30.1
comp=Z,52nm,0.9s
GGR IVMs_BB IVMs_BB 15 35 33.4
comp=Z,339nm,32.1s
SVW2 Sparrevohn 77.31 22 P P 15 08 29.9 +0.5
SVW2 IAmb IAmb 15 08 34.9
comp=Z,54nm,0.7s
NJS Nagarjunasagar 77.61 288 eP P 15 08 31.7 -0.3
NJS IAmb IAmb 15 08 33.4
comp=Z,59nm,1.0s
NJS eS S 15 18 18.7 -1.3
NJS IVMs_BB IVMs_BB 15 36 06.2
comp=Z,240nm,32.0s
WMQ Urumqi 77.77 317 eP P 15 08 33.2 +0.8
WMQ pP pP 15 08 46.9 -0.8
WMQ sP sP 15 08 56.8 +3.0
WMQ S S 15 18 19.3 -1.6
WMQ pmax pmax
comp=Z,17nm,1.5s
WMQ pmax pmax
comp=Z,290nm,4.1s
WMQ LR LR
comp=Z,530nm,20.7s
WMQ LR LR
comp=Z,610nm,20.9s
WMQ LR LR
comp=Z,2µm,28.7s
WMQ Urumqi 77.77 317 P P 15 08 32.5 +0.1
WMQ Urumqi 77.77 317 P P 15 08 32.5 +0.1
WMQ pmax pmax
comp=Z,39nm,1.2s
SRLM Srisailam 77.92 288 eP P 15 08 33.5 -0.3
SRLM IAmb IAmb 15 08 35.1
comp=Z,77nm,0.9s
SRLM IVMs_BB IVMs_BB 15 36 32.8
comp=Z,215nm,29.8s
RSO Redoubt South 78.03 24 P P 15 08 31.6 -2.0
RPR Rampur 78.03 291 eP P 15 08 33.8 -0.5
RPR eS S 15 18 21.5 -2.9
CNPM China Poot 78.11 25 P P 15 08 33.7 -0.2
CNPM IAMs_20 IAMs_20 15 39 21.0
comp=Z,6µm,20.0s
BRLK Bradley Lake 78.39 25 P P 15 08 35.1 -0.3
BRLK IAMs_20 IAMs_20 15 37 34.3
comp=Z,6µm,22.0s
HYB Hyderabad 78.47 289 iP P 15 08 35.0 -1.8
HYB esP pP 15 08 53.0 +1.2
HYB eS S 15 18 30.0 +0.7
HYB Hyderabad 78.47 289 eP P 15 08 36.3 -0.5
HYB IAmb IAmb 15 08 40.9
comp=Z,44nm,0.7s
HYBB Hyderabad (bro 78.47 289 eP P 15 08 35.9 -0.9
HYBB IAmb IAmb 15 08 37.9
comp=Z,58nm,1.0s
HYBB eS S 15 18 25.7 -3.6
HYBB IVMs_BB IVMs_BB 15 36 31.8
comp=Z,384nm,32.0s
NGP Nagpur 78.68 293 eP P 15 08 37.5 -0.4
NGP IAmb IAmb 15 08 40.3
comp=Z,44nm,0.9s
SRSP Sriramsagar 78.93 291 eP P 15 08 38.9 -0.3
SRSP IAmb IAmb 15 08 40.5
comp=Z,78nm,0.9s
SRSP eS S 15 18 30.0 -4.1
SRSP IVMs_BB IVMs_BB 15 36 24.7
comp=Z,255nm,37.7s
SEW Seward 79.18 25 P P 15 08 40.1 +0.4
SEW IAMs_20 IAMs_20 15 38 08.6
comp=Z,7µm,22.0s
URV Uravakonda 79.28 286 eP P 15 08 41.3 0.0
URV IAmb IAmb 15 08 42.9
comp=Z,124nm,1.1s
URV eS S 15 18 36.3 -1.7
URV IVMs_BB IVMs_BB 15 39 57.2
comp=Z,444nm,17.6s
TIXI Tiksi 79.33 352 P P 15 08 39.6 -0.7
comp=Z,12nm,0.9s,baz=125,slow=4.5,SNR=9.9
TIXI Tiksi 79.33 352 P P 15 08 38.0 -2.3
TIXI Tiksi 79.33 352⇓iP P 15 08 40.2 -0.1
TIXI pmax pmax
comp=Z,17nm,1.0s
SKT Skwentna 79.39 23 P P 15 08 40.2 -0.7
SKT IAMs_20 IAMs_20 15 38 22.0
comp=Z,6µm,22.0s
SUA Susitna One 79.41 24 P P 15 08 39.9 -1.2
SUA IAMs_20 IAMs_20 15 37 59.4
comp=Z,4µm,22.0s
RC01 Rabbit Creek A 79.60 24 P P 15 08 42.0 -0.1
RC01 IAmb IAmb 15 08 46.9
comp=Z,85nm,0.8s
PPLA Purkeypile 79.68 22 P P 15 08 42.0 -0.5
PPLA IAmb IAmb 15 09 15.0
comp=Z,129nm,1.6s
PPLA IAMs_20 IAMs_20 15 38 08.5
comp=Z,7µm,22.0s
RDOG Red Dog Mine 79.72 15 P P 15 08 41.6 -1.0
RDOG IAmb IAmb 15 08 47.9
comp=Z,52nm,0.6s
PMR Palmer 80.12 24 P P 15 08 43.4 -1.4
PMR IAmb IAmb 15 08 49.0
comp=Z,64nm,0.8s
PMR Palmer 80.12 24 P P 15 08 43.4 -1.4
PMR pmax pmax
comp=Z,64nm,0.8s
KNK Knik Glacier 80.30 24 P P 15 08 45.1 -0.7
KNK IAmb IAmb 15 09 06.7
comp=Z,162nm,1.5s
KNK IAMs_20 IAMs_20 15 38 51.2
comp=Z,6µm,22.0s
GHO Glory Hole Cre 80.30 24 P P 15 08 45.8 -0.1
GHO IAmb IAmb 15 08 50.2
comp=Z,72nm,0.8s
KLRI Killari 80.41 289 eP P 15 08 46.3 -1.0
KLRI IAmb IAmb 15 08 48.2
comp=Z,25nm,0.8s
KLRI eS S 15 18 47.4 -2.6
KLRI IVMs_BB IVMs_BB 15 37 37.4
comp=Z,480nm,32.7s
KTH Kantishna Hill 80.53 22 P P 15 08 46.3 -0.8
KTH IAmb IAmb 15 08 50.5
comp=Z,51nm,0.8s
KTH IAMs_20 IAMs_20 15 42 05.9
comp=Z,5µm,20.0s
BHPL Bhopal 80.56 295 eP P 15 08 46.4 -1.7
BHPL IAmb IAmb 15 08 52.2
comp=Z,88nm,0.6s
SML Sawmill 80.56 24 IAMs_20 IAMs_20 15 39 12.0
comp=Z,4µm,22.0s
GLI Glacier Island 80.58 25 P P 15 08 47.4 0.0
GLI IAMs_20 IAMs_20 15 38 38.7
comp=Z,5µm,22.0s
HIN Hinchinbrook I 80.59 26 P P 15 08 47.6 +0.2
TRF Thorofare Moun 80.70 22 P P 15 08 47.9 -0.2
TRF IAmb IAmb 15 08 53.3
comp=Z,68nm,0.8s
TRF IAMs_20 IAMs_20 15 39 05.6
comp=Z,8µm,22.0s
FID Port Fidalgo 80.78 25 P P 15 08 47.9 -0.5
FID IAmb IAmb 15 08 52.7
comp=Z,84nm,0.8s
BPAW Bear Paw Mtn. 80.82 21 P P 15 08 49.0 +0.5
BPAW IAMs_20 IAMs_20 15 42 14.6
comp=Z,5µm,20.0s
ZSN Zaisan 80.88 320 eP P 15 08 48.1 -1.1
comp=Z,122nm,3.6s
ZSN eS S 15 18 59.1 +5.4
ZSN Zaisan 80.88 320 eP P 15 08 48.1 -1.1
ZSN eS S 15 18 59.0 +5.4
ZSN pmax pmax
comp=Z,122nm,3.6s
SCM Sheep Creek Mo 80.98 24 P P 15 08 49.4 -0.1
SCM IAmb IAmb 15 08 54.3
comp=Z,79nm,0.9s
SCM IAMs_20 IAMs_20 15 39 00.1
comp=Z,7µm,22.0s
SCM Sheep Creek Mo 80.98 24 P P 15 08 49.4 -0.1
SCM pmax pmax
comp=Z,79nm,0.9s
EYAK Cordova Ski Ar 80.99 26 P P 15 08 50.1 +0.7
EYAK IAmb IAmb 15 09 09.3
comp=Z,149nm,1.6s
EYAK IAMs_20 IAMs_20 15 39 41.4
comp=Z,5µm,21.0s
IMAR Indian Mountai 80.99 19 P P 15 08 48.9 -0.5
RND Reindeer 81.22 22 P P 15 08 49.3 -1.4
RND IAmb IAmb 15 08 54.4
comp=Z,76nm,0.8s
RND Reindeer 81.22 22 P P 15 08 49.3 -1.4
RND pmax pmax
comp=Z,76nm,0.8s
MCK McKinley 81.36 22 P P 15 08 50.6 -0.9
MCK McKinley 81.36 22 P P 15 08 50.6 -0.9
MCK pmax pmax
comp=Z,139nm,0.8s
RAGM Ragged Mountai 81.38 26 IAMs_20 IAMs_20 15 38 53.6
comp=Z,6µm,22.0s
BWN Browne 81.41 22 P P 15 08 51.1 -0.6
BWN IAmb IAmb 15 09 20.1
comp=Z,88nm,1.1s
BWN IAMs_20 IAMs_20 15 42 15.9
comp=Z,4µm,20.0s
MLY Manley 81.44 21 P P 15 08 51.2 -0.6
MLY IAmb IAmb 15 08 56.1
comp=Z,44nm,0.7s
MLY IAMs_20 IAMs_20 15 42 17.0
comp=Z,6µm,20.0s
HMT Hamilton 81.53 26 P P 15 08 52.8 +0.4
HMT IAmb IAmb 15 08 56.9
comp=Z,59nm,0.8s
HMT IAMs_20 IAMs_20 15 38 55.8
comp=Z,6µm,22.0s
NDI New Delhi 81.78 300 eP P 15 08 57.0 +2.6
WRH Wood River Hil 82.08 22 P P 15 08 54.2 -0.9
WRH IAMs_20 IAMs_20 15 42 53.9
comp=Z,4µm,20.0s
CRQM Cirque 82.22 26 P P 15 08 56.5 +0.3
CRQM IAmb IAmb 15 09 01.1
comp=Z,72nm,0.9s
CRQM IAMs_20 IAMs_20 15 39 20.5
comp=Z,4µm,22.0s
GLB Gilahina Butte 82.25 25 P P 15 08 56.3 +0.1
GLB IAmb IAmb 15 09 01.0
comp=Z,78nm,0.8s
CCB Clear Creek Bu 82.27 22 P P 15 08 54.4 -1.7
CCB IAmb IAmb 15 08 59.4
comp=Z,34nm,0.7s
CCB IAMs_20 IAMs_20 15 43 00.1
comp=Z,3µm,20.0s
MDM Murphy Dome 82.29 21 P P 15 08 56.0 -0.3
MDM IAmb IAmb 15 09 15.9
comp=Z,50nm,1.5s
VRDI Verde Repeater 82.30 26 P P 15 08 56.1 -0.6
VRDI IAmb IAmb 15 09 01.3
comp=Z,60nm,0.8s
VRDI IAMs_20 IAMs_20 15 40 21.1
comp=Z,6µm,22.0s
PAX Paxson 82.30 24 IAMs_20 IAMs_20 15 40 06.0
comp=Z,6µm,22.0s
MK31 Makanchi Array 82.34 319 P P 15 08 55.7 -1.3
MK31 Makanchi Array 82.34 319 iP P 15 08 56.6 -0.4
MKAR Makanchi Array 82.34 319 P P 15 08 56.1 -0.9
comp=Z,27nm,1.0s,baz=101,slow=6.2,SNR=42
MKAR S SKSac 15 19 12.7 -0.7
comp=Z,3.3nm,1.1s,baz=110,slow=11,SNR=8.5
MKAR PKPbc PKPbc 15 27 25.1 -0.9
comp=Z,1.6nm,1.0s,baz=286,slow=3.5,SNR=7.0
MKAR LR LR 15 45 39.5
comp=Z,1µm,20.8s,baz=110,slow=36
MKAR Makanchi Array 82.34 319 P P 15 08 55.8 -1.2
MKAR Makanchi Array 82.34 319 iP P 15 08 56.0 -1.0
MKAR pmax pmax
comp=Z,27nm,1.0s
TGL Tana Glacier 82.35 26 P P 15 08 57.0 +0.1
TGL IAmb IAmb 15 09 01.6
comp=Z,48nm,0.9s
TCOL CIGO, UAF Yank 82.37 21 P P 15 08 56.2 -0.4
baz=238
COLA College 82.38 21 P P 15 08 55.7 -1.0
COLA College 82.38 21 eP P 15 08 55.6 -1.0
HDA Harding Lake 82.46 22 P P 15 08 56.4 -0.8
HDA IAMs_20 IAMs_20 15 40 09.2
comp=Z,8µm,22.0s
HDA Harding Lake 82.46 22 P P 15 08 56.8 -0.4
baz=239
MAKZ Makanchi 82.55 319 P P 15 08 56.8 -1.3
MAKZ Makanchi 82.55 319 iP P 15 08 57.1 -1.0
MAKZ pmax pmax
comp=Z,27nm,0.8s
MCARA McCarthy VSAT 82.56 26 P P 15 08 57.8 +0.1
MCARA IAmb IAmb 15 09 02.7
comp=Z,76nm,0.9s
MCARA IAMs_20 IAMs_20 15 40 38.9
comp=Z,5µm,22.0s
POKR Poker Plat Res 82.66 21 P P 15 08 58.2 0.0
baz=238
IL31 82.67 22 P P 15 08 57.2 -1.0
IL31 IAmb IAmb 15 09 01.3
comp=Z,35nm,0.8s
ILAR Eielson Array 82.67 22 P P 15 08 57.5 -0.8
comp=Z,31nm,0.7s,baz=245,slow=4.3,SNR=62
ILAR S SKSac 15 19 14.7 0.0
comp=Z,2.1nm,1.0s,baz=244,slow=9.9,SNR=9.6
ILAR PKPbc PKPbc 15 27 26.9 +0.9
comp=Z,0.3nm,0.5s,baz=20,slow=1.1,SNR=4.7
ILAR LR LR 15 40 59.6
comp=Z,4µm,21.5s,baz=241,slow=32
ILAR Eielson Array 82.67 22 P P 15 08 55.8 -2.5
BALM Baldy 82.69 26 IAMs_20 IAMs_20 15 39 46.5
comp=Z,4µm,22.0s
COLD Coldfoot 82.87 19 P P 15 09 00.0 +0.8
RIDG Independent Ri 82.93 23 P P 15 08 59.7 0.0
RIDG IAmb IAmb 15 09 21.1
comp=Z,138nm,1.5s
RIDG IAMs_20 IAMs_20 15 40 26.5
comp=Z,5µm,22.0s
MENT Mentasta 82.99 24 P P 15 08 59.8 -0.2
MENT IAmb IAmb 15 09 04.6
comp=Z,30nm,0.7s
MENT IAMs_20 IAMs_20 15 40 36.3
comp=Z,6µm,22.0s
BARN Barnard Glacie 83.00 26 P P 15 08 60.0 -0.3
BARN IAmb IAmb 15 09 05.3
comp=Z,58nm,0.8s
POO Poona 83.06 289⇑iP P 15 08 59.0 -2.3
comp=Z,180nm,1.0s
ZAA0 Zalesovo Array 83.10 326 P P 15 08 59.2 -1.5
ZALV Zalesovo Beam 83.10 326 P P 15 08 59.5 -1.2
comp=Z,8.9nm,0.5s,baz=106,slow=5.3,SNR=23
ZALV S SKSac 15 19 17.6 -0.3
comp=Z,3.0nm,1.0s,baz=101,slow=8.0,SNR=5.1
ZALV PKPbc PKPbc 15 27 23.5 -1.0
comp=Z,0.4nm,0.6s,baz=336,slow=6.8,SNR=3.8
ZALV LR LR 15 45 48.8
comp=Z,508nm,22.0s,baz=102,slow=36
ZALV Zalesovo Beam 83.10 326 P P 15 08 58.4 -2.3
CTGM Chitina Glacie 83.10 26 P P 15 09 01.5 +0.8
CTGM IAmb IAmb 15 09 05.8
comp=Z,76nm,0.8s
DOT Dot Lake 83.19 23 P P 15 09 00.8 -0.2
DOT IAmb IAmb 15 09 05.4
comp=Z,67nm,0.8s
DOT IAMs_20 IAMs_20 15 40 34.2
comp=Z,6µm,22.0s
DHRM DHARAMSHALA 83.26 303 eP P 15 09 01.6 -0.8
SHLS Shalkode 83.28 315 eP P 15 09 00.1 -1.9
comp=Z,81nm,3.4s
SHLS eS S 15 19 13.6 -5.1
SHLS Shalkode 83.28 315 eP P 15 09 00.1 -1.9
SHLS eS S 15 19 13.5 -5.1
SHLS pmax pmax
comp=Z,81nm,3.4s
PDGK Podgornoye 83.30 315 iP P 15 09 01.8 -0.4
PDGK pmax pmax
comp=Z,15nm,1.1s
SCRK Sand Creek 83.38 23 P P 15 09 01.5 -0.6
SCRK IAmb IAmb 15 09 06.4
comp=Z,29nm,0.8s
SCRK IAMs_20 IAMs_20 15 40 39.3
comp=Z,5µm,22.0s
UZB Uzynbulak 83.58 315 eP P 15 09 03.2 -0.5
comp=Z,68nm,3.6s
UZB Uzynbulak 83.58 315 eP P 15 09 03.1 -0.5
UZB pmax pmax
comp=Z,68nm,3.6s
BCAR Beaver Creek A 83.83 24 P P 15 09 04.0 -0.4
KPKS Kokpek 83.90 315⇑iP P 15 09 04.5 -0.7
comp=Z,154nm,4.0s
KPKS Kokpek 83.90 315c iP P 15 09 04.5 -0.7
KPKS pmax pmax
comp=Z,154nm,4.0s
QSPA South Pole Qui 83.94 180 P P 15 09 04.5 -0.5
comp=Z,133nm,0.8s,baz=350,slow=1.3,SNR=195
QSPA PKKPbc PKKPbc 15 27 24.2 +0.8
comp=Z,0.8nm,0.6s,baz=299,slow=0.5,SNR=8.3
QSPA South Pole Qui 83.94 180 P P 15 09 04.2 -0.7
SATY Saty 84.00 314⇑eP P 15 09 05.3 -0.4
comp=Z,110nm,3.5s
SATY eS S 15 19 22.4 -3.6
SATY Saty 84.00 314c eP P 15 09 05.3 -0.4
SATY eS S 15 19 22.3 -3.6
SATY pmax pmax
comp=Z,110nm,3.5s
FYU Fort Yukon 84.18 20 P P 15 09 06.3 +0.4
FYU IAmb IAmb 15 09 10.6
comp=Z,28nm,0.7s
FYU IAMs_20 IAMs_20 15 43 19.4
comp=Z,4µm,20.0s
TDK Taldyqorghan 84.47 316 eP P 15 09 06.7 -1.3
comp=Z,331nm,4.2s
TDK eS S 15 19 27.8 -2.7
TDK Taldyqorghan 84.47 316 eP P 15 09 06.7 -1.3
TDK eS S 15 19 27.7 -2.7
KDJ Kajisay 84.67 313 P P 15 09 08.2 -1.0
KDJ IAmb IAmb 15 09 37.8
comp=Z,65nm,1.2s
KDJ Kajisay 84.67 313 P P 15 09 08.2 -1.0
KDJ pmax pmax
comp=Z,65nm,1.2s
SEM Semipalatinsk 84.67 322 eP P 15 09 06.9 -2.2
SEM Semipalatinsk 84.67 322 eP P 15 09 06.9 -2.2
HYT Haines Junctio 84.76 27 P P 15 09 09.9 +0.7
BMAR Burnt Mountain 84.83 20 P P 15 09 08.6 -0.7
EGAK Eagle 84.84 23 P P 15 09 09.3 0.0
EGAK IAMs_20 IAMs_20 15 41 22.9
comp=Z,7µm,22.0s
MDOK Medeo 84.99 314 eP P 15 09 09.3 -1.5
comp=Z,781nm,4.6s
MDOK eS SKSac 15 19 28.8 -2.3
comp=Z,513nm,10.0s
MDOK Medeo 84.99 314 eP P 15 09 09.3 -1.5
MDOK eS SKSac 15 19 28.7 -2.3
MDOK smax smax
comp=E,513nm,10.0s
KSH Kashi 85.00 310 P P 15 09 13.5 +2.6
KSH pP pP 15 09 27.3 +1.2
KSH sP sP 15 09 33.5 +1.5
KSH S S 15 19 37.5 +1.5
KSH sS sS 15 20 05.2 +3.3
KSH SS SS 15 25 11.6 +1.3
KSH pmax pmax
comp=E,42nm,1.3s
KSH pmax pmax
comp=E,1µm,8.1s
KSH LR LR
comp=E,700nm,9.7s
KSH LR LR
comp=E,680nm,9.7s
KSH LR LR
comp=E,1µm,22.6s
MAW Mawson 85.08 203 P P 15 09 11.7 +1.2
baz=85,SNR=22
MAW Mawson 85.08 203 P P 15 09 10.3 -0.2
comp=E,50nm,0.6s,baz=102,slow=5.9,SNR=30
MAW LR LR 15 43 22.8
comp=E,2µm,21.7s,baz=91,slow=33
MAW Mawson 85.08 203 P P 15 09 10.8 +0.3
MAW Mawson 85.08 203 P P 15 09 10.8 +0.3
MAW pmax pmax
comp=Z,17nm,0.9s
AAA Alma-Ata 85.10 314 eP P 15 09 11.7 +0.5
AAA eS S 15 19 46.5 +10
AAA Alma-Ata 85.10 314 eP P 15 09 09.7 -1.5
AAA eS S 15 19 31.7 -5.1
AAA pmax pmax
comp=Z,500nm,9.5s
AAA smax smax
comp=N,500nm,11.3s
DAWY Dawson 85.23 24 P P 15 09 12.4 +1.0
DAWY IAmb IAmb 15 09 16.5
comp=Z,23nm,0.8s
NRN Naryn 85.38 312 P P 15 09 11.9 -1.1
NRN Naryn 85.38 312 P P 15 09 11.9 -1.1
NRN pmax pmax
comp=Z,18nm,1.1s
KUU Kurty 85.66 315 eP P 15 09 11.8 -2.2
comp=Z,228nm,3.6s
KUU eS SKSac 15 19 30.2 -4.7
KUU Kurty 85.66 315 eP P 15 09 11.7 -2.2
KUU eS SKSac 15 19 30.2 -4.7
KUU pmax pmax
comp=Z,228nm,3.6s
KURK Kurchatov 85.76 322 P P 15 09 11.9 -2.3
KURK IAmb IAmb 15 09 45.9
comp=Z,64nm,1.5s
KURK Kurchatov 85.76 322 PKPdf 15 27 16.6 +5.8
KURK Kurchatov 85.76 322c iP P 15 09 13.3 -0.9
KURK pmax pmax
comp=Z,25nm,1.3s
KURBB Kurchatov Arra 85.79 322 P P 15 09 13.6 -0.8
comp=Z,3.3nm,0.5s,baz=97,slow=5.2,SNR=21
KURBB S S 15 19 43.3 +0.2
comp=Z,3.9nm,1.2s,baz=85,slow=19,SNR=13
KURBB PKPbc PKPbc 15 27 16.6 -1.4
comp=Z,1.1nm,0.9s,baz=276,slow=3.1,SNR=5.5
WHY Whitehorse 85.90 28 P P 15 09 13.9 -1.0
WHY IAmb IAmb 15 09 36.3
comp=Z,44nm,1.6s
NIL Nilore 86.04 304 P P 15 09 14.6 -1.5
NIL IAmb IAmb 15 10 17.8
comp=Z,46nm,0.9s
NIL Nilore 86.04 304 P P 15 09 14.6 -1.5
NIL pmax pmax
comp=Z,46nm,1.0s
CHMS Chumysh 86.60 314 iP P 15 09 17.9 -0.7
CHMS pmax pmax
comp=Z,18nm,0.9s
AAK Ala-Archa 86.72 313 P P 15 09 19.3 -0.1
comp=Z,4.7nm,0.9s,baz=143,slow=6.6,SNR=7.2
AAK Ala-Archa 86.72 313 P P 15 09 18.3 -1.1
AAK IAmb IAmb 15 10 04.6
comp=Z,75nm,1.9s
AAK Ala-Archa 86.72 313c iP P 15 09 19.5 +0.1
AAK pmax pmax
comp=Z,44nm,4.0s
SGDS Sogindy 86.78 314 eP P 15 09 18.2 -1.3
comp=Z,117nm,4.8s
SGDS eS S 15 19 49.6 -3.6
BBB Bella Bella 87.07 37 LR LR 15 41 48.7
comp=Z,2µm,20.9s,baz=250,slow=31
EPYK Eagle Plains 87.17 22 P P 15 09 20.5 -0.4
EPYK IAMs_20 IAMs_20 15 44 02.5
comp=Z,3µm,21.0s
EPYK Eagle Plains 87.17 22 P P 15 09 21.3 +0.4
baz=248
DLBC Dease Lake 87.58 31 LR LR 15 40 39.3
comp=Z,8µm,21.5s,baz=303,slow=30
DLBC Dease Lake 87.58 31 P P 15 09 22.2 -0.9
BHUJ Bhuj 87.61 294⇑iP P 15 09 23.0 -0.9
BHUJ IAmb IAmb 15 09 26.6
comp=Z,86nm,1.0s
BHUJ ix x 15 09 37.9
KMRM Mail Ridge 87.64 49 IAMs_20 IAMs_20 15 40 38.6
comp=Z,7µm,22.0s
KCPM Cahto Peak 87.64 50 IAMs_20 IAMs_20 15 40 16.9
comp=Z,5µm,22.0s
KHMM Horse Mountain 87.73 49 IAMs_20 IAMs_20 15 40 36.1
comp=Z,4µm,21.0s
MCCM Marconi Confer 87.93 51 IAMs_20 IAMs_20 15 45 28.6
comp=Z,4µm,19.0s

M02C Callahan 88.47 48 P P 15 09 31.4 +3.7
baz=261
WDC Whiskeytown Da 88.58 49 P P 15 09 27.0 -1.1
WDC IAmb IAmb 15 10 15.0
comp=Z,32nm,1.6s
WDC IAMs_20 IAMs_20 15 41 32.5
comp=Z,4µm,22.0s
WDC Whiskeytown Da 88.58 49 P P 15 09 27.0 -1.1
WDC pmax pmax
comp=Z,32nm,1.6s
YBH Yreka Blue Hor 88.63 48 P P 15 09 30.4 +1.9
comp=Z,6.6nm,0.7s,baz=355,slow=1.4,SNR=20
YBH LR LR 15 41 31.7
comp=Z,8µm,21.9s,baz=277,slow=30
YBH Yreka Blue Hor 88.63 48 P P 15 09 27.2 -1.3
YBH IAmb IAmb 15 10 04.3
comp=Z,56nm,1.9s
NLWA Neilton Lookou 88.77 42 IAMs_20 IAMs_20 15 42 44.0
comp=Z,6µm,20.0s
SAO San Andreas Ge 88.84 53 IAMs_20 IAMs_20 15 43 30.0
comp=Z,5µm,20.0s
BTK Batken 89.00 310 P P 15 09 27.9 -2.3
BTK IAmb IAmb 15 10 01.2
comp=Z,31nm,1.2s
BTK Batken 89.00 310 P P 15 09 27.9 -2.3
BTK pmax pmax
comp=Z,31nm,1.3s
INK Inuvik 89.01 21 PKKPbc PKKPbc 15 27 08.1 -2.8
comp=Z,1.7nm,0.8s,baz=83,slow=8.0,SNR=5.6
INK LR LR 15 46 42.1
comp=Z,5µm,20.7s,baz=240,slow=34
INK Inuvik 89.01 21 P P 15 09 29.1 -0.4
INK IAmb IAmb 15 09 33.4
comp=Z,15nm,0.8s
INK Inuvik 89.01 21 IAMs_20 IAMs_20 15 46 53.0
comp=Z,5µm,20.0s
INK Inuvik 89.01 21 P P 15 09 29.1 -0.4
INK pmax pmax
comp=Z,15nm,0.8s
H04D Lebanon 89.06 45 P P 15 09 32.6 +2.3
baz=261
O03E Paynes Creek 89.09 49 P P 15 09 34.5 +3.8
baz=261,SNR=5.2
ORV Oroville 89.21 50 P P 15 09 29.2 -1.9
ORV Oroville 89.21 50 P P 15 09 29.2 -1.9
ORV pmax pmax
comp=Z,22nm,1.7s
PMPB Monarch Peak 89.28 54 IAMs_20 IAMs_20 15 42 11.6
comp=Z,5µm,21.0s
M04C Macdoel 89.28 48 P P 15 09 34.7 +3.1
baz=261
J04D Umpqua Nationa 89.31 47 P P 15 09 34.2 +2.4
baz=261
E04D Cinebar 89.51 43 P P 15 09 34.7 +2.4
baz=261
AFDM Forest Hills D 89.53 51 P P 15 09 31.3 -1.4
JBG Jabagly 89.56 313 eP P 15 09 31.7 -1.2
JBG eS SKSac 15 20 07.8 +8.9
JBG pmax pmax
comp=Z,26nm,2.0s
KBL Kabul 89.63 305 P P 15 09 30.6 -2.8
KBL Kabul 89.63 305 P P 15 09 30.7 -2.8
KBL pmax pmax
comp=Z,6.0nm,0.7s
KK31 Karatay Array 89.68 313 P P 15 09 31.1 -2.1
KK31 IAmb IAmb 15 10 41.6
comp=Z,39nm,1.9s
KK31 Karatay Array 89.68 313 P P 15 09 32.3 -1.0
KKAR Karatay Array 89.68 313 P P 15 09 31.7 -1.6
KKAR Karatay Array 89.68 313 P P 15 09 31.9 -1.3
KKAR IAmb IAmb 15 10 41.6
comp=Z,39nm,1.9s
KKAR Karatay Array 89.68 313 P P 15 09 31.9 -1.3
KKAR pmax pmax
comp=Z,39nm,1.9s
CMB Columbia Colle 89.86 52 P P 15 09 34.0 -0.2
CMB IAMs_20 IAMs_20 15 44 38.7
comp=Z,3µm,20.0s
CMB Columbia Colle 89.86 52 P P 15 09 34.0 -0.2
CMB pmax pmax
comp=Z,8.0nm,1.0s
IUG Iuzhnay 89.89 312 eS S 15 20 15.6 -7.3
PKM Mcpherson Peak 89.91 55 P P 15 09 37.9 +3.1
baz=263
SNCC San Nicolas Is 89.94 57 IAMs_20 IAMs_20 15 43 25.0
comp=Z,5µm,20.0s
J05D Fort Rock, OR 89.95 47 P P 15 09 37.1 +2.4
baz=262
I05D Terrebonne, OR 90.03 46 P P 15 09 36.9 +2.0
baz=262
BEKR Beckworth 90.12 50 P P 15 09 35.6 0.0
BEKR IAMs_20 IAMs_20 15 42 40.6
comp=Z,4µm,21.0s
F05D White Salmon 90.17 44 P P 15 09 37.7 +2.3
baz=262
MOD Modoc Plateau 90.44 48 P P 15 09 36.9 -0.1
B06A Marblemount 90.54 41 IAMs_20 IAMs_20 15 43 59.6
comp=Z,6µm,20.0s
VCNR Virginia City 90.59 51 P P 15 09 37.2 -0.7
VES Vestal, Richgr 90.61 54 P P 15 09 40.5 +2.7
baz=263
WAKR Walker 90.66 52 P P 15 09 37.8 -0.4
WAKR IAmb IAmb 15 10 25.4
comp=Z,26nm,1.4s
WAKR IAMs_20 IAMs_20 15 46 09.9
comp=Z,3µm,19.0s
PAHR Pah Rah Range 90.85 50 P P 15 09 39.2 +0.3
YERR Yerington 90.87 51 P P 15 09 38.8 -0.4
CIS Catalina Islan 90.88 57 P P 15 09 41.9 +2.8
baz=263,SNR=5.2
OMMB Old Mammoth Mi 90.89 52 IAMs_20 IAMs_20 15 45 04.2
comp=Z,5µm,20.0s
LTY Liberty 90.90 43 P P 15 09 39.1 +0.2
ISA Isabella, Lake 91.09 54 IAMs_20 IAMs_20 15 42 37.4
comp=Z,3µm,21.0s
PASC Pasadena Art C 91.15 56 P P 15 09 39.6 -0.7
PASC Pasadena Art C 91.15 56 IAMs_20 IAMs_20 15 43 34.2
comp=Z,3µm,20.0s
BVAR Borovoye Array 91.22 323 P P 15 09 37.5 -2.6
comp=Z,5.9nm,0.8s,baz=101,slow=4.8,SNR=24
MWC Mount Wilson 91.26 56 IAMs_20 IAMs_20 15 43 28.1
comp=Z,3µm,20.0s
BRVK Borovoye 91.29 323 P P 15 09 38.8 -1.7
BRVK IAmb IAmb 15 10 38.6
comp=Z,18nm,0.9s
BRVK Borovoye 91.29 323 P P 15 09 38.8 -1.7
BRVK pmax pmax
comp=Z,18nm,1.0s
BRVK MLR MLR
comp=Z,2µm,22.0s
I07A Izee 91.30 46 P P 15 09 40.7 -0.2
I07A IAmb IAmb 15 10 12.8
comp=Z,30nm,1.5s
E07A Sunnyside 91.36 43 P P 15 09 41.7 +0.7
E07A IAmb IAmb 15 10 14.0
comp=Z,20nm,1.1s
RYN Ryan 91.39 51 P P 15 09 39.8 -1.7
RYN IAmb IAmb 15 09 46.1
comp=Z,18nm,0.9s
EDW2 Edwards Air Fo 91.39 55 P P 15 09 43.6 +2.2
baz=264,SNR=7.8
TIN Tinemaha, Big 91.44 53 P P 15 09 45.5 +3.8
baz=264,SNR=6.2
CWC Cottonwood Cre 91.49 54 P P 15 09 44.4 +2.3
baz=264
NVAR Mina Array Bea 91.53 52 P P 15 09 43.3 +1.1
comp=Z,22nm,0.8s,baz=250,slow=5.2,SNR=74
NVAR PKKPbc PKKPbc 15 27 03.8 +0.2
comp=Z,0.7nm,0.8s,baz=148,slow=2.5,SNR=4.3
NVAR LR LR 15 47 31.3
comp=Z,2µm,18.4s,baz=294,slow=33
NVAR Mina Array Bea 91.53 52 P P 15 09 41.6 -0.7
HAWA Hanford 91.56 44 P P 15 09 40.7 -1.2
HAWA IAmb IAmb 15 10 14.3
comp=Z,20nm,1.2s
BFSC Mount Baldy Ra 91.59 56 P P 15 09 45.1 +2.6
baz=264,SNR=9.3
NV11 Mina Array Sit 91.65 52 P P 15 09 40.9 -1.8
WVOR Wild Horse Val 91.73 48 P P 15 09 43.0 0.0
WVOR Wild Horse Val 91.73 48 P P 15 09 43.0 0.0
WVOR pmax pmax
comp=Z,8.0nm,0.9s
KVN Kaiserville 91.76 51 P P 15 09 42.3 -1.0
KVN IAmb IAmb 15 09 47.7
comp=Z,14nm,0.9s
KVN Kaiserville 91.76 51 P P 15 09 42.3 -1.0

DAC Darwin (Calif) 91.86 54 IAMs_20 IAMs_20 15 43 45.9
comp=Z,4µm,22.0s
MURC Murrieta 91.91 57 P P 15 09 46.1 +2.3
baz=264,SNR=7.1
109C Camp Elliot, M 91.91 57 P P 15 09 42.8 -1.0
109C IAmb IAmb 15 09 48.6
comp=Z,36nm,1.1s
109C IAMs_20 IAMs_20 15 46 17.4
comp=Z,5µm,19.0s
109C Camp Elliot, M 91.91 57 P P 15 09 46.2 +2.4
baz=264,SNR=7.5
MPMC Manual Prospec 91.92 54 P P 15 09 46.6 +2.5
baz=264,SNR=13
B08A Colville Reser 91.93 42 P P 15 09 42.9 -0.7
B08A IAmb IAmb 15 10 14.9
comp=Z,41nm,1.7s
J08A Circle Bar Ran 91.95 47 P P 15 09 43.4 -0.5
D08A Wollman Farm, 92.06 43 P P 15 09 43.4 -0.8
D08A IAmb IAmb 15 10 15.7
comp=Z,45nm,1.7s
GRAC Grapevine Rang 92.12 53 P P 15 09 47.0 +2.2
baz=264,SNR=7.7
BBRC Big Bear Solar 92.20 56 P P 15 09 48.0 +2.6
baz=264,SNR=5.5
BAR Barrett 92.25 58 IAMs_20 IAMs_20 15 46 36.4
comp=Z,5µm,19.0s
GSC Goldstone, Bar 92.40 55 IAMs_20 IAMs_20 15 43 29.2
comp=Z,3µm,21.0s
GSC Goldstone, Bar 92.40 55 P P 15 09 48.8 +2.6
baz=264,SNR=6.3
FURC Furnace Creek, 92.47 54 P P 15 09 49.1 +2.8
baz=264,SNR=12
MONP2 Monument Peak 92.48 57 P P 15 09 48.7 +2.0
baz=264,SNR=27
PFO Pinyon Flats O 92.52 57 LR LR 15 47 59.6
comp=Z,5µm,18.0s,baz=275,slow=33
PFO Pinyon Flats O 92.52 57 P P 15 09 47.4 +0.6
PFO IAmb IAmb 15 09 52.5
comp=Z,20nm,0.8s
PFO Pinyon Flats O 92.52 57 P P 15 09 47.4 +0.6
PFO pmax pmax
comp=Z,20nm,0.8s
PFO Pinyon Flats O 92.52 57 P P 15 09 48.7 +1.9
baz=264,SNR=20
XPFO Pion Flat 92.53 57 P P 15 09 47.3 +0.5
XPFO IAmb IAmb 15 09 52.5
comp=Z,20nm,0.8s
E09A Wood Farm, Sta 92.53 44 P P 15 09 46.6 +0.2
E09A IAmb IAmb 15 10 17.9
comp=Z,68nm,1.7s
C09A Chrisman Ranch 92.58 42 P P 15 09 45.8 -0.8
C36M Paulatuk 92.59 21 P P 15 09 45.5 -0.6
C36M IAmb IAmb 15 09 49.7
comp=Z,17nm,0.8s
C36M Paulatuk 92.59 21 P P 15 09 46.2 +0.1
baz=260
IKP In-Ko-Pah, Jac 92.72 58 P P 15 09 50.2 +2.5
baz=265,SNR=7.0
HEC Hector,Ludlow 92.74 55 P P 15 09 50.3 +2.6
baz=265
SHOC Shoshone, Teco 92.89 54 P P 15 09 51.7 +3.4
baz=265
BELC Belle Mtn. Jos 92.94 56 P P 15 09 51.4 +2.6
baz=265,SNR=18
BMO Blue Mountains 92.95 45 P P 15 09 47.5 -1.0
BMO IAmb IAmb 15 10 19.9
comp=Z,31nm,1.6s
BMO IAMs_20 IAMs_20 15 46 56.9
comp=Z,3µm,20.0s
BMO Blue Mountains 92.95 45 P P 15 09 47.5 -1.0
BMO pmax pmax
comp=Z,31nm,1.6s
TPNV Topopah Spring 93.01 53 P P 15 09 47.8 -1.2
TPNV IAmb IAmb 15 10 29.3
comp=Z,51nm,1.4s
TPNV IAMs_20 IAMs_20 15 45 32.1
comp=Z,4µm,20.0s
TPNV Topopah Spring 93.01 53 P P 15 09 47.8 -1.2
TPNV pmax pmax
comp=Z,51nm,1.5s
TPNV Topopah Spring 93.01 53 P P 15 09 51.5 +2.5
baz=265,SNR=10.0
SWSC Sam W. Stewart 93.01 57 P P 15 09 51.7 +2.8
baz=265,SNR=8.6
SYO Syowa Base 93.06 199⇑eP P 15 09 46.8 -1.5
SYO Syowa Base 93.06 199⇓iPcP PcP 15 09 48.6 -0.3
SYO Syowa Base 93.06 199⇑ipP pP 15 10 00.8 -2.4
F10A Beach Ranch, E 93.11 44 P P 15 09 49.3 +0.1
F10A IAMs_20 IAMs_20 15 43 32.1
comp=Z,4µm,22.0s
GMRC Granite Mounta 93.29 56 P P 15 09 53.0 +2.7
baz=265,SNR=15
BC3 Big Chuckawall 93.36 57 P P 15 09 53.2 +2.5
baz=265,SNR=25
NEW Newport 93.39 42 P P 15 09 49.4 -1.0
NEW IAmb IAmb 15 10 25.7
comp=Z,26nm,1.5s
NEW Newport 93.39 42 P P 15 09 49.4 -1.0
NEW pmax pmax
comp=Z,26nm,1.5s
NEW Newport 93.39 42 P P 15 09 52.1 +1.7
baz=265
R11A Troy Canyon, C 93.65 52 IAMs_20 IAMs_20 15 45 46.0
comp=Z,3µm,20.0s
R11A Troy Canyon, C 93.65 52 P P 15 09 54.3 +2.3
baz=265
IRM Iron Mountain 93.66 56 P P 15 09 54.9 +3.0
baz=265,SNR=27
GLA Glamis 93.83 57 P P 15 09 52.5 -0.3
GLA Glamis 93.83 57 P P 15 09 52.5 -0.3
GLA pmax pmax
comp=Z,63nm,1.5s
GLA Glamis 93.83 57 P P 15 09 56.3 +3.6
baz=265,SNR=6.4
SHPR Sheep Range 93.84 54 P P 15 09 52.7 -0.2
SHPR IAmb IAmb 15 10 25.8
comp=Z,60nm,1.8s
SHPR IAMs_20 IAMs_20 15 44 58.3
comp=Z,3µm,21.0s
ELK Elko 94.11 50 LR LR 15 45 19.2
comp=Z,3µm,21.5s,baz=284,slow=31
ELK Elko 94.11 50 IAMs_20 IAMs_20 15 44 35.2
comp=Z,3µm,22.0s
NEE2 Needles Airpor 94.14 56 P P 15 09 58.2 +4.1
baz=266
Y12C Blythe 94.14 57 P P 15 09 52.9 -1.2
Y12C IAmb IAmb 15 09 59.9
comp=Z,15nm,0.8s
Y12C IAMs_20 IAMs_20 15 48 47.4
comp=Z,4µm,19.0s
Y12C Blythe 94.14 57 P P 15 09 57.9 +3.8
baz=266,SNR=10.0
PDMCI Parker Dam,Lak 94.50 56 P P 15 09 58.9 +3.2
baz=266,SNR=19
113A Mohawk Valley, 94.70 58 IAMs_20 IAMs_20 15 48 38.2
comp=Z,5µm,19.0s
W13A Hualapai Mount 94.77 55 P P 15 09 56.2 -1.1
W13A IAmb IAmb 15 10 03.4
comp=Z,10nm,0.8s
PSUT Pine Spring 95.02 52 P P 15 09 57.3 -1.0
LCMT Little Creek M 95.41 53 P P 15 09 59.8 -0.3
Y14A Wickenburg 95.42 57 IAMs_20 IAMs_20 15 49 28.1
comp=Z,3µm,18.0s
MSO Missoula 95.44 44 P P 15 10 03.7 +3.8
baz=267
214A Organ Pipe Nat 95.45 59 IAMs_20 IAMs_20 15 46 05.9
comp=Z,5µm,20.0s
214A Organ Pipe Nat 95.45 59 P P 15 10 04.4 +4.2
baz=266
SZCU Shurtz Canyon 95.57 53 P P 15 09 59.8 -1.5
WALA Waterton Lakes 95.57 41 P P 15 10 00.3 -0.2
WALA IAmb IAmb 15 10 33.1
comp=Z,18nm,1.2s
SRIG Santa Rosalia 95.65 63 IAMs_20 IAMs_20 15 46 22.4
comp=Z,5µm,20.0s
YKA Yellowknife Ar 95.73 28 P P 15 10 01.1 +0.4
comp=Z,8.5nm,0.8s,baz=268,slow=4.8,SNR=41
YKA PKKPbc PKKPbc 15 26 50.1 -3.0
comp=Z,2.4nm,0.9s,baz=89,slow=2.5,SNR=15
YKA LR LR 15 50 27.2
comp=Z,1µm,20.3s,baz=0.0,slow=34
KNB Kanab 95.75 53 P P 15 10 00.7 -0.9
KNB Kanab 95.75 53 P P 15 10 00.7 -0.9
KNB pmax pmax
comp=Z,59nm,1.5s
BGU Big Grassy Mou 95.79 50 P P 15 10 01.7 0.0
DUG Dugway, Tooele 95.92 50 IAMs_20 IAMs_20 15 45 33.1

comp=Z,3µm,22.0s
DUG Dugway, Tooele 95.92 50 P P 15 10 05.2 +2.9
DUG pmax pmax
comp=Z,4.0nm,0.9s
MCMT McKenzie Canyo 96.11 46 P P 15 10 03.6 +0.4
U15A North Rim 96.14 54 P P 15 10 02.4 -1.2
U15A IAmb IAmb 15 10 10.9
comp=Z,10nm,0.8s
MTPU Mount Pierson 96.31 52 P P 15 10 02.3 -2.1
DLMT Dillon 96.31 45 P P 15 10 01.6 -2.3
DLMT IAmb IAmb 15 10 34.7
comp=Z,20nm,1.6s
X16A Lo Mia Camp, P 96.74 56 IAMs_20 IAMs_20 15 47 55.6
comp=Z,4µm,20.0s
WUAZ Wupatki 96.84 55 IAMs_20 IAMs_20 15 51 07.8
comp=Z,4µm,18.0s
WUAZ Wupatki 96.84 55 P P 15 10 10.0 +3.4
baz=268
HSIG 96.89 62 IAMs_20 IAMs_20 15 52 33.1
comp=Z,5µm,18.0s
HWUT Hardware Ranch 96.93 49 P P 15 10 05.9 -0.9
HWUT IAMs_20 IAMs_20 15 47 08.7
comp=Z,3µm,20.0s
TUC Tucson 97.19 58 IAMs_20 IAMs_20 15 46 57.8
comp=Z,5µm,20.0s
YHB Horse Butte 97.28 46 P P 15 10 07.2 -1.2
ABKAR Akbulak array 97.49 319 P P 15 10 06.6 -2.3
P17A Butcher Ranch, 97.49 51 P P 15 10 08.1 -1.4
MOOW Moose Ponds 97.59 47 P Pdif 15 10 10.2 +0.3
SRU San Rafael Swe 97.65 51 P P 15 10 08.8 -1.4
SRU San Rafael Swe 97.65 51 P P 15 10 08.8 -1.4
SRU pmax pmax
comp=Z,5.0nm,0.7s
WSAR Wadi Sarin 97.70 293 P P 15 10 10.3 -0.2
comp=Z,7.0nm,0.8s,baz=173,slow=5.2,SNR=3.6
H17A Grant Village 97.72 46 P Pdif 15 10 14.2 +3.7
baz=269
X18A Snowflake 97.97 56 P P 15 10 10.6 -1.1
X18A IAMs_20 IAMs_20 15 53 21.3
comp=Z,3µm,18.0s
W18A Petrified Fore 98.17 55 IAMs_20 IAMs_20 15 49 22.9
comp=Z,4µm,20.0s
W18A Petrified Fore 98.17 55 P Pdif 15 10 16.0 +3.3
baz=268
ARU Arti 98.26 326 P P 15 10 10.4 -1.8
ARU Arti 98.26 326 P P 15 10 10.1 -2.2
ARU 15 14 10.7
ARU PPP PPP 15 16 14.6
ARU S SKSac 15 20 42.4 -3.0
ARU SP SP 15 23 00.3 +0.8
ARU PS PS 15 23 08.8 +1.8
ARU SS SS 15 28 23.5 +3.6
ARU MLR MLR
comp=Z,1µm,22.0s
EGMT Eagleton 98.31 42 P P 15 10 12.2 -0.6
EGMT Eagleton 98.31 42 Pdiff Pdif 15 10 15.0 +2.2
baz=270
RDMU Red Mountain 98.41 50 P P 15 10 12.7 -0.9
PD31 Pinedale Array 98.44 48 P P 15 10 12.8 -0.9
PDAR Pinedale Array 98.44 48 P P 15 10 13.1 -0.7
comp=Z,3.3nm,0.7s,baz=232,slow=1.4,SNR=31
PDAR PP PP 15 14 16.3 +1.8
comp=Z,0.9nm,0.9s,baz=282,slow=4.5,SNR=3.6
PDAR PKKPbc PKKPdf 15 26 47.0 -1.5
comp=Z,0.5nm,0.5s,baz=104,slow=4.4,SNR=5.6
PDAR LR LR 15 48 44.8
comp=Z,4µm,20.9s,baz=268,slow=32
PDAR Pinedale Array 98.44 48 P P 15 10 12.2 -1.5
RLMT Red Lodge 98.66 45 IAMs_20 IAMs_20 15 52 22.6
comp=Z,2µm,19.0s
RLMT Red Lodge 98.66 45 Pdiff Pdif 15 10 17.3 +2.7
baz=270
GEYT Alibeck 98.68 307 P Pdif 15 10 14.9 +0.3
comp=Z,0.5nm,0.5s,baz=347,slow=1.9,SNR=2.5
GEYT PP PP 15 14 14.2 -2.0
comp=Z,2.4nm,0.8s,baz=110,slow=12,SNR=5.5
GEYT LR LR 15 55 39.5
comp=Z,687nm,21.2s,baz=140,slow=36
GEYT Alibeck 98.68 307 PP 15 14 14.1 -2.2
MVCO Mesa Verde 99.21 53 IAMs_20 IAMs_20 15 48 31.3
comp=Z,3µm,21.0s
MVCO Mesa Verde 99.21 53 Pdiff Pdif 15 10 21.2 +3.9
baz=270
NVL N'lazarevskaya 99.41 192 eP Pdif 15 10 10.4 -6.7
NVL e 15 14 30.1
NVL eSS SS 15 28 48.1 +14
NVL pmax pmax
comp=Z,4.0nm,0.5s
NVL MLR MLR
comp=Z,2µm,13.0s
O20A White River Ci 99.42 50 IAMs_20 IAMs_20 15 47 47.4
comp=Z,3µm,22.0s
O20A White River Ci 99.42 50 Pdiff Pdif 15 10 20.4 +2.3
baz=270
121A Cookes Peak, D 99.73 58 IAMs_20 IAMs_20 15 51 26.1
comp=Z,5µm,19.0s
RWWY Rawlins 100.19 49 IAMs_20 IAMs_20 15 49 48.0
comp=Z,4µm,21.0s
SMCO Snowmass 100.41 51 IAMs_20 IAMs_20 15 55 39.9
comp=Z,3µm,18.0s
Y22D IRIS PASSCAL I 100.47 57 IAMs_20 IAMs_20 15 52 22.5
comp=Z,5µm,19.0s
S22A 4UR Ranch, Cre 100.54 53 IAMs_20 IAMs_20 15 50 10.3
comp=Z,4µm,21.0s
S22A 4UR Ranch, Cre 100.54 53 Pdiff Pdif 15 10 25.9 +2.6
baz=271
K22A Casper 100.68 48 IAMs_20 IAMs_20 15 50 16.5
comp=Z,3µm,21.0s
K22A Casper 100.68 48 Pdiff Pdif 15 10 26.7 +3.1
baz=272
LAO LASA Array 100.74 44 IAMs_20 IAMs_20 15 48 25.7
comp=Z,5µm,22.0s
LAO LASA Array 100.74 44 Pdiff Pdif 15 10 26.2 +2.5
baz=273
ANMO Albuquerque 100.86 56 IAMs_20 IAMs_20 15 50 49.6
comp=Z,2µm,20.0s
ANMO Albuquerque 100.86 56 P Pdif 15 10 27.6 +3.0
ANMO Albuquerque 100.86 56 Pdiff Pdif 15 10 27.4 +2.8
baz=270
SNAA Sanae 101.03 187 Pdiff Pdif 15 10 25.7 +1.2
SNAA Sanae 101.03 187 Pdif 15 10 24.5 0.0
SNAA IAMs_20 IAMs_20 15 54 02.4
comp=Z,5µm,21.0s
SNAA Sanae 101.03 187⇓eP Pdif 15 10 25.7 +1.2
N23A Red Feather La 101.16 50 Pdiff Pdif 15 10 27.9 +1.9
baz=272
RES Resolute Bay 101.17 15 P Pdif 15 10 26.6 +1.8
RES pmax pmax
comp=Z,5.0nm,1.8s
ISCO Idaho Springs 101.45 51 P Pdif 15 10 28.7 +1.4
ISCO pmax pmax
comp=Z,4.0nm,1.6s
ISCO Idaho Springs 101.45 51 Pdiff Pdif 15 10 29.7 +2.4
baz=272
SDCO Great Sand Dun 101.59 53 IAMs_20 IAMs_20 15 50 45.2
comp=Z,4µm,20.0s
SDCO Great Sand Dun 101.59 53 Pdiff Pdif 15 10 31.6 +3.6
baz=271
Q24A Divide 101.83 52 IAMs_20 IAMs_20 15 53 26.7
comp=Z,3µm,19.0s
VNA3 Neumayer Olymp 102.16 185 Pdiff Pdif 15 10 30.3 +0.9
VNA2 Neumayer--Watz 102.25 186 Pdiff Pdif 15 10 31.0 +1.1
baz=166,slow=5.1
RSSD Black Hills 102.42 46 P Pdif 15 10 33.2 +1.8
RSSD pmax pmax
comp=Z,5.0nm,0.7s
RSSD Black Hills 102.42 46 Pdiff Pdif 15 10 33.5 +2.1
baz=274
T25A Trinidad 102.47 53 IAMs_20 IAMs_20 15 50 48.6
comp=Z,4µm,21.0s
FFC Flin Flon 102.72 35 IAMs_20 IAMs_20 15 55 58.0
comp=Z,2µm,19.0s
TXAR Lajitas Array 103.26 61 Pdiff Pdif 15 10 36.6 +1.3
comp=Z,0.1nm,0.6s,baz=224,slow=2.5,SNR=2.3
TXAR PKKPbc PKKPbc 15 26 31.4 +0.6
comp=Z,2.0nm,0.8s,baz=114,slow=3.5,SNR=16
TXAR Lajitas Array 103.26 61 PKKPbc 15 26 29.9 -0.9
KSCO Kaye Shedlock' 103.79 51 IAMs_20 IAMs_20 15 50 52.3
comp=Z,3µm,22.0s
MSTX Muleshoe 103.92 57 IAMs_20 IAMs_20 15 54 41.3
comp=Z,3µm,19.0s
PRGR Permogore 104.19 332 eP Pdif 15 10 35.0 -3.5
PRGR pmax pmax
comp=Z,12nm,0.8s
ZAIG Zacatecas 104.24 68 IAMs_20 IAMs_20 15 52 19.6
comp=Z,3µm,19.0s

AMTX Amarillo 104.78 56 IAMs_20 IAMs_20 15 52 46.5
comp=Z,2µm,20.0s
SUSD Miller 106.02 46 IAMs_20 IAMs_20 15 51 51.6
comp=Z,3µm,22.0s
CBKS Cedar Bluff 106.06 51 IAMs_20 IAMs_20 15 53 42.2
comp=Z,3µm,20.0s
ABTX Abilene, Hawle 106.60 58 IAMs_20 IAMs_20 15 50 47.0
comp=Z,4µm,22.0s
U32A Winter Ranch, 106.86 54 IAMs_20 IAMs_20 15 55 05.8
comp=Z,4µm,20.0s
BGNE Belgrade 106.99 49 IAMs_20 IAMs_20 15 55 20.6
comp=Z,2µm,20.0s
833A Chaparral WMA, 107.03 62 IAMs_20 IAMs_20 15 55 16.9
comp=Z,4µm,19.0s
APA Apatity 107.06 340 ⇓ *i*P Pdif **15 10 52.1 +0.9**
APA pmax pmax
comp=Z,5.0nm,0.7s
ULM Lac du Bonnet 107.14 39 IAMs_20 IAMs_20 15 54 23.0
comp=Z,4µm,21.0s
WMOK Wichita Mounta 107.17 56 IAMs_20 IAMs_20 15 57 49.8
comp=Z,3µm,19.0s
KLMR Klimovskoe 107.24 332 *e*Pdif **Pdif** **15 10 46.0 -6.1**
KLMR AMP 15 10 49.9
comp=Z,31nm,2.0s
KLMR LR LR 15 53 05.5
KLMR AMP 16 03 31.9
comp=Z,802nm,14.3s
UNM Universidad Na 107.38 72 IAMs_20 IAMs_20 15 53 32.1
comp=Z,3µm,20.0s
TLIG Tlapa 107.94 74 IAMs_20 IAMs_20 15 50 39.2
comp=Z,3µm,21.0s
OKCFA Oklahoma City 108.20 55 IAMs_20 IAMs_20 15 57 45.4
comp=Z,2µm,19.0s
KSU1 Kansas State U 108.45 51 IAMs_20 IAMs_20 15 53 16.8
comp=Z,4µm,22.0s
WHTX Lake Whitney, 108.49 58 IAMs_20 IAMs_20 15 53 49.1
comp=Z,3µm,20.0s
TUL1 Leonard 109.49 54 IAMs_20 IAMs_20 15 57 05.5
comp=Z,3µm,19.0s
KIV Kislovodsk 109.80 315 *i*P **Pdif** **15 10 57.4 -6.7**
KIV *e* 15 15 37.0
KIV *e*PS PS 15 25 07.1 -1.2
KIV *e*SS SS 15 30 57.4 -1.7
KIV pmax pmax
comp=Z,11nm,1.0s
KIV MLR MLR
comp=Z,2µm,21.0s
X37A Clayton 109.98 55 IAMs_20 IAMs_20 15 55 21.7
comp=Z,4µm,21.0s
SPMN Marine on St. 110.20 44 IAMs_20 IAMs_20 15 54 08.6
comp=Z,4µm,22.0s
VORD Divnogorie 110.39 322 *e*PKIKP **PKiKP** **15 15 08.1 +1.1**
VORD pmax pmax
comp=Z,10.0nm,0.6s
VSR Storozhevoye 110.40 323 *i* PKIKP **PKiKP** **15 15 05.9 -1.1**
VSR pmax pmax
comp=Z,4.0nm,0.7s
NATX Nacogdoches 110.88 58 IAMs_20 IAMs_20 15 54 56.4
comp=Z,3µm,20.0s
HHAR Hobbs 110.93 54 IAMs_20 IAMs_20 15 58 18.8
comp=Z,4µm,20.0s
W39A Magazine 111.20 55 IAMs_20 IAMs_20 16 01 56.9
comp=Z,2µm,19.0s
MIAR Mount Ida 111.46 55 IAMs_20 IAMs_20 15 59 25.7
comp=Z,4µm,19.0s
U40A Yellville 111.78 53 PKiKP **PKiKP** **15 15 09.7 -0.5**
baz=279
SOC Sochi 111.98 315 *i* PKIKP **PKiKP** **15 15 07.1 -3.2**
SOC *e* 15 15 50.8
SOC MLR MLR
comp=Z,1µm,21.0s
I40A Norwalk 112.02 45 IAMs_20 IAMs_20 16 01 35.8
comp=Z,3µm,19.0s
X40A Basin Creek Fa 112.07 55 IAMs_20 IAMs_20 15 59 53.0
comp=Z,3µm,19.0s
MGMO Mountain Grove 112.12 52 IAMs_20 IAMs_20 16 00 58.1
comp=Z,3µm,18.0s
Z41A Richland Creek 112.27 57 IAMs_20 IAMs_20 15 56 24.8
comp=Z,2µm,20.0s
WHAR Wooly Hollow 112.40 54 IAMs_20 IAMs_20 15 58 56.6
comp=Z,3µm,20.0s
UALR University of 112.43 55 IAMs_20 IAMs_20 15 57 30.5
comp=Z,4µm,20.0s
W41B Gary Mavity, V 112.45 55 IAMs_20 IAMs_20 15 58 09.9
comp=Z,4µm,20.0s
JFWS Jewell Farm 112.51 46 IAMs_20 IAMs_20 15 56 33.8
comp=Z,4µm,21.0s
CCM Cathedral Cave 112.77 51 IAMs_20 IAMs_20 15 55 47.2
comp=Z,3µm,22.0s
FINES FINESS Array B 112.85 336 Pdiff **Pdif** **15 11 16.8 -0.3**
comp=Z,3.4nm,0.9s,baz=72,slow=6.2,SNR=5.9
FINES PP **PP** **15 16 01.6 +1.8**
comp=Z,2.5nm,0.7s,baz=43,slow=8.6,SNR=4.2
FINES PKKPbc **PKKPbc** **15 26 00.7 -0.8**
comp=Z,1.4nm,0.9s,baz=263,slow=5.5,SNR=3.5
342A Flagon Creek P 112.91 59 IAMs_20 IAMs_20 16 00 36.0
comp=Z,4µm,20.0s
CCAR Cane Creek 113.03 56 IAMs_20 IAMs_20 16 00 10.3
comp=Z,3µm,19.0s
LCAR Lake Charles 113.19 53 IAMs_20 IAMs_20 16 00 34.3
comp=Z,3µm,19.0s
I42A Draeger Farm, 113.22 45 IAMs_20 IAMs_20 16 02 03.4
comp=Z,3µm,19.0s
SLM Saint Louis 113.43 51 IAMs_20 IAMs_20 15 57 03.6
comp=Z,3µm,21.0s
143A Socs Landing, 113.51 57 IAMs_20 IAMs_20 16 00 44.1
comp=Z,3µm,19.0s
PBMO Poplar Bluff 113.64 53 IAMs_20 IAMs_20 15 57 20.2
comp=Z,4µm,21.0s
X43A Marvell 113.66 55 IAMs_20 IAMs_20 15 58 37.1
comp=Z,3µm,20.0s
K43A Burlington 113.93 46 IAMs_20 IAMs_20 15 59 28.3
comp=Z,4µm,20.0s
CCIG Comitan 114.10 75 IAMs_20 IAMs_20 15 55 59.3
comp=Z,3µm,20.0s
GNAR Gosnell 114.11 53 IAMs_20 IAMs_20 15 56 17.8
comp=Z,3µm,22.0s
344A Westbrook Farm 114.25 58 IAMs_20 IAMs_20 15 57 21.5
comp=Z,3µm,20.0s
VBMS Vicksburg 114.32 57 IAMs_20 IAMs_20 15 55 28.6
comp=Z,2µm,22.0s
S44A Carbondale 114.38 51 IAMs_20 IAMs_20 15 56 25.8
comp=Z,3µm,22.0s
O44A Mansfield 114.45 49 IAMs_20 IAMs_20 15 56 55.3
comp=Z,4µm,22.0s
M44A Midewin, Midew 114.46 47 IAMs_20 IAMs_20 15 56 52.2
comp=Z,4µm,22.0s
OXF Oxford 114.86 55 IAMs_20 IAMs_20 15 59 41.8
comp=Z,4µm,20.0s
I45A Fountain 115.04 44 IAMs_20 IAMs_20 15 57 17.7
comp=Z,4µm,22.0s
346A Big Creek Wild 115.33 58 IAMs_20 IAMs_20 16 06 44.1
comp=Z,3µm,18.0s
SFIN Lafayette 115.41 48 IAMs_20 IAMs_20 15 57 45.8
comp=Z,4µm,22.0s
P46A Rosedale 115.51 49 IAMs_20 IAMs_20 16 03 10.5
comp=Z,4µm,19.0s
USIN University of 115.55 51 IAMs_20 IAMs_20 16 00 09.7
comp=Z,3µm,20.0s
L46A Eue Claire 115.57 46 IAMs_20 IAMs_20 15 58 37.7
comp=Z,4µm,21.0s
E46A Sault Ste Mari 115.61 41 **PKiKP** **15 15 15.6 -1.5**
WVT Waverly 115.82 53 IAMs_20 IAMs_20 15 58 23.4
comp=Z,4µm,21.0s
PLAL Pickwick Lake 115.85 54 IAMs_20 IAMs_20 16 01 46.0
comp=Z,4µm,19.0s
T47A Sharon Grove 116.20 52 IAMs_20 IAMs_20 16 03 44.1
comp=Z,3µm,19.0s
J47A Sunmer 116.26 44 IAMs_20 IAMs_20 15 57 57.8
comp=Z,2µm,22.0s
AKASG Malin Array Be 116.46 325 PKP **PKiKP** **15 15 19.8 +1.2**
comp=Z,1.8nm,0.7s,baz=64,slow=2.2,SNR=6.8
AKASG PKKPbc **PKKPbc** **15 25 45.6 -3.1**
comp=Z,0.5nm,0.5s,baz=267,slow=4.0,SNR=5.3
V48A Smith Brothers 116.70 53 IAMs_20 IAMs_20 15 58 28.3
comp=Z,4µm,22.0s
X48A Hartselle 116.79 54 IAMs_20 IAMs_20 16 02 13.8
comp=Z,3µm,20.0s
M48A Edgerton 116.85 46 IAMs_20 IAMs_20 15 59 47.7
comp=Z,4µm,21.0s
P48A Milroy 116.89 49 IAMs_20 IAMs_20 16 00 14.9
comp=Z,3µm,20.0s
J48A Bridge Port 116.96 44 IAMs_20 IAMs_20 16 01 09.3
comp=Z,2µm,21.0s
AAM Ann Arbor 117.36 45 IAMs_20 IAMs_20 16 02 40.1
comp=Z,3µm,20.0s
BRTR Keskin Array B 117.36 312 PKP **PKiKP** **15 15 21.5 +0.5**
comp=Z,0.7nm,0.9s,baz=101,slow=6.4,SNR=4.6
BRTR PP **PP** **15 16 32.1 -0.5**
comp=Z,3.5nm,1.0s,baz=110,slow=6.7,SNR=6.6
BRTR PKKPbc **PKKPbc** **15 25 46.4 +0.9**
comp=Z,0.7nm,0.8s,baz=184,slow=1.9,SNR=4.3
N49A Columbus Grove 117.40 47 **PKPdf** **15 15 19.2 -1.5**
N49A Columbus Grove 117.40 47 P **PKiKP** **15 15 21.1 +0.3**
baz=287
T49A Edmonton 117.40 51 IAMs_20 IAMs_20 16 01 05.7
comp=Z,4µm,21.0s
BRAL Brewton 117.40 58 IAMs_20 IAMs_20 16 02 44.4
comp=Z,2µm,20.0s
Y49A Blount Mountai 117.42 55 IAMs_20 IAMs_20 16 01 10.7
comp=Z,2µm,20.0s
O49A Covington 117.50 48 IAMs_20 IAMs_20 15 58 47.0
comp=Z,4µm,22.0s
PLCA Paso Flores 117.80 143 PKP **PKPdf** **15 15 20.6 -1.1**
comp=Z,3.4nm,1.0s,baz=291,slow=3.5,SNR=6.3
PLCA PKKPbc **PKKPbc** **15 25 43.7 -0.2**
comp=Z,1.3nm,1.0s,baz=63,slow=2.3,SNR=6.3
250A Grady 117.91 57 IAMs_20 IAMs_20 16 03 36.8
comp=Z,2µm,20.0s
FPAL Fort Paine 117.93 54 IAMs_20 IAMs_20 16 04 03.0
comp=Z,2µm,19.0s
K50A Casco 117.93 44 IAMs_20 IAMs_20 16 02 54.2
comp=Z,4µm,21.0s
Z50A Ashland 117.95 56 IAMs_20 IAMs_20 16 01 40.6
comp=Z,3µm,20.0s
W50A Signal Mountai 118.02 53 IAMs_20 IAMs_20 16 03 14.3
comp=Z,4µm,20.0s
W50A Signal Mountai 118.02 53 P **PKiKP** **15 15 24.6 +2.4**
baz=283
M50A Fremont 118.07 46 IAMs_20 IAMs_20 16 05 01.1
comp=Z,3µm,19.0s
U50A Jamestown 118.11 52 P **PKiKP** **15 15 24.9 +2.6**
baz=284
KIS Kishinev 118.22 321 *e*PKP **PKiKP** **15 15 23.0 +0.8**
KIS Kishinev 118.22 321 *e*PP PP 15 16 38.0 0.0
KIS *e*SKS **SKSdf** **15 22 27.0 -2.7**
KIS *e*SKKS SKKSac 15 23 48.0 +14
KIS Kishinev 118.22 321 *e*PS PS 15 25 50.0 -35
KIS Kishinev 118.22 321 *e*PKIKP **PKiKP** **15 15 23.0 +0.8**
KIS *e* 15 16 38.0
KIS *e* 15 22 27.0
KIS MLR MLR
comp=Z,1µm,24.0s
X51A Calhoun 118.53 54 IAMs_20 IAMs_20 16 01 46.9
comp=Z,4µm,21.0s
Z51A Franklin 118.55 55 IAMs_20 IAMs_20 16 01 56.4
comp=Z,3µm,20.0s
Q51A Peebles 118.56 49 IAMs_20 IAMs_20 15 59 21.2
comp=Z,3µm,22.0s
CPCT Cooper Cave 118.59 53 IAMs_20 IAMs_20 15 59 24.4
comp=Z,3µm,22.0s
451A Vernon 118.60 58 IAMs_20 IAMs_20 16 03 54.9
comp=Z,3µm,20.0s
NB2 NORSAR Subarra 118.62 341 PKPdf **PKiKP** **15 15 24.7 +2.1**
comp=Z,0.6nm,0.6s,baz=42,slow=1.8
NOA NORSAR Array B 118.62 341 PKP **PKiKP** **15 15 24.0 +1.4**
comp=Z,0.8nm,0.7s,baz=46,slow=1.9,SNR=4.3
P51A Williamsport 118.64 48 IAMs_20 IAMs_20 15 59 21.3
comp=Z,4µm,22.0s
V51A Loudon 118.64 52 IAMs_20 IAMs_20 16 00 01.7
comp=Z,3µm,21.0s
N51A Ashland 118.70 46 IAMs_20 IAMs_20 15 59 42.8
comp=Z,4µm,22.0s
TGUH Tegucigalpa,Un 118.82 77 IAMs_20 IAMs_20 15 56 16.7
comp=Z,3µm,21.0s
152A Waverly Hall 119.06 56 IAMs_20 IAMs_20 16 07 34.1
comp=Z,3µm,18.0s
TZTN Tazewell 119.08 51 IAMs_20 IAMs_20 16 05 40.3
comp=Z,4µm,19.0s
LSQQ Lebel-sur-Quev 119.10 36 P **PKPdf** **15 15 23.0 -0.8**
baz=297
352A Blakely 119.13 57 IAMs_20 IAMs_20 16 03 10.0
comp=Z,2µm,20.0s
TKL Tuckaleechee C 119.13 52 PKP **PKiKP** **15 15 25.2 +0.8**
comp=Z,3.2nm,0.7s,baz=176,slow=4.4,SNR=5.5
TKL Tuckaleechee C 119.13 52 IAMs_20 IAMs_20 16 00 16.7
comp=Z,3µm,22.0s
W52A Murphy 119.15 53 IAMs_20 IAMs_20 16 04 18.2
comp=Z,4µm,19.0s
V52A Sevierville 119.22 52 IAMs_20 IAMs_20 16 00 31.1
comp=Z,4µm,22.0s
M52A Chesterland 119.23 45 IAMs_20 IAMs_20 16 05 17.6
comp=Z,4µm,21.0s
VLDQ Val d'Or 119.24 37 IAMs_20 IAMs_20 16 11 41.5
comp=Z,3µm,19.0s
Y52A Lilburn 119.33 54 IAMs_20 IAMs_20 16 05 05.1
comp=Z,3µm,20.0s
O52A Adamsville 119.34 47 IAMs_20 IAMs_20 15 59 40.9
comp=Z,4µm,22.0s
D53A Lac Vacive, Po 119.54 38 IAMs_20 IAMs_20 16 12 11.9
comp=Z,3µm,18.0s
ALGO Algonquin Park 119.80 40 P **PKPdf** **15 15 23.7 -1.5**
baz=295
553A Crawfordville 119.80 59 IAMs_20 IAMs_20 16 00 29.6
comp=Z,3µm,22.0s
R53A Hurricane 119.81 49 IAMs_20 IAMs_20 16 03 54.2
comp=Z,3µm,20.0s
V53A Saluda 119.89 52 IAMs_20 IAMs_20 16 04 36.6
comp=Z,4µm,19.0s
GOGA Godfrey 119.92 55 IAMs_20 IAMs_20 16 04 37.7
comp=Z,3µm,20.0s
BG3 Lake Jocassee 119.97 53 IAMs_20 IAMs_20 16 05 19.8
comp=Z,2µm,20.0s
ERPA Erie 119.99 44 IAMs_20 IAMs_20 16 04 34.7
comp=Z,2µm,20.0s
BOSA Boshof 120.21 232 PKP **PKPdf** **15 15 26.3 -0.4**
comp=Z,2.3nm,0.6s,baz=96,slow=2.4,SNR=6.0
BOSA PKKPbc **PKKPab** **15 25 35.9 -0.7**
comp=Z,2.0nm,0.6s,baz=313,slow=3.1,SNR=6.6
TIGA Tifton 120.26 57 IAMs_20 IAMs_20 16 04 00.5
comp=Z,3µm,20.0s
N54A Moraine State 120.39 46 IAMs_20 IAMs_20 16 06 23.5
comp=Z,3µm,20.0s
154A Montrose 120.40 56 IAMs_20 IAMs_20 16 01 10.5
comp=Z,3µm,21.0s
U54A Nelsons Funny 120.43 51 IAMs_20 IAMs_20 16 02 58.9
comp=Z,3µm,20.0s
M54A Oil Creek Stat 120.43 45 IAMs_20 IAMs_20 16 05 38.0
comp=Z,3µm,20.0s
MLR Muntele Rosu 120.66 320 PKKPbc PKKPbc 15 25 33.4 -0.2
comp=Z,3.5nm,0.9s,baz=342,slow=17,SNR=4.5
HODGE Hodges 120.69 54 IAMs_20 IAMs_20 16 03 40.2
comp=Z,3µm,20.0s
ACON Acoyapa 120.88 80 IAMs_20 IAMs_20 15 54 37.5
comp=Z,2µm,20.0s
PAULI Pauline 120.90 53 IAMs_20 IAMs_20 16 03 13.4
comp=Z,4µm,20.0s
MCWV Mont Chateau 120.94 47 IAMs_20 IAMs_20 16 02 28.1
comp=Z,2µm,21.0s
255A Hazlehurst 121.08 56 IAMs_20 IAMs_20 16 06 14.5
comp=Z,3µm,20.0s
M55A Ridgway 121.08 45 IAMs_20 IAMs_20 16 02 13.5
comp=Z,3µm,22.0s
JTS Las Juntas de 121.09 82 IAMs_20 IAMs_20 15 59 53.1
comp=Z,2µm,19.0s
SCHQ Schefferville 121.16 27 PKP **PKiKP** **15 15 28.0 +0.3**
comp=Z,2.6nm,0.9s,baz=222,slow=11,SNR=5.1
SCHQ PKKPbc **PKKPab** **15 25 30.1 -0.8**
comp=Z,4.2nm,0.9s,baz=252,slow=1.1,SNR=5.2
R55A Marlinton 121.19 49 IAMs_20 IAMs_20 16 08 19.8
comp=Z,3µm,19.0s
KOLS Kolonicke sedl 121.27 325 *e*PKIKP **PKiKP** **15 15 29.4 +1.3**
KOLS Kolonicke sedl 121.27 325 *e*PKP **PKiKP** **15 15 29.4 +1.3**
D56A ZEC Mazanza, M 121.35 37 P **PKiKP** **15 15 31.4 +3.0**
baz=298
M56A Emporium 121.48 44 IAMs_20 IAMs_20 16 00 48.1
comp=Z,3µm,20.0s
JSC Jenkinsville 121.48 53 IAMs_20 IAMs_20 16 06 05.0
comp=Z,2µm,19.0s
LBTB Lobatse 121.50 236 PKP **PKiKP** **15 15 30.2 +0.8**
comp=Z,2.2nm,0.6s,baz=120,slow=4.7,SNR=3.9
656A Willston 121.58 59 IAMs_20 IAMs_20 16 06 34.7
comp=Z,2µm,20.0s
U56A King 121.59 51 IAMs_20 IAMs_20 16 01 04.5
comp=Z,4µm,22.0s
Z56A Williston 121.64 54 IAMs_20 IAMs_20 16 04 01.3
comp=Z,3µm,20.0s
O56A Blue Knob Stat 121.65 46 IAMs_20 IAMs_20 16 02 26.8
comp=Z,3µm,22.0s
456A Hilliard 121.72 58 IAMs_20 IAMs_20 16 04 19.8
comp=Z,3µm,21.0s
ESPN Las Esperanzas 121.74 79 IAMs_20 IAMs_20 15 57 33.1
comp=Z,2µm,20.0s
HDC Heredia 121.91 82 IAMs_20 IAMs_20 15 58 55.0
comp=Z,2µm,20.0s
SSPA Standing Stone 122.00 45 IAMs_20 IAMs_20 16 08 17.0
comp=Z,3µm,19.0s
E57A Chemin Saint G 122.02 38 P **PKPdf** **15 15 29.0 -0.6**
baz=298
S57A Dark Hollow, R 122.23 49 IAMs_20 IAMs_20 16 05 58.4
comp=Z,4µm,20.0s
Y57A Sumter 122.25 53 IAMs_20 IAMs_20 16 07 48.2
comp=Z,3µm,19.0s
257A Skidaway Islan 122.26 56 IAMs_20 IAMs_20 16 04 59.8
comp=Z,2µm,20.0s
M57A Sunshine Farm, 122.27 44 IAMs_20 IAMs_20 16 03 39.9
comp=Z,3µm,21.0s
LONY Lake Ozonia 122.58 40 IAMs_20 IAMs_20 16 03 43.9
comp=Z,3µm,21.0s
NHSC New Hope 122.66 54 IAMs_20 IAMs_20 16 05 00.4
comp=Z,4µm,20.0s
LSZ Lusaka 122.73 248 IAMs_20 IAMs_20 16 11 47.8
comp=Z,2µm,18.0s
V58A Windy Hill, Pi 122.73 51 IAMs_20 IAMs_20 16 04 19.9
comp=Z,3µm,20.0s
N58A Sunbury 122.75 45 IAMs_20 IAMs_20 16 08 23.7
comp=Z,3µm,20.0s
DWPF Disney Wildern 122.78 60 IAMs_20 IAMs_20 16 03 26.7
comp=Z,2µm,21.0s
Y58A Scranton 122.86 53 IAMs_20 IAMs_20 16 08 15.3
comp=Z,3µm,19.0s
S58A Poland Farm, P 122.95 49 IAMs_20 IAMs_20 16 06 38.6
comp=Z,4µm,20.0s
S58A Poland Farm, P 122.95 49 P **PKPdf** **15 15 31.2 -0.3**
baz=290
PAGS Pennsylvania G 122.98 45 IAMs_20 IAMs_20 16 03 58.9
comp=Z,3µm,21.0s
OKC Ostrava-Krasne 123.05 328 AMS AMS 16 08 40.0
comp=Z,2µm,23.5s
FRNY Flat Rock 123.11 39 IAMs_20 IAMs_20 16 09 52.8
comp=Z,3µm,19.0s
PSZ Piszkesteto 123.15 325 IAMs_20 IAMs_20 16 07 32.7
comp=Z,2µm,20.0s
MVL Millersville 123.33 45 IAMs_20 IAMs_20 16 05 09.2
comp=Z,3µm,20.0s
N59A State Game Lan 123.38 44 IAMs_20 IAMs_20 16 04 43.3
comp=Z,3µm,20.0s
Y59A Loris 123.46 53 IAMs_20 IAMs_20 16 04 51.4
comp=Z,4µm,20.0s
F60A Warwick 123.57 37 P **PKPdf** **15 15 32.3 -0.2**
baz=300
KRLC Kraliky 123.62 329 AMS AMS 16 11 10.0
comp=Z,2µm,20.7s
OSTC Ostas 123.62 329 AMS AMS 16 08 20.0
comp=Z,2µm,26.0s
CHVC Chvalec 123.69 329 AMS AMS 16 09 00.0
comp=Z,2µm,22.4s
D60A Saint Jean D'O 123.69 36 P **PKPdf** **15 15 32.1 -0.5**
baz=302
DPC Dobruska-Polom 123.69 329 AMS AMS 16 08 30.0
comp=Z,2µm,20.1s
UPC Upice 123.76 329 AMS AMS 16 08 50.0
comp=Z,2µm,23.3s
VT1 Waterbury 123.88 39 IAMs_20 IAMs_20 16 11 26.2
comp=Z,2µm,19.0s
P60A Greenville 123.91 45 IAMs_20 IAMs_20 16 04 05.5
comp=Z,3µm,20.0s
D61A St Aubert, Com 123.97 35 P **PKiKP** **15 15 33.2 -0.2**
baz=303
Q60A Greensboro 124.08 46 IAMs_20 IAMs_20 16 09 21.7
comp=Z,3µm,20.0s
T60A Surry 124.10 49 IAMs_20 IAMs_20 16 08 51.9
comp=Z,3µm,20.0s
E61A Lac Etchemin 124.20 36 P **PKiKP** **15 15 33.8 -0.2**
baz=302
BRNJ Basking Ridge 124.31 44 IAMs_20 IAMs_20 16 05 18.9
comp=Z,3µm,21.0s
LBNH Lisbon 124.44 39 IAMs_20 IAMs_20 16 04 35.0
comp=Z,3µm,21.0s
PVCC Panska Ves 124.47 330 AMS AMS 16 10 00.0
comp=Z,2µm,22.3s
HNH Hanover 124.47 40 IAMs_20 IAMs_20 16 05 10.8
comp=Z,4µm,21.0s
P61A Hammonton 124.56 45 IAMs_20 IAMs_20 16 05 34.7
comp=Z,3µm,20.0s
D62A Allapoint, All 124.68 35 IAMs_20 IAMs_20 16 14 16.0
comp=Z,2µm,20.0s
CFA Coronel Fontan 124.69 135 PKP **PKPdf** **15 15 34.8 -0.4**
comp=Z,9.1nm,0.9s,baz=248,slow=2.5,SNR=9.3
CLL Collm 124.72 332 *e*PKPdf **PKiKP** **15 15 38.0 +3.2**
CLL *e*PP **PP** **15 17 18.0 -3.8**
CLL *e*PPP PPP 15 20 00.0
CLL *e*sSKKSac 15 24 36.0
CLL *e* 15 26 24.0
CLL *e*PS **PS** **15 27 19.0 -3.5**
CLL *e*PPS PPS 15 28 48.0
CLL *e*PPPrev 15 32 54.0
CLL *e*SS SS 15 34 12.0 +0.3
CLL *e*SSS SSS 15 39 00.0
CLL *e* 15 45 24.0
CLL Collm 124.72 332 *e*PKIKP **PKiKP** **15 15 38.0 +3.2**
CLL *e* 15 17 18.0
GOPC GO Pecny, Ondr 124.74 329 AMS AMS 16 10 10.0
comp=Z,2µm,20.1s
H62A Milan 124.75 38 IAMs_20 IAMs_20 16 14 57.2
comp=Z,3µm,18.0s
TREC Trest 124.76 328 AMS AMS 16 09 40.0
comp=Z,2µm,21.6s
G62A West of Eustis 124.81 37 IAMs_20 IAMs_20 16 12 53.6
comp=Z,3µm,19.0s
PRU Pruhonice 124.82 330 AMS AMS 16 10 00.0
comp=Z,2µm,22.3s
PRA Prague 124.82 330 PKIKP PKiKP 15 15 45.8 +11
FFD Franklin Falls 124.99 40 IAMs_20 IAMs_20 16 05 36.5
comp=Z,4µm,22.0s
I62A Tamworth 124.99 39 IAMs_20 IAMs_20 16 15 38.5
comp=Z,3µm,18.0s
IDI Anoyia 125.34 309 PKP **PKiKP** **15 15 38.6 +1.9**
comp=Z,9.8nm,1.0s,baz=60,slow=20,SNR=2.6
I63A Otisfield 125.38 39 IAMs_20 IAMs_20 16 10 52.7
comp=Z,3µm,19.0s
F63A Nahmakanta, Br 125.41 36 IAMs_20 IAMs_20 16 13 12.9
comp=Z,2µm,19.0s
E63A Oxbow 125.41 35 IAMs_20 IAMs_20 16 05 20.2
comp=Z,3µm,22.0s
PQI Presque Isle 125.50 35 IAMs_20 IAMs_20 16 05 33.6
comp=Z,3µm,22.0s
PKME Peaks-Kenny Pk 125.53 37 IAMs_20 IAMs_20 16 18 57.6
comp=Z,2µm,18.0s
ATAH Atahualpa 125.66 103 PKP **PKiKP** **15 15 39.0 +0.7**
comp=Z,6.3nm,0.6s,baz=110,slow=7.9,SNR=3.6
WVL Waterville 125.68 38 IAMs_20 IAMs_20 16 13 28.6
comp=Z,3µm,19.0s
NKC Novy Kostel 125.70 331 AMS AMS 16 06 20.0
comp=Z,3µm,29.8s
F64A Sherman 125.76 36 IAMs_20 IAMs_20 16 17 11.6
comp=Z,2µm,18.0s
KHC Kasperske Hory 125.85 329 *e*PKPDF **PKiKP** **15 15 37.3 +0.1**
KHC *e*pPKP **pPKPdf** **15 15 50.2 -2.7**
KHC *e*x x 15 16 05.1
KHC AMS AMS 16 10 00.0
comp=Z,3µm,24.0s
KHC Kasperske Hory 125.85 329 *e*PKIKP **PKiKP** **15 15 37.3 +0.1**
KHC *e* 15 15 50.2
KHC MLR MLR
comp=Z,3µm,24.0s
NNA Nana 125.92 109 PKP **PKiKP** **15 15 38.2 -0.2**
comp=Z,3.1nm,0.4s,baz=245,slow=17,SNR=2.5
GERES GERESS Array B 125.97 329 PKP **PKPdf** **15 15 36.8 -0.3**
comp=Z,2.0nm,0.7s,baz=66,slow=1.8,SNR=15
GERES GERESS Array B 125.97 329 **PKPdf** **15 15 36.3 -0.8**
G65A Princeton 126.59 36 IAMs_20 IAMs_20 16 14 41.5
comp=Z,3µm,19.0s
OTAV Otavalo 126.87 94 IAMs_20 IAMs_20 16 02 23.8
comp=Z,2µm,19.0s
EMMW East Machias 126.92 37 IAMs_20 IAMs_20 16 15 57.5
comp=Z,3µm,19.0s
GGN Saint George 127.06 36 IAMs_20 IAMs_20 16 15 31.2
comp=Z,3µm,19.0s
GO02 Mina Guanaco 127.12 128 **PKPdf** **15 15 39.4 -1.0**
PB01 IPOC Station P 129.16 123 **PKPdf** **15 15 42.9 -1.1**
HAL Halifax 129.21 35 IAMs_20 IAMs_20 16 08 29.1
comp=Z,3µm,22.0s
PB11 IPOC Station P 129.59 122 **PKPdf** **15 15 43.9 -1.1**
GBN Guysborough 129.87 33 IAMs_20 IAMs_20 16 17 04.4
comp=Z,3µm,20.0s
MNMC Minye Minye 129.91 121 **PKPdf** **15 15 44.3 -1.4**
GTBY Guantanamo Bay 129.94 69 IAMs_20 IAMs_20 16 12 38.6
comp=Z,2µm,20.0s
GO01 Chusmiza 130.02 122 **PKPdf** **15 15 43.7 -2.4**
AQU L'Aquila 130.06 323 IAMs_20 IAMs_20 16 16 44.7
comp=Z,2µm,20.0s
TSUM Tsumeb 130.69 238 PKP **PKPdf** **15 15 47.3 +0.2**

	comp=Z,2.6nm,0.7s,baz=120,slow=9.4,SNR=4.3						
TSUM				SKPbc	**SKPab**	**15 19 09.8**	**+3.2**
	comp=Z,2.8nm,0.8s,baz=128,slow=7.0,SNR=3.5						
TSUM	**Tsumeb**	**130.69**	**238**	IAMs_20	IAMs_20	16 07 57.7	
	comp=Z,2μm,21.0s						
ROSC	**El Rosal**	**131.43**	**89**	PKP	**PKiKP**	**15 15 50.1**	**+0.3**
	comp=Z,7.8nm,0.5s,baz=256,slow=17,SNR=3.7						
LPAZ	**La Paz**	**132.37**	**118**	PKhKP	PKPpre	15 15 43.5	
	comp=Z,0.7nm,0.4s,baz=254,slow=4.5,SNR=3.8						
LPAZ				PKP	**PKPdf**	**15 15 51.0**	**+0.1**
	comp=Z,4.8nm,0.6s,baz=341,slow=0.8,SNR=18						
LPAZ				SKPbc	**SKPab**	**15 19 14.3**	**-0.1**
	comp=Z,3.2nm,0.9s,baz=6.3,slow=2.5,SNR=3.8						
LPAZ	**La Paz**	**132.37**	**118**		**PKPdf**	**15 15 48.0**	**-2.9**
LPAZ	**La Paz**	**132.37**	**118**	PKIKP	**PKPdf**	**15 15 51.0**	**+0.1**
GRTK	**Grand Turk**	**133.31**	**66**	IAMs_20	IAMs_20	16 06 09.4	
	comp=Z,3μm,22.0s						
SDDR	**Presa de Saban**	**133.66**	**70**	IAMs_20	IAMs_20	16 08 23.0	
	comp=Z,3μm,20.0s						
SC01	**Santiago de lo**	**134.10**	**69**	IAMs_20	IAMs_20	16 10 07.6	
	comp=Z,3μm,21.0s						
BBSR	**BB Station**	**135.08**	**49**	IAMs_20	IAMs_20	16 11 45.6	
	comp=Z,3μm,20.0s						
SDV	**Santo Domingo**	**135.21**	**83**	PKP	**PKPdf**	**15 15 56.3**	**+0.6**
	comp=Z,10nm,0.8s,baz=263,slow=5.7,SNR=3.5						
SDV	**Santo Domingo**	**135.21**	**83**		**PKPdf**	**15 15 53.1**	**-2.6**
CPUP	**Villa Florida**	**135.44**	**138**	PKhKP	PKPpre	15 15 46.9	
	comp=Z,0.9nm,0.8s,baz=183,slow=9.4,SNR=3.1						
CPUP				PKP	**PKPdf**	**15 15 56.1**	**+0.5**
	comp=Z,8.5nm,1.1s,baz=267,slow=4.3,SNR=8.2						
CPUP	**Villa Florida**	**135.44**	**138**		**PKPdf**	**15 15 53.8**	**-1.8**
SIV	**San Ignacio**	**138.57**	**122**	PKhKP	PKPpre	15 15 53.4	
	comp=Z,2.0nm,0.9s,baz=295,slow=1.5,SNR=7.5						
SIV				PKP	**PKPdf**	**15 16 01.6**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=247,slow=4.8,SNR=8.5						
SIV				SKPbc	**SKiKP**	**15 19 33.6**	**-2.0**
	comp=Z,4.9nm,0.8s,baz=239,slow=6.8,SNR=6.9						
SJG	**San Juan**	**138.61**	**69**	PKhKP	PKPpre	15 15 53.3	
	comp=Z,7.9nm,0.8s,baz=204,slow=2.9,SNR=2.3						
SJG	**San Juan**	**138.61**	**69**	IAMs_20	IAMs_20	16 10 39.2	
	comp=Z,2μm,22.0s						
SAML	**Samuel**	**139.62**	**111**		PKPpre	15 15 52.5	
SAML	**Samuel**	**139.62**	**111**	PKHKP	PKPpre	15 15 52.5	
SAML				MLR	MLR		
	comp=Z,800nm,19.0s						
ESDC	**Sonseca Array**	**141.28**	**333**	PKP	**PKPdf**	**15 16 04.3**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=21,slow=3.1,SNR=4.1						
ESDC				PP	**PP**	**15 19 08.0**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=27,slow=6.6,SNR=5.1						
ESDC	**Sonseca Array**	**141.28**	**333**		PP	15 19 07.4	-0.3
SABA	**Saba**	**141.42**	**69**	IAMs_20	IAMs_20	16 11 02.6	
	comp=Z,2μm,22.0s						
SMRT	**St. Maarten**	**141.48**	**69**	IAMs_20	IAMs_20	16 16 49.1	
	comp=Z,2μm,20.0s						
SEUS	**St. Eustatius**	**141.69**	**69**	IAMs_20	IAMs_20	16 11 22.8	
	comp=Z,3μm,22.0s						
SKI	**Saint Kitts**	**141.95**	**70**	IAMs_20	IAMs_20	16 12 02.7	
	comp=Z,2μm,20.0s						
ANWB	**Willy Bob**	**142.76**	**69**	IAMs_20	IAMs_20	16 12 46.1	
	comp=Z,2μm,22.0s						
DLPL	**La Plaine**	**143.76**	**72**	IAMs_20	IAMs_20	16 06 52.0	
	comp=Z,2μm,22.0s						
PNCL	**Nicolau / Gran**	**144.53**	**337**	*e*PKP	**PKiKP**	**15 16 14.9**	**-0.5**
PCVE	**Castro Verde**	**144.74**	**336**	*e*PKP	**PKiKP**	**15 16 11.5**	**-0.6**
PALE	**Palemas**	**144.80**	**328**	P	**PKPab**	**15 16 11.2**	**-0.1**
	SNR=13						
TOSP	**Speyside**	**145.02**	**79**		**PKPbc**	**15 16 11.3**	**-1.3**
AKLM	**AKL**	**145.30**	**328**	P	**PKPdf**	**15 16 14.0**	**+0.7**
	SNR=24						
MDT	**Midelt**	**146.99**	**326**	PKPbc	**PKPab**	**15 16 19.2**	**-0.5**
	comp=Z,15nm,0.7s,baz=94,slow=3.2,SNR=20						
MDT	**Midelt**	**146.99**	**326**	P	**PKPab**	**15 16 19.5**	**-0.2**
	SNR=10						
BDFB	**Brasilia**	**149.02**	**134**	PKPbc	**PKPbc**	**15 16 23.0**	**-1.1**
	comp=Z,16nm,0.9s,baz=19,slow=7.4,SNR=9.7						
BDFB	**Brasilia**	**149.02**	**134**		**PKPdf**	**15 16 18.6**	**-1.4**
BDFB				IAMs_20	IAMs_20	16 27 12.1	
	comp=Z,2μm,21.0s						
BDFB	**Brasilia**	**149.02**	**134**	PKHKP	PKPpre	15 16 18.7	
TZRR	**Tazzarine**	**149.05**	**325**	P	**PKiKP**	**15 16 26.0**	**+0.9**
	SNR=13						
ZGR	**Zagora**	**149.58**	**324**	P	**PKiKP**	**15 16 27.0**	**+0.8**
	SNR=14						
TORD	**Torodi Ar. Bea**	**152.26**	**287**	PKP	**PKPdf**	**15 16 24.9**	**0.0**
	comp=Z,2.0nm,0.8s,baz=62,slow=1.7,SNR=7.9						
TORD				PKPbc	**PKiKP**	**15 16 32.1**	**+0.2**
	comp=Z,20nm,0.6s,baz=40,slow=3.1,SNR=35						
TORD	**Torodi Ar. Bea**	**152.26**	**287**		**PKPdf**	**15 16 23.8**	**-1.1**
MDP	**Montagnes des**	**153.00**	**91**	PKPbc	**PKiKP**	**15 16 33.5**	**-0.1**
	comp=Z,23nm,0.9s,baz=250,slow=6.6,SNR=4.5						
KIC	**Kosan Boka**	**159.33**	**272**	*e*PKP1	**PKPab**	**15 17 12.4**	**+0.3**
	comp=Z,144nm,1.0s						
DBIC	**Dimbokro**	**159.45**	**273**	PKP	**PKPdf**	**15 16 34.9**	**+0.4**
	comp=Z,4.0nm,1.0s,baz=229,slow=3.5,SNR=3.9						
DBIC				PKPab	**PKPab**	**15 17 13.2**	**+0.7**
	comp=Z,31nm,0.9s,baz=72,slow=5.0,SNR=20						
TIC	**Toumodi**	**159.61**	**273**	*e*PKP1	**PKPab**	**15 17 13.5**	**+0.2**
	comp=Z,55nm,0.8s						
LIC	**Lamto**	**159.62**	**272**	*e*PKP1	**PKPab**	**15 17 13.5**	**+0.2**
	comp=Z,174nm,1.3s						

DJA 09 14:57:17.7±0.2**, 1°S**±3°×**12°3E**±°**, h10**km**, M4.6**/12**, mB5.1**/3**, mb4.9**/5**, MLv4.5**/12**, Mw(mB)4.5**/3**, 1D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.70**	**237**	P	Pg	14 57 30.9	-0.4
LUWI				S	Sg	14 57 40.6	+0.2
KMSI	**Cibinong**	**1.37**	**27**	P	Pn	14 57 40.6	-2.4
APSI	**Ampana**	**1.73**	**262**	P	Pn	14 57 48.7	+0.9
MRSI	**Marisa**	**1.81**	**309**	P	Pn	14 57 46.6	-2.4
SANI	**Sanana**	**2.97**	**118**	P	Pn	14 58 02.6	-2.3
MPSI	**Mapaga**	**3.60**	**286**	P	Pn	14 58 14.9	+1.3
LBMI	**Labuha**	**4.14**	**90**	P	Pn	14 58 20.5	-0.6
NLAI	**Namlea**	**4.53**	**124**	P	Pn	14 58 26.3	-0.1
SPSI	**Sidrap Palu**	**4.86**	**227**	P	Pn	14 58 31.4	+0.4
BNSI	**Bone**	**4.94**	**221**	P	Pn	14 58 32.0	0.0
AAI	**Ambon**	**5.69**	**122**	P	Pn	14 58 43.2	+0.8
	0.7nm1μm102nm,1.0s						
KCP	**Kidapawan**	**7.81**	**13**⇓	*e*P	Pn	14 59 18.4	+6.8
KPJI	**Karang Pucung**	**15.84**	**245**	P	Pn	15 01 01.8	+0.8

WEL 09 15:07:34.0, 40°.6S±0°.7×**17°6E**±°**, h23**km±1km**, ML3.9**/14**, MLv3.5**/65**, Error ellipse: s-maj=0.0km s-min=0.0km az=84.5, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRWZ	**Pori Road**	**0.12**	**56**	P	Pb	15 07 39.2	+0.6
PRWZ				S	Sb	15 07 43.2	+1.5
TIWZ	**Tintock**	**0.16**	**166**	P	Pb	15 07 39.5	+0.5
TIWZ				S	Sb	15 07 43.4	+0.9
POWZ	**Post Office Ro**	**0.24**	**348**	P	Pb	15 07 40.9	+0.9
POWZ				S	Sb	15 07 45.3	+1.2
BFZ	**Birch Farm**	**0.32**	**101**	P	Pb	15 07 41.3	+0.1
BFZ				S	Sb	15 07 46.9	+0.8
HOWZ	**Holdsworth Sta**	**0.36**	**222**	P	Pb	15 07 42.6	+0.7
HOWZ				S	Sb	15 07 48.8	+1.4
CPWZ	**Castlepoint**	**0.40**	**136**	P	Pb	15 07 43.4	+0.9
CPWZ				S	Sn	15 07 51.7	+0.5
DVHZ	**Dannevirke**	**0.41**	**38**	P	Pb	15 07 42.9	+0.2
DVHZ				S	Sb	15 07 49.5	+0.8
TMWZ	**Te Maipa**	**0.48**	**175**	P	Pb	15 07 44.5	+0.6
TMWZ				S	Sn	15 07 52.6	-0.7
ANWZ	**Angora Road**	**0.52**	**72**	P	Pb	15 07 44.8	+0.3
ANWZ				S	Sn	15 07 53.0	-1.0
OGWZ	**Otaki Gorge**	**0.54**	**249**	P	Pn	15 07 45.8	-0.5
TSZ	**Takapari Road**	**0.57**	**10**	P	Pb	15 07 45.8	+0.3
OHWZ	**Ohakea**	**0.58**	**316**	P	Pb	15 07 47.2	+0.5
MTW	**Mount Morrison**	**0.59**	**205**	P	Pb	15 07 46.1	+0.4
MTW				S	Sn	15 07 55.1	-0.8
PRHZ	**Porangahau**	**0.71**	**60**	P	Pb	15 07 47.7	0.0
PRHZ				S	Sn	15 07 58.8	-0.1
WPHZ	**Waipukurau**	**0.73**	**40**	P	Pn	15 07 48.5	-0.4
KIW	**Kapiti Island**	**0.74**	**251**	P	Pn	15 07 49.3	+0.2
CAW	**Cannon Point**	**0.76**	**230**	P	Pn	15 07 48.9	-0.4
PNHZ	**Pukenui**	**0.76**	**22**	P	Pn	15 07 49.2	-0.2
TRWZ	**Traveller**	**0.78**	**188**	P	Pb	15 07 48.6	-0.4
PAWZ	**Paruwai Farm**	**0.82**	**202**	P	Pb	15 07 49.5	-0.1
MSWZ	**Moikau Station**	**0.91**	**209**	P	Pb	15 07 50.3	-0.8
PXZ	**Pawanui**	**0.98**	**53**	P	Pb	15 07 51.5	-0.9
PLWZ	**Palliser**	**1.04**	**205**	P	Pn	15 07 51.9	-1.3
WEL	**Wellington**	**1.04**	**230**	P	Pn	15 07 52.9	-0.4
KRHZ	**Kereru**	**1.06**	**23**	P	Pn	15 07 53.4	-0.1
BHW	**Baring Head**	**1.07**	**223**	P	Pn	15 07 52.8	-0.8
WAZ	**Wanganui**	**1.08**	**323**	P	Pb	15 07 55.8	+1.7
BHHZ	**Black Hill Sta**	**1.15**	**9**	P	Pb	15 07 55.1	-0.1
KAHZ	**Kahuranaki**	**1.15**	**44**	P	Pn	15 07 54.1	-0.7
MOVZ	**Moawhango**	**1.22**	**357**	P	Pb	15 07 56.4	0.0
MTVZ	**Mangateitei**	**1.27**	**347**	P	Pb	15 07 58.0	+0.7
KWHZ	**Kaweka Forest**	**1.28**	**21**	P	Pn	15 07 56.5	-0.1
TCW	**Tory Channel**	**1.32**	**243**	P	Pn	15 07 56.7	-0.3
TRVZ	**Turoa**	**1.34**	**350**	P	Pb	15 07 59.1	+0.5
MCHZ	**McNeill Hill**	**1.35**	**30**	P	Pn	15 07 57.2	-0.3
WHVZ	**Whangaehu Hut**	**1.35**	**352**	P	Pb	15 07 59.5	+0.7
TUVZ	**Tukino**	**1.36**	**354**	P	Pb	15 07 59.4	+0.5
FWVZ	**Far West T-bar**	**1.39**	**351**	P	Pb	15 07 59.7	+0.3
PKVZ	**Pokaka**	**1.39**	**344**	P	Pb	15 07 59.9	+0.6
NGZ	**Ngauruhoe**	**1.46**	**353**	P	Pb	15 08 00.6	+0.1
DUWZ	**D'Urville Isla**	**1.46**	**262**	P	Pn	15 07 59.6	+0.6
WTVZ	**West Tongariro**	**1.52**	**353**	P	Pb	15 08 01.7	+0.1
BKZ	**Black Stump Fm**	**1.54**	**19**	P	Pn	15 07 59.7	-0.4
TWVZ	**Taurewa**	**1.58**	**349**	P	Pb	15 08 02.1	-0.5
LREZ	**Lake Rotokare**	**1.60**	**316**	P	Pb	15 08 03.8	+0.9
TUWZ	**Tuamarina**	**1.64**	**240**	P	Pn	15 08 00.6	-0.9
RITZ	**Rihia Road**	**1.65**	**1**	P	Pn	15 08 05.2	+1.5
VRZ	**Vera Road**	**1.71**	**331**	P	Pb	15 08 04.0	-0.8
RATZ	**Rangitukua**	**1.76**	**358**	P	Pb	15 08 09.6	+4.0
WATZ	**Wairara**	**1.92**	**358**	P	Pb	15 08 05.8	+0.5
KHEZ	**Kahui Hut**	**1.93**	**313**	P	Pb	15 08 09.6	+1.1
NMEZ	**Namu Road**	**1.93**	**308**	P	Pb	15 08 09.1	+0.6
MTHZ	**Maungataniwha**	**1.93**	**24**	P	Pb	15 08 12.6	+4.0
MHEZ	**Mangahewa**	**1.94**	**323**	P	Pb	15 08 13.0	+4.4
NNZ	**Nelson**	**1.95**	**252**	P	Pn	15 08 05.8	0.0
RAHZ	**Arahi**	**1.96**	**30**	P	Pn	15 08 05.4	-0.4
PKE	**Pukeiti**	**2.02**	**315**	P	Pb	15 08 09.8	-0.2
NBEZ	**Newall Road No**	**2.03**	**311**	P	Pb	15 08 10.6	+0.3
ALRZ	**Allen Road**	**2.10**	**11**	P	Pb	15 08 15.0	+3.6
PRRZ	**Plateau Road**	**2.17**	**12**	P	Pb	15 08 14.3	+1.7
HIZ	**Hauiti**	**2.24**	**340**	P	Pb	15 08 11.0	+1.3
MUGZ	**Murupara**	**2.26**	**19**	P	Pb	15 08 16.3	+2.1
TLZ	**Tolley Road**	**2.30**	**354**	P	Pb	15 08 14.8	-0.1
KHZ	**Kahutara**	**2.48**	**223**	P	Pn	15 08 10.9	-2.1
THZ	**Tophouse**	**2.49**	**242**	P	Pn	15 08 12.0	-1.1
QRZ	**Quartz Range**	**2.52**	**264**	P	Pn	15 08 13.7	+0.2
URZ	**Urewera**	**2.56**	**23**	P	Pn	15 08 12.8	-1.3
MWZ	**Matawai**	**2.64**	**30**	P	Pn	15 08 13.2	-2.0
TOZ	**Tahuroa Road**	**2.90**	**355**	P	Pb	15 08 23.0	-2.0
GVZ	**Greta Valley S**	**3.14**	**221**	P	Pn	15 08 19.6	-2.5
HAZ	**Te Kaha**	**3.24**	**28**	P	Pn	15 08 21.9	-1.5
DSZ	**Denniston Nort**	**3.24**	**248**	P	Pn	15 08 23.5	0.0
LTZ	**Lake Taylor**	**3.43**	**230**	P	Pn	15 08 24.2	-1.8
OKCZ	**Okains Bay**	**3.72**	**213**	P	Pn	15 08 27.0	-3.1
INZ	**Inchbonnie**	**3.90**	**236**	P	Pn	15 08 30.9	-1.6
AKCZ	**Akaroa Harbour**	**3.90**	**213**	P	Pn	15 08 30.4	-2.2
ODZ	**Otahua Downs**	**5.84**	**219**	P	Pn	15 09 02.8	+3.7

*MAN **09** 15:29:09.7, 4°.20N×127°.78E, h5km, mb4.7, ML3.6, MS3.5*
*IDC **09** 15:29:09.8±1.4, 3°.79N×126°.08E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/41, mbtmp3.5/4, Error ellipse: s-maj=161.4km s-min=22.2km az=68.0*
ISC 09 15:29:10.0±1.1**, 4°.3N**±0°.1×**127°.8E**±0°.2**, h10**km**, n10, σ2.s48**/16**, mb3.5**/4**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**2.78**	**311**	*e*P	**Pn**	**15 29 55.2**	**+0.6**
DDMP				*e*S	**Sn**	**15 30 30.5**	**+2.3**
MATI	**Mati**	**3.07**	**330**	*e*P	**Pn**	**15 30 00.5**	**+1.8**
MATI				*e*S	**Sn**	**15 30 39.2**	**+3.6**
GSPH	**General Santos**	**3.38**	**302**	*e*P	**Pn**	**15 30 04.3**	**+1.3**
KCP	**Kidapawan**	**3.84**	**315**⇓	*e*P	**Pb**	**15 30 14.4**	**-3.6**
KCP				*i* S	**Sb**	**15 31 03.0**	**-1.6**
SKMP	**Bagumbayan, Su**	**3.95**	**304**	*e*P	**Pn**	**15 30 12.4**	**+1.6**
SKMP				*e*S	**Sn**	**15 31 00.5**	**+3.3**
BUKP	**Musuan**	**4.51**	**323**	*e*P	**Pn**	**15 30 21.2**	**+2.8**
BUKP				*e*S	**Sn**	**15 31 14.1**	**+3.0**
WRA	**Warramunga Arr**	**24.91**	**165**	P	**P**	**15 34 35.4**	**+2.0**
	0.4nm,0.6s,baz=334,slow=10,SNR=6.8						
ASAR	**Alice Springs**	**28.40**	**168**	P	**P**	**15 35 06.2**	**+1.3**
	0.2nm,0.7s,baz=356,slow=8.4,SNR=1.7						
ASAR				PcP	**PcP**	**15 38 16.6**	**-0.8**
	0.2nm,0.5s,baz=349,slow=2.1,SNR=5.1						
SONM	**Songino Array**	**47.14**	**340**	P	**P**	**15 37 41.1**	**-1.6**
	0.4nm,0.7s,baz=155,slow=7.9,SNR=1.9						
MKAR	**Makanchi Array**	**57.74**	**325**	P	**P**	**15 38 59.8**	**-1.4**
	0.9nm,0.5s,baz=113,slow=7.8,SNR=16						

*THE **09** 15:32:26.1, 38°.16N×20°.36E, h7km, ML2.8/8, Error ellipse: s-maj=1.0km s-min=0.5km az=76.0*
*ATH **09** 15:32:26.2, 38°.17N×20°.40E, h9km±1km, ML2.9/5, Error ellipse: s-maj=1.7km s-min=0.8km az=243.0*
ISC 09 15:32:26.1±1.0**, 38°.17N**±0°.03×**20°.38E**±0°.04**, h9**km±4km**, n32, σ0.s46**/56**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.02**	**358**	P	**Pg**	**15 32 27.7**	**0.0**
CHV1				S	**Sg**	**15 32 28.6**	**-0.1**
KEF3	**Kipouria, Keph**	**0.04**	**323**	P	**Pg**	**15 32 28.1**	**+0.3**
KEF3				S	**Sg**	**15 32 29.2**	**+0.1**
LXR1	**Lixouri, Cepha**	**0.06**	**53**	P	**Pg**	**15 32 28.0**	**0.0**
LXR1				S	**Sg**	**15 32 29.4**	**+0.1**
ARGA	**Argostoli. Kep**	**0.08**	**83**	P	**Pg**	**15 32 28.2**	**0.0**
ARGA				S	**Sg**	**15 32 29.6**	**-0.2**
KEF2	**Argostoli. Kep**	**0.08**	**91**	P	**Pg**	**15 32 28.3**	**0.0**
KEF2				S	**Sg**	**15 32 29.8**	**-0.1**
ARG2	**Argostoli**	**0.08**	**82**	P	**Pg**	**15 32 28.3**	**0.0**
ARG2				S	**Sg**	**15 32 29.8**	**-0.1**
KEF4	**Livadi, Kephal**	**0.10**	**20**	P	**Pg**	**15 32 28.7**	**+0.2**
KEF4				S	**Sg**	**15 32 29.9**	**-0.3**
KEF1	**Kardakata, Kep**	**0.13**	**32**	P	**Pg**	**15 32 29.2**	**+0.2**
KEF1				S	**Sg**	**15 32 31.0**	**-0.1**
VLS	**Valsamata**	**0.16**	**86**	P	**Pg**	**15 32 29.4**	**-0.2**
VLS				S	**Sg**	**15 32 32.0**	**0.0**
	18μm,0.2s						
VLS	**Valsamata**	**0.16**	**86**	P	**Pg**	**15 32 29.4**	**-0.2**
VLS				S	**Sg**	**15 32 31.9**	**-0.1**
VLS				AML	AML	15 32 32.2	
	comp=N,46818μm,0.2s						
VLS				AML	AML	15 32 32.7	
	comp=E,17231μm,0.2s						
VSK1	**VASILIKIADES**	**0.28**	**31**	P	**Pg**	**15 32 31.7**	**0.0**
VSK1				S	**Sg**	**15 32 36.4**	**+0.9**
	comp=E,6μm,0.4s						
KONA	**Konidatara, Ke**	**0.30**	**30**	P	**Pg**	**15 32 32.1**	**0.0**
VLMS	**Volimes, Zakyn**	**0.36**	**143**	P	**Pg**	**15 32 33.2**	**-0.1**
VLMS				S	**Sg**	**15 32 38.8**	**+0.7**
VLMS				AML	AML	15 32 41.6	
	comp=N,10200μm,0.3s						
VLMS				AML	AML	15 32 44.3	
	comp=E,12166μm,0.3s						
EVGI	**Lefkada island**	**0.50**	**25**	P	**Pg**	**15 32 35.8**	**-0.1**
EVGI				S	**Sb**	**15 32 43.8**	**-0.8**
EVGI	**Lefkada island**	**0.50**	**25**	P	**Pg**	**15 32 35.8**	**-0.1**
EVGI				S	**Sg**	**15 32 43.0**	**+0.6**
MGNA	**Meganis**	**0.58**	**33**	P	**Pg**	**15 32 36.9**	**-0.5**
MGNA				S	**Sg**	**15 32 44.8**	**-0.3**
MGNA				AML	AML	15 32 46.4	
	comp=N,4927μm,0.3s						
MGNA				AML	AML	15 32 46.6	
	comp=E,7334μm,0.4s						
KRI1	**kERI**	**0.61**	**146**	P	**Pg**	**15 32 37.5**	**-0.4**
KRI1				S	**Sb**	**15 32 47.2**	**-0.5**
	comp=E,2μm,0.6s						
LKD2	**Lefkada island**	**0.66**	**19**	P	**Pg**	**15 32 38.3**	**-0.5**
LKD2				S	**Sb**	**15 32 48.5**	**-0.6**
	comp=E,540nm,0.4s						
LKD2	**Lefkada island**	**0.66**	**19**	P	**Pg**	**15 32 38.4**	**-0.4**
LKD2				S	**Sg**	**15 32 47.8**	**+0.3**
LKD2				AML	AML	15 32 56.0	
	comp=N,1240μm,0.5s						
LKD2				AML	AML	15 32 57.7	
	comp=E,917μm,0.5s						
TSLK	**Tsoukalades, L**	**0.69**	**18**	P	**Pg**	**15 32 38.9**	**-0.6**
TSLK				S	**Sb**	**15 32 49.8**	**-0.3**
	comp=E,780nm,0.8s						
TSLK	**Tsoukalades, L**	**0.69**	**18**	P	**Pg**	**15 32 39.2**	**-0.3**
TSLK				S	**Sg**	**15 32 48.7**	**+0.2**
RLS	**Riolos of Patr**	**0.86**	**97**	P	**Pg**	**15 32 42.5**	**-0.2**
RLS				S	**Sb**	**15 32 56.1**	**+1.1**
	comp=E,382nm,0.5s						
RLS	**Riolos of Patr**	**0.86**	**97**	P	**Pg**	**15 32 42.2**	**-0.5**
RLS				S	**Sg**	**15 32 54.0**	**+0.1**
RLS				AML	AML	15 33 01.4	
	comp=E,728μm,0.5s						
RLS				AML	AML	15 33 04.3	
	comp=N,810μm,0.5s						
LAKA	**Lakka**	**1.26**	**86**	P	**Pn**	**15 32 49.5**	**-0.5**
LAKA				S	**Sn**	**15 33 08.2**	**+1.1**
	comp=N,175nm,0.4s						
LAKA	**Lakka**	**1.26**	**86**	P	**Pn**	**15 32 49.3**	**-0.7**
EVR	**Evrytania**	**1.35**	**56**	P	**Pn**	**15 32 51.5**	**+0.3**
EVR	**Evrytania**	**1.35**	**56**	P	**Pb**	**15 32 51.7**	**+0.1**
IGT	**Igoumenitsa**	**1.36**	**358**	P	**Pn**	**15 32 51.6**	**+0.2**
KLV	**Kalavryta, Ach**	**1.40**	**95**	P	**Pn**	**15 32 51.9**	**-0.1**
KLV				S	**Sg**	**15 33 12.3**	**+1.1**
	comp=N,172nm,0.6s						
KLV	**Kalavryta, Ach**	**1.40**	**95**	P	**Pn**	**15 32 51.9**	**-0.1**
KALE	**Kalithea**	**1.40**	**80**	P	**Pn**	**15 32 51.0**	**-1.0**
ITM	**Ithomi**	**1.57**	**128**	P	**Pb**	**15 32 55.3**	**-0.2**

*IDC **09** 15:37:06.1±1.3, 52°.70N×132°.68W, h0km, mb3.7/5, mb1 3.8/10, mb1mx3.6/40, mbtmp3.6/10, ML3.8/5, Error ellipse: s-maj=19.3km s-min=11.9km az=51.0*
*PGC **09** 15:37:07.4±0.4, 52°.74N×132°.26W, h25km, mb4.3, ML3.9/20, 64km southwest of Sandspit, Bc Haida Gwaii Region*
*NEIC **09** 15:37:07.6±1.5, 52°.73N±0°.03×132°.31W±0°.07, h13km±4km, Error ellipse: s-maj=6.9km s-min=3.7km az=111.0*
ISC 09 15:37:06.8±1.2**, 52°.67N**±0°.04×**132°.35W**±0°.04**, h11**km±7km**, n108, σ1.s66**/125**, mb4.0**/8**, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HG1B	**Mitchell Dam**	**0.29**	**27**	P	**Pb**	**15 37 12.9**	**-1.1**
HG1B				S	**Sb**	**15 37 16.6**	**-2.4**
BNB	**Barry Inlet**	**0.38**	**105**	P	**Pg**	**15 37 15.3**	**+0.9**
BNB				S	**Sb**	**15 37 20.8**	**-0.6**
MOBC	**Moresby Island**	**0.53**	**26**	P	**Pg**	**15 37 16.7**	**-0.4**
MOBC				S	**Sg**	**15 37 23.3**	**-0.8**
MOBC	**Moresby Island**	**0.53**	**26**		**Pg**	**15 37 16.7**	**-0.4**
DIB	**Dawson Inlet,**	**0.54**	**352**	P	**Pg**	**15 37 17.0**	**-0.3**
DIB				S	**Sg**	**15 37 23.5**	**-0.8**
DIB	**Dawson Inlet,**	**0.54**	**352**		**Pg**	**15 37 16.9**	**-0.4**
DIB				Sg	**Sg**	**15 37 23.4**	**-0.9**
H02S1	**DAWSON INLET T**	**0.54**	**352**	Pg	**Pg**	**15 37 17.2**	**-0.1**
H02S1				Lg	Lg	15 37 23.6	
HG3B	**Hotspring**	**0.56**	**100**	P	**Pg**	**15 37 17.9**	**+0.2**
HG3B				S	**Sg**	**15 37 25.4**	**+0.2**
H02N1	**VAN INLET T-PH**	**0.59**	**349**	Pg	**Pg**	**15 37 18.1**	**-0.3**
H02N1				Lg	Lg	15 37 25.4	
VIB	**Van Inlet**	**0.59**	**349**	P	**Pg**	**15 37 18.1**	**-0.3**
VIB				S	**Sg**	**15 37 25.3**	**-0.9**
NDB	**Naden**	**1.33**	**345**	P	**Pn**	**15 37 29.5**	**-1.8**
MASB	**Masset**	**1.36**	**8**	P	**Pn**	**15 37 30.5**	**-1.2**
RUBB	**Prince Rupert**	**2.08**	**36**	Pn	**Pn**	**15 37 39.8**	**-1.7**
RUBB				Sn	**Sn**	**15 38 04.9**	**-2.4**
RUBB				Sg	**Sb**	**15 38 09.7**	**-0.5**
BBB	**Bella Bella**	**2.64**	**99**	Pn	**Pb**	**15 37 52.7**	**-1.3**
	32nm,0.3s,baz=292,slow=16,SNR=78						
BBB				Sn	**Sb**	**15 38 26.8**	**+0.4**
	67nm,0.3s,baz=15,slow=20,SNR=5.3						
BBB	**Bella Bella**	**2.64**	**99**	Pn	**Pn**	**15 37 47.6**	**-1.6**
BBB				Pg	**Pb**	**15 37 52.6**	**-1.4**
BBB				Sn	**Sn**	**15 38 17.1**	**-4.0**
BBB				Sg	**Sb**	**15 38 26.8**	**+0.4**
BBB	**Bella Bella**	**2.64**	**99**		**Pn**	**15 37 47.8**	**-1.4**
CRAG	**Craig**	**2.84**	**351**		**Pn**	**15 37 50.2**	**-1.8**
HOLB	**Holberg**	**3.32**	**126**	Pn	**Pn**	**15 37 56.8**	**-1.9**
HOLB				Sn	**Sn**	**15 38 34.1**	**-4.0**
BCBC	**Bella Coola**	**3.43**	**93**	Sn	**Sn**	**15 38 36.2**	**-4.5**
PHC	**Port Hardy**	**3.64**	**121**	Pn	**Pn**	**15 38 00.9**	**-2.1**
PHC				Sn	**Sn**	**15 38 41.5**	**-4.3**
WRAK	**Wrangell Islan**	**3.75**	**0**		**Pn**	**15 38 04.0**	**-0.5**
PACB	**Port Alice, BC**	**3.77**	**125**	Pn	**Pn**	**15 38 03.8**	**-1.0**
PACB				Sn	**Sn**	**15 38 43.3**	**-5.7**
BPBC	**Brooks Peninsu**	**3.82**	**129**	Pn	**Pn**	**15 38 05.1**	**-0.3**
MAYB	**Maynard**	**3.95**	**123**	Pn	**Pn**	**15 38 05.4**	**-2.0**
TLCB	**Telegraph Cove**	**4.04**	**120**	Pn	**Pn**	**15 38 07.3**	**-1.2**
EDB	**Eliza Dome**	**4.32**	**128**	Pn	**Pn**	**15 38 12.0**	**-0.3**
WOSB	**Woss**	**4.41**	**123**	Pn	**Pn**	**15 38 12.6**	**-1.0**
NCRB	**Newcastle Ridg**	**4.54**	**118**	Pn	**Pn**	**15 38 14.7**	**-0.8**
NCRB				Sn	**Sn**	**15 39 05.5**	**-2.8**
SIT	**Sitka**	**4.72**	**340**	Pn	**Pn**	**15 38 16.0**	**-1.8**
GDR	**Gold River**	**4.91**	**124**	Pn	**Pn**	**15 38 20.0**	**-0.5**
UBRB	**Upper Baezaeko**	**5.02**	**84**	Pn	**Pn**	**15 38 22.7**	**+0.6**
FSB	**Fort Saint Jam**	**5.11**	**66**	Pn	**Pn**	**15 38 21.9**	**-1.4**
FSB				Sg	**Sb**	**15 39 41.4**	**+3.9**
CBB	**Campbell River**	**5.11**	**118**	Pn	**Pn**	**15 38 21.9**	**-1.3**
CBB				Sn	**Sn**	**15 39 19.7**	**-2.5**
BTB	**Buttle Lake**	**5.37**	**124**	Pn	**Pn**	**15 38 26.0**	**-0.9**
JIS	**Juneau Island**	**5.73**	**349**	Pn	**Pn**	**15 38 31.6**	**0.0**
TXB	**Texada**	**5.80**	**118**	Pn	**Pn**	**15 38 33.0**	**+0.3**
DLBC	**Dease Lake**	**5.93**	**12**	Pn	**Pn**	**15 38 36.9**	**+2.4**
	1.7nm,0.3s,baz=199,slow=16,SNR=15						
DLBC				Sn	**Sn**	**15 39 43.1**	**+0.8**
	3.5nm,0.3s,baz=348,slow=19,SNR=3.8						
DLBC				Lg	Lg	15 40 10.6	
	5.3nm,0.3s,baz=291,slow=27,SNR=5.7						
DLBC	**Dease Lake**	**5.93**	**12**	Pn	**Pn**	**15 38 35.9**	**+1.4**
DLBC				Sn	**Sn**	**15 39 41.4**	**-0.9**
DLBC	**Dease Lake**	**5.93**	**12**	Pn	**Pn**	**15 38 36.4**	**+1.9**
MGB	**Mount Grey**	**6.09**	**124**	Pn	**Pn**	**15 38 37.1**	**+0.3**
BESE	**Bessie Mountai**	**6.09**	**348**	Sn	**Sn**	**15 39 44.3**	**-1.9**
SHB	**Sechelt**	**6.16**	**117**	Pn	**Pn**	**15 38 38.1**	**+0.4**
YOUB	**Youbou, Lake C**	**6.37**	**123**	Pn	**Pn**	**15 38 41.3**	**+0.8**
LLLB	**Lillooet**	**6.84**	**103**	Pn	**Pn**	**15 38 47.2**	**+0.3**
BMBC	**Bull Mountain**	**6.86**	**56**	Pn	**Pn**	**15 38 46.8**	**-0.4**
BMBC				Sn	**Sn**	**15 40 03.8**	**-1.5**
SKAG	**Skagway**	**7.00**	**347**	Pn	**Pn**	**15 38 48.9**	**-0.2**
PLBC	**Pleasant Camp**	**7.16**	**343**	Pn	**Pn**	**15 38 50.8**	**-0.5**
NBC5	**NorthernBC 5**	**7.37**	**45**	Pn	**Pn**	**15 38 54.3**	**0.0**
NLWA	**Neilton Lookou**	**7.60**	**131**	Pn	**Pn**	**15 38 58.5**	**+1.1**
MBW	**Mount Baker**	**7.69**	**116**	Pn	**Pn**	**15 39 01.8**	**+3.0**
HDW	**Hoodsport**	**7.80**	**126**	Pn	**Pn**	**15 39 02.7**	**+2.5**
JCW	**Jim Creek**	**8.02**	**120**	Pn	**Pn**	**15 39 04.9**	**+1.7**
BLBC	**Blue River**	**8.05**	**89**	Pn	**Pn**	**15 39 04.6**	**+0.8**
WHY	**Whitehorse**	**8.13**	**351**	Pn	**Pn**	**15 39 04.8**	**+0.1**
WHY				Sn	**Sn**	**15 40 33.6**	**-2.9**
WHY	**Whitehorse**	**8.13**	**351**		**Pn**	**15 39 04.8**	**+0.1**
FNBB	**Fort Nelson**	**8.15**	**36**	Pn	**Pn**	**15 39 04.1**	**-0.8**
FNBB				Sn	**Sn**	**15 40 34.6**	**-2.3**
MNB	**Mounoet Dainar**	**8.55**	**88**	Pn	**Pn**	**15 39 11.4**	**+0.8**
HYT	**Haines Junctio**	**8.65**	**343**	Pn	**Pn**	**15 39 12.3**	**+0.5**
F03A	**Seaside**	**8.86**	**136**	Pn	**Pn**	**15 39 15.5**	**+0.9**
SLEB	**Sale Mountain**	**8.92**	**94**	Pn	**Pn**	**15 39 17.4**	**+1.7**
LTY	**Liberty**	**9.27**	**121**	Pn	**Pn**	**15 39 21.1**	**+0.8**
LTY	**Liberty**	**9.27**	**121**	Pn	**Pn**	**15 39 21.5**	**+1.2**
F04A	**Amboy**	**9.35**	**132**	Pn	**Pn**	**15 39 24.4**	**+3.0**
CTGM	**Chitina Glacie**	**9.65**	**333**	Pn	**Pn**	**15 39 27.0**	**+1.5**
CTGM	**Chitina Glacie**	**9.65**	**333**	Pn	**Pn**	**15 39 26.9**	**+1.3**
BARN	**Barnard Glacie**	**9.82**	**333**	Pn	**Pn**	**15 39 28.7**	**+0.7**
KIAG	**Kiagna River**	**9.91**	**330**	Pn	**Pn**	**15 39 30.3**	**+1.1**
TGL	**Tana Glacier**	**9.93**	**329**	Pn	**Pn**	**15 39 29.1**	**-0.3**
BALM	**Baldy**	**10.00**	**331**	Pn	**Pn**	**15 39 31.4**	**+1.1**
BALM	**Baldy**	**10.00**	**331**	Pn	**Pn**	**15 39 30.9**	**+0.6**
HMT	**Hamilton**	**10.10**	**324**	Pn	**Pn**	**15 39 30.7**	**-0.9**
MCARA	**McCarthy VSAT**	**10.48**	**331**	Pn	**Pn**	**15 39 38.5**	**+1.7**
VRDI	**Verde Repeater**	**10.49**	**329**	Pn	**Pn**	**15 39 36.9**	**-0.2**
GLB	**Gilahina Butte**	**10.76**	**329**	Pn	**Pn**	**15 39 41.1**	**+0.5**
DAWY	**Dawson**	**12.00**	**345**	Pn	**Pn**	**15 39 58.4**	**+0.8**
DAWY	**Dawson**	**12.00**	**345**	Pn	**Pn**	**15 39 58.4**	**+0.8**
SCM	**Sheep Creek Mo**	**12.21**	**325**	Pn	**Pn**	**15 40 02.0**	**+1.4**
EGAK	**Eagle**	**12.95**	**343**	Pn	**Pn**	**15 40 11.5**	**+0.9**
KHMM	**Horse Mountain**	**13.18**	**150**	Pn	**Pn**	**15 40 14.4**	**+0.4**
YKA	**Yellowknife Ar**	**13.64**	**37**	Pn	**Pn**	**15 40 18.0**	**-1.8**
	0.2nm,0.3s,baz=226,slow=12,SNR=20						
YKA				Lg	Lg	15 44 14.4	
	0.1nm,0.3s,baz=228,slow=29,SNR=3.3						
ILAR	**Eielson Array**	**14.23**	**334**	Pn	**P**	**15 40 33.6**	**-1.8**
	0.0nm,0.3s,baz=148,slow=9.6,SNR=7.1						
ILAR				Lg	Lg	15 44 44.5	
	0.0nm,0.3s,baz=114,slow=28,SNR=3.2						
INK	**Inuvik**	**15.70**	**358**	Pn	**Pn**	**15 40 46.8**	**-0.7**
	0.1nm,0.3s,baz=188,slow=15,SNR=2.9						
INK				Lg	Lg	15 45 15.6	
	0.0nm,0.3s,baz=249,slow=10,SNR=2.6						
DHRN	**Dharma Camp**	**15.72**	**19**	P	**P**	**15 40 50.1**	**-1.7**

YHB Horse Butte 16.01 111 P Pn 15 40 53.6 +1.6
IMAR Indian Mountai 17.10 329 P P 15 41 08.2 +1.0
PDAR Pinedale Array 18.18 114 P P 15 41 23.8 +4.2
0.1nm,0.3s,baz=299,slow=9.0,SNR=4.2
PDAR Pinedale Array 18.18 114 P P 15 41 20.5 +1.0
ECSD EROS Data Cent 25.21 96 P P 15 42 33.5 +1.2
ECSD IAmb IAmb 15 42 43.3
comp=Z,5.3nm,1.1s
RES Resolute Bay 26.73 21 P P 15 42 48.4 +2.7
comp=Z,0.2nm,0.3s,baz=115,slow=19,SNR=28
RES Resolute Bay 26.73 21 IAmb IAmb 15 43 35.0
comp=Z,8.6nm,1.8s
TXAR Lajitas Array 31.45 127 P P 15 43 30.8 +2.6
comp=Z,0.5nm,0.6s,baz=330,slow=7.1,SNR=6.6
CCM Cathedral Cave 31.88 101 P P 15 43 31.6 -0.2
CCM IAmb IAmb 15 43 32.8
comp=Z,9.5nm,1.6s
NPOC North of Pu'u 37.64 217 P P 15 44 22.5 +0.8
H11N2 WAKE ISLAND Hy 56.88 259 T T 16 48 41.9
baz=39,slow=76,SNR=747
H11N3 WAKE ISLAND Hy 56.88 259 T T 16 48 42.0
baz=39,slow=76,SNR=964
H11N1 WAKE ISLAND Hy 56.89 259 T T 16 48 43.2
baz=39,slow=76,SNR=754
H11S1 WAKE ISLAND Hy 57.94 258 T T 16 50 01.4
baz=39,slow=76,SNR=21
H11S2 WAKE ISLAND Hy 57.95 258 T T 16 49 58.6
baz=39,slow=76,SNR=30
H11S3 WAKE ISLAND Hy 57.95 258 T T 16 50 01.6
baz=39,slow=76,SNR=38
ZALV Zalesovo Beam 69.33 338 P P 15 48 14.2 +0.4
comp=Z,1.0nm,0.7s,baz=11,slow=5.2,SNR=4.7
ZALV Zalesovo Beam 69.33 338 P P 15 48 13.6 -0.2
HHC Hu-ho-hao-te 71.72 314 eP P 15 48 28.6 -0.1
MKAR Makanchi Array 76.58 336 P P 15 48 57.1 +0.2
comp=Z,0.7nm,0.7s,baz=22,slow=5.0,SNR=8.3
MAKZ Makanchi 76.64 337 P P 15 48 57.3 +0.1
MAKZ IAmb IAmb 15 48 58.3
comp=Z,2.5nm,1.0s
WMQ Urumqi 77.88 332 eP P 15 49 06.4 +2.1
WMQ sP PcP 15 49 13.2 -1.0
ABKAR Akbulak array 77.91 352 P P 15 49 04.2 -0.1
LZH Lanzhou 79.00 317 eP P 15 49 11.0 +0.3
LZH pP pP 15 49 13.7 -0.3
LZH sP sP 15 49 16.6 +1.4
BRTR Keskin Array B 87.18 11 P P 15 49 52.6 -0.3
comp=Z,0.5nm,0.7s,baz=342,slow=1.1,SNR=3.2

IDC 09 15:39:38.3±3.6, 6°.15S×149°.41E, h61km±31km, mb3.8/14, mb1 4.0/15, mb1mx3.9/32, mbtmp4.1/15, ML3.4/2, MS3.5/1, Ms1 3.5/1, ms1mx3.2/30, Error ellipse: s-maj=26.2km s-min=15.0km az=89.0
DJA 09 15:39:39.9±0.7, 7°S±5°×14°9E±1°4, h32km±5km, M4.3/6, mb4.4/6, mB5.0/1, MLv4.3/1, Mw(mB)4.3/1
NEIC 09 15:39:47.9±1.9, 6°.23S±0°.07×148°.3E±0°.1, h76km±12km, mb4.6/18, Error ellipse: s-maj=17.1km s-min=9.7km az=100.0
ISC 09 15:39:45.9±0.7, 6°.23S±0°.06×148°.5E±0°.1, h76km, n51, σ2s.35/46, mb4.0/16, New Britain region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 3.41 202 P Pn 15 40 36.0 -0.7
69nm,0.3s,baz=26,slow=4.6,SNR=307
PMG S Sn 15 41 20.0 +3.9
133nm,0.3s,baz=93,slow=16,SNR=14
PMG LR LR 15 42 11.3
comp=Z,574nm,19.0s,baz=163,slow=39
PMG Port Moresby 3.41 202 P Pn 15 40 35.9 -0.9
MANU Manus Island 4.30 345 P Pn 15 40 49.8 +0.8
COEN Coen 9.28 214 Pn Pn 15 41 56.2 -0.8
CTA Charters Tower 13.94 189 P Pn 15 42 56.0 -4.1
0.3nm,0.3s,baz=7.6,slow=15,SNR=3.8
MTN Manton Dam 18.30 248 Pn Pn 15 43 56.2 +1.4
MTN IAmb IAmb 15 44 13.4
comp=Z,24nm,1.0s
WB0 Warramunga Arr 19.19 224 P P 15 44 04.7 +1.0
EIDS Eidsvold 19.19 173 P P 15 44 05.1 +1.5
WR0 Warramunga Arr 19.21 223 P P 15 44 04.8 +0.8
WR0 IAmb IAmb 15 44 22.9
comp=Z,19nm,0.8s
WRAB Tennant Creek 19.33 224 P P 15 44 06.2 +0.9
WRAB IAmb IAmb 15 44 24.4
comp=Z,18nm,0.8s
WB2 Warramunga Arr 19.33 224 P P 15 44 06.4 +1.1
WB2 IAmb IAmb 15 44 18.2
comp=Z,21nm,0.9s
WRA Warramunga Arr 19.34 224 P Pn 15 44 06.9 -0.3
comp=Z,3.7nm,0.4s,baz=52,slow=11,SNR=37
WRA PcP PcP 15 48 20.9 -4.0
comp=Z,2.6nm,0.7s,baz=34,slow=1.8,SNR=7.5
WRA Warramunga Arr 19.34 224 P P 15 44 06.2 +0.8
SANVU Saraoutou 20.54 118 P Pn 15 44 24.8 +3.6
SANVU IAmb IAmb 15 45 05.0
comp=Z,70nm,1.6s
KNRA Kununurra 21.48 242 P P 15 44 30.6 +2.2
KNRA IAmb IAmb 15 44 33.5
comp=Z,123nm,1.4s
AS31 Alice Springs 22.28 217 P P 15 44 37.3 +0.2
ASAR Alice Springs 22.29 217 P P 15 44 37.3 +0.2
comp=Z,4.3nm,0.5s,baz=58,slow=9.3,SNR=110
ASAR Alice Springs 22.29 217 P P 15 44 37.5 +0.4
FITZ Fitzroy Crossi 25.20 240 P P 15 45 05.8 +1.2
comp=Z,9.2nm,0.7s,baz=103,slow=7.1,SNR=9.3
FITZ Fitzroy Crossi 25.20 240 P P 15 45 06.0 +1.4
FITZ IAmb IAmb 15 45 18.2
comp=Z,27nm,0.8s
TARA Tarawa 25.55 74 P P 15 45 13.2 +5.3
TARA IAmb IAmb 15 45 45.4
comp=Z,23nm,0.7s
STKA Stephens Creek 26.31 193 P P 15 45 12.1 -2.4
comp=Z,2.8nm,0.5s,baz=11,slow=13,SNR=11
STKA Stephens Creek 26.31 193 P P 15 45 12.5 -2.1
PSA00 Pilbara Seismi 31.60 238 P P 15 46 02.0 +0.3
KSM Kuching 38.86 280 P P 15 47 04.3 +0.2
KSM IAmb IAmb 15 48 10.1
comp=Z,14nm,1.4s
YULB Yu-li 39.64 319 P P 15 47 11.8 +1.3
TPUB Ta-pu 40.02 318 P P 15 47 14.3 +0.6
SSLB Suanglung 40.14 319 P P 15 47 15.6 +0.9
NJ2 Nanjing 47.39 325 eP P 15 48 15.2 +2.6
KSRS Korea Array 47.51 338 P P 15 48 10.7 -2.7
comp=Z,0.7nm,0.6s,baz=154,slow=9.6,SNR=4.2
WHN Wuhan 49.04 320 P P 15 48 28.5 +3.1
USRK Ussuriysk Ar. 52.36 345 P P 15 48 43.3 -6.7
comp=Z,1.4nm,0.8s,baz=162,slow=15,SNR=3.3
CMAR Chiang Mai Arr 54.65 298 P P 15 49 06.6 -0.8
comp=Z,0.3nm,0.5s,baz=111,slow=4.9,SNR=3.3
HHC Hu-ho-hao-te 57.81 327 eP P 15 49 35.2 +5.6
LZH Lanzhou 59.34 319 eP P 15 49 44.1 +3.7
LZH pP pP 15 50 01.4 +1.4
LZH sP sP 15 50 06.9 -1.6
LZH PP PP 15 51 54.7 +2.3
LZH PP PP 15 52 15.4 +23
PETK Petropavlovsk- 59.63 6 P P 15 49 35.1 -6.7
comp=Z,4.4nm,0.6s,baz=169,slow=8.1,SNR=21
SONM Songino Array 65.32 330 P P 15 50 17.8 -2.3
comp=Z,0.5nm,0.4s,baz=137,slow=5.0,SNR=12
WMQ Urumqi 73.92 319 eP P 15 51 16.3 +3.3
MKAR Makanchi Array 78.61 320 P P 15 51 36.4 -3.1
comp=Z,0.3nm,0.5s,baz=99,slow=6.6,SNR=9.3
ZALV Zalesovo Beam 79.99 327 P P 15 51 43.4 -3.3
comp=Z,1.0nm,0.5s,baz=101,slow=5.8,SNR=5.4
KSH Kashi 80.62 312 P P 15 51 49.2 -1.5
QSPA South Pole Qui 83.73 180 P P 15 52 00.6 -5.7
comp=Z,3.0nm,0.7s,baz=251,slow=1.6,SNR=6.3
ILAR Eielson Array 85.12 23 P P 15 52 04.0 -9.2
comp=Z,1.0nm,0.8s,baz=247,slow=5.2,SNR=11
NVAR Mina Array Bea 96.36 52 P P 15 52 56.9 -10
comp=Z,0.3nm,0.7s,baz=265,slow=6.2
VYHS Vyhne 120.16 324 ePKP PKPdf 15 58 25.6 -2.6
PLCA Paso Flores 121.12 146 PKP PKPdf 15 58 23.9 -6.6
comp=Z,0.7nm,0.7s,baz=278,slow=4.4,SNR=4.9
GERES GERESS Array B 122.92 326 PKP PKPdf 15 58 28.5 -5.1
comp=Z,0.2nm,0.3s,baz=52,slow=3.8,SNR=3.3
LPAZ La Paz 137.43 122 PKP PKPdf 15 58 56.3 -6.3
comp=Z,1.5nm,0.6s,baz=5.9,slow=2.8,SNR=7.4
TORD Torodi Ar. Bea 146.56 284 PKPbc PKPdf 15 59 15.8 -2.3
comp=Z,2.4nm,0.6s,baz=66,slow=3.2,SNR=17
BDFB Brasilia 152.82 143 PKPbc PKPdf 15 59 28.3 +0.1
comp=Z,4.9nm,0.6s,baz=191,slow=5.2,SNR=7.2
BDFB PKPab PKiKP 15 59 38.0 +2.5
comp=Z,4.6nm,0.7s,baz=28,slow=2.6,SNR=5.1
DBIC Dimbokro 153.49 272 PKPbc PKPdf 15 59 31.1 +2.1
comp=Z,1.0nm,0.6s,baz=124,slow=3.6,SNR=2.9
DBIC PKPab PKPab 15 59 45.6 -3.8
comp=Z,2.3nm,0.9s,baz=61,slow=5.5,SNR=4.0

NEIC 09 16:10:21.3±0.6, 8°.03S±0°.09×118°.01E±0°.08, h216km±8km, mb4.3/11, Error ellipse: s-maj=13.6km s-min=10.7km az=191.0
IDC 09 16:10:24.9±3.3, 7°.88S×118°.24E, h252km±30km, mb3.3/6, mb1 3.4/9, mb1mx3.1/33, mbtmp3.9/9, Error ellipse: s-maj=57.4km s-min=10.2km az=61.0
ISC 09 16:10:22.7±0.6, 8°.13S±0°.07×118°.00E±0°.06, h250km, n33, σ2s.24/35, mb3.8/7, Sumbawa region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KAPI Kappang 3.55 30 P Pn 16 11 19.6 -1.7
1.7nm,0.3s,baz=192,slow=4.9,SNR=5.9
KAPI S S 16 12 04.0 -3.8
1.1nm,0.3s,baz=271,slow=22,SNR=3.3
KAPI Kappang 3.55 30 Pn 16 11 17.4 -4.0
JAGI Jajag, Banyuwa 3.82 265 Pn Pn 16 11 21.8 -2.7
JAGI S 16 12 07.0 -6.5
SOEI Soe 6.40 105 Pn 16 11 54.2 -1.8
BKB Balikpapan 6.91 351 Pn Pn 16 12 01.5 -0.8
UGM Wanagama 7.41 271 Pn Pn 16 12 08.5 -0.1
CISI Cisompet, Garu 10.10 273 Pn Pn 16 12 41.9 -0.8
FITZ Fitzroy Crossi 12.39 144 P P 16 13 15.4 +1.7
0.6nm,0.3s,baz=343,slow=5.8,SNR=7.9
FITZ S S 16 15 26.4 -2.9
0.4nm,0.3s,baz=181,slow=18,SNR=5.3
FITZ Fitzroy Crossi 12.39 144 P P 16 13 15.2 +1.5
KNRA Kununurra 12.93 126 P P 16 13 18.9 -0.7
MTN Manton Dam 13.74 111 Pn P 16 13 27.5 -1.2
FAKI Fak Fak 15.09 71 Pn 16 13 43.6 -0.6
FAKI IAmb IAmb 16 13 51.0
comp=Z,17nm,1.0s
MNAI Manna 15.41 283 Pn 16 13 48.7 +0.7
WRA Warramunga Arr 19.71 128 P Pn 16 14 35.4 -3.1
comp=Z,0.5nm,0.3s,baz=298,slow=12,SNR=34
WRA S S 16 18 16.2 +14
comp=Z,0.1nm,0.3s,baz=297,slow=20,SNR=4.1
WRA Warramunga Arr 19.71 128 P P 16 14 35.2 +1.4
WRAB Tennant Creek 19.71 128 P Pn 16 14 35.4 -3.1
WRAB IAmb IAmb 16 14 38.9
comp=Z,13nm,1.3s
WB2 Warramunga Arr 19.72 128 P P 16 14 35.4 +1.5
WB2 IAmb IAmb 16 14 35.6
comp=Z,21nm,1.5s
WR0 Warramunga Arr 19.87 128 P P 16 14 36.8 +1.3
WR0 IAmb IAmb 16 15 10.0
comp=Z,36nm,1.9s
AS31 Alice Springs 21.71 137 P P 16 14 56.0 +1.8
ASAR Alice Springs 21.71 137 P P 16 14 56.3 +2.1
comp=Z,2.9nm,0.6s,baz=314,slow=8.9,SNR=68
ASAR Alice Springs 21.71 137 P P 16 14 56.1 +2.0
STKA Stephens Creek 32.25 140 P P 16 16 30.6 +2.5
comp=Z,1.1nm,0.8s,baz=336,slow=8.8,SNR=4.2
CMAR Chiang Mai Arr 32.42 325 P P 16 16 31.7 +2.0
comp=Z,0.2nm,0.5s,baz=155,slow=6.6,SNR=7.6
EIDS Eidsvold 35.87 123 P P 16 17 01.2 +1.9
SONM Songino Array 56.66 351 P P 16 19 41.5 +1.4
comp=Z,0.9nm,0.3s,baz=171,slow=9.5,SNR=17
SONM Songino Array 56.66 351 IAmb IAmb 16 19 43.0
comp=Z,1.1nm,1.0s
MK31 Makanchi Array 63.23 333 P P 16 20 25.7 +1.0
MK31 IAmb IAmb 16 20 58.5
comp=Z,4.4nm,1.7s
MKAR Makanchi Array 63.23 333 P P 16 20 25.4 +0.8
comp=Z,0.9nm,0.6s,baz=149,slow=6.0,SNR=19
MKAR Makanchi Array 63.23 333 P P 16 20 25.2 +0.5
KKAR Karatay Array 66.77 324 P P 16 20 48.9 +1.5
ZALV Zalesovo Beam 67.88 340 P P 16 20 54.4 +0.3
comp=Z,1.1nm,0.5s,baz=153,slow=5.2,SNR=5.7
ZALV Zalesovo Beam 67.88 340 P P 16 20 54.1 0.0
ABKAR Akbulak array 76.28 325 P P 16 21 44.1 +0.2

IDC 09 16:35:59.1±2.0, 14°.76S×167°.51E, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.6/37, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=50.8km s-min=29.4km az=114.0
NEIC 09 16:36:00.2±1.6, 14°.78S±0°.10×167°.6E±0°.2, h10km±1km, mb4.5/8, Error ellipse: s-maj=26.3km s-min=15.2km az=110.0
ISC 09 16:36:00.2±1.0, 14°.77S±0°.09×167°.6E±0°.1, h10km, n15, σ0s.74/16, mb3.9/6, Vanuatu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 0.76 208 Pn Pn 16 36 16.4 -0.7
DZM Mont Dzumac 7.34 188 Pn Pn 16 37 47.2 -0.5
1.1nm,0.3s,baz=56,slow=11,SNR=13
DZM Sn Sn 16 39 11.5 +0.3
baz=329,slow=23,SNR=2.2
NOUC Port Laguerre 7.39 189 Pn Pn 16 37 48.3 +0.1
NIUE Niue 21.95 104 P P 16 40 53.7 -0.5
PATS Pohnpei 23.35 336 P P 16 41 08.6 -0.3
COEN Coen 23.64 269 P P 16 41 12.2 +0.2
COEN IAmb IAmb 16 41 18.2
comp=Z,61nm,1.8s
STKA Stephens Creek 29.19 230 P P 16 42 03.6 +1.6
comp=Z,1.9nm,0.7s,baz=54,slow=7.9,SNR=3.1
WB0 Warramunga Arr 32.03 256 P P 16 42 27.3 -0.1
WRAB Tennant Creek 32.09 256 P P 16 42 28.1 +0.3
WRA Warramunga Arr 32.10 256 P P 16 42 26.6 -1.3
comp=Z,0.8nm,1.1s,baz=85,slow=8.0,SNR=3.0
AS31 Alice Springs 32.93 249 P P 16 42 35.3 +0.1
AS31 IAmb IAmb 16 42 44.4
comp=Z,5.5nm,1.9s
ASAR Alice Springs 32.93 249 P P 16 42 35.1 0.0
comp=Z,1.0nm,0.9s,baz=78,slow=9.3,SNR=8.1
ASAR Alice Springs 32.93 249 P P 16 42 34.5 -0.6
NWAO Narrogin (SRO) 48.98 239 P P 16 44 46.2 -0.9
ILAR Eielson Array 86.47 18 P P 16 48 43.5 +0.7
comp=Z,0.2nm,0.7s,baz=222,slow=5.5,SNR=4.2

VIE 09 17:29:24.3±0.8, 49°.81N×18°.63E, h0km, mb1.9/2, ml2.3/4, Error ellipse: s-maj=12.7km s-min=4.0km az=16.0 27 km E of Ostrava Suspected Mining induced.
IPEC 09 17:29:25.6±0.2, 49°.81N×18°.51E, h0km, ML2.0/3, Error ellipse: s-maj=2.0km s-min=1.1km az=161.0
ISC 09 17:29:25.8±0.8, 49°.83N±0°.04×18°.45E±0°.02, h0km, n27, σ1s.02/49, Czech and Slovak Republics

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
OKC Ostrava-Krasne 0.20 273 ePG Pg 17 29 30.1 +0.5
OKC eSG Sg 17 29 32.8 +0.7
comp=Z,165nm,0.4s
MORC Moravsky Berou 0.59 265 ePG Pg 17 29 37.5 +0.3
MORC eSG Sg 17 29 45.4 +0.6
MORC Moravsky Berou 0.59 265 ePg Pg 17 29 37.4 +0.3
baz=87
MORC eSg Sg 17 29 45.3 +0.5
33nm,0.3s,baz=87
OJC Ojcow 0.95 65 ePg Pb 17 29 43.5 -1.7
OJC eSg Sb 17 29 55.6 -2.7
JAVC Velka Javorina 1.10 208 ePG Pg 17 29 47.9 -0.6
KRLC Kraliky 1.11 284 ePG Pg 17 29 46.0 -1.0
KRLC eSG Sg 17 30 01.3 -0.1
comp=Z,25nm,0.5s
NIE Niedzica 1.27 108 ePg Pn 17 29 51.0 +0.2
NIE eSg Sn 17 30 10.4 +1.8
VRAC Vranov 1.32 247 ePG Pg 17 29 50.9 -0.1
VRAC eSG Sg 17 30 07.9 -0.2
VRAC Vranov 1.32 247 ePg Pg 17 29 50.8 -0.2
baz=67
VRAC eSg Sg 17 30 07.9 -0.2
20nm,0.3s,baz=67
VYHS Vyhne 1.36 169 ePG Pn 17 29 51.7 -0.3
VYHS eSG Sn 17 30 09.9 -0.9
DPC Dobruska-Polom 1.47 292 ePG Pn 17 29 53.2 -0.4
DPC eSG Sn 17 30 13.3 +0.4
comp=Z,9.4nm,0.4s
KRUC Moravsky 1.55 241 ePG Pn 17 29 54.2 -0.4
KRUC eSG Sn 17 30 14.9 -0.5
KRUC Moravsky 1.55 241 ePg Pn 17 29 54.2 -0.4
baz=61
KRUC eSg Sn 17 30 14.8 -0.6
14nm,0.2s,baz=61
OSTC Ostas 1.61 298 ePG Pn 17 29 55.8 +0.3
OSTC eSG Sn 17 30 17.5 +0.5
comp=Z,36nm,1.3s
MODS Modra-Piesok 1.65 208 ePG Pn 17 29 55.5 -0.5
MODS eSG Sn 17 30 17.7 -0.2
UPC Upice 1.71 294 ePG Pn 17 29 56.8 -0.1
UPC eSG Sn 17 30 20.5 +1.1
KSP Ksiaz 1.72 307 ePg Pn 17 29 56.8 -0.2
KSP eSg Sn 17 30 20.2 +0.7
CHVC Chvalec 1.72 297 ePG Pn 17 29 57.3 +0.3
CHVC eSG Sn 17 30 20.9 +1.2
comp=Z,5.9nm,0.4s
STHS Stebnicka Huta 1.86 102 ePN Pg 17 30 02.3 +0.9
STHS eSN Sg 17 30 28.2 +2.6
TREC Trest 2.00 256 ePG Pb 17 30 02.6 -0.5
TREC eSG Sb 17 30 28.8 +0.2
comp=Z,7.7nm,0.5s
GOPC GO Pecny, Ondr 2.37 273 ePG Pb 17 30 08.2 -1.2
GOPC eSG Sb 17 30 40.3 +1.1
comp=Z,4.1nm,0.2s
PRU Pruhonice 2.53 275 ePG Pb 17 30 11.0 -1.1
PRU eSG Sb 17 30 45.5 +1.7
CONA Conrad Observa 2.56 223 Pn Pn 17 30 08.3 -0.3
0.2nm,0.1s
PVCC Panska Ves 2.59 287 eSG Sb 17 30 47.8 +2.3
comp=Z,5.3nm,0.2s
KHC Kasperske Hory 3.25 259 ePG Pb 17 30 25.5 +1.1
KHC eSG Sg 17 31 09.5 -0.8
comp=Z,4.7nm,0.4s
MOA Molln 3.40 236 ePn Pn 17 30 20.2 0.0
0.1nm,0.1s
CLL Collm 3.78 295 eSg Sg 17 31 25.0 -2.1

MOS 09 17:52:59.0±1.0, 14°.92S×71°.83W, h101km, mb4.8/9, Error ellipse: s-maj=13.9km s-min=8.0km az=118.1
BJI 09 17:53:00.0, 15°.00S×71°.80W, h95km, mb5.1/9, mB5.4/9
SJA 09 17:53:00.9±0.6, 14°.98S×71°.82W, h96km
NEIC 09 17:53:00.5±2.5, 15°.06S±0°.06×71°.92W±0°.07, h108km±5km, mb5.0/107, Error ellipse: s-maj=10.1km s-min=7.7km az=59.0
IDC 09 17:53:02.9±0.8, 15°.00S×71°.76W, h124km±6km, mb4.3/16, mb1 4.4/20, mb1mx4.3/31, mbtmp4.6/20, MS3.3/3, Ms1 3.3/3, ms1mx2.9/35, Error ellipse: s-maj=17.1km s-min=10.9km az=61.0
VAO 09 17:53:05.2±1.4, 15°.05S×71°.66W, h144km±14km, mb4.6
ISC 09 17:53:02.0±0.3, 15°.10S±0°.04×71°.88W±0°.05, h124km, n583, σ1s.29/601, mb4.9/74, 7C-8D, Southern Peru

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LPAZ La Paz 3.80 109 P Pn 17 54 02.4 +2.8
10nm,0.3s,baz=335,slow=9.2,SNR=93
LPAZ S Sn 17 54 44.8 +0.8
4.6nm,0.3s,baz=54,slow=22,SNR=4.3
MNMC Minye Minye 4.57 152 Pn 17 54 09.8 +0.4
MNMC Sn Sn 17 55 02.2 +0.4
PB11 IPOC Station P 5.10 156 Pn 17 54 15.7 -0.8
PB11 Sn Sn 17 55 12.7 -1.8
GO01 Chusmiza 5.22 151 Pn 17 54 19.6 +1.2
NNA Nana 5.73 302 P Pn 17 54 23.1 -1.8
20nm,0.3s,baz=119,slow=9.4,SNR=24
NNA S Sn 17 55 24.4 -5.1
26nm,0.3s,baz=51,slow=9.2,SNR=8.7
NNA Nana 5.73 302 Pn 17 54 23.3 -1.6
NNA Sn Sn 17 55 25.6 -4.0
NNA Nana 5.73 302c iP Pn 17 54 22.9 -2.0
PB01 IPOC Station P 6.33 159 Pn 17 54 31.8 -1.2
PB01 Sn Sn 17 55 41.1 -3.1
PB04 IPOC Station P 7.38 167 Pn 17 54 44.8 -2.5
PB04 Sn Sn 17 56 08.3 -1.3
LVC Limon Verde 7.98 160 P Pn 17 54 54.5 -1.0
12nm,0.3s,baz=23,slow=7.2,SNR=108
LVC S Sn 17 56 21.7 -2.7
27nm,0.3s,baz=50,slow=24,SNR=20
LVC Limon Verde 7.98 160 Pn 17 54 54.7 -0.8
LVC Sn Sn 17 56 22.7 -1.8
LVC Limon Verde 7.98 160 eP Pn 17 54 54.7 -0.8
PB10 IPOC Station P 8.46 172 Pn 17 54 58.9 -2.8
PB10 Sn Sn 17 56 28.2 -7.3
ATAH Atahualpa 10.17 320 P Pn 17 55 24.9 -0.2
0.3nm,0.3s,baz=115,slow=21,SNR=2.6
ATAH S Sn 17 57 12.2 -5.4
0.8nm,0.3s,baz=184,slow=22,SNR=2.1
GO02 Mina Guanaco 10.24 168 Pn 17 55 23.1 -2.8
GO02 Sn Sn 17 57 16.8 -2.3
SIV San Ignacio 10.46 96 P Pn 17 55 27.4 -1.2
1.2nm,0.3s,baz=291,slow=11,SNR=34
SIV S Sn 17 57 17.2 -6.8
0.6nm,0.3s,baz=358,slow=6.6,SNR=3.5
SIV LR LR 18 00 13.5
comp=Z,65nm,18.4s,baz=236,slow=42
SAML Samuel 10.48 55 Pn 17 55 26.3 -2.6
SAML Samuel 10.48 55 P Pn 17 55 26.3 -2.6
GO03 Copiap 12.53 173 Pn 17 55 56.2 +0.2
GO03 Sn 17 58 08.6 -5.5
VCA Vinchina 13.99 167 eP Pn 17 56 16.1 +1.2
CYA Choya 14.42 158 eP Pn 17 56 22.1 +1.7
AGUA GUANDACOL 14.66 168 eP P 17 56 25.3 -1.0
GO04 Tololo Observa 15.04 176 Pn 17 56 28.9 +0.7
GO04 IAmb IAmb 17 56 33.4
comp=Z,120nm,1.1s
AROD Rodeo 15.16 172 eP Pn 17 56 32.0 -0.1
SALV Santo Antonio 15.62 95 eP Pn 17 56 35.5 0.0
ACCO Cerro Coronel 15.63 171 eP Pn 17 56 37.6 +0.3
AMOG MOGNA 16.07 169 eP P 17 56 42.4 +0.5
CLDB Colider 16.23 77 eP Pn 17 56 42.7 -0.3
AQDB Aquidauana 16.31 111 eP Pn 17 56 43.8 -0.1
OTAV Otavalo 16.57 336 eP P 17 56 49.9 +2.0
CFA Coronel Fontan 16.76 169 P P 17 56 50.5 +1.0
comp=Z,2.8nm,0.3s,baz=346,slow=12,SNR=64
CFA S Sn 17 59 55.5 -0.7
comp=Z,0.3nm,0.3s,baz=186,slow=22,SNR=3.0
RTLS Leoncito 16.79 172 eP P 17 56 51.9 +1.8
RTCV Cerro Valdivia 16.96 170 eP Pn 17 56 53.3 +1.5
FLOC Florencia 16.99 347 eP Pn 17 56 56.0 +3.7
FLOC Florencia 16.99 347 P P 17 56 51.7 -0.4
CPUP Villa Florida 17.59 132 P P 17 56 59.1 +0.4
comp=Z,0.4nm,0.3s,baz=306,slow=11,SNR=28
CPUP LR LR 18 04 31.6
comp=Z,91nm,21.4s,baz=258,slow=39
CPUP Villa Florida 17.59 132 P Pn 17 57 00.1 +0.6
CPUP Villa Florida 17.59 132 P Pn 17 57 00.1 +0.6
CPUP pmax pmax
comp=Z,22nm,1.0s
ACAN Cantantal 17.62 167 eP Pn 17 57 01.1 +1.3
ASAL Salagasta 17.63 171 eP Pn 17 57 01.6 +1.6
BBAC Balboa, Cauca 17.82 342 eP Pn 17 57 02.6 +0.1
AAGR Agrelo 18.12 172 eP Pn 17 57 07.1 +1.3
POPC Popayan, Colom 18.16 344 eP Pn 17 57 07.2 +0.7
C2SB Chapadao do Su 18.58 104 eP P 17 57 09.5 0.0
PRAC Prado 18.93 351 eP Pn 17 57 15.9 +0.5
GR1C Gorgona, Isla 19.03 340 eP P 17 57 14.6 +0.1
ORTC Ortega, Tolima 19.18 350 eP Pn 17 57 21.9 +3.5
ARAG Araguaiana, MT 19.36 94 eP P 17 57 17.5 -0.6
YOTC Yotoco, Valle 19.47 347 eP P 17 57 19.2 -0.2
YOTC eP Pn 17 57 20.5 -1.3
CHIC Chingaza 19.69 355 eP P 17 57 25.2 +0.5
TRCB Terra Rica 19.74 116 eP P 17 57 22.2 +0.1
GO05 Huala 19.82 180 P P 17 57 23.9 +0.9
GO05 IAmb IAmb 17 57 25.6
comp=Z,131nm,1.8s
PCMB Pacaembu 20.60 111 eP P 17 57 31.6 +0.1
NORC Norcasia 20.74 352 eP P 17 57 33.8 +0.8
RUSC La Rusia 20.89 357 eP P 17 57 35.8 +0.8
RUSC La Rusia 20.89 357 P P 17 57 34.1 -0.9
PTGB Pitanga 20.92 120 eP P 17 57 34.5 -0.5
CBOC Ciudad Bolivar 21.23 349 eP P 17 57 38.5 +0.1
HELC Santa Helena 21.46 350 eP P 17 57 41.1 +0.1
BARC Barichara 21.59 356 eP P 17 57 43.1 +0.8
PTBC PUERTO BERRIO, 21.65 353 eP P 17 57 41.1 -1.6
ITAB Concordia 21.99 127 eP P 17 57 45.0 -1.2
DBBC Dabeiba 22.39 349 eP P 17 57 52.4 +2.0
ZARC Zaragoza, Cauc 22.64 352 eP P 17 57 50.4 -2.3
ZARC eP P 17 57 51.1 -1.7
IPMB Ipameri, GO 22.87 100 eP P 17 57 53.2 -1.9
BDFB Brasilia 23.02 95 P P 17 57 55.5 -1.1
comp=Z,15nm,0.5s,baz=267,slow=12,SNR=23
BDFB Brasilia 23.02 95 P P 17 57 55.5 -1.1
BDFB Brasilia 23.02 95 P P 17 57 55.5 -1.1
BDFB pmax pmax
comp=Z,54nm,1.2s

SMLC	San Martn de	23.85	355	eP	P	17 58 01.7	-2.2
SDV	Santo Domingo	23.86	3	P	P	17 58 03.5	-0.9
	comp=Z,22nm,0.9s,baz=200,slow=8.0,SNR=19						
SDV	Santo Domingo	23.86	3	eP	P	17 58 04.1	-0.2
SDV	Santo Domingo	23.86	3	P	P	17 58 03.1	-1.3
RCLB	Rio Claro- Sao	24.16	111	eP	P	17 58 07.1	+0.3
SPB	Sao Paulo	24.54	114	eP	P	17 58 10.6	+0.4
VAO	Valinhos	24.80	112	eP	P	17 58 12.9	+0.2
SJCC	San Jacinto, C	25.05	352	eP	P	17 58 15.0	+0.1
PLCA	Paso Flores	25.57	178	P	P	17 58 20.5	+1.0
	comp=Z,14nm,0.9s,baz=20,slow=10,SNR=30						
PLCA	Paso Flores	25.57	178	eP	P	17 58 21.2	+1.8
PLCA	Paso Flores	25.57	178	P	P	17 58 21.1	+1.7
PLCA	Paso Flores	25.57	178	eP	P	17 58 21.1	+1.7
PARB	Paraibuna	26.08	112	eP	P	17 58 25.0	+0.7
PCRV	Puerto La Cruz	26.12	16	P	P	17 58 23.5	-1.1
	comp=Z,4.7nm,0.6s,baz=20,slow=5.3,SNR=3.5						
SMRC	Santa Marta, M	26.20	355	eP	P	17 58 22.3	-2.9
BSCB	Bom Sucesso	26.41	107	eP	P	17 58 26.9	-0.4
SJMB	Sao Joao De Ma	29.57	101	eP	P	17 58 55.0	-0.4
BSFB	Barra de Sao F	29.90	102	eP	P	17 58 57.6	-0.6
MLPR	Magueyes Islan	33.20	8	P	P	17 59 25.0	-2.1
CRPR	Cabo Rojo, PR	33.23	8	P	P	17 59 24.8	-2.6
CRPR				IAmb	IAmb	17 59 26.6	
	comp=Z,22nm,0.7s						
OBIP	Obispado Ponce	33.34	9	P	P	17 59 25.8	-2.6
PDPR	Patillas Dam,	33.41	10	P	P	17 59 26.6	-2.4
PDPR				IAmb	IAmb	17 59 28.5	
	comp=Z,21nm,1.1s						
HUMP	Col San Antoni	33.56	10	P	P	17 59 28.7	-1.6
HUMP				IAmb	IAmb	17 59 31.8	
	comp=Z,15nm,0.9s						
AOPR	Arecibo Observ	33.62	9	P	P	17 59 29.1	-1.7
GCPR	Guaynabo City	33.69	10	P	P	17 59 29.4	-1.9
GCPR				IAmb	IAmb	17 59 30.4	
	comp=Z,26nm,0.8s						
CBYP	Canovanas	33.69	10	P	P	17 59 29.0	-2.4
CUPR	Culebra, Puert	33.83	11	P	P	17 59 29.1	-3.4
CUPR				IAmb	IAmb	18 00 35.1	
	comp=Z,36nm,1.2s						
SDDR	Presa de Saban	33.87	1	P	P	17 59 29.4	-3.6
SDDR				IAmb	IAmb	18 00 33.2	
	comp=Z,30nm,1.4s						
ANWB	Willy Bob	34.05	17	P	P	17 59 31.1	-3.3
GO09	Cerro Castillo	36.08	180	P	P	17 59 50.2	-1.4
RCBR	Riachuelo	36.51	79	P	P	17 59 54.7	-1.1
RCBR				IAmb	IAmb	18 00 16.9	
	comp=Z,27nm,1.3s						
RCBR	Riachuelo	36.51	79	P	P	17 59 54.7	-1.1
RCBR				pmax	pmax		
	comp=Z,27nm,1.3s						
USHA	Ushuaia	39.74	177	P	P	18 00 24.0	+1.9
	comp=Z,9.2nm,0.8s,baz=354,slow=6.5,SNR=3.5						
NHSC	New Hope	48.59	351	P	P	18 01 34.7	+1.8
	baz=169,SNR=7.0						
154A	Montrose	48.64	347	P	P	18 01 34.0	+0.6
	baz=165						
Z58A	St. Stephen	48.75	351	P	P	18 01 35.4	+1.2
	baz=170,SNR=7.1						
Y60A	Bolivia	49.20	353	P	P	18 01 37.5	-0.1
Y60A	Bolivia	49.20	353	P	P	18 01 38.4	+0.8
	baz=172						
Y58A	Scranton	49.29	351	P	P	18 01 39.1	+0.9
	baz=170,SNR=5.9						
Z53A	Monticello	49.39	347	P	P	18 01 38.7	-0.4
	baz=165						
Z52A	Williamson	49.49	346	P	P	18 01 39.9	0.0
	baz=164,SNR=6.5						
GOGA	Godfrey	49.49	347	P	P	18 01 38.3	-1.5
GOGA	Godfrey	49.49	347	P	P	18 01 38.3	-1.5
GOGA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GOGA	Godfrey	49.49	347	P	P	18 01 39.1	-0.7
	baz=165						
Y57A	Sumter	49.51	351	P	P	18 01 40.8	+0.8
	baz=169						
Y55A	Saluda	49.68	349	P	P	18 01 41.9	+0.6
	baz=167,SNR=5.1						
X60A	Albert Glenn T	49.74	353	P	P	18 01 42.6	+0.9
	baz=172						
Y54A	Tignall	49.77	348	P	P	18 01 41.9	0.0
	baz=166,SNR=5.2						
X59A	McDuffie Farm,	49.81	353	P	P	18 01 42.8	+0.6
	baz=171,SNR=5.9						
X58A	Rowland	49.89	352	P	P	18 01 41.3	-1.4
X58A	Rowland	49.89	352	P	P	18 01 43.4	+0.7
	baz=170						
JSC	Jenkinsville	49.91	350	P	P	18 01 42.9	-0.1
JSC	Jenkinsville	49.91	350	P	P	18 01 42.9	-0.1
JSC				pmax	pmax		
	comp=Z,28nm,0.9s						
Z50A	Ashland	49.92	345	P	P	18 01 42.5	-0.5
Z50A				IAmb	IAmb	18 01 43.8	
	comp=Z,14nm,0.8s						
Z50A	Ashland	49.92	345	P	P	18 01 42.9	-0.2
	baz=162,SNR=7.6						
Y53A	Monroe	49.94	347	P	P	18 01 43.8	+0.5
	baz=165						
Y52A	Lilburn	50.06	347	P	P	18 01 44.0	-0.1
	baz=164						
X56A	White Oak	50.08	350	P	P	18 01 44.9	+0.6
	baz=168						
BIRD	Birdtown, Kers	50.14	351	P	P	18 01 44.6	0.0
BIRD				IAmb	IAmb	18 01 47.0	
	comp=Z,22nm,1.1s						
X55A	Gracelyn & Ava	50.16	350	P	P	18 01 45.4	+0.6
	baz=168						
Y51A	Rockmart	50.32	346	P	P	18 01 46.0	-0.1
	baz=163,SNR=7.0						
W58A	Raeford	50.33	352	P	P	18 01 47.2	+1.1
	baz=171,SNR=24						
X54A	Belton	50.37	349	P	P	18 01 47.0	+0.5
	baz=167						
W59A	Clinton	50.38	353	P	P	18 01 47.4	+0.9
	baz=172						
HKT	Hockley	50.39	333⇑	iP	P	18 01 47.1	+0.5
HKT				pmax	pmax		
	comp=Z,5.0nm,1.2s						
W57A	Gilead	50.56	351	P	P	18 01 48.9	+1.0
	baz=170,SNR=6.1						
Y49A	Blount Mountai	50.62	344	P	P	18 01 47.7	-0.7
W56A	Indian Trail	50.64	351	P	P	18 01 48.9	+0.5
	baz=169						
833A	Chaparral WMA,	50.72	328	P	P	18 01 50.6	+1.4
	baz=145						
KMSC	Kings Mountain	50.76	350	P	P	18 01 49.5	+0.1
KMSC				IAmb	IAmb	18 01 50.3	
	comp=Z,6.6nm,0.6s						
KMSC	Kings Mountain	50.76	350	P	P	18 01 50.0	+0.6
	baz=168						
X51A	Calhoun	50.91	346	P	P	18 01 50.4	-0.1
	baz=164						
V59A	Middlesex	50.94	353	P	P	18 01 51.5	+0.7
	baz=172,SNR=9.8						
V58A	Windy Hill, Pi	51.08	352	P	P	18 01 52.3	+0.6
V58A	Windy Hill, Pi	51.08	352	P	P	18 01 52.3	+0.6
	baz=171,SNR=13						
W53A	Cullowhee	51.13	348	P	P	18 01 52.7	+0.4
	baz=166,SNR=8.0						
V57A	Coltrane Farms	51.26	352	P	P	18 01 53.8	+0.7
	baz=170,SNR=9.0						
V56A	Mocksville	51.28	351	P	P	18 01 54.1	+0.9
	baz=169,SNR=6.6						
X48A	Hartselle	51.34	344	P	P	18 01 53.1	-0.7
X48A				IAmb	IAmb	18 01 54.1	
	comp=Z,24nm,1.4s						
V55A	Taylorsville	51.44	350	P	P	18 01 53.9	-0.5
V55A				IAmb	IAmb	18 02 41.0	
	comp=Z,15nm,1.2s						
V55A	Taylorsville	51.44	350	P	P	18 01 55.7	+1.3
	baz=168						
W51A	Cleveland	51.46	346	P	P	18 01 54.7	+0.1
	baz=164						
V54A	Nebo	51.49	350	P	P	18 01 55.1	+0.2
	baz=168,SNR=5.6						
U60A	Pendleton	51.53	355	P	P	18 01 55.4	+0.3
	baz=173						
V53A	Saluda	51.54	349	P	P	18 01 54.7	-0.6
	baz=166						
U58A	Oxford	51.60	353	P	P	18 01 56.3	+0.7
	baz=172,SNR=7.9						
W50A	Signal Mountai	51.62	346	P	P	18 01 55.7	-0.2
	baz=163						
U57A	Blanch	51.73	352	P	P	18 01 57.3	+0.7
	baz=171,SNR=15						
U56A	King	51.80	351	P	P	18 01 58.8	+1.7
	baz=170,SNR=5.6						
V52A	Sevierville	51.86	348	P	P	18 01 57.0	-0.6
V52A				IAmb	IAmb	18 01 58.2	
	comp=Z,15nm,1.1s						
V52A	Sevierville	51.86	348	P	P	18 01 57.5	-0.1
	baz=166,SNR=6.1						
V51A	Loudon	51.98	347	P	P	18 01 58.3	-0.2
	baz=165						
V50A	Pikevile	52.02	346	P	P	18 01 58.2	-0.6
	baz=164,SNR=6.5						
U55A	TA2, Sparta	52.05	351	P	P	18 01 59.6	+0.6
	baz=169						
T59A	Double "B" Far	52.07	354	P	P	18 01 59.4	+0.3
T59A	Double "B" Far	52.07	354	P	P	18 01 59.2	+0.2
	baz=173,SNR=5.1						
OXF	Oxford	52.08	342	P	P	18 01 58.6	-0.6
	baz=158						
T58A	Grand View Acr	52.14	353	P	P	18 02 00.4	+0.8
	baz=172						
U54A	Nelsons Funny	52.19	350	P	P	18 02 00.5	+0.4
	baz=168						
T57A	Hurt	52.28	353	P	P	18 02 01.3	+0.6
T57A	Hurt	52.28	353	P	P	18 02 01.5	+0.9
	baz=171,SNR=22						
V49A	McMinnville	52.30	346	P	P	18 02 00.1	-0.8
	baz=163						
U52A	Thorn Hill	52.35	348	P	P	18 02 00.9	-0.3
	baz=166						
T56A	Rocky Mt	52.41	352	P	P	18 02 03.0	+1.4
	baz=170,SNR=14						
U51A	La Follette	52.47	348	P	P	18 02 01.8	-0.3
	baz=165						
V48A	Smith Brothers	52.51	345	P	P	18 02 02.0	-0.3
V48A				IAmb	IAmb	18 02 02.6	
	comp=Z,41nm,1.8s						
TZTN	Tazewell	52.53	348	P	P	18 02 01.6	-1.0
TZTN				IAmb	IAmb	18 03 22.9	
	comp=Z,30nm,1.6s						
X43A	Marvell	52.55	340	P	P	18 02 03.2	+0.6
	baz=157						
T55A	Pulaski	52.61	351	P	P	18 02 03.9	+0.8
	baz=169,SNR=8.3						
BLA	Blacksburg	52.65	351	P	P	18 02 06.2	+2.8
	baz=170						
T54A	Tazewell	52.68	350	P	P	18 02 03.9	+0.2
	baz=168						
U50A	Jamestown	52.68	347	P	P	18 02 03.3	-0.3
	baz=164,SNR=5.7						
S58A	Poland Farm, P	52.75	354	P	P	18 02 04.5	+0.4
	baz=172						
T53A	Wise	52.77	349	P	P	18 02 04.3	0.0
	baz=167						
WHTX	Lake Whitney,	52.85	333	P	P	18 02 05.6	+0.7
	baz=148,SNR=6.3						
T52A	Hallie	52.97	349	P	P	18 02 05.1	-0.7
T52A				IAmb	IAmb	18 02 06.3	
	comp=Z,10nm,0.8s						
T52A	Hallie	52.97	349	P	P	18 02 05.5	-0.3
	baz=166						
U49A	Red Boiling Sp	52.98	346	P	P	18 02 05.1	-0.7
	baz=163						
S56A	Natural Bridge	52.99	352	P	P	18 02 07.0	+1.1
	baz=171,SNR=7.6						
S57A	Dark Hollow, R	53.00	353	P	P	18 02 06.7	+0.8
S57A	Dark Hollow, R	53.00	353	P	P	18 02 06.8	+0.8
	baz=171,SNR=16						
T51A	Gray	53.02	348	P	P	18 02 05.9	-0.2
	baz=165,SNR=6.5						
R58B	Mineral	53.08	354	P	P	18 02 07.2	+0.7
R58B	Mineral	53.08	354	P	P	18 02 07.2	+0.7
	baz=173						
WVT	Waverly	53.14	344	P	P	18 02 04.4	-2.6
WVT	Waverly	53.14	344	P	P	18 02 04.4	-2.6
WVT				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WVT	Waverly	53.14	344	P	P	18 02 05.8	-1.1
	baz=161						
S55A	Lewisburg	53.21	351	P	P	18 02 08.3	+0.7
	baz=170,SNR=14						
T50A	Nancy	53.26	347	P	P	18 02 07.3	-0.5
	baz=164,SNR=6.2						
S54A	Dingess, Beckl	53.36	351	P	P	18 02 08.9	+0.2
	baz=169						
R58A	Rapidan	53.42	354	P	P	18 02 09.4	+0.4
	baz=173						
R57A	Stanardsville	53.48	353	P	P	18 02 10.6	+1.1
	baz=172,SNR=12						
T49A	Edmonton	53.49	346	P	P	18 02 09.3	-0.2
T49A				IAmb	IAmb	18 02 09.9	
	comp=Z,20nm,0.8s						
T49A	Edmonton	53.49	346	P	P	18 02 09.1	-0.5
	baz=164,SNR=13						
MIAR	Mount Ida	53.51	338	P	P	18 02 09.9	+0.2
MIAR				pmax	pmax		
	comp=Z,30nm,0.9s						
MIAR	Mount Ida	53.51	338	P	P	18 02 10.1	+0.4
	baz=154,SNR=15						
S52A	Salyersville	53.54	349	P	P	18 02 09.5	-0.5
	baz=166						
W41B	Gary Mavity, V	53.60	339	P	P	18 02 10.1	-0.3
	baz=155,SNR=5.1						
R55A	Marlinton	53.66	352	P	P	18 02 11.2	+0.3
R55A	Marlinton	53.66	352	P	P	18 02 12.6	+1.8
	baz=170,SNR=5.3						
R54A	Victor	53.68	351	P	P	18 02 11.5	+0.6
	baz=169,SNR=6.0						
R56A	Bull Pasture M	53.69	353	P	P	18 02 12.2	+1.1
	baz=171						
TXAR	Lajitas Array	53.79	325	P	P	18 02 12.4	+0.4
	comp=Z,3.6nm,0.8s,baz=140,slow=9.9,SNR=14						
S50A	Richmond	53.80	348	P	P	18 02 11.8	0.0
	baz=165						
Q58A	Fox Den Farm,	54.03	354	P	P	18 02 14.0	+0.6
	baz=173						
S49A	Springfield	54.09	347	P	P	18 02 13.3	-0.6
	baz=164						
W39A	Magazine	54.17	338	P	P	18 02 15.4	+0.9
	baz=154,SNR=7.6						
Q57A	Strasburg	54.20	354	P	P	18 02 15.8	+1.2
	baz=172,SNR=15						
X37A	Clayton	54.23	336	P	P	18 02 15.7	+0.7
X37A				IAmb	IAmb	18 02 16.8	
	comp=Z,16nm,0.9s						
Q56A	Snyder Ridge,	54.29	353	P	P	18 02 16.7	+1.4
	baz=171,SNR=21						
Q55A	Buckhannon	54.35	352	P	P	18 02 17.4	+1.6
	baz=170,SNR=12						
R50A	Paris	54.37	348	P	P	18 02 15.7	-0.2
	baz=165						
ABTX	Abilene, Hawle	54.38	331	P	P	18 02 16.7	+0.5
ABTX	Abilene, Hawle	54.38	331	P	P	18 02 16.8	+0.7
	baz=146,SNR=12						
Q53A	Leroy	54.43	351	P	P	18 02 16.8	+0.4
	baz=168,SNR=6.6						
Q54A	Coxs Mills	54.45	351	P	P	18 02 16.9	+0.5
Q54A	Coxs Mills	54.45	351	P	P	18 02 16.5	+0.1
	baz=169,SNR=7.4						
PBMO	Poplar Bluff	54.49	342	P	P	18 02 16.1	-0.7
PBMO				IAmb	IAmb	18 02 17.0	
	comp=Z,12nm,0.8s						
P59A	Jarrettsville	54.59	356	P	P	18 02 18.2	+0.7
	baz=174						
P57A	Homestead Farm	54.60	354	P	P	18 02 19.1	+1.6
	baz=173						
P56A	Dayton Farm, R	54.71	353	P	P	18 02 19.5	+1.2
	baz=172,SNR=6.7						
WCI	Wyandotte Cave	54.74	346	P	P	18 02 17.3	-1.3
WCI				IAmb	IAmb	18 02 18.7	
	comp=Z,16nm,0.9s						
WCI	Wyandotte Cave	54.74	346	P	P	18 02 17.3	-1.3
WCI				pmax	pmax		
	comp=Z,16nm,1.0s						
WCI	Wyandotte Cave	54.74	346	P	P	18 02 17.9	-0.7
	baz=163						
P55A	Reedsville	54.83	352	P	P	18 02 20.6	+1.4
	baz=170,SNR=6.1						
Q50A	Georgetown	54.84	348	P	P	18 02 19.0	-0.3
	baz=166						
U40A	Yellville	54.88	339	P	P	18 02 19.0	-0.6
U40A	Yellville	54.88	339	P	P	18 02 19.5	-0.2
	baz=155,SNR=6.8						
Q51A	Peebles	54.90	349	P	P	18 02 19.8	+0.1
	baz=166						
MCWV	Mont Chateau	54.98	352	P	P	18 02 21.0	+0.8
MCWV				IAmb	IAmb	18 02 22.1	
	comp=Z,13nm,0.7s						
MCWV	Mont Chateau	54.98	352	P	P	18 02 21.3	+1.0
	baz=170,SNR=5.9						
S44A	Carbondale	54.99	343	P	P	18 02 19.4	-1.0
P54A	Burton	55.01	352	P	P	18 02 21.1	+0.6
	baz=170,SNR=11						
P53A	Whipple	55.02	351	P	P	18 02 21.0	+0.4
P53A	Whipple	55.02	351	P	P	18 02 21.0	+0.4
	baz=169,SNR=6.5						
HHAR	Hobbs	55.19	338	P	P	18 02 21.4	-0.5
HHAR				IAmb	IAmb	18 02 22.6	
	comp=Z,18nm,1.2s						
O60A	Telford	55.23	357	P	P	18 02 22.3	+0.3
	baz=176						
P52A	Corning	55.28	350	P	P	18 02 22.0	-0.4
	baz=168						
O57A	Amberson	55.28	355	P	P	18 02 22.6	+0.1
	baz=173						
Q48A	North Vernon	55.29	347	P	P	18 02 21.8	-0.7
	baz=164						
MGMO	Mountain Grove	55.41	340	P	P	18 02 23.2	-0.2
MGMO				IAmb	IAmb	18 02 23.5	
	comp=Z,9.5nm,0.8s						
O56A	Blue Knob Stat	55.43	354	P	P	18 02 24.7	+1.1
O56A	Blue Knob Stat	55.43	354	P	P	18 02 24.5	+0.9
	baz=172,SNR=11						
O55A	Ligonier	55.45	353	P	P	18 02 24.6	+0.9
	baz=171,SNR=16						
P50A	Jamestown	55.55	349	P	P	18 02 23.8	-0.6
	baz=166						
TUL1	Leonard	55.55	336	P	P	18 02 23.5	-1.0
TUL1				IAmb	IAmb	18 02 25.7	
	comp=Z,21nm,1.0s						
TUL1	Leonard	55.55	336	P	P	18 02 24.9	+0.4
	baz=152,SNR=6.3						
O54A	Avella	55.56	352	P	P	18 02 25.1	+0.7
	baz=170						
P49A	Miami Univ. Ec	55.65	348	P	P	18 02 24.1	-1.0
	baz=165						
O52A	Adamsville	55.71	351	P	P	18 02 24.8	-0.7
	baz=168						
P48A	Milroy	55.73	347	P	P	18 02 24.4	-1.3
	baz=164						
SSPA	Standing Stone	55.73	354	P	P	18 02 26.1	+0.5
	baz=173						
O53A	New Philadelph	55.74	351	P	P	18 02 26.2	+0.5
	baz=169						
WMOK	Wichita Mounta	55.77	333	P	P	18 02 25.8	-0.3
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WMOK	Wichita Mounta	55.77	333	P	P	18 02 26.0	-0.1
	baz=148						
N57A	Milroy	55.82	355	P	P	18 02 26.8	+0.5
	baz=173						
N58A	Sunbury	55.83	356	P	P	18 02 26.6	+0.3
	baz=174						
PAL	Palisades	55.85	358	P	P	18 02 26.0	-0.4
	baz=178						
O51A	Pataskala	55.86	350	P	P	18 02 26.2	-0.5
	baz=167						
CCM	Cathedral Cave	55.91	342	P	P	18 02 26.4	-0.6
	baz=157						
N55A	Marion Center	55.98	353	P	P	18 02 28.5	+1.0
	baz=172,SNR=32						
ACSO	Alum Creek Sta	56.01	350	P	P	18 02 27.4	-0.2
	baz=167						
O50A	Cable	56.04	349	P	P	18 02 27.9	0.0
	baz=166						
N56A	West Decatur	56.05	354	P	P	18 02 28.7	+0.7
	baz=172,SNR=12						
O49A	Covington	56.21	349	P	P	18 02 28.4	-0.7
	baz=165						
N53A	Lisbon	56.24	352	P	P	18 02 29.6	+0.3
	baz=170,SNR=5.3						
N54A	Moraine State	56.28	353	P	P	18 02 30.4	+0.9
	baz=170,SNR=14						
M58A	Price's Panora	56.34	356	P	P	18 02 30.5	+0.5
	baz=175						
M57A	Sunshine Farm,	56.36	355	P	P	18 02 30.9	+0.7
	baz=174						
O48A	Farmland	56.44	348	P	P	18 02 29.9	-0.8
	baz=164						
M59A	Waymart	56.45	357	P	P	18 02 31.5	+0.7
	baz=176						
MNTX	Cornudas Mount	56.55	326	P	P	18 02 31.9	+0.2
	baz=140,SNR=6.8						
N50A	Nevada	56.56	350	P	P	18 02 31.0	-0.6
	baz=167						
N51A	Ashland	56.58	350	P	P	18 02 31.3	-0.3
	baz=168						
M56A	Emporium	56.60	354	P	P	18 02 32.5	+0.7
M56A	Emporium	56.60	354	P	P	18 02 32.5	+0.7
	baz=173,SNR=15						
M55A	Ridgway	56.64	354	P	P	18 02 32.4	+0.2
M55A	Ridgway	56.64	354	P	P	18 02 32.8	+0.6
	baz=172,SNR=18						
L63A	North Scituate	56.68	0	P	P	18 02 32.1	-0.2
	baz=180						
BRYW	Bryant College	56.73	0	P	P	18 02 32.3	-0.5
M54A	Oil Creek Stat	56.78	353	P	P	18 02 32.9	-0.2
M54A	Oil Creek Stat	56.78	353	P	P	18 02 33.9	+0.8
	baz=171,SNR=16						
M53A	Wl Miller and	56.84	352	P	P	18 02 34.1	+0.6
	baz=170,SNR=11						
L60A	Shokan	56.84	358	P	P	18 02 33.7	+0.2
	baz=177						
N49A	Columbus Grove	56.89	349	P	P	18 02 32.6	-1.3
N49A				IAmb	IAmb	18 02 34.1	
	comp=Z,19nm,0.9s						
N49A	Columbus Grove	56.89	349	P	P	18 02 33.4	-0.5
	baz=166,SNR=6.8						
L58A	Harry Jones Me	56.98	356	P	P	18 02 35.1	+0.7
	baz=175						
SFIN	Lafayette	56.98	346	P	P	18 02 32.9	-1.6
SFIN				IAmb	IAmb	18 02 33.4	
	comp=Z,8.1nm,0.6s						
SFIN	Lafayette	56.98	346	P	P	18 02 32.9	-1.6
	baz=162,SNR=5.0						
MSTX	Muleshoe	56.98	329	P	P	18 02 35.1	+0.3
	baz=144,SNR=10						
N48A	Decatur	56.99	348	P	P	18 02 33.7	-0.9
	baz=165						
L57A	Andrews Acres	57.00	356	P	P	18 02 34.9	+0.3
	baz=174						
M52A	Chesterland	57.03	352	P	P	18 02 35.0	+0.2
	baz=169						
L59A	Walton	57.08	357	P	P	18 02 35.6	+0.4
	baz=176						
BINY	Binghamton	57.14	356	P	P	18 02 35.9	+0.3
BINY				IAmb	IAmb	18 02 36.5	
	comp=Z,12nm,0.7s						
BINY	Binghamton	57.14	356	P	P	18 02 36.0	+0.4
	baz=175						
N47A	Urbana	57.15	348	P	P	18 02 34.6	-1.1
	baz=164						
L56A	Greenwood	57.19	355	P	P	18 02 36.1	+0.1
L56A				IAmb	IAmb	18 02 37.3	
	comp=Z,21nm,0.8s						
L56A	Greenwood	57.19	355	P	P	18 02 36.6	+0.5
	baz=173,SNR=7.0						
L61B	Northampton	57.27	359	P	P	18 02 36.2	-0.3
	baz=179						
L53A	Girard	57.29	353	P	P	18 02 37.3	+0.6
	baz=170,SNR=26						
L55A	Hinsdale	57.31	354	P	P	18 02 37.8	+0.9
	baz=172,SNR=13						
HRV	Adam Dziewonsk	57.32	0	P	P	18 02 36.9	+0.1
	baz=180						
M49A	Liberty Center	57.39	349	P	P	18 02 36.8	-0.6
	baz=166						
ERPA	Erie	57.42	353	P	P	18 02 38.1	+0.5
	baz=171,SNR=17						
L54A	Sinclairville	57.46	353	P	P	18 02 38.6	+0.8
	baz=171,SNR=31						
WVNY	West Valley, N	57.55	354	P	P	18 02 39.2	+0.7
K59A	Cooperstown	57.65	357	P	P	18 02 39.3	+0.1
	baz=176						
K58A	Earlville	57.68	357	P	P	18 02 39.6	+0.1
K58A				IAmb	IAmb	18 02 40.6	
	comp=Z,20nm,1.1s						
K58A	Earlville	57.68	357	P	P	18 02 39.3	-0.1
	baz=176						
K57A	Scipio Center	57.70	356	P	P	18 02 39.7	+0.2
	baz=175						
K56A	Middlesex	57.73	355	P	P	18 02 39.8	+0.1
	baz=174						
K54A	Basiliko Farm,	57.76	354	P	P	18 02 40.9	+0.9
	baz=172,SNR=9.9						
K55A	Perry	57.82	355	P	P	18 02 40.9	+0.5
	baz=173,SNR=6.1						

L48A N Adams 57.93 349 P P 18 02 40.3 -0.8
baz=166
L49A Milan 57.97 350 P P 18 02 41.2 -0.2
baz=166
J60A Lant Hill Farm 58.07 359 P P 18 02 42.4 +0.3
baz=178
L47A Sherwood 58.10 348 P P 18 02 41.3 -1.0
baz=165,SNR=5.9
J59A Piesco 58.33 358 P P 18 02 43.6 -0.3
J59A IAmb IAmb 18 02 45.1
comp=Z,26nm,1.3s
J59A Piesco 58.33 358 P P 18 02 44.4 +0.5
baz=177
J55A Hilton 58.33 355 P P 18 02 44.2 +0.4
baz=173
J57A Williamstown 58.34 356 P P 18 02 43.9 0.0
baz=175
J54A Appleton 58.41 354 P P 18 02 45.0 +0.5
baz=172
121A Cookes Peak, D 58.51 324 P P 18 02 47.1 +1.4
baz=138,SNR=8.8
I58A Old Forge 58.57 357 P P 18 02 45.9 +0.3
baz=176
J52A Paris 58.59 353 P P 18 02 45.9 +0.2
baz=170,SNR=8.6
I59A Olmsteadville 58.64 358 P P 18 02 46.3 +0.3
baz=178
KSU1 Kansas State U 58.66 338 P P 18 02 46.1 -0.3
baz=152
I60A Shoreham 58.67 359 P P 18 02 46.7 +0.5
baz=178
K48A Perry 58.70 349 P P 18 02 45.8 -0.7
baz=166,SNR=5.8
K47A Vermontville 58.74 349 P P 18 02 45.9 -0.8
baz=165
LBNH Lisbon 59.05 360 P P 18 02 49.3 +0.4
baz=180
I53A Kortright Cn E 59.06 354 P P 18 02 49.5 +0.6
baz=171
J48A Bridge Port 59.13 350 P P 18 02 48.8 -0.6
baz=166
I51A Listowel 59.21 352 P P 18 02 49.9 -0.1
baz=170,SNR=7.0
J47A Sunmer 59.25 349 P P 18 02 49.4 -0.9
baz=165
I55A Frankford 59.27 355 P P 18 02 50.7 +0.3
baz=173,SNR=5.2
H58A Gabriels 59.27 358 P P 18 02 50.1 -0.3
baz=177
H61A Lyndonville 59.34 360 P P 18 02 51.4 +0.5
baz=180
H57A Richville 59.36 357 P P 18 02 51.2 +0.2
baz=176,SNR=8.2
I52A Shelburne 59.37 353 P P 18 02 51.6 +0.5
baz=171,SNR=11
K43A Burlington 59.48 346 P P 18 02 50.6 -1.2
H59A Cadyville 59.48 359 P P 18 02 52.1 +0.3
baz=178
LONY Lake Ozonia 59.48 358 P P 18 02 52.1 +0.2
baz=177
H63A New Sharon 59.50 2 P P 18 02 52.2 +0.3
baz=182
H64A Troy 59.50 2 P P 18 02 52.3 +0.4
baz=183
H56A Elgin 59.54 356 P P 18 02 52.6 +0.4
baz=175,SNR=5.7
H55A Tweed 59.56 356 P P 18 02 52.7 +0.4
baz=174,SNR=6.3
DELO Deloro Mine 59.56 355 P P 18 02 52.2 -0.1
ANMO Albuquerque 59.62 327⇓iP P 18 02 53.3 +0.1
ANMO pmax pmax
comp=Z,5.0nm,0.9s
ANMO Albuquerque 59.62 327 P P 18 02 54.2 +0.9
baz=140
CBKS Cedar Bluff 59.63 335 P P 18 02 53.9 +0.8
baz=148,SNR=6.8
H53A Bobcaygeon 59.70 354 P P 18 02 53.4 +0.1
baz=172,SNR=12
H52A Wyevale 59.90 353 P P 18 02 55.4 +0.7
baz=171,SNR=12
SADO Sadowa 59.95 354 P P 18 02 55.0 0.0
I48A Sherman Twp 59.98 350 P P 18 02 54.6 -0.6
baz=167,SNR=5.6
G57A Newington 59.98 357 P P 18 02 55.6 +0.3
baz=176,SNR=5.5
G58A Ormstown 59.99 358 P P 18 02 55.6 +0.3
baz=178
G62A West of Eustis 60.04 1 P P 18 02 56.2 +0.6
G62A IAmb IAmb 18 02 57.2
comp=Z,14nm,0.8s
G62A West of Eustis 60.04 1 P P 18 02 56.5 +0.8
baz=181
TUC Tucson 60.08 322 P P 18 02 57.2 +0.9
TUC Tucson 60.08 322 P P 18 02 57.3 +1.0
baz=136
G61A St-Isidore-de- 60.09 0 P P 18 02 57.0 +0.9
baz=180
G65A Princeton 60.14 4 P P 18 02 56.5 +0.2
baz=185
JFWS Jewell Farm 60.14 345 P P 18 02 55.7 -0.7
baz=159
G55A Calabogie 60.23 356 P P 18 02 57.0 +0.1
baz=175,SNR=8.6
G53A Haliburton 60.25 355 P P 18 02 57.3 +0.2
baz=172,SNR=20
T25A Trinidad 60.32 330 P P 18 02 59.2 +1.2
baz=143,SNR=11
G54A Lake Saint Pet 60.47 355 P P 18 02 58.7 +0.1
baz=173,SNR=12
H46A Fife Lake 60.58 349 P P 18 02 58.4 -0.9
baz=165
F64A Sherman 60.76 3 P P 18 03 00.8 +0.3
baz=184
F60A Warwick 60.78 360 P P 18 03 00.7 0.0
baz=180
F52A Sundridge 60.98 354 P P 18 03 02.1 0.0
baz=172,SNR=17
ALGO Algonquin Park 61.02 355 P P 18 03 02.4 +0.1
baz=173
214A Organ Pipe Nat 61.05 320 P P 18 03 04.5 +1.6
baz=134,SNR=8.0
F51A Arnstein 61.17 354 P P 18 03 03.2 -0.1
baz=171,SNR=9.5
E60A Ste Agathe de 61.18 0 P P 18 03 03.0 -0.3
baz=180
E58A La Victoria 61.20 359 P P 18 03 03.7 +0.3
baz=178,SNR=6.6
BGNE Belgrade 61.25 338 P P 18 03 04.2 +0.2
baz=151,SNR=6.1
E61A Lac Etchemin 61.26 1 P P 18 03 04.6 +0.7
baz=182
E57A Chemin Saint G 61.26 358 P P 18 03 04.0 +0.1
baz=177,SNR=5.0
F49A Sandfield 61.27 352 P P 18 03 03.2 -0.8
baz=169
SDCO Great Sand Dun 61.33 330 P P 18 03 05.5 +0.6
SDCO IAmb IAmb 18 03 06.9
comp=Z,18nm,0.8s
SDCO Great Sand Dun 61.33 330 P P 18 03 06.0 +1.0
baz=142,SNR=35
E64A Bridgewater 61.34 3 P P 18 03 04.7 +0.3
baz=184
E55A Montcerf-Lytto 61.38 357 P P 18 03 05.0 +0.3
baz=175
E52A Mattawa 61.40 355 P P 18 03 04.8 -0.1
baz=172,SNR=12
E53A Dumoine, Ponti 61.41 355 P P 18 03 05.1 +0.2
baz=174,SNR=10
F48A Evansville 61.41 351 P P 18 03 04.4 -0.5
baz=168
E56A St. Veronique 61.42 358 P P 18 03 05.0 0.0
baz=176,SNR=15
E54A Lac Daplat, Po 61.43 356 P P 18 03 05.1 +0.1
baz=174,SNR=16
W18A Petrified Fore 61.51 325 P P 18 03 07.5 +1.5
baz=138
E51A G1948 Merrick 61.73 354 P P 18 03 07.2 +0.1
baz=172,SNR=11
F45A CMU Biological 61.74 349 P P 18 03 06.5 -0.7
baz=165
D57A Chemin Vers le 61.85 358 P P 18 03 08.1 +0.2
baz=178,SNR=9.1
D56A ZEC Mazanza, M 61.91 358 P P 18 03 08.3 0.0
baz=177,SNR=12
D58A Chemin du LacG 61.91 359 P P 18 03 08.6 +0.4
baz=179,SNR=15
D55A Sainte-Anne-du 61.91 357 P P 18 03 08.3 +0.1
baz=176,SNR=14

D63A Stockholm 61.94 3 P P 18 03 08.9 +0.5
baz=184
D62A Allapoint, All 61.95 2 P P 18 03 08.2 -0.3
D62A IAmb IAmb 18 03 09.2
comp=Z,15nm,0.7s
D62A Allapoint, All 61.95 2 P P 18 03 08.9 +0.5
baz=183,SNR=12
S22A 4UR Ranch, Cre 61.98 329 P P 18 03 10.4 +1.2
baz=141,SNR=8.2
E48A Lockeyer 61.99 352 P P 18 03 08.4 -0.4
baz=169
D61A St Aubert, Com 62.03 1 P P 18 03 09.8 +0.8
baz=182
D52A ZEK Kipawa Sen 62.07 355 P P 18 03 09.8 +0.5
baz=173,SNR=17
D53A Lac Vacive, Po 62.11 356 P P 18 03 09.5 -0.1
D53A Lac Vacive, Po 62.11 356 P P 18 03 09.7 +0.1
baz=174,SNR=14
D54A Lac Fusel, La 62.11 356 P P 18 03 09.3 -0.3
baz=175,SNR=14
E47A Iron Bridge 62.12 351 P P 18 03 09.0 -0.6
baz=168
Q24A Divide 62.13 331 P P 18 03 11.5 +1.2
baz=143
E46A Sault Ste Mari 62.20 350 P P 18 03 09.3 -0.8
E46A IAmb IAmb 18 03 56.2
comp=Z,18nm,1.2s
LATQ La Tuque 62.20 359 P P 18 03 10.3 +0.2
baz=179
D51A Lot 18 Range I 62.27 354 P P 18 03 10.7 +0.1
baz=172,SNR=6.1
D50A G1974 Best Tow 62.39 354 P P 18 03 11.5 0.0
baz=171,SNR=19
MVCO Mesa Verde 62.41 328 P P 18 03 13.0 +0.8
baz=139,SNR=5.7
D46A Sault St. Mari 62.66 351 P P 18 03 12.5 -0.8
baz=167
D47A Chapleau 62.69 351 P P 18 03 12.7 -0.8
baz=168
E43A Lone Tree Farm 62.69 348 P P 18 03 12.8 -0.6
E43A IAmb IAmb 18 03 13.5
comp=Z,9.6nm,0.8s
WUAZ Wupatki 62.72 324 P P 18 03 15.9 +1.8
baz=136,SNR=7.4
ECSD EROS Data Cent 62.77 340 P P 18 03 14.0 -0.1
baz=153,SNR=12
COWI Conover 62.88 347 P P 18 03 14.4 -0.4
SPMN Marine on St. 62.97 344 P P 18 03 14.8 -0.5
baz=157
ISCO Idaho Springs 63.01 331 P P 18 03 15.7 -0.4
ISCO Idaho Springs 63.01 331 P P 18 03 15.7 -0.4
ISCO pmax pmax
comp=Z,5.0nm,0.8s
ISCO Idaho Springs 63.01 331 P P 18 03 17.1 +1.0
baz=143,SNR=9.8
VLDQ Val d'Or 63.12 356 P P 18 03 16.2 -0.1
VLDQ IAmb IAmb 18 03 17.5
comp=Z,20nm,1.0s
Y12C Blythe 63.33 321 P P 18 03 20.2 +2.2
baz=133
D41A Chassel 63.66 347 P P 18 03 18.8 -1.1
D41A IAmb IAmb 18 03 20.6
comp=Z,16nm,0.9s
BC3 Big Chuckawall 63.84 320 P P 18 03 23.2 +1.7
baz=132,SNR=6.4
MONP2 Monument Peak 63.94 319 P P 18 03 24.1 +1.9
baz=131
IRM Iron Mountain 63.98 321 P P 18 03 24.2 +1.8
baz=133,SNR=8.7
LSQQ Lebel-sur-Quev 64.03 356 P P 18 03 22.4 +0.2
baz=174
N23A Red Feather La 64.04 332 P P 18 03 24.0 +1.2
baz=143
PFO Pinyon Flats O 64.44 320deP P 18 03 27.3 +1.9
PFO pmax pmax
comp=Z,13nm,1.1s
PFO Pinyon Flats O 64.44 320 P P 18 03 26.9 +1.5
baz=131
O20A White River Ci 64.52 330 P P 18 03 27.3 +1.4
baz=141,SNR=6.7
GMRC Granite Mounta 64.72 321 P P 18 03 28.9 +1.7
baz=132,SNR=8.9
MATQ Matagami 64.77 356 P P 18 03 26.8 -0.3
baz=174,SNR=17
SRU San Rafael Swe 64.89 328 P P 18 03 28.8 +0.5
SRU San Rafael Swe 64.89 328 P P 18 03 28.8 +0.5
SRU pmax pmax
comp=Z,11nm,0.9s
EYMN Ely 65.16 346 P P 18 03 28.7 -0.9
EYMN Ely 65.16 346 P P 18 03 29.2 -0.4
baz=159,SNR=7.2
HEC Hector,Ludlow 65.16 321 P P 18 03 32.3 +2.3
baz=132,SNR=7.5
TUQ Turquoise Moun 65.32 321 P P 18 03 32.8 +1.7
baz=132
DRLN Deer Lake 65.33 10 P P 18 03 29.9 -0.7
DRLN IAmb IAmb 18 03 31.2
comp=Z,24nm,1.1s
MSU Marysvale 65.33 326 P P 18 03 32.7 +1.5
MSU Marysvale 65.33 326 P P 18 03 32.7 +1.5
TMUT Trail Mountain 65.39 327 P P 18 03 31.6 -0.1
SHPR Sheep Range 65.59 323 P P 18 03 34.0 +1.2
BFSC Mount Baldy Ra 65.60 319 P P 18 03 34.2 +1.3
baz=130
K22A Casper 65.70 333 P P 18 03 34.7 +1.3
baz=143
GSC Goldstone, Bar 65.77 321 P P 18 03 35.9 +2.0
baz=132,SNR=5.3
RSSD Black Hills 65.84 335 P P 18 03 34.5 +0.2
RSSD Black Hills 65.84 335 P P 18 03 34.5 +0.2
RSSD pmax pmax
comp=Z,6.0nm,0.7s
RSSD Black Hills 65.84 335 P P 18 03 35.6 +1.2
baz=146
EDW2 Edwards Air Fo 66.22 320 P P 18 03 38.4 +1.5
baz=130
TPNV Topopah Spring 66.53 322 P P 18 03 41.2 +2.3
baz=133,SNR=11
FURC Furnace Creek, 66.57 322 P P 18 03 41.2 +2.3
baz=132
AGMN Agassiz Nation 66.63 343 P P 18 03 38.0 -1.1
AGMN IAmb IAmb 18 03 39.9
comp=Z,17nm,0.8s
AGMN Agassiz Nation 66.63 343 P P 18 03 39.1 +0.1
baz=155,SNR=14
MPMC Manual Prospec 66.68 321 P P 18 03 41.1 +1.2
baz=131,SNR=7.7
DUG Dugway, Tooele 66.89 327 P P 18 03 42.7 +1.7
DUG pmax pmax
comp=Z,19nm,1.0s
DUG Dugway, Tooele 66.89 327 P P 18 03 42.7 +1.7
baz=136,SNR=13
VNA3 Neumayer Olymp 67.01 162 P P 18 03 43.1 +1.9
ISA Isabella, Lake 67.03 320 P P 18 03 44.0 +2.0
baz=130
R11A Troy Canyon, C 67.10 324 P P 18 03 44.5 +2.0
baz=134,SNR=13
PD31 Pinedale Array 67.18 331 P P 18 03 43.4 +0.5
PDAR Pinedale Array 67.18 331 P P 18 03 43.1 +0.2
comp=Z,2.3nm,0.6s,baz=126,slow=6.4,SNR=19
GRAC Grapevine Rang 67.23 322 P P 18 03 45.1 +2.0
baz=132
CWC Cottonwood Cre 67.29 321 P P 18 03 45.3 +1.6
baz=131
PKM Mcpherson Peak 67.38 319 P P 18 03 46.3 +2.0
baz=129,SNR=6.6
MDND Maddock 67.38 340 P P 18 03 45.0 +1.2
baz=151,SNR=7.0
VES Vestal, Richgr 67.52 320 P P 18 03 46.6 +1.6
baz=130
VNA2 Neumayer--Watz 67.59 161 P P 18 03 48.0 +3.2
baz=290,slow=7.4
ULM Lac du Bonnet 68.41 344 P P 18 03 49.8 -0.4
comp=Z,11nm,0.8s,baz=150,slow=6.3,SNR=24
ULM Lac du Bonnet 68.41 344 P P 18 03 49.5 -0.6
ULM IAmb IAmb 18 03 50.8
comp=Z,16nm,1.1s
ULM Lac du Bonnet 68.41 344c iP P 18 03 49.5 -0.6
LAO LASA Array 68.82 335 P P 18 03 54.0 +1.1
baz=144
RLMT Red Lodge 68.87 333 P P 18 03 54.4 +1.0
baz=141,SNR=7.9
H17A Grant Village 68.90 331 P P 18 03 55.5 +1.9
baz=140
YNE Yellowstone No 69.11 332 P P 18 03 56.3 +1.3
SNAA Sanae 69.21 162 P P 18 03 56.9 +1.9
SNAA Sanae 69.21 162 P P 18 03 56.7 +1.7

SNAA Sanae 69.21 162⇑eP P 18 03 56.6 +1.6
DGMT Dagmar 69.51 338 P P 18 03 58.6 +1.5
baz=146
LIC Lamto 69.54 77 eP P 18 03 54.2 -3.7
comp=Z,15nm,1.0s
TIC Toumodi 69.68 77 eP P 18 03 56.8 -2.0
SCHQ Schefferville 69.79 3 P P 18 04 00.6 +2.0
comp=Z,1.4nm,0.6s,baz=212,slow=6.1,SNR=3.7
DBIC Dimbokro 69.84 77 P P 18 04 01.4 +1.6
comp=Z,2.9nm,0.5s,baz=236,slow=6.7,SNR=12
DBIC Dimbokro 69.84 77 P P 18 03 57.7 -2.1
DBIC Dimbokro 69.84 77 P P 18 03 57.7 -2.1
KIC Kosan Boka 69.85 77 eP P 18 03 57.9 -2.0
comp=Z,6.7nm,0.7s
PAHR Pah Rah Range 70.20 323 P P 18 04 01.9 +0.2
PAHR IAmb IAmb 18 04 04.7
comp=Z,18nm,0.9s
EGMT Eagleton 71.34 334 P P 18 04 09.3 +1.1
baz=141,SNR=5.8
ORV Oroville 71.36 322 P P 18 04 09.3 +0.8
ORV pmax pmax
comp=Z,14nm,1.0s
MSO Missoula 72.29 331 P P 18 04 16.2 +2.2
baz=137,SNR=7.7
BMO Blue Mountains 72.53 328 P P 18 04 15.6 +0.1
BMO Blue Mountains 72.53 328 P P 18 04 15.6 +0.1
BMO pmax pmax
comp=Z,6.0nm,0.7s
M04C Macdoel 72.97 323 P P 18 04 19.7 +1.5
baz=129
WALA Waterton Lakes 73.92 333 P P 18 04 24.6 +1.0
J04D Umpqua Nationa 74.05 324 P P 18 04 26.3 +1.7
baz=129
I05D Terrebonne, OR 74.32 326 P P 18 04 28.3 +2.4
baz=130
FCC Fort Churchill 75.81 348 P P 18 04 33.9 -0.1
FCC Fort Churchill 75.81 348 P P 18 04 33.9 -0.1
FCC pmax pmax
comp=Z,10.0nm,1.1s
B05A Bryant 77.27 328 P P 18 04 43.5 +1.1
baz=130
TOA0 Torodi Ar. Sit 78.02 73 P P 18 04 46.3 -1.1
TORD Torodi Ar. Bea 78.02 73 P P 18 04 46.0 -1.4
comp=Z,12nm,0.8s,baz=254,slow=5.2,SNR=44
TORD Torodi Ar. Bea 78.02 73 P P 18 04 46.3 -1.1
FRB Frobisher Bay 78.64 2 P P 18 04 49.8 +0.1
FRB pmax pmax
comp=Z,29nm,0.9s
ESDC Sonseca Array 83.36 46 P P 18 05 15.9 +0.5
comp=Z,9.2nm,0.8s,baz=254,slow=4.9,SNR=34
ESDC Sonseca Array 83.36 46 P P 18 05 15.9 +0.5
SYO Syowa Base 83.45 160⇑eP P 18 05 15.0 -0.3
YKA Yellowknife Ar 84.25 342 P P 18 05 19.5 +0.2
comp=Z,12nm,0.7s,baz=136,slow=5.0,SNR=177
YKA pP pP 18 05 51.9 -0.5
comp=Z,2.0nm,0.8s,baz=137,slow=5.1,SNR=2.9
YKA LR LR 18 46 59.7
comp=Z,36nm,18.4s,baz=0.0,slow=38
TAM Tamanrasset 84.57 65 P P 18 05 23.0 +1.0
TAM pmax pmax
comp=Z,7.0nm,1.2s
TSUM Tsumeb 84.66 108 P P 18 05 23.9 +1.3
BOSA Boshof 88.98 119 P P 18 05 43.9 +0.5
comp=Z,2.4nm,0.7s,baz=253,slow=4.1,SNR=5.4
BOSA Boshof 88.98 119 P P 18 05 44.2 +0.8
BOSA IAmb IAmb 18 05 46.4
comp=Z,13nm,1.2s
BOSA Boshof 88.98 119 P P 18 05 44.2 +0.8
BOSA pmax pmax
comp=Z,13nm,1.3s
SUMG Summit 90.23 10 iP P 18 05 49.7 +1.2
comp=Z,96nm,0.9s
SUMG Summit 90.23 10 P P 18 05 49.9 +1.4
SUMG Summit 90.23 10 iP P 18 05 49.7 +1.2
RES Resolute Bay 90.76 354 P P 18 05 51.8 +1.4
RES Resolute Bay 90.76 354 P P 18 05 51.8 +1.4
RES pmax pmax
comp=Z,4.0nm,0.9s
INK Inuvik 94.00 341 P P 18 06 06.3 +0.9
INK pmax pmax
comp=Z,5.0nm,1.2s
ILAR Eielson Array 97.28 335 P Pdif 18 06 20.8 +0.2
comp=Z,0.8nm,0.8s,baz=142,slow=4.4,SNR=6.2
ILAR Eielson Array 97.28 335 P P 18 06 19.7 -0.8
ILAR Eielson Array 97.28 335 P P 18 06 19.7 -0.8
GERES GERESS Array B 98.35 42 P P 18 06 25.4 -0.4
comp=Z,0.9nm,0.7s,baz=296,slow=5.4,SNR=3.1
VYHS Vyhne 101.62 43 eP Pdif 18 06 40.1 -0.1
VYHS Vyhne 101.62 43 ePDIFF Pdif 18 06 40.1 -0.1
KBZ Khabaz 118.15 48 PKP PKiKP 18 11 35.6 +1.1
comp=Z,3.0nm,0.8s,baz=250,slow=1.7,SNR=7.5
TIXI Tiksi 122.12 352⇑ePKIKP PKPdf 18 11 41.3 0.0
SEY Seymchan 123.14 338⇓ePKIKP PKiKP 18 11 44.0 +0.3
ARU Arti 124.29 31 PKP PKiKP 18 11 46.8 +0.6
comp=Z,0.6nm,0.6s,baz=319,slow=8.9,SNR=3.8
AKTO Aktyubinsk 126.53 38 PKP PKiKP 18 11 52.1 +1.3
comp=Z,2.9nm,0.8s,baz=312,slow=3.1,SNR=10
ABKAR Akbulak array 128.14 38 PKiKP 18 11 55.6 +1.5
GEYT Alibeck 130.50 53 PKP PKiKP 18 11 59.4 +0.1
comp=Z,0.9nm,0.7s,baz=212,slow=7.7,SNR=3.0
YAK Yakutsk 130.68 347 PKP PKiKP 18 11 58.8 0.0
comp=Z,7.5nm,0.5s,baz=119,slow=1.1,SNR=3.8
YAK Yakutsk 130.68 347⇓ePKIKP PKPdf 18 11 58.4 +0.5
BVAR Borovoye Array 131.90 30 PKP PKiKP 18 12 02.9 +1.3
comp=Z,2.1nm,1.1s,baz=228,slow=1.8,SNR=4.9
ASAR Alice Springs 133.96 214 PKP PKiKP 18 12 06.5 -0.2
comp=Z,0.7nm,0.7s,baz=104,slow=2.1,SNR=10
WRA Warramunga Arr 136.67 217 PKP PKiKP 18 12 11.9 -0.4
comp=Z,1.5nm,0.7s,baz=139,slow=2.0,SNR=10.0
ZALV Zalesovo Beam 137.16 20 PKhKP PKPpre 18 12 05.3
comp=Z,0.7nm,0.6s,baz=338,slow=3.2,SNR=4.7
ZALV PKP PKiKP 18 12 11.9 -0.2
comp=Z,7.5nm,0.8s,baz=289,slow=3.0,SNR=23
ZALV pPKP pPKPdf 18 12 44.7 -0.6
comp=Z,4.1nm,0.8s,baz=295,slow=3.3,SNR=4.6
KURK Kurchatov 137.25 27⇑ePKIKP PKPdf 18 12 11.2 +0.6
KURBB Kurchatov Arra 137.27 28 PKP PKiKP 18 12 12.1 -0.4
comp=Z,0.8nm,0.6s,baz=305,slow=2.8,SNR=8.4
KLR Kul'dur 140.86 335 PKP PKiKP 18 12 18.8 -1.1
comp=Z,1.1nm,0.6s,baz=55,slow=9.8,SNR=3.9
KLR Kul'dur 140.86 335⇓ePKIKP PKPdf 18 12 18.2 +1.0
MK31 Makanchi Array 141.76 29⇓ePKIKP PKiKP 18 12 21.6 -0.3
MKAR Makanchi Array 141.76 29 PKhKP PKPpre 18 12 12.5
comp=Z,1.3nm,0.7s,baz=328,slow=3.0,SNR=17
KSH Kashi 142.82 43 PKP PKPdf 18 12 17.1 -4.1
KSH pPKP pPKPdf 18 12 47.6 -8.6
KSH sPKP 18 12 59.1
KSH PP PP 18 15 35.8 +4.8
KSH PKS PKSdf 18 15 52.5 -4.6
KSH AMB AMB
comp=Z,130nm,4.4s
KSH LR LR
comp=Z,76nm,4.4s
KSH LR LR
comp=Z,150nm,8.9s
KSH LR LR
comp=Z,350nm,6.5s
TLY Talaya 143.33 5 PKP PKPdf 18 12 20.6 -1.0
comp=Z,1.8nm,0.5s,baz=333,slow=11,SNR=5.2
TLY Talaya 143.33 5⇓iPKIKP PKPbc 18 12 20.4 +1.4
ZAK Zakamensk 144.59 5 ePKIKP PKPbc 18 12 23.5 +0.5
ZAK pmax pmax
comp=Z,11nm,1.1s
USRK Ussuriysk Ar. 144.60 330 PKP PKPbc 18 12 23.6 +0.5
comp=Z,7.5nm,0.9s,baz=14,slow=5.8,SNR=10.0
USRK Ussuriysk Ar. 144.60 330 PKPdf 18 12 23.8 -0.2
USRK Ussuriysk Ar. 144.60 330 PKIKP PKPdf 18 12 23.8 -0.2
MAJO Matsushiro 145.74 314 PKPab 18 12 27.7 +0.3
MAJO Matsushiro 145.74 314⇓iPKP2 PKPab 18 12 27.6 +0.2
MAT Matsushiro 145.74 314 PKP PKPbc 18 12 27.2 +0.3
MJAR Matsushiro Arr 145.74 314 PKPbc PKPbc 18 12 26.9 +0.1
comp=Z,12nm,0.9s,baz=104,slow=0.8,SNR=22
MJAR Matsushiro Arr 145.74 314 PKPab 18 12 27.6 +0.2
MJAR Matsushiro Arr 145.74 314 PKP2 PKPab 18 12 27.6 +0.2
MJB9 Matsu-Tunnel 145.74 314 PKPab 18 12 27.6 +0.2
WMQ Urumqi 146.49 27 ePKPbc PKPdf 18 12 28.2 +0.8
WMQ sPKP 18 13 02.8
WMQ PP PP 18 15 56.8 +4.5
WMQ AMB AMB
comp=Z,81nm,5.1s
WMQ LR LR
comp=Z,640nm,29.0s
WMQ LR LR
comp=Z,710nm,29.2s
WMQ LR LR

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,810nm,28.9s						
SONM	**Songino Array**	**147.33**	**2**	PKPbc	**PKPbc**	**18 12 30.9**	**-0.4**
	comp=Z,11nm,0.8s,baz=327,slow=1.9,SNR=69						
SONM				pPKPbc	**pPKPdf**	**18 13 04.9**	**+1.1**
	comp=Z,2.3nm,0.8s,baz=325,slow=2.3,SNR=2.8						
KSRS	**Korea Array**	**151.64**	**325**	PKPbc	**PKiKP**	**18 12 43.4**	**+1.0**
	comp=Z,10nm,0.7s,baz=4.9,slow=2.0,SNR=23						
PALK	**Pallekele**	**152.03**	**103**	PKPbc	**PKiKP**	**18 12 45.3**	**+1.3**
	comp=Z,7.2nm,0.9s,baz=206,slow=1.7,SNR=4.4						
HHC	**Hu-ho-hao-te**	**154.17**	**354**	*e*PKPbc	**PKPdf**	**18 12 38.7**	**-0.8**
GTA	**Gaotai**	**154.71**	**15**	PKPbc	**PKPdf**	**18 12 41.6**	**+1.3**
GTA				pPKP	PKPab	18 13 04.4	+0.3
GTA				sPKP		18 13 15.1	
LZH	**Lanzhou**	**158.75**	**10**	*e*PKP	**PKPdf**	**18 12 45.3**	**-0.3**
LZH				pPKP	pPKPdf	18 13 11.4	-9.5
LZH				sPKP		18 13 23.0	
LZH				LR	LR		
	comp=Z,130nm,18.1s						
LZH				LR	LR		
	comp=Z,140nm,18.0s						
LZH				LR	LR		
	comp=Z,150nm,20.2s						
NJ2	**Nanjing**	**160.49**	**332**	*e*PKP	**PKPdf**	**18 12 48.4**	**+0.9**
XAN	**Xi'an**	**161.13**	**358**	PKP	**PKPdf**	**18 12 49.8**	**+1.6**
WHN	**Wuhan**	**163.60**	**341**	PKP	**PKPdf**	**18 12 54.9**	**+4.2**
CD2	**Chengdu**	**163.76**	**14**	PKP	**PKPdf**	**18 12 50.0**	**-0.9**
CMAR	**Chiang Mai Arr**	**170.60**	**68**	PKP	**PKPdf**	**18 12 57.5**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=283,slow=3.1,SNR=5.5						
CMAR				PKPab	**PKPab**	**18 14 14.1**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=282,slow=5.9,SNR=21						

MAN 09 18:08:07.8, 14°.09N×120°.45E, h120km, mb4.2, ML3.0, MS2.7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.41**	**210**	*e*P	Pn	18 08 27.6	+2.4
LUBP				*e*S	Sn	18 08 40.9	+2.5
LQP	**Lukban**	**1.05**	**89**	⇓*i*P	Pn	18 08 32.8	+2.2
LQP				*i*S	Sn	18 08 51.5	+3.7
POLP	**Polilio Island**	**1.57**	**66**	*e*P	Pn	18 08 37.4	+1.3
POLP				*e*S	Sn	18 08 58.2	+0.6
SJMP	**San Jose**	**1.74**	**158**	*e*P	Pn	18 08 39.6	+1.4
SJMP				*e*S	Sn	18 09 02.5	+1.2
SCZP	**Santa Cruz**	**1.76**	**343**	*e*P	Pn	18 08 39.2	+1.0
SCZP				*e*S	Sn	18 09 02.7	+1.1
BALP	**Baler**	**1.97**	**33**	*e*P	Pn	18 08 41.6	+0.8
BALP				*e*S	Sn	18 09 07.7	+1.5
SMPP	**San Manuel, Pa**	**2.06**	**6**	*e*P	Pn	18 08 41.8	-0.2
SMPP				*e*S	Sn	18 09 08.1	-0.1
BUSP	**Coron**	**2.09**	**187**	*e*P	Pn	18 08 43.5	+1.1
BUSP				*e*S	Sn	18 09 09.3	+0.4
BOLP	**Bolinao**	**2.34**	**347**	*e*P	Pn	18 08 46.5	+1.0
BOLP				*e*S	Sn	18 09 15.8	+1.3
ENPP	**El Nido**	**3.04**	**199**	*e*P	Pn	18 08 55.7	+1.0
ENPP				*e*S	Sn	18 09 31.1	+0.4

IDC 09 18:13:47.0±4.0, 7°.94S×105°.79E, h0km, mb3.5/3, mb1 3.5/4, mb1mx3.3/44, mbtmp3.5/4, ML3.9/1, Error ellipse: s-maj=94.4km s-min=39.3km az=1.0, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	Lembang	2.12	59	Pn	Pn	18 14 23.2	-0.6
	42nm,0.3s,baz=16,slow=13,SNR=33						
LEM				Sn	Sg	18 15 01.4	+6.2
	42nm,0.3s,baz=339,slow=23,SNR=9.9						
SONM	**Songino Array**	**55.53**	**0**	P	P	18 23 24.9	+0.8
	0.2nm,0.5s,baz=186,slow=4.2,SNR=3.0						
MKAR	**Makanchi Array**	**58.37**	**341**	P	P	18 23 44.1	0.0
	0.2nm,0.5s,baz=142,slow=7.9,SNR=5.2						
BVAR	**Borovoye Array**	**67.77**	**338**	P	P	18 24 45.3	-1.1
	0.4nm,0.6s,baz=132,slow=6.2,SNR=4.0						
TXAR	**Lajitas Array**	**145.08**	**49**	PKPbc	PKPbc	18 33 26.2	-0.5
	0.2nm,0.6s,baz=308,slow=4.4,SNR=3.4						

NEIC 09 18:38:03.6±1.6, 4°.91S±0°.10×153°.8E±0°.1, h107km±5km, mb4.1/10, Error ellipse: s-maj=15.4km s-min=13.0km az=48.0
IDC 09 18:38:05.4±4.1, 4°.91S×153°.66E, h115km±37km, mb3.4/9, mb1 3.7/10, mb1mx3.5/39, mbtmp3.8/10, MS3.3/1, Ms1 3.2/1, ms1mx2.7/13, Error ellipse: s-maj=22.7km s-min=21.5km az=22.0
ISC 09 18:38:03.2±0.7, 4°.86S±0°.08×153°.73E±0°.09, h100km, n29, σ1°.59/25, mb3.8/13, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.70**	**293**	Pn	**Pn**	**18 38 32.9**	**+1.0**
RABL				Sn	**Sn**	**18 38 57.4**	**+3.6**
MANU	**Manus Island**	**6.94**	**294**	Pn	**Pn**	**18 39 43.0**	**+0.7**
HNR	**Honiara**	**7.66**	**127**	P	Pn	18 40 07.0	+15
PMG	**Port Moresby**	**7.93**	**235**	P	**Pn**	**18 39 56.6**	**+0.8**
	7.8nm,0.3s,baz=53,slow=0.5,SNR=26						
PMG				S	**Sn**	**18 41 24.5**	**+0.7**
	13nm,0.3s,baz=110,slow=20,SNR=11						
PMG	**Port Moresby**	**7.93**	**235**		**Pn**	**18 39 56.2**	**+0.5**
PATS	**Pohnpei**	**12.49**	**22**	Pn	**Pn**	**18 40 55.6**	**-1.8**
COEN	**Coen**	**13.78**	**228**	Pn	**Pn**	**18 41 10.0**	**-4.4**
DZM	**Mont Dzumac**	**21.08**	**145**	P	**P**	**18 42 41.5**	**+1.8**
	2.6nm,0.5s,baz=274,slow=13,SNR=4.5						
WB0	**Warramunga Arr**	**23.96**	**230**	P	**P**	**18 43 08.6**	**+0.1**
WB0				IAmb	IAmb	18 43 09.8	
	comp=Z,4.4nm,0.8s						
WR0	**Warramunga Arr**	**23.96**	**230**	P	**P**	**18 43 07.2**	**-1.3**
WR0				IAmb	IAmb	18 43 10.4	
	comp=Z,8.5nm,1.1s						
WRAB	**Tennant Creek**	**24.09**	**230**	P	**P**	**18 43 09.1**	**-0.5**
WRAB				IAmb	IAmb	18 43 10.9	
	comp=Z,4.8nm,0.7s						
WB2	**Warramunga Arr**	**24.09**	**230**	P	**P**	**18 43 10.2**	**+0.5**
WB2				IAmb	IAmb	18 43 19.2	
	comp=Z,17nm,1.5s						
WRA	**Warramunga Arr**	**24.10**	**230**	P	**P**	**18 43 10.4**	**+0.7**
	comp=Z,4.1nm,0.7s,baz=54,slow=10.0,SNR=24						
WRA	**Warramunga Arr**	**24.10**	**230**	IAmb	IAmb	18 43 10.9	
	comp=Z,0.2nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**26.50**	**28**	T	T	19 12 18.0	
	baz=208,slow=76,SNR=5.3						
H11S2	**WAKE ISLAND Hy**	**26.50**	**29**	T	T	19 12 17.3	
	baz=208,slow=76,SNR=4.9						
H11S1	**WAKE ISLAND Hy**	**26.51**	**29**	T	T	19 12 12.0	
	baz=208,slow=76,SNR=4.8						
AS31	**Alice Springs**	**26.73**	**224**	P	**P**	**18 43 33.7**	**+0.1**
ASAR	**Alice Springs**	**26.73**	**224**	P	**P**	**18 43 33.2**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=55,slow=9.1,SNR=16						
STKA	**Stephens Creek**	**29.18**	**202**	P	**P**	**18 43 54.8**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=21,slow=5.6,SNR=3.4						
STKA				LR	LR	18 56 01.1	
	comp=Z,50nm,19.0s,baz=206,slow=37						
STKA	**Stephens Creek**	**29.18**	**202**	IAmb	IAmb	18 43 58.5	
	comp=Z,2.1nm,1.5s						
FITZ	**Fitzroy Crossi**	**30.44**	**242**	P	**P**	**18 44 04.8**	**-1.8**
CMAR	**Chiang Mai Arr**	**58.74**	**295**	P	**P**	**18 47 51.9**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=131,slow=4.2,SNR=3.4						
SONM	**Songino Array**	**66.87**	**327**	P	**P**	**18 48 45.8**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=162,slow=1.3,SNR=3.5						
SONM	**Songino Array**	**66.87**	**327**	IAmb	IAmb	18 48 47.0	
	comp=Z,0.5nm,0.9s						
MKAR	**Makanchi Array**	**80.98**	**319**	P	**P**	**18 50 07.3**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=92,slow=8.1,SNR=11						
ILAR	**Eielson Array**	**81.87**	**22**	P	**P**	**18 50 10.6**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=244,slow=4.8,SNR=14						
NVAR	**Mina Array Bea**	**91.40**	**52**	P	**P**	**18 51 01.0**	**+2.3**
	comp=Z,0.3nm,0.5s,baz=253,slow=6.3,SNR=3.1						
TORD	**Torodi Ar. Bea**	**151.20**	**288**	PKPbc	**PKPbc**	**18 57 45.4**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=82,slow=2.7,SNR=11						
TORD				PKPab	**PKPab**	**18 57 54.2**	**0.0**
	comp=Z,0.6nm,0.5s,baz=87,slow=1.8,SNR=9.6						

IDC 09 19:33:19.3±2.7, 47°.69N×129°.62W, h0km, mb3.3/3, mb1 3.6/8, mb1mx3.4/49, mbtmp3.3/8, ML3.7/5, MS3.3/14, Ms1 3.3/14, ms1mx2.2/27, Error ellipse: s-maj=51.9km s-min=18.5km az=64.0
PGC 09 19:33:21.1±1.8, 47°.67N×129°.09W, h10km, MLSn2.9/18, Mw3.6/18, 286km Wsw of Tofino, Bc Off Coast Of Washington
ISC 09 19:33:23.3±1.2, 47°.87N±0°.08×128°.86W±0°.06, h8km±10km, n44, σ1°.31/40, mb3.2/3, MS3.1/6, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMF	**NEPTUNE Canada**	**0.18**	**298**	P	**Pg**	**19 33 26.1**	**-0.8**
KEMF				S	**Sg**	**19 33 30.0**	**+0.8**
NC27	**ODP1027**	**0.75**	**97**	S	**Sg**	**19 33 47.7**	**+0.3**
NC89	**ODP889**	**1.57**	**58**	Sn	**Sn**	**19 34 11.3**	**-0.3**
EDB	**Eliza Dome**	**2.32**	**29**	Pn	**Pn**	**19 34 01.1**	**-0.6**
OZB	**Mount Ozzard**	**2.50**	**63**	Pn	**Pn**	**19 34 03.1**	**-1.2**
OZB				Sn	**Sn**	**19 34 34.4**	**-0.6**
B928	**Bamfield**	**2.67**	**67**	Pn	**Pn**	**19 34 05.8**	**-0.6**
GDR	**Gold River**	**2.68**	**43**	Pn	**Pn**	**19 34 06.9**	**+0.2**
BTB	**Buttle Lake**	**2.73**	**53**	Pn	**Pn**	**19 34 07.4**	**-0.2**
BTB				Sn	**Sn**	**19 34 40.4**	**-0.5**
WOSB	**Woss**	**2.75**	**32**	Pn	**Pn**	**19 34 07.9**	**+0.2**
MAYB	**Maynard**	**2.77**	**23**	Pn	**Pn**	**19 34 07.9**	**-0.2**
SPLB	**Strathcona Par**	**2.93**	**45**	Pn	**Pn**	**19 34 10.7**	**+0.6**
TLCB	**Telegraph Cove**	**3.00**	**26**	Pn	**Pn**	**19 34 11.3**	**+0.3**
MGB	**Mount Grey**	**3.00**	**66**	Pn	**Pn**	**19 34 10.5**	**-0.8**
PFB	**Port Renfrew**	**3.04**	**75**	Pn	**Pn**	**19 34 10.4**	**-1.3**
PFB				Sn	**Sn**	**19 34 46.8**	**-1.4**
NCRB	**Newcastle Ridg**	**3.14**	**35**	Pn	**Pn**	**19 34 13.7**	**+0.6**
NCRB				Sn	**Sn**	**19 34 52.0**	**+1.2**
CBB	**Campbell River**	**3.17**	**45**	Pn	**Pn**	**19 34 14.0**	**+0.6**
CBB				Sn	**Sn**	**19 34 52.4**	**+1.1**
YOUB	**Youbou, Lake C**	**3.24**	**70**	Pn	**Pn**	**19 34 13.6**	**-0.8**
YOUB				Sn	**Sn**	**19 34 53.5**	**+0.4**
B926	**Mesachie Lake**	**3.30**	**71**	Pn	**Pn**	**19 34 14.5**	**-0.7**
B926				Sn	**Sn**	**19 34 54.7**	**+0.2**
LZB	**Mount Lazard**	**3.45**	**76**	Pn	**Pn**	**19 34 15.9**	**-1.4**
TXB	**Texada**	**3.45**	**56**	Pn	**Pn**	**19 34 17.6**	**+0.2**
NLLB	**Nanaimo Lost L**	**3.51**	**65**	Pn	**Pn**	**19 34 18.1**	**0.0**
SHB	**Sechelt**	**3.73**	**60**	Pn	**Pn**	**19 34 21.2**	**0.0**
SHB				Sn	**Sn**	**19 35 05.8**	**+0.4**
BBB	**Bella Bella**	**4.35**	**6**	Pn	**Pn**	**19 34 30.3**	**+0.7**
	4.1nm,0.3s,baz=195,slow=14,SNR=30						
BBB	**Bella Bella**	**4.35**	**6**	Pn	**Pn**	**19 34 30.3**	**+0.7**
YBH	**Yreka Blue Hor**	**7.53**	**142**	LR	LR	19 37 55.0	
	comp=Z,246nm,18.5s,baz=322,slow=36						
NEW	**Newport**	**7.88**	**83**	LR	LR	19 38 29.1	
	comp=Z,328nm,20.2s,baz=266,slow=37						
NVAR	**Mina Array Bea**	**12.17**	**137**	Pn	**Pn**	**19 36 19.8**	**+2.7**
	0.1nm,0.3s,baz=325,slow=11,SNR=3.3						
NVAR				LR	LR	19 40 52.8	
	comp=Z,241nm,18.1s,baz=346,slow=36						
PDAR	**Pinedale Array**	**14.50**	**103**	P	**P**	**19 36 53.8**	**-1.9**
	0.1nm,0.3s,baz=288,slow=11,SNR=4.5						
PDAR				LR	LR	19 42 33.9	
	comp=Z,153nm,20.6s,baz=323,slow=37						
YKA	**Yellowknife Ar**	**16.70**	**23**	P	**P**	**19 37 19.2**	**-0.5**
	0.2nm,0.3s,baz=215,slow=12,SNR=7.3						
YKA				LR	LR	19 43 49.8	
	comp=Z,62nm,20.7s,baz=0.0,slow=37						
PFO	**Pinyon Flats O**	**17.03**	**142**	LR	LR	19 43 59.7	
	comp=Z,64nm,18.4s,baz=172,slow=37						
KDAK	**Kodiak Island**	**17.34**	**314**	LR	LR	19 42 18.5	
	comp=Z,121nm,19.5s,baz=130,slow=32						
ILAR	**Eielson Array**	**19.54**	**337**	P	**P**	**19 37 46.4**	**-4.6**
	0.1nm,0.3s,baz=121,slow=11,SNR=6.1						
ILAR				LR	LR	19 44 38.6	
	comp=Z,57nm,18.6s,baz=161,slow=35						
INK	**Inuvik**	**20.64**	**355**	LR	LR	19 46 47.9	
	comp=Z,64nm,18.2s,baz=304,slow=39						
ANMO	**Albuquerque**	**21.10**	**120**	P	**P**	**19 38 09.2**	**+0.9**
	0.9nm,0.8s,baz=316,slow=9.2,SNR=3.9						
ANMO				LR	LR	19 46 25.2	
	comp=Z,61nm,20.2s,baz=328,slow=37						
ULM	**Lac du Bonnet**	**21.65**	**71**	P	**P**	**19 38 17.2**	**+3.3**
	1.0nm,0.4s,baz=303,slow=11,SNR=4.7						
ULM				LR	LR	19 47 07.8	
	comp=Z,121nm,18.9s,baz=281,slow=37						
TXAR	**Lajitas Array**	**26.83**	**125**	P	**P**	**19 39 05.1**	**+1.0**
	0.3nm,0.9s,baz=316,slow=8.8,SNR=2.5						
TXAR				LR	LR	19 50 20.3	
	comp=Z,63nm,19.8s,baz=0.0,slow=38						
LPIG	**La Paz**	**27.92**	**142**	LR	LR	19 50 22.9	
	comp=Z,27nm,18.4s,baz=18,slow=36						
H11N2	**WAKE ISLAND Hy**	**58.41**	**265**	T	T	20 46 16.4	
	baz=45,slow=75,SNR=11						
H11N3	**WAKE ISLAND Hy**	**58.41**	**265**	T	T	20 46 16.5	
	baz=45,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**58.43**	**265**	T	T	20 46 17.6	
	baz=45,slow=75,SNR=8.8						
H11S1	**WAKE ISLAND Hy**	**59.40**	**264**	T	T	20 47 30.1	
H11S2	**WAKE ISLAND Hy**	**59.41**	**264**	T	T	20 47 31.4	
H11S3	**WAKE ISLAND Hy**	**59.42**	**264**	T	T	20 47 33.6	
KSRS	**Korea Array**	**71.02**	**305**	LR	LR	20 12 58.4	
	comp=Z,11nm,19.7s,baz=235,slow=34						

NEIC 09 19:47:33.1±2.7, 47°.77N±0°.07×128°.92W±0°.10, h10km±2km, mb3.3, Mwr3.4(OTT), Error ellipse: s-maj=10.8km s-min=8.6km az=138.0
PGC 09 19:47:33.3±7.6, 47°.72N×129°.06W, h10km, MLSn2.8/15, Mw3.4/15, 281km Wsw of Tofino, Bc Off Coast Of Washington
IDC 09 19:47:35.2±2.9, 47°.81N×128°.84W, h0km, mb3.1/1, mb1 3.4/6, mb1mx3.3/52, mbtmp3.2/6, ML3.3/4, MS3.1/8, Ms1 3.1/8, ms1mx2.9/15, Error ellipse: s-maj=57.0km s-min=17.4km az=63.0
ISC 09 19:47:33.5±0.9, 47°.79N±0°.07×128°.87W±0°.05, h13km, n57, σ1°.52/54, MS3.0/3, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMF	**NEPTUNE Canada**	**0.22**	**316**	P	**Pg**	**19 47 37.3**	**-0.9**
KEMF				S	**Sg**	**19 47 40.9**	**-0.4**
KEMF	**NEPTUNE Canada**	**0.22**	**316**		**Pg**	**19 47 37.3**	**-0.9**
KEMF					**Sg**	**19 47 40.9**	**-0.4**
NC27	**ODP1027**	**0.75**	**92**	P	**Pg**	**19 47 46.2**	**-1.8**
NC27				S	**Sb**	**19 47 59.8**	**+1.6**
NC27	**ODP1027**	**0.75**	**92**		**Pg**	**19 47 46.2**	**-1.8**
NC27					**Sb**	**19 47 59.8**	**+1.6**
GDR	**Gold River**	**2.74**	**42**	Pn	**Pn**	**19 48 17.9**	**+0.8**
BTB	**Buttle Lake**	**2.78**	**52**	Pn	**Pn**	**19 48 18.3**	**+0.4**
BTB				Sn	**Sn**	**19 48 50.9**	**-0.6**
WOSB	**Woss**	**2.81**	**32**	Pn	**Pn**	**19 48 19.0**	**+0.7**
WOSB	**Woss**	**2.81**	**32**	Pn	**Pn**	**19 48 19.0**	**+0.7**
MAYB	**Maynard**	**2.84**	**22**	Pn	**Pn**	**19 48 19.1**	**+0.4**
MAYB	**Maynard**	**2.84**	**22**	Pn	**Pn**	**19 48 19.1**	**+0.4**
SPLB	**Strathcona Par**	**2.99**	**44**	Pn	**Pn**	**19 48 21.6**	**+1.0**
SPLB	**Strathcona Par**	**2.99**	**44**	Pn	**Pn**	**19 48 21.6**	**+1.0**
MGB	**Mount Grey**	**3.03**	**65**	Pn	**Pn**	**19 48 21.7**	**+0.3**
TLCB	**Telegraph Cove**	**3.07**	**25**	Pn	**Pn**	**19 48 22.9**	**+1.3**
TLCB	**Telegraph Cove**	**3.07**	**25**	Pn	**Pn**	**19 48 22.9**	**+1.3**
NCRB	**Newcastle Ridg**	**3.20**	**34**	Pn	**Pn**	**19 48 24.9**	**+1.2**
NCRB	**Newcastle Ridg**	**3.20**	**34**	Pn	**Pn**	**19 48 24.9**	**+1.2**
CBB	**Campbell River**	**3.22**	**44**	Pn	**Pn**	**19 48 25.2**	**+1.4**
CBB				Sn	**Sn**	**19 49 01.8**	**-0.2**
YOUB	**Youbou, Lake C**	**3.27**	**68**	Pn	**Pn**	**19 48 25.1**	**+0.6**
YOUB	**Youbou, Lake C**	**3.27**	**68**	Pn	**Pn**	**19 48 25.1**	**+0.6**
B926	**Mesachie Lake**	**3.33**	**70**	Pn	**Pn**	**19 48 25.6**	**+0.3**
B926				Sn	**Sn**	**19 49 04.7**	**+0.1**
B926	**Mesachie Lake**	**3.33**	**70**	Pn	**Pn**	**19 48 25.6**	**+0.3**
B926				Sn	**Sn**	**19 49 04.7**	**+0.1**
NLWA	**Neilton Lookou**	**3.41**	**95**	Pn	**Pn**	**19 48 27.1**	**+0.8**
TXB	**Texada**	**3.50**	**55**	Pn	**Pn**	**19 48 28.8**	**+1.1**
SHB	**Sechelt**	**3.77**	**59**	Pn	**Pn**	**19 48 32.4**	**+1.0**
F03A	**Seaside**	**4.09**	**115**	Pn	**Pn**	**19 48 37.0**	**+1.2**
BBB	**Bella Bella**	**4.43**	**6**	Pn	**Pn**	**19 48 41.8**	**+1.5**
	1.2nm,0.3s,baz=186,slow=2.1,SNR=23						
BBB	**Bella Bella**	**4.43**	**6**	Pn	**Pn**	**19 48 41.5**	**+1.2**
HNBB	**Haney**	**4.44**	**68**	Pn	**Pn**	**19 48 42.9**	**+2.3**
LON	**Longmire**	**4.91**	**100**	Pn	**Pn**	**19 48 49.6**	**+2.4**
LLLB	**Lillooet**	**5.38**	**56**	Pn	**Pn**	**19 48 56.0**	**+2.5**
H04A	**Detroit Lake**	**5.58**	**121**	Pn	**Pn**	**19 48 58.9**	**+2.6**
H02S1	**DAWSON INLET T**	**5.89**	**338**	T	T	19 53 56.1	
	SNR=144						
H02N1	**VAN INLET T-PH**	**5.95**	**338**	T	T	19 53 58.3	
	SNR=54						
E07A	**Sunnyside**	**6.27**	**98**	Pn	**Pn**	**19 49 06.8**	**+1.1**
YBH	**Yreka Blue Hor**	**7.47**	**142**	LR	LR	19 52 05.7	
	comp=Z,78nm,18.4s,baz=331,slow=36						
NEW	**Newport**	**7.89**	**82**	LR	LR	19 52 39.6	
	comp=Z,150nm,20.8s,baz=287,slow=39						
NVAR	**Mina Array Bea**	**12.12**	**137**	Pn	Pn	19 50 31.1	+5.1
	0.0nm,0.3s,baz=303,slow=12,SNR=3.3						
NVAR				LR	LR	19 54 24.7	
	comp=Z,49nm,19.6s,baz=1.0,slow=34						
NVAR	**Mina Array Bea**	**12.12**	**137**		**Pn**	**19 50 24.5**	**-1.5**
SKAG	**Skagway**	**12.30**	**344**	Pn	**Pn**	**19 50 27.9**	**-0.3**
OMMB	**Old Mammoth Mi**	**12.48**	**141**	Pn	**Pn**	**19 50 28.0**	**-3.1**
TPNV	**Topopah Spring**	**14.27**	**135**	Pn	**Pn**	**19 50 54.7**	**-0.7**
PDAR	**Pinedale Array**	**14.48**	**103**	Pn	**P**	**19 51 04.0**	**-1.0**
	0.1nm,0.3s,baz=297,slow=8.0,SNR=3.6						
PDAR				LR	LR	19 56 45.7	
	comp=Z,75nm,19.0s,baz=328,slow=38						
PDAR	**Pinedale Array**	**14.48**	**103**	Pn	**Pn**	**19 50 56.1**	**-2.2**
MESA	**MESA**	**14.56**	**333**	Pn	**Pn**	**19 50 58.1**	**-1.2**
KNB	**Kanab**	**15.98**	**127**	Pn	**Pn**	**19 51 16.5**	**-1.6**
O20A	**White River Ci**	**16.67**	**110**		**P**	**19 51 28.6**	**-0.8**
O20A				IAmb	IAmb	19 51 42.4	
	comp=Z,2.3nm,1.0s						
YKA	**Yellowknife Ar**	**16.77**	**23**	Pn	**Pn**	**19 51 29.1**	**+1.2**
	baz=218,slow=11,SNR=5.8						
PFO	**Pinyon Flats O**	**16.97**	**142**	Pn	**Pn**	**19 51 30.7**	**0.0**
PFO				IAmb	IAmb	19 51 49.6	
	comp=Z,3.4nm,1.1s						
KDAK	**Kodiak Island**	**17.40**	**314**	LR	LR	19 56 20.5	
	comp=Z,78nm,19.3s,baz=127,slow=30						
ILAR	**Eielson Array**	**19.61**	**337**	P	**Pn**	**19 52 04.4**	**+1.7**
	comp=Z,0.0nm,0.3s,baz=152,slow=8.8,SNR=4.6						
ANMO	**Albuquerque**	**21.06**	**119**	P	**P**	**19 52 22.9**	**+5.4**
	comp=Z,0.6nm,0.6s,baz=324,slow=13,SNR=3.6						
ANMO				LR	LR	20 01 18.4	
	comp=Z,29nm,19.2s,baz=322,slow=39						
ULM	**Lac du Bonnet**	**21.68**	**71**	LR	LR	20 01 01.8	
	comp=Z,61nm,18.6s,baz=132,slow=37						
TXAR	**Lajitas Array**	**26.79**	**124**	LR	LR	20 04 48.6	
	comp=Z,48nm,18.0s,baz=0.0,slow=39						
H11N2	**WAKE ISLAND Hy**	**58.41**	**265**	T	T	21 00 32.4	
	baz=45,slow=75,SNR=6.1						
H11N3	**WAKE ISLAND Hy**	**58.41**	**265**	T	T	21 00 24.8	
	baz=45,slow=75,SNR=7.5						
H11N1	**WAKE ISLAND Hy**	**58.42**	**265**	T	T	21 00 30.2	
	baz=45,slow=75,SNR=4.0						

IDC 09 19:49:57.5±5.6, 51°.33N×155°.14E, h134km±31km, mb3.3/5, mb1 3.6/6, mb1mx3.1/54, mbtmp3.6/6, MS3.0/1, Ms1 3.0/1, ms1mx2.2/26, Error ellipse: s-maj=87.2km s-min=25.8km az=0.0
KRSC 09 19:49:58.8±1.1, 50°.89N×157°.03E, h121km±10km, ML3.8
ISC 09 19:50:00.3±1.0, 50°.9N±0°.1×156°.9E±0°.1, h119km±8km, n24, σ0°.77/30, mb3.5/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**0.53**	**356**	*i* P	**Pn**	**19 50 17.9**	**-0.3**
PAU				*e*S	**Sn**	**19 50 31.3**	**-0.5**
SKR	**Severo-Kuril's**	**0.54**	**242**	*i* P	**Pn**	**19 50 18.6**	**+0.3**
SKR				*e*S	**Sn**	**19 50 32.5**	**+0.6**
KDTR	**Khodutka, Kamc**	**1.15**	**41**	*e*P	**Pn**	**19 50 23.8**	**+0.1**
KDTR				*e*S	**Sn**	**19 50 41.4**	**-0.1**
MTVR	**Mutnovka**	**1.75**	**27**	*e*P	**Pn**	**19 50 30.5**	**-0.2**
RUS	**Russkaya**	**1.81**	**34**	*e*P	**Pn**	**19 50 31.4**	**+0.1**
RUS				*e*S	**Sn**	**19 50 54.4**	**-0.6**
APC	**Apacha**	**1.99**	**5**	*e*P	**Pn**	**19 50 32.8**	**-0.8**
PETK	**Petropavlovsk-**	**2.23**	**13**	P	**Pn**	**19 50 36.4**	**-0.1**
	3.3nm,0.3s,baz=179,slow=13,SNR=52						
PETK				S	Sn	19 51 16.8	+12
	0.7nm,0.3s,baz=96,slow=38,SNR=2.5						
DALK	**Dalny**	**2.40**	**28**	*e*P	**Pn**	**19 50 38.9**	**+0.3**
DALK				*e*S	**Sn**	**19 51 08.6**	**+0.6**
UGLR	**Uglovaya**	**2.57**	**27**	*e*P	**Pn**	**19 50 42.7**	**+1.7**
UGLR				*e*S	**Sn**	**19 51 13.7**	**+1.4**
KOK	**Koryaka**	**2.59**	**24**	*e*P	**Pn**	**19 50 42.1**	**+0.8**
AVH	**Avacha**	**2.60**	**26**	*e*P	**Pn**	**19 50 41.4**	**+0.1**
AVH				*e*S	**Sn**	**19 51 13.8**	**+0.9**
SMAR	**Somma**	**2.61**	**26**	*e*P	**Pn**	**19 50 42.2**	**+0.5**
KRER	**Koryakskii**	**2.63**	**25**	*e*S	**Sn**	**19 51 15.0**	**+1.1**
SDLR	**Sedlovina**	**2.65**	**27**	*e*P	**Pn**	**19 50 42.3**	**+0.3**
SDLR				*e*S	**Sn**	**19 51 13.9**	**-0.2**
KRX	**Arik**	**2.66**	**24**	*e*P	**Pn**	**19 50 42.9**	**+0.7**
TUMR	**Tumrok**	**4.78**	**23**	*e*P	**Pn**	**19 51 10.9**	**+0.7**
KBTR	**Krutoberegovo**	**6.35**	**32**	*e*P	**Pn**	**19 51 30.4**	**-1.0**
BKI	**Bering**	**6.95**	**49**	*e*P	**Pn**	**19 51 38.6**	**-0.8**
ILAR	**Eielson Array**	**31.75**	**43**	P	**P**	**19 56 11.7**	**-1.0**
	0.6nm,0.7s,baz=266,slow=6.3,SNR=12						
GUMO	**Guam**	**38.51**	**199**	LR	LR	20 11 25.8	
	comp=Z,20nm,19.6s,baz=234,slow=33						
ZALV	**Zalesovo Beam**	**42.28**	**303**	P	P	19 57 27.9	-14
	1.1nm,0.3s,baz=67,slow=3.7,SNR=5.2						
YKA	**Yellowknife Ar**	**46.10**	**40**	P	**P**	**19 58 11.2**	**-0.8**
	0.3nm,0.5s,baz=292,slow=7.2,SNR=4.0						
NVAR	**Mina Array Bea**	**58.39**	**67**	P	**P**	**19 59 44.5**	**+1.1**
	0.4nm,0.7s,baz=320,slow=8.3,SNR=3.0						
TXAR	**Lajitas Array**	**73.34**	**64**	P	**P**	**20 01 19.5**	**+0.3**
	0.6nm,0.8s,baz=293,slow=4.8,SNR=6.4						

IDC 09 19:54:46.1±2.0, 33°.98N×89°.53E, h0km, mb3.7/3, mb1 3.8/8, mb1mx3.5/51, mbtmp3.7/8, ML3.2/5, MS3.5/5, Ms1 3.5/5, ms1mx3.0/48, Error ellipse: s-maj=44.3km s-min=29.4km az=55.0
ISC 09 19:54:55.6±3.5, 34°.6N±0°.4×89°.5E±0°.2, h33km, n11, σ1°.05/7, MS3.2/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**13.32**	**338**	Pn	**Pn**	**19 58 01.6**	**-0.7**
	0.1nm,0.3s,baz=152,slow=13,SNR=6.3						
AAK	**Ala-Archa**	**14.18**	**309**	Pn	**Pn**	**19 58 14.8**	**+0.6**
	0.0nm,0.3s,baz=350,slow=14,SNR=3.1						
KURBB	**Kurchatov Arra**	**17.88**	**337**	P	**Pn**	**19 59 01.3**	**-0.3**
	0.2nm,0.3s,baz=148,slow=12,SNR=5.7						
CMAR	**Chiang Mai Arr**	**18.16**	**150**	P	P	19 58 52.5	-13
	0.1nm,0.3s,baz=326,slow=13,SNR=5.6						
CMAR				LR	LR	20 06 29.5	
	comp=Z,48nm,18.8s,baz=210,slow=40						
SONM	**Songino Array**	**18.28**	**39**	P	**P**	**19 59 07.4**	**+0.7**
	0.1nm,0.3s,baz=232,slow=9.5,SNR=6.6						
ZALV	**Zalesovo Beam**	**19.61**	**352**	P	**Pn**	**19 59 22.1**	**-0.3**
	3.7nm,0.7s,baz=170,slow=11,SNR=16						
ZALV				LR	LR	20 07 57.3	
	comp=Z,65nm,18.4s,baz=280,slow=39						
BVAR	**Borovoye Array**	**22.86**	**329**	P	**P**	**19 59 57.1**	**+1.1**
	1.2nm,0.8s,baz=143,slow=12,SNR=5.3						
GEYT	**Alibeck**	**25.44**	**287**	LR	LR	20 12 06.5	
	comp=Z,77nm,19.8s,baz=10.0,slow=40						
AKTO	**Aktyubinsk**	**27.80**	**314**	LR	LR	20 13 43.5	
	comp=Z,53nm,18.0s,baz=74,slow=40						
ASAJ	**Asahikawa**	**41.51**	**60**	LR	LR	20 20 20.5	
	comp=Z,574nm,20.4s,baz=171,slow=37						
GERES	**GERESS Array B**	**56.06**	**309**	P	**P**	**20 04 30.1**	**-1.3**
	0.8nm,0.8s,baz=66,slow=7.5,SNR=4.3						

IDC 09 20:18:15.7±1.2, 56°.28N×154°.20W, h0km, mb3.9/18, mb1 4.0/19, mb1mx3.8/54, mbtmp3.9/19, ML3.2/1, MS3.1/2, Ms1 3.2/2, ms1mx2.7/34, Error ellipse: s-maj=31.0km s-min=18.3km az=170.0
AEIC 09 20:18:19.4±1.9, 56°.30N±0°.04×153°.94W±0°.08, h11km±4km, ML3.5/58, mb3.9/8(NEIC), Error ellipse: s-maj=6.5km s-min=5.4km az=84.0
NEIC 09 20:18:20.1±1.3, 56°.36N±0°.04×154°.10W±0°.07, h26km±5km, Error ellipse: s-maj=7.0km s-min=3.9km az=51.0
ISC 09 20:18:18.5±1.1, 56°.27N±0°.05×153°.94W±0°.05, h20km±4km, n100, σ1°.01/104, mb4.0/18, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SII	**Sitkinak Islan**	**0.32**	**335**		**Pg**	**20 18 25.5**	**-0.1**
SII					**Sb**	**20 18 30.1**	**-0.2**
OHAK	**Old Harbor**	**1.02**	**20**		**Pb**	**20 18 37.6**	**0.0**
OHAK					**Sg**	**20 18 51.0**	**-0.8**
CHIR	**Chirikof Islan**	**1.04**	**245**		**Pg**	**20 18 37.5**	**-1.3**
KDAK	**Kodiak Island**	**1.69**	**26**	Pn	**Pn**	**20 18 47.0**	**+0.1**
	30nm,0.3s,baz=219,slow=8.2,SNR=426						
KDAK				Sn	**Sg**	**20 19 13.7**	**+0.6**
	90nm,0.3s,baz=50,slow=14,SNR=15						
PLK3	**Peulik 3**	**1.91**	**319**		**Pn**	**20 18 49.4**	**-0.6**
PLK3					**Sn**	**20 19 13.4**	**0.0**
PLK2	**Peulik 2**	**1.98**	**320**		**Pn**	**20 18 50.8**	**-0.2**
PLK2					**Sn**	**20 19 15.9**	**+0.6**
ACHA	**Angle Creek He**	**2.09**	**339**		**Pn**	**20 18 51.9**	**-0.5**
ACHA					LR	20 19 19.9	
ANCK	**Angle Creek**	**2.11**	**337**		**Pn**	**20 18 52.1**	**-0.7**
PLK1	**Peulik 1**	**2.12**	**318**		**Pn**	**20 18 52.4**	**-0.4**
PLBL	**Peulik Blue Cr**	**2.13**	**314**		**Pn**	**20 18 53.4**	**+0.4**
KABU	**Katmai Buttres**	**2.13**	**341**		**Pn**	**20 18 53.0**	**-0.1**
KABU					LR	20 19 20.9	
KAHG	**Katmai Hook Gl**	**2.25**	**352**		**Pn**	**20 18 55.1**	**+0.3**
KAHG					**Sn**	**20 19 23.5**	**+1.5**
KARR	**Katmai Rainbow**	**2.27**	**350**		**Pn**	**20 18 54.9**	**-0.1**

PLK5 Peulik 5 2.36 319 Pn 20 18 56.0 0.0
KAHC Katmai Hardscr 2.45 347 Pn 20 18 57.1 -0.4
CHGN Chignik 2.49 273 Pn 20 18 59.6 +1.7
VNSG Veniaminof 6 2.88 269 Pn 20 19 03.1 -0.2
VNWF Veniaminof 8 3.14 270 Pn 20 19 07.1 +0.2
CNBA Chernabura Isl 3.52 248 Pn 20 19 12.3 +0.2
CNPM China Poot 3.57 23 Pn 20 19 13.2 +0.4
SDPT Sand Point 3.80 259 Pn 20 19 15.7 -0.2
BRLK Bradley Lake 3.86 24 Pn 20 19 16.4 -0.4
BRSE Bradley Lake S 3.88 25 Pn 20 19 16.8 -0.2
RED Redoubt Volcan 4.21 8 Pn 20 19 21.1 -0.5
RSO Redoubt South 4.25 8 Pn 20 19 22.9 +0.6
RDWB Redoubt West 4.27 7 Pn 20 19 22.3 -0.2
RDJH Redoubt Jeurge 4.38 7 Pn 20 19 24.0 +0.1
DFR Drift River 4.38 8 Pn 20 19 24.1 +0.1
SEW Seward 4.52 30 Pn 20 19 24.8 -1.0
SLKM Skilak Lake 4.68 23 Pn 20 19 27.1 -0.9
SVW2 Sparrevohn 4.92 351 Pn 20 19 31.0 -0.3
SPCR Spurr Chakacha 5.03 10 Pn 20 19 32.6 -0.2
SPWE Spurr West 5.07 8 Pn 20 19 33.6 +0.2
SPBG Spurr Blockage 5.07 9 Pn 20 19 33.3 -0.2
SPCG Spurr Capps Gl 5.13 10 Pn 20 19 34.3 0.0
RC01 Rabbit Creek A 5.31 23 Pn 20 19 36.6 +0.1
PWL Port Wells 5.46 30 Pn 20 19 38.1 -0.5
HIN Hinchinbrook I 5.70 40 Pn 20 19 40.9 -1.1
GLI Glacier Island 5.85 35 Pn 20 19 43.0 -1.0
SKT Skwentna 5.86 11 Pn 20 19 43.7 -0.5
KNK Knik Glacier 5.89 27 Pn 20 19 43.9 -0.8
FID Port Fidalgo 5.96 38 Pn 20 19 44.0 -1.4
SCM Sheep Creek Mo 6.54 29 Pn 20 19 53.6 0.0
TRF Thorofare Moun 7.43 13 Pn 20 20 05.1 -0.8
KTH Kantishna Hill 7.46 10 Pn 20 20 06.9 +0.7
DHY Denali Highway 7.59 23 Pn Pn 20 20 08.2 +0.2
RND Reindeer 7.60 18 Pn 20 20 08.1 0.0
MCARA McCarthy VSAT 7.64 43 Pn Pn 20 20 08.8 +0.3
BALM Baldy 7.70 47 Pn 20 20 09.3 -0.2
BALM Baldy 7.70 47 Pn 20 20 09.6 +0.1
BALM Sn 20 21 31.0 -5.2
MCK McKinley 7.89 16 Pn 20 20 13.0 +0.9
PAX Paxson 7.97 29 Pn Pn 20 20 14.2 +1.1
BARN Barnard Glacie 8.00 48 Pn Pn 20 20 15.1 +1.4
CTGM Chitina Glacie 8.09 49 Pn Pn 20 20 16.4 +1.6
NEA Nenana 8.67 14 Pn Pn 20 20 22.5 -0.2
WRH Wood River Hil 8.72 17 Pn 20 20 22.2 -1.1
RIDG Independent Ri 8.76 28 Pn Pn 20 20 25.6 +1.6
HDA Harding Lake 8.87 20 Pn 20 20 24.4 -0.9
CCB Clear Creek Bu 8.93 17 Pn 20 20 24.1 -2.1
MLY Manley 8.93 9 Pn Pn 20 20 25.9 -0.4
MDM Murphy Dome 9.15 15 Pn Pn 20 20 28.8 -0.5
BCAR Beaver Creek A 9.17 37 Pn Pn 20 20 30.3 +0.8
SCRK Sand Creek 9.18 29 Pn Pn 20 20 30.9 +1.1
IL31 9.20 19 Pn 20 20 29.0 -1.0
ILAR Eielson Array 9.20 19 Pn Pn 20 20 29.1 -0.8
0.6nm,0.3s,baz=210,slow=12,SNR=40
ILAR Sn Sn 20 22 04.5 -8.4
0.1nm,0.3s,baz=190,slow=26,SNR=2.4
ILAR LR LR 20 24 24.2
comp=Z,116nm,18.6s,baz=201,slow=40
ILAR Eielson Array 9.20 19 Pn 20 20 30.2 +0.2
ILAR Sn 20 22 09.9 -2.9
HYT Haines Junctio 9.72 55 Pn Pn 20 20 38.9 +1.8
IM03 9.75 0 Pn 20 20 36.3 -1.1
IMAR Indian Mountai 9.75 0 Pn 20 20 36.8 -0.6
ANM Nome 10.04 331 Pn Pn 20 20 40.8 -0.6
PRP Porcupine Dome 10.13 20 Pn Pn 20 20 43.3 +0.5
EGAK Eagle 10.58 31 Pn Pn 20 20 49.2 +0.4
WHY Whitehorse 10.89 58 Pn Pn 20 20 54.9 +1.6
BMAR Burnt Mountain 12.02 18 Pn Pn 20 21 07.0 -1.5
INK Inuvik 15.24 30 Pn Pn 20 21 53.7 +1.5
0.1nm,0.3s,baz=255,slow=11,SNR=3.2
INK LR LR 20 28 25.4
comp=Z,78nm,19.5s,baz=344,slow=40
C36M Paulatuk 18.64 34 P P 20 22 35.0 +0.5
C36M IAmb IAmb 20 22 45.2
comp=Z,8.5nm,1.3s
YKA Yellowknife Ar 20.71 56 P P 20 22 59.2 +2.0
comp=Z,1.6nm,0.7s,baz=270,slow=11,SNR=22
BILL Bilibino 21.53 319 P P 20 23 04.3 -1.7
BILL IAmb IAmb 20 23 05.2
comp=Z,5.4nm,1.2s
PETK Petropavlovsk- 27.67 284 P P 20 24 04.8 0.0
comp=Z,1.2nm,0.3s,baz=82,slow=12,SNR=4.8
RES Resolute Bay 28.80 28 P P 20 24 15.3 +0.8
comp=Z,1.2nm,1.0s,baz=239,slow=5.9,SNR=3.6
RES Resolute Bay 28.80 28 IAmb IAmb 20 24 27.9
comp=Z,1.2nm,0.7s
TXAR Lajitas Array 44.29 106 P P 20 26 27.6 +0.8
comp=Z,0.2nm,0.7s,baz=360,slow=12,SNR=2.8
SONM Songino Array 56.62 307 P P 20 27 59.5 -0.4
comp=Z,0.8nm,0.5s,baz=40,slow=6.4,SNR=7.5
SONM PcP PcP 20 28 57.1 +1.1
comp=Z,0.6nm,0.8s,baz=50,slow=3.6,SNR=2.1
SONM Songino Array 56.62 307 IAmb IAmb 20 28 00.8
comp=Z,1.0nm,0.8s
ZALV Zalesovo Beam 60.10 324 P P 20 28 23.4 -0.5
comp=Z,0.5nm,0.4s,baz=36,slow=6.2,SNR=5.5
FINES FINESS Array B 62.63 360 P P 20 28 40.4 -0.4
comp=Z,1.5nm,0.9s,baz=352,slow=3.9,SNR=3.8
HFS Hagfors 63.53 7 P P 20 28 47.0 +0.1
comp=Z,1.8nm,0.8s,baz=41,slow=4.7,SNR=7.1
ARU Arti 64.61 341 P P 20 28 53.4 -0.6
comp=Z,0.4nm,0.4s,baz=354,slow=2.9,SNR=4.3
ARU Arti 64.61 341 IAmb IAmb 20 29 06.4
comp=Z,3.3nm,1.2s
EKA Eskdalemuir Ar 66.24 18 P P 20 29 05.1 +0.5
comp=Z,1.2nm,0.7s,baz=331,slow=5.1,SNR=3.6
MKAR Makanchi Array 67.05 322 P P 20 29 09.2 -0.7
comp=Z,0.4nm,0.6s,baz=46,slow=6.8,SNR=6.4
AKTO Aktyubinsk 70.41 339 P P 20 29 30.2 -0.5
comp=Z,1.3nm,0.5s,baz=345,slow=9.8,SNR=4.8
AKASG Malin Array Be 73.36 358 P P 20 29 48.1 -0.3
comp=Z,1.0nm,0.6s,baz=3.0,slow=6.0,SNR=7.5
GERES GERESS Array B 74.75 8 P P 20 29 57.0 +0.3
comp=Z,0.4nm,0.6s,baz=20,slow=4.4,SNR=4.1
MLR Muntele Rosu 78.61 0 P P 20 30 19.5 +0.9
comp=Z,0.6nm,0.6s,baz=284,slow=4.2,SNR=3.1
MLR Muntele Rosu 78.61 0 IAmb IAmb 20 30 22.7
comp=Z,5.5nm,1.4s
ESDC Sonseca Array 81.09 23 P P 20 30 33.6 +1.5
comp=Z,0.1nm,0.3s,baz=354,slow=4.8,SNR=4.1
ESDC Sonseca Array 81.09 23 IAmb IAmb 20 30 34.7
comp=Z,1.5nm,0.9s
CMAR Chiang Mai Arr 83.95 294 P P 20 30 46.9 -0.3
comp=Z,0.7nm,0.6s,baz=11,slow=5.3,SNR=12
BRTR Keskin Array B 84.16 354 P P 20 30 48.2 +0.1
comp=Z,0.9nm,0.8s,baz=2.5,slow=4.3,SNR=6.0

*ATH **09** 20:24:42.3, 38.28N×20.45E, h12km±1km, ML3.1/13, Error ellipse: s-maj=1.6km s-min=0.8km az=244.0*
*THE **09** 20:24:42.4, 38.30N×20.39E, h9km±1km, ML3.2/17, Error ellipse: s-maj=1.5km s-min=0.4km az=250.0*
*BEO **09** 20:24:42.6±1.0, 38.23N×20.22E, h16km±5km, ML3.6/6*
*IDC **09** 20:24:46.9±2.1, 38.47N×20.20E, h58km±25km, mb3.4/7, mb1 3.5/12, mb1mx3.3/42, mbtmp3.6/12, ML3.1/4, Error ellipse: s-maj=21.8km s-min=15.4km az=154.0*
ISC 09 20:24:42.0±0.7, 38.28N±0.02×20.40E±0.02, h12km±4km, n103, σ1.07/147, mb3.8/7, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.03 141 P Pg 20 24 44.3 +0.3
KEF4 S Sg 20 24 46.1 +0.5
KEF1 Kardakata, Kep 0.06 96 P Pg 20 24 44.3 0.0
KEF1 S Sg 20 24 45.6 -0.4
LXR1 Lixouri, Cepha 0.09 159 P Pg 20 24 45.0 +0.4
LXR1 S Sg 20 24 47.4 +0.9
KEF3 Kipouria, Keph 0.09 206 P Pg 20 24 45.3 +0.7
KEF3 S Sg 20 24 47.5 +0.9
CHV1 Chavriata, Kef 0.10 187 P Pg 20 24 45.3 +0.6
CHV1 S Sg 20 24 47.7 +0.9
ARGA Argostoli. Kep 0.12 149 P Pg 20 24 45.1 +0.1
ARGA S Sg 20 24 47.4 +0.1
ARG2 Argostoli 0.13 146 P Pg 20 24 45.2 +0.1
ARG2 S Sg 20 24 47.2 -0.1
KEF2 Argostoli. Kep 0.14 149 P Pg 20 24 45.3 +0.1
KEF2 S Sg 20 24 47.2 -0.4
VSK1 VASILIKIADES 0.18 46 P Pg 20 24 46.1 +0.1
VSK1 S Sg 20 24 49.1 +0.3
27μm,0.5s
VLS Valsamata 0.18 125 P Pg 20 24 45.8 -0.2
VLS S Sg 20 24 48.6 -0.3
VLS Valsamata 0.18 125 P Pg 20 24 45.8 -0.2
VLS S Sg 20 24 48.5 -0.4
VLS AML AML 20 24 48.8
comp=E,58594μm,0.1s
VLS AML AML 20 24 49.1
comp=N,53494μm,0.2s
KONA Konidatara, Ke 0.20 44 P Pg 20 24 46.3 +0.1
KONA S Sg 20 24 49.1 -0.1
EVGI Lefkada island 0.39 31 P Pg 20 24 49.9 +0.1
EVGI S Sg 20 24 56.3 +1.2
EVGI Lefkada island 0.39 31 P Pg 20 24 50.0 +0.1
EVGI S Sg 20 24 55.8 +0.8
VLMS Volimes, Zakyn 0.46 153 P Pg 20 24 50.7 -0.2
VLMS S Sg 20 24 57.2 +0.2
VLMS AML AML 20 24 58.7
comp=N,10724μm,0.7s
VLMS AML AML 20 24 59.1
comp=E,9478μm,0.1s
MGNA Meganis 0.48 40 P Pg 20 24 51.3 -0.1
MGNA S Sg 20 24 58.6 +0.7
MGNA AML AML 20 24 59.3
comp=E,11951μm,0.1s
MGNA AML AML 20 24 59.7
comp=N,6367μm,0.1s
LKD2 Lefkada island 0.54 22 P Pg 20 24 52.4 -0.2
LKD2 Lefkada island 0.54 22 P Pg 20 24 52.5 -0.1
LKD2 AML AML 20 25 08.2
comp=E,5350μm,0.6s
LKD2 AML AML 20 25 09.3
comp=N,5347μm,0.6s
TSLK Tsoukalades, L 0.58 20 P Pg 20 24 53.3 +0.1
TSLK S Sg 20 25 00.5 -0.3
comp=N,3μm,0.6s
TSLK Tsoukalades, L 0.58 20 P Pg 20 24 53.4 +0.1
TSLK S Sg 20 25 00.6 -0.3
TSLK AML AML 20 25 07.9
comp=E,6688μm,0.8s
TSLK AML AML 20 25 10.0
comp=N,7001μm,0.4s
AST1 Astakos 0.60 64 P Pg 20 24 53.4 -0.3
AST1 S Sg 20 25 02.5 +0.9
comp=N,5μm,0.6s
ZAK2 Zakynthos 0.63 141 P Pg 20 24 54.1 -0.2
ZAK2 S Sb 20 25 05.0 +1.2
comp=N,10μm,0.8s
KRI1 kERI 0.70 152 P Pg 20 24 55.1 -0.5
KRI1 S Sb 20 25 06.2 +0.4
comp=N,4μm,0.4s
RLS Riolos of Patr 0.87 105 P Pb 20 24 59.0 0.0
RLS S Sn 20 25 12.2 -0.5
comp=N,640nm,0.6s
RLS Riolos of Patr 0.87 105 P Pb 20 24 58.9 -0.2
RLS AML AML 20 25 19.4
comp=N,1132μm,0.7s
RLS AML AML 20 25 20.5
comp=E,1372μm,0.5s
UPR University Cam 1.09 90 P Pg 20 25 05.0 +2.0
UPR S Sg 20 25 20.1 +2.9
LAKA Lakka 1.25 92 P Pn 20 25 04.5 -0.8
LAKA S Sg 20 25 23.7 +1.6
comp=E,565nm,0.6s
LAKA Lakka 1.25 92 P Pn 20 25 04.5 -0.8
LAKA AML AML 20 25 31.1
comp=N,1269μm,0.6s
LAKA AML AML 20 25 33.6
comp=E,1158μm,0.6s
IGT Igoumenitsa 1.25 358 P Pg 20 25 07.0 +1.0
IGT S Sg 20 25 23.9 +1.7
comp=E,618nm,0.5s
IGT Igoumenitsa 1.25 358 ePg Pg 20 25 06.6 +0.6
IGT eSg Sg 20 25 23.9 +1.7
IGT Igoumenitsa 1.25 358 P Pb 20 25 05.5 0.0
IGT S Sg 20 25 24.0 +1.8
IGT AML AML 20 25 30.3
comp=E,1117μm,0.4s
IGT AML AML 20 25 31.0
comp=N,1106μm,0.4s
EVR Evrytania 1.27 60 P Pn 20 25 05.3 -0.4
EVR S Sn 20 25 22.6 -0.2
comp=N,658nm,1.1s
EVR Evrytania 1.27 60 P Pn 20 25 05.1 -0.6
EVR AML AML 20 25 34.6
comp=N,1658μm,0.8s
EVR AML AML 20 25 36.1
comp=E,732μm,0.6s
TRIZ Trizonia 1.32 86 P Pn 20 25 05.4 -0.8
TRIZ S Sg 20 25 25.7 +1.2
comp=E,795nm,0.6s
TRIZ Trizonia 1.32 86 P Pn 20 25 05.4 -0.8
ALIK Aliki, Aigiali 1.35 90 P Pn 20 25 06.9 +0.3
ALIK S Sg 20 25 26.9 +1.5
KALE Kalithea 1.37 85 P Pg 20 25 08.8 +0.4
KALE S Sb 20 25 26.0 +0.8
comp=E,750nm,0.7s
KLV Kalavryta, Ach 1.40 99 P Pn 20 25 07.3 -0.1
KLV S Sg 20 25 28.4 +1.3
comp=E,428nm,1.0s
KLV Kalavryta, Ach 1.40 99 P Pn 20 25 06.9 -0.5
KLV S Sb 20 25 26.3 +0.3
KLV AML AML 20 25 32.6
comp=N,877μm,0.8s
KLV AML AML 20 25 35.9
comp=E,703μm,0.6s
JAN Janina 1.42 14 P Pg 20 25 09.3 +0.1
JAN S Sg 20 25 29.3 +1.7
comp=E,760nm,0.5s
JAN Janina 1.42 14 P Pg 20 25 09.7 +0.5
KEK Kerkira 1.50 342 P Pb 20 25 10.0 +0.2
KEK Kerkira 1.50 342 P Pb 20 25 09.9 +0.1
KASA Kassiopi 1.50 346 P Pg 20 25 10.9 +0.1
MAKR Makrakomi, Fth 1.54 61 P Pb 20 25 10.9 +0.4
MAKR S Sg 20 25 31.5 -0.1
comp=E,700nm,0.9s
MAKR Makrakomi, Fth 1.54 61 P Pb 20 25 10.6 +0.1
MAKR AML AML 20 25 37.1
comp=N,1376μm,0.9s
MAKR AML AML 20 25 45.1
comp=E,1260μm,0.5s
ITM Ithomi 1.64 132 P Pn 20 25 11.6 +0.9
ITM S Sb 20 25 34.2 +1.4
comp=E,428nm,1.1s
ITM Ithomi 1.64 132 P Pb 20 25 11.8 -0.3
AGG Agios Georgios 1.68 63 P Pb 20 25 13.3 +0.4
AGG S Sb 20 25 34.4 +0.3
comp=E,408nm,1.2s
AGG Agios Georgios 1.68 63 P Pb 20 25 13.4 +0.5
AGG AML AML 20 25 43.0
comp=E,614μm,0.9s
AGG AML AML 20 25 47.3
comp=N,854μm,1.3s
THL Klokotos Trika 1.80 44 P Pb 20 25 15.5 +0.7
THL S Sb 20 25 37.3 0.0
comp=N,520nm,0.9s
THL Klokotos Trika 1.80 44 P Pb 20 25 15.3 +0.5
THL S Sb 20 25 38.4 +1.1
THL AML AML 20 25 50.5
comp=E,1085μm,1.0s
THL AML AML 20 25 51.0
comp=N,875μm,0.7s
KPRO Kipourio 1.83 24 P Pb 20 25 16.0 +0.6
KPRO Kipourio 1.83 24 P Pb 20 25 16.1 +0.6
PENT Pentalofos 1.99 17 P Pb 20 25 18.4 +0.1
PENT Pentalofos 1.99 17 P Pb 20 25 18.7 +0.4
LKR Lokris 2.07 79 P Pb 20 25 18.9 -0.7
LKR Lokris 2.07 79 P Pb 20 25 18.6 -1.0
NEST Nestorio 2.19 13 P Pb 20 25 21.8 +0.2
VIL2 Platees 2.26 91 P Pb 20 25 22.0 -0.7
LIT Litokhoron 2.44 41 P Pb 20 25 24.0 -1.7
LIT Litokhoron 2.44 41 P Pb 20 25 24.1 -1.7
OHR Ohrid 2.84 6 *i* Pn Pg 20 25 36.6 +0.1
TIR Tirane 3.09 353 *e*Pn Pn 20 25 31.8 +1.2
VAY Valandovo 3.46 28 *e*Pn Pn 20 25 38.1 +2.4
VAY Valandovo 3.46 28 *e*P Pb 20 25 45.5 +2.2
VAY Valandovo 3.46 28 *i* Pn Pg 20 25 48.1 -0.2
STIP Stip 3.67 21 *i* Pn Pn 20 25 42.6 +4.0
SRS Serrai 3.75 40 *e*Pn Pn 20 25 41.3 +1.6
MMB Musomiste 4.18 37 *e*P Pn 20 25 45.4 -0.2
PDG Podgorica 4.23 348 *e*Pn Pn 20 25 47.5 +1.2
PDG *e*Sn Sn 20 26 34.9 -0.7
BOSS Bosilegrad 4.50 20 *e*Pn Pn 20 25 52.0 +2.0
BARS Barje 4.66 13 *e*Pn Pn 20 25 53.1 +1.0
IDI Anoyia 4.68 128 P Pb 20 25 59.4 -4.7
comp=N,0.2nm,0.3s,baz=40,slow=21,SNR=1.9
IDI S Sn 20 26 51.7 +4.9
comp=N,0.8nm,0.3s,baz=332,slow=23,SNR=6.2
TREB Trebinje 4.70 341 *e*Pn Pn 20 25 52.1 -0.6
TREB *e*Sn Sn 20 26 45.6 -1.5
VAE Valguarnera 4.80 262 P Pn 20 25 55.5 +1.3
comp=N,0.5nm,0.3s,baz=153,slow=14,SNR=3.1
VAE S Sn 20 26 49.1 -0.7
comp=N,0.9nm,0.3s,baz=181,slow=14,SNR=2.4
VTS Vitosha 4.84 26 *e*Pn Pn 20 25 55.6 +0.8
SELS Selova 4.96 6 *e*Pn Pn 20 25 56.5 +0.1
SJES Sjenica 4.98 356 *e*Pn Pn 20 25 57.5 +0.8
SJES *e*Sn Sn 20 26 53.3 -1.0
STON Ston 5.02 337 *e*Sn Sn 20 26 53.2 -1.9
ZAPS Zavoj 5.27 18 *e*Pn Pn 20 26 01.6 +1.1
IVAS Ivanjica 5.29 358 *e*Pn Pn 20 26 01.3 +0.4
BOVS Bovan 5.44 10 *e*Pn Pn 20 26 03.2 +0.4
GRUS Gruza 5.61 2 *e*Pn Pn 20 26 05.7 +0.5
ZAGS Zajecar 5.70 14 *e*Pn Pn 20 26 07.1 +0.7
DIVS Divibare 5.82 357 *e*Pn Pn 20 26 07.7 -0.5
TRUS Trudelj 5.94 0 *e*Pn Pn 20 26 09.4 -0.3
TRUS *e*Sn Sn 20 27 16.0 -1.6
MLR Muntele Rosu 8.30 28 P Pn 20 26 43.3 +1.0
comp=N,0.1nm,0.3s,baz=187,slow=6.6,SNR=4.8
SOKA Soboth 9.28 336 Pn Pn 20 26 55.2 -0.4
comp=N,6.0nm,0.6s
OBKA Obir 9.29 334 *e*Pn Pn 20 26 56.5 +0.8
comp=N,2.7nm,0.5s
KBA Koelnbreinsper 10.20 332 *e*Pn Pn 20 27 08.6 +0.2
comp=N,1.3nm,0.5s
MOA Molln 10.56 337 *e*Pn Pn 20 27 13.0 -0.1
comp=N,2.4nm,0.4s
MOTA Moosalm 11.33 326 *e*Pn Pn 20 27 25.2 +1.4
comp=N,1.9nm,0.5s
RETA Reutte 11.59 326 *e*Pn Pn 20 27 29.6 +2.4
comp=N,1.0nm,0.5s
GERES GERESS Array B 11.62 338 P Pn 20 27 26.3 -1.3
comp=N,0.2nm,0.3s,baz=154,slow=14,SNR=5.9
GNI Garni 18.94 77 P Pn 20 29 04.7 +1.0
comp=N,0.1nm,0.3s,baz=344,slow=3.7,SNR=4.1
HFS Hagfors 22.28 351 P P 20 29 38.2 -0.6
comp=N,2.8nm,0.7s,baz=178,slow=10,SNR=5.1
FINES FINESS Array B 23.45 7 P P 20 29 48.9 -2.1
comp=N,2.1nm,0.7s,baz=176,slow=7.5,SNR=5.7
TORD Torodi Ar. Bea 30.05 219 P P 20 30 51.7 +0.6
comp=N,0.5nm,0.8s,baz=26,slow=8.5,SNR=3.4
ARCES ARCESS Array B 31.43 3 P P 20 31 01.7 -1.1
comp=N,1.0nm,0.8s,baz=188,slow=8.3,SNR=3.6
MKAR Makanchi Array 45.33 58 P P 20 32 59.0 -0.8
comp=N,0.2nm,0.4s,baz=278,slow=7.1,SNR=5.2
ZALV Zalesovo Beam 45.69 48 P P 20 33 00.9 -1.6
comp=N,1.0nm,0.6s,baz=272,slow=8.8,SNR=4.9
SONM Songino Array 60.47 51 P P 20 34 50.1 -1.5
comp=N,0.3nm,0.7s,baz=294,slow=7.1,SNR=2.4

*PGC **09** 20:27:33.4±6.8, 47.65N×129.10W, h10km, MLSn2.9/20, Mw3.5/20, 288km Wsw of Tofino, Bc Off Coast Of Washington*
*IDC **09** 20:27:35.0±2.6, 47.69N×128.99W, h0km, mb3.2/3, mb1 3.5/8, mb1mx3.3/42, mbtmp3.2/8, ML3.1/5, MS3.1/3, Ms1 3.1/3, ms1mx2.8/9, Error ellipse: s-maj=49.6km s-min=17.2km az=65.0*
*NEIC **09** 20:27:35.9±1.8, 47.83N±0.02×128.83W±0.03, h10km±1km, Mwr3.5(OTT), Error ellipse: s-maj=3.5km s-min=2.6km az=212.0*
ISC 09 20:27:35.6±0.9, 47.80N±0.06×128.76W±0.03, h8km, n68, σ1.20/72, mb3.0/3, Off coast of Washington

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEMF NEPTUNE Canada 0.27 303 P Pg 20 27 38.8 -2.0
KEMF S Sg 20 27 42.7 -1.8
KEMF NEPTUNE Canada 0.27 303 Pg Pg 20 27 38.8 -2.0
KEMF Sg Sg 20 27 42.7 -1.8
NC27 ODP1027 0.68 93 P Pg 20 27 44.9 -3.7
NC27 S Sb 20 27 59.5 +0.6
NC27 ODP1027 0.68 93 Pg Pg 20 27 44.9 -3.7
NC27 Sg Sb 20 27 59.5 +0.6
NC89 ODP889 1.55 55 S Sg 20 28 24.6 -0.7
NC89 ODP889 1.55 55 Sg 20 28 24.6 -0.7
EDB Eliza Dome 2.34 27 Pn Pn 20 28 13.6 -0.8
OZB Mount Ozzard 2.47 61 Pn Pn 20 28 15.8 -0.4
B928 Bamfield 2.63 66 Pn Pn 20 28 18.0 -0.3
B928 Bamfield 2.63 66 Pn Pn 20 28 18.0 -0.3
GDR Gold River 2.68 41 Pn Pn 20 28 19.4 +0.4
BTB Buttle Lake 2.72 51 Pn Pn 20 28 19.9 +0.1
BTB Sn Sn 20 28 53.5 +0.6
WOSB Woss 2.77 31 Pn Pn 20 28 20.5 +0.1
WOSB Woss 2.77 31 Pn Pn 20 28 20.5 +0.1
MAYB Maynard 2.81 21 Pn Pn 20 28 20.6 -0.4
MAYB Maynard 2.81 21 Pn Pn 20 28 20.6 -0.4
HOLB Holberg 2.87 8 Pn Pn 20 28 21.6 -0.1
HOLB Holberg 2.87 8 Pn Pn 20 28 21.6 -0.1
MGB Mount Grey 2.97 65 Pn Pn 20 28 22.8 -0.3
MGB Sn Sn 20 28 59.2 +0.3
PFB Port Renfrew 2.99 73 Pn Pn 20 28 22.5 -0.9
TLCB Telegraph Cove 3.02 24 Pn Pn 20 28 23.8 +0.1
TLCB Telegraph Cove 3.02 24 Pn Pn 20 28 23.8 +0.1
NCRB Newcastle Ridg 3.15 33 Pn Pn 20 28 26.4 +0.7
NCRB Newcastle Ridg 3.15 33 Pn Pn 20 28 26.4 +0.7
OBC Olympics--Boni 3.16 84 Pn Pn 20 28 25.5 -0.2
CBB Campbell River 3.16 44 Pn Pn 20 28 26.4 +0.7
CBB Sn Sn 20 29 05.2 +1.5
YOUB Youbou, Lake C 3.20 68 Pn Pn 20 28 26.1 -0.1
YOUB Sn Sn 20 29 04.8 +0.3
YOUB Youbou, Lake C 3.20 68 Pn Pn 20 28 26.1 -0.1
YOUB Sn Sn 20 29 04.8 +0.3
B926 Mesachie Lake 3.25 70 Pn Pn 20 28 26.7 -0.2
B926 Sn Sn 20 29 07.4 +1.5
B926 Mesachie Lake 3.25 70 Pn Pn 20 28 26.7 -0.2
B926 Sn Sn 20 29 07.4 +1.5
NLWA Neilton Lookou 3.34 95 Pn Pn 20 28 28.8 +0.7
LZB Mount Lazard 3.40 74 Pn Pn 20 28 28.7 -0.3
TXB Texada 3.43 55 Pn Pn 20 28 30.2 +0.7
NLLB Nanaimo Lost L 3.48 64 Pn Pn 20 28 30.6 +0.5
NLLB Sn Sn 20 29 11.1 -0.3
NLLB Nanaimo Lost L 3.48 64 Pn Pn 20 28 30.6 +0.5
NLLB Sn Sn 20 29 11.1 -0.3
PGC Sidney 3.65 75 Pn Pn 20 28 32.9 +0.5
VGZ Gonzales 3.69 78 Pn Pn 20 28 32.7 -0.2
SHB Sechelt 3.70 59 Pn Pn 20 28 33.9 +0.7
HDW Hoodsport 3.86 90 Pn Pn 20 28 35.0 -0.2
BLN Blyn Mountain 3.90 85 Pn Pn 20 28 35.9 +0.1
BIB Bowen Island 3.96 64 Pn Pn 20 28 37.2 +0.5
HNBB Haney 4.37 68 Pn Pn 20 28 42.5 +0.2
BBB Bella Bella 4.41 5 Pn Pn 20 28 42.3 -0.5
5.5nm,0.3s,baz=203,slow=12,SNR=26
BBB Bella Bella 4.41 5 Pn Pn 20 28 42.7 0.0
BBB Bella Bella 4.41 5 Pn 20 28 43.0 +0.2
JCW Jim Creek 4.60 83 Pn Pn 20 28 46.0 +0.5
MBW Mount Baker 4.69 75 Pn Pn 20 28 47.8 +1.0
LLLB Lillooet 5.31 56 Pn Pn 20 28 56.8 +1.5
LLLB Lillooet 5.31 56 Pn Pn 20 28 56.9 +1.6
H04A Detroit Lake 5.52 122 Pn Pn 20 29 00.1 +1.9
G06A Carlson Farm, 6.17 112 Pn Pn 20 29 07.7 +0.7
YBH Yreka Blue Hor 7.44 142 Pn Pn 20 29 29.9 +5.4
0.1nm,0.3s,baz=309,slow=13,SNR=2.3
YBH LR LR 20 32 06.2
comp=Z,107nm,18.4s,baz=322,slow=36
NEW Newport 7.82 82 LR LR 20 32 41.2
comp=Z,146nm,20.7s,baz=308,slow=38
PAHR Pah Rah Range 10.55 137 Pn 20 30 04.2 -3.1
NVAR Mina Array Bea 12.08 137 Pn Pn 20 30 30.5 +2.3
0.0nm,0.3s,baz=295,slow=11,SNR=2.5
PDAR Pinedale Array 14.42 103 Pn P 20 31 05.8 -1.3
0.0nm,0.3s,baz=318,slow=6.0,SNR=5.8
YKA Yellowknife Ar 16.73 23 Pn Pn 20 31 31.1 +0.9
0.0nm,0.3s,baz=212,slow=12,SNR=4.3
KDAK Kodiak Island 17.44 314 LR LR 20 36 07.0
comp=Z,76nm,19.2s,baz=122,slow=29
ILAR Eielson Array 19.63 337 P Pn 20 32 06.3 +0.7
0.0nm,0.3s,baz=154,slow=13,SNR=4.9
ANMO Albuquerque 21.01 120 P P 20 32 21.6 +1.9
0.4nm,0.6s,baz=317,slow=13,SNR=3.8
ULM Lac du Bonnet 21.61 71 P P 20 32 28.4 +2.6
0.6nm,0.3s,baz=274,slow=13,SNR=2.8
TXAR Lajitas Array 26.74 125 P P 20 33 17.1 +1.5
0.3nm,0.9s,baz=350,slow=4.8,SNR=3.2
H11N2 WAKE ISLAND Hy 58.48 265 T T 21 40 33.2
baz=45,slow=75,SNR=9.1
H11N3 WAKE ISLAND Hy 58.48 265 T T 21 40 33.2
baz=45,slow=75,SNR=12
H11N1 WAKE ISLAND Hy 58.49 265 T T 21 40 33.9

baz=45,slow=75,SNR=9.4
H11S1 WAKE ISLAND Hy 59.46 264 T T 21 41 42.7
H11S2 WAKE ISLAND Hy 59.47 264 T T 21 41 47.1
SNR=3.8
H11S3 WAKE ISLAND Hy 59.48 264 T T 21 41 44.4

IDC 09 20:40:30.1±4.2, 4.27S×153.33E, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.2/19, mbtmp3.3/2, Error ellipse: s-maj=203.3km s-min=51.0km az=121.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.19	228	P	P	20 45 49.2	+0.7
	0.8nm,0.5s,baz=55,slow=9.9,SNR=7.5						
ASAR	Alice Springs	26.89	222	P	P	20 46 12.7	-0.4
	0.2nm,0.7s,baz=50,slow=8.6,SNR=1.8						
TORD	Torodi Ar. Bea	150.64	289	PKPbc	PKPbc	21 00 24.6	-0.6
	0.2nm,0.3s,baz=93,slow=2.4,SNR=6.0						

IDC 09 20:57:37.6±2.2, 50.11N×114.91W, h0km, mb1 3.4/2, mb1mx3.1/39, mbtmp3.1/2, ML3.2/1, Error ellipse: s-maj=43.3km s-min=10.0km az=116.0, Alberta

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEW	Newport	2.35	219	Pn	Pb	20 58 19.7	-1.1
	baz=33,slow=16						
NEW				Lg	Lg	20 58 50.3	
	1.4nm,0.3s,baz=137,slow=19,SNR=2.7						
I56US	NEWPORT INFRAS	2.36	219	i		21 13 30.0	
	baz=38,slow=330,SNR=1.2						
I10CA	LAC DU BONNET	12.11	82	i		22 11 20.0	
	baz=271,slow=316,SNR=2.2						
ULM	Lac du Bonnet	12.20	82	Lg	Lg	21 03 55.9	
	0.2nm,0.3s,baz=195,slow=20,SNR=2.7						
YKA	Yellowknife Ar	12.41	1	Pn	Pn	21 00 31.0	-4.3
	0.1nm,0.3s,baz=179,slow=13,SNR=6.4						
YKA				Sn	Sn	21 02 40.0	-14
	baz=171,slow=23,SNR=3.4						
YKA				Lg	Lg	21 04 02.3	
	0.0nm,0.3s,baz=170,slow=28,SNR=4.9						

SKHL 09 21:19:28.9±0.8, 47.76N×146.76E, h481km±11km, mb5.1/11, msh5.1/1
MOS 09 21:19:29.9±0.9, 48.09N×146.63E, h474km, mb4.2/17, Error ellipse: s-maj=8.4km s-min=6.1km az=74.0
JMA 09 21:19:29.3±0.5, 47.58N×147.06E, h502km, M3.9
IDC 09 21:19:30.9±0.8, 48.12N×146.55E, h470km±10km, mb3.4/19, mb1 3.5/28, mb1mx3.3/59, mbtmp4.2/28, Error ellipse: s-maj=12.5km s-min=8.3km az=147.0
NEIC 09 21:19:31.1±1.2, 48.11N±0.08×146.6E±0.1, h470km±7km, mb4.1/153, Error ellipse: s-maj=15.1km s-min=11.0km az=116.0
ISC 09 21:19:31.1±0.3, 47.95N±0.05×146.66E±0.05, h483km, n316, σ1.71/321, mb4.1/110, 8C-11D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	2.83	251	i P	P	21 20 39.5	0.0
YSS				AMB	AMB	21 20 39.9	
	460nm,0.9s						
YSS				eS	S	21 21 32.3	-2.9
YSS				A	A	21 21 34.0	
	70nm,0.9s						
YSS				A	A	21 21 34.0	
	50nm,0.9s						
YSS	Yuzh-Sakhalins	2.83	251	P	P	21 20 38.9	-0.7
YSS	Yuzh-Sakhalins	2.83	251	α iPN	P	21 20 39.6	0.0
YSS				eS	S	21 21 33.3	-1.9
YSS				pmax	pmax		
	comp=Z,460nm,0.9s						
YSS				smax	smax		
	comp=N,70nm,0.6s						
YSS				smax	smax		
	comp=E,50nm,0.9s						
KUR	Kuril'sk	2.84	163	i P	P	21 20 38.0	-1.7
KUR				AMB	AMB	21 20 38.0	
	comp=E,43nm,0.4s						
KUR				eS	S	21 21 32.5	-2.8
KUR				A	A	21 21 37.0	
	comp=E,41nm,0.9s						
KUR				A	A	21 21 37.0	
	comp=E,84nm,0.9s						
KUR	Kuril'sk	2.84	163	d iPN	P	21 20 38.5	-1.2
KUR				eS	S	21 21 33.1	-2.2
KUR				pmax	pmax		
	comp=Z,43nm,0.4s						
KUR				smax	smax		
	comp=E,84nm,0.9s						
KUR				smax	smax		
	comp=N,41nm,0.7s						
UGL	Uglegorsk	3.26	292	i P	P	21 20 42.1	-0.4
UGL				AMB	AMB	21 20 43.0	
	comp=N,473nm,0.5s						
UGL				eS	S	21 21 38.4	-2.3
UGL				A	A	21 21 39.0	
	comp=N,115nm,1.0s						
UGL				A	A	21 21 39.0	
	comp=N,128nm,1.0s						
UGL	Uglegorsk	3.26	292	⇑ iPN	P	21 20 42.0	-0.4
UGL				eS	S	21 21 36.5	-4.2
UGL				pmax	pmax		
	comp=Z,473nm,0.5s						
UGL				pmax	pmax		
	comp=E,311nm,0.4s						
UGL				pmax	pmax		
	comp=N,183nm,0.6s						
UGL				smax	smax		
	comp=E,128nm,1.3s						
UGL				smax	smax		
	comp=N,115nm,0.6s						
UGL				smax	smax		
	comp=E,500nm,1.5s						
TYV	Tymovskoe	3.92	320	eP	P	21 20 46.6	-0.9
TYV				AMB	AMB	21 20 47.1	
	comp=E,200nm,0.6s						
TYV				eS	S	21 21 47.2	-2.8
TYV				A	A	21 21 48.5	
	comp=E,14nm,0.7s						
TYV				A	A	21 21 48.5	
	comp=E,23nm,0.7s						
TYV	Tymovskoe	3.92	320	ePN	P	21 20 46.6	-0.9
TYV				eS	S	21 21 46.8	-3.2
TYV				pmax	pmax		
	comp=Z,20nm,0.7s						
TYV				smax	smax		
	comp=N,26nm,1.0s						
YUK	Yuzh-Kuril'sk	3.95	188	eS	S	21 21 50.2	-0.4
YUK				A	A	21 21 54.0	
	comp=N,700nm,0.9s						
YUK				A	A	21 21 54.0	
	comp=N,950nm,0.9s						
GRPR	Tuman	4.00	189	eP	P	21 20 46.0	-2.5
GRPR				AMB	AMB	21 20 46.0	
	comp=N,231nm,0.4s						
GRPR				eS	S	21 21 50.0	-1.4
GRPR				A	A	21 21 56.0	
	comp=N,523nm,0.4s						
GRPR				A	A	21 21 56.0	
	comp=N,103nm,0.4s						
GRPR	Tuman	4.00	189	ePN	P	21 20 46.2	-2.3
GRPR				eS	S	21 21 50.9	-0.5
GRPR				pmax	pmax		
	comp=Z,231nm,0.4s						
GRPR				pmax	pmax		
	comp=E,53nm,0.3s						
GRPR				pmax	pmax		
	comp=N,38nm,0.1s						
GRPR				smax	smax		
	comp=N,523nm,0.4s						
GRPR				smax	smax		
	comp=E,103nm,0.3s						
SHO	Shikotan	4.08	178	eP	P	21 20 45.3	-3.8
SHO				AMB	AMB	21 20 45.6	
	comp=E,132nm,0.3s						
SHO				eS	S	21 21 45.7	-6.9
SHO				A	A	21 21 49.0	
	comp=E,643nm,0.4s						
SHO				A	A	21 21 49.0	
	comp=E,444nm,0.3s						
SHO	Shikotan	4.08	178	ePN	P	21 20 44.8	-4.3
SHO				pmax	pmax		
	comp=Z,132nm,0.3s						
SHO				pmax	pmax		
	comp=N,32nm,0.4s						
SHO				pmax	pmax		
	comp=E,17nm,0.1s						
JSE	Soyaes	4.11	225	P	P	21 20 48.9	-0.4
JWK2	Keihoku	4.21	233	P	P	21 20 50.5	+0.4
JWK2				eS	S	21 21 54.5	0.0
GLVR	Golovnino	4.28	191	eP	P	21 20 50.0	-0.8
GLVR				AMB	AMB	21 20 50.0	
	comp=E,304nm,0.3s						
GLVR				eS	S	21 21 55.0	-0.7
GLVR				A	A	21 21 58.0	
	comp=E,640nm,0.5s						
GLVR				A	A	21 21 58.0	
	comp=E,506nm,0.5s						
GLVR	Golovnino	4.28	191	PN	P	21 20 50.4	-0.4
GLVR				eS	S	21 21 55.6	-0.1
GLVR				pmax	pmax		
	comp=N,112nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,304nm,0.3s						
GLVR				pmax	pmax		
	comp=E,36nm,0.1s						
GLVR				smax	smax		
	comp=N,640nm,0.5s						
GLVR				smax	smax		
	comp=E,506nm,0.4s						
JTKR	Abashiri--Toko	4.42	207	P	P	21 20 50.5	-1.5
JTKR				eS	S	21 21 55.1	-2.7
NMR	Nemuro--Hokkai	4.62	188	eP	P	21 20 50.0	-3.8
NMR	Nemuro--Hokkai	4.62	188	ePN	P	21 20 50.1	-3.8
NMR				i S	S	21 21 55.1	-6.1
NEM2	Nemuro 2	4.63	188	P	P	21 20 50.1	-3.8
NEM2				eS	S	21 21 53.9	-7.3
JKA	Kamikawa-asahi	4.76	218	eP	P	21 20 54.7	-0.4
JKA	Kamikawa-asahi	4.76	218	P	P	21 20 54.7	-0.4
ASAJ	Asahikawa	4.76	218	P	P	21 20 54.7	-0.4
	comp=E,8.8nm,0.3s,baz=39,slow=3.9,SNR=84						
ASAJ				S	S	21 22 02.3	-1.2
	baz=5.3,slow=30,SNR=2.7						
JKK2	Kamakawa 2	4.91	215	P	P	21 20 55.5	-0.9
JAR	Ashorobuto	5.07	205	P	P	21 20 56.2	-1.7
JAR				eS	S	21 22 04.8	-3.9
JHR	Hokuryu	5.44	221	P	P	21 21 01.0	-0.3
JFR	Furan	5.57	212	P	P	21 21 01.6	-1.0
JCH	Churui	5.82	205	P	P	21 21 02.0	-3.0
JCH				eS	S	21 22 14.0	-7.6
ERM	Erimo	6.43	204	P	P	21 21 09.5	-1.6
ERM	Erimo	6.43	204	⇑ePN	P	21 21 09.1	-1.9
SKR	Severo-Kuril's	6.76	63	eP	P	21 21 13.2	-0.9
SKR	Severo-Kuril's	6.76	63	⇓iPN	P	21 21 13.2	-0.9
JKB	Kayabe	7.26	215	P	P	21 21 17.8	-1.6
JKB				eS	S	21 22 41.0	-7.1
GRNR	Gornyy	7.26	297	eP	P	21 21 19.2	-0.1
GRNR				AMB	AMB	21 21 19.8	
	comp=E,20nm,0.7s						
GRNR	Gornyy	7.26	297	⇓iPN	P	21 21 19.2	-0.1
GRNR				eS	S	21 22 45.4	-2.6
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR				smax	smax		
	comp=E,8.0nm,0.8s						
GRNR				MLR	MLR		
	comp=Z,110nm,14.0s						
JOT	Ohata	7.69	213	P	P	21 21 22.1	-1.7
JOT				eS	S	21 22 49.4	-6.9
JOSM	Okushiri--Mats	7.76	224	P	P	21 21 23.0	-1.6
PEA0B	Petropavlovsk-	8.72	50	P	P	21 21 33.1	-1.4
PEA0B	Petropavlovsk-	8.72	50	⇓ePN	P	21 21 33.9	-0.6
PETK	Petropavlovsk-	8.72	50	P	P	21 21 33.5	-1.0
	comp=Z,0.3nm,0.3s,baz=198,slow=7.8,SNR=5.1						
PETK	Petropavlovsk-	8.72	50	P	P	21 21 33.8	-0.7
PETK	Petropavlovsk-	8.72	50	PN	P	21 21 33.8	-0.7
JMK	Ichinoseki	9.82	206	P	P	21 21 47.3	+0.9
JMK				eS	S	21 23 37.2	-0.5
KLR	Kul'dur	9.97	283	P	P	21 21 48.4	+0.5
	comp=Z,1.9nm,0.3s,baz=80,slow=10.0,SNR=69						
EKMR	Ekimchan	10.12	306	eP	P	21 21 50.0	+0.5
EKMR				AMB	AMB	21 21 52.5	
	comp=Z,64nm,0.9s						
USA0B	Ussuriysk Arra	10.86	255	P	P	21 21 56.8	-0.7
USA0B	Ussuriysk Arra	10.86	255	PN	P	21 21 56.8	-0.7
USRK	Ussuriysk Ar.	10.86	255	P	P	21 21 56.7	-0.8
	baz=62,slow=9.7,SNR=14						
USRK	Ussuriysk Ar.	10.86	255	P	P	21 21 56.5	-0.9
VLA	Vladivostok	11.43	250	⇓ePN	P	21 22 05.8	+2.2
MA2	Magadan	11.90	10	P	P	21 22 07.8	-0.5
	comp=Z,1.0nm,0.3s,baz=182,slow=10,SNR=5.7						
MA2	Magadan	11.90	10	eP	P	21 22 08.1	-0.2
MA2	Magadan	11.90	10	P	P	21 22 06.7	-1.6
MA2	Magadan	11.90	10	d ePN	P	21 22 08.1	-0.2
MDJ	Mudanjiang	12.27	261	P	P	21 22 11.8	-0.7
MDJ	Mudanjiang	12.27	261	P	P	21 22 11.9	-0.6
MJB9	Matsu-Tunnel	12.99	212	P	P	21 22 21.6	+1.3
MAJO	Matsushiro	12.99	212	P	P	21 22 21.5	+1.1
MAJO	Matsushiro	12.99	212	PN	P	21 22 21.5	+1.1
MJAR	Matsushiro Arr	12.99	212	P	P	21 22 21.7	+1.3
	comp=Z,0.1nm,0.3s,baz=8.8,slow=12,SNR=7.2						
MJAR	Matsushiro Arr	12.99	212	P	P	21 22 21.2	+0.9
MJAR	Matsushiro Arr	12.99	212	PN	P	21 22 21.3	+0.9
BMKR	Bomnak	13.02	308	eP	P	21 22 18.0	-2.3
BMKR				AMB	AMB	21 22 20.9	
	comp=Z,50nm,0.7s						
KROS	Kirovskiy	13.93	305	eP	P	21 22 28.9	-1.1
KROS				AMB	AMB	21 22 30.0	
	comp=Z,6.0nm,0.5s						
SEY	Seymchan	15.36	10	P	P	21 22 44.3	-0.6
	comp=Z,1.7nm,0.3s,baz=193,slow=10.0,SNR=20						
SEY	Seymchan	15.36	10	eP	P	21 22 43.8	-1.1
SEY	Seymchan	15.36	10	⇓iP	P	21 22 43.8	-1.1
YAK	Yakutsk	17.06	332	P	P	21 23 00.1	-2.7
	comp=Z,0.3nm,0.3s,baz=32,slow=0.7,SNR=4.4						
YAK	Yakutsk	17.06	332	P	P	21 23 00.1	-2.7
YAK	Yakutsk	17.06	332	eP	P	21 22 59.1	-3.7
YAK				eS	S	21 25 51.7	-4.9
YAK				pmax	pmax		
	comp=Z,11nm,1.2s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.3s						
YAK				smax	smax		
	comp=E,296nm,5.3s						
YAK				smax	smax		
	comp=N,192nm,4.7s						
KS19	Wonju Array Si	17.27	240	P	P	21 23 06.6	+1.3
KSRS	Korea Array	17.27	239	P	P	21 23 06.1	+0.9
	comp=N,0.8nm,0.3s,baz=43,slow=9.6,SNR=19						
KSAR	Wonju Array Be	17.30	240	P	P	21 23 05.8	+0.3
KSAR	Wonju Array Be	17.30	240	P	P	21 23 05.8	+0.3
TJN	Taejon	18.34	238	⇑eP	P	21 23 16.6	+1.2
BILL	Bilibino	22.46	19	eP	P	21 23 51.3	-1.2
BILL	Bilibino	22.46	19	P	P	21 23 50.5	-1.9
BILL				IAmb	IAmb	21 23 53.0	
	comp=Z,4.0nm,0.7s						
BILL	Bilibino	22.46	19	⇓eP	P	21 23 51.5	-1.0
BILL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BJT	Baijiatuau	23.22	261	P	P	21 23 59.7	+0.1
BJT	Baijiatuau	23.22	261	P	P	21 23 59.7	+0.1
BJT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TIXI	Tiksi	25.19	347	eP	P	21 24 15.9	-0.8
TIXI	Tiksi	25.19	347	⇑eP	P	21 24 15.9	-0.8
HHC	Hu-ho-hao-te	25.89	267	eP	P	21 24 24.6	+1.1
ULN	Ulaanbaatar	26.36	285	eP	P	21 24 27.2	-0.3
ULN	Ulaanbaatar	26.36	285	P	P	21 24 27.2	-0.3
ULN				IAmb	IAmb	21 24 33.3	
	comp=Z,4.7nm,0.8s						
ULN	Ulaanbaatar	26.36	285	P	P	21 24 27.2	-0.3
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONM	Songino Array	26.79	285	PP		21 19 27.9	
	comp=Z,0.3nm,0.6s,baz=108,slow=9.5,SNR=3.5						
SONM				P	P	21 24 31.2	-0.1
	comp=Z,0.8nm,0.5s,baz=73,slow=8.1,SNR=19						
SONM	Songino Array	26.79	285	P	P	21 24 30.6	-0.8
SONM	Songino Array	26.79	285	P	P	21 24 30.6	-0.8
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TLY	Talaya	27.71	294	eP	P	21 24 39.5	+0.3
TLY	Talaya	27.71	294	⇑eP	P	21 24 39.5	+0.3
TLY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ZAK	Zakamensk	28.18	291	eP	P	21 24 43.3	-0.1
ZAK	Zakamensk	28.18	291	eP	P	21 24 43.3	-0.1
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
YOJ	Yonaguni jima	30.00	227	P	P	21 25 01.5	+2.0
WHN	Wuhan	30.17	247	P	P	21 24 57.5	-3.4
ANM	Nome	30.45	39	P	P	21 25 01.9	-1.0
ANM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XAN	Xi'an	31.36	258	P	P	21 25 12.0	+0.8
LZH	Lanzhou	33.53	265	eP	P	21 25 31.4	+1.5
LZH				pP	pP	21 26 52.4	-1.9
LZH				PP	PP	21 27 02.2	-5.5
LZH				sP	sP	21 27 34.7	-15
GTA	Gaotai	34.48	273	⇓P	P	21 25 38.5	+0.7
GTA				pP	pP	21 27 00.4	-2.3
GTA				sP	sP	21 27 41.9	-16
GTA				PcP	PcS	21 30 59.5	-47
IMAR	Indian Mountai	35.44	37	P	P	21 25 44.9	-0.3
BPAW	Bear Paw Mtn.	36.67	41	P	P	21 25 55.2	-0.3
MLY	Manley	36.72	39	P	P	21 25 55.5	-0.4
MLY				IAmb	IAmb	21 25 59.0	
	comp=Z,3.9nm,0.4s						
KTH	Kantishna Hill	36.74	42	P	P	21 25 56.4	+0.2
KTH				IAmb	IAmb	21 25 57.1	
	comp=Z,6.0nm,0.8s						
KDAK	Kodiak Island	36.77	51	P	P	21 25 56.0	-0.3
KDAK				IAmb	IAmb	21 26 14.1	
	comp=Z,6.8nm,0.9s						
KDAK	Kodiak Island	36.77	51	P	P	21 25 56.0	-0.3
KDAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TRF	Thorofare Moun	37.04	42	P	P	21 25 58.8	+0.1
TRF				IAmb	IAmb	21 25 59.3	
	comp=Z,3.7nm,0.6s						
BRLK	Bradley Lake	37.27	48	P	P	21 26 00.1	-0.4
NEA	Nenana	37.46	40	P	P	21 26 01.6	-0.4
RC01	Rabbit Creek A	37.60	46	P	P	21 26 03.3	+0.1
RC01				IAmb	IAmb	21 26 07.8	
	comp=Z,6.8nm,1.1s						
MCK	McKinley	37.61	41	IAmb	IAmb	21 26 04.3	
	comp=Z,6.0nm,0.7s						
MCK	McKinley	37.61	41	P	P	21 26 03.6	+0.4
MCK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
RND	Reindeer	37.68	42	P	P	21 26 04.0	+0.1
RND	Reindeer	37.68	42	P	P	21 26 03.0	-0.9
RND				pmax	pmax		
	comp=Z,11nm,1.3s						
MDM	Murphy Dome	37.78	39	P	P	21 26 04.7	+0.1
MDM				IAmb	IAmb	21 26 05.6	
	comp=Z,7.9nm,1.1s						
PMR	Palmer	37.81	45	P	P	21 26 05.3	+0.4
PMR				IAmb	IAmb	21 26 10.1	
	comp=Z,5.0nm,0.9s						
WRH	Wood River Hil	37.89	40	IAmb	IAmb	21 26 06.7	
	comp=Z,5.6nm,0.6s						
SEW	Seward	37.91	47	P	P	21 26 06.2	+0.5
COLA	College	37.95	39	P	P	21 26 06.4	+0.4
CCB	Clear Creek Bu	38.00	40	IAmb	IAmb	21 26 06.4	
	comp=Z,3.3nm,0.5s						
SML	Sawmill	38.15	44	P	P	21 26 07.9	+0.2
KNK	Knik Glacier	38.16	45	P	P	21 26 07.4	-0.3
ZAA0	Zalesovo Array	38.31	303	P	P	21 26 08.1	-1.0
ZALV	Zalesovo Beam	38.31	303	P	P	21 26 07.6	-1.5
	comp=Z,0.7nm,0.4s,baz=75,slow=4.9,SNR=4.9						
ZALV				ScP	ScP	21 31 13.0	+1.0
	comp=Z,0.2nm,0.4s,baz=76,slow=6.1,SNR=2.8						
IL31		38.38	39	P	P	21 26 09.1	-0.3
IL31				IAmb	IAmb	21 26 10.2	
	comp=Z,8.0nm,0.7s						
ILAR	Eielson Array	38.38	39	P	P	21 26 08.8	-0.7
	comp=Z,5.8nm,0.6s,baz=258,slow=6.3,SNR=72						
ILAR	Eielson Array	38.38	39	P	P	21 26 09.2	-0.3
DHY	Denali Highway	38.39	42	P	P	21 26 09.4	-0.4
SCM	Sheep Creek Mo	38.62	44	P	P	21 26 12.4	+0.8
SCM				IAmb	IAmb	21 26 26.8	
	comp=Z,10nm,1.2s						
SCM	Sheep Creek Mo	38.62	44	P	P	21 26 12.4	+0.8
SCM				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BMAR	Burnt Mountain	39.02	35	P	P	21 26 14.7	0.0
FID	Port Fidalgo	39.23	46	P	P	21 26 16.2	-0.3
PAX	Paxson	39.27	42	P	P	21 26 15.3	-1.5
PAX	Paxson	39.27	42	P	P	21 26 15.3	-1.5
PAX				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HIN	Hinchinbrook I	39.30	46	P	P	21 26 17.1	+0.1
RIDG	Independent Ri	39.41	41	P	P	21 26 17.4	-0.6
RIDG				IAmb	IAmb	21 26 18.3	
	comp=Z,11nm,1.1s						
DOT	Dot Lake	39.77	41	IAmb	IAmb	21 26 22.1	
	comp=Z,3.0nm,0.6s						
GLB	Gilahina Butte	40.34	44	P	P	21 26 26.0	+0.5
WMQ	Urumqi	40.39	287	eP	P	21 26 27.2	+1.1
VRDI	Verde Repeater	40.56	44	P	P	21 26 28.0	+0.6
VRDI				IAmb	IAmb	21 26 33.0	
	comp=Z,5.8nm,1.0s						
MCARA	McCarthy VSAT	40.72	44	P	P	21 26 29.3	+0.9
MCARA				IAmb	IAmb	21 26 29.9	
	comp=Z,10.0nm,1.0s						
BCAR	Beaver Creek A	40.89	41	P	P	21 26 30.4	+0.5
TGL	Tana Glacier	40.97	45	P	P	21 26 31.6	+1.0
TGL				IAmb	IAmb	21 26 33.0	
	comp=Z,7.3nm,0.9s						
BALM	Baldy	41.13	44	P	P	21 26 32.4	+0.6
BALM	Baldy	41.13	44	P	P	21 26 32.4	+0.6
BALM				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BARN	Barnard Glacie	41.44	44	P	P	21 26 35.1	+0.6
BARN				IAmb	IAmb	21 26 36.3	
	comp=Z,6.0nm,0.8s						
CTGM	Chitina Glacie	41.62	44	P	P	21 26 36.4	+0.6
CTGM				IAmb	IAmb	21 26 37.0	
	comp=Z,6.0nm,0.6s						
DAWY	Dawson	41.70	39	P	P	21 26 36.0	-0.2
MK31	Makanchi Array	42.47	293	IAmb	IAmb	21 26 43.2	
	comp=Z,4.5nm,0.8s						
MK31	Makanchi Array	42.47	293	i P	P	21 26 42.5	-0.1
MKAR	Makanchi Array	42.47	293	P	P	21 26 42.5	-0.1
	comp=Z,4.6nm,0.7s,baz=65,slow=6.6,SNR=63						
MKAR				ScP	ScP	21 31 28.6	0.0
	comp=Z,0.4nm,0.6s,baz=68,slow=3.7,SNR=5.5						
MKAR	Makanchi Array	42.47	293	P	P	21 26 42.6	0.0
MAKZ	Makanchi	42.66	294	P	P	21 26 44.0	0.0
MAKZ	Makanchi	42.66	294	P	P	21 26 44.0	0.0
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
INK	Inuvik	42.99	32	P	P	21 26 45.8	-0.5
	comp=Z,4.9nm,0.4s,baz=288,slow=5.9,SNR=47						
INK	Inuvik	42.99	32	IAmb	IAmb	21 26 46.3	
	comp=Z,5.2nm,0.5s						
KURK	Kurchatov	43.01	300	eP	P	21 26 46.1	-0.6
KURK	Kurchatov	43.01	300	P	P	21 26 46.3	-0.4
KURK	Kurchatov	43.01	300	d iP	P	21 26 46.1	-0.6
KURK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HYT	Haines Junctio	43.45	44	IAmb	IAmb	21 26 53.0	
	comp=Z,12nm,1.0s						
WHY	Whitehorse	44.72	43	P	P	21 27 00.2	+0.1
LSA	Lhasa	45.88	267	IAmb	IAmb	21 27 12.6	
	comp=Z,6.3nm,0.7s						
LSA	Lhasa	45.88	267	P	P	21 27 11.9	+2.1
LSA				pmax	pmax		
	comp=Z,64nm,0.7s						
C36M	Paulatuk	45.96	30	IAmb	IAmb	21 27 08.9	
	comp=Z,5.0nm,0.5s						
BRVK	Borovoye	46.70	306	eP	P	21 27 14.9	-0.3
BRVK	Borovoye	46.70	306	P	P	21 27 14.9	-0.3
BRVK	Borovoye	46.70	306	P	P	21 27 14.9	-0.3
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KDJ	Kajisay	47.93	290	P	P	21 27 25.1	+0.2
KDJ				IAmb	IAmb	21 27 31.2	
	comp=Z,7.0nm,0.9s						
KDJ	Kajisay	47.93	290	P	P	21 27 25.1	+0.2
KDJ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SHL	Shillong	48.09	263	P	P	21 27 26.7	+0.5
SHL				pmax	pmax		
	comp=Z,11nm,0.8s						
CHTO	Chiang Mai	48.26	250	P	P	21 27 28.4	+1.0
CHTO	Chiang Mai	48.26	250	P	P	21 27 28.4	+1.0

CHTO pmax pmax
comp=Z,3.0nm,0.8s
CMAR Chiang Mai Arr 48.53 250 P P 21 27 30.7 +1.3
comp=Z,1.0nm,0.7s,baz=34,slow=6.9,SNR=9.6
PBKT Sadao Pong 48.69 246 P P 21 27 32.5 +2.0
DIB Dawson Inlet, 49.03 52 P P 21 27 33.8 +1.1
DIB IAmb IAmb 21 27 34.8
comp=Z,5.8nm,0.7s
NRN Naryn 49.05 290 P P 21 27 34.0 +0.6
NRN Naryn 49.05 290 P P 21 27 34.0 +0.6
NRN pmax pmax
comp=Z,1.0nm,0.6s
MOBC Moresby Island 49.33 52 P P 21 27 36.2 +1.3
MOBC IAmb IAmb 21 27 46.0
comp=Z,15nm,1.1s
AAK Ala-Archa 49.34 292 eP P 21 27 35.8 +0.5
AAK Ala-Archa 49.34 292 eP P 21 27 36.0 +0.6
AAK IAmb IAmb 21 27 36.6
comp=Z,4.6nm,0.8s
AAK Ala-Archa 49.34 292⇑iP P 21 27 35.8 +0.5
AAK pmax pmax
comp=Z,5.0nm,0.8s
TAPN Taplejung 49.71 268 eP P 21 27 39.3 +0.9
comp=Z,7.4nm,0.4s
KEKH Kekaha 49.79 102 P P 21 27 39.3 +0.6
SVE Sverdlovsk 49.91 314 eP P 21 27 39.1 0.0
SVE Sverdlovsk 49.91 314 eP P 21 27 39.1 0.0
SVE pmax pmax
comp=Z,8.0nm,0.7s
KSH Kashi 50.12 288 P P 21 27 45.4 +4.3
KSH PP **PP 21 29 49.8 +7.6**
KSH S **S 21 34 21.0 +5.0**
KSH ScS **ScS 21 36 41.0 +0.8**
KSH sS sS 21 37 05.2 +2.5
JIRN Jiri 50.53 269 eP P 21 27 45.1 +0.6
GUN Gumba 50.57 270 eP P 21 27 45.4 +0.6
comp=Z,5.7nm,0.3s
RAMN Ramite 50.71 268 eP P 21 27 46.3 +0.6
comp=Z,21nm,0.6s
ARSB Arslanbob 51.01 292 P P 21 27 48.0 +0.5
ARSB Arslanbob 51.01 292 P P 21 27 48.0 +0.5
ARSB pmax pmax
comp=Z,5.0nm,0.9s
KKN Kakani 51.05 270 eP P 21 27 49.3 +1.1
comp=Z,10nm,0.5s
RES Resolute Bay 51.05 17 P P 21 27 46.8 -0.4
RES pmax pmax
comp=Z,23nm,0.7s
ARU Arti 51.10 314 eP P 21 27 47.1 -0.7
ARU Arti 51.10 314 P P 21 27 46.9 -0.9
ARU IAmb IAmb 21 27 47.7
comp=Z,5.7nm,0.6s
ARU Arti 51.10 314 diP P 21 27 47.2 -0.6
ARU 21 29 46.7
ARU S **S 21 34 28.7 +0.2**
ARU SS **SS 21 38 10.8 -0.2**
ARU pmax pmax
comp=Z,4.0nm,0.6s
PKI Pulchoki 51.11 270 eP P 21 27 49.3 +0.6
PKIN Phulchoki 51.11 270 eP P 21 27 49.4 +0.7
comp=Z,3.8nm,0.4s
DMN Daman 51.29 270 eP P 21 27 50.8 +0.9
comp=Z,9.7nm,0.5s
GKN Gorkha 51.35 271 eP P 21 27 51.0 +0.8
comp=Z,22nm,0.4s
KK31 Karatay Array 51.55 295 P P 21 27 51.3 0.0
KK31 Karatay Array 51.55 295 P P 21 27 51.3 0.0
KK31 pmax pmax
comp=Z,3.0nm,0.8s
KKAR Karatay Array 51.55 295 P P 21 27 51.2 -0.1
KKAR Karatay Array 51.55 295 IAmb IAmb 21 27 52.1
comp=Z,3.3nm,0.8s
KKAR Karatay Array 51.55 295 P P 21 27 51.2 -0.1
DANN Dangsing 51.71 271 eP P 21 27 54.2 +1.2
KOLN Koldanda 52.20 271 eP P 21 27 57.3 +0.9
YKA Yellowknife Ar 52.54 35 P P 21 27 57.9 -0.1
comp=Z,2.6nm,0.6s,baz=303,slow=7.0,SNR=34
YKA PcP **PcP 21 29 01.1 +0.5**
comp=Z,0.7nm,0.5s,baz=308,slow=3.5,SNR=7.4
BTK Batken 53.08 291 IAmb IAmb 21 28 04.0
comp=Z,5.0nm,0.7s
ABKAR Akbulak array 54.24 306 P P 21 28 10.2 -0.2
ABKAR Akbulak array 54.24 306 IAmb IAmb 21 28 10.6
comp=Z,4.9nm,0.5s
NIL Nilore 55.36 284 P P 21 28 18.7 +0.1
NIL IAmb IAmb 21 28 20.6
comp=Z,7.4nm,0.9s
NIL Nilore 55.36 284 P P 21 28 18.7 +0.1
NIL pmax pmax
comp=Z,7.0nm,0.9s
LLLB Lillooet 55.97 50 P P 21 28 23.1 +0.6
PGC Sidney 56.29 53 P P 21 28 26.2 +1.4
PGC IAmb IAmb 21 28 28.6
comp=Z,17nm,1.1s
NLWA Neilton Lookou 56.81 54 P P 21 28 29.8 +1.4
KBL Kabul 57.53 287 P P 21 28 33.2 -0.6
KBL Kabul 57.53 287 P P 21 28 33.3 -0.6
KBL pmax pmax
comp=Z,4.0nm,0.7s
LTY Liberty 58.62 53 P P 21 28 42.1 +1.2
LTY IAmb IAmb 21 28 42.4
comp=Z,2.9nm,0.5s
B08A Colville Reser 58.65 51 P P 21 28 41.9 +0.9
COR Corvallis 58.83 57 P P 21 28 44.4 +2.2
COR IAmb IAmb 21 28 49.8
comp=Z,10nm,0.9s
COR Corvallis 58.83 57 P P 21 28 44.4 +2.2
COR pmax pmax
comp=Z,10.0nm,0.9s
H04A Detroit Lake 59.39 56 P P 21 28 47.7 +1.7
H04A IAmb IAmb 21 28 48.5
comp=Z,5.8nm,0.8s
SUMG Summit 59.73 2 IAmb IAmb 21 28 49.0
comp=Z,7.3nm,0.8s
SUMG Summit 59.73 2 P P 21 28 48.4 +0.2
SUMG pmax pmax
comp=Z,22nm,1.9s
HAWA Hanford 59.77 53 P P 21 28 49.2 +0.8
KBO Bosley Butte 59.78 59 P P 21 28 49.9 +1.2
NEW Newport 59.86 50 P P 21 28 50.4 +1.3
NEW Newport 59.86 50 P P 21 28 50.4 +1.3
NEW pmax pmax
comp=Z,3.0nm,0.9s
HUMO Hull Mountain 60.26 58 P P 21 28 53.8 +1.9
E09A Wood Farm, Sta 60.44 52 IAmb IAmb 21 28 55.0
comp=Z,5.8nm,1.0s
PINE Pine Mountain 60.65 56 IAmb IAmb 21 28 57.7
comp=Z,6.1nm,0.7s
YBH Yreka Blue Hor 60.96 59 P P 21 28 58.5 +2.0
YBH Yreka Blue Hor 60.96 59 P P 21 28 58.6 +2.0
YBH pmax pmax
comp=Z,2.0nm,1.1s
WALA Waterton Lakes 60.98 48 P P 21 28 57.8 +1.2
WALA IAmb IAmb 21 28 58.2
comp=Z,3.4nm,0.7s
FIA1 FINESS Array S 61.00 332 P P 21 28 56.5 +0.2
FIA1 IAmb IAmb 21 28 58.3
comp=Z,12nm,1.1s
FINES FINESS Array B 61.00 332 P P 21 28 55.7 -0.6
comp=Z,3.2nm,1.0s,baz=38,slow=9.6,SNR=6.4
FINES FINESS Array B 61.00 332 P P 21 28 56.5 +0.2
I07A Izee 61.26 55 P P 21 28 59.9 +1.3
JTMT Jette 61.65 49 P P 21 29 02.0 +0.9
JTMT IAmb IAmb 21 29 03.5
comp=Z,2.9nm,0.5s
GEYT Alibeck 62.19 297 P P 21 29 04.8 +0.2
comp=Z,2.5nm,0.5s,baz=7.8,slow=3.3,SNR=9.3
GEYT Alibeck 62.19 297 P P 21 29 05.2 +0.6
MOD Modoc Plateau 62.23 57 P P 21 29 06.7 +1.8
FFC Flin Flon 62.55 38 P P 21 29 07.1 +0.5
FFC IAmb IAmb 21 29 07.7
comp=Z,3.9nm,0.8s
FFC Flin Flon 62.55 38 P P 21 29 07.1 +0.5
FFC pmax pmax
comp=Z,4.0nm,0.9s
FCC Fort Churchill 62.57 31 P P 21 29 06.4 -0.2
FCC Fort Churchill 62.57 31 P P 21 29 06.4 -0.2
FCC pmax pmax
comp=Z,3.0nm,1.1s
EGMT Eagleton 63.72 47 IAmb IAmb 21 29 15.7
comp=Z,4.5nm,0.6s
DLMT Dillon 64.11 50 IAmb IAmb 21 29 19.2
comp=Z,5.9nm,0.8s
PAHR Pah Rah Range 64.20 59 IAmb IAmb 21 29 19.9
comp=Z,5.0nm,0.9s

SFJD Kangerlussuaq 64.63 7 P P 21 29 19.6 -0.1
SFJD IAmb IAmb 21 29 25.2
comp=Z,7.0nm,0.9s
SFJD Kangerlussuaq 64.63 7 P P 21 29 19.6 -0.1
SFJD pmax pmax
comp=Z,7.0nm,1.0s
YERR Yerington 64.76 59 P P 21 29 23.1 +1.8
FRB Frobisher Bay 65.25 16 P P 21 29 22.4 -1.2
FRB pmax pmax
comp=Z,6.0nm,2.4s
NC303 NORSAR Array S 65.38 338 P P 21 29 24.7 +0.2
NC303 IAmb IAmb 21 29 40.7
comp=Z,2.6nm,0.8s
RYN Ryan 65.42 59 IAmb IAmb 21 29 27.8
comp=Z,2.9nm,0.8s
NB2 NORSAR Subarra 65.58 338 P P 21 29 25.4 -0.5
comp=Z,0.4nm,0.5s,baz=30,slow=6.5
NOA NORSAR Array B 65.58 338 P P 21 29 25.1 -0.8
comp=Z,0.8nm,0.6s,baz=31,slow=6.7,SNR=9.0
NVAR Mina Array Bea 65.68 59 P P 21 29 28.8 +1.6
comp=Z,3.0nm,0.6s,baz=301,slow=6.7,SNR=31
NVAR Mina Array Bea 65.68 59 P P 21 29 27.5 +0.4
HFS Hagfors 65.70 336 P P 21 29 25.8 -0.8
comp=Z,2.9nm,0.9s,baz=92,slow=4.5,SNR=6.9
NV11 Mina Array Sit 65.76 59 P P 21 29 28.8 +1.3
NV11 IAmb IAmb 21 29 29.5
comp=Z,2.6nm,0.7s
H17A Grant Village 65.82 50 P P 21 29 29.6 +1.7
H17A IAmb IAmb 21 29 31.7
comp=Z,4.0nm,0.8s
RLMT Red Lodge 65.98 49 IAmb IAmb 21 29 31.8
comp=Z,2.4nm,0.7s
KIV Kislovodsk 66.75 310 eP P 21 29 34.5 +0.9
KIV Kislovodsk 66.75 310 eP P 21 29 34.5 +0.9
KIV pmax pmax
comp=Z,12nm,1.0s
HWUT Hardware Ranch 67.24 53 P P 21 29 38.0 +1.3
HWUT IAmb IAmb 21 29 39.2
comp=Z,4.0nm,0.8s
PD31 Pinedale Array 67.48 51 IAmb IAmb 21 29 40.0
comp=Z,5.8nm,1.1s
PDAR Pinedale Array 67.48 51 P P 21 29 39.1 +0.8
comp=Z,4.4nm,0.6s,baz=37,slow=1.0,SNR=45
PDAR Pinedale Array 67.48 51 P P 21 29 38.8 +0.5
DUG Dugway, Tooele 67.55 55 P P 21 29 39.8 +1.1
DUG Dugway, Tooele 67.55 55 P P 21 29 39.8 +1.1
DUG pmax pmax
comp=Z,2.0nm,0.7s
TCUT Toone Canyon 67.67 53 P P 21 29 39.9 +0.4
AKASG Malin Array Be 68.02 323 P P 21 29 39.9 -1.2
comp=Z,0.3nm,0.4s,baz=41,slow=5.6,SNR=3.1
OSI Osito Audit: C 68.04 62 P P 21 29 42.4 +0.8
PSUT Pine Spring 68.14 56 P P 21 29 42.4 +0.1
ULM Lac du Bonnet 68.37 38 P P 21 29 42.8 -0.5
comp=Z,2.7nm,0.7s,baz=295,slow=5.6,SNR=6.7
WRA Warramunga Arr 68.47 192 P P 21 29 45.2 +1.0
comp=Z,0.3nm,0.6s,baz=8.5,slow=6.6,SNR=4.9
SHPR Sheep Range 68.81 59 IAmb IAmb 21 29 48.9
comp=Z,3.6nm,0.8s
TMUT Trail Mountain 69.06 54 P P 21 29 49.7 +1.6
RSSD Black Hills 69.30 47 P P 21 29 49.6 +0.3
RSSD IAmb IAmb 21 29 51.3
comp=Z,4.0nm,0.5s
RSSD Black Hills 69.30 47 P P 21 29 49.6 +0.3
RSSD pmax pmax
comp=Z,4.0nm,0.5s
Q16A Castle Valley 69.35 55 P P 21 29 50.8 +1.1
U15A North Rim 70.50 57 P P 21 29 58.2 +1.6
W13A Hualapai Mount 70.54 59 P P 21 29 57.4 +0.6
Y12C Blythe 71.12 60 P P 21 30 01.2 +1.2
Y12C IAmb IAmb 21 30 02.1
comp=Z,5.8nm,0.7s
SMCO Snowmass 71.42 52 IAmb IAmb 21 30 04.1
comp=Z,2.9nm,0.8s
SUSD Miller 71.47 43 P P 21 30 01.8 -0.2
WUAZ Wupatki 71.67 57 P P 21 30 03.6 +0.2
Y14A Wickenburg 71.87 59 P P 21 30 05.7 +1.2
Y14A IAmb IAmb 21 30 06.4
comp=Z,3.1nm,0.5s
EYMN Ely 71.97 37 P P 21 30 04.6 -0.2
EYMN IAmb IAmb 21 30 04.9
comp=Z,4.5nm,0.6s
MVCO Mesa Verde 72.04 54 IAmb IAmb 21 30 07.6
comp=Z,3.5nm,0.8s
ASAR Alice Springs 72.20 192 P P 21 30 08.7 +2.4
comp=Z,0.4nm,0.6s,baz=359,slow=5.3,SNR=4.9
ASAR Alice Springs 72.20 192 P P 21 30 08.9 +2.6
X16A Lo Mia Camp, P 72.42 58 IAmb IAmb 21 30 10.5
comp=Z,3.6nm,0.8s
E38A The Farm, Brul 73.02 38 IAmb IAmb 21 30 11.4
comp=Z,8.5nm,1.1s
ECSD EROS Data Cent 73.09 43 P P 21 30 11.6 +0.2
ECSD IAmb IAmb 21 30 12.2
comp=Z,4.9nm,0.7s
DPC Dobruska-Polom 73.17 329 P P 21 30 11.0 -0.7
TIRR Tirgusor 73.21 319 P P 21 30 10.8 -1.2
TIRR pmax pmax
comp=Z,24nm,1.1s
SCHQ Schefferville 73.77 19 P P 21 30 13.8 -1.2
comp=Z,1.1nm,0.6s,baz=252,slow=14,SNR=5.7
D41A Chassel 73.85 36 P P 21 30 15.8 +0.3
D41A IAmb IAmb 21 30 17.0
comp=Z,4.7nm,0.7s
T25A Trinidad 74.29 52 P P 21 30 19.2 +0.6
T25A IAmb IAmb 21 30 19.8
comp=Z,2.7nm,0.6s
G40A Rib Lake 74.66 38 IAmb IAmb 21 30 20.9
comp=Z,5.4nm,0.9s
H43A Windswept, Lux 76.30 37 P P 21 30 29.1 -0.3
TX31 Lajitas Ar. Si 80.61 56 IAmb IAmb 21 30 54.7
comp=Z,2.9nm,0.6s
TX32 Lajitas Array 80.61 56 IAmb IAmb 21 30 54.7
comp=Z,3.2nm,0.6s
TXAR Lajitas Array 80.61 56 P P 21 30 54.4 +1.5
comp=Z,2.3nm,0.4s,baz=291,slow=3.6,SNR=21
TXAR Lajitas Array 80.61 56 P P 21 30 53.5 +0.6
TXAR Lajitas Array 80.61 56 P P 21 30 53.5 +0.6
WHAR Wooly Hollow 81.83 45 IAmb IAmb 21 31 00.1
comp=Z,6.0nm,0.8s
BDFB Brasilia 145.58 26 PKPbc PKPbc 21 38 15.7 +0.4
comp=Z,1.9nm,0.4s,baz=318,slow=3.0,SNR=5.0
BDFB Brasilia 145.58 26 PKPdf PKPbc 21 38 14.8 -0.6
PLCA Paso Flores 152.63 89 PKPbc PKPbc 21 38 31.8 -0.2
comp=Z,1.5nm,0.7s,baz=256,slow=2.0,SNR=7.4
PLCA Paso Flores 152.63 89 PKPdf PKPdf 21 38 25.6 +1.1
PLCA PKPbc **PKiKP 21 38 33.0 +0.9**
PLCA Paso Flores 152.63 89 PKIKP PKPdf 21 38 25.6 +1.1

IDC 09 21:21:19.2±1.5, 14°.91S×176°.56E, h0km, mb3.8/6, mb1 4.1/6, mb1mx3.8/43, mbtmp3.8/6, MS3.2/6, Ms1 3.2/6, ms1mx3.0/34, Error ellipse: s-maj=118.6km s-min=23.8km az=146.0, Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DZM Mont Dzumac 11.95 232 LR LR 21 27 41.6
comp=Z,124nm,19.4s,baz=48,slow=32
STKA Stephens Creek 36.06 236 P P 21 28 22.1 -0.5
2.4nm,0.7s,baz=54,slow=11,SNR=4.6
ASAR Alice Springs 41.07 251 P P 21 29 05.2 +0.2
2.1nm,0.9s,baz=86,slow=8.2,SNR=14
GUMO Guam 42.25 311 LR LR 21 44 55.9
comp=Z,22nm,21.8s,baz=106,slow=34
MJAR Matsushiro Arr 62.67 326 LR LR 21 56 05.3
comp=Z,17nm,20.7s,baz=290,slow=33
KSRS Korea Array 69.29 320 LR LR 21 58 07.0
comp=Z,16nm,21.3s,baz=120,slow=32
NVAR Mina Array Bea 80.73 46 P P 21 33 35.1 +0.2
0.4nm,0.7s,baz=230,slow=8.2,SNR=3.3
CMAR Chiang Mai Arr 83.32 291 LR LR 22 10 45.4
comp=Z,8.0nm,19.0s,baz=135,slow=36
ILAR Eielson Array 84.15 15 P P 21 33 51.0 -0.8
0.7nm,0.9s,baz=220,slow=7.9,SNR=4.7
NEW Newport 86.03 38 LR LR 22 07 10.0
comp=Z,22nm,18.2s,baz=358,slow=32
TXAR Lajitas Array 88.55 59 P P 21 34 13.3 -1.1
0.5nm,1.0s,baz=226,slow=3.6,SNR=3.1
PDAR Pinedale Array 88.58 45 P P 21 34 16.1 +1.7
0.3nm,0.9s,baz=225,slow=15,SNR=2.2

IDC 09 21:27:37.1±1.6, 7°.26S×128°.13E, h0km, mb3.7/2, mb1 3.9/5, mb1mx3.6/40, mbtmp3.8/5, ML3.7/3, Error ellipse: s-maj=96.1km s-min=25.0km az=74.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FITZ Fitzroy Crossi 11.04 192 Pn Pn 21 30 17.6 +1.1
0.4nm,0.3s,baz=29,slow=13,SNR=4.9
FITZ Sn Sn 21 32 16.1 -4.7
0.3nm,0.3s,baz=119,slow=23,SNR=2.9
WRA Warramunga Arr 13.97 155 Pn Pn 21 30 54.5 -2.0
0.4nm,0.3s,baz=330,slow=13,SNR=13
WRA Sn Sn 21 33 27.0 -5.5
0.4nm,0.3s,baz=349,slow=21,SNR=5.7
ASAR Alice Springs 17.23 162 P Pn 21 31 39.9 +0.5
0.3nm,0.3s,baz=335,slow=10,SNR=14
MKAR Makanchi Array 67.44 328 P P 21 38 35.0 +0.3
0.4nm,0.6s,baz=125,slow=8.8,SNR=8.2
ZALV Zalesovo Beam 71.01 335 P P 21 38 56.3 -0.3
0.5nm,0.5s,baz=124,slow=4.8,SNR=2.8

IDC 09 21:38:35.9±1.0, 19°.88S×169°.00E, h0km, mb4.0/7, mb1 4.3/9, mb1mx4.0/37, mbtmp4.1/9, ML4.0/2, MS3.5/9, Ms1 3.5/9, ms1mx3.2/29, Error ellipse: s-maj=33.4km s-min=22.4km az=141.0
NEIC 09 21:38:43.9±1.2, 20°.10S±0°.06×168°.8E±0°.1, h62km±9km, mb4.3/9, Error ellipse: s-maj=15.6km s-min=8.4km az=103.0
ISC 09 21:38:41.6±0.6, 20°.13S±0°.06×168°.91E±0°.08, h35km, n35, σ1°27/33, mb4.1/10, MS3.6/5, Loyalty Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DZM Mont Dzumac 3.00 230 Pn Pn 21 39 27.7 +0.8
15nm,0.3s,baz=86,slow=7.9,SNR=231
DZM Sn **Sn 21 40 02.7 +0.9**
64nm,0.3s,baz=330,slow=22,SNR=11
DZM LR LR 21 40 42.7
comp=Z,644nm,18.8s,baz=35,slow=39
DZM Mont Dzumac 3.00 230 Pn 21 39 27.6 +0.7
DZM **Sn 21 40 02.8 +1.0**
NOUC Port Laguerre 3.13 231 Pn 21 39 29.9 +1.4
NOUC Sn **Sn 21 40 06.2 +1.6**
SANVU Saraoutou 4.93 340 Pn Pn 21 39 54.4 +1.1
SANVU Sn **Sn 21 40 51.5 +2.3**
MSVF Nonsavu 8.97 76 Pn 21 40 51.2 +2.3
RAO Raoul Island 15.01 130 LR LR 21 46 40.8
comp=Z,84nm,21.4s,baz=318,slow=32
URZ Urewera 19.41 160 P Pn 21 43 06.6 +0.5
0.4nm,0.3s,baz=342,slow=2.0,SNR=3.0
URZ LR LR 21 48 42.0
comp=Z,156nm,18.4s,baz=0.0,slow=31
URZ Urewera 19.41 160 P P 21 43 05.6 +0.8
URZ IAmb IAmb 21 43 11.4
comp=Z,12nm,0.9s
AFI Afiamalu 19.47 74 LR LR 21 49 05.7
comp=Z,109nm,20.9s,baz=288,slow=33
BKZ Black Stump Fm 20.07 163 P P 21 43 13.5 +1.5
RPZ Rata Peaks 23.58 176 LR LR 21 52 36.2
comp=Z,176nm,18.2s,baz=324,slow=35
STKA Stephens Creek 27.12 239 P P 21 44 22.9 +1.5
comp=Z,2.0nm,0.7s,baz=103,slow=8.5,SNR=4.2
STKA Stephens Creek 27.12 239 P P 21 44 20.1 -1.3
RAR Rarotonga 29.30 98 LR LR 21 56 40.6
comp=Z,45nm,18.4s,baz=322,slow=37
WB2 Warramunga Arr 32.44 264 P P 21 45 08.0 -0.7
WB2 IAmb IAmb 21 45 11.1
comp=Z,4.0nm,1.0s
WRAB Tennant Creek 32.44 264 P P 21 45 08.3 -0.5
WRA Warramunga Arr 32.45 264 P P 21 45 07.9 -0.9
comp=Z,1.1nm,0.6s,baz=88,slow=8.4,SNR=8.8
AS31 Alice Springs 32.62 257 P P 21 45 09.6 -0.8
AS31 IAmb IAmb 21 45 11.4
comp=Z,2.9nm,0.5s
ASAR Alice Springs 32.62 257 P P 21 45 10.7 +0.3
comp=Z,6.8nm,0.7s,baz=84,slow=9.0,SNR=84
ASAR LR LR 21 58 51.2
comp=Z,98nm,18.8s,baz=110,slow=37
ASAR Alice Springs 32.62 257 P P 21 45 08.9 -1.5
VNDA Vanda 57.53 182 LR LR 22 09 17.4
comp=Z,90nm,20.1s,baz=214,slow=32
QSPA South Pole Qui 69.93 180 P P 21 49 48.8 -0.4
QSPA IAmb IAmb 21 49 54.4
comp=Z,4.0nm,0.9s
PETK Petropavlovsk- 73.58 353 LR LR 22 16 49.2
comp=Z,47nm,20.7s,baz=66,slow=31
CMAR Chiang Mai Arr 78.59 295 P P 21 50 41.9 +1.6
comp=Z,0.3nm,0.5s,baz=141,slow=2.5,SNR=4.8
ULN Ulaanbaatar 87.39 324 P P 21 51 24.7 -0.6
SONM Songino Array 87.75 323 P P 21 51 25.9 -1.1
comp=Z,1.3nm,0.9s,baz=158,slow=5.7,SNR=9.7
SONM Songino Array 87.75 323 P P 21 51 25.9 -1.1
SNAA Sanae 88.26 183 P P 21 51 28.0 -1.1
VNA3 Neumayer Olymp 88.86 180 P P 21 51 30.7 -1.2
VNA2 Neumayer--Watz 89.15 181 P P 21 51 32.4 -0.8
baz=174,slow=4.2
NVAR Mina Array Bea 89.62 49 P P 21 51 34.5 -1.7
comp=Z,0.4nm,0.6s,baz=227,slow=7.1,SNR=4.1
ILAR Eielson Array 91.17 17 P P 21 51 41.5 -0.9
comp=Z,0.5nm,0.8s,baz=241,slow=5.3,SNR=6.6
ARCES ARCESS Array B 125.84 345 PKP PKPdf 21 57 37.5 -1.5
comp=Z,4.1nm,1.1s,baz=90,slow=3.6,SNR=3.2
GERES GERESS Array B 145.12 331 PKP PKPbc 21 58 14.0 -1.0
comp=Z,1.5nm,0.6s,baz=23,slow=4.8,SNR=8.5
GERES GERESS Array B 145.12 331 PKPbc 21 58 13.8 -1.2

NEIC 09 21:42:19.4±1.6, 45°.87N±0°.05×106°.62W±0°.06, h0km±2km, ML2.3/14, Error ellipse: s-maj=10.2km s-min=4.5km az=141.0
IDC 09 21:42:21.1±3.6, 45°.48N×106°.59W, h0km, mb1 2.2/1, mb1mx2.2/56, mbtmp1.7/1, ML2.7/1, Error ellipse: s-maj=44.9km s-min=25.6km az=129.0
ISC 09 21:42:19.6±1.3, 45°.86N±0°.07×106°.7W±0°.1, h0km, n13, σ1°05/16, Montana

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LAO LASA Array 0.90 22 Pg Pg 21 42 36.2 -0.6
RLMT Red Lodge 1.94 249 Pn 21 42 52.9 -1.1
RLMT IAML 21 43 18.6
18nm,0.4s
RLMT IAML 21 43 18.7
13nm,0.7s
RLMT Sn **Sn 21 43 19.8 +0.5**
GCMT Greycliff 2.07 269 Pn Pn 21 42 55.3 -0.4
YNE Yellowstone No 2.47 251 Pn 21 43 02.0 +0.6
YNE **Sn 21 43 31.1 -1.3**
YMP Mirror Lake Pl 2.68 247 Pn Pn 21 43 05.2 +1.0
EGMT Eagleton 3.01 317 Pn 21 43 09.6 +1.0
EGMT IAML 21 43 45.7
11nm,3.5s
YHH Holmes Hill 3.11 251 Pn 21 43 11.3 +1.2
FLWY Flagg Ranch 3.34 239 Pn Pn 21 43 14.2 +0.9
FLWY IAML 21 45 18.4
10.0nm,4.1s
PD31 Pinedale Array 3.71 215 Pn Pn 21 43 17.9 -0.3
PDAR Pinedale Array 3.71 215 Pn Pn 21 43 19.4 +1.1
0.1nm,0.3s,baz=52,slow=16,SNR=2.3
PDAR Pg **Pb 21 43 26.4 +0.3**
0.1nm,0.3s,baz=42,slow=19,SNR=8.8
PDAR Sn **Sn 21 44 00.8 -2.0**
0.1nm,0.3s,baz=44,slow=31,SNR=2.3
PDAR Lg Lg 21 44 08.8
0.2nm,0.3s,baz=39,slow=38,SNR=6.0
PDAR Pinedale Array 3.71 215 Pn 21 43 19.1 +0.8
PDAR **Sn 21 44 03.3 +0.5**
I56US NEWPORT INFRAS 7.51 292 *i* 22 30 20.0
baz=106,slow=333,SNR=3.3
I10CA LAC DU BONNET 8.37 55 *i* 22 35 20.0
baz=235,slow=337,SNR=1.5

IDC 09 21:46:11.0±2.0, 33°.75N×89°.12E, h0km, mb3.9/3, mb1 3.7/7, mb1mx3.3/60, mbtmp3.5/7, ML3.0/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/37, Error ellipse: s-maj=48.1km s-min=31.4km az=61.0
ISC 09 21:46:15.6±1.2, 33°.8N±0°.1×89°.2E±0°.2, h35km, n8, σ0°92/8, Xizang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MKAR Makanchi Array 13.98 340 Pn Pn 21 49 29.7 -1.4
0.0nm,0.3s,baz=148,slow=11,SNR=2.2
AAK Ala-Archa 14.53 312 Pn P 21 49 44.9 0.0
0.1nm,0.3s,baz=51,slow=5.7,SNR=4.3

CMAR	Chiang Mai Arr	17.60	148	P	Pn	21 50 17.4	-0.7
	0.1nm,0.3s,baz=324,slow=13,SNR=5.0						
KURBB	Kurchatov Arra	18.52	338	P	P	21 50 28.3	-0.5
	0.0nm,0.3s,baz=147,slow=12,SNR=11						
SONM	Songino Array	19.02	38	P	Pn	21 50 36.2	+0.8
	baz=224,slow=9.9,SNR=3.5						
ZALV	Zalesovo Beam	20.35	352	P	P	21 50 49.1	+0.4
	1.8nm,0.8s,baz=172,slow=9.4,SNR=9.0						
ZALV				LR	LR	21 59 56.8	
	comp=Z,67nm,20.2s,baz=264,slow=40						
FINES	FINESS Array B	48.19	325	P	P	21 54 52.8	+0.6
	6.6nm,1.2s,baz=94,slow=11,SNR=2.7						
GERES	GERESS Array B	56.40	310	P	P	21 55 54.1	+0.7
	0.6nm,0.8s,baz=98,slow=4.6,SNR=3.6						

IDC 09 21:53:37.3±0.8, 38.°22N×20.°44E, h0km, mb4.0/18, mb1 4.0/29, mb1mx3.9/63, mbtmp3.9/29, ML3.3/10, MS3.4/12, Ms1 3.4/12, ms1mx3.1/55, Error ellipse: s-maj=15.7km s-min=12.2km az=5.0

MOS 09 21:53:37.1±1.4, 38.°02N×20.°19E, h14km, mb4.5/14, Error ellipse: s-maj=5.5km s-min=3.4km az=72.8

NEIC 09 21:53:37.8±1.7, 38.°15N±0.°03×20.°31E±0.°03, h9km±4km, Error ellipse: s-maj=4.5km s-min=3.3km az=178.0

ATH 09 21:53:38.4, 38.°17N×20.°34E, h11km±1km, ML4.1/17, Error ellipse: s-maj=1.4km s-min=0.7km az=60.0

PDG 09 21:53:38.1±0.4, 38.°18N×20.°29E, h11km, ML4.3/13, Error ellipse: s-maj=0.8km s-min=1.0km az=0.0

THE 09 21:53:39.3, 38.°20N×20.°39E, h8km, ML4.1/16, Error ellipse: s-maj=1.0km s-min=0.4km az=258.0

HLW 09 21:53:39.2, 38.°13N×20.°59E, h33km±27km, Ml4.6

BEO 09 21:53:40.7±0.6, 38.°08N×20.°14E, h31km±6km, ML4.0/17

BGR 09 21:53:41.9±1.4, 38.°24N×20.°57E, h15km, Error ellipse: s-maj=51.1km s-min=25.6km az=48.0

ISC 09 21:53:38.7±0.6, 38.°17N±0.°02×20.°37E±0.°02, h9km±3km, n416, σ1.68/511, mb4.2/43, MS3.4/6, 19C-14D, Greece

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res
CHV1	Chavriata, Kef	0.02	40	P	Pg	21 53 40.6	+0.3
CHV1				S	Sg	21 53 41.5	+0.1
KEF3	Kipouria, Keph	0.04	336	P	Pg	21 53 40.8	+0.3
LXR1	Lixouri, Cepha	0.06	61	P	Pg	21 53 40.9	+0.2
LXR1				S	Sg	21 53 42.3	+0.2
ARGA	Argostoli. Kep	0.09	85	P	Pg	21 53 41.2	+0.2
ARGA				S	Sg	21 53 43.2	+0.5
KEF2	Argostoli. Kep	0.10	92	P	Pg	21 53 41.5	+0.3
KEF2				S	Sg	21 53 43.5	+0.7
ARG2	Argostoli	0.10	85	P	Pg	21 53 41.4	+0.3
ARG2				S	Sg	21 53 43.0	+0.2
KEF4	Livadi, Kephal	0.10	27	P	Pg	21 53 41.3	+0.1
KEF4				S	Sg	21 53 43.6	+0.7
KEF1	Kardakata, Kep	0.14	37	P	Pg	21 53 42.0	+0.3
KEF1				S	Sg	21 53 44.0	+0.1
VLS	Valsamata	0.18	87	P	Pg	21 53 42.5	+0.1
VLS				S	Sg	21 53 44.6	-0.4
	141µm,0.1s						
VLS	Valsamata	0.18	87	P	Pg	21 53 42.5	+0.1
VLS				S	Sg	21 53 45.6	+0.6
VLS				AML	AML	21 53 46.1	
VLS				AML	AML	21 53 46.1	
VLS	Valsamata	0.18	87		Pg	21 53 42.5	+0.1
VLS	Valsamata	0.18	87	P	Pg	21 53 42.5	+0.1
VSK1	VASILIKIADES	0.28	33	P	Pg	21 53 44.6	+0.1
VSK1				S	Sg	21 53 48.6	+0.3
	368µm,0.3s						
KONA	Konidatara, Ke	0.30	32	P	Pg	21 53 44.8	+0.1
KONA				S	Sg	21 53 49.4	+0.6
VLMS	Volimes, Zakyn	0.37	141	P	Pg	21 53 46.5	+0.2
VLMS				S	Sb	21 53 52.9	-0.7
VLMS				AML	AML	21 53 53.9	
VLMS				AML	AML	21 53 55.2	
	comp=E,88136µm,0.2s						
EVGI	Lefkada island	0.51	27	P	Pg	21 53 48.5	0.0
EVGI				S	Sg	21 53 55.6	+0.4
EVGI	Lefkada island	0.51	27	P	Pg	21 53 48.6	0.0
EVGI				S	Sb	21 53 56.4	-0.9
EVGI	Lefkada island	0.51	27		Pg	21 53 48.5	0.0
EVGI					Sg	21 53 55.6	+0.4
ZAK2	Zakynthos	0.57	132	P	Pb	21 53 50.4	-0.5
ZAK2				S	Sb	21 53 59.9	+0.9
	comp=E,103µm,0.6s						
ZAK2	Zakynthos	0.57	132		Pb	21 53 50.4	-0.5
ZAK2					Sb	21 53 59.9	+0.9
MGNA	Meganis	0.59	34	P	Pg	21 53 49.7	-0.4
MGNA				S	Sg	21 53 58.6	+0.7
MGNA				AML	AML	21 53 59.0	
MGNA				AML	AML	21 53 59.2	
KRI1	kERI	0.62	145	P	Pb	21 53 50.6	-0.1
KRI1				S	Sb	21 54 00.6	+0.1
	comp=E,25µm,0.4s						
KRI1	kERI	0.62	145		Pb	21 53 50.6	-0.1
KRI1					Sb	21 54 00.6	+0.1
LKD2	Lefkada island	0.66	20	P	Pg	21 53 51.0	-0.5
LKD2				S	Sg	21 53 59.3	-0.8
	comp=E,18µm,0.4s						
LKD2	Lefkada island	0.66	20	P	Pg	21 53 51.6	+0.1
LKD2				S	Sg	21 54 00.1	0.0
LKD2				AML	AML	21 54 03.7	
	comp=E,33162µm,0.2s						
LKD2				AML	AML	21 54 05.3	
	comp=N,30793µm,0.5s						
LKD2	Lefkada island	0.66	20		Pg	21 53 51.0	-0.5
AST1	Astakos	0.68	57	P	Pg	21 53 51.6	-0.2
AST1				S	Sg	21 54 00.4	-0.3
	comp=N,60µm,0.4s						
AST1	Astakos	0.68	57		Pg	21 53 51.6	-0.2
TSLK	Tsoukalades, L	0.69	19	P	Pg	21 53 51.5	-0.6
TSLK				S	Sg	21 54 01.5	+0.3
	comp=N,20µm,0.5s						
TSLK	Tsoukalades, L	0.69	19	P	Pg	21 53 52.0	-0.2
TSLK				S	Sg	21 54 01.4	+0.2
TSLK				AML	AML	21 54 06.0	
	comp=E,39540µm,0.3s						
TSLK				AML	AML	21 54 09.2	
	comp=N,40183µm,0.6s						
TSLK	Tsoukalades, L	0.69	19		Pg	21 53 51.5	-0.6
TSLK					Sg	21 54 01.5	+0.3
RLS	Riolos of Patr	0.87	97	P	Pg	21 53 55.5	0.0
RLS	Riolos of Patr	0.87	97	P	Pg	21 53 55.6	0.0
RLS				S	Sb	21 54 07.5	-0.4
RLS				AML	AML	21 54 16.5	
	comp=E,9962µm,0.6s						
RLS				AML	AML	21 54 17.4	
	comp=N,10156µm,0.6s						
RLS	Riolos of Patr	0.87	97		Pg	21 53 55.5	0.0
LAKA	Lakka	1.27	86	P	Pn	21 54 02.0	-0.8
LAKA				S	Sn	21 54 21.8	+1.8
	comp=N,5µm,0.9s						
LAKA	Lakka	1.27	86	P	Pn	21 54 02.2	-0.5
LAKA				S	Sn	21 54 21.7	+1.7
LAKA				AML	AML	21 54 28.7	
	comp=N,9900µm,0.8s						
LAKA				AML	AML	21 54 32.9	
	comp=E,9709µm,0.9s						
LAKA	Lakka	1.27	86		Pn	21 54 02.0	-0.8
LAKA					Sn	21 54 21.8	+1.8
EVR	Evrytania	1.35	56	P	Pn	21 54 03.5	-0.5
EVR				S	Sg	21 54 24.4	+2.1
	comp=E,5µm,1.0s						
EVR	Evrytania	1.35	56	P	Pn	21 54 04.0	0.0
EVR				AML	AML	21 54 31.0	
	comp=N,8784µm,1.2s						
EVR				AML	AML	21 54 33.4	
	comp=E,11621µm,0.6s						
EVR	Evrytania	1.35	56		Pn	21 54 03.5	-0.5
EVR					Sg	21 54 24.4	+2.1
TRIZ	Trizonia	1.36	81	P	Pn	21 54 03.2	-0.7
TRIZ				S	Sn	21 54 21.9	-0.1
	comp=E,5µm,0.5s						
TRIZ	Trizonia	1.36	81	P	Pb	21 54 04.0	-0.3
TRIZ				S	Sg	21 54 22.5	+0.2
TRIZ	Trizonia	1.36	81		Pn	21 54 03.2	-0.7
TRIZ					Sn	21 54 21.9	-0.1
IGT	Igoumenitsa	1.36	359	P	Pn	21 54 04.1	+0.1
IGT				S	Sg	21 54 22.6	0.0
	comp=E,5µm,0.8s						
IGT	Igoumenitsa	1.36	359	ePg	Pg	21 54 07.4	+2.5
IGT	Igoumenitsa	1.36	359	P	Pn	21 54 04.1	+0.1
IGT				S	Sb	21 54 21.7	-0.2
IGT				AML	AML	21 54 30.0	
	comp=E,11897µm,0.9s						
IGT				AML	AML	21 54 30.1	
	comp=N,8997µm,0.8s						
IGT	Igoumenitsa	1.36	359		Pn	21 54 04.1	+0.1
IGT					Sg	21 54 22.6	0.0
IGT	Igoumenitsa	1.36	359	P	Pn	21 54 04.1	+0.1
IGT				S	Sg	21 54 22.6	0.0
ALIK	Aliki, Aigiali	1.38	86	P	Pn	21 54 03.9	-0.2
ALIK	Aliki, Aigiali	1.38	86		Pn	21 54 03.9	-0.2
KLV	Kalavryta, Ach	1.41	95	P	Pn	21 54 04.8	+0.1
KLV	Kalavryta, Ach	1.41	95	P	Pn	21 54 04.9	+0.1
KLV				S	Sg	21 54 25.1	+0.9
KLV				AML	AML	21 54 37.9	
	comp=E,4571µm,0.6s						
KLV				AML	AML	21 54 38.0	
	comp=N,5132µm,0.8s						
KLV	Kalavryta, Ach	1.41	95		Pn	21 54 04.8	+0.1
KALE	Kalithea	1.41	80	P	Pn	21 54 04.3	-0.4
KALE				S	Sg	21 54 24.6	+0.4
	comp=N,4µm,0.7s						
KALE	Kalithea	1.41	80	P	Pn	21 54 04.8	0.0
KALE				S	Sg	21 54 26.0	+1.8
KALE				AML	AML	21 54 34.7	
	comp=N,10227µm,0.6s						
KALE				AML	AML	21 54 34.8	
	comp=E,6053µm,0.9s						
KALE	Kalithea	1.41	80		Pn	21 54 04.3	-0.4
KALE					Sg	21 54 24.6	+0.4
JAN	Janina	1.53	14	P	Pb	21 54 07.2	-0.2
JAN				S	Sg	21 54 28.7	+0.7
	comp=E,5µm,0.6s						
JAN	Janina	1.53	14	P	Pb	21 54 07.4	0.0
JAN				S	Sg	21 54 29.4	+1.3
JAN				AML	AML	21 54 34.4	
	comp=E,10887µm,0.8s						
JAN				AML	AML	21 54 37.2	
	comp=N,6633µm,0.4s						
JAN	Janina	1.53	14	P	Pb	21 54 07.2	-0.2
JAN				S	Sg	21 54 28.7	+0.7
ITM	Ithomi	1.58	128	P	Pb	21 54 07.8	-0.4
ITM	Ithomi	1.58	128	P	Pb	21 54 07.9	-0.3
ITM				S	Sg	21 54 30.4	+0.8
ITM				AML	AML	21 54 43.0	
	comp=N,4712µm,0.6s						
ITM				AML	AML	21 54 47.2	
	comp=E,4375µm,0.8s						
ITM	Ithomi	1.58	128	Pn	Pn	21 54 06.5	-0.5
KEK	Kerkira	1.60	344	P	Pb	21 54 07.6	+0.3
KEK	Kerkira	1.60	344	P	Pb	21 54 08.2	-0.4
KEK	Kerkira	1.60	344		Pn	21 54 07.6	+0.3
KASA	Kassiopi	1.61	348	P	Pb	21 54 08.8	+0.1
KASA				S	Sg	21 54 30.5	0.0
KASA				AML	AML	21 54 37.6	
	comp=N,4058µm,0.4s						
KASA				AML	AML	21 54 38.3	
	comp=E,5541µm,0.5s						
KASA	Kassiopi	1.61	348		Pg	21 54 11.5	+1.9
MAKR	Makrakomi, Fth	1.62	58	P	Pg	21 54 09.8	0.0
MAKR				AML	AML	21 54 39.2	
	comp=E,13562µm,0.4s						
MAKR				AML	AML	21 54 40.7	
	comp=N,16815µm,0.6s						
MAKR	Makrakomi, Fth	1.62	58		Pg	21 54 10.1	+0.3
DLFA	Delphi	1.70	79		Pg	21 54 12.3	+0.9
SRN	Sarande	1.73	351		Pg	21 54 11.9	-0.1
KLMT	Kalamata	1.74	129	P	Pb	21 54 10.7	-0.2
AGG	Agios Georgios	1.76	60	P	Pb	21 54 11.3	+0.1
AGG				S	Sg	21 54 35.2	-0.1
	comp=N,5µm,0.9s						
AGG	Agios Georgios	1.76	60	P	Pb	21 54 11.3	+0.1
AGG				S	Sg	21 54 35.4	+0.1
AGG				AML	AML	21 54 42.5	
	comp=N,11498µm,0.8s						
AGG				AML	AML	21 54 47.6	
	comp=E,8788µm,0.8s						
AGG	Agios Georgios	1.76	60	P	Pb	21 54 11.3	+0.1
AGG				S	Sg	21 54 35.2	-0.1
AXAR	Agios Charalam	1.90	71	P	Pb	21 54 13.7	+0.2
AXAR				AML	AML	21 54 53.5	
	comp=E,17422µm,1.0s						
AXAR				AML	AML	21 54 57.0	
	comp=N,18719µm,1.3s						
AXAR	Agios Charalam	1.90	71		Pb	21 54 14.2	+0.7
THL	Klokotos Trika	1.90	42	P	Pb	21 54 13.6	+0.1
THL				S	Sg	21 54 38.6	-1.1
	comp=N,4µm,0.5s						
THL	Klokotos Trika	1.90	42		Pb	21 54 13.6	+0.1
THL					Sg	21 54 38.6	-1.1
KPRO	Kipourio	1.94	23	P	Pb	21 54 14.6	+0.2
KPRO				S	Sb	21 54 37.9	-0.9
	comp=N,4µm,0.8s						
KPRO	Kipourio	1.94	23		Pb	21 54 14.6	+0.2
KPRO					Sb	21 54 37.9	-0.9
PROD	Prodromos	2.00	87	P	Pb	21 54 15.2	-0.1
PROD	Prodromos	2.00	87		Pg	21 54 18.4	+1.4
LOUT	Loutraki	2.06	94	P	Pb	21 54 15.9	-0.5
LOUT	Loutraki	2.06	94		Pb	21 54 16.2	-0.2
PENT	Pentalofos	2.11	16	P	Pb	21 54 17.5	+0.2
PENT	Pentalofos	2.11	16		Pg	21 54 19.5	+0.3
LKR	Lokris	2.12	76	P	Pb	21 54 16.3	-1.1
LKR	Lokris	2.12	76	P	Pb	21 54 15.9	-1.4
LKR	Lokris	2.12	76		Pb	21 54 16.3	-1.1
TPE	Tepelena	2.14	353		Pb	21 54 18.6	+0.9
VIL2	Platees	2.29	88	P	Pb	21 54 18.9	-1.3
VIL2				S	Sb	21 54 48.8	+0.2
VILL	Villia	2.32	89	P	Pb	21 54 19.4	-1.4
VILL	Villia	2.32	89		Pb	21 54 19.4	-1.4
KZN	Kozani	2.40	27		Pb	21 54 21.5	-0.6
KZN	Kozani	2.40	27	P	Pb	21 54 21.5	-0.6
SCTE	Santa Cesarea	2.41	323	Pn	Pb	21 54 17.3	-1.1
NEO	Neokhori	2.51	62	P	Pb	21 54 22.0	-1.9
NEO	Neokhori	2.51	62		Pb	21 54 22.0	-1.9
XOR	Xorichti	2.51	61		Pb	21 54 22.0	-2.0
LIT	Litokhoron	2.54	40	Pn	Pb	21 54 19.0	-1.2
LIT	Litokhoron	2.54	40	P	Pb	21 54 19.0	-1.2
MRKA	Markates	2.58	77	P	Pb	21 54 22.3	+1.5
SKIA	Skiathos	2.62	67	P	Pn	21 54 23.4	+2.1
ATH	Athens Observa	2.65	93	P	Pn	21 54 23.5	+1.8
ATHU	Athens Univers	2.71	93	P	Pn	21 54 23.8	+1.4
ATHU				S	Sb	21 54 58.1	-2.5
ATHU	Athens Univers	2.71	93		Pn	21 54 23.8	+1.4
VLY	Voula,Athens	2.73	96		Pn	21 54 24.0	+1.3
PTL	Penteli	2.76	91	P	Pn	21 54 24.6	+1.4
PTL	Penteli	2.76	91		Pn	21 54 24.7	+1.4
KTHR	Kythira	2.84	131		Pb	21 54 29.0	-0.6
ALNA	Alonissos	2.91	69		Pb	21 54 28.8	-2.0
OHR	Ohrid	2.96	6	iPn	Pb	21 54 29.0	-2.7
OHR				iSn	Sb	21 55 09.0	+1.1
TIP	Timpagrande	3.00	291	⇑P	Pn	21 54 27.3	+0.8
TIP	Timpagrande	3.00	291		Pn	21 54 25.4	-1.1
MESG	Mesagne	3.10	322		Pn	21 54 30.3	+2.4
PAIG	Paliouri	3.12	55	P	Pb	21 54 33.1	-1.3
THE	Thessaloniki	3.18	38	P	Pb	21 54 33.7	-1.7
GRG	Griva	3.20	29	P	Pb	21 54 34.7	-1.0
TIR	Tirane	3.20	353	ePn	Pn	21 54 30.7	+1.5
TIR				eSn	Sn	21 55 07.7	+0.2
TIR	Tirane	3.20	353	⇓P	Pn	21 54 31.1	+1.9
TIR	Tirane	3.20	353		Pn	21 54 28.2	-1.0
TIR	Tirane	3.20	353	P	Pn	21 54 30.5	+1.3
KARY	Karystos	3.21	91		Pn	21 54 31.4	+2.0
HORT	Hortiatis	3.22	40		Pb	21 54 34.1	-2.0
ANKY	Antikythira Is	3.29	133		Pb	21 54 34.1	-3.1
CGL1	Ceglie Messapi	3.34	319	ePn	Pn	21 54 32.0	+0.8
TAR1	Taranto	3.35	316	ePn	Pn	21 54 31.9	+0.6
PHP	Peshkopia	3.51	1		Pn	21 54 35.9	+2.3
PHP	Peshkopia	3.51	1	P	Pn	21 54 35.9	+2.3
SOH	Sokhos	3.52	40	P	Pb	21 54 37.3	-3.9
CEL	Celeste	3.52	273		Pn	21 54 32.6	-1.2
OUR	Ouranopolis	3.54	51		Pn	21 54 37.1	+3.2
OUR	Ouranopolis	3.54	51	P	Pn	21 54 37.1	+3.2
KNT	Kendrikon	3.57	32	P	Pb	21 54 39.2	-2.9
VAY	Valandovo	3.58	28	ePn	Pn	21 54 37.0	+2.5
VAY	Valandovo	3.58	28	eP	Pn	21 54 36.9	+2.5
VAY	Valandovo	3.58	28	iPn	Pn	21 54 36.7	+2.3
VAY				iSn	Sn	21 55 17.6	+1.0
NOCI	Noci	3.66	317		Pn	21 54 36.0	+0.5
STIP	Stip	3.79	21	iPn	Pn	21 54 40.8	+3.5
SRS	Serrai	3.85	39	ePn	Pn	21 54 40.5	+2.2
SRS	Serrai	3.85	39	P	Pb	21 54 43.1	-3.8
SKO	Skopje	3.89	12	ePn	Pn	21 54 40.5	+1.8
SKO				eSn	Sn	21 55 24.7	+0.2
ULC	Ulcinj	3.89	348	P	Pn	21 54 41.4	+2.7
ULC	Ulcinj	3.89	348	⇓iPn	Pn	21 54 38.3	-0.4
ULC				eSn	Sn	21 55 24.7	+0.2
SG1	Sgolgore (BA)	3.91	314	ePn	Pn	21 54 40.0	+1.0
IMMV	Iera Moni Meta	3.96	132		Pn	21 54 41.5	+1.8
BAI	Bari	3.98	319	ePn	Pn	21 54 40.6	+0.6
CUC	Castrocucco	3.98	299		Pn	21 54 42.9	+2.9
DRME	Dracevica, Mon	4.11	348	ePn	Pn	21 54 42.2	+0.4
DRME	Dracevica, Mon	4.11	348	ePn	Pn	21 54 41.9	+0.1
DRME				eSn	Sn	21 55 30.4	+0.3
KKB	Krupnik	4.24	29	eP	Pb	21 54 50.4	-3.1
APE	Apeiranthos	4.24	103		Pn	21 54 46.7	+3.1
APE	Apeiranthos	4.24	103	⇑eP	Pn	21 54 46.7	+3.1
BUM	Brajici-Budva	4.28	345	ePn	Pn	21 54 43.8	-0.3
BUM				iSn	Sn	21 55 32.4	-1.8
MMB	Musomiste	4.28	36	eP	Pn	21 54 46.3	+2.1
ACER	Acerenza	4.31	309		Pn	21 54 43.7	-0.8
ACER				Sn	Sn	21 55 33.7	-1.2
PDG	Podgorica	4.34	349	ePn	Pn	21 54 45.8	+0.9
PDG				eSn	Sn	21 55 34.7	-0.8
PDG	Podgorica	4.34	349	⇑P	Pn	21 54 47.6	+2.7
PDG	Podgorica	4.34	349	ePn	Pn	21 54 45.4	+0.5
PDG	Podgorica	4.34	349		Pn	21 54 43.9	-0.9
PDG				Sn	Sn	21 55 34.8	-0.8
TTG	Podgorica	4.34	349	ePn	Pn	21 54 44.9	0.0
TTG				eSn	Sn	21 55 35.8	+0.2
PVY	Plav	4.43	356	ePn	Pn	21 54 46.7	+0.4
PVY				eSn	Sn	21 55 38.5	+0.4
SANT	Santorini	4.44	112	Pn	Pn	21 54 44.7	-1.6
SANT				Sn	Sn	21 55 36.8	-1.3
GVD	Gavdhos	4.47	137		Pn	21 54 49.6	+2.8
CHOS	Chios island	4.48	85		Pn	21 54 48.9	+2.0
HCY	Herceg Novi	4.51	342	ePn	Pn	21 54 46.7	-0.5
HCY	Herceg Novi	4.51	342	ePn	Pn	21 54 46.7	-0.5
HCY				eSn	Sn	21 55 39.5	-0.2
CEME	Cevo	4.51	346	ePn	Pn	21 54 47.1	-0.2
CEME				eSn	Sn	21 55 38.9	-1.0
AMGA	Amorgos Island	4.59	105		Pn	21 54 53.0	+4.6
BOSS	Bosilegrad	4.61	20	ePn	Pn	21 54 49.8	+1.1
IDI	Anoyia	4.63	127	Pn	Pn	21 54 50.4	+1.4
	comp=N,0.4nm,0.3s,baz=294,slow=13,SNR=11						
IDI				Sn	Sb	21 55 52.7	-3.5
	comp=N,8.7nm,0.3s,baz=317,slow=22,SNR=7.9						
IVA	Berane	4.71	356	ePn	Pn	21 54 50.5	+0.4
IVA				eSn	Sn	21 55 45.3	+0.4
NKME	Niksic	4.72	347	⇓iPn	Pn	21 54 50.2	+0.1
NKME				eSn	Sn	21 55 44.8	-0.2
KOME	Kolasin	4.72	352	ePn	Pn	21 54 50.8	+0.6
KOME				eSn	Sn	21 55 45.5	+0.3
NKY	Niksic	4.75	348	⇓iPn	Pn	21 54 51.5	+0.8
NKY				eSn	Sn	21 55 46.1	+0.1
VAE	Valguarnera	4.76	264	Pn	Pn	21 54 53.0	+2.2
	comp=N,0.9nm,0.3s,baz=13,slow=19,SNR=3.3						
VAE				Sn	Sn	21 55 45.8	-0.4
	comp=N,2.7nm,0.3s,baz=63,slow=7.8,SNR=3.6						
BARS	Barje	4.77	13	ePn	Pn	21 54 51.9	+1.1
BARS				eSn	Sn	21 55 46.5	+0.2
TREB	Trebinje	4.80	342	ePn	Pn	21 54 50.8	-0.4
TREB				eSn	Sn	21 55 44.3	-2.6
TREB	Trebinje	4.80	342	ePn	Pn	21 54 49.7	-1.5
RZN	Rozhen	4.85	42	eP	Pn	21 54 54.9	+2.8
BRY	Bratogost	4.93	344	ePn	Pn	21 54 52.7	-0.4
BRY	Bratogost	4.93	344	P	Pn	21 54 58.1	+5.0
BRY	Bratogost	4.93	344	ePn	Pn	21 54 52.7	-0.4
BRY				eSn	Sn	21 55 49.7	-0.6
VTS	Vitosha	4.95	25	ePn	Pn	21 54 54.4	+0.9
VTS				eSn	Sn	21 55 50.1	-0.9
VTS	Vitosha	4.95	25	eP	Pn	21 54 54.3	+0.8
VTS	Vitosha	4.95	25		Pn	21 54 53.6	+0.1
VTS	Vitosha	4.95	25	P	Pn	21 54 53.6	+0.1
SGRT	San Giovanni R	5.04	317		Pn	21 54 53.2	-1.4
SGRT				Sn	Sn	21 55 51.1	-2.0
SELS	Selova	5.08	6	ePn	Pn	21 54 55.4	+0.3
SELS				eSn	Sn	21 55 52.2	-1.6
SJES	Sjenica	5.09	357	ePn	Pn	21 54 56.4	+1.0
SJES				eSn	Sn	21 55 52.8	-1.6
STON	Ston	5.12	337	ePn	Pn	21 54 55.0	-0.6
STON				eSn	Sn	21 55 51.5	-3.2
STON	Ston	5.12	337	ePn	Pn	21 54 53.3	-2.3
PLD	Plovdiv	5.15	39	ePn	Pn	21 54 58.5	+2.5
UPM	Unac-Piva	5.15	348	ePn	Pn	21 54 58.0	+1.8
UPM	Unac-Piva	5.15	348	ePn	Pn	21 54 56.1	-0.1
UPM				eSn	Sn	21 55 55.6	-0.3
ALN	Alexandroupoli	5.17	56	Pn	Pn	21 54 57.4	+1.1
ALN				Sn	Sn	21 55 55.5	-0.4
ALN	Alexandroupoli	5.17	56	P	Pn	21 54 57.4	+1.1
ALN						21 55 55.5	
PLE	Pljevlja	5.21	352	ePn	Pn	21 54 57.4	+0.5
PLE				eSn	Sn	21 55 57.2	0.0
KDZ	Kurdzhali	5.21	47	eP	Pn	21 54 48.4	-8.5
WDD	Wied Dalam	5.22	245		Pn	21 54 56.3	-0.7
WDD				Sn	Sn	21 55 54.6	-2.8
PGB	Panagyurishte	5.25	32	eP	Pn	21 54 59.1	+1.6
PAOL	Paolisi	5.31	304		Pn	21 54 56.9	-1.4
ZAPS	Zavoj	5.38	18	ePn	Pn	21 55 00.3	+1.0
IVAS	Ivanjica	5.40	358	ePn	Pn	21 54 59.6	0.0
IVAS				eSn	Sn	21 56 00.7	-1.2
RUDO	Rudo	5.50	352	ePn	Pn	21 55 01.0	+0.2
BOVS	Bovan	5.55	10	ePn	Pn	21 55 01.8	+0.2
BOVS				eSn	Sn	21 56 03.5	-2.0
CORL	Corleone	5.58	269	Pn	Pn	21 55 00.9	-1.1
CLTB	Caltabellotta	5.69	266		Pn	21 55 02.3	-1.2
GRUS	Gruza	5.72	3	ePn	Pn	21 55 05.1	+1.2
GRUS				eSn	Sn	21 56 07.2	-2.4
BBLS	Lazići	5.74	353	ePn	Pn	21 55 03.5	-0.7
BBLS				eSn	Sn	21 56 07.7	-2.5
BBLS	Lazići	5.74	353	ePn	Pn	21 55 02.8	-1.4
ZAGS	Zajecar	5.81	13	ePn	Pn	21 55 05.9	+0.8
DIVS	Divibare	5.93	357	ePn	Pn	21 55 06.7	-0.1
DIVS				eSn	Sn	21 56 12.1	-2.8
DIVS	Divibare	5.93	357	ePn	Pn	21 55 05.8	-1.0
HAPS	Han Pijesak,Bl	6.01	350	ePn	Pn	21 55 05.9	-2.0
KARP	Karpathos	6.04	114	Pn	Pn	21 55 07.4	-1.0
TRUS	Trudelj	6.05	0	ePn	Pn	21 55 09.3	+0.9
TRUS				eSn	Sn	21 56 15.7	-2.0
PLVB	Pleven	6.13	30	⇑P	Pn	21 55 11.8	+2.4
ELND	Elena	6.34	40	⇓P	Pn	21 55 14.5	+2.1
TEKS	Tekeris	6.41	355	eSn	Sn	21 56 22.6	-3.9
TEKS	Tekeris	6.41	355	ePn	Pn	21 55 11.4	-1.9
MGRS	Mrkonjic Grad	6.71	339	ePn	Pn	21 55 17.7	+0.2
AQU	L'Aquila	6.77	310		Pn	21 55 16.6	-1.7
AQU	L'Aquila	6.77	310	P	Pn	21 55 16.6	-1.7
BLY	Banja Luka	6.99	341	⇑P	Pn	21 55 23.1	+1.7
BLY	Banja Luka	6.99	341	ePn	Pn	21 55 21.5	+0.2
BLY	Banja Luka	6.99	341		Pn	21 55 20.4	-0.9
NRCA	Norcia	7.23	312		Pn	21 55 23.7	-1.0
HUMR	Humele	7.24	27	⇑P	Pn	21 55 26.5	+1.8
GZR	Gura Zlata	7.44	13	⇑P	Pn	21 55 28.5	+1.0
GZR	Gura Zlata	7.44	13	P	Pn	21 55 30.8	+3.3
BZS	Buzias	7.50	7	⇑P	Pn	21 55 30.3	+2.0
BZS	Buzias	7.50	7	P	Pn	21 55 30.7	+2.4
BZS				pmax	pmax		
	comp=Z,20nm,1.2s						
LOT	Lotru	7.70	18	⇑P	Pn	21 55 33.5	+2.3
ELL	Elmali	7.72	98	P	Pn	21 55 37.2	+5.7
SLUM	Salum	7.76	148	P	Pn	21 55 28.8	-3.1
	baz=148						
SLUM				AMP		21 56 00.0	
	baz=148						
SLUM				S	Sn	21 56 49.2	-11
	baz=148						
ARR	Arges	7.87	23	⇑P	Pn	21 55 35.1	+1.8
VOIR		8.06	24	⇑P	Pn	21 55 37.8	+1.8
VOIR		8.06	24	P	Pn	21 55 38.3	+2.3
VOIR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MORH	Mrgy, Hungar	8.14	352	ePn	Pn	21 55 35.9	-1.2
MLR	Muntele Rosu	8.41	28	Pn	Pn	21 55 41.7	+0.7
	comp=Z,0.2nm,0.3s,baz=177,slow=5.8,SNR=7.5						
MLR				LR	LR	21 58 55.7	
	comp=Z,148nm,18.4s,baz=136,slow=38						
MLR	Muntele Rosu	8.41	28	⇑P	Pn	21 55 42.9	+1.9
GBRS	Gornja Briga	8.44	332	iPn	Pn	21 55 41.2	0.0
CRES	Cresnjev	8.48	336	ePn	Pn	21 55 40.2	-1.5
DOPR	Dopca	8.64	24	⇑P	Pn	21 55 46.3	+2.4
BISRR	Bisoca	8.76	31	⇑P	Pn	21 55 56.6	+11
OZUR		8.88	25	⇑P	Pn	21 55 49.2	+2.0
LJU	Ljubljana	8.98	333	ePn	Pn	21 55 47.7	-0.9
VRI	Vrincioaia	9.03	30	P	Pn	21 55 52.8	+3.5
VRI				pmax	pmax		
	comp=Z,25nm,1.1s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KEST	Kesra	9.15	258	Pn	Pn	21 55 52.5	+1.4
	comp=Z,0.4nm,0.3s,baz=19,slow=9.4,SNR=6.6						
KEST				LR	LR	22 00 12.7	
	comp=Z,216nm,19.1s,baz=108,slow=43						
SOKA	Soboth	9.37	337	ePn	Pn	21 55 52.9	-1.1
	comp=Z,11nm,0.4s,SNR=21						
SOKA				eSn	Sn	21 57 33.8	-5.7
	comp=Z,8.2nm,0.5s						
OBKA	Obir	9.38	335	ePn	Pn	21 55 54.0	-0.1
	comp=Z,5.0nm,0.4s						
ZCCA	Zocca	9.38	314	Pn	Pn	21 55 52.7	-1.5
ARSA	Arzberg	9.75	340	ePn	Pn	21 55 59.7	+0.6
	comp=Z,3.8nm,0.4s						
PSZ	Piszkesteto	9.75	358	Pn	Pn	21 55 57.8	-1.4
PSZ	Piszkesteto	9.75	358	P	Pn	21 56 01.5	+2.3
SWA2		9.86	153	P	Pn	21 55 58.4	-2.2
	baz=154						
SWA2				S	Sn	21 57 39.3	-12
	baz=154						
SWA2				AMP		21 58 00.0	
	baz=154						
STAL	STALIGIAL	9.88	327	Pn	Pn	21 55 59.3	-1.6
PRMA	PARMA	10.01	314	Pn	Pn	21 56 01.8	-0.9
BURAR	Bucovina Array	10.09	19	⇓P	Pn	21 56 06.0	+2.1
BURAR	Bucovina Array	10.09	19	Pn	Pn	21 56 02.4	-1.4
BURAR	Bucovina Array	10.09	19	P	Pn	21 56 07.1	+3.3
BUR08	Bucovina Ar. S	10.11	19	Pn	Pn	21 56 02.5	-1.7
CTI	Castel Tesino	10.19	323	P	Pn	21 56 04.2	-1.0
KBA	Koelnbreinsper	10.29	332	ePn	Pn	21 56 07.7	+0.9
	comp=Z,2.6nm,0.3s						
KBA				eSn	Sn	21 57 57.7	-4.6
	comp=Z,9.1nm,0.5s						
KBA	Koelnbreinsper	10.29	332	P	Pn	21 56 09.6	+2.9
KBA				pmax	pmax		
	comp=Z,17nm,0.9s						
ABTA	Abfaltersbach	10.35	328	ePn	Pn	21 56 06.5	-0.9
	comp=Z,7.7nm,0.5s						
ABTA				Sn	Sn	21 57 59.6	-3.9
	comp=Z,13nm,0.7s						
VYHS	Vyhne	10.38	354	eP	Pn	21 56 07.2	-0.6
VYHS	Vyhne	10.38	354	ePN	Pn	21 56 07.2	-0.6
VYHS				eSN	Sn	21 57 57.3	-6.9
MODS	Modra-Piesok	10.44	349	eSN	Sn	21 57 57.6	-8.2
BRTR	Keskin Array B	10.46	77	Pn	Pn	21 56 11.5	+2.5
	comp=Z,0.1nm,0.3s,baz=256,slow=12,SNR=5.0						
BRTR				LR	LR	22 01 04.6	
	comp=Z,275nm,20.8s,baz=250,slow=43						
BRTR	Keskin Array B	10.46	77	Pn	Pn	21 56 07.8	-1.2
BRTR	Keskin Array B	10.46	77	*i* P	Pn	21 56 12.1	+3.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MOA	Molln	10.65	337	ePn	Pn	21 56 11.3	-0.2
	comp=Z,2.6nm,0.2s,SNR=17						
MOA				eSn	Sn	21 58 06.3	-4.6
	comp=Z,7.5nm,0.6s						
CSS	Mathiatis	10.90	103	Pn	Pn	21 56 13.6	-1.4
RJOB	Jochberg	11.05	332	ePn	Pn	21 56 17.9	+0.9
RJOB				eSn	Sn	21 58 17.2	-3.5
WTTA	Wattenberg	11.12	328	ePn	Pn	21 56 19.4	+1.4
	comp=Z,3.2nm,0.4s,SNR=5.2						
WTTA				Sn	Sn	21 58 22.1	-0.5
	comp=Z,17nm,0.7s						
WATA	Walderalm	11.20	328	ePn	Pn	21 56 20.1	+0.9
	comp=Z,2.7nm,0.4s						
WATA				Sn	Sn	21 58 23.9	-0.6
	comp=Z,7.5nm,0.5s						
NIE	Niedzica	11.25	360	P	Pn	21 56 22.7	+3.1
NIE				pmax	pmax		
	comp=Z,4.0nm,1.4s						
SQTA	Sankt Quirin	11.27	326	ePn	Pn	21 56 22.5	+2.4
	comp=Z,3.5nm,0.4s						
SQTA				Sn	Sn	21 58 24.0	-2.2
	comp=Z,12nm,0.7s						
FETA	Feichten	11.34	324	Pn	Pn	21 56 22.9	+1.9
	comp=Z,1.1nm,0.4s						
FETA				Sn	Sn	21 58 25.9	-2.0
	comp=Z,3.5nm,0.5s						
MOTA	Moosalm	11.41	326	ePn	Pn	21 56 23.5	+1.5
	comp=Z,2.7nm,0.4s						
MOTA				Sn	Sn	21 58 29.2	-0.5
	comp=Z,3.4nm,0.6s						
VRAC	Vranov	11.46	347	LR	LR	22 01 38.6	
	comp=Z,128nm,19.8s,baz=176,slow=42						
RETA	Reutte	11.67	326	Pn	Pn	21 56 28.0	+2.5
	comp=Z,0.6nm,0.2s						
GEC2	GERESS Array S	11.71	338	ePn	Pn	21 56 25.9	-0.2
GEC2	GERESS Array S	11.71	338	P	Pn	21 56 28.6	+2.5
GEC2				pmax	pmax		
	comp=Z,10.0nm,1.7s						
GERES	GERESS Array B	11.71	338	Pn	Pn	21 56 25.1	-1.0
	comp=Z,0.5nm,0.3s,baz=155,slow=14,SNR=14						
GERES				Sn	Sn	21 58 25.1	-12
	comp=Z,0.1nm,0.3s,baz=35,slow=4.9,SNR=5.5						
GERES				LR	LR	22 01 36.1	
	comp=Z,196nm,20.9s,baz=160,slow=41						
GERES	GERESS Array B	11.71	338	Pn	Pn	21 56 25.7	-0.4
GERES	GERESS Array B	11.71	338	P	Pn	21 56 25.7	-0.4
MORC	Moravsky Berou	11.78	351	Pn	Pn	21 56 25.0	-1.9
MORC	Moravsky Berou	11.78	351	P	Pn	21 56 28.5	+1.6
DAVA	Damuels	11.93	323	Pn	Pn	21 56 29.7	+0.6
	comp=Z,0.6nm,0.2s						
PLONS	Plons/SG	12.00	321	ePn	Pn	21 56 32.5	+2.5
PLONS				eSn	Sn	21 58 41.3	-2.7
KHC	Kasperske Hory	12.00	338	ePn	Pn	21 56 30.1	+0.1
KHC				eSn	Sn	21 58 37.5	-6.5
KHC	Kasperske Hory	12.00	338	ePN	Pn	21 56 29.5	-0.5
KHC				eSN	Sn	21 58 35.0	-9.0
KHC	Kasperske Hory	12.00	338	Pn	Pn	21 56 28.8	-1.2
KHC	Kasperske Hory	12.00	338	⇓eP	Pn	21 56 29.8	-0.2
BNI	Bardonecchia	12.33	308	P	Pn	21 56 37.0	+2.4
GLL	Jalalah	12.73	129	P	Pn	21 56 38.0	-2.0
	baz=129						
HFRF	Wahat Farafira	12.86	146	P	Pn	21 56 38.5	-3.3
	baz=147						
BALST	Balsthal	13.05	319	eSn	Sn	21 59 01.4	-8.2
GRF	Grafenberg Arr	13.26	333	P	Pn	21 56 49.4	+2.3
MMAI	Mount Meron Ar	13.27	108	Pn	Pn	21 56 43.9	-3.5
	comp=Z,0.5nm,0.3s,baz=310,slow=11,SNR=3.9						
ECH	Echery	13.90	320	Pn	Pn	21 56 56.4	+0.5
ECH	Echery	13.90	320	P	Pn	21 56 56.4	+0.5
AKASG	Malin Array Be	14.02	24	Pn	Pn	21 56 57.7	+0.2
	comp=Z,0.5nm,0.3s,baz=217,slow=11,SNR=3.5						
CLL	Collm	14.13	341	esPP		21 57 09.0	
CLL				Lm	MLR	22 02 00.0	
	comp=N,200nm,19.4s						
CLL				Lm	MLR	22 02 00.0	
	comp=E,200nm,20.9s						
CLL	Collm	14.13	341	eP	P	21 57 09.0	+2.3
EIL	Elat	14.77	121	LR	LR	22 04 51.4	
	comp=E,86nm,20.7s,baz=310,slow=46						
ASF	Jabal al Asfar	14.78	109	Pn	Pn	21 57 07.0	-1.0
	comp=E,0.1nm,0.3s,baz=125,slow=6.7,SNR=2.2						
WLF	Walferdange	15.36	323	P	P	21 57 20.4	+0.1
WLF				sP	pwP	21 57 26.1	+1.5
WLF	Walferdange	15.36	323	P	P	21 57 23.6	+3.2
WLF				pmax	pmax		
	comp=Z,31nm,1.1s						
NACGM	Naroch	17.30	13	*e*	P	21 57 40.0	-0.3
NEY	Neytrino	17.67	66	⇓eP	P	21 57 49.1	+2.9
NEY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KIV	Kislovodsk	17.77	64	P	Pn	21 57 45.5	-0.9
KIV	Kislovodsk	17.77	64	eP	P	21 57 48.5	+1.3
KIV				pmax	pmax		
	comp=Z,21nm,1.0s						
KIV				MLR	MLR		
	comp=Z,167nm,14.0s						
KBZ	Khabaz	17.88	65	P	P	21 57 48.3	0.0
	comp=Z,0.1nm,0.3s,baz=278,slow=5.9,SNR=11						
KBZ	Khabaz	17.88	65	ceP	P	21 57 50.3	+2.0
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NCK	Nalchik	18.34	66	⇓eP	P	21 57 55.0	+1.6
NCK				pmax	pmax		
	comp=Z,2.0nm,0.2s						
ZEI	Tsey	18.47	68	eP	P	21 57 54.7	-0.3
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VORD	Divnogorie	18.52	40	eP	P	21 57 54.2	-1.0
VORD				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VSR	Storozhevoye	18.60	39	eP	P	21 57 54.5	-1.7
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ESDC	Sonseca Array	18.98	282	P	Pn	21 58 01.1	-0.1
	comp=Z,0.3nm,0.3s,baz=82,slow=11,SNR=5.7						
ESDC	Sonseca Array	18.98	282	P	P	21 57 58.4	-2.1
GNI	Garni	18.99	76	P	Pn	21 58 01.5	0.0
	comp=Z,0.6nm,0.3s,baz=342,slow=3.0,SNR=18						
GNI				LR	LR	22 05 49.8	
	comp=Z,73nm,20.7s,baz=281,slow=39						
GNI	Garni	18.99	76	P	P	21 57 59.9	-0.9
GNI				IAmb	IAmb	21 58 05.7	
	comp=Z,19nm,0.9s						
GNI	Garni	18.99	76	deP	Pn	21 58 02.6	+1.2
GNI				pmax	pmax		
	comp=Z,68nm,1.0s						
PAB	San Pablo	19.29	282	P	P	21 58 03.1	-0.8
PAB	San Pablo	19.29	282	P	P	21 58 03.1	-0.8
NAX	Nakhchivan	19.63	79	P	Pn	21 58 09.5	+0.5
VRH	Novokhopyorsk	19.91	42	eP	P	21 58 10.2	-0.3
VRH				pmax	pmax		
	comp=Z,6.0nm,0.5s						
GANJ	Ganja	20.19	75	P	Pn	21 58 15.2	-0.3
VSU	Vasula	20.73	9	⇑eP	P	21 58 19.8	+0.5
MNGR	Mingechevir, A	20.76	74	P	Pn	21 58 21.3	-0.9
SEKA	Sheki	20.84	73	P	Pn	21 58 22.9	-0.3
AKT	Akhty	21.24	72	eP	P	21 58 28.2	+3.1
AKT				*e*		21 58 48.5	
AKT				pmax	pmax		
	comp=Z,20nm,0.8s						
LKRN	Lenkeran, Azer	22.23	80	P	P	21 58 37.7	+2.1
HFS	Hagfors	22.39	351	P	P	21 58 36.7	-0.4
	comp=Z,3.5nm,0.5s,baz=133,slow=15,SNR=18						
HFS				LR	LR	22 09 47.6	
	comp=Z,157nm,19.2s,baz=350,slow=43						
NC602	NORSAR Array S	23.26	349	P	P	21 58 47.3	+1.0
NORES	NORESS Array B	23.26	349	P	P	21 58 48.2	+1.9
NORES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
EKA	Eskdalemuir Ar	23.36	325	P	P	21 58 47.1	-0.2
	comp=Z,3.9nm,0.7s,baz=117,slow=12,SNR=6.5						
ESK	Eskdalemuir	23.38	325	P	P	21 58 47.5	+0.1
ESK				IAmb	IAmb	21 58 47.7	
	comp=Z,9.2nm,0.9s						
ESK	Eskdalemuir	23.38	325	P	P	21 58 47.6	+0.1
ESK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NAO01	NORSAR Array S	23.47	348	P	P	21 58 47.2	-1.2
NAO01				IAmb	IAmb	21 58 54.8	
	comp=Z,8.8nm,1.0s						
FINES	FINESS Array B	23.57	7	P	P	21 58 48.5	-0.8
	comp=Z,7.2nm,0.7s,baz=168,slow=9.8,SNR=15						
FINES	FINESS Array B	23.57	7	*i* P	P	21 58 50.5	+1.2
FINES				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NC405	NORSAR Array S	23.60	349	P	P	21 58 49.2	-0.4
NB201	NORSAR Array S	23.60	349	P	P	21 58 48.9	-0.8
NB2	NORSAR Subarra	23.60	349	P	P	21 58 50.7	+1.0
	comp=Z,26nm,1.4s,baz=159,slow=9.3						
NOA	NORSAR Array B	23.60	349	P	P	21 58 49.8	+0.1
	comp=Z,1.8nm,0.6s,baz=155,slow=9.2,SNR=10						
NC303	NORSAR Array S	23.76	349	P	P	21 58 50.4	-0.8
NC204	NORSAR Array S	23.90	349	P	P	21 58 51.8	-0.8
NC204				IAmb	IAmb	21 59 02.8	
	comp=Z,8.9nm,0.9s						
KLMR	Klimovskoe	25.69	22	eP	P	21 59 06.7	-2.2
KLMR				AMP		21 59 19.1	
	comp=Z,22nm,2.3s						
KLMR	Klimovskoe	25.69	22	eP	P	21 59 06.6	-2.3
KLMR				pmax	pmax		
	comp=Z,22nm,2.3s						
RAYN	Ar Rayn	25.95	117	P	P	21 59 10.3	-1.2
RAYN				IAmb	IAmb	21 59 27.4	
	comp=Z,3.1nm,1.0s						
RAYN	Ar Rayn	25.95	117	P	P	21 59 10.4	-1.2
RAYN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIRV	Kirov	27.73	33	LR	LR	22 11 10.0	
	comp=Z,95nm,18.4s,baz=308,slow=38						
PRGR	Permogore	28.22	26	eP	P	21 59 31.0	-0.6
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKTO	Aktyubinsk	29.28	53	LR	LR	22 12 55.9	
	comp=Z,52nm,20.2s,baz=289,slow=40						
GEYT	Alibeck	29.60	79	P	P	21 59 43.1	-1.1
	comp=Z,1.0nm,0.4s,baz=280,slow=10,SNR=3.5						
GEYT	Alibeck	29.60	79	P	P	21 59 43.6	-0.6
TOA0	Torodi Ar. Sit	29.95	219	P	P	21 59 47.9	+0.6
TORD	Torodi Ar. Bea	29.95	219	P	P	21 59 47.8	+0.4
	comp=Z,1.4nm,0.8s,baz=28,slow=8.3,SNR=8.1						
ABKAR	Akbulak array	30.35	56	P	P	21 59 49.9	-0.7
ARCES	ARCESS Array B	31.55	3	P	P	22 00 00.6	-0.5
	comp=Z,2.6nm,0.8s,baz=196,slow=9.1,SNR=5.7						
KEV	Kevo	31.85	4	P	P	22 00 06.3	+2.7
KEV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SVE	Sverdlovsk	32.36	42	eP	P	22 00 08.2	-0.1
KK31	Karatay Array	37.91	66	IAmb	IAmb	22 00 58.7	
	comp=Z,3.2nm,0.6s						
KK31	Karatay Array	37.91	66	P	P	22 00 58.4	+2.1
KK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KKAR	Karatay Array	37.91	66	P	P	22 00 55.6	-0.7
KKAR	Karatay Array	37.91	66	IAmb	IAmb	22 00 58.7	
	comp=Z,3.2nm,0.6s						
KKAR	Karatay Array	37.91	66	P	P	22 00 55.6	-0.7
BTK	Batken	38.77	71	P	P	22 01 05.6	+2.0
BTK				IAmb	IAmb	22 01 07.4	
	comp=Z,3.1nm,0.9s						
BTK	Batken	38.77	71	P	P	22 01 05.6	+2.0
BTK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DBIC	Dimbokro	38.80	222	LR	LR	22 19 49.3	
	comp=Z,41nm,18.3s,baz=17,slow=40						
KBL	Kabul	39.02	80	P	P	22 01 07.0	+1.1
KBL	Kabul	39.02	80	P	P	22 01 07.0	+1.1
KBL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SOCY	Socotra	39.57	122	P	P	22 01 08.3	-2.2
SOCY				IAmb	IAmb	22 01 23.6	
	comp=Z,6.4nm,1.1s						
AAK	Ala-Archa	40.87	66	P	P	22 01 22.7	+1.5
AAK	Ala-Archa	40.87	66	⇓eP	P	22 01 22.2	+1.0
AAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
NRN	Naryn	42.24	67	P	P	22 01 33.0	+0.3
NRN				IAmb	IAmb	22 01 51.9	
	comp=Z,3.0nm,1.1s						
NRN	Naryn	42.24	67	P	P	22 01 33.0	+0.3
NRN				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KURBB	Kurchatov Arra	42.33	53	P	P	22 01 30.9	-1.9
	comp=Z,0.9nm,0.6s,baz=281,slow=8.7,SNR=11						
KURK	Kurchatov	42.38	53	P	P	22 01 33.2	0.0
KURK	Kurchatov	42.38	53	⇑eP	P	22 01 33.5	+0.3
KURK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MK31	Makanchi Array	45.41	58	IAmb	IAmb	22 02 03.2	
	comp=Z,2.1nm,0.5s						
MK31	Makanchi Array	45.41	58	eP	P	22 01 57.3	-0.4
MKAR	Makanchi Array	45.41	58	P	P	22 01 56.5	-1.1
	comp=Z,2.1nm,0.5s,baz=275,slow=7.3,SNR=32						
MKAR	Makanchi Array	45.41	58	P	P	22 01 56.1	-1.5
ZALV	Zalesovo Beam	45.79	48	P	P	22 01 59.5	-1.0
	comp=Z,3.1nm,0.6s,baz=273,slow=9.0,SNR=14						
ZALV	Zalesovo Beam	45.79	48	P	P	22 01 59.2	-1.3
WMQ	Urumqi	49.87	61	eP	P	22 02 36.2	+3.8
SCHQ	Schefferville	58.38	317	P	P	22 03 35.3	+1.0
	comp=Z,1.7nm,0.7s,baz=56,slow=8.7,SNR=3.8						
SCHQ	Schefferville	58.38	317	P	P	22 03 33.7	-0.5
SCHQ				IAmb	IAmb	22 03 46.4	
	comp=Z,1.9nm,0.8s						
TIXI	Tiksi	59.70	20	⇓eP	P	22 03 43.4	+0.3
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.8s						
SONM	Songino Array	60.56	51	P	P	22 03 49.1	-0.5
	comp=Z,1.4nm,1.0s,baz=324,slow=4.0,SNR=7.8						
SONM	Songino Array	60.56	51	P	P	22 03 48.1	-1.4
ULN	Ulaanbaatar	60.94	50	P	P	22 03 52.3	+0.1
ULN				IAmb	IAmb	22 03 54.4	
	comp=Z,2.0nm,1.1s						
ULN	Ulaanbaatar	60.94	50	P	P	22 03 52.3	+0.1
ULN				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BATG	Bathurst New B	61.04	309	P	P	22 03 53.8	+1.1
BATG				IAmb	IAmb	22 03 54.2	
	comp=Z,4.0nm,1.2s						
E63A	Oxbow	62.88	309	P	P	22 04 05.7	+0.7
E63A				IAmb	IAmb	22 04 21.9	
	comp=Z,1.9nm,1.0s						
LZH	Lanzhou	64.31	63	eP	P	22 04 15.5	+0.6
LZH				pP	sP	22 04 20.3	+1.5
LZH				sP	pP	22 04 23.5	+5.8
LZH				PP	PP	22 06 44.7	+8.7
HHC	Hu-ho-hao-te	67.14	55	eP	P	22 04 34.5	+1.5
CMAR	Chiang Mai Arr	70.01	82	P	P	22 04 49.8	-1.4
	comp=Z,1.1nm,0.8s,baz=308,slow=7.1,SNR=9.3						
BILL	Bilibino	71.05	13	⇓eP	P	22 04 58.3	+1.6
BILL				*e*		22 07 34.6	
BILL				eS	S	22 14 17.0	+4.3
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,49nm,18.0s						
INK	Inuvik	72.05	350	P	P	22 05 02.4	-0.3
	comp=Z,0.8nm,0.8s,baz=255,slow=17,SNR=1.9						
YKA	Yellowknife Ar	73.36	340	P	P	22 05 09.9	-0.6
	comp=Z,0.1nm,0.5s,baz=40,slow=5.0,SNR=3.0						
KLR	Kul'dur	73.96	39	⇑eP	P	22 05 15.8	+1.5
KLR				pmax	pmax		
	comp=Z,9.0nm,1.5s						
WHN	Wuhan	74.69	63	P	P	22 05 23.4	+4.5
ULM	Lac du Bonnet	75.63	324	P	P	22 05 24.3	+0.3
	comp=Z,2.2nm,0.7s,baz=59,slow=3.1,SNR=5.3						
ILAR	Eielson Array	76.91	354	P	P	22 05 31.2	+0.2
	comp=Z,0.6nm,1.0s,baz=358,slow=4.8,SNR=4.6						
ILAR	Eielson Array	76.91	354	P	P	22 05 29.7	-1.3
YSS	Yuzh-Sakhalins	80.84	36	⇓eP	P	22 05 53.7	+0.8
YSS				pmax	pmax		
	comp=Z,31nm,1.5s						
PETK	Petropavlovsk-	81.86	24	P	P	22 05 57.5	-0.7
	comp=Z,14nm,1.2s,baz=85,slow=16,SNR=4.3						
CPUP	Villa Florida	96.94	242	LR	LR	22 51 14.5	
	comp=Z,48nm,19.2s,baz=42,slow=36						

*ATH **09** 22:31:12.8, 41.°79N×24.°54E, h13km±4km, ML2.9/5, Error ellipse: s-maj=8.6km s-min=2.3km az=174.0*

*ISK **09** 22:31:12.0, 41.°87N×24.°59E, h9km, ML3.1/19*

*THE **09** 22:31:13.6, 41.°89N×24.°53E, h19km±3km, ML3.0/8, Error ellipse: s-maj=3.9km s-min=1.5km az=181.0*

ISC 09 22:31:11.8±1.0, **41.°87N**±0.°02×**24.°53E**±0.°02, **h7**km±9km, **n63,** σ0.s65/87, **13C-10D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLD	Plovdiv	0.27	28	PG	Pg	22 31 17.7	+0.6
PLD				SG	Sg	22 31 21.3	+0.7
KDZ	Kurdzhali	0.70	108	PG	Pg	22 31 24.8	-0.4
KDZ				SG	Sg	22 31 33.3	-1.0
KAVA	Kavala	0.87	181	P	Pb	22 31 29.3	+0.1
KAVA				S	Sb	22 31 41.9	+0.8
	1µm,0.4s						
KAVA	Kavala	0.87	181	P	Pg	22 31 26.6	-1.9
KAVA				S	Sg	22 31 39.0	-0.8
KAVA				AML	AML	22 31 45.5	
	comp=E,2326µm,0.4s						
KAVA				AML	AML	22 31 46.1	
	comp=N,2188µm,0.4s						
SRS	Serrai	1.03	224	P	Pg	22 31 31.7	+0.2
SRS				S	Sn	22 31 46.6	-0.8
	comp=N,890nm,0.6s						
SRS	Serrai	1.03	224	P	Pg	22 31 30.8	-0.7
SRS				S	Sg	22 31 44.8	-0.1
SRS				AML	AML	22 31 50.1	
	comp=N,1059µm,0.5s						
SRS				AML	AML	22 31 50.2	
	comp=E,2248µm,0.6s						
RDO	Rodhopi	1.04	133	P	Pb	22 31 32.4	+0.2
RDO				S	Sb	22 31 46.2	+0.1
	comp=E,815nm,0.1s						
RDO	Rodhopi	1.04	133	P	Pg	22 31 30.6	-1.2
RDO				S	Sg	22 31 44.8	-0.5
RDO				AML	AML	22 31 47.9	
	comp=N,1612µm,0.2s						
RDO				AML	AML	22 31 48.5	
	comp=E,1643µm,0.2s						
RDO	Rodhopi	1.04	133	PG	Pg	22 31 31.7	-0.1
RDO				SG	Sb	22 31 46.3	+0.1
VTS	Vitosha	1.22	308	P	Pb	22 31 34.7	-0.6
VTS				S	Sg	22 31 49.9	-1.1
VTS	Vitosha	1.22	308	⇓P	Pb	22 31 33.9	-1.4
VTS				⇑S	Sb	22 31 51.7	+0.4
THAS	Thassos island	1.27	174	P	Pg	22 31 36.6	+0.5
THAS				S	Sb	22 31 52.6	+0.1
	comp=E,375nm,0.2s						
THAS	Thassos island	1.27	174	P	Pb	22 31 36.2	+0.2
SOH	Sokhos	1.37	221	P	Pb	22 31 37.9	+0.1
SOH				S	Sg	22 31 56.0	+0.2
	comp=E,662nm,0.4s						
SOH	Sokhos	1.37	221	P	Pb	22 31 37.9	+0.1
SOH				S	Sb	22 31 55.0	-0.6
SOH				AML	AML	22 31 59.3	
	comp=N,1465µm,0.4s						
SOH				AML	AML	22 32 00.3	
	comp=E,1191µm,0.4s						
KNT	Kendrikon	1.42	241	P	Pb	22 31 38.5	0.0
KNT				S	Sn	22 31 57.0	+0.1
	comp=E,428nm,0.3s						
ELND	Elena	1.45	43	⇑P	Pn	22 31 37.8	-0.7
ELND				⇑S	Sn	22 31 56.5	-1.4
ALN	Alexandroupoli	1.50	130	P	Pg	22 31 40.8	+0.3
ALN				S	Sg	22 31 59.8	-0.1
	comp=E,158nm,0.5s						
ALN	Alexandroupoli	1.50	130	P	Pb	22 31 40.2	+0.3
ALN				S	Sb	22 31 59.4	+0.3
ALN				AML	AML	22 32 02.8	
	comp=E,232µm,0.5s						
ALN				AML	AML	22 32 03.1	
	comp=N,327µm,0.5s						
ALN	Alexandroupoli	1.50	130	PN	Pn	22 31 39.3	+0.2
ALN				SN	Sg	22 31 59.6	-0.3
PLVB	Pleven	1.52	2	⇑P	Pb	22 31 40.1	-0.2
PLVB				⇓S	Sb	22 32 00.2	+0.4
VAY	Valandovo	1.57	250	*i* Pn	Pg	22 31 42.7	+0.9
VAY				*i* Sn	Sg	22 32 03.3	+1.1
SMTH	Samothraki Isl	1.59	151	P	Pg	22 31 42.4	+0.2
OUR	Ouranopolis	1.59	195	P	Pg	22 31 42.4	+0.1
OUR	Ouranopolis	1.59	195	PN	Pb	22 31 41.5	0.0
EDRB	Edirne	1.65	90	P	Pn	22 31 41.1	-0.1
EDRB				S	Sn	22 32 02.1	-0.7
	comp=N,58nm,0.3s						
EDRB	Edirne	1.65	90	PN	Pn	22 31 41.1	-0.1
HORT	Hortiatis	1.67	221	P	Pb	22 31 42.4	-0.5
HORT	Hortiatis	1.67	221	P	Pg	22 31 43.8	+0.1
THE	Thessaloniki	1.71	224	P	Pb	22 31 44.2	+0.6
UKOP	Uzunkopru-Edir	1.74	114	PN	Pn	22 31 42.8	+0.3
ZIMR		1.89	19	⇑P	Pb	22 31 45.8	-0.8
ZIMR				⇑S	Sg	22 32 11.8	-0.7
ERIK	Erikli-Kesan	1.91	128	PN	Pn	22 31 45.0	+0.2
PAIG	Paliouri	2.04	199	P	Pn	22 31 46.6	0.0
PAIG	Paliouri	2.04	199	P	Pn	22 31 46.4	-0.2
GELI	Tayfur-Gelibol	2.08	134	PN	Pn	22 31 47.7	+0.6
VLAD	Vladila	2.13	358	⇓P	Pb	22 31 51.3	+0.6
BLKB	Belogradchik	2.22	323	⇓S	Sn	22 32 17.7	+0.8
RAZG	Razgrad	2.24	40	⇑P	Pn	22 31 49.7	+0.4
LPK	Lapseki	2.25	131	PN	Pn	22 31 49.6	+0.1
PHSR	Pinarhisar	2.25	95	PN	Pn	22 31 49.9	+0.4
BOZC	Bozcaada	2.33	150	PN	Pn	22 31 51.4	+0.8
EZN	Ezine	2.45	146	PN	Pn	22 31 52.9	+0.7
CRLT	Corlu	2.52	106	PN	Pn	22 31 53.4	+0.3
KRBG	Karabiga-Canak	2.56	124	PN	Pn	22 31 54.5	+0.8
MRMT	Marmara Adasi	2.63	118	PN	Pn	22 31 55.2	+0.4
HUMR	Humele	2.68	7	⇑P	Pn	22 31 55.5	+0.1
HUMR				⇓S	Sb	22 32 33.8	+0.7
SLVT	Silivri	2.83	102	PN	Pn	22 31 57.5	0.0
CTYL	Yalikoy Yolu	2.84	97	PN	Pn	22 31 58.1	+0.5
EDC	Edincik	2.94	120	PN	Pn	22 31 59.7	+0.7
BGKT	Bogazkoy	3.26	101	PN	Pn	22 32 04.2	+0.9
ICOR	Ion Corvin	3.29	46	⇑P	Pn	22 32 05.0	+1.3
KCTX	Karacabey (Bur	3.31	118	PN	Pn	22 32 04.7	+0.7
BALB	Balikesir	3.38	130	PN	Pn	22 32 05.8	+0.8
VOIR		3.59	6	⇓P	Pn	22 32 07.8	-0.1
LOT	Lotru	3.62	351	⇑P	Pn	22 32 08.0	-0.4
GZR	Gura Zlata	3.75	341	⇑P	Pn	22 32 09.4	-0.7
HARR	Harsova	3.76	40	⇑P	Pn	22 32 10.7	+0.6
MLR	Muntele Rosu	3.76	15	⇓P	Pn	22 32 11.3	+0.9
DOPR	Dopca	4.14	8	⇓P	Pn	22 32 15.5	0.0
PLOR	Plostina	4.26	20	⇓P	Pn	22 32 18.3	+1.1
VRI	Vrincioaia	4.30	21	⇑P	Pn	22 32 18.8	+1.1
BIR	Birlad	4.93	26	⇓P	Pn	22 32 26.6	+0.3

IDC **09** *22:38:40.4±0.7, 17.°68S×173.°26W, h0km, mb4.1/10, mb1 4.3/11, mb1mx4.1/35, mbtmp4.1/11, ML3.9/1, MS3.7/15, Ms1 3.7/15, ms1mx3.5/35, Error ellipse: s-maj=33.8km s-min=17.1km az=124.0*
NEIC **09** *22:38:44.2±1.6, 17.°91S±0.°05×172.°60W±0.°07, h37km±8km, mb4.6/9, Error ellipse: s-maj=10.1km s-min=6.3km az=104.0*
ISC 09 22:38:43.2±0.6, 17.°93S±0.°07×172.°65W±0.°08, h26km, n44, σ1.°78/33, mb4.3/13, MS3.8/14, 1C, Tonga Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NIUE Niue 2.82 114 Pn Pn 22 39 26.1 -0.5
NIUE Sn Sn 22 39 58.3 -1.5
AFI Afiamalu 4.09 12 Pn Pn 22 39 45.0 +0.9
8.3nm,0.3s,baz=134,slow=9.9,SNR=4.5
AFI Sn Sn 22 40 21.6 -10
11nm,0.3s,baz=218,slow=22,SNR=6.0
AFI Afiamalu 4.09 12 Pn 22 39 43.9 -0.2
AFI Sn Sn 22 40 29.0 -2.1
MSVF Nonsavu 8.86 270 Pn 22 40 50.8 +1.0
RAR Rarotonga 12.56 107 LR LR 22 45 49.1
comp=Z,106nm,19.8s,baz=258,slow=32
DZM Mont Dzumac 20.07 255 LR LR 22 49 41.1
comp=Z,321nm,20.2s,baz=64,slow=34
URZ Urewera 22.15 202 P P 22 43 37.0 0.0
comp=Z,0.8s,baz=43,slow=3.8,SNR=8.2
URZ Urewera 22.15 202 P P 22 43 37.7 +0.7
URZ IAmb IAmb 22 43 39.6
comp=Z,20nm,0.8s
BKZ Black Stump Fm 23.17 202 P P 22 43 47.0 -0.9
BKZ IAmb IAmb 22 43 55.3
comp=Z,23nm,1.0s
THZ Tophouse 26.78 204 P P 22 44 20.5 -0.6
RPZ Rata Peaks 29.16 205 P P 22 44 44.2 +2.0
comp=Z,6.6nm,0.7s,baz=354,slow=2.2,SNR=9.6
RPZ Rata Peaks 29.16 205 P P 22 44 42.9 +0.7
RPZ IAmb IAmb 22 44 48.6
comp=Z,21nm,1.1s
FOZ Fox Glacier 29.51 206 P P 22 44 45.7 +0.4
STKA Stephens Creek 43.45 242 LR LR 23 03 08.9
comp=Z,98nm,18.1s,baz=35,slow=34
WR0 Warramunga Arr 49.83 259 P P 22 47 33.6 -0.8
WR0 IAmb IAmb 22 47 41.0
comp=Z,5.0nm,1.1s
WB0 Warramunga Arr 49.99 259 P P 22 47 33.2 -2.4
WRAB Tennant Creek 50.01 259 P P 22 47 32.7 -3.1
WRAB IAmb IAmb 22 47 35.8
comp=Z,9.0nm,1.0s
WRA Warramunga Arr 50.02 259 P P 22 47 31.9 -4.0
comp=Z,2.8nm,0.8s,baz=93,slow=7.3,SNR=9.3
WRA LR LR 23 07 13.2
comp=Z,200nm,19.8s,baz=95,slow=35
ASAR Alice Springs 50.06 254 P P 22 47 32.9 -3.4
comp=Z,8.4nm,0.8s,baz=86,slow=8.5,SNR=36
ASAR LR LR 23 08 20.3
comp=Z,61nm,18.0s,baz=118,slow=36
ASAR Alice Springs 50.06 254 P P 22 47 33.0 -3.2
GUMO Guam 52.32 304 LR LR 23 07 40.7
comp=Z,54nm,18.6s,baz=123,slow=34
RPN Rapa Nui 58.68 111 LR LR 23 09 42.7
comp=Z,65nm,19.7s,baz=234,slow=31
QSPA South Pole Qui 72.13 180 P P 22 50 08.8 +3.5
comp=Z,1.8nm,0.8s,baz=107,slow=0.6,SNR=5.3
QSPA South Pole Qui 72.13 180 P P 22 50 05.1 -0.2
YBH Yreka Blue Hor 75.18 36 LR LR 23 15 56.7
comp=Z,54nm,19.4s,baz=237,slow=30
NVAR Mina Array Bea 75.73 41 P P 22 50 28.9 +1.9
comp=Z,0.2nm,0.4s,baz=225,slow=8.6,SNR=3.3
NVAR Mina Array Bea 75.73 41 P P 22 50 26.1 -0.8
KSRS Korea Array 78.46 316 LR LR 23 21 39.2
comp=Z,31nm,19.9s,baz=102,slow=33
USRK Ussuriysk Ar. 79.83 323 LR LR 23 20 00.9
comp=Z,65nm,19.8s,baz=179,slow=31
TXAR Lajitas Array 81.43 56 P P 22 51 00.3 +1.9
comp=Z,0.5nm,1.0s,baz=204,slow=5.5,SNR=3.8
TXAR LR LR 23 19 17.8
comp=Z,16nm,22.0s,baz=0.0,slow=30
TXAR Lajitas Array 81.43 56 P P 22 50 58.3 -0.1
ILAR Eielson Array 84.78 11 P P 22 51 15.6 +0.8
comp=Z,0.7nm,0.9s,baz=223,slow=6.0,SNR=4.8
ILAR Eielson Array 84.78 11 P P 22 51 14.2 -0.6
PLCA Paso Flores 87.29 132 LR LR 23 22 56.6
comp=Z,40nm,20.0s,baz=202,slow=30
PSI Prapat 89.36 273 LR LR 23 31 47.8
comp=Z,46nm,18.8s,baz=8.5,slow=36
SYO Syowa Base 90.27 191 ⇑iX P 22 51 35.0 -6.3
YKA Yellowknife Ar 92.12 23 P P 22 51 50.9 +1.0
comp=Z,0.4nm,1.0s,baz=238,slow=5.8,SNR=2.9
CMAR Chiang Mai Arr 94.09 288 P P 22 52 00.3 +0.3
comp=Z,0.8nm,0.8s,baz=88,slow=2.8,SNR=7.3
ULM Lac du Bonnet 95.44 39 LR LR 23 34 00.1
comp=Z,61nm,18.1s,baz=12,slow=35
LPAZ La Paz 98.27 110 LR LR 23 26 30.2
comp=Z,28nm,21.6s,baz=230,slow=29
KMBO Kilima Mbogo 145.00 240 PKP PKPdf 22 58 20.7 +1.1
comp=Z,1.5nm,0.7s,baz=54,slow=5.8,SNR=5.0
CLL Collm 146.40 354 ePKPbc PKPab 22 58 22.0 -0.6
CLL epPKPbc sPKPab 22 58 33.0 +1.9
comp=Z,25nm,1.4s
BRTR Keskin Array B 148.55 319 PKPbc PKPbc 22 58 26.6 -1.6
comp=Z,1.4nm,0.9s,baz=116,slow=2.9,SNR=7.8
GERES GERESS Array B 148.74 352 PKPbc PKiKP 22 58 29.6 -0.2
comp=Z,0.2nm,0.4s,baz=197,slow=4.2,SNR=4.5

MAN 09 22:47:47.2, 7.°94N×124.°68E, h32km, mb3.7, ML2.4, MS1.9, 1C, Mindanao

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BUKP Musuan 0.38 99 eP Pn 22 47 57.9 +1.3
BUKP eS Sn 22 48 04.4 +1.5
CTBH Cotabato--PC H 0.83 211 ⇑iP Pb 22 48 03.4 +0.1
CTBH iS Sn 22 48 13.9 0.0
SKMP Bagumbayan, Su 1.42 186 eP Pn 22 48 11.7 +0.9
SKMP eS Sn 22 48 29.1 +0.7

NIED **09** *22:57:00, 42.°40N×143.°20E, h56km, Mw4.3 Best double couple: M₀3.01000×10¹⁵ NP1:φs30.00000°, δ65.00000°, λ87.00000°. NP2:φs216.00000°, δ25.00000°, λ96.00000°.*
BJI **09** *22:57:26.9±0.0, 42.°21N×143.°05E, h54km, mB4.9/21, mb4.6/29, Ms4.6/6, Ms7 4.2/4*
SKHL **09** *22:57:28.8±0.2, 42.°16N×143.°24E, h74km±6km, mb4.7/9*
MOS **09** *22:57:28.2±1.0, 42.°26N×143.°14E, h68km, mb4.8/23, Error ellipse: s-maj=7.2km s-min=5.3km az=96.2*
NEIC **09** *22:57:29.4±0.9, 42.°32N±0.°06×143.°1E±0.°1, h61km±5km, mb4.5/35, Error ellipse: s-maj=13.2km s-min=8.2km az=89.0*
JMA **09** *22:57:30.1±0.1, 42.°36N×143.°11E, h51km±1km, M4.2 Broadband fault plane solution: P waves. NP1: φs239.00000°, δ37.00000°, λ131.00000°. NP2: φs11.00000°, δ63.00000°, λ63.00000°. Principal axes: T Plg62.0000°, Azm239.0000°; N Plg23.0000°, Azm24.0000°; P Plg14.0000°, Azm120.0000°;*
JMA Felt II J1.
IDC **09** *22:57:31.3±1.8, 42.°40N×143.°02E, h74km±15km, mb3.9/21, mb1 4.1/26, mb1mx4.0/42, mbtmp4.2/26, MS3.0/6, Ms1 3.0/6, ms1mx2.9/42 Error ellipse: s-maj=14.4km s-min=11.9km az=141.0*
ISC 09 22:57:28.9±0.5, 42.°29N±0.°04×143.°18E±0.°04, h57km±4km, n246, σ1.°48/279, mb4.3/64, 30C-16D, Hokkaido region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JTHR Tokachihiroo 0.09 88 ⇑P Pn 22 57 38.3 +0.8
JTHR eS Sn 22 57 44.5 +0.9
JEM Erimo 0.27 184 ⇑P Pn 22 57 39.8 +1.4
JEM eS Sn 22 57 47.6 +2.3
ERM Erimo 0.27 184 Pn Pn 22 57 40.0 +1.6
ERM Sn Sn 22 57 47.0 +1.7
ERM Erimo 0.27 184 c iPN Pn 22 57 39.9 +1.5
ERM pmax pmax
comp=Z,8μm,0.7s
JNBK Urakawa-nobuka 0.32 269 ⇓P Pn 22 57 39.0 +0.2
JNBK eS Sn 22 57 45.9 0.0
JCH Churui 0.35 22 ⇑P Pn 22 57 39.3 +0.2
JCH S Sn 22 57 46.8 +0.3
JSHD Hidakashinhida 0.54 283 ⇓P Pn 22 57 41.5 +0.4
JBT2 Biratori 2 0.78 309 ⇓P Pn 22 57 43.9 0.0
JOB Onbets 0.78 38 ⇑P Pn 22 57 45.3 +1.3
JOB eS Sn 22 57 57.2 +2.2
JFR Furan 0.98 334 ⇓P Pn 22 57 45.3 -1.2
JIAM Iburiatsuma 0.99 290 ⇓P Pn 22 57 48.0 +1.3
JAR Ashorobuto 1.10 23 ⇑P Pn 22 57 48.3 +0.2
JAR eS Sn 22 58 02.1 -0.3
JAK Akkeshi 1.32 57 P Pn 22 57 51.9 +0.8
JAK eS Sn 22 58 09.9 +2.2
JEW Eniwo 1.39 294 P Pn 22 57 52.7 +0.6
JAB Ashibetsu 1.41 330 ⇓P Pn 22 57 52.8 +0.6
JKA Kamikawa-asahi 1.88 347 eP Pn 22 57 59.3 +0.7
JKA Kamikawa-asahi 1.88 347 Pn 22 57 59.3 +0.7
JKA Sn 22 58 24.7 +3.5
ASAJ Asahikawa 1.88 347 P Pn 22 57 59.3 +0.6
comp=Z,75nm,0.3s,baz=200,slow=13,SNR=196
ASAJ S **Sn 22 58 24.7 +3.5**
comp=Z,71nm,0.3s,baz=204,slow=28,SNR=8.4
ASAJ LR LR 22 58 54.1
comp=Z,311nm,21.4s,baz=172,slow=47
NMR Nemuro--Hokkai 2.16 59 iP Pn 22 58 02.0 -0.5
NMR iS Sn 22 58 27.0 -1.1
NMR Nemuro--Hokkai 2.16 59 ⇑iPN Pn 22 58 02.6 +0.1
NMR iS Sn 22 58 27.9 -0.2
GLVR Golovnino 2.25 49 iP Pn 22 58 05.0 +1.4
GLVR AMB AMB 22 58 05.0
comp=Z,102nm,0.4s
GLVR iS **Sn 22 58 31.0 +0.8**
GLVR A A 22 58 35.0
comp=Z,598nm,0.4s
GLVR A A 22 58 35.0
comp=Z,596nm,0.4s
GLVR Golovnino 2.25 49 ⇑iPN Pn 22 58 05.0 +1.4
GLVR iS **Sn 22 58 31.5 +1.3**
GLVR pmax pmax
comp=N,94nm,0.1s
GLVR pmax pmax
comp=Z,1μm,0.1s
GLVR pmax pmax
comp=E,224nm,0.3s
GLVR smax smax
comp=N,6μm,0.2s
GLVR smax smax
comp=E,6μm,0.2s
GRPR Tuman 2.55 47 iP Pn 22 58 09.0 +1.2
GRPR AMB AMB 22 58 14.0
comp=E,75nm,0.2s
GRPR iS **Sn 22 58 39.0 +1.4**
GRPR A A 22 58 43.0
comp=E,1μm,0.4s
GRPR A A 22 58 43.0
comp=E,188nm,0.4s
GRPR Tuman 2.55 47 ⇑iPN Pn 22 58 09.2 +1.4
GRPR iS **Sn 22 58 39.6 +2.0**
GRPR pmax pmax
comp=N,163nm,0.2s
GRPR pmax pmax
comp=Z,749nm,0.2s
GRPR pmax pmax
comp=E,166nm,0.1s
GRPR smax smax
comp=E,2μm,0.4s
GRPR smax smax
comp=N,1μm,0.2s
YUK Yuzh-Kuril'sk 2.63 47 iP Pn 22 58 10.0 +1.2
YUK AMB AMB 22 58 16.0
comp=N,129nm,0.4s
YUK iS **Sn 22 58 40.0 +0.5**
YUK A A 22 58 48.0
comp=N,289nm,0.4s
YUK A A 22 58 48.0
comp=N,2μm,0.4s
YUK Yuzh-Kuril'sk 2.63 47 c iPN Pn 22 58 10.0 +1.2
YUK iS **Sn 22 58 40.9 +1.4**
YUK pmax pmax
comp=N,419nm,0.3s
YUK pmax pmax
comp=Z,1μm,0.3s
YUK pmax pmax
comp=E,452nm,0.5s
YUK smax smax
comp=N,3μm,0.4s
YUK smax smax
comp=E,2μm,0.4s
SHO Shikotan 3.11 58 iP Pn 22 58 16.0 +0.6
SHO AMB AMB 22 58 19.0
comp=E,317nm,0.2s
SHO iS **Sn 22 58 50.0 -1.2**
SHO A A 22 58 53.0
comp=E,975nm,0.3s
SHO A A 22 58 53.0
comp=E,122nm,0.3s
SHO Shikotan 3.11 58 c iPN Pn 22 58 16.0 +0.6
SHO iS **Sn 22 58 50.9 -0.3**
SHO pmax pmax
comp=N,106nm,0.2s
SHO pmax pmax
comp=E,242nm,0.2s
SHO pmax pmax
comp=Z,317nm,0.2s
SHO smax smax
comp=E,1μm,0.2s
SHO smax smax
comp=N,975nm,0.3s
KUR Kuril'sk 4.49 47 eP Pn 22 58 37.0 +2.6
KUR AMB AMB 22 58 43.0
comp=N,145nm,0.5s
KUR eS **Sn 22 59 29.0 +3.7**
KUR A A 22 59 39.0
comp=N,137nm,0.5s
KUR A A 22 59 39.0
comp=N,276nm,0.5s
KUR Kuril'sk 4.49 47 ePN Pn 22 58 37.9 +3.5
KUR eS **Sn 22 59 29.0 +3.7**
KUR pmax pmax
comp=Z,145nm,0.8s
KUR pmax pmax
comp=E,100nm,0.2s
KUR pmax pmax
comp=N,82nm,0.5s
KUR smax smax
comp=N,137nm,0.5s
KUR smax smax
comp=E,276nm,0.5s
YSS Yuzh-Sakhalins 4.68 356 eP Pn 22 58 39.0 +2.1
YSS AMB AMB 22 58 42.0
comp=E,40nm,0.6s
YSS eS **Sn 22 59 32.0 +2.2**
YSS Yuzh-Sakhalins 4.68 356 Pn 22 58 37.5 +0.6
YSS Yuzh-Sakhalins 4.68 356 ⇓ePN Pn 22 58 39.3 +2.4
YSS eS **Sn 22 59 32.2 +2.4**
YSS pmax pmax
comp=Z,40nm,0.6s
YSS smax smax
comp=E,30nm,0.8s
MJB9 Matsu-Tunnel 6.91 216 Pn 22 59 07.6 0.0
MAJO Matsushiro 6.91 215 Pn 22 59 07.7 +0.1
MAJO Matsushiro 6.91 215 ⇓ePN Pn 22 59 08.5 +1.0
MAT Matsushiro 6.91 215 P Pn 22 59 08.5 +1.0
MAT eS **Sn 23 00 26.7 +2.0**
MJAR Matsushiro Arr 6.91 215 P Pn 22 59 09.4 +1.8
comp=E,0.5nm,0.3s,baz=29,slow=15,SNR=23
MJAR LR LR 23 01 41.1
comp=E,112nm,20.0s,baz=45,slow=36
MJAR Matsushiro Arr 6.91 215 Pn 22 59 07.0 -0.5
USRK Ussuriysk Ar. 8.39 287 P Pn 22 59 28.7 +0.9
baz=88,slow=14,SNR=10
USRK LR LR 23 02 19.8
comp=E,161nm,20.1s,baz=118,slow=35
USRK Ussuriysk Ar. 8.39 287 Pn 22 59 27.9 +0.1
INU Inuyama 8.43 217 Pn 22 59 28.4 0.0
JHJ Hachijo jima 2 9.54 197 LR LR 23 03 19.3
comp=E,245nm,21.8s,baz=274,slow=36
GRNR Gornyy 9.67 334 eP Pn 22 59 48.4 +3.1
GRNR AMB AMB 22 59 49.2
comp=E,20nm,0.7s
GRNR AMB AMB 22 59 49.2
comp=E,20nm,0.7s
GRNR Gornyy 9.67 334 ⇓iPN Pn 22 59 48.4 +3.1
GRNR eS **Sn 23 01 39.2 +6.8**
GRNR pmax pmax
comp=Z,20nm,0.6s
GRNR smax smax
comp=N,8.0nm,0.6s
KLR Kul'dur 10.57 315 P Pn 22 59 58.9 +1.3
comp=N,0.1nm,0.3s,baz=110,slow=18,SNR=5.2
KLR Kul'dur 10.57 315 eP Pn 23 00 00.6 +3.0
KLR Kul'dur 10.57 315 ⇓ePN Pn 23 00 00.6 +3.0
KLR pmax pmax
comp=Z,13nm,1.5s
KSRS Korea Array 12.67 253 P Pn 23 00 27.5 +1.2
comp=Z,0.1nm,0.3s,baz=72,slow=13,SNR=5.7
KSRS LR LR 23 04 50.0
comp=Z,75nm,19.4s,baz=80,slow=35
EKMR Ekimchan 12.79 331 eP Pn 23 00 29.0 +1.2
TJN Taejon 13.59 249 ⇓eP Pn 23 00 39.3 +0.6
PETK Petropavlovsk- 14.55 37 P Pn 23 00 53.8 +2.3
comp=Z,0.4nm,0.3s,baz=222,slow=12,SNR=3.6
PETK LR LR 23 06 05.7
comp=Z,29nm,21.7s,baz=243,slow=35
PETK Petropavlovsk- 14.55 37 P Pn 23 00 51.1 -0.3
PETK Petropavlovsk- 14.55 37 P Pn 23 00 51.2 -0.3
ZEA Zeya 15.61 323 eP Pn 23 01 06.3 +1.3
ZEA AMB AMB 23 01 07.9
comp=Z,13nm,0.8s
ZEA Zeya 15.61 323 eP Pn 23 01 06.3 +1.3
ZEA pmax pmax
comp=Z,13nm,0.8s
BMKR Bomnak 15.61 328 eP P 23 01 06.5 -1.8
YAK Yakutsk 21.35 342 eP P 23 02 07.8 -3.2
YAK e 23 02 29.2
YAK eS **S 23 06 01.6 -3.2**
YAK e 23 06 13.0
YAK e*SS **sS 23 06 21.4 -3.9**
YAK eSS **SnSn 23 06 32.2 +1.3**
YAK e 23 13 22.9
YAK pmax pmax
comp=Z,9.0nm,0.8s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,1.0s
YAK smax smax
comp=N,165nm,4.6s
YAK smax smax
comp=E,172nm,4.6s
SEY Seymchan 21.38 12 P P 23 02 08.6 -2.8
comp=E,5.3nm,0.7s,baz=181,slow=8.0,SNR=12
SEY Seymchan 21.38 12 ⇓iP P 23 02 08.2 -3.1
BOD Bodaibo 24.07 320 eP P 23 02 35.6 -3.1
BOD pmax pmax
comp=Z,5.0nm,1.9s
WHN Wuhan 25.87 252 P P 23 02 55.9 +0.7
ULN Ulaanbaatar 25.95 295 eP P 23 02 55.3 -0.7
ULN Ulaanbaatar 25.95 295 P P 23 02 55.3 -0.7
ULN Ulaanbaatar 25.95 295 P P 23 02 55.3 -0.7
ULN pmax pmax
comp=Z,7.0nm,1.2s
SONM Songino Array 26.39 295 P P 23 02 59.0 -1.0
comp=Z,4.6nm,0.7s,baz=79,slow=8.6,SNR=44
SONM LR LR 23 15 02.6
comp=Z,18nm,20.1s,baz=144,slow=40
SONM Songino Array 26.39 295 P P 23 02 59.2 -0.8
SONM Songino Array 26.39 295 P P 23 02 59.2 -0.8
SONM pmax pmax
comp=Z,5.0nm,0.9s
XAN Xi'an 28.02 264 P P 23 03 15.6 +1.0
XAN pP pP 23 03 30.7 +1.9
XAN sP sP 23 03 37.3 +1.8
XAN pmax pmax
comp=Z,4.0nm,0.6s
XAN pmax pmax
comp=Z,240nm,6.3s
TLY Talaya 28.25 303 P P 23 03 15.7 -0.8
comp=Z,3.1nm,0.5s,baz=121,slow=5.8,SNR=8.2
TLY Talaya 28.25 303 eP P 23 03 16.2 -0.3
TLY Talaya 28.25 303 P P 23 03 15.6 -0.8
TLY Talaya 28.25 303 eP P 23 03 16.6 +0.1
TLY pmax pmax
comp=Z,13nm,0.8s
TLY MLR MLR
comp=Z,201nm,15.0s
BILL Bilibino 28.61 18 eP P 23 03 19.8 +0.4
BILL Bilibino 28.61 18 ⇑eP P 23 03 19.1 -0.3
BILL e 23 04 17.7
BILL eS **S 23 08 11.3 +7.7**
BILL pmax pmax
comp=Z,4.0nm,1.2s
BILL MLR MLR
comp=Z,41nm,16.0s
ENH Enshi 29.50 257 P P 23 03 26.6 -1.2
ENH IAmb IAmb 23 03 28.4
comp=Z,6.1nm,0.7s
MOY Mondy 29.90 303 eP P 23 03 31.1 -0.1
H11N2 WAKE ISLAND Hy 30.12 131 T T 23 35 04.6
baz=324,slow=75,SNR=268
H11N1 WAKE ISLAND Hy 30.14 131 T T 23 35 05.4
baz=324,slow=75,SNR=260
H11N3 WAKE ISLAND Hy 30.14 131 T T 23 35 06.0
baz=324,slow=75,SNR=251
WAKE Wake Island 30.35 132 P P 23 03 35.5 +0.3
H11S1 WAKE ISLAND Hy 31.00 133 T T 23 36 15.0
baz=325,slow=76,SNR=278
H11S3 WAKE ISLAND Hy 31.01 133 T T 23 36 08.0
baz=325,slow=76,SNR=284
H11S2 WAKE ISLAND Hy 31.02 133 T T 23 36 11.3
baz=325,slow=76,SNR=349
GTA Gaotai 32.67 280 P P 23 03 55.8 +0.1
GTA PcP **PcP 23 06 41.6 +1.2**
GTA pmax pmax
comp=Z,9.0nm,1.0s
ZAA0 Zalesovo Array 39.58 308 P P 23 04 53.8 -0.5
ZAA0 IAmb IAmb 23 04 54.7
comp=Z,8.3nm,0.8s
ZALV Zalesovo Beam 39.58 308 P P 23 04 54.0 -0.3
comp=Z,11nm,0.8s,baz=85,slow=7.2,SNR=41
ZALV PcP **PcP 23 07 01.0 +0.5**
comp=Z,3.0nm,0.7s,baz=85,slow=3.1,SNR=7.8
ZALV Zalesovo Beam 39.58 308 P P 23 04 53.5 -0.8
ZALV **PcP 23 07 00.7 +0.2**
WMQ Urumqi 39.93 292 P P 23 04 57.1 -0.4
WMQ IAmb IAmb 23 04 59.6
comp=Z,6.3nm,0.6s
WMQ Urumqi 39.93 292 P P 23 04 57.1 -0.4
WMQ pmax pmax
comp=Z,6.0nm,0.6s
IMAR Indian Mountai 41.48 33 P P 23 05 10.4 +0.6
MK31 Makanchi Array 42.68 298 P P 23 05 20.0 0.0
MK31 IAmb IAmb 23 05 20.5
comp=Z,5.9nm,0.7s
MK31 Makanchi Array 42.68 298 iP P 23 05 19.5 -0.5
MK31 pmax pmax
comp=Z,5.0nm,0.5s
MKAR Makanchi Array 42.68 298 P P 23 05 19.8 -0.2
comp=Z,5.0nm,0.6s,baz=82,slow=10,SNR=78
MKAR PcP **PcP 23 07 11.2 +0.3**
comp=Z,1.0nm,0.7s,baz=64,slow=5.5,SNR=4.2
MKAR Makanchi Array 42.68 298 P P 23 05 19.5 -0.4
MKAR **PcP 23 07 11.4 +0.5**
MAKZ Makanchi 42.89 298 P P 23 05 21.4 -0.2
MAKZ IAmb IAmb 23 05 22.3
comp=Z,7.7nm,0.8s
MAKZ Makanchi 42.89 298 iP P 23 05 21.0 -0.6
MAKZ pmax pmax
comp=Z,8.0nm,0.9s
KURK Kurchatov 43.94 304 eP P 23 05 29.4 -0.5
KURK Kurchatov 43.94 304 P P 23 05 29.7 -0.2
KURK Kurchatov 43.94 304 c iP P 23 05 29.4 -0.5
KURK pmax pmax
comp=Z,17nm,0.7s
COLA College 43.95 35 P P 23 05 31.4 +1.5
CHTO Chiang Mai 44.07 252 P P 23 05 30.9 -0.5
CHTO Chiang Mai 44.07 252 P P 23 05 30.9 -0.5
CHTO pmax pmax
comp=Z,3.0nm,0.7s
CMAR Chiang Mai Arr 44.31 251 P P 23 05 34.0 +0.7
comp=Z,1.4nm,0.6s,baz=41,slow=7.5,SNR=11
IL31 44.37 35 P P 23 05 33.4 +0.2
ILAR Eielson Array 44.37 35 P P 23 05 33.5 +0.3
comp=Z,2.7nm,1.0s,baz=265,slow=6.4,SNR=16
ILAR Eielson Array 44.37 35 P P 23 05 32.2 -1.1
SCRK Sand Creek 45.71 36 IAmb IAmb 23 05 45.2
comp=Z,3.4nm,0.7s
BCAR Beaver Creek A 46.84 37 P P 23 05 51.2 -1.6
TAPN Taplejung 47.12 270 eP P 23 05 55.9 +0.1
comp=Z,13nm,0.7s
ODAN Odare 47.63 270 eP P 23 06 00.0 +0.3
RAMN Ramite 48.16 270 eP P 23 06 03.7 -0.1
comp=Z,25nm,0.7s
GUN Gumba 48.17 272 eP P 23 06 04.1 +0.1
comp=Z,32nm,0.4s

BRVK Borovoye 48.23 309 eP P 23 06 03.4 -0.2
BRVK Borovoye 48.23 309 P P 23 06 03.3 -0.4
BRVK PcP PcP 23 07 29.9 -0.1
BRVK Borovoye 48.23 309 i P P 23 06 03.4 -0.2
BRVK pmax pmax
comp=Z,5.0nm,0.6s
KKN Kakani 48.68 272 eP P 23 06 07.9 +0.1
PKI Pulchoki 48.71 272 eP P 23 06 07.7 -0.4
PKIN Phulchoki 48.71 272 eP P 23 06 07.7 -0.3
comp=Z,5.2nm,0.3s
DMN Daman 48.91 272 eP P 23 06 09.7 +0.1
GKN Gorkha 49.04 273 eP P 23 06 10.2 -0.2
comp=Z,10nm,0.3s
INK Inuvik 49.12 29 P P 23 06 10.1 -0.2
comp=Z,0.9nm,0.4s,baz=268,slow=5.5,SNR=12
AAK Ala-Archa 49.35 295 eP P 23 06 13.1 +0.5
AAK Ala-Archa 49.35 295 P P 23 06 12.2 -0.4
AAK IAmb IAmb 23 06 13.3
comp=Z,2.7nm,0.4s
AAK Ala-Archa 49.35 295 ceP P 23 06 13.1 +0.5
AAK pmax pmax
comp=Z,1.0nm,0.5s
DANN Dangsing 49.51 274 eP P 23 06 14.4 +0.3
comp=Z,74nm,0.7s
KSH Kashi 49.67 291 P P 23 06 22.4 +7.4
KSH pP sP 23 06 36.3 -0.3
KSH PP PP 23 08 17.6 +7.9
KSH S S 23 13 27.1 +7.5
KSH pmax pmax
comp=Z,74nm,4.3s
KSH LR LR
comp=Z,98nm,5.6s
KSH LR LR
comp=Z,120nm,5.6s
KSH LR LR
comp=Z,130nm,7.5s
KOLN Koldanda 49.94 273 eP P 23 06 17.4 +0.1
KK31 Karatay Array 51.81 297 P P 23 06 30.4 -0.5
KK31 IAmb IAmb 23 06 32.0
comp=Z,2.8nm,0.6s
KK31 Karatay Array 51.81 297 i P P 23 06 30.2 -0.7
KK31 pmax pmax
comp=Z,1.0nm,0.4s
KKAR Karatay Array 51.81 297 P P 23 06 30.2 -0.7
KKAR Karatay Array 51.81 297 P P 23 06 30.2 -0.7
KKAR IAmb IAmb 23 06 32.0
comp=Z,2.8nm,0.6s
KKAR Karatay Array 51.81 297 P P 23 06 30.2 -0.7
SVE Sverdlovsk 52.20 316 eP P 23 06 33.5 -0.1
SVE Sverdlovsk 52.20 316⇓eP P 23 06 33.5 -0.1
SVE pmax pmax
comp=Z,26nm,0.8s
BTK Batken 52.97 294 IAmb IAmb 23 06 39.9
comp=Z,3.0nm,0.9s
ARU Arti 53.41 316 eP P 23 06 41.9 -0.6
ARU Arti 53.41 316 P P 23 06 42.2 -0.3
ARU PcP PcP 23 07 48.4 -0.6
ARU Arti 53.41 316 c i P P 23 06 42.0 -0.6
ARU 23 07 47.3
ARU S S 23 14 10.5 +0.2
ARU SS SKiKP 23 17 52.5 -0.5
ARU pmax pmax
comp=Z,12nm,0.7s
AB31 Akbulak array 55.69 308 i P P 23 06 58.7 -0.5
AB31 pmax pmax
comp=Z,2.0nm,0.3s
ABKAR Akbulak array 55.69 308 P P 23 06 59.1 -0.1
ABKAR Akbulak array 55.69 308 P P 23 06 58.5 -0.7
ABKAR IAmb IAmb 23 06 59.8
comp=Z,7.2nm,0.8s
AKTO Aktyubinsk 56.26 310 i P P 23 07 02.0 -1.3
AKTO pmax pmax
comp=Z,3.0nm,0.6s
KBL Kabul 56.92 289 P P 23 07 07.5 -0.9
KBL IAmb IAmb 23 07 14.9
comp=Z,2.3nm,0.9s
KBL Kabul 56.92 289 P P 23 07 07.5 -0.9
KBL pmax pmax
comp=Z,2.0nm,0.9s
PRGR Permogore 57.15 326 eP P 23 07 04.7 -4.6
PRGR pmax pmax
comp=Z,10.0nm,1.2s
RES Resolute Bay 57.18 16 IAmb IAmb 23 07 09.3
comp=Z,4.0nm,0.7s
RES Resolute Bay 57.18 16 P P 23 07 08.6 -0.8
RES pmax pmax
comp=Z,7.0nm,0.7s
YKA Yellowknife Arr 58.61 32 P P 23 07 19.5 -0.1
comp=Z,0.5nm,0.5s,baz=304,slow=6.6,SNR=8.8
ARCES ARCESS Array B 59.58 339 P P 23 07 24.9 -1.3
comp=Z,6.1nm,1.0s,baz=31,slow=10,SNR=3.7
KLMR Klimovskoe 60.08 327 P P 23 07 27.4 -2.3
KLMR AMP 23 07 32.3
comp=Z,19nm,1.8s
KLMR Klimovskoe 60.08 327 P P 23 07 27.3 -2.4
KLMR pmax pmax
comp=Z,19nm,1.8s
WRA Warramunga Arr 62.45 189 P P 23 07 46.6 +0.4
comp=Z,1.0nm,0.6s,baz=7.0,slow=6.8,SNR=13
GEYT Alibeck 62.56 297 P P 23 07 46.2 -0.7
comp=Z,4.4nm,0.7s,baz=46,slow=4.3,SNR=14
GEYT Alibeck 62.56 297 P P 23 07 46.3 -0.7
VRH Novokhopyorsk 64.64 317 eP P 23 07 58.8 -1.5
VRH pmax pmax
comp=Z,6.0nm,0.8s
FINES FINESS Array B 64.82 332 P P 23 08 00.6 -0.8
comp=Z,3.3nm,0.4s,baz=54,slow=7.1,SNR=49
FINES FINESS Array B 64.82 332 P P 23 08 00.8 -0.5
SUMG Summit 65.43 1 i P P 23 08 05.9 +0.3
comp=Z,14nm,0.6s
SUMG Summit 65.43 1 P P 23 08 05.8 +0.1
SUMG IAmb IAmb 23 08 08.4
comp=Z,8.8nm,1.0s
SUMG Summit 65.43 1 i P P 23 08 05.9 +0.3
SUMG pmax pmax
comp=Z,14nm,0.6s
VSR Storozhevoye 65.91 318 eP P 23 08 07.2 -1.4
VSR pmax pmax
comp=Z,7.0nm,0.8s
ASAR Alice Springs 66.18 189 P P 23 08 11.8 +1.3
comp=Z,0.8nm,0.7s,baz=9.0,slow=6.8,SNR=6.9
ASAR Alice Springs 66.18 189 P P 23 08 10.1 -0.4
ASAR Alice Springs 66.18 189 P P 23 08 10.1 -0.4
KIV Kislovodsk 68.53 310 ⇑P P 23 08 26.2 +0.8
KIV Kislovodsk 68.53 310 eP P 23 08 25.8 +0.4
KIV Kislovodsk 68.53 310 P P 23 08 25.4 0.0
KIV Kislovodsk 68.53 310 eP P 23 08 25.8 +0.4
KIV pmax pmax
comp=Z,33nm,0.9s
KBZ Khabaz 68.55 310 P P 23 08 25.6 +0.2
comp=Z,5.0nm,0.8s,baz=71,slow=4.1,SNR=16
KBZ Khabaz 68.55 310 eP P 23 08 26.1 +0.8
KBZ Khabaz 68.55 310⇓eP P 23 08 26.1 +0.8
KBZ pmax pmax
comp=Z,5.0nm,0.8s
NEY Neytrino 68.94 310⇓eP P 23 08 29.2 +1.1
NEY pmax pmax
comp=Z,1.0nm,0.8s
GNI Garni 69.69 306⇓eP P 23 08 32.1 -0.7
GNI pmax pmax
comp=Z,23nm,1.4s
NB2 NORSAR Subarra 69.87 337 P P 23 08 32.4 -0.9
comp=Z,1.8nm,0.6s,baz=34,slow=6.5
NOA NORSAR Array B 69.87 337 P P 23 08 32.6 -0.7
comp=Z,1.0nm,0.8s,baz=275,slow=18,SNR=7.4
NORES NORESS Array B 70.02 337 P P 23 08 35.5 +1.3
BCA Borcka 70.72 309 ⇑P P 23 08 39.4 +0.6
NVAR Mina Array Bea 70.81 55 P P 23 08 41.0 +1.3
comp=Z,0.9nm,0.7s,baz=291,slow=5.7,SNR=3.6
ANN Anapa 70.89 314 eP P 23 08 36.5 -3.2
ANN e*PP pP 23 08 54.6 -1.1
ANN eS S 23 17 45.9 -4.7
ANN pmax pmax
comp=Z,71nm,1.1s
AKASG Malin Array Be 70.99 322 P P 23 08 39.3 -0.9
comp=Z,1.0nm,0.4s,baz=43,slow=6.2,SNR=17
AKASG Malin Array Be 70.99 322 ceP P 23 08 39.2 -1.0
AKASG pmax pmax
comp=Z,1.0nm,0.4s
TPNV Topopah Spring 73.01 55 P P 23 08 54.3 +1.4
TPNV IAmb IAmb 23 08 55.0
comp=Z,3.5nm,0.9s
TPNV Topopah Spring 73.01 55 P P 23 08 54.3 +1.4
TPNV pmax pmax
comp=Z,4.0nm,1.0s
PDAR Pinedale Array 73.06 47 P P 23 08 53.9 +0.8
comp=Z,0.4nm,0.4s,baz=0.2,slow=1.2,SNR=8.1
PDAR Pinedale Array 73.06 47 P P 23 08 53.3 +0.2
SORM Soroca 73.20 321 ⇑P P 23 08 52.4 -1.2
SORM Soroca 73.20 321 P P 23 08 52.3 -1.2
GIRR Girov 74.92 321 ⇑P P 23 09 03.2 -0.4
BUR08 Bucovina Ar. S 75.02 322 P P 23 09 04.2 -0.1
BUR08 IAmb IAmb 23 09 04.8
comp=Z,2.6nm,0.8s
BURAR Bucovina Array 75.03 322 ⇑P P 23 09 04.3 -0.1
BURAR Bucovina Array 75.03 322 P P 23 09 04.3 -0.1
BURAR Bucovina Array 75.03 322 P P 23 09 04.3 -0.1
TESR Tescani 75.17 320 ⇑P P 23 09 04.8 -0.3
KOLS Kolonicke sedl 75.37 324 eP P 23 09 06.9 +0.7
KOLS Kolonicke sedl 75.37 324 eP P 23 09 06.9 +0.7
OJC Ojcow 75.43 326 P P 23 09 06.2 -0.3
OJC IAmb IAmb 23 09 07.5
comp=Z,6.3nm,0.9s
OJC Ojcow 75.43 326 P P 23 09 06.2 -0.3
OJC pmax pmax
comp=Z,6.0nm,0.9s
TRPA Tarpa 75.86 324 ⇑P P 23 09 09.4 +0.5
OZUR 75.89 320 ⇑P P 23 09 09.9 +0.7
ICOR Ion Corvin 76.35 318 ⇑P P 23 09 12.8 +1.0
BRTR Keskin Array B 76.39 312 P P 23 09 11.4 -0.9
comp=Z,1.6nm,0.4s,baz=82,slow=3.1,SNR=14
BRTR Keskin Array B 76.39 312 P P 23 09 12.1 -0.2
BRTR Keskin Array B 76.39 312 ceP P 23 09 12.1 -0.2
BRTR pmax pmax
comp=Z,2.0nm,0.6s
CHVC Chvalec 76.64 329 eP P 23 09 13.5 +0.1
MORC Moravsky Berou 76.70 327 ⇑P P 23 09 13.8 +0.1
MORC Moravsky Berou 76.70 327 P P 23 09 13.8 +0.1
VOIR 76.72 320 ⇑P P 23 09 14.8 +0.8
VOIR 76.72 320 P P 23 09 14.8 +0.8
KRLC Kraliky 76.76 328 eP P 23 09 14.0 -0.1
KRLC Kraliky 76.76 328 eP P 23 09 14.0 -0.1
VYHS Vyhne 77.17 326 eP P 23 09 14.9 -1.5
VYHS Vyhne 77.17 326 eP P 23 09 14.9 -1.5
CLL Collm 77.21 331 eP P 23 09 15.0 -1.5
CLL epP pP 23 09 33.0 +0.4
CLL Collm 77.21 331 eP P 23 09 15.0 -1.5
CLL e*PP pP 23 09 33.0 +0.4
GZR Gura Zlata 77.81 322 ⇑P P 23 09 19.8 -0.3
GZR Gura Zlata 77.81 322 P P 23 09 19.8 -0.3
KHC Kasperske Hory 78.77 329 eP P 23 09 25.2 -0.1
KHC Kasperske Hory 78.77 329 eP P 23 09 25.2 -0.1
CONA Conrad Observa 78.84 327 eP P 23 09 26.9 +1.2
comp=Z,0.2nm,0.2s
GERES GERESS Array B 78.95 329 P P 23 09 25.2 -1.1
comp=Z,0.8nm,0.6s,baz=40,slow=6.4,SNR=9.1
GERES GERESS Array B 78.95 329 P P 23 09 26.0 -0.4
GERES GERESS Array B 78.95 329 P P 23 09 26.0 -0.4
MOA Molln 79.54 328 eP P 23 09 30.8 +1.4
comp=Z,1.2nm,0.5s
VTS Vitosha 79.70 319 ⇑P P 23 09 31.2 +0.5
VTS Vitosha 79.70 319 P P 23 09 31.1 +0.5
RAYN Ar Rayn 79.92 292 P P 23 09 31.4 -0.6
RAYN IAmb IAmb 23 09 32.6
comp=Z,3.8nm,1.1s
RAYN Ar Rayn 79.92 292 P P 23 09 31.4 -0.6
RAYN pmax pmax
comp=Z,4.0nm,1.1s
SOKA Soboth 80.18 327 eP P 23 09 33.5 +0.5
comp=Z,2.0nm,0.5s
OBKA Obir 80.51 327 eP P 23 09 35.0 +0.1
comp=Z,2.7nm,0.8s
WATA Walderalm 81.01 329 i P P 23 09 37.6 0.0
WTTA Wattenberg 81.04 329 i P P 23 09 38.0 +0.2
MOTA Moosalm 81.18 329 eP P 23 09 38.8 +0.4
comp=Z,1.6nm,0.4s
RETA Reutte 81.19 330 i PcP P 23 09 39.3 +0.9
TX32 Lajitas Array 85.87 54 P P 23 10 03.2 +0.5
TXAR Lajitas Array 85.87 54 P P 23 10 04.0 +1.3
comp=Z,1.2nm,0.6s,baz=291,slow=3.4,SNR=20
TXAR Lajitas Array 85.87 54 P P 23 10 02.9 +0.1
TXAR Lajitas Array 85.87 54 P P 23 10 02.9 +0.1
TORD Torodi Ar. Bea 114.46 318 PKP PKiKP 23 16 01.4 -1.5
comp=Z,0.2nm,0.4s,baz=41,slow=2.4,SNR=5.2
SNAA Sanae 146.16 199 PKPdf PKPab 23 17 01.9 -0.4
VNA2 Neumayer--Watz 147.74 198 PKPdf PKiKP 23 17 06.7 -1.1
baz=134,slow=1.5
VNA3 Neumayer Olymp 147.99 196 PKPdf PKPbc 23 17 07.3 +0.6
BDFB Brasilia 151.75 23 PKPbc PKPbc 23 17 17.3 -0.2
comp=Z,2.8nm,1.0s,baz=207,slow=6.0,SNR=4.2
BDFB Brasilia 151.75 23 PKPdf PKPdf 23 17 10.4 -0.8
BDFB Brasilia 151.75 23 PKIKP PKPdf 23 17 10.4 -0.8
PLCA Paso Flores 154.78 98 PKPbc PKiKP 23 17 24.3 +0.8
comp=Z,2.2nm,1.0s,baz=235,slow=7.6,SNR=2.8

SOME ***09*** *23:17:31.4, 39.°38N×75.°60E, h0^{km}*
KRNET ***09*** *23:17:41.7±0.1, 39.°63N×75.°65E, mb3.4*
NNC ***09*** *23:17:44.1±2.8, 39.°80N×75.°69E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=19.5km s-min=12.2km az=174.0*
ISC 09 23:17:45.1±1.9, **39.°78N**±0.°09×**75.°59E**±0.°04, **h10^{km}, n47, σ2^{s}27**/68, **23C-5D, Southern Xinjiang**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NRN Naryn 1.69 11 ⇑iP Pb 23 18 15.5 -0.9
baz=8.0
NRN ⇑iS Sg 23 18 40.2 +0.8
baz=8.0
ARLS Aral 2.29 336 ⇑iP Pb 23 18 24.8 -1.9
baz=36
ARLS ⇑eS Sb 23 18 56.9 +1.7
baz=36
KZA Kyzart 2.31 354 ⇑iP Pb 23 18 25.6 -1.6
baz=53
KZA ⇑iS Sb 23 18 57.6 +1.6
baz=53
KZA Kyzart 2.31 354 P Pb 23 18 25.6 -1.6
SNR=11
ULHL Ulahol 2.52 11 ⇑iP Pb 23 18 28.4 -2.1
baz=10.0
ULHL ⇑iS Sb 23 19 01.9 +0.2
baz=10.0
ULHL Ulahol 2.52 11 P Pb 23 18 31.1 +0.6
SNR=11
ARSB Arslanbob 2.52 309 ⇓iP Pb 23 18 28.0 -2.5
baz=11
ARSB ⇓iS Sb 23 19 01.8 +0.2
baz=11
UCH Uchtor 2.58 342 ⇑iP Pn 23 18 29.4 +2.0
baz=42
UCH ⇑iS Sb 23 19 04.2 +0.4
baz=42
UCH Uchtor 2.58 342 P Pb 23 18 29.6 -2.2
SNR=49
KDJ Kajisay 2.64 27 ⇑iP Pn 23 18 29.3 +1.3
baz=25
KDJ ⇑iS Sb 23 19 04.2 -1.0
baz=25
BOOM Boomskoye usch 2.73 5 ⇑iP Pn 23 18 31.0 +1.9
baz=4.0
BOOM ⇑iS Sb 23 19 07.0 -0.6
baz=4.0
AML Almayashu 2.76 329 ⇑iP Pn 23 18 31.6 +1.8
baz=30
AML ⇑iS Sb 23 19 08.3 -0.4
baz=30
AML Almayashu 2.76 329 P Pn 23 18 31.5 +1.7
SNR=18
KBK Karagaybulak 2.92 351 P Pb 23 18 34.5 -2.8
SNR=20
AAK Ala-Archa 2.98 344 ⇑iP Pn 23 18 34.9 +2.3
baz=44
AAK ⇑iS Sb 23 19 13.2 -1.6
baz=44
AAK Ala-Archa 2.98 344 P Pb 23 18 35.4 -2.9
SNR=39
AAK Ala-Archa 2.98 344 ⇓Pg Pn 23 18 35.0 +2.5
24nm,0.4s
AAK ⇓Lg Lg 23 19 15.1
31nm,0.9s
FRU1 Bishkek 3.12 347 ⇑eP Pn 23 18 36.4 +2.0
baz=47
FRU1 ⇑iS Sb 23 19 16.4 -2.4
baz=47
KST Kastek 3.28 5 Pg Pb 23 18 44.7 +1.2
29nm,0.7s
KST Lg Lg 23 19 29.9
18nm,0.7s
CHMS Chumysh 3.28 349 P Pn 23 18 39.3 +2.7
SNR=12
CHMS Chumysh 3.28 349 ⇑Pg Pn 23 18 39.2 +2.6
7.8nm,0.4s
CHMS ⇓Lg Lg 23 19 23.7
33nm,0.7s
MTBS Maitube 3.41 10 eP Pb 23 18 43.1 -2.6
4.5nm,0.5s
MTBS eS Sg 23 19 34.3 -0.4
9.8nm,0.6s
TNSS Tian-Shan 3.42 17 eP Pn 23 18 41.5 +2.7
3.7nm,0.4s
TNSS eS Sb 23 19 32.1 +4.5
12nm,0.8s
TNSS Tian-Shan 3.42 17 Pg Pb 23 18 47.2 +1.3
7.6nm,0.4s
TNSS Lg Lg 23 19 34.4
11nm,0.6s
ARK Arkit 3.42 307 ⇑iP Pn 23 18 40.0 +1.5
baz=9.0
ARK ⇑iS Sn 23 19 22.1 +2.9
baz=9.0
MRKS Merke 3.46 330 eP Pn 23 18 41.0 +1.9
3.2nm,0.3s
MRKS eS Sb 23 19 30.8 +2.1
7.1nm,0.6s
MRKS Merke 3.46 330 Pg Pb 23 18 48.9 +2.4
16nm,0.6s
MRKS Lg Lg 23 19 36.8
8.3nm,0.5s
DGS Degeres 3.47 2 Pg Pb 23 18 47.8 +1.2
11nm,0.8s
DGS Lg Lg 23 19 35.9
19nm,0.5s
MDOK Medeo 3.56 17 Pg Pn 23 18 43.3 +2.8
8.8nm,1.0s
MDOK Lg Lg 23 19 36.9
16nm,0.8s
USP Ospenovka 3.58 347 P Pn 23 18 43.2 +2.4
SNR=17
KOTS Kotyrbulak 3.64 18 Pg Pb 23 18 50.5 +0.8
13nm,0.5s
KOTS Lg Lg 23 19 40.0
59nm,0.5s
SGDS Sogindy 3.74 349 Pg Pb 23 18 53.6 +2.3
5.9nm,0.4s
SGDS Lg Lg 23 19 45.1
13nm,0.8s
SATY Saty 3.91 32 eP Pb 23 18 50.9 -3.2
9.2nm,1.4s
SATY eS Sg 23 19 48.2 -2.3
20nm,1.7s
SATY Saty 3.91 32 Pg Pb 23 18 55.8 +1.6
4.4nm,0.5s
SATY Lg Lg 23 19 48.5
12nm,0.8s
ZHN Zhinishke 4.01 31 eP Pb 23 18 53.1 -2.8
0.6nm,0.1s
ZHN eS Sg 23 19 52.0 -1.8
1.8nm,0.4s
KTBS Karatobe 4.02 11 Pg Pb 23 18 58.0 +2.0
5.7nm,0.4s
KTBS Lg Lg 23 19 52.5
19nm,0.5s
KURS Kuram 4.18 27 eP Pb 23 18 55.4 -3.5
3.5nm,0.7s
KURS eS Sg 23 19 55.6 -3.8
8.9nm,1.6s
UZB Uzynbulak 4.24 36 eP Pb 23 18 56.9 -3.0
1.4nm,0.5s
UZB eS Sg 23 19 58.5 -2.8
7.9nm,1.0s
UZB Uzynbulak 4.24 36 Pg Pb 23 19 01.3 +1.4
UZB Lg Lg 23 19 57.9
7.8nm,1.0s
KPKS Kokpek 4.36 31 eP Pb 23 18 58.4 -3.4
3.5nm,0.4s
KPKS eS Sg 23 20 00.9 -4.1
21nm,0.8s
SHLS Shalkode 4.46 39 eP Pb 23 19 03.9 +0.3
5.5nm,1.8s
SHLS eS Sg 23 20 10.4 +2.2
15nm,0.8s
SHLS Shalkode 4.46 39 Pg Pg 23 19 07.8 -2.7
3.7nm,0.6s
SHLS Lg Lg 23 20 09.0
15nm,0.6s
PDGK Podgornoye 4.60 38 Pg Pb 23 19 06.0 0.0
1.6nm,0.7s
PDGK Lg Lg 23 20 06.1
4.5nm,0.7s
IUG Iuzhnay 4.83 301 Pg Pg 23 19 16.3 -1.3
1.0nm,0.5s
IUG Lg Lg 23 20 24.6
13nm,0.8s
KK31 Karatay Array 5.06 313 Pg Pg 23 19 19.1 -3.0
1.1nm,0.7s,baz=126,slow=16,SNR=4.6
KK31 Lg Lg 23 20 27.3
DJR Jarkent 5.52 33 Pg Pb 23 19 24.4 +2.8
0.6nm,0.1s
DJR Lg Lg 23 20 38.0
3.9nm,0.6s
KAPS Kapalarasan 6.17 26 Pg Pb 23 19 36.3 +3.6
2.0nm,0.7s
KAPS Lg Lg 23 20 57.9
3.1nm,0.9s

NDI ***09*** *23:24:19.2±3.3, 23.°18N×96.°27E, h7^{km}±999^{km}, ML3.0, mb4.1(NEIC)*
IDC ***09*** *23:24:22.7±1.2, 23.°87N×96.°52E, h0^{km}, mb3.6/4, mb1 3.6/6, mb1mx3.3/56, mbtmp3.5/6, ML2.7/1, MS2.6/1, Ms1 2.8/1, ms1mx2.5/37, Error ellipse: s-maj=47.2km s-min=17.5km az=58.0*
NEIC ***09*** *23:24:30.6±0.9, 23.°77N±0.°07×96.°07E±0.°07, h52^{km}±12^{km}, mb4.1/11, Error ellipse: s-maj=11.0km s-min=9.3km az=207.0*
BJI ***09*** *23:24:33.5±0.0, 23.°80N×94.°70E, h55^{km}, mB4.4/7, mb4.2/8, Ms4.1/4, Ms7 4.0/1*
ISC 09 23:24:29.5±0.6, **23.°70N**±0.°06×**96.°09E**±0.°06, **h35^{km}, n44, σ1^{s}92**/49, **mb4.1**/13, **Myanmar**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KOHI KOHIMA 2.70 318 eP Pn 23 25 11.1 +0.5
KOHI eS Sn 23 25 46.9 +4.7
KOHI IAML 23 26 04.3
comp=N,99nm,0.0s
KOHI IAML 23 26 08.4
TEZP TEZPUR 4.16 315 eP Pn 23 25 29.0 -1.6
BRDH Bariadhala 4.22 257 Pn Pn 23 25 33.5 +2.1
comp=N,0.3nm,0.3s,baz=180,slow=24,SNR=1.9
BRDH Sn Sn 23 26 24.8 +5.4
comp=N,0.1nm,0.3s,baz=180,slow=24,SNR=14
SHL Shillong 4.25 297 eP Pn 23 25 30.3 -1.7
SHL eS Sn 23 26 20.1 -0.5
SHL IAML 23 26 21.4
comp=E,27nm,0.6s
SHL IAML 23 26 30.9
comp=E,33nm,0.9s
SHL Shillong 4.25 297 Pn 23 25 30.9 -1.1
SIMRM Sittwe 4.63 221 Pn 23 25 38.7 +1.6
CHTO Chiang Mai 5.54 151 Pn 23 25 51.0 +1.3
CM31 Chiang Mai Arr 5.86 152 Pn Pn 23 25 54.4 +0.5
CMAR Chiang Mai Arr 5.86 152 Pn Pn 23 25 52.4 -1.6
baz=321,slow=14,SNR=1.3
CMAR Pg 23 26 15.7
comp=E,1.8nm,0.3s,baz=331,slow=16,SNR=6.6
CMAR Lg Lg 23 27 30.3
comp=E,0.9nm,0.3s,baz=311,slow=17,SNR=2.0
CMAR LR LR 23 28 43.8
comp=E,56nm,18.4s,baz=325,slow=45
KMI Kunming 6.22 76 Pn Pn 23 25 59.5 +0.4
LSA Lhasa 7.43 325 P Pn 23 26 15.9 0.0
LSA pmax pmax
comp=E,20nm,0.5s
LSA Lhasa 7.43 325 Pn 23 26 16.1 +0.2
SLVN Son La 7.60 107 Pn Pn 23 26 20.0 +2.1
GTK Tadong 7.66 300 eP Pn 23 26 17.9 -0.9
GTK eS Sn 23 27 43.6 -0.9
TAPN Taplejung 8.39 297 eP Pn 23 26 28.0 -1.0
comp=E,17nm,0.5s
PBKT Sadao Pong 8.45 146 Pn Pn 23 26 31.3 +1.9
ODAN Odare 8.48 294 eP Pn 23 26 28.4 -1.7
RAMN Ramite 9.17 293 eP Pn 23 26 38.4 -1.3
GUN Gumba 10.11 297 eP Pn 23 26 51.2 -1.4
comp=E,16nm,0.5s

KKN Kakani 10.56 295 eP Pn 23 26 55.8 -2.8
GKN Gorkha 11.17 295 eP Pn 23 27 04.4 -2.5
comp=E,20nm,0.6s
UBPT Khong Chiam 12.18 132 Pn Pn 23 27 22.4 +1.8
PBA Port Blair 12.40 195 Pn Pn 23 27 25.1 +1.5
LZH Lanzhou 14.05 27 eP Pn 23 27 47.4 +1.2
LZH pP P 23 27 55.0 +1.5
LZH PP PnPn 23 27 57.7 +3.4
LZH sP 23 28 02.2
GTA Gaotai 15.98 11 eP Pn 23 28 11.3 -0.4
GTA pP pP 23 28 21.7 -2.4
GTA sP sP 23 28 28.9 +0.3
WMQ Urumqi 21.22 343 eP P 23 29 14.2 +1.8
WMQ pmax pmax
comp=E,18nm,0.9s
WMQ pmax pmax
comp=E,250nm,6.3s
WMQ LR LR
comp=E,120nm,24.7s
WMQ LR LR
comp=E,430nm,29.0s
PALK Pallekele 22.02 225 P P 23 29 22.5 +1.3
PALK IAmb IAmb 23 29 22.9
comp=Z,11nm,1.2s
NIL Nilore 22.31 301 P P 23 29 23.2 -0.9
NIL IAmb IAmb 23 29 28.4
comp=Z,9.1nm,0.8s
TPUB Ta-pu 22.50 86 P P 23 29 24.6 -1.7
YULB Yu-li 23.10 86 P P 23 29 32.6 +0.1
KSH Kashi 23.20 318 P P 23 29 32.8 -0.7
KSH PcP PcP 23 33 24.2 +3.4
KSH pmax pmax
comp=Z,20nm,1.6s
KSH pmax pmax
comp=Z,110nm,5.6s
KSH LR LR
comp=Z,130nm,6.2s
KSH LR LR
comp=Z,150nm,5.4s
KSH LR LR
comp=Z,180nm,7.0s
MK31 Makanchi Array 25.57 338 P P 23 29 54.7 -0.5
MKAR Makanchi Array 25.57 338 P P 23 29 54.0 -1.2
comp=Z,1.2nm,0.8s,baz=146,slow=12,SNR=12
MKAR Makanchi Array 25.57 338 P P 23 29 54.0 -1.2
MAKZ Makanchi 25.69 337 P P 23 29 57.1 +0.8
MAKZ IAmb IAmb 23 29 58.9
comp=Z,4.2nm,1.1s
KBL Kabul 25.90 301 P P 23 29 59.1 +0.5
KBL IAmb IAmb 23 30 00.8
comp=Z,3.0nm,0.8s
AAK Ala-Archa 26.01 322 P P 23 29 58.5 -1.0
comp=Z,1.4nm,0.8s,baz=89,slow=7.4,SNR=5.1
AAK Ala-Archa 26.01 322 P P 23 29 58.8 -0.6
KSM Kuching 26.04 146 P P 23 29 59.7 0.0
KSM IAmb IAmb 23 30 53.3
comp=Z,7.7nm,1.0s
BTK Batken 26.82 313 P P 23 30 05.8 -0.8
BTK IAmb IAmb 23 30 11.5
comp=Z,4.0nm,0.8s
ABKAR Akbulak array 38.10 321 P P 23 31 44.1 -0.8
SOCY Socotra 41.51 262 P P 23 32 12.2 -1.7
SOCY IAmb IAmb 23 32 59.8
comp=Z,26nm,1.5s
WRA Warramunga Arr 57.20 136 P P 23 34 09.4 -4.0
comp=Z,0.6nm,0.9s,baz=322,slow=7.5,SNR=1.6
ASAR Alice Springs 59.71 139 P P 23 34 28.5 -2.4
comp=Z,0.2nm,0.6s,baz=325,slow=7.5,SNR=1.8

DJA 10 00:01:09.7±2.2, 6°S±4°×14°5E±°, h30km±20km, M4.7/8, mb4.4/8, mB5.3/2, MLv4.9/2, Mw(mB)4.7/2
IDC 10 00:01:13.3±3.1, 6°.14S×148°.02E, h40km±26km, mb3.9/8, mb1 4.1/10, mb1mx3.9/33, mbtmp4.1/10, ML2.2/1, MS3.2/14, Ms1 3.2/14, ms1mx3.2/25, Error ellipse: s-maj=37.2km s-min=17.5km az=103.0
NEIC 10 00:01:15.8±1.8, 6°.22S±0°.04×147°.87E±0°.08, h63km±7km, mb4.3/16, Error ellipse: s-maj=11.9km s-min=5.1km az=88.0
ISC 10 00:01:15.6±0.5, 6°.20S±0°.07×147°.84E±0°.08, h60km, n42, σ0§95/36, mb4.2/12, MS3.2/10, Eastern New Guinea region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 3.26 192 Pn Pn 00 02 04.0 -0.2
39nm,0.3s,baz=22,slow=5.3,SNR=37
PMG Sn Sn 00 02 41.5 -0.3
44nm,0.3s,baz=14,slow=16,SNR=7.2
PMG LR LR 00 03 52.7
comp=Z,388nm,21.8s,baz=46,slow=48
PMG Port Moresby 3.26 192 Pn 00 02 04.6 +0.4
RABL Rabaul 4.75 65 Pn Pn 00 02 24.6 -0.1
COEN Coen 8.97 210 Pn Pn 00 03 23.4 +0.8
HNR Honiara 12.42 106 Pn Pn 00 04 10.7 +1.0
FAKI Fak Fak 15.88 281 Pn Pn 00 04 54.5 -1.0
FAKI IAmb IAmb 00 05 05.2
comp=Z,35nm,1.1s
PATS Pohnpei 16.64 39 Pn Pn 00 05 04.5 -0.6
PATS IAmb IAmb 00 05 10.9
comp=Z,36nm,1.1s
SIJI Sorong 17.36 287 LR LR 00 13 49.8
comp=Z,118nm,19.2s,baz=94,slow=43
WB0 Warramunga Arr 18.78 223 P P 00 05 30.8 +0.7
WR0 Warramunga Arr 18.82 222 P 00 05 30.0 -0.6
WRA Warramunga Arr 18.94 223 P P 00 05 32.3 +0.4
comp=Z,0.8nm,0.3s,baz=48,slow=11,SNR=35
WRA ScP ScP 00 13 29.4 +2.6
comp=Z,0.1nm,0.3s,baz=49,slow=2.8,SNR=5.5
WRA LR LR 00 13 44.9
comp=Z,62nm,18.4s,baz=150,slow=39
EIDS Eidsvold 19.31 171 Pn 00 05 37.2 -0.3
EIDS IAmb IAmb 00 05 38.3
comp=Z,8.0nm,0.7s
GUMO Guam 19.88 351 LR LR 00 13 12.9
comp=Z,68nm,18.1s,baz=166,slow=36
KNRA Kununurra 20.94 242 P P 00 05 53.9 +0.2
KNRA IAmb IAmb 00 06 08.2
comp=Z,18nm,0.9s
AS31 Alice Springs 21.94 216 P P 00 06 05.2 +0.9
AS31 IAmb IAmb 00 06 10.5
comp=Z,4.6nm,0.3s
ASAR Alice Springs 21.94 216 P P 00 06 04.9 +0.6
comp=Z,3.9nm,0.6s,baz=52,slow=9.0,SNR=44
ASAR LR LR 00 14 31.6
comp=Z,69nm,19.3s,baz=50,slow=36
ASAR Alice Springs 21.94 216 P P 00 06 04.3 0.0
NOUC Port Laguerre 23.84 133 P P 00 06 22.6 -0.8
NOUC IAmb IAmb 00 06 30.2
comp=Z,13nm,1.0s
DZM Mont Dzumac 23.92 133 LR LR 00 13 13.0
comp=Z,81nm,20.1s,baz=24,slow=30
DZM Mont Dzumac 23.92 133 P P 00 06 23.0 -1.2
DZM IAmb IAmb 00 06 29.6
comp=Z,11nm,1.1s
FITZ Fitzroy Crossi 24.68 239 P P 00 06 32.8 +1.7
comp=Z,4.9nm,0.4s,baz=64,slow=7.3,SNR=15
FITZ LR LR 00 17 51.0
comp=Z,61nm,18.6s,baz=90,slow=40
DAV Davao City (W) 25.83 300 LR LR 00 16 10.0
comp=Z,49nm,20.8s,baz=55,slow=34
STKA Stephens Creek 26.20 192 P P 00 06 45.3 +0.5
comp=Z,3.2nm,0.4s,baz=359,slow=8.8,SNR=12
STKA LR LR 00 17 22.3
comp=Z,88nm,18.8s,baz=27,slow=37
STKA Stephens Creek 26.20 192 P P 00 06 45.5 +0.7
KAPI Kappang 27.98 271 P P 00 07 00.2 -0.8
CAN Canberra 29.00 178 P P 00 07 08.6 -1.2
CAN IAmb IAmb 00 07 16.5
comp=Z,5.2nm,0.9s
FORT Forrest 30.70 215 P P 00 07 24.4 -0.5
PSA00 Pilbara Seismi 31.09 238 P P 00 07 28.3 -0.1
MJAR Matsushiro Arr 43.46 349 LR LR 00 25 13.4
comp=Z,33nm,21.5s,baz=255,slow=33
KSRS Korea Array 47.24 338 LR LR 00 27 32.2
comp=Z,27nm,21.5s,baz=149,slow=33
CMAR Chiang Mai Arr 54.08 298 LR LR 00 32 04.1
comp=Z,7.0nm,21.6s,baz=185,slow=34
PETK Petropavlovsk- 59.67 7 P P 00 11 14.4 +0.8
comp=Z,1.8nm,0.5s,baz=162,slow=6.1,SNR=4.3
PETK LR LR 00 32 52.7
comp=Z,29nm,21.7s,baz=238,slow=32
SONM Songino Array 64.98 331 P P 00 11 50.5 +1.1
comp=Z,0.8nm,0.7s,baz=140,slow=4.7,SNR=6.5
SONM Songino Array 64.98 331 IAmb IAmb 00 11 50.8
comp=Z,1.1nm,1.0s
MKAR Makanchi Array 78.18 320 P P 00 13 08.7 0.0
comp=Z,0.5nm,0.5s,baz=99,slow=7.9,SNR=15
ZALV Zalesovo Beam 79.62 328 P P 00 13 16.1 -0.2
comp=Z,0.5nm,0.3s,baz=118,slow=6.2,SNR=5.0
ZALV LR LR 00 48 38.0
comp=Z,22nm,19.8s,baz=26,slow=36
ILAR Eielson Array 85.34 23 P P 00 13 44.2 -1.7
comp=Z,0.4nm,0.6s,baz=247,slow=4.7,SNR=12
ILAR Eielson Array 85.34 23 P P 00 13 44.8 -1.2
GERES GERESS Array B 122.54 326 PKP PKPdf 00 20 03.1 -1.5
comp=Z,0.2nm,0.3s,baz=95,slow=1.2,SNR=3.7
TORD Torodi Ar. Bea 145.95 284 PKPbc PKPbc 00 20 49.7 +0.1
comp=Z,2.2nm,0.6s,baz=61,slow=4.1,SNR=41
TORD Torodi Ar. Bea 145.95 284 PKPbc 00 20 50.0 +0.4
BDFB Brasilia 153.22 144 PKPbc PKiKP 00 21 09.0 +0.9
comp=Z,2.4nm,0.7s,baz=69,slow=10.0,SNR=4.3

IDC 10 00:04:57.3±1.6, 1°.46N×122°.27E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.5/33, mbtmp3.6/4, ML4.0/1, Error ellipse: s-maj=146.4km s-min=24.0km az=64.0
NEIC 10 00:05:01.3±2.2, 1°.5N±0°.1×122°.0E±0°.2, h35km±3km, mb4.1/8, Error ellipse: s-maj=23.4km s-min=19.6km az=94.0
ISC 10 00:05:01.7±1.0, 1°.5N±0°.1×122°.2E±0°.2, h35km, n15, σ1§14/12, mb3.8/6, Minahassa Peninsula, Sulawesi

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LUWI Luwuk 2.59 167 Pn 00 05 47.6 +6.5
BKB Balikpapan 5.98 243 Pn Pn 00 06 28.2 +0.5
KNRA Kununurra 18.26 159 P Pn 00 09 13.4 +1.0
KNRA IAmb IAmb 00 09 31.3
comp=Z,24nm,1.1s
FITZ Fitzroy Crossi 19.77 170 P P 00 09 28.6 -0.3
comp=Z,0.3nm,0.3s,baz=356,slow=7.1,SNR=3.4
FITZ Fitzroy Crossi 19.77 170 IAmb IAmb 00 09 38.7
comp=Z,9.5nm,1.1s
UBPT Khong Chiam 21.45 311 P P 00 09 45.6 -1.5
UBPT IAmb IAmb 00 09 48.2
comp=Z,6.7nm,1.2s
TPUB Ta-pu 21.72 356 P P 00 09 50.9 +0.9
YULB Yu-li 21.77 358 P P 00 09 49.3 -1.2
YULB IAmb IAmb 00 09 49.9
comp=Z,23nm,1.1s
PSA00 Pilbara Seismi 23.05 186 P P 00 10 02.5 -1.6
WB0 Warramunga Arr 24.29 151 P P 00 10 14.9 -1.1
WRA Warramunga Arr 24.41 151 P P 00 10 16.6 -0.5
comp=Z,1.0nm,0.8s,baz=328,slow=10,SNR=4.5
WRA Warramunga Arr 24.41 151 IAmb IAmb 00 10 18.1
comp=Z,0.3nm,1.1s
WR0 Warramunga Arr 24.52 151 P P 00 10 18.0 -0.1
WR0 IAmb IAmb 00 10 32.8
comp=Z,5.4nm,1.1s
ASAR Alice Springs 27.49 156 P P 00 10 45.4 +0.5
comp=Z,0.3nm,0.5s,baz=342,slow=14,SNR=5.7
MKAR Makanchi Array 56.92 328 P P 00 14 44.6 +1.3
comp=Z,0.6nm,1.0s,baz=116,slow=6.6,SNR=2.6

THE 10 00:35:33.5, 38°.17N×20°.42E, h5km, ML2.7/2, Error ellipse: s-maj=0.7km s-min=0.4km az=274.0
ATH 10 00:35:33.2, 38°.17N×20°.41E, h7km±1km, ML3.0/3, Error ellipse: s-maj=1.7km s-min=0.9km az=271.0
ISC 10 00:35:33.3±1.1, 38°.18N±0°.02×20°.43E±0°.03, h6km±4km, n31, σ0§57/49, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LXR1 Lixouri, Cepha 0.03 18 P Pg 00 35 34.3 -0.2
LXR1 S Sg 00 35 35.4 0.0
LXRA Lixouri, Kepha 0.03 16 P Pg 00 35 34.3 -0.2
LXRA S Sg 00 35 35.1 -0.3
CHV1 Chavriata, Kef 0.04 281 P Pg 00 35 34.7 +0.1
CHV1 S Sg 00 35 35.8 +0.3
ARGA Argostoli. Kep 0.04 89 P Pg 00 35 34.8 +0.2
ARGA S Sg 00 35 36.1 +0.5
ARG2 Argostoli 0.05 88 P Pg 00 35 35.0 +0.3
ARG2 S Sg 00 35 36.0 +0.3
KEF2 Argostoli. Kep 0.05 103 P Pg 00 35 35.0 +0.3
KEF2 S Sg 00 35 36.4 +0.7
KEF3 Kipouria, Keph 0.07 293 P Pg 00 35 35.1 0.0
KEF3 S Sg 00 35 36.5 +0.2
KEF4 Livadi, Kephal 0.08 358 P Pg 00 35 35.4 +0.2
KEF4 S Sg 00 35 37.2 +0.7
KEF1 Kardakata, Kep 0.11 18 P Pg 00 35 35.6 0.0
KEF1 S Sg 00 35 37.8 +0.5
VLS Valsamata 0.13 90 P Pg 00 35 36.1 +0.1
VLS S Sg 00 35 38.3 +0.5
6µm,0.1s
VLS Valsamata 0.13 90 P Pg 00 35 36.1 +0.1
VLS S Sg 00 35 38.8 +1.0
VLS AML AML 00 35 42.0
comp=E,18243µm,0.3s
VLS AML AML 00 35 42.9
comp=N,37033µm,0.4s
VSK1 VASILIKIADES 0.26 25 P Pg 00 35 38.6 +0.2
VSK1 S Sg 00 35 42.6 +0.8
comp=N,3µm,0.2s
KONA Konidatara, Ke 0.27 24 P Pg 00 35 38.7 0.0
KONA S Sg 00 35 43.2 +0.9
VLMS Volimes, Zakyn 0.35 148 P Pg 00 35 40.2 +0.1
VLMS S Sg 00 35 46.0 +1.1
VLMS AML AML 00 35 47.4
comp=E,15333µm,0.3s
VLMS AML AML 00 35 53.0
comp=N,19439µm,0.3s
EVGI Lefkada island 0.48 22 P Pg 00 35 42.5 -0.1
EVGI S Sg 00 35 50.2 +1.4
EVGI Lefkada island 0.48 22 P Pg 00 35 42.6 0.0
EVGI S Sg 00 35 50.1 +1.2
MGNA Meganis 0.56 31 P Pg 00 35 43.9 -0.2
MGNA AML AML 00 35 53.3
comp=N,1515µm,0.2s
MGNA AML AML 00 35 53.7
comp=E,1440µm,0.4s
KRI1 kERI 0.60 149 P Pg 00 35 44.6 -0.2
KRI1 S Sg 00 35 53.6 +1.0
AST1 Astakos 0.64 55 P Pg 00 35 45.6 0.0
AST1 S Sb 00 35 55.5 -0.4
LKD2 Lefkada island 0.64 16 P Pg 00 35 45.9 +0.3
LKD2 Lefkada island 0.64 16 P Pg 00 35 45.1 -0.6
RLS Riolos of Patr 0.83 98 P Pg 00 35 48.8 -0.4
RLS Riolos of Patr 0.83 98 P Pg 00 35 48.8 -0.4
PVO Paravola 0.97 63 P Pg 00 35 51.9 0.0
AMT Artemida-Makis 1.20 122 P Pg 00 35 56.1 -0.2
LAKA Lakka 1.22 87 P Pg 00 35 55.8 -1.0
TRIZ Trizonia 1.31 81 P Pn 00 35 57.1 -1.0
IGT Igoumenitsa 1.36 357 P Pn 00 35 58.6 -0.2
KLV Kalavryta, Ach 1.36 95 P Pn 00 35 58.2 -0.8
KLV Kalavryta, Ach 1.36 95 P Pn 00 35 58.6 -0.3
ITM Ithomi 1.55 129 P Pn 00 36 01.8 +0.4

NEIC 10 00:48:43.4±2.6, 52°.7N±0°.1×168°.6W±0°.1, h77km±12km, Error ellipse: s-maj=19.2km s-min=4.7km az=141.0
AEIC 10 00:48:45.0±3.4, 52°.76N±0°.10×168°.41W±0°.10, h63km±8km, ML3.1/27, mb3.5/25(NEIC), Error ellipse: s-maj=15.8km s-min=4.0km az=150.0, Fox Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NIKH Nikolski High 0.34 308 Pn 00 48 55.8 +0.1
NIKH Nikolski High 0.34 308 Sn 00 49 04.8 +1.4
NIKH Nikolski High 0.34 308 Sn Sn 00 49 04.6 +1.2
OKSP Okmok Steeple 0.49 9 Pn 00 48 57.9 +0.7
OKFG Magazine Ridge 0.71 25 Pn 00 49 00.6 +1.0
OKFG Sn 00 49 13.6 +3.3
OKWE Okmok W'ng Wal 0.72 8 Pn 00 48 59.8 +0.2
OKWE Sn 00 49 11.9 +1.5
OKER Okmok East Rim 0.72 17 Pn 00 49 00.4 +0.6
MGOD Makushin Gods 1.39 41 Pn 00 49 09.0 +0.7
MGOD Sn 00 49 27.3 +1.5
MREP Makushin Rep't 1.45 43 Pn 00 49 10.2 +1.1
MCIR Makushin Cirqu 1.50 37 Pn 00 49 10.4 +0.7
MSW Makushin Switc 1.51 40 Pn 00 49 10.5 +0.6
MSW Sn 00 49 30.6 +2.0
MNAT Makushin Natee 1.53 42 Pn 00 49 10.9 +0.8
MNAT Sn 00 49 31.1 +2.0
UNV Unalaska Valle 1.58 46 Pn 00 49 12.0 +1.3
UNV Sn Sn 00 49 32.7 +2.5
MTBL Makushin Table 1.59 40 Pn 00 49 11.8 +0.7
AKMO Akutan Morgan 1.96 46 Pn 00 49 17.3 +1.4
AKRB Akutan Reef Bi 1.96 45 Pn 00 49 17.2 +1.2
AKGG Akutan Green G 2.04 44 Pn 00 49 18.3 +1.3
AKUT Akutan 2.09 48 Pn Pn 00 49 18.5 +0.8
WESP Westdahl Peak 2.80 50 Pn 00 49 29.2 +1.8
ATKA Atka Island 3.58 263 Pn Pn 00 49 34.5 -3.5
FALS False Pass 3.63 53 Pn Pn 00 49 35.9 -2.8
DT1 Dutton Round H 4.32 55 Pn 00 49 49.2 +1.1
GSTR Great Sitkin T 4.73 265 Pn Pn 00 49 53.2 -0.5
ADK Adak 5.15 263 Pn Pn 00 49 58.3 -1.1
SDPT Sand Point 5.34 58 Pn Pn 00 50 01.3 -0.8
CNBA Chernabura Isl 5.62 65 Pn Pn 00 50 06.2 +0.3
CHGN Chignik 6.81 55 Pn Pn 00 50 21.9 -0.2
CHIR Chirikof Islan 8.09 63 Pn Pn 00 50 39.0 -0.6
SII Sitkinak Islan 9.08 60 Pn Pn 00 50 52.2 -1.0
OHAK Old Harbor 9.77 57 Pn Pn 00 51 00.2 -2.3
KDAK Kodiak Island 10.33 55 Pn Pn 00 51 07.4 -2.7
GAMB Gambell 11.18 352 Pn Pn 00 51 19.1 -2.6
CNPM China Poot 11.71 48 Pn Pn 00 51 27.4 -1.6
BRLK Bradley Lake 11.98 47 Pn Pn 00 51 30.5 -2.2
SEW Seward 12.78 47 Pn Pn 00 51 41.6 -2.0
SUA Susitna One 12.92 41 Pn Pn 00 51 43.9 -1.8
PPLA Purkeypile 13.29 34 Pn Pn 00 51 51.3 +0.7
GHO Glory Hole Cre 13.82 42 Pn Pn 00 51 58.2 +0.5
MID Middleton Isla 13.97 53 Pn Pn 00 51 59.2 -0.4
SML Sawmill 14.08 42 Pn Pn 00 52 01.4 +0.3
KTH Kantishna Hill 14.15 33 Pn Pn 00 52 02.8 +0.6
TRF Thorofare Moun 14.30 34 Pn Pn 00 52 04.8 +0.7
FID Port Fidalgo 14.39 48 Pn Pn 00 52 04.5 -0.6
BPAW Bear Paw Mtn. 14.51 32 Pn Pn 00 52 06.9 +0.3
SCM Sheep Creek Mo 14.51 43 Pn Pn 00 52 06.4 -0.3
DHY Denali Highway 15.13 39 Pn Pn 00 52 13.9 -1.0
DHY IAmb IAmb 00 52 14.5
comp=Z,2.3nm,0.9s
IMAR Indian Mountai 15.15 23 Pn Pn 00 52 14.1 -0.8
MLY Manley 15.24 29 Pn Pn 00 52 16.3 +0.2
MLY IAmb IAmb 00 52 17.2
comp=Z,5.3nm,1.2s
WRH Wood River Hil 15.70 34 Pn Pn 00 52 19.5 -2.5
WRH IAmb IAmb 00 52 28.2
comp=Z,3.2nm,1.1s
GLB Gilahina Butte 15.85 47 Pn Pn 00 52 22.4 -1.5
GLB IAmb IAmb 00 52 41.0
comp=Z,3.4nm,1.0s
CCB Clear Creek Bu 15.91 34 Pn Pn 00 52 21.1 -3.4
CRQM Cirque 15.91 50 Pn Pn 00 52 23.1 -1.8
CRQM IAmb IAmb 00 52 34.6
comp=Z,11nm,1.2s
VRDI Verde Repeater 15.93 48 Pn Pn 00 52 21.8 -3.3
VRDI IAmb IAmb 00 52 40.5
comp=Z,6.4nm,1.0s
TGL Tana Glacier 16.06 50 Pn Pn 00 52 25.0 -1.6
MCARA McCarthy VSAT 16.18 48 Pn Pn 00 52 27.2 -0.9
MCARA IAmb IAmb 00 52 41.0
comp=Z,3.1nm,0.8s
IL31 16.30 34 Pn Pn 00 52 25.9 -3.6
ILAR Eielson Array 16.30 34 Pn Pn 00 52 27.0 -2.5
BALM Baldy 16.37 49 Pn Pn 00 52 29.7 -0.9
BALM IAmb IAmb 00 52 36.8
comp=Z,6.8nm,1.0s
RIDG Independent Ri 16.45 39 Pn Pn 00 52 30.5 -1.0
RIDG IAmb IAmb 00 52 34.3
comp=Z,1.8nm,0.9s
MENT Mentasta 16.51 42 Pn Pn 00 52 31.6 -0.6
BARN Barnard Glacie 16.70 50 Pn Pn 00 52 33.1 -1.6
BARN IAmb IAmb 00 52 46.8
comp=Z,7.8nm,1.2s
DOT Dot Lake 16.71 40 Pn Pn 00 52 33.4 -1.3
CTGM Chitina Glacie 16.82 50 Pn Pn 00 52 35.6 -0.6
SCRK Sand Creek 16.90 39 Pn Pn 00 52 33.5 -3.7
FYU Fort Yukon 17.95 31 P P 00 52 46.9 -2.8
FYU IAmb IAmb 00 53 01.0
comp=Z,6.7nm,1.2s
EGAK Eagle 18.37 39 P P 00 52 51.9 -2.4
HYT Haines Junctio 18.60 52 P P 00 52 55.9 -1.1
HYT IAmb IAmb 00 53 13.8
comp=Z,1.7nm,1.0s
BMAR Burnt Mountain 18.70 29 P 00 52 56.8 -1.2
DAWY Dawson 18.75 42 P P 00 52 58.4 -0.1
SIT Sitka 19.38 64 P P 00 53 04.2 -1.2
SKAG Skagway 19.47 57 P P 00 53 05.7 -0.6
WHY Whitehorse 19.84 53 P P 00 53 10.7 +0.2
WHY IAmb IAmb 00 53 13.8
comp=Z,2.8nm,1.1s
JIS Juneau Island 19.89 60 P P 00 53 10.2 -0.6

NIED 10 00:52:00, 36°.70N×140°.70E, h8km, Mw3.5 Best double couple: M0 1.69000×10^14 NP1:φs320.00000°, δ61.00000°, λ-93.00000°. NP2:φs146.00000°, δ29.00000°, λ-85.00000°.
IDC 10 00:52:49.4±2.0, 36°.64N×140°.74E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.5/35, mbtmp3.8/4, ML2.6/1, MS2.6/1, Ms1 2.6/1, ms1mx2.1/40, Error ellipse: s-maj=39.0km s-min=24.9km az=63.0
JMA 10 00:52:51.8, 36°.68N×140°.67E, h11km±1km, M3.7 Broadband fault plane solution: P waves. NP1: φs139.00000°, δ16.00000°, λ-106.00000°. NP2: φs336.00000°, δ75.00000°, λ-86.00000°. Principal axes: T Plg30.0000°, Azm62.0000°; N Plg4.0000°, Azm154.0000°; P Plg60.0000°, Azm252.0000°;
JMA Felt II J1.
NEIC 10 00:52:54.1±1.6, 36°.46N±0°.09×140°.74E±0°.10, h47km±7km, mb4.3/7 Error ellipse: s-maj=13.7km s-min=10.3km az=205.0
ISC 10 00:52:51.0±1.0, 36°.64N±0°.03×140°.70E±0°.04, h16km±7km, n35, σ1§15/38, mb4.0/6, 4C-1D, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JHO Hitachi 0.11 254 ⇑P Pg 00 52 54.5 0.0
JHO S Sb 00 52 56.5 -0.6
JHYU Hitachinakayam 0.31 197 P Pb 00 52 58.8 +0.7
JHYU eS Sb 00 53 03.8 +0.9
ONAJ Iwakimizuishiy 0.47 10 ⇑P Pg 00 53 00.3 -0.1
ONAJ eS Sg 00 53 06.6 -0.2
JYT Yasato 0.58 225 P Pb 00 53 03.0 +0.3
JYT S Sb 00 53 10.9 +0.3
JSB Shiboa 0.70 298 P Pb 00 53 05.1 +0.2
JSB S Sb 00 53 14.1 -0.2
JFK Kawauchi 0.74 11 ⇑P Pb 00 53 04.9 -0.6
JFK S Sb 00 53 14.8 -0.6
JFT Otama 0.92 342 ⇑P Pb 00 53 08.3 -0.3
JFT S Sb 00 53 19.8 -0.8
JAG Ashikaga 1.02 258 P Pb 00 53 10.1 -0.2
JFY Yanaizu 1.10 314 ⇓P Pb 00 53 11.6 -0.2
JFY S Sb 00 53 25.4 -0.4
MJAR Matsushiro Arr 2.00 268 Pn Pn 00 53 25.3 +1.2
2.2nm,0.3s,baz=89,slow=12,SNR=49
MJAR Sn Sb 00 53 50.8 -1.0
11nm,0.3s,baz=87,slow=29,SNR=26
MJAR Matsushiro Arr 2.00 268 Pn 00 53 24.8 +0.7
MAJO Matsushiro 2.01 268 Pb 00 53 26.0 -1.0
MAT Matsushiro 2.01 268 P Pb 00 53 25.9 -1.2
MAT S Sb 00 53 51.7 -0.1
MJB9 Matsu-Tunnel 2.01 268 Pb 00 53 26.0 -1.1
INU Inuyama 3.25 248 Pn Pn 00 53 41.4 +0.1
JHJ2 Mitsune 3.59 192 Pn Pn 00 53 44.8 -1.2
JCJ Chichijima 9.60 172 LR LR 00 59 23.1
comp=Z,32nm,18.7s,baz=78,slow=41
USA0B Ussuriysk Arra 10.05 321 Pn 00 55 17.3 +2.7
YSS Yuzh-Sakhalins 10.42 8 Pn Pn 00 55 22.3 +2.7
SARN Sarigan 20.37 166 P P 00 57 25.1 -1.8
SARN IAmb IAmb 00 57 29.0
comp=Z,15nm,0.9s
ULN Ulaanbaatar 27.10 305 P P 00 58 34.4 +1.3
SONM Songino Array 27.53 305 P P 00 58 37.7 +0.8
comp=Z,0.7nm,0.7s,baz=111,slow=9.6,SNR=4.7
SONM Songino Array 27.53 305 P P 00 58 36.5 -0.4
H11N2 WAKE ISLAND Hy 28.45 119 T T 01 28 28.8
baz=312,slow=75,SNR=47
H11N1 WAKE ISLAND Hy 28.46 119 T T 01 28 29.4
baz=312,slow=75,SNR=52
H11N3 WAKE ISLAND Hy 28.47 119 T T 01 28 30.1
baz=312,slow=75,SNR=49
WAKE Wake Island 28.58 120 P P 00 58 45.2 -1.1
WAKE IAmb IAmb 00 58 46.0

	comp=Z,56nm,1.1s						
H11S1	WAKE ISLAND Hy	29.14	121	T	T	01 29 20.4	
	baz=314,slow=76,SNR=388						
H11S3	WAKE ISLAND Hy	29.14	121	T	T	01 29 20.6	
	baz=314,slow=76,SNR=276						
H11S2	WAKE ISLAND Hy	29.15	121	T	T	01 29 21.7	
	baz=314,slow=76,SNR=171						
CHTO	Chiang Mai	40.64	256	P	P	01 00 27.4	-3.0
CHTO				IAmb	IAmb	01 00 40.3	
	comp=Z,2.0nm,0.7s						
ZALV	Zalesovo Beam	41.76	313	P	P	01 00 40.1	+1.0
	comp=Z,1.2nm,0.5s,baz=95,slow=6.7,SNR=6.7						
KURK	Kurchatov	45.72	308	P	P	01 01 11.8	+0.7
KURK				IAmb	IAmb	01 01 12.0	
	comp=Z,2.0nm,0.8s						
SII	Sitkinak Islan	46.99	43	P	P	01 01 21.1	+0.2
WRA	Warramunga Arr	56.59	187	P	P	01 02 34.0	+1.1
	comp=Z,0.5nm,0.3s,baz=5.2,slow=7.6,SNR=12						

ATH 10 01:04:14.4, 38.17N×20.31E, h6km±2km, ML2.8/2, Error ellipse: s-maj=2.6km s-min=1.2km az=53.0
THE 10 01:04:14.6, 38.17N×20.32E, h0km, ML2.4/4, Error ellipse: s-maj=0.7km s-min=0.4km az=226.0
ISC 10 01:04:14.4±1.6, 38.17N±0.03×20.31E±0.07, h6km±6km, n25, σ0.46/45, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.04	47	P	Pg	01 04 15.9	+0.3
KEF3				S	Sg	01 04 16.7	+0.1
CHV1	Chavriata, Kef	0.06	81	P	Pg	01 04 15.7	-0.2
CHV1				S	Sg	01 04 16.4	-0.5
LXR1	Lixouri, Cepha	0.10	75	P	Pg	01 04 16.1	-0.1
LXR1				S	Sg	01 04 18.1	0.0
LXRA	Lixouri, Kepha	0.10	76	P	Pg	01 04 16.7	+0.1
LXRA				S	Sg	01 04 18.4	+0.2
KEF4	Livadi, Kephal	0.12	47	P	Pg	01 04 17.1	+0.1
KEF4				S	Sg	01 04 19.3	+0.6
ARGA	Argostoli. Kep	0.13	89	P	Pg	01 04 17.2	+0.1
ARGA				S	Sg	01 04 19.4	+0.4
ARG2	Argostoli	0.14	88	P	Pg	01 04 17.4	+0.1
ARG2				S	Sg	01 04 19.4	+0.2
KEF2	Argostoli. Kep	0.14	94	P	Pg	01 04 17.5	+0.2
KEF2				S	Sg	01 04 19.5	+0.3
KEF1	Kardakata, Kep	0.16	51	P	Pg	01 04 17.8	+0.1
KEF1				S	Sg	01 04 20.4	+0.5
VLS	Valsamata	0.22	89	P	Pg	01 04 18.6	-0.2
VLS				S	Sg	01 04 21.8	+0.1
	5μm,0.3s						
VLS	Valsamata	0.22	89	P	Pg	01 04 18.6	-0.2
VLS				S	Sg	01 04 21.7	+0.1
VLS				AML	AML	01 04 22.0	
	comp=E,7995μm,0.1s						
VLS				AML	AML	01 04 22.1	
	comp=N,9148μm,0.2s						
VSK1	VASILIKIADES	0.31	41	P	Pg	01 04 20.5	+0.1
VSK1				S	Sg	01 04 24.8	+0.3
	comp=N,2μm,0.3s						
KONA	Konidatara, Ke	0.32	39	P	Pg	01 04 20.7	0.0
KONA				S	Sg	01 04 25.9	+0.9
VLMS	Volimes, Zakyn	0.41	137	P	Pg	01 04 22.4	+0.1
VLMS				S	Sg	01 04 28.2	+0.6
VLMS				AML	AML	01 04 30.3	
	comp=E,3939μm,0.2s						
VLMS				AML	AML	01 04 34.0	
	comp=N,3544μm,0.2s						
EVGI	Lefkada island	0.52	31	P	Pg	01 04 24.5	0.0
EVGI				S	Sg	01 04 32.3	+1.0
EVGI	Lefkada island	0.52	31	P	Pg	01 04 24.3	-0.2
EVGI				S	Sg	01 04 31.5	+0.2
MGNA	Meganis	0.61	38	P	Pg	01 04 25.9	-0.3
KRI1	kERI	0.65	142	P	Pg	01 04 26.6	-0.3
KRI1				S	Sg	01 04 36.5	+1.2
LKD2	Lefkada island	0.67	24	P	Pg	01 04 26.9	-0.4
LKD2				S	Sg	01 04 37.1	+1.0
	comp=N,145nm,0.2s						
LKD2	Lefkada island	0.67	24	P	Pg	01 04 26.9	-0.4
TSLK	Tsoukalades, L	0.70	23	P	Pg	01 04 27.8	-0.2
TSLK				S	Sb	01 04 38.5	-0.6
	comp=N,142nm,0.4s						
TSLK	Tsoukalades, L	0.70	23	P	Pg	01 04 27.7	-0.2
AST1	Astakos	0.71	59	P	Pg	01 04 28.1	0.0
AST1				S	Sg	01 04 38.5	+1.1
PVO	Paravola	1.05	65	P	Pg	01 04 34.2	-0.4
KLV	Kalavryta, Ach	1.46	95	P	Pn	01 04 41.1	-0.3

IDC 10 01:09:26.6±13.0, 7.57S×129.13E, h108km±151km, mb3.5/3, mb1 3.9/6, mb1mx3.6/26, mbtmp4.1/6, ML4.3/3, Error ellipse: s-maj=116.1km s-min=61.4km az=37.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.01	198	P	Pn	01 12 08.0	-0.1
	2.2nm,0.3s,baz=19,slow=16,SNR=26						
FITZ				S	Sn	01 13 59.5	-2.6
	1.6nm,0.3s,baz=79,slow=19,SNR=3.7						
WRA	Warramunga Arr	13.30	158	P	Pn	01 12 29.9	-1.3
	1.4nm,0.3s,baz=335,slow=13,SNR=49						
WRA				S	Sn	01 14 51.2	-6.5
	1.9nm,0.3s,baz=330,slow=22,SNR=9.8						
ASAR	Alice Springs	16.65	165	P	P	01 13 15.1	+1.0
	0.8nm,0.3s,baz=349,slow=12,SNR=24						
SONM	Songino Array	58.71	342	P	P	01 19 13.7	+0.6
	0.3nm,0.6s,baz=151,slow=7.9,SNR=4.0						
MKAR	Makanchi Array	68.23	327	P	P	01 20 15.9	+0.2
	0.5nm,0.4s,baz=118,slow=8.1,SNR=22						
ZALV	Zalesovo Beam	71.71	334	P	P	01 20 36.1	-0.7
	1.4nm,0.7s,baz=138,slow=5.2,SNR=7.8						

THE 10 01:32:20.2, 35.27N×22.91E, h13km±1km, ML2.8/6, Error ellipse: s-maj=2.0km s-min=0.9km az=98.0
ATH 10 01:32:20.9, 35.33N×23.10E, h29km±1km, ML2.9/6, Error ellipse: s-maj=3.3km s-min=1.0km az=52.0
ISK 10 01:32:21.7, 35.36N×23.13E, h51km±2km, ML3.7/5
ISC 10 01:32:21.5±1.4, 35.31N±0.05×23.07E±0.06, h22km±7km, n43, σ0.77/60, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.51	99	P	Pb	01 32 31.6	-0.2
KNDR				S	Sn	01 32 41.1	-0.5
	782nm,0.5s						
KNDR	Palaiochora Ch	0.51	99	PG	Pb	01 32 32.2	+0.4
KNDR				SG	Sn	01 32 40.7	-0.9
ANKY	Antikythira Is	0.59	19	P	Pb	01 32 32.9	-0.2
ANKY	Antikythira Is	0.59	19	P	Pb	01 32 32.8	-0.3
ANKY				S	Sb	01 32 41.1	0.0
ANKY				AML	AML	01 32 47.4	
	comp=N,1976μm,0.7s						
ANKY				AML	AML	01 32 49.3	
	comp=E,1806μm,0.4s						
RODP	Rodopos	0.62	66	P	Pn	01 32 34.2	-0.7
RODP				S	Sn	01 32 45.2	+1.0
	comp=E,328nm,0.4s						
RODP	Rodopos	0.62	66	PG	Pn	01 32 34.2	-0.7
RODP				SG	Sn	01 32 43.3	-0.9
IMMV	Iera Moni Meta	0.76	79	P	Pn	01 32 36.8	-0.1
IMMV				S	Sn	01 32 50.3	+2.6
	comp=E,1μm,0.6s						
IMMV	Iera Moni Meta	0.76	79	P	Pb	01 32 36.0	0.0
IMMV				S	Sb	01 32 45.7	-0.3
IMMV				AML	AML	01 32 51.7	
	comp=N,2374μm,0.7s						
IMMV				AML	AML	01 32 56.6	
	comp=E,2084μm,0.4s						
IMMV	Iera Moni Meta	0.76	79	PG	Pn	01 32 37.1	+0.2
IMMV				SG	Sn	01 32 46.6	-1.1
CHAN	Chania	0.82	75	P	Pn	01 32 38.1	+0.3
CHAN				S	Sn	01 32 52.0	+2.8
	comp=E,490nm,1.0s						
KTHA	Kythira Island	0.94	360	P	Pn	01 32 38.5	-1.0
KTHA				S	Sn	01 32 52.2	-0.1
	comp=E,528nm,0.7s						
KTHA	Kythira Island	0.94	360	P	Pn	01 32 38.8	-0.6
KTHA				S	Sn	01 32 52.3	+0.1
KTHA				AML	AML	01 32 54.8	
	comp=E,1588μm,0.5s						
KTHA				AML	AML	01 32 56.8	
	comp=N,647μm,0.7s						
KTHA	Kythira Island	0.94	360	PG	Pn	01 32 38.9	-0.6
KTHA				SG	Sb	01 32 51.2	0.0
KTHR	Kythira	0.95	357	P	Pn	01 32 38.5	-1.0
KTHR				S	Sn	01 32 52.9	+0.5
	comp=N,610nm,0.5s						
GVD	Gavdhos	0.96	119	P	Pn	01 32 39.3	-0.3
GVD	Gavdhos	0.96	119	P	Pn	01 32 39.4	-0.3
GVD				S	Sn	01 32 52.3	-0.4
GVD				AML	AML	01 33 04.5	
	comp=E,1261μm,0.5s						
GVD				AML	AML	01 33 05.4	
	comp=N,1529μm,0.5s						
GVD	Gavdhos	0.96	119	PG	Pb	01 32 39.5	+0.1
GVDS	Gavdos	0.96	119	P	Pn	01 32 38.9	-0.8
GVDS	Gavdos	0.96	119	PG	Pn	01 32 39.1	-0.6
GVDS				SG	Sn	01 32 51.9	-0.7
MNVA	Monemvasia	1.37	359	P	Pb	01 32 46.7	+0.2
VLI	Veliai	1.41	356	P	Pn	01 32 46.1	+0.3
VLI	Veliai	1.41	356	P	Pn	01 32 46.1	+0.3
VLI				S	Sb	01 33 05.7	+1.1
VLI				AML	AML	01 33 13.2	
	comp=N,515μm,0.5s						
VLI				AML	AML	01 33 19.4	
	comp=E,545μm,0.6s						
SIVA	Sivas	1.46	101	P	Pn	01 32 46.7	+0.2
SIVA	Sivas	1.46	101	P	Pn	01 32 46.6	+0.1
SIVA				S	Sb	01 33 06.1	0.0
SIVA				AML	AML	01 33 30.6	
	comp=E,1069μm,0.6s						
SIVA				AML	AML	01 33 31.2	
	comp=N,722μm,0.7s						
IDI	Anoyia	1.49	90	P	Pn	01 32 47.3	+0.3
IDI	Anoyia	1.49	90	PN	Pn	01 32 46.4	-0.6
HRKL	Herakleio	1.66	89	PN	Pn	01 32 48.7	-0.6
MHLA	Plaka, Milos I	1.80	37	P	Pb	01 32 52.5	-1.3
LAST	Lasithi	1.98	94	P	Pn	01 32 54.7	+0.9
LAST	Lasithi	1.98	94	P	Pn	01 32 54.7	+0.9
KRND	KRANIDI	2.07	2	P	Pn	01 32 55.2	+0.3
ITM	Ithomi	2.08	334	P	Pn	01 32 55.8	+0.7
ITM	Ithomi	2.08	334	PN	Pn	01 32 55.2	+0.1
NPS	Neapolis	2.08	91	P	Pn	01 32 55.8	+0.7
NPS	Neapolis	2.08	91	P	Pn	01 32 55.6	+0.5
SERI	Serifos	2.17	31	P	Pn	01 32 56.4	0.0
IOSP	Ios island	2.29	51	P	Pn	01 32 57.6	-0.3
ZKR	Zakros	2.59	93	P	Pn	01 33 03.1	+1.0
ZKR	Zakros	2.59	93	PN	Pn	01 33 01.9	-0.1
APE	Apeiranthos	2.65	48	P	Pn	01 33 03.4	+0.4
APE	Apeiranthos	2.65	48	PN	Pn	01 33 02.4	-0.6
KARP	Karpathos	3.35	85	PN	Pn	01 33 12.5	-0.1
AGG	Agios Georgios	3.75	351	PN	Pn	01 33 17.6	-0.5

SJA 10 01:47:03.3±1.1, 21.20S×68.55W, h145km±8km, ML3.7, MW3.6
IDC 10 01:47:04.3±0.8, 21.20S×68.18W, h124km±14km, mb3.6/1, mb1 3.4/5, mb1mx3.2/26, mbtmp3.9/5, Error ellipse: s-maj=34.4km s-min=10.1km az=102.0
GUC 10 01:47:04.7±0.7, 21.12S×68.69W, h131km±5km, ML3.7
ISC 10 01:47:03.9±0.9, 21.19S±0.04×68.59W±0.05, h143km±8km, n33, σ1.38/54, 4C-7D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.85	279	⇓iP	Pn	01 47 26.5	-0.3
PB01				iS	Sn	01 47 43.1	-1.1
PB01				IAML		01 47 45.1	
	comp=E,2μm,0.2s						
PB09	IPOC Station P	0.86	225	⇑iP	Pn	01 47 27.6	+0.6
PB09				eS	Sn	01 47 45.0	+0.5
PB09				IAML		01 47 46.4	
	comp=N,1μm,0.5s						
PB09	IPOC Station P	0.86	225	eP	Pn	01 47 27.7	+0.6
PB09				iS	Sn	01 47 44.9	+0.3
PB09				IAML		01 47 45.9	
	comp=Z,667nm,0.4s						
PB08	IPOC Station P	1.16	333	⇓iP	Pn	01 47 29.9	-0.1
PB08				eS	Sn	01 47 48.8	-0.9
PB07	IPOC Station P	1.32	246	⇑iP	Pn	01 47 31.7	+0.5
PB07				eS	Sn	01 47 51.9	-0.2
PB07				IAML		01 47 52.5	
	comp=N,2μm,0.3s						
PB03	IPOC Station P	1.38	231	⇑iP	Pn	01 47 32.4	+0.6
PB03				eS	Sn	01 47 53.1	0.0
PB03				IAML		01 47 54.2	
	comp=N,2μm,0.4s						
LVC	Limon Verde	1.45	192	eP	Pn	01 47 33.4	+0.6
LVC				iS	Sn	01 47 54.9	+0.1
LVC	Limon Verde	1.45	192	P	Pn	01 47 33.3	+0.6
	comp=N,104nm,0.3s,baz=21,slow=9.8,SNR=760						
LVC				S	Sn	01 47 54.9	+0.1
	comp=N,41nm,0.3s,baz=108,slow=22,SNR=26						
LVC	Limon Verde	1.45	192	⇑iP	Pn	01 47 33.3	+0.6
LVC				iS	Sn	01 47 55.1	+0.3
TA01	Diego Aracena	1.61	292	⇓iP	Pn	01 47 33.8	-0.2
TA01				eS	Sn	01 47 56.0	-1.1
TA01				IAML		01 47 58.3	
	comp=E,1μm,0.4s						
GO01	Chusmiza	1.61	339	⇓iP	Pn	01 47 34.5	-0.2
GO01				eS	Sn	01 47 57.3	-0.8
GO01				IAML		01 48 01.1	
	comp=E,1μm,0.1s						
PB11	IPOC Station P	1.73	325	⇓iP	Pn	01 47 35.1	-0.5
PB11				iS	Sn	01 47 58.8	-1.2
PB11				IAML		01 48 00.5	
	comp=E,1μm,0.3s						
PB06	IPOC Station P	1.77	211	⇑iP	Pn	01 47 36.8	+0.8
PB06				eS	Sn	01 48 01.3	+0.6
PB06				IAML		01 48 04.0	
	comp=E,529nm,0.2s						
PB06	IPOC Station P	1.77	211	iP	Pn	01 47 36.8	+0.8
PB06				IAML		01 47 37.7	
	comp=Z,630nm,0.3s						
PB06				iS	Sn	01 48 01.2	+0.5
PB04	IPOC Station P	1.84	231	eP	Pn	01 47 37.4	+0.5
PB04				eS	Sn	01 48 01.7	-0.6
PB04				IAML		01 48 03.6	
	comp=E,576nm,0.5s						
PB04	IPOC Station P	1.84	231	iP	Pn	01 47 37.5	+0.6
PB04				iS	Sn	01 48 02.2	0.0
PB04				IAML		01 48 04.6	
	comp=Z,369nm,0.1s						
PSGC	Pisagua	2.13	317	⇓iP	Pn	01 47 39.4	-1.0
PSGC				eS	Sn	01 48 06.4	-1.9
PSGC				IAML		01 48 08.3	
	comp=N,299nm,0.5s						
PB15	IPOC Station P	2.17	202	iP	Pn	01 47 41.7	+0.8
PB15				iS	Sn	01 48 10.4	+1.1
PB05	IPOC Station P	2.23	222	iP	Pn	01 47 42.1	+0.6
PB05				eS	Sn	01 48 10.2	-0.2
PB10	IPOC Station P	2.94	218	iP	Pn	01 47 50.6	+0.3
YJA	Yavi	3.03	110	iP	Pn	01 47 52.3	+0.5
YJA				iS	Sn	01 48 28.2	-0.5
PB14	IPOC Station P	3.81	206	iP	Pn	01 48 01.9	+0.1
AZAP	Zapla	4.45	134	iP	Pn	01 48 10.1	+0.1
LPAZ	La Paz	4.89	5	P	Pn	01 48 17.4	+1.0
	comp=N,1.9nm,0.3s,baz=179,slow=5.8,SNR=30						
LPAZ				S	Sn	01 49 12.6	-0.1
	comp=N,0.6nm,0.3s,baz=96,slow=19,SNR=2.3						
LPAZ	La Paz	4.89	5	⇓iP	Pn	01 48 17.4	+1.0
GO03	Copiap	6.55	193	iP	Pn	01 48 36.2	-1.8
SIV	San Ignacio	8.80	55	P	Pn	01 49 04.2	-4.0
	comp=N,3.9nm,0.3s,baz=259,slow=12,SNR=76						
ACCO	Cerro Coronel	9.37	182	iP	Pn	01 49 15.5	-0.4
CFA	Coronel Fontan	10.38	178	P	Pn	01 49 26.7	-2.4
	comp=N,0.2nm,0.3s,baz=345,slow=14,SNR=5.6						
CFA				S	Sn	01 51 16.6	-7.3
	comp=N,0.5nm,0.3s,baz=230,slow=17,SNR=3.9						
PLCA	Paso Flores	19.56	184	P	P	01 51 22.5	+1.8
	comp=N,0.1nm,0.3s,baz=34,slow=11,SNR=4.7						
BDFB	Brasilia	20.28	78	P	P	01 51 26.6	-2.1
	comp=N,0.3nm,0.3s,baz=254,slow=7.4,SNR=3.5						
TORD	Torodi Ar. Bea	76.97	70	P	P	01 58 41.7	+0.4
	comp=N,0.7nm,0.5s,baz=253,slow=5.3,SNR=11						
MKAR	Makanchi Array	145.21	36	PKP	PKPbc	02 06 26.7	+2.2
	comp=N,0.7nm,0.7s,baz=323,slow=3.5,SNR=7.3						

IDC 10 01:50:18.9±1.8, 50.74N×130.37W, h0km, mb3.5/2, mb1 3.9/5, mb1mx3.3/34, mbtmp3.7/5, ML3.9/3, MS2.9/7, Ms1 2.9/7, ms1mx2.8/36, Error ellipse: s-maj=23.6km s-min=14.6km az=57.0
PGC 10 01:50:19.4±0.8, 50.56N×130.36W, h10km, MLSn3.2/35, Mw3.8/35, 208km west of Pt. Hardy, Bc Vancouver Island, Canada Region
ISC 10 01:50:19.9±1.0, 50.59N±0.06×130.32W±0.05, h10km, n86, σ1.92/93, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	Holberg	1.40	87	Pn	Pn	01 50 43.2	-2.3
HOLB				Sn	Sn	01 50 59.9	-4.0
BPBC	Brooks Peninsu	1.69	104	Pn	Pn	01 50 46.9	-2.7
PACB	Port Alice, BC	1.81	94	Pn	Pn	01 50 48.9	-2.3
PHC	Port Hardy	1.84	85	Pn	Pn	01 50 49.7	-1.9
PHC				Sn	Sn	01 51 10.9	-4.0
MAYB	Maynard	2.02	94	Pn	Pn	01 50 52.1	-2.1
HG3B	Hotspring	2.11	341	Pn	Pn	01 50 53.0	-2.3
HG3B				Sn	Sn	01 51 17.5	-4.0
BBB	Bella Bella	2.11	40	Pn	Pn	01 50 53.9	-1.4
	12nm,0.3s,baz=229,slow=6.4,SNR=373						
BBB				Sn	Sn	01 51 18.2	-3.4
	52nm,0.3s,baz=60,slow=16,SNR=15						
BBB				LR	LR	01 51 20.1	
	comp=Z,56nm,18.2s,baz=149,slow=30						
BBB	Bella Bella	2.11	40	Pn	Pn	01 50 53.8	-1.4
BBB				Sn	Sn	01 51 18.2	-3.4
EDB	Eliza Dome	2.18	108	Pn	Pn	01 50 53.8	-2.4
BNB	Barry Inlet	2.18	336	Pn	Pn	01 50 53.7	-2.5
BNB				Sn	Sn	01 51 19.8	-3.5
TLCB	Telegraph Cove	2.22	90	Pn	Pn	01 50 55.3	-1.5
TLCB				Sn	Sn	01 51 20.5	-3.7
ETB	Estevan Point	2.73	115	Pn	Pn	01 51 01.4	-2.3
MOBC	Moresby Island	2.75	339	Pn	Pn	01 51 02.0	-2.2
MOBC				Sn	Sn	01 51 34.4	-3.1
BCBC	Bella Coola	2.85	50	Pn	Pn	01 51 05.1	-0.3
BCBC				Sn	Sn	01 51 36.8	-3.1
GDR	Gold River	2.87	105	Pn	Pn	01 51 03.7	-2.0
DIB	Dawson Inlet,	2.94	334	Pn	Pn	01 51 04.7	-1.9
DIB				Sn	Sn	01 51 38.3	-3.6
H02S1	DAWSON INLET T	2.94	334	Pn	Pn	01 51 04.8	-1.9
H02S1				Sn	Sn	01 51 39.0	-2.9
	SNR=322						
NC89	ODP889	2.96	129	Pn	Pn	01 51 04.7	-2.1
H02N1	VAN INLET T-PH	3.00	334	Pn	Pn	01 51 05.7	-1.9
H02N1				Sn	Sn	01 51 40.7	-2.9
VIB	Van Inlet	3.00	334	Pn	Pn	01 51 05.4	-2.2
VIB				Sn	Sn	01 51 40.0	-3.6
SPLB	Strathcona Par	3.08	101	Pn	Pn	01 51 07.2	-1.4
TOFB	Tofino	3.20	115	Pn	Pn	01 51 08.4	-1.8
CBB	Campbell River	3.23	98	Pn	Pn	01 51 09.5	-1.1
BTB	Buttle Lake	3.29	108	Pn	Pn	01 51 09.8	-1.9
OZB	Mount Ozzard	3.53	116	Pn	Pn	01 51 12.9	-1.9
RUBB	Prince Rupert	3.74	1	Pn	Pn	01 51 17.1	-0.6
RUBB				Sn	Sn	01 51 59.4	-2.3
B928	Bamfield	3.80	116	Pn	Pn	01 51 17.9	-0.5
B927	Port Alberni	3.82	109	Pn	Pn	01 51 17.1	-1.6
TXB	Texada	3.89	101	Pn	Pn	01 51 18.4	-1.3
MGB	Mount Grey	3.98	111	Pn	Pn	01 51 19.1	-2.0
SHB	Sechelt	4.27	101	Pn	Pn	01 51 23.8	-1.2
YOUB	Youbou, Lake C	4.28	111	Pn	Pn	01 51 23.6	-1.5
NLLB	Nanaimo Lost L	4.31	106	Pn	Pn	01 51 25.0	-0.5
OCP	Olym-Cheeka Pk	4.37	120	Pn	Pn	01 51 26.5	+0.2
UBRB	Upper Baezaeko	4.51	57	Pn	Pn	01 51 29.2	+0.9
UBRB				Sn	Sn	01 52 19.0	-1.8
LZB	Mount Lazard	4.67	113	Pn	Pn	01 51 30.3	-0.1
WPB	Watts Point	4.67	99	Pn	Pn	01 51 30.0	-0.4
BIB	Bowen Island	4.68	102	Pn	Pn	01 51 29.9	-0.6
GOBB	Galiano Island	4.71	108	Pn	Pn	01 51 31.4	+0.5
OBC	Olympics--Boni	4.82	120	Pn	Pn	01 51 32.7	+0.2
SOKB	Sooke	4.86	114	Pn	Pn	01 51 33.2	+0.2
B010	North Saanich	4.87	111	Pn	Pn	01 51 33.4	+0.3
PGC	Sidney	4.87	111	Pn	Pn	01 51 33.1	-0.1
B009	North Saanich	4.87	111	Pn	Pn	01 51 33.4	+0.2
SNB	Saturna Island	4.98	109	Pn	Pn	01 51 35.4	+0.6
HNBB	Haney	5.17	102	Pn	Pn	01 51 37.7	+0.3
MCW	Mount Constitu	5.23	109	Pn	Pn	01 51 38.8	+0.6
FSB	Fort Saint Jam	5.34	41	Pn	Pn	01 51 39.9	+0.3
LLLB	Lillooet	5.38	87	Pn	Pn	01 51 39.9	-0.3
BLN	Blyn Mountain	5.46	115	Pn	Pn	01 51 41.7	+0.4
VDB	Vedder Mountai	5.55	103	Pn	Pn	01 51 43.3	+0.8
WISH	Wishkah	5.55	126	Pn	Pn	01 51 43.1	+0.6
HDW	Hoodsport	5.61	119	Pn	Pn	01 51 43.9	+0.6
MBW	Mount Baker	5.76	105	Pn	Pn	01 51 46.1	+0.6
CMW	Cultus Mountai	5.76	109	Pn	Pn	01 51 46.5	+0.9
HOPB	Hope	5.87	98	Pn	Pn	01 51 46.8	0.0
JCW	Jim Creek	5.98	110	Pn	Pn	01 51 48.1	-0.3
B06A	Marblemount	6.11	106	Pn	Pn	01 51 50.5	+0.3
GPW	Glacier Peak	6.49	109	Pn	Pn	01 51 56.3	+0.7
FMW	Mount Fremont	6.79	119	Pn	Pn	01 52 00.8	+1.1
LON	Longmire	6.82	121	Pn	Pn	01 52 01.2	+1.2
LTY	Liberty	7.18	114	Pn	Pn	01 52 05.7	+0.7
BMBC	Bull Mountain	7.34	39	Pn	Pn	01 52 08.4	+1.2
BMBC				Sn	Sn	01 53 29.6	-0.9
B08A	Colville Reser	7.50	103	Pn	Pn	01 52 09.9	+0.5
MNB	Mounoet Dainar	7.64	73	Pn	Pn	01 52 12.4	+1.0
NBC4	NorthernBC 4	7.73	45	Pn	Pn	01 52 13.6	+1.2
SLEB	Sale Mountain	7.73	81	Pn	Pn	01 52 13.1	+0.4
NBC5	NorthernBC 5	8.27	30	Pn	Pn	01 52 20.9	+1.0
NEW	Newport	8.91	100	Pn	Pn	01 52 29.2	+0.5
	0.5nm,0.3s,baz=301,slow=13,SNR=8.9						
NEW				LR	LR	01 55 52.5	
	comp=Z,93nm,19.8s,baz=315,slow=37						
NBC6	NorthernBC 6	9.55	30	Pn	Pn	01 52 38.2	+0.9
WHY	Whitehorse	10.41	347	Pn	Pn	01 52 50.1	+0.8
YKA	Yellowknife Ar	14.69	30	Pn	Pn	01 53 45.9	-1.6
	0.2nm,0.3s,baz=223,slow=12,SNR=12						
KDAK	Kodiak Island	14.84	308	LR	LR	01 58 10.5	
	comp=Z,38nm,20.2s,baz=123,slow=32						
PDAR	Pinedale Array	16.22	111	Pn	P	01 54 09.9	-1.2
	0.1nm,0.3s,baz=316,slow=12,SNR=13						
PDAR				LR	LR	02 01 14.1	
	comp=Z,37nm,19.3s,baz=20,slow=40						
ILAR	Eielson Array	16.66	335	Pn	P	01 54 19.7	+4.1
	0.0nm,0.3s,baz=145,slow=10,SNR=12						
INK	Inuvik	17.84	356	P	P	01 54 32.0	+3.4
	0.0nm,0.3s,baz=170,slow=8.1,SNR=3.0						
INK				LR	LR	02 01 22.0	
	comp=Z,43nm,19.1s,baz=206,slow=38						
ULM	Lac du Bonnet	21.84	77	P	P	01 55 12.0	-0.2
	1.0nm,0.4s,baz=286,slow=11,SNR=4.4						
ANMO	Albuquerque	23.33	123	LR	LR	02 04 16.6	
	comp=Z,48nm,20.6s,baz=316,slow=36						
TXAR	Lajitas Array	29.19	127	P	P	01 56 24.0	+2.4
	0.6nm,1.0s,baz=325,slow=6.1,SNR=3.8						
H11N2	WAKE ISLAND Hy	57.78	262	T	T	03 02 37.3	
	baz=41,slow=76,SNR=388						
H11N3	WAKE ISLAND Hy	57.79	262	T	T	03 02 38.9	
	baz=41,slow=76,SNR=372						
H11N1	WAKE ISLAND Hy	57.79	262	T	T	03 02 38.5	
	baz=41,slow=76,SNR=227						
H11S1	WAKE ISLAND Hy	58.81	261	T	T	03 03 57.5	
	baz=41,slow=76,SNR=23						
H11S2	WAKE ISLAND Hy	58.82	261	T	T	03 03 58.4	
	baz=41,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	58.83	261	T	T	03 03 59.0	
	baz=41,slow=76,SNR=18						
CMAR	Chiang Mai Arr	98.76	313	LR	LR	02 50 28.1	
	comp=Z,13nm,18.5s,baz=340,slow=37						

TRN 10 02:01:25.9, 17.86N×60.49W, h55km, MD3.9, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	Willy Bob	1.25	261	eP	Pn	02 01 47.8	+0.7
ANWB				eS	Sn	02 02 04.6	+1.7
BPA	Boggy Peak	1.54	238	eP	Pn	02 01 52.9	+1.9
BPA				eS	Sn	02 02 11.8	+1.8
ABD	La Joyeuse, An	1.68	215	eP	Pn	02 01 53.9	+1.0
MLYT	Lee's Yard	1.98	235	eP	Pn	02 01 59.3	+2.2
MLYT				eS	Sn	02 02 23.8	+2.9
CBE	Ff, Capester	2.08	211	eP	Pn	02 02 00.5	+2.1
NVRH	Round Hill, Ne	2.12	252	eP	Pn	02 02 01.6	+2.6
NVRH				eS	Sn	02 02 26.4	+2.1
NVBH	Bath Hotel, Ne	2.16	250	eP	Pn	02 02 01.3	+1.8
NVBH				eS	Sn	02 02 26.8	+1.6
NVDO	Nevis, Disaste	2.16	250	eP	Pn	02 02 01.0	+1.5
NVDO				eS	Sn	02 02 27.0	+1.8
SKI	Saint Kitts	2.21	257	eP	Pn	02 02 02.0	+1.8
SKI				eS	Sn	02 02 28.6	+2.2
SKOC	St. Kitts, UWI	2.21	256	eP	Pn	02 02 02.0	+1.8
SKOC				eS	Sn	02 02 28.0	+1.6
TDBA	Terre de Bas,	2.28	209	eP	Pn	02 02 03.3	+2.1
SEUS	St. Eustatius	2.41	262	eP	Pn	02 02 04.4	+1.5

SEUS eS Sn 02 02 32.8 +1.7
DWS Wesley 2.41 199 eP Pn 02 02 04.7 +1.8
DWS eS Sn 02 02 32.5 +1.2
MDPO Dominica; Chan 2.45 202 eP Pn 02 02 05.4 +1.9
MDPO eS Sn 02 02 34.1 +1.9
SMRT St. Maarten 2.47 275 eP Pn 02 02 05.4 +1.7
SMRT eS Sn 02 02 34.4 +1.7
SABA Saba 2.64 265 eP Pn 02 02 07.1 +1.1
SABA eS Sn 02 02 37.5 +0.7
MDN Morne-Daniel 2.67 199 eP Pn 02 02 08.9 +2.4
MDN eS Sn 02 02 39.7 +2.0
DBCT Belle View Cho 2.70 198 eP Pn 02 02 08.6 +1.6
DBCT eS Sn 02 02 40.0 +1.5
DPMT Pointe Michel 2.72 198 eP Pn 02 02 08.8 +1.6
DPMT eS Sn 02 02 40.4 +1.5
CXM Morne La Croix 3.10 192 eP Pn 02 02 14.2 +1.7
PCM Pelee Case Pet 3.11 193 eP Pn 02 02 13.6 +1.1
GBMF Grand Be 3.12 192 eP Pn 02 02 13.7 +1.0
PML Morne Lenard 3.13 192 eP Pn 02 02 14.1 +1.2
FDF Fort de France 3.17 192 eP Pn 02 02 14.6 +1.2
FDF eS Sn 02 02 50.5 +0.4
LPMF Morne Lapointe 3.30 188 eP Pn 02 02 16.3 +1.2
MVM Montagne Vaucl 3.31 187 eP Pn 02 02 17.0 +1.8
ZAM Aeronautique 3.31 189 eP Pn 02 02 16.5 +1.3
TRMF Trois Ilets 3.35 189 eP Pn 02 02 17.7 +1.9
BIM Bigot 3.37 190 eP Pn 02 02 18.2 +2.1
MPOM Morne Pois Mar 3.42 186 eP Pn 02 02 18.2 +1.6
SLBI Saint Lucia, B 3.84 187 eP Pn 02 02 24.8 +2.2
SLBI eS Sn 02 03 06.7 +0.2
SLB Belfond 4.05 188 eP Pn 02 02 27.9 +2.5
SLB eS Sn 02 03 12.2 +0.7
MCLT Moule a Chique 4.15 186 eP Pn 02 02 29.4 +2.6
MCLT eS Sn 02 03 13.9 -0.1
SFAN Fancy Village 4.50 189 eP Pn 02 02 33.6 +2.1
SFAN Fancy Village 4.50 189 eS Sn 02 03 23.2 +0.5
SVV Soufriere Volc 4.57 189 eP Pn 02 02 34.9 +2.4
SVV Soufriere Volc 4.57 189 eS Sn 02 03 24.7 +0.3
SVCV St. Vincent, C 4.61 188 eP Pn 02 02 35.1 +2.1
SVCV St. Vincent, C 4.61 188 eS Sn 02 03 25.6 +0.3
SVB Belmont 4.62 189 eP Pn 02 02 35.0 +1.8
SVB Belmont 4.62 189 eS Sn 02 03 25.6 0.0
BBGH Gun Hill 4.78 169 eP Pn 02 02 37.6 +2.2
BBGH Gun Hill 4.78 169 eS Sn 02 03 30.1 +0.7
GRSS Sisters 5.64 191 eP Pn 02 02 49.6 +2.5
GRSS Sisters 5.64 191 eS Sn 02 03 49.8 -0.8
GRHS Sauteurs 5.71 191 eP Pn 02 02 50.6 +2.4
GRHS Sauteurs 5.71 191 eS Sn 02 03 51.9 -0.6
GRGR Grenville 5.81 191 eP Pn 02 02 51.0 +1.6
GRGR Grenville 5.81 191 eS Sn 02 03 54.0 -0.8
TOSP Speyside 6.52 180 e Pn 02 03 02.2 +2.9

IDC 10 02:26:35.4±1.4, 6.°01N×126.°01E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.6/60, mbtmp3.9/7, Error ellipse: s-maj=122.1km s-min=16.3km az=68.0
MAN 10 02:26:37.2, 6.°03N×126.°50E, h18km, MS3.8
ISC 10 02:26:40.0±1.4, 6.°10N±0.°07×126.°32E±0.°08, h33km±4km, n20, σ1.°01/20, mb3.7/7, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.61	270	eP	Pb	02 26 52.0	-0.4
DDMP				eS	Sn	02 27 01.7	+0.7
MATI	Mati	0.84	355	eP	Pn	02 26 54.6	-0.9
MATI				eS	Sb	02 27 07.1	-0.2
DMPH	Davao City--Mi	1.27	320	⇓eP	Pb	02 27 04.4	+1.1
DMPH				eS	Sb	02 27 21.0	+1.6
KCP	Kidapawan	1.52	306	⇑eP	Pb	02 27 05.2	+0.3
KCP				i S	Sn	02 27 22.9	-0.7
SKMP	Bagumbayan, Su	1.82	283	eP	Pb	02 27 11.1	-1.5
BUKP	Musuan	2.16	325	eP	Pn	02 27 14.7	+0.9
BUKP				eS	Sb	02 27 44.1	-0.9
FITZ	Fitzroy Crossi	24.06	182	P	P	02 31 53.5	+1.2
	21nm,1.3s,baz=0.0,slow=9.1,SNR=5.0						
WRA	Warramunga Arr	27.06	163	P	P	02 32 18.7	-0.9
	1.1nm,0.5s,baz=337,slow=10,SNR=17						
ASAR	Alice Springs	30.50	166	P	P	02 32 49.4	-0.8
	0.5nm,0.5s,baz=341,slow=6.6,SNR=9.5						
STKA	Stephens Creek	40.48	160	P	P	02 34 17.1	+1.4
	2.8nm,1.0s,baz=315,slow=6.8,SNR=3.7						
H11S3	WAKE ISLAND Hy	41.21	69	T	T	03 18 06.2	
	baz=257,slow=75,SNR=71						
H11S1	WAKE ISLAND Hy	41.22	69	T	T	03 18 06.1	
	baz=257,slow=75,SNR=52						
H11S2	WAKE ISLAND Hy	41.22	69	T	T	03 18 06.4	
	baz=257,slow=75,SNR=89						
H11N1	WAKE ISLAND Hy	41.66	67	T	T	03 18 44.9	
	baz=264,SNR=4.2						
H11N2	WAKE ISLAND Hy	41.67	67	T	T	03 18 47.6	
	baz=264						
H11N3	WAKE ISLAND Hy	41.68	67	T	T	03 18 47.7	
	baz=264						
MKAR	Makanchi Array	55.39	325	P	P	02 36 10.4	-0.7
	0.5nm,0.7s,baz=129,slow=7.6,SNR=6.2						
MKAR				PcP	PcP	02 37 10.5	-0.7
	0.5nm,0.6s,baz=125,slow=2.9,SNR=4.7						
KURBB	Kurchatov Arra	59.54	327	P	P	02 36 40.4	+0.3
	0.4nm,0.6s,baz=124,slow=6.3,SNR=9.5						
BVAR	Borovoye Array	65.13	327	P	P	02 37 17.8	+0.3
	0.7nm,0.7s,baz=134,slow=6.4,SNR=5.3						
TORD	Torodi Ar. Bea	121.78	289	PKP	PKPdf	02 45 30.9	-0.7
	0.3nm,0.6s,baz=17,slow=1.9,SNR=4.4						

NIC 10 02:31:08.2±0.0, 36.°16N×27.°08E, h11km±1km, Ml3.7/3
ISK 10 02:31:08.2, 36.°16N×27.°08E, h12km, MS3.5/26
ATH 10 02:31:08.3, 36.°16N×27.°10E, h29km±1km, ML3.5/9, Error ellipse: s-maj=2.2km s-min=0.8km az=90.0
DDA 10 02:31:08.1, 36.°07N×27.°13E, h15km±1km, MW3.8
THE 10 02:31:09.2, 36.°15N×27.°11E, h6km±1km, ML3.4/17, Error ellipse: s-maj=1.9km s-min=0.7km az=81.0
IDC 10 02:31:11.3±5.3, 36.°03N×27.°17E, h31km±45km, mb3.6/4, mb1 3.4/8, mb1mx3.2/55, mbtmp3.5/8, ML3.2/4, MS2.6/4, Ms1 2.6/4, ms1mx2.4/37, Error ellipse: s-maj=30.6km s-min=15.1km az=159.0
ISC 10 02:31:08.8±1.0, 36.°15N±0.°02×27.°11E±0.°02, h17km±7km, n124, σ1.°26/176, mb3.7/4, 8C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NISR	Nisiros	0.47	2	P	Pg	02 31 18.0	-0.1
NISR				S	Sb	02 31 25.3	+0.2
	5μm,0.2s						
NISR	Nisiros	0.47	2	P	Pb	02 31 18.2	-0.3
NISR				S	Sb	02 31 25.7	+0.6
NISR				AML	AML	02 31 29.5	
	comp=E,11760μm,0.2s						
NISR				AML	AML	02 31 29.7	
	comp=N,6543μm,0.2s						
KARP	Karpathos	0.60	176	P	Pb	02 31 20.7	-0.1
KARP				S	Sb	02 31 29.3	+0.3
	comp=N,8μm,0.3s						
KARP	Karpathos	0.60	176	P	Pb	02 31 20.7	-0.1
KARP				S	Sb	02 31 29.5	+0.5
KARP				AML	AML	02 31 33.1	
	comp=E,21493μm,0.3s						
KARP				AML	AML	02 31 33.3	
	comp=N,10760μm,0.3s						
KARP	Karpathos	0.60	176	PG	Pb	02 31 20.9	+0.1
KARP				SG	Sb	02 31 29.6	+0.6
KARP	Karpathos	0.60	176	⇑P	Pb	02 31 20.7	-0.1
KARP				S	Sb	02 31 29.4	+0.3
KARP				AML	AML	02 31 32.6	
	comp=N,21nm,0.3s						
KARP				AML	AML	02 31 32.6	
	comp=N,21nm,0.3s						
KARP				AML	AML	02 31 32.8	
	comp=N,10nm,0.3s						
KARP				AML	AML	02 31 32.8	
	comp=N,10nm,0.3s						
KOSK	Kos Island	0.61	350	P	Pb	02 31 21.4	+0.3
KOSK				S	Sb	02 31 30.4	+1.0
	comp=N,3μm,0.4s						
KOSK	Kos Island	0.61	350	PG	Pg	02 31 20.6	-0.3
KOSK				SG	Sg	02 31 29.2	-0.2
DAT	Datca	0.69	33	PG	Pb	02 31 22.2	-0.3
DAT				SG	Sb	02 31 32.5	+0.7
DAT	Datca	0.69	33	i P	Pg	02 31 22.0	-0.4
DAT				i S	Sn	02 31 33.2	-1.2
DAT				IAML		02 31 36.0	
	comp=E,576nm,0.5s						
DAT				IAML		02 31 37.0	
	comp=N,758nm,0.3s						
ARG	Arkhangelos	0.82	85	P	Pb	02 31 24.5	-0.1
ARG				S	Sn	02 31 36.9	-0.5
	comp=N,6μm,0.3s						
ARG	Arkhangelos	0.82	85	P	Pn	02 31 25.1	-0.6
ARG				S	Sn	02 31 36.4	-1.0
ARG				AML	AML	02 31 39.0	
	comp=N,7241μm,0.3s						
ARG				AML	AML	02 31 39.8	
	comp=E,16740μm,0.3s						
ARG	Arkhangelos	0.82	85	PG	Pg	02 31 24.9	+0.1
ARG				SG	Sn	02 31 37.3	-0.1
ARG	Arkhangelos	0.82	85	⇑P	Pb	02 31 24.6	-0.1
ARG				S	Sn	02 31 37.0	-0.5
BODT	Bodrum	0.93	10	P	Pb	02 31 26.1	-0.4
BODT				S	Sn	02 31 39.7	-0.4
BODT	Bodrum	0.93	10	PG	Pn	02 31 27.2	+0.1
BODT				SG	Sn	02 31 39.7	-0.4
BDRM	Kayabasi	0.96	16	i P	Pn	02 31 27.7	+0.2
BDRM				IAML		02 31 45.0	
	comp=E,428nm,0.9s						
MRSB	Marmaris-Mugla	1.04	57	PG	Pg	02 31 29.3	+0.3
AMGA	Amorgos Island	1.20	305	P	Pn	02 31 30.2	-0.6
AMGA				S	Sg	02 31 48.1	+0.6
	comp=E,2μm,0.5s						
AMGA	Amorgos Island	1.20	305	P	Pn	02 31 30.4	-0.3
AMGA				S	Sb	02 31 46.1	0.0
AMGA				AML	AML	02 31 51.4	
	comp=N,3282μm,0.4s						
AMGA				AML	AML	02 31 52.0	
	comp=E,4653μm,0.6s						
STIA	Sitia Lasithi	1.26	222	P	Pb	02 31 32.0	0.0
STIA				S	Sg	02 31 49.1	-0.3
ZKR	Zakros	1.26	216	P	Pg	02 31 33.0	-0.1
ZKR				S	Sg	02 31 49.3	-0.2
	comp=E,2μm,0.5s						
ZKR	Zakros	1.26	216	P	Pb	02 31 32.4	+0.4
ZKR				S	Sg	02 31 49.3	-0.2
ZKR				AML	AML	02 31 53.6	
	comp=N,2445μm,0.5s						
ZKR				AML	AML	02 31 53.7	
	comp=E,5045μm,0.5s						
ZKR	Zakros	1.26	216	PN	Pb	02 31 32.1	0.0
ZKR				SN	Sg	02 31 49.5	0.0
ZKR	Zakros	1.26	216	⇑P	Pn	02 31 31.3	-0.4
ZKR				S	Sg	02 31 49.6	+0.1
ZKR				AML	AML	02 31 53.2	
	comp=E,2.5nm,0.6s						
ZKR				AML	AML	02 31 53.2	
	comp=E,2.5nm,0.6s						
ZKR				AML	AML	02 31 53.3	
	comp=E,5.0nm,0.5s						
ZKR				AML	AML	02 31 53.3	
	comp=E,5.0nm,0.5s						
SANT	Santorini	1.35	280	P	Pn	02 31 32.9	0.0
SANT				S	Sg	02 31 52.5	0.0
	comp=E,2μm,0.6s						
SANT	Santorini	1.35	280	P	Pn	02 31 33.0	0.0
SANT				S	Sb	02 31 51.3	+0.5
SANT				AML	AML	02 31 55.5	
	comp=E,5850μm,0.6s						
SANT				AML	AML	02 31 56.4	
	comp=N,3351μm,0.6s						
SANT	Santorini	1.35	280	PN	Pb	02 31 33.2	-0.5
SANT				SN	Sb	02 31 51.3	+0.5
YER	Yerkesik	1.36	43	P	Pb	02 31 34.0	+0.1
YER				S	Sb	02 31 51.7	+0.6
YER	Yerkesik	1.36	43	PN	Pb	02 31 33.8	-0.1
YER				SN	Sg	02 31 52.6	-0.3
SAP2K	Karterados	1.37	282	P	Pb	02 31 33.5	-0.5
SAP2K				S	Sg	02 31 52.6	-0.5
	comp=N,10μm,0.7s						
SAP2K	Karterados	1.37	282	P	Pn	02 31 33.3	+0.2
THT1	Athinios (Pele	1.38	280	P	Pn	02 31 33.3	+0.1
THR7	Fira-Santorini	1.39	282	P	Pg	02 31 34.9	-0.6
THT2	Imerovigli	1.39	282	P	Pn	02 31 33.5	0.0
THT2				S	Sb	02 31 51.7	-0.2
	comp=N,2μm,0.6s						
THT2	Imerovigli	1.39	282	PN	Pn	02 31 33.7	+0.2
THR6	Thira Island,	1.40	279	P	Pn	02 31 33.6	+0.1
THR6	Thira Island,	1.40	279	P	Pn	02 31 33.7	+0.2
SAP1	Santorini-Akro	1.40	279	P	Pn	02 31 33.8	+0.3
SAP1				S	Sg	02 31 54.3	+0.2
	comp=N,10μm,0.6s						
SAP1	Santorini-Akro	1.40	279	P	Pn	02 31 33.9	+0.3
TURN	Turunc	1.40	58	PN	Pn	02 31 30.1	-3.5
TURN				SN	Sn	02 31 46.2	-5.5
TURN	Turunc	1.40	58	i P	Pn	02 31 29.6	-4.0
TURN				i S	Sn	02 31 46.2	-5.5
TURN				IAML		02 31 47.0	
	comp=E,461nm,0.6s						
TURN				IAML		02 31 49.0	
	comp=N,637nm,0.3s						
THR3	Thira Island,	1.41	281	P	Pn	02 31 33.7	+0.1
THR3	Thira Island,	1.41	281	P	Pn	02 31 33.7	+0.1
DALY	Dalyan (Mula)	1.41	61	PN	Pb	02 31 34.6	-0.1
DALY	Dalyan (Mula)	1.41	61	i P	Pg	02 31 35.2	-0.8
DALY				IAML		02 32 02.0	
	comp=N,386nm,0.8s						
SAP3	Santorini-Thir	1.46	282	P	Pb	02 31 35.5	+0.1
NPS	Neapolis	1.50	235	P	Pn	02 31 35.4	+0.4
NPS				S	Sn	02 31 54.2	0.0
	comp=N,1μm,0.4s						
NPS	Neapolis	1.50	235	P	Pn	02 31 35.3	+0.3
NPS				S	Sn	02 31 54.2	0.0
NPS				AML	AML	02 31 59.2	
	comp=E,3395μm,0.4s						
NPS				AML	AML	02 31 59.3	
	comp=N,2312μm,0.3s						
GCAM	G?zelcaml?	1.55	4	PN	Pb	02 31 36.8	-0.3
GCAM	G?zelcaml?	1.55	4	i P	Pg	02 31 38.9	+0.2
GCAM				i S	Sg	02 32 03.3	+4.4
APE	Apeiranthos	1.57	306	P	Pn	02 31 36.1	+0.2
APE				S	Sb	02 31 57.2	+0.2
	comp=N,260nm,0.3s						
APE	Apeiranthos	1.57	306	P	Pn	02 31 35.8	-0.1
APE	Apeiranthos	1.57	306	PN	Pn	02 31 36.1	+0.2
APE	Apeiranthos	1.57	306	⇑P	Pn	02 31 35.6	-0.4
SMG	Samos	1.57	352	P	Pn	02 31 35.7	-0.3
SMG				S	Sn	02 31 56.2	+0.2
	comp=N,415nm,0.3s						
SMG	Samos	1.57	352	P	Pn	02 31 35.5	-0.5
IOSP	Ios island	1.58	292	P	Pn	02 31 35.8	-0.2
IOSP				S	Sb	02 31 56.9	-0.3
	comp=N,1μm,0.7s						
IOSP	Ios island	1.58	292	P	Pn	02 31 35.8	-0.2
IOSP				S	Sb	02 31 56.6	-0.5
IOSP				AML	AML	02 32 01.8	
	comp=N,2411μm,0.8s						
IOSP				AML	AML	02 32 04.8	
	comp=E,1983μm,0.6s						
FRMA	Ierapetra Chan	1.59	225	P	Pb	02 31 36.9	-0.8
FRMA				S	Sn	02 31 55.0	-1.3
	comp=E,648nm,0.4s						
AYDN	Tasoluk	1.63	22	i P	Pg	02 31 40.7	+0.5
LAST	Lasithi	1.65	234	P	Pn	02 31 37.6	+0.5
LAST				S	Sn	02 31 57.4	-0.6
	comp=E,682nm,0.6s						
LAST	Lasithi	1.65	234	P	Pn	02 31 37.5	+0.5
LAST				S	Sn	02 31 58.0	0.0
LAST				AML	AML	02 32 04.6	
	comp=N,1432μm,0.5s						
LAST				AML	AML	02 32 08.0	
	comp=E,1332μm,0.7s						
FETY	Fethiye	1.67	72	P	Pb	02 31 38.4	-0.6
FETY				S	Sb	02 32 00.4	+0.7
FETY	Fethiye	1.67	72	PN	Pb	02 31 38.6	-0.4
FETY	Fethiye	1.67	72	i P	Pb	02 31 39.6	+0.6
FETY				i S	Sg	02 32 02.1	-0.4
FETY				IAML		02 32 07.0	
	comp=N,198nm,0.9s						
HRKL	Herakleio	1.83	244	P	Pn	02 31 40.0	+0.5
HRKL	Herakleio	1.83	244	PN	Pn	02 31 40.0	+0.5
KSTL	Kastelli Herak	1.86	244	P	Pn	02 31 39.9	0.0
KSTL				S	Sn	02 32 00.6	-2.4
AYDB	Zeytinkoy-Aydi	1.90	19	PN	Pn	02 31 41.3	+0.7
TAVA	DENIZLI_Tavas	1.96	47	i P	Pb	02 31 42.9	-1.1
TAVA				i S	Sb	02 32 10.7	-1.1
IDI	Anoyia	2.00	245	Pn	Pn	02 31 42.2	+0.4
	comp=N,3.8nm,0.3s,baz=57,slow=18,SNR=50						
IDI				Sn	Sn	02 32 06.0	-0.5
	comp=N,18nm,0.3s,baz=264,slow=20,SNR=9.5						
IDI				LR	LR	02 32 34.3	
	comp=N,89nm,19.2s,baz=78,slow=42						
IDI	Anoyia	2.00	245	P	Pn	02 31 42.1	+0.2
IDI	Anoyia	2.00	245	PN	Pn	02 31 42.4	+0.5
KSL	Kastellorizon	2.00	89	P	Pn	02 31 42.5	+0.6
KSL	Kastellorizon	2.00	89	P	Pn	02 31 42.9	+1.1
KSL	Kastellorizon	2.00	89	⇑P	Pn	02 31 42.4	+0.6
AKAS	Kas	2.02	87	PN	Pn	02 31 43.3	+1.1
AKAS	Kas	2.02	87	i P	Pb	02 31 44.5	-0.7
AKAS				IAML		02 32 25.0	
	comp=E,136nm,0.6s						
AKAS				IAML		02 32 33.0	
	comp=N,140nm,1.0s						
SIVA	Sivas	2.19	240	P	Pb	02 31 46.4	-1.5
SIVA				S	Sn	02 32 11.6	+0.6
	comp=N,645nm,0.6s						
SIVA	Sivas	2.19	240	P	Pn	02 31 46.0	+1.6
BLCB	Balcova	2.24	359	PN	Pn	02 31 45.9	+0.9
GOLH	Golhisar	2.25	60	i P	Pb	02 31 48.4	-0.6
GOLH				i S	Sg	02 32 19.8	-1.4
GOLH				IAML		02 32 26.0	
	comp=N,197nm,0.5s						
ELL	Elmali	2.33	74	PN	Pn	02 31 47.9	+1.3
ELL	Elmali	2.33	74	P	Pn	02 31 47.8	+1.3
CHOS	Chios island	2.39	340	P	Pn	02 31 47.4	+0.2
CHOS	Chios island	2.39	340	PN	Pn	02 31 47.9	+0.7
AKUM	Antalya-Kumluc	2.62	85	i P	Pb	02 31 53.1	-2.2
IMMV	Iera Moni Meta	2.63	256	P	Pn	02 31 51.8	+1.3
IMMV	Iera Moni Meta	2.63	256	P	Pn	02 31 52.1	+1.6
IMMV	Iera Moni Meta	2.63	256	PN	Pn	02 31 51.3	+0.8
KULA	Kula-Manisa	2.67	27	PN	Pn	02 31 52.6	+1.5
KORT	Korkueli	2.74	71	PN	Pn	02 31 53.9	+1.7
KORT	Korkueli	2.74	71	i P	Pb	02 31 55.4	-2.1
KORT				IAML		02 32 45.0	
	comp=N,80nm,1.0s						
KORT				IAML		02 32 53.0	
	comp=E,93nm,1.1s						
RODP	Rodopos	2.79	259	P	Pn	02 31 53.7	+1.1
RODP	Rodopos	2.79	259	PN	Pn	02 31 53.6	+1.0
GVDS	Gavdos	2.79	243	PN	Pn	02 31 53.8	+1.2
GVD	Gavdhos	2.79	243	PN	Pn	02 31 53.9	+1.2
BRDR	BURDUR-Merkez	2.83	56	i P	Pb	02 31 56.5	-2.3
KHAL	Karahalli	2.92	40	i P	Pn	02 31 56.8	+2.2
KNDR	Palaiochora Ch	2.93	253	PN	Pn	02 31 55.9	+1.3
BASM	Basmaki-Afyon	2.94	52	PN	Pn	02 31 56.2	+1.3
ANTB	Antalya	2.95	74	PN	Pn	02 31 56.5	+1.6
USAK	Uak-Merkez	2.98	30	i P	Pn	02 31 57.3	+1.9
BCK	Bucak	3.08	64	PN	Pn	02 31 58.1	+1.3
DEMI	Demirci	3.16	23	i P	Pn	02 32 00.8	+3.0
ISP	Isparta	3.20	58	PN	Pn	02 31 59.9	+1.4
KTHA	Kythira Island	3.28	273	P	Pn	02 32 00.1	+0.8
KTHA	Kythira Island	3.28	273	PN	Pn	02 32 00.8	+1.4
VLI	Veliai	3.41	281	P	Pn	02 32 02.3	+1.1
AKMS	Akamas	4.41	103	P	Pn	02 32 16.0	+1.1
ALFC	Alefka	4.58	101	⇑P	Pn	02 32 18.1	+0.8
ALFC				AML	AML	02 33 10.5	
	comp=E,0.4nm,0.4s						
ALFC				AML	AML	02 33 11.5	
	comp=E,0.6nm,0.6s						
NATA	Nata	4.66	105	P	Pn	02 32 19.1	+0.6
SZAC	Souni	4.91	105	⇑P	Pn	02 32 22.6	+0.7
ASGA	Asgata	5.19	103	P	Pn	02 32 26.7	+1.0
MVOU	Mavrovouni	5.43	100	⇑P	Pn	02 32 31.1	+2.1
MVOU				S	Sn	02 33 34.8	+3.7
BRTR	Keskin Array B	6.28	53	Pn	Pn	02 32 43.9	+3.2
	comp=E,0.1nm,0.3s,baz=233,slow=16,SNR=5.9						
MMAI	Mount Meron Ar	7.52	112	Pn	Pn	02 32 56.7	-1.0
	comp=E,1.8nm,0.3s,baz=301,slow=12,SNR=12						
MMAI				Sn	Sn	02 34 19.5	-3.1
	comp=E,3.4nm,0.3s,baz=306,slow=23,SNR=7.4						
MMAI				LR	LR	02 36 32.6	
	comp=E,33nm,18.6s,baz=245,slow=43						
EIL	Elat	9.22	132	Pn	Pn	02 33 21.1	0.0
	comp=E,0.5nm,0.3s,baz=352,slow=3.9,SNR=10						
EIL				Sn	Sn	02 35 00.5	-4.0
	comp=E,1.1nm,0.3s,baz=126,slow=20,SNR=6.8						
EIL				LR	LR	02 38 58.4	
	comp=E,18nm,18.9s,baz=332,slow=51						
GNI	Garni	14.44	69	LR	LR	02 40 54.6	
	comp=E,55nm,18.1s,baz=280,slow=40						
GEYT	Alibeck	24.76	77	P	P	02 36 30.8	+1.2
	comp=E,1.7nm,0.6s,baz=289,slow=9.0,SNR=5.1						
TORD	Torodi Ar. Bea	32.34	231	P	P	02 37 37.9	+0.6
	comp=E,1.0nm,0.6s,baz=32,slow=8.6,SNR=12						
KURBB	Kurchatov Arra	39.27	52	P	P	02 38 36.5	+0.1
	comp=E,0.9nm,0.8s,baz=276,slow=8.8,SNR=8.9						
MKAR	Makanchi Array	41.91	58	P	P	02 38 59.0	+0.8
	comp=E,0.4nm,0.6s,baz=283,slow=7.0,SNR=5.9						

ATH 10 02:40:52.1, 38.°17N×20.°35E, h9km±2km, ML2.5/2, Error ellipse: s-maj=2.4km s-min=1.6km az=302.0
THE 10 02:40:52.1, 38.°16N×20.°36E, h9km, ML2.5/2, Error ellipse: s-maj=0.9km s-min=0.6km az=248.0
ISC 10 02:40:51.8±1.7, 38.°17N±0.°04×20.°36E±0.°07, h11km±6km, n17, σ0.°31/30, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	45	P	Pg	02 40 53.8	+0.1
CHV1				S	Sg	02 40 54.8	-0.3
KEF3	Kipouria, Keph	0.04	346	P	Pg	02 40 54.0	+0.1
KEF3				S	Sg	02 40 55.3	-0.1
LXRA	Lixouri, Kepha	0.07	61	P	Pg	02 40 54.2	+0.1
LXRA				S	Sg	02 40 55.9	+0.1
LXR1	Lixouri, Cepha	0.07	61	P	Pg	02 40 54.2	+0.1
LXR1				S	Sg	02 40 55.9	+0.1
KEF2	Argostoli. Kep	0.10	90	P	Pg	02 40 54.7	+0.2
KEF2				S	Sg	02 40 56.6	+0.1
ARG2	Argostoli	0.10	83	P	Pg	02 40 54.7	+0.2
ARG2				S	Sg	02 40 56.5	+0.1
KEF4	Livadi, Kephal	0.10	29	P	Pg	02 40 54.6	0.0
KEF4				S	Sg	02 40 56.6	+0.1
KEF1	Kardakata, Kep	0.14	38	P	Pg	02 40 55.1	0.0
KEF1				S	Sg	02 40 57.5	+0.1
VLS	Valsamata	0.18	86	P	Pg	02 40 55.8	0.0
VLS				S	Sg	02 40 58.6	+0.1
	2μm,0.1s						
VLS	Valsamata	0.18	86	P	Pg	02 40 55.8	0.0
VLS				S	Sg	02 40 58.6	+0.1
VLS				AML	AML	02 40 58.7	
	comp=E,5207μm,0.1s						
VLS				AML	AML	02 40 58.8	
	comp=N,3459μm,0.1s						
VSK1	VASILIKIADES	0.29	33	P	Pg	02 40 57.8	0.0
VSK1				S	Sg	02 41 02.2	+0.5
	comp=N,2μm,0.4s						
KONA	Konidatara, Ke	0.31	33	P	Pg	02 40 58.0	0.0
KONA				S	Sg	02 41 02.8	+0.6
VLMS	Volimes, Zakyn	0.38	140	P	Pg	02 40 59.6	+0.3
VLMS				AML	AML	02 41 06.8	
	comp=N,2532μm,0.7s						
VLMS				AML	AML	02 41 07.5	
	comp=E,1900μm,0.1s						
EVGI	Lefkada island	0.51	27	P	Pg	02 41 01.9	+0.1
EVGI				S	Sg	02 41 09.6	+1.0
LKD2	Lefkada island	0.66	21	P	Pg	02 41 04.4	-0.3
PVO	Paravola	1.02	63	P	Pg	02 41 11.0	-0.5
KLV	Kalavryta, Ach	1.42	94	P	Pn	02 41 17.4	-0.3

IDC 10 02:44:47.1±0.9, 67.°60N×147.°14W, h0km, mb3.7/6, mb1 3.9/10, mb1mx3.7/44, mbtmp3.7/10, ML3.6/4, MS2.7/2, Ms1 2.8/2, ms1mx2.4/39, Error ellipse: s-maj=24.9km s-min=12.8km az=82.0
AEIC 10 02:44:47.6±1.8, 67.°54N±0.°04×146.°97W±0.°07, h5km±6km, ML3.9/70, mb3.5/3(NEIC), Mwr3.9/41(NEIC), Error ellipse: s-maj=6.7km s-min=3.5km az=189.0
NEIC 10 02:44:47.6±1.2, 67.°61N±0.°03×146.°93W±0.°06, h10km±5km, Error ellipse: s-maj=4.8km s-min=2.1km az=146.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.25; $M_{\theta\theta}$-8.13; $M_{\phi\phi}$7.88; $M_{r\theta}$-2.70; $M_{\theta\phi}$-2.30; $M_{\phi r}$-1.43; Fault plane solution: $M_0$8.88000×10^{14} NP1:ϕ_s36.21000°, δ83.80000°, λ-17.58000°. NP2:ϕ_s128.17000°, δ72.53000°, λ-173.50000°. Principal axes: T 8.3477, Plg8.0000°, Azm83.0000°; N 0.9745, Plg71.0000°, Azm197.0000°; P -9.3222, Plg17.0000°, Azm351.0000°;
ISC 10 02:44:47.3±1.3, 67.°64N±0.°04×146.°94W±0.°03, h6km±9km, n82, σ1.°22/89, mb3.6/6, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BM03	Burnt Mountain	0.93	103		Pg	02 45 04.5	-0.5

BM03 Sb 02 45 19.2 +1.0
BMAR Burnt Mountain 0.93 102 Pg 02 45 05.3 +0.2
BMAR Sg 02 45 16.1 -1.1
FYU Fort Yukon 1.27 147 Pg 02 45 11.1 -0.5
FYU Sg 02 45 27.1 -0.9
FYU Sb 02 45 27.4 -0.7
COLD Coldfoot 1.32 253 Pn 02 45 12.1 -0.2
COLD Coldfoot 1.32 253 Sg 02 45 29.1 -0.6
PS05 TAPS Pump Stn5 1.67 242 Pn 02 45 16.3 -0.7
PS05 Sg 02 45 40.0 -0.8
PS06 TAPS Pump Stn6 2.11 213 Pn 02 45 22.5 -0.5
PRP Porcupine Dome 2.21 164 Pn 02 45 23.7 -0.8
POKR Poker Plat Res 2.54 185 Pn 02 45 28.1 -0.9
POKR Sn 02 45 58.9 -1.3
PS01 TAPS Pump Stn 2.70 348 Pn 02 45 32.8 +1.7
MDM Murphy Dome 2.74 192 Pn 02 45 30.7 -1.1
COLA College 2.80 188 Sn 02 46 05.7 -0.8
COLA College 2.80 188 Pg Pb 02 45 38.2 +0.6
COLA College 2.80 188 Pn Pn 02 45 30.8 -1.7
TCOL CIGO, UAF Yank 2.80 188 Pn 02 45 32.6 0.0
IL31 2.88 180 Pn 02 45 32.5 -1.0
ILAR Eielson Array 2.88 180 Pn Pn 02 45 32.5 -1.1
6.2nm,0.3s,baz=351,slow=11,SNR=193
ILAR Lg Lg 02 46 15.0
89nm,0.3s,baz=358,slow=32,SNR=12
ILAR LR LR 02 46 38.3
comp=Z,98nm,21.1s,baz=126,slow=39
ILAR Eielson Array 2.88 180 Pn 02 45 33.0 -0.6
CCB Clear Creek Bu 3.03 187 Pn 02 45 34.5 -1.1
MLY Manley 3.03 212 Pn 02 45 35.5 -0.3
PS08 TAPS Pump Stn8 3.11 179 Pn 02 45 35.8 -1.0
IM03 3.17 241 Pn 02 45 36.2 -1.3
IMAR Indian Mountai 3.17 241 Pn 02 45 36.5 -1.1
NEA Nenana 3.20 197 Pn 02 45 36.4 -1.5
WRH Wood River Hil 3.22 189 Pn 02 45 37.1 -1.2
HDA Harding Lake 3.25 180 Pn Pn 02 45 38.2 -0.5
BWN Browne 3.63 198 Pn 02 45 42.7 -1.3
EGAK Eagle 3.71 138 Pn 02 45 44.1 -0.9
SCRK Sand Creek 3.87 160 Pn 02 45 47.1 -0.3
BPAW Bear Paw Mtn. 3.92 207 Pn 02 45 47.0 -0.9
MCK McKinley 4.01 193 Pn 02 45 48.6 -0.6
RIDG Independent Ri 4.01 167 Pn 02 45 48.9 -0.3
RIDG Pg Pb 02 46 00.0 +1.7
DOT Dot Lake 4.18 162 Pn 02 45 51.3 -0.3
EPYK Eagle Plains 4.21 103 Pn 02 45 51.2 -0.7
RND Reindeer 4.33 191 Pn 02 45 53.1 -0.4
KTH Kantishna Hill 4.42 204 Pn 02 45 53.7 -1.1
TRF Thorofare Moun 4.43 200 Pn 02 45 54.2 -0.9
DHY Denali Highway 4.59 182 Pn 02 45 57.5 +0.3
PAX Paxson 4.73 172 Pn 02 45 58.8 -0.4
PAX Sn 02 46 49.0 -5.2
DAWY Dawson 4.74 136 Pn 02 45 58.4 -0.8
WAT2 Susitna Watana 4.75 189 Pn 02 45 59.5 +0.1
WAT1 Susitna Watana 4.88 189 Pn 02 46 01.0 -0.1
BC03 5.07 152 Pn 02 46 03.0 -0.6
BCAR Beaver Creek A 5.07 152 Pn 02 46 02.9 -0.9
WAT6 Susitna Watana 5.09 184 Pn 02 46 04.1 -0.1
INK Inuvik 5.09 76 Pn Pn 02 46 04.1 +0.1
0.8nm,0.3s,baz=267,slow=11,SNR=30
INK Inuvik 5.09 76 Sn 02 46 59.1 -3.9
PPLA Purkeypile 5.25 207 Pn 02 46 06.0 -0.2
PPLA Sn 02 47 06.4 -0.6
PS11 TAPS Pump St11 5.62 173 Pn 02 46 12.0 +0.8
SCM Sheep Creek Mo 5.83 182 Pn 02 46 15.1 +0.9
BVCY Beaver Creek 5.84 151 Pn 02 46 14.3 0.0
RDOG Red Dog Mine 6.05 281 Pn 02 46 17.9 +0.8
RDOG Sn 02 47 22.5 -4.1
TT01 Tatalina 6.08 223 Pn 02 46 16.3 -1.3
YUK1 Sand Pete Hill 6.14 151 Pn 02 46 18.2 -0.3
YUK2 White River 6.43 153 Pn 02 46 22.4 -0.1
YUK3 Moose Creek 6.51 152 Pn 02 46 23.2 -0.4
PTPK Patty Peak 6.76 161 Pn 02 46 27.5 +0.4
FID Port Fidalgo 6.92 178 Pn 02 46 30.0 +0.9
BALM Baldy 6.92 161 Pn 02 46 29.8 +0.6
BARN Barnard Glacie 6.99 158 Pn 02 46 30.6 +0.3
KIAG Kiagna River 7.03 161 Pn 02 46 31.3 +0.5
CRQM Cirque 7.11 165 Pn 02 46 32.8 +1.0
CTGM Chitina Glacie 7.13 157 Pn 02 46 32.7 +0.6
GRNC Granite Creek 7.29 160 Pn 02 46 34.9 +0.5
YUK6 Outpost Mounta 7.68 147 Pn 02 46 39.4 -0.3
MESA MESA 7.80 161 Sn 02 48 09.2 -0.8
MESA MESA 7.80 161 Pn 02 46 43.1 +1.8
YUK7 Dusty Glacier 8.10 148 Pn 02 46 45.6 +0.2
KDAK Kodiak Island 10.22 197 LR LR 02 51 33.1
comp=Z,61nm,18.5s,baz=22,slow=40
YKA Yellowknife Ar 14.45 95 Pn Pn 02 48 07.5 -4.5
0.5nm,0.3s,baz=306,slow=13,SNR=33
BILL Bilibino 17.33 293 P Pn 02 48 49.8 +0.5
BILL IAmb IAmb 02 48 57.0
comp=Z,2.8nm,0.6s
RES Resolute Bay 17.59 44 P P 02 48 54.0 +0.3
comp=Z,0.2nm,0.3s,baz=257,slow=8.7,SNR=6.1
RES Resolute Bay 17.59 44 IAmb IAmb 02 49 07.2
comp=Z,3.0nm,1.1s
PDAR Pinedale Array 31.90 122 P P 02 51 14.6 +1.3
comp=Z,0.5nm,0.8s,baz=354,slow=6.0,SNR=5.1
PDAR Pinedale Array 31.90 122 P P 02 51 12.0 -1.3
NVAR Mina Array Bea 33.32 137 P P 02 51 28.1 +2.4
comp=Z,1.0nm,0.8s,baz=327,slow=4.3,SNR=2.8
NVAR Mina Array Bea 33.32 137 P P 02 51 24.7 -1.0
TXAR Lajitas Array 46.09 124 P P 02 53 13.7 +1.8
comp=Z,0.4nm,0.8s,baz=324,slow=6.2,SNR=4.8
FINES FINESS Array B 51.11 4 P P 02 53 50.4 +0.4
comp=Z,1.0nm,0.9s,baz=11,slow=10,SNR=4.4
MKAR Makanchi Array 60.02 323 P P 02 54 55.4 +1.1
comp=Z,0.2nm,0.6s,baz=33,slow=3.9,SNR=3.7
MKAR Makanchi Array 60.02 323 P P 02 54 54.2 0.0
AKASG Malin Array Be 61.95 3 P P 02 55 08.0 +0.7
comp=Z,2.8nm,0.6s,baz=360,slow=6.7,SNR=21

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*ANF **10** 03:00:07.1±1.2, 11.87N×89.49W, h30km, Error ellipse: s-maj=20.0km s-min=7.4km az=0.0*
*SNET **10** 03:00:08.5±1.7, 12.23N×89.77W, h12km±49km, ML4.0*
*UCR **10** 03:00:09.7±2.3, 13.06N×89.56W, h181km±27km, ML4.0, mb4.4(NEIC)*
*INET **10** 03:00:14.4, 12.53N×89.54W, h15km, ML3.4*
*NEIC **10** 03:00:15.2±2.6, 12.55N±0.08×89.39W±0.07, h35km±2km, mb4.4/62, Md4.0(SNET), Error ellipse: s-maj=14.4km s-min=9.1km az=216.0*
*IDC **10** 03:00:17.4±1.9, 12.85N×89.16W, h42km±18km, mb3.8/9, mb1 4.0/12, mb1mx3.7/36, mbtmp4.0/12, ML3.3/3, MS3.2/5, Ms1 3.2/5, ms1mx2.9/27, Error ellipse: s-maj=38.4km s-min=11.8km az=42.0*
*GCG **10** 03:00:20.0±0.3, 15.13N×89.85W, h221km±19km, MD4.0*
ISC 10 03:00:16.1±1.4, **12.38N**±0.07×**89.55W**±0.06, **h61km**±12km, **n284**, σ1.52/284, **mb4.3**/26, **Off coast of central America**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
LFRS El Faro 1.32 21 eP Pn 03 00 35.3 -3.3
SNET Serv Nac Est T 1.33 13 eP Pn 03 00 36.5 -2.3
SNET eS Sn 03 00 57.9 +2.3
SNET IAML 03 01 00.1
comp=Z,1μm,0.4s
SNET Serv Nac Est T 1.33 13 Pn 03 00 35.4 -3.4
SNET Serv Nac Est T 1.33 13 eP Pn 03 00 36.5 -2.3
SNET eS Sn 03 00 57.9 +2.3
SNET IAML 03 01 00.1
comp=Z,1μm,0.4s
ALJI Alcalda de J 1.34 45 eP Pn 03 00 36.3 -2.4
ALJI eS Sn 03 00 57.8 +2.2
ALJI IAML 03 01 09.9
comp=Z,884nm,0.5s
ALJI Alcalda de J 1.34 45 eP Pn 03 00 36.3 -2.4
ALJI eS Sn 03 00 57.8 +2.2
ALJI IAML 03 01 09.9
comp=Z,884nm,0.5s
OPAM Oficina de Pla 1.37 14 eP Pn 03 00 36.2 -2.9
OPAM Oficina de Pla 1.37 14 eP Pn 03 00 36.2 -2.9
BOQS Boqueron 1.37 11 eP Pn 03 00 36.2 -3.1
COEG Centro de Oper 1.39 28 eP Pn 03 00 36.4 -3.0
COEG IAML 03 01 13.2
comp=Z,1μm,0.4s
COEG Centro de Oper 1.39 28 eP Pn 03 00 36.4 -3.0
COEG IAML 03 01 13.2
comp=Z,1μm,0.4s
LFU La Fuente 1.42 17 eP Pn 03 00 37.4 -2.5
LFU La Fuente 1.42 17 eP Pn 03 00 37.4 -2.5
LBRS Las Brisas 1.44 20 eP Pn 03 00 37.8 -2.3
CEVE Cerro Verde 1.44 357 eP Pn 03 00 37.0 -3.3
CEVE eS Sn 03 00 58.9 +0.5
CEVE IAML 03 01 07.9
comp=Z,4μm,0.3s
CEVE Cerro Verde 1.44 357 eP Pn 03 00 37.0 -3.3
CEVE eS Sn 03 00 58.9 +0.5
CEVE IAML 03 01 07.9
comp=Z,4μm,0.3s
PAVA Las Pavas 1.45 24 eP Pn 03 00 37.4 -2.9
PAVA IAML 03 00 57.3
comp=Z,1μm,0.5s
PAVA eS Sn 03 00 59.1 +0.6
PAVA Las Pavas 1.45 24 eP Pn 03 00 37.4 -2.9
PAVA IAML 03 00 57.3
comp=Z,1μm,0.5s
PAVA eS Sn 03 00 59.1 +0.6
SBLS San Blas 1.45 357 eP Pn 03 00 37.4 -3.1
SBLS San Blas 1.45 357 eP Pn 03 00 37.4 -3.1
SNJE San Jose 1.48 358 eP Pn 03 00 37.7 -3.0
SNJE San Jose 1.48 358 eP Pn 03 00 37.7 -3.0
COEB Comit de Eme 1.49 42 eP Pn 03 00 38.1 -2.7
COEB eS Sn 03 01 02.2 +2.8
COEB IAML 03 01 06.3
comp=Z,2μm,0.4s
COEB Comit de Eme 1.49 42 eP Pn 03 00 38.1 -2.7
COEB eS Sn 03 01 02.2 +2.8
COEB IAML 03 01 06.3
comp=Z,2μm,0.4s
TECA Tecapa 1.50 43 eP Pn 03 00 38.5 -2.6
TECA Tecapa 1.50 43 eP Pn 03 00 38.5 -2.6
JUCU Jucuar¡n 1.54 55 eP Pn 03 00 38.9 -2.5
JUCU IAML 03 01 11.4
comp=Z,1μm,0.3s
JUCU Jucuar¡n 1.54 55 eP Pn 03 00 38.9 -2.5
JUCU IAML 03 01 11.4
comp=Z,1μm,0.3s
PACA Pacayal 1.61 48 eP Pn 03 00 40.1 -2.3
PACA IAML 03 01 11.0
comp=Z,7μm,0.4s
PACA Pacayal 1.61 48 eP Pn 03 00 40.1 -2.3
PACA IAML 03 01 11.0
comp=Z,7μm,0.4s
BLLM Bellamira 1.66 50 eP Pn 03 00 41.1 -1.9
BLLM Bellamira 1.66 50 eP Pn 03 00 41.1 -1.9
LCND La Caada 1.86 60 eP Pn 03 00 43.1 -2.6
LCND eS Sn 03 01 09.7 +1.5
LCND IAML 03 01 19.7
comp=Z,741nm,0.4s
LCND La Caada 1.86 60 eP Pn 03 00 43.1 -2.6
LCND eS Sn 03 01 09.7 +1.5
LCND IAML 03 01 19.7
comp=Z,741nm,0.4s
CNCH Conchagua 1.89 62 eP Pn 03 00 44.8 -1.5
CNCH eS Sn 03 01 13.7 +4.5
CNCH IAML 03 01 24.8
comp=Z,2μm,0.5s
CNCH Conchagua 1.89 62 eP Pn 03 00 44.8 -1.5
CNCH eS Sn 03 01 13.7 +4.5
CNCH IAML 03 01 24.8
comp=Z,2μm,0.5s
PCG Pacaya 2.25 333 eP Pn 03 00 53.5 +2.3
PCG eS Sn 03 01 19.7 +1.7
NBG Las Nubes 2.33 341 eP Pn 03 00 51.8 -0.6
FUG Fuego 3 2.41 329 eP Pn 03 00 54.2 +0.8
APG El Apazote 2.75 341 P Pn 03 00 55.1 -3.0
comp=Z,1.4nm,0.3s,baz=172,slow=10.0,SNR=9.9
APG LR LR 03 01 39.1
comp=Z,120nm,18.6s,baz=278,slow=33
TGUH Tegucigalpa,Un 2.77 53 Pn 03 00 56.5 -1.8
ESTN Estel 3.18 77 Pn Pn 03 01 01.1 -2.7
CCIG Comitan 4.62 327 Pn 03 01 25.0 +1.4
JTS Las Juntas de 4.96 114 P Pn 03 01 28.9 +0.8
comp=Z,4.7nm,0.3s,baz=16,slow=18,SNR=23
JTS S Sn 03 02 23.3 -1.0
comp=Z,1.6nm,0.3s,baz=342,slow=22,SNR=2.2
JTS Las Juntas de 4.96 114 Pn 03 01 27.2 -0.9
JTS Sn 03 02 20.9 -3.4
CMIG Matias Romero 6.97 313 P Pn 03 01 55.2 -0.5
comp=Z,0.5nm,0.3s,baz=136,slow=9.7,SNR=8.5
TEIG Tepich 7.89 9 LR LR 03 05 25.1
comp=Z,276nm,18.7s,baz=319,slow=42
TEIG Tepich 7.89 9 Pn Pn 03 02 07.8 -0.5
TLIG Tlapa 10.12 302 Pn 03 02 39.6 +0.7
ROSC El Rosal 16.81 115 P P 03 04 08.7 -0.5
ROSC IAmb IAmb 03 04 17.5
comp=Z,38nm,1.5s
656A Willston 18.12 20 P 03 04 21.8 -1.4
656A IAmb IAmb 03 04 34.6
comp=Z,65nm,1.5s
833A Chaparral WMA, 18.34 331 P Pn 03 04 27.2 +1.0
baz=149
553A Crawfordville 18.34 14 P 03 04 25.8 +0.1
SDV Santo Domingo 18.91 99 P Pn 03 04 34.0 +0.6
comp=Z,0.4nm,0.3s,baz=294,slow=9.3,SNR=5.1
344A Westbrook Farm 19.01 357 P P 03 04 30.8 -2.2
344A IAmb IAmb 03 04 41.5
comp=Z,15nm,0.8s
342A Flagon Creek P 19.08 353 P P 03 04 31.4 -2.3
342A IAmb IAmb 03 04 36.2
comp=Z,42nm,1.2s
TIGA Tifton 19.75 15 P P 03 04 39.7 -1.3
TIGA Tifton 19.75 15 P Pn 03 04 42.0 -0.9
baz=197,SNR=5.3
435B Jarrell 19.76 339 P P 03 04 41.1 -0.1
435B IAmb IAmb 03 04 42.0
comp=Z,23nm,0.7s
435B Jarrell 19.76 339 P P 03 04 41.3 +0.1
baz=157,SNR=6.6
VBMS Vicksburg 19.76 358 P Pn 03 04 42.3 -0.9
baz=177
NATX Nacogdoches 19.85 347 P P 03 04 42.3 +0.1
NATX IAmb IAmb 03 04 43.3
comp=Z,16nm,0.7s
NATX Nacogdoches 19.85 347 P P 03 04 41.9 -0.2
baz=165
JCT Junction City 20.36 334 P P 03 04 46.4 -1.3
JCT Junction City 20.36 334 P P 03 04 48.1 +0.3
baz=151
WHTX Lake Whitney, 20.83 341 P P 03 04 52.5 -0.3
baz=158,SNR=13
HPIG 20.94 316 P P 03 04 51.8 -2.5
154A Montrose 20.99 15 P P 03 04 55.2 +0.8
baz=197
Z41A Richland Creek 20.99 352 P P 03 04 54.5 0.0
baz=171
Z50A Ashland 21.04 8 P P 03 04 53.8 -1.2
Z50A Ashland 21.04 8 P P 03 04 55.4 +0.4
baz=190
Z52A Williamson 21.24 12 P P 03 04 57.4 +0.3
baz=194
TXAR Lajitas Array 21.38 324 P P 03 05 00.6 +1.8
comp=Z,5.3nm,0.7s,baz=146,slow=11,SNR=82
TXAR Lajitas Array 21.38 324 P P 03 05 00.4 +1.7
TX32 Lajitas Array 21.38 324 P P 03 04 59.9 +1.2
Z53A Monticello 21.51 14 P P 03 05 00.6 +0.6
baz=196
Y49A Blount Mountai 21.57 7 P P 03 05 00.3 -0.4
Y49A IAmb IAmb 03 05 01.8
comp=Z,10nm,0.8s
GOGA Godfrey 21.66 14 P P 03 05 00.9 -0.7
GOGA Godfrey 21.66 14 P P 03 05 01.6 0.0
baz=196
157A Early Branch 21.67 20 P P 03 05 03.2 +1.4
baz=202
Y51A Rockmart 21.81 10 P P 03 05 03.1 -0.1
baz=191,SNR=7.6
OXF Oxford 22.03 0 P P 03 05 04.7 -0.9
OXF Oxford 22.03 0 P P 03 05 05.1 -0.5
baz=180
Y53A Monroe 22.06 13 P P 03 05 06.0 +0.1
baz=195
Z56A Williston 22.15 18 P P 03 05 08.1 +1.3
baz=201
ABTX Abilene, Hawle 22.18 337 IAmb IAmb 03 05 08.6
comp=Z,24nm,1.5s
ABTX Abilene, Hawle 22.18 337 P P 03 05 06.9 -0.3
baz=154
X40A Basin Creek Fa 22.21 353 P P 03 05 06.9 -0.6
baz=172
Y54A Tignall 22.28 15 P P 03 05 07.8 -0.4
baz=197
Z57A Bowman 22.34 20 P P 03 05 09.2 +0.3
baz=203
NHSC New Hope 22.34 21 P P 03 05 09.4 +0.5
baz=204
MIAR Mount Ida 22.37 351 P P 03 05 09.0 -0.2
baz=170,SNR=12
Y55A Saluda 22.57 17 P P 03 05 11.2 -0.2
baz=199
Y56A Pelion 22.60 18 P P 03 05 12.2 +0.4
baz=201
X52A Dahlonega 22.71 12 P P 03 05 12.1 -0.8
baz=194
X53A Estanollee 22.74 13 P P 03 05 12.8 -0.4
baz=196
W41B Gary Mavity, V 22.82 354 P P 03 05 13.3 -0.7
baz=173
W49A Belvidere 22.83 7 P P 03 05 13.3 -0.9
baz=188
WHAR Wooly Hollow 22.94 354 IAmb IAmb 03 05 17.4
comp=Z,14nm,1.1s
X54A Belton 23.01 15 P P 03 05 15.1 -0.8
baz=198
W39A Magazine 23.04 351 P P 03 05 14.1 -2.1
W39A IAmb IAmb 03 05 18.6
comp=Z,17nm,1.3s
W39A Magazine 23.04 351 P P 03 05 15.2 -0.9
baz=170
W50A Signal Mountai 23.04 9 P P 03 05 15.0 -1.2
baz=190
W51A Cleveland 23.09 10 P P 03 05 16.0 -0.7
baz=192
Y57A Sumter 23.10 20 P P 03 05 17.2 +0.4
baz=203
X55A Gracelyn & Ava 23.14 17 P P 03 05 17.2 0.0
baz=199
X56A White Oak 23.33 18 P P 03 05 19.1 0.0
baz=201
W53A Cullowhee 23.41 13 P P 03 05 19.1 -0.9
baz=195
GNAR Gosnell 23.48 359 P P 03 05 20.3 -0.2
V49A McMinnville 23.52 7 P P 03 05 19.8 -1.0
baz=189
V50A Pikevile 23.53 9 P P 03 05 20.1 -0.8
baz=191
W54A Cherokee Point 23.57 15 P P 03 05 21.1 -0.1
baz=198
LCAR Lake Charles 23.63 357 IAmb IAmb 03 05 23.6
comp=Z,10nm,0.8s
WVT Waverly 23.70 3 P P 03 05 21.6 -0.8
baz=184
TKL Tuckaleechee C 23.76 12 P P 03 05 22.4 -0.5
comp=Z,4.5nm,0.6s,baz=179,slow=11,SNR=11
TKL Tuckaleechee C 23.76 12 IAmb IAmb 03 05 24.0
comp=Z,9.5nm,1.0s
WMOK Wichita Mounta 23.79 341 IAmb IAmb 03 05 24.0
comp=Z,8.0nm,0.8s
WMOK Wichita Mounta 23.79 341 P P 03 05 21.9 -1.4
baz=158,SNR=12
KMSC Kings Mountain 23.85 17 P P 03 05 23.5 -0.3
baz=200
X58A Rowland 23.95 21 P P 03 05 24.8 +0.2
baz=205
V52A Sevierville 23.97 12 P P 03 05 24.4 -0.5
baz=194
V53A Saluda 23.97 14 P P 03 05 24.9 -0.1
baz=196
U40A Yellville 24.06 353 P P 03 05 24.6 -1.1
baz=172,SNR=6.9
W56A Indian Trail 24.07 18 P P 03 05 25.6 -0.2
baz=201
MNTX Cornudas Mount 24.13 325 P P 03 05 26.5 +0.1
baz=140,SNR=6.5
X59A McDuffie Farm, 24.23 22 P P 03 05 27.4 +0.2
baz=206
U49A Red Boiling Sp 24.27 7 P P 03 05 26.7 -0.8
baz=189
W57A Gilead 24.27 19 P P 03 05 27.2 -0.3
baz=203
V54A Nebo 24.29 15 P P 03 05 27.2 -0.6
baz=198
U50A Jamestown 24.30 9 P P 03 05 27.2 -0.8
baz=191
W58A Raeford 24.40 21 P P 03 05 28.9 +0.1
baz=204
U51A La Follette 24.41 11 P P 03 05 27.9 -1.0
baz=193
X60A Albert Glenn T 24.47 24 P P 03 05 28.9 -0.5
baz=208
V55A Taylorsville 24.55 16 P P 03 05 29.7 -0.5
baz=199
T47A Sharon Grove 24.60 5 IAmb IAmb 03 05 31.2
comp=Z,15nm,0.9s
MSTX Muleshoe 24.64 333 IAmb IAmb 03 05 33.1
comp=Z,20nm,1.5s
MSTX Muleshoe 24.64 333 P P 03 05 30.7 -0.5
baz=148
TZTN Tazewell 24.66 12 P P 03 05 30.4 -0.7
baz=194
U53A Fall Branch 24.69 14 P P 03 05 31.3 -0.1
baz=196,SNR=5.0
V56A Mocksville 24.72 18 P P 03 05 31.4 -0.2
baz=201
MGMO Mountain Grove 24.79 355 IAmb IAmb 03 05 34.9
comp=Z,9.5nm,0.8s
T49A Edmonton 24.88 8 IAmb IAmb 03 05 33.3
comp=Z,7.1nm,0.8s
T49A Edmonton 24.88 8 P P 03 05 32.3 -0.8
baz=189
AMTX Amarillo 24.96 336 IAmb IAmb 03 05 35.3
comp=Z,9.1nm,0.8s
AMTX Amarillo 24.96 336 P P 03 05 34.2 +0.2
baz=151
T51A Gray 24.99 11 P P 03 05 33.3 -0.9
baz=193
V57A Coltrane Farms 25.01 19 P P 03 05 34.0 -0.4
baz=202
U54A Nelsons Funny 25.02 15 IAmb IAmb 03 05 36.8
comp=Z,13nm,0.8s
U54A Nelsons Funny 25.02 15 P P 03 05 34.5 0.0
baz=198
V58A Windy Hill, Pi 25.14 20 P P 03 05 34.9 -0.6
baz=204
U55A TA2, Sparta 25.21 16 P P 03 05 35.4 -0.8
baz=199
U56A King 25.25 18 P P 03 05 36.5 -0.1
baz=201
T53A Wise 25.29 13 P P 03 05 35.9 -1.1
baz=196
S49A Springfield 25.58 8 P P 03 05 37.2 -2.4
baz=189
T54A Tazewell 25.59 15 P P 03 05 38.9 -0.8
baz=198
S50A Richmond 25.61 9 P P 03 05 38.8 -1.0
baz=191
CCM Cathedral Cave 25.61 357 P P 03 05 39.1 -0.7
CCM IAmb IAmb 03 05 42.3
comp=Z,12nm,1.0s
CCM Cathedral Cave 25.61 357 P P 03 05 39.2 -0.6
baz=176
U57A Blanch 25.65 19 P P 03 05 40.2 0.0
baz=203
T55A Pulaski 25.86 16 P P 03 05 41.6 -0.5
baz=199
WCI Wyandotte Cave 25.90 6 P P 03 05 41.4 -1.0
WCI IAmb IAmb 03 05 45.7
comp=Z,7.5nm,0.7s
WCI Wyandotte Cave 25.90 6 P P 03 05 41.2 -1.2
baz=187
R49A Shelbyville 26.10 8 P P 03 05 42.8 -1.4
baz=189
U59A Littleton 26.11 22 P P 03 05 43.9 -0.4
baz=206
121A Cookes Peak, D 26.12 323 P P 03 05 43.6 -1.0
baz=137
R50A Paris 26.21 9 P P 03 05 44.3 -0.9
baz=191
R51A Hillsboro 26.35 11 P P 03 05 45.5 -1.0
baz=193
T58A Grand View Acr 26.38 20 P P 03 05 46.9 +0.2
baz=204
S55A Lewisburg 26.55 16 P P 03 05 48.5 +0.2
baz=200
Q48A North Vernon 26.66 7 P P 03 05 47.8 -1.4
baz=188
R53A Hurricane 26.71 13 P P 03 05 49.1 -0.6
baz=196
T59A Double "B" Far 26.75 22 P P 03 05 49.8 -0.2
baz=206
Q49A Aurora 26.84 8 P P 03 05 49.6 -1.3
baz=190
Q51A Peebles 27.10 11 P P 03 05 52.3 -0.9
baz=193

P48A	Milroy	27.22	7	P	P	03 05 52.6	-1.6
	baz=189						
KSU1	Kansas State U	27.34	348	P	P	03 05 54.6	-0.7
	baz=165						
Q54A	Coxs Mills	27.60	15	P	P	03 05 57.1	-0.6
	baz=198						
R57A	Stanardsville	27.62	19	P	P	03 05 57.3	-0.5
	baz=203						
S60A	Water View	27.73	22	P	P	03 05 58.6	-0.2
	baz=207						
TUC	Tucson	27.81	319	P	P	03 06 00.3	+0.6
	baz=131						
P53A	Whipple	27.95	14	P	P	03 06 00.3	-0.5
	baz=197						
HDIL	Hopedale	28.07	0	P	P	03 06 00.9	-0.9
	baz=180						
O49A	Covington	28.08	9	P	P	03 06 00.4	-1.5
	baz=191						
O50A	Cable	28.15	10	P	P	03 06 01.4	-1.2
	baz=192						
P54A	Burton	28.27	15	P	P	03 06 03.3	-0.4
	baz=198						
O51A	Pataskala	28.33	11	P	P	03 06 02.1	-2.0
	baz=194						
P55A	Reedsville	28.36	16	P	P	03 06 02.8	-1.6
	baz=200						
N47A	Urbana	28.59	6	P	P	03 06 04.9	-1.6
	baz=188						
R61A	Willards	28.78	24	P	P	03 06 08.7	+0.6
	baz=209						
N49A	Columbus Grove	28.82	8	P	P	03 06 07.0	-1.5
	baz=191						
O54A	Avella	28.85	15	P	P	03 06 08.1	-0.7
	baz=198						
N52A	McGinn's Farm,	29.15	12	P	P	03 06 10.2	-1.3
	baz=196						
N53A	Lisbon	29.33	14	P	P	03 06 11.1	-2.0
	baz=197						
M50A	Fremont	29.47	10	P	P	03 06 13.1	-1.2
	baz=193						
S22A	4UR Ranch, Cre	29.61	332	P	P	03 06 16.3	+0.4
	baz=144						
N54A	Moraine State	29.68	15	P	P	03 06 15.6	-0.6
	baz=199						
L47A	Sherwood	29.73	7	P	P	03 06 15.3	-1.2
	baz=188						
L48A	N Adams	29.79	8	P	P	03 06 15.7	-1.4
	baz=190						
BGNE	Belgrade	29.88	347	P	P	03 06 16.7	-1.3
	baz=163						
M52A	Chesterland	29.92	12	P	P	03 06 16.7	-1.6
	baz=196						
N56A	West Decatur	30.09	17	P	P	03 06 19.5	-0.4
	baz=202						
L50A	Kingsville	30.13	10	P	P	03 06 18.9	-1.2
	baz=193						
N57A	Milroy	30.17	18	P	P	03 06 20.3	-0.1
	baz=203						
M54A	Oil Creek Stat	30.28	15	P	P	03 06 20.7	-0.7
	baz=199						
JFWS	Jewell Farm	30.43	359	P	P	03 06 21.9	-0.8
	baz=179						
K47A	Vermontville	30.43	7	P	P	03 06 20.9	-1.9
	baz=189						
M55A	Ridgway	30.48	16	P	P	03 06 22.3	-0.9
	baz=201						
L53A	Girard	30.56	14	P	P	03 06 22.7	-1.2
	baz=198						
M56A	Emporium	30.65	17	P	P	03 06 23.5	-1.3
	baz=202						
K48A	Perry	30.67	8	P	P	03 06 23.3	-1.6
	baz=190						
N59A	State Game Lan	30.89	21	P	P	03 06 26.2	-0.7
	baz=206						
L54A	Sinclairville	31.05	15	P	P	03 06 27.3	-0.9
	baz=199						
M58A	Price's Panora	31.07	19	P	P	03 06 27.3	-1.1
	baz=205						
J48A	Bridge Port	31.21	8	P	P	03 06 27.6	-2.0
	baz=191						
L55A	Hinsdale	31.23	16	P	P	03 06 28.6	-1.3
	baz=201						
J49A	Marlette	31.36	9	P	P	03 06 29.3	-1.7
	baz=192						
M59A	Waymart	31.56	20	P	P	03 06 31.6	-1.2
	baz=207						
I46A	Reed City	31.65	6	P	P	03 06 30.8	-2.7
	baz=187						
I45A	Fountain	31.67	5	P	P	03 06 31.4	-2.2
	baz=186						
J52A	Paris	31.73	13	P	P	03 06 32.9	-1.4
	baz=197						
ECSD	EROS Data Cent	31.83	350	P	P	03 06 34.0	-1.1
	baz=167						
BINY	Binghamton	31.97	19	P	P	03 06 36.0	-0.4
	baz=205						
I49A	Point Hope	31.98	9	P	P	03 06 34.8	-1.6
	baz=192						
K56A	Middlesex	32.02	17	P	P	03 06 36.0	-0.8
	baz=202						
H48A	Harrisville	32.65	8	P	P	03 06 40.9	-1.3
	baz=191						
J56A	Wolcott	32.68	17	P	P	03 06 41.4	-1.2
	baz=203						
G45A	Suttons Bay	32.72	5	P	P	03 06 41.2	-1.6
	baz=187						
G40A	Rib Lake	32.78	359	IAmb	IAmb	03 06 44.6	
	comp=Z,4.8nm,0.8s						
SPMN	Marine on St.	32.85	356	P	P	03 06 42.8	-1.2
	baz=174,SNR=6.4						
J57A	Williamstown	33.06	18	P	P	03 06 45.4	-0.5
	baz=204						
H52A	Wyevale	33.20	13	P	P	03 06 46.1	-0.9
	baz=197						
I55A	Frankford	33.32	16	P	P	03 06 47.5	-0.6
	baz=201						
H53A	Bobcaygeon	33.43	14	P	P	03 06 48.0	-1.1
	baz=199						
F48A	Evansville	33.85	9	P	P	03 06 51.1	-1.5
	baz=192						
F49A	Sandfield	33.88	9	P	P	03 06 51.1	-1.8
	baz=193						
G53A	Haliburton	33.94	14	P	P	03 06 52.0	-1.5
	baz=199						
E38A	The Farm, Brul	34.16	358	IAmb	IAmb	03 06 54.9	
	comp=Z,4.5nm,0.6s						
G54A	Lake Saint Pet	34.32	14	P	P	03 06 55.3	-1.5
	baz=200						
E47A	Iron Bridge	34.37	8	P	P	03 06 56.2	-1.0
	baz=191						
G55A	Calabogie	34.54	16	P	P	03 06 57.2	-1.5
	baz=202						
H58A	Gabriels	34.54	20	P	P	03 06 57.5	-1.3
	baz=207						
E48A	Lockeyer	34.56	9	P	P	03 06 57.4	-1.4
	baz=192						
LONY	Lake Ozonia	34.59	19	P	P	03 06 58.2	-0.9
	baz=206						
D46A	Sault St. Mari	34.71	7	P	P	03 06 58.6	-1.6
	baz=189						
ALGO	Algonquin Park	34.86	14	P	P	03 07 00.2	-1.1
	baz=200						
PDAR	Pinedale Array	34.90	334	LR	LR	03 22 59.1	
	comp=Z,24nm,18.3s,baz=52,slow=39						
E52A	Mattawa	35.03	13	P	P	03 07 02.0	-0.9
	baz=198						
I62A	Tamworth	35.08	23	P	P	03 07 03.2	-0.1
	baz=212						
E51A	G1948 Merrick	35.09	12	P	P	03 07 01.9	-1.5
	baz=197						
SBC	Santa Barbara	35.11	314	P	P	03 07 04.2	+0.5
	baz=122						
D48A	Paudash Townsh	35.29	9	P	P	03 07 03.5	-1.6
	baz=193						
E53A	Dumoine, Ponti	35.35	14	P	P	03 07 04.3	-1.3
	baz=200						
D49A	Beulah Townshi	35.46	10	P	P	03 07 05.0	-1.6
	baz=194						
EYMN	Ely	35.49	358	IAmb	IAmb	03 07 07.0	
	comp=Z,2.7nm,0.7s						
EYMN	Ely	35.49	358	P	P	03 07 05.2	-1.6
	baz=177						
E54A	Lac Daplat, Po	35.52	15	P	P	03 07 05.8	-1.2
	baz=201						
D50A	G1974 Best Tow	35.62	11	P	P	03 07 06.7	-1.2
	baz=196						
D51A	Lot 18 Range I	35.64	12	P	P	03 07 06.7	-1.4
	baz=197						
D52A	ZEK Kipawa Sen	35.74	13	P	P	03 07 08.2	-0.8
	baz=198						
D53A	Lac Vacive, Po	36.00	14	P	P	03 07 10.3	-0.9
	baz=200						
H63A	New Sharon	36.25	24	P	P	03 07 12.6	-0.8
	baz=213						
D54A	Lac Fusel, La	36.32	15	P	P	03 07 12.3	-1.6
	baz=201						
MDND	Maddock	36.34	349	P	P	03 07 13.0	-1.1
	baz=163						
NVAR	Mina Array Bea	36.43	320	P	P	03 07 18.3	+3.0
	comp=Z,1.6nm,0.8s,baz=133,slow=8.7,SNR=12						
NVAR	Mina Array Bea	36.43	320	P	P	03 07 14.2	-1.1
D55A	Sainte-Anne-du	36.51	16	P	P	03 07 14.5	-1.1
	baz=203						
H64A	Troy	36.56	25	P	P	03 07 15.0	-1.0
	baz=214						
E58A	La Victoria	36.57	19	P	P	03 07 14.8	-1.2
	baz=207						
D58A	Chemin du LacG	37.34	19	P	P	03 07 21.0	-1.6
	baz=207						
LATQ	La Tuque	37.62	19	P	P	03 07 24.4	-0.5
	baz=207						
LSQQ	Lebel-sur-Quev	38.02	13	P	P	03 07 26.7	-1.6
	baz=200						
ULM	Lac du Bonnet	38.12	353	P	P	03 07 27.6	-1.5
	comp=Z,1.7nm,0.5s,baz=172,slow=10,SNR=6.5						
ULM				LR	LR	03 25 49.4	
	comp=Z,55nm,18.2s,baz=145,slow=41						
ULM	Lac du Bonnet	38.12	353	IAmb	IAmb	03 07 27.9	
	comp=Z,3.2nm,0.8s						
D61A	St Aubert, Com	38.34	21	P	P	03 07 30.2	-0.8
	baz=211						
MATQ	Matagami	38.54	12	P	P	03 07 31.4	-1.2
	baz=199,SNR=5.5						
D62A	Allapoint, All	38.65	23	P	P	03 07 32.7	-0.9
	baz=213						
SIV	San Ignacio	39.85	134	P	P	03 07 47.3	+3.2
	comp=Z,1.9nm,1.1s,baz=308,slow=12,SNR=3.9						
SCHQ	Schefferville	45.96	18	P	P	03 08 31.5	-1.4
	comp=Z,3.4nm,0.6s,baz=217,slow=6.8,SNR=12						
SCHQ				PcP	PcP	03 10 10.2	+1.4
	comp=Z,0.9nm,0.6s,baz=268,slow=6.1,SNR=4.0						
SCHQ	Schefferville	45.96	18	IAmb	IAmb	03 08 32.2	
	comp=Z,4.2nm,0.8s						
YKA	Yellowknife Ar	53.16	346	P	P	03 09 27.5	0.0
	comp=Z,1.7nm,0.9s,baz=144,slow=7.7,SNR=18						
YKA				LR	LR	03 35 10.4	
	comp=Z,30nm,18.9s,baz=0.0,slow=40						
ILAR	Eielson Array	65.26	337	P	P	03 10 51.8	+0.6
	comp=Z,0.6nm,0.7s,baz=166,slow=4.7,SNR=6.4						
ILAR	Eielson Array	65.26	337	P	P	03 10 51.2	0.0
TORD	Torodi Ar. Bea	88.42	77	P	P	03 13 02.4	0.0
	comp=Z,0.3nm,0.5s,baz=290,slow=6.0,SNR=7.1						
CMAR	Chiang Mai Arr	148.23	345	PKPbc	PKPab	03 19 59.5	+0.3
	comp=Z,1.0nm,0.3s,baz=328,slow=3.1,SNR=6.5						

NNC 10 03:00:19.5±0.5, 42.86N×77.97E, h0km±3km, mb2.5, mpv2.8, Error ellipse: s-maj=4.5km s-min=1.5km az=177.0
KRNET 10 03:00:20.6±0.1, 42.86N×77.95E, h18km, mb2.6
SOME 10 03:00:20.7, 42.87N×77.95E, h15km
ISC 10 03:00:20.2±0.9, 42.86N±0.02×77.97E±0.02, h12km±8km, n53, σ0.72/101, 15C-9D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANVS	Anan'yevo	0.23	252	⇑iP	Pg	03 00 25.3	+0.1
	baz=51						
ANVS				⇑iS	Sg	03 00 28.9	+0.3
	baz=51						
SATY	Saty	0.38	58	eP	Pg	03 00 27.8	-0.1
	7.8nm,0.1s						
SATY				eS	Sg	03 00 33.1	+0.1
	51nm,0.1s						
SATY	Saty	0.38	58	P	Pg	03 00 27.7	-0.1
	7.8nm,0.1s						
SATY				S	Sg	03 00 32.6	-0.3
	51nm,0.1s						
ZHN	Zhinishke	0.46	48	eP	Pg	03 00 29.2	-0.1
	4.1nm,0.1s						
ZHN				eS	Sg	03 00 35.5	0.0
	9.1nm,0.1s						
ZHN	Zhinishke	0.46	48	P	Pg	03 00 29.2	-0.1
	4.6nm,0.1s						
ZHN				S	Sg	03 00 35.3	-0.2
	8.9nm,0.2s						
PRZ	Przheval'sk	0.49	139	⇑iP	Pb	03 00 31.0	+0.1
	baz=37						
PRZ				⇑iS	Sg	03 00 37.7	+1.3
	baz=37						
KURS	Kuram	0.65	13	eP	Pg	03 00 32.7	-0.1
	baz=14						
KURS				eS	Sg	03 00 41.5	+0.1
	baz=14						
KURS	Kuram	0.65	13	eP	Pg	03 00 32.7	-0.1
	1.1nm,0.0s						
KURS				eS	Sg	03 00 41.5	+0.1
	6.1nm,0.1s						
KURS	Kuram	0.65	13	P	Pg	03 00 32.7	-0.1
	1.2nm,0.1s						
KURS				S	Sg	03 00 41.3	0.0
	6.1nm,0.2s						
KOTS	Kotyrbulak	0.73	301	eP	Pg	03 00 34.2	-0.2
	baz=1.0						
KOTS				eS	Sg	03 00 43.9	-0.1
	baz=1.0						
KOTS	Kotyrbulak	0.73	301	eP	Pg	03 00 34.2	-0.2
	29nm,0.1s						
KOTS				eS	Sg	03 00 43.8	-0.1
	3.8nm,0.2s						
KOTS	Kotyrbulak	0.73	301	P	Pg	03 00 34.1	-0.2
	30nm,0.1s						
KOTS				S	Sg	03 00 43.7	-0.3
	3.8nm,0.2s						
MDOK	Medeo	0.74	295	eP	Pg	03 00 34.5	0.0
	baz=95						
MDOK				eS	Sg	03 00 44.5	+0.2
	baz=95						
MDOK	Medeo	0.74	295	eP	Pg	03 00 34.5	0.0
	2.3nm,0.1s						
MDOK				eS	Sg	03 00 44.5	+0.2
	3.0nm,0.1s						
MDOK	Medeo	0.74	295	Pg	Pg	03 00 34.2	-0.4
	9.4nm,0.1s						
MDOK				Lg	Lg	03 00 43.8	
	3.2nm,0.2s						
TNSS	Tian-Shan	0.77	284	eP	Pg	03 00 35.2	0.0
	baz=84						
TNSS				eS	Sg	03 00 45.7	+0.4
	baz=84						
TNSS	Tian-Shan	0.77	284	eP	Pg	03 00 35.2	0.0
	1.2nm,0.0s						
TNSS				eS	Sg	03 00 45.7	+0.4
	2.1nm,0.1s						
TNSS	Tian-Shan	0.77	284	P	Pg	03 00 34.8	-0.3
	1.5nm,0.2s						
TNSS				S	Sg	03 00 44.9	-0.4
	3.0nm,0.3s						
KPKS	Kokpek	0.81	40	eP	Pg	03 00 35.5	-0.2
	baz=42						
KPKS				eS	Sg	03 00 46.1	-0.2
	baz=42						
KPKS	Kokpek	0.81	40	eP	Pg	03 00 35.5	-0.2
	3.0nm,0.1s						
KPKS				eS	Sg	03 00 46.1	-0.2
	9.7nm,0.1s						
UZB	Uzynbulak	0.83	69	eP	Pg	03 00 35.8	-0.4
	1.0nm,0.0s						
UZB				eS	Sg	03 00 46.6	-0.4
	5.7nm,0.1s						
UZB	Uzynbulak	0.83	69	P	Pg	03 00 35.5	-0.7
	1.9nm,0.2s						
UZB				S	Sg	03 00 46.2	-0.9
	6.7nm,0.2s						
KDJ	Kajisay	0.93	219	⇑iP	Pb	03 00 37.8	-0.5
	baz=18						
KDJ				⇑iS	Sb	03 00 49.8	-0.9
	baz=18						
IZV	Izvestkoviy	1.01	281	eP	Pb	03 00 39.6	-0.1
	baz=81						
IZV				eS	Sb	03 00 53.2	+0.4
	baz=81						
IZV	Izvestkoviy	1.01	281	eP	Pb	03 00 39.6	-0.1
	3.3nm,0.1s						
IZV				eS	Sg	03 00 53.3	+0.4
	6.0nm,0.1s						
IZV	Izvestkoviy	1.01	281	P	Pb	03 00 39.2	-0.5
	4.6nm,0.1s						
IZV				S	Sb	03 00 52.6	-0.4
	7.6nm,0.2s						
SHLS	Shalkode	1.14	74	P	Pg	03 00 47.9	+5.8
	3.4nm,0.2s						
SHLS				S	Sn	03 01 07.3	+10
	5.0nm,0.3s						
PDGK	Podgornoye	1.21	67	P	Pn	03 00 42.7	-0.4
	0.6nm,0.2s						
PDGK				S	Sb	03 00 58.5	-0.3
	1.6nm,0.2s						
PDGK	Podgornoye	1.21	67	⇑P	Pn	03 00 42.1	-1.0
	0.7nm,0.5s						
PDGK				⇑S	Sb	03 00 58.4	-0.5
	1.4nm,0.4s						
CHKK	Chushkaly	1.23	325	eP	Pb	03 00 43.4	+0.1
	baz=26						
CHKK				eS	Sn	03 00 59.6	-0.1
	baz=26						
CHKK	Chushkaly	1.23	325	eP	Pb	03 00 43.4	+0.1
	1.3nm,0.1s						
CHKK				eS	Sn	03 00 59.6	-0.1
	5.7nm,0.1s						
CHKK	Chushkaly	1.23	325	P	Pn	03 00 43.1	-0.1
	2.0nm,0.2s						
CHKK				S	Sn	03 00 59.5	-0.3
KTBS	Karatobe	1.27	313	eP	Pb	03 00 44.2	+0.2
	2.8nm,0.1s						
KTBS				eS	Sg	03 01 01.1	0.0
	3.4nm,0.2s						
KTBS	Karatobe	1.27	313	P	Pn	03 00 43.8	0.0
	2.8nm,0.1s						
KTBS				S	Sn	03 01 00.6	-0.3
	6.8nm,0.3s						
ARXS	Arharly	1.36	356	eP	Pb	03 00 45.7	+0.1
	1.3nm,0.2s						
ARXS				eS	Sg	03 01 03.7	-0.3
	3.6nm,0.1s						
ARXS	Arharly	1.36	356	P	Pb	03 00 45.7	+0.1
	1.6nm,0.3s						
ARXS				S	Sb	03 01 03.5	+0.5
	3.7nm,0.2s						
ULHL	Ulahol	1.41	245	⇓eP	Pb	03 00 46.2	-0.4
	baz=45						
ULHL				⇓iS	Sb	03 01 04.7	0.0
	baz=45						
KST	Kastek	1.48	278	eP	Pb	03 00 47.9	+0.2
	baz=78						
KST				eS	Sg	03 01 07.4	-0.5
	baz=78						
KST	Kastek	1.48	278	eP	Pb	03 00 47.9	+0.2
	1.7nm,0.1s						
KST				eS	Sg	03 01 07.4	-0.5
	1.4nm,0.2s						
KST	Kastek	1.48	278	P	Pb	03 00 47.6	-0.2
	4.0nm,0.2s						
KST				S	Sb	03 01 07.1	+0.5
	2.2nm,0.2s						
BOOM	Boomskoye usch	1.54	257	⇓iP	Pb	03 00 48.7	0.0
	baz=57						
BOOM				⇓iS	Sb	03 01 08.5	+0.3
	baz=57						
KUU	Kurty	1.58	312	eP	Pb	03 00 49.5	+0.2
	baz=12						
KUU				eS	Sg	03 01 10.1	-0.8
	baz=12						
KUU	Kurty	1.58	312	eP	Pb	03 00 49.5	+0.2
	0.9nm,0.1s						
KUU				eS	Sg	03 01 10.1	-0.8
	11nm,0.2s						
KUU	Kurty	1.58	312	P	Pb	03 00 49.3	0.0
	1.2nm,0.2s						
KUU				S	Sb	03 01 09.8	+0.6
	12nm,0.3s						
KRBS	Karabastau	1.87	297	eP	Pb	03 00 54.7	+0.3
	0.4nm,0.1s						
KRBS				eS	Sb	03 01 19.0	+1.2
	1.4nm,0.2s						
DJR	Jarkent	1.98	41	eP	Pb	03 00 56.8	+0.5
	0.3nm,0.1s						
DJR				eS	Sb	03 01 22.5	+1.6
	3.4nm,0.2s						
DJR	Jarkent	1.98	41	Pg	Pb	03 00 57.0	+0.7
	0.5nm,0.2s						
DJR				Lg	Lg	03 01 22.7	
	3.3nm,0.2s						
KZA	Kyzart	2.15	250	⇑iP	Pb	03 00 58.4	-1.0
	baz=50						
KZA				⇑iS	Sb	03 01 25.9	-0.3
	baz=50						
KBK	Karagaybulak	2.23	266	⇑iP	Pb	03 00 59.4	-1.1
	baz=66						
KBK				⇑iS	Sb	03 01 27.6	-0.6
	baz=66						
AAK	Ala-Archa	2.57	266	⇑iP	Pn	03 01 03.9	+2.2
	baz=66						
AAK				⇑iS	Sb	03 01 35.3	-2.5
	baz=66						
AAK	Ala-Archa	2.57	266	⇓Pg	Pb	03 01 05.0	-1.2
	0.6nm,0.6s						
AAK				⇑Lg	Lg	03 01 40.2	
	1.3nm,0.5s						
USP	Ospenovka	2.57	280	⇓iP	Pb	03 01 04.1	-2.2
	baz=80						
USP				⇓iS	Sb	03 01 35.6	-2.3
	baz=80						
UCH	Uchtor	2.63	257	⇓iP	Pn	03 01 04.8	+2.0
	baz=57						
UCH				⇓iS	Sn	03 01 36.9	+2.0
	baz=57						

IDC 10 03:29:11.4±2.1, 5.83S×146.40E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.6/18, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=81.6km s-min=26.1km az=111.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.28	219	P	Pn	03 33 26.3	-0.4
	0.3nm,0.3s,baz=40,slow=12,SNR=8.7						
ASAR	Alice Springs	21.43	213	P	P	03 34 01.8	+0.5
	0.5nm,0.5s,baz=46,slow=9.1,SNR=4.5						
USRK	Ussuriysk Ar.	51.47	347	P	P	03 38 19.8	+1.3
	1.3nm,0.5s,baz=160,slow=5.5,SNR=4.9						
MKAR	Makanchi Array	76.98	321	P	P	03 41 05.3	-0.8
	0.2nm,0.5s,baz=93,slow=7.2,SNR=3.5						
ILAR	Eielson Array	85.56	23	P	P	03 41 51.0	-0.3
	0.2nm,0.6s,baz=264,slow=5.0,SNR=5.0						

THE 10 03:54:19.8, 38.19N×20.42E, h12km, ML3.1/3, Error ellipse: s-maj=0.8km s-min=0.5km az=250.0
ATH 10 03:54:19.6, 38.20N×20.40E, h12km±1km, ML2.6/5, Error ellipse: s-maj=1.7km s-min=0.9km az=249.0
ISC 10 03:54:19.5±1.1, 38.20N±0.03×20.42E±0.04, h13km±5km, n29, σ0.37/49, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXRA	Lixouri, Kepha	0.01	78	P	Pg	03 54 21.9	+0.1
LXRA				S	Sg	03 54 23.5	+0.1
LXR1	Lixouri, Cepha	0.02	77	P	Pg	03 54 21.9	+0.1
LXR1				S	Sg	03 54 23.6	+0.2
CHV1	Chavriata, Kef	0.03	245	P	Pg	03 54 21.9	0.0
CHV1				S	Sg	03 54 23.6	+0.1
ARGA	Argostoli. Kep	0.05	113	P	Pg	03 54 22.0	0.0
ARGA				S	Sg	03 54 23.6	-0.2
KEF3	Kipouria, Keph	0.06	276	P	Pg	03 54 22.1	0.0
KEF3				S	Sg	03 54 23.8	0.0
ARG2	Argostoli	0.06	109	P	Pg	03 54 22.1	0.0
ARG2				S	Sg	03 54 23.8	-0.1
KEF4	Livadi, Kephal	0.06	5	P	Pg	03 54 22.2	+0.1
KEF4				S	Sg	03 54 24.1	+0.1
KEF2	Argostoli. Kep	0.06	120	P	Pg	03 54 22.1	0.0
KEF2				S	Sg	03 54 23.7	-0.2
KEF1	Kardakata, Kep	0.09	27	P	Pg	03 54 22.5	+0.1
KEF1				S	Sg	03 54 24.4	-0.1
VLS	Valsamata	0.14	98	P	Pg	03 54 23.0	0.0
VLS				S	Sg	03 54 25.5	0.0
	14µm,0.1s						
VLS	Valsamata	0.14	98	P	Pg	03 54 23.0	0.0
VLS				S	Sg	03 54 25.5	0.0
VSK1	VASILIKIADES	0.24	28	P	Pg	03 54 24.9	+0.2
VSK1				S	Sg	03 54 29.1	+0.9
	12µm,0.2s						

KONA Konidatara, Ke 0.26 28 P Pg 03 54 25.2 +0.2
KONA S Sg 03 54 29.3 +0.7
VLMS Volimes, Zakyn 0.37 149 P Pg 03 54 27.1 +0.1
VLMS S Sg 03 54 33.1 +1.0
VLMS AML AML 03 54 34.2
comp=E,4505μm,0.1s
VLMS AML AML 03 54 35.5
comp=N,5317μm,0.3s
EVGI Lefkada island 0.46 24 P Pg 03 54 28.6 -0.1
EVGI S Sb 03 54 36.2 -0.2
EVGI Lefkada island 0.46 24 P Pg 03 54 28.6 -0.1
MGNA Meganis 0.54 32 P Pg 03 54 30.0 -0.3
MGNA S Sg 03 54 37.2 -0.2
MGNA AML AML 03 54 39.0
comp=N,2983μm,0.1s
MGNA AML AML 03 54 39.2
comp=E,2207μm,0.1s
LKD2 Lefkada island 0.62 18 P Pg 03 54 31.4 -0.3
LKD2 Lefkada island 0.62 18 P Pg 03 54 31.4 -0.3
LKD2 S Sg 03 54 39.9 0.0
LKD2 AML AML 03 54 47.1
comp=N,679μm,0.2s
LKD2 AML AML 03 54 48.9
comp=E,836μm,0.2s
AST1 Astakos 0.63 57 P Pg 03 54 31.6 -0.2
AST1 S Sg 03 54 41.4 +1.2
comp=E,1μm,0.3s
TSLK Tsoukalades, L 0.65 16 P Pg 03 54 32.0 -0.3
TSLK Tsoukalades, L 0.65 16 P Pg 03 54 32.1 -0.3
TSLK S Sb 03 54 42.0 +0.2
TSLK AML AML 03 54 49.4
comp=E,1007μm,0.3s
TSLK AML AML 03 54 49.8
comp=N,938μm,0.6s
RLS Riolos of Patr 0.84 99 P Pg 03 54 35.4 -0.4
RLS Riolos of Patr 0.84 99 P Pg 03 54 35.3 -0.4
RLS S Sg 03 54 47.7 +0.9
RLS AML AML 03 54 55.7
comp=E,304μm,0.3s
RLS AML AML 03 54 55.8
comp=N,334μm,0.3s
PVO Paravola 0.97 64 P Pg 03 54 38.1 -0.1
TRIZ Trizonia 1.31 82 P Pn 03 54 43.0 -0.6
IGT Igoumenitsa 1.33 357 P Pn 03 54 44.0 +0.1
IGT Igoumenitsa 1.33 357 P Pg 03 54 45.2 0.0
KLV Kalavryta, Ach 1.38 96 P Pn 03 54 44.4 -0.1

SJA 10 04:03:02.4±0.7, 24.99S×69.73W, h28km±4km, ML3.6, MW3.4
GUC 10 04:03:03.6±0.8, 24.91S×69.96W, h59km±6km, ML3.5
ISC 10 04:03:05.5±1.7, 24.95S±0.06×69.99W±0.07, h62km±12km, n14, σ1§28/25, 3C-1D, Northern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

GO02 Mina Guanaco 0.42 121 ⇓iP Pn 04 03 16.6 -0.6
GO02 eS Sn 04 03 25.7 +0.1
GO02 IAML 04 03 26.5
comp=E,5μm,0.2s
PB14 IPOC Station P 0.49 310 ⇑iP Pn 04 03 17.3 -0.6
PB14 eS Sn 04 03 27.1 +0.2
PB14 IPOC Station P 0.49 310 iP Pn 04 03 17.4 -0.6
PB14 eS Sn 04 03 27.9 +1.0
PB10 IPOC Station P 1.52 340 ⇑iP Pn 04 03 29.2 -1.3
PB10 eS Sn 04 03 49.0 -0.3
PB10 IAML 04 03 54.7
comp=N,381nm,0.5s
PB10 IPOC Station P 1.52 340 eS Sn 04 03 53.2 +4.0
PB15 IPOC Station P 1.79 15 ⇑iP Pn 04 03 33.8 -0.6
PB15 eS Sn 04 03 56.5 +0.3
PB15 IPOC Station P 1.79 15 iP Pn 04 03 34.1 -0.3
PB15 eS Sn 04 03 57.4 +1.1
PB06 IPOC Station P 2.26 10 eP Pn 04 03 40.2 -0.5
PB06 eS Sn 04 04 08.4 +0.8
PB06 IAML 04 04 12.3
comp=E,465nm,0.5s
PB06 IPOC Station P 2.26 10 iP Pn 04 03 40.3 -0.5
PB06 eS Sn 04 04 09.5 +1.9
LVC Limon Verde 2.52 23 iP Pn 04 03 43.8 -0.7
LVC eS Sn 04 04 14.8 +0.5
PB04 IPOC Station P 2.60 357 eP Pn 04 03 42.9 -2.5
PB04 eS Sn 04 04 16.1 +0.1
PB04 IAML 04 04 22.4
comp=E,327nm,0.4s
GO03 Copiap 2.65 185 iP Pn 04 03 45.7 -0.1
PB03 IPOC Station P 2.89 4 eP Pn 04 03 48.2 -1.2
PB03 eS Sn 04 04 22.9 -0.1
PB03 IAML 04 04 31.4
comp=E,143nm,0.1s
PB09 IPOC Station P 3.21 12 iP Pn 04 03 53.9 +0.3
PB09 IAML 04 04 43.5
comp=Z,168nm,0.4s

IDC 10 04:09:49.4±3.1, 17.21N×105.71W, h0km, mb3.9/7, mb1 4.3/10, mb1mx4.0/42, mbtmp4.0/10, ML3.5/3, MS4.4/29, Ms1 4.4/29, ms1mx4.4/38, Error ellipse: s-maj=57.2km s-min=27.9km az=8.0
GCMT 10 04:09:53.0±0.2, 17.66N±0.01×105.53W±0.01, h19km, MW5.2/121, Moment Tensor Solution. s77,c111; s121,c223; Duration: 1§0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.01±.01; $M_{\theta\theta}$-0.75±.01; $M_{\phi\phi}$0.75±.01; $M_{r\theta}$-0.08±.03; $M_{r\phi}$-0.13±.01; $M_{\theta\phi}$0.07±.03; Best double couple: $M_0$0.76800×10^{17} NP1:ϕ_s40.00000°, δ82.00000°, λ0.00000°. NP2:ϕ_s130.00000°, δ90.00000°, λ-172.00000°. Principal axes: T 0.7720, Plg5.0000°, Azm265.0000°; N -0.0080, Plg82.0000°, Azm132.0000°; P -0.7640, Plg6.0000°, Azm355.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC 10 04:09:57.0±3.0, 17.97N±0.06×105.02W±0.05, h10km±2km, mb4.6/161, Md4.6/19(MEX) Error ellipse: s-maj=10.4km s-min=7.3km az=144.0
ANF 10 04:09:56.3±0.4, 17.61N×105.36W, h30km, Error ellipse: s-maj=7.3km s-min=2.0km az=15.0
MEX 10 04:09:57.1±0.9, 17.90N×105.42W, h10km, MD4.6
ISC 10 04:09:56.5±0.8, 17.95N±0.07×105.05W±0.05, h10km, n418, σ1§37/336, mb4.5/47, MS4.5/29, Off coast of Jalisco

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

CJM Chamela 1.54 0 eP Pn 04 10 22.4 -1.7
CJM iS Sn 04 10 42.0 -2.1
R15V 1.58 40 Pb 04 10 25.4 -0.5
R15V 1.58 40 eP Pb 04 10 25.4 -0.5
MMIG Aquila 1.66 78 Pn 04 10 24.4 -1.2
MMIG Sg 04 10 49.3 -0.6
MMIG Aquila 1.66 78 eP Pn 04 10 24.4 -1.2
MMIG eS Sg 04 10 49.3 -0.6
COIG Colima 1.78 46 eP Pb 04 10 28.1 +0.6
EZ5V 2.05 42 Pb 04 10 32.9 -1.1
EZ5V 2.05 42 eP Pb 04 10 32.9 -1.1
ANIG Ahuacatlan 3.13 9 Pn 04 10 46.6 +0.6
ANIG Sb 04 11 28.9 -1.7
ANIG Ahuacatlan 3.13 9 eP Pn 04 10 46.6 +0.6
ANIG iS Sn 04 11 23.2 -0.3
ZIIG Zihuatanejo 3.44 95 iP Pn 04 10 49.6 -0.5
MOIG Morelia 4.04 64 Pn 04 11 01.5 +2.8
MOIG Morelia 4.04 64 Pn 04 11 01.0 +2.3
MOIG Morelia 4.04 64 eP Pn 04 11 01.0 +2.3
ARIG Puente Sto Nin 4.49 85 Pn 04 11 05.5 +0.9
ARIG Puente Sto Nin 4.49 85 eP Pn 04 11 05.5 +0.9
ZAIG Zacatecas 5.33 26 Pn 04 11 18.3 +1.9
H06E1 SOCORRO T-PHAS 5.64 279 Pn Pn 04 11 07.9 -13
H06E1 T T 04 16 39.0
SNR=442
H06S1 SOCORRO T 5.66 279 T T 04 16 37.2
SNR=57
UNM Universidad Na 5.74 75 Pn Pn 04 11 25.2 +3.2
TLIG Tlapa 6.19 93 Pn 04 11 29.6 +1.5
TLIG Sn Sn 04 12 31.9 -7.3
LPIG La Paz 7.85 322 LR LR 04 14 18.8
comp=Z,5μm,18.8s,baz=146,slow=33
LPIG La Paz 7.85 322 Pn 04 11 50.2 -0.5
LPIG Sn 04 13 19.3 -0.3
LPIG La Paz 7.85 322 eP Pn 04 11 50.2 -0.5
LPIG iS Sn 04 13 19.3 -0.3
HPIG 8.96 356 Pn 04 12 09.4 +3.2
HPIG ScP ScP 04 22 03.5 +0.3
CMIG Matias Romero 9.74 93 Pn Pn 04 12 19.8 +3.1
0.2nm,0.3s,baz=271,slow=15,SNR=5.1
CMIG LR LR 04 15 57.6
comp=Z,5μm,21.0s,baz=274,slow=36
TX31 Lajitas Ar. Si 11.40 6 Pn 04 12 45.1 +5.5
TX32 Lajitas Array 11.40 6 Pn 04 12 45.2 +5.6
TXAR Lajitas Array 11.40 6 Pn Pn 04 12 45.0 +5.4
0.2nm,0.3s,baz=191,slow=12,SNR=41
TXAR Lajitas Array 11.40 6 Pn 04 12 43.6 +4.0
833A Chaparral WMA, 11.56 26 Pn 04 12 47.3 +5.6
833A Chaparral WMA, 11.56 26 P Pn 04 12 47.6 +5.9
baz=208
HSIG 12.27 335 Pn 04 12 52.0 +0.7
CCIG Comitan 12.46 96 Pn Pn 04 12 57.5 +3.4
JCT Junction City 13.36 20 Pn 04 13 09.7 +3.5
JCT Junction City 13.36 20 P P 04 13 11.7 -4.2
baz=203
MNTX Cornudas Mount 13.69 359 Pn 04 13 12.3 +1.5
MNTX Cornudas Mount 13.69 359 P Pn 04 13 14.6 +3.8
baz=180,SNR=10
319A Douglas 13.91 345 Pn 04 13 17.7 +3.9
APG El Apazote 14.30 100 LR LR 04 18 20.4
comp=Z,2μm,19.2s,baz=290,slow=34
435B Jarrell 14.47 27 P 04 13 25.4 -2.9
435B Jarrell 14.47 27 P P 04 13 26.0 -2.2
baz=210
HKT Hockley 14.61 33 Pn 04 13 23.8 +0.5
121A Cookes Peak, D 14.73 351 Pn 04 13 24.7 -0.4
121A Cookes Peak, D 14.73 351 P P 04 13 28.6 -2.7
baz=171
TUC Tucson 15.21 341 Pn 04 13 31.4 0.0
TUC Tucson 15.21 341 P Pn 04 13 33.2 +1.8
baz=160
ABTX Abilene, Hawle 15.40 17 IAmb IAmb 04 13 46.9
comp=Z,58nm,1.4s
ABTX Abilene, Hawle 15.40 17 P P 04 13 37.0 -1.6
baz=200
WHTX Lake Whitney, 15.58 25 Pn Pn 04 13 37.8 +1.6
WHTX Lake Whitney, 15.58 25 P P 04 13 39.6 -0.9
baz=208
214A Organ Pipe Nat 15.61 335 P Pn 04 13 37.4 +0.7
baz=153
TEIG Tepich 16.02 79 LR LR 04 21 28.6
comp=Z,2μm,18.7s,baz=140,slow=42
MSTX Muleshoe 16.09 7 IAmb IAmb 04 13 60.0
comp=Z,74nm,1.3s
MSTX Sn 04 16 39.2 -2.2
MSTX Muleshoe 16.09 7 P P 04 13 45.8 -0.5
baz=189,SNR=18
Y22D IRIS PASSCAL I 16.15 354 P 04 13 46.6 -0.3
Y22D IRIS PASSCAL I 16.15 354 P P 04 13 46.7 -0.3
baz=175
NATX Nacogdoches 16.66 32 P P 04 13 53.5 +1.0
NATX IAmb IAmb 04 14 02.9
comp=Z,95nm,1.4s
NATX Nacogdoches 16.66 32 P P 04 13 53.1 +0.6
baz=217
113A Mohawk Valley, 16.71 334 P Pn 04 13 52.8 -0.3
ANMO Albuquerque 16.98 356 P P 04 13 57.8 +1.5
comp=Z,0.1nm,0.3s,baz=177,slow=13,SNR=12
ANMO Albuquerque 16.98 356 P P 04 13 57.5 +1.2
ANMO Albuquerque 16.98 356 P P 04 13 57.5 +1.2
baz=176
AMTX Amarillo 17.13 9 IAmb IAmb 04 14 19.1
comp=Z,50nm,1.4s
AMTX Amarillo 17.13 9 P P 04 13 58.4 +0.6
baz=192
GLA Glamis 17.42 332 Pn 04 14 01.4 +0.4
GLA Glamis 17.42 332 P Pn 04 13 59.9 +0.2
baz=149
TGUH Tegucigalpa,Un 17.52 100 P 04 14 04.5 +2.1
TGUH IAmb IAmb 04 14 19.1
comp=Z,45nm,1.1s
W18A Petrified Fore 17.60 347 IAmb IAmb 04 14 17.7
comp=Z,40nm,1.4s
W18A Petrified Fore 17.60 347 P P 04 14 03.9 +0.8
baz=166
WMOK Wichita Mounta 17.63 17 P P 04 14 04.5 +1.2
baz=201,SNR=8.3
342A Flagon Creek P 17.66 38 Pn 04 14 02.4 -0.2
342A IAmb IAmb 04 14 16.0
comp=Z,45nm,1.1s
IKP In-Ko-Pah, Jac 17.71 328 P Pn 04 14 03.5 +0.2
baz=145
SWSC Sam W. Stewart 17.79 329 P Pn 04 14 04.5 +0.2
baz=146
Y12C Blythe 17.88 333 P Pn 04 14 04.8 -0.6
baz=151
MONP2 Monument Peak 18.06 328 P Pn 04 14 07.3 -0.5
baz=144
PDMCI Parker Dam,Lak 18.20 335 P Pn 04 14 09.7 +0.4
baz=153
BC3 Big Chuckawall 18.21 331 P Pn 04 14 09.7 +0.2
baz=148
WUAZ Wupatki 18.38 343 IAmb IAmb 04 14 33.0
comp=Z,33nm,1.2s
WUAZ Wupatki 18.38 343 P P 04 14 12.6 +0.9
baz=162
109C Camp Elliot, M 18.41 326 P 04 14 12.3 +0.4
109C Camp Elliot, M 18.41 326 P P 04 14 11.0 -0.8
baz=142
IRM Iron Mountain 18.49 333 P P 04 14 13.0 +0.2
baz=150
FNO Franklin 18.54 20 P 04 14 13.1 -0.2
XPFO Pion Flat 18.65 329 P Pn 04 14 15.7 +0.8
PFO Pinyon Flats O 18.65 329 P Pn 04 14 17.0 +2.0
comp=Z,0.1nm,0.3s,baz=153,slow=9.0,SNR=4.2
PFO LR LR 04 20 24.1
comp=Z,737nm,21.7s,baz=162,slow=34
PFO Pinyon Flats O 18.65 329 P Pn 04 14 15.5 +0.5
PFO Pinyon Flats O 18.65 329 P P 04 14 14.2 -0.4
baz=145
OKCFA Oklahoma City 18.66 20 P P 04 14 15.9 +0.9
BELC Belle Mtn. Jos 18.75 331 P Pn 04 14 15.2 -0.5
baz=147
NEE2 Needles Airpor 18.80 335 P Pn 04 14 16.0 -0.1
baz=152
Z41A Richland Creek 18.80 33 P Pn 04 14 16.7 +0.1
Z41A IAmb IAmb 04 14 32.7
comp=Z,57nm,1.4s
Z41A Richland Creek 18.80 33 P Pn 04 14 18.9 +2.3
baz=219
W13A Hualapai Mount 18.80 337 P Pn 04 14 17.8 +0.9
MURC Murrieta 19.01 327 P Pn 04 14 18.7 +0.2
baz=144
U32A Winter Ranch, 19.12 15 P P 04 14 20.3 +0.6
U32A IAmb IAmb 04 14 33.0
comp=Z,73nm,1.5s
T25A Trinidad 19.13 2 IAmb IAmb 04 14 33.8
comp=Z,59nm,1.4s
T25A Trinidad 19.13 2 P Pn 04 14 22.2 +1.4
baz=183,SNR=12
143A Socs Landing, 19.16 37 P P 04 14 20.1 +0.1
143A IAmb IAmb 04 14 33.7
comp=Z,34nm,1.1s
GMRC Granite Mounta 19.25 333 P P 04 14 21.5 +0.3
baz=149
SCI2 San Clemente I 19.27 324 P P 04 14 21.3 0.0
baz=139
VBMS Vicksburg 19.34 40 P Pn 04 14 22.9 -0.3
VBMS IAmb IAmb 04 14 27.7
comp=Z,43nm,1.4s
VBMS Vicksburg 19.34 40 P Pn 04 14 24.8 +1.7
baz=226
BBRC Big Bear Solar 19.40 329 P P 04 14 22.8 -0.2
baz=145
MVCO Mesa Verde 19.43 352 P Pn 04 14 24.2 -0.2
baz=171
MIAR Mount Ida 19.45 30 P Pn 04 14 25.6 +1.2
baz=215
346A Big Creek Wild 19.45 44 P Pn 04 14 24.9 +0.3
346A IAmb IAmb 04 14 41.9
comp=Z,21nm,0.9s
U15A North Rim 19.49 342 IAmb IAmb 04 14 42.6
comp=Z,43nm,1.4s
CIS Catalina Islan 19.51 325 P P 04 14 23.4 -0.6
baz=140
HEC Hector,Ludlow 19.59 331 P P 04 14 24.9 0.0
baz=148
FMP Fort Macarthur 19.68 325 P P 04 14 25.0 -0.7
baz=141
TUL1 Leonard 19.68 23 IAmb IAmb 04 14 33.9
comp=Z,73nm,1.4s
TUL1 Leonard 19.68 23 P Pn 04 14 27.7 +0.5
baz=207,SNR=5.4
SDCO Great Sand Dun 19.73 359 P Pn 04 14 28.4 +0.3
baz=180,SNR=21
BFSC Mount Baldy Ra 19.75 328 P P 04 14 25.9 -0.8
baz=143
X40A Basin Creek Fa 19.76 31 P Pn 04 14 27.8 -0.3
X40A Basin Creek Fa 19.76 31 P Pn 04 14 28.8 +0.7
baz=217
S22A 4UR Ranch, Cre 19.79 356 IAmb IAmb 04 14 43.0
comp=Z,29nm,1.3s
S22A 4UR Ranch, Cre 19.79 356 P Pn 04 14 29.1 +0.4
baz=176,SNR=12
W39A Magazine 19.89 28 IAmb IAmb 04 14 41.5
comp=Z,52nm,1.4s
W39A Magazine 19.89 28 P Pn 04 14 30.8 +1.1
baz=213,SNR=10
TUQ Turquoise Moun 19.92 333 P P 04 14 27.8 -0.7
baz=150
RRX Edison Barstow 19.93 330 P P 04 14 28.0 -0.6
baz=146
PASC Pasadena Art C 19.97 327 Pn Pn 04 14 31.7 +1.0
SNCC San Nicolas Is 20.02 322 P P 04 14 29.1 -0.5
baz=137
ACON Acoyapa 20.10 104 P Pn 04 14 32.0 -0.3
DECC Green Verdugo 20.11 326 P P 04 14 29.8 -0.7
baz=142
GSC Goldstone, Bar 20.20 331 P P 04 14 31.7 +0.2
baz=147
EDW2 Edwards Air Fo 20.43 328 P P 04 14 33.3 -0.7
baz=144
SHOC Shoshone, Teco 20.46 333 P P 04 14 34.1 -0.2
baz=149
W41B Gary Mavity, V 20.59 31 IAmb IAmb 04 14 50.7
comp=Z,34nm,1.3s
W41B Gary Mavity, V 20.59 31 P Pn 04 14 38.0 +0.1
baz=217,SNR=11
OSI Osito Audit: C 20.59 326 P P 04 14 34.6 -1.2
baz=142
WHAR Wooly Hollow 20.67 31 IAmb IAmb 04 14 51.5
comp=Z,55nm,1.4s
HHAR Hobbs 20.74 26 IAmb IAmb 04 14 49.9
comp=Z,66nm,1.5s
X43A Marvell 20.79 35 P Pn 04 14 41.2 +1.0
baz=221
JTS Las Juntas de 20.91 109 LR LR 04 21 19.2
comp=Z,803nm,18.6s,baz=358,slow=32
Q24A Divide 20.94 360 IAmb IAmb 04 14 52.2
comp=Z,34nm,1.4s
Q24A Divide 20.94 360 P Pn 04 14 41.8 -0.5
baz=181
BRAL Brewton 20.97 48 P Pn 04 14 41.6 -0.8
baz=235
ARVC Arvin 21.05 327 P P 04 14 39.9 -0.7
baz=142
KSCO Kaye Shedlock' 21.09 5 P P 04 14 42.5 +1.3
baz=187
MPMC Manual Prospec 21.13 331 P P 04 14 41.1 -0.6
baz=147
FURC Furnace Creek, 21.19 333 P P 04 14 41.2 -1.0
baz=149
SMCO Snowmass 21.22 356 IAmb IAmb 04 15 04.0
comp=Z,39nm,1.5s
U40A Yellville 21.27 28 IAmb IAmb 04 14 55.4
comp=Z,22nm,1.2s
U40A Yellville 21.27 28 P P 04 14 44.2 +1.1
baz=214
ISA Isabella, Lake 21.29 329 P P 04 14 43.5 +0.3
ISA Isabella, Lake 21.29 329 P P 04 14 42.5 -0.8
baz=144
CBKS Cedar Bluff 21.30 11 P P 04 14 43.4 0.0
CBKS Cedar Bluff 21.30 11 P P 04 14 44.5 +1.1
baz=195
TPNV Topopah Spring 21.34 335 P P 04 14 43.9 -0.1
baz=151,SNR=10.0
DAC Darwin (Calif) 21.36 331 IAmb IAmb 04 14 58.6
comp=Z,21nm,1.2s
PKM Mcpherson Peak 21.39 325 P P 04 14 42.5 -2.0
baz=140
OXF Oxford 21.61 37 IAmb IAmb 04 15 07.8
comp=Z,59nm,1.4s
OXF Oxford 21.61 37 P P 04 14 48.5 +1.8
baz=224
CWC Cottonwood Cre 21.72 331 P P 04 14 47.0 -1.0
baz=146
VES Vestal, Richgr 21.73 328 P P 04 14 46.9 -1.1
baz=143
MET Memphis--Engin 21.76 35 P P 04 14 50.5 +2.2
ISCO Idaho Springs 21.78 359 IAmb IAmb 04 15 06.4
comp=Z,41nm,1.5s
ISCO Idaho Springs 21.78 359 P P 04 14 50.3 +1.4
baz=179,SNR=8.7
SMMC Simmler 21.80 325 P P 04 14 47.8 -1.0
baz=140
LCAR Lake Charles 21.84 32 IAmb IAmb 04 15 02.1
comp=Z,34nm,1.2s
GRAC Grapevine Rang 21.86 333 P P 04 14 48.5 -0.9
baz=148
MGMO Mountain Grove 22.20 28 IAmb IAmb 04 15 06.5
comp=Z,42nm,1.2s
VOG Valley Oaks Go 22.26 328 P P 04 14 52.7 -0.9
baz=143
O20A White River Ci 22.28 354 IAmb IAmb 04 15 01.4
comp=Z,29nm,1.4s
O20A White River Ci 22.28 354 P P 04 14 55.0 +0.9
baz=173
TIN Tinemaha, Big 22.29 331 P P 04 14 53.3 -0.8
baz=146
R11A Troy Canyon, C 22.31 338 P P 04 14 54.3 -0.1
baz=154,SNR=6.0
KSU1 Kansas State U 22.32 18 P P 04 14 55.6 +1.3
baz=202
NLU North Lily Min 22.76 346 P P 04 14 58.1 -1.1
PBMO Poplar Bluff 22.76 32 IAmb IAmb 04 15 11.6
comp=Z,35nm,1.4s
N23A Red Feather La 22.88 358 P P 04 15 01.5 +1.0
baz=179
Z50A Ashland 22.96 45 IAmb IAmb 04 15 18.8
comp=Z,27nm,1.1s
Z50A Ashland 22.96 45 P P 04 15 03.6 +2.4
baz=233
X48A Hartselle 22.99 41 P P 04 15 01.2 -0.2
MLAC Mammoth, Mammo 23.04 331 P P 04 15 01.6 -0.5
baz=146
DUG Dugway, Tooele 23.16 345 IAmb IAmb 04 15 16.4
comp=Z,15nm,1.2s
DUG Dugway, Tooele 23.16 345 P P 04 15 03.5 +0.2
baz=162,SNR=6.9
JLU Jordanelle 23.24 348 P P 04 15 04.1 -0.1
PHWY Pilot Hill 23.28 359 P P 04 15 04.6 0.0
PHWY IAmb IAmb 04 15 19.5
comp=Z,21nm,1.4s
CCM Cathedral Cave 23.40 28 P P 04 15 05.9 +0.3
CCM Cathedral Cave 23.40 28 P P 04 15 07.1 +1.6
baz=215
NV11 Mina Array Sit 23.40 333 IAmb IAmb 04 15 16.6
comp=Z,20nm,1.4s
NVAR Mina Array Bea 23.46 333 P P 04 15 06.6 +0.2
comp=Z,1.2nm,0.9s,baz=141,slow=5.8,SNR=6.4
TIGA Tifton 23.62 51 P P 04 15 10.0 +2.2
baz=240
WVT Waverly 23.67 37 P P 04 15 08.8 +0.6
WVT Waverly 23.67 37 P P 04 15 09.9 +1.7
baz=225
RYN Ryan 23.72 333 P P 04 15 08.0 -0.9
KVN Kaiserville 23.90 334 IAmb IAmb 04 15 20.4
comp=Z,16nm,1.1s
W49A Belvidere 23.91 41 P P 04 15 12.7 +2.2
baz=229,SNR=14
Y51A Rockmart 23.92 45 P P 04 15 12.7 +2.0
baz=233,SNR=9.4
DWPF Disney Wildern 23.93 61 P P 04 15 12.5 +1.6
baz=250
Z52A Williamson 23.95 47 P P 04 15 13.5 +2.6
baz=236,SNR=7.3
V48A Smith Brothers 23.98 39 IAmb IAmb 04 15 32.1
comp=Z,25nm,1.3s
WAKR Walker 24.02 331 IAmb IAmb 04 15 27.7
comp=Z,28nm,1.4s
CMB Columbia Colle 24.10 329 P P 04 15 11.8 -0.5
BGNE Belgrade 24.12 13 P P 04 15 13.7 +1.2
baz=197
ELK Elko 24.35 341 IAmb IAmb 04 15 27.5
comp=Z,16nm,1.4s
X51A Calhoun 24.46 43 IAmb IAmb 04 15 23.7
comp=Z,9.2nm,0.8s
X51A Calhoun 24.46 43 P P 04 15 17.8 +2.1
baz=232
V49A McMinnville 24.55 40 P P 04 15 18.3 +1.7
baz=229,SNR=8.2
W50A Signal Mountai 24.56 42 P P 04 15 19.8 +3.1
W50A Signal Mountai 24.56 42 P P 04 15 18.2 +1.6

baz=231,SNR=6.1
154A Montrose 24.57 49 P P 04 15 18.4 +1.8
baz=239
Y52A Lilburn 24.58 46 P P 04 15 15.6 -1.1
Y52A Lilburn 24.58 46 P P 04 15 18.7 +1.9
baz=235
Z53A Monticello 24.59 47 P P 04 15 18.0 +1.2
baz=237
K22A Casper 24.66 357 P P 04 15 18.0 +0.4
baz=177,SNR=6.1
GOGA Godfrey 24.73 47 IAmb IAmb 04 15 40.7
comp=Z,34nm,1.5s
GOGA Godfrey 24.73 47 P P 04 15 19.6 +1.4
baz=237
W51A Cleveland 24.89 42 P P 04 15 21.0 +1.4
baz=232
Y53A Monroe 24.90 46 P P 04 15 21.2 +1.6
baz=236
PAHR Pah Rah Range 24.99 333 IAmb IAmb 04 15 43.6
comp=Z,21nm,1.5s
V50A Pikevile 24.99 41 P P 04 15 21.8 +1.3
baz=230,SNR=14
PD31 Pinedale Array 25.03 352 IAmb IAmb 04 15 30.7
comp=Z,11nm,1.2s
PDAR Pinedale Array 25.03 352 P P 04 15 21.9 +0.8
comp=Z,2.8nm,1.0s,baz=170,slow=9.0,SNR=16
PDAR LR LR 04 25 19.8
comp=Z,1μm,20.1s,baz=180,slow=36
PDAR Pinedale Array 25.03 352 P P 04 15 20.2 -0.8
USIN University of 25.09 34 P P 04 15 20.8 -0.5
X52A Dahlonega 25.12 45 P P 04 15 23.4 +1.7
baz=234
U49A Red Boiling Sp 25.13 39 P P 04 15 23.3 +1.6
baz=228
AHID Auburn Hatcher 25.27 350 IAmb IAmb 04 15 41.6
comp=Z,13nm,1.4s
W52A Murphy 25.39 44 IAmb IAmb 04 15 33.5
comp=Z,14nm,1.0s
W52A Murphy 25.39 44 P P 04 15 26.0 +1.9
baz=233
X53A Estanollee 25.46 45 P P 04 15 26.1 +1.4
baz=235
Y54A Tignall 25.52 47 P P 04 15 25.4 +0.1
baz=237
V51A Loudon 25.55 42 P P 04 15 25.7 +0.2
baz=231
U50A Jamestown 25.63 40 P P 04 15 27.4 +1.2
baz=229
T49A Edmonton 25.67 38 P P 04 15 26.4 -0.2
T49A IAmb IAmb 04 15 41.8
comp=Z,12nm,1.2s
T49A Edmonton 25.67 38 P P 04 15 28.4 +1.7
baz=227
REDW Red Top Meadow 25.81 350 IAmb IAmb 04 15 46.1
comp=Z,28nm,1.2s
TKL Tuckaleechee C 25.83 43 P P 04 15 31.3 +3.3
comp=Z,1.6nm,0.7s,baz=186,slow=9.9,SNR=4.1
TKL LR LR 04 27 51.8
comp=Z,593nm,19.4s,baz=234,slow=40
TKL Tuckaleechee C 25.83 43 IAmb IAmb 04 15 50.1
comp=Z,27nm,1.4s
ORV Oroville 25.83 330 IAmb IAmb 04 15 40.1
comp=Z,13nm,1.4s
SNOW Snow King Moun 25.89 350 IAmb IAmb 04 15 41.1
comp=Z,24nm,1.1s
W53A Cullowhee 25.93 44 P P 04 15 30.3 +1.1
baz=234
SCIA State Center 25.94 20 P P 04 15 30.2 +1.2
baz=207
BG3 Lake Jocassee 25.99 45 P P 04 15 28.7 -0.8
BG3 IAmb IAmb 04 15 44.6
comp=Z,17nm,1.4s
WCI Wyandotte Cave 26.02 35 P P 04 15 30.8 +1.0
baz=224
HODGE Hodges 26.02 47 IAmb IAmb 04 15 42.1
comp=Z,26nm,1.5s
T50A Nancy 26.03 39 P P 04 15 30.8 +0.9
baz=228
V52A Sevierville 26.05 43 P P 04 15 29.9 -0.2
baz=232
FXWY Fox Creek 26.10 350 IAmb IAmb 04 15 47.2
comp=Z,18nm,1.1s
RSSD Black Hills 26.11 2 P P 04 15 29.9 -0.8
baz=183
X54A Belton 26.12 46 P P 04 15 32.4 +1.7
baz=236
U51A La Follette 26.12 41 P P 04 15 31.3 +0.6
baz=231
157A Early Branch 26.14 51 P P 04 15 32.3 +1.3
baz=241
Y55A Saluda 26.15 48 P P 04 15 32.6 +1.6
baz=238
MOOW Moose Ponds 26.17 351 IAmb IAmb 04 15 44.8
comp=Z,16nm,1.4s
S49A Springfield 26.28 37 P P 04 15 33.4 +1.3
baz=227
HDIL Hopedale 26.31 28 P P 04 15 33.1 +0.8
baz=216
V53A Saluda 26.46 44 P P 04 15 34.4 +0.5
baz=234
Y56A Pelion 26.47 49 P P 04 15 34.8 +0.9
baz=239
FLWY Flagg Ranch 26.48 351 IAmb IAmb 04 15 53.0
comp=Z,23nm,1.3s
TZTN Tazewell 26.51 41 P P 04 15 34.8 +0.5
baz=231
T51A Gray 26.53 40 P P 04 15 35.3 +0.8
baz=230
U52A Thorn Hill 26.54 42 P P 04 15 36.3 +1.8
baz=232
W54A Cherokee Point 26.54 45 P P 04 15 36.3 +1.7
baz=236
X55A Gracelyn & Ava 26.59 47 P P 04 15 35.6 +0.7
baz=238
PAULI Pauline 26.65 46 IAmb IAmb 04 15 47.0
comp=Z,20nm,1.2s
Z57A Bowman 26.66 50 P P 04 15 37.0 +1.5
baz=241
ECSD EROS Data Cent 26.68 14 P P 04 15 35.8 +0.1
baz=198
R49A Shelbyville 26.69 37 P P 04 15 37.1 +1.2
baz=226
S50A Richmond 26.73 38 P P 04 15 37.3 +1.1
baz=228
H17A Grant Village 26.77 351 P P 04 15 36.5 -0.3
baz=169
Q48A North Vernon 26.83 35 P P 04 15 38.5 +1.4
baz=224
SUSD Miller 26.91 10 P P 04 15 37.2 -0.6
baz=193
NHSC New Hope 26.95 51 P P 04 15 40.1 +1.9
baz=242
X56A White Oak 27.02 48 P P 04 15 40.5 +1.7
baz=238
KMSC Kings Mountain 27.16 46 P P 04 15 42.0 +1.9
baz=237
S51A Beattyville 27.18 39 P P 04 15 40.3 0.0
S51A IAmb IAmb 04 15 56.0
comp=Z,15nm,1.2s
S51A Beattyville 27.18 39 P P 04 15 42.4 +2.2
baz=230
Y57A Sumter 27.24 49 P P 04 15 42.8 +2.1
baz=240
YNE Yellowstone No 27.30 352 P P 04 15 40.5 -1.0
QLMT Earthquake Lak 27.33 350 P P 04 15 39.8 -2.0
S52A Salyersville 27.52 40 P P 04 15 44.2 +0.9
baz=230
U54A Nelsons Funny 27.61 43 P P 04 15 45.0 +0.8
baz=234
R51A Hillsboro 27.62 38 P P 04 15 45.0 +0.8
baz=229
V55A Taylorsville 27.63 45 P P 04 15 44.8 +0.5
baz=236
W56A Indian Trail 27.67 47 P P 04 15 45.4 +0.8
baz=238
M04C Macdoel 27.76 332 P P 04 15 44.0 -1.5
baz=145
JFWS Jewell Farm 27.88 24 P P 04 15 47.0 +0.5
baz=212
GCMT Greycliff 28.03 353 P P 04 15 47.0 -0.9
DLMT Dillon 28.05 349 IAmb IAmb 04 15 58.6
comp=Z,11nm,1.4s
O48A Farmland 28.09 34 P P 04 15 49.8 +1.4
baz=224
U55A TA2, Sparta 28.11 44 P P 04 15 48.9 +0.2
baz=235
YBH Yreka Blue Hor 28.11 331 LR LR 04 26 58.0
comp=Z,449nm,18.9s,baz=154,slow=36
Q51A Peebles 28.24 38 P P 04 15 49.7 0.0
Q51A IAmb IAmb 04 15 59.7
comp=Z,15nm,1.3s
Q51A Peebles 28.24 38 P P 04 15 49.5 -0.2
baz=228
P50A Jamestown 28.38 36 P P 04 15 50.8 -0.1
baz=226
N48A Decatur 28.60 33 P P 04 15 52.9 0.0
baz=223
R53A Hurricane 28.62 40 P P 04 15 53.3 +0.2
baz=231
V57A Coltrane Farms 28.63 46 P P 04 15 53.7 +0.5
baz=238
T55A Pulaski 28.63 43 P P 04 15 54.2 +0.9
baz=235
LAO LASA Array 28.68 358 P P 04 15 52.7 -0.9
baz=178
J05D Fort Rock, OR 28.73 335 P P 04 15 53.0 -1.2
baz=147
Q52A Bidwell 28.83 39 P P 04 15 56.1 +1.1
baz=230
J04D Umpqua Nationa 29.06 334 P P 04 15 56.5 -0.6
baz=146
P52A Corning 29.35 38 P P 04 16 00.3 +0.7
baz=229
O51A Pataskala 29.41 37 P P 04 16 01.7 +1.6
baz=228
P53A Whipple 29.69 39 P P 04 16 03.8 +1.2
baz=230
MSO Missoula 29.72 348 IAmb IAmb 04 16 13.4
comp=Z,9.2nm,1.2s
MSO Missoula 29.72 348 P P 04 16 02.0 -0.9
baz=164
U58A Oxford 29.74 47 P P 04 16 05.1 +2.1
baz=239
EGMT Eagleton 30.24 354 IAmb IAmb 04 16 17.4
comp=Z,15nm,1.4s
EGMT Eagleton 30.24 354 P P 04 16 07.2 -0.2
baz=172
AAM Ann Arbor 30.36 32 P P 04 16 08.0 -0.4
L50A Kingsville 30.61 34 P P 04 16 11.0 +0.3
baz=225
MCWV Mont Chateau 30.73 40 P P 04 16 13.0 +1.2
baz=232
I48A Sherman Twp 31.73 30 P P 04 16 21.1 +0.6
baz=221
NEW Newport 31.80 345 P P 04 16 20.5 -0.7
baz=159
EYMN Ely 31.91 17 P P 04 16 24.8 +2.7
EYMN Ely 31.91 17 P P 04 16 22.0 -0.1
baz=205,SNR=7.7
N55A Marion Center 31.94 39 P P 04 16 23.1 +0.6
baz=232
M54A Oil Creek Stat 31.99 37 P P 04 16 23.9 +0.9
baz=230
K52A Tillsonburg 32.24 35 P P 04 16 25.3 +0.2
baz=227
H48A Harrisville 32.29 30 P P 04 16 26.3 +0.9
baz=221
O57A Amberson 32.43 41 P P 04 16 27.7 +1.0
baz=235
N56A West Decatur 32.44 40 P P 04 16 27.7 +0.8
baz=233
B08A Colville Reser 32.49 342 IAmb IAmb 04 16 36.5
comp=Z,11nm,1.4s
M55A Ridgway 32.49 38 P P 04 16 29.3 +1.9
baz=232
SSPA Standing Stone 32.52 40 P P 04 16 28.5 +1.0
baz=234
D04E Lakebay 32.59 337 P P 04 16 27.1 -0.9
baz=148
L54A Sinclairville 32.66 37 P P 04 16 30.4 +1.7
baz=230
J52A Paris 32.68 34 P P 04 16 30.3 +1.4
baz=227
ROSC El Rosal 32.75 110 LR LR 04 28 51.9
comp=Z,182nm,19.7s,baz=328,slow=34
I51A Listowel 32.78 33 P P 04 16 30.8 +1.0
baz=226
N57A Milroy 32.80 40 P P 04 16 31.3 +1.3
baz=234
ULM Lac du Bonnet 33.06 11 P P 04 16 33.9 +1.9
comp=Z,0.7nm,0.4s,baz=206,slow=12,SNR=3.0
ULM Lac du Bonnet 33.06 11 IAmb IAmb 04 16 51.5
comp=Z,11nm,1.4s
L55A Hinsdale 33.13 38 P P 04 16 33.8 +0.9
baz=231
B05A Bryant 33.28 339 P P 04 16 33.1 -1.0
baz=150
O59A Robesonia 33.40 42 P P 04 16 36.6 +1.4
baz=236
M58A Price's Panora 33.82 40 P P 04 16 39.5 +0.5
baz=235
H52A Wyevale 33.95 33 P P 04 16 41.3 +1.4
baz=226
L57A Andrews Acres 33.95 39 P P 04 16 41.3 +1.2
baz=234
K56A Middlesex 34.09 38 P P 04 16 41.9 +0.6
baz=232
D47A Chapleau 34.19 27 P P 04 16 43.6 +1.6
baz=219
M59A Waymart 34.56 41 P P 04 16 46.4 +1.1
baz=236
H53A Bobcaygeon 34.59 34 P P 04 16 46.2 +0.7
baz=228
BINY Binghamton 34.59 39 P P 04 16 46.4 +0.8
baz=234
D48A Paudash Townsh 34.85 28 P P 04 16 48.9 +1.1
baz=221
G53A Haliburton 34.93 33 P P 04 16 49.7 +1.2
baz=228
F52A Sundridge 35.03 32 P P 04 16 50.3 +1.0
baz=226
K58A Earlville 35.12 39 P P 04 16 51.4 +1.2
baz=234
L59A Walton 35.16 40 P P 04 16 51.8 +1.2
baz=236
G54A Lake Saint Pet 35.40 33 P P 04 16 53.6 +1.1
baz=228
E51A G1948 Merrick 35.47 31 P P 04 16 54.7 +1.6
baz=225
M61A Granite Spring 35.48 42 P P 04 16 54.8 +1.5
baz=238
E52A Mattawa 35.71 32 P P 04 16 55.5 +0.4
baz=226
ALGO Algonquin Park 35.79 33 P P 04 16 57.5 +1.7
baz=228
H56A Elgin 35.87 36 P P 04 16 58.5 +2.0
baz=232
G55A Calabogie 36.04 35 P P 04 16 59.5 +1.5
baz=230
J59A Piesco 36.21 39 P P 04 17 01.1 +1.6
baz=235
E53A Dumoine, Ponti 36.28 33 P P 04 17 01.7 +1.7
baz=228
H57A Richville 36.28 37 P P 04 17 01.7 +1.7
baz=233
D52A ZEK Kipawa Sen 36.31 31 P P 04 17 01.8 +1.5
baz=226
E54A Lac Daplat, Po 36.56 33 P P 04 17 03.1 +0.7
baz=228
F55A Otter Lake 36.61 34 P P 04 17 04.0 +1.2
baz=230
D53A Lac Vacive, Po 36.73 32 P P 04 17 04.5 +0.6
baz=227
L61B Northampton 36.77 41 P P 04 17 05.5 +1.2
baz=238
I59A Olmsteadville 36.77 39 P P 04 17 05.2 +0.8
baz=235
FFC Flin Flon 36.78 3 P P 04 17 04.5 +0.3
FFC IAmb IAmb 04 17 17.8
comp=Z,19nm,1.5s
LONY Lake Ozonia 36.84 37 P P 04 17 05.7 +0.8
baz=234
H58A Gabriels 36.95 38 P P 04 17 06.3 +0.5
baz=234
I60A Shoreham 37.15 39 P P 04 17 08.8 +1.3
baz=236
D54A Lac Fusel, La 37.31 32 P P 04 17 09.8 +1.0
baz=228
J61A Chester 37.33 40 P P 04 17 09.9 +0.9
baz=237
H59A Cadyville 37.37 38 P P 04 17 10.2 +0.8
baz=235
G58A Ormstown 37.45 37 P P 04 17 09.7 -0.3
baz=234
D55A Sainte-Anne-du 37.83 33 P P 04 17 14.1 +0.9
baz=230
G59A Clarenceville 37.92 38 P P 04 17 15.0 +1.1
baz=235
E57A Chemin Saint G 38.16 35 P P 04 17 17.1 +1.1
baz=232
I62A Tamworth 38.36 40 P P 04 17 18.5 +0.8
baz=238
G60A Masonville 38.42 38 P P 04 17 18.8 +0.5
baz=236
LSQQ Lebel-sur-Quev 38.45 30 P P 04 17 18.8 +0.5
baz=226
F59A Saint Guilaume 38.59 37 P P 04 17 20.2 +0.6
baz=234
E58A La Victoria 38.62 36 P P 04 17 21.1 +1.2
baz=233
MATQ Matagami 38.63 29 P P 04 17 20.0 +0.1
baz=225
D57A Chemin Vers le 38.67 35 P P 04 17 21.1 +0.7
baz=232
F60A Warwick 39.13 37 P P 04 17 25.2 +1.0
baz=235
LATQ La Tuque 39.50 35 P P 04 17 28.1 +0.9
baz=233
G62A West of Eustis 39.55 39 P P 04 17 28.2 +0.5
baz=238
FCC Fort Churchill 41.54 9 P P 04 17 43.8 -0.1
FCC IAmb IAmb 04 17 59.3
comp=Z,16nm,1.4s
TAOE Nuku Hiva Isla 43.71 235 eLR LR 04 29 54.8
comp=Z,2μm,29.2s
TAOE Nuku Hiva Isla 43.71 235 eT T 05 03 24.0
comp=Z,2.5nm,0.2s
YKA Yellowknife Ar 45.00 354 P P 04 18 10.3 -1.5
comp=Z,2.5nm,1.1s,baz=167,slow=7.7,SNR=15
YKA LR LR 04 37 57.1
comp=Z,1μm,18.4s,baz=0.0,slow=37
SCHQ Schefferville 46.96 29 LR LR 04 39 41.5
comp=Z,646nm,19.2s,baz=260,slow=37
LPAZ La Paz 49.80 131 LR LR 04 39 04.0
comp=Z,310nm,18.4s,baz=318,slow=35
EPYK Eagle Plains 52.63 345 P P 04 19 09.4 -1.0
baz=142
C36M Paulatuk 52.72 352 P P 04 19 10.1 -0.9
baz=158
INK Inuvik 53.45 347 P P 04 19 15.0 -1.4
comp=Z,5.6nm,1.1s,baz=116,slow=7.2,SNR=9.7
INK Inuvik 53.45 347 P P 04 19 15.3 -1.1
ILAR Eielson Array 54.50 339 P P 04 19 21.7 -2.5
comp=Z,1.7nm,1.1s,baz=150,slow=4.2,SNR=8.7
ILAR LR LR 04 43 18.4
comp=Z,274nm,19.1s,baz=136,slow=36
ILAR Eielson Array 54.50 339 P P 04 19 23.6 -0.6
POKR Poker Plat Res 54.90 340 P P 04 19 24.5 -2.5
baz=129
PPT Papeete 56.25 234 LR LR 04 36 21.6
comp=Z,259nm,20.2s,baz=294,slow=29
PPT2 Papeete2 56.26 234 eLR LR 04 35 25.8
comp=Z,741nm,25.2s
TBI Tubuai 59.71 228 eLR LR 04 37 12.1
comp=Z,699nm,27.8s,baz=43
SFJD Kangerlussuaq 60.05 22 LR LR 04 47 00.4
comp=Z,606nm,20.8s,baz=238,slow=37
RDOG Red Dog Mine 61.69 339 P P 04 20 14.4 -0.1
CPUP Villa Florida 63.92 132 LR LR 04 47 59.8
comp=Z,234nm,18.7s,baz=319,slow=36
BDFB Brasilia 65.36 117 LR LR 04 47 21.4
comp=Z,167nm,19.1s,baz=299,slow=34
PLCA Paso Flores 66.61 152 LR LR 04 43 35.3
comp=Z,240nm,18.5s,baz=360,slow=31
AFI Afiamalu 73.02 249 LR LR 04 44 12.4
comp=Z,446nm,18.9s,baz=34,slow=29
TIXI Tiksi 83.52 345 LR LR 05 00 22.7
comp=Z,54nm,21.7s,baz=46,slow=36
ARCES ARCESS Array B 86.04 16 LR LR 05 01 58.2
comp=Z,544nm,19.8s,baz=320,slow=36
NOA NORSAR Array B 86.42 26 LR LR 05 01 29.2
comp=Z,219nm,19.9s,baz=300,slow=36
ESDC Sonseca Array 86.94 49 LR LR 05 02 40.9
comp=Z,121nm,18.4s,baz=245,slow=36
FINES FINESS Array B 91.85 21 LR LR 05 05 24.8
comp=Z,493nm,19.0s,baz=315,slow=36
CLL Collm 92.44 34 eSS SS 04 40 30.0 +8.4
CLL eSSSS 04 47 24.0
CLL Lm MLR 05 06 00.0
comp=N,200nm,21.1s
CLL Lm MLR 05 06 00.0
comp=E,200nm,18.9s
CLL Lm MLR 05 06 00.0
comp=Z,300nm,20.3s
GERES GERESS Array B 94.16 35 LR LR 05 05 32.2
comp=Z,262nm,20.8s,baz=309,slow=35
DZM Mont Dzumac 95.24 249 eLR LR 04 54 06.7
comp=Z,1μm,26.8s
VYHS Vyhne 97.14 34 ePDIFF Pdif 04 23 30.1 +0.8
DBIC Dimbokro 97.59 80 LR LR 05 02 25.0
comp=Z,183nm,21.6s,baz=274,slow=32
KEST Kesra 98.16 48 LR LR 05 08 50.7
comp=Z,140nm,21.6s,baz=239,slow=36
MJAR Matsushiro Arr 99.40 313 LR LR 04 59 09.8
comp=Z,132nm,21.9s,baz=40,slow=30

IDC ***10*** *04:10:53.5±3.9, 3°.55S×135°.63E, h0km, mb3.7/2, mb1 4.4/3, mb1mx3.8/26, mbtmp4.2/3, ML4.5/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/23, Error ellipse: s-maj=180.8km s-min=29.8km az=80.0*
DJA ***10*** *04:10:56.2±1.4, 4°S±16°×13°5E±°, h19km±8km, M4.1/7, mb4.1/1, MLv4.0/7*
ISC 10 04:10:57.8±1.1, **3°.60S**±0°.08×**134°.98E**±0°.08, **h22**km, **n8,** σ**0s.93**/9, **Irian Jaya region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SRPI Serui, Papua 2.13 36 P **Pn 04 11 32.7 +0.7**
SRPI S **Sb 04 12 01.4 -0.3**
RKPI Ransiki, Papua 2.23 339 P **Pb 04 11 36.8 -0.5**
BAKI Biak 2.64 25 P **Pb 04 11 43.1 -1.4**
FAKI Fak Fak 2.81 284 P **Pn 04 11 41.0 -0.4**
SWI Sorong 4.61 306 P **Pn 04 12 06.4 +0.3**
WRA Warramunga Arr 16.26 182 Pn **Pn 04 14 44.5 -0.4**
2.1nm,0.3s,baz=3.5,slow=11,SNR=5.6
ASAR Alice Springs 19.98 183 P **P 04 15 28.7 -0.1**
2.4nm,0.7s,baz=7.3,slow=11,SNR=24
ASAR LR LR 04 23 47.5
comp=Z,58nm,18.1s,baz=211,slow=39
MKAR Makanchi Array 68.27 324 P **P 04 21 58.5 +1.5**
0.7nm,0.7s,baz=113,slow=7.9,SNR=8.6

IDC ***10*** *04:13:45.0±0.4, 38°.48S×73°.00W, h34km±3km, mb4.3/14, mb1 4.4/18, mb1mx4.3/29, mbtmp4.5/18, ML4.3/4, MS3.9/6, Ms1 3.9/6, ms1mx3.6/20, Error ellipse: s-maj=19.7km s-min=12.1km az=81.0*
BJI ***10*** *04:13:44.0±0.0, 38°.50S×73°.10W, h30km, mB5.4/3, Ms5.2/2, Ms7 4.9/1*
NEIC ***10*** *04:13:44.4±2.5, 38°.44S±0°.05×73°.2W±0°.1, h38km±3km, mb5.0/63, Error ellipse: s-maj=15.4km s-min=7.2km az=81.0*
GUC ***10*** *04:13:45.0±0.6, 38°.57S×73°.13W, h36km±3km, ML4.9*
MOS ***10*** *04:13:45.7±1.1, 38°.40S×72°.79W, h50km, mb5.0/15, Error ellipse: s-maj=17.7km s-min=8.4km az=96.4*
VAO ***10*** *04:13:51.5±0.8, 38°.82S×72°.66W, h112km±8km, mb4.7*
ISC 10 04:13:42.9±0.4, **38°.50S**±0°.03×**73°.16W**±0°.04, **h26**km±2km, **h25**km**:pP-P, n415,** σ**1s.22**/443, **mb5.0**/49, **6C-9D, Near coast of central Chile**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BI04 Isla Mocha 0.58 279 eP **Pn 04 13 56.5 +1.1**
BI04 i S **Sn 04 14 05.3 +1.2**
LC01 Cunco 1.08 112⇓iP **Pb 04 14 03.1 +0.1**
LC01 i S **Sn 04 14 16.4 -0.2**
CCSP San Pedro de C 1.66 1 eP **Pb 04 14 12.4 -0.4**
CCSP eS **Sb 04 14 33.6 +0.4**
CCSP IAML 04 14 44.3
comp=E,18μm,0.5s
CCHI Chillan 2.08 25⇓iP **Pb 04 14 18.9 -1.1**
CCHI IAML 04 14 57.7
comp=N,10μm,0.6s
BI02 San Fabin de 2.37 40⇑iP **Pb 04 14 22.8 -2.2**
BI02 eS **Sb 04 14 52.0 -1.8**
PLCA Paso Flores 3.00 139 eP **Pn 04 14 31.0 +2.1**
PLCA eS **Sb 04 15 12.0 -0.1**
PLCA Paso Flores 3.00 139 Pn **Pn 04 14 31.2 +2.3**
comp=N,11nm,0.3s,baz=326,slow=9.8,SNR=324

PLCA Lg Lg 04 15 15.7
comp=N,96nm,0.3s,baz=254,slow=21,SNR=6.4
PLCA LR LR 04 15 54.6
comp=N,2μm,20.6s,baz=339,slow=44
PLCA Paso Flores 3.00 139 eP **Pn 04 14 31.0 +2.1**
PLCA Paso Flores 3.00 139 eP **Pn 04 14 31.5 +2.5**
PLCA Sn **Sn 04 15 03.4 -0.8**
GO05 Huala 3.62 16 eP **Pn 04 14 38.9 +1.4**
GO05 eS **Sb 04 15 34.4 +4.5**
GO05 IAML 04 15 46.1
comp=E,2μm,0.8s
GO05 Huala 3.62 16 Pn **Pn 04 14 39.0 +1.6**
LL01 San Ignacio de 3.91 172 eP **Pn 04 14 42.3 +1.0**
LL01 eS **Sn 04 15 26.4 0.0**
LL01 IAML 04 15 44.9
comp=E,560nm,0.6s
BO02 Sierra Bellavi 4.17 28 eP **Pn 04 14 46.9 +1.9**
BO02 eS **Sn 04 15 35.6 +2.7**
BO02 Sierra Bellavi 4.17 28⇓iP **Pn 04 14 46.9 +1.9**
BO02 eS **Sn 04 15 35.5 +2.6**
BO02 IAML 04 15 56.6
comp=E,2μm,0.5s
MT01 Popeta 4.88 19⇑iP **Pn 04 14 55.3 +0.6**
MT01 eS **Sn 04 15 50.3 -0.1**
MT01 IAML 04 16 16.0
comp=E,702nm,0.7s
LMEL Las Melosas 5.23 28 eP **Pn 04 15 01.3 +1.7**
LMEL eS **Sn 04 16 01.4 +2.3**
LMEL IAML 04 16 22.4
comp=N,428nm,0.6s
MT03 Universidad Ad 5.44 24 eP **Pn 04 15 03.3 +0.8**
MT03 eS **Sn 04 16 06.7 +2.4**
MT03 IAML 04 16 40.0
comp=N,685nm,0.6s
MT05 Renca 5.47 22 eP **Pn 04 15 03.4 +0.6**
MT05 eS **Sn 04 16 05.4 +0.6**
MT05 IAML 04 16 29.2
comp=E,749nm,0.6s
CLCH Cerro Calan 5.52 23 eP **Pn 04 15 04.3 +0.7**
CLCH eS **Sn 04 16 07.7 +1.4**
FCH Farellones 5.67 25⇑iP **Pn 04 15 06.8 +1.0**
FCH eS **Sn 04 16 11.5 +1.4**
FCH IAML 04 16 49.8
comp=E,410nm,0.6s
PEL Peldehue 5.71 21 Pn **Pn 04 15 06.6 +0.4**
PEL Sn **Sn 04 16 07.2 -3.8**
PEL Peldehue 5.71 21 P **Pn 04 15 06.8 +0.6**
PEL pmax pmax
comp=Z,346nm,0.9s
CFA Coronel Fontan 7.98 32 Pn **Pn 04 15 37.0 -0.2**
comp=Z,6.0nm,0.3s,baz=215,slow=12,SNR=102
CFA Sn **Sn 04 17 06.8 +0.1**
comp=Z,4.0nm,0.3s,baz=108,slow=19,SNR=2.8
CFA LR LR 04 18 24.4
comp=Z,138nm,20.6s,baz=218,slow=35
GO04 Tololo Observa 8.54 14 Pn **Pn 04 15 45.2 +0.1**
GO04 Sn **Sn 04 17 17.9 -2.8**
GO03 Copiap 11.15 14 Pn **Pn 04 16 20.3 -0.5**
GO02 Mina Guanaco 13.64 14 **Pn 04 16 53.3 -1.7**
PB10 IPOC Station P 15.11 9 Pn **Pn 04 17 14.7 0.0**
LVC Limon Verde 16.26 14 eP **P 04 17 36.7 +3.9**
LVC Limon Verde 16.26 14 eP **Pn 04 17 30.0 +0.1**
PB04 IPOC Station P 16.32 10 Pn **Pn 04 17 30.4 -0.2**
USHA Ushuaia 16.65 170 Pn **P 04 17 36.1 -0.4**
comp=Z,0.4nm,0.3s,baz=20,slow=12,SNR=3.9
EFI East Falkland 16.90 146 **P 04 17 38.9 -0.4**
EFI IAmb IAmb 04 17 54.7
comp=Z,206nm,1.6s
EFI East Falkland 16.90 146⇑eP **P 04 17 38.9 -0.4**
EFI pmax pmax
comp=Z,34nm,0.6s
PLTB Pedras Altas 17.34 73 eP **Pn 04 17 42.0 -1.1**
PB01 IPOC Station P 17.69 11 Pn **Pn 04 17 45.2 -2.4**
CPUP Villa Florida 18.02 52 P **P 04 17 53.0 +1.1**
comp=Z,0.3nm,0.3s,baz=234,slow=9.7,SNR=18
CPUP LR LR 04 25 31.8
comp=Z,748nm,18.5s,baz=226,slow=40
CPUP Villa Florida 18.02 52 eP **P 04 17 52.9 +0.9**
CPUP Villa Florida 18.02 52 P **Pn 04 17 50.7 -0.9**
CPUP Villa Florida 18.02 52 P **Pn 04 17 50.7 -0.9**
CPUP pmax pmax
comp=Z,6.0nm,0.8s
CPSB Cacapava Do Su 18.14 69 eP **Pn 04 17 52.2 -0.8**
PB11 IPOC Station P 18.92 10 P **P 04 18 00.4 -1.6**
GO01 Chusmiza 19.08 12 P **P 04 18 03.5 -0.6**
MNMC Minye Minye 19.55 10 P **P 04 18 08.4 -0.6**
ITAB Concordia 20.89 64 eP **P 04 18 23.0 -0.2**
PTGB Pitanga 22.55 59 eP **P 04 18 40.5 -0.7**
LPAZ La Paz 22.57 13 P **P 04 18 44.0 +2.1**
comp=Z,13nm,0.8s,baz=164,slow=5.4,SNR=27
LPAZ La Paz 22.57 13 eP **P 04 18 44.8 +2.8**
LPAZ La Paz 22.57 13 P **P 04 18 42.9 +0.9**
LPAZ La Paz 22.57 13 P **P 04 18 42.9 +0.9**
LPAZ pmax pmax
comp=Z,14nm,0.8s
AQDB Aquidauana 23.46 45 eP **P 04 18 49.8 -0.6**
TRCB Terra Rica 23.52 54 eP **P 04 18 50.3 -0.8**
SIV San Ignacio 24.82 29 P **P 04 19 02.7 -0.4**
comp=Z,8.7nm,0.8s,baz=230,slow=8.4,SNR=40
FRTB Fartura 25.16 60 eP **P 04 19 05.2 -1.0**
PCMB Pacaembu 25.25 54 eP **P 04 19 06.4 -0.6**
PP1B Ponte de Pedra 26.25 43 eP **P 04 19 16.1 +0.1**
C2SB Chapadao do Su 26.44 48 eP **P 04 19 17.7 -0.1**
SPB Sao Paulo 26.47 63 eP **P 04 19 16.4 -1.6**
RCLB Rio Claro- Sao 27.17 61 eP **P 04 19 23.2 -1.2**
VAO Valinhos 27.18 63 eP **P 04 19 22.9 -1.6**
ITRB Iturama 27.22 53 eP **P 04 19 24.6 -0.2**
SALV Santo Antonio 27.26 39 eP **P 04 19 25.2 +0.1**
BB19B Bebedouro 27.42 58 eP **P 04 19 25.4 -1.2**
HOPE Hope Point 29.40 134 P **P 04 19 44.2 +0.3**
HOPE Hope Point 29.40 134 P **P 04 19 44.2 +0.3**
HOPE pmax pmax
comp=Z,106nm,1.6s
ARAG Araguaiana, MT 29.47 45 eP **P 04 19 44.5 -0.4**
IPMB Ipameri, GO 29.85 54 eP **P 04 19 46.9 -1.4**
BSCB Bom Sucesso 30.02 63 eP **P 04 19 47.8 -2.0**
SAML Samuel 30.77 20 eP **P 04 19 57.1 +0.8**
SAML Samuel 30.77 20 P **P 04 19 53.8 -2.5**
SAML Samuel 30.77 20 P **P 04 19 53.8 -2.5**
SAML pmax pmax
comp=Z,8.0nm,1.1s
CLDB Colider 31.59 34 eP **P 04 20 03.7 +0.1**
BDFB Brasilia 31.75 51 P **P 04 20 04.4 -0.7**
comp=Z,5.1nm,0.9s,baz=237,slow=8.3,SNR=6.7
BDFB Brasilia 31.75 51 P **P 04 20 04.9 -0.2**
BDFB Brasilia 31.75 51 P **P 04 20 04.9 -0.2**
BDFB pmax pmax
comp=Z,7.0nm,0.9s
SJMB Sao Joao De Ma 34.06 64 eP **P 04 20 23.0 -2.2**
BSFB Barra de Sao F 34.21 64 eP **P 04 20 23.6 -2.9**
OTAV Otavalo 38.86 352 eP **P 04 21 10.0 +3.3**
OTAV Otavalo 38.86 352 P **P 04 21 02.0 -4.6**
OTAV Otavalo 38.86 352 P **P 04 21 02.0 -4.6**
OTAV pmax pmax
comp=Z,7.0nm,1.0s
PRAC Prado 42.04 357 eP **P 04 21 34.4 +1.9**
ORTC Ortega, Tolima 42.24 357 eP **P 04 21 37.0 +2.9**
CHIC Chingaza 42.92 359 eP **P 04 21 41.7 +1.7**
ROSC El Rosal 43.14 358 P **P 04 21 45.8 +4.0**
comp=Z,7.2nm,0.5s,baz=141,slow=9.9,SNR=7.8
GUY2C Guyana, Caldas 43.44 357 eP **P 04 21 46.9 +1.7**
NORC Norcasia 43.87 358 eP **P 04 21 48.2 +0.8**
RUSC La Rusia 44.17 0 eP **P 04 21 52.3 +2.1**
RUSC La Rusia 44.17 0 P **P 04 21 50.8 +0.6**
CBOC Ciudad Bolivar 44.22 356 eP **P 04 21 51.5 +1.3**
HELC Santa Helena 44.52 357 eP **P 04 21 54.0 +1.2**
VNA3 Neumayer Olymp 45.58 156 P **P 04 22 00.9 +0.6**
ZARC Zaragoza, Cauc 45.79 358 eP **P 04 22 02.6 +0.1**
VNA1 Neumayer--Stat 45.93 155 P **P 04 22 04.0 +1.0**
VNA2 Neumayer--Watz 46.26 155 P **P 04 22 06.4 +0.8**
baz=264,slow=8.9
SDV Santo Domingo 47.20 3 eP **P 04 22 14.1 +0.2**
SNAA Sanae 47.80 156 P **P 04 22 18.6 +0.8**
SNAA Sanae 47.80 156 P **P 04 22 18.4 +0.6**
comp=Z,14nm,0.8s,baz=264,slow=6.4,SNR=41
SNAA Sanae 47.80 156 P **P 04 22 18.8 +1.0**
SNAA IAmb IAmb 04 22 19.7
comp=Z,20nm,0.9s
PTCN Pitcairn Islan 49.50 268 P **P 04 22 27.7 -3.6**
URIC Uribia, Colomb 49.95 1 P **P 04 22 31.8 -2.9**
QSPA South Pole Qui 51.74 180 P **P 04 22 49.3 +1.4**
comp=Z,6.9nm,0.7s,baz=144,slow=1.8,SNR=34
QSPA pP **sP 04 22 59.2 +0.2**
comp=Z,13nm,0.8s,baz=141,slow=0.7,SNR=18
QSPA South Pole Qui 51.74 180 P **P 04 22 47.2 -0.7**
QSPA IAmb IAmb 04 23 00.5
comp=Z,17nm,0.9s
NVL N'lazarevskaya 52.58 155 eP **P 04 22 53.9 +0.1**
NVL pmax pmax
comp=Z,20nm,0.8s
MLPR Magueyes Islan 56.47 7 P **P 04 23 21.1 -1.5**
MLPR IAmb IAmb 04 23 46.4
comp=Z,21nm,0.9s
PDPR Patillas Dam, 56.62 8 P **P 04 23 21.7 -2.0**
PDPR IAmb IAmb 04 24 13.6
comp=Z,15nm,1.1s
GCPR Guaynabo City 56.90 8 P **P 04 23 22.4 -3.3**
TEIG Tepich 60.12 344 P **P 04 23 49.1 +1.0**
comp=Z,14nm,0.9s,baz=112,slow=7.9,SNR=4.8
TEIG Tepich 60.12 344 P **P 04 23 47.0 -1.1**
TBI Tubuai 65.47 259 eLR LR 04 44 09.7
comp=Z,160nm,25.8s
MEH Mehetia 67.44 265 eT T 05 37 16.7
comp=Z,26nm,0.3s
TIAR Tiarei 68.61 264 eT T 05 38 45.3
comp=Z,3.9nm,0.2s
PAE Paea 68.74 264 eT T 05 38 54.6
comp=Z,0.9nm,0.3s
PPT2 Papeete2 68.78 264 eLR LR 04 45 40.8
comp=Z,148nm,26.5s
PPT Papeete 68.79 264 LR LR 04 47 46.1
comp=Z,142nm,18.5s,baz=214,slow=30
553A Crawfordville 69.14 350 P **P 04 24 47.2 +0.4**
TIGA Tifton 70.26 351 P **P 04 24 54.2 +0.6**
baz=171
833A Chaparral WMA, 70.86 336 P **P 04 24 58.0 +0.5**
baz=159
157A Early Branch 71.19 353 P **P 04 24 59.6 +0.2**
baz=174
154A Montrose 71.36 351 P **P 04 25 00.7 +0.3**
baz=172
NHSC New Hope 71.55 354 P **P 04 25 02.4 +0.9**
baz=174
Z59A Georgetown, SC 71.61 355 P **P 04 25 02.6 +0.8**
baz=175
Z58A St. Stephen 71.74 354 P **P 04 25 03.0 +0.4**
baz=175
Z57A Bowman 71.78 353 P **P 04 25 03.3 +0.5**
baz=174
Z53A Monticello 72.07 351 P **P 04 25 05.1 +0.5**
baz=172
Z52A Williamson 72.09 350 P **P 04 25 05.2 +0.4**
baz=171
GOGA Godfrey 72.19 351 P **P 04 25 05.7 +0.4**
GOGA IAmb IAmb 04 25 17.2
comp=Z,10nm,0.7s
GOGA Godfrey 72.19 351 P **P 04 25 05.7 +0.4**
GOGA pmax pmax
comp=Z,11nm,0.7s
GOGA Godfrey 72.19 351 P **P 04 25 05.7 +0.4**
baz=172
Z50A Ashland 72.37 349 P **P 04 25 07.6 +1.1**
baz=170
Y55A Saluda 72.53 352 P **P 04 25 07.9 +0.6**
baz=173
Y54A Tignall 72.54 352 P **P 04 25 08.0 +0.6**
baz=172
Y53A Monroe 72.64 351 P **P 04 25 08.5 +0.5**
baz=172
Y52A Lilburn 72.71 351 P **P 04 25 08.3 -0.1**
baz=171
Y51A Rockmart 72.88 350 P **P 04 25 10.1 +0.7**
baz=170
X59A McDuffie Farm, 72.88 355 P **P 04 25 09.8 +0.4**
baz=176
X57A Johnson Farm, 72.89 354 P **P 04 25 10.4 +0.9**
baz=174
X58A Rowland 72.92 355 P **P 04 25 10.1 +0.5**
baz=175
JCT Junction City 72.99 336 P **P 04 25 11.2 +0.9**
baz=159,SNR=6.4
X56A White Oak 73.00 353 P **P 04 25 10.4 +0.4**
baz=174
X55A Gracelyn & Ava 73.03 353 P **P 04 25 10.8 +0.5**
baz=173
Y49A Blount Mountai 73.04 348 P **P 04 25 09.4 -1.0**
Y49A IAmb IAmb 04 25 22.8
comp=Z,11nm,0.9s
X54A Belton 73.19 352 P **P 04 25 11.6 +0.3**
baz=173
X53A Estanollee 73.25 351 P **P 04 25 12.4 +0.8**
baz=172
TXAR Lajitas Array 73.26 332 P **P 04 25 13.1 +1.2**
comp=Z,1.0nm,0.8s,baz=157,slow=8.6,SNR=11
TXAR pP **sP 04 25 24.1 +0.7**
comp=Z,3.7nm,0.7s,baz=153,slow=8.7,SNR=28
TXAR LR LR 04 50 58.8
comp=Z,38nm,21.1s,baz=0.0,slow=30
TX32 Lajitas Array 73.26 332 P **P 04 25 12.1 +0.2**
W60A Pink Hill 73.31 356 P **P 04 25 12.7 +0.8**
baz=176
W58A Raeford 73.37 355 P **P 04 25 13.0 +0.7**
baz=175
X52A Dahlonega 73.42 351 P **P 04 25 13.1 +0.4**
baz=171
X51A Calhoun 73.51 350 P **P 04 25 13.9 +0.8**
baz=171,SNR=5.3
W57A Gilead 73.56 354 P **P 04 25 13.9 +0.5**
baz=174
FPAL Fort Paine 73.59 349 P **P 04 25 11.9 -1.8**
FPAL IAmb IAmb 04 25 26.3
comp=Z,16nm,0.7s
KMSC Kings Mountain 73.67 353 P **P 04 25 14.1 0.0**
KMSC IAmb IAmb 04 25 26.4
comp=Z,12nm,0.8s
KMSC Kings Mountain 73.67 353 P **P 04 25 15.3 +1.3**
baz=173
W54A Cherokee Point 73.70 352 P **P 04 25 15.1 +0.9**
baz=173
X48A Hartselle 73.72 348 P **P 04 25 14.3 -0.1**
W53A Cullowhee 73.89 351 P **P 04 25 16.4 +0.9**
baz=172
W52A Murphy 73.91 351 P **P 04 25 16.0 +0.5**
baz=171
V59A Middlesex 74.05 356 P **P 04 25 17.4 +1.2**
baz=176
W51A Cleveland 74.08 350 P **P 04 25 17.4 +0.9**
baz=171
V58A Windy Hill, Pi 74.13 355 P **P 04 25 17.6 +0.8**
baz=175
W50A Signal Mountai 74.19 350 P **P 04 25 18.0 +0.8**
W50A Signal Mountai 74.19 350 P **P 04 25 17.7 +0.5**
baz=170,SNR=5.3
OXF Oxford 74.20 346 P **P 04 25 17.1 -0.1**
OXF IAmb IAmb 04 25 29.0
comp=Z,20nm,0.9s
OXF Oxford 74.20 346 P **P 04 25 17.1 -0.1**
OXF pmax pmax
comp=Z,19nm,0.9s
OXF Oxford 74.20 346 P **P 04 25 18.2 +1.0**
baz=167
W49A Belvidere 74.25 349 P **P 04 25 18.1 +0.6**
baz=169,SNR=5.8
V56A Mocksville 74.25 354 P **P 04 25 17.9 +0.5**
baz=174,SNR=5.4
CPCT Cooper Cave 74.33 350 P **P 04 25 17.9 0.0**
CPCT IAmb IAmb 04 25 30.4
comp=Z,18nm,0.7s
V53A Saluda 74.34 352 P **P 04 25 16.8 -1.2**
V53A IAmb IAmb 04 25 30.0
comp=Z,9.4nm,0.8s
V53A Saluda 74.34 352 P **P 04 25 18.2 +0.2**
baz=172
V54A Nebo 74.36 353 P **P 04 25 18.5 +0.4**
baz=173
V55A Taylorsville 74.36 353 P **P 04 25 17.9 -0.2**
V55A IAmb IAmb 04 25 30.6
comp=Z,19nm,0.8s
V55A Taylorsville 74.36 353 P **P 04 25 18.7 +0.6**
baz=174,SNR=7.5
PLAL Pickwick Lake 74.41 347 P **P 04 25 15.8 -2.7**
PLAL IAmb IAmb 04 25 30.3
comp=Z,9.4nm,0.7s
TKL Tuckaleechee C 74.44 351 P **P 04 25 19.0 +0.4**
comp=Z,2.4nm,0.7s,baz=170,slow=6.8,SNR=4.8
TKL pP **sP 04 25 30.0 -0.1**
comp=Z,7.3nm,0.7s,baz=184,slow=8.4,SNR=7.8
TKL Tuckaleechee C 74.44 351 P **P 04 25 18.1 -0.5**
TKL Tuckaleechee C 74.44 351 P **P 04 25 18.1 -0.5**
TKL pmax pmax
comp=Z,7.0nm,0.8s
V52A Sevierville 74.60 351 P **P 04 25 19.3 -0.2**
baz=172,SNR=5.5
V50A Pikevile 74.63 350 P **P 04 25 20.1 +0.5**
baz=170,SNR=8.7
V51A Loudon 74.66 351 P **P 04 25 20.1 +0.2**
baz=171
U58A Oxford 74.69 355 P **P 04 25 19.6 -0.4**
baz=176
U56A King 74.78 354 P **P 04 25 20.3 -0.2**
baz=174
U57A Blanch 74.78 355 P **P 04 25 19.7 -0.8**
baz=175
V49A McMinnville 74.83 349 P **P 04 25 20.7 -0.1**
baz=170,SNR=6.9
ABTX Abilene, Hawle 74.93 337 P **P 04 25 21.4 -0.1**
baz=159
V48A Smith Brothers 74.95 349 P **P 04 25 21.7 +0.2**
U55A TA2, Sparta 74.99 353 P **P 04 25 21.4 -0.4**
baz=174
U53A Fall Branch 75.00 352 P **P 04 25 21.4 -0.5**
baz=172
U54A Nelsons Funny 75.08 353 P **P 04 25 21.6 -0.8**
U54A IAmb IAmb 04 25 34.6
comp=Z,17nm,0.7s
U54A Nelsons Funny 75.08 353 P **P 04 25 21.7 -0.6**
baz=173,SNR=5.4
MIAR Mount Ida 75.11 343 P **P 04 25 23.9 +1.5**
MIAR pmax pmax
comp=Z,8.0nm,0.8s
MIAR Mount Ida 75.11 343 P **P 04 25 22.0 -0.5**
baz=164
U52A Thorn Hill 75.12 351 P **P 04 25 21.9 -0.6**
baz=172
U51A La Follette 75.18 351 P **P 04 25 22.7 -0.1**
baz=171,SNR=5.9
T59A Double "B" Far 75.21 356 P **P 04 25 23.2 +0.3**
baz=176
TZTN Tazewell 75.29 351 P **P 04 25 23.2 -0.2**
baz=172
U50A Jamestown 75.33 350 P **P 04 25 23.8 +0.1**
baz=171
T57A Hurt 75.34 355 P **P 04 25 23.7 0.0**
baz=175
W41B Gary Mavity, V 75.41 344 P **P 04 25 24.3 +0.1**
W41B IAmb IAmb 04 25 36.6
comp=Z,12nm,0.9s
W41B Gary Mavity, V 75.41 344 P **P 04 25 24.1 -0.1**
baz=165
T56A Rocky Mt 75.43 354 P **P 04 25 23.7 -0.6**
baz=174
WVT Waverly 75.49 348 P **P 04 25 24.9 +0.3**
WVT IAmb IAmb 04 25 36.5
comp=Z,24nm,1.1s
WVT Waverly 75.49 348 P **P 04 25 24.9 +0.3**
WVT pmax pmax
comp=Z,24nm,1.1s
WVT Waverly 75.49 348 P **P 04 25 24.6 0.0**
baz=168
U49A Red Boiling Sp 75.55 350 P **P 04 25 25.4 +0.5**
baz=170,SNR=5.9
T55A Pulaski 75.58 354 P **P 04 25 25.3 +0.2**
baz=174
T54A Tazewell 75.59 353 P **P 04 25 25.5 +0.3**
baz=173
T53A Wise 75.61 352 P **P 04 25 25.6 +0.3**
baz=172
BLA Blacksburg 75.64 354 P **P 04 25 26.1 +0.6**
baz=174
T51A Gray 75.75 351 P **P 04 25 26.4 +0.2**
baz=171
W39A Magazine 75.78 343 P **P 04 25 26.6 +0.3**
baz=164,SNR=5.6
T52A Hallie 75.78 352 P **P 04 25 27.0 +0.7**
baz=172
S60A Water View 75.90 357 P **P 04 25 27.2 +0.3**
baz=177
T50A Nancy 75.92 350 P **P 04 25 27.4 +0.4**
baz=171
MNTX Cornudas Mount 76.02 332 P **P 04 25 28.2 +0.5**
baz=155
S56A Natural Bridge 76.04 355 P **P 04 25 28.3 +0.6**
baz=175
LCAR Lake Charles 76.05 345 IAmb IAmb 04 25 39.7
comp=Z,21nm,0.8s
S57A Dark Hollow, R 76.08 355 P **P 04 25 27.9 0.0**
baz=175
T49A Edmonton 76.10 350 P **P 04 25 28.7 +0.6**
baz=170
S55A Lewisburg 76.20 354 P **P 04 25 29.1 +0.4**
baz=174
T47A Sharon Grove 76.22 349 P **P 04 25 26.6 -2.1**
T47A IAmb IAmb 04 25 40.4
comp=Z,13nm,0.7s
S54A Dingess, Beckl 76.30 353 P **P 04 25 29.7 +0.4**
baz=174
S52A Salyersville 76.36 352 P **P 04 25 30.3 +0.8**
baz=172
S51A Beattyville 76.38 351 P **P 04 25 30.0 +0.4**
baz=172
R60A Leonardtown, M 76.46 357 P **P 04 25 30.8 +0.7**
baz=177
S50A Richmond 76.51 351 P **P 04 25 31.1 +0.7**
baz=171
R58A Rapidan 76.56 356 P **P 04 25 31.8 +1.2**
baz=176
R57A Stanardsville 76.58 356 P **P 04 25 31.8 +1.0**
baz=176
PBMO Poplar Bluff 76.59 346 P **P 04 25 30.8 0.0**
PBMO IAmb IAmb 04 25 42.8
comp=Z,15nm,0.8s
WMOK Wichita Mounta 76.65 339 P **P 04 25 32.2 +0.9**
WMOK Wichita Mounta 76.65 339 P **P 04 25 32.4 +1.1**
baz=160
R54A Victor 76.65 354 P **P 04 25 32.3 +1.1**
baz=174
U40A Yellville 76.68 344 P **P 04 25 31.1 -0.3**
U40A IAmb IAmb 04 25 43.5
comp=Z,12nm,0.8s
U40A Yellville 76.68 344 P **P 04 25 32.1 +0.7**
baz=164,SNR=5.5
S49A Springfield 76.73 350 P **P 04 25 32.7 +1.1**
baz=170
R56A Bull Pasture M 76.75 355 P **P 04 25 32.7 +0.8**
baz=175
TUL1 Leonard 76.95 341 P **P 04 25 33.1 +0.2**
baz=162,SNR=5.4
LIC Lamto 77.07 71 eP **P 04 25 34.4 +0.2**
comp=Z,24nm,0.7s
LIC Lamto 77.07 71 ePcP **PcP 04 25 49.2 +4.2**
Q60A Greensboro 77.17 358 P **P 04 25 34.5 +0.5**
baz=178
MSTX Muleshoe 77.17 335 P **P 04 25 34.3 -0.1**
baz=157
R49A Shelbyville 77.22 350 P **P 04 25 34.8 +0.5**
baz=170
MGMO Mountain Grove 77.32 344 IAmb IAmb 04 25 47.7
comp=Z,34nm,1.8s
TIC Toumodi 77.35 71 eP **P 04 25 36.1 +0.3**
comp=Z,19nm,0.7s
TIC Toumodi 77.35 71 ePcP **PcP 04 25 51.2 +5.0**
KIC Kosan Boka 77.37 71 eP **P 04 25 36.2 +0.3**
comp=Z,22nm,0.7s
KIC Kosan Boka 77.37 71 ePcP **PcP 04 25 51.0 +4.7**
DBIC Dimbokro 77.49 71 P **P 04 25 36.9 +0.4**
comp=Z,7.9nm,0.7s,baz=185,slow=5.0,SNR=16
DBIC Dimbokro 77.49 71 P **P 04 25 35.3 -1.2**
DBIC IAmb IAmb 04 25 52.8
comp=Z,19nm,0.9s
DBIC Dimbokro 77.49 71 P **P 04 25 35.3 -1.2**
DBIC pmax pmax
comp=Z,19nm,1.0s
Q52A Bidwell 77.54 353 P **P 04 25 36.8 +0.6**
baz=173
121A Cookes Peak, D 77.67 331 P **P 04 25 37.1 -0.1**
baz=153
P58A Pank, Wackersv 77.71 357 P **P 04 25 38.0 +0.9**
baz=177
Q51A Peebles 77.72 352 P **P 04 25 37.6 +0.5**
baz=172
P57A Homestead Farm 77.74 356 P **P 04 25 35.8 -1.5**
P57A IAmb IAmb 04 28 18.3
comp=Z,22nm,1.6s
P57A Homestead Farm 77.74 356 P **P 04 25 37.3 0.0**
baz=176
P56A Dayton Farm, R 77.81 356 P **P 04 25 38.0 +0.4**
baz=176
Q49A Aurora 77.88 351 P **P 04 25 38.9 +0.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=171						
Q48A	North Vernon	77.92	350	P	P	04 25 38.2	-0.1
	baz=170,SNR=6.1						
P60A	Greenville	77.97	358	P	P	04 25 38.5	0.0
	baz=178						
P53A	Whipple	77.98	353	P	P	04 25 39.0	+0.4
	baz=174						
CCM	Cathedral Cave	77.98	345	P	P	04 25 39.4	+0.8
CCM	Cathedral Cave	77.98	345	P	P	04 25 39.4	+0.8
CCM				pmax	pmax		
	comp=Z,40nm,0.7s						
CCM	Cathedral Cave	77.98	345	P	P	04 25 38.8	+0.1
	baz=166						
P54A	Burton	78.02	354	P	P	04 25 39.0	+0.2
	baz=174						
MCWV	Mont Chateau	78.03	355	P	P	04 25 39.1	+0.2
	baz=175						
P51A	Williamsport	78.14	352	P	P	04 25 40.1	+0.6
	baz=172						
P52A	Corning	78.19	353	P	P	04 25 40.5	+0.7
	baz=173						
P50A	Jamestown	78.35	352	P	P	04 25 40.8	+0.1
	baz=172						
P49A	Miami Univ. Ec	78.38	351	P	P	04 25 41.3	+0.5
	baz=171						
P48A	Milroy	78.40	350	P	P	04 25 40.3	-0.6
P48A				IAmb	IAmb	04 25 52.2	
	comp=Z,14nm,0.8s						
P48A	Milroy	78.40	350	P	P	04 25 41.1	+0.1
	baz=170						
TUC	Tucson	78.67	328	P	P	04 25 43.8	+1.1
O51A	Pataskala	78.75	353	P	P	04 25 43.3	+0.5
	baz=173						
BOSA	Boshof	78.79	118	P	P	04 25 43.8	0.0
	comp=Z,3.6nm,0.6s,baz=224,slow=4.6,SNR=9.3						
BOSA	Boshof	78.79	118	P	P	04 25 43.8	0.0
BOSA	Boshof	78.79	118	P	P	04 25 43.8	0.0
BOSA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
O50A	Cable	78.86	352	P	P	04 25 43.7	+0.2
	baz=172						
ACSO	Alum Creek Sta	78.87	352	P	P	04 25 43.3	-0.1
ACSO				IAmb	IAmb	04 25 55.4	
	comp=Z,18nm,0.8s						
ACSO	Alum Creek Sta	78.87	352	P	P	04 25 43.4	-0.1
	baz=172						
O49A	Covington	78.98	351	P	P	04 25 44.8	+0.7
	baz=171						
O48A	Farmland	79.15	351	P	P	04 25 45.4	+0.4
	baz=170						
214A	Organ Pipe Nat	79.22	326	P	P	04 25 45.9	+0.2
	baz=150						
ANMO	Albuquerque	79.33	333	⇑eP	P	04 25 47.8	+1.4
ANMO	Albuquerque	79.33	333	P	P	04 25 47.5	+1.1
	baz=154						
N50A	Nevada	79.42	352	P	P	04 25 47.0	+0.5
	baz=172						
N51A	Ashland	79.49	353	P	P	04 25 47.5	+0.6
	baz=173						
N49A	Columbus Grove	79.69	352	P	P	04 25 48.1	+0.1
	baz=171						
N48A	Decatur	79.73	351	P	P	04 25 47.9	-0.2
	baz=171						
M56A	Emporium	79.74	356	P	P	04 25 48.7	+0.4
	baz=176						
N47A	Urbana	79.83	350	P	P	04 25 48.8	+0.1
	baz=170						
M54A	Oil Creek Stat	79.85	355	P	P	04 25 48.8	0.0
	baz=175						
M53A	WI Miller and	79.86	354	P	P	04 25 48.4	-0.5
	baz=174						
URZ	Urewera	79.99	229	LR	LR	04 53 52.7	
	comp=Z,252nm,21.6s,baz=72,slow=30						
HDIL	Hopedale	80.06	348	P	P	04 25 49.6	-0.3
	baz=167						
M49A	Liberty Center	80.21	352	P	P	04 25 51.1	+0.4
	baz=172						
L56A	Greenwood	80.36	357	P	P	04 25 52.6	+0.9
	baz=177						
T25A	Trinidad	80.60	335	P	P	04 25 53.8	+0.6
	baz=156						
W18A	Petrified Fore	80.71	330	P	P	04 25 54.6	+0.8
	baz=152						
L48A	N Adams	80.72	352	P	P	04 25 54.6	+1.1
	baz=171						
L49A	Milan	80.81	352	P	P	04 25 54.4	+0.5
	baz=172						
L47A	Sherwood	80.85	351	P	P	04 25 54.8	+0.7
	baz=171						
LBTB	Lobatse	81.24	115	P	P	04 25 56.1	-0.9
LBTB				IAmb	IAmb	04 26 16.5	
	comp=Z,16nm,1.1s						
LBTB	Lobatse	81.24	115	P	P	04 25 56.1	-0.9
LBTB				pmax	pmax		
	comp=Z,16nm,1.2s						
Y12C	Blythe	81.50	326	P	P	04 25 59.8	+1.9
	baz=148						
J58A	Remsen	81.51	358	P	P	04 25 58.8	+1.2
	baz=178						
SDCO	Great Sand Dun	81.52	335	P	P	04 25 58.9	+0.7
	baz=155						
K48A	Perry	81.54	352	P	P	04 25 59.0	+1.2
	baz=171						
WUAZ	Wupatki	81.70	329	P	P	04 26 00.1	+1.0
	baz=151						
S22A	4UR Ranch, Cre	81.97	334	P	P	04 26 01.4	+0.8
	baz=154						
J48A	Bridge Port	81.99	352	P	P	04 26 00.7	+0.6
	baz=172						
I51A	Listowel	82.24	354	P	P	04 26 02.7	+1.2
	baz=174						
Q24A	Divide	82.50	335	P	P	04 26 04.2	+0.8
	baz=155						
JFWS	Jewell Farm	82.51	347	P	P	04 26 03.6	+0.6
	baz=167						
BGNE	Belgrade	82.74	341	P	P	04 26 05.0	+0.8
	baz=161						
I47A	Gladwin	82.78	352	P	P	04 26 05.1	+0.8
	baz=171						
I48A	Sherman Twp	82.86	352	P	P	04 26 05.4	+0.7
	baz=172						
H48A	Harrisville	83.33	353	P	P	04 26 08.1	+1.0
	baz=172						
G53A	Haliburton	83.39	356	P	P	04 26 08.1	+0.6
	baz=176						
ISCO	Idaho Springs	83.41	335	P	P	04 26 08.9	+0.9
	baz=155						
G47A	Hillman	83.85	352	P	P	04 26 10.6	+0.9
	baz=172						
F52A	Sundridge	84.10	356	P	P	04 26 11.8	+0.7
	baz=175						
OSI	Osito Audit: C	84.12	324	P	P	04 26 12.1	+0.6
	baz=146						
F61A	St Evariste	84.12	2	P	P	04 26 12.1	+0.9
	baz=182						
ALGO	Algonquin Park	84.19	357	P	P	04 26 12.3	+0.9
	baz=176						
F51A	Arnstein	84.27	355	P	P	04 26 12.4	+0.5
	baz=175						
N23A	Red Feather La	84.51	336	P	P	04 26 14.3	+0.7
	baz=155						
E57A	Chemin Saint G	84.54	359	P	P	04 26 14.0	+0.7
	baz=179						
ECSD	EROS Data Cent	84.57	343	P	P	04 26 14.2	+0.7
	baz=162						
FURC	Furnace Creek,	84.82	326	P	P	04 26 15.6	+0.8
	baz=147						
PKM	Mcpherson Peak	84.85	323	P	P	04 26 15.7	+0.3
	baz=145						
TPNV	Topopah Spring	84.95	327	P	P	04 26 16.8	+1.0
	baz=148						
E48A	Lockeyer	84.99	354	P	P	04 26 16.5	+1.0
	baz=173						
E47A	Iron Bridge	85.06	353	P	P	04 26 16.5	+0.6
	baz=172						
D57A	Chemin Vers le	85.14	360	P	P	04 26 17.1	+0.8
	baz=180						
D55A	Sainte-Anne-du	85.17	358	P	P	04 26 16.4	0.0
	baz=178						
SPMN	Marine on St.	85.21	346	P	P	04 26 16.8	+0.1
	baz=165						
D58A	Chemin du LacG	85.22	0	P	P	04 26 17.0	+0.3
	baz=180						
D63A	Stockholm	85.28	3	P	P	04 26 17.5	+0.5
	baz=184						
D62A	Allapoint, All	85.29	3	P	P	04 26 16.8	-0.1
	baz=183						
E43A	Lone Tree Farm	85.41	350	P	P	04 26 16.5	-1.1
COWI	Conover	85.44	349	P	P	04 26 17.1	-0.7
COWI				IAmb	IAmb	04 26 30.1	
	comp=Z,11nm,0.7s						
GRAC	Grapevine Rang	85.48	326	P	P	04 26 18.1	-0.2
	baz=147						
D50A	G1974 Best Tow	85.50	355	P	P	04 26 18.1	0.0
	baz=175						
LATQ	La Tuque	85.51	0	P	P	04 26 17.6	-0.4
	baz=180						
D46A	Sault St. Mari	85.57	353	P	P	04 26 18.2	-0.2
	baz=172						
D47A	Chapleau	85.64	353	P	P	04 26 18.6	-0.2
	baz=172						
D48A	Paudash Townsh	85.65	354	P	P	04 26 18.4	-0.4
	baz=173						
D49A	Beulah Townshi	85.71	354	P	P	04 26 18.8	-0.3
	baz=174						
SUSD	Miller	85.79	342	P	P	04 26 20.9	+1.3
	baz=160						
R11A	Troy Canyon, C	85.85	328	P	P	04 26 22.5	+2.2
	baz=148						
K22A	Casper	86.28	336	P	P	04 26 24.1	+1.8
	baz=154						
D41A	Chassel	86.29	350	P	P	04 26 22.2	+0.2
DUG	Dugway, Tooele	86.32	331	P	P	04 26 24.7	+2.2
DUG	Dugway, Tooele	86.32	331	P	P	04 26 23.6	+1.1
	baz=150						
TOA0	Torodi Ar. Sit	86.59	70	P	P	04 26 24.1	-0.2
TOA0				IAmb	IAmb	04 26 39.7	
	comp=Z,5.7nm,0.8s						
TORD	Torodi Ar. Bea	86.59	70	P	P	04 26 24.0	-0.2
	comp=Z,4.6nm,0.9s,baz=221,slow=4.7,SNR=20						
TORD	Torodi Ar. Bea	86.59	70	P	P	04 26 23.4	-0.8
NVAR	Mina Array Bea	87.08	326	P	P	04 26 28.6	+2.3
	comp=Z,1.4nm,1.0s,baz=164,slow=6.2,SNR=6.2						
NVAR				pP	sP	04 26 39.3	+1.4
	comp=Z,1.5nm,0.8s,baz=160,slow=7.5,SNR=8.1						
NVAR	Mina Array Bea	87.08	326	P	P	04 26 26.2	-0.1
LSQQ	Lebel-sur-Quev	87.25	357	P	P	04 26 27.4	+0.8
	baz=177						
PDAR	Pinedale Array	87.39	334	P	P	04 26 28.5	+0.8
	comp=Z,1.2nm,0.8s,baz=153,slow=6.8,SNR=11						
PDAR				pP	sP	04 26 39.3	0.0
	comp=Z,1.3nm,0.6s,baz=150,slow=5.8,SNR=9.8						
EYMN	Ely	87.61	348	P	P	04 26 27.5	-0.9
EYMN	Ely	87.61	348	P	P	04 26 29.0	+0.6
	baz=166						
MATQ	Matagami	87.97	357	P	P	04 26 30.6	+0.5
	baz=177						
MDND	Maddock	89.14	343	P	P	04 26 35.9	+0.2
	baz=160						
LAO	LASA Array	89.83	338	P	P	04 26 39.0	0.0
	baz=155						
ULM	Lac du Bonnet	90.61	346	P	P	04 26 42.8	+0.4
	comp=Z,2.1nm,0.6s,baz=186,slow=3.8,SNR=6.1						
ULM				pP	sP	04 26 53.7	-0.4
	comp=Z,4.8nm,0.8s,baz=177,slow=4.0,SNR=5.4						
ULM	Lac du Bonnet	90.61	346	P	P	04 26 42.8	+0.4
ULM				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GERES	GERESS Array B	115.92	47	PKP	PKiKP	04 32 23.1	+0.2
	comp=Z,1.1nm,0.7s,baz=207,slow=0.9,SNR=11						
GERES				pPKP	pPKiKP	04 32 34.3	+2.6
	comp=Z,1.0nm,0.7s,baz=239,slow=0.8,SNR=5.9						
GERES	GERESS Array B	115.92	47		PKPdf	04 32 22.0	-0.9
GERES	GERESS Array B	115.92	47	PKIKP	PKPdf	04 32 22.0	-0.9
ILAR	Eielson Array	117.77	332	PKP	PKPdf	04 32 25.7	-0.1
	comp=Z,0.3nm,0.7s,baz=144,slow=2.3,SNR=5.1						
ILAR				pPKP	sPKPdf	04 32 36.6	-1.0
	comp=Z,0.5nm,0.8s,baz=187,slow=3.2,SNR=4.3						
VYHS	Vyhne	118.76	49	ePKIKP	PKiKP	04 32 28.8	+0.5
VYHS	Vyhne	118.76	49	ePKP	PKiKP	04 32 28.8	+0.5
HFS	Hagfors	121.01	36	PKP	PKPdf	04 32 31.5	-0.7
	comp=Z,7.3nm,1.1s,baz=240,slow=5.0,SNR=5.7						
HFS				pPKP	sPKPdf	04 32 42.4	-1.6
	comp=Z,2.7nm,0.7s,baz=132,slow=2.2,SNR=3.0						
H11S2	WAKE ISLAND Hy	124.70	267	T	T	06 49 36.0	
	baz=126,slow=75,SNR=40						
H11S1	WAKE ISLAND Hy	124.71	267	T	T	06 49 34.8	
	baz=126,slow=75,SNR=35						
H11S3	WAKE ISLAND Hy	124.71	267	T	T	06 49 29.0	
	baz=126,slow=75,SNR=25						
BRTR	Keskin Array B	124.72	64	PKP	PKPdf	04 32 39.6	-0.6
	comp=Z,1.0nm,0.8s,baz=184,slow=3.2,SNR=8.1						
BRTR				pPKP	sPKPdf	04 32 51.4	-0.5
	comp=Z,0.8nm,0.8s,baz=204,slow=2.7,SNR=4.3						
AKASG	Malin Array Be	125.84	50	PKP	PKPdf	04 32 41.1	-0.6
	comp=Z,0.9nm,0.5s,baz=258,slow=2.6,SNR=9.4						
AKASG				pPKP	sPKPdf	04 32 52.2	-1.3
	comp=Z,1.5nm,0.6s,baz=264,slow=2.5,SNR=4.9						
FINES	FINESS Array B	127.18	37	PKP	PKPdf	04 32 44.1	+0.2
	comp=Z,1.3nm,0.9s,baz=158,slow=1.5,SNR=3.6						
ARCES	ARCESS Array B	128.46	26	PKP	PKiKP	04 32 46.9	0.0
	comp=Z,3.2nm,0.7s,baz=328,slow=4.3,SNR=6.2						
ARCES				pPKP	sPKPdf	04 32 58.5	+0.6
	comp=Z,2.9nm,0.9s,baz=318,slow=3.6,SNR=1.7						
OBN	Obninsk	131.27	46	i PKIKP	PKiKP	04 32 53.1	+0.2
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NEY	Neytrino	132.34	63	⇓iPKIKP	PKiKP	04 32 59.0	+3.3
KIV	Kislovodsk	132.52	62	i PKIKP	PKiKP	04 32 58.1	+2.2
KIV				pmax	pmax		
	comp=Z,14nm,0.9s						
BILL	Bilibino	136.43	332	i PKIKP	PKiKP	04 33 02.4	-0.6
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s						
PRGR	Permogore	136.48	37	ePKIKP	PKPdf	04 33 00.1	-1.4
SEY	Seymchan	143.39	327	⇑ePKIKP	PKPdf	04 33 14.8	+0.8
ARU	Arti	143.67	44	PKP	PKPbc	04 33 13.1	+0.8
	comp=Z,3.7nm,0.2s,baz=280,slow=3.8,SNR=7.2						
ARU				pPKP	pPKPdf	04 33 24.0	+0.6
	comp=Z,2.9nm,0.2s,baz=185,slow=3.4,SNR=1.4						
ARU	Arti	143.67	44	i PKIKP	PKPbc	04 33 13.3	+1.0
AKTO	Aktyubinsk	143.80	55	PKP	PKPbc	04 33 13.2	+0.3
	comp=Z,2.1nm,0.8s,baz=289,slow=3.5,SNR=5.6						
TIXI	Tiksi	144.93	348	PKP	PKPab	04 33 15.6	-0.2
	comp=Z,14nm,0.7s,baz=37,slow=4.0,SNR=27						
TIXI				pPKP	sPKPdf	04 33 26.7	-1.5
	comp=Z,23nm,0.8s,baz=54,slow=7.9,SNR=12						
TIXI	Tiksi	144.93	348		PKPab	04 33 14.8	-0.9
TIXI	Tiksi	144.93	348	⇓ePKIKP	PKPab	04 33 15.3	-0.4
ABKAR	Akbulak array	145.05	57		PKPbc	04 33 16.9	+0.1
MA2	Magadan	145.21	322	⇓ePKIKP	PKPdf	04 33 18.9	+1.6
BRVK	Borovoye	151.01	48		PKiKP	04 33 33.8	+0.4
BRVK	Borovoye	151.01	48	PKIKP	PKiKP	04 33 33.8	+0.4
BVAR	Borovoye Array	151.08	48	PKP	PKPdf	04 33 28.5	+1.3
	comp=Z,1.1nm,0.7s,baz=288,slow=0.9,SNR=5.4						
BVAR				PKPbc	PKPbc	04 33 33.9	+0.9
	comp=Z,5.8nm,0.7s,baz=292,slow=4.0,SNR=25						
BVAR				pPKPbc	sPKPbc	04 33 45.3	+0.6
	comp=Z,5.1nm,0.7s,baz=289,slow=4.5,SNR=11						
YAK	Yakutsk	152.58	337	⇓ePKIKP	PKPdf	04 33 30.0	+0.9
AAK	Ala-Archa	155.17	70	⇓ePKIKP	PKPdf	04 33 32.4	-1.2
KSH	Kashi	156.05	78	PKP	PKPdf	04 33 36.5	+1.6
KSH				sPKP		04 33 50.7	
KSH				PKS	PKSdf	04 37 09.3	+0.4
KSH				PP	PP	04 37 38.5	-1.9
KSH				SKS	SKSdf	04 40 34.8	-4.7
KSH				SKKS	SKKSac	04 44 26.1	-1.7
KSH				AMB	AMB		
	comp=Z,96nm,4.0s						
KSH				LR	LR		
	comp=Z,65nm,5.2s						
KSH				LR	LR		
	comp=Z,76nm,8.2s						
KURBB	Kurchatov Arra	156.63	50	PKP	PKPdf	04 33 35.8	+0.7
	comp=Z,1.0nm,0.8s,baz=230,slow=1.3,SNR=8.0						
KURBB				PKPbc	PKPbc	04 33 45.8	
	comp=Z,0.7nm,0.7s,baz=291,slow=2.4,SNR=5.3						
KURBB				PKPab	PKPab	04 34 04.8	+0.4
	comp=Z,2.5nm,0.8s,baz=288,slow=4.5,SNR=12						
KURK	Kurchatov	156.65	49		PKPdf	04 33 35.8	+0.7
KURK					sPKPdf	04 33 45.8	-1.0
KURK					PKPab	04 34 04.8	+0.4
KURK	Kurchatov	156.65	49	⇓ePKIKP	PKPdf	04 33 36.2	+1.1
BOD	Bodaibo	160.11	349	ePKP2	PKPab	04 34 17.6	-1.5
BOD				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MKAR	Makanchi Array	160.19	57	PKP	PKPdf	04 33 39.7	+0.2
	comp=Z,1.7nm,1.1s,baz=297,slow=0.5,SNR=7.3						
MKAR				PKPab	PKPab	04 34 20.0	0.0
	comp=Z,2.6nm,0.7s,baz=278,slow=3.8,SNR=16						
MKAR	Makanchi Array	160.19	57	PKPdf	PKPdf	04 33 38.8	-0.7
MKAR					PKPab	04 34 19.9	-0.1
MKAR	Makanchi Array	160.19	57	PKIKP	PKPdf	04 33 38.8	-0.7
WMQ	Urumqi	164.64	64	ePKP	PKPdf	04 33 44.8	+0.7
WMQ				LR	LR		
	comp=Z,260nm,29.0s						
WMQ				LR	LR		
	comp=Z,250nm,28.9s						
CN2	Changchun	165.02	297	ePKP	PKPdf	04 33 43.1	-1.3
NJ2	Nanjing	168.26	240	ePKP	PKPdf	04 33 48.7	+1.5
CD2	Chengdu	172.01	161	PKP	PKPdf	04 33 49.0	-0.5
GTA	Gaotai	174.45	78	ePKP	PKPdf	04 33 50.9	+0.7
HHC	Hu-ho-hao-te	175.67	304	ePKP	PKPdf	04 33 50.3	-0.2

IDC 10 05:03:01.4±2.5, 13.84S×72.71W, h58km±29km, mb3.3/3, mb1 3.8/6, mb1mx3.5/27, mbtmp3.8/6, ML4.2/3, Error ellipse: s-maj=76.2km s-min=15.8km az=28.0

ISC 10 05:03:01.8±0.7, 14.4S±0.1×73.0W±0.1, h83km, n10, σ1.37/13, mb3.5/3, Central Peru

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNA	Nana	4.42	302	P	Pn	05 04 06.9	+0.4
	7.2nm,0.3s,baz=131,slow=12,SNR=19						
NNA				S	Sn	05 04 56.3	-0.6
	3.6nm,0.3s,baz=84,slow=10.0,SNR=3.7						
LPAZ	La Paz	5.09	112	P	Pn	05 04 19.2	+3.0
	1.9nm,0.3s,baz=318,slow=8.6,SNR=34						
LVC	Limon Verde	9.06	155	P	Pn	05 05 11.3	+1.2
	0.4nm,0.3s,baz=345,slow=12,SNR=5.5						
LVC				S	Sn	05 06 50.1	-0.5
	0.4nm,0.3s,baz=249,slow=22,SNR=5.0						
SIV	San Ignacio	11.65	99	P	Pn	05 05 43.4	-1.9
	1.4nm,0.3s,baz=302,slow=9.0,SNR=23						
CPUP	Villa Florida	18.89	131	P	Pn	05 07 18.6	+1.3
	0.4nm,0.3s,baz=314,slow=7.2,SNR=8.7						
TXAR	Lajitas Array	52.58	326	P	P	05 12 07.9	+0.5
	0.3nm,0.6s,baz=151,slow=9.0,SNR=6.4						
TXAR				pP	pP	05 12 29.8	+0.7
	0.3nm,0.8s,baz=155,slow=6.9,SNR=3.9						
TORD	Torodi Ar. Bea	78.88	73	P	P	05 14 55.5	-1.2
	0.8nm,0.7s,baz=257,slow=4.5,SNR=7.5						
YKA	Yellowknife Ar	83.24	342	P	P	05 15 18.7	-0.1
	0.3nm,0.8s,baz=132,slow=5.0,SNR=4.4						
ZALV	Zalesovo Beam	136.87	19	PKP	PKiKP	05 22 16.4	-0.1
	0.8nm,0.4s,baz=288,slow=1.4,SNR=4.0						
SONM	Songino Array	146.66	1	PKPbc	PKPab	05 22 35.4	-0.1
	0.9nm,0.6s,baz=324,slow=3.0,SNR=7.3						

ATH 10 05:27:12.9, 38.15N×20.35E, h14km±1km, ML2.5/5, Error ellipse: s-maj=1.9km s-min=1.2km az=61.0
THE 10 05:27:13.9, 38.17N×20.40E, h12km, ML2.8/2, Error ellipse: s-maj=1.1km s-min=0.6km az=263.0

ISC 10 05:27:12.8±1.2, 38.17N±0.04×20.38E±0.06, h17km±4km, n25, σ0.65/44, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	0	P	Pg	05 27 15.7	-0.1
CHV1				S	Sg	05 27 17.6	-0.3
KEF3	Kipouria, Keph	0.04	324	P	Pg	05 27 15.9	0.0
KEF3				S	Sg	05 27 17.7	-0.4
LXRA	Lixouri, Kepha	0.06	53	P	Pg	05 27 16.0	0.0
LXRA				S	Sg	05 27 18.1	-0.1
LXR1	Lixouri, Cepha	0.06	53	P	Pg	05 27 16.1	+0.1
LXR1				S	Sg	05 27 18.1	-0.1
ARGA	Argostoli. Kep	0.08	82	P	Pg	05 27 16.0	-0.1
ARGA				S	Sg	05 27 17.7	-0.8
KEF2	Argostoli. Kep	0.08	91	P	Pg	05 27 16.1	-0.1
KEF2				S	Sg	05 27 17.9	-0.6
ARG2	Argostoli	0.08	82	P	Pg	05 27 16.2	0.0
ARG2				S	Sg	05 27 18.2	-0.3
KEF4	Livadi, Kephal	0.10	20	P	Pg	05 27 16.5	+0.2
KEF4				S	Sg	05 27 18.9	+0.2
KEF1	Kardakata, Kep	0.13	32	P	Pg	05 27 16.9	+0.2
KEF1				S	Sg	05 27 19.4	0.0
VLS	Valsamata	0.16	86	P	Pg	05 27 17.0	-0.2
VLS				S	Sg	05 27 20.0	-0.2
	4μm,0.2s						
VLS	Valsamata	0.16	86	P	Pg	05 27 17.0	-0.2
VLS				S	Sg	05 27 19.9	-0.2
VSK1	VASILIKIADES	0.28	31	P	Pb	05 27 19.2	-0.2
VSK1				S	Sg	05 27 23.9	+0.7
	4μm,0.4s						
KONA	Konidatara, Ke	0.30	30	P	Pb	05 27 19.3	-0.4
KONA				S	Sg	05 27 24.8	+1.1
VLMS	Volimes, Zakyn	0.36	142	P	Pg	05 27 20.3	-0.1
VLMS				S	Sg	05 27 25.9	+0.3
VLMS				AML	AML	05 27 26.4	
	comp=E,13926μm,0.2s						
VLMS				AML	AML	05 27 26.6	
	comp=N,10623μm,0.2s						
EVGI	Lefkada island	0.50	25	P	Pb	05 27 23.6	+0.5
EVGI				S	Sb	05 27 30.6	+0.4
EVGI	Lefkada island	0.50	25	P	Pb	05 27 22.7	-0.4
MGNA	Meganis	0.58	33	P	Pb	05 27 24.4	-0.1
MGNA				AML	AML	05 27 34.4	
	comp=N,586μm,0.2s						
MGNA				AML	AML	05 27 34.6	
	comp=E,914μm,0.3s						
LKD2	Lefkada island	0.66	19	P	Pb	05 27 25.9	+0.1
LKD2				S	Sn	05 27 35.5	-1.8
LKD2	Lefkada island	0.66	19	P	Pb	05 27 26.0	+0.1
LKD2				S	Sn	05 27 35.7	-1.6
TSLK	Tsoukalades, L	0.69	18	P	Pb	05 27 27.1	+0.8
TSLK				AML	AML	05 27 45.2	
	comp=E,476μm,0.6s						
TSLK				AML	AML	05 27 47.5	
	comp=N,335μm,0.3s						
RLS	Riolos of Patr	0.86	97	P	Pg	05 27 29.3	-0.3
RLS				S	Sn	05 27 42.9	+0.7
RLS				AML	AML	05 27 46.7	
	comp=N,238μm,0.3s						
RLS				AML	AML	05 27 47.2	
	comp=E,256μm,0.5s						
PVO	Paravola	1.00	63	P	Pn	05 27 32.4	+0.3
PVO				S	Sn	05 27 47.6	+1.9
PVO				AML	AML	05 27 49.5	
	comp=E,800μm,0.3s						
PVO				AML	AML	05 27 49.5	
	comp=N,694μm,0.3s						
IGT	Igoumenitsa	1.36	358	P	Pg	05 27 38.9	-0.2
KLV	Kalavryta, Ach	1.40	94	P	Pb	05 27 38.8	+0.3
KALE	Kalithea	1.40	80	P	Pg	05 27 38.3	-1.5

IDC 10 05:32:31.8±1.5, 18.02S×178.51W, h595km±20km, mb3.6/14, mb1 3.8/16, mb1mx3.7/24, mbtmp4.5/16, Error ellipse: s-maj=19.2km s-min=10.1km az=150.0
NEIC 10 05:32:32.7±1.2, 18.00S±0.06×178.5W±0.1, h610km±5km, mb4.6/54, Error ellipse: s-maj=15.1km s-min=8.0km az=108.0

ISC 10 05:32:32.2±0.4, 17.97S±0.09×178.51W±0.07, h600km, n162, σ0.77/158, mb4.5/39, 1C-18D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.29	274	P	P	05 33 54.6	+1.5
AFI	Afiamalu	7.63	59	P	P	05 34 26.4	-1.8
	4.4nm,0.3s,baz=293,slow=3.1,SNR=7.7						
AFI	Afiamalu	7.63	59	P	P	05 34 26.9	-1.3
NIUE	Niue	8.21	99	P	P	05 34 34.5	+0.9
DZM	Mont Dzumac	14.72	251	P	P	05 35 38.2	+0.2
	1.2nm,0.3s,baz=106,slow=22,SNR=7.0						
NOUC	Port Laguerre	14.85	251	P	P	05 35 39.3	+0.2
URZ	Urewera	20.57	190	P	P	05 36 29.3	-1.6
	4.2nm,0.3s,baz=107,slow=11,SNR=11						
URZ	Urewera	20.57	190	P	P	05 36 29.2	-1.6
URZ				IAmb	IAmb	05 36 39.4	
	comp=Z,38nm,1.4s						
MSWZ	Moikau Station	23.97	192	P	P	05 37 00.5	-0.7
THZ	Tophouse	24.82	195	P	P	05 37 08.5	-0.3
THZ				IAmb	IAmb	05 37 12.4	
	comp=Z,11nm,1.3s						
PPT	Papeete	27.54	94	P	P	05 37 32.9	0.0
	comp=Z,32nm,0.6s,baz=357,slow=1.6,SNR=6.0						
PPT	Papeete	27.54	94	P	P	05 37 32.7	-0.2
EIDS	Eidsvold	29.16	250	P	P	05 37 46.8	0.0
EIDS				IAmb	IAmb	05 37 47.6	
	comp=Z,9.0nm,0.7s						
MLZ	Mavora Lakes	29.51	199	P	P	05 37 49.8	+0.3
MLZ				IAmb	IAmb	05 37 55.1	
	comp=Z,18nm,1.3s						
WHZ	Wether Hill Ro	30.03	199	P	P	05 37 52.5	-1.5
CAN	Canberra	33.59	233	P	P	05 38 25.4	+1.0

CAN				IAmb	IAmb	05 38 31.2	
comp=Z,21nm,1.4s							
COEN	Coen	37.01	271	P	P	05 38 53.9	+1.0
TAOE	Nuku Hiva Isla	38.33	81	P	P	05 39 04.1	+0.4
STKA	Stephens Creek	38.52	241	P	P	05 39 05.8	+0.9
comp=Z,14nm,0.7s,baz=96,slow=11,SNR=32							
STKA	Stephens Creek	38.52	241	P	P	05 39 05.8	+0.9
BBOO	Buckleboo	43.29	241	P	P	05 39 42.9	+0.3
BBOO				IAmb	IAmb	05 39 43.4	
comp=Z,18nm,0.5s							
HMH	Humu'ula Sheep	43.65	32	P	P	05 39 46.5	+0.7
WR0	Warramunga Arr	44.34	260	P	P	05 39 49.5	-1.3
WB0	Warramunga Arr	44.50	260	P	P	05 39 51.6	-0.5
WB0				IAmb	IAmb	05 39 52.4	
comp=Z,17nm,0.6s							
WB2	Warramunga Arr	44.52	260	P	P	05 39 51.9	-0.3
WRAB	Tennant Creek	44.52	260	P	P	05 39 52.5	+0.3
WRAB				IAmb	IAmb	05 39 52.6	
comp=Z,15nm,0.7s							
WRA	Warramunga Arr	44.53	260	P	P	05 39 51.7	-0.6
comp=Z,11nm,0.5s,baz=95,slow=7.3,SNR=17							
WRA	Warramunga Arr	44.53	260	P	P	05 39 51.7	-0.6
AS31	Alice Springs	44.68	254	P	P	05 39 53.6	+0.2
ASAR	Alice Springs	44.69	254	P	P	05 39 53.5	0.0
comp=Z,67nm,0.6s,baz=87,slow=8.5,SNR=766							
ASAR				PcP	PcP	05 41 22.7	-0.1
comp=Z,2.9nm,0.5s,baz=99,slow=4.2,SNR=5.9							
ASAR				S	S	05 45 46.1	-1.5
comp=Z,2.6nm,1.1s,baz=83,slow=16,SNR=11							
ASAR	Alice Springs	44.69	254	P	P	05 39 53.4	-0.1
ASAR					PcP	05 41 22.3	-0.4
MTN	Manton Dam	48.70	269	P	P	05 40 23.4	-0.3
MTN				IAmb	IAmb	05 40 23.9	
comp=Z,20nm,0.8s							
FORT	Forrest	49.90	245	P	P	05 40 31.8	-0.5
KNRA	Kununurra	50.39	264	P	P	05 40 35.4	-0.6
KNRA				IAmb	IAmb	05 40 36.6	
comp=Z,27nm,0.8s							
FAKI	Fak Fak	50.50	281	P	P	05 40 36.9	0.0
FITZ	Fitzroy Crossi	52.93	261	P	P	05 40 54.5	+0.3
SOEI	Soe	55.98	270	P	P	05 41 13.6	-2.2
PSA00	Pilbara Seismi	57.80	255	P	P	05 41 27.1	-0.9
PSA00				IAmb	IAmb	05 41 28.0	
comp=Z,18nm,0.7s							
NWAO	Narrogin (SRO)	59.10	242	P	P	05 41 36.4	-0.1
NWAO				IAmb	IAmb	05 41 41.2	
comp=Z,30nm,1.5s							
NWAO	Narrogin (SRO)	59.10	242	P	P	05 41 36.5	0.0
NWAO				IAmb	IAmb	05 41 41.3	
comp=Z,38nm,1.5s							
GIRL	Giralia	62.79	253	P	P	05 42 01.4	+0.7
JAGI	Jajag, Banyuwa	65.95	269	P	P	05 42 19.8	-1.0
JAGI				IAmb	IAmb	05 42 20.2	
comp=Z,22nm,0.7s							
MJAR	Matsushiro Arr	67.90	323	P	P	05 42 31.8	-0.5
comp=Z,6.7nm,0.5s,baz=148,slow=6.2,SNR=16							
MJAR	Matsushiro Arr	67.90	323	P	P	05 42 32.2	-0.1
MAJO	Matsushiro	67.91	323	P	P	05 42 31.9	-0.4
MAJO				IAmb	IAmb	05 42 32.5	
comp=Z,9.6nm,0.6s							
MAT	Matsushiro	67.91	323	P	P	05 42 31.9	-0.4
MJB9	Matsu-Tunnel	67.91	323	P	P	05 42 32.6	+0.3
MJB9				IAmb	IAmb	05 42 35.1	
comp=Z,12nm,1.1s							
UGM	Wanagama	69.55	268	P	P	05 42 42.8	+0.1
YULB	Yu-li	71.73	303	P	P	05 42 54.4	-0.9
YULB				IAmb	IAmb	05 42 56.2	
comp=Z,37nm,1.2s							
QSPA	South Pole Qui	72.08	180	P	P	05 42 57.4	+0.7
SSLB	Suanglung	72.19	303	P	P	05 42 57.1	-0.9
SSLB				IAmb	IAmb	05 43 08.3	
comp=Z,30nm,1.2s							
TPUB	Ta-pu	72.22	303	P	P	05 42 57.4	-0.7
TPUB				IAmb	IAmb	05 43 09.5	
comp=Z,32nm,1.2s							
KSM	Kuching	72.60	277	P	P	05 43 01.1	+0.6
PETK	Petropavlovsk-	73.72	345	P	P	05 43 05.9	0.0
comp=Z,5.8nm,0.6s,baz=145,slow=8.6,SNR=6.5							
PETK	Petropavlovsk-	73.72	345	P	P	05 43 05.5	-0.4
USRK	Ussuriysk Ar.	76.62	326	P	P	05 43 23.4	+1.2
comp=Z,1.9nm,0.6s,baz=107,slow=6.3,SNR=6.9							
USRK	Ussuriysk Ar.	76.62	326	P	P	05 43 22.5	+0.3
MDJ	Mudanjiang	78.19	325	P	P	05 43 31.9	+1.2
MDJ				IAmb	IAmb	05 43 32.7	
comp=Z,27nm,1.1s							
NVAR	Mina Array Bea	79.53	44	P	P	05 43 38.8	+0.6
comp=Z,0.6nm,0.6s,baz=224,slow=8.2,SNR=5.7							
NVAR	Mina Array Bea	79.53	44	P	P	05 43 37.4	-0.9
CN2	Changchun	80.02	322	eP	P	05 43 41.0	+0.7
GAMB	Gambell	81.66	3	P	P	05 43 48.8	+0.5
SUA	Susitna One	82.22	13	P	P	05 43 51.0	-0.4
PPLA	Purkeypile	83.22	12	P	P	05 43 55.3	-1.1
PPLA				IAmb	IAmb	05 44 01.6	
comp=Z,16nm,1.5s							
SCM	Sheep Creek Mo	83.31	14	P	P	05 43 56.5	-0.3
SCM				IAmb	IAmb	05 44 03.2	
comp=Z,12nm,1.3s							
CAST	Castle Rocks	83.71	12	P	P	05 43 59.1	+0.4
RPSI	Rantau Prapat	83.77	275	P	P	05 44 00.2	+0.1
RPSI				IAmb	IAmb	05 44 00.6	
comp=Z,11nm,0.8s							
VRDI	Verde Repeater	83.77	16	P	P	05 43 59.2	0.0
VRDI				IAmb	IAmb	05 44 12.9	
comp=Z,17nm,1.5s							
GLB	Gilahina Butte	83.85	16	P	P	05 43 58.9	-0.5
BALM	Baldy	83.91	17	P	P	05 44 00.1	+0.3
BALM				IAmb	IAmb	05 44 05.9	
comp=Z,11nm,1.1s							
KTH	Kantishna Hill	84.06	12	P	P	05 43 59.3	-1.2
TRF	Thorofare Moun	84.09	12	P	P	05 43 59.9	-0.8
TRF				IAmb	IAmb	05 44 01.4	
comp=Z,8.7nm,0.9s							
DHY	Denali Highway	84.39	14	P	P	05 44 01.9	-0.2
CCB	Clear Creek Bu	85.67	13	P	P	05 44 07.3	-0.8
ILAR	Eielson Array	85.97	13	P	P	05 44 08.2	-1.3
comp=Z,1.2nm,0.5s,baz=220,slow=5.0,SNR=28							
ILAR	Eielson Array	85.97	13	P	P	05 44 08.5	-1.0
TX31	Lajitas Ar. Si	86.11	58	P	P	05 44 10.9	-0.3
TXAR	Lajitas Array	86.11	58	P	P	05 44 12.6	+1.5
comp=Z,1.6nm,0.7s,baz=220,slow=6.3,SNR=23							
TXAR	Lajitas Array	86.11	58	P	P	05 44 11.0	-0.1
XAN	Xi'an	86.23	307	P	P	05 44 12.6	+1.1
XAN	Xi'an	86.23	307	P	P	05 44 11.8	+0.3
XAN				IAmb	IAmb	05 44 13.5	
comp=Z,16nm,1.0s							
PDAR	Pinedale Array	87.46	43	P	P	05 44 17.6	+0.2
comp=Z,0.3nm,0.5s,baz=207,slow=2.7,SNR=3.8							
PDAR	Pinedale Array	87.46	43	P	P	05 44 17.2	-0.2
COLD	Coldfoot	87.49	11	P	P	05 44 15.8	-0.8
BMAR	Burnt Mountain	88.74	12	P	P	05 44 22.9	+0.4
CMAR	Chiang Mai Arr	88.82	290	P	P	05 44 25.1	+1.1
comp=Z,3.1nm,0.8s,baz=113,slow=2.9,SNR=20							
SONM	Songino Array	93.54	319	P	P	05 44 45.7	+0.6
comp=Z,0.5nm,0.5s,baz=136,slow=4.3,SNR=5.6							
SONM	Songino Array	93.54	319	P	P	05 44 43.4	-1.7
YKA	Yellowknife Ar	94.43	25	P	P	05 44 48.3	-0.4
comp=Z,0.2nm,0.6s,baz=239,slow=4.6,SNR=4.8							
ZALV	Zalesovo Beam	108.23	322	PKiKP	PKiKP	05 49 51.7	-1.1
comp=Z,0.3nm,0.3s,baz=251,slow=1.8,SNR=3.5							
MKAR	Makanchi Array	109.11	314	PKiKP	PKiKP	05 49 53.6	-1.2
comp=Z,0.7nm,0.5s,baz=163,slow=0.7,SNR=20							
MKAR	Makanchi Array	109.11	314		PKiKP	05 49 53.7	-1.1
ABKAR	Akbulak array	123.92	318		PKPdf	05 50 22.4	-0.6
FINES	FINESS Array B	133.22	344	PKP	PKPdf	05 50 39.7	-0.6
comp=Z,1.1nm,0.6s,baz=97,slow=3.2,SNR=6.4							
FINES	FINESS Array B	133.22	344		PKPdf	05 50 40.0	-0.3
GKP	Gorka Klasztor	142.70	344	ePKP	PKPdf	05 50 47.4	-10
SORM	Soroca	142.80	330	⇓P	PKPdf	05 50 55.4	-2.8
GAZ	Gaziantep	143.30	309		PKPab	05 50 57.4	-0.6
VASR	Vaslui	144.12	329	⇓P	PKPdf	05 51 01.2	+0.6
BUR08	Bucovina Ar. S	144.61	332		PKPbc	05 51 02.8	+0.8
BURAR	Bucovina Array	144.63	332	⇓P	PKPbc	05 51 03.0	+1.0
BURAR	Bucovina Array	144.63	332		PKPbc	05 51 02.5	+0.5
OJC	Ojcow	144.64	340	ePKP	PKPdf	05 51 01.6	+0.2
BR131	Keskin Array S	144.76	315	PKPbc	PKPdf	05 51 02.6	+0.5
BRTR	Keskin Array B	144.76	315	PKPdf	PKPdf	05 51 02.2	+0.1
comp=Z,6.2nm,0.9s,baz=121,slow=3.6,SNR=28							
BRTR	Keskin Array B	144.76	315		PKPdf	05 51 02.7	+0.6
TESR	Tescani	144.77	329	⇓P	PKPbc	05 51 02.7	+0.3
KOLS	Kolonicke sedl	144.82	336	ePKP	PKPbc	05 51 02.8	+0.4
TOPG	Topolog	145.01	326	⇓P	PKPbc	05 51 03.7	+0.6
KSP	Ksiaz	145.15	344	ePKP	PKPbc	05 51 03.7	+0.4
NIE	Niedzica	145.15	338	ePKP	PKPbc	05 51 03.7	+0.3
CRVS	Cervenica-Dubn	145.16	337	ePKP	PKPbc	05 51 03.8	+0.4
VRI	Vrincioaia	145.19	329	⇓P	PKPbc	05 51 03.8	+0.2
PLOR	Plostina	145.24	329	⇓P	PKPdf	05 51 03.6	+1.0
ANTO	Ankara	145.26	315	PKPbc	PKPdf	05 51 04.1	+1.2
TRPA	Tarpa	145.37	335	⇓P	PKPbc	05 51 04.3	+0.4
OSTC	Ostas	145.43	343	ePKP	PKPbc	05 51 04.9	+0.7
CHVC	Chvalec	145.44	344	ePKP	PKPbc	05 51 04.5	+0.3
OZUR		145.48	330	⇓P	PKPbc	05 51 05.1	+0.6
OKC	Ostrava-Krasne	145.50	341	ePKP	PKPbc	05 51 04.9	+0.6
CLL	Collm	145.51	347	⇑iPKPbc	PKPbc	05 51 04.3	0.0
comp=Z,17nm,0.8s							
CLL	Collm	145.51	347	PKPbc	PKPdf	05 51 04.0	+1.2
UPC	Upice	145.53	344	ePKP	PKPbc	05 51 04.9	+0.5
DPC	Dobruska-Polom	145.58	343	ePKP	PKPbc	05 51 05.3	+0.7
KRLC	Kraliky	145.70	342	ePKP	PKPbc	05 51 05.1	+0.1
MORC	Moravsky Berou	145.74	341	ePKP	PKPbc	05 51 05.0	-0.1
MORC	Moravsky Berou	145.74	341	⇓P	PKPbc	05 51 05.5	+0.4
DOPR	Dopca	145.77	330	⇓P	PKPbc	05 51 05.5	+0.3
MBAR	Mbarara	145.82	240		PKPbc	05 51 06.4	-0.1
MLR	Muntele Rosu	145.84	329	⇓P	PKPdf	05 51 05.1	+1.4
MLR	Muntele Rosu	145.84	329		PKPbc	05 51 05.5	-0.2
VOIR		146.31	330	⇓P	PKPbc	05 51 07.0	+0.1
DRGR		146.35	333	⇓P	PKPbc	05 51 07.4	+0.5
PRU	Pruhonice	146.38	345	ePKP	PKPbc	05 51 07.0	+0.2
GOPC	GO Pecny, Ondr	146.39	344	ePKP	PKPbc	05 51 07.1	+0.2
VRAC	Vranov	146.44	342	ePKP	PKPdf	05 51 06.1	+1.6
VYHS	Vyhne	146.44	339	ePKP	PKPbc	05 51 07.4	+0.4
VYHS				e		05 51 10.0	
JAVC	Velka Javorina	146.51	341	ePKP	PKPbc	05 51 08.1	+0.8
ARR	Arges	146.57	330	⇓P	PKPbc	05 51 08.5	+1.0
KRUC	Moravsky	146.72	342	ePKP	PKPbc	05 51 07.1	-0.6
SMOL	Smolenice	146.89	340	ePKP	PKPbc	05 51 09.1	+0.9
MODS	Modra-Piesok	147.06	341	ePKP	PKPbc	05 51 08.6	-0.1
MODS				e		05 51 12.4	
GZR	Gura Zlata	147.41	332	⇓P	PKPbc	05 51 09.6	-0.1
KHC	Kasperske Hory	147.41	345	ePKP	PKPbc	05 51 09.6	0.0
KHC				ex	x	05 51 14.3	
KHC	Kasperske Hory	147.41	345		PKPbc	05 51 09.9	+0.3
GEC2	GERESS Array S	147.65	345		PKPbc	05 51 10.1	-0.2
GERES	GERESS Array B	147.65	345	PKPbc	PKPbc	05 51 10.1	-0.2
comp=Z,4.6nm,0.6s,baz=25,slow=3.3,SNR=35							
ELND	Elena	147.66	325	⇓P	PKPab	05 51 15.6	+0.7
BZS	Buzias	147.75	333	⇓P	PKPbc	05 51 10.6	+0.1
CONA	Conrad Observa	147.90	342	ePKiKP	PKPbc	05 51 11.0	0.0
comp=Z,2.5nm,0.5s							
MOA	Molln	148.42	343	ePKiKP	PKPbc	05 51 12.9	+0.7
comp=Z,1.1nm,0.5s							
VTS	Vitosha	149.26	328		PKPbc	05 51 13.8	-0.8
KBA	Koelnbreinsper	149.38	344	ePKiKP	PKPbc	05 51 14.3	-0.4
comp=Z,2.0nm,0.5s							
WATA	Walderalm	149.57	346	i PKiKP	PKPbc	05 51 15.1	0.0
WTTA	Wattenberg	149.62	346	ePKiKP	PKPbc	05 51 15.5	+0.2
comp=Z,10nm,0.6s							
MOTA	Moosalm	149.66	347	ePKiKP	PKPbc	05 51 15.3	0.0
comp=Z,1.4nm,0.4s							
SQTA	Sankt Quirin	149.76	347	ePKiKP	PKPbc	05 51 15.7	+0.2
comp=Z,6.8nm,0.7s							
ABTA	Abfaltersbach	149.90	345	ePKiKP	PKPbc	05 51 15.4	-0.4
comp=Z,7.6nm,0.6s,SNR=7.4							
DAVA	Damuels	149.96	349	ePKiKP	PKPbc	05 51 16.4	+0.3
comp=Z,2.9nm,0.6s							
FETA	Feichten	150.05	347	ePKiKP	PKPbc	05 51 16.6	+0.3
comp=Z,3.3nm,0.6s							
STAL	STALIGIAL	150.30	344		PKPbc	05 51 15.5	-1.2
FUORN	Ofenpass-Fuorn	150.53	348		PKPbc	05 51 17.6	+0.1

MDD **10** *05:56:49.5±0.2,28.82N×17.74W,h40km,mbLg3.7/16, Error ellipse: s-maj=2.1km s-min=0.9km az=158.0, PRXIMO TT-model: canary*
MDD EMS: II INTENSIDAD MAXIMA.
INMG **10** *05:56:49.1±1.2,28.98N×17.80W,h7km±9km,ML3.3,Error ellipse: s-maj=3.4km s-min=1.9km az=101.0*
ISC 10 05:56:43.7±1.4,**29.01N**±0.03×**17.78W**±0.04,**h28**km±14km, **n20**,σ1§66/39,**1C-10D,Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHIG	Higuera	0.45	183	⇓P	Pn	05 56 56.5	+2.1
	339nm,0.1s,SNR=18						
EHIG				S	Sn	05 57 02.5	+0.9
	800nm,0.1s,SNR=24						
EGOM	La Gomera	0.98	149	⇓P	Pb	05 57 03.0	+0.8
	672nm,0.1s,SNR=18						
EGOM				S	Sn	05 57 13.3	-1.3
	2μm,0.2s,SNR=26						
CTIG	El Hierro	1.23	186	⇓P	Pb	05 57 06.2	0.0
	100nm,0.1s,SNR=18						
CTIG				S	Sn	05 57 19.6	-0.9
	631nm,0.2s,SNR=7.9						
CTAN	El Hierro	1.28	191	⇓P	Pb	05 57 06.9	-0.3
	664nm,0.1s,SNR=18						
CTAN				S	Sn	05 57 20.2	-1.6
	2μm,0.1s,SNR=7.9						
CCUM	Cumbre, El Hie	1.28	190	⇓P	Pb	05 57 06.9	-0.3
	108nm,0.1s,SNR=18						
CCUM				S	Sn	05 57 20.7	-1.3
	577nm,0.1s,SNR=7.9						
CTAD	Las Tabladas,	1.29	192	P	Pb	05 57 06.9	-0.4
	361nm,0.1s,SNR=7.9						
CTAD				S	Sn	05 57 20.2	-1.9
	1μm,0.1s,SNR=7.9						
CHIE	El Hierro	1.29	187	⇓P	Pb	05 57 06.7	-0.6
	40nm,0.1s,SNR=18						
CHIE				S	Sn	05 57 20.2	-2.0
	43nm,0.1s,SNR=7.9						
CORC	Orchilla, El H	1.34	194	⇑P	Pb	05 57 07.7	-0.6
	211nm,0.1s,SNR=18						
CORC				S	Sn	05 57 22.2	-1.2
	589nm,0.1s,SNR=7.9						
EBAJ	Bajamar	1.34	110	⇓P	Pb	05 57 09.4	+1.1
	30nm,0.1s,SNR=18						
EBAJ				S	Sn	05 57 22.9	-0.6
	156nm,0.2s,SNR=13						
MACI	Morro de la Ar	1.35	124	⇓P	Pb	05 57 09.0	+0.5
	15nm,0.1s,SNR=18						
MACI				S	Sb	05 57 23.4	-2.0
	147nm,0.2s,SNR=7.9						
CGUI	Guimar, Teneri	1.36	120	⇓P	Pb	05 57 09.1	+0.5
	48nm,0.1s,SNR=18						
CGUI				S	Sn	05 57 23.4	-0.6
	374nm,0.2s,SNR=7.9						
CRST	La Restinga, E	1.38	188	⇓P	Pb	05 57 08.4	-0.5
	88nm,0.1s,SNR=18						
CRST				S	Sn	05 57 23.1	-1.2
	434nm,0.2s,SNR=7.9						
EOSO	Osorio	2.17	115	P	Pb	05 57 20.5	-1.8
	4.9nm,0.1s,SNR=14						
EOSO				S	Sn	05 57 41.8	-2.2
	19nm,0.1s,SNR=12						
CFTV	Fuerteventura	3.30	100	P	Pn	05 57 36.3	+2.7
	0.9nm,0.1s,SNR=7.9						
CFTV				S	Sn	05 58 08.8	-3.0
	SNR=7.9						
CFUE	Fuerteventura	3.39	95	P	Pn	05 57 38.1	+3.3
	2.6nm,0.1s,SNR=7.9						
CFUE				S	Sn	05 58 11.0	-3.0
	34nm,0.1s,SNR=7.9						
FUL	Funchal	3.70	12	ePn	Pn	05 57 40.9	+1.9
FUL				eSn	Sn	05 58 19.7	-2.0
FUL				A	A	05 58 27.9	
	50nm,0.2s						
EFAM	Famara	3.72	87	S	Sn	05 58 21.3	-0.9
	7.3nm,0.1s,SNR=7.9						
PMAR	Madeira	3.77	11	ePn	Pn	05 57 42.0	+1.8
PMAR				eSn	Sn	05 58 22.2	-1.6
PMAR				A	A	05 58 25.4	
	66nm,0.2s						
PMOZ	Porto Moniz, M	3.83	7	ePn	Pn	05 57 42.6	+1.7
PMOZ				eSn	Sn	05 58 24.1	-1.0
PMOZ				A	A	05 58 28.0	
	152nm,0.6s						
PMOZ	Porto Moniz, M	3.83	7	P	Pn	05 57 42.4	+1.4
	57nm,0.2s,SNR=7.9						
PMOZ				S	Sn	05 58 24.2	-0.8
	336nm,0.6s,SNR=7.9						

IDC 10 06:08:42.6±24.0,**35.83S**×**107.61W**,**h0**km,**mb3.8**/3, **mb1 4.3**/3,**mb1mx3.8**/17,**mbtmp3.8**/3,**MS3.5**/2,**Ms1 3.6**/2, **ms1mx3.0**/16,**Error ellipse: s-maj=676.3km s-min=293.3km az=146.0,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	40.11	71	LR	LR	06 29 27.7	
	comp=Z,42nm,20.3s,baz=137,slow=31						
PPT	Papeete	41.30	285	LR	LR	06 30 07.6	
	comp=Z,90nm,18.2s,baz=188,slow=31						
TXAR	Lajitas Array	64.93	4	P	P	06 19 23.9	-0.1
	0.4nm,0.9s,baz=190,slow=9.1,SNR=4.6						
NVAR	Mina Array Bea	74.55	351	P	P	06 20 23.5	+0.2
	0.7nm,0.7s,baz=180,slow=6.6,SNR=6.1						
PDAR	Pinedale Array	78.25	359	P	P	06 20 44.2	0.0
	1.6nm,1.1s,baz=155,slow=4.9,SNR=6.7						

DRS **10** *06:16:09.1±0.0,41.95N×45.96E,h12km*
MOS **10** *06:16:10.2±0.0,42.04N×46.09E,h23km,MPVA3.5*
NORS **10** *06:16:11.8±0.0,42.05N×46.17E,h31km,MPVA3.2*
TIF **10** *06:16:11.2,42.04N×45.97E,h15km±2km*
DDA **10** *06:16:15.0,41.87N×45.77E,h7km±1km,ML1.9*
ISC 10 06:16:11.0±1.0,**42.03N**±0.02×**46.00E**±0.02,**h12**km±9km, **n32**,σ1§20/61,**Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGD	Lagodekhi	0.27	137	P	Pb	06 16 17.9	+0.1
LGD				S	Sb	06 16 22.3	0.0
LGD	Lagodekhi	0.27	137	i Pg	Pb	06 16 17.9	+0.1
LGD				eSg	Sb	06 16 22.1	-0.2
DDFL	Dedoflistskaro	0.59	171	P	Pn	06 16 25.0	-0.3
DDFL				S	Sn	06 16 38.4	+3.4
DDFL	Dedoflistskaro	0.59	171	i P	Pn	06 16 25.1	-0.2
DDFL				i S	Sn	06 16 38.1	+3.2
BTLR	Botlikh	0.66	14	ePg	Pg	06 16 23.7	-0.1
	47nm,0.4s						
BTLR				eSg	Sg	06 16 32.8	+0.3
	354nm,0.5s						
XNZR	Khunzakh	0.73	45	ePg	Pg	06 16 25.4	+0.2
XNZR				eSg	Sg	06 16 34.6	-0.2
GNBR	Gunib	0.80	63	ePg	Pg	06 16 26.2	-0.4
	41nm,0.4s						
GNBR				eSg	Sg	06 16 37.1	0.0
	414nm,0.5s						
KMKR	Kumukh	0.82	83	ePg	Pg	06 16 26.0	-1.0
KMKR				eSg	Sg	06 16 37.0	-0.8
UNCR	Uncukul	0.90	40	ePg	Pb	06 16 28.0	-0.7
UNCR				eSg	Sb	06 16 38.0	-2.7
ARKR	Arakani	0.93	52	i Pg	Pb	06 16 28.8	-0.4
ARKR				i Sg	Sb	06 16 40.0	-1.6
SEAG	Tbilisi Sea	0.93	254	P	Pn	06 16 29.7	-0.4
BTNK	Botanikuri	0.96	249	P	Pg	06 16 29.7	+0.1
BTNK				S	Sn	06 16 43.8	-0.4
BTNK	Botanikuri	0.96	249	ePg	Pg	06 16 29.7	+0.1
BTNK				eSg	Sn	06 16 43.8	-0.4
BTNK	Botanikuri	0.96	249	i P	Pg	06 16 29.7	+0.1
BTNK				i S	Sn	06 16 43.9	-0.2
BTNK				IAML		06 16 44.0	
	comp=E,70nm,0.3s						
BTNK				IAML		06 16 44.0	
	comp=N,76nm,0.3s						
TBLG	Delisi	0.99	253	P	Pn	06 16 30.2	-0.6
TBLG				S	Sn	06 16 44.3	-0.5
TBLG	Delisi	0.99	253	i P	Pn	06 16 30.3	-0.5
TBLG				IAML		06 16 44.0	
	comp=E,43nm,0.4s						
TBLG				i S	Sn	06 16 44.5	-0.2
TBLG				IAML		06 16 45.0	
	comp=N,37nm,0.3s						
KRNR	Karanay	1.04	40	ePg	Pb	06 16 31.0	-0.1
KRNR				i Sg	Sb	06 16 43.5	-1.3
DLMR	Dylym	1.14	24	ePg	Pb	06 16 31.5	-1.2
DLMR				eSg	Sb	06 16 51.5	+3.7
	comp=N,217nm,0.3s						
DBC	Dubki	1.16	31	i Pg	Pg	06 16 34.1	+0.7
	comp=N,27nm,0.3s						
DBC				eSg	Sb	06 16 48.4	+0.1
	comp=N,186nm,0.9s						
GROC	Groznyy	1.18	353	ePg	Pg	06 16 33.8	0.0
GROC				eSg	Sg	06 16 51.4	+2.3
GUDG	Gudauri	1.21	292	P	Pb	06 16 33.8	-0.3
GUDG				S	Sg	06 16 51.0	+0.9
KMGR	Komgaron	1.33	321	ePg	Pg	06 16 36.9	+0.4
KMGR				eSg	Sg	06 16 55.8	+2.0
KZRT	Kazreti	1.36	242	P	Pn	06 16 35.4	-0.5
KZRT				S	Sb	06 16 53.5	-0.4
KZRT	Kazreti	1.36	242	i P	Pn	06 16 35.4	-0.5
KZRT				i S	Sb	06 16 53.5	-0.4
AKT	Akhty	1.41	112	ePg	Pn	06 16 36.5	-0.1
	comp=N,13nm,0.2s						
AKT				eSg	Sn	06 16 54.8	-0.4
	comp=N,83nm,0.6s						
TRLG	Trialeti	1.50	252	P	Pb	06 16 38.3	-0.7
TRLG				S	Sg	06 16 58.9	-0.5
ZEI	Tsey	1.73	297	ePg	Pg	06 16 44.8	+0.5
ZEI				eSg	Sg	06 17 06.8	0.0
ONI	Oni	1.97	287	P	Pb	06 16 46.4	-0.6
ONI				S	Sg	06 17 12.9	-1.5
AKH	Akhalkalaki	1.98	253	ePg	Pb	06 16 45.3	+0.8
AKH				eSg	Sb	06 17 12.1	+0.3
GNI	Garni	2.11	207	ePg	Pb	06 16 47.9	-1.3
GNI				eSg	Sb	06 17 16.5	+1.1
NEY	Neytrino	2.71	298	ePn	Pb	06 16 57.2	-2.4
KBZ	Khabaz	2.84	308	ePn	Pn	06 16 58.4	+2.1

NEIC **10** *06:17:30.3±2.2,19.7N±0.3×68.11W±0.07,h98km±52km, Error ellipse: s-maj=37.9km s-min=9.3km az=186.0*
RSPR **10** *06:17:31.3,19.29N×68.08W,h164km±7km,MD3.4/7*
ISC 10 06:17:32.4±2.3,**19.5N**±0.2×**68.14W**±0.06,**h107**km±36km, **n24**,σ1§07/31,**7C,North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	1.04	193	Pn	Pn	06 17 52.8	-1.0
DR12	Loma Pena Alta	1.39	238		Pn	06 17 54.8	-3.0
DR12					Sn	06 18 11.9	-5.2
AGPR	Aguadilla, PR	1.44	137	⇑eP	Pn	06 17 59.4	+1.1
AGPR	Aguadilla, PR	1.44	137	Pn	Pn	06 17 57.9	-0.4
AGPR				Sn	Sn	06 18 16.9	-1.0
MPR	Mayaguez	1.62	144		Pn	06 17 59.2	-1.3
MPR					Sn	06 18 21.3	-0.5
LSP	Las Mesas	1.68	143	⇑eP	Pn	06 18 01.5	+0.3
LSP	Las Mesas	1.68	143	eS	Sn	06 18 25.4	+2.2
LSP	Las Mesas	1.68	143		Pn	06 18 01.5	+0.3
LSP					Sn	06 18 25.4	+2.2
AOPR	Arecibo Observ	1.76	132	⇑eP	Pn	06 18 02.4	+0.1
AOPR	Arecibo Observ	1.76	132	eS	Sn	06 18 26.5	+1.5
AOPR	Arecibo Observ	1.76	132	Pn	Pn	06 18 01.3	-1.0
AOPR					Sn	06 18 24.9	-0.2
AOPR				Sn	Sn	06 18 26.7	+1.6
CRPR	Cabo Rojo, PR	1.80	147	⇑eP	Pn	06 18 02.7	-0.1
CRPR	Cabo Rojo, PR	1.80	147	eS	Sn	06 18 27.4	+1.5
CRPR	Cabo Rojo, PR	1.80	147		Pn	06 18 02.6	-0.1
CRPR				Sn	Sn	06 18 24.8	-1.1
MLPR	Magueyes Islan	1.87	146	⇑eP	Pn	06 18 02.7	-0.8
MLPR	Magueyes Islan	1.87	146	eS	Sn	06 18 28.2	+0.9
MLPR	Magueyes Islan	1.87	146		Pn	06 18 02.8	-0.8
MLPR					Sn	06 18 26.5	-0.9
OBIP	Obispado Ponce	2.07	135	eS	Sn	06 18 32.8	+0.7
OBIP	Obispado Ponce	2.07	135	⇑eP	Pn	06 18 05.8	-0.4
OBIP	Obispado Ponce	2.07	135		Pn	06 18 05.0	-1.2
OBIP					Sn	06 18 30.8	-1.2
BANI	BANI	2.39	242	Pn	Pn	06 18 10.5	+0.1
BANI				Sn	Sn	06 18 40.7	+1.2
HUMP	Col San Antoni	2.57	122		Pn	06 18 12.8	+0.2
MTP	Monte Pirata	2.83	120	⇑eP	Pn	06 18 16.0	-0.1
SDDR	Presa de Saban	3.03	260	Pn	Pn	06 18 17.9	-0.8

ASRS **10** *06:30:45.5±0.2,50°N±1°×8°8E±°,h10km,MLh3.4/19, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*
NNC **10** *06:30:46.1±1.4,50.03N×87.73E,h0km,mb3.5,mpv3.1, Error ellipse: s-maj=12.3km s-min=7.8km az=102.0*
ISC 10 06:30:45.1±0.8,**49.97N**±0.03×**87.94E**±0.03,**h10**km,**n29**, σ2§**03**/60,**5C-10D,Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUR	Chagan-Uzun	0.30	63	Pg	Pg	06 30 50.5	-0.6
CUR				Sg	Sg	06 30 55.0	-0.1
AKAR	Aktash	0.41	330	Pg	Pg	06 30 52.7	-0.6
AKAR				Sg	Sg	06 30 58.6	-0.1
DGZ	Jazzator, Alta	0.42	231	Pg	Pg	06 30 52.7	-0.8
DGZ				Sg	Sg	06 30 57.8	-1.3

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
CHBI	**Chibit, Altay**	**0.45**	**321**	Pg	**Pg**	**06 30 53.2**	**-0.7**
CHBI				Sg	**Sg**	**06 30 59.3**	**-0.6**
ULGR	**Ulagan, Altay**	**0.66**	**1**	Pg	**Sg**	**06 30 56.9**	**-1.0**
ULGR				Sg	**Sg**	**06 31 05.6**	**-1.0**
TUNR	**Tungur**	**1.06**	**281**	Pg	**Pg**	**06 31 03.5**	**-1.9**
TUNR				Sg	**Sg**	**06 31 17.9**	**-1.3**
TEL	**Teeli**	**1.79**	**53**	Pg	**Pb**	**06 31 17.5**	**-0.4**
TEL				Sg	**Sb**	**06 31 40.8**	**+0.3**
ARTR	**Artybash**	**1.88**	**347**	Pg	**Pb**	**06 31 18.6**	**-1.0**
ARTR				Sg	**Sg**	**06 31 43.7**	**-1.9**
GALT	**Gorno-Altaysk,**	**2.36**	**328**	Pg	**Pb**	**06 31 28.0**	**+0.2**
GALT				Sg	**Sg**	**06 32 00.3**	**-0.6**
TASR	**Tashtagol**	**2.80**	**359**	Pg	**Pb**	**06 31 35.3**	**+0.2**
TASR				Sg	**Sb**	**06 32 11.0**	**+1.5**
ELT	**Eltsovka**	**3.47**	**343**	Pg	**Pb**	**06 31 46.5**	**0.0**
ELT				Sg	**Sg**	**06 32 33.6**	**-2.8**
DJO	**Djoy, Khakassi**	**3.49**	**35**	Pg	**Pb**	**06 31 49.1**	**+2.2**
DJO				Sg	**Sg**	**06 32 33.6**	**-3.5**
DJOS	**Djoyskaya Sosn**	**3.57**	**36**	Pg	**Pg**	**06 31 51.7**	**-1.7**
DJOS				Sg	**Sg**	**06 32 37.2**	**-2.4**
VEH	**Verkhnyaya Baz**	**3.61**	**23**	Pg	**Pb**	**06 31 50.3**	**+1.2**
VEH				Sg	**Sb**	**06 32 35.5**	**+2.5**
CERR	**Cheremushki**	**3.62**	**36**	Pg	**Pg**	**06 31 52.2**	**-2.2**
CERR				Sg	**Sg**	**06 32 39.4**	**-1.8**
LUZB	**Luzhba, Kemero**	**3.75**	**9**	Pn	**Pn**	**06 31 44.5**	**+1.5**
LUZB				Pg	**Pg**	**06 31 51.8**	**+0.5**
LUZB				Sg	**Sb**	**06 32 40.4**	**+3.6**
ARDR	**Aradan**	**4.33**	**51**	Pg	**Pb**	**06 32 02.4**	**+1.2**
ARDR				Sg	**Sg**	**06 33 00.4**	**-3.5**
ZAA0	**Zalesovo Array**	**4.43**	**335**	⇓Pn	**Pn**	**06 31 52.7**	**+0.4**
	0.3nm,0.7s						
ZAA0				⇓Pg	**Pb**	**06 32 04.0**	**+1.0**
	0.6nm,0.8s						
ZAA0				⇑Lg	Lg	06 33 04.5	
	3.0nm,0.9s						
SALR	**Pechorkino, Sa**	**4.67**	**344**	Pn	**Pn**	**06 31 55.9**	**+0.4**
SALR				Pg	**Pb**	**06 32 09.3**	**+2.3**
SALR				Sg	**Sg**	**06 33 09.0**	**-5.8**
MK31	**Makanchi Array**	**4.92**	**232**	⇑Pn	**Pn**	**06 32 01.1**	**+1.9**
	1.8nm,0.5s,baz=54,slow=13,SNR=192						
MK31				⇓Pg	**Pg**	**06 32 15.6**	**-3.7**
	2.9nm,0.5s,baz=55,slow=13,SNR=5.2						
MK31				⇓Lg	Lg	06 33 19.8	
	6.6nm,0.5s,baz=53,slow=28,SNR=5.2						
MKAR	**Makanchi Array**	**4.92**	**232**	Pn	**Pn**	**06 32 01.5**	**+2.3**
MKAR				Pg	**Pg**	**06 32 17.7**	**-1.7**
MKAR				Sg	**Sg**	**06 33 19.2**	**-3.9**
MAKZ	**Makanchi**	**5.08**	**234**	Pn	**Pn**	**06 32 03.6**	**+2.4**
MAKZ				Pg	**Pg**	**06 32 20.3**	**-2.0**
MAKZ				Sg	**Sg**	**06 33 24.1**	**-3.8**
MAKZ	**Makanchi**	**5.08**	**234**	⇑Pn	**Pn**	**06 32 02.8**	**+1.6**
	3.5nm,0.8s						
MAKZ				⇓Pg	**Pb**	**06 32 17.0**	**+3.1**
	4.2nm,0.8s						
MAKZ				⇓Lg	Lg	06 33 20.8	
	7.7nm,0.7s						
BSTK	**Bystrovka, Nov**	**5.64**	**327**	Sg	**Sg**	**06 33 47.7**	**+1.8**
NVS	**Novosibirsk**	**5.67**	**331**	Pg	**Pg**	**06 32 30.2**	**-3.4**
NVS				Sg	**Sg**	**06 33 47.4**	**+0.5**
NVSII	**Novosibirsk**	**5.67**	**331**	Sg	**Sg**	**06 33 46.8**	**-0.2**
KURK	**Kurchatov**	**6.02**	**281**	Pn	**Pn**	**06 32 14.7**	**+0.7**
KURK				Sg	**Sg**	**06 33 56.7**	**-1.4**
KURK	**Kurchatov**	**6.02**	**281**	⇓Pn	**Pn**	**06 32 14.2**	**+0.1**
	1.5nm,0.4s						
KURK				⇓Sn	**Sn**	**06 33 24.5**	**+1.5**
	4.1nm,0.7s						
KURK				⇑Lg	Lg	06 33 52.3	
	5.7nm,0.5s						
KURBB	**Kurchatov Arra**	**6.07**	**280**	⇑Pn	**Pn**	**06 32 15.1**	**+0.3**
	3.1nm,0.4s						
KURBB				⇓Sn	**Sn**	**06 33 23.9**	**-0.4**
	7.1nm,0.5s						
KURBB				⇓Lg	Lg	06 33 54.1	
	32nm,0.8s						

*IDC **10** 06:32:37.9±1.7, 1°.53N×124°.84E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.4/40, mbtmp3.7/4, ML4.0/1, Error ellipse: s-maj=127.2km s-min=22.3km az=67.0*
*NEIC **10** 06:32:38.7±0.6, 1°.6N±0°.1×125°.1E±0°.1, h10km±2km, mb4.4/8, Error ellipse: s-maj=29.5km s-min=5.1km az=131.0*
*DJA **10** 06:33:08.9±0.8, 0°N±6°×12°3E±°, h232km±7km, M3.3/6, MLv3.3/6*
ISC 10 06:33:05.9±1.0, **0°.3N**±0°.1×**123°.38E**±0°.08, **h250**km, **n20**, σ1s.82/21, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
KMSI	**Cibinong**	**0.64**	**69**	P	**Pn**	**06 33 39.6**	**+0.3**
LUWI	**Luwuk**	**1.50**	**204**	P	**Pn**	**06 33 45.4**	**+1.1**
LUWI				S	**S**	**06 34 14.4**	**-0.1**
LUWI	**Luwuk**	**1.50**	**204**	Pn	Pn	06 33 34.0	-10
LUWI					**S**	**06 34 16.1**	**+1.6**
MPSI	**Mapaga**	**3.48**	**270**	P	**Pn**	**06 34 05.1**	**+1.3**
SANI	**Sanana**	**3.52**	**132**	P	**Pn**	**06 34 01.1**	**-3.2**
LBMI	**Labuha**	**4.23**	**103**	P	**Pn**	**06 34 16.7**	**+4.2**
KNRA	**Kununurra**	**16.78**	**162**	P	**P**	**06 36 45.2**	**-0.2**
KNRA				IAmb	IAmb	06 37 13.7	
	comp=Z,36nm,1.2s						
FITZ	**Fitzroy Crossi**	**18.46**	**173**	P	**P**	**06 37 08.1**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=7.5,slow=9.9,SNR=4.1						
WB0	**Warramunga Arr**	**22.71**	**152**	P	**P**	**06 37 45.1**	**-1.5**
WB0				IAmb	IAmb	06 38 24.1	
	comp=Z,43nm,1.9s						
WRA	**Warramunga Arr**	**22.84**	**153**	P	**P**	**06 37 46.6**	**-1.1**
	comp=Z,1.6nm,0.4s,baz=333,slow=10,SNR=14						
WRA	**Warramunga Arr**	**22.84**	**153**	P	**P**	**06 37 47.0**	**-0.8**
WB2	**Warramunga Arr**	**22.84**	**153**	P	**P**	**06 37 46.6**	**-1.2**
WB2				IAmb	IAmb	06 38 21.9	
	comp=Z,22nm,1.6s						
WR0	**Warramunga Arr**	**22.95**	**152**	P	**P**	**06 37 47.0**	**-1.7**
WR0				IAmb	IAmb	06 38 32.2	
	comp=Z,22nm,1.4s						
AS31	**Alice Springs**	**25.96**	**158**	P	**P**	**06 38 17.4**	**+1.5**
ASAR	**Alice Springs**	**25.96**	**158**	P	**P**	**06 38 17.8**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=342,slow=14,SNR=5.3						
ASAR	**Alice Springs**	**25.96**	**158**	P	**P**	**06 38 16.8**	**+0.8**
BBOO	**Buckleboo**	**35.07**	**161**	P	**P**	**06 39 34.6**	**-1.0**
MK31	**Makanchi Array**	**58.53**	**328**	P	**P**	**06 42 34.7**	**-1.7**
MK31				IAmb	IAmb	06 43 21.7	
	comp=Z,2.3nm,1.4s						
MKAR	**Makanchi Array**	**58.53**	**328**	P	**P**	**06 42 34.8**	**-1.6**
	comp=Z,0.6nm,0.5s,baz=124,slow=8.4,SNR=13						
MKAR	**Makanchi Array**	**58.53**	**328**	P	**P**	**06 42 34.4**	**-2.0**

*IDC **10** 07:01:53.6±1.8, 56°.27S×27°.54W, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.7/18, mbtmp3.9/2, Error ellipse: s-maj=79.3km s-min=44.3km az=9.0*
*NEIC **10** 07:02:00.1±2.5, 55°.9S±0°.2×27°.77W±0°.10, h35km±2km, mb4.4/5, Error ellipse: s-maj=30.3km s-min=5.7km az=193.0*
ISC 10 07:02:00.5±0.9, **55°.8S**±0°.2×**27°.7W**±0°.1, **h35**km, **n14**, σ2s.21/15, **mb4.3**/4, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
HOPE	**Hope Point**	**5.29**	**283**	Pn	**Pn**	**07 03 20.2**	**+3.2**
HOPE					**Sn**	**07 04 15.4**	**-1.2**
VNA1	**Neumayer--Stat**	**17.11**	**158**	P	**P**	**07 06 03.0**	**+5.1**
VNA2	**Neumayer--Watz**	**17.51**	**158**	P	**P**	**07 06 02.3**	**0.0**
	baz=314,slow=13						
SNAA	**Sanae**	**19.07**	**156**	P	**P**	**07 06 18.5**	**-1.0**
SNAA	**Sanae**	**19.07**	**156**	P	**P**	**07 06 18.5**	**-1.0**
QSPA	**South Pole Qui**	**34.43**	**180**	P	**P**	**07 08 43.8**	**-0.6**
QSPA				IAmb	IAmb	07 08 44.4	
	comp=Z,3.2nm,0.7s						
GO05	**Huala**	**36.55**	**286**	P	**P**	**07 08 59.3**	**-3.3**
LPAZ	**La Paz**	**50.02**	**306**	P	**P**	**07 10 53.0**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=153,slow=4.5,SNR=5.8						
LPAZ	**La Paz**	**50.02**	**306**	P	**P**	**07 10 52.6**	**+0.5**
LPAZ				IAmb	IAmb	07 11 02.5	
	comp=Z,6.9nm,1.5s						
TOA0	**Torodi Ar. Sit**	**72.99**	**30**	P	**P**	**07 13 27.5**	**+1.2**
TOA0				IAmb	IAmb	07 13 31.3	
	comp=Z,6.8nm,1.5s						
TORD	**Torodi Ar. Bea**	**72.99**	**30**	P	**P**	**07 13 27.0**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=203,slow=6.3,SNR=6.5						
ILAR	**Eielson Array**	**149.76**	**312**	PKPbc	**PKPbc**	**07 21 44.1**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=124,slow=3.1,SNR=14						
SONM	**Songino Array**	**150.99**	**86**	PKPbc	**PKPbc**	**07 21 47.2**	**-1.4**
	comp=Z,0.7nm,0.4s,baz=224,slow=4.0,SNR=10						
SONM	**Songino Array**	**150.99**	**86**		**PKPbc**	**07 21 47.5**	**-1.2**

*SJA **10** 07:03:09.5±0.6, 34°.29S×70°.96W, h110km±5km, ML3.1, MW3.0*
*GUC **10** 07:03:11.1±0.6, 34°.32S×70°.85W, h84km±5km, ML3.7*
ISC 10 07:03:11.6±1.5, **34°.30S**±0°.04×**70°.90W**±0°.05, **h93**km±11km, **n24**, σ0s.56/37, **6C-3D**, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
MT01	**Popeta**	**0.52**	**326**	⇑iP	**Pn**	**07 03 26.7**	**-0.2**
MT01				iS	**Sn**	**07 03 38.2**	**-0.1**
MT01				IAML		07 03 39.1	
	comp=E,3μm,0.2s						
LMEL	**Las Melosas**	**0.73**	**52**	⇓iP	**Pn**	**07 03 28.4**	**-0.5**
LMEL				iS	**Sn**	**07 03 41.5**	**-0.4**
LMEL				IAML		07 03 45.0	
	comp=N,3μm,0.1s						
FSR	**Penalolen**	**0.88**	**21**	eP	**Pn**	**07 03 30.9**	**+0.6**
FSR				iS	**Sn**	**07 03 45.3**	**+1.0**
STL	**Santa Lucia**	**0.89**	**14**	⇑iP	**Pn**	**07 03 29.9**	**-0.5**
STL				iS	**Sn**	**07 03 43.6**	**-0.9**
STL				IAML		07 03 44.8	
	comp=E,6μm,0.3s						
CLCH	**Cerro Calan**	**0.95**	**19**	⇑iP	**Pn**	**07 03 30.9**	**-0.2**
CLCH				iS	**Sn**	**07 03 45.9**	**+0.1**
CLCH				IAML		07 03 47.0	
	comp=E,3μm,0.3s						
GO05	**Huala**	**1.10**	**230**	⇓iP	**Pn**	**07 03 32.7**	**-0.1**
GO05				iS	**Sn**	**07 03 49.0**	**+0.3**
GO05	**Huala**	**1.10**	**230**	iP	**Pn**	**07 03 32.4**	**-0.4**
GO05				eS	**Sn**	**07 03 49.2**	**+0.5**
PEL	**Peldehue**	**1.17**	**9**	⇑iP	**Pn**	**07 03 33.3**	**-0.2**
PEL				iS	**Sn**	**07 03 49.9**	**-0.1**
PEL				IAML		07 03 51.6	
	comp=N,3μm,0.3s						
PEL	**Peldehue**	**1.17**	**9**	iP	**Pn**	**07 03 33.5**	**0.0**
PEL				eS	**Sn**	**07 03 50.8**	**+0.8**
ROC1	**El Roble**	**1.32**	**356**	iP	**Pn**	**07 03 35.5**	**-0.2**
ROC1				eS	**Sn**	**07 03 54.8**	**+1.1**
ROCH	**El Roble**	**1.33**	**356**	⇑iP	**Pn**	**07 03 35.4**	**-0.3**
ROCH				iS	**Sn**	**07 03 53.6**	**-0.1**
ROCH				IAML		07 03 58.4	
	comp=N,1μm,0.4s						
VA01	**Torpederas**	**1.42**	**334**	⇑iP	**Pn**	**07 03 37.1**	**+0.6**
VA01				iS	**Sn**	**07 03 56.6**	**+1.3**
PUMA	**Malargue**	**1.69**	**135**	⇑iP	**Pn**	**07 03 40.0**	**+0.1**
EDS3	**Malargue**	**1.92**	**140**	iP	**Pn**	**07 03 43.2**	**+0.2**
AAGR	**Agrelo**	**2.11**	**56**	iP	**Pn**	**07 03 46.0**	**+0.5**
ARCO	**CERRO ARCO**	**2.19**	**49**	iP	**Pn**	**07 03 47.0**	**+0.4**
ARCO				IAML		07 03 48.8	
	comp=Z,48nm,0.5s						
CCHI	**Chillan**	**2.49**	**202**	eP	**Pn**	**07 03 49.9**	**-0.5**
ZON	**Zonda**	**3.32**	**35**	iP	**Pn**	**07 04 01.7**	**+0.1**
ZON				IAML		07 04 59.1	
	comp=Z,88nm,0.2s						
CFA	**Coronel Fontan**	**3.50**	**41**	iP	**Pn**	**07 04 03.4**	**-0.6**
RTLL	**Cerro Villicun**	**3.60**	**35**	eP	**Pn**	**07 04 05.1**	**-0.3**
RTLL				⇑iP		07 04 05.3	
RTLL				IAML		07 04 05.7	
AMOG	**MOGNA**	**3.92**	**32**	⇓iP	**Pn**	**07 04 09.6**	**-0.1**
ACCO	**Cerro Coronel**	**4.01**	**23**	iP	**Pn**	**07 04 11.1**	**-0.1**
ACCO				eS	**Sn**	**07 04 57.4**	**+0.1**
GO04	**Tololo Observa**	**4.12**	**1**	iP	**Pn**	**07 04 11.6**	**-0.9**
AGUA	**GUANDACOL**	**5.22**	**24**	iP	**Pn**	**07 04 26.5**	**-0.9**

BEO 10 07:09:40.2±0.4, **43°.68N×22°.00E**, **h3**km±3km, **ML1.4**/7, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
BOVS	**Bovan**	**0.21**	**258**	ePg	Pg	07 09 44.0	-0.3
BOVS				eSg	Sg	07 09 47.2	+0.1
ZAGS	**Zajecar**	**0.22**	**52**	ePg	Pg	07 09 43.7	-0.7
ZAGS				eSg	Sg	07 09 48.2	+0.9
ZAPS	**Zavoj**	**0.62**	**131**	eSg	Pg	07 09 50.5	-1.5
ZAPS	**Zavoj**	**0.62**	**131**	ePg	Sg	07 10 00.7	+0.7
SELS	**Selova**	**0.79**	**234**	ePg	Pg	07 09 54.2	-1.1
GRUS	**Gruza**	**0.95**	**283**	ePg	Pg	07 09 57.7	-0.7
GRUS				eSg	Sg	07 10 10.7	0.0
BOSS	**Bosilegrad**	**1.24**	**163**	eSg	Sg	07 10 19.7	-0.2
IVAS	**Ivanjica**	**1.34**	**266**	ePg	Pn	07 10 04.4	-1.5
IVAS				eSg	Sg	07 10 23.2	-0.1
SJES	**Sjenica**	**1.53**	**255**	ePg	Pn	07 10 07.3	-1.2
SJES				eSg	Sb	07 10 29.2	+0.1

*IDC **10** 07:11:26.7±1.4, 34°.74N×26°.65E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.6/46, mbtmp3.7/7, ML3.7/1, Error ellipse: s-maj=31.4km s-min=20.3km az=161.0*
*ATH **10** 07:11:26.7, 34°.46N×26°.66E, h31km±1km, ML2.8/4, Error ellipse: s-maj=3.7km s-min=2.0km az=4.0*
*THE **10** 07:11:26.0, 34°.45N×26°.66E, h0km±2km, ML2.6/4, Error ellipse: s-maj=6.3km s-min=0.9km az=113.0*
ISC 10 07:11:27.6±2.1, **34°.49N**±0°.09×**26°.62E**±0°.06, **h15**km±11km, **n20**, σ1s.13/29, **mb3.6**/6, **Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
ZKR	**Zakros**	**0.71**	**332**	P	**Pg**	**07 11 41.3**	**-0.1**
ZKR				S	**Sb**	**07 11 52.8**	**+1.6**
	610nm,0.5s						
ZKR	**Zakros**	**0.71**	**332**	P	**Pg**	**07 11 41.4**	**-0.1**
ZKR				S	**Sb**	**07 11 53.1**	**+1.8**
ZKR				AML	AML	07 11 58.9	
	comp=E,2341μm,0.4s						
ZKR				AML	AML	07 11 58.9	
	comp=N,975μm,0.3s						
STIA	**Sitia Lasithi**	**0.84**	**329**	P	**Pb**	**07 11 43.6**	**-0.2**
FRMA	**Ierapetra Chan**	**0.90**	**306**	P	**Pb**	**07 11 43.4**	**-1.5**
FRMA				S	**Sb**	**07 11 56.6**	**-0.1**
	comp=N,385nm,0.7s						
NPS	**Neapolis**	**1.14**	**313**	P	**Pn**	**07 11 48.5**	**-0.4**
NPS				S	**Sg**	**07 12 05.7**	**+1.3**
	comp=N,1μm,0.7s						
NPS	**Neapolis**	**1.14**	**313**	P	**Pg**	**07 11 49.1**	**-0.4**
NPS				S	**Sg**	**07 12 04.9**	**+0.5**
NPS				AML	AML	07 12 10.7	
	comp=N,1053μm,0.5s						
NPS				AML	AML	07 12 10.8	
	comp=E,1586μm,0.7s						
KARP	**Karpathos**	**1.15**	**22**	P	**Pn**	**07 11 48.6**	**-0.5**
KARP				S	**Sb**	**07 12 04.3**	**+0.5**
KARP				AML	AML	07 12 26.7	
	comp=E,619μm,0.8s						
KARP				AML	AML	07 12 27.4	
	comp=N,896μm,0.6s						
LAST	**Lasithi**	**1.16**	**306**	P	**Pn**	**07 11 47.8**	**-1.5**
LAST				S	**Sg**	**07 12 06.1**	**+1.0**
	comp=N,190nm,0.7s						
LAST	**Lasithi**	**1.16**	**306**	P	**Pb**	**07 11 49.0**	**-0.3**
LAST				S	**Sn**	**07 12 05.1**	**+0.2**
LAST				AML	AML	07 12 13.7	
	comp=N,728μm,0.8s						
LAST				AML	AML	07 12 25.9	
	comp=E,758μm,0.9s						
SIVA	**Sivas**	**1.58**	**290**	P	**Pb**	**07 11 55.5**	**-1.0**
IDI	**Anoyia**	**1.63**	**300**	Pn	**Pb**	**07 11 57.1**	**-0.4**
	comp=E,2.3nm,0.3s,baz=98,slow=15,SNR=14						
IDI				Sn	**Sg**	**07 12 20.6**	**+0.4**
	comp=E,5.0nm,0.3s,baz=210,slow=22,SNR=7.5						
IDI	**Anoyia**	**1.63**	**300**	P	**Pn**	**07 11 55.7**	**-0.1**
AKASG	**Malin Array Be**	**16.32**	**6**	Pn	**P**	**07 15 18.1**	**-0.8**
	comp=E,0.6nm,0.3s,baz=196,slow=11,SNR=4.3						
GERES	**GERESS Array B**	**17.25**	**330**	Pn	**P**	**07 15 28.8**	**-0.6**
	comp=E,0.1nm,0.3s,baz=151,slow=11,SNR=7.0						
FINES	**FINESS Array B**	**26.98**	**359**	P	**P**	**07 17 05.8**	**-2.5**
	comp=E,1.4nm,0.7s,baz=173,slow=15,SNR=3.8						
TORD	**Torodi Ar. Bea**	**31.01**	**233**	P	**P**	**07 17 46.8**	**+2.1**
	comp=E,0.5nm,0.7s,baz=40,slow=10,SNR=2.6						
ARCES	**ARCESS Array B**	**35.11**	**359**	P	**P**	**07 18 18.3**	**-1.6**
	comp=E,7.0nm,0.9s,baz=185,slow=10.0,SNR=6.2						
MKAR	**Makanchi Array**	**43.15**	**56**	P	**P**	**07 19 28.2**	**+0.8**
	comp=E,0.4nm,0.5s,baz=277,slow=6.7,SNR=5.7						
ZALV	**Zalesovo Beam**	**44.61**	**46**	P	**P**	**07 19 39.1**	**+0.1**
	comp=E,0.7nm,0.3s,baz=291,slow=8.3,SNR=2.5						
SONM	**Songino Array**	**58.98**	**51**	P	**P**	**07 21 27.5**	**+0.9**
	comp=E,0.2nm,0.5s,baz=293,slow=6.3,SNR=2.6						

NNC 10 07:16:34.7±12.0, **53°.59N×85°.98E**, **h16**km±61km, **mb3.5**, **mpv3.2**, **5C-5D**, **Error ellipse: s-maj=79.3km s-min=58.9km az=88.0**, **Suspected Mining explosion.**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
KURK	**Kurchatov**	**5.37**	**241**	⇓Pn	Pn	07 17 56.3	+2.3
	2.6nm,1.3s						
KURK				⇓Lg	Lg	07 19 27.9	
	3.5nm,1.3s						
KURBB	**Kurchatov Arra**	**5.47**	**240**	⇑Pn	Pn	07 17 56.3	+0.9
	2.1nm,0.3s						
KURBB				⇓Lg	Lg	07 19 29.0	
	4.9nm,0.7s						
MK31	**Makanchi Array**	**7.20**	**201**	⇓Pn	Pn	07 18 16.3	-3.0
	0.7nm,0.7s,baz=18,slow=14,SNR=5.8						
MK31				⇑Sn	Sn	07 19 42.6	+1.8
	2.2nm,1.2s,baz=278,slow=6.1,SNR=4.3						
MK31				⇓Lg	Lg	07 20 22.7	
	0.7nm,0.7s,baz=9.2,slow=26						
MAKZ	**Makanchi**	**7.26**	**202**	⇑Pn	Pn	07 18 17.4	-2.6
	2.4nm,1.2s						
MAKZ				⇑Sn	Sn	07 19 43.2	+1.1
	1.0nm,0.8s						
MAKZ				⇑Lg	Lg	07 20 25.6	
	3.7nm,1.4s						

*NEIC **10** 07:22:10.0±0.9, 42°.75N±0°.07×141°.4E±0°.1, h121km±7km, mb4.3/11, Error ellipse: s-maj=12.7km s-min=9.6km az=77.0*
*JMA **10** 07:22:09.4±0.1, 42°.69N×141°.43E, h119km±1km, M3.3*
*IDC **10** 07:22:10.5±1.6, 42°.80N×141°.44E, h126km±9km, mb3.6/11, mb1 3.6/14, mb1mx3.4/50, mbtmp3.9/14, MS3.7/1, Ms1 3.7/1, ms1mx2.5/41, Error ellipse: s-maj=26.9km s-min=13.9km az=148.0*
ISC 10 07:22:09.5±0.7, **42°.70N**±0°.04×**141°.44E**±0°.04, **h121**km±5km, **n62**, σ0s.57/78, **mb4.0**/15, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
JEW	**Eniwo**	**0.14**	**4**	P	**Pn**	**07 22 26.1**	**0.0**
JEW				eS	**Sn**	**07 22 38.3**	**-0.3**
JIAM	**Iburiatsuma**	**0.36**	**102**	P	**Pn**	**07 22 26.8**	**0.0**
JIAM				eS	**Sn**	**07 22 40.2**	**+0.4**
JNB	**Noboribetsu**	**0.38**	**232**	P	**Pn**	**07 22 26.5**	**-0.4**
JNB				eS	**Sn**	**07 22 39.4**	**-0.5**
JISS	**Ishikarishitsu**	**0.57**	**359**	P	**Pn**	**07 22 28.1**	**+0.1**
JISS				eS	**Sn**	**07 22 42.1**	**+0.1**
JBT2	**Biratori 2**	**0.69**	**83**	P	**Pn**	**07 22 28.6**	**-0.2**
JBT2				eS	**Sn**	**07 22 44.1**	**+0.7**
JKB	**Kayabe**	**0.87**	**200**	P	**Pn**	**07 22 30.3**	**0.0**
JKB				eS	**Sn**	**07 22 45.7**	**-0.3**
JSK	**Shakotan**	**0.96**	**313**	P	**Pn**	**07 22 31.1**	**-0.1**
JSK				eS	**Sn**	**07 22 47.7**	**+0.1**
JFR	**Furan**	**0.97**	**61**	P	**Pn**	**07 22 30.7**	**-0.6**
JFR				eS	**Sn**	**07 22 47.4**	**-0.4**
JYM2	**Yakumo 2**	**0.98**	**234**	P	**Pn**	**07 22 31.4**	**0.0**
JYM2				eS	**Sn**	**07 22 47.5**	**-0.5**
JAB	**Ashibetsu**	**0.99**	**35**	P	**Pn**	**07 22 32.0**	**+0.5**
JAB				eS	**Sn**	**07 22 48.7**	**+0.6**
JSH	**Shimam**	**1.03**	**267**	P	**Pn**	**07 22 31.8**	**0.0**
JNBK	**Urakawa-nobuka**	**1.06**	**113**	P	**Pn**	**07 22 32.0**	**-0.2**
JHR	**Hokuryu**	**1.06**	**11**	P	**Pn**	**07 22 32.8**	**+0.6**
JHR				eS	**Sn**	**07 22 50.8**	**+1.4**
JHST	**Hiyamasetana**	**1.19**	**257**	P	**Pn**	**07 22 33.6**	**+0.1**
JOT	**Ohata**	**1.35**	**193**	P	**Pn**	**07 22 35.3**	**0.0**
JOT				eS	**Sn**	**07 22 55.1**	**+0.3**
JCH	**Churui**	**1.42**	**93**	P	**Pn**	**07 22 35.5**	**-0.6**
JCH				eS	**Sn**	**07 22 55.5**	**-0.7**
ERM	**Erimo**	**1.45**	**118**		**Pn**	**07 22 37.5**	**+1.2**
ERM				Sn	**Sn**	**07 22 57.6**	**+0.9**
JKK2	**Kamakawa 2**	**1.51**	**39**	P	**Pn**	**07 22 37.3**	**+0.2**
JKK2				eS	**Sn**	**07 22 57.8**	**-0.4**
JOSM	**Okushiri--Mats**	**1.58**	**248**	P	**Pn**	**07 22 37.9**	**0.0**
JOSM				eS	**Sn**	**07 22 59.5**	**0.0**
JOMM	**Oshimamatsumae**	**1.59**	**223**	P	**Pn**	**07 22 38.4**	**+0.4**
ASAJ	**Asahikawa**	**1.65**	**30**	P	**Pn**	**07 22 39.0**	**+0.3**
	9.1nm,0.3s,baz=227,slow=13,SNR=58						
ASAJ				S	**Sn**	**07 23 00.8**	**-0.2**
	7.9nm,0.3s,baz=90,slow=32,SNR=5.9						
JKA	**Kamikawa-asahi**	**1.65**	**31**		**Pn**	**07 22 39.0**	**+0.3**
JKA					**Sn**	**07 23 00.8**	**-0.2**
JAR	**Ashorobuto**	**1.81**	**70**	P	**Pn**	**07 22 40.3**	**-0.4**
JAR				eS	**Sn**	**07 23 03.8**	**-0.6**
MJAR	**Matsushiro Arr**	**6.64**	**203**	P	**Pn**	**07 23 46.6**	**+2.0**
	0.1nm,0.3s,baz=24,slow=10.0,SNR=7.6						
USA0B	**Ussuriysk Arra**	**7.04**	**286**	Pn	**Pn**	**07 23 51.4**	**+1.5**
USRK	**Ussuriysk Ar.**	**7.04**	**286**	P	**Pn**	**07 23 51.1**	**+1.2**
	baz=94,slow=14,SNR=12						
USRK	**Ussuriysk Ar.**	**7.04**	**286**		**Pn**	**07 23 50.1**	**+0.2**
KLR	**Kul'dur**	**9.38**	**317**	P	**Pn**	**07 24 22.4**	**+0.9**
	0.1nm,0.3s,baz=124,slow=14,SNR=16						
SONM	**Songino Array**	**25.05**	**294**	P	**P**	**07 27 22.4**	**-0.1**
	1.9nm,0.8s,baz=84,slow=8.3,SNR=14						
SONM	**Songino Array**	**25.05**	**294**	P	**P**	**07 27 22.5**	**-0.1**
H11S1	**WAKE ISLAND Hy**	**32.24**	**131**	T	T	08 01 29.6	
	baz=329,slow=76,SNR=7.2						
H11S3	**WAKE ISLAND Hy**	**32.24**	**131**	T	T	08 01 31.2	
	baz=329,slow=76,SNR=6.6						
H11S2	**WAKE ISLAND Hy**	**32.24**	**131**	T	T	08 01 31.2	
	baz=329,slow=76,SNR=6.6						
MK31	**Makanchi Array**	**41.35**	**297**	P	**P**	**07 29 42.9**	**-0.4**
MK31	**Makanchi Array**	**41.35**	**297**		**P**	**07 29 43.0**	**-0.3**
MKAR	**Makanchi Array**	**41.35**	**297**	P	**P**	**07 29 43.0**	**-0.3**
	0.8nm,0.6s,baz=82,slow=9.9,SNR=7.9						
MAKZ	**Makanchi**	**41.55**	**297**	P	**P**	**07 29 45.0**	**0.0**
MAKZ				IAmb	IAmb	07 29 46.7	
	comp=Z,4.2nm,1.3s						
IMAR	**Indian Mountai**	**41.85**	**34**	P	**P**	**07 29 46.9**	**-0.2**
KURK	**Kurchatov**	**42.64**	**303**	P	**P**	**07 29 53.5**	**-0.2**
KURK				IAmb	IAmb	07 29 57.7	
	comp=Z,5.8nm,0.8s						
KURBB	**Kurchatov Arra**	**42.71**	**303**	P	**P**	**07 29 54.1**	**-0.2**
	comp=Z,4.3nm,0.5s,baz=76,slow=8.8,SNR=14						
BVAR	**Borovoye Array**	**46.91**	**309**	P	**P**	**07 30 27.7**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=72,slow=9.1,SNR=11						
BVAR				PcP	**PcP**	**07 31 58.7**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=75,slow=2.2,SNR=3.0						
BRVK	**Borovoye**	**46.96**	**309**	P	**P**	**07 30 27.2**	**-0.8**
BOOM	**Boomskoye usch**	**47.09**	**293**	P	**P**	**07 30 29.9**	**+0.7**
BOOM				IAmb	IAmb	07 30 31.4	
	comp=Z,7.4nm,1.1s						
BCAR	**Beaver Creek A**	**47.28**	**37**	P	**P**	**07 30 30.9**	**+0.5**
INK	**Inuvik**	**49.38**	**29**	P	**P**	**07 30 46.2**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=308,slow=8.5,SNR=3.6						
INK	**Inuvik**	**49.38**	**29**	P	**P**	**07 30 46.7**	**+0.4**
INK				IAmb	IAmb	07 31 02.0	
	comp=Z,5.3nm,1.4s						
HYT	**Haines Junctio**	**49.82**	**39**	P	**P**	**07 30 51.1**	**+1.2**
HYT				IAmb	IAmb	07 30 53.5	
	comp=Z,17nm,1.5s						
KKAR	**Karatay Array**	**50.47**	**296**	P	**P**	**07 30 54.9**	**0.0**
ABKAR	**Akbulak array**	**54.42**	**307**	P	**P**	**07 31 23.8**	**-0.1**
SPITS	**Spitsbergen Ar**	**54.98**	**348**	LR	LR	07 56 32.7	
	comp=Z,62nm,18.5s,baz=155,slow=38						
RES	**Resolute Bay**	**57.12**	**15**	P	**P**	**07 31 42.1**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=300,slow=5.8,SNR=6.0						
RES	**Resolute Bay**	**57.12**	**15**	P	**P**	**07 31 42.4**	**-0.3**
RES				IAmb	IAmb	07 31 42.7	
	comp=Z,1.5nm,0.8s						
ARCES	**ARCESS Array B**	**58.72**	**338**	P	**P**	**07 31 54.0**	**0.0**
	comp=Z,4.3nm,0.9s,baz=48,slow=11,SNR=4.1						
ARCES	**ARCESS Array B**	**58.72**	**338**	P	**P**	**07 31 54.4**	**+0.3**
ARCES	**ARCESS Array B**	**58.72**	**338**	P	**P**	**07 31 54.4**	**+0.3**
YKA	**Yellowknife Ar**	**58.94**	**32**	P	**P**	**07 31 55.9**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=308,slow=6.3,SNR=4.2						
FIA1	**FINESS Array S**	**63.84**	**331**	P	**P**	**07 32 28.4**	**-0.2**
FINES	**FINESS Array B**	**63.84**	**331**	P	**P**	**07 32 27.9**	**-0.7**
	comp=Z,2.9nm,0.5s,baz=58,slow=7.7,SNR=18						
NC204	**NORSAR Array S**	**68.93**	**337**	P	**P**	**07 33 00.9**	**-0.2**
NB2	**NORSAR Subarra**	**68.99**	**337**	P	**P**	**07 33 00.7**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=36,slow=6.5						
NOA	**NORSAR Array B**	**68.99**	**337**	P	**P**	**07 33 01.0**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=38,slow=6.3,SNR=4.2						
AKASG	**Malin Array Be**	**69.86**	**321**	P	**P**	**07 33 06.3**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=44,slow=6.1,SNR=6.7						

*IDC **10** 07:24:23.9±3.5, 36°.71N×71°.52E, h86km±28km, mb3.4/5, mb1 3.7/11, mb1mx3.4/46, mbtmp3.9/11, Error ellipse: s-maj=33.1km s-min=22.1km az=2.0*

MOS 10 07:24:26.6±1.1,37.°02N×71.°55E,h122km,mb4.5/4,Error ellipse: s-maj=14.8km s-min=5.5km az=79.8
BJI 10 07:24:26.5±0.0,37.°12N×71.°47E,h126km,mB4.6/6, mb4.2/8
NEIC 10 07:24:27.0±2.4,37.°05N±0.°05×71.°39E±0.°09, h123km±11km,mb4.1/3,Error ellipse: s-maj=10.7km s-min=7.2km az=96.0
NNC 10 07:24:29.1±4.3,37.°25N×71.°07E,h126km±73km,mb3.6, mpv4.2,Error ellipse: s-maj=39.7km s-min=22.3km az=162.0
ISC 10 07:24:25.7±0.5,36.°97N±0.°04×71.°35E±0.°05,h150km,n98, σ2.°22/117,mb3.9/12,14C-11D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	Kabul	3.07	218		Pn	07 25 16.0	+1.8
KBL				Sn	Sn	07 25 55.1	+3.6
KBL	Kabul	3.07	218	PN	Pn	07 25 16.0	+1.8
KBL						07 25 55.1	
BTK	Batken	3.11	352		Pn	07 25 16.8	+2.3
BTK				Sn	Sn	07 25 51.4	-1.0
BTK	Batken	3.11	352	PN	Pn	07 25 16.8	+2.3
BTK				S	Sn	07 25 53.1	+0.7
NIL	Nilore	3.66	154		Pn	07 25 22.6	+1.0
NIL				Sn	Sn	07 26 04.8	-0.1
NIL	Nilore	3.66	154	PN	Pn	07 25 22.6	+1.0
NIL				S	Sn	07 26 05.8	+0.9
KSH	Kashi	4.44	54	P	Pn	07 25 26.9	-4.9
KSH				S	Sn	07 26 10.8	-12
KSH				smax	smax		
	comp=N,370nm,0.5s						
KSH				smax	smax		
	comp=E,340nm,0.4s						
ARSB	Arslanbob	4.53	16		Pn	07 25 33.6	+0.7
ARSB				Sn	Sn	07 26 23.9	-1.5
ARSB	Arslanbob	4.53	16	PN	Pn	07 25 33.7	+0.7
ARSB						07 26 23.9	
AML	Almayashu	5.46	19	P	Pn	07 25 46.8	+1.2
	SNR=109						
NRN	Naryn	5.73	38		Pn	07 25 48.6	-0.5
NRN	Naryn	5.73	38	PN	Pn	07 25 48.6	-0.5
THN	Thein Dam	5.78	140	eP	Pn	07 25 50.5	+1.1
THN				eS	Sn	07 26 50.8	-4.1
UCH	Uchtor	5.79	24	P	Pn	07 25 51.1	+1.1
	SNR=21						
KZA	Kyzart	5.92	29	P	Pn	07 25 52.6	+0.9
	SNR=12						
EKS2	Erkin-Say	5.98	17	P	Pn	07 25 53.6	+1.4
	SNR=25						
AAK	Ala-Archa	6.15	22	P	Pn	07 25 56.2	+1.7
	15nm,0.3s,baz=170,slow=5.9,SNR=187						
AAK				S	Sn	07 27 03.0	-1.0
	1.3nm,0.3s,baz=316,slow=17,SNR=19						
AAK	Ala-Archa	6.15	22	P	Pn	07 25 56.1	+1.5
	SNR=49						
AAK	Ala-Archa	6.15	22	⇑P	Pn	07 25 55.7	+1.2
	17nm,0.4s						
AAK				⇑S	Sn	07 27 02.7	-1.4
	77nm,1.1s						
AAK	Ala-Archa	6.15	22		Pn	07 25 56.1	+1.5
AAK				Sn	Sn	07 27 02.5	-1.6
AAK	Ala-Archa	6.15	22	d iPN	Pn	07 25 55.8	+1.3
KK31	Karatay Array	6.16	354	⇑P	Pn	07 25 56.1	+1.6
	8.6nm,0.4s,baz=179,slow=13,SNR=237						
KK31				⇓S	Sn	07 27 01.4	-2.6
	15nm,0.6s,baz=186,slow=20,SNR=10						
KK31	Karatay Array	6.16	354		Pn	07 25 56.4	+1.9
KK31				Sn	Sn	07 27 02.1	-1.9
KK31	Karatay Array	6.16	354	PN	Pn	07 25 56.4	+1.9
KKAR	Karatay Array	6.16	354		Pn	07 25 55.9	+1.4
KKAR				Sn	Sn	07 27 02.3	-1.7
KKAR	Karatay Array	6.16	354	PN	Pn	07 25 55.9	+1.4
DHRM	DHARAMSHALA	6.23	138	eP	Pn	07 25 55.5	-0.2
DHRM				eS	Sn	07 27 00.9	-5.1
DHRM				IAML		07 27 25.2	
	comp=E,63nm,0.7s						
DHRM				IAML		07 27 25.6	
	comp=N,42nm,0.3s						
KBK	Karagaybulak	6.32	25	P	Pn	07 25 58.4	+1.6
	SNR=11						
FRU1	Bishkek	6.35	22	Pn	Pn	07 25 57.0	-0.1
FRU1				Sn	Sn	07 27 08.0	-0.7
FRU1	Bishkek	6.35	22	PN	Pn	07 25 57.0	-0.1
ULHL	Ulahol	6.48	34	P	Pn	07 26 00.6	+1.6
	SNR=7.6						
BOOM	Boomskoye usch	6.55	31		Pn	07 26 01.0	+1.2
BOOM				Sn	Sn	07 27 12.6	-0.9
BOOM	Boomskoye usch	6.55	31	PN	Pn	07 26 01.0	+1.2
CHMS	Chumysh	6.56	22	P	Pn	07 26 01.4	+1.6
	SNR=7.7						
CHMS	Chumysh	6.56	22	⇑P	Pn	07 26 00.7	+0.9
	comp=N,21nm,0.7s						
CHMS				⇓S	Sn	07 27 12.1	-1.5
	comp=N,40nm,0.8s						
CHMS	Chumysh	6.56	22	PN	Pn	07 26 00.7	+0.9
USP	Ospenovka	6.74	20	P	Pn	07 26 03.1	+0.9
	SNR=11						
SMLA	Simla	7.56	139	eP	Pn	07 26 13.2	0.0
SMLA				eS	Sn	07 27 31.5	-6.2
SMLA				IAML		07 27 36.4	
	comp=E,54nm,0.1s						
SMLA				IAML		07 27 37.2	
	comp=N,36nm,0.1s						
MDOK	Medeo	7.57	33	P	Pn	07 26 13.5	+0.1
	comp=N,7.9nm,1.1s						
MDOK	Medeo	7.57	33	PN	Pn	07 26 13.5	+0.1
JOSI	Joshimath	9.35	131	eP	Pn	07 26 38.3	+0.9
JOSI				ex	x	07 27 40.1	
JOSI				eS	Sn	07 28 13.4	-7.8
JOSI				ex	x	07 28 15.1	
JOSI				IAML		07 28 27.9	
	comp=E,76nm,0.2s						
JOSI				IAML		07 28 28.4	
	comp=N,65nm,0.4s						
GEYT	Alibeck	10.57	279	P	Pn	07 26 54.2	+1.0
	comp=N,2.6nm,0.3s,baz=105,slow=12,SNR=14						
GEYT	Alibeck	10.57	279		Pn	07 26 54.1	+1.0
GEYT					Sn	07 28 49.5	-0.7
GYA0B	ALIBECK ARRAY	10.57	279	⇑P	Pn	07 26 54.1	+0.9
GYA0B				⇓S	Sn	07 28 47.4	-2.7
GYA0B	ALIBECK ARRAY	10.57	279	Pn	Pn	07 26 54.4	+1.2
GYA0B				Sn	Sn	07 28 51.4	+1.3
MAKZ	Makanchi	12.61	35	⇓P	Pn	07 27 19.1	-0.6
	comp=N,5.3nm,1.1s						
MAKZ	Makanchi	12.61	35	Pn	Pn	07 27 20.4	+0.7
MAKZ	Makanchi	12.61	35	PN	Pn	07 27 20.4	+0.7
MK31	Makanchi Array	12.74	36	⇑P	Pn	07 27 22.0	+0.5
	comp=N,4.3nm,1.1s,baz=206,slow=7.5,SNR=16						
MK31	Makanchi Array	12.74	36		Pn	07 27 20.6	-0.9
MK31	Makanchi Array	12.74	36	⇓iP	Pn	07 27 21.5	0.0
MKAR	Makanchi Array	12.74	36	P	Pn	07 27 22.8	+1.3
	comp=N,0.1nm,0.3s,baz=218,slow=14,SNR=18						
MKAR	Makanchi Array	12.74	36		Pn	07 27 22.3	+0.8
DANN	Dangsing	13.52	126	eP	Pn	07 27 28.2	-3.6
	comp=N,6.1nm,0.2s						
WMQ	Urumqi	14.20	56	eP	P	07 27 43.1	+0.1
WMQ				pmax	pmax		
	comp=N,9.0nm,0.6s						
WMQ				pmax	pmax		
	comp=N,18nm,6.1s						
WMQ				LR	LR		
	comp=N,250nm,29.0s						
WMQ				LR	LR		
	comp=N,860nm,29.0s						
WMQ				LR	LR		
	comp=N,37nm,29.0s						
KURBB	Kurchatov Arra	14.59	18	⇓P	P	07 27 49.9	+2.8
	comp=N,3.5nm,0.6s						
KURK	Kurchatov	14.70	18	⇑P	P	07 27 49.9	+1.6
	comp=N,6.2nm,1.0s						
KURK	Kurchatov	14.70	18	Pn	Pn	07 27 46.8	+0.7
KURK	Kurchatov	14.70	18	⇓iP	Pn	07 27 45.8	-0.3
AB31	Akbulak array	14.82	330	⇑P	P	07 27 49.4	-0.3
	comp=N,4.1nm,0.6s,baz=158,slow=10,SNR=27						
AB31				⇓S	Sn	07 30 24.8	-7.2
	comp=N,4.2nm,0.6s						
AB31	Akbulak array	14.82	330	P	P	07 27 49.4	-0.3
AB31				S	Sn	07 30 24.8	-7.2
ABKAR	Akbulak array	14.82	330	Pn	Pn	07 27 48.2	+0.5
ABKAR	Akbulak array	14.82	330	P	Pn	07 27 49.1	+1.4
PKIN	Phulchoki	15.11	124	eP	Pn	07 27 48.0	-3.8
PKI	Pulchoki	15.12	124	eP	Pn	07 27 50.0	-2.0
	comp=N,20nm,0.8s						
GUN	Gumba	15.22	122	eP	Pn	07 27 51.6	-1.6
	comp=N,99nm,1.0s						
JIRN	Jiri	15.59	122	eP	Pn	07 27 55.4	-2.4
	comp=N,66nm,0.7s						
BVAR	Borovoye Array	16.07	358	P	P	07 28 06.1	+2.6
	comp=N,0.2nm,0.3s,baz=159,slow=13,SNR=6.9						
BRVK	Borovoye	16.11	358	⇑P	P	07 28 05.6	+1.7
	comp=N,5.1nm,1.2s						
BRVK	Borovoye	16.11	358		P	07 28 05.0	+1.1
BRVK				IAmb	IAmb	07 28 07.3	
	comp=Z,8.5nm,1.6s						
BRVK	Borovoye	16.11	358	eP	P	07 28 05.0	+1.1
RAMN	Ramite	16.33	123	eP	Pn	07 28 04.1	-2.6
	comp=Z,32nm,0.8s						
AKTO	Aktyubinsk	16.52	329	P	Pn	07 28 13.7	+5.2
	comp=Z,0.4nm,0.3s,baz=130,slow=14,SNR=13						
AKTO	Aktyubinsk	16.52	329	⇑P	Pn	07 28 09.9	+1.3
	comp=Z,2.6nm,0.8s						
AKTO				⇓S	S	07 31 07.4	-4.6
	comp=Z,3.3nm,0.8s						
TAPN	Taplejung	16.82	120	eP	P	07 28 11.5	-0.9
	comp=Z,28nm,0.9s						
ODAN	Odare	16.92	122	eP	P	07 28 11.4	-2.0
	comp=Z,34nm,0.8s						
ZAA0	Zalesovo Array	19.37	25	P	Pn	07 28 42.3	0.0
ZAA0				IAmb	IAmb	07 29 14.7	
	comp=Z,8.5nm,0.5s						
ZALV	Zalesovo Beam	19.37	25	P	Pn	07 28 43.4	+1.1
	comp=Z,0.7nm,0.3s,baz=224,slow=10,SNR=13						
ZALV	Zalesovo Beam	19.37	25	P	Pn	07 28 42.8	+0.5
ZALV	Zalesovo Beam	19.37	25	eP	Pn	07 28 42.8	+0.5
ARU	Arti	21.28	340	⇑iP	P	07 28 59.5	-0.6
ARU				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA	Gaotai	22.46	75	P	P	07 29 25.6	+13
GTA				pP	pP	07 29 45.1	+4.0
GTA				sP	sP	07 29 55.6	-4.8
KIV	Kislovodsk	22.83	297	eP	P	07 29 14.6	-1.2
KIV				pmax	pmax		
	comp=Z,12nm,0.9s						
SONM	Songino Array	27.84	56	P	P	07 30 06.5	+5.5
	comp=Z,0.5nm,0.6s,baz=270,slow=9.3,SNR=3.7						
ULN	Ulaanbaatar	28.28	56	P	P	07 30 08.2	+3.2
ULN				IAmb	IAmb	07 30 08.9	
	comp=Z,2.8nm,0.5s						
ULN	Ulaanbaatar	28.28	56	eP	P	07 30 07.7	+2.7
OBN	Obninsk	29.77	319	iP	P	07 30 19.0	+1.2
OBN				i *PP	pP	07 30 47.5	-2.9
OBN				i		07 31 23.1	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC	Hu-ho-hao-te	31.34	70	eP	P	07 30 35.5	+3.5
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,51nm,5.3s						
FINES	FINESS Array B	37.25	326	P	P	07 31 29.7	+7.2
	comp=Z,1.1nm,0.4s,baz=116,slow=8.9,SNR=7.7						
NOA	NORSAR Array B	44.18	323	P	P	07 32 26.2	+6.9
	comp=Z,1.0nm,0.5s,baz=95,slow=7.8,SNR=4.6						
KLR	Kul'dur	44.64	54	⇑eP	P	07 32 23.1	+0.1
KLR				pmax	pmax		
	comp=Z,5.0nm,1.5s						
USA0B	Ussuriysk Arra	45.69	61	⇑iP	P	07 32 30.9	-0.5
BILL	Bilibino	58.06	26	⇓iP	P	07 34 04.2	+1.6
YKA	Yellowknife Ar	80.76	3	P	P	07 36 28.2	+6.2
	comp=Z,0.6nm,0.7s,baz=344,slow=5.2,SNR=9.8						
WRAB	Tennant Creek	82.00	122	⇑iP	P	07 36 28.0	-1.1
WRAB				pmax	pmax		
	comp=Z,26nm,1.9s						
ASAR	Alice Springs	84.29	125	P	P	07 36 44.8	+4.0
	comp=Z,0.2nm,0.5s,baz=313,slow=5.8,SNR=5.2						
ASAR	Alice Springs	84.29	125	P	P	07 36 45.5	+4.7
ASAR	Alice Springs	84.29	125	P	P	07 36 45.5	+4.7

ATH 10 07:30:27.3,38.°18N×20.°34E, h11km±1km, ML2.5/4, Error ellipse: s-maj=1.6km s-min=0.9km az=259.0
THE 10 07:30:27.7,38.°18N×20.°37E, h9km, ML2.7/4, Error ellipse: s-maj=1.0km s-min=0.5km az=84.0
ISC 10 07:30:27.5±1.2,38.°19N±0.°03×20.°37E±0.°05,h11km±4km, n32,σ0.°34/53,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.01	128	P	Pg	07 30 29.5	0.0
CHV1				S	Sg	07 30 30.8	0.0
KEF3	Kipouria, Keph	0.03	306	P	Pg	07 30 29.6	0.0
KEF3				S	Sg	07 30 30.9	0.0
LXRA	Lixouri, Kepha	0.05	77	P	Pg	07 30 29.8	0.0
LXRA				S	Sg	07 30 31.4	+0.1
LXR1	Lixouri, Cepha	0.05	76	P	Pg	07 30 29.8	+0.1
LXR1				S	Sg	07 30 31.3	0.0
KEF4	Livadi, Kephal	0.08	30	P	Pg	07 30 30.1	+0.1
KEF4				S	Sg	07 30 32.0	+0.1
ARGA	Argostoli. Kep	0.08	98	P	Pg	07 30 30.0	0.0
ARGA				S	Sg	07 30 31.9	0.0
ARG2	Argostoli	0.09	96	P	Pg	07 30 30.2	+0.1
ARG2				S	Sg	07 30 31.8	-0.2
KEF2	Argostoli. Kep	0.09	104	P	Pg	07 30 30.2	+0.1
KEF2				S	Sg	07 30 31.8	-0.3
KEF1	Kardakata, Kep	0.12	41	P	Pg	07 30 30.6	+0.1
KEF1				S	Sg	07 30 32.5	-0.1
VLS	Valsamata	0.17	94	P	Pg	07 30 31.2	-0.1
VLS				S	Sg	07 30 34.2	+0.2
	5μm,0.2s						
VLS	Valsamata	0.17	94	P	Pg	07 30 31.3	-0.1
VLS				S	Sg	07 30 34.1	+0.2
VSK1	VASILIKIADES	0.27	34	P	Pg	07 30 33.2	+0.2
VSK1				S	Sg	07 30 37.4	+0.7
	3μm,0.3s						
KONA	Konidatara, Ke	0.28	33	P	Pg	07 30 33.3	0.0
FSK	Fiskardo	0.31	29	P	Pg	07 30 33.7	-0.1
FSK				S	Sg	07 30 38.9	+0.9
	1μm,0.3s						
FSK	Fiskardo	0.31	29	P	Pg	07 30 33.7	-0.1
FSK				S	Sg	07 30 38.4	+0.4
FSK				AML	AML	07 30 39.6	
	comp=N,2390μm,0.5s						
FSK				AML	AML	07 30 43.1	
	comp=E,2287μm,0.6s						
KFL	Anninata	0.34	103	P	Pg	07 30 34.2	-0.1
VLMS	Volimes, Zakyn	0.39	144	P	Pg	07 30 35.3	+0.1
VLMS				S	Sg	07 30 41.2	+0.9
VLMS				AML	AML	07 30 42.5	
	comp=N,7558μm,0.6s						
VLMS				AML	AML	07 30 48.9	
	comp=E,2896μm,0.2s						
EVGI	Lefkada island	0.49	27	P	Pg	07 30 37.0	-0.1
EVGI				S	Sb	07 30 44.8	-0.5
EVGI	Lefkada island	0.49	27	P	Pg	07 30 36.9	-0.2
MGNA	Meganis	0.57	35	P	Pg	07 30 38.4	-0.2
MGNA				S	Sb	07 30 47.5	-0.2
KRI1	kERI	0.63	146	P	Pg	07 30 39.4	-0.4
KRI1				S	Sg	07 30 48.7	+0.6
	comp=E,830nm,0.2s						
LKD2	Lefkada island	0.64	20	P	Pg	07 30 39.6	-0.4
LKD2	Lefkada island	0.64	20	P	Pg	07 30 39.6	-0.4
TSLK	Tsoukalades, L	0.67	19	P	Pg	07 30 40.2	-0.5
TSLK	Tsoukalades, L	0.67	19	P	Pg	07 30 40.1	-0.5
TSLK				S	Sg	07 30 50.3	+0.8
RLS	Riolos of Patr	0.87	98	P	Pg	07 30 44.3	-0.1
PVO	Paravola	1.00	64	P	Pg	07 30 46.8	0.0
PVO	Paravola	1.00	64	P	Pg	07 30 46.6	-0.3
PVO				S	Sn	07 31 01.5	-0.2
PVO				AML	AML	07 31 09.0	
	comp=E,479μm,0.4s						
PVO				AML	AML	07 31 09.9	
	comp=N,462μm,0.8s						
DRO	Drossia	1.08	102	P	Pg	07 30 47.7	-0.7
DRO				S	Sn	07 31 03.7	+0.1
DRO				AML	AML	07 31 10.4	
	comp=E,544μm,0.6s						
DRO				AML	AML	07 31 13.5	
	comp=N,418μm,0.7s						
ANX	Ano Chora	1.28	71	P	Pg	07 30 52.3	+0.1
KALE	Kalithea	1.40	81	P	Pn	07 30 53.1	0.0
KLV	Kalavryta, Ach	1.41	95	P	Pn	07 30 53.4	+0.2

MEX 10 07:35:40.4±0.3,14.°33N×92.°57W,h50km±35km,MD3.6
GCG 10 07:35:42.4±0.6,14.°59N×92.°38W,h71km±44km,MD3.5
ISC 10 07:35:38.7±3.3,14.°4N±0.°1×92.°6W±0.°1,h27km±17km,n6, σ0.°87/12,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		0.66	33	iP	Pb	07 35 51.6	0.0
THIG				eS	Sb	07 36 01.3	+0.9
STG3	Santiaguito 3,	1.09	71	eP	Pn	07 35 58.8	+0.3
STG3				eS	Sb	07 36 12.2	-0.8
PCIG		1.45	337	eP	Pn	07 36 03.5	+0.3
PCIG				iS	Sn	07 36 21.0	-0.4
FUG	Fuego 3	1.74	87	eP	Pn	07 36 08.3	+0.9
FUG				eS	Sn	07 36 27.7	-1.1
CCIG	Comitan	1.97	14	eP	Pb	07 36 13.2	-0.9
CCIG				iS	Sn	07 36 35.0	+0.5
IXG	Ixpaco	2.14	95	eP	Pn	07 36 13.8	+0.9
IXG				eS	Sn	07 36 38.3	-0.3

IDC 10 07:43:14.1±8.0,35.°28N×72.°09E,h70km±76km,mb3.4/2, mb1 3.3/7,mb1mx3.1/60,mbtmp3.6/7,ML3.2/5,Error ellipse: s-maj=71.1km s-min=48.9km az=125.0
NNC 10 07:43:15.7±4.5,35.°55N×71.°58E,h52km±85km,mb3.7, mpv3.6,Error ellipse: s-maj=32.0km s-min=28.9km az=49.0
ISC 10 07:43:15.3±1.1,35.°49N±0.°07×71.°8E±0.°1,h68km,n14, σ1.°96/21,6C-3D,Pakistan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THN	Thein Dam	4.48	132	eP	Pn	07 44 04.6	-16
THN				eS	Sn	07 45 13.5	+2.0
DHRM	DHARAMSHALA	4.97	129	eP	Pn	07 44 26.2	-1.3
DHRM				eS	Sn	07 45 23.7	-0.1
DHRM				IAML		07 45 25.5	
	comp=E,169nm,0.4s						
DHRM				IAML		07 45 25.6	
	comp=N,92nm,0.6s						
AAK	Ala-Archa	7.44	16	P	Pn	07 45 02.2	+0.9
	comp=N,0.8nm,0.3s,baz=192,slow=7.2,SNR=5.4						
AAK				S	Sn	07 46 25.9	+1.6
	baz=6.3,slow=18,SNR=6.0						
AAK	Ala-Archa	7.44	16	P	Pn	07 45 00.9	-0.4
	comp=N,2.4nm,0.7s						
AAK				⇓S	Sn	07 46 25.1	+0.8
	comp=N,12nm,1.4s						
KK31	Karatay Array	7.66	353	⇓P	Pn	07 45 04.6	+0.4
	comp=N,1.9nm,0.4s,baz=182,slow=13,SNR=49						
KK31				⇑S	Sn	07 46 32.2	+2.8
	comp=N,2.1nm,0.6s,baz=173,slow=21,SNR=4.6						
CHMS	Chumysh	7.84	16	⇑P	Pn	07 45 06.1	-0.5
	comp=N,1.6nm,0.6s						
CHMS				⇑S	Sn	07 46 33.9	0.0
	comp=N,3.5nm,0.7s						
MKAR	Makanchi Array	13.78	32	P	Pn	07 46 25.7	-1.7
	comp=N,0.0nm,0.3s,baz=203,slow=11,SNR=3.0						
KURBB	Kurchatov Arra	15.90	16	P	Pn	07 46 56.8	+2.1
	comp=N,0.1nm,0.3s,baz=205,slow=11,SNR=9.9						
AB31	Akbulak array	16.26	331	⇑P	Pn	07 46 59.2	0.0
	comp=N,0.9nm,0.6s,baz=153,slow=12,SNR=13						
AB31				⇑S	Sn	07 49 53.5	-5.3
	comp=N,0.8nm,0.5s,baz=153,slow=20,SNR=4.0						
BVAR	Borovoye Array	17.55	357	P	Pn	07 47 16.0	+0.8
	comp=N,0.1nm,0.3s,baz=163,slow=10,SNR=3.6						
AKTO	Aktyubinsk	17.96	330	P	Pn	07 47 23.0	+2.8
	comp=N,0.2nm,0.3s,baz=138,slow=14,SNR=5.4						
AKTO	Aktyubinsk	17.96	330	⇓P	Pn	07 47 21.6	+1.4
	comp=N,3.1nm,0.8s						
AKTO				⇑S	Sn	07 50 37.7	-2.0
	comp=N,2.0nm,0.8s						
ZALV	Zalesovo Beam	20.59	22	P	P	07 47 48.8	+0.4
	comp=N,1.2nm,0.5s,baz=214,slow=10.0,SNR=3.6						
TORD	Torodi Ar. Bea	66.32	270	P	P	07 53 57.0	0.0
	comp=N,0.9nm,0.7s,baz=40,slow=5.9,SNR=4.8						

ISN 10 07:53:07.3±0.8,34.°21N×45.°55E,h7km±6km,ML3.0
TEH 10 07:53:08.0,34.°22N×45.°58E,h15km,ML2.9
ISC 10 07:53:07.6±1.4,34.°24N±0.°04×45.°67E±0.°03,h1km±13km, n17,σ1.°02/23,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IDHR	Dehrash	0.74	52	ePg	Pg	07 53 22.3	+0.4
IDHR				e		07 53 36.3	
IGHG	Ghaleghazi	0.75	83	ePg	Pb	07 53 23.3	-0.3
IGHG				e		07 53 25.8	
IGHG				eSg	Sn	07 53 35.9	-1.8
IVIS	Veis	1.01	73	ePg	Pb	07 53 27.7	-0.4
IVIS				e		07 53 30.3	
IBDR	Badra	1.15	169	ePn	Pn	07 53 31.0	+0.1
IBDR				eSn	Sn	07 53 49.0	+1.7
IBDR				AML	AML	07 53 51.0	
	comp=E,301nm,0.6s						
IBDR				AML	AML	07 53 52.8	
	comp=N,215nm,0.4s						
ILIN	Lien	1.26	57	ePg	Pg	07 53 32.5	+0.7
ILIN				e		07 53 34.0	
BHD	Baghdad	1.45	228	ePn	Pb	07 53 34.0	-1.4
BHD				eSn	Sg	07 53 54.0	-0.2
IKOM	Komasi	1.52	92	ePn	Pg	07 53 37.0	+0.1
IKOM				e		07 54 06.4	
IKRK	Kirkuk	1.59	317	ePn	Pn	07 53 37.0	-0.9
IKRK				eSn	Sg	07 53 59.0	+0.2
IKRK				AML	AML	07 54 00.1	
	comp=N,573nm,0.2s						
IKRK				AML	AML	07 54 00.1	
	comp=E,408nm,0.3s						
IBZA	Bozab	1.82	82	ePn	Pb	07 53 41.4	-0.6
IKFM	Kafar-mosalman	1.95	111	ePn	Pb	07 53 42.4	-1.5
IKFM				e		07 54 17.2	
IDOB	Doab	2.13	102	ePn	Pn	07 53 45.0	+0.4
IDOB				e		07 53 53.1	
IALM	Almabolaq	2.15	73	ePn	Pb	07 53 45.8	-1.7
IALM				e		07 53 49.3	
BDRS	Dareh Seyedi	2.68	95	e	Pn	07 53 53.2	+1.0
BMDN	Meydan	2.68	101	ePn	Pn	07 53 52.4	+0.3
BMDN				e		07 53 55.1	
HAGD	Aghdareh	2.92	78	ePn	Pn	07 53 56.4	+0.9
HAGD				e		07 54 05.4	
MSL	Mosul	3.00	316	ePn	Pn	07 53 57.0	+0.6
MSL				eSn	Sn	07 54 33.0	0.0
MSL				AML	AML	07 54 41.5	
	comp=E,54nm,0.5s						
MSL				AML	AML	07 54 51.9	
	comp=N,66nm,0.6s						
NSR	Nassriya	3.25	173	ePn	Pn	07 54 01.0	+1.3
NSR				eSn	Sn	07 54 39.0	0.0

IDC 10 07:53:25.6±1.8,21.°42S×179.°28W,h599km±21km,mb3.5/8, mb1 3.8/10,mb1mx3.5/24,mbtmp4.4/10,Error ellipse: s-maj=28.7km s-min=13.8km az=150.0
NEIC 10 07:53:25.4±2.5,21.°35S±0.°1×179.°4W±0.°1,h594km±7km, mb4.4/26,Error ellipse: s-maj=19.3km s-min=15.1km az=137.0
ISC 10 07:53:25.5±0.5,21.°30S±0.°10×179.°31W±0.°08,h600km, n54,σ1.°30/56,mb4.4/20,Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	Niue	9.09	78	P	P	07 55 34.6	-0.7
AFI	Afiamalu	10.28	46	P	P	07 55 47.8	+0.5
	2.9nm,0.3s,baz=191,slow=16,SNR=4.7						
AFI				S	S	07 57 41.1	-2.4
	2.1nm,0.3s,baz=90,slow=20,SNR=4.0						
AFI	Afiamalu	10.28	46	P	P	07 55 47.6	+0.4
AFI				S	S	07 57 41.4	-2.1
SANVU	Saraoutou	14.06	292	P	P	07 56 22.8	-2.3
MXZ	Matakaoa Point	16.34	187	P	P	07 56 44.9	-0.9
URZ	Urewera	17.18	190	P	P	07 56 51.6	-1.8
	0.7nm,0.3s,baz=297,slow=4.4,SNR=5.4						
URZ	Urewera	17.18	190	P	P	07 56 51.8	-1.7
URZ				IAmb	IAmb	07 57 03.1	
	comp=Z,34nm,1.4s						
BKZ	Black Stump Fm	18.17	191	P	P	07 57 02.1	-0.5
KNTN	Kanton	19.84	23	P	P	07 57 18.2	+0.2
MLZ	Mavora Lakes	26.13	200	P	P	07 58 14.8	+1.2
MLZ				IAmb	IAmb	07 58 32.2	
	comp=Z,22nm,1.2s						
WHZ	Wether Hill Ro	26.66	200	P	P	07 58 16.9	-1.2
WHZ				IAmb	IAmb	07 58 19.1	
	comp=Z,9.8nm,0.8s						
EIDS	Eidsvold	27.46	256	P	P	07 58 26.5	+1.1

EIDS				IAmb	IAmb	07 58 26.8	
	comp=Z,5.8nm,0.6s						
TOO	Toolangi	34.44	234	P	P	07 59 25.7	+1.0
TOO				IAmb	IAmb	07 59 26.1	
	comp=Z,7.3nm,0.8s						
STKA	Stephens Creek	36.34	245	P	P	07 59 41.2	+0.7
	comp=Z,4.9nm,0.5s,baz=96,slow=11,SNR=18						
STKA	Stephens Creek	36.34	245	P	P	07 59 41.1	+0.7
COEN	Coen	36.42	275	P	P	07 59 42.4	+1.1
COEN				IAmb	IAmb	07 59 43.4	
	comp=Z,10nm,0.7s						
BBOO	Buckleboo	41.09	244	P	P	08 00 18.8	+0.1
BBOO				IAmb	IAmb	08 00 19.5	
	comp=Z,15nm,0.9s						
AS31	Alice Springs	43.15	258	P	P	08 00 35.2	+0.3
AS31				IAmb	IAmb	08 00 36.3	
	comp=Z,7.2nm,1.1s						
ASAR	Alice Springs	43.15	258	P	P	08 00 35.0	+0.1
	comp=Z,16nm,0.8s,baz=97,slow=7.8,SNR=163						
ASAR				PcP	PcP	08 02 10.6	-0.1
	comp=Z,1.8nm,0.7s,baz=108,slow=4.0,SNR=6.8						
ASAR				ScP	ScP	08 05 06.7	+1.2
	comp=Z,1.6nm,0.8s,baz=105,slow=4.5,SNR=9.2						
ASAR				S	S	08 06 16.3	-3.0
	comp=Z,1.5nm,0.9s,baz=87,slow=14,SNR=7.3						
ASAR	Alice Springs	43.15	258	P	P	08 00 34.4	-0.5
ASAR					PcP	08 02 10.2	-0.5
ASAR					ScP	08 05 06.7	+1.2
WB0	Warramunga Arr	43.26	263	P	P	08 00 40.0	+4.2
WRAB	Tennant Creek	43.27	263	P	P	08 00 30.9	-5.0
WRA	Warramunga Arr	43.28	263	P	P	08 00 35.6	-0.4
	comp=Z,7.9nm,0.8s,baz=95,slow=7.6,SNR=29						
FORT	Forrest	47.85	247	P	P	08 01 10.2	-0.3
MTN	Manton Dam	47.95	272	P	P	08 01 10.0	-1.4
MTN				IAmb	IAmb	08 01 11.8	
	comp=Z,16nm,0.7s						
KNRA	Kununurra	49.39	267	P	P	08 01 22.3	+0.3
PSA00	Pilbara Seismi	56.30	258	P	P	08 02 10.9	-0.1
PSA00				IAmb	IAmb	08 02 11.3	
	comp=Z,23nm,1.1s						
QSPA	South Pole Qui	68.77	180		P	08 03 31.1	+0.6
MJAR	Matsushiro Arr	70.14	325	P	P	08 03 39.4	+0.5
	comp=Z,2.5nm,0.6s,baz=137,slow=5.8,SNR=6.0						
MJAR	Matsushiro Arr	70.14	325	P	P	08 03 38.8	-0.1
HUMO	Hull Mountain	82.08	38	P	P	08 04 46.1	+1.8
HUMO				IAmb	IAmb	08 04 46.7	
	comp=Z,10.0nm,1.4s						
NVAR	Mina Array Bea	82.45	44	P	P	08 04 47.6	+1.1
	comp=Z,0.8nm,0.5s,baz=225,slow=8.1,SNR=10.0						
KVN	Kaiserville	82.93	43	P	P	08 04 50.2	+1.3
K05A	Summer Lake	83.36	39	P	P	08 04 52.6	+1.8
K05A				IAmb	IAmb	08 04 58.2	
	comp=Z,6.6nm,1.3s						
U15A	North Rim	85.41	48	P	P	08 05 02.5	+1.3
U15A				IAmb	IAmb	08 05 03.6	
	comp=Z,2.7nm,0.8s						
MNTX	Cornudas Mount	88.21	55	P	P	08 05 14.8	+0.7
TX31	Lajitas Ar. Si	88.52	58	P	P	08 05 16.6	+0.9
TX32	Lajitas Array	88.52	58	P	P	08 05 16.9	+1.2
TXAR	Lajitas Array	88.52	58	P	P	08 05 17.1	+1.4
	comp=Z,1.2nm,0.8s,baz=214,slow=6.2,SNR=15						
TXAR	Lajitas Array	88.52	58	P	P	08 05 15.7	0.0
CMAR	Chiang Mai Arr	89.23	290	P	P	08 05 21.2	+2.1
	comp=Z,1.7nm,0.3s,baz=128,slow=5.2,SNR=15						
PDAR	Pinedale Array	90.38	44	P	P	08 05 24.8	+0.6
	comp=Z,0.3nm,0.5s,baz=208,slow=4.7,SNR=4.9						
PDAR	Pinedale Array	90.38	44	P	P	08 05 24.6	+0.4
MKAR	Makanchi Array	110.85	313	PKiKP	PKiKP	08 10 50.4	-0.9
	comp=Z,0.2nm,0.4s,baz=206,slow=0.7,SNR=5.1						
ARCES	ARCESS Array B	129.48	349	PKP	PKPdf	08 11 25.4	-0.9
	comp=Z,1.8nm,0.7s,baz=107,slow=1.3,SNR=8.6						
AKASG	Malin Array Be	143.10	330	PKP	PKPab	08 11 49.3	-0.5
	comp=Z,3.7nm,0.5s,baz=43,slow=4.3,SNR=19						
AKASG	Malin Array Be	143.10	330	PKPdf	PKPab	08 11 49.5	-0.4
AKBB	Malin Array Si	143.10	330	PKPdf	PKPab	08 11 49.6	-0.3
MBAR	Mbarara	143.45	227		PKPbc	08 11 52.7	-0.1
BR131	Keskin Array S	146.45	311		PKPbc	08 12 00.7	-0.1
BRTR	Keskin Array B	146.45	311	PKPbc	PKPbc	08 11 59.7	-1.1
	comp=Z,1.9nm,0.6s,baz=138,slow=4.9,SNR=11						
BRTR	Keskin Array B	146.45	311	PKPbc	PKPbc	08 11 59.5	-1.3
CLL	Collm	148.54	345	ePKPbc	PKiKP	08 12 06.0	-0.6
GERES	GERESS Array B	150.61	342	PKPbc	PKPbc	08 12 10.1	-0.6
	comp=Z,1.0nm,0.6s,baz=115,slow=1.9,SNR=6.1						

NEIC **10** *08:14:57.5±2.1, 1°.04N±0°.09×126°.38E±0°.06, h11km±4km, mb4.5/19, Error ellipse: s-maj=12.9km s-min=8.4km az=181.0*

IDC **10** *08:15:04.9±2.7, 1°.08N×126°.71E, h75km±27km, mb3.9/8, mb1 4.0/11, mb1mx3.7/38, mbtmp4.2/11, MS2.9/4, Ms1 2.9/4, ms1mx2.7/40, Error ellipse: s-maj=23.4km s-min=14.2km az=75.0*

DJA **10** *08:15:04.9±0.3, 1°N±3°×127°E±°, h53km±5km, M4.4/13, mB5.0/1, mb4.5/10, mb4.6/1, MLv4.4/13, MLv4.2/2, Mw(mB)4.3/1*

ISC 10 08:15:04.5±0.5, **1°.11N**±0°.05×**126°.81E**±0°.06, **h72km, n59,** σ1°.49/61, **mb4.4**/16, **1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.65	121	P	Pn	08 15 18.4	-0.6
TNTI				S	Sn	08 15 28.8	-0.8
TNTI	Ternate	0.65	121		Pn	08 15 18.3	-0.7
TNTI				Sn	Sn	08 15 30.0	+0.3
LBMI	Labuha	1.87	158	P	Pn	08 15 36.1	+1.7
KMSI	Cibinong	2.88	259	P	Pn	08 15 49.4	+1.3
SANI	Sanana	3.24	195	P	Pn	08 15 53.4	+0.4
NLAI	Namlea	4.33	176	P	Pn	08 16 09.9	+2.1
LUWI	Luwuk	4.57	242	P	Pn	08 16 14.3	+3.2
SWI	Sorong	4.86	114	P	Pn	08 16 19.6	+4.5
SIJI	Sorong	4.87	114	P	Pn	08 16 17.9	+2.6
	1.6nm,0.3s,baz=334,slow=6.7,SNR=7.5						
SIJI				LR	LR	08 18 29.4	
	comp=Z,144nm,19.9s,baz=265,slow=41						
MSAI	Masohi	4.90	154	P	Pn	08 16 21.1	+5.4
MRSI	Marisa	4.91	263	P	Pn	08 16 17.7	+1.9
	0.2nm63nm,0.8s,63nm,0.8s						
APSI	Ampana	5.54	249	P	Pn	08 16 27.4	+3.0
	0.5nm1μm77nm,0.7s						
DAV	Davao City (W)	6.05	348	LR	LR	08 19 17.0	
	comp=Z,56nm,20.1s,baz=163,slow=42						
KCP	Kidapawan	6.11	344	⇓iP	Pn	08 16 31.3	-1.0
KCP				iS	Sn	08 17 43.6	+2.7
FAKI	Fak Fak	6.75	126	P	Pn	08 16 41.5	+0.5
	0.2nm49nm,1.2s						
FAKI	Fak Fak	6.75	126		Pn	08 16 42.4	+1.4
MPSI	Mapaga	6.96	264	P	Pn	08 16 46.4	+2.6
	0.1nm0.1nm11nm,0.8s						
TTSI	Tana Toraja	8.12	239	P		08 17 00.2	+0.5
	28nm,0.8s						
BNSI	Bone	8.65	231	P	Pn	08 17 08.4	+1.5
	17nm,0.9s						
SPSI	Sidrap Palu	8.66	234	P	Pn	08 17 08.6	+1.6
	20nm,0.8s						
BKSI	Bulukumba	9.24	226	P	Pn	08 17 17.8	+2.8
	26nm,0.8s						
KAPI	Kappang	9.31	229	P	Pn	08 17 15.6	-0.4
	3.1nm,0.3s,baz=81,slow=17,SNR=3.3						
KAPI				S	Sn	08 18 56.8	-2.4
	2.5nm,0.3s,baz=98,slow=15,SNR=4.0						
KAPI	Kappang	9.31	229	Pn	Pn	08 17 05.9	-10
FITZ	Fitzroy Crossi	19.12	183	P	P	08 19 23.1	+1.3
	0.2nm,0.3s,baz=7.1,slow=8.1,SNR=2.6						
FITZ				LR	LR	08 26 50.4	
	comp=Z,49nm,18.5s,baz=304,slow=37						
FITZ	Fitzroy Crossi	19.12	183	P	P	08 19 20.3	-1.5
FITZ				IAmb	IAmb	08 19 25.2	
	comp=Z,33nm,1.4s						
WB0	Warramunga Arr	22.04	161	P	P	08 19 52.8	-0.5
WB0				IAmb	IAmb	08 19 54.9	
	comp=Z,14nm,0.9s						
WRAB	Tennant Creek	22.18	161	P	P	08 19 53.9	-0.9
WRAB				IAmb	IAmb	08 19 56.9	
	comp=Z,14nm,0.5s						
WRA	Warramunga Arr	22.18	161	P	P	08 19 54.5	-0.4
	comp=Z,7.9nm,0.7s,baz=336,slow=12,SNR=31						
WRA				LR	LR	08 29 23.3	
	comp=Z,23nm,19.2s,baz=215,slow=39						
WRA	Warramunga Arr	22.18	161	P	P	08 19 52.4	-2.5
WB2	Warramunga Arr	22.19	161	P	P	08 19 54.4	-0.6
WB2				IAmb	IAmb	08 19 57.5	
	comp=Z,27nm,1.3s						
WR0	Warramunga Arr	22.27	160	P	P	08 19 55.3	-0.5
WR0				IAmb	IAmb	08 19 57.9	
	comp=Z,13nm,1.0s						
YULB	Yu-li	22.79	347	P	P	08 19 59.0	-2.3
TPUB	Ta-pu	22.86	345	P	P	08 20 00.9	-1.1
PSA00	Pilbara Seismi	23.55	196	P	P	08 20 07.1	-1.4
AS31	Alice Springs	25.57	165	P	P	08 20 28.1	+1.1
ASAR	Alice Springs	25.57	165	P	P	08 20 26.9	-0.1
	comp=Z,7.7nm,0.8s,baz=347,slow=8.3,SNR=40						
ASAR				PcP	PcP	08 23 56.6	-0.1
	comp=Z,0.2nm,0.5s,baz=358,slow=2.0,SNR=3.8						
ASAR	Alice Springs	25.57	165	P	P	08 20 27.0	+0.1
BBOO	Buckleboo	34.85	166	P	P	08 21 49.2	+0.4
STKA	Stephens Creek	35.67	158	P	P	08 21 55.4	-0.5
	comp=Z,2.1nm,0.6s,baz=327,slow=9.6,SNR=6.4						
STKA	Stephens Creek	35.67	158	P	P	08 21 56.8	+0.9
KSRS	Korea Array	36.18	1	P	P	08 21 58.7	-1.4
	comp=Z,1.7nm,0.8s,baz=195,slow=5.4,SNR=3.0						
BJT	Baijiatuau	39.92	347	P	P	08 22 31.8	+0.2
BJT				IAmb	IAmb	08 22 32.3	
	comp=Z,7.5nm,0.7s						
ULN	Ulaanbaatar	49.62	343	P	P	08 23 49.0	+0.1
ULN				IAmb	IAmb	08 23 50.3	
	comp=Z,5.3nm,1.1s						
SONM	Songino Array	49.80	342	P	P	08 23 50.6	+0.6
	comp=Z,2.2nm,0.8s,baz=143,slow=9.4,SNR=15						
SONM	Songino Array	49.80	342	P	P	08 23 50.3	+0.2
PEA0B	Petropavlovsk-	57.82	21	P	P	08 24 49.0	+0.7
PETK	Petropavlovsk-	57.82	21	P	P	08 24 48.9	+0.6
	comp=Z,5.6nm,1.1s,baz=206,slow=13,SNR=3.0						
PETK	Petropavlovsk-	57.82	21	P	P	08 24 49.0	+0.6
MK31	Makanchi Array	59.75	326	P	P	08 25 01.6	-0.3
MK31				IAmb	IAmb	08 25 03.1	
	comp=Z,2.2nm,0.6s						
MKAR	Makanchi Array	59.75	326	P	P	08 25 02.1	+0.2
	comp=Z,2.9nm,0.5s,baz=120,slow=8.3,SNR=60						
MAKZ	Makanchi	59.94	326	P	P	08 25 02.4	-0.8
MAKZ				IAmb	IAmb	08 25 04.2	
	comp=Z,2.8nm,0.6s						
KSH	Kashi	59.96	316	P	P	08 25 04.0	+0.3
ZALV	Zalesovo Beam	62.95	334	P	P	08 25 23.0	-0.3
	comp=Z,0.8nm,0.6s,baz=117,slow=8.3,SNR=4.6						
ZALV	Zalesovo Beam	62.95	334	P	P	08 25 22.7	-0.7
KURK	Kurchatov	63.99	328	P	P	08 25 28.5	-1.8
KKAR	Karatay Array	65.21	318	P	P	08 25 38.6	+0.2
ABKAR	Akbulak array	74.23	321	P	P	08 26 33.2	-0.5
TORD	Torodi Ar. Bea	123.77	287	PKP	PKPdf	08 33 55.1	-0.1
	comp=Z,0.5nm,0.7s,baz=88,slow=3.1,SNR=2.8						
CPUP	Villa Florida	154.61	171	PKPab	PKPab	08 35 13.4	+0.9
	comp=Z,1.1nm,0.8s,baz=207,slow=6.8,SNR=3.4						

ANF **10** *08:30:22.7±0.1, 35°.48N×118°.28W, h15km, ML2.8/24, Error ellipse: s-maj=1.1km s-min=1.0km az=118.0*

NEIC **10** *08:30:23.5±1.1, 35°.47N±0°.01×118°.26W±0°.01, h6km±4km, Error ellipse: s-maj=1.6km s-min=1.4km az=174.0*

SCEDC **10** *08:30:24.0, 35°.48N×118°.28W, h4km*

PAS **10** *08:30:24.0±1.1, 35°.48N±0°.01×118°.28W±0°.01, h4km, ML2.8/174, Error ellipse: s-maj=1.7km s-min=1.4km az=162.0*

ISC 10 08:30:23.6±0.9, **35°.48N**±0°.01×**118°.27W**±0°.01, **h9km**±9km, **n95,** σ0°.72/133, **Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISA	Isabella, Lake	0.25	319	Pg	Pg	08 30 28.6	0.0
ISA				Sg	Sg	08 30 31.9	-0.1
ISA	Isabella, Lake	0.25	319	P	Pg	08 30 28.7	0.0
	baz=140,SNR=786						
ISA				S	Sg	08 30 31.6	-0.5
	baz=140						
WOFM	Oak Flat	0.36	279		Sg	08 30 35.6	0.0
TEJ	El Tejon	0.42	234		Pg	08 30 31.7	-0.1
TEJ					Sg	08 30 37.3	-0.1
LRMC	Laurel Mtn Rad	0.48	90		Pg	08 30 33.1	+0.1
LRMC					Sg	08 30 39.8	+0.5
LRMC	Laurel Mtn Rad	0.48	90	P	Pg	08 30 33.1	+0.1
	baz=270,SNR=23						
LRMC				S	Sg	08 30 39.5	+0.2
	baz=270						
MAGC	SCE Magundon P	0.54	258		Pg	08 30 34.5	+0.4
ARVC	Arvin	0.57	233		Pg	08 30 34.8	+0.1
ARVC					Sg	08 30 42.3	+0.1
ARVC	Arvin	0.57	233	P	Pg	08 30 34.8	+0.1
	baz=52,SNR=20						
ARVC				S	Sg	08 30 42.3	+0.1
	baz=52						
TJR	Tejon Ranch	0.59	221		Pg	08 30 34.7	-0.3
TJR					Sg	08 30 42.7	0.0
JRC2	Joshua Ridge	0.63	37		Pg	08 30 35.7	-0.1
JRC2					Sg	08 30 44.3	+0.3
EDW2	Edwards Air Fo	0.64	159		Pg	08 30 35.6	-0.3
EDW2					Sg	08 30 44.1	-0.1
EDW2	Edwards Air Fo	0.64	159	P	Pg	08 30 35.6	-0.3
	baz=339,SNR=25						
EDW2				S	Sg	08 30 44.1	-0.1
	baz=339						
CLC	China Lake	0.65	58		Pg	08 30 35.9	-0.1
CLC					Sg	08 30 44.3	-0.2
THC	Tehachapi Micr	0.65	210		Pg	08 30 35.9	-0.3
BAKC	Calstate	0.69	259		Pg	08 30 37.3	+0.3
BAKC					Sb	08 30 47.3	-0.1
CCCA	Chr Cany lake	0.74	86		Pg	08 30 38.1	+0.2
VES	Vestal, Richgr	0.76	299		Pg	08 30 38.0	-0.2
VES					Sg	08 30 47.5	-0.5
VES	Vestal, Richgr	0.76	299	P	Pg	08 30 38.0	-0.2
	baz=119,SNR=96						
VES				S	Sg	08 30 47.4	-0.5
	baz=119						
BTPC	Burnt Peak	0.83	197		Pg	08 30 39.3	-0.3
LEOC	Leona Valley	0.84	182		Pg	08 30 39.4	-0.4
MPMC	Manual Prospec	0.86	47		Pg	08 30 40.0	-0.2
MPMC					Sg	08 30 51.5	0.0
MPMC	Manual Prospec	0.86	47	P	Pg	08 30 40.0	-0.2
	baz=228,SNR=77						
MPMC				S	Sg	08 30 51.4	0.0
	baz=228						
SBB	Saddle Back Bu	0.87	155		Pg	08 30 39.8	-0.5
SBB					Sg	08 30 51.1	-0.5
OSI	Osito Audit: C	0.94	203		Pg	08 30 41.1	-0.5
OSI				Sg	Sg	08 30 52.6	-1.1
OSI	Osito Audit: C	0.94	203	P	Pg	08 30 41.0	-0.6
	baz=23,SNR=8.9						
DAC	Darwin (Calif)	0.97	34		Pn	08 30 44.7	+1.2
DAC				Sg	Sg	08 30 55.3	+0.4
CWC	Cottonwood Cre	0.97	9		Pg	08 30 41.7	-0.6
CWC					Sg	08 30 54.5	-0.5
CWC	Cottonwood Cre	0.97	9	P	Pg	08 30 41.8	-0.6
	baz=190						
CWC				S	Sg	08 30 54.5	-0.5
	baz=190						
PYR	Pyramid	0.98	203		Pg	08 30 42.0	-0.5
BCW	Bitter Crk WRg	1.08	240		Pg	08 30 43.6	-0.6
BCW					Sg	08 30 58.1	-0.2
IR2C	Iron Canyon	1.09	186		Pg	08 30 43.9	-0.6
CGO	Cerro Gordo	1.14	19		Pg	08 30 44.9	-0.6
CHFC	Chilao Flat St	1.16	170		Pg	08 30 45.1	-0.7
OAT	Oat Mountain	1.17	194		Pg	08 30 45.2	-0.7
RRX	Edison Barstow	1.21	119		Pg	08 30 46.3	-0.4
RRX					Sb	08 31 03.5	+1.2
RRX	Edison Barstow	1.21	119	Pg	Pg	08 30 46.3	-0.4
	baz=300						
RRX				Sg	Sb	08 31 03.4	+1.2
	baz=300						
GSC	Goldstone, Bar	1.21	98		Pg	08 30 46.2	-0.6
GSC	Goldstone, Bar	1.21	98		Pg	08 30 46.4	-0.5
GSC				Sg	Sg	08 31 01.9	-0.7
GSC	Goldstone, Bar	1.21	98	Pg	Pg	08 30 46.2	-0.6
	baz=279,SNR=46						
GSC				S	Sg	08 31 01.6	-1.0
	baz=279						
DECC	Green Verdugo	1.22	182		Pg	08 30 47.4	+0.4
DECC	Green Verdugo	1.22	182	Pg	Pg	08 30 46.8	-0.2
	baz=2.1						
DECC				Sg	Sb	08 31 03.6	+0.9
	baz=2.1						
XTL	Crystal Lake,	1.23	164		Pg	08 30 47.2	+0.1
VOG	Valley Oaks Go	1.23	313		Pg	08 30 46.4	-0.9
VOG					Sg	08 31 02.7	-0.6
VOG	Valley Oaks Go	1.23	313	Pg	Pg	08 30 46.7	-0.6
	baz=133						
VOG				S	Sg	08 31 01.8	-1.5
	baz=133						
QSM	Queen of Sheba	1.24	67		Pg	08 30 46.3	-1.1
MWC	Mount Wilson	1.26	172		Sg	08 31 04.7	+0.4
MWC	Mount Wilson	1.26	172	Pn	Pg	08 30 46.9	-0.9
MWC				Sg	Sg	08 31 03.6	-0.6
CARC	Carrizo Plain	1.30	263		Pn	08 30 47.5	-0.5
CARC					Sg	08 31 05.1	-0.2
PASC	Pasadena Art C	1.30	177		Pn	08 30 48.0	0.0
PASC				Sg	Sb	08 31 05.2	+0.2
BFSC	Mount Baldy Ra	1.33	158		Pn	08 30 48.5	0.0
BFSC					Sb	08 31 06.5	+0.4
BFSC	Mount Baldy Ra	1.33	158	Pg	Pn	08 30 48.4	0.0
	baz=338,SNR=10						
BFSC				S	Sb	08 31 04.8	-1.3
	baz=338						
PEM	Pine Mountain	1.35	166		Pn	08 30 49.0	+0.4
SSK	Sunset Peak	1.35	159		Pn	08 30 49.0	+0.2
DJJ	Donna J Jenkin	1.38	186		Pn	08 30 49.3	+0.3
PKM	Mcpherson Peak	1.39	246	Pg	Pn	08 30 49.4	+0.1
	baz=64						
PKM				Sb	Sb	08 31 07.1	-0.7
	baz=64						
SMMC	Simmler	1.42	264	Sb	Sb	08 31 07.9	-0.5
	baz=83						
FURC	Furnace Creek,	1.51	49	Pg	Pb	08 30 52.1	+0.4
	baz=230						
FURC				Sg	Sg	08 31 12.5	+0.4
	baz=230						
BLG	Laguna Peak, P	1.51	206	Pg	Pn	08 30 52.0	+1.1
	baz=25						
BLG				Sb	Sn	08 31 11.1	+0.4
	baz=25						
TIN	Tinemaha, Big	1.57	1	P	Pn	08 30 49.6	-2.2
	baz=181						
BBRC	Big Bear Solar	1.64	137	Pg	Pb	08 30 54.5	+0.4
	baz=318						
SHOC	Shoshone, Teco	1.68	75	Pg	Pn	08 30 54.7	+1.5
	baz=256						
GRAC	Grapevine Rang	1.68	26	Pg	Pb	08 30 55.1	+0.3
	baz=206						
FMP	Fort Macarthur	1.76	181	Pg	Pb	08 30 56.9	+0.9
	baz=0.4						
SME	Santa Rosa Min	1.81	155		Pn	08 30 55.2	+0.2
AMDNV	Amargosa	1.89	58		Pn	08 30 55.4	-0.5
BLDC	Black Mountain	2.15	272		Pn	08 30 59.9	+0.2
PMPB	Monarch Peak	2.18	290	Pn	Pn	08 31 00.7	+0.6
TPNV	Topopah Spring	2.20	47	Pn	Pn	08 31 00.6	+0.2
OMMB	Old Mammoth Mi	2.21	345	Pn	Pb	08 31 03.3	-0.6
MCSM	Casa Diablo Ho	2.23	347		Pb	08 31 04.8	+0.5
GMRC	Granite Mounta	2.25	107	P	Pn	08 30 59.8	-1.3
	baz=289,SNR=10						
MMIM	Miami Mountain	2.27	329		Pn	08 31 03.6	+2.2
PFO	Pinyon Flats O	2.39	141	Pn	Pn	08 31 03.3	+0.3
XPFO	Pion Flat	2.39	141	Pn	Pn	08 31 03.2	+0.2
SHPR	Sheep Range	2.73	67	Pn	Pn	08 31 07.9	+0.3
HAY	Hayfield	2.77	129		Pb	08 31 12.1	-1.2
SAO	San Andreas Ge	2.87	297	Pn	Pn	08 31 11.2	+1.6
IRM	Iron Mountain	2.89	116	P	Pn	08 31 08.8	-1.0
	baz=298						
NVAR	Mina Array Bea	2.95	360	Pn	Pn	08 31 10.3	-0.5
NV11	Mina Array Sit	2.95	2	Pn	Pn	08 31 12.3	+1.5
CMB	Columbia Colle	3.07	327	Pn	Pn	08 31 13.5	+1.3
BAR	Barrett	3.09	154	Pn	Pn	08 31 13.7	+1.2
WAKR	Walker	3.16	343	Pn	Pn	08 31 15.5	+1.8
Y12C	Blythe	3.54	118	Pn	Pn	08 31 18.3	-0.4
KVN	Kaiserville	3.57	2	Pn	Pn	08 31 18.5	-0.8
R11A	Troy Canyon, C	3.58	36	Pn	Pn	08 31 20.7	+1.2
YERR	Yerington	3.59	348	Pn	Pn	08 31 17.9	-1.6
W13A	Hualapai Mount	3.61	95	Pn	Pn	08 31 19.7	-0.2
PNTR	Pine Nut	3.76	344	Pn	Pn	08 31 22.9	+0.9
AFDM	Forest Hills D	4.08	329	Pn	Pn	08 31 26.1	0.0
PAHR	Pah Rah Range	4.31	349	Pn	Pn	08 31 29.4	-0.1
LCMT	Little Creek M	4.34	68	Pn	Pn	08 31 30.2	+0.3
Y14A	Wickenburg	4.60	108	Pn	Pn	08 31 32.7	-0.7
U15A	North Rim	4.94	77	Pn	Pn	08 31 39.6	+1.3

NIED **10** *08:37:00, 28°.20N×140°.30E, h400km, Mw5.2 Best double couple: $M_0$6.00000×10^{16} NP1:ϕ_s329.00000°, δ58.00000°, λ-44.00000°. NP2:ϕ_s86.00000°, δ54.00000°, λ-139.00000°.*

BJI **10** *08:37:49.2±0.0, 28°.15N×140°.01E, h414km, mB4.8/51, mb5.2/72*

JMA **10** *08:37:49.7±0.3, 28°.23N×140°.34E, h421km±4km, M5.2*

MOS **10** *08:37:50.0±0.8, 28°.21N×139°.88E, h409km, mb5.1/80, Error ellipse: s-maj=6.7km s-min=3.8km az=114.1*

IDC **10** *08:37:50.9±0.4, 28°.18N×139°.95E, h407km±3km, mb4.3/45, mb1 4.3/52, mb1mx4.3/58, mbtmp5.1/52, Error ellipse: s-maj=7.6km s-min=5.7km az=92.0*

NEIC **10** *08:37:51.2±1.5, 28°.20N±0°.07×139°.92E±0°.09, h409km±5km, mb4.7/232, Error ellipse: s-maj=12.0km s-min=9.7km az=75.0*

BGR **10** *08:37:58.9±0.0, 29°.24N×139°.05E, h33km, mb5.5*

ISC 10 08:37:51.2±0.3, **28°.25N**±0°.03×**139°.97E**±0°.04, **h413km**±3km, **h413km:pP-P, n895,** σ1°.26/1016, **mb4.8**/246, **20C-57D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.28	120	P	P	08 38 47.7	-2.4
CBIJ				eS	S	08 39 33.0	-4.8
JCJ	Chichijima	2.28	120	P	P	08 38 47.7	-2.4
	381nm,0.3s,baz=276,slow=7.7,SNR=80						
JCJ				S	S	08 39 33.6	-4.2
	943nm,0.3s,baz=288,slow=19,SNR=18						
JHH2	Haha-jima-NKT2	2.54	129	P	P	08 38 49.7	-2.2
JHH2				S	S	08 39 37.2	-3.9
JAOM	Aogashimamukai	4.20	358	P	P	08 39 06.7	+1.0
JHCJ	Hachijojimakas	4.80	358	P	P	08 39 11.2	-0.4
JHCJ				eS	S	08 40 12.8	-4.5
JHJ2	Mitsune	4.84	358	P	P	08 39 12.4	+0.4
JHJ2				eS	S	08 40 16.1	-1.9
JHJ2	Mitsune	4.84	358		P	08 39 13.0	+1.0
JHJ2				S	S	08 40 16.4	-1.6
JHJ	Hachijo jima 2	4.85	358	P	P	08 39 12.4	+0.4
	133nm,0.3s,baz=234,slow=22,SNR=27						
JHJ				S	S	08 40 15.3	-2.9
	352nm,0.3s,baz=107,slow=19,SNR=8.5						
JMKN	Mikurajimanish	5.63	357	P	P	08 39 20.2	+0.2
JKO	Kozu shima	5.96	353	P	P	08 39 23.7	+0.2
TTO1	TONANKAI O.B.S	6.01	334	P	P	08 39 26.7	+3.0
BSO1	Boso 1	6.44	7	P	P	08 39 28.4	+0.4
JIM2	Oshima 3	6.46	356	P	P	08 39 28.7	-0.2
JMMH	Miemihama	6.50	330	P	P	08 39 31.5	+2.2
JIZS	Izushimoda	6.51	352	P	P	08 39 29.6	-0.5
BSO3	Boso 3	6.54	4	P	P	08 39 29.3	-0.8
JSG	Sagara	6.58	347	P	P	08 39 31.5	+0.7
JTNC	Tanabenakahech	6.69	327	P	P	08 39 33.6	+1.6
BSO4	Boso 4	6.72	3	P	P	08 39 31.4	-0.9
JIE	Ise	6.72	336	P	P	08 39 34.1	+1.7
JIE				eS	S	08 40 55.5	+1.1
JHTM	Izuhatsuma	6.73	353	P	P	08 39 32.5	0.0
JKN2	Miekihoku	6.75	333	P	P	08 39 34.2	+1.5
JAA	Atsumi	6.80	340	P	P	08 39 34.4	+1.2
AJI	Ajiro2	6.81	354	P	P	08 39 32.7	-0.6
HMMJ	Hamamatsu 2	6.86	344	P	P	08 39 34.3	+0.5
JKUC	kamogawauchiur	6.89	2	P	P	08 39 32.4	-1.8
SHZ3	Shizuoka 3	6.95	348	P	P	08 39 35.1	+0.1
JSSY	Shinshiroyabe	6.96	343	P	P	08 39 35.8	+0.8
JYZW	Yoshizawa	6.99	345	P	P	08 39 35.6	+0.3
JOD2	Odawara 2	7.03	354	P	P	08 39 34.7	-1.1
TSUJ	Tsu 2	7.11	336	P	P	08 39 38.4	+1.8
JNY	Yasuok	7.31	346	P	P	08 39 39.1	+0.2
JYN	Shimob	7.32	351	P	P	08 39 38.8	-0.2
JSGW	Sagamiharawaka	7.35	355	P	P	08 39 37.7	-1.6
JAO	Obara	7.36	342	P	P	08 39 40.3	+0.8
JAO				S	S	08 41 06.5	-0.9
INU	Inuyama	7.50	341	P	P	08 39 42.0	+1.1
INU				S	S	08 41 08.5	-1.7
JGF	Kuroka	7.65	344	P	P	08 39 42.9	+0.2
JTO	Tosashimizu	7.70	308	P	P	08 39 45.4	+2.3
JTO				eS	S	08 41 18.2	+3.9
JNT	Takato	7.75	349	P	P	08 39 43.9	0.0
JRY	Ryogami san	7.79	354	P	P	08 39 43.3	-0.9
JYTA	Yamagatataniai	7.82	340	P	P	08 39 45.2	+0.8
JFM	Mihama	8.00	336	P	P	08 39 48.1	+1.8
JWT	Wachi	8.01	332	P	P	08 39 48.5	+2.1
JKDJ	Kitadaitoujima	8.06	255	P	P	08 39 47.8	+0.7
JHYU	Hitachinakayam	8.08	4	P	P	08 39 46.5	-0.7
JAG	Ashikaga	8.16	357	P	P	08 39 46.2	-1.9
JAG				S	S	08 41 16.3	-7.5
JMZ	Minamidaito 2	8.17	255	P	P	08 39 48.3	0.0
JNAR	Kushima--Naru	8.22	295	P	P	08 39 52.1	+3.3

JGN Niukaw 8.26 345 P P 08 39 49.5 +0.3
JNG Nsakai 8.28 349 P P 08 39 49.1 -0.4
JSKE Saikikamae 8.30 305 P P 08 39 52.6 +2.9
JTSN Tsuno 8.33 301 P P 08 39 52.9 +2.9
JHO Hitachi 8.35 3 P P 08 39 49.1 -1.1
MJAR Matsushiro Arr 8.40 350 P P 08 39 49.9 -0.8
1.3nm,0.3s,baz=164,slow=11,SNR=42
MJAR Matsushiro Arr 8.40 350 P P 08 39 48.6 -2.1
MJAR S S 08 41 27.4 -1.4
MAJO Matsushiro 8.40 350 P P 08 39 49.9 -0.8
MAJO S S 08 41 25.2 -3.6
MAJO Matsushiro 8.40 350⇓iP P 08 39 50.0 -0.8
MAJO pmax pmax
comp=Z,43nm,1.0s
MAT Matsushiro 8.40 350 P P 08 39 49.9 -0.8
MAT Matsushiro 8.40 350 P P 08 39 49.7 -1.0
MAT S S 08 41 23.0 -5.8
MJB9 Matsu-Tunnel 8.40 350 P P 08 39 50.8 0.0
MJB9 S S 08 41 25.3 -3.5
JTZ Takazaki 8.51 297 P P 08 39 55.1 +3.1
JKT Katashina 8.51 356 P P 08 39 50.4 -1.6
JKIT Kitakata 8.54 303 P P 08 39 55.8 +3.4
JSB Shiboa 8.69 360 P P 08 39 54.1 +0.1
JHS Saijyo 8.90 321 P P 08 39 58.7 +2.3
JHS S S 08 41 41.2 +1.8
JHK Hiroka 9.01 355 P P 08 39 56.2 -1.2
JHK S S 08 41 34.5 -6.9
JNU Nakatsue 9.21 304 P P 08 40 01.8 +2.0
comp=Z,8.0nm,0.3s,baz=105,slow=7.8,SNR=34
JNU S S 08 41 50.0 +4.3
baz=199,slow=23,SNR=5.7
JNU Nakatsue 9.21 304 P P 08 40 03.4 +3.6
JAMN Amaminishikomi 9.52 272 P P 08 40 05.9 +2.7
JSJ Shimokoshiki 9.52 293 P P 08 40 05.1 +1.8
JSJ eS S 08 41 53.4 +1.2
JOI OKI 9.82 326 eS S 08 41 59.1 +0.9
JYRO Yoronjima 10.29 266 P P 08 40 14.5 +2.7
JOW Kunigami 10.47 265 P P 08 40 16.3 +2.4
JOW Kunigami 10.47 265 P P 08 40 14.6 +0.7
comp=Z,1.3nm,0.3s,baz=118,slow=14,SNR=8.6
JOW Kunigami 10.47 265 P P 08 40 16.6 +2.7
JOW S S 08 42 09.6 -2.1
JYK Kaneyama 10.64 2 P P 08 40 16.6 +1.1
JIH Iheya 10.71 266 P P 08 40 19.6 +3.2
JMK Ichinoseki 10.72 5 P P 08 40 17.3 +1.0
JMK eS S 08 42 14.3 -1.9
JNTH Nagotoyohara 10.76 264 P P 08 40 19.9 +2.9
JTU Tsushima 10.98 307 P P 08 40 21.9 +2.6
JKE Kume jima 2 11.88 264 P P 08 40 30.6 +1.3
JAH Hinai 11.92 2 P P 08 40 31.4 +1.9
SARN Sarigan 12.69 154 P P 08 40 39.1 +0.8
ANA2 Anatahan 12.99 155 P P 08 40 42.8 +1.2
JOT Ohata 13.13 4 P P 08 40 43.9 +1.1
TJN Taejon 13.38 310⇑iP P 08 40 46.7 +1.1
JKB Kayabe 13.63 3 P P 08 40 49.2 +1.0
KSRS Korea Array 13.65 315 P P 08 40 49.8 +1.3
comp=Z,1.7nm,0.3s,baz=125,slow=9.6,SNR=38
KSRS S S 08 43 18.4 +3.2
baz=117,slow=22,SNR=4.6
KSRS ScP ScP 08 48 35.8 +0.7
comp=Z,0.2nm,0.3s,baz=202,slow=1.0,SNR=8.7
KSAR Wonju Array Be 13.67 315 P P 08 40 48.2 -0.4
KSAR Wonju Array Be 13.67 315 P P 08 40 48.3 -0.4
KS19 Wonju Array Si 13.72 315 P P 08 40 49.3 +0.1
JOSM Okushiri--Mats 13.80 358 P P 08 40 51.6 +1.5
ERM Erimo 13.97 10 P P 08 40 54.5 +2.6
ERM Erimo 13.97 10⇑iP P 08 40 54.0 +2.0
ERM pmax pmax
comp=Z,179nm,0.9s
INCN Inchon 14.49 313 P P 08 40 58.2 +0.6
INCN Inchon 14.49 313 P P 08 40 58.2 +0.6
JCH Churui 14.59 10 P P 08 41 00.8 +2.1
JHR Hokuryu 15.52 5 P P 08 41 10.9 +2.2
NEM2 Nemuro 2 15.78 16 P P 08 41 12.9 +1.4
ASAJ Asahikawa 15.97 7 P P 08 41 14.9 +1.5
comp=Z,2.5nm,0.3s,baz=196,slow=13,SNR=8.1
ASAJ S S 08 44 09.5 +8.6
comp=Z,1.2nm,0.3s,baz=180,slow=10,SNR=3.6
ASAJ ScP ScP 08 48 39.9 +0.7
comp=Z,0.3nm,0.3s,baz=214,slow=7.3,SNR=3.8
ASAJ Asahikawa 15.97 7 P P 08 41 15.0 +1.5
JKA Kamikawa-asahi 15.97 7 ScP 08 48 39.9 +0.7
MSHR Mys Shultsa 15.98 336⇑iP P 08 41 15.3 +1.7
VLA Vladivostok 16.21 338diP P 08 41 17.6 +1.6
VLA pmax pmax
comp=Z,236nm,0.9s
SSE Sheshan 16.57 284 P P 08 41 18.9 -1.1
TATO Taipei 16.84 263 P P 08 41 22.4 -0.7
NACB Ninganchiao 16.98 260 P P 08 41 23.8 -0.8
NACB IAmb IAmb 08 41 25.1
comp=Z,45nm,0.9s
YHNB Yeheng 17.03 262 P P 08 41 23.9 -1.2
YHNB IAmb IAmb 08 41 27.3
comp=Z,59nm,0.9s
YHNB S S 08 44 24.1 +2.0
USRK Ussuriysk Ar. 17.15 340 P P 08 41 26.9 +0.8
baz=144,slow=11,SNR=458
USRK S S 08 44 27.2 +3.4
baz=144,slow=20,SNR=4.1
YULB Yu-li 17.49 258 P P 08 41 32.0 +2.0
SSLB Suanglung 17.66 260 P P 08 41 32.3 +0.5
SSLB S S 08 44 32.9 -1.2
TWG Pinlang 17.88 257 P P 08 41 33.1 -1.1
TPUB Ta-pu 18.10 259 P P 08 41 35.9 -0.6
MDJ Mudanjiang 18.31 336 P P 08 41 39.1 +0.7
MDJ sP sP 08 43 23.0 -3.6
MDJ S S 08 44 47.1 +1.6
MDJ pmax pmax
comp=Z,200nm,1.1s
MDJ pmax pmax
comp=Z,650nm,3.8s
MDJ Mudanjiang 18.31 336 P P 08 41 38.4 0.0
DL2 Dalian 18.58 310 P P 08 41 42.1 +0.9
DL2 S S 08 44 54.1 +3.9
DL2 pmax pmax
comp=Z,120nm,0.7s
NJ2 Nanjing 18.64 287⇓iP P 08 41 40.5 -1.4
NJ2 S S 08 44 52.1 +0.6
NJ2 pmax pmax
comp=Z,59nm,0.9s
NJ2 pmax pmax
comp=Z,600nm,4.1s
YSS Yuzh-Sakhalins 18.80 6 P P 08 41 43.8 +0.5
YSS IAmb IAmb 08 41 45.0
comp=Z,36nm,0.9s
YSS Yuzh-Sakhalins 18.80 6⇓eP P 08 41 43.7 +0.5
YSS eS S 08 44 51.1 -2.5
YSS pmax pmax
comp=Z,40nm,0.8s
YSS pmax pmax
comp=N,20nm,0.6s
YSS pmax pmax
comp=E,20nm,0.9s
YSS pmax pmax
comp=Z,300nm,4.0s
YSS smax smax
comp=N,1μm,6.6s
YSS smax smax
comp=E,800nm,4.8s
YSS MLR MLR
comp=N,300nm,15.0s
YSS MLR MLR
comp=Z,200nm,15.0s
SNY Shenyang 19.02 320⇓P P 08 41 42.9 -2.7
SNY S S 08 44 54.1 -3.4
SNY pmax pmax
comp=Z,120nm,1.0s
QZH Quanzhou 19.39 265⇓iP P 08 41 48.9 -0.4
QZH S S 08 45 02.2 -1.8
QZH pmax pmax
comp=Z,72nm,0.8s
CN2 Changchun 19.41 327 eP P 08 41 49.3 0.0
CN2 esP sP 08 43 39.2 +0.7
CN2 eS S 08 45 07.1 +3.2
CN2 pmax pmax
comp=Z,80nm,1.6s
CN2 pmax pmax
comp=Z,600nm,3.0s
KNMB Chin-men Tao 19.70 264 P P 08 41 51.5 -0.6
TIA Tai'an 20.86 298 P P 08 42 02.7 +0.1
KLR Kul'dur 21.88 345 P P 08 42 12.4 +0.7
comp=Z,37nm,0.7s,baz=155,slow=7.6,SNR=139
KLR S S 08 45 46.2 +2.7
comp=Z,11nm,1.1s,baz=246,slow=21,SNR=12
KLR ScP ScP 08 48 52.4 0.0
comp=Z,2.4nm,0.9s,baz=126,slow=0.7,SNR=4.9
KLR Kul'dur 21.88 345diP P 08 42 12.8 +1.1
KLR pmax pmax
comp=Z,43nm,0.9s
WHN Wuhan 22.42 282⇓iP P 08 42 17.4 +0.5
WHN pmax pmax
comp=Z,200nm,0.8s
TGY Tagaytay City 22.61 235 P P 08 42 19.6 +0.9
comp=Z,134nm,0.4s,baz=90,slow=10,SNR=5.0
BJT Baijiatuau 22.86 307 P P 08 42 19.4 -1.3
BJT Baijiatuau 22.86 307 P P 08 42 19.4 -1.3
BJT pmax pmax
comp=Z,72nm,1.3s
BJI Beijing 22.86 307⇓iP P 08 42 20.2 -0.5
BJI S S 08 45 50.8 -8.5
BJI PcP PcP 08 45 57.8 +0.6
BJI pmax pmax
comp=Z,43nm,1.3s
TIY Taiyuan 24.87 299 eP P 08 42 39.5 +0.6
HIA Hailar 26.10 329 P P 08 42 49.9 +0.4
HIA Hailar 26.10 329diP P 08 42 50.4 +0.9
HIA pmax pmax
comp=Z,729nm,0.8s
HHC Hu-ho-hao-te 26.43 306⇓iP P 08 42 53.0 +0.3
HHC pmax pmax
comp=Z,23nm,1.2s
HHC pmax pmax
comp=Z,66nm,5.3s
ENH Enshi 26.63 282 P P 08 42 53.4 -1.2
ENH S S 08 46 56.9 -2.1
ZEA Zeya 27.12 343 eP P 08 43 00.5 +2.0
ZEA e 08 45 00.5
ZEA eS S 08 47 06.1 0.0
ZEA eS S 08 47 07.7 +1.6
ZEA eS S 08 47 07.7 +1.6
ZEA pmax pmax
comp=N,55nm,0.7s
ZEA pmax pmax
comp=E,50nm,0.7s
ZEA pmax pmax
comp=Z,81nm,0.9s
ZEA smax smax
comp=N,400nm,2.0s
ZEA smax smax
comp=E,300nm,2.0s
ZEA MLR MLR
comp=E,200nm,11.0s
ZEA MLR MLR
comp=Z,300nm,11.0s
XAN Xi'an 27.13 290 P P 08 42 58.9 0.0
XAN pP PP 08 44 10.9 0.0
XAN sP sP 08 45 00.3 +1.2
XAN PcP PcP 08 46 07.8 +0.7
XAN S S 08 47 04.9 -1.9
XAN ScP ScP 08 49 08.6 +1.0
XAN pmax pmax
comp=Z,82nm,0.7s
XAN pmax pmax
comp=Z,540nm,4.0s
XAN Xi'an 27.13 290 P P 08 42 58.7 -0.2
XAN Xi'an 27.13 290 P P 08 42 58.7 -0.2
XAN pmax pmax
comp=Z,62nm,0.8s
BTO Baotou 27.47 305 eP P 08 43 02.9 +1.0
PETK Petropavlovsk- 28.08 23 P P 08 43 08.7 +1.8
comp=Z,2.3nm,0.7s,baz=230,slow=8.7,SNR=4.4
PETK Petropavlovsk- 28.08 23 P P 08 43 08.3 +1.3
PET Petropavlovsk 28.35 24 P P 08 43 11.4 +2.1
PET pmax pmax
comp=Z,86nm,1.4s
GYA Guiyang 29.58 274⇓iP P 08 43 20.9 +0.2
GYA pP pP 08 44 35.2 +1.6
GYA S S 08 47 42.7 -2.8
GYA ScP ScP 08 49 16.5 +0.9
GYA sS sS 08 49 55.3 -6.4
GYA pmax pmax
comp=Z,110nm,0.7s
GYA pmax pmax
comp=Z,280nm,4.5s
TNTI Ternate 29.87 206 P P 08 43 23.0 -0.1
TNTI IAmb IAmb 08 43 23.7
comp=Z,73nm,1.4s
SIJI Sorong 30.14 198 P P 08 43 24.3 -1.2
comp=Z,6.3nm,0.4s,baz=11,slow=16
CIT Chita 30.86 328 eP P 08 43 32.6 +1.3
CIT pmax pmax
comp=Z,316nm,1.2s
LZH Lanzhou 31.42 294 eP P 08 43 37.0 +0.4
LZH pP pwP 08 44 56.1 -0.1
LZH sP sP 08 45 39.6 +1.9
LZH PcP PcP 08 46 19.6 +1.3
LZH pmax pmax
comp=Z,31nm,1.1s
LZH pmax pmax
comp=Z,120nm,4.3s
CD2 Chengdu 31.52 284⇓iP P 08 43 37.4 +0.1
FAKI Fak Fak 31.87 195 P P 08 43 38.8 -1.6
ULN Ulaanbaatar 32.13 317 P P 08 43 43.5 +1.0
ULN Ulaanbaatar 32.13 317 P P 08 43 43.6 +1.0
ULN Ulaanbaatar 32.13 317 P P 08 43 43.5 +1.0
ULN pmax pmax
comp=Z,175nm,0.9s
MA2 Magadan 32.18 10 P P 08 43 43.6 +1.0
comp=Z,36nm,0.9s,baz=187,slow=9.6,SNR=7.9
MA2 Magadan 32.18 10c iP P 08 43 44.0 +1.4
MA2 pmax pmax
comp=Z,43nm,1.0s
SONM Songino Array 32.52 316 P P 08 43 46.3 +0.5
comp=Z,63nm,0.7s,baz=128,slow=8.9,SNR=383
SONM PcP PcP 08 46 21.7 +0.6
comp=Z,1.7nm,0.4s,baz=136,slow=3.1,SNR=4.2
SONM ScP ScP 08 49 25.9 +0.8
comp=Z,8.2nm,1.0s,baz=146,slow=3.4,SNR=11
SONM Songino Array 32.52 316 P P 08 43 46.7 +0.9
SONM PcP 08 46 21.3 +0.2
SONM ScP 08 49 25.5 +0.5
MSAI Masohi 33.17 200 P P 08 43 53.3 +1.7
comp=Z,21nm,1.4s
KMI Kunming 33.33 273 P P 08 43 53.8 +0.7
KMI pmax pmax
comp=Z,140nm,1.0s
KMI Kunming 33.33 273 P P 08 43 53.8 +0.7
KMI Kunming 33.33 273 P P 08 43 53.8 +0.7
KMI pmax pmax
comp=Z,128nm,1.0s
UBPT Khong Chiam 34.41 255 P P 08 44 02.6 +0.4
UBPT IAmb IAmb 08 44 03.8
comp=Z,58nm,1.5s
YAK Yakutsk 34.46 351 P P 08 44 02.6 +0.6
comp=Z,25nm,0.7s,baz=170,slow=2.8,SNR=15
YAK pP pP 08 45 18.2 +0.7
comp=Z,6.8nm,0.4s,baz=151,slow=0.9,SNR=2.3
YAK S S 08 48 57.3 -1.9
comp=Z,4.3nm,0.4s,baz=209,slow=19,SNR=9.4
YAK Yakutsk 34.46 351 P P 08 44 02.8 +0.9
YAK IAmb IAmb 08 44 03.2
comp=Z,69nm,1.0s
YAK Yakutsk 34.46 351diP P 08 44 02.2 +0.3
YAK e*PP pP 08 45 17.1 -0.5
YAK e 08 45 37.6
YAK eS S 08 48 55.6 -3.6
YAK e 08 53 30.1
YAK pmax pmax
comp=Z,58nm,0.9s
YAK pmax pmax
comp=N,30nm,1.0s
YAK pmax pmax
comp=E,6.0nm,0.8s
YAK pmax pmax
comp=Z,46nm,2.0s
YAK pmax pmax
comp=N,55nm,1.8s
YAK pmax pmax
comp=E,26nm,1.6s
YAK smax smax
comp=N,125nm,2.0s
YAK smax smax
comp=E,79nm,1.8s
BOD Bodaibo 34.69 336 eP P 08 44 04.4 +0.5
BOD pmax pmax
comp=Z,69nm,1.1s
GTA Gaotai 34.90 299⇓P P 08 44 06.2 0.0
GTA pP pwP 08 45 25.0 -1.9
GTA sP sP 08 46 11.5 +3.2
GTA PcP PcP 08 46 29.0 +0.9
GTA S S 08 49 04.8 -2.1
GTA ScP ScP 08 49 35.1 +1.4
GTA PcS PcS 08 50 16.4 +0.8
GTA ScS ScS 08 53 37.2 -1.4
GTA pmax pmax
comp=Z,70nm,1.0s
GTA pmax pmax
comp=Z,320nm,5.4s
ZAK Zakamensk 35.45 319 eP P 08 44 10.7 +0.1
ZAK pmax pmax
comp=Z,128nm,1.1s
SEY Seymchan 35.62 10 P P 08 44 13.1 +1.4
comp=Z,13nm,0.9s,baz=185,slow=5.9,SNR=24
IRK Irkutsk 35.72 322 eP P 08 44 12.5 -0.2
IRK pmax pmax
comp=Z,186nm,1.3s
TLY Talaya 35.80 321 P P 08 44 14.9 +1.4
comp=Z,54nm,0.7s,baz=153,slow=6.3,SNR=28
TLY Talaya 35.80 321 P P 08 44 14.7 +1.3
TLY Talaya 35.80 321 P P 08 44 14.6 +1.1
TLY Talaya 35.80 321diP P 08 44 14.5 +1.1
TLY pmax pmax
comp=Z,79nm,0.9s
MOY Mondy 37.29 320 eP P 08 44 26.1 +0.1
MOY pmax pmax
comp=Z,61nm,2.1s
SPSI Sidrap Palu 37.48 214 P P 08 44 30.4 +2.6
comp=Z,642nmcomp=Z,23nm,1.3s
PBKT Sadao Pong 37.73 261 P P 08 44 29.7 -0.2
PBKT IAmb IAmb 08 44 31.5
comp=Z,82nm,1.2s
PBKT ScP 08 49 46.0 +1.6
PMG Port Moresby 38.08 168 P P 08 44 32.3 -0.4
comp=Z,7.3nm,0.5s,baz=342,slow=7.3,SNR=3.2
PMG Port Moresby 38.08 168 P P 08 44 33.0 +0.3
PMG Port Moresby 38.08 168 P P 08 44 33.0 +0.3
PMG pmax pmax
comp=Z,13nm,0.8s
CHTO Chiang Mai 38.61 265 P P 08 44 36.6 -0.6
CHTO IAmb IAmb 08 44 38.2
comp=Z,44nm,0.8s
CHTO Chiang Mai 38.61 265 P P 08 44 37.2 0.0
CHTO Chiang Mai 38.61 265 P P 08 44 36.6 -0.6
CHTO pmax pmax
comp=Z,44nm,0.9s
CM31 Chiang Mai Arr 38.75 265 P P 08 44 38.8 +0.5
CM31 IAmb IAmb 08 44 39.5
comp=Z,21nm,0.7s
CM31 Chiang Mai Arr 38.75 265 P P 08 44 38.9 +0.6
SNR=6.7
CMAR Chiang Mai Arr 38.75 265 P P 08 44 38.4 +0.1
comp=Z,13nm,0.8s,baz=158,slow=8.6,SNR=70
CMAR PcP PcP 08 46 41.0 +0.8
comp=Z,6.5nm,0.9s,baz=132,slow=0.5,SNR=12
CMAR ScP ScP 08 49 50.0 +1.7
comp=Z,5.5nm,1.0s,baz=44,slow=2.3,SNR=10
KSM Kuching 38.89 232 P P 08 44 39.8 +0.3
KIWB Kanaga Island 39.62 41 P P 08 44 45.1 +0.3
ADK Adak 39.90 42 P P 08 44 47.2 0.0
ADK IAmb IAmb 08 44 58.3
comp=Z,76nm,1.1s
ADK Adak 39.90 42 P P 08 44 47.2 0.0
ADK pmax pmax
comp=Z,76nm,1.2s
MTN Manton Dam 41.74 193 P P 08 45 01.3 -1.1
MTN IAmb IAmb 08 45 02.4
comp=Z,39nm,1.3s
COEN Coen 42.08 175 P P 08 45 05.8 +0.7
LSA Lhasa 42.48 284 P P 08 45 10.0 +1.2
LSA pmax pmax
comp=Z,75nm,0.7s
LSA Lhasa 42.48 284 P P 08 45 10.0 +1.2
LSA Lhasa 42.48 284 P P 08 45 08.5 -0.3
LSA Lhasa 42.48 284 P P 08 45 08.5 -0.3
LSA pmax pmax
comp=Z,14nm,0.7s
SHL Shillong 42.74 278 P P 08 45 10.3 -0.3
SHL Shillong 42.74 278 P P 08 45 10.6 0.0
SNR=20
SHL Shillong 42.74 278 P P 08 45 10.3 -0.3
SHL pmax pmax
comp=Z,66nm,0.9s
BILL Bilibino 42.79 14 P P 08 45 11.3 +1.2
BILL IAmb IAmb 08 45 13.2
comp=Z,40nm,1.0s
BILL Bilibino 42.79 14 iP P 08 45 11.3 +1.2
BILL pmax pmax
comp=Z,43nm,1.1s
KULM Kulim 43.72 246 P P 08 45 18.1 0.0
KULM IAmb IAmb 08 45 19.6
comp=Z,28nm,0.7s
TIXI Tiksi 43.87 355 P P 08 45 19.1 +0.5
comp=Z,22nm,0.8s,baz=143,slow=6.7,SNR=35
TIXI ScP ScP 08 50 07.0 -0.7
comp=Z,1.5nm,0.7s,baz=87,slow=3.4,SNR=1.9
TIXI S S 08 51 18.8 +1.0
comp=Z,2.0nm,0.3s,baz=65,slow=23,SNR=10
TIXI Tiksi 43.87 355 P P 08 45 18.7 +0.2
TIXI IAmb IAmb 08 45 20.0
comp=Z,23nm,0.8s
TIXI Tiksi 43.87 355diP P 08 45 18.9 +0.4
TIXI pmax pmax
comp=Z,24nm,0.9s
IPM Ipoh 43.90 245 P P 08 45 19.1 -0.5
IPM IAmb IAmb 08 45 20.4
comp=Z,17nm,0.8s
WMQ Urumqi 44.30 305 eP P 08 45 23.0 +0.5
WMQ pmax pmax
comp=Z,75nm,1.5s
WMQ pmax pmax
comp=Z,190nm,3.6s
WMQ Urumqi 44.30 305 P P 08 45 22.9 +0.5
WMQ Urumqi 44.30 305 P P 08 45 22.9 +0.5
WMQ pmax pmax
comp=Z,173nm,1.3s
KNRA Kununurra 45.00 195 P P 08 45 27.9 -0.1
KNRA IAmb IAmb 08 45 37.8
comp=Z,31nm,1.4s
TAPN Taplejung 45.93 282 eP P 08 45 36.0 +0.4
comp=Z,36nm,0.6s
ODAN Odare 46.33 281 eP P 08 45 39.0 +0.4
comp=Z,125nm,0.8s
UNV Unalaska Valle 46.36 41 P P 08 45 38.2 +0.2
UNV IAmb IAmb 08 45 51.1
comp=Z,93nm,1.4s
PSI Prapat 46.57 245 P P 08 45 40.9 +0.5
PSI pmax pmax
comp=Z,27nm,0.7s
RPSI Rantau Prapat 46.64 244 P P 08 45 40.9 +0.2
RPSI IAmb IAmb 08 45 41.5
comp=Z,27nm,0.7s
RPSI PcP pwP 08 47 07.6 +0.5
GAMB Gambell 46.96 27 P P 08 45 44.7 +2.2
RAMN Ramite 46.99 282 eP P 08 45 43.9 +0.3
comp=Z,144nm,0.9s
KCSI Kotacane, Aceh 47.07 246 P P 08 45 43.0 -1.1
comp=Z,22nm,0.9s
KLSI 47.16 232 P P 08 45 46.3 +1.5
comp=Z,20nm,0.9s
JIRN Jiri 47.17 283 eP P 08 45 46.0 +0.9
comp=Z,250nm,0.8s
ZAA0 Zalesovo Array 47.33 319 P P 08 45 45.6 +0.2
ZAA0 IAmb IAmb 08 45 46.4
comp=Z,64nm,1.0s
ZALV Zalesovo Beam 47.33 319 P P 08 45 45.4 -0.1
comp=Z,46nm,0.8s,baz=102,slow=6.6,SNR=69
ZALV PcP PcP 08 47 08.6 -0.1
comp=Z,18nm,0.8s,baz=113,slow=3.9,SNR=9.4
ZALV ScP ScP 08 50 21.3 -1.2
comp=Z,9.3nm,0.7s,baz=110,slow=4.0,SNR=13
ZALV Zalesovo Beam 47.33 319 P P 08 45 45.5 +0.1
ZALV ScP 08 50 21.0 -1.5
ZALV Zalesovo Beam 47.33 319 P P 08 45 45.5 +0.1
GUN Gumba 47.38 283 eP P 08 45 47.3 +0.6
comp=Z,272nm,0.8s
MDSI Maura Dua 47.40 232 P P 08 45 46.3 -0.3
comp=Z,2μmcomp=Z,47nm,0.9s
PKI Pulchoki 47.86 283 eP P 08 45 50.4 +0.1
comp=Z,84nm,1.1s
PKIN Phulchoki 47.87 283 eP P 08 45 50.2 -0.1
comp=Z,67nm,1.1s
KKN Kakani 47.92 283 eP P 08 45 50.8 +0.2
comp=Z,126nm,1.0s

WB0 Warramunga Arr 48.04 187 P P 08 45 50.4 -0.8
WB0 IAmb IAmb 08 45 51.0
comp=Z,12nm,0.6s
DMN Daman 48.11 283 eP P 08 45 52.4 +0.2
comp=Z,103nm,1.0s
FITZ Fitzroy Crossi 48.12 198 P P 08 45 51.8 0.0
comp=Z,2.5nm,0.4s,baz=16,slow=13
FITZ pP PcP 08 47 11.9 0.0
comp=Z,4.7nm,0.7s,baz=0.0,slow=6.1,SNR=2.3
FITZ Fitzroy Crossi 48.12 198 P P 08 45 51.1 -0.7
FITZ PcP 08 47 11.1 -0.9
WR0 Warramunga Arr 48.22 187 P P 08 45 51.8 -0.7
WB2 Warramunga Arr 48.22 187 P P 08 45 51.9 -0.7
MK31 Makanchi Array 48.22 309 P P 08 45 52.8 +0.4
MK31 IAmb IAmb 08 45 53.8
comp=Z,42nm,0.9s
MK31 Makanchi Array 48.22 309 iP P 08 45 52.3 -0.1
MK31 pmax pmax
comp=Z,49nm,0.8s
MKAR Makanchi Array 48.22 309 P P 08 45 52.7 +0.3
comp=Z,36nm,0.8s,baz=94,slow=9.2,SNR=350
MKAR pP PcP 08 47 12.1 0.0
comp=Z,16nm,0.8s,baz=92,slow=6.1,SNR=7.7
MKAR ScP ScP 08 50 25.9 -0.6
comp=Z,11nm,0.8s,baz=80,slow=4.9,SNR=15
MKAR Makanchi Array 48.22 309 P P 08 45 53.0 +0.6
MKAR Makanchi Array 48.22 309 iP P 08 45 52.7 +0.3
MKAR pmax pmax
comp=Z,37nm,0.8s
WRA Warramunga Arr 48.22 187 P P 08 45 51.9 -0.8
comp=Z,5.1nm,0.4s,baz=1.3,slow=7.7,SNR=9.3
WRA pP PcP 08 47 11.8 -0.5
comp=Z,7.4nm,1.0s,baz=8.3,slow=8.1,SNR=3.0
WRA ScP ScP 08 50 25.6 -1.1
comp=Z,8.3nm,1.1s,baz=360,slow=4.6,SNR=6.8
WRA S S 08 52 16.1 -4.2
comp=Z,3.8nm,0.9s,baz=12,slow=15,SNR=2.4
WRA Warramunga Arr 48.22 187 P P 08 45 51.5 -1.2
GKN Gorkha 48.42 284 eP P 08 45 54.6 +0.3
comp=Z,200nm,1.2s
MAKZ Makanchi 48.44 309 P P 08 45 54.2 +0.1
MAKZ IAmb IAmb 08 45 55.0
comp=Z,36nm,0.8s
MAKZ Makanchi 48.44 309 iP P 08 45 52.3 -1.7
MAKZ pmax pmax
comp=Z,49nm,0.8s
DANN Dangsing 49.09 284 eP P 08 46 00.2 +0.7
comp=Z,228nm,0.9s
KOLN Koldanda 49.37 284 eP P 08 46 02.0 +0.5
comp=Z,125nm,0.9s
ANM Nome 49.83 27 P P 08 46 05.3 +1.3
ANM Nome 49.83 27 P P 08 46 05.3 +1.3
ANM pmax pmax
comp=Z,12nm,1.0s
CNBA Chernabura Isl 50.51 41 P P 08 46 10.8 +1.5
CNBA IAmb IAmb 08 46 26.4
comp=Z,24nm,0.8s
KURK Kurchatov 50.77 314 P P 08 46 11.5 +0.3
KURK Kurchatov 50.77 314 P P 08 46 11.2 0.0
KURK Kurchatov 50.77 314 d iP P 08 46 11.2 0.0
KURK pmax pmax
comp=Z,221nm,1.0s
SANVU Saraoutou 50.82 145 P P 08 46 12.8 +0.9
SANVU IAmb IAmb 08 46 14.3
comp=Z,35nm,1.2s
KURBB Kurchatov Arra 50.83 314 P P 08 46 11.7 +0.1
comp=Z,110nm,0.8s,baz=93,slow=6.9,SNR=691
KURBB PcP PcP 08 47 21.3 -0.3
comp=Z,4.5nm,0.8s,baz=91,slow=7.6,SNR=2.7
KURBB ScP ScP 08 50 36.2 -1.3
comp=Z,3.1nm,0.8s,baz=91,slow=3.9,SNR=5.2
KURBB S S 08 52 53.9 -1.5
comp=Z,0.4nm,0.7s,baz=288,slow=18,SNR=3.4
AS31 Alice Springs 51.95 187 P P 08 46 19.7 -0.5
ASAR Alice Springs 51.95 187 P P 08 46 19.4 -0.8
comp=Z,3.7nm,0.4s,baz=0.3,slow=5.1,SNR=100
ASAR PcP PcP 08 47 26.5 +0.3
comp=Z,5.5nm,0.8s,baz=11,slow=4.2,SNR=13
ASAR ScP ScP 08 50 42.9 +0.2
comp=Z,3.9nm,1.1s,baz=7.7,slow=3.8,SNR=7.3
ASAR S S 08 53 06.5 -4.7
comp=Z,2.2nm,1.1s,baz=11,slow=17,SNR=6.8
ASAR Alice Springs 51.95 187 P P 08 46 19.6 -0.6
ASAR Alice Springs 51.95 187 P P 08 46 19.6 -0.6
KDJ Kajisay 52.06 303 P P 08 46 22.2 +1.1
KDJ IAmb IAmb 08 46 24.0
comp=Z,50nm,1.1s
KDJ Kajisay 52.06 303 P P 08 46 22.2 +1.1
KDJ pmax pmax
comp=Z,50nm,1.1s
UHLL Ulahol 52.74 303 P P 08 46 27.4 +1.3
SNR=6.4
CHIR Chirikof Islan 52.86 40 P P 08 46 26.6 +0.3
BOOM Boomskoye usch 52.94 304 P P 08 46 28.6 +1.2
BOOM IAmb IAmb 08 46 29.4
comp=Z,94nm,1.3s
BOOM Boomskoye usch 52.94 304 P P 08 46 28.6 +1.2
BOOM pmax pmax
comp=Z,94nm,1.3s
NRN Naryn 53.02 302 P P 08 46 29.3 +1.2
NRN IAmb IAmb 08 46 30.2
comp=Z,84nm,1.4s
NRN Naryn 53.02 302 P P 08 46 29.3 +1.2
NRN pmax pmax
comp=Z,84nm,1.4s
PSA00 Pilbara Seismi 53.21 204 P P 08 46 29.1 -0.2
KSH Kashi 53.30 300 P P 08 46 33.9 +3.9
KSH pP pwP 08 47 58.2 0.0
KSH sP sP 08 48 42.6 +5.2
KSH S S 08 53 29.8 +0.5
KSH pmax pmax
comp=Z,20nm,1.6s
KSH pmax pmax
comp=Z,160nm,5.5s
SVW2 Sparrevohn 53.38 33 P P 08 46 32.6 +2.6
KZA Kyzart 53.49 303 P P 08 46 33.5 +1.8
SNR=25
KBK Karagaybulak 53.65 304 P P 08 46 33.4 +0.9
SNR=66
CHMS Chumysh 53.75 304 P P 08 46 33.7 +0.7
SNR=29
CHMS Chumysh 53.75 304 iP P 08 46 32.4 -0.6
CHMS pmax pmax
comp=Z,103nm,1.4s
USP Ospenovka 53.90 305 P P 08 46 34.8 +0.6
SNR=26
AAK Ala-Archa 53.98 304 P P 08 46 35.5 +0.7
comp=Z,26nm,0.8s,baz=108,slow=5.2,SNR=79
AAK PcP PcP 08 47 34.0 0.0
comp=Z,16nm,1.0s,baz=96,slow=5.7,SNR=4.6
AAK ScP ScP 08 50 51.9 +0.2
comp=Z,3.5nm,0.8s,baz=111,slow=8.8,SNR=4.1
AAK Ala-Archa 53.98 304 P P 08 46 35.5 +0.7
SNR=35
AAK Ala-Archa 53.98 304 iP P 08 46 35.6 +0.8
SNR=41
AAK Ala-Archa 53.98 304 P P 08 46 35.7 +0.9
AAK IAmb IAmb 08 46 36.6
comp=Z,53nm,1.1s
AAK PcP 08 47 34.6 +0.7
AAK Ala-Archa 53.98 304 P P 08 46 35.3 +0.5
AAK Ala-Archa 53.98 304 iP P 08 46 34.8 -0.1
AAK pmax pmax
comp=Z,36nm,0.8s
UCH Uchtor 54.02 303 P P 08 46 36.9 +1.4
SNR=90
EIDS Eidsvold 54.38 168 P P 08 46 37.6 +0.1
EIDS IAmb IAmb 08 46 39.4
comp=Z,33nm,1.4s
EKS2 Erkin-Say 54.50 304 P P 08 46 38.9 +0.4
SNR=35
KDAK Kodiak Island 54.63 37 P P 08 46 39.3 +0.3
comp=Z,19nm,0.9s,baz=230,slow=2.8,SNR=13
KDAK Kodiak Island 54.63 37 P P 08 46 39.2 +0.3
KDAK IAmb IAmb 08 46 40.9
comp=Z,77nm,1.4s
KDAK Kodiak Island 54.63 37 P P 08 46 39.2 +0.3
KDAK pmax pmax
comp=Z,77nm,1.4s
AML Almayashu 54.64 303 P P 08 46 41.1 +1.3
SNR=112
IMAR Indian Mountai 54.91 27 P P 08 46 41.3 +0.5
PPLA Purkeypile 55.18 31 P P 08 46 44.2 +1.3
PPLA IAmb IAmb 08 46 47.1
comp=Z,31nm,1.4s
ARSB Arslanbob 55.28 302 P P 08 46 45.2 +1.1
ARSB Arslanbob 55.28 302 P P 08 46 45.2 +1.1
ARSB pmax pmax
comp=Z,172nm,1.3s
CNPM China Poot 55.40 35 P P 08 46 45.2 +0.8
BRLK Bradley Lake 55.59 35 P P 08 46 46.4 +0.6
BRLK IAmb IAmb 08 46 52.5
comp=Z,28nm,1.2s
SUA Susitna One 55.74 33 P P 08 46 48.2 +1.3
KTH Kantishna Hill 55.81 30 P P 08 46 49.1 +1.8
BVAR Borovoye Array 55.86 317 P P 08 46 48.2 +0.5
comp=Z,162nm,0.9s,baz=91,slow=8.0,SNR=294
BVAR pP pP 08 48 10.0 -1.3
comp=Z,5.7nm,0.9s,baz=123,slow=10,SNR=1.0
BVAR ScP ScP 08 50 58.2 -1.3
comp=Z,5.6nm,0.8s,baz=74,slow=5.4,SNR=5.5
BVAR S S 08 54 01.7 -0.7
comp=Z,1.7nm,0.7s,baz=100,slow=14,SNR=4.8
BRVK Borovoye 55.92 317 P P 08 46 48.4 +0.2
BRVK Borovoye 55.92 317 P P 08 46 48.7 +0.6
BRVK Borovoye 55.92 317 iP P 08 46 48.2 +0.1
BRVK pmax pmax
comp=Z,254nm,1.1s
MLY Manley 56.03 29 P P 08 46 50.3 +1.6
TRF Thorofare Moun 56.09 31 P P 08 46 50.8 +1.5
RC01 Rabbit Creek A 56.21 33 P P 08 46 51.2 +1.1
SEW Seward 56.32 35 P P 08 46 51.4 +0.6
SEW IAmb IAmb 08 46 52.5
comp=Z,24nm,1.1s
COLD Coldfoot 56.48 26 P P 08 46 52.1 +0.3
NIL Nilore 56.59 293 P P 08 46 54.6 +1.4
NIL Nilore 56.59 293 P P 08 46 53.9 +0.7
NIL Nilore 56.59 293 P P 08 46 54.6 +1.4
NIL pmax pmax
comp=Z,62nm,0.9s
MCK McKinley 56.71 30 P P 08 46 54.1 +0.6
MCK IAmb IAmb 08 46 55.5
comp=Z,22nm,0.9s
MCK McKinley 56.71 30 P P 08 46 54.1 +0.6
MCK pmax pmax
comp=Z,22nm,0.9s
RND Reindeer 56.73 31 P P 08 46 53.4 -0.2
RND Reindeer 56.73 31 P P 08 46 53.4 -0.2
RND pmax pmax
comp=Z,15nm,1.0s
KK31 Karatay Array 56.81 305 P P 08 46 55.4 +0.8
KK31 Karatay Array 56.81 305 iP P 08 46 54.8 +0.2
KKAR Karatay Array 56.81 305 P P 08 46 55.3 +0.8
KKAR Karatay Array 56.81 305 P P 08 46 55.2 +0.7
KKAR IAmb IAmb 08 46 56.3
comp=Z,199nm,0.9s
KKAR Karatay Array 56.81 305 P P 08 46 55.3 +0.7
KNK Knik Glacier 56.84 33 P P 08 46 55.4 +0.9
KNK IAmb IAmb 08 46 56.2
comp=Z,16nm,0.7s
SML Sawmill 56.91 33 P P 08 46 54.7 -0.3
SML IAmb IAmb 08 46 58.2
comp=Z,19nm,1.1s
SML Sawmill 56.91 33 P P 08 46 54.1 -0.8
SML pmax pmax
comp=Z,19nm,1.1s
MDM Murphy Dome 57.09 29 P P 08 46 55.9 -0.2
HYB Hyderabad 57.11 273 iP P 08 46 56.0 -1.0
HYB ePcP PcP 08 47 45.0 -1.4
BTK Batken 57.12 301 P P 08 46 57.0 +0.2
BTK IAmb IAmb 08 46 58.3
comp=Z,65nm,1.1s
BTK Batken 57.12 301 P P 08 46 57.0 +0.2
BTK pmax pmax
comp=Z,65nm,1.1s
TCOL CIGO, UAF Yank 57.24 29 P P 08 46 57.1 0.0
baz=267
COLA College 57.24 29 P P 08 46 59.7 +2.6
CCB Clear Creek Bu 57.25 29 P P 08 46 59.4 +2.2
DHY Denali Highway 57.38 31 P P 08 46 59.9 +1.6
SCM Sheep Creek Mo 57.39 33 P P 08 46 58.3 +0.1
SCM IAmb IAmb 08 47 00.1
comp=Z,13nm,0.6s
SCM Sheep Creek Mo 57.39 33 P P 08 46 58.3 +0.1
POKR Poker Flat Res 57.43 29 P P 08 46 59.1 +0.7
baz=267,SNR=5.7
GLI Glacier Island 57.50 34 P P 08 47 00.2 +1.3
GLI IAmb IAmb 08 47 00.9
comp=Z,31nm,0.9s
HDA Harding Lake 57.61 29 P P 08 46 59.9 +0.3
HDA Harding Lake 57.61 29 P P 08 46 60.0 +0.3
baz=268,SNR=8.6
IL31 57.65 29 P P 08 46 59.9 0.0
ILAR Eielson Array 57.65 29 P P 08 47 00.1 +0.2
comp=Z,6.5nm,0.9s,baz=270,slow=5.7,SNR=50
ILAR pP pP 08 48 25.2 +0.8
comp=Z,1.9nm,1.0s,baz=270,slow=6.0,SNR=2.1
ILAR ScP ScP 08 51 06.7 -0.5
comp=Z,1.0nm,1.0s,baz=221,slow=6.8,SNR=2.6
ILAR Eielson Array 57.65 29 P P 08 47 00.5 +0.6
TAS Tashkent 58.02 303 P P 08 47 03.8 +0.9
TAS Tashkent 58.02 303 P P 08 47 03.8 +0.9
TAS pmax pmax
comp=Z,182nm,1.1s
PAX Paxson 58.25 31 P P 08 47 05.9 +1.7
PAX IAmb IAmb 08 47 06.7
comp=Z,23nm,1.3s
PAX Paxson 58.25 31 P P 08 47 05.9 +1.7
PAX pmax pmax
comp=Z,23nm,1.3s
FYU Fort Yukon 58.39 27 P P 08 47 05.0 0.0
FYU IAmb IAmb 08 47 10.3
comp=Z,46nm,1.3s
RIDG Independent Ri 58.53 30 P P 08 47 06.8 +0.8
BMAR Burnt Mountain 58.67 26 P P 08 47 08.2 +1.3
DOT Dot Lake 58.88 30 P P 08 47 07.3 -1.1
DOT IAmb IAmb 08 47 10.3
comp=Z,20nm,1.0s
SCRK Sand Creek 58.90 30 P P 08 47 08.3 -0.4
SCRK IAmb IAmb 08 47 10.6
comp=Z,20nm,0.9s
GLB Gilahina Butte 59.07 33 P P 08 47 11.1 +1.4
VRDI Verde Repeater 59.26 33 P P 08 47 12.3 +1.1
ARMA Armidale 59.40 168 P P 08 47 13.3 +1.0
CRQM Cirque 59.44 34 P P 08 47 14.2 +1.8
CRQM IAmb IAmb 08 47 20.4
comp=Z,23nm,0.9s
MCARA McCarthy VSAT 59.45 33 P P 08 47 13.9 +1.6
MCARA IAmb IAmb 08 47 18.3
comp=Z,23nm,0.9s
PALK Pallekele 59.57 261 P P 08 47 13.9 +0.1
comp=Z,16nm,0.8s,baz=35,slow=6.9,SNR=11
PALK Pallekele 59.57 261 iP P 08 47 13.7 -0.1
SNR=6.4
PALK Pallekele 59.57 261 P P 08 47 14.1 +0.3
PALK IAmb IAmb 08 47 14.5
comp=Z,14nm,0.8s
PALK Pallekele 59.57 261 P P 08 47 13.8 -0.1
PALK Pallekele 59.57 261 d iP P 08 47 13.7 -0.1
PALK pmax pmax
comp=Z,18nm,0.9s
TGL Tana Glacier 59.59 34 P P 08 47 14.7 +1.4
TGL IAmb IAmb 08 47 15.6
comp=Z,13nm,0.8s
KBL Kabul 59.75 295 P P 08 47 14.6 -0.4
KBL Kabul 59.75 295 P P 08 47 15.1 +0.1
KBL Kabul 59.75 295 P P 08 47 14.6 -0.4
KBL pmax pmax
comp=Z,134nm,1.3s
FORT Forrest 59.79 192 P P 08 47 14.8 -0.1
FORT IAmb IAmb 08 47 20.9
comp=Z,18nm,0.9s
BALM Baldy 59.80 33 P P 08 47 15.5 +0.7
BALM IAmb IAmb 08 47 29.0
comp=Z,27nm,1.3s
BALM Baldy 59.80 33 P P 08 47 15.5 +0.7
BALM pmax pmax
comp=Z,27nm,1.3s
STKA Stephens Creek 59.82 178 P P 08 47 14.7 -0.4
comp=Z,9.7nm,0.5s,baz=357,slow=7.2,SNR=40
STKA Stephens Creek 59.82 178 P P 08 47 14.8 -0.1
STKA Stephens Creek 59.82 178 P P 08 47 14.9 -0.1
STKA pmax pmax
comp=Z,2.0nm,0.7s
BCAR Beaver Creek A 59.93 31 P P 08 47 16.9 +1.4
BCAR PcP 08 47 57.5 +0.6
EGAK Eagle 60.10 29 P P 08 47 17.7 +1.1
BARN Barnard Glacie 60.14 33 P P 08 47 17.6 +0.5
CTGM Chitina Glacie 60.30 33 P P 08 47 18.6 +0.5
POO Poona 60.82 276 eP P 08 47 19.0 -3.1
DAWY Dawson 60.92 30 P P 08 47 23.4 +1.3
SVE Sverdlovsk 61.11 322 c iP P 08 47 24.1 +0.7
SVE pmax pmax
comp=Z,171nm,1.0s
EPYK Eagle Plains 61.81 27 P P 08 47 29.7 +1.8
EPYK Eagle Plains 61.81 27 P P 08 47 28.6 +0.7
baz=276
HYT Haines Junctio 62.18 33 P P 08 47 31.9 +1.4
HYT IAmb IAmb 08 47 33.8
comp=Z,15nm,1.1s
ARU Arti 62.30 322 P P 08 47 31.5 +0.2
comp=Z,42nm,0.7s,baz=86,slow=3.4,SNR=131
ARU S S 08 55 23.1 -0.9
comp=Z,0.9nm,0.3s,baz=143,slow=20,SNR=4.4
ARU Arti 62.30 322 P P 08 47 31.7 +0.5
ARU Arti 62.30 322 d iP P 08 47 31.4 +0.2
ARU pmax pmax
comp=Z,164nm,1.0s
INK Inuvik 62.80 25 P P 08 47 34.6 +0.5
comp=Z,7.3nm,0.9s,baz=281,slow=6.5,SNR=20
INK S S 08 55 26.4 -3.2
comp=Z,1.3nm,1.1s,baz=225,slow=2.9,SNR=2.0
INK Inuvik 62.80 25 P P 08 47 34.7 +0.5
AB31 Akbulak array 62.88 314 iP P 08 47 35.1 0.0
ABKAR Akbulak array 62.88 314 P P 08 47 35.6 +0.5
ABKAR Akbulak array 62.88 314 P P 08 47 35.6 +0.5
ABKAR IAmb IAmb 08 47 36.3
comp=Z,108nm,0.8s
SKAG Skagway 63.48 35 P P 08 47 41.4 +2.6
SKAG IAmb IAmb 08 47 41.9
comp=Z,31nm,1.4s
CAN Canberra 63.81 172 P P 08 47 42.0 +0.8
CAN IAmb IAmb 08 47 43.2
comp=Z,28nm,1.3s
CAN Canberra 63.81 172 P P 08 47 42.0 +0.8
CAN pmax pmax
comp=Z,28nm,1.3s
AKTO Aktyubinsk 63.83 315 P P 08 47 41.2 -0.1
comp=Z,64nm,0.7s,baz=89,slow=7.7,SNR=176
AKTO S S 08 55 42.0 -1.0
comp=Z,1.0nm,0.6s,baz=72,slow=19,SNR=5.0
NWAO Narrogin (SRO) 64.56 201 P P 08 47 44.6 -1.5
NWAO IAmb IAmb 08 48 04.0
comp=Z,11nm,0.7s
NWAO Narrogin (SRO) 64.56 201 P P 08 47 44.6 -1.5
NWAO pmax pmax
comp=Z,11nm,0.7s
HRA Herat 65.17 297 P P 08 47 51.0 +0.6
TOO Toolangi 65.68 175 P P 08 47 52.9 -0.2
TOO IAmb IAmb 08 47 55.1
comp=Z,14nm,0.8s
TOO Toolangi 65.68 175 P P 08 47 52.9 -0.2
TOO pmax pmax
comp=Z,15nm,0.9s
C36M Paulatuk 65.94 23 P P 08 47 54.6 +0.4
baz=286
DLBC Dease Lake 66.39 35 P P 08 47 58.6 +1.1
comp=Z,5.9nm,0.9s,baz=298,slow=5.3,SNR=4.1
DLBC Dease Lake 66.39 35 P P 08 47 58.7 +1.2
DLBC IAmb IAmb 08 48 00.7
comp=Z,19nm,1.3s
KIRV Kirov 66.63 325 P P 08 47 59.0 +0.2
comp=Z,131nm,0.8s,baz=83,slow=2.6,SNR=56
KIRV Kirov 66.63 325 P P 08 47 59.0 +0.2
GEYT Alibeck 67.22 302 P P 08 48 03.7 +0.7
comp=Z,49nm,0.9s,baz=58,slow=3.7,SNR=85
GEYT Alibeck 67.22 302 P P 08 48 04.1 +1.1
GYA0B ALIBECK ARRAY 67.22 302 P P 08 48 03.7 +0.7
PRGR Permogore 67.55 329 eP P 08 48 01.5 -3.0
PRGR eS S 08 56 26.6 -0.4
PRGR pmax pmax
comp=Z,95nm,1.0s
SPA0 Spitsbergen Ar 68.89 349 eP P 08 48 13.6 +1.1
SPA0 Spitsbergen Ar 68.89 349 P P 08 48 12.9 +0.4
SPA0 IAmb IAmb 08 48 14.5
comp=Z,35nm,1.1s
KBS Kingsbay 69.09 351 eP P 08 48 14.8 +1.2
KBS Kingsbay 69.09 351 P P 08 48 15.3 +1.7
KBS Kingsbay 69.09 351 P P 08 48 15.3 +1.7
KBS pmax pmax
comp=Z,45nm,1.0s
NOR Nord 69.71 356 iP P 08 48 18.0 +0.6
comp=Z,11nm,1.0s
NOR Nord 69.71 356 iP P 08 48 18.0 +0.6
NOR pmax pmax
comp=Z,11nm,1.0s
HSPB Hornsund (broa 69.77 349 eP P 08 48 19.1 +1.4
TMCR Tamitsa 69.92 333 eP P 08 48 17.7 -1.1
TMCR pmax pmax
comp=Z,146nm,1.5s
KLMR Klimovskoe 70.59 329 eP P 08 48 20.4 -2.5
KLMR AMP 08 48 24.2
comp=Z,70nm,0.9s
KLMR ePP PP 08 51 03.0 -2.4
KLMR Klimovskoe 70.59 329 eP P 08 48 20.3 -2.6
KLMR e 08 51 03.0
KLMR pmax pmax
comp=Z,70nm,0.9s
KEV Kevo 71.24 340 P P 08 48 27.5 +0.9
KEV Kevo 71.24 340 P P 08 48 27.5 +0.9
KEV pmax pmax
comp=Z,76nm,1.3s
RES Resolute Bay 71.39 13 P P 08 48 28.2 +0.8
comp=Z,19nm,0.9s,baz=321,slow=5.8,SNR=61
RES pP pwP 08 49 58.4 -0.9
comp=Z,1.7nm,0.7s,baz=306,slow=5.1,SNR=2.2
RES Resolute Bay 71.39 13 P P 08 48 28.9 +1.5
RES IAmb IAmb 08 48 29.6
comp=Z,24nm,0.9s
RES Resolute Bay 71.39 13 P P 08 48 29.0 +1.5
RES pmax pmax
comp=Z,25nm,1.0s
ARCES ARCESS Array B 71.80 340 P P 08 48 30.6 +0.7
comp=Z,24nm,0.8s,baz=68,slow=8.1,SNR=42
ARCES ARCESS Array B 71.80 340 P P 08 48 30.9 +0.9
ARCES ARCESS Array B 71.80 340 P P 08 48 30.9 +0.9
ARE0 ARCESS Array S 71.80 340 eP P 08 48 30.9 +0.9
ARE0 ARCESS Array S 71.80 340 P P 08 48 31.1 +1.1
JLN Jalan Bani Buh 71.90 286 P P 08 48 31.6 +0.2
YKA Yellowknife Ar 72.05 28 P P 08 48 31.8 +0.3
comp=Z,11nm,0.7s,baz=293,slow=5.9,SNR=105
YKA pP pP 08 50 02.0 +1.4
comp=Z,3.0nm,1.1s,baz=299,slow=6.0,SNR=2.0
KTK1 Kautokeino 72.76 340 eP P 08 48 36.4 +0.8
BANOM Banah 73.00 291 P P 08 48 38.5 +0.7
SHME Shamm 73.08 291 iP P 08 48 38.8 +0.5
SNR=11
HOQ Hoqain 73.09 288 P P 08 48 38.8 +0.5
SNR=7.3
MSFE Esma-Masafi 73.34 290 iP P 08 48 40.3 +0.5
SNR=6.7
VRH Novokhopyorsk 73.36 319 eP P 08 48 38.7 -0.6
VRH pmax pmax
comp=Z,110nm,0.7s
AKT Akhty 73.45 308 d iP P 08 48 40.5 +0.3
AKT pmax pmax
comp=Z,206nm,0.9s
UOSS Minazif 73.47 290 iP P 08 48 40.5 0.0
SNR=10
UOSS Minazif 73.47 290 P P 08 48 41.3 +0.8
SOHO SOHO 73.52 289 P P 08 48 41.3 +0.5
SNR=17
BSY Bisya 73.53 287 P P 08 48 41.3 +0.4
SNR=5.3
HATD Hatta, Dubai 73.58 290 iP P 08 48 41.4 +0.3
SNR=16
HATD Hatta, Dubai 73.58 290 P P 08 48 41.7 +0.6
SNR=8.3
MHTO MHTO 73.60 285 P P 08 48 41.2 -0.1
SNR=11
TRO Tromso 73.63 342 eP P 08 48 41.4 +0.9
MOS Moscow 73.64 325 eP P 08 48 40.4 -0.4
MOS eS S 08 57 35.3 -1.4
MOS pmax pmax
comp=Z,148nm,1.1s
NLWA Neilton Lookou 73.67 45 P P 08 48 42.8 +1.5
NLWA IAmb IAmb 08 48 50.4
comp=Z,16nm,1.2s
ASHO Ashiyiah 73.70 290 iP P 08 48 42.2 +0.3
SNR=12
ASHO Ashiyiah 73.70 290 P P 08 48 42.3 +0.4
SNR=8.4
A04D Lummi Island 73.84 43 P P 08 48 43.3 +1.2
baz=294
ARQ Araqi 73.86 288 P P 08 48 43.4 +0.6

SNR=7.3
NAZ Nazwa, Dubai 73.90 290 P P 08 48 43.2 +0.2
TULEG Thule 73.94 7 P P 08 48 42.6 +0.4
TULEG IAmb IAmb 08 48 44.6
comp=Z,42nm,1.4s
FAQ Al Faqa, Dubai 74.06 290 P P 08 48 44.0 +0.1
GROC Groznyy 74.08 311 eP P 08 48 42.3 -1.3
GROC e 08 48 55.6
GROC e*PP pP 08 50 12.3 -0.8
GROC pmax pmax
comp=Z,190nm,1.2s
D03D Eldon 74.09 44 P P 08 48 44.8 +1.1
baz=294
DAG Danmarks Havn 74.39 355 iP P 08 48 45.0 +0.2
comp=Z,27nm,1.3s
DAG Danmarks Havn 74.39 355 iP P 08 48 45.0 +0.2
DAG pmax pmax
comp=Z,27nm,1.3s
B05A Bryant 74.40 43 P P 08 48 45.9 +0.6
baz=295
OBN Obninsk 74.46 325 diP P 08 48 45.6 +0.1
OBN i 08 48 55.4
OBN i*PP pwP 08 50 18.4 -1.2
OBN i 08 51 37.1
OBN pmax pmax
comp=Z,102nm,1.0s
URZ Urewera 74.74 150 P P 08 48 47.6 +0.3
URZ IAmb IAmb 08 48 50.1
comp=Z,24nm,1.3s
VSR Storozhevoye 74.80 320 eP P 08 48 47.3 -0.3
VSR pmax pmax
comp=Z,110nm,0.9s
E04D Cinebar 74.83 45 P P 08 48 47.9 +0.1
baz=295
VORD Divnogorie 74.84 320 eP P 08 48 47.5 -0.3
VORD pmax pmax
comp=Z,50nm,0.8s
D05A Enumclaw 74.92 44 P P 08 48 48.5 +0.1
D05A IAmb IAmb 08 49 03.4
comp=Z,31nm,1.5s
G03D McMinnville, O 74.95 47 P P 08 48 48.3 -0.3
baz=295
I02D Swisshome 75.04 48 P P 08 48 48.7 -0.4
baz=295
QRZ Quartz Range 75.08 155 P P 08 48 49.2 +0.1
GOF Gofitskoye 75.12 313⇑iP P 08 48 50.4 +0.9
GOF pmax pmax
comp=Z,61nm,0.7s
PUL Pulkovo 75.16 330⇓eP P 08 48 50.3 +0.9
PUL pmax pmax
comp=Z,73nm,0.7s
LON Longmire 75.22 45 P P 08 48 51.2 +1.1
LON Longmire 75.22 45 P P 08 48 51.2 +1.1
LON pmax pmax
comp=Z,12nm,1.5s
C06D Leavenworth 75.27 43 P P 08 48 51.2 +0.8
baz=296
J01E Myrtle Point 75.38 49 P P 08 48 51.5 +0.5
baz=295
TBLG Delisi 75.40 310 P P 08 48 52.0 +0.8
TBLG Delisi 75.40 310 P P 08 48 52.0 +0.8
TBLG pmax pmax
comp=Z,73nm,1.1s
NCK Nalchik 75.42 312⇑eP P 08 48 51.7 +0.4
NCK pmax pmax
comp=Z,63nm,0.9s
PYA1 Pyatigorsk 75.51 312⇑iP P 08 48 52.2 +0.4
ZEI Tsey 75.52 311 eP P 08 48 49.6 -2.5
ZEI pmax pmax
comp=Z,66nm,0.7s
I03D Drain, OR 75.54 48 P P 08 48 52.5 +0.7
baz=295
H04D Lebanon 75.58 47 P P 08 48 52.4 +0.3
baz=296
LTY Liberty 75.70 44 P P 08 48 53.3 +0.4
STEI Steigen 75.75 341 eP P 08 48 53.2 +0.6
K02D Willamette Mer 75.76 49 P P 08 48 53.9 +0.6
baz=295
KBZ Khabaz 75.78 312 P P 08 48 54.0 +0.8
comp=Z,165nm,0.8s,baz=81,slow=3.8,SNR=280
KBZ Khabaz 75.78 312 diP P 08 48 53.8 +0.6
F05D White Salmon 75.81 45 P P 08 48 53.8 +0.4
baz=296
KIV Kislovodsk 75.82 312 ⇓P P 08 48 54.3 +0.7
KIV Kislovodsk 75.82 312 iP P 08 48 54.2 +0.7
SNR=14
KIV Kislovodsk 75.82 312 P P 08 48 53.4 -0.2
KIV Kislovodsk 75.82 312 P P 08 48 54.6 +1.1
KIV Kislovodsk 75.82 312 eP P 08 48 54.1 +0.5
KIV pmax pmax
comp=Z,399nm,1.0s
H04A Detroit Lake 75.87 47 P P 08 48 55.4 +1.6
H04A IAmb IAmb 08 48 56.3
comp=Z,11nm,0.8s
SHA1 Shidzhatmaz 75.93 312 diP P 08 48 54.8 +0.4
B08A Colville Reser 76.02 42 P P 08 48 55.6 +1.1
B08A IAmb IAmb 08 48 56.9
comp=Z,15nm,0.9s
L02E Cave Junction 76.03 50 P P 08 48 55.5 +0.8
baz=296
THZ Tophouse 76.03 155 P P 08 48 55.0 +0.5
THZ IAmb IAmb 08 49 02.1
comp=Z,24nm,1.3s
FIA1 FINESS Array S 76.03 333 P P 08 48 54.4 +0.1
FINES FINESS Array B 76.04 333 P P 08 48 54.3 0.0
comp=Z,23nm,0.6s,baz=69,slow=6.0,SNR=125
FINES FINESS Array B 76.04 333 iP P 08 48 54.2 -0.1
FINES pmax pmax
comp=Z,23nm,0.6s
GNI Garni 76.06 308 iP P 08 48 56.3 +1.1
SNR=13
GNI Garni 76.06 308 P P 08 48 56.5 +1.4
GNI Garni 76.06 308 diP P 08 48 56.2 +1.1
GNI pmax pmax
comp=Z,262nm,1.2s
NEY Neytrino 76.10 312⇑iP P 08 48 56.5 +1.2
NEY pmax pmax
comp=Z,14nm,1.0s
I04A Tendick Farm, 76.11 48 P P 08 48 55.5 +0.3
baz=296
G05D Wamic, OR 76.18 46 P P 08 48 56.0 +0.5
baz=296
SNZO South Karori 76.32 154 P P 08 48 55.6 -0.4
BSWZ Blackbirch Sta 76.35 155 P P 08 48 55.7 -0.5
AKH Akhalkalaki 76.38 310 ⇓P P 08 48 58.3 +1.4
AKH Akhalkalaki 76.38 310 P P 08 48 58.3 +1.4
E07A Sunnyside 76.51 44 P P 08 48 58.2 +0.9
E07A IAmb IAmb 08 49 00.1
comp=Z,15nm,1.3s
J04D Umpqua Nationa 76.55 48 P P 08 48 58.0 +0.2
baz=296
I05D Terrebonne, OR 76.57 47 P P 08 48 58.1 +0.4
baz=296
LTZ Lake Taylor 76.69 156 P P 08 48 58.5 +0.4
LTZ IAmb IAmb 08 49 05.3
comp=Z,21nm,1.5s
HAWA Hanford 76.78 44 P P 08 48 59.4 +0.7
YBH Yreka Blue Hor 76.81 50 P P 08 49 00.7 +1.6
comp=Z,5.0nm,0.9s,baz=267,slow=4.6,SNR=7.4
YBH Yreka Blue Hor 76.81 50 P P 08 49 00.8 +1.6
YBH Yreka Blue Hor 76.81 50 P P 08 49 00.8 +1.7
YBH pmax pmax
comp=Z,6.0nm,1.0s
SHAO Shalim 76.85 283 P P 08 48 59.5 -0.1
D08A Wollman Farm, 76.86 44 P P 08 49 00.5 +1.4
D08A IAmb IAmb 08 49 01.6
comp=Z,13nm,1.0s
M02C Callahan 76.86 50 P P 08 48 59.9 +0.5
baz=296
L04D Klamath Falls 76.87 49 P P 08 48 59.5 0.0
baz=296
C09A Chrisman Ranch 76.90 43 P P 08 49 00.0 +0.6
C09A IAmb IAmb 08 49 07.3
comp=Z,9.3nm,0.7s
ARXR Arkhyz 76.91 312⇑iP P 08 49 00.7 +1.0
ARXR pmax pmax
comp=Z,44nm,0.8s
K04D Chiloquin, OR 77.06 49 P P 08 49 00.3 -0.3
baz=296
PINE Pine Mountain 77.07 47 P P 08 49 02.2 +1.6
PINE IAmb IAmb 08 49 03.8
comp=Z,21nm,0.9s
RPZ Rata Peaks 77.08 157 P P 08 49 00.7 +0.5
RPZ IAmb IAmb 08 49 03.5
comp=Z,7.4nm,0.6s

J05D Fort Rock, OR 77.10 48 P P 08 49 01.1 +0.3
baz=297
KCPM Cahto Peak 77.11 52 P P 08 49 01.3 +0.4
N02D Trinity Center 77.15 50 P P 08 49 01.4 +0.4
baz=296
MOR8 Moi Rana 77.17 340 eP P 08 49 00.1 -0.4
NEW Newport 77.37 42 P P 08 49 03.2 +1.2
comp=Z,8.0nm,0.8s,baz=299,slow=3.3,SNR=16
NEW pP pP 08 50 33.2 +0.8
comp=Z,4.0nm,1.1s,baz=291,slow=8.1,SNR=1.7
NEW Newport 77.37 42 P P 08 49 02.9 +0.9
NEW IAmb IAmb 08 49 04.4
comp=Z,11nm,0.9s
NEW Newport 77.37 42 P P 08 49 02.4 +0.4
baz=298
M04C Macdoel 77.37 49 P P 08 49 02.6 +0.3
baz=297
VSU Vasula 77.43 330 eP P 08 49 02.6 +0.6
VSU Vasula 77.43 330⇑iP P 08 49 01.9 -0.1
VSU pmax pmax
comp=Z,193nm,1.0s
K05A Summer Lake 77.58 48 P P 08 49 04.9 +1.4
K05A IAmb IAmb 08 49 07.0
comp=Z,13nm,1.0s
E09A Wood Farm, Sta 77.58 44 P P 08 49 04.7 +1.5
E09A IAmb IAmb 08 49 05.8
comp=Z,10nm,0.9s
BCA Borcka 77.63 310 ⇓P P 08 49 04.1 +0.6
G08A Pilot Rock 77.64 45 P P 08 49 04.4 +0.7
G08A IAmb IAmb 08 49 06.3
comp=Z,16nm,1.4s
I07A Izee 77.86 46 P P 08 49 05.4 +0.5
SOC Sochi 77.91 313 diP P 08 49 05.2 +0.2
SOC e*PP pwP 08 50 40.2 -0.6
SOC eS S 08 58 16.5 -6.9
SOC eSS SS 09 03 34.6 +0.5
SOC pmax pmax
comp=Z,130nm,0.8s
MOD Modoc Plateau 78.34 49 P P 08 49 08.7 +1.1
F10A Beach Ranch, E 78.40 44 P P 08 49 08.2 +0.5
ORV Oroville 78.61 51 P P 08 49 09.4 +0.5
ORV IAmb IAmb 08 49 10.8
comp=Z,13nm,1.1s
ORV Oroville 78.61 51 P P 08 49 09.4 +0.5
ORV pmax pmax
comp=Z,13nm,1.1s
ANN Anapa 78.79 315 eP P 08 49 09.7 0.0
ANN eS S 08 58 32.4 -0.2
ANN eSS SS 09 03 45.1 -1.9
ANN pmax pmax
comp=Z,327nm,1.2s
WALA Waterton Lakes 78.84 40 P P 08 49 11.6 +1.5
WALA IAmb IAmb 08 49 12.7
comp=Z,11nm,0.9s
J08A Circle Bar Ran 78.86 47 P P 08 49 11.4 +1.2
J08A IAmb IAmb 08 49 13.1
comp=Z,16nm,1.1s
BMO Blue Mountains 78.89 45 P P 08 49 10.7 +0.3
BMO Blue Mountains 78.89 45 P P 08 49 10.7 +0.3
BMO pmax pmax
comp=Z,8.0nm,1.0s
NSS Namsos 79.06 340 eP P 08 49 11.3 +0.5
IZAR Zarasai 79.18 328 eP P 08 49 12.9 +1.3
IZAR IAmb IAmb 08 49 14.1
comp=Z,48nm,1.0s
WVOR Wild Horse Val 79.19 48 P P 08 49 12.6 +0.5
WVOR Wild Horse Val 79.19 48 P P 08 49 12.6 +0.5
WVOR pmax pmax
comp=Z,7.0nm,1.1s
BEKR Beckworth 79.25 51 P P 08 49 13.2 +0.7
BEKR IAmb IAmb 08 49 14.6
comp=Z,16nm,0.9s
JTMT Jette 79.29 41 P P 08 49 14.4 +1.9
JTMT IAmb IAmb 08 49 15.1
comp=Z,20nm,1.3s
ISAL Salakas 79.34 328 eP P 08 49 12.8 +0.4
ISAL IAmb IAmb 08 49 15.0
comp=Z,57nm,1.1s
NACGM Naroch 79.41 327 e P 08 49 13.0 +0.2
IIGN Ignalina 79.42 328 eP P 08 49 13.0 +0.1
SUMG Summit 79.43 360 iP P 08 49 14.0 +0.9
comp=Z,77nm,1.2s
SUMG Summit 79.43 360 P P 08 49 12.9 -0.2
SUMG IAmb IAmb 08 49 20.0
comp=Z,16nm,1.0s
SUMG Summit 79.43 360 iP P 08 49 14.0 +0.9
SUMG pmax pmax
comp=Z,77nm,1.2s
MSO Missoula 79.95 42 P P 08 49 16.2 +0.2
baz=301
PAHR Pah Rah Range 79.98 50 P P 08 49 16.2 -0.2
PAHR IAmb IAmb 08 49 18.6
comp=Z,8.7nm,0.9s
CMB Columbia Colle 80.08 52 P P 08 49 17.7 +0.9
CMB IAmb IAmb 08 49 19.6
comp=Z,12nm,1.2s
CMB Columbia Colle 80.08 52 P P 08 49 17.7 +0.9
CMB pmax pmax
comp=Z,12nm,1.2s
PNTR Pine Nut 80.13 51 P P 08 49 17.3 +0.1
PNTR IAmb IAmb 08 49 25.7
comp=Z,14nm,0.7s
PABE Paberze 80.37 329 eP P 08 49 18.2 +0.3
PABE IAmb IAmb 08 49 19.9
comp=Z,119nm,0.9s
YERR Yerington 80.42 51 P P 08 49 17.5 -1.3
YERR IAmb IAmb 08 49 21.1
comp=Z,13nm,1.0s
TBLU Trondheim 80.51 339 eP P 08 49 16.9 -1.6
MFID Camas Ranch 80.52 46 P P 08 49 19.7 +0.6
MFID IAmb IAmb 08 49 21.8
comp=Z,15nm,1.1s
AKASG Malin Array Be 80.52 323 P P 08 49 18.3 -0.4
comp=Z,31nm,0.8s,baz=47,slow=6.1,SNR=122
AKASG PP PP 08 52 28.9 +0.5
comp=Z,4.1nm,0.8s,baz=49,slow=8.6,SNR=6.0
AKASG Malin Array Be 80.52 323 P P 08 49 18.1 -0.7
AKBB Malin Array Si 80.52 323 P P 08 49 18.7 0.0
AKBB Malin Array Si 80.52 323 P P 08 49 18.7 0.0
AKBB pmax pmax
comp=Z,53nm,0.9s
SIM Simferopol' 80.77 316 iP P 08 49 21.3 +1.1
SOCY Socotra 80.84 279 P P 08 49 19.4 -1.8
PBUR Paburge 80.97 330 eP P 08 49 21.4 +0.4
RYN Ryan 81.09 51 P P 08 49 22.8 +0.6
RYN IAmb IAmb 08 49 24.6
comp=Z,10nm,0.9s
KVN Kaiserville 81.17 50 P P 08 49 23.4 +0.7
KVN IAmb IAmb 08 49 25.0
comp=Z,11nm,0.9s
KVN Kaiserville 81.17 50 P P 08 49 23.4 +0.7
KVN pmax pmax
comp=Z,11nm,0.9s
NVAR Mina Array Bea 81.33 51 P P 08 49 24.8 +1.2
comp=Z,6.3nm,0.7s,baz=284,slow=5.3,SNR=53
NVAR Mina Array Bea 81.33 51 P P 08 49 23.9 +0.3
NV11 Mina Array Sit 81.44 51 P P 08 49 25.1 +1.1
DLMT Dillon 81.51 43 P P 08 49 24.5 +0.3
DLMT IAmb IAmb 08 49 26.6
comp=Z,12nm,1.2s
NC405 NORSAR Array S 81.58 337 P P 08 49 23.8 -0.3
SUW Suwalki 81.63 328 eP P 08 49 24.5 0.0
SUW Suwalki 81.63 328 eP P 08 49 24.5 0.0
DIKM Dikmen 81.73 313 ⇓P P 08 49 26.2 +0.9
EGMT Eagleton 81.73 40 P P 08 49 25.5 +0.2
EGMT IAmb IAmb 08 49 27.4
comp=Z,19nm,1.1s
EGMT Eagleton 81.73 40 P P 08 49 25.3 +0.1
baz=303,SNR=9.5
NB201 NORSAR Array S 81.77 337 P P 08 49 24.9 -0.2
DOMB Dombas 81.77 339 eP P 08 49 25.4 +0.3
NC204 NORSAR Array S 81.78 338 P P 08 49 25.4 +0.2
NB2 NORSAR Subarra 81.80 337 P P 08 49 24.5 -0.8
comp=Z,7.6nm,0.7s,baz=47,slow=5.1
NB2 NORSAR Subarra 81.80 337 P P 08 49 24.5 -0.8
baz=47,slow=5.1
NOA NORSAR Array B 81.80 337 P P 08 49 24.7 -0.6
comp=Z,10nm,0.7s,baz=45,slow=5.4,SNR=30
NOA PP PP 08 52 39.0 +0.5
comp=Z,2.5nm,0.9s,baz=25,slow=7.1,SNR=3.9
NC602 NORSAR Array S 81.91 337 eP P 08 49 25.9 +0.1
NC602 NORSAR Array S 81.91 337 P P 08 49 25.7 -0.1
NC602 IAmb IAmb 08 49 41.9
comp=Z,26nm,1.2s
NORES NORESS Array B 81.91 337 P P 08 49 26.3 +0.5

NORES pmax pmax
comp=Z,1.0nm,0.2s
NBO00 NORSAR Array S 81.95 338 P P 08 49 25.8 -0.2
VES Vestal, Richgr 82.04 54 P P 08 49 27.0 +0.1
baz=299
NAO01 NORSAR Array S 82.05 337 P P 08 49 26.4 -0.1
BZK Bozkurt 82.37 314 ⇑P P 08 49 29.0 +0.5
FCC Fort Churchill 82.41 25 P P 08 49 28.3 -0.1
FCC IAmb IAmb 08 49 29.5
comp=Z,14nm,1.1s
FCC Fort Churchill 82.41 25 P P 08 49 28.3 -0.1
FCC pmax pmax
comp=Z,14nm,1.1s
SORM Soroca 82.42 321 ⇓P P 08 49 28.2 -0.5
SORM Soroca 82.42 321 ⇑P P 08 49 28.1 -0.5
CWC Cottonwood Cre 82.46 53 P P 08 49 29.4 0.0
baz=300
ILULI Ilulissat 82.48 4 P P 08 49 28.0 -0.5
ILULI IAmb IAmb 08 49 46.4
comp=Z,26nm,1.2s
ILULI Ilulissat 82.48 4 P P 08 49 28.0 -0.5
ILULI pmax pmax
comp=Z,26nm,1.2s
SCZ2 Santa Cruz Isl 82.54 56 P P 08 49 30.0 +0.3
baz=299
ISA Isabella, Lake 82.56 54 P P 08 49 29.4 -0.4
baz=300
ARVC Arvin 82.57 54 P P 08 49 30.2 +0.5
baz=299
YHL Hebgen Lake 82.63 43 P P 08 49 32.1 +1.9
GAZ Gaziantep 82.66 308 P P 08 49 31.0 +0.8
YHB Horse Butte 82.68 43 P P 08 49 32.6 +2.3
GRAC Grapevine Rang 82.69 52 P P 08 49 31.0 +0.6
baz=300
KIS Kishinev 82.79 320 eP P 08 49 30.0 -0.6
KIS Kishinev 82.79 320 eP P 08 49 30.0 -0.6
MILM Milestii Mici 82.84 320 ⇑P P 08 49 30.0 -0.8
RAYN Ar Rayn 82.89 293 iP P 08 49 32.2 +0.6
SNR=96
RAYN Ar Rayn 82.89 293 P P 08 49 32.2 +0.6
RAYN Ar Rayn 82.89 293 P P 08 49 32.2 +0.6
RAYN pmax pmax
comp=Z,159nm,1.0s
GCMT Greycliff 83.01 41 P P 08 49 32.2 +0.3
MPMC Manual Prospec 83.07 53 P P 08 49 33.1 +0.7
baz=300,SNR=6.8
LRMC Laurel Mtn Rad 83.22 53 P P 08 49 33.7 +0.5
baz=300
R11A Troy Canyon, C 83.23 50 P P 08 49 34.2 +1.0
R11A IAmb IAmb 08 49 35.6
comp=Z,13nm,1.1s
R11A Troy Canyon, C 83.23 50 P P 08 49 33.9 +0.7
baz=301,SNR=16
H17A Grant Village 83.24 43 P P 08 49 35.8 +2.5
baz=303,SNR=11
YNE Yellowstone No 83.24 42 P P 08 49 33.8 +0.6
EDW2 Edwards Air Fo 83.29 54 P P 08 49 34.3 +0.8
baz=300
FURC Furnace Creek, 83.30 52 P P 08 49 34.2 +0.9
baz=300,SNR=12
DECC Green Verdugo 83.36 55 P P 08 49 33.9 +0.2
baz=300
FXWY Fox Creek 83.38 44 P P 08 49 34.2 +0.2
FXWY IAmb IAmb 08 49 37.6
comp=Z,12nm,1.2s
IAS Iasi 83.39 321 ⇓P P 08 49 34.2 +0.6
IAS Iasi 83.39 321 P P 08 49 34.2 +0.6
LEOM Leova 83.41 320 ⇓P P 08 49 33.9 +0.1
LEOM Leova 83.41 320 P P 08 49 33.8 +0.1
TPNV Topopah Spring 83.48 52 P P 08 49 34.8 +0.3
TPNV IAmb IAmb 08 49 36.8
comp=Z,11nm,0.9s
TPNV Topopah Spring 83.48 52 P P 08 49 34.8 +0.3
TPNV pmax pmax
comp=Z,11nm,0.9s
TPNV Topopah Spring 83.48 52 P P 08 49 35.2 +0.7
baz=300,SNR=9.9
MOOW Moose Ponds 83.49 44 P P 08 49 35.1 +0.6
MWC Mount Wilson 83.57 55 P P 08 49 35.8 +0.8
MWC IAmb IAmb 08 49 37.6
comp=Z,23nm,1.4s
MWC Mount Wilson 83.57 55 P P 08 49 35.8 +0.8
MWC pmax pmax
comp=Z,23nm,1.4s
VASR Vaslui 83.58 320 ⇓P P 08 49 35.9 +1.3
BGU Big Grassy Mou 83.58 47 P P 08 49 35.3 +0.4
RLMT Red Lodge 83.62 42 P P 08 49 36.5 +1.5
RLMT IAmb IAmb 08 49 37.9
comp=Z,12nm,1.0s
RLMT Red Lodge 83.62 42 P P 08 49 36.6 +1.5
baz=304,SNR=11
SNOW Snow King Moun 83.64 44 P P 08 49 35.3 0.0
SPUT South Promonto 83.75 46 P P 08 49 36.5 +0.8
LVV L'vov 83.75 324 eP P 08 49 35.2 -0.1
BR131 Keskin Array S 83.77 312 P P 08 49 36.0 +0.1
BR131 IAmb IAmb 08 49 37.3
comp=Z,22nm,0.8s
BR131 Keskin Array S 83.77 312 P P 08 49 35.7 -0.2
SNR=12
BR131 Keskin Array S 83.77 312 diP P 08 49 35.4 -0.5
BRTR Keskin Array B 83.77 312 P P 08 49 35.6 -0.2
comp=Z,16nm,0.7s,baz=98,slow=3.7,SNR=86
BRTR Keskin Array B 83.77 312 P P 08 49 36.0 +0.1
SCI2 San Clemente I 83.83 56 P P 08 49 35.9 -0.2
baz=300
BFSC Mount Baldy Ra 83.85 54 P P 08 49 36.6 +0.3
baz=300
GSC Goldstone, Bar 83.92 53 P P 08 49 37.7 +1.0
baz=300,SNR=5.4
SHOC Shoshone, Teco 84.00 52 P P 08 49 37.3 +0.4
baz=301
PRAR RASCA 84.04 321 ⇓P P 08 49 37.3 +0.4
DUG Dugway, Tooele 84.11 47 P P 08 49 38.3 +0.8
DUG IAmb IAmb 08 49 40.6
comp=Z,24nm,1.4s
DUG Dugway, Tooele 84.11 47 P P 08 49 38.3 +0.8
DUG pmax pmax
comp=Z,24nm,1.4s
DUG Dugway, Tooele 84.11 47 P P 08 49 38.0 +0.5
baz=302,SNR=13
BEL Belsk 84.12 327 eP P 08 49 37.7 +0.6
BEL Belsk 84.12 327 eP P 08 49 37.7 +0.6
HWUT Hardware Ranch 84.15 46 P P 08 49 37.9 +0.1
HWUT IAmb IAmb 08 49 41.0
comp=Z,21nm,1.1s
ODD1 Odda 84.16 338 eP P 08 49 37.6 +0.4
TOPG Topolog 84.24 318 ⇓P P 08 49 38.8 +0.9
ANTO Ankara 84.25 312 P P 08 49 38.5 +0.4
ANTO pmax pmax
comp=Z,23nm,0.9s
TESR Tescani 84.30 320 ⇑P P 08 49 37.9 -0.3
PETR Petresti 84.32 320 ⇓P P 08 49 41.1 +2.3
BUR08 Bucovina Ar. S 84.43 322 P P 08 49 39.4 +0.5
BUR08 IAmb IAmb 08 49 40.3
comp=Z,20nm,1.1s
BURAR Bucovina Array 84.44 322 ⇑P P 08 49 38.9 0.0
BURAR Bucovina Array 84.44 322 P P 08 49 39.3 +0.4
TIRR Tirgusor 84.46 318 ⇓P P 08 49 28.4 -11
SHPR Sheep Range 84.46 51 P P 08 49 40.3 +0.9
LAO LASA Array 84.47 39 P P 08 49 39.9 +0.8
LAO IAmb IAmb 08 49 41.5
comp=Z,19nm,1.1s
LAO LASA Array 84.47 39 P P 08 49 39.4 +0.3
baz=306,SNR=9.7
TUQ Turquoise Moun 84.48 53 P P 08 49 39.7 +0.3
baz=301
HEC Hector,Ludlow 84.50 53 P P 08 49 39.6 +0.1
baz=301
MURC Murrieta 84.50 55 P P 08 49 39.6 +0.2
baz=300
KWP Kalwaria Pacla 84.55 325 eP P 08 49 39.5 +0.2
KWP Kalwaria Pacla 84.55 325 eP P 08 49 39.5 +0.2
BLS5 Blasjo 84.59 338 eP P 08 49 39.7 +0.3
HARR Harsova 84.61 318 ⇓P P 08 49 40.3 +0.6
HARR Harsova 84.61 318 P P 08 49 40.3 +0.6
VRI Vrincioaia 84.63 320 ⇓P P 08 49 40.6 +0.7
VRI Vrincioaia 84.63 320 P P 08 49 40.5 +0.7
SFJD Kangerlussuaq 84.71 4 iP P 08 49 40.1 +0.4
SFJD Kangerlussuaq 84.71 4 iP P 08 49 40.1 +0.4
PD31 Pinedale Array 84.76 44 P P 08 49 42.2 +1.3
PDAR Pinedale Array 84.76 44 P P 08 49 41.6 +0.7
comp=Z,5.5nm,1.1s,baz=282,slow=2.9,SNR=20
JLU Jordanelle 84.77 46 P P 08 49 41.8 +0.9
GKP Gorka Klasztor 84.83 330 eP P 08 49 40.7 +0.1

GKP	Gorka Klasztor	84.83	330	eP	P	08 49 40.7	+0.1
109C	Camp Elliot, M	84.92	55	P	P	08 49 42.0	+0.5
	baz=300						
GMRC	Granite Mounta	85.00	53	P	P	08 49 42.6	+0.6
	baz=301,SNR=6.9						
PFO	Pinyon Flats O	85.03	55	P	P	08 49 42.9	+0.7
PFO				IAmb	IAmb	08 49 44.2	
	comp=Z,13nm,0.9s						
PFO	Pinyon Flats O	85.03	55	⇑iP	P	08 49 43.1	+0.9
PFO				pmax	pmax		
	comp=Z,18nm,1.0s						
PFO	Pinyon Flats O	85.03	55	P	P	08 49 42.1	-0.1
	baz=301,SNR=7.6						
XPFO	Pion Flat	85.03	55	P	P	08 49 42.7	+0.5
XPFO				IAmb	IAmb	08 49 44.2	
	comp=Z,13nm,0.9s						
BELC	Belle Mtn. Jos	85.16	54	P	P	08 49 43.0	+0.1
	baz=301,SNR=6.9						
KOLS	Kolonicke sedl	85.20	324	eP	P	08 49 42.2	-0.4
KOLS				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KOLS	Kolonicke sedl	85.20	324	eP	P	08 49 42.2	-0.4
DOPR	Dopca	85.32	320	⇓P	P	08 49 44.3	+1.1
BAR	Barrett	85.34	55	P	P	08 49 44.0	+0.3
BAR				IAmb	IAmb	08 49 45.6	
	comp=Z,9.1nm,1.1s						
UZH	Uzhgorod	85.38	324	eP	P	08 49 43.3	-0.1
MONP2	Monument Peak	85.42	55	P	P	08 49 43.9	-0.3
	baz=301						
LCMT	Little Creek M	85.51	50	P	P	08 49 43.9	-0.6
TRPA	Tarpa	85.56	323	⇓P	P	08 49 44.2	0.0
OJC	Ojcow	85.64	326	eP	P	08 49 44.7	+0.1
OJC	Ojcow	85.64	326	eP	P	08 49 44.7	+0.1
CRVS	Cervenica-Dubn	85.64	324	eP	P	08 49 45.1	+0.4
CRVS				pmax	pmax		
	comp=Z,81nm,1.5s						
CRVS	Cervenica-Dubn	85.64	324	eP	P	08 49 45.1	+0.4
IRM	Iron Mountain	85.68	53	P	P	08 49 45.7	+0.5
	baz=301,SNR=6.3						
BC3	Big Chuckawall	85.72	54	P	P	08 49 46.3	+0.7
	baz=301,SNR=7.8						
IKP	In-Ko-Pah, Jac	85.77	55	P	P	08 49 46.2	+0.4
	baz=301						
KNB	Kanab	85.79	50	P	P	08 49 45.8	-0.1
KNB	Kanab	85.79	50	P	P	08 49 45.8	-0.1
KNB				pmax	pmax		
	comp=Z,24nm,1.4s						
VOIR		85.83	320	⇓P	P	08 49 48.5	+2.7
VOIR		85.83	320	P	P	08 49 48.4	+2.7
SWSC	Sam W. Stewart	85.84	55	P	P	08 49 46.3	+0.3
	baz=301						
NIE	Niedzica	85.90	325	eP	P	08 49 46.0	0.0
NIE	Niedzica	85.90	325	eP	P	08 49 46.0	0.0
RDMU	Red Mountain	85.98	46	P	P	08 49 46.7	-0.1
ARR	Arges	86.11	320	⇑P	P	08 49 47.4	+0.3
DRGR		86.30	322	P	P	08 49 49.4	+1.4
DRGR				pmax	pmax		
	comp=Z,37nm,1.0s						
PDMCI	Parker Dam,Lak	86.32	53	P	P	08 49 48.4	+0.2
	baz=302						
Y12C	Blythe	86.34	54	P	P	08 49 47.9	-0.5
Y12C				IAmb	IAmb	08 49 50.7	
	comp=Z,12nm,1.2s						
Y12C	Blythe	86.34	54	P	P	08 49 48.9	+0.5
	baz=302						
U15A	North Rim	86.47	50	P	P	08 49 47.9	-1.4
GLA	Glamis	86.48	54	P	P	08 49 49.7	+0.6
	baz=302						
CSS	Mathiatis	86.49	308	P	P	08 49 48.2	-0.9
CSS	Mathiatis	86.49	308	P	P	08 49 48.9	-0.2
SZH	Strazhica	86.61	318	eP	P	08 49 48.9	-0.6
SZH	Strazhica	86.61	318	eP	P	08 49 48.9	-0.6
K22A	Casper	86.66	43	P	P	08 49 50.3	+0.4
	baz=306						
LEF	Lefka	86.71	308	⇓P	P	08 49 49.1	-1.0
KSP	Ksiaz	86.90	328	eP	P	08 49 50.4	-0.3
KSP	Ksiaz	86.90	328	eP	P	08 49 50.4	-0.3
EDRB	Edirne	86.96	317	P	P	08 49 50.8	-0.3
PVL	Pavlikeni	86.99	318	eP	P	08 49 51.4	+0.2
PVL	Pavlikeni	86.99	318	eP	P	08 49 51.4	+0.2
MORC	Moravsky Berou	87.03	327	eP	P	08 49 50.4	-1.0
MORC	Moravsky Berou	87.03	327	⇓P	P	08 49 50.8	-0.5
MORC	Moravsky Berou	87.03	327	P	P	08 49 50.8	-0.5
O20A	White River Ci	87.06	45	P	P	08 49 52.0	+0.1
	baz=305						
PSZ	Piszkesteto	87.07	324	⇓P	P	08 49 51.6	0.0
PSZ	Piszkesteto	87.07	324	P	P	08 49 51.9	+0.3
PSZ				pmax	pmax		
	comp=Z,28nm,1.4s						
GZR	Gura Zlata	87.13	321	⇓P	P	08 49 51.5	-0.5
GZR	Gura Zlata	87.13	321	P	P	08 49 51.4	-0.5
CHVC	Chvalec	87.19	328	eP	P	08 49 52.0	-0.1
KRLC	Kraliky	87.19	327	eP	P	08 49 51.9	-0.2
KRLC	Kraliky	87.19	327	eP	P	08 49 51.9	-0.2
DPC	Dobruska-Polom	87.22	328	eP	P	08 49 52.4	+0.1
DPC	Dobruska-Polom	87.22	328	eP	P	08 49 52.4	+0.1
RSSD	Black Hills	87.23	40	P	P	08 49 53.5	+0.8
RSSD				IAmb	IAmb	08 49 54.5	
	comp=Z,14nm,1.4s						
RSSD	Black Hills	87.23	40	P	P	08 49 53.5	+0.8
RSSD				pmax	pmax		
	comp=Z,14nm,1.4s						
RSSD	Black Hills	87.23	40	P	P	08 49 53.0	+0.3
	baz=308						
VYHS	Vyhne	87.24	325	eP	P	08 49 52.3	0.0
VYHS				pmax	pmax		
	comp=Z,41nm,1.4s						
VYHS	Vyhne	87.24	325	eP	P	08 49 52.3	0.0
PLVB	Pleven	87.31	319	⇓P	P	08 49 52.7	0.0
ULM	Lac du Bonnet	87.53	32	P	P	08 49 52.4	-1.3
	comp=Z,2.3nm,0.7s,baz=313,slow=6.0,SNR=6.2						
ULM	Lac du Bonnet	87.53	32	⇑iP	P	08 49 54.1	+0.5
JAVC	Velka Javorina	87.58	326	eP	P	08 49 54.6	+0.6
BZS	Buzias	87.63	322	⇓P	P	08 49 53.4	-0.8
BZS	Buzias	87.63	322	P	P	08 49 53.4	-0.8
VRAC	Vranov	87.80	327	eP	P	08 49 54.5	-0.4
VRAC	Vranov	87.80	327	⇓P	P	08 49 54.7	-0.3
VRAC	Vranov	87.80	327	P	P	08 49 54.6	-0.4
ELL	Elmali	87.85	311	P	P	08 49 55.1	-0.4
ELL	Elmali	87.85	311	P	P	08 49 55.2	-0.4
ELL				pmax	pmax		
	comp=Z,44nm,0.7s						
KDZ	Kurdzhali	87.88	317	eP	P	08 49 55.5	0.0
KDZ	Kurdzhali	87.88	317	eP	P	08 49 55.5	0.0
PVCC	Panska Ves	87.92	329	eP	P	08 49 57.1	+1.7
PVCC	Panska Ves	87.92	329	eP	P	08 49 57.1	+1.7
ALN	Alexandroupoli	87.94	316	P	P	08 49 55.0	-0.7
ALN	Alexandroupoli	87.94	316	P	P	08 49 55.6	-0.1
ALN				IAmb	IAmb	08 49 56.5	
	comp=Z,15nm,1.1s						
ALN	Alexandroupoli	87.94	316	P	P	08 49 55.6	-0.1
ALN				pmax	pmax		
	comp=Z,15nm,1.1s						
PLD	Plovdiv	88.03	318	P	P	08 49 56.7	+0.6
PLD				pmax	pmax		
	comp=Z,95nm,1.2s						
N23A	Red Feather La	88.04	44	P	P	08 49 57.3	+0.7
	baz=306						
KRUC	Moravsky	88.06	327	eP	P	08 49 55.8	-0.4
CLL	Collm	88.07	330	⇓iP	P	08 49 55.3	-0.9
	comp=Z,30nm,1.4s						
CLL				ePP	PP	08 53 27.0	-2.0
CLL	Collm	88.07	330	⇓iP	P	08 49 55.3	-0.9
CLL				pmax	pmax		
	comp=Z,30nm,1.4s						
MODS	Modra-Piesok	88.09	326	eP	P	08 49 55.5	-0.9
MODS				pmax	pmax		
	comp=Z,39nm,1.3s						
MODS	Modra-Piesok	88.09	326	eP	P	08 49 55.5	-0.9
MDVR	Moldovita	88.10	321	⇑P	P	08 49 54.9	-1.6
GOPC	GO Pecny, Ondr	88.24	328	eP	P	08 49 57.2	+0.2
GOPC	GO Pecny, Ondr	88.24	328	eP	P	08 49 57.2	+0.2
RZN	Rozhen	88.27	317	eP	P	08 49 57.2	-0.4
RZN	Rozhen	88.27	317	eP	P	08 49 57.2	-0.4
PRU	Pruhonice	88.30	328	eP	P	08 49 56.8	-0.5
PRU	Pruhonice	88.30	328	eP	P	08 49 56.8	-0.5
EZN	Ezine	88.40	315	P	P	08 49 57.8	-0.1
EZN	Ezine	88.40	315	P	P	08 49 57.8	-0.1
214A	Organ Pipe Nat	88.51	54	P	P	08 49 59.3	+0.7
	baz=303						
MVCO	Mesa Verde	88.56	48	P	P	08 49 59.6	+0.5
	baz=305						
VTS	Vitosha	88.58	319	P	P	08 49 58.5	-0.4
VTS	Vitosha	88.58	319	⇓P	P	08 49 59.1	+0.1
VTS	Vitosha	88.58	319	eP	P	08 49 58.5	-0.4
VTS	Vitosha	88.58	319	eP	P	08 49 58.5	-0.4
VTS	Vitosha	88.58	319	P	P	08 49 59.6	+0.7
VTS	Vitosha	88.58	319	P	P	08 49 59.6	+0.7
VTS				pmax	pmax		
	comp=Z,29nm,1.0s						
ISCO	Idaho Springs	88.89	45	P	P	08 50 00.8	+0.2
	baz=307						
SOP	Sopron	88.92	326	P	P	08 50 02.4	+2.2
SOP				pmax	pmax		
	comp=Z,27nm,2.0s						
MMB	Musomiste	88.92	318	eP	P	08 49 59.7	-0.7
MMB	Musomiste	88.92	318	eP	P	08 49 59.7	-0.7
NKC	Novy Kostel	89.09	329	eP	P	08 50 00.5	-0.5
NKC	Novy Kostel	89.09	329	eP	P	08 50 00.5	-0.5
CONA	Conrad Observa	89.09	326	ePcP	P	08 50 01.6	+0.5
	comp=Z,33nm,1.3s,SNR=6.8						
KKB	Krupnik	89.13	318	eP	P	08 50 00.9	-0.4
KKB	Krupnik	89.13	318	eP	P	08 50 00.9	-0.4
SRS	Serrai	89.29	317	P	P	08 50 02.2	+0.1
SRS				pmax	pmax		
	comp=Z,23nm,1.1s						
S22A	4UR Ranch, Cre	89.34	47	P	P	08 50 03.4	+0.6
	baz=306						
KHC	Kasperske Hory	89.35	328	eP	P	08 50 02.0	-0.3
KHC	Kasperske Hory	89.35	328	⇓iP	P	08 50 01.8	-0.5
KHC				pmax	pmax		
	comp=Z,28nm,1.1s						
GEC2	GERESS Array S	89.50	328	P	P	08 50 02.8	-0.2
GEC2				IAmb	IAmb	08 50 03.5	
	comp=Z,22nm,1.3s						
GERES	GERESS Array B	89.50	328	P	P	08 50 02.2	-0.8
	comp=Z,5.5nm,0.9s,baz=38,slow=5.0,SNR=26						
GERES				PP	PP	08 53 39.3	-1.1
	comp=Z,1.1nm,0.7s,baz=40,slow=6.9,SNR=4.2						
GERES	GERESS Array B	89.50	328	P	P	08 50 02.5	-0.5
GERES	GERESS Array B	89.50	328	P	P	08 50 02.5	-0.5
ARSA	Arzberg	89.72	326	ePcP	P	08 50 04.0	0.0
	comp=Z,25nm,1.2s,SNR=5.6						
TUC	Tucson	89.76	53	P	P	08 50 06.3	+1.8
TUC				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TUC	Tucson	89.76	53	P	P	08 50 05.0	+0.5
	baz=304						
VAY	Valandovo	89.77	318	eP	P	08 50 03.7	-0.6
VAY	Valandovo	89.77	318	eP	P	08 50 03.7	-0.6
VAY	Valandovo	89.77	318	P	P	08 50 04.3	0.0
VAY				pmax	pmax		
	comp=Z,58nm,1.0s						
KOGS	Kog	89.91	325	eP	P	08 50 04.3	-0.5
MOA	Molln	89.92	327	ePcP	P	08 50 05.0	+0.1
	comp=Z,15nm,1.2s,SNR=5.4						
GRF	Grafenberg Arr	90.03	330	eP	P	08 50 05.1	-0.3
	comp=Z,44nm,1.2s,baz=51,slow=4.2						
SDCO	Great Sand Dun	90.19	46	P	P	08 50 06.8	+0.1
SDCO	Great Sand Dun	90.19	46	P	P	08 50 06.5	-0.2
	baz=307						
SOKA	Soboth	90.36	326	ePcP	P	08 50 06.9	-0.1
	comp=Z,24nm,1.2s,SNR=10.0						
LIT	Litokhoron	90.58	317	P	P	08 50 06.8	-1.3
LIT	Litokhoron	90.58	317	P	P	08 50 07.2	-0.9
LIT	Litokhoron	90.58	317	P	P	08 50 07.2	-0.9
LIT				pmax	pmax		
	comp=Z,59nm,0.9s						
KBA	Koelnbreinsper	90.91	327	ePcP	P	08 50 09.0	-0.7
	comp=Z,8.0nm,1.1s						
MYKA	Terra Mystica	91.08	326	ePcP	P	08 50 09.5	-0.9
	comp=Z,16nm,1.3s						
CRNS	Crni Vrh	91.16	326	eP	P	08 50 09.7	-1.0
EYMN	Ely	91.20	32	P	P	08 50 10.6	-0.2
	baz=316						
ANMO	Albuquerque	91.22	49	P	P	08 50 11.3	-0.1
ANMO				IAmb	IAmb	08 50 14.4	
	comp=Z,7.5nm,0.9s						
ANMO	Albuquerque	91.22	49	⇑iP	P	08 50 13.1	+1.7
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ANMO	Albuquerque	91.22	49	P	P	08 50 11.6	+0.1
	baz=306						
T25A	Trinidad	91.25	46	P	P	08 50 11.0	-0.5
	baz=307						
AGG	Agios Georgios	91.34	316	P	P	08 50 09.6	-2.1
AGG	Agios Georgios	91.34	316	P	P	08 50 09.6	-2.1
MAKR	Makrakomi, Fth	91.47	316	P	P	08 50 10.5	-1.8
ABTA	Abfaltersbach	91.55	327	eP	P	08 50 11.3	-1.3
	comp=Z,22nm,1.2s						
ECSD	EROS Data Cent	91.59	37	P	P	08 50 12.7	0.0
	baz=313						
WTTA	Wattenberg	91.59	328	ePcP	P	08 50 12.4	-0.5
	comp=Z,12nm,1.2s						
DID	Didima	91.72	315	P	P	08 50 11.2	-2.3
121A	Cookes Peak, D	91.72	51	P	P	08 50 14.7	+1.0
	baz=305						
MOTA	Moosalm	91.79	328	ePcP	P	08 50 13.2	-0.5
	comp=Z,11nm,1.3s						
SQTA	Sankt Quirin	91.83	328	ePcP	P	08 50 13.4	-0.4
	comp=Z,7.4nm,0.8s						
RETA	Reutte	91.84	328	ePcP	P	08 50 13.5	-0.4
	comp=Z,17nm,1.3s						
ANX	Ano Chora	91.86	316	P	P	08 50 12.8	-1.4
FETA	Feichten	92.20	328	ePcP	P	08 50 15.1	-0.5
	comp=Z,16nm,1.2s						
IGT	Igoumenitsa	92.22	318	P	P	08 50 15.5	-0.2
IGT				pmax	pmax		
	comp=Z,44nm,1.1s						
DRO	Drossia	92.39	316	P	P	08 50 16.2	-0.3
DAVA	Damuels	92.40	329	ePcP	P	08 50 16.3	-0.2
	comp=Z,21nm,1.1s						
RLS	Riolos of Patr	92.48	316	P	P	08 50 16.6	-0.2
LKD2	Lefkada island	92.50	317	P	P	08 50 15.9	-1.1
SPMN	Marine on St.	92.52	34	P	P	08 50 16.6	-0.3
	baz=315						
FUORN	Ofenpass-Fuorn	92.71	328	P	P	08 50 17.4	-0.6
CBKS	Cedar Bluff	93.08	42	P	P	08 50 19.5	-0.2
	baz=310						
MNTX	Cornudas Mount	93.86	51	P	P	08 50 23.6	+0.2
	baz=307						
SCHQ	Schefferville	94.10	15	P	P	08 50 24.1	+0.1
	comp=Z,1.0nm,0.9s,baz=303,slow=17,SNR=2.3						
MSTX	Muleshoe	94.24	48	P	P	08 50 25.1	-0.1
	baz=308						
AMTX	Amarillo	94.38	47	P	P	08 50 25.6	-0.2
	baz=309						
TIP	Timpagrande	94.55	319	⇓P	P	08 50 26.5	+0.1
MATQ	Matagami	95.44	23	P	P	08 50 29.3	-0.8
	baz=327						
D47A	Chapleau	95.56	28	P	P	08 50 30.6	-0.2
	baz=323						
LSQQ	Lebel-sur-Quev	96.26	23	P	P	08 50 33.0	-0.9
	baz=328						
TX31	Lajitas Ar. Si	96.46	52	P	P	08 50 34.2	-1.1
TXAR	Lajitas Array	96.46	52	P	P	08 50 36.3	+1.0
	comp=Z,1.3nm,0.8s,baz=307,slow=2.7,SNR=16						
TXAR				pP	pP	08 52 08.2	-0.9
	comp=Z,1.4nm,1.0s,baz=295,slow=3.9,SNR=4.2						
H46A	Fife Lake	96.64	31	P	P	08 50 35.2	-0.4
	baz=321						
E51A	G1948 Merrick	97.44	26	P	P	08 50 38.3	-1.0
	baz=326						
D52A	ZEK Kipawa Sen	97.49	25	P	P	08 50 38.4	-1.1
	baz=327						
E52A	Mattawa	97.97	26	P	P	08 50 40.7	-0.8
	baz=326						
I49A	Point Hope	98.16	30	P	P	08 50 41.0	-1.5
	baz=323						
G54A	Lake Saint Pet	98.93	26	P	Pdif	08 50 44.3	-1.6
	baz=327						
D57A	Chemin Vers le	99.08	23	P	Pdif	08 50 45.9	-0.6
	baz=330						
ESDC	Sonseca Array	104.53	332	PP	PKiKP	08 55 26.8	+2.3
	comp=Z,3.8nm,1.0s,baz=25,slow=7.2,SNR=4.1						
TOA0	Torodi Ar. Sit	122.34	310		PKPdf	08 55 58.4	-0.5
TORD	Torodi Ar. Bea	122.34	310	PKP	PKPdf	08 55 58.1	-0.8
	comp=Z,2.0nm,0.5s,baz=50,slow=0.9,SNR=24						
TORD				PP	PP	08 57 40.1	-0.4
	comp=Z,3.1nm,1.0s,baz=22,slow=6.1,SNR=3.6						
TORD	Torodi Ar. Bea	122.34	310		PKPdf	08 55 58.2	-0.7
BOSA	Boshof	123.27	253	PKP	PKPdf	08 56 00.0	-0.4
	comp=Z,1.6nm,0.7s,baz=82,slow=7.1,SNR=3.6						
DBIC	Dimbokro	131.45	310	PKP	PKPdf	08 56 15.7	-0.6
	comp=Z,1.8nm,0.5s,baz=42,slow=2.7,SNR=5.0						
DBIC				PP	PP	08 58 38.1	-2.0
	comp=Z,3.5nm,0.8s,baz=51,slow=3.2,SNR=4.5						
DBIC				SKPbc	SKPbc	08 59 01.7	-0.6
	comp=Z,18nm,0.8s,baz=35,slow=4.1,SNR=14						
DBIC	Dimbokro	131.45	310		PKPdf	08 56 14.4	-1.9
SAML	Samuel	150.95	53		PKPbc	08 56 56.4	-0.4
SAML	Samuel	150.95	53	PKIKP	PKPbc	08 56 56.4	-0.4
LPAZ	La Paz	151.48	71	PKP	PKPdf	08 56 52.1	0.0
	comp=Z,1.5nm,0.9s,baz=338,slow=3.2,SNR=5.5						
LPAZ				PKPbc	PKiKP	08 56 59.0	-0.1
	comp=Z,8.8nm,1.1s,baz=257,slow=0.3,SNR=12						
LPAZ				pPKP	pPKPdf	08 58 30.6	-1.6
	comp=Z,0.9nm,0.7s,baz=297,slow=9.0,SNR=2.0						
LPAZ	La Paz	151.48	71	PKPbc	PKiKP	08 56 58.9	-0.1
MNMC	Minye Minye	151.51	78		PKiKP	08 56 59.4	+0.8
PB11	IPOC Station P	151.71	79		PKiKP	08 56 59.0	+0.1
PLCA	Paso Flores	152.08	124	PKPbc	PKiKP	08 56 59.0	0.0
	comp=Z,2.6nm,0.6s,baz=262,slow=2.9,SNR=29						
PLCA				pPKP	pPKPdf	08 58 30.8	-0.7
	comp=Z,1.1nm,0.8s,baz=270,slow=7.1,SNR=1.8						

IDC 10 08:40:17.4±4.5, 7°.39S×109°.87E, h0km, mb4.0/4, mb1 4.0/4, mb1mx3.6/48, mbtmp4.0/4, MS2.8/1, Ms1 3.0/1, ms1mx2.5/37, Error ellipse: s-maj=341.2km s-min=22.4km az=53.0

DJA 10 08:40:25.3±0.9, 8°S±4°×10°E±°, h11km±7km, M4.3/19, mb4.3/7, MLv4.4/19

NEIC 10 08:40:27.4±2.7, 8°.2S±0°.1×109°.27E±0°.05, h85km±8km, mb4.3/5, Error ellipse: s-maj=15.5km s-min=6.3km az=187.0

ISC 10 08:40:26.4±1.0**, 8°.29S**±0°.09×**109°.23E**±0°.04**, h80km**±9km**, n42, σ1s.62**/43**, mb4.0**/5**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	0.92	303	P	Pn	08 40 44.1	-0.5
CMJI				S	Sn	08 40 57.0	-1.1
KPJI	Karang Pucung	0.99	342	P	Pn	08 40 46.0	+0.6
KPJI				S	Sn	08 41 00.2	+0.7
UGM	Wanagama	1.33	74	P	Pn	08 40 49.4	-0.2
UGM				S	Sn	08 41 06.1	-1.0
UGM	Wanagama	1.33	74		Pn	08 40 49.4	-0.2
UGM				Sn	Sn	08 41 06.1	-1.0
CISI	Cisompet, Garu	1.58	297	P	Pn	08 40 52.5	-0.4
CISI	Cisompet, Garu	1.58	297	Pn	Pn	08 40 53.0	+0.2
CISI				Sn	Sn	08 41 13.1	+0.2
SMRI	Semarang	1.72	44	P	Pn	08 40 55.4	+0.8
SMRI	Semarang	1.72	44	Pn	Pn	08 40 55.5	+0.9
SMRI				Sn	Sn	08 41 15.8	-0.2
WOJI	Wonogiri, Jawa	1.73	75	P	Pn	08 40 54.7	-0.1
PCJI	Pacitan	1.93	87	P	Pn	08 40 57.5	+0.2
LEM	Lembang	2.16	312	P	Pn	08 41 03.2	+2.6
CNJI	Cibinong	2.30	295	P	Pn	08 41 02.1	-0.2
NGJI	Ngawi	2.39	68	P	Pn	08 41 05.9	+2.4
UWJI	Ujung Watu	2.52	43	P	Pn	08 41 05.8	+0.5
PWJI	Pagerwojo	2.56	84	P	Pn	08 41 05.9	+0.1
SKJI	Sukabumi	2.94	295	P	Pn	08 41 13.5	+2.5
TBJI	Tambak Boyo	2.98	61	P	Pn	08 41 11.9	+0.4
GRJI	Gresik	3.50	67	P	Pn	08 41 19.6	+1.1
JAGI	Jajag, Banyuwa	4.87	93	P	Pn	08 41 38.4	+1.1
JAGI	Jajag, Banyuwa	4.87	93		Pn	08 41 38.4	+1.1
TPI	Tanjungpandan	5.71	344	P	Pn	08 41 50.8	+2.0
	0.1nm20nm,1.4s						
KLSI		5.72	308	P	Pn	08 41 52.1	+3.2
	0.1nm9.7nm,2.2s						
SRBI	Singaraja	5.92	88	P	Pn	08 41 53.9	+2.3
	0.3nm51nm,1.4s						
MDSI	Maura Dua	6.28	307	P	Pn	08 41 58.4	+1.9
	0.2nm9.8nm,1.2s						
MNAI	Manna	7.36	302	Pn	Pn	08 42 12.4	+1.1
PLAI	Plampang	8.47	94	P	Pn	08 42 27.8	+1.4
KNRA	Kununurra	20.46	113	P	P	08 44 58.5	+0.8
KNRA				IAmb	IAmb	08 45 17.7	
	comp=Z,8.3nm,0.8s						
ASAR	Alice Springs	28.15	126	P	P	08 46 12.1	+0.8
	comp=Z,0.9nm,0.4s,baz=305,slow=9.1,SNR=14						
CMAR	Chiang Mai Arr	28.45	339	LR	LR	09 00 20.4	
	comp=Z,19nm,18.2s,baz=80,slow=43						
BBOO	Buckleboo	34.82	138	P	P	08 47 10.4	+0.6
H08S2	Diego Garcia H	36.38	268	T	T	09 25 52.4	
	baz=94,slow=74,SNR=3.0						
H08S3	Diego Garcia H	36.39	268	T	T	09 26 04.5	
	baz=94,slow=74,SNR=4.3						
H08S1	Diego Carcia H	36.40	268	T	T	09 26 26.6	
	baz=94						
STKA	Stephens Creek	38.14	132	P	P	08 47 39.3	+1.2
	comp=Z,1.7nm,0.4s,baz=326,slow=7.3,SNR=4.4						
STKA	Stephens Creek	38.14	132	P	P	08 47 39.4	+1.3
STKA				IAmb	IAmb	08 47 54.2	
	comp=Z,2.1nm,1.4s						
MK31	Makanchi Array	59.86	339	P	P	08 50 26.0	+2.3
MK31				IAmb	IAmb	08 50 28.3	
	comp=Z,9.7nm,0.8s						
MKAR	Makanchi Array	59.86	339	P	P	08 50 20.0	-3.7
	comp=Z,1.0nm,0.7s,baz=151,slow=7.9,SNR=5.1						
KURBB	Kurchatov Arra	64.43	339	P	P	08 50 51.8	-2.3
	comp=Z,0.3nm,0.5s,baz=145,slow=6.6,SNR=2.9						
ABKAR	Akbulak array	71.65	328	P	P	08 51 37.4	-2.1
QSPA	South Pole Qui	81.71	180	P	P	08 52 37.6	+1.6
TXAR	Lajitas Array	142.69	51	PKhKP	PKPpre	08 59 47.0	
	comp=Z,0.1nm,0.4s,baz=273,slow=3.3,SNR=3.7						
TXAR	Lajitas Array	142.69	51		PKPdf	08 59 47.7	-3.6

JMA 10 08:43:22.0±0.2, 25°.78N×125°.50E, h21km±3km, M3.7

IDC 10 08:43:25.6±1.5, 25°.79N×125°.59E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.5/49, mbtmp3.9/4, ML2.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/46, Error ellipse: s-maj=32.1km s-min=27.9km az=102.0

ISC 10 08:43:23.4±1.6**, 25°.64N**±0°.07×**125°.61E**±0°.07**, h7km**±12km**, n21, σ1s.86**/29**, mb3.9**/3**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKM	Ikemajima	0.79	205	P	Pg	08 43 38.5	-0.1
JIKM				S	Sg	08 43 49.5	+0.7
JOGS	Gusukube	0.90	192	P	Pg	08 43 40.5	-0.2
JOGS				S	Sb	08 43 53.9	+0.4
JIRB	Irabujima	0.90	206	P	Pg	08 43 39.8	-1.0
JIRB				S	Sg	08 43 53.3	+0.8
JMJ2	Miyako jima3	0.93	196	P	Pg	08 43 41.1	-0.3
JMJ2				S	Sb	08 43 54.9	+0.4
JKE	Kume jima 2	1.26	57	P	Pn	08 43 44.8	-2.7
JKE				eS	Sb	08 44 00.6	-3.4
JTJ	Tarama	1.29	220	P	Pn	08 43 46.0	-1.9
JTJ				eS	Sb	08 44 03.5	-1.3
JISG	Ishigakijimahi	1.58	229	P	Pn	08 43 49.4	-2.4
JISG				eS	Sn	08 44 09.8	-2.7
JAGN	Aguni-jima	1.75	57	P	Pn	08 43 51.6	-2.6
JAGN				eS	Sn	08 44 13.8	-2.9
JIJ	Ishigaki jima	1.84	227	P	Pn	08 43 53.2	-2.3
JKRS	Kuro-shima	2.02	226	P	Pn	08 43 56.6	-1.3
JJT3	Tamagusuku3	2.02	75	P	Pn	08 43 57.5	-0.5
JJT3				eS	Sn	08 44 22.8	-0.7
IRIF	Iriomote-Funau	2.14	233	P	Pn	08 43 58.2	-1.4
JNTH	Nagotoyohara	2.34	68	P	Pn	08 44 01.4	-0.9
JIH	Iheya	2.53	56	P	Pn	08 44 03.1	-1.9
JOW	Kunigami	2.67	63	P	Pn	08 44 05.2	-1.7
JOW	Kunigami	2.67	63	Pn	Pn	08 44 07.9	+1.0
	3.3nm,0.3s,baz=207,slow=16,SNR=9.1						
JOW				Sn	Sb	08 44 44.8	+0.2
	9.2nm,0.3s,baz=94,slow=18,SNR=9.4						
KSRS	Korea Array	11.94	9	Pn	Pn	08 46 15.9	+1.8
	baz=191,slow=12,SNR=4.4						
SONM	Songino Array	26.83	331	P	P	08 49 05.9	+1.4
	2.6nm,1.1s,baz=146,slow=10,SNR=4.3						
PETK	Petropavlovsk-	36.45	33	LR	LR	09 06 02.0	
	comp=Z,43nm,18.7s,baz=243,slow=37						
ASAR	Alice Springs	49.67	170	P	P	08 52 20.4	+4.4
	0.3nm,0.4s,baz=355,slow=8.1,SNR=4.4						
YKA	Yellowknife Ar	80.04	24	P	P	08 55 36.4	+3.0
	2.1nm,1.0s,baz=302,slow=5.5,SNR=10						

ATH 10 08:47:34.6, 38°.30N×20°.37E, h11km±2km**, ML2.3**/6**, Error ellipse: s-maj=2.0km s-min=0.8km az=175.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.06	137	P	Pg	08 47 36.9	+0.1
KEF1	Kardakata, Kep	0.08	107	P	Pg	08 47 36.9	-0.1
KEF1				S	Sg	08 47 38.6	-0.2
KEF3	Kipouria, Keph	0.10	191	P	Pg	08 47 37.4	+0.2
KEF3				S	Sg	08 47 39.8	+0.5
LXRA	Lixouri, Kepha	0.11	154	P	Pg	08 47 37.2	-0.2

LXRA S Sg 08 47 40.1 +0.6
ARGA Argostoli. Kep 0.15 146 P Pg 08 47 38.0 0.0
ARGA S Sg 08 47 40.2 -0.2
KEF2 Argostoli. Kep 0.16 147 P Pg 08 47 38.2 0.0
KEF2 S Sg 08 47 40.5 -0.3
KONA Konidatara, Ke 0.20 52 P Pg 08 47 38.7 -0.1
KONA S Sg 08 47 42.0 +0.2
VLS Valsamata 0.21 126 P Pg 08 47 38.7 -0.3
VLS S Sg 08 47 41.9 -0.2
VLS AML AML 08 47 42.2
comp=N,4542μm,0.2s
VLS AML AML 08 47 42.5
comp=E,4756μm,0.1s
FSK Fiskardo 0.22 43 P Pg 08 47 39.0 -0.2
FSK S Sg 08 47 42.4 +0.2
FSK AML AML 08 47 42.8
comp=N,1561μm,0.4s
FSK AML AML 08 47 42.9
comp=E,1795μm,0.2s
EVGI Lefkada island 0.39 35 P Pg 08 47 42.2 -0.1
EVGI S Sg 08 47 48.2 +0.7
VLMS Volimes, Zakyn 0.48 152 P Pg 08 47 43.3 -0.7
VLMS S Sg 08 47 51.0 +0.7
VLMS AML AML 08 47 52.6
comp=E,1042μm,0.1s
VLMS AML AML 08 47 52.6
comp=N,1083μm,0.2s
MGNA Meganis 0.48 43 P Pg 08 47 43.3 -0.7
LKD2 Lefkada island 0.54 25 P Pg 08 47 44.8 -0.2
TSLK Tsoukalades, L 0.57 23 P Pg 08 47 45.3 -0.3
PDO Prodromos 0.70 65 P Pg 08 47 47.5 -0.7
RLS Riolos of Patr 0.90 105 P Pg 08 47 51.4 -0.4
PVO Paravola 0.96 70 P Pg 08 47 52.5 -0.6
PVO AML AML 08 48 13.2
comp=E,262μm,0.2s
PVO AML AML 08 48 14.7
comp=N,183μm,0.5s
DRO Drossia 1.11 108 P Pn 08 47 56.3 +0.3
DRO AML AML 08 48 18.1
comp=E,313μm,0.4s
DRO AML AML 08 48 19.9
comp=N,237μm,0.4s
ANX Ano Chora 1.25 76 P Pg 08 47 58.6 0.0
ANX AML AML 08 48 27.0
comp=N,180μm,0.5s
ANX AML AML 08 48 30.9
comp=E,116μm,0.5s
KALE Kalithea 1.39 86 P Pg 08 48 01.7 +0.4
KLV Kalavryta, Ach 1.42 100 P Pn 08 47 59.9 -0.5
AGG Agios Georgios 1.69 64 P Pg 08 48 06.4 -0.7

IDC 10 08:51:07.9±2.6, 28.70N×140.83E, h79km±29km, mb3.5/7, mb1 3.7/7, mb1mx3.3/40, mbtmp3.8/7, Error ellipse: s-maj=33.0km s-min=19.2km az=82.0
JMA 10 08:51:08.3, 28.87N×141.51E, h112km, M3.9
NEIC 10 08:51:09.0±1.3, 28.6N±0.1×140.8E±0.2, h90km±9km, mb4.8/7, Error ellipse: s-maj=26.7km s-min=12.3km az=63.0
ISC 10 08:51:09.4±0.7, 28.72N±0.08×141.0E±0.2, h94km, n34, σ1s00/37, mb4.1/10, Bonin Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CBIJ Chichi jima 1.92 147 P Pn 08 51 40.0 -0.7
CBIJ S Sn 08 52 04.4 -0.1
JCJ Chichijima 1.92 147 P Pn 08 51 40.0 -0.7
76nm,0.3s,baz=304,slow=15,SNR=55
JCJ S Sn 08 52 04.5 -0.1
278nm,0.3s,baz=288,slow=22,SNR=16
JHH2 Haha-jima-NKT2 2.32 153 P Pn 08 51 45.9 0.0
JHH2 eS Sn 08 52 14.2 +0.3
BSO1 Boso 1 5.92 360 P Pn 08 52 34.2 +0.3
BSO3 Boso 3 6.08 356 P Pn 08 52 35.7 -0.7
BSO4 Boso 4 6.28 355 P Pn 08 52 40.2 +0.9
JOD2 Odawara 2 6.72 346 P Pn 08 52 45.5 0.0
JHU Hanno 7.26 349 P Pn 08 52 53.1 +0.4
JRY Ryogami san 7.49 347 P Pn 08 52 56.8 +0.9
JAG Ashikaga 7.79 351 P Pn 08 52 58.5 -1.5
JHO Hitachi 7.88 357 P Pn 08 52 59.6 -1.5
MJAR Matsushiro Arr 8.15 344 Pn Pn 08 53 06.2 +1.3
MAJO Matsushiro 8.15 344 P Pn 08 53 06.6 +1.7
MJB9 Matsu-Tunnel 8.15 344 Pn Pn 08 53 06.2 +1.2
JFK Kawauchi 8.62 359 P Pn 08 53 09.4 -1.9
KLR Kul'dur 21.68 343 P P 08 55 51.3 -1.0
3.1nm,0.7s,baz=171,slow=8.4,SNR=11
TIXI Tiksi 43.50 354 P P 08 59 02.8 -0.1
1.8nm,0.3s,baz=193,slow=4.0,SNR=6.6
TIXI Tiksi 43.50 354 P P 08 59 03.0 0.0
TIXI IAmb IAmb 09 00 23.7
comp=Z,2.4nm,0.3s
WB0 Warramunga Arr 48.63 188 P P 08 59 43.0 -0.8
WB0 IAmb IAmb 09 00 35.5
comp=Z,26nm,1.6s
WR0 Warramunga Arr 48.80 188 P P 08 59 44.9 -0.2
WRA Warramunga Arr 48.81 188 P P 08 59 44.5 -0.7
comp=Z,0.4nm,0.4s,baz=6.5,slow=8.2,SNR=8.8
WRA Warramunga Arr 48.81 188 P P 08 59 44.5 -0.7
KURK Kurchatov 51.12 314 P P 09 00 01.4 -0.9
IMAR Indian Mountai 54.07 27 P P 09 00 26.0 +2.1
ILAR Eielson Array 56.79 29 P P 09 00 43.7 +0.2
comp=Z,0.7nm,1.0s,baz=268,slow=6.4,SNR=3.9
ILAR Eielson Array 56.79 29 P P 09 00 44.5 +1.1
INK Inuvik 61.99 25 P P 09 01 20.1 +1.0
baz=271,slow=1.9
INK Inuvik 61.99 25 P P 09 01 20.3 +1.2
INK IAmb IAmb 09 01 52.9
comp=Z,11nm,1.8s
ABKAR Akbulak array 63.23 314 P P 09 01 26.0 -1.7
AKTO Aktyubinsk 64.15 315 P P 09 01 34.2 +0.5
comp=Z,0.8nm,0.5s,baz=42,slow=14,SNR=4.3
YKA Yellowknife Ar 71.21 28 P P 09 02 19.2 +1.3
comp=Z,0.1nm,0.3s,baz=292,slow=6.6,SNR=3.2
FIA1 FINESS Array S 76.04 333 P P 09 02 46.2 +0.1
FIA1 IAmb IAmb 09 03 37.9
comp=Z,65nm,1.8s
FINES FINESS Array B 76.04 333 P P 09 02 45.9 -0.2
comp=Z,1.6nm,0.4s,baz=74,slow=4.5,SNR=24
FINES FINESS Array B 76.04 333 P P 09 02 46.1 0.0

IDC 10 09:03:26.8±1.8, 34.09N×24.49E, h0km, mb3.7/2, mb1 3.4/4, mb1mx3.2/32, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=79.8km s-min=26.6km az=136.0
ATH 10 09:03:27.8, 34.00N×24.22E, h30km±2km, ML2.2/7, Error ellipse: s-maj=5.1km s-min=2.5km az=358.0
HLW 10 09:03:30.2, 34.20N×24.61E, h20km±27km, Md3.1, Ml3.4
THE 10 09:03:31.2, 34.15N×24.24E, h14km, ML3.2/5, Error ellipse: s-maj=1.3km s-min=0.9km az=227.0
GII 10 09:03:38.0±1.2, 34.18N×25.02E, h100km
ISC 10 09:03:29.5±1.5, 34.07N±0.04×24.33E±0.07, h17km±10km, n41, σ1s06/50, Crete

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GVD Gavdhos 0.79 346 P Pg 09 03 44.5 -0.4
GVD S Sb 09 03 55.3 +0.1
3μm,0.5s
GVD Gavdhos 0.79 346 P Pg 09 03 44.6 -0.4
GVD AML AML 09 03 59.0
comp=E,6014μm,0.5s
GVD AML AML 09 04 01.3
comp=N,7753μm,0.4s
GVDS Gavdos 0.79 346 P Pg 09 03 44.7 -0.3
GVDS S Sb 09 03 55.1 -0.2
comp=N,1μm,0.4s
SIVA Sivas 1.02 23 P Pb 09 03 49.5 +0.8
SIVA S Sg 09 04 03.4 +0.6
comp=N,3μm,0.7s
SIVA Sivas 1.02 23 P Pb 09 03 48.2 -0.5
SIVA S Sn 09 04 05.2 +2.1
SIVA AML AML 09 04 06.9
comp=E,5883μm,0.6s
SIVA AML AML 09 04 09.3
comp=N,5747μm,0.9s
KNDR Palaiochora Ch 1.27 336 P Pn 09 03 52.7 +0.2
KNDR S Sn 09 04 08.9 -0.3
comp=N,438nm,0.7s
IDI Anoyia 1.30 21 P Pn 09 03 52.9 0.0
IDI AML AML 09 04 13.3
comp=N,578μm,0.5s
IDI AML AML 09 04 15.2
comp=E,878μm,0.7s
VAM Vamos 1.33 356 P Pn 09 03 53.0 -0.4
VAM Vamos 1.33 356 P Pn 09 03 52.9 -0.4
VAM AML AML 09 04 19.8
comp=E,1326μm,0.8s
VAM AML AML 09 04 20.9
comp=N,998μm,0.6s
IMMV Iera Moni Meta 1.41 349 P Pn 09 03 53.9 -0.5
IMMV S Sb 09 04 11.8 -1.3
comp=N,1μm,0.6s
IMMV Iera Moni Meta 1.41 349 P Pn 09 03 54.1 -0.3
IMMV AML AML 09 04 20.3
comp=E,2565μm,0.8s
IMMV AML AML 09 04 22.6
comp=N,1854μm,0.5s
LAST Lasithi 1.44 41 P Pn 09 03 55.4 +0.5
LAST Lasithi 1.44 41 P Pn 09 03 55.3 +0.5
LAST AML AML 09 04 27.0
comp=N,548μm,0.9s
LAST AML AML 09 04 36.5
comp=E,469μm,0.7s
NPS Neapolis 1.59 41 P Pn 09 03 58.0 +1.1
NPS Neapolis 1.59 41 P Pn 09 03 57.9 +1.1
NPS AML AML 09 04 29.5
comp=N,384μm,0.9s
NPS AML AML 09 04 32.1
comp=E,525μm,0.5s
ZKR Zakros 1.88 56 P Pn 09 04 02.1 +1.4
ANKY Antikythira Is 1.98 335 P Pn 09 04 02.8 +0.6
KTHA Kythira Island 2.41 335 P Pn 09 04 08.4 +0.2
SLUM Salum 2.68 164 P Pn 09 04 14.2 +2.4
baz=169
SLUM AMP 09 04 00.0
baz=169
SLUM S Sn 09 04 45.2 +1.3
baz=169
KARP Karpathos 2.76 57 P Pn 09 04 14.9 +2.0
KARP Karpathos 2.76 57 P Pn 09 04 14.5 +1.6
IOSP Ios island 2.76 16 P Pn 09 04 12.5 -0.5
VLI Veliai 2.87 337 P Pn 09 04 14.3 -0.2
DYR Agios Nikonas 3.14 329 P Pn 09 04 18.7 +0.6
PYL PYLOS 3.52 324 P Pn 09 04 22.6 -0.7
ITM Ithomi 3.67 328 P Pn 09 04 25.5 +0.1
SWA2 4.91 168 P Pn 09 04 44.1 +1.6
baz=171
SWA2 S Sn 09 05 39.7 +0.8
baz=171
CSS Mathiatis 7.49 81 Pn Pn 09 05 16.4 -1.5
HFRF Wahat Farafira 7.71 152 P Pn 09 05 22.1 +1.1
baz=154
HFRF S Sn 09 06 44.6 -3.3
baz=154
GLL Jalalah 7.71 124 P Pn 09 05 21.1 0.0
baz=125
KZIT Kziot 9.07 108 Pn Pn 09 05 39.5 -0.2
KZIT Sn Sn 09 07 15.2 -6.2
GRB Gharib 9.27 126 P Pn 09 05 43.3 +0.9
baz=128
BRTR Keskin Array B 9.35 50 Pn Pn 09 05 42.8 -0.7
comp=E,0.1nm,0.3s,baz=235,slow=14,SNR=2.8
HMDT Nahal Hemdat 9.56 98 Pn Pn 09 05 44.9 -1.5
PRNI Paran 9.78 109 Pn Pn 09 05 50.1 +0.8
PRNI Sn Sn 09 07 32.0 -6.7
HRFI Mount Harif 9.94 111 Pn Pn 09 05 51.9 +0.3
HRFI Sn Sn 09 07 36.2 -6.5
MBRI Mt Berech 9.96 112 Pn Pn 09 05 51.6 -0.2
MBRI Sn Sn 09 07 36.7 -6.5
EIL Elat 10.04 113 Pn Pn 09 05 52.4 -0.5
EIL Sn Sn 09 07 38.0 -7.2
AKASG Malin Array Be 17.00 11 Pn Pn 09 07 25.5 -0.8
comp=E,0.9nm,0.3s,baz=200,slow=10,SNR=4.8
TORD Torodi Ar. Bea 29.26 230 P P 09 09 31.6 +0.8
comp=E,0.2nm,0.5s,baz=33,slow=8.6,SNR=2.6
MKAR Makanchi Array 44.95 56 P P 09 11 42.9 -0.6
comp=E,0.9nm,0.6s,baz=272,slow=7.3,SNR=7.6

KRNET 10 09:07:13.6±0.1, 39.64N×73.74E, mb3.2
NNC 10 09:07:14.4±3.5, 39.66N×74.04E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=27.6km s-min=16.4km az=165.0
SOME 10 09:07:16.6, 39.82N×73.67E, h15km
ISC 10 09:07:10.4±1.8, 39.64N±0.07×73.69E±0.03, h17km±15km, n52, σ1s64/80, 19C-14D, Tajikistan-Xinjiang border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ARSB Arslanbob 1.77 342 ⇑iP Pg 09 07 46.8 +2.3
baz=41
ARSB ⇑iS Sg 09 08 11.7 +4.2
baz=41
BTK Batken 2.25 282 ⇓eP Pg 09 07 54.9 +1.3
baz=81
BTK ⇓iS Sg 09 08 25.1 +2.3
baz=81
ARLS Aral 2.27 12 ⇓iP Pg 09 07 54.6 +0.5
baz=11
ARLS ⇓iS Sg 09 08 24.5 +0.9
baz=11
AML Almayashu 2.49 0 ⇑iP Pg 09 07 57.8 -0.5
baz=59
AML ⇑iS Sg 09 08 29.8 -0.8
baz=59
AML Almayashu 2.49 0 P Pg 09 07 58.7 +0.5
SNR=44
NRN Naryn 2.51 44 ⇑iP Pg 09 07 57.6 -1.0
baz=43
NRN ⇑iS Sg 09 08 29.6 -1.7
baz=43
ARK Arkit 2.53 329 ⇑iP Pg 09 07 57.9 -1.0
baz=29
ARK ⇑iS Sg 09 08 30.8 -0.9
baz=29
UCH Uchtor 2.66 13 ⇑iP Pb 09 07 59.8 +1.9
baz=12
UCH ⇑iS Sg 09 08 34.0 -2.1
baz=12
UCH Uchtor 2.66 13 P Pg 09 08 00.7 -0.9
SNR=28
KZA Kyzart 2.71 25 ⇓eP Pb 09 08 00.6 +1.9
baz=25
KZA ⇓iS Sg 09 08 35.0 -2.6
baz=25
KZA Kyzart 2.71 25 P Pg 09 08 02.4 0.0
SNR=24
EKS2 Erkin-Say 3.02 1 ⇓iP Pb 09 08 04.8 +1.0
baz=1.0
EKS2 ⇓iS Sb 09 08 42.2 +1.7
baz=1.0
EKS2 Erkin-Say 3.02 1 P Pg 09 08 08.1 -0.3
SNR=5.6
AAK Ala-Archa 3.06 11 ⇑iP Pb 09 08 05.7 +1.2
baz=11
AAK ⇑iS Sb 09 08 43.4 +1.8
baz=11
AAK Ala-Archa 3.06 11 P Pb 09 08 06.7 +2.1
SNR=14
AAK Ala-Archa 3.06 11 Pn Pb 09 08 06.6 +2.1
6.9nm,0.5s
AAK Lg Lg 09 08 50.9
38nm,0.8s
MRKS Merke 3.13 354 eP Pg 09 08 10.1 -0.2
11nm,0.1s
MRKS eS Sg 09 08 48.9 -1.9
24nm,0.3s
MRKS Merke 3.13 354 Pg Pb 09 08 05.9 +0.3
14nm,0.5s
MRKS Lg Lg 09 08 51.3
19nm,0.4s
KBK Karagaybulak 3.16 17 ⇑iP Pb 09 08 06.9 +0.6
baz=16
KBK ⇑iS Sb 09 08 45.7 +1.1
baz=16
KBK Karagaybulak 3.16 17 P Pb 09 08 08.1 +1.8
SNR=9.4
ULHL Ulahol 3.25 36 ⇓iP Pb 09 08 07.8 +0.1
baz=35
ULHL ⇓iS Sb 09 08 47.4 +0.4
baz=35
ULHL Ulahol 3.25 36 P Pg 09 08 11.7 -0.9
SNR=9.1
BOOM Boomskoye usch 3.32 30 ⇓iP Pb 09 08 08.4 -0.5
baz=30
BOOM ⇓iS Sb 09 08 48.8 -0.3
baz=30
CHMS Chumysh 3.45 13 ⇓Pn Pb 09 08 13.2 +2.1
5.2nm,0.5s
CHMS ⇓Lg Lg 09 09 02.2
15nm,0.7s
KDJ Kajisay 3.63 46 ⇑iP Pb 09 08 13.5 -0.8
baz=45
KDJ ⇑iS Sb 09 08 56.8 -1.3
baz=45
JBG Jabagly 3.66 320 Pg Pb 09 08 14.4 -0.4
4.0nm,0.2s
JBG Lg Lg 09 09 05.3
24nm,0.4s
USP Ospenovka 3.68 9 P Pb 09 08 18.1 +3.1
SNR=7.0
IUG Iuzhnay 3.74 313 eP Pg 09 08 21.4 -0.6
0.7nm,0.2s
IUG eS Sg 09 09 08.2 -2.3
23nm,0.3s
IUG Iuzhnay 3.74 313 Pg Pb 09 08 14.8 -1.2
1.0nm,0.2s
IUG Lg Lg 09 09 05.9
29nm,0.4s
KST Kastek 3.81 26 eP Pg 09 08 24.4 +1.0
2.1nm,0.1s
KST eS Sg 09 09 13.1 +0.3
19nm,0.5s
KST Kastek 3.81 26 Pg Pb 09 08 18.9 +1.6
4.7nm,0.4s
KST Lg Lg 09 09 12.9
19nm,0.6s
DGS Degeres 3.93 23 eP Pg 09 08 26.0 +0.3
4.1nm,0.3s
DGS eS Sg 09 09 15.7 -0.8
19nm,0.3s
DGS Degeres 3.93 23 Pg Pb 09 08 21.1 +1.8
3.2nm,0.7s
DGS Lg Lg 09 09 16.8
16nm,0.6s
IZV Izvestkoviy 4.05 32 eP Pg 09 08 28.1 +0.2
3.1nm,0.2s
IZV eS Sg 09 09 19.8 -0.5
14nm,0.3s
IZV Izvestkoviy 4.05 32 Pg Pb 09 08 22.8 +1.5
3.3nm,0.5s
IZV Lg Lg 09 09 19.6
15nm,0.6s
MTBS Maitube 4.05 30 eP Pg 09 08 28.3 +0.3
3.2nm,0.1s
MTBS eS Sg 09 09 20.3 -0.2
10nm,0.2s
MTBS Maitube 4.05 30 Pg Pb 09 08 23.1 +1.8
4.0nm,0.2s
MTBS Lg Lg 09 09 20.4
12nm,0.3s
TNSS Tian-Shan 4.19 35 eP Pg 09 08 31.0 +0.3
1.9nm,0.2s
TNSS eS Sg 09 09 24.8 -0.1
11nm,0.3s
TNSS Tian-Shan 4.19 35 Pg Pb 09 08 25.7 +1.9
4.1nm,0.4s
TNSS Lg Lg 09 09 24.2
10nm,0.4s
KK31 Karatay Array 4.21 326 ⇑Pn Pb 09 08 20.8 -3.2
0.8nm,0.4s,baz=130,slow=13,SNR=15
KK31 ⇑Sn Sb 09 09 13.0 -1.6
2.9nm,0.3s,baz=136,slow=24,SNR=6.2
KK31 ⇑Lg Lg 09 09 29.7
7.8nm,0.6s,baz=152,slow=24,SNR=4.9
KRBS Karabastau 4.32 19 eP Pg 09 08 33.7 +0.6
2.1nm,0.2s
KRBS eS Sg 09 09 29.3 +0.2
7.5nm,0.3s
MDOK Medeo 4.33 35 eP Pg 09 08 33.3 -0.2
2.4nm,0.1s
MDOK eS Sg 09 09 28.7 -0.9
6.5nm,0.4s
MDOK Medeo 4.33 35 Pg Pb 09 08 28.4 +2.2
1.5nm,0.5s
MDOK Lg Lg 09 09 28.7
7.5nm,0.8s
KOTS Kotyrbulak 4.42 34 eP Pg 09 08 35.2 +0.1
6.2nm,0.2s
KOTS eS Sg 09 09 31.6 -0.7
37nm,0.4s
KOTS Kotyrbulak 4.42 34 Pg Pb 09 08 30.2 +2.5
6.9nm,0.4s
KOTS Lg Lg 09 09 32.0
15nm,0.6s
KTBS Karatobe 4.65 28 eP Pg 09 08 38.9 -0.5
4.4nm,0.4s
KTBS eS Sg 09 09 37.9 -1.7
14nm,0.4s
KTBS Karatobe 4.65 28 Pg Pb 09 08 34.3 +2.8
4.4nm,0.5s
KTBS Lg Lg 09 09 39.0
14nm,0.5s
KUU Kurty 4.69 24 eP Pg 09 08 38.9 -1.4
1.0nm,0.1s
KUU eS Sg 09 09 37.9 -3.1
9.6nm,0.4s
KUU Kurty 4.69 24 Pg Pb 09 08 34.7 +2.5
1.1nm,0.2s
KUU Lg Lg 09 09 40.3
5.6nm,0.5s
CHKK Chushkaly 4.88 29 eP Pg 09 08 43.2 -0.7
0.8nm,0.0s
CHKK eS Sg 09 09 45.1 -2.0
8.6nm,0.2s
CHKK Chushkaly 4.88 29 Pg Pb 09 08 38.0 +2.5
2.1nm,0.3s
CHKK Lg Lg 09 09 45.5
8.1nm,0.6s
ARXS Arharly 5.52 33 Pg Pb 09 08 49.9 +3.6
1.6nm,0.4s
ARXS Lg Lg 09 10 05.7
12nm,0.5s

TRN 10 09:22:02.4, 19.22N×63.34W, h55km, MD2.8, Leeward Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SKI Saint Kitts 1.96 163 eP Pn 09 22 47.3 +14
SKI eS Sn 09 22 59.3 +2.6
ANWB Willy Bob 2.13 136 eP Pn 09 22 40.6 +5.0
ANWB eS Sn 09 22 47.8 -13
NVRH Round Hill, Ne 2.14 161 eP Pn 09 22 47.7 +12
NVRH eS Sn 09 23 01.4 +0.2
NVDO Nevis, Disaste 2.20 162 eS Sn 09 23 04.3 +1.8

IDC 10 09:23:42.8±2.3, 11.22S×119.46E, h0km, mb3.6/2, mb1 3.6/5, mb1mx3.4/48, mbtmp3.5/5, ML3.3/3, Error ellipse: s-maj=166.8km s-min=22.7km az=51.0
ISC 10 09:23:48.9±1.3, 10.9S±0.3×120.3E±0.4, h35km, n6, σ2s54/9, Sumba region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FITZ Fitzroy Crossi 8.79 145 Pn Pn 09 25 54.9 +1.3
0.3nm,0.3s,baz=347,slow=18,SNR=4.8
FITZ Sn Sn 09 27 29.0 -2.4
baz=191,slow=19
WRA Warramunga Arr 16.20 125 Pn P 09 27 38.0 +1.2
0.1nm,0.3s,baz=288,slow=14,SNR=3.2
WRA Sn Sn 09 30 31.6 -1.2
0.2nm,0.3s,baz=302,slow=24,SNR=5.1
ASAR Alice Springs 18.11 136 P Pn 09 28 01.4 +3.6
0.2nm,0.3s,baz=310,slow=12,SNR=8.9
ASAR S Sn 09 31 15.6 -3.3
0.1nm,0.3s,baz=306,slow=22,SNR=3.8
SONM Songino Array 59.80 349 P P 09 33 50.9 +0.2
0.2nm,0.5s,baz=170,slow=6.6,SNR=2.3
MKAR Makanchi Array 66.76 333 P P 09 34 35.1 -1.6
0.6nm,0.4s,baz=147,slow=7.0,SNR=13
KURBB Kurchatov Arra 71.27 333 P P 09 35 03.1 -1.5
baz=146,slow=5.6

NIED 10 09:30:00, 39.70N×143.60E, h14km, Mw4.6 Best double couple: M0 8.88000×10^15 NP1:φs34.00000°, δ62.00000°, λ105.00000°. NP2:φs183.00000°, δ32.00000°, λ63.00000°.
IDC 10 09:30:30.7±0.5, 39.63N×143.45E, h0km, mb4.4/29, mb1 4.5/35, mb1mx4.4/55, mbtmp4.4/35, ML3.3/5, MS3.7/1, Ms1 3.7/1, ms1mx2.9/40, Error ellipse: s-maj=13.7km s-min=11.3km az=105.0

JMA **10** 09:30:32.0±0.2, 39°.67N×143°.61E, h33km, M4.7
MOS **10** 09:30:33.1±1.1, 39°.70N×143°.49E, h27km, mb5.0/45, Error ellipse: s-maj=7.1km s-min=4.3km az=95.3
BJI **10** 09:30:34.6±0.0, 39°.70N×142°.96E, h20km, mB5.0/46, mb4.7/61, Ms4.6/47, Ms7 4.4/45
NEIC **10** 09:30:36±1.3, 39°.69N±0°.06×143°.5E±0°.1, h34km±5km, mb4.7/25, Error ellipse: s-maj=13.7km s-min=7.3km az=107.0
ISC 10 09:30:34.1±0.7, **39°.63N**±0°.04×**143°.61E**±0°.04, **h25**km±4km, **n231**, σ1s.57/269, **mb4.7**/89, **17C-9D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.38**	**283**	P	**Pn**	**09 30 55.4**	**-2.5**
MIYJ	**Miyakonagasawa**	**1.39**	**268**	P	**Pn**	**09 30 55.9**	**-2.0**
MIYJ				eS	**Sn**	**09 31 13.2**	**-2.3**
JKEN	**Kujiedanirisaw**	**1.57**	**292**	P	**Pn**	**09 30 57.7**	**-2.8**
JKEN				eS	**Sn**	**09 31 16.8**	**-3.2**
JANG	**Nango**	**1.77**	**295**	P	**Pn**	**09 31 00.8**	**-2.5**
JOM	**Ohasama**	**1.80**	**266**	P	**Pn**	**09 31 02.3**	**-1.3**
JOM				eS	**Sn**	**09 31 24.2**	**-1.5**
JMK	**Ichinoseki**	**1.98**	**251**	P	**Pn**	**09 31 04.6**	**-1.4**
JIO	**Ouri**	**2.12**	**237**	P	**Pn**	**09 31 06.1**	**-1.9**
JIO				eS	**Sn**	**09 31 31.3**	**-2.2**
JTM	**Tenmabayashi**	**2.27**	**301**	P	**Pn**	**09 31 08.5**	**-1.5**
JTM				eS	**Sn**	**09 31 34.9**	**-2.2**
ERM	**Erimo**	**2.41**	**352**	Pn	**Pn**	**09 31 11.9**	**0.0**
ERM				Sn	**Sn**	**09 31 37.7**	**-2.9**
ERM	**Erimo**	**2.41**	**352**	c iP	**Pn**	**09 31 10.5**	**-1.4**
JOT	**Ohata**	**2.62**	**313**	P	**Pn**	**09 31 13.1**	**-1.8**
JOT				eS	**Sn**	**09 31 43.7**	**-2.3**
JYK	**Kaneyama**	**2.62**	**255**	P	**Pn**	**09 31 14.1**	**-0.9**
JYK				eS	**Sn**	**09 31 45.6**	**-0.4**
JNBK	**Urakawa-nobuka**	**2.73**	**346**	P	**Pn**	**09 31 15.6**	**-0.7**
JNBK				eS	**Sn**	**09 31 48.1**	**-0.4**
JCH	**Churui**	**2.98**	**356**	P	**Pn**	**09 31 18.5**	**-1.4**
JCH				eS	**Sn**	**09 31 52.7**	**-2.2**
JKB	**Kayabe**	**2.99**	**320**	P	**Pn**	**09 31 19.7**	**-0.2**
JFT	**Otama**	**3.32**	**232**	P	**Pn**	**09 31 23.3**	**-1.3**
JFT				eS	**Sn**	**09 32 02.0**	**-1.3**
JAK	**Akkeshi**	**3.46**	**13**	P	**Pn**	**09 31 25.0**	**-1.4**
JAK				eS	**Sn**	**09 32 03.4**	**-3.1**
NMR	**Nemuro--Hokkai**	**4.06**	**22**	⇓iP	**Pn**	**09 31 32.9**	**-1.7**
NMR				eS	**Sn**	**09 32 17.0**	**-4.3**
GLVR	**Golovnino**	**4.34**	**19**	eP	**Pn**	**09 31 37.1**	**-1.4**
GLVR				eS	**Sn**	**09 32 25.0**	**-3.4**
GLVR	comp=Z,324nm,0.5s			pmax	pmax		
GLVR	comp=E,80nm,0.2s			pmax	pmax		
GLVR	comp=N,648nm,0.2s			smax	smax		
GLVR	comp=E,1μm,0.5s			smax	smax		
JKA	**Kamikawa-asahi**	**4.54**	**351**		**Pn**	**09 31 40.6**	**-0.7**
JKA					**Sn**	**09 32 32.4**	**-1.0**
ASAJ	**Asahikawa**	**4.54**	**351**	Pn	**Pn**	**09 31 40.6**	**-0.7**
	comp=E,3.3nm,0.3s,baz=216,slow=14,SNR=26						
ASAJ				Sn	**Sn**	**09 32 32.4**	**-1.0**
	comp=E,4.9nm,0.3s,baz=195,slow=20,SNR=3.5						
GRPR	**Tuman**	**4.65**	**20**	eP	**Pn**	**09 31 41.0**	**-1.7**
GRPR				eS	**Sn**	**09 32 31.5**	**-4.3**
GRPR	comp=E,54nm,0.2s			pmax	pmax		
GRPR	comp=Z,225nm,0.2s			pmax	pmax		
GRPR	comp=E,476nm,0.2s			smax	smax		
GRPR	comp=N,1μm,0.5s			smax	smax		
YUK	**Yuzh-Kuril'sk**	**4.71**	**20**	eP	**Pn**	**09 31 41.5**	**-2.1**
YUK				eS	**Sn**	**09 32 33.7**	**-3.6**
YUK	comp=N,209nm,0.2s			pmax	pmax		
YUK	comp=Z,377nm,0.2s			pmax	pmax		
YUK	comp=E,120nm,0.1s			pmax	pmax		
YUK	comp=E,1μm,0.5s			smax	smax		
YUK	comp=N,1μm,0.4s			smax	smax		
YUK	comp=Z,668nm,17.0s			MLR	MLR		
SHO	**Shikotan**	**4.87**	**29**	eP	**Pn**	**09 31 43.7**	**-2.1**
SHO				eS	**Sn**	**09 32 35.5**	**-5.8**
SHO	comp=E,48nm,0.4s			pmax	pmax		
SHO	comp=Z,71nm,0.4s			pmax	pmax		
SHO	comp=N,20nm,0.2s			pmax	pmax		
SHO	comp=N,503nm,0.5s			smax	smax		
SHO	comp=E,250nm,0.4s			smax	smax		
MJAR	**Matsushiro Arr**	**5.26**	**236**	Pn	**Pn**	**09 31 50.7**	**-0.5**
	comp=E,1.2nm,0.3s,baz=42,slow=12,SNR=67						
MJAR	**Matsushiro Arr**	**5.26**	**236**	Pn	**Pn**	**09 31 51.5**	**+0.2**
MJAR	**Matsushiro Arr**	**5.26**	**236**	P	**Pn**	**09 31 51.5**	**+0.2**
MAJO	**Matsushiro**	**5.26**	**236**	Pn	**Pn**	**09 31 51.3**	**+0.1**
MAJO	**Matsushiro**	**5.26**	**236**	c iP	**Pn**	**09 31 51.4**	**+0.1**
MAJO	comp=Z,53nm,0.9s			pmax	pmax		
MJB9	**Matsu-Tunnel**	**5.26**	**236**	Pn	**Pn**	**09 31 51.6**	**+0.3**
KUR	**Kuril'sk**	**6.42**	**28**	eP	**Pn**	**09 32 06.6**	**-0.5**
KUR				eS	**Sn**	**09 33 16.0**	**-3.5**
KUR	comp=Z,91nm,0.5s			pmax	pmax		
KUR	comp=E,36nm,0.2s			pmax	pmax		
KUR	comp=N,41nm,0.4s			pmax	pmax		
KUR	comp=N,235nm,0.5s			smax	smax		
KUR	comp=E,96nm,0.2s			smax	smax		
INU	**Inuyama**	**6.77**	**233**	Pn	**Pn**	**09 32 12.3**	**+0.4**
JHJ	**Hachijo jima 2**	**7.20**	**207**	Pn	**Pn**	**09 32 17.5**	**-0.2**
	comp=E,24nm,0.3s,baz=61,slow=19,SNR=3.1						
JHJ				Sn	**Sn**	**09 33 31.2**	**-7.5**
	comp=E,19nm,0.3s,baz=63,slow=18,SNR=3.4						
YSS	**Yuzh-Sakhalins**	**7.34**	**355**		**Pn**	**09 32 19.4**	**-0.3**
YSS	**Yuzh-Sakhalins**	**7.34**	**355**	⇓eP	**Pn**	**09 32 19.6**	**-0.2**
YSS				eS	**Sn**	**09 33 40.9**	**-1.4**
YSS	comp=N,30nm,0.9s			pmax	pmax		
YSS	comp=E,30nm,0.9s			pmax	pmax		
YSS	comp=Z,40nm,0.9s			pmax	pmax		
YSS	comp=N,20nm,0.7s			smax	smax		
YSS	comp=E,20nm,1.0s			smax	smax		
USRK	**Ussuriysk Ar.**	**9.79**	**302**	Pn	**Pn**	**09 32 53.4**	**0.0**
	baz=116,slow=15,SNR=36						
MDJ	**Mudanjiang**	**11.54**	**300**	P	**Pn**	**09 33 17.6**	**+0.4**
MDJ				pP		09 33 24.0	
MDJ				sP		09 33 26.9	
MDJ				S	**Sn**	**09 35 23.0**	**-2.2**
MDJ				sS		09 35 33.6	
MDJ	comp=E,15nm,1.0s			pmax	pmax		
MDJ	comp=E,290nm,3.9s			pmax	pmax		
MDJ	comp=E,1μm,12.7s			LR	LR		
MDJ	comp=E,1μm,16.4s			LR	LR		
MDJ	comp=E,2μm,15.7s			LR	LR		
MDJ	**Mudanjiang**	**11.54**	**300**		**Pn**	**09 33 16.6**	**-0.6**
GRNR	**Gornyy**	**12.23**	**338**	⇑iP	**Pn**	**09 33 25.8**	**-0.8**
GRNR				eS	**Sn**	**09 35 41.7**	**-0.4**
GRNR	comp=Z,10.0nm,1.0s			pmax	pmax		
GRNR	comp=N,3.0nm,0.6s			smax	smax		
GRNR	comp=Z,260nm,13.0s			MLR	MLR		
KSRS	**Korea Array**	**12.48**	**265**	Pn	**Pn**	**09 33 31.4**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=88,slow=13,SNR=7.6						
KS19	**Wonju Array Si**	**12.51**	**265**	Pn	**Pn**	**09 33 30.9**	**+0.4**
KSAR	**Wonju Array Be**	**12.51**	**265**	Pn	**Pn**	**09 33 29.4**	**-1.2**
KSAR	**Wonju Array Be**	**12.51**	**265**	P	**Pn**	**09 33 29.4**	**-1.2**
KLR	**Kul'dur**	**12.79**	**322**	Pn	**Pn**	**09 33 33.3**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=125,slow=12,SNR=12						
KLR	**Kul'dur**	**12.79**	**322**	⇑iP	**Pn**	**09 33 33.7**	**-0.6**
KLR	comp=Z,11nm,1.1s			pmax	pmax		
CN2	**Changchun**	**14.19**	**293**	eP	**Pn**	**09 33 54.0**	**+0.6**
CN2				eS	**Sn**	**09 36 30.1**	**+0.1**
CN2	comp=Z,10.0nm,1.4s			pmax	pmax		
CN2	comp=Z,200nm,8.0s			pmax	pmax		
CN2	comp=Z,600nm,17.0s			LR	LR		
CN2	comp=Z,700nm,17.0s			LR	LR		
CN2	comp=Z,900nm,18.0s			LR	LR		
PEA0B	**Petropavlovsk-**	**16.57**	**31**		**P**	**09 34 27.3**	**+0.2**
PEA0B	**Petropavlovsk-**	**16.57**	**31**	P	**P**	**09 34 27.3**	**+0.2**
PEA0B	comp=Z,43nm,1.3s			pmax	pmax		
PETK	**Petropavlovsk-**	**16.57**	**31**	Pn	**P**	**09 34 26.1**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=219,slow=12,SNR=5.3						
PETK	**Petropavlovsk-**	**16.57**	**31**	Pn	**Pn**	**09 34 25.0**	**+0.3**
PET	**Petropavlovsk**	**16.90**	**33**	⇑iP	**P**	**09 34 31.5**	**+0.9**
PET	comp=Z,41nm,1.4s			pmax	pmax		
ZEA	**Zeya**	**17.97**	**327**	eP	**Pn**	**09 34 37.8**	**-4.2**
ZEA	comp=N,27nm,0.9s			pmax	pmax		
ZEA	comp=E,21nm,0.8s			pmax	pmax		
ZEA	comp=Z,28nm,0.8s			pmax	pmax		
ZEA	comp=E,600nm,13.0s			MLR	MLR		
ZEA	comp=Z,1μm,13.0s			MLR	MLR		
ZEA	comp=N,800nm,14.0s			MLR	MLR		
MA2	**Magadan**	**20.47**	**10**	P	**P**	**09 35 10.2**	**+0.3**
MA2	**Magadan**	**20.47**	**10**		Pn	09 35 11.1	-0.9
MA2	comp=Z,41nm,0.9s			IAmb	IAmb	09 35 12.2	
MA2	**Magadan**	**20.47**	**10**	c iP	**P**	**09 35 10.1**	**+0.3**
MA2	comp=Z,38nm,0.9s			pmax	pmax		
BJI	**Beijing**	**21.05**	**280**	eP	**P**	**09 35 12.6**	**-3.6**
BJI	comp=Z,8.0nm,1.1s			pmax	pmax		
BJI	comp=Z,120nm,4.5s			pmax	pmax		
BJI	comp=Z,240nm,10.4s			LR	LR		
BJI	comp=Z,630nm,17.0s			LR	LR		
BJI	comp=Z,440nm,18.9s			LR	LR		
BJT	**Baijiatuau**	**21.06**	**280**	P	**P**	**09 35 13.9**	**-2.4**
BJT	**Baijiatuau**	**21.06**	**280**	P	**P**	**09 35 13.9**	**-2.4**
BJT	comp=Z,9.0nm,0.9s			pmax	pmax		
TIA	**Tai'an**	**21.15**	**269**	P	**P**	**09 35 15.7**	**-1.6**
TIA	comp=Z,29nm,1.0s			pmax	pmax		
NJ2	**Nanjing**	**21.41**	**257**	eP	**P**	**09 35 20.0**	**-0.1**
NJ2	comp=Z,5.0nm,0.5s			pmax	pmax		
SEY	**Seymchan**	**23.92**	**10**	P	**P**	**09 35 46.2**	**+0.4**
	comp=Z,30nm,0.9s,baz=189,slow=7.4,SNR=40						
SEY	**Seymchan**	**23.92**	**10**	⇓iP	**P**	**09 35 45.9**	**+0.1**
YAK	**Yakutsk**	**23.99**	**344**	P	**P**	**09 35 45.0**	**-1.4**
	comp=Z,5.9nm,0.3s,baz=174,slow=1.0,SNR=7.3						
YAK	**Yakutsk**	**23.99**	**344**	eP	**P**	**09 35 44.5**	**-1.9**
YAK				e*PP	**pP**	**09 35 53.2**	**+0.2**
YAK				ePPP	PPP	09 36 20.4	
YAK				eS	**S**	**09 39 58.3**	**-3.3**
YAK				e*SS	**sS**	**09 40 14.2**	**+1.5**
YAK				eSS	**SnSn**	**09 40 42.2**	**-0.3**
YAK				eSSS	SSS	09 40 59.0	
YAK	comp=Z,41nm,1.3s			pmax	pmax		
YAK	comp=N,23nm,1.0s			pmax	pmax		
YAK	comp=E,5.0nm,1.1s			pmax	pmax		
YAK	comp=N,31nm,1.9s			smax	smax		
YAK	comp=E,52nm,1.9s			smax	smax		
HHC	**Hu-ho-hao-te**	**24.43**	**283**	eP	**P**	**09 35 50.6**	**-0.3**
HHC	comp=E,6.0nm,1.1s			pmax	pmax		
HHC	comp=E,50nm,5.3s			pmax	pmax		
YULB	**Yu-li**	**24.88**	**236**	P	**P**	**09 35 51.2**	**-3.8**
YULB	comp=Z,39nm,1.3s			IAmb	IAmb	09 35 55.8	
WHN	**Wuhan**	**25.52**	**258**	⇑iP	**P**	**09 35 59.8**	**-0.8**
WHN				sP	**pwP**	**09 36 12.1**	**+1.8**
WHN	comp=Z,94nm,0.9s			pmax	pmax		
BTO	**Baotou**	**25.62**	**283**	eP	**P**	**09 36 00.3**	**-1.4**
GUMO	**Guam**	**25.96**	**177**	P	**P**	**09 36 04.7**	**-0.1**
	comp=Z,38nm,0.8s,baz=30,slow=20,SNR=2.4						
BOD	**Bodaibo**	**26.36**	**323**	eP	**P**	**09 36 06.9**	**-1.2**
BOD	comp=Z,27nm,1.0s			pmax	pmax		
ULN	**Ulaanbaatar**	**27.45**	**300**	P	**P**	**09 36 18.4**	**+0.2**
ULN	comp=Z,22nm,1.1s			IAmb	IAmb	09 36 19.3	
ULN	**Ulaanbaatar**	**27.45**	**300**	P	**P**	**09 36 18.4**	**+0.2**
ULN	comp=Z,22nm,1.1s			pmax	pmax		
SONM	**Songino Array**	**27.89**	**299**	P	**P**	**09 36 20.8**	**-1.4**
	comp=Z,7.3nm,0.8s,baz=90,slow=8.0,SNR=43						
SONM	**Songino Array**	**27.89**	**299**	P	**P**	**09 36 21.6**	**-0.5**
SONM	**Songino Array**	**27.89**	**299**	P	**P**	**09 36 21.6**	**-0.5**
SONM	comp=Z,9.0nm,1.0s			pmax	pmax		
XAN	**Xi'an**	**28.21**	**270**	P	**P**	**09 36 23.5**	**-1.4**
XAN	comp=Z,12nm,1.0s			pmax	pmax		
XAN	comp=Z,140nm,4.9s			pmax	pmax		
XAN	comp=Z,240nm,13.6s			LR	LR		
XAN	comp=Z,450nm,12.5s			LR	LR		
XAN	comp=Z,470nm,16.3s			LR	LR		
TLY	**Talaya**	**30.04**	**307**	eP	**P**	**09 36 41.8**	**+0.8**
TLY				eS	**S**	**09 41 44.9**	**+7.2**
TLY	comp=Z,17nm,0.9s			pmax	pmax		
TLY	comp=Z,568nm,13.0s			MLR	MLR		
ZAK	**Zakamensk**	**30.13**	**304**	eP	**P**	**09 36 40.6**	**-1.3**
ZAK	comp=Z,8.0nm,1.4s			pmax	pmax		
BILL	**Bilibino**	**31.05**	**16**	⇓iP	**P**	**09 36 50.3**	**+0.6**
BILL	comp=Z,7.0nm,1.0s			pmax	pmax		
LZH	**Lanzhou**	**31.42**	**276**	eP	**P**	**09 36 53.4**	**-0.1**
LZH				pP	pP	09 36 57.7	-2.4
LZH				sP	sP	09 37 00.6	-2.2
LZH	comp=Z,16nm,1.0s			pmax	pmax		
LZH	comp=Z,65nm,4.3s			pmax	pmax		
LZH	comp=Z,510nm,10.3s			LR	LR		
LZH	comp=Z,680nm,11.9s			LR	LR		
LZH	comp=Z,760nm,14.1s			LR	LR		
MOY	**Mondy**	**31.68**	**307**	eP	**P**	**09 36 55.7**	**+0.1**
TIXI	**Tiksi**	**32.95**	**351**	P	**P**	**09 37 06.2**	**-0.1**
	comp=Z,1.8nm,0.3s,baz=155,slow=4.5,SNR=3.7						
TIXI	**Tiksi**	**32.95**	**351**	⇓iP	**P**	**09 37 05.8**	**-0.5**
TIXI	comp=Z,2.0nm,1.0s			pmax	pmax		
GYA	**Guiyang**	**33.41**	**258**	⇑iP	**P**	**09 37 09.8**	**-1.1**
GYA	comp=Z,20nm,0.9s			pmax	pmax		
GYA	comp=Z,150nm,3.5s			pmax	pmax		
CD2	**Chengdu**	**33.46**	**267**	P	**P**	**09 37 10.0**	**-1.3**
CD2				S	**S**	**09 42 29.2**	**-2.3**
CD2	comp=Z,20nm,0.6s			pmax	pmax		
CD2	comp=Z,1μm,10.0s			LR	LR		
CD2	comp=Z,980nm,12.4s			LR	LR		
GTA	**Gaotai**	**33.54**	**284**	⇓P	**P**	**09 37 12.3**	**+0.3**
GTA				pP	pP	09 37 19.4	+0.8
GTA				sP	pwP	09 37 23.3	+1.4
GTA				PcP	**PcP**	**09 39 53.3**	**+1.0**
GTA	comp=Z,14nm,1.1s			pmax	pmax		
GTA	comp=Z,110nm,4.2s			pmax	pmax		
GTA	comp=Z,240nm,17.2s			LR	LR		
GTA	comp=Z,740nm,16.5s			LR	LR		
GTA	comp=Z,790nm,16.8s			LR	LR		
DAV	**Davao City (W)**	**36.25**	**211**	LR	LR	09 50 00.9	
	comp=Z,127nm,20.9s,baz=60,slow=32						
KMI	**Kunming**	**37.10**	**260**	P	**P**	**09 37 43.6**	**+0.7**
KMI	comp=Z,15nm,0.8s			pmax	pmax		
ANM	**Nome**	**38.48**	**33**	P	**P**	**09 37 55.0**	**+1.2**
ANM	**Nome**	**38.48**	**33**	P	**P**	**09 37 55.0**	**+1.2**
ANM	comp=Z,10.0nm,1.4s			pmax	pmax		
WMQ	**Urumqi**	**41.27**	**295**	eP	**P**	**09 38 18.1**	**+0.7**
WMQ				pP	pwP	09 38 27.3	+0.2
WMQ				sP	sP	09 38 30.5	+3.6
WMQ	comp=Z,29nm,1.1s			pmax	pmax		
WMQ	comp=Z,78nm,5.1s			pmax	pmax		
WMQ	comp=Z,470nm,29.2s			LR	LR		
WMQ	comp=Z,950nm,28.9s			LR	LR		
ZALV	**Zalesovo Beam**	**41.50**	**310**	P	**P**	**09 38 18.9**	**-0.1**
	comp=Z,7.3nm,0.8s,baz=88,slow=7.8,SNR=22						
ZALV				PcP	**PcP**	**09 40 16.8**	**+0.6**
	comp=Z,3.6nm,0.8s,baz=74,slow=3.6,SNR=4.2						
ZALV	**Zalesovo Beam**	**41.50**	**310**	P	**P**	**09 38 18.3**	**-0.7**
IMAR	**Indian Mountai**	**43.54**	**32**	P	**P**	**09 38 36.5**	**+1.1**
CMAR	**Chiang Mai Arr**	**43.84**	**254**	P	**P**	**09 38 38.1**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=48,slow=7.1,SNR=9.1						
CMAR	**Chiang Mai Arr**	**43.84**	**254**	i P	**P**	**09 38 38.5**	**0.0**
CMAR	comp=Z,1.0nm,0.4s			pmax	pmax		
MK31	**Makanchi Array**	**44.26**	**300**	IAmb	IAmb	09 38 42.2	
	comp=Z,11nm,0.9s						
MK31	**Makanchi Array**	**44.26**	**300**	i P	**P**	**09 38 41.0**	**-0.5**
MKAR	**Makanchi Array**	**44.26**	**300**	P	**P**	**09 38 41.1**	**-0.4**
	comp=Z,11nm,0.9s,baz=82,slow=8.4,SNR=79						
MKAR				PcP	**PcP**	**09 40 25.9**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=126,slow=2.5,SNR=1.7						
MKAR	**Makanchi Array**	**44.26**	**300**	P	**P**	**09 38 40.5**	**-1.0**
MKAR	**Makanchi Array**	**44.26**	**300**	c eP	**P**	**09 38 41.0**	**-0.5**
MKAR	comp=Z,11nm,0.9s			pmax	pmax		
MAKZ	**Makanchi**	**44.46**	**300**	P	**P**	**09 38 42.4**	**-0.7**
MAKZ	comp=Z,18nm,1.1s			IAmb	IAmb	09 38 44.0	
MAKZ	**Makanchi**	**44.46**	**300**	P	**P**	**09 38 42.4**	**-0.7**
MAKZ	comp=Z,18nm,1.1s			pmax	pmax		
KURK	**Kurchatov**	**45.74**	**306**	P	**P**	**09 38 52.5**	**-0.6**
KURK	**Kurchatov**	**45.74**	**306**	c iP	**P**	**09 38 52.4**	**-0.7**
KURK	comp=Z,22nm,0.9s			pmax	pmax		
COLA	**College**	**45.96**	**34**	P	**P**	**09 38 53.3**	**-1.4**
COLA	comp=Z,16nm,1.0s			pmax	pmax		
IL31		**46.38**	**34**	P	**P**	**09 38 59.1**	**+1.1**
IL31	comp=Z,6.9nm,1.1s			IAmb	IAmb	09 39 12.2	
ILAR	**Eielson Array**	**46.38**	**34**	P	**P**	**09 38 59.0**	**+1.1**
	comp=Z,2.1nm,0.8s,baz=264,slow=6.5,SNR=22						
ILAR	**Eielson Array**	**46.38**	**34**	P	**P**	**09 38 58.6**	**+0.6**
BMAR	**Burnt Mountain**	**47.22**	**30**	P	**P**	**09 39 06.4**	**+1.7**
TAPN	**Taplejung**	**47.52**	**273**	eP	**P**	**09 39 07.8**	**0.0**
	comp=Z,47nm,1.2s						
ODAN	**Odare**	**48.01**	**272**	eP	**P**	**09 39 11.9**	**+0.4**
	comp=Z,33nm,0.7s						
PRZ	**Przheval'sk**	**48.16**	**296**	P	**P**	**09 39 12.2**	**-0.3**
PRZ	comp=Z,14nm,0.8s			pmax	pmax		
JIRN	**Jiri**	**48.53**	**274**	eP	**P**	**09 39 16.0**	**+0.3**
	comp=Z,25nm,0.7s						
RAMN	**Ramite**	**48.57**	**273**	eP	**P**	**09 39 15.6**	**-0.3**
	comp=Z,49nm,0.9s						
GUN	**Gumba**	**48.65**	**275**	eP	**P**	**09 39 16.5**	**-0.1**
	comp=Z,50nm,0.7s						
BCAR	**Beaver Creek A**	**48.78**	**36**	P	**P**	**09 39 18.4**	**+1.7**
KKN	**Kakani**	**49.17**	**275**	eP	**P**	**09 39 20.2**	**-0.2**
	comp=Z,29nm,0.6s						
PKI	**Pulchoki**	**49.18**	**274**	eP	**P**	**09 39 20.0**	**-0.6**
	comp=Z,9.5nm,0.6s						
PKIN	**Phulchoki**	**49.19**	**274**	eP	**P**	**09 39 20.6**	**0.0**
	comp=Z,11nm,0.6s						
DMN	**Daman**	**49.39**	**275**	eP	**P**	**09 39 22.1**	**-0.1**
	comp=Z,11nm,0.5s						
GKN	**Gorkha**	**49.56**	**275**	eP	**P**	**09 39 23.1**	**-0.2**
	comp=Z,15nm,0.5s						
DANN	**Dangsing**	**50.06**	**276**	eP	**P**	**09 39 27.3**	**0.0**
	comp=Z,84nm,0.8s						
BRVK	**Borovoye**	**50.19**	**311**	P	**P**	**09 39 27.3**	**-0.2**
BRVK	comp=Z,9.5nm,0.8s			IAmb	IAmb	09 39 28.7	
BRVK	**Borovoye**	**50.19**	**311**	i P	**P**	**09 39 26.8**	**-0.8**
BRVK	comp=Z,10.0nm,0.9s			pmax	pmax		
KOLN	**Koldanda**	**50.47**	**276**	eP	**P**	**09 39 30.1**	**-0.2**
	comp=Z,58nm,1.2s						
AAK	**Ala-Archa**	**50.81**	**297**	P	**P**	**09 39 32.2**	**-0.4**
	comp=Z,2.9nm,0.7s,baz=87,slow=6.2,SNR=8.6						
AAK	**Ala-Archa**	**50.81**	**297**	P	**P**	**09 39 32.4**	**-0.2**
AAK	comp=Z,5.6nm,1.1s			IAmb	IAmb	09 39 33.4	
AAK	**Ala-Archa**	**50.81**	**297**	⇓iP	**P**	**09 39 32.6**	**0.0**
AAK	comp=Z,4.0nm,1.0s			pmax	pmax		
KSH	**Kashi**	**50.96**	**293**	P	**P**	**09 39 37.7**	**+4.0**
KSH				pP	sP	09 39 43.4	+0.1
KSH				PcP	**PcP**	**09 40 51.4**	**+1.6**
KSH				PP	**PP**	**09 41 35.2**	**+5.1**
KSH				PcS	**PcS**	**09 44 48.5**	**+1.1**
KSH				S	**S**	**09 46 52.8**	**+3.6**
KSH	comp=Z,35nm,1.3s			pmax	pmax		
KSH	comp=Z,160nm,5.9s			pmax	pmax		
KSH	comp=Z,160nm,6.7s			LR	LR		
KSH	comp=Z,170nm,5.6s			LR	LR		
KSH	comp=Z,750nm,16.2s			LR	LR		
INK	**Inuvik**	**51.28**	**28**	P	**P**	**09 39 37.0**	**+1.4**
	comp=Z,2.5nm,0.8s,baz=301,slow=6.2,SNR=11						
INK	**Inuvik**	**51.28**	**28**	P	**P**	**09 39 37.0**	**+1.4**
KK31	**Karatay Array**	**53.35**	**299**	i P	**P**	**09 39 50.3**	**-1.0**
KKAR	**Karatay Array**	**53.35**	**299**	P	**P**	**09 39 50.5**	**-0.8**
KKAR	**Karatay Array**	**53.35**	**299**	P	**P**	**09 39 50.5**	**-0.8**
SVE	**Sverdlovsk**	**54.37**	**318**	⇑eP	**P**	**09 39 59.2**	**+0.7**
SVE	comp=Z,26nm,1.3s			pmax	pmax		
SVE	comp=Z,722nm,14.0s			MLR	MLR		
BTK	**Batken**	**54.37**	**296**	P	**P**	**09 39 59.0**	**+0.1**
BTK	comp=Z,13nm,1.4s			pmax	pmax		
NIL	**Nilore**	**55.47**	**288**	P	**P**	**09 40 07.7**	**+0.8**
NIL	comp=Z,12nm,0.6s			pmax	pmax		
ARU	**Arti**	**55.58**	**318**	P	**P**	**09 40 07.2**	**-0.1**
	comp=Z,5.6nm,0.9s,baz=54,slow=5.4,SNR=19						
ARU	**Arti**	**55.58**	**318**	c iP	**P**	**09 40 07.7**	**+0.4**

ARU 09 41 06.6
ARU 09 42 06.5
ARU S S 09 47 51.9 +0.7
ARU SS SS 09 51 37.6 +1.8
ARU pmax pmax
comp=Z,31nm,1.1s
ARU MLR MLR
comp=Z,553nm,15.0s
MDSI Maura Dua 56.96 229 P **P 09 40 17.3 -0.3**
comp=Z,9.9nm,1.2s
AB31 Akbulak array 57.61 310 *i* P **P 09 40 21.5 -0.3**
ABKAR Akbulak array 57.61 310 P **P 09 40 21.4 -0.5**
KBL Kabul 58.12 290 P **P 09 40 25.5 -0.4**
KBL pmax pmax
comp=Z,12nm,0.9s
AKTO Aktyubinsk 58.24 311 P **P 09 40 25.1 -1.2**
comp=Z,4.7nm,0.8s,baz=74,slow=13,SNR=14
AKTO Aktyubinsk 58.24 311 *i* P **P 09 40 25.6 -0.7**
AKTO pmax pmax
comp=Z,7.0nm,0.8s
KIRV Kirov 59.23 323 P **P 09 40 32.4 -0.5**
comp=Z,14nm,0.6s,baz=104,slow=8.3,SNR=6.6
PRGR Permogore 59.54 327 *e*P **P 09 40 32.2 -2.8**
PRGR *e**PP **pwP 09 40 45.5 +0.4**
PRGR pmax pmax
comp=Z,11nm,0.9s
RES Resolute Bay 59.65 15 IAmb IAmb 09 40 47.8
comp=Z,5.6nm,1.1s
RES Resolute Bay 59.65 15 P **P 09 40 36.1 +0.5**
RES pmax pmax
comp=Z,5.0nm,1.2s
FITZ Fitzroy Crossi 59.83 200 P **P 09 40 37.6 +0.1**
comp=Z,7.3nm,1.0s,baz=82,slow=7.1,SNR=2.5
WRAB Tennant Creek 59.88 190 ⇑*i*P **P 09 40 37.4 -0.4**
WRAB pmax pmax
comp=Z,6.0nm,1.1s
WRA Warramunga Arr 59.89 190 P **P 09 40 37.1 -0.8**
comp=Z,1.3nm,0.6s,baz=9.7,slow=7.3,SNR=9.2
YKA Yellowknife Ar 60.69 31 P **P 09 40 43.6 +0.7**
comp=Z,0.8nm,0.6s,baz=296,slow=6.7,SNR=13
YKA Yellowknife Ar 60.69 31 *i* P **P 09 40 44.2 +1.3**
YKA pmax pmax
comp=Z,1.0nm,0.6s
KLMR Klimovskoe 62.49 328 *e*P **P 09 40 53.4 -1.7**
KLMR AMP 09 40 56.8
comp=Z,19nm,1.3s
KLMR *e*PP **PP 09 43 10.8 -1.4**
KLMR Klimovskoe 62.49 328 *e*P **P 09 40 53.3 -1.8**
KLMR *e* 09 43 10.7
KLMR pmax pmax
comp=Z,19nm,1.3s
DAG Danmarks Havn 63.33 355 *i* P **P 09 41 00.6 +0.2**
comp=Z,8.6nm,1.0s
DAG Danmarks Havn 63.33 355 *i* P **P 09 41 00.6 +0.2**
DAG pmax pmax
comp=Z,9.0nm,1.0s
ASAR Alice Springs 63.62 190 P **P 09 41 03.4 +0.4**
comp=Z,0.9nm,0.7s,baz=10,slow=7.0,SNR=14
GEYT Alibeck 64.10 299 P **P 09 41 06.2 0.0**
comp=Z,3.3nm,0.7s,baz=64,slow=3.4,SNR=7.4
LTY Liberty 65.62 48 P **P 09 41 17.5 +1.5**
LTY IAmb IAmb 09 41 18.2
comp=Z,5.2nm,1.1s
VRH Novokhopyorsk 66.81 318 *e*P **P 09 41 22.9 -0.6**
VRH pmax pmax
comp=Z,10.0nm,0.9s
OBN Obninsk 67.05 323 *i* P **P 09 41 22.1 -2.8**
OBN pmax pmax
comp=Z,7.0nm,0.9s
FIA1 FINESS Array S 67.32 332 P **P 09 41 26.2 -0.3**
FINES FINESS Array B 67.32 332 P **P 09 41 26.7 +0.2**
comp=Z,9.6nm,0.8s,baz=87,slow=17
FINES FINESS Array B 67.32 332 *i* P **P 09 41 27.1 +0.6**
FINES pmax pmax
comp=Z,10.0nm,0.9s
PINE Pine Mountain 67.35 51 P **P 09 41 30.2 +2.9**
SUMG Summit 68.08 1 *i* P **P 09 41 32.4 +0.8**
comp=Z,20nm,0.9s
SUMG Summit 68.08 1 *i* P **P 09 41 32.4 +0.8**
SUMG pmax pmax
comp=Z,21nm,0.9s
VSR Storozhevoye 68.11 319 *e*P **P 09 41 31.4 -0.3**
VSR pmax pmax
comp=Z,10.0nm,1.2s
VSU Vasula 69.09 330 *ce*P **P 09 41 39.5 +1.9**
VSU pmax pmax
comp=Z,31nm,1.3s
GOF Gofitskoye 69.65 312 ⇑*e*P **P 09 41 42.5 +1.1**
ZEI Tsey 70.48 310 *e*P **P 09 41 44.9 -1.9**
ZEI pmax pmax
comp=Z,9.0nm,1.0s
KIV Kislovodsk 70.51 311 *e*P **P 09 41 47.9 +1.1**
KIV pmax pmax
comp=Z,89nm,1.1s
KBZ Khabaz 70.52 311 P **P 09 41 47.3 +0.6**
comp=Z,11nm,0.9s,baz=69,slow=2.5,SNR=18
KBZ Khabaz 70.52 311 *c i*P **P 09 41 47.0 +0.3**
SHA1 Shidzhatmaz 70.65 311 ⇓*i*P **P 09 41 48.9 +1.1**
GNI Garni 71.53 307 ⇑*i*P **P 09 41 53.3 +0.1**
GNI pmax pmax
comp=Z,26nm,1.4s
KVN Kaiserville 71.82 54 IAmb IAmb 09 42 07.2
comp=Z,18nm,1.5s
NVAR Mina Array Bea 72.06 55 P **P 09 41 58.5 +2.1**
comp=Z,1.8nm,0.9s,baz=294,slow=5.6,SNR=8.9
NC405 NORSAR Array S 72.24 338 P **P 09 41 57.4 +0.6**
NB2 NORSAR Subarra 72.45 338 P **P 09 41 58.9 +0.8**
comp=Z,2.4nm,0.8s,baz=40,slow=6.2
NOA NORSAR Array B 72.45 338 P **P 09 41 58.6 +0.5**
comp=Z,6.8nm,0.9s,baz=39,slow=6.1,SNR=9.6
AKASG Malin Array Be 73.29 323 P **P 09 42 03.0 -0.2**
comp=Z,3.5nm,0.6s,baz=43,slow=6.1,SNR=14
AKASG Malin Array Be 73.29 323 *i* P **P 09 42 03.4 +0.2**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKBB Malin Array Si 73.29 323 ⇓*i*P **P 09 42 03.3 +0.1**
FRB Frobisher Bay 73.84 14 P **P 09 42 07.1 +0.9**
FRB pmax pmax
comp=Z,14nm,1.3s
DUG Dugway, Tooele 74.36 51 P **P 09 42 08.8 -1.1**
DUG pmax pmax
comp=Z,8.0nm,3.0s
PDAR Pinedale Array 74.62 47 P **P 09 42 12.8 +1.3**
comp=Z,0.8nm,0.6s,baz=267,slow=1.8,SNR=12
PDAR Pinedale Array 74.62 47 P **P 09 42 11.4 0.0**
ULM Lac du Bonnet 76.39 35 P **P 09 42 20.9 -0.2**
comp=Z,1.2nm,0.5s,baz=329,slow=7.0,SNR=4.5
KWP Kalwaria Pacla 77.01 325 *e*P **P 09 42 25.4 +0.7**
KWP Kalwaria Pacla 77.01 325 *e*P **P 09 42 25.4 +0.7**
BURAR Bucovina Array 77.33 322 P **P 09 42 26.9 +0.3**
BURAR Bucovina Array 77.33 322 P **P 09 42 26.9 +0.3**
KOLS Kolonicke sedl 77.72 325 *e*P **P 09 42 29.6 +0.9**
KOLS pmax pmax
comp=Z,6.0nm,1.2s
KOLS Kolonicke sedl 77.72 325 *e*P **P 09 42 29.6 +0.9**
OJC Ojcow 77.83 327 *e*P **P 09 42 30.4 +1.1**
OJC Ojcow 77.83 327 *e*P **P 09 42 30.4 +1.1**
CRVS Cervenica-Dubn 78.10 325 *e*P **P 09 42 29.7 -1.1**
CRVS Cervenica-Dubn 78.10 325 *e*P **P 09 42 29.7 -1.1**
NIE Niedzica 78.22 326 P **P 09 42 32.3 +0.8**
NIE pmax pmax
comp=Z,3.0nm,1.3s
BRTR Keskin Array B 78.41 312 P **P 09 42 32.3 -0.5**
comp=Z,2.3nm,1.0s,baz=79,slow=2.6,SNR=9.4
BRTR Keskin Array B 78.41 312 *i* P **P 09 42 33.0 +0.2**
BRTR pmax pmax
comp=Z,2.0nm,1.0s
MORC Moravsky Berou 79.11 328 *e*P **P 09 42 37.1 +0.7**
MORC Moravsky Berou 79.11 328 P **P 09 42 37.7 +1.3**
MORC pmax pmax
comp=Z,12nm,1.1s
DPC Dobruska-Polom 79.16 329 P **P 09 42 38.3 +1.7**
DPC pmax pmax
comp=Z,55nm,1.9s
VYHS Vyhne 79.55 326 *e*P **P 09 42 38.1 -0.7**
VYHS pmax pmax
comp=Z,8.0nm,1.2s
VYHS Vyhne 79.55 326 *e*P **P 09 42 38.1 -0.7**
CLL Collm 79.69 331 *e*P **P 09 42 40.0 +0.6**
CLL Collm 79.69 331 *e*P **P 09 42 40.0 +0.6**
JAVC Velka Javorina 79.77 327 *e*P **P 09 42 41.3 +1.3**
VRAC Vranov 79.86 328 *e*P **P 09 42 41.4 +0.9**
VRAC Vranov 79.86 328 P **P 09 42 41.2 +0.7**
VRAC pmax pmax
comp=Z,9.0nm,1.0s

KRUC Moravsky 80.14 328 *e*P **P 09 42 42.4 +0.5**
KRUC Moravsky 80.14 328 P **P 09 42 42.7 +0.8**
KRUC pmax pmax
comp=Z,11nm,1.0s
PRU Pruhonice 80.15 329 P **P 09 42 43.2 +1.2**
PRU pmax pmax
comp=Z,5.0nm,2.1s
MODS Modra-Piesok 80.31 327 *e*P **P 09 42 43.9 +1.0**
MODS Modra-Piesok 80.31 327 *e*P **P 09 42 43.9 +1.0**
ECSD EROS Data Cent 80.81 40 P **P 09 42 47.1 +1.4**
ECSD IAmb IAmb 09 42 47.4
comp=Z,5.1nm,1.0s
KHC Kasperske Hory 81.21 329 P **P 09 42 48.9 +1.2**
KHC pmax pmax
comp=Z,3.0nm,2.0s
RAYN Ar Rayn 81.25 293 P **P 09 42 48.6 +0.2**
RAYN pmax pmax
comp=Z,4.0nm,0.9s
GERES GERESS Array B 81.39 329 P **P 09 42 48.7 -0.1**
comp=Z,0.9nm,0.7s,baz=46,slow=3.9,SNR=6.7
ANMO Albuquerque 81.60 51 P **P 09 42 53.3 +3.0**
ANMO pmax pmax
comp=Z,11nm,1.1s
VTS Vitosha 81.93 320 P **P 09 42 53.1 +1.3**
VTS pmax pmax
comp=Z,11nm,1.1s
KBA Koelnbreinsper 82.96 328 P **P 09 42 57.3 +0.2**
KBA pmax pmax
comp=Z,9.0nm,1.1s
FUORN Ofenpass-Fuorn 84.56 330 P **P 09 43 05.5 +0.1**
TXAR Lajitas Array 87.18 54 P **P 09 43 19.9 +1.4**
comp=Z,0.3nm,0.5s,baz=295,slow=3.8,SNR=8.0
CCM Cathedral Cave 87.76 40 P **P 09 43 22.2 +1.2**
CCM pmax pmax
comp=Z,9.0nm,2.5s
PB11 IPOC Station P 145.25 65 **PKPdf 09 50 10.4 +0.2**

NIED ***10*** *09:38:00, 39°.70N×144°.10E, h23km, Mw4.8 Best double couple: M₀1.82000×10¹⁶ NP1:φs29.00000°, δ49.00000°, λ108.00000°. NP2:φs182.00000°, δ45.00000°, λ71.00000°.*
JMA ***10*** *09:38:00.7±0.2, 39°.69N×143°.64E, h29km, M5.0*
JMA Felt I J1.
BJI ***10*** *09:38:02.5±0.0, 39°.75N×143°.27E, h22km, mB5.2/52, mb5.1/75, Ms4.8/73, Ms7 4.6/70*
IDC ***10*** *09:38:03.5±3.3, 39°.58N×143°.48E, h26km±22km, mb4.6/31, mb1 4.7/40, mb1mx4.6/55, mbtmp4.8/40, ML4.0/9, MS4.1/12, Ms1 4.1/12, ms1mx3.7/44, Error ellipse: s-maj=12.0km s-min=10.0km az=106.0*
NEIC ***10*** *09:38:04.5±2.1, 39°.62N±0°.06×143°.5E±0°.1, h31km±4km, mb5.0/140, Error ellipse: s-maj=13.2km s-min=7.3km az=109.0*
MOS ***10*** *09:38:04.4±1.0, 39°.87N×143°.37E, h31km, mb5.3/76, MS4.2/5, Error ellipse: s-maj=6.3km s-min=3.7km az=101.9*
GCMT ***10*** *09:38:05.5±0.3, 39°.86N±0°.03×143°.65E±0°.03, h29km, MW4.9/67, Moment Tensor Solution. s30,c32; s67,c91; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.63±.18; Mθθ-0.10±.12; Mφφ-2.53±.11; Mrθ-0.25±.22; Mθφ-0.55±.08; Mφr1.43±.13; Best double couple: M₀3.01100×10¹⁶ NP1:φs202.00000°, δ32.00000°, λ107.00000°. NP2: φs2.00000°, δ59.00000°, λ80.00000°. Principal axes: T 3.0450, Plg73.0000°, Azm245.0000°; N -0.0700, Plg9.0000°, Azm7.0000°; P -2.9760, Plg14.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGR ***10*** *09:38:06.8±0.0, 40°.49N×143°.47E, h33km, mb5.2, Ms4.5*
ISC 10 09:38:03.8±0.6, **39°.64N**±0°.03×**143°.52E**±0°.04, **h28**km±3km, **n760**, σ1§**38**/751, **mb5.0**/186, **MS4.6**/32, **70C-15D, Off east coast of Honshu**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)

JTH Tanohata 1.31 284 ⇑P **Pn 09 38 24.5 -1.7**
JTH *e*S **Sb 09 38 44.0 -0.1**
MIYJ Miyakonagasawa 1.31 268 ⇑P **Pn 09 38 25.0 -1.2**
MIYJ *e*S **Sn 09 38 43.1 +0.3**
JKEN Kujiedanarisaw 1.50 293 ⇑P **Pn 09 38 26.8 -2.0**
OFUJ Ofunato 1.54 249 ⇑P **Pn 09 38 28.2 -1.1**
JANG Nango 1.70 296 ⇑P **Pn 09 38 29.9 -1.7**
JANG *e*S **Sn 09 38 51.1 -1.4**
JOM Ohasama 1.73 265 ⇑P **Pn 09 38 31.5 -0.5**
JOM *e*S **Sn 09 38 53.5 +0.4**
JMK Ichinoseki 1.91 250 P **Pn 09 38 34.0 -0.4**
JMK *e*S **Sn 09 38 58.3 +0.8**
JSZI Iwateshizukuis 1.98 274 ⇑P **Pn 09 38 35.3 -0.1**
JRG Rokugo 2.24 265 ⇑P **Pn 09 38 38.8 -0.2**
JAH Hinai 2.28 285 P **Pn 09 38 39.3 -0.3**
ERM Erimo 2.39 354 P **Pn 09 38 39.7 -1.3**
ERM Erimo 2.39 354 *c i*P **Pn 09 38 39.5 -1.5**
ERM pmax pmax
comp=Z,257nm,1.0s
JYK Kaneyama 2.56 255 P **Pn 09 38 43.3 0.0**
JOT Ohata 2.56 314 P **Pn 09 38 42.8 -0.6**
JNBK Urakawa-nobuka 2.70 348 P **Pn 09 38 44.4 -0.9**
JKB Kayabe 2.93 321 P **Pn 09 38 47.3 -1.2**
JCH Churui 2.98 358 P **Pn 09 38 47.4 -1.7**
JCH *e*S **Sn 09 39 20.7 -3.1**
JOMM Oshimamatsumae 3.27 306 *e*S **Sn 09 39 31.5 +0.4**
JFT Otama 3.27 231 P **Pn 09 38 52.8 -0.4**
JAK Akkeshi 3.47 14 P **Pn 09 38 54.1 -1.8**
JAK S **Sn 09 39 32.3 -3.7**
JAW Awa shima 3.53 252 P **Pn 09 38 57.7 +1.0**
NMR Nemuro--Hokkai 4.08 23 ⇑*i*P **Pn 09 39 01.9 -2.4**
NMR *i* S **Sn 09 39 46.5 -4.5**
JHR Hokuryu 4.31 342 P **Pn 09 39 08.2 +0.7**
JTKR Abashiri--Toko 4.34 4 ⇑P **Pn 09 39 06.3 -1.5**
GLVR Golovnino 4.36 19 *e*P **Pn 09 39 06.2 -1.9**
GLVR *e*S **Sn 09 39 53.5 -4.5**
GLVR pmax pmax
comp=E,227nm,0.6s
GLVR pmax pmax
comp=Z,817nm,0.6s
GLVR pmax pmax
comp=N,304nm,0.3s
GLVR smax smax
comp=N,3μm,0.3s
GLVR smax smax
comp=E,2μm,0.3s
GLVR smax smax
comp=N,2μm,1.4s
GLVR smax smax
comp=E,6μm,1.4s
JKA Kamikawa-asahi 4.53 352 **Pn 09 39 10.4 +0.1**
JKA **Sn 09 40 03.5 +1.4**
ASAJ Asahikawa 4.53 352 Pn **Pn 09 39 10.4 0.0**
comp=E,16nm,0.3s,baz=188,slow=11,SNR=48
ASAJ Sn **Sn 09 40 03.5 +1.4**
comp=E,20nm,0.3s,baz=144,slow=19,SNR=4.8
JAG Ashikaga 4.54 226 ⇓P **Pn 09 39 10.6 0.0**
GRPR Tuman 4.67 20 ⇑*i*P **Pn 09 39 10.1 -2.2**
GRPR *i* S **Sn 09 39 59.9 -5.6**
GRPR pmax pmax
comp=N,385nm,0.5s
GRPR pmax pmax
comp=Z,623nm,0.5s
GRPR pmax pmax
comp=E,338nm,0.4s
GRPR smax smax
comp=E,1μm,0.4s
GRPR smax smax
comp=N,3μm,0.5s
GRPR smax smax
comp=N,2μm,1.0s
GRPR smax smax
comp=E,2μm,1.2s
YUK Yuzh-Kuril'sk 4.73 21 *d i*P **Pn 09 39 11.2 -2.0**
YUK *i* S **Sn 09 40 01.8 -5.2**
YUK pmax pmax
comp=E,501μm,0.5s
YUK pmax pmax
comp=Z,817μm,0.5s
YUK pmax pmax
comp=N,729μm,0.4s
YUK smax smax
comp=N,4μm,0.6s
YUK smax smax
comp=E,1μm,0.6s
YUK smax smax

comp=E,5μm,1.3s
YUK smax smax
comp=N,4μm,0.7s
YUK MLR MLR
comp=Z,2μm,16.0s
SHO Shikotan 4.90 29 *c i*P **Pn 09 39 12.9 -2.6**
SHO *i* S **Sn 09 40 03.4 -7.8**
SHO pmax pmax
comp=N,75μm,0.6s
SHO pmax pmax
comp=E,91μm,0.6s
SHO pmax pmax
comp=Z,127μm,0.6s
SHO smax smax
comp=N,1μm,0.5s
SHO smax smax
comp=E,958nm,0.5s
SHO smax smax
comp=N,1μm,0.5s
SHO smax smax
comp=E,2μm,1.1s
JJN Nakama 4.91 241 P **Pn 09 39 17.4 +1.7**
JRY Ryogami san 5.14 227 P **Pn 09 39 18.7 -0.2**
MJAR Matsushiro Arr 5.21 235 Pn **Pn 09 39 19.9 +0.1**
comp=E,2.1nm,0.3s,baz=44,slow=13,SNR=45
MJAR Matsushiro Arr 5.21 235 Pn **Pn 09 39 20.2 +0.4**
MJAR Matsushiro Arr 5.21 235 P **Pn 09 39 20.2 +0.4**
MAJO Matsushiro 5.21 235 Pn **Pn 09 39 20.6 +0.8**
MAJO Matsushiro 5.21 235 *c i*P **Pn 09 39 20.5 +0.8**
MAT Matsushiro 5.21 235 P **Pn 09 39 20.6 +0.8**
MAT Matsushiro 5.21 235 P **Pn 09 39 20.5 +0.8**
MAT *e*S **Sn 09 40 23.2 +4.3**
MJB9 Matsu-Tunnel 5.21 235 Pn **Pn 09 39 20.6 +0.8**
JNG Nsakai 5.36 235 P **Pn 09 39 23.1 +1.2**
JTT Ttatey 5.74 240 P **Pn 09 39 28.9 +1.8**
KUR Kuril'sk 6.45 28 *e*P **Pn 09 39 35.9 -0.9**
KUR *e*S **Sn 09 40 44.1 -5.3**
KUR pmax pmax
comp=Z,202nm,0.5s
KUR pmax pmax
comp=N,110nm,0.4s
KUR pmax pmax
comp=E,75nm,0.3s
KUR smax smax
comp=E,618nm,0.6s
KUR smax smax
comp=N,395nm,0.7s
JAO Obara 6.62 231 P **Pn 09 39 40.1 +0.9**
INU Inuyama 6.71 232 **Pn 09 39 39.8 -0.7**
JYTA Yamagatataniai 6.73 235 P **Pn 09 39 41.6 +0.9**
JHJ2 Mitsune 7.17 206 Pn **Pn 09 39 46.9 +0.2**
JHJ2 Sn **Sn 09 41 01.7 -5.4**
JHJ Hachijo jima 2 7.17 206 Pn **Pn 09 39 44.3 -2.4**
comp=N,57nm,0.3s,baz=39,slow=16,SNR=5.5
JHJ Sn **Sn 09 40 59.1 -8.1**
comp=N,68nm,0.3s,baz=72,slow=20,SNR=5.8
YSS Yuzh-Sakhalins 7.33 356 **Pn 09 39 48.7 -0.3**
YSS Yuzh-Sakhalins 7.33 356 ⇓*e*P **Pn 09 39 48.6 -0.3**
YSS *e*S **Sn 09 41 09.7 -1.4**
YSS pmax pmax
comp=Z,120nm,1.2s
YSS pmax pmax
comp=N,80nm,1.1s
YSS pmax pmax
comp=E,80nm,1.1s
YSS smax smax
comp=N,70nm,0.8s
YSS smax smax
comp=E,20nm,0.6s
YSS MLR MLR
comp=Z,2μm,14.0s
YSS MLR MLR
comp=E,2μm,14.0s
TEY Ternei 7.44 319 ⇓*e*P **Pn 09 39 52.6 +2.3**
TEY pmax pmax
comp=Z,100nm,0.9s
TEY pmax pmax
comp=E,100nm,1.0s
TEY pmax pmax
comp=N,90nm,1.1s
USRK Ussuriysk Ar. 9.72 302 Pn **Pn 09 40 23.4 +1.6**
baz=100,slow=12,SNR=70
MDJ Mudanjiang 11.47 300 P **Pn 09 40 43.6 -2.0**
MDJ sP 09 40 53.0
MDJ S **Sn 09 42 51.2 -1.5**
MDJ pmax pmax
comp=N,32nm,0.9s
MDJ pmax pmax
comp=N,330nm,4.9s
MDJ LR LR
comp=N,2μm,13.7s
MDJ LR LR
comp=N,3μm,14.1s
MDJ LR LR
comp=N,3μm,15.1s
MDJ Mudanjiang 11.47 300 **Pn 09 40 47.2 +1.5**
JNU Nakatsue 12.08 241 Pn **Pn 09 40 52.1 -1.9**
comp=N,0.7nm,0.3s,baz=47,slow=2.7,SNR=4.5
JNU Nakatsue 12.08 241 Pn **Pn 09 40 53.5 -0.6**
GRNR Gornyy 12.19 338 ⇑*i*P **Pn 09 40 55.1 -0.4**
GRNR *e*S **Sn 09 43 10.3 -0.1**
GRNR pmax pmax
comp=Z,30nm,1.2s
GRNR smax smax
comp=N,7.0nm,0.9s
GRNR MLR MLR
comp=Z,960nm,14.0s
KSRS Korea Array 12.40 265 Pn **Pn 09 40 59.2 +0.8**
comp=Z,0.5nm,0.3s,baz=87,slow=13,SNR=21
KS19 Wonju Array Si 12.44 265 **Pn 09 41 00.5 +1.7**
KSAR Wonju Array Be 12.44 265 **Pn 09 41 00.7 +1.8**
KSAR Wonju Array Be 12.44 265 P **Pn 09 41 00.7 +1.8**
JCJ Chichijima 12.56 185 Pn **Pn 09 40 57.9 -2.7**
comp=Z,7.4nm,0.3s,baz=78,slow=20,SNR=2.8
JCJ Sn Sn 09 43 04.6 -15
comp=Z,5.1nm,0.3s,baz=72,slow=20,SNR=2.8
JCJ LR LR 09 45 04.7
comp=Z,199nm,21.9s,baz=3.5,slow=34
KLR Kul'dur 12.74 323 Pn **Pn 09 41 02.4 -0.6**
comp=Z,0.4nm,0.3s,baz=132,slow=13,SNR=18
KLR Kul'dur 12.74 323 *c i*P **Pn 09 41 01.2 -1.7**
KLR pmax pmax
comp=Z,27nm,1.2s
CN2 Changchun 14.12 293 *e*P **Pn 09 41 21.4 -0.4**
CN2 *e*S **Sn 09 43 57.7 +0.3**
CN2 pmax pmax
comp=Z,10.0nm,1.5s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,1μm,15.0s
CN2 LR LR
comp=Z,1μm,15.0s
CN2 LR LR
comp=Z,1μm,16.0s
SKR Severo-Kuril's 14.15 35 *e*P **P 09 41 28.1 -1.3**
SKR *e*S **Sn 09 44 05.4 +7.3**
SKR pmax pmax
comp=Z,58nm,1.1s
SKR pmax pmax
comp=Z,600nm,5.4s
SKR MLR MLR
comp=Z,500nm,15.0s
SNY Shenyang 15.27 285 ⇑P **Pn 09 41 33.1 -4.2**
SNY pmax pmax
comp=Z,14nm,0.9s
PEA0B Petropavlovsk- 16.61 31 P **P 09 41 57.2 +0.6**
PEA0B Petropavlovsk- 16.61 31 ⇓*i*P **P 09 41 55.9 -0.8**
PETK Petropavlovsk- 16.61 31 Pn **Pn 09 41 54.9 +0.5**
comp=Z,0.4nm,0.3s,baz=224,slow=8.3,SNR=11
PETK LR LR 09 47 47.4
comp=Z,471nm,20.5s,baz=220,slow=35
PETK Petropavlovsk- 16.61 31 P **P 09 41 56.8 +0.1**
PETK Petropavlovsk- 16.61 31 P **P 09 41 56.8 +0.1**
PET Petropavlovsk 16.93 33 *e*P **P 09 42 01.4 +1.2**
PET *e*S **Sn 09 45 04.6 -1.1**
PET pmax pmax
comp=Z,67nm,1.4s
PET MLR MLR
comp=Z,800nm,15.0s
DL2 Dalian 16.96 275 P **P 09 42 00.0 -0.7**
DL2 *e*S **Sn 09 45 08.6 +2.0**
DL2 pmax pmax
comp=Z,59nm,1.2s
DL2 LR LR
comp=Z,1μm,14.3s

DL2 comp=Z,670nm,16.0s LR LR
DL2 comp=Z,1µm,17.7s LR LR
ZEA Zeya 17.92 327 *e*P **Pn** **09 42 07.1 -3.6**
ZEA comp=N,55nm,0.9s pmax pmax
ZEA comp=E,44nm,0.9s pmax pmax
ZEA comp=Z,68nm,0.9s pmax pmax
ZEA comp=Z,2µm,13.0s MLR MLR
ZEA comp=E,1µm,12.0s MLR MLR
ZEA comp=N,2µm,14.0s MLR MLR
HIA Hailar 19.44 307 P **P** **09 42 25.7 -2.3**
HIA IAmb IAmb 09 42 36.7
comp=Z,48nm,0.8s
HIA Hailar 19.44 307⇓*i*P **P** **09 42 25.5 -2.4**
HIA pmax pmax
comp=Z,222nm,0.9s
MA2 Magadan 20.48 11 P **P** **09 42 39.8 +0.7**
comp=Z,97nm,0.9s,baz=196,slow=7.9,SNR=24
MA2 LR LR 09 51 21.4
comp=Z,394nm,18.9s,baz=185,slow=39
MA2 Magadan 20.48 11 P **P** **09 42 39.3 +0.2**
MA2 Magadan 20.48 11 **P** **09 42 40.0 +0.9**
MA2 IAmb IAmb 09 42 40.8
comp=Z,90nm,0.8s
MA2 Magadan 20.48 11 *i* P **P** **09 42 39.8 +0.7**
MA2 pmax pmax
comp=Z,91nm,0.9s
BJI Beijing 20.97 280⇑*i*P **P** **09 42 41.7 -2.9**
BJI S **S** **09 46 39.4 +2.7**
BJI pmax pmax
comp=Z,23nm,1.0s
BJI LR LR
comp=Z,590nm,13.9s
BJI LR LR
comp=Z,1µm,15.1s
BJI LR LR
comp=Z,720nm,15.2s
BJT Baijiatuau 20.98 280 P **P** **09 42 42.2 -2.5**
BJT IAmb IAmb 09 43 11.1
comp=Z,104nm,1.7s
BJT Baijiatuau 20.98 280 P **P** **09 42 42.2 -2.5**
BJT pmax pmax
comp=Z,104nm,1.7s
TIA Tai'an 21.07 269 P **P** **09 42 43.0 -2.7**
TIA pmax pmax
comp=Z,70nm,1.0s
TIA LR LR
comp=Z,690nm,11.1s
TIA LR LR
comp=Z,2µm,11.9s
TIA LR LR
comp=Z,3µm,12.2s
NJ2 Nanjing 21.34 257 *e*P **P** **09 42 46.8 -1.8**
NJ2 pmax pmax
comp=Z,14nm,0.7s
NJ2 LR LR
comp=Z,1µm,10.7s
NJ2 LR LR
comp=Z,1µm,15.2s
NJ2 LR LR
comp=Z,610nm,10.9s
SEY Seymchan 23.93 10 P **P** **09 43 14.4 -0.7**
comp=Z,84nm,1.0s,baz=191,slow=7.0,SNR=80
SEY Seymchan 23.93 10⇑*i*P **P** **09 43 14.7 -0.4**
YAK Yakutsk 23.96 344 P **P** **09 43 14.0 -1.3**
comp=Z,20nm,0.5s,baz=159,slow=2.0,SNR=17
YAK S **S** **09 47 31.4 +1.4**
comp=Z,6.9nm,0.4s,baz=147,slow=1.9,SNR=4.3
YAK Yakutsk 23.96 344 P **P** **09 43 13.6 -1.8**
YAK Yakutsk 23.96 344*c i*P **P** **09 43 13.7 -1.6**
YAK *e**PP **pP** **09 43 22.3 -0.6**
YAK *e*PPP PPP 09 43 50.6
YAK *e*S **S** **09 47 28.1 -1.9**
YAK *e**SS **sS** **09 47 46.8 +4.2**
YAK *e*SS **SnSn** **09 48 13.0 +2.0**
YAK *e*SSS SSS 09 48 25.6
YAK *e* 09 54 18.2
YAK pmax pmax
comp=Z,87nm,1.1s
YAK pmax pmax
comp=N,46nm,1.1s
YAK pmax pmax
comp=E,17nm,1.1s
YAK smax smax
comp=N,132nm,2.2s
YAK smax smax
comp=E,53nm,1.9s
CIT Chita 24.08 311 *e*P **P** **09 43 14.9 -1.8**
CIT *e* 09 43 26.1
CIT *e* 09 43 50.2
CIT pmax pmax
comp=Z,182nm,1.0s
TIY Taiyuan 24.29 275 *e*P **P** **09 43 20.1 +1.4**
HHC Hu-ho-hao-te 24.35 283⇓*i*P **P** **09 43 17.2 -2.2**
HHC S **S** **09 47 30.5 -6.5**
HHC pmax pmax
comp=Z,110nm,5.7s
HHC LR LR
comp=Z,350nm,13.9s
HHC LR LR
comp=Z,830nm,17.9s
HHC LR LR
comp=Z,1µm,16.7s
SSLB Suanglung 24.76 237 P **P** **09 43 21.0 -2.1**
YULB Yu-li 24.82 236 P **P** **09 43 20.5 -3.2**
YULB IAmb IAmb 09 43 20.9
comp=Z,81nm,1.4s
TPUB Ta-pu 25.32 237 P **P** **09 43 27.1 -1.0**
WHN Wuhan 25.44 258⇑*i*P **P** **09 43 29.3 +0.1**
WHN pmax pmax
comp=Z,270nm,0.8s
WHN LR LR
comp=Z,2µm,16.0s
BTO Baotou 25.55 283 *e*P **P** **09 43 29.8 -0.4**
BOD Bodaibo 26.31 324⇓*i*P **P** **09 43 36.3 -0.5**
BOD pmax pmax
comp=Z,59nm,0.9s
ULN Ulaanbaatar 27.39 300 P **P** **09 43 47.6 +0.8**
ULN **P** **09 43 47.9 +1.1**
ULN IAmb IAmb 09 43 48.4
comp=Z,51nm,1.1s
ULN Ulaanbaatar 27.39 300 *e*P **P** **09 43 47.3 +0.5**
SONM Songino Array 27.83 299 P **P** **09 43 51.3 +0.6**
comp=Z,20nm,0.8s,baz=91,slow=8.2,SNR=110
SONM LR LR 09 55 31.1
comp=Z,1µm,19.3s,baz=100,slow=38
SONM Songino Array 27.83 299 P **P** **09 43 51.1 +0.4**
XAN Xi'an 28.13 270 P **P** **09 43 52.6 -0.9**
XAN pmax pmax
comp=Z,28nm,0.9s
XAN pmax pmax
comp=Z,260nm,5.7s
XAN LR LR
comp=Z,640nm,17.4s
XAN LR LR
comp=Z,1µm,17.4s
XAN LR LR
comp=Z,1µm,14.2s
XAN Xi'an 28.13 270 P **P** **09 43 53.0 -0.5**
XAN IAmb IAmb 09 43 54.9
comp=Z,26nm,0.9s
XAN Xi'an 28.13 270 P **P** **09 43 53.0 -0.5**
XAN pmax pmax
comp=Z,26nm,0.9s
H11S1 WAKE ISLAND Hy 29.07 130 T T 10 14 23.7
baz=314,slow=75,SNR=14
H11S3 WAKE ISLAND Hy 29.07 130 T T 10 14 22.7
baz=314,slow=75,SNR=9.8
H11S2 WAKE ISLAND Hy 29.08 130 T T 10 14 25.4
baz=314,slow=75,SNR=3.7
ENH Enshi 29.27 262 P **P** **09 44 03.3 -0.3**
IRK Irkutsk 29.68 308 *e*P **P** **09 44 06.6 -0.4**
IRK pmax pmax
comp=Z,45nm,1.1s
TLY Talaya 29.98 307 P **P** **09 44 10.4 +0.8**
comp=Z,4.1nm,0.6s,baz=133,slow=7.4,SNR=4.3
TLY LR LR 09 56 42.1
comp=Z,186nm,20.2s,baz=90,slow=37
TLY Talaya 29.98 307⇓*i*P **P** **09 44 10.3 +0.6**
TLY pmax pmax
comp=Z,11nm,1.1s
ZAK Zakamensk 30.06 304 *e*P **P** **09 44 09.8 -0.7**
ZAK pmax pmax
comp=Z,24nm,1.2s
BILL Bilibino 31.06 16⇑*i*P **P** **09 44 18.9 -0.1**
BILL pmax pmax
comp=Z,21nm,1.1s
LZH Lanzhou 31.35 276 *e*P **P** **09 44 21.7 -0.3**
LZH pP pP 09 44 26.3 -3.3
LZH sP sP 09 44 31.5 -1.3
LZH S **S** **09 49 34.2 +6.6**
LZH pmax pmax
comp=Z,39nm,1.4s
LZH pmax pmax
comp=Z,230nm,5.4s
LZH LR LR
comp=Z,990nm,13.0s
LZH LR LR
comp=Z,2µm,14.6s
LZH LR LR
comp=Z,1µm,15.2s
MOY Mondy 31.62 307 *e*P **P** **09 44 24.2 0.0**
MOY pmax pmax
comp=Z,30nm,1.8s
TIXI Tiksi 32.93 352 P **P** **09 44 34.9 -0.4**
comp=Z,1.8nm,0.3s,baz=145,slow=6.5,SNR=6.0
TIXI Tiksi 32.93 352 P **P** **09 44 34.1 -1.2**
TIXI Tiksi 32.93 352⇑*i*P **P** **09 44 34.6 -0.7**
TIXI pmax pmax
comp=Z,6.0nm,1.1s
GYA Guiyang 33.34 258⇑*i*P **P** **09 44 38.9 -0.6**
GYA S **S** **09 49 52.5 -6.1**
GYA SS **SnSn** **09 51 56.3 -4.1**
GYA pmax pmax
comp=Z,50nm,0.9s
GYA pmax pmax
comp=Z,190nm,4.2s
GYA LR LR
comp=Z,640nm,16.0s
GYA LR LR
comp=Z,420nm,15.7s
GYA LR LR
comp=Z,720nm,11.4s
CD2 Chengdu 33.39 267 P **P** **09 44 38.9 -0.9**
CD2 S **S** **09 49 51.4 -7.8**
CD2 pmax pmax
comp=Z,60nm,0.8s
CD2 pmax pmax
comp=Z,230nm,6.1s
CD2 LR LR
comp=Z,2µm,12.4s
CD2 LR LR
comp=Z,1µm,13.3s
CD2 LR LR
comp=Z,2µm,14.1s
GTA Gaotai 33.46 284 ⇑P **P** **09 44 40.8 +0.3**
GTA pP pP 09 44 48.3 +0.1
GTA sP pwP 09 44 51.4 +0.3
GTA PcP **PcP** **09 47 22.6 +1.4**
GTA pmax pmax
comp=Z,33nm,1.1s
GTA pmax pmax
comp=Z,150nm,6.0s
GTA LR LR
comp=Z,390nm,17.5s
GTA LR LR
comp=Z,1µm,17.5s
GTA LR LR
comp=Z,2µm,17.5s
QIZ Qiongzhong 35.53 245 P **P** **09 44 58.6 +0.2**
QIZ S **S** **09 50 30.1 -2.1**
QIZ sS **sS** **09 50 46.2 +1.3**
QIZ LR LR
comp=Z,750nm,17.2s
QIZ LR LR
comp=Z,670nm,12.3s
QIZ LR LR
comp=Z,730nm,13.2s
KMI Kunming 37.03 259 P **P** **09 45 11.9 +0.5**
KMI sP pwP 09 45 25.0 +2.8
KMI S **S** **09 50 58.5 +2.9**
KMI pmax pmax
comp=Z,25nm,1.0s
KMI pmax pmax
comp=Z,120nm,3.1s
KMI LR LR
comp=Z,550nm,15.4s
KMI LR LR
comp=Z,800nm,14.5s
KMI LR LR
comp=Z,720nm,15.5s
ANM Nome 38.51 33 P **P** **09 45 23.4 +0.1**
ANM Nome 38.51 33 P **P** **09 45 23.4 +0.1**
ANM pmax pmax
comp=Z,11nm,1.0s
RDOG Red Dog Mine 40.43 28 P **P** **09 45 39.8 +0.5**
WMQ Urumqi 41.20 295 *e*P **P** **09 45 47.2 +1.2**
WMQ pP pwP 09 45 56.5 -0.1
WMQ sP sP 09 46 01.3 +4.5
WMQ pmax pmax
comp=Z,63nm,0.9s
WMQ pmax pmax
comp=Z,27nm,3.8s
WMQ LR LR
comp=Z,410nm,28.9s
WMQ LR LR
comp=Z,460nm,28.8s
WMQ LR LR
comp=Z,210nm,17.3s
WMQ Urumqi 41.20 295 P **P** **09 45 46.8 +0.8**
WMQ Urumqi 41.20 295 P **P** **09 45 46.8 +0.8**
WMQ pmax pmax
comp=Z,67nm,0.8s
ZAA0 Zalesovo Array 41.44 310 IAmb IAmb 09 45 48.7
comp=Z,18nm,0.7s
ZALV Zalesovo Beam 41.44 310 P **P** **09 45 47.6 -0.1**
comp=Z,16nm,0.6s,baz=89,slow=7.8,SNR=63
ZALV PcP **PcP** **09 47 45.8 +0.7**
comp=Z,12nm,0.8s,baz=77,slow=3.3,SNR=5.8
ZALV LR LR 10 03 23.3
comp=Z,211nm,20.0s,baz=74,slow=37
ZALV Zalesovo Beam 41.44 310 P **P** **09 45 46.9 -0.8**
ZALV **PcP** **09 47 45.5 +0.5**
PBKT Sadao Pong 43.48 250 P **P** **09 46 04.5 -0.2**
CHTO Chiang Mai 43.55 255 P **P** **09 46 04.7 -0.6**
CHTO Chiang Mai 43.55 255 P **P** **09 46 07.7 +2.4**
IMAR Indian Mountai 43.57 32 P **P** **09 46 05.7 +0.9**
LSA Lhasa 43.66 274 P **P** **09 46 08.1 +1.5**
LSA Lhasa 43.66 274 P **P** **09 46 07.9 +1.3**
MRSI Marisa 43.67 212 P **P** **09 46 06.8 +0.6**
comp=Z,36nm,1.2s
CMAR Chiang Mai Arr 43.77 254 P **P** **09 46 07.7 +0.6**
comp=Z,4.3nm,0.6s,baz=46,slow=6.8,SNR=27
CMAR PcP **PcP** **09 47 54.3 +0.8**
comp=Z,0.9nm,0.3s,baz=44,slow=2.7,SNR=4.3
CMAR LR LR 10 06 13.8
comp=Z,206nm,18.2s,baz=60,slow=39
CMAR Chiang Mai Arr 43.77 254 *i* P **P** **09 46 07.6 +0.5**
CMAR pmax pmax
comp=Z,4.0nm,0.6s
KDAK Kodiak Island 44.07 44 P **P** **09 46 09.1 +0.2**
comp=Z,5.8nm,0.6s,baz=259,slow=4.5,SNR=4.3
MK31 Makanchi Array 44.19 300 IAmb IAmb 09 46 11.3
comp=Z,27nm,0.9s
MK31 Makanchi Array 44.19 300 *i* P **P** **09 46 09.9 -0.2**
MKAR Makanchi Array 44.19 300 P **P** **09 46 10.3 +0.2**
comp=Z,25nm,0.9s,baz=83,slow=9.0,SNR=156
MKAR LR LR 10 05 28.7
comp=Z,518nm,19.0s,baz=72,slow=37
MKAR Makanchi Array 44.19 300 P **P** **09 46 09.1 -1.0**
MAKZ Makanchi 44.39 300 P **P** **09 46 12.0 +0.2**
MAKZ Makanchi 44.39 300 *i* P **P** **09 46 11.1 -0.6**
MAKZ pmax pmax
comp=Z,41nm,1.1s
KTH Kantishna Hill 44.67 35 P **P** **09 46 15.5 +1.8**
KTH IAmb IAmb 09 46 16.4
comp=Z,18nm,1.1s
SUA Susitna One 44.79 38 P **P** **09 46 15.9 +1.2**
SUA IAmb IAmb 09 47 00.9
comp=Z,21nm,1.2s
BRLK Bradley Lake 44.81 41 P **P** **09 46 15.6 +0.8**
COLD Coldfoot 45.07 30 P **P** **09 46 18.6 +1.8**
SHL Shillong 45.12 268 P **P** **09 46 18.5 +0.5**
SHL pmax pmax
comp=Z,23nm,0.9s
RC01 Rabbit Creek A 45.29 39 P **P** **09 46 19.7 +1.0**
RC01 IAmb IAmb 09 46 44.9
comp=Z,37nm,1.5s
RND Reindeer 45.60 36 IAmb IAmb 09 47 40.7
comp=Z,16nm,0.9s
KURK Kurchatov 45.67 306 P **P** **09 46 22.4 +0.6**
KURK Kurchatov 45.67 306 IAmb IAmb 09 46 22.9
comp=Z,60nm,0.9s
KURK Kurchatov 45.67 306*c i*P **P** **09 46 21.1 -0.7**
KURK pmax pmax
comp=Z,60nm,1.0s
BNDI Bandanaira 45.70 199 P **P** **09 46 23.9 +1.6**
comp=Z,37µmcomp=Z,162nm,0.5s
KURBB Kurchatov Arra 45.75 306 P **P** **09 46 22.4 -0.1**
comp=Z,40nm,0.8s,baz=81,slow=8.3,SNR=194
TCOL CIGO, UAF Yank 45.99 34 P **P** **09 46 25.0 +0.9**
baz=271
COLA College 46.00 34 P **P** **09 46 25.9 +1.8**
COLA pmax pmax
comp=Z,30nm,1.0s
POKR Poker Plat Res 46.17 33 P **P** **09 46 26.8 +1.3**
baz=272,SNR=15
DHY Denali Highway 46.28 36 P **P** **09 46 27.9 +1.3**
DHY IAmb IAmb 09 46 40.9
comp=Z,13nm,1.1s
SCM Sheep Creek Mo 46.39 38 P **P** **09 46 28.4 +1.0**
SCM IAmb IAmb 09 47 51.6
comp=Z,17nm,0.8s
SCM Sheep Creek Mo 46.39 38 P **P** **09 46 28.4 +1.0**
SCM pmax pmax
comp=Z,17nm,0.8s
HDA Harding Lake 46.40 34 P **P** **09 46 28.1 +0.7**
baz=273,SNR=5.9
IL31 46.41 34 IAmb IAmb 09 46 42.2
comp=Z,18nm,1.1s
ILAR Eielson Array 46.41 34 P **P** **09 46 28.1 +0.7**
comp=Z,5.7nm,0.8s,baz=259,slow=6.2,SNR=63
ILAR Eielson Array 46.41 34 P **P** **09 46 27.6 +0.1**
FYU Fort Yukon 47.03 31 P **P** **09 46 34.1 +1.9**
FYU IAmb IAmb 09 46 45.2
comp=Z,17nm,0.9s
BMAR Burnt Mountain 47.25 30 P **P** **09 46 36.0 +2.0**
RIDG Independent Ri 47.37 35 P **P** **09 46 36.0 +1.0**
RIDG IAmb IAmb 09 46 50.9
comp=Z,21nm,1.1s
TAPN Taplejung 47.44 273 *e*P **P** **09 46 36.9 +0.6**
comp=Z,80nm,1.1s
DOT Dot Lake 47.72 35 P **P** **09 46 38.2 +0.4**
DOT IAmb IAmb 09 46 48.4
comp=Z,29nm,1.8s
ODAN Odare 47.93 272 *e*P **P** **09 46 40.6 +0.5**
comp=Z,94nm,1.0s
GLB Gilahina Butte 48.11 38 P **P** **09 46 42.1 +1.4**
JIRN Jiri 48.46 274 *e*P **P** **09 46 44.8 +0.5**
comp=Z,48nm,0.6s
RAMN Ramite 48.50 273 *e*P **P** **09 46 44.7 +0.2**
comp=Z,148nm,1.0s
GUN Gumba 48.57 274 *e*P **P** **09 46 45.5 +0.3**
comp=Z,101nm,0.7s
TGL Tana Glacier 48.68 39 P **P** **09 46 46.8 +1.6**
BCAR Beaver Creek A 48.81 36 P **P** **09 46 47.5 +1.4**
BNSI Bone 48.84 212 P **P** **09 46 47.2 +0.4**
comp=Z,19nm,1.0s
EGAK Eagle 48.86 33 IAmb IAmb 09 47 00.2
comp=Z,13nm,0.9s
BALM Baldy 48.87 38 P **P** **09 46 47.4 +0.7**
KKN Kakani 49.09 275 *e*P **P** **09 46 49.6 +0.6**
comp=Z,99nm,0.7s
PKI Pulchoki 49.10 274 *e*P **P** **09 46 49.1 -0.1**
comp=Z,34nm,0.7s
PKIN Phulchoki 49.11 274 *e*P **P** **09 46 49.3 +0.1**
comp=Z,22nm,0.6s
BARN Barnard Glacie 49.19 38 P **P** **09 46 50.7 +1.5**
DMN Daman 49.32 275 *e*P **P** **09 46 51.2 +0.4**
comp=Z,106nm,1.3s
CTGM Chitina Glacie 49.37 38 P **P** **09 46 52.6 +2.0**
GKN Gorkha 49.48 275 *e*P **P** **09 46 52.1 +0.2**
comp=Z,35nm,0.5s
DAWY Dawson 49.72 34 P **P** **09 46 54.6 +1.5**
DANN Dangsing 49.99 276 *e*P **P** **09 46 56.6 +0.7**
comp=Z,160nm,0.6s
BRVK Borovoye 50.13 311 P **P** **09 46 56.8 +0.5**
BRVK Borovoye 50.13 311 *i* P **P** **09 46 56.0 -0.3**
BRVK pmax pmax
comp=Z,22nm,0.8s
KOLN Koldanda 50.40 276 *e*P **P** **09 46 59.3 +0.4**
comp=Z,71nm,0.9s
KBK Karagaybulak 50.42 297 P **P** **09 46 59.2 +0.3**
SNR=47
KZA Kyzart 50.42 296 P **P** **09 47 00.5 +1.3**
SNR=9.3
CHMS Chumysh 50.44 297 P **P** **09 46 59.2 +0.4**
SNR=7.0
EPYK Eagle Plains 50.45 31 P **P** **09 46 59.8 +1.2**
baz=280,SNR=10.0
USP Ospenovka 50.51 298 P **P** **09 46 59.9 +0.5**
SNR=16
AAK Ala-Archa 50.74 297 P **P** **09 47 01.6 +0.3**
SNR=14
AAK Ala-Archa 50.74 297 *i* P **P** **09 47 01.6 +0.3**
SNR=14
AAK Ala-Archa 50.74 297 P **P** **09 47 01.5 +0.3**
AAK IAmb IAmb 09 47 33.6
comp=Z,18nm,1.1s
AAK Ala-Archa 50.74 297 *i* P **P** **09 47 00.2 -1.1**
AAK pmax pmax
comp=Z,14nm,0.9s
UCH Uchtor 50.88 297 P **P** **09 47 05.0 +2.3**
SNR=7.6
KSH Kashi 50.89 293 P **P** **09 47 06.5 +4.1**
KSH pP pwP 09 47 13.7 +0.5
KSH sP sP 09 47 18.9 +5.5
KSH PP **PP** **09 49 05.0 +6.4**
KSH S **S** **09 54 20.1 +3.1**
KSH sS sS 09 54 36.5 +6.4
KSH SS **SS** **09 57 55.7 +4.1**
KSH pmax pmax
comp=Z,30nm,0.9s
KSH pmax pmax
comp=Z,260nm,4.7s
KSH LR LR
comp=Z,270nm,7.0s
KSH LR LR
comp=Z,480nm,10.6s
KSH LR LR
comp=Z,600nm,6.5s
EKS2 Erkin-Say 51.23 297 P **P** **09 47 05.1 +0.2**
SNR=22
HYT Haines Junctio 51.23 38 IAmb IAmb 09 47 24.1
comp=Z,25nm,1.0s
INK Inuvik 51.31 28 P **P** **09 47 06.2 +1.3**
comp=Z,5.6nm,0.7s,baz=297,slow=6.7,SNR=30
INK Inuvik 51.31 28 IAmb IAmb 09 47 16.3
comp=Z,11nm,0.6s
AML Almayashu 51.48 297 P **P** **09 47 08.1 +1.0**
SNR=27
KK31 Karatay Array 53.28 299 IAmb IAmb 09 47 20.9
comp=Z,17nm,0.9s
KK31 Karatay Array 53.28 299 *i* P **P** **09 47 19.3 -0.7**
KKAR Karatay Array 53.28 299 P **P** **09 47 19.7 -0.3**
KKAR Karatay Array 53.28 299 IAmb IAmb 09 47 20.9
comp=Z,17nm,0.9s
KKAR Karatay Array 53.28 299 P **P** **09 47 19.7 -0.3**
PPBI Pangkal Pinang 53.89 229 P **P** **09 47 25.8 +1.1**
SVE Sverdlovsk 54.31 318 *e*P **P** **09 47 27.7 +0.4**
SVE pmax pmax
comp=Z,59nm,1.0s
SVE MLR MLR
comp=Z,1µm,14.0s
C36M Paulatuk 54.37 26 IAmb IAmb 09 47 38.7
comp=Z,7.1nm,0.7s
C36M Paulatuk 54.37 26 P **P** **09 47 27.9 +0.4**
baz=288,SNR=6.6
NIL Nilore 55.39 287 P **P** **09 47 36.8 +1.3**
NIL pmax pmax
comp=Z,57nm,1.2s
ARU Arti 55.52 318*c i*P **P** **09 47 36.4 +0.4**
ARU pmax pmax
comp=Z,56nm,1.0s
PWJI Pagerwojo 55.77 219 P **P** **09 47 37.5 -0.8**
comp=Z,64nm,0.8s
KLSI 56.75 228 P **P** **09 47 46.0 +0.7**
comp=Z,15nm,1.1s
MDSI Maura Dua 56.91 229 P **P** **09 47 46.7 +0.3**
comp=Z,31nm,1.1s
AB31 Akbulak array 57.55 310 *i* P **P** **09 47 50.2 -0.3**

ABKAR Akbulak array 57.55 310 P P 09 47 50.5 0.0
AKTO Aktyubinsk 58.18 311 iP P 09 47 54.2 -0.8
AKTO pmax pmax
comp=Z,17nm,0.8s
NOR Nord 58.56 357⇑iP P 09 47 57.5 +0.4
comp=Z,13nm,1.1s
NOR Nord 58.56 357⇑iP P 09 47 57.5 +0.4
NOR pmax pmax
comp=Z,13nm,1.1s
PRGR Permogore 59.49 327 eP P 09 48 03.1 -0.8
PRGR e*PP sP 09 48 13.1 -1.9
PRGR e 09 50 13.7
PRGR pmax pmax
comp=Z,20nm,0.9s
RES Resolute Bay 59.66 15 IAmb IAmb 09 48 17.9
comp=Z,15nm,0.9s
RES Resolute Bay 59.66 15 P P 09 48 05.5 +0.6
RES pmax pmax
comp=Z,19nm,1.1s
WB0 Warramunga Arr 59.71 190 P P 09 48 05.3 -0.5
FITZ Fitzroy Crossi 59.81 200 P P 09 48 05.6 -0.9
comp=Z,10nm,1.0s,baz=42,slow=12,SNR=4.2
WRA Warramunga Arr 59.89 190 P P 09 48 05.7 -1.3
comp=Z,3.9nm,0.6s,baz=7.9,slow=6.9,SNR=13
WRA Warramunga Arr 59.89 190 P P 09 48 06.1 -1.0
WRA Warramunga Arr 59.89 190 P P 09 48 06.1 -1.0
HYB Hyderabad 59.93 268 iP P 09 48 04.0 -3.6
YKA Yellowknife Ar 60.73 31 P P 09 48 12.9 +0.6
comp=Z,2.1nm,0.6s,baz=296,slow=7.0,SNR=33
YKA LR LR 10 17 40.9
comp=Z,47nm,19.0s,baz=0.0,slow=39
APA Apatity 61.00 336⇓iP P 09 48 13.9 -0.2
APA pmax pmax
comp=Z,10.0nm,0.8s
APA MLR MLR
comp=Z,400nm,16.0s
TMCR Tamitsa 61.26 331 eP P 09 48 15.7 -0.2
TMCR pmax pmax
comp=Z,52nm,1.0s
ARCES ARCESS Array B 62.14 339 P P 09 48 22.4 +0.6
comp=Z,2.6nm,0.6s,baz=46,slow=8.2,SNR=14
ARCES LR LR 10 18 21.9
comp=Z,325nm,20.8s,baz=20,slow=39
KLMR Klimovskoe 62.44 328 eP P 09 48 21.7 -2.2
KLMR AMP 09 48 25.3
comp=Z,41nm,1.4s
KLMR ePP PP 09 50 37.0 -4.0
KLMR Klimovskoe 62.44 328 eP P 09 48 21.7 -2.2
KLMR e 09 50 37.0
KLMR pmax pmax
comp=Z,41nm,1.4s
POO Poona 62.92 272 eP P 09 48 25.0 -2.8
SGF Sodankyl 63.19 337 P P 09 48 29.9 +1.1
SGF pmax pmax
comp=Z,49nm,2.5s
DAG Danmarks Havn 63.32 355⇑iP P 09 48 29.9 +0.4
comp=Z,28nm,1.1s
DAG Danmarks Havn 63.32 355 P P 09 48 30.3 +0.8
DAG pmax pmax
comp=Z,28nm,1.6s
MSF Maaselka 63.38 335 P P 09 48 29.4 -0.7
MSF pmax pmax
comp=Z,25nm,1.0s
AS31 Alice Springs 63.61 190 P P 09 48 32.6 +0.6
ASAR Alice Springs 63.61 190 P P 09 48 31.2 -0.9
comp=Z,2.7nm,0.9s,baz=14,slow=6.9,SNR=21
ASAR Alice Springs 63.61 190 P P 09 48 31.7 -0.4
ASAR Alice Springs 63.61 190 P P 09 48 31.7 -0.4
NLWA Neilton Lookou 63.75 49 P P 09 48 35.1 +2.2
GEYT Alibeck 64.03 299 P P 09 48 34.2 -0.7
comp=Z,11nm,0.9s,baz=29,slow=3.4,SNR=17
GEYT LR LR 10 18 19.7
comp=Z,159nm,18.4s,baz=215,slow=38
GEYT Alibeck 64.03 299 P P 09 48 34.5 -0.3
D03D Eldon 64.13 49 P P 09 48 36.8 +1.5
baz=301
B05A Bryant 64.32 48 P P 09 48 37.5 +0.9
baz=302
JOF Joensuu 64.44 332 P P 09 48 37.5 +0.4
JOF pmax pmax
comp=Z,20nm,1.1s
D04E Lakebay 64.50 49 P P 09 48 39.0 +1.3
baz=302
PALK Pallekele 64.54 258 P P 09 48 38.9 +0.3
OUL Oulu 64.92 336 P P 09 48 39.2 -0.9
OUL pmax pmax
comp=Z,33nm,1.3s
E04D Cinebar 64.94 49 P P 09 48 41.3 +0.6
baz=302
DZM Mont Dzumac 65.02 157 eP P 09 48 54.9 +13
comp=Z,91nm,1.4s
DZM Mont Dzumac 65.02 157 eLR LR 10 08 18.8
comp=Z,296nm,22.5s
C06D Leavenworth 65.19 48 P P 09 48 42.9 +0.6
baz=302
LON Longmire 65.28 49 P P 09 48 44.9 +1.9
LON Longmire 65.28 49 P P 09 48 44.9 +1.9
LON pmax pmax
comp=Z,9.0nm,1.2s
LTY Liberty 65.67 48 P P 09 48 46.2 +0.7
LTY IAmb IAmb 09 48 51.7
comp=Z,14nm,1.4s
B08A Colville Reser 65.84 46 IAmb IAmb 09 48 48.9
comp=Z,26nm,1.6s
H04D Lebanon 65.92 51 P P 09 48 47.8 +0.7
baz=303
J01E Myrtle Point 65.92 53 P P 09 48 47.8 +0.8
baz=302
F05D White Salmon 65.95 50 P P 09 48 48.0 +0.8
baz=303
I03D Drain, OR 66.00 52 P P 09 48 48.3 +0.8
baz=303
MOS Moscow 66.14 324 eP P 09 48 47.9 -0.3
MOS e 09 49 16.2
MOS e 09 51 15.5
MOS pmax pmax
comp=Z,46nm,0.8s
MOS MLR MLR
comp=Z,700nm,16.0s
K02D Willamette Mer 66.34 54 P P 09 48 50.4 +0.5
baz=303
G05D Wamic, OR 66.39 50 P P 09 48 51.2 +1.1
baz=303
SUF Sumiainen 66.40 333 P P 09 48 49.9 +0.1
SUF pmax pmax
comp=Z,36nm,0.8s
I04A Tendick Farm, 66.52 52 P P 09 48 52.1 +1.2
baz=303,SNR=6.3
L02E Cave Junction 66.67 54 P P 09 48 53.1 +1.2
baz=303
C09A Chrisman Ranch 66.74 47 IAmb IAmb 09 48 54.4
comp=Z,24nm,1.4s
VRH Novokhopyorsk 66.76 318 eP P 09 48 51.5 -0.7
VRH pmax pmax
comp=Z,20nm,0.8s
D08A Wollman Farm, 66.78 48 IAmb IAmb 09 48 54.3
comp=Z,7.0nm,0.7s
I05D Terrebonne, OR 66.86 51 P P 09 48 54.4 +1.2
baz=303
OBN Obninsk 67.00 323 iP P 09 48 53.1 -0.6
OBN i 09 49 03.2
OBN i 09 49 19.0
OBN pmax pmax
comp=Z,27nm,1.2s
OBN MLR MLR
comp=Z,663nm,15.0s
J04D Umpqua Nationa 67.00 52 P P 09 48 54.7 +0.5
baz=303
E08A Dider Farm, El 67.02 48 IAmb IAmb 09 49 05.6
comp=Z,20nm,1.5s
NEW Newport 67.12 46 IAmb IAmb 09 49 06.9
comp=Z,16nm,1.3s
NEW Newport 67.12 46 P P 09 48 56.4 +1.7
NEW pmax pmax
comp=Z,12nm,1.3s
NEW Newport 67.12 46 P P 09 48 55.4 +0.7
baz=304,SNR=7.3
FINES FINESS Array B 67.28 332 P P 09 48 55.8 +0.5
comp=Z,28nm,0.9s,baz=50,slow=7.7,SNR=47
FINES FINESS Array B 67.28 332 P P 09 48 55.3 0.0
FINES FINESS Array B 67.28 332 iP P 09 48 55.7 +0.3
FINES pmax pmax
comp=Z,29nm,0.9s
VAF Ylistaro 67.35 335 P P 09 48 56.8 +1.0
VAF pmax pmax
comp=Z,39nm,1.9s

L04D Klamath Falls 67.44 53 P P 09 48 58.3 +1.3
baz=304
J05D Fort Rock, OR 67.51 52 P P 09 48 58.2 +0.9
baz=304,SNR=5.5
E09A Wood Farm, Sta 67.53 48 IAmb IAmb 09 48 59.8
comp=Z,22nm,1.3s
M02C Callahan 67.56 54 P P 09 48 58.0 +0.4
baz=304
K04D Chiloquin, OR 67.56 53 P P 09 48 58.0 +0.3
baz=304
N02D Trinity Center 67.88 55 P P 09 49 00.5 +0.9
baz=304
M04C Macdoel 67.97 54 P P 09 49 01.5 +1.2
baz=304
K05A Summer Lake 68.03 52 P P 09 49 03.2 +2.5
VSR Storozhevoye 68.06 319 eP P 09 49 00.0 -0.5
VSR pmax pmax
comp=Z,20nm,1.1s
SUMG Summit 68.08 1⇑iP P 09 49 02.1 +1.4
comp=Z,81nm,1.1s
SUMG Summit 68.08 1 P P 09 49 02.1 +1.4
SUMG Summit 68.08 1⇑iP P 09 49 02.1 +1.4
SUMG pmax pmax
comp=Z,81nm,1.1s
VORD Divnogorie 68.14 319 eP P 09 49 00.7 -0.3
VORD pmax pmax
comp=Z,10.0nm,0.8s
WALA Waterton Lakes 68.41 44 IAmb IAmb 09 49 14.5
comp=Z,18nm,1.4s
AKT Akhty 68.85 307 eP P 09 49 05.6 -0.2
AKT e 09 49 30.2
AKT pmax pmax
comp=Z,30nm,1.0s
MOD Modoc Plateau 68.85 53 IAmb IAmb 09 49 18.4
comp=Z,13nm,1.4s
BMO Blue Mountains 68.96 49 IAmb IAmb 09 49 08.9
comp=Z,15nm,1.4s
JTMT Jette 68.98 45 IAmb IAmb 09 49 18.4
comp=Z,16nm,1.1s
VSU Vasula 69.04 330 eP P 09 49 06.7 +0.2
VSU Vasula 69.04 330⇓eP P 09 49 07.3 +0.8
WVOR Wild Horse Val 69.57 52 IAmb IAmb 09 49 17.0
comp=Z,20nm,1.5s
WVOR Wild Horse Val 69.57 52 P P 09 49 12.1 +1.9
WVOR pmax pmax
comp=Z,8.0nm,1.1s
GOF Gofitskoye 69.59 312⇑eP P 09 49 11.2 +1.1
GOF pmax pmax
comp=Z,59nm,0.6s
MSO Missoula 69.71 46 P P 09 49 11.6 +0.6
baz=307,SNR=8.9
ZEI Tsey 70.42 310 eP P 09 49 15.0 -0.6
ZEI pmax pmax
comp=Z,26nm,1.3s
KIV Kislovodsk 70.45 311 ⇑P P 09 49 17.5 +2.0
KIV Kislovodsk 70.45 311 iP P 09 49 17.2 +1.7
SNR=8.5
KIV Kislovodsk 70.45 311 eP P 09 49 16.5 +1.0
KIV pmax pmax
comp=Z,247nm,1.1s
KIV MLR MLR
comp=Z,1μm,18.0s
KBZ Khabaz 70.46 311 P P 09 49 16.4 +1.0
comp=Z,29nm,0.9s,baz=60,slow=4.6,SNR=42
SHA1 Shidzhatmaz 70.59 311 c iP P 09 49 17.6 +1.0
FFC Flin Flon 70.62 34 P P 09 49 17.0 +0.7
FFC IAmb IAmb 09 49 18.0
comp=Z,14nm,1.0s
FFC Flin Flon 70.62 34 P P 09 49 17.0 +0.7
FFC pmax pmax
comp=Z,15nm,1.0s
MFID Camas Ranch 70.66 49 IAmb IAmb 09 49 28.0
comp=Z,12nm,1.2s
PAHR Pah Rah Range 70.69 54 IAmb IAmb 09 49 28.9
comp=Z,24nm,1.3s
VCNR Virginia City 70.76 55 IAmb IAmb 09 49 29.1
comp=Z,9.5nm,1.1s
NEY Neytrino 70.84 311⇑iP P 09 49 19.9 +1.8
NEY pmax pmax
comp=Z,4.0nm,0.8s
FCC Fort Churchill 70.93 28 IAmb IAmb 09 49 28.9
comp=Z,18nm,1.4s
CMB Columbia Colle 71.03 56 IAmb IAmb 09 49 30.9
comp=Z,13nm,1.2s
IZAR Zarasai 71.09 328 eP P 09 49 20.4 +1.3
STKA Stephens Creek 71.18 182 P P 09 49 20.2 +0.5
comp=Z,1.6nm,0.5s,baz=330,slow=2.1,SNR=6.6
YERR Yerington 71.20 55 IAmb IAmb 09 49 32.2
comp=Z,19nm,1.0s
EGMT Eagleton 71.23 43 IAmb IAmb 09 49 22.4
comp=Z,17nm,1.1s
EGMT Eagleton 71.23 43 P P 09 49 20.9 +0.7
baz=309,SNR=8.6
ISAL Salakas 71.27 328 eP P 09 49 21.0 +0.8
ISAL IAmb IAmb 09 49 22.4
comp=Z,28nm,1.0s
SLIT Slitere, Latvi 71.32 331 eP P 09 49 20.5 +0.1
DLMT Dillon 71.34 46 IAmb IAmb 09 49 32.7
comp=Z,17nm,1.2s
IIGN Ignalina 71.38 328 eP P 09 49 21.8 +1.0
IIGN IAmb IAmb 09 49 23.1
comp=Z,20nm,1.0s
NACGM Naroch 71.45 327 e P 09 49 21.0 -0.3
GNI Garni 71.47 307⇓iP P 09 49 23.8 +1.9
GNI pmax pmax
comp=Z,39nm,1.3s
AKH Akhalkalaki 71.48 309 ⇓P P 09 49 23.0 +1.0
AKH Akhalkalaki 71.48 309 P P 09 49 23.0 +1.0
ARXR Arkhyz 71.50 311 iP P 09 49 23.5 +1.5
ARXR pmax pmax
comp=Z,33nm,0.9s
KVN Kaiserville 71.88 54 IAmb IAmb 09 49 36.4
comp=Z,18nm,1.0s
BANOM Banah 71.94 289 P P 09 49 25.0 +0.2
SHME Shamm 71.98 289 P P 09 49 25.2 +0.1
NVAR Mina Array Bea 72.12 55 P P 09 49 27.5 +1.6
comp=Z,4.1nm,0.8s,baz=290,slow=5.6,SNR=23
PABE Paberze 72.19 329 eP P 09 49 26.4 +0.7
PABE IAmb IAmb 09 49 27.1
comp=Z,42nm,0.8s
MSFE Esma-Masafi 72.37 289 P P 09 49 27.8 +0.4
NB2 NORSAR Subarra 72.41 338 P P 09 49 27.2 +0.2
comp=Z,28nm,0.9s,baz=36,slow=6.2
NB2 NORSAR Subarra 72.41 338 P P 09 49 27.2 +0.2
baz=36,slow=6.2
NOA NORSAR Array B 72.41 338 P P 09 49 27.4 +0.3
comp=Z,18nm,0.8s,baz=38,slow=6.0,SNR=26
YHB Horse Butte 72.50 46 P P 09 49 29.5 +1.4
UOSS Minazif 72.58 288 iP P 09 49 28.7 +0.1
SNR=5.7
UOSS Minazif 72.58 288 P P 09 49 29.1 +0.5
UOSS IAmb IAmb 09 49 29.6
comp=Z,13nm,0.8s
BCA Borcka 72.58 310 ⇑P P 09 49 29.4 +1.0
HATD Hatta, Dubai 72.70 288 iP P 09 49 30.0 +0.6
SNR=5.5
ASHO Ashiyiah 72.84 288 P P 09 49 29.6 -0.6
H17A Grant Village 73.06 46 P P 09 49 32.5 +1.0
baz=309,SNR=10
VES Vestal, Richgr 73.16 57 P P 09 49 32.4 +0.6
baz=307
AKASG Malin Array Be 73.24 323 P P 09 49 32.1 +0.1
comp=Z,12nm,0.6s,baz=45,slow=6.0,SNR=44
AKASG Malin Array Be 73.24 323 P P 09 49 32.2 +0.1
AKBB Malin Array Si 73.24 323 IAmb IAmb 09 49 33.1
comp=Z,20nm,0.9s
AKBB Malin Array Si 73.24 323⇑iP P 09 49 32.3 +0.3
KIEV Kiev 73.25 323 P P 09 49 32.0 -0.1
PKM Mcpherson Peak 73.26 59 P P 09 49 33.5 +0.8
baz=307
FXWY Fox Creek 73.29 47 IAmb IAmb 09 49 45.2
comp=Z,18nm,1.5s
RLMT Red Lodge 73.32 45 IAmb IAmb 09 49 35.9
comp=Z,18nm,1.6s
RLMT Red Lodge 73.32 45 P P 09 49 33.1 +0.1
baz=310
MOOW Moose Ponds 73.38 47 P P 09 49 35.2 +1.9
CWC Cottonwood Cre 73.45 56 P P 09 49 34.2 +0.4
baz=307
GRAC Grapevine Rang 73.57 56 P P 09 49 34.5 +0.1
baz=308,SNR=6.9
SUW Suwalki 73.58 328 eP P 09 49 34.5 +0.6
SUW Suwalki 73.58 328 eP P 09 49 34.5 +0.6
ISA Isabella, Lake 73.67 57 P P 09 49 35.4 +0.5
baz=307
ARVC Arvin 73.76 58 P P 09 49 35.7 +0.3

baz=307
FRB Frobisher Bay 73.85 14 P P 09 49 35.9 +0.5
FRB pmax pmax
comp=Z,33nm,0.9s
R11A Troy Canyon, C 73.87 53 IAmb IAmb 09 49 48.1
comp=Z,18nm,1.3s
R11A Troy Canyon, C 73.87 53 P P 09 49 35.9 -0.3
baz=308,SNR=8.6
LAO LASA Array 73.93 42 P P 09 49 35.8 -0.5
baz=311,SNR=5.9
SPUT South Promonto 73.93 50 pP 09 49 44.2 -0.4
MPMC Manual Prospec 74.06 56 P P 09 49 38.3 +0.8
baz=308,SNR=5.6
FURC Furnace Creek, 74.22 56 P P 09 49 39.3 +1.3
baz=308,SNR=7.7
TPNV Topopah Spring 74.31 55 IAmb IAmb 09 49 50.6
comp=Z,18nm,1.1s
TPNV Topopah Spring 74.31 55 P P 09 49 39.7 +0.9
baz=308,SNR=9.9
DUG Dugway, Tooele 74.41 51 IAmb IAmb 09 49 51.4
comp=Z,11nm,1.1s
DUG Dugway, Tooele 74.41 51 P P 09 49 41.5 +2.2
DUG pmax pmax
comp=Z,16nm,2.3s
DUG Dugway, Tooele 74.41 51 P P 09 49 40.4 +1.1
baz=309,SNR=12
EDW2 Edwards Air Fo 74.45 58 P P 09 49 40.8 +1.3
baz=308
SIM Simferopol' 74.62 316ceP P 09 49 41.9 +1.7
SIM pmax pmax
comp=Z,19nm,0.8s
PDAR Pinedale Array 74.67 47 P P 09 49 41.9 +0.9
comp=Z,3.0nm,0.7s,baz=270,slow=1.6,SNR=34
PDAR Pinedale Array 74.67 47 P P 09 49 41.6 +0.7
SHOC Shoshone, Teco 74.94 56 P P 09 49 43.2 +1.0
baz=308
GSC Goldstone, Bar 74.97 57 P P 09 49 43.7 +1.1
baz=308
BFSC Mount Baldy Ra 75.06 58 P P 09 49 43.8 +0.6
baz=308
SCI2 San Clemente I 75.25 59 P P 09 49 44.7 +0.6
baz=308
SORM Soroca 75.42 321 ⇑P P 09 49 44.3 -0.5
SORM Soroca 75.42 321 ⇑P P 09 49 44.3 -0.5
TUQ Turquoise Moun 75.45 56 P P 09 49 45.5 +0.1
baz=308
HEC Hector,Ludlow 75.56 57 P P 09 49 45.8 -0.1
baz=308
MURC Murrieta 75.76 58 P P 09 49 46.8 -0.3
baz=308
DIKM Dikmen 76.15 313 ⇑P P 09 49 50.1 +1.0
BEL Belsk 76.16 327 eP P 09 49 50.6 +1.7
BEL Belsk 76.16 327 eP P 09 49 50.6 +1.7
LVV L'vov 76.24 325 eP P 09 49 49.0 -0.4
BELC Belle Mtn. Jos 76.29 57 P P 09 49 50.0 -0.2
baz=309
ULM Lac du Bonnet 76.42 35 P P 09 49 50.5 0.0
comp=Z,5.2nm,0.8s,baz=317,slow=5.7,SNR=13
MDND Maddock 76.44 38 P P 09 49 51.1 +0.5
baz=315
K22A Casper 76.44 46 P P 09 49 51.3 +0.4
baz=312
MONP2 Monument Peak 76.71 58 P P 09 49 53.4 +0.8
baz=309
IRM Iron Mountain 76.75 57 P P 09 49 53.6 +1.0
baz=309
RSSD Black Hills 76.79 43 P P 09 49 53.6 +0.6
RSSD Black Hills 76.79 43 P P 09 49 53.6 +0.6
RSSD pmax pmax
comp=Z,8.0nm,1.0s
RSSD Black Hills 76.79 43 P P 09 49 53.4 +0.4
baz=313
BC3 Big Chuckawall 76.86 57 P P 09 49 54.5 +1.1
baz=309
KWP Kalwaria Pacla 76.96 325 eP P 09 49 54.9 +1.3
KWP Kalwaria Pacla 76.96 325 eP P 09 49 54.9 +1.3
SWSC Sam W. Stewart 77.08 58 P P 09 49 55.4 +0.9
baz=309
U15A North Rim 77.11 53 IAmb IAmb 09 50 07.2
comp=Z,17nm,1.2s
O20A White River Ci 77.13 48 P P 09 49 55.7 +0.7
baz=311
BUR08 Bucovina Ar. S 77.27 322 IAmb IAmb 09 49 57.2
comp=Z,15nm,0.8s
BURAR Bucovina Array 77.28 322 ⇑P P 09 49 56.3 +0.8
BURAR Bucovina Array 77.28 322 P P 09 49 56.0 +0.5
BURAR Bucovina Array 77.28 322 ⇑P P 09 49 56.3 +0.8
PDMCI Parker Dam,Lak 77.30 56 P P 09 49 56.7 +1.0
baz=310
TESR Tescani 77.38 321 ⇑P P 09 49 55.9 -0.1
Y12C Blythe 77.40 57 P P 09 49 57.4 +1.1
baz=310
GLA Glamis 77.65 57 P P 09 49 58.5 +0.7
baz=309
TOPG Topolog 77.67 319 ⇑P P 09 49 58.6 +1.0
KOLS Kolonicke sedl 77.67 325 eP P 09 49 58.5 +1.0
KOLS pmax pmax
comp=Z,10.0nm,1.0s
KOLS Kolonicke sedl 77.67 325 eP P 09 49 58.5 +1.0
OJC Ojcow 77.78 327 eP P 09 49 59.3 +1.2
OJC Ojcow 77.78 327 eP P 09 49 59.3 +1.2
VRI Vrincioaia 77.80 320 ⇑P P 09 49 57.8 -0.5
VRI Vrincioaia 77.80 320 ⇑P P 09 49 57.8 -0.5
UZH Uzhgorod 77.88 325 eP P 09 49 59.0 +0.3
UZH e 09 50 10.2
N23A Red Feather La 77.94 47 P P 09 50 00.1 +0.6
baz=312,SNR=7.0
TIRR Tirgusor 77.94 318 ⇑P P 09 49 59.6 +0.5
TIRR Tirgusor 77.94 318 ⇑P P 09 49 59.6 +0.5
CRVS Cervenica-Dubn 78.05 325 eP P 09 50 00.9 +1.2
CRVS pmax pmax
comp=Z,15nm,0.9s
CRVS Cervenica-Dubn 78.05 325 eP P 09 50 00.9 +1.2
TRPA Tarpa 78.14 324 ⇑P P 09 50 01.3 +1.2
NIE Niedzica 78.17 326 eP P 09 50 01.7 +1.3
NIE Niedzica 78.17 326 eP P 09 50 01.7 +1.3
WUAZ Wupatki 78.27 54 P P 09 50 01.8 +0.5
baz=311,SNR=5.2
BRTR Keskin Array B 78.35 312 P P 09 50 02.1 +0.5
comp=Z,5.3nm,1.0s,baz=88,slow=4.0,SNR=19
BRTR Keskin Array B 78.35 312 P P 09 50 01.4 -0.3
DOPR Dopca 78.38 321 ⇑P P 09 50 03.6 +2.1
RUE Ruedersdorf 78.42 331 eP P 09 49 56.2 -5.4
ICOR Ion Corvin 78.50 319 ⇑P P 09 50 03.4 +1.2
KSP Ksiaz 78.74 329 eP P 09 50 04.7 +1.3
KSP Ksiaz 78.74 329 eP P 09 50 04.7 +1.3
OKC Ostrava-Krasne 78.77 327 eP P 09 50 05.0 +1.4
OKC Ostrava-Krasne 78.77 327 eP P 09 50 05.0 +1.4
ISCO Idaho Springs 78.86 47 P P 09 50 06.7 +2.0
ISCO pmax pmax
comp=Z,7.0nm,1.8s
ISCO Idaho Springs 78.86 47 P P 09 50 05.1 +0.4
baz=313
MVCO Mesa Verde 78.91 51 IAmb IAmb 09 50 16.8
comp=Z,22nm,1.4s
MVCO Mesa Verde 78.91 51 P P 09 50 05.7 +0.8
baz=312,SNR=6.6
VOIR 78.93 321 ⇑P P 09 50 06.4 +1.7
VOIR 78.93 321 ⇑P P 09 50 06.4 +1.7
CHVC Chvalec 79.04 329 eP P 09 50 06.3 +1.2
MORC Moravsky Berou 79.06 328 eP P 09 50 06.2 +0.9
MORC Moravsky Berou 79.06 328 ⇑P P 09 50 06.4 +1.1
MORC Moravsky Berou 79.06 328 ⇑P P 09 50 06.4 +1.1
DPC Dobruska-Polom 79.11 329 eP P 09 50 07.1 +1.6
DPC Dobruska-Polom 79.11 329 eP P 09 50 07.1 +1.6
KRLC Kraliky 79.14 328 eP P 09 50 06.9 +1.2
KRLC Kraliky 79.14 328 eP P 09 50 06.9 +1.2
PSZ Piszkesteto 79.48 325 ⇑P P 09 50 08.8 +1.2
PSZ Piszkesteto 79.48 325 ⇑P P 09 50 08.8 +1.2
VYHS Vyhne 79.50 326 eP P 09 50 09.0 +1.3
VYHS pmax pmax
comp=Z,16nm,1.2s
VYHS Vyhne 79.50 326 eP P 09 50 09.0 +1.3
S22A 4UR Ranch, Cre 79.54 49 P P 09 50 09.2 +0.7
baz=312
CLL Collm 79.64 331 iP P 09 50 08.9 +0.6
comp=Z,23nm,0.9s
CLL Lm MLR 10 28 00.0
comp=N,200nm,20.6s
CLL Lm MLR 10 28 00.0
comp=E,200nm,18.9s
CLL Lm MLR 10 28 00.0
comp=Z,300nm,20.3s
CLL Collm 79.64 331 iP P 09 50 08.9 +0.6
CLL pmax pmax

	comp=Z,23nm,0.9s					
214A	Organ Pipe Nat	79.66	57	P	P	09 50 10.0 +1.2
	baz=310					
PVCC	Panska Ves	79.67	330	eP	P	09 50 10.0 +1.5
PVCC	Panska Ves	79.67	330	eP	P	09 50 10.0 +1.5
Q24A	Divide	79.69	48	P	P	09 50 09.7 +0.4
	baz=313					
JAVC	Velka Javorina	79.72	327	eP	P	09 50 10.7 +1.8
VRAC	Vranov	79.82	328	eP	P	09 50 10.5 +1.2
VRAC	Vranov	79.82	328	⇑P	P	09 50 10.7 +1.4
VRAC	Vranov	79.82	328	⇑P	P	09 50 10.7 +1.4
GZR	Gura Zlata	80.05	322	⇓P	P	09 50 11.5 +0.8
GZR	Gura Zlata	80.05	322	⇓P	P	09 50 11.5 +0.8
EYMN	Ely	80.06	34	P	P	09 50 11.2 +0.5
EYMN				IAmb	IAmb	09 50 11.9
	comp=Z,16nm,1.4s					
EYMN	Ely	80.06	34	P	P	09 50 10.9 +0.2
	baz=320					
GOPC	GO Pecny, Ondr	80.07	329	eP	P	09 50 12.0 +1.3
GOPC	GO Pecny, Ondr	80.07	329	eP	P	09 50 12.0 +1.3
KRUC	Moravsky	80.09	328	eP	P	09 50 11.7 +0.9
KRUC	Moravsky	80.09	328	P	P	09 50 12.1 +1.3
KRUC				pmax	pmax	
	comp=Z,27nm,0.9s					
PRU	Pruhonice	80.11	329	eP	P	09 50 12.1 +1.2
PRU	Pruhonice	80.11	329	eP	P	09 50 12.1 +1.2
MODS	Modra-Piesok	80.26	327	eP	P	09 50 12.4 +0.6
MODS				pmax	pmax	
	comp=Z,21nm,1.1s					
MODS	Modra-Piesok	80.26	327	eP	P	09 50 12.4 +0.6
SDCO	Great Sand Dun	80.32	49	P	P	09 50 13.3 +0.7
	baz=313,SNR=5.7					
BZS	Buzias	80.43	323	⇑P	P	09 50 13.1 +0.4
BZS	Buzias	80.43	323	⇑P	P	09 50 13.1 +0.4
PBCC	Pribram	80.56	329	eP	P	09 50 14.4 +1.1
PLVB	Pleven	80.62	320	⇑P	P	09 50 14.6 +0.8
MOX	Moxa	80.70	331	eL	L	10 30 36.8
	comp=Z,220nm,19.9s					
TUC	Tucson	80.73	56	P	P	09 50 15.7 +1.1
	baz=311					
ECSD	EROS Data Cent	80.85	40	P	P	09 50 15.2 +0.1
	baz=318,SNR=11					
MDVR	Moldovita	81.01	322	⇑P	P	09 50 15.9 0.0
KSCO	Kaye Shedlock'	81.08	46	P	P	09 50 17.0 +0.5
	baz=314					
SOP	Sopron	81.10	327	P	P	09 50 18.2 +2.0
SOP				pmax	pmax	
	comp=Z,35nm,1.1s					
KHC	Kasperske Hory	81.17	329	eP	P	09 50 17.9 +1.3
KHC	Kasperske Hory	81.17	329	⇑iP	P	09 50 17.5 +0.9
KHC				pmax	pmax	
	comp=Z,37nm,1.0s					
RAYN	Ar Rayn	81.18	293	iP	P	09 50 17.3 +0.1
	SNR=12					
RAYN	Ar Rayn	81.18	293	P	P	09 50 17.5 +0.4
RAYN				IAmb	IAmb	09 50 18.5
	comp=Z,14nm,0.9s					
RAYN	Ar Rayn	81.18	293	P	P	09 50 17.5 +0.4
RAYN				pmax	pmax	
	comp=Z,14nm,1.0s					
CONA	Conrad Observa	81.20	327	ePcP	P	09 50 18.4 +1.6
	comp=Z,15nm,1.0s,SNR=5.6					
EKA	Eskdalemuir Ar	81.21	341	P	P	09 50 17.0 +0.3
GEC2	GERESS Array S	81.35	329	P	P	09 50 18.4 +0.7
GEC2				pmax	pmax	
	comp=Z,11nm,1.9s					
GERES	GERESS Array B	81.35	329	P	P	09 50 17.9 +0.2
	comp=Z,4.9nm,0.8s,baz=29,slow=6.1,SNR=20					
GERES	GERESS Array B	81.35	329	P	P	09 50 18.1 +0.4
GERES	GERESS Array B	81.35	329	P	P	09 50 18.1 +0.4
T25A	Trinidad	81.37	49	IAmb	IAmb	09 50 29.8
	comp=Z,12nm,1.0s					
T25A	Trinidad	81.37	49	P	P	09 50 18.8 +0.7
	baz=314,SNR=6.5					
WET	Wettzell	81.43	330	P	P	09 50 19.4 +1.4
WET				pmax	pmax	
	comp=Z,18nm,1.1s					
SPMN	Marine on St.	81.55	36	P	P	09 50 19.0 +0.4
	baz=320					
GRF	Grafenberg Arr	81.62	331	eP	P	09 50 19.8 +0.8
	comp=Z,27nm,1.0s,baz=36,slow=4.5					
GRF				eL	L	10 30 56.4
	comp=Z,177nm,18.3s					
GRF	Grafenberg Arr	81.62	331	P	P	09 50 20.7 +1.7
GRF				pmax	pmax	
	comp=Z,36nm,1.1s					
ANMO	Albuquerque	81.66	51	⇑iP	P	09 50 21.0 +1.3
ANMO				pmax	pmax	
	comp=Z,5.0nm,1.2s					
ANMO	Albuquerque	81.66	51	P	P	09 50 19.9 +0.2
	baz=313					
BGNE	Belgrade	81.78	42	P	P	09 50 20.2 +0.3
	baz=317					
ARSA	Arzberg	81.88	327	iP	P	09 50 21.5 +1.1
VTS	Vitosha	81.88	320	⇑P	P	09 50 21.8 +1.1
VTS	Vitosha	81.88	320	IAmb	IAmb	09 50 22.9
	comp=Z,16nm,0.8s					
VTS	Vitosha	81.88	320	⇑P	P	09 50 21.8 +1.1
SCHQ	Schefferville	82.37	17	P	P	09 50 22.7 -0.1
	comp=Z,3.3nm,0.8s,baz=333,slow=4.5,SNR=6.2					
121A	Cookes Peak, D	82.47	54	P	P	09 50 24.0 0.0
	baz=313					
SOKA	Soboth	82.53	327	ePcP	P	09 50 24.8 +0.9
	comp=Z,25nm,0.9s,SNR=6.9					
MEM	Membach	82.71	334	P	P	09 50 23.7 -0.9
MEM				x	x	09 50 25.0
SRS	Serrai	82.81	319	P	P	09 50 25.6 +0.2
SRS				pmax	pmax	
	comp=Z,10.0nm,1.4s					
CBKS	Cedar Bluff	82.81	45	P	P	09 50 25.3 -0.2
	baz=316					
OBKA	Obir	82.87	327	eP	P	09 50 26.3 +0.6
	comp=Z,7.8nm,0.8s					
KBA	Koelnbreinsper	82.91	328	ePcP	P	09 50 27.7 +1.7
	comp=Z,15nm,1.0s					
KBA	Koelnbreinsper	82.91	328	P	P	09 50 27.1 +1.1
KBA				pmax	pmax	
	comp=Z,19nm,0.9s					
KNT	Kendrikon	83.13	319	P	P	09 50 27.6 +0.6
KNT				pmax	pmax	
	comp=Z,12nm,1.5s					
MYKA	Terra Mystica	83.15	328	ePcP	P	09 50 27.8 +0.7
	comp=Z,21nm,1.4s					
BMRD	Maredsous	83.38	335	P	P	09 50 27.1 -1.0
BMRD				x	x	09 50 28.8
WATA	Walderalm	83.41	329	ePcP	P	09 50 29.2 +0.6
	comp=Z,6.8nm,0.9s					
E44A	Grand Marais A	83.44	32	P	P	09 50 28.7 +0.2
	baz=324					
WTTA	Wattenberg	83.44	329	ePcP	P	09 50 29.9 +1.1
	comp=Z,15nm,1.3s					
WLF	Walferdange	83.46	334	x	P	09 50 29.7 +1.2
ABTA	Abfaltersbach	83.52	329	ePcP	P	09 50 29.6 +0.6
	comp=Z,14nm,1.0s					
GRG	Griva	83.53	319	P	P	09 50 29.8 +0.7
GRG				pmax	pmax	
	comp=Z,8.0nm,0.8s					
MOTA	Moosalm	83.59	330	ePcP	P	09 50 30.5 +1.1
	comp=Z,28nm,1.0s,SNR=5.9					
RETA	Reutte	83.60	330	ePcP	P	09 50 30.6 +1.2
	comp=Z,25nm,1.0s					
SQTA	Sankt Quirin	83.65	330	ePcP	P	09 50 30.6 +0.9
	comp=Z,20nm,1.1s					
SCIA	State Center	83.88	39	P	P	09 50 30.7 -0.1
	baz=320					
MATQ	Matagami	83.88	25	P	P	09 50 30.6 -0.1
	baz=329					
PDG	Podgorica	83.96	322	⇑P	P	09 50 31.3 +0.1
D46A	Sault St. Mari	83.97	31	P	P	09 50 30.9 -0.3
	baz=325,SNR=6.5					
FETA	Feichten	84.00	330	ePcP	P	09 50 32.7 +1.1
	comp=Z,13nm,1.0s					
DAVA	Damuels	84.11	330	ePcP	P	09 50 33.1 +1.0
	comp=Z,21nm,0.9s					
LIT	Litokhoron	84.12	319	P	P	09 50 31.8 -0.4
LIT				pmax	pmax	
	comp=Z,19nm,0.9s					
D47A	Chapleau	84.20	30	P	P	09 50 31.8 -0.6
	baz=326,SNR=5.3					
KSU1	Kansas State U	84.27	43	P	P	09 50 32.7 -0.2
	baz=318					
F45A	CMU Biological	84.36	32	P	P	09 50 32.8 -0.4
	baz=324					
PPT2	Papeete2	84.37	118	eLR	LR	10 17 15.5
	comp=Z,235nm,22.0s					
JFWS	Jewell Farm	84.50	37	P	P	09 50 33.3 -0.7
	baz=321					
FUORN	Ofenpass-Fuorn	84.51	330	P	P	09 50 35.3 +1.0
AMTX	Amarillo	84.52	49	P	P	09 50 35.3 +0.9
	baz=315					
DAVOX	Davos/Dischmat	84.53	330	LR	LR	10 31 48.1
	comp=Z,219nm,18.8s,slow=38					
MSTX	Muleshoe	84.53	50	IAmb	IAmb	09 50 45.6
	comp=Z,10nm,0.9s					
MSTX	Muleshoe	84.53	50	P	P	09 50 34.8 +0.4
	baz=315,SNR=5.5					
MNTX	Cornudas Mount	84.53	53	P	P	09 50 34.9 +0.5
	baz=314,SNR=6.4					
D48A	Paudash Townsh	84.59	29	P	P	09 50 33.8 -0.6
	baz=327					
E47A	Iron Bridge	84.63	30	P	P	09 50 34.4 -0.2
	baz=326,SNR=5.2					
D49A	Beulah Townshi	84.68	29	P	P	09 50 34.3 -0.6
	baz=327					
LSQQ	Lebel-sur-Quev	84.70	25	P	P	09 50 34.9 0.0
	baz=330					
G45A	Suttons Bay	84.82	33	P	P	09 50 35.6 +0.1
	baz=324					
E48A	Lockeyer	85.04	30	P	P	09 50 36.3 -0.3
	baz=326					
D50A	G1974 Best Tow	85.33	28	P	P	09 50 37.4 -0.7
	baz=328					
F48A	Evansville	85.40	30	P	P	09 50 38.3 -0.2
	baz=326,SNR=5.4					
H46A	Fife Lake	85.42	33	P	P	09 50 38.2 -0.4
	baz=325					
GLMI	Grayling	85.43	32	P	P	09 50 38.8 +0.2
	baz=325					
G47A	Hillman	85.45	31	P	P	09 50 38.3 -0.4
	baz=325					
F49A	Sandfield	85.68	30	P	P	09 50 39.5 -0.3
	baz=327					
J45A	Montague	85.81	34	P	P	09 50 39.7 -0.8
	baz=324					
E51A	G1948 Merrick	85.99	28	P	P	09 50 41.0 -0.3
	baz=328					
D52A	ZEK Kipawa Sen	86.00	27	P	P	09 50 40.5 -0.9
	baz=329					
H48A	Harrisville	86.06	31	P	P	09 50 40.7 -1.0
	baz=326					
L44A	Lake County Fo	86.15	36	P	P	09 50 41.5 -0.7
	baz=323					
D53A	Lac Vacive, Po	86.16	27	P	P	09 50 41.4 -0.8
	baz=330					
J46A	Howard City	86.20	34	P	P	09 50 42.3 -0.2
	baz=324					
WMOK	Wichita Mounta	86.28	47	IAmb	IAmb	09 50 54.6
	comp=Z,7.6nm,1.1s					
WMOK	Wichita Mounta	86.28	47	P	P	09 50 43.8 +0.7
WMOK				pmax	pmax	
	comp=Z,10.0nm,1.1s					
WMOK	Wichita Mounta	86.28	47	P	P	09 50 43.1 +0.1
	baz=317,SNR=5.3					
LOR	Lormes	86.30	334	P	P	09 50 44.0 +1.1
LOR				pmax	pmax	
	comp=Z,26nm,1.2s					
I48A	Sherman Twp	86.33	32	P	P	09 50 43.3 +0.3
	baz=326					
F51A	Arnstein	86.35	29	P	P	09 50 42.2 -0.9
	baz=328					
D54A	Lac Fusel, La	86.46	26	P	P	09 50 43.1 -0.6
	baz=330					
E52A	Mattawa	86.51	28	P	P	09 50 43.6 -0.3
	baz=329					
J47A	Sunmer	86.64	33	P	P	09 50 44.6 -0.1
	baz=325					
F52A	Sundridge	86.68	28	P	P	09 50 44.2 -0.6
	baz=328					
E53A	Dumoine, Ponti	86.78	27	P	P	09 50 44.9 -0.4
	baz=330					
HDIL	Hopedale	86.79	37	P	P	09 50 45.6 +0.2
	baz=322					
I49A	Point Hope	86.89	32	P	P	09 50 45.7 -0.1
	baz=326					
D55A	Sainte-Anne-du	86.98	26	P	P	09 50 45.6 -0.6
	baz=331					
ALGO	Algonquin Park	87.01	28	P	P	09 50 46.1 -0.2
	baz=329					
J48A	Bridge Port	87.02	32	P	P	09 50 47.0 +0.5
	baz=326					
K47A	Vermontville	87.03	34	P	P	09 50 46.7 +0.2
	baz=325					
D56A	ZEC Mazanza, M	87.19	25	P	P	09 50 47.0 -0.3
	baz=332					
TXAR	Lajitas Array	87.23	54	P	P	09 50 48.6 +0.7
	comp=Z,0.8nm,0.5s,baz=295,slow=3.6,SNR=25					
J49A	Marlette	87.24	32	P	P	09 50 47.7 +0.2
	baz=326					
K48A	Perry	87.29	33	P	P	09 50 47.7 -0.1
	baz=325					
ABTX	Abilene, Hawle	87.32	49	P	P	09 50 48.6 +0.4
	baz=317					
H52A	Wyevale	87.45	29	P	P	09 50 48.5 0.0
	baz=328					
G54A	Lake Saint Pet	87.47	28	P	P	09 50 48.5 -0.1
	baz=329					
D57A	Chemin Vers le	87.50	25	P	P	09 50 48.9 +0.2
	baz=332,SNR=8.6					
L47A	Sherwood	87.50	34	P	P	09 50 48.7 -0.2
	baz=325					
G53A	Haliburton	87.51	28	P	P	09 50 48.8 0.0
	baz=329					
E56A	St. Veronique	87.54	26	P	P	09 50 48.8 -0.1
	baz=331					
F55A	Otter Lake	87.71	27	P	P	09 50 49.2 -0.6
	baz=330					
I51A	Listowel	87.72	31	P	P	09 50 50.0 +0.1
	baz=327					
D58A	Chemin du LacG	87.75	24	P	P	09 50 49.9 0.0
	baz=333					
CCM	Cathedral Cave	87.80	40	P	P	09 50 51.2 +0.8
CCM	Cathedral Cave	87.80	40	P	P	09 50 51.2 +0.8
CCM				pmax	pmax	
	comp=Z,13nm,1.0s					
CCM	Cathedral Cave	87.80	40	P	P	09 50 50.5 +0.1
	baz=321					
L48A	N Adams	87.86	34	P	P	09 50 51.0 +0.4
	baz=325					
E57A	Chemin Saint G	87.95	25	P	P	09 50 50.8 -0.1
	baz=332					
SFIN	Lafayette	87.95	36	P	P	09 50 50.9 -0.1
	baz=324					
H53A	Bobcaygeon	88.00	29	P	P	09 50 51.8 +0.7
	baz=329					
L49A	Milan	88.01	33	P	P	09 50 51.5 +0.3
	baz=326					
G55A	Calabogie	88.09	27	P	P	09 50 51.3 -0.2
	baz=330					
D59A	Saint-Raymond	88.15	23	P	P	09 50 51.7 -0.1
	baz=334					
N47A	Urbana	88.18	35	P	P	09 50 51.9 -0.2
	baz=324					
E58A	La Victoria	88.26	25	P	P	09 50 52.4 +0.1
	baz=333					
U40A	Yellville	88.29	42	P	P	09 50 53.0 +0.2
	baz=320,SNR=5.6					
K51A	Iona Station	88.43	31	P	P	09 50 53.6 +0.4
	baz=327					
M49A	Liberty Center	88.44	34	P	P	09 50 53.5 +0.2
	baz=325					
D61A	St Aubert, Com	88.47	22	P	P	09 50 53.3 0.0
	baz=335					
L50A	Kingsville	88.47	33	P	P	09 50 53.2 -0.2
	baz=326					
N48A	Decatur	88.49	35	P	P	09 50 53.0 -0.5
	baz=325					
D60A	Saint Jean D'O	88.51	23	P	P	09 50 52.8 -0.7
	baz=334					
H55A	Tweed	88.53	28	P	P	09 50 53.0 -0.7
	baz=330					
I55A	Frankford	88.64	28	P	P	09 50 53.6 -0.5
	baz=330					
W39A	Magazine	88.69	44	P	P	09 50 54.4 -0.2
	baz=320					
JCT	Junction City	88.78	50	P	P	09 50 55.1 0.0
	baz=317					
N49A	Columbus Grove	88.81	34	P	P	09 50 54.9 -0.2
	baz=325					
G57A	Newington	88.82	26	P	P	09 50 54.5 -0.5
	baz=331					
H56A	Elgin	88.82	27	P	P	09 50 54.8 -0.2
	baz=330					
E60A	Ste Agathe de	88.84	23	P	P	09 50 54.9 -0.1
	baz=334					
D62A	Allapoint, All	88.90	22	P	P	09 50 55.3 0.0
	baz=336					
G58A	Ormstown	89.09	26	P	P	09 50 56.4 +0.1
	baz=332					
D63A	Stockholm	89.21	21	P	P	09 50 56.7 -0.1
	baz=336					
H57A	Richville	89.24	27	P	P	09 50 56.7 -0.2
	baz=331					
MIAR	Mount Ida	89.29	44	P	P	09 50 58.7 +1.3
MIAR				pmax	pmax	
	comp=Z,10.0nm,1.2s					
MIAR	Mount Ida	89.29	44	P	P	09 50 57.8 +0.4
	baz=320					
F61A	St Evariste	89.33	23	P	P	09 50 57.1 -0.3
	baz=334					
O49A	Covington	89.34	35	P	P	09 50 58.0 +0.4
	baz=325					
N50A	Nevada	89.38	34	P	P	09 50 58.2 +0.5
	baz=326					
WHAR	Wooly Hollow	89.40	43	IAmb	IAmb	09 51 08.7
	comp=Z,10.0nm,1.0s					
G59A	Clarenceville	89.44	25	P	P	09 50 57.8 -0.1
	baz=333					
P48A	Milroy	89.45	36	P	P	09 50 58.4 +0.3
	baz=325					
M52A	Chesterland	89.48	32	P	P	09 50 58.8 +0.6
	baz=327					
W41B	Gary Mavity, V	89.51	43	P	P	09 50 58.6 +0.2
	baz=320					
BATG	Bathurst New B	89.54	20	IAmb	IAmb	09 51 00.3
	comp=Z,10nm,0.9s					
L53A	Girard	89.58	31	P	P	09 50 59.1 +0.4
	baz=328					
N51A	Ashland	89.58	33	P	P	09 50 59.0 +0.4
	baz=326					
I57A	Carthage	89.60	27	P	P	09 50 59.1 +0.4
	baz=331					
K54A	Basiliko Farm,	89.64	30	P	P	09 50 58.9 0.0
	baz=329					
H59A	Cadyville	89.66	26	P	P	09 50 59.0 +0.1
	baz=332					
E63A	Oxbow	89.68	21	P	P	09 50 58.8 -0.2
	baz=336					
O50A	Cable	89.69	34	P	P	09 50 59.6 +0.4
	baz=326					
H58A	Gabriels	89.69	26	P	P	09 50 59.2 0.0
	baz=332					
P49A	Miami Univ. Ec	89.71	35	P	P	09 50 59.8 +0.5
	baz=325					
L54A	Sinclairville	89.71	30	P	P	09 50 59.8 +0.5
	baz=328					
X40A	Basin Creek Fa	89.73	43	P	P	09 51 00.1 +0.6
	baz=320					
Q48A	North Vernon	89.74	36	P	P	09 50 59.8 +0.3
	baz=324					
J56A	Wolcott	89.75	28	P	P	09 50 59.4 0.0
	baz=330					
K55A	Perry	89.77	29	P	P	09 50 60.0 +0.4
	baz=329					
G61A	St-Isidore-de-	89.79	24	P	P	09 50 59.8 +0.3
	baz=334					
M53A	WI Miller and	89.85	32	P	P	09 51 00.5 +0.6
	baz=328					
E64A	Bridgewater	89.85	21	P	P	09 51 00.2 +0.4
	baz=336					
ACSO	Alum Creek Sta	89.89	34	P	P	09 51 00.4 +0.3
	baz=326					
J57A	Williamstown	89.94	28	P	P	09 51 00.3 0.0
	baz=331					
WCI	Wyandotte Cave	90.05	37	P	P	09 51 01.1 +0.2
	baz=324					
P50A	Jamestown	90.05	35	P	P	09 51 00.9 0.0
	baz=326					
H60A	Morristown	90.06	25	P	P	09 51 00.8 -0.1
	baz=333					
Q49A	Aurora	90.06	36	P	P	09 51 01.3 +0.4
	baz=325					
K56A	Middlesex	90.08	29	P	P	09 51 01.4 +0.4
	baz=330					
L55A	Hinsdale	90.10	30	P	P	09 51 00.9 -0.2
	baz=329					
O51A	Pataskala	90.12	34	P	P	09 51 01.7 +0.5
	baz=326					
F63A	Nahmakanta, Br	90.14	22	P	P	09 51 02.0 +0.8
	baz=336					
G62A	West of Eustis	90.15	23	P	P	09 51 01.5 +0.2
	baz=334					
M54A	Oil Creek Stat	90.19	31	P	P	09 51 02.0 +0.4
	baz=328					
F64A	Sherman	90.21	22	P	P	09 51 01.9 +0.4
	baz=336					
J58A	Remsen	90.24	27	P	P	09 51 02.1 +0.4
	baz=331					
H61A	Lyndonville	90.33	25	P	P	09 51 02.7 +0.6
	baz=334					
J59A	Piesco	90.42	27	P	P	09 51 02.8 +0.2
	baz=332					
L56A	Greenwood	90.47	29	P	P	09 51 03.1 +0.2
	baz=330					
I60A	Shoreham	90.50	26	P	P	09 51 03.4 +0.5
	baz=333					
G63A	Kingsbury	90.52	23	P	P	09 51 03.2 +0.2
	baz=335					
N54A	Moraine State	90.53	31	P	P	09 51 03.3 +0.2
	baz=328					
H62A	Milan	90.54	24	P	P	09 51 03.6 +0.5
	baz=334					
M55A	Ridgway	90.58	30	P	P	09 51 03.2 -0.2
	baz=329					
O53A	New Philadelph	90.63	33	P	P	09 51 03.8 +0.2
	baz=327					
K58A	Earlville	90.63	28	P	P	09 51 03.5 -0.1
	baz=331					
G64A	Maxfield	90.65	22	P	P	09 51 03.6 0.0
	baz=336					
Q51A	Peebles	90.73	35	P	P	09 51 04.3 +0.2
	baz=326					
P52A	Corning	90.75	34	P	P	09 51 04.3 +0.1
	baz=327					
M56A	Emporium	90.79	30	P	P	09 51 04.6 +0.3
	baz=329					
H63A	New Sharon	90.81	23	P	P	09 51 04.1 -0.2
	baz=335					
L57A	Andrews Acres	90.86	29	P	P	09 51 04.4 -0.2
	baz=330					
S49A	Springfield	90.87	37	P	P	09 51 04.9 +0.2
	baz=325					
K59A	Cooperstown	90.91	27	P	P	09 51 05.0 +0.1
	baz=332					
R50A	Paris	90.91	36	P	P	09 51 04.8 -0.1
	baz=325					
BINY	Binghamton	91.00	28	P	P	09 51 05.0 -0.3
	baz=331					
G65A	Princeton	91.04	21	P	P	09 51 04.9 -0.4
	baz=337					
L58A	Harry Jones Me	91.19	28	P	P	09 51 06.2 0.0
	baz=331					
J61A	Chester	91.19	25	P	P	09 51 06.0 -0.1
	baz=333					
R51A	Hillsboro	91.22	35	P	P	09 51 06.7 +0.4
	baz=326					
N56A	West Decatur	91.24	30	P	P	09 51 06.4 -0.1
	baz=329					
H65A	Eastbrook	91.31	22	P	P	09 51 07.2 +0.6
	baz=336					
T49A	Edmonton	91.31	37	P	P	09 51 07.1 +0.3
	baz=324					
M57A	Sunshine Farm,	91.32	29	P	P	09 51 07.3 +0.5
	baz=330,SNR=5.0					
L59A	Walton	91.35	28	P	P	09 51 07.3 +0.3
	baz=331					
S50A	Richmond	91.37	36	P	P	09 51 07.5 +0.5
	baz=325					
K61A	Williamstown	91.55	26	P	P	09 51 08.2 +0.4
	baz=333					
SSPA	Standing Stone	91.64	30	P	P	09 51 08.7 +0.4
	baz=329					
N57A	Milroy	91.66	30	P	P	09 51 08.1 -0.3
	baz=330					
U49A	Red Boiling Sp	91.68	38	P	P	09 51 08.8 +0.3
	baz=324					
T50A	Nancy	91.70	37	P	P	09 51 09.0 +0.4
	baz=325					
S51A	Beattyville	91.76	36	P	P	09 51 08.9 0.0
	baz=326					
P55A	Reedsville	91.82	32	P	P	09 51 08.8 -0.4
	baz=328					
L61A	Hillsdale 1, H	91.87	27	P	P	09 51 09.6 +0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=332						
N58A	**Sunbury**	**91.91**	**29**	P	**P**	**09 51 09.3**	**-0.2**
	baz=330						
S52A	**Salyersville**	**91.96**	**35**	P	**P**	**09 51 09.7**	**-0.1**
	baz=326						
T51A	**Gray**	**92.16**	**36**	P	**P**	**09 51 10.9**	**+0.1**
	baz=326						
N59A	**State Game Lan**	**92.20**	**29**	P	**P**	**09 51 10.4**	**-0.4**
	baz=331						
S54A	**Dingess, Beckl**	**92.64**	**34**	P	**P**	**09 51 12.9**	**-0.1**
	baz=327						
M62A	**Hamden**	**92.77**	**27**	P	**P**	**09 51 13.2**	**-0.2**
	baz=333						
U52A	**Thorn Hill**	**92.89**	**36**	P	**P**	**09 51 13.9**	**-0.3**
	baz=326						
R56A	**Bull Pasture M**	**92.93**	**32**	P	**P**	**09 51 14.1**	**-0.3**
	baz=328						
Z50A	**Ashland**	**94.24**	**40**	P	**P**	**09 51 20.6**	**+0.2**
	baz=324						
X53A	**Estanollee**	**94.48**	**37**	P	**P**	**09 51 21.8**	**+0.3**
	baz=326						
Z52A	**Williamson**	**95.03**	**39**	P	**P**	**09 51 24.2**	**+0.2**
	baz=325						
Y54A	**Tignall**	**95.29**	**37**	P	**P**	**09 51 25.5**	**+0.3**
	baz=326						
Z53A	**Monticello**	**95.36**	**38**	P	**P**	**09 51 25.7**	**+0.2**
	baz=326						
W57A	**Gilead**	**95.43**	**35**	P	**P**	**09 51 25.8**	**+0.1**
	baz=328						
TORD	**Torodi Ar. Bea**	**116.60**	**318**	PKP	**PKiKP**	**09 56 45.7**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=353,slow=3.3,SNR=2.9						
TORD				PP	**PP**	**09 57 50.7**	**-1.5**
	comp=Z,4.5nm,1.1s,baz=34,slow=7.2,SNR=11						
SNAA	**Sanae**	**143.72**	**197**	PKPdf	PKPbc	09 57 32.8	+0.2
LPAZ	**La Paz**	**143.94**	**59**	PKP	PKPbc	09 57 35.2	-0.2
	comp=Z,1.8nm,0.9s,baz=284,slow=8.3,SNR=3.4						
VNA2	**Neumayer--Watz**	**145.28**	**196**	PKPdf	**PKPdf**	**09 57 37.7**	**+0.1**
	baz=133,slow=2.9						
VNA3	**Neumayer Olymp**	**145.51**	**195**	PKPdf	**PKPdf**	**09 57 38.0**	**+0.1**
VNA1	**Neumayer--Stat**	**145.68**	**196**	PKPdf	**PKPab**	**09 57 40.0**	**+1.0**

*IDC **10** 09:38:25.9±3.7, 9.20S×161.02E, h65km±22km, mb3.7/7, mb1 4.0/7, mb1mx3.6/39, mbtmp4.0/7, Error ellipse: s-maj=52.4km s-min=27.1km az=132.0*

ISC 10 09:38:21.3±1.3**, 9.3S**±0.3×**161.3E**±0.1**, h35**km**, n17, σ0.87**/12**, mb3.9**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.33**	**266**	P	**Pn**	**09 38 44.2**	**+0.7**
	327nm,0.3s,baz=70,slow=3.7,SNR=76						
HNR				S	**Sn**	**09 38 59.9**	**-0.1**
	792nm,0.3s,baz=49,slow=20,SNR=44						
HNR	**Honiara**	**1.33**	**266**	*i* P	**Pn**	**09 38 44.0**	**+0.5**
HNR				*i* S	**Sn**	**09 39 01.0**	**+0.9**
WRA	**Warramunga Arr**	**28.09**	**245**	P	**P**	**09 44 10.1**	**+0.1**
	1.9nm,0.8s,baz=68,slow=9.1,SNR=8.1						
H11S2	**WAKE ISLAND Hy**	**28.17**	**11**	T	T	10 12 55.2	
	baz=194,slow=76,SNR=131						
H11S3	**WAKE ISLAND Hy**	**28.17**	**11**	T	T	10 12 44.4	
	baz=194,slow=76,SNR=137						
H11S1	**WAKE ISLAND Hy**	**28.18**	**11**	T	T	10 12 47.5	
	baz=194,slow=76,SNR=86						
H11N1	**WAKE ISLAND Hy**	**29.39**	**11**	T	T	10 14 16.2	
	baz=193,slow=76,SNR=127						
H11N3	**WAKE ISLAND Hy**	**29.40**	**11**	T	T	10 14 17.1	
	baz=193,slow=76,SNR=91						
H11N2	**WAKE ISLAND Hy**	**29.41**	**11**	T	T	10 14 18.0	
	baz=193,slow=76,SNR=347						
ASAR	**Alice Springs**	**29.80**	**238**	P	**P**	**09 44 25.5**	**+0.3**
	0.7nm,0.7s,baz=64,slow=10,SNR=7.5						
ASAR				PcP	**PcP**	**09 47 29.0**	**+0.7**
	0.3nm,0.8s,baz=87,slow=2.3,SNR=4.1						
FITZ	**Fitzroy Crossi**	**35.66**	**252**	P	**P**	**09 45 15.3**	**-1.1**
	4.4nm,0.9s,baz=0.0,slow=4.0,SNR=2.8						
CMAR	**Chiang Mai Arr**	**67.42**	**294**	P	**P**	**09 49 12.7**	**-1.2**
	0.7nm,0.2s,baz=128,slow=8.2,SNR=2.9						
SONM	**Songino Array**	**74.75**	**325**	P	**P**	**09 49 57.6**	**-0.3**
	1.2nm,0.9s,baz=152,slow=6.5,SNR=3.9						
ILAR	**Eielson Array**	**83.35**	**20**	P	**P**	**09 50 45.8**	**+1.3**
	0.6nm,0.7s,baz=256,slow=5.1,SNR=5.4						
MKAR	**Makanchi Array**	**89.31**	**318**	P	**P**	**09 51 13.7**	**-0.5**
	1.1nm,0.7s,baz=101,slow=5.3,SNR=4.8						
H06S1	**SOCORRO T**	**90.84**	**71**	T	T	11 31 46.2	
H06E1	**SOCORRO T-PHAS**	**90.88**	**71**	T	T	11 31 36.0	
	SNR=35						

*ATH **10** 09:40:24.6, 38.22N×20.40E, h11km±1km, ML2.3/9, Error ellipse: s-maj=1.4km s-min=0.9km az=256.0*
*THE **10** 09:40:24.9, 38.22N×20.40E, h10km, ML2.6/3, Error ellipse: s-maj=0.8km s-min=0.4km az=245.0*

ISC 10 09:40:24.3±1.0**, 38.22N**±0.03×**20.40E**±0.04**, h12**km±4km**, n36, σ0.44**/56**, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.04**	**197**	P	**Pg**	**09 40 26.5**	**0.0**
CHV1				S	**Sg**	**09 40 28.2**	**+0.2**
LXR1	**Lixouri, Cepha**	**0.04**	**118**	P	**Pg**	**09 40 26.7**	**+0.2**
LXR1				S	**Sg**	**09 40 28.3**	**+0.3**
LXRA	**Lixouri, Kepha**	**0.04**	**120**	P	**Pg**	**09 40 26.7**	**+0.2**
LXRA				S	**Sg**	**09 40 28.3**	**+0.3**
KEF3	**Kipouria, Keph**	**0.04**	**247**	P	**Pg**	**09 40 26.7**	**+0.2**
KEF3				S	**Sg**	**09 40 28.2**	**+0.1**
KEF4	**Livadi, Kephal**	**0.04**	**31**	P	**Pg**	**09 40 26.8**	**+0.2**
KEF4				S	**Sg**	**09 40 28.0**	**-0.2**
ARGA	**Argostoli. Kep**	**0.08**	**122**	P	**Pg**	**09 40 27.0**	**+0.2**
ARGA				S	**Sg**	**09 40 28.5**	**-0.2**
ARG2	**Argostoli**	**0.08**	**119**	P	**Pg**	**09 40 27.1**	**+0.2**
ARG2				S	**Sg**	**09 40 28.9**	**+0.1**
KEF1	**Kardakata, Kep**	**0.08**	**45**	P	**Pg**	**09 40 27.2**	**+0.3**
KEF1				S	**Sg**	**09 40 28.4**	**-0.5**
VLS	**Valsamata**	**0.16**	**105**	P	**Pg**	**09 40 28.1**	**+0.1**
VLS				S	**Sg**	**09 40 30.7**	**+0.1**
	4μm,0.1s						
VLS	**Valsamata**	**0.16**	**105**	P	**Pg**	**09 40 28.1**	**+0.1**
VLS				S	**Sg**	**09 40 30.7**	**+0.1**
VLS				AML	AML	09 40 30.9	
	comp=N,8435μm,0.1s						
VLS				AML	AML	09 40 31.0	
	comp=E,6600μm,0.1s						
VSK1	**VASILIKIADES**	**0.23**	**35**	P	**Pg**	**09 40 29.6**	**+0.4**
VSK1				S	**Sg**	**09 40 33.3**	**+0.7**
	comp=E,3μm,0.4s						
KONA	**Konidatara, Ke**	**0.25**	**34**	P	**Pg**	**09 40 29.9**	**+0.4**
KONA				S	**Sg**	**09 40 32.4**	**-0.6**
FSK	**Fiskardo**	**0.27**	**29**	P	**Pg**	**09 40 30.2**	**+0.2**
FSK				S	**Sg**	**09 40 34.5**	**+0.7**
	comp=E,1μm,0.1s						
FSK	**Fiskardo**	**0.27**	**29**	P	**Pg**	**09 40 30.2**	**+0.2**
FSK				S	**Sg**	**09 40 33.5**	**-0.2**
FSK				AML	AML	09 40 35.0	
	comp=N,1393μm,0.2s						
FSK				AML	AML	09 40 35.2	
	comp=E,3053μm,0.1s						
VLMS	**Volimes, Zakyn**	**0.40**	**148**	P	**Pg**	**09 40 32.4**	**+0.1**
VLMS				S	**Sg**	**09 40 38.3**	**+0.6**
VLMS				AML	AML	09 40 40.5	
	comp=E,1767μm,0.1s						
VLMS				AML	AML	09 40 42.0	
	comp=N,2759μm,0.2s						
EVGI	**Lefkada island**	**0.45**	**27**	P	**Pg**	**09 40 33.4**	**+0.2**
EVGI				S	**Sg**	**09 40 40.2**	**+1.0**
EVGI	**Lefkada island**	**0.45**	**27**	P	**Pg**	**09 40 33.4**	**+0.2**
EVGI				S	**Sb**	**09 40 40.4**	**-0.6**
MGNA	**Meganis**	**0.54**	**35**	P	**Pg**	**09 40 34.7**	**-0.1**
MGNA				AML	AML	09 40 43.4	
	comp=N,868μm,0.3s						
MGNA				AML	AML	09 40 43.6	
	comp=E,1039μm,0.2s						
LKD2	**Lefkada island**	**0.60**	**20**	P	**Pg**	**09 40 36.1**	**0.0**
LKD2	**Lefkada island**	**0.60**	**20**	P	**Pg**	**09 40 35.9**	**-0.2**
LKD2				AML	AML	09 40 54.0	
	comp=N,216μm,0.4s						
LKD2				AML	AML	09 40 54.5	
	comp=E,257μm,0.2s						
TSLK	**Tsoukalades, L**	**0.64**	**19**	P	**Pg**	**09 40 36.9**	**+0.1**
TSLK	**Tsoukalades, L**	**0.64**	**19**	P	**Pg**	**09 40 36.8**	**0.0**
TSLK				S	**Sb**	**09 40 46.5**	**+0.1**
TSLK				AML	AML	09 40 52.4	
	comp=N,307μm,0.3s						
TSLK				AML	AML	09 40 55.1	
	comp=E,314μm,0.5s						
RLS	**Riolos of Patr**	**0.86**	**100**	P	**Pg**	**09 40 40.9**	**0.0**
PVO	**Paravola**	**0.97**	**66**	P	**Pg**	**09 40 43.2**	**+0.1**
PVO	**Paravola**	**0.97**	**66**	P	**Pg**	**09 40 43.2**	**+0.1**
PVO				AML	AML	09 41 00.2	
	comp=E,419μm,0.3s						
PVO				AML	AML	09 41 06.2	
	comp=N,276μm,0.5s						
DRO	**Drossia**	**1.07**	**104**	P	**Pb**	**09 40 44.2**	**-0.6**
DRO				S	**Sn**	**09 40 59.9**	**-0.2**
DRO				AML	AML	09 41 08.9	
	comp=E,369μm,0.4s						
DRO				AML	AML	09 41 09.3	
	comp=N,373μm,0.5s						
ANX	**Ano Chora**	**1.25**	**72**	P	**Pn**	**09 40 47.5**	**-0.4**
ANX				AML	AML	09 41 15.3	
	comp=N,229μm,0.4s						
ANX				AML	AML	09 41 16.9	
	comp=E,195μm,0.5s						
SERG	**Sergoula**	**1.32**	**81**	P	**Pn**	**09 40 48.3**	**-0.3**
KALE	**Kalithea**	**1.38**	**82**	P	**Pb**	**09 40 50.2**	**+0.1**
KLV	**Kalavryta, Ach**	**1.40**	**97**	P	**Pn**	**09 40 50.0**	**+0.3**
KLV	**Kalavryta, Ach**	**1.40**	**97**	P	**Pn**	**09 40 50.0**	**+0.3**
KLV				S	**Sg**	**09 41 10.5**	**+1.2**
KEK	**Kerkira**	**1.56**	**343**	P	**Pb**	**09 40 53.1**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.57**	**59**	P	**Pb**	**09 40 53.9**	**+0.5**
ITM	**Ithomi**	**1.60**	**130**	P	**Pb**	**09 40 54.5**	**+0.7**
AGG	**Agios Georgios**	**1.71**	**62**	P	**Pg**	**09 40 57.1**	**-0.1**
DID	**Didima**	**2.36**	**107**	P	**Pb**	**09 41 05.3**	**-1.5**

*ATH **10** 10:03:47.8, 38.32N×20.44E, h15km±1km, ML2.4/14, Error ellipse: s-maj=1.8km s-min=0.8km az=278.0*
*THE **10** 10:03:48.1, 38.33N×20.43E, h15km±1km, ML2.7/3, Error ellipse: s-maj=1.7km s-min=0.4km az=113.0*

ISC 10 10:03:47.8±1.0**, 38.33N**±0.03×**20.43E**±0.05**, h17**km±5km**, n33, σ0.43**/52**, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF1	**Kardakata, Kep**	**0.06**	**150**	P	**Pg**	**10 03 50.5**	**-0.4**
KEF1				S	**Sg**	**10 03 52.0**	**-1.0**
LXR1	**Lixouri, Cepha**	**0.13**	**179**	P	**Pg**	**10 03 51.7**	**+0.1**
LXR1				S	**Sb**	**10 03 54.5**	**+0.1**
VSK1	**VASILIKIADES**	**0.13**	**52**	P	**Pg**	**10 03 51.6**	**-0.1**
VSK1				S	**Sg**	**10 03 54.1**	**-0.2**
	4μm,0.1s						
KEF3	**Kipouria, Keph**	**0.14**	**209**	P	**Pg**	**10 03 51.8**	**0.0**
KEF3				S	**Sg**	**10 03 54.3**	**-0.2**
KONA	**Konidatara, Ke**	**0.14**	**48**	P	**Pg**	**10 03 51.8**	**-0.1**
KONA				S	**Sg**	**10 03 54.1**	**-0.5**
CHV1	**Chavriata, Kef**	**0.15**	**196**	P	**Pg**	**10 03 52.0**	**+0.1**
CHV1				S	**Sg**	**10 03 54.8**	**+0.2**
ARG2	**Argostoli**	**0.15**	**164**	P	**Pg**	**10 03 52.0**	**0.0**
ARG2				S	**Sg**	**10 03 54.8**	**+0.1**
ARGA	**Argostoli. Kep**	**0.15**	**167**	P	**Pg**	**10 03 51.7**	**-0.2**
ARGA				S	**Sg**	**10 03 54.9**	**+0.2**
FSK	**Fiskardo**	**0.17**	**37**	P	**Pg**	**10 03 52.1**	**0.0**
FSK				S	**Sg**	**10 03 55.0**	**0.0**
	3μm,0.1s						
FSK	**Fiskardo**	**0.17**	**37**	P	**Pg**	**10 03 52.1**	**0.0**
FSK				S	**Sg**	**10 03 54.8**	**-0.3**
FSK				AML	AML	10 03 55.4	
	comp=E,8353μm,0.2s						
FSK				AML	AML	10 03 56.1	
	comp=N,3271μm,0.2s						
VLS	**Valsamata**	**0.19**	**141**	P	**Pg**	**10 03 52.5**	**0.0**
VLS				S	**Sg**	**10 03 56.0**	**+0.3**
	comp=N,3μm,0.1s						
VLS	**Valsamata**	**0.19**	**141**	P	**Pg**	**10 03 52.5**	**0.0**
VLS				S	**Sg**	**10 03 55.7**	**-0.1**
VLS				AML	AML	10 03 56.9	
	comp=N,5595μm,0.1s						
VLS				AML	AML	10 03 58.3	
	comp=E,4451μm,0.1s						
EVGI	**Lefkada island**	**0.34**	**31**	P	**Pg**	**10 03 55.1**	**+0.1**
EVGI				S	**Sb**	**10 04 00.7**	**+0.1**
EVGI	**Lefkada island**	**0.34**	**31**	P	**Pg**	**10 03 55.2**	**+0.2**
EVGI				S	**Sb**	**10 04 00.7**	**+0.1**
MGNA	**Meganis**	**0.43**	**40**	P	**Pg**	**10 03 56.7**	**+0.1**
MGNA				S	**Sg**	**10 04 01.8**	**-0.7**
MGNA				AML	AML	10 04 03.8	
	comp=N,1075μm,0.3s						
MGNA				AML	AML	10 04 04.0	
	comp=E,886μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.48**	**158**	P	**Pg**	**10 03 56.1**	**-1.5**
VLMS				AML	AML	10 04 07.1	
	comp=E,1734μm,0.2s						
VLMS				AML	AML	10 04 08.1	
	comp=N,2370μm,0.3s						
LKD2	**Lefkada island**	**0.49**	**21**	P	**Pg**	**10 03 57.6**	**-0.1**
LKD2	**Lefkada island**	**0.49**	**21**	P	**Pg**	**10 03 57.7**	**-0.1**
LKD2				AML	AML	10 04 11.4	
	comp=N,449μm,0.4s						
LKD2				AML	AML	10 04 13.1	
	comp=E,372μm,0.4s						
TSLK	**Tsoukalades, L**	**0.53**	**19**	P	**Pg**	**10 03 57.6**	**-0.7**
TSLK	**Tsoukalades, L**	**0.53**	**19**	P	**Pg**	**10 03 57.3**	**-1.0**
TSLK				AML	AML	10 04 11.2	
	comp=N,416μm,0.3s						
TSLK				AML	AML	10 04 11.6	
	comp=E,538μm,0.4s						
PDO	**Prodromos**	**0.65**	**65**	P	**Pg**	**10 03 59.5**	**-1.1**
PDO				S	**Sb**	**10 04 09.5**	**+0.1**
PDO				AML	AML	10 04 12.5	
	comp=N,1253μm,0.3s						
PDO				AML	AML	10 04 13.4	
	comp=E,928μm,0.3s						
RLS	**Riolos of Patr**	**0.86**	**108**	P	**Pb**	**10 04 04.3**	**0.0**
PVO	**Paravola**	**0.90**	**71**	P	**Pn**	**10 04 05.9**	**+0.1**
PVO				S	**Sg**	**10 04 17.8**	**+0.5**
PVO				AML	AML	10 04 21.9	
	comp=E,917μm,0.3s						
PVO				AML	AML	10 04 22.0	
	comp=N,730μm,0.3s						
DRO	**Drossia**	**1.07**	**110**	P	**Pn**	**10 04 08.4**	**+0.3**
DRO				S	**Sn**	**10 04 23.0**	**+0.3**
DRO				AML	AML	10 04 33.5	
	comp=E,535μm,0.6s						
DRO				AML	AML	10 04 37.7	
	comp=N,430μm,0.5s						
ANX	**Ano Chora**	**1.20**	**77**	P	**Pn**	**10 04 09.9**	**0.0**
ANX				S	**Sg**	**10 04 27.3**	**+0.6**
ANX				AML	AML	10 04 34.8	
	comp=N,316μm,0.4s						
ANX				AML	AML	10 04 35.0	
	comp=E,300μm,0.4s						
LAKA	**Lakka**	**1.22**	**94**	P	**Pb**	**10 04 10.6**	**+0.2**
LAKA				AML	AML	10 04 30.5	
	comp=N,230μm,0.4s						
LAKA				AML	AML	10 04 31.2	
	comp=E,279μm,0.4s						
SERG	**Sergoula**	**1.28**	**86**	P	**Pb**	**10 04 11.6**	**+0.1**
SERG				AML	AML	10 04 34.5	
	comp=N,254μm,0.3s						
SERG				AML	AML	10 04 37.2	
	comp=E,213μm,0.6s						
TRIZ	**Trizonia**	**1.29**	**88**	P	**Pn**	**10 04 10.8**	**-0.3**
KALE	**Kalithea**	**1.34**	**87**	P	**Pn**	**10 04 12.3**	**+0.4**
KLV	**Kalavryta, Ach**	**1.38**	**101**	P	**Pn**	**10 04 13.1**	**+0.7**
KLV				AML	AML	10 04 43.0	
	comp=N,90μm,0.5s						
KLV				AML	AML	10 04 46.6	
	comp=E,91μm,0.6s						
MAKR	**Makrakomi, Fth**	**1.49**	**62**	P	**Pg**	**10 04 16.1**	**-0.5**
MAKR				AML	AML	10 04 46.0	
	comp=N,138μm,0.4s						
MAKR				AML	AML	10 04 49.3	
	comp=E,185μm,0.9s						
AGG	**Agios Georgios**	**1.64**	**64**	P	**Pg**	**10 04 19.2**	**-0.2**
PYL	**PYLOS**	**1.77**	**144**	P	**Pb**	**10 04 19.7**	**-0.1**

*NIED **10** 10:03:00, 39.70N×143.70E, h17km, Mw5.0 Best double couple: $M_0$3.61000×10^{16} NP1:ϕ_s44.00000°, δ75.00000°, λ115.00000°. NP2:ϕ_s164.00000°, δ29.00000°, λ33.00000°.*
*IDC **10** 10:03:55.9±0.5, 39.65N×143.40E, h0km, mb4.5/33, mb1 4.6/39, mb1mx4.6/53, mbtmp4.6/39, ML4.2/4, MS4.5/13, Ms1 4.5/13, ms1mx4.1/40, Error ellipse: s-maj=13.0km s-min=10.7km az=132.0*
*JMA **10** 10:03:55.0±0.2, 39.67N×143.70E, h18km, M5.0*
JMA Felt II J1.
*BJI **10** 10:03:57.6±0.0, 39.74N×143.36E, h26km, mB5.2/53, mb5.1/73, Ms5.1/75, Ms7 5.0/69*
*MOS **10** 10:03:58.5±1.0, 39.87N×143.29E, h21km, mb5.1/65, MS5.0/6, Error ellipse: s-maj=6.6km s-min=4.0km az=96.0*
*NEIC **10** 10:04:00.3±1.4, 39.63N±0.06×143.4E±0.1, h31km±5km, mb4.7/84, Error ellipse: s-maj=12.5km s-min=7.7km az=105.0*
*GCMT **10** 10:04:02.3±0.2, 39.69N±0.02×143.53E±0.02, h22km±1km, MW5.0/114, Moment Tensor Solution. s48,c57; s114,c153; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.82±.16; $M_{\theta\theta}$-0.41±.10; $M_{\phi\phi}$-2.41±.10; $M_{r\theta}$1.54±.17; $M_{\theta\phi}$-0.84±.06; $M_{\phi r}$3.05±.20; Best double couple: $M_0$4.39700×10^{16} NP1:ϕ_s195.00000°, δ20.00000°, λ81.00000°. NP2:ϕ_s25.00000°, δ71.00000°, λ93.00000°. Principal axes: T 4.4600, Plg64.0000°, Azm301.0000°; N -0.1280, Plg3.0000°, Azm204.0000°; P -4.3330, Plg25.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 10:03:58.8±0.6**, 39.62N**±0.04×**143.48E**±0.04**, h23**km±3km**, h23**km**:pP-P, n385, σ1.74**/402**, mb4.8**/139**, MS4.9**/37**, 50C-6D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.28**	**268**	⇑P	**Pn**	**10 04 20.8**	**-0.4**
MIYJ				*e*S	**Sb**	**10 04 40.1**	**+1.9**
JTH	**Tanohata**	**1.28**	**285**	⇑P	**Pn**	**10 04 20.3**	**-0.9**
JTH				S	**Sb**	**10 04 38.9**	**+0.6**
JKEN	**Kujiedanarisaw**	**1.48**	**294**	P	**Pn**	**10 04 22.4**	**-1.5**
JANG	**Nango**	**1.68**	**297**	⇑P	**Pn**	**10 04 25.5**	**-1.2**
JKZ	**Kuzumaki**	**1.69**	**283**	⇑P	**Pn**	**10 04 26.8**	**-0.1**
JOM	**Ohasama**	**1.70**	**266**	⇑P	**Pn**	**10 04 27.3**	**+0.4**
JOM				*e*S	**Sb**	**10 04 50.6**	**+0.5**
JKMT	**Kesennumamotoy**	**1.75**	**243**	⇑P	**Pn**	**10 04 27.5**	**-0.2**
JMK	**Ichinoseki**	**1.88**	**250**	⇑P	**Pn**	**10 04 29.4**	**0.0**
JSZI	**Iwateshizukuis**	**1.95**	**274**	⇑P	**Pn**	**10 04 31.0**	**+0.6**
JIO	**Ouri**	**2.03**	**236**	⇑P	**Pn**	**10 04 31.0**	**-0.4**
JTM	**Tenmabayashi**	**2.18**	**303**	⇑P	**Pn**	**10 04 33.2**	**-0.4**
JRG	**Rokugo**	**2.21**	**265**	⇑P	**Pn**	**10 04 34.4**	**+0.4**
JOFO	**Osakifurukawao**	**2.24**	**244**	⇑P	**Pn**	**10 04 35.0**	**+0.6**
JAH	**Hinai**	**2.26**	**285**	⇑P	**Pn**	**10 04 35.0**	**+0.4**
ERM	**Erimo**	**2.40**	**354**		**Pn**	**10 04 36.1**	**-0.5**
ERM	**Erimo**	**2.40**	**354**	*c i*P	**Pn**	**10 04 34.9**	**-1.7**
JYK	**Kaneyama**	**2.52**	**255**	⇑P	**Pn**	**10 04 38.9**	**+0.7**
JOU	**Okura**	**2.53**	**241**	⇑P	**Pn**	**10 04 38.3**	**0.0**
JOT	**Ohata**	**2.55**	**314**	P	**Pn**	**10 04 38.4**	**-0.3**
JHHS	**Hirosakihyakuz**	**2.60**	**294**	⇑P	**Pn**	**10 04 40.3**	**+0.9**
JNBK	**Urakawa-nobuka**	**2.71**	**349**	P	**Pn**	**10 04 40.9**	**+0.1**
JNBK				*e*S	**Sn**	**10 05 13.7**	**+0.8**
JMM	**Marumori**	**2.74**	**231**	⇑P	**Pn**	**10 04 40.6**	**-0.6**
JKB	**Kayabe**	**2.93**	**321**	P	**Pn**	**10 04 44.5**	**+0.7**
JCH	**Churui**	**2.99**	**358**	⇓P	**Pn**	**10 04 43.8**	**-0.9**
JCH				*e*S	**Sn**	**10 05 17.6**	**-2.2**
JFK	**Kawauchi**	**3.04**	**223**	⇑P	**Pn**	**10 04 44.4**	**-1.0**
JYA	**Atsumi**	**3.10**	**252**	⇑P	**Pn**	**10 04 46.9**	**+0.6**
JFT	**Otama**	**3.24**	**230**	P	**Pn**	**10 04 48.8**	**+0.7**
JFT				*e*S	**Sn**	**10 05 27.6**	**+1.7**
JAK	**Akkeshi**	**3.49**	**15**	P	**Pn**	**10 04 49.9**	**-1.7**
JAK				*e*S	**Sn**	**10 05 29.4**	**-2.7**
JAW	**Awa shima**	**3.49**	**252**	P	**Pn**	**10 04 52.6**	**+1.0**
JEW	**Eniwo**	**3.56**	**335**	P	**Pn**	**10 04 53.5**	**+1.0**
JFR	**Furan**	**3.60**	**350**	P	**Pn**	**10 04 53.4**	**+0.3**
JFR				*e*S	**Sn**	**10 05 34.0**	**-0.8**
JAR	**Ashorobuto**	**3.68**	**3**	P	**Pn**	**10 04 52.7**	**-1.4**
JAR				*e*S	**Sn**	**10 05 35.2**	**-1.5**
JFY	**Yanaizu**	**3.69**	**234**	⇑P	**Pn**	**10 04 55.1**	**+0.7**
JHO	**Hitachi**	**3.78**	**218**	P	**Pn**	**10 04 54.2**	**-1.4**
JSB	**Shiboa**	**3.85**	**228**	P	**Pn**	**10 04 57.2**	**+0.6**
JHYU	**Hitachinakayam**	**3.99**	**216**	P	**Pn**	**10 04 57.3**	**-1.2**
NMR	**Nemuro--Hokkai**	**4.11**	**24**	⇑*i*P	**Pn**	**10 04 58.1**	**-1.9**
NMR				*i* S	**Sn**	**10 05 41.2**	**-6.1**
JHK	**Hiroka**	**4.23**	**237**	P	**Pn**	**10 05 02.5**	**+0.8**
JIHU	**Itakohorinouch**	**4.33**	**214**	P	**Pn**	**10 05 03.0**	**-0.2**
GLVR	**Golovnino**	**4.39**	**20**	*e*P	**Pn**	**10 05 02.0**	**-1.9**
GLVR				*e*S	**Sn**	**10 05 49.9**	**-4.3**
GLVR				pmax	pmax		
	comp=Z,405nm,0.4s						
GLVR				pmax	pmax		
	comp=E,138nm,0.5s						
GLVR				pmax	pmax		
	comp=N,133nm,0.4s						
GLVR				smax	smax		
	comp=N,2μm,0.3s						
GLVR				smax	smax		
	comp=E,4μm,0.3s						
JAG	**Ashikaga**	**4.50**	**226**	P	**Pn**	**10 05 05.9**	**+0.4**
JKA	**Kamikawa-asahi**	**4.54**	**352**		**Pn**	**10 05 06.0**	**0.0**
JKA					**Sn**	**10 05 57.5**	**-0.5**
ASAJ	**Asahikawa**	**4.54**	**352**	Pn	**Pn**	**10 05 06.0**	**0.0**
	comp=E,18nm,0.3s,baz=204,slow=13,SNR=54						
ASAJ				Sn	**Sn**	**10 05 57.5**	**-0.5**
	comp=E,20nm,0.3s,baz=316,slow=19,SNR=4.6						
GRPR	**Tuman**	**4.69**	**21**	*e*P	**Pn**	**10 05 05.5**	**-2.5**
GRPR				*e*S	**Sn**	**10 05 55.7**	**-6.0**
GRPR				pmax	pmax		
	comp=E,145nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,391nm,0.2s						
GRPR				smax	smax		
	comp=N,3μm,0.4s						
GRPR				smax	smax		
	comp=E,1μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.75**	**21**	*e*P	**Pn**	**10 05 07.7**	**-1.2**
YUK				*e*S	**Sn**	**10 05 58.8**	**-4.4**
YUK				pmax	pmax		
	comp=N,166nm,0.2s						
YUK				pmax	pmax		
	comp=E,106nm,0.2s						
YUK				pmax	pmax		
	comp=Z,516nm,0.2s						
YUK				smax	smax		
	comp=E,1μm,0.3s						
YUK				smax	smax		
	comp=N,4μm,0.6s						
JJN	**Nakama**	**4.88**	**241**	P	**Pn**	**10 05 12.6**	**+2.0**
JGK	**Kuni**	**4.89**	**233**	P	**Pn**	**10 05 12.4**	**+1.5**
SHO	**Shikotan**	**4.93**	**29**	*d i*P	**Pn**	**10 05 09.2**	**-2.1**
SHO				*i* S	**Sn**	**10 06 00.0**	**-7.5**
SHO				pmax	pmax		
	comp=Z,78μm,0.3s						
SHO				pmax	pmax		
	comp=E,7842μm,16.3s						
SHO				pmax	pmax		
	comp=N,5033μm,19.8s						
SHO				smax	smax		
	comp=N,555nm,0.4s						
SHO				smax	smax		
	comp=E,1μm,0.4s						
SHO				MLR	MLR		
	comp=E,6μm,14.0s						
JRY	**Ryogami san**	**5.11**	**227**	⇑P	**Pn**	**10 05 14.0**	**+0.2**
MJA0	**Matsu Arr-Jizo**	**5.15**	**235**	*e*P	**Pn**	**10 05 16.0**	**+1.6**
MJA0				pmax	pmax		
	comp=Z,5.0nm,0.3s						
JKUC	**kamogawauchiur**	**5.16**	**211**	P	**Pn**	**10 05 14.0**	**-0.6**
MJAR	**Matsushiro Arr**	**5.17**	**235**	Pn	**Pn**	**10 05 16.0**	**+1.3**
	comp=Z,4.8nm,0.3s,baz=37,slow=14,SNR=151						
MJAR				LR	LR	10 07 28.7	
	comp=Z,4μm,18.9s,baz=40,slow=42						
MJAR	**Matsushiro Arr**	**5.17**	**235**		**Pn**	**10 05 15.3**	**+0.7**
MJAR	**Matsushiro Arr**	**5.17**	**235**	P	**Pn**	**10 05 16.0**	**+1.3**
MAJO	**Matsushiro**	**5.17**	**235**		**Pn**	**10 05 15.9**	**+1.2**
MAJO	**Matsushiro**	**5.17**	**235**	*c i*P	**Pn**	**10 05 15.8**	**+1.1**
MAT	**Matsushiro**	**5.17**	**235**	P	**Pn**	**10 05 16.2**	**+1.5**
MAT	**Matsushiro**	**5.17**	**235**	P	**Pn**	**10 05 15.6**	**+0.9**
MAT				*e*S	**Sn**	**10 06 21.4**	**+7.8**
MJB9	**Matsu-Tunnel**	**5.17**	**235**		**Pn**	**10 05 15.8**	**+1.1**
JNG	**Nsakai**	**5.32**	**235**	P	**Pn**	**10 05 18.4**	**+1.5**
JOD2	**Odawara 2**	**5.58**	**220**	P	**Pn**	**10 05 20.1**	**-0.2**
KUR	**Kuril'sk**	**6.48**	**29**	*e*P	**Pn**	**10 05 31.9**	**-0.7**
KUR				*i* S	**Sn**	**10 06 39.4**	**-6.3**
KUR				pmax	pmax		
	comp=Z,197nm,0.6s						
KUR				smax	smax		
	comp=N,616nm,0.4s						
KUR				smax	smax		
	comp=E,326nm,0.6s						
KUR				MLR	MLR		
	comp=Z,4μm,9.0s						
JAO	**Obara**	**6.59**	**231**	P	**Pn**	**10 05 35.5**	**+1.3**
INU	**Inuyama**	**6.68**	**232**		**Pn**	**10 05 36.2**	**+0.8**

JYTA Yamagatataniai 6.69 235 P Pn 10 05 37.3 +1.7
JHJ2 Mitsune 7.14 206 Pn Pn 10 05 41.8 +0.1
JHJ2 Sn Sn 10 06 57.7 -4.3
JHJ Hachijo jima 2 7.14 206 Pn Pn 10 05 41.8 +0.1
comp=Z,185nm,0.3s,baz=76,slow=23,SNR=16
JHJ Sn Sn 10 06 55.5 -6.7
comp=Z,86nm,0.3s,baz=73,slow=19,SNR=4.5
JHJ LR LR 10 08 46.6
comp=Z,1μm,18.6s,baz=84,slow=41
YSS Yuzh-Sakhalins 7.35 356 Pn 10 05 44.9 +0.5
YSS Yuzh-Sakhalins 7.35 356⇓eP Pn 10 05 44.8 +0.3
YSS eS Sn 10 07 06.5 -0.6
YSS pmax pmax
comp=Z,60nm,0.8s
YSS pmax pmax
comp=N,50nm,0.9s
YSS pmax pmax
comp=E,30nm,0.9s
YSS MLR MLR
comp=N,3μm,15.0s
YSS MLR MLR
comp=Z,4μm,15.0s
TEY Ternei 7.43 319⇑eP Pn 10 05 54.5 +8.9
TEY pmax pmax
comp=N,60nm,0.7s
TEY pmax pmax
comp=Z,80nm,0.9s
UGL Uglegorsk 9.51 354 eP Pn 10 06 12.8 -1.3
UGL S Sn 10 08 00.5 +0.4
UGL MLR MLR
comp=Z,3μm,15.0s
UGL MLR MLR
comp=N,3μm,11.0s
USRK Ussuriysk Ar. 9.71 302 Pn Pn 10 06 19.7 +2.8
baz=94,slow=12,SNR=67
USRK LR LR 10 10 02.4
comp=N,4μm,18.2s,baz=98,slow=38
MDJ Mudanjiang 11.45 300 P Pn 10 06 42.4 +1.6
MDJ pP 10 06 48.6
MDJ sP 10 06 52.9
MDJ S Sn 10 08 48.3 +0.4
MDJ sS 10 08 58.7
MDJ pmax pmax
comp=N,12nm,1.1s
MDJ pmax pmax
comp=N,680nm,4.7s
MDJ LR LR
comp=N,4μm,12.9s
MDJ LR LR
comp=N,5μm,13.1s
MDJ LR LR
comp=N,8μm,15.1s
MDJ Mudanjiang 11.45 300 Pn 10 06 42.1 +1.3
MDJ Sn 10 08 44.6 -3.3
JNU Nakatsue 12.04 241 Pn Pn 10 06 49.0 +0.1
comp=N,1.4nm,0.3s,baz=148,slow=2.7,SNR=7.4
JNU Sn Sn 10 08 56.5 -6.1
comp=N,0.5nm,0.3s,baz=31,slow=10,SNR=2.7
JNU LR LR 10 11 46.8
comp=N,4μm,18.9s,baz=48,slow=39
JNU Nakatsue 12.04 241 Pn Pn 10 06 49.3 +0.4
GRNR Gornyy 12.20 338⇑iP Pn 10 06 50.7 -0.2
GRNR eS Sn 10 09 05.9 -0.2
GRNR pmax pmax
comp=Z,10.0nm,0.7s
GRNR smax smax
comp=N,10.0nm,0.9s
GRNR MLR MLR
comp=Z,2μm,15.0s
KSRS Korea Array 12.37 265 Pn Pn 10 06 57.4 +4.0
comp=Z,0.9nm,0.3s,baz=88,slow=14,SNR=14
KSRS LR LR 10 11 21.9
comp=Z,3μm,18.3s,baz=72,slow=36
KS19 Wonju Array Si 12.40 265 Pn 10 06 56.0 +2.2
KSAR Wonju Array Be 12.40 265 Pn Pn 10 06 56.6 +2.8
KSAR Wonju Array Be 12.40 265 P Pn 10 06 56.6 +2.8
JCJ Chichijima 12.54 185 Pn Pn 10 06 52.2 -3.5
comp=Z,13nm,0.3s,baz=251,slow=23,SNR=6.7
KLR Kul'dur 12.73 323 Pn Pn 10 06 57.8 -0.4
comp=Z,0.4nm,0.3s,baz=130,slow=15,SNR=19
KLR LR LR 10 12 03.0
comp=Z,3μm,20.6s,baz=134,slow=38
CN2 Changchun 14.10 293 eP Pn 10 07 17.8 +0.9
CN2 eS Sn 10 09 54.3 +1.8
CN2 pmax pmax
comp=Z,10.0nm,1.6s
CN2 pmax pmax
comp=Z,800nm,10.0s
CN2 LR LR
comp=Z,2μm,16.0s
CN2 LR LR
comp=Z,3μm,16.0s
CN2 LR LR
comp=Z,4μm,18.0s
SNY Shenyang 15.25 285 ⇓P Pn 10 07 33.8 +1.4
SNY pmax pmax
comp=Z,860nm,10.1s
SNY LR LR
comp=Z,3μm,15.3s
SNY LR LR
comp=Z,3μm,19.6s
SNY LR LR
comp=Z,6μm,16.7s
PETK Petropavlovsk- 16.64 31 Pn Pn 10 07 50.8 +0.6
comp=Z,0.3nm,0.3s,baz=195,slow=11,SNR=5.5
PETK LR LR 10 13 42.9
comp=Z,752nm,19.6s,baz=214,slow=35
DL2 Dalian 16.93 275 P Pn 10 07 55.1 +1.0
DL2 S S 10 11 07.6 -3.8
DL2 pmax pmax
comp=Z,45nm,1.3s
DL2 pmax pmax
comp=Z,540nm,7.7s
DL2 LR LR
comp=Z,2μm,13.7s
DL2 LR LR
comp=Z,2μm,17.8s
DL2 LR LR
comp=Z,3μm,16.8s
PET Petropavlovsk 16.96 33 eP P 10 08 02.5 +6.4
PET eS S 10 11 08.6 -3.1
PET smax smax
comp=N,41nm,0.6s
PET smax smax
comp=E,34nm,0.6s
PET MLR MLR
comp=Z,1μm,16.0s
ZEA Zeya 17.92 327 eP Pn 10 08 02.9 -3.3
ZEA pmax pmax
comp=E,36nm,0.8s
ZEA pmax pmax
comp=N,50nm,0.7s
ZEA pmax pmax
comp=Z,50nm,0.7s
ZEA pmax pmax
comp=Z,400nm,3.0s
ZEA MLR MLR
comp=Z,5μm,14.0s
ZEA MLR MLR
comp=E,3μm,13.0s
ZEA MLR MLR
comp=N,4μm,14.0s
HIA Hailar 19.42 308 P P 10 08 21.4 -2.0
HIA IAmb IAmb 10 08 32.2
comp=Z,38nm,0.7s
HIA Hailar 19.42 308⇓iP P 10 08 21.3 -2.0
MA2 Magadan 20.50 11 P P 10 08 35.0 +0.1
comp=Z,52nm,0.8s,baz=193,slow=11,SNR=19
MA2 Magadan 20.50 11 P P 10 08 34.5 -0.3
MA2 Magadan 20.50 11⇑iP P 10 08 35.7 +0.9
MA2 pmax pmax
comp=Z,54nm,0.9s
BJI Beijing 20.95 280⇑iP P 10 08 37.4 -2.4
BJI S S 10 12 32.6 +0.5
BJI pmax pmax
comp=Z,270nm,3.8s
BJI LR LR
comp=Z,1μm,13.9s
BJI LR LR
comp=Z,3μm,15.6s
BJI LR LR
comp=Z,2μm,17.2s
BJT Baijiatuau 20.95 280 P P 10 08 37.8 -2.1
BJT IAmb IAmb 10 08 55.9
comp=Z,29nm,1.1s
BJT Baijiatuau 20.95 280 P P 10 08 37.8 -2.1
BJT pmax pmax
comp=Z,29nm,1.1s
TIA Tai'an 21.04 269 P P 10 08 39.2 -1.7
TIA S S 10 12 26.6 -7.5
TIA pmax pmax
comp=Z,60nm,1.0s
TIA pmax pmax
comp=Z,1μm,14.1s
TIA LR LR
comp=Z,4μm,13.8s
TIA LR LR
comp=Z,6μm,14.5s
NJ2 Nanjing 21.30 257 eP P 10 08 43.4 -0.3
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NJ2 LR LR
comp=Z,2μm,12.4s
NJ2 LR LR
comp=Z,2μm,13.8s
NJ2 LR LR
comp=Z,2μm,11.8s
YHNB Yeheng 23.84 238 P P 10 09 08.0 -2.2
SEY Seymchan 23.95 10 P P 10 09 10.9 +0.1
comp=Z,41nm,0.9s,baz=189,slow=8.2,SNR=64
SEY Seymchan 23.95 10⇑iP P 10 09 10.5 -0.4
YAK Yakutsk 23.96 344 P P 10 09 09.7 -1.3
comp=Z,18nm,0.4s,baz=171,slow=1.6,SNR=14
YAK Yakutsk 23.96 344 P P 10 09 09.3 -1.6
YAK Yakutsk 23.96 344c iP P 10 09 09.4 -1.6
YAK e*PP pP 10 09 15.3 -1.9
YAK ePPP PPP 10 09 45.4
YAK eS S 10 13 23.8 -2.3
YAK e*SS sS 10 13 37.5 +0.7
YAK eSSS SSS 10 14 19.9
YAK pmax pmax
comp=Z,41nm,0.9s
YAK pmax pmax
comp=N,38nm,1.3s
YAK pmax pmax
comp=E,13nm,1.3s
YAK smax smax
comp=N,153nm,2.5s
YAK smax smax
comp=E,67nm,2.3s
CIT Chita 24.07 311 eP P 10 09 10.9 -1.3
CIT e 10 09 21.8
CIT e 10 09 45.3
TIY Taiyuan 24.26 275 eP P 10 09 16.0 +1.9
HHC Hu-ho-hao-te 24.33 283 eP P 10 09 15.4 +0.7
HHC S S 10 13 29.6 -3.0
HHC pmax pmax
comp=E,110nm,5.4s
HHC LR LR
comp=E,710nm,14.5s
HHC LR LR
comp=E,2μm,18.5s
HHC LR LR
comp=E,3μm,17.0s
SSLB Suanglung 24.73 237 P P 10 09 16.2 -2.1
SSLB IAmb IAmb 10 09 20.5
comp=Z,18nm,0.6s
YULB Yu-li 24.79 236 P P 10 09 16.2 -2.7
TPUB Ta-pu 25.28 237 P P 10 09 21.9 -1.5
WHN Wuhan 25.41 258⇑iP P 10 09 24.7 +0.3
WHN pP pP 10 09 28.9 -1.8
WHN sP pwP 10 09 31.6 -2.0
WHN pmax pmax
comp=Z,150nm,0.8s
WHN LR LR
comp=Z,7μm,16.9s
WHN LR LR
comp=Z,5μm,17.7s
QZH Quanzhou 25.52 242 eP P 10 09 27.5 +2.0
QZH S S 10 13 54.3 +2.7
QZH LR LR
comp=Z,1μm,15.2s
QZH LR LR
comp=Z,870nm,9.0s
QZH LR LR
comp=Z,2μm,15.4s
BOD Bodaibo 26.31 324⇑iP P 10 09 31.6 -0.7
BOD pmax pmax
comp=Z,60nm,1.1s
ULN Ulaanbaatar 27.37 300 P P 10 09 42.3 +0.1
ULN IAmb IAmb 10 09 43.4
comp=Z,27nm,0.9s
ULN Ulaanbaatar 27.37 300 P P 10 09 42.3 +0.1
ULN pmax pmax
comp=Z,27nm,1.0s
SONM Songino Array 27.81 299 P P 10 09 46.8 +0.7
comp=Z,16nm,0.7s,baz=94,slow=8.1,SNR=67
SONM LR LR 10 21 26.9
comp=Z,2μm,19.3s,baz=100,slow=38
SONM Songino Array 27.81 299 P P 10 09 46.8 +0.7
XAN Xi'an 28.10 270 P P 10 09 47.6 -1.2
XAN pmax pmax
comp=Z,29nm,0.8s
XAN pmax pmax
comp=Z,390nm,6.5s
XAN LR LR
comp=Z,770nm,19.5s
XAN LR LR
comp=Z,2μm,14.5s
XAN LR LR
comp=Z,2μm,14.7s
XAN Xi'an 28.10 270 P P 10 09 48.3 -0.4
XAN IAmb IAmb 10 09 49.9
comp=Z,23nm,0.8s
XAN Xi'an 28.10 270 P P 10 09 48.3 -0.4
XAN pmax pmax
comp=Z,23nm,0.8s
ENH Enshi 29.24 262 P P 10 09 59.1 +0.3
IRK Irkutsk 29.67 308 eP P 10 10 00.6 -1.8
IRK pmax pmax
comp=Z,48nm,2.8s
TLY Talaya 29.96 307 P P 10 10 05.7 +0.6
comp=Z,4.3nm,0.6s,baz=101,slow=7.7,SNR=12
TLY LR LR 10 22 47.7
comp=Z,563nm,18.0s,baz=92,slow=38
TLY Talaya 29.96 307 P P 10 10 05.4 +0.3
TLY IAmb IAmb 10 10 17.7
comp=Z,20nm,1.2s
TLY Talaya 29.96 307 eP P 10 10 05.5 +0.4
TLY e 10 11 13.9
TLY pmax pmax
comp=Z,49nm,1.3s
TLY MLR MLR
comp=Z,4μm,15.0s
ZAK Zakamensk 30.04 304 eP P 10 10 05.5 -0.4
ZAK pmax pmax
comp=Z,24nm,1.4s
BILL Bilibino 31.09 16⇑iP P 10 10 14.8 0.0
BILL pmax pmax
comp=Z,6.0nm,1.0s
LZH Lanzhou 31.32 276 eP P 10 10 18.1 +0.7
LZH pP pP 10 10 22.2 -1.5
LZH sP pwP 10 10 26.6 0.0
LZH pmax pmax
comp=Z,31nm,1.2s
LZH pmax pmax
comp=Z,270nm,4.9s
LZH LR LR
comp=Z,2μm,9.8s
LZH LR LR
comp=Z,3μm,13.0s
LZH LR LR
comp=Z,3μm,13.6s
MOY Mondy 31.60 307 eP P 10 10 20.0 +0.3
MOY pmax pmax
comp=Z,53nm,1.6s
TIXI Tiksi 32.94 352 P P 10 10 30.8 -0.2
comp=Z,1.1nm,0.3s,baz=138,slow=12,SNR=3.8
TIXI Tiksi 32.94 352⇑iP P 10 10 29.2 -1.8
TIXI pmax pmax
comp=Z,3.0nm,1.1s
GYA Guiyang 33.30 258⇑iP P 10 10 34.7 -0.1
GYA pP pP 10 10 43.2 +2.1
GYA PP PnPn 10 11 43.5 -1.9
GYA S S 10 15 47.6 -6.5
GYA sS sS 10 16 05.5 +0.9
GYA SS SnSn 10 17 49.8 -5.4
GYA pmax pmax
comp=Z,30nm,0.8s
GYA pmax pmax
comp=Z,140nm,4.9s
GYA LR LR
comp=Z,1μm,16.3s
GYA LR LR
comp=Z,1μm,17.6s
GYA LR LR
comp=Z,1μm,12.2s
CD2 Chengdu 33.35 267 P P 10 10 34.6 -0.5
CD2 S S 10 15 53.7 -1.0
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,300nm,5.3s
CD2 LR LR
comp=Z,4μm,13.5s
CD2 LR LR
comp=Z,2μm,13.5s
CD2 LR LR
comp=Z,4μm,13.1s
GTA Gaotai 33.44 284 ⇑P P 10 10 36.2 +0.3
GTA pP pwP 10 10 46.1 +0.8
GTA sP sP 10 10 50.1 +5.3
GTA sS sS 10 16 07.7 +1.1
GTA pmax pmax
comp=Z,21nm,1.2s
GTA pmax pmax
comp=Z,310nm,6.1s
GTA LR LR
comp=Z,1μm,16.8s
GTA LR LR
comp=Z,3μm,16.8s
GTA LR LR
comp=Z,4μm,17.2s
QIZ Qiongzhong 35.49 244 P P 10 10 52.0 -1.7
QIZ S S 10 16 29.0 +1.3
QIZ LR LR
comp=Z,1μm,11.8s
QIZ LR LR
comp=Z,870nm,12.8s
QIZ LR LR
comp=Z,1μm,15.2s
KMI Kunming 36.99 259 P P 10 11 07.3 +0.6
KMI pmax pmax
comp=Z,29nm,0.9s
ANM Nome 38.54 33 P P 10 11 21.4 +2.3
ANM Nome 38.54 33 P P 10 11 21.4 +2.3
ANM pmax pmax
comp=Z,8.0nm,1.1s
WMQ Urumqi 41.18 295 eP P 10 11 42.7 +1.3
WMQ pP pwP 10 11 51.6 +0.7
WMQ sP sP 10 11 57.4 +7.0
WMQ pmax pmax
comp=Z,25nm,0.9s
WMQ pmax pmax
comp=Z,220nm,3.9s
WMQ LR LR
comp=Z,630nm,16.7s
WMQ LR LR
comp=Z,1μm,28.9s
WMQ LR LR
comp=Z,460nm,18.9s
ZAA0 Zalesovo Array 41.43 310 IAmb IAmb 10 12 02.1
comp=Z,14nm,0.7s
ZALV Zalesovo Beam 41.43 310 P P 10 11 43.6 +0.4
comp=Z,14nm,0.5s,baz=91,slow=7.6,SNR=58
ZALV LR LR 10 29 42.1
comp=Z,710nm,18.8s,baz=74,slow=37
PBKT Sadao Pong 43.44 250 P P 10 11 59.8 -0.2
CHTO Chiang Mai 43.52 255 P P 10 12 00.4 -0.2
CHTO IAmb IAmb 10 12 19.5
comp=Z,8.4nm,0.8s
CHTO Chiang Mai 43.52 255 P P 10 12 00.4 -0.2
CHTO pmax pmax
comp=Z,8.0nm,0.9s
IMAR Indian Mountai 43.60 32 P P 10 12 01.6 +1.0
LSA Lhasa 43.63 274 P P 10 12 03.5 +1.5
LSA Lhasa 43.63 274 P P 10 12 03.0 +1.1
LSA IAmb IAmb 10 12 22.0
comp=Z,10nm,0.8s
LSA Lhasa 43.63 274 P P 10 12 03.0 +1.1
LSA pmax pmax
comp=Z,10.0nm,0.8s
CMAR Chiang Mai Arr 43.74 254 P P 10 12 02.7 +0.4
comp=Z,3.1nm,0.6s,baz=42,slow=7.7,SNR=17
CMAR LR LR 10 32 10.7
comp=Z,413nm,18.8s,baz=60,slow=39
CMAR Chiang Mai Arr 43.74 254 eP P 10 12 03.1 +0.7
CMAR pmax pmax
comp=Z,3.0nm,0.6s
KDAK Kodiak Island 44.10 44 P P 10 12 05.7 +1.0
comp=Z,23nm,1.0s,baz=292,slow=11,SNR=6.1
KDAK Kodiak Island 44.10 44 P P 10 12 05.1 +0.3
MK31 Makanchi Array 44.17 300 P P 10 12 05.3 -0.2
MK31 IAmb IAmb 10 12 06.4
comp=Z,14nm,0.8s
MK31 Makanchi Array 44.17 300 iP P 10 12 05.4 -0.2
MKAR Makanchi Array 44.17 300 P P 10 12 05.8 +0.3
comp=Z,12nm,0.7s,baz=84,slow=9.3,SNR=128
MKAR LR LR 10 31 24.8
comp=Z,1μm,18.8s,baz=82,slow=37
MKAR Makanchi Array 44.17 300 P P 10 12 05.5 -0.1
MAKZ Makanchi 44.38 300 P P 10 12 07.6 +0.4
MAKZ Makanchi 44.38 300 P P 10 12 07.6 +0.4
MAKZ pmax pmax
comp=Z,29nm,1.2s
SANI Sanana 44.47 205 P P 10 12 08.8 +0.6
comp=Z,15nm,0.9s
SUA Susitna One 44.82 38 P P 10 12 11.4 +0.8
SUA IAmb IAmb 10 12 22.5
comp=Z,11nm,1.1s
BRLK Bradley Lake 44.84 41 P P 10 12 11.9 +1.2
SHL Shillong 45.09 268 P P 10 12 14.8 +1.5
SHL pmax pmax
comp=Z,19nm,0.9s
RC01 Rabbit Creek A 45.32 39 P P 10 12 16.4 +1.9
RC01 IAmb IAmb 10 12 16.4
comp=Z,13nm,1.2s
KURK Kurchatov 45.66 306 P P 10 12 17.5 +0.2
KURK Kurchatov 45.66 306c iP P 10 12 17.3 0.0
KURK pmax pmax
comp=Z,31nm,1.0s
KURBB Kurchatov Arra 45.73 306 P P 10 12 18.1 +0.2
comp=Z,21nm,0.7s,baz=80,slow=8.3,SNR=188
COLA College 46.03 34 P P 10 12 21.4 +1.4
COLA pmax pmax
comp=Z,17nm,0.9s
CCB Clear Creek Bu 46.05 34 P P 10 12 21.3 +1.1
DHY Denali Highway 46.31 36 P P 10 12 24.0 +1.6
DHY IAmb IAmb 10 12 37.1
comp=Z,5.6nm,0.7s
HDA Harding Lake 46.43 34 P P 10 12 24.1 +0.9
IL31 46.44 34 P P 10 12 24.1 +0.8
IL31 IAmb IAmb 10 12 37.3
comp=Z,6.8nm,0.8s
ILAR Eielson Array 46.44 34 P P 10 12 24.1 +0.8
comp=Z,3.1nm,0.6s,baz=263,slow=6.1,SNR=51
ILAR Eielson Array 46.44 34 P P 10 12 23.5 +0.2
BMAR Burnt Mountain 47.28 30 P P 10 12 32.0 +2.1
TAPN Taplejung 47.41 273 eP P 10 12 32.4 +0.7
comp=Z,52nm,0.8s
ODAN Odare 47.90 272 eP P 10 12 36.1 +0.6
comp=Z,40nm,0.7s
JIRN Jiri 48.43 274 eP P 10 12 40.5 +0.8
comp=Z,60nm,0.5s
RAMN Ramite 48.47 273 eP P 10 12 40.2 +0.4
comp=Z,74nm,0.8s
GUN Gumba 48.54 274 eP P 10 12 41.2 +0.7
comp=Z,84nm,0.5s
CRQM Cirque 48.56 39 P P 10 12 40.9 +0.8
BCAR Beaver Creek A 48.84 36 P P 10 12 42.3 +0.3
KKN Kakani 49.06 275 eP P 10 12 45.0 +0.6
comp=Z,98nm,0.6s
PKI Pulchoki 49.07 274 eP P 10 12 44.8 +0.2
comp=Z,19nm,0.5s
PKIN Phulchoki 49.08 274 eP P 10 12 44.7 +0.1
comp=Z,21nm,0.5s
DMN Daman 49.29 275 eP P 10 12 46.7 +0.5
CTGM Chitina Glacie 49.40 38 P P 10 12 47.4 +1.0
CTGM IAmb IAmb 10 12 53.4
comp=Z,11nm,1.2s
GKN Gorkha 49.45 275 eP P 10 12 47.7 +0.4
comp=Z,34nm,0.4s
ULHL Ulahol 49.66 296 P P 10 12 49.0 +0.2
SNR=6.5
DANN Dangsing 49.96 276 eP P 10 12 52.3 +1.0
comp=Z,179nm,0.6s
BRVK Borovoye 50.12 311 P P 10 12 52.5 +0.7

BRVK Borovoye 50.12 311⇑eP P 10 12 51.0 -0.8
BRVK pmax pmax
comp=Z,17nm,0.8s
KOLN Koldanda 50.37 276 eP P 10 12 54.9 +0.6
comp=Z,36nm,0.6s
KBK Karagaybulak 50.40 297 P P 10 12 55.2 +0.9
SNR=27
KZA Kyzart 50.40 296 P P 10 12 56.2 +1.6
SNR=9.9
USP Ospenovka 50.49 298 P P 10 12 55.2 +0.3
SNR=12
AAK Ala-Archa 50.72 297 P P 10 12 57.1 +0.4
SNR=9.4
AAK Ala-Archa 50.72 297 iP P 10 12 57.2 +0.4
SNR=11
AAK Ala-Archa 50.72 297 P P 10 12 56.9 +0.2
AAK IAmb IAmb 10 12 57.7
comp=Z,8.8nm,0.8s
AAK Ala-Archa 50.72 297ceP P 10 12 57.3 +0.6
AAK pmax pmax
comp=Z,15nm,1.7s
KSH Kashi 50.87 293 P P 10 13 02.0 +4.2
KSH pP sP 10 13 11.0 +4.1
KSH sP pwP 10 13 14.3 +6.8
KSH PcP PcP 10 14 13.6 -0.6
KSH PP PP 10 14 59.0 +5.0
KSH S S 10 20 14.7 +1.9
KSH ScS ScS 10 22 46.5 -0.7
KSH pmax pmax
comp=Z,22nm,0.7s
KSH pmax pmax
comp=Z,250nm,8.1s
KSH LR LR
comp=Z,210nm,6.8s
KSH LR LR
comp=Z,200nm,11.5s
KSH LR LR
comp=Z,440nm,12.2s
EKS2 Erkin-Say 51.20 297 P P 10 13 00.9 +0.6
SNR=16
HYT Haines Junctio 51.26 38 IAmb IAmb 10 13 18.4
comp=Z,16nm,1.1s
INK Inuvik 51.34 28 P P 10 13 02.0 +1.3
comp=Z,3.2nm,0.6s,baz=310,slow=6.7,SNR=22
INK Inuvik 51.34 28 P P 10 13 02.1 +1.3
INK IAmb IAmb 10 13 12.1
comp=Z,6.6nm,0.6s
INK Inuvik 51.34 28 P P 10 13 02.1 +1.3
INK pmax pmax
comp=Z,7.0nm,0.6s
AML Almayashu 51.46 297 P P 10 13 03.3 +0.7
SNR=22
KK31 Karatay Array 53.26 299 IAmb IAmb 10 13 16.0
comp=Z,10nm,0.8s
KK31 Karatay Array 53.26 299 iP P 10 13 15.2 -0.2
KKAR Karatay Array 53.26 299 P P 10 13 15.6 +0.1
KKAR Karatay Array 53.26 299 IAmb IAmb 10 13 16.0
comp=Z,10nm,0.8s
KKAR Karatay Array 53.26 299 P P 10 13 15.6 +0.1
SVE Sverdlovsk 54.30 318⇓eP P 10 13 23.9 +1.1
SVE pmax pmax
comp=Z,34nm,0.9s
SVE MLR MLR
comp=Z,3μm,14.0s
C36M Paulatuk 54.40 26 IAmb IAmb 10 13 35.6
comp=Z,5.9nm,0.6s
NIL Nilore 55.37 287 P P 10 13 32.3 +1.4
NIL pmax pmax
comp=Z,27nm,0.7s
ARU Arti 55.52 318ceP P 10 13 32.3 +0.7
ARU pmax pmax
comp=Z,58nm,1.7s
KLSI 56.72 228 P P 10 13 41.0 +0.3
comp=Z,12nm,1.4s
MDSI Maura Dua 56.87 229 P P 10 13 42.1 +0.4
comp=Z,18nm,1.2s
AB31 Akbulak array 57.53 309⇑eP P 10 13 45.6 -0.5
AB31 pmax pmax
comp=Z,11nm,0.6s
ABKAR Akbulak array 57.53 309 P P 10 13 45.9 -0.1
KBL Kabul 58.02 290 P P 10 13 49.9 -0.1
KBL pmax pmax
comp=Z,19nm,0.9s
NOR Nord 58.57 357 iP P 10 13 53.4 +0.5
NOR e 10 15 29.9
NOR Nord 58.57 357 eP P 10 13 53.4 +0.5
PRGR Permogore 59.49 327 eP P 10 13 57.5 -2.0
PRGR e*PP pP 10 14 09.0 +2.9
PRGR pmax pmax
comp=Z,13nm,0.8s
RES Resolute Bay 59.69 15 P P 10 14 01.2 +0.6
comp=Z,3.7nm,0.8s,baz=322,slow=6.5,SNR=20
RES Resolute Bay 59.69 15 IAmb IAmb 10 14 12.7
comp=Z,6.7nm,0.8s
WRA Warramunga Arr 59.87 190 P P 10 14 02.2 -0.3
comp=Z,6.1nm,0.8s,baz=181,slow=7.2,SNR=21
YKA Yellowknife Ar 60.76 31 P P 10 14 08.8 +0.7
comp=Z,0.9nm,0.6s,baz=300,slow=6.5,SNR=14
TMCR Tamitsa 61.26 331 eP P 10 14 11.7 +0.2
TMCR pmax pmax
comp=Z,27nm,0.9s
ARCES ARCESS Array B 62.15 339 P P 10 14 18.0 +0.5
comp=Z,3.0nm,0.7s,baz=42,slow=9.7,SNR=10
ARCES ARCESS Array B 62.15 339 P P 10 14 16.9 -0.6
KLMR Klimovskoe 62.44 328 eP P 10 14 16.7 -2.8
KLMR AMP 10 14 21.9
comp=Z,38nm,1.9s
KLMR Klimovskoe 62.44 328 eP P 10 14 16.7 -2.8
KLMR pmax pmax
comp=Z,38nm,1.9s
POO Poona 62.89 272 eP P 10 14 20.5 -2.7
DAG Danmarks Havn 63.33 355⇑iP P 10 14 25.6 +0.4
DAG i 10 16 15.0
DAG Danmarks Havn 63.33 355⇑iP P 10 14 25.6 +0.4
ASAR Alice Springs 63.59 190 P P 10 14 28.6 +1.0
comp=Z,2.3nm,0.8s,baz=8.1,slow=6.7,SNR=20
ASAR Alice Springs 63.59 190 P P 10 14 26.7 -0.9
GEYT Alibeck 64.01 299 P P 10 14 30.6 +0.3
comp=Z,4.1nm,0.6s,baz=75,slow=1.6,SNR=9.3
GEYT Alibeck 64.01 299 P P 10 14 30.7 +0.3
JOF Joensuu 64.44 332 P P 10 14 33.2 +0.5
JOF pmax pmax
comp=Z,9.0nm,1.1s
DZM Mont Dzumac 65.02 156 eLR LR 10 34 03.3
comp=Z,597nm,22.4s
LTY Liberty 65.71 48 P P 10 14 42.2 +0.9
LTY IAmb IAmb 10 14 49.9
comp=Z,9.4nm,1.5s
MOS Moscow 66.14 323 eP P 10 14 43.2 -0.6
MOS eS S 10 23 29.0 -1.7
MOS pmax pmax
comp=Z,28nm,1.0s
MOS MLR MLR
comp=Z,1μm,17.0s
VRH Novokhopyorsk 66.75 318 eP P 10 14 47.6 -0.2
VRH pmax pmax
comp=Z,40nm,1.8s
D08A Wollman Farm, 66.82 47 P P 10 14 49.5 +1.2
D08A IAmb IAmb 10 14 51.2
comp=Z,3.4nm,0.7s
OBN Obninsk 66.99 323 iP P 10 14 49.5 +0.2
OBN i 10 15 18.8
OBN i 10 17 15.0
OBN pmax pmax
comp=Z,10.0nm,1.0s
OBN MLR MLR
comp=Z,1μm,15.0s
NEW Newport 67.15 46 P P 10 14 52.2 +1.7
comp=Z,1.5nm,0.7s,baz=307,slow=9.5,SNR=5.1
FINES FINESS Array B 67.28 332 P P 10 14 51.4 +0.4
comp=Z,12nm,0.7s,baz=56,slow=6.3,SNR=37
FINES FINESS Array B 67.28 332 P P 10 14 51.2 +0.2
FINES FINESS Array B 67.28 332 eP P 10 14 51.2 +0.2
FINES pmax pmax
comp=Z,12nm,0.7s
PINE Pine Mountain 67.44 51 IAmb IAmb 10 15 14.0
comp=Z,8.1nm,1.0s
YBH Yreka Blue Hor 67.49 54 P P 10 14 54.8 +1.9
comp=Z,2.7nm,0.7s,baz=315,slow=7.1,SNR=3.0
VSR Storozhevoye 68.05 319 eP P 10 14 54.4 -1.7
VSR pmax pmax
comp=Z,20nm,1.2s
SUMG Summit 68.09 1 iP P 10 14 57.4 +0.9
comp=Z,30nm,0.9s
SUMG i 10 16 48.6
SUMG Summit 68.09 1 iP P 10 14 57.4 +0.9
SUMG pmax pmax
comp=Z,31nm,0.9s
VORD Divnogorie 68.14 319 eP P 10 14 54.6 -2.0
VORD pmax pmax
comp=Z,20nm,1.6s
AKT Akhty 68.84 307 eP P 10 15 01.5 +0.2
AKT e 10 15 25.9
AKT pmax pmax
comp=Z,32nm,1.4s
BMO Blue Mountains 68.99 49 P P 10 15 04.9 +2.7
BMO pmax pmax
comp=Z,6.0nm,1.4s
VSU Vasula 69.04 330ceP P 10 15 03.3 +1.2
VSU pmax pmax
comp=Z,70nm,1.3s
GOF Gofitskoye 69.58 312⇑eP P 10 15 06.3 +0.6
GOF pmax pmax
comp=Z,41nm,0.6s
WVOR Wild Horse Val 69.60 51 P P 10 15 08.2 +2.1
WVOR pmax pmax
comp=Z,10.0nm,2.6s
ZEI Tsey 70.41 310 eP P 10 15 10.0 -1.1
ZEI pmax pmax
comp=Z,8.0nm,0.8s
KIV Kislovodsk 70.43 311 iP P 10 15 12.7 +1.6
SNR=6.8
KIV Kislovodsk 70.43 311 eP P 10 15 12.1 +1.0
KIV pmax pmax
comp=Z,132nm,1.1s
KBZ Khabaz 70.44 311 P P 10 15 11.7 +0.7
comp=Z,13nm,0.8s,baz=36,slow=4.9,SNR=21
KBZ Khabaz 70.44 311 eP P 10 15 12.1 +1.1
KBZ pmax pmax
comp=Z,13nm,0.8s
SHA1 Shidzhatmaz 70.58 311c iP P 10 15 13.1 +0.9
FFC Flin Flon 70.65 34 P P 10 15 13.1 +1.0
FFC IAmb IAmb 10 15 26.2
comp=Z,6.1nm,1.1s
FFC Flin Flon 70.65 34 P P 10 15 13.1 +1.0
FFC pmax pmax
comp=Z,6.0nm,1.2s
STKA Stephens Creek 71.16 182 P P 10 15 15.9 +0.7
comp=Z,2.6nm,0.8s,baz=353,slow=9.4,SNR=4.0
STKA LR LR 10 51 12.1
comp=Z,73nm,18.6s,baz=22,slow=40
STKA Stephens Creek 71.16 182 eP P 10 15 17.1 +1.8
STKA pmax pmax
comp=Z,2.0nm,0.6s
EGMT Eagleton 71.26 43 IAmb IAmb 10 15 29.9
comp=Z,8.2nm,1.1s
DLMT Dillon 71.37 46 IAmb IAmb 10 15 30.5
comp=Z,7.0nm,1.1s
NACGM Naroch 71.45 327 e P 10 15 17.0 +0.1
NACGM eLR LR 10 49 02.0
GNI Garni 71.45 307ceP P 10 15 20.0 +2.5
GNI pmax pmax
comp=Z,42nm,1.3s
KVN Kaiserville 71.91 54 P P 10 15 22.1 +1.8
KVN IAmb IAmb 10 15 31.7
comp=Z,6.0nm,0.9s
KVN Kaiserville 71.91 54 P P 10 15 22.1 +1.8
KVN pmax pmax
comp=Z,6.0nm,0.9s
BANOM Banah 71.92 289 P P 10 15 21.0 +0.7
SHME Shamm 71.96 289 P P 10 15 20.8 +0.2
NVAR Mina Array Bea 72.15 55 P P 10 15 23.7 +1.9
comp=Z,2.4nm,0.8s,baz=295,slow=6.3,SNR=17
NVAR Mina Array Bea 72.15 55 P P 10 15 24.5 +2.7
NC303 NORSAR Array S 72.22 338 P P 10 15 22.4 +0.9
MSFE Esma-Masafi 72.35 288 P P 10 15 23.6 +0.7
NB2 NORSAR Subarra 72.42 338 P P 10 15 22.7 0.0
comp=Z,16nm,0.9s,baz=38,slow=6.2
NB2 NORSAR Subarra 72.42 338 P P 10 15 22.7 0.0
baz=38,slow=6.2
NOA NORSAR Array B 72.42 338 P P 10 15 23.0 +0.3
comp=Z,6.5nm,0.8s,baz=39,slow=6.1,SNR=15
UOSS Minazif 72.56 288 P P 10 15 24.5 +0.4
HATD Hatta, Dubai 72.68 288 P P 10 15 25.6 +0.7
AKASG Malin Array Be 73.23 323 P P 10 15 27.9 +0.2
comp=Z,5.1nm,0.5s,baz=45,slow=6.1,SNR=38
AKASG Malin Array Be 73.23 323 P P 10 15 28.1 +0.5
AKASG Malin Array Be 73.23 323 eP P 10 15 27.7 +0.1
AKASG pmax pmax
comp=Z,5.0nm,0.5s
AKBB Malin Array Si 73.23 323 IAmb IAmb 10 15 28.3
comp=Z,9.6nm,0.8s
AKBB Malin Array Si 73.23 323⇑iP P 10 15 27.7 +0.1
FRB Frobisher Bay 73.88 14 P P 10 15 31.4 +0.2
FRB pmax pmax
comp=Z,16nm,1.3s
R11A Troy Canyon, C 73.90 53 IAmb IAmb 10 15 52.3
comp=Z,13nm,1.5s
TPNV Topopah Spring 74.35 55 IAmb IAmb 10 15 52.7
comp=Z,8.0nm,1.1s
DUG Dugway, Tooele 74.45 51 P P 10 15 37.5 +2.3
DUG pmax pmax
comp=Z,8.0nm,1.9s
PDAR Pinedale Array 74.70 47 P P 10 15 37.6 +0.8
comp=Z,1.2nm,0.6s,baz=267,slow=1.8,SNR=19
PDAR Pinedale Array 74.70 47 P P 10 15 37.5 +0.7
KVT Kavak 76.06 312 P P 10 15 47.4 +3.1
ULM Lac du Bonnet 76.45 35 P P 10 15 47.1 +0.9
comp=Z,1.6nm,0.7s,baz=343,slow=6.9,SNR=5.4
ULM Lac du Bonnet 76.45 35 eP P 10 15 48.0 +1.7
ULM pmax pmax
comp=Z,2.0nm,0.7s
RSSD Black Hills 76.83 43 P P 10 15 50.5 +1.7
RSSD Black Hills 76.83 43 P P 10 15 50.5 +1.7
RSSD pmax pmax
comp=Z,3.0nm,0.6s
KWP Kalwaria Pacla 76.96 325 P P 10 15 50.6 +1.4
KWP pmax pmax
comp=Z,28nm,2.2s
U15A North Rim 77.15 53 IAmb IAmb 10 16 02.6
comp=Z,6.3nm,0.9s
BUR08 Bucovina Ar. S 77.26 322 IAmb IAmb 10 15 52.5
comp=Z,6.9nm,0.7s
BURAR Bucovina Array 77.27 322 P P 10 15 51.8 +0.7
BURAR Bucovina Array 77.27 322 P P 10 15 51.8 +0.7
KOLS Kolonicke sedl 77.66 325 eP P 10 15 54.1 +0.9
KOLS pmax pmax
comp=Z,6.0nm,1.1s
KOLS Kolonicke sedl 77.66 325 eP P 10 15 54.1 +0.9
OJC Ojcow 77.78 327 P P 10 15 55.0 +1.2
OJC pmax pmax
comp=Z,20nm,1.2s
CRVS Cervenica-Dubn 78.05 325 eP P 10 15 56.3 +1.0
CRVS pmax pmax
comp=Z,15nm,1.1s
CRVS Cervenica-Dubn 78.05 325 eP P 10 15 56.2 +1.0
NIE Niedzica 78.17 326 P P 10 15 57.6 +1.6
NIE pmax pmax
comp=Z,5.0nm,0.9s
BR131 Keskin Array S 78.33 312 IAmb IAmb 10 15 59.3
comp=Z,5.3nm,0.9s
BRTR Keskin Array B 78.33 312 P P 10 15 57.8 +0.6
comp=Z,2.2nm,0.7s,baz=96,slow=4.7,SNR=12
BRTR Keskin Array B 78.33 312 P P 10 15 57.4 +0.2
KSP Ksiaz 78.74 329 P P 10 16 00.2 +1.1
KSP pmax pmax
comp=Z,12nm,1.3s
OKC Ostrava-Krasne 78.76 327 AMS AMS 10 53 50.0
comp=Z,800nm,18.8s
ISCO Idaho Springs 78.89 47 P P 10 16 03.6 +3.1
ISCO pmax pmax
comp=Z,7.0nm,2.2s
VOIR 78.92 321 P P 10 16 01.2 +0.9
VOIR pmax pmax
comp=Z,6.0nm,1.5s
CHVC Chvalec 79.03 329 AMS AMS 10 53 40.0
comp=Z,1μm,20.8s
MORC Moravsky Berou 79.06 328 eP P 10 16 01.7 +0.8
MORC Moravsky Berou 79.06 328 P P 10 16 02.0 +1.1
MORC pmax pmax
comp=Z,12nm,1.2s
DPC Dobruska-Polom 79.11 329 eP P 10 16 02.6 +1.4
DPC AMS AMS 10 56 00.0
comp=Z,800nm,18.0s
DPC Dobruska-Polom 79.11 329 eP P 10 16 02.6 +1.4
DPC MLR MLR
comp=Z,800nm,18.0s
UPC Upice 79.11 329 AMS AMS 10 55 00.0
comp=Z,900nm,16.7s
VYHS Vyhne 79.50 326 eP P 10 16 04.2 +0.9
VYHS pmax pmax
comp=Z,15nm,1.3s
VYHS Vyhne 79.50 326 eP P 10 16 04.2 +0.9
CLL Collm 79.64 331 eP P 10 16 04.0 0.0
comp=Z,11nm,0.8s
CLL LmH 10 54 00.0
comp=Z,500nm,21.7s
CLL Collm 79.64 331 eP P 10 16 04.0 0.0
CLL pmax pmax
comp=Z,11nm,0.8s
CLL MLR MLR
comp=Z,500nm,21.7s
PVCC Panska Ves 79.67 330 AMS AMS 10 54 20.0
comp=Z,1μm,18.7s
JAVC Velka Javorina 79.72 327 eP P 10 16 06.4 +1.9
VRAC Vranov 79.81 328 eP P 10 16 05.9 +0.9
VRAC Vranov 79.81 328 P P 10 16 06.3 +1.3
VRAC pmax pmax
comp=Z,11nm,2.6s
GOPC GO Pecny, Ondr 80.07 329 eP P 10 16 07.7 +1.4
GOPC AMS AMS 10 55 30.0
comp=Z,800nm,17.7s
GOPC GO Pecny, Ondr 80.07 329 eP P 10 16 07.7 +1.4
GOPC MLR MLR
comp=Z,800nm,17.7s
PRA Prague 80.08 329 AMS AMS 10 54 30.0
comp=Z,1μm,20.2s
KRUC Moravsky 80.09 328 eP P 10 16 07.2 +0.8
KRUC Moravsky 80.09 328 P P 10 16 07.7 +1.3
KRUC pmax pmax
comp=Z,19nm,1.4s
PRU Pruhonice 80.10 329 eP P 10 16 07.8 +1.3
PRU AMS AMS 10 58 20.0
comp=Z,1μm,16.5s
PRU Pruhonice 80.10 329 eP P 10 16 07.8 +1.3
PRU MLR MLR
comp=Z,1μm,16.5s
MODS Modra-Piesok 80.26 327 eP P 10 16 08.0 +0.6
MODS pmax pmax
comp=Z,13nm,1.0s
MODS Modra-Piesok 80.26 327 eP P 10 16 08.0 +0.6
BZS Buzias 80.42 323 P P 10 16 08.7 +0.4
BZS pmax pmax
comp=Z,8.0nm,1.3s
RAYN Ar Rayn 81.16 293 iP P 10 16 13.1 +0.3
SNR=6.8
RAYN Ar Rayn 81.16 293 P P 10 16 13.0 +0.3
RAYN IAmb IAmb 10 16 13.6
comp=Z,7.8nm,0.9s
RAYN Ar Rayn 81.16 293 P P 10 16 13.0 +0.3
RAYN pmax pmax
comp=Z,8.0nm,0.9s
KHC Kasperske Hory 81.17 329 eP P 10 16 13.1 +0.8
KHC AMS AMS 10 56 10.0
comp=Z,1μm,17.1s
KHC Kasperske Hory 81.17 329⇑iP P 10 16 12.8 +0.5
KHC pmax pmax
comp=Z,13nm,0.9s
CONA Conrad Observa 81.20 327 epP P 10 16 14.0 +1.5
comp=Z,8.5nm,1.1s
GERES GERESS Array B 81.35 329 P P 10 16 13.8 +0.5
comp=Z,2.5nm,0.8s,baz=27,slow=6.1,SNR=11
GERES GERESS Array B 81.35 329 P P 10 16 13.7 +0.3
WET Wettzell 81.43 330 P P 10 16 14.8 +1.1
ANMO Albuquerque 81.69 51ceP P 10 16 19.5 +4.0
ANMO pmax pmax
comp=Z,8.0nm,2.5s
ARSA Arzberg 81.87 327 epP P 10 16 17.1 +1.1
comp=Z,2.9nm,0.6s
VTS Vitosha 81.87 320 IAmb IAmb 10 16 18.1
comp=Z,7.7nm,0.8s
VTS Vitosha 81.87 320 P P 10 16 17.6 +1.3
VTS pmax pmax
comp=Z,12nm,0.8s
SCHQ Schefferville 82.40 17 P P 10 16 19.7 +1.1
comp=Z,1.1nm,0.6s,baz=19,slow=13,SNR=4.1
SOKA Soboth 82.53 327 eP P 10 16 20.3 +0.7
comp=Z,7.3nm,0.7s
KBA Koelnbreinsper 82.91 328 epP P 10 16 23.0 +1.3
comp=Z,3.7nm,0.6s
KBA Koelnbreinsper 82.91 328 P P 10 16 22.4 +0.8
KBA pmax pmax
comp=Z,10.0nm,0.8s
WATA Walderalm 83.41 329 epP P 10 16 25.3 +1.2
comp=Z,6.4nm,0.7s
WTTA Wattenberg 83.44 329 i pP P 10 16 25.4 +1.1
comp=Z,12nm,1.2s
MOTA Moosalm 83.58 330 eP P 10 16 25.6 +0.5
comp=Z,14nm,1.1s
RETA Reutte 83.60 330 eP P 10 16 25.7 +0.6
comp=Z,8.0nm,1.0s
PMOR Pomariorio Ree 83.77 115 eT T 11 48 33.7
comp=Z,6.2nm,0.2s
FETA Feichten 84.00 330 epP P 10 16 28.0 +0.8
comp=Z,4.0nm,0.9s
DAVA Damuels 84.11 330 epP P 10 16 28.7 +0.9
comp=Z,16nm,1.1s
PPT2 Papeete2 84.39 118 eLR LR 10 42 59.8
comp=Z,609nm,22.2s
TAOE Nuku Hiva Isla 85.26 105 eLR LR 10 43 23.0
comp=Z,734nm,23.9s
TX31 Lajitas Ar. Si 87.27 54 IAmb IAmb 10 16 54.7
comp=Z,8.3nm,1.4s
TX32 Lajitas Array 87.27 54 IAmb IAmb 10 16 54.7
comp=Z,8.5nm,1.4s
TXAR Lajitas Array 87.27 54 P P 10 16 44.8 +1.1
comp=Z,0.4nm,0.5s,baz=291,slow=4.0,SNR=9.6
TXAR Lajitas Array 87.27 54 P P 10 16 44.7 +1.0
CCM Cathedral Cave 87.83 40 P P 10 16 48.1 +2.0
CCM Cathedral Cave 87.83 40 P P 10 16 48.1 +2.0
CCM pmax pmax
comp=Z,9.0nm,1.2s
TBI Tubuai 88.49 122 eT T 11 54 28.8
comp=Z,17nm,0.3s
RKT Rikitea 98.25 113 eLR LR 10 49 25.9
comp=Z,313nm,23.0s
TORD Torodi Ar. Bea 116.59 318 PP PP 10 23 45.9 -1.9
comp=Z,2.5nm,1.0s,baz=33,slow=5.6,SNR=6.4
SNAA Sanae 143.70 197 PKPdf PKPbc 10 23 29.5 +1.4
VNA2 Neumayer--Watz 145.25 196 PKPdf PKPbc 10 23 33.2 +0.2
baz=135,slow=2.5
VNA3 Neumayer Olymp 145.48 195 PKPdf PKPbc 10 23 34.2 +0.5

*NIED **10** 10:05:00, 39.70N×143.70E, h17km, Mw4.7 Best double couple: $M_0$1.27000×10^{16} NP1:ϕ_s36.00000°, δ65.00000°, λ101.00000°. NP2:ϕ_s191.00000°, δ28.00000°, λ67.00000°.*
*JMA **10** 10:05:46.7±0.2, 39.67N×143.66E, h16km±5km, M4.8*
JMA Felt I J1.
*IDC **10** 10:05:47.2±0.7, 39.70N×143.44E, h0km, mb4.5/25, mb1 4.6/29, mb1mx4.5/50, mbtmp4.5/29, ML4.4/3, MS4.4/6, Ms1 4.4/6, ms1mx3.7/42, Error ellipse: s-maj=17.4km s-min=15.2km az=122.0*
*BJI **10** 10:05:49.5±0.0, 39.60N×143.24E, h25km, mB5.1/22, mb4.9/37, Ms5.1/19, Ms7 5.0/19*
*MOS **10** 10:05:49.9±0.9, 39.74N×143.41E, h28km, mb5.1/39, Error ellipse: s-maj=7.9km s-min=4.7km az=92.9*
*NEIC **10** 10:05:51.0±1.3, 39.67N±0.07×143.5E±0.2, h26km±7km, mb4.9/18, Error ellipse: s-maj=17.7km s-min=8.9km az=111.0*
ISC 10 10:05:48.3±0.4, 39.67N±0.04×143.56E±0.04, h11km, n172, σ1.55/177, mb4.9/76, MS4.7/10, 10C-4D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	1.33	282	P	Pn	10 06 11.8	-1.0
JTH				eS	Sg	10 06 30.1	-1.1
MIYJ	Miyakonagasawa	1.35	266	P	Pn	10 06 12.3	-0.7
MIYJ				eS	Sb	10 06 30.2	-0.6
JKEN	Kujiedanarisaw	1.52	291	P	Pn	10 06 14.1	-1.2
JANG	Nango	1.72	295	P	Pn	10 06 17.1	-1.0
JOM	Ohasama	1.76	264	P	Pn	10 06 18.5	-0.2
JOM				eS	Sn	10 06 41.5	+0.3
JMK	Ichinoseki	1.95	249	P	Pn	10 06 20.9	-0.4
JMK				eS	Sn	10 06 44.9	-0.9
JIO	Ouri	2.11	235	P	Pn	10 06 22.8	-0.7
JTM	Tenmabayashi	2.21	301	P	Pn	10 06 25.2	+0.4
ERM	Erimo	2.36	353	eP	Pn	10 06 27.7	+0.8
JOT	Ohata	2.56	313	P	Pb	10 06 32.0	-2.3
JNBK	Urakawa-nobuka	2.67	347	eS	Sn	10 07 04.3	+0.7
JCH	Churui	2.94	357	eS	Sn	10 07 09.6	-0.6
JAK	Akkeshi	3.43	14	eS	Sn	10 07 20.0	-2.2
NMR	Nemuro--Hokkai	4.04	23	eP	Pn	10 06 50.1	+0.2

NMR eS Sn 10 07 33.4 -3.8
GLVR Golovnino 4.32 19 eP Pn 10 06 54.7 +0.9
GLVR eS Sn 10 07 41.3 -2.8
GLVR smax smax
comp=E,643nm,0.2s
GLVR smax smax
comp=N,2μm,0.3s
JKA Kamikawa-asahi 4.50 351 Pn 10 06 57.4 +1.1
JKA Sn 10 07 50.0 +1.5
ASAJ Asahikawa 4.50 351 Pn Pn 10 06 57.4 +1.1
comp=N,17nm,0.3s,baz=125,slow=12,SNR=3.7
ASAJ Sn Sn 10 07 50.0 +1.5
comp=N,6.3nm,0.3s,baz=311,slow=11,SNR=2.4
GRPR Tuman 4.62 20 P Pn 10 06 58.7 +0.7
GRPR eS Sn 10 07 46.8 -4.8
GRPR pmax pmax
comp=N,199nm,0.4s
GRPR pmax pmax
comp=E,149nm,0.4s
GRPR pmax pmax
comp=Z,275nm,0.4s
GRPR smax smax
comp=E,1μm,0.3s
GRPR smax smax
comp=N,2μm,0.5s
YUK Yuzh-Kuril'sk 4.68 21 eP Pn 10 07 00.2 +1.4
YUK eS Sn 10 07 50.0 -3.2
YUK smax smax
comp=E,1μm,0.4s
YUK smax smax
comp=N,2μm,0.6s
SHO Shikotan 4.85 29 eP Pn 10 07 01.7 +0.5
SHO eS Sn 10 07 51.3 -6.0
SHO smax smax
comp=N,1μm,0.5s
SHO smax smax
comp=E,367nm,0.2s
MJA0 Matsu Arr-Jizo 5.23 235 eP Pn 10 07 07.3 +0.9
MJAR Matsushiro Arr 5.25 235 Pn Pn 10 07 06.7 -0.1
comp=E,0.4nm,0.3s,baz=38,slow=13,SNR=4.3
MAJO Matsushiro 5.25 235 Pn Pn 10 07 08.0 +1.2
MAJO Matsushiro 5.25 235 i P Pn 10 07 08.2 +1.5
KUR Kuril'sk 6.40 28 eP Pn 10 07 24.3 +1.8
KUR eS Sn 10 08 31.3 -4.2
KUR pmax pmax
comp=N,86nm,0.6s
KUR pmax pmax
comp=Z,171nm,0.6s
KUR pmax pmax
comp=E,85nm,0.3s
KUR smax smax
comp=E,377nm,0.6s
KUR smax smax
comp=N,245nm,0.8s
JHJ Hachijo jima 2 7.21 206 Sn Sn 10 08 48.3 -7.3
comp=N,61nm,0.3s,baz=38,slow=19,SNR=5.5
YSS Yuzh-Sakhalins 7.30 356⇓eP Pn 10 07 35.4 +0.6
YSS pmax pmax
comp=Z,30nm,1.0s
YSS pmax pmax
comp=N,50nm,0.8s
YSS pmax pmax
comp=E,20nm,0.9s
YSS MLR MLR
comp=N,2μm,12.0s
USRK Ussuriysk Ar. 9.73 301 Pn Pn 10 08 11.0 +2.8
baz=95,slow=12,SNR=12
USRK Ussuriysk Ar. 9.73 301 P Pn 10 08 11.0 +2.8
MSHR Mys Shultsa 9.80 291 eP Pn 10 08 07.7 -1.3
GRNR Gornyy 12.18 338⇑iP Pn 10 08 41.8 +0.3
GRNR eS Sn 10 10 55.9 -1.3
GRNR pmax pmax
comp=Z,10.0nm,1.3s
GRNR smax smax
comp=N,4.0nm,0.9s
GRNR MLR MLR
comp=Z,2μm,14.0s
KSRS Korea Array 12.44 265 Pn Pn 10 08 48.4 +3.1
comp=Z,0.3nm,0.3s,baz=75,slow=14,SNR=3.8
JCJ Chichijima 12.60 186 Pn Pn 10 08 48.4 +1.0
comp=Z,6.0nm,0.3s,baz=270,slow=19,SNR=1.8
KLR Kul'dur 12.73 322 Pn Pn 10 08 48.8 -0.4
comp=Z,0.4nm,0.3s,baz=123,slow=16,SNR=3.6
KLR Kul'dur 12.73 322⇓iP Pn 10 08 46.8 -2.3
CN2 Changchun 14.14 293 eP Pn 10 09 10.0 +1.7
CN2 eS Sn 10 11 46.6 +1.5
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,300nm,7.3s
CN2 LR LR
comp=Z,2μm,12.2s
CN2 LR LR
comp=Z,2μm,12.2s
CN2 LR LR
comp=Z,2μm,13.0s
PET Petropavlovsk 16.89 33 eP P 10 09 47.4 +1.0
HIA Hailar 19.45 307 P P 10 10 12.3 -2.4
HIA Hailar 19.45 307c iP P 10 10 12.0 -2.7
MA2 Magadan 20.44 11 LR LR 10 18 11.2
comp=Z,985nm,18.5s,baz=103,slow=36
MA2 Magadan 20.44 11 P P 10 10 26.6 +1.2
MA2 Magadan 20.44 11 P 10 10 26.7 +1.3
MA2 IAmb IAmb 10 10 27.9
comp=Z,41nm,0.8s
MA2 Magadan 20.44 11d iP Pn 10 10 27.2 -0.3
MA2 pmax pmax
comp=Z,47nm,0.8s
TIA Tai'an 21.11 269 P P 10 10 29.8 -3.0
TIA pmax pmax
comp=Z,56nm,1.0s
SEY Seymchan 23.89 10 P P 10 11 02.0 +0.4
comp=Z,30nm,0.9s,baz=194,slow=8.9,SNR=6.3
SEY Seymchan 23.89 10⇑iP P 10 11 01.7 +0.1
YAK Yakutsk 23.93 344 P P 10 11 01.2 -0.8
comp=Z,13nm,0.5s,baz=267,slow=1.5,SNR=3.5
YAK Yakutsk 23.93 344 i P P 10 11 00.8 -1.2
YAK pmax pmax
comp=Z,37nm,0.7s
TPUB Ta-pu 25.36 237 P P 10 11 12.8 -2.6
WHN Wuhan 25.48 258 ⇑P P 10 11 16.0 -0.4
WHN pP sP 10 11 20.8 +0.8
WHN sP pwP 10 11 25.8 +3.6
WHN S S 10 15 39.5 -4.0
WHN pmax pmax
comp=Z,160nm,0.8s
WHN LR LR
comp=Z,4μm,13.1s
BTO Baotou 25.57 283 eP P 10 11 16.7 -0.6
BOD Bodaibo 26.31 323 eP P 10 11 22.2 -1.4
BOD pmax pmax
comp=Z,45nm,0.9s
ULN Ulaanbaatar 27.40 299 P P 10 11 34.4 +0.6
ULN IAmb IAmb 10 11 35.2
comp=Z,31nm,1.1s
ULN Ulaanbaatar 27.40 299 P P 10 11 34.4 +0.6
ULN pmax pmax
comp=Z,31nm,1.1s
SONM Songino Array 27.84 299 P P 10 11 37.6 -0.1
comp=Z,14nm,0.8s,baz=95,slow=8.6,SNR=8.3
SONM Songino Array 27.84 299 P P 10 11 36.8 -0.9
SONM Songino Array 27.84 299 eP P 10 11 37.9 +0.2
SONM pmax pmax
comp=Z,14nm,0.8s
XAN Xi'an 28.16 269 P P 10 11 40.0 -0.7
XAN pmax pmax
comp=Z,23nm,0.9s
XAN LR LR
comp=Z,930nm,18.4s
XAN LR LR
comp=Z,2μm,14.9s
XAN LR LR
comp=Z,2μm,14.7s
H11N2 WAKE ISLAND Hy 28.24 128 T T 10 40 52.2
baz=318,slow=75,SNR=926
H11N1 WAKE ISLAND Hy 28.25 128 T T 10 40 49.2
baz=318,slow=75,SNR=588
H11N3 WAKE ISLAND Hy 28.26 128 T T 10 40 53.5
baz=318,slow=75,SNR=850
H11S1 WAKE ISLAND Hy 29.06 130 T T 10 41 23.1
baz=318
H11S3 WAKE ISLAND Hy 29.07 130 T T 10 41 07.2
baz=318
H11S2 WAKE ISLAND Hy 29.08 130 T T 10 41 55.4
baz=318
ENH Enshi 29.31 262 P P 10 11 49.7 -1.2
TLY Talaya 29.99 307 P P 10 11 57.3 +0.7
comp=Z,1.8nm,0.4s,baz=113,slow=7.7,SNR=3.0
TLY Talaya 29.99 307 eP P 10 11 56.7 +0.1
TLY pmax pmax
comp=Z,24nm,1.4s
BILL Bilibino 31.02 16⇑iP P 10 12 06.3 +0.8
BILL pmax pmax
comp=Z,8.0nm,1.0s
TIXI Tiksi 32.90 351 eP P 10 12 22.4 +0.4
TIXI pmax pmax
comp=Z,3.0nm,0.9s
GYA Guiyang 33.37 258⇑iP P 10 12 25.8 -1.0
GYA pmax pmax
comp=Z,40nm,0.9s
GTA Gaotai 33.49 284 ⇓P P 10 12 28.3 +0.6
GTA pP pwP 10 12 38.7 +5.4
GTA sP sP 10 12 43.0 +12
GTA ScP ScP 10 18 52.8 -0.1
GTA pmax pmax
comp=Z,21nm,1.3s
ZAA0 Zalesovo Array 41.44 310 P P 10 13 34.2 -0.5
ZALV Zalesovo Beam 41.44 310 P P 10 13 34.8 +0.1
comp=Z,7.9nm,0.5s,baz=96,slow=8.5,SNR=5.5
ZALV PcP PcP 10 15 32.2 -0.1
comp=Z,5.3nm,0.9s,baz=69,slow=3.6,SNR=4.4
ZALV Zalesovo Beam 41.44 310 P P 10 13 34.5 -0.2
ZALV Zalesovo Beam 41.44 310 eP P 10 13 34.9 +0.2
ZALV pmax pmax
comp=Z,8.0nm,0.5s
CHTO Chiang Mai 43.59 255 P P 10 13 52.4 -0.2
CHTO pmax pmax
comp=Z,11nm,1.0s
CMAR Chiang Mai Arr 43.82 254 P P 10 13 54.4 0.0
comp=Z,2.6nm,0.7s,baz=46,slow=6.6,SNR=5.6
KDAK Kodiak Island 44.02 44 LR LR 10 31 43.9
comp=Z,174nm,20.1s,baz=251,slow=35
MK31 Makanchi Array 44.20 300 P P 10 13 57.0 -0.2
MK31 IAmb IAmb 10 14 14.2
comp=Z,18nm,0.8s
MK31 Makanchi Array 44.20 300 P P 10 13 57.0 -0.2
MK31 pmax pmax
comp=Z,18nm,0.9s
MKAR Makanchi Array 44.20 300 P P 10 13 57.1 -0.1
comp=Z,14nm,0.9s,baz=83,slow=8.3,SNR=6.3
MKAR PcP PcP 10 15 41.7 -0.1
comp=Z,3.0nm,0.9s,baz=92,slow=2.2,SNR=1.8
MAKZ Makanchi 44.41 300 P P 10 13 58.8 0.0
MAKZ IAmb IAmb 10 14 16.0
comp=Z,21nm,0.8s
MAKZ Makanchi 44.41 300 P P 10 13 58.8 0.0
MAKZ pmax pmax
comp=Z,21nm,0.9s
KURK Kurchatov 45.68 306 P P 10 14 08.7 -0.2
KURK Kurchatov 45.68 306⇑iP P 10 14 07.6 -1.2
KURK pmax pmax
comp=Z,40nm,1.0s
KURBB Kurchatov Arra 45.76 306 P P 10 14 09.4 0.0
comp=Z,22nm,0.8s,baz=82,slow=8.2,SNR=7.2
ILAR Eielson Array 46.37 34 P P 10 14 15.1 +1.1
comp=Z,2.3nm,0.8s,baz=270,slow=6.6,SNR=3.0
AAK Ala-Archa 50.76 297 P P 10 14 48.5 +0.1
AAK IAmb IAmb 10 15 03.0
comp=Z,12nm,1.1s
AAK Ala-Archa 50.76 297⇑iP P 10 14 47.8 -0.6
AAK pmax pmax
comp=Z,16nm,1.5s
KSH Kashi 50.90 293 P P 10 14 53.6 +4.1
KSH pP pwP 10 15 01.4 +6.0
KSH pmax pmax
comp=Z,15nm,0.9s
KSH pmax pmax
comp=Z,260nm,6.2s
INK Inuvik 51.27 28 P P 10 14 52.9 +1.2
comp=Z,3.6nm,0.9s,baz=282,slow=6.9,SNR=2.3
INK Inuvik 51.27 28 P P 10 14 53.5 +2.0
INK Inuvik 51.27 28 P P 10 14 53.6 +2.0
INK pmax pmax
comp=Z,11nm,1.4s
ARSB Arslanbob 52.30 296 P P 10 15 00.0 +0.1
ARSB Arslanbob 52.30 296 P P 10 15 00.0 +0.1
ARSB pmax pmax
comp=Z,32nm,0.9s
KKAR Karatay Array 53.29 299 P P 10 15 07.2 +0.1
KKAR Karatay Array 53.29 299 P P 10 15 07.2 +0.1
SVE Sverdlovsk 54.31 318 eP P 10 15 15.4 +1.1
SVE pmax pmax
comp=Z,26nm,1.1s
NIL Nilore 55.41 287 P P 10 15 23.1 +0.4
NIL pmax pmax
comp=Z,22nm,1.0s
ARU Arti 55.52 318⇑iP P 10 15 22.8 -0.3
ARU pmax pmax
comp=Z,37nm,1.1s
ABKAR Akbulak array 57.55 309 P P 10 15 37.6 0.0
ABKAR Akbulak array 57.55 309 IAmb IAmb 10 15 38.6
comp=Z,11nm,0.8s
KBL Kabul 58.06 290 P P 10 15 41.2 -0.5
KBL pmax pmax
comp=Z,16nm,1.0s
SPITS Spitsbergen Ar 58.26 349 LR LR 10 41 54.5
comp=Z,726nm,20.5s,baz=100,slow=37
PRGR Permogore 59.48 327 eP P 10 15 50.5 -0.4
PRGR e*PP pwP 10 16 00.3 +3.5
PRGR pmax pmax
comp=Z,19nm,0.9s
RES Resolute Bay 59.62 15 P P 10 15 51.9 +0.2
comp=Z,4.0nm,0.8s,baz=321,slow=8.3,SNR=2.7
WRA Warramunga Arr 59.93 190 P P 10 15 54.6 +0.2
comp=Z,3.5nm,0.8s,baz=6.4,slow=7.3,SNR=3.3
TMCR Tamitsa 61.24 331 eP P 10 16 03.6 +0.7
TMCR pmax pmax
comp=Z,14nm,0.6s
ARCES ARCESS Array B 62.12 339 P P 10 16 09.1 +0.3
comp=Z,3.2nm,0.8s,baz=61,slow=7.4,SNR=2.5
KLMR Klimovskoe 62.43 328 eP P 10 16 10.0 -1.0
KLMR AMP 10 16 12.8
comp=Z,28nm,1.5s
KLMR ePP PP 10 18 24.8 -3.0
KLMR Klimovskoe 62.43 328 eP P 10 16 09.9 -1.0
KLMR e 10 18 24.8
KLMR pmax pmax
comp=Z,28nm,1.5s
SGF Sodankyl 63.17 337 P P 10 16 16.4 +0.6
SGF pmax pmax
comp=Z,26nm,2.4s
DAG Danmarks Havn 63.29 355 P P 10 16 16.8 +0.4
DAG pmax pmax
comp=Z,11nm,0.9s
ASAR Alice Springs 63.65 190 P P 10 16 20.2 +0.8
comp=Z,1.8nm,0.7s,baz=11,slow=5.7,SNR=2.9
GEYT Alibeck 64.04 299 P P 10 16 22.0 -0.1
comp=Z,7.4nm,1.1s,baz=329,slow=2.5,SNR=4.6
JOF Joensuu 64.43 332 P P 10 16 24.4 +0.3
JOF pmax pmax
comp=Z,10.0nm,0.9s
DZM Mont Dzumac 65.04 157 LR LR 10 44 01.3
comp=Z,334nm,18.6s,baz=24,slow=35
SUF Sumiainen 66.38 333 P P 10 16 37.1 +0.3
SUF pmax pmax
comp=Z,25nm,2.3s
VRH Novokhopyorsk 66.76 318 eP P 10 16 37.7 -1.6
VRH pmax pmax
comp=Z,20nm,1.2s
VRH MLR MLR
comp=Z,2μm,14.0s
OBN Obninsk 66.99 323 i P P 10 16 39.2 -1.5
OBN i 10 17 07.1
OBN pmax pmax
comp=Z,17nm,1.2s
FIA1 FINESS Array S 67.26 332 P P 10 16 42.9 +0.5
FIA1 IAmb IAmb 10 16 43.2
comp=Z,12nm,0.8s
FINES FINESS Array B 67.26 332 P P 10 16 42.5 +0.1
comp=Z,12nm,0.8s,baz=46,slow=8.2,SNR=6.3
FINES FINESS Array B 67.26 332 P P 10 16 42.3 -0.1
VSR Storozhevoye 68.06 319 eP P 10 16 46.2 -1.4
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR MLR MLR
comp=Z,870nm,12.0s
VSU Vasula 69.03 330 P P 10 16 54.2 +0.7
VSU pmax pmax
comp=Z,81nm,1.0s
GOF Gofitskoye 69.59 312⇑eP P 10 17 10.5 +13
ZEI Tsey 70.42 310 eP P 10 17 01.7 -1.0
ZEI pmax pmax
comp=Z,10.0nm,1.0s
KIV Kislovodsk 70.45 311 eP P 10 17 03.4 +0.7
KIV pmax pmax
comp=Z,122nm,1.1s
KBZ Khabaz 70.46 311 P P 10 17 03.2 +0.6
comp=Z,14nm,0.9s,baz=52,slow=3.9,SNR=6.8
FFC Flin Flon 70.58 34 P P 10 17 03.9 +0.8
FFC pmax pmax
comp=Z,4.0nm,0.9s
NACGM Naroch 71.44 327 e P 10 17 07.0 -1.3
NVAR Mina Array Bea 72.07 55 P P 10 17 14.4 +1.6
comp=Z,1.7nm,0.8s,baz=310,slow=4.6,SNR=9.0
NB2 NORSAR Subarra 72.39 338 P P 10 17 14.3 +0.2
comp=Z,5.5nm,0.9s,baz=37,slow=5.9
NOA NORSAR Array B 72.39 338 P P 10 17 14.5 +0.4
comp=Z,8.3nm,0.9s,baz=38,slow=6.1,SNR=7.5
NOA NORSAR Array B 72.39 338 eP P 10 17 14.7 +0.6
NOA pmax pmax
comp=Z,8.0nm,0.9s
AKASG Malin Array Be 73.23 323 P P 10 17 19.1 0.0
comp=Z,7.7nm,0.8s,baz=43,slow=6.1,SNR=5.9
FRB Frobisher Bay 73.81 14 P P 10 17 23.1 +0.8
FRB pmax pmax
comp=Z,11nm,1.3s
PDAR Pinedale Array 74.62 47 P P 10 17 28.8 +1.1
comp=Z,1.2nm,0.8s,baz=284,slow=2.4,SNR=3.9
ULM Lac du Bonnet 76.37 35 LR LR 10 53 25.0
comp=Z,175nm,18.7s,baz=3.5,slow=37
BUR08 Bucovina Ar. S 77.26 322 IAmb IAmb 10 17 44.1
comp=Z,7.8nm,0.9s
BURAR Bucovina Array 77.27 322 P P 10 17 43.1 +0.6
KOLS Kolonicke sedl 77.66 325 eP P 10 17 45.4 +0.8
KOLS pmax pmax
comp=Z,6.0nm,1.0s
KOLS Kolonicke sedl 77.66 325 eP P 10 17 45.4 +0.8
NIE Niedzica 78.16 326 P P 10 17 48.4 +1.0
BRTR Keskin Array B 78.35 312 P P 10 17 49.0 +0.2
comp=Z,2.6nm,1.0s,baz=76,slow=5.2,SNR=4.9
BRTR Keskin Array B 78.35 312 eP P 10 17 48.6 -0.2
BRTR pmax pmax
comp=Z,3.0nm,1.0s
MORC Moravsky Berou 79.05 328 eP P 10 17 53.2 +0.8
MORC Moravsky Berou 79.05 328 P P 10 17 53.8 +1.4
MORC pmax pmax
comp=Z,10.0nm,1.7s
VYHS Vyhne 79.49 326 eP P 10 17 55.6 +0.8
VYHS pmax pmax
comp=Z,11nm,1.2s
VYHS Vyhne 79.49 326 eP P 10 17 55.6 +0.8
CLL Collm 79.63 331 i P P 10 17 56.0 +0.6
comp=Z,23nm,1.2s
CLL Collm 79.63 331 i P P 10 17 56.0 +0.6
CLL pmax pmax
comp=Z,23nm,1.2s
JAVC Velka Javorina 79.71 327 eP P 10 17 57.5 +1.5
VRAC Vranov 79.81 328 eP P 10 17 57.2 +0.8
KRUC Moravsky 80.08 328 eP P 10 17 58.6 +0.7
KRUC Moravsky 80.08 328 P P 10 17 59.3 +1.4
KRUC pmax pmax
comp=Z,13nm,1.1s
PRU Pruhonice 80.09 329 P P 10 17 58.9 +1.0
PRU pmax pmax
comp=Z,7.0nm,1.0s
MODS Modra-Piesok 80.25 327 eP P 10 17 59.4 +0.5
MODS pmax pmax
comp=Z,12nm,1.2s
MODS Modra-Piesok 80.25 327 eP P 10 17 59.4 +0.5
RAR Rarotonga 80.39 128 LR LR 10 49 20.1
comp=Z,177nm,19.7s,baz=282,slow=32
CONA Conrad Observa 81.19 327 eP P 10 18 05.2 +1.3
comp=Z,4.4nm,0.9s
GERES GERESS Array B 81.34 329 P P 10 18 05.1 +0.4
comp=Z,2.6nm,0.9s,baz=44,slow=5.9,SNR=5.8
VTS Vitosha 81.87 320 P P 10 18 09.0 +1.2
SCHQ Schefferville 82.33 17 P P 10 18 10.2 +0.4
comp=Z,3.0nm,0.8s,baz=359,slow=6.5,SNR=4.3
SOKA Soboth 82.52 327 eP P 10 18 11.6 +0.6
comp=Z,12nm,1.0s
KBA Koelnbreinsper 82.90 328 ePcP P 10 18 14.5 +1.4
comp=Z,7.1nm,0.9s
ABTA Abfaltersbach 83.50 329 eP P 10 18 14.4 -1.7
comp=Z,10nm,1.3s
MOTA Moosalm 83.57 330 ePcP P 10 18 17.2 +0.6
comp=Z,6.4nm,1.0s
RETA Reutte 83.59 330 ePcP P 10 18 18.1 +1.6
comp=Z,11nm,1.1s
FETA Feichten 83.99 330 ePcP P 10 18 20.0 +1.3
comp=Z,8.2nm,1.1s
TXAR Lajitas Array 87.19 54 P P 10 18 36.7 +1.9
comp=Z,0.8nm,0.9s,baz=305,slow=3.2,SNR=2.4
TORD Torodi Ar. Bea 116.59 318 PP PP 10 25 37.2 -2.0
comp=Z,1.5nm,1.0s,baz=22,slow=4.7,SNR=3.6

IDC **10** *10:25:37.6±4.0, 39.°47N×143.°92E, h0km, mb3.7/5, mb1 3.6/8, mb1mx3.4/60, mbtmp3.6/8, ML2.8/3, Error ellipse: s-maj=71.0km s-min=30.8km az=131.0*
JMA **10** *10:25:42.8±0.2, 39.°65N×143.°51E, h42km, M3.5*
ISC 10 10:25:42.1±1.5**, 39.°68N**±0.°07×**143.°45E**±0.°09**, h11km, n20, σ1.§15**/27**, mb3.6**/5**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.25	283	P	Pn	10 26 04.8	-0.6
JTH				eS	Sn	10 26 21.7	-0.5
MIYJ	Miyakonagasawa	1.26	266	P	Pn	10 26 05.4	-0.2
MIYJ				eS	Sb	10 26 21.0	-1.0
JKEN	Kujiedanarisaw	1.44	292	P	Pn	10 26 07.7	-0.3
JANG	Nango	1.64	296	P	Pn	10 26 10.1	-0.7
JOM	Ohasama	1.68	264	P	Pn	10 26 11.6	+0.2
JMK	Ichinoseki	1.87	248	P	Pn	10 26 14.1	+0.1
JMK				eS	Sn	10 26 36.9	-0.7
JIO	Ouri	2.04	234	P	Pn	10 26 15.5	-0.8
JTM	Tenmabayashi	2.13	302	P	Pn	10 26 18.4	+0.8
JOT	Ohata	2.50	314	P	Pn	10 26 23.2	+0.5
JOT				eS	Sn	10 26 52.6	-0.5
JYK	Kaneyama	2.51	253	P	Pn	10 26 23.6	+0.8
JYK				eS	Sn	10 26 54.0	+0.6
JNBK	Urakawa-nobuka	2.65	349	P	Pn	10 26 24.7	-0.1
JNBK				eS	Sn	10 26 56.1	-0.9
JCH	Churui	2.94	359	P	Pn	10 26 28.9	+0.2
JCH				eS	Sn	10 27 02.3	-1.6
ASAJ	Asahikawa	4.48	352	Pn	Pn	10 26 51.2	+1.2
	1.1nm,0.3s,baz=179,slow=10,SNR=6.9						
MJAR	Matsushiro Arr	5.18	234	Pn	Pn	10 27 00.4	+0.8
	0.2nm,0.3s,baz=56,slow=12,SNR=12						
USRK	Ussuriysk Ar.	9.66	302	Pn	Pn	10 28 05.2	+4.3
	baz=128,slow=13,SNR=2.7						
SEY	Seymchan	23.90	10	P	P	10 30 54.7	-0.8
	2.2nm,0.7s,baz=163,slow=19,SNR=5.6						
SONM	Songino Array	27.76	299	P	P	10 31 31.9	+1.1
	0.5nm,0.6s,baz=83,slow=7.6,SNR=4.0						
ZALV	Zalesovo Beam	41.37	310	P	P	10 33 27.8	-0.1
	0.3nm,0.3s,baz=83,slow=6.0,SNR=2.3						
MKAR	Makanchi Array	44.12	300	P	P	10 33 50.5	+0.1
	0.7nm,0.8s,baz=93,slow=8.9,SNR=7.6						
KURBB	Kurchatov Arra	45.68	306	P	P	10 34 02.5	-0.2
	0.9nm,0.7s,baz=81,slow=8.1,SNR=7.8						

NIED **10** *10:26:00, 39.°70N×143.°70E, h20km, Mw4.1 Best double couple: M0 1.34000×10^15 NP1: φs 42.00000°, δ66.00000°, λ108.00000°. NP2: φs 183.00000°, δ29.00000°, λ55.00000°.*
IDC **10** *10:26:42.6±0.8, 39.°66N×143.°44E, h0km, mb4.0/19, mb1 4.2/21, mb1mx4.0/60, mbtmp4.0/21, ML3.6/2, MS4.0/1, Ms1 4.0/1, ms1mx2.7/50, Error ellipse: s-maj=20.0km s-min=15.7km az=143.0*
JMA **10** *10:26:43.1±0.1, 39.°67N×143.°67E, h37km, M4.2*
NEIC **10** *10:26:47.6±0.5, 39.°67N±0.°08×143.°53E±0.°03, h37km±10km, mb4.2/4, Error ellipse: s-maj=12.6km s-min=2.3km az=165.0*
ISC 10 10:26:42.7±2.8**, 39.°68N**±0.°05×**143.°49E**±0.°06**, h2km**±16km**, n58, σ1.§02**/65**, mb4.2**/19**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.28	282	P	Pb	10 27 07.4	-0.1
JTH				eS	Sn	10 27 25.4	0.0
MIYJ	Miyakonagasawa	1.29	266	P	Pn	10 27 07.8	0.0
MIYJ				eS	Sn	10 27 25.9	+0.2
JKEN	Kujiedanarisaw	1.47	292	P	Pn	10 27 09.9	-0.3
JKEN				eS	Sg	10 27 29.4	-0.5

JANG Nango 1.67 295 P Pn 10 27 12.5 -0.5
JANG eS Sn 10 27 34.9 -0.1
JOM Ohasama 1.71 264 P Pn 10 27 13.0 -0.6
JOM eS Sn 10 27 35.7 -0.3
JMK Ichinoseki 1.91 248 P Pn 10 27 16.3 +0.1
JMK eS Sn 10 27 39.9 -0.8
ERM Erimo 2.35 354 Pn Pn 10 27 23.3 +1.0
JOT Ohata 2.52 313 P Pb 10 27 27.2 -1.5
JYK Kaneyama 2.55 254 P Pn 10 27 25.5 +0.5
JNBK Urakawa-nobuka 2.66 348 P Pn 10 27 28.1 +1.5
JNBK eS Sn 10 27 59.2 -0.2
JCH Churui 2.94 358 eS Sn 10 28 03.9 -2.3
JFT Otama 3.28 230 P Pn 10 27 34.8 -0.3
JFT eS Sn 10 28 13.4 -1.3
JAK Akkeshi 3.44 15 eS Sn 10 28 15.9 -2.7
JEW Eniwo 3.51 335 eS Sn 10 28 19.8 -0.7
JFR Furan 3.55 349 eS Sn 10 28 20.6 -0.7
JAR Ashorobuto 3.62 3 P Pn 10 27 39.6 -0.2
JAR eS Sn 10 28 20.7 -2.4
JKA Kamikawa-asahi 4.49 352 Pn 10 27 53.2 +1.6
JKA Sn 10 28 44.4 -0.1
ASAJ Asahikawa 4.49 352 Pn Pn 10 27 53.2 +1.6
4.3nm,0.3s,baz=210,slow=17,SNR=8.1
ASAJ Sn Sn 10 28 44.4 -0.1
2.3nm,0.3s,baz=18,slow=20,SNR=3.5
MJAR Matsushiro Arr 5.21 235 Pn Pn 10 28 02.7 +1.0
0.5nm,0.3s,baz=40,slow=14,SNR=17
MJAR Matsushiro Arr 5.21 235 Pn 10 28 02.9 +1.2
MAJO Matsushiro 5.21 235 Pn 10 28 03.2 +1.6
MAT Matsushiro 5.21 235 P Pn 10 28 02.8 +1.1
MAT eS Sn 10 29 00.6 -1.8
MJB9 Matsu-Tunnel 5.21 235 Pn 10 28 03.3 +1.6
INU Inuyama 6.72 232 Pn Pn 10 28 24.4 +2.0
USRK Ussuriysk Ar. 9.69 302 Pn Pn 10 29 05.8 +2.7
baz=96,slow=14,SNR=7.8
MA2 Magadan 20.44 11 P P 10 31 21.9 +0.7
8.5nm,0.8s,baz=228,slow=8.3,SNR=3.9
SEY Seymchan 23.89 10 P P 10 31 57.8 +0.4
6.8nm,0.8s,baz=189,slow=6.3,SNR=14
SONM Songino Array 27.79 299 P P 10 32 33.5 +0.3
2.5nm,0.8s,baz=91,slow=8.1,SNR=11
H11N2 WAKE ISLAND Hy 28.29 128 T T 11 03 39.8
baz=318,slow=75,SNR=34
H11N1 WAKE ISLAND Hy 28.30 128 T T 11 03 41.6
baz=318,slow=75,SNR=35
H11N3 WAKE ISLAND Hy 28.30 128 T T 11 03 36.7
baz=318,slow=75,SNR=34
ZALV Zalesovo Beam 41.40 310 P P 10 34 30.3 +0.2
2.1nm,0.5s,baz=89,slow=6.7,SNR=8.8
CMAR Chiang Mai Arr 43.77 254 P P 10 34 49.9 +0.1
0.3nm,0.3s,baz=47,slow=7.8,SNR=5.3
MK31 Makanchi Array 44.15 300 P P 10 34 52.8 +0.1
MKAR Makanchi Array 44.15 300 P P 10 34 52.6 -0.1
2.5nm,0.8s,baz=82,slow=9.0,SNR=14
MKAR Makanchi Array 44.15 300 P P 10 34 52.5 -0.2
MAKZ Makanchi 44.36 300 P P 10 34 54.5 +0.2
MAKZ IAmb IAmb 10 34 55.7
comp=Z,3.6nm,1.0s
KURK Kurchatov 45.63 306 P P 10 35 04.3 -0.1
KURBB Kurchatov Arra 45.71 306 P P 10 35 04.8 -0.2
ILAR Eielson Array 46.39 34 P P 10 35 10.4 +0.3
comp=Z,0.5nm,0.8s,baz=261,slow=6.9,SNR=6.1
ILAR Eielson Array 46.39 34 P P 10 35 09.4 -0.8
BVAR Borovoye Array 50.04 311 P P 10 35 38.6 +0.2
comp=Z,2.4nm,0.7s,baz=79,slow=7.9,SNR=9.5
INK Inuvik 51.29 28 P P 10 35 49.4 +1.8
comp=Z,1.0nm,1.0s,baz=255,slow=4.3,SNR=2.5
KKAR Karatay Array 53.24 299 P P 10 36 02.1 -0.5
ARU Arti 55.48 318 P P 10 36 18.5 -0.2
comp=Z,1.6nm,0.2s,baz=64,slow=2.9,SNR=4.5
ABKAR Akbulak array 57.51 309 P P 10 36 32.9 -0.3
AKTO Aktyubinsk 58.14 311 P P 10 36 37.9 +0.3
comp=Z,1.7nm,0.7s,baz=90,slow=12,SNR=6.4
BBB Bella Bella 59.04 46 LR LR 11 03 07.5
comp=Z,118nm,20.0s,baz=327,slow=37
RES Resolute Bay 59.63 15 P P 10 36 47.5 -0.2
comp=Z,1.6nm,0.9s,baz=336,slow=10,SNR=4.3
RES Resolute Bay 59.63 15 IAmb IAmb 10 36 48.4
comp=Z,2.5nm,1.0s
WRA Warramunga Arr 59.92 190 P P 10 36 49.8 -0.4
comp=Z,1.2nm,1.0s,baz=7.7,slow=6.9,SNR=3.7
FINES FINESS Array B 67.23 332 P P 10 37 37.9 -0.2
comp=Z,2.2nm,0.7s,baz=57,slow=7.0,SNR=6.2
FINES FINESS Array B 67.23 332 P P 10 37 37.7 -0.4
KBZ Khabaz 70.42 311 P P 10 37 58.0 -0.2
comp=Z,3.8nm,1.1s,baz=114,slow=4.5,SNR=6.1
NVAR Mina Array Bea 72.11 55 P P 10 38 09.6 +0.6
comp=Z,0.4nm,0.7s,baz=284,slow=7.3,SNR=3.3
NOA NORSAR Array B 72.37 338 P P 10 38 10.0 +0.1
comp=Z,1.5nm,0.8s,baz=37,slow=6.1,SNR=4.1
AKASG Malin Array Be 73.20 323 P P 10 38 14.4 -0.4
comp=Z,1.0nm,0.5s,baz=47,slow=5.9,SNR=8.2
TXAR Lajitas Array 87.23 54 P P 10 39 31.3 +0.3
comp=Z,0.1nm,0.3s,baz=286,slow=3.4,SNR=2.4

*NIED **10** 10:30:00, 39.°60N×143.°70E, h17km, Mw4.3 Best double couple: $M_0 2.86000\times10^{15}$ NP1: ϕ_s38.00000°, δ65.00000°, λ103.00000°. NP2: ϕ_s190.00000°, δ28.00000°, λ64.00000°.*
*JMA **10** 10:30:44.7±0.1, 39.°65N×143.°69E, h26km, M4.6*
JMA Felt I J1.
*IDC **10** 10:30:45.5±0.7, 39.°72N×143.°42E, h0km, mb4.1/29, mb1 4.2/33, mb1mx4.1/70, mbtmp4.1/33, ML3.5/4, MS3.6/8, Ms1 3.6/8, ms1mx3.2/51, Error ellipse: s-maj=15.8km s-min=13.2km az=141.0*
*BJI **10** 10:30:46.6±0.0, 39.°73N×143.°46E, h29km, mB4.9/19, mb4.5/37, Ms4.4/9, Ms7 4.2/9*
*NEIC **10** 10:30:50.1±1.5, 39.°67N±0.°07×143.°50E±0.°09, h37km±6km, mb4.4/15, Error ellipse: s-maj=13.2km s-min=6.5km az=137.0*
ISC 10 10:30:47.3±1.3, **39.°68N**±0.°04×**143.°46E**±0.°06, **h13**km±7km, **n96, σ0.s99**/108, **mb4.4**/38, **MS3.7**/7, **1C-1D, Off east coast of Honshu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JTH Tanohata 1.25 282 P Pn 10 31 09.3 -1.2
JTH eS Sn 10 31 28.0 +0.8
MIYJ Miyakonagasawa 1.27 266 P Pn 10 31 09.8 -0.9
MIYJ eS Sn 10 31 28.0 +0.4
JKEN Kujiedanarisaw 1.44 292 P Pn 10 31 12.0 -1.0
JANG Nango 1.64 295 P Pn 10 31 14.6 -1.2
JANG eS Sn 10 31 37.0 +0.2
JOM Ohasama 1.69 264 P Pn 10 31 16.2 -0.2
JOM eS Sb 10 31 39.6 +0.3
JMK Ichinoseki 1.89 248 P Pn 10 31 18.4 -0.7
JMK eS Sn 10 31 42.8 +0.1
JIO Ouri 2.05 234 P Pn 10 31 19.9 -1.5
JIO eS Sn 10 31 46.3 -0.5
ERM Erimo 2.34 354 Pn 10 31 26.3 +0.9
JOT Ohata 2.50 313 P Pn 10 31 27.6 0.0
JYK Kaneyama 2.52 253 P Pn 10 31 27.9 0.0
JYK eS Sn 10 32 00.2 +1.7
JNBK Urakawa-nobuka 2.65 349 P Pn 10 31 30.2 +0.6
JNBK eS Sn 10 32 02.6 +1.0
JKB Kayabe 2.87 321 P Pn 10 31 32.7 0.0
JCH Churui 2.93 359 P Pn 10 31 32.9 -0.6
JCH eS Sn 10 32 06.4 -2.1
JFT Otama 3.27 230 P Pn 10 31 37.4 -0.7
JFT eS Sn 10 32 17.2 +0.4
JKA Kamikawa-asahi 4.47 352 Pn 10 31 55.3 +0.6
JKA Sn 10 32 47.3 +0.7
ASAJ Asahikawa 4.48 352 Pn Pn 10 31 55.3 +0.6
5.7nm,0.3s,baz=198,slow=13,SNR=12
ASAJ Sn Sn 10 32 47.3 +0.7
1.9nm,0.3s,baz=309,slow=33,SNR=3.8
MJAR Matsushiro Arr 5.19 234 Pn Pn 10 32 05.2 +0.6
0.6nm,0.3s,baz=42,slow=14,SNR=38
MJAR LR LR 10 34 17.4
comp=Z,330nm,19.9s,baz=50,slow=41
MJAR Matsushiro Arr 5.19 234 Pn 10 32 05.1 +0.5
MAJO Matsushiro 5.20 235 Pn 10 32 05.0 +0.3
MAT Matsushiro 5.20 235 P Pn 10 32 05.1 +0.4
MAT eS Sn 10 33 06.5 +2.1
MJB9 Matsu-Tunnel 5.20 235 Pn 10 32 04.8 +0.2
INU Inuyama 6.70 232 Pn 10 32 25.0 -0.4
USRK Ussuriysk Ar. 9.66 302 Pn Pn 10 33 08.0 +2.1
baz=92,slow=13,SNR=12
USRK LR LR 10 36 20.0
comp=Z,278nm,18.6s,baz=122,slow=35
KSRS Korea Array 12.36 265 Pn Pn 10 33 44.7 +1.8
0.2nm,0.3s,baz=82,slow=14,SNR=6.2
KSRS LR LR 10 38 01.9
comp=Z,178nm,19.0s,baz=80,slow=35
KLR Kul'dur 12.68 323 Pn Pn 10 33 47.0 -0.1
0.1nm,0.3s,baz=120,slow=12,SNR=5.6
KLR LR LR 10 39 10.1
comp=Z,263nm,18.1s,baz=78,slow=40
CN2 Changchun 14.06 293 eP P 10 34 10.7 -3.1
CN2 pmax pmax
comp=Z,10.0nm,0.7s
MA2 Magadan 20.44 11 P P 10 35 24.3 +0.2
19nm,0.8s,baz=173,slow=8.1,SNR=6.8
SEY Seymchan 23.89 10 P P 10 36 00.2 -0.1
13nm,0.9s,baz=196,slow=6.3,SNR=18
YAK Yakutsk 23.90 344 P P 10 35 58.8 -1.6
4.2nm,0.3s,baz=132,slow=0.4,SNR=4.0
YAK Yakutsk 23.90 344 P P 10 35 58.2 -2.1
WHN Wuhan 25.41 258 ⇑P P 10 36 13.9 -0.5
WHN pP pP 10 36 18.3 +0.5
WHN pmax pmax
comp=Z,60nm,0.8s
ULN Ulaanbaatar 27.32 299 P P 10 36 32.2 +0.4
ULN IAmb IAmb 10 36 33.0
comp=Z,12nm,1.1s
SONM Songino Array 27.77 299 P P 10 36 36.0 +0.2
comp=Z,4.6nm,0.7s,baz=93,slow=8.4,SNR=17
SONM LR LR 10 48 16.0
comp=Z,161nm,20.1s,baz=54,slow=38
SONM Songino Array 27.77 299 P P 10 36 35.5 -0.2
XAN Xi'an 28.09 269 P P 10 36 37.6 -1.0
XAN pmax pmax
comp=Z,7.0nm,0.7s
XAN pmax pmax
comp=Z,98nm,4.7s
XAN LR LR
comp=Z,300nm,12.0s
XAN LR LR
comp=Z,220nm,14.1s
H11N2 WAKE ISLAND Hy 28.31 128 T T 11 07 39.3
baz=318,slow=75,SNR=48
H11N1 WAKE ISLAND Hy 28.32 128 T T 11 07 40.1
baz=318,slow=75,SNR=38
H11N3 WAKE ISLAND Hy 28.33 128 T T 11 07 40.7
baz=318,slow=75,SNR=50
TLY Talaya 29.92 307 LR LR 10 49 44.1
comp=Z,76nm,19.6s,baz=12,slow=38
TIXI Tiksi 32.88 352 P P 10 37 20.0 -0.5
comp=Z,0.5nm,0.3s,baz=201,slow=8.6,SNR=1.5
GTA Gaotai 33.41 284 ⇓P P 10 37 26.1 +0.5
GTA pP pwP 10 37 36.0 +4.0
GTA sP sP 10 37 39.3 +8.9
GTA PcP PcP 10 40 06.2 -0.7
GTA pmax pmax
comp=Z,7.0nm,1.0s
GTA pmax pmax
comp=Z,77nm,4.2s
GTA LR LR
comp=Z,150nm,13.7s
GTA LR LR
comp=Z,350nm,14.8s
GTA LR LR
comp=Z,360nm,16.5s
ZAA0 Zalesovo Array 41.38 310 P P 10 38 33.0 +0.2
ZALV Zalesovo Beam 41.38 310 P P 10 38 32.8 0.0
comp=Z,4.1nm,0.6s,baz=88,slow=7.5,SNR=17
ZALV PcP PcP 10 40 30.9 +0.1
comp=Z,1.7nm,0.8s,baz=128,slow=2.4,SNR=3.6
ZALV Zalesovo Beam 41.38 310 P P 10 38 32.3 -0.5
OHAK Old Harbor 43.73 45 P P 10 38 50.9 -0.9
CMAR Chiang Mai Arr 43.74 254 P P 10 38 52.6 +0.2
comp=Z,1.0nm,0.4s,baz=49,slow=7.0,SNR=8.3
CMAR LR LR 10 58 59.7
comp=Z,74nm,18.4s,baz=265,slow=39
MK31 Makanchi Array 44.13 300 IAmb IAmb 10 38 56.0
comp=Z,5.2nm,0.8s
MKAR Makanchi Array 44.13 300 P P 10 38 55.1 -0.1
comp=Z,5.3nm,0.8s,baz=82,slow=9.3,SNR=40
MKAR LR LR 10 58 03.8
comp=Z,96nm,18.7s,baz=5.0,slow=37
MKAR Makanchi Array 44.13 300 P P 10 38 54.5 -0.8
MAKZ Makanchi 44.33 300 P P 10 38 56.8 -0.1
MAKZ IAmb IAmb 10 38 58.2
comp=Z,6.8nm,1.0s
KURK Kurchatov 45.61 306 P P 10 39 06.7 -0.3
KURBB Kurchatov Arra 45.69 306 P P 10 39 07.3 -0.2
comp=Z,8.8nm,0.8s,baz=81,slow=8.2,SNR=72
ILAR Eielson Array 46.40 34 P P 10 39 13.2 +0.2
comp=Z,0.9nm,0.8s,baz=268,slow=6.4,SNR=9.5
BMAR Burnt Mountain 47.24 30 P P 10 39 20.8 +1.2
ODAN Odare 47.88 272 eP P 10 39 25.6 +0.2
RAMN Ramite 48.45 273 eP P 10 39 29.4 -0.3
comp=Z,24nm,0.7s
GUN Gumba 48.53 274 eP P 10 39 30.0 -0.4
comp=Z,31nm,0.7s
DMN Daman 49.27 275 eP P 10 39 35.6 -0.5
DANN Dangsing 49.94 276 eP P 10 39 41.3 +0.1
comp=Z,53nm,0.7s
BVAR Borovoye Array 50.01 311 P P 10 39 41.1 0.0
comp=Z,3.5nm,0.7s,baz=78,slow=9.2,SNR=20
AAK Ala-Archa 50.68 297 P P 10 39 46.2 -0.2
comp=Z,1.9nm,0.7s,baz=113,slow=7.7,SNR=7.1
AAK Ala-Archa 50.68 297 IAmb IAmb 10 39 46.8
comp=Z,2.2nm,0.8s
KSH Kashi 50.83 293 P P 10 39 51.5 +3.9
KSH pP pwP 10 40 01.4 +7.3
KSH PcP PcP 10 41 03.6 -0.7
KSH PP PP 10 41 47.8 +4.2
KSH S S 10 47 04.4 +1.1
KSH sS sS 10 47 23.6 +14
KSH ScS ScS 10 49 38.2 0.0
KSH pmax pmax
comp=Z,12nm,1.0s
KSH pmax pmax
comp=Z,300nm,6.7s
KSH LR LR
comp=Z,260nm,6.3s
KSH LR LR
comp=Z,410nm,11.8s
KSH LR LR
comp=Z,240nm,8.4s
INK Inuvik 51.30 28 P P 10 39 50.4 0.0
comp=Z,0.7nm,0.6s,baz=346,slow=3.5,SNR=3.1
ARSB Arslanbob 52.22 296 P P 10 39 58.3 +0.2
KK31 Karatay Array 53.22 299 P P 10 40 04.5 -0.7
KK31 IAmb IAmb 10 40 05.5
comp=Z,3.2nm,0.8s
KKAR Karatay Array 53.22 299 P P 10 40 04.1 -1.1
KKAR Karatay Array 53.22 299 P P 10 40 04.5 -0.7
KKAR IAmb IAmb 10 40 05.5
comp=Z,3.2nm,0.8s
ARU Arti 55.46 318 P P 10 40 20.9 -0.4
comp=Z,1.7nm,0.2s,baz=75,slow=2.5,SNR=8.4
ARU Arti 55.46 318 pP 10 40 32.0 +7.2
ABKAR Akbulak array 57.48 309 P P 10 40 35.5 -0.3
ABKAR Akbulak array 57.48 309 IAmb IAmb 10 40 36.4
comp=Z,5.7nm,0.8s
AKTO Aktyubinsk 58.12 311 P P 10 40 40.1 -0.1
comp=Z,3.2nm,0.8s,baz=70,slow=13,SNR=12
RES Resolute Bay 59.63 15 P P 10 40 50.5 +0.2
comp=Z,1.3nm,0.8s,baz=308,slow=8.7,SNR=4.1
RES Resolute Bay 59.63 15 P P 10 40 50.2 -0.2
RES IAmb IAmb 10 40 51.9
comp=Z,4.3nm,1.1s
WRA Warramunga Arr 59.92 190 P P 10 40 53.4 +0.4
comp=Z,2.0nm,0.3s,baz=7.7,slow=7.1,SNR=7.9
YKA Yellowknife Ar 60.71 31 P P 10 40 58.2 +0.3
comp=Z,0.2nm,0.6s,baz=290,slow=6.2,SNR=5.4
ASAR Alice Springs 63.65 190 P P 10 41 17.6 -0.4
comp=Z,0.7nm,0.8s,baz=15,slow=5.1,SNR=4.2
ASAR Alice Springs 63.65 190 P P 10 41 16.7 -1.3
GEYT Alibeck 63.97 299 P P 10 41 20.0 -0.2
comp=Z,2.1nm,0.8s,baz=15,slow=6.0,SNR=3.7
FINES FINESS Array B 67.22 332 P P 10 41 40.5 -0.2
comp=Z,4.1nm,0.7s,baz=70,slow=8.3,SNR=9.0
FINES FINESS Array B 67.22 332 P P 10 41 39.6 -1.1
KBZ Khabaz 70.39 311 P P 10 42 01.1 +0.4
comp=Z,6.2nm,0.9s,baz=44,slow=3.5,SNR=11
NVAR Mina Array Bea 72.13 55 P P 10 42 13.1 +1.3
comp=Z,0.2nm,0.6s,baz=268,slow=5.4,SNR=3.0
HFS Hagfors 72.33 336 P P 10 42 12.4 +0.1
comp=Z,2.3nm,0.4s,baz=44,slow=8.7,SNR=7.7
NB2 NORSAR Subarra 72.36 338 P P 10 42 12.1 -0.3
comp=Z,8.0nm,1.0s,baz=37,slow=6.2
NOA NORSAR Array B 72.36 338 P P 10 42 12.5 +0.1
comp=Z,3.4nm,0.8s,baz=39,slow=6.1,SNR=5.7
AKASG Malin Array Be 73.18 323 P P 10 42 17.2 -0.2
comp=Z,2.4nm,0.7s,baz=44,slow=6.3,SNR=11
PDAR Pinedale Array 74.67 47 P P 10 42 26.9 +0.3
comp=Z,0.2nm,0.6s,baz=76,slow=0.4,SNR=3.2
BURAR Bucovina Array 77.22 322 P P 10 42 41.0 0.0
MORC Moravsky Berou 79.00 328 eP P 10 42 50.7 0.0
VYHS Vyhne 79.44 326 eP P 10 42 54.1 +1.0
VRAC Vranov 79.76 328 eP P 10 42 55.0 +0.2
KRUC Moravsky 80.03 328 eP P 10 42 56.2 0.0
GERES GERESS Array B 81.29 329 P P 10 43 03.1 0.0
comp=Z,0.4nm,0.4s,baz=357,slow=4.0,SNR=4.3
TXAR Lajitas Array 87.24 54 P P 10 43 34.4 +0.6
comp=Z,0.2nm,0.8s,baz=293,slow=4.0,SNR=2.7

IDC 10 10:35:25.5±3.7, **4.°76S**×**153.°28E**, **h0**km, **mb3.5**/2, **mb1 3.8**/2, **mb1mx3.4**/47, **mbtmp3.6**/2, **MS3.2**/1, **Ms1 3.2**/1, **ms1mx2.6**/26, **Error ellipse: s-maj=176.3km s-min=49.0km az=122.0, New Ireland region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 23.83 229 P P 10 40 41.1 +0.5
1.8nm,0.8s,baz=56,slow=10,SNR=7.7
ASAR Alice Springs 26.50 223 P P 10 41 05.0 0.0
0.3nm,0.4s,baz=56,slow=9.1,SNR=12
PETK Petropavlovsk- 57.77 3 LR LR 11 07 25.5
comp=Z,20nm,19.6s,baz=62,slow=33
TORD Torodi Ar. Bea 150.75 288 PKPbc PKPbc 10 55 20.6 -0.4
0.4nm,0.4s,baz=81,slow=2.0,SNR=4.4

IDC 10 10:53:49.6±1.5, **3.°02S**×**130.°52E**, **h0**km, **mb3.5**/2, **mb1 3.7**/4, **mb1mx3.4**/34, **mbtmp3.4**/4, **ML3.3**/2, **Error ellipse: s-maj=54.0km s-min=21.5km az=91.0, Seram**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 2.27 19 Pn Pn 10 54 28.7 +0.4
3.3nm,0.3s,baz=228,slow=16,SNR=13
SIJI Sn Sn 10 54 57.0 0.0
3.5nm,0.3s,baz=207,slow=22,SNR=3.8
WRA Warramunga Arr 17.23 168 P Pn 10 57 51.6 -0.2
0.2nm,0.3s,baz=348,slow=11,SNR=5.7
ASAR Alice Springs 20.78 171 P P 10 58 32.5 0.0
1.7nm,0.3s,baz=351,slow=10,SNR=66
MKAR Makanchi Array 65.23 326 P P 11 04 33.0 0.0
0.1nm,0.5s,baz=124,slow=7.8,SNR=4.0

*SJA **10** 11:00:03.9±0.4, 21.°91S×69.°30W, h182km±25km, ML4.9, MW4.5*
*VAO **10** 11:00:08.4±0.3, 22.°23S×67.°96W, h10km, mb5.6*
*IDC **10** 11:00:09.8±0.2, 22.°26S×68.°64W, h103km±2km, mb4.5/30, mb1 4.5/35, mb1mx4.5/42, mbtmp4.8/35, MS3.9/13, Ms1 3.9/13, ms1mx3.7/26, Error ellipse: s-maj=9.6km s-min=6.2km az=91.0*
*GUC **10** 11:00:10.2±0.7, 22.°17S×68.°76W, h104km±4km, ML4.9*
*NEIC **10** 11:00:10.1±1.6, 22.°22S±0.°05×68.°65W±0.°07, h107km±4km, Error ellipse: s-maj=9.9km s-min=6.9km az=97.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-2.49; $M_{\theta\theta}$-0.78; $M_{\phi\phi}$3.27; $M_{r\theta}$0.47; $M_{\theta\phi}$3.31; $M_{\phi r}$-6.22; Fault plane solution: $M_0 7.66000\times10^{16}$ NP1: ϕ_s357.83000°, δ78.57000°, λ-116.77000°. NP2: ϕ_s246.38000°, δ28.94000°, λ-24.18000°. Principal axes: T 8.0069, Plg29.0000°, Azm109.0000°; N -0.7586, Plg26.0000°, Azm4.0000°; P -7.2484, Plg49.0000°, Azm239.0000°;*
*BJI **10** 11:00:12.0±0.0, 22.°30S×68.°70W, h100km, mB5.5/4*
*GCMT **10** 11:00:17.0±0.2, 22.°38S±0.°01×68.°81W±0.°01, h124km±1km, MW5.2/119, Moment Tensor Solution. s68,c86; s119,c190; Duration: 1.s0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.31±.02; $M_{\theta\theta}$-0.10±.02; $M_{\phi\phi}$0.41±.03; $M_{r\theta}$0.18±.01; $M_{\theta\phi}$0.56±.02; $M_{\phi r}$-0.65±.02; Best double couple: $M_0 0.95500\times10^{17}$ NP1: ϕ_s250.00000°, δ41.00000°, λ-19.00000°. NP2: ϕ_s355.00000°, δ77.00000°, λ-130.00000°. Principal axes: T 0.9570, Plg22.0000°, Azm114.0000°; N -0.0040, Plg39.0000°, Azm5.0000°; P -0.9530, Plg43.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 10 11:00:09.6±0.3, **22.°25S**±0.°03×**68.°66W**±0.°04, **h107**km±2km, **h107**km**:pP-P, n672, σ1.s05**/672, **mb5.1**/114, **12C-1D, Northern Chile**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LVC Limon Verde 0.42 213 iP Pn 11 00 27.1 +0.9
LVC iS Sn 11 00 39.3 +0.7
LVC Limon Verde 0.42 213 P Pn 11 00 27.3 +1.0
3μm,0.3s,baz=29,slow=5.9,SNR=4708
LVC S Sn 11 00 39.1 +0.6
7μm,0.3s,baz=281,slow=19,SNR=203
LVC Limon Verde 0.42 213 eP Pn 11 00 27.2 +1.0
LVC Limon Verde 0.42 213 Pn 11 00 26.9 +0.7
LVC Sn Sn 11 00 38.9 +0.3
PB09 IPOC Station P 0.70 310 ⇑iP Pn 11 00 28.5 +0.5
PB09 iS Sn 11 00 41.8 0.0
PB09 IAML 11 00 46.2
comp=N,40μm,0.6s
PB06 IPOC Station P 0.96 242 ⇑iP Pn 11 00 30.8 +0.5
PB06 iS Sn 11 00 46.4 +0.4
PB06 IAML 11 00 49.6
comp=E,49μm,0.4s
PB03 IPOC Station P 1.03 281 ⇑iP Pn 11 00 31.1 -0.1
PB03 iS Sn 11 00 46.5 -0.8
PB03 IAML 11 00 50.6
comp=E,31μm,0.2s
PB15 IPOC Station P 1.21 218 ⇑iP Pn 11 00 34.0 +0.9
PB15 iS Sn 11 00 52.9 +2.0
PB07 IPOC Station P 1.25 294 iP Pn 11 00 33.5 -0.1
PB07 iS Sn 11 00 50.9 -0.8
PB07 IAML 11 00 51.8
comp=N,46μm,0.3s
PB04 IPOC Station P 1.38 266 ⇑iP Pn 11 00 34.9 -0.2
PB04 iS Sn 11 00 53.8 -0.5
PB04 IAML 11 00 55.9
comp=E,27μm,0.3s
PB04 IPOC Station P 1.38 266 Pn 11 00 34.5 -0.6
PB04 Sn Sn 11 00 53.1 -1.2
PB01 IPOC Station P 1.43 327 iP Pn 11 00 35.3 -0.3
PB01 iS Sn 11 00 54.0 -1.1
PB01 IAML 11 00 56.5
comp=E,21μm,0.3s
PB01 IPOC Station P 1.43 327 Pn 11 00 35.0 -0.5
PB01 Sn Sn 11 00 53.8 -1.3
PB02 IPOC Station P 1.48 309 ⇑iP Pn 11 00 35.9 -0.3
PB02 iS Sn 11 00 54.8 -1.4
PB02 IAML 11 00 56.2
comp=E,36μm,0.3s
PB05 IPOC Station P 1.54 247 ⇑iP Pn 11 00 36.8 -0.1
PB05 iS Sn 11 00 56.6 -1.1
PB05 IAML 11 01 04.7
comp=E,12μm,0.5s
PATCX Punta Patache 1.99 315 ⇑iP Pn 11 00 41.4 -1.1
PATCX iS Sn 11 01 06.5 -1.1
PATCX IAML 11 01 11.3
comp=E,15μm,0.3s
PB08 IPOC Station P 2.15 348 ⇑iP Pn 11 00 45.4 +0.5
PB08 iS Sn 11 01 11.9 +0.2
PB08 IAML 11 01 15.6
comp=E,5μm,0.4s
PB10 IPOC Station P 2.15 234 eP Pn 11 00 44.0 -0.5
PB10 iS Sn 11 01 08.8 -2.3
PB10 IPOC Station P 2.15 234 Pn 11 00 44.2 -0.3
PB10 Sn Sn 11 01 08.7 -2.4
TA01 Diego Aracena 2.19 320 ⇑iP Pn 11 00 43.6 -1.4
TA01 iS Sn 11 01 10.0 -2.1
TA01 IAML 11 01 12.8
comp=N,9μm,0.5s
GO01 Chusmiza 2.62 349 ⇑iP Pn 11 00 51.2 +0.1
GO01 iS Sn 11 01 22.6 -0.2
GO01 Chusmiza 2.62 349 Pn 11 00 51.1 +0.1
GO01 Sn Sn 11 01 21.3 -1.4
PB11 IPOC Station P 2.65 339 Pn 11 00 49.9 -1.2
PB11 Sn Sn 11 01 20.4 -2.6
PB14 IPOC Station P 2.85 214 eP Pn 11 00 53.8 -0.1
PB14 iS Sn 11 01 23.1 -4.9
PB14 IAML 11 01 53.0
comp=E,2μm,0.6s
GO02 Mina Guanaco 3.02 196 Pn 11 00 56.8 +0.6
MNMC Minye Minye 3.23 344 Pn 11 00 57.9 -1.0

GO03 Copiap 5.51 195 Pn 11 01 28.0 -1.3
GO03 Copiap 5.51 195 i P Pn 11 01 28.1 -1.3
LPAZ La Paz 5.95 5 P Pn 11 01 37.4 +1.4
comp=E,5.3nm,0.3s,baz=199,slow=3.6,SNR=70
LPAZ S Sn 11 02 29.3 -14
comp=E,5.6nm,0.3s,baz=199,slow=14,SNR=8.0
LPAZ La Paz 5.95 5 eP Pn 11 01 36.8 +0.8
LPAZ La Paz 5.95 5 Pn 11 01 36.9 +0.8
VCA Vinchina 6.47 176 i P Pn 11 01 43.3 +0.8
VCA IAML 11 03 19.7
comp=Z,190nm,1.6s
AGUA GUANDACOL 7.21 179 i P Pn 11 01 52.1 -0.3
AGUA i S Sn 11 03 12.8 0.0
AROD Rodeo 7.92 185 i P Pn 11 02 02.3 0.0
GO04 Tololo Observa 8.12 193 Pn 11 02 02.3 -2.6
GO04 Tololo Observa 8.12 193 i P Pn 11 02 02.0 -3.0
GO04 i S Sn 11 03 32.7 -2.5
RTLL Cerro Villicun 9.04 179 i P Pn 11 02 15.3 -2.0
RTLL i S Sn 11 03 51.6 -5.8
CFA Coronel Fontan 9.32 178 P Pn 11 02 19.0 -2.1
comp=Z,6.1nm,0.3s,baz=353,slow=14,SNR=39
CFA S Sn 11 03 58.4 -5.7
comp=Z,8.7nm,0.3s,baz=204,slow=15,SNR=4.4
SIV San Ignacio 9.50 50 P Pn 11 02 21.5 -2.1
comp=Z,33nm,0.3s,baz=252,slow=12,SNR=291
SIV S Sn 11 03 57.6 -11
comp=Z,4.7nm,0.3s,baz=315,slow=22,SNR=6.9
RTLS Leoncito 9.53 183 i P Pn 11 02 21.9 -2.2
RTCV Cerro Valdivia 9.57 179 i P Pn 11 02 22.4 -2.1
ACAN Cantantal 10.07 173 i P Pn 11 02 28.8 -2.4
ASAL Salagasta 10.30 181 i P Pn 11 02 32.2 -2.2
ARCO CERRO ARCO 10.55 181 i P Pn 11 02 36.0 -1.9
AAGR Agrelo 10.79 181 i P Pn 11 02 39.6 -1.5
ROC1 El Roble 10.88 191 Pn 11 02 40.0 -2.5
ROC1 El Roble 10.88 191 i P Pn 11 02 39.1 -3.3
PEL Peldehue 11.00 189 Pn Pn 11 02 43.7 -0.1
CPUP Villa Florida 11.10 114 P Pn 11 02 44.4 -0.8
comp=Z,1.1nm,0.3s,baz=294,slow=12,SNR=49
CPUP LR LR 11 07 42.8
comp=Z,1μm,21.6s,baz=311,slow=41
CPUP Villa Florida 11.10 114 Pn 11 02 44.2 -1.1
RFA San Rafael 12.47 179 i P Pn 11 03 00.3 -3.2
LAMA Las Malvinas 12.65 182 i P Pn 11 03 03.0 -2.6
COIS El Sosneado 12.84 183 i P Pn 11 03 05.8 -2.3
NNA Nana 12.85 321 P Pn 11 03 09.5 +1.0
comp=Z,1.0nm,0.3s,baz=169,slow=12,SNR=3.3
NNA S Sn 11 05 29.2 -0.8
comp=Z,1.5nm,0.3s,baz=131,slow=9.3,SNR=3.4
NNA LR LR 11 07 47.3
comp=Z,177nm,21.8s,baz=156,slow=36
NNA Nana 12.85 321 Pn 11 03 07.0 -1.6
GO05 Huala 13.03 192 Pn Pn 11 03 10.7 0.0
SALV Santo Antonio 13.79 65 eP Pn 11 03 16.4 -4.3
SAML Samuel 14.24 23 Pn Pn 11 03 24.1 -2.3
TRCB Terra Rica 14.82 95 eP Pn 11 03 30.8 -3.1
ITAB Concordia 15.81 112 eP Pn 11 03 45.4 -0.9
CPSB Cacapava Do Su 15.87 124 eP Pn 11 03 45.7 -1.2
PLTB Pedras Altas 16.41 128 eP Pn 11 03 52.5 -1.2
CLDB Colider 16.72 49 eP Pn 11 03 56.3 -1.3
ARAG Araguaiana, MT 17.21 71 eP P 11 04 01.8 -1.6
ITRB Iturama 17.28 85 eP P 11 04 02.7 -1.5
CNLB Canela 17.50 117 eP P 11 04 05.6 -1.0
FRTB Fartura 17.64 97 eP P 11 04 06.6 -1.6
ATAH Atahualpa 17.72 327 P Pn 11 04 10.3 +0.2
comp=Z,0.4nm,0.3s,baz=173,slow=8.1,SNR=3.2
PLCA Paso Flores 18.49 185 P Pn 11 04 18.6 -0.2
comp=Z,1.1nm,0.3s,baz=8.8,slow=11,SNR=27
PLCA LR LR 11 12 38.2
comp=Z,553nm,21.4s,baz=23,slow=40
PLCA Paso Flores 18.49 185 P Pn 11 04 18.2 -0.6
BB19B Bebedouro 18.75 90 eP P 11 04 19.9 -0.5
RCLB Rio Claro- Sao 19.55 95 eP P 11 04 28.7 -0.4
SPB Sao Paulo 19.60 98 eP P 11 04 29.8 +0.3
SPB eS S 11 08 04.4 -0.6
SPB Sao Paulo 19.60 98 P P 11 04 29.9 +0.4
IPMB Ipameri, GO 19.66 81 eP P 11 04 29.7 -0.7
VAO Valinhos 20.04 96 eP P 11 04 33.0 -1.4
BDFB Brasilia 20.59 75 P P 11 04 39.4 -1.0
comp=Z,98nm,0.7s,baz=254,slow=12,SNR=67
BDFB LR LR 11 14 22.8
comp=Z,507nm,18.4s,baz=261,slow=42
BDFB Brasilia 20.59 75 P P 11 04 39.5 -1.0
BDFB IAmb IAmb 11 04 42.3
comp=Z,136nm,0.9s
BSCB Bom Sucesso 22.24 91 eP P 11 04 57.5 -0.4
ESAR Angra dos Reis 22.36 97 eP P 11 04 58.3 -0.8
VAS01 Vassouras-RJ 23.33 95 eP P 11 05 08.8 +0.2
FLOC Florencia 24.65 343 eP P 11 05 17.6 -2.9
FLOC Florencia 24.65 343 P P 11 05 20.8 +0.2
PRAC Prado 26.52 346 eP P 11 05 35.9 -1.5
ORTC Ortega, Tolima 26.79 345 eP P 11 05 39.8 0.0
YOTC Yotoco, Valle 27.14 343 eP P 11 05 40.5 -2.5
ROSC El Rosal 27.49 348 LR LR 11 16 47.5
comp=Z,284nm,19.2s,baz=202,slow=36
GUY2C Guyana, Caldas 28.08 346 eP P 11 05 51.4 -0.5
NORC Norcasia 28.30 347 eP P 11 05 53.0 -0.4
RUSC La Rusia 28.30 351 eP P 11 05 52.6 -1.3
RUSC La Rusia 28.30 351 P P 11 05 53.4 -0.5
PTBC PUERTO BERRIO, 29.17 348 eP P 11 05 58.5 -2.5
ZARC Zaragoza, Cauc 30.18 348 eP P 11 06 01.3 -3.8
EFI East Falkland 30.50 167 P P 11 06 13.2 +0.8
SDV Santo Domingo 31.00 356 P P 11 06 16.1 -1.2
comp=Z,2.2nm,0.4s,baz=221,slow=7.6,SNR=5.8
SDV pP pP 11 06 41.5 -0.8
comp=Z,4.4nm,0.7s,baz=332,slow=9.6,SNR=3.8
SDV Santo Domingo 31.00 356 P P 11 06 16.1 -1.2
SMLC San Martn de 31.31 350 eP P 11 06 16.6 -3.3
MDP Montagnes des 31.38 32 P P 11 06 19.7 -0.8
comp=Z,39nm,0.9s,baz=213,slow=9.8,SNR=7.6
PLCV Puerto La Cruz 32.46 7 P P 11 06 29.3 -0.6
PLCV pP 11 06 54.4 -0.8
PCRV Puerto La Cruz 32.47 7 P P 11 06 29.3 -0.7
comp=Z,3.8nm,0.6s,baz=96,slow=9.2,SNR=2.3
PCRV pP pP 11 06 54.4 -0.9
comp=Z,30nm,1.1s,baz=208,slow=3.4,SNR=4.7
USHA Ushuaia 32.53 180 P P 11 06 31.9 +1.7
comp=Z,11nm,0.8s,baz=228,slow=3.5,SNR=6.2
RCBR Riachuelo 35.60 68 P P 11 06 57.2 -0.1
comp=Z,107nm,0.9s,baz=238,slow=11,SNR=14
RCBR Riachuelo 35.60 68 P P 11 06 57.1 -0.1
CRPR Cabo Rojo, PR 40.04 2 P P 11 07 33.5 -0.8
HOPE Hope Point 40.11 151 P P 11 07 36.4 +1.8
SJG San Juan 40.19 4 P P 11 07 35.5 -0.1
TGUH Tegucigalpa,Un 40.44 331 P P 11 07 38.3 +0.4
TGUH pP pP 11 08 04.4 +1.2
TGUH sP sP 11 08 17.0 +1.3
PMSA Palmer Station 42.62 177 P P 11 07 56.8 +1.9
comp=Z,8.8nm,0.8s,baz=354,slow=10,SNR=2.4
PMSA Palmer Station 42.62 177 P P 11 07 55.7 +0.8
APG El Apazote 42.75 328 P P 11 07 57.6 +0.8
comp=Z,18nm,0.8s,baz=171,slow=4.3,SNR=20
APG pP pP 11 08 22.2 -0.3
comp=Z,16nm,0.9s,baz=176,slow=2.9,SNR=6.4
TEIG Tepich 46.36 334 P P 11 08 25.7 +0.5
comp=Z,8.8nm,0.6s,baz=188,slow=7.6,SNR=7.4
TEIG pP pP 11 08 51.0 -0.4
comp=Z,21nm,0.6s,baz=125,slow=5.6,SNR=7.3
TEIG Tepich 46.36 334 P P 11 08 25.3 +0.1
TEIG IAmb IAmb 11 08 52.3
comp=Z,30nm,0.8s
CMIG Matias Romero 46.78 325 P P 11 08 28.7 +0.2
comp=Z,6.4nm,0.8s,baz=131,slow=6.7,SNR=7.8
TLIG Tlapa 49.22 321 P P 11 08 48.5 +1.0
TLIG pP pP 11 09 15.6 +1.8
TLIG sP 11 09 28.2 +2.1
TLIG IAmb IAmb 11 09 29.4
comp=Z,28nm,1.1s
DWPF Disney Wildern 51.56 346 P P 11 09 04.4 -0.4
baz=165
656A Willston 53.03 345 P P 11 09 15.8 +0.1
TIGA Tifton 55.27 344 P P 11 09 31.8 0.0
baz=163
ZAIG Zacatecas 55.61 321 P P 11 09 35.5 +0.7
ZAIG pP pP 11 10 02.8 +1.2
ZAIG sP sP 11 10 15.9 +2.0
ZAIG IAmb IAmb 11 10 17.1
comp=Z,29nm,0.9s
352A Blakely 55.65 343 P P 11 09 34.2 -0.4
352A pP pP 11 10 02.0 +0.3
352A sP 11 10 14.1 +0.2
158A Hollywood 55.78 348 P P 11 09 35.6 +0.2
baz=167
BRAL Brewton 55.97 341 P P 11 09 36.8 -0.1
baz=160
NHSC New Hope 56.13 348 P P 11 09 38.3 +0.3
baz=167
154A Montrose 56.28 345 P P 11 09 39.2 +0.2
baz=164
Z58A St. Stephen 56.29 349 P P 11 09 39.2 +0.1
baz=168
Z57A Bowman 56.42 348 P P 11 09 40.4 +0.4
baz=167
Z56A Williston 56.58 347 P P 11 09 42.1 +0.9
baz=166
Y60A Bolivia 56.68 351 P P 11 09 42.2 +0.3
baz=170
152A Waverly Hall 56.73 344 IAmb IAmb 11 10 10.5
comp=Z,18nm,1.1s
Y58A Scranton 56.82 349 P P 11 09 43.1 +0.3
baz=168
Y56A Pelion 57.02 347 P P 11 09 44.3 0.0
baz=166
Z53A Monticello 57.02 345 P P 11 09 44.1 -0.2
baz=164
GOGA Godfrey 57.12 345 P P 11 09 44.7 -0.3
baz=164
Z52A Williamson 57.15 344 P P 11 09 44.7 -0.5
baz=163
Y55A Saluda 57.27 347 P P 11 09 46.3 +0.3
baz=166
Y54A Tignall 57.38 346 P P 11 09 46.6 -0.2
baz=165
Y53A Monroe 57.58 345 P P 11 09 47.4 -0.8
baz=164
Z50A Ashland 57.60 343 P P 11 09 47.9 -0.5
Z50A pP pP 11 10 15.3 -0.3
Z50A IAmb IAmb 11 10 16.7
comp=Z,26nm,0.8s
Z50A sP sP 11 10 27.3 -0.5
Z50A Ashland 57.60 343 P P 11 09 47.9 -0.5
baz=161,SNR=11
X56A White Oak 57.64 348 P P 11 09 47.8 -0.8
baz=167
BIRD Birdtown, Kers 57.68 348 IAmb IAmb 11 10 18.5
comp=Z,33nm,1.0s
Y52A Lilburn 57.70 345 P P 11 09 48.5 -0.6
baz=163
X55A Gracelyn & Ava 57.74 347 P P 11 09 48.5 -0.9
baz=166
W58A Raeford 57.84 350 P P 11 09 50.4 +0.4
baz=169,SNR=5.3
342A Flagon Creek P 57.95 336 P P 11 09 51.5 +0.6
342A pP pP 11 10 19.1 +1.0
342A sP 11 10 31.5 +1.1
X54A Belton 57.97 347 P P 11 09 50.6 -0.3
baz=165
Y51A Rockmart 57.98 344 P P 11 09 50.5 -0.6
baz=162,SNR=5.5
VBMS Vicksburg 58.06 338 P P 11 09 51.1 -0.5
baz=156
W57A Gilead 58.09 349 P P 11 09 52.0 +0.2
baz=168
HKT Hockley 58.11 332 P P 11 09 52.5 +0.6
HKT pP pP 11 10 20.0 +1.0
HKT sP 11 10 32.5 +1.3
HKT IAmb IAmb 11 10 33.4
comp=Z,29nm,1.2s
X53A Estanollee 58.13 346 P P 11 09 51.9 -0.2
baz=164
W56A Indian Trail 58.18 349 P P 11 09 52.7 +0.3
baz=167
V61A Roper 58.21 352 P P 11 09 53.1 +0.6
baz=172
V60A Jim Taylor Roa 58.27 352 P P 11 09 53.2 +0.2
baz=171
Y49A Blount Mountai 58.30 343 IAmb IAmb 11 10 21.3
comp=Z,13nm,0.9s
KMSC Kings Mountain 58.33 348 IAmb IAmb 11 09 54.9
comp=Z,27nm,1.3s
KMSC Kings Mountain 58.33 348 P P 11 09 53.5 +0.1
baz=166
X52A Dahlonega 58.37 345 P P 11 09 53.4 -0.4
baz=164
833A Chaparral WMA, 58.38 328 P P 11 09 54.4 +0.5
baz=146,SNR=8.7
V59A Middlesex 58.41 351 P P 11 09 54.2 +0.2
baz=170
W54A Cherokee Point 58.45 347 P P 11 09 54.3 0.0
baz=165
X51A Calhoun 58.56 344 IAmb IAmb 11 10 23.7
comp=Z,26nm,1.1s
X51A Calhoun 58.56 344 P P 11 09 55.1 0.0
baz=162
V58A Windy Hill, Pi 58.57 350 P P 11 09 55.1 0.0
baz=169
W53A Cullowhee 58.74 346 P P 11 09 56.3 -0.1
baz=164,SNR=5.8
V57A Coltrane Farms 58.77 349 P P 11 09 56.2 -0.3
baz=168
V56A Mocksville 58.82 349 P P 11 09 56.9 +0.1
baz=167,SNR=7.9
W52A Murphy 58.84 345 P P 11 09 56.8 -0.2
baz=164
U59A Littleton 58.92 351 P P 11 09 57.3 -0.2
baz=170
U60A Pendleton 58.95 352 P P 11 09 57.5 -0.2
baz=171
V55A Taylorsville 59.00 348 P P 11 09 58.0 -0.1
baz=167,SNR=7.1
X48A Hartselle 59.04 342 IAmb IAmb 11 10 26.8
comp=Z,25nm,0.9s
V54A Nebo 59.07 347 P P 11 09 58.4 -0.2
baz=166,SNR=7.3
U58A Oxford 59.07 351 P P 11 09 58.4 -0.1
baz=169
W51A Cleveland 59.11 345 P P 11 09 58.5 -0.3
baz=163
V53A Saluda 59.15 347 P P 11 09 59.0 -0.1
baz=165
NATX Nacogdoches 59.20 334 P P 11 10 00.3 +0.8
baz=152
U57A Blanch 59.23 350 P P 11 09 59.7 +0.1
baz=169
W50A Signal Mountai 59.28 344 IAmb IAmb 11 10 40.6
comp=Z,24nm,1.0s
W50A Signal Mountai 59.28 344 P P 11 09 59.5 -0.6
baz=162,SNR=6.1
VNA3 Neumayer Olymp 59.29 161 P P 11 10 01.3 +1.6
CPCT Cooper Cave 59.32 345 IAmb IAmb 11 10 29.1
comp=Z,15nm,1.0s
U56A King 59.33 349 P P 11 10 00.6 +0.3
baz=168
TKL Tuckaleechee C 59.35 346 P P 11 10 00.2 -0.3
comp=Z,12nm,0.9s,baz=165,slow=9.4,SNR=12
TKL pP pP 11 10 26.8 -1.1
comp=Z,8.6nm,0.8s,baz=154,slow=8.3,SNR=6.0
TKL Tuckaleechee C 59.35 346 IAmb IAmb 11 10 01.1
comp=Z,17nm,0.9s
SHEL Horse Pasture 59.43 96 P P 11 10 02.4 +0.8
W49A Belvidere 59.45 343 P P 11 10 00.7 -0.5
baz=161
V52A Sevierville 59.48 346 IAmb IAmb 11 10 31.9
comp=Z,28nm,1.1s
V52A Sevierville 59.48 346 P P 11 10 01.0 -0.4
baz=164,SNR=7.8
T59A Double "B" Far 59.50 352 P P 11 10 01.7 +0.3
baz=171
VNA1 Neumayer--Stat 59.50 160 P P 11 10 03.5 +2.4
435B Jarrell 59.59 331 IAmb IAmb 11 10 03.6
comp=Z,19nm,0.8s
435B Jarrell 59.59 331 P P 11 10 02.4 +0.1
baz=149
U55A TA2, Sparta 59.60 348 P P 11 10 02.2 0.0
baz=167
T58A Grand View Acr 59.61 351 P P 11 10 01.8 -0.4
baz=170
V51A Loudon 59.62 345 P P 11 10 02.0 -0.3
baz=163
V50A Pikevile 59.68 345 P P 11 10 02.3 -0.4
baz=162,SNR=10
U54A Nelsons Funny 59.76 348 P P 11 10 03.5 +0.1
baz=166,SNR=6.2
U53A Fall Branch 59.77 347 P P 11 10 03.0 -0.3
baz=165
T57A Hurt 59.77 350 P P 11 10 03.6 +0.2
baz=169
OXF Oxford 59.80 340 P P 11 10 02.1 -1.4
baz=158,SNR=6.4
Z41A Richland Creek 59.81 337 P P 11 10 03.4 -0.2
baz=154
PLAL Pickwick Lake 59.83 342 IAmb IAmb 11 10 31.7
comp=Z,13nm,0.8s
VNA2 Neumayer--Watz 59.87 161 P P 11 10 05.1 +1.5
baz=287,slow=8.1
T56A Rocky Mt 59.93 349 P P 11 10 03.4 -1.1
baz=168,SNR=6.3
U52A Thorn Hill 59.96 346 P P 11 10 03.8 -0.9
baz=164
V49A McMinnville 59.97 344 P P 11 10 04.1 -0.7
baz=162,SNR=8.8
U51A La Follette 60.09 346 P P 11 10 05.7 +0.1
baz=164
TZTN Tazewell 60.15 346 P P 11 10 06.5 +0.6
baz=164
T55A Pulaski 60.15 349 P P 11 10 06.2 +0.3
baz=167,SNR=5.6
BLA Blacksburg 60.17 349 P P 11 10 06.5 +0.4
baz=168
T54A Tazewell 60.24 348 P P 11 10 06.1 -0.6
baz=166
S59A Mechanicsville 60.24 352 P P 11 10 06.6 +0.1
baz=171
X43A Marvell 60.28 339 P P 11 10 06.7 -0.2
baz=156
U50A Jamestown 60.32 345 P P 11 10 06.7 -0.5
baz=163,SNR=7.2
T53A Wise 60.35 347 P P 11 10 07.0 -0.4
baz=165,SNR=5.1
JCT Junction City 60.36 329 P P 11 10 07.8 +0.2
baz=147,SNR=20
S57A Dark Hollow, R 60.47 351 P P 11 10 08.2 +0.1
baz=169,SNR=5.3
S56A Natural Bridge 60.49 350 P P 11 10 08.3 +0.1
baz=168
R58B Mineral 60.52 352 IAmb IAmb 11 10 39.4
comp=Z,27nm,1.1s
R58B Mineral 60.52 352 P P 11 10 08.8 +0.4
baz=170
T52A Hallie 60.57 347 P P 11 10 08.0 -0.8
baz=165
WHTX Lake Whitney, 60.57 332 P P 11 10 09.0 +0.1
baz=149
HPIG 60.60 322 IAmb IAmb 11 10 51.3
comp=Z,21nm,1.2s
T51A Gray 60.64 346 P P 11 10 08.3 -1.0
baz=164
U49A Red Boiling Sp 60.64 344 P P 11 10 08.2 -1.1
baz=162
S55A Lewisburg 60.73 349 P P 11 10 10.3 +0.4
baz=168,SNR=8.6
WVT Waverly 60.83 342 P P 11 10 09.7 -0.9
WVT IAmb IAmb 11 10 10.7
comp=Z,24nm,0.8s
WVT Waverly 60.83 342 P P 11 10 09.6 -1.0
baz=160
R58A Rapidan 60.87 352 P P 11 10 10.0 -0.8
baz=170
T50A Nancy 60.90 345 P P 11 10 10.3 -0.8
baz=163,SNR=5.6
S54A Dingess, Beckl 60.91 349 P P 11 10 10.6 -0.5
baz=167
X40A Basin Creek Fa 60.93 337 P P 11 10 10.4 -0.9
baz=154
R57A Stanardsville 60.94 351 P P 11 10 10.9 -0.3
baz=170
S53A Williamson 60.95 348 P P 11 10 11.0 -0.4
baz=166
UALR University of 61.01 338 IAmb IAmb 11 10 52.5
comp=Z,35nm,1.2s
Q61A Milford 61.13 354 P P 11 10 12.2 -0.3
baz=173
T49A Edmonton 61.15 345 IAmb IAmb 11 10 43.1
comp=Z,40nm,1.2s
T49A Edmonton 61.15 345 P P 11 10 12.1 -0.6
baz=162,SNR=9.2
R55A Marlinton 61.17 350 P P 11 10 13.3 +0.4
baz=168
R56A Bull Pasture M 61.17 350 P P 11 10 12.6 -0.3
baz=169
S51A Beattyville 61.21 347 P P 11 10 13.1 0.0
baz=164
R54A Victor 61.22 349 P P 11 10 13.1 -0.1
baz=167
MIAR Mount Ida 61.25 337 IAmb IAmb 11 10 54.3
comp=Z,32nm,0.9s
MIAR Mount Ida 61.25 337 P P 11 10 13.3 -0.1
baz=154,SNR=19
LPIG La Paz 61.33 316 P P 11 10 14.8 +0.6
comp=Z,3.7nm,0.4s,baz=162,slow=2.8,SNR=2.7
LPIG LR LR 11 31 34.0
comp=Z,62nm,19.0s,baz=114,slow=31
W41B Gary Mavity, V 61.34 338 IAmb IAmb 11 10 14.9
comp=Z,22nm,1.1s
W41B Gary Mavity, V 61.34 338 P P 11 10 13.5 -0.5
baz=155,SNR=9.7
TX31 Lajitas Ar. Si 61.38 325 P P 11 10 14.5 0.0
TX31 IAmb IAmb 11 10 44.5
comp=Z,32nm,1.8s
TXAR Lajitas Array 61.38 325 P P 11 10 15.0 +0.5
comp=Z,2.9nm,0.8s,baz=150,slow=8.2,SNR=42
TXAR pP pP 11 10 41.3 -0.7
comp=Z,1.4nm,0.7s,baz=145,slow=8.9,SNR=4.6
TXAR Lajitas Array 61.38 325 P P 11 10 14.8 +0.2
S50A Richmond 61.42 346 P P 11 10 14.3 -0.3
baz=164,SNR=6.3
Q58A Fox Den Farm, 61.45 352 P P 11 10 14.8 0.0
baz=171
WHAR Wooly Hollow 61.46 338 IAmb IAmb 11 10 55.4
comp=Z,18nm,1.0s
SNAA Sanae 61.50 161 P P 11 10 16.0 +1.3
SNAA Sanae 61.50 161 P P 11 10 16.1 +1.4
comp=Z,16nm,0.6s,baz=283,slow=7.6,SNR=84
SNAA pP pP 11 10 41.7 -0.5
comp=Z,12nm,1.0s,baz=300,slow=7.2,SNR=3.7
SNAA Sanae 61.50 161 P P 11 10 16.1 +1.4
SNAA IAmb IAmb 11 10 17.0
comp=Z,18nm,0.7s
R53A Hurricane 61.54 348 P P 11 10 15.0 -0.4
baz=166
Q57A Strasburg 61.65 351 P P 11 10 16.2 +0.1
baz=170
R52A Catlettsburg 61.68 348 P P 11 10 16.0 -0.2
baz=165
S49A Springfield 61.73 345 P P 11 10 15.8 -0.8
baz=163
Q56A Snyder Ridge, 61.76 351 P P 11 10 18.0 +1.1
baz=169,SNR=5.2
LCAR Lake Charles 61.79 339 IAmb IAmb 11 10 45.5
comp=Z,13nm,0.8s
R51A Hillsboro 61.84 347 P P 11 10 17.2 -0.1
baz=164
Q55A Buckhannon 61.86 350 P P 11 10 18.0 +0.5
baz=168
W39A Magazine 61.91 337 IAmb IAmb 11 10 47.5
comp=Z,27nm,0.8s
W39A Magazine 61.91 337 P P 11 10 18.2 +0.3
baz=154,SNR=14
P58A Pank, Wackersv 61.95 352 P P 11 10 18.4 +0.4
baz=171
P59A Jarrettsville 61.97 353 P P 11 10 18.7 +0.5
baz=172
Q54A Coxs Mills 61.97 349 P P 11 10 18.9 +0.7
baz=167
Q53A Leroy 61.97 349 P P 11 10 18.4 +0.2
baz=167
R50A Paris 61.98 346 P P 11 10 17.7 -0.6
baz=164
P57A Homestead Farm 62.03 352 P P 11 10 19.0 +0.4
baz=170
ABTX Abilene, Hawle 62.08 331 P P 11 10 19.3 +0.1
ABTX pP pP 11 10 46.7 +0.2
ABTX sP PcP 11 10 59.1 +0.6
ABTX Abilene, Hawle 62.08 331 P P 11 10 19.2 +0.1
baz=148,SNR=11
P60A Greenville 62.08 354 P P 11 10 19.1 +0.2
baz=173
P56A Dayton Farm, R 62.17 351 P P 11 10 20.1 +0.6
baz=170
R49A Shelbyville 62.19 345 P P 11 10 19.5 -0.2
baz=163
PBMO Poplar Bluff 62.20 340 IAmb IAmb 11 10 48.4
comp=Z,20nm,0.8s
Q52A Bidwell 62.21 348 P P 11 10 19.6 -0.2
baz=166
P55A Reedsville 62.32 350 P P 11 10 21.2 +0.7
baz=168
WCI Wyandotte Cave 62.40 344 P P 11 10 20.3 -0.7
WCI IAmb IAmb 11 10 51.1
comp=Z,32nm,1.1s

WCI Wyandotte Cave 62.40 344 P P 11 10 20.3 -0.7
baz=162
MCWV Mont Chateau 62.47 350 P P 11 10 22.2 +0.7
baz=168
P54A Burton 62.52 350 P P 11 10 22.4 +0.6
baz=168
O58A Lewisberry 62.53 353 P P 11 10 22.4 +0.5
baz=172
P53A Whipple 62.56 349 P P 11 10 23.0 +0.9
baz=167
O60A Telford 62.56 354 P P 11 10 22.7 +0.7
baz=173
U40A Yellville 62.62 338 IAmb IAmb 11 10 50.9
comp=Z,19nm,0.8s
U40A Yellville 62.62 338 P P 11 10 22.1 -0.4
baz=155,SNR=12
O59A Robesonia 62.63 354 P P 11 10 22.4 -0.2
baz=172
O57A Amberson 62.70 352 P P 11 10 22.5 -0.5
baz=171
Q49A Aurora 62.80 346 P P 11 10 23.2 -0.6
baz=163
P52A Corning 62.84 348 P P 11 10 23.1 -0.9
baz=166
O56A Blue Knob Stat 62.88 351 P P 11 10 23.6 -0.7
baz=170
O55A Ligonier 62.92 351 P P 11 10 24.8 +0.2
baz=169
Q48A North Vernon 62.93 345 P P 11 10 23.5 -1.0
baz=162
O54A Avella 63.06 350 P P 11 10 24.8 -0.7
baz=168
PAL Palisades 63.12 356 P P 11 10 25.0 -0.8
baz=175
P50A Jamestown 63.14 347 P P 11 10 25.9 -0.1
baz=164
SSPA Standing Stone 63.15 352 P P 11 10 26.0 -0.1
baz=170
N59A State Game Lan 63.19 354 P P 11 10 25.9 -0.4
baz=173
M66A Nantucket 63.20 359 P P 11 10 26.0 -0.3
baz=179
N58A Sunbury 63.21 353 P P 11 10 26.4 0.0
baz=172
N57A Milroy 63.23 352 P P 11 10 26.2 -0.3
baz=171
O53A New Philadelph 63.27 349 P P 11 10 25.8 -1.0
baz=167
P49A Miami Univ. Ec 63.27 346 P P 11 10 26.0 -0.8
baz=164
TUL1 Leonard 63.29 336 IAmb IAmb 11 10 28.2
comp=Z,35nm,1.0s
TUL1 Leonard 63.29 336 P P 11 10 27.0 0.0
baz=152,SNR=9.3
P48A Milroy 63.36 346 P P 11 10 26.4 -1.1
baz=163
O51A Pataskala 63.42 348 P P 11 10 27.4 -0.5
baz=166
N55A Marion Center 63.44 351 P P 11 10 28.1 +0.1
baz=169
N56A West Decatur 63.48 352 P P 11 10 28.0 -0.2
baz=170
WMOK Wichita Mounta 63.49 332 IAmb IAmb 11 10 29.4
comp=Z,33nm,1.9s
WMOK Wichita Mounta 63.49 332 P P 11 10 27.9 -0.5
baz=149
M62A Hamden 63.49 356 P P 11 10 27.9 -0.3
baz=176
ACSO Alum Creek Sta 63.58 348 IAmb IAmb 11 10 58.2
comp=Z,39nm,0.9s
ACSO Alum Creek Sta 63.58 348 P P 11 10 28.5 -0.3
baz=165
O50A Cable 63.62 347 P P 11 10 28.8 -0.4
baz=165
CCM Cathedral Cave 63.63 340 P P 11 10 28.7 -0.6
CCM IAmb IAmb 11 10 29.9
comp=Z,21nm,0.9s
CCM Cathedral Cave 63.63 340 P P 11 10 28.8 -0.5
baz=157
M58A Price's Panora 63.71 353 P P 11 10 30.4 +0.7
baz=172
M57A Sunshine Farm, 63.75 353 P P 11 10 30.7 +0.7
baz=171
N54A Moraine State 63.77 350 P P 11 10 30.4 +0.4
baz=168
M59A Waymart 63.78 354 P P 11 10 30.7 +0.5
baz=173
O49A Covington 63.81 347 IAmb IAmb 11 10 59.5
comp=Z,29nm,1.1s
O49A Covington 63.81 347 P P 11 10 30.8 +0.5
baz=164
L63A North Scituate 63.85 358 P P 11 10 31.3 +0.8
baz=177
N52A McGinn's Farm, 63.90 349 P P 11 10 31.2 +0.2
baz=167
M56A Emporium 64.02 352 P P 11 10 32.0 +0.3
baz=170
O48A Farmland 64.06 346 P P 11 10 31.4 -0.6
baz=163
M55A Ridgway 64.08 352 IAmb IAmb 11 11 02.5
comp=Z,48nm,1.3s
M55A Ridgway 64.08 352 P P 11 10 32.0 -0.2
baz=170
L60A Shokan 64.12 355 P P 11 10 32.6 +0.2
baz=174
N51A Ashland 64.13 348 P P 11 10 32.2 -0.2
baz=166
N50A Nevada 64.13 348 P P 11 10 32.4 -0.1
baz=165
MNTX Cornudas Mount 64.14 326 P P 11 10 32.2 -0.6
baz=142,SNR=14
M54A Oil Creek Stat 64.25 351 P P 11 10 33.5 +0.2
baz=169
L58A Harry Jones Me 64.32 354 P P 11 10 33.8 +0.2
baz=173
M53A WI Miller and 64.34 350 P P 11 10 34.4 +0.6
baz=168
L57A Andrews Acres 64.38 353 P P 11 10 34.7 +0.6
baz=172
L59A Walton 64.39 355 P P 11 10 34.6 +0.5
baz=174
BINY Binghamton 64.48 354 P P 11 10 35.4 +0.6
baz=173
N49A Columbus Grove 64.49 347 P P 11 10 33.8 -1.0
baz=164,SNR=5.7
M51A Elyria 64.49 349 P P 11 10 35.1 +0.3
baz=166
M52A Chesterland 64.55 349 P P 11 10 35.4 +0.3
baz=167
L56A Greenwood 64.59 353 P P 11 10 35.7 +0.2
baz=171
N48A Decatur 64.61 346 P P 11 10 35.5 0.0
baz=163
SFIN Lafayette 64.63 344 P P 11 10 34.9 -0.8
baz=161
MSTX Muleshoe 64.66 329 IAmb IAmb 11 10 37.4
comp=Z,43nm,1.0s
MSTX Muleshoe 64.66 329 P P 11 10 36.3 +0.1
baz=145
K60A Five Rivers En 64.72 356 P P 11 10 36.2 0.0
baz=175
K61A Williamstown 64.73 356 P P 11 10 36.8 +0.4
baz=175
L55A Hinsdale 64.74 352 P P 11 10 37.1 +0.6
baz=170
N47A Urbana 64.78 346 P P 11 10 36.6 0.0
baz=163
L53A Girard 64.78 350 P P 11 10 37.3 +0.6
baz=168
ERPA Erie 64.90 351 P P 11 10 38.0 +0.6
baz=168
AMTX Amarillo 64.90 330 P P 11 10 37.7 0.0
baz=146
L54A Sinclairville 64.91 351 P P 11 10 38.3 +0.7
baz=169
K59A Cooperstown 64.95 355 P P 11 10 38.9 +1.1
baz=174
M49A Liberty Center 64.97 347 P P 11 10 38.7 +0.8
baz=164
U32A Winter Ranch, 64.98 333 IAmb IAmb 11 10 39.4
comp=Z,28nm,0.9s
K58A Earlville 65.01 354 P P 11 10 39.1 +1.0
baz=173
K57A Scipio Center 65.06 354 P P 11 10 38.9 +0.4
baz=172
K56A Middlesex 65.12 353 P P 11 10 39.2 +0.4
baz=171
K54A Basiliko Farm, 65.20 352 P P 11 10 39.2 -0.2
baz=170
J62A Henniker 65.22 357 P P 11 10 40.2 +0.8
baz=177
M47A Cromwell 65.22 346 P P 11 10 40.1 +0.6
baz=163
K55A Perry 65.23 352 P P 11 10 39.5 -0.1
baz=170
J63A Strafford 65.24 358 P P 11 10 39.3 -0.3
baz=178
HSIG 65.26 320 IAmb IAmb 11 11 10.9
comp=Z,28nm,1.3s
J61A Chester 65.37 357 P P 11 10 40.0 -0.5
baz=176
HDIL Hopedale 65.37 343 P P 11 10 39.9 -0.6
baz=159
L48A N Adams 65.52 347 P P 11 10 41.3 -0.1
baz=164
L49A Milan 65.54 348 P P 11 10 41.6 0.0
baz=165
J58A Remsen 65.57 355 P P 11 10 41.7 0.0
baz=173
J59A Piesco 65.61 355 P P 11 10 42.5 +0.5
baz=174
J56A Wolcott 65.64 353 P P 11 10 41.9 -0.2
baz=172
K52A Tillsonburg 65.66 350 P P 11 10 41.8 -0.5
baz=168
J57A Williamstown 65.68 354 P P 11 10 43.2 +0.8
baz=173
L47A Sherwood 65.71 347 P P 11 10 41.7 -1.0
baz=163
K51A Iona Station 65.73 350 P P 11 10 43.4 +0.6
baz=167
J55A Hilton 65.73 353 P P 11 10 42.3 -0.5
baz=171
J54A Appleton 65.84 352 P P 11 10 43.6 +0.1
baz=170
I62A Tamworth 65.84 358 P P 11 10 44.5 +1.0
baz=177
I64A Boothbay 65.85 359 P P 11 10 44.1 +0.6
baz=179
I59A Olmsteadville 65.89 356 P P 11 10 45.2 +1.3
baz=175
I60A Shoreham 65.91 356 P P 11 10 44.7 +0.8
baz=175
I61A Oroboro, Fairl 65.94 357 P P 11 10 44.9 +0.8
baz=176
N41A Harden Midland 65.95 342 IAmb IAmb 11 11 13.1
comp=Z,47nm,1.5s
K50A Casco 65.97 349 P P 11 10 44.4 +0.1
baz=166
I63A Otisfield 66.00 358 P P 11 10 45.5 +1.0
baz=178
319A Douglas 66.02 322 IAmb IAmb 11 11 28.0
comp=Z,35nm,1.1s
J52A Paris 66.07 351 P P 11 10 45.7 +0.7
baz=168
121A Cookes Peak, D 66.07 324 P P 11 10 46.6 +1.2
baz=140,SNR=8.6
I57A Carthage 66.18 354 P P 11 10 47.2 +1.6
baz=173
K48A Perry 66.28 348 P P 11 10 46.1 -0.2
baz=164
K47A Vermontville 66.33 347 P P 11 10 45.2 -1.5
baz=164
KSU1 Kansas State U 66.40 337 P P 11 10 47.1 -0.1
baz=152,SNR=6.3
H58A Gabriels 66.53 356 P P 11 10 48.3 +0.4
baz=174
H63A New Sharon 66.60 359 P P 11 10 50.2 +2.0
baz=179
J49A Marlette 66.63 349 P P 11 10 48.1 -0.4
baz=166
I55A Frankford 66.66 353 P P 11 10 48.9 +0.2
baz=171
H57A Richville 66.67 355 P P 11 10 49.1 +0.4
baz=173
I51A Listowel 66.70 350 P P 11 10 49.3 +0.3
baz=168
H59A Cadyville 66.73 356 P P 11 10 49.8 +0.7
baz=175
LONY Lake Ozonia 66.77 355 P P 11 10 50.1 +0.8
baz=174
Y22D IRIS PASSCAL I 66.81 326 P P 11 10 51.0 +1.0
baz=142
J47A Sunmer 66.84 347 P P 11 10 49.7 -0.2
baz=164
H56A Elgin 66.88 354 P P 11 10 50.4 +0.3
baz=172
G63A Kingsbury 67.05 359 P P 11 10 52.3 +1.2
baz=179
G60A Masonville 67.11 357 P P 11 10 52.2 +0.7
baz=176
H53A Bobcaygeon 67.12 352 P P 11 10 51.8 +0.2
baz=170
K43A Burlington 67.13 344 IAmb IAmb 11 11 20.4
comp=Z,26nm,0.8s
I49A Point Hope 67.14 349 P P 11 10 51.0 -0.7
baz=166
G62A West of Eustis 67.17 359 P P 11 10 53.0 +1.1
baz=178
G64A Maxfield 67.18 360 P P 11 10 53.3 +1.4
baz=180
PKME Peaks-Kenny Pk 67.19 360 P P 11 10 52.5 +0.5
baz=180
ANMO Albuquerque 67.25 327 P P 11 10 53.9 +1.0
comp=Z,12nm,0.8s,baz=139,slow=7.3,SNR=60
ANMO pP pP 11 11 20.8 +0.1
comp=Z,9.6nm,1.0s,baz=143,slow=10,SNR=5.8
ANMO Albuquerque 67.25 327 P P 11 10 53.7 +0.8
ANMO IAmb IAmb 11 10 55.3
comp=Z,18nm,0.9s
ANMO Albuquerque 67.25 327 P P 11 10 54.2 +1.3
baz=142
G58A Ormstown 67.25 356 P P 11 10 53.0 +0.6
baz=175
G61A St-Isidore-de- 67.26 358 P P 11 10 53.1 +0.7
baz=177
G57A Newington 67.28 355 P P 11 10 53.6 +1.0
baz=174
L40A Anamosa 67.31 342 IAmb IAmb 11 11 22.2
comp=Z,30nm,1.1s
H52A Wyevale 67.36 351 P P 11 10 53.3 +0.2
baz=169
CBKS Cedar Bluff 67.37 334 P P 11 10 53.8 +0.5
baz=149,SNR=21
SADO Sadowa 67.38 352 P P 11 10 53.3 +0.1
comp=Z,3.4nm,0.6s,baz=216,slow=1.6,SNR=4.4
SADO pP PcP 11 11 20.6 +0.6
comp=Z,6.4nm,0.8s,baz=210,slow=3.5,SNR=5.0
I47A Gladwin 67.53 348 P P 11 10 55.5 +1.3
baz=164
I48A Sherman Twp 67.54 348 P P 11 10 53.8 -0.4
baz=165
TUC Tucson 67.57 322 P P 11 10 55.8 +1.0
TUC IAmb IAmb 11 11 26.0
comp=Z,51nm,1.6s
TUC Tucson 67.57 322 P P 11 10 55.9 +1.1
baz=138
G55A Calabogie 67.58 354 P P 11 10 55.0 +0.6
baz=172
F63A Nahmakanta, Br 67.63 360 P P 11 10 55.2 +0.4
baz=180
G53A Haliburton 67.66 352 P P 11 10 54.8 -0.1
baz=170
SCIA State Center 67.76 340 P P 11 10 55.5 -0.2
baz=156
F64A Sherman 67.79 0 P P 11 10 56.2 +0.5
baz=180
JFWS Jewell Farm 67.83 343 IAmb IAmb 11 11 25.1
comp=Z,16nm,0.8s
JFWS Jewell Farm 67.83 343 P P 11 10 55.6 -0.5
baz=158,SNR=6.5
G54A Lake Saint Pet 67.87 353 P P 11 10 56.5 +0.2
baz=171
QSPA South Pole Qui 67.94 180 P P 11 10 58.5 +1.7
comp=Z,8.1nm,0.5s,baz=249,slow=0.4,SNR=27
QSPA South Pole Qui 67.94 180 P P 11 10 58.2 +1.4
F58A St-Lin Laurent 67.95 356 P P 11 10 56.9 +0.1
baz=175
T25A Trinidad 68.01 330 IAmb IAmb 11 11 29.4
comp=Z,33nm,1.3s
T25A Trinidad 68.01 330 P P 11 10 58.6 +1.0
baz=144,SNR=14
H47A Mio 68.03 348 P P 11 10 57.8 +0.5
baz=165
F55A Otter Lake 68.12 354 P P 11 10 58.3 +0.5
baz=172
H46A Fife Lake 68.17 347 P P 11 10 58.1 -0.1
baz=164
E60A Ste Agathe de 68.34 358 P P 11 10 59.8 +0.6
baz=177
E63A Oxbow 68.35 0 P P 11 10 59.7 +0.5
baz=180
E64A Bridgewater 68.35 1 P P 11 10 59.1 -0.1
baz=181
E61A Lac Etchemin 68.38 359 P P 11 11 00.8 +1.3
baz=178
LIC Lamto 68.38 73 eP P 11 10 59.8 -0.4
comp=Z,40nm,0.7s
I42A Draeger Farm, 68.39 344 IAmb IAmb 11 11 29.4
comp=Z,49nm,1.5s
F52A Sundridge 68.41 352 P P 11 11 00.2 +0.5
baz=170
ALGO Algonquin Park 68.41 353 P P 11 11 01.3 +1.6
baz=171
E58A La Victoria 68.43 357 P P 11 11 00.3 +0.6
baz=176
214A Organ Pipe Nat 68.49 320 IAmb IAmb 11 11 43.4
comp=Z,26nm,1.1s
214A Organ Pipe Nat 68.49 320 P P 11 11 02.4 +1.9
baz=136,SNR=20
G47A Hillman 68.52 349 P P 11 11 00.9 +0.6
baz=165
E57A Chemin Saint G 68.52 356 P P 11 11 00.3 -0.1
baz=175
TIC Toumodi 68.57 73 eP P 11 11 01.2 -0.2
comp=Z,31nm,0.8s
F51A Arnstein 68.62 352 P P 11 11 01.0 +0.1
baz=169
KIC Kosan Boka 68.69 73 eP P 11 11 02.0 -0.2
comp=Z,68nm,0.8s
E55A Montcerf-Lytto 68.71 355 P P 11 11 01.6 +0.1
baz=173
E56A St. Veronique 68.71 355 P P 11 11 01.5 0.0
baz=174
DBIC Dimbokro 68.73 73 P P 11 11 02.5 +0.1
comp=Z,32nm,0.7s,baz=217,slow=6.3,SNR=62
DBIC pP pP 11 11 30.5 0.0
comp=Z,16nm,0.8s,baz=232,slow=7.2,SNR=3.7
DBIC LR LR 11 42 06.3
comp=Z,112nm,18.2s,baz=258,slow=37
DBIC Dimbokro 68.73 73 P P 11 11 02.6 +0.2
DBIC IAmb IAmb 11 11 03.4
comp=Z,39nm,0.8s
KSCO Kaye Shedlock' 68.74 332 IAmb IAmb 11 11 04.2
comp=Z,38nm,0.8s
KSCO Kaye Shedlock' 68.74 332 P P 11 11 03.0 +1.0
baz=146,SNR=16
F49A Sandfield 68.77 350 P P 11 11 01.6 -0.3
baz=167
E53A Dumoine, Ponti 68.79 353 P P 11 11 02.2 +0.2
baz=171
E54A Lac Daplat, Po 68.80 354 P P 11 11 02.1 +0.1
baz=172
E52A Mattawa 68.81 353 P P 11 11 02.3 +0.2
baz=170
G46A Petoskey 68.85 348 P P 11 11 02.2 -0.2
baz=164
D60A Saint Jean D'O 68.87 358 P P 11 11 02.3 -0.2
baz=178
F48A Evansville 68.93 350 P P 11 11 02.8 0.0
baz=166
D63A Stockholm 68.96 0 P P 11 11 03.6 +0.6
baz=181
BGNE Belgrade 68.99 337 P P 11 11 04.0 +0.6
baz=151,SNR=35
D59A Saint-Raymond 68.99 358 P P 11 11 03.9 +0.7
baz=177
D62A Allapoint, All 69.01 360 IAmb IAmb 11 11 08.1
comp=Z,57nm,1.5s
D62A Allapoint, All 69.01 360 P P 11 11 04.6 +1.3
baz=180
SDCO Great Sand Dun 69.01 329 IAmb IAmb 11 11 06.5
comp=Z,32nm,1.0s
SDCO Great Sand Dun 69.01 329 P P 11 11 05.3 +1.4
baz=144,SNR=59
D57A Chemin Vers le 69.10 356 P P 11 11 04.3 +0.3
baz=175,SNR=6.9
D58A Chemin du LacG 69.13 357 P P 11 11 04.5 +0.4
baz=176,SNR=7.5
D61A St Aubert, Com 69.14 359 P P 11 11 04.7 +0.6
baz=179
E51A G1948 Merrick 69.16 352 P P 11 11 04.1 -0.2
baz=169
D56A ZEC Mazanza, M 69.19 356 P P 11 11 04.6 +0.1
baz=174
D55A Sainte-Anne-du 69.22 355 P P 11 11 04.6 0.0
baz=173,SNR=5.4
BATG Bathurst New B 69.24 2 P P 11 11 05.2 +0.4
F45A CMU Biological 69.33 347 P P 11 11 05.0 -0.3
baz=163
LATQ La Tuque 69.41 357 P P 11 11 05.8 0.0
baz=176
D54A Lac Fusel, La 69.45 354 P P 11 11 05.6 -0.5
baz=172,SNR=5.4
D52A ZEK Kipawa Sen 69.46 353 P P 11 11 06.5 +0.3
baz=170,SNR=5.6
D53A Lac Vacive, Po 69.49 353 P P 11 11 06.5 +0.2
baz=171,SNR=7.2
E48A Lockeyer 69.49 350 P P 11 11 06.0 -0.4
baz=167
S22A 4UR Ranch, Cre 69.64 328 P P 11 11 09.1 +1.2
baz=142,SNR=11
E47A Iron Bridge 69.65 349 P P 11 11 07.3 0.0
baz=166
D51A Lot 18 Range I 69.69 352 P P 11 11 07.9 +0.3
baz=170
D50A G1974 Best Tow 69.83 352 P P 11 11 08.5 +0.1
baz=169
Q24A Divide 69.83 330 IAmb IAmb 11 11 11.3
comp=Z,38nm,0.9s
Q24A Divide 69.83 330 P P 11 11 10.2 +1.3
baz=144,SNR=16
MVCO Mesa Verde 70.05 327 IAmb IAmb 11 11 12.8
comp=Z,27nm,0.9s
MVCO Mesa Verde 70.05 327 P P 11 11 11.5 +1.2
baz=141,SNR=24
D48A Paudash Townsh 70.11 351 P P 11 11 10.5 +0.4
baz=167
D49A Beulah Townshi 70.14 351 P P 11 11 10.3 -0.1
baz=168,SNR=8.0
D47A Chapleau 70.20 350 P P 11 11 10.6 -0.1
baz=166
D46A Sault St. Mari 70.21 349 P P 11 11 10.5 -0.2
baz=165
WUAZ Wupatki 70.27 324 P P 11 11 13.4 +1.8
baz=138,SNR=18
GLA Glamis 70.46 320 P P 11 11 12.8 +0.2
GLA IAmb IAmb 11 11 45.2
comp=Z,45nm,1.5s
ECSD EROS Data Cent 70.50 339 P P 11 11 12.3 -0.3
baz=153,SNR=11
SPMN Marine on St. 70.67 342 P P 11 11 13.6 0.0
baz=156
ISCO Idaho Springs 70.71 331 P P 11 11 15.6 +1.3
baz=144,SNR=16
Y12C Blythe 70.77 321 P P 11 11 16.1 +1.7
baz=135,SNR=8.5
SMCO Snowmass 70.85 329 IAmb IAmb 11 11 18.0
comp=Z,19nm,0.9s
PDMCI Parker Dam,Lak 70.94 321 P P 11 11 17.0 +1.6
baz=136
IKP In-Ko-Pah, Jac 70.95 319 P P 11 11 16.5 +0.8
baz=134
SWSC Sam W. Stewart 70.97 319 P P 11 11 16.2 +0.6
baz=134
BC3 Big Chuckawall 71.25 320 P P 11 11 19.2 +1.7
baz=135,SNR=12
D41A Chassel 71.29 346 IAmb IAmb 11 11 18.6
comp=Z,28nm,1.0s
MONP2 Monument Peak 71.31 319 P P 11 11 18.8 +0.8
baz=134
BAR Barrett 71.32 319 IAmb IAmb 11 11 48.5
comp=Z,25nm,1.1s
LSQQ Lebel-sur-Quev 71.37 354 P P 11 11 18.4 +0.7
baz=172
IRM Iron Mountain 71.42 321 P P 11 11 20.2 +1.7
baz=135,SNR=11
U15A North Rim 71.45 324 IAmb IAmb 11 11 50.9
comp=Z,46nm,1.4s
109C Camp Elliot, M 71.72 318 P P 11 11 21.6 +1.3
baz=133
N23A Red Feather La 71.75 331 IAmb IAmb 11 11 22.9
comp=Z,24nm,0.9s
N23A Red Feather La 71.75 331 P P 11 11 21.8 +1.3

	baz=144,SNR=18						
BELC	**Belle Mtn. Jos**	**71.82**	**320**	P	**P**	**11 11 22.5**	**+1.5**
	baz=134,SNR=5.4						
XPFO	**Pion Flat**	**71.82**	**319**	P	**P**	**11 11 21.6**	**+0.6**
PFO	**Pinyon Flats O**	**71.83**	**319**	P	**P**	**11 11 22.0**	**+1.0**
	comp=Z,5.0nm,1.0s,baz=106,slow=6.6,SNR=4.9						
PFO				pP	**pP**	**11 11 48.1**	**-1.0**
	comp=Z,5.5nm,0.8s,baz=142,slow=5.3,SNR=5.1						
PFO				LR	LR	11 38 51.8	
	comp=Z,41nm,18.6s,baz=176,slow=32						
PFO	**Pinyon Flats O**	**71.83**	**319**	P	**P**	**11 11 21.6**	**+0.7**
PFO	**Pinyon Flats O**	**71.83**	**319**	P	**P**	**11 11 21.7**	**+0.7**
	baz=134						
DRLN	**Deer Lake**	**71.88**	**8**	P	**P**	**11 11 20.9**	**+0.2**
SUSD	**Miller**	**71.93**	**338**	P	**P**	**11 11 21.2**	**0.0**
	baz=151						
MATQ	**Matagami**	**72.13**	**354**	P	**P**	**11 11 22.1**	**-0.1**
	baz=171						
GMRC	**Granite Mounta**	**72.17**	**321**	P	**P**	**11 11 24.8**	**+1.8**
	baz=135,SNR=10						
O20A	**White River Ci**	**72.20**	**329**	IAmb	IAmb	11 11 25.8	
	comp=Z,39nm,0.9s						
O20A	**White River Ci**	**72.20**	**329**	P	**P**	**11 11 24.5**	**+1.3**
	baz=142,SNR=14						
MURC	**Murrieta**	**72.27**	**319**	P	**P**	**11 11 25.0**	**+1.5**
	baz=133						
EYMN	**Ely**	**72.82**	**344**	P	**P**	**11 11 25.9**	**-0.5**
	baz=158,SNR=8.2						
RWWY	**Rawlins**	**72.95**	**331**	IAmb	IAmb	11 11 30.1	
	comp=Z,25nm,0.9s						
BFSC	**Mount Baldy Ra**	**72.98**	**319**	P	**P**	**11 11 29.4**	**+1.5**
	baz=133,SNR=5.2						
GSC	**Goldstone, Bar**	**73.20**	**320**	IAmb	IAmb	11 12 01.8	
	comp=Z,57nm,1.7s						
GSC	**Goldstone, Bar**	**73.20**	**320**	P	**P**	**11 11 30.5**	**+1.4**
	baz=134,SNR=5.5						
K22A	**Casper**	**73.42**	**332**	IAmb	IAmb	11 11 32.6	
	comp=Z,30nm,1.1s						
K22A	**Casper**	**73.42**	**332**	P	**P**	**11 11 31.5**	**+1.2**
	baz=144,SNR=11						
RSSD	**Black Hills**	**73.57**	**334**	P	**P**	**11 11 31.7**	**+0.5**
RSSD				IAmb	IAmb	11 11 33.3	
	comp=Z,21nm,0.8s						
RSSD	**Black Hills**	**73.57**	**334**	P	**P**	**11 11 32.4**	**+1.2**
	baz=146						
EDW2	**Edwards Air Fo**	**73.62**	**319**	P	**P**	**11 11 32.8**	**+1.3**
	baz=133						
BLG	**Laguna Peak, P**	**73.75**	**318**	P	**P**	**11 11 33.0**	**+0.7**
	baz=132						
LRMC	**Laurel Mtn Rad**	**73.84**	**320**	P	**P**	**11 11 34.1**	**+1.2**
	baz=133						
TPNV	**Topopah Spring**	**74.03**	**322**	IAmb	IAmb	11 12 17.4	
	comp=Z,28nm,1.1s						
TPNV	**Topopah Spring**	**74.03**	**322**	P	**P**	**11 11 35.9**	**+1.9**
	baz=135,SNR=8.9						
FURC	**Furnace Creek,**	**74.04**	**321**	P	**P**	**11 11 35.7**	**+1.9**
	baz=134,SNR=8.3						
MPMC	**Manual Prospec**	**74.12**	**321**	P	**P**	**11 11 35.3**	**+0.7**
	baz=134						
ISA	**Isabella, Lake**	**74.44**	**320**	P	**P**	**11 11 37.0**	**+0.7**
ISA	**Isabella, Lake**	**74.44**	**320**	P	**P**	**11 11 38.0**	**+1.7**
	baz=133,SNR=7.1						
DUG	**Dugway, Tooele**	**74.51**	**326**	IAmb	IAmb	11 12 08.5	
	comp=Z,45nm,1.5s						
DUG	**Dugway, Tooele**	**74.51**	**326**	P	**P**	**11 11 38.2**	**+1.5**
	baz=138,SNR=17						
R11A	**Troy Canyon, C**	**74.64**	**323**	P	**P**	**11 11 39.2**	**+1.7**
	baz=136,SNR=11						
GRAC	**Grapevine Rang**	**74.70**	**321**	P	**P**	**11 11 38.5**	**+0.8**
	baz=134						
PKM	**Mcpherson Peak**	**74.73**	**318**	P	**P**	**11 11 39.9**	**+1.8**
	baz=132,SNR=5.7						
CWC	**Cottonwood Cre**	**74.73**	**321**	P	**P**	**11 11 39.0**	**+1.0**
	baz=133						
PD31	**Pinedale Array**	**74.87**	**330**	P	**P**	**11 11 38.8**	**0.0**
PDAR	**Pinedale Array**	**74.87**	**330**	P	**P**	**11 11 39.5**	**+0.6**
	comp=Z,1.3nm,0.5s,baz=142,slow=7.5,SNR=20						
PDAR				pP	**pP**	**11 12 04.8**	**-2.4**
	comp=Z,2.0nm,0.9s,baz=157,slow=5.6,SNR=1.7						
PDAR	**Pinedale Array**	**74.87**	**330**	P	**P**	**11 11 39.1**	**+0.3**
MDND	**Maddock**	**75.11**	**339**	P	**P**	**11 11 40.6**	**+0.8**
	baz=151,SNR=7.2						
TIN	**Tinemaha, Big**	**75.24**	**321**	P	**P**	**11 11 42.6**	**+1.7**
	baz=133						
AHID	**Auburn Hatcher**	**75.60**	**329**	IAmb	IAmb	11 11 45.1	
	comp=Z,33nm,0.9s						
SYO	**Syowa Base**	**75.72**	**159**	⇑*i*P	**P**	**11 11 41.9**	**-1.1**
SYO	**Syowa Base**	**75.72**	**159**	⇓*e*PcP	**PcP**	**11 11 54.4**	**-0.9**
SNOW	**Snow King Moun**	**75.97**	**330**	IAmb	IAmb	11 11 47.5	
	comp=Z,19nm,0.8s						
ULM	**Lac du Bonnet**	**76.10**	**342**	P	**P**	**11 11 45.4**	**+0.1**
	comp=Z,6.0nm,0.6s,baz=155,slow=6.9,SNR=24						
ULM				pP	**pP**	**11 12 13.1**	**-0.8**
	comp=Z,5.2nm,0.6s,baz=163,slow=4.9,SNR=5.6						
ULM				LR	LR	11 48 27.9	
	comp=Z,49nm,19.6s,baz=178,slow=38						
ULM	**Lac du Bonnet**	**76.10**	**342**	P	**P**	**11 11 45.2**	**-0.1**
ULM				IAmb	IAmb	11 11 46.1	
	comp=Z,57nm,1.8s						
MOOW	**Moose Ponds**	**76.18**	**330**	IAmb	IAmb	11 11 48.5	
	comp=Z,64nm,2.0s						
NVAR	**Mina Array Bea**	**76.22**	**322**	P	**P**	**11 11 48.0**	**+1.4**
	comp=Z,2.2nm,0.7s,baz=154,slow=7.1,SNR=19						
NVAR				pP	**pP**	**11 12 15.4**	**+0.5**
	comp=Z,3.2nm,0.8s,baz=156,slow=6.5,SNR=6.8						
NVAR	**Mina Array Bea**	**76.22**	**322**	P	**P**	**11 11 47.3**	**+0.7**
LAO	**LASA Array**	**76.56**	**334**	IAmb	IAmb	11 11 50.3	
	comp=Z,39nm,1.1s						
LAO	**LASA Array**	**76.56**	**334**	P	**P**	**11 11 49.2**	**+1.1**
	baz=145,SNR=11						
RLMT	**Red Lodge**	**76.58**	**332**	IAmb	IAmb	11 11 51.1	
	comp=Z,66nm,1.6s						
RLMT	**Red Lodge**	**76.58**	**332**	P	**P**	**11 11 49.9**	**+1.4**
	baz=142,SNR=19						
H17A	**Grant Village**	**76.60**	**331**	P	**P**	**11 11 50.5**	**+1.9**
	baz=141,SNR=6.7						
SCHQ	**Schefferville**	**76.78**	**1**	P	**P**	**11 11 49.4**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=184,slow=5.4,SNR=7.8						
SCHQ				LR	LR	11 46 56.0	
	comp=Z,50nm,21.5s,baz=356,slow=36						
WAKR	**Walker**	**76.93**	**321**	IAmb	IAmb	11 12 23.0	
	comp=Z,46nm,1.7s						
TOA0	**Torodi Ar. Sit**	**77.39**	**70**	P	**P**	**11 11 53.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**77.39**	**70**	P	**P**	**11 11 53.4**	**0.0**
	comp=Z,19nm,0.5s,baz=254,slow=5.0,SNR=94						
TORD				pP	**pP**	**11 12 21.0**	**-0.9**
	comp=Z,11nm,0.7s,baz=254,slow=5.5,SNR=2.0						
TORD				S	**S**	**11 21 34.5**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=246,slow=9.2,SNR=4.6						
TORD				LR	LR	11 45 30.6	
	comp=Z,112nm,20.5s,baz=245,slow=35						
TORD	**Torodi Ar. Bea**	**77.39**	**70**	P	**P**	**11 11 52.8**	**-0.6**
PAHR	**Pah Rah Range**	**77.71**	**322**	IAmb	IAmb	11 12 26.3	
	comp=Z,36nm,1.2s						
SUR	**Sutherland**	**78.00**	**120**	P	**P**	**11 11 58.5**	**+1.7**
SUR				IAmb	IAmb	11 13 13.5	
	comp=Z,91nm,1.8s						
MFID	**Camas Ranch**	**78.40**	**327**	IAmb	IAmb	11 12 30.7	
	comp=Z,40nm,1.6s						
ORV	**Oroville**	**78.82**	**321**	IAmb	IAmb	11 12 32.8	
	comp=Z,72nm,1.6s						
EGMT	**Eagleton**	**79.07**	**333**	P	**P**	**11 12 02.7**	**+0.7**
	baz=142,SNR=11						
O03E	**Paynes Creek**	**79.48**	**322**	P	**P**	**11 12 04.6**	**+0.1**
	baz=131						
TSUM	**Tsumeb**	**79.61**	**107**	P	**P**	**11 12 07.1**	**+1.3**
TSUM				IAmb	IAmb	11 12 08.1	
	comp=Z,33nm,0.8s						
TSUM				pP	**pP**	**11 12 35.2**	**+0.9**
J08A	**Circle Bar Ran**	**79.72**	**326**	IAmb	IAmb	11 12 38.6	
	comp=Z,49nm,1.9s						
O02D	**Mt. Diablo Mer**	**79.98**	**321**	P	**P**	**11 12 07.6**	**+0.5**
	baz=130						
MSO	**Missoula**	**79.99**	**330**	P	**P**	**11 12 08.7**	**+1.6**
	baz=138,SNR=7.2						
M04C	**Macdoel**	**80.48**	**323**	P	**P**	**11 12 10.8**	**+0.9**
	baz=131,SNR=12						
M02C	**Callahan**	**80.81**	**322**	P	**P**	**11 12 11.7**	**+0.1**
	baz=131						
YBH	**Yreka Blue Hor**	**80.94**	**322**	P	**P**	**11 12 12.4**	**+0.2**
	comp=Z,3.6nm,0.7s,baz=70,slow=10,SNR=11						
L04D	**Klamath Falls**	**81.03**	**323**	P	**P**	**11 12 12.9**	**+0.1**
	baz=131						
J05D	**Fort Rock, OR**	**81.15**	**324**	P	**P**	**11 12 14.5**	**+1.1**
	baz=132,SNR=8.3						
J04D	**Umpqua Nationa**	**81.59**	**324**	P	**P**	**11 12 16.9**	**+1.0**
	baz=131,SNR=6.0						
L02E	**Cave Junction**	**81.73**	**322**	P	**P**	**11 12 17.4**	**+1.1**
	baz=130						
E09A	**Wood Farm, Sta**	**81.76**	**328**	IAmb	IAmb	11 12 48.5	
	comp=Z,42nm,1.9s						
FFC	**Flin Flon**	**81.81**	**341**	P	**P**	**11 12 16.6**	**+0.2**
I05D	**Terrebonne, OR**	**81.91**	**325**	P	**P**	**11 12 18.5**	**+1.3**
	baz=132,SNR=17						
K02D	**Willamette Mer**	**82.11**	**322**	P	**P**	**11 12 19.4**	**+1.0**
	baz=130						
I04A	**Tendick Farm,**	**82.12**	**324**	P	**P**	**11 12 18.9**	**+0.6**
	baz=131						
HAWA	**Hanford**	**82.36**	**327**	IAmb	IAmb	11 12 51.6	
	comp=Z,39nm,1.4s						
G05D	**Wamic, OR**	**82.50**	**325**	P	**P**	**11 12 21.7**	**+1.4**
	baz=132						
NEW	**Newport**	**82.51**	**330**	P	**P**	**11 12 20.7**	**+0.4**
	comp=Z,3.3nm,1.0s,baz=128,slow=6.1,SNR=5.1						
NEW	**Newport**	**82.51**	**330**	P	**P**	**11 12 20.8**	**+0.5**
	baz=136						
J01E	**Myrtle Point**	**82.56**	**323**	P	**P**	**11 12 21.5**	**+0.9**
	baz=130						
I03D	**Drain, OR**	**82.58**	**323**	P	**P**	**11 12 21.6**	**+1.0**
	baz=130						
C09A	**Chrisman Ranch**	**82.73**	**329**	IAmb	IAmb	11 12 23.5	
	comp=Z,28nm,0.7s						
BOSA	**Boshof**	**82.89**	**118**	P	**P**	**11 12 23.7**	**+0.7**
	comp=Z,18nm,0.9s,baz=258,slow=4.1,SNR=12						
BOSA	**Boshof**	**82.89**	**118**	P	**P**	**11 12 23.7**	**+0.7**
BOSA				IAmb	IAmb	11 12 24.6	
	comp=Z,17nm,0.9s						
F05D	**White Salmon**	**83.00**	**326**	P	**P**	**11 12 24.0**	**+1.1**
	baz=132						
I02D	**Swisshome**	**83.11**	**323**	P	**P**	**11 12 24.5**	**+1.1**
	baz=130						
MAW	**Mawson**	**83.55**	**163**	P	**P**	**11 12 26.9**	**+1.5**
	comp=Z,5.1nm,0.8s,baz=225,slow=4.3,SNR=4.3						
MAW				LR	LR	11 51 54.3	
	comp=Z,73nm,18.4s,baz=228,slow=37						
MAW	**Mawson**	**83.55**	**163**	P	**P**	**11 12 26.5**	**+1.2**
LBTB	**Lobatse**	**84.50**	**115**	P	**P**	**11 12 31.9**	**+0.7**
LBTB				IAmb	IAmb	11 12 33.1	
	comp=Z,25nm,1.0s						
B05A	**Bryant**	**84.91**	**327**	P	**P**	**11 12 32.8**	**+0.4**
	baz=132						
D03D	**Eldon**	**84.94**	**326**	P	**P**	**11 12 33.4**	**+0.8**
	baz=131						
TAM	**Tamanrasset**	**84.95**	**63**	P	**P**	**11 12 34.3**	**+0.8**
ESDC	**Sonseca Array**	**86.21**	**44**	P	**P**	**11 12 39.4**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=246,slow=5.7,SNR=5.6						
ESDC				LR	LR	11 47 59.3	
	comp=Z,64nm,20.8s,baz=195,slow=33						
ESDC	**Sonseca Array**	**86.21**	**44**	P	**P**	**11 12 39.4**	**+0.3**
LLLB	**Lillooet**	**86.38**	**329**	IAmb	IAmb	11 12 41.8	
	comp=Z,50nm,1.8s						
YKA	**Yellowknife Ar**	**91.97**	**340**	P	**P**	**11 13 06.0**	**+0.3**
	comp=Z,6.4nm,0.8s,baz=137,slow=4.4,SNR=87						
YKA				pP	**pP**	**11 13 34.4**	**-0.6**
	comp=Z,6.3nm,0.9s,baz=136,slow=4.3,SNR=6.9						
YKA				sP	**sP**	**11 13 46.4**	**-0.5**
	comp=Z,5.5nm,0.8s,baz=138,slow=4.3,SNR=5.4						
EPYK	**Eagle Plains**	**101.83**	**338**	P	**Pdif**	**11 13 50.4**	**+0.1**
	baz=119						
CLL	**Collm**	**102.05**	**39**	*e*PKiKP	**PKiKP**	**11 18 14.0**	**+0.5**
CLL	**Collm**	**102.05**	**39**	LV		11 19 00.0	
	comp=Z,200nm,18.6s						
ILAR	**Eielson Array**	**105.02**	**334**	PP	**PP**	**11 18 21.2**	**-5.3**
	comp=Z,0.4nm,0.9s,baz=90,slow=4.5,SNR=3.6						
POKR	**Poker Flat Res**	**105.36**	**335**	P	**PKiKP**	**11 18 18.5**	**-0.7**
	baz=110						
HNR	**Honiara**	**122.89**	**242**	P	PKiKP	11 19 04.0	+10
H11S2	**WAKE ISLAND Hy**	**128.19**	**276**	T	T	13 39 21.3	
	baz=103,slow=74,SNR=149						
H11S1	**WAKE ISLAND Hy**	**128.20**	**277**	T	T	13 39 27.5	
	baz=103,slow=74,SNR=118						
H11S3	**WAKE ISLAND Hy**	**128.21**	**276**	T	T	13 39 22.1	
	baz=103,slow=74,SNR=117						
H11N3	**WAKE ISLAND Hy**	**128.29**	**278**	T	T	13 39 24.0	
	baz=104,slow=75,SNR=92						
H11N2	**WAKE ISLAND Hy**	**128.31**	**278**	T	T	13 39 33.3	
	baz=104,slow=75,SNR=84						
H11N1	**WAKE ISLAND Hy**	**128.31**	**278**	T	T	13 39 32.0	
	baz=104,slow=75,SNR=74						
ASAR	**Alice Springs**	**129.35**	**207**	PKP	**PKiKP**	**11 19 07.0**	**0.0**
	comp=Z,2.7nm,0.9s,baz=137,slow=1.9,SNR=15						
ASAR				pPKP	**pPKPdf**	**11 19 36.6**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=133,slow=2.3,SNR=2.7						
ASAR	**Alice Springs**	**129.35**	**207**		**PKiKP**	**11 19 06.9**	**-0.2**
ABKAR	**Akbulak array**	**131.54**	**43**		**PKiKP**	**11 19 10.4**	**-0.1**
WRA	**Warramunga Arr**	**132.42**	**210**	PKP	**PKiKP**	**11 19 13.2**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=155,slow=1.8,SNR=11						
WRA				pPKP	**pPKPdf**	**11 19 41.3**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=157,slow=2.0,SNR=2.4						
WRA				SKPbc	**SKPab**	**11 22 30.5**	**-0.2**
	comp=Z,3.1nm,1.0s,baz=145,slow=3.6,SNR=6.3						
ZALV	**Zalesovo Beam**	**142.53**	**26**	PKhKP	**PKPdf**	**11 19 27.3**	**-2.4**
	comp=Z,1.0nm,0.4s,baz=328,slow=2.9,SNR=5.6						
AAK	**Ala-Archa**	**143.24**	**48**		**PKPdf**	**11 19 31.4**	**-0.1**
NRN	**Naryn**	**144.73**	**49**		**PKPdf**	**11 19 35.1**	**+0.7**
KDJ	**Kajisay**	**145.27**	**47**		**PKPab**	**11 19 36.3**	**+1.0**
KSH	**Kashi**	**145.38**	**52**	PKPbc	**PKPab**	**11 19 36.2**	**+0.5**
KSH				sPKP		11 20 11.2	
KSH				PKS	**PKSdf**	**11 23 10.5**	**-0.4**
KSH				SKS	**SKSdf**	**11 26 33.2**	**-1.7**
KSH				SKKS	**SKKSac**	**11 29 36.7**	**-1.7**
KSH				AMB	AMB		
	comp=Z,290nm,5.1s						
MAKZ	**Makanchi**	**145.92**	**37**		**PKPdf**	**11 19 36.4**	**+0.5**
MK31	**Makanchi Array**	**146.10**	**37**		**PKPbc**	**11 19 37.5**	**+0.3**
MKAR	**Makanchi Array**	**146.10**	**37**	PKPbc	**PKPbc**	**11 19 37.5**	**+0.2**
	comp=Z,9.5nm,0.7s,baz=314,slow=2.9,SNR=52						
MKAR				pPKPbc	**pPKPdf**	**11 20 05.4**	**-1.2**
	comp=Z,4.9nm,0.7s,baz=313,slow=2.7,SNR=2.0						
FAKI	**Fak Fak**	**147.70**	**222**		**PKPbc**	**11 19 42.5**	**-0.2**
SIJI	**Sorong**	**149.90**	**223**	PKPbc	**PKiKP**	**11 19 49.4**	**+0.2**
	comp=Z,15nm,0.8s,baz=63,slow=4.5,SNR=7.8						
WMQ	**Urumqi**	**150.93**	**37**	*e*PKPbc	**PKPdf**	**11 19 43.7**	**-0.5**
WMQ				LR	LR		
	comp=Z,690nm,19.3s						
WMQ				LR	LR		
	comp=Z,730nm,22.7s						
WMQ				LR	LR		
	comp=Z,750nm,29.1s						
USRK	**Ussuriysk Ar.**	**152.26**	**327**	PKPbc	**PKiKP**	**11 19 53.9**	**+0.8**
	comp=Z,5.2nm,0.8s,baz=64,slow=3.4,SNR=6.3						
MJAR	**Matsushiro Arr**	**152.71**	**307**	PKPbc	**PKiKP**	**11 19 55.0**	**+0.7**
	comp=Z,7.1nm,1.0s,baz=70,slow=1.4,SNR=8.7						
MJAR	**Matsushiro Arr**	**152.71**	**307**		**PKPbc**	**11 19 54.0**	**-0.2**
MJAR				PKPab	**PKPab**	**11 20 05.6**	**+0.3**
SONM	**Songino Array**	**154.17**	**8**	PKP	**PKPdf**	**11 19 49.9**	**+1.1**
	comp=Z,1.1nm,0.8s,baz=245,slow=1.2,SNR=6.4						
SONM				PKPbc	**PKiKP**	**11 19 57.7**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=355,slow=0.6,SNR=7.6						
SONM				pPKP	**pPKPdf**	**11 20 15.8**	**-3.5**
	comp=Z,1.2nm,0.7s,baz=333,slow=1.6,SNR=3.1						
SONM	**Songino Array**	**154.17**	**8**		**PKPdf**	**11 19 49.4**	**+0.5**
SONM					**PKiKP**	**11 19 57.5**	**+0.3**
ULN	**Ulaanbaatar**	**154.21**	**7**	PKPdf	**PKPdf**	**11 19 49.9**	**+0.9**
ULN					**PKPab**	**11 20 11.8**	**+0.4**
KSRS	**Korea Array**	**159.16**	**320**	PKPab	**PKPab**	**11 20 33.5**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=51,slow=4.5,SNR=5.0						
GTA	**Gaotai**	**160.27**	**27**	PKP	**PKPdf**	**11 19 57.7**	**+0.9**
HHC	**Hu-ho-hao-te**	**161.46**	**359**	*e*PKP	**PKPdf**	**11 19 57.7**	**-0.3**
LZH	**Lanzhou**	**164.75**	**24**	*e*PKP	**PKPdf**	**11 20 02.0**	**+0.6**
LZH				pPKP	pPKPdf	11 20 27.6	-4.2
LZH				sPKP		11 20 38.6	
CMAR	**Chiang Mai Arr**	**167.78**	**106**	PKP	**PKPdf**	**11 20 04.7**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=267,slow=1.5,SNR=4.1						
CMAR				PKPab	**PKPab**	**11 21 11.6**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=252,slow=5.4,SNR=9.4						
CMAR				PP	**PP**	**11 25 01.1**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=250,slow=6.1,SNR=5.0						
XAN	**Xi'an**	**168.06**	**10**	PKP	PKPdf	11 20 17.9	+14
NJ2	**Nanjing**	**168.17**	**327**	*e*PKP	**PKPdf**	**11 20 03.8**	**-0.1**
CD2	**Chengdu**	**169.03**	**37**	PKP	**PKPdf**	**11 20 03.6**	**-1.0**

NNC 10 11:18:29.4±13.0**, 48°.22N×77°.29E, h0km, mb3.8, mpv3.5, 3C-3D, Error ellipse: s-maj=106.1km s-min=67.8km az=138.0, Suspected Mining explosion., Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKZ	**Makanchi**	**3.48**	**112**	⇓Pn	Pn	11 19 27.4	+2.6
	6.7nm,0.8s						
MAKZ				⇑Sn	Sn	11 20 09.9	+3.3
	4.8nm,1.0s						
MK31	**Makanchi Array**	**3.68**	**111**	⇓Pn	Pn	11 19 27.1	-0.4
	8.2nm,0.8s,baz=322,slow=3.1,SNR=88						
MK31				⇑Sn	Sn	11 20 10.3	-1.3
	17nm,0.9s,baz=301,slow=28,SNR=7.3						
PDGK	**Podgornoye**	**5.12**	**162**	⇓Pn	Pn	11 19 46.4	-1.1
	8.6nm,0.8s						
PDGK				⇑Sn	Sn	11 20 46.2	-1.2
	5.1nm,1.1s						

IDC 10 11:25:27.7±13.0**, 19°.87N×107°.40W, h0km, mb3.3/3, mb1 3.9/4, mb1mx3.6/34, mbtmp4.4/4, ML3.5/1, Error ellipse: s-maj=269.2km s-min=74.2km az=138.0, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**10.01**	**19**	Pn	Pn	11 27 55.1	+2.1
	0.1nm,0.3s,baz=194,slow=15,SNR=32						
PDAR	**Pinedale Array**	**22.90**	**356**	P	P	11 30 32.6	-0.7
	0.3nm,0.6s,baz=174,slow=9.5,SNR=3.9						
YKA	**Yellowknife Ar**	**42.88**	**355**	P	P	11 33 27.1	-0.4
	0.3nm,0.7s,baz=167,slow=7.5,SNR=5.1						
ILAR	**Eielson Array**	**51.93**	**340**	P	P	11 34 38.4	+0.3
	0.5nm,0.9s,baz=164,slow=4.1,SNR=4.8						

IDC ***10*** *11:28:25.3±2.3, 39°.60N×143°.80E, h0km, mb3.5/4, mb1 3.6/6, mb1mx3.3/52, mbtmp3.5/6, ML3.1/2, Error ellipse: s-maj=55.7km s-min=23.4km az=81.0*

JMA ***10*** *11:28:27.3±0.2, 39°.65N×143°.64E, h24km, M3.6*

ISC 10 11:28:28.0±1.2**, 39°.64N**±0°.06×**143°.53E**±0°.08**, h11km, n25,** σ**0ˢ75**/26**, mb3.5**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.32**	**284**	P	**Pn**	**11 28 51.4**	**-0.9**
JTH				*e*S	**Sn**	**11 29 09.4**	**-0.5**
MIYJ	**Miyakonagasawa**	**1.32**	**268**	P	**Pn**	**11 28 51.9**	**-0.5**
JKEN	**Kujiedanarisaw**	**1.51**	**293**	P	**Pn**	**11 28 54.1**	**-0.8**
JANG	**Nango**	**1.71**	**296**	P	**Pn**	**11 28 56.9**	**-0.9**
JOM	**Ohasama**	**1.74**	**265**	P	**Pn**	**11 28 58.4**	**+0.3**
JOM				*e*S	**Sn**	**11 29 20.5**	**+0.3**
JMK	**Ichinoseki**	**1.92**	**250**	P	**Pn**	**11 29 00.7**	**+0.2**
JIO	**Ouri**	**2.07**	**236**	P	**Pn**	**11 29 02.3**	**-0.3**
JIO				*e*S	**Sn**	**11 29 28.0**	**-0.3**
JTM	**Tenmabayashi**	**2.21**	**302**	P	**Pn**	**11 29 04.7**	**+0.2**
JYK	**Kaneyama**	**2.56**	**255**	P	**Pn**	**11 29 10.4**	**+1.0**
JNBK	**Urakawa-nobuka**	**2.71**	**348**	P	**Pn**	**11 29 12.3**	**+0.9**
JNBK				*e*S	**Sn**	**11 29 45.0**	**+0.9**
JCH	**Churui**	**2.98**	**358**	P	**Pn**	**11 29 15.2**	**+0.1**
JCH				*e*S	**Sn**	**11 29 49.9**	**-0.9**
JFT	**Otama**	**3.28**	**231**	P	**Pn**	**11 29 19.6**	**+0.4**
JAK	**Akkeshi**	**3.47**	**14**	P	**Pn**	**11 29 21.7**	**-0.2**
JAK				S	**Sn**	**11 30 01.6**	**-1.3**
ASAJ	**Asahikawa**	**4.53**	**351**	Pn	**Pn**	**11 29 37.5**	**+1.1**
	1.3nm,0.3s,baz=188,slow=17,SNR=6.3						
ASAJ				Sn	**Sn**	**11 30 29.7**	**+0.6**
	0.9nm,0.3s,baz=37,slow=20,SNR=3.1						
MJAR	**Matsushiro Arr**	**5.21**	**235**	Pn	**Pn**	**11 29 46.9**	**+1.0**
	0.2nm,0.3s,baz=55,slow=13,SNR=12						
SONM	**Songino Array**	**27.84**	**299**	P	**P**	**11 34 18.1**	**+0.7**
	0.6nm,0.7s,baz=85,slow=8.6,SNR=3.8						
H11N2	**WAKE ISLAND Hy**	**28.24**	**128**	T	T	12 04 00.0	
	baz=320,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.25**	**128**	T	T	12 03 57.7	
	baz=320						
H11N3	**WAKE ISLAND Hy**	**28.25**	**128**	T	T	12 03 57.5	
	baz=320,slow=75						
H11S1	**WAKE ISLAND Hy**	**29.06**	**130**	T	T	12 05 01.0	
	baz=321						
H11S3	**WAKE ISLAND Hy**	**29.06**	**130**	T	T	12 05 02.8	
	baz=321						
H11S2	**WAKE ISLAND Hy**	**29.07**	**130**	T	T	12 05 01.6	
	baz=321						
MKAR	**Makanchi Array**	**44.20**	**300**	P	**P**	**11 36 37.3**	**+0.4**
	0.5nm,0.7s,baz=81,slow=9.3,SNR=5.0						
KURBB	**Kurchatov Arra**	**45.76**	**306**	P	**P**	**11 36 49.3**	**+0.1**
	0.6nm,0.5s,baz=80,slow=8.5,SNR=4.0						
WRA	**Warramunga Arr**	**59.89**	**190**	P	**P**	**11 38 32.8**	**-1.0**
	0.3nm,0.7s,baz=8.9,slow=6.9,SNR=2.7						

UCR 10 11:29:46.2±1.3**, 10°.17N×84°.21W, h89km**±4km**, MD3.7, 2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HDC	**Heredia**	**0.19**	**150**	*e*P	Pn	11 29 59.4	+0.1
SRA1	**San Ramn**	**0.28**	**253**	*e*P	Pn	11 29 59.1	-0.5
SRA1				*e*S	Sn	11 30 09.8	+0.2
CVTR	**Volcan Turrial**	**0.47**	**108**	*e*P	Pn	11 30 00.9	-0.1
LCR2	**La Lucha 2**	**0.47**	**154**	*e*P	Pn	11 30 00.5	-0.4
LCR2				*e*S	Sn	11 30 12.3	+0.5
FORC	**Fortuna**	**0.54**	**303**	*i* P	Pn	11 30 01.4	+0.2
FORC				*i* S	Sn	11 30 12.9	+0.5
CASO	**Castillo**	**0.58**	**297**	*i* P	Pn	11 30 01.6	0.0
CEDE	**Laguna Cedeo**	**0.58**	**303**	⇓*i*P	Pn	11 30 01.9	+0.3
CEDE				*i* S	Sn	11 30 13.7	+0.6
JTS	**Las Juntas de**	**0.74**	**280**	*e*P	Pn	11 30 03.2	+0.1
JTS				*e*S	Sn	11 30 16.3	+0.7
ACAL	**Aguas Claras**	**0.94**	**300**	*i* P	Pn	11 30 05.3	+0.1
PTEN	**Parque Tenorio**	**0.94**	**306**	*i* P	Pn	11 30 05.2	-0.1
EDDO	**Dominical**	**0.97**	**159**	*e*P	Pn	11 30 06.0	+0.5
EDDO				*e*S	Sn	11 30 21.0	+1.1
CUI	**Cuipilapa**	**1.06**	**298**	⇓*i*P	Pn	11 30 06.8	+0.2
CUI				*e*P	Pn	11 30 06.8	+0.2
EDLM	**Las Mercedes**	**1.07**	**145**	*e*S	Sn	11 30 22.7	+0.5
COLC	**Colonia**	**1.10**	**297**	*i* P	Pn	11 30 07.3	+0.3
GUAI	**GUAI**	**1.28**	**275**	*i* P	Pn	11 30 10.1	+0.8
GUAI				*i* S	Sn	11 30 28.0	+1.4
BUAI	**Buenos Aires**	**1.31**	**303**	*i* P	Pn	11 30 09.6	0.0
BUEV	**Buena Vista**	**1.33**	**298**	*i* P	Pn	11 30 10.2	+0.3
LAPC	**Finca la Perla**	**1.34**	**297**	*i* P	Pn	11 30 10.0	0.0
GBS3	**Finca Las Img**	**1.37**	**297**	*i* P	Pn	11 30 10.4	+0.1
NY14	**Universidad de**	**1.39**	**290**	*i* P	Pn	11 30 10.8	+0.3
BRU2	**Volcan**	**2.03**	**132**	*e*S	Sn	11 30 44.4	+0.6

IDC ***10*** *11:41:41.8±0.6, 37°.04S×96°.68W, h0km, mb4.5/15, mb1 4.6/15, mb1mx4.5/27, mbtmp4.5/15, MS4.4/17, Ms1 4.4/17, ms1mx4.3/25, Error ellipse: s-maj=17.6km s-min=17.2km az=116.0*

MOS ***10*** *11:41:41.4±0.9, 37°.02S×96°.60W, h10km, mb5.0/22, Error ellipse: s-maj=13.8km s-min=9.3km az=82.1*

NEIC ***10*** *11:41:42.8±1.2, 37°.07S±0°.10×96°.75W±0°.1, h10km±1km, mb5.0/188, Error ellipse: s-maj=19.3km s-min=16.4km az=107.0*

GCMT ***10*** *11:41:44.8±0.2, 37°.00S±0°.01×96°.79W±0°.01, h17km, MW5.3/134, Moment Tensor Solution. s84,c128; s134,c226; Duration: 1ˢ1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.25±.02; $M_{\theta\theta}$0.01±.02; $M_{\phi\phi}$0.24±.02; $M_{r\theta}$-0.06±.04; $M_{\theta\phi}$-0.99±.02; $M_{\phi r}$-0.18±.04; Best double couple: $M_0$1.01900×10^{17} NP1:ϕ_s94.00000°, δ77.00000°, λ-173.00000°. NP2:ϕ_s2.00000°, δ83.00000°, λ-13.00000°. Principal axes: T 1.1270, Plg4.0000°, Azm49.0000°; N -0.2160, Plg75.0000°, Azm153.0000°; P -0.9110, Plg14.0000°, Azm318.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 11:41:43.2±0.3**, 37°.09S**±0°.07×**96°.57W**±0°.07**, h10km, n455,** σ**1ˢ40**/386**, mb5.0**/104**, MS4.5**/21**, 4C-6D, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**14.67**	**309**	Pn	**Pn**	**11 45 08.8**	**-2.0**
RPN	**Rapa Nui**	**14.67**	**309**	P	**Pn**	**11 45 08.8**	**-2.0**
GO05	**Huala**	**20.02**	**91**	P	**P**	**11 46 13.8**	**-2.3**
PLCA	**Paso Flores**	**20.55**	**108**	P	Pn	11 46 23.5	-0.6
	5.2nm,0.8s,baz=297,slow=11,SNR=11						
PLCA				LR	LR	11 52 23.8	
	comp=Z,1μm,20.3s,baz=298,slow=31						
PLCA	**Paso Flores**	**20.55**	**108**	*e*P	Pn	11 46 24.6	+0.5
PLCA	**Paso Flores**	**20.55**	**108**	P	**P**	**11 46 21.9**	**+0.1**
PEL	**Peldehue**	**21.51**	**87**	P	**P**	**11 46 31.1**	**-1.2**
PEL				IAmb	IAmb	11 46 56.3	
	comp=Z,71nm,1.6s						
PEL	**Peldehue**	**21.51**	**87**	P	**P**	**11 46 31.1**	**-1.2**
PEL				pmax	pmax		
	comp=Z,71nm,1.6s						

GO04 Tololo Observa 22.50 80 P P 11 46 40.9 -2.2
GO04 IAmb IAmb 11 47 09.9
comp=Z,60nm,1.3s
CFA Coronel Fontan 23.98 85 P P 11 46 58.5 +0.7
comp=Z,4.6nm,0.7s,baz=251,slow=11,SNR=9.0
CFA LR LR 11 53 33.7
comp=Z,636nm,20.0s,baz=255,slow=30
GO03 Copiap 24.11 75 P P 11 46 57.9 -1.3
GO03 IAmb IAmb 11 47 01.7
comp=Z,97nm,2.0s
GO02 Mina Guanaco 25.88 70 P P 11 47 14.1 -1.4
USHA Ushuaia 26.14 142 LR LR 11 55 23.9
comp=Z,2μm,18.8s,baz=300,slow=31
LVC Limon Verde 27.87 67 P P 11 47 34.1 +0.6
comp=Z,9.7nm,0.9s,baz=256,slow=10.0,SNR=8.0
LVC LR LR 11 55 51.7
comp=Z,1μm,18.7s,baz=231,slow=30
LVC Limon Verde 27.87 67 eP P 11 47 34.1 +0.6
LVC Limon Verde 27.87 67 P P 11 47 32.5 -1.0
PB01 IPOC Station P 28.43 63 P P 11 47 37.3 -0.9
PB01 IAmb IAmb 11 47 42.1
comp=Z,44nm,1.7s
PB11 IPOC Station P 29.15 61 P P 11 47 43.1 -1.6
PB11 IAmb IAmb 11 47 48.0
comp=Z,32nm,1.4s
GO01 Chusmiza 29.53 62 P P 11 47 47.5 -1.0
MNMC Minye Minye 29.61 60 P P 11 47 48.4 -0.6
MNMC IAmb IAmb 11 47 50.4
comp=Z,43nm,1.2s
NNA Nana 30.63 40 LR LR 11 57 01.2
comp=Z,3μm,21.6s,baz=223,slow=30
NNA Nana 30.63 40⇓eP P 11 47 56.7 -1.0
NNA pmax pmax
comp=Z,14nm,1.4s
LPAZ La Paz 32.58 58 P P 11 48 16.5 +1.0
comp=Z,24nm,1.0s,baz=218,slow=9.5,SNR=34
LPAZ La Paz 32.58 58 eP P 11 48 15.6 +0.1
LPAZ La Paz 32.58 58 P P 11 48 15.7 +0.2
LPAZ La Paz 32.58 58 P P 11 48 15.7 +0.2
LPAZ pmax pmax
comp=Z,33nm,1.0s
ATAH Atahualpa 34.10 34 P P 11 48 30.0 +1.4
comp=Z,21nm,1.0s,baz=207,slow=6.7,SNR=15
CPUP Villa Florida 34.84 84 P P 11 48 34.1 -0.3
comp=Z,1.5nm,0.6s,baz=261,slow=9.7,SNR=5.2
CPUP LR LR 12 00 38.9
comp=Z,431nm,20.0s,baz=250,slow=33
CPUP Villa Florida 34.84 84 P P 11 48 33.8 -0.6
CPUP IAmb IAmb 11 48 37.2
comp=Z,31nm,1.9s
PLTB Pedras Altas 35.61 94 eP P 11 48 43.7 +2.6
RKT Rikitea 35.77 282 eLQ LQ 11 56 44.0
comp=Z,2μm,28.8s
CPSB Cacapava Do Su 36.24 92 eP P 11 48 46.0 -0.4
PAYG Puerto Ayora 36.70 11 P P 11 48 50.0 -0.4
PAYG IAmb IAmb 11 49 12.0
comp=Z,29nm,0.9s
SIV San Ignacio 37.76 66 P P 11 48 59.5 0.0
comp=Z,3.5nm,1.0s,baz=250,slow=9.8,SNR=9.5
AQDB Aquidauana 39.12 76 eP P 11 49 11.2 +0.3
PTGB Pitanga 39.79 85 eP P 11 49 17.3 +0.7
TRCB Terra Rica 40.30 82 eP P 11 49 21.1 +0.4
OTAV Otavalo 40.75 28 eP P 11 49 25.4 +0.4
OTAV Otavalo 40.75 28 P P 11 49 24.6 -0.4
OTAV Otavalo 40.75 28 P P 11 49 24.6 -0.4
OTAV pmax pmax
comp=Z,31nm,1.5s
SAML Samuel 41.19 56 eP P 11 49 27.5 -0.6
SAML Samuel 41.19 56 P P 11 49 27.3 -0.8
SAML Samuel 41.19 56 P P 11 49 27.3 -0.8
SAML pmax pmax
comp=Z,14nm,1.4s
SALV Santo Antonio 41.81 71 eP P 11 49 32.9 -0.3
PCMB Pacaembu 42.00 81 eP P 11 49 35.0 +0.3
FRTB Fartura 42.46 85 eP P 11 49 39.2 +0.7
FLOC Florencia 43.09 31 P P 11 49 42.9 -0.8
ARAG Araguaiana, MT 44.89 74 eP P 11 49 58.4 +0.3
CLDB Colider 44.98 65 eP P 11 49 57.5 -1.3
ROSC El Rosal 46.59 31 P P 11 50 12.7 +0.8
comp=Z,9.2nm,0.5s,baz=258,slow=8.8,SNR=7.1
ROSC LR LR 12 07 04.6
comp=Z,1μm,18.8s,baz=230,slow=33
ROSC El Rosal 46.59 31 P P 11 50 11.2 -0.7
TBI Tubuai 47.15 271 eLQ LQ 12 01 30.7
comp=Z,647nm,23.8s
TBI eLR LR 12 03 28.5
comp=Z,736nm,29.5s,baz=123
BDFB Brasilia 47.87 77 P P 11 50 21.7 +0.1
comp=Z,3.0nm,0.6s,baz=176,slow=9.5,SNR=3.3
BDFB LR LR 12 09 29.0
comp=Z,504nm,20.4s,baz=254,slow=35
BDFB Brasilia 47.87 77 P P 11 50 20.1 -1.5
BDFB IAmb IAmb 11 50 44.4
comp=Z,22nm,1.5s
RUSC La Rusia 48.06 32 P P 11 50 22.2 -1.2
JTS Las Juntas de 48.37 15⇓iP P 11 50 24.8 -0.5
JTS pmax pmax
comp=Z,5.0nm,1.3s
MEH Mehetia 48.91 279 eT T 12 42 22.5
comp=Z,26nm,0.2s
PEXB Peixe 49.78 73 eP P 11 50 36.9 +0.6
TIAR Tiarei 50.09 278 eT T 12 43 53.9
comp=Z,4.2nm,0.3s
PPT2 Papeete2 50.26 278 eLQ LQ 12 02 48.0
comp=Z,9μm,37.2s
PPT2 eLR LR 12 04 56.0
comp=Z,456nm,23.2s
PPT Papeete 50.27 278 LR LR 12 05 57.2
comp=Z,235nm,20.1s,baz=199,slow=29
SJMB Sao Joao De Ma 51.54 85 eP P 11 50 49.2 -0.3
TGUH Tegucigalpa,Un 51.62 12 P P 11 50 48.8 -1.2
SDV Santo Domingo 51.80 33 eP P 11 50 52.0 +0.5
SDV Santo Domingo 51.80 33 P P 11 50 50.2 -1.4
QSPA South Pole Qui 53.13 180 P P 11 51 01.8 +1.0
comp=Z,3.6nm,0.8s,baz=134,slow=3.2,SNR=22
QSPA South Pole Qui 53.13 180 P P 11 51 01.1 +0.3
QSPA IAmb IAmb 11 51 04.4
comp=Z,18nm,1.4s
URIC Uribia, Colomb 53.75 30 P P 11 51 04.8 -0.9
TLIG Tlapa 54.39 358 P P 11 51 10.0 -0.4
VNA3 Neumayer Olymp 54.40 157 P P 11 51 08.2 -1.6
VNA2 Neumayer--Watz 55.19 156 P P 11 51 15.9 +0.3
baz=269,slow=7.7
SNAA Sanae 56.42 158 P P 11 51 24.8 +0.3
SNAA Sanae 56.42 158⇓iP P 11 51 22.1 -2.4
VNDA Vanda 56.55 195 LR LR 12 11 02.4
comp=Z,402nm,18.2s,baz=110,slow=31
VNDA Vanda 56.55 195 P P 11 51 25.6 +0.4
VNDA Vanda 56.55 195 P P 11 51 25.6 +0.4
VNDA pmax pmax
comp=Z,82nm,1.7s
TEIG Tepich 57.54 9 P P 11 51 32.1 -0.7
ZAIG Zacatecas 59.80 354 P P 11 51 48.3 -0.6
GTBY Guantanamo Bay 60.21 23 P P 11 51 50.9 -0.5
NVL N'lazarevskaya 61.13 159 eP P 11 51 58.8 +1.7
NVL pmax pmax
comp=Z,8.0nm,0.7s
NBLI Livramento-PB 61.47 77 eP P 11 52 01.8 +1.5
PDPR Patillas Dam, 61.92 33 P P 11 52 00.8 -2.2
NBPA Parau_RN 62.35 75 eP P 11 52 07.8 +1.7
SMRT St. Maarten 63.29 36 P P 11 52 10.7 -1.5
HPIG 64.25 351 P P 11 52 18.0 -0.6
HPIG IAmb IAmb 11 52 35.4
comp=Z,7.6nm,0.9s
833A Chaparral WMA, 65.12 357 P P 11 52 23.9 -0.1
833A IAmb IAmb 11 52 26.8
comp=Z,11nm,1.1s
833A Chaparral WMA, 65.12 357 P P 11 52 26.1 +2.1
baz=177
KHZ Kahutara 66.13 234 P P 11 52 31.5 +0.9
BSWZ Blackbirch Sta 66.25 235 P P 11 52 32.3 +0.9
TX31 Lajitas Ar. Si 66.41 353 P P 11 52 32.0 -0.4
TX31 IAmb IAmb 11 52 42.5
comp=Z,24nm,1.8s
TX32 Lajitas Array 66.41 353 P P 11 52 31.7 -0.8
TX32 IAmb IAmb 11 52 53.4
comp=Z,12nm,1.4s
TXAR Lajitas Array 66.41 353 P P 11 52 31.8 -0.6
comp=Z,2.3nm,1.0s,baz=170,slow=7.1,SNR=13
TXAR LR LR 12 15 44.0
comp=Z,164nm,18.2s,baz=0.0,slow=31
HKT Hockley 66.69 1 P P 11 52 33.8 -0.2
HKT Hockley 66.69 1⇓iP P 11 52 34.1 +0.1
HKT pmax pmax
comp=Z,2.0nm,1.1s

JCT Junction City 67.28 357 P P 11 52 37.2 -0.7
JCT IAmb IAmb 11 52 57.0
comp=Z,13nm,1.1s
JCT Junction City 67.28 357 P P 11 52 37.2 -0.7
JCT pmax pmax
comp=Z,13nm,1.1s
JCT Junction City 67.28 357 P P 11 52 38.6 +0.7
baz=177
435B Jarrell 67.52 359 P P 11 52 39.4 0.0
435B IAmb IAmb 11 53 01.4
comp=Z,8.4nm,0.9s
FOZ Fox Glacier 67.95 232 P P 11 52 42.1 0.0
342A Flagon Creek P 68.22 4 P P 11 52 44.1 +0.4
WHTX Lake Whitney, 68.72 359 P P 11 52 47.3 +0.4
baz=179
MNTX Cornudas Mount 68.92 352 P P 11 52 47.6 -0.6
baz=172
352A Blakely 69.07 11 P P 11 52 48.7 -0.4
319A Douglas 69.14 348 P P 11 52 48.9 -0.8
319A IAmb IAmb 11 53 01.1
comp=Z,9.8nm,1.1s
VBMS Vicksburg 69.18 5 P P 11 52 50.5 +0.8
baz=185
SYO Syowa Base 69.37 165⇑iP P 11 52 47.8 -2.8
SYO Syowa Base 69.37 165⇓epP P 11 52 50.0 -0.6
ABTX Abilene, Hawle 69.41 357 P P 11 52 53.1 +1.9
baz=177
143A Socs Landing, 69.60 5 P P 11 52 52.0 -0.3
121A Cookes Peak, D 70.05 350 P P 11 52 54.7 -0.6
121A IAmb IAmb 11 53 16.0
comp=Z,11nm,1.3s
121A Cookes Peak, D 70.05 350 P P 11 52 58.2 +2.9
baz=170
152A Waverly Hall 70.27 11 P P 11 52 56.6 +0.1
TUC Tucson 70.30 347 P P 11 52 56.2 -0.6
TUC IAmb IAmb 11 52 59.6
comp=Z,14nm,1.4s
TUC Tucson 70.30 347 P P 11 52 56.2 -0.6
TUC pmax pmax
comp=Z,14nm,1.5s
TUC Tucson 70.30 347 P P 11 52 57.1 +0.3
baz=168
LRAL Lakeview Retre 70.33 9 P P 11 52 55.9 -0.8
LRAL Lakeview Retre 70.33 9 P P 11 52 57.9 +1.1
baz=188
214A Organ Pipe Nat 70.34 345 P P 11 52 57.0 0.0
214A Organ Pipe Nat 70.34 345 P P 11 52 56.9 0.0
baz=166
154A Montrose 70.47 12 P P 11 52 58.9 +1.3
baz=191
Z50A Ashland 70.68 9 P P 11 52 58.2 -0.8
Z50A IAmb IAmb 11 53 07.7
comp=Z,11nm,0.9s
Z50A Ashland 70.68 9 P P 11 52 59.6 +0.7
baz=189
Z52A Williamson 70.83 11 P P 11 53 01.1 +1.3
baz=190
Z51A Franklin 70.84 10 P P 11 53 00.2 +0.3
Z51A IAmb IAmb 11 53 09.1
comp=Z,12nm,0.8s
MSTX Muleshoe 70.93 355 P P 11 53 00.5 -0.1
MSTX Muleshoe 70.93 355 P P 11 53 01.5 +0.9
baz=175
Z53A Monticello 71.05 11 P P 11 53 02.4 +1.3
baz=191
GOGA Godfrey 71.19 12 P P 11 53 01.6 -0.4
GOGA IAmb IAmb 11 53 11.7
comp=Z,20nm,1.3s
GOGA Godfrey 71.19 12 P P 11 53 01.6 -0.4
GOGA pmax pmax
comp=Z,20nm,1.3s
GOGA Godfrey 71.19 12 P P 11 53 03.5 +1.5
baz=191
MIAR Mount Ida 71.32 3 P P 11 53 04.2 +1.4
MIAR pmax pmax
comp=Z,19nm,1.3s
MIAR Mount Ida 71.32 3 P P 11 53 04.2 +1.4
baz=182
Y51A Rockmart 71.43 10 P P 11 53 04.8 +1.3
baz=190
NHSC New Hope 71.49 14 P P 11 53 05.8 +2.0
baz=194
WMOK Wichita Mounta 71.49 358 P P 11 53 03.5 -0.4
WMOK Wichita Mounta 71.49 358 P P 11 53 03.5 -0.4
WMOK pmax pmax
comp=Z,5.0nm,0.9s
WMOK Wichita Mounta 71.49 358 P P 11 53 03.9 0.0
baz=178
Y52A Lilburn 71.54 11 P P 11 53 04.0 -0.2
Y52A IAmb IAmb 11 53 13.3
comp=Z,18nm,1.1s
Y52A Lilburn 71.54 11 P P 11 53 05.4 +1.3
baz=190
OXF Oxford 71.55 6 P P 11 53 05.1 +1.0
baz=186
Z57A Bowman 71.57 14 P P 11 53 06.1 +1.8
baz=193
Y53A Monroe 71.61 11 P P 11 53 06.4 +1.8
baz=191
IKP In-Ko-Pah, Jac 71.74 343 P P 11 53 06.4 +0.9
baz=164
AMTX Amarillo 71.76 356 P P 11 53 04.5 -1.1
AMTX Amarillo 71.76 356 P P 11 53 07.5 +1.9
baz=176
Y54A Tignall 71.76 12 P P 11 53 06.4 +1.0
baz=192
Z58A St. Stephen 71.78 15 P P 11 53 07.6 +2.0
baz=194
SWSC Sam W. Stewart 71.95 343 P P 11 53 08.8 +2.2
baz=164
W39A Magazine 71.96 2 P P 11 53 06.6 0.0
W39A IAmb IAmb 11 53 16.8
comp=Z,15nm,1.1s
W39A Magazine 71.96 2 P P 11 53 08.6 +2.0
baz=182
Y55A Saluda 71.98 13 P P 11 53 08.6 +1.8
baz=192
FNO Franklin 71.98 359 P P 11 53 06.4 -0.3
W41B Gary Mavity, V 72.01 4 P P 11 53 05.7 -1.2
W41B IAmb IAmb 11 53 17.4
comp=Z,17nm,1.1s
W41B Gary Mavity, V 72.01 4 P P 11 53 08.3 +1.4
baz=184
X51A Calhoun 72.12 10 P P 11 53 09.3 +1.7
baz=190
HODGE Hodges 72.20 12 P P 11 53 08.3 +0.3
HODGE IAmb IAmb 11 53 17.6
comp=Z,16nm,1.1s
ANMO Albuquerque 72.25 351 LR LR 12 19 36.1
comp=Z,246nm,18.0s,baz=142,slow=32
ANMO Albuquerque 72.25 351 P P 11 53 08.1 -0.6
ANMO Albuquerque 72.25 351⇑iP P 11 53 08.0 -0.6
ANMO pmax pmax
comp=Z,2.0nm,1.3s
ANMO Albuquerque 72.25 351 P P 11 53 09.3 +0.6
baz=172
X53A Estanollee 72.29 11 P P 11 53 10.1 +1.5
baz=191
X52A Dahlonega 72.29 11 P P 11 53 10.3 +1.6
baz=190
Y14A Wickenburg 72.30 346 P P 11 53 08.5 -0.3
X18A Snowflake 72.33 348 P P 11 53 09.2 0.0
X18A IAmb IAmb 11 53 13.2
comp=Z,21nm,1.5s
JSC Jenkinsville 72.42 13 P P 11 53 09.8 +0.4
JSC IAmb IAmb 11 53 19.0
comp=Z,13nm,1.0s
JSC Jenkinsville 72.42 13 P P 11 53 09.8 +0.4
JSC pmax pmax
comp=Z,13nm,1.0s
Y12C Blythe 72.44 344 P P 11 53 09.7 +0.1
Y12C IAmb IAmb 11 53 16.2
comp=Z,16nm,1.4s
Y12C Blythe 72.44 344 P P 11 53 11.7 +2.2
baz=165
W49A Belvidere 72.48 9 P P 11 53 11.0 +1.3
baz=188
X16A Lo Mia Camp, P 72.48 347 P P 11 53 09.4 -0.6
X16A IAmb IAmb 11 53 13.1
comp=Z,16nm,1.8s
X54A Belton 72.48 12 P P 11 53 11.8 +2.0
baz=192
X55A Gracelyn & Ava 72.54 13 P P 11 53 11.5 +1.5
baz=192
TUL1 Leonard 72.63 1 P P 11 53 12.1 +1.4
baz=181

X56A White Oak 72.67 13 P P 11 53 12.9 +2.0
baz=193
W50A Signal Mountai 72.68 10 P P 11 53 12.2 +1.3
baz=189
W52A Murphy 72.77 11 P P 11 53 11.3 -0.2
W52A IAmb IAmb 11 53 20.8
comp=Z,16nm,1.1s
W52A Murphy 72.77 11 P P 11 53 13.7 +2.2
baz=190
BG3 Lake Jocassee 72.83 12 IAmb IAmb 11 53 21.4
comp=Z,22nm,1.1s
PAULI Pauline 72.85 13 P P 11 53 11.4 -0.5
MURC Murrieta 72.91 342 P P 11 53 15.6 +3.2
baz=163
BIRD Birdtown, Kers 72.92 14 IAmb IAmb 11 53 22.1
comp=Z,14nm,1.0s
LCAR Lake Charles 72.96 5 IAmb IAmb 11 53 21.2
comp=Z,21nm,1.1s
IRM Iron Mountain 72.96 344 P P 11 53 15.2 +2.5
baz=164
W53A Cullowhee 72.96 11 P P 11 53 14.1 +1.3
baz=191
BELC Belle Mtn. Jos 73.00 343 P P 11 53 15.6 +2.5
baz=164
V48A Smith Brothers 73.02 8 IAmb IAmb 11 53 21.3
comp=Z,12nm,0.8s
CPCT Cooper Cave 73.03 10 IAmb IAmb 11 53 22.1
comp=Z,12nm,1.2s
W54A Cherokee Point 73.04 12 P P 11 53 14.9 +1.8
baz=192
U40A Yellville 73.16 3 P P 11 53 15.1 +1.4
baz=183
V49A McMinnville 73.16 9 P P 11 53 14.9 +1.1
baz=189
V50A Pikevile 73.17 10 P P 11 53 16.7 +2.9
baz=190
KMSC Kings Mountain 73.25 13 IAmb IAmb 11 53 24.0
comp=Z,12nm,0.8s
KMSC Kings Mountain 73.25 13 P P 11 53 15.9 +1.6
baz=193
WVT Waverly 73.30 7 P P 11 53 14.2 -0.4
WVT IAmb IAmb 11 53 23.3
comp=Z,11nm,1.1s
WVT Waverly 73.30 7 P P 11 53 14.2 -0.4
WVT pmax pmax
comp=Z,11nm,1.1s
WVT Waverly 73.30 7 P P 11 53 15.5 +1.0
baz=187
TKL Tuckaleechee C 73.35 11 LR LR 12 21 40.2
comp=Z,161nm,19.5s,baz=184,slow=33
W56A Indian Trail 73.38 14 P P 11 53 16.5 +1.4
baz=193
V51A Loudon 73.40 10 P P 11 53 16.9 +1.7
baz=190
V53A Saluda 73.51 12 IAmb IAmb 11 53 25.8
comp=Z,20nm,1.0s
V53A Saluda 73.51 12 P P 11 53 17.5 +1.6
baz=191
W57A Gilead 73.51 14 P P 11 53 17.3 +1.5
baz=194
W58A Raeford 73.53 15 P P 11 53 17.4 +1.4
baz=194
WUAZ Wupatki 73.53 347 P P 11 53 19.0 +2.8
baz=168
GMRC Granite Mounta 73.68 344 P P 11 53 19.2 +2.2
baz=164
PBMO Poplar Bluff 73.72 5 IAmb IAmb 11 53 25.6
comp=Z,16nm,1.1s
V54A Nebo 73.76 12 P P 11 53 19.5 +2.2
baz=192
U49A Red Boiling Sp 73.91 9 P P 11 53 19.3 +1.2
baz=189
U50A Jamestown 73.94 10 P P 11 53 19.8 +1.5
baz=190
V55A Taylorsville 73.96 13 IAmb IAmb 11 53 27.5
comp=Z,24nm,1.1s
V55A Taylorsville 73.96 13 P P 11 53 20.1 +1.6
baz=193
MGMO Mountain Grove 73.98 4 IAmb IAmb 11 53 27.6
comp=Z,23nm,1.1s
U51A La Follette 74.02 11 P P 11 53 19.9 +1.1
baz=190
V56A Mocksville 74.05 14 P P 11 53 20.4 +1.4
baz=193
U52A Thorn Hill 74.13 11 P P 11 53 20.6 +1.1
baz=191
T47A Sharon Grove 74.22 8 IAmb IAmb 11 53 29.0
comp=Z,16nm,1.1s
U53A Fall Branch 74.23 12 P P 11 53 21.3 +1.2
baz=192
GSC Goldstone, Bar 74.44 343 P P 11 53 23.6 +2.2
baz=163
V59A Middlesex 74.46 15 P P 11 53 23.2 +1.8
baz=195
MAW Mawson 74.47 172 P P 11 53 22.1 +0.9
comp=Z,6.9nm,1.0s,baz=212,slow=8.6,SNR=2.8
MAW LR LR 12 25 16.9
comp=Z,280nm,18.2s,baz=231,slow=35
MAW Mawson 74.47 172 P P 11 53 21.1 -0.1
U54A Nelsons Funny 74.50 12 P P 11 53 22.9 +1.2
baz=192
T50A Nancy 74.53 10 P P 11 53 21.8 0.0
baz=190
U15A North Rim 74.58 347 IAmb IAmb 11 53 43.8
comp=Z,26nm,1.9s
U56A King 74.59 14 P P 11 53 24.4 +2.2
baz=193
T51A Gray 74.60 10 P P 11 53 23.3 +1.1
baz=190
U55A TA2, Sparta 74.62 13 P P 11 53 24.0 +1.6
baz=193
MVCO Mesa Verde 74.75 350 IAmb IAmb 11 53 43.5
comp=Z,26nm,1.4s
MVCO Mesa Verde 74.75 350 P P 11 53 24.9 +1.5
baz=170
ARVC Arvin 74.77 341 P P 11 53 25.2 +2.0
baz=162
V62A Hyde County Ai 74.77 17 P P 11 53 25.0 +1.8
baz=197
U57A Blanch 74.88 14 P P 11 53 25.8 +2.0
baz=194
T52A Hallie 74.89 11 P P 11 53 26.5 +2.6
baz=191
SDCO Great Sand Dun 74.92 353 P P 11 53 26.1 +1.7
baz=173
CCM Cathedral Cave 74.93 4 P P 11 53 23.8 -0.3
CCM Cathedral Cave 74.93 4 P P 11 53 23.8 -0.3
CCM pmax pmax
comp=Z,25nm,1.0s
CCM Cathedral Cave 74.93 4 P P 11 53 25.7 +1.6
baz=184
U58A Oxford 75.00 15 P P 11 53 26.5 +2.0
baz=195
S22A 4UR Ranch, Cre 75.06 352 IAmb IAmb 11 53 46.5
comp=Z,22nm,1.6s
S22A 4UR Ranch, Cre 75.06 352 P P 11 53 27.1 +1.9
baz=172
T54A Tazewell 75.07 12 P P 11 53 26.0 +1.0
baz=192
U59A Littleton 75.12 16 P P 11 53 26.6 +1.4
baz=195
ISA Isabella, Lake 75.19 342 P P 11 53 25.8 +0.1
ISA Isabella, Lake 75.19 342 P P 11 53 25.8 +0.1
ISA pmax pmax
comp=Z,5.0nm,1.0s
ISA Isabella, Lake 75.19 342 P P 11 53 28.2 +2.4
baz=162
S50A Richmond 75.24 10 P P 11 53 27.0 +1.1
baz=190
T55A Pulaski 75.27 13 P P 11 53 27.7 +1.6
baz=193
S51A Beattyville 75.32 11 P P 11 53 27.6 +1.3
baz=191
T56A Rocky Mt 75.32 14 P P 11 53 28.0 +1.6
baz=194
MPMC Manual Prospec 75.32 343 P P 11 53 28.4 +1.7
baz=163
VES Vestal, Richgr 75.51 341 P P 11 53 29.0 +1.6
baz=162
T58A Grand View Acr 75.53 15 P P 11 53 29.0 +1.4
baz=195
WCI Wyandotte Cave 75.54 8 P P 11 53 28.2 +0.6
WCI pmax pmax
comp=Z,12nm,1.2s
WCI Wyandotte Cave 75.54 8 P P 11 53 28.2 +0.6
baz=188
CBKS Cedar Bluff 75.58 357 IAmb IAmb 11 53 37.5
comp=Z,16nm,1.1s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CBKS	Cedar Bluff	75.58	357	P	P	11 53 29.1	+1.2
	baz=177						
T59A	Double "B" Far	75.76	16	P	P	11 53 29.7	+0.9
	baz=196						
KSU1	Kansas State U	75.81	360	P	P	11 53 31.0	+1.8
	baz=180						
CWC	Cottonwood Cre	75.83	342	P	P	11 53 32.2	+2.7
	baz=162						
S54A	Dingess, Beckl	75.84	12	P	P	11 53 31.0	+1.6
	baz=192						
R50A	Paris	75.84	10	IAmb	IAmb	11 53 37.6	
	comp=Z,14nm,1.1s						
R50A	Paris	75.84	10	P	P	11 53 30.1	+0.8
	baz=190						
TPNV	Topopah Spring	75.89	344	P	P	11 53 31.0	+1.2
	baz=164						
MSVF	Nonsavu	75.93	258	P	P	11 53 30.2	-0.4
MSVF	Nonsavu	75.93	258⇓	iP	P	11 53 30.3	-0.2
MSVF				pmax	pmax		
	comp=Z,11nm,1.0s						
KSCO	Kaye Shedlock'	75.93	355	IAmb	IAmb	11 53 40.5	
	comp=Z,17nm,1.1s						
KSCO	Kaye Shedlock'	75.93	355	P	P	11 53 31.7	+1.7
	baz=175						
S55A	Lewisburg	75.95	13	P	P	11 53 31.4	+1.4
	baz=193						
R51A	Hillsboro	75.97	10	P	P	11 53 31.5	+1.5
	baz=191						
S56A	Natural Bridge	76.04	14	P	P	11 53 31.9	+1.4
	baz=194						
Q24A	Divide	76.09	353	P	P	11 53 33.1	+2.0
	baz=173						
GRAC	Grapevine Rang	76.19	343	P	P	11 53 34.3	+2.9
	baz=163						
R54A	Victor	76.27	13	P	P	11 53 33.1	+1.3
	baz=193						
S58A	Poland Farm, P	76.28	15	P	P	11 53 33.6	+1.9
	baz=195						
Q48A	North Vernon	76.30	9	P	P	11 53 33.1	+1.2
	baz=189						
Q50A	Georgetown	76.44	10	P	P	11 53 34.1	+1.4
	baz=190						
Q49A	Aurora	76.48	9	P	P	11 53 36.0	+3.1
	baz=190						
R55A	Marlinton	76.52	13	P	P	11 53 35.6	+2.4
	baz=193						
P43A	Skaggs, Pawnee	76.63	6	IAmb	IAmb	11 53 42.5	
	comp=Z,19nm,1.0s						
R58B	Mineral	76.65	15	P	P	11 53 35.5	+1.7
	baz=195						
Q51A	Peebles	76.71	11	IAmb	IAmb	11 53 43.6	
	comp=Z,19nm,1.1s						
Q51A	Peebles	76.71	11	P	P	11 53 35.8	+1.5
	baz=191						
R56A	Bull Pasture M	76.77	14	P	P	11 53 36.3	+1.6
	baz=194						
Q52A	Bidwell	76.81	11	P	P	11 53 35.9	+1.1
	baz=192						
Q53A	Leroy	76.83	12	P	P	11 53 37.0	+2.1
	baz=192						
R57A	Stanardsville	76.84	14	P	P	11 53 34.9	-0.1
	baz=195						
R58A	Rapidan	76.95	15	P	P	11 53 38.4	+2.8
	baz=195						
Q54A	Coxs Mills	77.07	13	P	P	11 53 38.7	+2.5
	baz=193						
R11A	Troy Canyon, C	77.09	345	P	P	11 53 37.2	+0.6
	baz=164						
P51A	Williamsport	77.20	11	IAmb	IAmb	11 53 45.8	
	comp=Z,20nm,1.1s						
P51A	Williamsport	77.20	11	P	P	11 53 38.3	+1.4
	baz=191						
Q55A	Buckhannon	77.22	13	P	P	11 53 39.0	+1.8
	baz=193						
P50A	Jamestown	77.22	10	P	P	11 53 38.2	+1.2
	baz=190						
Q56A	Snyder Ridge,	77.43	14	P	P	11 53 41.3	+3.0
	baz=194						
P53A	Whipple	77.47	12	P	P	11 53 40.0	+1.5
	baz=192						
P52A	Corning	77.49	11	P	P	11 53 40.1	+1.5
	baz=192						
O20A	White River Ci	77.59	351	P	P	11 53 40.8	+1.4
	baz=170						
Q58A	Fox Den Farm,	77.63	15	P	P	11 53 40.7	+1.3
	baz=195						
O48A	Farmland	77.68	9	P	P	11 53 39.7	0.0
	baz=189						
O49A	Covington	77.72	10	IAmb	IAmb	11 53 48.7	
	comp=Z,16nm,1.1s						
O49A	Covington	77.72	10	P	P	11 53 40.4	+0.6
	baz=190						
P54A	Burton	77.74	13	P	P	11 53 39.5	-0.5
	baz=193						
NV11	Mina Array Sit	77.74	343	P	P	11 53 39.4	-0.8
O50A	Cable	77.77	10	P	P	11 53 41.5	+1.3
	baz=190						
NVAR	Mina Array Bea	77.78	343	P	P	11 53 40.5	-0.1
	comp=Z,5.0nm,0.7s,baz=178,slow=6.6,SNR=38						
NVAR	Mina Array Bea	77.78	343	P	P	11 53 39.9	-0.6
Q59A	Harwood	77.78	16	P	P	11 53 42.4	+2.4
	baz=196						
CMB	Columbia Colle	77.92	341	IAmb	IAmb	11 53 47.7	
	comp=Z,26nm,1.9s						
O51A	Pataskala	77.92	11	P	P	11 53 42.7	+1.7
	baz=191						
ACSO	Alum Creek Sta	77.95	11	P	P	11 53 42.1	+1.0
	baz=191						
RYN	Ryan	78.02	343	IAmb	IAmb	11 53 48.7	
	comp=Z,24nm,1.8s						
N23A	Red Feather La	78.08	353	P	P	11 53 44.1	+1.9
	baz=172						
BGNE	Belgrade	78.13	359	P	P	11 53 44.0	+1.8
	baz=179						
O53A	New Philadelph	78.24	12	P	P	11 53 44.7	+1.9
	baz=192						
N48A	Decatur	78.29	9	P	P	11 53 44.0	+1.0
	baz=189						
DUG	Dugway, Tooele	78.34	347	P	P	11 53 44.1	+0.6
DUG				pmax	pmax		
	comp=Z,9.0nm,1.2s						
DUG	Dugway, Tooele	78.34	347	P	P	11 53 44.4	+0.9
	baz=167						
N50A	Nevada	78.45	10	P	P	11 53 44.7	+0.8
	baz=191						
N49A	Columbus Grove	78.46	10	P	P	11 53 44.9	+1.0
	baz=190						
PNTR	Pine Nut	78.72	342	IAmb	IAmb	11 56 02.6	
	comp=Z,42nm,2.0s						
N53A	Lisbon	78.85	12	P	P	11 53 47.2	+1.1
	baz=193						
L40A	Anamosa	78.92	4	IAmb	IAmb	11 53 55.7	
	comp=Z,15nm,1.1s						
O58A	Lewisberry	78.93	15	P	P	11 53 47.4	+0.9
	baz=196						
M48A	Edgerton	78.94	9	IAmb	IAmb	11 53 55.7	
	comp=Z,18nm,0.9s						
M48A	Edgerton	78.94	9	P	P	11 53 47.8	+1.2
	baz=190						
L42A	Oliver, Polo	78.97	5	IAmb	IAmb	11 53 55.1	
	comp=Z,13nm,1.1s						
M49A	Liberty Center	79.03	10	P	P	11 53 48.1	+1.0
	baz=190						
M50A	Fremont	79.09	10	P	P	11 53 48.9	+1.6
	baz=191						
N54A	Moraine State	79.14	13	P	P	11 53 49.0	+1.3
	baz=193						
N55A	Marion Center	79.15	14	P	P	11 53 48.9	+1.0
	baz=194						
PAHR	Pah Rah Range	79.25	342	IAmb	IAmb	11 54 05.2	
	comp=Z,21nm,1.7s						
L44A	Lake County Fo	79.28	7	P	P	11 53 49.9	+1.4
	baz=187						
L47A	Sherwood	79.37	9	P	P	11 53 50.1	+1.2
	baz=189						
L48A	N Adams	79.43	9	P	P	11 53 50.6	+1.4
	baz=190						
M54A	Oil Creek Stat	79.73	13	P	P	11 53 51.2	+0.3
	baz=194						
K43A	Burlington	79.77	6	IAmb	IAmb	11 54 00.4	
	comp=Z,23nm,1.1s						
K22A	Casper	79.88	353	P	P	11 53 53.5	+1.6
	baz=172						
M56A	Emporium	79.98	14	P	P	11 53 52.8	+0.5
	baz=195						
K47A	Vermontville	80.08	9	P	P	11 53 54.7	+2.0
	baz=189						
M58A	Price's Panora	80.22	15	P	P	11 53 53.7	0.0
	baz=196						
K48A	Perry	80.32	9	P	P	11 53 55.0	+1.0
	baz=190						
PD31	Pinedale Array	80.35	350	P	P	11 53 53.9	-0.7
PDAR	Pinedale Array	80.35	350	P	P	11 53 54.0	-0.5
	comp=Z,3.1nm,0.7s,baz=164,slow=6.1,SNR=24						
PDAR	Pinedale Array	80.35	350	P	P	11 53 53.5	-1.1
ECSD	EROS Data Cent	80.44	360	IAmb	IAmb	11 54 04.0	
	comp=Z,14nm,1.1s						
ECSD	EROS Data Cent	80.44	360	P	P	11 53 55.4	+0.7
	baz=180						
L54A	Sinclairville	80.50	13	P	P	11 53 55.8	+0.7
	baz=194						
J48A	Bridge Port	80.85	9	P	P	11 53 57.8	+1.0
	baz=190						
RSSD	Black Hills	81.11	355	P	P	11 53 58.9	+0.3
RSSD				IAmb	IAmb	11 54 09.0	
	comp=Z,15nm,1.1s						
RSSD	Black Hills	81.11	355	P	P	11 53 58.9	+0.3
RSSD				pmax	pmax		
	comp=Z,15nm,1.1s						
RSSD	Black Hills	81.11	355	P	P	11 54 00.7	+2.1
	baz=174						
REDW	Red Top Meadow	81.12	350	IAmb	IAmb	11 54 21.0	
	comp=Z,19nm,1.2s						
MOD	Modoc Plateau	81.55	342	IAmb	IAmb	11 54 11.3	
	comp=Z,24nm,1.8s						
WVOR	Wild Horse Val	81.66	344	IAmb	IAmb	11 54 22.8	
	comp=Z,13nm,1.3s						
WVOR	Wild Horse Val	81.66	344	P	P	11 54 01.0	-0.4
WVOR				pmax	pmax		
	comp=Z,11nm,1.3s						
M02C	Callahan	81.72	340	P	P	11 54 04.7	+3.0
	baz=159						
FLWY	Flagg Ranch	81.80	350	IAmb	IAmb	11 54 12.1	
	comp=Z,12nm,0.8s						
M04C	Macdoel	81.82	341	P	P	11 54 03.6	+1.4
	baz=160						
H46A	Fife Lake	81.90	8	P	P	11 54 04.0	+1.6
	baz=189						
YBH	Yreka Blue Hor	82.00	341	LR	LR	12 22 04.7	
	comp=Z,156nm,21.3s,baz=146,slow=30						
SPMN	Marine on St.	82.00	3	IAmb	IAmb	11 54 12.4	
	comp=Z,18nm,0.9s						
SPMN	Marine on St.	82.00	3	P	P	11 54 04.4	+1.4
	baz=183						
H17A	Grant Village	82.09	350	P	P	11 54 05.7	+1.9
	baz=169						
G40A	Rib Lake	82.18	5	IAmb	IAmb	11 54 13.6	
	comp=Z,18nm,1.2s						
DZM	Mont Dzumac	82.29	248	eLR	LR	12 19 37.3	
	comp=Z,861nm,28.0s						
J08A	Circle Bar Ran	82.51	344	IAmb	IAmb	11 54 10.5	
	comp=Z,9.8nm,1.0s						
RLMT	Red Lodge	82.63	351	IAmb	IAmb	11 54 23.9	
	comp=Z,7.5nm,0.9s						
RLMT	Red Lodge	82.63	351	P	P	11 54 08.1	+1.5
	baz=170						
G47A	Hillman	82.68	9	P	P	11 54 07.9	+1.4
	baz=190						
J05D	Fort Rock, OR	83.08	342	P	P	11 54 11.3	+2.5
	baz=160						
K02D	Willamette Mer	83.16	340	P	P	11 54 11.3	+2.2
	baz=158						
DLMT	Dillon	83.34	349	IAmb	IAmb	11 54 31.7	
	comp=Z,14nm,1.6s						
I07A	Izee	83.43	344	IAmb	IAmb	11 54 26.3	
	comp=Z,11nm,1.0s						
PINE	Pine Mountain	83.49	342	IAmb	IAmb	11 54 21.6	
	comp=Z,14nm,1.1s						
F48A	Evansville	83.49	10	P	P	11 54 11.0	+0.4
	baz=191						
F49A	Sandfield	83.50	10	P	P	11 54 10.9	+0.2
	baz=192						
H58A	Gabriels	83.62	16	P	P	11 54 12.8	+1.4
	baz=198						
BMO	Blue Mountains	83.69	345	IAmb	IAmb	11 54 28.1	
	comp=Z,21nm,1.9s						
LAO	LASA Array	83.85	353	P	P	11 54 14.5	+1.9
	baz=172						
I04A	Tendick Farm,	83.85	341	P	P	11 54 14.1	+1.5
	baz=160						
I03D	Drain, OR	84.00	341	P	P	11 54 15.7	+2.3
	baz=159						
I05D	Terrebonne, OR	84.10	342	P	P	11 54 15.4	+1.5
	baz=160						
E48A	Lockeyer	84.19	10	P	P	11 54 14.6	+0.3
	baz=191						
G08A	Pilot Rock	84.45	344	IAmb	IAmb	11 54 26.5	
	comp=Z,9.4nm,1.0s						
H04D	Lebanon	84.62	342	P	P	11 54 17.4	+1.0
	baz=159						
D47A	Chapleau	84.63	9	P	P	11 54 16.8	+0.3
	baz=191						
E54A	Lac Daplat, Po	84.95	13	P	P	11 54 18.5	+0.5
	baz=195						
F07A	Phinny Hill Vi	85.24	344	IAmb	IAmb	11 54 42.1	
	comp=Z,16nm,1.3s						
D53A	Lac Vacive, Po	85.48	13	P	P	11 54 20.2	-0.5
	baz=195						
CAN	Canberra	85.69	228	P	P	11 54 21.2	-1.2
CAN	Canberra	85.69	228	P	P	11 54 21.3	-1.2
CAN				pmax	pmax		
	comp=Z,79nm,2.0s						
E07A	Sunnyside	85.86	344	IAmb	IAmb	11 54 43.8	
	comp=Z,8.5nm,1.1s						
D08A	Wollman Farm,	86.13	345	IAmb	IAmb	11 54 40.1	
	comp=Z,21nm,1.5s						
TOO	Toolangi	86.17	225	P	P	11 54 23.9	-0.9
TOO	Toolangi	86.17	225	P	P	11 54 23.9	-0.9
TOO				pmax	pmax		
	comp=Z,65nm,2.0s						
NEW	Newport	86.93	346	IAmb	IAmb	11 54 37.4	
	comp=Z,9.0nm,1.2s						
NEW	Newport	86.93	346	P	P	11 54 30.2	+2.3
NEW				pmax	pmax		
	comp=Z,9.0nm,1.3s						
NEW	Newport	86.93	346	P	P	11 54 30.3	+2.4
	baz=164						
ULM	Lac du Bonnet	86.96	0	P	P	11 54 28.8	+0.8
	comp=Z,1.3nm,0.4s,baz=196,slow=4.7,SNR=4.6						
ULM	Lac du Bonnet	86.96	0	IAmb	IAmb	11 54 37.0	
	comp=Z,14nm,1.2s						
STKA	Stephens Creek	92.48	226	LR	LR	12 28 00.3	
	comp=Z,364nm,21.4s,baz=158,slow=30						
BBB	Bella Bella	93.07	341	LR	LR	12 27 11.1	
	comp=Z,28nm,18.7s,baz=344,slow=29						
YKA	Yellowknife Ar	100.30	352	P	Pdif	11 55 30.1	+1.0
	comp=Z,0.2nm,0.5s,baz=159,slow=3.6,SNR=3.6						
H01W1	Cape Leeuwin H	102.89	206	T	T	13 51 10.9	
	baz=155,slow=76,SNR=36						
H01W2	Cape Leeuwin H	102.90	206	T	T	13 51 11.1	
	baz=155,slow=76,SNR=47						
H01W3	Cape Leeuwin H	102.91	206	T	T	13 51 12.1	
	baz=155,slow=76,SNR=50						
H11S2	WAKE ISLAND Hy	106.16	281	T	T	13 54 13.7	
	baz=126,slow=75,SNR=7.0						
H11S1	WAKE ISLAND Hy	106.16	281	T	T	13 54 17.5	
	baz=126,slow=75,SNR=6.2						
H11S3	WAKE ISLAND Hy	106.17	281	T	T	13 54 13.4	
	baz=126,slow=75,SNR=5.4						
BILL	Bilibino	126.43	332⇑	iPKIKP	PKPdf	12 00 44.2	-1.0
GERES	GERESS Array B	129.33	53	PKP	PKiKP	12 00 53.1	+0.9
	comp=Z,1.1nm,0.7s,baz=157,slow=3.2,SNR=3.6						
GERES	GERESS Array B	129.33	53		PKPdf	12 00 49.6	-1.9
GERES	GERESS Array B	129.33	53	PKIKP	PKPdf	12 00 49.6	-1.9
TIH	Tihany	131.61	57	eP	PKiKP	12 01 01.0	+4.3
CSKK	Cskako	131.96	56	eP	PKiKP	12 01 01.0	+3.6
BUD	Budapest	132.49	56	eP	PKiKP	12 01 01.0	+2.5
BSZH	Besenyszg	133.28	57	eP	PKiKP	12 01 01.0	+0.9
LTVH	Ltavrtes, Hu	134.39	57	eP	PKPdf	12 01 01.0	+0.1
AKASG	Malin Array Be	139.54	53	PKP	PKPdf	12 01 10.7	+0.3
	comp=Z,0.2nm,0.3s,baz=271,slow=2.7,SNR=2.7						
AKASG	Malin Array Be	139.54	53		PKPdf	12 01 09.8	-0.6
AKASG	Malin Array Be	139.54	53	PKIKP	PKPdf	12 01 09.8	-0.6
BRTR	Keskin Array B	141.29	70	PKP	PKPdf	12 01 15.0	+0.9
	comp=Z,0.3nm,0.5s,baz=253,slow=1.5,SNR=2.5						
BRTR	Keskin Array B	141.29	70	PKIKP	PKPdf	12 01 15.0	+0.9
KLMR	Klimovskoe	143.67	35	ePKPdf	PKPbc	12 01 15.8	+0.9
KLMR				AMP		12 01 26.4	
	comp=Z,23nm,1.5s						
KLMR	Klimovskoe	143.67	35	ePKIKP	PKPbc	12 01 15.7	+0.8
KLMR				pmax	pmax		
	comp=Z,23nm,1.5s						
OBN	Obninsk	143.67	45	i PKIKP	PKPbc	12 01 15.2	+0.1
OBN				i		12 04 26.2	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KULM	Kulim	144.65	211		PKPab	12 01 18.6	-0.6
RAYN	Ar Rayn	144.81	102		PKPab	12 01 19.6	-0.1
RAYN	Ar Rayn	144.81	102	PKIKP	PKPab	12 01 19.6	-0.1
KSRS	Korea Array	144.84	284	PKP	PKPab	12 01 18.5	-0.8
	comp=Z,2.2nm,0.9s,baz=97,slow=4.3,SNR=3.9						
ZEA	Zeya	145.67	313	ePKIKP	PKPab	12 01 22.2	+0.4
ZEA				pmax	pmax		
	comp=Z,63nm,2.0s						
VSR	Storozhevoye	145.79	51	ePKIKP	PKPdf	12 01 19.0	-2.4
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VORD	Divnogorie	145.90	52	ePKIKP	PKPdf	12 01 18.4	-3.2
VORD				pmax	pmax		
	comp=Z,20nm,0.4s						
PRGR	Permogore	146.02	32	ePKP2	PKiKP	12 01 24.9	-0.7
PRGR				pmax	pmax		
	comp=Z,13nm,0.6s						
VRH	Novokhopyorsk	147.38	51	ePKP2	PKPbc	12 01 25.8	-0.8
VRH				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2	Changchun	147.60	295	ePKPbc	PKPab	12 01 30.0	+0.4
KIV	Kislovodsk	148.52	65	i PKP2	PKiKP	12 01 31.9	+0.4
KIV				pmax	pmax		
	comp=Z,36nm,1.0s						
KIV				MLR	MLR		
	comp=Z,230nm,24.0s						
KBZ	Khabaz	148.67	65	PKPbc	PKPbc	12 01 29.7	-0.5
	comp=Z,3.7nm,0.9s,baz=317,slow=1.4,SNR=4.6						
GOF	Gofitskoye	148.79	62⇑	ePKP2	PKPab	12 01 40.1	+5.7
NJ2	Nanjing	150.51	271	ePKPbc	PKPdf	12 01 29.4	-0.4
BOD	Bodaibo	151.13	326	ePKIKP	PKiKP	12 01 36.4	+0.1
BOD				pmax	pmax		
	comp=Z,15nm,1.6s						
ARU	Arti	154.46	33	PKIKP	PKPbc	12 01 41.6	-1.6
CMAR	Chiang Mai Arr	156.98	220	PKPab	PKPab	12 02 09.1	-0.4
	comp=Z,1.6nm,0.8s,baz=177,slow=3.0,SNR=8.4						
HHC	Hu-ho-hao-te	157.85	288	ePKP	PKPdf	12 01 41.5	+1.5
ABKAR	Akbulak array	159.09	47	PKPdf	PKPdf	12 01 41.0	0.0
ABKAR				PKPab	PKPab	12 02 18.9	+1.1
SONM	Songino Array	160.01	310	PKPab	PKPab	12 02 22.0	-0.1
	comp=Z,0.1nm,0.3s,baz=74,slow=5.1,SNR=2.5						
SONM	Songino Array	160.01	310	PKPdf	PKPdf	12 01 43.1	+0.7
SONM					PKPab	12 02 24.0	+2.0
SONM	Songino Array	160.01	310	PKP2	PKPab	12 02 22.0	-0.1
CD2	Chengdu	162.07	256	PKP	PKPdf	12 01 44.5	-0.5
ZALV	Zalesovo Beam	163.11	357	PKP	PKPdf	12 01 42.4	-2.7
	comp=Z,0.5nm,0.4s,baz=252,slow=0.9,SNR=2.7						
ZALV				PKPab	PKPab	12 02 35.3	+0.2
	comp=Z,0.5nm,0.4s,baz=47,slow=4.9,SNR=2.5						
LZH	Lanzhou	163.57	273	ePKP	PKPdf	12 01 43.0	-3.4
LZH				pPKP	sPKPdf	12 01 53.0	+3.4
MKAR	Makanchi Array	170.26	5	PKPab	PKPab	12 03 05.6	-1.3
	comp=Z,1.1nm,0.9s,baz=20,slow=3.9,SNR=7.0						
MKAR	Makanchi Array	170.26	5	PKPdf	PKPdf	12 01 51.3	+0.4
MKAR					PKPab	12 03 08.3	+1.4
WMQ	Urumqi	172.53	336	ePKP	PKPdf	12 01 52.0	-0.2
WMQ				LR	LR		
	comp=Z,310nm,28.8s						
WMQ				LR	LR		
	comp=Z,1μm,28.8s						
WMQ				LR	LR		
	comp=Z,880nm,28.9s						
KSH	Kashi	173.65	65	PKP	PKPdf	12 01 53.0	+0.2
KSH				PP	PP	12 07 13.1	-1.8
KSH				AMB	AMB		
	comp=Z,320nm,5.7s						

NIED **10** *11:49:00,39°.70N×143°.60E,h17km,Mw3.7 Best double couple: $M_0$3.87000×10^{14} NP1:ϕ_s29.00000°,δ62.00000°, λ99.00000°. NP2:ϕ_s190.00000°,δ29.00000°,λ73.00000°.*
JMA **10** *11:49:40.7±0.1,39°.66N×143°.61E,h40km,M3.9*
IDC **10** *11:49:47.7±5.8,40°.10N×142°.13E,h0km,mb3.6/3, mb1 3.5/5,mb1mx3.4/29,mbtmp3.5/5,ML3.0/2,Error ellipse: s-maj=108.8km s-min=29.0km az=112.0*
ISC 10 11:49:41.6±2.5,39°.69N±0°.05×143°.49E±0°.08,h19km±8km, n26,σ1§14/33,mb3.5/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
JTH	Tanohata	1.28	282	P	Pn	11 50 03.8	-0.6
JTH				eS	Sb	11 50 21.4	+0.3
MIYJ	Miyakonagasawa	1.29	265	P	Pn	11 50 04.3	-0.4
MIYJ				eS	Sb	11 50 21.3	-0.3
JKEN	Kujiedanarisaw	1.46	291	P	Pn	11 50 06.6	-0.4
JKEN				eS	Sn	11 50 25.1	-0.5
JANG	Nango	1.66	295	P	Pn	11 50 09.3	-0.5
JANG				eS	Sn	11 50 29.7	-0.9
JOM	Ohasama	1.71	263	P	Pn	11 50 10.7	+0.3
JOM				eS	Sn	11 50 32.5	+0.7
JMK	Ichinoseki	1.91	248	P	Pn	11 50 12.8	-0.3
JMK				S	Sn	11 50 36.2	-0.5
JIO	Ouri	2.08	234	P	Pn	11 50 14.4	-1.0
JOT	Ohata	2.51	313	P	Pn	11 50 21.7	+0.3
JOT				eS	Sn	11 50 51.9	+0.4
JYK	Kaneyama	2.55	253	P	Pn	11 50 22.1	+0.2
JNBK	Urakawa-nobuka	2.65	348	P	Pn	11 50 24.4	+1.1
JNBK				eS	Sn	11 50 56.6	+1.8
JKB	Kayabe	2.88	320	P	Pn	11 50 27.4	+0.9
JCH	Churui	2.92	358	P	Pn	11 50 27.1	+0.1
JCH				eS	Sn	11 51 00.6	-1.0
JFT	Otama	3.29	230	P	Pn	11 50 31.7	-0.4
JFT				eS	Sn	11 51 10.5	-0.2
JAK	Akkeshi	3.42	15	P	Pn	11 50 33.4	-0.5
JAK				S	Sn	11 51 13.2	-0.8
ASAJ	Asahikawa	4.47	352	Pn	Pn	11 50 51.3	+3.0
	1.3nm,0.3s,baz=191,slow=16,SNR=6.6						
ASAJ				Sn	Sn	11 51 38.3	-1.6
	1.6nm,0.3s,baz=60,slow=20,SNR=2.8						
MJAR	Matsushiro Arr	5.22	235	Pn	Pn	11 50 59.8	+1.1
	0.2nm,0.3s,baz=44,slow=12,SNR=15						
MAT	Matsushiro	5.22	235	P	Pn	11 50 59.6	+0.9
MAT				eS	Sn	11 52 01.6	+3.2
SONM	Songino Array	27.78	299	P	P	11 55 28.2	-1.2
	0.5nm,0.6s,baz=101,slow=8.0,SNR=4.1						
H11N2	WAKE ISLAND Hy	28.30	128	T	T	12 26 31.9	
	baz=318,slow=75,SNR=19						
H11N1	WAKE ISLAND Hy	28.31	128	T	T	12 26 32.0	
	baz=318,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	28.31	128	T	T	12 26 32.7	
	baz=318,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	29.12	130	T	T	12 27 16.9	
	baz=318,SNR=3.8						
H11S3	WAKE ISLAND Hy	29.12	130	T	T	12 27 30.5	
	baz=318						
H11S2	WAKE ISLAND Hy	29.13	130	T	T	12 27 16.9	
	baz=318						
ZALV	Zalesovo Beam	41.39	310	P	P	11 57 26.1	-0.2
	0.5nm,0.4s,baz=88,slow=9.5,SNR=3.2						
MKAR	Makanchi Array	44.14	300	P	P	11 57 49.2	+0.3
	0.3nm,0.5s,baz=82,slow=8.6,SNR=5.2						

HEL 10 11:58:57.2±0.2,69°.40N×30°.69E,h0km,ML1.1, Explosion,Norway-Murmansk border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
KEV	Kevo	1.34	287	PG	Pg	11 59 21.2	-1.6
	baz=110						
KEV				MSG		11 59 37.6	
	comp=Z,0.8nm,0.2s						
KEV				SB	Sg	11 59 38.7	-1.5
VRF	Varrio	1.71	194	MSG		11 59 48.0	
	comp=Z,1.3nm,0.2s						
VRF				SN	Sn	11 59 50.5	-0.1
ARE0	ARCESS Array S	1.83	277	PG	Pn	11 59 29.9	0.0
	baz=93						
ARE0				SN	Sn	11 59 53.6	-0.2

SNET **10** *12:01:23.3±1.1,13°.91N×90°.85W,h14km±6km,ML3.7*
UCR **10** *12:01:23.4±1.1,13°.93N×90°.85W,h13km±11km,ML3.7*
GCG **10** *12:01:24.0±0.5,13°.73N×91°.05W,h35km±999km,MD3.7*
ISC 10 12:01:21.2±1.6,13°.69N±0°.08×90°.86W±0°.06,h10km,n20, σ1§84/31,1D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
PCG	Pacaya	0.74	19	eP	Pn	12 01 39.1	+1.1
PCG	Pacaya	0.74	19	eP	Pn	12 01 39.1	+1.1
FUG	Fuego 3	0.75	1⇓	eP	Pn	12 01 38.7	+0.6
FUG	Fuego 3	0.75	1	eP	Pn	12 01 38.7	+0.6

FAME	Alcaldia de Sa	0.83	79	eP	Pg	12 01 33.3	-4.0
FAME				eS	Sg	12 01 45.8	-2.3
FAME	Alcaldia de Sa	0.83	79	eP	Pg	12 01 33.3	-4.0
FAME				eS	Sg	12 01 45.8	-2.3
NBG	Las Nubes	1.02	29	eP	Pn	12 01 43.9	+2.1
NBG				eS	Sn	12 01 59.1	+2.7
NBG	Las Nubes	1.02	29	eP	Pn	12 01 43.9	+2.1
NBG				eS	Sn	12 01 59.1	+2.7
CEVE	Cerro Verde	1.21	83	eP	Pg	12 01 45.7	+1.3
CEVE				eS	Sn	12 02 01.7	+0.8
CEVE				IAML		12 02 05.8	
	comp=Z,2µm,0.3s						
CEVE	Cerro Verde	1.21	83	eP	Pg	12 01 45.7	+1.3
CEVE				eS	Sn	12 02 01.7	+0.8
CEVE				IAML		12 02 05.8	
	comp=Z,2µm,0.3s						
SBLS	San Blas	1.21	83	eP	Pg	12 01 45.6	+1.1
SBLS				eS	Sn	12 02 02.2	+1.3
SBLS	San Blas	1.21	83	eP	Pg	12 01 45.6	+1.1
SBLS				eS	Sn	12 02 02.2	+1.3
STG3	Santiaguito 3,	1.23	326	eP	Pb	12 01 43.6	-1.1
STG3	Santiaguito 3,	1.23	326	eP	Pb	12 01 43.5	-1.1
MTO3	Montecristo	1.61	64	eP	Pb	12 01 50.5	-0.8
MTO3				eS	Sg	12 02 11.8	-1.4
MTO3	Montecristo	1.61	64	eP	Pb	12 01 50.5	-0.8
MTO3				eS	Sg	12 02 11.8	-1.4
LFRS	El Faro	1.75	92	eP	Pg	12 01 53.9	-0.9
LFRS				eS	Sg	12 02 17.1	-0.3
MRL	Marmol	1.79	39	iP	Pb	12 01 53.9	-0.3
CNCH	Conchagua	2.97	98	eP	Pn	12 02 10.3	+1.7
CNCH	Conchagua	2.97	98	eP	Pn	12 02 10.3	+1.7

BJI **10** 12:06:40.5±0.0, 40.23N×48.06E, h48km, mB5.6/52, mb5.6/72, Ms5.1/65, Ms7 4.8/60

THR **10** 12:06:41.9±0.4, 40.36N×48.84E, h14km±6km, ML5.7

GII **10** 12:06:44.9±1.1, 40.50N×48.92E, h60km

DRS **10** 12:06:46.6±0.0, 40.10N×49.19E, h25km, FELT I=IV MSK at Baku, Akhty; I=III-IV - at Derbent; I=II-III at Makhachkala

MOS **10** 12:06:46.8±1.0, 40.29N×48.72E, h60km, mb5.6/106, MS4.4/12, Error ellipse: s-maj=4.1km s-min=2.3km az=39.9 Broadband fault plane solution: P waves. $M_0$3.20000×10^{17} NP1:ϕ_s134.00000°, δ82.00000°, λ25.00000°. NP2:ϕ_s228.00000°, δ65.00000°, λ171.00000°. Principal axes: T Plg11.0000°, Azm183.0000°; N Plg64.0000°, Azm297.0000°; P Plg23.0000°, Azm88.0000°;

MOS Fault plane solution: P-wave C16, D38 . Felt (IV) at Baku, (III-IV) at Akhty, Derbent, (II-III) at Makhachkala.

BGR **10** 12:06:46.2±0.0, 39.44N×48.53E, h33km, mb5.1, Ms4.0

AZER **10** 12:06:47.0, 40.25N×48.63E, h46km, ML5.7

GCMT **10** 12:06:47.3±0.1, 40.14N±0.01×48.78E±0.01, h70km±1km, MW5.5/144, Moment Tensor Solution. s118, c179; s144, c282; Duration: 1±3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.43±.03; $M_{\theta\theta}$1.61±.03; $M_{\phi\phi}$-1.18±.03; $M_{r\theta}$-1.15±.02; $M_{r\phi}$0.01±.02; $M_{\theta\phi}$0.71±.02; Best double couple: $M_0$1.94700×10^{17} NP1:ϕ_s225.00000°, δ43.00000°, λ-169.00000°. NP2:ϕ_s128.00000°, δ83.00000°, λ-47.00000°. Principal axes: T 2.1510, Plg25.0000°, Azm186.0000°; N -0.4120, Plg42.0000°, Azm301.0000°; P -1.7430, Plg37.0000°, Azm75.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

TEH **10** 12:06:47.7, 40.26N×48.65E, h50km, ML5.5

IDC **10** 12:06:47.6±0.5, 40.29N×48.69E, h66km±3km, mb4.9/42, mb1 5.0/53, mb1mx5.0/57, mbtmp5.2/53, MS4.4/38, Ms1 4.5/38, ms1mx4.4/47, Error ellipse: s-maj=9.1km s-min=6.9km az=169.0

NEIC **10** 12:06:47.3±1.5, 40.29N±0.06×48.80E±0.06, h65km±4km, mb5.6/340, Mwb5.4/30, Mwc5.5(GCMT), Error ellipse: s-maj=9.2km s-min=7.0km az=193.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.08; $M_{\theta\theta}$0.73; $M_{\phi\phi}$-0.80; $M_{r\theta}$-0.92; $M_{r\phi}$-0.08; $M_{\theta\phi}$0.89; Fault plane solution: $M_0$1.50000×10^{17} NP1:ϕ_s224.88000°, δ31.11000°, λ177.01000°. NP2:ϕ_s317.45000°, δ88.45000°, λ58.92000°. Principal axes: T 1.5393, Plg39.0000°, Azm200.0000°; N -0.0927, Plg31.0000°, Azm318.0000°; P -1.4466, Plg36.0000°, Azm74.0000°;

NEIC **10** 12:06:48, 40.16N×48.82E, h78km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.29; $M_{\theta\theta}$1.68; $M_{\phi\phi}$-1.39; $M_{r\theta}$-1.17; $M_{r\phi}$0.07; $M_{\theta\phi}$0.69; Fault plane solution: $M_0$2.07000×10^{17} NP1:ϕ_s223.00000°, δ48.00000°, λ-175.00000°. NP2:ϕ_s130.00000°, δ87.00000°, λ-42.00000°. Principal axes: T 2.2404, Plg26.0000°, Azm184.0000°; N -0.4083, Plg48.0000°, Azm306.0000°; P -1.8320, Plg31.0000°, Azm77.0000°;

NNC **10** 12:06:58.1±4.7, 40.99N×49.99E, h61km±35km, mb5.8 Error ellipse: s-maj=35.9km s-min=18.0km az=87.0

ISC 10 12:06:46.7±0.2, **40.27N**±0.02×**48.76E**±0.02, **h63**km±2km, **h63**km:**pP-P, n1836, σ1.60**/1937, **mb5.5**/385, **85C-84D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBS	Qobustan	0.30	27	P	Pn	12 06 59.0	+1.8
GBS				S	Sn	12 07 07.4	+2.5
GBS	Qobustan	0.30	27	ePg	Pn	12 06 59.0	+1.8
ALIB	Äli-Bayra	0.36	149	P	Pn	12 06 59.8	+2.2
ALIB				S	Sn	12 07 08.4	+2.9
KDMR	Kurdemir	0.45	284	P	Pn	12 06 59.2	+0.8
KDMR				S	Sn	12 07 08.2	+1.2
KDMR	Kurdemir	0.45	284	ePg	Pn	12 06 59.1	+0.7
SAAT	Saatly	0.48	213	P	Pn	12 07 00.2	+1.5
SAAT				S	Sn	12 07 08.7	+1.3
SAAT	Saatly	0.48	213	ePg	Pn	12 07 00.2	+1.5
PQL	Pirkuli	0.54	346	P	Pn	12 07 00.8	+1.3
PQL				S	Sn	12 07 11.5	+2.7
PQL	Pirkuli	0.54	346	ePg	Pn	12 07 00.7	+1.2
ATGJ	Altiaghaj	0.61	13	P	Pn	12 07 01.9	+1.7
ATGJ				S	Sn	12 07 13.7	+3.6
ATGJ	Altiaghaj	0.61	13	ePg	Pn	12 07 01.7	+1.5
IML	Ismayilli	0.69	320	P	Pn	12 07 01.6	+0.6
IML				S	Sn	12 07 13.0	+1.5
IML	Ismayilli	0.69	320	ePg	Pn	12 07 01.5	+0.5
GOBA	Gobu	0.76	80	P	Pn	12 07 04.6	+2.8
GOBA				S	Sn	12 07 18.0	+5.2
GOBA	Gobu	0.76	80	ePg	Pn	12 07 04.5	+2.7
SIZA	Siyzn	0.81	7	P	Pn	12 07 04.0	+1.4
SIZA				S	Sn	12 07 17.8	+3.5
SIZA	Siyzn	0.81	7	ePg	Pn	12 07 04.0	+1.4
ZRD	Zardab	0.82	271	P	Pn	12 07 03.5	+0.9
ZRD				S	Sn	12 07 17.4	+3.1
ZRD	Zardab	0.82	271	ePg	Pn	12 07 03.5	+0.9
QBL	Gabala	0.98	314	P	Pn	12 07 05.1	+0.5
QBL				S	Sn	12 07 18.5	+0.6
QBL	Gabala	0.98	314	ePg	Pn	12 07 05.0	+0.4
NDR	Nardaran	0.99	71	P	Pn	12 07 06.8	+2.2
NDR				S	Sn	12 07 22.2	+4.2
NDR	Nardaran	0.99	71	ePg	Pn	12 07 06.9	+2.2
XNQ	Khinaliq	1.02	333	P	Pn	12 07 06.0	+0.7
XNQ				S	Sn	12 07 21.1	+2.0
XNQ	Khinaliq	1.02	333	ePg	Pn	12 07 05.8	+0.5
GLBA	Clilabad	1.06	196	P	Pn	12 07 06.2	+0.5
GLBA				S	Sn	12 07 20.9	+1.1
GLBA	Clilabad	1.06	196	ePg	Pn	12 07 06.0	+0.3
BLQ	Beylaqan	1.07	240	P	Pn	12 07 05.9	0.0
BLQ				S	Sn	12 07 20.3	+0.3
BLQ	Beylaqan	1.07	240	ePg	Pn	12 07 05.8	0.0
GALA	Gala	1.07	82	P	Pn	12 07 08.8	+2.9
GALA				S	Sn	12 07 25.6	+5.6
GALA	Gala	1.07	82	ePg	Pn	12 07 08.7	+2.9
QUBA	Quba, Azerbaij	1.10	349	P	Pn	12 07 08.0	+1.7
QUBA				S	Sn	12 07 22.2	+1.4
QUB	Quba	1.15	345	ePg	Pn	12 07 07.9	+1.0
BRDA	Brd	1.21	270	P	Pn	12 07 08.9	+1.3
BRDA				S	Sn	12 07 25.7	+2.5
BRDA	Brd	1.21	270	ePg	Pn	12 07 08.9	+1.3
AGDM	Agdam	1.28	263	P	Pn	12 07 08.8	+0.3
AGDM				S	Sn	12 07 26.2	+1.4
QSAR	Qusar	1.30	343	P	Pn	12 07 10.5	+1.6
QSAR				S	Sn	12 07 26.8	+1.3
QRD	Qoradiz	1.37	234	P	Pn	12 07 09.8	0.0
QRD				S	Sn	12 07 27.0	0.0
QRD	Qoradiz	1.37	234	ePg	Pn	12 07 09.6	-0.1
MNGR	Mingechevir, A	1.37	292	P	Pn	12 07 10.9	+1.1
MNGR	Mingechevir, A	1.37	292	P	Pn	12 07 10.6	+0.9
MNGR				S	Sn	12 07 28.9	+1.9
YRD	Yardimli	1.41	197	P	Pn	12 07 10.2	-0.2
YRD				S	Sn	12 07 28.1	-0.1
KSMR	Kasumkent	1.42	340	ePg	Pn	12 07 12.0	+1.6
KSMR	Kasumkent	1.42	340	P	Pn	12 07 12.0	+1.6
AKT	Akhty	1.44	327	ePg	Pn	12 07 12.2	+1.4
	15µm,0.5s						
AKT				eSg	Sn	12 07 30.8	+1.9
	98µm,0.5s						
AKT	Akhty	1.44	327	⇑iP	Pn	12 07 11.9	+1.1
AKT				e		12 07 30.7	
AKT				smax	smax		
	comp=E,89µm,0.4s						
SEKA	Sheki	1.51	309	P	Pn	12 07 12.0	+0.3
SEKA	Sheki	1.51	309	Pn	Pn	12 07 12.1	+0.4
SEKA				Sn	Sn	12 07 31.2	+0.6
LKRN	Lenkeran, Azer	1.56	179	P	Pn	12 07 11.9	-0.3
LKRN	Lenkeran, Azer	1.56	179	Pn	Pn	12 07 11.9	-0.3
LKRN				Sn	Sn	12 07 31.2	-0.2
GRMI	Germi	1.60	205	ePg	Pn	12 07 13.1	+0.1
GRMI				IAML		12 07 34.8	
	comp=N,69µm,0.4s						
GRMI				IAML		12 07 35.5	
	comp=E,64µm,0.5s						
LRK	Lerik	1.66	191	Pn	Pn	12 07 13.5	-0.3
LRK				Sn	Sn	12 07 34.1	0.0
ASTR	Astara	1.71	179	Pn	Pn	12 07 13.8	-0.4
ASTR				Sn	Sn	12 07 34.3	-0.7
DRN	Derbent	1.79	350	iPg	Pn	12 07 16.7	+1.4
	comp=E,15µm,0.7s						
DRN				eSg	Sn	12 07 38.2	+1.2
	comp=E,44µm,0.6s						
DRN	Derbent	1.79	350	⇑iP	Pn	12 07 16.6	+1.3
DRN				i		12 07 38.3	
GANJ	Ganja	1.90	282	P	Pn	12 07 16.6	-0.3
GANJ	Ganja	1.90	282	Pn	Pn	12 07 16.4	-0.4
GANJ				Sn	Sn	12 07 39.0	-0.7
URKR	Urkarakh	2.08	336	iPn	Pn	12 07 20.9	+1.5
URKR				eSn	Sn	12 07 45.5	+1.2
URKR	Urkarakh	2.08	336	⇑iP	Pn	12 07 20.7	+1.3
URKR				e		12 07 45.5	
ZKTA	Zakatala	2.12	311	Pn	Pn	12 07 21.0	+1.1
ZKTA				Sn	Sn	12 07 46.1	+1.0
AHAR	Ahar	2.22	217	ePn	Pn	12 07 21.8	+0.5
KMKR	Kumukh	2.24	327	iPn	Pn	12 07 24.0	+2.3
KMKR				iSn	Sn	12 07 51.0	+2.6
KMKR	Kumukh	2.24	327	⇑iP	Pn	12 07 24.0	+2.3
KMKR				iS	Sn	12 07 51.0	+2.6
IHSH	Hashtrud	2.28	211	ePn	Pn	12 07 36.0	+14
IHSH				e		12 08 26.7	
GDB	GEDABAY	2.34	282	Pn	Pn	12 07 22.5	-0.5
GDB				Sn	Sn	12 07 49.7	-1.0
IHRS	Heris	2.36	215	ePn	Pn	12 07 24.0	+0.7
IHRS				e		12 07 55.8	
TVRZ	Varzaqan	2.40	223	ePn	Pn	12 07 24.6	+0.8
LGD	Lagodekhi	2.46	310	P	Pn	12 07 26.7	+2.2
GNBR	Gunib	2.51	328	ePn	Pn	12 07 28.0	+2.7
GNBR				eSn	Sn	12 07 58.0	+3.2
GNBR	Gunib	2.51	328	ciP	Pn	12 07 27.2	+1.9
ORD	Ordubad	2.52	239	Pn	Pn	12 07 26.1	+0.7
ORD				Sn	Sn	12 07 55.1	0.0
ISRB	Sarab	2.58	200	ePn	Pn	12 07 27.0	+0.6
ISRB				e		12 08 05.1	
SBZ	Shahbuz	2.62	252	Pn	Pn	12 07 27.8	+1.1
SBZ				Sn	Sn	12 07 59.4	+1.9
ARKR	Arakani	2.68	331	iPn	Pn	12 07 30.0	+2.4
ARKR				iSn	Sn	12 08 01.0	+2.1
ARKR	Arakani	2.68	331	iP	Pn	12 07 30.0	+2.4
ARKR				iS	Sn	12 08 01.0	+2.1
QZX	Qazax, Azerbai	2.70	288	Pn	Pn	12 07 27.6	-0.1
QZX				Sn	Sn	12 07 59.0	-0.2
NAX	Nakhchivan	2.75	248	P	Pn	12 07 29.7	+1.3
NAX	Nakhchivan	2.75	248	Pn	Pn	12 07 29.7	+1.3
NAX				Sn	Sn	12 08 02.2	+1.6
XNZR	Khunzakh	2.75	326	ePn	Pn	12 07 31.0	+2.5
XNZR				eSn	Sn	12 08 02.8	+2.2
XNZR	Khunzakh	2.75	326	⇑eP	Pn	12 07 31.3	+2.8
XNZR				e		12 08 02.7	
IMRD	Marand	2.83	238	ePn	Pn	12 07 30.8	+1.1
BUJR	Buynaksk	2.84	335	ePn	Pn	12 07 32.3	+2.6
BUJR				eSn	Sn	12 08 05.1	+2.4
BUJR	Buynaksk	2.84	335	⇓eP	Pn	12 07 32.3	+2.6
BUJR				e		12 08 05.9	
MAK	Makhachkala	2.85	341	eP	Pn	12 07 32.3	+2.5
MAK				e		12 08 05.5	
MAK				pmax	pmax		
	comp=Z,5µm,0.3s						
MAK				smax	smax		
	comp=E,60µm,0.6s						
MAK				MLR	MLR		
	comp=Z,4µm,10.0s						
ITBZ	Tabriz	2.87	226	ePn	Pn	12 07 31.4	+1.1
TAB	Tabriz	2.90	222	P	Pn	12 07 32.2	+1.6
TABZ	Tabriz	2.91	221	ePn	Pn	12 07 32.4	+1.7
TABZ				e		12 07 57.3	
KRNR	Karanay	2.91	332	iPn	Pn	12 07 33.0	+2.3
KRNR				iSn	Sn	12 08 07.0	+2.4
	comp=Z,201nm,0.3s						
KRNR	Karanay	2.91	332	⇑iP	Pn	12 07 33.0	+2.3
KRNR				iS	Sn	12 08 07.0	+2.4
HYR	Heyderabad	3.05	261	Pn	Pn	12 07 34.2	+1.6
HYR				Sn	Sn	12 08 08.5	+0.5
BTLR	Botlikh	3.06	322	ePn	Pn	12 07 35.7	+3.0
BTLR				eSn	Sn	12 08 11.1	+3.0
BTLR	Botlikh	3.06	322	⇑eP	Pn	12 07 34.4	+1.7
BTLR				e		12 08 11.4	
BTLR				pmax	pmax		
	comp=Z,2µm,0.6s						
BTLR				smax	smax		
	comp=E,8µm,1.5s						
GNI	Garni	3.08	269	P	Pn	12 07 34.7	+1.7
	comp=E,436nm,0.3s,baz=73,slow=2.4,SNR=1398						
GNI				LR	LR	12 09 19.3	
	comp=E,18µm,19.7s,baz=84,slow=50						
GNI	Garni	3.08	269	iP	Pn	12 07 34.9	+1.8
	SNR=596						
GNI	Garni	3.08	269	P	Pn	12 07 34.5	+1.5
GNI	Garni	3.08	269		Pn	12 07 35.0	+1.8
GNI	Garni	3.08	269	P	Pn	12 07 34.6	+1.5
DBC	Dubki	3.11	333	iPn	Pn	12 07 35.5	+2.2
DBC				eSn	Sn	12 08 10.7	+1.3
DBC	Dubki	3.11	333	⇑eP	Pn	12 07 35.4	+2.0
DBC				e		12 08 10.4	
MAKU	Maku	3.27	255	ePn	Pn	12 07 36.0	+0.3
MAKU	Maku	3.27	255	ePn	Pn	12 07 36.0	+0.3
BTNK	Botanikuri	3.32	297	P	Pn	12 07 36.1	-0.1
SEAG	Tbilisi Sea	3.35	298	P	Pn	12 07 37.0	+0.4
TBLG	Delisi	3.38	297	P	Pn	12 07 37.2	+0.2
TBLG	Delisi	3.38	297		Pn	12 07 37.1	+0.2
TBLG				Sn	Sn	12 08 16.2	+0.3
TBLG	Delisi	3.38	297	P	Pn	12 07 37.1	+0.1
TBLG				S	Sn	12 08 16.2	+0.3
TASB	TASBURUN-IGDIR	3.48	257	P	Pn	12 07 39.8	+1.4
KZRT	Kazreti	3.49	290	iP	Pn	12 07 38.4	-0.2
ZNJK	Zanjan	3.59	181	ePn	Pn	12 07 40.5	+0.3
ZNJK				IAML		12 08 24.5	
	comp=N,11µm,0.5s						
ZNJK				IAML		12 08 25.7	
	comp=E,10µm,0.6s						
ZNJK	Zanjan	3.59	181	ePn	Pn	12 07 40.5	+0.3
GROC	Groznyy	3.68	324	ciP	Pn	12 07 42.8	+1.7
TRLG	Trialeti	3.75	291	P	Pn	12 07 42.0	-0.3
GUDG	Gudauri	3.90	306	P	Pn	12 07 44.3	0.0
CLDR	Caldiran	3.90	255	P	Pn	12 07 46.0	+1.6
IGZV	Ghazvin	4.04	163	ePn	Pn	12 07 45.3	-1.0
BGD	Bogdanovka	4.04	286	P	Pn	12 07 47.7	+1.4
QALM	Alamut, Qazvin	4.11	158	ePn	Pn	12 07 46.0	-1.2
AKH	Akhalkalaki	4.16	288	⇑P	Pn	12 07 49.2	+1.4
AKH	Akhalkalaki	4.16	288	P	Pn	12 07 49.3	+1.4
AKH	Akhalkalaki	4.16	288		Pn	12 07 49.2	+1.4
AKH				Sn	Sn	12 08 34.1	-1.0
AKH	Akhalkalaki	4.16	288	P	Pn	12 07 49.2	+1.4
AKH				e		12 08 34.1	
MAHB	Mahabad	4.24	215	ePn	Pn	12 07 49.1	+0.2
VANB	Van	4.48	250	P	Pn	12 07 54.9	+2.7
AGRB	Hanur-Agry	4.49	263	P	Pn	12 07 54.4	+2.0
QABG	Abgarm-Qazvin	4.60	172	ePn	Pn	12 07 53.0	-0.9
ONI	Oni	4.62	302	P	Pn	12 07 55.2	+1.2
ONI	Oni	4.62	302	P	Pn	12 07 55.1	+1.1
CHTH	Charan	4.74	156	ePn	Pn	12 07 55.9	+0.1
CHTH	Charan	4.74	156	ePn	Pn	12 07 55.9	+0.1
TKB	Tkibuli	4.81	297	P	Pn	12 07 57.5	+0.8
IMHD	Mahdasht	4.82	161	ePn	Pn	12 07 57.5	+0.7
AKDM	Akdamar-Van	4.88	248	P	Pn	12 07 59.4	+1.6
SENK	Senkaya-Erzuru	4.90	275	P	Pn	12 08 00.2	+2.2
IPRN	Peran	4.91	144	ePn	Pn	12 07 57.3	-0.8
MLAZ	Malazgirt-MUS	4.92	259	P	Pn	12 08 00.9	+2.6
IRAZ	Razeghan	4.94	169	ePn	Pn	12 07 58.1	-0.5
TEH	Tehran	4.97	155	ePn	Pn	12 08 00.0	+1.0
NCK	Nalchik	5.03	312	eP	Pn	12 08 00.7	+1.2
CUKT	Cukurca	5.03	235	P	Pn	12 08 01.9	+2.1
HSRG	Sareghieh	5.03	185	ePn	Pn	12 08 01.1	+1.2
IHSB	Hasanabad	5.22	157	ePn	Pn	12 08 03.3	+1.0
IALA	Alasht	5.26	141	ePn	Pn	12 08 02.3	-0.7
KOPR	Koprukoy-ERZUR	5.30	269	P	Pn	12 08 06.7	+3.2
IDMV	Damavand	5.35	150	ePn	Pn	12 08 05.1	+0.8
NEY	Neytrino	5.41	305	ciP	Pn	12 08 07.6	+2.7
IALM	Almabolaq	5.42	185	ePn	Pn	12 08 07.1	+1.9
HAGD	Aghdareh	5.45	177	ePn	Pn	12 08 05.8	+0.3
IGLO	Ghaloghah	5.48	132	ePn	Pn	12 08 04.9	-1.0
GURO	Guroymak-BITLI	5.49	254	P	Pn	12 08 08.9	+2.9
BATM	Batumi	5.52	286	P	Pn	12 08 09.4	+3.2
BATM	Batumi	5.52	286	iP	Pn	12 08 08.3	+2.1
ILIN	Lien	5.53	196	ePn	Pn	12 08 09.2	+2.5
BCA	Borcka	5.54	285	P	Pn	12 08 09.4	+2.8
KBZ	Khabaz	5.57	310	P	Pn	12 08 07.3	+0.4
	comp=E,16nm,0.3s,baz=124,slow=3.4,SNR=90						
KBZ				S	Sn	12 09 06.7	-2.8
	comp=E,36nm,0.3s,baz=285,slow=7.1,SNR=2.2						
IFIR	Firoozkooh	5.59	144	ePn	Pn	12 08 08.7	+1.1
SIRT	Sirnak	5.65	243	P	Pn	12 08 10.7	+2.5
PYA1	Pyatigorsk	5.66	314	iP	Pn	12 08 08.2	-0.1
ISHM	Shahmirzad	5.71	140	ePn	Pn	12 08 10.0	+0.8
SHA1	Shidzhatmaz	5.72	309	diP	Pn	12 08 10.0	+0.8
IQOM	Qom	5.72	161	ePn	Pn	12 08 09.5	+0.2
VRTB	Varto-Mus	5.74	261	P	Pn	12 08 12.8	+3.3
IVRN	Varamin	5.77	155	ePn	Pn	12 08 10.8	+1.0
KIV	Kislovodsk	5.83	311	⇓P	Pn	12 08 10.7	+0.2
KIV	Kislovodsk	5.83	311	iP	Pn	12 08 10.8	+0.2
	SNR=77						
KIV	Kislovodsk	5.83	311	P	Pn	12 08 10.9	+0.3
KIV	Kislovodsk	5.83	311		Pn	12 08 10.8	+0.2
KIV				Sn	Sn	12 09 13.5	-2.6
KIV	Kislovodsk	5.83	311	eP	Pn	12 08 10.7	+0.2
KIV				eS	Sn	12 09 17.2	+1.1
KIV				pmax	pmax		
	comp=Z,483nm,0.9s						
KIV				MLR	MLR		
	comp=Z,1µm,8.0s						
IBZA	Bozab	5.83	187	ePn	Pn	12 08 12.9	+2.0
IDHR	Dehrash	5.87	199	ePn	Pn	12 08 13.7	+2.4
ILAS	Lasjerd	5.90	144	ePn	Pn	12 08 12.4	+0.6
IVIS	Veis	5.93	195	ePn	Pn	12 08 14.4	+2.3
IMND	Minoodasht	6.00	118	ePn	Pn	12 08 11.3	-1.6
KARO	Karliova-Bingo	6.02	263	P	Pn	12 08 16.7	+3.4
HSAM	Samen	6.05	181	ePn	Pn	12 08 15.4	+1.6
CHOM	Cayeli-Rize	6.14	280	P	Pn	12 08 17.9	+3.1
IKOM	Komasi	6.16	190	ePn	Pn	12 08 17.9	+2.6
IGHG	Ghaleghazi	6.18	197	ePn	Pn	12 08 17.9	+2.3
SVAN	Silvan-Diyarba	6.24	253	P	Pn	12 08 19.1	+2.9
IANJ	Anjilo	6.29	138	ePn	Pn	12 08 17.9	+0.8
BDRS	Dareh Seyedi	6.30	179	ePn	Pn	12 08 18.6	+1.3
BNGB	Bingl	6.37	261	P	Pn	12 08 21.3	+3.3
GOF	Gofitskoye	6.38	321	⇑iP	Pn	12 08 17.8	-0.2
GOF				eS	Sn	12 09 23.8	-5.6
GOF				pmax	pmax		
	comp=Z,2µm,0.5s						
GOF				smax	smax		
	comp=N,4µm,0.9s						
GOF				smax	smax		
	comp=E,3µm,0.6s						
YEDI	Yedisu-Bingol	6.38	265	P	Pn	12 08 21.3	+3.1
ARXR	Arkhyz	6.48	303	iP	Pn	12 08 22.2	+2.6
IDOB	Doab	6.49	184	ePn	Pn	12 08 22.3	+2.5
BMDN	Meydan	6.58	180	ePn	Pn	12 08 23.2	+2.1
KHMZ	Khomeyn	6.59	171	ePn	Pn	12 08 22.1	+1.0
KHMZ	Khomeyn	6.59	171	ePn	Pn	12 08 22.2	+1.0
BAYT	Aydıntepe-Bayb	6.59	274	eP	Pn	12 08 24.4	+3.3
IKMR	Kamar-syah	6.75	183	ePn	Pn	12 08 25.5	+2.4
IKFM	Kafar-mosalman	6.77	186	ePn	Pn	12 08 25.7	+2.3
QAM	Ghamsar	6.84	161	ePn	Pn	12 08 25.3	+0.7
KRSH	Karshahi	6.84	156	ePn	Pn	12 08 25.1	+0.5
ERZN	Erzincan	6.98	267	eP	Pn	12 08 29.3	+2.9
MAZI	Mazidag	7.07	249	eP	Pn	12 08 29.5	+1.9
DYBB	Diyarbakir	7.09	254	eP	Pn	12 08 30.8	+2.9
SHRO	Shahrood	7.13	124	IAML		12 09 52.2	
	comp=E,1µm,0.5s						
BJRD	Bojnurd	7.21	108	ePn	Pn	12 08 28.8	-0.7
BJRD	Bojnurd	7.21	108	ePn	Pn	12 08 28.8	-0.7
IKLH	Kolahrood	7.29	161	ePn	Pn	12 08 31.8	+0.9
SOC	Sochi	7.51	299	eP	Pn	12 08 34.3	+0.8
SOC				e		12 10 00.8	
SOC				pmax	pmax		
	comp=Z,48nm,0.7s						
SOC				MLR	MLR		
	comp=Z,943nm,7.0s						
SVRC	Sivrice-ELAZID	7.57	259	eP	Pn	12 08 37.4	+2.9
GEYT	Alibeck	7.64	105	P	Pn	12 08 34.4	-1.0
	comp=Z,515nm,0.3s,baz=290,slow=15,SNR=771						
GEYT				S	Sn	12 09 54.8	-5.7
	comp=Z,84nm,0.3s,baz=304,slow=24,SNR=2.8						
GEYT	Alibeck	7.64	105		Pn	12 08 33.7	-1.7
GYA0B	ALIBECK ARRAY	7.64	105	⇓P	Pn	12 08 33.9	-1.4
GYA0B				⇑S	Sn	12 09 57.5	-3.0
GYA0B	ALIBECK ARRAY	7.64	105		Pn	12 08 33.7	-1.7
GYA0B				Sn	Sn	12 09 56.1	-4.3
ESPY	Espiye-Giresun	7.66	278	eP	Pn	12 08 38.6	+3.0
IPIR	Pirpir	7.76	167	ePn	Pn	12 08 39.4	+2.1
ASHT	Ashkhabad	7.83	104	Pn	Pn	12 08 37.2	-0.7
ASHT				Sn	Sn	12 10 00.7	-4.5
ASHT	Ashkhabad	7.83	104	P	Pn	12 08 37.9	-0.1
ASHT				pmax	pmax		
	comp=Z,7µm,1.1s						
IZEF	Zefreh	7.90	158	ePn	Pn	12 08 40.3	+1.2
ISFR	Sfrayin	7.91	111	ePn	Pn	12 08 39.1	-0.2
ANAR	Anarak	8.11	149	ePn	Pn	12 08 42.1	+0.2
ROKH	ROKH	8.12	166	ePn	Pn	12 08 44.2	+2.1
ARPR	Arapgir-MALATY	8.13	265	eP	Pn	12 08 44.9	+2.8
JHBN	Jahan bin	8.17	169	ePn	Pn	12 08 43.6	+0.8
IEMG	Emamgholi	8.23	107	ePn	Pn	12 08 42.6	-1.0
URFA	Urfa	8.25	253	eP	Pn	12 08 45.9	+2.1
IKRD	Kardeh	8.40	111	ePn	Pn	12 08 54.9	+8.9
IBRJ	Brojen	8.58	166	ePn	Pn	12 08 50.4	+1.9
IAKL	Akhelmad	8.65	112	ePn	Pn	12 08 48.8	-0.7
RSDY	Resadiye-TOKAT	8.73	275	eP	Pn	12 08 53.2	+2.9
TNSJ	Nastanj	8.88	133	ePn	Pn	12 08 52.1	-0.3
DARE	Darende-Malaty	8.89	263	eP	Pn	12 08 55.8	+3.3
IPAY	Payeh	8.90	112	ePn	Pn	12 08 52.0	-0.7
IRAM	Ramesheh	8.94	160	ePn	Pn	12 08 55.7	+2.4
SVSK	Karacayir	9.02	272	eP	Pn	12 08 56.8	+2.6
YZKH	Yazd	9.16	147	ePn	Pn	12 08 56.7	+0.5
YZKH	Yazd	9.16	147	ePn	Pn	12 08 56.7	+0.5
ISAD	Sadrabad	9.24	153	ePn	Pn	12 08 58.4	+0.9
IMOG	Moghan	9.30	113	ePn	Pn	12 08 57.3	-1.1
TKDS	Koohdasht(Taba	9.43	132	ePn	Pn	12 08 59.6	-0.3
ANN	Anapa	9.51	302	eP	Pn	12 09 02.8	+2.0
ANN				eS	Sn	12 10 50.2	+4.2
ANN				pmax	pmax		
	comp=Z,134nm,1.4s						
KLNJ	Kolanjah	9.52	165	ePn	Pn	12 09 01.9	+0.5
GAZ	Gaziantep	9.54	255	eP	Pn	12 09 03.9	+2.5
GAZ	Gaziantep	9.54	255		Pn	12 09 03.3	+2.0
TPRV	Parvadeh(Tabas	9.63	136	ePn	Pn	12 09 02.7	+0.1
KMRS	Kahramanmaras	9.65	257	eP	Pn	12 09 04.8	+2.0
KVT	Kavak	9.70	279	P	Pn	12 09 06.7	+3.3
IMYA	Miami	9.74	110	ePn	Pn	12 09 02.9	-1.2
SARI	SarD1z-Kayseri	9.74	263	eP	Pn	12 09 06.8	+2.6
JRKH	Jarkhoshk	10.12	112	ePn	Pn	12 09 07.9	-1.4
IBAF	Bafgh	10.26	145	ePn	Pn	12 09 11.5	+0.1
DIKM	Dikmen	10.31	282	⇓P	Pn	12 09 14.6	+2.8
AFRZ	Afriz	10.68	127	ePn	Pn	12 09 17.0	0.0
IKAZ	Kazeroun	10.76	166	ePn	Pn	12 09 18.9	+0.5
ITEG	Tejag	10.88	129	ePn	Pn	12 09 19.6	-0.3
SHI	Shiraz	11.04	163	ePn	Pn	12 09 23.1	+1.1
IMON	Monand	11.24	126	ePn	Pn	12 09 24.9	+0.2
BZK	Bozkurt	11.26	283	⇑P	Pn	12 09 27.4	+2.6
GHB	Gharebagh	11.30	163	ePn	Pn	12 09 26.4	+0.8
IKOO	Kooshah	11.37	130	ePn	Pn	12 09 26.8	+0.2
ILGA	Ilgaz	11.46	279		Pn	12 09 30.2	+2.5
BR131	Keskin Array S	11.62	272		Pn	12 09 31.9	+2.1

BR131 Keskin Array S 11.62 272 P Pn 12 09 32.4 +2.6
SNR=36
BR131 Keskin Array S 11.62 272 d iP Pn 12 09 31.7 +1.9
BRTR Keskin Array B 11.62 272 P Pn 12 09 31.4 +1.7
comp=Z,0.7nm,0.3s,baz=91,slow=12,SNR=71
BRTR LR LR 12 14 58.1
comp=Z,2µm,20.8s,baz=62,slow=42
BRTR ScP ScP 12 18 44.0 +1.1
comp=Z,0.1nm,0.3s,baz=76,slow=2.0,SNR=4.1
BRTR Keskin Array B 11.62 272 ceP Pn 12 09 32.0 +2.2
BRTR pmax pmax
comp=Z,37nm,0.9s
IDAH Dahanechah 11.67 127 ePn Pn 12 09 30.5 -0.1
KHGB Koh Gabri 11.70 145 ePn Pn 12 09 32.0 +0.9
SIM Simferopol' 11.76 298 eP Pn 12 09 33.3 +1.8
SIM eS Sn 12 11 46.7 +5.7
SIM pmax pmax
comp=Z,181nm,1.4s
HWQ Hawqa 11.82 244 eP Pn 12 09 34.5 +1.9
SEVA Sevastopol 11.93 296 ⇑P Pn 12 09 34.9 +1.1
VRH Novokhopyorsk 11.98 338 eP Pn 12 09 31.6 -2.9
VRH eS Sn 12 11 39.3 -7.1
VRH pmax pmax
comp=Z,180nm,0.6s
VRH smax smax
comp=N,8µm,2.0s
AB31 Akbulak array 11.98 38 ⇓P Pn 12 09 31.1 -3.4
comp=N,230nm,0.7s,baz=218,slow=13,SNR=1554
AB31 ⇑S Sn 12 11 34.7 -12
comp=N,534nm,0.6s,baz=223,slow=24,SNR=6.7
AB31 Akbulak array 11.98 38 P Pn 12 09 31.5 -3.1
ABKAR Akbulak array 11.98 38 Pn 12 09 31.2 -3.4
ABKAR Akbulak array 11.98 38 Pn 12 09 31.1 -3.4
I31KZ AKTYUBINSK INF 12.04 30 i 13 22 50.0
baz=206,slow=332,SNR=1.0
AKTO Aktyubinsk 12.06 29 P Pn 12 09 33.0 -2.7
comp=N,59nm,0.3s,baz=207,slow=9.9,SNR=233
AKTO S Sn 12 11 36.3 -12
comp=N,47nm,0.3s,baz=222,slow=16,SNR=3.3
AKTO LR LR 12 15 46.2
comp=N,3µm,21.6s,baz=226,slow=45
AKTO Aktyubinsk 12.06 29 ⇑P Pn 12 09 32.0 -3.6
comp=N,367nm,0.6s
AKTO ⇑S Sn 12 11 36.5 -12
comp=N,1µm,0.6s
AKTO Aktyubinsk 12.06 29 P Pn 12 09 32.0 -3.6
TVBK TV Kerman 12.16 145 ePn Pn 12 09 39.1 +1.6
HRA Herat 12.23 114 Pn 12 09 36.2 -2.0
BHL Bhannes 12.24 243 eP Pn 12 09 40.2 +2.0
ANTO Ankara 12.24 273 ⇓P Pn 12 09 40.7 +2.5
ANTO Ankara 12.24 273 Pn 12 09 39.8 +1.5
ANTO Ankara 12.24 273 P Pn 12 09 39.8 +1.5
BR231 Keskin MP Arra 12.26 273 Pn Pn 12 09 39.8 +1.3
NGRK Negar Kerman 12.45 146 ePn Pn 12 09 43.1 +1.8
SHBL Chebaa 12.50 241 eP Pn 12 09 43.0 +1.1
ASF Jabal al Asfar 12.52 234 P Pn 12 09 41.8 -0.3
comp=N,0.5nm,0.3s,baz=3.0,slow=3.3,SNR=32
ASF S Sn 12 12 07.6 +7.7
comp=N,0.1nm,0.3s,baz=62,slow=18,SNR=1.1
ASF Lg Lg 12 13 16.0
comp=N,0.3nm,0.3s,baz=183,slow=21,SNR=2.6
ASF LR LR 12 15 14.6
comp=N,894nm,20.9s,baz=7.0,slow=41
NATI Neve Ativ 12.56 240 Pn Pn 12 09 44.2 +1.7
VORD Divnogorie 12.57 331 eP Pn 12 09 40.0 -2.5
VORD pmax pmax
comp=Z,70nm,0.5s
KSDI Kefar Szold 12.65 240 Pn Pn 12 09 46.1 +2.3
KSHT Keshet 12.68 239 Pn Pn 12 09 45.7 +1.4
NHDN Nehbandan 12.73 131 ePn Pn 12 09 45.7 +0.7
VSR Storozhevoye 12.82 332 eP Pn 12 09 42.4 -3.6
VSR pmax pmax
comp=Z,120nm,1.1s
VSR MLR MLR
comp=Z,3µm,19.0s
MMA0B Mount Meron ar 12.93 240 Pn Pn 12 09 50.2 +2.5
MMAI Mount Meron Ar 12.93 240 P Pn 12 09 50.7 +3.1
comp=Z,4.0nm,0.3s,baz=60,slow=14,SNR=8.1
MMAI LR LR 12 15 41.8
comp=Z,2µm,18.1s,baz=45,slow=41
HNTI Hanita 13.04 241 Pn Pn 12 09 51.3 +2.2
KDZE Karadeniz Ereo 13.17 280 ⇑P P 12 09 60.0 +1.3
VORR Voronezh 13.18 333 eP Pn 12 09 47.0 -3.9
VORR pmax pmax
comp=Z,350nm,1.0s
MMLI Mount Malkishu 13.28 238 Pn Pn 12 09 54.9 +2.5
CSS Mathiatis 13.33 251 Pn 12 09 54.5 +1.6
CSS Mathiatis 13.33 251 Pn 12 09 54.3 +1.4
HMDT Nahal Hemdat 13.33 237 Pn Pn 12 09 55.0 +2.0
MDUB Mudurnu 13.40 277 Pn 12 09 55.0 +1.0
OFRI `Ofer 13.45 240 Pn Pn 12 09 56.5 +1.8
SLTI Sal'it 13.65 238 Pn Pn 12 09 59.4 +2.0
DSI Dead Sea 13.88 235 Pn Pn 12 10 01.6 +1.3
GHAJ Ghor Haditha 13.94 234 Pn Pn 12 10 02.6 +1.4
YTIR Yattir 14.18 235 Pn Pn 12 10 05.7 +1.2
AMAZ Amatzia 14.20 236 Pn Pn 12 10 06.3 +1.7
GENO Geno 14.23 152 ePn Pn 12 10 05.0 -0.2
NIAN Nian 14.33 150 ePn Pn 12 10 05.2 -1.1
ISP Isparta 14.38 266 Pn 12 10 08.2 +1.1
ISP Isparta 14.38 266 P Pn 12 10 08.2 +1.1
ZFRI Zfri 14.70 233 Pn Pn 12 10 12.1 +1.0
KZIT Kziot 14.94 236 Pn Pn 12 10 15.7 +1.4
PRNI Paran 14.95 233 Pn Pn 12 10 15.4 +1.0
ISK Istanbul-Kandi 14.98 279 P P 12 10 19.3 +0.6
ISK Istanbul-Kandi 14.98 279 P P 12 10 19.3 +0.6
HRFI Mount Harif 15.15 232 Pn Pn 12 10 18.0 +1.0
ELL Elmali 15.17 263 S 12 13 18.1 +0.2
KRMI Paran Flat 15.29 233 Pn Pn 12 10 19.5 +0.8
EFOR EFORIE 15.40 291 ⇑P P 12 10 24.0 +0.7
MBRI Mt Berech 15.40 232 Pn Pn 12 10 21.1 +0.8
SHME Shamm 15.46 154 i P Pn 12 10 20.2 -0.8
SNR=61
EIL Elat 15.47 231 P Pn 12 10 21.7 +0.7
comp=Z,0.9nm,0.3s,baz=33,slow=5.1,SNR=21
EIL S S 12 13 18.9 -5.0
comp=Z,0.5nm,0.3s,baz=158,slow=18,SNR=0.9
EIL LR LR 12 16 34.9
comp=Z,2µm,20.8s,baz=52,slow=38
EIL Elat 15.47 231 Pn Pn 12 10 21.7 +0.7
MFTR Murfatlar 15.56 291 ⇑P Pn 12 10 22.0 -0.1
TAS Tashkent 15.59 79 Pn 12 10 20.2 -2.3
TAS Tashkent 15.59 79 P Pn 12 10 20.2 -2.3
TAS pmax pmax
comp=Z,1µm,0.6s
TIRR Tirgusor 15.61 292 ⇑P Pn 12 10 21.3 -1.4
TIRR Tirgusor 15.61 292 ⇑P Pn 12 10 21.3 -1.4
TIRR Tirgusor 15.61 292 i P Pn 12 10 22.3 -0.3
BANOM Banah 15.63 154 i P Pn 12 10 22.7 -0.4
SNR=146
BANOM Banah 15.63 154 P Pn 12 10 22.6 -0.4
SNR=35
BANOM S Sn 12 13 13.3 -2.1
KULA Kula-Manisa 15.64 270 P P 12 10 27.8 +1.6
KULA Kula-Manisa 15.64 270 P P 12 10 27.8 +1.6
PSN Preselentsi 15.68 289 i P Pn 12 10 26.5 0.0
TOPG Topolog 15.70 294 ⇓P Pn 12 10 24.0 +0.2
MANT Manisa 15.72 270 Pn 12 10 25.1 +0.6
UMQ Umm Al-Quwin 15.79 156 i P Pn 12 10 26.0 +0.8
SNR=18
UMQ Umm Al-Quwin 15.79 156 P P 12 10 26.7 -1.2
SNR=24
UMQ S Sn 12 13 19.7 +0.4
CHM Chimkent 15.80 76 eP Pn 12 10 22.9 -2.3
CHM Chimkent 15.80 76 eP Pn 12 10 22.8 -2.4
CVDA Cernavoda 15.85 292 ⇑P Pn 12 10 26.9 +1.1
MILM Milestii Mici 15.89 301 ⇑P Pn 12 10 25.0 -1.2
KIS Kishinev 15.91 302 ⇑ i P Pn 12 10 25.0 -1.5
comp=Z,390nm,1.8s
KIS Kishinev 15.91 302 i PP pP 12 10 42.0 -0.2
KIS eS Sn 12 13 17.0 -4.8
KIS i SS SnSn 12 13 40.0 +4.7
KIS i LQ LQ 12 15 50.0
KIS eLR LR 12 17 16.0
comp=Z,800nm,15.0s
KIS Kishinev 15.91 302 ⇑ i P Pn 12 10 25.0 -1.5
KIS eS Sn 12 13 17.0 -4.8
KIS pmax pmax
comp=Z,380nm,1.8s
KIS MLR MLR
comp=Z,800nm,15.0s
KIS MLR MLR
comp=N,1µm,10.0s
HARR Harsova 15.98 293 ⇑P P 12 10 28.8 -1.1
HARR Harsova 15.98 293 P P 12 10 28.7 -1.1
ICOR Ion Corvin 16.00 291 ⇓P P 12 10 29.0 -1.1
MSFE Esma-Masafi 16.11 155 i P Pn 12 10 28.8 -0.4
SNR=282
IUG Iuzhnay 16.12 76 eP Pn 12 10 27.0 -2.3
IUG eS Sn 12 13 31.4 +4.2
IUG Iuzhnay 16.12 76 eP Pn 12 10 26.9 -2.3
IUG eS Sn 12 13 31.3 +4.2
LEOM Leova 16.14 299 ⇑P Pn 12 10 28.2 -1.1
MDH Madha 16.21 155 i P Pn 12 10 29.2 -1.1
SNR=27
MDH Madha 16.21 155 P Pn 12 10 29.4 -0.9
SNR=38
MDH S Sn 12 13 27.0 -2.3
PRD Provadia 16.21 287 i P P 12 10 32.3 -0.1
VARL Varlezi 16.26 297 ⇓P Pn 12 10 30.9 -0.1
YER Yerkesik 16.29 265 P Pn 12 10 32.4 +1.0
YER Yerkesik 16.29 265 P Pn 12 10 32.4 +1.0
NAZ Nazwa, Dubai 16.30 157 i P Pn 12 10 31.4 -0.1
SNR=208
NAZ Nazwa, Dubai 16.30 157 P Pn 12 10 32.1 +0.5
SNR=122
NAZ S Sn 12 13 31.4 -0.2
NEF NEVSHA 16.30 288 i P P 12 10 34.4 +0.9
VASR Vaslui 16.48 300 ⇓P Pn 12 10 33.3 -0.4
KK31 Karatay Array 16.49 73 ⇑P Pn 12 10 32.2 -1.6
comp=N,811nm,1.0s,baz=258,slow=10,SNR=3662
KK31 ⇓S Sn 12 13 24.5 -11
comp=N,315nm,0.7s,baz=271,slow=24,SNR=7.6
KK31 Karatay Array 16.49 73 Pn Pn 12 10 31.4 -2.5
KK31 IAmb IAmb 12 10 34.1
comp=Z,774nm,1.1s
KK31 Sn Sn 12 13 30.5 -5.5
KK31 Karatay Array 16.49 73 i P Pn 12 10 31.1 -2.7
KK31 eS Sn 12 13 27.2 -8.8
KKAR Karatay Array 16.49 73 Pn 12 10 31.7 -2.2
KKAR Karatay Array 16.49 73 IAmb IAmb 12 10 34.1
comp=Z,774nm,1.1s
KKAR Karatay Array 16.49 73 P Pn 12 10 31.7 -2.2
JBG Jabagly 16.50 75 deP Pn 12 10 31.4 -2.7
JBG eS Sn 12 13 36.2 -0.1
JBG pmax pmax
comp=Z,586nm,1.2s
UOSS Minazif 16.50 156 i P Pn 12 10 33.3 -0.8
SNR=9.1
UOSS Minazif 16.50 156 Pn 12 10 33.5 -0.6
UOSS IAmb IAmb 12 10 43.0
comp=Z,386nm,0.8s
UOSS Minazif 16.50 156 P Pn 12 10 33.0 -1.2
UOSS S Sn 12 13 31.1 -5.5
FAQ Al Faqa, Dubai 16.51 158 i P Pn 12 10 33.6 -0.5
SNR=23
FAQ Al Faqa, Dubai 16.51 158 P Pn 12 10 34.6 +0.5
SNR=31
AJN Ajban 16.51 160 i P Pn 12 10 34.9 +0.7
SNR=112
AJN Ajban 16.51 160 P Pn 12 10 34.4 +0.2
SNR=98
SORM Soroca 16.58 305 ⇑P Pn 12 10 32.9 -2.0
SORM Soroca 16.58 305 P Pn 12 10 35.1 +0.2
HATD Hatta, Dubai 16.59 156 i P Pn 12 10 34.7 -0.5
SNR=66
HATD Hatta, Dubai 16.59 156 P Pn 12 10 35.0 -0.3
SNR=104
HATD S Sn 12 13 35.6 -3.1
GHRR 16.60 297 ⇓P Pn 12 10 35.4 +0.3
PETR Petresti 16.65 296 ⇑P Pn 12 10 36.1 +0.3
EDRB Edirne 16.68 283 P Pn 12 10 35.9 -0.3
EDRB Edirne 16.68 283 P Pn 12 10 35.9 -0.3
ARG Arkhangelos 16.70 263 P P 12 10 37.6 -0.3
ARG Arkhangelos 16.70 263 P P 12 10 37.6 -0.3
ARG Arkhangelos 16.70 263 P P 12 10 39.1 +1.2
ARG pmax pmax
comp=Z,523nm,1.1s
ASHO Ashiyiah 16.70 156 i P Pn 12 10 35.8 -0.8
SNR=511
ASHO Ashiyiah 16.70 156 P Pn 12 10 37.0 +0.3
SNR=110
GRER 16.76 295 ⇑P P 12 10 38.1 -0.4
ODBI Odobesti 16.78 296 ⇑P P 12 10 38.6 0.0
IAS Iasi 16.79 301 ⇑P Pn 12 10 36.5 -0.9
BTK Batken 16.86 84 Pn 12 10 36.6 -2.0
BTK IAmb IAmb 12 10 41.8
comp=Z,640nm,1.0s
BTK Batken 16.86 84 P Pn 12 10 36.6 -2.0
BTK pmax pmax
comp=Z,641nm,1.0s
RAYN Ar Rayn 16.92 190 i P Pn 12 10 36.9 -2.5
SNR=338
RAYN Ar Rayn 16.92 190 Pn 12 10 37.0 -2.4
RAYN Ar Rayn 16.92 190 P Pn 12 10 37.0 -2.4
RAYN pmax pmax
comp=Z,1µm,1.0s
OBN Obninsk 16.93 335 ⇑P Pn 12 10 36.9 -2.3
OBN Obninsk 16.93 335 Pn 12 10 36.5 -2.6
OBN IAmb IAmb 12 10 38.1
comp=Z,277nm,0.6s
OBN Obninsk 16.93 335 c iP Pn 12 10 36.4 -2.7
OBN pmax pmax
comp=Z,312nm,1.1s
OBN MLR MLR
comp=Z,2µm,21.0s
BISRR Bisoca 16.98 295 ⇓P P 12 10 41.3 +0.4
ISR Istrita 17.02 294 ⇓P P 12 10 41.7 +0.2
ISR Istrita 17.02 294 P P 12 10 41.5 +0.1
ISR pmax pmax
comp=Z,296nm,1.2s
VRI Vrincioaia 17.02 296 ⇑P Pn 12 10 40.9 +0.4
VRI Vrincioaia 17.02 296 P Pn 12 10 39.7 -0.8
VRI pmax pmax
comp=Z,168nm,1.3s
BODT Bodrum 17.05 266 P Pn 12 10 39.8 -1.1
BODT Bodrum 17.05 266 P Pn 12 10 39.8 -1.1
PLOR Plostina 17.07 296 ⇑P Pn 12 10 41.4 +0.2
PLOR Plostina 17.07 296 P Pn 12 10 41.3 +0.2
DZA Taraz 17.08 74 eP Pn 12 10 39.7 -1.6
DZA eS Sn 12 13 46.9 -3.4
DZA Taraz 17.08 74 eP Pn 12 10 39.6 -1.6
DZA eS Sn 12 13 46.9 -3.4
KBL Kabul 17.09 103 P Pn 12 10 41.6 +0.1
KBL IAmb IAmb 12 10 45.8
comp=Z,300nm,1.1s
KBL Kabul 17.09 103 P Pn 12 10 41.6 +0.1
KBL pmax pmax
comp=Z,300nm,1.1s
MOS Moscow 17.14 338 eP Pn 12 10 37.6 -4.2
MOS eSS Sn 12 13 50.6 -0.9
MOS pmax pmax
comp=Z,698nm,1.5s
MOS MLR MLR
comp=Z,2µm,22.0s
AKASG Malin Array Be 17.17 314 P Pn 12 10 40.3 -1.9
comp=Z,22nm,0.3s,baz=122,slow=12,SNR=177
AKASG S Sn 12 13 34.0 -18
baz=122,slow=24,SNR=1.1
AKASG LR LR 12 18 48.9
comp=Z,787nm,18.0s,baz=115,slow=42
AKASG Malin Array Be 17.17 314 Pn 12 10 39.5 -2.6
AKASG Malin Array Be 17.17 314 P Pn 12 10 39.5 -2.6
AKASG pmax pmax
comp=Z,55nm,1.0s
AKBB Malin Array Si 17.17 314 P Pn 12 10 40.2 -1.9
AKBB Malin Array Si 17.17 314 P Pn 12 10 40.2 -1.9
AKBB pmax pmax
comp=Z,200nm,0.9s
EZN Ezine 17.18 276 P P 12 10 43.4 +0.2
EZN Ezine 17.18 276 P P 12 10 43.4 +0.2
ALNE Al Ain 17.20 158 i P Pn 12 10 42.1 -0.7
SNR=36
TESR Tescani 17.21 299 ⇑P P 12 10 42.4 -0.4
SMG Samos 17.23 269 P P 12 10 45.1 +1.3
SMG Samos 17.23 269 P P 12 10 45.1 +1.3
ALN Alexandroupoli 17.26 279 P P 12 10 44.8 +0.7
ALN Alexandroupoli 17.26 279 P P 12 10 44.8 +0.7
ALN Alexandroupoli 17.26 279 P P 12 10 44.6 +0.5
ALN pmax pmax
comp=Z,163nm,1.4s
SZH Strazhica 17.28 287 i P Pn 12 10 43.5 -0.1
SGRR Singureni 17.31 291 ⇓P P 12 10 45.0 +0.4
ELND Elena 17.32 286 ⇓P P 12 10 44.8 +0.2
PRK Paraskevi 17.32 274 P P 12 10 47.0 +2.3
PRK Paraskevi 17.32 274 P P 12 10 47.0 +2.3
SOHO SOHO 17.37 156 P Pn 12 10 44.4 -0.4
SNR=155
ARU Arti 17.40 18 P Pn 12 10 40.5 -4.5
comp=Z,0.5nm,0.3s,baz=211,slow=9.7,SNR=66
ARU S Sn 12 13 40.1 -18
comp=Z,0.1nm,0.3s,baz=309,slow=22,SNR=3.2
ARU LR LR 12 19 14.8
comp=Z,1µm,19.7s,baz=210,slow=43
ARU Arti 17.40 18 P Pn 12 10 41.3 -3.7
ARU Arti 17.40 18 eP Pn 12 10 41.2 -3.8
ARU S Sn 12 13 52.9 -4.9
MLR Muntele Rosu 17.50 295 P Pn 12 10 44.5 -1.9
comp=Z,1.2nm,0.3s,baz=30,slow=20,SNR=7.7
MLR LR LR 12 20 13.8
comp=Z,600nm,21.0s,baz=114,slow=46
MLR Muntele Rosu 17.50 295 ⇓P P 12 10 47.6 +0.8
RDO Rodhopi 17.62 280 P Pn 12 10 46.8 -1.0
RDO Rodhopi 17.62 280 P Pn 12 10 46.8 -1.0
MZR Muzera 17.67 166 i P Pn 12 10 47.9 -0.6
SNR=127
MZR Muzera 17.67 166 P P 12 10 49.0 +0.3
SNR=98
KARP Karpathos 17.67 261 P Pn 12 10 48.2 -0.3
KARP Karpathos 17.67 261 P Pn 12 10 48.2 -0.3
KDZ Kurdzhali 17.68 282 i P P 12 10 49.5 +0.8
SMTH Samothraki Isl 17.70 278 P Pn 12 10 46.8 -2.0
SMTH Samothraki Isl 17.70 278 P Pn 12 10 46.8 -2.0
PRAR RASCA 17.70 301 ⇑P Pn 12 10 47.6 -1.2
ZIMR 17.71 289 ⇓P P 12 10 50.2 +1.2
PVL Pavlikeni 17.72 287 i P P 12 10 51.0 +1.9
COPA Copaceanca 17.85 290 ⇓P Pn 12 10 50.7 +0.2
DOPR Dopca 17.96 296 ⇑P Pn 12 10 52.2 +0.3
HUMR Humele 18.05 291 ⇑P Pn 12 10 53.9 +0.8
MTUR Matau 18.07 294 ⇑P Pn 12 10 54.4 +1.0
ARQ Araqi 18.11 156 P Pn 12 10 55.0 +1.1
SNR=84
VOIR 18.11 294 ⇓P Pn 12 10 54.6 +0.8
VOIR 18.11 294 P Pn 12 10 54.7 +0.9
VOIR pmax pmax
comp=Z,135nm,0.9s
HOQ Hoqain 18.13 154 P Pn 12 10 55.0 +0.8
SNR=16
PLD Plovdiv 18.19 284 i P Pn 12 10 54.8 +0.1
PLD Plovdiv 18.19 284 P Pn 12 10 55.5 +0.8
PLD pmax pmax
comp=Z,12nm,1.5s
AMGA Amorgos Island 18.20 266 P P 12 10 54.5 0.0
AMGA Amorgos Island 18.20 266 P P 12 10 54.5 0.0
PLVB Pleven 18.24 288 ⇑P Pn 12 10 55.7 +0.4
SVE Sverdlovsk 18.29 21 ceP P 12 10 52.9 -2.4
SVE pmax pmax
comp=Z,682nm,0.8s
THAS Thassos island 18.30 279 P Pn 12 10 55.8 -0.2
THAS Thassos island 18.30 279 P Pn 12 10 55.8 -0.2
KIRV Kirov 18.34 1 P P 12 10 52.2 -3.5
comp=Z,31nm,0.3s,baz=170,slow=1.7,SNR=59
KIRV S Sn 12 14 01.9 -18
comp=Z,8.4nm,0.3s,baz=242,slow=21,SNR=1.8
ARSB Arslanbob 18.36 79 P P 12 10 55.2 -1.1
ARSB Arslanbob 18.36 79 P P 12 10 55.2 -1.1
ARSB pmax pmax
comp=Z,557nm,0.7s
ARR Arges 18.39 294 ⇑P Pn 12 10 57.7 +0.5
APE Apeiranthos 18.41 267 P Pn 12 10 58.5 +1.1
APE Apeiranthos 18.41 267 P Pn 12 10 58.5 +1.1
APE Apeiranthos 18.41 267 ⇑P Pn 12 10 58.6 +1.1
APE Apeiranthos 18.41 267 c iP Pn 12 10 58.6 +1.1
APE pmax pmax
comp=Z,166nm,0.9s
KAVA Kavala 18.41 280 P P 12 10 56.7 0.0
KAVA Kavala 18.41 280 P P 12 10 56.7 0.0
VLAD Vladila 18.43 290 ⇑P Pn 12 10 58.6 +1.1
BURAR Bucovina Array 18.43 301 ⇓P P 12 10 56.4 -0.7
BURAR Bucovina Array 18.43 301 P P 12 10 56.2 -0.9
BURAR Bucovina Array 18.43 301 P P 12 10 56.3 -0.7
BIDO Bidbid 18.47 152 P Pn 12 10 59.0 +0.7
SNR=11
ZKR Zakros 18.55 261 P P 12 10 58.1 -0.2
ZKR Zakros 18.55 261 P P 12 10 58.1 -0.2
PGB Panagyurishte 18.57 285 i P Pn 12 11 00.6 +1.2
STIA Sitia Lasithi 18.61 261 P Pn 12 11 02.8 +2.9
STIA Sitia Lasithi 18.61 261 P Pn 12 11 02.8 +2.9
SANT Santorini 18.68 265 P P 12 10 59.8 0.0
IOSP Ios island 18.70 267 P P 12 10 59.9 0.0
IOSP Ios island 18.70 267 P P 12 10 59.9 0.0
AML Almayashu 18.84 76 P Pn 12 11 03.0 0.0
SNR=104
SMDO Samad 18.87 153 P Pn 12 11 04.0 +0.8
SNR=30
BSY Bisya 18.88 155 P Pn 12 11 04.0 +0.8
SNR=41
ARCR ARCALIA 18.88 299 ⇑P Pn 12 11 02.5 -0.5
EKS2 Erkin-Say 18.88 75 P Pn 12 11 03.2 0.0
SNR=126
OUR Ouranopolis 18.89 278 P Pn 12 11 02.9 -0.2
OUR Ouranopolis 18.89 278 P Pn 12 11 02.9 -0.2
WSAR Wadi Sarin 18.92 151 P Pn 12 11 03.3 -0.3
comp=Z,7.3nm,0.3s,baz=5.8,slow=6.9,SNR=27
WSAR S S 12 14 27.0 -7.0
comp=Z,0.4nm,0.3s,baz=280,slow=23,SNR=0.9
WSAR LR LR 12 20 46.3
comp=Z,445nm,21.6s,baz=3.0,slow=44
WSAR Wadi Sarin 18.92 151 P Pn 12 11 04.8 +1.2
SNR=8.8
MMB Musomiste 18.95 282 i P Pn 12 11 03.9 0.0
KARY Karystos 18.98 271 P Pn 12 11 03.2 +0.2
KARY Karystos 18.98 271 P Pn 12 11 03.2 +0.2
LOT Lotru 19.00 294 ⇑P Pn 12 11 04.1 -0.5
SRS Serrai 19.09 281 P Pn 12 11 05.4 -0.2
SRS Serrai 19.09 281 P Pn 12 11 05.4 -0.2
LAST Lasithi 19.09 262 P P 12 11 05.0 +0.7
LAST Lasithi 19.09 262 P P 12 11 05.0 +0.7
AOS Alonnisos 19.16 275 P Pn 12 11 05.7 -0.7
AOS Alonnisos 19.16 275 P Pn 12 11 05.7 -0.7
BTLS Baital 19.17 67 ⇓iP P 12 11 04.7 -0.3
comp=Z,158nm,0.9s
BTLS Baital 19.17 67 d iP P 12 11 04.6 -0.3
BTLS pmax pmax
comp=Z,158nm,0.9s
PAIG Paliouri 19.18 277 P Pn 12 11 06.4 -0.2
PAIG Paliouri 19.18 277 P Pn 12 11 06.4 -0.2
PAIG Paliouri 19.18 277 P Pn 12 11 06.6 0.0
PAIG pmax pmax
comp=Z,308nm,1.1s
SERI Serifos 19.18 268 P Pn 12 11 06.4 -0.3
SERI Serifos 19.18 268 P Pn 12 11 06.4 -0.3
VTS Vitosha 19.26 285 P P 12 11 05.8 -0.4
VTS Vitosha 19.26 285 P P 12 11 05.8 -0.4
VTS Vitosha 19.26 285 ⇑P P 12 11 08.0 +0.3
VTS Vitosha 19.26 285 i P P 12 11 07.4 -0.3
VTS Vitosha 19.26 285 P P 12 11 07.7 0.0
VTS pmax pmax
comp=Z,175nm,0.8s
SOH Sokhos 19.30 280 P Pn 12 11 07.9 -0.2
SOH Sokhos 19.30 280 P Pn 12 11 07.9 -0.2
SOH Sokhos 19.30 280 P Pn 12 11 08.4 +0.3
SOH pmax pmax
comp=Z,128nm,1.5s
CJR Cluj-Napoca 19.31 298 ⇑P Pn 12 11 07.5 -0.8
CJR Cluj-Napoca 19.31 298 P Pn 12 11 07.4 -0.8
SRE Strehaia 19.33 292 ⇑P Pn 12 11 07.9 -0.5
SRE Strehaia 19.33 292 P Pn 12 11 07.8 -0.5
BRZS Berezniki 19.39 52 ⇓iP P 12 11 07.3 -0.1
comp=Z,229nm,0.8s
BRZS Berezniki 19.39 52 d iP P 12 11 07.3 -0.1
BRZS pmax pmax
comp=Z,229nm,0.8s
USP Ospenovka 19.41 73 P P 12 11 07.8 +0.2
SNR=28
AAK Ala-Archa 19.41 75 P Pn 12 11 09.3 -0.2
comp=Z,33nm,0.3s,baz=235,slow=3.3,SNR=276
AAK LR LR 12 20 10.4
comp=Z,1µm,21.6s,baz=270,slow=41
AAK Ala-Archa 19.41 75 P Pn 12 11 08.8 -0.8
SNR=431
AAK Ala-Archa 19.41 75 i P Pn 12 11 08.9 -0.6
SNR=90
AAK Ala-Archa 19.41 75 ⇑P P 12 11 07.9 0.0
comp=Z,354nm,0.7s
AAK Ala-Archa 19.41 75 P P 12 11 08.2 +0.3
AAK IAmb IAmb 12 11 14.1
comp=Z,375nm,0.7s
AAK Ala-Archa 19.41 75 P P 12 11 08.2 +0.3
AAK pmax pmax
comp=Z,375nm,0.7s
PTL Penteli 19.42 271 P Pn 12 11 09.5 0.0
PTL Penteli 19.42 271 P Pn 12 11 09.5 0.0

BRVK Borovoye 19.44 42 ⇓P P 12 11 07.6 -0.3
comp=Z,1μm,1.2s
BRVK ⇓S S 12 14 28.6 -16
comp=Z,228nm,0.7s
BRVK Borovoye 19.44 42 P P 12 11 07.7 -0.3
BRVK Borovoye 19.44 42 i P P 12 11 07.6 -0.3
BRVK pmax pmax
comp=Z,1μm,1.2s
UCH Uchtor 19.44 76 P Pn 12 11 09.7 -0.5
SNR=22
SKIA Skiathos 19.48 275 P Pn 12 11 09.3 -0.8
SKIA Skiathos 19.48 275 P Pn 12 11 09.3 -0.8
MRKA Markates 19.48 274 P P 12 11 09.1 +0.7
MRKA Markates 19.48 274 P P 12 11 09.1 +0.7
BVAR Borovoye Array 19.48 42 P P 12 11 08.7 +0.4
comp=Z,48nm,0.3s,baz=242,slow=8.2,SNR=925
BVAR S S 12 14 35.9 -9.0
comp=Z,36nm,0.3s,baz=238,slow=25,SNR=17
IDI Anoyia 19.49 263 P P 12 11 08.4 -0.2
comp=Z,8.1nm,0.3s,baz=43,slow=14,SNR=18
IDI S S 12 14 41.3 -4.2
comp=Z,0.4nm,0.3s,baz=288,slow=22,SNR=1.7
IDI LR LR 12 20 26.9
comp=Z,2μm,21.3s,baz=69,slow=42
PUNG Punghina 19.50 290 ⇑P Pn 12 11 09.5 -0.8
ATHU Athens Univers 19.50 271 P Pn 12 11 10.1 -0.3
ATHU Athens Univers 19.50 271 P Pn 12 11 10.1 -0.3
SGDS Sogindy 19.50 72 ⇓eP P 12 11 08.0 -0.8
comp=Z,213nm,1.4s
SGDS eS S 12 14 43.8 -1.9
HORT Hortiatis 19.52 279 P Pn 12 11 10.4 -0.3
HORT Hortiatis 19.52 279 P Pn 12 11 10.4 -0.3
VLY Voula,Athens 19.52 271 P Pn 12 11 10.3 -0.4
VLY Voula,Athens 19.52 271 P Pn 12 11 10.3 -0.4
JMDO Jabal Madar 19.52 153 P Pn 12 11 11.0 +0.2
SNR=25
ATH Athens Observa 19.55 271 P Pn 12 11 10.8 -0.2
ATH Athens Observa 19.55 271 P Pn 12 11 10.8 -0.2
BMR Baia Mare 19.58 301 ⇓P P 12 11 09.6 +0.2
CHMS Chumysh 19.59 73 P P 12 11 10.0 +0.4
SNR=207
CHMS Chumysh 19.59 73 ⇑P P 12 11 09.9 +0.2
comp=Z,306nm,0.8s
KNT Kendrikon 19.61 281 P Pn 12 11 10.8 -0.9
KNT Kendrikon 19.61 281 P Pn 12 11 10.8 -0.9
KNT Kendrikon 19.61 281 P Pn 12 11 11.3 -0.4
KNT pmax pmax
comp=Z,200nm,1.1s
THE Thessaloniki 19.62 279 P Pn 12 11 11.1 -0.7
THE Thessaloniki 19.62 279 P Pn 12 11 11.1 -0.7
THE Thessaloniki 19.62 279 P Pn 12 11 11.6 -0.2
THE pmax pmax
comp=Z,297nm,1.1s
NEO Neokhori 19.63 275 P Pn 12 11 11.3 -0.7
NEO Neokhori 19.63 275 P Pn 12 11 11.3 -0.7
XOR Xorichti 19.65 276 P P 12 11 10.3 0.0
XOR Xorichti 19.65 276 P P 12 11 10.3 0.0
SIVA Sivas 19.65 262 P Pn 12 11 11.7 -0.5
SIVA Sivas 19.65 262 P Pn 12 11 11.7 -0.5
DEV Deva 19.66 295 P Pn 12 11 11.7 -0.6
DEV pmax pmax
comp=Z,150nm,1.0s
GZR Gura Zlata 19.69 294 ⇓P P 12 11 10.6 -0.1
KBK Karagaybulak 19.75 74 P Pn 12 11 12.6 -0.9
SNR=339
VILL Villia 19.81 272 P P 12 11 13.0 +0.9
VILL Villia 19.81 272 P P 12 11 13.0 +0.9
LVV L'vov 19.83 307 ⇑iP P 12 11 11.4 -0.8
LVV i S S 12 14 48.2 -3.8
LVV pmax pmax
comp=Z,300nm,1.3s
LVV MLR MLR
comp=N,600nm,11.0s
LVV MLR MLR
comp=E,500nm,11.0s
LVV MLR MLR
comp=Z,600nm,12.0s
VAY Valandovo 19.84 282 ⇓iP Pn 12 11 13.3 -1.0
VAY Valandovo 19.84 282 P Pn 12 11 13.8 -0.6
VAY pmax pmax
comp=Z,140nm,1.0s
DRGR 19.93 298 ⇓P P 12 11 13.8 +0.5
DRGR 19.93 298 i P P 12 11 13.1 -0.2
DRGR 19.93 298 P P 12 11 13.8 +0.5
DRGR pmax pmax
comp=Z,525nm,1.1s
LKR Lokris 19.94 274 P P 12 11 14.1 +0.7
LKR Lokris 19.94 274 P P 12 11 14.1 +0.7
MICGM Minsk 19.95 322 eP P 12 11 12.0 -1.4
MICGM epP Pn 12 11 20.0 +4.4
MICGM eS S 12 14 47.0 -7.3
MICGM esS Sn 12 15 04.0 +4.8
MICGM eLR LR 12 17 55.0
MNK Minsk 19.95 322 eP P 12 11 12.0 -1.4
MNK eS S 12 14 47.0 -7.3
VAM Vamos 19.97 264 P P 12 11 14.2 +0.4
VAM Vamos 19.97 264 P P 12 11 14.2 +0.4
KZA Kyzart 20.00 76 P P 12 11 15.5 +1.0
SNR=47
GRG Griva 20.00 281 P Pn 12 11 15.5 -0.9
GRG Griva 20.00 281 P Pn 12 11 15.5 -0.9
GRG Griva 20.00 281 P Pn 12 11 15.7 -0.7
GRG pmax pmax
comp=Z,83nm,1.4s
DID Didima 20.04 270 P P 12 11 14.6 0.0
DID Didima 20.04 270 P P 12 11 14.6 0.0
LIT Litokhoron 20.05 278 P P 12 11 14.3 -0.4
LIT Litokhoron 20.05 278 P P 12 11 14.3 -0.4
LIT Litokhoron 20.05 278 P P 12 11 15.5 +0.8
LIT Litokhoron 20.05 278 P P 12 11 15.5 +0.8
LIT pmax pmax
comp=Z,209nm,1.3s
STIP Stip 20.09 283 ⇓iP P 12 11 14.2 -0.9
LTK Loutraki 20.11 272 P Pn 12 11 17.9 +0.3
LTK Loutraki 20.11 272 P Pn 12 11 17.9 +0.3
LOUT Loutraki 20.11 272 P Pn 12 11 17.9 +0.2
LOUT Loutraki 20.11 272 P Pn 12 11 17.9 +0.2
IMMV Iera Moni Meta 20.12 264 P P 12 11 15.2 -0.2
IMMV Iera Moni Meta 20.12 264 P P 12 11 15.2 -0.2
KRND KRANIDI 20.14 270 P P 12 11 16.4 +0.8
KRND KRANIDI 20.14 270 P P 12 11 16.4 +0.8
JLN Jalan Bani Buh 20.20 150 P Pn 12 11 18.1 -0.6
SNR=7.9
GVDS Gavdos 20.27 262 P P 12 11 16.2 -0.8
GVDS Gavdos 20.27 262 P P 12 11 16.2 -0.8
TRPA Tarpa 20.31 301 ⇓P P 12 11 17.1 -0.2
AGG Agios Georgios 20.37 275 P P 12 11 18.5 +0.4
AGG Agios Georgios 20.37 275 P P 12 11 18.5 +0.4
AGG Agios Georgios 20.37 275 P P 12 11 19.0 +0.9
AGG Agios Georgios 20.37 275 P P 12 11 19.0 +0.9
AGG pmax pmax
comp=Z,937nm,1.7s
MDVR Moldovita 20.40 292 ⇓P P 12 11 18.5 +0.1
ANKY Antikythira Is 20.50 266 P P 12 11 18.0 -1.4
ANKY Antikythira Is 20.50 266 P P 12 11 18.0 -1.4
VLI Veliai 20.50 268 P P 12 11 17.3 -2.2
VLI Veliai 20.50 268 P P 12 11 17.3 -2.2
THL Klokotos Trika 20.50 277 P P 12 11 19.9 +0.4
THL Klokotos Trika 20.50 277 P P 12 11 19.9 +0.4
MAKR Makrakomi, Fth 20.52 275 P Pn 12 11 21.2 -1.3
MAKR Makrakomi, Fth 20.52 275 P Pn 12 11 21.2 -1.3
BZS Buzias 20.53 294 ⇓P P 12 11 19.3 -0.5
BZS Buzias 20.53 294 P P 12 11 19.4 -0.3
BZS pmax pmax
comp=Z,86nm,1.0s
KTHA Kythira Island 20.55 267 P P 12 11 18.8 -1.2
KTHA Kythira Island 20.55 267 P P 12 11 18.8 -1.2
KZN Kozani 20.57 279 P P 12 11 21.2 +0.9
KZN Kozani 20.57 279 P P 12 11 21.2 +0.9
SIRR Siria 20.57 296 ⇑P P 12 11 20.8 +0.6
UZH Uzhgorod 20.58 303 ⇑iP P 12 11 20.4 +0.1
UZH e 12 11 40.5
UZH eS S 12 15 00.6 -6.2
KTHR Kythira 20.59 267 P P 12 11 19.2 -1.3
KTHR Kythira 20.59 267 P P 12 11 19.2 -1.3
KWP Kalwaria Pacla 20.59 306 eP P 12 11 20.0 -0.3
KWP eS S 12 15 10.5 +3.5
KWP Kalwaria Pacla 20.59 306 P P 12 11 20.1 -0.3
KWP Kalwaria Pacla 20.59 306 P P 12 11 20.1 -0.3
KWP pmax pmax
comp=Z,4μm,1.0s
NIL Nilore 20.62 101 P P 12 11 21.9 +1.0

NIL Nilore 20.62 101 P P 12 11 21.9 +1.0
NIL pmax pmax
comp=Z,420nm,0.5s
SKO Skopje 20.62 284 i P P 12 11 21.7 +0.9
KALE Kalithea 20.66 273 P Pn 12 11 22.7 -1.4
KALE Kalithea 20.66 273 P Pn 12 11 22.7 -1.4
KOLS Kolonicke sedl 20.67 304 eP P 12 11 21.0 -0.3
KOLS pmax pmax
comp=Z,46nm,0.9s
KOLS Kolonicke sedl 20.67 304 eP P 12 11 21.0 -0.3
NACGM Naroch 20.71 322 eP P 12 11 19.0 -2.6
NACGM eS S 12 15 05.0 -4.1
NACGM eSS SnSn 12 15 30.0 -3.0
NACGM eLR LR 12 18 18.0
TRIZ Trizonia 20.71 273 P P 12 11 20.7 -1.1
TRIZ Trizonia 20.71 273 P P 12 11 20.7 -1.1
SERG Sergoula 20.71 274 P Pn 12 11 23.7 -1.0
SERG Sergoula 20.71 274 P Pn 12 11 23.7 -1.0
ULHL Ulahol 20.72 76 P P 12 11 23.4 +1.3
SNR=617
KLV Kalavryta, Ach 20.73 272 P P 12 11 22.8 +0.7
KLV Kalavryta, Ach 20.73 272 P P 12 11 22.8 +0.7
VLX Vlachokerasia 20.73 270 P P 12 11 21.3 -0.8
VLX Vlachokerasia 20.73 270 P P 12 11 21.3 -0.8
KUU Kurty 20.75 71 ⇓iP P 12 11 22.3 +0.1
KUU eS S 12 15 07.8 -2.5
KUU eSS Sn 12 15 28.1 +10
KUU Kurty 20.75 71 d iP P 12 11 22.2 +0.1
KUU eS S 12 15 07.7 -2.5
KUU eSS Sn 12 15 28.1 +10
MHTO MHTO 20.76 155 P Pn 12 11 24.0 -1.4
SNR=164
ANX Ano Chora 20.77 274 P P 12 11 21.8 -0.8
ANX Ano Chora 20.77 274 P P 12 11 21.8 -0.8
EVR Evrytania 20.79 275 P Pn 12 11 24.6 -1.1
EVR Evrytania 20.79 275 P Pn 12 11 24.6 -1.1
MTBS Maitube 20.82 73 eP P 12 11 23.8 +0.7
MTBS eS S 12 15 09.7 -2.1
MTBS eSS Sn 12 15 34.2 +14
MTBS Maitube 20.82 73 eP P 12 11 23.7 +0.7
MTBS eS S 12 15 09.6 -2.1
MTBS eSS Sn 12 15 34.1 +14
KSH Kashi 20.87 83 P P 12 11 22.0 -1.6
KSH PP PnPn 12 11 42.4 -2.0
KSH pmax pmax
comp=Z,89nm,0.8s
KSH pmax pmax
comp=Z,1μm,5.0s
KSH LR LR
comp=Z,1μm,8.9s
KSH LR LR
comp=Z,1μm,6.5s
KSH LR LR
comp=Z,3μm,10.9s
KPRO Kipourio 20.93 278 P P 12 11 25.6 +1.4
KPRO Kipourio 20.93 278 P P 12 11 25.6 +1.4
DYR Agios Nikonas 20.95 269 P P 12 11 22.4 -1.9
DYR Agios Nikonas 20.95 269 P P 12 11 22.4 -1.9
PENT Pentalofos 21.06 279 P P 12 11 26.6 +1.0
PENT Pentalofos 21.06 279 P P 12 11 26.6 +1.0
PVO Paravola 21.07 274 P P 12 11 27.6 +2.0
PVO Paravola 21.07 274 P P 12 11 27.6 +2.0
DRO Drossia 21.09 272 P P 12 11 26.9 +1.0
DRO Drossia 21.09 272 P P 12 11 26.9 +1.0
NEST Nestorio 21.09 279 P P 12 11 27.7 +1.7
NEST Nestorio 21.09 279 P P 12 11 27.7 +1.7
ITM Ithomi 21.13 270 P P 12 11 24.7 -1.6
ITM Ithomi 21.13 270 P P 12 11 24.7 -1.6
ITM Ithomi 21.13 270 IAmb IAmb 12 11 53.1
comp=Z,199nm,1.0s
AAA Alma-Ata 21.17 73 eP P 12 11 27.2 +0.4
AAA Alma-Ata 21.17 73 i P P 12 11 27.7 +0.9
CRVS Cervenica-Dubn 21.18 303 eP P 12 11 27.0 +0.2
CRVS pmax pmax
comp=Z,335nm,1.3s
CRVS Cervenica-Dubn 21.18 303 eP P 12 11 27.0 +0.2
OHR Ohrid 21.19 281 i P P 12 11 28.1 +1.1
OHR Ohrid 21.19 281 P P 12 11 28.6 +1.7
OHR pmax pmax
comp=Z,177nm,1.0s
AMT Artemida-Makis 21.20 271 P P 12 11 27.2 +0.1
AMT Artemida-Makis 21.20 271 P P 12 11 27.2 +0.1
TNSS Tian-Shan 21.20 73 eP P 12 11 28.1 +0.6
TNSS eS S 12 15 18.2 -1.8
TNSS eSS SnSn 12 15 41.3 -4.5
TNSS Tian-Shan 21.20 73 eP P 12 11 28.1 +0.6
TNSS eS S 12 15 18.1 -1.8
TNSS eSS SnSn 12 15 41.3 -4.5
KNDC Almaty 21.21 73 ⇑P P 12 11 28.5 +1.3
comp=Z,247nm,0.8s
CHKK Chushkaly 21.22 71 ⇓iP P 12 11 27.6 +0.3
CHKK eS S 12 15 19.8 +0.2
CHKK eSS SnSn 12 15 40.2 -5.3
CHKK Chushkaly 21.22 71 ⇓iP P 12 11 27.5 +0.3
CHKK eS S 12 15 19.7 +0.2
IIGN Ignalina 21.23 323 eP P 12 11 26.4 -0.7
IIGN IAmb IAmb 12 11 27.3
comp=Z,123nm,0.6s
IIGN eS S 12 15 16.7 -2.8
RLS Riolos of Patr 21.25 273 P P 12 11 27.7 +0.2
RLS Riolos of Patr 21.25 273 P P 12 11 27.7 +0.2
MDOK Medeo 21.27 73 i P P 12 11 27.7 -0.2
MDOK eS S 12 15 19.6 -1.3
MDOK eSS SnSn 12 15 52.3 +5.1
MDOK Medeo 21.27 73 ⇑P P 12 11 28.3 +0.3
comp=Z,386nm,1.2s
MDOK Medeo 21.27 73 i P P 12 11 27.7 -0.2
MDOK eS S 12 15 19.6 -1.3
MDOK eSS SnSn 12 15 52.2 +5.1
PYL PYLOS 21.36 270 P P 12 11 26.6 -2.1
PYL PYLOS 21.36 270 P P 12 11 26.6 -2.1
JAN Janina 21.37 277 P P 12 11 27.7 -1.2
JAN Janina 21.37 277 P P 12 11 27.7 -1.2
KLMR Klimovskoe 21.39 348 ⇓iP P 12 11 26.5 -2.3
KLMR eP P 12 11 26.5 -2.3
KLMR eP P 12 11 26.5 -2.3
KLMR AMP 12 11 32.5
comp=Z,1μm,1.6s
KLMR eS S 12 15 12.5 -10
KLMR eS S 12 15 12.5 -10
KLMR LQ LQ 12 18 51.4
KLMR LQ LQ 12 18 51.4
KLMR LR LR 12 19 14.4
KLMR Klimovskoe 21.39 348 d iP P 12 11 26.4 -2.3
KLMR eS S 12 15 12.5 -10
KLMR pmax pmax
comp=Z,1μm,1.6s
PHP Peshkopia 21.39 283 P P 12 11 27.7 -1.4
PHP Peshkopia 21.39 283 P P 12 11 27.7 -1.4
ISAL Salakas 21.41 323 eP P 12 11 28.3 -0.7
ISAL IAmb IAmb 12 11 29.2
comp=Z,145nm,0.8s
ISAL eS S 12 15 20.3 -2.7
KDJ Kajisay 21.43 76 P P 12 11 31.2 +1.6
KDJ Kajisay 21.43 76 P P 12 11 31.3 +1.6
KDJ pmax pmax
comp=Z,713nm,1.1s
IZAR Zarasai 21.46 324 eP P 12 11 29.0 -0.6
IZAR IAmb IAmb 12 11 29.8
comp=Z,167nm,0.5s
IZAR eS S 12 15 21.2 -2.8
PRGR Permogore 21.48 356 ⇓iP P 12 11 28.4 -1.4
PRGR i S S 12 15 16.4 -7.9
PRGR pmax pmax
comp=Z,1μm,0.6s
DIVS Divibare 21.61 290 eP P 12 11 31.0 -0.4
DQM DQM 21.62 157 P P 12 11 32.0 +0.4
SNR=46
LKD2 Lefkada island 21.70 275 P P 12 11 27.7 -4.6
LKD2 Lefkada island 21.70 275 P P 12 11 27.7 -4.6
KECS Kecovo 21.72 302 eP P 12 11 32.8 +0.3
KECS pmax pmax
comp=Z,66nm,1.1s
KECS Kecovo 21.72 302 eP P 12 11 32.8 +0.3
IGT Igoumenitsa 21.79 277 P P 12 11 27.7 -5.6
IGT Igoumenitsa 21.79 277 P P 12 11 27.7 -5.6
IGT Igoumenitsa 21.79 277 P P 12 11 33.0 -0.3
IGT pmax pmax
comp=Z,136nm,1.2s
TIR Tirane 21.86 282 ⇑P P 12 11 34.2 +0.2
TIR Tirane 21.86 282 P P 12 11 34.1 +0.1
TIR Tirane 21.86 282 P P 12 11 34.1 +0.1

TIR pmax pmax
comp=Z,105nm,0.8s
TEKS Tekeris 21.95 291 eP P 12 11 35.7 +0.7
SRN Sarande 21.98 278 P P 12 11 27.7 -7.6
SRN Sarande 21.98 278 P P 12 11 27.7 -7.6
PSZ Piszkesteto 22.00 300 ⇑P P 12 11 36.0 +0.4
PSZ Piszkesteto 22.00 300 P P 12 11 35.6 0.0
PSZ IAmb IAmb 12 11 52.1
comp=Z,216nm,1.1s
PSZ Piszkesteto 22.00 300 P P 12 11 35.6 0.0
PSZ pmax pmax
comp=Z,216nm,1.1s
SUW Suwalki 22.02 317 eP P 12 11 33.9 -1.7
SUW eS S 12 15 30.6 -4.1
SUW Suwalki 22.02 317 P P 12 11 33.9 -1.7
SUW Suwalki 22.02 317 P P 12 11 33.9 -1.7
SUW pmax pmax
comp=Z,464nm,0.8s
BBLS Lazići 22.03 289 eP P 12 11 35.3 -0.7
NIE Niedzica 22.05 304 eP P 12 11 35.6 -0.4
NIE eS S 12 15 39.4 +3.9
NIE Niedzica 22.05 304 eP P 12 11 35.6 -0.4
NIE eS S 12 15 39.4 +3.9
KEK Kerkira 22.16 278 P P 12 11 27.7 -10
KEK Kerkira 22.16 278 P P 12 11 27.7 -10
PDG Podgorica 22.21 285 ⇑P P 12 11 38.0 +0.2
PDG Podgorica 22.21 285 eP P 12 11 37.7 -0.1
PDG Podgorica 22.21 285 P P 12 11 37.1 -0.6
TDK Taldyqorghan 22.25 68 ⇑iP P 12 11 37.8 -0.5
TDK eS S 12 15 38.0 -1.1
TDK Taldyqorghan 22.25 68 c iP P 12 11 37.7 -0.5
TDK eS S 12 15 38.0 -1.1
SATY Saty 22.27 73 ⇓iP P 12 11 38.8 +0.1
comp=Z,150nm,1.5s
SATY eS S 12 15 40.5 +0.7
SATY Saty 22.27 73 d iP P 12 11 38.7 +0.1
SATY eS S 12 15 40.4 +0.7
SATY pmax pmax
comp=Z,150nm,1.5s
JMU Jammu 22.27 102 ex P 12 11 40.0 +1.5
DRME Dracevica, Mon 22.28 285 eP P 12 11 37.7 -0.9
ZHN Zhinishke 22.29 73 eP P 12 11 39.0 +0.2
comp=Z,70nm,1.2s
ZHN Zhinishke 22.29 73 eP P 12 11 38.9 +0.2
ZHN pmax pmax
comp=Z,70nm,1.2s
PRZ Przheval'sk 22.30 75 P P 12 11 40.0 +0.9
PRZ Przheval'sk 22.30 75 P P 12 11 40.0 +0.9
PRZ pmax pmax
comp=Z,488nm,0.9s
HAPS Han Pijesak,Bl 22.36 290 eP P 12 11 40.5 +1.0
PABE Paberze 22.38 321 eP P 12 11 38.4 -1.0
UPM Unac-Piva 22.42 287 eP P 12 11 41.9 +1.6
BEL Belsk 22.45 310 eP P 12 11 39.2 -1.1
BEL Belsk 22.45 310 eP P 12 11 39.2 -1.1
KPKS Kokpek 22.45 72 ⇓iP P 12 11 40.5 -0.1
comp=Z,438nm,1.7s
KPKS eS S 12 15 41.6 -1.2
KPKS eSS SnSn 12 16 14.5 -1.5
KPKS Kokpek 22.45 72 d iP P 12 11 40.4 -0.1
KPKS eS S 12 15 41.6 -1.2
KPKS eSS SnSn 12 16 14.4 -1.5
KPKS pmax pmax
comp=Z,438nm,1.7s
BUD Budapest 22.52 299 P P 12 11 41.4 +0.3
BUD pmax pmax
comp=Z,84nm,1.1s
OJC Ojcow 22.56 306 eS Sn 12 16 14.4 +13
OJC Ojcow 22.56 306 IAmb IAmb 12 12 17.3
comp=Z,675nm,2.0s
OJC Ojcow 22.56 306 P P 12 11 40.2 -1.3
OJC pmax pmax
comp=Z,119nm,1.0s
MORH Mrgy, Hungar 22.65 295 eP P 12 11 41.7 -0.7
WHFO Wadi Hawf 22.69 168 P P 12 11 43.0 -0.2
SNR=53
BRY Bratogost 22.70 287 eP P 12 11 43.9 +0.7
UZB Uzynbulak 22.72 73 ⇓iP P 12 11 43.3 -0.1
UZB eS S 12 15 46.5 -0.8
UZB eSS SnSn 12 16 19.7 -2.8
UZB Uzynbulak 22.72 73 d iP P 12 11 43.3 -0.1
UZB eS S 12 15 46.5 -0.8
UZB eSS SnSn 12 16 19.6 -2.8
HCY Herceg Novi 22.77 285 eP P 12 11 43.9 +0.1
VYHS Vyhne 22.80 301 eP P 12 11 44.1 0.0
VYHS pmax pmax
comp=Z,87nm,1.1s
VYHS Vyhne 22.80 301 eP P 12 11 44.1 0.0
TREB Trebinje 22.85 286 eP P 12 11 44.0 -0.6
SHAO Shalim 22.95 163 i P P 12 11 44.4 -1.3
SNR=288
SHAO Shalim 22.95 163 P P 12 11 46.0 +0.2
SNR=30
SHAO P P 12 11 46.0 +0.2
SNR=30
VSU Vasula 22.99 330 eP P 12 11 44.6 -1.2
VSU eS S 12 15 48.4 -2.8
THN Thein Dam 23.02 101 eP P 12 11 48.5 +2.2
THN ex x 12 16 04.8
SHLS Shalkode 23.04 73 ⇓iP P 12 11 50.0 +3.4
comp=Z,112nm,0.7s
SHLS eS S 12 15 57.0 +4.4
SHLS eSS SnSn 12 16 37.5 +7.3
SHLS Shalkode 23.04 73 d iP P 12 11 50.0 +3.4
SHLS eS S 12 15 56.9 +4.4
SHLS eSS SnSn 12 16 37.5 +7.3
SHLS pmax pmax
comp=Z,112nm,0.7s
PDGK Podgornoye 23.05 72 ⇓P P 12 11 46.5 -0.3
comp=Z,494nm,1.0s
DMTO DMTO 23.10 165 P P 12 11 47.0 -0.3
SNR=45
KURBB Kurchatov Arra 23.16 54 P P 12 11 47.9 +0.2
comp=Z,1μm,0.7s,baz=262,slow=9.3,SNR=487
KURBB S S 12 15 56.9 +2.8
comp=Z,14nm,0.8s,baz=259,slow=24,SNR=2.5
KURBB Kurchatov Arra 23.16 54 ⇓P P 12 11 47.8 +0.2
comp=Z,974nm,0.7s
ABTO Aybut 23.17 169 P P 12 11 47.0 -1.0
SNR=75
ABTO P P 12 11 47.0 -1.0
SNR=75
RBK Rabkut 23.17 167 P P 12 11 46.9 -1.1
RBK P P 12 11 48.0 0.0
SNR=57
KURK Kurchatov 23.24 53 ⇑P P 12 11 48.8 +0.4
comp=Z,1μm,0.7s
KURK Kurchatov 23.24 53 P P 12 11 48.7 +0.3
KURK Kurchatov 23.24 53 d iP P 12 11 49.3 +0.9
KURK MLR MLR
comp=Z,2μm,17.0s
OKC Ostrava-Krasne 23.50 304 eP P 12 11 49.7 -1.1
OKC epP pP 12 12 04.8 -0.5
OKC Ostrava-Krasne 23.50 304 eP P 12 11 49.7 -1.1
OKC e 12 12 04.8
DHRM DHARAMSHALA 23.54 101 ⇓iP P 12 11 52.4 +0.8
DHRM i x x 12 16 03.6
BLY Banja Luka 23.62 291 ⇑P P 12 11 53.0 +1.0
BLY Banja Luka 23.62 291 eP P 12 11 48.6 -3.4
BLY Banja Luka 23.62 291 P P 12 11 52.3 +0.3
JAVC Velka Javorina 23.62 302 eP P 12 11 52.7 +0.7
PBUR Paburge 23.63 321 eP P 12 11 51.8 -0.1
MGRS Mrkonjic Grad 23.70 291 eP P 12 11 53.6 +0.9
SMOL Smolenice 23.73 301 eP P 12 11 53.7 +0.8
SMOL Smolenice 23.73 301 eP P 12 11 53.7 +0.8
MODS Modra-Piesok 23.81 300 eP P 12 11 53.8 +0.2
MODS pmax pmax
comp=Z,317nm,1.8s
MODS Modra-Piesok 23.81 300 eP P 12 11 53.8 +0.2
MORC Moravsky Berou 23.88 304 eP P 12 11 53.5 -0.8
MORC Moravsky Berou 23.88 304 ⇑P P 12 11 54.3 +0.1
MORC Moravsky Berou 23.88 304 P P 12 11 53.9 -0.4
MORC pmax pmax
comp=Z,72nm,1.5s
ZST Bratislava 23.90 300 eP P 12 11 54.2 -0.2
ZST Bratislava 23.90 300 eP P 12 11 54.2 -0.2
BEHE Becsehely 23.95 296 eP pP 12 12 11.0 +1.0
BHK Bhakra 24.02 103 ePN P 12 11 58.0 +2.3
SEM Semipalatinsk 24.18 55 ⇑iP P 12 11 58.5 +1.3
SEM Semipalatinsk 24.18 55 c iP P 12 11 58.5 +1.3
SOP Sopron 24.20 299 P P 12 11 57.6 +0.4
SOP pmax pmax
comp=Z,81nm,1.6s

SLIT Slitere, Latvi 24.33 324 eP P 12 11 57.5 -0.6
VRAC Vranov 24.40 302 eP P 12 11 59.0 0.0
VRAC Vranov 24.40 302 P P 12 11 58.8 -0.2
comp=Z,16nm,0.9s,baz=96,slow=11,SNR=7.6
VRAC Vranov 24.40 302 ⇑P P 12 11 58.6 -0.4
KRLC Kraliky 24.42 304 eP P 12 11 59.1 -0.1
KRLC epP pP 12 12 14.6 +0.1
KRLC Kraliky 24.42 304 eP P 12 11 59.1 -0.1
KRLC e 12 12 14.6
BHUJ Bhuj 24.46 128 eP P 12 12 01.0 +1.3
KRUC Moravsky 24.49 302 eP P 12 12 00.7 +0.9
KRUC Moravsky 24.49 302 P P 12 11 59.9 +0.1
KRUC pmax pmax
comp=Z,66nm,1.1s
TIP Timpagrande 24.57 278 ⇑P P 12 12 00.8 +0.1
TIP Timpagrande 24.57 278 P P 12 12 00.8 +0.1
TIP IAmb IAmb 12 12 18.2
comp=Z,428nm,1.5s
CONA Conrad Observa 24.69 299 eP P 12 12 01.6 -0.2
comp=Z,45nm,1.1s,SNR=14
SMLA Simla 24.72 103⇓iP P 12 12 03.5 +1.4
TMCR Tamitsa 24.75 349 eP P 12 12 00.9 -1.0
TMCR eS S 12 16 18.5 -0.9
TMCR pmax pmax
comp=Z,314nm,0.8s
DPC Dobruska-Polom 24.76 305 eP P 12 12 02.2 -0.1
DPC epP pP 12 12 15.2 -2.4
DPC Dobruska-Polom 24.76 305 eP P 12 12 02.2 -0.1
DPC e 12 12 15.2
MAKZ Makanchi 24.82 64 ⇓P P 12 12 03.8 +0.9
comp=Z,944nm,1.2s
MAKZ Makanchi 24.82 64 P P 12 12 04.0 +1.1
MAKZ Makanchi 24.82 64 P P 12 12 04.0 +1.1
MAKZ pmax pmax
comp=Z,770nm,1.0s
CRES Cresnjev 24.85 294 eP P 12 12 02.7 -0.4
ARSA Arzberg 24.86 297 eP P 12 12 03.5 +0.2
comp=Z,90nm,1.1s,SNR=23
OSTC Ostas 24.87 305 eP P 12 12 03.4 +0.1
KSP Ksiaz 24.88 306 eP P 12 12 03.5 +0.2
KSP eS S 12 16 57.1 +35
KSP Ksiaz 24.88 306 eP P 12 12 03.5 +0.2
JOF Joensuu 24.97 341 P P 12 12 03.8 -0.2
JOF pmax pmax
comp=Z,103nm,0.7s
GKP Gorka Klasztor 24.97 312 eS S 12 16 35.2 +12
GKP Gorka Klasztor 24.97 312 P P 12 12 04.1 0.0
GKP pmax pmax
comp=Z,150nm,1.2s
CHVC Chvalec 24.98 305 eP P 12 12 04.4 +0.1
CHVC ex x 12 12 16.5
UPC Upice 24.99 305 eP P 12 12 04.5 +0.2
UPC Upice 24.99 305 eP P 12 12 04.5 +0.2
BOJS Bojanci 24.99 293 eP P 12 12 04.9 +0.5
MK31 Makanchi Array 25.04 64 P P 12 12 05.9 +1.0
comp=Z,437nm,0.7s,baz=262,slow=7.8,SNR=3720
MK31 Makanchi Array 25.04 64 P P 12 12 05.8 +1.0
MK31 Makanchi Array 25.04 64 iP P 12 12 05.8 +1.0
MKAR Makanchi Array 25.04 64 P P 12 12 06.2 +1.4
comp=Z,461nm,0.8s,baz=256,slow=7.1,SNR=686
MKAR S S 12 16 42.2 +18
comp=Z,14nm,0.7s,baz=271,slow=16,SNR=2.4
MKAR LR LR 12 23 48.6
comp=Z,2µm,20.8s,baz=252,slow=41
MKAR P3KPbc 12 45 09.1
comp=Z,5.8nm,0.8s,baz=85,slow=5.5,SNR=32
MKAR Makanchi Array 25.04 64 P P 12 12 05.8 +1.0
TREC Trest 25.11 302 eP P 12 12 02.9 -2.6
TREC Trest 25.11 302 eP P 12 12 02.9 -2.6
SOKA Soboth 25.17 296 eP P 12 12 06.5 +0.4
comp=Z,109nm,0.8s,SNR=41
FIA1 FINESS Array S 25.33 334 P P 12 12 06.9 -0.4
FIA1 IAmb IAmb 12 12 25.5
comp=Z,174nm,0.6s
FINES FINESS Array B 25.33 334 P P 12 12 07.2 -0.1
comp=Z,96nm,0.4s,baz=142,slow=11,SNR=92
FINES S S 12 16 31.0 +2.3
comp=Z,67nm,0.9s,baz=148,slow=18,SNR=3.9
FINES LR LR 12 23 09.4
comp=Z,1µm,20.9s,baz=133,slow=39
FINES FINESS Array B 25.33 334 P P 12 12 07.0 -0.3
CEL Celeste 25.45 276 IAmb IAmb 12 12 36.4
comp=Z,172nm,1.0s
OBKA Obir 25.49 296 eP P 12 12 09.7 +0.6
comp=Z,33nm,0.8s,SNR=5.4
LJU Ljubljana 25.50 294 eP P 12 12 09.6 +0.6
LJU ipP pP 12 12 26.3 +2.1
LJU Ljubljana 25.50 294 eP P 12 12 09.4 +0.4
GOPC GO Pecny, Ondr 25.65 303 eP P 12 12 12.0 +1.6
GOPC GO Pecny, Ondr 25.65 303 eP P 12 12 12.0 +1.6
CRNS Crni Vrh 25.68 295 eP P 12 12 10.9 +0.2
CRNS epP pP 12 12 27.5 +1.6
MOA Molln 25.76 299 eP P 12 12 11.3 0.0
comp=Z,13nm,0.7s,SNR=6.1
DDI Dehra Dun 25.79 103 eP P 12 12 10.5 -1.3
PRU Pruhonice 25.82 304 eP P 12 12 11.7 -0.2
PRU Pruhonice 25.82 304 eP P 12 12 11.7 -0.2
DAMY Dhamar 25.88 190 P P 12 12 14.6 +1.5
PRA Prague 25.91 304 eP P 12 12 15.4 +2.8
PRA Prague 25.91 304 eP P 12 12 15.4 +2.8
NDI New Delhi 26.04 108 eP P 12 12 15.5 +1.5
MYKA Terra Mystica 26.12 296 eP P 12 12 13.9 -0.9
comp=Z,11nm,0.8s
INTR Introdacqua 26.20 285 P P 12 12 15.9 +0.4
GEC2 GERESS Array S 26.22 301 eP P 12 12 17.1 +1.5
comp=Z,82nm,1.1s,baz=97,slow=8.9
GEC2 GERESS Array S 26.22 301 IAmb IAmb 12 12 39.8
comp=Z,85nm,0.7s
GERES GERESS Array B 26.22 301 P P 12 12 15.3 -0.3
comp=Z,28nm,0.8s,baz=102,slow=9.2,SNR=56
GERES pP pP 12 12 31.7 +0.9
comp=Z,40nm,0.9s,baz=99,slow=8.2,SNR=13
GERES LR LR 12 25 54.0
comp=Z,323nm,18.2s,baz=94,slow=44
GERES GERESS Array B 26.22 301 P P 12 12 15.0 -0.6
SUF Sumiainen 26.25 336 P P 12 12 15.5 -0.1
SUF pmax pmax
comp=Z,261nm,1.5s
KHC Kasperske Hory 26.33 301 eP P 12 12 17.0 +0.4
KHC epP pP 12 12 29.3 -2.5
KHC Kasperske Hory 26.33 301 P P 12 12 16.8 +0.3
KHC Kasperske Hory 26.33 301 eP P 12 12 17.0 +0.4
KBA Koelnbreinsper 26.34 297 eP P 12 12 16.9 +0.2
comp=Z,79nm,1.1s,SNR=17
KBA Koelnbreinsper 26.34 297 P P 12 12 17.0 +0.2
KBA pmax pmax
comp=Z,115nm,1.1s
BRG Berggiesshubel 26.35 305 eP P 12 12 16.7 +0.1
comp=Z,42nm,1.0s,baz=97,slow=8.9
BRG Berggiesshubel 26.35 305 P P 12 12 17.1 +0.5
BRG pmax pmax
comp=Z,44nm,0.9s
AQU L'Aquila 26.53 286 eP P 12 12 18.0 -0.4
AQU L'Aquila 26.53 286 P P 12 12 19.0 +0.6
AQU IAmb IAmb 12 12 42.0
comp=Z,256nm,1.1s
AQU L'Aquila 26.53 286 P P 12 12 19.0 +0.6
AQU pmax pmax
comp=Z,256nm,1.1s
STAL STALIGIAL 26.76 295 IAmb IAmb 12 12 43.0
comp=Z,162nm,1.4s
RUE Ruedersdorf 26.77 309 eP P 12 12 19.8 -0.6
comp=Z,84nm,1.0s,baz=97,slow=8.9
RUE Ruedersdorf 26.77 309 eP P 12 12 20.2 -0.2
VAE Valguarnera 26.79 275 P P 12 12 21.4 +0.6
comp=Z,30nm,0.9s,baz=45,slow=4.3,SNR=2.9
VAE pP pP 12 12 37.5 +1.5
comp=Z,173nm,0.9s,baz=30,slow=2.6,SNR=13
ZSN Zaisan 26.82 62⇓iP P 12 12 21.5 +0.5
comp=Z,68nm,1.3s
ZSN Zaisan 26.82 62⇓iP P 12 12 21.5 +0.5
ZSN pmax pmax
comp=Z,68nm,1.3s
BSD Bornholm Skovb 26.86 315⇓iP P 12 12 19.2 -2.0
BSD Bornholm Skovb 26.86 315⇓iP P 12 12 19.2 -2.0
ABTA Abfaltersbach 26.90 296 eP P 12 12 22.0 +0.2
comp=Z,12nm,0.9s
CLL Collm 27.01 306 eP P 12 12 22.5 -0.1
comp=Z,44nm,1.0s,baz=97,slow=8.9
CLL Collm 27.01 306 eP P 12 12 22.0 -0.5
comp=Z,44nm,1.0s
CLL ipP pP 12 12 40.8 +2.9
comp=Z,59nm,1.0s
CLL isP sP 12 12 46.1 +0.7

CLL e 12 13 11.0
CLL e 12 13 14.0
CLL e(sPP) 12 13 24.0
CLL e(S) S 12 17 33.0 +38
comp=N,700nm,22.7s
CLL e(S) S 12 17 33.0 +38
comp=E,300nm,14.6s
CLL eSS SnSn 12 18 24.0 +17
CLL e 12 18 48.0
CLL Collm 27.01 306 eP P 12 12 22.0 -0.5
CLL i *SP pP 12 12 40.8 +2.9
CLL pmax pmax
comp=Z,44nm,1.0s
MURB Monte Urbino 27.06 288 P P 12 12 23.9 +0.7
CTI Castel Tesino 27.50 294 P P 12 12 27.2 0.0
CTI IAmb IAmb 12 12 55.5
comp=Z,187nm,1.5s
CTI Castel Tesino 27.50 294 P P 12 12 27.2 0.0
CTI pmax pmax
comp=Z,187nm,1.5s
WTTA Wattenberg 27.51 297 eP P 12 12 26.7 -0.6
comp=Z,34nm,0.7s,SNR=12
TEOL Teolo 27.51 293 P P 12 12 27.1 0.0
TEOL IAmb IAmb 12 12 48.2
comp=Z,205nm,1.0s
WATA Walderalm 27.55 297 eP P 12 12 26.9 -0.8
comp=Z,59nm,1.3s,SNR=8.3
RGN Rugen 27.57 313 eP P 12 12 27.3 -0.2
VAF Ylistaro 27.59 334 P P 12 12 27.9 +0.3
VAF pmax pmax
comp=Z,160nm,0.9s
GRB1 Grafenberg Arr 27.61 302 P P 12 12 26.6 -1.4
GRB1 pmax pmax
comp=Z,43nm,1.1s
NEUB Neuenburg 27.75 306 eP P 12 12 29.4 +0.2
comp=Z,52nm,0.9s,baz=97,slow=8.9
ZAA0 Zalesovo Array 27.75 48 ⇑P P 12 12 28.3 -0.9
comp=Z,16nm,0.7s
ZAA0 Zalesovo Array 27.75 48 P P 12 12 29.2 +0.1
ZAA0 IAmb IAmb 12 12 31.1
comp=Z,105nm,0.7s
ZALV Zalesovo Beam 27.75 48 P P 12 12 29.4 +0.3
comp=Z,83nm,0.5s,baz=268,slow=12,SNR=186
ZALV S S 12 17 22.3 +15
comp=Z,5.6nm,0.7s,baz=244,slow=23,SNR=1.0
ZALV LR LR 12 25 30.6
comp=Z,3µm,18.5s,baz=248,slow=40
ZALV P3KPbc 12 44 55.0
comp=Z,3.1nm,0.8s,baz=61,slow=6.3,SNR=8.7
MOX Moxa 27.77 304 eL L 12 24 07.4
comp=Z,355nm,19.8s
MOX Moxa 27.77 304 P P 12 12 29.3 -0.1
MOX pmax pmax
comp=Z,22nm,1.1s
SQTA Sankt Quirin 27.80 297 eP P 12 12 29.4 -0.4
comp=Z,14nm,0.5s
MOTA Moosalm 27.87 297 eP P 12 12 29.7 -0.8
comp=Z,36nm,1.1s
GRA1 Grafenberg Arr 27.92 302 P P 12 12 31.6 +0.8
GRF Grafenberg Arr 27.92 302 eL L 12 26 58.3
comp=Z,427nm,19.4s
GRF Grafenberg Arr 27.92 302 P P 12 12 31.6 +0.8
GRF pmax pmax
comp=Z,47nm,1.3s
MSF Maaselka 28.02 343 P P 12 12 31.1 -0.4
MSF pmax pmax
comp=Z,138nm,1.1s
RETA Reutte 28.11 298 P P 12 12 31.8 -0.7
comp=Z,7.5nm,0.5s
FETA Feichten 28.13 297 eP P 12 12 32.5 -0.3
comp=Z,12nm,0.5s
OUL Oulu 28.13 340 P P 12 12 32.0 -0.4
OUL pmax pmax
comp=Z,129nm,0.6s
SOCY Socotra 28.35 169 P P 12 12 32.8 -2.1
SOCY Socotra 28.35 169 P P 12 12 33.0 -1.9
SNR=17
FUORN Ofenpass-Fuorn 28.45 296 P P 12 12 35.6 -0.2
FUORN IAmb IAmb 12 12 58.3
comp=Z,178nm,1.4s
APA Apatity 28.63 348⇓iP P 12 12 36.1 -0.8
APA i 12 12 53.9
APA i S S 12 17 18.0 -2.7
APA i SS SnSn 12 17 53.0 -53
APA pmax pmax
comp=Z,26nm,1.0s
DAVA Damuels 28.70 297 eP P 12 12 37.2 -0.7
comp=Z,23nm,1.1s
DAVOX Davos/Dischmat 28.71 296 P P 12 12 37.4 -0.6
comp=Z,9.4nm,0.5s,baz=99,slow=6.9,SNR=11
DAVOX LR LR 12 26 41.4
comp=Z,320nm,19.9s,baz=80,slow=42
CLZ Clausthal 28.71 307 eP P 12 12 38.0 +0.2
comp=Z,17nm,0.9s,baz=97,slow=8.9
LVZ Lovozero 28.74 349 P P 12 12 37.6 -0.3
LVZ IAmb IAmb 12 13 24.0
comp=Z,111nm,0.8s
LVZ Lovozero 28.74 349⇓iP P 12 12 37.3 -0.6
LVZ pmax pmax
comp=Z,47nm,1.1s
WMQ Urumqi 28.95 70 eP P 12 12 41.7 +1.6
WMQ pmax pmax
comp=Z,210nm,0.9s
WMQ pmax pmax
comp=Z,310nm,3.7s
WMQ LR LR
comp=Z,2µm,27.7s
WMQ LR LR
comp=Z,3µm,28.1s
WMQ LR LR
comp=Z,2µm,29.0s
WMQ Urumqi 28.95 70 P P 12 12 41.6 +1.6
WMQ Urumqi 28.95 70 P P 12 12 41.6 +1.6
WMQ pmax pmax
comp=Z,276nm,0.7s
ATD Arta Tunnel 29.10 192 P P 12 12 42.4 +0.8
BSEG Bad Segeberg 29.12 311 eP P 12 12 41.7 +0.3
comp=Z,28nm,0.9s,baz=97,slow=8.9
STU Stuttgart 29.19 300 eP P 12 12 41.5 -0.5
comp=Z,50nm,0.9s,baz=97,slow=8.9
STU Stuttgart 29.19 300 P P 12 12 41.7 -0.3
STU Stuttgart 29.19 300 P P 12 12 41.7 -0.3
STU pmax pmax
comp=Z,48nm,0.8s
HFS Hagfors 29.44 324 P P 12 12 44.0 -0.1
comp=Z,127nm,0.8s,baz=129,slow=10.0,SNR=109
BHPL Bhopal 29.52 116 eP P 12 12 47.4 +2.2
BHPL IAmb IAmb 12 12 59.8
comp=Z,32nm,0.6s
SLE Schleitheim 29.64 298 P P 12 12 44.6 -1.5
SLE pmax pmax
comp=Z,35nm,1.1s
BOM Bombay 29.68 129 AMP 12 12 42.5
comp=Z,282nm,2.3s
PGF Pioggiola 29.72 288 eP P 12 12 46.2 -0.7
PGF pmax pmax
comp=Z,122nm,1.5s
SGF Sodankyl 29.86 343 P P 12 12 47.4 -0.3
SGF pmax pmax
comp=Z,88nm,1.2s
ECH Echery 30.54 299 P P 12 12 53.0 -1.0
ECH pmax pmax
comp=Z,31nm,1.6s
SAOF Saorge 30.56 291 P P 12 12 54.5 +0.3
SAOF pmax pmax
comp=Z,162nm,1.1s
POO Poona 30.59 128 eP P 12 12 54.0 -0.7
SBF Sospel 30.66 291 eP P 12 12 56.9 +1.7
SBF pmax pmax
comp=Z,46nm,0.7s
NC602 NORSAR Array S 30.67 324 eP P 12 12 54.6 -0.3
NORES NORESS Array B 30.67 324 P P 12 12 54.4 -0.5
NORES pmax pmax
comp=Z,23nm,0.3s
OSL Oslo 30.72 323 eP P 12 12 55.1 -0.2
NB2 NORSAR Subarra 30.94 325 P P 12 12 56.6 -0.8
comp=Z,83nm,0.8s,baz=116,slow=8.6
NB2 NORSAR Subarra 30.94 325 P P 12 12 56.6 -0.8
baz=116,slow=8.6
NOA NORSAR Array B 30.94 325 P P 12 12 56.6 -0.8
comp=Z,46nm,0.7s,baz=116,slow=8.1,SNR=108
NOA LR LR 12 26 25.1
comp=Z,683nm,19.3s,baz=110,slow=38
LPG La Plagne 30.96 294 eP P 12 12 57.7 -0.3
LPG pmax pmax
comp=Z,13nm,0.7s

LPL La Plagne 30.97 294 eP P 12 12 57.0 -1.0
LPL pmax pmax
comp=Z,62nm,1.4s
MBDF Montbardon 31.02 292 eP P 12 12 57.7 -0.8
MBDF pmax pmax
comp=Z,39nm,0.6s
DANN Dangsing 31.06 102 eP P 12 13 00.8 +1.7
comp=Z,772nm,0.6s
HAU Haudompre 31.08 299 eP P 12 12 57.3 -1.5
HAU pmax pmax
comp=Z,35nm,0.9s
NBO00 NORSAR Array S 31.13 325 IAmb IAmb 12 12 59.1
comp=Z,125nm,0.7s
KONO Kongsberg 31.14 322 eP P 12 12 58.9 -0.2
KONO Kongsberg 31.14 322 P P 12 12 58.7 -0.3
KONO Kongsberg 31.14 322⇓iP P 12 12 58.3 -0.8
KONO pmax pmax
comp=Z,53nm,1.0s
WLF Walferdange 31.20 302 P P 12 12 59.5 -0.3
WLF pmax pmax
comp=Z,30nm,1.8s
KEST Kesra 31.21 274 P P 12 13 00.5 +0.4
comp=Z,19nm,0.9s,baz=335,slow=9.1,SNR=9.4
KEST pP pP 12 13 17.6 +2.1
comp=Z,66nm,0.8s,baz=327,slow=2.7,SNR=18
KEST ScP ScP 12 19 32.8 +1.9
comp=Z,12nm,1.0s,baz=90,slow=8.1,SNR=3.9
KEST Kesra 31.21 274 IAmb IAmb 12 13 18.7
comp=Z,103nm,0.9s
NC204 NORSAR Array S 31.24 325 IAmb IAmb 12 13 00.1
comp=Z,92nm,0.9s
KOLN Koldanda 31.25 103 eP P 12 13 01.9 +1.2
FRF La Foret Royal 31.27 290 eP P 12 12 59.8 -0.6
FRF pmax pmax
comp=Z,59nm,0.8s
CABF La Chapelle 31.33 296 eP P 12 13 00.0 -1.0
CABF pmax pmax
comp=Z,27nm,0.9s
MEM Membach 31.33 304 P P 12 13 01.1 +0.2
MEM pmax pmax
comp=Z,62nm,1.3s
KEV Kevo 31.68 346 P P 12 13 04.3 +0.5
KEV IAmb IAmb 12 14 00.3
comp=Z,48nm,0.7s
KEV Kevo 31.68 346 P P 12 13 04.3 +0.5
KEV pmax pmax
comp=Z,48nm,0.7s
ARCES ARCESS Array B 31.79 345 P P 12 13 04.9 +0.1
comp=Z,41nm,0.6s,baz=147,slow=8.7,SNR=47
ARCES pP pP 12 13 21.5 +1.1
comp=Z,30nm,0.8s,baz=147,slow=7.5,SNR=6.3
ARCES PcP PcP 12 15 54.8 +0.5
comp=Z,15nm,0.7s,baz=130,slow=4.9,SNR=1.6
ARCES LR LR 12 27 08.6
comp=Z,1µm,20.0s,baz=138,slow=38
ARE0 ARCESS Array S 31.79 345 eP P 12 13 05.2 +0.5
ARE0 ARCESS Array S 31.79 345 P P 12 13 05.0 +0.2
SNART Snartemo 31.89 319 eP P 12 13 06.3 +0.6
GKN Gorkha 31.90 101 eP P 12 13 07.7 +1.3
comp=Z,552nm,0.3s
NGP Nagpur 32.04 117 eP P 12 13 08.4 +1.0
NGP IAmb IAmb 12 13 09.9
comp=Z,21nm,0.5s
GIVF Givet 32.07 303 eP P 12 13 08.2 +0.8
GIVF pmax pmax
comp=Z,55nm,1.2s
SKAR Skarslia 32.11 323 eP P 12 13 08.1 +0.4
DOU Dourbes 32.22 303 P P 12 13 10.1 +1.4
DOU pmax pmax
comp=Z,70nm,1.6s
DOMB Dombas 32.29 326 eP P 12 13 09.5 +0.3
MOR8 Moi Rana 32.32 335 eP P 12 13 09.1 -0.4
CMAH Djebel Manchou 32.37 277 P P 12 13 11.3 +1.0
ABSA Djebel Ababsia 32.45 276 P P 12 13 12.4 +1.4
DMN Daman 32.47 102 eP P 12 13 12.8 +1.4
comp=Z,104nm,0.4s
BAIF Baives 32.47 303 eP P 12 13 11.7 +0.8
BAIF pmax pmax
comp=Z,54nm,1.0s
VIVF Saint-Julien-l 32.49 293 eP P 12 13 10.4 -0.8
VIVF pmax pmax
comp=Z,57nm,1.3s
KKN Kakani 32.50 101 eP P 12 13 12.7 +1.0
comp=Z,112nm,0.7s
FURI Furi 32.51 199 P P 12 13 14.2 +2.3
SSB Saint Sauveur 32.53 294 IAmb IAmb 12 13 32.4
comp=Z,191nm,1.3s
SSB Saint Sauveur 32.53 294 P P 12 13 11.2 -0.3
SSB pmax pmax
comp=Z,89nm,1.1s
BLS5 Blasjo 32.58 320 eP P 12 13 12.8 +1.0
KLRI Killari 32.63 125 eP P 12 13 14.0 +1.3
KLRI IAmb IAmb 12 13 14.5
comp=Z,14nm,0.6s
KLRI eS S 12 18 24.7 +0.5
ODD1 Odda 32.64 321 eP P 12 13 13.2 +0.8
PKIN Phulchoki 32.70 101 eP P 12 13 14.6 +1.1
comp=Z,297nm,0.8s
PKI Pulchoki 32.71 101 eP P 12 13 14.7 +1.1
comp=Z,351nm,0.8s
CAEH 'Ain El Ouahch 32.75 278 P P 12 13 13.9 +0.3
LOR Lormes 32.80 297 eP P 12 13 12.3 -1.6
LOR pmax pmax
comp=Z,13nm,0.8s
SMF Signal de Mont 32.87 296 eP P 12 13 13.3 -1.1
SMF pmax pmax
comp=Z,19nm,0.9s
GUN Gumba 32.89 100 eP P 12 13 16.3 +1.1
comp=Z,607nm,1.1s
STOK Stokkvaagen 32.89 334 eP P 12 13 14.7 +0.4
KONS Konsvik 32.95 335 eP P 12 13 15.0 +0.2
CKFL Kef-Lekhel 32.98 277 P P 12 13 13.1 -2.6
SSF Saint Saulge 33.06 297 eP P 12 13 14.7 -1.4
SSF pmax pmax
comp=Z,15nm,0.9s
HAMF Hammerfest 33.06 345 eP P 12 13 16.2 +0.4
SRSP Sriramsagar 33.12 121 eP P 12 13 17.5 +0.6
SRSP IAmb IAmb 12 13 18.3
comp=Z,6.3nm,0.6s
SRSP eS S 12 18 32.3 +0.5
MOL Molde 33.15 326 eP P 12 13 17.1 +0.4
STEI Steigen 33.16 338 eP P 12 13 16.7 0.0
AVF Avril sur Loir 33.19 297 eP P 12 13 16.1 -1.1
AVF pmax pmax
comp=Z,38nm,0.9s
AKN Aaknes 33.24 325 eP P 12 13 17.8 +0.3
JIRN Jiri 33.25 101 eP P 12 13 19.9 +1.5
comp=Z,452nm,0.6s
TRO Tromso 33.34 342 eP P 12 13 18.2 +0.1
BER Bergen 33.40 322 eP P 12 13 19.2 +0.3
BER Bergen 33.40 322 P P 12 13 18.8 -0.1
BER pmax pmax
comp=Z,90nm,0.8s
ASK Askoy 33.50 322 eP P 12 13 20.1 +0.5
LOF Lofoten 33.78 337 eP P 12 13 21.4 -0.7
SUE Sulen 33.87 323 eP P 12 13 23.5 +0.6
FOO Floro 33.91 324 eP P 12 13 23.2 0.0
RAMN Ramite 33.94 101 eP P 12 13 25.3 +1.1
comp=Z,340nm,0.8s
TCF Toulx Ste Croi 34.03 296 eP P 12 13 24.0 -0.5
TCF pmax pmax
comp=Z,52nm,1.4s
SET Setif 34.05 277 P P 12 13 17.0 -7.9
CAF Calviac 34.31 294 eP P 12 13 25.8 -1.3
CAF pmax pmax
comp=Z,282nm,2.5s
HYBB Hyderabad (bro 34.36 123 eP P 12 13 28.6 +0.9
HYBB IAmb IAmb 12 13 29.6
comp=Z,20nm,0.6s
HYBB eS S 12 18 51.5 +0.6
HYB Hyderabad 34.36 123 i P P 12 13 28.0 +0.3
HYB epP pP 12 13 44.0 +0.8
HYB eS S 12 18 52.0 +1.0
HYB Hyderabad 34.36 123 eP P 12 13 28.3 +0.6
HYB IAmb IAmb 12 13 31.1
comp=Z,24nm,0.9s
HYB i x x 12 13 51.0
MTLF Montolieu 34.48 291 eP P 12 13 27.7 -0.8
MTLF pmax pmax
comp=Z,31nm,1.0s
TAPN Taplejung 34.56 100 eP P 12 13 31.0 +1.3
comp=Z,458nm,1.2s
ODAN Odare 34.58 101 eP P 12 13 31.4 +1.6
comp=Z,1µm,1.3s
RJF Les Rejaudoux 34.64 294 eP P 12 13 30.5 +0.7

RJF pmax pmax
comp=Z,105nm,1.6s
GGR Gangavaram 35.14 120 eP P 12 13 35.1 +0.7
GGR IAmb IAmb 12 13 39.0
comp=Z,20nm,1.3s
GGR eS S 12 19 03.9 +0.9
BOK Bokaro 35.20 106 eP P 12 13 35.4 +0.5
BOK IAmb IAmb 12 13 37.3
comp=Z,57nm,0.5s
BOK i x x 12 13 55.1
LFF La Frestale 35.24 294 eP P 12 13 34.5 -0.5
LFF pmax pmax
comp=Z,30nm,0.7s
LDF La Druitiere 35.36 300 eP P 12 13 35.0 -1.0
LDF pmax pmax
comp=Z,18nm,0.8s
URV Uravakonda 35.41 127 eP P 12 13 38.0 +1.2
URV IAmb IAmb 12 13 38.7
comp=Z,48nm,0.6s
URV eS S 12 19 07.6 +0.5
NJS Nagarjunasagar 35.48 123 eP P 12 13 38.4 +1.1
NJS IAmb IAmb 12 13 39.3
comp=Z,26nm,0.6s
NJS eS S 12 19 09.4 +1.3
SRLM Srisailam 35.55 124 eP P 12 13 38.8 +0.8
SRLM IAmb IAmb 12 13 40.7
comp=Z,16nm,0.9s
SRLM eS S 12 19 09.8 +0.5
FLN La Foliniere 35.58 301 eP P 12 13 36.7 -1.2
FLN pmax pmax
comp=Z,34nm,0.8s
MFF Saint Martin d 35.60 297 eP P 12 13 36.8 -1.3
MFF pmax pmax
comp=Z,50nm,1.4s
GRR Gorron 35.87 300 eP P 12 13 39.1 -1.2
GRR pmax pmax
comp=Z,45nm,0.7s
EPF Esparros 35.89 291 eP P 12 13 38.6 -2.1
EPF pmax pmax
comp=Z,28nm,1.0s
CWF Charnwood Fore 35.93 307 eP P 12 13 39.7 -1.0
LSA Lhasa 35.99 94 P P 12 13 43.9 +1.7
LSA pmax pmax
comp=Z,82nm,0.6s
LSA Lhasa 35.99 94 P P 12 13 43.5 +1.3
LSA IAmb IAmb 12 13 45.3
comp=Z,77nm,0.7s
LSA Lhasa 35.99 94 P P 12 13 43.5 +1.3
LSA pmax pmax
comp=Z,77nm,0.7s
HPK Haverah Park 36.13 309 eP P 12 13 41.0 -1.4
HPK IAmb IAmb 12 13 43.0
comp=Z,41nm,0.6s
LBWR Ladybower, Pea 36.18 309 eP P 12 13 42.3 -0.7
LBWR IAmb IAmb 12 13 42.5
comp=Z,43nm,1.0s
MYLAV Mylavaram 36.20 121 eP P 12 13 44.4 +1.0
MYLAV IAmb IAmb 12 13 46.0
comp=Z,21nm,0.7s
MYLAV eS S 12 19 20.3 +1.2
EDMD Edmundbyers 36.35 311 eP P 12 13 44.0 -0.4
EDMD IAmb IAmb 12 13 44.7
comp=Z,38nm,0.9s
ADKI Addanki 36.43 123 eP P 12 13 46.9 +1.5
ADKI IAmb IAmb 12 13 48.6
comp=Z,8.8nm,0.8s
ADKI eS S 12 19 23.9 +1.3
PVM Polavaram 36.49 119 eP P 12 13 47.2 +1.3
PVM IAmb IAmb 12 13 48.3
comp=Z,8.4nm,0.9s
ETSF Etsaut 36.56 291 eP P 12 13 45.5 -0.9
ETSF pmax pmax
comp=Z,54nm,1.2s
ESY Stoneypath 36.77 313 eP P 12 13 47.8 -0.1
MONM Monmouth 36.87 306 eP P 12 13 46.9 -1.9
HLM1 Long Mynd 36.89 307 eP P 12 13 47.9 -1.0
MCH1 Michaelchurch 36.98 306 eP P 12 13 49.1 -0.6
MCH1 IAmb IAmb 12 13 50.9
comp=Z,23nm,0.7s
SJPF Ste Jean 36.99 291 eP P 12 13 49.6 -0.4
SJPF pmax pmax
comp=Z,85nm,1.3s
KESW Keswick, Cumbr 37.01 310 eP P 12 13 49.7 -0.3
KESW IAmb IAmb 12 13 50.2
comp=Z,51nm,0.7s
SGMF Saint Gilles 37.01 300 eP P 12 13 49.4 -0.6
SGMF pmax pmax
comp=Z,42nm,0.8s
EKA Eskdalemuir Ar 37.06 312 P P 12 13 49.2 -1.2
EKA pmax pmax
comp=Z,2.0nm,0.3s
FOEL Foel Wylfa 37.07 308 eP P 12 13 50.4 -0.2
ESK Eskdalemuir 37.08 312 eP P 12 13 49.9 -0.6
ESK Eskdalemuir 37.08 312 P P 12 13 50.0 -0.6
ESK IAmb IAmb 12 14 33.8
comp=Z,132nm,1.8s
ESK Eskdalemuir 37.08 312 P P 12 13 50.0 -0.6
ESK pmax pmax
comp=Z,132nm,1.8s
CHLP Challavanipeta 37.27 115 eP P 12 13 53.6 +1.0
CHLP IAmb IAmb 12 13 59.9
comp=Z,6.7nm,0.7s
CHLP eS S 12 19 35.2 -0.3
MOY Mondy 37.29 54 eP P 12 13 54.5 +2.0
MOY e 12 15 19.8
MOY pmax pmax
comp=Z,196nm,2.1s
MLA1 Latheron 37.36 317 eP P 12 13 51.2 -1.7
QUIF Quistinic 37.46 299 eP P 12 13 52.9 -0.9
QUIF pmax pmax
comp=Z,38nm,0.8s
ROSF Rostrenen 37.47 300 P P 12 13 53.7 -0.3
ROSF pmax pmax
comp=Z,118nm,1.1s
HOPEN Hopen 37.79 351 eP P 12 13 57.6 +1.3
LODK Lodwar 38.63 202 P P 12 14 06.0 +1.9
SNR=87
SHL Shillong 38.67 99 eP P 12 14 04.5 0.0
SHL i pP sP 12 14 24.2 -3.4
SHL Shillong 38.67 99 P P 12 14 04.5 0.0
SHL Shillong 38.67 99 P P 12 14 05.1 +0.6
SNR=48
SHL Shillong 38.67 99 P P 12 14 04.5 0.0
SHL pmax pmax
comp=Z,196nm,0.8s
GTA Gaotai 38.76 74 ⇓P P 12 14 06.6 +1.5
GTA pP pP 12 14 20.2 -0.7
GTA sP sP 12 14 26.8 -1.5
GTA PP PnPn 12 15 38.0 +0.5
GTA PcP PcP 12 16 17.1 +1.6
GTA ScP S 12 19 57.4 -0.6
GTA S ScP 12 20 00.6 +2.5
GTA ScS ScS 12 24 08.2 -0.9
GTA pmax pmax
comp=Z,100nm,1.0s
GTA pmax pmax
comp=Z,560nm,5.2s
GTA LR LR
comp=Z,920nm,17.9s
GTA LR LR
comp=Z,760nm,14.8s
GTA LR LR
comp=Z,670nm,14.8s
ZAK Zakamensk 38.84 56 eP P 12 14 07.2 +1.6
ZAK e 12 15 33.9
ZAK pmax pmax
comp=Z,58nm,1.3s
ZAK pmax pmax
comp=Z,34nm,1.4s
TLY Talaya 38.93 54 P P 12 14 08.0 +1.8
comp=Z,27nm,0.6s,baz=243,slow=9.7,SNR=22
TLY Talaya 38.93 54 P P 12 14 07.8 +1.5
TLY IAmb IAmb 12 14 10.1
comp=Z,136nm,1.3s
TLY Talaya 38.93 54⇓ i P P 12 14 08.4 +2.2
TLY e 12 15 34.7
TLY eS S 12 20 04.2 +4.2
TLY eSSS SSS 12 23 17.4
TLY e 12 24 01.0
TLY pmax pmax
comp=Z,209nm,1.0s
TLY MLR MLR
comp=Z,4μm,20.0s
IRK Irkutsk 39.27 53 eP P 12 14 09.3 +0.3
IRK e 12 14 27.8
IRK e 12 15 39.8
IRK e 12 19 58.2
IRK pmax pmax
comp=Z,345nm,1.9s
HSPB Hornsund (broa 39.47 349 eP P 12 14 11.8 +1.5
ESBB Sonseca Array 39.91 287 IAmb IAmb 12 14 32.2
comp=Z,89nm,0.9s
ESDC Sonseca Array 39.91 287 P P 12 14 13.8 -0.7
comp=Z,36nm,0.7s,baz=67,slow=8.3,SNR=73
ESDC pP pP 12 14 30.4 +0.1
comp=Z,51nm,0.7s,baz=64,slow=8.4,SNR=16
ESDC PcP PcP 12 16 19.8 +0.8
comp=Z,2.8nm,0.6s,baz=44,slow=3.1,SNR=3.4
ESDC ScP ScP 12 20 03.0 +0.6
comp=Z,1.7nm,0.8s,baz=54,slow=4.3,SNR=3.1
ESDC Sonseca Array 39.91 287 P P 12 14 13.6 -0.9
ESDC PcP 12 16 19.8 +0.8
PAB San Pablo 40.23 287 P P 12 14 16.6 -0.7
PAB IAmb IAmb 12 14 34.4
comp=Z,214nm,1.5s
PAB San Pablo 40.23 287 P P 12 14 16.6 -0.7
PAB pmax pmax
comp=Z,214nm,1.5s
SPA0 Spitsbergen Ar 40.25 350 eP P 12 14 17.9 +1.1
SPA0 Spitsbergen Ar 40.25 350 P P 12 14 17.7 +0.8
TAM Tamanrasset 40.32 258 P P 12 14 19.1 +0.9
TAM Tamanrasset 40.32 258 P P 12 14 19.1 +0.9
TAM pmax pmax
comp=Z,37nm,1.0s
SONM Songino Array 41.26 60 P P 12 14 26.6 +0.9
comp=Z,45nm,0.6s,baz=275,slow=9.0,SNR=261
SONM PP PP 12 16 02.5 +0.8
comp=Z,11nm,1.0s,baz=291,slow=12,SNR=3.8
SONM PcP PcP 12 16 23.8 +0.4
comp=Z,7.0nm,0.6s,baz=262,slow=2.7,SNR=4.6
SONM ScP ScP 12 20 07.6 0.0
comp=Z,3.1nm,1.1s,baz=263,slow=3.6,SNR=2.6
SONM LR LR 12 33 43.8
comp=Z,2μm,19.4s,baz=284,slow=39
SONM Songino Array 41.26 60 P P 12 14 26.5 +0.8
SONM PcP PcP 12 16 23.6 +0.2
PBRG Braganca 41.27 291 eP P 12 14 25.7 -0.1
PBRG epP pP 12 14 42.4 +0.8
KBS Kingsbay 41.40 350 eP P 12 14 27.0 +0.8
KBS Kingsbay 41.40 350 P P 12 14 26.8 +0.5
KBS IAmb IAmb 12 14 28.8
comp=Z,211nm,1.7s
KBS Kingsbay 41.40 350⇓ i P P 12 14 26.6 +0.3
KBS pmax pmax
comp=Z,157nm,0.9s
ULN Ulaanbaatar 41.69 59 P P 12 14 30.7 +1.5
ULN Ulaanbaatar 41.69 59 P P 12 14 30.7 +1.5
ULN pmax pmax
comp=Z,242nm,0.8s
LIJA Lijar 41.92 283 i P P 12 14 29.5 -1.7
PVRL Vila Real 42.13 290 eP P 12 14 33.1 +0.3
comp=Z,153nm,1.9s
MTE Manteigas 42.28 289 eP P 12 14 33.5 -0.5
comp=Z,222nm,1.6s
MTE epP pP 12 14 51.0 +1.1
MTE Manteigas 42.28 289 P P 12 14 33.7 -0.4
PCBR Castelo Branco 42.42 288 eP P 12 14 34.9 -0.2
comp=Z,138nm,1.5s
PCBR epP pP 12 14 52.9 +2.0
PVIS Viseu 42.43 290 eP P 12 14 35.2 -0.1
comp=Z,153nm,1.7s
PVIS epP pP 12 14 53.0 +1.9
PMRV Marv??o 42.49 288 eP P 12 14 35.5 -0.2
comp=Z,182nm,1.3s
PMRV epP pP 12 14 52.4 +0.8
KMBO Kilima Mbogo 42.52 197 P P 12 14 37.4 +1.0
comp=Z,37nm,1.0s,baz=15,slow=10,SNR=21
KMBO ScP ScP 12 20 13.0 -0.2
comp=Z,1.9nm,0.6s,baz=14,slow=6.9,SNR=2.2
KMBO LR LR 12 32 50.6
comp=Z,1μm,20.1s,baz=37,slow=37
KMBO Kilima Mbogo 42.52 197 i P P 12 14 37.9 +1.6
SNR=24
KMBO Kilima Mbogo 42.52 197 P P 12 14 37.6 +1.3
KMBO IAmb IAmb 12 14 39.5
comp=Z,78nm,1.1s
KMBO Kilima Mbogo 42.52 197 i P P 12 14 38.2 +1.9
KMBO pmax pmax
comp=Z,30nm,0.9s
PESTR Estremoz 42.83 287 P P 12 14 38.0 -0.5
PESTR IAmb IAmb 12 14 56.5
comp=Z,142nm,1.1s
LZH Lanzhou 42.92 77 eP P 12 14 41.2 +1.8
LZH sP sP 12 15 01.3 -1.4
LZH S S 12 21 00.2 +0.4
LZH pmax pmax
comp=Z,210nm,1.1s
LZH pmax pmax
comp=Z,750nm,6.0s
LZH LR LR
comp=Z,1μm,15.2s
LZH LR LR
comp=Z,840nm,16.9s
LZH LR LR
comp=Z,980nm,17.5s
MDT Midelt 42.97 278 P P 12 14 39.0 -0.7
comp=Z,7.7nm,1.0s,baz=79,slow=7.5,SNR=3.7
MDT pP pP 12 14 55.4 -0.3
comp=Z,19nm,1.0s,baz=83,slow=6.1,SNR=7.7
COI Coimbra 42.97 289 eP P 12 14 40.3 +0.8
PCAS Casmilo, Conde 43.09 289 eP P 12 14 40.8 +0.3
comp=Z,263nm,1.6s
PCAS epP pP 12 14 57.3 +0.9
PTOM Tomar 43.17 288 eP P 12 14 41.4 +0.3
comp=Z,377nm,1.3s
PTOM epP pP 12 14 59.4 +2.3
PMTG Montargil 43.23 288 eP P 12 14 41.3 -0.3
comp=Z,235nm,1.4s
PMTG epP pP 12 14 58.0 +0.5
PBEJ Beja 43.33 286 eP P 12 14 42.0 -0.5
comp=Z,128nm,1.3s
PBEJ epP pP 12 14 59.6 +1.2
PVAQ Vaqueiros 43.45 285 eP P 12 14 43.2 -0.3
comp=Z,144nm,1.3s
PVAQ epP pP 12 15 00.5 +1.1
PVAQ Vaqueiros 43.45 285 IAmb IAmb 12 15 01.3
comp=Z,137nm,1.1s
PALK Pallekele 43.52 130 P P 12 14 45.0 +0.7
comp=Z,10nm,0.8s,baz=332,slow=9.7,SNR=7.9
PALK Pallekele 43.52 130⇓ i P P 12 14 45.1 +0.9
PALK pmax pmax
comp=Z,16nm,0.9s
KIBK Kibwezi 43.52 196 P P 12 14 46.2 +1.9
SNR=20
PCVE Castro Verde 43.61 286 eP P 12 14 45.0 +0.3
comp=Z,136nm,1.4s
PCVE epP pP 12 15 01.2 +0.6
PNCL Nicolau / Gran 43.79 286 eP P 12 14 46.7 +0.6
comp=Z,173nm,1.4s
PNCL epP pP 12 15 03.6 +1.5
MBAR Mbarara 43.88 207 P P 12 14 47.8 +0.7
comp=Z,18nm,0.8s,baz=33,slow=7.5,SNR=8.9
MBAR PcP PcP 12 16 33.3 +0.7
comp=Z,15nm,0.9s,baz=65,slow=7.0,SNR=3.1
MBAR Mbarara 43.88 207 P P 12 14 48.0 +0.8
MBAR IAmb IAmb 12 14 49.3
comp=Z,186nm,1.8s
MBAR Mbarara 43.88 207c i P P 12 14 47.6 +0.4
MBAR pmax pmax
comp=Z,30nm,1.0s
PMAFR Mafra 44.04 288 eP P 12 14 48.4 +0.3
PMAFR epP pP 12 15 06.0 +1.9
PTEO Sao Teotonio 44.14 286 eP P 12 14 49.1 +0.1
comp=Z,291nm,1.8s
BOD Bodaibo 44.33 44⇑ i P P 12 14 50.5 +0.3
BOD pmax pmax
comp=Z,320nm,0.6s
CIT Chita 44.96 52 eP P 12 14 57.0 +1.6
CD2 Chengdu 45.06 84 P P 12 14 57.6 +1.1
CD2 S S 12 21 33.3 +2.4
CD2 pmax pmax
comp=Z,110nm,0.6s
CD2 pmax pmax
comp=Z,360nm,6.3s
CD2 LR LR
comp=Z,1μm,18.6s
CD2 LR LR
comp=Z,1μm,20.6s
CD2 LR LR
comp=Z,1μm,18.6s
MSEY Mahe Island 45.15 171 P P 12 14 57.8 +0.6
MSEY IAmb IAmb 12 14 58.9
comp=Z,84nm,1.1s
MSEY Mahe Island 45.15 171 P P 12 14 57.8 +0.6
MSEY pmax pmax
comp=Z,84nm,1.2s
KAAM Kaadhehdhoo 45.31 145 P P 12 14 59.3 +0.8
BTO Baotou 45.77 69 eP P 12 15 02.3 +0.3
DAG Danmarks Havn 46.04 343⇓ i P P 12 15 03.9 +0.4
comp=Z,43nm,0.8s
DAG Danmarks Havn 46.04 343⇓ i P P 12 15 03.9 +0.4
DAG pmax pmax
comp=Z,43nm,0.8s
HHC Hu-ho-hao-te 46.78 68⇓ i P P 12 15 11.8 +1.9
HHC S S 12 21 54.2 -1.3
HHC pmax pmax
comp=Z,85nm,1.1s
HHC pmax pmax
comp=Z,160nm,5.8s
HHC LR LR
comp=Z,750nm,16.1s
HHC LR LR
comp=Z,470nm,14.1s
HHC LR LR
comp=Z,380nm,15.9s
NOR Nord 46.87 349 i P P 12 15 10.7 +0.7
NOR Nord 46.87 349 i P P 12 15 10.7 +0.7
DGPR DIGLIPUR 47.12 112 eP P 12 15 13.8 +1.1
KMI Kunming 47.18 92 P P 12 15 14.0 +0.7
KMI pP pP 12 15 28.5 -1.0
KMI sP sP 12 15 34.6 -2.2
KMI PP PP 12 17 06.3 +1.6
KMI pmax pmax
comp=Z,200nm,1.1s
KMI pmax pmax
comp=Z,490nm,3.5s
KMI LR LR
comp=Z,300nm,22.6s
KMI LR LR
comp=Z,280nm,18.5s
KMI LR LR
comp=Z,470nm,35.5s
KMI Kunming 47.18 92 P P 12 15 14.2 +0.9
KMI Kunming 47.18 92 P P 12 15 14.2 +0.9
KMI pmax pmax
comp=Z,143nm,0.7s
XAN Xi'an 47.55 77 P P 12 15 16.8 +0.8
XAN PP PP 12 17 09.0 +1.2
XAN pmax pmax
comp=Z,200nm,0.9s
XAN pmax pmax
comp=Z,620nm,5.0s
XAN LR LR
comp=Z,790nm,14.1s
XAN LR LR
comp=Z,590nm,14.1s
XAN Xi'an 47.55 77 P P 12 15 16.6 +0.7
XAN Xi'an 47.55 77 P P 12 15 16.7 +0.7
XAN pmax pmax
comp=Z,149nm,0.8s
CHTO Chiang Mai 47.90 101 P P 12 15 18.8 +0.1
CHTO IAmb IAmb 12 15 21.1
comp=Z,29nm,0.6s
CHTO Chiang Mai 47.90 101 P P 12 15 18.8 +0.1
CHTO pmax pmax
comp=Z,29nm,0.6s
PBA Port Blair 48.04 114 P P 12 15 19.9 +0.1
CMAR Chiang Mai Arr 48.11 102 P P 12 15 20.8 +0.4
comp=Z,22nm,0.7s,baz=302,slow=8.5,SNR=45
CMAR ScP ScP 12 20 36.2 +0.1
comp=Z,6.2nm,1.1s,baz=306,slow=6.2,SNR=6.2
CMAR LR LR 12 40 07.6
comp=Z,156nm,20.1s,baz=295,slow=42
TIY Taiyuan 48.60 71 eP P 12 15 25.4 +1.4
TIY sP sP 12 15 44.9 -2.7
TIY S S 12 22 25.0 +3.7
TIY pmax pmax
comp=Z,92nm,0.6s
TIY LR LR
comp=Z,380nm,6.9s
TIY LR LR
comp=Z,410nm,12.6s
TIY LR LR
comp=Z,950nm,20.2s
TOA0 Torodi Ar. Sit 49.22 250 P P 12 15 28.0 -0.8
TOA0 IAmb IAmb 12 15 51.8
comp=Z,61nm,1.0s
TOA0 Torodi Ar. Sit 49.22 250 P P 12 15 28.2 -0.6
SNR=15
TORD Torodi Ar. Bea 49.22 250 P P 12 15 27.7 -1.1
comp=Z,23nm,0.8s,baz=46,slow=6.3,SNR=91
TORD PcP PcP 12 16 51.6 +0.4
comp=Z,15nm,0.9s,baz=38,slow=3.2,SNR=2.5
TORD ScP ScP 12 20 41.1 +0.2
comp=Z,2.4nm,0.8s,baz=45,slow=4.3,SNR=3.0
TORD LR LR 12 38 43.5
comp=Z,328nm,21.6s,baz=15,slow=39
TORD Torodi Ar. Bea 49.22 250 P P 12 15 27.1 -1.7
TORD PcP PcP 12 16 51.4 +0.2
TIXI Tiksi 49.28 24 P P 12 15 29.1 +0.5
TIXI IAmb IAmb 12 15 31.7
comp=Z,85nm,1.2s
TIXI Tiksi 49.28 24 P P 12 15 29.1 +0.5
TIXI pmax pmax
comp=Z,85nm,1.2s
GYA Guiyang 49.47 88⇓ i P P 12 15 31.3 +0.4
GYA pP pP 12 15 48.1 +0.9
GYA sP sP 12 15 50.0 -4.4
GYA PP PP 12 17 31.1 +5.7
GYA S S 12 22 34.5 +0.6
GYA sS sS 12 22 57.3 -4.1
GYA pmax pmax
comp=Z,60nm,1.1s
GYA pmax pmax
comp=Z,550nm,5.5s
GYA LR LR
comp=Z,190nm,18.2s
GYA LR LR
comp=Z,270nm,17.9s
GYA LR LR
comp=Z,210nm,18.0s
ENH Enshi 49.71 82 P P 12 15 33.2 +0.6
ENH IAmb IAmb 12 15 34.9
comp=Z,69nm,0.9s
BJI Beijing 50.34 67⇓ i P P 12 15 38.5 +1.4
BJI S S 12 22 39.7 -5.7
BJI pmax pmax
comp=Z,62nm,0.9s
BJI LR LR
comp=Z,1μm,16.7s
BJI LR LR
comp=Z,680nm,9.9s
BJI LR LR
comp=Z,890nm,29.9s
BJT Baijiatuau 50.35 67 IAmb IAmb 12 15 40.1
comp=Z,89nm,1.2s
PBKT Sadao Pong 50.79 102 P P 12 15 41.2 +0.4
PBKT IAmb IAmb 12 16 05.6
comp=Z,39nm,0.8s
SUMG Summit 51.31 337 i P P 12 15 45.7 +1.3
SUMG Summit 51.31 337 P P 12 15 45.1 +0.7
SUMG IAmb IAmb 12 15 46.3
comp=Z,84nm,1.2s
SUMG Summit 51.31 337 i P P 12 15 45.7 +1.3
YAK Yakutsk 51.34 37 P P 12 15 44.2 -0.1
YAK Yakutsk 51.34 37 eP P 12 15 43.9 -0.4
YAK e*PP pP 12 16 02.7 +2.0
YAK e 12 16 57.3
YAK e 12 17 43.3
YAK ePPP PPP 12 18 44.3
YAK eS S 12 22 56.2 -2.3
YAK e*SS sS 12 23 32.5 +6.4
YAK e 12 25 22.0
YAK eSS SS 12 26 28.0 -6.2
YAK pmax pmax
comp=Z,100nm,1.0s
YAK pmax pmax
comp=N,20nm,0.9s
YAK pmax pmax
comp=E,56nm,1.1s
YAK pmax pmax
comp=Z,82nm,1.9s
YAK pmax pmax
comp=N,52nm,1.8s
YAK pmax pmax

comp=E,83nm,1.8s
YAK smax smax
comp=N,80nm,1.8s
YAK smax smax
comp=E,60nm,1.5s
DGAR Diego Garcia 52.24 150 P **P 12 15 51.6 +0.1**
DGAR Diego Garcia 52.24 150 P **P 12 15 51.6 +0.1**
DGAR pmax pmax
comp=Z,1µm,1.7s
TIA Tai'an 52.64 71 P **P 12 15 55.6 +1.2**
TIA pmax pmax
comp=Z,71nm,1.0s
WHN Wuhan 53.25 79⇓*i*P **P 12 16 00.0 +1.1**
WHN sP **sP 12 16 21.0 -1.6**
WHN PP **PP 12 18 02.4 +3.1**
DL2 Dalian 54.65 66 P **P 12 16 10.1 +1.1**
DL2 sP **sP 12 16 30.1 -2.6**
DL2 *e*S **S 12 23 47.2 +3.0**
DL2 pmax pmax
comp=Z,340nm,4.1s
SNY Shenyang 54.72 62 ⇓P **P 12 16 07.2 -2.3**
SNY pmax pmax
comp=Z,26nm,0.6s
UBPT Khong Chiam 54.97 100 P **P 12 16 11.5 -0.2**
UBPT IAmb IAmb 12 17 43.4
comp=Z,100nm,1.7s
CN2 Changchun 55.13 59 *e*P **P 12 16 13.0 +0.6**
CN2 *e*S **S 12 23 48.9 -1.7**
CN2 pmax pmax
comp=Z,30nm,0.6s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,700nm,19.0s
CN2 LR LR
comp=Z,1µm,19.0s
CN2 LR LR
comp=Z,2µm,23.0s
KULLO Kullorsuaq 55.67 342 *i* P **P 12 16 15.8 0.0**
comp=Z,21nm,0.6s
KULLO Kullorsuaq 55.67 342 *i* P **P 12 16 15.8 0.0**
KULLO pmax pmax
comp=Z,21nm,0.6s
NJ2 Nanjing 55.86 75 *e*P **P 12 16 18.5 +0.7**
NJ2 pmax pmax
comp=Z,22nm,0.6s
QIZ Qiongzhong 56.03 93 P **P 12 16 20.8 +1.6**
QIZ S **S 12 24 04.6 +1.4**
QIZ pmax pmax
comp=Z,48nm,0.9s
QIZ LR LR
comp=Z,430nm,24.0s
QIZ Qiongzhong 56.03 93 P **P 12 16 19.4 +0.2**
ILULI Ilulissat 56.32 335 IAmb IAmb 12 16 22.3
comp=Z,113nm,1.4s
KLR Kul'dur 56.81 51 LR LR 12 42 59.7
comp=Z,745nm,22.0s,baz=296,slow=38
KLR Kul'dur 56.81 51*d i*P **P 12 16 25.1 +0.8**
KLR MLR MLR
comp=Z,712nm,17.0s
TPTI 57.09 117 P **P 12 16 25.6 -1.1**
comp=Z,9.7nm,0.5s
SFJD Kangerlussuaq 57.11 332 P **P 12 16 26.2 +0.1**
comp=Z,10nm,0.4s,baz=67,slow=7.3,SNR=6.0
SFJD Kangerlussuaq 57.11 332 *i* P **P 12 16 26.3 +0.1**
SFJD Kangerlussuaq 57.11 332 P **P 12 16 26.3 +0.1**
SFJD IAmb IAmb 12 16 45.5
comp=Z,92nm,1.4s
TULEG Thule 57.12 346 IAmb IAmb 12 16 26.8
comp=Z,121nm,1.8s
KCSI Kotacane, Aceh 57.30 116 P **P 12 16 26.1 -2.1**
comp=Z,32nm,1.0s
MDJ Mudanjiang 57.47 57 P **P 12 16 28.5 -0.6**
MDJ pP pP 12 16 43.9 -1.9
MDJ S **S 12 24 22.9 +1.4**
MDJ pmax pmax
comp=Z,14nm,0.9s
MDJ pmax pmax
comp=Z,400nm,3.4s
MDJ LR LR
comp=Z,2µm,11.3s
MDJ LR LR
comp=Z,1µm,10.9s
MDJ LR LR
comp=Z,3µm,17.1s
MDJ Mudanjiang 57.47 57 P **P 12 16 29.0 0.0**
MDJ IAmb IAmb 12 16 32.3
comp=Z,113nm,1.7s
KULM Kulim 58.05 113 P **P 12 16 33.1 -0.3**
KULM Kulim 58.05 113 P **P 12 16 33.0 -0.5**
SSE Sheshan 58.06 75 P **P 12 16 33.6 +0.3**
DBIC Dimbokro 58.32 250 P **P 12 16 34.7 -0.6**
comp=Z,24nm,0.9s,baz=32,slow=9.5,SNR=29
DBIC PcP **PcP 12 17 26.1 +0.2**
comp=Z,34nm,0.9s,baz=80,slow=6.6,SNR=3.6
DBIC Dimbokro 58.32 250 P **P 12 16 34.8 -0.6**
DBIC IAmb IAmb 12 16 58.7
comp=Z,38nm,0.9s
DBIC Dimbokro 58.32 250 P **P 12 16 34.8 -0.6**
DBIC pmax pmax
comp=Z,38nm,0.9s
KIC Kosan Boka 58.45 250 *e*P **P 12 16 34.8 -1.5**
comp=Z,335nm,1.5s
TIC Toumodi 58.46 250 *e*P **P 12 16 34.1 -2.3**
comp=Z,175nm,1.2s
LSZ Lusaka 58.48 203 *i* P **P 12 16 38.0 +1.5**
LSZ Lusaka 58.48 203 *i* P **P 12 16 38.0 +1.5**
LSZ Lusaka 58.48 203 P **P 12 16 37.4 +0.9**
LSZ Lusaka 58.48 203 P **P 12 16 37.4 +0.9**
LSZ pmax pmax
comp=Z,608nm,1.8s
PSI Prapat 58.61 116 LR LR 12 45 01.0
comp=Z,356nm,21.9s,baz=303,slow=39
PSI Prapat 58.61 116 P **P 12 16 37.1 -0.4**
PSI pmax pmax
comp=Z,62nm,1.0s
RPSI Rantau Prapat 58.69 116 P **P 12 16 37.1 -0.8**
RPSI IAmb IAmb 12 16 58.0
comp=Z,62nm,1.0s
LIC Lamto 58.75 250 *e*P **P 12 16 36.2 -2.2**
comp=Z,219nm,0.9s
INCN Inchon 58.80 65 P **P 12 16 38.5 0.0**
INCN IAmb IAmb 12 16 40.4
comp=Z,68nm,0.9s
INCN Inchon 58.80 65 P **P 12 16 38.5 0.0**
INCN pmax pmax
comp=Z,69nm,0.9s
GRNR Gornyy 58.85 48⇓*i*P **P 12 16 39.7 +1.0**
GRNR *e*S **S 12 24 43.6 +4.2**
GRNR pmax pmax
comp=Z,40nm,0.7s
GRNR smax smax
comp=N,3.0nm,0.6s
GRNR MLR MLR
comp=Z,2µm,13.0s
IPM Ipoh 58.88 113 P **P 12 16 38.6 -0.7**
IPM Ipoh 58.88 113 P **P 12 16 39.0 -0.3**
ABPO Ambohimpanom 58.99 182 P **P 12 16 40.9 +0.9**
ABPO Ambohimpanom 58.99 182 P **P 12 16 40.9 +0.9**
ABPO pmax pmax
comp=Z,127nm,0.9s
USA0B Ussuriysk Arra 59.19 56 P **P 12 16 41.0 -0.1**
USA0B IAmb IAmb 12 16 42.9
comp=Z,50nm,0.8s
USA0B Ussuriysk Arra 59.19 56 P **P 12 16 41.0 -0.1**
USA0B pmax pmax
comp=Z,50nm,0.8s
USRK Ussuriysk Ar. 59.19 56 P **P 12 16 41.5 +0.4**
comp=Z,39nm,0.6s,baz=273,slow=7.3,SNR=57
USRK PP **PP 12 18 52.8 +0.8**
comp=Z,20nm,0.8s,baz=298,slow=7.4,SNR=7.2
USRK LR LR 12 45 14.8
comp=Z,2µm,18.1s,baz=296,slow=39
VLA Vladivostok 59.63 57⇑*i*P **P 12 16 44.2 +0.1**
VLA pmax pmax
comp=Z,30nm,0.9s
KS19 Wonju Array Si 59.65 65 P **P 12 16 44.8 +0.4**
KSAR Wonju Array Be 59.69 65 P **P 12 16 44.8 +0.2**
KSAR Wonju Array Be 59.69 65 P **P 12 16 44.8 +0.2**
KSRS Korea Array 59.71 65 P **P 12 16 45.3 +0.6**
comp=Z,45nm,0.6s,baz=294,slow=6.8,SNR=87
KSRS LR LR 12 46 15.6
comp=Z,264nm,20.1s,baz=304,slow=40
TJN Taejon 59.85 66⇑*i*P **P 12 16 45.9 +0.2**
JRMM Jerantut 60.32 112 P **P 12 16 49.0 -0.2**

SEY Seymchan 60.65 31⇓*i*P **P 12 16 52.2 +1.4**
RER Riviere de l'E 61.45 173 P **P 12 16 57.2 +0.6**
YHNB Yeheng 61.62 81 P **P 12 16 58.5 +0.5**
MA2 Magadan 61.76 34 LR LR 12 46 37.8
comp=Z,480nm,18.1s,baz=300,slow=39
MA2 Magadan 61.76 34 P **P 12 16 58.9 +0.6**
MA2 IAmb IAmb 12 17 01.6
comp=Z,91nm,1.1s
MA2 Magadan 61.76 34*c i*P **P 12 17 00.0 +1.7**
MA2 pmax pmax
comp=Z,85nm,1.0s
MA2 MLR MLR
comp=Z,635nm,22.0s
SSLB Suanglung 61.80 82 P **P 12 17 00.0 +0.9**
TPUB Ta-pu 61.83 82 IAmb IAmb 12 17 02.6
comp=Z,70nm,0.9s
BKNI Bangkinang 61.85 116 P **P 12 16 58.9 -0.6**
comp=Z,4µmcomp=Z,189nm,1.1s
BKNI Bangkinang 61.85 116 P **P 12 16 58.6 -0.9**
VOI Vohitsoka 62.00 182 P **P 12 17 00.9 +0.5**
SNR=8.1
PDSI Padang 62.35 118 P **P 12 17 02.3 -0.6**
comp=Z,1µmcomp=Z,30nm,0.8s
BILL Bilibino 62.38 22 P **P 12 17 03.4 +1.0**
BILL IAmb IAmb 12 17 04.9
comp=Z,86nm,1.1s
BILL Bilibino 62.38 22⇓*i*P **P 12 17 03.5 +1.2**
BILL MLR MLR
comp=Z,832nm,27.0s
TWG Pinlang 62.43 83 P **P 12 17 04.0 +0.6**
MYKOM Kota Tinggi 62.76 113 P **P 12 17 05.2 -0.4**
MYKOM IAmb IAmb 12 17 26.8
comp=Z,32nm,0.9s
RES Resolute Bay 62.81 350 P **P 12 17 06.2 +1.1**
comp=Z,9.8nm,0.6s,baz=33,slow=8.6,SNR=35
RES Resolute Bay 62.81 350 P **P 12 17 06.2 +1.1**
RES IAmb IAmb 12 17 07.0
comp=Z,65nm,1.7s
MATP Matopo 63.27 201 *i* P **P 12 17 09.4 +0.5**
MATP Matopo 63.27 201 *i* P **P 12 17 09.4 +0.5**
JNU Nakatsue 64.01 68 LR LR 12 47 54.3
comp=Z,283nm,21.8s,baz=320,slow=38
JNU Nakatsue 64.01 68 P **P 12 17 14.0 +0.3**
JNU IAmb IAmb 12 17 17.2
comp=Z,43nm,0.8s
YSS Yuzh-Sakhalins 64.37 49 P **P 12 17 16.4 +0.6**
YSS Yuzh-Sakhalins 64.37 49⇓*e*P **P 12 17 16.8 +1.0**
YSS *e**PP **pP 12 17 30.6 -2.2**
YSS *e**SP **sP 12 17 36.2 -3.7**
YSS *e* 12 17 49.3
YSS *e* 12 19 37.5
YSS *e*S **S 12 25 48.3 -0.9**
YSS *e* 12 26 33.0
YSS pmax pmax
comp=Z,70nm,0.9s
YSS pmax pmax
comp=Z,900nm,3.0s
MSNA Messina 64.69 199 *i* P **P 12 17 19.0 +0.9**
MSNA Messina 64.69 199 *i* P **P 12 17 19.0 +0.9**
FRB Frobisher Bay 65.13 334 P **P 12 17 21.4 +0.9**
comp=Z,49nm,0.7s,baz=44,slow=7.6,SNR=50
KSI Kapahiang 65.80 118 P **P 12 17 25.4 -0.1**
comp=Z,113nm,0.9s
TSUM Tsumeb 65.91 212 *i* P **P 12 17 27.1 +1.0**
TSUM Tsumeb 65.91 212 *i* P **P 12 17 27.1 +1.0**
TSUM Tsumeb 65.91 212 P **P 12 17 26.6 +0.5**
TSUM IAmb IAmb 12 17 28.0
comp=Z,129nm,1.2s
MJB9 Matsu-Tunnel 67.19 61 P **P 12 17 34.1 0.0**
MAJO Matsushiro 67.19 61 P **P 12 17 34.4 +0.2**
MAJO Matsushiro 67.19 61⇓*i*P **P 12 17 33.8 -0.4**
MAJO pmax pmax
comp=Z,18nm,0.9s
MAT Matsushiro 67.19 61 P **P 12 17 33.6 -0.6**
MAT *e*S **S 12 26 18.4 -5.6**
MJAR Matsushiro Arr 67.19 61 P **P 12 17 34.9 +0.7**
comp=Z,9.4nm,0.7s,baz=318,slow=7.7,SNR=17
MJAR pP **pP 12 17 52.6 +1.3**
comp=Z,12nm,0.7s,baz=310,slow=7.1,SNR=8.0
MJAR LR LR 12 49 29.7
comp=Z,518nm,20.3s,baz=305,slow=38
MJAR Matsushiro Arr 67.19 61 P **P 12 17 34.3 +0.1**
ERM Erimo 67.32 54 P **P 12 17 35.2 +0.4**
ERM IAmb IAmb 12 17 42.4
comp=Z,65nm,1.1s
ERM Erimo 67.32 54 P **P 12 17 35.2 +0.4**
ERM pmax pmax
comp=Z,65nm,1.1s
TGY Tagaytay City 67.47 90 LR LR 12 47 46.1
comp=Z,57nm,21.4s,baz=293,slow=36
MDSI Maura Dua 67.48 117 P P 12 17 42.8 +6.6
KSM Kuching 67.61 108 P **P 12 17 37.1 +0.1**
LWLI Liwa 67.79 118 P **P 12 17 37.5 -0.8**
comp=Z,4µmcomp=Z,195nm,0.8s
YUK Yuzh-Kuril'sk 67.81 51*c i*P **P 12 17 38.2 +0.3**
YUK *e*S **S 12 26 32.2 +1.2**
YUK *e* 12 27 31.0
YUK *e*SS **SS 12 30 56.3 +3.6**
YUK pmax pmax
comp=N,483nm,1.3s
YUK pmax pmax
comp=Z,517nm,1.3s
YUK pmax pmax
comp=E,132nm,0.9s
YUK pmax pmax
comp=Z,967nm,2.0s
YUK MLR MLR
comp=Z,1µm,18.0s
KLSI 68.01 117 P **P 12 17 36.6 -2.9**
comp=Z,17nm,0.8s
SBUM Sibu 68.35 106 P **P 12 17 42.1 +0.4**
SBUM Sibu 68.35 106 P **P 12 17 43.0 +1.3**
LBTB Lobatse 68.44 203 P **P 12 17 43.1 +1.1**
LBTB Lobatse 68.44 203 P **P 12 17 43.1 +1.1**
LBTB pmax pmax
comp=Z,189nm,1.0s
KASI Kota Agung 68.45 118 P **P 12 17 41.4 -0.9**
comp=Z,142nm,1.0s
COCO West Island 68.61 129 P **P 12 17 43.6 +0.5**
COCO West Island 68.61 129 P **P 12 17 43.6 +0.5**
COCO pmax pmax
comp=Z,788nm,2.0s
PEA0B Petropavlovsk- 68.66 38 P **P 12 17 42.8 -0.3**
PEA0B IAmb IAmb 12 17 53.4
comp=Z,100nm,1.5s
PEA0B Petropavlovsk- 68.66 38 P **P 12 17 42.8 -0.3**
PEA0B pmax pmax
comp=Z,100nm,1.5s
PETK Petropavlovsk- 68.66 38 P **P 12 17 42.6 -0.4**
comp=Z,14nm,0.9s,baz=205,slow=2.8,SNR=13
PETK PP **PP 12 20 14.3 -0.4**
comp=Z,7.4nm,0.9s,baz=307,slow=5.5,SNR=3.5
PETK LR LR 12 51 06.4
comp=Z,432nm,21.9s,baz=275,slow=39
RDOG Red Dog Mine 69.40 12 P **P 12 17 48.0 +0.6**
RDOG IAmb IAmb 12 17 49.7
comp=Z,44nm,0.7s
SKR Severo-Kuril's 69.42 40 *e*P **P 12 17 43.3 -4.5**
SKR pmax pmax
comp=Z,65nm,1.3s
SKR pmax pmax
comp=Z,400nm,4.4s
DRLN Deer Lake 69.76 318 P **P 12 17 50.2 +0.2**
SCHQ Schefferville 70.50 326 P **P 12 17 54.8 +0.4**
comp=Z,14nm,0.5s,baz=41,slow=4.9,SNR=21
SCHQ pP **pP 12 18 12.1 +0.5**
comp=Z,11nm,0.6s,baz=20,slow=10,SNR=4.9
SCHQ LR LR 12 48 55.3
comp=Z,155nm,20.2s,baz=60,slow=36
SCHQ Schefferville 70.50 326 IAmb IAmb 12 17 56.1
comp=Z,89nm,1.6s
C36M Paulatuk 70.57 357 IAmb IAmb 12 17 56.2
comp=Z,64nm,0.7s
C36M Paulatuk 70.57 357 P **P 12 17 54.7 +0.2**
baz=5.7
GAMB Gambell 71.45 18 P **P 12 18 00.3 +0.4**
INK Inuvik 71.73 1 P **P 12 18 01.8 +0.2**
comp=Z,9.0nm,0.7s,baz=7.9,slow=7.3,SNR=26
INK Inuvik 71.73 1 P **P 12 18 01.6 +0.1**
BOSA Boshof 71.93 202 *i* P **P 12 18 04.1 +0.7**
BOSA Boshof 71.93 202 P **P 12 18 04.0 +0.6**
comp=Z,90nm,0.9s,baz=20,slow=6.0,SNR=98
BOSA LR LR 12 50 41.3
comp=Z,526nm,19.7s,baz=0.5,slow=37
BOSA Boshof 71.93 202 *i* P **P 12 18 04.1 +0.7**

BOSA Boshof 71.93 202 P **P 12 18 03.9 +0.5**
BOSA Boshof 71.93 202 P **P 12 18 04.0 +0.7**
ANM Nome 72.11 15 IAmb IAmb 12 18 06.5
comp=Z,117nm,1.5s
BMAR Burnt Mountain 72.15 5 P **P 12 18 05.2 +1.0**
IMAR Indian Mountai 72.65 9 P **P 12 18 08.0 +0.8**
EPYK Eagle Plains 73.61 2 IAmb IAmb 12 18 14.7
comp=Z,50nm,0.8s
EPYK Eagle Plains 73.61 2 P **P 12 18 13.3 +0.4**
baz=356
POKR Poker Flat Res 74.19 7 P **P 12 18 17.2 +1.1**
baz=347,SNR=28
MDM Murphy Dome 74.27 7 P **P 12 18 17.5 +0.8**
MDM IAmb IAmb 12 18 20.2
comp=Z,102nm,1.5s
GBN Guysborough 74.32 317 IAmb IAmb 12 18 19.1
comp=Z,77nm,1.2s
TCOL CIGO, UAF Yank 74.39 7 P **P 12 18 18.2 +0.9**
baz=347,SNR=19
COLA College 74.39 7 P **P 12 18 18.1 +0.9**
COLA IAmb IAmb 12 18 19.9
comp=Z,66nm,1.1s
COLA College 74.39 7 P **P 12 18 18.1 +0.9**
COLA pmax pmax
comp=Z,66nm,1.1s
IL31 74.58 7 P **P 12 18 18.6 +0.2**
ILAR Eielson Array 74.58 7 P **P 12 18 18.8 +0.4**
comp=Z,11nm,0.6s,baz=322,slow=3.5,SNR=80
ILAR PKKPbc **PKKPbc 12 37 41.8 -2.6**
comp=Z,0.2nm,0.8s,baz=185,slow=4.3,SNR=3.5
ILAR LR LR 12 54 38.9
comp=Z,255nm,20.5s,baz=332,slow=38
CCB Clear Creek Bu 74.61 7 IAmb IAmb 12 18 20.6
comp=Z,71nm,1.3s
BPAW Bear Paw Mtn. 74.80 9 IAmb IAmb 12 18 22.9
comp=Z,95nm,1.5s
HDA Harding Lake 74.93 7 P **P 12 18 20.6 +0.1**
baz=348,SNR=24
EGAK Eagle 75.00 4 IAmb IAmb 12 18 23.1
comp=Z,132nm,1.6s
KTH Kantishna Hill 75.34 9 IAmb IAmb 12 18 24.8
comp=Z,47nm,0.6s
BATG Bathurst New B 75.36 320 P **P 12 18 24.2 +1.0**
BATG IAmb IAmb 12 18 25.6
comp=Z,78nm,1.3s
MCK McKinley 75.39 8 IAmb IAmb 12 18 25.1
comp=Z,224nm,1.9s
SHEL Horse Pasture 75.44 234 **P 12 18 24.6 +0.6**
SHEL IAmb IAmb 12 18 26.0
comp=Z,86nm,1.0s
SHEL Horse Pasture 75.44 234 P **P 12 18 24.6 +0.6**
SHEL pmax pmax
comp=Z,86nm,1.0s
MPSI Mapaga 75.45 102 P **P 12 18 24.0 -0.2**
comp=Z,38nm,1.1s
RND Reindeer 75.72 8 IAmb IAmb 12 18 26.5
comp=Z,53nm,0.6s
LMN Caledonia Moun 75.72 319 P **P 12 18 25.7 +0.4**
RIDG Independent Ri 75.77 6 IAmb IAmb 12 18 27.6
comp=Z,66nm,1.0s
DAWY Dawson 75.81 4 IAmb IAmb 12 18 27.8
comp=Z,179nm,1.8s
PPLA Purkeypile 75.82 10 IAmb IAmb 12 20 23.4
comp=Z,95nm,1.3s
DOT Dot Lake 75.92 6 IAmb IAmb 12 18 28.9
comp=Z,64nm,0.7s
HAL Halifax 75.93 317 IAmb IAmb 12 18 28.2
comp=Z,54nm,0.6s
HAL Halifax 75.93 317 P **P 12 18 27.9 +1.4**
PCI Palu 76.23 103 P **P 12 18 24.1 -4.6**
PAX Paxson 76.48 7 IAmb IAmb 12 21 15.1
comp=Z,58nm,1.0s
D63A Stockholm 76.52 321 P **P 12 18 30.9 +1.0**
baz=44,SNR=5.3
FCC Fort Churchill 76.61 341 IAmb IAmb 12 18 32.7
comp=Z,152nm,1.6s
BCAR Beaver Creek A 76.67 5 P **P 12 18 31.4 +1.0**
YKA Yellowknife Ar 76.71 352 P **P 12 18 31.2 +0.6**
comp=Z,32nm,0.5s,baz=7.0,slow=5.2,SNR=452
YKA Yellowknife Ar 76.71 352 *i* P **P 12 18 31.0 +0.4**
YKA pmax pmax
comp=Z,31nm,0.5s
PQI Presque Isle 76.73 321 P **P 12 18 31.8 +0.7**
PQI IAmb IAmb 12 18 33.2
comp=Z,53nm,1.1s
SUR Sutherland 76.78 204 P **P 12 18 32.9 +1.4**
E64A Bridgewater 76.82 321 P **P 12 18 32.5 +0.9**
baz=44,SNR=7.7
MRSI Marisa 76.89 101 P **P 12 18 32.3 -0.1**
comp=Z,56nm,1.1s
D62A Allapoint, All 76.94 322 P **P 12 18 33.3 +1.2**
baz=44,SNR=9.7
E63A Oxbow 77.11 321 P **P 12 18 33.9 +0.8**
baz=44,SNR=6.3
D61A St Aubert, Com 77.38 322 P **P 12 18 35.6 +1.0**
baz=43,SNR=11
SCM Sheep Creek Mo 77.42 8 IAmb IAmb 12 18 42.8
comp=Z,166nm,1.6s
PMR Palmer 77.45 9 IAmb IAmb 12 18 37.1
comp=Z,166nm,1.6s
F64A Sherman 77.47 320 P **P 12 18 36.4 +1.2**
baz=44
G65A Princeton 77.56 320 P **P 12 18 36.7 +1.0**
baz=44
H66A Whiting 77.73 319 P **P 12 18 37.5 +0.9**
baz=44
D60A Saint Jean D'O 77.94 322 P **P 12 18 38.7 +1.0**
baz=43
F63A Nahmakanta, Br 77.95 321 P **P 12 18 39.0 +1.1**
baz=44
E61A Lac Etchemin 78.09 322 P **P 12 18 39.9 +1.3**
baz=43
G64A Maxfield 78.11 320 P **P 12 18 39.9 +1.1**
baz=44
H65A Eastbrook 78.26 320 P **P 12 18 40.8 +1.2**
baz=44
LATQ La Tuque 78.44 324 P **P 12 18 41.8 +1.2**
baz=42,SNR=5.3
E60A Ste Agathe de 78.58 322 P **P 12 18 42.2 +0.9**
baz=42
G63A Kingsbury 78.63 321 P **P 12 18 42.8 +1.2**
baz=43
BALM Baldy 78.64 5 IAmb IAmb 12 18 44.3
comp=Z,55nm,0.9s
F61A St Evariste 78.66 322 P **P 12 18 43.0 +1.1**
baz=42
D58A Chemin du LacG 78.70 324 P **P 12 18 42.6 +0.5**
baz=41
MATQ Matagami 78.72 328 P **P 12 18 43.2 +1.1**
baz=39
CTGM Chitina Glacie 78.78 5 IAmb IAmb 12 18 45.1
comp=Z,58nm,1.0s
CRQM Cirque 78.86 6 IAmb IAmb 12 18 45.9
comp=Z,58nm,1.0s
SEW Seward 78.86 9 IAmb IAmb 12 18 44.9
comp=Z,62nm,0.6s
KAPI Kappang 78.91 106 P **P 12 18 43.6 0.0**
KAPI Kappang 78.91 106 P **P 12 18 43.6 0.0**
KAPI pmax pmax
comp=Z,50nm,1.3s
LSQQ Lebel-sur-Quev 78.99 327 P **P 12 18 44.8 +1.3**
baz=39
G62A West of Eustis 79.00 321 P **P 12 18 45.2 +1.6**
baz=43
F60A Warwick 79.11 322 P **P 12 18 45.2 +0.9**
baz=42
H63A New Sharon 79.16 320 P **P 12 18 45.8 +1.3**
baz=43
CNPM China Poot 79.19 10 P **P 12 18 44.9 +0.4**
CNPM IAmb IAmb 12 18 46.2
comp=Z,80nm,0.6s
D57A Chemin Vers le 79.22 324 P **P 12 18 45.7 +0.8**
baz=41,SNR=16
G61A St-Isidore-de- 79.42 322 P **P 12 18 47.4 +1.3**
baz=42
E58A La Victoria 79.43 323 P **P 12 18 47.0 +1.1**
baz=41,SNR=7.7
I64A Boothbay 79.51 320 P **P 12 18 47.5 +1.0**
baz=43
D56A ZEC Mazanza, M 79.58 325 P **P 12 18 47.7 +0.9**
baz=40,SNR=9.2
F59A Saint Guilaume 79.59 323 P **P 12 18 48.0 +1.2**
baz=41
PCA Pinnacle 79.72 5 P **P 12 18 47.9 +0.5**
PCA IAmb IAmb 12 18 50.3
comp=Z,54nm,0.8s
H62A Milan 79.77 321 P **P 12 18 48.8 +0.9**

baz=42
E57A Chemin Saint G 79.79 324 P P 12 18 48.9 +0.9
baz=40,SNR=9.2
I63A Otisfield 79.88 320 P P 12 18 49.6 +1.1
baz=42
D55A Sainte-Anne-du 79.92 325 P P 12 18 50.1 +1.4
baz=40
VLDQ Val d'Or 79.93 327 P P 12 18 49.6 +1.0
VLDQ IAmb IAmb 12 18 50.9
comp=Z,32nm,0.6s
G60A Masonville 79.94 322 P P 12 18 50.0 +1.1
baz=42
E56A St. Veronique 80.09 324 P P 12 18 50.5 +0.9
baz=40,SNR=8.7
TRQ Mont Tremblant 80.12 324 P P 12 18 50.1 +0.3
H61A Lyndonville 80.17 321 P P 12 18 51.3 +1.3
baz=42
D54A Lac Fusel, La 80.33 326 P P 12 18 51.7 +0.8
baz=39,SNR=8.0
G59A Clarenceville 80.35 322 P P 12 18 51.9 +1.0
baz=41
I62A Tamworth 80.38 321 P P 12 18 52.2 +1.0
baz=42
LBNH Lisbon 80.39 321 P P 12 18 52.3 +1.1
baz=42
F57A Harrington 80.49 324 P P 12 18 52.9 +1.1
baz=40
H60A Morristown 80.52 322 P P 12 18 53.1 +1.1
baz=41
SKAG Skagway 80.57 2 P P 12 18 52.2 +0.3
SKAG IAmb IAmb 12 19 28.6
comp=Z,112nm,2.0s
KDAK Kodiak Island 80.68 11 P P 12 18 53.6 +1.1
comp=Z,48nm,0.6s,baz=3.0,slow=4.5,SNR=13
KDAK Kodiak Island 80.68 11 P P 12 18 53.5 +1.1
KDAK IAmb IAmb 12 18 55.1
comp=Z,74nm,0.8s
J63A Strafford 80.69 320 P P 12 18 54.0 +1.1
baz=42
G58A Ormstown 80.71 323 P P 12 18 53.8 +0.9
baz=40,SNR=7.2
I61A Oroboro, Fairl 80.75 321 P P 12 18 54.3 +1.1
baz=41
TNTI Ternate 80.81 97 P P 12 18 54.1 +0.3
comp=Z,66nm,1.6s
TNTI Ternate 80.81 97 P P 12 18 54.2 +0.3
TNTI IAmb IAmb 12 19 21.3
comp=Z,57nm,1.0s
D53A Lac Vacive, Po 80.84 326 P P 12 18 54.6 +1.0
D53A IAmb IAmb 12 18 56.2
comp=Z,72nm,1.4s
D53A Lac Vacive, Po 80.84 326 P P 12 18 54.5 +1.0
baz=38,SNR=18
H59A Cadyville 80.92 322 P P 12 18 54.7 +0.6
baz=41
J62A Henniker 81.09 320 P P 12 18 56.0 +1.0
baz=42
OHAK Old Harbor 81.11 12 P P 12 18 55.6 +0.8
OHAK IAmb IAmb 12 18 57.3
comp=Z,64nm,0.6s
E54A Lac Daplat, Po 81.12 325 P P 12 18 56.0 +0.9
baz=39,SNR=7.4
G57A Newington 81.17 323 P P 12 18 56.3 +1.0
baz=40
D52A ZEK Kipawa Sen 81.22 326 P P 12 18 56.8 +1.2
baz=38,SNR=13
F55A Otter Lake 81.22 325 P P 12 18 56.9 +1.3
baz=39,SNR=5.0
H58A Gabriels 81.32 323 P P 12 18 57.2 +1.0
baz=40
I60A Shoreham 81.34 322 P P 12 18 57.3 +1.0
baz=41
LONY Lake Ozonia 81.35 323 P P 12 18 57.6 +1.2
baz=40,SNR=5.2
E53A Dumoine, Ponti 81.37 326 P P 12 18 57.7 +1.3
baz=38,SNR=15
HRV Adam Dziewonsk 81.50 320 P P 12 18 58.2 +1.1
baz=42
D51A Lot 18 Range I 81.53 327 P P 12 18 58.5 +1.3
baz=37,SNR=9.1
SANI Sanana 81.59 100 P P 12 18 57.7 -0.3
comp=Z,38nm,0.8s
I59A Olmsteadville 81.65 322 P P 12 18 59.2 +1.3
baz=40
DLBC Dease Lake 81.65 359 P P 12 18 59.2 +1.5
comp=Z,20nm,0.6s,baz=9.2,slow=3.0,SNR=18
D50A G1974 Best Tow 81.67 327 P P 12 18 59.2 +1.3
baz=37,SNR=14
M66A Nantucket 81.71 318 P P 12 18 57.9 -0.4
baz=42
G55A Calabogie 81.83 324 P P 12 19 00.0 +1.2
baz=39,SNR=5.6
H57A Richville 81.84 323 P P 12 19 00.3 +1.4
baz=40
J60A Lant Hill Farm 81.85 321 P P 12 19 00.4 +1.4
baz=41
E52A Mattawa 81.87 326 P P 12 19 00.3 +1.2
baz=38,SNR=8.8
ALGO Algonquin Park 81.87 326 P P 12 19 00.1 +1.1
baz=38,SNR=9.5
L63A North Scituate 82.00 319 P P 12 19 01.1 +1.3
baz=42
E51A G1948 Merrick 82.03 327 P P 12 19 01.2 +1.3
baz=37,SNR=14
L61B Northampton 82.09 320 P P 12 19 01.5 +1.2
baz=41
FFC Flin Flon 82.11 343 P P 12 19 00.3 +0.2
FFC IAmb IAmb 12 19 01.2
comp=Z,50nm,0.5s
FFC Flin Flon 82.11 343 P P 12 19 00.3 +0.2
FFC pmax pmax
comp=Z,50nm,0.5s
H56A Elgin 82.14 324 P P 12 19 02.0 +1.6
baz=39
PLVO Plevna 82.16 325 IAmb IAmb 12 19 03.3
comp=Z,80nm,1.7s
D49A Beulah Townshi 82.20 328 P P 12 19 02.0 +1.2
baz=36
J59A Piesco 82.20 322 P P 12 19 02.4 +1.5
baz=40
K61A Williamstown 82.21 321 P P 12 19 02.6 +1.6
baz=41
G54A Lake Saint Pet 82.32 325 P P 12 19 02.9 +1.4
baz=38,SNR=25
I57A Carthage 82.37 323 P P 12 19 03.1 +1.3
baz=39,SNR=7.1
L62A Suffield 82.40 320 P P 12 19 03.1 +1.3
baz=41
D48A Paudash Townsh 82.46 328 P P 12 19 03.3 +1.2
baz=36,SNR=12
F52A Sundridge 82.54 326 P P 12 19 04.1 +1.6
baz=37,SNR=28
K60A Five Rivers En 82.55 321 P P 12 19 03.9 +1.3
baz=40
M63A Gales Ferry 82.56 319 P P 12 19 04.0 +1.3
baz=41
H55A Tweed 82.59 324 P P 12 19 04.1 +1.3
baz=38,SNR=8.4
J58A Remsen 82.64 322 IAmb IAmb 12 19 05.9
comp=Z,83nm,1.6s
J58A Remsen 82.64 322 P P 12 19 04.3 +1.2
baz=40,SNR=5.1
F51A Arnstein 82.68 327 P P 12 19 04.7 +1.4
baz=37,SNR=19
L61A Hillsdale 1, H 82.71 321 P P 12 19 04.9 +1.4
baz=40
G53A Haliburton 82.77 325 P P 12 19 05.2 +1.4
baz=38,SNR=7.6
DELO Deloro Mine 82.81 325 IAmb IAmb 12 19 06.4
comp=Z,55nm,1.2s
K59A Cooperstown 82.89 322 P P 12 19 05.7 +1.2
baz=40
J57A Williamstown 82.94 323 IAmb IAmb 12 19 06.9
comp=Z,118nm,1.6s
J57A Williamstown 82.94 323 P P 12 19 05.9 +1.2
baz=39,SNR=8.6
M62A Hamden 82.96 320 P P 12 19 05.6 +0.9
baz=41
SIT Sitka 82.98 2 P P 12 19 05.3 +0.7
SIT IAmb IAmb 12 22 01.4
comp=Z,99nm,1.6s
SIT Sitka 82.98 2 P P 12 19 05.3 +0.7
SIT pmax pmax
comp=Z,99nm,1.6s
D47A Chapleau 83.07 329 P P 12 19 06.8 +1.5
baz=35,SNR=18
I55A Frankford 83.07 324 P P 12 19 06.3 +1.0
baz=38
N63A Mattituck 83.11 319 P P 12 19 07.1 +1.5
baz=41
E48A Lockeyer 83.17 328 P P 12 19 07.3 +1.5
baz=35,SNR=22
H53A Bobcaygeon 83.19 325 P P 12 19 07.0 +1.1
baz=38,SNR=7.1
L60A Shokan 83.19 321 P P 12 19 06.9 +0.9
baz=40
K58A Earlville 83.27 322 IAmb IAmb 12 19 08.8
comp=Z,87nm,1.2s
K58A Earlville 83.27 322 P P 12 19 07.5 +1.1
baz=39
SADO Sadowa 83.28 326 P P 12 19 07.4 +1.0
comp=Z,13nm,0.9s,baz=72,slow=5.3,SNR=7.3
L59A Walton 83.43 322 IAmb IAmb 12 19 09.6
comp=Z,62nm,1.1s
L59A Walton 83.43 322 P P 12 19 08.4 +1.1
baz=40
J56A Wolcott 83.44 323 P P 12 19 08.4 +1.2
baz=38
D46A Sault St. Mari 83.57 330 P P 12 19 09.5 +1.6
baz=34
N62A Caumsett State 83.63 320 P P 12 19 09.1 +0.9
baz=40
E47A Iron Bridge 83.63 329 P P 12 19 09.4 +1.2
baz=35,SNR=13
WRAK Wrangell Islan 83.67 1 P P 12 19 09.1 +1.0
F49A Sandfield 83.70 328 P P 12 19 09.9 +1.4
baz=35,SNR=14
H52A Wyevale 83.70 326 P P 12 19 09.6 +1.0
baz=37
K57A Scipio Center 83.70 323 P P 12 19 09.7 +1.1
baz=39
PAL Palisades 83.79 320 P P 12 19 09.8 +0.8
baz=40
BINY Binghamton 83.87 322 IAmb IAmb 12 19 11.8
comp=Z,85nm,1.4s
BINY Binghamton 83.87 322 P P 12 19 10.4 +0.9
baz=39
J55A Hilton 83.88 324 P P 12 19 10.4 +0.9
baz=38
F48A Evansville 83.88 328 P P 12 19 10.8 +1.4
baz=35,SNR=15
M60A Port Jervis 83.89 321 P P 12 19 10.5 +0.9
baz=40
L58A Harry Jones Me 83.92 322 P P 12 19 10.7 +0.9
baz=39
K56A Middlesex 84.10 323 P P 12 19 11.6 +0.9
baz=38
M59A Waymart 84.11 321 P P 12 19 11.4 +0.6
baz=39
N61A South Mountain 84.17 320 P P 12 19 11.8 +0.8
baz=40
J54A Appleton 84.24 324 P P 12 19 12.2 +0.9
baz=37
K55A Perry 84.42 324 P P 12 19 13.1 +0.8
baz=38
L57A Andrews Acres 84.43 322 P P 12 19 13.4 +1.1
baz=38
N60A Cedar Hill Far 84.47 321 P P 12 19 13.1 +0.6
baz=39
E44A Grand Marais A 84.51 331 P P 12 19 14.4 +1.7
baz=33,SNR=10
L56A Greenwood 84.65 323 IAmb IAmb 12 19 41.8
comp=Z,29nm,0.8s
L56A Greenwood 84.65 323 P P 12 19 14.3 +0.8
baz=38
ULM Lac du Bonnet 84.66 338 P P 12 19 13.4 +0.1
comp=Z,6.3nm,0.5s,baz=30,slow=4.7,SNR=16
ULM LR LR 12 57 09.6
comp=Z,283nm,21.6s,baz=24,slow=36
ULM Lac du Bonnet 84.66 338 IAmb IAmb 12 19 14.9
comp=Z,90nm,1.6s
M58A Price's Panora 84.73 322 P P 12 19 14.5 +0.6
baz=39
N59A State Game Lan 84.76 321 P P 12 19 14.9 +0.9
baz=39
K54A Basiliko Farm, 84.79 324 P P 12 19 14.9 +0.7
baz=37
O61A Allentown 84.80 320 P P 12 19 14.7 +0.5
baz=40
SWI Sorong 84.82 96 P P 12 19 15.4 +0.7
comp=Z,1μmcomp=Z,57nm,1.8s
I51A Listowel 84.86 326 P P 12 19 15.5 +1.0
baz=36,SNR=7.5
G47A Hillman 84.91 328 P P 12 19 16.1 +1.5
baz=34,SNR=30
L55A Hinsdale 85.01 324 P P 12 19 16.1 +0.8
baz=38
O60A Telford 85.04 321 P P 12 19 16.3 +0.9
baz=39
M57A Sunshine Farm, 85.07 322 P P 12 19 16.6 +1.0
baz=38
J52A Paris 85.08 325 P P 12 19 16.5 +0.9
baz=36,SNR=6.2
H48A Harrisville 85.09 328 IAmb IAmb 12 19 17.9
comp=Z,99nm,1.4s
H48A Harrisville 85.09 328 P P 12 19 17.0 +1.4
baz=34,SNR=6.4
BBSR BB Station 85.11 309 P P 12 19 16.8 +1.0
E43A Lone Tree Farm 85.12 331 IAmb IAmb 12 19 17.7
comp=Z,176nm,1.9s
F45A CMU Biological 85.14 330 P P 12 19 17.0 +1.2
baz=33,SNR=15
G46A Petoskey 85.19 329 P P 12 19 17.0 +0.9
baz=34,SNR=5.3
EYMN Ely 85.35 334 IAmb IAmb 12 19 19.0
comp=Z,131nm,1.7s
EYMN Ely 85.35 334 P P 12 19 17.8 +0.9
baz=29
SOEI Soe 85.39 107 P P 12 19 27.2 +10
SOEI Soe 85.39 107 P P 12 19 18.0 +0.4
O59A Robesonia 85.43 321 P P 12 19 17.2 -0.1
baz=39
GLMI Grayling 85.51 329 P P 12 19 19.0 +1.3
GLMI IAmb IAmb 12 19 20.0
comp=Z,76nm,0.9s
GLMI Grayling 85.51 329 P P 12 19 18.8 +1.1
baz=34
I49A Point Hope 85.51 327 IAmb IAmb 12 19 42.2
comp=Z,51nm,0.7s
I49A Point Hope 85.51 327 P P 12 19 18.6 +0.9
baz=35,SNR=11
H47A Mio 85.53 328 P P 12 19 18.8 +1.0
baz=34
P60A Greenville 85.55 320 P P 12 19 18.4 +0.4
baz=39
I48A Sherman Twp 85.67 328 P P 12 19 19.6 +1.2
baz=34,SNR=9.8
M55A Ridgway 85.73 323 P P 12 19 19.5 +0.6
baz=37
G45A Suttons Bay 85.73 329 P P 12 19 19.9 +1.2
baz=33,SNR=7.3
H46A Fife Lake 85.97 329 P P 12 19 20.6 +0.6
baz=33,SNR=8.9
SSPA Standing Stone 85.98 322 P P 12 19 20.5 +0.4
baz=38
L53A Girard 86.02 324 P P 12 19 20.8 +0.5
baz=36
M54A Oil Creek Stat 86.11 324 P P 12 19 20.7 0.0
baz=37
J49A Marlette 86.11 327 P P 12 19 21.3 +0.6
baz=35
I47A Gladwin 86.13 328 IAmb IAmb 12 19 44.0
comp=Z,102nm,1.6s
I47A Gladwin 86.13 328 P P 12 19 21.2 +0.5
baz=34
COWI Conover 86.14 332 IAmb IAmb 12 19 22.8
comp=Z,104nm,1.6s
O57A Amberson 86.20 322 P P 12 19 21.5 +0.3
baz=38
Q60A Greensboro 86.28 320 P P 12 19 22.1 +0.6
baz=39
K50A Casco 86.38 326 P P 12 19 22.4 +0.4
baz=35
N55A Marion Center 86.38 323 P P 12 19 22.4 +0.3
baz=37
AGMN Agassiz Nation 86.41 337 P P 12 19 22.3 +0.3
baz=26
J48A Bridge Port 86.43 327 IAmb IAmb 12 19 24.3
comp=Z,48nm,1.1s
J48A Bridge Port 86.43 327 P P 12 19 22.7 +0.4
baz=34
I46A Reed City 86.57 329 P P 12 19 23.5 +0.5
baz=33
P58A Pank, Wackersv 86.60 321 P P 12 19 23.2 0.0
baz=38
K49A Clarkson 86.72 327 P P 12 19 23.9 +0.2
baz=34
I45A Fountain 86.80 329 P P 12 19 24.5 +0.5
baz=33
FAKI Fak Fak 86.90 96 P P 12 19 25.9 +0.9
FAKI Fak Fak 86.90 96 P P 12 19 24.6 -0.4
FAKI IAmb IAmb 12 19 49.9
comp=Z,65nm,1.3s
J47A Sunmer 86.91 328 IAmb IAmb 12 19 26.8
comp=Z,53nm,1.1s
J47A Sunmer 86.91 328 P P 12 19 25.5 +0.9
baz=34
P57A Homestead Farm 86.95 322 P P 12 19 24.3 -0.5
baz=38
K48A Perry 86.98 327 P P 12 19 24.3 -0.6
baz=34
O55A Ligonier 86.98 323 P P 12 19 24.0 -1.0
baz=37
L50A Kingsville 87.05 326 P P 12 19 24.0 -1.3
baz=35
N53A Lisbon 87.20 324 P P 12 19 25.2 -0.9
baz=36
Q58A Fox Den Farm, 87.22 321 P P 12 19 25.4 -0.7
baz=38
G40A Rib Lake 87.23 332 IAmb IAmb 12 19 27.5
comp=Z,29nm,0.7s
GIRL Giralia 87.31 123 P P 12 19 27.0 +0.3
P56A Dayton Farm, R 87.32 322 P P 12 19 25.8 -0.9
baz=37
M51A Elyria 87.36 325 P P 12 19 26.5 -0.3
baz=35
L49A Milan 87.41 327 P P 12 19 27.4 +0.4
baz=34
O54A Avella 87.49 324 P P 12 19 26.8 -0.7
baz=36
MCWV Mont Chateau 87.67 323 P P 12 19 28.4 +0.1
baz=36
M50A Fremont 87.68 326 P P 12 19 27.9 -0.4
baz=35
K46A Dorr 87.75 328 P P 12 19 28.6 -0.1
baz=33
P55A Reedsville 87.78 323 P P 12 19 28.8 -0.1
baz=36
D32A Dogwood Acres, 87.79 337 IAmb IAmb 12 19 29.6
comp=Z,31nm,0.5s
L48A N Adams 87.82 327 P P 12 19 29.1 +0.1
baz=34
MDND Maddock 87.88 339 P P 12 19 29.7 +0.6
baz=24,SNR=9.4
BBB Bella Bella 87.88 358 P P 12 19 29.3 +0.3
comp=Z,17nm,0.8s,baz=40,slow=7.9,SNR=1.9
I42A Draeger Farm, 87.95 331 IAmb IAmb 12 19 31.7
comp=Z,92nm,1.8s
S59A Mechanicsville 87.95 320 P P 12 19 29.8 +0.2
baz=38
P54A Burton 88.00 323 P P 12 19 29.9 0.0
baz=36
M49A Liberty Center 88.02 326 P P 12 19 30.2 +0.3
baz=34
R58B Mineral 88.08 321 P P 12 19 30.2 -0.1
baz=38
L47A Sherwood 88.11 328 P P 12 19 30.1 -0.3
baz=33
R57A Stanardsville 88.13 321 P P 12 19 30.4 -0.2
baz=37
SPMN Marine on St. 88.17 334 IAmb IAmb 12 19 33.4
comp=Z,19nm,0.6s
SPMN Marine on St. 88.17 334 P P 12 19 31.2 +0.6
baz=28,SNR=9.3
N50A Nevada 88.24 326 P P 12 19 31.1 +0.1
baz=34
Q55A Buckhannon 88.31 323 P P 12 19 31.5 +0.1
baz=36
S58A Poland Farm, P 88.44 321 P P 12 19 31.8 -0.2
baz=38
R56A Bull Pasture M 88.46 322 P P 12 19 31.5 -0.7
baz=37
P53A Whipple 88.51 324 IAmb IAmb 12 19 55.3
comp=Z,89nm,1.9s
P53A Whipple 88.51 324 P P 12 19 32.7 +0.3
baz=36
O51A Pataskala 88.52 325 P P 12 19 32.4 0.0
baz=35
N49A Columbus Grove 88.56 326 P P 12 19 32.5 0.0
baz=34
I40A Norwalk 88.57 332 IAmb IAmb 12 19 34.8
comp=Z,55nm,1.6s
ACSO Alum Creek Sta 88.61 325 P P 12 19 32.8 0.0
baz=35
U61A Possum Corner 88.65 319 P P 12 19 33.5 +0.5
baz=38
Q54A Coxs Mills 88.67 323 P P 12 19 33.1 +0.1
baz=36
T59A Double "B" Far 88.70 320 P P 12 19 32.9 -0.3
baz=38
P52A Corning 88.73 324 P P 12 19 33.1 -0.2
baz=35
S57A Dark Hollow, R 88.76 321 P P 12 19 33.2 -0.3
baz=37
O50A Cable 88.96 326 P P 12 19 34.7 +0.2
baz=34,SNR=5.5
N48A Decatur 88.97 327 P P 12 19 34.4 -0.1
baz=33
Q53A Leroy 89.08 323 P P 12 19 34.8 -0.2
baz=36
LLLB Lillooet 89.13 354 IAmb IAmb 12 19 56.9
comp=Z,32nm,0.9s
T58A Grand View Acr 89.20 320 P P 12 19 35.7 0.0
baz=37
N47A Urbana 89.23 327 P P 12 19 35.3 -0.4
baz=33
O49A Covington 89.23 326 IAmb IAmb 12 19 36.8
comp=Z,53nm,1.4s
O49A Covington 89.23 326 P P 12 19 35.6 -0.1
baz=34,SNR=6.8
JFWS Jewell Farm 89.28 331 IAmb IAmb 12 19 37.6
comp=Z,63nm,1.6s
JFWS Jewell Farm 89.28 331 P P 12 19 35.7 -0.2
baz=30
U59A Littleton 89.31 320 P P 12 19 36.0 -0.1
baz=38
Q52A Bidwell 89.33 324 P P 12 19 36.4 +0.3
baz=35
V60A Jim Taylor Roa 89.50 319 P P 12 19 37.3 +0.3
baz=38
T57A Hurt 89.51 321 P P 12 19 37.7 +0.7
baz=37
O48A Farmland 89.53 327 P P 12 19 37.2 +0.1
baz=33
U58A Oxford 89.65 320 P P 12 19 37.8 +0.1
baz=37
RCBR Riachuelo 89.66 262 P P 12 19 38.3 +0.2
RCBR IAmb IAmb 12 19 41.1
comp=Z,68nm,1.6s
RCBR Riachuelo 89.66 262 P P 12 19 38.3 +0.2
RCBR pmax pmax
comp=Z,69nm,1.7s
WALA Waterton Lakes 89.75 349 IAmb IAmb 12 20 11.8
comp=Z,34nm,1.2s
M44A Midewin, Midew 89.75 329 IAmb IAmb 12 19 39.6
comp=Z,57nm,1.5s
Q51A Peebles 89.76 325 P P 12 19 38.2 -0.1
baz=34
L42A Oliver, Polo 89.85 330 P P 12 19 39.0 +0.4
L42A IAmb IAmb 12 19 40.2
comp=Z,55nm,1.4s
P49A Miami Univ. Ec 89.94 326 P P 12 19 38.8 -0.2
baz=34
V59A Middlesex 89.99 319 P P 12 19 39.6 +0.3
baz=37
U57A Blanch 90.00 321 P P 12 19 39.5 +0.2
baz=37
EGMT Eagleton 90.04 346 IAmb IAmb 12 19 60.0
comp=Z,62nm,1.6s
EGMT Eagleton 90.04 346 P P 12 19 39.8 +0.4
baz=16,SNR=14
Q50A Georgetown 90.19 325 P P 12 19 40.0 -0.2
baz=34
SFIN Lafayette 90.23 328 P P 12 19 40.2 -0.1
baz=32
W60A Pink Hill 90.29 319 P P 12 19 40.8 +0.1
baz=38
P48A Milroy 90.31 326 IAmb IAmb 12 19 41.7
comp=Z,33nm,1.4s
P48A Milroy 90.31 326 P P 12 19 40.6 -0.2
baz=33
L40A Anamosa 90.38 331 IAmb IAmb 12 19 42.4
comp=Z,30nm,1.2s
V58A Windy Hill, Pi 90.40 320 P P 12 19 41.3 0.0

baz=37
Q49A Aurora 90.46 326 P P 12 19 41.6 +0.1
baz=33
LAO LASA Array 90.59 343 P P 12 19 43.4 +1.3
LAO LASA Array 90.59 343 P P 12 19 43.9 +1.9
baz=19,SNR=36
V57A Coltrane Farms 90.65 321 P P 12 19 42.5 +0.1
baz=36
ECSD EROS Data Cent 90.74 336 IAmb IAmb 12 19 44.8
comp=Z,80nm,1.6s
ECSD EROS Data Cent 90.74 336 P P 12 19 43.4 +0.7
baz=26,SNR=28
U55A TA2, Sparta 90.77 322 P P 12 19 43.1 +0.1
baz=36
X60A Albert Glenn T 90.80 319 P P 12 19 43.6 +0.5
baz=38
SUSD Miller 90.81 338 P P 12 19 43.9 +0.9
baz=24,SNR=10
R50A Paris 90.81 325 P P 12 19 43.2 +0.1
baz=34
Q48A North Vernon 90.88 326 P P 12 19 43.5 +0.1
baz=33
HDIL Hopedale 90.95 329 IAmb IAmb 12 20 10.8
comp=Z,27nm,1.1s
HDIL Hopedale 90.95 329 P P 12 19 44.0 +0.3
baz=30
NEW Newport 90.96 351 P P 12 19 45.1 +1.4
comp=Z,15nm,0.7s,baz=358,slow=4.5,SNR=21
NEW pP pP 12 20 03.7 +2.2
comp=Z,19nm,0.7s,baz=15,slow=6.2,SNR=8.6
NEW Newport 90.96 351 P P 12 19 45.2 +1.5
baz=11,SNR=21
O44A Mansfield 90.97 329 IAmb IAmb 12 19 45.5
comp=Z,21nm,0.8s
S51A Beattyville 91.01 324 P P 12 19 44.1 +0.1
baz=34
V56A Mocksville 91.06 321 P P 12 19 44.5 +0.2
baz=36
T53A Wise 91.07 323 P P 12 19 44.7 +0.3
baz=35
W58A Raeford 91.08 320 P P 12 19 44.8 +0.5
baz=37
JTMT Jette 91.08 349 IAmb IAmb 12 19 46.6
comp=Z,16nm,0.6s
R49A Shelbyville 91.17 325 P P 12 19 44.6 -0.2
baz=33
T52A Hallie 91.18 323 P P 12 19 45.2 +0.3
baz=35
SCIA State Center 91.23 333 P P 12 19 45.1 +0.1
baz=28
S50A Richmond 91.34 325 P P 12 19 45.8 +0.2
baz=34
W57A Gilead 91.34 320 P P 12 19 45.5 -0.1
baz=36
V55A Taylorsville 91.37 321 P P 12 19 45.9 +0.1
baz=36
N41A Harden Midland 91.42 330 IAmb IAmb 12 19 47.0
comp=Z,22nm,1.0s
B05A Bryant 91.48 354 P P 12 19 45.8 -0.2
baz=6.9
U53A Fall Branch 91.59 323 P P 12 19 46.7 -0.1
baz=35
S49A Springfield 91.64 325 P P 12 19 46.7 -0.3
baz=33
W56A Indian Trail 91.65 321 P P 12 19 47.5 +0.4
baz=36
WCI Wyandotte Cave 91.70 326 P P 12 19 46.9 -0.4
baz=32
T51A Gray 91.73 324 P P 12 19 47.8 +0.4
baz=34
V54A Nebo 91.78 322 P P 12 19 48.1 +0.4
baz=35
TZTN Tazewell 91.90 323 P P 12 19 48.8 +0.6
baz=34
MSO Missoula 91.92 348 P P 12 19 48.6 +0.4
baz=13,SNR=6.5
U52A Thorn Hill 91.94 323 P P 12 19 49.0 +0.6
baz=34
BIRD Birdtown, Kers 91.98 320 IAmb IAmb 12 20 12.8
comp=Z,77nm,1.9s
KMSC Kings Mountain 92.00 321 IAmb IAmb 12 20 12.8
comp=Z,58nm,1.6s
KMSC Kings Mountain 92.00 321 P P 12 19 49.1 +0.4
baz=36
OLIL Olney 92.03 328 IAmb IAmb 12 20 12.6
comp=Z,18nm,0.8s
T50A Nancy 92.08 325 P P 12 19 49.1 +0.1
baz=33
U51A La Follette 92.24 324 P P 12 19 50.3 +0.5
baz=34,SNR=5.3
T49A Edmonton 92.32 325 P P 12 19 50.0 -0.1
baz=33
D08A Wollman Farm, 92.36 352 IAmb IAmb 12 20 11.8
comp=Z,13nm,0.8s
X56A White Oak 92.38 321 P P 12 19 51.3 +0.9
baz=36,SNR=6.0
W54A Cherokee Point 92.45 322 P P 12 19 51.0 +0.2
baz=35
RSSD Black Hills 92.49 341 P P 12 19 51.7 +0.6
RSSD Black Hills 92.49 341 P P 12 19 51.7 +0.6
RSSD pmax pmax
comp=Z,74nm,1.7s
RSSD Black Hills 92.49 341 P P 12 19 51.7 +0.6
baz=20
PAULI Pauline 92.49 321 IAmb IAmb 12 19 53.1
comp=Z,22nm,1.0s
V52A Sevierville 92.50 323 P P 12 19 51.4 +0.4
baz=34
Z59A Georgetown, SC 92.51 319 P P 12 19 51.6 +0.6
baz=37
U50A Jamestown 92.59 324 P P 12 19 51.4 0.0
baz=33
X55A Gracelyn & Ava 92.69 321 P P 12 19 53.0 +1.1
baz=35,SNR=7.6
Z58A St. Stephen 92.71 319 P P 12 19 52.6 +0.7
baz=36
TKL Tuckaleechee C 92.73 323 P P 12 19 52.6 +0.6
comp=Z,6.2nm,0.9s,baz=146,slow=5.9,SNR=6.1
RLMT Red Lodge 92.73 345 P P 12 19 53.1 +1.0
baz=16,SNR=9.9
E09A Wood Farm, Sta 92.81 351 IAmb IAmb 12 20 13.8
comp=Z,21nm,0.9s
W53A Cullowhee 92.85 322 P P 12 19 53.2 +0.4
baz=34
V51A Loudon 92.87 324 P P 12 19 53.2 +0.6
baz=34
U49A Red Boiling Sp 92.92 325 P P 12 19 53.1 +0.2
baz=33
X54A Belton 92.98 321 P P 12 19 53.8 +0.6
baz=35
NHSC New Hope 93.07 319 P P 12 19 54.6 +1.0
baz=36
T47A Sharon Grove 93.10 326 IAmb IAmb 12 20 16.5
comp=Z,30nm,1.8s
DLMT Dillon 93.13 347 IAmb IAmb 12 20 14.6
comp=Z,26nm,1.5s
Z57A Bowman 93.18 320 P P 12 19 55.0 +0.9
baz=36,SNR=6.0
HODGE Hodges 93.19 321 IAmb IAmb 12 19 56.1
comp=Z,24nm,1.2s
F10A Beach Ranch, E 93.23 350 IAmb IAmb 12 20 16.3
comp=Z,17nm,0.8s
Y55A Saluda 93.23 321 P P 12 19 55.2 +0.8
baz=35,SNR=5.9
V50A Pikeville 93.32 324 P P 12 19 55.3 +0.5
baz=33
BGNE Belgrade 93.32 336 P P 12 19 55.2 +0.5
baz=24
S44A Carbondale 93.39 328 IAmb IAmb 12 19 56.6
comp=Z,19nm,1.1s
X53A Estanollee 93.46 322 P P 12 19 56.0 +0.6
baz=34
Z56A Williston 93.49 320 P P 12 19 56.2 +0.6
baz=36
LKWY Lake 93.49 345 P P 12 19 56.4 +0.7
LKWY Lake 93.49 345 P P 12 19 56.4 +0.7
LKWY pmax pmax
comp=Z,13nm,1.5s
W51A Cleveland 93.59 323 P P 12 19 56.1 +0.1
baz=34
V49A McMinnville 93.60 325 P P 12 19 55.8 -0.2
baz=33
Y54A Tignall 93.69 321 P P 12 19 57.2 +0.7
baz=35,SNR=6.1
W50A Signal Mountai 93.81 324 P P 12 19 57.2 +0.2
baz=33
157A Early Branch 93.83 319 P P 12 19 57.3 +0.2
baz=36

CCM Cathedral Cave 93.87 329 P P 12 19 57.4 +0.1
CCM Cathedral Cave 93.87 329 P P 12 19 57.4 +0.1
CCM pmax pmax
comp=Z,7.0nm,0.8s
CCM Cathedral Cave 93.87 329 P P 12 19 57.3 +0.1
baz=29
G08A Pilot Rock 94.11 351 IAmb IAmb 12 20 00.8
comp=Z,32nm,1.7s
Y53A Monroe 94.12 322 P P 12 19 59.2 +0.7
baz=34
WVT Waverly 94.13 326 P P 12 19 57.5 -1.0
WVT pmax pmax
comp=Z,4.0nm,1.8s
WVT Waverly 94.13 326 P P 12 19 58.2 -0.3
baz=32
Y52A Lilburn 94.34 322 P P 12 20 00.4 +1.0
baz=34
G06A Carlson Farm, 94.35 353 IAmb IAmb 12 20 02.1
comp=Z,40nm,1.8s
GOGA Godfrey 94.43 322 P P 12 20 00.2 +0.4
baz=34
K22A Casper 94.48 342 IAmb IAmb 12 20 02.4
comp=Z,24nm,1.6s
K22A Casper 94.48 342 P P 12 20 00.2 +0.1
baz=18
FXWY Fox Creek 94.51 345 P P 12 20 00.2 -0.2
G03D McMinnville, O 94.60 354 P P 12 20 02.7 +2.3
baz=6.0
Y51A Rockmart 94.78 323 P P 12 20 01.1 -0.3
baz=33
KSU1 Kansas State U 94.90 334 P P 12 20 02.1 +0.2
baz=26
PDAR Pinedale Array 95.05 344 P P 12 20 02.8 -0.1
comp=Z,0.5nm,0.5s,baz=70,slow=3.7,SNR=6.5
PDAR PP PP 12 23 51.4 -0.4
comp=Z,1.8nm,1.0s,baz=57,slow=5.5,SNR=3.0
PDAR PKKPbc PKKPbc 12 36 56.1 -0.4
comp=Z,1.4nm,0.8s,baz=172,slow=3.2,SNR=11
PDAR LR LR 13 07 08.4
comp=Z,180nm,18.4s,baz=16,slow=38
Z52A Williamson 95.06 322 P P 12 20 02.8 0.0
baz=34
I05D Terrebonne, OR 95.30 353 P P 12 20 04.3 +0.5
baz=7.5
LCAR Lake Charles 95.56 328 IAmb IAmb 12 20 06.4
comp=Z,30nm,1.9s
Z50A Ashland 95.71 323 P P 12 20 06.2 +0.5
baz=33
I02D Swisshome 95.74 355 P P 12 20 05.6 0.0
baz=5.5
I04A Tendick Farm, 95.94 354 P P 12 20 06.9 +0.3
baz=6.7
J08A Circle Bar Ran 95.96 351 IAmb IAmb 12 20 27.9
comp=Z,25nm,1.5s
U40A Yellville 95.98 330 P P 12 20 06.9 0.0
baz=28
N23A Red Feather La 96.00 341 P P 12 20 07.4 +0.1
baz=19
TIGA Tifton 96.11 321 P P 12 20 07.4 -0.1
baz=34
I03D Drain, OR 96.11 354 P P 12 20 08.1 +0.8
baz=5.9
CBKS Cedar Bluff 96.19 336 IAmb IAmb 12 20 34.9
comp=Z,17nm,1.0s
CBKS Cedar Bluff 96.19 336 P P 12 20 08.1 +0.2
baz=24
J05D Fort Rock, OR 96.34 353 P P 12 20 09.6 +1.0
baz=7.5
J04D Umpqua Nationa 96.46 353 P P 12 20 09.7 +0.4
baz=6.9
HWUT Hardware Ranch 96.57 345 IAmb IAmb 12 20 30.5
comp=Z,29nm,1.9s
W41B Gary Mavity, V 96.78 329 P P 12 20 11.1 +0.6
baz=29
K05A Summer Lake 96.86 352 IAmb IAmb 12 20 32.8
comp=Z,45nm,1.5s
KSCO Kaye Shedlock' 96.88 338 P P 12 20 11.4 +0.3
baz=21
WVOR Wild Horse Val 96.89 351 IAmb IAmb 12 20 32.8
comp=Z,10nm,0.8s
ISCO Idaho Springs 96.95 340 P P 12 20 11.5 -0.2
ISCO pmax pmax
comp=Z,3.0nm,0.9s
ISCO Idaho Springs 96.95 340 P P 12 20 11.1 -0.5
baz=19
K02D Willamette Mer 97.13 354 P Pdif 12 20 12.2 0.0
baz=5.7
HUMO Hull Mountain 97.17 354 IAmb IAmb 12 20 13.9
comp=Z,28nm,1.6s
W39A Magazine 97.36 330 P Pdif 12 20 13.2 0.0
baz=28
TUL1 Leonard 97.47 332 P Pdif 12 20 14.2 +0.5
baz=26
L04D Klamath Falls 97.50 353 P Pdif 12 20 14.0 +0.1
baz=6.8
X40A Basin Creek Fa 97.61 329 P Pdif 12 20 15.0 +0.6
baz=28
MOD Modoc Plateau 97.61 352 IAmb IAmb 12 20 36.4
comp=Z,9.5nm,0.7s
Q24A Divide 97.61 340 P Pdif 12 20 15.2 +0.5
baz=20
MIAR Mount Ida 97.85 329 P Pdif 12 20 15.9 +0.5
baz=28
M04C Macdoel 97.89 353 P Pdif 12 20 16.4 +0.7
baz=7.1
YBH Yreka Blue Hor 98.01 354 P Pdif 12 20 16.4 +0.3
comp=Z,1.2nm,0.6s,baz=12,slow=9.0,SNR=3.8
YBH Yreka Blue Hor 98.01 354 P P 12 20 15.9 -0.2
ELK Elko 98.06 348 P Pdif 12 20 17.5 +0.9
ELK IAmb IAmb 12 20 19.5
comp=Z,34nm,1.9s
ELK Elko 98.06 348 P Pdif 12 20 17.5 +0.9
ELK pmax pmax
comp=Z,34nm,1.9s
DUG Dugway, Tooele 98.17 346 P P 12 20 14.4 -2.5
baz=14
M02C Callahan 98.36 354 P P 12 20 17.0 -0.7
baz=6.3
VBMS Vicksburg 98.62 326 P P 12 20 18.4 -0.5
baz=30
Z41A Richland Creek 98.67 328 P P 12 20 18.0 -1.1
baz=28
SRU San Rafael Swe 98.76 344 P Pdif 12 20 19.9 +0.2
SRU San Rafael Swe 98.76 344 P Pdif 12 20 19.9 +0.2
SRU pmax pmax
comp=Z,4.0nm,0.8s
SDCO Great Sand Dun 98.85 340 P P 12 20 18.8 -1.4
baz=19
Q16A Castle Valley 99.08 344 P Pdif 12 20 21.6 +0.5
T25A Trinidad 99.12 339 P Pdif 12 20 20.2 -1.2
baz=20
S22A 4UR Ranch, Cre 99.20 341 P Pdif 12 20 20.9 -0.9
baz=18
WRA Warramunga Arr 99.37 108 P Pdif 12 20 21.8 -0.5
comp=Z,2.8nm,0.6s,baz=317,slow=4.0,SNR=14
WRA pP pP 12 20 41.6 +1.5
comp=Z,3.8nm,0.5s,baz=320,slow=3.6,SNR=9.7
WRA PKKPbc PKKPbc 12 36 45.7 +1.2
comp=Z,0.9nm,0.6s,baz=128,slow=2.3,SNR=4.2
WRA LR LR 13 15 27.6
comp=Z,28nm,18.2s,baz=345,slow=41
WRAB Tennant Creek 99.37 108 P Pdif 12 20 21.4 -0.9
WRAB pmax pmax
comp=Z,13nm,1.1s
O02D Mt. Diablo Mer 99.56 353 P Pdif 12 20 21.7 -1.8
baz=6.4
WMOK Wichita Mounta 99.58 333 P Pdif 12 20 21.7 -1.5
baz=24
MVCO Mesa Verde 100.12 342 P Pdif 12 20 23.9 -1.9
baz=17
R11A Troy Canyon, C 100.46 348 P Pdif 12 20 24.9 -2.3
baz=12
NATX Nacogdoches 100.73 329 P Pdif 12 20 26.0 -2.2
baz=27
NVAR Mina Array Bea 100.79 350 P Pdif 12 20 28.6 -0.1
comp=Z,0.7nm,0.7s,baz=22,slow=4.4,SNR=6.4
NVAR PKKPbc PKKPbc 12 36 40.3 -0.4
comp=Z,1.2nm,0.6s,baz=190,slow=4.6,SNR=9.1
NVAR Mina Array Bea 100.79 350 Pdif 12 20 28.9 +0.1
ASAR Alice Springs 101.40 111 P Pdif 12 20 30.7 -0.6
comp=Z,0.9nm,0.8s,baz=310,slow=4.7,SNR=5.4
ASAR pP pP 12 20 50.2 +0.9
comp=Z,1.7nm,0.8s,baz=305,slow=5.2,SNR=5.8
ASAR PKiKP PKiKP 12 24 55.2 0.0
comp=Z,0.9nm,0.7s,baz=329,slow=1.5,SNR=2.6
ASAR pPKiKP pPKiKP 12 25 13.7 0.0
comp=Z,0.6nm,0.5s,baz=328,slow=1.0,SNR=1.4
ASAR PKKPbc PKKPbc 12 36 39.6 +0.9

comp=Z,1.1nm,0.7s,baz=125,slow=3.8,SNR=7.0
ASAR Alice Springs 101.40 111 Pdif 12 20 30.5 -0.8
MSTX Muleshoe 101.59 336 P Pdif 12 20 30.4 -1.8
baz=22
WHTX Lake Whitney, 101.59 331 P Pdif 12 20 30.7 -1.4
baz=26
MLAC Mammoth, Mammot 101.65 350 P Pdif 12 20 29.8 -2.8
baz=9.5
ANMO Albuquerque 101.75 339 P Pdif 12 20 32.3 -0.7
comp=Z,0.7nm,0.8s,baz=84,slow=10,SNR=2.4
ANMO Albuquerque 101.75 339 Pdif 12 20 33.0 0.0
ANMO Albuquerque 101.75 339 P Pdif 12 20 33.0 0.0
ANMO Albuquerque 101.75 339 P Pdif 12 20 31.2 -1.8
baz=19
ABTX Abilene, Hawle 101.80 333 P Pdif 12 20 31.1 -1.9
baz=24
TPNV Topopah Spring 101.93 348 P Pdif 12 20 31.7 -2.0
baz=12
WUAZ Wupatki 102.40 344 P Pdif 12 20 33.7 -2.2
baz=15
Y22D IRIS PASSCAL I 102.69 339 P Pdif 12 20 34.4 -2.8
baz=19
CWC Cottonwood Cre 102.71 349 P Pdif 12 20 34.9 -2.4
baz=10
435B Jarrell 102.72 331 P Pdif 12 20 35.5 -1.7
baz=26
SHOC Shoshone, Teco 102.96 348 P Pdif 12 20 36.5 -1.7
baz=12
TUQ Turquoise Moun 103.36 347 P Pdif 12 20 38.7 -1.4
baz=12
ISA Isabella, Lake 103.53 349 P Pdif 12 20 39.6 -1.2
baz=9.8
GSC Goldstone, Bar 103.63 348 P Pdif 12 20 39.7 -1.5
baz=11
JCT Junction City 103.81 332 P Pdif 12 20 41.1 -0.9
baz=24
GMRC Granite Mounta 103.95 347 P Pdif 12 20 41.3 -1.4
baz=12
EDW2 Edwards Air Fo 104.23 349 P Pdif 12 20 41.8 -2.1
baz=10
121A Cookes Peak, D 104.38 340 P Pdif 12 20 42.8 -2.0
baz=18
IRM Iron Mountain 104.47 346 P Pdif 12 20 42.6 -2.4
baz=12
MNTX Cornudas Mount 104.49 337 Pdif 12 20 45.5 +0.5
MNTX Cornudas Mount 104.49 337 P Pdif 12 20 44.4 -0.7
baz=20
BFSC Mount Baldy Ra 104.81 348 P Pdif 12 20 44.8 -1.8
baz=10
214A Organ Pipe Nat 106.14 344 P PKiKP 12 25 03.2 -0.8
baz=14
TXAR Lajitas Array 106.17 335 Pdiff Pdif 12 20 53.7 +1.1
comp=Z,0.3nm,0.7s,baz=37,slow=4.8,SNR=3.7
TXAR PP PP 12 25 16.0 0.0
comp=Z,0.7nm,0.7s,baz=40,slow=5.9,SNR=2.0
TXAR PKKPbc PKKPbc 12 36 23.9 -0.6
comp=Z,0.4nm,0.8s,baz=192,slow=5.7,SNR=4.1
TXAR Lajitas Array 106.17 335 Pdif 12 20 52.6 -0.1
TXAR Lajitas Array 106.17 335 P Pdif 12 20 52.6 -0.1
SYO Syowa Base 109.17 183⇑ePPdiff pPdif 12 21 23.4 +1.1
NVL N'lazarevskaya 113.88 193 ePKIKP PKiKP 12 25 17.4 +0.4
NVL pmax pmax
comp=Z,4.0nm,0.6s
SIV San Ignacio 115.21 270 PKP PKiKP 12 25 21.4 +0.1
comp=Z,1.4nm,0.7s,baz=174,slow=5.1,SNR=4.1
SNAA Sanae 117.41 196 PKPdf PKiKP 12 25 24.1 +0.1
SNAA Sanae 117.41 196 PKPdf 12 25 23.9 0.0
SNAA Sanae 117.41 196 PKIKP PKPdf 12 25 23.9 0.0
VNA2 Neumayer--Watz 117.90 198 PKPdf PKiKP 12 25 25.7 +0.9
baz=43,slow=3.7
CPUP Villa Florida 118.32 258 PKP PKPdf 12 25 26.4 -0.6
comp=Z,3.6nm,0.7s,baz=67,slow=2.5,SNR=7.0
VNA3 Neumayer Olymp 118.66 198 PKPdf PKiKP 12 25 26.7 +0.3
LPAZ La Paz 120.79 274 PKP PKPdf 12 25 32.6 -0.1
comp=Z,2.6nm,0.6s,baz=169,slow=4.1,SNR=5.4
GO01 Chusmiza 123.60 272 PKiKP 12 25 38.5 +0.3
PB11 IPOC Station P 124.01 272 PKiKP 12 25 38.7 +0.1
DZM Mont Dzumac 124.77 91 eLR LR 13 04 38.0
comp=Z,364nm,21.9s
LVC Limon Verde 125.06 269 PKP PKPdf 12 25 40.4 -0.1
comp=Z,3.1nm,0.6s,baz=35,slow=6.9,SNR=2.5
LVC Limon Verde 125.06 269 PKiKP 12 25 41.1 +0.3
LVC Limon Verde 125.06 269 PKIKP PKiKP 12 25 41.1 +0.3
CFA Coronel Fontan 129.21 259 PKP PKPdf 12 25 47.8 +0.1
comp=Z,5.3nm,0.8s,baz=329,slow=2.1,SNR=4.5
QSPA South Pole Qui 130.09 180 PKPdf 12 25 48.2 -0.1
VNDA Vanda 133.92 164 PKP PKPdf 12 25 54.9 -0.4
comp=Z,9.8nm,1.1s,baz=255,slow=0.8,SNR=2.1
PLCA Paso Flores 134.68 249 PKP PKPdf 12 25 58.5 +0.7
comp=Z,3.0nm,0.8s,baz=106,slow=1.8,SNR=7.0
PLCA SKPbc SKPbc 12 29 22.9 +0.5
comp=Z,16nm,1.1s,baz=84,slow=4.9,SNR=14
PLCA Paso Flores 134.68 249 PKiKP 12 25 58.7 -0.6
PLCA Paso Flores 134.68 249 PKIKP PKiKP 12 25 58.7 -0.6
USHA Ushuaia 136.67 229 PKP PKPdf 12 26 00.9 -0.1
comp=Z,8.4nm,0.7s,baz=346,slow=12,SNR=1.5
PPT2 Papeete2 152.39 40 eLR LR 13 17 19.9
comp=Z,498nm,23.0s
TBI Tubuai 157.18 48 eLR LR 13 19 31.2
comp=Z,578nm,24.5s
RKT Rikitea 162.61 12 eLR LR 13 22 01.7
comp=Z,513nm,30.0s

ROM 10 12:14:13.8±0.1, 43°.394N±0°.004×12°.505E±0°.004, h8km, ML1.8/12, 3C-3D, Error ellipse: s-maj=0.4km s-min=0.1km az=6.0, Central Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ATFO Monte Foce - G 0.06 119 ⇓P Pg 12 14 15.9 +0.1
ATFO S Sg 12 14 17.0 -0.1
ATFO AML AML
comp=E,3865µm,0.5s
ATFO AML AML
comp=N,4725µm,0.2s
ATFO AML AML
comp=N,4730µm,0.2s
ATFO AML AML
comp=E,3860µm,0.5s
ATVO AVT- Monte Val 0.07 261 P Pg 12 14 16.1 +0.2
ATVO S Sg 12 14 17.5 +0.1
ATVO AML AML
comp=N,1595µm,0.2s
ATVO AML AML
comp=E,1650µm,0.4s
ATPI Pietralunga - 0.09 307 ⇑P Pg 12 14 16.6 +0.4
ATPI S Sg 12 14 18.5 +0.6
ATPI AML AML
comp=E,642µm,0.3s
ATPI AML AML
comp=N,845µm,0.5s
ATPI AML AML
comp=N,848µm,0.5s
ATPI AML AML
comp=E,642µm,0.3s
MURB Monte Urbino 0.13 174 ⇓P Pg 12 14 17.4 +0.6
MURB AML AML
comp=N,706µm,0.9s
MURB AML AML
comp=E,932µm,0.2s
ATMI Monte Miggiano 0.18 251 ⇑P Pg 12 14 18.3 +0.7
ATMI S Sg 12 14 21.5 +1.3
ATMI AML AML
comp=E,402µm,0.6s
ATMI AML AML
comp=N,328µm,0.6s
FRON Frontone 0.20 52 ⇑P Pg 12 14 18.7 +0.7
FRON S Sg 12 14 22.4 +1.6
FRON AML AML
comp=E,272µm,0.1s
FRON AML AML
comp=N,478µm,0.7s
SSFR Montelago di S 0.21 78 P Pg 12 14 18.7 +0.6
SSFR S Sg 12 14 22.4 +1.5
SSFR AML AML
comp=N,424µm,0.2s
SSFR AML AML
comp=N,511µm,1.5s
SSFR AML AML
comp=E,451µm,0.2s
SSFR AML AML
comp=E,469µm,0.4s
BADI Badiali 0.22 302 ⇓P Pg 12 14 19.1 +0.7
BADI S Sg 12 14 23.2 +1.7
BADI AML AML
comp=E,660µm,0.2s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
BADI				AML	AML		
	comp=N,528μm,0.2s						
BADI				AML	AML		
	comp=N,528μm,0.2s						
BADI				AML	AML		
	comp=E,661μm,0.2s						
NARO	**Abbazia di Nar**	**0.22**	**14**	P	Pg	12 14 19.0	+0.6
NARO				S	Sg	12 14 22.9	+1.4
ATCC	**AVT- Casa Cast**	**0.23**	**155**	P	Pg	12 14 19.3	+0.8
ATCC				S	Sg	12 14 23.8	+2.2
ATCC				AML	AML		
	comp=E,322μm,0.6s						
ATCC				AML	AML		
	comp=N,359μm,0.2s						
PE3	**Peglio**	**0.30**	**359**	P	Pb	12 14 21.1	-0.5
SNTG	**Esanatoglia**	**0.35**	**113**	P	Pg	12 14 21.2	+0.5
SNTG				S	Sb	12 14 27.1	-0.8
SNTG				AML	AML		
	comp=E,127μm,0.2s						
SNTG				AML	AML		
	comp=N,261μm,0.3s						
FSSB	**Fossombrone**	**0.36**	**33**	P	Pg	12 14 21.6	+0.6
FSSB				AML	AML		
	comp=E,206μm,0.4s						
FSSB				AML	AML		
	comp=N,176μm,1.6s						
ASSB	**Assisi San Ben**	**0.37**	**162**	P	Pg	12 14 21.7	+0.6
ARRO	**Arrone**	**0.84**	**167**	AML	AML		
	comp=N,81μm,1.5s						
ARRO				AML	AML		
	comp=E,88μm,1.1s						

*IDC **10** 12:15:30.9±1.8, 24°.85S×14°.27W, h0km, mb3.9/5, mb1 3.9/5, mb1mx3.7/39, mbtmp3.9/5, MS4.2/10, Ms1 4.2/10, ms1mx3.9/30, Error ellipse: s-maj=67.4km s-min=30.7km az=156.0*
*GCMT **10** 12:15:30.3±0.3, 25°.81S±0°.02×13°.78W±0°.02, h16km±1km, MW5.0/101, Moment Tensor Solution. s20,c22; s101,c140; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.81±.17; Mθθ-1.36±.15; Mφφ2.17±.16; Mrθ0.59±.39; Mrφ3.39±.12; Mθφ0.26±.39; Best double couple: Mo3.87600×10^16 NP1:φs346.00000°, δ80.00000°, λ-179.00000°. NP2:φs256.00000°, δ89.00000°, λ-10.00000°. Principal axes: T 4.2830, Plg6.0000°, Azm302.0000°; N -0.8170, Plg80.0000°, Azm68.0000°; P -3.4700, Plg8.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **10** 12:15:32.3±1.0, 24°.92S±0°.08×14°.2W±0°.1, h10km±2km, mb4.6/10 Error ellipse: s-maj=22.1km s-min=9.3km az=115.0*
ISC 10 12:15:32.2±0.8, 24°.9S±0°.2×14°.2W±0°.1, h10km, n33, σ0§61/18, mb4.5/9, MS4.2/10, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**15.87**	**358**	T	T	12 36 33.9	
	baz=177,slow=74,SNR=152						
H10S3	**ASCENSION HYDR**	**15.87**	**358**	T	T	12 36 34.4	
	baz=43,slow=74,SNR=125						
H10N1	**ASCENSION HYDR**	**16.97**	**359**	T	T	12 37 49.0	
	baz=181,slow=77,SNR=7.7						
H10N3	**ASCENSION HYDR**	**16.97**	**359**	T	T	12 37 43.4	
	baz=181,slow=77,SNR=40						
H10N2	**ASCENSION HYDR**	**16.99**	**359**	T	T	12 37 50.3	
	baz=181,slow=77,SNR=12						
RCBR	**Riachuelo**	**28.14**	**309**	LR	LR	12 30 50.7	
	comp=Z,383nm,18.6s,baz=131,slow=33						
BDFB	**Brasilia**	**32.94**	**280**	LR	LR	12 33 48.9	
	comp=Z,464nm,19.4s,baz=113,slow=33						
BDFB	**Brasilia**	**32.94**	**280**	P	**P**	**12 22 07.0**	**-0.3**
BDFB				IAmb	IAmb	12 22 12.6	
	comp=Z,14nm,1.5s						
BOSA	**Boshof**	**35.33**	**105**	LR	LR	12 34 17.2	
	comp=Z,369nm,18.5s,baz=326,slow=32						
BOSA	**Boshof**	**35.33**	**105**	P	**P**	**12 22 28.1**	**+0.1**
BOSA				IAmb	IAmb	12 22 30.9	
	comp=Z,9.8nm,1.1s						
LBTB	**Lobatse**	**36.01**	**99**	P	**P**	**12 22 33.6**	**-0.2**
LBTB				IAmb	IAmb	12 22 42.7	
	comp=Z,6.3nm,0.8s						
CPUP	**Villa Florida**	**38.77**	**258**	LR	LR	12 35 33.4	
	comp=Z,157nm,20.2s,baz=106,slow=31						
LSZ	**Lusaka**	**40.82**	**85**	P	**P**	**12 23 14.4**	**-0.1**
LSZ				IAmb	IAmb	12 23 18.8	
	comp=Z,12nm,1.3s						
TORD	**Torodi Ar. Bea**	**40.89**	**24**	P	**P**	**12 23 13.8**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=205,slow=9.7,SNR=4.2						
TORD	**Torodi Ar. Bea**	**40.89**	**24**	P	**P**	**12 23 14.4**	**-0.3**
SIV	**San Ignacio**	**44.61**	**272**	P	**P**	**12 23 44.0**	**-1.0**
	comp=Z,1.4nm,0.8s,baz=135,slow=10,SNR=4.9						
PLCA	**Paso Flores**	**49.09**	**237**	LR	LR	12 41 24.1	
	comp=Z,154nm,21.2s,baz=116,slow=32						
SAML	**Samuel**	**49.17**	**280**	P	**P**	**12 24 21.1**	**+0.3**
LPAZ	**La Paz**	**50.92**	**269**	LR	LR	12 44 27.8	
	comp=Z,219nm,21.8s,baz=104,slow=34						
LPAZ	**La Paz**	**50.92**	**269**	P	**P**	**12 24 34.3**	**-0.5**
SDV	**Santo Domingo**	**64.40**	**294**	P	**P**	**12 26 09.9**	**+0.8**
	comp=Z,2.3nm,0.5s,baz=127,slow=5.1,SNR=2.0						
SDV	**Santo Domingo**	**64.40**	**294**	P	**P**	**12 26 09.3**	**+0.1**
SDV				IAmb	IAmb	12 26 14.8	
	comp=Z,8.7nm,1.1s						
RUSC	**La Rusia**	**64.89**	**290**	P	**P**	**12 26 13.5**	**+0.8**
FLOC	**Florencia**	**65.00**	**284**	P	**P**	**12 26 13.4**	**+0.5**
ROSC	**El Rosal**	**65.42**	**288**	LR	LR	12 54 08.6	
	comp=Z,559nm,19.3s,baz=118,slow=36						
BRTR	**Keskin Array B**	**78.27**	**36**	P	**P**	**12 27 32.5**	**0.0**
	comp=Z,0.5nm,0.8s,baz=215,slow=4.8,SNR=1.5						
BRTR	**Keskin Array B**	**78.27**	**36**	P	**P**	**12 27 32.2**	**-0.3**
AKASG	**Malin Array Be**	**84.49**	**26**	P	**P**	**12 28 06.2**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=231,slow=4.3,SNR=2.7						
AKASG	**Malin Array Be**	**84.46**	**26**	P	**P**	**12 28 05.2**	**+0.2**
HFS	**Hagfors**	**87.77**	**14**	LR	LR	13 06 46.4	
	comp=Z,115nm,19.0s,baz=214,slow=35						
SCHQ	**Schefferville**	**91.30**	**333**	LR	LR	13 03 50.4	
	comp=Z,156nm,18.7s,baz=12,slow=32						
JMIC	**Jan Mayen**	**95.71**	**2**	LR	LR	13 07 39.1	
	comp=Z,77nm,19.6s,baz=56,slow=33						
ASAR	**Alice Springs**	**122.67**	**145**	PKP	**PKPdf**	**12 34 29.3**	**+0.3**
	comp=Z,0.4nm,0.9s,baz=225,slow=1.2,SNR=2.0						

*ISK **10** 12:17:08.3, 38°.91N×43°.55E, h5km, ML3.0/15*
*DDA **10** 12:17:09.0, 38°.88N×43°.57E, h14km±1km, ML3.0*
ISC 10 12:17:09.5±0.9, 38°.91N±0°.02×43°.53E±0°.03, h12km±7km, n25, σ1§37/37, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.08**	**25**	*i* P	**Pg**	**12 17 11.9**	**-0.4**
VMUR				*i* S	**Sg**	**12 17 14.7**	**+0.3**
VMUR				IAML		12 17 15.0	
	comp=E,22μm,0.3s						
VMUR				IAML		12 17 15.0	
	comp=N,15μm,0.3s						
VANB	**Van**	**0.34**	**199**	PG	**Pb**	**12 17 17.7**	**+0.2**
VANB				SG	**Sb**	**12 17 24.5**	**+1.6**
CLDR	**Caldiran**	**0.38**	**53**	PG	**Pb**	**12 17 16.6**	**-0.6**
CLDR				SG	**Sb**	**12 17 23.1**	**-1.2**
TVAN	**Van**	**0.40**	**194**	*i* P	**Pg**	**12 17 17.5**	**+0.1**
TVAN				*i* S	**Sb**	**12 17 25.3**	**+0.6**
TVAN				IAML		12 17 26.0	
	comp=E,2μm,0.3s						
TVAN				IAML		12 17 30.0	
	comp=N,2μm,0.6s						
ADCV	**BITLIS_Adilcev**	**0.63**	**261**	*i* P	**Pg**	**12 17 22.1**	**+0.2**
ADCV				*i* S	**Sb**	**12 17 32.4**	**+0.9**
ADCV				IAML		12 17 33.0	
	comp=N,958nm,0.5s						
ADCV				IAML		12 17 33.0	
	comp=E,979nm,0.4s						
DYDN	**Diyadin**	**0.64**	**11**	*i* P	**Pg**	**12 17 21.9**	**-0.1**
DYDN				*i* S	**Sb**	**12 17 32.1**	**+0.2**
GEVA	**Gevas**	**0.70**	**211**	*i* P	**Pg**	**12 17 22.0**	**-1.1**
GEVA				*i* S	**Sb**	**12 17 33.4**	**-0.1**
AKDM	**Akdamar-Van**	**0.72**	**216**	PG	**Pg**	**12 17 22.9**	**-0.6**
AKDM				SG	**Sg**	**12 17 34.8**	**+0.7**
TUTA	**Tutak**	**0.74**	**312**	*i* P	**Pg**	**12 17 23.3**	**-0.6**
AGRB	**Hanur-Agry**	**0.78**	**328**	PG	**Pg**	**12 17 24.7**	**+0.1**
AGRB				SG	**Sb**	**12 17 35.2**	**+1.0**
MLAZ	**Malazgirt-MUS**	**0.79**	**287**	PG	**Pb**	**12 17 26.1**	**+0.2**
TASB	**TASBURUN-IGDIR**	**1.20**	**27**	PN	**Pg**	**12 17 32.5**	**-0.1**
BLIS	**Bitlis-Merkez**	**1.21**	**246**	*i* P	**Pn**	**12 17 31.5**	**-0.9**
BLIS				*i* S	**Sb**	**12 17 42.2**	**-5.9**
BLIS				IAML		12 17 43.0	
	comp=N,117nm,0.7s						
GURO	**Guroymak-BITLI**	**1.22**	**253**	PN	**Pn**	**12 17 32.0**	**-0.6**
GNI	**Garni**	**1.55**	**37**	PN	**Pb**	**12 17 38.1**	**-0.2**
SRTM	**Siirt_Merkez**	**1.56**	**234**	*i* P	**Pb**	**12 17 38.0**	**-0.4**
SRTM				*i* S	**Sg**	**12 18 01.6**	**+1.9**
SRTM				IAML		12 18 12.0	
	comp=N,191nm,1.0s						
MUSM	**Mu-Merkez**	**1.58**	**264**	*i* P	**Pn**	**12 17 37.6**	**+0.1**
SIRT	**Sirnak**	**1.65**	**212**	PN	**Pb**	**12 17 39.7**	**-0.2**
CUKT	**Cukurca**	**1.67**	**178**	PN	**Pb**	**12 17 39.8**	**-0.4**
KOPR	**Koprukoy-ERZUR**	**1.68**	**310**	PN	**Pb**	**12 17 40.4**	**-0.1**
BNGL	**BINGOL**	**1.85**	**272**	*i* P	**Pg**	**12 17 44.7**	**-0.4**
BNGL				*i* S	**Sg**	**12 18 11.2**	**+2.2**
SENK	**Senkaya-Erzuru**	**1.88**	**332**	PN	**Pb**	**12 17 43.1**	**-0.8**
SVAN	**Silvan-Diyarba**	**1.98**	**248**	PN	**Pb**	**12 17 44.5**	**-1.0**
BNGB	**Bingl**	**2.22**	**273**	PN	**Pb**	**12 17 48.0**	**-1.6**
YEDI	**Yedisu-Bingol**	**2.38**	**284**	PN	**Pn**	**12 17 50.2**	**+1.8**

*THE **10** 12:18:09.9, 38°.18N×20°.40E, h9km, ML2.9/9, Error ellipse: s-maj=1.5km s-min=0.6km az=261.0*
*ATH **10** 12:18:10.5, 38°.16N×20°.44E, h6km±1km, ML2.5/3, Error ellipse: s-maj=2.1km s-min=0.9km az=18.0*
ISC 10 12:18:09.9±0.9, 38°.17N±0°.03×20°.43E±0°.04, h9km±4km, n24, σ0§52/40, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LXRA	**Lixouri, Kepha**	**0.03**	**11**	P	**Pg**	**12 18 11.7**	**+0.1**
LXRA				S	**Sg**	**12 18 13.0**	**+0.3**
LXR1	**Lixouri, Cepha**	**0.03**	**12**	P	**Pg**	**12 18 11.5**	**-0.1**
LXR1				S	**Sg**	**12 18 13.3**	**+0.6**
	41μm,0.4s						
ARGA	**Argostoli. Kep**	**0.04**	**77**	P	**Pg**	**12 18 11.5**	**-0.1**
ARGA				S	**Sg**	**12 18 12.6**	**-0.2**
CHV1	**Chavriata, Kef**	**0.04**	**292**	P	**Pg**	**12 18 11.6**	**0.0**
CHV1				S	**Sg**	**12 18 13.2**	**+0.4**
	51μm,0.2s						
KEF2	**Argostoli. Kep**	**0.04**	**94**	P	**Pg**	**12 18 11.5**	**-0.2**
KEF2				S	**Sg**	**12 18 12.6**	**-0.3**
ARG2	**Argostoli**	**0.05**	**78**	P	**Pg**	**12 18 11.6**	**-0.1**
ARG2				S	**Sg**	**12 18 13.0**	**+0.1**
	72μm,0.4s						
KEF3	**Kipouria, Keph**	**0.07**	**298**	P	**Pg**	**12 18 12.1**	**+0.2**
KEF3				S	**Sg**	**12 18 14.0**	**+0.5**
VLS	**Valsamata**	**0.13**	**86**	P	**Pg**	**12 18 12.8**	**0.0**
VLS	**Valsamata**	**0.13**	**86**	P	**Pg**	**12 18 12.8**	**0.0**
VLS				S	**Sg**	**12 18 15.1**	**+0.3**
VLMS	**Volimes, Zakyn**	**0.34**	**148**	P	**Pg**	**12 18 16.8**	**+0.1**
VLMS				S	**Sb**	**12 18 22.5**	**-1.4**
VLMS				AML	AML	12 18 23.0	
	comp=E,7962μm,0.2s						
VLMS				AML	AML	12 18 27.2	
	comp=N,9313μm,0.3s						
EVGI	**Lefkada island**	**0.49**	**21**	P	**Pg**	**12 18 19.7**	**+0.3**
EVGI				S	**Sg**	**12 18 26.3**	**+0.5**
EVGI	**Lefkada island**	**0.49**	**21**	P	**Pg**	**12 18 19.8**	**+0.5**
MGNA	**Meganis**	**0.56**	**30**	P	**Pg**	**12 18 21.2**	**+0.4**
MGNA				AML	AML	12 18 34.0	
	comp=E,1176μm,0.7s						
MGNA				AML	AML	12 18 34.2	
	comp=N,760μm,0.5s						
KRI1	**kERI**	**0.59**	**149**	P	**Pg**	**12 18 21.1**	**-0.2**
KRI1				S	**Sb**	**12 18 30.8**	**-0.1**
	comp=N,2μm,0.2s						
LKD2	**Lefkada island**	**0.65**	**16**	P	**Pg**	**12 18 20.9**	**-1.5**
LKD2				S	**Sb**	**12 18 31.8**	**-0.8**
	comp=N,315nm,0.6s						
LKD2	**Lefkada island**	**0.65**	**16**	P	**Pb**	**12 18 23.5**	**0.0**
LKD2				AML	AML	12 18 43.0	
	comp=E,667μm,0.5s						
LKD2				AML	AML	12 18 47.8	
	comp=N,551μm,0.7s						
RLS	**Riolos of Patr**	**0.82**	**97**	P	**Pg**	**12 18 25.7**	**-0.1**
PVO	**Paravola**	**0.97**	**62**	P	**Pb**	**12 18 28.9**	**-0.1**
PVO	**Paravola**	**0.97**	**62**	P	**Pb**	**12 18 29.1**	**+0.1**
DRO	**Drossia**	**1.03**	**102**	P	**Pg**	**12 18 29.7**	**-0.1**
DRO				S	**Sn**	**12 18 45.8**	**+0.5**
	comp=N,618nm,0.3s						
DRO	**Drossia**	**1.03**	**102**	P	**Pg**	**12 18 29.7**	**-0.1**
AMT	**Artemida-Makis**	**1.20**	**122**	P	**Pg**	**12 18 33.6**	**+0.7**
AMT				S	**Sn**	**12 18 50.1**	**+0.8**
	comp=N,355nm,0.5s						
ANX	**Ano Chora**	**1.25**	**70**	P	**Pn**	**12 18 33.2**	**-0.5**
ANX				S	**Sn**	**12 18 51.8**	**+1.1**
	comp=N,325nm,0.5s						
KLV	**Kalavryta, Ach**	**1.36**	**95**	P	**Pn**	**12 18 34.9**	**-0.3**
KLV				S	**Sb**	**12 18 53.1**	**-0.2**
	comp=N,125nm,0.8s						

IDC 10 12:28:18.4±2.7, 7°.73S×120°.10E, h234km±24km, mb3.0/3, mb1 3.0/6, mb1mx2.9/41, mbtmp3.5/6, Error ellipse: s-maj=110.9km s-min=16.3km az=60.0, Flores Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.72**	**353**	P	Pn	12 29 07.0	0.0
	0.9nm,0.3s,baz=166,slow=8.5,SNR=2.8						
FITZ	**Fitzroy Crossi**	**11.63**	**153**	P	Pn	12 30 57.5	-0.3
	0.2nm,0.3s,baz=339,slow=14,SNR=1.8						
FITZ				S	S	12 33 01.7	-5.2
	0.2nm,0.3s,baz=40,slow=15,SNR=1.6						
WRA	**Warramunga Arr**	**18.37**	**133**	P	P	12 32 16.1	-0.1
	0.0nm,0.3s,baz=310,slow=10,SNR=1.5						
WRA				S	S	12 35 38.4	+4.6
	0.1nm,0.3s,baz=311,slow=20,SNR=2.2						
ASAR	**Alice Springs**	**20.64**	**142**	P	P	12 32 40.7	+0.2
	0.4nm,0.4s,baz=317,slow=9.3,SNR=3.0						
MKAR	**Makanchi Array**	**63.85**	**332**	P	P	12 38 26.2	+0.2
	0.4nm,0.5s,baz=150,slow=7.3,SNR=5.3						
ZALV	**Zalesovo Beam**	**68.26**	**338**	P	P	12 38 53.7	-0.2
	0.6nm,0.4s,baz=134,slow=6.1,SNR=3.9						

*IDC **10** 12:36:37.3±2.5, 39°.61N×143°.95E, h0km, mb3.7/4, mb1 3.7/6, mb1mx3.4/45, mbtmp3.7/6, ML3.0/2, MS3.4/2, Ms1 3.5/2, ms1mx2.9/45, Error ellipse: s-maj=58.1km s-min=24.8km az=84.0*
*JMA **10** 12:36:40.5±0.1, 39°.69N×143°.65E, h30km, M3.9*
ISC 10 12:36:39.2±2.1, 39°.71N±0°.04×143°.52E±0°.07, h2km±12km, n30, σ1§48/36, mb3.6/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.29**	**281**	P	**Pg**	**12 37 04.4**	**+0.5**
JTH				*e*S	**Sg**	**12 37 22.2**	**+1.5**
MIYJ	**Miyakonagasawa**	**1.32**	**265**	P	**Pg**	**12 37 04.9**	**+0.5**
MIYJ				*e*S	**Sg**	**12 37 22.8**	**+1.4**
JKEN	**Kujiedanarisaw**	**1.47**	**290**	P	**Pg**	**12 37 07.0**	**-0.4**
JKEN				*e*S	**Sg**	**12 37 26.8**	**+0.3**
JANG	**Nango**	**1.67**	**294**	P	**Pb**	**12 37 09.8**	**-0.9**
JANG				*e*S	**Sg**	**12 37 32.1**	**-0.8**
JOM	**Ohasama**	**1.73**	**263**	P	**Pb**	**12 37 11.3**	**-0.4**
JOM				*e*S	**Sb**	**12 37 33.5**	**-0.4**
JMK	**Ichinoseki**	**1.93**	**248**	P	**Pb**	**12 37 13.5**	**-1.6**
JOT	**Ohata**	**2.51**	**312**	P	**Pb**	**12 37 22.3**	**-2.7**
JOT				*e*S	**Sn**	**12 37 52.5**	**+0.2**
JYK	**Kaneyama**	**2.57**	**253**	P	**Pb**	**12 37 23.2**	**-2.8**
JYK				*e*S	**Sb**	**12 37 55.4**	**-2.7**
JNBK	**Urakawa-nobuka**	**2.63**	**348**	P	**Pb**	**12 37 25.2**	**-1.8**
JNBK				*e*S	**Sn**	**12 37 55.0**	**-0.2**
JKB	**Kayabe**	**2.88**	**320**	*e*S	**Sn**	**12 38 01.0**	**-0.2**
JCH	**Churui**	**2.90**	**358**	P	**Pn**	**12 37 28.0**	**+1.6**
JCH				*e*S	**Sn**	**12 38 01.3**	**-0.6**
JFT	**Otama**	**3.31**	**230**	P	**Pn**	**12 37 32.7**	**+0.6**
JFT				*e*S	**Sn**	**12 38 12.0**	**0.0**
JAK	**Akkeshi**	**3.40**	**15**	P	**Pn**	**12 37 34.6**	**+1.4**
JAK				*e*S	**Sn**	**12 38 13.7**	**-0.4**
JEW	**Eniwo**	**3.49**	**334**	P	**Pn**	**12 37 35.0**	**+0.5**
JEW				*e*S	**Sn**	**12 38 16.0**	**-0.4**
JFR	**Furan**	**3.52**	**349**	P	**Pn**	**12 37 36.7**	**+1.8**
ASAJ	**Asahikawa**	**4.46**	**351**	Pn	**Pn**	**12 37 50.3**	**+2.6**
	0.9nm,0.3s,baz=185,slow=12,SNR=18						
ASAJ				Sn	**Sn**	**12 38 42.0**	**+1.9**
	1.3nm,0.3s,baz=189,slow=32,SNR=2.7						
MJAR	**Matsushiro Arr**	**5.24**	**235**	Pn	**Pn**	**12 38 00.5**	**+1.9**
	0.2nm,0.3s,baz=55,slow=13,SNR=14						
MAT	**Matsushiro**	**5.25**	**235**	P	**Pn**	**12 38 00.4**	**+1.8**
MAT				*e*S	**Sn**	**12 39 01.3**	**+1.6**
SONM	**Songino Array**	**27.79**	**299**	P	**P**	**12 42 30.9**	**+1.3**
	0.8nm,0.5s,baz=101,slow=9.2,SNR=4.7						
H11N2	**WAKE ISLAND Hy**	**28.29**	**128**	T	T	13 12 11.3	
	baz=320						
H11N1	**WAKE ISLAND Hy**	**28.30**	**128**	T	T	13 12 13.7	
	baz=320						
H11N3	**WAKE ISLAND Hy**	**28.31**	**128**	T	T	13 12 13.9	
	baz=320						
H11S1	**WAKE ISLAND Hy**	**29.11**	**130**	T	T	13 13 22.3	
	baz=327,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.12**	**130**	T	T	13 13 20.1	
	baz=327						
H11S2	**WAKE ISLAND Hy**	**29.13**	**130**	T	T	13 13 21.9	
	baz=327,slow=74						
ZALV	**Zalesovo Beam**	**41.39**	**310**	P	**P**	**12 44 27.2**	**+0.7**
	0.8nm,0.5s,baz=99,slow=6.7,SNR=4.0						
CMAR	**Chiang Mai Arr**	**43.79**	**254**	LR	LR	13 02 53.0	
	comp=Z,30nm,19.7s,baz=150,slow=36						
MKAR	**Makanchi Array**	**44.15**	**300**	P	**P**	**12 44 49.9**	**+0.8**
	0.7nm,0.8s,baz=87,slow=8.2,SNR=7.3						
RES	**Resolute Bay**	**59.59**	**15**	LR	LR	13 12 04.0	
	comp=Z,50nm,19.1s,baz=262,slow=36						
WRA	**Warramunga Arr**	**59.96**	**190**	P	**P**	**12 46 45.2**	**-1.8**
	0.2nm,0.5s,baz=9.8,slow=7.0,SNR=3.6						

IDC 10 12:48:07.5±13.0, 14°.58S×164°.98E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.5/28, mbtmp3.6/4, ML3.9/1, Error ellipse: s-maj=232.2km s-min=36.2km az=51.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.58**	**170**	Pn	Pn	12 49 59.2	-0.2
	1.9nm,0.3s,baz=29,slow=19,SNR=15						
DZM				Sn	Sn	12 51 27.7	+1.5
	baz=223,slow=17,SNR=1.8						
STKA	**Stephens Creek**	**27.43**	**227**	P	P	12 53 55.6	+0.4
	0.9nm,0.8s,baz=53,slow=10,SNR=3.0						
WRA	**Warramunga Arr**	**29.71**	**255**	P	P	12 54 15.6	-0.1
	0.3nm,0.5s,baz=87,slow=9.1,SNR=1.5						
ASAR	**Alice Springs**	**30.66**	**248**	P	P	12 54 23.9	-0.2
	0.2nm,0.5s,baz=76,slow=9.6,SNR=8.3						

*TAP **10** 12:50:56.8, 24°.45N×121°.95E, h12km, ML3.4, B*
*JMA **10** 12:50:57.0±0.1, 24°.42N×121°.94E, h22km, M2.7*
ISC 10 12:50:56.5±0.9, 24°.45N±0°.02×121°.98E±0°.02, h13km±6km, n98, σ0§64/150, 23C-7D, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.17**	**53**	⇓P	**Pb**	**12 51 01.4**	**-0.1**
	baz=52						
EOS1				S	**Sb**	**12 51 05.0**	**+0.1**
TWC	**Suao**	**0.20**	**325**	⇑*i*P	**Pg**	**12 51 01.1**	**+0.1**
	baz=339						
TWC				S	**Sg**	**12 51 03.7**	**-0.3**
	baz=339						
ENA	**Nanau**	**0.21**	**265**	P	**Pg**	**12 51 01.3**	**+0.1**
	baz=269						
ENA				S	**Sg**	**12 51 04.0**	**-0.3**
	baz=269						
ILA	**Ilan**	**0.38**	**327**	⇑*i*P	**Pb**	**12 51 04.8**	**-0.3**
	baz=319						
TWE	**Neicheng**	**0.39**	**314**	⇑*i*P	**Pg**	**12 51 04.6**	**+0.3**
	baz=321						
TWE				S	**Sg**	**12 51 09.7**	**+0.1**
	baz=321						
ENTT	**Nioudou**	**0.42**	**297**	⇑*i*P	**Pg**	**12 51 05.2**	**+0.3**
	baz=298						
ENTT				S	**Sg**	**12 51 10.4**	**-0.1**
	baz=298						
NTC	**Toucheng**	**0.43**	**342**	⇑*e*P	**Pg**	**12 51 05.4**	**+0.4**
	baz=343						
NTC				*e*S	**Sb**	**12 51 11.8**	**-0.5**
	baz=343						
SLBB	**Yuanshan**	**0.44**	**315**	⇑*i*P	**Pb**	**12 51 05.8**	**-0.3**
	baz=319						
SLBB				*e*S	**Sg**	**12 51 11.3**	**+0.3**
	baz=319						
NACB	**Ninganchiao**	**0.44**	**232**	⇓P	**Pg**	**12 51 05.3**	**+0.1**
	baz=230						
NACB				S	**Sg**	**12 51 11.5**	**+0.4**
	baz=230						
NDT	**Datong Townshi**	**0.45**	**290**	⇑*i*P	**Pg**	**12 51 05.8**	**-0.4**
	baz=291						
NDT				S	**Sg**	**12 51 11.3**	**-0.1**
	baz=291						
ETLH	**Xiulin Townshi**	**0.51**	**242**	P	**Pg**	**12 51 06.6**	**+0.1**
	baz=241						
ETLH				*e*S	**Sg**	**12 51 13.6**	**+0.2**
	baz=241						
NNSB	**Datong**	**0.54**	**268**	⇑P	**Pg**	**12 51 07.3**	**+0.2**
	baz=268						
NNSB				S	**Sg**	**12 51 13.7**	**-0.7**
	baz=268						
NNSH	**Datong**	**0.54**	**268**	P	**Pg**	**12 51 07.3**	**+0.2**
	baz=268						
NNSH				*e*S	**Sg**	**12 51 14.0**	**-0.4**
	baz=268						
TIPB	**Shuangxi**	**0.54**	**345**	⇑*i*P	**Pg**	**12 51 07.5**	**+0.4**
	baz=354						
TIPB				*e*S	**Sg**	**12 51 13.7**	**-0.6**
	baz=354						
NWLT	**Wulai**	**0.54**	**308**	⇑*e*P	**Pb**	**12 51 07.5**	**-0.4**
	baz=300						
NWLT				*e*S	**Sg**	**12 51 14.5**	**+0.1**
	baz=300						
NNS	**Nan Shan**	**0.55**	**270**	⇑*i*P	**Pg**	**12 51 07.4**	**+0.1**
	baz=269						
NNS				S	**Sg**	**12 51 14.2**	**-0.4**
	baz=269						
TWB1	**Santiao Chiao**	**0.56**	**1**	*e*P	**Pb**	**12 51 08.1**	**-0.1**
	baz=353						
TWB1				*e*S	**Sg**	**12 51 15.1**	**+0.1**
	baz=353						
HWA	**Hwalien**	**0.58**	**216**	*e*P	**Pb**	**12 51 09.0**	**+0.6**
	baz=221						
YHNB	**Yeheng**	**0.59**	**292**	⇑P	**Pb**	**12 51 08.5**	**-0.2**
	baz=292						
YHNB				*e*S	**Sg**	**12 51 15.2**	**-0.7**
	baz=292						
NSK	**Sanguang**	**0.61**	**292**	⇑*i*P	**Pb**	**12 51 08.8**	**-0.3**
	baz=298						
NSK				S	**Sg**	**12 51 15.8**	**-0.6**
	baz=298						
ENLB	**Shoufeng**	**0.64**	**212**	*e*P	**Pb**	**12 51 09.7**	**+0.2**
	baz=220						
TWA	**Mucha**	**0.64**	**326**	P	**Pb**	**12 51 09.7**	**+0.1**
	baz=327						
TWA				*e*S	**Sb**	**12 51 18.5**	**0.0**
	baz=327						
NWF	**Wu-fen Shan**	**0.65**	**344**	*e*P	**Pb**	**12 51 09.8**	**+0.1**
	baz=334						
NWF				*e*S	**Sb**	**12 51 18.5**	**-0.2**
	baz=334						
WFSB	**Wu-fen Shan**	**0.65**	**344**	⇑P	**Pb**	**12 51 09.8**	**+0.2**
	baz=333						
WFSB				S	**Sg**	**12 51 17.7**	**+0.1**
	baz=333						
NHDH	**Xindian Distri**	**0.66**	**322**	P	**Pb**	**12 51 10.0**	**+0.2**
	baz=311						
NHDH				S	**Sb**	**12 51 18.6**	**-0.4**
	baz=311						
TATO	**Taipei**	**0.69**	**320**	⇑P	**Pb**	**12 51 10.7**	**+0.3**
	baz=310						
TATO				*e*S	**Sb**	**12 51 18.7**	**-0.3**
	baz=310						
WHF	**Hehuan Shan**	**0.71**	**245**	⇓*i*P	**Pb**	**12 51 10.5**	**0.0**
	baz=244						
WHF				*e*S	**Sb**	**12 51 19.6**	**-0.3**
	baz=244						
TAP	**Taipei**	**0.73**	**324**	*e*P	**Pb**	**12 51 11.2**	**+0.2**
	baz=325						
TWT	**Tachien**	**0.76**	**255**	*e*P	**Pb**	**12 51 11.9**	**+0.3**
	baz=255						
TWT				*e*S	**Sg**	**12 51 21.0**	**-0.1**
	baz=255						
TDCB	**Techi**	**0.77**	**256**	P	**Pb**	**12 51 11.8**	**0.0**
	baz=255						
TDCB				S	**Sg**	**12 51 20.9**	**-0.7**
	baz=255						
WLTB	**Daxi**	**0.77**	**302**	⇑P	**Pn**	**12 51 12.9**	**-0.2**
	baz=302						
WLTB				*e*S	**Sb**	**12 51 22.8**	**+0.6**

	baz=302						
YM01	YM01	0.79	332	P	Pn	12 51 12.8	-0.5
	baz=332						
YM01				eS	Sn	12 51 23.8	-1.3
	baz=332						
ESL	Shilin	0.80	218	P	Pg	12 51 11.7	-0.3
	baz=222						
ESL				eS	Sb	12 51 23.1	+0.1
	baz=222						
YM10	YM10	0.80	332	P	Pn	12 51 13.0	-0.6
	baz=332						
YM11	YM11	0.81	333	⇑P	Pn	12 51 13.2	-0.5
	baz=333						
YM11				eS	Sb	12 51 23.6	+0.4
	baz=333						
YM08	YM08	0.82	335	⇑P	Pb	12 51 13.0	-0.4
	baz=335						
CHGB	Renai	0.83	243	⇓P	Pb	12 51 12.7	-0.2
	baz=253						
CHGB				eS	Sb	12 51 23.4	-0.5
	baz=253						
TWS1	Kuangyinshan	0.83	322	⇑P	Pn	12 51 13.9	+0.1
	baz=323						
YM03	YM03	0.83	332	⇓P	Pn	12 51 13.6	-0.4
	baz=332						
YM03				eS	Sn	12 51 25.3	-0.9
	baz=332						
ANP	Anpu	0.85	331	eP	Pn	12 51 13.7	-0.5
	baz=331						
OWD	Renai	0.88	236	⇓P	Pg	12 51 13.4	-0.1
	baz=230						
NCU	National Centr	0.89	306	P	Pn	12 51 15.1	+0.5
	baz=306						
NCU				eS	Sn	12 51 28.3	+0.9
	baz=306						
NCUH	Zhongli	0.89	306	eP	Pn	12 51 15.3	+0.6
	baz=306						
NCUH				eS	Sn	12 51 27.5	+0.1
	baz=306						
LIOB	Emei	0.90	283	⇑P	Pn	12 51 14.8	-0.1
	baz=283						
LIOB				eS	Sg	12 51 25.8	+0.2
	baz=283						
NSTT	Nanjuang	0.91	282	⇑P	Pn	12 51 14.8	-0.2
	baz=282						
NSTT				eS	Sb	12 51 25.6	-0.5
	baz=282						
EGFH	Guangfu	0.92	213	eP	Pn	12 51 14.8	-0.4
	baz=225						
YOJ	Yonaguni jima	0.94	89	P	Pb	12 51 15.0	+0.3
YOJ				eS	Sg	12 51 28.0	+1.0
WHP	Taichung City	0.95	260	eP	Pn	12 51 15.7	0.0
	baz=260						
WHP				eS	Sg	12 51 27.6	+0.2
	baz=260						
SBCB	Hsinchu	0.97	291	eP	Pn	12 51 16.7	+0.9
	baz=291						
HSN	Hsinchu	0.98	291	eP	Pn	12 51 16.3	+0.3
	baz=287						
HSN				S	Sn	12 51 29.5	-0.3
	baz=287						
VWDT	VWDT	1.03	228	P	Pn	12 51 16.5	-0.1
	baz=232						
VWDT				eS	Sn	12 51 30.0	-0.9
	baz=232						
DPDB	Guoxing	1.04	247	P	Pn	12 51 17.0	+0.2
	baz=246						
DPDB				eS	Sb	12 51 29.6	-0.4
	baz=246						
HGSD	Ruisui	1.07	208	eP	Pg	12 51 18.1	+0.9
	baz=208						
NMLH	Miaoli	1.08	275	eP	Pg	12 51 18.5	+1.1
	baz=274						
NSY	Sanyi	1.11	269	eP	Pg	12 51 19.0	+1.1
	baz=268						
NSY				eS	Sn	12 51 33.1	+0.2
	baz=268						
EHY	Hungye	1.11	213	eP	Pg	12 51 17.8	-0.1
	baz=224						
EHY				eS	Sn	12 51 33.2	+0.3
	baz=224						
SSLB	Suanglung	1.14	235	⇓P	Pg	12 51 18.3	-0.1
	baz=243						
SSLB				eS	Sb	12 51 32.2	-0.6
	baz=243						
TYC	Yuchr	1.16	242	⇑iP	Pg	12 51 18.9	+0.1
	baz=242						
TYC				S	Sb	12 51 33.5	-0.6
	baz=242						
PTSB	Yuanli	1.16	270	eP	Pb	12 51 18.1	-0.3
	baz=270						
YULB	Yu-li	1.22	211	eP	Pb	12 51 19.3	-0.1
	baz=222						
WDJ	Dajia District	1.22	266	eP	Pg	12 51 21.2	+1.2
	baz=265						
TCU	Taichung	1.22	256	eP	Pg	12 51 20.8	+0.8
	baz=256						
TWF1	Yuli	1.25	210	⇑P	Pb	12 51 20.2	+0.2
	baz=227						
TWF1				eS	Sg	12 51 37.5	+0.6
	baz=227						
WHYT	Xinyi Township	1.27	234	eP	Pg	12 51 20.5	-0.4
	baz=234						
WJS	Zhushan	1.30	242	eP	Pg	12 51 21.4	0.0
	baz=234						
WNT	Mingjian	1.31	245	eP	Pg	12 51 22.2	+0.5
	baz=259						
WCHH	Zhanghua	1.34	255	eP	Pg	12 51 23.1	+0.7
	baz=254						
FULB	Fuli	1.39	207	eP	Pb	12 51 22.3	-0.1
	baz=225						
ALS	Alishan	1.42	229	eP	Pg	12 51 23.8	0.0
	baz=216						
CHKT	Chengkung	1.45	203	eP	Pn	12 51 20.0	-2.4
	baz=185						
CHN5	Tsauling	1.46	235	P	Pg	12 51 25.2	+0.7
	baz=237						
CHN5				eS	Sg	12 51 45.5	+2.1
	baz=237						
WGK	Gukeng	1.50	240	eP	Pb	12 51 24.3	+0.1
	baz=241						
WDLH	Douliu	1.52	240	eP	Pg	12 51 26.3	+0.7
	baz=241						
ELDTW	Lidau	1.53	215	eP	Pb	12 51 24.4	-0.3
	baz=203						
RLNB	Erlin	1.58	250	eP	Pb	12 51 25.9	+0.4
	baz=263						
IRIF	Iriomote-Funau	1.60	94	P	Pn	12 51 24.6	+0.1
IRIF				eS	Sn	12 51 44.0	-1.1
CHN4	Tsaushan	1.67	230	eP	Pg	12 51 28.6	+0.1
	baz=231						
TPUB	Ta-pu	1.68	228	eP	Pg	12 51 28.3	-0.4
	baz=229						
STYT	Tauyuan	1.70	221	eP	Pb	12 51 28.2	+0.6
	baz=222						
CHY	Chiayi	1.71	237	eP	Pg	12 51 29.2	0.0
	baz=224						
WTP	Ta-pu	1.73	227	eP	Pg	12 51 29.3	-0.3
	baz=228						
TWK	Hsinying	1.80	230	eP	Pg	12 51 30.4	-0.7
	baz=231						
CHN1	Nanshi	1.83	227	eP	Pg	12 51 31.1	-0.4
	baz=229						
SGST	Jiashian	1.86	224	eP	Pb	12 51 30.4	0.0
	baz=225						
JKRS	Kuro-shima	1.87	96	P	Pn	12 51 28.3	+0.2
JKRS				eS	Sn	12 51 51.4	-0.2
SLGT	Liugui	1.89	220	eP	Pb	12 51 31.5	+0.6
	baz=222						
JIJ	Ishigaki jima	1.98	92	P	Pn	12 51 29.7	0.0
JIJ				S	Sn	12 51 52.9	-1.4
ECL	Taimali	2.07	207	eP	Pn	12 51 31.4	+0.6
	baz=197						
SSD	Sandimen	2.09	216	eP	Pg	12 51 35.5	-1.1
	baz=229						
JISG	Ishigakijimahi	2.13	86	P	Pn	12 51 32.6	+0.8
JISG				S	Sn	12 51 58.6	+0.5
MASBT	Mashibuluo	2.20	214	eP	Pb	12 51 35.8	-0.4
	baz=219						
MASBT				eS	Sb	12 52 02.9	-0.5
	baz=219						
EAST	Anshuo	2.30	207	eP	Pn	12 51 35.7	+1.5
	baz=198						
VWUC	VWUC	2.36	284	eP	Pn	12 51 35.8	+0.8
	baz=282						
PHUB	P'eng-hu	2.39	248	eP	Pn	12 51 36.3	+1.0
	baz=249						
SCZT	Fangliau	2.41	211	eP	Pb	12 51 38.8	-0.9
	baz=214						
MATB	Ma-tsu	2.50	313	eP	Pb	12 51 39.5	-1.8
	baz=311						
KNM	Kinmen	3.23	270	eP	Pn	12 51 49.9	+3.0
	baz=268						
KNMB	Chin-men Tao	3.27	271	eP	Pn	12 51 48.3	+0.9
	baz=270						

*IDC **10** 12:57:44.2±0.5, 81°45N×3°95W, h0km, mb3.8/22, mb1 4.0/24, mb1mx3.8/55, mbtmp3.9/24, ML3.9/2, MS3.4/3, Ms1 3.4/3, ms1mx2.8/46, Error ellipse: s-maj=15.6km s-min=11.7km az=36.0*

*NEIC **10** 12:57:44.8±1.6, 81°46N±0°09×4°0W±0°5, h10km±1km, mb4.4/24, Error ellipse: s-maj=16.5km s-min=10.7km az=18.0*

*BER **10** 12:57:44.5±2.9, 81°68N×3°38W, h15km±38km, ML2.6, ML3.9(NAO), Confirmed Earthquake*

*IEPN **10** 12:57:46.0, 81°80N×1°23W, h15km*

ISC 10 12:57:45.0±0.4, 81°37N±0°06×4°29W±0°04, h11km, n109, σ2°35/126, mb4.0/32, 1C, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	Nord	1.86	283	iP	Pn	12 58 16.8	+0.1
NOR	Nord	1.86	283	iP	Pn	12 58 16.8	+0.1
KBS	Kingsbay	3.70	123	Pn	Pn	12 58 39.9	-2.1
KBS				Sn	Sn	12 59 19.5	-6.0
KBS	Kingsbay	3.70	123	eP	Pn	12 58 40.1	-1.9
KBS				eS	Sn	12 59 20.7	-4.7
KBS				IAML		12 59 26.2	
	comp=Z,26nm,0.5s						
KBS	Kingsbay	3.70	123	eP	Pn	12 58 39.6	-2.4
KBS				eS	Sn	12 59 19.4	-6.0
KBS	Kingsbay	3.70	123		Pn	12 58 40.0	-1.9
KBS				Sn	Sn	12 59 25.0	-0.5
BRBA	Barentsburg A	4.67	126	Pn	Pn	12 58 54.3	-1.0
BRBA	Barentsburg A	4.67	126	Pn	Pn	12 58 54.3	-1.0
SPA0	Spitsbergen Ar	4.84	121	Pn	Pn	12 58 55.8	-2.0
	baz=344,slow=8.6						
SPA0				Sn	Sn	12 59 49.1	-4.6
SPA0	Spitsbergen Ar	4.84	121	Pn	Pn	12 58 55.8	-2.0
	baz=344,slow=8.6						
SPA0				Sn	Sn	12 59 49.1	-4.6
SPA0				IAML		12 59 60.0	
	comp=Z,14nm,0.6s						
SPA0	Spitsbergen Ar	4.84	121	⇑iP	Pn	12 58 55.8	-2.0
SPA0				eS	Sn	12 59 48.8	-4.9
SPA0	Spitsbergen Ar	4.84	121		Pn	12 58 55.8	-2.0
SPITS	Spitsbergen Ar	4.84	121	Pn	Pn	12 58 55.8	-2.0
	baz=310,slow=4.3,SNR=243						
SPITS				Sn	Sn	12 59 45.5	-8.3
	baz=305,slow=16,SNR=1.6						
SPITS				LR	LR	13 00 40.1	
	comp=Z,353nm,20.7s,baz=300,slow=36						
DAG	Danmarks Havn	5.34	218	iP	Pn	12 59 05.5	+1.0
DAG	Danmarks Havn	5.34	218	iP	Pn	12 59 05.0	+0.5
DAG				iP	Pn	12 59 05.5	+1.0
DAG				iS	Sn	13 00 01.1	-4.9
DAG				IAML		13 00 10.1	
	comp=Z,11nm,0.4s						
HSPB	Hornsund (broa	5.71	130	Pn	Pn	12 59 08.7	-0.9
HSPB	Hornsund (broa	5.71	130	eP	Pn	12 59 08.6	-1.0
HSPB	Hornsund (broa	5.71	130	eP	Pn	12 59 08.6	-1.0
HSPB				eS	Sn	13 00 11.6	-3.5
HSPB				IAML		13 00 15.5	
	comp=Z,5.2nm,0.7s						
HSPB	Hornsund (broa	5.71	130	eP	Pn	12 59 08.2	-1.4
HSPB				eS	Sn	13 00 11.5	-3.5
HOPEN	Hopen	7.33	116	Pn	Pn	12 59 29.4	-2.4
HOPEN	Hopen	7.33	116	eP	Pn	12 59 28.4	-3.3
HOPEN				IAML		13 00 40.7	
	comp=Z,24nm,0.3s						
HOPEN	Hopen	7.33	116	eP	Pn	12 59 28.7	-3.1
DBG	Daneborg	7.80	213	iP	Pn	12 59 38.5	+0.3
DBG				iS	Sn	13 01 02.4	-4.0
DBG				IAML		13 01 13.7	
	comp=Z,6.9nm,0.3s						
ZFI2	Zemlya Franca-	7.85	68	eP	Pn	12 59 34.4	-4.4
ZFI2				eS	Sn	13 00 52.1	-15
	comp=Z,31nm,0.7s						
SUMG	Summit	11.41	239	eP	Pn	13 00 26.8	-1.1
SUMG				IAML		13 02 34.5	
	comp=Z,8.5nm,0.3s						
SUMG	Summit	11.41	239		Pn	13 00 26.7	-1.2
SUMG					Sn	13 02 27.1	-8.2
TULEG	Thule	12.52	283	iP	Pn	13 00 35.0	-7.7
TULEG				iS	Sn	13 02 49.7	-12
TULEG	Thule	12.52	283		Pn	13 00 38.8	-3.9
KEV	Kevo	13.68	130	Pn	Pn	13 00 57.0	-1.5
ARA0	ARCESS Array S	13.72	133	Pn	Pn	13 00 58.6	-0.4
	baz=343,slow=12						
ARA0	ARCESS Array S	13.72	133	Pn	Pn	13 00 58.6	-0.4
	baz=343,slow=12						
ARCES	ARCESS Array B	13.72	133	Pn	Pn	13 00 58.5	-0.6
	comp=Z,0.5nm,0.3s,baz=354,slow=12,SNR=8.3						
ARCES	ARCESS Array B	13.72	133	Pn	Pn	13 00 58.3	-0.8
ARE0	ARCESS Array S	13.72	133	Pn	Pn	13 00 57.8	-1.3
ILULI	Ilulissat	16.20	249	Pn	Pn	13 01 30.7	-1.5
LVZ	Lovozero	16.37	122	Pn	Pn	13 01 33.4	-0.9
LVZ				IAmb	IAmb	13 01 37.8	
	comp=Z,36nm,1.3s						
RES	Resolute Bay	17.72	299	P	Pn	13 01 45.2	-6.0
	comp=Z,0.1nm,0.3s,baz=27,slow=11,SNR=19						
RES	Resolute Bay	17.72	299		Pn	13 01 46.1	-5.1
SFJD	Kangerlussuaq	18.20	246	LR	LR	13 09 37.2	
	comp=Z,112nm,18.2s,baz=47,slow=39						
LSH	Leshukonskoye	20.71	112	eP	P	13 02 25.1	+0.3
	comp=Z,22nm,1.1s						
NB2	NORSAR Subarra	20.87	159	P	Pn	13 02 28.7	-0.4
	comp=Z,3.0nm,1.0s,baz=354,slow=11						
NOA	NORSAR Array B	20.87	159	P	Pn	13 02 28.2	-0.9
	comp=Z,3.3nm,0.8s,baz=348,slow=9.9,SNR=5.1						
NRA0	NORESS Array S	21.19	158	P	P	13 02 31.6	+1.6
	baz=341,slow=11						
FIA1	FINESS Array S	21.63	139	P	P	13 02 35.1	+0.3
FIA1				IAmb	IAmb	13 02 37.4	
	comp=Z,22nm,1.4s						
FIA0	FINESS Array S	21.63	139	P	P	13 02 35.4	+0.7
	baz=354,slow=16						
FIA0	FINESS Array S	21.63	139	P	P	13 02 35.4	+0.7
	baz=354,slow=16						
FINES	FINESS Array B	21.63	139	P	P	13 02 35.4	+0.7
	comp=Z,4.4nm,0.7s,baz=358,slow=13,SNR=8.7						
FINES	FINESS Array B	21.63	139	P	P	13 02 33.8	-1.0
HFS	Hagfors	21.92	156	P	P	13 02 39.4	+1.6
	baz=356,slow=12						
HFS	Hagfors	21.92	156	P	P	13 02 39.5	+1.7
	comp=Z,4.3nm,0.8s,baz=16,slow=11,SNR=6.3						
HFS	Hagfors	21.92	156	P	P	13 02 39.4	+1.6
	baz=356,slow=12						
KLMR	Klimovskoe	23.75	123	eP	P	13 02 57.0	+0.3
	comp=Z,180nm,1.9s						
KLMR	Klimovskoe	23.75	123	eP	P	13 02 57.0	+0.3
KLMR				eP	P	13 02 57.0	+0.3
KLMR				eP	P	13 02 57.0	+0.3
KLMR				AMP		13 03 09.2	
	comp=Z,180nm,1.9s						
PRGR	Permogore	23.80	115	eP	P	13 03 01.6	+4.4
	comp=Z,9.2nm,0.8s						
FRB	Frobisher Bay	23.86	262	P	P	13 02 59.4	+1.6
	comp=Z,6.9nm,0.9s,baz=20,slow=9.7,SNR=11						
FRB				LR	LR	13 12 57.2	
	comp=Z,115nm,18.1s,baz=318,slow=38						
TIXI	Tiksi	25.19	33	P	P	13 03 10.2	+0.3
	comp=Z,2.3nm,0.8s,baz=355,slow=5.8,SNR=6.6						
TIXI	Tiksi	25.19	33	P	P	13 03 08.6	-1.3
EKA	Eskdalemuir Ar	26.16	179	P	P	13 03 20.7	+1.9
	comp=Z,0.9nm,0.6s,baz=5.3,slow=11,SNR=3.2						
ARU	Arti	30.66	104	P	P	13 03 59.9	+1.0
	comp=Z,0.6nm,0.3s,baz=331,slow=9.1,SNR=4.2						
ARU	Arti	30.66	104	P	P	13 03 58.6	-0.3
ARU				IAmb	IAmb	13 04 07.8	
	comp=Z,5.5nm,1.1s						
YKA	Yellowknife Ar	31.66	304	P	P	13 04 09.0	+1.4
	comp=Z,0.3nm,0.5s,baz=16,slow=9.2,SNR=5.2						
YKA				PcP	PcP	13 06 59.6	+0.6
	comp=Z,0.5nm,0.7s,baz=5.6,slow=2.7,SNR=10						
SCHQ	Schefferville	32.16	255	P	P	13 04 12.7	+0.5
AKASG	Malin Array Be	32.54	139	P	P	13 04 16.1	+0.6
	comp=Z,0.5nm,0.4s,baz=346,slow=9.3,SNR=4.2						
AKBB	Malin Array Si	32.54	139	P	P	13 04 15.8	+0.3
AKBB				IAmb	IAmb	13 04 34.3	
	comp=Z,5.8nm,1.2s						
ILAR	Eielson Array	32.68	331	P	P	13 04 17.6	+1.0
	comp=Z,0.3nm,0.7s,baz=7.5,slow=6.8,SNR=4.2						
ILAR				PcP	PcP	13 07 02.0	+0.2
	comp=Z,0.5nm,0.6s,baz=337,slow=5.6,SNR=8.0						
ILAR	Eielson Array	32.68	331	P	P	13 04 16.6	0.0
GERES	GERESS Array B	33.17	158	P	P	13 04 22.9	+1.8
	comp=Z,3.0nm,1.0s,baz=15,slow=8.1,SNR=10						
GERES	GERESS Array B	33.17	158	P	P	13 04 21.6	+0.4
VYHS	Vyhne	33.85	152	eP	P	13 04 24.9	-2.0
BCAR	Beaver Creek A	33.97	327	P	P	13 04 27.4	-0.5
YAK	Yakutsk	34.68	37	P	P	13 04 31.7	-2.2
BUR08	Bucovina Ar. S	35.20	145	P	P	13 04 39.4	+0.6
BUR08				IAmb	IAmb	13 04 52.0	
	comp=Z,6.1nm,1.3s						
BURAR	Bucovina Array	35.23	145	P	P	13 04 40.0	+1.1
BVAR	Borovoye Array	35.72	94	P	P	13 04 43.4	+0.4
	comp=Z,1.2nm,0.8s,baz=347,slow=10.0,SNR=4.7						
AKTO	Aktyubinsk	36.40	107	P	P	13 04 49.9	+1.0
	comp=Z,0.7nm,0.6s,baz=346,slow=8.6,SNR=4.6						
ZAA0	Zalesovo Array	36.99	79	P	P	13 04 53.3	-0.6
ZALV	Zalesovo Beam	36.99	79	P	P	13 04 54.5	+0.6
	comp=Z,0.8nm,0.5s,baz=355,slow=11,SNR=4.9						
ZALV				PcP	PcP	13 07 14.6	+0.2
	comp=Z,0.5nm,0.6s,baz=328,slow=5.1,SNR=3.4						
ZALV	Zalesovo Beam	36.99	79	P	P	13 04 53.6	-0.2
ABKAR	Akbulak array	37.83	106	P	P	13 05 01.1	+0.1
KURK	Kurchatov	39.20	86	P	P	13 05 12.5	0.0
KURK				IAmb	IAmb	13 05 21.2	
	comp=Z,7.1nm,1.1s						
KURBB	Kurchatov Arra	39.28	87	P	P	13 05 13.6	+0.4
	comp=Z,3.2nm,0.8s,baz=345,slow=7.7,SNR=30						
KURBB				PcP	PcP	13 07 22.2	+0.7
	comp=Z,0.6nm,0.7s,baz=335,slow=3.8,SNR=5.5						
KBZ	Khabaz	40.95	126	P	P	13 05 28.6	+1.6
	comp=Z,3.1nm,0.9s,baz=13,slow=4.3,SNR=6.1						
MAKZ	Makanchi	43.52	85	P	P	13 05 48.0	0.0
MAKZ				IAmb	IAmb	13 05 56.6	
	comp=Z,4.8nm,0.9s						
MK31	Makanchi Array	43.58	84	P	P	13 05 48.2	-0.2
MKAR	Makanchi Array	43.58	84	P	P	13 05 49.0	+0.5
	comp=Z,1.4nm,0.7s,baz=350,slow=7.4,SNR=20						
MKAR	Makanchi Array	43.58	84	P	P	13 05 48.2	-0.3
BRTR	Keskin Array B	43.85	137	P	P	13 05 52.0	+1.1
	comp=Z,1.5nm,0.8s,baz=332,slow=7.7,SNR=5.4						
BRTR	Keskin Array B	43.85	137	P	P	13 05 51.0	+0.1
KKAR	Karatay Array	45.41	97	P	P	13 06 03.2	+0.1
KKAR	Karatay Array	45.41	97	P	P	13 06 03.2	+0.1
KKAR				IAmb	IAmb	13 06 12.9	
	comp=Z,7.0nm,1.2s						
SONM	Songino Array	46.01	61	P	P	13 06 07.4	-0.5
	comp=Z,1.3nm,0.8s,baz=349,slow=5.7,SNR=7.1						
SONM	Songino Array	46.01	61	P	P	13 06 07.7	-0.3
ULN	Ulaanbaatar	46.07	61	P	P	13 06 08.3	-0.1
ULN				IAmb	IAmb	13 06 17.2	
	comp=Z,5.7nm,0.9s						
FRU1	Bishkek	46.31	93	P	P	13 06 10.6	+0.2
AAK	Ala-Archa	46.46	93	P	P	13 06 11.8	+0.1
AAK				IAmb	IAmb	13 06 21.7	
	comp=Z,4.6nm,0.9s						
ERPA	Erie	46.51	264	P	P	13 06 10.8	-1.0
WMQ	Urumqi	47.29	80	eP	P	13 06 20.3	+2.3
BTK	Batken	48.43	98	P	P	13 06 27.1	+0.2
GEYT	Alibeck	48.67	111	P	P	13 06 28.9	+0.2
KSH	Kashi	49.74	93	P	P	13 06 41.0	+4.1
KSH				sP	pwP	13 07 00.5	+16
KSH				PcP	PcP	13 08 01.4	+3.7
KSH				S	S	13 13 51.4	+5.8
KSH				ScS	ScS	13 16 36.9	+8.9
GTA	Gaotai	53.38	69	P	P	13 07 04.3	+0.2
GTA				pP	pwP	13 07 08.7	-2.6
GTA				sP	sP	13 07 11.6	+4.2
HHC	Hu-ho-hao-te	53.55	58	eP	P	13 07 05.1	-0.3
TXAR	Lajitas Array	62.59	284	P	P	13 08 09.7	+0.9
	comp=Z,0.2nm,0.6s,baz=32,slow=3.6,SNR=3.0						
TXAR	Lajitas Array	62.59	284	P	P	13 08 08.8	0.0
ENH	Enshi	63.70	62	P	P	13 08 15.8	-0.3
ENH				IAmb	IAmb	13 08 26.8	
	comp=Z,4.8nm,1.1s						
TORD	Torodi Ar. Bea	68.30	174	P	P	13 08 46.8	+1.1
	comp=Z,1.5nm,0.6s,baz=359,slow=6.6,SNR=9.3						
TORD	Torodi Ar. Bea	68.30	174	P	P	13 08 46.0	+0.3
CMAR	Chiang Mai Arr	73.84	74	P	P	13 09 20.3	+1.0
	comp=Z,0.4nm,0.3s,baz=342,slow=5.7,SNR=3.2						
ASAR	Alice Springs	119.86	45	PKP	PKiKP	13 16 33.9	-0.8
	comp=Z,0.6nm,0.7s,baz=360,slow=2.6,SNR=10.0						

*NIED **10** 13:08:00, 39°60N×143°70E, h23km, Mw3.8 Best double couple: M₀6.59000×10¹⁴ NP1:φs40.00000°, δ69.00000°, λ102.00000°. NP2:φs191.00000°, δ24.00000°, λ62.00000°.*

*IDC **10** 13:08:38.4±1.1, 39°64N×143°44E, h0km, mb3.9/13, mb1 3.9/18, mb1mx3.8/48, mbtmp3.8/18, ML3.0/4, Error ellipse: s-maj=24.6km s-min=18.6km az=146.0*

*JMA **10** 13:08:38.2±0.1, 39°64N×143°69E, h26km, M3.9*

*NEIC **10** 13:08:43.5±1.5, 39°68N±0°08×143°4E±0°1, h34km±6km, mb4.4/10, Error ellipse: s-maj=15.2km s-min=7.1km az=134.0*

ISC 10 13:08:38.9±2.1, 39°71N±0°05×143°44E±0°06, h3km±12km, n58, σ1°17/64, mb4.0/17, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	1.24	281	P	Pg	13 09 02.8	+0.2
JTH				eS	Sn	13 09 21.1	+0.8
MIYJ	Miyakonagasawa	1.26	264	P	Pg	13 09 03.2	+0.1
MIYJ				eS	Sn	13 09 21.7	+0.8
JKEN	Kujiedanarisaw	1.42	291	P	Pn	13 09 05.5	-0.1
JKEN				eS	Sg	13 09 25.3	+0.7
JANG	Nango	1.62	295	P	Pn	13 09 08.1	-0.3
JOM	Ohasama	1.68	263	P	Pn	13 09 09.6	+0.4
JOM				eS	Sn	13 09 32.2	+1.0
JMK	Ichinoseki	1.88	247	P	Pn	13 09 11.8	-0.2
JMK				eS	Sn	13 09 35.8	-0.4
JIO	Ouri	2.06	233	P	Pn	13 09 13.3	-1.0
JTM	Tenmabayashi	2.11	301	P	Pn	13 09 16.0	+0.9
ERM	Erimo	2.31	355	Pn	Pn	13 09 19.0	+1.1
JOT	Ohata	2.48	313	P	Pn	13 09 21.1	+1.0
JYK	Kaneyama	2.52	253	P	Pn	13 09 21.6	+0.9
JNBK	Urakawa-nobuka	2.62	349	P	Pn	13 09 23.6	+1.5
JNBK				eS	Sn	13 09 56.2	+1.7
JCH	Churui	2.90	359	P	Pn	13 09 26.5	+0.5
JCH				eS	Sn	13 10 01.3	-0.1
JFT	Otama	3.27	229	P	Pn	13 09 30.8	-0.3
JFT				eS	Sn	13 10 08.7	-1.9
JAK	Akkeshi	3.42	16	P	Pn	13 09 32.9	-0.1
JAK				eS	Sn	13 10 12.8	-1.3
JKA	Kamikawa-asahi	4.45	352		Pn	13 09 48.7	+1.5
JKA					Sb	13 10 47.3	-4.3
ASAJ	Asahikawa	4.45	352	Pn	Pn	13 09 48.7	+1.5
	1.2nm,0.3s,baz=196,slow=17,SNR=27						
ASAJ				Sn	Sb	13 10 47.3	-4.4
	1.4nm,0.3s,baz=248,slow=34,SNR=2.2						
MAJO	Matsushiro	5.20	234		Pn	13 09 58.7	+1.1
MAT	Matsushiro	5.20	234	P	Pn	13 09 58.6	+1.0
MAT				eS	Sn	13 10 57.9	-0.2
MJAR	Matsushiro Arr	5.20	234	Pn	Pn	13 09 58.3	+0.7
	0.3nm,0.3s,baz=41,slow=14,SNR=31						
MJB9	Matsu-Tunnel	5.20	234		Pn	13 09 58.4	+0.8
INU	Inuyama	6.71	232	Pn	Pn	13 10 19.0	+0.7
USA0B	Ussuriysk Arra	9.64	301	Pn	Pn	13 10 58.8	+0.3
USRK	Ussuriysk Ar.	9.64	301	Pn	Pn	13 10 57.8	-0.7
	baz=93,slow=13,SNR=2.3						
KSRS	Korea Array	12.36	264	Pn	Pn	13 11 35.7	0.0
	0.1nm,0.3s,baz=78,slow=14,SNR=2.8						
KLR	Kul'dur	12.65	323	Pn	Pn	13 11 38.8	-0.9
	0.0nm,0.3s,baz=157,slow=15,SNR=2.1						
MA2	Magadan	20.42	11	P	P	13 13 15.8	-1.2
	7.0nm,0.7s,baz=170,slow=19,SNR=3.5						
MA2	Magadan	20.42	11	P	P	13 13 18.6	+1.6
SEY	Seymchan	23.87	10	P	P	13 13 53.8	+0.5
	3.9nm,0.8s,baz=182,slow=8.3,SNR=9.2						
SONM	Songino Array	27.74	299	P		13 14 28.6	-0.1
	1.9nm,0.8s,baz=91,slow=8.6,SNR=12						
SONM	Songino Array	27.74	299	P	P	13 14 29.2	+0.4
H11N2	WAKE ISLAND Hy	28.34	128	T	T	13 44 10.5	
	baz=317						
H11N1	WAKE ISLAND Hy	28.34	128	T	T	13 44 10.0	
	baz=317						
H11N3	WAKE ISLAND Hy	28.35	128	T	T	13 44 11.0	
	baz=317						
H11S1	WAKE ISLAND Hy	29.16	130	T	T	13 45 11.3	
	baz=325						
H11S3	WAKE ISLAND Hy	29.16	130	T	T	13 45 12.9	

	baz=325						
H11S2	WAKE ISLAND Hy	29.17	130	T	T	13 45 13.6	
	baz=325						
RDOG	Red Dog Mine	40.40	28	P	P	13 16 18.1	+0.2
RDOG				IAmb	IAmb	13 16 45.5	
	comp=Z,4.3nm,0.7s						
ZALV	Zalesovo Beam	41.35	310	P	P	13 16 26.3	+0.5
	comp=Z,1.5nm,0.5s,baz=87,slow=7.8,SNR=4.9						
MK31	Makanchi Array	44.10	300	P	P	13 16 48.1	-0.2
MKAR	Makanchi Array	44.10	300	P	P	13 16 48.5	+0.1
	comp=Z,1.8nm,0.8s,baz=82,slow=9.2,SNR=19						
MKAR	Makanchi Array	44.10	300	P	P	13 16 48.2	-0.1
MAKZ	Makanchi	44.31	300	P	P	13 16 50.6	+0.6
KURK	Kurchatov	45.59	306	P	P	13 16 59.9	-0.2
KURK				IAmb	IAmb	13 17 01.3	
	comp=Z,3.4nm,0.8s						
KURBB	Kurchatov Arra	45.66	306	P	P	13 17 00.6	0.0
	comp=Z,3.0nm,0.8s,baz=82,slow=8.1,SNR=29						
ILAR	Eielson Array	46.38	34	P	P	13 17 07.7	+1.5
	comp=Z,0.4nm,0.8s,baz=249,slow=7.6,SNR=4.3						
KDJ	Kajisay	48.98	296	P	P	13 17 26.6	-0.3
BRVK	Borovoye	50.04	311	P	P	13 17 35.5	+1.0
BRVK				IAmb	IAmb	13 17 36.3	
	comp=Z,2.3nm,0.7s						
KKAR	Karatay Array	53.20	299	P	P	13 17 57.9	-0.5
ARU	Arti	55.44	318	P	P	13 18 14.9	+0.5
ARU				IAmb	IAmb	13 18 15.7	
	comp=Z,3.8nm,0.8s						
ABKAR	Akbulak array	57.46	309	P	P	13 18 29.0	+0.1
WRA	Warramunga Arr	59.95	190	P	P	13 18 45.2	-1.2
	comp=Z,0.8nm,0.8s,baz=3.3,slow=6.8,SNR=2.8						
YKA	Yellowknife Ar	60.70	31	P	P	13 18 52.5	+1.4
	comp=Z,0.3nm,0.8s,baz=297,slow=6.9,SNR=3.2						
FINES	FINESS Array B	67.19	332	P	P	13 19 34.1	+0.2
	comp=Z,2.4nm,0.8s,baz=5.7,slow=5.7,SNR=4.6						
KBZ	Khabaz	70.37	311	P	P	13 19 54.6	+0.6
	comp=Z,2.3nm,0.8s,baz=78,slow=7.0,SNR=4.6						
NOA	NORSAR Array B	72.33	338	P	P	13 20 06.5	+0.9
	comp=Z,1.2nm,0.9s,baz=41,slow=5.9,SNR=3.4						
AKASG	Malin Array Be	73.15	323	P	P	13 20 10.7	+0.1
	comp=Z,0.5nm,0.4s,baz=48,slow=5.7,SNR=5.8						
PDAR	Pinedale Array	74.67	47	P	P	13 20 18.5	-1.4
	comp=Z,0.3nm,0.9s,baz=334,slow=6.0,SNR=2.4						

BJI ***10*** *13:15:07.0±0.0, 21°.40S×174°.20W, h5km, mB5.6/18, mb5.1/35, Ms5.2/6, Ms7 4.9/5*
IDC ***10*** *13:15:07.4±0.6, 21°.48S×174°.22W, h0km, mb4.7/16, mb1 4.8/17, mb1mx4.6/38, mbtmp4.7/17, ML4.5/1, MS4.0/4, Ms1 4.0/4, ms1mx3.4/27, Error ellipse: s-maj=23.7km s-min=15.4km az=142.0*
NEIC ***10*** *13:15:08.6±2.7, 21°.20S±0°.10×174°.2W±0°.1, h10km±1km, mb5.0/59, Error ellipse: s-maj=21.4km s-min=15.2km az=113.0*
MOS ***10*** *13:15:09.0±0.9, 21°.28S×174°.50W, h10km, mb5.5/11, Error ellipse: s-maj=13.1km s-min=11.6km az=14.3*
ISC 10 13:15:08.8±0.4, **21°.31S**±0°.08×**174°.22W**±0°.08, **h10km**, **n205**, σ1s40/200, **mb5.0**/59, **5C-4D**, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	4.61	62	P	Pn	13 16 12.1	-6.4
	baz=4.3,SNR=26						
NIUE	Niue	4.61	62	Pn	Pn	13 16 11.8	-6.7
NIUE				Sn	Sn	13 16 57.1	-15
AFI	Afiamalu	7.72	18	Pn	Pn	13 16 58.5	-3.0
	11nm,0.3s,baz=130,slow=20,SNR=15						
AFI				Sn	Sn	13 18 16.7	-12
	8.7nm,0.3s,baz=188,slow=23,SNR=1.9						
AFI	Afiamalu	7.72	18	Pn	Pn	13 16 58.6	-2.9
AFI	Afiamalu	7.72	18	P	Pn	13 16 58.6	-2.9
MSVF	Nonsavu	8.11	295		Pn	13 17 14.8	+8.0
RAR	Rarotonga	13.47	92	Pn	Pn	13 18 11.4	-8.7
	28nm,0.3s,baz=237,slow=5.7,SNR=39						
RAR				Sn	Sn	13 20 25.2	-25
	1.9nm,0.3s,baz=132,slow=18,SNR=1.7						
DZM	Mont Dzumac	17.99	264	P	P	13 19 21.7	+1.9
	0.7nm,0.3s,baz=74,slow=19,SNR=11						
DZM	Mont Dzumac	17.99	264	P	P	13 19 21.6	+1.9
URZ	Urewera	18.47	202	P	P	13 19 23.9	-0.9
	1.5nm,0.3s,baz=329,slow=1.9,SNR=14						
URZ				Sn	Sn	13 22 29.1	-22
	0.2nm,0.3s,baz=145,slow=10.0,SNR=1.9						
URZ	Urewera	18.47	202	P	P	13 19 25.3	+0.5
SANVU	Saraoutou	18.56	285	P	Pn	13 19 28.2	+2.0
SANVU				IAmb	IAmb	13 19 35.7	
	comp=Z,66nm,0.9s						
BKZ	Black Stump Fm	19.50	202	P	P	13 19 35.3	-0.8
BKZ				IAmb	IAmb	13 19 58.0	
	comp=Z,122nm,1.9s						
HIZ	Hauiti	19.55	206	P	P	13 19 36.3	-0.5
HIZ				IAmb	IAmb	13 19 38.9	
	comp=Z,158nm,1.7s						
MSWZ	Moikau Station	21.93	202	P	P	13 20 01.3	-1.2
SNZO	South Karori	22.03	203	P	P	13 20 02.5	-0.9
SNZO				IAmb	IAmb	13 20 17.6	
	comp=Z,108nm,1.1s						
BHW	Baring Head	22.05	202	P	P	13 19 59.1	-4.6
PLWZ	Palliser	22.07	201	P	P	13 20 02.7	-1.2
TUWZ	Tuamarina	22.41	204	P	P	13 20 03.9	-3.7
QRZ	Quartz Range	22.47	207	P	P	13 20 07.0	-1.2
QRZ				IAmb	IAmb	13 20 32.9	
	comp=Z,103nm,1.4s						
BSWZ	Blackbirch Sta	22.68	204	P	P	13 20 07.8	-2.7
THZ	Tophouse	23.10	205	P	P	13 20 12.4	-2.5
KHZ	Kahutara	23.42	203	P	P	13 20 16.2	-1.8
KHZ				IAmb	IAmb	13 20 38.5	
	comp=Z,48nm,1.2s						
LTZ	Lake Taylor	24.21	205	P	P	13 20 23.4	-2.3
MQZ	McQueen's Vall	24.86	203	P	P	13 20 31.8	+0.3
MQZ				IAmb	IAmb	13 21 03.3	
	comp=Z,73nm,1.7s						
RPZ	Rata Peaks	25.48	205	P	P	13 20 36.1	-1.1
	comp=Z,6.0nm,0.7s,baz=120,slow=12,SNR=4.2						
RPZ	Rata Peaks	25.48	205	P	P	13 20 36.3	-0.9
TARA	Tarawa	25.80	329	P	P	13 20 38.2	-2.1
TARA				IAmb	IAmb	13 20 41.7	
	comp=Z,38nm,0.8s						
LHI	Lord Howe Isla	25.93	241	P	P	13 20 43.5	+2.1
	baz=26,SNR=4.3						
HNR	Honiara	27.52	291	LR	LR	13 31 11.2	
	comp=Z,133nm,18.3s,baz=163,slow=35						
ARMA	Armidale	31.94	246	P	P	13 21 35.8	+0.8
	baz=32,SNR=9.1						
ARMA	Armidale	31.94	246	P	P	13 21 33.3	-1.7
ARMA				IAmb	IAmb	13 21 36.5	
	comp=Z,12nm,0.9s						
RMQ	Roma	34.16	254	P	P	13 21 55.8	+1.4
	baz=34,SNR=6.8						
CTA	Charters Tower	36.93	265	P	P	13 22 18.0	-0.3
	comp=Z,5.7nm,0.6s,baz=97,slow=14,SNR=5.8						
CMSA	Cobar Meteorol	37.14	246	P	P	13 22 19.7	-0.2
	baz=37,SNR=13						
QLP	Quilpie	38.21	254	P	P	13 22 28.9	-0.2
	baz=38,SNR=3.7						
TOO	Toolangi	38.32	236	P	P	13 22 29.9	0.0
TOO				IAmb	IAmb	13 23 31.8	
	comp=Z,59nm,1.9s						
TOO	Toolangi	38.32	236	P	P	13 22 29.9	0.0
TOO				pmax	pmax		
	comp=Z,59nm,1.9s						
TAU	Tasmania Unive	38.59	227	P	P	13 22 32.9	+0.8
TAU				IAmb	IAmb	13 22 56.6	
	comp=Z,83nm,1.6s						
TAU	Tasmania Unive	38.59	227	P	P	13 22 32.9	+0.8
TAU				pmax	pmax		
	comp=Z,83nm,1.6s						
PMG	Port Moresby	38.97	282	P	P	13 22 35.1	-0.4
	comp=Z,18nm,0.8s,baz=94,slow=4.9,SNR=5.9						
PMG	Port Moresby	38.97	282	P	P	13 22 34.9	-0.6
PMG				IAmb	IAmb	13 22 38.8	
	comp=Z,18nm,0.8s						
PMG	Port Moresby	38.97	282	⇓eP	P	13 22 34.3	-1.2
PMG				pmax	pmax		
	comp=Z,76nm,0.9s						
MTSU	Mount Surprise	39.08	267	P	P	13 22 37.3	+0.8
	baz=39,SNR=5.2						
STKA	Stephens Creek	40.64	246	P	P	13 22 49.4	0.0
	baz=41,SNR=6.8						
STKA	Stephens Creek	40.64	246	P	P	13 22 48.8	-0.5
	comp=Z,11nm,0.8s,baz=89,slow=9.6,SNR=18						
STKA				LR	LR	13 38 50.2	
	comp=Z,180nm,19.1s,baz=41,slow=35						
STKA	Stephens Creek	40.64	246	P	P	13 22 49.0	-0.3
STKA	Stephens Creek	40.64	246	P	P	13 22 49.0	-0.3
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WAKE	Wake Island	44.48	334	P	P	13 23 20.6	+0.1
BBOO	Buckleboo	45.37	245	P	P	13 23 26.9	-0.7
	baz=46,SNR=4.6						
BBOO	Buckleboo	45.37	245	P	P	13 23 26.1	-1.5
BBOO				IAmb	IAmb	13 23 27.7	
	comp=Z,24nm,1.1s						
KHLH	Kahului Airpor	45.41	24	P	P	13 23 25.5	-2.4
AS31	Alice Springs	47.77	257	P	P	13 23 45.0	-1.6
ASAR	Alice Springs	47.77	257	P	P	13 23 46.0	-0.7
	comp=Z,20nm,0.9s,baz=90,slow=8.3,SNR=130						
ASAR				PcP	PcP	13 25 16.2	+0.5
	comp=Z,1.3nm,0.8s,baz=107,slow=3.6,SNR=2.3						
ASAR				S	S	13 30 38.9	-4.6
	comp=Z,1.6nm,1.0s,baz=93,slow=16,SNR=7.9						
ASAR				LR	LR	13 44 27.4	
	comp=Z,129nm,18.7s,baz=102,slow=37						
ASAR	Alice Springs	47.77	257	P	P	13 23 45.0	-1.7
WR0	Warramunga Arr	47.80	262	P	P	13 23 45.6	-1.2
WR0				IAmb	IAmb	13 23 46.6	
	comp=Z,24nm,1.3s						
WB0	Warramunga Arr	47.97	262	P	P	13 23 47.2	-1.0
WB0				IAmb	IAmb	13 23 52.7	
	comp=Z,13nm,0.7s						
WB2	Warramunga Arr	47.98	262	P	P	13 23 46.5	-1.7
WB2				IAmb	IAmb	13 23 48.6	
	comp=Z,20nm,0.9s						
WRAB	Tennant Creek	47.98	262	*i* P	P	13 23 47.8	-0.4
WRA	Warramunga Arr	47.99	262	P	P	13 23 47.3	-1.0
	comp=Z,14nm,0.9s,baz=98,slow=7.4,SNR=37						
WRA				PcP	PcP	13 25 17.0	+0.6
	comp=Z,2.3nm,0.8s,baz=96,slow=3.6,SNR=3.2						
WRA	Warramunga Arr	47.99	262	P	P	13 23 46.6	-1.7
KDU	Kakadu	51.49	271	P	P	13 24 14.9	-0.2
	baz=52,SNR=6.2						
FORT	Forrest	52.22	247	P	P	13 24 19.7	-0.6
FORT				IAmb	IAmb	13 24 20.8	
	comp=Z,28nm,0.9s						
WRKA	Warakurna	52.64	254	P	P	13 24 23.0	-0.6
	baz=53,SNR=23						
MTN	Manton Dam	52.70	270	P	P	13 24 23.8	-0.2
	baz=53,SNR=3.7						
MTN	Manton Dam	52.70	270	P	P	13 24 22.9	-1.1
MTN				IAmb	IAmb	13 25 41.4	
	comp=Z,21nm,1.2s						
SAUI	Saumlaki	54.10	276	P	P	13 24 32.9	-1.4
KNRA	Kununurra	54.13	266	P	P	13 24 35.4	+0.9
	baz=54,SNR=3.5						
KNRA	Kununurra	54.13	266	P	P	13 24 33.9	-0.6
FAKI	Fak Fak	55.12	282	P	P	13 24 39.9	-1.9
FAKI				IAmb	IAmb	13 24 42.6	
	comp=Z,20nm,1.2s						
SIJI	Sorong	56.86	284	P	P	13 24 54.1	-0.1
	comp=Z,39nm,0.9s,baz=65,slow=6.5,SNR=17						
SWI	Sorong	56.87	284	P	P	13 24 54.4	+0.1
	comp=Z,56nm,1.0s						
SWI	Sorong	56.87	284	P	P	13 24 55.0	+0.7
SWI				pmax	pmax		
	comp=Z,56nm,1.1s						
MEEK	Meekatharra	60.99	251	P	P	13 25 23.6	+0.8
	baz=61,SNR=3.3						
TNTI	Ternate	61.08	283	P	P	13 25 23.1	-0.5
TNTI	Ternate	61.08	283	P	P	13 25 22.2	-1.3
MORW	Morawa	62.78	247	P	P	13 25 35.3	+0.5
	baz=63,SNR=3.0						
KCP	Kidapawan	65.84	288	⇓*i*P	P	13 25 55.6	+0.6
QSPA	South Pole Qui	68.76	180	P	P	13 26 12.8	-0.1
QSPA				IAmb	IAmb	13 26 16.5	
	comp=Z,16nm,1.2s						
MJAR	Matsushiro Arr	73.00	322	P	P	13 26 39.9	+1.1
	comp=Z,11nm,0.9s,baz=149,slow=5.8,SNR=17						
MJAR	Matsushiro Arr	73.00	322	IAmb	IAmb	13 26 40.1	
	comp=Z,3.6nm,0.9s						
MAJO	Matsushiro	73.00	322	⇑*i*P	P	13 26 39.8	+0.9
MAJO				pmax	pmax		
	comp=Z,12nm,1.0s						
MAT	Matsushiro	73.00	322	P	P	13 26 40.0	+1.1
YOJ	Yonaguni jima	76.11	303	P	P	13 26 58.9	+1.7
YOJ				pmax	pmax		
	comp=Z,176nm,0.6s						
KSM	Kuching	77.02	277	P	P	13 27 01.2	-1.4
KSM				IAmb	IAmb	13 27 05.6	
	comp=Z,15nm,0.9s						
PET	Petropavlovsk	77.68	344	*e*P	P	13 27 08.4	+3.0
PETK	Petropavlovsk-	78.01	343	P	P	13 27 08.8	+1.5
	comp=Z,9.2nm,0.8s,baz=142,slow=9.8,SNR=10						
PETK	Petropavlovsk-	78.01	343	P	P	13 27 06.8	-0.4
YSS	Yuzh-Sakhalins	78.25	331	⇑*e*P	P	13 27 10.6	+2.0
YSS				*e*		13 27 21.1	
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				pmax	pmax		
	comp=Z,600nm,4.7s						
N02D	Trinity Center	78.27	37	P	P	13 27 11.5	+2.4
	baz=228						
MPMC	Manual Prospec	78.31	44	P	P	13 27 10.8	+1.3
	baz=233						
PNTR	Pine Nut	78.86	40	P	P	13 27 13.2	+0.6
NVAR	Mina Array Bea	79.24	41	P	P	13 27 15.5	+0.9
	comp=Z,1.7nm,0.6s,baz=214,slow=6.4,SNR=20						
NVAR	Mina Array Bea	79.24	41	P	P	13 27 13.4	-1.2
M04C	Macdoel	79.29	37	P	P	13 27 16.9	+2.2
	baz=229						
L04D	Klamath Falls	79.32	37	P	P	13 27 16.9	+2.0
	baz=228						
NV11	Mina Array Sit	79.33	42	P	P	13 27 13.6	-1.5
KSRS	Korea Array	79.86	317	P	P	13 27 19.8	+2.0
	comp=Z,5.5nm,0.9s,baz=135,slow=6.0,SNR=11						
KSAR	Wonju Array Be	79.88	317	P	P	13 27 18.5	+0.6
KSAR	Wonju Array Be	79.88	317	P	P	13 27 18.5	+0.6
J04D	Umpqua Nationa	80.11	36	P	P	13 27 21.2	+1.9
	baz=228						
J05D	Fort Rock, OR	80.62	36	P	P	13 27 22.0	+0.1
	baz=229						
PINE	Pine Mountain	81.11	36	P	P	13 27 22.8	-1.8
I05D	Terrebonne, OR	81.25	35	P	P	13 27 26.9	+1.8
	baz=229						
WVOR	Wild Horse Val	81.53	38	P	P	13 27 28.1	+1.3
WVOR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
G06A	Carlson Farm,	82.22	35	P	P	13 27 29.5	-0.7
MTPU	Mount Pierson	82.91	45	P	P	13 27 34.1	-0.3
NJ2	Nanjing	83.14	308	*e*P	P	13 27 35.9	+0.7
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
G08A	Pilot Rock	83.16	36	P	P	13 27 35.5	+0.3
G08A				IAmb	IAmb	13 27 37.9	
	comp=Z,25nm,1.9s						
MDJ	Mudanjiang	83.25	323	P	P	13 27 37.5	+2.0
MDJ				pmax	pmax		
	comp=Z,24nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,210nm,4.5s						
E07A	Sunnyside	83.49	34	P	P	13 27 36.9	+0.1
E07A				IAmb	IAmb	13 27 44.3	
	comp=Z,6.2nm,0.8s						
BMO	Blue Mountains	83.80	37	P	P	13 27 38.4	-0.1
BMO	Blue Mountains	83.80	37	P	P	13 27 38.4	-0.1
BMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GRNR	Gornyy	83.89	331	⇑*i*P	P	13 27 40.6	+1.9
GRNR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GRNR				MLR	MLR		
	comp=Z,60nm,10.0s						
F10A	Beach Ranch, E	84.53	36	P	P	13 27 42.4	+0.2
F10A				IAmb	IAmb	13 27 58.5	
	comp=Z,7.5nm,0.9s						
TXAR	Lajitas Array	84.55	56	P	P	13 27 41.9	-0.8
	comp=Z,0.4nm,0.8s,baz=220,slow=8.3,SNR=4.7						
SRU	San Rafael Swe	84.58	44	P	P	13 27 41.3	-1.4
SRU	San Rafael Swe	84.58	44	P	P	13 27 41.3	-1.4
SRU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KLR	Kul'dur	85.06	328	⇑*e*P	P	13 27 43.6	-1.0
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CN2	Changchun	85.13	321	*e*P	P	13 27 42.6	-2.5
CN2				pmax	pmax		
	comp=Z,10.0nm,2.1s						
ANMO	Albuquerque	85.19	50	P	P	13 27 46.1	+0.2
ANMO	Albuquerque	85.19	50	*i* P	P	13 27 48.7	+2.8
ANMO	Albuquerque	85.19	50	P	P	13 27 47.1	+1.2
	baz=240						
TRF	Thorofare Moun	86.55	11	P	P	13 27 52.0	+0.1
TRF				IAmb	IAmb	13 27 54.2	
	comp=Z,12nm,0.8s						
O20A	White River Ci	86.62	45	P	P	13 27 53.7	+0.8
	baz=238						
IPM	Ipoh	86.73	276	P	P	13 27 53.0	-0.8
RND	Reindeer	86.76	11	P	P	13 27 51.4	-1.4
RND	Reindeer	86.76	11	P	P	13 27 51.4	-1.4
RND				pmax	pmax		
	comp=Z,62nm,1.9s						
MCK	McKinley	87.05	11	P	P	13 27 54.5	+0.4
MCK				IAmb	IAmb	13 28 25.4	
	comp=Z,16nm,1.2s						
MCK	McKinley	87.05	11	P	P	13 27 54.5	+0.4
MCK				pmax	pmax		
	comp=Z,16nm,1.2s						
VNA3	Neumayer Olymp	87.06	175	P	P	13 27 54.3	-0.1
SNAA	Sanae	87.07	177	P	P	13 27 54.3	-0.2
SNAA	Sanae	87.07	177	⇓*e*P	P	13 27 57.0	+2.5
PDAR	Pinedale Array	87.17	42	P	P	13 27 53.6	-1.9
	comp=Z,0.3nm,0.6s,baz=210,slow=5.2,SNR=5.9						
MSTX	Muleshoe	87.39	52	P	P	13 27 58.0	+1.4
	baz=242						
VNA2	Neumayer--Watz	87.55	176	P	P	13 27 57.3	+0.6
	baz=192,slow=4.8						
WRH	Wood River Hil	87.88	11	P	P	13 27 58.7	+0.7
BCAR	Beaver Creek A	87.90	14	P	P	13 27 59.2	+0.9
SEY	Seymchan	88.01	345	⇓*i*P	P	13 28 00.4	+1.7
HDA	Harding Lake	88.03	11	P	P	13 27 59.5	+0.7
	baz=205						
RPSI	Rantau Prapat	88.04	274	P	P	13 27 59.9	-0.1
RPSI	Rantau Prapat	88.04	274	P	P	13 28 00.2	+0.1
PSI	Prapat	88.08	274	P	P	13 28 00.2	-0.2
	comp=Z,12nm,0.9s,baz=268,slow=13,SNR=7.5						
CCB	Clear Creek Bu	88.09	11	P	P	13 27 59.8	+0.7
TCOL	CIGO, UAF Yank	88.28	11	P	P	13 28 00.7	+0.7
	baz=204						
COLA	College	88.29	11	*e*P	P	13 28 00.9	+0.9
ILAR	Eielson Array	88.37	11	P	P	13 28 01.6	+1.1
	comp=Z,0.9nm,0.5s,baz=225,slow=5.9,SNR=15						
ILAR	Eielson Array	88.37	11	P	P	13 28 00.6	+0.1
POKR	Poker Plat Res	88.58	11	P	P	13 28 03.2	+1.7
	baz=205						
BJI	Beijing	88.97	314	*e*P	P	13 28 03.9	+0.1
BJI				pmax	pmax		
	comp=Z,7.0nm,2.5s						
ENH	Enshi	89.43	303	P	P	13 28 05.2	-1.1
ZEA	Zeya	90.09	330	*e*P	P	13 28 10.8	+2.1
ZEA				pmax	pmax		
	comp=Z,18nm,1.4s						
BILL	Bilibino	90.24	353	P	P	13 28 10.0	+0.8
BILL	Bilibino	90.24	353	*i* P	P	13 28 10.1	+1.0
BILL				*i*		13 31 49.3	
BILL				*i* S	SKSac	13 38 39.7	-0.2
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,98nm,19.0s						
BMAR	Burnt Mountain	91.17	11	P	P	13 28 12.7	-0.9
XAN	Xi'an	91.45	306	P	P	13 28 18.2	+2.6
XAN				pmax	pmax		
	comp=Z,13nm,1.8s						
XAN				pmax	pmax		
	comp=Z,250nm,4.9s						
XAN	Xi'an	91.45	306	P	P	13 28 15.3	-0.3
XAN				IAmb	IAmb	13 28 19.2	
	comp=Z,12nm,1.0s						
XAN	Xi'an	91.45	306	P	P	13 28 15.3	-0.3
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC	Hu-ho-hao-te	92.47	313	*e*P	P	13 28 20.3	0.0
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,23nm,5.2s						
CMAR	Chiang Mai Arr	93.72	288	P	P	13 28 27.6	+1.2
	comp=Z,4.9nm,0.8s,baz=129,slow=2.7,SNR=34						
CHTO	Chiang Mai	93.85	289	P	P	13 28 27.1	+0.1
CHTO				IAmb	IAmb	13 28 30.6	
	comp=Z,7.4nm,0.8s						
CHTO	Chiang Mai	93.85	289	P	P	13 28 27.1	+0.1
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CD2	Chengdu	94.21	301	*e*P	P	13 28 28.0	-0.5
YKA	Yellowknife Ar	95.80	24	P	P	13 28 35.9	+1.0
	comp=Z,0.4nm,0.7s,baz=238,slow=4.6,SNR=4.1						
ECSD	EROS Data Cent	95.96	45	P	P	13 28 37.0	+0.8
	baz=246						
LZH	Lanzhou	96.08	306	*e*P	P	13 28 37.8	+0.7
LZH				pP	pwP	13 28 42.5	-1.9
LZH				sP	sP	13 28 45.5	+5.7
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LPAZ	La Paz	98.48	111	LR	LR	14 06 39.2	
	comp=Z,104nm,18.1s,baz=256,slow=31						
SONM	Songino Array	98.70	318	P	Pdif	13 28 49.1	+0.6
	comp=Z,0.1nm,0.3s,baz=105,slow=3.1,SNR=2.4						
GTA	Gaotai	100.23	308	*e*P	Pdif	13 29 00.8	+5.2
GTA				pP	pwP	13 29 04.4	+1.4
GTA				sP	sP	13 29 06.9	+8.5
GTA				pmax	pmax		
	comp=Z,1.0nm,1.4s						
WMQ	Urumqi	110.14	310	*e*PKP	PKiKP	13 33 39.8	-1.2
WMQ				LR	LR		
	comp=Z,420nm,29.2s						
WMQ				LR	LR		
	comp=Z,800nm,29.1s						
WMQ				LR	LR		
	comp=Z,200nm,29.0s						
ZALV	Zalesovo Beam	113.34	321	PKiKP	PKiKP	13 33 46.9	+0.2
	comp=Z,1.1nm,0.5s,baz=94,slow=0.4,SNR=4.4						
MK31	Makanchi Array	114.33	313	*e*PKIKP	PKiKP	13 33 49.4	+0.6
MKAR	Makanchi Array	114.33	313	PKP	PKiKP	13 33 49.1	+0.2
	comp=Z,0.8nm,0.8s,baz=108,slow=2.2,SNR=7.6						
MKAR	Makanchi Array	114.33	313		PKPdf	13 33 48.5	-0.4
MKAR	Makanchi Array	114.33	313	*i* PKIKP	PKPdf	13 33 48.5	-0.3
KKAR	Karatay Array	122.52	308		PKiKP	13 34 05.0	+0.1
KKAR	Karatay Array	122.52	308	PKIKP	PKiKP	13 34 05.0	+0.1
ARU	Arti	127.86	326	*e*PKIKP	PKiKP	13 34 15.3	+0.3
AKTO	Aktyubinsk	130.01	319	PKP	PKPdf	13 34 17.8	-0.9
	comp=Z,0.8nm,0.6s,baz=101,slow=5.2,SNR=3.4						
ARCES	ARCESS Array B	130.31	351	PKP	PKiKP	13 34 19.0	-0.6
	comp=Z,4.3nm,0.9s,baz=1.4,slow=3.6,SNR=3.3						
AKT	Akhty	139.42	309	*e*PKIKP	PKPdf	13 34 32.1	-4.7
AKT				pmax	pmax		
	comp=Z,18nm,1.2s						
AKASG	Malin Array Be	145.37	334	PKPbc	PKPdf	13 34 47.0	+0.1
	comp=Z,5.0nm,0.7s,baz=39,slow=4.3,SNR=20						
AKASG	Malin Array Be	145.37	334		PKPdf	13 34 46.7	-0.2
AKBB	Malin Array Si	145.37	334		PKPdf	13 34 46.9	0.0
AKBB	Malin Array Si	145.37	334	PKIKP	PKPdf	13 34 46.9	0.0
KIEV	Kiev	145.38	334	PKIKP	PKPdf	13 34 47.0	+0.1
LVV	L'vov	148.09	337	*e*PKP2	PKPbc	13 34 55.1	+0.4
BUR08	Bucovina Ar. S	149.41	334	PKPdf	PKPdf	13 34 53.5	-0.3
BURAR	Bucovina Array	149.43	334		PKiKP	13 34 58.9	-0.5
BURAR	Bucovina Array	149.43	334	PKP2	PKiKP	13 34 58.9	-0.5
KOLS	Kolonicke sedl	149.46	338	*e*PKP2	PKPab	13 35 02.3	-0.7
KOLS	Kolonicke sedl	149.46	338	*e*PKP	PKPab	13 35 02.3	-0.7
UZH	Uzhgorod	149.71	338	*e*PKP2	PKPbc	13 34 58.4	-0.4
BR131	Keskin Array S	149.97	314		PKiKP	13 35 00.3	-0.5
BR131	Keskin Array S	149.97	314	PKP2	PKiKP	13 35 00.4	-0.5
BRTR	Keskin Array B	149.97	314	PKPbc	PKiKP	13 35 00.3	-0.5
	comp=Z,3.4nm,0.7s,baz=138,slow=2.5,SNR=14						
VYHS	Vyhne	150.93	342	*e*PKIKP	PKiKP	13 35 03.1	+0.7
VYHS	Vyhne	150.93	342	*e*PKP	PKiKP	13 35 03.1	+0.7
MODS	Modra-Piesok	151.47	344	*e*PKIKP	PKPdf	13 34 58.7	+1.8
MODS	Modra-Piesok	151.47	344	*e*PKP	PKPdf	13 34 58.7	+1.8
GERES	GERESS Array B	151.81	349	PKPbc	PKiKP	13 35 04.4	+0.1
	comp=Z,1.3nm,0.7s,baz=11,slow=0.5,SNR=7.4						
GERES	GERESS Array B	151.81	349		PKiKP	13 35 04.2	-0.1
GERES	GERESS Array B	151.81	349	PKIKP	PKiKP	13 35 04.2	-0.1
ESDC	Sonseca Array	159.89	22	PKPab	PKPab	13 35 48.0	+0.4
	comp=Z,0.5nm,0.3s,baz=326,slow=11,SNR=5.0						
TORD	Torodi Ar. Bea	170.99	154	PKP	PKPdf	13 35 18.0	-0.3
	comp=Z,0.3nm,0.6s,baz=211,slow=4.2,SNR=2.7						
TORD				PKPab	PKPab	13 36 36.3	-0.6
	comp=Z,0.7nm,0.8s,baz=213,slow=2.6,SNR=2.6						

WEL 10 13:28:22.7, 39°S±4°×**17°9E**±°, **h33km**, **M2.8**/30, **ML3.0**/30, **MLv2.8**/30, **Error ellipse: s-maj=0.0km s-min=0.0km az=171.2**, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHGZ	Mahia Peninsul	0.51	278	P	Pb	13 28 33.3	-0.1
PRGZ	Paritu Road	0.61	300	P	Pn	13 28 34.5	-0.4
PRGZ	Paritu Road	0.61	300	P	Pn	13 28 34.5	-0.4
KNZ	Kokohu	0.72	286	P	Pb	13 28 36.7	0.0
CNGZ	Carnagh Statio	0.79	340	P	Pn	13 28 37.3	-0.2
RIGZ	Rimuhau	0.81	310	P	Pn	13 28 37.9	+0.1
TKGZ	Te Karaka	0.96	325	P	Pn	13 28 39.5	-0.2
TKGZ	Te Karaka	0.96	325	S	Sn	13 28 52.2	-0.1
WHHZ	Waihua	1.04	278	P	Pn	13 28 41.4	+0.5
WHHZ	Waihua	1.04	278	S	Sb	13 28 54.9	-0.6
SNGZ	Shannon Statio	1.05	295	P	Pn	13 28 41.2	+0.1
RAGZ	Rawiri	1.15	309	P	Pn	13 28 42.4	-0.1
PUZ	Puketiti	1.18	348	P	Pn	13 28 41.8	-1.0
RAHZ	Arahi	1.19	285	P	Pn	13 28 43.1	+0.2
RAHZ	Arahi	1.19	285	S	Sn	13 28 57.7	-0.2
MWZ	Matawai	1.20	318	P	Pn	13 28 42.9	-0.3
MWZ	Matawai	1.20	318	S	Sn	13 28 57.5	-0.8
ARHZ	Aropaoanui	1.21	268	P	Pn	13 28 44.0	+0.7
ARHZ	Aropaoanui	1.21	268	S	Sn	13 28 58.9	+0.3
NMHZ	Naumai	1.37	275	P	Pn	13 28 45.7	+0.3
RTZ	Ruatahuna	1.37	296	P	Pn	13 28 45.6	0.0
PKGZ	Pakihiroa	1.39	344	P	Pn	13 28 45.5	-0.2
MTHZ	Maungataniwha	1.39	285	P	Pn	13 28 45.9	+0.2
WMGZ	Waiomatatini S	1.41	355	P	Pn	13 28 45.4	-0.6
KAHZ	Kahuranaki	1.42	246	P	Pn	13 28 45.4	-0.8
RUGZ	Raukumara Rang	1.43	331	P	Pn	13 28 45.9	-0.6
MCHZ	McNeill Hill	1.46	261	P	Pn	13 28 47.1	+0.4
URZ	Urewera	1.49	310	P	Pn	13 28 47.2	+0.2
PXZ	Pawanui	1.54	238	P	Pn	13 28 46.1	-1.6
MUGZ	Murupara	1.58	298	P	Pn	13 28 48.9	+0.5
HAZ	Te Kaha	1.59	337	P	Pn	13 28 48.1	-0.3
BKZ	Black Stump Fm	1.61	271	P	Pn	13 28 48.7	0.0
KWHZ	Kaweka Forest	1.67	262	P	Pn	13 28 49.4	-0.2
MXZ	Matakaoa Point	1.67	353	P	Pn	13 28 49.4	-0.2
MRHZ	Matea Rd	1.71	282	P	Pn	13 28 50.6	+0.4
KRHZ	Kereru	1.75	255	P	Pn	13 28 50.2	-0.5
PRHZ	Porangahau	1.81	234	P	Pn	13 28 49.5	-2.0
RRRZ	Republican Roa	1.82	298	P	Pn	13 28 51.8	+0.1
TARZ	Mount Tarawera	1.88	301	P	Pn	13 28 53.1	+0.5
PNHZ	Pukenui	1.95	249	P	Pn	13 28 52.4	-1.0
BHHZ	Black Hill Sta	1.95	261	P	Pn	13 28 53.2	-0.3
OPRZ	Ohinepanea	2.09	311	P	Pn	13 28 55.1	-0.2
TSZ	Takapari Road	2.17	247	P	Pn	13 28 55.3	-1.2
MOVZ	Moawhango	2.18	264	P	Pn	13 28 57.5	+0.5
RATZ	Rangitukua	2.20	278	P	Pn	13 28 57.5	+0.6
KATZ	Kakaramea	2.24	275	P	Pn	13 28 58.1	+0.6
TUVZ	Tukino	2.25	268	P	Pn	13 28 58.4	+0.7
KRVZ	Karewarewa	2.27	272	P	Pn	13 28 58.4	+0.4
NGZ	Ngauruhoe	2.30	270	P	Pn	13 28 58.9	+0.6
MTVZ	Mangateitei	2.40	265	P	Pn	13 29 00.1	+0.4
PKVZ	Pokaka	2.49	267	P	Pn	13 29 01.3	+0.3
TLZ	Tolley Road	2.52	290	P	Pb	13 29 05.9	-1.4
MTW	Mount Morrison	3.04	230	P	Pn	13 29 04.4	-4.0
PKE	Pukeiti	3.55	269	P	Pn	13 29 16.7	+1.2
QRZ	Quartz Range	4.90	249	P	Pn	13 29 31.2	-2.8

WEL 10 13:29:39.6, 44˚S±2˚×17˚3E±˚, h20km±4km, M1.7/5, ML1.7/5, MLv1.7/5, Error ellipse: s-maj=0.0km s-min=0.0km az=160.5, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	McQueen's Vall	0.17	209	P	Pg	13 29 45.8	+1.5
MQZ				S	Sg	13 29 49.9	+2.4
OKCZ	Okains Bay	0.27	128	P	Pn	13 29 47.3	-1.2
OKCZ				S	Sg	13 29 51.8	+1.8
AKCZ	Akaroa Harbour	0.33	162	P	Pn	13 29 48.8	-0.5
AKCZ				S	Sn	13 29 54.6	-0.9
OXZ	Oxford	0.58	293	P	Pn	13 29 52.5	-0.2
OXZ				S	Sn	13 30 02.3	+0.7
LTZ	Lake Taylor	0.86	335	P	Pn	13 29 56.5	0.0
LTZ				S	Sn	13 30 08.2	-0.3

STR 10 13:37:45.2±0.8, 44˚N±4˚×˚±˚, h5km±6km, MLv2.4/6
ROM 10 13:37:46.6±0.2, 44˚15N±0˚01×8˚600E±0˚007, h7km±1km, ML2.6/10, Error ellipse: s-maj=0.9km s-min=0.8km az=344.0
LDG 10 13:37:47.2±0.1, 44˚13N×8˚61E, h10km, Md2.7/2, Ml2.7/21, Error ellipse: s-maj=1.3km s-min=0.9km az=150.0
GEN 10 13:37:47.6, 44˚17N×8˚58E, h8km±2km, Ml2.4
ISC 10 13:37:46.5±1.0, 44˚13N±0˚02×8˚63E±0˚02, h18km±3km, n54, σ1§35/97, 1D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FINB	Finale Ligure	0.22	282	⇓P	Pg	13 37 51.4	-0.5
FINB				S	Sb	13 37 54.4	-0.7
FINB				AML	AML		
	comp=E,1790μm,0.2s						
FINB				AML	AML		
	comp=N,2915μm,0.2s						
PCP	Piancastagn	0.41	352	P	Pg	13 37 54.5	-0.6
PCP				S	Sg	13 38 00.1	-0.8
PCP				AML	AML		
	comp=E,774μm,1.0s						
PCP				AML	AML		
	comp=N,1070μm,0.3s						
PCP				AML	AML		
	comp=E,774μm,1.0s						
PCP	Piancastagn	0.41	352	P	Pg	13 37 54.5	-0.6
PCP				S	Sg	13 37 60.0	-0.9
IMI	Imperia	0.57	248	P	Pb	13 37 57.9	-0.1
IMI				S	Sb	13 38 06.4	+0.5
IMI				AML	AML		
	comp=E,426μm,1.5s						
IMI				AML	AML		
	comp=N,604μm,0.4s						
IMI	Imperia	0.57	248	P	Pb	13 37 57.9	-0.1
IMI				S	Sb	13 38 06.3	+0.5
MSSA	Maissana	0.67	74	P	Pg	13 38 00.0	+0.3
MSSA				S	Sn	13 38 10.2	-0.9
GORR	Gorreto	0.67	45	P	Pg	13 38 00.2	+0.4
GORR				S	Sn	13 38 10.3	-0.9
GORR				AML	AML		
	comp=E,596μm,0.2s						
GORR				AML	AML		
	comp=N,580μm,1.2s						
GORR	Gorreto	0.67	45	P	Pg	13 38 00.2	+0.4
GORR				S	Sg	13 38 09.1	+0.3
NEGI	Seborga	0.73	247	P	Pb	13 38 01.0	+0.4
NEGI				S	Sb	13 38 11.6	+1.4
NEGI	Seborga	0.73	247	P	Pb	13 38 01.1	+0.4
NEGI				S	Sb	13 38 10.9	+0.7
ROTM	Rocchetta Tana	0.74	345	P	Pb	13 38 01.5	+0.5
ROTM				S	Sg	13 38 11.8	+0.8
ROTM				AML	AML		
	comp=E,1270μm,1.6s						
ROTM				AML	AML		
	comp=N,1630μm,0.4s						
ROTM				AML	AML		
	comp=N,1635μm,0.4s						
ROTM				AML	AML		
	comp=E,1275μm,1.6s						
ROTM	Rocchetta Tana	0.74	345	P	Pb	13 38 01.4	+0.5
ROTM				S	Sg	13 38 11.6	+0.5
SAOF	Saorge	0.79	260	Pg	Pb	13 38 01.8	+0.1
SAOF				Sg	Sb	13 38 12.7	+0.7
SAOF	Saorge	0.79	260	P	Pb	13 38 01.7	+0.1
SAOF				S	Sb	13 38 13.0	+1.0
BOB	Bobbio (Coli)	0.86	42	P	Pn	13 38 03.9	+0.5
SBF	Sospel	0.90	253	ePg	Pb	13 38 04.2	+0.5
SBF				eSn	Sb	13 38 16.3	+1.0
	comp=E,221nm,0.3s						
STV	Sant Anna di V	0.94	277	P	Pb	13 38 04.8	+0.4
STV	Sant Anna di V	0.94	277	P	Pb	13 38 04.6	+0.2
STV				S	Sb	13 38 16.9	+0.4
DOI	San Damiano	1.06	291	P	Pb	13 38 06.4	0.0
DOI				S	Sb	13 38 20.2	+0.3
DOI				AML	AML		
	comp=E,684μm,0.2s						
DOI				AML	AML		
	comp=N,430μm,0.4s						
MONC	Moncucco Torin	1.07	332	P	Pn	13 38 07.6	+1.0
GRAM	Graiana	1.09	70	P	Pn	13 38 07.5	+0.5
GRAM				AML	AML		
	comp=N,228μm,1.5s						
GRAM				AML	AML		
	comp=E,240μm,1.4s						
EQUI	Equi	1.10	88	P	Pb	13 38 06.9	0.0
ISO	Isola	1.14	273	Pg	Pn	13 38 08.1	+0.5
PZZ	Stroppo	1.15	290	P	Pn	13 38 07.4	-0.4
PZZ				S	Sb	13 38 22.9	+0.4
PZZ				AML	AML		
	comp=N,524μm,1.4s						
PZZ				AML	AML		
	comp=E,596μm,0.3s						
BHB	Bricherasio	1.21	306	P	Pn	13 38 08.0	-0.5
BHB				S	Sb	13 38 24.3	+0.2
BHB				AML	AML		
	comp=N,311μm,0.4s						
BHB				AML	AML		
	comp=E,274μm,0.7s						
VLC	Villacollemand	1.27	88	P	Pg	13 38 10.9	-0.1
VLC				AML	AML		
	comp=N,186μm,1.6s						
VLC				AML	AML		
	comp=E,207μm,1.6s						
SARO	Sassorosso	1.28	87	P	Pn	13 38 09.4	-0.1
CALF	Calern	1.29	253	Pg	Pn	13 38 10.3	+0.6
CALF				Sg	Sb	13 38 28.4	+1.9
SURF	Saint Ours	1.35	286	Pn	Pn	13 38 11.8	+1.2
RSP	Reno Superiore	1.41	317	P	Pn	13 38 12.4	+1.1
RSP				S	Sb	13 38 30.7	+0.8
MBDF	Montbardon	1.46	295	ePn	Pn	13 38 12.2	+0.2
MBDF	Montbardon	1.46	295	ePg	Pb	13 38 14.5	+1.3
MBDF				eSn	Sn	13 38 29.7	-1.0
	comp=E,11nm,0.2s						
MBDF				eSg	Sb	13 38 32.6	+1.2
	comp=E,50nm,0.3s						
TRAV	Traversella	1.52	336	AML	AML		
	comp=E,70μm,0.3s						
TRAV				AML	AML		
	comp=N,60μm,1.6s						
OGAG	Argentiere	1.53	283	Pn	Pb	13 38 15.8	+1.3
FRF	La Foret Royal	1.54	249	ePn	Pn	13 38 13.9	+0.8
FRF	La Foret Royal	1.54	249	ePg	Pb	13 38 16.2	+1.7
FRF				eSn	Sn	13 38 31.5	-1.1
FRF				eSg	Sb	13 38 35.2	+1.5
	comp=N,33nm,0.2s						
PGF	Pioggiola	1.61	170	ePn	Pn	13 38 13.0	-1.1
PGF				eSn	Sn	13 38 33.1	-1.2
	comp=N,7.6nm,0.3s						
PGF	Pioggiola	1.61	170	Pg	Pn	13 38 13.0	-1.1
PGF				Sg	Sn	13 38 31.8	-2.5
LMR	La Mourre	1.73	243	ePn	Pn	13 38 15.3	-0.4
LMR	La Mourre	1.73	243	ePg	Pb	13 38 19.3	+1.6
LMR				eSn	Sn	13 38 36.1	-1.2
LMR				eSg	Sb	13 38 40.9	+1.8
	comp=N,22nm,0.3s						
LPG	La Plagne	1.91	316	eP	Pb	13 38 20.6	-0.4
LPG				eSn	Sn	13 38 40.6	-1.5
	comp=N,13nm,0.3s						
LPL	La Plagne	1.93	316	eP	Pb	13 38 20.9	-0.4
LPL				eSn	Sn	13 38 41.2	-1.4
	comp=N,6.6nm,0.3s						
LPL				eSg	Sg	13 38 48.2	-0.6
	comp=N,16nm,0.3s						
RSL	Roselend	2.11	318	Pn	Pb	13 38 24.2	-0.1
RSL				Pg	Pg	13 38 27.2	+0.1
ORIF	Oris-en-Rattie	2.12	293	eP	Pn	13 38 23.5	+2.4
ORIF				eSn	Sn	13 38 45.3	-1.6
	comp=N,6.5nm,0.3s						
ORIF				eSg	Sb	13 38 53.5	+3.2
	comp=N,15nm,0.4s						
ORIF	Oris-en-Rattie	2.12	293	Pn	Pb	13 38 23.8	-0.6
ORIF				Sn	Sb	13 38 50.3	0.0
MAGA	Magasa	2.17	40	P	Pn	13 38 23.8	+2.0
SMRF	Simiane la Rot	2.21	267	eP	Pn	13 38 24.5	+2.2
SMRF	Simiane la Rot	2.21	267	ePg	Pb	13 38 28.2	+2.3
SMRF				eSn	Sn	13 38 47.5	-1.6
	comp=N,4.8nm,0.2s						
SMRF				eSg	Sg	13 38 56.6	-1.0
	comp=N,46nm,0.4s						
VIVF	Saint-Julien-l	2.92	286	eP	Pn	13 38 35.0	+2.9
VIVF				eSn	Sn	13 39 05.1	-1.6
	comp=N,1.2nm,0.2s						
VIVF				eSg	Sg	13 39 18.3	-2.1
	comp=N,2.5nm,0.2s						
HINF	Hinteralfeld	3.89	342	ePn	Pn	13 38 45.1	-0.2
HINF				eSn	Sn	13 39 28.2	-2.3
	comp=N,0.5nm,0.2s						
HAU	Haudompre	4.19	339	ePn	Pn	13 38 48.9	-0.5
HAU				eSn	Sn	13 39 34.7	-3.1
	comp=N,2.3nm,0.2s						
SMF	Signal de Mont	4.21	308	eP	Pn	13 38 52.9	+3.2
SMF				eSn	Sn	13 39 35.2	-3.1
	comp=N,1.7nm,0.3s						
AVF	Avril sur Loir	4.56	307	eP	Pn	13 38 58.1	+3.5
BGF	Bois d'Agland	4.74	303	ePn	Pn	13 38 56.6	-0.5
BGF				eSn	Sn	13 39 48.3	-3.2
	comp=N,0.8nm,0.2s						

WEL 10 13:45:36.3, 38˚8S±0˚7×17˚8E±˚, h32km±1km, M3.4/55, ML3.6/55, MLv3.4/55, Error ellipse: s-maj=0.0km s-min=0.0km az=92.1, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNGZ	Shannon Statio	0.18	280	P	Pb	13 45 42.4	-0.2
SNGZ				S	Sn	13 45 47.4	+0.5
RIGZ	Rimuhau	0.19	56	P	Pn	13 45 43.1	+0.1
KNZ	Kokohu	0.23	158	P	Pn	13 45 43.5	0.0
KNZ				S	Sn	13 45 49.5	+1.4
PRGZ	Paritu Road	0.27	114	P	Pn	13 45 44.3	+0.2
RAGZ	Rawiri	0.34	340	P	Pb	13 45 44.4	-0.2
RAGZ				S	Sn	13 45 50.8	-0.1
WHHZ	Waihua	0.37	224	P	Pn	13 45 45.5	0.0
RAHZ	Arahi	0.39	254	P	Pb	13 45 45.3	+0.1
MHGZ	Mahia Peninsul	0.43	142	P	Pn	13 45 46.7	+0.4
TKGZ	Te Karaka	0.43	31	P	Pn	13 45 46.3	0.0
TKGZ				S	Sn	13 45 53.3	+0.1
MWZ	Matawai	0.48	357	P	Pb	13 45 46.5	-0.1
RTZ	Ruatahuna	0.50	293	P	Pb	13 45 46.5	-0.4
MTHZ	Maungataniwha	0.57	266	P	Pb	13 45 47.7	-0.2
CNGZ	Carnagh Statio	0.60	57	P	Pn	13 45 48.9	+0.3
ARHZ	Aropaoanui	0.63	224	P	Pn	13 45 49.5	+0.4
NMHZ	Naumai	0.66	244	P	Pn	13 45 49.7	+0.2
URZ	Urewera	0.66	327	P	Pb	13 45 48.9	-0.5
MUGZ	Murupara	0.71	298	P	Pn	13 45 49.7	-0.4
RUGZ	Raukumara Rang	0.85	6	P	Pn	13 45 51.9	-0.3
MRHZ	Matea Rd	0.90	268	P	Pn	13 45 52.9	+0.1
BKZ	Black Stump Fm	0.91	247	P	Pn	13 45 53.0	+0.1
PUZ	Puketiti	0.92	37	P	Pn	13 45 52.8	-0.2
MCHZ	McNeill Hill	0.92	227	P	Pn	13 45 53.4	+0.3
CKHZ	Cape Kidnapper	0.93	204	P	Pn	13 45 52.8	-0.4
RRRZ	Republican Roa	0.95	300	P	Pn	13 45 53.4	-0.1
EDRZ	Edgecumbe	0.96	317	P	Pn	13 45 53.4	-0.2
PRRZ	Plateau Road	0.97	288	P	Pn	13 45 53.8	+0.1
ALRZ	Allen Road	0.99	284	P	Pn	13 45 54.1	+0.1
PKGZ	Pakihiroa	1.01	24	P	Pn	13 45 54.7	+0.4
TARZ	Mount Tarawera	1.01	304	P	Pn	13 45 54.5	+0.1
WHRZ	Whale Island	1.06	334	P	Pn	13 45 55.3	+0.3
HAZ	Te Kaha	1.07	9	P	Pn	13 45 55.3	+0.3
KWHZ	Kaweka Forest	1.08	235	P	Pn	13 45 55.2	0.0
MARZ	Manawahe	1.08	319	P	Pn	13 45 55.7	+0.4
HRRZ	Handcock Road	1.09	292	P	Pn	13 45 55.3	-0.1
MKRZ	Makatiti	1.09	308	P	Pb	13 45 56.4	-0.4
HLRZ	Highlands Stat	1.10	300	P	Pn	13 45 55.9	+0.3
KAHZ	Kahuranaki	1.12	208	P	Pn	13 45 55.5	-0.3
WPRZ	Whakapapatarin	1.14	284	P	Pn	13 45 56.1	+0.1
HSRZ	Hossack Road	1.15	295	P	Pn	13 45 56.2	0.0
HATZ	Hinemaiaia	1.15	266	P	Pn	13 45 56.5	+0.2
OMRZ	Omania	1.17	307	P	Pn	13 45 56.3	-0.3
WMGZ	Waiomatatini S	1.20	34	P	Pn	13 45 56.6	-0.3
LIRZ	Lichensteins R	1.23	311	P	Pn	13 45 57.1	-0.2
GRRZ	Galatos Road	1.23	292	P	Pn	13 45 57.6	+0.3
KRHZ	Kereru	1.24	228	P	Pn	13 45 57.2	-0.4
UTU	Utuhina	1.25	300	P	Pn	13 45 58.1	+0.6
OPRZ	Ohinepanea	1.25	320	P	Pn	13 45 56.9	-0.7
WHTZ	Whakaora	1.27	276	P	Pn	13 45 58.1	+0.2
NGRZ	Ngongotaha	1.29	303	P	Pn	13 45 58.4	+0.2
KARZ	Kaharoa	1.30	307	P	Pn	13 45 57.9	-0.5
PXZ	Pawanui	1.33	204	P	Pn	13 45 57.3	-1.4
RITZ	Rihia Road	1.34	262	P	Pn	13 45 59.7	+0.8
BHHZ	Black Hill Sta	1.35	239	P	Pn	13 45 58.9	-0.1
MXZ	Matakaoa Point	1.38	25	P	Pn	13 46 00.0	+0.6
RATZ	Rangitukua	1.40	267	P	Pn	13 46 00.4	+0.7
KUTZ	Kaahu Road	1.40	283	P	Pn	13 45 59.7	0.0
WATZ	Wairara	1.44	274	P	Pn	13 46 00.1	-0.1
KATZ	Kakaramea	1.47	263	P	Pn	13 46 01.0	+0.3
TGRZ	Tauranga	1.49	316	P	Pn	13 46 00.5	-0.4
WPHZ	Waipukurau	1.52	214	P	Pn	13 46 00.5	-0.9
KRVZ	Karewarewa	1.52	259	P	Pn	13 46 01.6	+0.2
PNHZ	Pukenui	1.53	223	P	Pn	13 46 00.6	-0.9
MOVZ	Moawhango	1.53	247	P	Pn	13 46 01.5	0.0
TUVZ	Tukino	1.56	252	P	Pn	13 46 02.1	+0.2
WTVZ	West Tongariro	1.57	258	P	Pn	13 46 02.4	+0.3
NGZ	Ngauruhoe	1.57	256	P	Pn	13 46 02.4	+0.2
KMRZ	Kaimai	1.60	307	P	Pn	13 46 01.8	-0.6
PRHZ	Porangahau	1.62	206	P	Pn	13 46 01.3	-1.4
FWVZ	Far West T-bar	1.63	254	P	Pn	13 46 04.4	+1.4
TRVZ	Turoa	1.64	252	P	Pn	13 46 04.5	+1.3
TLZ	Tolley Road	1.66	286	P	Pn	13 46 03.0	-0.3
TWVZ	Taurewa	1.68	260	P	Pn	13 46 04.3	+0.7
MTVZ	Mangateitei	1.73	250	P	Pn	13 46 04.2	0.0
TSZ	Takapari Road	1.76	224	P	Pn	13 46 03.5	-1.1
PKVZ	Pokaka	1.79	254	P	Pn	13 46 06.3	+1.2
DVHZ	Dannevirke	1.84	216	P	Pn	13 46 04.6	-1.1
ANWZ	Angora Road	1.85	207	P	Pn	13 46 04.1	-1.7
TOZ	Tahuroa Road	1.95	303	P	Pn	13 46 06.5	-0.7
POWZ	Post Office Ro	2.10	221	P	Pn	13 46 07.9	-1.4
BFZ	Birch Farm	2.13	208	P	Pn	13 46 07.6	-2.0
PRWZ	Pori Road	2.13	215	P	Pn	13 46 08.7	-1.0
HIZ	Hauiti	2.14	277	P	Pn	13 46 10.4	+0.6
VRZ	Vera Road	2.21	261	P	Pn	13 46 11.1	+0.3
WAZ	Wanganui	2.21	244	P	Pn	13 46 11.4	+0.6
OHWZ	Ohakea	2.23	231	P	Pn	13 46 11.7	+0.7
TIWZ	Tintock	2.35	213	P	Pn	13 46 11.6	-1.2
MRZ	Mangatainoka R	2.40	219	P	Pn	13 46 11.3	-2.1
HOWZ	Holdsworth Sta	2.61	216	P	Pn	13 46 13.9	-2.5
TMWZ	Te Maipa	2.63	209	P	Pn	13 46 14.1	-2.5
OGWZ	Otaki Gorge	2.72	222	P	Pn	13 46 15.5	-2.4
WIAZ	Waiheke Island	2.79	316	P	Pn	13 46 18.6	-0.1
ETAZ	East Tamaki Re	2.79	311	P	Pn	13 46 20.1	+1.3
KHEZ	Kahui Hut	2.81	259	P	Pn	13 46 22.3	+3.2
PKE	Pukeiti	2.81	261	P	Pn	13 46 21.1	+2.0
MTW	Mount Morrison	2.83	213	P	Pn	13 46 16.4	-2.9
KIW	Kapiti Island	2.89	224	P	Pn	13 46 18.0	-2.2
CAW	Cannon Point	2.99	219	P	Pn	13 46 18.8	-2.7
PAWZ	Paruwai Farm	3.04	212	P	Pn	13 46 19.9	-2.4
PLWZ	Palliser	3.27	212	P	Pn	13 46 22.3	-3.1
DUWZ	D'Urville Isla	3.44	234	P	Pn	13 46 25.7	-2.0
TUWZ	Tuamarina	3.81	226	P	Pn	13 46 29.6	-3.2
WCZ	Waipu Caves	3.85	317	P	Pn	13 46 33.4	+0.2
NNZ	Nelson	4.01	232	P	Pn	13 46 33.1	-2.5
BSWZ	Blackbirch Sta	4.04	223	P	Pn	13 46 33.8	-2.2
QRZ	Quartz Range	4.37	241	P	Pn	13 46 37.8	-2.7
THZ	Tophouse	4.62	229	P	Pn	13 46 41.6	-2.5
OUZ	Omahuta	4.79	317	P	Pn	13 46 46.2	-0.1
GVZ	Greta Valley S	5.38	218	P	Pn	13 46 51.5	-2.9
INZ	Inchbonnie	6.07	228	P	Pn	13 47 00.9	-2.9
MQZ	McQueen's Vall	6.13	216	P	Pn	13 47 01.4	-3.2

KRSC 10 13:46:26.6±1.3, 50˚05N×158˚55E, h80km±33km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.69	293	eP	Pn	13 46 55.2	+0.9
SKR				eS	Sn	13 47 16.8	+1.5
PAU	Pauzhetka	1.80	323	eP	Pn	13 46 58.6	+2.7
PAU				eS	Sn	13 47 21.6	+3.5
ASAK	Asacha	2.38	350	eP	Pn	13 47 06.3	+2.7
ASAK				eS	Sn	13 47 35.1	+3.2
RUS	Russkaya	2.39	359	eP	Pn	13 47 05.6	+1.9
RUS				eS	Sn	13 47 34.2	+2.1
MTVR	Mutnovka	2.45	355	eP	Pn	13 47 07.0	+2.3
KRMR	Karymshinskiy	2.80	355	eP	Pn	13 47 12.1	+2.9
KRMR				eS	Sn	13 47 45.2	+3.2
DALK	Dalny	2.99	2	eP	Pn	13 47 14.1	+2.3
DALK				eS	Sn	13 47 48.9	+2.3
NLC	Nalytchevo	3.17	9	eS	Sn	13 47 52.8	+1.9
UGLR	Uglovaya	3.17	3	eP	Pn	13 47 17.3	+2.9
SPN	Mys Shipunski	3.19	16	eP	Pn	13 47 16.2	+1.7
SPN				eS	Sn	13 47 52.7	+1.2
SMAR	Somma	3.23	3	eP	Pn	13 47 18.2	+3.0
AVH	Avacha	3.23	2	eP	Pn	13 47 17.0	+1.9
AVH				eS	Sn	13 47 54.1	+1.7
KOK	Koryaka	3.25	1	eP	Pn	13 47 18.4	+3.0
KRER	Koryakskii	3.27	2	eP	Pn	13 47 18.0	+2.3
KRX	Arik	3.32	1	eP	Pn	13 47 19.0	+2.6
KRX				eS	Sn	13 47 57.3	+2.5
TUMD	Tumrok D	5.29	12	eP	Pn	13 47 46.2	+3.2
TUMR	Tumrok	5.34	10	eP	Pn	13 47 47.8	+4.0
KMNR	Kamenistaya	5.81	9	eP	Pn	13 47 54.4	+4.2
KBTR	Krutoberegovo	6.69	21	eP	Pn	13 48 04.1	+2.1

ATH 10 14:03:41.8, 38˚20N×20˚38E, h12km, ML2.8/19, Error ellipse: s-maj=1.4km s-min=0.9km az=257.0
THE 10 14:03:42.0, 38˚21N×20˚34E, h8km, ML2.9/18, Error ellipse: s-maj=1.2km s-min=0.5km az=87.0
ISC 10 14:03:42.3±0.9, 38˚20N±0˚02×20˚39E±0˚04, h9km±4km, n60, σ0§73/93, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	187	P	Pg	14 03 44.0	0.0
CHV1				S	Sg	14 03 45.5	+0.4
KEF3	Kipouria, Keph	0.03	271	P	Pg	14 03 44.2	+0.2
KEF3				S	Sg	14 03 45.4	+0.1
LXRA	Lixouri, Kepha	0.04	93	P	Pg	14 03 44.1	0.0
LXRA				S	Sg	14 03 45.5	+0.1
LXR1	Lixouri, Cepha	0.04	93	P	Pg	14 03 44.0	-0.1
LXR1				S	Sg	14 03 45.6	+0.2
ARGA	Argostoli. Kep	0.08	109	P	Pg	14 03 44.5	0.0
ARGA				S	Sg	14 03 46.2	+0.1
ARG2	Argostoli	0.09	107	P	Pg	14 03 44.6	0.0
ARG2				S	Sg	14 03 46.3	+0.1
KEF2	Argostoli. Kep	0.09	115	P	Pg	14 03 44.7	+0.1
KEF2				S	Sg	14 03 46.3	-0.1
VLS	Valsamata	0.16	99	P	Pg	14 03 45.6	-0.2
VLS				S	Sg	14 03 48.2	-0.1
	7μm,0.1s						
VLS	Valsamata	0.16	99	P	Pg	14 03 45.6	-0.2
VLS				S	Sg	14 03 48.0	-0.2
VLS				AML	AML	14 03 48.3	
	comp=N,15370μm,0.1s						
VLS				AML	AML	14 03 48.3	
	comp=E,14081μm,0.1s						
VSK1	VASILIKIADES	0.25	34	P	Pg	14 03 47.2	-0.2
VSK1				S	Sg	14 03 51.5	+0.7
	comp=E,13μm,0.3s						
KONA	Konidatara, Ke	0.27	33	P	Pg	14 03 47.5	-0.2
KONA				S	Sg	14 03 51.8	+0.5
FSK	Fiskardo	0.29	29	P	Pg	14 03 47.9	-0.3
FSK				S	Sg	14 03 52.4	+0.3
	comp=E,3μm,0.2s						
FSK	Fiskardo	0.29	29	P	Pg	14 03 47.9	-0.3
FSK				S	Sg	14 03 52.1	0.0
FSK				AML	AML	14 03 53.0	
	comp=E,7500μm,0.2s						
FSK				AML	AML	14 03 53.8	
	comp=N,3380μm,0.4s						
VLMS	Volimes, Zakyn	0.39	146	P	Pg	14 03 49.9	-0.1
VLMS				S	Sg	14 03 56.0	+0.8
VLMS				AML	AML	14 03 59.0	
	comp=E,7959μm,0.4s						
VLMS				AML	AML	14 04 01.5	
	comp=N,10522μm,0.4s						
EVGI	Lefkada island	0.47	27	P	Pg	14 03 50.8	-0.7
EVGI				S	Sg	14 03 58.6	+1.0
EVGI	Lefkada island	0.47	27	P	Pg	14 03 51.0	-0.4
EVGI				S	Sg	14 03 58.6	+1.0
MGNA	Meganis	0.55	35	P	Pg	14 03 52.4	-0.6
MGNA				S	Sg	14 03 59.9	-0.5
MGNA				AML	AML	14 04 01.3	
	comp=N,3180μm,0.3s						
MGNA				AML	AML	14 04 01.5	
	comp=E,2862μm,0.3s						
ZAK2	Zakynthos	0.58	135	P	Pg	14 03 53.5	0.0
ZAK2				S	Sb	14 04 03.8	+0.9
	comp=E,15μm,0.2s						
LKD2	Lefkada island	0.62	20	P	Pg	14 03 53.3	-1.1
LKD2				S	Sb	14 04 04.2	0.0
	comp=E,475nm,0.4s						
LKD2	Lefkada island	0.62	20	P	Pg	14 03 53.5	-0.8
LKD2				AML	AML	14 04 09.2	
	comp=N,1069μm,0.5s						

LKD2				AML	AML	14 04 10.2	
	comp=E,906μm,0.3s						
KRI1	kERI	0.64	148	P	Pg	14 03 53.9	-0.7
KRI1				S	Sb	14 04 05.0	+0.4
	comp=E,3μm,0.4s						
TSLK	Tsoukalades, L	0.66	19	P	Pg	14 03 54.4	-0.6
TSLK				S	Sb	14 04 05.3	+0.2
	comp=E,480nm,0.6s						
TSLK	Tsoukalades, L	0.66	19	P	Pg	14 03 54.4	-0.6
PDO	Prodromos	0.74	58	P	Pg	14 03 56.4	-0.2
PDO				S	Sb	14 04 08.0	+0.4
	comp=E,2μm,0.3s						
PDO	Prodromos	0.74	58	P	Pg	14 03 55.7	-0.9
PDO				AML	AML	14 04 13.9	
	comp=N,2489μm,0.3s						
PDO				AML	AML	14 04 15.1	
	comp=E,2173μm,0.4s						
RLS	Riolos of Patr	0.86	99	P	Pg	14 03 58.2	-0.8
RLS				S	Sn	14 04 12.4	-0.9
	comp=E,512nm,0.6s						
RLS	Riolos of Patr	0.86	99	P	Pg	14 03 58.2	-0.8
RLS				AML	AML	14 04 14.0	
	comp=N,910μm,0.4s						
RLS				AML	AML	14 04 15.1	
	comp=E,800μm,0.3s						
PVO	Paravola	0.99	65	P	Pg	14 04 00.9	-0.4
PVO				S	Sn	14 04 16.3	0.0
	comp=E,960nm,0.4s						
PVO	Paravola	0.99	65	P	Pg	14 04 00.9	-0.4
PVO				AML	AML	14 04 22.1	
	comp=E,2083μm,0.5s						
PVO				AML	AML	14 04 22.4	
	comp=N,1702μm,0.4s						
DRO	Drossia	1.07	103	P	Pb	14 04 02.1	-1.0
DRO				S	Sn	14 04 20.1	+1.6
	comp=N,1μm,0.3s						
DRO	Drossia	1.07	103	P	Pb	14 04 02.1	-1.0
DRO				AML	AML	14 04 23.6	
	comp=E,2560μm,0.3s						
DRO				AML	AML	14 04 27.0	
	comp=N,1856μm,0.4s						
AMT	Artemida-Makis	1.24	122	P	Pn	14 04 05.2	-0.7
AMT				S	Sb	14 04 22.0	0.0
	comp=N,498nm,0.4s						
AMT	Artemida-Makis	1.24	122	P	Pn	14 04 05.2	-0.7
AMT				AML	AML	14 04 30.6	
	comp=N,861μm,0.6s						
AMT				AML	AML	14 04 36.5	
	comp=E,1022μm,0.4s						
LAKA	Lakka	1.26	88	P	Pn	14 04 05.1	-0.9
LAKA				S	Sg	14 04 23.8	+1.1
	comp=E,272nm,0.5s						
LAKA	Lakka	1.26	88	P	Pn	14 04 05.1	-0.9
LAKA				AML	AML	14 04 26.5	
	comp=N,656μm,0.5s						
LAKA				AML	AML	14 04 32.4	
	comp=E,535μm,0.6s						
ANX	Ano Chora	1.27	72	P	Pn	14 04 05.8	-0.5
ANX				S	Sg	14 04 24.9	+1.8
	comp=E,465nm,0.6s						
ANX	Ano Chora	1.27	72	P	Pn	14 04 05.8	-0.5
ANX				S	Sg	14 04 23.5	+0.4
ANX				AML	AML	14 04 31.6	
	comp=E,854μm,0.5s						
ANX				AML	AML	14 04 37.1	
	comp=N,953μm,0.5s						
EVR	Evrytania	1.32	57	P	Pn	14 04 06.4	-0.6
EVR				AML	AML	14 04 33.3	
	comp=E,268μm,0.7s						
EVR				AML	AML	14 04 40.3	
	comp=N,363μm,0.6s						
IGT	Igoumenitsa	1.33	358	P	Pg	14 04 07.8	0.0
SERG	Sergoula	1.33	80	P	Pn	14 04 06.2	-0.9
SERG				S	Sg	14 04 27.7	+2.5
	comp=N,355nm,0.3s						
SERG	Sergoula	1.33	80	P	Pn	14 04 06.1	-0.9
SERG				AML	AML	14 04 31.7	
	comp=E,546μm,0.3s						
SERG				AML	AML	14 04 33.5	
	comp=N,885μm,0.3s						
TRIZ	Trizonia	1.34	82	P	Pn	14 04 06.6	-0.5
TRIZ				S	Sg	14 04 27.2	+1.9
	comp=N,412nm,0.3s						
TRIZ	Trizonia	1.34	82	P	Pn	14 04 06.4	-0.7
ALIK	Aliki, Aigiali	1.36	87	P	Pn	14 04 07.2	-0.2
KALE	Kalithea	1.39	82	P	Pn	14 04 06.6	-1.3
KALE				S	Sg	14 04 28.2	+1.1
	comp=N,238nm,0.5s						
KALE	Kalithea	1.39	82	P	Pn	14 04 07.4	-0.5
KALE				AML	AML	14 04 34.7	
	comp=N,557μm,0.4s						
KALE				AML	AML	14 04 35.9	
	comp=E,398μm,0.6s						
KLV	Kalavryta, Ach	1.40	96	P	Pn	14 04 07.9	-0.1
KLV				S	Sg	14 04 27.3	-0.1
	comp=E,155nm,0.7s						
KLV	Kalavryta, Ach	1.40	96	P	Pn	14 04 08.0	-0.1
KLV				AML	AML	14 04 37.9	
	comp=N,310μm,0.7s						
KLV				AML	AML	14 04 42.3	
	comp=E,302μm,0.6s						
KEK	Kerkira	1.58	343	P	Pn	14 04 10.4	0.0
MAKR	Makrakomi, Fth	1.59	59	P	Pb	14 04 12.0	+0.2
MAKR				AML	AML	14 04 41.5	
	comp=E,452μm,0.4s						
MAKR				AML	AML	14 04 43.0	
	comp=N,392μm,0.5s						
ITM	Ithomi	1.59	129	P	Pb	14 04 11.7	-0.2
PYL	PYLOS	1.69	140	P	Pn	14 04 12.2	+0.2
AGG	Agios Georgios	1.73	61	P	Pb	14 04 14.7	+0.4
AGG				AML	AML	14 04 45.4	
	comp=E,312μm,0.7s						
AGG				AML	AML	14 04 50.0	
	comp=N,259μm,0.7s						
THL	Klokotos Trika	1.86	43	P	Pb	14 04 16.5	+0.1
AXAR	Agios Charalam	1.87	72	P	Pb	14 04 16.4	-0.2
AXAR				AML	AML	14 04 59.4	
	comp=N,678μm,0.5s						
AXAR				AML	AML	14 05 02.2	
	comp=E,519μm,0.9s						
LTK	Loutraki	2.04	94	P	Pn	14 04 18.0	+1.1
LKR	Lokris	2.10	77	P	Pn	14 04 18.8	+1.2
DYR	Agios Nikonas	2.11	132	P	Pb	14 04 19.8	-1.0
VIL2	Platees	2.27	89	P	Pb	14 04 21.7	-1.7
DID	Didima	2.36	106	P	Pn	14 04 22.1	+0.9

IDC 10 14:04:54.8±2.4,20°.27S×67°.16E,h0km,mb3.9/10, mb1 4.0/10,mb1mx3.7/49,mbtmp3.9/10,MS3.6/4, Ms1 3.6/4,ms1mx3.1/33,Error ellipse: s-maj=73.5km s-min=28.1km az=48.0

NEIC 10 14:04:55.9±0.9,20°.3S±0°.2×67°.1E±0°.2,h10km±2km, mb4.6/5,Error ellipse: s-maj=36.6km s-min=32.7km az=284.0

ISC 10 14:04:56.6±2.4,20°.3S±0°.4×67°.2E±0°.4,h10km,n22, σ0§64/16,mb4.0/13,MS3.7/4,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	13.53	23	T	T	14 21 50.2	
	baz=202,slow=75,SNR=9.3						
H08S2	Diego Garcia H	13.54	23	T	T	14 21 55.3	
	baz=202,slow=75,SNR=10						
H08S3	Diego Garcia H	13.55	23	T	T	14 21 50.3	
	baz=202,slow=75,SNR=10						
CMAR	Chiang Mai Arr	49.48	41	P	P	14 13 48.1	+0.7
	1.8nm,0.9s,baz=237,slow=8.3,SNR=12						
CMAR				LR	LR	14 34 24.3	
	comp=Z,22nm,18.2s,baz=258,slow=36						
UBPT	Khong Chiam	51.58	50	P	P	14 14 03.5	+0.3
UBPT				IAmb	IAmb	14 15 09.2	
	comp=Z,116nm,1.9s						
ASAR	Alice Springs	61.44	107	P	P	14 15 13.6	-0.1
	comp=Z,0.5nm,0.8s,baz=270,slow=5.6,SNR=5.6						
ASAR				LR	LR	14 37 40.4	
	comp=Z,71nm,21.5s,baz=254,slow=32						
WRA	Warramunga Arr	62.60	103	P	P	14 15 22.4	+0.8
	comp=Z,1.1nm,1.0s,baz=258,slow=6.8,SNR=3.2						
MK31	Makanchi Array	68.11	11	P	P	14 15 56.0	-0.5
MK31				IAmb	IAmb	14 18 02.2	
	comp=Z,3.8nm,1.6s						
MKAR	Makanchi Array	68.11	11	P	P	14 15 56.4	-0.1
	comp=Z,0.8nm,0.8s,baz=205,slow=5.4,SNR=10.0						
MKAR	Makanchi Array	68.11	11	P	P	14 15 56.0	-0.5
ABKAR	Akbulak array	69.50	355	P	P	14 16 05.3	+0.2
KURBB	Kurchatov Arra	71.27	8	P	P	14 16 15.9	+0.1
	comp=Z,0.7nm,0.6s,baz=203,slow=6.6,SNR=5.8						
KURK	Kurchatov	71.37	8	P	P	14 16 15.9	-0.5
KURK	Kurchatov	71.37	8	IAmb	IAmb	14 16 26.0	
	comp=Z,4.6nm,1.3s						
BVAR	Borovoye Array	73.02	2	P	P	14 16 26.1	-0.3
	comp=Z,0.9nm,0.8s,baz=167,slow=9.0,SNR=6.1						
ZALV	Zalesovo Beam	75.44	11	P	P	14 16 40.3	-0.1
	comp=Z,1.0nm,0.7s,baz=267,slow=3.0,SNR=5.4						
ZALV				LR	LR	14 46 26.7	
	comp=Z,35nm,19.3s,baz=48,slow=33						
SONM	Songino Array	76.34	26	P	P	14 16 46.0	+0.1
	comp=Z,0.7nm,0.6s,baz=227,slow=6.8,SNR=5.3						
SONM	Songino Array	76.34	26	IAmb	IAmb	14 16 47.4	
	comp=Z,1.1nm,0.9s						
AKASG	Malin Array Be	78.17	336	P	P	14 16 56.5	+0.5
	comp=Z,0.3nm,0.4s,baz=117,slow=5.3,SNR=4.5						
TLY	Talaya	78.40	22	LR	LR	14 49 18.0	
	comp=Z,42nm,18.4s,baz=214,slow=34						
MJAR	Matsushiro Arr	87.58	50	P	P	14 17 43.9	-1.2
	comp=Z,1.2nm,0.7s,baz=218,slow=7.7,SNR=3.3						
MJAR	Matsushiro Arr	87.58	50	P	P	14 17 43.9	-1.2

IDC 10 14:13:30.9±56.0,19°.74S×179°.55E,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.7/22,mbtmp3.9/3,Error ellipse: s-maj=1000.0km s-min=160.4km az=81.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.07	243	P	P	14 20 34.1	-0.3
	1.5nm,0.8s,baz=74,slow=7.4,SNR=3.6						
WRA	Warramunga Arr	42.43	262	P	P	14 21 28.0	+0.3
	0.4nm,0.4s,baz=96,slow=8.0,SNR=6.2						
ASAR	Alice Springs	42.45	256	P	P	14 21 27.6	-0.3
	1.6nm,0.5s,baz=90,slow=8.4,SNR=56						

IDC 10 14:17:23.7±1.8,13°.74N×120°.49E,h0km,mb3.4/4, mb1 3.5/4,mb1mx3.3/35,mbtmp3.4/4,Error ellipse: s-maj=169.7km s-min=27.9km az=66.0

MAN 10 14:17:36.8,13°.73N×120°.51E,h102km,MS3.0

ISC 10 14:17:36.7±0.9,13°.74N±0°.06×120°.52E±0°.06,h114km±7km, n14,σ0§57/20,mb3.4/4,2D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.27	270	eP	Pn	14 17 52.7	-0.1
LUBP				eS	Sn	14 18 05.2	+0.3
LQP	Lukban	1.05	69	⇓iP	Pn	14 17 59.4	+0.3
LQP				i S	Sn	14 18 15.3	-0.5
BOAC	Boac	1.31	102	eP	Pn	14 18 01.1	-0.5
BOAC				eS	Sn	14 18 21.1	+0.7
SJMP	San Jose	1.39	155	eP	Pn	14 18 02.9	+0.4
SJMP				eS	Sn	14 18 22.1	0.0
POLP	Polilio Island	1.69	54	eP	Pn	14 18 06.5	+0.5
BUSP	Coron	1.75	190	eP	Pn	14 18 06.9	0.0
BUSP				eS	Sn	14 18 29.5	-0.2
GQP	Guinayangan	1.88	85	⇓eP	Pn	14 18 09.0	+0.7
OTRP	Odiongan	2.00	133	eP	Pn	14 18 10.7	+0.9
OTRP				eS	Sn	14 18 34.2	-1.0
ENPP	El Nido	2.73	203	eP	Pn	14 18 20.2	+0.8
CUYO	Cuyo Island	2.91	170	eP	Pn	14 18 21.7	0.0
SONM	Songino Array	35.98	344	P	P	14 24 26.0	-0.6
	0.4nm,0.7s,baz=149,slow=8.0,SNR=2.4						
ASAR	Alice Springs	39.41	160	P	P	14 24 55.6	-0.1
	0.2nm,0.5s,baz=334,slow=7.2,SNR=1.9						
MKAR	Makanchi Array	45.90	324	P	P	14 25 48.3	+0.5
	0.4nm,0.6s,baz=129,slow=8.9,SNR=5.2						
KURBB	Kurchatov Arra	50.06	328	P	P	14 26 19.8	0.0
	0.8nm,0.7s,baz=133,slow=7.9,SNR=11						

IDC 10 14:42:26.9±0.8,39°.42N×73°.70E,h0km,mb3.7/11, mb1 3.8/19,mb1mx3.6/44,mbtmp3.6/19,ML2.7/7,MS2.6/1, Ms1 2.6/1,ms1mx2.2/40,Error ellipse: s-maj=14.5km s-min=11.7km az=109.0

SOME 10 14:42:27.3,39°.63N×73°.47E,h15km

BJI 10 14:42:27.8±0.0,39°.59N×73°.72E,h7km,mb3.6/7,ML3.6/6, Ms3.5/5,Ms7 3.3/2

KRNET 10 14:42:29.3±0.1,39°.72N×73°.91E,mb4.0

NNC 10 14:42:31.3±1.9,39°.84N×73°.54E,h0km,mb4.2,mpv4.1, Error ellipse: s-maj=15.0km s-min=7.5km az=174.0

NEIC 10 14:42:35.9±2.9,39°.70N±0°.06×73°.67E±0°.04,h64km±8km, mb4.5/7,Error ellipse: s-maj=9.3km s-min=3.5km az=164.0

ISC 10 14:42:29.4±1.3,39°.71N±0°.04×73°.85E±0°.02,h10km±8km, n122,σ2§19/162,mb3.7/12,31C-24D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.65	96	Pg	Pn	14 42 54.8	-3.8
KSH				Sg	Sn	14 43 13.9	-6.0
KSH				smax	smax		
	comp=N,1μm,0.6s						
KSH				smax	smax		
	comp=E,770nm,0.6s						
ARSB	Arslanbob	1.74	338	⇓eP	Pg	14 43 02.9	0.0
	baz=37						
ARSB				⇓iS	Sg	14 43 25.5	0.0
	baz=37						
ARSB	Arslanbob	1.74	338	Pn	Pg	14 43 02.0	-0.9
ARSB				Sn	Sg	14 43 25.1	-0.4
ARLS	Aral	2.18	9	⇑iP	Pg	14 43 10.8	-0.4
	baz=8.0						
ARLS				⇑iS	Sg	14 43 39.1	-0.4
	baz=8.0						
BTK	Batken	2.36	279	⇑iP	Pb	14 43 11.9	-0.1
	baz=79						
BTK				⇑iS	Sb	14 43 41.2	0.0
	baz=79						
BTK	Batken	2.36	279		Pb	14 43 11.5	-0.5
NRN	Naryn	2.38	43	⇑iP	Pg	14 43 13.8	-1.2
	baz=42						
NRN				⇑iS	Sg	14 43 44.4	-1.4
	baz=42						
NRN	Naryn	2.38	43		Pb	14 43 12.7	+0.2
AML	Almayashu	2.42	357	⇑iP	Pb	14 43 13.8	+0.5
	baz=56						
AML				⇑iS	Sb	14 43 44.4	+1.1
	baz=56						
AML	Almayashu	2.42	357	P	Pb	14 43 13.8	+0.5
	SNR=283						
ARK	Arkit	2.53	326	⇓iP	Pb	14 43 14.2	-0.8
	baz=25						
ARK				⇓iS	Sb	14 43 45.2	-1.0
	baz=25						
UCH	Uchtor	2.56	11	⇑iP	Pb	14 43 16.4	+0.6
	baz=10.0						
UCH				⇑iS	Sb	14 43 48.3	+0.8
	baz=10.0						
UCH	Uchtor	2.56	11	P	Pb	14 43 16.2	+0.4
	SNR=157						
KZA	Kyzart	2.59	24	⇓iP	Pb	14 43 16.9	+0.7
	baz=23						
KZA				⇓iS	Sb	14 43 49.3	+1.0
	baz=23						
KZA	Kyzart	2.59	24	P	Pg	14 43 18.3	-0.9
	SNR=25						
EKS2	Erkin-Say	2.95	359	⇓eP	Pb	14 43 21.2	-0.9
	baz=58						
EKS2				⇓eS	Sb	14 43 56.6	-1.7
	baz=58						
EKS2	Erkin-Say	2.95	359	P	Pb	14 43 21.8	-0.3
	SNR=44						
AAK	Ala-Archa	2.96	9	Pn	Pb	14 43 22.6	+0.2
	7.5nm,0.3s,baz=155,slow=8.2,SNR=54						
AAK				Sn	Sg	14 44 03.5	-1.2
	15nm,0.3s,baz=283,slow=21,SNR=12						
AAK				Lg	Lg	14 44 08.9	
	26nm,0.3s,baz=280,slow=18,SNR=8.9						
AAK				LR	LR	14 44 44.2	
	comp=Z,100nm,21.7s,baz=204,slow=42						
AAK	Ala-Archa	2.96	9	⇑eP	Pb	14 43 21.5	-0.9
	baz=8.0						
AAK				⇑eS	Sb	14 43 57.5	-1.2
	baz=8.0						
AAK	Ala-Archa	2.96	9	P	Pb	14 43 22.1	-0.3
	SNR=52						
AAK	Ala-Archa	2.96	9	Pg	Pb	14 43 23.6	+1.2
	40nm,0.6s						
AAK				Lg	Lg	14 44 06.9	
	131nm,0.6s						
AAK	Ala-Archa	2.96	9		Pb	14 43 20.8	-1.6
KBK	Karagaybulak	3.06	15	⇑eP	Pb	14 43 23.1	-0.9
	baz=15						
KBK				⇑iS	Sb	14 43 59.8	-1.6
	baz=15						
KBK	Karagaybulak	3.06	15	P	Pb	14 43 23.8	-0.2
	SNR=50						
MRKS	Merke	3.07	351	eP	Pb	14 43 23.4	-0.7
	18nm,0.2s						
MRKS				eS	Sb	14 44 03.7	+2.0
	126nm,0.3s						
MRKS	Merke	3.07	351	Pg	Pb	14 43 22.6	-1.5
	18nm,0.2s						
MRKS				Lg	Lg	14 44 02.3	
	126nm,0.3s						
ULHL	Ulahol	3.11	35	⇑iP	Pb	14 43 24.3	-0.7
	baz=34						
ULHL				⇑iS	Sb	14 44 02.3	-0.8
	baz=34						
ULHL	Ulahol	3.11	35	P	Pb	14 43 25.8	+0.8
	SNR=8.9						
BOOM	Boomskoye usch	3.19	29	⇑iP	Pb	14 43 25.4	-0.9
	baz=28						
BOOM				⇑iS	Sb	14 44 04.6	-0.8
	baz=28						
BOOM	Boomskoye usch	3.19	29	Pn	Pb	14 43 25.1	-1.3
CHMS	Chumysh	3.35	11	⇓eP	Pb	14 43 26.9	-2.1
	baz=11						
CHMS				⇓eS	Sb	14 44 06.7	-3.1
	baz=11						
CHMS	Chumysh	3.35	11	P	Pb	14 43 27.2	-1.8
	SNR=22						
CHMS	Chumysh	3.35	11	⇓Pg	Pb	14 43 30.3	+1.3
	33nm,0.6s						
CHMS				⇓Lg	Lg	14 44 19.9	
	30nm,0.5s						
KDJ	Kajisay	3.49	45	⇑iP	Pb	14 43 29.8	-1.6
	baz=45						
KDJ				⇑iS	Sb	14 44 12.0	-2.0
	baz=45						
KDJ	Kajisay	3.49	45		Pb	14 43 29.3	-2.2
USP	Ospenovka	3.59	8	P	Pb	14 43 29.4	-3.5
	SNR=12						
JBG	Jabagly	3.69	318	Pg	Pb	14 43 32.1	-2.6
	7.3nm,0.2s						
JBG				Lg	Lg	14 44 18.7	
	73nm,0.3s						
KST	Kastek	3.69	25	eP	Pg	14 43 37.8	-2.3
	12nm,0.2s						
KST				eS	Sg	14 44 28.8	+0.9
	119nm,0.4s						
KST	Kastek	3.69	25	Pg	Pg	14 43 37.8	-2.3
	12nm,0.2s						
KST				Lg	Lg	14 44 28.8	
	119nm,0.4s						
DZA	Taraz	3.70	330	eP	Pb	14 43 31.8	-3.1
	26nm,0.1s						
DZA				eS	Sb	14 44 18.0	-1.8
	164nm,0.2s						
DZA	Taraz	3.70	330	Pg	Pb	14 43 31.8	-3.1
	26nm,0.1s						
DZA				Lg	Lg	14 44 18.0	
	164nm,0.2s						
IUG	Iuzhnay	3.78	311	eP	Pb	14 43 32.5	-3.7
	4.7nm,0.2s						
IUG				eS	Sb	14 44 19.4	-2.8
	366nm,0.2s						
IUG	Iuzhnay	3.78	311	Pg	Pb	14 43 32.5	-3.7
	4.7nm,0.2s						
IUG				Lg	Lg	14 44 19.4	
	366nm,0.2s						
DGS	Degeres	3.81	22	eP	Pg	14 43 41.1	-1.4
	19nm,0.3s						
DGS				eS	Sg	14 44 34.0	+2.2
	68nm,0.4s						
DGS	Degeres	3.81	22	Pg	Pg	14 43 41.1	-1.4
	19nm,0.3s						
DGS				Lg	Lg	14 44 34.0	
	68nm,0.4s						
IZV	Izvestkoviy	3.92	31	eP	Pg	14 43 42.8	-1.7
	21nm,0.3s						
IZV				eS	Sg	14 44 37.0	+1.7
	97nm,0.4s						
IZV	Izvestkoviy	3.92	31	Pg	Pg	14 43 42.8	-1.7
	21nm,0.3s						
IZV				Lg	Lg	14 44 37.0	
	97nm,0.4s						
MTBS	Maitube	3.93	29	eP	Pg	14 43 42.5	-2.1
	7.9nm,0.1s						
MTBS				eS	Sg	14 44 37.0	+1.5
	52nm,0.3s						
MTBS	Maitube	3.93	29	Pg	Pg	14 43 42.5	-2.1
	7.9nm,0.1s						
MTBS				Lg	Lg	14 44 37.0	
	52nm,0.3s						
TNSS	Tian-Shan	4.06	34	eP	Pg	14 43 45.3	-1.9
	14nm,0.3s						
TNSS				eS	Sg	14 44 41.6	+1.8
	59nm,0.3s						
TNSS	Tian-Shan	4.06	34	Pg	Pg	14 43 45.3	-1.9
	14nm,0.3s						
TNSS				Lg	Lg	14 44 41.6	
	59nm,0.3s						
CHM	Chimkent	4.14	310	eP	Pb	14 43 40.2	-2.1
	215nm,0.1s						
CHM				eS	Sb	14 44 32.2	-0.1
	189nm,0.2s						
AAA	Alma-Ata	4.19	32	eP	Pg	14 43 47.7	-1.9
	11nm,0.0s						
AAA				eS	Sg	14 44 46.0	+2.2
	44nm,0.0s						
AAA	Alma-Ata	4.19	32	Pg	Pg	14 43 47.7	-1.9
	11nm,0.0s						
AAA				Lg	Lg	14 44 46.0	
	44nm,0.0s						
MDOK	Medeo	4.21	34	eP	Pg	14 43 47.5	-2.5
	7.6nm,0.4s						
MDOK				eS	Sg	14 44 45.3	+0.9
	40nm,0.5s						
MDOK	Medeo	4.21	34	⇑Pg	Pg	14 43 51.0	+1.1
	29nm,0.7s						
MDOK				⇓Lg	Lg	14 44 42.5	
	42nm,0.8s						
MDOK	Medeo	4.21	34	Pg	Pg	14 43 47.5	-2.5
	7.6nm,0.4s						
MDOK				Lg	Lg	14 44 45.3	
	40nm,0.5s						
ANVS	Anan'yevo	4.21	42	⇓eP	Pb	14 43 39.2	-4.4
	baz=42						
ANVS				⇓iS	Sb	14 44 29.2	-5.3
	baz=42						
KRBS	Karabastau	4.21	18	eP	Pg	14 43 48.0	-2.1
	18nm,0.2s						
KRBS				eS	Sg	14 44 45.5	+0.9
	42nm,0.4s						
KNDC	Almaty	4.21	33	⇑Pg	Pg	14 43 48.1	-2.0
	34nm,0.6s						
KNDC				⇓Lg	Lg	14 44 44.0	
	94nm,0.8s						
KK31	Karatay Array	4.22	325	⇑Pn	Pn	14 43 37.7	+4.0
	1.3nm,0.2s,baz=130,slow=14,SNR=74						
KK31				⇓Sn	Sn	14 44 25.7	+2.7
	17nm,0.3s,baz=138,slow=28,SNR=7.5						
KK31				⇓Lg	Lg	14 43 43.2	
	46nm,0.6s,baz=149,slow=24,SNR=4.5						
KK31	Karatay Array	4.22	325		Pn	14 43 36.5	+2.8
KKAR	Karatay Array	4.22	325		Pn	14 43 37.1	+3.4
KKAR	Karatay Array	4.22	325		Pn	14 43 36.8	+3.1
KOTS	Kotyrbulak	4.29	34	eP	Pg	14 43 50.1	-1.5
	33nm,0.5s						
KOTS				eS	Sg	14 44 49.1	+1.9
	235nm,0.5s						
PRZ	Przheval'sk	4.42	50		Pg	14 43 43.8	-3.3
KTBS	Karatobe	4.53	27	eP	Pg	14 43 53.7	-2.4
	8.5nm,0.4s						
KTBS				eS	Sg	14 44 55.3	+0.6
	80nm,0.4s						
KUU	Kurty	4.58	23	eP	Pg	14 43 54.0	-3.0
	2.9nm,0.1s						
KUU				eS	Sg	14 44 56.3	0.0
	75nm,0.4s						
KUU	Kurty	4.58	23	Pg	Pg	14 43 54.0	-3.0
	2.9nm,0.1s						
KUU				Lg	Lg	14 44 56.3	
	75nm,0.4s						
KURS	Kuram	4.97	39	eP	Pg	14 44 01.9	-2.7
	11nm,0.5s						

KURS eS Sg 14 45 10.0 +0.9
17nm,0.4s
KURS Kuram 4.97 39 Pg Pg 14 44 01.9 -2.7
11nm,0.5s
KURS Lg Lg 14 45 10.0
17nm,0.4s
BTLS Baital 5.33 1 eP Pg 14 44 07.0 -4.5
0.3nm,0.1s
BTLS eS Sg 14 45 18.2 -2.3
9.3nm,0.2s
PDGK Podgornoye 5.57 48 ⇓Pn Pn 14 43 56.3 +3.9
6.1nm,0.7s
PDGK ⇑Pg Pg 14 44 16.6 +0.6
18nm,1.1s
PDGK ⇑Lg Lg 14 45 28.9
26nm,1.0s
CHCP Chirah Chowk 6.06 185 P Pn 14 44 02.3 +3.2
NIL Nilore 6.07 185 Pn 14 44 02.4 +3.2
CEP Cherat 6.08 195 P Pn 14 44 02.0 +2.6
CEP S Sn 14 45 11.0 +1.9
KBL Kabul 6.43 218 Pn 14 44 07.1 +2.8
THW Thamme Wali 7.11 194 P Pn 14 44 14.5 +1.0
THN Thein Dam 7.42 168 eP Pn 14 44 21.5 +3.9
THN eS Sn 14 45 44.5 +2.7
DHRM DHARAMSHALA 7.70 164 eP Pn 14 44 23.9 +2.1
DHRM eS Sn 14 45 48.6 -0.7
DHRM IAML 14 45 55.0
comp=E,68nm,0.2s
DHRM IAML 14 45 55.5
comp=N,32nm,0.3s
SMLA Simla 8.98 161 eP Pn 14 44 39.4 +0.3
SMLA eS Sn 14 46 16.7 -3.5
SMLA IAML 14 46 21.0
comp=N,33nm,0.4s
SMLA IAML 14 46 21.6
comp=E,22nm,0.4s
MAKZ Makanchi 9.24 37 ⇑Pn Pn 14 44 46.9 +4.2
comp=E,2.5nm,1.1s
MAKZ ⇑Lg Lg 14 47 25.5
comp=E,2.8nm,0.9s
MAKZ Makanchi 9.24 37 Pn Pn 14 44 46.7 +4.0
MK31 Makanchi Array 9.38 38 ⇑Pn Pn 14 44 49.7 +5.2
comp=E,1.3nm,0.7s,baz=225,slow=13,SNR=3.7
MK31 ⇑Lg Lg 14 47 32.1
comp=E,2.4nm,0.8s,baz=15,slow=15,SNR=4.0
MK31 Makanchi Array 9.38 38 Pn 14 44 50.8 +6.2
MKAR Makanchi Array 9.38 38 Pn Pn 14 44 50.3 +5.8
comp=E,0.1nm,0.3s,baz=225,slow=18,SNR=6.6
MKAR Lg Lg 14 47 33.7
comp=E,0.2nm,0.3s,baz=227,slow=23,SNR=5.6
JOSI Joshimath 10.26 151 eP Pn 14 44 57.7 +0.9
JOSI eS Sn 14 46 48.2 -3.7
JOSI IAML 14 46 55.7
comp=E,74nm,0.7s
JOSI IAML 14 46 57.9
comp=N,41nm,0.5s
WMQ Urumqi 11.12 64 eP Pn 14 45 12.8 +4.3
WMQ pmax pmax
comp=N,6.0nm,0.7s
WMQ LR LR
comp=N,780nm,29.0s
KURBB Kurchatov Arra 11.40 15 Pn Pn 14 45 14.4 +2.2
comp=N,0.0nm,0.3s,baz=200,slow=12,SNR=3.6
KURBB Lg Lg 14 48 31.1
comp=N,0.1nm,0.3s,baz=211,slow=30,SNR=6.6
KURBB Kurchatov Arra 11.40 15 ⇓Lg Lg 14 48 33.7
comp=N,9.0nm,0.9s
KURK Kurchatov 11.51 15 ⇓Lg Lg 14 48 39.9
comp=N,23nm,1.4s
KURK Kurchatov 11.51 15 Pn 14 45 14.4 +0.8
GEYT Alibeck 12.40 267 Pn Pn 14 45 24.1 -1.9
comp=N,0.3nm,0.3s,baz=69,slow=17,SNR=3.4
GEYT Sn Sn 14 47 38.4 -5.8
comp=N,0.2nm,0.3s,baz=69,slow=20,SNR=2.5
BVAR Borovoye Array 13.53 351 Pn Pn 14 45 42.1 +0.8
comp=N,0.1nm,0.3s,baz=156,slow=11,SNR=11
BVAR Lg Lg 14 49 39.3
comp=N,0.2nm,0.3s,baz=167,slow=27,SNR=3.6
BRVK Borovoye 13.57 351 ⇓P Pn 14 45 45.6 +3.8
comp=N,3.1nm,0.7s
BRVK Borovoye 13.57 351 Pn 14 45 42.4 +0.6
AB31 Akbulak array 13.75 319 ⇑P Pn 14 45 46.6 +2.3
comp=N,0.5nm,0.3s,baz=126,slow=14,SNR=19
AB31 ⇑S Sn 14 48 20.0 +3.0
comp=N,1.0nm,0.3s,baz=128,slow=25,SNR=10
ABKAR Akbulak array 13.75 319 Pn 14 45 45.0 +0.7
AKTO Aktyubinsk 15.46 319 Pn Pn 14 46 05.5 -1.9
comp=N,0.1nm,0.3s,baz=116,slow=15,SNR=2.9
AKTO Sn Sn 14 48 54.1 -4.5
comp=N,0.2nm,0.3s,baz=327,slow=20,SNR=2.3
AKTO Aktyubinsk 15.46 319 ⇓P Pn 14 46 12.1 +0.2
comp=N,3.1nm,0.8s
AKTO ⇓S Sn 14 49 01.6 +3.0
comp=N,1.7nm,0.7s
ZALV Zalesovo Beam 16.07 24 Pn P 14 46 17.6 -1.0
baz=216,slow=12,SNR=2.1
ZALV Zalesovo Beam 16.07 24 Pn Pn 14 46 16.1 +0.8
ARU Arti 19.52 334 P Pn 14 46 59.1 +1.1
comp=N,0.0nm,0.3s,baz=104,slow=4.2,SNR=3.1
ARU Arti 19.52 334 IAmb IAmb 14 47 16.7
comp=Z,15nm,1.8s
GTA Gaotai 20.00 83 eP Pn 14 47 04.2 +0.2
GTA pP sP 14 47 07.5 -0.4
GTA sP pP 14 47 10.2 +4.1
GTA pmax pmax
comp=Z,2.0nm,1.2s
KBZ Khabaz 23.38 290 P P 14 47 36.4 -1.6
comp=Z,1.1nm,0.7s,baz=108,slow=9.6,SNR=2.6
SONM Songino Array 24.72 60 P P 14 47 52.2 +1.3
comp=Z,0.6nm,0.9s,baz=251,slow=9.0,SNR=4.8
FIA1 FINESS Array S 36.18 323 P P 14 49 32.9 +1.2
FIA1 IAmb IAmb 14 49 56.1
comp=Z,28nm,1.4s
FINES FINESS Array B 36.18 323 P P 14 49 32.0 +0.3
comp=Z,0.9nm,0.4s,baz=108,slow=9.0,SNR=14
FINES FINESS Array B 36.18 323 P P 14 49 32.8 +1.1
ARCES ARCESS Array B 39.10 335 P P 14 49 57.5 +1.1
comp=Z,1.5nm,0.7s,baz=108,slow=10,SNR=5.3
GERES GERESS Array B 43.00 303 P P 14 50 29.1 +0.3
comp=Z,0.4nm,0.6s,baz=55,slow=8.5,SNR=5.2
NC303 NORSAR Array S 43.17 321 P P 14 50 30.7 +0.8
NB2 NORSAR Subarra 43.24 321 P P 14 50 30.9 +0.4
comp=Z,1.1nm,0.6s,baz=90,slow=7.9
NOA NORSAR Array B 43.24 321 P P 14 50 30.9 +0.4
comp=Z,0.4nm,0.5s,baz=92,slow=7.6,SNR=3.1
NC204 NORSAR Array S 43.46 321 P P 14 50 32.7 +0.4
TORD Torodi Ar. Bea 68.03 269 P P 14 53 27.3 -2.0
comp=Z,0.7nm,0.6s,baz=43,slow=5.7,SNR=8.2
TORD Torodi Ar. Bea 68.03 269 P P 14 53 27.2 -2.0
ILAR Eielson Array 71.07 17 P P 14 53 47.5 +0.2
comp=Z,0.2nm,0.7s,baz=323,slow=6.4,SNR=4.5
YKA Yellowknife Ar 77.92 4 P P 14 54 27.5 +0.5
comp=Z,0.3nm,0.6s,baz=349,slow=5.6,SNR=4.5
WRA Warramunga Arr 81.85 124 P P 14 54 47.6 -1.3
comp=Z,1.3nm,0.7s,baz=324,slow=5.1,SNR=8.4
ASAR Alice Springs 84.31 127 P P 14 55 00.4 -1.2
comp=Z,0.6nm,0.6s,baz=310,slow=5.3,SNR=13

IDC 10 15:41:44.6±2.3, 2°.57N×123°.44E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/43, mbtmp3.3/3, Error ellipse: s-maj=341.3km s-min=27.7km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.80	155	P	P	15 47 09.0	+0.4
	0.3nm,0.5s,baz=335,slow=9.7,SNR=5.0						
ASAR	Alice Springs	28.00	159	P	P	15 47 37.1	-0.4
	0.2nm,0.8s,baz=332,slow=8.7,SNR=6.9						
MKAR	Makanchi Array	56.69	327	P	P	15 51 29.9	-0.1
	0.2nm,0.4s,baz=122,slow=7.6,SNR=4.4						

IDC 10 15:45:54.5±0.9, 25°.62N×125°.50E, h0km, mb3.5/6, mb1 3.7/7, mb1mx3.5/44, mbtmp3.5/7, ML2.8/1, MS3.2/8, Ms1 3.2/8, ms1mx3.0/30, Error ellipse: s-maj=25.9km s-min=21.2km az=82.0
JMA 10 15:45:55.5±0.3, 25°.80N×125°.48E, h17km±4km, M3.7
ISC 10 15:45:56.0±1.8, 25°.73N±0°.07×125°.48E±0°.07, h9km±12km, n33, σ1°.00/33, mb3.6/6, MS3.3/6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	Ikemajima	0.83	195	P	Pb	15 46 12.3	-0.3
JIKM				eS	Sb	15 46 24.4	+0.5
JIRB	Irabujima	0.94	197	P	Pg	15 46 13.9	-0.2
JIRB				S	Sg	15 46 26.6	+0.3
JOGS	Gusukube	0.97	184	P	Pg	15 46 14.6	0.0
JOGS				eS	Sb	15 46 28.4	+0.5
JMJ2	Miyako jima3	1.00	188	P	Pg	15 46 15.0	-0.1
JMJ2				eS	Sg	15 46 28.9	+0.8
JTJ	Tarama	1.30	213	P	Pn	15 46 20.1	-0.2
JTJ				eS	Sn	15 46 37.9	+0.1
JKE	Kume jima 2	1.31	63	P	Pn	15 46 18.4	-2.1
JKE				eS	Sb	15 46 35.7	-2.1
JISG	Ishigakijimahi	1.56	223	P	Pn	15 46 23.4	-0.5
JISG				eS	Sn	15 46 43.1	-1.1
JAGN	Aguni-jima	1.80	61	P	Pn	15 46 26.7	-0.5
JIJ	Ishigaki jima	1.83	222	P	Pn	15 46 27.1	-0.5
JKRS	Kuro-shima	2.00	222	P	Pn	15 46 30.0	0.0
JKRS				S	Sn	15 46 55.3	+0.1
JJT3	Tamagusuku3	2.11	78	P	Pn	15 46 31.6	+0.1
IRIF	Iriomote-Funau	2.11	229	P	Pn	15 46 31.9	+0.4
JNTH	Nagotoyohara	2.41	70	P	Pn	15 46 34.9	-0.8
JIH	Iheya	2.58	59	P	Pn	15 46 38.5	+0.6
JOW	Kunigami	2.73	66	P	Pn	15 46 41.6	+1.5
JOW	Kunigami	2.73	66	Pn	Pn	15 46 41.0	+0.9
	2.6nm,0.3s,baz=158,slow=13,SNR=13						
JOW				Sn	Sn	15 47 16.1	+2.8
	8.2nm,0.3s,baz=98,slow=17,SNR=7.9						
JYRO	Yoronjima	2.96	64	P	Pn	15 46 43.0	-0.1
KSRS	Korea Array	11.87	9	LR	LR	15 53 22.9	
	comp=Z,89nm,18.3s,baz=198,slow=38						
MJAR	Matsushiro Arr	15.31	42	LR	LR	15 56 13.6	
	comp=Z,43nm,18.2s,baz=130,slow=40						
GUMO	Guam	21.85	120	LR	LR	15 57 28.1	
	comp=Z,40nm,20.4s,baz=306,slow=32						
CMAR	Chiang Mai Arr	25.60	259	LR	LR	16 02 05.3	
	comp=Z,26nm,19.1s,baz=245,slow=38						
SONM	Songino Array	26.70	331	P	P	15 51 37.1	+1.5
	2.2nm,0.9s,baz=150,slow=10,SNR=8.7						
SONM				LR	LR	16 03 42.8	
	comp=Z,82nm,18.8s,baz=20,slow=40						
H11S3	WAKE ISLAND Hy	38.73	92	T	T	16 33 54.9	
	baz=283,slow=74						
H11S1	WAKE ISLAND Hy	38.73	92	T	T	16 33 56.0	
	baz=283,slow=74						
H11S2	WAKE ISLAND Hy	38.74	92	T	T	16 33 56.7	
	baz=283,slow=74						
MKAR	Makanchi Array	40.05	313	P	P	15 53 32.0	+0.6
	0.4nm,0.7s,baz=94,slow=11,SNR=4.6						
MKAR				PcP	PcP	15 55 35.8	-0.5
	0.3nm,0.7s,baz=90,slow=2.8,SNR=3.5						
ZALV	Zalesovo Beam	41.18	324	LR	LR	16 10 08.9	
	comp=Z,36nm,19.4s,baz=86,slow=35						
WRA	Warramunga Arr	46.21	168	P	P	15 54 20.4	-1.1
	0.8nm,0.7s,baz=350,slow=8.5,SNR=5.5						
ASAR	Alice Springs	49.78	170	P	P	15 54 48.3	-0.8
	0.2nm,0.6s,baz=356,slow=13,SNR=6.5						
ILAR	Eielson Array	66.04	28	P	P	15 56 42.9	+0.1
	0.2nm,0.6s,baz=246,slow=5.0,SNR=4.1						
SPITS	Spitsbergen Ar	68.80	348	LR	LR	16 30 03.1	
	comp=Z,46nm,18.9s,baz=215,slow=38						
BRTR	Keskin Array B	75.38	307	LR	LR	16 32 47.9	
	comp=Z,18nm,18.2s,baz=284,slow=37						
YKA	Yellowknife Ar	80.00	24	P	P	15 58 05.5	0.0
	0.4nm,0.5s,baz=300,slow=5.8,SNR=4.5						

IDC 10 15:49:31.3±1.8, 28°.54S×177°.48W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.5/24, mbtmp3.4/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/12, Error ellipse: s-maj=30.4km s-min=21.6km az=93.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.80	208	Pn	Pn	15 49 50.0	+0.1
	180nm,0.3s,baz=359,slow=22,SNR=6.8						
RAO				Sn	Sn	15 50 02.1	-0.5
	1μm,0.3s,baz=24,slow=22,SNR=13						
DZM	Mont Dzumac	15.89	290	LR	LR	15 58 17.2	
	comp=Z,55nm,19.9s,baz=38,slow=33						
ASAR	Alice Springs	43.69	265	P	P	15 57 38.4	0.0
	0.2nm,0.4s,baz=103,slow=7.6,SNR=5.1						
WRA	Warramunga Arr	44.51	270	P	P	15 57 46.5	+1.6
	0.3nm,0.5s,baz=108,slow=8.0,SNR=4.7						
AKASG	Malin Array Be	150.07	325	PKPbc	PKPbc	16 09 22.1	-1.5
	0.5nm,0.5s,baz=44,slow=2.4,SNR=3.0						

NEIC 10 15:49:39.4±2.3, 15°.1S±0°.1×167°.45E±0°.10, h120km±5km, mb4.7/16, Error ellipse: s-maj=15.6km s-min=13.5km az=193.0
IDC 10 15:49:41.8±3.1, 15°.23S×167°.47E, h142km±23km, mb3.7/8, mb1 3.8/10, mb1mx3.6/32, mbtmp4.2/10, Error ellipse: s-maj=30.6km s-min=17.6km az=73.0
ISC 10 15:49:40.1±0.7, 15°.18S±0°.08×167°.51E±0°.09, h129km, n37, σ1°.31/36, mb4.4/11, 2C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.40	228	Pn	Pn	15 49 56.8	-1.8
DZM	Mont Dzumac	6.93	188	P	Pn	15 51 19.6	+0.3
	3.8nm,0.3s,baz=85,slow=16,SNR=45						
DZM				S	Sn	15 52 38.1	+1.3
	4.5nm,0.3s,baz=137,slow=20,SNR=12						
DZM	Mont Dzumac	6.93	188	Pn	Pn	15 51 19.4	+0.1
NOUC	Port Laguerre	6.98	189	Pn	Pn	15 51 20.8	+0.9
HNR	Honiara	9.34	307	P	Pn	15 51 53.1	+1.4
	3.5nm,0.3s,baz=170,slow=18,SNR=4.4						
HNR				S	Sn	15 53 37.5	+2.5
	2.7nm,0.3s,baz=17,slow=20,SNR=2.4						
HNR	Honiara	9.34	307	Pn	Pn	15 51 51.8	+0.1
MSVF	Nonsavu	10.42	106	Pn	Pn	15 52 07.4	+1.1
EIDS	Eidsvold	18.43	234	Pn	Pn	15 53 47.5	+0.1
EIDS				IAmb	IAmb	15 53 49.5	
	comp=Z,22nm,1.4s						
CTA	Charters Tower	20.83	253	P	Pn	15 54 13.7	-1.8
	comp=Z,2.7nm,0.7s,baz=76,slow=14,SNR=4.3						
BKZ	Black Stump Fm	25.17	163	P	P	15 54 54.3	+0.8
CAN	Canberra	26.04	216	P	P	15 55 01.3	-0.2
CAN				IAmb	IAmb	15 55 17.9	
	comp=Z,38nm,1.6s						
LTZ	Lake Taylor	27.81	172	P	P	15 55 14.9	-2.3
STKA	Stephens Creek	28.89	230	P	P	15 55 27.7	+0.9
	comp=Z,5.7nm,0.3s,baz=53,slow=9.8,SNR=38						
STKA	Stephens Creek	28.89	230	P	P	15 55 27.5	+0.7
WR0	Warramunga Arr	31.76	257	P	P	15 55 50.6	-1.7
WR0				IAmb	IAmb	15 56 58.9	
	comp=Z,34nm,1.8s						
WB0	Warramunga Arr	31.89	257	P	P	15 55 52.1	-1.3
WB2	Warramunga Arr	31.93	257	P	P	15 55 52.0	-1.8
WB2				IAmb	IAmb	15 56 19.4	
	comp=Z,38nm,1.9s						
WRAB	Tennant Creek	31.94	257	P	P	15 55 52.1	-1.8
WRA	Warramunga Arr	31.95	257	P	P	15 55 52.4	-1.6
	comp=Z,1.2nm,0.6s,baz=84,slow=8.6,SNR=8.8						
AS31	Alice Springs	32.73	250	P	P	15 55 59.9	-1.0
ASAR	Alice Springs	32.73	250	P	P	15 55 59.8	-1.1
	comp=Z,4.5nm,0.6s,baz=80,slow=9.2,SNR=68						
ASAR	Alice Springs	32.73	250	P	P	15 55 59.2	-1.7
BBOO	Buckleboo	33.49	233	P	P	15 56 07.7	+0.4
BBOO				IAmb	IAmb	15 56 09.0	
	comp=Z,18nm,1.0s						
KNRA	Kununurra	37.32	264	P	P	15 56 37.1	-3.1
FORT	Forrest	39.27	240	P	P	15 56 56.3	-0.1
FITZ	Fitzroy Crossi	40.16	260	P	P	15 57 03.8	-0.2
	comp=Z,1.8nm,0.5s,baz=76,slow=8.3,SNR=4.0						
NWAO	Narrogin (SRO)	48.72	239	P	P	15 58 11.3	-0.4
CMAR	Chiang Mai Arr	75.34	294	P	P	16 01 10.8	+1.0
	comp=Z,0.5nm,0.6s,baz=126,slow=5.1,SNR=4.9						
SONM	Songino Array	82.99	324	P	P	16 01 51.5	+0.5
	comp=Z,0.3nm,0.3s,baz=148,slow=6.9,SNR=4.0						
SONM	Songino Array	82.99	324	IAmb	IAmb	16 01 52.9	
	comp=Z,1.5nm,1.3s						
SYO	Syowa Base	88.34	197	⇓eP	P	16 02 15.3	-1.6
SYO	Syowa Base	88.34	197	⇑ePcP	P	16 02 17.3	+0.4
SYO	Syowa Base	88.34	197	⇑epP	pP	16 02 46.0	-3.7
MKAR	Makanchi Array	97.69	316	P	P	16 03 00.5	+0.1
	comp=Z,0.2nm,0.5s,baz=91,slow=6.3,SNR=7.5						
ARCES	ARCESS Array B	120.74	345	PKP	PKPdf	16 08 16.0	-0.3
	comp=Z,5.2nm,1.0s,baz=71,slow=2.3,SNR=5.8						
TORD	Torodi Ar. Bea	166.10	263	PKP	PKPdf	16 09 30.4	-0.4
	comp=Z,0.4nm,0.6s,baz=144,slow=0.9,SNR=3.6						
TORD	Torodi Ar. Bea	166.10	263		PKPdf	16 09 29.8	-1.0

MAN 10 16:11:23.0, 1°.57N×127°.52E, h103km, MS4.4
NEIC 10 16:11:26.4±1.5, 1°.58N±0°.08×127°.40E±0°.08, h159km±5km, mb4.8/46, Error ellipse: s-maj=12.0km s-min=9.8km az=223.0
DJA 10 16:11:26.8±0.3, 2°N±3°×12°7E±°, h134km±4km, M4.4/15, mB4.8/11, mb4.7/12, MLv4.7/15, Mw(mB)4.1/11
IDC 10 16:11:27.2±1.4, 1°.60N×127°.58E, h164km±14km, mb3.9/15, mb1 4.0/18, mb1mx3.8/34, mbtmp4.4/18, MS2.8/1, Ms1 2.8/1, ms1mx2.3/34, Error ellipse: s-maj=16.0km s-min=9.6km az=77.0
KLM 10 16:11:30.0, 1°.25N×127°.22E, h140km, mb4.5
ISC 10 16:11:26.1±0.6, 1°.62N±0°.04×127°.42E±0°.05, h156km±5km, n125, σ1°.43/146, mb4.6/42, 1C-1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.85	184	P	Pn	16 11 50.2	0.0
TNTI	Ternate	0.85	184		Pn	16 11 50.3	0.0
LBMI	Labuha	2.25	178	P	Pn	16 12 05.2	+0.7
LBMI				S	Sn	16 12 33.6	-0.5
KMSI	Cibinong	3.59	253	P	Pn	16 12 21.0	-0.2
KMSI				S	Sn	16 13 01.8	-2.2
SANI	Sanana	3.92	201	P	Pn	16 12 24.1	-1.4
SIJI	Sorong	4.58	123	P	Pn	16 12 34.2	+0.1
	3.0nm,0.3s,baz=331,slow=20,SNR=11						
DDMP	Don Marcelino,	4.77	339	eP	Pn	16 12 35.3	-1.3
DDMP				eS	Sn	16 13 25.7	-5.9
NLAI	Namlea	4.84	184	P	Pn	16 12 37.2	-0.3
MSAI	Masohi	5.16	163	P	Pn	16 12 42.4	+0.6
	0.1nm308nm24nm,0.8s						
AAI	Ambon	5.33	172	P	Pn	16 12 44.8	+0.8
LUWI	Luwuk	5.35	240	P	Pn	16 12 43.0	-1.2
	7.6nm3μm229nm,0.9s						
LUWI	Luwuk	5.35	240		Pn	16 12 43.6	-0.7
MATI	Mati	5.41	348	eP	Pn	16 12 43.6	-1.5
MATI				eS	Sn	16 13 42.9	-4.1
MRSI	Marisa	5.59	258	P	Pn	16 12 46.6	-0.9
	0.7nm1μm94nm,0.6s						
SKMP	Bagumbayan, Su	5.65	330	eP	Pn	16 12 47.1	-1.1
DAV	Davao City (W)	5.71	341	S	Sn	16 13 52.3	-1.8
	60nm,0.3s,baz=246,slow=20,SNR=3.7						
DAV				LR	LR	16 15 17.7	
	comp=Z,84nm,18.1s,baz=282,slow=40						
KCP	Kidapawan	5.83	337	⇑iP	Pn	16 12 51.1	+0.3
KCP				iS	Sn	16 13 56.7	-0.3
CTBH	Cotabato--PC H	6.40	330	⇓iP	Pn	16 12 57.0	-1.1
FAKI	Fak Fak	6.61	133	P	Pn	16 13 02.5	+1.5
	0.1nm16nm,0.9s						
FAKI	Fak Fak	6.61	133		Pn	16 13 01.2	+0.2
BUKP	Musuan	6.64	339	eP	Pn	16 12 59.9	-1.6
BUKP				eS	Sn	16 14 16.6	+0.3
KDI	Kendari	7.33	221	P	Pn	16 13 10.1	-0.5
	0.4nm50nm,0.7s						
MPSI	Mapaga	7.63	260	P	Pn	16 13 14.6	0.0
	0.1nm475nm29nm,0.8s						
TTSI	Tana Toraja	8.90	239	P	Pn	16 13 30.8	-0.7
	1μm152nm,0.7s						
BNSI	Bone	9.44	231	P	Pn	16 13 38.4	-0.3
	678nm47nm,0.7s						
SPSI	Sidrap Palu	9.45	234	P	Pn	16 13 38.5	-0.3
	916nm42nm,0.6s						
BKSI	Bulukumba	10.04	227	P	Pn	16 13 48.3	+1.7
	600nm72nm,0.7s						
KAPI	Kappang	10.11	229	P	Pn	16 13 49.4	+1.9
	5.2nm,0.3s,baz=63,slow=7.6,SNR=14						
KAPI				S	Sn	16 15 37.0	-2.6
	14nm,0.3s,baz=165,slow=23,SNR=20						
KAPI	Kappang	10.11	229		Pn	16 13 45.8	-1.7
SAUI	Saumlaki	10.30	158	Pn	Pn	16 13 49.2	-0.8
SPMM	Sapulut	11.36	286	P	P	16 14 08.0	-3.6
GENI	Genyem	13.42	108	P	P	16 14 33.0	-1.5
MTN	Manton Dam	14.84	166		Pn	16 14 47.0	-1.4
SBUM	Sibu	15.21	273	P	P	16 14 55.3	+0.9
SBUM	Sibu	15.21	273		P	16 14 57.0	+2.6
KSM	Kuching	17.11	270	P	Pn	16 15 15.6	-0.5
KSM				IAmb	IAmb	16 15 19.0	
	comp=Z,20nm,0.9s						
KSM	Kuching	17.11	270	P	P	16 15 17.0	+0.9
KNRA	Kununurra	17.24	176	P	Pn	16 15 17.1	-0.6
KNRA				IAmb	IAmb	16 15 19.7	
	comp=Z,43nm,0.7s						
FITZ	Fitzroy Crossi	19.68	185	P	P	16 15 42.4	-0.9
	comp=Z,0.9nm,0.3s,baz=14,slow=10,SNR=11						
FITZ	Fitzroy Crossi	19.68	185	P	P	16 15 43.0	-0.2
LEM	Lembang	21.47	247	P	P	16 16 04.9	+2.2
	comp=Z,21nm,0.8s,baz=91,slow=9.9,SNR=5.0						
CISI	Cisompet, Garu	21.58	245	P	P	16 16 02.6	-1.2
CISI				IAmb	IAmb	16 16 12.6	
	comp=Z,132nm,1.5s						
WB0	Warramunga Arr	22.33	162	P	P	16 16 10.9	-0.4
WB0				IAmb	IAmb	16 16 19.1	
	comp=Z,25nm,0.9s						
WRAB	Tennant Creek	22.48	163	P	P	16 16 11.0	-1.7
WRAB				IAmb	IAmb	16 16 20.4	
	comp=Z,23nm,0.6s						
WRA	Warramunga Arr	22.48	163	P	P	16 16 11.8	-0.8
	comp=Z,8.2nm,0.6s,baz=336,slow=8.4,SNR=72						
WRA				S	S	16 20 04.7	-3.2
	comp=Z,1.4nm,0.7s,baz=337,slow=16,SNR=5.1						
WRA	Warramunga Arr	22.48	163	P	P	16 16 11.0	-1.7
WB2	Warramunga Arr	22.48	163	P	P	16 16 12.4	-0.3
WB2				IAmb	IAmb	16 16 20.5	
	comp=Z,18nm,0.8s						
PMG	Port Moresby	22.51	119	P	P	16 16 12.3	-0.7
	comp=Z,4.9nm,0.6s,baz=288,slow=13,SNR=4.4						
PMG	Port Moresby	22.51	119	P	P	16 16 12.5	-0.5
PMG				IAmb	IAmb	16 16 26.0	
	comp=Z,28nm,1.1s						
TPUB	Ta-pu	22.53	344	P	P	16 16 12.5	-0.6
WR0	Warramunga Arr	22.56	162	P	P	16 16 13.2	-0.2
YHNB	Yeheng	23.64	346	P	P	16 16 22.6	-0.8
PSA00	Pilbara Seismi	24.21	197	P	P	16 16 28.2	-0.3
JRMM	Jerantut	25.01	276	P	P	16 16 39.0	+3.1
UBPT	Khong Chiam	25.56	303	P	P	16 16 43.7	+2.9
UBPT				IAmb	IAmb	16 17 15.9	
	comp=Z,129nm,1.9s						
AS31	Alice Springs	25.92	166	P	P	16 16 43.9	0.0
ASAR	Alice Springs	25.92	166	P	P	16 16 43.9	-0.1
	comp=Z,1.9nm,0.5s,baz=343,slow=7.2,SNR=63						
ASAR				PcP	PcP	16 20 08.2	-0.6
	comp=Z,0.8nm,0.7s,baz=330,slow=1.9,SNR=5.1						
ASAR				S	S	16 21 00.1	-2.6
	comp=Z,0.9nm,0.8s,baz=351,slow=18,SNR=4.8						
ASAR				ScP	ScP	16 23 33.1	-0.9
	comp=Z,0.4nm,0.7s,baz=340,slow=2.5,SNR=4.2						
ASAR	Alice Springs	25.92	166	P	P	16 16 44.0	+0.1
NJ2	Nanjing	31.33	346	eP	P	16 17 35.0	+3.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
JNU	Nakatsue	31.50	6	P	P	16 17 33.3	-0.1
JNU				IAmb	IAmb	16 18 37.1	
	comp=Z,50nm,1.3s						
FORT	Forrest	32.23	179	P	P	16 17 38.9	-0.9
FORT				IAmb	IAmb	16 18 02.1	
	comp=Z,22nm,0.9s						
MORW	Morawa	32.41	199	P	P	16 17 40.7	-0.6
CMAR	Chiang Mai Arr	32.55	303	P	P	16 17 46.2	+3.4
	comp=Z,0.2nm,0.4s,baz=97,slow=7.4,SNR=3.4						
CMAR				PcP	PcP	16 20 27.2	+1.4
	comp=Z,0.2nm,0.3s,baz=172,slow=2.5,SNR=4.2						
CMAR				ScP	ScP	16 23 55.4	+0.1
	comp=Z,0.6nm,0.8s,baz=144,slow=2.7,SNR=6.9						
ENH	Enshi	33.19	331	P	P	16 17 49.2	+1.1
ENH				IAmb	IAmb	16 18 48.5	
	comp=Z,22nm,1.6s						
INU	Inuyama	34.72	14	P	P	16 18 01.4	+0.1
BBOO	Buckleboo	35.21	167	P	P	16 18 05.2	-0.3
BBOO				IAmb	IAmb	16 18 37.7	
	comp=Z,29nm,1.3s						
KSRS	Korea Array	35.66	1	P	P	16 18 10.2	+0.9
	comp=Z,3.6nm,0.5s,baz=176,slow=9.4,SNR=24						
NWAO	Narrogin (SRO)	35.69	195	P	P	16 18 08.7	-0.8
NWAO	Narrogin (SRO)	35.69	195	P	P	16 18 09.4	-0.2
KS19	Wonju Array Si	35.71	1	P	P	16 18 09.4	-0.2
STKA	Stephens Creek	35.93	159	P	P	16 18 12.2	+0.5
	comp=Z,13nm,0.7s,baz=332,slow=9.7,SNR=26						
STKA	Stephens Creek	35.93	159	P	P	16 18 11.7	0.0
MJAR	Matsushiro Arr	36.15	15	P	P	16 18 12.5	-1.0
	comp=Z,4.3nm,0.8s,baz=179,slow=9.4,SNR=8.0						
MJAR	Matsushiro Arr	36.15	15	P	P	16 18 12.2	-1.2
XAN	Xi'an	36.60	334	P	P	16 18 18.0	+0.6
XAN				pP	pwP	16 18 57.7	+4.4
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN	Xi'an	36.60	334	P	P	16 18 17.5	+0.2
CD2	Chengdu	36.74	325	eP	P	16 18 19.5	+0.8

ARMA Armidale 39.34 146 P P 16 18 41.0 +0.5
ARMA IAmb IAmb 16 18 42.5
comp=Z,14nm,1.1s
BJT Baijiatuau 39.56 346 P P 16 18 41.5 -0.5
BJT IAmb IAmb 16 18 44.1
comp=Z,28nm,1.6s
BJI Beijing 39.58 346 eP P 16 18 42.6 +0.4
BJI pmax pmax
comp=Z,8.0nm,0.7s
LZH Lanzhou 40.66 330 eP P 16 18 53.4 +2.1
LZH pP pwP 16 19 27.5 -0.1
LZH sP sP 16 19 44.8 +2.7
LZH pmax pmax
comp=Z,16nm,1.0s
HHC Hu-ho-hao-te 41.60 342 eP P 16 19 01.2 +2.3
HHC pmax pmax
comp=Z,6.0nm,1.0s
HHC pmax pmax
comp=Z,35nm,5.1s
CAN Canberra 41.93 153 P P 16 19 02.3 +0.7
CAN IAmb IAmb 16 20 07.8
comp=Z,64nm,1.8s
USRK Ussuriysk Ar. 42.59 5 P P 16 19 07.2 +0.5
comp=Z,4.7nm,0.7s,baz=182,slow=6.5,SNR=7.1
MDJ Mudanjiang 42.85 2 P P 16 19 08.7 -0.1
MDJ pmax pmax
comp=Z,13nm,1.3s
MDJ pmax pmax
comp=Z,290nm,4.5s
MDJ Mudanjiang 42.85 2 P P 16 19 09.8 +1.0
MDJ IAmb IAmb 16 19 10.4
comp=Z,19nm,1.3s
GTA Gaotai 45.25 330 P P 16 19 29.4 +1.2
GTA pP pP 16 20 04.0 +1.9
GTA sP sP 16 20 24.8 +5.6
GTA PcP PcP 16 21 06.8 +1.3
GTA ScP ScP 16 24 44.2 +0.5
GTA pmax pmax
comp=Z,4.0nm,1.0s
ODAN Odare 45.86 307 eP P 16 19 32.1 -1.2
comp=Z,10.0nm,0.3s
RAMN Ramite 46.53 306 eP P 16 19 38.3 -0.3
comp=Z,4.3nm,0.4s
YSS Yuzh-Sakhalins 47.09 14 P P 16 19 42.1 -0.1
YSS IAmb IAmb 16 21 13.3
comp=Z,27nm,1.3s
JIRN Jiri 47.17 307 eP P 16 19 42.6 -1.1
comp=Z,5.9nm,0.5s
GUN Gumba 47.53 307 eP P 16 19 45.5 -0.9
comp=Z,7.1nm,0.4s
KKN Kakani 47.95 307 eP P 16 19 49.9 +0.4
comp=Z,5.2nm,0.6s
DMN Daman 48.02 307 eP P 16 19 50.2 +0.1
KOLN Koldanda 49.30 306 eP P 16 20 01.0 +1.2
comp=Z,11nm,0.6s
ULN Ulaanbaatar 49.32 342 P P 16 20 00.0 +0.5
DANN Dangsing 49.41 307 eP P 16 20 01.8 +1.1
comp=Z,16nm,0.7s
SONM Songino Array 49.50 341 P P 16 20 01.6 +0.7
comp=Z,1.8nm,0.6s,baz=154,slow=8.9,SNR=16
SONM pP pwP 16 20 39.5 +0.9
comp=Z,0.5nm,0.6s,baz=148,slow=8.7,SNR=2.3
SONM PcP PcP 16 21 20.9 +0.4
comp=Z,1.2nm,0.7s,baz=154,slow=4.1,SNR=5.6
SONM Songino Array 49.50 341 P P 16 20 01.4 +0.5
FUNA Funafuti 52.59 102 P P 16 20 24.7 +0.4
MSVF Nonsavu 53.43 113 P P 16 20 30.9 +0.4
MSVF IAmb IAmb 16 20 32.8
comp=Z,11nm,0.9s
WMQ Urumqi 54.84 326 eP P 16 20 41.9 +1.6
WMQ pmax pmax
comp=Z,16nm,0.9s
WMQ pmax pmax
comp=Z,81nm,4.5s
WMQ LR LR
comp=Z,640nm,29.0s
WMQ LR LR
comp=Z,740nm,28.9s
WMQ LR LR
comp=Z,110nm,28.9s
WMQ Urumqi 54.84 326 P P 16 20 41.7 +1.4
WMQ IAmb IAmb 16 20 42.8
comp=Z,13nm,0.9s
PEA0B Petropavlovsk- 57.12 21 P P 16 20 56.9 +0.7
PETK Petropavlovsk- 57.12 21 P P 16 20 57.2 +1.0
comp=Z,4.1nm,0.6s,baz=190,slow=6.5,SNR=7.6
PETK Petropavlovsk- 57.12 21 P P 16 20 56.7 +0.5
THZ Tophouse 59.63 142 P P 16 21 13.8 -0.1
THZ IAmb IAmb 16 21 30.2
comp=Z,65nm,1.8s
RPZ Rata Peaks 59.66 145 P P 16 21 14.1 +0.1
RPZ IAmb IAmb 16 22 06.3
comp=Z,46nm,1.5s
MK31 Makanchi Array 59.67 326 P P 16 21 14.3 +0.2
MKAR Makanchi Array 59.67 326 P P 16 21 14.8 +0.7
comp=Z,6.0nm,0.7s,baz=121,slow=8.5,SNR=63
MKAR pP pP 16 21 51.6 +1.8
comp=Z,1.0nm,0.5s,baz=126,slow=9.0,SNR=2.7
MKAR ScP ScP 16 25 45.0 -0.8
comp=Z,0.3nm,0.8s,baz=136,slow=2.8,SNR=3.3
MKAR Makanchi Array 59.67 326 P P 16 21 14.3 +0.2
LTZ Lake Taylor 59.82 143 P P 16 21 15.2 0.0
MAKZ Makanchi 59.85 326 P P 16 21 15.8 +0.5
KSH Kashi 60.02 316 P P 16 21 16.4 -0.3
KSH pP pP 16 21 52.0 -0.5
KSH PcP PcP 16 22 05.6 +4.4
KSH S S 16 29 12.5 -4.8
KSH pmax pmax
comp=Z,56nm,1.7s
KSH pmax pmax
comp=Z,220nm,9.5s
KSH LR LR
comp=Z,120nm,6.3s
KSH LR LR
comp=Z,160nm,5.8s
KSH LR LR
comp=Z,220nm,8.7s
ZALV Zalesovo Beam 62.77 333 P P 16 21 33.6 -1.0
comp=Z,0.6nm,0.4s,baz=122,slow=11,SNR=4.4
KURK Kurchatov 63.88 328 P P 16 21 42.1 0.0
KURK IAmb IAmb 16 21 43.1
comp=Z,8.9nm,0.8s
KKAR Karatay Array 65.24 317 P P 16 21 51.3 +0.2
TIXI Tiksi 69.93 0 P P 16 22 19.5 -0.4
GEYT Alibeck 72.75 309 P P 16 22 38.2 +0.6
comp=Z,1.4nm,0.6s,baz=105,slow=3.4,SNR=4.0
GEYT Alibeck 72.75 309 P P 16 22 36.8 -0.8
ABKAR Akbulak array 74.21 321 P P 16 22 45.3 -0.5
ILAR Eielson Array 86.70 25 P P 16 23 50.6 -1.5
comp=Z,0.3nm,0.6s,baz=245,slow=5.7,SNR=7.5
BMAR Burnt Mountain 87.74 23 P P 16 23 57.6 +0.5
ARCES ARCESS Array B 92.65 340 P P 16 24 19.5 -0.4
comp=Z,3.5nm,0.8s,baz=75,slow=6.0,SNR=5.2
TORD Torodi Ar. Bea 124.21 287 PKP PKPdf 16 30 07.0 -0.4
comp=Z,0.4nm,0.5s,baz=123,slow=6.9,SNR=3.8

IDC 10 16:39:41.3±2.3, 15.̊30N×96.̊13W, h0km, mb3.5/2, mb1 4.0/6, mb1mx3.7/36, mbtmp3.8/6, ML3.9/4, MS2.7/2, Ms1 2.7/2, ms1mx2.3/25, Error ellipse: s-maj=37.7km s-min=22.2km az=145.0
MEX 10 16:39:43.8±0.9, 15.̊37N×96.̊17W, h3km, MD4.2
NEIC 10 16:39:47.8±3.7, 15.̊84N±0.̊04×96.̊33W±0.̊02, h10km±1km, Error ellipse: s-maj=7.7km s-min=2.9km az=201.0
ISC 10 16:39:41.4±3.1, 15.̊43N±0.̊06×96.̊15W±0.̊03, h2km±20km, n56, σ1.̊80/76, mb4.1/9, 1C-1D, Near coast of Oaxaca

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
HUIG Huatulco 0.34 6 Pn 16 39 51.1 -2.2
HUIG Sb 16 39 57.1 +1.1
HUIG Huatulco 0.34 6 ⇑iP Pn 16 39 51.1 -2.2
baz=186,slow=16
HUIG iS Sb 16 39 57.1 +1.1
PANG Puerto Angel 0.39 307 Pb 16 39 51.1 +0.1
PANG Sb 16 39 56.9 -0.6
PANG Puerto Angel 0.39 307 iP Pb 16 39 51.1 +0.1
PANG iS Sb 16 39 56.9 -0.6
PEIG Puerto Escondi 1.12 301 eP Pb 16 40 01.6 -1.8
PEIG iS Sb 16 40 15.2 -3.3
OXBJ Oaxaca 1.72 341 Pn 16 40 11.9 -0.6
OXBJ Oaxaca 1.72 341 iP Pn 16 40 11.9 -0.6
VHO Vista Hermosa 1.73 341 iP Pb 16 40 12.9 +1.1
VHO iS Sn 16 40 34.2 -1.2
YOIG Yosondua 1.95 317 eP Pn 16 40 15.5 -0.3
YOIG iS Sn 16 40 39.9 -1.2
CMIG Matias Romero 2.05 36 Pn Pn 16 40 16.9 0.0
21nm,0.3s,baz=206,slow=11,SNR=177
CMIG Sn Sn 16 40 41.9 -1.2
39nm,0.3s,baz=3.1,slow=11,SNR=7.0
CMIG Lg Lg 16 40 50.7
49nm,0.3s,baz=333,slow=18,SNR=7.1
CMIG Matias Romero 2.05 36 Pn 16 40 16.4 -0.5
CMIG Sn 16 40 42.9 -0.1
CMIG Matias Romero 2.05 36 eP Pn 16 40 16.4 -0.5
CMIG iS Sn 16 40 42.9 -0.1
PNIG Pinotepa 2.13 297 Pn 16 40 16.6 -1.4
PNIG Sn 16 40 43.3 -1.8
PNIG Pinotepa 2.13 297 eP Pn 16 40 16.6 -1.4
PNIG iS Sn 16 40 43.3 -1.8
PCIG 2.83 84 Pn 16 40 27.7 0.0
PCIG Sn 16 40 59.0 -3.4
PCIG 2.83 84 iP Pn 16 40 27.7 0.0
PCIG iS Sn 16 40 59.0 -3.4
HLIG Huajuapan de L 2.87 327 iP Pn 16 40 28.6 +0.3
HLIG iS Sn 16 41 03.3 -0.2
FTIG Fresnillo de T 3.11 323 eP Pn 16 40 32.4 +0.8
FTIG iS Sn 16 41 10.4 +0.9
TLIG Tlapa 3.14 313 Pn 16 40 32.7 +0.6
TLIG Tlapa 3.14 313 Pn 16 40 32.4 +0.3
TLIG Sn 16 41 10.7 +0.5
TLIG Tlapa 3.14 313 eP Pn 16 40 32.4 +0.3
TLIG iS Sn 16 41 10.7 +0.5
TPIG Tehuac#an 3.19 339 Sn 16 41 07.5 -4.0
TPIG Tehuac#an 3.19 339 iS Sn 16 41 07.5 -4.0
TGIG 3.20 65 Pn 16 40 31.3 -1.5
TGIG 3.20 65 eP Pn 16 40 31.3 -1.5
CCIG Comitan 3.95 77 Pn 16 40 32.7 -11
CAIG El Cayaco 4.27 293 Pn 16 40 47.4 0.0
CAIG Sn 16 41 36.1 -1.8
CAIG El Cayaco 4.27 293 iP Pn 16 40 47.4 0.0
CAIG iS Sn 16 41 36.1 -1.8
MAVM Malinalco, Edo 4.75 318 Pn 16 40 53.4 -0.8
MAVM Malinalco, Edo 4.75 318 eP Pn 16 40 53.4 -0.8
ARIG Puente Sto Nin 4.92 306 Pn 16 40 57.2 +0.8
ARIG Sn 16 41 52.9 -1.1
ARIG Puente Sto Nin 4.92 306 eP Pn 16 40 57.2 +0.8
ARIG ⇓iS Sn 16 41 52.9 -1.1
APG El Apazote 5.50 94 Pn Pn 16 41 06.5 +1.9
2.0nm,0.3s,baz=330,slow=14,SNR=2.9
APG Sn Sn 16 42 07.4 -1.2
2.0nm,0.3s,baz=8.1,slow=14,SNR=2.2
TGUH Tegucigalpa,Un 8.69 98 Pn 16 41 57.4 +9.1
TEIG Tepich 8.88 56 Pn Pn 16 41 49.9 -0.9
3.9nm,0.3s,baz=152,slow=0.9,SNR=13
TEIG Sn Sn 16 43 23.2 -8.3
0.2nm,0.3s,baz=318,slow=19,SNR=2.2
TEIG Tepich 8.88 56 Pn 16 41 49.7 -1.1
TX32 Lajitas Array 15.48 335 P P 16 43 27.4 +1.8
TXAR Lajitas Array 15.48 335 Pn P 16 43 26.4 +0.8
0.1nm,0.3s,baz=139,slow=14,SNR=13
TXAR LR LR 16 50 09.0
comp=Z,12nm,21.4s,baz=0.0,slow=40
TXAR Lajitas Array 15.48 335 P P 16 43 27.9 +2.3
PAYG Puerto Ayora 17.02 160 Pn P 16 43 56.6 +14
WMOK Wichita Mounta 19.37 353 P Pn 16 44 09.6 0.0
MSTX Muleshoe 19.41 343 P Pn 16 44 10.6 +0.6
MSTX IAmb IAmb 16 44 12.0
comp=Z,9.5nm,1.0s
W35A Tecumseh 19.65 358 P Pn 16 44 13.1 +0.3
U40A Yellville 21.05 7 P P 16 44 27.1 +0.4
U40A IAmb IAmb 16 44 36.1
comp=Z,8.4nm,0.9s
MGMO Mountain Grove 21.91 8 P P 16 44 35.5 -0.4
MGMO IAmb IAmb 16 44 39.7
comp=Z,4.3nm,0.8s
T25A Trinidad 22.84 343 P P 16 44 48.2 +2.1
T25A IAmb IAmb 16 44 50.8
comp=Z,6.0nm,1.1s
T47A Sharon Grove 22.93 19 P P 16 44 47.0 +0.3
T47A IAmb IAmb 16 44 49.2
comp=Z,6.5nm,0.8s
X16A Lo Mia Camp, P 23.39 327 P P 16 44 54.6 +2.8
WUAZ Wupatki 24.21 329 P P 16 45 02.9 +3.2
WUAZ IAmb IAmb 16 45 11.7
comp=Z,4.2nm,0.9s
WCI Wyandotte Cave 24.32 19 P P 16 45 02.4 +2.0
N41A Harden Midland 25.60 9 P P 16 45 12.7 +0.7
N41A IAmb IAmb 16 45 13.8
comp=Z,6.3nm,0.8s
SDV Santo Domingo 25.76 102 LR LR 16 54 52.3
comp=Z,38nm,18.0s,baz=85,slow=35
Q51A Peebles 26.06 23 P P 16 45 16.4 +0.2
Q51A IAmb IAmb 16 45 17.5
comp=Z,12nm,1.2s
O49A Covington 26.73 20 P P 16 45 22.3 0.0
YKA Yellowknife Ar 48.78 349 P P 16 48 28.1 +0.6
comp=Z,0.5nm,0.8s,baz=155,slow=7.4,SNR=5.3
ILAR Eielson Array 59.97 337 P P 16 49 50.8 +1.8
comp=Z,0.6nm,1.0s,baz=145,slow=6.5,SNR=4.0

NNC 10 16:42:34.2±4.7, 37.̊78N×71.̊53E, h0km, mb4.0, mpv3.6, 4C-1D, Error ellipse: s-maj=36.6km s-min=29.4km az=166.0, Afghanistan-Tajikistan border region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
AAK Ala-Archa 5.36 24 P Pn 16 43 55.3 -0.2
2.7nm,0.4s
AAK ⇑S Sn 16 44 59.3 +1.3
4.9nm,0.9s
KK31 Karatay Array 5.37 352 ⇓P Pn 16 43 56.8 +1.3
3.2nm,0.3s,baz=176,slow=13,SNR=42
KK31 ⇑S Sn 16 44 59.6 +1.4
1.8nm,0.3s,baz=174,slow=22,SNR=12
CHMS Chumysh 5.76 24 ⇑P Pn 16 44 00.2 -0.7
2.9nm,0.5s
CHMS ⇑S Sn 16 45 08.0 +0.2
2.3nm,0.5s

IDC 10 17:09:04.0±1.1, 26.̊20N×65.̊94E, h0km, mb3.6/10, mb1 3.6/12, mb1mx3.5/44, mbtmp3.6/12, ML3.4/2, MS2.3/4, Ms1 3.3/4, ms1mx2.8/39, Error ellipse: s-maj=24.9km s-min=21.4km az=157.0
ISC 10 17:09:05.0±0.9, 26.̊1N±0.̊1×65.̊8E±0.̊1, h10km, n12, σ2.̊26/13, mb3.5/10, MS3.2/3, Pakistan

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
WSAR Wadi Sarin 7.11 248 Pn Pn 17 10 52.0 +2.8
0.7nm,0.3s,baz=105,slow=6.2,SNR=12
WSAR Sn Sn 17 12 04.6 -5.4
0.7nm,0.3s,baz=320,slow=18,SNR=4.0
AAK Ala-Archa 17.95 21 P Pn 17 13 12.7 -2.1
0.1nm,0.3s,baz=198,slow=6.4,SNR=3.2
AAK LR LR 17 21 28.6
comp=Z,71nm,19.2s,baz=198,slow=42
MKAR Makanchi Array 24.43 28 P P 17 14 22.9 -1.0
2.1nm,0.7s,baz=211,slow=9.2,SNR=27
AKTO Aktyubinsk 24.99 348 P P 17 14 29.0 +0.2
1.6nm,0.9s,baz=197,slow=4.1,SNR=4.1
AKTO LR LR 17 26 10.2
comp=Z,68nm,19.5s,baz=112,slow=41
KURBB Kurchatov Arra 26.34 18 P P 17 14 40.5 -0.6
0.5nm,0.7s,baz=209,slow=9.1,SNR=4.6
BVAR Borovoye Array 27.09 6 P P 17 14 46.7 -1.0
1.1nm,0.8s,baz=150,slow=12,SNR=5.8
ZALV Zalesovo Beam 31.17 22 P P 17 15 23.1 -1.0
0.3nm,0.4s,baz=212,slow=13,SNR=3.2
ZALV LR LR 17 29 53.7
comp=Z,71nm,18.6s,baz=178,slow=40
CMAR Chiang Mai Arr 31.56 97 P P 17 15 27.9 +0.1
0.5nm,0.8s,baz=282,slow=8.5,SNR=4.3
CMAR LR LR 17 29 31.3
comp=Z,32nm,20.8s,baz=275,slow=39
AKASG Malin Array Be 37.13 321 P P 17 16 17.1 +1.4
0.2nm,0.3s,baz=119,slow=6.8,SNR=4.6
SONM Songino Array 38.42 45 P P 17 16 27.5 +0.6
0.1nm,0.4s,baz=267,slow=5.6,SNR=2.3
TORD Torodi Ar. Bea 61.20 271 P P 17 19 22.1 +1.7
0.4nm,0.7s,baz=44,slow=8.5,SNR=3.1
ASAR Alice Springs 82.40 121 P P 17 21 26.8 -0.9
0.2nm,0.8s,baz=320,slow=5.5,SNR=4.6

NIED 10 17:15:00, 39.̊80N×143.̊60E, h17km, Mw3.4 Best double couple: M0 1.32000×10^14 NP1:φs39.00000°, δ66.00000°, λ100.00000°. NP2:φs194.00000°, δ26.00000°, λ68.00000°.
JMA 10 17:15:20.2±0.3, 39.̊76N×143.̊59E, h10km±4km, M3.5, Off east coast of Honshu

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
JTH Tanohata 1.34 278 P Pn 17 15 44.6 -0.4
JTH eS Sb 17 16 02.5 -0.1
MIYJ Miyakonagasawa 1.38 263 P Pn 17 15 45.4 -0.1
JKEN Kujiedanarisaw 1.51 288 P Pn 17 15 47.0 -0.3
JANG Nango 1.71 292 P Pn 17 15 49.8 -0.2
JOM Ohasama 1.80 262 P Pn 17 15 52.0 +0.7
JOM eS Sb 17 16 15.8 0.0
JMK Ichinoseki 2.01 247 P Pn 17 15 54.5 +0.4
JIO Ouri 2.18 234 P Pn 17 15 56.4 -0.1
JTM Tenmabayashi 2.19 299 P Pn 17 15 57.6 +1.0
JTM eS Sn 17 16 24.9 +1.2
JOT Ohata 2.52 311 P Pb 17 16 04.0 -1.6
JNBK Urakawa-nobuka 2.60 346 P Pb 17 16 04.7 -2.1
JNBK eS Sn 17 16 36.2 +2.4
JYK Kaneyama 2.64 252 P Pn 17 16 04.2 +1.3
JCH Churui 2.86 357 P Pn 17 16 07.5 +1.7
JKB Kayabe 2.88 318 P Pn 17 16 08.8 +2.7

IDC 10 17:30:56.7±7.0, 7.̊25S×129.̊55E, h249km±80km, mb2.7/1, mb1 2.7/2, mb1mx2.5/25, mbtmp3.3/2, Error ellipse: s-maj=147.9km s-min=30.9km az=72.0, Banda Sea

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
WRA Warramunga Arr 13.45 160 P Pn 17 33 56.7 -1.4
2.2nm,0.3s,baz=339,slow=12,SNR=10
WRA S S 17 36 20.6 -6.7
1.4nm,0.3s,baz=320,slow=26,SNR=6.1
ASAR Alice Springs 16.85 166 P Pn 17 34 38.5 -0.4
0.1nm,0.3s,baz=342,slow=10,SNR=14
ASAR S S 17 37 39.6 -0.4
0.0nm,0.3s,baz=326,slow=14,SNR=3.5
MKAR Makanchi Array 68.19 327 P P 17 41 30.3 -0.1
0.1nm,0.4s,baz=124,slow=8.0,SNR=4.6

WEL 10 17:34:53.2, 39.̊3S±0.̊8×176.̊5E±1.̊0, h65km±3km, M3.6/44, ML3.9/44, MLv3.6/44, Error ellipse: s-maj=0.0km s-min=0.0km az=111.6, North Island

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
BKZ Black Stump Fm 0.12 352 P Pn 17 35 02.0 -0.9
KWHZ Kaweka Forest 0.16 207 P Pn 17 35 02.4 -0.7
KWHZ S Sn 17 35 08.8 -1.5
MCHZ McNeill Hill 0.21 138 P Pn 17 35 03.5 +0.2
MCHZ S Sn 17 35 11.2 +0.7
NMHZ Naumai 0.29 51 P Pn 17 35 04.0 +0.2
NMHZ S Sn 17 35 12.1 +0.5
KRHZ Kereru 0.37 197 P Pn 17 35 04.3 -0.1
KRHZ S Sn 17 35 12.0 -0.6
ARHZ Aropaoanui 0.38 87 P Pn 17 35 04.7 +0.3
ARHZ S Sn 17 35 13.6 +1.1
BHHZ Black Hill Sta 0.40 240 P Pn 17 35 04.6 0.0
BHHZ S Sn 17 35 12.2 -0.9
MRHZ Matea Rd 0.46 351 P Pn 17 35 04.9 -0.2
MRHZ S Sn 17 35 13.3 -0.5
MTHZ Maungataniwha 0.50 31 P Pn 17 35 05.8 +0.2
MTHZ S Sn 17 35 15.5 +0.9
HATZ Hinemaiaia 0.51 320 P Pn 17 35 05.4 -0.3
HATZ S Sn 17 35 13.4 -1.4
CKHZ Cape Kidnapper 0.57 131 P Pn 17 35 06.9 +0.6
RAHZ Arahi 0.58 51 P Pn 17 35 06.9 +0.6
KAHZ Kahuranaki 0.58 151 P Pn 17 35 07.0 +0.6
RITZ Rihia Road 0.59 301 P Pn 17 35 06.7 +0.2
WHHZ Waihua 0.60 70 P Pn 17 35 07.2 +0.7
MOVZ Moawhango 0.60 258 P Pn 17 35 06.7 +0.1
TUVZ Tukino 0.67 271 P Pn 17 35 07.7 +0.3
PNHZ Pukenui 0.67 201 P Pn 17 35 07.7 +0.2
KRVZ Karewarewa 0.70 285 P Pn 17 35 08.0 +0.1
KATZ Kakaramea 0.71 296 P Pn 17 35 08.1 +0.1
RATZ Rangitukua 0.71 306 P Pn 17 35 08.0 +0.1
NGZ Ngauruhoe 0.72 278 P Pn 17 35 08.3 +0.2
WHVZ Whangaehu Hut 0.72 270 P Pn 17 35 08.3 +0.2
ALRZ Allen Road 0.73 350 P Pn 17 35 08.0 -0.1
DRZ Dome Shelter 0.74 270 P Pn 17 35 08.6 +0.2
WTVZ West Tongariro 0.74 283 P Pn 17 35 08.5 +0.3
FWVZ Far West T-bar 0.75 272 P Pn 17 35 08.6 +0.1
TRVZ Turoa 0.75 269 P Pn 17 35 08.7 +0.2
WHTZ Whakaora 0.76 325 P Pn 17 35 08.9 +0.5
RTZ Ruatahuna 0.76 29 P Pn 17 35 08.9 +0.4
WPHZ Waipukurau 0.78 184 P Pn 17 35 09.1 +0.4
PRRZ Plateau Road 0.79 353 P Pn 17 35 08.9 +0.1
PXZ Pawanui 0.79 160 P Pn 17 35 09.2 +0.4
WPRZ Whakapapatarin 0.81 340 P Pn 17 35 09.0 -0.1
MTVZ Mangateitei 0.81 263 P Pn 17 35 09.4 +0.3
SNGZ Shannon Station 0.82 52 P Pn 17 35 09.7 +0.6
MUGZ Murupara 0.83 14 P Pn 17 35 09.3 0.0
WATZ Wairara 0.84 313 P Pn 17 35 09.3 0.0
TWVZ Taurewa 0.86 284 P Pn 17 35 09.6 -0.1
TSZ Takapari Road 0.88 209 P Pn 17 35 10.2 +0.3
PKVZ Pokaka 0.91 269 P Pn 17 35 10.6 +0.4
HRRZ Handcock Road 0.91 349 P Pn 17 35 10.6 +0.3
KNZ Kokohu 0.94 74 P Pn 17 35 10.8 +0.2
RRRZ Republican Roa 0.94 0 P Pn 17 35 10.9 +0.1
RRRZ P Pn 17 35 10.9 +0.1
KUTZ Kaahu Road 0.96 326 P Pn 17 35 11.1 +0.2
PRHZ Porangahau 0.98 175 P Pn 17 35 11.5 +0.2
GRRZ Galatos Road 0.99 341 P Pn 17 35 11.6 +0.4
HSRZ Hossack Road 0.99 348 P Pn 17 35 11.7 +0.4
HLRZ Highlands Stat 1.04 353 P Pn 17 35 13.2 +1.3
DVHZ Dannevirke 1.05 195 P Pn 17 35 11.9 -0.2
TARZ Mount Tarawera 1.05 360 P Pn 17 35 12.6 +0.5
RAGZ Rawiri 1.06 42 P Pn 17 35 12.8 +0.6
MHGZ Mahia Peninsul 1.09 83 P Pn 17 35 13.0 +0.4
PRGZ Paritu Road 1.13 72 P Pn 17 35 13.3 +0.3
URZ Urewera 1.13 25 P Pn 17 35 13.1 +0.1
RIGZ Rimuhau 1.13 60 P Pn 17 35 13.5 +0.4
MKRZ Makatiti 1.15 358 P Pn 17 35 13.9 +0.5
ANWZ Angora Road 1.17 181 P Pn 17 35 13.8 +0.2
OMRZ Omania 1.18 355 P Pn 17 35 13.9 +0.1
EDRZ Edgecumbe 1.19 9 P Pn 17 35 14.2 +0.3
TLZ Tolley Road 1.22 321 P Pn 17 35 14.4 +0.1
MWZ Matawai 1.24 40 P Pn 17 35 14.9 +0.3
POWZ Post Office Ro 1.25 207 P Pn 17 35 14.6 0.0
WAZ Wanganui 1.27 248 P Pn 17 35 16.2 +1.3
KARZ Kaharoa 1.28 350 P Pn 17 35 15.3 +0.2
OHWZ Ohakea 1.30 225 P Pn 17 35 16.6 +1.3
MARZ Manawahe 1.30 6 P Pn 17 35 15.7 +0.3
PRWZ Pori Road 1.33 198 P Pn 17 35 15.8 0.0
TKGZ Te Karaka 1.34 51 P Pn 17 35 16.3 +0.5
VRZ Vera Road 1.37 276 P Pn 17 35 16.8 +0.5
BFZ Birch Farm 1.41 188 P Pn 17 35 16.4 -0.4
OPRZ Ohinepanea 1.44 1 P Pn 17 35 17.2 +0.1
WHRZ Whale Island 1.47 14 P Pn 17 35 18.5 +0.9
HIZ Hauiti 1.51 300 P Pn 17 35 18.5 +0.5
CNGZ Carnagh Statio 1.55 59 P Pn 17 35 19.1 +0.5
MRZ Mangatainoka R 1.55 207 P Pn 17 35 18.1 -0.5
TIWZ Tintock 1.56 198 P Pn 17 35 18.5 -0.4
TGRZ Tauranga 1.57 353 P Pn 17 35 19.1 +0.3
RUGZ Raukumara Rang 1.60 35 P Pn 17 35 19.6 +0.2
CPWZ Castlepoint 1.64 188 P Pn 17 35 19.9 +0.1
LREZ Lake Rotokare 1.65 263 P Pn 17 35 21.1 +1.2
MHEZ Mangahewa 1.71 276 P Pn 17 35 22.4 +1.5
TOZ Tahuroa Road 1.74 333 P Pn 17 35 21.6 +0.4
HOWZ Holdsworth Sta 1.78 205 P Pn 17 35 20.8 -1.0
DREZ Durham Road 1.80 272 P Pn 17 35 23.6 +1.7
HAZ Te Kaha 1.82 34 P Pn 17 35 21.9 -0.4
PUZ Puketiti 1.82 49 P Pn 17 35 22.2 -0.1
PREZ Palmer Road 1.83 267 P Pn 17 35 24.1 +1.7
OGWZ Otaki Gorge 1.84 214 P Pn 17 35 21.8 -0.8
PKGZ Pakihiroa 1.86 42 P Pn 17 35 23.4 +0.5
TMWZ Te Maipa 1.88 194 P Pn 17 35 22.2 -0.9
KHEZ Kahui Hut 1.94 269 P Pn 17 35 25.8 +1.9
PKE Pukeiti 1.96 272 P Pn 17 35 25.9 +1.7
KIW Kapiti Island 2.00 218 P Pn 17 35 24.0 -0.6
MTW Mount Morrison 2.02 202 P Pn 17 35 23.5 -1.5
NMEZ Namu Road 2.05 266 P Pn 17 35 27.2 +1.9
NBEZ Newall Road No 2.05 270 P Pn 17 35 26.9 +1.5
WMGZ Waiomatatini S 2.09 46 P Pn 17 35 26.0 +0.1
TRWZ Traveller 2.20 196 P Pn 17 35 26.0 -1.5
MXZ Matakaoa Point 2.22 40 P Pn 17 35 28.3 +0.6
PAWZ Paruwai Farm 2.25 201 P Pn 17 35 26.4 -1.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSWZ	Moikau Station	2.34	204	P	Pn	17 35 27.3	-2.0
WEL	Wellington	2.40	213	P	Pn	17 35 28.7	-1.5
MKAZ	Moumakai	2.42	334	P	Pn	17 35 31.4	+1.0
BHW	Baring Head	2.46	210	P	Pn	17 35 28.9	-2.0
PLWZ	Palliser	2.48	202	P	Pn	17 35 28.9	-2.2
DUWZ	D'Urville Isla	2.50	232	P	Pn	17 35 30.4	-1.1
TCW	Tory Channel	2.58	221	P	Pn	17 35 30.5	-1.9
KUZ	Kuaotunu	2.61	346	P	Pn	17 35 34.1	+1.1
ETAZ	East Tamaki Re	2.64	331	P	Pn	17 35 34.7	+1.3
AWAZ	Awhitu Peninsu	2.66	326	P	Pn	17 35 34.9	+1.2
WIAZ	Waiheke Island	2.72	336	P	Pn	17 35 35.5	+1.1
WTAZ	Waiatarua	2.80	326	P	Pn	17 35 37.2	+1.6
TUWZ	Tuamarina	2.91	222	P	Pn	17 35 35.1	-1.9
ABAZ	Army Bay	2.99	333	P	Pn	17 35 39.7	+1.6
NNZ	Nelson	3.08	230	P	Pn	17 35 38.1	-1.6
GRZ	Great Barrier	3.14	344	P	Pn	17 35 41.4	+1.2
BSWZ	Blackbirch Sta	3.15	219	P	Pn	17 35 38.4	-1.9
QRZ	Quartz Range	3.42	242	P	Pn	17 35 42.5	-1.6
THZ	Tophouse	3.70	227	P	Pn	17 35 45.6	-2.3
WCZ	Waipu Caves	3.76	332	P	Pn	17 35 50.2	+1.6
KHZ	Kahutara	3.86	215	P	Pn	17 35 46.9	-3.0
DSZ	Denniston Nort	4.35	234	P	Pn	17 35 54.6	-2.1
OUZ	Omahuta	4.68	329	P	Pn	17 36 03.0	+1.8
LTZ	Lake Taylor	4.74	221	P	Pn	17 35 59.0	-3.1
WVZ	Waitaha Valley	5.77	227	P	Pn	17 36 13.4	-2.7
RPZ	Rata Peaks	6.03	221	P	Pn	17 36 16.7	-3.0

*SKHL **10** 17:49:33.6±0.7, 44°.60N×146°.52E, h137km±6km, mb4.4/4, msh4.3/4*

*IDC **10** 17:49:34.7±2.5, 44°.65N×146°.32E, h176km±23km, mb3.0/6, mb1 3.2/8, mb1mx3.0/30, mbtmp3.4/8, Error ellipse: s-maj=29.7km s-min=17.2km az=109.0*

*JMA **10** 17:49:34.5±0.4, 44°.37N×146°.51E, h156km±4km, M2.9*

ISC 10 17:49:32.7±0.8, 44°.46N±0°.07×146°.60E±0°.07, h163km±6km, n33, σ1^{s}04/38, mb3.1/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	0.68	231	eP	Pn	17 49 57.0	+0.6
YUK				AMB	AMB	17 49 58.0	
	156nm,0.5s						
YUK				iS	Sn	17 50 15.0	+0.5
YUK				A	A	17 50 18.0	
	68nm,0.4s						
YUK				A	A	17 50 18.0	
	65nm,0.4s						
GRPR	Tuman	0.76	232	iP	Pn	17 49 57.0	+0.1
GRPR				AMB	AMB	17 49 58.0	
	114nm,0.4s						
GRPR				iS	Sn	17 50 16.0	+0.6
GRPR				A	A	17 50 19.0	
	58nm,0.5s						
GRPR				A	A	17 50 19.0	
	110nm,0.5s						
GLVR	Golovnino	1.06	228	iP	Pn	17 50 00.0	+0.9
GLVR				AMB	AMB	17 50 01.0	
	112nm,0.2s						
GLVR				iS	Sn	17 50 20.0	+0.6
GLVR				A	A	17 50 21.0	
	85nm,0.6s						
GLVR				A	A	17 50 21.0	
	92nm,0.6s						
KUR	Kuril'sk	1.19	49	iP	Pn	17 50 00.0	-0.2
KUR				AMB	AMB	17 50 01.0	
	183nm,0.5s						
KUR				eS	Sn	17 50 22.0	+0.6
KUR				A	A	17 50 32.0	
	42nm,0.5s						
KUR				A	A	17 50 32.0	
	89nm,0.5s						
NEM2	Nemuro 2	1.26	210	P	Pn	17 50 01.0	+0.1
NEM2				eS	Sn	17 50 21.2	-1.3
NMR	Nemuro--Hokkai	1.26	210	iP	Pn	17 50 01.0	+0.1
NMR				iS	Sn	17 50 21.0	-1.5
JNSB	Nemuroshibetsu	1.34	240	P	Pn	17 50 02.5	+0.9
JNK	Nakash	1.61	238	P	Pn	17 50 05.0	+0.6
JKHN	Kushirohamanak	1.73	218	P	Pn	17 50 06.0	+0.4
JKHN				eS	Sn	17 50 30.2	-0.7
JTKR	Abashiri--Toko	2.00	257	P	Pn	17 50 08.7	+0.2
JTKR				eS	Sn	17 50 35.9	-0.2
JAK	Akkeshi	2.01	224	P	Pn	17 50 09.1	+0.4
JAK				eS	Sn	17 50 35.4	-1.0
JAR	Ashorobuto	2.35	241	P	Pn	17 50 13.7	+1.0
JOB	Onbets	2.54	233	P	Pn	17 50 15.6	+0.7
JOB				eS	Sn	17 50 46.9	-0.6
JKK2	Kamakawa 2	2.83	259	P	Pn	17 50 19.5	+1.0
ASAJ	Asahikawa	2.90	265	P	Pn	17 50 20.1	+1.0
	1.2nm,0.3s,baz=74,slow=6.8,SNR=21						
JCH	Churui	2.99	233	P	Pn	17 50 21.0	+0.6
JCH				eS	Sn	17 50 55.5	-1.9
JFR	Furan	3.18	247	P	Pn	17 50 24.4	+1.7
JWK2	Keihoku	3.45	286	P	Pn	17 50 27.5	+1.4
JNBK	Urakawa-nobuka	3.55	233	P	Pn	17 50 27.1	-0.4
YSS	Yuzh-Sakhalins	3.67	314	eP	Pn	17 50 28.9	0.0
SEY	Seymchan	18.81	8	P	P	17 53 37.5	-1.9
	0.2nm,0.3s,baz=149,slow=19,SNR=6.4						
H11N2	WAKE ISLAND Hy	29.90	139	T	T	18 26 47.6	
	baz=331,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	29.91	139	T	T	18 26 43.8	
	baz=331,slow=75,SNR=18						
H11N3	WAKE ISLAND Hy	29.91	139	T	T	18 26 41.8	
	baz=331,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	30.87	141	T	T	18 27 52.6	
	baz=332,slow=76,SNR=42						
H11S3	WAKE ISLAND Hy	30.87	141	T	T	18 27 51.3	
	baz=332,slow=76,SNR=23						
H11S2	WAKE ISLAND Hy	30.89	141	T	T	18 27 52.3	
	baz=332,slow=76,SNR=24						
MKAR	Makanchi Array	43.91	297	P	P	17 57 22.4	-0.5
	0.2nm,0.5s,baz=78,slow=7.9,SNR=5.4						
YKA	Yellowknife Ar	55.43	34	P	P	17 58 50.1	+0.4
	0.2nm,0.6s,baz=303,slow=7.1,SNR=3.7						
FINES	FINESS Array B	64.06	333	P	P	17 59 46.5	-2.1
	1.3nm,0.9s,baz=51,slow=9.1,SNR=4.0						
WRA	Warramunga Arr	65.06	193	P	P	17 59 56.5	+1.0
	0.5nm,0.5s,baz=8.4,slow=6.7,SNR=5.0						
ASAR	Alice Springs	68.78	192	P	P	18 00 20.4	+1.4
	0.2nm,0.6s,baz=8.4,slow=6.4,SNR=7.8						
TXAR	Lajitas Array	82.58	56	P	P	18 01 39.3	+1.7
	0.1nm,0.6s,baz=316,slow=7.6,SNR=2.9						

*IDC **10** 18:06:15.5±0.4, 8°.17S×124°.52E, h0km, mb5.1/29, mb1 5.1/33, mb1mx5.1/40, mbtmp5.1/33, ML4.7/4, MS4.7/29, Ms1 4.7/29, ms1mx4.6/32, Error ellipse: s-maj=13.9km s-min=9.9km az=67.0*

*NEIC **10** 18:06:17.9, 8°.21S×124°.53E, h4km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.58; M$_{\theta\theta}$-0.97; M$_{\phi\phi}$-0.61; M$_{r\theta}$-1.41; M$_{r\phi}$-0.44; M$_{\theta\phi}$0.27; Fault plane solution: M$_0$2.04000×10^{17} NP1:ϕ_s48.85000°, δ26.80000°, λ57.33000°. NP2:ϕ_s264.55000°, δ67.69000°, λ105.26000°. Principal axes: T 2.2728, Plg64.0000°, Azm200.0000°; N -0.5968, Plg14.0000°, Azm79.0000°; P -1.6760, Plg21.0000°, Azm343.0000°;*

*NEIC **10** 18:06:17.9±1.9, 8°.21S±0°.05×124°.53E±0°.04, h19km±2km, mb5.6/120, Ms_20 5.0/98, Mwb5.5/35, Mwc5.6(GCMT) Error ellipse: s-maj=8.3km s-min=5.3km az=151.0*

*BJI **10** 18:06:17.0±0.0, 8°.10S×124°.60E, h15km, mB5.6/61, mb5.3/76, Ms5.1/66, Ms7 4.8/46*

*MOS **10** 18:06:19.3±1.0, 8°.04S×124°.51E, h33km, mb5.6/41, MS4.7/20, Error ellipse: s-maj=8.3km s-min=4.4km az=118.6*

*GCMT **10** 18:06:19.9±0.1, 8°.08S±0°.01×124°.62E±0°.01, h17km, MW5.6/136, Moment Tensor Solution. s121,c206; s136,c247; Duration: 1s5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.78±.03; M$_{\theta\theta}$-1.73±.02; M$_{\phi\phi}$-0.05±.03; M$_{r\theta}$-1.51±.08; M$_{r\phi}$-0.65±.02; M$_{\theta\phi}$-1.28±.08; Best double couple: M$_0$2.72500×10^{17} NP1:ϕ_s87.00000°, δ24.00000°, λ119.00000°. NP2:ϕ_s236.00000°, δ69.00000°, λ78.00000°. Principal axes: T 2.7120, Plg64.0000°, Azm125.0000°; N 0.0210, Plg11.0000°, Azm240.0000°; P -2.7390, Plg23.0000°, Azm335.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **10** 18:06:20, 8°.06S×124°.69E, h16km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.73; M$_{\theta\theta}$-1.76; M$_{\phi\phi}$0.03; M$_{r\theta}$-1.39; M$_{r\phi}$-0.73; M$_{\theta\phi}$-1.09; Fault plane solution: M$_0$2.59000×10^{17} NP1:ϕ_s86.00000°, δ26.00000°, λ116.00000°. NP2:ϕ_s237.00000°, δ67.00000°, λ78.00000°. Principal axes: T 2.4937, Plg66.0000°, Azm126.0000°; N 0.1812, Plg11.0000°, Azm242.0000°; P -2.6749, Plg21.0000°, Azm336.0000°;*

*DJA **10** 18:06:20.0±0.6, 8°S±2°×12°5E±°, h33km±7km, M5.3/50, mB5.7/46, mb5.4/50, MLv5.4/16, Mw(mB)5.2/46, Mwp5.5/26*

*KLM **10** 18:06:22.0, 8°.22S×124°.64E, h25km, mb5.5*

ISC 10 18:06:20.2±0.9, 8°.23S±0°.03×124°.58E±0°.04, h33km±3km, n788, σ1^{s}70/841, mb5.5/155, MS4.8/104, 47C-12D, Timor region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOEI	Soe	1.55	192	P	Pn	18 06 46.6	+0.9
SOEI	Soe	1.55	192		Pn	18 06 46.3	+0.6
BBSI	Bau Bau	3.38	324	P	Pn	18 07 09.0	-1.7
BBSI				S	Sn	18 07 50.0	+0.3
WSI	Waingapu	4.47	251	P	Pn	18 07 27.3	+1.6
KDI	Kendari	4.67	335	P	Pn	18 07 25.9	-2.6
BKSI	Bulukumba	5.29	303	P	Pn	18 07 35.8	-1.2
	3.2nm27μm7μm608nm,1.0s						
NLAI	Namlea	5.55	27	P	Pn	18 07 41.1	+0.5
	1.0nm6μm361nm,0.8s						
NLAI				S	Sn	18 08 45.7	+2.3
	1.0nm6μm361nm,0.8s						
KAPI	Kappang	5.76	303	Pn	Pn	18 07 42.6	-1.0
	33nm,0.3s,baz=104,slow=4.9,SNR=80						
KAPI				Sn	Sn	18 08 49.4	+0.8
	25nm,0.3s,baz=253,slow=17,SNR=3.6						
KAPI	Kappang	5.76	303		Pn	18 07 43.1	-0.4
KAPI	Kappang	5.76	303	P	Pn	18 07 43.1	-0.4
KAPI						18 08 49.4	
AAI	Ambon	5.77	39	P	Pn	18 07 43.4	-0.2
	1.1nm16μm4μm157nm,0.9s						
BNSI	Bone	5.85	310	P	Pn	18 07 44.0	-0.7
	7.4nm38μm17μm2μm,1.0s						
BNSI				S	Sn	18 08 51.4	+0.7
	7.4nm38μm17μm2μm,1.0s						
SANI	Sanana	6.29	13	P	Pn	18 07 49.9	-0.9
	1.3nm12μm6μm411nm,0.7s						
SPSI	Sidrap Palu	6.39	311	P	Pn	18 07 51.9	-0.2
	3.5nm20μm11μm754nm,0.9s						
BNDI	Bandanaira	6.44	55	P	Pn	18 07 53.6	+0.7
	1.6nm9μm6μm298nm,1.2s						
MSAI	Masohi	6.50	42	P	Pn	18 07 54.3	+0.7
	0.2nm584nm45nm,0.9s						
SAUI	Saumlaki	6.66	88	P	Pn	18 07 54.6	-1.2
	2.6nm14μm8μm459nm,0.9s						
SAUI	Saumlaki	6.66	88		Pn	18 07 55.7	-0.1
PLAI	Plampang	6.76	264	P	Pn	18 07 58.2	+1.0
	5.0nm10μm15μm2μm,1.1s						
TTSI	Tana Toraja	7.00	317	P	Pn	18 07 59.1	-1.4
	2.2nm16μm6μm634nm,1.3s						
LUWI	Luwuk	7.36	346	P	Pn	18 08 04.9	-0.6
	6.6nm21μm24μm2μm,1.6s						
LUWI	Luwuk	7.36	346		Pn	18 08 04.7	-0.8
MTN	Manton Dam	7.91	126	P	Pn	18 08 13.6	+0.7
	baz=8.0,SNR=597						
MTN	Manton Dam	7.91	126		Pn	18 08 13.4	+0.4
LBMI	Labuha	8.08	21	P	Pn	18 08 14.6	-0.8
	4μm270nm,1.4s						
KNRA	Kununurra	8.46	151	P	Pn	18 08 21.2	+0.7
	baz=8.6,SNR=58						
KNRA	Kununurra	8.46	151	Pn	Pn	18 08 20.8	+0.2
KMSI	Cibinong	8.77	356	P	Pn	18 08 24.5	-0.3
	2μm172nm,0.8s						
KDU	Kakadu	8.93	120	P	Pn	18 08 27.2	+0.1
	baz=9.0,SNR=325						
MRSI	Marisa	9.04	343	P	Pn	18 08 27.1	-1.4
	12μm4μm317nm,1.5s						
FAKI	Fak Fak	9.27	56	P	Pn	18 08 32.0	+0.3
	5μm3μm168nm,0.9s						
FAKI	Fak Fak	9.27	56		Pn	18 08 31.9	+0.1
SRBI	Singaraja	9.28	270	P	Pn	18 08 32.2	+0.4
	6μm3μm238nm,1.1s						
TNTI	Ternate	9.36	17	P	Pn	18 08 32.9	-0.1
	4μm3μm100nm,1.0s						
TNTI	Ternate	9.36	17		Pn	18 08 32.9	-0.1
MPSI	Mapaga	9.71	331	P	Pn	18 08 36.6	-1.1
	22μm3μm144nm,0.8s						
FITZ	Fitzroy Crossi	9.87	174	P	Pn	18 08 40.2	+0.4
	baz=10.0,SNR=22						
FITZ	Fitzroy Crossi	9.87	174	Pn	Pn	18 08 40.1	+0.3
	10nm,0.3s,baz=4.9,slow=8.4,SNR=85						
FITZ				Sn	Sn	18 10 26.8	-2.7
	20nm,0.3s,baz=84,slow=9.2,SNR=9.7						
FITZ				LR	LR	18 12 55.0	
	comp=Z,7μm,20.3s,baz=354,slow=40						
FITZ	Fitzroy Crossi	9.87	174	Pn	Pn	18 08 39.6	-0.2
SIJI	Sorong	9.89	43	Pn	Pn	18 08 40.5	+0.3
	1.4nm,0.3s,baz=226,slow=9.9,SNR=14						
SIJI				Sn	Sn	18 10 31.3	+1.2
	baz=270,slow=20,SNR=1.7						
SIJI				LR	LR	18 14 10.8	
	comp=Z,4μm,18.1s,baz=287,slow=48						
SWI	Sorong	9.89	43	P	Pn	18 08 40.0	-0.2
	4μm3μm158nm,0.9s						
BKB	Balikpapan	10.32	312	P	Pn	18 08 43.8	-2.3
	12μm4μm104nm,1.6s						
JAGI	Jajag, Banyuwa	10.32	268		Pn	18 08 45.7	-0.5
KMMI	Kalianget	10.59	276	P	Pn	18 08 49.6	-0.1
	4μm199nm,1.2s						
SMKI	Samarinda	10.67	316	P	Pn	18 08 49.9	-0.9
	13μm658nm,0.8s						
RKPI	Ransiki, Papua	11.65	56	P	Pn	18 09 03.8	-0.6
	4μm343nm,0.9s						
GRJI	Gresik	12.07	275	P	Pn	18 09 10.0	0.0
	2μm205nm,1.1s						
PCJI	Pacitan	13.27	269	P	Pn	18 09 26.4	0.0
	280nm,1.0s						
BAKI	Biak	13.44	59	P	Pn	18 09 28.8	0.0
	251nm,1.1s						
PSA00	Pilbara Seismi	14.03	198	Pn	Pn	18 09 36.3	-0.5
SMRI	Semarang	14.07	274	P	Pn	18 09 39.4	+2.0
WB0	Warramunga Arr	14.90	141	P	Pn	18 09 45.0	-3.6
WRA	Warramunga Arr	14.99	142	Pn	Pn	18 09 46.4	-3.5
	7.0nm,0.3s,baz=318,slow=13,SNR=69						
WRA				Sn	Sn	18 12 27.6	-7.5
	5.1nm,0.3s,baz=312,slow=22,SNR=7.6						
WRA				LR	LR	18 16 58.6	
	comp=Z,13μm,18.6s,baz=320,slow=43						
WRA	Warramunga Arr	14.99	142	Pn	Pn	18 09 44.7	-5.2
WRA	Warramunga Arr	14.99	142	P	Pn	18 09 44.7	-5.2
WRA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WRAB	Tennant Creek	14.99	142	P	Pn	18 09 45.5	-4.4
WRAB	Tennant Creek	14.99	142	⇑eP	Pn	18 09 46.8	-3.1
WB2	Warramunga Arr	15.00	142	P	Pn	18 09 46.2	-3.8
WB2				IAmb	IAmb	18 10 03.9	
	comp=Z,347nm,0.9s						
WR0	Warramunga Arr	15.13	141	P	Pn	18 09 47.4	-4.3
WR0				IAmb	IAmb	18 09 54.6	
	comp=Z,537nm,1.4s						
KCP	Kidapawan	15.14	2	⇓eP	Pn	18 09 50.8	-1.2
DAV	Davao City (W)	15.23	4	⇓eP	Pn	18 09 49.9	-3.2
CTBH	Cotabato--PC H	15.35	359	⇑eP	Pn	18 09 53.5	-1.1
SMPI	Sarmi	15.37	67	P	Pn	18 09 55.1	+0.2
	comp=Z,2μmcomp=Z,46nm,0.8s						
STKI	Sintang	15.44	302	P	Pn	18 09 56.2	+0.4
	comp=Z,5μmcomp=Z,154nm,2.1s						
SBUM	Sibu	16.27	310	P	Pn	18 10 07.5	+1.1
SBUM	Sibu	16.27	310	P	P	18 10 08.0	-1.1
KKM	Kota Kinabalu	16.45	329	P	Pn	18 10 09.5	+0.6
KKM				IAmb	IAmb	18 10 14.5	
	comp=Z,1μm,1.8s						
GENI	Genyem	16.49	71	P	Pn	18 10 08.7	-0.5
	comp=Z,3μmcomp=Z,2μmcomp=Z,154nm,1.0s						
CISI	Cisompet, Garu	16.62	271	P	Pn	18 10 10.3	-0.7
	comp=Z,3μmcomp=Z,3μmcomp=Z,250nm,1.5s						
CISI	Cisompet, Garu	16.62	271	Pn	Pn	18 10 09.2	-1.8
CISI				IAmb	IAmb	18 10 35.8	
	comp=Z,839nm,1.7s						
LEM	Lembang	16.88	274	Pn	P	18 10 15.8	-0.2
	comp=Z,2.1nm,0.3s,baz=88,slow=9.7,SNR=12						
LEM				LR	LR	18 19 02.2	
	comp=Z,6μm,18.1s,baz=66,slow=46						
LEM	Lembang	16.88	274	P	P	18 10 13.3	-1.0
	comp=Z,2μmcomp=Z,2μmcomp=Z,120nm,0.9s						
WRKA	Warakurna	17.09	168	P	Pn	18 10 16.9	+0.2
	baz=17,SNR=97						
KSM	Kuching	17.19	303	P	Pn	18 10 17.9	-0.1
KSM				IAmb	IAmb	18 10 29.6	
	comp=Z,462nm,1.4s						
KSM	Kuching	17.19	303	P	P	18 10 20.0	+0.6
CNJI	Cibinong	17.32	272	P	Pn	18 10 19.4	-0.2
	comp=Z,4μmcomp=Z,292nm,1.2s						
GIRL	Giralia	17.45	214	P	P	18 10 26.0	+3.9
	baz=18,SNR=4.5						
TPI	Tanjungpandan	17.70	287	P	P	18 10 25.8	+0.8
	comp=Z,5μmcomp=Z,197nm,1.6s						
AS31	Alice Springs	17.76	151	P	Pn	18 10 24.6	-0.5
ASAR	Alice Springs	17.76	151	P	Pn	18 10 24.4	-0.8
	comp=Z,2.3nm,0.3s,baz=328,slow=12,SNR=176						
ASAR				S	Sn	18 13 30.6	-12
	comp=Z,0.7nm,0.3s,baz=318,slow=20,SNR=3.0						
ASAR				LR	LR	18 18 04.9	
	comp=Z,7μm,18.8s,baz=320,slow=40						
DBJI	Dramaga	17.76	274	P	P	18 10 25.7	0.0
	comp=Z,6μmcomp=Z,330nm,1.4s						
SKJI	Sukabumi	17.91	273	P	Pn	18 10 25.7	-1.3
	comp=Z,4μmcomp=Z,281nm,1.2s						
QIS	Mount Isa	19.00	132	P	P	18 10 39.8	+0.5
	baz=19,SNR=99						
COEN	Coen	19.11	109	P	P	18 10 40.5	0.0
	baz=19,SNR=21						
COEN	Coen	19.11	109		P	18 10 39.5	-1.0
MEEK	Meekatharra	19.17	196	P	Pn	18 10 43.1	+0.9
	baz=19,SNR=26						
KASI	Kota Agung	20.12	276	P	P	18 10 51.3	-0.3
	comp=Z,2μmcomp=Z,107nm,1.3s						
PMBI	Palembang	20.40	284	P	P	18 10 55.3	+0.7
	comp=Z,4μmcomp=Z,6μmcomp=Z,357nm,1.3s						
PMBI	Palembang	20.40	284	P	P	18 10 54.1	-0.5
PMBI				IAMs_20	IAMs_20	18 19 33.2	
	comp=Z,4μm,19.0s						
MDSI	Maura Dua	20.61	279	P	Pn	18 10 58.3	-1.1
	comp=Z,768nmcomp=Z,30nm,1.3s						
LWLI	Liwa	20.63	278	P	P	18 10 57.3	0.0
	comp=Z,15μmcomp=Z,52nm,0.8s						
MTSU	Mount Surprise	21.57	119	P	P	18 11 08.7	+1.5
	baz=22,SNR=78						
TPRI	Tanjung Pinang	21.96	294	P	P	18 11 10.9	-0.6
	comp=Z,6μmcomp=Z,230nm,1.5s						
MORW	Morawa	22.23	200	P	P	18 11 15.1	+0.8
	baz=22,SNR=12						
MORW	Morawa	22.23	200	P	P	18 11 12.1	-2.1
KSI	Kapahiang	22.33	280	P	P	18 11 13.1	-2.4
	comp=Z,4μmcomp=Z,65nm,1.0s						
KSI	Kapahiang	22.33	280	P	P	18 11 16.2	+0.7
PMG	Port Moresby	22.34	95	P	P	18 11 17.4	+1.8
	comp=Z,240nm,0.9s,baz=311,slow=6.1,SNR=13						
PMG				LR	LR	18 22 38.3	
	comp=Z,4μm,18.6s,baz=248,slow=44						
PMG	Port Moresby	22.34	95	P	P	18 11 16.1	+0.5
PMG				IAmb	IAmb	18 11 23.6	
	comp=Z,281nm,0.9s						
TGY	Tagaytay City	22.48	351	P	P	18 11 17.8	+0.8
	comp=Z,73nm,0.4s,baz=157,slow=22,SNR=3.0						
TGY				LR	LR	18 20 47.3	
	comp=Z,1μm,21.7s,baz=156,slow=39						
FORT	Forrest	22.67	172	P	P	18 11 19.8	+1.0
	baz=23,SNR=17						
FORT	Forrest	22.67	172	P	P	18 11 18.9	+0.1
FORT				IAMs_20	IAMs_20	18 20 52.3	
	comp=Z,6μm,19.0s						
MYKOM	Kota Tinggi	22.94	295	P	P	18 11 22.5	+0.6
MYKOM				IAmb	IAmb	18 11 31.0	
	comp=Z,431nm,1.6s						
MYKOM	Kota Tinggi	22.94	295	P	P	18 11 25.0	+3.1
KMBL	Kambalda	23.16	186	P	P	18 11 25.0	+1.1
	baz=23,SNR=14						
BLDU	Ballidu	23.46	197	P	P	18 11 27.7	+0.8
	baz=24,SNR=17						
MANU	Manus Island	23.50	76	P	P	18 11 26.0	-1.5
KRJI	Kerinci	23.81	284	P	P	18 11 29.7	-0.8
PCPH	Palayan	23.89	352	⇓eP	P	18 11 32.5	+1.4
CTA	Charters Tower	24.06	122	P	P	18 11 34.6	+1.9
	comp=Z,89nm,1.0s,baz=300,slow=11,SNR=34						
CTA				LR	LR	18 21 46.9	
	comp=Z,2μm,19.0s,baz=297,slow=39						
CTAO	Charters Tower	24.06	122	IAMs_20	IAMs_20	18 21 44.8	
	comp=Z,3μm,18.0s						
CTAO	Charters Tower	24.06	122	P	P	18 11 34.6	+1.9
CTAO				pmax	pmax		
	comp=Z,181nm,1.2s						
KLBR	Kellerberrin	24.10	194	P	P	18 11 35.2	+2.3
	baz=24,SNR=5.8						
MUN	Mundaring	24.88	197	P	P	18 11 42.3	+2.2
	baz=25,SNR=4.7						
BKNI	Bangkinang	24.96	289		P	18 11 41.4	+0.5
NWAO	Narrogin (SRO)	25.50	194	P	P	18 11 47.3	+1.6
	baz=26,SNR=7.0						
NWAO	Narrogin (SRO)	25.50	194	P	P	18 11 46.4	+0.8
	comp=Z,33nm,1.0s,baz=37,slow=7.6,SNR=11						
NWAO				LR	LR	18 23 56.7	
	comp=Z,2μm,19.1s,baz=16,slow=42						
NWAO	Narrogin (SRO)	25.50	194	P	P	18 11 45.9	+0.2
NWAO				IAmb	IAmb	18 11 51.6	
	comp=Z,181nm,1.6s						
QLP	Quilpie	26.10	137	P	P	18 11 53.6	+2.5
	baz=26,SNR=10.0						
IPM	Ipoh	26.67	297	P	P	18 11 57.8	+1.3
IPM				IAmb	IAmb	18 12 05.7	
	comp=Z,112nm,1.1s						
IPM	Ipoh	26.67	297	P	P	18 11 59.0	+2.5
BBOO	Buckleboo	26.67	158	P	P	18 11 58.1	+1.8
	baz=27,SNR=15						
BBOO	Buckleboo	26.67	158	P	P	18 11 57.0	+0.7
BBOO				IAmb	IAmb	18 12 03.2	
	comp=Z,370nm,1.9s						
KULM	Kulim	27.39	299	P	P	18 12 04.3	+1.4
KULM				IAmb	IAmb	18 12 06.1	
	comp=Z,155nm,1.5s						
KULM				IAMs_20	IAMs_20	18 23 31.3	
	comp=Z,3μm,19.0s						
RPSI	Rantau Prapat	27.80	292	P	P	18 12 06.9	+0.3
RPSI				IAmb	IAmb	18 12 15.4	
	comp=Z,142nm,1.2s						
RPSI				IAMs_20	IAMs_20	18 24 08.1	
	comp=Z,5μm,18.0s						
PSI	Prapat	27.84	292	P	P	18 12 06.9	-0.2
	comp=Z,34nm,0.8s,baz=184,slow=6.5,SNR=23						
PSI				LR	LR	18 24 37.0	
	comp=Z,4μm,18.2s,baz=130,slow=40						
STKA	Stephens Creek	28.36	148	P	P	18 12 13.5	+2.1
	baz=28,SNR=82						
STKA	Stephens Creek	28.36	148	P	P	18 12 13.5	+2.1
	comp=Z,49nm,0.7s,baz=318,slow=9.3,SNR=90						
STKA				LR	LR	18 24 58.9	
	comp=Z,9μm,18.9s,baz=318,slow=40						
STKA	Stephens Creek	28.36	148	P	P	18 12 13.4	+2.1
RMQ	Roma	29.26	131	P	P	18 12 21.7	+2.2
	baz=29,SNR=17						
UBPT	Khong Chiam	30.07	321	P	P	18 12 26.9	+0.1
CMSA	Cobar Meteorol	30.40	143	P	P	18 12 32.0	+2.5
	baz=30,SNR=30						
EIDS	Eidsvold	30.46	127	IAMs_20	IAMs_20	18 25 56.3	
	comp=Z,2μm,19.0s						
QIZ	Qiongzhong	30.74	332	P	P	18 12 34.0	+1.4
QIZ				PP	PnPn	18 13 33.3	+0.1
QIZ				S	S	18 17 35.1	+1.5
QIZ				pmax	pmax		
	comp=Z,31nm,1.1s						
QIZ				LR	LR		
	comp=Z,900nm,22.6s						
QIZ				LR	LR		
	comp=Z,1μm,19.1s						
TWG	Pinlang	31.05	354	IAMs_20	IAMs_20	18 23 59.9	
	comp=Z,4μm,18.0s						
TPUB	Ta-pu	31.57	353	P	P	18 12 39.8	-0.1
TPUB				IAmb	IAmb	18 12 41.9	
	comp=Z,82nm,0.8s						
YULB	Yu-li	31.59	354	P	P	18 12 38.6	-1.4
YULB				IAmb	IAmb	18 12 44.5	
	comp=Z,146nm,1.8s						
SSLB	Suanglung	32.02	354	P	P	18 12 43.0	-0.8
SSLB				IAmb	IAmb	18 12 45.5	
	comp=Z,154nm,1.8s						
ARPS	Mount Arapiles	32.46	154	P	P	18 12 50.4	+2.8
	baz=33,SNR=74						
QZH	Quanzhou	33.48	350	⇓iP	P	18 12 59.8	+3.2
QZH				S	S	18 18 16.0	-0.3
ARMA	Armidale	33.57	135	P	P	18 13 00.5	+3.0
	baz=34,SNR=16						
ARMA	Armidale	33.57	135	P	P	18 13 00.5	+3.0
ARMA				IAMs_20	IAMs_20	18 27 57.8	
	comp=Z,4μm,20.0s						
PBKT	Sadao Pong	33.95	317	P	P	18 13 01.5	+0.7
PBKT				IAmb	IAmb	18 13 08.8	
	comp=Z,158nm,1.7s						
YNG	Young	33.96	143	P	P	18 13 03.3	+2.6

baz=34,SNR=14
TOO Toolangi 34.81 150 P P 18 13 11.9 +3.8
baz=35,SNR=36
TOO Toolangi 34.81 150 P P 18 13 11.6 +3.5
TOO IAmb IAmb 18 13 13.2
comp=Z,88nm,0.8s
TOO Toolangi 34.81 150 P P 18 13 11.6 +3.5
TOO pmax pmax
comp=Z,88nm,0.9s
TOO MLR MLR
comp=Z,6µm,18.0s
MGCD Mangrove Creek 34.92 139 P P 18 13 12.3 +3.3
baz=35,SNR=8.4
CAN Canberra 35.03 144 P P 18 13 13.2 +3.2
CAN Canberra 35.03 144 P P 18 13 13.2 +3.2
CAN pmax pmax
comp=Z,481nm,2.0s
CAN MLR MLR
comp=Z,5µm,18.0s
CNB Canberra Magne 35.23 144 P P 18 13 12.5 +0.7
baz=35,SNR=20
RIV Riverview 35.34 140 P P 18 13 16.8 +4.2
baz=36,SNR=3.9
MILA Mila 36.34 146 P P 18 13 24.3 +3.0
baz=36,SNR=4.9
CM31 Chiang Mai Arr 36.65 317 P P 18 13 25.3 +1.3
CM31 IAmb IAmb 18 13 26.7
comp=Z,76nm,0.9s
CMAR Chiang Mai Arr 36.65 317 P P 18 13 25.3 +1.3
comp=Z,43nm,0.9s,baz=141,slow=6.6,SNR=278
CMAR PcP PcP 18 15 47.1 +0.4
comp=Z,12nm,1.1s,baz=160,slow=2.7,SNR=5.1
CMAR LR LR 18 29 41.9
comp=Z,1µm,19.8s,baz=152,slow=38
CMAR Chiang Mai Arr 36.65 317 ceP P 18 13 25.5 +1.5
CMAR pmax pmax
comp=Z,48nm,0.9s
CHTO Chiang Mai 36.90 317 P P 18 13 27.4 +1.2
CHTO IAmb IAmb 18 13 28.7
comp=Z,91nm,1.0s
CHTO Chiang Mai 36.90 317 IAMs_20 IAMs_20 18 29 49.4
comp=Z,2µm,20.0s
CHTO Chiang Mai 36.90 317 P P 18 13 27.4 +1.2
CHTO pmax pmax
comp=Z,91nm,1.0s
CHTO MLR MLR
comp=Z,2µm,20.0s
PBA Port Blair 37.32 302 IAMs_20 IAMs_20 18 31 12.6
comp=Z,2µm,20.0s
GYA Guiyang 38.62 334 ⇑iP P 18 13 41.8 +1.1
GYA pP pP 18 13 48.6 -1.9
GYA PP PnPn 18 15 15.1 +3.3
GYA PcP PcP 18 15 53.8 +1.1
GYA S S 18 19 34.3 -0.9
GYA sS pS 18 19 45.4 +0.4
GYA SS SnSn 18 22 18.2 -6.6
GYA pmax pmax
comp=Z,50nm,1.0s
GYA pmax pmax
comp=Z,120nm,4.5s
GYA LR LR
comp=Z,500nm,12.9s
GYA LR LR
comp=Z,640nm,13.5s
KMI Kunming 39.39 328 P P 18 13 49.5 +2.2
KMI pP pP 18 13 54.1 -3.0
KMI S S 18 19 39.3 -7.8
KMI pmax pmax
comp=Z,34nm,1.1s
KMI pmax pmax
comp=Z,860nm,6.4s
KMI LR LR
comp=Z,750nm,27.9s
KMI LR LR
comp=Z,650nm,34.3s
KMI Kunming 39.39 328 P P 18 13 47.8 +0.5
KMI Kunming 39.39 328 P P 18 13 47.8 +0.5
KMI pmax pmax
comp=Z,41nm,1.1s
KMI MLR MLR
comp=Z,800nm,21.0s
MOO Moorlands 39.47 153 P P 18 13 51.2 +3.6
baz=40,SNR=3.5
LHI Lord Howe Isla 39.57 131 IAMs_20 IAMs_20 18 32 01.6
comp=Z,2µm,18.0s
WHN Wuhan 39.78 346 ⇑P P 18 13 51.5 +1.3
WHN pmax pmax
comp=Z,340nm,1.6s
WHN pmax pmax
comp=Z,2µm,8.4s
TAU Tasmania Unive 39.90 154 P P 18 13 51.6 +0.5
TAU IAmb IAmb 18 14 00.8
comp=Z,162nm,1.5s
TAU Tasmania Unive 39.90 154 P P 18 13 51.6 +0.5
TAU pmax pmax
comp=Z,163nm,1.5s
TAU MLR MLR
comp=Z,5µm,18.0s
NJ2 Nanjing 40.42 352 eP P 18 13 56.0 +0.5
NJ2 sP pP 18 14 02.5 -2.8
NJ2 PP PnPn 18 15 35.1 +2.1
NJ2 S S 18 20 08.1 +6.3
NJ2 pmax pmax
comp=Z,45nm,0.9s
NJ2 LR LR
comp=Z,880nm,19.9s
NJ2 LR LR
comp=Z,820nm,17.1s
ENH Enshi 40.93 340 P P 18 14 00.1 +0.3
SANVU Saraoutou 42.27 104 P P 18 14 11.6 +0.6
SANVU IAmb IAmb 18 14 13.9
comp=Z,186nm,1.1s
NOUC Port Laguerre 42.41 114 P P 18 14 12.5 +0.5
NOUC IAMs_20 IAMs_20 18 32 43.2
comp=Z,2µm,18.0s
DZM Mont Dzumac 42.53 114 eP P 18 14 13.3 +0.2
comp=Z,108nm,1.3s
DZM eS S 18 20 31.2 -2.5
comp=Z,1µm,34.4s
DZM eLR LR 18 25 58.6
comp=Z,2µm,21.8s
DZM Mont Dzumac 42.53 114 P P 18 14 13.6 +0.5
DZM IAMs_20 IAMs_20 18 32 57.2
comp=Z,2µm,18.0s
CD2 Chengdu 43.74 334 P P 18 14 23.0 +0.3
CD2 sP pP 18 14 28.1 -4.4
CD2 PP PcP 18 16 08.7 -0.5
CD2 S S 18 20 50.4 -0.6
CD2 sS pS 18 20 59.8 -1.1
CD2 pmax pmax
comp=Z,110nm,1.1s
CD2 pmax pmax
comp=Z,850nm,4.7s
CD2 LR LR
comp=Z,1µm,14.7s
CD2 LR LR
comp=Z,2µm,14.3s
CD2 LR LR
comp=Z,1µm,16.7s
XAN Xi'an 44.58 341 ⇑P P 18 14 28.9 -0.5
XAN PcP PcP 18 16 11.7 -0.4
XAN PP PP 18 16 18.9 +5.0
XAN S S 18 21 01.8 -1.4
XAN SS SS 18 24 09.3 -15
XAN pmax pmax
comp=Z,39nm,1.3s
XAN pmax pmax
comp=Z,800nm,7.2s
XAN LR LR
comp=Z,820nm,18.4s
XAN Xi'an 44.58 341 P P 18 14 28.6 -0.8
XAN Xi'an 44.58 341 P P 18 14 28.6 -0.8
XAN pmax pmax
comp=Z,59nm,1.2s
INU Inuyama 44.90 14 P P 18 14 30.5 -1.3
KSAR Wonju Array Be 45.54 4 P P 18 14 37.0 +0.2
KSAR Wonju Array Be 45.54 4 P P 18 14 37.0 +0.2
KSRS Korea Array 45.55 4 P P 18 14 36.7 -0.2
comp=Z,3.7nm,0.7s,baz=183,slow=10,SNR=12
KSRS PcP PcP 18 16 15.2 0.0
comp=Z,2.4nm,0.8s,baz=178,slow=5.0,SNR=3.3
SHL Shillong 46.27 318 P P 18 14 42.7 -0.3
SHL IAMs_20 IAMs_20 18 36 40.1
comp=Z,1µm,20.0s
SHL Shillong 46.27 318 P P 18 14 42.7 -0.3
SHL pmax pmax
comp=Z,123nm,1.1s
SHL MLR MLR
comp=Z,1µm,20.0s
MJAR Matsushiro Arr 46.34 15 P P 18 14 42.6 -0.6
comp=Z,35nm,1.0s,baz=191,slow=8.5,SNR=57
MJAR LR LR 18 32 02.9
comp=Z,502nm,22.0s,baz=175,slow=33
MJAR Matsushiro Arr 46.34 15 P P 18 14 42.3 -0.9
MAJO Matsushiro 46.34 15 P P 18 14 42.6 -0.6
MAJO Matsushiro 46.34 15 ⇓iP P 18 14 43.1 -0.1
MAJO pmax pmax
comp=Z,38nm,1.0s
MAT Matsushiro 46.34 15 P P 18 14 42.1 -1.1
MAT S S 18 21 23.6 -4.8
MJB9 Matsu-Tunnel 46.34 15 P P 18 14 42.8 -0.4
PALK Pallekele 46.38 288 P P 18 14 43.5 -0.4
comp=Z,28nm,1.3s,baz=115,slow=8.6,SNR=14
PALK Pallekele 46.38 288 P P 18 14 41.5 -2.4
PALK Pallekele 46.38 288 P P 18 14 42.5 -1.4
PALK IAmb IAmb 18 14 49.9
comp=Z,100nm,1.6s
PALK Pallekele 46.38 288 IAMs_20 IAMs_20 18 35 08.6
comp=Z,2µm,18.0s
PALK Pallekele 46.38 288 ⇓iP P 18 14 42.9 -1.0
PALK pmax pmax
comp=Z,33nm,1.4s
DL2 Dalian 46.97 357 P P 18 14 47.2 -0.9
DL2 eS S 18 21 36.7 -0.6
DL2 pmax pmax
comp=Z,64nm,1.2s
DL2 pmax pmax
comp=Z,460nm,5.9s
DL2 LR LR
comp=Z,610nm,17.5s
DL2 LR LR
comp=Z,540nm,18.4s
DL2 LR LR
comp=Z,630nm,15.3s
TIY Taiyuan 47.09 347 eP P 18 14 53.2 +4.0
TIY S S 18 21 37.4 -1.8
TIY pmax pmax
comp=Z,400nm,6.6s
TIY LR LR
comp=Z,450nm,6.3s
TIY LR LR
comp=Z,200nm,11.6s
CHLP Challavanipeta 48.00 304 eP P 18 14 57.0 +0.5
CHLP IAmb IAmb 18 14 58.6
comp=Z,72nm,1.3s
CHLP eS S 18 21 51.8 -0.8
LZH Lanzhou 48.21 337 ⇑P P 18 14 58.9 +0.9
LZH pP pP 18 15 05.9 -2.0
LZH sP sP 18 15 10.1 -2.1
LZH PP PP 18 16 55.0 +4.4
LZH S S 18 21 55.4 +0.1
LZH sS pS 18 22 03.3 -2.4
LZH pmax pmax
comp=Z,76nm,1.4s
LZH pmax pmax
comp=Z,750nm,6.5s
LZH LR LR
comp=Z,750nm,15.2s
LZH LR LR
comp=Z,710nm,15.2s
LZH LR LR
comp=Z,830nm,15.6s
BJT Baijiatuau 48.63 351 P P 18 15 00.1 -0.8
BJT IAmb IAmb 18 15 01.5
comp=Z,83nm,1.7s
BJT Baijiatuau 48.63 351 P P 18 15 00.1 -0.8
BJT pmax pmax
comp=Z,83nm,1.7s
BJI Beijing 48.65 351 ⇑iP P 18 15 00.2 -0.9
BJI PP PP 18 16 52.8 -1.6
BJI S S 18 21 59.9 -1.2
BJI pmax pmax
comp=Z,21nm,0.9s
BJI pmax pmax
comp=Z,480nm,7.2s
BJI LR LR
comp=Z,350nm,7.0s
BJI LR LR
comp=Z,370nm,9.3s
BJI LR LR
comp=Z,960nm,22.7s
PVM Polavaram 49.43 301 eP P 18 15 08.0 +0.5
PVM IAmb IAmb 18 15 09.8
comp=Z,88nm,1.3s
PVM eS S 18 22 11.1 -1.7
LSA Lhasa 49.56 321 P P 18 15 10.4 +1.6
LSA Lhasa 49.56 321 P P 18 15 09.7 +0.9
LSA Lhasa 49.56 321 P P 18 15 09.7 +0.9
LSA Lhasa 49.56 321 P P 18 15 09.7 +0.9
LSA pmax pmax
comp=Z,211nm,1.2s
SKHT Srikalahasti 49.60 296 eP P 18 15 08.6 -0.2
SKHT IAmb IAmb 18 15 09.7
comp=Z,43nm,1.3s
SKHT eS S 18 22 13.5 -1.8
SNY Shenyang 49.82 359 ⇑P P 18 15 06.0 -4.0
SNY S S 18 22 10.2 -7.2
MYLAV Mylavaram 50.05 300 eP P 18 15 12.6 +0.4
MYLAV IAmb IAmb 18 15 18.7
comp=Z,128nm,1.5s
MYLAV eS S 18 22 20.0 -1.4
ODAN Odare 50.17 315 eP P 18 15 13.5 +0.3
comp=Z,208nm,1.0s
ADKI Addanki 50.24 298 eP P 18 15 12.9 -0.7
ADKI IAmb IAmb 18 15 15.6
comp=Z,72nm,1.5s
ADKI eS S 18 22 22.5 -1.6
TAPN Taplejung 50.26 316 eP P 18 15 14.4 +0.4
comp=Z,479nm,1.2s
HHC Hu-ho-hao-te 50.29 347 ⇑iP P 18 15 13.4 -0.3
HHC S S 18 22 25.2 +1.0
HHC pmax pmax
comp=Z,10.0nm,1.1s
HHC pmax pmax
comp=Z,320nm,5.3s
BTO Baotou 50.41 346 eP P 18 15 13.9 -0.8
RAMN Ramite 50.78 315 eP P 18 15 18.3 +0.4
comp=Z,265nm,0.8s
GGR Gangavaram 50.90 301 eP P 18 15 18.5 -0.2
GGR IAmb IAmb 18 15 19.8
comp=Z,102nm,1.4s
GGR eS S 18 22 31.7 -1.6
MSHR Mys Shultsa 50.92 6 ⇑iP P 18 15 18.1 -0.2
NJS Nagarjunasagar 51.12 299 eP P 18 15 19.9 -0.3
NJS IAmb IAmb 18 15 21.0
comp=Z,63nm,1.4s
NJS eS S 18 22 34.8 -1.4
SRLM Srisailam 51.28 298 eP P 18 15 20.5 -1.1
SRLM IAmb IAmb 18 15 22.1
comp=Z,54nm,1.4s
SRLM eS S 18 22 36.4 -2.3
JIRN Jiri 51.50 315 eP P 18 15 23.7 +0.3
comp=Z,343nm,0.9s
CN2 Changchun 51.79 1 eP P 18 15 23.4 -1.4
CN2 eS S 18 22 45.2 +0.5
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,600nm,14.0s
CN2 LR LR
comp=Z,500nm,14.0s
CN2 LR LR
comp=Z,600nm,17.0s
GUN Gumba 51.87 315 eP P 18 15 26.4 +0.2
comp=Z,1µm,1.3s
PKI Pulchoki 51.99 315 eP P 18 15 26.9 -0.2
comp=Z,200nm,1.0s
PKIN Phulchoki 52.01 315 eP P 18 15 26.8 -0.3
comp=Z,129nm,0.7s
HYB Hyderabad 52.13 299 iP P 18 15 27.0 -0.9
HYB eS S 18 22 50.0 -0.4
HYBB Hyderabad (bro 52.14 299 eP P 18 15 27.8 -0.8
HYBB IAmb IAmb 18 15 29.1
comp=Z,98nm,1.4s
HYBB eS S 18 22 48.2 -2.2
RPR Rampur 52.14 302 eP P 18 15 27.8 -0.1
RPR IAmb IAmb 18 15 28.9
comp=Z,90nm,1.3s
RPR eS S 18 22 48.5 -1.8
KKN Kakani 52.22 315 eP P 18 15 28.7 +0.1
comp=Z,634nm,1.5s
DMN Daman 52.23 314 eP P 18 15 29.0 +0.3
comp=Z,596nm,1.5s
URV Uravakonda 52.26 296 eP P 18 15 27.6 -1.2
URV IAmb IAmb 18 15 29.7
comp=Z,37nm,1.2s
URV eS S 18 22 49.2 -2.9
USRK Ussuriysk Ar. 52.61 7 P P 18 15 31.2 +0.3
comp=Z,27nm,0.9s,baz=194,slow=7.4,SNR=23
USRK LR LR 18 40 07.3
comp=Z,150nm,18.5s,baz=154,slow=39
MLZ Mavora Lakes 52.65 142 P P 18 15 33.2 +1.9
MLZ IAmb IAmb 18 15 39.8
comp=Z,173nm,1.9s
GTA Gaotai 52.67 336 ⇑P P 18 15 32.3 +0.7
GTA pP pP 18 15 35.6 -6.1
GTA sP sP 18 15 38.4 -7.5
GTA ScP ScP 18 20 38.6 +2.3
GTA S S 18 22 58.0 +0.8
GTA sS pS 18 23 09.2 +1.7
GTA pmax pmax
comp=Z,57nm,1.4s
GTA pmax pmax
comp=Z,720nm,6.6s
GTA LR LR
comp=Z,340nm,18.2s
GTA LR LR
comp=Z,800nm,17.2s
GTA LR LR
comp=Z,540nm,19.9s
MDJ Mudanjiang 52.79 4 P P 18 15 32.5 +0.3
MDJ pP pP 18 15 38.4 -3.8
MDJ S S 18 23 05.5 +7.1
MDJ sS sS 18 23 14.0 -0.9
MDJ pmax pmax
comp=Z,100nm,0.9s
MDJ pmax pmax
comp=Z,670nm,2.8s
MDJ Mudanjiang 52.79 4 P P 18 15 32.5 +0.3
MSVF Nonsavu 52.80 106 P P 18 15 33.5 +0.6
MSVF IAmb IAmb 18 15 37.9
comp=Z,145nm,1.6s
MSVF Nonsavu 52.80 106 ⇓iP P 18 15 33.9 +1.0
MSVF pmax pmax
comp=Z,24nm,1.0s
GKN Gorkha 52.80 315 eP P 18 15 32.8 0.0
comp=Z,262nm,1.0s
FOZ Fox Glacier 52.80 140 P P 18 15 34.0 +1.6
FOZ IAmb IAmb 18 15 42.9
comp=Z,106nm,1.8s
ERM Erimo 52.81 17 P P 18 15 33.8 +1.4
ERM IAmb IAmb 18 15 35.6
comp=Z,53nm,0.8s
ERM Erimo 52.81 17 ⇓iP P 18 15 31.9 -0.5
ERM pmax pmax
comp=Z,41nm,0.8s
WHZ Wether Hill Ro 52.82 143 P P 18 15 34.4 +1.9
SRSP Sriramsagar 52.97 301 eP P 18 15 33.1 -0.9
SRSP IAmb IAmb 18 15 35.4
comp=Z,76nm,1.3s
SRSP eS S 18 22 58.0 -3.8
KOLN Koldanda 53.40 314 eP P 18 15 37.3 0.0
comp=Z,420nm,1.0s
QRZ Quartz Range 53.44 135 P P 18 15 39.7 +2.5
QRZ IAmb IAmb 18 15 41.0
comp=Z,86nm,1.0s
WTAZ Waiatarua 53.49 130 P P 18 15 58.2 +21
DANN Dangsing 53.63 314 eP P 18 15 39.1 0.0
comp=Z,301nm,0.7s
RPZ Rata Peaks 53.68 139 P P 18 15 40.4 +1.5
LTZ Lake Taylor 54.07 138 P P 18 15 44.0 +2.1
LTZ IAmb IAmb 18 16 11.8
comp=Z,66nm,1.4s
THZ Tophouse 54.07 136 P P 18 15 43.8 +1.9
KLRI Killari 54.10 299 eP P 18 15 40.6 -1.8
KLRI IAmb IAmb 18 15 43.3
comp=Z,61nm,1.4s
KLRI eS S 18 23 13.9 -3.2
TEY Ternei 54.11 11 ⇑eP P 18 15 42.5 +0.6
TEY pmax pmax
comp=Z,50nm,0.7s
KUZ Kuaotunu 54.30 130 P P 18 15 56.3 +13
TUWZ Tuamarina 54.65 136 P P 18 15 47.2 +1.2
MQZ McQueen's Vall 54.72 139 P P 18 15 48.2 +1.7
MQZ IAmb IAmb 18 15 56.1
comp=Z,46nm,1.0s
KHZ Kahutara 54.77 137 P P 18 15 48.4 +1.6
CMWZ Cape Campbell 54.97 136 P P 18 15 50.2 +1.9
BHW Baring Head 55.29 135 P P 18 15 51.5 +0.9
BHHZ Black Hill Sta 55.45 133 P P 18 15 53.9 +2.0
YUK Yuzh-Kuril'sk 55.48 19 eP P 18 15 48.0 -3.8
YUK i 18 16 49.0
YUK e 18 17 58.7
YUK eS S 18 23 33.5 -1.1
YUK e 18 25 33.3
YUK pmax pmax
comp=Z,376nm,1.4s
YUK pmax pmax
comp=N,169nm,0.7s
YUK pmax pmax
comp=Z,393nm,1.8s
MSWZ Moikau Station 55.56 135 P P 18 15 53.7 +1.1
PLWZ Palliser 55.62 135 P P 18 15 53.8 +0.7
BKZ Black Stump Fm 55.66 132 P P 18 15 54.9 +1.5
BKZ IAmb IAmb 18 16 00.7
comp=Z,114nm,1.6s
BKZ Black Stump Fm 55.66 132 P P 18 15 55.4 +2.0
KRHZ Kereru 55.73 133 P P 18 15 56.0 +2.2
MTHZ Maungataniwha 55.78 132 P P 18 15 51.7 -2.8
URZ Urewera 55.82 131 P P 18 15 55.5 +1.0
BFZ Birch Farm 56.00 134 P P 18 16 12.5 +17
RAGZ Rawiri 56.12 131 P P 18 15 48.9 -7.8
RUGZ Raukumara Rang 56.16 130 P P 18 15 56.5 -0.6
SNGZ Shannon Statio 56.16 131 P P 18 15 46.2 -11
MWZ Matawai 56.16 131 P P 18 15 51.2 -5.8
HAZ Te Kaha 56.17 130 P P 18 15 60.0 +3.0
MXZ Matakaoa Point 56.52 130 P P 18 16 00.6 +1.2
POO Poona 56.67 298 eP P 18 15 57.5 -3.4
WMGZ Waiomatatini S 56.67 130 P P 18 16 03.1 +2.5
CNGZ Carnagh Statio 56.71 131 P P 18 16 02.5 +1.7
YSS Yuzh-Sakhalins 57.27 15 P P 18 16 05.1 +0.6
YSS IAmb IAmb 18 16 07.5
comp=Z,64nm,0.8s
YSS Yuzh-Sakhalins 57.27 15 ⇑iP P 18 16 05.3 +0.8
YSS eS S 18 24 01.4 +3.1
YSS ePS PnS 18 24 17.7 +5.4
YSS pmax pmax
comp=Z,30nm,0.9s
YSS MLR MLR
comp=Z,300nm,14.0s
HIA Hailar 57.41 356 P P 18 16 05.4 -0.1
HIA IAmb IAmb 18 16 10.9
comp=Z,53nm,1.1s
HIA Hailar 57.41 356 P P 18 16 05.4 -0.1
HIA pmax pmax
comp=Z,53nm,1.1s
HIA MLR MLR
comp=Z,500nm,22.0s
KLR Kul'dur 57.56 6 ceP P 18 16 06.5 0.0
KLR pmax pmax
comp=Z,10.0nm,0.9s
ULN Ulaanbaatar 57.97 346 P P 18 16 09.7 +0.1
ULN IAmb IAmb 18 16 11.3
comp=Z,93nm,1.8s
ULN Ulaanbaatar 57.97 346 P P 18 16 09.7 +0.1
ULN pmax pmax
comp=Z,93nm,1.8s
SONM Songino Array 58.09 346 P P 18 16 10.4 -0.1
comp=Z,8.3nm,0.9s,baz=166,slow=6.6,SNR=40
SONM LR LR 18 41 00.6
comp=Z,415nm,21.8s,baz=168,slow=36
SONM PKP2bc 18 46 08.2
comp=Z,1.2nm,1.1s,baz=336,slow=3.2,SNR=4.3
SONM Songino Array 58.09 346 P P 18 16 10.0 -0.5
GRNR Gornyy 59.65 9 ⇑iP P 18 16 22.1 +1.0
GRNR eS S 18 24 36.5 +7.3
GRNR pmax pmax
comp=Z,30nm,1.0s
GRNR smax smax
comp=N,2.0nm,0.9s
GRNR MLR MLR
comp=Z,180nm,15.0s
ZAK Zakamensk 61.24 345 eP P 18 16 31.0 -1.1

ZAK pmax pmax
comp=Z,13nm,1.6s
WMQ Urumqi 61.64 330 eP **P** **18 16 35.6 +0.7**
WMQ pP pP 18 16 41.5 -3.6
WMQ sP sP 18 16 46.9 -2.5
WMQ S **S** **18 24 56.4 +1.2**
WMQ sS pS 18 25 05.2 -1.4
WMQ pmax pmax
comp=Z,45nm,1.1s
WMQ pmax pmax
comp=Z,270nm,3.7s
WMQ LR LR
comp=Z,1µm,28.8s
WMQ LR LR
comp=Z,960nm,28.8s
WMQ LR LR
comp=Z,600nm,29.1s
WMQ Urumqi 61.64 330 P **P** **18 16 35.2 +0.3**
WMQ Urumqi 61.64 330 P **P** **18 16 35.2 +0.3**
WMQ pmax pmax
comp=Z,636nm,2.0s
WMQ MLR MLR
comp=Z,500nm,20.0s
ZEA Zeya 61.77 2 eP **P** **18 16 35.8 +0.4**
ZEA eS **S** **18 25 02.0 +5.8**
ZEA ePS **PnS** **18 25 27.0 +13**
ZEA e 18 26 20.0
ZEA pmax pmax
comp=N,85nm,1.6s
ZEA pmax pmax
comp=Z,140nm,1.6s
ZEA pmax pmax
comp=Z,800nm,7.0s
ZEA pmax pmax
comp=N,500nm,5.0s
ZEA smax smax
comp=E,500nm,16.0s
ZEA smax smax
comp=N,400nm,13.0s
ZEA MLR MLR
comp=Z,400nm,14.0s
TLY Talaya 62.33 345 P **P** **18 16 39.6 +0.2**
comp=Z,4.0nm,0.8s,baz=168,slow=7.2,SNR=14
TLY Talaya 62.33 345 P **P** **18 16 39.5 +0.2**
TLY IAmb IAmb 18 16 46.1
comp=Z,64nm,1.8s
TLY Talaya 62.33 345ceP **P** **18 16 39.3 0.0**
TLY pmax pmax
comp=Z,12nm,1.2s
NKL Nikolayevsk 62.66 11 eP **P** **18 16 41.1 -0.3**
NKL pmax pmax
comp=Z,119nm,1.0s
NKL pmax pmax
comp=N,8.0nm,0.7s
NKL pmax pmax
comp=E,7.0nm,0.8s
IRK Irkutsk 62.70 346 eP **P** **18 16 41.3 -0.4**
IRK pmax pmax
comp=Z,90nm,2.2s
MOY Mondy 63.02 344 eP **P** **18 16 44.2 +0.2**
MOY pmax pmax
comp=Z,106nm,2.5s
NIL Nilore 64.06 314 P **P** **18 16 50.9 -0.3**
NIL IAmb IAmb 18 16 58.2
comp=Z,75nm,1.2s
NIL Nilore 64.06 314 IAMs_20 IAMs_20 18 48 42.5
comp=Z,667nm,19.0s
NIL Nilore 64.06 314 P **P** **18 16 50.9 -0.3**
NIL pmax pmax
comp=Z,75nm,1.3s
NIL MLR MLR
comp=Z,700nm,19.0s
NIUE Niue 64.24 107 P **P** **18 16 53.5 +0.8**
KSH Kashi 65.41 320 P **P** **18 17 00.9 +0.9**
KSH PcP **PcP** **18 17 33.6 +1.8**
KSH PP **PP** **18 19 29.3 +5.0**
KSH ScP 18 21 35.1
KSH PcS 18 21 37.4
KSH S **S** **18 25 43.1 +0.7**
KSH SKS **ScS** **18 26 56.0 +2.8**
KSH pmax pmax
comp=Z,58nm,0.7s
KSH pmax pmax
comp=Z,1µm,4.5s
KSH LR LR
comp=Z,360nm,7.3s
KSH LR LR
comp=Z,530nm,10.4s
KSH LR LR
comp=Z,1µm,9.4s
SHLS Shalkode 65.53 325⇑iP **P** **18 16 59.5 -1.3**
comp=Z,112nm,1.6s
SHLS i S **S** **18 25 44.0 +0.2**
comp=Z,47nm,3.0s
SHLS Shalkode 65.53 325c iP **P** **18 16 59.4 -1.3**
SHLS i S **S** **18 25 43.9 +0.2**
SHLS pmax pmax
comp=Z,112nm,1.6s
SHLS smax smax
comp=N,47nm,3.0s
ZSN Zaisan 65.65 332⇑iP **P** **18 17 00.6 -0.7**
comp=N,22nm,1.1s
ZSN eS **S** **18 25 46.9 +2.1**
ZSN Zaisan 65.65 332c iP **P** **18 17 00.5 -0.7**
ZSN eS **S** **18 25 46.8 +2.1**
ZSN pmax pmax
comp=Z,22nm,1.1s
PRZ Przheval'sk 65.72 324 P **P** **18 17 03.8 +1.8**
PRZ Przheval'sk 65.72 324 P **P** **18 17 03.8 +1.8**
PRZ pmax pmax
comp=Z,192nm,1.4s
PRZ MLR MLR
comp=Z,500nm,20.0s
UZB Uzynbulak 65.77 325⇑iP **P** **18 17 02.6 +0.3**
comp=Z,93nm,1.9s
UZB eS **S** **18 25 48.6 +1.9**
comp=Z,99nm,3.5s
UZB Uzynbulak 65.77 325c iP **P** **18 17 02.6 +0.3**
UZB eS **S** **18 25 48.6 +1.9**
UZB pmax pmax
comp=Z,93nm,1.9s
UZB smax smax
comp=E,99nm,3.5s
SATY Saty 66.07 325⇑iP **P** **18 17 04.4 +0.2**
comp=E,100nm,1.8s
SATY eS **S** **18 25 53.2 +2.9**
comp=E,134nm,3.8s
SATY Saty 66.07 325c iP **P** **18 17 04.4 +0.2**
SATY eS **S** **18 25 53.2 +2.9**
SATY pmax pmax
comp=Z,100nm,1.8s
SATY smax smax
comp=E,134nm,3.8s
KPKS Kokpek 66.17 325⇑iP **P** **18 17 04.8 +0.1**
comp=E,136nm,1.6s
KPKS eS **S** **18 25 53.4 +2.0**
comp=E,209nm,6.7s
KPKS Kokpek 66.17 325c iP **P** **18 17 04.8 +0.1**
KPKS eS **S** **18 25 53.4 +2.0**
KPKS pmax pmax
comp=Z,136nm,1.6s
KPKS smax smax
comp=E,209nm,6.7s
KDJ Kajisay 66.21 323 P **P** **18 17 04.9 -0.3**
KDJ IAmb IAmb 18 17 13.9
comp=Z,60nm,1.1s
KDJ Kajisay 66.21 323 P **P** **18 17 04.9 -0.3**
KDJ pmax pmax
comp=Z,60nm,1.2s
KDJ MLR MLR
comp=Z,400nm,22.0s
BOD Bodaibo 66.38 354⇓iP **P** **18 17 05.5 -0.2**
BOD pmax pmax
comp=Z,91nm,1.6s
MK31 Makanchi Array 66.44 330 P **P** **18 17 06.0 -0.3**
MK31 Makanchi Array 66.44 330 i P **P** **18 17 05.5 -0.8**
MKAR Makanchi Array 66.44 330 P **P** **18 17 06.5 +0.1**
comp=Z,47nm,0.6s,baz=131,slow=7.5,SNR=513
MKAR LR LR 18 47 55.5
comp=Z,244nm,20.2s,baz=141,slow=38
MKAR Makanchi Array 66.44 330 P **P** **18 17 06.3 0.0**
NRN Naryn 66.51 322 P **P** **18 17 07.0 -0.2**
NRN IAmb IAmb 18 17 15.3
comp=Z,36nm,1.1s
NRN Naryn 66.51 322 P **P** **18 17 07.0 -0.2**
NRN pmax pmax
comp=Z,36nm,1.2s
MAKZ Makanchi 66.60 330 P **P** **18 17 07.1 -0.3**
MAKZ Makanchi 66.60 330 P **P** **18 17 07.1 -0.3**
MAKZ pmax pmax
comp=Z,235nm,1.7s
MAKZ MLR MLR
comp=Z,500nm,22.0s
TNSS Tian-Shan 66.90 324⇑iP **P** **18 17 10.1 +0.3**
TNSS Tian-Shan 66.90 324⇑iP **P** **18 17 10.1 +0.3**
MDOK Medeo 66.92 324 eP **P** **18 17 09.0 -0.7**
MDOK eS **S** **18 26 02.4 +1.8**
MDOK Medeo 66.92 324 eP **P** **18 17 08.9 -0.7**
MDOK eS **S** **18 26 02.4 +1.8**
AAA Alma-Ata 67.02 324 eP **P** **18 17 09.5 -0.7**
comp=Z,38nm,1.1s
AAA eS **S** **18 26 02.2 +0.5**
AAA Alma-Ata 67.02 324 eP **P** **18 17 09.4 -0.7**
AAA eS **S** **18 26 02.2 +0.5**
AAA pmax pmax
comp=Z,38nm,1.1s
MTBS Maitube 67.26 324 eP **P** **18 17 11.0 -0.8**
MTBS Maitube 67.26 324 eP **P** **18 17 10.9 -0.8**
PETK Petropavlovsk- 67.27 21 P **P** **18 17 12.6 +1.1**
comp=Z,31nm,0.8s,baz=190,slow=4.7,SNR=22
PETK LR LR 18 43 37.6
comp=Z,138nm,21.9s,baz=231,slow=33
PETK Petropavlovsk- 67.27 21 P **P** **18 17 12.0 +0.5**
TDK Taldyqorghan 67.29 326 eP **P** **18 17 11.6 -0.3**
comp=Z,258nm,1.7s
TDK eS **S** **18 26 05.5 +0.7**
TDK Taldyqorghan 67.29 326 eP **P** **18 17 11.5 -0.3**
TDK eS **S** **18 26 05.5 +0.7**
TDK pmax pmax
comp=Z,257nm,1.7s
KZA Kyzart 67.34 322 P **P** **18 17 13.3 +0.7**
SNR=32
CHKK Chushkaly 67.37 325 eP **P** **18 17 11.7 -0.7**
CHKK Chushkaly 67.37 325 eP **P** **18 17 11.6 -0.7**
KBL Kabul 67.54 313 P **P** **18 17 13.6 -0.2**
KBL IAmb IAmb 18 17 20.1
comp=Z,37nm,0.8s
KBL Kabul 67.54 313 P **P** **18 17 13.6 -0.2**
KBL pmax pmax
comp=Z,37nm,0.8s
KBL MLR MLR
comp=Z,500nm,22.0s
PET Petropavlovsk 67.54 21 eP **P** **18 17 15.0 +1.9**
PET eS **S** **18 26 08.4 +1.0**
PET pmax pmax
comp=Z,58nm,1.0s
PET pmax pmax
comp=Z,900nm,4.7s
PET MLR MLR
comp=Z,300nm,21.0s
KUU Kurty 67.77 324⇑iP **P** **18 17 14.8 -0.1**
comp=Z,307nm,2.0s
KUU eS **S** **18 26 11.5 +1.0**
comp=Z,173nm,3.1s
KUU Kurty 67.77 324c iP **P** **18 17 14.7 -0.1**
KUU eS **S** **18 26 11.5 +1.0**
KUU pmax pmax
comp=Z,307nm,2.0s
KUU smax smax
comp=N,173nm,3.1s
KBK Karagaybulak 67.86 323 P **P** **18 17 16.8 +1.2**
SNR=24
UCH Uchtor 67.87 322 P **P** **18 17 16.4 +0.4**
SNR=19
AAK Ala-Archa 68.12 322 P **P** **18 17 17.8 +0.7**
comp=N,12nm,0.7s,baz=111,slow=5.6,SNR=51
AAK Ala-Archa 68.12 322 P **P** **18 17 17.9 +0.7**
SNR=28
AAK Ala-Archa 68.12 322 P **P** **18 17 17.9 +0.7**
AAK Ala-Archa 68.12 322 P **P** **18 17 17.4 +0.1**
AAK IAmb IAmb 18 17 26.0
comp=Z,70nm,1.2s
FRU1 Bishkek 68.14 323 P **P** **18 17 17.0 -0.2**
FRU1 IAmb IAmb 18 17 19.3
comp=Z,40nm,1.2s
FRU1 Bishkek 68.14 323 P **P** **18 17 17.0 -0.2**
FRU1 pmax pmax
comp=Z,40nm,1.3s
CHMS Chumysh 68.17 323 P **P** **18 17 17.3 -0.1**
SNR=9.4
ARSB Arslanbob 68.31 321 P **P** **18 17 18.4 0.0**
ARSB Arslanbob 68.31 321 P **P** **18 17 18.5 0.0**
ARSB pmax pmax
comp=Z,117nm,1.2s
AML Almayashu 68.32 322 P **P** **18 17 19.3 +0.5**
SNR=30
USP Ospenovka 68.48 323 P **P** **18 17 19.7 +0.4**
SNR=36
SGDS Sogindy 68.51 323⇑iP **P** **18 17 18.9 -0.6**
comp=Z,66nm,1.9s
SGDS eS **S** **18 26 20.2 +0.7**
EKS2 Erkin-Say 68.57 322 P **P** **18 17 20.7 +0.7**
SNR=34
BTK Batken 69.03 318 P **P** **18 17 22.9 0.0**
BTK IAmb IAmb 18 17 30.6
comp=Z,101nm,2.0s
BTK IAMs_20 IAMs_20 18 53 01.3
comp=Z,627nm,19.0s
BTK Batken 69.03 318 P **P** **18 17 22.9 0.0**
BTK pmax pmax
comp=Z,101nm,2.0s
BTK MLR MLR
comp=Z,600nm,19.0s
BTLS Baital 69.77 324 eP **P** **18 17 26.6 -0.7**
BTLS eS **S** **18 26 34.2 -0.1**
BTLS Baital 69.77 324 eP **P** **18 17 26.5 -0.7**
BTLS eS **S** **18 26 34.1 -0.1**
SEM Semipalatinsk 69.89 332 eP **P** **18 17 25.6 -2.6**
SEM eS **S** **18 26 35.9 -0.1**
SEM Semipalatinsk 69.89 332 eP **P** **18 17 25.6 -2.6**
SEM eS **S** **18 26 35.8 -0.1**
YAK Yakutsk 70.16 3 P **P** **18 17 28.9 -0.2**
comp=Z,46nm,0.8s,baz=181,slow=3.0,SNR=8.4
YAK Yakutsk 70.16 3 P **P** **18 17 29.4 +0.2**
YAK Yakutsk 70.16 3 eP **P** **18 17 29.1 -0.1**
YAK pmax pmax
comp=Z,124nm,1.0s
ZAA0 Zalesovo Array 70.42 336 P **P** **18 17 30.0 -1.1**
ZALV Zalesovo Beam 70.42 336 P **P** **18 17 30.1 -0.9**
comp=Z,35nm,0.8s,baz=136,slow=4.4,SNR=149
ZALV LR LR 18 49 02.4
comp=Z,155nm,20.4s,baz=134,slow=36
JBG Jabagly 70.44 321c iP **P** **18 17 31.4 -0.2**
JBG pmax pmax
comp=Z,42nm,1.5s
IUG Iuzhnay 70.62 320 eP **P** **18 17 32.2 -0.5**
IUG eS **S** **18 26 43.7 -0.8**
IUG Iuzhnay 70.62 320 eP **P** **18 17 32.1 -0.5**
IUG eS **S** **18 26 43.6 -0.8**
TAS Tashkent 70.67 319 P **P** **18 17 33.1 +0.2**
TAS IAmb IAmb 18 17 40.6
comp=Z,91nm,1.4s
TAS Tashkent 70.67 319 P **P** **18 17 33.1 +0.2**
TAS pmax pmax
comp=Z,91nm,1.4s
TAS MLR MLR
comp=Z,500nm,20.0s
MA2 Magadan 70.75 14 P **P** **18 17 33.6 +0.7**
MA2 IAmb IAmb 18 17 36.2
comp=Z,50nm,1.0s
MA2 Magadan 70.75 14ceP **P** **18 17 33.4 +0.5**
MA2 pmax pmax
comp=Z,44nm,1.0s
KK31 Karatay Array 70.82 321 P **P** **18 17 33.0 -0.7**
KK31 Karatay Array 70.82 321 i P **P** **18 17 32.8 -0.9**
KKAR Karatay Array 70.82 321 P **P** **18 17 32.9 -0.8**
KKAR Karatay Array 70.82 321 P **P** **18 17 33.3 -0.4**
KKAR IAmb IAmb 18 17 36.8
comp=Z,28nm,1.3s
KKAR Karatay Array 70.82 321 P **P** **18 17 33.3 -0.4**
KKAR pmax pmax
comp=Z,28nm,1.3s
KURBB Kurchatov Arra 70.86 331 P **P** **18 17 33.5 -0.2**
comp=Z,36nm,0.9s,baz=141,slow=5.1,SNR=293
KURK Kurchatov 70.87 331 P **P** **18 17 33.4 -0.4**
KURK Kurchatov 70.87 331 i P **P** **18 17 33.5 -0.3**
KURK pmax pmax
comp=Z,103nm,1.0s
MHTO MHTO 71.55 295 P **P** **18 17 39.0 +0.4**
SNR=10
WSAR Wadi Sarin 71.62 298 P **P** **18 17 39.9 +0.9**
comp=Z,56nm,1.2s,baz=120,slow=6.1,SNR=9.3
WSAR Wadi Sarin 71.62 298 P **P** **18 17 40.3 +1.3**
SNR=6.6
DQM DQM 71.64 294 P **P** **18 17 41.0 +1.9**
SNR=6.2
JMDO Jabal Madar 71.83 297 P **P** **18 17 43.0 +2.7**
SNR=5.5
MAW Mawson 71.88 201 P **P** **18 17 41.1 +1.5**
comp=Z,7.6nm,0.9s,baz=80,slow=7.2,SNR=5.0
MAW LR LR 18 46 22.5
comp=Z,668nm,19.6s,baz=59,slow=34
MAW Mawson 71.88 201 P **P** **18 17 41.0 +1.4**
VNDA Vanda 71.93 172 P **P** **18 17 41.4 +1.5**
comp=Z,4.6nm,0.6s,baz=317,slow=8.3,SNR=12
VNDA LR LR 18 47 06.4
comp=Z,2µm,21.9s,baz=336,slow=34
VNDA Vanda 71.93 172 P **P** **18 17 41.7 +1.8**
VNDA IAmb IAmb 18 19 36.6
comp=Z,163nm,1.9s
VNDA Vanda 71.93 172 P **P** **18 17 41.7 +1.8**
VNDA pmax pmax
comp=Z,163nm,2.0s
SMDO Samad 72.08 297 P **P** **18 17 46.0 +4.1**
SNR=5.3
BIDO Bidbid 72.15 298 P **P** **18 17 45.0 +2.9**
SNR=10
HRA Herat 72.54 310 P **P** **18 17 43.6 -0.9**
HRA IAMs_20 IAMs_20 18 54 54.4
comp=Z,747nm,19.0s
BSY Bisya 72.74 297 P **P** **18 17 48.0 +2.3**
SNR=5.4
HOQ Hoqain 72.88 298 P **P** **18 17 49.0 +2.4**
SNR=9.5
SOCY Socotra 73.04 285 P **P** **18 17 47.6 -0.1**
SOCY IAMs_20 IAMs_20 18 48 11.1
comp=Z,642nm,20.0s
BRZS Berezniki 73.40 328⇑iP **P** **18 17 48.5 -0.5**
comp=Z,91nm,1.6s
BRZS eS **S** **18 27 16.5 +0.5**
BRZS Berezniki 73.40 328c iP **P** **18 17 48.5 -0.5**
BRZS eS **S** **18 27 16.4 +0.5**
BRZS pmax pmax
comp=Z,91nm,1.6s
ARQ Araqi 73.50 297 P **P** **18 17 53.0 +2.8**
SNR=7.2
SOHO SOHO 73.73 298 P **P** **18 17 53.0 +1.5**
SNR=12
RAR Rarotonga 73.73 110 LR LR 18 48 20.1
comp=Z,182nm,21.9s,baz=262,slow=34
RBK Rabkut 74.06 291 P **P** **18 17 55.0 +1.4**
SNR=7.6
SEY Seymchan 74.09 13⇓iP **P** **18 17 53.7 +1.0**
UOSS Minazif 74.25 299 i P **P** **18 17 54.9 +0.4**
SNR=8.3
UOSS Minazif 74.25 299 P **P** **18 17 53.8 -0.7**
UOSS IAmb IAmb 18 18 01.6
comp=Z,77nm,1.7s
HATD Hatta, Dubai 74.28 299 i P **P** **18 17 56.3 +1.6**
SNR=8.7
HATD Hatta, Dubai 74.28 299 P **P** **18 17 58.0 +3.3**
SNR=9.5
ASHO Ashiyiah 74.30 298 i P **P** **18 17 54.9 0.0**
SNR=8.9
ASHO Ashiyiah 74.30 298 P **P** **18 17 59.0 +4.1**
SNR=8.0
ALNE Al Ain 74.39 298 i P **P** **18 17 57.4 +2.1**
SNR=5.7
MSFE Esma-Masafi 74.41 299 i P **P** **18 17 56.9 +1.4**
SNR=5.6
BANOM Banah 74.45 300 i P **P** **18 17 58.0 +2.3**
SNR=6.3
BANOM Banah 74.45 300 P P 18 18 01.0 +5.2
SNR=5.1
WHFO Wadi Hawf 74.56 291 P **P** **18 17 58.1 +1.6**
SNR=7.1
NAZ Nazwa, Dubai 74.73 299 P **P** **18 18 02.0 +4.7**
SNR=7.0
ABTO Aybut 74.86 290 P **P** **18 17 60.0 +1.7**
SNR=6.2
ABPO Ambohimpanom 75.46 252 P **P** **18 18 00.2 -1.7**
ABPO IAmb IAmb 18 18 04.1
comp=Z,62nm,1.6s
ABPO Ambohimpanom 75.46 252 P **P** **18 18 00.2 -1.7**
ABPO pmax pmax
comp=Z,62nm,1.6s
OPO Ambohidratompo 75.53 253 P **P** **18 18 02.2 0.0**
comp=Z,15nm,1.1s,baz=95,slow=6.9,SNR=8.3
BVAR Borovoye Array 76.32 330 P **P** **18 18 05.1 -0.8**
comp=Z,14nm,0.9s,baz=123,slow=5.5,SNR=47
BRVK Borovoye 76.39 330 P **P** **18 18 05.7 -0.5**
BRVK IAmb IAmb 18 18 07.6
comp=Z,89nm,1.4s
BRVK Borovoye 76.39 330 P **P** **18 18 05.7 -0.5**
BRVK pmax pmax
comp=Z,89nm,1.5s
GEYT Alibeck 76.97 312 P **P** **18 18 09.8 -0.1**
comp=Z,5.2nm,0.9s,baz=158,slow=5.6,SNR=14
GEYT PP **PP** **18 21 03.4 -0.2**
comp=Z,3.8nm,0.9s,baz=137,slow=7.3,SNR=3.6
GEYT LR LR 19 00 24.3
comp=Z,227nm,18.2s,baz=45,slow=42
GEYT Alibeck 76.97 312 P **P** **18 18 09.7 -0.2**
GYA0B ALIBECK ARRAY 76.97 312 P **P** **18 18 09.7 -0.1**
GYA0B IAmb IAmb 18 18 17.4
comp=Z,77nm,1.9s
GYA0B IAMs_20 IAMs_20 18 55 21.6
comp=Z,459nm,21.0s
KIWB Kanaga Island 77.80 33 P **P** **18 18 14.8 +0.7**
TIXI Tiksi 79.76 1 P **P** **18 18 23.3 -1.1**
TIXI IAMs_20 IAMs_20 18 52 24.1
comp=Z,574nm,21.0s
TIXI Tiksi 79.76 1c iP **P** **18 18 23.4 -1.1**
TIXI pmax pmax
comp=Z,17nm,0.9s
AB31 Akbulak array 80.19 323 i P **P** **18 18 26.3 -1.0**
ABKAR Akbulak array 80.19 323 P **P** **18 18 25.9 -1.4**
ABKAR Akbulak array 80.19 323 P **P** **18 18 26.4 -0.9**
ABKAR IAmb IAmb 18 18 27.8
comp=Z,15nm,0.6s
SYO Syowa Base 80.57 201⇑iP **P** **18 18 29.2 +0.2**
SYO Syowa Base 80.57 201⇑eP P 18 18 34.2 +5.2
BILL Bilibino 81.59 15 P **P** **18 18 33.7 -0.7**
BILL Bilibino 81.59 15 i P **P** **18 18 32.8 -1.6**
BILL i 18 18 40.1
BILL i 18 18 51.7
BILL i 18 21 39.7
BILL i S **S** **18 28 45.5 +1.6**
BILL pmax pmax
comp=Z,5.0nm,1.2s
BILL MLR MLR
comp=Z,342nm,18.0s
QSPA South Pole Qui 81.76 180 P **P** **18 18 35.4 -0.2**
AKTO Aktyubinsk 81.81 324 P **P** **18 18 34.1 -1.8**
SVE Sverdlovsk 83.09 330⇑eP **P** **18 18 42.5 0.0**
SVE pmax pmax
comp=Z,31nm,1.0s
TBI Tubuai 83.10 113 eS **S** **18 28 54.9 -6.3**
comp=Z,341nm,28.5s
TBI Tubuai 83.10 113 eLR LR 18 44 45.9
comp=Z,759nm,25.0s
RAYN Ar Rayn 83.36 295 P **P** **18 18 44.1 -0.5**
RAYN Ar Rayn 83.36 295 P **P** **18 18 44.4 -0.2**
RAYN IAmb IAmb 18 18 46.3
comp=Z,61nm,1.2s
RAYN IAMs_20 IAMs_20 18 57 34.0
comp=Z,964nm,19.0s
RAYN Ar Rayn 83.36 295 P **P** **18 18 44.4 -0.2**
RAYN pmax pmax
comp=Z,61nm,1.2s
RAYN MLR MLR
comp=Z,1µm,19.0s
PPT2 Papeete2 83.62 107 eLR LR 18 45 11.8
comp=Z,1µm,34.5s
PPT Papeete 83.62 107 LR LR 18 51 28.6
comp=Z,231nm,20.1s,baz=204,slow=32
ARU Arti 83.96 329 P **P** **18 18 45.8 -1.1**
ARU Arti 83.96 329d iP **P** **18 18 44.4 -2.5**
ARU pmax pmax
comp=Z,10.0nm,1.0s
GAMB Gambell 86.14 24 P **P** **18 18 58.4 +0.8**
GAMB IAmb IAmb 18 19 02.5
comp=Z,54nm,1.9s
MAK Makhachkala 86.22 314 eP **P** **18 18 54.1 -4.4**
MAK e 18 22 15.8
MAK e 18 29 17.0
MAK eSS SS 18 35 07.0 -4.1

MAK pmax pmax
comp=Z,255nm,1.2s
KMBO Kilima Mbogo 87.20 269 P P 18 19 03.9 -0.5
comp=Z,4.6nm,1.1s,baz=96,slow=9.0,SNR=5.6
KMBO LR LR 18 53 39.1
comp=Z,410nm,20.2s,baz=97,slow=33
KMBO Kilima Mbogo 87.20 269 P P 18 19 04.3 0.0
KMBO Kilima Mbogo 87.20 269 P P 18 19 04.0 -0.3
KMBO Kilima Mbogo 87.20 269 IAMs_20 IAMs_20 18 53 57.6
comp=Z,588nm,22.0s
KMBO Kilima Mbogo 87.20 269 cP P 18 19 07.5 +3.2
KMBO pmax pmax
comp=Z,2.0nm,0.7s
FURI Furi 87.25 279 IAMs_20 IAMs_20 18 56 24.8
comp=Z,576nm,20.0s
GROC Groznyy 87.49 314 eP P 18 19 02.0 -2.8
GROC e 18 22 29.5
GROC pmax pmax
comp=Z,35nm,1.3s
GNI Garni 87.56 311 P P 18 19 05.4 0.0
GNI Garni 87.56 311⇓eP P 18 19 06.3 +0.9
GNI pmax pmax
comp=Z,32nm,1.4s
TBLG Delisi 87.92 313 P P 18 19 07.4 +0.5
TBLG IAmb IAmb 18 19 08.9
comp=Z,52nm,1.3s
TBLG Delisi 87.92 313 P P 18 19 07.4 +0.5
TBLG pmax pmax
comp=Z,52nm,1.3s
ZEI Tsey 88.75 313 eP P 18 19 09.7 -1.4
ZEI pmax pmax
comp=Z,21nm,1.4s
AKH Akhalkalaki 88.76 312 P P 18 19 11.3 +0.2
AKH IAmb IAmb 18 19 13.3
comp=Z,33nm,1.2s
AKH Akhalkalaki 88.76 312 P P 18 19 11.3 +0.2
AKH pmax pmax
comp=Z,33nm,1.2s
ANM Nome 88.99 24 P P 18 19 11.9 +0.5
ANM Nome 88.99 24 P P 18 19 11.9 +0.5
ANM pmax pmax
comp=Z,29nm,1.6s
ONI Oni 89.03 313 P P 18 19 15.4 +3.2
NVL N'lazarevskaya 89.58 198 eP P 18 19 14.4 +0.3
NVL ePPP PPP 18 24 46.9
NVL eS SKSac 18 29 39.4 -2.4
NVL pmax pmax
comp=Z,25nm,1.3s
KBZ Khabaz 89.67 314 P P 18 19 14.7 -0.2
comp=Z,5.6nm,1.0s,baz=247,slow=22,SNR=7.0
KBZ LR LR 19 09 07.1
comp=Z,189nm,18.8s,baz=98,slow=42
LODK Lodwar 89.71 273 P P 18 19 17.6 +1.6
SNR=6.6
GOF Gofitskoye 89.83 315⇑eP P 18 19 15.9 +0.1
GOF pmax pmax
comp=Z,23nm,1.4s
KIV Kislovodsk 89.86 314 P P 18 19 17.0 +1.0
KIV Kislovodsk 89.86 314 eP P 18 19 16.6 +0.5
KIV e 18 22 49.0
KIV e 18 29 47.0
KIV eSS SS 18 36 08.1 +3.7
KIV pmax pmax
comp=Z,29nm,1.1s
KIV pmax pmax
comp=Z,403nm,4.8s
KIV MLR MLR
comp=Z,593nm,20.0s
RDOG Red Dog Mine 91.14 21 P P 18 19 21.5 +0.1
VRH Novokhopyorsk 91.90 321 eP P 18 19 21.7 -3.5
VRH pmax pmax
comp=Z,30nm,1.2s
PRGR Permogore 91.97 332 eP P 18 19 22.3 -3.0
PRGR pmax pmax
comp=Z,7.0nm,0.8s
GAZ Gaziantep 92.83 307 IAMs_20 IAMs_20 19 03 47.5
comp=Z,395nm,20.0s
SNAA Sanae 93.18 195 P P 18 19 32.5 +1.5
SNAA Sanae 93.18 195 P P 18 19 32.1 +1.2
SNAA IAMs_20 IAMs_20 18 58 08.0
comp=Z,1μm,22.0s
SNAA Sanae 93.18 195⇑iP P 18 19 32.7 +1.8
VORD Divnogorie 93.37 321 eP P 18 19 29.3 -2.7
VORD pmax pmax
comp=Z,10.0nm,1.5s
VSR Storozhevoye 93.48 321 eP P 18 19 30.1 -2.5
VSR pmax pmax
comp=Z,10.0nm,1.3s
LSZ Lusaka 93.97 254 P P 18 19 34.9 -0.9
LSZ IAmb IAmb 18 19 42.8
comp=Z,22nm,1.4s
LSZ Lusaka 93.97 254 P P 18 19 34.9 -0.9
LSZ pmax pmax
comp=Z,23nm,1.4s
IMAR Indian Mountai 94.07 24 P P 18 19 33.7 -1.3
BOSA Boshof 94.20 240 P P 18 19 36.8 +0.1
comp=Z,16nm,1.2s,baz=99,slow=5.4,SNR=9.2
BOSA LR LR 18 55 23.9
comp=Z,415nm,21.7s,baz=102,slow=31
BOSA Boshof 94.20 240 P P 18 19 36.8 +0.1
BOSA IAmb IAmb 18 19 49.2
comp=Z,33nm,1.3s
LBTB Lobatse 94.62 244 P P 18 19 39.3 +0.7
LBTB IAmb IAmb 18 19 40.8
comp=Z,25nm,1.4s
LBTB Lobatse 94.62 244 P P 18 19 39.3 +0.7
LBTB pmax pmax
comp=Z,25nm,1.4s
KLMR Klimovskoe 94.72 331 eP P 18 19 32.8 -5.2
KLMR AMP 18 19 37.5
comp=Z,39nm,2.1s
KLMR Klimovskoe 94.72 331 eP P 18 19 32.8 -5.2
KLMR pmax pmax
comp=Z,39nm,2.1s
VNA2 Neumayer--Watz 94.78 194 P P 18 19 44.9 +6.7
MOS Moscow 95.02 325 eP P 18 19 37.1 -2.4
MOS e 18 23 25.8
MLY Manley 95.15 25 P P 18 19 39.2 -0.8
GHO Glory Hole Cre 95.53 28 IAMs_20 IAMs_20 18 49 20.1
comp=Z,480nm,19.0s
OBN Obninsk 95.55 325 P 18 19 41.2 -0.7
OBN Obninsk 95.55 325 iP P 18 19 40.7 -1.2
OBN i 18 19 46.8
OBN iS SKSac 18 30 10.7 -4.7
OBN pmax pmax
comp=Z,12nm,1.1s
COLD Coldfoot 95.67 23 P P 18 19 42.2 -0.1
KNK Knik Glacier 95.70 29 P P 18 19 40.0 -2.6
KNK IAMs_20 IAMs_20 18 53 47.9
comp=Z,474nm,20.0s
RND Reindeer 95.75 27 P P 18 19 41.0 -1.8
RND IAmb IAmb 18 20 31.7
comp=Z,22nm,1.5s
RND Reindeer 95.75 27 P P 18 19 41.0 -1.8
RND pmax pmax
comp=Z,23nm,1.5s
BRTR Keskin Array B 95.92 309 P P 18 19 41.2 -3.0
comp=Z,0.6nm,0.4s,baz=96,slow=2.5,SNR=7.1
BRTR PP PP 18 23 33.7 -3.1
comp=Z,2.3nm,1.0s,baz=106,slow=9.1,SNR=5.4
BRTR LR LR 19 08 01.0
comp=Z,118nm,21.9s,baz=92,slow=39
BRTR Keskin Array B 95.92 309cP P 18 19 43.0 -1.2
BRTR pmax pmax
comp=Z,2.0nm,1.0s
ILGA Ilgaz 95.99 311 IAMs_20 IAMs_20 19 05 10.2
comp=Z,352nm,22.0s
RKT Rikitea 96.30 114 eLR LR 18 51 01.5
comp=Z,677nm,27.0s
ANTO Ankara 96.58 309 IAMs_20 IAMs_20 19 05 06.7
comp=Z,359nm,22.0s
ILAR Eielson Array 96.75 26 P P 18 19 44.6 -2.6
comp=Z,0.5nm,0.7s,baz=267,slow=4.2,SNR=6.7
ILAR PP PP 18 23 39.5 -2.8
comp=Z,1.6nm,0.9s,baz=252,slow=6.5,SNR=8.1
ILAR PKKPbc PKKPbc 18 36 30.7 -1.8
comp=Z,0.6nm,0.8s,baz=37,slow=2.3,SNR=5.6
ILAR LR LR 19 02 34.9
comp=Z,96nm,19.0s,baz=275,slow=35
BMAR Burnt Mountain 97.86 23 P Pdif 18 19 52.6 +0.3
GLB Gilahina Butte 97.93 29 IAMs_20 IAMs_20 18 56 34.8
comp=Z,577nm,22.0s
SCRK Sand Creek 97.96 26 IAMs_20 IAMs_20 19 12 07.3
comp=Z,309nm,19.0s
APA Apatity 98.00 337⇑iP Pdif 18 20 04.7 +12

MCARA McCarthy VSAT 98.31 29 IAMs_20 IAMs_20 18 57 26.8
comp=Z,441nm,21.0s
BCAR Beaver Creek A 98.92 27 P P 18 19 57.0 -0.1
AKASG Malin Array Be 99.70 320 P Pdif 18 19 59.0 -1.7
comp=Z,3.6nm,1.0s,baz=81,slow=3.9,SNR=14
AKASG PP PP 18 24 04.5 -0.8
comp=Z,3.5nm,0.9s,baz=76,slow=6.9,SNR=9.5
AKASG LR LR 19 10 09.0
comp=Z,215nm,21.9s,baz=70,slow=38
HYT Haines Junctio 100.99 30 IAMs_20 IAMs_20 18 58 03.8
comp=Z,510nm,21.0s
FINES FINESS Array B 101.25 331 PP PP 18 24 15.2 -1.4
comp=Z,4.2nm,1.1s,baz=134,slow=6.0,SNR=3.2
VRI Vrincioaia 101.32 315 P Pdif 18 20 08.6 +0.5
VRI pmax pmax
comp=Z,5.0nm,1.7s
INK Inuvik 102.00 22 PP PP 18 24 21.8 -0.2
comp=Z,1.7nm,0.8s,baz=286,slow=9.9,SNR=4.5
AGG Agios Georgios 104.64 308 IAMs_20 IAMs_20 19 12 40.2
comp=Z,306nm,20.0s
NOA NORSAR Array B 108.38 332 PP PP 18 25 07.2 -2.3
comp=Z,1.2nm,0.9s,baz=82,slow=6.7,SNR=3.2
CLL Collm 109.83 322 ePKiKP PKiKP 18 24 48.0 0.0
CLL ePP PP 18 25 17.0 -3.3
CLL eSKSSac SKSSac 18 32 24.0 +2.9
CLL ePS PS 18 34 47.0 -2.4
CLL ePPS PPS 18 35 49.0
CLL e(SSS) 18 45 30.0
CLL eSSSS 18 48 36.0
CLL Lm MLR 19 14 00.0
comp=Z,300nm,22.0s
GERES GERESS Array B 109.86 319 PP PP 18 25 17.5 -3.3
comp=Z,0.4nm,0.5s,baz=79,slow=5.1,SNR=4.3
INTR Introdacqua 110.81 312 IAMs_20 IAMs_20 19 10 28.3
comp=Z,408nm,18.0s
YKA Yellowknife Ar 111.18 25 PKiKP PKiKP 18 24 49.1 -1.2
comp=Z,1.0nm,0.8s,baz=292,slow=2.2,SNR=9.7
YKA PP PP 18 25 26.6 -3.0
comp=Z,0.9nm,1.1s,baz=288,slow=7.9,SNR=4.0
YKA PKKPbc PKKPbc 18 35 47.1 -1.8
comp=Z,0.5nm,0.7s,baz=100,slow=2.5,SNR=7.0
YERR Yerington 115.43 51 IAMs_20 IAMs_20 19 12 14.0
comp=Z,234nm,19.0s
RYN Ryan 116.05 51 IAMs_20 IAMs_20 19 05 33.4
comp=Z,230nm,21.0s
NVAR Mina Array Bea 116.25 51 PKP PKiKP 18 25 01.5 +0.5
comp=Z,0.9nm,0.8s,baz=224,slow=2.5,SNR=6.2
NVAR PKKPbc PKKPbc 18 35 31.6 +0.3
comp=Z,0.6nm,0.7s,baz=124,slow=1.6,SNR=4.7
NVAR Mina Array Bea 116.25 51 PKPdf PKPdf 18 25 00.8 -0.2
NVAR PKKPbc 18 35 31.4 +0.1
KVN Kaiserville 116.29 50 PKPdf 18 25 00.4 -0.6
KVN Kaiserville 116.29 50 PKIKP PKPdf 18 25 00.4 -0.6
MWC Mount Wilson 117.16 56 IAMs_20 IAMs_20 19 10 26.5
comp=Z,421nm,21.0s
MSO Missoula 117.27 41 PKPdf 18 25 01.6 -0.9
MSO Missoula 117.27 41 P PKPdf 18 25 01.1 -1.5
baz=288
MPMC Manual Prospec 117.32 54 P PKPdf 18 25 02.9 -0.2
baz=280
ELK Elko 118.07 48 PKPdf 18 25 04.0 -0.5
ELK Elko 118.07 48 PKIKP PKPdf 18 25 04.0 -0.5
R11A Troy Canyon, C 118.36 51 PKiKP 18 25 05.2 +0.1
R11A Troy Canyon, C 118.36 51 P PKiKP 18 25 05.2 +0.1
baz=283
GMRC Granite Mounta 119.02 55 P PKiKP 18 25 07.1 +0.8
baz=281
BC3 Big Chuckawall 119.39 56 P PKiKP 18 25 07.5 +0.4
baz=280
EGMT Eagleton 119.52 39 PKPdf 18 25 05.9 -0.9
EGMT Eagleton 119.52 39 P PKPdf 18 25 06.7 -0.1
baz=293
YHL Hebgen Lake 119.74 43 PKiKP 18 25 07.8 +0.1
YHH Holmes Hill 119.98 43 PKPdf 18 25 07.8 -0.3
DUG Dugway, Tooele 120.00 48 PKPdf 18 25 07.7 -0.4
DUG Dugway, Tooele 120.00 48 PKIKP PKPdf 18 25 07.7 -0.4
DUG Dugway, Tooele 120.00 48 P PKiKP 18 25 08.6 +0.5
baz=286
FXWY Fox Creek 120.24 44 PKPdf 18 25 08.5 -0.1
CCUT Cedar City 120.25 51 PKPdf 18 25 08.7 -0.1
H17A Grant Village 120.30 43 PKiKP 18 25 09.0 +0.3
H17A Grant Village 120.30 43 P PKiKP 18 25 09.5 +0.8
baz=290
PDMCI Parker Dam,Lak 120.34 55 P PKiKP 18 25 09.0 +0.3
baz=282
W13A Hualapai Mount 120.39 54 PKPdf 18 25 08.9 -0.1
MOOW Moose Ponds 120.40 44 PKiKP 18 25 09.2 +0.3
REDW Red Top Meadow 120.45 44 PKPdf 18 25 08.6 -0.3
SZCU Shurtz Canyon 120.45 51 PKPdf 18 25 09.0 -0.1
LCMT Little Creek M 120.47 52 PKiKP 18 25 09.1 0.0
SNOW Snow King Moun 120.49 44 PKPdf 18 25 09.0 0.0
HWUT Hardware Ranch 120.50 46 PKPdf 18 25 08.4 -0.6
NLU North Lily Min 120.61 48 PKPdf 18 25 08.8 -0.5
FFC Flin Flon 120.70 29 PKPdf 18 25 07.8 -1.0
FFC Flin Flon 120.70 29 PKIKP PKPdf 18 25 07.8 -1.0
KNB Kanab 120.80 52 PKPdf 18 25 09.6 -0.1
KNB Kanab 120.80 52 PKIKP PKPdf 18 25 09.6 -0.1
RLMT Red Lodge 120.92 42 P PKiKP 18 25 11.0 +1.2
baz=291
MTPU Mount Pierson 121.04 50 PKPdf 18 25 10.1 -0.3
U15A North Rim 121.35 52 PKPdf 18 25 10.4 -0.5
TMUT Trail Mountain 121.43 49 PKPdf 18 25 10.9 -0.2
PD31 Pinedale Array 121.55 44 PKPdf 18 25 10.2 -0.9
PDAR Pinedale Array 121.55 44 PKP PKPdf 18 25 10.0 -1.0
comp=Z,1.7nm,0.9s,baz=211,slow=1.7,SNR=8.9
PDAR PKKPbc PKKPbc 18 35 12.8 +0.6
comp=Z,1.2nm,1.0s,baz=108,slow=3.3,SNR=7.1
214A Organ Pipe Nat 121.89 57 P PKiKP 18 25 12.4 +0.4
baz=281
SRU San Rafael Swe 122.00 49 PKPdf 18 25 11.8 -0.2
SRU San Rafael Swe 122.00 49 PKIKP PKPdf 18 25 11.8 -0.2
LAO LASA Array 122.26 39 PKPdf 18 25 11.9 -0.2
LAO LASA Array 122.26 39 P PKiKP 18 25 12.2 -0.1
baz=295
WUAZ Wupatki 122.30 53 PKPdf 18 25 12.3 -0.3
WUAZ Wupatki 122.30 53 P PKiKP 18 25 13.0 +0.2
baz=284
X16A Lo Mia Camp, P 122.50 54 PKPdf 18 25 12.9 -0.2
O20A White River Ci 123.36 47 PKPdf 18 25 14.6 0.0
O20A White River Ci 123.36 47 P PKiKP 18 25 14.8 0.0
baz=289
TUC Tucson 123.50 57 PKPdf 18 25 14.8 -0.1
TUC Tucson 123.50 57 PKIKP PKPdf 18 25 14.8 -0.1
TUC Tucson 123.50 57 P PKiKP 18 25 15.1 -0.1
baz=282
RWWY Rawlins 123.56 45 PKPdf 18 25 14.1 -0.9
K22A Casper 123.68 44 PKPdf 18 25 14.7 -0.4
K22A IAMs_20 IAMs_20 19 09 24.4
comp=Z,226nm,19.0s
K22A Casper 123.68 44 P PKPdf 18 25 14.6 -0.5
baz=292
W18A Petrified Fore 123.69 53 PKPdf 18 25 15.4 +0.1
W18A Petrified Fore 123.69 53 P PKiKP 18 25 16.0 +0.4
baz=285
TOA0 Torodi Ar. Sit 123.76 280 PKPdf 18 25 15.1 -0.7
TORD Torodi Ar. Bea 123.76 280 PKP PKPdf 18 25 15.0 -0.8
comp=Z,3.9nm,0.7s,baz=56,slow=1.9,SNR=21
TORD Torodi Ar. Bea 123.76 280 PKPdf 18 25 14.8 -0.9
MVCO Mesa Verde 124.08 50 PKiKP 18 25 16.5 +0.2
MVCO IAMs_20 IAMs_20 19 11 54.0
comp=Z,238nm,20.0s
MVCO Mesa Verde 124.08 50 P PKiKP 18 25 16.7 +0.4
baz=287
ESDC Sonseca Array 124.50 313 PKP PKPdf 18 25 16.3 -0.3
comp=Z,4.7nm,1.0s,baz=55,slow=3.3,SNR=8.2
ESDC Sonseca Array 124.50 313 PKPdf 18 25 15.7 -0.9
SMCO Snowmass 124.60 48 PKPdf 18 25 17.0 -0.2
N23A Red Feather La 124.73 45 PKPdf 18 25 16.4 -0.9
N23A Red Feather La 124.73 45 P PKPdf 18 25 17.3 +0.1
baz=292
RSSD Black Hills 124.74 41 PKPdf 18 25 15.9 -1.2
RSSD Black Hills 124.74 41 PKIKP PKPdf 18 25 15.9 -1.2
RSSD Black Hills 124.74 41 P PKPdf 18 25 16.1 -1.1
baz=296
319A Douglas 124.95 57 PKPdf 18 25 17.3 -0.5
S22A 4UR Ranch, Cre 125.17 49 PKPdf 18 25 18.0 -0.2
S22A 4UR Ranch, Cre 125.17 49 P PKPdf 18 25 18.2 -0.1
baz=289
ISCO Idaho Springs 125.37 47 PKPdf 18 25 17.9 -0.6
ISCO Idaho Springs 125.37 47 PKIKP PKPdf 18 25 18.0 -0.6
ISCO Idaho Springs 125.37 47 P PKPdf 18 25 17.7 -0.9
baz=291
MDND Maddock 125.67 35 PKPdf 18 25 18.2 -0.3
MDND Maddock 125.67 35 P PKPdf 18 25 18.3 -0.3
baz=302

121A Cookes Peak, D 125.92 56 PKPdf 18 25 19.4 -0.2
121A Cookes Peak, D 125.92 56 P PKiKP 18 25 21.0 +0.9
baz=285
Q24A Divide 126.00 47 P PKPdf 18 25 19.7 -0.1
baz=291
SDCO Great Sand Dun 126.17 49 PKPdf 18 25 19.8 -0.4
SDCO Great Sand Dun 126.17 49 P PKPdf 18 25 20.3 +0.2
baz=290
ANMO Albuquerque 126.33 52 PKPdf 18 25 19.6 -0.8
ANMO Albuquerque 126.33 52⇑ePKIKP PKiKP 18 25 21.2 +0.3
ANMO pmax pmax
comp=Z,20nm,2.5s
ANMO Albuquerque 126.33 52 P PKiKP 18 25 20.8 -0.1
baz=287
ULM Lac du Bonnet 126.34 31 PKP PKPdf 18 25 18.3 -1.4
comp=Z,3.9nm,0.7s,baz=308,slow=1.5,SNR=7.6
ULM Lac du Bonnet 126.34 31 PKPdf 18 25 18.4 -1.2
ULM Lac du Bonnet 126.34 31⇑iPKIKP PKPdf 18 25 18.0 -1.7
T25A Trinidad 127.19 49 PKPdf 18 25 21.4 -0.6
T25A Trinidad 127.19 49 P PKiKP 18 25 22.4 -0.2
baz=290
AGMN Agassiz Nation 127.51 33 PKPdf 18 25 20.4 -1.6
AGMN Agassiz Nation 127.51 33 P PKPdf 18 25 20.7 -1.3
baz=306
MNTX Cornudas Mount 128.10 56 PKPdf 18 25 23.2 -0.5
MNTX Cornudas Mount 128.10 56 P PKiKP 18 25 24.5 +0.3
baz=286
PLCA Paso Flores 129.32 165 PKP PKPdf 18 25 24.7 -1.1
comp=Z,4.7nm,0.9s,baz=2.9,slow=0.6,SNR=8.7
PLCA Paso Flores 129.32 165 eP PKiKP 18 25 28.8 +2.2
PLCA Paso Flores 129.32 165 PKPdf 18 25 25.6 -0.2
PLCA Paso Flores 129.32 165 PKIKP PKPdf 18 25 25.6 -0.2
MSTX Muleshoe 129.52 52 PKPdf 18 25 26.3 -0.1
MSTX Muleshoe 129.52 52 P PKiKP 18 25 26.8 -0.4
baz=289
ECSD EROS Data Cent 129.63 38 PKPdf 18 25 25.7 -0.5
ECSD EROS Data Cent 129.63 38 P PKPdf 18 25 25.9 -0.3
baz=302
KIC Kosan Boka 129.72 271 eP PKPdf 18 25 26.7 -0.5
comp=Z,38nm,1.6s
BGNE Belgrade 129.84 42 P PKPdf 18 25 25.3 -1.4
baz=299
DBIC Dimbokro 129.87 272 PKP PKPdf 18 25 25.9 -1.6
comp=Z,3.2nm,0.9s,baz=120,slow=7.5,SNR=5.3
DBIC Dimbokro 129.87 272 PKPdf 18 25 26.0 -1.4
DBIC Dimbokro 129.87 272 PKIKP PKPdf 18 25 26.0 -1.4
CBKS Cedar Bluff 129.94 45 IAMs_20 IAMs_20 19 12 11.5
comp=Z,228nm,19.0s
LIC Lamto 130.00 271 eP PKPdf 18 25 28.1 +0.4
comp=Z,5.9nm,0.5s
EYMN Ely 130.02 31 PKPdf 18 25 25.5 -1.3
EYMN Ely 130.02 31 P PKPdf 18 25 25.6 -1.2
baz=311
TIC Toumodi 130.03 272 eP PKiKP 18 25 28.4 -0.2
AMTX Amarillo 130.06 51 P PKiKP 18 25 27.9 -0.3
baz=291
TX31 Lajitas Ar. Si 130.15 58 PKiKP 18 25 28.5 -0.1
TX32 Lajitas Array 130.15 58 PKiKP 18 25 28.6 0.0
TXAR Lajitas Array 130.15 58 PKP PKiKP 18 25 27.3 -0.4
comp=Z,1.4nm,1.0s,baz=222,slow=1.7,SNR=8.3
TXAR SKPbc SKPbc 18 28 51.5 +3.1
comp=Z,0.7nm,0.9s,baz=329,slow=6.8,SNR=3.5
TXAR Lajitas Array 130.15 58 PKPdf 18 25 26.9 -0.9
E38A The Farm, Brul 130.85 33 PKPdf 18 25 28.0 -0.4
D41A Chassel 132.09 30 PKPdf 18 25 31.0 +0.3
WMOK Wichita Mounta 132.32 50 PKPdf 18 25 30.8 -0.8
WMOK Wichita Mounta 132.32 50 PKIKP PKPdf 18 25 30.8 -0.8
WMOK Wichita Mounta 132.32 50 P PKPdf 18 25 30.9 -0.7
baz=293
G40A Rib Lake 132.44 33 PKPdf 18 25 31.5 0.0
ABTX Abilene, Hawle 132.44 53 IAMs_20 IAMs_20 19 28 53.8
comp=Z,232nm,19.0s
COWI Conover 132.45 32 PKPdf 18 25 31.6 +0.1
SCHQ Schefferville 132.63 9 PKP PKPdf 18 25 30.4 -1.1
comp=Z,4.1nm,0.8s,baz=14,slow=3.2,SNR=5.9
SCHQ Schefferville 132.63 9 PKPdf 18 25 31.1 -0.4
JCT Junction City 133.03 56 PKPdf 18 25 32.6 -0.5
JCT Junction City 133.03 56 PKIKP PKPdf 18 25 32.6 -0.5
JCT Junction City 133.03 56 P PKPdf 18 25 33.4 +0.3
baz=289
OKCFA Oklahoma City 133.04 48 IAMs_20 IAMs_20 19 23 26.0
comp=Z,199nm,20.0s
E43A Lone Tree Farm 133.35 30 PKPdf 18 25 33.2 +0.1
TRQA Tornquist 133.55 173 eP PKiKP 18 25 37.4 +2.3
D46A Sault St. Mari 134.38 27 P PKPdf 18 25 34.7 -0.3
baz=319
WHTX Lake Whitney, 134.40 53 P PKPdf 18 25 34.5 -1.0
baz=292
F45A CMU Biological 134.57 30 P PKPdf 18 25 35.2 -0.2
baz=316
MATQ Matagami 134.63 20 P PKPdf 18 25 33.8 -1.7
baz=328
E46A Sault Ste Mari 134.65 28 PKPdf 18 25 35.5 0.0
D47A Chapleau 134.67 27 P PKPdf 18 25 34.5 -1.1
baz=320
X37A Clayton 134.94 48 PKPdf 18 25 36.1 -0.4
E47A Iron Bridge 135.05 27 P PKPdf 18 25 36.1 -0.2
baz=319
D48A Paudash Townsh 135.14 25 P PKPdf 18 25 35.7 -0.8
baz=322
D49A Beulah Townshi 135.26 25 P PKPdf 18 25 36.7 0.0
baz=322
E48A Lockeyer 135.53 26 P PKPdf 18 25 36.2 -1.0
baz=321
G47A Hillman 135.74 29 P PKiKP 18 25 39.0 -0.2
baz=318
W39A Magazine 135.82 47 PKiKP 18 25 39.3 -0.4
W39A Magazine 135.82 47 P PKiKP 18 25 38.8 +0.7
baz=298
MGMO Mountain Grove 135.92 44 PKPdf 18 25 38.1 -0.1
U40A Yellville 135.92 45 PKPdf 18 25 38.0 -0.3
U40A Yellville 135.92 45 P PKPdf 18 25 37.7 -0.6
baz=300
D50A G1974 Best Tow 135.96 24 P PKPdf 18 25 36.6 -1.4
baz=324
CCM Cathedral Cave 136.12 42 PKPdf 18 25 40.0 -0.2
CCM Cathedral Cave 136.12 42 PKIKP PKPdf 18 25 40.0 -0.2
CCM Cathedral Cave 136.12 42 P PKiKP 18 25 40.4 +0.2
baz=304
F49A Sandfield 136.13 27 P PKiKP 18 25 39.8 -0.2
baz=320
MIAR Mount Ida 136.28 48 PKPdf 18 25 38.0 -1.0
MIAR Mount Ida 136.28 48 PKIKP PKPdf 18 25 38.0 -1.0
D53A Lac Vacive, Po 136.87 22 PKPdf 18 25 39.4 -0.3
LCAR Lake Charles 137.25 44 PKPdf 18 25 40.1 -0.6
OLIL Olney 137.75 39 PKPdf 18 25 39.7 -1.8
N49A Columbus Grove 138.62 33 PKPdf 18 25 42.7 -0.4
PLVO Plevna 138.81 23 IAMs_20 IAMs_20 19 22 13.1
comp=Z,248nm,20.0s
P48A Milroy 138.90 36 PKPdf 18 25 42.6 -1.1
T49A Edmonton 140.35 39 PKPdf 18 25 45.4 -1.0
HNH Hanover 141.71 20 IAMs_20 IAMs_20 19 09 55.4
comp=Z,364nm,20.0s
LRAL Lakeview Retre 141.76 45 PKPdf 18 25 45.4 -3.6
FPAL Fort Paine 141.86 42 PKPdf 18 25 43.1 -6.2
V52A Sevierville 142.35 39 PKPdf 18 25 48.0 -2.1
TKL Tuckaleechee C 142.36 39 PKhKP PKPdf 18 25 45.5 -4.6
comp=Z,5.2nm,0.9s,baz=157,slow=2.3,SNR=6.0
TKL Tuckaleechee C 142.36 39 PKPdf 18 25 46.2 -3.8
TKL Tuckaleechee C 142.36 39 PKIKP PKPdf 18 25 46.2 -3.8
Z50A Ashland 142.39 44 PKPdf 18 25 44.5 -5.7
CNLB Canela 142.42 187 eP PKPdf 18 25 53.7 +0.2
V53A Saluda 142.95 38 PKPdf 18 25 47.5 -3.6
WES Weston 143.20 20 IAMs_20 IAMs_20 19 18 31.6
comp=Z,301nm,19.0s
MVL Millersville 143.25 27 IAMs_20 IAMs_20 19 41 29.6
comp=Z,362nm,22.0s
Y52A Lilburn 143.29 42 PKPab 18 25 46.9 -0.7
BG3 Lake Jocassee 143.31 39 PKPbc 18 25 49.9 +1.0
YLE Yale 143.57 22 IAMs_20 IAMs_20 19 15 02.5
comp=Z,272nm,22.0s
V55A Taylorsville 143.79 37 PKPbc 18 25 50.5 +0.3
451A Vernon 143.96 48 PKPbc 18 25 51.4 +0.6
GO02 Mina Guanaco 144.05 158 PKPbc 18 25 52.5 +0.9
352A Blakely 144.08 46 PKPbc 18 25 51.2 0.0
PAULI Pauline 144.12 39 PKPbc 18 25 51.4 +0.1
HODGE Hodges 144.23 40 PKPab 18 25 51.1 -0.1
ITAB Concordia 144.60 185 eP PKPdf 18 25 55.3 +1.1
JSC Jenkinsville 144.82 39 PKPab 18 25 52.7 -0.6
JSC Jenkinsville 144.82 39 PKIKP PKPab 18 25 52.7 -0.6
W57A Gilead 145.00 36 PKPab 18 25 52.7 -1.3
T59A Double "B" Far 145.03 32 PKPbc 18 25 52.8 -1.2
TIGA Tifton 145.05 45 PKPbc 18 25 53.5 -0.8
V58A Windy Hill, Pi 145.05 35 PKPbc 18 25 52.9 -1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
BIRD	Birdtown, Kers	145.07	38		PKPbc	18 25 53.4	-0.8
BIRD				IAMs_20	IAMs_20	19 28 49.7	
	comp=Z,206nm,18.0s						
553A	Crawfordville	145.15	47		PKPbc	18 25 53.8	-0.8
T60A	Surry	145.32	31		PKPbc	18 25 53.8	-1.1
U59A	Littleton	145.37	33		PKPbc	18 25 54.1	-1.0
Z56A	Williston	145.38	40		PKPbc	18 25 54.3	-0.9
255A	Hazlehurst	145.53	43		PKPdf	18 25 55.0	-0.7
CPUP	Villa Florida	145.60	177	PKPbc	PKPab	18 25 56.8	+0.4
	comp=Z,16nm,0.8s,baz=179,slow=2.5,SNR=43						
CPUP				PKKP	PKKPdf	18 35 01.4	+1.4
	comp=Z,1.2nm,0.4s,baz=9.0,slow=3.8,SNR=4.1						
CPUP	Villa Florida	145.60	177	eP	PKPab	18 25 57.8	+1.5
TEIG	Tepich	146.07	66		PKPbc	18 25 57.5	-0.3
U61A	Possum Corner	146.09	31		PKPdf	18 25 56.6	+0.2
V60A	Jim Taylor Roa	146.09	33		PKPdf	18 25 55.5	-0.9
NHSC	New Hope	146.28	39		PKPbc	18 25 57.6	-0.4
PB04	IPOC Station P	146.37	155		PKPbc	18 25 58.3	-0.5
456A	Hilliard	146.55	44		PKPdf	18 25 58.1	+0.7
LVC	Limon Verde	146.62	157	eP	PKPab	18 26 00.8	0.0
LVC	Limon Verde	146.62	157		PKPdf	18 25 58.9	+0.6
LVC	Limon Verde	146.62	157	PKP2	PKPdf	18 25 58.9	+0.6
656A	Willston	146.97	47		PKPdf	18 25 58.9	+0.8
PTGB	Pitanga	147.09	186	eP	PKPbc	18 26 01.3	+0.5
SPB	Sao Paulo	147.43	194	eP	PKPab	18 26 02.8	-0.7
VAS01	Vassouras-RJ	147.49	201	eP	PKPbc	18 26 02.0	+0.2
PB01	IPOC Station P	147.79	155		PKPbc	18 26 01.9	-0.9
VAO	Valinhos	147.88	195	eP	PKPbc	18 26 03.4	+0.4
FRTB	Fartura	148.10	190	eP	PKPbc	18 26 03.4	-0.1
RCLB	Rio Claro- Sao	148.58	194	eP	PKPbc	18 26 04.4	-0.4
PB11	IPOC Station P	148.85	153		PKPdf	18 26 03.5	+1.7
TRCB	Terra Rica	149.05	185	eP	PKPbc	18 26 04.8	-1.1
GO01	Chusmiza	149.14	154		PKPbc	18 26 05.1	-1.7
MNMC	Minye Minye	149.43	153		PKPbc	18 26 05.6	-1.7
BSFB	Barra de Sao F	149.51	208	eP	PKPbc	18 26 06.0	-1.1
SJMB	Sao Joao De Ma	149.78	208	eP	PKPbc	18 26 06.5	-1.3
PCMB	Pacaembu	150.07	188	eP	PKPbc	18 26 06.6	-1.9
BB19B	Bebedouro	150.11	193	eP	PKPbc	18 26 06.6	-2.0
NNA	Nana	150.72	133		PKPbc	18 26 09.1	-1.2
NNA	Nana	150.72	133	PKIKP	PKPbc	18 26 09.1	-1.2
JTS	Las Juntas de	150.78	84		PKPbc	18 26 09.7	-0.7
JTS	Las Juntas de	150.78	84	PKIKP	PKPbc	18 26 09.7	-0.7
AQDB	Aquidauana	151.47	179	eP	PKPdf	18 26 08.3	+2.6
NBIT	Itapeh - BA	152.06	215	eP	PKPdf	18 26 09.2	+2.5
LPAZ	La Paz	152.58	153	PKP	PKPdf	18 26 08.8	+0.6
	comp=Z,2.9nm,1.0s,baz=47,slow=5.2,SNR=6.9						
LPAZ				PKPbc	PKPbc	18 26 16.4	+1.3
	comp=Z,8.4nm,1.1s,baz=188,slow=3.5,SNR=11						
LPAZ				PP	PP	18 30 00.2	+3.5
	comp=Z,0.9nm,0.4s,baz=208,slow=5.9,SNR=5.2						
LPAZ	La Paz	152.58	153	eP	PKPdf	18 26 10.5	+2.3
LPAZ	La Paz	152.58	153	eP	PKPdf	18 26 07.7	-0.5
IPMB	Ipameri, GO	153.00	195	eP	PKPdf	18 26 11.2	+3.2
C2SB	Chapadao do Su	153.05	185	eP	PKPdf	18 26 09.5	+1.4
NBRF	Rio Formoso -	153.72	231	eP	PKPdf	18 26 12.3	+3.2
NBAN	Anadia - AL	153.93	227	eP	PKPdf	18 26 13.6	-3.8
BDFB	Brasilia	155.18	197	PKP	PKPdf	18 26 11.7	+0.5
	comp=Z,3.0nm,0.8s,baz=154,slow=3.8,SNR=2.2						
BDFB				PKPbc	PKPbc	18 26 22.0	
	comp=Z,3.8nm,0.7s,baz=149,slow=8.3,SNR=4.2						
NBPN	Ponto Novo - B	155.74	219	eP	PKPdf	18 26 14.2	+2.3
NBLI	Livramento-PB	155.94	220	eP	PKPdf	18 26 14.7	+2.4
ARAG	Araguaiana, MT	155.95	189	eP	PKPdf	18 26 14.8	+2.7
SAML	Samuel	161.26	155		PKPdf	18 26 17.9	-0.7
SAML					PKPab	18 27 02.5	+0.5
SAML	Samuel	161.26	155	PKIKP	PKPdf	18 26 17.9	-0.7
SAML						18 27 02.5	
SMTB	Santa Maria do	161.32	205	eP	PKPdf	18 26 20.8	+2.1
RUSC	La Rusia	162.32	96		PKPdf	18 26 19.3	-1.0
SDV	Santo Domingo	164.94	86	eP	PKPdf	18 26 23.5	+1.1
SDV	Santo Domingo	164.94	86		PKPdf	18 26 20.8	-1.5

IDC 10 18:11:25.5±1.8, 3.°98N×94.°34E, h0km, mb4.0/7, mb1 4.1/9, mb1mx3.8/49, mbtmp4.0/9, ML4.2/2, Error ellipse: s-maj=70.6km s-min=19.2km az=52.0

NEIC 10 18:11:35.4±1.3, 4.°45N±0.°10×95.°01E±0.°03, h65km±15km, mb4.3/3, Error ellipse: s-maj=14.7km s-min=2.9km az=169.0

ISC 10 18:11:33.9±1.1, 4.°4N±0.°1×95.°0E±0.°1, h48km, n23, σ1s18/21, mb4.1/9, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
LHMI	Lhok Sumawe	2.15	67		Pn	18 12 07.8	+0.5
PSI	Prapat	4.26	112	Pn	Pn	18 12 38.4	+2.0
	4.1nm,0.3s,baz=316,slow=9.1,SNR=9.3						
PSI				Sn	Sn	18 13 24.0	-1.0
	8.7nm,0.3s,baz=100,slow=19.9,SNR=8.0						
RPSI	Rantau Prapat	4.30	113		Pn	18 12 38.4	+1.5
RPSI					Sn	18 13 24.0	-1.8
RPSI	Rantau Prapat	4.30	113	Pn	Pn	18 12 38.6	+1.7
KULM	Kulim	5.74	81	Pn	Pn	18 12 56.8	+0.2
IPM	Ipoh	6.05	89	Pn	Pn	18 13 01.3	+0.3
PBA	Port Blair	7.54	343	Pn	Pn	18 13 19.7	-1.7
PBKT	Sadao Pong	13.47	26	Pn	Pn	18 14 44.8	+2.4
CMAR	Chiang Mai Arr	14.51	15	Pn	P	18 15 01.1	-1.1
	0.6nm,0.3s,baz=209,slow=11,SNR=11						
CISI	Cisompet, Garu	17.48	133	Pn	Pn	18 15 33.4	-1.0
CISI				IAmb	IAmb	18 16 23.4	
	comp=Z,49nm,1.1s						
H08S2	Diego Garcia H	25.40	242	T	T	18 42 12.1	
	baz=60,slow=76,SNR=29						
H08S3	Diego Garcia H	25.40	242	T	T	18 42 08.2	
	baz=60,slow=76,SNR=55						
H08S1	Diego Garcia H	25.42	242	T	T	18 42 15.8	
	baz=60,slow=76,SNR=30						
MK31	Makanchi Array	43.64	347	P	P	18 19 32.4	-1.4
MK31				IAmb	IAmb	18 19 34.2	
	comp=Z,5.6nm,0.9s						
MKAR	Makanchi Array	43.64	347	P	P	18 19 33.6	-0.2
	comp=Z,3.1nm,0.6s,baz=168,slow=8.0,SNR=21						
MKAR	Makanchi Array	43.64	347	P	P	18 19 33.4	-0.4
MAKZ	Makanchi	43.73	347	P	P	18 19 33.8	-0.7
MAKZ				IAmb	IAmb	18 20 00.8	
	comp=Z,4.1nm,1.1s						
WRA	Warramunga Arr	45.63	123	P	P	18 19 50.1	+0.1
	comp=Z,2.3nm,0.8s,baz=304,slow=9.0,SNR=5.4						
ASAR	Alice Springs	47.10	128	P	P	18 20 01.7	+0.1
	comp=Z,0.8nm,0.6s,baz=299,slow=7.9,SNR=4.7						
KURBB	Kurchatov Arra	48.10	346	P	P	18 20 08.9	+0.1
	comp=Z,1.1nm,0.8s,baz=177,slow=6.7,SNR=4.1						
ZALV	Zalesovo Beam	50.09	352	P	P	18 20 24.3	+0.3
	comp=Z,0.8nm,0.5s,baz=165,slow=6.0,SNR=3.5						
BVAR	Borovoye Array	52.53	342	P	P	18 20 41.8	-0.5
	comp=Z,1.6nm,0.8s,baz=124,slow=8.9,SNR=4.7						
FINES	FINESS Array B	76.15	333	P	P	18 23 16.1	-0.5
	comp=Z,1.1nm,0.8s,baz=108,slow=4.5,SNR=2.8						

IDC 10 18:34:01.4±4.3, 8.°47S×159.°49E, h97km±68km, mb3.0/3, mb1 3.2/3, mb1mx3.0/26, mbtmp3.3/3, Error ellipse: s-maj=117.5km s-min=40.9km az=125.0

ISC 10 18:34:01.7±1.7, 8.°5S±0.°2×159.°6E±0.°3, h103km, n12, σ1s39/8, mb3.0/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
HNR	Honiara	0.97	156	P	Pn	18 34 22.1	-0.1
	97nm,0.3s,baz=215,slow=2.2,SNR=61						
HNR				S	Sn	18 34 38.3	+0.8
	268nm,0.3s,baz=0.0,slow=20,SNR=58						
HNR	Honiara	0.97	156	eP	Pn	18 34 21.0	-1.1
HNR				eS	Sn	18 34 38.0	+0.5
WRA	Warramunga Arr	26.89	242	P	P	18 39 33.7	+0.4
	0.2nm,0.4s,baz=65,slow=9.1,SNR=3.8						
H11S2	WAKE ISLAND Hy	27.77	15	T	T	19 08 20.2	
	baz=195,slow=76,SNR=43						
H11S3	WAKE ISLAND Hy	27.77	15	T	T	19 08 27.1	
	baz=195,slow=76,SNR=25						
H11S1	WAKE ISLAND Hy	27.79	15	T	T	19 08 19.6	
	baz=195,slow=76,SNR=25						
ASAR	Alice Springs	28.79	235	P	P	18 39 50.4	+0.2
	0.1nm,0.4s,baz=61,slow=10,SNR=5.5						
H11N1	WAKE ISLAND Hy	28.99	14	T	T	19 09 57.0	
	baz=195,slow=76,SNR=25						
H11N3	WAKE ISLAND Hy	29.00	14	T	T	19 09 58.3	
	baz=195,slow=76,SNR=26						
H11N2	WAKE ISLAND Hy	29.01	14	T	T	19 09 58.4	
	baz=195,slow=76,SNR=31						
MKAR	Makanchi Array	87.55	318	P	P	18 46 39.6	+1.4
	0.1nm,0.5s,baz=97,slow=6.1,SNR=5.1						
TORD	Torodi Ar. Bea	157.78	284	PKPab	PKPab	18 54 18.0	-2.3

0.6nm,0.9s,baz=45,slow=4.3,SNR=2.8

JMA 10 18:37:18.4±0.2, 35.°82N×141.°14E, h16km±2km, M1.6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
CHOJ	Chosi	0.26	243	P	Pg	18 37 23.9	-0.1
CHOJ				eS	Sg	18 37 28.2	+0.3
JHYU	Hitachinakayam	0.69	319	eS	Sb	18 37 41.6	+0.4
JYT	Yasato	0.87	298	eS	Sb	18 37 45.6	-0.9

JMA 10 18:37:47.6, 35.°75N×138.°23E, h13km±1km, M1.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
JNT	Takato	0.14	329	P	Pg	18 37 51.1	-0.2
JNT				S	Sg	18 37 53.7	-0.2
JYN	Shimob	0.36	134	P	Pg	18 37 54.8	-0.1
JYN				eS	Sg	18 38 00.3	+0.5
JRY	Ryogami san	0.61	64	P	Pg	18 37 59.0	-0.5
JRY				eS	Sg	18 38 06.7	-0.8
SHZ3	Shizuoka 3	0.68	181	eS	Sg	18 38 09.3	-0.6
MAT	Matsushiro	0.79	359	P	Pg	18 38 02.7	-0.3
MAT				eS	Sg	18 38 12.7	-0.7
MAT	Matsushiro	0.79	359	P	Pg	18 38 02.7	-0.3
MAT				S	Sg	18 38 12.8	-0.6
JOD2	Odawara 2	0.85	125	P	Pg	18 38 03.3	-0.8

IDC 10 18:44:18.0±0.9, 15.°38S×173.°83W, h0km, mb4.1/9, mb1 4.4/11, mb1mx4.2/29, mbtmp4.2/11, ML4.1/2, MS3.7/1, Ms1 3.7/1, ms1mx3.0/41, Error ellipse: s-maj=51.1km s-min=16.6km az=151.0

NEIC 10 18:44:22.8±1.6, 15.°46S±0.°09×173.°7W±0.°1, h36km±7km, mb4.5/16, Error ellipse: s-maj=17.4km s-min=10.9km az=115.0

ISC 10 18:44:23.3±0.6, 15.°48S±0.°07×173.°59W±0.°08, h42km, n45, σ1s35/44, mb4.4/17, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
AFI	Afiamalu	2.35	49	Pn	Pn	18 45 00.7	+1.1
	112nm,0.3s,baz=182,slow=1.4,SNR=69						
AFI				Sn	Sn	18 45 24.0	-3.3
	1μm,0.3s,baz=38,slow=22,SNR=52						
AFI	Afiamalu	2.35	49		Pn	18 45 00.0	+0.4
AFI					Sn	18 45 25.4	-2.0
NIUE	Niue	5.00	136		Pn	18 45 37.7	+1.8
NIUE				Sn	Sn	18 46 28.1	-4.5
RAR	Rarotonga	14.30	116	Pn	Pn	18 47 44.9	+1.7
	2.5nm,0.3s,baz=172,slow=5.3,SNR=3.9						
RAR	Rarotonga	14.30	116		Pn	18 47 44.2	+0.9
HNR	Honiara	26.51	280	LR	LR	18 58 50.0	
	comp=Z,156nm,19.3s,baz=120,slow=33						
H11N3	WAKE ISLAND Hy	39.89	331	T	T	19 34 38.6	
	baz=149,slow=76,SNR=6.9						
H11N1	WAKE ISLAND Hy	39.90	331	T	T	19 34 40.1	
	baz=149,slow=76,SNR=4.5						
H11N2	WAKE ISLAND Hy	39.91	331	T	T	19 34 41.1	
	baz=149,slow=76,SNR=9.5						
STKA	Stephens Creek	43.83	240	P	P	18 52 24.9	-0.6
	2.5nm,0.7s,baz=54,slow=7.9,SNR=6.9						
STKA	Stephens Creek	43.83	240	P	P	18 52 25.5	-0.1
WB2	Warramunga Arr	49.63	257	P	P	18 53 09.0	-2.2
WRA	Warramunga Arr	49.64	257	P	P	18 53 09.7	-1.6
	3.0nm,0.7s,baz=89,slow=7.2,SNR=28						
WRA	Warramunga Arr	49.64	257	P	P	18 53 09.6	-1.6
AS31	Alice Springs	49.91	252	P	P	18 53 12.8	-0.5
ASAR	Alice Springs	49.91	252	P	P	18 53 12.6	-0.6
	7.8nm,0.6s,baz=88,slow=7.5,SNR=150						
ASAR	Alice Springs	49.91	252	P	P	18 53 12.1	-1.1
PFO	Pinyon Flats O	73.11	47	P	P	18 55 49.0	-0.8
PFO				IAmb	IAmb	18 55 52.3	
	comp=Z,6.6nm,1.1s						
XPFO	Pion Flat	73.12	47	P	P	18 55 48.9	-0.9
XPFO				IAmb	IAmb	18 55 52.3	
	comp=Z,6.1nm,1.1s						
AFDM	Forest Hills D	73.12	40	P	P	18 55 49.2	-0.4
AFDM				IAmb	IAmb	18 55 52.4	
	comp=Z,3.6nm,0.9s						
YBH	Yreka Blue Hor	73.78	37		P	18 55 55.0	+1.5
YBH				IAmb	IAmb	18 55 56.1	
	comp=Z,7.2nm,1.2s						
RYN	Ryan	74.49	42	P	P	18 55 58.5	+0.8
NVAR	Mina Array Bea	74.52	42	P	P	18 55 59.8	+1.8
	comp=Z,1.7nm,0.7s,baz=224,slow=9.5,SNR=9.8						
NVAR	Mina Array Bea	74.52	42	P	P	18 55 57.5	-0.5
113A	Mohawk Valley,	74.61	49	P	P	18 55 59.1	+0.7
NV11	Mina Array Sit	74.61	42	P	P	18 55 59.2	+0.7
NV11				IAmb	IAmb	18 56 00.7	
	comp=Z,4.7nm,1.1s						
W13A	Hualapai Mount	75.70	47	P	P	18 56 05.9	+0.9
W13A				IAmb	IAmb	18 56 07.8	
	comp=Z,13nm,1.9s						
TUC	Tucson	76.59	51	P	P	18 56 10.4	+0.6
TUC				IAmb	IAmb	18 56 12.9	
	comp=Z,5.3nm,1.2s						
TX31	Lajitas Ar. Si	80.81	56	P	P	18 56 33.2	+0.1
TX32	Lajitas Array	80.81	56	P	P	18 56 33.1	0.0
TX32				IAmb	IAmb	18 56 37.0	
	comp=Z,12nm,1.8s						
TXAR	Lajitas Array	80.81	56	P	P	18 56 35.0	+1.8
	comp=Z,1.2nm,1.0s,baz=231,slow=6.0,SNR=8.9						
TXAR	Lajitas Array	80.81	56	P	P	18 56 33.8	+0.6
PDAR	Pinedale Array	82.45	42	P	P	18 56 42.3	+0.6
	comp=Z,0.5nm,0.7s,baz=227,slow=3.6,SNR=6.0						
PDAR	Pinedale Array	82.45	42	P	P	18 56 42.0	+0.4
YHL	Hebgen Lake	82.46	39	P	P	18 56 43.8	+2.0
ILAR	Eielson Array	82.56	11	P	P	18 56 41.8	+0.3
	comp=Z,0.3nm,0.6s,baz=234,slow=6.6,SNR=11						
YKA	Yellowknife Ar	90.25	23	P	P	18 57 19.5	+0.3
	comp=Z,0.3nm,0.7s,baz=239,slow=4.8,SNR=4.8						
CMAR	Chiang Mai Arr	92.46	288	P	P	18 57 30.8	+0.3
	comp=Z,0.6nm,0.7s,baz=105,slow=2.1,SNR=6.0						
ARCES	ARCESS Array B	124.67	352	PKP	PKPdf	19 03 17.9	+0.1
	comp=Z,12nm,1.2s,baz=352,slow=5.5,SNR=3.7						
ARCES	ARCESS Array B	124.67	352		PKiKP	19 03 18.2	+0.1
BR131	Keskin Array S	146.10	321		PKPab	19 03 59.7	-0.3
BRTR	Keskin Array B	146.10	321	PKPbc	PKPab	19 04 00.0	0.0
	comp=Z,4.0nm,0.8s,baz=102,slow=2.9,SNR=22						
BRTR	Keskin Array B	146.10	321		PKPdf	19 03 58.7	+0.2
GERES	GERESS Array B	146.19	351	PKPbc	PKPbc	19 03 58.8	-0.5
	comp=Z,0.3nm,0.5s,baz=348,slow=4.4,SNR=3.8						
GERES	GERESS Array B	146.19	351		PKPdf	19 03 58.2	0.0

IDC 10 19:08:05.4±1.0, 8.°21S×124.°44E, h0km, mb4.0/5, mb1 4.0/7, mb1mx3.7/40, mbtmp4.0/7, ML3.7/2, Error ellipse: s-maj=45.4km s-min=18.1km az=53.0

DJA 10 19:08:06.7±1.7, 8.°S±4.°×12.°5E±1.°9, h10km, M4.1/4, mb4.6/2, MLv3.9/4

NEIC 10 19:08:07.7±2.6, 8.°04S±0.°07×124.°95E±0.°09, h35km±2km, mb4.2/4, Error ellipse: s-maj=15.3km s-min=11.5km az=279.0

ISC 10 19:08:08.2±0.7, 8.°14S±0.°05×124.°90E±0.°08, h27km, n27, σ2s47/30, mb4.2/7, Timor region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
SOEI	Soe	1.72	201	P	Pb	19 08 39.1	-0.1
SOEI				S	Sb	19 09 02.0	+1.5
SOEI	Soe	1.72	201		Pn	19 08 37.3	+0.8
BBSI	Bau Bau	3.51	319	P	Pn	19 08 59.1	-1.9
KAPI	Kappang	5.98	301	Pn	Pn	19 09 31.6	-3.4
BNSI	Bone	6.04	308	P	Pn	19 09 33.8	-2.0
	0.1nm20nm,0.5s						
SAUI	Saumlaki	6.34	89	Pn	Pn	19 09 38.5	-1.5
PLAI	Plampang	7.08	264	P	Pn	19 09 50.7	+0.6
MTN	Manton Dam	7.71	128		Pn	19 10 03.2	+4.5
KNRA	Kununurra	8.39	154	Pn	Pn	19 10 10.9	+2.9
FITZ	Fitzroy Crossi	9.92	176	Pn	Pn	19 10 28.7	-0.4
	0.4nm,0.3s,baz=7.4,slow=14,SNR=6.3						
FITZ				Sn	Sn	19 12 16.9	-2.8
	1.0nm,0.3s,baz=185,slow=3.9,SNR=5.8						
FITZ	Fitzroy Crossi	9.92	176		Pn	19 10 29.3	+0.2
WB0	Warramunga Arr	14.77	142	Pn	Pn	19 11 34.8	-0.6
WRA	Warramunga Arr	14.87	143	Pn	Pn	19 11 35.6	-1.2
	1.4nm,0.3s,baz=315,slow=14,SNR=61						
WRA				Sn	Sn	19 14 14.3	-6.5
	0.2nm,0.3s,baz=319,slow=24,SNR=5.0						
WB2	Warramunga Arr	14.88	143		Pn	19 11 36.1	-0.8
WR0	Warramunga Arr	15.01	143		Pn	19 11 37.0	-1.6
WR0				IAmb	IAmb	19 11 40.8	
	comp=Z,8.2nm,0.9s						
AS31	Alice Springs	17.68	152	P	Pn	19 12 11.7	-1.0
ASAR	Alice Springs	17.69	152	P	P	19 12 14.4	+0.9
	comp=Z,0.5nm,0.3s,baz=321,slow=11,SNR=31						
ASAR				S	Sn	19 15 25.6	-3.6
	comp=Z,0.1nm,0.3s,baz=326,slow=23,SNR=5.0						
ASAR	Alice Springs	17.69	152	P	Pn	19 12 11.9	-0.9
PMG	Port Moresby	22.03	95	P	P	19 13 07.1	+6.2
	comp=Z,8.7nm,0.6s,baz=247,slow=13,SNR=4.1						
STKA	Stephens Creek	28.27	149	P	P	19 14 02.7	+3.3
	comp=Z,1.0nm,0.6s,baz=336,slow=10.0,SNR=5.4						
CMAR	Chiang Mai Arr	36.80	316	P	P	19 15 14.5	+0.4
	comp=Z,0.8nm,0.7s,baz=145,slow=7.1,SNR=9.2						
LSA	Lhasa	49.69	321	P	P	19 16 59.0	+0.4
LSA				IAmb	IAmb	19 17 04.6	
	comp=Z,4.5nm,1.1s						
MK31	Makanchi Array	66.52	330	P	P	19 18 54.4	-1.2
MK31				IAmb	IAmb	19 19 13.6	
	comp=Z,2.9nm,1.4s						
MKAR	Makanchi Array	66.52	330	P	P	19 18 56.0	+0.4
	comp=Z,1.1nm,0.5s,baz=129,slow=7.9,SNR=32						
MKAR	Makanchi Array	66.52	330	P	P	19 18 54.7	-1.0
ZALV	Zalesovo Beam	70.47	336	P	P	19 19 19.6	-0.5
	comp=Z,0.6nm,0.4s,baz=119,slow=5.3,SNR=3.7						
ZALV	Zalesovo Beam	70.47	336	P	P	19 19 17.2	-2.9

NCEDC 10 19:09:49.9±1.8, 40.°38N±0.°06×125.°69W±0.°04, h22km±7km, ML3.4/19, Error ellipse: s-maj=8.1km s-min=4.4km az=177.0

NEIC 10 19:09:50.3±1.8, 40.°35N±0.°05×125.°5W±0.°1, h16km±12km, Error ellipse: s-maj=11.9km s-min=7.2km az=82.0

ANF 10 19:09:53.2±0.7, 40.°64N×125.°00W, h0km, ML2.9/11, Error ellipse: s-maj=6.4km s-min=3.6km az=67.0

ISC 10 19:09:47.9±2.0, 40.°38N±0.°04×125.°63W±0.°08, h17km±13km, n98, σ1s67/109, Off coast of northern California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
KCTM	Capetown	0.99	84		Pn	19 10 07.7	+0.6
KCTM					Sb	19 10 20.1	+0.7
KSMM	Slide Mountain	1.13	100		Pb	19 10 08.9	-0.2
KMPM	Mount Pierce	1.15	88		Pg	19 10 09.7	-0.5
KMPM					Sb	19 10 23.4	-0.7
KCRM	Chalk Rock	1.38	88		Pb	19 10 13.2	-0.1
KRPM	Rodgers	1.45	57		Pn	19 10 13.2	-0.2
KMRM	Mail Ridge	1.48	96		Pn	19 10 14.6	+0.7
KHMM	Horse Mountain	1.53	71		Pn	19 10 14.9	+0.3
KCSM	Cold Springs	1.62	84		Pn	19 10 16.9	+1.0
KSBM	Bell Springs	1.63	106		Pn	19 10 16.8	+0.9
KCPM	Cahto Peak	1.72	113		Pn	19 10 17.8	+0.6
KRMB	Red Mountain	1.73	48		Pn	19 10 17.0	-0.4
KIPM	Iron Peak	1.74	108		Pn	19 10 18.6	+1.1
KFPM	Farley Peak	1.85	113		Pn	19 10 19.6	+0.7
KHBM	Hayfork Bally	1.86	81		Pn	19 10 19.9	+0.7
GTC	Three Chop Rid	1.87	121		Pn	19 10 19.2	0.0
KOMM	Orleans Mounta	1.88	61		Pn	19 10 19.5	+0.2
KBNM	Bluenose Ridge	1.93	104		Pn	19 10 21.4	+1.3
GNAM	Navarro Ridge	1.94	127		Pn	19 10 20.0	-0.1
KSXB	Camp Six Broad	1.96	42		Pn	19 10 20.6	+0.1
KRKM	Rackout Spring	2.05	113		Pn	19 10 22.8	+1.1
GHOM	Hamilton Openi	2.09	129		Pn	19 10 22.2	0.0
LBPM	Beegum Peak	2.10	91		Pn	19 10 23.6	+1.2
KBO	Bosley Butte	2.11	30		Pn	19 10 23.0	+0.4
O02D	Mt. Diablo Mer	2.18	94		Pn	19 10 24.7	+1.1
O02D	Mt. Diablo Mer	2.18	94	P	Pn	19 10 24.6	+1.1
	baz=276,SNR=9.1						
O02D				Sb	Sn	19 10 49.8	-0.4
	baz=276						
LGPM	Granite Peak	2.20	75		Pn	19 10 24.2	+0.5
GGUM	Gualala	2.24	132		Pn	19 10 24.1	-0.2
GHMM	Hull Mountain	2.25	112		Pn	19 10 25.7	+1.1
KTRM	Thompson Ridge	2.29	47		Pn	19 10 26.4	+1.5
N02D	Trinity Center	2.30	74		Pn	19 10 25.8	+0.7
GROM	Round Mountain	2.31	101		Pn	19 10 26.6	+1.3
M02C	Callahan	2.33	63		Pn	19 10 26.1	+0.5
M02C	Callahan	2.33	63	P	Pn	19 10 25.9	+0.3
	baz=246,SNR=33						
M02C				Sb	Sn	19 10 52.0	-1.9
	baz=246						
L02E	Cave Junction	2.34	40		Pn	19 10 26.7	+1.1
L02E	Cave Junction	2.34	40	P	Pn	19 10 26.2	+0.5
	baz=222,SNR=25						
L02E				S	Sn	19 10 51.3	-2.7
	baz=222						
GVV	Valley View	2.35	104		Pn	19 10 27.1	+1.3
GASB	Alder Springs	2.35	107		Pn	19 10 27.2	+1.3
LBKM	Bonanza King	2.36	72		Pn	19 10 26.6	+0.6
WDC	Whiskeytown Da	2.36	84		Pn	19 10 26.7	+0.8
GSNM	Snow Mountain	2.37	127		Pn	19 10 26.3	+0.2
HOPS	Hopland Field	2.41	124	Pn	Pn	19 10 26.8	+0.2
GHLM	Highland Sprin	2.42	123		Pn	19 10 26.9	+0.1
GDCM	Dry Creek	2.45	130		Pn	19 10 28.7	+1.5
GTSM	Trough Springs	2.56	114		Pn	19 10 30.1	+1.4
GPMM	Pine Mountain	2.58	126		Pn	19 10 31.5	+2.5
LAMM	Antelope Mount	2.58	61		Pn	19 10 30.1	+1.0
GHCM	House Creek	2.59	133		Pn	19 10 29.0	0.0
YBH	Yreka Blue Hor	2.59	58		Pn	19 10 30.1	+1.1
GCK	Clark Valley	2.59	108		Pn	19 10 31.2	+2.1
GACM	Adobe Creek	2.62	124		Pn	19 10 29.7	+0.2
GSSM	Skaggs Springs	2.63	129		Pn	19 10 31.6	+2.0
FTR	Fort Ross	2.66	133		Pn	19 10 30.6	+0.5
KEBM	Edson Butte	2.67	21	Pn	Pb	19 10 33.7	-1.6
LTCM	Tuscan Springs	2.69	93		Pn	19 10 32.2	+1.9
K02D	Willamette Mer	2.74	32	P	Pn	19 10 32.4	+1.2
	baz=214,SNR=124						
K02D				S	Sn	19 11 01.5	-2.5
	baz=214						
NMCNC	Mill Creek, So	2.76	130		Pn	19 10 32.9	+1.6
LSHM	Sage Hen Hill	2.76	80		Pn	19 10 32.7	+1.3
LMPM	Military Pass	2.85	66		Pn	19 10 35.0	+2.2
O03E	Paynes Creek	2.93	90	P	Pn	19 10 34.6	+0.9
	baz=273						
O03E				S	Sn	19 11 06.9	-1.6
	baz=273						
LDBM	Digger Butte	2.94	88		Pn	19 10 34.8	+0.9
HUMO	Hull Mountain	3.00	41		Pn	19 10 36.2	+1.6
NTYM	Taylor	3.04	130		Pn	19 10 37.0	+1.8
J01E	Myrtle Point	3.05	24	S	Sn	19 11 09.5	-2.0
	baz=206						
MCCM	Marconi Confer	3.09	135	Pn	Pn	19 10 37.3	+1.4
L04D	Klamath Falls	3.10	53		Pn	19 10 39.7	+3.5
L04D	Klamath Falls	3.10	53	Pb	Pn	19 10 39.6	+3.3
	baz=235,SNR=177						
L04D				Sb	Sn	19 11 14.5	+1.4
	baz=235						
OSUM	Sutter Buttes	3.11	110		Pn	19 10 37.2	+1.0
LCMM	Colby Mountain	3.15	93		Pn	19 10 38.5	+1.5
SUTB	Sutter Butte	3.18	110		Pn	19 10 35.8	-1.3
LRDM	Redding Peak	3.18	87		Pn	19 10 39.3	+2.0
M04C	Macdoel	3.19	63	Pb	Pn	19 10 40.3	+2.9
	baz=246						
ORV	Oroville	3.28	103		Pn	19 10 39.3	+0.8
SNT	Sears Point	3.30	131		Pn	19 10 40.3	+1.5
I03D	Drain, OR	3.72	26	P	Pn	19 10 46.9	+2.3
	baz=208,SNR=22						
I03D				S	Sn	19 11 26.5	-1.5
	baz=208						
CMCM	Mills College	3.74	133		Pb	19 10 52.2	-1.2
AFDM	Forest Hills D	3.87	110		Pn	19 10 47.8	+1.1
J04D	Umpqua Nationa	3.88	41	P	Pn	19 10 50.0	+3.0
	baz=224,SNR=8.7						
I02D	Swisshome	3.95	19	S	Sn	19 11 32.7	-0.9
	baz=201						
BEKR	Beckworth	4.07	96		Pn	19 10 49.8	+0.2
I04A	Tendick Farm,	4.17	34	P	Pn	19 10 53.5	+2.8
	baz=217,SNR=8.0						
I04A				S	Sn	19 11 37.7	-1.4
	baz=217						
JBNB	Ben Lomond Mou	4.24	139		Pn	19 10 52.6	+0.9
MOD	Modoc Plateau	4.30	68		Pn	19 10 54.9	+2.2
JUMM	Mount Umunhum	4.34	137		Pn	19 10 55.2	+2.0
J05D	Fort Rock, OR	4.38	47	P	Pn	19 10 56.4	+2.6
	baz=230,SNR=15						
JRGM	Rodeo Gulch Ro	4.40	138		Pn	19 10 55.4	+1.4
H04D	Lebanon	4.66	26	P	Pn	19 11 00.4	+2.9
	baz=209						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
H04D				S	Sn	19 11 50.7	-0.4
	baz=209						
CMB	Columbia Colle	4.70	118		Pn	19 11 01.3	+3.2
PINE	Pine Mountain	4.88	44		Pn	19 11 03.1	+2.5
SAO	San Andreas Ge	4.88	136	Pn	Pn	19 11 01.9	+1.5
H04A	Detroit Lake	5.00	29		Pn	19 11 05.1	+3.0
BJCM	Johnson Can.	5.07	138		Pn	19 11 04.6	+1.5
HAST	Hastings Reser	5.11	140		Pn	19 11 04.9	+1.2
WAKR	Walker	5.15	109		Pn	19 11 08.6	+4.2
PAPM	Alder Peak	5.59	142		Pn	19 11 12.7	+2.4
OMMB	Old Mammoth Mi	5.86	116	Pn	Pn	19 11 17.4	+3.2
I07A	Izee	5.86	49		Pn	19 11 17.4	+3.3
J08A	Circle Bar Ran	6.11	59		Pn	19 11 19.1	+1.6
BMO	Blue Mountains	7.59	51		Pn	19 11 41.8	+4.0

NIED **10** *19:14:00, 34.20N×140.10E, h86km, Mw5.3 Best double couple: M0 1.12000×10^17 NP1: φs 234.00000°, δ79.00000°, λ116.00000°. NP2: φs 346.00000°, δ28.00000°, λ25.00000°.*
BJI **10** *19:14:31.5±0.0, 34.09N×140.50E, h80km, mB5.1/64, mb4.9/82, Ms4.8/81, Ms7 4.5/77*
JMA **10** *19:14:38.5±0.2, 34.19N×140.16E, h91km±2km, M5.3 JMA Felt III J1.*
NEIC **10** *19:14:40.0±1.4, 34.16N±0.04×139.95E±0.08, h94km±3km, mb5.3/410, Error ellipse: s-maj=10.0km s-min=5.3km az=98.0*
BGR **10** *19:14:39.9±0.0, 34.98N×140.90E, h78km±4km, mb5.6*
GCMT **10** *19:14:40.0±0.1, 34.19N±0.01×140.08E±0.01, h102km±1km, MW5.4/144, Moment Tensor Solution. s102,c166; s144,c278; Duration: 1.2 Moment tensor: Scale 10^17Nm; Mrr0.36±.02; Mθθ0.38±.02; Mφφ-0.73±.02; Mrθ-0.95±.01; Mrφ-0.67±.02; Mθφ-0.57±.01; Best double couple: M0 1.42800×10^17 NP1: φs 343.00000°, δ35.00000°, λ16.00000°. NP2: φs 240.00000°, δ81.00000°, λ124.00000°. Principal axes: T 1.3190, Plg44.0000°, Azm183.0000°; N 0.2180, Plg34.0000°, Azm54.0000°; P -1.5370, Plg28.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC **10** *19:14:40.7±0.4, 34.09N×139.87E, h100km±3km, mb4.9/42, mb1 5.0/45, mb1mx4.9/54, mbtmp5.2/45, MS4.3/25, Ms1 4.3/25, ms1mx4.2/36 Error ellipse: s-maj=9.5km s-min=4.8km az=82.0*
ISC 10 19:14:39.5±0.3, 34.15N±0.02×140.03E±0.03, h95km±2km, h95km:pP-P, n1483, σ1.30/1625, mb5.3/452, 39C-123D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMKN	Mikurajimanish	0.44	234	P	Pn	19 14 53.8	-0.5
JMKN				S	Sn	19 15 05.8	+0.5
JNIO	Niijimaoohara	0.66	288	P	Pn	19 14 55.9	-0.1
JNIO				S	Sn	19 15 09.7	+1.4
JTHY	Toshimahigashi	0.71	302	P	Pn	19 14 56.3	-0.2
JTHY				S	Sn	19 15 10.7	+1.4
JKO	Kozu shima	0.74	273	⇑P	Pn	19 14 56.6	-0.1
JKO				S	Sn	19 15 11.1	+1.4
JIM2	Oshima 3	0.75	319	⇑P	Pn	19 14 55.9	-1.0
JIM2				eS	Sn	19 15 09.4	-0.5
BSO3	Boso 3	0.76	32	⇑P	Pn	19 14 55.2	-1.5
BSO4	Boso 4	0.88	17	⇑P	Pn	19 14 57.0	-1.0
BSO1	Boso 1	0.93	57	⇑P	Pn	19 14 56.4	-1.7
JKUC	kamogawauchiur	1.02	8	⇑P	Pn	19 14 58.2	-1.5
JHJ	Hachijo jima 2	1.05	191	P	Pn	19 15 00.4	+0.3
	19µm,0.3s,baz=64,slow=1.9,SNR=974						
JHJ				S	Sn	19 15 16.8	+1.3
	30µm,0.3s,baz=41,slow=19,SNR=20						
JHJ2	Mitsune	1.05	190	⇓P	Pn	19 15 00.3	+0.2
JHJ2				S	Sn	19 15 17.4	+1.9
JHJ2	Mitsune	1.05	190		Pn	19 14 59.9	-0.2
JIZS	Izushimoda	1.10	301	⇓P	Pn	19 15 00.6	0.0
JIZS				S	Sn	19 15 17.8	+1.2
JHTM	Izuhatsuma	1.16	314	P	Pn	19 15 01.2	-0.1
AJI	Ajiro2	1.18	319	⇑P	Pn	19 15 01.1	-0.4
I30JP	ISUMI INFRASON	1.18	12	P	Pn	19 15 00.0	-1.5
	baz=193,slow=16,SNR=2.1						
I30JP				S	Sn	19 15 17.9	-0.2
I30JP				i		19 23 00.0	
	baz=204,slow=338,SNR=1.4						
JOD2	Odawara 2	1.35	325	P	Pn	19 15 03.0	-0.6
JOD2				S	Sn	19 15 21.8	-0.1
JFNN	Fujinakano	1.52	314	⇓P	Pn	19 15 06.1	+0.5
JSMT	Sammumatsuo	1.53	13	⇑P	Pn	19 15 04.4	-1.4
JSGW	Sagamiharawaka	1.59	335	P	Pn	19 15 05.8	-0.8
JSG	Sagara	1.61	289	⇓P	Pn	19 15 08.2	+1.4
JAOM	Aogashimamukai	1.70	187	P	Pn	19 15 08.9	+0.9
SHZ3	Shizuoka 3	1.75	302	P	Pn	19 15 09.6	+0.9
JKKS	Kakegawashinom	1.79	290	⇓P	Pn	19 15 10.6	+1.5
TK04	Tokai 4	1.80	278	⇓P	Pn	19 15 10.6	+1.6
JYN	Shimob	1.81	318	⇓P	Pn	19 15 09.8	+0.3
JYN				S	Sn	19 15 34.2	+1.9
JIHU	Itakohorinouch	1.86	13	P	Pn	19 15 08.9	-1.0
TK02	Tokai 2	1.89	264	⇓P	Pn	19 15 11.6	+1.4
HMMJ	Hamamatsu 2	2.03	291	⇓P	Pn	19 15 13.2	+1.0
JYZW	Yoshizawa	2.07	295	P	Pn	19 15 13.7	+1.0
JRY	Ryogami san	2.08	334	⇓P	Pn	19 15 12.6	-0.2
JNY	Yasuok	2.15	305	⇓P	Pn	19 15 15.3	+1.5
JSSY	Shinshiroyabe	2.21	291	⇓P	Pn	19 15 15.7	+1.1
JHYU	Hitachinakayam	2.23	12	P	Pn	19 15 12.8	-2.0
JNT	Takato	2.31	319	⇓P	Pn	19 15 17.0	+0.9
JAG	Ashikaga	2.32	349	P	Pn	19 15 14.7	-1.3
JAA	Atsumi	2.43	282	⇓P	Pn	19 15 18.5	+1.1
JAA				S	Sn	19 15 48.6	+2.0
JHO	Hitachi	2.49	10	P	Pn	19 15 15.9	-2.4
JAO	Obara	2.54	297	⇓P	Pn	19 15 20.2	+1.3
JGF	Kuroka	2.63	304	⇓P	Pn	19 15 21.5	+1.4
JGK	Kuni	2.66	335	P	Pn	19 15 20.6	+0.1
JKT	Katashina	2.69	347	P	Pn	19 15 19.8	-1.1
JNG	Nsakai	2.75	326	⇓P	Pn	19 15 22.4	+0.6
INU	Inuyama	2.75	297		Pn	19 15 23.0	+1.3
JIE	Ise	2.76	276	⇓P	Pn	19 15 22.9	+1.1
JIE				S	Sn	19 15 56.0	+1.6
MJAR	Matsushiro Arr	2.81	329	P	Pn	19 15 23.2	+0.6
	70nm,0.3s,baz=152,slow=11,SNR=2311						
MJAR				S	Sn	19 15 57.0	+1.4
	56nm,0.3s,baz=181,slow=30,SNR=7.0						
MJAR	Matsushiro Arr	2.81	329		Pn	19 15 22.0	-0.5
MAJO	Matsushiro	2.81	329		Pn	19 15 22.8	+0.3
MAJO	Matsushiro	2.81	329	d iP	Pn	19 15 23.2	+0.7
MAT	Matsushiro	2.81	329	P	Pn	19 15 23.0	+0.5
MAT	Matsushiro	2.81	329	P	Pn	19 15 22.8	+0.3
MAT				S	Sn	19 15 56.9	+1.2
JSB	Shiboa	2.81	358	P	Pn	19 15 21.1	-1.5
MJB9	Matsu-Tunnel	2.81	329		Pn	19 15 22.9	+0.3
JICN	Ichinomiyachia	2.86	295	P	Pn	19 15 25.1	+1.9
ONAJ	Iwakimizuishiy	3.01	12	⇑P	Pn	19 15 22.4	-2.8
TSUJ	Tsu 2	3.03	282	⇓P	Pn	19 15 26.7	+1.2
JGN	Niukaw	3.03	314	⇓P	Pn	19 15 27.0	+1.4
JYTA	Yamagatataniai	3.06	299	⇓P	Pn	19 15 27.0	+1.1
JKN2	Miekihoku	3.11	273	⇓P	Pn	19 15 27.8	+1.3
JKN2				S	Sn	19 16 04.4	+1.6
JHK	Hiroka	3.20	345	⇓P	Pn	19 15 26.5	-1.2
JTT	Ttatey	3.29	319	⇓P	Pn	19 15 30.7	+1.7
JJN	Nakama	3.31	333	P	Pn	19 15 29.6	+0.4
JMMH	Miemihama	3.34	265	P	Pn	19 15 30.8	+1.2
JMMH				S	Sn	19 16 09.7	+1.3
JIZZ	Izumozaki	3.54	343	P	Pn	19 15 32.0	-0.3
JFM	Mihama	3.60	294	P	Pn	19 15 34.3	+1.2
JKG	Kaga	3.69	306	P	Pn	19 15 36.5	+2.1
JNS	Sasagawa	3.70	351	P	Pn	19 15 33.6	-0.9
JSZ	Suzu	3.94	327	P	Pn	19 15 37.8	+0.2
JSD	Sado	4.13	340	⇓P	Pn	19 15 39.3	-1.0
OFUJ	Ofunato	5.09	15	P	Pn	19 15 50.0	-3.3
JCJ	Chichijima	7.28	165	P	Pn	19 16 20.2	-2.9
	188nm,0.3s,baz=62,slow=3.6,SNR=68						
JCJ				S	Sn	19 17 36.0	-8.1
	208nm,0.3s,baz=299,slow=21,SNR=5.6						
JCJ				LR	LR	19 19 25.2	
	comp=Z,2µm,21.0s,baz=0.5,slow=39						
JNU	Nakatsue	7.70	265	P	Pn	19 16 31.6	+2.7
	12nm,0.3s,baz=79,slow=8.1,SNR=85						
JNU	Nakatsue	7.70	265		Pn	19 16 29.8	+0.9
ERM	Erimo	8.23	17		Pn	19 16 30.8	-5.1
ERM	Erimo	8.23	17	ceP	Pn	19 16 32.5	-3.4
ASAJ	Asahikawa	10.15	11	P	Pn	19 16 57.7	-4.4
	40nm,0.3s,baz=228,slow=9.8,SNR=137						
ASAJ				S	Sn	19 18 43.4	-11
	12nm,0.3s,baz=343,slow=19,SNR=5.6						
JKA	Kamikawa-asahi	10.15	11		Pn	19 16 57.7	-4.4
NMR	Nemuro--Hokkai	10.22	24	⇓iP	Pn	19 16 57.2	-5.9
KSRS	Korea Array	10.37	292	P	Pn	19 17 06.9	+1.9
	2.1nm,0.3s,baz=106,slow=13,SNR=119						
KSAR	Wonju Array Be	10.39	292		Pn	19 17 06.6	+1.1
KSAR	Wonju Array Be	10.39	292	P	Pn	19 17 06.6	+1.1
KS19	Wonju Array Si	10.42	292		Pn	19 17 08.3	+2.4
GLVR	Golovnino	10.48	22	eP	Pn	19 17 01.3	-5.3
GLVR				pmax	pmax		
	comp=Z,414nm,0.5s						
GLVR				pmax	pmax		
	comp=N,70nm,0.6s						
GLVR				pmax	pmax		
	comp=E,184nm,0.6s						
GRPR	Tuman	10.79	23	⇓iP	Pn	19 17 04.9	-5.9
GRPR				pmax	pmax		
	comp=Z,399nm,0.3s						
GRPR				pmax	pmax		
	comp=N,173nm,0.4s						
GRPR				pmax	pmax		
	comp=E,342nm,0.6s						
GRPR				pmax	pmax		
	comp=Z,532nm,1.6s						
YUK	Yuzh-Kuril'sk	10.86	23	eP	Pn	19 17 05.6	-6.1
YUK				pmax	pmax		
	comp=E,28nm,0.3s						
YUK				pmax	pmax		
	comp=Z,394nm,0.3s						
YUK				pmax	pmax		
	comp=N,215nm,0.4s						
YUK				MLR	MLR		
	comp=Z,1µm,20.0s						
MSHR	Mys Shultsa	10.91	323	deP	Pn	19 17 11.2	-1.3
SHO	Shikotan	11.05	27	eP	Pn	19 17 08.0	-6.3
SHO				pmax	pmax		
	comp=Z,168nm,1.2s						
SHO				pmax	pmax		
	comp=N,23nm,0.3s						
SHO				pmax	pmax		
	comp=Z,140nm,0.3s						
SHO				pmax	pmax		
	comp=E,109nm,0.5s						
CHJN	Chongjin	11.11	316	P	Pn	19 17 16.4	+1.3
TEY	Ternei	11.19	347	⇑eP	Pn	19 17 17.3	+1.2
TEY				pmax	pmax		
	comp=Z,40nm,1.4s						
TEY				MLR	MLR		
	comp=N,200nm,14.0s						
WOSN	Wonsan	11.29	300	P	Pn	19 17 21.1	+3.5
INCN	Inchon	11.37	291		Pn	19 17 21.4	+2.7
INCN	Inchon	11.37	291	P	Pn	19 17 21.4	+2.7
HHU	Hamhung	11.53	304	P	Pn	19 17 24.4	+3.6
USA0B	Ussuriysk Arra	11.81	331		Pn	19 17 24.2	-0.3
USA0B	Ussuriysk Arra	11.81	331	P	Pn	19 17 24.2	-0.3
USRK	Ussuriysk Ar.	11.81	331	P	Pn	19 17 24.3	-0.2
	baz=135,slow=7.5,SNR=25						
USRK				LR	LR	19 21 54.6	
	comp=N,2µm,18.5s,baz=131,slow=37						
HJU	Haeju	12.20	293	P	Pn	19 17 33.0	+3.2
PYAG	Pyongyang	12.46	297	P	Pn	19 17 37.0	+3.7
PYAG				PP	P	19 17 51.0	+10
PYAG				sP		19 18 00.0	
PYAG				S	S	19 20 06.0	-5.1
PYAG				sS	Sn	19 20 22.0	+32
JOW	Kunigami	12.48	237		Pn	19 17 30.0	-3.6
KUR	Kuril'sk	12.60	26	eP	Pn	19 17 31.7	-3.3
KUR				pmax	pmax		
	comp=E,49nm,0.5s						
KUR				pmax	pmax		
	comp=Z,144nm,0.5s						
KUR				pmax	pmax		
	comp=N,57nm,0.4s						
YSS	Yuzh-Sakhalins	12.96	8		Pn	19 17 35.4	-4.3
YSS	Yuzh-Sakhalins	12.96	8	⇑iP	Pn	19 17 35.0	-4.8
YSS				pmax	pmax		
	comp=Z,110nm,0.4s						
YSS				pmax	pmax		
	comp=Z,300nm,3.2s						
MDJ	Mudanjiang	13.19	325	P	Pn	19 17 41.8	-1.1
MDJ				PP	P	19 17 49.8	+0.5
MDJ				S	Sn	19 20 08.5	+0.7
MDJ				pmax	pmax		
	comp=Z,78nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,890nm,6.3s						
MDJ				LR	LR		
	comp=Z,3µm,15.7s						
MDJ				LR	LR		
	comp=Z,2µm,14.2s						
MDJ				LR	LR		
	comp=Z,3µm,17.7s						
MDJ	Mudanjiang	13.19	325		Pn	19 17 41.5	-1.4
SUJ	Sinuiju	13.73	300	P	Pn	19 17 51.1	+1.1
CN2	Changchun	14.86	315	eP	Pn	19 18 03.5	-1.0
CN2				eS	Sn	19 20 45.7	-2.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,500nm,4.0s						
CN2				LR	LR		
	comp=Z,2µm,19.0s						
CN2				LR	LR		
	comp=Z,2µm,19.0s						
CN2				LR	LR		
	comp=Z,2µm,30.0s						
UGL	Uglegorsk	14.99	5	eP	Pn	19 18 03.2	-2.9
UGL				pmax	pmax		
	comp=Z,2µm,1.8s						
UGL				pmax	pmax		
	comp=Z,307nm,1.1s						
SNY	Shenyang	15.05	305	⇓P	Pn	19 18 03.9	-3.0
SNY				pmax	pmax		
	comp=Z,19nm,1.4s						
SNY				pmax	pmax		
	comp=Z,1µm,12.7s						
SNY				LR	LR		
	comp=Z,990nm,10.0s						
SNY				LR	LR		
	comp=Z,1µm,10.7s						
SNY				LR	LR		
	comp=Z,2µm,10.4s						
SSE	Sheshan	16.16	264	P	Pn	19 18 20.7	-0.2
SSE				S	Sn	19 21 21.4	+1.5
SSE				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SSE				pmax	pmax		
	comp=Z,470nm,4.1s						
SSE				LR	LR		
	comp=Z,890nm,21.0s						
SSE				LR	LR		
	comp=Z,680nm,16.3s						
SSE	Sheshan	16.16	264	P	Pn	19 18 23.0	+2.1
KLR	Kul'dur	16.27	340	P	Pn	19 18 18.6	-3.5
	comp=Z,5.0nm,0.3s,baz=158,slow=11,SNR=115						
JISG	Ishigakijimahi	16.67	239	P	Pn	19 18 28.0	+0.7
GRNR	Gornyy	16.82	352	⇑iP	Pn	19 18 25.8	-3.1
GRNR				eS	Sn	19 21 25.2	-10
GRNR				pmax	pmax		
	comp=Z,100nm,0.8s						
GRNR				smax	smax		
	comp=N,4.0nm,0.6s						
GRNR				MLR	MLR		
	comp=Z,860nm,16.0s						
JIJ	Ishigaki jima	16.93	239	P	Pn	19 18 31.3	+0.9
NJ2	Nanjing	17.86	269	eP	P	19 18 41.1	0.0
NJ2				pP	pP	19 18 54.8	-3.9
NJ2				sP	sP	19 19 10.8	-0.1
NJ2				S	Sn	19 21 58.1	-2.7
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
NJ2				LR	LR		
	comp=Z,1µm,9.4s						
NJ2				LR	LR		
	comp=Z,1µm,9.0s						
NJ2				LR	LR		
	comp=Z,1µm,10.2s						
SARN	Sarigan	18.13	162	P	P	19 18 44.2	0.0
SARN				IAmb	IAmb	19 18 47.6	
	comp=Z,343nm,1.3s						
ANA2	Anatahan	18.46	163	P	P	19 18 45.8	-2.0
ANA2				IAmb	IAmb	19 19 00.7	
	comp=Z,93nm,0.8s						
TIA	Tai'an	18.83	283	P	P	19 18 52.9	+1.2
TIA				pmax	pmax		
	comp=Z,33nm,1.5s						
TIA				pmax	pmax		
	comp=Z,590nm,4.5s						
TIA				LR	LR		
	comp=Z,770nm,10.7s						
TIA				LR	LR		
	comp=Z,2µm,11.9s						
TIA				LR	LR		
	comp=Z,2µm,11.5s						
NACB	Ninganchiao	18.89	243	P	P	19 18 52.3	-0.2
NKL	Nikolayevsk	19.00	1	eP	P	19 18 52.1	-1.3
NKL				pmax	pmax		
	comp=N,5.0nm,1.2s						
NKL				pmax	pmax		
	comp=Z,83nm,1.2s						
NKL				pmax	pmax		
	comp=E,10.0nm,1.0s						
YULB	Yu-li	19.57	242	P	P	19 18 57.8	-2.2
SSLB	Suanglung	19.59	243	P	P	19 18 59.4	-0.7
BJI	Beijing	19.89	294	P	P	19 19 02.6	-0.6
BJI				pP	pP	19 19 20.9	-0.3
BJI				S	S	19 22 45.6	+3.8
BJI				sS	sS	19 23 06.9	-4.3
BJI				pmax	pmax		
	comp=E,17nm,0.8s						
BJI				pmax	pmax		
	comp=E,220nm,3.7s						
BJI				LR	LR		
	comp=E,330nm,7.7s						
BJI				LR	LR		
	comp=E,620nm,19.0s						
BJI				LR	LR		
	comp=E,2µm,30.3s						
BJT	Baijiatuau	19.89	294	P	P	19 19 02.9	-0.3
BJT	Baijiatuau	19.89	294	P	P	19 19 02.9	-0.3
BJT				pmax	pmax		
	comp=Z,64nm,1.3s						
TWG	Pinlang	20.09	241	P	P	19 19 04.8	-0.7
TWG				IAmb	IAmb	19 19 41.4	
	comp=Z,275nm,1.1s						
TPUB	Ta-pu	20.12	243	P	P	19 19 06.1	+0.3
QZH	Quanzhou	20.75	249	eP	P	19 19 14.0	+1.4
QZH				S	S	19 22 55.1	-3.9
QZH				sS	sS	19 23 23.0	-5.9
GUMO	Guam	20.94	167	P	P	19 19 14.0	-0.6
	comp=Z,49nm,0.4s,baz=235,slow=13,SNR=8.9						
GUMO	Guam	20.94	167	P	P	19 19 13.9	-0.8
HIA	Hailar	21.29	321	P	P	19 19 15.1	-3.1
HIA				IAmb	IAmb	19 19 23.1	
	comp=Z,97nm,0.9s						
HIA	Hailar	21.29	321	P	P	19 19 15.1	-3.1
HIA				pmax	pmax		
	comp=Z,97nm,0.9s						
ZEA	Zeya	21.57	339	eP	P	19 19 19.2	-1.9
ZEA				e		19 19 51.0	
ZEA				eS	S	19 23 16.0	+1.4
ZEA				eSS	SnSn	19 23 58.0	+11
ZEA				pmax	pmax		
	comp=N,290nm,0.8s						
ZEA				pmax	pmax		
	comp=E,100nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,560nm,0.8s						
ZEA				pmax	pmax		
	comp=N,900nm,2.0s						
ZEA				pmax	pmax		
	comp=Z,2µm,2.0s						
ZEA				pmax	pmax		
	comp=E,500nm,3.0s						
ZEA				smax	smax		
	comp=E,1µm,9.0s						
ZEA				MLR	MLR		
	comp=N,600nm,15.0s						
ZEA				MLR	MLR		
	comp=E,800nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,15.0s						
WHN	Wuhan	21.97	268	⇓P	P	19 19 24.2	-1.4
WHN				pP	pP	19 19 46.8	+2.9
WHN				S	S	19 23 17.1	-5.3
WHN				pmax	pmax		
	comp=Z,30nm,0.9s						
WHN				LR	LR		
	comp=Z,2µm,11.3s						
TIY	Taiyuan	22.59	287	eP	P	19 19 30.8	-1.3
TIY				S	S	19 23 32.1	-0.8
TIY				pmax	pmax		
	comp=Z,16nm,0.6s						
TIY				pmax	pmax		
	comp=Z,250nm,6.3s						
TIY				LR	LR		
	comp=Z,500nm,11.5s						
TIY				LR	LR		
	comp=Z,960nm,13.0s						
TIY				LR	LR		
	comp=Z,1µm,14.1s						
PEA0B	Petropavlovsk-	22.75	28	P	P	19 19 34.6	+1.1
PEA0B				IAmb	IAmb	19 19 58.1	
	comp=Z,111nm,1.1s						
PEA0B	Petropavlovsk-	22.75	28	P	P	19 19 34.6	+1.1
PEA0B				pmax	pmax		
	comp=Z,111nm,1.2s						
PETK	Petropavlovsk-	22.75	28	P	P	19 19 34.8	+1.3
	comp=Z,13nm,1.0s,baz=226,slow=7.3,SNR=9.8						
PETK				LR	LR	19 28 50.2	
	comp=Z,420nm,19.5s,baz=231,slow=37						
PETK	Petropavlovsk-	22.75	28	P	P	19 19 34.2	+0.7
PET	Petropavlovsk	23.07	30	eP	P	19 19 31.9	-4.7
PET				e*PP	pP	19 19 53.4	-2.2
PET				eS	S	19 23 34.9	-5.1
PET				pmax	pmax		
	comp=Z,23nm,0.7s						
PET				pmax	pmax		
	comp=Z,500nm,16.8s						
PET				MLR	MLR		
	comp=Z,500nm,18.0s						
HHC	Hu-ho-hao-te	23.48	295	eP	P	19 19 40.8	0.0
HHC				S	S	19 23 43.3	-3.9
HHC				pmax	pmax		
	comp=Z,52nm,1.2s						
HHC				pmax	pmax		
	comp=Z,150nm,5.2s						
HHC				LR	LR		
	comp=Z,230nm,14.5s						
HHC				LR	LR		
	comp=Z,400nm,12.2s						
HHC				LR	LR		
	comp=Z,550nm,13.1s						
BTO	Baotou	24.62	294	eP	P	19 19 51.9	+0.9
XAN	Xi'an	25.71	279	P	P	19 19 59.1	-1.8
XAN				PcP	PcP	19 23 29.4	+0.7
XAN				S	S	19 24 13.1	-10
XAN				pmax	pmax		
	comp=Z,76nm,0.8s						
XAN				pmax	pmax		
	comp=Z,350nm,3.9s						
XAN				LR	LR		
	comp=Z,790nm,16.3s						
XAN				LR	LR		
	comp=Z,1µm,16.3s						
XAN				LR	LR		
	comp=Z,1µm,15.9s						
XAN	Xi'an	25.71	279	P	P	19 19 59.2	-1.8
XAN				IAmb	IAmb	19 20 01.6	
	comp=Z,58nm,0.8s						
XAN	Xi'an	25.71	279	P	P	19 19 59.2	-1.7
XAN				pmax	pmax		
	comp=Z,58nm,0.8s						
ENH	Enshi	26.08	270	P	P	19 20 02.3	-1.9
ENH				IAmb	IAmb	19 20 04.9	
	comp=Z,54nm,0.8s						
CIT	Chita	26.09	321	eP	P	19 20 03.6	-0.6
CIT				e		19 20 28.5	
CIT				pmax	pmax		
	comp=Z,426nm,1.2s						
MA2	Magadan	26.40	12	IAmb	IAmb	19 20 08.6	
	comp=Z,66nm,0.8s						
MA2	Magadan	26.40	12	P	P	19 20 07.5	+0.7
MA2	Magadan	26.40	12	deP	P	19 20 06.2	-0.6
MA2				pmax	pmax		
	comp=Z,72nm,0.9s						
H11N2	WAKE ISLAND Hy	27.82	114	T	T	19 49 44.7	
	baz=309,slow=75,SNR=6.0						
H11N1	WAKE ISLAND Hy	27.83	114	T	T	19 50 10.6	
	baz=309,slow=75,SNR=6.6						
H11N3	WAKE ISLAND Hy	27.84	114	T	T	19 50 11.8	
	baz=309,slow=75,SNR=6.4						

ULN Ulaanbaatar 28.16 309 P P 19 20 23.1 +0.2
ULN IAmb IAmb 19 20 25.3
comp=Z,72nm,1.0s
ULN Ulaanbaatar 28.16 309 P P 19 20 23.1 +0.2
ULN pmax pmax
comp=Z,72nm,1.0s
H11S3 WAKE ISLAND Hy 28.42 117 T T 19 50 21.4
baz=311,slow=76,SNR=184
H11S1 WAKE ISLAND Hy 28.42 116 T T 19 50 18.8
baz=311,slow=76,SNR=168
H11S2 WAKE ISLAND Hy 28.43 116 T T 19 50 25.8
baz=311,slow=76,SNR=48
SONM Songino Array 28.58 309 P P 19 20 26.9 +0.4
comp=Z,33nm,1.1s,baz=118,slow=7.6,SNR=136
SONM PcP PcP 19 23 36.7 +1.2
comp=Z,7.9nm,0.6s,baz=113,slow=2.4,SNR=12
SONM ScP ScP 19 27 08.3 +0.2
comp=Z,9.0nm,1.2s,baz=121,slow=2.5,SNR=13
SONM Songino Array 28.58 309 P P 19 20 26.6 0.0
SONM Songino Array 28.58 309 ScP 19 27 07.4 -0.7
YAK Yakutsk 28.67 350 P P 19 20 26.9 0.0
comp=Z,32nm,0.7s,baz=162,slow=0.9,SNR=54
YAK Yakutsk 28.67 350 P P 19 20 26.8 -0.2
YAK IAmb IAmb 19 20 49.8
comp=Z,89nm,0.7s
YAK Yakutsk 28.67 350 i P P 19 20 26.7 -0.2
YAK pmax pmax
comp=Z,68nm,0.9s
BOD Bodaibo 29.44 331 ⇑iP P 19 20 34.3 +0.4
BOD pmax pmax
comp=Z,83nm,1.3s
LZH Lanzhou 29.55 284 ⇓P P 19 20 34.1 -1.3
LZH pP pP 19 20 55.6 -1.1
LZH sP sP 19 21 04.3 -3.4
LZH PP PnPn 19 21 36.1 +1.8
LZH PcP PcP 19 23 39.8 +1.6
LZH S S 19 25 22.4 -1.1
LZH SS SnSn 19 27 05.9 +4.5
LZH ScP ScP 19 27 12.3 +0.8
LZH ScS ScS 19 31 04.5 -2.0
LZH pmax pmax
comp=Z,27nm,1.0s
LZH pmax pmax
comp=Z,270nm,5.4s
LZH LR LR
comp=Z,960nm,12.5s
LZH LR LR
comp=Z,1µm,13.6s
LZH LR LR
comp=Z,1µm,15.2s
GYA Guiyang 29.71 264 ⇑iP P 19 20 35.1 -1.7
GYA pP pP 19 20 59.4 +1.4
GYA PP PnPn 19 21 41.0 +4.7
GYA PcP PcP 19 23 39.2 +0.5
GYA S S 19 25 26.2 +0.2
GYA sS sS 19 25 55.4 -7.1
GYA ScP ScP 19 27 12.5 +0.5
GYA ScS ScS 19 31 04.9 -2.5
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,160nm,5.5s
GYA LR LR
comp=Z,810nm,15.8s
GYA LR LR
comp=Z,360nm,15.2s
GYA LR LR
comp=Z,580nm,13.5s
SEY Seymchan 29.83 11 P P 19 20 38.3 +1.1
comp=Z,9.4nm,0.8s,baz=210,slow=6.9,SNR=17
SEY Seymchan 29.83 11 ⇓eP P 19 20 38.1 +0.8
CD2 Chengdu 30.65 274 ⇓P P 19 20 43.0 -1.9
CD2 sP pP 19 21 09.7 +3.5
CD2 PP PnPn 19 21 49.6 +1.2
CD2 S S 19 25 33.2 -7.3
CD2 sS sS 19 26 12.4 -4.6
CD2 pmax pmax
comp=Z,90nm,0.7s
CD2 pmax pmax
comp=Z,300nm,5.7s
CD2 LR LR
comp=Z,2µm,11.8s
CD2 LR LR
comp=Z,2µm,12.9s
CD2 LR LR
comp=Z,2µm,12.2s
QIZ Qiongzhong 30.76 248 P P 19 20 43.1 -2.9
QIZ S S 19 25 42.6 +0.2
QIZ pmax pmax
comp=Z,52nm,2.1s
QIZ LR LR
comp=Z,640nm,31.9s
QIZ LR LR
comp=Z,680nm,20.6s
QIZ LR LR
comp=Z,420nm,23.5s
ZAK Zakamensk 31.27 312 eP P 19 20 50.5 +0.2
ZAK e 19 21 20.3
ZAK e 19 23 42.4
ZAK pmax pmax
comp=Z,40nm,1.1s
IRK Irkutsk 31.30 316 eP P 19 20 50.1 -0.2
IRK pmax pmax
comp=Z,143nm,2.7s
TLY Talaya 31.46 315 P P 19 20 53.1 +1.3
comp=Z,132nm,0.9s,baz=120,slow=7.3,SNR=125
TLY PcP PcP 19 23 43.6 +0.8
comp=Z,5.7nm,0.7s,baz=191,slow=5.2,SNR=3.9
TLY Talaya 31.46 315 P P 19 20 52.8 +0.9
TLY Talaya 31.46 315 eP P 19 20 52.5 +0.7
TLY e 19 22 06.3
TLY e 19 28 16.9
TLY pmax pmax
comp=Z,514nm,1.0s
TLY MLR MLR
comp=Z,2µm,14.0s
GTA Gaotai 32.44 291 P P 19 20 59.0 -1.7
GTA pP pP 19 21 18.7 -3.4
GTA sP sP 19 21 28.9 -4.2
GTA PP PP 19 22 16.1 +0.6
GTA PcP PcP 19 23 47.3 +1.5
GTA S S 19 26 08.7 +0.3
GTA sS sS 19 26 41.7 -3.3
GTA ScP ScP 19 27 20.4 -0.5
GTA ScS ScS 19 31 18.4 -2.1
GTA pmax pmax
comp=Z,15nm,1.5s
GTA pmax pmax
comp=Z,210nm,5.2s
GTA LR LR
comp=Z,420nm,16.5s
GTA LR LR
comp=Z,510nm,17.5s
GTA LR LR
comp=Z,570nm,18.6s
MOY Mondy 33.03 314 eP P 19 21 06.0 +0.4
MOY pmax pmax
comp=Z,117nm,1.4s
KMI Kunming 33.48 265 P P 19 21 09.1 -0.9
KMI pP pP 19 21 31.3 -0.2
KMI sP sP 19 21 42.9 +0.5
KMI pmax pmax
comp=Z,11nm,0.7s
KMI LR LR
comp=Z,520nm,14.0s
KMI LR LR
comp=Z,800nm,15.2s
KMI LR LR
comp=Z,790nm,16.0s
KMI Kunming 33.48 265 P P 19 21 08.8 -1.2
KMI Kunming 33.48 265 P P 19 21 08.8 -1.2
KMI pmax pmax
comp=Z,22nm,1.1s
TNTI Ternate 35.26 202 P P 19 21 23.3 -1.8
comp=Z,440nmcomp=Z,24nm,1.6s
TNTI Ternate 35.26 202 P P 19 21 23.3 -1.8
TNTI IAmb IAmb 19 21 26.8
comp=Z,44nm,1.3s
ADK Adak 35.64 47 P P 19 21 29.0 +1.0
ADK Adak 35.64 47 P P 19 21 29.0 +1.0
ADK pmax pmax
comp=Z,145nm,1.6s
SWI Sorong 35.79 195 P P 19 21 26.9 -2.7
comp=Z,24nm,0.7s
SIJI Sorong 35.80 195 P P 19 21 27.9 -1.8
comp=Z,12nm,0.6s,baz=4.2,slow=16,SNR=15
SIJI LR LR 19 33 13.4
comp=Z,787nm,21.7s,baz=23,slow=31
GENI Genyem 36.55 180 P P 19 21 34.5 -1.6
comp=Z,2µmcomp=Z,103nm,1.5s
KMSI Cibinong 36.63 208 P P 19 21 35.4 -1.4
comp=Z,1µmcomp=Z,48nm,0.6s
MANU Manus Island 36.66 168 P P 19 21 36.4 -0.7
MANU IAmb IAmb 19 21 54.6
comp=Z,26nm,0.8s
BILL Bilibino 37.10 16 P P 19 21 40.6 +0.4
BILL IAmb IAmb 19 21 41.8
comp=Z,37nm,1.1s
BILL Bilibino 37.10 16 d iP P 19 21 40.1 -0.2
BILL i 19 22 01.5
BILL i 19 23 05.3
BILL i 19 23 58.1
BILL i S S 19 27 11.5 -7.7
BILL pmax pmax
comp=Z,31nm,1.0s
BILL MLR MLR
comp=Z,523nm,19.0s
ATKA Atka Island 37.21 47 P P 19 21 40.9 -0.5
FAKI Fak Fak 37.59 193 P P 19 21 40.5 -4.4
comp=Z,31nm,0.7s
FAKI Fak Fak 37.59 193 P P 19 21 42.7 -2.3
FAKI IAmb IAmb 19 21 51.8
comp=Z,22nm,0.7s
TIXI Tiksi 38.02 354 P P 19 21 47.6 -0.3
comp=Z,35nm,0.6s,baz=147,slow=7.0,SNR=171
TIXI Tiksi 38.02 354 P P 19 21 47.5 -0.4
TIXI IAmb IAmb 19 21 49.0
comp=Z,43nm,0.7s
TIXI Tiksi 38.02 354 d iP P 19 21 47.9 -0.1
TIXI pmax pmax
comp=Z,37nm,0.9s
SANI Sanana 38.35 203 P P 19 21 48.0 -3.3
comp=Z,28nm,0.8s
MSAI Masohi 38.74 198 P P 19 21 58.0 +3.5
PBKT Sadao Pong 39.11 253 P P 19 21 56.5 -1.2
PBKT S 19 27 46.9 -3.5
AAI Ambon 39.26 199 P P 19 22 00.0 +1.1
CHTO Chiang Mai 39.53 258 P P 19 21 59.0 -2.3
CHTO Chiang Mai 39.53 258 P P 19 21 59.0 -2.3
CHTO pmax pmax
comp=Z,10.0nm,0.9s
CM31 Chiang Mai Arr 39.72 257 P P 19 22 01.8 -1.0
CMAR Chiang Mai Arr 39.72 257 P P 19 22 01.6 -1.2
comp=Z,6.9nm,0.8s,baz=47,slow=7.7,SNR=77
CMAR PcP PcP 19 24 09.0 +1.4
comp=Z,3.5nm,0.8s,baz=66,slow=0.7,SNR=7.4
CMAR ScP ScP 19 27 48.9 +1.0
comp=Z,6.0nm,1.0s,baz=30,slow=3.9,SNR=17
CMAR LR LR 19 41 18.7
comp=Z,175nm,19.0s,baz=62,slow=40
RABL Rabaul 39.82 161 P P 19 22 02.3 -1.2
SBUM Sibu 40.83 225 P P 19 22 10.7 -1.2
SBUM Sibu 40.83 225 P P 19 22 11.0 -1.0
WMQ Urumqi 41.20 300 eP P 19 22 15.8 +1.0
WMQ sP sP 19 22 47.9 +0.2
WMQ ScP ScP 19 27 53.7 +0.3
WMQ S S 19 28 21.7 +0.3
WMQ pmax pmax
comp=Z,52nm,1.1s
WMQ pmax pmax
comp=Z,90nm,3.6s
WMQ LR LR
comp=Z,780nm,29.2s
WMQ LR LR
comp=Z,810nm,29.0s
WMQ LR LR
comp=Z,370nm,29.3s
WMQ Urumqi 41.20 300 P P 19 22 15.9 +1.0
WMQ Urumqi 41.20 300 P P 19 22 15.9 +1.1
WMQ pmax pmax
comp=Z,154nm,1.2s
LSA Lhasa 41.41 278 P P 19 22 16.7 -0.4
LSA pmax pmax
comp=Z,41nm,0.8s
LSA Lhasa 41.41 278 i P P 19 22 16.8 -0.4
SNR=13
LSA Lhasa 41.41 278 P P 19 22 15.9 -1.2
LSA Lhasa 41.41 278 P P 19 22 16.8 -0.4
LSA Lhasa 41.41 278 P P 19 22 15.9 -1.2
LSA pmax pmax
comp=Z,11nm,0.9s
SHL Shillong 42.30 272 PcP 19 24 16.2 0.0
KSM Kuching 42.75 227 P P 19 22 26.2 -1.4
KSM Kuching 42.75 227 P P 19 22 27.0 -0.6
ZSN Zaisan 42.95 305 ⇓iP P 19 22 29.6 +0.6
comp=Z,59nm,0.9s
ZSN epP pP 19 22 52.1 +1.0
ZSN Zaisan 42.95 305 d iP P 19 22 29.5 +0.6
ZSN e*PP pP 19 22 52.1 +1.0
ZSN pmax pmax
comp=Z,59nm,0.9s
ZAA0 Zalesovo Array 43.08 315 P P 19 22 29.8 0.0
ZALV Zalesovo Beam 43.08 315 P P 19 22 29.9 +0.1
comp=Z,92nm,1.0s,baz=98,slow=6.1,SNR=206
ZALV PcP PcP 19 24 18.4 +0.3
comp=Z,53nm,0.5s,baz=104,slow=3.3,SNR=33
ZALV ScP ScP 19 28 00.8 +0.3
comp=Z,7.3nm,0.6s,baz=109,slow=3.2,SNR=10
ZALV LR LR 19 41 09.9
comp=Z,709nm,18.7s,baz=94,slow=37
ZALV Zalesovo Beam 43.08 315 P P 19 22 30.2 +0.4
KAPI Kappang 43.41 210 P P 19 22 32.7 -0.2
comp=Z,5.3nm,0.5s,baz=139,slow=1.2,SNR=4.6
KAPI PcP PcP 19 24 20.4 +0.7
comp=Z,8.4nm,0.5s,baz=45,slow=1.1,SNR=4.1
KAPI Kappang 43.41 210 P P 19 22 31.1 -1.8
PMG Port Moresby 43.84 170 P P 19 22 35.7 -0.6
comp=Z,4.4nm,0.3s,baz=25,slow=6.5,SNR=4.5
PMG LR LR 19 40 19.5
comp=Z,180nm,19.7s,baz=338,slow=35
PMG Port Moresby 43.84 170 P P 19 22 33.3 -3.0
PMG IAmb IAmb 19 23 02.6
comp=Z,46nm,1.1s
PMG Port Moresby 43.84 170 c eP P 19 22 39.6 +3.3
PMG pmax pmax
comp=Z,62nm,1.3s
ANM Nome 44.65 30 P P 19 22 44.1 +1.9
ANM IAmb IAmb 19 22 45.5
comp=Z,44nm,1.0s
ANM Nome 44.65 30 P P 19 22 44.1 +1.9
ANM pmax pmax
comp=Z,44nm,1.0s
MK31 Makanchi Array 44.75 304 P P 19 22 43.3 -0.1
MK31 IAmb IAmb 19 22 44.9
comp=Z,58nm,0.8s
MK31 Makanchi Array 44.75 304 i P P 19 22 43.4 +0.1
MKAR Makanchi Array 44.75 304 P P 19 22 43.5 +0.1
comp=Z,44nm,0.6s,baz=91,slow=10.0,SNR=571
MKAR PcP PcP 19 24 24.2 +0.3
comp=Z,10.0nm,0.7s,baz=88,slow=6.6,SNR=3.2
MKAR ScP ScP 19 28 08.8 +1.2
comp=Z,3.5nm,0.7s,baz=76,slow=5.5,SNR=7.5
MKAR LR LR 19 41 57.7
comp=Z,474nm,21.2s,baz=84,slow=37
MKAR Makanchi Array 44.75 304 i P P 19 22 43.5 +0.1
MKAR pmax pmax
comp=Z,46nm,0.6s
MAKZ Makanchi 44.96 304 P P 19 22 45.0 0.0
MAKZ IAmb IAmb 19 22 46.7
comp=Z,58nm,0.8s
MAKZ Makanchi 44.96 304 i P P 19 22 45.0 0.0
MAKZ pmax pmax
comp=Z,80nm,0.9s
TAPN Taplejung 45.06 276 eP P 19 22 45.0 -1.4
comp=Z,48nm,0.7s
ODAN Odare 45.51 276 eP P 19 22 48.6 -1.3
comp=Z,46nm,0.8s
SEM Semipalatinsk 45.85 310 eP P 19 22 51.5 -0.7
comp=Z,34nm,0.8s
SEM Semipalatinsk 45.85 310 eP P 19 22 51.5 -0.7
SEM pmax pmax
comp=Z,34nm,0.8s
JRMM Jerantut 46.08 238 P P 19 22 55.0 +0.9
RAMN Ramite 46.13 276 eP P 19 22 53.6 -1.2
comp=Z,124nm,0.8s
SOEI Soe 46.16 202 P P 19 22 54.7 -0.1
comp=Z,64nm,1.1s
SOEI Soe 46.16 202 P P 19 22 53.6 -1.2
JIRN Jiri 46.20 277 eP P 19 22 54.7 -0.7
comp=Z,279nm,0.8s
GUN Gumba 46.36 278 eP P 19 22 55.6 -1.1
comp=Z,165nm,0.9s
KULM Kulim 46.41 241 P P 19 22 55.3 -1.4
KULM Kulim 46.41 241 P P 19 22 56.0 -0.7
RDOG Red Dog Mine 46.58 26 P P 19 22 58.9 +1.5
RDOG IAmb IAmb 19 23 25.3
comp=Z,59nm,1.1s
IPM Ipoh 46.69 240 P P 19 22 56.8 -2.2
IPM IAmb IAmb 19 22 59.6
comp=Z,17nm,0.6s
IPM Ipoh 46.69 240 P P 19 22 58.0 -1.0
KURK Kurchatov 46.87 310 P P 19 22 59.8 0.0
KURK Kurchatov 46.87 310 d iP P 19 22 59.4 -0.5
KURK pmax pmax
comp=Z,175nm,0.9s
PKI Pulchoki 46.88 277 eP P 19 22 59.3 -1.4
comp=Z,59nm,0.8s
PKIN Phulchoki 46.89 277 eP P 19 22 59.3 -1.4
comp=Z,32nm,0.6s
KKN Kakani 46.90 278 eP P 19 22 59.5 -1.2
comp=Z,83nm,0.8s
DMN Daman 47.11 278 eP P 19 23 01.4 -1.0
comp=Z,38nm,0.7s
SHLS Shalkode 47.23 300 ⇓iP P 19 23 00.5 -2.4
comp=Z,74nm,1.1s
SHLS i S S 19 29 44.4 -4.5
comp=Z,93nm,2.9s
SHLS Shalkode 47.23 300 d iP P 19 23 00.5 -2.4
SHLS i S S 19 29 44.4 -4.5
SHLS pmax pmax
comp=Z,74nm,1.1s
SHLS smax smax
comp=N,93nm,2.9s
HNR Honiara 47.29 153 P P 19 23 03.3 -0.2
comp=N,21nm,0.4s,baz=174,slow=20,SNR=3.9
GKN Gorkha 47.35 278 eP P 19 23 03.3 -0.9
comp=N,130nm,0.7s
MTN Manton Dam 47.49 192 P P 19 23 03.9 -1.1
MTN IAmb IAmb 19 23 05.6
comp=Z,92nm,1.5s
UZB Uzynbulak 47.55 300 ⇓iP P 19 23 05.6 +0.1
comp=Z,60nm,0.9s
UZB epP pP 19 23 29.3 +1.3
UZB eS S 19 29 52.5 -1.0
comp=Z,34nm,2.5s
UZB Uzynbulak 47.55 300 d iP P 19 23 05.6 +0.1
UZB e*PP pP 19 23 29.2 +1.3
UZB eS S 19 29 52.5 -1.0
UZB pmax pmax
comp=Z,60nm,0.9s
UZB smax smax
comp=E,34nm,2.5s
TDK Taldyqorghan 47.66 302 i P P 19 23 06.8 +0.6
comp=E,68nm,0.9s
TDK epP pP 19 23 28.9 +0.1
TDK Taldyqorghan 47.66 302 i P P 19 23 06.7 +0.6
TDK e*PP pP 19 23 28.8 +0.1
TDK pmax pmax
comp=Z,68nm,0.9s
KPKS Kokpek 47.73 300 ⇓iP P 19 23 07.1 +0.3
comp=Z,70nm,1.0s
KPKS eS S 19 29 55.2 -0.8
comp=Z,52nm,2.8s
KPKS Kokpek 47.73 300 d iP P 19 23 07.1 +0.3
KPKS eS S 19 29 55.1 -0.8
KPKS pmax pmax
comp=Z,70nm,1.0s
KPKS smax smax
comp=N,52nm,2.8s
COEN Coen 47.94 176 P P 19 23 08.5 +0.1
COEN IAmb IAmb 19 23 09.6
comp=Z,47nm,0.7s
DANN Dangsing 47.94 279 eP P 19 23 08.4 -0.5
comp=Z,427nm,1.0s
ZHN Zhinishke 47.96 300 ⇓iP P 19 23 08.7 0.0
comp=Z,33nm,1.0s
ZHN Zhinishke 47.96 300 d iP P 19 23 08.6 0.0
ZHN pmax pmax
comp=Z,33nm,1.0s
SATY Saty 48.01 300 ⇓iP P 19 23 09.0 0.0
comp=Z,40nm,1.1s
SATY epP pP 19 23 32.9 +1.4
SATY eS S 19 29 58.9 -1.0
comp=Z,25nm,2.4s
SATY Saty 48.01 300 d iP P 19 23 09.0 0.0
SATY e*PP pP 19 23 32.9 +1.4
SATY eS S 19 29 58.9 -1.0
SATY pmax pmax
comp=Z,40nm,1.1s
SATY smax smax
comp=E,25nm,2.4s
PRZ Przheval'sk 48.12 299 P P 19 23 10.9 +0.9
PRZ Przheval'sk 48.12 299 P P 19 23 10.9 +0.9
PRZ pmax pmax
comp=Z,244nm,0.9s
KOLN Koldanda 48.29 279 eP P 19 23 10.7 -0.8
comp=Z,71nm,0.8s
TTA Tatalina 48.44 33 P P 19 23 13.3 +1.4
TTA Tatalina 48.44 33 P P 19 23 13.3 +1.4
CHKK Chushkaly 48.87 301 eP P 19 23 15.2 -0.2
CHKK Chushkaly 48.87 301 eP P 19 23 15.2 -0.2
MDOK Medeo 48.96 300 eP P 19 23 17.1 +0.8
MDOK epP pP 19 23 39.6 +0.7
MDOK eS S 19 30 12.9 -0.6
MDOK Medeo 48.96 300 eP P 19 23 17.1 +0.8
MDOK e*PP pP 19 23 39.6 +0.7
MDOK eS S 19 30 12.8 -0.6
JAGI Jajag, Banyuwa 48.98 215 P P 19 23 15.2 -1.3
AAA Alma-Ata 49.05 300 ⇓iP P 19 23 17.6 +0.7
comp=Z,176nm,0.8s
AAA Alma-Ata 49.05 300 d iP P 19 23 17.6 +0.7
AAA pmax pmax
comp=Z,176nm,0.8s
TNSS Tian-Shan 49.06 300 eP P 19 23 18.2 +0.8
TNSS Tian-Shan 49.06 300 eP P 19 23 18.2 +0.8
KDJ Kajisay 49.08 299 P P 19 23 17.9 +0.6
KDJ Kajisay 49.08 299 P P 19 23 17.9 +0.6
KDJ pmax pmax
comp=Z,71nm,0.9s
KUU Kurty 49.32 301 ⇓iP P 19 23 19.0 +0.1
comp=Z,183nm,0.9s
KUU epP pP 19 23 41.9 +0.3
KUU eS S 19 30 17.0 -1.2
KUU Kurty 49.32 301 d iP P 19 23 19.0 +0.1
KUU e*PP pP 19 23 41.8 +0.2
KUU eS S 19 30 16.9 -1.2
KUU pmax pmax
comp=Z,183nm,0.9s
PSI Prapat 49.36 240 P P 19 23 18.1 -1.5
comp=Z,9.4nm,0.9s,baz=297,slow=16,SNR=10
MTBS Maitube 49.41 300 eP P 19 23 20.3 +0.6
MTBS Maitube 49.41 300 eP P 19 23 20.3 +0.6
RPSI Rantau Prapat 49.43 240 P P 19 23 18.2 -1.8
RPSI Rantau Prapat 49.43 240 P P 19 23 18.1 -1.9
OHAK Old Harbor 49.65 41 P P 19 23 21.5 +0.4
IMAR Indian Mountai 49.71 29 P P 19 23 22.6 +1.1
ULHL Ulahol 49.73 299 P P 19 23 23.3 +0.9
SNR=5.4
RSO Redoubt South 49.87 37 P P 19 23 24.4 +1.4
BOOM Boomskoye usch 49.90 300 P P 19 23 23.9 +0.4
BOOM Boomskoye usch 49.90 300 P P 19 23 23.9 +0.4
KDAK Kodiak Island 50.01 40 P P 19 23 24.7 +0.9
KDAK IAmb IAmb 19 23 25.4
comp=Z,45nm,0.8s
KDAK Kodiak Island 50.01 40 P P 19 23 24.7 +0.9
KDAK pmax pmax
comp=Z,45nm,0.8s
NRN Naryn 50.10 298 P P 19 23 25.4 +0.2
NRN Naryn 50.10 298 P P 19 23 25.4 +0.2
NRN pmax pmax
comp=Z,51nm,0.9s
PPLA Purkeypile 50.18 34 P P 19 23 26.6 +1.3
PPLA IAmb IAmb 19 23 28.5
comp=Z,33nm,0.8s
SKT Skwentna 50.47 35 P P 19 23 28.6 +1.3
SKT IAmb IAmb 19 23 30.0
comp=Z,19nm,0.9s
KZA Kyzart 50.49 299 P P 19 23 29.9 +1.6
SNR=68
KBK Karagaybulak 50.58 300 P P 19 23 29.2 +0.6
SNR=180
KSH Kashi 50.59 296 P P 19 23 32.6 +3.9
KSH pP pP 19 23 47.1 -4.4
KSH sP sP 19 24 02.4 +0.3
KSH PcP PcP 19 24 48.2 +3.1

KSH PP PP 19 25 28.7 +3.5
KSH S S 19 30 38.6 +2.4
KSH sS sS 19 31 19.3 +4.6
KSH ScS ScS 19 33 10.0 -0.5
KSH SS SS 19 34 10.9 -0.3
KSH pmax pmax
comp=Z,77nm,0.9s
KSH pmax pmax
comp=Z,350nm,6.4s
KSH LR LR
comp=Z,270nm,10.3s
KSH LR LR
comp=Z,440nm,5.4s
KSH LR LR
comp=Z,440nm,9.5s
SGDS Sogindy 50.62 301⇓iP **P** **19 23 29.2 +0.3**
comp=Z,50nm,1.0s
SGDS epP pP 19 23 51.7 +0.1
SGDS eS S 19 30 35.7 -0.7
comp=Z,54nm,4.8s
CHMS Chumysh 50.64 300 P **P** **19 23 29.4 +0.5**
SNR=58
CNPM China Poot 50.65 38 P **P** **19 23 29.6 +0.9**
BTLS Baital 50.70 303 eP **P** **19 23 29.2 -0.1**
comp=Z,32nm,1.2s
BTLS epP pP 19 23 52.1 +0.1
BTLS Baital 50.70 303 eP **P** **19 23 29.2 -0.1**
BTLS e*PP pP 19 23 52.1 +0.1
BTLS pmax pmax
comp=Z,32nm,1.2s
KNRA Kununurra 50.70 194 P **P** **19 23 28.0 -1.4**
KNRA IAmb IAmb 19 23 56.1
comp=Z,65nm,1.2s
BRZS Berezniki 50.73 310⇓iP **P** **19 23 29.3 -0.1**
comp=Z,60nm,0.9s
BRZS epP pP 19 23 52.1 -0.2
BRZS eS S 19 30 36.1 -1.6
BRZS Berezniki 50.73 310diP **P** **19 23 29.3 -0.1**
BRZS e*PP pP 19 23 52.0 -0.2
BRZS eS S 19 30 36.0 -1.6
BRZS pmax pmax
comp=Z,60nm,0.9s
BPAW Bear Paw Mtn. 50.76 32 P **P** **19 23 30.7 +1.3**
BPAW IAmb IAmb 19 23 32.3
comp=Z,35nm,1.2s
USP Ospenovka 50.76 301 P **P** **19 23 30.1 +0.3**
SNR=91
FRU1 Bishkek 50.77 300 P **P** **19 23 30.2 +0.2**
FRU1 Bishkek 50.77 300 P **P** **19 23 30.2 +0.2**
FRU1 pmax pmax
comp=Z,172nm,1.1s
KTH Kantishna Hill 50.77 33 P **P** **19 23 30.9 +1.2**
KTH IAmb IAmb 19 23 32.5
comp=Z,42nm,1.2s
SUA Susitna One 50.85 35 P **P** **19 23 31.2 +1.0**
SUA IAmb IAmb 19 23 32.8
comp=Z,27nm,0.9s
MLY Manley 50.89 31 P **P** **19 23 32.1 +1.6**
AAK Ala-Archa 50.91 300 P **P** **19 23 32.1 +1.0**
SNR=8.1
AAK Ala-Archa 50.91 300 iP **P** **19 23 31.5 +0.4**
SNR=133
AAK Ala-Archa 50.91 300 P **P** **19 23 31.2 +0.2**
AAK Ala-Archa 50.91 300 iP **P** **19 23 31.1 0.0**
AAK pmax pmax
comp=Z,90nm,0.9s
UCH Uchtor 50.99 300 P **P** **19 23 33.3 +1.3**
SNR=79
LEM Lembang 51.01 223 P **P** **19 23 31.7 -0.3**
comp=Z,15nm,0.7s,baz=322,slow=18,SNR=3.8
KLSI 51.01 228 P **P** **19 23 29.3 -2.6**
TRF Thorofare Moun 51.05 33 P **P** **19 23 33.1 +1.2**
TRF IAmb IAmb 19 24 02.5
comp=Z,22nm,1.0s
MDSI Maura Dua 51.19 229 P **P** **19 23 31.3 -1.9**
comp=Z,24nm,1.2s
COLD Coldfoot 51.22 28 P **P** **19 23 34.0 +1.2**
RC01 Rabbit Creek A 51.34 36 P **P** **19 23 34.7 +0.8**
RC01 IAmb IAmb 19 23 37.1
comp=Z,48nm,1.1s
EKS2 Erkin-Say 51.41 300 P **P** **19 23 35.8 +1.0**
SNR=8.8
BWN Browne 51.42 32 P **P** **19 23 36.7 +2.3**
SEW Seward 51.53 37 P **P** **19 23 35.4 +0.2**
NEA Nenana 51.59 31 P **P** **19 23 37.1 +1.4**
AML Almayashu 51.60 300 P **P** **19 23 37.5 +0.9**
SNR=352
PMR Palmer 51.62 35 P **P** **19 23 36.9 +1.1**
PMR IAmb IAmb 19 23 38.0
comp=Z,40nm,1.1s
PMR Palmer 51.62 35 P **P** **19 23 36.9 +1.1**
PMR pmax pmax
comp=Z,40nm,1.1s
MCK McKinley 51.66 32 P **P** **19 23 37.5 +1.4**
MCK IAmb IAmb 19 23 40.7
comp=Z,37nm,0.9s
MCK McKinley 51.66 32 P **P** **19 23 37.6 +1.4**
LWLI Liwa 51.67 228 P P 19 23 33.4 -3.6
comp=Z,7μmcomp=Z,22nm,0.9s
RND Reindeer 51.70 33 P **P** **19 23 37.2 +0.6**
RND IAmb IAmb 19 23 38.4
comp=Z,46nm,0.9s
RND Reindeer 51.70 33 P **P** **19 23 37.2 +0.6**
RND pmax pmax
comp=Z,46nm,0.9s
GHO Glory Hole Cre 51.71 35 P **P** **19 23 37.7 +1.0**
GHO IAmb IAmb 19 23 38.7
comp=Z,34nm,0.9s
BRVK Borovoye 51.77 314 P **P** **19 23 37.2 +0.1**
BRVK IAmb IAmb 19 23 38.8
comp=Z,43nm,0.8s
BRVK Borovoye 51.77 314 iP **P** **19 23 37.1 0.0**
BRVK pmax pmax
comp=Z,59nm,1.0s
KNK Knik Glacier 51.95 35 P **P** **19 23 39.5 +1.2**
KNK IAmb IAmb 19 23 41.8
comp=Z,43nm,0.9s
MDM Murphy Dome 51.96 31 P **P** **19 23 40.0 +1.6**
SML Sawmill 51.99 35 P **P** **19 23 39.6 +0.9**
SML Sawmill 51.99 35 P **P** **19 23 39.6 +0.9**
SML pmax pmax
comp=Z,48nm,0.8s
WRH Wood River Hil 52.02 31 P **P** **19 23 40.1 +1.2**
WRH IAmb IAmb 19 23 42.3
comp=Z,28nm,0.8s
COLA College 52.12 31 P **P** **19 23 40.1 +0.6**
COLA IAmb IAmb 19 23 43.3
comp=Z,48nm,0.8s
COLA College 52.12 31 P **P** **19 23 40.1 +0.6**
COLA pmax pmax
comp=Z,48nm,0.9s
CCB Clear Creek Bu 52.14 31 P **P** **19 23 40.8 +1.0**
CCB IAmb IAmb 19 23 43.9
comp=Z,23nm,1.0s
POKR Poker Flat Res 52.30 31 P **P** **19 23 42.6 +1.7**
baz=271,SNR=24
ARSB Arslanbob 52.32 299 P **P** **19 23 42.1 +0.5**
ARSB Arslanbob 52.32 299 P **P** **19 23 42.1 +0.5**
ARSB pmax pmax
comp=Z,154nm,1.0s
DHY Denali Highway 52.38 33 P **P** **19 23 42.8 +1.1**
DHY IAmb IAmb 19 24 10.2
comp=Z,75nm,1.9s
SCM Sheep Creek Mo 52.46 35 P **P** **19 23 43.9 +1.6**
SCM Sheep Creek Mo 52.46 35 P **P** **19 23 43.9 +1.6**
SCM pmax pmax
comp=Z,60nm,1.0s
HDA Harding Lake 52.52 32 P **P** **19 23 42.9 +0.4**
HDA Harding Lake 52.52 32 P **P** **19 23 42.6 +0.1**
baz=272,SNR=42
IL31 52.53 31 P **P** **19 23 43.3 +0.8**
IL31 IAmb IAmb 19 23 44.3
comp=Z,35nm,0.8s
ILAR Eielson Array 52.53 31 P **P** **19 23 43.2 +0.6**
comp=Z,29nm,0.8s,baz=271,slow=6.0,SNR=236
ILAR LR LR 19 46 02.1
comp=Z,70nm,21.8s,baz=290,slow=36
PRP Porcupine Dome 53.09 30 P **P** **19 23 47.6 +0.7**
PRP IAmb IAmb 19 23 49.3
comp=Z,19nm,0.8s
DZA Taraz 53.10 301 eP **P** **19 23 47.0 -0.2**
comp=Z,37nm,0.8s
DZA Taraz 53.10 301 eP **P** **19 23 47.0 -0.2**
DZA pmax pmax
comp=Z,37nm,0.8s

FYU Fort Yukon 53.17 29 P **P** **19 23 48.9 +1.7**
PAX Paxson 53.25 33 P **P** **19 23 49.5 +1.4**
PAX Paxson 53.25 33 P **P** **19 23 49.5 +1.4**
PAX pmax pmax
comp=Z,16nm,0.8s
BMAR Burnt Mountain 53.40 28 P **P** **19 23 51.1 +2.1**
RIDG Independent Ri 53.48 32 P **P** **19 23 50.3 +0.7**
RIDG IAmb IAmb 19 23 52.8
comp=Z,22nm,0.8s
KK31 Karatay Array 53.63 302 P **P** **19 23 51.5 +0.4**
KK31 Karatay Array 53.63 302 iP **P** **19 23 51.2 +0.2**
KKAR Karatay Array 53.63 302 P **P** **19 23 51.4 +0.4**
KKAR Karatay Array 53.63 302 P **P** **19 23 51.4 +0.4**
KKAR IAmb IAmb 19 23 52.7
comp=Z,184nm,0.9s
KKAR Karatay Array 53.63 302 P **P** **19 23 51.4 +0.4**
FITZ Fitzroy Crossi 53.74 197 P **P** **19 23 51.7 -0.2**
comp=Z,13nm,0.6s,baz=14,slow=7.6,SNR=16
JBG Jabagly 53.78 301diP **P** **19 23 53.1 +0.8**
JBG eS S 19 31 20.1 +0.3
JBG pmax pmax
comp=Z,72nm,1.0s
JBG smax smax
comp=N,30nm,2.2s
DOT Dot Lake 53.83 32 P **P** **19 23 52.9 +0.7**
DOT IAmb IAmb 19 23 54.0
comp=Z,27nm,0.8s
SCRK Sand Creek 53.84 32 P **P** **19 23 53.4 +1.0**
SCRK IAmb IAmb 19 23 54.8
comp=Z,42nm,0.8s
WB0 Warramunga Arr 53.89 187 P **P** **19 23 52.1 -0.9**
MENT Mentasta 54.05 33 P **P** **19 23 55.1 +1.3**
MENT IAmb IAmb 19 23 56.8
comp=Z,35nm,0.8s
WRAB Tennant Creek 54.05 187 P **P** **19 23 52.9 -1.3**
WRAB Tennant Creek 54.05 187⇓iP **P** **19 23 53.9 -0.3**
WRAB pmax pmax
comp=Z,101nm,1.3s
WR0 Warramunga Arr 54.06 186 P **P** **19 23 53.6 -0.7**
WB2 Warramunga Arr 54.06 187 P **P** **19 23 53.3 -1.0**
WRA Warramunga Arr 54.06 187 P **P** **19 23 53.5 -0.8**
comp=Z,48nm,0.5s,baz=4.6,slow=7.7,SNR=206
WRA ScP **ScP** **19 28 47.4 -0.1**
comp=Z,15nm,1.1s,baz=5.8,slow=4.6,SNR=12
WRA S **S** **19 31 21.9 -1.6**
comp=Z,3.9nm,0.9s,baz=13,slow=15,SNR=5.8
WRA LR LR 19 47 05.6
comp=Z,248nm,20.4s,baz=280,slow=36
WRA Warramunga Arr 54.06 187 P **P** **19 23 53.0 -1.3**
WRA **ScP** **19 28 47.6 +0.1**
GLB Gilahina Butte 54.17 35 P **P** **19 23 56.3 +1.6**
GLB IAmb IAmb 19 24 24.2
comp=Z,37nm,1.3s
IUG Iuzhnay 54.23 301⇓iP **P** **19 23 56.3 +0.7**
IUG Iuzhnay 54.23 301diP **P** **19 23 56.2 +0.7**
BTK Batken 54.26 298 P **P** **19 23 55.6 -0.1**
BTK IAmb IAmb 19 23 57.0
comp=Z,60nm,1.1s
BTK Batken 54.26 298 P **P** **19 23 55.6 -0.1**
BTK pmax pmax
comp=Z,60nm,1.1s
CTA Charters Tower 54.26 173 P **P** **19 23 56.0 +0.2**
comp=Z,12nm,0.5s,baz=356,slow=7.9,SNR=21
CTA Charters Tower 54.26 173 P **P** **19 23 56.0 +0.2**
CTAO Charters Tower 54.26 173 P **P** **19 23 56.5 +0.8**
CTAO pmax pmax
comp=Z,66nm,1.7s
VRDI Verde Repeater 54.37 35 P **P** **19 23 57.5 +1.1**
VRDI IAmb IAmb 19 23 58.9
comp=Z,17nm,0.9s
NIL Nilore 54.48 290 P **P** **19 23 57.1 -0.3**
NIL IAmb IAmb 19 23 58.9
comp=Z,40nm,0.9s
NIL Nilore 54.48 290 P **P** **19 23 57.1 -0.3**
NIL pmax pmax
comp=Z,40nm,0.9s
CHM Chimkent 54.48 301 eP **P** **19 23 57.4 +0.1**
comp=Z,42nm,0.8s
CHM Chimkent 54.48 301 eP **P** **19 23 57.4 +0.1**
CHM pmax pmax
comp=Z,42nm,0.8s
MCARA McCarthy VSAT 54.55 35 P **P** **19 23 58.8 +1.4**
MCARA IAmb IAmb 19 24 01.4
comp=Z,34nm,0.8s
CRQM Cirque 54.58 36 P **P** **19 23 59.3 +1.5**
CRQM IAmb IAmb 19 24 01.1
comp=Z,53nm,1.0s
TGL Tana Glacier 54.73 36 P **P** **19 23 59.9 +1.1**
TGL IAmb IAmb 19 24 02.5
comp=Z,41nm,1.0s
WAX Waxell Ridge 54.77 36 P **P** **19 24 00.5 +1.4**
BCAR Beaver Creek A 54.91 33 P **P** **19 24 01.0 +0.9**
BALM Baldy 54.93 36 P **P** **19 24 01.6 +1.3**
BALM IAmb IAmb 19 24 29.3
comp=Z,48nm,1.3s
EGAK Eagle 54.98 31 P **P** **19 24 01.3 +0.8**
EGAK IAmb IAmb 19 24 04.0
comp=Z,17nm,0.8s
TAS Tashkent 54.99 300 P **P** **19 24 01.5 +0.6**
TAS Tashkent 54.99 300 P **P** **19 24 01.5 +0.6**
TAS pmax pmax
comp=Z,135nm,0.7s
MESA MESA 55.25 37 P **P** **19 24 02.8 +0.1**
BARN Barnard Glacie 55.25 35 P **P** **19 24 03.9 +1.2**
BARN IAmb IAmb 19 24 31.2
comp=Z,58nm,1.6s
CTGM Chitina Glacie 55.43 36 P **P** **19 24 05.3 +1.4**
SANVU Saraoutou 55.70 148 P **P** **19 24 06.5 +0.4**
DAWY Dawson 55.84 32 P **P** **19 24 08.2 +1.6**
SVE Sverdlovsk 56.58 320ciP **P** **19 24 12.9 +0.9**
SVE pmax pmax
comp=Z,77nm,0.9s
EPYK Eagle Plains 56.59 29 P **P** **19 24 13.2 +1.3**
EPYK Eagle Plains 56.59 29 P **P** **19 24 13.3 +1.3**
baz=280
HYB Hyderabad 57.02 269 iP **P** **19 24 14.0 -1.7**
HLK Haleakala 57.29 86 P **P** **19 24 17.1 -0.8**
HYT Haines Junctio 57.29 35 P **P** **19 24 19.5 +2.3**
HYT IAmb IAmb 19 24 20.6
comp=Z,33nm,0.9s
DHAK Deception Hill 57.32 37 P **P** **19 24 17.7 +0.4**
KBL Kabul 57.42 292 P **P** **19 24 17.9 -0.6**
KBL Kabul 57.42 292 P **P** **19 24 18.0 -0.6**
KBL pmax pmax
comp=Z,64nm,1.0s
INK Inuvik 57.46 26 P **P** **19 24 19.2 +1.2**
comp=Z,27nm,0.8s,baz=288,slow=6.1,SNR=89
INK Inuvik 57.46 26 P **P** **19 24 18.9 +0.9**
INK IAmb IAmb 19 24 20.2
comp=Z,26nm,0.8s
ARU Arti 57.79 320 P **P** **19 24 20.4 -0.2**
ARU Arti 57.79 320diP **P** **19 24 20.8 +0.3**
ARU *PP **pP** **19 24 44.1 +0.5**
ARU 19 25 14.4
ARU 19 26 27.7
ARU S **S** **19 32 12.4 +0.2**
ARU SS **SS** **19 36 01.9 -1.7**
ARU pmax pmax
comp=Z,87nm,0.8s
ARU MLR MLR
comp=Z,411nm,17.0s
AS31 Alice Springs 57.79 187 P **P** **19 24 20.6 -0.3**
AS31 IAmb IAmb 19 24 22.6
comp=Z,17nm,0.5s
ASAR Alice Springs 57.79 187 P **P** **19 24 20.6 -0.2**
comp=Z,14nm,0.6s,baz=17,slow=13,SNR=228
ASAR ScP **ScP** **19 29 04.2 +0.4**
comp=Z,4.7nm,1.1s,baz=15,slow=3.8,SNR=7.2
ASAR S **S** **19 32 11.9 -1.0**
comp=Z,5.7nm,1.1s,baz=9.7,slow=13,SNR=18
ASAR LR LR 19 48 58.7
comp=Z,361nm,20.8s,baz=350,slow=36
ASAR PKP2bc 19 54 17.0
comp=Z,0.8nm,0.9s,baz=202,slow=2.0,SNR=4.1
ASAR Alice Springs 57.79 187 P **P** **19 24 20.1 -0.7**
ASAR **ScP** **19 29 03.3 -0.5**
KNTN Kanton 58.35 119 P **P** **19 24 24.8 -0.2**
WHY Whitehorse 58.58 35 P **P** **19 24 27.8 +1.6**
WHY IAmb IAmb 19 24 29.3
comp=Z,34nm,0.8s
MLH Mauna Loa 58.59 87 P **P** **19 24 28.7 +1.7**
SKAG Skagway 58.67 37 P **P** **19 24 28.2 +1.6**
AB31 Akbulak array 58.95 311 iP **P** **19 24 28.3 -0.4**
ABKAR Akbulak array 58.95 311 P **P** **19 24 28.7 -0.1**

ABKAR Akbulak array 58.95 311 P **P** **19 24 28.8 +0.1**
ABKAR IAmb IAmb 19 24 30.3
comp=Z,182nm,1.3s
AKTO Aktyubinsk 59.78 313 iP **P** **19 24 33.8 -0.6**
AKTO pmax pmax
comp=Z,89nm,1.2s
EIDS Eidsvold 60.12 168 P **P** **19 24 37.8 +0.9**
POO Poona 60.37 273 eP **P** **19 24 36.0 -3.0**
C36M Paulatuk 60.52 24 P **P** **19 24 39.7 +0.6**
C36M Paulatuk 60.52 24 P **P** **19 24 39.9 +0.8**
baz=289,SNR=86
PALK Pallekele 60.66 258 LR LR 19 53 03.9
comp=Z,167nm,20.2s,baz=34,slow=38
PALK Pallekele 60.66 258 P **P** **19 24 41.0 0.0**
PALK Pallekele 60.66 258 P **P** **19 24 40.7 -0.3**
PALK Pallekele 60.66 258 P **P** **19 24 40.7 -0.3**
PALK pmax pmax
comp=Z,9.0nm,0.8s
NOUC Port Laguerre 61.28 152 P **P** **19 24 46.2 +1.4**
DZM Mont Dzumac 61.30 152 eP **P** **19 24 46.3 +1.2**
comp=Z,265nm,1.4s
DZM Mont Dzumac 61.30 152 eLR LR 19 43 04.2
comp=Z,1μm,34.4s
DZM Mont Dzumac 61.30 152 P **P** **19 24 47.0 +1.9**
comp=Z,49nm,0.9s,baz=32,slow=5.2,SNR=24
DZM Mont Dzumac 61.30 152 P **P** **19 24 47.1 +1.9**
PRGR Permogore 62.57 328⇓iP **P** **19 24 53.6 +0.6**
PRGR e 19 27 11.4
PRGR eS **S** **19 33 12.8 -0.4**
PRGR pmax pmax
comp=Z,113nm,1.0s
HRA Herat 62.66 295 P **P** **19 24 55.0 +0.6**
MSVF Nonsavu 63.03 139 P **P** **19 24 58.6 +1.9**
MSVF Nonsavu 63.03 139 P **P** **19 24 58.6 +1.9**
MSVF pmax pmax
comp=Z,139nm,1.6s
SPA0 Spitsbergen Ar 63.13 349 eP **P** **19 24 57.7 +1.2**
SPA0 Spitsbergen Ar 63.13 349 P **P** **19 24 57.0 +0.5**
SPA0 IAmb IAmb 19 24 58.6
comp=Z,40nm,0.9s
SPITS Spitsbergen Ar 63.13 349 P **P** **19 24 57.4 +0.9**
KBS Kingsbay 63.30 350 eP **P** **19 24 58.9 +1.2**
KBS Kingsbay 63.30 350 P **P** **19 24 59.0 +1.4**
KBS IAmb IAmb 19 25 00.0
comp=Z,61nm,0.9s
KBS Kingsbay 63.30 350⇑iP **P** **19 24 59.1 +1.5**
KBS pmax pmax
comp=Z,244nm,0.9s
NOR Nord 63.85 356 iP **P** **19 25 01.6 +0.4**
comp=Z,19nm,1.1s
NOR Nord 63.85 356 iP **P** **19 25 01.6 +0.4**
NOR pmax pmax
comp=Z,19nm,1.1s
HSPB Hornsund (broa 64.02 348 eP **P** **19 25 03.4 +1.0**
HSPB Hornsund (broa 64.02 348 eP **P** **19 25 03.4 +1.0**
HSPB Hornsund (broa 64.02 348 eP **P** **19 25 03.4 +1.0**
GEYT Alibeck 64.25 300 P **P** **19 25 05.2 +0.5**
comp=Z,21nm,0.8s,baz=35,slow=3.6,SNR=68
GEYT LR LR 19 55 23.9
comp=Z,278nm,18.7s,baz=90,slow=38
GEYT Alibeck 64.25 300 P **P** **19 25 04.9 +0.2**
GYA0B ALIBECK ARRAY 64.25 300 P **P** **19 25 04.7 +0.1**
GYA0B IAmb IAmb 19 25 06.3
comp=Z,32nm,0.9s
LVZ Lovozero 64.28 336 P **P** **19 25 04.4 +0.2**
LVZ IAmb IAmb 19 25 05.5
comp=Z,29nm,0.8s
LVZ Lovozero 64.28 336⇑iP **P** **19 25 04.3 +0.1**
LVZ pmax pmax
comp=Z,26nm,1.0s
TMCR Tamitsa 64.73 332 eP **P** **19 25 07.0 -0.2**
TMCR pmax pmax
comp=Z,77nm,0.9s
APA Apatity 64.85 336⇓iP **P** **19 25 07.4 -0.5**
APA pmax pmax
comp=Z,42nm,0.7s
ARMA Armidale 65.15 169 P **P** **19 25 11.1 +0.7**
ARMA IAmb IAmb 19 25 12.9
comp=Z,101nm,1.8s
FORT Forrest 65.56 191 P **P** **19 25 13.2 +0.3**
KLMR Klimovskoe 65.59 328⇓iP **P** **19 25 13.1 +0.3**
KLMR ⇓iP **P** **19 25 13.1 +0.3**
KLMR ⇑iP **P** **19 25 13.1 +0.3**
KLMR AMP 19 25 14.1
comp=Z,50nm,0.6s
KLMR ePP **PP** **19 27 39.6 +1.9**
KLMR LQ LQ 19 48 22.2
KLMR LQ LQ 19 48 22.2
KLMR LR LR 19 49 40.5
KLMR Klimovskoe 65.59 328diP **P** **19 25 13.0 +0.3**
KLMR e 19 27 39.5
KLMR pmax pmax
comp=Z,50nm,0.6s
RES Resolute Bay 65.67 14 P **P** **19 25 13.7 +0.6**
RES IAmb IAmb 19 25 14.9
comp=Z,54nm,0.9s
RES Resolute Bay 65.67 14 P **P** **19 25 13.7 +0.6**
RES pmax pmax
comp=Z,54nm,0.9s
STKA Stephens Creek 65.69 179 P **P** **19 25 14.2 +0.5**
comp=Z,15nm,0.6s,baz=350,slow=6.7,SNR=50
STKA LR LR 19 54 42.7
comp=Z,110nm,19.1s,baz=12,slow=37
STKA Stephens Creek 65.69 179 P **P** **19 25 14.2 +0.5**
STKA Stephens Creek 65.69 179 P **P** **19 25 14.3 +0.5**
STKA pmax pmax
comp=Z,7.0nm,0.9s
KEV Kevo 65.73 339 P **P** **19 25 13.9 +0.3**
KEV IAmb IAmb 19 25 14.8
comp=Z,35nm,0.9s
KEV Kevo 65.73 339 P **P** **19 25 13.9 +0.3**
KEV pmax pmax
comp=Z,35nm,0.9s
HAMF Hammerfest 66.16 341 eP **P** **19 25 16.9 +0.5**
ARCES ARCESS Array B 66.29 340 P **P** **19 25 17.8 +0.5**
comp=Z,30nm,0.8s,baz=47,slow=6.9,SNR=69
ARCES LR LR 19 59 43.5
comp=Z,273nm,19.1s,baz=20,slow=41
ARCES ARCESS Array B 66.29 340 P **P** **19 25 17.5 +0.3**
ARE0 ARCESS Array S 66.29 340 eP **P** **19 25 17.8 +0.6**
ARE0 ARCESS Array S 66.29 340 P **P** **19 25 18.0 +0.8**
BBOO Buckleboo 66.71 184 P **P** **19 25 20.3 +0.1**
MORW Morawa 66.85 203 P **P** **19 25 20.7 -0.5**
MORW IAmb IAmb 19 25 42.4
comp=Z,22nm,0.8s
YKA Yellowknife Ar 66.87 29 P **P** **19 25 21.4 +0.4**
comp=Z,8.0nm,0.9s,baz=299,slow=6.2,SNR=62
SGF Sodankyl 67.17 337 P **P** **19 25 23.6 +0.8**
SGF pmax pmax
comp=Z,102nm,0.8s
MSF Maaselka 67.19 335 P **P** **19 25 23.7 +0.8**
MSF pmax pmax
comp=Z,71nm,0.8s
KTK1 Kautokeino 67.26 340 eP **P** **19 25 23.9 +0.6**
JOF Joensuu 67.97 332 P **P** **19 25 28.4 +0.5**
JOF pmax pmax
comp=Z,47nm,1.0s
TRO Tromso 68.07 341 eP **P** **19 25 28.6 +0.2**
TULEG Thule 68.09 7 P **P** **19 25 28.8 +0.4**
TULEG IAmb IAmb 19 25 29.8
comp=Z,37nm,1.0s
DAG Danmarks Havn 68.54 355⇓iP **P** **19 25 32.0 +0.8**
comp=Z,70nm,0.9s
DAG Danmarks Havn 68.54 355⇓iP **P** **19 25 32.0 +0.8**
DAG pmax pmax
comp=Z,70nm,0.9s
OUL Oulu 68.74 335 P **P** **19 25 33.3 +0.7**
OUL pmax pmax
comp=Z,60nm,1.0s
MOS Moscow 68.89 324 eP **P** **19 25 31.3 -2.4**
MOS e*PP **pP** **19 25 56.5 -0.9**
MOS e 19 28 04.1
MOS eS **S** **19 34 27.8 -2.4**
MOS pmax pmax
comp=Z,167nm,1.1s
VRH Novokhopyorsk 68.96 318 eP **P** **19 25 33.7 -0.5**
VRH pmax pmax
comp=Z,100nm,0.7s
LLLB Lillooet 69.13 42 P **P** **19 25 36.7 +1.4**
CAN Canberra 69.62 172 P **P** **19 25 39.5 +1.1**
CAN Canberra 69.62 172 P **P** **19 25 39.5 +1.1**
CAN pmax pmax
comp=Z,184nm,1.7s
OBN Obninsk 69.73 323 P **P** **19 25 38.2 -0.7**

OBN Obninsk 69.73 323 d iP P 19 25 39.0 +0.1
OBN i 19 26 02.6
OBN i 19 28 12.8
OBN pmax pmax
comp=Z,75nm,1.0s
OBN MLR MLR
comp=Z,626nm,15.0s
AKT Akhty 69.89 307 eP P 19 25 40.2 -0.1
AKT e 19 26 02.0
AKT e*PP pP 19 26 04.8 +0.6
AKT e*SP sP 19 26 17.4 +3.0
AKT pmax pmax
comp=Z,99nm,0.6s
NWAO Narrogin (SRO) 70.08 200 P P 19 25 41.5 +0.2
comp=Z,25nm,0.5s,baz=29,slow=5.3,SNR=39
NWAO Narrogin (SRO) 70.08 200 P P 19 25 40.8 -0.5
NWAO IAmb IAmb 19 26 04.5
comp=Z,119nm,1.6s
PUL Pulkovo 70.09 330 ⇑iP P 19 25 42.2 +1.2
PUL pmax pmax
comp=Z,147nm,0.9s
STEI Steigen 70.21 341 eP P 19 25 43.0 +1.4
GROC Groznyy 70.34 309 eP P 19 25 42.4 -0.5
GROC e 19 26 03.8
GROC e*PP pP 19 26 07.0 +0.3
GROC e*SP sP 19 26 19.0 +2.0
GROC pmax pmax
comp=Z,65nm,1.1s
VSR Storozhevoye 70.36 319 eP P 19 25 42.3 -0.5
VSR pmax pmax
comp=Z,110nm,0.9s
B06A Marblemount 70.37 44 P P 19 25 44.4 +1.5
B06A IAmb IAmb 19 26 14.4
comp=Z,88nm,1.8s
SEKA Sheki 70.37 307 P P 19 25 43.4 +0.2
VORD Divnogorie 70.41 319 eP P 19 25 42.9 -0.2
VORD pmax pmax
comp=Z,60nm,1.0s
LKRN Lenkeran, Azer 70.49 304 P P 19 25 44.3 +0.4
WBK Wadi Bani Khal 70.56 285 P P 19 25 44.5 -0.2
MNGR Mingechevir, A 70.66 307 P P 19 25 45.5 +0.7
LGD Lagodekhi 70.70 308 P P 19 25 46.5 +1.3
BIDO Bidbid 70.79 286 P P 19 25 48.0 +2.0
SNR=8.8
FIA1 FINESS Array S 70.83 332 P P 19 25 45.4 -0.1
FINES FINESS Array B 70.83 332 P P 19 25 45.9 +0.3
comp=Z,54nm,0.7s,baz=84,slow=5.4,SNR=152
FINES LR LR 20 01 48.3
comp=Z,222nm,19.4s,baz=40,slow=40
FINES FINESS Array B 70.83 332 P P 19 25 45.5 0.0
G03D McMinnville, O 70.93 48 P P 19 25 47.9 +1.5
baz=300
KULLO Kullorsuaq 70.94 5 ⇓iP P 19 25 46.6 +0.6
comp=Z,37nm,0.8s
KULLO Kullorsuaq 70.94 5 ⇓iP P 19 25 46.6 +0.6
KULLO pmax pmax
comp=Z,37nm,0.8s
C06D Leavenworth 71.00 45 P P 19 25 48.3 +1.4
baz=300
BANOM Banah 71.06 289 iP P 19 25 48.2 +0.6
SNR=22
BANOM Banah 71.06 289 P P 19 25 49.0 +1.4
SNR=13
SMDO Samad 71.08 285 P P 19 25 49.0 +1.2
SNR=6.6
VAF Ylistaro 71.11 335 P P 19 25 48.0 +0.8
VAF pmax pmax
comp=Z,95nm,1.1s
SHME Shamm 71.12 289 iP P 19 25 48.6 +0.6
SNR=49
GOF Gofitskoye 71.17 312 ⇓iP P 19 25 48.6 +0.7
GOF pmax pmax
comp=Z,102nm,0.6s
GANJ Ganja 71.23 307 P P 19 25 48.9 +0.5
MDH Madha 71.37 288 P P 19 25 49.2 -0.2
JMDO Jabal Madar 71.38 285 P P 19 25 49.9 +0.3
KEBM Edson Butte 71.40 51 P P 19 25 50.5 +1.1
HOQ Hoqain 71.41 286 P P 19 25 51.0 +1.3
SNR=14
MSFE Esma-Masafi 71.45 288 iP P 19 25 50.4 +0.4
SNR=17
J01E Myrtle Point 71.52 50 P P 19 25 52.1 +2.1
baz=300
TOO Toolangi 71.54 175 P P 19 25 50.6 +0.6
TOO IAmb IAmb 19 25 52.5
comp=Z,125nm,1.6s
TOO Toolangi 71.54 175 P P 19 25 50.6 +0.6
TOO pmax pmax
comp=Z,125nm,1.6s
GUDG Gudauri 71.55 309 P P 19 25 50.3 -0.2
H04D Lebanon 71.59 48 P P 19 25 52.3 +1.9
baz=300
UOSS Minazif 71.61 288 iP P 19 25 51.3 +0.4
SNR=22
UOSS Minazif 71.61 288 P P 19 25 51.0 +0.1
UOSS IAmb IAmb 19 25 52.8
comp=Z,68nm,1.1s
I03D Drain, OR 71.62 49 P P 19 25 53.0 +2.4
baz=300,SNR=5.6
MOR8 Moi Rana 71.67 340 eP P 19 25 49.7 -0.8
B08A Colville Reser 71.69 44 P P 19 25 52.4 +1.4
B08A IAmb IAmb 19 26 19.2
comp=Z,52nm,1.6s
F05D White Salmon 71.69 47 P P 19 25 52.9 +1.9
baz=300
HATD Hatta, Dubai 71.73 288 iP P 19 25 52.0 +0.4
SNR=33
HATD Hatta, Dubai 71.73 288 P P 19 25 53.0 +1.3
SNR=19
TBLG Delisi 71.74 308 P P 19 25 52.1 +0.7
TBLG IAmb IAmb 19 25 53.4
comp=Z,51nm,1.0s
TBLG Delisi 71.74 308 P P 19 25 52.1 +0.7
TBLG pmax pmax
comp=Z,51nm,1.0s
ZEI Tsey 71.75 310 eP P 19 25 47.5 -4.2
ZEI pmax pmax
comp=Z,35nm,0.9s
SOHO SOHO 71.75 287 P P 19 25 52.2 +0.5
SNR=22
KBO Bosley Butte 71.80 51 P P 19 25 54.2 +2.4
KBO IAmb IAmb 19 25 55.9
comp=Z,64nm,1.3s
KONS Konsvik 71.81 340 eP P 19 25 52.8 +1.5
H04A Detroit Lake 71.85 48 P P 19 25 53.9 +1.8
ASHO Ashiyiah 71.86 288 iP P 19 25 52.6 +0.2
SNR=42
ASHO Ashiyiah 71.86 288 P P 19 25 54.0 +1.5
SNR=20
BSY Bisya 71.92 286 P P 19 25 54.0 +1.2
SNR=8.2
K02D Willamette Mer 71.92 50 P P 19 25 54.7 +2.2
baz=300,SNR=9.2
KBZ Khabaz 71.92 311 P P 19 25 53.3 +0.9
comp=Z,85nm,0.9s,baz=72,slow=4.8,SNR=141
KBZ LR LR 20 01 42.7
comp=Z,286nm,18.7s,baz=46,slow=39
KBZ Khabaz 71.92 311 d iP P 19 25 52.9 +0.5
KIV Kislovodsk 71.94 311 iP P 19 25 53.6 +1.0
SNR=57
KIV Kislovodsk 71.94 311 P P 19 25 53.5 +0.8
KIV Kislovodsk 71.94 311 eP P 19 25 53.2 +0.5
KIV e*PP pP 19 26 18.2 +1.7
KIV eS S 19 35 06.1 -0.2
KIV pmax pmax
comp=Z,465nm,1.0s
KIV pmax pmax
comp=Z,160nm,3.4s
NAZ Nazwa, Dubai 72.02 288 iP P 19 25 53.7 +0.4
SNR=12
NAZ Nazwa, Dubai 72.02 288 P P 19 25 55.0 +1.6
SNR=8.1
SHA1 Shidzhatmaz 72.07 311 d iP P 19 25 53.9 +0.3
G05D Wamic, OR 72.11 47 P P 19 25 55.4 +1.8
baz=301
KZRT Kazreti 72.13 308 P P 19 25 54.6 +0.8
ONI Oni 72.14 310 P P 19 25 55.2 +1.4
ARQ Araqi 72.16 286 P P 19 25 55.2 +1.0
SNR=18
I04A Tendick Farm, 72.16 49 P P 19 25 55.1 +1.2
baz=300,SNR=12
MHTO MHTO 72.18 284 P P 19 25 55.0 +0.7
SNR=9.2
L02E Cave Junction 72.23 51 P P 19 25 56.5 +2.2
baz=300,SNR=7.6
NEY Neytrino 72.27 310 c iP P 19 25 56.9 +2.1
NEY pmax pmax
comp=Z,8.0nm,0.8s
E07A Sunnyside 72.31 45 P P 19 25 56.1 +1.4
KRMB Red Mountain 72.35 52 P P 19 25 57.2 +2.0
VSU Vasula 72.36 330 eP P 19 25 55.6 +0.9
VSU Vasula 72.36 330 d iP P 19 25 55.1 +0.4
VSU pmax pmax
comp=Z,256nm,1.0s
ALNE Al Ain 72.41 287 iP P 19 25 56.3 +0.6
SNR=13
HUMO Hull Mountain 72.42 50 P P 19 25 57.4 +2.0
NAX Nakhchivan 72.50 306 P P 19 25 56.5 +0.4
GNI Garni 72.52 307 iP P 19 25 58.0 +1.7
SNR=20
GNI Garni 72.52 307 P P 19 25 57.8 +1.5
GNI IAmb IAmb 19 25 59.1
comp=Z,103nm,1.3s
GNI Garni 72.52 307 d iP P 19 25 57.7 +1.5
GNI pmax pmax
comp=Z,163nm,1.1s
G06A Carlson Farm, 72.52 47 P P 19 25 57.7 +1.6
G06A IAmb IAmb 19 26 26.1
comp=Z,73nm,1.9s
I05D Terrebonne, OR 72.55 48 P P 19 25 57.5 +1.2
baz=301
C09A Chrisman Ranch 72.58 44 P P 19 25 57.5 +1.2
C09A IAmb IAmb 19 25 59.5
comp=Z,76nm,1.6s
HAWA Hanford 72.58 46 P P 19 25 58.1 +1.7
D08A Wollman Farm, 72.60 45 P P 19 25 58.0 +1.6
J04D Umpqua Nationa 72.63 49 P P 19 25 58.1 +1.2
baz=301
AKH Akhalkalaki 72.71 308 ⇓P P 19 25 59.0 +1.6
AKH Akhalkalaki 72.71 308 P P 19 25 58.7 +1.3
AKH IAmb IAmb 19 25 60.0
comp=Z,45nm,0.8s
AKH Akhalkalaki 72.71 308 P P 19 25 58.7 +1.3
AKH pmax pmax
comp=Z,45nm,0.8s
BGD Bogdanovka 72.71 308 P P 19 25 59.0 +1.5
AJN Ajban 72.76 288 P P 19 25 58.5 +0.8
SNR=5.3
KHMM Horse Mountain 72.79 52 P P 19 26 00.2 +2.3
KHMM IAmb IAmb 19 26 01.8
comp=Z,42nm,1.0s
E08A Dider Farm, El 72.81 45 P P 19 25 59.4 +1.7
NEW Newport 72.99 43 P P 19 26 00.4 +1.6
comp=Z,15nm,0.9s,baz=295,slow=5.0,SNR=18
NEW Newport 72.99 43 P P 19 26 00.3 +1.6
NEW Newport 72.99 43 P P 19 25 59.8 +1.0
baz=302
YBH Yreka Blue Hor 73.02 51 P P 19 26 01.3 +2.2
comp=Z,26nm,1.0s,baz=268,slow=1.5,SNR=14
YBH Yreka Blue Hor 73.02 51 P P 19 26 01.4 +2.3
L04D Klamath Falls 73.03 50 P P 19 26 00.9 +1.7
baz=301,SNR=18
DQM DQM 73.06 283 P P 19 25 59.4 -0.2
PINE Pine Mountain 73.08 48 P P 19 26 02.1 +2.6
PINE IAmb IAmb 19 26 03.4
comp=Z,52nm,1.1s
M02C Callahan 73.10 51 P P 19 26 02.1 +2.6
baz=301,SNR=11
KMRM Mail Ridge 73.13 53 P P 19 26 02.2 +2.4
KMRM IAmb IAmb 19 26 03.7
comp=Z,39nm,1.0s
J05D Fort Rock, OR 73.16 49 P P 19 26 02.1 +2.1
baz=301,SNR=15
E09A Wood Farm, Sta 73.34 45 P P 19 26 02.3 +1.6
E09A IAmb IAmb 19 26 29.3
comp=Z,75nm,1.8s
KCPM Cahto Peak 73.49 53 P P 19 26 04.0 +2.0
KCPM IAmb IAmb 19 26 06.1
comp=Z,51nm,1.1s
G08A Pilot Rock 73.50 46 P P 19 26 03.3 +1.4
M04C Macdoel 73.55 51 P P 19 26 04.3 +2.0
baz=301,SNR=22
SUMG Summit 73.56 360 iP P 19 26 03.6 +1.5
comp=Z,153nm,0.8s
SUMG Summit 73.56 360 P P 19 26 03.6 +1.5
SUMG IAmb IAmb 19 26 04.8
comp=Z,61nm,0.8s
SUMG Summit 73.56 360 iP P 19 26 03.6 +1.5
SUMG pmax pmax
comp=Z,150nm,0.8s
WDC Whiskeytown Da 73.72 52 P P 19 26 04.3 +1.2
WDC IAmb IAmb 19 26 06.5
comp=Z,35nm,1.1s
WDC Whiskeytown Da 73.72 52 P P 19 26 04.3 +1.2
WDC pmax pmax
comp=Z,35nm,1.1s
O02D Mt. Diablo Mer 73.76 52 P P 19 26 05.3 +1.8
baz=301,SNR=22
BATM Batumi 73.77 309 ⇑P P 19 26 04.0 +0.6
BATM Batumi 73.77 309 P P 19 26 04.0 +0.6
I07A Izee 73.81 48 ⇓P P 19 26 04.8 +1.0
BCA Borcka 73.90 309 ⇓P P 19 26 04.9 +0.7
SOC Sochi 73.98 312 eP P 19 26 04.1 -0.4
SOC e 19 28 56.5
SOC ePPP PPP 19 30 38.0
SOC eS SKiKP 19 35 27.4 +3.8
SOC eSS SS 19 40 12.0 -2.7
SOC pmax pmax
comp=Z,76nm,1.1s
SOC MLR MLR
comp=Z,248nm,16.0s
F10A Beach Ranch, E 74.17 45 P P 19 26 07.4 +1.7
IZAR Zarasai 74.22 327 eP P 19 26 07.5 +1.8
IZAR IAmb IAmb 19 26 08.2
comp=Z,49nm,1.1s
O03E Paynes Creek 74.35 52 P P 19 26 08.1 +1.2
baz=302,SNR=20
ISAL Salakas 74.39 327 eP P 19 26 07.8 +1.1
ISAL IAmb IAmb 19 26 09.2
comp=Z,74nm,1.1s
MOD Modoc Plateau 74.47 50 P P 19 26 09.0 +1.3
GDXM Geysers 74.47 54 P P 19 26 09.0 +1.4
IIGN Ignalina 74.48 327 eP P 19 26 08.3 +1.0
IIGN IAmb IAmb 19 26 09.8
comp=Z,63nm,1.2s
NACGM Naroch 74.50 327 eP P 19 26 07.0 -0.4
NACGM PM 19 26 09.0
comp=Z,0.3nm,1.0s
ANN Anapa 74.71 314 d iP P 19 26 08.5 -0.3
ANN i*PP pP 19 26 32.8 0.0
ANN eS S 19 35 36.4 -0.9
ANN pmax pmax
comp=Z,253nm,1.5s
SLIT Slitere, Latvi 74.73 330 eP P 19 26 08.8 +0.2
BMO Blue Mountains 74.73 46 P P 19 26 10.2 +1.2
BMO Blue Mountains 74.73 46 P P 19 26 10.2 +1.2
BMO pmax pmax
comp=Z,18nm,1.0s
J08A Circle Bar Ran 74.83 48 P P 19 26 11.1 +1.4
J08A IAmb IAmb 19 26 13.3
comp=Z,49nm,1.3s
SCO Scoresbysund 74.86 354 iP P 19 26 10.7 +1.6
comp=Z,36nm,0.8s
SCO Scoresbysund 74.86 354 iP P 19 26 10.7 +1.6
SCO pmax pmax
comp=Z,36nm,0.8s
JTMT Jette 74.87 42 P P 19 26 11.4 +1.6
JTMT IAmb IAmb 19 26 13.0
comp=Z,42nm,1.0s
ORV Oroville 74.93 52 P P 19 26 11.4 +1.2
ORV IAmb IAmb 19 26 12.8
comp=Z,36nm,1.1s
ORV Oroville 74.93 52 P P 19 26 11.4 +1.2
ORV pmax pmax
comp=Z,36nm,1.2s
WVOR Wild Horse Val 75.23 49 P P 19 26 13.3 +1.3
WVOR IAmb IAmb 19 26 41.8
comp=Z,44nm,1.5s
WVOR Wild Horse Val 75.23 49 P P 19 26 13.3 +1.3
WVOR pmax pmax
comp=Z,44nm,1.5s
PABE Paberze 75.39 328 eP P 19 26 13.3 +0.9
BEKR Beckworth 75.51 52 P P 19 26 15.1 +1.4
BEKR IAmb IAmb 19 26 16.7
comp=Z,42nm,0.9s
MSO Missoula 75.58 43 P P 19 26 14.9 +1.0
MSO Missoula 75.58 43 P P 19 26 14.9 +1.0
baz=305
SHAO Shalim 75.59 282 P P 19 26 14.7 +0.4
SHAO Shalim 75.59 282 P P 19 26 14.1 -0.2
AFDM Forest Hills D 75.60 53 P P 19 26 15.9 +1.8
AKASG Malin Array Be 75.88 322 P P 19 26 15.4 +0.1
comp=Z,34nm,0.5s,baz=49,slow=6.2,SNR=330
AKASG LR LR 20 04 15.1
comp=Z,60nm,21.4s,baz=45,slow=39
AKASG Malin Array Be 75.88 322 P P 19 26 15.3 -0.1
AKBB Malin Array Si 75.88 322 P P 19 26 14.9 -0.5
AKBB Malin Array Si 75.88 322 d iP P 19 26 15.4 +0.1
PBUR Paburge 75.93 329 eP P 19 26 16.3 +0.8
RUBR Rubicon Trail 76.08 52 P P 19 26 16.9 -0.1
RUBR IAmb IAmb 19 26 20.3
comp=Z,45nm,1.0s
NC405 NORSAR Array S 76.18 337 P P 19 26 17.2 +0.2
NC303 NORSAR Array S 76.21 337 eP P 19 26 17.5 +0.4
NC303 NORSAR Array S 76.21 337 P P 19 26 17.4 +0.4
PAHR Pah Rah Range 76.23 51 P P 19 26 19.4 +1.6
VCNR Virginia City 76.28 52 P P 19 26 20.2 +2.1
DOMB Dombas 76.31 339 eP P 19 26 18.3 +0.6
MOL Molde 76.35 339 eP P 19 26 19.0 +1.2
NB201 NORSAR Array S 76.36 337 P P 19 26 18.0 0.0
NC204 NORSAR Array S 76.36 337 P P 19 26 17.5 -0.5
NB2 NORSAR Subarra 76.40 337 P P 19 26 18.1 -0.1
comp=Z,59nm,0.8s,baz=42,slow=5.9
NB2 NORSAR Subarra 76.40 337 P P 19 26 18.1 -0.1
baz=42,slow=5.9
NOA NORSAR Array B 76.40 337 P P 19 26 18.4 +0.3
comp=Z,28nm,0.8s,baz=44,slow=5.6,SNR=94
NOA LR LR 20 03 11.0
comp=Z,361nm,20.7s,baz=45,slow=38
MFID Camas Ranch 76.41 47 P P 19 26 20.3 +1.6
PNTR Pine Nut 76.43 52 P P 19 26 20.5 +1.5
PNTR IAmb IAmb 19 26 22.4
comp=Z,31nm,1.0s
CMB Columbia Colle 76.48 53 P P 19 26 20.5 +1.4
CMB IAmb IAmb 19 26 22.8
comp=Z,37nm,1.1s
CMB Columbia Colle 76.48 53 P P 19 26 20.5 +1.4
CMB pmax pmax
comp=Z,37nm,1.1s
NC602 NORSAR Array S 76.52 337 P P 19 26 18.3 -0.5
NC602 IAmb IAmb 19 26 20.1
comp=Z,122nm,1.4s
NORES NORESS Array B 76.52 337 P P 19 26 23.1 +4.3
NBO00 NORSAR Array S 76.55 337 P P 19 26 19.4 +0.4
SIM Simferopol' 76.58 315 d eP P 19 26 20.7 +1.2
SIM e*PP pP 19 26 44.0 +0.4
SIM pmax pmax
comp=Z,41nm,0.8s
ILULI Ilulissat 76.61 4 iP P 19 26 19.9 +0.7
comp=Z,43nm,0.9s
ILULI Ilulissat 76.61 4 P P 19 26 20.3 +1.2
ILULI IAmb IAmb 19 26 21.3
comp=Z,50nm,1.0s
ILULI Ilulissat 76.61 4 iP P 19 26 19.9 +0.7
ILULI pmax pmax
comp=Z,43nm,0.9s
NAO01 NORSAR Array S 76.65 337 P P 19 26 20.0 +0.4
NAO01 IAmb IAmb 19 26 21.0
comp=Z,79nm,1.0s
YERR Yerington 76.72 52 P P 19 26 22.2 +1.5
YERR IAmb IAmb 19 26 23.9
comp=Z,37nm,1.0s
FFC Flin Flon 76.74 32 P P 19 26 20.6 +0.4
FFC IAmb IAmb 19 26 46.9
comp=Z,34nm,1.1s
FFC Flin Flon 76.74 32 P P 19 26 20.6 +0.4
FFC pmax pmax
comp=Z,34nm,1.1s
AKN Aaknes 76.82 339 eP P 19 26 22.0 +1.5
WAKR Walker 76.85 52 P P 19 26 23.1 +1.7
TAU Tasmania Unive 76.98 175 P P 19 26 22.4 +1.0
TAU IAmb IAmb 19 26 24.0
comp=Z,102nm,1.6s
TAU Tasmania Unive 76.98 175 P P 19 26 22.4 +1.0
TAU pmax pmax
comp=Z,102nm,1.7s
RBK Rabkut 77.01 282 P P 19 26 24.0 +1.6
SNR=6.3
FCC Fort Churchill 77.08 26 P P 19 26 22.3 +0.3
FCC IAmb IAmb 19 26 49.1
comp=Z,50nm,1.1s
FCC Fort Churchill 77.08 26 P P 19 26 22.3 +0.3
FCC pmax pmax
comp=Z,50nm,1.1s
WHFO Wadi Hawf 77.15 283 P P 19 26 23.0 -0.1
SNR=7.8
EGMT Eagleton 77.19 40 P P 19 26 24.0 +1.1
EGMT IAmb IAmb 19 26 25.8
comp=Z,71nm,1.0s
EGMT Eagleton 77.19 40 P P 19 26 24.1 +1.1
baz=307
DLMT Dillon 77.19 44 P P 19 26 24.7 +1.6
DLMT IAmb IAmb 19 26 26.1
comp=Z,36nm,0.8s
MCMT McKenzie Canyo 77.36 44 P P 19 26 25.3 +1.1
RYN Ryan 77.38 52 P P 19 26 26.0 +1.7
OSL Oslo 77.39 336 eP P 19 26 24.6 +0.9
KVN Kaiserville 77.42 51 P P 19 26 26.2 +1.6
KVN IAmb IAmb 19 26 27.9
comp=Z,52nm,1.4s
KVN Kaiserville 77.42 51 P P 19 26 26.2 +1.6
KVN pmax pmax
comp=Z,52nm,1.4s
SKAR Skarslia 77.60 338 eP P 19 26 26.4 +1.4
OMMB Old Mammoth Mi 77.63 53 P P 19 26 27.5 +1.6
NVAR Mina Array Bea 77.64 52 P P 19 26 27.6 +1.8
comp=Z,12nm,1.0s,baz=285,slow=5.5,SNR=37
NVAR Mina Array Bea 77.64 52 P P 19 26 27.2 +1.4
NV11 Mina Array Sit 77.73 52 P P 19 26 27.8 +1.6
ABTO Aybut 77.83 283 P P 19 26 28.0 +1.0
SNR=9.1
SORM Soroca 77.89 320 ⇓P P 19 26 26.7 -0.1
SORM Soroca 77.89 320 P P 19 26 26.6 -0.1
KONO Kongsberg 77.98 337 eP P 19 26 27.4 +0.4
KONO Kongsberg 77.98 337 c eP P 19 26 28.7 +1.7
KONO pmax pmax
comp=Z,99nm,2.5s
QLMT Earthquake Lak 78.17 44 P P 19 26 30.2 +1.5
ELK Elko 78.28 49 P P 19 26 31.0 +1.6
ELK Elko 78.28 49 P P 19 26 31.0 +1.6
ELK pmax pmax
comp=Z,28nm,1.3s
YHL Hebgen Lake 78.30 43 P P 19 26 30.4 +0.9
KIS Kishinev 78.34 319 eP P 19 26 30.0 +0.8
KIS Kishinev 78.34 319 ePP PP 19 29 25.0 -1.9
KIS LRM MLR 20 03 16.0
comp=Z,300nm,17.0s
KIS Kishinev 78.34 319 eP P 19 26 30.0 +0.8
KIS e 19 29 25.0
KIS MLR MLR
comp=Z,300nm,17.0s
YHB Horse Butte 78.36 44 P P 19 26 31.6 +1.9
MILM Milestii Mici 78.39 319 ⇑P P 19 26 29.2 -0.3
YHH Holmes Hill 78.53 43 P P 19 26 31.8 +1.1
YMR Madison River 78.54 44 P P 19 26 32.2 +1.6
VES Vestal, Richgr 78.55 54 P P 19 26 31.8 +1.2
baz=304
PKM Mcpherson Peak 78.58 56 P P 19 26 32.9 +1.9
baz=304
GCMT Greycliff 78.59 42 P P 19 26 32.1 +1.3
YNR Norris Junctio 78.67 43 P P 19 26 33.3 +1.9
ASK Askoy 78.70 339 eP P 19 26 30.9 0.0
ODD1 Odda 78.72 338 eP P 19 26 32.2 +1.1
BER Bergen 78.74 339 eP P 19 26 32.1 +1.0
YUF Upper Falls 78.77 43 P P 19 26 33.9 +1.9
SFJD Kangerlussuaq 78.84 4 iP P 19 26 32.3 +0.7
SFJD Kangerlussuaq 78.84 4 P P 19 26 32.4 +0.8
SFJD IAmb IAmb 19 26 33.5
comp=Z,41nm,0.7s
SFJD Kangerlussuaq 78.84 4 iP P 19 26 32.3 +0.7
YPP Pitchstone Pla 78.87 44 P P 19 26 35.2 +2.6
YNE Yellowstone No 78.87 43 P P 19 26 34.2 +1.6
CWC Cottonwood Cre 78.89 54 P P 19 26 34.0 +1.3
baz=304
IAS Iasi 78.90 320 ⇓P P 19 26 32.8 +0.5
IAS Iasi 78.90 320 P P 19 26 33.1 +0.8
IAS pmax pmax
comp=Z,22nm,1.3s
LKWY Lake 78.92 43 P P 19 26 35.8 +3.0
LKWY IAmb IAmb 19 26 37.6
comp=Z,38nm,1.0s
LKWY Lake 78.92 43 P P 19 26 35.8 +3.0
LKWY pmax pmax
comp=Z,38nm,1.0s

H17A Grant Village 78.92 44 P P 19 26 35.8 +3.0
H17A IAmb IAmb 19 26 37.8
comp=Z,63nm,1.0s
H17A Grant Village 78.92 44 P P 19 26 36.0 +3.2
baz=307
YMP Mirror Lake Pl 78.95 43 P P 19 26 34.4 +1.4
LEOM Leova 78.98 319 ⇓P P 19 26 33.3 +0.6
LEOM Leova 78.98 319 P P 19 26 33.3 +0.6
LVV L'vov 79.03 324 eP P 19 26 33.7 +0.7
LVV e 19 29 34.3
FLWY Flagg Ranch 79.04 44 P P 19 26 35.0 +1.5
FLWY IAmb IAmb 19 26 37.6
comp=Z,32nm,0.9s
GRAC Grapevine Rang 79.05 53 P P 19 26 35.4 +2.0
baz=305
ISA Isabella, Lake 79.06 54 P P 19 26 34.1 +0.6
ISA Isabella, Lake 79.06 54 P P 19 26 34.1 +0.6
ISA pmax pmax
comp=Z,9.0nm,1.1s
ISA Isabella, Lake 79.06 54 P P 19 26 34.8 +1.3
baz=304
ILGA Ilgaz 79.08 312 P P 19 26 34.6 +0.9
GAZ Gaziantep 79.09 308 P P 19 26 34.6 +1.0
FXWY Fox Creek 79.12 44 P P 19 26 34.8 +0.9
BLS5 Blasjo 79.16 338 eP P 19 26 35.5 +2.0
HVU Hansel Valley 79.19 47 P P 19 26 35.9 +1.7
HVU Hansel Valley 79.19 47 P P 19 26 35.9 +1.7
HVU pmax pmax
comp=Z,18nm,0.7s
MOOW Moose Ponds 79.22 44 P P 19 26 36.0 +1.7
BEL Belsk 79.23 327 eP P 19 26 35.0 +1.0
BEL Belsk 79.23 327 eP P 19 26 35.0 +1.0
DAC Darwin (Calif) 79.31 53 P P 19 26 38.8 +3.8
DAC Darwin (Calif) 79.31 53 P P 19 26 38.8 +3.8
DAC pmax pmax
comp=Z,12nm,1.1s
SNOW Snow King Moun 79.38 44 P P 19 26 35.7 +0.4
REDW Red Top Meadow 79.39 45 P P 19 26 36.3 +1.0
BSD Bornholm Skovb 79.44 331 iP P 19 26 35.0 0.0
comp=Z,70nm,1.1s
BSD Bornholm Skovb 79.44 331 iP P 19 26 35.0 0.0
BSD pmax pmax
comp=Z,70nm,1.1s
BIR Birlad 79.44 319 ⇑P P 19 26 36.5 +1.2
BIR Birlad 79.44 319 P P 19 26 36.4 +1.2
R11A Troy Canyon, C 79.44 51 P P 19 26 37.0 +1.3
R11A Troy Canyon, C 79.44 51 P P 19 26 37.1 +1.5
baz=305,SNR=14
OSI Osito Audit: C 79.48 55 P P 19 26 36.9 +1.1
PRAR RASCA 79.50 321 ⇑P P 19 26 36.3 +0.8
MPMC Manual Prospec 79.50 54 P P 19 26 37.8 +1.7
baz=305
BGU Big Grassy Mou 79.54 47 P P 19 26 37.7 +1.5
AHID Auburn Hatcher 79.60 45 P P 19 26 37.6 +1.1
GIUM Giurgiulesti 79.61 318 ⇓P P 19 26 37.6 +1.4
SPUT South Promonto 79.67 47 P P 19 26 37.4 +0.6
FURC Furnace Creek, 79.69 53 P P 19 26 38.6 +1.9
baz=305
JURR Jurilovca 79.69 318 ⇓P P 19 26 37.4 +0.8
GHRR 79.69 319 ⇓P P 19 26 38.0 +1.4
LRMC Laurel Mtn Rad 79.70 54 P P 19 26 38.2 +1.1
baz=305
SNART Snartemo 79.78 337 eP P 19 26 37.7 +0.8
KWP Kalwaria Pacla 79.80 324 eP P 19 26 38.2 +1.0
KWP Kalwaria Pacla 79.80 324 P P 19 26 38.1 +1.0
KWP Kalwaria Pacla 79.80 324 eP P 19 26 38.2 +1.0
DGMT Dagmar 79.80 38 P P 19 26 38.2 +0.9
DGMT IAmb IAmb 19 26 39.6
comp=Z,39nm,0.9s
DGMT Dagmar 79.80 38 P P 19 26 38.7 +1.5
baz=311
TESR Tescani 79.81 320 ⇓P P 19 26 37.9 +0.6
TPNV Topopah Spring 79.81 52 P P 19 26 39.0 +1.3
TPNV Topopah Spring 79.81 52 P P 19 26 39.0 +1.3
TPNV pmax pmax
comp=Z,21nm,1.1s
TPNV Topopah Spring 79.81 52 P P 19 26 38.9 +1.2
baz=305
FRB Frobisher Bay 79.83 12 P P 19 26 37.9 +0.9
FRB pmax pmax
comp=Z,68nm,1.0s
EDW2 Edwards Air Fo 79.83 55 P P 19 26 38.9 +1.2
baz=305
BUR08 Bucovina Ar. S 79.85 321 P P 19 26 38.3 +0.7
BUR08 IAmb IAmb 19 26 39.6
comp=Z,27nm,0.9s
BURAR Bucovina Array 79.86 321 ⇓P P 19 26 38.4 +0.8
BURAR Bucovina Array 79.86 321 P P 19 26 38.0 +0.4
BURAR Bucovina Array 79.86 321 P P 19 26 38.4 +0.8
TOPG Topolog 79.90 318 ⇑P P 19 26 38.5 +0.7
LAO LASA Array 79.90 40 P P 19 26 38.9 +1.1
LAO IAmb IAmb 19 26 40.8
comp=Z,48nm,0.9s
LAO LASA Array 79.90 40 P P 19 26 39.1 +1.2
baz=310
BR131 Keskin Array S 79.91 311 P P 19 26 38.4 +0.3
BR131 IAmb IAmb 19 26 40.1
comp=Z,57nm,1.0s
BR131 Keskin Array S 79.91 311 d iP P 19 26 38.6 +0.5
BRTR Keskin Array B 79.91 311 P P 19 26 38.8 +0.7
comp=Z,40nm,0.9s,baz=109,slow=3.4,SNR=145
BRTR LR LR 20 06 43.6
comp=Z,122nm,18.5s,baz=41,slow=39
BRTR Keskin Array B 79.91 311 P P 19 26 38.4 +0.3
COP Copenhagen 79.98 333 iP P 19 26 38.7 +0.8
comp=Z,73nm,0.9s
COP Copenhagen 79.98 333 eP P 19 26 38.7 +0.8
COP pmax pmax
comp=Z,73nm,0.9s
PETR Petresti 80.00 319 ⇑P P 19 26 40.2 +1.9
HWUT Hardware Ranch 80.02 46 P P 19 26 40.3 +1.5
SOCY Socotra 80.02 278 P P 19 26 37.6 -1.4
SOCY IAmb IAmb 19 26 38.6
comp=Z,51nm,0.9s
ODBI Odobesti 80.07 319 ⇓P P 19 26 40.5 +1.9
DUG Dugway, Tooele 80.11 48 P P 19 26 40.6 +1.4
DUG IAmb IAmb 19 27 08.3
comp=Z,42nm,1.4s
DUG Dugway, Tooele 80.11 48 P P 19 26 40.6 +1.4
DUG pmax pmax
comp=Z,42nm,1.4s
DUG Dugway, Tooele 80.11 48 P P 19 26 40.9 +1.7
baz=307,SNR=15
GOET G??ttrup 80.12 335 iP P 19 26 39.8 +1.2
comp=Z,86nm,0.8s
TIRR Tirgusor 80.14 317 ⇓P P 19 26 38.6 -0.4
TIRR Tirgusor 80.14 317 P P 19 26 38.0 -1.0
TIRR Tirgusor 80.14 317 P P 19 26 38.6 -0.4
VRI Vrincioaia 80.18 319 ⇑P P 19 26 40.6 +1.3
VRI Vrincioaia 80.18 319 P P 19 26 40.8 +1.5
VRI pmax pmax
comp=Z,60nm,1.5s
PLOR Plostina 80.23 319 ⇑P P 19 26 40.9 +1.3
PLOR Plostina 80.23 319 P P 19 26 40.9 +1.3
HARR Harsova 80.26 318 ⇓P P 19 26 40.6 +0.9
HARR Harsova 80.26 318 P P 19 26 40.6 +0.9
MFTR Murfatlar 80.31 317 ⇓P P 19 26 40.7 +0.7
ANTO Ankara 80.34 312 ⇓P P 19 26 41.4 +1.0
ANTO Ankara 80.34 312 P P 19 26 40.9 +0.5
ANTO IAmb IAmb 19 26 42.5
comp=Z,61nm,0.9s
ANTO Ankara 80.34 312 P P 19 26 40.9 +0.5
ANTO pmax pmax
comp=Z,61nm,1.0s
GRER 80.35 319 ⇓P P 19 26 41.8 +1.6
BR231 Keskin MP Arra 80.37 312 P P 19 26 41.1 +0.5
BR231 IAmb IAmb 19 26 42.7
comp=Z,46nm,0.9s
GSC Goldstone, Bar 80.39 54 P P 19 26 42.2 +1.5
GSC Goldstone, Bar 80.39 54 P P 19 26 42.2 +1.5
GSC pmax pmax
comp=Z,20nm,1.3s
GSC Goldstone, Bar 80.39 54 P P 19 26 42.0 +1.3
baz=305
BISRR Bisoca 80.39 319 ⇓P P 19 26 42.1 +1.6
SHOC Shoshone, Teco 80.40 53 P P 19 26 41.7 +1.0
baz=305
TCUT Toone Canyon 80.41 47 P P 19 26 42.9 +2.0
BFSC Mount Baldy Ra 80.42 55 P P 19 26 42.1 +1.1
baz=305
PSUT Pine Spring 80.44 50 P P 19 26 42.3 +1.3
CTU Camp Tracy 80.46 47 P P 19 26 42.4 +1.3
KOLS Kolonicke sedl 80.48 324 eP P 19 26 41.6 +0.7
KOLS pmax pmax
comp=Z,21nm,1.2s
KOLS Kolonicke sedl 80.48 324 eP P 19 26 41.5 +0.7
PDAR Pinedale Array 80.50 44 P P 19 26 42.3 +1.0
SCI2 San Clemente I 80.52 57 P P 19 26 42.8 +1.4
baz=305
OZUR 80.54 320 ⇓P P 19 26 42.7 +1.5
MUD Monsted U'grnd 80.58 335 iP P 19 26 41.9 +0.7
comp=Z,38nm,1.0s
MUD Monsted U'grnd 80.58 335 iP P 19 26 41.9 +0.7
MUD pmax pmax
comp=Z,38nm,1.0s
ARCR ARCALIA 80.65 321 ⇓P P 19 26 42.8 +1.1
UZH Uzhgorod 80.67 323 ⇓iP P 19 26 41.9 +0.1
UZH e 19 29 51.4
UZH eS S 19 36 37.0 -4.4
RAYN Ar Rayn 80.69 292 iP P 19 26 43.0 +0.5
SNR=151
RAYN Ar Rayn 80.69 292 P P 19 26 42.8 +0.3
RAYN Ar Rayn 80.69 292 P P 19 26 42.8 +0.3
RAYN pmax pmax
comp=Z,132nm,1.1s
ICOR Ion Corvin 80.69 317 ⇓P P 19 26 43.5 +1.5
JLU Jordanelle 80.70 47 P P 19 26 43.8 +1.3
BMR Baia Mare 80.70 322 ⇓P P 19 26 43.3 +1.2
NLU North Lily Min 80.70 48 P P 19 26 43.6 +1.2
SHPR Sheep Range 80.78 52 P P 19 26 44.0 +1.1
OJC Ojcow 80.79 326 eP P 19 26 43.3 +0.8
OJC Ojcow 80.79 326 P P 19 26 42.9 +0.4
OJC IAmb IAmb 19 26 44.5
comp=Z,81nm,1.1s
OJC Ojcow 80.79 326 eP P 19 26 43.3 +0.8
DOPR Dopca 80.83 320 ⇓P P 19 26 44.2 +1.4
MLR Muntele Rosu 80.84 319 ⇑P P 19 26 44.0 +1.0
MLR Muntele Rosu 80.84 319 P P 19 26 43.4 +0.4
MLR IAmb IAmb 19 26 44.9
comp=Z,43nm,1.3s
MLR Muntele Rosu 80.84 319 P P 19 26 43.4 +0.4
MLR pmax pmax
comp=Z,43nm,1.3s
TRPA Tarpa 80.88 323 ⇓P P 19 26 44.1 +1.2
CRVS Cervenica-Dubn 80.89 324 eP P 19 26 44.2 +1.1
CRVS pmax pmax
comp=Z,45nm,1.2s
CRVS Cervenica-Dubn 80.89 324 eP P 19 26 44.2 +1.1
TUQ Turquoise Moun 80.90 53 P P 19 26 44.5 +1.0
baz=306
MDUB Mudurnu 80.96 313 P P 19 26 44.2 +0.5
HEC Hector,Ludlow 80.98 54 P P 19 26 45.0 +1.2
baz=305
MURC Murrieta 81.10 55 P P 19 26 45.7 +1.2
baz=305
NIE Niedzica 81.10 325 eP P 19 26 45.4 +1.2
NIE epP pwP 19 27 11.9 +1.4
NIE Niedzica 81.10 325 eP P 19 26 45.4 +1.2
NIE e*PP pwP 19 27 11.9 +1.4
SULR 81.19 319 ⇓P P 19 26 45.7 +1.0
TCRU Three Creeks R 81.28 49 P P 19 26 47.2 +1.6
CJR Cluj-Napoca 81.28 321 ⇑P P 19 26 46.6 +1.4
CCUT Cedar City 81.33 50 P P 19 26 47.8 +1.9
VOIR 81.36 320 ⇑P P 19 26 46.6 +1.0
VOIR 81.36 320 P P 19 26 46.9 +1.2
VOIR pmax pmax
comp=Z,11nm,0.9s
THZ Tophouse 81.36 156 P P 19 26 46.3 +1.0
TUWZ Tuamarina 81.42 155 P P 19 26 45.5 -0.1
GMRC Granite Mounta 81.45 54 P P 19 26 48.0 +1.5
baz=306
SZCU Shurtz Canyon 81.48 50 P P 19 26 46.6 -0.1
MSU Marysvale 81.51 49 P P 19 26 48.8 +2.0
MSU Marysvale 81.51 49 P P 19 26 48.8 +2.0
109C Camp Elliot, M 81.57 56 P P 19 26 47.6 +0.8
PFO Pinyon Flats O 81.60 55 P P 19 26 48.0 +0.8
PFO Pinyon Flats O 81.60 55 P P 19 26 48.0 +0.8
PFO pmax pmax
comp=Z,24nm,1.2s
PFO Pinyon Flats O 81.60 55 P P 19 26 48.0 +0.8
baz=306
XPFO Pion Flat 81.60 55 P P 19 26 48.1 +0.9
ARR Arges 81.62 320 ⇓P P 19 26 48.5 +1.4
TMUT Trail Mountain 81.64 48 P P 19 26 48.5 +1.0
BSWZ Blackbirch Sta 81.65 155 P P 19 26 45.7 -1.2
KECS Kecovo 81.66 324 eP P 19 26 48.1 +1.0
KECS pmax pmax
comp=Z,9.0nm,1.0s
KECS Kecovo 81.66 324 eP P 19 26 48.1 +1.0
BELC Belle Mtn. Jos 81.68 55 P P 19 26 48.5 +0.9
baz=306
DRGR 81.69 322 ⇓P P 19 26 47.7 +0.4
LCMT Little Creek M 81.73 51 P P 19 26 49.5 +1.6
RAZG Razgrad 81.77 318 ⇑P P 19 26 48.9 +1.2
MTPU Mount Pierson 81.79 49 P P 19 26 50.2 +1.8
P17A Butcher Ranch, 81.82 48 P P 19 26 50.1 +1.8
OKC Ostrava-Krasne 81.82 326 eP P 19 26 48.7 +0.8
OKC Ostrava-Krasne 81.82 326 eP P 19 26 48.7 +0.8
RUE Ruedersdorf 81.82 330 eP P 19 26 48.3 +0.5
comp=Z,41nm,0.8s,baz=39,slow=5.1
RDMU Red Mountain 81.85 46 P P 19 26 50.0 +1.4
Q16A Castle Valley 81.89 48 P P 19 26 50.5 +1.7
KSP Ksiaz 81.94 328 eP P 19 26 49.4 +0.9
KSP Ksiaz 81.94 328 eP P 19 26 49.4 +0.9
HUMR Humele 81.98 319 ⇓P P 19 26 49.0 +0.1
BAR Barrett 81.99 56 P P 19 26 49.9 +0.7
KNB Kanab 82.00 51 P P 19 26 51.1 +1.8
KNB Kanab 82.00 51 P P 19 26 51.1 +1.8
KNB pmax pmax
comp=Z,24nm,0.8s
BHL Bhannes 82.01 306 eP P 19 26 49.6 +0.3
LOT Lotru 82.03 320 ⇓P P 19 26 50.2 +1.0
MONP2 Monument Peak 82.04 56 P P 19 26 50.6 +1.0
baz=306
BSEG Bad Segeberg 82.10 333 eP P 19 26 49.5 +0.3
comp=Z,38nm,1.2s,baz=39,slow=5.1
BSEG Bad Segeberg 82.10 333 P P 19 26 49.1 -0.1
BSEG pmax pmax
comp=Z,31nm,1.1s
COPA Copaceanca 82.11 319 ⇓P P 19 26 49.8 +0.3
MORC Moravsky Berou 82.14 326 eP P 19 26 50.3 +0.6
MORC e 19 29 56.9
MORC Moravsky Berou 82.14 326 ⇑P P 19 26 50.4 +0.8
MORC Moravsky Berou 82.14 326 P P 19 26 50.2 +0.6
MORC IAmb IAmb 19 26 51.7
comp=Z,45nm,1.2s
MORC Moravsky Berou 82.14 326 P P 19 26 50.2 +0.6
MORC pmax pmax
comp=Z,45nm,1.2s
IRM Iron Mountain 82.17 54 P P 19 26 51.4 +1.3
baz=306
SRU San Rafael Swe 82.17 48 P P 19 26 51.4 +1.2
SRU San Rafael Swe 82.17 48 P P 19 26 51.4 +1.2
SRU pmax pmax
comp=Z,28nm,0.9s
OSTC Ostas 82.18 328 eP P 19 26 50.8 +1.0
QRWL Qaraoun 82.19 305 eP P 19 26 51.1 +0.8
CHVC Chvalec 82.23 328 eP P 19 26 50.6 +0.5
BC3 Big Chuckawall 82.25 55 P P 19 26 51.2 +0.6
baz=306
KRLC Kraliky 82.27 327 eP P 19 26 51.3 +1.0
KRLC Kraliky 82.27 327 eP P 19 26 51.3 +1.0
DPC Dobruska-Polom 82.28 327 eP P 19 26 51.4 +1.0
DPC epP pwP 19 27 16.3 -0.4
DPC ePP PP 19 29 58.9 -0.5
DPC AMS AMS 20 07 10.0
comp=Z,500nm,17.5s
DPC Dobruska-Polom 82.28 327 eP P 19 26 51.4 +1.0
DPC e 19 27 16.3
DPC e 19 29 58.9
DPC MLR MLR
comp=Z,500nm,17.5s
UPC Upice 82.31 328 eP P 19 26 51.7 +1.3
UPC AMS AMS 20 07 20.0
comp=Z,500nm,15.9s
UPC Upice 82.31 328 eP P 19 26 51.7 +1.3
UPC MLR MLR
comp=Z,500nm,15.9s
PSZ Piszkesteto 82.33 324 ⇓P P 19 26 51.8 +1.1
PSZ Piszkesteto 82.33 324 P P 19 26 51.3 +0.6
PSZ IAmb IAmb 19 26 53.0
comp=Z,101nm,1.3s
PSZ Piszkesteto 82.33 324 P P 19 26 51.3 +0.6
PSZ pmax pmax
comp=Z,101nm,1.3s
IKP In-Ko-Pah, Jac 82.39 56 P P 19 26 52.6 +1.3
baz=306
JMB Yambol 82.43 317 eP P 19 26 52.5 +1.3
VYHS Vyhne 82.44 325 eP P 19 26 52.4 +1.2
VYHS pmax pmax
comp=Z,71nm,1.4s
VYHS Vyhne 82.44 325 eP P 19 26 52.4 +1.2
W13A Hualapai Mount 82.45 53 P P 19 26 52.7 +0.9
MDND Maddock 82.50 36 P P 19 26 52.4 +0.9
MDND IAmb IAmb 19 26 53.3
comp=Z,41nm,0.8s
MDND Maddock 82.50 36 P P 19 26 52.2 +0.7
baz=314
ELND Elena 82.53 317 ⇓P P 19 26 52.8 +1.0
ULM Lac du Bonnet 82.53 32 P P 19 26 52.0 +0.4
comp=Z,11nm,0.8s,baz=308,slow=6.0,SNR=21
ULM Lac du Bonnet 82.53 32 P P 19 26 52.2 +0.6
RWWY Rawlins 82.53 44 P P 19 26 53.1 +0.9
RWWY IAmb IAmb 19 26 54.7
comp=Z,36nm,0.9s
GZR Gura Zlata 82.59 321 ⇓P P 19 26 52.9 +0.7
GZR Gura Zlata 82.59 321 P P 19 26 52.8 +0.7
VLAD Vladila 82.64 319 ⇓P P 19 26 53.0 +0.7
U15A North Rim 82.69 51 P P 19 26 54.6 +1.5
JAVC Velka Javorina 82.73 326 eP P 19 26 54.7 +1.9
PDMCI Parker Dam,Lak 82.75 53 P P 19 26 54.5 +1.5
baz=307
Y12C Blythe 82.82 54 P P 19 26 53.9 +0.5
Y12C Blythe 82.82 54 P P 19 26 54.8 +1.4
baz=306
VRAC Vranov 82.91 327 eP P 19 26 54.4 +0.8
VRAC Vranov 82.91 327 ⇓P P 19 26 54.6 +1.0
VRAC Vranov 82.91 327 P P 19 26 54.8 +1.2
VRAC pmax pmax
comp=Z,45nm,1.2s
O20A White River Ci 82.91 46 P P 19 26 55.0 +1.0
O20A IAmb IAmb 19 26 56.7
comp=Z,29nm,1.1s
O20A White River Ci 82.91 46 P P 19 26 55.1 +1.0
baz=309,SNR=6.0
PVCC Panska Ves 82.93 328 eP P 19 26 54.9 +1.3
PVCC Panska Ves 82.93 328 eP P 19 26 54.9 +1.3
PLVB Pleven 82.93 318 ⇑P P 19 26 54.9 +1.1
CSS Mathiatis 82.93 308 P P 19 26 54.3 +0.4
BRG Berggiesshubel 82.94 329 eP P 19 26 54.0 +0.3
comp=Z,39nm,1.5s,baz=39,slow=5.1
BRG Berggiesshubel 82.94 329 P P 19 26 54.4 +0.7
BRG pmax pmax
comp=Z,19nm,1.5s
ISP Isparta 82.99 311 P P 19 26 54.2 -0.1
ISP IAmb IAmb 19 26 55.6
comp=Z,52nm,1.1s
ISP Isparta 82.99 311 P P 19 26 54.3 -0.1
ISP pmax pmax
comp=Z,52nm,1.1s
CLL Collm 83.02 330 eP P 19 26 54.1 0.0
comp=Z,91nm,1.6s,baz=39,slow=5.1
CLL Collm 83.02 330 ⇓iP P 19 26 54.3 +0.2
comp=Z,91nm,1.6s
CLL ePcP PcP 19 26 58.0 -0.6
CLL epP pP 19 27 16.0 -2.4
CLL iPP PP 19 30 05.0 -0.3
comp=Z,56nm,1.8s
CLL eS S 19 37 12.0 +6.6
CLL eSS SS 19 42 36.0 +6.3
CLL eSSS SSS 19 46 00.0
CLL e 19 47 36.0
CLL LmV 20 10 00.0
comp=Z,300nm,20.3s
CLL Collm 83.02 330 P P 19 26 54.3 +0.2
CLL IAmb IAmb 19 26 55.5
comp=Z,54nm,1.2s
CLL Collm 83.02 330 P P 19 26 54.3 +0.2
CLL pmax pmax
comp=Z,54nm,1.2s
GLA Glamis 83.03 55 P P 19 26 55.6 +1.0
GLA Glamis 83.03 55 P P 19 26 55.6 +1.0
GLA pmax pmax
comp=Z,15nm,1.0s
GLA Glamis 83.03 55 P P 19 26 55.2 +0.6
baz=306
BZS Buzias 83.04 322 ⇑P P 19 26 54.8 +0.5
BZS Buzias 83.04 322 P P 19 26 54.9 +0.6
BZS pmax pmax
comp=Z,58nm,1.2s
BUD Budapest 83.06 324 P P 19 26 55.9 +1.6
BUD pmax pmax
comp=Z,41nm,1.3s
SMOL Smolenice 83.09 326 eP P 19 26 56.0 +1.5
SMOL pmax pmax
comp=Z,41nm,1.2s
SMOL Smolenice 83.09 326 eP P 19 26 56.0 +1.5
LEF Lefka 83.12 308 ⇓P P 19 26 55.1 +0.2
FBE Freiberg 83.16 329 eP P 19 26 55.5 +0.7
comp=Z,111nm,1.6s,baz=39,slow=5.1
KRUC Moravsky 83.18 327 eP P 19 26 55.5 +0.5
KRUC Moravsky 83.18 327 P P 19 26 56.0 +1.0
KRUC pmax pmax
comp=Z,48nm,1.4s
BAIL Bailesti 83.20 320 ⇓P P 19 26 56.7 +1.6
PUNG Punghina 83.25 320 ⇑P P 19 26 56.2 +0.8
MODS Modra-Piesok 83.26 326 eP P 19 26 55.8 +0.4
MODS pmax pmax
comp=Z,79nm,1.3s
MODS Modra-Piesok 83.26 326 eP P 19 26 55.8 +0.4
GOPC GO Pecny, Ondr 83.28 328 eP P 19 26 56.5 +1.0
GOPC epP pP 19 27 20.5 +0.7
GOPC ePP PP 19 30 09.4 +1.9
GOPC GO Pecny, Ondr 83.28 328 eP P 19 26 56.5 +1.0
GOPC e 19 27 20.5
GOPC e 19 30 09.4
DIM Dimitrovgrad 83.29 317 eP P 19 26 56.9 +1.2
PRA Prague 83.32 328 eP P 19 26 57.2 +1.5
PRA Prague 83.32 328 eP P 19 26 57.2 +1.5
PRU Pruhonice 83.33 328 eP P 19 26 56.8 +1.1
PRU epP pwP 19 27 21.7 -0.4
PRU ePP PP 19 30 07.2 -0.7
PRU AMS AMS 20 07 30.0
comp=Z,500nm,16.8s
PRU Pruhonice 83.33 328 eP P 19 26 56.8 +1.1
PRU e 19 27 21.7
PRU e 19 30 07.2
PRU MLR MLR
comp=Z,500nm,16.8s
RETH Rethem/Aller, 83.39 332 eP P 19 26 56.2 +0.2
comp=Z,39nm,1.3s,baz=39,slow=5.1
RETH epP pP 19 27 16.4 -3.9
TREC Trest 83.42 327 P P 19 26 57.3 +1.1
TREC pmax pmax
comp=Z,18nm,1.2s
BANR Banloc 83.45 322 ⇓P P 19 26 58.1 +1.7
ZST Bratislava 83.47 326 eP P 19 26 57.1 +0.6
ZST pmax pmax
comp=Z,91nm,1.6s
ZST Bratislava 83.47 326 eP P 19 26 57.1 +0.6
MDVR Moldovita 83.56 321 ⇓P P 19 26 57.7 +0.7
NEUB Neuenburg 83.60 330 eP P 19 26 57.3 +0.2
comp=Z,77nm,1.3s,baz=39,slow=5.1
KDZ Kurdzhali 83.62 317 eP P 19 26 58.8 +1.4
CLZ Clausthal 83.69 331 eP P 19 26 58.1 +0.5
comp=Z,66nm,1.4s,baz=39,slow=5.1
PLD Plovdiv 83.72 317 P P 19 26 58.8 +0.9
Y14A Wickenburg 83.72 53 P P 19 26 59.2 +1.1
PGB Panagyurishte 83.73 318 eP P 19 26 59.4 +1.4
ALN Alexandroupoli 83.75 316 P P 19 26 58.4 +0.4
ALN Alexandroupoli 83.75 316 P P 19 26 58.4 +0.4
ALN pmax pmax
comp=Z,17nm,1.0s
N23A Red Feather La 83.78 44 P P 19 26 59.1 +0.6
N23A IAmb IAmb 19 27 19.2
comp=Z,41nm,1.0s
N23A Red Feather La 83.78 44 P P 19 26 59.7 +1.1
baz=310
MANT Manisa 83.79 313 P P 19 26 58.6 0.0
PHWY Pilot Hill 83.79 44 P P 19 26 58.6 0.0
PHWY IAmb IAmb 19 27 01.3
comp=Z,22nm,0.6s
PBCC Pribram 83.80 328 eP P 19 26 59.0 +0.9
PBCC ex x 19 27 23.9
WUAZ Wupatki 83.83 51 P P 19 26 59.5 +0.6
WUAZ IAmb IAmb 19 27 02.3
comp=Z,25nm,0.9s
WUAZ Wupatki 83.83 51 P P 19 27 00.0 +1.2
baz=308
TANN Tannenbergstha 83.91 329 eP P 19 26 59.1 +0.4
comp=Z,37nm,1.1s,baz=39,slow=5.1

113A Mohawk Valley, 83.92 54 P P 19 26 59.7 +0.7
AGMN Agassiz Nation 83.95 34 P P 19 26 58.9 0.0
AGMN Agassiz Nation 83.95 34 P P 19 26 58.8 -0.1
baz=316
PLN Plauen 83.99 330 eP P 19 26 59.4 +0.3
comp=Z,21nm,1.0s,baz=39,slow=5.1
GUNZ Gunzen 84.01 329 eP P 19 26 59.7 +0.5
comp=Z,37nm,1.0s,baz=39,slow=5.1
ELL Elmali 84.04 311 P P 19 27 00.3 +0.5
ELL Elmali 84.04 311 P P 19 27 00.3 +0.5
ELL pmax pmax
comp=Z,182nm,0.8s
WERN Wernitzgruen 84.05 329 eP P 19 26 59.9 +0.5
comp=Z,38nm,0.9s,baz=39,slow=5.1
NKC Novy Kostel 84.06 329 eP P 19 27 00.4 +0.9
NKC Novy Kostel 84.06 329 eP P 19 27 00.4 +0.9
GTTG Gottingen 84.08 331 eP P 19 26 59.8 +0.3
comp=Z,36nm,1.1s,baz=39,slow=5.1
SOP Sopron 84.09 325 P P 19 27 01.0 +1.3
SOP pmax pmax
comp=Z,84nm,1.2s
MOX Moxa 84.09 330 eP P 19 26 59.9 +0.3
comp=Z,47nm,1.5s,baz=39,slow=5.1
MOX Moxa 84.09 330 P P 19 27 00.6 +1.0
MOX pmax pmax
comp=Z,27nm,1.2s
PMOR Pomariorio Ree 84.10 112 eT T 20 59 01.2
comp=Z,65nm,0.2s
VTS Vitosha 84.20 319 ⇓P P 19 27 01.5 +1.0
VTS Vitosha 84.20 319 eP P 19 27 01.9 +1.4
VTS Vitosha 84.20 319 P P 19 27 00.9 +0.4
VTS IAmb IAmb 19 27 02.9
comp=Z,58nm,0.9s
VTS Vitosha 84.20 319 P P 19 27 00.9 +0.4
VTS pmax pmax
comp=Z,58nm,0.9s
CONA Conrad Observa 84.24 326 i PcP P 19 27 01.8 +1.3
comp=Z,49nm,0.8s,SNR=23
CONA i pP pP 19 27 23.9 -1.1
comp=Z,41nm,1.0s
CONA ePP PP 19 30 18.1 +2.6
comp=Z,20nm,1.6s
D32A Dogwood Acres, 84.24 35 P P 19 27 00.9 +0.5
D32A IAmb IAmb 19 27 01.9
comp=Z,23nm,0.9s
SMCO Snowmass 84.28 46 P P 19 27 02.1 +0.8
IBBN Ibbenburen 84.34 333 eP P 19 27 00.9 +0.1
comp=Z,43nm,0.9s,baz=39,slow=5.1
KPL Plockton 84.37 342 eP P 19 27 01.5 +0.7
KPL IAmb IAmb 19 27 03.2
comp=Z,54nm,1.0s
MANZ Manzenberg 84.39 329 eP P 19 27 01.5 +0.4
comp=Z,29nm,0.9s,baz=39,slow=5.1
PPT Papeete 84.39 115 LR LR 19 57 48.5
comp=Z,124nm,21.7s,baz=330,slow=31
KHC Kasperske Hory 84.39 328 eP P 19 27 01.8 +0.6
KHC epP pP 19 27 25.6 -0.1
KHC ePP PP 19 30 18.3 +1.7
KHC AMS AMS 20 08 00.0
comp=Z,800nm,19.3s
KHC Kasperske Hory 84.39 328 P P 19 27 01.4 +0.2
KHC Kasperske Hory 84.39 328 eP P 19 27 01.8 +0.6
KHC e 19 27 25.6
KHC e 19 30 18.3
KHC MLR MLR
comp=Z,800nm,19.3s
PPT2 Papeete2 84.40 115 eS S 19 37 20.0 -0.4
comp=Z,135nm,25.8s
PPT2 Papeete2 84.40 115 eLQ LQ 19 50 09.1
comp=Z,1μm,33.0s
PPT2 eLR LR 19 53 01.9
comp=Z,1μm,34.8s,baz=283
PPT2 Papeete2 84.40 115 eT T 20 59 24.8
comp=Z,12nm,0.3s
PAE Paea 84.44 116 eT T 20 59 27.1
comp=Z,3.1nm,0.4s
X16A Lo Mia Camp, P 84.46 52 P P 19 27 03.4 +1.3
ROTZ Rotzenmuhle 84.51 329 eP P 19 27 02.4 +0.6
comp=Z,65nm,1.3s,baz=39,slow=5.1
ROTZ epP pP 19 27 22.2 -3.9
GEC2 GERESS Array S 84.55 328 eP P 19 27 02.1 +0.1
comp=Z,30nm,0.9s,baz=39,slow=5.1
GEC2 GERESS Array S 84.55 328 P P 19 27 02.2 +0.1
GEC2 IAmb IAmb 19 27 03.5
comp=Z,28nm,0.9s
GEC2 GERESS Array S 84.55 328 P P 19 27 02.6 +0.5
GEC2 pmax pmax
comp=Z,44nm,1.4s
GERES GERESS Array B 84.55 328 P P 19 27 02.4 +0.3
comp=Z,20nm,0.8s,baz=38,slow=5.4,SNR=104
GERES PP PP 19 30 19.1 +1.1
comp=Z,1.9nm,0.7s,baz=56,slow=8.3,SNR=4.8
GERES LR LR 20 07 45.6
comp=Z,272nm,19.5s,baz=47,slow=38
GERES GERESS Array B 84.55 328 P P 19 27 02.2 +0.1
TIAR Tiarei 84.56 115 eT T 20 59 35.5
comp=Z,8.0nm,0.3s
MVCO Mesa Verde 84.60 48 P P 19 27 03.8 +1.1
MVCO Mesa Verde 84.60 48 P P 19 27 04.1 +1.4
baz=309,SNR=13
UBBA Unterbreizbach 84.62 331 eP P 19 27 02.2 0.0
comp=Z,72nm,1.8s,baz=39,slow=5.1
ISCO Idaho Springs 84.68 45 P P 19 27 04.1 +0.9
ISCO Idaho Springs 84.68 45 P P 19 27 04.1 +0.9
ISCO pmax pmax
comp=Z,12nm,0.9s
ISCO Idaho Springs 84.68 45 P P 19 27 04.1 +0.9
baz=311,SNR=6.1
WET Wettzell 84.69 328 eP P 19 27 03.2 +0.5
comp=Z,22nm,1.1s,baz=39,slow=5.1
WET Wettzell 84.69 328 P P 19 27 03.5 +0.8
WET pmax pmax
comp=Z,23nm,1.3s
INVG Invergeldie, C 84.75 341 eP P 19 27 03.4 +0.6
ARSA Arzberg 84.89 326 i PcP P 19 27 04.5 +0.8
comp=Z,26nm,0.9s,SNR=9.5
ARSA i pP pP 19 27 27.7 -0.5
comp=Z,24nm,0.8s
ARSA ePP PP 19 30 18.5 -2.2
comp=Z,8.4nm,1.4s
GRA1 Grafenberg Arr 84.98 329 P P 19 27 04.7 +0.6
GRF Grafenberg Arr 84.98 329 eP P 19 27 04.7 +0.6
comp=Z,84nm,1.1s,baz=39,slow=5.1
GRF epP pP 19 27 26.6 -2.0
GRF Grafenberg Arr 84.98 329 P P 19 27 04.7 +0.6
GRF pmax pmax
comp=Z,71nm,1.0s
SRS Serrai 85.00 317 P P 19 27 04.7 +0.3
SRS pmax pmax
comp=Z,15nm,0.9s
GRB1 Grafenberg Arr 85.03 329 P P 19 27 05.4 +1.0
GRB1 pmax pmax
comp=Z,56nm,1.0s
MOA Molln 85.03 327 i PcP P 19 27 05.2 +0.8
comp=Z,30nm,1.2s,SNR=6.5
MOA ePP PP 19 30 20.3 -1.5
comp=Z,19nm,1.3s
EAB Aberfoyle 85.04 341 eP P 19 27 05.3 +1.1
214A Organ Pipe Nat 85.05 55 P P 19 27 05.9 +1.1
214A Organ Pipe Nat 85.05 55 P P 19 27 06.3 +1.4
baz=307
W18A Petrified Fore 85.13 51 P P 19 27 06.3 +0.9
W18A Petrified Fore 85.13 51 P P 19 27 06.6 +1.2
baz=309
BUG Bochum--Univer 85.21 333 eP P 19 27 05.1 -0.1
comp=Z,48nm,1.0s,baz=39,slow=5.1
BUG epP pP 19 27 27.0 -2.5
BUG Bochum--Univer 85.21 333 P P 19 27 05.9 +0.7
BUG pmax pmax
comp=Z,49nm,1.4s
S22A 4UR Ranch, Cre 85.28 47 P P 19 27 07.8 +1.5
S22A 4UR Ranch, Cre 85.28 47 P P 19 27 07.7 +1.5
baz=310,SNR=26
KNT Kendrikon 85.36 318 P P 19 27 06.2 0.0
KNT pmax pmax
comp=Z,8.0nm,1.1s
X18A Snowflake 85.36 51 P P 19 27 08.1 +1.5
PGBU Glenifferbraes 85.41 341 eP P 19 27 07.2 +1.1
VAY Valandovo 85.44 318 P P 19 27 07.0 +0.5
VAY pmax pmax
comp=Z,28nm,0.9s
EKA Eskdalemuir Ar 85.45 340 P P 19 27 07.1 +0.8
ESK Eskdalemuir 85.48 340 eP P 19 27 07.2 +0.8
ESK Eskdalemuir 85.48 340 P P 19 27 08.1 +1.6
ESK pmax pmax
comp=Z,43nm,1.8s
Q24A Divide 85.50 45 P P 19 27 07.8 +0.4
BISS Bistriski jare 85.52 325 eP P 19 27 07.1 +0.3
SOKA Soboth 85.54 326 i PcP P 19 27 07.5 +0.5
comp=Z,39nm,0.8s,SNR=10
SOKA i pP pP 19 27 30.5 -1.0
comp=Z,50nm,1.0s
THE Thessaloniki 85.68 317 P P 19 27 07.4 -0.3
THE pmax pmax
comp=Z,11nm,0.9s
MEH Mehetia 85.71 115 eT T 21 01 02.0
comp=Z,120nm,0.3s
TNS Taunus Mts 85.71 331 eP P 19 27 08.0 +0.2
comp=Z,27nm,0.9s,baz=39,slow=5.1
TNS Taunus Mts 85.71 331 P P 19 27 08.4 +0.6
TNS pmax pmax
comp=Z,31nm,1.1s
PAIG Paliouri 85.74 316 P P 19 27 08.0 -0.1
PAIG pmax pmax
comp=Z,18nm,0.8s
GRG Griva 85.78 318 P P 19 27 08.2 -0.1
GRG pmax pmax
comp=Z,13nm,1.3s
RJOB Jochberg 85.78 327 eP P 19 27 08.7 +0.5
comp=Z,42nm,1.2s,baz=39,slow=5.1
OBKA Obir 85.89 326 i PcP P 19 27 09.2 +0.4
comp=Z,11nm,0.8s
OBKA epP pP 19 27 32.6 -0.7
comp=Z,18nm,0.8s
AHRW Bad Neuenahr-A 86.00 332 eP P 19 27 09.4 +0.3
comp=Z,45nm,1.0s,baz=39,slow=5.1
KBA Koelnbreinsper 86.02 327 i PcP P 19 27 08.8 -0.7
comp=Z,24nm,2.0s
KBA epP pP 19 27 32.4 -1.7
comp=Z,16nm,0.8s
KBA ePP PP 19 30 32.2 +2.1
comp=Z,38nm,1.4s
KBA Koelnbreinsper 86.02 327 P P 19 27 08.3 -1.3
KBA pmax pmax
comp=Z,27nm,0.8s
SDCO Great Sand Dun 86.08 46 P P 19 27 11.2 +1.0
SDCO Great Sand Dun 86.08 46 P P 19 27 11.7 +1.5
baz=311,SNR=14
KESW Keswick, Cumbr 86.09 340 eP P 19 27 10.3 +0.8
KESW IAmb IAmb 19 27 11.2
comp=Z,72nm,1.2s
VNDS Vrh nad Dolski 86.12 325 eP P 19 27 10.0 +0.2
FUR Furstenfeldbru 86.12 328 eP P 19 27 10.2 +0.3
comp=Z,55nm,1.1s,baz=39,slow=5.1
FUR Furstenfeldbru 86.12 328 P P 19 27 11.0 +1.2
FUR pmax pmax
comp=Z,60nm,1.2s
EYMN Ely 86.17 32 P P 19 27 10.5 +0.4
EYMN Ely 86.17 32 P P 19 27 10.7 +0.6
baz=320
TUC Tucson 86.19 53 P P 19 27 11.4 +0.9
TUC Tucson 86.19 53 P P 19 27 11.4 +0.9
TUC pmax pmax
comp=Z,8.0nm,0.9s
TUC Tucson 86.19 53 P P 19 27 11.8 +1.2
baz=308
MYKA Terra Mystica 86.22 326 i PcP P 19 27 10.1 -0.3
comp=Z,20nm,0.9s
MYKA epP pP 19 27 34.1 -0.9
comp=Z,18nm,0.8s
MYKA ePP PP 19 30 30.7 -0.8
comp=Z,27nm,1.3s
LJU Ljubljana 86.24 325 eP P 19 27 10.7 +0.3
GAL1 Galloway 86.30 340 eP P 19 27 11.1 +0.6
GAL1 IAmb IAmb 19 27 11.8
comp=Z,93nm,1.0s
LIT Litokhoron 86.30 317 P P 19 27 10.5 -0.4
LIT IAmb IAmb 19 27 11.5
comp=Z,29nm,0.9s
LIT Litokhoron 86.30 317 P P 19 27 10.5 -0.4
LIT pmax pmax
comp=Z,29nm,0.9s
MEM Membach 86.36 333 P P 19 27 11.2 +0.3
comp=Z,32nm,1.0s
MEM Membach 86.36 333 P P 19 27 11.4 +0.5
MEM pmax pmax
comp=Z,53nm,1.6s
PDG Podgorica 86.47 320 P 19 27 11.7 +0.1
PDG IAmb IAmb 19 27 12.6
comp=Z,30nm,0.7s
CLGH Cloghs, Cushen 86.49 341 eP P 19 27 12.2 +0.8
CLGH IAmb IAmb 19 27 13.4
comp=Z,75nm,1.0s
DAMY Dhamar 86.51 285 P 19 27 13.6 +0.9
DAMY IAmb IAmb 19 27 49.8
comp=Z,48nm,1.2s
KARP Karpathos 86.52 311 P P 19 27 11.4 -0.7
KARP IAmb IAmb 19 27 15.4
comp=Z,50nm,1.0s
WACR West Acre 86.53 337 eP P 19 27 12.1 +0.4
WACR IAmb IAmb 19 27 13.2
comp=Z,119nm,0.9s
APE Apeiranthos 86.54 313 ⇓P P 19 27 11.2 -0.9
APE Apeiranthos 86.54 313 P P 19 27 11.2 -0.9
STU Stuttgart 86.54 330 eP P 19 27 12.0 +0.2
comp=Z,50nm,1.2s,baz=39,slow=5.1
STU Stuttgart 86.54 330 P P 19 27 12.5 +0.6
STU IAmb IAmb 19 27 13.4
comp=Z,47nm,1.1s
STU Stuttgart 86.54 330 P P 19 27 12.5 +0.6
STU pmax pmax
comp=Z,47nm,1.1s
BSTI Sart Tilman 86.55 333 P P 19 27 12.3 +0.5
BHOU Houvegnez 86.56 333 P P 19 27 11.7 -0.2
BHOU PcP PcP 19 27 13.8 -0.4
TAOE Nuku Hiva Isla 86.60 103 eLR LR 19 54 36.2
comp=Z,886nm,31.0s
WATA Walderalm 86.62 328 ePcP P 19 27 12.2 -0.3
comp=Z,8.0nm,0.9s
WATA ePP PP 19 30 32.4 -2.4
comp=Z,47nm,1.5s
ABTA Abfaltersbach 86.65 327 i PcP P 19 27 12.6 +0.1
comp=Z,9.0nm,0.6s
ABTA epP pP 19 27 35.8 -1.3
comp=Z,15nm,0.8s
ABTA PP PP 19 30 32.3 -2.7
comp=Z,13nm,1.6s
WTTA Wattenberg 86.65 328 ePcP P 19 27 12.2 -0.4
comp=Z,5.1nm,0.8s
WTTA ePP PP 19 30 35.0 -0.1
comp=Z,48nm,1.6s
LBWR Ladybower, Pea 86.70 338 eP P 19 27 13.3 +0.8
LBWR IAmb IAmb 19 27 14.6
comp=Z,123nm,1.0s
BCLA Clavier 86.78 333 P P 19 27 13.0 +0.1
comp=Z,25nm,1.5s
BCLA PcP PcP 19 27 14.8 -0.3
BCLA pP pP 19 27 36.9 -0.5
UCC Uccle 86.82 334 P P 19 27 13.2 +0.1
UCC IAmb IAmb 19 27 14.1
comp=Z,40nm,1.3s
UCC Uccle 86.82 334 P P 19 27 13.2 +0.1
UCC pmax pmax
comp=Z,40nm,1.3s
MOTA Moosalm 86.83 328 i PcP P 19 27 13.4 -0.1
comp=Z,16nm,1.3s
MOTA ePP PP 19 30 37.1 +0.7
comp=Z,18nm,1.3s
RETA Reutte 86.86 328 ePcP P 19 27 13.4 -0.1
comp=Z,26nm,1.3s
SQTA Sankt Quirin 86.87 328 i PcP P 19 27 13.6 0.0
comp=Z,16nm,1.3s
SQTA PP PP 19 30 36.3 -0.5
comp=Z,35nm,1.5s
ECSD EROS Data Cent 86.88 37 P P 19 27 13.8 +0.1
ECSD IAmb IAmb 19 27 15.5
comp=Z,21nm,1.1s
ECSD EROS Data Cent 86.88 37 P P 19 27 13.9 +0.3
baz=316
BGES Gesves 86.89 333 P P 19 27 13.8 +0.3
comp=Z,22nm,1.1s
STAL STALIGIAL 86.92 326 P P 19 27 13.2 -0.6
STAL IAmb IAmb 19 27 13.8
comp=Z,70nm,1.3s
KSCO Kaye Shedlock' 86.93 44 P P 19 27 13.5 -0.6
KSCO IAmb IAmb 19 27 42.3
comp=Z,38nm,1.2s
KSCO Kaye Shedlock' 86.93 44 P P 19 27 15.2 +1.1
baz=313
WLF Walferdange 87.06 332 eP P 19 27 14.6 +0.2
comp=Z,57nm,1.3s,baz=39,slow=5.1
WLF Walferdange 87.06 332 P P 19 27 15.2 +0.8
WLF Walferdange 87.06 332 P P 19 27 15.5 +1.2
WLF pmax pmax
comp=Z,37nm,2.1s
BMRD Maredsous 87.07 333 P P 19 27 14.6 +0.3
comp=Z,41nm,1.0s
BMRD pP pP 19 27 39.8 +0.9
T25A Trinidad 87.14 46 P P 19 27 15.6 +0.3
T25A Trinidad 87.14 46 P P 19 27 16.5 +1.2
baz=312,SNR=7.6
CWF Charnwood Fore 87.14 338 eP P 19 27 14.9 +0.3
CWF IAmb IAmb 19 27 16.3
comp=Z,67nm,1.3s
E38A The Farm, Brul 87.17 33 P P 19 27 15.0 +0.1
E38A IAmb IAmb 19 27 16.0
comp=Z,22nm,0.8s
GIVF Givet 87.22 333 eP P 19 27 14.6 -0.5
GIVF pmax pmax
comp=Z,59nm,1.6s
FETA Feichten 87.24 328 i PcP P 19 27 15.5 +0.1
comp=Z,21nm,1.4s
BFO Black Forest 87.25 330 P P 19 27 15.5 +0.2
BFO IAmb IAmb 19 27 16.8
comp=Z,94nm,1.8s
BFO Black Forest 87.25 330 P P 19 27 15.5 +0.2
BFO pmax pmax
comp=Z,94nm,1.8s
DOU Dourbes 87.31 333 P P 19 27 15.3 -0.2
ANMO Albuquerque 87.32 49 P P 19 27 17.6 +1.4
comp=Z,2.0nm,0.5s,baz=298,slow=3.4,SNR=6.7
ANMO Albuquerque 87.32 49 P P 19 27 16.5 +0.3
ANMO Albuquerque 87.32 49 P P 19 27 17.3 +1.1
baz=311
DAVA Damuels 87.40 329 ePcP P 19 27 16.4 +0.1
comp=Z,13nm,0.8s
WME Myndd Eilian 87.47 340 eP P 19 27 16.4 +0.1
BAIF Baives 87.48 333 eP P 19 27 16.1 -0.2
BAIF pmax pmax
comp=Z,26nm,1.2s
CTI Castel Tesino 87.57 327 P P 19 27 16.7 -0.3
CTI IAmb IAmb 19 27 17.4
comp=Z,48nm,1.5s
CTI Castel Tesino 87.57 327 P P 19 27 16.7 -0.3
CTI pmax pmax
comp=Z,48nm,1.5s
CDF Champ du Feu 87.61 331 eP P 19 27 16.8 -0.3
CDF pmax pmax
comp=Z,40nm,1.5s
SPMN Marine on St. 87.64 34 P P 19 27 17.7 +0.5
SPMN Marine on St. 87.64 34 P P 19 27 17.8 +0.6
baz=319
YLL Llanberis 87.66 339 eP P 19 27 18.0 +0.9
BGNE Belgrade 87.75 40 P P 19 27 18.0 +0.1
BGNE Belgrade 87.75 40 P P 19 27 18.7 +0.8
baz=315
FUORN Ofenpass-Fuorn 87.75 328 P P 19 27 18.3 +0.3
ECH Echery 87.82 331 P P 19 27 18.0 0.0
ECH IAmb IAmb 19 27 33.1
comp=Z,52nm,1.7s
ECH Echery 87.82 331 P P 19 27 18.0 0.0
ECH pmax pmax
comp=Z,52nm,1.7s
TBI Tubuai 88.05 120 eLR LR 19 54 31.2
comp=Z,556nm,38.0s,baz=321
TBI Tubuai 88.05 120 eT T 21 03 58.1
comp=Z,16nm,0.3s
TEOL Teolo 88.08 326 P P 19 27 20.1 +0.8
D41A Chassel 88.12 31 P P 19 27 19.6 +0.1
D41A IAmb IAmb 19 27 21.2
comp=Z,17nm,0.8s
STRD Stroud 88.23 338 eP P 19 27 20.8 +0.9
STRD IAmb IAmb 19 27 21.2
comp=Z,118nm,1.0s
HINF Hinteralfeld 88.26 331 eP P 19 27 18.5 -1.7
HINF pmax pmax
comp=Z,67nm,2.1s
MCH1 Michaelchurch 88.30 338 eP P 19 27 20.8 +0.6
MCH1 IAmb IAmb 19 27 21.9
comp=Z,34nm,0.9s
HAU Haudompre 88.31 331 eP P 19 27 19.8 -0.6
HAU pmax pmax
comp=Z,9.0nm,0.7s
MONM Monmouth 88.38 338 eP P 19 27 21.2 +0.6
MONM IAmb IAmb 19 27 21.9
comp=Z,41nm,0.8s
SCHQ Schefferville 88.41 15 P P 19 27 21.7 +1.0
comp=Z,30nm,0.8s,baz=347,slow=5.4,SNR=54
SCHQ LR LR 20 11 12.8
comp=Z,198nm,19.6s,baz=12,slow=38
SCHQ Schefferville 88.41 15 P P 19 27 21.4 +0.7
SCHQ IAmb IAmb 19 27 23.1
comp=Z,32nm,0.8s
ITM Ithomi 88.61 315 P P 19 27 20.8 -1.2
COWI Conover 88.62 32 P P 19 27 21.9 0.0
COWI IAmb IAmb 19 27 23.2
comp=Z,16nm,0.9s
CBKS Cedar Bluff 88.71 42 P P 19 27 22.5 +0.1
CBKS IAmb IAmb 19 27 24.6
comp=Z,21nm,1.1s
CBKS Cedar Bluff 88.71 42 P P 19 27 22.5 +0.1
CBKS pmax pmax
comp=Z,21nm,1.1s
CBKS Cedar Bluff 88.71 42 P P 19 27 22.6 +0.1
baz=314,SNR=5.7
SGRT San Giovanni R 88.78 322 P P 19 27 23.0 +0.2
G40A Rib Lake 88.80 33 P P 19 27 23.1 +0.4
G40A IAmb IAmb 19 27 24.2
comp=Z,17nm,0.7s
SENIN Lac Senin/Sane 89.23 329 P P 19 27 25.6 +0.6
MURB Monte Urbino 89.27 325 P P 19 27 25.6 +0.5
NRCA Norcia 89.30 324 P P 19 27 25.9 +0.7
NRCA IAmb IAmb 19 27 26.2
comp=Z,31nm,0.9s
E43A Lone Tree Farm 89.33 30 P P 19 27 25.9 +0.8
E43A IAmb IAmb 19 27 26.7
comp=Z,22nm,0.8s
F42A Maple Grove Fa 89.33 31 P P 19 27 25.6 +0.5
F42A IAmb IAmb 19 27 27.4
comp=Z,22nm,1.1s
ACER Acerenza 89.38 321 P P 19 27 24.3 -1.3
ATD Arta Tunnel 89.46 283 P P 19 27 27.2 +0.8
ATD IAmb IAmb 19 27 28.5
comp=Z,39nm,1.1s
AQU L'Aquila 89.52 323 P P 19 27 25.4 -0.7
AQU L'Aquila 89.52 323 P P 19 27 25.5 -0.7
AQU pmax pmax
comp=Z,36nm,0.8s
E44A Grand Marais A 89.58 30 P P 19 27 27.3 +1.0
E44A Grand Marais A 89.58 30 P P 19 27 27.0 +0.7
baz=324
I40A Norwalk 89.67 34 P P 19 27 27.1 +0.4
LOR Lormes 89.90 332 eP P 19 27 29.2 +1.4
LOR pmax pmax
comp=Z,55nm,1.9s
SCIA State Center 89.92 37 P P 19 27 29.5 +1.5
SCIA IAmb IAmb 19 27 30.0
comp=Z,27nm,1.1s
SCIA State Center 89.92 37 P P 19 27 28.7 +0.7
baz=318
MATQ Matagami 90.02 23 P P 19 27 28.6 +0.3
baz=330,SNR=7.1
MNTX Cornudas Mount 90.11 51 P P 19 27 29.4 +0.3
baz=311
LPL La Plagne 90.14 329 eP P 19 27 29.1 -0.2
LPL pmax pmax
comp=Z,20nm,1.0s
LPG La Plagne 90.15 329 eP P 19 27 29.2 -0.2
LPG pmax pmax
comp=Z,18nm,0.9s
SSF Saint Saulge 90.20 332 eP P 19 27 29.1 -0.1
SSF pmax pmax
comp=Z,93nm,2.2s
KSU1 Kansas State U 90.22 41 P P 19 27 30.0 +0.5
baz=316
MSTX Muleshoe 90.25 48 P P 19 27 30.2 +0.4
baz=313
FLN La Foliniere 90.26 335 eP P 19 27 29.1 -0.3
FLN pmax pmax
comp=Z,88nm,1.8s
AMTX Amarillo 90.29 46 P P 19 27 31.0 +1.0
AMTX IAmb IAmb 19 27 32.6
comp=Z,26nm,0.9s
AMTX Amarillo 90.29 46 P P 19 27 30.8 +0.9
baz=313
D47A Chapleau 90.35 28 P P 19 27 30.3 +0.4
baz=326,SNR=13

SMF Signal de Mont 90.42 332 eP P 19 27 30.1 -0.1
SMF pmax pmax
comp=Z,65nm,1.8s
E46A Sault Ste Mari 90.44 29 P P 19 27 31.4 +1.1
E46A IAmb IAmb 19 27 32.6
comp=Z,31nm,1.1s
I42A Draeger Farm, 90.45 33 P P 19 27 31.3 +0.9
I42A IAmb IAmb 19 27 31.9
comp=Z,10nm,0.8s
AVF Avril sur Loir 90.49 332 eP P 19 27 30.3 -0.2
AVF pmax pmax
comp=Z,50nm,1.3s
F45A CMU Biological 90.50 30 P P 19 27 31.3 +0.7
baz=324,SNR=13
H43A Windswept, Lux 90.50 32 P P 19 27 31.3 +0.6
H43A IAmb IAmb 19 27 35.0
comp=Z,15nm,0.8s
JFWS Jewell Farm 90.59 34 P P 19 27 31.1 0.0
JFWS Jewell Farm 90.59 34 P P 19 27 31.1 0.0
JFWS pmax pmax
comp=Z,9.0nm,1.0s
JFWS Jewell Farm 90.59 34 P P 19 27 31.3 +0.2
baz=320
GRR Gorron 90.71 335 eP P 19 27 31.4 -0.1
GRR pmax pmax
comp=Z,56nm,1.2s
D48A Paudash Townsh 90.74 27 P P 19 27 32.1 +0.3
baz=327,SNR=6.3
MBDF Montbardon 90.75 329 eP P 19 27 31.2 -0.8
MBDF pmax pmax
comp=Z,15nm,0.7s
E47A Iron Bridge 90.77 28 P P 19 27 32.1 +0.3
baz=326,SNR=14
L40A Anamosa 90.78 36 P P 19 27 32.6 +0.6
L40A IAmb IAmb 19 27 33.8
comp=Z,14nm,0.9s
D49A Beulah Townshi 90.83 27 P P 19 27 32.6 +0.4
baz=327,SNR=5.6
LSQQ Lebel-sur-Quev 90.85 23 P P 19 27 32.9 +0.7
baz=330
G45A Suttons Bay 90.96 30 P P 19 27 34.0 +1.3
G45A IAmb IAmb 19 28 02.2
comp=Z,25nm,0.8s
G45A Suttons Bay 90.96 30 P P 19 27 33.2 +0.4
baz=324
ORIF Oris-en-Rattie 90.98 329 eP P 19 27 32.7 -0.3
ORIF pmax pmax
comp=Z,19nm,1.0s
G46A Petoskey 91.06 30 P P 19 27 34.1 +0.9
baz=324
E48A Lockeyer 91.19 28 P P 19 27 34.3 +0.5
baz=326,SNR=6.0
TCF Toulx Ste Croi 91.35 332 eP P 19 27 34.5 -0.1
TCF pmax pmax
comp=Z,35nm,1.3s
SGMF Saint Gilles 91.40 336 eP P 19 27 35.0 +0.2
SGMF pmax pmax
comp=Z,76nm,1.3s
D50A G1974 Best Tow 91.48 26 P P 19 27 35.4 +0.3
baz=328
VLDQ Val d'Or 91.51 24 P P 19 27 35.3 +0.1
VLDQ IAmb IAmb 19 28 02.0
comp=Z,53nm,1.9s
VIVF Saint-Julien-l 91.54 330 eP P 19 27 35.3 -0.2
VIVF pmax pmax
comp=Z,48nm,1.2s
F48A Evansville 91.55 28 P P 19 27 35.5 0.0
baz=326,SNR=5.2
L42A Oliver, Polo 91.56 35 P P 19 27 35.9 +0.2
L42A IAmb IAmb 19 27 37.6
comp=Z,18nm,1.1s
GLMI Grayling 91.56 30 P P 19 27 36.7 +1.1
ROSF Rostrenen 91.57 336 eP P 19 27 35.8 +0.3
ROSF pmax pmax
comp=Z,47nm,1.0s
G47A Hillman 91.59 29 P P 19 27 36.3 +0.6
baz=325,SNR=5.6
D51A Lot 18 Range I 91.71 26 P P 19 27 36.7 +0.5
baz=328
FRF La Foret Royal 91.74 328 eP P 19 27 35.6 -0.8
FRF pmax pmax
comp=Z,48nm,1.2s
F49A Sandfield 91.83 28 P P 19 27 37.6 +0.8
baz=326
MFF Saint Martin d 91.97 334 eP P 19 27 37.6 +0.2
MFF pmax pmax
comp=Z,106nm,1.6s
LMR La Mourre 91.98 328 eP P 19 27 36.8 -0.7
LMR pmax pmax
comp=Z,48nm,1.2s
N41A Harden Midland 91.99 36 P P 19 27 36.9 -0.7
N41A IAmb IAmb 19 27 39.6
comp=Z,13nm,1.0s
WMOK Wichita Mounta 92.11 45 P P 19 27 38.7 +0.4
WMOK IAmb IAmb 19 27 40.5
comp=Z,15nm,1.1s
WMOK Wichita Mounta 92.11 45 P P 19 27 38.7 +0.4
WMOK pmax pmax
comp=Z,15nm,1.1s
WMOK Wichita Mounta 92.11 45 P P 19 27 39.2 +0.9
baz=315
E51A G1948 Merrick 92.14 26 P P 19 27 38.3 +0.1
baz=328
D52A ZEK Kipawa Sen 92.15 25 P P 19 27 38.5 +0.2
baz=329
L44A Lake County Fo 92.24 34 P P 19 27 39.2 +0.4
D53A Lac Vacive, Po 92.31 25 P P 19 27 39.6 +0.6
D53A IAmb IAmb 19 27 40.4
comp=Z,40nm,1.7s
D53A Lac Vacive, Po 92.31 25 P P 19 27 39.2 +0.2
baz=330
RJF Les Rejaudoux 92.44 332 eP P 19 27 39.8 +0.2
RJF pmax pmax
comp=Z,20nm,0.9s
I48A Sherman Twp 92.46 30 P P 19 27 40.5 +0.7
baz=325
F51A Arnstein 92.50 27 P P 19 27 39.9 0.0
baz=328
CAF Calviac 92.54 332 eP P 19 27 40.5 +0.4
CAF pmax pmax
comp=Z,17nm,0.9s
D54A Lac Fusel, La 92.61 24 P P 19 27 40.2 -0.1
baz=330
E52A Mattawa 92.66 26 P P 19 27 40.6 0.0
baz=329
TX31 Lajitas Ar. Si 92.78 52 P P 19 27 42.6 +0.9
TX31 IAmb IAmb 19 27 44.3
comp=Z,18nm,0.9s
TX32 Lajitas Array 92.78 52 P P 19 27 42.6 +1.0
TX32 IAmb IAmb 19 27 44.4
comp=Z,18nm,0.9s
TXAR Lajitas Array 92.78 52 P P 19 27 42.9 +1.2
comp=Z,15nm,0.8s,baz=289,slow=3.0,SNR=107
TXAR PKKPbc PKKPbc 19 44 53.4 +2.1
comp=Z,0.2nm,0.5s,baz=134,slow=5.7,SNR=3.6
TXAR Lajitas Array 92.78 52 P P 19 27 42.6 +1.0
M44A Midewin, Midew 92.80 34 P P 19 27 42.0 +0.7
M44A IAmb IAmb 19 27 43.9
comp=Z,27nm,1.2s
F52A Sundridge 92.83 26 P P 19 27 42.2 +0.8
baz=328
HDIL Hopedale 92.86 35 P P 19 27 41.4 -0.3
HDIL IAmb IAmb 19 27 43.1
comp=Z,18nm,0.8s
HDIL Hopedale 92.86 35 P P 19 27 42.3 +0.6
baz=321
W35A Tecumseh 92.91 43 P P 19 27 42.3 +0.3
E53A Dumoine, Ponti 92.93 25 P P 19 27 41.9 +0.1
baz=330
TUL1 Leonard 92.98 42 P P 19 27 43.0 +0.7
TUL1 IAmb IAmb 19 27 44.4
comp=Z,20nm,1.2s
TUL1 Leonard 92.98 42 P P 19 27 42.5 +0.2
baz=317
I49A Point Hope 93.03 29 P P 19 27 43.4 +1.1
I49A IAmb IAmb 19 27 44.7
comp=Z,13nm,0.9s
I49A Point Hope 93.03 29 P P 19 27 42.9 +0.6
baz=326
HPIG 93.04 55 P P 19 27 43.4 +0.4
HPIG IAmb IAmb 19 27 45.8
comp=Z,18nm,0.9s
LFF La Frestale 93.04 332 eP P 19 27 43.2 +0.8
LFF pmax pmax
comp=Z,15nm,0.8s
E54A Lac Daplat, Po 93.05 25 P P 19 27 42.4 0.0
baz=330
ABTX Abilene, Hawle 93.07 47 P P 19 27 42.4 -0.4
ABTX IAmb IAmb 19 27 45.2
comp=Z,17nm,1.1s
ABTX Abilene, Hawle 93.07 47 P P 19 27 43.5 +0.7
baz=314
L46A Eue Claire 93.11 33 P P 19 27 42.4 -0.4
L46A IAmb IAmb 19 28 09.6
comp=Z,16nm,0.7s
D55A Sainte-Anne-du 93.12 23 P P 19 27 43.2 +0.5
baz=331
J48A Bridge Port 93.16 30 P P 19 27 44.0 +1.1
J48A IAmb IAmb 19 27 45.4
comp=Z,16nm,0.8s
J48A Bridge Port 93.16 30 P P 19 27 43.5 +0.6
baz=325
ALGO Algonquin Park 93.16 26 P P 19 27 43.3 +0.4
baz=329
D56A ZEC Mazanza, M 93.33 23 P P 19 27 44.1 +0.4
baz=332
J49A Marlette 93.38 30 P P 19 27 44.1 +0.1
baz=326
G54A Lake Saint Pet 93.62 26 P P 19 27 45.4 +0.3
baz=329
L47A Sherwood 93.62 32 P P 19 27 45.8 +0.7
baz=324
D57A Chemin Vers le 93.63 22 P P 19 27 45.1 0.0
baz=332
LATQ La Tuque 93.65 22 P P 19 27 45.9 +0.8
baz=333
G53A Haliburton 93.66 26 P P 19 27 46.2 +1.0
baz=329
E56A St. Veronique 93.68 23 P P 19 27 45.9 +0.6
baz=332
HHAR Hobbs 93.72 41 P P 19 27 45.8 +0.1
MTLF Montolieu 93.79 331 eP P 19 27 46.0 +0.1
MTLF pmax pmax
comp=Z,206nm,2.6s
CCM Cathedral Cave 93.82 38 P P 19 27 46.7 +0.6
CCM IAmb IAmb 19 27 47.3
comp=Z,6.4nm,0.8s
CCM Cathedral Cave 93.82 38 P P 19 27 46.7 +0.6
CCM pmax pmax
comp=Z,6.0nm,0.8s
CCM Cathedral Cave 93.82 38 P P 19 27 46.7 +0.6
baz=320
I51A Listowel 93.86 28 P P 19 27 46.9 +0.6
baz=327
D58A Chemin du LacG 93.88 22 P P 19 27 46.8 +0.6
baz=333
M47A Cromwell 93.93 33 P P 19 27 47.4 +0.8
baz=324
MGMO Mountain Grove 93.97 39 P P 19 27 47.3 +0.4
MGMO IAmb IAmb 19 27 48.1
comp=Z,8.2nm,0.8s
L48A N Adams 93.98 32 P P 19 27 47.0 +0.2
baz=324
SFIN Lafayette 94.04 34 P P 19 27 47.5 +0.5
baz=323
E57A Chemin Saint G 94.09 23 P P 19 27 48.2 +1.0
baz=332
TRQ Mont Tremblant 94.12 23 P P 19 27 47.3 -0.2
H53A Bobcaygeon 94.15 27 P P 19 27 48.3 +0.9
baz=329
X37A Clayton 94.17 43 P P 19 27 48.6 +0.8
G55A Calabogie 94.23 25 P P 19 27 48.3 +0.4
baz=330
U40A Yellville 94.25 40 P P 19 27 48.0 -0.2
U40A IAmb IAmb 19 27 49.7
comp=Z,16nm,0.9s
U40A Yellville 94.25 40 P P 19 27 48.6 +0.5
baz=319
D59A Saint-Raymond 94.28 21 P P 19 27 48.3 +0.3
baz=334
N47A Urbana 94.28 33 P P 19 27 48.6 +0.4
N47A IAmb IAmb 19 27 49.3
comp=Z,14nm,1.1s
N47A Urbana 94.28 33 P P 19 27 48.2 0.0
baz=324
PLVO Plevna 94.29 25 P P 19 27 48.6 +0.5
E58A La Victoria 94.40 22 P P 19 27 49.3 +0.7
baz=333
JCT Junction City 94.46 48 P P 19 27 49.5 +0.2
JCT IAmb IAmb 19 27 51.1
comp=Z,12nm,0.8s
JCT Junction City 94.46 48 P P 19 27 49.5 +0.2
JCT pmax pmax
comp=Z,12nm,0.9s
JCT Junction City 94.46 48 P P 19 27 50.2 +1.0
baz=314
J52A Paris 94.55 28 P P 19 27 49.5 +0.2
baz=327
M49A Liberty Center 94.56 32 P P 19 27 50.3 +0.9
baz=325
D61A St Aubert, Com 94.58 20 P P 19 27 50.1 +0.7
baz=335
N48A Decatur 94.60 33 P P 19 27 50.6 +1.0
baz=324
D60A Saint Jean D'O 94.63 21 P P 19 27 49.9 +0.3
baz=335
H55A Tweed 94.68 26 P P 19 27 50.3 +0.4
baz=330
OLIL Olney 94.86 36 P P 19 27 51.0 +0.1
N49A Columbus Grove 94.92 32 P P 19 27 51.7 +0.6
N49A IAmb IAmb 19 28 20.0
comp=Z,6.2nm,0.7s
N49A Columbus Grove 94.92 32 P P 19 27 51.4 +0.3
baz=325
G57A Newington 94.96 24 P P 19 27 51.8 +0.6
baz=332
E60A Ste Agathe de 94.97 21 P P 19 27 51.7 +0.5
baz=334
H56A Elgin 94.97 25 P P 19 27 51.7 +0.5
baz=331
D62A Allapoint, All 95.01 19 P P 19 27 51.8 +0.5
baz=336
F59A Saint Guilaume 95.02 22 P P 19 27 52.4 +1.0
baz=333
O48A Farmland 95.03 33 P P 19 27 52.4 +0.8
baz=324
MIAR Mount Ida 95.21 42 P P 19 27 53.2 +0.7
MIAR IAmb IAmb 19 27 54.5
comp=Z,7.5nm,0.9s
MIAR Mount Ida 95.21 42 P P 19 27 53.2 +0.7
MIAR pmax pmax
comp=Z,8.0nm,0.9s
MIAR Mount Ida 95.21 42 P P 19 27 53.3 +0.7
baz=318
PBMO Poplar Bluff 95.21 38 P P 19 27 53.2 +0.7
PBMO IAmb IAmb 19 31 33.7
comp=Z,7.4nm,0.8s
G58A Ormstown 95.23 23 P P 19 27 53.4 +1.0
baz=332
J54A Appleton 95.24 27 P P 19 27 53.2 +0.7
baz=329
ETSF Etsaut 95.27 332 eP P 19 27 54.2 +1.5
ETSF pmax pmax
comp=Z,96nm,1.8s
D63A Stockholm 95.31 19 P P 19 27 53.5 +0.8
baz=337
WHAR Wooly Hollow 95.36 41 P P 19 27 53.5 +0.4
WHAR IAmb IAmb 19 27 54.8
comp=Z,8.5nm,1.0s
LCAR Lake Charles 95.37 39 P P 19 27 53.6 +0.4
LCAR IAmb IAmb 19 30 41.8
comp=Z,4.5nm,0.6s
H57A Richville 95.39 25 P P 19 27 53.7 +0.6
baz=331
F61A St Evariste 95.46 21 P P 19 27 54.4 +0.9
baz=335
W41B Gary Mavity, V 95.47 41 P P 19 27 53.6 -0.1
baz=319
L53A Girard 95.72 29 P P 19 27 55.5 +0.8
baz=328
I57A Carthage 95.75 25 P P 19 27 54.7 -0.1
baz=331
E63A Oxbow 95.79 19 P P 19 27 56.2 +1.2
baz=337
O50A Cable 95.80 32 P P 19 27 56.0 +0.8
baz=325
Q48A North Vernon 95.83 34 P P 19 27 55.9 +0.6
baz=324
H58A Gabriels 95.84 24 P P 19 27 55.5 +0.3
baz=331
L54A Sinclairville 95.86 28 P P 19 27 56.0 +0.7
baz=328
K55A Perry 95.92 27 P P 19 27 56.1 +0.4
baz=329
G61A St-Isidore-de- 95.92 22 P P 19 27 56.6 +1.0
baz=334
E64A Bridgewater 95.95 19 P P 19 27 56.9 +1.2
baz=337
M53A WI Miller and 95.98 30 P P 19 27 56.8 +0.8
baz=327
ACSO Alum Creek Sta 96.01 32 P P 19 27 56.7 +0.6
baz=326
J57A Williamstown 96.09 26 P P 19 27 57.1 +0.7
baz=331
WCI Wyandotte Cave 96.13 35 P P 19 27 57.2 +0.5
baz=323
Q49A Aurora 96.16 34 P P 19 27 57.5 +0.7
baz=324
H60A Morristown 96.20 23 P P 19 27 57.3 +0.4
baz=333
G62A West of Eustis 96.28 21 P P 19 27 58.0 +0.7
baz=335
M54A Oil Creek Stat 96.34 29 P P 19 27 57.8 +0.2
baz=328
J58A Remsen 96.39 25 P P 19 27 58.4 +0.6
baz=331
N53A Lisbon 96.45 30 P P 19 27 58.1 0.0
baz=327
I59A Olmsteadville 96.49 24 P P 19 27 58.1 -0.1
baz=332
K57A Scipio Center 96.50 26 P P 19 27 58.2 -0.1
baz=330
J59A Piesco 96.57 25 P P 19 27 58.5 -0.1
baz=332
KEST Kesra 96.60 322 P P 19 27 58.8 -0.2
comp=Z,4.8nm,0.7s,baz=357,slow=5.3,SNR=6.0
KEST LR LR 20 16 22.5
comp=Z,291nm,18.2s,baz=328,slow=38
L56A Greenwood 96.62 27 P P 19 27 59.3 +0.5
baz=330
I60A Shoreham 96.64 24 P P 19 27 59.4 +0.5
baz=333
N54A Moraine State 96.67 29 P P 19 27 59.2 +0.2
baz=328
H62A Milan 96.67 22 P P 19 27 59.5 +0.5
baz=334
T47A Sharon Grove 96.72 36 P P 19 28 00.1 +0.7
O53A New Philadelph 96.76 31 P P 19 27 59.6 +0.1
baz=327
G64A Maxfield 96.77 20 P P 19 27 59.9 +0.5
baz=336
K58A Earlville 96.78 26 P P 19 27 59.7 +0.1
baz=331
Q51A Peebles 96.84 33 P P 19 27 59.2 -0.7
Q51A IAmb IAmb 19 28 01.6
comp=Z,7.3nm,0.8s
Q51A Peebles 96.84 33 P P 19 28 00.3 +0.4
baz=325
M56A Emporium 96.94 28 P P 19 28 00.1 -0.2
baz=329
S49A Springfield 96.96 35 P P 19 28 00.9 +0.5
baz=324
K59A Cooperstown 97.05 25 P P 19 28 01.0 +0.2
baz=332
BINY Binghamton 97.15 26 P P 19 28 01.3 0.0
baz=331
H64A Troy 97.19 21 P P 19 28 01.9 +0.6
baz=336
I63A Otisfield 97.32 22 P Pdif 19 28 02.8 +0.8
baz=335
T49A Edmonton 97.39 35 P P 19 28 02.9 +0.6
baz=324
S50A Richmond 97.46 34 P Pdif 19 28 03.3 +0.6
baz=324
M57A Sunshine Farm, 97.47 27 P P 19 28 03.3 +0.6
baz=330
L59A Walton 97.50 26 P P 19 28 03.3 +0.4
baz=331
O55A Ligonier 97.58 29 P Pdif 19 28 03.9 +0.7
baz=328
P54A Burton 97.61 30 P Pdif 19 28 04.3 +0.9
baz=327
K61A Williamstown 97.69 24 P Pdif 19 28 04.4 +0.7
baz=333
SSPA Standing Stone 97.78 28 P P 19 28 04.7 +0.6
baz=329
T50A Nancy 97.78 35 P P 19 28 04.7 +0.5
baz=324
N57A Milroy 97.81 28 P P 19 28 04.6 +0.4
baz=330
S51A Beattyville 97.86 34 P P 19 28 04.9 +0.4
baz=325
L60A Shokan 97.97 25 P P 19 28 05.0 +0.1
baz=332
Q54A Coxs Mills 97.97 31 P Pdif 19 28 05.6 +0.6
baz=327
O57A Amberson 98.25 28 P P 19 28 05.3 -0.9
baz=329
P56A Dayton Farm, R 98.37 29 P Pdif 19 28 07.4 +0.7
baz=328
ESDC Sonseca Array 99.35 333 LR LR 20 17 14.6
comp=Z,185nm,19.5s,baz=265,slow=38
KMBO Kilima Mbogo 101.20 276 iP Pdif 19 28 21.7 +1.6
KMBO pmax pmax
comp=Z,1.0nm,0.4s
MAW Mawson 116.45 205 PKP PKPdf 19 33 11.7 +0.6
comp=Z,2.4nm,0.7s,baz=124,slow=3.6,SNR=3.8
MAW Mawson 116.45 205 PKPdf 19 33 11.5 +0.5
TOA0 Torodi Ar. Sit 118.50 313 PKPdf 19 33 16.7 0.0
TORD Torodi Ar. Bea 118.50 313 PKP PKPdf 19 33 16.6 -0.1
comp=Z,5.1nm,0.6s,baz=22,slow=1.7,SNR=38
TORD PP PP 19 34 32.5 -1.5
comp=Z,7.8nm,1.2s,baz=31,slow=4.7,SNR=8.0
TORD PKKPbc PKKPbc 19 43 34.9 +2.1
comp=Z,0.5nm,0.5s,baz=227,slow=2.5,SNR=3.5
TORD Torodi Ar. Bea 118.50 313 PKPdf 19 33 16.7 0.0
LBTB Lobatse 123.10 260 PKPdf 19 33 25.6 +0.2
LBTB Lobatse 123.10 260 PKIKP PKPdf 19 33 25.6 +0.2
QSPA South Pole Qui 123.90 180 PKPdf 19 33 25.2 -0.3
BOSA Boshof 124.87 257 PKP PKPdf 19 33 29.3 +0.6
comp=Z,4.8nm,0.6s,baz=129,slow=0.8,SNR=17
BOSA Boshof 124.87 257 PKPdf 19 33 29.1 +0.5
BOSA Boshof 124.87 257 PKIKP PKPdf 19 33 29.1 +0.5
DBIC Dimbokro 127.54 314 PKP PKPdf 19 33 34.2 +0.1
comp=Z,5.6nm,0.6s,baz=189,slow=2.1,SNR=20
DBIC PP PP 19 35 32.8 -2.1
comp=Z,7.2nm,1.0s,baz=25,slow=8.2,SNR=3.6
DBIC Dimbokro 127.54 314 PKPdf 19 33 33.6 -0.4
DBIC Dimbokro 127.54 314 PKIKP PKPdf 19 33 33.7 -0.4
TIC Toumodi 127.66 314 ePKP1 PKPdf 19 33 34.7 +0.4
comp=Z,8.0nm,0.4s
KIC Kosan Boka 127.72 314 ePKP1 PKPdf 19 33 34.6 +0.2
comp=Z,16nm,0.8s
LIC Lamto 128.00 314 ePKP1 PKPdf 19 33 35.4 +0.4
comp=Z,20nm,0.6s
SDV Santo Domingo 128.26 40 PKP PKPdf 19 33 36.5 +0.8
comp=Z,17nm,0.8s,baz=12,slow=2.3,SNR=9.5
SDV Santo Domingo 128.26 40 PKPdf 19 33 35.8 +0.1
ROSC El Rosal 129.46 47 PKP PKPdf 19 33 39.3 +1.1
comp=Z,6.0nm,0.3s,baz=158,slow=13,SNR=4.4
ROSC El Rosal 129.46 47 PKPdf 19 33 38.4 +0.1
VNA2 Neumayer--Watz 139.24 196 PKPdf PKPdf 19 33 46.9 -7.3
baz=115,slow=2.4
VNA3 Neumayer Olymp 139.50 195 PKPdf PKPdf 19 33 51.7 -3.0
ASCN Ascension 144.82 312 PKPab 19 34 05.3 +0.3
SAML Samuel 147.08 46 PKPdf 19 34 10.3 +0.6
SAML Samuel 147.08 46 PKP2 PKPdf 19 34 10.3 +0.6
LPAZ La Paz 149.09 62 PKPbc PKPbc 19 34 18.8 +0.8
comp=Z,17nm,0.6s,baz=2.2,slow=6.6,SNR=31
LPAZ La Paz 149.09 62 PKPdf 19 34 15.1 +1.4
PB11 IPOC Station P 150.04 69 PKPdf 19 34 15.4 +0.8
GO01 Chusmiza 150.35 68 PKiKP 19 34 21.9 +0.3
PB01 IPOC Station P 150.88 71 PKPdf 19 34 16.1 +0.3
PB04 IPOC Station P 151.03 74 PKPbc 19 34 22.7 +0.8
RCBR Riachuelo 151.56 351 PKPbc PKPbc 19 34 23.8 +0.5
comp=Z,17nm,0.7s,baz=346,slow=3.4,SNR=10.0
RCBR Riachuelo 151.56 351 PKPbc 19 34 23.2 -0.1
RCBR Riachuelo 151.56 351 PKIKP PKPbc 19 34 23.2 -0.1
LVC Limon Verde 152.16 73 PKPbc PKiKP 19 34 26.2 +1.1
comp=Z,18nm,0.7s,baz=287,slow=3.4,SNR=10
LVC Limon Verde 152.16 73 PKiKP 19 34 25.9 +0.8
LVC Limon Verde 152.16 73 PKIKP PKiKP 19 34 25.9 +0.8
GO02 Mina Guanaco 152.83 79 PKiKP 19 34 27.1 +0.8
GO03 Copiap 153.28 84 PKiKP 19 34 27.7 +0.8
GO04 Tololo Observa 153.66 90 PKPbc 19 34 28.1 +0.4
SIV San Ignacio 153.78 52 PKP PKiKP 19 34 21.3 +1.2
comp=Z,4.7nm,0.9s,baz=352,slow=0.5,SNR=21
SIV PKPbc PKPbc 19 34 28.5 +0.5
comp=Z,7.4nm,0.8s,baz=280,slow=2.1,SNR=16
PLCA Paso Flores 154.93 114 PKPbc PKiKP 19 34 30.6 +0.7

comp=Z,1.9nm,0.7s,baz=270,slow=2.1,SNR=10
PLCA Paso Flores 154.93 114 PKPbc 19 34 30.2 +0.3
PLCA Paso Flores 154.93 114 PKIKP **PKPbc 19 34 30.2 +0.3**
CFA Coronel Fontan 156.16 92 PKPab **PKPab 19 34 52.7 +1.5**
comp=Z,20nm,0.7s,baz=270,slow=4.6,SNR=26
CPUP Villa Florida 163.11 67 PKP **PKPdf 19 34 32.3 +1.4**
comp=Z,0.9nm,0.3s,baz=336,slow=4.1,SNR=3.8

IDC 10 19:31:56.5±0.8, 2.°51S×121.°65E, h0km, mb3.9/9, mb1 4.1/11, mb1mx3.9/43, mbtmp4.0/11, ML4.3/2, MS3.8/4, Ms1 3.8/4, ms1mx3.2/35, Error ellipse: s-maj=21.7km s-min=15.4km az=60.0
DJA 10 19:31:58.1±0.2, 3.°S±2.°×12.°2E±.°, h10km, M4.7/14, mB5.2/3, mb5.0/4, MLv4.6/14, Mw(mB)4.5/3
NEIC 10 19:32:01.3±1.1, 2.°45S±0.°06×121.°56E±0.°06, h40km±9km, mb4.5/12, Error ellipse: s-maj=10.0km s-min=7.5km az=122.0
ISC 10 19:31:57.6±2.6, 2.°49S±0.°05×121.°56E±0.°05, h8km±17km, n61, σ1.°11/62, mb4.3/14, MS3.8/4, Sulawesi

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
APSI Ampana 1.57 3 P **Pn 19 32 26.3 +0.5**
APSI S **Sg 19 32 48.9 +0.7**
KDI Kendari 1.80 144 P **Pn 19 32 28.6 -0.3**
TTSI Tana Toraja 1.82 252 P **Pn 19 32 27.4 -1.8**
TTSI S **Sn 19 32 53.1 +0.5**
LUWI Luwuk 1.88 40 P **Pn 19 32 29.8 -0.3**
LUWI S **Sb 19 32 56.5 +0.6**
LUWI Luwuk 1.88 40 Pn 19 32 29.6 -0.4
SPSI Sidrap Palu 2.31 231 P **Pn 19 32 36.1 +0.2**
SPSI S **Sn 19 33 03.5 -1.1**
BNSI Bone 2.39 217 P **Pn 19 32 37.5 +0.5**
BNSI S **Sn 19 33 07.8 +1.3**
MRSI Marisa 2.97 7 P **Pn 19 32 45.6 +0.5**
KAPI Kappang 3.09 216 Pn **Pn 19 32 47.7 +1.1**
32nm,0.3s,baz=353,slow=4.5,SNR=56
KAPI Sn **Sn 19 33 24.8 +1.0**
32nm,0.3s,baz=331,slow=22,SNR=6.5
KAPI Kappang 3.09 216 Pn 19 32 47.3 +0.6
BKSI Bulukumba 3.15 207 P **Pn 19 32 46.9 -0.7**
MPSI Mapaga 3.27 329 P **Pn 19 32 49.4 +0.3**
KMSI Cibinong 3.89 38 P **Pn 19 32 58.9 +1.2**
SANI Sanana 4.45 84 P **Pn 19 33 04.2 -1.2**
SMKI Samarinda 4.80 295 P Pn 19 32 56.4 -14
BKB Balikpapan 4.82 285 Pn 19 33 12.1 +1.6
LBMI Labuha 6.22 73 P **Pn 19 33 30.1 +0.4**
0.5nm2μm128nm,0.9s
TNTI Ternate 6.65 61 P **Pn 19 33 36.9 +1.2**
TNTI Ternate 6.65 61 Pn 19 33 36.5 +0.9
SOEI Soe 7.70 160 Pn 19 33 52.0 +1.7
SIJI Sorong 9.84 81 Pn **Pn 19 34 20.1 +0.7**
2.7nm,0.3s,baz=227,slow=9.1,SNR=19
SIJI Sn **Sn 19 36 10.5 +0.3**
0.8nm,0.3s,baz=111,slow=17,SNR=3.6
SBUM Sibu 10.55 298 Pn 19 34 28.7 -0.3
FAKI Fak Fak 10.69 93 Pn **Pn 19 34 29.7 -1.3**
KSM Kuching 11.92 289 Pn **Pn 19 34 45.8 -2.1**
FITZ Fitzroy Crossi 16.02 166 Pn **P 19 35 47.2 +0.4**
0.2nm,0.3s,baz=59,slow=7.8,SNR=4.1
FITZ Fitzroy Crossi 16.02 166 IAmb IAmb 19 36 40.5
comp=Z,66nm,1.9s
WB0 Warramunga Arr 21.26 145 P **P 19 36 44.5 0.0**
WB0 IAmb IAmb 19 36 47.3
comp=Z,24nm,1.2s
WRA Warramunga Arr 21.37 145 P **P 19 36 45.1 -0.5**
comp=Z,2.6nm,0.8s,baz=323,slow=7.1,SNR=12
WRA Warramunga Arr 21.37 145 IAmb IAmb 19 36 53.0
comp=Z,0.3nm,0.8s
WR0 Warramunga Arr 21.50 145 P **P 19 36 46.5 -0.6**
IPM Ipoh 21.66 289 P **P 19 36 49.8 +1.0**
IPM IAmb IAmb 19 36 58.1
comp=Z,14nm,0.9s
KULM Kulim 22.27 290 P **P 19 36 54.7 -0.8**
KULM IAmb IAmb 19 37 01.0
comp=Z,29nm,1.4s
RPSI Rantau Prapat 23.21 283 P **P 19 37 05.5 +0.2**
PSI Prapat 23.23 283 P **P 19 37 06.7 +1.0**
comp=Z,16nm,0.9s,baz=83,slow=9.9,SNR=6.8
AS31 Alice Springs 24.20 151 P **P 19 37 15.1 +0.2**
ASAR Alice Springs 24.20 151 P **P 19 37 14.6 -0.3**
comp=Z,2.2nm,0.7s,baz=319,slow=8.7,SNR=16
ASAR Alice Springs 24.20 151 P **P 19 37 14.7 -0.2**
CMAR Chiang Mai Arr 30.48 314 P **P 19 38 12.6 +1.3**
comp=Z,0.7nm,0.7s,baz=141,slow=7.2,SNR=6.7
CMAR LR LR 19 51 45.1
comp=Z,86nm,19.4s,baz=110,slow=39
NWAO Narrogin (SRO) 30.55 187 LR LR 19 50 57.9
comp=Z,168nm,18.8s,baz=42,slow=37
NJ2 Nanjing 34.45 356 eP **P 19 38 46.9 +1.1**
STKA Stephens Creek 34.79 149 P **P 19 38 47.4 -1.5**
comp=Z,2.4nm,0.6s,baz=320,slow=11,SNR=7.2
TAPN Taplejung 44.09 315 eP **P 19 40 07.2 +0.3**
comp=Z,19nm,1.1s
HHC Hu-ho-hao-te 44.09 349 eP **P 19 40 05.8 -0.6**
RAMN Ramite 44.65 313 eP **P 19 40 13.7 +2.4**
comp=Z,23nm,1.0s
GUN Gumba 45.73 314 eP **P 19 40 20.0 0.0**
PKIN Phulchoki 45.89 313 eP **P 19 40 22.4 +1.2**
comp=Z,6.0nm,0.7s
DMN Daman 46.12 313 eP **P 19 40 24.3 +1.3**
comp=Z,8.8nm,0.7s
KOLN Koldanda 47.31 312 eP **P 19 40 34.5 +2.2**
comp=Z,10nm,0.7s
USRK Ussuriysk Ar. 47.41 10 P **P 19 40 31.6 -0.9**
comp=Z,5.1nm,0.7s,baz=144,slow=40,SNR=3.9
DANN Dangsing 47.52 313 eP **P 19 40 34.0 0.0**
comp=Z,26nm,0.7s
SONM Songino Array 51.85 347 P **P 19 41 07.5 +1.0**
comp=Z,0.4nm,0.9s,baz=149,slow=6.7,SNR=3.4
WMQ Urumqi 55.20 331 eP **P 19 41 31.2 +0.1**
MK31 Makanchi Array 60.00 330 P **P 19 42 03.7 -1.0**
MK31 IAmb IAmb 19 43 01.1
comp=Z,6.2nm,1.6s
MKAR Makanchi Array 60.00 330 P **P 19 42 04.4 -0.4**
comp=Z,0.4nm,0.6s,baz=130,slow=6.8,SNR=6.4
MKAR Makanchi Array 60.00 330 P **P 19 42 03.5 -1.3**
KBL Kabul 61.48 312 P **P 19 42 12.5 -2.8**
KBL IAmb IAmb 19 42 43.9
comp=Z,4.3nm,1.0s
ZALV Zalesovo Beam 64.00 337 P **P 19 42 31.7 +0.2**
comp=Z,0.6nm,0.5s,baz=113,slow=3.7,SNR=3.9
ZALV Zalesovo Beam 64.00 337 P **P 19 42 30.3 -1.1**
VNDA Vanda 78.00 172 LR LR 20 16 52.2
comp=Z,118nm,21.9s,baz=352,slow=35
BOSA Boshof 94.35 241 LR LR 20 22 37.0
comp=Z,50nm,21.0s,baz=55,slow=32
TORD Torodi Ar. Bea 119.63 284 PKP **PKiKP 19 50 51.5 +2.2**
comp=Z,0.3nm,0.5s,baz=37,slow=2.4,SNR=3.7

IDC 10 19:43:29.6±1.9, 34.°23N×140.°38E, h93km±12km, mb3.4/4, mb1 3.5/7, mb1mx3.2/38, mbtmp3.7/7, Error ellipse: s-maj=39.6km s-min=7.7km az=79.0
JMA 10 19:43:30.9±0.1, 34.°21N×140.°14E, h85km±2km, M3.4
ISC 10 19:43:30.2±0.9, 34.°21N±0.°04×140.°15E±0.°07, h92km±7km, n25, σ1.°01/34, mb3.8/4, 5C-3D, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JMKN Mikurajimanish 0.56 236 ⇑P **Pn 19 43 45.1 +0.5**
JMKN S **Sn 19 43 57.0 -0.1**
BSO3 Boso 3 0.66 27 ⇑P **Pn 19 43 47.0 +0.8**
JNIO Niijimaoohara 0.74 282 P **Pn 19 43 47.6 +0.4**
JTHY Toshimahigashi 0.78 294 P **Pn 19 43 48.1 +0.5**
JIM2 Oshima 3 0.78 311 ⇑P **Pn 19 43 47.8 +0.1**
JIM2 S **Sn 19 44 00.8 +0.1**
BSO4 Boso 4 0.79 11 ⇑P **Pn 19 43 48.8 +1.1**
BSO1 Boso 1 0.82 57 P **Pn 19 43 48.2 +0.8**
BSO1 X 19 44 02.7
JKO Kozu shima 0.84 269 P **Pn 19 43 48.4 +0.2**
JHJ Hachijo jima 2 1.13 196 P **Pn 19 43 52.3 +0.8**
157nm,0.3s,baz=331,slow=21,SNR=22
JHJ S **Sn 19 44 08.7 +1.2**
335nm,0.3s,baz=250,slow=22,SNR=15
JHJ2 Mitsune 1.13 194 P **Pn 19 43 52.3 +0.8**
KTJ3 Kamata3 1.14 309 ⇓P **Pn 19 43 52.0 +0.3**
KTJ3 S **Sn 19 44 08.0 +0.2**
JIZS Izushimoda 1.16 296 ⇑P **Pn 19 43 52.4 +0.5**
JIZS S **Sn 19 44 08.4 +0.2**
JOD2 Odawara 2 1.36 321 P **Pn 19 43 54.8 +0.4**
JOD2 S **Sn 19 44 12.9 +0.3**
JFNN Fujinakano 1.55 310 ⇓P **Pn 19 43 57.8 +1.1**
JFNN eS **Sn 19 44 18.0 +1.2**
JAOM Aogashimamukai 1.77 191 P **Pn 19 44 01.1 +1.6**
SHZ3 Shizuoka 3 1.81 299 P **Pn 19 44 01.4 +1.4**
JYN Shimob 1.84 315 ⇓P **Pn 19 44 01.6 +1.2**
MJAR Matsushiro Arr 2.81 326 P **Pn 19 44 14.4 +1.1**
1.8nm,0.3s,baz=94,slow=28,SNR=81
MJAR S **Sn 19 44 47.7 +1.3**
0.6nm,0.3s,baz=1.6,slow=10,SNR=4.7
MAT Matsushiro 2.81 326 P **Pn 19 44 14.5 +1.2**
MAT S **Sn 19 44 48.0 +1.6**
ASAJ Asahikawa 10.07 10 P **Pn 19 45 50.1 -1.7**
0.4nm,0.3s,baz=197,slow=14,SNR=6.3
KLR Kul'dur 16.25 340 P **Pn 19 47 10.9 -1.9**
0.4nm,0.3s,baz=152,slow=9.4,SNR=9.2
MKAR Makanchi Array 44.80 304 P **P 19 51 35.3 +0.5**
0.6nm,0.6s,baz=84,slow=9.6,SNR=11
WRA Warramunga Arr 54.13 187 P **P 19 52 44.6 -1.3**
0.7nm,0.5s,baz=3.4,slow=7.6,SNR=9.2
ASAR Alice Springs 57.86 187 P **P 19 53 12.3 -0.2**
0.3nm,0.6s,baz=20,slow=10,SNR=8.6
FINES FINESS Array B 70.83 332 P **P 19 54 36.7 +0.1**
1.7nm,1.0s,baz=64,slow=6.5,SNR=4.0

IDC 10 19:59:21.7±0.7, 13.°54N×146.°35E, h0km, mb4.0/15, mb1 4.2/15, mb1mx4.0/36, mbtmp4.0/15, MS3.4/4, Ms1 3.4/4, ms1mx3.0/29, Error ellipse: s-maj=18.3km s-min=15.4km az=116.0
NEIC 10 19:59:25.1±1.5, 13.°6N±0.°1×146.°34E±0.°08, h25km±6km, mb4.6/13, Error ellipse: s-maj=18.6km s-min=5.5km az=146.0
ISC 10 19:59:25.4±0.6, 13.°5N±0.°1×146.°34E±0.°08, h26km, n58, σ0.°79/57, mb4.2/21, MS3.5/4, South of Mariana Islands

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GUMO Guam 1.43 272 Pn **Pn 19 59 49.7 +0.1**
81nm,0.3s,baz=38,slow=2.7,SNR=51
GUMO Sn **Sb 20 00 09.4 +0.2**
70nm,0.3s,baz=180,slow=20,SNR=9.9
GUMO Guam 1.43 272 Pn 19 59 49.1 -0.5
SIJI Sorong 20.69 227 P Pn 20 04 05.5 -0.7
8.7nm,0.9s,baz=198,slow=20,SNR=2.8
FAKI Fak Fak 21.51 222 P **P 20 04 13.7 +1.2**
FAKI IAmb IAmb 20 04 31.2
comp=Z,38nm,1.1s
MJAR Matsushiro Arr 24.04 344 LR LR 20 13 06.0
comp=Z,129nm,19.0s,baz=195,slow=34
JNU Nakatsue 24.06 327 P **P 20 04 38.4 -0.2**
comp=Z,13nm,1.0s,baz=124,slow=2.3,SNR=4.4
JNU Nakatsue 24.06 327 P **P 20 04 38.3 -0.4**
KSRS Korea Array 28.93 329 P **P 20 05 21.7 -0.8**
comp=Z,1.8nm,0.6s,baz=155,slow=10,SNR=6.6
WRA Warramunga Arr 35.30 200 P **P 20 06 17.1 -1.3**
comp=Z,2.5nm,1.0s,baz=21,slow=9.5,SNR=5.5
ASAR Alice Springs 38.92 198 P **P 20 06 48.8 -0.4**
comp=Z,0.7nm,0.7s,baz=22,slow=8.7,SNR=8.1
ASAR Alice Springs 38.92 198 P **P 20 06 48.5 -0.7**
PBKT Sadao Pong 43.85 280 P **P 20 07 29.9 +0.2**
PBKT IAmb IAmb 20 07 39.3
comp=Z,4.1nm,0.9s
STKA Stephens Creek 45.38 186 P **P 20 07 42.2 +0.4**
comp=Z,0.5nm,0.4s,baz=4.8,slow=12,SNR=3.5
STKA Stephens Creek 45.38 186 P **P 20 07 41.5 -0.2**
CMAR Chiang Mai Arr 45.72 283 P **P 20 07 45.5 +0.7**
comp=Z,1.5nm,0.6s,baz=83,slow=6.1,SNR=12
CMAR LR LR 20 27 34.4
comp=Z,13nm,18.0s,baz=195,slow=37
SONM Songino Array 47.60 324 P **P 20 07 59.7 +0.5**
comp=Z,0.9nm,0.8s,baz=150,slow=6.6,SNR=7.0
SONM PcP **PcP 20 09 31.0 +2.3**
comp=Z,0.6nm,0.7s,baz=118,slow=0.9,SNR=3.6
SONM Songino Array 47.60 324 P **P 20 07 57.2 -2.0**
TAPN Taplejung 56.17 294 eP **P 20 09 03.4 -0.3**
comp=Z,7.0nm,0.6s
ODAN Odare 56.45 293 eP **P 20 09 05.9 +0.3**
RAMN Ramite 57.16 293 eP **P 20 09 10.9 +0.3**
JIRN Jiri 57.53 294 eP **P 20 09 13.4 0.0**
comp=Z,15nm,0.7s
GUN Gumba 57.81 295 eP **P 20 09 15.5 +0.1**
comp=Z,18nm,0.8s
PKI Pulchoki 58.22 294 eP **P 20 09 17.8 -0.4**
comp=Z,7.1nm,0.9s
PKIN Phulchoki 58.23 294 eP **P 20 09 17.8 -0.4**
KKN Kakani 58.34 294 eP **P 20 09 18.7 -0.2**
DMN Daman 58.49 294 eP **P 20 09 19.8 -0.2**
GKN Gorkha 58.91 295 eP **P 20 09 22.6 -0.2**
DANN Dangsing 59.69 295 eP **P 20 09 28.2 -0.2**
comp=Z,18nm,0.7s
KOLN Koldanda 59.83 294 eP **P 20 09 29.0 -0.2**
comp=Z,14nm,0.8s
ZAA0 Zalesovo Array 62.50 324 P **P 20 09 46.9 +0.3**
ZAA0 IAmb IAmb 20 10 05.5
comp=Z,15nm,1.9s
ZALV Zalesovo Beam 62.50 324 P **P 20 09 46.2 -0.3**
comp=Z,2.0nm,0.6s,baz=100,slow=7.7,SNR=10
ZALV PcP **PcP 20 10 25.2 -0.4**
comp=Z,1.5nm,0.7s,baz=100,slow=6.0,SNR=3.8
ZALV Zalesovo Beam 62.50 324 P **P 20 09 45.5 -1.1**
MK31 Makanchi Array 62.52 316 P **P 20 09 47.7 +0.8**
MKAR Makanchi Array 62.52 316 P **P 20 09 47.4 +0.4**
comp=Z,1.2nm,0.6s,baz=90,slow=8.3,SNR=20
MKAR Makanchi Array 62.52 316 P **P 20 09 47.1 +0.2**
MAKZ Makanchi 62.73 316 P **P 20 09 48.7 +0.4**
MAKZ IAmb IAmb 20 09 51.9
comp=Z,2.6nm,0.8s
KDAK Kodiak Island 63.36 32 P **P 20 09 54.4 +2.1**
comp=Z,42nm,1.3s,baz=252,slow=6.4,SNR=3.0
KDAK Kodiak Island 63.36 32 P **P 20 09 51.8 -0.4**
KURK Kurchatov 65.54 320 P **P 20 10 06.3 -0.3**
KURK IAmb IAmb 20 10 07.6
comp=Z,6.9nm,0.9s
ILAR Eielson Array 68.00 25 P **P 20 10 21.9 -0.1**
comp=Z,0.4nm,0.5s,baz=251,slow=5.5,SNR=6.9
ILAR Eielson Array 68.00 25 P **P 20 10 21.6 -0.5**
NIL Nilore 68.63 301 P **P 20 10 26.3 -0.4**
NIL IAmb IAmb 20 10 28.3
comp=Z,8.5nm,1.0s
INK Inuvik 73.87 22 P **P 20 10 58.0 +0.4**
comp=Z,1.7nm,0.8s,baz=260,slow=11,SNR=6.5
GEYT Alibeck 80.43 307 P **P 20 11 36.6 +1.4**
comp=Z,1.3nm,0.8s,baz=281,slow=2.3,SNR=3.1
GEYT Alibeck 80.43 307 P **P 20 11 35.3 +0.2**
YKA Yellowknife Ar 82.25 28 P **P 20 11 44.9 +0.7**
comp=Z,0.3nm,0.4s,baz=284,slow=5.2,SNR=6.0
PFO Pinyon Flats O 88.49 56 LR LR 20 49 14.7
comp=Z,20nm,18.5s,baz=136,slow=34
PDAR Pinedale Array 90.98 46 LR LR 20 46 35.5
comp=Z,22nm,19.9s,baz=16,slow=31
SRU San Rafael Swe 91.48 49 P **P 20 12 29.4 -0.7**
FINES FINESS Array B 91.81 335 P **P 20 12 29.6 -1.2**
comp=Z,1.5nm,0.6s,baz=45,slow=3.0,SNR=7.2
FINES FINESS Array B 91.81 335 P **P 20 12 29.2 -1.6**
DBIC Dimbokro 145.05 303 PKPbc **PKPdf 20 19 01.2 -0.3**
comp=Z,4.0nm,0.8s,baz=13,slow=4.0,SNR=5.4
DBIC Dimbokro 145.05 303 PKPdf 20 19 01.0 -0.5
KIC Kosan Boka 145.13 303 ePKP2 **PKPdf 20 19 02.1 +0.4**
comp=Z,8.2nm,0.8s
TIC Toumodi 145.20 303 ePKP2 **PKPdf 20 19 02.4 +0.6**
comp=Z,7.4nm,0.3s
LIC Lamto 145.45 303 ePKP2 **PKPab 20 19 03.3 +0.9**
comp=Z,8.0nm,0.6s
LPAZ La Paz 146.60 99 PKPbc **PKPab 20 19 06.9 -0.5**
comp=Z,1.0nm,0.5s,baz=28,slow=7.2,SNR=2.2
LPAZ La Paz 146.60 99 PKPab 20 19 06.7 -0.7

IDC 10 20:22:28.9±9.8, 15.°44S×177.°64W, h406km±105km, mb3.3/8, mb1 3.6/8, mb1mx3.4/30, mbtmp4.0/8, Error ellipse: s-maj=67.9km s-min=28.9km az=156.0
NEIC 10 20:22:31.4±1.8, 15.°7S±0.°2×177.°7W±0.°1, h444km±8km, mb4.6/23, Error ellipse: s-maj=27.7km s-min=13.3km az=146.0
ISC 10 20:22:31.9±0.6, 15.°7S±0.°1×177.°6W±0.°2, h450km, n42, σ1.°00/41, mb4.5/20, 1D, Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSVF Nonsavu 4.59 244 P **P 20 23 52.4 -0.1**
BKZ Black Stump Fm 23.91 191 P **P 20 27 08.5 0.0**
QRZ Quartz Range 26.42 197 P **P 20 27 30.4 -0.4**
THZ Tophouse 27.20 196 P **P 20 27 36.7 -0.9**
THZ IAmb IAmb 20 27 42.7
comp=Z,37nm,1.5s
KHZ Kahutara 27.66 194 P **P 20 27 39.1 -2.5**
LTZ Lake Taylor 28.32 196 P **P 20 27 45.1 -2.4**
LTZ IAmb IAmb 20 27 49.5
comp=Z,49nm,1.9s
FOZ Fox Glacier 29.71 199 P **P 20 27 58.2 -1.3**
MLZ Mavora Lakes 31.89 199 P **P 20 28 18.7 +0.3**
MLZ IAmb IAmb 20 29 16.3
comp=Z,41nm,1.6s
TOO Toolangi 39.13 229 P **P 20 29 19.1 -0.1**
TOO IAmb IAmb 20 30 31.3
comp=Z,33nm,1.6s
STKA Stephens Creek 40.35 239 P **P 20 29 30.5 +1.4**
comp=Z,1.1nm,0.4s,baz=88,slow=9.4,SNR=5.4
STKA Stephens Creek 40.35 239 P **P 20 29 29.2 +0.1**
BBOO Buckleboo 45.13 239 P **P 20 30 07.0 +0.2**
BBOO IAmb IAmb 20 30 55.5
comp=Z,66nm,1.9s
WR0 Warramunga Arr 45.60 257 P **P 20 30 11.0 +0.3**
WR0 IAmb IAmb 20 30 47.7
comp=Z,46nm,1.9s
WB0 Warramunga Arr 45.75 258 P **P 20 30 12.0 +0.2**
WB0 IAmb IAmb 20 31 24.0
comp=Z,50nm,1.9s
WB2 Warramunga Arr 45.78 257 P **P 20 30 11.5 -0.6**
WB2 IAmb IAmb 20 30 19.9
comp=Z,57nm,2.0s
WRAB Tennant Creek 45.78 257 P **P 20 30 09.8 -2.2**
WRA Warramunga Arr 45.79 257 P **P 20 30 12.5 +0.4**
comp=Z,1.6nm,0.3s,baz=91,slow=5.9,SNR=46
WRA Warramunga Arr 45.79 257 P **P 20 30 12.2 +0.1**
AS31 Alice Springs 46.12 252 P **P 20 30 15.6 +1.0**
ASAR Alice Springs 46.12 252 P **P 20 30 15.8 +1.1**
comp=Z,12nm,0.5s,baz=85,slow=7.4,SNR=192
ASAR Alice Springs 46.12 252 P **P 20 30 15.1 +0.4**
FORT Forrest 51.63 243 P **P 20 30 56.3 +0.8**
QSPA South Pole Qui 74.31 180 P **P 20 33 23.6 +1.6**
QSPA IAmb IAmb 20 35 22.6
comp=Z,29nm,2.0s
KMRM Mail Ridge 74.88 40 P **P 20 33 26.0 +0.5**
KMRM IAmb IAmb 20 33 27.3
comp=Z,23nm,1.1s
YBH Yreka Blue Hor 76.38 39 P **P 20 33 33.4 -0.5**
YBH IAmb IAmb 20 34 04.8
comp=Z,15nm,1.8s
IL31 83.61 13 P **P 20 34 10.6 -0.7**
IL31 IAmb IAmb 20 35 19.0
comp=Z,20nm,1.8s
ILAR Eielson Array 83.61 13 P **P 20 34 10.6 -0.8**
comp=Z,1.5nm,0.7s,baz=225,slow=5.0,SNR=22
ILAR Eielson Array 83.61 13 P **P 20 34 09.9 -1.4**
TX31 Lajitas Ar. Si 84.21 58 P **P 20 34 16.4 +1.1**
TX32 Lajitas Array 84.21 58 P **P 20 34 16.2 +0.9**
TXAR Lajitas Array 84.21 58 P **P 20 34 16.5 +1.2**
comp=Z,1.4nm,0.8s,baz=216,slow=7.7,SNR=13
TXAR Lajitas Array 84.21 58 P **P 20 34 16.0 +0.7**
PDAR Pinedale Array 85.27 43 P **P 20 34 20.3 -0.1**
comp=Z,0.3nm,0.5s,baz=210,slow=3.1,SNR=4.4
SYO Syowa Base 91.43 193⇓eX 20 34 41.0 -7.5
YKA Yellowknife Ar 92.05 24 P **P 20 34 50.8 -0.6**
comp=Z,0.4nm,0.6s,baz=251,slow=4.4,SNR=5.4
SONM Songino Array 92.39 319 P **P 20 34 54.8 +1.3**
comp=Z,0.1nm,0.5s,baz=131,slow=4.3,SNR=2.5
ARCES ARCESS Array B 124.31 350 PKP **PKiKP 20 40 38.4 0.0**
comp=Z,2.8nm,0.9s,baz=51,slow=2.9,SNR=4.5
BR131 Keskin Array S 143.73 317 PKPdf 20 41 14.8 -0.4
BRTR Keskin Array B 143.73 317 PKP **PKPdf 20 41 15.1 -0.2**
comp=Z,2.5nm,0.8s,baz=89,slow=2.4,SNR=11
BRTR Keskin Array B 143.73 317 PKPdf 20 41 14.7 -0.6
GERES GERESS Array B 145.69 347 PKPbc **PKPab 20 41 20.1 -0.7**
comp=Z,0.3nm,0.4s,baz=20,slow=4.3,SNR=5.6
GERES GERESS Array B 145.69 347 PKPbc 20 41 19.2 -0.4

IDC 10 20:29:40.4±1.5, 3.°59S×149.°84E, h0km, mb3.7/6, mb1 4.0/6, mb1mx3.7/28, mbtmp3.7/6, MS2.9/2, Ms1 2.9/2, ms1mx2.7/20, Error ellipse: s-maj=71.9km s-min=22.2km az=122.0, Bismarck Sea

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PMG Port Moresby 6.37 205 LR LR 20 33 59.9
comp=Z,83nm,18.1s,baz=356,slow=41
HNR Honiara 11.60 121 LR LR 20 37 16.6
comp=Z,62nm,18.0s,baz=278,slow=39
WRA Warramunga Arr 22.20 222 P P 20 34 38.1 -0.5
2.2nm,1.0s,baz=42,slow=11,SNR=5.8
ASAR Alice Springs 25.21 216 P P 20 35 07.6 -0.5
0.7nm,0.7s,baz=50,slow=8.3,SNR=9.4
FITZ Fitzroy Crossi 27.74 237 P P 20 35 32.1 +1.1
5.7nm,0.6s,baz=68,slow=13,SNR=7.9
MKAR Makanchi Array 77.48 319 P P 20 41 37.7 -0.3
0.1nm,0.7s,baz=99,slow=4.7,SNR=2.2
ILAR Eielson Array 82.17 23 P P 20 42 02.5 -0.5
0.5nm,0.8s,baz=238,slow=5.2,SNR=7.9
YKA Yellowknife Ar 95.73 28 P P 20 43 09.2 +1.1
0.2nm,0.5s,baz=273,slow=4.9,SNR=3.9
TORD Torodi Ar. Bea 147.13 289 PKPbc PKPbc 20 49 25.7 -0.9
0.4nm,0.8s,baz=61,slow=3.5,SNR=2.3

THE 10 20:46:13.9, 34.°62N×25.°30E, h6km±2km, ML3.5/7, Error ellipse: s-maj=2.3km s-min=0.7km az=3.0
NIC 10 20:46:13.9±0.0, 34.°32N×25.°76E, h16km±2km, Ml4.1/3
ISK 10 20:46:14.6, 34.°79N×25.°33E, h61km±1km, ML3.5/16
ATH 10 20:46:14.8, 34.°81N×25.°32E, h43km±1km, ML3.5/12, Error ellipse: s-maj=3.2km s-min=1.3km az=347.0
HLW 10 20:46:14.4, 34.°54N×25.°62E, h26km±14km, Md4.0, Ml4.3
NEIC 10 20:46:15.7±1.2, 34.°83N±0.°08×25.°25E±0.°07, h61km±6km, mb4.2/18, ML3.5(THE), Error ellipse: s-maj=11.7km s-min=8.3km az=202.0
IDC 10 20:46:15.0±1.4, 34.°82N×25.°31E, h54km±9km, mb3.8/17, mb1 3.8/19, mb1mx3.7/36, mbtmp4.0/19, MS3.0/1, Ms1 3.0/1, ms1mx2.3/36, Error ellipse: s-maj=20.7km s-min=14.4km az=174.0
GII 10 20:46:18.1±0.0, 34.°42N×26.°16E, h5km, MD3.5/3
ISC 10 20:46:12.8±0.9, 34.°56N±0.°04×25.°41E±0.°03, h41km±9km, n180, σ1.°71/221, mb4.0/22, Crete

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FRMA Ierapetra Chan 0.52 31 P **Pn 20 46 25.8 +1.9**
FRMA S **Sn 20 46 35.0 +3.2**
2μm,0.5s
LAST Lasithi 0.60 6 P **Pn 20 46 24.5 -0.5**
LAST S **Sn 20 46 34.2 +0.5**
8μm,0.6s
LAST Lasithi 0.60 6 P **Pn 20 46 24.5 -0.5**
LAST S **Sn 20 46 32.2 -1.6**
LAST AML AML 20 46 35.1
comp=E,20596μm,0.7s
LAST AML AML 20 46 35.6
comp=N,9757μm,0.6s
SIVA Sivas 0.67 313 P **Pn 20 46 25.4 -0.5**
SIVA S **Sn 20 46 32.5 -2.7**
comp=N,27μm,0.6s
SIVA Sivas 0.67 313 P **Pn 20 46 25.4 -0.5**
SIVA S **Sn 20 46 33.3 -1.9**
SIVA AML AML 20 46 38.1
comp=N,56246μm,0.7s
SIVA AML AML 20 46 40.8
comp=E,57874μm,0.5s
NPS Neapolis 0.72 13 P **Pn 20 46 26.6 0.0**
NPS S **Sn 20 46 36.9 +0.4**
comp=E,5μm,0.5s
NPS Neapolis 0.72 13 P **Pn 20 46 26.4 -0.2**
NPS S **Sn 20 46 34.8 -1.7**
NPS AML AML 20 46 39.7
comp=E,13997μm,0.9s
NPS AML AML 20 46 41.4
comp=N,9820μm,0.5s
TMBK Timbaki Herakl 0.73 314 P **Pn 20 46 26.9 +0.2**
TMBK S **Sn 20 46 35.6 -1.2**
comp=N,7μm,0.6s
HRKL Herakleio 0.79 341 PG **Pn 20 46 27.6 +0.1**
HRKL SG **Sn 20 46 37.2 -0.9**
KSTL Kastelli Herak 0.79 340 P **Pn 20 46 25.2 -2.3**
KSTL S **Sn 20 46 35.1 -3.1**
IACM Heraklion 0.79 340 P **Pn 20 46 27.3 -0.2**
IACM S **Sn 20 46 34.8 -3.4**
IDI Anoyia 0.84 330 P **Pn 20 46 27.8 -0.5**
comp=N,88nm,0.3s,baz=152,slow=9.2,SNR=505

IDI				S	Sn	20 46 38.7	-0.8
	comp=N,380nm,0.3s,baz=31,slow=18,SNR=49						
IDI	Anoyia	0.84	330	P	Pn	20 46 27.8	-0.5
IDI				S	Sn	20 46 37.9	-1.6
IDI				AML	AML	20 46 39.7	
	comp=E,5607μm,0.5s						
IDI				AML	AML	20 46 40.4	
	comp=N,9811μm,0.6s						
IDI	Anoyia	0.84	330	PG	Pn	20 46 28.2	-0.1
IDI				SG	Sn	20 46 38.6	-0.9
STIA	Sitia Lasithi	0.85	41	P	Pn	20 46 30.5	+2.2
STIA				S	Sn	20 46 44.1	+4.5
ZKR	Zakros	0.86	50	P	Pn	20 46 30.9	+2.4
ZKR				S	Sn	20 46 43.7	+3.8
	comp=N,2μm,0.5s						
ZKR	Zakros	0.86	50	P	Pn	20 46 30.9	+2.4
ZKR				S	Sn	20 46 42.8	+2.8
ZKR				AML	AML	20 46 48.8	
	comp=N,2069μm,0.6s						
ZKR				AML	AML	20 46 50.5	
	comp=E,5315μm,0.7s						
ZKR	Zakros	0.86	50	PG	Pn	20 46 31.1	+2.6
ZKR				SG	Sn	20 46 42.3	+2.3
ZKR	Zakros	0.86	50	P	Pn	20 46 30.6	+2.1
ZKR				S	Sn	20 46 43.8	+3.8
PRNS	Prines Rethymn	1.09	317	P	Pn	20 46 33.6	+1.9
PRNS				S	Sn	20 46 47.2	+1.6
GVDS	Gavdos	1.12	285	P	Pn	20 46 33.3	+1.3
GVDS	Gavdos	1.12	285	PG	Pn	20 46 33.5	+1.5
GVDS				SG	Sn	20 46 48.3	+2.0
GVD	Gavdhos	1.12	285	P	Pn	20 46 33.0	+0.9
GVD	Gavdhos	1.12	285	P	Pn	20 46 33.2	+1.1
GVD				AML	AML	20 47 01.2	
	comp=E,8722μm,0.6s						
GVD				AML	AML	20 47 05.3	
	comp=N,6253μm,0.5s						
GVD	Gavdhos	1.12	285	PG	Pn	20 46 33.2	+1.1
GVD				SG	Sn	20 46 47.8	+1.5
VAM	Vamos	1.30	311	P	Pn	20 46 35.4	+0.9
VAM	Vamos	1.30	311	P	Pn	20 46 35.4	+0.9
VAM				AML	AML	20 46 55.5	
	comp=E,7074μm,0.8s						
VAM				AML	AML	20 46 56.4	
	comp=N,6338μm,0.6s						
CHAN	Chania	1.47	311	P	Pn	20 46 39.0	+2.2
IMMV	Iera Moni Meta	1.48	308	P	Pn	20 46 37.9	+1.0
IMMV				S	Sn	20 46 57.1	+2.1
	comp=N,2μm,0.7s						
IMMV	Iera Moni Meta	1.48	308	P	Pn	20 46 38.1	+1.2
IMMV				AML	AML	20 47 01.2	
	comp=N,3992μm,0.5s						
IMMV				AML	AML	20 47 10.0	
	comp=E,4391μm,0.7s						
IMMV	Iera Moni Meta	1.48	308	PN	Pn	20 46 38.0	+1.0
KNDR	Palaiochora Ch	1.57	296	P	Pn	20 46 39.5	+1.4
KNDR	Palaiochora Ch	1.57	296	PN	Pn	20 46 39.8	+1.7
KNDR				SN	Sn	20 46 58.4	+1.2
RODP	Rodopos	1.68	307	P	Pn	20 46 40.8	+1.1
KARP	Karpathos	1.74	55	P	Pn	20 46 43.8	+3.2
KARP	Karpathos	1.74	55	P	Pn	20 46 43.6	+3.0
KARP	Karpathos	1.74	55	PN	Pn	20 46 42.8	+2.2
KARP	Karpathos	1.74	55	Pn	Pn	20 46 43.8	+3.2
KARP	Karpathos	1.74	55	P	Pn	20 46 43.9	+3.2
SAP1	Santorini-Akro	1.79	360	P	Pn	20 46 41.0	-0.2
SANT	Santorini	1.81	1	P	Pn	20 46 40.9	-0.6
SANT	Santorini	1.81	1	P	Pn	20 46 41.5	0.0
SANT				SN	Sn	20 47 00.5	-2.7
SANT	Santorini	1.81	1		Pn	20 46 40.9	-0.6
THT1	Athinios (Pele	1.82	1	P	Pn	20 46 40.7	-0.9
THR8	Santorini-Mono	1.84	2	P	Pn	20 46 41.6	-0.4
SAP2K	Karterados	1.84	1	P	Pn	20 46 41.4	-0.6
THT2	Imerovigli	1.87	0	PN	Pn	20 46 42.3	0.0
SAP3	Santorini-Thir	1.87	358	P	Pn	20 46 42.2	-0.2
IOSP	Ios island	2.16	357	P	Pn	20 46 46.0	-0.3
IOSP				AML	AML	20 47 18.4	
	comp=N,1237μm,0.8s						
IOSP				AML	AML	20 47 20.7	
	comp=E,1414μm,0.7s						
ANKY	Antikythira Is	2.16	308	P	Pn	20 46 47.6	+1.3
ANKY	Antikythira Is	2.16	308	P	Pn	20 46 47.7	+1.3
ANKY				AML	AML	20 47 32.0	
	comp=E,1507μm,0.7s						
ANKY				AML	AML	20 47 33.8	
	comp=N,1095μm,0.8s						
MHLO	Agia Marina, M	2.28	339	P	Pn	20 46 47.5	-0.4
AMGA	Amorgos Island	2.30	10	P	Pn	20 46 48.0	-0.2
AMGA				AML	AML	20 47 32.3	
	comp=E,752μm,0.7s						
AMGA				AML	AML	20 47 33.5	
	comp=N,980μm,0.5s						
MHLA	Plaka, Milos I	2.32	340	P	Pn	20 46 48.2	-0.3
APE	Apeiranthos	2.50	2	P	Pn	20 46 50.7	-0.3
APE				AML	AML	20 47 32.4	
	comp=E,312μm,0.4s						
APE				AML	AML	20 47 39.7	
	comp=N,314μm,0.5s						
APE	Apeiranthos	2.50	2	PN	Pn	20 46 50.9	-0.2
KOSK	Kos Island	2.53	30	PN	Pn	20 46 52.5	+1.1
KTHA	Kythira Island	2.56	312	P	Pn	20 46 51.5	-0.2
KTHA	Kythira Island	2.56	312	PN	Pn	20 46 52.4	+0.6
KTHR	Kythira	2.59	311	P	Pn	20 46 52.7	+0.4
ARG	Arkhangelos	2.77	53	P	Pn	20 46 57.2	+2.5
ARG	Arkhangelos	2.77	53	P	Pn	20 46 57.2	+2.5
ARG	Arkhangelos	2.77	53	PN	Pn	20 46 57.2	+2.5
ARG	Arkhangelos	2.77	53	P	Pn	20 46 57.1	+2.5
ARG				S	Sn	20 47 30.0	+3.2
DAT	Datca	2.79	39	PN	Pn	20 46 56.4	+1.3
BODT	Bodrum	2.94	31	PN	Pn	20 46 58.2	+1.2
SLUM	Salum	3.07	183	P	Pn	20 47 01.5	+2.7
	baz=187						
SLUM				AMP		20 47 00.0	
	baz=187						
SLUM				S	Sn	20 47 35.9	+1.7
	baz=187						
GCAM	G?zelcaml?	3.46	25	PN	Pn	20 47 06.1	+1.9
DALY	Dalyan (Mula)	3.47	49	PN	Pn	20 47 06.7	+2.4
YER	Yerkesik	3.47	41	PN	Pn	20 47 06.5	+2.1
TURN	Turunc	3.47	48	PN	Pn	20 47 02.1	-2.2
KSL	Kastellorizon	3.76	64	P	Pn	20 47 09.8	+1.5
ITM	Ithomi	3.85	314	PN	Pn	20 47 08.9	-0.6
ITM	Ithomi	3.85	314		Pn	20 47 08.5	-1.0
CHOS	Chios island	3.85	8	PN	Pn	20 47 10.5	+0.9
AYDB	Zeytinkoy-Aydi	3.93	30	PN	Pn	20 47 12.6	+1.9
BLCB	Balcova	4.04	19	PN	Pn	20 47 12.5	+0.4
ELL	Elmali	4.26	58		Pn	20 47 15.7	+0.4
ELL	Elmali	4.26	58	P	Pn	20 47 17.5	+2.2
AGG	Agios Georgios	5.09	332		Pn	20 47 26.0	-0.5
ISP	Isparta	5.26	50	Pn	Pn	20 47 29.8	+0.8
SWA2		5.30	180	P	Pn	20 47 31.8	+2.3
	baz=182						
SWA2				AMP		20 48 00.0	
	baz=182						
SWA2				S	Sn	20 48 29.3	0.0
	baz=182						
AKMS	Akamas	5.72	83	P	Pn	20 47 35.4	+0.2
AKMS				AML	AML	20 48 38.1	
	comp=N,0.2nm,0.3s						
AKMS				AML	AML	20 48 38.1	
	comp=N,0.2nm,0.3s						
AKMS				AML	AML	20 48 38.3	
	comp=N,0.3nm,0.3s						
AKMS				AML	AML	20 48 38.3	
	comp=N,0.3nm,0.3s						
AKMS				S	Sn	20 48 38.8	-0.7
NATA	Nata	5.91	86	P	Pn	20 47 37.7	-0.1
NATA				AML	AML	20 48 43.2	
	comp=N,0.4nm,0.6s						
NATA				AML	AML	20 48 43.2	
	comp=N,0.4nm,0.6s						
NATA				S	Sn	20 48 44.3	+0.1
NATA				AML	AML	20 48 44.5	
	comp=N,0.3nm,0.3s						
NATA				AML	AML	20 48 44.5	
	comp=N,0.3nm,0.3s						
ALFC	Alefka	5.94	82	P	Pn	20 47 38.5	+0.2
LIT	Litokhoron	6.00	338		Pn	20 47 38.6	-0.4
SZAC	Souni	6.16	86	P	Pn	20 47 41.8	+0.4
SZAC				S	Sn	20 48 50.5	0.0
SZAC				AML	AML	20 48 52.1	
	comp=N,0.3nm,0.6s						
SZAC				AML	AML	20 48 52.1	
	comp=N,0.3nm,0.6s						
SZAC				AML	AML	20 48 57.0	
	comp=N,0.3nm,0.4s						
SZAC				AML	AML	20 48 57.0	
	comp=N,0.3nm,0.4s						
ASGA	Asgata	6.46	86	P	Pn	20 47 45.7	+0.3
ASGA				S	Sn	20 48 57.2	-0.7
CSS	Mathiatis	6.53	84		Pn	20 47 46.0	-0.4
CSS	Mathiatis	6.53	84	P	Pn	20 47 46.5	+0.1
CSS				S	Sn	20 48 59.7	0.0
HNAT	Natroun	6.61	137	P	Pn	20 47 49.3	+1.8
	baz=137						
MVOU	Mavrovouni	6.78	84	P	Pn	20 47 50.8	+1.1
KOT	Kottamia	7.14	129	P	Pn	20 47 54.9	+0.2
	baz=129						
KOT				S	Sn	20 49 08.9	-5.6
	baz=129						
HSAF	As Saff	7.17	132	P	Pn	20 47 57.3	+2.1
	baz=132						
GLL	Jalalah	7.30	131	P	Pn	20 47 58.4	+1.4
	baz=132						
NBNS	Bani Suef	7.76	138	P	Pn	20 48 05.5	+2.2
	baz=139						
NBNS				S	Sn	20 49 28.1	-1.8
	baz=139						
HFRF	Wahat Farafira	7.80	161	P	Pn	20 48 05.2	+1.4
	baz=161						
SUZ	Suez	7.86	125	P	Pn	20 48 06.0	+1.4
	baz=125						
ZAF	Zafarana	8.03	129	P	Pn	20 48 08.6	+1.6
	baz=129						
ZNM	Zenema	8.18	127	P	Pn	20 48 10.7	+1.7
	baz=127						
VTS	Vitosha	8.22	349		Pn	20 48 07.2	-2.4
HNTI	Hanita	8.26	98	Pn	Pn	20 48 10.8	+0.7
HNTI				Sn	Sn	20 49 38.3	-3.8
TIP	Timpagrande	8.32	306	Pn	Pn	20 48 09.2	-1.8
TAMRE	El Minia	8.32	144	P	Pn	20 48 13.3	+2.3
	baz=145						
BRTR	Keskin Array B	8.35	49	P	Pn	20 48 12.2	+0.8
	comp=N,0.1nm,0.3s,baz=231,slow=11,SNR=4.9						
SLTI	Sal'it	8.38	103	Pn	Pn	20 48 11.1	-0.6
SLTI				Sn	Sn	20 49 39.7	-5.3
KZIT	Kziot	8.40	113	Pn	Pn	20 48 12.4	+0.4
KZIT				Sn	Sn	20 49 40.4	-5.2
MMA0B	Mount Meron ar	8.46	98	Pn	Pn	20 48 12.2	-0.7
MMAI	Mount Meron Ar	8.46	98	P	Pn	20 48 12.4	-0.5
	comp=N,1.9nm,0.3s,baz=276,slow=11,SNR=11						
MMAI				S	Sn	20 49 41.6	-5.6
	comp=N,2.8nm,0.3s,baz=290,slow=17,SNR=6.2						
AMAZ	Amatzia	8.53	108	Pn	Pn	20 48 14.4	+0.6
AMAZ				Sn	Sn	20 49 44.2	-4.6
MMLI	Mount Malkishu	8.63	101	Pn	Pn	20 48 15.4	+0.3
MMLI				Sn	Sn	20 49 46.8	-4.4
NATI	Neve Ativ	8.68	96	Pn	Pn	20 48 15.5	-0.3
YTIR	Yattir	8.76	109	Pn	Pn	20 48 17.7	+0.7
YTIR				Sn	Sn	20 49 50.2	-4.2
HMDT	Nahal Hemdat	8.77	102	Pn	Pn	20 48 17.6	+0.6
HMDT				Sn	Sn	20 49 50.0	-4.5
DSI	Dead Sea	8.88	107	Pn	Pn	20 48 18.5	-0.1
DSI				Sn	Sn	20 49 53.1	-4.3
PRNI	Paran	9.13	115	Pn	Pn	20 48 23.0	+1.0
PRNI				Sn	Sn	20 49 58.8	-4.7
GHAJ	Ghor Haditha	9.13	108	Pn	Pn	20 48 23.1	+1.1
HRFI	Mount Harif	9.31	116	Pn	Pn	20 48 24.7	+0.2
HRFI				Sn	Sn	20 50 03.0	-5.0
MBRI	Mt Berech	9.35	118	Pn	Pn	20 48 25.6	+0.5
EIL	Elat	9.45	118	P	Pn	20 48 27.4	+1.1
	comp=N,0.7nm,0.3s,baz=335,slow=4.1,SNR=15						
EIL				S	Sn	20 50 06.5	-4.8
	comp=N,1.9nm,0.3s,baz=239,slow=3.1,SNR=11						
EIL	Elat	9.45	118	Pn	Pn	20 48 27.4	+1.1
ACER	Acerenza	9.74	312	Pn	Pn	20 48 27.6	-2.7
ASF	Jabal al Asfar	9.90	101	P	Pn	20 48 32.3	-0.4
	comp=N,0.2nm,0.3s,baz=27,slow=2.3,SNR=2.2						
ASF				S	Sn	20 50 20.7	-1.8
	comp=N,0.4nm,0.3s,baz=330,slow=20,SNR=2.7						
CORL	Corleone	10.33	292	Pn	Pn	20 48 38.0	-0.4
SGRT	San Giovanni R	10.46	316	Pn	Pn	20 48 37.3	-2.9
MLR	Muntele Rosu	10.92	2	P	Pn	20 48 49.3	+2.7
	comp=N,0.1nm,0.3s,baz=30,slow=16,SNR=2.2						
MLR				LR	LR	20 52 49.0	
	comp=N,72nm,18.1s,baz=120,slow=37						
NRCA	Norcia	12.65	314	Pn	Pn	20 49 09.1	-1.1
VYHS	Vyhne	14.76	343	*e*PN	Pn	20 49 37.1	-1.5
KIV	Kislovodsk	16.32	50	P	Pn	20 49 59.2	+0.3
KVAR	Kislovodsk Arr	16.32	50	P	P	20 50 03.8	+2.4
	baz=87,slow=23,SNR=7.1						
KBZ	Khabaz	16.34	51	P	P	20 50 03.8	+2.3
	comp=N,0.4nm,0.3s,baz=222,slow=9.6,SNR=25						
AKASG	Malin Array Be	16.37	9	P	Pn	20 49 59.8	+0.3
	comp=N,2.9nm,0.3s,baz=200,slow=11,SNR=18						
AKASG	Malin Array Be	16.37	9	P	Pn	20 49 59.0	-0.4
AKBB	Malin Array Si	16.37	9	P	Pn	20 50 00.0	+0.6
GERES	GERESS Array B	16.70	332	P	Pn	20 50 04.3	+0.5
	comp=N,0.2nm,0.3s,baz=144,slow=12,SNR=8.9						
SENIN	Lac Senin/Sane	18.08	316		P	20 50 18.1	-3.0
SENIN				IAmb	IAmb	20 50 22.0	
	comp=Z,14nm,1.4s						
SUW	Suwalki	19.51	356	P	P	20 50 34.5	-1.8
SUW				IAmb	IAmb	20 50 43.4	
	comp=Z,32nm,1.5s						
ESDC	Sonseca Array	23.91	291	P	P	20 51 22.4	-0.4
	comp=Z,0.6nm,0.5s,baz=81,slow=9.5,SNR=7.0						
ESDC	Sonseca Array	23.91	291	IAmb	IAmb	20 51 27.9	
	comp=Z,2.4nm,1.3s						
GEYT	Alibeck	26.52	73	P	P	20 51 46.1	-0.4
	comp=Z,0.9nm,0.4s,baz=297,slow=16,SNR=2.5						
HFS	Hagfors	26.70	347	P	P	20 51 45.3	-2.6
	comp=Z,0.4nm,0.5s,baz=144,slow=12,SNR=2.9						
FINES	FINESS Array B	26.90	1	P	P	20 51 47.0	-2.6
	comp=Z,0.7nm,0.4s,baz=161,slow=11,SNR=15						
FINES				PcP	PcP	20 55 11.1	+0.3
	comp=Z,2.2nm,1.1s,baz=107,slow=1.5,SNR=3.3						
NOA	NORSAR Array B	28.03	345	P	P	20 51 59.8	0.0
	comp=Z,2.5nm,1.2s,baz=144,slow=10,SNR=2.4						
AKTO	Aktyubinsk	28.51	46	P	P	20 52 04.0	-0.2
	comp=Z,1.4nm,0.5s,baz=258,slow=11,SNR=6.5						
EKA	Eskdalemuir Ar	28.65	325	P	P	20 52 03.7	-1.5
	comp=Z,0.5nm,0.4s,baz=124,slow=10,SNR=4.0						
ABKAR	Akbulak array	29.30	49	P	P	20 52 11.2	0.0
TOA0	Torodi Ar. Sit	30.27	231	P	P	20 52 21.9	+1.8
TORD	Torodi Ar. Bea	30.27	231	P	P	20 52 21.6	+1.6
	comp=Z,1.0nm,0.4s,baz=33,slow=8.8,SNR=25						
TORD	Torodi Ar. Bea	30.27	231	IAmb	IAmb	20 52 26.4	
	comp=Z,1.1nm,0.8s						
ARU	Arti	31.42	36	P	P	20 52 29.6	-0.2
ARCES	ARCESS Array B	35.03	0	P	P	20 52 58.3	-2.8
	comp=Z,2.5nm,0.8s,baz=171,slow=9.3,SNR=11						
KKAR	Karatay Array	35.79	63	P	P	20 53 09.2	+1.2
ARSB	Arslanbob	37.74	65	P	P	20 53 25.6	+0.8
ARSB				IAmb	IAmb	20 54 18.2	
	comp=Z,9.4nm,1.6s						
KURK	Kurchatov	41.40	50	P	P	20 53 55.1	+0.2
KURK				IAmb	IAmb	20 53 55.9	
	comp=Z,1.9nm,0.5s						
MAKZ	Makanchi	43.72	56	P	P	20 54 14.2	+0.4
MAKZ				IAmb	IAmb	20 54 39.2	
	comp=Z,5.5nm,1.8s						
MK31	Makanchi Array	43.94	56	P	P	20 54 16.4	+0.8
MKAR	Makanchi Array	43.94	56	P	P	20 54 16.5	+0.9
	comp=Z,1.5nm,0.5s,baz=267,slow=8.0,SNR=50						
MKAR				PcP	PcP	20 56 01.8	+0.8
	comp=Z,0.3nm,0.5s,baz=263,slow=3.1,SNR=2.8						
MKAR	Makanchi Array	43.94	56	P	P	20 54 16.2	+0.6
ZAA0	Zalesovo Array	45.27	46	P	P	20 54 26.3	+0.2
ZAA0				IAmb	IAmb	20 54 26.8	
	comp=Z,2.6nm,0.5s						
ZALV	Zalesovo Beam	45.27	46	P	P	20 54 25.9	-0.2
	comp=Z,3.0nm,0.5s,baz=266,slow=8.9,SNR=18						
ZALV	Zalesovo Beam	45.27	46	P	P	20 54 25.8	-0.3
DANN	Dangsing	49.58	80	*e*P	P	20 55 01.9	+1.6
	comp=Z,28nm,0.7s						
KOLN	Koldanda	49.67	81	*e*P	P	20 55 02.4	+1.5
GKN	Gorkha	50.42	80	*e*P	P	20 55 07.8	+1.2
DMN	Daman	50.96	81	*e*P	P	20 55 12.0	+1.3
	comp=Z,5.0nm,0.4s						
KKN	Kakani	51.03	80	*e*P	P	20 55 12.2	+1.0
PKIN	Phulchoki	51.21	80	*e*P	P	20 55 13.5	+0.9
PKI	Pulchoki	51.22	80	*e*P	P	20 55 13.6	+0.8
GUN	Gumba	51.47	80	*e*P	P	20 55 16.0	+1.4
JIRN	Jiri	51.82	80	*e*P	P	20 55 17.9	+0.6
ODAN	Odare	53.12	80	*e*P	P	20 55 27.7	+0.9
TAPN	Taplejung	53.18	80	*e*P	P	20 55 28.1	+0.8
SONM	Songino Array	59.71	50	P	P	20 56 14.3	+1.1
	comp=Z,1.2nm,0.5s,baz=292,slow=8.3,SNR=8.3						
SONM	Songino Array	59.71	50	IAmb	IAmb	20 56 14.9	
	comp=Z,0.9nm,0.6s						
ULN	Ulaanbaatar	60.12	50	P	P	20 56 17.0	+0.9
ULN				IAmb	IAmb	20 56 17.7	
	comp=Z,1.9nm,0.7s						
SCHQ	Schefferville	63.77	320	P	P	20 56 40.0	-0.3
	comp=Z,2.1nm,0.5s,baz=68,slow=5.5,SNR=9.1						
CMAR	Chiang Mai Arr	66.44	83	P	P	20 56 59.2	+1.1
	comp=Z,0.5nm,0.5s,baz=302,slow=7.2,SNR=4.9						
USRK	Ussuriysk Ar.	77.12	45	P	P	20 58 02.0	+0.1
	comp=Z,1.7nm,0.5s,baz=287,slow=4.4,SNR=7.5						
YKA	Yellowknife Ar	78.08	342	P	P	20 58 06.0	-0.9
	comp=Z,0.4nm,0.5s,baz=31,slow=5.2,SNR=7.7						
KSRS	Korea Array	78.48	52	P	P	20 58 10.1	+0.5
	comp=Z,0.6nm,0.6s,baz=300,slow=3.7,SNR=2.9						

IDC 10 20:48:00.5±2.5, 6°.11S×151°.72E, h0km, mb3.2/3, mb1 3.6/3, mb1mx3.3/19, mbtmp3.3/3, Error ellipse: s-maj=198.8km s-min=30.5km az=128.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.78	229	P	P	20 52 52.9	-1.2
	0.3nm,0.7s,baz=56,slow=11,SNR=2.5						
ASAR	Alice Springs	24.46	223	P	P	20 53 22.5	+1.0
	0.2nm,0.5s,baz=58,slow=9.2,SNR=5.1						
ILAR	Eielson Array	83.77	22	P	P	21 00 31.2	-0.1
	0.3nm,0.6s,baz=244,slow=5.6,SNR=5.6						

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*IDC **10** 21:15:17.7±1.5, 8°.16S×117°.97E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.4/38, mbtmp3.5/5, ML3.4/2, Error ellipse: s-maj=43.2km s-min=22.2km az=64.0*

*DJA **10** 21:15:19.7±0.6, 8°S±4°×11°8E±°, h21km±7km, M3.8/6, MLv3.8/6*

ISC 10 21:15:18.8±0.8, 8°.22S±0°.06×117°.98E±0°.07, h10km, n12, σ0s.73/14, mb3.6/3, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.63	199	P	Pb	21 15 32.5	+0.5
PLAI				S	Sb	21 15 41.2	+0.3
WSI	Waingapu	2.70	122	S	Sn	21 16 33.6	-1.5
SRBI	Singaraja	2.75	273	P	Pn	21 16 03.0	+0.1
BKSI	Bulukumba	3.58	37	P	Pn	21 16 14.5	+0.1
KAPI	Kappang	3.64	29	Pn	Pn	21 16 15.2	0.0
	5.0nm,0.3s,baz=216,slow=7.5,SNR=22						
KAPI				Sn	Sn	21 16 57.1	-1.2
	7.8nm,0.3s,baz=37,slow=20,SNR=14						
JAGI	Jajag, Banyuwa	3.80	266	P	Pn	21 16 16.6	-0.8
BNSI	Bone	4.34	29	P	Pn	21 16 25.6	+0.7
SPSI	Sidrap Palu	4.59	23	P	Pn	21 16 28.3	0.0
WRA	Warramunga Arr	19.66	128	P	Pn	21 19 49.3	-0.2
	0.1nm,0.3s,baz=302,slow=12,SNR=3.3						
ASAR	Alice Springs	21.65	137	P	P	21 20 10.2	+0.6
	1.5nm,0.5s,baz=313,slow=9.3,SNR=30						
SONM	Songino Array	56.75	351	P	P	21 25 03.5	+0.5
	0.8nm,0.9s,baz=173,slow=6.5,SNR=5.6						
MKAR	Makanchi Array	63.31	333	P	P	21 25 47.8	-0.2
	0.3nm,0.7s,baz=142,slow=7.2,SNR=2.6						

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*JMA **10** 21:35:30.7±0.1, 27°.52N×143°.39E, h0km±3km, M4.3*

*IDC **10** 21:35:36.7±3.3, 27°.62N×142°.56E, h0km, mb3.3/2, mb1 3.6/4, mb1mx3.3/31, mbtmp3.5/4, ML2.7/2, Error ellipse: s-maj=70.1km s-min=17.9km az=94.0*

ISC 10 21:35:32.3±2.4, 27°.5N±0°.1×143°.4E±0°.2, h10km, n13, σ2s.12/19, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.09	251	P	Pn	21 35 52.9	-0.8
CBIJ				S	Sn	21 36 08.8	-0.1
JCJ	Chichijima	1.09	251	Pn	Pn	21 35 53.0	-0.7
	14nm,0.3s,baz=32,slow=8.8,SNR=19						
JCJ				Sn	Sn	21 36 08.6	-0.2
	148nm,0.3s,baz=283,slow=23,SNR=40						
JHH2	Haha-jima-NKT2	1.33	232	P	Pb	21 35 57.1	-0.2
JHH2				*e*S	Sg	21 36 15.3	+0.3
JOD2	Odawara 2	8.59	336	P	Pn	21 37 38.7	+1.9
JOD2				*e*S	Sn	21 39 16.8	+3.0
JHU	Hanno	9.06	339	P	Pn	21 37 43.8	+0.7
JHO	Hitachi	9.43	346	P	Pn	21 37 49.1	+0.9
JHO				S	Sn	21 39 31.5	-2.8
JAG	Ashikaga	9.54	341	P	Pn	21 37 50.8	+1.1
JAG				*e*S	Sn	21 39 39.0	+2.1
MJAR	Matsushiro Arr	10.05	336	Pn	Pn	21 37 56.9	+0.1
	0.1nm,0.3s,baz=155,slow=11,SNR=5.5						
JFK	Kawauchi	10.10	349	*e*S	Sn	21 39 46.6	-4.3
JMK	Ichinoseki	11.61	352	*e*S	Sn	21 40 22.8	-4.8
USRK	Ussuriysk Ar.	19.05	334	P	Pn	21 39 56.4	+1.1
	baz=150,slow=9.8,SNR=4.7						
SONM	Songino Array	35.18	315	P	P	21 42 27.5	+1.0
	0.3nm,0.7s,baz=122,slow=7.2,SNR=3.0						
MKAR	Makanchi Array	51.05	309	P	P	21 44 34.8	+0.1
	0.4nm,0.7s,baz=88,slow=8.8,SNR=8.0						

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*IDC **10** 21:49:43.8±0.4, 28°.82S×177°.02W, h0km, mb4.7/17, mb1 4.8/19, mb1mx4.7/39, mbtmp4.7/19, ML4.2/2, MS4.3/18, Ms1 4.3/18, ms1mx4.3/22, Error ellipse: s-maj=17.2km s-min=12.2km az=145.0*

*NEIC **10** 21:49:43.5±3.0, 29°.01S±0°.07×176°.85W±0°.05, h10km±1km, mb4.9/69, Error ellipse: s-maj=13.2km s-min=6.9km az=159.0*

*BJI **10** 21:49:48.0±0.0, 29°.30S×176°.80W, h30km, mB5.6/19, mb5.0/30, Ms5.1/7, Ms7 4.8/8*

*MOS **10** 21:49:48.1±1.3, 29°.06S×176°.97W, h39km, mb5.0/16, Error ellipse: s-maj=11.2km s-min=10.7km az=16.2*

*GCMT **10** 21:49:48.5±0.4, 28°.92S±0°.03×176°.86W±0°.02, h38km±1km, MW5.0/69, Moment Tensor Solution. s39,c46; s69,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.64±.20; $M_{\theta\theta}$1.02±.15; $M_{\phi\phi}$1.62±.13; $M_{r\theta}$0.46±.13; $M_{\theta\phi}$1.87±.09; $M_{\phi r}$1.79±.11; Best double couple: $M_0$3.48400×10^{16} NP1:ϕ_s58.00000°,δ33.00000°,λ-62.00000°. NP2: ϕ_s205.00000°,δ62.00000°,λ-107.00000°. Principal axes: T 3.6640, Plg15.0000°, Azm307.0000°; N -0.3600, Plg15.0000°, Azm213.0000°; P -3.3040, Plg69.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 21:49:48.3±0.3, 29°.21S±0°.04×176°.83W±0°.05, h36km, n358, σ2s.39/331, mb4.8/63, MS4.5/23, 44C-5D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.95	267	Pn	Pn	21 50 04.7	-0.4
	2μm,0.3s,baz=111,slow=6.7,SNR=71						
RAO				Sn	Sn	21 50 17.7	+0.3
	9μm,0.3s,baz=88,slow=23,SNR=28						
RAO	Raoul Island	0.95	267		Pn	21 50 04.2	-0.9
RAO					Sn	21 50 13.8	-3.6
RAO	Raoul Island	0.95	267	P	Pn	21 50 04.2	-0.9
RAO						21 50 13.9	
GLKZ	Green Lake	0.95	266	P	Pn	21 50 05.2	+0.1
GLKZ				S	Sn	21 50 18.4	+1.0
RIZ	Raoul Island	0.96	267	P	Pn	21 50 04.5	-0.7
RIZ				S	Sn	21 50 17.9	+0.2
MXZ	Matakaoa Point	9.27	205	Pn	Pn	21 51 58.7	-0.6
MXZ					Sn	21 53 40.8	-1.6
WMGZ	Waiomatatini S	9.46	204	P	Pn	21 52 00.3	-1.6
WMGZ				S	Sn	21 53 43.1	-4.0
HAZ	Te Kaha	9.64	206	P	Pn	21 52 01.9	-2.5
HAZ				S	Sn	21 53 51.6	+0.2
PKGZ	Pakihiroa	9.64	205	P	Pn	21 52 01.5	-3.0
PKGZ				S	Sn	21 53 47.1	-4.5
RUGZ	Raukumara Rang	9.86	206	P	Pn	21 52 05.6	-2.0
CNGZ	Carnagh Statio	10.13	203	P	Pn	21 52 09.1	-2.0
MWZ	Matawai	10.24	206	P	Pn	21 52 10.2	-2.5
MWZ				S	Sn	21 54 01.8	-4.5
URZ	Urewera	10.34	208	Pn	Pn	21 52 11.5	-2.5
	0.9nm,0.3s,baz=271,slow=3.8,SNR=8.8						
URZ				Sn	Sn	21 54 05.9	-2.7
	9.9nm,0.3s,baz=89,slow=19,SNR=11						
URZ	Urewera	10.34	208		Pn	21 52 12.2	-1.8
URZ	Urewera	10.34	208	P	Pn	21 52 11.6	-2.4
URZ				S	Sn	21 54 05.6	-3.0
MUGZ	Murupara	10.66	208	P	Pn	21 52 14.3	-4.2

RTZ Ruatahuna 10.70 207 P Pn 21 52 14.0 -5.0
RTZ S Sn 21 54 15.8 -1.7
BKZ Black Stump Fm 11.37 207 Pn Pn 21 52 26.8 -1.3
BKZ Sn 21 54 30.4 -3.4
HIZ Hauiti 11.57 214 Pn Pn 21 52 32.4 +1.5
NIUE Niue 11.89 34 Pn Pn 21 52 28.0 -7.3
MSVF Nonsavu 12.34 337 c iP Pn 21 52 41.5 -0.1
MSVF pmax pmax
comp=Z,6.0nm,0.8s
MSWZ Moikau Station 13.78 206 Pn 21 52 59.7 -1.4
SNZO South Karori 13.91 207 Pn Pn 21 53 00.4 -2.3
PLWZ Palliser 13.91 205 Pn Pn 21 53 01.6 -1.3
BHW Baring Head 13.92 207 Pn Pn 21 53 03.1 +0.1
TUWZ Tuamarina 14.32 209 P Pn 21 53 05.1 -3.3
QRZ Quartz Range 14.49 214 Pn Pn 21 53 09.4 -1.3
BSWZ Blackbirch Sta 14.59 209 Pn Pn 21 53 12.3 +0.3
THZ Tophouse 15.05 211 Pn 21 53 16.0 -2.2
THZ IAmb IAmb 21 53 32.6
comp=Z,64nm,1.5s
KHZ Kahutara 15.31 208 Pn 21 53 19.0 -2.6
KHZ IAmb IAmb 21 53 29.9
comp=Z,62nm,1.0s
AFI Afiamalu 15.93 18 Pn Pn 21 53 23.9 -5.9
comp=Z,3.0nm,0.3s,baz=80,slow=23,SNR=3.8
AFI Sn Sn 21 56 19.8 -5.5
comp=Z,3.2nm,0.3s,baz=207,slow=20,SNR=3.0
AFI Afiamalu 15.93 18 Pn 21 53 24.6 -5.2
AFI IAmb IAmb 21 53 24.9
comp=Z,89nm,1.2s
AFI Afiamalu 15.93 18 P Pn 21 53 24.6 -5.2
AFI pmax pmax
comp=Z,89nm,1.2s
LTZ Lake Taylor 16.14 210 Pn 21 53 29.3 -3.1
DZM Mont Dzumac 16.66 291 eP P 21 53 44.0 +2.8
comp=Z,116nm,1.2s
DZM eLR LR 21 57 39.7
comp=Z,5µm,24.0s
DZM Mont Dzumac 16.66 291 Pn Pn 21 53 34.4 -4.8
comp=Z,0.3nm,0.3s,baz=0.4,slow=17,SNR=2.0
DZM LR LR 21 59 01.3
comp=Z,3µm,18.1s,baz=46,slow=34
DZM Mont Dzumac 16.66 291 Pn 21 53 35.3 -3.9
MQZ McQueen's Vall 16.74 207 P Pn 21 53 36.4 -3.5
NOUC Port Laguerre 16.76 291 P Pn 21 53 38.5 -1.8
NOUC IAmb IAmb 21 53 47.7
comp=Z,101nm,1.2s
RAR Rarotonga 17.35 67 P Pn 21 53 43.3 -4.4
comp=Z,1.8nm,0.3s,baz=321,slow=3.1,SNR=8.8
RAR S Sn 21 56 42.0 -18
comp=Z,1.4nm,0.3s,baz=355,slow=3.8,SNR=3.4
RAR LR LR 21 58 35.0
comp=Z,1µm,21.8s,baz=268,slow=31
RAR Rarotonga 17.35 67 P Pn 21 53 43.2 -4.5
RAR Rarotonga 17.35 67 P Pn 21 53 43.2 -4.5
RAR pmax pmax
comp=Z,205nm,1.2s
RPZ Rata Peaks 17.42 211 P Pn 21 53 47.6 -0.8
comp=Z,3.1nm,0.3s,baz=188,slow=2.0,SNR=11
RPZ S Sn 21 56 50.8 -10
baz=195,slow=23,SNR=6.6
RPZ Rata Peaks 17.42 211 P Pn 21 53 47.4 -1.1
FOZ Fox Glacier 17.86 213 P Pn 21 53 51.5 -2.3
ODZ Otahua Downs 18.66 209 P P 21 54 02.6 -0.4
MLZ Mavora Lakes 20.04 212 P P 21 54 16.7 -1.4
WHZ Wether Hill Ro 20.51 212 P P 21 54 22.1 -1.1
LHI Lord Howe Isla 20.92 258 P P 21 54 24.3 -3.5
LHI IAmb IAmb 21 54 35.6
comp=Z,58nm,0.7s
TBI Tubuai 25.20 83 eS S 21 59 26.0 -7.5
comp=Z,290nm,25.2s
TBI eLQ LQ 22 00 05.2
comp=Z,641nm,28.2s
TBI eLR LR 22 01 14.1
comp=Z,2µm,26.0s,baz=252
TBI Tubuai 25.20 83 eT T 22 21 05.8
comp=Z,20nm,0.3s
ARMA Armidale 27.35 260 P P 21 55 27.7 -2.5
PAE Paea 27.45 71 eT T 22 23 41.6
comp=Z,9.2nm,0.3s
PPT2 Papeete2 27.49 71 eLQ LQ 22 00 58.4
comp=Z,816nm,24.5s
PPT2 eLR LR 22 02 23.2
comp=Z,2µm,25.2s
PPT2 Papeete2 27.49 71 eT T 22 23 45.0
comp=Z,4.3nm,0.2s
PPT Papeete 27.50 71 LR LR 22 03 28.5
comp=Z,631nm,21.5s,baz=193,slow=30
EIDS Eidsvold 28.72 270 P P 21 55 40.4 -1.9
EIDS IAmb IAmb 21 55 44.8
comp=Z,18nm,1.1s
HNR Honiara 29.34 307 LR LR 22 05 33.4
comp=Z,433nm,21.2s,baz=165,slow=33
CAN Canberra 29.43 249 P P 21 55 47.1 -1.5
CAN IAmb IAmb 21 56 03.6
comp=Z,35nm,1.1s
CAN Canberra 29.43 249 P P 21 55 50.5 +1.9
CAN pmax pmax
comp=Z,24nm,1.1s
VAH Vaihoa 30.30 69 eT T 22 27 12.2
comp=Z,24nm,0.2s
TAU Tasmania Unive 31.79 235 P P 21 56 10.8 +1.6
TAU pmax pmax
comp=Z,43nm,2.6s
TOO Toolangi 32.38 245 P P 21 56 14.5 0.0
TOO IAmb IAmb 21 56 29.3
comp=Z,14nm,0.9s
TOO Toolangi 32.38 245 P P 21 56 14.5 0.0
TOO pmax pmax
comp=Z,14nm,1.0s
CTA Charters Tower 34.64 277 P P 21 56 36.0 +1.6
CTAO Charters Tower 34.64 277 P P 21 56 36.3 +1.9
CTAO pmax pmax
comp=Z,31nm,0.9s
STKA Stephens Creek 35.75 255 P P 21 56 44.2 +0.4
comp=Z,10nm,0.8s,baz=89,slow=8.1,SNR=20
STKA ScP ScP 22 03 00.3 +5.7
comp=Z,1.1nm,0.6s,baz=117,slow=9.8,SNR=2.9
STKA LR LR 22 09 50.1
comp=Z,1µm,19.3s,baz=86,slow=34
STKA Stephens Creek 35.75 255 P P 21 56 41.5 -2.3
STKA Stephens Creek 35.75 255 P P 21 56 41.5 -2.3
STKA pmax pmax
comp=Z,3.0nm,1.0s
RKT Rikitea 37.91 91 eLR LR 22 07 05.8
comp=Z,1µm,24.2s
TAOE Nuku Hiva Isla 39.91 67 eLR LR 22 08 04.8
comp=Z,1µm,24.1s
BBOO Buckleboo 40.28 253 P P 21 57 20.4 -1.6
BBOO IAmb IAmb 21 57 34.9
comp=Z,31nm,1.1s
AS31 Alice Springs 44.20 265 P P 21 57 52.7 -1.4
ASAR Alice Springs 44.20 265 P P 21 57 52.9 -1.3
comp=Z,7.5nm,0.6s,baz=99,slow=6.8,SNR=44
ASAR PcP PcP 21 59 40.2 +1.8
comp=Z,5.3nm,0.9s,baz=110,slow=4.6,SNR=3.4
ASAR ScP ScP 22 03 32.6 +5.0
comp=Z,1.2nm,0.9s,baz=115,slow=4.4,SNR=4.8
ASAR LR LR 22 15 52.3
comp=Z,1µm,18.2s,baz=108,slow=36
ASAR Alice Springs 44.20 265 P P 21 57 53.2 -0.9
ASAR Alice Springs 44.20 265 P P 21 57 53.2 -0.9
WR0 Warramunga Arr 44.90 270 P P 21 57 58.0 -1.8
WR0 IAmb IAmb 21 58 11.8
comp=Z,14nm,0.9s
WRA Warramunga Arr 45.09 270 P P 21 57 59.2 -2.0
comp=Z,9.2nm,0.8s,baz=109,slow=7.7,SNR=22
WRA PP PP 21 59 47.3 +0.4
comp=Z,3.5nm,1.0s,baz=112,slow=6.7,SNR=8.7
WRA ScP ScP 22 03 37.7 +6.4
comp=Z,1.5nm,1.0s,baz=116,slow=3.4,SNR=3.2
WRA LR LR 22 15 37.4
comp=Z,520nm,18.1s,baz=100,slow=35
WRA Warramunga Arr 45.09 270 P P 21 57 59.7 -1.5
WRA Warramunga Arr 45.09 270 P P 21 57 59.7 -1.5
WRA pmax pmax
comp=Z,1.0nm,0.9s
WB0 Warramunga Arr 45.10 271 P P 21 58 00.4 -0.9
WB0 IAmb IAmb 21 58 13.4
comp=Z,19nm,0.8s
VNDA Vanda 49.38 186 LR LR 22 15 48.3
comp=Z,144nm,20.9s,baz=3.0,slow=31
KIP Kipapa 53.50 22 P P 21 59 06.7 +1.5
KIP pmax pmax
comp=Z,122nm,2.3s
FAKI Fak Fak 54.90 289 P P 21 59 14.2 -1.5

FAKI IAmb IAmb 21 59 26.2
comp=Z,14nm,0.8s
SWI Sorong 56.87 290 P P 21 59 29.0 -0.8
SWI pmax pmax
comp=Z,38nm,1.1s
QSPA South Pole Qui 60.90 180 P P 22 00 00.8 +3.6
comp=Z,37nm,0.9s,baz=41,slow=3.0,SNR=55
QSPA South Pole Qui 60.90 180 P P 22 00 00.7 +3.6
MAW Mawson 73.78 200 P P 22 01 20.8 +2.4
comp=Z,11nm,0.7s,baz=133,slow=6.6,SNR=10
MAW LR LR 22 32 54.9
comp=Z,249nm,18.5s,baz=78,slow=35
SBUM Sibu 74.66 282 P P 22 01 23.8 -0.7
SBUM IAmb IAmb 22 01 37.6
comp=Z,14nm,1.5s
MJAR Matsushiro Arr 77.85 324 P P 22 01 40.4 -1.7
comp=Z,8.4nm,1.0s,baz=153,slow=5.6,SNR=8.6
MJAR LR LR 22 30 59.2
comp=Z,155nm,21.9s,baz=190,slow=32
MJAR Matsushiro Arr 77.85 324 P P 22 01 40.4 -1.7
MJAR pmax pmax
comp=Z,3.0nm,1.0s
MAT Matsushiro 77.85 324 P P 22 01 41.6 -0.5
MAT eS S 22 11 33.6 +1.2
SYO Syowa Base 78.50 193 ⇓iP P 22 01 46.6 +1.3
SYO Syowa Base 78.50 193 ⇑iP P 22 01 48.7 +3.4
SNAA Sanae 79.31 178 P P 22 01 52.6 +2.8
SNAA Sanae 79.31 178 P P 22 01 50.9 +1.1
SNAA IAmb IAmb 22 02 05.2
comp=Z,8.0nm,0.9s
SNAA Sanae 79.31 178 ⇑iP P 22 01 52.6 +2.8
VNA3 Neumayer Olymp 79.42 176 P P 22 01 53.0 +2.6
VNA2 Neumayer--Watz 79.87 176 P P 22 01 55.9 +3.1
VNA1 Neumayer--Stat 80.09 176 P P 22 01 57.0 +3.1
NVL N'lazarevskaya 80.12 183 eP P 22 01 56.6 +2.5
NVL eS S 22 11 56.3 +0.6
NVL pmax pmax
comp=Z,18nm,1.1s
PLCA Paso Flores 82.57 133 P P 22 02 09.4 +1.6
comp=Z,10nm,1.0s,baz=243,slow=3.7,SNR=12
PLCA LR LR 22 29 57.6
comp=Z,193nm,21.2s,baz=300,slow=29
PLCA Paso Flores 82.57 133 P P 22 02 08.2 +0.5
PLCA Paso Flores 82.57 133 P P 22 02 08.3 +0.5
PLCA pmax pmax
comp=Z,16nm,1.1s
KSRS Korea Array 84.11 319 P P 22 02 15.2 -0.1
comp=Z,2.7nm,1.1s,baz=86,slow=34,SNR=3.7
KSRS LR LR 22 36 06.0
comp=Z,106nm,19.6s,baz=134,slow=33
KSAR Wonju Array Be 84.12 319 P P 22 02 15.7 +0.3
KSAR Wonju Array Be 84.12 319 P P 22 02 15.7 +0.3
YSS Yuzh-Sakhalins 84.12 333 eP P 22 02 15.5 +0.3
YSS e 22 02 27.7
YSS eS S 22 12 37.1 0.0
YSS pmax pmax
comp=Z,20nm,0.6s
YSS smax smax
comp=E,200nm,4.0s
YSS MLR MLR
comp=Z,200nm,16.0s
PFO Pinyon Flats O 84.65 47 P P 22 02 20.6 +2.2
PFO pmax pmax
comp=Z,8.0nm,1.8s
GO05 Huala 84.68 127 P P 22 02 19.6 +1.0
PETK Petropavlovsk- 84.92 345 P P 22 02 17.6 -1.5
comp=Z,5.2nm,0.7s,baz=125,slow=7.6,SNR=8.0
PETK LR LR 22 37 40.8
comp=Z,107nm,19.6s,baz=240,slow=34
PETK Petropavlovsk- 84.92 345 P P 22 02 17.8 -1.3
PETK Petropavlovsk- 84.92 345 P P 22 02 17.8 -1.3
CMB Columbia Colle 85.20 41 P P 22 02 21.0 +0.1
CMB IAmb IAmb 22 02 23.4
comp=Z,10nm,1.2s
CMB Columbia Colle 85.20 41 P P 22 02 21.0 +0.1
CMB pmax pmax
comp=Z,10.0nm,1.3s
MSHR Mys Shultsa 85.97 324 ⇑iP P 22 02 25.8 +1.2
NJ2 Nanjing 86.25 310 eP P 22 02 28.9 +2.7
NJ2 pmax pmax
comp=Z,5.0nm,0.6s
RPSI Rantau Prapat 86.28 275 P P 22 02 26.1 -0.8
PSI Prapat 86.33 275 P P 22 02 26.1 -1.2
PSI pmax pmax
comp=Z,16nm,1.1s
PNTR Pine Nut 86.36 41 P P 22 02 26.3 -0.7
PNTR IAmb IAmb 22 02 30.1
comp=Z,11nm,1.0s
YBH Yreka Blue Hor 86.47 37 P P 22 02 27.6 +0.4
comp=Z,3.9nm,1.0s,baz=193,slow=2.9,SNR=6.3
YBH Yreka Blue Hor 86.47 37 IAmb IAmb 22 02 30.6
comp=Z,8.4nm,1.2s
PEL Peldehue 86.55 126 P P 22 02 27.7 -0.3
PEL Peldehue 86.55 126 P P 22 02 27.7 -0.3
PEL pmax pmax
comp=Z,21nm,1.0s
NVAR Mina Array Bea 86.67 42 P P 22 02 28.7 +0.2
comp=Z,3.4nm,0.8s,baz=211,slow=5.1,SNR=20
NVAR Mina Array Bea 86.67 42 P P 22 02 26.9 -1.6
USRK Ussuriysk Ar. 86.74 326 P P 22 02 27.6 -0.7
comp=Z,4.6nm,0.8s,baz=171,slow=3.0,SNR=8.7
NV11 Mina Array Sit 86.76 42 IAmb IAmb 22 02 31.8
comp=Z,8.1nm,1.1s
TPNV Topopah Spring 86.94 44 P P 22 02 28.7 -1.0
TPNV IAmb IAmb 22 02 33.3
comp=Z,5.8nm,0.9s
TPNV Topopah Spring 86.94 44 P P 22 02 28.7 -1.0
TPNV pmax pmax
comp=Z,6.0nm,0.9s
KVN Kaiserville 87.21 42 IAmb IAmb 22 02 33.3
comp=Z,8.2nm,1.1s
MOD Modoc Plateau 87.88 39 IAmb IAmb 22 02 36.9
comp=Z,5.2nm,1.0s
MDJ Mudanjiang 88.23 325 P P 22 02 36.7 +1.2
MDJ pmax pmax
comp=Z,15nm,1.2s
MDJ pmax pmax
comp=Z,200nm,4.0s
MDJ Mudanjiang 88.23 325 P P 22 02 34.0 -1.5
CFA Coronel Fontan 89.12 126 P P 22 02 42.5 +2.1
comp=Z,5.8nm,1.0s,baz=252,slow=3.3,SNR=5.8
WVOR Wild Horse Val 89.15 39 P P 22 02 41.8 +1.7
WVOR pmax pmax
comp=Z,4.0nm,1.1s
GRNR Gornyy 89.69 332 eP P 22 02 42.3 +0.1
I07A Izee 89.79 37 IAmb IAmb 22 02 45.5
comp=Z,8.2nm,1.2s
CN2 Changchun 89.81 322 eP P 22 02 43.8 +0.8
CN2 pmax pmax
comp=Z,10.0nm,1.2s
ELK Elko 89.98 42 P P 22 02 44.7 +0.6
comp=Z,0.9nm,0.7s,baz=187,slow=4.4,SNR=3.8
KLR Kul'dur 90.53 329 ⇑iP P 22 02 47.5 +1.4
KLR pmax pmax
comp=Z,3.0nm,1.0s
TX31 Lajitas Ar. Si 90.89 57 IAmb IAmb 22 02 52.1
comp=Z,7.7nm,1.2s
TX32 Lajitas Array 90.89 57 IAmb IAmb 22 02 52.1
comp=Z,7.7nm,1.2s
TXAR Lajitas Array 90.89 57 P P 22 02 49.9 +1.4
comp=Z,2.4nm,0.9s,baz=219,slow=5.8,SNR=17
TXAR LR LR 22 38 42.0
comp=Z,71nm,18.2s,baz=0.0,slow=32
TXAR Lajitas Array 90.89 57 P P 22 02 49.1 +0.6
TXAR Lajitas Array 90.89 57 P P 22 02 49.1 +0.6
HAWA Hanford 91.34 36 P P 22 02 47.4 -2.6
MFID Camas Ranch 91.35 40 IAmb IAmb 22 02 53.3
comp=Z,7.4nm,1.0s
BMO Blue Mountains 91.48 38 IAmb IAmb 22 02 52.8
comp=Z,4.5nm,1.1s
ENH Enshi 91.77 304 P P 22 02 50.9 -1.6
ANMO Albuquerque 92.04 51 ⇑iP P 22 02 52.1 -1.7
ANMO pmax pmax
comp=Z,2.0nm,0.8s
BJT Baijiatuau 92.78 315 IAmb IAmb 22 03 10.0
comp=Z,7.4nm,1.0s
BJI Beijing 92.79 315 eP P 22 02 57.6 +0.7
BJI pmax pmax
comp=Z,5.0nm,1.1s
AHID Auburn Hatcher 93.66 42 IAmb IAmb 22 03 04.1
comp=Z,6.9nm,0.9s
CMAR Chiang Mai Arr 93.97 289 P P 22 03 05.2 +2.4
comp=Z,1.8nm,0.9s,baz=142,slow=3.4,SNR=12
CMAR LR LR 22 44 57.4
comp=Z,56nm,20.6s,baz=135,slow=35

XAN Xi'an 94.21 307 P P 22 03 09.7 +6.1
XAN sP pwP 22 03 22.7 +4.2
XAN pmax pmax
comp=Z,6.0nm,0.9s
FXWY Fox Creek 94.22 42 IAmb IAmb 22 03 07.0
comp=Z,3.6nm,0.9s
PDAR Pinedale Array 94.57 43 P P 22 03 06.7 +1.3
comp=Z,1.5nm,0.9s,baz=206,slow=4.7,SNR=10
PDAR LR LR 22 42 12.4
comp=Z,175nm,18.0s,baz=238,slow=33
PDAR Pinedale Array 94.57 43 P P 22 03 06.9 +1.5
HHC Hu-ho-hao-te 96.14 314 eP P 22 03 14.8 +2.4
HHC pmax pmax
comp=Z,3.0nm,1.1s
HHC pmax pmax
comp=Z,39nm,5.2s
CCB Clear Creek Bu 96.26 12 IAmb IAmb 22 03 17.7
comp=Z,3.8nm,1.1s
COLA College 96.46 12 P P 22 03 13.2 +0.2
COLA pmax pmax
comp=Z,9.0nm,2.2s
ILAR Eielson Array 96.54 12 P P 22 03 12.8 -0.7
comp=Z,1.7nm,0.7s,baz=221,slow=5.9,SNR=14
ILAR PKKPbc PKKPdf 22 20 10.3 +8.6
comp=Z,0.6nm,0.9s,baz=312,slow=1.7,SNR=4.5
ILAR LR LR 22 43 25.3
comp=Z,52nm,18.1s,baz=198,slow=34
ILAR Eielson Array 96.54 12 P P 22 03 12.3 -1.2
ILAR Eielson Array 96.54 12 P P 22 03 12.3 -1.2
PRP Porcupine Dome 97.47 13 P Pdif 22 03 18.6 +0.7
LPAZ La Paz 97.69 113 LR LR 22 39 15.4
comp=Z,113nm,20.4s,baz=222,slow=30
BILL Bilibino 97.77 354 ⇑iP Pdif 22 03 18.4 -0.6
BILL pmax pmax
comp=Z,1.0nm,1.1s
RSSD Black Hills 98.66 44 P Pdif 22 03 23.9 0.0
RSSD Black Hills 98.66 44 P Pdif 22 03 23.9 +0.1
RSSD pmax pmax
comp=Z,9.0nm,1.2s
LZH Lanzhou 98.83 306 eP Pdif 22 03 26.2 +1.5
LZH pP sP 22 03 37.5 -1.4
LZH sP pwP 22 03 42.5 +2.9
LZH pmax pmax
comp=Z,13nm,1.0s
YAK Yakutsk 100.54 337 ⇑iP Pdif 22 03 31.5 +0.1
YAK pmax pmax
comp=Z,4.0nm,0.7s
SONM Songino Array 102.94 318 PP PP 22 08 04.9 +7.2
comp=Z,0.6nm,0.8s,baz=98,slow=31,SNR=4.6
SONM PKKPbc PKKPbc 22 19 42.5 +1.5
comp=Z,0.7nm,0.9s,baz=266,slow=3.4,SNR=4.7
YKA Yellowknife Ar 103.93 25 PP PP 22 08 09.2 +4.7
comp=Z,0.3nm,0.7s,baz=235,slow=8.2,SNR=4.1
YKA PKKPbc PKKPbc 22 19 38.9 +0.5
comp=Z,0.8nm,0.8s,baz=49,slow=2.7,SNR=7.7
WMQ Urumqi 113.28 308 ePKP PKiKP 22 08 23.6 +1.5
WMQ LR LR
comp=Z,460nm,29.1s
WMQ LR LR
comp=Z,140nm,22.5s
MK31 Makanchi Array 117.78 310 ⇑iPKIKP PKPdf 22 08 29.9 -0.7
MKAR Makanchi Array 117.78 310 PKP PKiKP 22 08 30.3 -0.3
comp=Z,2.2nm,0.8s,baz=174,slow=0.8,SNR=21
MKAR PKKPbc PKKPab 22 18 54.0 +0.8
comp=Z,0.4nm,0.8s,baz=281,slow=3.6,SNR=3.6
MKAR Makanchi Array 117.78 310 PKPdf 22 08 29.9 -0.6
MKAR Makanchi Array 117.78 310 c iPKIKP PKiKP 22 08 31.0 +0.4
MKAR pmax pmax
comp=Z,2.0nm,0.8s
ZALV Zalesovo Beam 117.81 319 PKP PKiKP 22 08 30.0 -0.4
comp=Z,1.9nm,0.8s,baz=198,slow=0.5,SNR=8.0
ZALV Zalesovo Beam 117.81 319 PKPdf 22 08 29.0 -1.3
ZALV Zalesovo Beam 117.81 319 PKIKP PKPdf 22 08 29.0 -1.3
MAKZ Makanchi 117.99 310 PKiKP 22 08 30.6 -0.4
MAKZ Makanchi 117.99 310 PKIKP PKiKP 22 08 30.6 -0.4
BOSA Boshof 118.75 202 PKP PKiKP 22 08 35.4 +2.0
comp=Z,5.6nm,1.0s,baz=170,slow=3.7,SNR=7.2
BOSA Boshof 118.75 202 PKPdf 22 08 32.0 -1.3
BOSA Boshof 118.75 202 PKIKP PKPdf 22 08 32.0 -1.3
KSH Kashi 120.50 301 PKP PKiKP 22 08 38.9 +2.6
KSH PP PP 22 10 11.9 +8.1
KSH PKS PKSdf 22 12 14.7 +1.8
KSH AMB AMB
comp=Z,55nm,7.3s
KSH LR LR
comp=Z,68nm,7.3s
KSH LR LR
comp=Z,91nm,6.9s
KSH LR LR
comp=Z,130nm,6.7s
KURK Kurchatov 120.95 314 PKPdf 22 08 35.5 -0.9
KURK Kurchatov 120.95 314 ⇑ePKIKP PKiKP 22 08 36.4 -0.2
AAK Ala-Archa 122.29 304 PKiKP 22 08 39.5 -0.2
AAK Ala-Archa 122.29 304 ⇑iPKIKP PKiKP 22 08 40.5 +0.8
SCHQ Schefferville 124.68 41 PKP PKiKP 22 08 44.1 +0.3
comp=Z,2.3nm,0.8s,baz=112,slow=3.8,SNR=4.3
KBL Kabul 124.68 294 PKPdf 22 08 43.2 -1.2
KBL Kabul 124.68 294 PKIKP PKPdf 22 08 43.2 -1.2
KKAR Karatay Array 125.25 304 PKPpre PKPpre 22 08 31.6
KKAR PKiKP 22 08 45.3 -0.1
KKAR Karatay Array 125.25 304 PKPpre 22 08 32.2
KKAR PKPpre 22 08 32.8
KKAR PKiKP 22 08 45.0 -0.4
BRVK Borovoye 126.32 316 PKPdf 22 08 44.5 -2.2
BRVK Borovoye 126.32 316 PKIKP PKPdf 22 08 44.5 -2.2
KBS Kingsbay 130.04 358 epPKPdf pPKPdf 22 09 02.0 -1.4
SPA0 Spitsbergen Ar 130.58 356 ePKPdf PKiKP 22 08 55.4 +0.3
SVE Sverdlovsk 131.60 322 ePKIKP PKiKP 22 08 58.9 +1.3
ARU Arti 132.80 321 PKiKP 22 08 59.7 -0.4
ARU Arti 132.80 321 i PKIKP PKiKP 22 08 59.3 -0.8
ARU 22 11 23.1
ARU SS SS 22 28 54.7 -8.4
ABKAR Akbulak array 132.89 312 PKPdf 22 08 58.9 -0.4
GEYT Alibeck 133.96 296 PKhKP PKPpre 22 08 52.1
comp=Z,0.6nm,0.6s,baz=357,slow=7.4,SNR=2.8
GEYT PKP PKiKP 22 09 02.9 -0.2
comp=Z,1.8nm,0.9s,baz=65,slow=3.8,SNR=3.9
GEYT SKPbc SKiKP 22 12 34.3 -2.1
comp=Z,2.4nm,0.8s,baz=215,slow=1.8,SNR=7.8
GEYT Alibeck 133.96 296 PKPdf 22 08 59.7 -2.0
KMBO Kilima Mbogo 135.60 233 PKP PKiKP 22 09 08.0 +0.5
comp=Z,0.4nm,0.4s,baz=31,slow=9.0,SNR=3.0
PRGR Permogore 137.27 332 ePKIKP PKPdf 22 09 06.7 -0.4
PRGR pmax pmax
comp=Z,5.0nm,0.6s
ARCES ARCESS Array B 137.63 349 PKhKP PKPpre 22 08 59.4
comp=Z,2.9nm,0.9s,baz=354,slow=5.0,SNR=5.0
ARCES PKP PKiKP 22 09 08.6 -0.9
comp=Z,8.7nm,0.9s,baz=57,slow=4.5,SNR=9.7
ARCES ARCESS Array B 137.63 349 PKPdf 22 09 06.5 -1.0
ARCES ARCESS Array B 137.63 349 PKIKP PKPdf 22 09 06.6 -1.0
ARE0 ARCESS Array S 137.63 349 ePKPdf PKiKP 22 09 08.6 -0.9
H10S3 ASCENSION HYDR 138.35 153 T T 00 45 06.0
baz=205,slow=74,SNR=12
H10S2 ASCENSION HYDR 138.35 153 T T 00 45 06.2
baz=15,slow=74,SNR=22
KTK1 Kautokeino 138.48 349 ePKPdf PKiKP 22 09 10.2 -1.0
TRO Tromso 138.53 352 ePKPdf PKiKP 22 09 10.2 -1.1
H10N3 ASCENSION HYDR 139.43 152 T T 00 46 04.5
baz=203,slow=75,SNR=27
H10N1 ASCENSION HYDR 139.43 152 T T 00 46 04.1
baz=203,slow=75,SNR=16
H10N2 ASCENSION HYDR 139.44 152 T T 00 46 05.8
baz=203,slow=75,SNR=16
KLMR Klimovskoe 140.17 333 ePKPdf PKPdf 22 09 09.3 -3.1
KLMR AMP 22 09 15.7
comp=Z,29nm,1.4s
KLMR Klimovskoe 140.17 333 ePKIKP PKPdf 22 09 09.3 -3.1
KLMR pmax pmax
comp=Z,29nm,1.4s
VRH Novokhopyorsk 143.85 318 ePKIKP PKiKP 22 09 22.4 -0.3
VRH pmax pmax
comp=Z,8.0nm,0.6s
NSS Namsos 144.22 354 ePKPdf PKPdf 22 09 18.8 -0.8
FINES FINESS Array B 144.36 341 PKP PKPbc 22 09 18.1 -0.1
comp=Z,5.6nm,0.6s,baz=74,slow=2.7,SNR=24
FINES FINESS Array B 144.36 341 PKPab 22 09 17.6 -0.4
FINES FINESS Array B 144.36 341 PKIKP PKPab 22 09 17.6 -0.4
GNI Garni 144.40 299 PKPdf 22 09 20.2 -0.7
GNI Garni 144.40 299 PKIKP PKPdf 22 09 20.2 -0.7
ZEI Tsey 144.71 304 i PKIKP PKPab 22 09 19.7 -0.5
ZEI pmax pmax
comp=Z,15nm,0.9s
OBN Obninsk 144.75 327 i PKIKP PKPbc 22 09 19.3 -0.4
OBN i 22 09 30.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
OBN				pmax	pmax		
	comp=Z,18nm,1.0s						
GOF	**Gofitskoye**	**144.88**	**308**	⇑ePKIKP	**PKPdf**	**22 09 21.9**	**+0.6**
AKH	**Akhalkalaki**	**145.21**	**301**	⇑P	**PKPdf**	**22 09 22.8**	**+0.6**
KBZ	**Khabaz**	**145.27**	**306**	PKP	**PKPdf**	**22 09 22.1**	**+0.1**
	comp=Z,4.3nm,0.7s,baz=158,slow=4.2,SNR=17						
KBZ	**Khabaz**	**145.27**	**306**	⇑ePKIKP	**PKPdf**	**22 09 22.6**	**+0.6**
VSR	**Storozhevoye**	**145.31**	**319**	ePKIKP	**PKPbc**	**22 09 21.2**	**-0.5**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORD	**Divnogorie**	**145.35**	**319**	ePKIKP	**PKPdf**	**22 09 21.4**	**-0.5**
VORD				pmax	pmax		
	comp=Z,20nm,1.2s						
KIV	**Kislovodsk**	**145.37**	**306**	⇑P	**PKPab**	**22 09 23.5**	**+1.0**
KIV	**Kislovodsk**	**145.37**	**306**		**PKPab**	**22 09 23.4**	**+1.0**
KIV	**Kislovodsk**	**145.37**	**306**	i PKIKP	**PKPab**	**22 09 22.8**	**+0.3**
KIV				pmax	pmax		
	comp=Z,48nm,1.0s						
SHA1	**Shidzhatmaz**	**145.44**	**306**	⇑ePKIKP	**PKPab**	**22 09 23.7**	**+0.8**
TBLU	**Trondheim**	**145.64**	**354**	ePKPbc	**PKPab**	**22 09 22.7**	**+0.1**
MOL	**Molde**	**146.51**	**356**	ePKPbc	**PKPab**	**22 09 25.7**	**-0.2**
BATM	**Batumi**	**146.52**	**302**	⇑P	**PKPab**	**22 09 26.3**	**-0.5**
BATM	**Batumi**	**146.52**	**302**	⇑PKP2	**PKPab**	**22 09 26.3**	**-0.5**
VSU	**Vasula**	**146.53**	**338**	eP	**PKPab**	**22 09 25.5**	**-0.7**
BCA	**Borcka**	**146.60**	**302**	⇑P	**PKPab**	**22 09 26.6**	**-0.5**
AKN	**Aaknes**	**146.93**	**357**	ePKPbc	**PKPab**	**22 09 27.2**	**-0.5**
DOMB	**Dombas**	**146.93**	**355**	ePKPbc	**PKPab**	**22 09 26.9**	**-0.8**
SOC	**Sochi**	**147.55**	**306**	i PKP2	**PKPab**	**22 09 36.0**	**+5.3**
SOC				ePPP	PPP	22 16 18.1	
SOC				eSS	SS	22 32 28.8	+32
SOC				pmax	pmax		
	comp=Z,59nm,0.8s						
SOC				MLR	MLR		
	comp=Z,129nm,17.0s						
FOO	**Floro**	**147.58**	**358**	ePKPbc	**PKPbc**	**22 09 28.4**	**+0.4**
NB2	**NORSAR Subarra**	**147.71**	**353**	PKP	**PKPbc**	**22 09 28.6**	**+0.1**
	comp=Z,4.3nm,0.5s,baz=10,slow=3.2						
NOA	**NORSAR Array B**	**147.71**	**353**	PKPbc	**PKPbc**	**22 09 27.8**	**-0.7**
	comp=Z,14nm,0.8s,baz=13,slow=4.4,SNR=33						
NC602	**NORSAR Array S**	**147.97**	**352**	ePKPbc	**PKPbc**	**22 09 29.3**	**+0.2**
NORES	**NORESS Array B**	**147.97**	**352**	PKP2	**PKPbc**	**22 09 29.4**	**+0.3**
NORES				pmax	pmax		
	comp=Z,17nm,0.6s						
HYA	**Hoyanger**	**147.97**	**357**	ePKPbc	**PKiKP**	**22 09 29.9**	**-1.0**
SUE	**Sulen**	**148.13**	**359**	ePKPbc	**PKiKP**	**22 09 30.2**	**-1.0**
SKAR	**Skarslia**	**148.34**	**355**	ePKPbc	**PKiKP**	**22 09 30.6**	**-1.2**
SLIT	**Slitere, Latvi**	**148.60**	**340**	eP	**PKPbc**	**22 09 30.6**	**-0.2**
ASK	**Askoy**	**148.69**	**358**	ePKPbc	**PKiKP**	**22 09 31.6**	**-0.9**
IZAR	**Zarasai**	**148.78**	**335**	eP	**PKiKP**	**22 09 33.2**	**+0.5**
BER	**Bergen**	**148.79**	**358**	ePKPbc	**PKiKP**	**22 09 32.0**	**-0.6**
ANN	**Anapa**	**148.79**	**309**	i PKP2	**PKPbc**	**22 09 31.7**	**0.0**
ANN				e		22 16 33.2	
ANN				pmax	pmax		
	comp=Z,60nm,1.0s						
OSL	**Oslo**	**148.84**	**353**	ePKPbc	**PKiKP**	**22 09 32.1**	**-0.7**
ISAL	**Salakas**	**148.96**	**335**	eP	**PKiKP**	**22 09 33.1**	**0.0**
ISAL				IAmb	IAmb	22 09 36.0	
	comp=Z,19nm,0.8s						
IIGN	**Ignalina**	**149.08**	**334**	eP	**PKiKP**	**22 09 32.6**	**-0.8**
IIGN				IAmb	IAmb	22 09 34.1	
	comp=Z,19nm,0.8s						
NACGM	**Naroch**	**149.20**	**333**	e	**PKPbc**	**22 09 32.0**	**-0.4**
ODD1	**Odda**	**149.21**	**357**	ePKPbc	**PKiKP**	**22 09 33.0**	**-0.6**
KONO	**Kongsberg**	**149.25**	**354**	ePKPbc	**PKiKP**	**22 09 32.9**	**-0.7**
KONO	**Kongsberg**	**149.25**	**354**		**PKPbc**	**22 09 32.0**	**-0.4**
KONO	**Kongsberg**	**149.25**	**354**		**PKiKP**	**22 09 31.9**	**-0.6**
KONO	**Kongsberg**	**149.25**	**354**	PKP2	**PKiKP**	**22 09 33.2**	**-0.4**
BLS5	**Blasjo**	**149.70**	**357**	ePKPbc	**PKPbc**	**22 09 33.4**	**-0.2**
PABE	**Paberze**	**149.79**	**336**	eP	**PKiKP**	**22 09 34.5**	**-0.3**
PABE				IAmb	IAmb	22 09 36.1	
	comp=Z,89nm,0.7s						
PBUR	**Paburge**	**150.05**	**339**	eP	**PKiKP**	**22 09 35.2**	**-0.1**
AKASG	**Malin Array Be**	**150.94**	**325**	PKP	**PKPdf**	**22 09 31.4**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=68,slow=2.0,SNR=4.7						
AKASG				PKPbc	**PKiKP**	**22 09 36.6**	**-0.7**
	comp=Z,23nm,0.7s,baz=45,slow=2.6,SNR=76						
SIM	**Simferopol'**	**150.96**	**311**	ePKIKP	**PKiKP**	**22 09 39.1**	**+1.5**
SIM				e		22 09 46.3	
SIM				pmax	pmax		
	comp=Z,22nm,0.9s						
QRWL	**Qaraoun**	**151.97**	**287**	eP	**PKiKP**	**22 09 40.7**	**+0.5**
BHL	**Bhannes**	**151.99**	**288**	eP	**PKiKP**	**22 09 40.5**	**+0.3**
BSD	**Bornholm Skovb**	**152.76**	**345**	i P	**PKiKP**	**22 09 41.5**	**+0.5**
BSD	**Bornholm Skovb**	**152.76**	**345**	i PKIKP	**PKiKP**	**22 09 41.5**	**+0.5**
BRTR	**Keskin Array B**	**152.89**	**301**	PKPbc	**PKiKP**	**22 09 42.4**	**+0.3**
	comp=Z,3.7nm,0.6s,baz=148,slow=5.2,SNR=16						
BRTR				PKPab	**PKPab**	**22 09 50.0**	**-3.1**
	comp=Z,12nm,0.9s,baz=112,slow=3.8,SNR=20						
BRTR	**Keskin Array B**	**152.89**	**301**		**PKiKP**	**22 09 41.9**	**-0.1**
BRTR					**PKPab**	**22 09 49.4**	**-3.6**
BRTR	**Keskin Array B**	**152.89**	**301**	PKIKP	**PKPab**	**22 09 49.4**	**-3.6**
SORM	**Soroca**	**152.92**	**321**	⇑P	**PKiKP**	**22 09 41.5**	**-0.1**
SORM	**Soroca**	**152.92**	**321**	⇑PKIKP	**PKiKP**	**22 09 41.5**	**-0.1**
MILM	**Milestii Mici**	**153.34**	**319**	⇑P	**PKiKP**	**22 09 42.2**	**-0.2**
ANTO	**Ankara**	**153.49**	**302**	PKPdf	**PKPdf**	**22 09 34.6**	**-0.8**
ANTO				PKPbc	**PKiKP**	**22 09 42.9**	**-0.2**
ANTO	**Ankara**	**153.49**	**302**	PKPbc	**PKiKP**	**22 09 42.9**	**-0.2**
LEOM	**Leova**	**153.91**	**318**	⇑P	**PKiKP**	**22 09 44.7**	**+1.1**
LEOM	**Leova**	**153.91**	**318**	⇑PKIKP	**PKiKP**	**22 09 44.7**	**+1.1**
LVV	**L'vov**	**154.03**	**328**	ePKIKP	**PKiKP**	**22 09 44.8**	**+1.0**
TOPG	**Topolog**	**154.66**	**315**	⇑P	**PKPab**	**22 09 53.9**	**-6.3**
BURAR	**Bucovina Array**	**154.92**	**323**	⇓P	**PKiKP**	**22 09 46.5**	**+0.6**
BURAR	**Bucovina Array**	**154.92**	**323**		**PKiKP**	**22 09 48.2**	**+2.4**
BURAR	**Bucovina Array**	**154.92**	**323**	PKIKP	**PKiKP**	**22 09 48.2**	**+2.4**
HARR	**Harsova**	**155.03**	**315**	⇑P	PKPab	22 09 53.8	-7.9
HARR	**Harsova**	**155.03**	**315**	⇑PKIKP	PKPab	22 09 53.8	-7.9
VRI	**Vrincioaia**	**155.13**	**318**	⇓P	**PKPab**	**22 09 59.0**	**-3.1**
VRI	**Vrincioaia**	**155.13**	**318**	⇓PKP2	**PKPab**	**22 09 59.0**	**-3.1**
PLOR	**Plostina**	**155.18**	**318**	⇑P	**PKPab**	**22 10 03.3**	**+0.9**
PLOR	**Plostina**	**155.18**	**318**	⇑PKP2	**PKPab**	**22 10 03.3**	**+0.9**
ICOR	**Ion Corvin**	**155.39**	**314**	⇑P	**PKPdf**	**22 09 44.4**	**+6.7**
OZUR		**155.53**	**320**	⇑P	**PKPab**	**22 10 03.6**	**-0.3**
UZH	**Uzhgorod**	**155.67**	**328**	ePKIKP	**PKPdf**	**22 09 41.9**	**+3.9**
UZH				e		22 09 48.8	
UZH				e		22 09 56.0	
MLR	**Muntele Rosu**	**155.79**	**318**	⇑P	PKPdf	22 09 48.8	+10
MLR	**Muntele Rosu**	**155.79**	**318**	⇑PKIKP	PKPdf	22 09 48.8	+10
DOPR	**Dopca**	**155.83**	**320**	⇑P	**PKPab**	**22 10 01.3**	**-3.8**
CRVS	**Cervenica-Dubn**	**155.85**	**330**	ePKP2	PKPab	22 10 17.0	+12
CRVS	**Cervenica-Dubn**	**155.85**	**330**	e	PKPab	22 10 17.0	+12
LIC	**Lamto**	**155.87**	**160**	eP	PKPdf	22 09 50.4	+11
KIC	**Kosan Boka**	**156.08**	**160**	eP	PKPdf	22 09 51.7	+12
	comp=Z,7.9nm,0.9s						
TIC	**Toumodi**	**156.27**	**159**	eP	PKPdf	22 09 49.5	+10
VOIR		**156.34**	**319**	⇑P	**PKPdf**	**22 09 60.0**	**-7.4**
VOIR		**156.34**	**319**	⇑PKP2	**PKPab**	**22 10 00.0**	**-7.4**
DBIC	**Dimbokro**	**156.34**	**160**	PKPbc	PKPbc	22 09 52.4	
	comp=Z,2.7nm,0.9s,baz=264,slow=12,SNR=3.7						
DBIC				PKPab	**PKPab**	**22 10 11.3**	**+3.3**
	comp=Z,7.1nm,0.9s,baz=197,slow=7.6,SNR=4.9						
DBIC	**Dimbokro**	**156.34**	**160**	PKP2	**PKPab**	**22 10 11.5**	**+3.5**
CHVC	**Chvalec**	**156.53**	**339**	ePKPAB	**PKPab**	**22 10 15.1**	**+7.1**
UPC	**Upice**	**156.62**	**339**	ePKPAB	PKPab	22 10 16.1	+7.8
UPC	**Upice**	**156.62**	**339**	ePKP2	PKPab	22 10 16.1	+7.8
DPC	**Dobruska-Polom**	**156.66**	**338**	ePKPAB	PKPab	22 10 16.6	+8.1
DPC	**Dobruska-Polom**	**156.66**	**338**	ePKP2	PKPab	22 10 16.6	+8.1
CLL	**Collm**	**156.72**	**344**	ePKPdf	**PKPdf**	**22 09 40.0**	**+0.7**
CLL				ePKPdiff	**pPKPdf**	**22 09 51.0**	**+1.1**
	comp=Z,10.0nm,1.1s						
CLL				e		22 09 59.0	
	comp=Z,8.0nm,1.0s						
CLL				ePKPab	**PKPab**	**22 10 08.0**	**-0.7**
	comp=Z,9.0nm,1.3s						
CLL				e(pPKPab)		22 10 16.0	
CLL				e		22 10 20.0	
CLL	**Collm**	**156.72**	**344**	ePKIKP	**PKPdf**	**22 09 40.0**	**+0.7**
CLL				e		22 09 51.0	
KRLC	**Kraliky**	**156.74**	**337**	ePKPAB	PKPab	22 10 16.5	+7.6
KRLC	**Kraliky**	**156.74**	**337**	ePKP2	PKPab	22 10 16.5	+7.6
COPA	**Copaceanca**	**156.97**	**316**	⇑P	**PKPab**	**22 10 09.7**	**-0.3**
LOT	**Lotru**	**157.05**	**321**	⇓P	**PKPab**	**22 10 12.2**	**+1.7**
ELND	**Elena**	**157.19**	**313**	⇑P	**PKPab**	**22 10 11.1**	**0.0**
PSZ	**Piszkesteto**	**157.28**	**330**	⇑P	**PKPab**	**22 10 16.3**	**+4.9**
PSZ	**Piszkesteto**	**157.28**	**330**	⇑PKP2	**PKPab**	**22 10 16.3**	**+4.9**
VYHS	**Vyhne**	**157.28**	**332**	ePKP2	**PKPab**	**22 10 18.5**	**+7.2**
VYHS	**Vyhne**	**157.28**	**332**	ePKP	**PKPab**	**22 10 18.5**	**+7.2**
VRAC	**Vranov**	**157.46**	**337**	ePKP	**PKPab**	**22 10 19.2**	**+7.2**
PRU	**Pruhonice**	**157.52**	**341**	ePKPAB	PKPab	22 10 20.0	+7.8
PRU	**Pruhonice**	**157.52**	**341**	ePKP2	PKPab	22 10 20.0	+7.8
VLAD	**Vladila**	**157.54**	**317**	⇑P	**PKPab**	**22 10 09.8**	**-2.7**
KRUC	**Moravsky**	**157.74**	**337**	ePKP	**PKPab**	**22 10 20.2**	**+7.0**
SMOL	**Smolenice**	**157.82**	**334**	ePKP2	PKPab	22 10 21.4	+7.9
SMOL	**Smolenice**	**157.82**	**334**	ePKP	PKPab	22 10 21.4	+7.9
KHC	**Kasperske Hory**	**158.57**	**341**	ePKPAB	**PKPab**	**22 10 24.0**	**+7.2**
KHC				ex	x	22 10 29.2	
KHC	**Kasperske Hory**	**158.57**	**341**	ePKP2	**PKPab**	**22 10 24.0**	**+7.2**
GERES	**GERESS Array B**	**158.79**	**341**	PKP	**PKPdf**	**22 09 43.2**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=197,slow=4.1,SNR=3.8						
GERES				PKPab	**PKPab**	**22 10 21.8**	**+4.0**
	comp=Z,2.2nm,0.9s,baz=30,slow=6.0,SNR=5.1						
GERES	**GERESS Array B**	**158.79**	**341**		**PKPdf**	**22 09 42.5**	**+0.4**
GERES					**PKPab**	**22 10 15.9**	**-1.9**
GERES	**GERESS Array B**	**158.79**	**341**	PKIKP	**PKPdf**	**22 09 42.5**	**+0.4**
GERES						22 10 15.9	
CONA	**Conrad Observa**	**158.89**	**336**	epPKPab	pPKPab	22 10 25.2	-3.4
	comp=Z,9.3nm,1.1s						
VTS	**Vitosha**	**159.01**	**315**	⇑P	**PKPab**	**22 10 19.5**	**+0.3**
VTS	**Vitosha**	**159.01**	**315**	⇑PKP2	**PKPab**	**22 10 19.5**	**+0.3**
SOKA	**Soboth**	**160.25**	**335**	epPKPab	pPKPab	22 10 31.6	-2.9
	comp=Z,12nm,1.2s						
WATA	**Walderalm**	**160.75**	**342**	epPKPab	pPKPab	22 10 33.6	-3.2
	comp=Z,12nm,1.3s						
WTTA	**Wattenberg**	**160.80**	**342**	epPKPab	pPKPab	22 10 34.1	-3.0
	comp=Z,11nm,1.1s						
RETA	**Reutte**	**160.82**	**344**	epPKPab	pPKPab	22 10 34.0	-3.0
	comp=Z,9.9nm,1.2s						
MOTA	**Moosalm**	**160.87**	**343**	epPKPab	pPKPab	22 10 34.4	-3.0
	comp=Z,9.6nm,1.2s						
ABTA	**Abfaltersbach**	**161.03**	**340**	epPKPab	pPKPab	22 10 33.1	-4.9
	comp=Z,19nm,1.2s						
TOA0	**Torodi Ar. Sit**	**163.96**	**175**		**PKPdf**	**22 09 48.2**	**-0.2**
TOA0					**PKPab**	**22 10 42.8**	**+1.8**
TORD	**Torodi Ar. Bea**	**163.96**	**175**	PKP	**PKPdf**	**22 09 49.5**	**+1.1**
	comp=Z,3.3nm,1.0s,baz=313,slow=1.6,SNR=12						
TORD				PKPab	**PKPab**	**22 10 43.7**	**+2.6**
	comp=Z,7.9nm,0.9s,baz=186,slow=3.8,SNR=20						
TORD	**Torodi Ar. Bea**	**163.96**	**175**		**PKPdf**	**22 09 49.3**	**+0.9**
ESDC	**Sonseca Array**	**168.02**	**27**	PKP	**PKPdf**	**22 09 51.8**	**+0.8**
	comp=Z,3.4nm,1.1s,baz=352,slow=3.0,SNR=6.0						
ESDC				PKPab	**PKPab**	**22 10 58.9**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=323,slow=2.3,SNR=4.0						
ESDC	**Sonseca Array**	**168.02**	**27**	PKPdf	**PKPdf**	**22 09 52.2**	**+1.2**
ESDC					**PKPab**	**22 10 57.0**	**-1.5**

NCEDC 10 21:58:22.9±1.2, 35.54N±0.03×121.26W±0.04, h4km±7km, ML3.1/8, Error ellipse: s-maj=6.0km s-min=3.1km az=223.0

NEIC 10 21:58:22.9±0.9, 35.51N±0.03×121.31W±0.03, h4km±6km, Error ellipse: s-maj=5.3km s-min=1.2km az=219.0, Central California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCBM	**Cambria**	**0.21**	**89**		Pg	21 58 26.6	-0.3
PHCM	**Hearst Castle**	**0.21**	**38**		Pg	21 58 26.8	-0.3
BLDC	**Black Mountain**	**0.33**	**86**		Pg	21 58 29.3	0.0
BLDC	**Black Mountain**	**0.33**	**86**		Pg	21 58 29.3	0.0
BLDC					Sg	21 58 34.0	+0.3
PHSB	**Hesperia Broad**	**0.38**	**34**		Pg	21 58 30.0	-0.2
RAMR	**Ramage Ranch**	**0.38**	**71**		Pg	21 58 30.1	-0.2
RAMR					Sg	21 58 35.4	+0.2
PAPM	**Alder Peak**	**0.40**	**354**		Pg	21 58 30.6	-0.1
PANM	**San Antonio Re**	**0.42**	**51**		Pg	21 58 30.8	-0.3
LSDC	**Los Osos Digit**	**0.44**	**119**		Pg	21 58 31.6	+0.3
VPDC	**Valencia Peak**	**0.45**	**127**		Pg	21 58 32.2	+0.5
PTAM	**Tassajara Cree**	**0.51**	**104**		Pg	21 58 32.6	-0.1
DPD	**Davis Peak**	**0.52**	**123**		Pg	21 58 33.1	+0.3
EFD	**Emergency Oper**	**0.52**	**112**		Pg	21 58 32.6	-0.2
PCCM	**Crazy Canyon**	**0.59**	**12**		Pg	21 58 34.2	0.0
PSAM	**San Ardo**	**0.62**	**34**		Pg	21 58 34.4	-0.4
PPO	**Portuguese Can**	**0.67**	**58**		Pg	21 58 35.6	-0.1
BAPM	**Anderson Peak**	**0.71**	**338**		Pg	21 58 37.1	+0.4
PWKM	**Work Ranch**	**0.72**	**65**		Pg	21 58 36.5	-0.2
PVCM	**Vineyard Canyo**	**0.75**	**57**		Pg	21 58 36.7	-0.6
PKD	**Bear Valley Ra**	**0.76**	**55**		Pg	21 58 36.7	-0.8
TCHL	**Shandon**	**0.76**	**77**		Pg	21 58 37.5	-0.1
LRC	**Lone Oak Road**	**0.76**	**17**		Pg	21 58 37.0	-0.5
PSTM	**Stockdale Moun**	**0.78**	**57**		Pg	21 58 37.0	-0.8
TSCN	**Private Proper**	**0.79**	**87**		Pg	21 58 38.0	-0.1
PCMM	**Cholame Hills**	**0.79**	**68**		Pg	21 58 37.7	-0.4
PMCM	**McMillan Canyo**	**0.80**	**74**		Pg	21 58 38.0	-0.2
BPOM	**Post Ranch**	**0.80**	**333**		Pg	21 58 38.2	-0.2
PMPB	**Monarch Peak**	**0.81**	**30**		Pg	21 58 38.1	-0.5
PMPB	**Monarch Peak**	**0.81**	**30**	Sg	Sg	21 58 50.0	+0.8
BCWM	**Chews Ridge**	**0.82**	**346**		Pg	21 58 38.5	-0.1
PHFM	**Heflinger Ranc**	**0.83**	**63**		Pg	21 58 38.2	-0.6
PKLM	**Kerr Lake**	**0.83**	**72**		Pg	21 58 38.4	-0.5
GHC	**Gold Hill**	**0.84**	**68**		Pg	21 58 38.4	-0.7
PMLM	**Mount Lospe**	**0.84**	**137**		Pg	21 58 38.5	-0.6
TRAM	**Private Proper**	**0.86**	**79**		Pg	21 58 39.1	-0.4
BSMM	**Soledad Missio**	**0.87**	**354**		Pg	21 58 39.4	-0.3
PSNM	**Stone Corral**	**0.87**	**71**		Pg	21 58 39.0	-0.7
HAST	**Hastings Reser**	**0.90**	**348**		Pg	21 58 39.5	-0.6
CTM	**Castle Mountai**	**0.90**	**62**		Pg	21 58 39.9	-0.2
BSGM	**Shirttail Gulc**	**0.90**	**3**		Pg	21 58 39.5	-0.7
PSRM	**Scobie Ranch**	**0.91**	**67**		Pg	21 58 39.6	-0.7
THIS	**South End of C**	**0.91**	**76**		Pg	21 58 39.8	-0.6
PTRM	**Twissleman Ran**	**0.91**	**81**		Pg	21 58 39.7	-0.6
PMRM	**Maxey Ranch**	**0.92**	**73**		Pg	21 58 39.8	-0.7
LRV	**Little Rabbit**	**0.94**	**15**		Pg	21 58 40.7	-0.3
PBPM	**Bitterwater Pu**	**1.01**	**86**		Pg	21 58 41.4	-0.9
BBNM	**San Benito**	**1.01**	**11**		Pg	21 58 41.8	-0.5
BJCM	**Johnson Can.**	**1.03**	**356**		Pg	21 58 41.8	-0.9
SCZ	**Santa Cruz**	**1.08**	**356**		Pg	21 58 42.5	-1.3
BBGB	**Big Mountain B**	**1.09**	**12**		Pg	21 58 43.2	-0.6
BPCNC	**Pine Canyon**	**1.09**	**347**		Pg	21 58 43.2	-0.6
SMMC	**Simmler**	**1.09**	**100**		Pg	21 58 43.1	-0.7
BJOM	**Mount Johnson**	**1.11**	**360**		Pg	21 58 42.7	-1.6
BLRM	**Lewis Ranch**	**1.15**	**2**		Pg	21 58 44.2	-0.8
BAVM	**Antelope Valle**	**1.15**	**11**		Pg	21 58 44.1	-0.9
BEHM	**Elkhorn Ranch**	**1.15**	**6**		Pg	21 58 45.0	-0.1
BEMM	**Emmet**	**1.16**	**9**		Pg	21 58 44.5	-0.6
BSRM	**Salinas Radio**	**1.16**	**352**		Pg	21 58 44.0	-1.2
HMOM	**Monterey**	**1.19**	**336**		Pg	21 58 44.6	-1.1
BCGM	**Cienega Road**	**1.19**	**359**		Pg	21 58 44.7	-1.1
BHRM	**Hodges Ranch**	**1.21**	**2**		Pg	21 58 45.9	-0.2
CARC	**Carrizo Plain**	**1.22**	**99**		Pg	21 58 45.4	-0.9
BMSM	**Mercy Hot Spri**	**1.22**	**20**		Pg	21 58 45.7	-0.6
BVYM	**Vineyard**	**1.24**	**356**		Pg	21 58 45.1	-1.6
FRP	**Fremont Peak**	**1.25**	**353**		Pg	21 58 45.0	-1.8
SAO	**San Andreas Ge**	**1.25**	**355**		Pg	21 58 45.0	-2.0
SAO	**San Andreas Ge**	**1.25**	**355**	Pn	Pg	21 58 46.4	-0.6
SAO				Sg	Sg	21 59 02.8	-0.4
BSLM	**Silva Ranch**	**1.26**	**359**		Pg	21 58 46.5	-0.6
HJGM	**San Juan Grade**	**1.30**	**351**		Pg	21 58 46.0	-1.8
HERM	**Elkhorn Road**	**1.32**	**346**		Pn	21 58 46.9	-1.3
HTUM	**Tustin Road**	**1.34**	**349**		Pn	21 58 47.3	-1.0
HBTM	**San Juan Bauti**	**1.35**	**352**		Pn	21 58 48.2	-0.3
HLTM	**Lone Tree Road**	**1.37**	**0**		Pn	21 58 47.5	-1.3
BRMM	**Rolling Bench**	**1.38**	**17**		Pn	21 58 47.6	-1.4
PKM	**Mcpherson Peak**	**1.38**	**116**		Pn	21 58 46.9	-2.2
HCOM	**Corn Cob Canyo**	**1.41**	**347**		Pn	21 58 48.1	-1.3
HFEM	**San Felipe**	**1.47**	**357**		Pn	21 58 47.1	-3.1
SFJWR	**San Luis Fatjo**	**1.54**	**4**		Pn	21 58 50.5	-0.6
HPCM	**Pacheco Lake**	**1.54**	**1**		Pn	21 58 50.6	-0.7
HLPM	**Lions Peak**	**1.55**	**350**		Pn	21 58 49.5	-1.7
SLD	**San Luis Dam**	**1.56**	**3**		Pn	21 58 49.9	-1.5
JRGM	**Rodeo Gulch Ro**	**1.61**	**341**		Pn	21 58 50.6	-1.5
JHLM	**Holstrom Ranch**	**1.65**	**345**		Pn	21 58 50.4	-2.3
BCW	**Bitter Crk WRg**	**1.66**	**110**		Pn	21 58 51.2	-1.7
JLAB	**Laurel Hill**	**1.67**	**348**		Pn	21 58 51.2	-1.8
JUMM	**Mount Umunhum**	**1.71**	**344**		Pn	21 58 51.5	-2.1
JSTM	**Santa Teresa H**	**1.73**	**347**		Pn	21 58 51.9	-2.0
JBNB	**Ben Lomond Mou**	**1.75**	**337**		Pn	21 58 52.3	-1.8
MRHM	**Rocky Hill**	**1.96**	**66**		Pn	21 58 54.9	-2.1
ISA	**Isabella, Lake**	**2.32**	**85**		Pn	21 58 59.1	-2.8
CMB	**Columbia Colle**	**2.62**	**16**		Pn	21 59 05.8	-0.3
OMMB	**Old Mammoth Mi**	**2.80**	**41**		Pn	21 59 09.7	+0.9
MWC	**Mount Wilson**	**2.97**	**115**		Pn	21 59 10.0	-1.0
MGNR	**McGee Canyon**	**3.11**	**42**		Pn	21 59 13.1	+0.1
WAKR	**Walker**	**3.34**	**26**		Pn	21 59 17.9	+1.8
AFDM	**Forest Hills D**	**3.44**	**4**	Pn	Pn	21 59 16.0	-1.3
AFDM					Sn	21 59 52.8	-5.8
NVAR	**Mina Array Bea**	**3.78**	**39**		Pn	21 59 22.4	+0.2
PNTR	**Pine Nut**	**3.82**	**20**		Pn	21 59 23.8	+1.4
TPNV	**Topopah Spring**	**4.34**	**69**		Pn	21 59 31.0	+1.3

ATH 10 22:15:13.7, 38.19N×20.37E, h11km±1km, ML2.9/2, Error ellipse: s-maj=1.8km s-min=1.1km az=252.0
THE 10 22:15:13.7, 38.19N×20.32E, h7km±1km, ML2.6/9, Error ellipse: s-maj=1.5km s-min=0.5km az=86.0

ISC 10 22:15:13.8±1.1, 38.19N±0.03×20.36E±0.05, h10km±4km, n32, σ0.51/54, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.02**	**329**	P	**Pg**	**22 15 15.6**	**0.0**
KEF3				S	**Sg**	**22 15 16.9**	**+0.1**
CHV1	**Chavriata, Kef**	**0.02**	**107**	P	**Pg**	**22 15 15.5**	**-0.1**
CHV1				S	**Sg**	**22 15 16.5**	**-0.3**
LXR1	**Lixouri, Cepha**	**0.06**	**79**	P	**Pg**	**22 15 15.9**	**0.0**
LXR1				S	**Sg**	**22 15 17.6**	**+0.1**
KEF4	**Livadi, Kephal**	**0.09**	**37**	P	**Pg**	**22 15 16.3**	**0.0**
KEF4				S	**Sg**	**22 15 18.2**	**+0.3**
ARG2	**Argostoli**	**0.10**	**96**	P	**Pg**	**22 15 16.3**	**-0.1**
ARG2				S	**Sg**	**22 15 18.3**	**0.0**
KEF2	**Argostoli. Kep**	**0.10**	**103**	P	**Pg**	**22 15 16.3**	**-0.1**
KEF2				S	**Sg**	**22 15 18.2**	**-0.1**
KEF1	**Kardakata, Kep**	**0.12**	**45**	P	**Pg**	**22 15 16.7**	**0.0**
KEF1				S	**Sg**	**22 15 18.7**	**-0.1**
VLS	**Valsamata**	**0.18**	**94**	P	**Pg**	**22 15 17.4**	**-0.3**
VLS				S	**Sg**	**22 15 20.3**	**-0.1**
	5μm,0.1s						
VLS	**Valsamata**	**0.18**	**94**	P	**Pg**	**22 15 17.4**	**-0.3**
VLS				S	**Sg**	**22 15 20.2**	**-0.2**
VLS				AML	AML	22 15 20.3	
	comp=E,10772μm,0.1s						
VLS				AML	AML	22 15 20.5	
	comp=N,9905μm,0.2s						
VSK1	**VASILIKIADES**	**0.27**	**36**	P	**Pg**	**22 15 19.3**	**-0.1**
VSK1				S	**Sg**	**22 15 23.9**	**+0.8**
	comp=N,4μm,0.3s						
FSK	**Fiskardo**	**0.31**	**31**	P	**Pg**	**22 15 20.0**	**-0.2**
FSK				S	**Sg**	**22 15 25.3**	**+1.0**
	comp=N,1μm,0.3s						
FSK	**Fiskardo**	**0.31**	**31**	P	**Pg**	**22 15 19.9**	**-0.2**
FSK				S	**Sg**	**22 15 24.7**	**+0.4**
VLMS	**Volimes, Zakyn**	**0.39**	**142**	P	**Pg**	**22 15 21.2**	**-0.4**
VLMS				S	**Sg**	**22 15 27.5**	**+0.7**
VLMS				AML	AML	22 15 28.5	
	comp=N,9508μm,0.6s						
VLMS				AML	AML	22 15 29.4	
	comp=E,4685μm,0.3s						
EVGI	**Lefkada island**	**0.49**	**28**	P	**Pg**	**22 15 23.2**	**-0.2**
EVGI				S	**Sb**	**22 15 31.4**	**-0.4**
EVGI	**Lefkada island**	**0.49**	**28**	P	**Pg**	**22 15 23.3**	**-0.2**
ZAK2	**Zakynthos**	**0.59**	**133**	P	**Pg**	**22 15 25.1**	**-0.1**
ZAK2				S	**Sb**	**22 15 34.8**	**+0.3**
KRI1	**kERI**	**0.64**	**145**	P	**Pg**	**22 15 25.6**	**-0.6**
KRI1				S	**Sb**	**22 15 36.0**	**-0.1**
	comp=E,1μm,0.5s						
LKD2	**Lefkada island**	**0.64**	**21**	P	**Pg**	**22 15 25.7**	**-0.6**
LKD2				S	**Sb**	**22 15 35.7**	**-0.6**
	comp=E,180nm,0.4s						
LKD2	**Lefkada island**	**0.64**	**21**	P	**Pg**	**22 15 25.6**	**-0.6**
AST1	**Astakos**	**0.67**	**58**	P	**Pg**	**22 15 26.9**	**0.0**
TSLK	**Tsoukalades, L**	**0.68**	**20**	P	**Pg**	**22 15 26.6**	**-0.3**
TSLK	**Tsoukalades, L**	**0.68**	**20**	P	**Pg**	**22 15 25.9**	**-1.0**
RLS	**Riolos of Patr**	**0.88**	**98**	P	**Pg**	**22 15 29.9**	**-0.9**
PVO	**Paravola**	**1.01**	**65**	P	**Pg**	**22 15 32.9**	**-0.4**
PVO				S	**Sn**	**22 15 48.7**	**+0.3**
	comp=E,332nm,0.7s						
PVO	**Paravola**	**1.01**	**65**	P	**Pg**	**22 15 32.8**	**-0.5**
DRO	**Drossia**	**1.09**	**102**	P	**Pg**	**22 15 33.9**	**-0.9**
DRO				S	**Sn**	**22 15 51.9**	**+1.5**
	comp=E,338nm,0.6s						
DRO	**Drossia**	**1.09**	**102**	P	**Pg**	**22 15 33.7**	**-1.2**
AMT	**Artemida-Makis**	**1.25**	**121**	P	**Pg**	**22 15 37.9**	**0.0**
AMT				S	**Sg**	**22 15 54.4**	**+0.2**
	comp=E,275nm,0.7s						
ANX	**Ano Chora**	**1.29**	**71**	P	**Pn**	**22 15 37.6**	**-0.5**
IGT	**Igoumenitsa**	**1.34**	**359**	P	**Pb**	**22 15 39.2**	**+0.1**
ALIK	**Aliki, Aigiali**	**1.38**	**86**	P	**Pn**	**22 15 39.0**	**-0.2**
ALIK				S	**Sg**	**22 15 59.1**	**+0.8**
KLV	**Kalavryta, Ach**	**1.42**	**95**	P	**Pn**	**22 15 39.5**	**-0.3**
KLV				S	**Sg**	**22 16 00.2**	**+0.7**
	comp=E,58nm,0.8s						

THE 10 22:20:36.7, 38.17N×20.41E, h13km, ML2.4/2, Error ellipse: s-maj=1.1km s-min=0.6km az=215.0
ATH 10 22:20:36.8, 38.19N×20.41E, h12km±2km, ML2.5/3, Error ellipse: s-maj=2.5km s-min=1.2km az=20.0

ISC 10 22:20:35.5±1.1, 38.19N±0.04×20.39E±0.06, h18km±4km, n16, σ0.60/27, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.01**	**239**	P	**Pg**	**22 20 39.0**	**+0.4**
CHV1				S	**Sg**	**22 20 40.7**	**0.0**
KEF3	**Kipouria, Keph**	**0.04**	**297**	P	**Pg**	**22 20 39.2**	**+0.5**
KEF4	**Livadi, Kephal**	**0.08**	**21**	P	**Pg**	**22 20 39.4**	**+0.4**
KEF4				S	**Sg**	**22 20 41.6**	**+0.3**
ARG2	**Argostoli**	**0.08**	**96**	P	**Pg**	**22 20 39.1**	**+0.2**
ARG2				S	**Sg**	**22 20 40.9**	**-0.3**
KEF2	**Argostoli. Kep**	**0.08**	**105**	P	**Pg**	**22 20 39.1**	**+0.2**
KEF2				S	**Sg**	**22 20 40.9**	**-0.4**
KEF1	**Kardakata, Kep**	**0.11**	**35**	P	**Pg**	**22 20 39.7**	**+0.4**
KEF1				S	**Sg**	**22 20 42.0**	**+0.2**
VLS	**Valsamata**	**0.16**	**93**	P	**Pg**	**22 20 40.1**	**+0.2**
VLS				S	**Sb**	**22 20 42.7**	**+0.4**
	4μm,0.1s						
VLS	**Valsamata**	**0.16**	**93**	P	**Pg**	**22 20 40.1**	**+0.2**
VLS				S	**Sb**	**22 20 42.7**	**+0.4**
VLS				AML	AML	22 20 42.8	
	comp=N,5913μm,0.1s						
VLS				AML	AML	22 20 42.9	
	comp=E,9445μm,0.1s						
FSK	**Fiskardo**	**0.30**	**27**	P	**Pb**	**22 20 42.8**	**+0.3**
FSK				S	**Sb**	**22 20 47.5**	**+0.4**
	comp=E,582nm,0.1s						
FSK	**Fiskardo**	**0.30**	**27**	P	**Pb**	**22 20 42.7**	**+0.3**
FSK				S	**Sb**	**22 20 47.8**	**+0.7**
FSK				AML	AML	22 20 48.1	
	comp=N,649μm,0.2s						
FSK				AML	AML	22 20 48.5	
	comp=E,1639μm,0.1s						
VLMS	**Volimes, Zakyn**	**0.38**	**145**	P	**Pb**	**22 20 44.0**	**+0.2**
VLMS				S	**Sb**	**22 20 50.2**	**+0.9**
VLMS				AML	AML	22 20 50.3	
	comp=E,2442μm,0.2s						
VLMS				AML	AML	22 20 51.1	
	comp=N,2400μm,0.2s						
EVGI	**Lefkada island**	**0.48**	**26**	P	**Pg**	**22 20 46.0**	**+0.7**
EVGI				S	**Sn**	**22 20 53.9**	**-1.7**
TSLK	**Tsoukalades, L**	**0.67**	**18**	P	**Pn**	**22 20 49.3**	**-0.8**
PDO	**Prodromos**	**0.75**	**56**	P	**Pg**	**22 20 50.6**	**+0.4**
PVO	**Paravola**	**0.99**	**64**	P	**Pg**	**22 20 55.3**	**+0.6**
PVO	**Paravola**	**0.99**	**64**	P	**Pg**	**22 20 55.4**	**+0.6**

ATH 10 22:29:37.9, 38.20N×20.38E, h10km±1km, ML2.5/3, Error ellipse: s-maj=1.7km s-min=1.1km az=244.0
THE 10 22:29:37.6, 38.17N×20.36E, h10km, ML2.2/4, Error ellipse: s-maj=1.3km s-min=0.5km az=202.0

ISC 10 22:29:37.6±1.5, 38.19N±0.03×20.38E±0.05, h11km±5km, n23, σ0.27/42, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.00**	**124**	P	**Pg**	**22 29 39.5**	**0.0**
CHV1				S	**Sg**	**22 29 40.7**	**-0.1**
KEF3	**Kipouria, Keph**	**0.03**	**307**	P	**Pg**	**22 29 39.8**	**+0.2**
KEF3				S	**Sg**	**22 29 41.3**	**+0.2**
LXRA	**Lixouria, Kepha**	**0.05**	**73**	P	**Pg**	**22 29 39.7**	**0.0**
LXRA				S	**Sg**	**22 29 41.1**	**-0.2**
LXR1	**Lixouri, Cepha**	**0.05**	**73**	P	**Pg**	**22 29 39.7**	**0.0**
LXR1				S	**Sg**	**22 29 41.1**	**-0.2**
ARGA	**Argostoli. Kep**	**0.08**	**96**	P	**Pg**	**22 29 40.1**	**+0.1**
ARGA				S	**Sg**	**22 29 41.8**	**0.0**
KEF4	**Livadi, Kephal**	**0.08**	**27**	P	**Pg**	**22 29 40.1**	**0.0**
KEF4				S	**Sg**	**22 29 41.8**	**0.0**
ARG2	**Argostoli**	**0.09**	**95**	P	**Pg**	**22 29 40.3**	**+0.2**
ARG2				S	**Sg**	**22 29 41.9**	**-0.1**
KEF2	**Argostoli. Kep**	**0.09**	**103**	P	**Pg**	**22 29 40.3**	**+0.2**
KEF2				S	**Sg**	**22 29 42.0**	**-0.1**
KEF1	**Kardakata, Kep**	**0.12**	**39**	P	**Pg**	**22 29 40.6**	**+0.1**
KEF1				S	**Sg**	**22 29 42.3**	**-0.4**
VLS	**Valsamata**	**0.17**	**93**	P	**Pg**	**22 29 41.4**	**+0.1**
VLS				S	**Sg**	**22 29 44.0**	**0.0**
	3μm,0.1s						
VLS	**Valsamata**	**0.17**	**93**	P	**Pg**	**22 29 41.4**	**+0.1**
VLS				S	**Sg**	**22 29 44.0**	**0.0**
VLS				AML	AML	22 29 44.1	

comp=E,6980µm,0.2s
VLS AML AML 22 29 44.9
comp=N,4106µm,0.1s
VSK1 VASILIKIADES 0.27 33 P Pg 22 29 43.3 +0.2
KONA Konidatara, Ke 0.28 32 P Pg 22 29 43.5 +0.2
KONA S Sg 22 29 47.7 +0.4
FSK Fiskardo 0.31 28 P Pg 22 29 43.9 0.0
FSK S Sg 22 29 48.7 +0.7
comp=N,882nm,0.1s
FSK Fiskardo 0.31 28 P Pg 22 29 43.9 0.0
FSK S Sg 22 29 48.4 +0.4
FSK AML AML 22 29 49.3
comp=N,1346µm,0.4s
FSK AML AML 22 29 50.0
comp=E,2177µm,0.1s
VLMS Volimes, Zakyn 0.38 144 P Pg 22 29 45.6 +0.4
VLMS S Sb 22 29 51.9 -0.4
VLMS AML AML 22 29 52.4
comp=E,1850µm,0.2s
VLMS AML AML 22 29 54.1
comp=N,2170µm,0.3s
EVGI Lefkada island 0.49 27 P Pg 22 29 47.2 +0.1
EVGI S Sb 22 29 54.9 -0.4
MGNA Meganis 0.57 35 P Pg 22 29 48.5 -0.2
LKD2 Lefkada island 0.64 20 P Pg 22 29 49.7 -0.4
LKD2 S Sb 22 29 59.6 -0.2
comp=N,148nm,0.2s
LKD2 Lefkada island 0.64 20 P Pg 22 29 49.7 -0.4
AST1 Astakos 0.66 57 P Pg 22 29 50.4 0.0
AST1 S Sb 22 30 01.1 +0.7
TSLK Tsoukalades, L 0.67 19 P Pg 22 29 50.5 -0.2
TSLK S Sb 22 30 00.8 +0.1
comp=N,198nm,0.4s
RLS Riolos of Patr 0.87 98 P Pg 22 29 54.0 -0.3

IDC 10 22:31:21.4±1.5, 9.°93S×160.°23E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.7/28, mbtmp3.7/5, MS3.3/3, Ms1 3.2/3, ms1mx2.8/31, Error ellipse: s-maj=33.9km s-min=15.8km az=85.0
ISC 10 22:31:26.1±1.5, **10.°0S**±0.°1×**160.°2E**±0.°2, **h32km, n9,** σ1°19/9, **mb3.5**/5, **MS3.0**/3, **Bougainville-Solomon Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HNR Honiara 0.59 331 LR LR 22 31 24.7
comp=Z,71nm,19.8s,baz=52,slow=5.8
HNR Pn Pb 22 31 37.4 -0.7
1µm,0.3s,baz=170,slow=5.1,SNR=315
HNR Sn Sn 22 31 46.0 -0.8
5µm,0.3s,baz=86,slow=22,SNR=64
HNR Honiara 0.59 331 *i* P Pb 22 31 37.0 -1.1
HNR *i* S Sn 22 31 49.0 +2.2
WRA Warramunga Arr 26.89 245 P P 22 37 04.5 +0.1
0.9nm,0.7s,baz=74,slow=9.6,SNR=5.7
STKA Stephens Creek 27.82 216 P P 22 37 12.8 +0.2
1.9nm,0.7s,baz=72,slow=11,SNR=4.9
STKA LR LR 22 46 48.7
comp=Z,41nm,18.5s,baz=23,slow=33
RAO Raoul Island 28.05 136 LR LR 22 45 50.3
comp=Z,91nm,19.3s,baz=254,slow=31
ASAR Alice Springs 28.59 238 P P 22 37 19.1 -0.6
0.2nm,0.4s,baz=64,slow=11,SNR=3.6
URZ Urewera 32.00 154 LR LR 22 47 36.0
comp=Z,36nm,20.3s,baz=256,slow=30
ILAR Eielson Array 84.28 20 P P 22 43 54.0 -0.3
0.4nm,0.5s,baz=246,slow=5.6,SNR=10
MKAR Makanchi Array 89.05 318 P P 22 44 19.1 +1.0
0.1nm,0.5s,baz=106,slow=3.6,SNR=2.3

ATH 10 23:06:50.0, 38.°15N×20.°40E, h15km±1km, ML2.8/2, Error ellipse: s-maj=1.6km s-min=1.0km az=254.0
THE 10 23:06:50.0, 38.°15N×20.°32E, h11km±1km, ML2.6/9, Error ellipse: s-maj=1.9km s-min=1.0km az=82.0
ISC 10 23:06:50.7±1.0, **38.°15N**±0.°03×**20.°41E**±0.°04, **h12km**±4km, **n39,** σ0°60/63, **Greece**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.04 326 P Pg 23 06 52.6 -0.3
CHV1 S Sg 23 06 54.4 -0.1
LXRA Lixouri, Kepha 0.05 28 P Pg 23 06 52.9 -0.1
LXRA S Sg 23 06 54.9 +0.2
LXR1 Lixouri, Cepha 0.05 28 P Pg 23 06 52.9 -0.1
LXR1 S Sg 23 06 55.0 +0.3
ARGA Argostoli. Kep 0.06 68 P Pg 23 06 52.9 -0.1
ARGA S Sg 23 06 54.4 -0.4
KEF2 Argostoli. Kep 0.06 80 P Pg 23 06 53.0 -0.1
KEF2 S Sg 23 06 54.9 0.0
KEF3 Kipouria, Keph 0.07 316 P Pg 23 06 52.9 -0.3
KEF3 S Sg 23 06 54.5 -0.4
ARG2 Argostoli 0.07 69 P Pg 23 06 53.0 -0.2
ARG2 S Sg 23 06 55.0 0.0
KEF1 Kardakata, Kep 0.13 22 P Pg 23 06 53.8 -0.2
KEF1 S Sg 23 06 56.2 -0.1
VLS Valsamata 0.15 81 P Pg 23 06 54.0 -0.2
VLS S Sg 23 06 56.7 0.0
5µm,0.2s
VLS Valsamata 0.15 81 P Pg 23 06 54.0 -0.2
VLS S Sg 23 06 56.7 0.0
VLS AML AML 23 06 56.8
comp=E,9246µm,0.2s
VLS AML AML 23 06 56.9
comp=N,10080µm,0.2s
VSK1 VASILIKIADES 0.28 26 P Pg 23 06 56.3 -0.2
VSK1 S Sg 23 07 01.1 +0.7
comp=N,5µm,0.3s
KONA Konidatara, Ke 0.30 26 P Pg 23 06 56.5 -0.3
KONA S Sg 23 07 01.2 +0.3
VLMS Volimes, Zakyn 0.34 144 P Pg 23 06 57.4 -0.2
VLMS S Sg 23 07 02.0 -0.2
VLMS AML AML 23 07 03.5
comp=E,6776µm,0.2s
VLMS AML AML 23 07 06.5
comp=N,3581µm,0.2s
EVGI Lefkada island 0.51 23 S Sb 23 07 08.5 -0.4
EVGI Lefkada island 0.51 23 P Pg 23 07 00.1 -0.6
EVGI S Sg 23 07 08.0 +0.6
MGNA Meganis 0.58 31 P Pg 23 07 01.4 -0.7
MGNA S Sg 23 07 10.3 +0.4
KRI1 kERI 0.59 146 P Pg 23 07 01.6 -0.6
KRI1 S Sb 23 07 11.8 +0.6
comp=N,610nm,0.2s
AST1 Astakos 0.66 54 P Pg 23 07 03.1 -0.4
AST1 S Sb 23 07 13.7 +0.4
comp=N,612nm,0.3s
LKD2 Lefkada island 0.66 17 P Pg 23 07 02.8 -0.8
TSLK Tsoukalades, L 0.70 16 P Pg 23 07 03.6 -0.6
TSLK S Sb 23 07 15.2 +0.8
comp=N,260nm,0.6s
TSLK Tsoukalades, L 0.70 16 P Pg 23 07 03.6 -0.6
TSLK S Sg 23 07 12.6 -0.8
PDO Prodromos 0.75 54 P Pg 23 07 04.9 -0.5
PDO S Sn 23 07 18.1 -0.4
comp=N,485nm,0.3s
PDO Prodromos 0.75 54 P Pg 23 07 04.8 -0.5
PDO S Sg 23 07 15.1 -0.1
RLS Riolos of Patr 0.84 96 P Pg 23 07 06.1 -0.8
RLS S Sn 23 07 21.6 +1.0
comp=N,78nm,0.4s
RLS Riolos of Patr 0.84 96 P Pg 23 07 06.1 -0.8
PVO Paravola 0.99 62 P Pb 23 07 09.4 -0.4
PVO S Sn 23 07 25.9 +1.5
comp=N,462nm,0.2s
PVO Paravola 0.99 62 P Pb 23 07 09.4 -0.4
DRO Drossia 1.05 101 P Pb 23 07 10.0 -0.8
DRO S Sn 23 07 28.0 +2.2
comp=N,235nm,0.5s
DRO Drossia 1.05 101 P Pb 23 07 10.0 -0.8
LAKA Lakka 1.24 86 P Pn 23 07 13.4 -0.5
ANX Ano Chora 1.27 69 P Pn 23 07 13.8 -0.5
SERG Sergoula 1.32 78 P Pn 23 07 14.5 -0.5
EVR Evrytania 1.34 55 P Pn 23 07 14.9 -0.4
IGT Igoumenitsa 1.38 358 P Pb 23 07 16.1 -0.3
KLV Kalavryta, Ach 1.38 94 P Pn 23 07 15.7 -0.1
KALE Kalithea 1.38 80 P Pn 23 07 15.2 -0.7
KEK Kerkira 1.63 343 P Pn 23 07 19.4 +0.2
AGG Agios Georgios 1.74 60 P Pn 23 07 22.5 0.0
LTK Loutraki 2.02 93 P Pn 23 07 25.7 +1.1

IDC 10 23:06:59.0±0.8, 33.°83N×89.°34E, h0km, mb3.9/13, mb1 4.0/17, mb1mx3.8/60, mbtmp3.9/17, ML2.9/3, MS3.2/2, Ms1 3.3/2, ms1mx2.6/43, Error ellipse: s-maj=27.3km s-min=15.9km az=49.0
ISC 10 23:07:03.9±0.7, **33.°92N**±0.°08×**89.°4E**±0.°1, **h33km, n30,** σ1°01/29, **mb4.0**/12, **Xizang**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GUN Gumba 6.71 208 *e*P Pn 23 08 41.0 +0.6
11nm,0.5s
TAPN Taplejung 6.71 193 *e*P Pn 23 08 41.0 +0.6
15nm,0.6s
JIRN Jiri 6.82 205 *e*P Pn 23 08 43.1 +1.1
28nm,0.5s
KKN Kakani 7.06 211 *e*P Pn 23 08 46.3 +1.2
14nm,0.5s
GKN Gorkha 7.17 216 *e*P Pn 23 08 46.6 0.0
8.0nm,0.3s
PKI Pulchoki 7.20 209 *e*P Pn 23 08 47.1 0.0
15nm,0.7s
ODAN Odare 7.25 194 *e*P Pn 23 08 48.2 +0.5
50nm,0.5s
DMN Daman 7.29 211 *e*P Pn 23 08 48.5 +0.2
10nm,0.5s
RAMN Ramite 7.35 200 *e*P Pn 23 08 49.9 +0.7
16nm,0.5s
DANN Dangsing 7.36 222 *e*P Pn 23 08 47.5 -1.7
8.0nm,0.5s
MKAR Makanchi Array 13.94 339 Pn Pn 23 10 17.2 -1.8
0.1nm,0.3s,baz=153,slow=14,SNR=4.8
AAK Ala-Archa 14.56 311 Pn P 23 10 34.8 +1.1
0.1nm,0.3s,baz=124,slow=11,SNR=7.7
CMAR Chiang Mai Arr 17.61 149 P Pn 23 11 04.0 -2.8
0.5nm,0.3s,baz=195,slow=26,SNR=4.6
CMAR LR LR 23 18 40.3
comp=Z,56nm,19.1s,baz=292,slow=40
KURBB Kurchatov Arra 18.49 338 P P 23 11 16.7 -0.2
0.0nm,0.3s,baz=146,slow=12,SNR=12
SONM Songino Array 18.88 38 P Pn 23 11 23.2 +1.0
0.1nm,0.3s,baz=228,slow=11,SNR=12
ZALV Zalesovo Beam 20.28 352 P P 23 11 37.5 +1.1
4.6nm,0.9s,baz=172,slow=12,SNR=14
BVAR Borovoye Array 23.42 330 P P 23 12 10.9 +1.1
2.1nm,1.0s,baz=128,slow=9.6,SNR=7.1
GEYT Alibeck 25.57 288 P P 23 12 30.1 +0.2
3.8nm,1.0s,baz=133,slow=8.3,SNR=7.6
AKTO Aktyubinsk 28.23 315 LR LR 23 25 48.8
comp=Z,74nm,18.8s,baz=88,slow=40
BRTR Keskin Array B 44.39 294 P P 23 15 10.6 -0.9
1.1nm,0.9s,baz=58,slow=10,SNR=5.5
AKASG Malin Array Be 46.23 310 P P 23 15 25.5 -0.1
1.3nm,0.7s,baz=79,slow=7.4,SNR=5.5
FINES FINESS Array B 48.19 325 P P 23 15 41.1 +0.3
2.9nm,0.9s,baz=70,slow=6.3,SNR=5.9
HFS Hagfors 54.28 323 P P 23 16 26.9 +0.4
3.0nm,0.7s,baz=88,slow=8.0,SNR=7.9
NB2 NORSAR Subarra 55.37 325 P P 23 16 34.4 0.0
comp=Z,2.9nm,0.8s,baz=82,slow=7.4
NOA NORSAR Array B 55.37 325 P P 23 16 34.5 0.0
comp=Z,1.7nm,0.7s,baz=83,slow=7.2,SNR=6.6
GERES GERESS Array B 56.44 310 P P 23 16 42.5 +0.2
comp=Z,1.1nm,0.6s,baz=72,slow=8.6,SNR=10.0
WRA Warramunga Arr 68.58 134 P P 23 18 03.4 -0.1
comp=Z,0.9nm,0.6s,baz=324,slow=6.4,SNR=5.8
ASAR Alice Springs 71.22 137 P P 23 18 20.7 +0.9
comp=Z,0.6nm,0.8s,baz=334,slow=6.7,SNR=5.0
TORD Torodi Ar. Bea 80.90 280 P P 23 19 16.1 +1.0
comp=Z,0.4nm,0.8s,baz=20,slow=5.3,SNR=3.5
YKA Yellowknife Ar 81.99 11 P P 23 19 19.4 -0.7
comp=Z,0.3nm,0.8s,baz=331,slow=5.0,SNR=3.3

IDC 10 23:14:57.7±1.4, 6.°73S×130.°57E, h0km, mb3.8/4, mb1 4.2/8, mb1mx3.9/35, mbtmp4.0/8, ML4.3/4, Error ellipse: s-maj=55.6km s-min=20.7km az=86.0
ISC 10 23:14:58.3±0.8, **6.°90S**±0.°06×**130.°5E**±0.°2, **h10km, n9,** σ3°16/12, **mb3.9**/4, **Banda Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 6.04 7 Pn Pn 23 16 26.6 -1.2
6.1nm,0.3s,baz=225,slow=23,SNR=23
SIJI Pg Pb 23 16 32.1 -12
14nm,0.3s,baz=161,slow=23,SNR=34
SIJI Sn Sn 23 17 35.2 -1.8
22nm,0.3s,baz=225,slow=24,SNR=17
FITZ Fitzroy Crossi 12.10 203 Pn Pn 23 17 54.8 +3.8
2.9nm,0.3s,baz=30,slow=12,SNR=40
FITZ Sn Sn 23 20 01.7 -4.5
3.3nm,0.3s,baz=143,slow=16,SNR=9.6
WRA Warramunga Arr 13.48 164 Pn Pn 23 18 13.7 +3.9
1.2nm,0.3s,baz=348,slow=14,SNR=28
WRA Sn Sn 23 20 32.8 -7.0
3.5nm,0.3s,baz=344,slow=22,SNR=14
ASAR Alice Springs 16.98 169 P P 23 18 59.2 +1.1
0.7nm,0.3s,baz=329,slow=8.5,SNR=22
ASAR S Sn 23 21 59.4 -5.7
1.0nm,0.3s,baz=353,slow=26,SNR=7.1
CMAR Chiang Mai Arr 40.07 309 P P 23 22 34.9 +0.6
0.5nm,0.4s,baz=138,slow=6.4,SNR=3.7
SONM Songino Array 58.52 341 P P 23 24 55.8 +0.8
0.4nm,0.4s,baz=160,slow=7.4,SNR=11
MKAR Makanchi Array 68.43 327 P P 23 26 00.7 +0.1
0.7nm,0.4s,baz=116,slow=7.8,SNR=28
ZALV Zalesovo Beam 71.73 334 P P 23 26 20.0 -0.5
0.5nm,0.5s,baz=131,slow=6.6,SNR=3.0
TORD Torodi Ar. Bea 129.30 281 PKP PKPdf 23 34 07.7 -0.5
0.3nm,0.6s,baz=116,slow=2.2,SNR=4.0

IDC 10 23:37:38.0±0.9, 35.°81N×96.°90W, h0km, mb3.4/2, mb1 3.8/7, mb1mx3.5/52, mbtmp3.4/7, ML3.3/5, MS2.8/4, Ms1 2.8/4, ms1mx2.5/33, Error ellipse: s-maj=13.5km s-min=11.1km az=136.0
NEIC 10 23:37:38.4±2.1, 35.°86N±0.°03×96.°91W±0.°05, h4km±6km, Error ellipse: s-maj=6.2km s-min=4.5km az=121.0, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr0.09; Mθθ1.85; Mφφ-1.94; Mrθ0.65; Mrφ1.23; Mθφ-0.15; Fault plane solution: M0 2.35000×10^14 NP1: φs119.17000°, δ85.55000°, λ15.93000°. NP2:φs27.90000°, δ74.12000°, λ175.37000°. Principal axes: T 2.3577, Plg14.0000°, Azm345.0000°; N -0.0123, Plg73.0000°, Azm134.0000°; P -2.3454, Plg8.0000°, Azm253.0000°;
ANF 10 23:37:39.0±0.3, 35.°83N×96.°92W, h5km, ML4.6/12 Error ellipse: s-maj=6.6km s-min=3.0km az=169.0
TUL 10 23:37:39±1.5, 35.°82N±0.°04×96.°93W±0.°05, h5km±2km, ML3.8, Mwr3.5/30(NEIC), Error ellipse: s-maj=7.6km s-min=5.2km az=134.0
ISC 10 23:37:38.6±1.1, **35.°85N**±0.°04×**96.°92W**±0.°03, **h10km**±8km, **n75,** σ1°50/88, **Oklahoma**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
OK005 Luther M Schoo 0.30 229 Pg 23 37 44.1 -0.4
OK005 Sg Sg 23 37 48.0 -0.5
ADOK Arcadia Dam 0.42 242 Pg 23 37 46.5 -0.3
OK001 Jones High Sch 0.42 226 Pg Pg 23 37 46.3 -0.5
OK001 Sg Sg 23 37 51.8 -0.5
OK009 Oakdale Elemen 0.49 237 Pg 23 37 47.8 -0.4
OKCFA Oklahoma City 0.61 225 Pg Pg 23 37 49.8 -0.7
OKCFA Sg Sg 23 37 58.0 -0.6
OKCSW OKLAHOMA CITY 0.61 224 Pg 23 37 49.6 -0.9
OKCSW Sg Sg 23 37 57.9 -0.6
W35A Tecumseh 0.70 177 Pg 23 37 51.2 -0.8
FNO Franklin 0.71 214 Pg 23 37 52.1 -0.2
TUL1 Leonard 0.92 86 Pg 23 37 56.1 -0.1
TUL1 Leonard 0.92 86 P Pg 23 37 56.3 +0.1
baz=266
TUL1 S Sg 23 38 09.1 +0.9
baz=266
U32A Winter Ranch, 1.77 288 Pn 23 38 10.2 +0.9
WMOK Wichita Mounta 1.89 234 P Pn 23 38 11.4 +0.5
baz=54
WMOK S Sn 23 38 36.3 +1.5
baz=54
HHAR Hobbs 2.45 79 Pn 23 38 19.9 +1.3
W39A Magazine 2.64 103 Pn 23 38 22.1 +0.9
W39A Magazine 2.64 103 P Pn 23 38 22.6 +1.4
baz=285
W39A S Sn 23 38 56.1 +2.8
baz=285
MIAR Mount Ida 3.03 114 P Pn 23 38 28.1 +1.5
baz=296
MIAR S Sn 23 39 05.1 +2.1
baz=296
KSU1 Kansas State U 3.25 4 P Pn 23 38 30.9 +1.2
baz=184
U40A Yellville 3.33 80 Pn 23 38 31.7 +1.0
U40A Yellville 3.33 80 P Pn 23 38 32.5 +1.7
baz=262
X40A Basin Creek Fa 3.61 111 Pn 23 38 36.1 +1.5
X40A Basin Creek Fa 3.61 111 P Pn 23 38 36.0 +1.5
baz=293
X40A S Sn 23 39 19.2 +2.0
baz=293
CBKS Cedar Bluff 3.71 324 Pn 23 38 37.4 +1.3
CBKS Pg Pb 23 38 45.2 +0.9
CBKS Cedar Bluff 3.71 324 P Pn 23 38 37.0 +1.0
baz=142
WHAR Wooly Hollow 3.81 97 Pn 23 38 38.6 +1.2
W41B Gary Mavity, V 3.87 99 Pn 23 38 39.3 +1.2
W41B Gary Mavity, V 3.87 99 P Pn 23 38 39.5 +1.4
baz=281
W41B S Sn 23 39 25.7 +2.1
baz=281
WHTX Lake Whitney, 3.88 187 Pn Pn 23 38 38.7 +0.5
WHTX Lake Whitney, 3.88 187 P Pn 23 38 38.7 +0.5
baz=6.4
UALR University of 3.89 105 Pn 23 38 40.2 +1.7
ABTX Abilene, Hawle 3.93 216 Pn Pn 23 38 39.9 +0.9
ABTX Abilene, Hawle 3.93 216 Pb Pb 23 38 48.6 +0.6
baz=34
237A Washetta, Mont 3.95 166 Pn Pn 23 38 39.3 +0.1
AMTX Amarillo 4.01 257 P Pn 23 38 41.3 +1.1
baz=75
AMTX Sb Sb 23 39 42.0 +4.0
baz=75
Z41A Richland Creek 4.27 126 Pn Pn 23 38 44.9 +1.3
CCM Cathedral Cave 5.05 62 Pn 23 38 55.5 +1.1
435B Jarrell 5.08 186 Pn 23 38 53.9 -1.0
KSCO Kaye Shedlock' 5.53 306 Pn Pn 23 39 02.8 +1.7
143A Socs Landing, 5.54 123 Pn Pn 23 39 02.5 +1.4
GNAR Gosnell 5.60 87 Pn Pn 23 39 01.6 -0.4
BGNE Belgrade 5.63 351 Pn 23 39 04.7 +2.3
BGNE Sn Sn 23 40 04.5 -2.6
JCT Junction City 5.88 205 Pn 23 39 06.4 +0.6
HICK Hickman 6.26 81 Pn Pn 23 39 12.2 +1.3
HICK Sn 23 40 22.8 +0.3
S44A Carbondale 6.42 71 Pn Pn 23 39 14.0 +0.8
SCIA State Center 6.70 24 Pn 23 39 18.8 +1.8
N41A Harden Midland 6.80 43 Pn Pn 23 39 21.8 +3.4
P43A Skaggs, Pawnee 6.97 55 Pn Pn 23 39 22.3 +1.5
SDCO Great Sand Dun 7.14 288 Pn 23 39 25.1 +1.7
SDCO Sn 23 40 44.9 +0.2
PLAL Pickwick Lake 7.27 94 Pn Pn 23 39 26.4 +1.5
HDIL Hopedale 7.62 50 Pn Pn 23 39 31.0 +1.4
L40A Anamosa 7.62 34 Pn 23 39 29.8 +0.1
ANMO Albuquerque 7.84 266 Pn Pn 23 39 34.4 +1.5
0.1nm,0.3s,baz=79,slow=16,SNR=2.8
ANMO Pg Pb 23 40 02.1 +7.4
1.3nm,0.3s,baz=85,slow=17,SNR=18
ANMO Lg Lg 23 41 45.8
4.5nm,0.3s,baz=57,slow=7.3,SNR=5.6
ANMO LR LR 23 42 42.9
comp=Z,98nm,21.3s,baz=72,slow=39
ANMO Albuquerque 7.84 266 Pg Pb 23 40 02.3 +7.6
ANMO Sn 23 40 59.0 -2.9
ECSD EROS Data Cent 7.88 2 Pn 23 39 33.1 -0.1
ISCO Idaho Springs 7.93 302 Pn 23 39 35.7 +1.5
T47A Sharon Grove 7.99 79 Pn Pn 23 39 35.3 +0.5
MNTX Cornudas Mount 8.17 242 Pn 23 39 37.3 0.0
S22A 4UR Ranch, Cre 8.17 286 Pn 23 39 39.1 +1.6
TXAR Lajitas Array 8.64 223 Pn Pn 23 39 42.9 -0.9
0.2nm,0.3s,baz=47,slow=11,SNR=11
TXAR Pg Pg 23 40 15.0 -8.9
1.4nm,0.3s,baz=48,slow=15,SNR=9.3
TXAR Lg Lg 23 42 03.0
1.9nm,0.3s,baz=51,slow=26,SNR=4.0
LRAL Lakeview Retre 8.66 106 Pn Pn 23 39 44.4 +0.4
LRAL Sn Sn 23 41 19.6 -2.1
WCI Wyandotte Cave 8.82 71 Pn Pn 23 39 46.7 +0.6
Y49A Blount Mountai 8.86 100 Pn Pn 23 39 47.4 +0.7
RSSD Black Hills 9.90 329 Pn 23 40 01.5 +0.5
TKL Tuckaleechee C 10.69 87 Pn Pn 23 40 11.2 -0.5
0.2nm,0.3s,baz=256,slow=17,SNR=3.2
TKL Lg Lg 23 43 12.8
1.8nm,0.3s,baz=4.0,slow=22,SNR=7.7
TKL LR LR 23 43 35.4
comp=Z,32nm,19.7s,baz=322,slow=34
G40A Rib Lake 10.70 26 Pn 23 40 11.7 -0.2
G40A Sn 23 42 06.4 -5.3
COWI Conover 11.80 27 Pn 23 40 26.1 -0.8
PDAR Pinedale Array 11.97 309 Pn Pn 23 40 30.3 +0.8
0.1nm,0.3s,baz=116,slow=14,SNR=3.9
PDAR Pg 23 41 18.5
0.4nm,0.3s,baz=118,slow=15,SNR=4.5
PDAR Lg Lg 23 43 52.3
1.5nm,0.3s,baz=119,slow=33,SNR=7.5
EYMN Ely 12.74 17 Pn 23 40 37.1 -2.6
D41A Chassel 12.82 27 Pn Pn 23 40 39.4 -1.4
E43A Lone Tree Farm 12.89 32 Pn 23 40 40.4 -1.4
ULM Lac du Bonnet 14.41 3 Pn Pn 23 40 58.3 -4.2
0.5nm,0.3s,baz=177,slow=11,SNR=7.1
ULM Sn Sn 23 43 34.1 -8.2
0.6nm,0.3s,baz=132,slow=23,SNR=3.6
ULM Lg Lg 23 45 06.8
0.5nm,0.3s,baz=273,slow=22,SNR=2.8
SADO Sadowa 16.20 51 Lg Lg 23 46 04.4
0.7nm,0.3s,baz=279,slow=18,SNR=6.6
PFO Pinyon Flats O 16.22 268 LR LR 23 48 08.2
comp=Z,46nm,19.3s,baz=188,slow=39
CMIG Matias Romero 18.77 174 LR LR 23 51 44.5
comp=Z,16nm,18.1s,baz=350,slow=45
YKA Yellowknife Ar 28.86 343 P P 23 43 37.4 +0.4
0.2nm,0.6s,baz=142,slow=8.3,SNR=3.6
ILAR Eielson Array 41.34 330 P P 23 45 26.0 +1.8
0.7nm,0.7s,baz=104,slow=7.6,SNR=9.5

IDC 10 23:39:27.4±2.5, 39.°36N×141.°88E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.4/50, mbtmp3.6/6, ML2.5/1, Error ellipse: s-maj=54.7km s-min=29.1km az=149.0
JMA 10 23:39:30.5±0.1, 38.°86N×142.°05E, h46km±1km, M3.8 JMA Felt II J1.
ISC 10 23:39:30.7±1.6, **38.°87N**±0.°06×**142.°0E**±0.°1, **h44km**±11km, **n17,** σ1°03/25, **mb3.6**/5, **Near east coast of eastern Honshu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
OFUJ Ofunato 0.36 307 P Pn 23 39 40.1 +0.2
OFUJ S Sn 23 39 46.7 +0.3
JKMT Kesennumamotoy 0.45 263 P Pn 23 39 40.9 0.0
JKMT S Sn 23 39 47.9 -0.2
JMK Ichinoseki 0.65 278 P Pn 23 39 43.5 +0.1
JMK S Sn 23 39 52.7 +0.1
JIO Ouri 0.68 233 P Pn 23 39 43.6 -0.3
JIO S Sn 23 39 52.4 -1.0
JOM Ohasama 0.84 316 P Pn 23 39 46.3 +0.2
JOM S Sn 23 39 57.7 +0.4
JOU Okura 1.19 245 P Pn 23 39 50.7 -0.1
JOU S Sn 23 40 05.9 +0.1
JRG Rokugo 1.21 296 P Pn 23 39 51.4 +0.2
JYK Kaneyama 1.31 273 P Pn 23 39 52.7 +0.2
JMM Marumori 1.40 225 P Pn 23 39 53.1 -0.6
JMM *e*S Sn 23 40 10.3 -0.7
JANG Nango 1.56 345 P Pn 23 39 56.2 +0.3
MAT Matsushiro 3.82 234 P Pn 23 40 29.7 +2.7
MAT *e*S Sn 23 41 10.0 -0.7
MJAR Matsushiro Arr 3.82 234 P Pn 23 40 30.3 +3.3
0.3nm,0.3s,baz=38,slow=14,SNR=16
SONM Songino Array 27.22 301 P P 23 45 10.4 0.0
0.3nm,0.5s,baz=87,slow=9.8,SNR=2.7
ZALV Zalesovo Beam 41.07 311 P P 23 47 08.8 -0.8
0.6nm,0.4s,baz=76,slow=6.3,SNR=4.3
MKAR Makanchi Array 43.59 301 P P 23 47 30.0 -0.3
0.9nm,0.6s,baz=80,slow=9.9,SNR=20
ILAR Eielson Array 47.69 33 P P 23 48 02.8 +0.4
0.4nm,0.8s,baz=277,slow=7.2,SNR=3.8
FINES FINESS Array B 67.43 332 P P 23 50 20.7 -0.5
0.7nm,0.7s,baz=24,slow=11,SNR=3.2

IDC 10 23:45:48.6±0.9, 17.°75N×146.°06E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/47, mbtmp3.7/8, Error ellipse: s-maj=30.4km s-min=20.4km az=99.0

NEIC 10 23:46:09.1±1.9, 17°.69N±0°.06×145°.8E±0°.2, h176km±7km, mb3.7/6, Error ellipse: s-maj=25.4km s-min=5.0km az=105.0

ISC 10 23:46:07.8±0.7, 17°.91N±0°.08×145°.8E±0°.2, h150km, n30, σ1°76/26, mb3.5/11, Mariana Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SARN	Sarigan	1.20	179		Pn	23 46 36.6	+2.1
SARN					Sn	23 46 57.3	+2.5
ANA2	Anatahan	1.56	182		Pn	23 46 40.0	+1.9
ANA2					Sn	23 47 00.7	-0.6
H11S3	WAKE ISLAND Hy	19.89	85	T	T	00 11 34.9	
	baz=275,slow=74,SNR=5.8						
H11S1	WAKE ISLAND Hy	19.90	85	T	T	00 11 26.1	
	baz=275,slow=74,SNR=3.8						
H11S2	WAKE ISLAND Hy	19.91	85	T	T	00 11 31.8	
	baz=275,slow=74,SNR=5.9						
H11N1	WAKE ISLAND Hy	20.08	82	T	T	00 11 41.2	
	baz=266,slow=74,SNR=14						
H11N2	WAKE ISLAND Hy	20.09	81	T	T	00 11 32.0	
	baz=266,slow=74,SNR=8.6						
H11N3	WAKE ISLAND Hy	20.10	82	T	T	00 11 42.5	
	baz=266,slow=74,SNR=11						
YHNB	Yeheng	23.68	291	P	P	23 51 07.7	+1.8
YHNB				IAmb	IAmb	23 51 08.9	
	comp=Z,15nm,0.8s						
KSAR	Wonju Array Be	25.00	325	P	P	23 51 19.1	+1.4
KS19	Wonju Array Si	25.06	325	P	P	23 51 19.9	+1.7
KLR	Kul'dur	33.24	343	P	P	23 52 30.2	-0.2
	comp=Z,0.5nm,0.3s,baz=129,slow=3.4,SNR=4.8						
WB0	Warramunga Arr	39.07	197	P	P	23 53 17.3	-3.1
WB2	Warramunga Arr	39.25	197	P	P	23 53 19.2	-2.6
WRA	Warramunga Arr	39.25	197	P	P	23 53 19.0	-2.9
	comp=Z,0.5nm,0.7s,baz=18,slow=11,SNR=5.0						
ASAR	Alice Springs	42.91	196	P	P	23 53 48.6	-3.2
	comp=Z,0.2nm,0.5s,baz=18,slow=12,SNR=4.5						
SONM	Songino Array	43.80	322	P	P	23 53 58.9	+0.2
	comp=Z,0.4nm,0.5s,baz=127,slow=4.4,SNR=4.7						
SONM	Songino Array	43.80	322	P	P	23 53 58.7	-0.1
CMAR	Chiang Mai Arr	44.39	278	P	P	23 54 03.7	0.0
	comp=Z,1.0nm,0.3s,baz=65,slow=6.9,SNR=4.7						
MK31	Makanchi Array	59.05	314	P	P	23 55 51.5	-0.6
MKAR	Makanchi Array	59.05	314	P	P	23 55 51.8	-0.3
	comp=Z,0.1nm,0.4s,baz=86,slow=8.6,SNR=6.6						
MKAR	Makanchi Array	59.05	314	P	P	23 55 50.2	-1.9
MAKZ	Makanchi	59.27	314	P	P	23 55 52.1	-1.5
MAKZ				IAmb	IAmb	23 55 59.8	
	comp=Z,0.3nm,0.8s						
IMAR	Indian Mountai	61.91	24	P	P	23 56 12.0	+0.9
IL31		64.32	26	P	P	23 56 25.8	-1.2
IL31				IAmb	IAmb	23 56 30.6	
	comp=Z,0.9nm,1.1s						
ILAR	Eielson Array	64.32	26	P	P	23 56 26.2	-0.8
	comp=Z,0.7nm,0.8s,baz=252,slow=4.1,SNR=9.4						
ILAR	Eielson Array	64.32	26	P	P	23 56 26.1	-0.9
YKA	Yellowknife Ar	78.65	28	P	P	23 57 52.3	-0.5
	comp=Z,0.4nm,0.4s,baz=288,slow=5.5,SNR=9.7						
LPAZ	La Paz	147.59	92	PKPbc	PKPdf	00 05 34.4	+1.2
	comp=Z,2.0nm,0.5s,baz=23,slow=2.1,SNR=7.4						
LPAZ	La Paz	147.59	92		PKPdf	00 05 34.7	+1.5

UPA 10 23:57:47.0±0.9, 7°.23N×78°.31W, h8km±9km, MW3.7
RSNC 10 23:57:48.1±0.9, 7°.37N×78°.27W, h9km±7km, ML2.6

ISC 10 23:57:46.3±1.6, 7°.26N±0°.04×78°.33W±0°.03, h11km±12km, n16, σ1°40/30, 2D, Panama

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PTAC	Punta Ardita,	0.53	102	⇓eP	Pg	23 57 57.0	+0.3
PTAC				eS	Sb	23 58 04.7	-0.5
PTAC	Punta Ardita,	0.53	102	⇓eP	Pg	23 57 57.0	+0.3
PTAC				eS	Sb	23 58 04.7	-0.5
SOLC	Bahia Solano	1.37	138	eP	Pn	23 58 11.5	0.0
SOLC				eS	Sn	23 58 32.5	+2.9
SOLC				i		23 58 41.9	
	comp=Z,69nm,0.4s						
SOLC	Bahia Solano	1.37	138	eP	Pn	23 58 11.5	0.0
SOLC				eS	Sn	23 58 32.5	+2.9
CAPC	Capurgana	1.68	35	eP	Pn	23 58 15.0	-0.6
CAPC				eS	Sn	23 58 35.4	-1.7
CAPC				i		23 58 42.7	
	comp=Z,82nm,0.3s						
CAP2	Capurgana	1.68	35	eP	Pn	23 58 16.1	+0.4
CAP2				eS	Sb	23 58 38.3	-0.3
AZU	Azuero	2.00	286	eP	Pn	23 58 20.3	+0.3
AZU				eS	Sn	23 58 44.5	-0.6
CHPO	Chepo, Panama	2.05	338	eP	Pn	23 58 22.6	+1.9
CHPO				eS	Sn	23 58 49.1	+2.8
UPA	Univ. de Panam	2.09	325	eS	Sn	23 58 48.3	+1.1
DBBC	Dabeiba	2.12	96	eP	Pn	23 58 21.9	+0.2
DBBC				eS	Sn	23 58 48.1	0.0
DBBC				i		23 58 54.4	
	comp=Z,52nm,0.5s						
CHOR3	La Chorrera	2.16	319	eP	Pn	23 58 23.3	+1.0
CHOR3				eS	Sn	23 58 50.0	+0.9
CACAO	El Cacao, Vera	2.51	272	eP	Pn	23 58 26.8	-0.2
CACAO				eS	Sn	23 58 54.5	-3.3
UREC	San Jos de Ur	2.82	80	eP	Pn	23 58 31.3	0.0
UREC				eS	Sn	23 59 05.0	-0.3
UREC				i		23 59 08.0	
	comp=Z,13nm,0.3s						
HELC	Santa Helena	2.98	111	eP	Pb	23 58 38.5	-1.1
HELC				eS	Sn	23 59 16.1	-0.1
ZARC	Zaragoza, Cauc	3.45	86	eP	Pn	23 58 41.3	+1.2
ZARC				eS	Sn	23 59 19.6	-1.4
ZARC				i		23 59 22.4	
	comp=Z,13nm,0.4s						
SJCC	San Jacinto, C	4.07	50	eS	Sn	23 59 36.1	-0.3

TAP 11 00:01:51.3, 25°.33N×122°.31E, h235km, ML3.5, D
JMA 11 00:01:53.1±0.2, 25°.11N×122°.27E, h220km±2km, M3.4

ISC 11 00:01:52.8±2.5, 25°.2N±0°.1×122°.27E±0°.05, h219km±13km, n57, σ0°49/103, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.34	229	P	Pn	00 02 21.4	-0.3
	baz=221						
TWB1				eS	S	00 02 44.8	+0.6
	baz=221						
TIPB	Shuangxi	0.48	237	P	Pn	00 02 22.1	-0.1
	baz=230						
TIPB				S	S	00 02 44.8	-0.2
	baz=230						
YM01	YM01	0.64	262	eP	Pn	00 02 22.8	+0.1
	baz=254						
YM01				S	S	00 02 45.4	-0.6
	baz=254						
EOS1	EOS1	0.69	191	P	Pn	00 02 23.1	+0.2
	baz=192						
EOS1				eS	S	00 02 46.0	-0.4
	baz=192						
NHDH	Xindian Distri	0.73	249	eP	Pn	00 02 23.4	+0.4
	baz=242						
NHDH				eS	S	00 02 46.7	+0.1
	baz=242						
TWC	Suao	0.73	212	eP	Pn	00 02 23.6	+0.5
	baz=209						
TWC				eS	S	00 02 46.1	-0.6
	baz=209						
SLBB	Yuanshan	0.75	231	eP	Pn	00 02 24.0	+0.8
	baz=226						
SLBB				eS	S	00 02 47.2	+0.3
	baz=226						
TWE	Neicheng	0.75	227	eP	Pn	00 02 24.2	+1.0
	baz=222						
NWLT	Wulai	0.83	237	P	Pn	00 02 23.7	0.0
	baz=232						
NWLT				eS	S	00 02 47.2	-0.4
	baz=232						
ENTT	Nioudou	0.87	227	eP	Pn	00 02 24.3	+0.5
	baz=223						
ENTT				eS	S	00 02 48.6	+0.6
	baz=223						
NDT	Datong Townshi	0.93	228	P	Pn	00 02 24.5	+0.3
	baz=224						
NDT				S	S	00 02 48.7	+0.2
	baz=224						
ENA	Nanau	0.94	211	P	Pn	00 02 24.8	+0.6
	baz=209						
ENA				S	S	00 02 48.8	+0.1
	baz=209						
YHNB	Yeheng	0.99	236	P	Pn	00 02 24.6	0.0
	baz=232						
YHNB				eS	S	00 02 48.3	-1.0
	baz=232						
NSK	Sanguang	1.00	236	P	Pn	00 02 24.6	-0.1
	baz=232						
NSK				eS	S	00 02 48.8	-0.6
	baz=232						
NNS	Nan Shan	1.14	226	eP	Pn	00 02 26.0	+0.3
	baz=223						
NNS				eS	S	00 02 51.6	+0.5
	baz=223						
NNSH	Datong	1.14	225	eP	Pn	00 02 25.9	+0.2
	baz=223						
NNSH				eS	S	00 02 50.9	-0.2
	baz=223						
NACB	Ninganchiao	1.22	210	eP	Pn	00 02 25.5	-0.6
	baz=209						
NACB				eS	S	00 02 51.2	-0.7
	baz=209						
ETLH	Xiulin Townshi	1.25	215	eP	Pn	00 02 26.2	-0.2
	baz=213						
ETLH				S	S	00 02 52.3	-0.2
	baz=213						
LIOB	Emei	1.28	243	P	Pn	00 02 26.6	0.0
	baz=239						
LIOB				S	S	00 02 52.5	-0.2
	baz=239						
NSTT	Nanjuang	1.30	243	eP	Pn	00 02 26.5	-0.2
	baz=239						
NSTT				eS	S	00 02 52.3	-0.5
	baz=239						
TWD	Chiawan	1.30	208	eP	Pn	00 02 26.9	+0.2
	baz=207						
TWD				eS	S	00 02 52.8	-0.2
	baz=207						
TDCB	Techi	1.41	226	eP	Pn	00 02 28.0	+0.3
	baz=224						
TDCB				eS	S	00 02 55.2	+0.5
	baz=224						
WHF	Hehuan Shan	1.42	220	eP	Pn	00 02 28.3	+0.2
	baz=218						
WHF				eS	S	00 02 55.2	-0.2
	baz=218						
WHP	Taichung City	1.54	232	eP	Pn	00 02 28.6	-0.1
	baz=229						
WHP				S	S	00 02 56.1	-0.3
	baz=229						
CHGB	Renai	1.54	221	P	Pn	00 02 29.6	+0.8
	baz=219						
CHGB				eS	S	00 02 57.0	+0.3
	baz=219						
IRIF	Iriomote-Funau	1.60	124	P	Pn	00 02 29.1	0.0
IRIF				eS	S	00 02 57.0	-0.2
OWD	Renai	1.62	218	eP	Pn	00 02 30.1	+0.6
	baz=216						
OWD				S	S	00 02 57.8	-0.1
	baz=216						
DPDB	Guoxing	1.71	226	eP	Pn	00 02 30.4	+0.3
	baz=224						
VWDT	VWDT	1.80	215	eP	Pn	00 02 31.9	+1.0
	baz=214						
VWDT				eS	S	00 03 01.2	+0.8
	baz=214						
HATJ	Hateruma jima	1.82	130	eS	S	00 03 01.0	+0.3
TYC	Yuchr	1.85	225	eP	Pn	00 02 31.4	0.0
	baz=222						
TYC				eS	S	00 03 00.6	-0.5
	baz=222						
JKRS	Kuro-shima	1.86	122	P	Pn	00 02 32.0	+0.5
JKRS				S	S	00 03 01.9	+0.5
SSLB	Suanglung	1.87	220	P	Pn	00 02 31.7	+0.1
	baz=218						
SSLB				eS	S	00 03 01.3	-0.5
	baz=218						
HGSD	Ruisui	1.90	204	eP	Pn	00 02 32.4	+0.6
	baz=203						
HGSD				eS	S	00 03 01.7	-0.4
	baz=203						
JIJ	Ishigaki jima	1.91	117	P	Pn	00 02 31.9	0.0
JIJ				S	S	00 03 00.9	-1.3
EHY	Hungye	1.93	207	eP	Pn	00 02 32.5	+0.4
	baz=206						
EHY				eS	S	00 03 01.8	-0.8
	baz=206						
JISG	Ishigakijimahi	1.96	109	P	Pn	00 02 32.3	-0.1
JISG				S	S	00 03 02.4	-0.6
YULB	Yu-li	2.04	206	eP	Pn	00 02 32.6	-0.6
	baz=205						
YULB				eS	S	00 03 03.7	-0.8
	baz=205						
TWF1	Yuli	2.07	206	eP	Pn	00 02 33.2	-0.4
	baz=204						
YUS	Yu-Shan	2.11	215	eP	Pn	00 02 35.0	+0.5
	baz=213						
ALS	Alishan	2.17	218	eP	Pn	00 02 35.2	+0.3
	baz=216						
ALS				eS	S	00 03 07.5	0.0
	baz=216						
CHN5	Tsauling	2.18	222	eP	Pn	00 02 35.1	+0.4
	baz=220						
CHN5				eS	S	00 03 07.6	+0.3
	baz=220						
FULB	Fuli	2.21	204	eP	Pn	00 02 34.6	-0.4
	baz=203						
FULB				eS	S	00 03 08.5	+0.8
	baz=203						
JTJ	Tarama	2.28	104	P	Pn	00 02 36.0	+0.4
JTJ				eS	S	00 03 08.6	-0.2
ELDTW	Lidau	2.33	210	eP	Pn	00 02 36.6	+0.2
	baz=208						
CHN4	Tsaushan	2.42	220	eP	Pn	00 02 37.1	0.0
	baz=218						
CHN4				eS	S	00 03 11.9	+0.4
	baz=218						
TPUB	Ta-pu	2.44	218	eP	Pn	00 02 37.4	0.0
	baz=217						
TPUB				eS	S	00 03 11.2	-0.7
	baz=217						
STYT	Tauyuan	2.48	214	eP	Pn	00 02 38.2	+0.4
	baz=213						
WTP	Ta-pu	2.49	218	eP	Pn	00 02 37.4	-0.5
	baz=216						
TWK	Hsinying	2.55	220	eP	Pn	00 02 37.7	-0.8
	baz=218						
TWK				eS	S	00 03 14.6	+0.5
	baz=218						
SNST	Tainan City	2.58	219	eP	Pn	00 02 38.8	0.0
	baz=218						
CHN1	Nanshi	2.59	218	eP	Pn	00 02 38.8	-0.1
	baz=217						
CHN1				eS	S	00 03 14.1	-0.7
	baz=217						
SGST	Jiashian	2.64	216	eP	Pn	00 02 39.8	+0.3
	baz=214						
JIRB	Irabujima	2.66	98	P	Pn	00 02 40.0	+0.3
JIRB				eS	S	00 03 15.0	-1.1
SLGT	Liugui	2.68	214	eP	Pn	00 02 40.5	+0.5
	baz=213						
SLGT				eS	S	00 03 15.9	-0.6
	baz=213						
JMJ2	Miyako jima3	2.82	99	P	Pn	00 02 42.0	+0.6
JMJ2				eS	S	00 03 19.4	+0.2
SSD	Sandimen	2.89	212	eP	Pn	00 02 42.5	+0.2
	baz=210						

PAS 11 00:06:51.8±1.2, 33°.70N±0°.03×118°.07W±0°.03, h14km±2km, ML2.0/24, Error ellipse: s-maj=4.4km s-min=2.5km az=217.0

NEIC 11 00:06:51.2±1.3, 33°.69N±0°.03×118°.11W±0°.04, h17km±7km, Error ellipse: s-maj=5.8km s-min=3.0km az=51.0, Southern California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BREC	Barre Substati	0.15	42		Pb	00 06 55.7	+0.1
SANC	Santa Ana	0.18	86		Sb	00 06 59.4	0.0
RPV	Rancho Palos V	0.25	282		Pb	00 06 57.2	0.0
GVRC	Garvey Reservo	0.36	358		Pb	00 06 59.3	+0.2
CIAC	Catalina I. Ai	0.39	222		Pb	00 06 59.9	+0.4
PSRC	Puddingstone R	0.47	32		Pg	00 07 00.6	-0.1
PSRC					Sg	00 07 06.8	-0.2
PASC	Pasadena Art C	0.48	352		Pg	00 07 01.0	+0.1
PASC	Pasadena Art C	0.48	352	Sg	Sg	00 07 04.4	-3.0
DJJ	Donna J Jenkin	0.51	325		Sb	00 07 08.7	0.0
PEM	Pine Mountain	0.51	22		Pg	00 07 01.2	-0.3
MWC	Mount Wilson	0.53	4		Pg	00 07 01.4	-0.5
MWC					Sg	00 07 08.8	-0.3
SSK	Sunset Peak	0.62	33		Pg	00 07 03.1	-0.4
XTL	Crystal Lake,	0.64	19		Pg	00 07 03.1	-0.7
SME	Santa Rosa Min	0.64	78		Pg	00 07 03.2	-0.6
CHFC	Chilao Flat St	0.64	6		Pg	00 07 03.2	-0.8
CHFC					Sg	00 07 11.5	-1.0
BFSC	Mount Baldy Ra	0.66	34		Pg	00 07 03.6	-0.6
BFSC					Sg	00 07 12.2	-0.9
RVR	Riverside	0.68	64		Sg	00 07 12.3	-1.3
RSBC	Riverside Bore	0.71	66		Sg	00 07 12.9	-1.6
SS2	San Sevaine	0.72	44		Pb	00 07 04.7	-0.5
IR2C	Iron Canyon	0.73	341		Pb	00 07 05.2	-0.3
HOLC	Holcomb Ridge	0.79	16		Pb	00 07 05.8	-0.8
PEC	Perris	0.81	76		Pb	00 07 06.2	-0.7
CSP	Cedar Springs	0.87	46		Pb	00 07 07.3	-0.5
DGR	Domenigoni Val	0.92	92		Pb	00 07 07.6	-1.0
BTL	Butler Peak	1.08	58		Pb	00 07 11.3	-0.2
CRY	Cary Ranch	1.15	96		Pn	00 07 12.0	-0.5
109C	Camp Elliot, M	1.16	133	Pn	Pn	00 07 11.9	-0.7
109C				Sg	Sb	00 07 26.8	-0.7
HWB	Hans Werner Br	1.17	124		Pn	00 07 11.9	-0.8
DPP	Dos Picos Cty	1.20	125		Pn	00 07 12.4	-0.7
PFO	Pinyon Flats O	1.38	93		Pb	00 07 16.2	-0.3
PFO					Sb	00 07 33.8	-0.1
XPFO	Pion Flat	1.38	93		Pb	00 07 16.2	-0.4
BAR	Barrett	1.57	130	Pn	Pn	00 07 17.8	-0.5
GSC	Goldstone, Bar	1.93	33		Pn	00 07 24.4	+1.1
ISA	Isabella, Lake	1.99	351	Pn	Pn	00 07 25.3	+1.2

IDC 11 00:09:43.9±0.4, 27°.25N×65°.57E, h0km, mb4.4/36, mb1 4.5/38, mb1mx4.4/54, mbtmp4.4/38, ML3.8/2, MS4.4/33, Ms1 4.4/33, ms1mx4.3/46, Error ellipse: s-maj=10.7km s-min=9.9km az=98.0
NEIC 11 00:09:43.2±2.5, 27°.12N±0°.07×65°.45E±0°.07, h10km±1km, mb4.8/81, Error ellipse: s-maj=12.8km s-min=9.1km az=135.0
BJI 11 00:09:44.1±0.0, 27°.33N×65°.68E, h5km, mB5.0/47, mb4.8/63, Ms5.0/56, Ms7 4.8/50
MOS 11 00:09:45.3±1.2, 27°.33N×65°.61E, h17km, mb4.9/55, MS4.2/20, Error ellipse: s-maj=4.9km s-min=3.1km az=94.9
GCMT 11 00:09:47.2±0.2, 26°.98N±0°.01×65°.49E±0°.01, h17km±1km, MW5.1/119, Moment Tensor Solution. s60, c74; s119, c197; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.48±.11; $M_{\theta\theta}$-3.70±.12; $M_{\phi\phi}$3.22±.11; $M_{r\theta}$0.78±.29; $M_{r\phi}$-3.09±.10; $M_{\theta\phi}$-2.57±.36; Best double couple: $M_0$5.32200×10^{16} NP1:ϕ_s111.00000°, δ70.00000°, λ162.00000°. NP2:ϕ_s207.00000°, δ73.00000°, λ21.00000°. Principal axes: T 5.7580, Plg27.0000°, Azm70.0000°; N -0.8710, Plg63.0000°, Azm244.0000°; P -4.8870, Plg2.0000°, Azm338.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
OMAN 11 00:09:55.0±0.2, 26°.92N×64°.93E, h47km, mb5.2/1, ms4.0/10 Error ellipse: s-maj=4.2km s-min=1.9km az=20.0

ISC 11 00:09:47.5±0.3, 27°.12N±0°.03×65°.51E±0°.03, h35km, n463, σ2°38/509, mb4.7/135, MS4.5/57, 44C-8D, Pakistan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BHUJ	Bhuj	5.38	135	eP	Pn	00 11 05.2	-0.1
BHUJ				eS	Sn	00 12 04.0	-2.0
BHUJ					IAML	00 12 09.0	
	comp=N,322nm,0.4s						
BHUJ					IAML	00 12 09.1	
	comp=E,518nm,0.5s						
WSAR	Wadi Sarin	7.33	240	Pn	Pn	00 11 28.9	-3.2
	comp=E,6.1nm,0.3s,baz=101,slow=3.6,SNR=65						
WSAR				Sn	Sn	00 12 45.8	-8.4
	comp=E,29nm,0.3s,baz=212,slow=4.5,SNR=9.9						
WSAR				LR	LR	00 15 25.6	
	comp=E,4µm,18.3s,baz=104,slow=46						
WSAR	Wadi Sarin	7.33	240	P	Pn	00 11 29.0	-3.2
	SNR=28						
WSAR				S	Sn	00 12 46.0	-8.2
WBK	Wadi Bani Khal	7.45	234	P	Pn	00 11 32.0	-1.7
	SNR=157						
WBK				S	Sn	00 12 49.4	-7.6
BIDO	Bidbid	7.58	243	P	Pn	00 11 35.4	-0.2
	SNR=6.7						
BIDO				S	Sn	00 12 54.8	-5.5
HRA	Herat	7.77	340		Pn	00 11 37.8	-0.6
THW	Thamme Wali	7.82	42	P	Pn	00 11 37.7	-1.2
SARP	Sargodha	7.86	51	P	Pn	00 11 38.3	-1.1
SMDO	Samad	7.88	241	P	Pn	00 11 38.3	-1.5
	SNR=22						
SMDO				S	Sn	00 13 01.3	-6.5
KBL	Kabul	8.00	21		Pn	00 11 41.0	-0.4
KBL	Kabul	8.00	21	P	Pn	00 11 41.0	-0.4
AJM	Ajmer	8.19	92	eP	Pn	00 11 42.0	-1.9
AJM				i x	x	00 13 10.0	
AJM				i x	x	00 13 10.0	
HOQ	Hoqain	8.21	246	P	Pn	00 11 42.7	-1.6
	SNR=31						
HOQ				S	Sn	00 13 09.3	-6.5
JMDO	Jabal Madar	8.23	237	P	Pn	00 11 44.4	-0.1
	SNR=155						
JMDO				S	Sn	00 13 11.0	-5.2
BANOM	Banah	8.34	264	i P	Pn	00 11 45.2	-0.8
	SNR=18						
BANOM	Banah	8.34	264	P	Pn	00 11 45.8	-0.2
	SNR=65						
BANOM				S	Sn	00 13 16.2	-2.7
SHME	Shamm	8.46	265	i P	Pn	00 11 47.8	+0.2
	SNR=32						
SHME				S	Sn	00 13 17.0	-4.9
MDH	Madha	8.47	260	i P	Pn	00 11 46.3	-1.5
	SNR=25						
MDH	Madha	8.47	260	P	Pn	00 11 46.8	-1.0
	SNR=9.4						
MDH				S	Sn	00 13 14.3	-7.9
MSFE	Esma-Masafi	8.58	260	i P	Pn	00 11 49.0	-0.3
	SNR=19						
SOHO	SOHO	8.63	252	P	Pn	00 11 49.0	-1.0
	SNR=27						
UOSS	Minazif	8.65	258	i P	Pn	00 11 48.2	-2.0
	SNR=15						
UOSS	Minazif	8.65	258		Pn	00 11 48.1	-2.1
CEP	Cherat	8.66	38	P	Pn	00 11 49.4	-1.1
CEP				S	Sn	00 13 19.0	-8.1
BSY	Bisya	8.71	242	P	Pn	00 11 50.9	-0.2
	SNR=169						
BSY				S	Sn	00 13 23.7	-4.4
HATD	Hatta, Dubai	8.74	257	i P	Pn	00 11 51.9	+0.4
	SNR=34						
HATD	Hatta, Dubai	8.74	257	P	Pn	00 11 52.9	+1.4
	SNR=41						
ASHO	Ashiyiah	8.85	256	i P	Pn	00 11 53.0	-0.1
	SNR=46						
ASHO	Ashiyiah	8.85	256	P	Pn	00 11 53.3	+0.3
	SNR=45						
ASHO				S	Sn	00 13 25.4	-6.1
ARQ	Araqi	8.97	247	P	Pn	00 11 57.0	+2.4
	SNR=34						
ARQ				S	Sn	00 13 31.5	-2.9
NAZ	Nazwa, Dubai	9.11	259	i P	Pn	00 11 57.7	+1.2
	SNR=69						
NAZ	Nazwa, Dubai	9.11	259	P	Pn	00 11 59.1	+2.5
	SNR=69						
NAZ				S	Sn	00 13 38.2	+0.4
MHTO	MHTO	9.21	230	P	Pn	00 11 58.0	+0.1
	SNR=19						
MHTO				S	Sn	00 13 33.3	-6.9
ALNE	Al Ain	9.32	253	i P	Pn	00 12 00.2	+0.7
	SNR=50						
NIL	Nilore	9.33	44		Pn	00 11 58.3	-1.2
NIL					Sn	00 13 38.0	-5.2
NIL	Nilore	9.33	44	P	Pn	00 11 58.3	-1.2
NIL						00 13 38.1	
CHCP	Chirah Chowk	9.34	44	P	Pn	00 11 58.3	-1.4
THN	Thein Dam	10.32	57	eP	Pn	00 12 13.5	+0.4

THN ex x 00 14 06.5
AYAN Aya Nagar 10.38 80 eP Pn 00 12 12.0 -1.9
BHK Bhakra 10.44 63 eS Sn 00 14 12.0 +1.5
NDI New Delhi 10.47 79 eP Pn 00 12 15.0 -0.2
NDI ex x 00 14 07.0
DHRM DHARAMSHALA 10.68 59 eP Pn 00 12 16.7 -1.6
DHRM ex x 00 14 12.8
DHRM IAML 00 14 18.4
comp=E,378nm,0.5s
DHRM IAML 00 14 20.1
comp=N,274nm,0.8s
SMLA Simla 10.95 66 IAML 00 14 25.6
comp=N,212nm,0.5s
SMLA IAML 00 14 25.9
comp=E,162nm,0.3s
BHPL Bhopal 11.46 107 eP Pn 00 12 26.9 -1.9
BHPL IAML 00 14 46.3
comp=N,24nm,0.2s
BHPL IAML 00 14 47.1
comp=E,15nm,0.1s
DDI Dehra Dun 11.46 71 eP Pn 00 12 27.6 -1.3
DDI ex x 00 16 15.6
POO Poona 11.49 136 ex Pn 00 12 32.5 +3.2
comp=E,20nm,1.0s
ASHT Ashkhabad 12.35 333 Pn Pn 00 12 38.7 -2.1
ASHT Ashkhabad 12.35 333 P Pn 00 12 38.7 -2.1
GEYT Alibeck 12.45 332 Pn Pn 00 12 40.7 -1.6
comp=E,0.1nm,0.3s,baz=157,slow=8.0,SNR=21
GEYT Lg Lg 00 16 13.0
baz=142,slow=17,SNR=2.1
GEYT LR LR 00 18 15.8
comp=E,1μm,18.5s,baz=140,slow=41
GEYT Alibeck 12.45 332 Pn 00 12 40.6 -1.6
GEYT Sn 00 14 52.9 -6.8
GYA0 ALIBECK ARRAY 12.45 332 P Pn 00 12 41.3 -0.9
GYA0B ALIBECK ARRAY 12.45 332 Pn 00 12 40.0 -2.2
JOSI Joshimath 12.78 71 eP Pn 00 12 45.2 -1.8
JOSI ex x 00 15 01.0
JOSI IAML 00 15 15.3
comp=E,213nm,0.6s
JOSI IAML 00 15 42.0
LGTI Lohaghat 13.19 76 eP P 00 13 10.2 +8.3
LGTI eS S 00 15 33.7 -8.0
DMTO DMTO 13.52 228 P Pn 00 12 57.8 +0.9
SNR=9.8
KLRI Killari 13.63 129 eP Pn 00 12 56.9 -1.5
KLRI IAmb IAmb 00 13 02.1
comp=Z,14nm,1.0s
KLRI eS Sn 00 15 26.7 -2.0
KLRI IVMsBB 00 19 04.7
comp=Z,924nm,5.7s
BTK Batken 13.64 18 Pn 00 12 58.4 -0.1
BTK Batken 13.64 18 P Pn 00 12 58.4 -0.1
RBK Rabkut 14.17 230 P Pn 00 13 06.3 +0.5
SNR=6.2
WHFO Wadi Hawf 14.19 232 P Pn 00 13 05.5 -0.5
SNR=23
SRSP Sriramsagar 14.35 122 eP Pn 00 13 06.3 -1.9
SRSP IAmb IAmb 00 13 10.4
comp=Z,16nm,1.4s
SRSP IVMs_BB IVMs_BB 00 19 38.0
comp=Z,870nm,11.7s
RPR Rampur 15.11 120 eP Pn 00 13 17.5 -1.0
RPR IAmb IAmb 00 13 18.5
comp=Z,15nm,1.1s
RPR eS Sn 00 16 02.6 -2.2
RPR IVMs_BB IVMs_BB 00 19 50.4
comp=Z,577nm,8.5s
KSH Kashi 15.13 33 P Pn 00 13 09.4 -9.3
KSH pP P 00 13 13.4 -10
KSH S Sn 00 15 45.6 -20
KSH pmax pmax
comp=Z,65nm,2.0s
KSH pmax pmax
comp=Z,520nm,4.4s
KSH LR LR
comp=Z,4μm,9.1s
KSH LR LR
comp=Z,3μm,9.4s
KSH LR LR
comp=Z,7μm,14.1s
IUG Iuzhnay 15.44 13⇑iP Pn 00 13 20.2 -2.7
IUG eLR LR 00 19 52.0
IUG Iuzhnay 15.44 13c iP Pn 00 13 20.1 -2.7
HYBB Hyderabad (bro 15.45 126 eP Pn 00 13 19.7 -3.2
HYBB IAmb IAmb 00 13 28.6
comp=Z,18nm,1.2s
HYBB eS Sn 00 16 14.6 +1.7
HYBB IVMs_BB IVMs_BB 00 20 10.5
comp=Z,1μm,10.3s
HYB Hyderabad 15.45 126 iP Pn 00 13 21.0 -1.9
HYB eS S 00 16 26.0 -2.0
ARSB Arslanbob 15.45 22 Pn 00 13 20.6 -2.3
ARSB IAmb IAmb 00 13 27.1
comp=Z,43nm,1.1s
ARSB Arslanbob 15.45 22 P Pn 00 13 20.6 -2.3
ARSB pmax pmax
comp=Z,43nm,1.2s
CHM Chimkent 15.53 11 eP Pn 00 13 20.8 -3.0
comp=Z,13nm,1.1s
CHM Chimkent 15.53 11 eP Pn 00 13 20.8 -3.0
CHM pmax pmax
comp=Z,13nm,1.1s
JBG Jabagly 15.81 14 eP Pn 00 13 24.5 -3.1
JBG pmax pmax
comp=Z,24nm,1.6s
JBG MLR MLR
comp=Z,285nm,10.0s
KOLN Koldanda 16.07 84 eP Pn 00 13 27.5 -3.6
comp=Z,426nm,1.2s
DANN Dangsing 16.21 81 eP Pn 00 13 28.3 -4.6
comp=Z,302nm,0.8s
URV Uravakonda 16.32 136 eP Pn 00 13 33.5 -0.7
URV IAmb IAmb 00 13 38.7
comp=Z,19nm,0.8s
URV IVMs_BB IVMs_BB 00 20 37.2
comp=Z,1μm,12.2s
AML Almayashu 16.41 22 P Pn 00 13 32.7 -2.8
SNR=26
GGR Gangavaram 16.42 121 eP Pn 00 13 31.5 -3.8
GGR IAmb IAmb 00 13 40.1
comp=Z,16nm,0.9s
GGR eS Sn 00 16 34.5 -2.0
GGR IVMsBB 00 20 50.5
comp=Z,783nm,11.0s
DZA Taraz 16.43 15 eP Pn 00 13 32.1 -3.3
DZA Taraz 16.43 15 eP Pn 00 13 32.1 -3.3
KK31 Karatay Array 16.46 13 Pn 00 13 32.4 -3.4
KK31 Karatay Array 16.46 13 iP Pn 00 13 32.8 -2.9
KKAR Karatay Array 16.46 13 Pn 00 13 32.5 -3.2
KKAR Karatay Array 16.46 13 Pn 00 13 32.7 -3.0
KKAR Karatay Array 16.46 13 P Pn 00 13 32.7 -3.0
NJS Nagarjunasagar 16.55 127 eP Pn 00 13 34.4 -2.7
NJS IAmb IAmb 00 13 39.7
comp=Z,6.1nm,0.9s
NJS eS Sn 00 16 38.1 -1.7
NJS IVMs_BB IVMs_BB 00 20 44.8
comp=Z,889nm,12.1s
SRLM Srisailam 16.57 129 eP Pn 00 13 35.0 -2.2
SRLM IAmb IAmb 00 13 43.0
comp=Z,13nm,1.0s
SRLM eS Sn 00 16 39.9 -0.3
SRLM IVMs_BB IVMs_BB 00 20 48.3
comp=Z,662nm,9.2s
NRN Naryn 16.68 28 Pn 00 13 35.2 -3.7
NRN Naryn 16.68 28 P Pn 00 13 35.2 -3.7
NRN pmax pmax
comp=Z,54nm,1.4s
UCH Uchtor 16.77 24 P Pn 00 13 38.0 -2.2
SNR=16
EKS2 Erkin-Say 16.91 21 P Pn 00 13 39.1 -2.4
SNR=14
KZA Kyzart 16.92 26 P P 00 13 45.1 +1.5
SNR=24
GKN Gorkha 16.99 83 eP Pn 00 13 38.4 -4.2
comp=Z,201nm,1.0s
AAK Ala-Archa 17.13 23 Pn Pn 00 13 43.1 -1.1
comp=Z,1.1nm,0.3s,baz=188,slow=6.7,SNR=33
AAK Sn Sn 00 16 49.6 -4.1
comp=Z,0.1nm,0.3s,baz=342,slow=20,SNR=2.6
AAK Ala-Archa 17.13 23 P Pn 00 13 43.4 -0.9
SNR=12
AAK Ala-Archa 17.13 23 iP Pn 00 13 42.1 -2.2
SNR=20
AAK Ala-Archa 17.13 23 Pn 00 13 42.5 -1.8
AAK Ala-Archa 17.13 23 iP Pn 00 13 42.5 -1.8
AAK pmax pmax
comp=Z,33nm,1.1s
KBK Karagaybulak 17.31 24 P Pn 00 13 44.6 -1.9
SNR=14
FRU1 Bishkek 17.33 23 Pn Pn 00 13 44.7 -2.0
FRU1 Bishkek 17.33 23 P Pn 00 13 44.7 -2.0
FRU1 pmax pmax
comp=Z,36nm,1.2s
MYLAV Mylavaram 17.40 123 eP Pn 00 13 45.3 -2.3
MYLAV IAmb IAmb 00 13 50.2
comp=Z,45nm,1.8s
MYLAV IVMs_BB IVMs_BB 00 21 21.8
comp=Z,1μm,8.9s
DMN Daman 17.42 84 eP Pn 00 13 44.2 -3.9
comp=Z,76nm,0.7s
ADKI Addanki 17.50 127 eP P 00 13 50.5 +0.7
ADKI IAmb IAmb 00 13 54.8
comp=Z,10.0nm,1.2s
ADKI eS S 00 17 06.7 -3.2
ADKI IVMs_BB IVMs_BB 00 21 22.1
comp=Z,762nm,10.9s
CHMS Chumysh 17.54 23 P P 00 13 52.0 +1.9
SNR=7.3
CHMS Chumysh 17.54 23 iP Pn 00 13 47.1 -2.1
CHMS pmax pmax
comp=Z,43nm,1.2s
BOOM Boomskoye usch 17.54 26 P Pn 00 13 47.8 -1.6
BOOM Boomskoye usch 17.54 26 P Pn 00 13 47.8 -1.6
BOOM pmax pmax
comp=Z,50nm,1.2s
KKN Kakani 17.56 83 eP Pn 00 13 45.7 -4.1
comp=Z,122nm,0.9s
PKIN Phulchoki 17.68 84 eP Pn 00 13 47.2 -4.1
comp=Z,90nm,0.9s
PKI Pulchoki 17.69 84 eP Pn 00 13 47.3 -4.2
comp=Z,233nm,1.3s
USP Ospenovka 17.69 22 P P 00 13 53.5 +1.7
SNR=7.8
KDJ Kajisay 17.76 30 Pn 00 13 50.0 -2.1
KDJ IAmb IAmb 00 13 56.2
comp=Z,87nm,1.1s
KDJ Kajisay 17.76 30 P Pn 00 13 50.0 -2.1
KDJ pmax pmax
comp=Z,87nm,1.1s
PVM Polavaram 17.85 120 eP Pn 00 13 51.9 -1.2
PVM IAmb IAmb 00 13 56.4
comp=Z,26nm,1.1s
PVM IVMs_BB IVMs_BB 00 21 38.0
comp=Z,760nm,11.6s
SGDS Sogindy 17.89 22 eP P 00 13 54.5 +0.4
comp=Z,42nm,1.4s
SGDS eS Sn 00 17 13.0 +0.8
SGDS eLR LR 00 20 56.7
comp=Z,156nm,9.8s
GUN Gumba 18.09 83 eP Pn 00 13 52.3 -4.1
comp=Z,718nm,1.2s
LKRN Lenkeran, Azer 18.16 314 P Pn 00 13 56.7 -0.1
MTBS Maitube 18.27 26 eP Pn 00 13 58.2 -0.2
MTBS Maitube 18.27 26 eP Pn 00 13 58.1 -0.2
JIRN Jiri 18.37 84 eP P 00 13 56.5 -3.3
comp=Z,250nm,0.7s
SOCY Socotra 18.38 218 P P 00 13 54.7 -4.9
SOCY IAmb IAmb 00 14 05.5
comp=Z,43nm,0.9s
SOCY Socotra 18.38 218 P P 00 13 59.0 -0.5
SNR=6.5
TNSS Tian-Shan 18.40 27 eP P 00 13 58.3 -1.7
TNSS Tian-Shan 18.40 27 eP P 00 13 58.3 -1.7
RAYN Ar Rayn 18.44 263 iP P 00 13 57.6 -2.6
SNR=17
RAYN Ar Rayn 18.44 263 P P 00 13 57.0 -3.2
RAYN Ar Rayn 18.44 263 P P 00 13 57.0 -3.2
RAYN pmax pmax
comp=Z,30nm,1.1s
AAA Alma-Ata 18.53 27 eP P 00 14 00.3 -0.9
comp=Z,13nm,0.7s
AAA eS S 00 17 30.9 +0.3
AAA eLR LR 00 21 28.0
comp=Z,954nm,12.7s
AAA Alma-Ata 18.53 27 eP P 00 14 00.2 -0.9
AAA eS S 00 17 30.9 +0.3
AAA pmax pmax
comp=Z,13nm,0.7s
AAA MLR MLR
comp=Z,954nm,13.0s
MDOK Medeo 18.55 27 eP Pn 00 14 01.6 -0.1
MDOK eS S 00 17 30.2 -0.9
MDOK eLR LR 00 21 24.7
comp=Z,1μm,12.2s
MDOK Medeo 18.55 27 eP Pn 00 14 01.6 -0.1
MDOK eS S 00 17 30.1 -1.0
MDOK MLR MLR
comp=Z,1μm,12.0s
PRZ Przheval'sk 18.59 31 P P 00 14 00.5 -1.4
PRZ IAmb IAmb 00 14 09.9
comp=Z,36nm,0.8s
PRZ Przheval'sk 18.59 31 P P 00 14 00.5 -1.4
PRZ pmax pmax
comp=Z,36nm,0.9s
BOK Bokaro 18.69 96 eP Pn 00 14 04.0 +0.5
BOK IAmb IAmb 00 14 06.9
comp=Z,32nm,1.0s
BOK ex x 00 17 19.4
BOK ex x 00 17 21.8
RAMN Ramite 18.79 86 eP P 00 14 01.5 -2.7
comp=Z,100nm,0.6s
SKHT Srikalahasti 18.80 132 eP P 00 14 02.9 -1.2
SKHT IAmb IAmb 00 14 09.7
comp=Z,6.6nm,0.8s
SKHT eS Sn 00 17 32.2 -1.9
SKHT IVMs_BB IVMs_BB 00 22 02.7
comp=Z,598nm,15.7s
KUU Kurty 18.89 25 eP P 00 14 04.6 -0.3
comp=Z,55nm,1.9s
KUU eS Sn 00 17 33.7 -2.3
KUU eLR LR 00 21 27.4
comp=Z,368nm,10.8s
KUU Kurty 18.89 25 eP P 00 14 04.6 -0.3
KUU eS Sn 00 17 33.7 -2.3
KUU pmax pmax
comp=Z,55nm,1.9s
KUU MLR MLR
comp=Z,368nm,11.0s
SATY Saty 19.05 30 eP P 00 14 06.4 -0.4
comp=Z,34nm,2.2s
SATY eLR LR 00 21 29.0
comp=Z,304nm,10.5s
SATY Saty 19.05 30 eP P 00 14 06.4 -0.4
SATY pmax pmax
comp=Z,34nm,2.2s
SATY MLR MLR
comp=Z,305nm,10.0s
CHKK Chushkaly 19.10 26 eP P 00 14 06.9 -0.4
CHKK Chushkaly 19.10 26 eP P 00 14 06.8 -0.4
CHLP Challavanipeta 19.11 113 eP P 00 14 07.6 +0.1
CHLP IAmb IAmb 00 14 11.2
comp=Z,16nm,1.3s
CHLP eS S 00 17 42.9 +0.5
CHLP IVMs_BB IVMs_BB 00 23 11.1
comp=Z,634nm,7.4s
BTLS Baital 19.15 19 eP Pn 00 14 08.2 -0.6
BTLS Baital 19.15 19 eP Pn 00 14 08.1 -0.6
UZB Uzynbulak 19.39 31⇑iP P 00 14 10.4 -0.2
comp=Z,38nm,1.6s
UZB eS S 00 17 47.5 -0.6
UZB eLR LR 00 21 55.1
comp=Z,337nm,10.8s
UZB Uzynbulak 19.39 31c iP P 00 14 10.4 -0.2
UZB eS S 00 17 47.5 -0.6
UZB pmax pmax
comp=Z,38nm,1.6s
UZB MLR MLR
comp=Z,337nm,11.0s
KPKS Kokpek 19.49 30⇑iP P 00 14 11.3 -0.4
comp=Z,35nm,1.2s
KPKS eS S 00 17 43.0 -7.1
KPKS eLR LR 00 22 10.6
comp=Z,508nm,11.9s
KPKS Kokpek 19.49 30c iP P 00 14 11.2 -0.4
KPKS eS S 00 17 42.9 -7.1
KPKS pmax pmax
comp=Z,35nm,1.2s
KPKS MLR MLR
comp=Z,508nm,12.0s
ODAN Odare 19.50 86 eP P 00 14 11.8 -0.2
comp=Z,159nm,0.9s
SHLS Shalkode 19.61 32⇑iP Pn 00 14 14.9 +0.5
comp=Z,26nm,1.0s
SHLS eS Sn 00 18 00.3 +6.7
SHLS eLR LR 00 22 22.0
comp=Z,480nm,13.6s
SHLS Shalkode 19.61 32c iP Pn 00 14 14.9 +0.5
SHLS pmax pmax
comp=Z,26nm,1.0s
SHLS MLR MLR
comp=Z,480nm,14.0s
TAPN Taplejung 19.74 84 eP P 00 14 14.1 -0.6
comp=Z,370nm,1.4s
MNGR Mingechevir, A 20.42 317 P P 00 14 21.6 0.0
AKT Akhty 20.46 319 eP P 00 14 21.6 -0.6
AKT e 00 14 37.6
AKT e 00 18 14.1
AKT pmax pmax
comp=Z,244nm,1.2s
NAX Nakhchivan 20.57 311 P P 00 14 23.7 +0.3
SEKA Sheki 20.61 318 P P 00 14 22.9 -0.8
TDK Taldyqorghan 20.62 27 eP P 00 14 24.6 +0.7
comp=Z,84nm,1.6s
TDK eS S 00 18 10.3 -2.0
TDK eLR LR 00 22 34.1
comp=Z,939nm,12.5s
TDK Taldyqorghan 20.62 27 eP P 00 14 24.5 +0.7
TDK eS S 00 18 10.3 -2.0
TDK pmax pmax
comp=Z,84nm,1.6s
TDK MLR MLR
comp=Z,939nm,12.0s
GANJ Ganja 20.82 315 P P 00 14 26.0 0.0
MAK Makhachkala 21.54 322 eP P 00 14 29.3 -4.4
MAK eS S 00 18 20.0 -11
MAK pmax pmax
comp=Z,142nm,0.9s
MAK MLR MLR
comp=Z,896nm,16.0s
GNI Garni 21.57 312 P P 00 14 33.9 -0.3
comp=Z,20nm,1.0s,baz=94,slow=1.9,SNR=26
GNI LR LR 00 24 50.8
comp=Z,451nm,18.5s,baz=114,slow=42
GNI Garni 21.57 312 P P 00 14 31.3 -2.9
GNI IAmb IAmb 00 14 41.6
comp=Z,34nm,0.8s
GNI Garni 21.57 312c iP P 00 14 35.8 +1.6
GNI pmax pmax
comp=Z,71nm,1.0s
BTLR Botlikh 22.08 320c iP P 00 14 40.3 +0.8
BTLR pmax pmax
comp=Z,24nm,0.9s
AB31 Akbulak array 22.52 350 iP P 00 14 44.2 +0.1
ABKAR Akbulak array 22.52 350 P P 00 14 44.0 0.0
ABKAR Akbulak array 22.52 350 P P 00 14 43.5 -0.6
ABKAR IAmb IAmb 00 14 52.3
comp=Z,27nm,0.9s
GROC Groznyy 22.66 320 eP P 00 14 46.2 +0.6
GROC e 00 15 11.3
GROC eS S 00 18 56.3 +5.0
GROC pmax pmax
comp=Z,176nm,0.8s
LSA Lhasa 22.68 77 P P 00 14 48.0 +1.4
LSA sP sP 00 14 59.2 -1.7
LSA pmax pmax
comp=Z,110nm,1.7s
LSA pmax pmax
comp=Z,1μm,2.8s
LSA LR LR
comp=Z,6μm,17.8s
LSA LR LR
comp=Z,4μm,15.7s
LSA LR LR
comp=Z,7μm,17.4s
LSA Lhasa 22.68 77 P P 00 14 46.6 0.0
LSA IAmb IAmb 00 14 55.3
comp=Z,51nm,1.1s
LSA Lhasa 22.68 77 P P 00 14 46.6 0.0
LSA pmax pmax
comp=Z,51nm,1.1s
AKH Akhalkalaki 23.03 314 ⇑P P 00 14 50.6 +0.9
AKH Akhalkalaki 23.03 314 P P 00 14 47.2 -2.5
AKH IAmb IAmb 00 14 55.6
comp=Z,33nm,1.0s
AKH Akhalkalaki 23.03 314 P P 00 14 47.2 -2.5
AKH pmax pmax
comp=Z,33nm,1.0s
DAMY Dhamar 23.31 242 P P 00 14 50.4 -2.4
BRZS Berezniki 23.48 12 eP P 00 14 53.9 0.0
comp=Z,64nm,2.3s
BRZS eLR LR 00 24 38.3
comp=Z,483nm,11.1s
BRZS Berezniki 23.48 12 eP P 00 14 53.9 0.0
BRZS pmax pmax
comp=Z,64nm,2.3s
BRZS MLR MLR
comp=Z,483nm,11.0s
ZEI Tsey 23.52 317 eP P 00 14 54.7 +0.1
ZEI pmax pmax
comp=Z,38nm,1.5s
MAKZ Makanchi 23.56 29 P P 00 14 54.2 -0.5
MAKZ IAmb IAmb 00 15 01.9
comp=Z,38nm,1.0s
MAKZ Makanchi 23.56 29 P P 00 14 54.2 -0.5
MAKZ pmax pmax
comp=Z,38nm,1.0s
SHL Shillong 23.67 88 eP P 00 14 53.9 -2.3
SHL IAmb IAmb 00 14 57.3
comp=Z,67nm,1.4s
SHL Shillong 23.67 88 P P 00 14 56.1 -0.1
SHL Shillong 23.67 88 P P 00 14 56.1 -0.1
SHL pmax pmax
comp=Z,94nm,1.5s
MK31 Makanchi Array 23.69 30 P P 00 14 55.8 -0.2
MKAR Makanchi Array 23.69 30 P P 00 14 55.2 -0.7
comp=Z,7.0nm,0.9s,baz=212,slow=7.5,SNR=53
MKAR LR LR 00 25 45.1
comp=Z,2μm,20.9s,baz=218,slow=41
MKAR Makanchi Array 23.69 30 P P 00 14 54.5 -1.4
ONI Oni 23.69 316 P P 00 14 58.7 +2.7
AKTO Aktyubinsk 23.98 348 P P 00 14 58.6 0.0
comp=Z,6.1nm,0.7s,baz=164,slow=5.0,SNR=17
AKTO LR LR 00 26 37.3
comp=Z,588nm,19.0s,baz=155,slow=42
BCA Borcka 24.27 312 ⇑P P 00 15 03.7 +2.3
BATM Batumi 24.29 313 ⇑P P 00 15 03.0 +1.4
BATM Batumi 24.29 313 P P 00 15 03.0 +1.4
PALK Pallekele 24.45 141 P P 00 15 06.4 +3.1
comp=Z,7.4nm,0.9s,baz=330,slow=15,SNR=4.6
PALK LR LR 00 26 04.5
comp=Z,910nm,19.8s,baz=327,slow=40
PALK Pallekele 24.45 141 P P 00 15 01.9 -1.4
PALK IAmb IAmb 00 15 13.2
comp=Z,14nm,1.1s
WMQ Urumqi 24.46 41 eP P 00 15 04.6 +1.4
WMQ pP pP 00 15 09.8 -4.0
WMQ sP sP 00 15 13.3 -4.9
WMQ S S 00 19 23.1 +2.0
WMQ pmax pmax
comp=Z,51nm,1.9s
WMQ pmax pmax
comp=Z,190nm,3.7s
WMQ LR LR
comp=Z,2μm,23.3s
WMQ LR LR
comp=Z,2μm,18.9s
WMQ LR LR
comp=Z,2μm,23.5s
WMQ Urumqi 24.46 41 P P 00 15 04.4 +1.2
WMQ Urumqi 24.46 41 P P 00 15 04.4 +1.2
WMQ pmax pmax
comp=Z,86nm,1.0s
NEY Neytrino 24.50 317c iP P 00 15 07.6 +3.9
NEY pmax pmax
comp=Z,8.0nm,0.8s
KBZ Khabaz 24.66 318 P P 00 15 06.0 +1.1
comp=Z,23nm,0.8s,baz=125,slow=8.1,SNR=34
KBZ Khabaz 24.66 318⇓iP P 00 15 07.8 +2.9
PYA1 Pyatigorsk 24.74 319⇓iP P 00 15 07.3 +1.6
PYA1 pmax pmax
comp=Z,2.0nm,1.0s
SHA1 Shidzhatmaz 24.81 318⇓iP P 00 15 08.6 +2.0
KVAR Kislovodsk Arr 24.91 318 P P 00 15 09.1 +1.8
comp=Z,5.9nm,0.8s,baz=270,slow=20,SNR=5.5

KIV Kislovodsk 24.92 318 ⇓P P 00 15 10.1 +2.8
KIV Kislovodsk 24.92 318 P P 00 15 08.8 +1.4
KIV IAmb IAmb 00 15 13.5
comp=Z,44nm,0.9s
KIV Kislovodsk 24.92 318 eP P 00 15 09.2 +1.8
KIV eS S 00 19 29.6 +1.2
KIV pmax pmax
comp=Z,115nm,4.6s
KIV pmax pmax
comp=Z,148nm,0.9s
ASF Jabal al Asfar 25.33 288 P P 00 15 13.8 +2.5
comp=Z,8.5nm,1.2s,baz=56,slow=3.8,SNR=7.2
ZSN Zaisan 25.35 32 eP P 00 15 10.3 -0.8
ZSN Zaisan 25.35 32 eP P 00 15 10.3 -0.8
GOF Gofitskoye 25.36 321⇑eP P 00 15 12.9 +1.7
GOF pmax pmax
comp=Z,26nm,0.7s
KURBB Kurchatov Arra 25.49 19 P P 00 15 12.3 0.0
comp=Z,8.6nm,0.8s,baz=212,slow=9.1,SNR=15
KURK Kurchatov 25.60 19 P P 00 15 13.6 +0.3
KURK IAmb IAmb 00 15 20.6
comp=Z,28nm,1.2s
KURK Kurchatov 25.60 19⇓iP P 00 15 14.5 +1.2
KURK pmax pmax
comp=Z,9.0nm,1.2s
SEM Semipalatinsk 25.84 22 eP P 00 15 15.8 0.0
comp=Z,5.3nm,0.9s
SEM Semipalatinsk 25.84 22 eP P 00 15 15.8 0.0
SEM pmax pmax
comp=Z,5.0nm,0.9s
GAZ Gaziantep 25.89 300 IAmb IAmb 00 15 22.4
comp=Z,38nm,0.9s
BVAR Borovoye Array 26.13 7 P P 00 15 19.6 +1.4
comp=Z,13nm,0.8s,baz=169,slow=8.4,SNR=65
BRVK Borovoye 26.15 7 P P 00 15 18.1 -0.3
BRVK IAmb IAmb 00 15 35.1
comp=Z,28nm,0.8s
BRVK Borovoye 26.15 7 iP P 00 15 19.4 +1.1
BRVK pmax pmax
comp=Z,30nm,0.9s
ATD Arta Tunnel 26.34 238 P P 00 15 18.4 -2.1
ATD IAmb IAmb 00 15 29.4
comp=Z,41nm,1.1s
SOC Sochi 26.54 315 eP P 00 15 19.8 -2.1
SOC e 00 15 59.3
SOC eS S 00 19 48.9 -5.0
SOC pmax pmax
comp=Z,22nm,0.9s
SOC MLR MLR
comp=Z,331nm,12.0s
MMAI Mount Meron Ar 26.66 290 P P 00 15 25.9 +2.7
comp=Z,4.4nm,0.9s,baz=90,slow=9.3,SNR=8.9
MMAI LR LR 00 27 37.8
comp=Z,1μm,21.7s,baz=90,slow=40
EIL Elat 26.97 283 P P 00 15 27.5 +1.5
comp=Z,7.3nm,0.6s,baz=93,slow=3.3,SNR=10
EIL LR LR 00 27 53.3
comp=Z,1μm,18.8s,baz=98,slow=40
CSS Mathiatis 28.57 294 P P 00 15 38.3 -2.0
CSS IAmb IAmb 00 15 43.3
comp=Z,10nm,0.8s
BRTR Keskin Array B 29.26 304 P P 00 15 47.0 +0.5
comp=Z,1.8nm,0.8s,baz=117,slow=7.9,SNR=12
BRTR Keskin Array B 29.26 304 P P 00 15 46.0 -0.5
BRTR Keskin Array B 29.26 304ceP P 00 15 48.0 +1.5
BRTR pmax pmax
comp=Z,2.0nm,0.8s
ARU Arti 29.71 352 P P 00 15 51.2 +1.1
comp=Z,0.7nm,0.3s,baz=164,slow=7.4,SNR=2.9
ARU LR LR 00 30 12.5
comp=Z,1μm,18.7s,baz=164,slow=42
ARU Arti 29.71 352 P P 00 15 48.6 -1.5
ARU IAmb IAmb 00 15 55.9
comp=Z,20nm,1.5s
ARU Arti 29.71 352c iP P 00 15 52.3 +2.2
ARU 00 16 44.4
ARU S S 00 20 47.1 +3.5
ARU SS SnSn 00 22 11.7 -2.9
ARU pmax pmax
comp=Z,28nm,1.7s
ARU MLR MLR
comp=Z,1μm,17.0s
PBA Port Blair 29.84 116 P P 00 15 50.1 -1.6
SVE Sverdlovsk 29.89 355 eP P 00 15 55.1 +3.4
SVE pmax pmax
comp=Z,23nm,1.6s
SVE MLR MLR
comp=Z,1μm,16.0s
ANTO Ankara 29.93 304 P P 00 15 50.6 -1.7
ANTO IAmb IAmb 00 15 56.6
comp=Z,18nm,1.4s
ANTO Ankara 29.93 304 P P 00 15 53.1 +0.8
ANTO pmax pmax
comp=Z,18nm,1.4s
BR231 Keskin MP Arra 29.93 303 P P 00 15 49.4 -3.1
BR231 IAmb IAmb 00 15 56.1
comp=Z,11nm,1.1s
VRH Novokhopyorsk 30.05 330 eP P 00 15 53.5 +0.3
VRH pmax pmax
comp=Z,30nm,1.7s
ZAA0 Zalesovo Array 30.35 23 P P 00 15 55.9 +0.2
ZAA0 IAmb IAmb 00 16 03.5
comp=Z,14nm,1.5s
ZALV Zalesovo Beam 30.35 23 P P 00 15 56.2 +0.4
comp=Z,2.5nm,0.4s,baz=226,slow=10,SNR=17
ZALV LR LR 00 29 18.2
comp=Z,936nm,18.8s,baz=216,slow=39
ZALV Zalesovo Beam 30.35 23 P P 00 15 54.5 -1.2
ZALV Zalesovo Beam 30.35 23 iP P 00 15 56.2 +0.4
ZALV pmax pmax
comp=Z,2.0nm,0.4s
SIM Simferopol' 30.74 314 eP P 00 16 02.2 +2.9
SIM S S 00 21 11.0 +11
SIM pmax pmax
comp=Z,20nm,0.9s
GTA Gaotai 31.01 58 ⇑P P 00 16 03.0 +1.1
GTA pP pP 00 16 07.3 -5.1
GTA sP sP 00 16 10.2 -6.6
GTA S S 00 21 09.3 +4.7
GTA sS sS 00 21 19.2 -2.6
GTA pmax pmax
comp=Z,15nm,1.5s
GTA pmax pmax
comp=Z,130nm,5.5s
GTA LR LR
comp=Z,920nm,14.8s
GTA LR LR
comp=Z,1μm,16.1s
GTA LR LR
comp=Z,1μm,17.5s
VORD Divnogorie 31.03 327 eP P 00 16 01.5 -0.3
VORD pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 31.25 327 eP P 00 16 03.5 -0.3
VSR pmax pmax
comp=Z,10.0nm,0.9s
MDUB Mudurnu 31.27 304 P P 00 16 02.6 -1.6
CHTO Chiang Mai 31.80 98 P P 00 16 09.7 +0.8
CHTO Chiang Mai 31.80 98 P P 00 16 09.7 +0.8
CHTO pmax pmax
comp=Z,49nm,1.2s
CM31 Chiang Mai Arr 31.93 99 P P 00 16 10.4 +0.3
CM31 IAmb IAmb 00 16 13.1
comp=Z,29nm,1.2s
CMAR Chiang Mai Arr 31.93 99 P P 00 16 11.3 +1.3
comp=Z,12nm,1.1s,baz=297,slow=7.7,SNR=34
CMAR LR LR 00 30 11.6
comp=Z,807nm,21.9s,baz=282,slow=38
MANT Manisa 32.86 300 P P 00 16 16.5 -1.8
MANT IAmb IAmb 00 16 35.5
comp=Z,23nm,1.1s
KMI Kunming 33.41 85 P P 00 16 24.4 +1.1
KMI PP PP 00 17 32.5 -6.6
KMI sS sS 00 21 58.6 -1.1
KMI SS SS 00 23 49.0 -18
KMI LR LR
comp=Z,96nm,6.4s
KMI Kunming 33.41 85 IAmb IAmb 00 16 25.3
comp=Z,26nm,1.2s
CD2 Chengdu 33.55 74 P P 00 16 24.6 +0.4
CD2 S S 00 21 41.1 -3.1
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,210nm,5.9s

CD2 LR LR
comp=Z,3μm,17.7s
CD2 LR LR
comp=Z,1μm,13.2s
CD2 LR LR
comp=Z,2μm,13.2s
LZH Lanzhou 33.67 65 eP P 00 16 27.5 +2.1
LZH pP pP 00 16 31.5 -4.4
LZH sP sP 00 16 34.7 -5.6
LZH S S 00 21 54.3 +8.0
LZH SS SnSn 00 23 48.9 -2.7
LZH pmax pmax
comp=Z,26nm,1.0s
LZH pmax pmax
comp=Z,180nm,4.2s
LZH LR LR
comp=Z,1μm,14.1s
LZH LR LR
comp=Z,1μm,16.3s
LZH LR LR
comp=Z,2μm,17.4s
PBKT Sadao Pong 34.44 100 P P 00 16 32.3 +0.3
MOS Moscow 34.97 333 eP P 00 16 37.1 +1.0
MOS e 00 18 02.4
MOS pmax pmax
comp=Z,45nm,1.2s
MOS MLR MLR
comp=Z,600nm,18.0s
OBN Obninsk 34.99 331 ⇑P P 00 16 37.9 +1.6
OBN Obninsk 34.99 331 P P 00 16 36.1 -0.1
OBN IAmb IAmb 00 16 43.3
comp=Z,21nm,0.9s
OBN Obninsk 34.99 331⇓iP P 00 16 37.9 +1.6
OBN e 00 17 52.0
OBN iS S 00 22 05.5 -0.2
OBN eSS SnSn 00 24 24.6 +1.9
OBN pmax pmax
comp=Z,19nm,1.0s
SANT Santorini 35.08 295 P P 00 16 35.1 -2.3
LEOM Leova 35.12 313 ⇑P P 00 16 38.4 +0.8
LEOM Leova 35.12 313 P P 00 16 38.3 +0.8
GHRR 35.53 312 ⇑P P 00 16 43.0 +1.9
SORM Soroca 35.66 316 ⇑P P 00 16 42.6 +0.4
SORM Soroca 35.66 316 P P 00 16 42.5 +0.4
ELND Elena 35.72 307 ⇑P P 00 16 43.9 +1.1
VRI Vrincioaia 35.92 312 ⇑P P 00 16 45.1 +0.6
VRI Vrincioaia 35.92 312 P P 00 16 46.5 +2.0
VRI pmax pmax
comp=Z,9.0nm,1.3s
PLOR Plostina 35.97 312 ⇑P P 00 16 47.4 +2.4
PLOR Plostina 35.97 312 P P 00 16 47.3 +2.4
TESR Tescani 36.17 313 ⇑P P 00 16 48.3 +1.6
AKASG Malin Array Be 36.22 320 P P 00 16 47.1 +0.2
comp=Z,1.3nm,0.4s,baz=112,slow=7.4,SNR=11
AKASG Malin Array Be 36.22 320 P P 00 16 46.8 -0.1
AKASG Malin Array Be 36.22 320ceP P 00 16 47.5 +0.6
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKBB Malin Array Si 36.22 320 IAmb IAmb 00 17 04.7
comp=Z,16nm,1.2s
AKBB Malin Array Si 36.22 320⇓iP P 00 16 48.1 +1.2
MOY Mondy 36.22 38 eP P 00 16 49.3 +2.2
MLR Muntele Rosu 36.33 311 ⇑P P 00 16 50.1 +1.9
GYA Guiyang 36.63 81⇑iP P 00 16 52.1 +1.2
GYA PP PP 00 18 19.6 +5.0
GYA S S 00 22 34.7 +2.9
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,100nm,3.5s
GYA LR LR
comp=Z,1μm,16.6s
GYA LR LR
comp=Z,490nm,13.5s
GYA LR LR
comp=Z,530nm,14.1s
PLVB Pleven 36.72 307 ⇑P P 00 16 53.1 +1.8
HUMR Humele 36.73 309 ⇑P P 00 16 51.8 +0.4
DOPR Dopca 36.84 311 ⇑P P 00 16 53.3 +1.0
VOIR 36.92 310 ⇑P P 00 16 54.5 +1.3
VOIR 36.92 310 P P 00 16 54.4 +1.3
ZAK Zakamensk 36.93 41 eP P 00 16 54.0 +0.9
ZAK pmax pmax
comp=Z,4.0nm,1.4s
PRGR Permogore 37.00 344 eP P 00 16 49.1 -4.3
PRGR e 00 18 13.6
PRGR pmax pmax
comp=Z,22nm,1.3s
SRS Serrai 37.05 303 P P 00 16 55.5 +1.3
SRS pmax pmax
comp=Z,16nm,1.1s
ARR Arges 37.19 310 ⇑P P 00 16 56.7 +1.4
BURAR Bucovina Array 37.45 314 ⇑P P 00 16 59.2 +1.5
BURAR Bucovina Array 37.45 314 P P 00 16 58.8 +1.2
BURAR Bucovina Array 37.45 314 P P 00 17 00.3 +2.7
VTS Vitosha 37.56 305 ⇑P P 00 17 00.5 +1.8
VTS Vitosha 37.56 305 P P 00 16 58.3 -0.4
VTS Vitosha 37.56 305 P P 00 16 58.3 -0.4
VTS pmax pmax
comp=Z,5.0nm,1.0s
TLY Talaya 37.69 39 LR LR 00 33 58.5
comp=Z,1μm,20.8s,baz=236,slow=39
TLY Talaya 37.69 39 eP P 00 17 01.0 +1.5
TLY eS S 00 22 43.7 -3.5
TLY eSSS SSS 00 25 24.2
TLY pmax pmax
comp=Z,10.0nm,0.7s
TLY MLR MLR
comp=Z,3μm,17.0s
XAN Xi'an 37.79 69 P P 00 17 01.4 +0.9
XAN pP pP 00 17 09.6 -1.5
XAN PP PnPn 00 18 30.7 +2.3
XAN S S 00 22 59.0 +10
XAN pmax pmax
comp=Z,19nm,1.4s
XAN pmax pmax
comp=Z,150nm,3.6s
XAN LR LR
comp=Z,530nm,12.7s
XAN LR LR
comp=Z,810nm,14.2s
XAN LR LR
comp=Z,850nm,14.3s
XAN Xi'an 37.79 69 P P 00 17 01.4 +0.9
XAN IAmb IAmb 00 17 02.2
comp=Z,41nm,1.5s
XAN Xi'an 37.79 69 P P 00 17 01.5 +0.9
XAN pmax pmax
comp=Z,41nm,1.5s
SONM Songino Array 37.90 46 P P 00 17 02.5 +1.0
comp=Z,4.5nm,1.0s,baz=248,slow=9.7,SNR=18
SONM LR LR 00 35 28.7
comp=Z,2μm,18.8s,baz=238,slow=41
SONM Songino Array 37.90 46 P P 00 17 02.9 +1.4
SONM Songino Array 37.90 46 P P 00 17 02.9 +1.4
SONM pmax pmax
comp=Z,5.0nm,1.1s
KLMR Klimovskoe 38.04 340 eP P 00 17 02.3 +0.1
KLMR e 00 18 26.3
KLMR pmax pmax
comp=Z,25nm,1.2s
KLMR Klimovskoe 38.04 340 eP P 00 17 02.4 +0.2
KLMR AMP 00 17 17.8
comp=Z,25nm,1.2s
KLMR ePP PP 00 18 26.3 -3.1
KLMR LQ LQ 00 30 16.2
KLMR LQ LQ 00 30 16.2
KLMR LR LR 00 33 38.0
ULN Ulaanbaatar 38.33 46 P P 00 17 04.9 -0.2
ULN Ulaanbaatar 38.33 46 P P 00 17 04.9 -0.2
ULN pmax pmax
comp=Z,9.0nm,1.2s
ENH Enshi 38.53 75 IAmb IAmb 00 17 26.1
comp=Z,22nm,1.1s
DRGR 38.85 312 ⇑P P 00 17 10.8 +1.5
DRGR 38.85 312 P P 00 17 12.4 +3.0
DRGR pmax pmax
comp=Z,10.0nm,1.6s
BTO Baotou 38.93 58 eP P 00 17 11.1 +0.9
KMBO Kilima Mbogo 39.10 229 P P 00 17 15.8 +3.9
comp=Z,1.4nm,0.6s,baz=12,slow=3.7,SNR=6.1
KMBO LR LR 00 34 32.0
comp=Z,400nm,19.7s,baz=49,slow=38
KMBO Kilima Mbogo 39.10 229 P P 00 17 10.2 -1.7

KMBO Kilima Mbogo 39.10 229 P P 00 17 10.3 -1.7
KMBO pmax pmax
comp=Z,10.0nm,1.5s
BZS Buzias 39.31 310 ⇑P P 00 17 14.1 +1.0
BZS Buzias 39.31 310 P P 00 17 14.8 +1.7
BZS pmax pmax
comp=Z,37nm,1.9s
TRPA Tarpa 39.33 314 ⇑P P 00 17 15.5 +2.2
UZH Uzhgorod 39.63 315 eP P 00 17 18.0 +2.3
UZH e 00 17 21.9
KWP Kalwaria Pacla 39.67 316 eP P 00 17 18.3 +2.2
KWP Kalwaria Pacla 39.67 316 eP P 00 17 18.3 +2.2
KOLS Kolonicke sedl 39.73 315 eP P 00 17 18.6 +2.0
KOLS pmax pmax
comp=Z,25nm,1.5s
KOLS Kolonicke sedl 39.73 315 eP P 00 17 18.6 +2.0
KULM Kulim 39.89 117 P P 00 17 17.8 -0.4
PSI Prapat 40.08 121 P P 00 17 21.2 +1.2
comp=Z,12nm,0.8s,baz=291,slow=6.5,SNR=7.8
PSI LR LR 00 36 11.2
comp=Z,548nm,19.4s,baz=290,slow=40
HHC Hu-ho-hao-te 40.12 58 eP P 00 17 21.8 +1.7
HHC S S 00 23 27.6 +3.3
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,63nm,6.7s
HHC LR LR
comp=Z,220nm,10.6s
HHC LR LR
comp=Z,140nm,14.9s
HHC LR LR
comp=Z,310nm,14.1s
RPSI Rantau Prapat 40.15 121 P P 00 17 19.6 -0.8
RPSI IAmb IAmb 00 17 26.2
comp=Z,45nm,1.5s
RPSI Rantau Prapat 40.15 121 P P 00 17 21.2 +0.8
CRVS Cervenica-Dubn 40.23 315 eP P 00 17 22.8 +2.0
CRVS pmax pmax
comp=Z,26nm,1.4s
CRVS Cervenica-Dubn 40.23 315 eP P 00 17 22.8 +2.0
TIY Taiyuan 40.63 63 eP P 00 17 26.1 +1.8
TMCR Tamitsa 41.06 342 eP P 00 17 31.0 +3.7
TMCR pmax pmax
comp=Z,35nm,1.2s
NIE Niedzica 41.11 315 eP P 00 17 30.7 +2.7
NIE Niedzica 41.11 315 eP P 00 17 30.7 +2.7
VSU Vasula 41.33 330⇑iP P 00 17 31.3 +1.7
VYHS Vyhne 41.81 313 eP P 00 17 35.1 +1.3
VYHS Vyhne 41.81 313 eP P 00 17 35.1 +1.3
OKC Ostrava-Krasne 42.57 315 eP P 00 17 42.2 +2.3
OKC Ostrava-Krasne 42.57 315 eP P 00 17 42.2 +2.3
WHN Wuhan 42.66 73 ⇓P P 00 17 42.5 +1.6
WHN pmax pmax
comp=Z,64nm,0.9s
WHN LR LR
comp=Z,2μm,12.2s
WHN LR LR
comp=Z,570nm,10.9s
WHN LR LR
comp=Z,2μm,25.2s
MODS Modra-Piesok 42.80 313 eP P 00 17 42.8 +1.0
MODS pmax pmax
comp=Z,21nm,1.6s
MODS Modra-Piesok 42.80 313 eP P 00 17 42.8 +1.0
SOP Sopron 43.13 312 P P 00 17 46.8 +2.3
SOP pmax pmax
comp=Z,13nm,0.9s
FINES FINESS Array B 43.24 334 P P 00 17 45.8 +0.6
comp=Z,2.9nm,0.4s,baz=123,slow=9.7,SNR=20
FINES LR LR 00 40 19.7
comp=Z,461nm,18.7s,baz=130,slow=42
FINES FINESS Array B 43.24 334 P P 00 17 45.5 +0.3
MBAR Mbarara 43.34 236 P P 00 17 50.0 +3.3
comp=Z,0.7nm,0.3s,baz=60,slow=5.8,SNR=4.9
MBAR Mbarara 43.34 236 P P 00 17 47.1 +0.4
MBAR Mbarara 43.34 236 P P 00 17 47.1 +0.4
MBAR pmax pmax
comp=Z,5.0nm,1.1s
KRUC Moravsky 43.51 314 eP P 00 17 47.5 0.0
BJT Baijiatuau 43.59 59 P P 00 17 46.8 -1.5
BJT IAmb IAmb 00 17 51.5
comp=Z,13nm,1.2s
BJT Baijiatuau 43.59 59 P P 00 17 46.8 -1.5
BJT pmax pmax
comp=Z,13nm,1.2s
BJI Beijing 43.59 59 P P 00 17 50.9 +2.6
BJI sP pP 00 17 54.2 -4.9
BJI pmax pmax
comp=Z,8.0nm,1.3s
ARSA Arzberg 43.75 311 epP P 00 17 51.2 +1.6
comp=Z,12nm,1.2s
DPC Dobruska-Polom 43.83 316 eP P 00 17 52.7 +2.5
DPC AMS AMS 00 42 40.0
comp=Z,600nm,19.5s
DPC Dobruska-Polom 43.83 316 eP P 00 17 52.7 +2.5
DPC MLR MLR
comp=Z,600nm,19.5s
OSTC Ostas 43.95 316 eP P 00 17 52.7 +1.6
OSTC ex x 00 18 00.3
KSP Ksiaz 43.97 316 eP P 00 17 54.0 +2.8
KSP Ksiaz 43.97 316 eP P 00 17 54.0 +2.8
SOKA Soboth 44.00 310 epP P 00 17 53.6 +2.0
comp=Z,14nm,1.3s
CHVC Chvalec 44.05 316 eP P 00 17 53.7 +1.8
CHVC ex x 00 18 03.5
CHVC AMS AMS 00 41 30.0
comp=Z,600nm,16.0s
UPC Upice 44.06 316 eP P 00 17 54.8 +2.8
UPC Upice 44.06 316 eP P 00 17 54.8 +2.8
TREC Trest 44.14 314 eP P 00 17 54.1 +1.5
TREC Trest 44.14 314 eP P 00 17 54.1 +1.5
TIA Tai'an 44.41 65 P P 00 17 56.7 +1.7
TIA pmax pmax
comp=Z,10.0nm,1.2s
MYKOM Kota Tinggi 44.53 118 P P 00 17 56.1 0.0
MOA Molln 44.69 312 i pP P 00 17 57.8 +0.7
comp=Z,7.2nm,1.0s
LVZ Lovozero 44.83 344 P P 00 17 57.7 -0.1
LVZ Lovozero 44.83 344⇑iP P 00 17 59.6 +1.8
LVZ pmax pmax
comp=Z,34nm,1.0s
PRU Pruhonice 44.88 315 eP P 00 17 59.0 +0.5
PRU AMS AMS 00 41 40.0
comp=Z,600nm,21.5s
PRU Pruhonice 44.88 315 eP P 00 17 59.0 +0.5
PRU MLR MLR
comp=Z,600nm,21.5s
PRA Prague 44.96 315 AMS AMS 00 41 40.0
comp=Z,600nm,21.0s
PVCC Panska Ves 44.97 315 AMS AMS 00 42 10.0
comp=Z,600nm,8.3s
KBA Koelnbreinsper 45.20 310 epP P 00 18 01.4 +0.1
comp=Z,19nm,1.2s
GEC2 GERESS Array S 45.22 313 P P 00 18 01.4 +0.1
GEC2 IAmb IAmb 00 18 18.5
comp=Z,25nm,1.4s
GERES GERESS Array B 45.22 313 P P 00 18 01.9 +0.6
comp=Z,2.9nm,0.8s,baz=98,slow=6.9,SNR=20
GERES LR LR 00 41 07.7
comp=Z,225nm,19.0s,baz=102,slow=42
GERES GERESS Array B 45.22 313 P P 00 18 00.6 -0.7
KHC Kasperske Hory 45.34 313 eP P 00 18 03.5 +1.3
KHC Kasperske Hory 45.34 313 eP P 00 18 03.5 +1.3
BRG Berggiesshubel 45.43 316 eP P 00 18 05.2 +2.4
BRG pmax pmax
comp=Z,13nm,1.0s
BRG MLR MLR
comp=N,13μm,16.5s
BRG MLR MLR
comp=E,539nm,12.1s
BRG MLR MLR
comp=Z,654nm,19.9s
BOD Bodaibo 45.64 34 eP P 00 18 04.7 +0.3
BOD pmax pmax
comp=Z,6.0nm,1.5s
CLL Collm 46.09 316 i P P 00 18 11.0 +3.0
comp=Z,6.0nm,0.9s
CLL eS S 00 24 54.0 +2.7
CLL eSS SS 00 28 18.0 +1.6
CLL Lm MLR 00 40 00.0
comp=Z,300nm,21.1s
CLL Collm 46.09 316 P P 00 18 06.4 -1.6
CLL IAmb IAmb 00 18 11.9
comp=Z,5.6nm,0.8s

CLL Collm 46.09 316 i P P 00 18 11.0 +3.0
CLL pmax pmax
comp=Z,6.0nm,0.9s
CLL MLR MLR
comp=Z,300nm,21.1s
NJ2 Nanjing 46.27 71 eP P 00 18 10.1 +0.4
NJ2 sP pP 00 18 14.6 -5.9
NJ2 pmax pmax
comp=Z,21nm,1.0s
NJ2 LR LR
comp=Z,580nm,15.2s
NJ2 LR LR
comp=Z,820nm,13.7s
NJ2 LR LR
comp=Z,1μm,19.9s
WTTA Wattenberg 46.38 311 epP P 00 18 10.8 +0.2
comp=Z,12nm,1.0s
WATA Walderalm 46.43 311 epP P 00 18 13.2 +2.3
comp=Z,8.0nm,1.1s
SQTA Sankt Quirin 46.66 310 i pP P 00 18 14.0 +1.2
comp=Z,10nm,1.3s
MOTA Moosalm 46.75 311 epP P 00 18 14.5 +1.1
comp=Z,11nm,1.0s
FETA Feichten 46.97 310 epP P 00 18 16.7 +1.5
comp=Z,12nm,1.0s
RETA Reutte 46.99 311 epP P 00 18 16.4 +1.1
comp=Z,17nm,1.6s
DAVA Damuels 47.57 310 epP P 00 18 20.5 +0.7
comp=Z,24nm,1.3s
KEST Kesra 48.13 295 P P 00 18 26.2 +1.9
comp=Z,5.8nm,0.8s,baz=190,slow=5.6,SNR=4.4
KEST LR LR 00 43 49.9
comp=Z,289nm,19.1s,baz=358,slow=42
ARCES ARCESS Array B 48.35 342 P P 00 18 26.1 +0.7
comp=Z,8.9nm,0.6s,baz=146,slow=7.1,SNR=21
ARCES ARCESS Array B 48.35 342 eP P 00 18 24.5 -0.9
ARE0 ARCESS Array S 48.35 342 eP P 00 18 27.6 +2.2
KTK1 Kautokeino 48.66 341 eP P 00 18 29.0 +1.3
OPO Ambohidratompo 48.77 203 P P 00 18 32.1 +2.7
comp=Z,3.7nm,0.7s,baz=277,slow=13,SNR=1.9
NC602 NORSAR Array S 49.27 328 eP P 00 18 35.6 +3.1
NORES NORESS Array B 49.27 328 P P 00 18 36.3 +3.8
NORES pmax pmax
comp=Z,2.0nm,0.4s
ECH Echery 49.47 311 IAmb IAmb 00 18 37.2
comp=Z,15nm,1.2s
NB2 NORSAR Subarra 49.51 329 P P 00 18 34.5 +0.1
comp=Z,6.3nm,0.9s,baz=108,slow=7.9
NB2 NORSAR Subarra 49.51 329 P P 00 18 34.5 +0.1
baz=108,slow=7.9
NOA NORSAR Array B 49.51 329 P P 00 18 34.6 +0.1
comp=Z,3.2nm,0.8s,baz=108,slow=7.5,SNR=11
HAMF Hammerfest 49.54 343 eP P 00 18 35.8 +1.4
TRO Tromso 50.27 341 eP P 00 18 42.0 +2.1
NSS Namsos 50.37 333 eP P 00 18 42.0 +1.2
CN2 Changchun 50.50 54 eP P 00 18 43.3 +1.1
CN2 esP pP 00 18 50.3 -2.8
CN2 eS S 00 25 53.6 -0.2
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,630nm,15.0s
CN2 LR LR
comp=Z,720nm,15.0s
CN2 LR LR
comp=Z,1μm,17.0s
STEI Steigen 50.57 338 eP P 00 18 44.9 +2.6
KONS Konsvik 50.69 336 eP P 00 18 44.7 +1.5
DOMB Dombas 50.80 330 eP P 00 18 46.8 +2.7
ZEA Zeya 52.02 42 eP P 00 18 55.8 +2.4
ZEA pmax pmax
comp=Z,48nm,1.8s
ZEA MLR MLR
comp=E,500nm,15.0s
KSRS Korea Array 52.91 62 P P 00 19 00.3 +0.1
comp=E,2.3nm,0.6s,baz=275,slow=7.2,SNR=5.8
KSRS LR LR 00 44 31.3
comp=E,209nm,18.9s,baz=266,slow=40
MDJ Mudanjiang 53.44 53 P P 00 19 04.6 +0.5
MDJ pmax pmax
comp=E,8.0nm,0.9s
MDJ pmax pmax
comp=E,280nm,3.9s
TAM Tamanrasset 54.12 280 P P 00 19 10.3 +0.8
TAM Tamanrasset 54.12 280 P P 00 19 10.3 +0.8
TAM pmax pmax
comp=Z,6.0nm,1.2s
YAK Yakutsk 54.34 31 eP P 00 19 10.8 +0.5
YAK pmax pmax
comp=Z,8.0nm,1.0s
YAK MLR MLR
comp=Z,404nm,12.0s
YAK MLR MLR
comp=N,361nm,14.0s
YAK MLR MLR
comp=E,343nm,18.0s
KLR Kul'dur 54.70 47⇑iP P 00 19 18.1 +4.9
KLR pmax pmax
comp=Z,6.0nm,1.1s
USRK Ussuriysk Ar. 55.19 53 LR LR 00 46 11.3
comp=Z,883nm,18.9s,baz=281,slow=40
SPA0 Spitsbergen Ar 55.67 349 eP P 00 19 21.5 +1.7
TIXI Tiksi 56.17 20⇑iP P 00 19 25.4 +2.0
TIXI pmax pmax
comp=Z,2.0nm,1.1s
KBS Kingsbay 56.83 349 P P 00 19 26.7 -1.2
KBS Kingsbay 56.83 349 P P 00 19 26.7 -1.2
KBS pmax pmax
comp=Z,17nm,0.7s
ESDC Sonseca Array 58.03 302 P P 00 19 37.6 +0.5
comp=Z,1.0nm,0.7s,baz=64,slow=7.9,SNR=6.1
ESDC LR LR 00 47 06.8
comp=Z,98nm,18.0s,baz=90,slow=39
ESDC Sonseca Array 58.03 302 IAmb IAmb 00 19 45.3
comp=Z,3.1nm,1.2s
MATP Matopo 59.32 221 P P 00 19 47.8 +1.5
baz=33,slow=7.6
TOA0 Torodi Ar. Sit 60.95 270 P P 00 19 56.3 -1.2
TOA0 IAmb IAmb 00 20 00.6
comp=Z,12nm,0.9s
TOA0 Torodi Ar. Sit 60.95 270 P P 00 19 59.3 +1.8
SNR=9.9
TORD Torodi Ar. Bea 60.95 270 P P 00 19 58.6 +1.1
comp=Z,8.1nm,0.8s,baz=60,slow=6.6,SNR=46
TORD LR LR 00 51 41.2
comp=Z,494nm,18.1s,baz=65,slow=41
TORD Torodi Ar. Bea 60.95 270 P P 00 19 56.3 -1.2
MJAR Matsushiro Arr 61.17 61 LR LR 00 49 43.4
comp=Z,172nm,18.1s,baz=250,slow=39
NOR Nord 62.21 351 i P P 00 20 06.4 +1.4
NOR Nord 62.21 351 i P P 00 20 06.4 +1.4
DAG Danmarks Havn 62.48 345 i P P 00 20 08.6 +1.8
comp=Z,8.6nm,0.9s
DAG Danmarks Havn 62.48 345 i P P 00 20 08.6 +1.8
DAG pmax pmax
comp=Z,9.0nm,0.9s
ASAJ Asahikawa 62.74 52 LR LR 00 50 03.7
comp=Z,235nm,18.9s,baz=169,slow=39
LBTB Lobatse 64.56 220 P P 00 20 24.3 +2.9
comp=Z,3.7nm,0.7s,baz=39,slow=7.9,SNR=6.4
TSUM Tsumeb 65.41 230 P P 00 20 29.2 +2.1
TSUM Tsumeb 65.41 230 P P 00 20 26.5 -0.5
TSUM IAmb IAmb 00 20 40.4
comp=Z,8.0nm,1.4s
BOSA Boshof 67.54 218 P P 00 20 42.1 +1.6
comp=Z,2.3nm,0.6s,baz=31,slow=6.9,SNR=8.7
BOSA LR LR 00 51 37.6
comp=Z,156nm,18.1s,baz=42,slow=37
BOSA Boshof 67.54 218 P P 00 20 39.0 -1.5
BOSA IAmb IAmb 00 20 49.0
comp=Z,14nm,1.4s
SUMG Summit 68.44 342 i P P 00 20 48.0 +2.1
comp=Z,26nm,0.9s
SUMG Summit 68.44 342 P P 00 20 45.0 -0.9
SUMG IAmb IAmb 00 20 55.7
comp=Z,5.4nm,0.7s
SUMG Summit 68.44 342 i P P 00 20 48.0 +2.1
SUMG pmax pmax
comp=Z,26nm,0.9s
BILL Bilibino 69.05 23⇑iP P 00 20 55.3 +6.0
BILL e 00 21 13.8
BILL e 00 23 24.7
BILL eS S 00 29 54.4 +2.7
BILL pmax pmax
comp=Z,2.0nm,0.8s
BILL MLR MLR
comp=Z,810nm,19.0s
DBIC Dimbokro 69.53 267 P P 00 20 54.4 +1.3
comp=Z,3.5nm,0.9s,baz=60,slow=8.8,SNR=4.1
PETK Petropavlovsk- 70.05 40 LR LR 00 53 27.7
comp=Z,472nm,21.6s,baz=271,slow=38
RES Resolute Bay 77.64 355 P P 00 21 41.5 +1.7
RES pmax pmax
comp=Z,7.0nm,1.3s
ANM Nome 80.44 20 IAmb IAmb 00 22 03.4
comp=Z,14nm,1.5s
WRA Warramunga Arr 81.42 117 LR LR 00 59 19.5
comp=Z,103nm,21.6s,baz=300,slow=36
COLD Coldfoot 82.19 13 IAmb IAmb 00 22 12.5
comp=Z,8.9nm,1.1s
ASAR Alice Springs 83.11 121 P P 00 22 11.3 +1.2
comp=Z,2.1nm,0.8s,baz=306,slow=5.2,SNR=15
ASAR LR LR 01 01 39.5
comp=Z,131nm,19.7s,baz=304,slow=38
FYU Fort Yukon 83.73 12 P 00 22 16.2 +3.6
PRP Porcupine Dome 84.61 12 P P 00 22 18.0 +0.8
ILAR Eielson Array 85.00 13 P P 00 22 19.1 +0.1
comp=Z,1.1nm,0.6s,baz=322,slow=4.3,SNR=16
ILAR LR LR 01 07 24.1
comp=Z,220nm,18.2s,baz=332,slow=41
SCRK Sand Creek 86.29 13 P P 00 22 25.0 -0.6
SCRK IAmb IAmb 00 22 32.5
comp=Z,13nm,1.1s
SCHQ Schefferville 88.71 335 LR LR 01 03 36.1
comp=Z,152nm,21.1s,baz=18,slow=36
YKA Yellowknife Ar 90.70 0 P P 00 22 47.5 +1.1
comp=Z,1.0nm,0.6s,baz=348,slow=4.6,SNR=11
YKA LR LR 01 07 56.0
comp=Z,607nm,20.7s,baz=0.0,slow=39
STKA Stephens Creek 93.21 124 LR LR 01 07 02.4
comp=Z,296nm,19.9s,baz=273,slow=37
MAW Mawson 94.45 181 P P 00 23 06.2 +3.0
comp=Z,5.6nm,0.9s,baz=302,slow=9.5,SNR=3.8
MAW LR LR 00 57 56.1
comp=Z,191nm,21.1s,baz=46,slow=31
NVAR Mina Array Bea 114.70 3 PKP PKPdf 00 28 26.8 +2.0
comp=Z,0.2nm,0.4s,baz=62,slow=2.1,SNR=1.9
NVAR Mina Array Bea 114.70 3 PKiKP PKPdf 00 28 25.3 +0.5
TXAR Lajitas Array 122.92 349 PKP PKiKP 00 28 42.5 +1.6
comp=Z,1.0nm,1.0s,baz=180,slow=2.4,SNR=4.5
CPUP Villa Florida 129.33 257 PKP PKiKP 00 28 56.5 +3.1
comp=Z,0.6nm,0.4s,baz=72,slow=3.2,SNR=2.0
PMSA Palmer Station 130.76 206 PKP PKiKP 00 28 57.3 +2.2
comp=Z,3.0nm,0.4s,baz=172,slow=11,SNR=4.4

PRU 11 00:17:17.6±0.0, 50.18N×18.61E, h0km, 2C, Poland

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
OKC Ostrava-Krasne 0.46 221 ePG Pg 00 17 26.3 0.0
OKC eSG Sg 00 17 32.8 +0.6
comp=Z,14nm,0.8s
OJC Ojcow 0.77 87 eP Pb 00 17 34.4 +0.6
MORC Moravsky Berou 0.80 240 ePG Pb 00 17 34.0 -0.4
MORC eSG Sg 00 17 43.5 +0.3
MORC Moravsky Berou 0.80 240 ⇑P Sg 00 17 43.6 +0.4
DPC Dobruska-Polom 1.48 277 eSG Sg 00 18 05.1 0.0
comp=Z,6.7nm,0.9s
VRAC Vranov 1.57 237 eP Pg 00 17 48.3 +0.6
VRAC Vranov 1.57 237 ⇑P Pg 00 17 48.7 +0.9
VRAC Vranov 1.57 237 P Pg 00 17 48.6 +0.9

IDC 11 00:20:08.2±0.8, 45.68S×34.87E, h0km, mb4.1/9, mb1 4.3/11, mb1mx4.0/35, mbtmp4.2/11, ML4.5/2, MS3.7/7, Ms1 3.6/7, ms1mx3.3/32, Error ellipse: s-maj=35.9km s-min=17.6km az=66.0
NEIC 11 00:20:09.9±2.3, 45.7S±0.1×34.6E±0.2, h11km±4km, mb4.4/10, Error ellipse: s-maj=24.9km s-min=14.5km az=221.0
ISC 11 00:20:09.8±0.7, 45.8S±0.1×34.6E±0.2, h10km, n45, σ1.29/40, mb4.3/9, MS3.6/5, Prince Edward Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SUR Sutherland 17.11 317 P Pn 00 24 07.8 -1.4
1.3nm,0.3s,baz=127,slow=18,SNR=39
SUR S Sn 00 27 06.4 -13
0.5nm,0.3s,baz=314,slow=17,SNR=1.3
SUR LR LR 00 28 58.6
comp=Z,308nm,20.5s,baz=146,slow=31
SUR Sutherland 17.11 317 P Pn 00 24 09.1 -0.1
SUR Sn 00 27 08.3 -11
BOSA Boshof 18.67 334 i P P 00 24 28.1 +0.1
BOSA Boshof 18.67 334 P P 00 24 26.4 -1.6
1.6nm,0.3s,baz=156,slow=12,SNR=17
BOSA S Sn 00 27 41.8 -15
0.0nm,0.3s,baz=283,slow=21,SNR=1.6
BOSA LR LR 00 30 46.1
comp=Z,115nm,21.8s,baz=176,slow=34
BOSA Boshof 18.67 334 i P P 00 24 28.1 +0.1
BOSA Boshof 18.67 334 P P 00 24 26.9 -1.1
BOSA IAmb IAmb 00 24 34.0
comp=Z,11nm,0.9s
LBTB Lobatse 21.96 338 i P P 00 25 04.9 +1.1
LBTB Lobatse 21.96 338 P P 00 25 02.9 -0.9
comp=Z,4.6nm,0.6s,baz=177,slow=12,SNR=10.0
LBTB LR LR 00 32 13.4
comp=Z,221nm,19.3s,baz=158,slow=33
LBTB Lobatse 21.96 338 i P P 00 25 04.9 +1.1
LBTB Lobatse 21.96 338 P P 00 25 04.0 +0.2
LBTB IAmb IAmb 00 25 09.1
comp=Z,29nm,1.4s
MSNA Messina 23.68 349 i P P 00 25 22.5 +0.8
MSNA Messina 23.68 349 i P P 00 25 22.5 +0.8
MATP Matopo 25.79 347 i P P 00 25 42.4 +1.4
MATP Matopo 25.79 347 P P 00 25 39.5 -1.6
comp=Z,5.1nm,0.8s,baz=168,slow=11,SNR=8.3
MATP LR LR 00 34 14.8
comp=Z,173nm,19.9s,baz=195,slow=33
MATP Matopo 25.79 347 i P P 00 25 42.4 +1.4
MAW Mawson 26.36 156 P P 00 25 44.3 -1.3
comp=Z,9.6nm,0.7s,baz=278,slow=9.1,SNR=11
MAW LR LR 00 34 21.0
comp=Z,92nm,18.7s,baz=202,slow=32
MAW Mawson 26.36 156 P P 00 25 45.0 -0.6
TSUM Tsumeb 30.02 326 i P P 00 26 21.3 +2.4
TSUM Tsumeb 30.02 326 P P 00 26 19.1 +0.2
comp=Z,2.4nm,0.9s,baz=164,slow=6.0,SNR=6.2
TSUM LR LR 00 37 09.7
comp=Z,179nm,19.4s,baz=155,slow=34
TSUM Tsumeb 30.02 326 i P P 00 26 21.3 +2.4
TSUM Tsumeb 30.02 326 P P 00 26 18.3 -0.6
TSUM IAmb IAmb 00 26 24.8
comp=Z,8.6nm,1.4s
LSZ Lusaka 30.89 348 i P P 00 26 26.9 +0.2
LSZ Lusaka 30.89 348 i P P 00 26 26.9 +0.2
LSZ Lusaka 30.89 348 P P 00 26 26.4 -0.2
VNDA Vanda 52.76 167 LR LR 00 49 38.8
comp=Z,90nm,20.9s,baz=246,slow=34
H10S2 ASCENSION HYDR55.82 295 T T 01 30 05.9
baz=82,slow=74,SNR=204
H10S3 ASCENSION HYDR55.84 295 T T 01 30 04.3
baz=138,slow=74,SNR=214
TOA0 Torodi Ar. Sit 65.75 325 P P 00 30 52.9 -2.0
TORD Torodi Ar. Bea 65.75 325 P P 00 30 56.3 +1.5
comp=Z,2.2nm,0.5s,baz=158,slow=6.9,SNR=29
TORD Torodi Ar. Bea 65.75 325 P P 00 30 52.8 -2.1
CPUP Villa Florida 72.90 250 P P 00 31 40.5 +1.3
comp=Z,1.5nm,0.7s,baz=154,slow=7.1,SNR=4.6
CPUP Villa Florida 72.90 250 P P 00 31 39.9 +0.8
CPUP IAmb IAmb 00 31 48.2
comp=Z,4.6nm,1.1s
ASAR Alice Springs 79.54 113 P P 00 32 17.9 +0.8
comp=Z,0.5nm,0.7s,baz=201,slow=6.7,SNR=4.1
ASAR Alice Springs 79.54 113 P P 00 32 17.1 +0.1
BRTR Keskin Array B 85.14 359 P P 00 32 45.2 -0.5
comp=Z,0.5nm,0.7s,baz=189,slow=7.1,SNR=4.1
CMWZ Cape Campbell 85.69 151 P P 00 32 49.2 +0.5
LPAZ La Paz 87.08 250 P P 00 32 58.5 +1.8
comp=Z,1.1nm,0.7s,baz=88,slow=7.0,SNR=3.7
LPAZ La Paz 87.08 250 P P 00 32 53.6 -3.1
LPAZ IAmb IAmb 00 32 54.1
comp=Z,3.2nm,1.3s
TXAR Lajitas Array 143.53 258 PKP PKPbc 00 39 42.5 +0.4
comp=Z,0.5nm,0.8s,baz=138,slow=5.5,SNR=3.4
TXAR Lajitas Array 143.53 258 PKPab 00 39 40.1 -1.0
PDAR Pinedale Array 154.30 276 PKPab PKPab 00 40 24.7 +0.6
comp=Z,0.2nm,0.5s,baz=134,slow=8.4,SNR=3.5
PDAR Pinedale Array 154.30 276 PKPdf PKPdf 00 40 01.6 -0.1
YKA Yellowknife Ar 155.76 325 PKPab PKPab 00 40 28.7 -0.7
comp=Z,0.1nm,0.3s,baz=54,slow=4.2,SNR=2.7
NVAR Mina Array Bea 158.67 259 PKPab PKPab 00 40 44.2 +1.2
comp=Z,0.1nm,0.3s,baz=132,slow=40,SNR=2.3
NVAR Mina Array Bea 158.67 259 PKPdf PKPdf 00 40 06.4 -1.1

NEIC 11 00:22:52.2±2.7, 6.8S±0.1×125.2E±0.2, h523km±14km, mb4.1/11, Error ellipse: s-maj=25.5km s-min=12.4km az=66.0
IDC 11 00:22:53.7±1.2, 6.84S×125.22E, h550km±16km, mb3.3/4, mb1 3.6/9, mb1mx3.2/41, mbtmp4.4/9, Error ellipse: s-maj=26.4km s-min=10.3km az=66.0
DJA 11 00:22:53.5±1.6, 7°S±10°×12°5E±°, h539km±21km, M4.5/10, mB4.5/2, mb4.5/6, MLv4.5/10, Mw(mB)3.7/2
ISC 11 00:22:52.4±0.6, 6.84S±0.06×125.19E±0.09, h543km, n36, σ1.79/40, mb3.7/5, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BBSI Bau Bau 2.92 297 P P 00 24 08.4 +2.0
SOEI Soe 3.04 197 P P 00 24 07.6 +0.4
SOEI Soe 3.04 197 P P 00 24 07.3 +0.1
SOEI S S 00 25 01.6 -6.5
NLAI Namlea 4.05 28 P P 00 24 15.5 +1.3
SANI Sanana 4.82 10 P P 00 24 21.1 +0.7
BKSI Bulukumba 5.25 286 P P 00 24 25.0 +1.0
0.3nm807nm78nm,0.6s
BNSI Bone 5.60 295 P P 00 24 28.8 +1.7
0.3nm82nm,0.7s
KAPI Kappang 5.70 288 P P 00 24 29.6 +1.7
5.6nm,0.3s,baz=118,slow=4.2,SNR=19
SPSI Sidrap Palu 6.10 298 P P 00 24 32.3 +0.7
0.3nm1μm65nm,0.6s
LUWI Luwuk 6.24 337 P P 00 24 32.9 -0.1
LUWI S S 00 25 51.3 -3.8
TTSI Tana Toraja 6.54 305 P P 00 24 48.0 +12
KMSI Cibinong 7.46 351 P P 00 24 46.8 +2.2
1.0nm245nm,0.6s
FAKI Fak Fak 8.04 61 P P 00 24 50.7 +0.3
FAKI S 00 26 23.6 -3.5
SIJI Sorong 8.48 46 P P 00 24 56.0 +1.2
2.9nm,0.3s,baz=257,slow=4.9,SNR=10
SIJI S S 00 26 36.0 +0.7
0.8nm,0.3s,baz=320,slow=24,SNR=2.4
FITZ Fitzroy Crossi 11.20 178 P P 00 25 23.0 +0.4
2.9nm,0.3s,baz=356,slow=6.6,SNR=41
WB0 Warramunga Ar 15.66 146 P P 00 26 08.4 -0.4
WB0 IAmb IAmb 00 26 10.4
comp=Z,6.7nm,0.7s
WRA Warramunga Arr 15.77 147 P P 00 26 10.3 +0.4
comp=Z,3.3nm,0.3s,baz=325,slow=10,SNR=12
WRA S S 00 28 50.6 -1.1
baz=317,slow=14,SNR=6.2
WRA Warramunga Arr 15.77 147 P P 00 26 10.6 +0.7
WR0 Warramunga Arr 15.89 146 P P 00 26 10.9 -0.2
AS31 Alice Springs 18.71 154 P P 00 26 38.6 +1.4
ASAR Alice Springs 18.71 154 P P 00 26 38.6 +1.5
comp=Z,2.1nm,0.3s,baz=345,slow=15,SNR=108
ASAR S S 00 29 39.9 -0.1
comp=Z,0.1nm,0.3s,baz=342,slow=20,SNR=8.4
ASAR Alice Springs 18.71 154 P P 00 26 38.2 +1.1
STKA Stephens Creek 29.25 151 P P 00 28 12.3 +1.6
comp=Z,5.7nm,0.5s,baz=319,slow=8.7,SNR=16
STKA Stephens Creek 29.25 151 P P 00 28 12.2 +1.6
STKA IAmb IAmb 00 28 13.0
comp=Z,2.4nm,1.0s
TPUB Ta-pu 30.28 352 P P 00 28 19.5 -0.2
YULB Yu-li 30.28 353 P P 00 28 17.7 -2.0
SSLB Suanglung 30.72 352 P P 00 28 22.3 -1.2
XAN Xi'an 43.48 340 P P 00 30 08.2 +0.4
XAN IAmb IAmb 00 30 08.5
comp=Z,6.3nm,0.6s
GTA Gaotai 51.66 335 eP P 00 31 10.6 +1.4
SONM Songino Array 56.91 345 P P 00 31 47.2 +1.3
comp=Z,0.8nm,0.7s,baz=157,slow=8.6,SNR=6.9
SONM Songino Array 56.91 345 IAmb IAmb 00 31 48.1
comp=Z,1.1nm,0.9s
KSH Kashi 64.73 320 P P 00 32 35.8 -1.8
KSH S S 00 40 57.4 +21
MK31 Makanchi Array 65.55 329 P P 00 32 43.8 +1.3
MKAR Makanchi Array 65.55 329 P P 00 32 43.5 +1.1
comp=Z,1.1nm,0.6s,baz=125,slow=7.3,SNR=30
MKAR Makanchi Array 65.55 329 P P 00 32 43.4 +0.9
ZALV Zalesovo Beam 69.40 336 P P 00 33 05.8 0.0
comp=Z,1.1nm,0.4s,baz=126,slow=4.2,SNR=6.5

IDC 11 00:33:42.3±4.8, 33.63N×89.27E, h0km, mb3.7/4, mb1 3.7/7, mb1mx3.4/40, mbtmp3.6/7, ML3.0/3, Error ellipse: s-maj=82.2km s-min=47.3km az=157.0
ISC 11 00:33:50.1±3.2, 34.0N±0.3×89.0E±0.2, h35km, n9, σ1.17/9, mb3.9/3, Xizang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MKAR Makanchi Array 13.72 340 Pn Pn 00 37 02.2 +0.1
0.0nm,0.3s,baz=148,slow=14,SNR=2.3
AAK Ala-Archa 14.25 311 Pn P 00 37 14.4 -1.9
0.0nm,0.3s,baz=56,slow=22,SNR=1.8
KURBB Kurchatov Arra 18.26 338 P P 00 38 01.0 +0.5
0.1nm,0.3s,baz=143,slow=13,SNR=4.1
SONM Songino Array 18.97 38 P P 00 38 07.3 -1.1
0.1nm,0.3s,baz=221,slow=15,SNR=2.5
ZALV Zalesovo Beam 20.12 353 P Pn 00 38 22.8 0.0
3.0nm,0.8s,baz=172,slow=11,SNR=13
AKASG Malin Array Be 45.92 310 P P 00 42 09.8 +0.6
0.3nm,0.4s,baz=76,slow=6.7,SNR=2.2
FINES FINESS Array B 47.92 325 P P 00 42 25.8 +1.2
0.6nm,0.4s,baz=352,slow=27,SNR=1.8
NB2 NORSAR Subarra 55.10 325 P P 00 43 19.4 +1.0
comp=Z,0.5nm,0.6s,baz=83,slow=7.9
NOA NORSAR Array B 55.10 325 P P 00 43 18.9 +0.5
comp=Z,1.4nm,0.9s,baz=83,slow=6.9,SNR=4.0

IDC 11 00:38:14.5±5.7, 34.23N×141.12E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.2/44, mbtmp3.3/4, ML2.3/1, MS4.3/1, Ms1 4.3/1, ms1mx3.1/26, Error ellipse: s-maj=133.7km s-min=36.9km az=3.0
JMA 11 00:38:24.7±0.2, 35.58N×140.91E, h17km±2km, M2.9
ISC 11 00:38:24.4±1.2, 35.61N±0.04×140.99E±0.06, h17km±6km, n21, σ1.07/20, mb3.5/3, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHOJ Chosi 0.14 309 P Pg 00 38 28.4 +0.1
CHOJ S Sg 00 38 31.5 +0.5
JSMT Sammumatsuo 0.45 274 P Pg 00 38 32.8 -0.5
JIHU Itakohorinouch 0.52 313 P Pg 00 38 35.1 +0.4
JCN Nagara 0.68 253 P Pb 00 38 37.1 -0.6
JCN S Sb 00 38 47.1 +0.4
BSO4 Boso 4 0.82 221 P Pb 00 38 39.4 -0.7
JYT Yasato 0.89 314 P Pb 00 38 40.5 -0.9
JYT S Sb 00 38 51.7 -1.3
BSO3 Boso 3 0.90 206 P Pb 00 38 40.8 -0.6
BSO1 Boso 1 0.96 181 P Pb 00 38 41.1 -1.1
JHO Hitachi 1.05 341 P Pb 00 38 43.2 -0.9
JHO S Sb 00 38 57.3 -0.4
MJAR Matsushiro Arr 2.44 293 Pn Pb 00 39 06.6 -1.2
0.3nm,0.3s,baz=112,slow=15,SNR=13
MJAR Sn Sb 00 39 39.9 +2.3
0.3nm,0.3s,baz=122,slow=14,SNR=5.6
MAT Matsushiro 2.44 293 P Pb 00 39 07.1 -0.7
MAT S Sb 00 39 37.5 -0.1
H11N2 WAKE ISLAND Hy 27.75 118 T T 01 13 14.0
baz=310,slow=75,SNR=35
H11N1 WAKE ISLAND Hy 27.76 118 T T 01 13 09.7
baz=310,slow=75,SNR=48
H11N3 WAKE ISLAND Hy 27.77 118 T T 01 13 11.5
baz=310,slow=75,SNR=44
H11S1 WAKE ISLAND Hy 28.41 120 T T 01 14 00.4
baz=312,slow=75,SNR=398
H11S3 WAKE ISLAND Hy 28.41 120 T T 01 13 58.9
baz=312,slow=75,SNR=344
H11S2 WAKE ISLAND Hy 28.42 120 T T 01 14 00.7
baz=312,slow=75,SNR=250
MKAR Makanchi Array 44.60 303 P P 00 46 35.4 -0.2
0.4nm,0.9s,baz=100,slow=6.8,SNR=3.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KDAK	Kodiak Island	48.38	41	LR	LR	01 05 54.7	
	comp=Z,344nm,21.1s,baz=295,slow=34						
ILAR	Eielson Array	50.88	32	P	P	00 47 25.9	+1.9
	0.5nm,0.8s,baz=280,slow=5.0,SNR=5.6						
YKA	Yellowknife Ar	65.20	30	P	P	00 49 03.7	-0.7
	0.3nm,0.7s,baz=295,slow=6.2,SNR=2.4						

HEL 11 00:38:41.3, 67°.96N×20°.02E, h0km, ML1.6, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	91	iP	Pg	00 38 40.8	-2.8
KUA				iS	Sg	00 38 42.8	-2.3
RATU	Laukkuluspa	0.21	231	iP	Pg	00 38 42.6	-2.7
LANU	Lannavaara	0.75	82	eP	Pg	00 38 51.3	-4.2
	baz=268						
DUNU	Dundret	0.86	166	iP	Pg	00 38 51.5	-6.4
MASU	Masugnsbyn	0.91	123	iP	Pg	00 38 52.8	-5.8
KIF	Kilpisjarvi	1.09	15	ePB	Pg	00 39 01.2	-1.0
KIF				MSG		00 39 15.8	
	comp=Z,4.0nm,0.2s						
KIF	Kilpisjarvi	1.09	15	eP	Pn	00 39 07.5	+3.7
HEF	Hetta	1.43	70	MSG		00 39 24.3	
	comp=Z,2.6nm,0.2s						
HEF	Hetta	1.43	70	eP	Pb	00 39 09.6	+0.7
PAJU	Pajala	1.52	127	eP	Pn	00 39 03.3	-6.3
TOF	Tornio	2.53	136	MSG		00 39 56.2	
	comp=Z,3.1nm,0.2s						
ARE0	ARCESS Array S	2.55	49	eSG	Sb	00 39 57.8	-2.0
KEV	Kevo	3.11	51	ePG	Pb	00 39 35.4	-2.0
KEV				MSG		00 40 12.8	
	comp=Z,1.7nm,0.2s						
KEV				eSB	Sb	00 40 13.3	-2.5

UPP 11 00:38:43.6±0.0, 67°.82N×20°.20E, h0km, ML2.0, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	21	P	Pg	00 38 46.7	+0.3
KUA				S	Sg	00 38 48.6	+0.4
RATU	Laukkuluspa	0.23	271	P	Pg	00 38 48.3	+0.3
LANU	Lannavaara	0.71	70	P	Pg	00 38 57.1	-0.2
DUNU	Dundret	0.72	168	P	Pg	00 38 57.1	-0.2
MASU	Masugnsbyn	0.78	117	P	Pg	00 38 58.5	0.0
PAJU	Pajala	1.38	124	P	Pg	00 39 08.9	-1.1
ERTU	Ertsjaerv	1.49	148	P	Pg	00 39 10.8	-0.8
HARU	Harads	1.69	169	P	Pn	00 39 14.3	0.0

UPP 11 00:38:46.8±0.1, 67°.82N×20°.27E, h0km, ML2.2, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	11	P	Pg	00 38 49.7	+0.3
KUA				S	Sg	00 38 51.6	+0.5
RATU	Laukkuluspa	0.26	271	P	Pg	00 38 51.9	+0.2
LANU	Lannavaara	0.69	70	P	Pg	00 38 59.7	-0.3
DUNU	Dundret	0.71	171	P	Pg	00 39 00.3	-0.1
PAJU	Pajala	1.36	125	P	Pg	00 39 11.8	-0.9

JMA 11 00:39:43.1±0.1, 37°.40N×141°.78E, h44km±2km, M3.7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.72	268	P	Pn	00 39 56.9	-0.1
JFK				S	Sn	00 40 06.6	-0.4
JMST	Minamisoumatoc	0.78	295	P	Pn	00 39 57.6	-0.1
JMST				S	Sn	00 40 07.8	-0.5
ONAJ	Iwakimizuishiy	0.84	249	P	Pn	00 39 58.5	-0.1
ONAJ				S	Sn	00 40 09.4	-0.4
JMM	Marumori	0.91	301	P	Pn	00 39 59.6	+0.1
JMM				S	Sn	00 40 11.4	-0.1
JIKH	Ishinomakikobu	0.94	345	P	Pn	00 40 00.0	+0.1
JIKH				S	Sn	00 40 11.9	-0.3
JIO	Ouri	1.11	342	P	Pn	00 40 02.4	+0.3
JIO				S	Sn	00 40 15.8	-0.4
JFT	Otama	1.16	276	P	Pn	00 40 03.7	+0.9
JFT				S	Sn	00 40 18.5	+1.0
JHO	Hitachi	1.25	231	P	Pn	00 40 03.8	-0.3
JHO				S	Sn	00 40 19.0	-0.7
JOU	Okura	1.31	318	P	Pn	00 40 05.8	+0.9
JOU				S	Sn	00 40 22.7	+1.5
JYS	Shirataka	1.59	302	S	Sn	00 40 30.0	+2.0
JMK	Ichinoseki	1.61	344	P	Pn	00 40 10.0	+0.9
JMK				eS	Sn	00 40 30.4	+1.8
JFY	Yanaizu	1.65	271	P	Pn	00 40 10.6	+0.9
JFY				S	Sn	00 40 31.9	+2.2
MAT	Matsushiro	2.99	254	P	Pn	00 40 31.6	+3.6
MAT				S	Sn	00 41 08.1	+5.6

IDC 11 00:40:48.5±1.9, 34°.33N×88°.83E, h0km, mb3.6/2, mb1 3.6/7, mb1mx3.3/45, mbtmp3.5/7, ML3.2/4, MS3.7/1, Ms1 3.7/1, ms1mx2.7/44, Error ellipse: s-maj=47.0km s-min=29.6km az=59.0

ISC 11 00:40:49.8±1.3, 34°.4N±0°.2×88°.9E±0°.2, h10km, n7, σ1.06/7, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.33	340	Pn	Pn	00 43 57.6	-1.4
	0.1nm,0.3s,baz=146,slow=7.6,SNR=2.5						
KURBB	Kurchatov Arra	17.87	338	P	P	00 45 00.4	+1.4
	0.0nm,0.3s,baz=147,slow=12,SNR=4.9						
CMAR	Chiang Mai Arr	18.25	148	P	P	00 45 03.1	-0.4
	0.2nm,0.3s,baz=330,slow=11,SNR=5.4						
SONM	Songino Array	18.76	39	P	Pn	00 45 09.4	0.0
	baz=225,slow=14,SNR=6.0						
ZALV	Zalesovo Beam	19.74	353	P	Pn	00 45 20.9	0.0
	0.1nm,0.3s,baz=171,slow=10,SNR=8.2						
AKASG	Malin Array Be	45.58	310	P	P	00 49 09.6	-0.2
	0.2nm,0.3s,baz=83,slow=6.4,SNR=2.4						
FINES	FINESS Array B	47.54	325	P	P	00 49 25.6	+0.6
	1.3nm,0.9s,baz=21,slow=5.9,SNR=1.8						
FINES				LR	LR	01 09 59.7	
	comp=Z,78nm,18.5s,baz=113,slow=37						

UCR 11 00:42:52.4±2.1, 9°.33N×84°.64W, h5km, MD3.6, Costa Rica

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCR2	La Lucha 2	0.74	57	eP	Pg	00 43 06.3	-0.4
LCR2				eS	Sb	00 43 18.4	-0.2
EDDO	Dominical	0.77	96	eP	Pg	00 43 06.7	-0.4
EDDO				eS	Sb	00 43 19.4	+0.4
JTS	Las Juntas de	1.00	342	eP	Pg	00 43 10.4	-1.3
EDLM	Las Mercedes	1.03	93	eS	Sb	00 43 26.9	+0.1
CASO	Castillo	1.10	355	iP	Pg	00 43 12.9	-0.6
CVTR	Volcan Turrial	1.10	52	eP	Pg	00 43 13.7	+0.1
ARE1	Arenal 1	1.12	356	eP	Pg	00 43 13.3	-0.7
FORC	Fortuna	1.13	358	iP	Pg	00 43 13.2	-0.7
FORC				iS	Sg	00 43 29.0	+0.3
GUAI	GUAI	1.27	317	iP	Pn	00 43 16.1	-0.7
AMAS	Alto Masis	1.32	345	iP	Pn	00 43 16.1	-1.5
ACAL	Aguas Claras	1.35	343	iP	Pn	00 43 16.7	-1.3
CUI	Cuipilapa	1.42	338	eP	Pn	00 43 17.5	-1.4
CUI				iP	Pb	00 43 17.7	-1.7
MESS	Mesas	1.50	339	iP	Pn	00 43 19.4	-0.7
MESS				iS	Sn	00 43 39.4	-0.8
NY14	Universidad de	1.58	326	iP	Pn	00 43 21.3	+0.2

DSN 11 00:46:43.0±1.7, 26°.46N×58°.10E, h15km, ML3.7/6, Error ellipse: s-maj=24.8km s-min=10.0km az=4.0
TEH 11 00:46:42.5, 26°.57N×57°.87E, h10km, ML3.5
IDC 11 00:46:43.4±1.8, 26°.58N×57°.84E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.3/56, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=51.4km s-min=23.2km az=78.0
OMAN 11 00:46:49.7±1.8, 26°.15N×57°.72E, h7km±43km, ml3.0/14, Error ellipse: s-maj=41.6km s-min=8.2km az=29.0

ISC 11 00:46:46.2±1.0, 26°.53N±0°.03×57°.82E±0°.06, h22km±8km, n53, σ1.23/62, mb3.5/4, Southern Iran

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JSK1	Jask	0.89	183	eSg	Sb	00 47 14.2	-0.1
NIAN	Nian	1.35	320	e		00 47 34.8	
NIAN				ePg	Pn	00 47 08.7	-1.1
KHNJ	Kahnooj	1.42	356	eSg	Sn	00 47 26.9	-1.9
KHNJ				ePg	Pn	00 47 07.4	-3.4
BANOM	Banah	1.49	247	eP	Pb	00 47 12.2	-1.0
	SNR=166						
BANOM				S	Sb	00 47 34.4	+2.6
BANOM	Banah	1.49	247	P	Pn	00 47 12.0	+0.2
	SNR=166						
BANOM				S	Sb	00 47 33.9	+2.1
BANOM	Banah	1.49	247	ePn	Pn	00 47 11.6	-0.1
SHME	Shamm	1.58	253	eP	Pb	00 47 13.8	-1.0
	SNR=37						
SHME	Shamm	1.58	253	ePn	Pb	00 47 13.7	-1.0
GENO	Geno	1.71	301	ePn	Pn	00 47 14.6	-0.3
GENO				e		00 47 44.4	
MDH	Madha	1.84	229	eP	Pn	00 47 15.5	-0.9
	SNR=19						
MDH	Madha	1.84	229	P	Pn	00 47 15.7	-0.7
	SNR=12						
MDH				S	Sn	00 47 37.9	-1.1
MDH	Madha	1.84	229	ePn	Pn	00 47 15.7	-0.7
MSFE	Esma-Masafi	1.89	233	eP	Pn	00 47 16.5	-0.7
	SNR=9.3						
MSFE	Esma-Masafi	1.89	233	ePn	Pn	00 47 16.5	-0.7
UOSS	Minazif	2.15	223	eP	Pn	00 47 19.7	-0.9
	SNR=9.4						
UOSS	Minazif	2.15	223	ePn	Pn	00 47 19.8	-0.9
HATD	Hatta, Dubai	2.28	222	P	Pn	00 47 21.5	-1.1
HATD	Hatta, Dubai	2.28	222	P	Pb	00 47 25.0	-1.7
	SNR=10.0						
HATD				S	Sn	00 47 49.0	-0.9
HATD	Hatta, Dubai	2.28	222	ePn	Pn	00 47 22.6	+0.1
ASHO	Ashiyiah	2.43	221	eP	Pn	00 47 25.6	+1.0
	SNR=22						
ASHO	Ashiyiah	2.43	221	P	Pn	00 47 26.1	+1.5
	SNR=20						
ASHO				S	Sn	00 47 54.2	+0.5
ASHO	Ashiyiah	2.43	221	ePn	Pn	00 47 25.0	+0.4
NAZ	Nazwa, Dubai	2.48	232	ePn	Pn	00 47 25.5	+0.2
SOHO	SOHO	2.65	206	P	Pn	00 47 27.0	-0.6
	SNR=29						
SOHO	SOHO	2.65	206	ePn	Pn	00 47 26.6	-1.0
HOQ	Hoqain	2.97	189	P	Pn	00 47 32.0	0.0
	SNR=29						
HOQ				S	Sn	00 48 04.9	-2.0
BIDO	Bidbid	3.00	175	P	Pn	00 47 33.1	+0.6
	SNR=11						
BIDO	Bidbid	3.00	175	ePn	Pn	00 47 32.2	-0.3
ALNE	Al Ain	3.09	218	ePn	Pn	00 47 35.6	+1.9
NGRK	Negar Kerman	3.25	343	ePn	Pn	00 47 36.2	-0.1
NGRK				e		00 47 44.9	
CHMN	Cheshme madani	3.33	356	ePn	Pn	00 47 39.4	+2.1
CHMN				e		00 47 50.8	
WSAR	Wadi Sarin	3.35	167	Pn	Pn	00 47 38.8	+1.5
	11nm,0.3s,baz=340,slow=6.9,SNR=151						
WSAR				Sn	Sn	00 48 18.1	+1.6
	14nm,0.3s,baz=264,slow=19,SNR=15						
WSAR	Wadi Sarin	3.35	167	P	Pn	00 47 38.2	+0.9
ARQ	Araqi	3.39	201	P	Pn	00 47 37.0	-0.8
SMDO	Samad	3.46	177	P	Pn	00 47 39.0	+0.2
TVBK	TV Kerman	3.57	345	ePn	Pn	00 47 42.5	+1.9
TVBK				e		00 47 52.9	
KHGB	Koh Gabri	4.01	343	ePn	Pn	00 47 48.4	+1.8
KHGB				e		00 48 00.4	
WBK	Wadi Bani Khal	4.04	165	P	Pn	00 47 48.0	+1.2
	SNR=51						
JMDO	Jabal Madar	4.14	176	P	Pn	00 47 50.2	+2.0
	SNR=28						
JMDO				S	Sn	00 48 34.8	-1.2
UMZA	Um Al Zommool	4.50	213	ePn	Pn	00 47 53.9	+0.8
ISRV	Sarvestan	5.04	305	ePn	Pn	00 48 01.0	+0.2
NHDN	Nehbandan	5.23	21	ePn	Pn	00 48 03.5	+0.3
IKOO	Kooshah	5.97	10	ePn	Pn	00 48 13.7	+0.2
IKAZ	Kazeroun	6.20	303	ePn	Pn	00 48 14.7	-2.0
ITEG	Tejag	6.40	7	ePn	Pn	00 48 20.1	+0.7
ISAD	Sadrabad	6.47	327	ePn	Pn	00 48 21.0	+0.6
TPRV	Parvadeh(Tabas	6.55	352	ePn	Pn	00 48 22.3	+0.9
KLNJ	Kolanjah	7.06	311	ePn	Pn	00 48 27.7	-0.9
IRAM	Ramesheh	7.09	319	ePn	Pn	00 48 28.7	-0.2
AKTO	Aktyubinsk	23.87	0	P	P	00 51 57.6	-0.3
	0.7nm,0.5s,baz=146,slow=11,SNR=2.1						
BRTR	Keskin Array B	24.07	309	P	P	00 52 00.9	+0.8
	0.5nm,0.7s,baz=113,slow=9.5,SNR=4.8						
FINES	FINESS Array B	40.92	337	P	P	00 54 26.8	+0.1
	0.8nm,0.7s,baz=132,slow=8.0,SNR=3.5						
TORD	Torodi Ar. Bea	54.07	267	P	P	00 56 09.9	+0.4
	0.4nm,0.6s,baz=66,slow=7.2,SNR=5.9						

IDC 11 00:47:06.2±1.0, 33°.86N×89°.29E, h0km, mb3.9/13, mb1 4.0/17, mb1mx3.8/53, mbtmp3.8/17, ML3.3/4, MS3.1/4, Ms1 3.1/4, ms1mx2.8/46, Error ellipse: s-maj=29.3km s-min=19.4km az=48.0

ISC 11 00:47:11.3±0.7, 34°.00N±0°.08×89°.3E±0°.1, h33km, n26, σ1.05/25, mb3.9/12, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TAPN	Taplejung	6.77	192	eP	Pn	00 48 50.2	+1.5
	7.5nm,0.4s						
KKN	Kakani	7.10	210	eP	Pn	00 48 54.9	+1.8
	12nm,0.5s						
PKI	Pulchoki	7.24	209	eP	Pn	00 48 56.6	+1.4
ODAN	Odare	7.31	194	eP	Pn	00 48 54.8	-1.2
	31nm,0.6s						
DMN	Daman	7.33	211	eP	Pn	00 48 57.1	+0.8
	7.7nm,0.4s						
DANN	Dangsing	7.38	222	eP	Pn	00 48 55.7	-1.3
	8.4nm,0.6s						
RAMN	Ramite	7.41	199	eP	Pn	00 48 56.7	-0.7
	16nm,0.5s						
MKAR	Makanchi Array	13.85	339	Pn	Pn	00 50 23.6	-1.7
	0.1nm,0.3s,baz=145,slow=13,SNR=4.6						
MKAR				LR	LR	00 56 52.9	
	comp=Z,33nm,18.1s,baz=161,slow=42						
AAK	Ala-Archa	14.48	311	LR	LR	00 56 27.5	
	comp=Z,98nm,19.2s,baz=120,slow=39						
CMAR	Chiang Mai Arr	17.70	149	P	Pn	00 51 14.7	-0.6
	0.1nm,0.3s,baz=326,slow=12,SNR=8.5						
CMAR				LR	LR	00 58 22.0	
	comp=Z,61nm,20.4s,baz=115,slow=38						
KURBB	Kurchatov Arra	18.40	338	P	P	00 51 22.7	-0.7
	0.1nm,0.3s,baz=148,slow=12,SNR=12						
SONM	Songino Array	18.84	38	P	Pn	00 51 30.6	+1.4
	0.2nm,0.3s,baz=229,slow=12,SNR=11						
ZALV	Zalesovo Beam	20.20	352	P	P	00 51 44.0	+0.9
	3.2nm,0.8s,baz=173,slow=12,SNR=15						
BVAR	Borovoye Array	23.33	330	P	P	00 52 17.4	+0.9
	1.7nm,0.9s,baz=140,slow=9.7,SNR=9.4						
GEYT	Alibeck	25.50	288	P	P	00 52 37.6	+0.9
	2.3nm,0.9s,baz=110,slow=8.1,SNR=5.8						
GEYT				LR	LR	01 04 27.8	
	comp=Z,62nm,21.1s,baz=40,slow=41						
BRTR	Keskin Array B	44.32	294	P	P	00 55 18.1	-0.3
	0.5nm,0.8s,baz=109,slow=6.7,SNR=4.4						
AKASG	Malin Array Be	46.14	310	P	P	00 55 31.7	-0.7
	0.5nm,0.4s,baz=78,slow=7.2,SNR=5.9						
FINES	FINESS Array B	48.10	325	P	P	00 55 48.4	+0.8
	1.2nm,0.6s,baz=96,slow=9.8,SNR=8.9						
MLR	Muntele Rosu	48.90	303	P	P	00 55 54.5	+0.4
	4.5nm,0.8s,baz=91,slow=6.4,SNR=7.3						
ARCES	ARCESS Array B	49.46	335	P	P	00 55 59.2	+1.3
	2.8nm,0.9s,baz=94,slow=8.3,SNR=1.8						
HFS	Hagfors	54.20	323	P	P	00 56 33.3	0.0
	1.9nm,0.5s,baz=92,slow=10,SNR=10						
NB2	NORSAR Subarra	55.28	325	P	P	00 56 41.8	+0.5
	comp=Z,1.3nm,0.6s,baz=82,slow=7.4						
NOA	NORSAR Array B	55.28	325	P	P	00 56 41.0	-0.3
	comp=Z,1.9nm,0.6s,baz=82,slow=7.2,SNR=9.2						
GERES	GERESS Array B	56.35	310	P	P	00 56 49.2	0.0
	comp=Z,1.3nm,0.8s,baz=74,slow=6.0,SNR=9.6						
ASAR	Alice Springs	71.31	137	P	P	00 58 26.9	-0.9
	comp=Z,0.4nm,0.7s,baz=330,slow=5.4,SNR=4.7						
YKA	Yellowknife Ar	81.93	11	P	P	00 59 26.8	-0.5
	comp=Z,0.2nm,0.7s,baz=333,slow=3.6,SNR=2.5						

GUC 11 00:58:30.4±1.1, 30°.14S×69°.06W, h33km±10km, ML3.2
SJA 11 00:58:30.4±0.6, 30°.25S×69°.07W, h10km, ML2.9, MW3.0

ISC 11 00:58:29.2±1.8, 30°.11S±0°.04×69°.02W±0°.05, h5km±16km, n20, σ1.50/33, 2C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AROD	Rodeo	0.39	262	eP	Pb	00 58 39.0	+0.2
AROD				eS	Sb	00 58 44.8	-0.5
RTLL	Cerro Villicun	1.30	159	eP	Pn	00 58 53.1	-1.0
RTLL				eS	Sn	00 59 10.2	-1.7
ZON	Zonda	1.46	168	eP	Pn	00 58 55.4	-0.8
GO04	Tololo Observa	1.54	267⇑	eP	Pb	00 58 58.1	-0.2
GO04				iS	Sg	00 59 18.2	-0.4
GO04				IAML		00 59 19.9	
	comp=N,952nm,0.4s						
VCA	Vinchina	1.54	28	eP	Pb	00 58 59.1	+0.7
VCA				iS	Sg	00 59 20.0	+1.2
CFA	Coronel Fontan	1.64	156	iP	Pn	00 58 57.7	+0.1
AC05	El Transito	1.67	319⇓	eP	Pg	00 59 01.3	0.0
AC05				eS	Sg	00 59 23.3	+0.4
RTLS	Leoncito	1.70	188	iP	Pn	00 59 00.5	+0.7
RTLS				eS	Sn	00 59 22.1	+0.1
RTLS				IAML		00 59 23.7	
	comp=Z,121nm,0.3s						
RTCV	Cerro Valdivia	1.79	167	iP	Pn	00 59 01.7	+0.9
RTCV				eS	Sn	00 59 24.9	+0.9
LSCH	La Serena	1.94	275	eP	Pb	00 59 03.1	-1.8
LSCH				IAML		00 59 31.0	
	comp=N,178nm,0.7s						
CO02	Combarbal	2.02	237⇑	iP	Pb	00 59 06.2	-0.3
CO02				iS	Sb	00 59 32.6	+0.7
CO02				IAML		00 59 34.1	
	comp=N,318nm,0.2s						
CO04	Los Peladeros	2.55	220	eP	Pb	00 59 14.0	-1.6
CO04				eS	Sb	00 59 47.0	-0.4
CO04				IAML		00 59 50.8	
	comp=E,105nm,0.3s						
ACAN	Cantantal	2.67	144	iP	Pn	00 59 14.6	+1.7
ARCO	CERRO ARCO	2.72	178	iP	Pn	00 59 15.2	+1.5
ARCO				eP	Pn	00 59 15.2	+1.5
ARCO				eS	Sn	00 59 48.1	+0.9
ARCO				IAML		01 00 02.0	
	comp=Z,70nm,0.8s						
AAGR	Agrelo	2.97	177	iP	Pn	00 59 19.0	+1.9
AC02	Maricunga	3.26	358	eP	Pn	00 59 25.6	-2.3
AC02				eS	Sb	01 00 06.0	-2.1
CYA	Choya	3.27	60	eP	Pn	00 59 22.6	+1.5
ROCH	El Roble	3.32	210	eP	Pn	00 59 23.3	+1.4
ROC1	El Roble	3.32	210	iP	Pn	00 59 23.7	+1.6
FCH	Farellones	3.38	198	eP	Pn	00 59 26.7	+3.8
FCH				iS	Sb	01 00 08.9	-2.5
FCH				IAML		01 00 15.1	
	comp=E,60nm,0.3s						

ANF 11 01:11:09.3±0.2, 35°.25N×76°.60W, h14km±1km, ML3.7/31, Error ellipse: s-maj=1.3km s-min=0.8km az=142.0
SLM 11 01:11:10±0.7, 35°.30N±0°.04×76°.63W±0°.09, h4km±6km, Md2.6/6, Error ellipse: s-maj=10.2km s-min=5.9km az=100.0

ISC 11 01:11:09.6±1.1, 35°.28N±0°.02×76°.61W±0°.03, h9km±9km, n63, σ0.58/97, North Carolina

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
W61A	Ground Anchor	0.33	252	P	Pg	01 11 16.4	+0.3
	baz=68,SNR=316						
W61A				S	Sg	01 11 21.3	+0.8
	baz=68						
V61A	Roper	0.51	3	Pg	Pg	01 11 19.2	-0.3
V61A				Sg	Sb	01 11 27.9	-0.5
V61A	Roper	0.51	3	P	Pg	01 11 20.1	+0.5
	baz=185,SNR=22						
V61A				S	Sg	01 11 27.2	+0.9
	baz=185						
V62A	Hyde County Ai	0.60	62	Pg	Pg	01 11 21.4	0.0
V62A				Sg	Sg	01 11 29.4	+0.2
V62A	Hyde County Ai	0.60	62	P	Pg	01 11 21.2	-0.1
	baz=244,SNR=34						
V62A				S	Sg	01 11 29.7	+0.5
	baz=244						
V60A	Jim Taylor Roa	0.72	313		Pg	01 11 23.2	-0.3
V60A					Sg	01 11 32.0	-1.0
V60A				Sg	Sb	01 11 32.8	-1.6
V60A	Jim Taylor Roa	0.72	313	P	Pg	01 11 23.9	+0.4
	baz=132						
V60A				S	Sb	01 11 34.1	-0.3
	baz=132						
W60A	Pink Hill	0.93	256	P	Pg	01 11 27.4	-0.1
	baz=74,SNR=45						
W60A				S	Sg	01 11 39.4	-0.3
	baz=74						
CNNC	Cliffs of the	1.05	268	Pg	Pb	01 11 29.9	0.0
CNNC				Sg	Sb	01 11 44.3	+0.5
CNNC	Cliffs of the	1.05	268	P	Pg	01 11 29.5	-0.3
	baz=86,SNR=54						
CNNC				S	Sb	01 11 43.7	-0.2
	baz=86						
U61A	Possum Corner	1.06	7		Pg	01 11 29.6	-0.4
U61A				Sg	Sg	01 11 43.1	-0.7
U61A	Possum Corner	1.06	7	P	Pg	01 11 29.5	-0.5
	baz=188,SNR=24						
U61A				S	Sb	01 11 44.7	+0.6
	baz=188						
U60A	Pendleton	1.27	340	Pb	Pn	01 11 33.4	-0.2
	baz=160,SNR=65						
U60A				S	Sg	01 11 50.7	+0.1
	baz=160						
X60A	Albert Glenn T	1.32	238	Pb	Pn	01 11 33.9	-0.4
	baz=57,SNR=23						
X60A				S	Sb	01 11 51.1	-0.6
	baz=57						
V59A	Middlesex	1.42	291	Pb	Pn	01 11 35.7	+0.1
	baz=109,SNR=406						
V59A				Sb	Sg	01 11 55.5	+0.4
	baz=109						
U59A	Littleton	1.44	318	Pn	Pn	01 11 36.1	+0.2
U59A				Sn	Sn	01 11 54.9	-0.1
U59A	Littleton	1.44	318	Pb	Pb	01 11 36.4	-0.3
	baz=138,SNR=105						
U59A				S	Sb	01 11 55.3	+0.2
	baz=138						
W59A	Clinton	1.50	266	Pb	Pn	01 11 37.1	+0.3
	baz=84,SNR=19						
W59A				S	Sn	01 11 56.7	+0.1
	baz=84						
X59A	McDuffie Farm,	1.78	247	P	Pn	01 11 40.3	-0.3
	baz=65,SNR=18						
X59A				Sb	Sb	01 12 05.1	+0.2
	baz=65						
Y60A	Bolivia	1.83	227		Pb	01 11 42.4	-1.0
Y60A					Sb	01 12 05.9	-0.6
Y60A	Bolivia	1.83	227	Pb	Pb	01 11 42.5	-0.9
	baz=45						
Y60A				Sb	Sb	01 12 07.0	+0.5
	baz=45						
T59A	Double "B" Far	1.85	336		Pn	01 11 42.1	+0.5
T59A				Sn	Sn	01 12 05.4	+0.1
T59A	Double "B" Far	1.85	336	Pb	Pb	01 11 43.4	-0.3
	baz=156						
T60A	Surry	1.86	357	Pn	Pn	01 11 42.6	+0.9
T60A	Surry	1.86	357	P	Pn	01 11 41.6	-0.2
	baz=177,SNR=30						
T60A				Sb	Sb	01 12 08.2	+1.0
	baz=177						
U58A	Oxford	1.93	306	Pb	Pb	01 11 44.8	-0.2
	baz=125						
U58A				Sb	Sg	01 12 10.8	-0.9
	baz=125						
V58A	Windy Hill, Pi	2.11	285	Pn	Pn	01 11 45.5	+0.4
V58A	Windy Hill, Pi	2.11	285	Pb	Pb	01 11 47.5	-0.6
	baz=103						
W58A	Raeford	2.17	264	Pb	Pb	01 11 48.5	-0.5
	baz=82						
W58A				Sb	Sb	01 12 16.8	+0.9
	baz=82						
Y59A	Loris	2.27	236		Pn	01 11 48.2	+1.0
Y59A	Loris	2.27	236	Pb	Pb	01 11 49.8	-1.0
	baz=54						
Y59A				Sb	Sb	01 12 19.1	+0.3
	baz=54						
T58A	Grand View Acr	2.28	317	Pb	Pb	01 11 50.7	-0.2
	baz=136						
T58A				Sb	Sb	01 12 20.5	+1.3
	baz=136						
X58A	Rowland	2.35	253		Pn	01 11 49.6	+1.1
X58A	Rowland	2.35	253	Pb	Pb	01 11 51.5	-0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=71						
X58A				Sb	Sb	01 12 21.7	+0.3
	baz=71						
S60A	Water View	2.42	359	P	Pn	01 11 49.3	-0.2
	baz=180						
S59A	Mechanicsville	2.54	348	Pb	Pb	01 11 54.9	-0.5
	baz=168						
S58A	Poland Farm, P	2.60	334		Pn	01 11 52.1	+0.2
V57A	Coltrane Farms	2.65	284	P	Pn	01 11 52.3	-0.3
	baz=102,SNR=21						
T57A	Hurt	2.74	310		Pn	01 11 54.3	+0.5
T57A	Hurt	2.74	310	P	Pn	01 11 53.5	-0.4
	baz=128						
W57A	Gilead	2.77	268	Pn	Pn	01 11 55.1	+0.9
R58B	Mineral	2.87	340	Pn	Pn	01 11 55.5	0.0
Y58A	Scranton	2.87	242	Pn	Pn	01 11 56.3	+0.7
CBN	Corbin Frederi	2.98	348	Pn	Pn	01 11 57.6	+0.5
S57A	Dark Hollow, R	3.11	323		Pn	01 11 58.7	-0.3
S57A	Dark Hollow, R	3.11	323	P	Pn	01 11 58.5	-0.5
	baz=142,SNR=12						
BIRD	Birdtown, Kers	3.23	260	Pn	Pn	01 12 00.8	+0.3
U56A	King	3.25	290		Pn	01 12 01.3	+0.5
Y57A	Sumter	3.36	249		Pn	01 12 02.7	+0.4
R57A	Stanardsville	3.38	334	P	Pn	01 12 02.2	-0.4
	baz=153,SNR=11						
BLA	Blacksburg	3.63	303	Pn	Pn	01 12 07.0	+0.8
BLA					Sn	01 12 49.6	+0.3
V55A	Taylorsville	3.80	280	Pn	Pn	01 12 08.7	+0.4
V55A					Sn	01 12 53.9	+0.7
R56A	Bull Pasture M	3.84	325	P	Pn	01 12 08.9	-0.1
	baz=144,SNR=12						
KMSC	Kings Mountain	3.87	269		Pn	01 12 09.8	+0.4
KMSC					Sn	01 12 55.2	+0.2
R55A	Marlinton	4.11	318	Pn	Pn	01 12 13.6	+0.8
PAULI	Pauline	4.29	265	Pn	Pn	01 12 15.6	+0.4
PAULI					Sn	01 13 06.2	+0.8
P59A	Jarrettsville	4.33	2	P	Pn	01 12 15.3	-0.3
	baz=182,SNR=6.5						
P60A	Greenville	4.59	9	Pn	Pn	01 12 19.9	+0.7
HODGE	Hodges	4.77	259	Pn	Pn	01 12 22.1	+0.4
O59A	Robesonia	5.04	4	P	Pn	01 12 24.8	-0.6
	baz=184,SNR=9.7						
BG3	Lake Jocassee	5.19	269	Sn	Sn	01 13 28.4	+0.9
GOGA	Godfrey	5.97	254	Pn	Pn	01 12 38.6	+0.3
GOGA					Sn	01 13 45.7	-1.0
M57A	Sunshine Farm,	6.06	356	P	Pn	01 12 39.1	-0.4
	baz=176,SNR=6.7						

*BJI **11** 01:15:08.9±0.0,40.°46N×122.°31E,h9km,ML3.6/14*

ISC 11 01:15:07.5±0.9,**40.°51N**±0.°04×**122.°34E**±0.°04,**h10km,n9,** σ2§**21**/21,**Northeastern China**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNY	Shenyang	1.62	35	Pn	Pn	01 15 34.1	-2.0
SNY				Pg	Pb	01 15 36.6	-0.9
SNY				Sn	Sn	01 15 55.2	-1.8
SNY				Sg	Sb	01 15 58.2	+0.3
SNY				smax	smax		
	comp=N,780nm,0.3s						
SNY				smax	smax		
	comp=E,430nm,0.5s						
DL2	Dalian	1.69	199	Pg	Pb	01 15 38.7	+0.1
DL2				Sg	Sg	01 16 00.7	-1.0
DL2				smax	smax		
	comp=N,680nm,0.5s						
DL2				smax	smax		
	comp=E,730nm,0.7s						
SUJ	Sinuiju	1.70	103	Pg	Pb	01 15 40.2	+1.4
SUJ				Sg	Sb	01 16 02.0	+1.8
PYS	Pyongsong	2.98	114	Pg	Pb	01 16 03.5	+2.8
PYS				Sg	Sg	01 16 41.7	-1.6
PYAG	Pyongyang	3.01	118	Pg	Pb	01 16 04.1	+3.0
PYAG				Sg	Sg	01 16 42.8	-1.3
HJU	Haeju	3.60	132	Pn	Pb	01 16 12.3	+1.1
HJU				Pg	Pg	01 16 15.2	-1.2
HJU				Sg	Sg	01 17 01.1	-2.0
HHU	Hamhung	4.02	97	Pg	Pg	01 16 24.0	-0.4
HHU				Sg	Sg	01 17 14.3	-2.1
CN2	Changchun	4.02	34	ePg	Pb	01 16 23.0	+4.6
CN2				eSg	Sg	01 17 16.3	-0.4
CN2				smax	smax		
	comp=N,90nm,0.7s						
CN2				smax	smax		
	comp=E,100nm,0.7s						
BJI	Beijing	4.74	266	Pn	Pn	01 16 21.9	+3.0
BJI				Sg	Sg	01 17 36.2	-3.3
BJI				smax	smax		
	comp=N,44nm,0.6s						
BJI				smax	smax		
	comp=E,95nm,0.7s						

*BGR **11** 01:15:25.4±0.0,33.°63N×89.°38E,h33km,mb5.5,Ms4.8*

*IDC **11** 01:15:25.0±0.5,33.°76N×89.°18E,h0km,mb4.8/33, mb1 4.9/37,mb1mx4.8/48,mbtmp4.8/37,ML4.1/4,MS4.6/35, Ms1 4.6/35,ms1mx4.5/40,Error ellipse: s-maj=13.0km s-min=10.4km az=31.0*

*NEIC **11** 01:15:26.6±1.3,33.°88N±0.°05×89.°22E±0.°04,h10km±1km, mb5.2/147,Error ellipse: s-maj=9.7km s-min=3.0km az=326.0*

*BJI **11** 01:15:27.4±0.0,33.°84N×89.°24E,h20km,mB5.2/61, mb4.9/71,ML5.1/1,Ms5.2/87,Ms7 5.1/79*

*GCMT **11** 01:15:29.6±0.1,33.°81N±0.°01×89.°24E±0.°01,h17km, MW5.2/126,Moment Tensor Solution. s89,c134; s126,c239; Duration: 1.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.69±.02; $M_{\theta\theta}$-0.11±.01; $M_{\phi\phi}$0.80±.01; $M_{r\theta}$-0.14±.04; $M_{r\phi}$0.50±.01; $M_{\theta\phi}$0.16±.04; Best double couple: $M_0$0.90400×10^{17} NP1:φs46.00000°,δ47.00000°, λ-58.00000°. NP2:φs183.00000°,δ52.00000°, λ-120.00000°. Principal axes: T 1.0300, Plg3.0000°, Azm293.0000°; N -0.2520, Plg23.0000°, Azm202.0000°; P -0.7770, Plg67.0000°, Azm30.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **11** 01:15:30.7±1.1,34.°05N×89.°21E,h43km,mb5.4/92, MS4.7/28 Error ellipse: s-maj=6.2km s-min=2.8km az=126.6*

*NDI **11** 01:15:32.1±4.4,33.°84N×89.°18E,h49km±33km,mb5.1, mb5.2(NEIC)*

ISC 11 01:15:27.4±0.4,**33.°88N**±0.°03×**89.°18E**±0.°03,**h12km**±2km, **h12km:pP-P,n697,**σ1§**62**/734,**mb5.3**/239,**MS4.8**/70, **25C-46D,Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSA	Lhasa	4.49	157	Pg	Pb	01 16 46.3	-0.1
LSA				Sn	Sb	01 17 36.9	-3.8
LSA				Sg	Sg	01 17 51.9	+0.3
LSA				LR	LR		
	comp=N,61μm,10.0s						
LSA				LR	LR		
	comp=E,111μm,10.0s						
LSA				LR	LR		
	comp=Z,68μm,11.4s						
LSA	Lhasa	4.49	157	iP	Pn	01 16 40.0	+4.3
	SNR=90						
LSA	Lhasa	4.49	157		Pn	01 16 40.1	+4.5
LSA	Lhasa	4.49	157	P	Pn	01 16 40.1	+4.5
GTK	Tadong	6.55	184	eP	Pn	01 17 07.5	+3.7
GUN	Gumba	6.59	206	eP	Pn	01 17 06.7	+2.3
	260nm,0.8s						
TAPN	Taplejung	6.63	191	eP	Pn	01 17 07.1	+2.2
	256nm,0.7s						
JIRN	Jiri	6.71	203	eP	Pn	01 17 09.1	+3.1
	496nm,0.8s						
KKN	Kakani	6.93	210	eP	Pn	01 17 10.9	+1.9
	224nm,0.7s						
GKN	Gorkha	7.03	215	eP	Pn	01 17 12.5	+2.2
	124nm,0.6s						
PKIN	Phulchoki	7.07	208	eP	Pn	01 17 13.2	+2.2
	207nm,0.9s						
PKI	Pulchoki	7.07	208	eP	Pn	01 17 13.9	+2.9
	217nm,0.7s						
DMN	Daman	7.16	210	eP	Pn	01 17 14.6	+2.4
	218nm,0.9s						
ODAN	Odare	7.16	193	eP	Pn	01 17 14.3	+2.1
	819nm,0.7s						
DANN	Dangsing	7.20	222	eP	Pn	01 17 13.9	+1.1
	150nm,0.7s						
RAMN	Ramite	7.25	199	eP	Pn	01 17 14.7	+1.3
	454nm,1.1s						
KOLN	Koldanda	7.75	220	eP	Pn	01 17 21.4	+1.2
	58nm,0.6s						
SHL	Shillong	8.61	163	eP	Pn	01 17 31.9	0.0
SHL	Shillong	8.61	163		Pn	01 17 30.7	-1.3
SHL				Sn	Sn	01 19 08.0	-1.1
LKP	Lekhapani	8.69	137	eP	Pn	01 17 32.9	0.0
WMQ	Urumqi	10.00	354	eP	Pn	01 17 52.5	+1.6
WMQ				pP		01 17 57.7	
WMQ				sP		01 17 59.9	
WMQ				PP		01 18 01.1	
WMQ				S	Sn	01 19 39.4	-3.6
WMQ				LR	LR		
	comp=N,4μm,12.1s						
WMQ				LR	LR		
	comp=E,7μm,13.9s						
WMQ				LR	LR		
	comp=Z,3μm,15.5s						
WMQ	Urumqi	10.00	354		Pn	01 17 52.7	+1.8
WMQ	Urumqi	10.00	354	P	Pn	01 17 52.7	+1.8
GTA	Gaotai	10.17	54	eP	Pn	01 17 53.2	-0.1
GTA				pP		01 17 57.0	
GTA				sP		01 17 59.8	
GTA				S	Sn	01 19 46.8	-0.6
GTA				sS		01 19 56.1	
GTA				SS	SnSn	01 20 00.2	+1.1
GTA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,420nm,7.2s						
GTA				LR	LR		
	comp=N,14μm,15.8s						
GTA				LR	LR		
	comp=E,7μm,14.8s						
GTA				LR	LR		
	comp=Z,8μm,10.0s						
BOK	Bokaro	10.45	197	eP	Pn	01 17 57.1	0.0
SMLA	Simla	10.51	258	eP	Pn	01 17 59.0	+1.3
DHRM	DHARAMSHALA	10.93	265	eP	Pn	01 18 06.5	+2.8
DHRM				ex	x	01 21 20.4	
BRDH	Bariadhala	11.37	168	Pn	Pn	01 18 09.9	+0.3
	0.1nm,0.3s,baz=360,slow=24,SNR=34						
BRDH				Sn	Sn	01 20 13.2	-3.3
	0.4nm,0.3s,baz=180,slow=24,SNR=2.3						
BRDH				Lg	Lg	01 21 26.1	
	0.3nm,0.3s,baz=360,slow=24,SNR=2.2						
NDI	New Delhi	11.46	246	eP	Pn	01 18 10.0	-0.9
SHLS	Shalkode	11.98	323	eP	Pn	01 18 16.0	-2.1
	119nm,3.9s						
SHLS				eLR	LR	01 23 37.9	
	898nm,10.0s						
SHLS	Shalkode	11.98	323	eP	Pn	01 18 15.9	-2.1
SHLS				pmax	pmax		
	comp=Z,119nm,3.9s						
SHLS				MLR	MLR		
	comp=Z,898nm,10.0s						
KSH	Kashi	12.00	302	P	Pn	01 18 22.7	+4.4
KSH				PP		01 18 31.4	
KSH				S	Sn	01 20 39.5	+7.4
KSH				SS	SnSn	01 20 53.0	+9.0
KSH				pmax	pmax		
	comp=Z,550nm,2.5s						
KSH				LR	LR		
	comp=Z,7μm,11.0s						
KSH				LR	LR		
	comp=Z,8μm,7.0s						
KSH				LR	LR		
	comp=Z,7μm,8.9s						
PRZ	Przheval'sk	12.06	319		Pn	01 18 20.3	+1.0
PRZ	Przheval'sk	12.06	319	P	Pn	01 18 20.3	+1.0
UZB	Uzynbulak	12.20	322	eP	Pn	01 18 21.7	+0.6
	comp=Z,19nm,1.8s						
UZB				eLR	LR	01 24 00.2	
	comp=Z,833nm,9.9s						
UZB	Uzynbulak	12.20	322	eP	Pn	01 18 21.6	+0.6
UZB				pmax	pmax		
	comp=Z,19nm,1.8s						
UZB				MLR	MLR		
	comp=Z,833nm,10.0s						
LZH	Lanzhou	12.23	75	eP	Pn	01 18 23.7	+2.1
LZH				pP	P	01 18 26.8	-7.3
LZH				S	Sn	01 20 48.2	+10
LZH				pmax	pmax		
	comp=Z,37nm,1.3s						
LZH				pmax	pmax		
	comp=Z,450nm,4.9s						
LZH				LR	LR		
	comp=Z,13μm,10.7s						
LZH				LR	LR		
	comp=Z,12μm,11.4s						
LZH				LR	LR		
	comp=Z,13μm,12.8s						
SATY	Saty	12.45	321	eP	Pn	01 18 25.1	+0.5
	comp=Z,47nm,2.2s						
SATY	Saty	12.45	321	eP	Pn	01 18 25.0	+0.5
SATY				pmax	pmax		
	comp=Z,47nm,2.2s						
KDJ	Kajisay	12.54	315		Pn	01 18 26.3	+0.6
KDJ	Kajisay	12.54	315	P	Pn	01 18 26.3	+0.6
KPKS	Kokpek	12.60	323	eP	Pn	01 18 27.0	+0.5
	comp=Z,14nm,0.9s						
KPKS	Kokpek	12.60	323	eP	Pn	01 18 26.9	+0.5
KPKS				pmax	pmax		
	comp=Z,14nm,0.9s						
CD2	Chengdu	12.67	100	P	Pn	01 18 27.9	+0.4
CD2				sP	P	01 18 36.4	-2.5
CD2				S	Sn	01 20 56.5	+7.9
CD2				pmax	pmax		
	comp=Z,50nm,1.1s						
CD2				pmax	pmax		
	comp=Z,530nm,4.7s						
CD2				LR	LR		
	comp=Z,9μm,7.6s						
CD2				LR	LR		
	comp=Z,16μm,7.5s						
CD2				LR	LR		
	comp=Z,13μm,6.9s						
NRN	Naryn	12.87	310		Pn	01 18 29.9	-0.5
NRN	Naryn	12.87	310	P	Pn	01 18 29.9	-0.5
ULHL	Ulahol	13.17	313	P	Pn	01 18 37.3	+2.9
	SNR=37						
TNSS	Tian-Shan	13.24	317	eP	Pn	01 18 35.8	+0.3
TNSS	Tian-Shan	13.24	317	eP	Pn	01 18 35.8	+0.3
CHCP	Chirah Chowk	13.24	273	P	Pn	01 18 34.9	-0.4
NIL	Nilore	13.26	273		Pn	01 18 33.9	-1.5
NIL	Nilore	13.26	273	P	Pn	01 18 33.9	-1.5
MDOK	Medeo	13.26	318	eP	Pn	01 18 36.2	+0.7
MDOK				eS	Sn	01 21 07.3	+4.3
MDOK				eLR	LR	01 24 10.8	
	comp=Z,3μm,18.1s						
MDOK	Medeo	13.26	318	eP	Pn	01 18 36.2	+0.7
MDOK				eS	Sn	01 21 07.3	+4.3
MDOK				MLR	MLR		
	comp=Z,3μm,18.0s						
AAA	Alma-Ata	13.36	318	eP	Pn	01 18 37.5	+0.6
AAA				eLR	LR	01 24 19.3	
	comp=Z,3μm,15.3s						
AAA	Alma-Ata	13.36	318	eP	Pn	01 18 38.8	+1.9
AAA				eS	Sn	01 21 10.6	+5.2
AAA				pmax	pmax		
	comp=Z,2μm,3.7s						
AAA				smax	smax		
	comp=N,400nm,5.7s						
AAA				MLR	MLR		
	comp=Z,4μm,14.0s						
JBP	Jabalpur	13.38	219⇓	eP	Pn	01 18 40.0	+2.9
JBP				AMB	AMB	01 18 41.0	
	comp=Z,41nm,1.1s						
JBP				ex	x	01 21 06.4	
BOOM	Boomskoye usch	13.49	313		Pn	01 18 39.3	+0.6
BOOM	Boomskoye usch	13.49	313	P	Pn	01 18 39.3	+0.6
MTBS	Maitube	13.59	317	eP	Pn	01 18 42.5	+2.5
MTBS	Maitube	13.59	317	eP	Pn	01 18 42.5	+2.5
KZA	Kyzart	13.69	311	P	Pn	01 18 45.3	+3.7
	SNR=8.1						
CHKK	Chushkaly	13.75	320	eP	Pn	01 18 41.6	-0.6
CHKK	Chushkaly	13.75	320	eP	Pn	01 18 41.5	-0.6
TDK	Taldyqorghan	13.87	326	eP	Pn	01 18 43.4	-0.4
TDK				eLR	LR	01 24 15.1	
	comp=Z,2μm,11.5s						
TDK	Taldyqorghan	13.87	326	eP	Pn	01 18 43.3	-0.4
TDK				MLR	MLR		
	comp=Z,2μm,12.0s						
MK31	Makanchi Array	13.92	340		Pn	01 18 43.7	-0.8
MK31	Makanchi Array	13.92	340	iP	Pn	01 18 43.1	-1.4
MKAR	Makanchi Array	13.92	340	Pn	Pn	01 18 43.6	-0.9
	comp=Z,0.5nm,0.3s,baz=151,slow=14,SNR=54						
MKAR				LR	LR	01 24 58.2	
	comp=Z,3μm,18.3s,baz=154,slow=41						
MKAR	Makanchi Array	13.92	340		Pn	01 18 43.4	-1.1
MKAR	Makanchi Array	13.92	340	iP	Pn	01 18 43.5	-0.9
MKAR				pmax	pmax		
	comp=Z,19nm,1.0s						
ZSN	Zaisan	13.95	348	eP	Pn	01 18 44.4	-0.4
	comp=Z,28nm,1.5s						
ZSN				eLR	LR	01 25 31.5	
	comp=Z,767nm,8.7s						
ZSN	Zaisan	13.95	348	eP	Pn	01 18 44.3	-0.4
ZSN				pmax	pmax		
	comp=Z,28nm,1.5s						
ZSN				MLR	MLR		
	comp=Z,767nm,9.0s						
MAKZ	Makanchi	14.03	339		Pn	01 18 45.2	-0.7
MAKZ	Makanchi	14.03	339	P	Pn	01 18 45.2	-0.7
KUU	Kurty	14.13	319	eP	Pn	01 18 46.9	-0.4
	comp=Z,2μm,12.7s						
KUU				eS	Sn	01 21 27.1	+3.1
KUU				eLR	LR	01 24 45.9	
KUU	Kurty	14.13	319	eP	Pn	01 18 46.9	-0.4
KUU				eS	Sn	01 21 27.0	+3.1
KBK	Karagaybulak	14.19	312	P	Pn	01 18 51.0	+2.7
	SNR=8.3						
UCH	Uchtor	14.23	310	P	Pn	01 18 49.1	-0.1
	SNR=17						
CEP	Cherat	14.35	275	P	Pn	01 18 48.4	-2.2
AAK	Ala-Archa	14.46	311	Pn	Pn	01 18 53.8	+1.8
	comp=Z,0.2nm,0.3s,baz=111,slow=15,SNR=26						
AAK				LR	LR	01 25 39.1	
	comp=Z,3μm,21.9s,baz=112,slow=42						
AAK	Ala-Archa	14.46	311	P	Pn	01 18 54.8	+2.8
	SNR=28						
AAK	Ala-Archa	14.46	311	iP	Pn	01 18 54.1	+2.1
	SNR=42						
AAK	Ala-Archa	14.46	311		Pn	01 18 52.1	+0.1
AAK	Ala-Archa	14.46	311	P	Pn	01 18 54.1	+2.1
FRU1	Bishkek	14.47	312		P	01 18 57.3	-1.5
FRU1	Bishkek	14.47	312	P	P	01 18 57.3	-1.5
CHMS	Chumysh	14.50	313	P	P	01 19 00.3	+1.2
	SNR=12						
THW	Thamme Wali	14.62	271	P	Pn	01 18 51.8	-2.3
AML	Almayashu	14.71	309	P	Pn	01 18 57.2	+1.6
	SNR=20						
BHPL	Bhopal	14.78	227	eP	Pn	01 18 54.1	-2.2
USP	Ospenovka	14.80	314	P	P	01 19 01.2	-1.3
	SNR=22						
ARSB	Arslanbob	14.82	305	Pn	Pn	01 18 59.0	+2.1
ARSB	Arslanbob	14.82	305	P	Pn	01 18 59.0	+2.1
SGDS	Sogindy	14.83	314	eP	Pn	01 18 57.1	+0.2
SGDS				eLR	LR	01 25 57.0	
EKS2	Erkin-Say	14.92	310	P	Pn	01 19 00.3	+2.1
	SNR=21						
BTK	Batken	15.91	298	Pn	Pn	01 19 11.0	-0.2
BTK	Batken	15.91	298	P	Pn	01 19 11.0	-0.2
BTK				pmax	pmax		
	comp=Z,85nm,1.4s						
CHLP	Challavanipeta	15.98	198	eP	Pn	01 19 10.0	-2.0
CHLP				IAmb	IAmb	01 19 18.6	
	comp=Z,49nm,1.3s						
CHLP				eS	Sn	01 22 07.8	-1.3
CHLP				IVMs_BB	IVMs_BB	01 25 39.5	
	comp=Z,1μm,7.7s						
BTLS	Baital	16.12	318	eP	Pn	01 19 15.3	+1.5
BTLS	Baital	16.12	318	eP	Pn	01 19 15.3	+1.5
XAN	Xi'an	16.39	84	P	Pn	01 19 17.8	+0.5
XAN				pP	pP	01 19 22.6	-2.5
XAN				S	Sn	01 22 23.4	+4.3
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
XAN				pmax	pmax		
	comp=Z,570nm,4.5s						
XAN				LR	LR		
	comp=Z,13μm,15.2s						
XAN				LR	LR		
	comp=Z,4μm,17.8s						
XAN				LR	LR		
	comp=Z,5μm,13.3s						
XAN	Xi'an	16.39	84		Pn	01 19 14.2	-3.1
XAN	Xi'an	16.39	84	P	Pn	01 19 14.2	-3.1
XAN				pmax	pmax		
	comp=Z,37nm,1.0s						
KBL	Kabul	16.67	278		Pn	01 19 19.5	-1.6
KBL	Kabul	16.67	278	P	Pn	01 19 19.5	-1.6
KBL				pmax	pmax		
	comp=Z,58nm,0.9s						
GYA	Guiyang	16.82	111⇑	iP	Pn	01 19 22.0	-0.9
GYA				PP	sP	01 19 35.7	+3.3
GYA				S	Sn	01 22 28.1	-1.6
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,620nm,3.5s						
GYA				LR	LR		
	comp=Z,2μm,11.2s						
GYA				LR	LR		
	comp=Z,3μm,11.3s						
GYA				LR	LR		
	comp=Z,4μm,14.9s						
JBG	Jabagly	16.93	306	eP	P	01 19 25.7	-0.5
JBG				pmax	pmax		
	comp=Z,164nm,1.9s						
IUG	Iuzhnay	17.18	304	eP	Pn	01 19 27.7	+0.4
IUG				eS	S	01 22 45.0	-2.6
IUG	Iuzhnay	17.18	304	eP	Pn	01 19 27.6	+0.4
IUG				eS	S	01 22 44.9	-2.6
KK31	Karatay Array	17.25	308	P	P	01 19 29.2	-0.3
KK31	Karatay Array	17.25	308	iP	Pn	01 19 28.5	+0.5
KKAR	Karatay Array	17.25	308		Pn	01 19 27.5	-0.5
KKAR	Karatay Array	17.25	308	P	P	01 19 30.7	+1.2
KKAR				IAmb	IAmb	01 19 40.4	
	comp=Z,39nm,1.3s						
KKAR	Karatay Array	17.25	308	P	Pn	01 19 27.5	-0.5
CHTO	Chiang Mai	17.35	147		Pn	01 19 28.3	-1.1
CHTO	Chiang Mai	17.35	147	P	Pn	01 19 28.3	-1.1
CHTO				pmax	pmax		
	comp=Z,30nm,1.1s						
RPR	Rampur	17.36	213	eP	Pn	01 19 28.2	-1.4
RPR				IVMs_BB	IVMs_BB	01 26 29.7	
	comp=Z,2μm,11.4s						
TAS	Tashkent	17.40	301	P	P	01 19 31.6	+0.3
TAS				IAmb	IAmb	01 19 36.9	
	comp=Z,158nm,1.2s						
TAS	Tashkent	17.40	301	P	P	01 19 31.6	+0.3
TAS				pmax	pmax		
	comp=Z,158nm,1.2s						
ENH	Enshi	17.58	96	IAmb	IAmb	01 19 45.3	
	comp=Z,147nm,1.0s						
CM31	Chiang Mai Arr	17.66	148	P	Pn	01 19 32.9	-0.5
CM31	Chiang Mai Arr	17.66	148	P	P	01 19 35.0	+0.7
	SNR=20						
CMAR	Chiang Mai Arr	17.66	148	P	Pn	01 19 32.9	-0.4
	comp=Z,0.5nm,0.3s,baz=327,slow=11,SNR=43						
CMAR				LR	LR	01 27 19.0	
	comp=Z,2μm,18.6s,baz=339,slow=41						
SRSP	Sriramsagar	17.75	216	eP	Pn	01 19 30.8	-3.6
SRSP				IAmb	IAmb	01 19 38.0	
	comp=Z,80nm,1.8s						
SRSP				IVMs_BB	IVMs_BB	01 26 54.0	
	comp=Z,1μm,9.0s						
SEM	Semipalatinsk	17.77	341	eP	Pn	01 19 31.6	-3.2
SEM	Semipalatinsk	17.77	341	eP	Pn	01 19 31.5	-3.2
BTO	Baotou	17.88	62	eP	Pn	01 19 35.1	-1.0
PVM	Polavaram	17.89	204	eP	Pn	01 19 34.6	-1.6
PVM				IAmb	IAmb	01 19 39.8	
	comp=Z,18nm,1.0s						
PVM				eS	S	01 23 02.8	+0.7
PVM				IVMs_BB	IVMs_BB	01 26 34.4	
	comp=Z,2μm,10.0s						
GGR	Gangavaram	17.89	209	eP	Pn	01 19 36.4	+0.2
GGR				IAmb	IAmb	01 19 39.4	
	comp=Z,101nm,1.6s						
GGR				IVMs_BB	IVMs_BB	01 27 31.0	
	comp=Z,1μm,7.5s						
KURBB	Kurchatov Arra	18.46	338	P	P	01 19 41.5	-1.3
	comp=Z,0.1nm,0.3s,baz=149,slow=12,SNR=168						
KURK	Kurchatov	18.52	338	P	P	01 19 42.2	-1.2
KURK				IAmb	IAmb	01 19 48.4	
	comp=Z,150nm,1.4s						
KURK	Kurchatov	18.52	338d	iP	P	01 19 41.9	-1.6
KURK				pmax	pmax		

comp=Z,49nm,1.1s
MYLAV Mylavaram 18.70 206 eP Pn 01 19 45.9 -0.2
MYLAV IAmb IAmb 01 19 50.2
comp=Z,16nm,1.1s
MYLAV eS Sn 01 23 11.7 -3.5
MYLAV IVMs_BB IVMs_BB 01 27 15.2
comp=Z,1µm,10.2s
HYBB Hyderabad (bro 18.96 213 eP Pn 01 19 49.3 +0.1
HYBB IAmb IAmb 01 19 52.5
comp=Z,35nm,0.9s
HYBB eS Sn 01 23 22.2 +0.7
HYBB IVMs_BB IVMs_BB 01 27 26.9
comp=Z,2µm,10.8s
HYB Hyderabad 18.96 213 i P P 01 19 47.0 -1.6
HYB i LR LR
comp=Z,4.2nm,12.0s
HYB Hyderabad 18.96 213 eP Pn 01 19 49.1 -0.1
HYB IAmb IAmb 01 19 51.9
comp=Z,76nm,1.1s
SONM Songino Array 19.02 38 P Pn 01 19 50.7 +0.8
comp=Z,1.1nm,0.3s,baz=226,slow=12,SNR=117
SONM LR LR 01 27 48.4
comp=Z,2µm,19.3s,baz=234,slow=39
SONM Songino Array 19.02 38 P P 01 19 49.0 -0.2
HHC Hu-ho-hao-te 19.08 62 eP P 01 19 49.7 -0.2
HHC PP PnPn 01 20 06.2 +3.0
HHC S Sn 01 23 23.9 -0.4
HHC pmax pmax
comp=Z,6.0nm,0.7s
HHC pmax pmax
comp=Z,830nm,7.2s
HHC LR LR
comp=Z,2µm,13.1s
HHC LR LR
comp=Z,2µm,12.6s
HHC LR LR
comp=Z,2µm,13.5s
TIY Taiyuan 19.24 72 eP Pn 01 19 52.6 0.0
TIY S S 01 23 30.5 +1.1
TIY pmax pmax
comp=Z,120nm,1.0s
TIY pmax pmax
comp=Z,1µm,5.1s
TIY LR LR
comp=Z,2µm,8.8s
TIY LR LR
comp=Z,3µm,8.8s
TIY LR LR
comp=Z,2µm,9.6s
KLRI Killari 19.35 219 eP Pn 01 19 53.5 -0.5
KLRI IAmb IAmb 01 19 56.5
comp=Z,54nm,0.8s
KLRI eS S 01 23 32.2 +0.4
KLRI IVMs_BB IVMs_BB 01 28 34.1
comp=Z,1µm,7.4s
ULN Ulaanbaatar 19.38 39 P P 01 19 53.2 +0.1
ULN IAmb IAmb 01 20 00.0
comp=Z,107nm,1.2s
ULN Ulaanbaatar 19.38 39 P P 01 19 53.2 +0.1
ULN pmax pmax
comp=Z,107nm,1.2s
NJS Nagarjunasagar 19.40 210 eP P 01 19 53.6 +0.3
NJS IAmb IAmb 01 19 56.9
comp=Z,19nm,0.7s
NJS eS S 01 23 33.2 +0.6
NJS IVMs_BB IVMs_BB 01 28 46.0
comp=Z,888nm,7.2s
ZAK Zakamensk 19.48 28 eP Pn 01 19 54.8 -0.5
ZAK pmax pmax
comp=Z,40nm,1.2s
MOY Mondy 19.74 22 eP Pn 01 19 59.5 +1.1
MOY pmax pmax
comp=Z,189nm,1.5s
ADKI Addanki 19.78 207 eP Pn 01 19 58.5 -0.5
ADKI IAmb IAmb 01 20 00.8
comp=Z,49nm,1.5s
ADKI IVMs_BB IVMs_BB 01 27 44.3
comp=Z,984nm,12.4s
SRLM Srisailam 19.98 210 eP P 01 20 00.3 +0.6
SRLM IAmb IAmb 01 20 03.2
comp=Z,99nm,1.5s
SRLM eS Sn 01 23 47.4 +1.3
SRLM IVMs_BB IVMs_BB 01 27 57.8
comp=Z,1µm,12.2s
BHUJ Bhuj 20.12 243 eP P 01 20 01.3 +0.2
BHUJ ex x 01 23 54.4
BRZS Berezniki 20.17 328 eP P 01 20 02.3 +0.7
BRZS eS Sn 01 23 52.2 +2.0
BRZS eLR LR 01 28 35.1
BRZS Berezniki 20.17 328 eP P 01 20 02.2 +0.7
PBKT Sadao Pong 20.24 145 P P 01 20 02.4 -0.1
ZAA0 Zalesovo Array 20.30 353 IAmb IAmb 01 20 07.9
comp=Z,158nm,1.1s
ZALV Zalesovo Beam 20.30 353 P P 01 20 03.4 +0.4
comp=Z,82nm,0.8s,baz=171,slow=10,SNR=127
ZALV LR LR 01 28 41.4
comp=Z,3µm,18.7s,baz=171,slow=39
ZALV Zalesovo Beam 20.30 353 P P 01 20 02.4 -0.6
ZALV Zalesovo Beam 20.30 353 i P P 01 20 03.4 +0.4
ZALV pmax pmax
comp=Z,81nm,0.8s
POO Poona 20.52 226⇑iP P 01 20 06.0 +0.4
comp=Z,130nm,1.0s
TLY Talaya 20.65 26 P Pn 01 20 08.7 -0.4
comp=Z,11nm,0.8s,baz=225,slow=9.3,SNR=8.2
TLY LR LR 01 28 41.0
comp=Z,1µm,21.2s,baz=216,slow=38
TLY Talaya 20.65 26 P P 01 20 04.7 -2.1
TLY Talaya 20.65 26d iP Pn 01 20 08.8 -0.3
TLY eSS Sn 01 24 14.0 +12
TLY pmax pmax
comp=Z,157nm,1.4s
TLY MLR MLR
comp=Z,4µm,10.0s
DGPR DIGLIPUR 20.89 170 eP P 01 20 09.6 0.0
DGPR IAmb IAmb 01 20 15.8
comp=Z,116nm,1.0s
IRK Irkutsk 21.34 26 eP P 01 20 15.6 +1.4
IRK pmax pmax
comp=Z,271nm,2.2s
WHN Wuhan 21.54 92 ⇑P P 01 20 19.1 +2.6
WHN S S 01 24 17.2 +2.1
WHN pmax pmax
comp=Z,550nm,2.0s
WHN LR LR
comp=Z,9µm,8.5s
WHN LR LR
comp=Z,8µm,7.7s
WHN LR LR
comp=Z,10µm,12.3s
URV Uravakonda 21.71 213 eP P 01 20 19.1 +0.6
URV IAmb IAmb 01 20 20.6
comp=Z,109nm,1.1s
URV eS S 01 24 18.9 +0.2
URV IVMs_BB IVMs_BB 01 29 00.7
comp=Z,3µm,11.8s
SKHT Srikalahasti 21.81 205 eP P 01 20 19.6 +0.1
SKHT IAmb IAmb 01 20 22.9
comp=Z,20nm,1.0s
SKHT eS S 01 24 22.9 +2.4
SKHT IVMsBB 01 28 49.7
comp=Z,639nm,12.5s
HRA Herat 22.28 279 IAmb IAmb 01 20 35.7
comp=Z,108nm,1.4s
PBA Port Blair 22.36 171 P P 01 20 27.4 +2.0
PBA IAmb IAmb 01 20 34.5
comp=Z,118nm,1.2s
BJI Beijing 22.39 66⇓eP P 01 20 26.6 +1.1
BJI pP pP 01 20 30.0 -0.5
BJI S S 01 24 33.6 +2.4
BJI pmax pmax
comp=Z,22nm,1.7s
BJI LR LR
comp=Z,2µm,13.3s
BJI LR LR
comp=Z,2µm,15.7s
GOA Goa 22.96 221 eP P 01 20 33.0 +1.2
GOA IAmb IAmb 01 20 35.4
comp=Z,56nm,0.9s
TIA Tai'an 22.97 76 P P 01 20 32.0 +0.2
TIA pmax pmax
comp=Z,55nm,1.0s
TIA pmax pmax
comp=Z,880nm,3.9s
TIA LR LR
comp=Z,2µm,10.8s
TIA LR LR
comp=Z,3µm,10.3s
TIA LR LR
comp=Z,3µm,11.8s
BVAR Borovoye Array 23.38 331 P P 01 20 36.2 +0.5
comp=Z,17nm,1.0s,baz=137,slow=11,SNR=57
BRVK Borovoye 23.44 331 P P 01 20 37.0 +0.6
BRVK IAmb IAmb 01 20 42.1
comp=Z,110nm,1.4s
BRVK Borovoye 23.44 331 i P P 01 20 36.1 -0.3
BRVK pmax pmax
comp=Z,71nm,1.4s
QIZ Qiongzhong 23.62 124 P P 01 20 36.2 -2.2
QIZ S S 01 24 51.5 -1.2
QIZ pmax pmax
comp=Z,31nm,1.8s
QIZ pmax pmax
comp=Z,870nm,4.2s
QIZ LR LR
comp=Z,2µm,11.5s
QIZ LR LR
comp=Z,2µm,13.6s
QIZ LR LR
comp=Z,3µm,16.1s
GZH Guangzhou 23.75 111 eP P 01 20 39.4 -0.2
GZH LR LR
comp=Z,3µm,7.5s
GZH LR LR
comp=Z,2µm,7.4s
HKPS Hong Kong Po S 24.81 111 P P 01 20 48.9 -0.5
NJ2 Nanjing 24.93 86 eP P 01 20 51.1 +0.7
NJ2 pP pP 01 20 54.6 -1.2
NJ2 sP sP 01 20 59.9 +1.8
NJ2 sS sS 01 25 27.5 +5.1
NJ2 pmax pmax
comp=Z,34nm,0.9s
NJ2 pmax pmax
comp=Z,600nm,5.2s
NJ2 LR LR
comp=Z,5µm,14.7s
NJ2 LR LR
comp=Z,3µm,14.2s
NJ2 LR LR
comp=Z,4µm,17.1s
GEYT Alibeck 25.42 288 P P 01 20 57.1 +2.2
comp=Z,50nm,1.1s,baz=111,slow=8.1,SNR=40
GEYT LR LR 01 33 09.8
comp=Z,2µm,19.5s,baz=65,slow=42
GEYT Alibeck 25.42 288 P P 01 20 55.3 +0.4
GEYT pP 01 20 57.0 -3.3
GYA0 ALIBECK ARRAY 25.42 288 P P 01 20 56.2 +1.3
GYA0B ALIBECK ARRAY 25.42 288 P P 01 20 55.2 +0.3
GYA0B IAmb IAmb 01 21 02.5
comp=Z,86nm,1.1s
AB31 Akbulak array 26.52 314 i P P 01 21 05.1 +0.5
ABKAR Akbulak array 26.52 314 P P 01 21 05.2 +0.6
ABKAR Akbulak array 26.52 314 IAmb IAmb 01 21 12.2
comp=Z,38nm,1.1s
QZH Quanzhou 27.05 101 eP P 01 21 09.6 -0.1
QZH LR LR
comp=Z,2µm,10.0s
QZH LR LR
comp=Z,1µm,10.9s
PALK Pallekele 27.61 198 P P 01 21 16.5 +1.7
comp=Z,7.2nm,0.8s,baz=8.0,slow=9.4,SNR=9.4
PALK LR LR 01 31 56.9
comp=Z,544nm,21.7s,baz=35,slow=36
PALK Pallekele 27.61 198 P P 01 21 14.8 0.0
PALK IAmb IAmb 01 21 18.4
comp=Z,36nm,1.3s
PALK Pallekele 27.61 198⇓iP P 01 21 17.4 +2.6
PALK pmax pmax
comp=Z,20nm,1.2s
AKTO Aktyubinsk 28.14 315 P P 01 21 19.9 +0.6
comp=Z,5.5nm,0.9s,baz=113,slow=8.0,SNR=14
AKTO LR LR 01 34 01.5
comp=Z,2µm,18.9s,baz=118,slow=40
SNY Shenyang 28.16 63 ⇓P P 01 21 15.9 -3.5
SNY S S 01 26 10.1 +5.6
SNY pmax pmax
comp=Z,21nm,1.8s
SNY pmax pmax
comp=Z,490nm,3.7s
SNY LR LR
comp=Z,2µm,12.8s
SNY LR LR
comp=Z,2µm,12.6s
SNY LR LR
comp=Z,3µm,13.5s
WSAR Wadi Sarin 28.75 256 P P 01 21 26.8 +1.9
comp=Z,30nm,1.1s,baz=117,slow=10.0,SNR=8.4
WSAR LR LR 01 34 33.4
comp=Z,698nm,21.0s,baz=102,slow=40
WBK Wadi Bani Khal 28.78 255 P P 01 21 28.2 +3.0
WBK P P 01 21 28.2 +3.0
BOD Bodaibo 29.22 27⇑iP P 01 21 29.4 +0.7
BOD pmax pmax
comp=Z,49nm,1.5s
SMDO Samad 29.30 257 P P 01 21 32.8 +2.9
SMDO P P 01 21 32.8 +2.9
BANOM Banah 29.49 263 P P 01 21 34.0 +2.5
BANOM Banah 29.49 263 P P 01 21 34.6 +3.1
JMDO Jabal Madar 29.59 255 P P 01 21 35.4 +3.0
JMDO P P 01 21 35.4 +3.0
CN2 Changchun 29.73 60 eP P 01 21 33.3 -0.1
CN2 esP sP 01 21 40.3 -0.8
CN2 eS S 01 26 25.4 -3.9
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,2µm,11.0s
CN2 LR LR
comp=Z,2µm,14.0s
MSFE Esma-Masafi 29.83 262 i P P 01 21 35.8 +1.3
SNR=7.0
NACB Ninganchiao 29.84 100 P P 01 21 33.3 -1.3
NACB IAmb IAmb 01 21 41.7
comp=Z,42nm,1.0s
UOSS Minazif 29.97 262 P P 01 21 37.1 +1.4
UOSS Minazif 29.97 262 P P 01 21 35.1 -0.6
SVE Sverdlovsk 30.09 328ceP P 01 21 37.7 +1.3
SVE pmax pmax
comp=Z,74nm,1.5s
SVE MLR MLR
comp=Z,2µm,16.0s
ASHO Ashiyiah 30.20 261 i P P 01 21 39.7 +1.9
SNR=8.4
KULM Kulim 30.37 157 P P 01 21 38.3 -1.0
ARU Arti 30.79 326 P P 01 21 43.3 +0.7
comp=Z,2.9nm,0.8s,baz=163,slow=4.5,SNR=13
ARU LR LR 01 35 00.2
comp=Z,1µm,20.0s,baz=116,slow=38
ARU Arti 30.79 326 P P 01 21 42.1 -0.5
ARU Arti 30.79 326c iP P 01 21 42.8 +0.2
ARU 01 22 44.6
ARU S S 01 26 46.5 +1.0
ARU SS ScP 01 28 20.5 -1.6
ARU pmax pmax
comp=Z,22nm,1.1s
ARU MLR MLR
comp=Z,1µm,18.0s
KSAR Wonju Array Be 31.50 72 P P 01 21 47.2 -1.9
KSAR pP 01 21 49.4 -5.2
KSRS Korea Array 31.53 72 P P 01 21 49.3 -0.1
comp=Z,7.3nm,0.9s,baz=270,slow=8.9,SNR=10.0
KSRS LR LR 01 35 22.8
comp=Z,1µm,18.2s,baz=265,slow=38
LKRN Lenkeran, Azer 32.73 290 P P 01 22 01.8 +1.9
MDJ Mudanjiang 32.78 59 P P 01 21 59.3 -1.0
MDJ PP PnPn 01 23 06.6 -2.0
MDJ PcP PcP 01 24 45.8 +0.5
MDJ S S 01 27 15.4 -1.5
MDJ ScP ScP 01 28 29.3 +0.2
MDJ PcS PcS 01 28 30.4 0.0
MDJ pmax pmax
comp=Z,16nm,1.1s
MDJ pmax pmax
comp=Z,210nm,9.3s
MDJ LR LR
comp=Z,4µm,14.2s
MDJ LR LR
comp=Z,3µm,15.7s
ZEA Zeya 33.34 42 eP P 01 22 05.0 -0.1
ZEA pmax pmax
comp=Z,43nm,1.2s
ZEA MLR MLR
comp=Z,3µm,11.0s
ZEA MLR MLR
comp=E,2µm,12.0s
ZEA MLR MLR
comp=N,1µm,11.0s
AKT Akhty 33.42 295 eP P 01 22 07.4 +1.4
AKT e 01 23 17.8
AKT pmax pmax
comp=Z,37nm,1.2s
MAK Makhachkala 33.60 298c iP P 01 22 06.3 -1.1
MAK eS S 01 27 29.4 -0.2
MAK pmax pmax
comp=Z,276nm,1.5s
MAK MLR MLR
comp=Z,996nm,16.0s
SEKA Sheki 33.82 295 P P 01 22 10.2 +0.7
MNGR Mingechevir, A 33.92 294 P P 01 22 11.8 +1.6
USA0B Ussuriysk Arra 34.47 60 IAmb IAmb 01 22 16.9
comp=Z,57nm,1.4s
USRK Ussuriysk Ar. 34.47 60 P P 01 22 14.8 -0.2
comp=Z,14nm,0.9s,baz=255,slow=7.3,SNR=10
USRK LR LR 01 36 49.0
comp=Z,1µm,18.3s,baz=261,slow=37
USRK Ussuriysk Ar. 34.47 60 P P 01 22 15.8 +0.8
USRK Ussuriysk Ar. 34.47 60 P P 01 22 15.8 +0.8
GANJ Ganja 34.51 294 P P 01 22 16.8 +1.4
BTLR Botlikh 34.54 298c iP P 01 22 16.9 +1.2
BTLR pmax pmax
comp=Z,23nm,0.9s
GROC Groznyy 34.85 298 eP P 01 22 19.3 +1.0
GROC e 01 23 39.5
GROC pmax pmax
comp=Z,47nm,1.2s
KLR Kul'dur 34.85 51 P P 01 22 18.8 +0.5
comp=Z,18nm,1.0s,baz=268,slow=12,SNR=9.2
KLR LR LR 01 37 59.5
comp=Z,2µm,18.3s,baz=260,slow=39
KLR Kul'dur 34.85 51⇑iP P 01 22 19.2 +0.9
KLR pmax pmax
comp=Z,23nm,1.1s
NAX Nakhchivan 35.24 292 P P 01 22 23.4 +1.6
WHFO Wadi Hawf 35.38 252 P P 01 22 26.1 +2.9
WHFO P P 01 22 26.1 +2.9
TBLG Delisi 35.66 296 P P 01 22 26.6 +1.3
GNI Garni 35.74 293 P P 01 22 26.6 +0.4
GNI IAmb IAmb 01 22 33.1
comp=Z,55nm,1.5s
GNI Garni 35.74 293 P P 01 22 26.6 +0.4
GNI pmax pmax
comp=Z,55nm,1.5s
ABTO Aybut 36.07 252 P P 01 22 31.8 +2.7
ABTO P P 01 22 31.8 +2.7
KIRV Kirov 36.14 325 P P 01 22 29.8 +0.7
comp=Z,32nm,0.9s,baz=103,slow=3.4,SNR=15
KIRV LR LR 01 38 35.1
comp=Z,707nm,18.2s,baz=112,slow=38
ZEI Tsey 36.25 298 eP P 01 22 31.9 +1.4
ZEI pmax pmax
comp=Z,13nm,1.6s
BGD Bogdanovka 36.53 295 P P 01 22 36.0 +3.0
ONI Oni 36.58 297 P P 01 22 35.8 +2.6
AKH Akhalkalaki 36.60 295 ⇑P P 01 22 35.8 +2.2
GOF Gofitskoye 36.87 302⇑eP P 01 22 39.9 +4.3
GOF pmax pmax
comp=Z,15nm,0.6s
KBZ Khabaz 36.97 299 P P 01 22 38.0 +1.6
comp=Z,3.0nm,1.1s,baz=80,slow=7.9,SNR=4.9
KBZ LR LR 01 40 34.4
comp=Z,714nm,19.7s,baz=81,slow=41
KBZ Khabaz 36.97 299 P P 01 22 38.0 +1.6
KIV Kislovodsk 37.12 300 eP P 01 22 38.6 +0.8
KIV eS S 01 28 25.6 +1.7
KIV pmax pmax
comp=Z,25nm,1.1s
BCA Borcka 38.00 296 ⇓P P 01 22 46.9 +1.7
YAK Yakutsk 38.05 30 P P 01 22 45.0 -0.3
comp=Z,6.8nm,0.4s,baz=250,slow=4.8,SNR=8.7
YAK Yakutsk 38.05 30 P P 01 22 44.6 -0.7
YAK Yakutsk 38.05 30 eP P 01 22 45.7 +0.4
YAK pmax pmax
comp=Z,20nm,1.0s
YAK pmax pmax
comp=N,13nm,1.5s
YAK pmax pmax
comp=E,25nm,1.4s
YAK MLR MLR
comp=Z,602nm,20.0s
YAK MLR MLR
comp=E,486nm,18.0s
YAK MLR MLR
comp=N,114nm,16.0s
GRNR Gornyy 38.07 49 eP P 01 22 45.1 -0.6
GRNR eS S 01 28 39.9 +1.9
GRNR pmax pmax
comp=Z,20nm,1.4s
GRNR MLR MLR
comp=Z,2µm,12.0s
VRH Novokhopyorsk 38.26 312 eP P 01 22 46.8 -0.5
VRH pmax pmax
comp=Z,90nm,1.7s
VRH MLR MLR
comp=Z,840nm,12.0s
PRGR Permogore 39.16 329 eP P 01 22 53.8 -0.8
PRGR pmax pmax
comp=Z,22nm,1.0s
SOC Sochi 39.28 299 eP P 01 22 53.2 -2.7
SOC ePPP PPP 01 24 51.1
SOC eS S 01 28 55.7 -0.6
SOC pmax pmax
comp=Z,23nm,1.0s
SOC MLR MLR
comp=Z,330nm,13.0s
RAYN Ar Rayn 39.42 267 i P P 01 22 57.3 -0.1
SNR=15
RAYN Ar Rayn 39.42 267 P P 01 22 56.8 -0.6
RAYN Ar Rayn 39.42 267 P P 01 22 56.8 -0.6
RAYN pmax pmax
comp=Z,26nm,1.1s
VORD Divnogorie 39.76 311 eP P 01 22 59.6 -0.2
VORD pmax pmax
comp=Z,40nm,1.0s
MJAR Matsushiro Arr 39.81 72 LR LR 01 40 53.5
comp=Z,482nm,18.7s,baz=280,slow=38
VSR Storozhevoye 39.86 311 eP P 01 23 00.3 -0.3
VSR pmax pmax
comp=Z,50nm,0.9s
VSR MLR MLR
comp=Z,1µm,14.0s
MOS Moscow 41.40 318 eP P 01 23 12.1 -1.2
MOS e 01 24 49.5
MOS eS S 01 29 30.2 +2.5
MOS i SS SS 01 32 28.6 -2.8
MOS pmax pmax
comp=Z,300nm,2.2s
MOS pmax pmax
comp=Z,90nm,1.6s
MOS MLR MLR
comp=Z,1µm,16.0s
KLMR Klimovskoe 41.63 326 eP P 01 23 13.8 -1.3
KLMR e 01 24 49.6
KLMR eSS SS 01 32 33.1 -2.8
KLMR pmax pmax
comp=Z,116nm,1.3s
KLMR Klimovskoe 41.63 326 eP P 01 23 13.9 -1.2
KLMR AMP 01 23 20.0
comp=Z,116nm,1.3s
KLMR ePP PP 01 24 49.7 -1.5
KLMR eSS SS 01 32 33.2 -2.7
KLMR eSS SS 01 32 33.2 -2.7
KLMR LQ LQ 01 37 21.4
KLMR LQ LQ 01 37 21.4
KLMR LR LR 01 40 14.4
OBN Obninsk 41.90 317 ⇑P P 01 23 17.3 0.0
OBN Obninsk 41.90 317 P P 01 23 17.4 0.0
OBN IAmb IAmb 01 23 22.1
comp=Z,77nm,1.3s
OBN Obninsk 41.90 317c iP P 01 23 18.1 +0.8
OBN i 01 24 56.5
OBN i 01 25 14.7
OBN eS S 01 29 36.5 +1.5
OBN pmax pmax
comp=Z,39nm,1.2s

OBN				MLR	MLR		
	comp=Z,738nm,18.0s						
GAZ	**Gaziantep**	**41.99**	**290**	IAmb	IAmb	01 23 24.0	
	comp=Z,43nm,1.0s						
YSS	**Yuzh-Sakhalins**	**42.05**	**55**	*e*P	**P**	**01 23 20.1**	**+1.4**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS				MLR	MLR		
	comp=E,600nm,14.0s						
ASAJ	**Asahikawa**	**42.10**	**60**	P	**P**	**01 23 19.4**	**+0.3**
	comp=E,13nm,0.8s,baz=294,slow=4.7,SNR=7.8						
JKA	**Kamikawa-asahi**	**42.10**	**60**	P	**P**	**01 23 19.4**	**+0.2**
TIXI	**Tiksi**	**43.20**	**17**	P	**P**	**01 23 27.7**	**-0.1**
	comp=E,31nm,0.8s,baz=231,slow=4.8,SNR=23						
TIXI	**Tiksi**	**43.20**	**17**	P	**P**	**01 23 27.2**	**-0.5**
TIXI				IAmb	IAmb	01 23 31.7	
	comp=Z,39nm,0.9s						
TIXI	**Tiksi**	**43.20**	**17**	*d* *i*P	**P**	**01 23 27.6**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,39nm,1.0s						
SIM	**Simferopol'**	**43.20**	**302**	*e*P	**P**	**01 23 28.8**	**+0.7**
SIM				pmax	pmax		
	comp=Z,19nm,1.1s						
TMCR	**Tamitsa**	**43.33**	**330**	*e*P	**P**	**01 23 28.6**	**-0.3**
TMCR				pmax	pmax		
	comp=Z,51nm,0.8s						
BR131	**Keskin Array S**	**44.25**	**294**	IAmb	IAmb	01 23 41.4	
	comp=Z,26nm,0.9s						
BR131	**Keskin Array S**	**44.25**	**294**	*d* *i*P	**P**	**01 23 37.1**	**+0.2**
BRTR	**Keskin Array B**	**44.26**	**294**	P	**P**	**01 23 37.4**	**+0.5**
	comp=Z,18nm,1.0s,baz=98,slow=7.6,SNR=30						
BRTR				PcP	**PcP**	**01 25 23.6**	**+2.4**
	comp=Z,9.5nm,1.2s,baz=91,slow=5.0,SNR=6.9						
BRTR	**Keskin Array B**	**44.26**	**294**	P	**P**	**01 23 36.8**	**-0.1**
BRTR					**PcP**	**01 25 21.0**	**-0.3**
DAMY	**Dhamar**	**44.73**	**256**	IAmb	IAmb	01 23 45.8	
	comp=Z,33nm,0.9s						
ANTO	**Ankara**	**44.87**	**295**	⇓P	**P**	**01 23 42.7**	**+1.0**
ANTO	**Ankara**	**44.87**	**295**	P	**P**	**01 23 41.7**	**0.0**
ANTO	**Ankara**	**44.87**	**295**	P	**P**	**01 23 41.7**	**0.0**
ANTO				pmax	pmax		
	comp=Z,101nm,1.2s						
MRSI	**Marisa**	**45.24**	**130**	P	P	01 23 50.5	+5.8
AKASG	**Malin Array Be**	**46.12**	**310**	P	**P**	**01 23 51.3**	**-0.1**
	comp=Z,23nm,0.8s,baz=80,slow=6.6,SNR=41						
AKASG				LR	LR	01 45 20.4	
	comp=Z,1μm,20.1s,baz=90,slow=39						
AKASG	**Malin Array Be**	**46.12**	**310**	P	**P**	**01 23 51.0**	**-0.4**
AKBB	**Malin Array Si**	**46.12**	**310**	IAmb	IAmb	01 23 55.7	
	comp=Z,50nm,1.2s						
KIEV	**Kiev**	**46.13**	**310**	P	**P**	**01 23 51.0**	**-0.5**
KMSI	**Cibinong**	**46.48**	**128**	P	**P**	**01 23 56.1**	**+1.6**
	comp=Z,77nm,0.6s						
KIS	**Kishinev**	**46.68**	**305**	*e*P	**P**	**01 23 56.0**	**+0.2**
KIS				LRM	MLR	01 46 34.0	
	comp=Z,500nm,17.0s						
MILM	**Milestii Mici**	**46.69**	**305**	⇓P	**P**	**01 23 55.8**	**0.0**
TTSI	**Tana Toraja**	**46.72**	**136**	P	**P**	**01 23 57.5**	**+1.1**
	comp=Z,51nm,1.2s						
MICGM	**Minsk**	**46.86**	**315**	*e*	**P**	**01 23 57.0**	**-0.1**
MNK	**Minsk**	**46.86**	**315**	*e*P	**P**	**01 23 57.0**	**-0.1**
SORM	**Soroca**	**46.87**	**307**	⇓P	**P**	**01 23 57.2**	**-0.2**
SORM	**Soroca**	**46.87**	**307**	P	**P**	**01 23 57.1**	**-0.2**
LEOM	**Leova**	**47.13**	**304**	⇓P	**P**	**01 23 59.7**	**+0.4**
LEOM	**Leova**	**47.13**	**304**	P	**P**	**01 23 59.7**	**+0.4**
TOPG	**Topolog**	**47.26**	**302**	⇓P	**P**	**01 24 00.6**	**+0.3**
MANR	**Mangalia**	**47.27**	**301**	⇓P	**P**	**01 24 00.9**	**+0.4**
SPSI	**Sidrap Palu**	**47.44**	**136**	P	**P**	**01 24 03.0**	**+1.0**
	comp=Z,795nmcomp=Z,52nm,0.8s						
VARL	**Varlezi**	**47.48**	**304**	⇓P	**P**	**01 24 03.3**	**+1.3**
NACGM	**Naroch**	**47.50**	**316**	*e*	**P**	**01 24 03.0**	**+0.9**
NACGM				*e*LR	LR	01 45 16.0	
IAS	**Iasi**	**47.51**	**306**	⇓P	**P**	**01 24 02.1**	**-0.1**
IAS	**Iasi**	**47.51**	**306**	P	**P**	**01 24 02.1**	**-0.1**
PSN	**Preselentsi**	**47.58**	**301**	*e*P	**P**	**01 24 07.5**	**+4.6**
HARR	**Harsova**	**47.60**	**302**	⇓P	**P**	**01 24 03.5**	**+0.5**
HARR	**Harsova**	**47.60**	**302**	P	**P**	**01 24 03.5**	**+0.5**
VSU	**Vasula**	**47.60**	**321**	*e*P	**P**	**01 24 03.3**	**+0.6**
VSU				IAmb	IAmb	01 24 07.5	
	comp=Z,114nm,0.8s						
VSU	**Vasula**	**47.60**	**321**	⇑*i*P	**P**	**01 24 02.8**	**0.0**
GHRR		**47.76**	**304**	⇑P	**P**	**01 24 05.3**	**+1.1**
IZAR	**Zarasai**	**47.80**	**317**	*e*P	**P**	**01 24 05.6**	**+1.2**
IIGN	**Ignalina**	**47.82**	**317**	*e*P	**P**	**01 24 05.8**	**+1.2**
IIGN				IAmb	IAmb	01 24 10.4	
	comp=Z,19nm,1.1s						
ISAL	**Salakas**	**47.87**	**317**	*e*P	**P**	**01 24 06.1**	**+1.2**
BNSI	**Bone**	**47.99**	**136**	P	**P**	**01 24 08.6**	**+2.3**
	comp=Z,32nm,1.0s						
AMRR	**Amara**	**48.03**	**302**	⇑P	**P**	**01 24 07.4**	**+1.0**
ODBI	**Odobesti**	**48.05**	**304**	⇑P	**P**	**01 24 08.0**	**+1.6**
FIA1	**FINESS Array S**	**48.13**	**325**	IAmb	IAmb	01 24 11.1	
	comp=Z,19nm,0.8s						
FINES	**FINESS Array B**	**48.13**	**325**	P	**P**	**01 24 07.3**	**+0.4**
	comp=Z,11nm,0.7s,baz=98,slow=8.4,SNR=35						
FINES				LR	LR	01 45 57.2	
	comp=Z,1μm,18.2s,baz=94,slow=38						
FINES	**FINESS Array B**	**48.13**	**325**	P	**P**	**01 24 07.2**	**+0.3**
TESR	**Tescani**	**48.22**	**305**	⇓P	**P**	**01 24 08.0**	**+0.2**
VRI	**Vrincioaia**	**48.26**	**304**	⇓P	**P**	**01 24 09.5**	**+1.4**
VRI	**Vrincioaia**	**48.26**	**304**	P	**P**	**01 24 09.5**	**+1.4**
NEF	**NEVSHA**	**48.31**	**300**	*e*P	**P**	**01 24 10.6**	**+2.1**
PLOR	**Plostina**	**48.31**	**304**	⇓P	**P**	**01 24 09.6**	**+0.9**
PLOR	**Plostina**	**48.31**	**304**	P	**P**	**01 24 09.5**	**+0.9**
SEY	**Seymchan**	**48.32**	**33**	⇑*i*P	**P**	**01 24 09.3**	**+1.0**
LEHL	**Lehliu**	**48.42**	**302**	⇓P	**P**	**01 24 10.6**	**+1.2**
BKSI	**Bulukumba**	**48.75**	**137**	P	**P**	**01 24 15.1**	**+3.0**
	comp=Z,36nm,0.9s						
RAZG	**Razgrad**	**48.80**	**301**	⇓P	**P**	**01 24 13.0**	**+0.7**
MLR	**Muntele Rosu**	**48.86**	**303**	⇓P	**P**	**01 24 14.5**	**+1.6**
OZUR		**48.87**	**304**	⇓P	**P**	**01 24 13.7**	**+0.8**
JMB	**Yambol**	**48.96**	**299**	*e*P	**P**	**01 24 14.4**	**+0.8**
BURAR	**Bucovina Array**	**49.03**	**306**	⇓P	**P**	**01 24 14.6**	**+0.4**
BURAR	**Bucovina Array**	**49.03**	**306**	P	**P**	**01 24 14.4**	**+0.2**
BURAR	**Bucovina Array**	**49.03**	**306**	P	**P**	**01 24 14.5**	**+0.4**
BUR08	**Bucovina Ar. S**	**49.04**	**306**	IAmb	IAmb	01 24 20.0	
	comp=Z,17nm,1.0s						
PABE	**Paberze**	**49.10**	**317**	*e*P	**P**	**01 24 15.0**	**+0.6**
PABE				IAmb	IAmb	01 24 16.0	
	comp=Z,59nm,1.1s						
DOPR	**Dopca**	**49.16**	**304**	⇓P	**P**	**01 24 16.1**	**+1.0**
ELND	**Elena**	**49.38**	**300**	⇓P	**P**	**01 24 17.3**	**+0.5**
VOIR		**49.49**	**304**	⇑P	**P**	**01 24 18.2**	**+0.6**
VOIR		**49.49**	**304**	P	**P**	**01 24 18.2**	**+0.6**
LVV	**L'vov**	**49.52**	**309**	*e*P	**P**	**01 24 17.5**	**-0.2**
LVV				*e*S	**S**	**01 31 22.0**	**-3.1**
ARCES	**ARCESS Array B**	**49.52**	**336**	P	**P**	**01 24 18.3**	**+0.8**
	comp=Z,12nm,0.9s,baz=101,slow=7.8,SNR=28						
ARCES				LR	LR	01 46 13.9	
	comp=Z,785nm,21.3s,baz=102,slow=37						
ARCES	**ARCESS Array B**	**49.52**	**336**	P	**P**	**01 24 17.7**	**+0.2**
ARE0	**ARCESS Array S**	**49.52**	**336**	*e*P	**P**	**01 24 18.1**	**+0.7**
ZIMR		**49.60**	**301**	⇓P	**P**	**01 24 18.6**	**+0.2**
COPA	**Copaceanca**	**49.61**	**302**	⇓P	**P**	**01 24 19.1**	**+0.6**
ARCR	**ARCALIA**	**49.69**	**306**	⇓P	**P**	**01 24 20.7**	**+1.6**
ALN	**Alexandroupoli**	**49.69**	**298**		pP	01 24 23.4	-1.4
ALN	**Alexandroupoli**	**49.69**	**298**	P	pP	01 24 24.2	-0.6
HUMR	**Humele**	**49.70**	**302**	⇓P	**P**	**01 24 19.7**	**+0.5**
LBMI	**Labuha**	**49.72**	**126**	P	P	01 24 30.7	+11
SANI	**Sanana**	**49.76**	**128**	P	**P**	**01 24 22.9**	**+3.0**
	comp=Z,758nmcomp=Z,24nm,0.9s						
ARR	**Arges**	**49.79**	**304**	⇓P	**P**	**01 24 20.5**	**+0.5**
BMR	**Baia Mare**	**50.17**	**307**	⇓P	**P**	**01 24 24.1**	**+1.4**
VLAD	**Vladila**	**50.21**	**302**	⇓P	**P**	**01 24 22.8**	**-0.2**
PBUR	**Paburge**	**50.23**	**318**	*e*P	**P**	**01 24 22.9**	**0.0**
KTK1	**Kautokeino**	**50.23**	**335**	*e*P	**P**	**01 24 23.7**	**+0.9**
LOT	**Lotru**	**50.37**	**304**	⇓P	**P**	**01 24 25.1**	**+0.7**
KWP	**Kalwaria Pacla**	**50.40**	**309**	*e*P	**P**	**01 24 25.3**	**+0.9**
KWP	**Kalwaria Pacla**	**50.40**	**309**	*e*P	**P**	**01 24 25.3**	**+0.9**
PLD	**Plovdiv**	**50.40**	**299**	*e*P	**P**	**01 24 24.2**	**-0.3**
PLD	**Plovdiv**	**50.40**	**299**	P	**P**	**01 24 27.1**	**+2.6**
PLD				pmax	pmax		
	comp=Z,75nm,1.6s						
RZN	**Rozhen**	**50.49**	**299**	*e*P	**P**	**01 24 26.3**	**+0.9**
TRPA	**Tarpa**	**50.73**	**307**	⇑P	**P**	**01 24 27.5**	**+0.5**
KOLS	**Kolonicke sedl**	**50.78**	**308**	*e*P	**P**	**01 24 27.8**	**+0.5**
KOLS				pmax	pmax		
	comp=Z,23nm,1.2s						
KOLS	**Kolonicke sedl**	**50.78**	**308**	*e*P	**P**	**01 24 27.8**	**+0.5**
UZH	**Uzhgorod**	**50.81**	**308**	*e*P	**P**	**01 24 26.9**	**-0.6**
UZH				*i*		01 24 34.1	
UZH				*e*S	**S**	**01 31 38.3**	**-4.8**
DRGR		**50.85**	**306**	⇓P	**P**	**01 24 28.9**	**+0.9**
DRGR		**50.85**	**306**	P	**P**	**01 24 28.8**	**+0.9**
DRGR				pmax	pmax		
	comp=Z,36nm,1.2s						
DEV	**Deva**	**50.89**	**304**	⇓P	**P**	**01 24 29.4**	**+1.2**
DEV	**Deva**	**50.89**	**304**	P	**P**	**01 24 29.3**	**+1.2**
GZR	**Gura Zlata**	**51.07**	**304**	⇓P	**P**	**01 24 29.9**	**+0.3**
PETK	**Petropavlovsk-**	**51.22**	**46**	LR	LR	01 48 02.4	
	comp=Z,850nm,18.2s,baz=269,slow=38						
BEL	**Belsk**	**51.30**	**312**	*e*P	**P**	**01 24 31.8**	**+0.7**
BEL	**Belsk**	**51.30**	**312**	*e*P	**P**	**01 24 31.8**	**+0.7**
CRVS	**Cervenica-Dubn**	**51.31**	**309**	*e*P	**P**	**01 24 32.7**	**+1.4**
CRVS				pmax	pmax		
	comp=Z,49nm,1.4s						
CRVS	**Cervenica-Dubn**	**51.31**	**309**	*e*P	**P**	**01 24 32.7**	**+1.4**
VTS	**Vitosha**	**51.34**	**300**	⇑P	**P**	**01 24 32.8**	**+1.0**
VTS	**Vitosha**	**51.34**	**300**	*e*P	**P**	**01 24 29.7**	**-2.1**
VTS	**Vitosha**	**51.34**	**300**	IAmb	IAmb	01 24 36.9	
	comp=Z,32nm,1.3s						
VTS	**Vitosha**	**51.34**	**300**	P	P	01 24 38.7	+6.9
NLAI	**Namlea**	**51.38**	**128**	P	**P**	**01 24 36.1**	**+3.9**
	comp=Z,8μmcomp=Z,14nm,0.5s						
SRS	**Serrai**	**51.44**	**298**	P	**P**	**01 24 35.7**	**+3.3**
SRS				pmax	pmax		
	comp=Z,15nm,1.6s						
KKB	**Krupnik**	**51.63**	**299**	*e*P	**P**	**01 24 33.0**	**-0.8**
PAIG	**Paliouri**	**51.68**	**297**	P	**P**	**01 24 37.4**	**+3.2**
TRO	**Tromso**	**51.82**	**335**	*e*P	**P**	**01 24 34.7**	**0.0**
BZS	**Buzias**	**51.82**	**304**	⇓P	**P**	**01 24 35.6**	**+0.4**
BZS	**Buzias**	**51.82**	**304**	P	**P**	**01 24 38.1**	**+2.9**
BZS				pmax	pmax		
	comp=Z,26nm,1.2s						
NIE	**Niedzica**	**51.98**	**309**	*e*P	**P**	**01 24 37.5**	**+1.2**
NIE	**Niedzica**	**51.98**	**309**	*e*P	**P**	**01 24 37.5**	**+1.2**
KECS	**Kecovo**	**52.02**	**308**	*e*P	**P**	**01 24 40.2**	**+3.6**
KECS				pmax	pmax		
	comp=Z,19nm,1.0s						
KECS	**Kecovo**	**52.02**	**308**	*e*P	**P**	**01 24 40.2**	**+3.6**
VAY	**Valandovo**	**52.14**	**299**	P	**P**	**01 24 40.7**	**+3.1**
OJC	**Ojcow**	**52.16**	**310**	*e*P	**P**	**01 24 38.2**	**+0.6**
OJC	**Ojcow**	**52.16**	**310**	IAmb	IAmb	01 24 42.8	
	comp=Z,66nm,1.3s						
OJC	**Ojcow**	**52.16**	**310**	*e*P	**P**	**01 24 38.2**	**+0.6**
GRG	**Griva**	**52.36**	**298**	P	**P**	**01 24 41.5**	**+2.2**
SIJI	**Sorong**	**52.48**	**122**	P	**P**	**01 24 40.5**	**+0.1**
	comp=Z,18nm,0.9s,baz=340,slow=7.6,SNR=5.9						
LIT	**Litokhoron**	**52.52**	**297**	IAmb	IAmb	01 24 44.5	
	comp=Z,42nm,1.2s						
LIT	**Litokhoron**	**52.52**	**297**	P	**P**	**01 24 43.0**	**+2.5**
PSZ	**Piszkesteto**	**52.52**	**308**	IAmb	IAmb	01 24 45.1	
	comp=Z,27nm,1.1s						
MSAI	**Masohi**	**52.67**	**127**	P	**P**	**01 24 46.1**	**+4.3**
	comp=Z,8.2nm,0.7s						
AGG	**Agios Georgios**	**52.94**	**296**	IAmb	IAmb	01 24 46.5	
	comp=Z,70nm,1.5s						
STEI	**Steigen**	**53.08**	**333**	*e*P	**P**	**01 24 45.1**	**+1.0**
VYHS	**Vyhne**	**53.10**	**308**	*e*P	**P**	**01 24 45.2**	**+0.6**
VYHS				pmax	pmax		
	comp=Z,57nm,1.3s						
VYHS	**Vyhne**	**53.10**	**308**	*e*P	**P**	**01 24 45.2**	**+0.6**
BUD	**Budapest**	**53.18**	**307**	P	**P**	**01 24 46.9**	**+1.7**
BUD				pmax	pmax		
	comp=Z,44nm,1.1s						
GKP	**Gorka Klasztor**	**53.24**	**315**	*e*P	**P**	**01 24 46.2**	**+0.7**
GKP	**Gorka Klasztor**	**53.24**	**315**	*e*P	**P**	**01 24 46.2**	**+0.7**
OKC	**Ostrava-Krasne**	**53.28**	**310**	*e*P	**P**	**01 24 46.6**	**+0.7**
OKC				*e*pP	**pP**	**01 24 48.8**	**-2.8**
OKC				AMS	AMS	01 49 10.0	
	comp=Z,900nm,8.1s						
OKC	**Ostrava-Krasne**	**53.28**	**310**	*e*P	**P**	**01 24 46.6**	**+0.7**
OKC				MLR	MLR		
	comp=Z,900nm,8.1s						
SRO	**Srobarova**	**53.58**	**308**	*e*P	**P**	**01 24 51.6**	**+3.5**
SRO				pmax	pmax		
	comp=Z,70nm,1.2s						
SRO	**Srobarova**	**53.58**	**308**	*e*P	**P**	**01 24 51.6**	**+3.5**
SPA0	**Spitsbergen Ar**	**53.59**	**346**	*e*P	**P**	**01 24 49.4**	**+1.6**
SPITS	**Spitsbergen Ar**	**53.59**	**346**	P	**P**	**01 24 48.6**	**+0.8**
	comp=Z,39nm,1.1s,baz=137,slow=11,SNR=10.0						
MORC	**Moravsky Berou**	**53.67**	**310**	*e*P	**P**	**01 24 49.9**	**+1.0**
MORC	**Moravsky Berou**	**53.67**	**310**	⇓P	**P**	**01 24 49.3**	**+0.4**
MORC	**Moravsky Berou**	**53.67**	**310**	IAmb	IAmb	01 24 54.3	
	comp=Z,66nm,1.4s						
MORC	**Moravsky Berou**	**53.67**	**310**	P	**P**	**01 24 49.1**	**+0.2**
MORC				pmax	pmax		
	comp=Z,127nm,1.3s						
LOF	**Lofoten**	**53.72**	**333**	*e*P	**P**	**01 24 49.0**	**+0.1**
JAVC	**Velka Javorina**	**53.78**	**309**	*e*P	**P**	**01 24 51.6**	**+1.9**
SMOL	**Smolenice**	**54.01**	**309**	*e*P	**P**	**01 24 52.7**	**+1.4**
SMOL				pmax	pmax		
	comp=Z,24nm,1.6s						
SMOL	**Smolenice**	**54.01**	**309**	*e*P	**P**	**01 24 52.7**	**+1.4**
KRLC	**Kraliky**	**54.10**	**311**	*e*P	**P**	**01 24 52.5**	**+0.5**
KRLC				*e*pP	**pP**	**01 24 55.7**	**-1.9**
KRLC				AMS	AMS	01 49 40.0	
	comp=Z,900nm,18.8s						
KRLC	**Kraliky**	**54.10**	**311**	*e*P	**P**	**01 24 52.5**	**+0.5**
KRLC				MLR	MLR		
	comp=Z,900nm,18.8s						
MODS	**Modra-Piesok**	**54.14**	**309**	*e*P	**P**	**01 24 54.0**	**+1.7**
MODS				pmax	pmax		
	comp=Z,35nm,1.4s						
MODS	**Modra-Piesok**	**54.14**	**309**	*e*P	**P**	**01 24 54.0**	**+1.7**
GUMO	**Guam**	**54.16**	**98**	LR	LR	01 46 60.0	
	comp=Z,252nm,19.9s,baz=310,slow=35						
KSP	**Ksiaz**	**54.25**	**312**	*e*P	**P**	**01 24 53.5**	**+0.5**
KSP	**Ksiaz**	**54.25**	**312**	*e*P	**P**	**01 24 53.5**	**+0.5**
BILL	**Bilibino**	**54.27**	**27**	P	**P**	**01 24 53.1**	**+0.2**
BILL				IAmb	IAmb	01 24 55.4	
	comp=Z,32nm,1.3s						
BILL	**Bilibino**	**54.27**	**27**	⇓*i*P	**P**	**01 24 53.8**	**+0.9**
BILL				*e*		01 26 55.4	
BILL				*e*S	**S**	**01 32 23.6**	**-6.3**
BILL				pmax	pmax		
	comp=Z,17nm,1.1s						
BILL				MLR	MLR		
	comp=Z,578nm,16.0s						
ZST	**Bratislava**	**54.29**	**308**	*e*P	**P**	**01 24 55.4**	**+2.1**
ZST				pmax	pmax		
	comp=Z,29nm,1.1s						
ZST	**Bratislava**	**54.29**	**308**	*e*P	**P**	**01 24 55.4**	**+2.1**
DPC	**Dobruska-Polom**	**54.33**	**311**	*e*P	**P**	**01 24 54.6**	**+1.0**
DPC				*e*pP	**pP**	**01 24 57.8**	**-1.5**
DPC				AMS	AMS	01 49 50.0	
	comp=Z,1μm,17.1s						
DPC	**Dobruska-Polom**	**54.33**	**311**	*e*P	**P**	**01 24 54.6**	**+1.0**
DPC				MLR	MLR		
	comp=Z,1μm,17.1s						
OSTC	**Ostas**	**54.35**	**311**	*e*P	**P**	**01 24 54.7**	**+0.9**
OSTC				*e*x	x	01 24 57.6	
OSTC				AMS	AMS	01 49 50.0	
	comp=Z,1μm,20.5s						
VRAC	**Vranov**	**54.38**	**310**	*e*P	**P**	**01 24 54.8**	**+0.8**
VRAC	**Vranov**	**54.38**	**310**	⇓P	**P**	**01 24 55.1**	**+1.2**
VRAC	**Vranov**	**54.38**	**310**	P	**P**	**01 24 55.1**	**+1.2**
CHVC	**Chvalec**	**54.45**	**311**	*e*P	**P**	**01 24 54.8**	**+0.3**
CHVC				*e*pP	**pP**	**01 24 58.4**	**-1.7**
CHVC				AMS	AMS	01 49 50.0	
	comp=Z,1μm,18.9s						
UPC	**Upice**	**54.49**	**311**	*e*P	**P**	**01 24 55.8**	**+1.0**
UPC				*e*pP	**pP**	**01 24 58.7**	**-1.7**
UPC				AMS	AMS	01 49 20.0	
	comp=Z,1μm,24.6s						
UPC	**Upice**	**54.49**	**311**	*e*P	**P**	**01 24 55.8**	**+1.0**
UPC				MLR	MLR		
	comp=Z,1μm,24.6s						
NSS	**Namsos**	**54.56**	**329**	*e*P	**P**	**01 24 54.8**	**-0.2**
KRUC	**Moravsky**	**54.56**	**310**	*e*P	**P**	**01 24 56.2**	**+0.9**
FAKI	**Fak Fak**	**54.63**	**123**	P	**P**	**01 24 56.1**	**0.0**
	comp=Z,28nm,0.9s						
FAKI	**Fak Fak**	**54.63**	**123**	P	**P**	**01 24 55.1**	**-1.0**
FAKI				IAmb	IAmb	01 24 59.7	
	comp=Z,20nm,0.9s						
SOEI	**Soe**	**54.71**	**136**	P	**P**	**01 24 56.0**	**-0.9**
	comp=Z,3μmcomp=Z,355nm,1.0s						
SOP	**Sopron**	**54.77**	**308**	P	**P**	**01 24 57.7**	**+0.9**
SOP				pmax	pmax		
	comp=Z,48nm,1.3s						
BLY	**Banja Luka**	**55.07**	**304**	IAmb	IAmb	01 25 02.9	
	comp=Z,63nm,1.4s						
TREC	**Trest**	**55.09**	**310**	*e*P	**P**	**01 25 00.2**	**+1.1**
TREC				*e*pP	**pP**	**01 25 04.5**	**-0.3**
TREC				AMS	AMS	01 50 20.0	
	comp=Z,1μm,20.8s						
TREC	**Trest**	**55.09**	**310**	*e*P	**P**	**01 25 00.2**	**+1.1**
TREC				MLR	MLR		
	comp=Z,1μm,20.8s						
CONA	**Conrad Observa**	**55.16**	**308**	*e*pP	**P**	**01 25 00.4**	**+0.6**
	comp=Z,54nm,1.1s,SNR=17						
NC602	**NORSAR Array S**	**55.20**	**324**	*e*P	**P**	**01 24 59.8**	**+0.1**
NORES	**NORESS Array B**	**55.20**	**324**	P	**P**	**01 25 00.0**	**+0.3**
NORES				pmax	pmax		
	comp=Z,10.0nm,0.3s						
NB201	**NORSAR Array S**	**55.27**	**325**	IAmb	IAmb	01 25 04.1	
	comp=Z,44nm,1.1s						
RGN	**Rugen**	**55.29**	**317**	*e*P	**P**	**01 25 01.4**	**+0.9**
	comp=Z,109nm,1.1s,baz=75,slow=7.0						
NB2	**NORSAR Subarra**	**55.31**	**325**	P	**P**	**01 25 00.4**	**-0.2**
	comp=Z,195nm,2.0s,baz=82,slow=7.9						
NB2	**NORSAR Subarra**	**55.31**	**325**	P	**P**	**01 25 00.4**	**-0.2**
	baz=82,slow=7.9						
NB2	**NORSAR Subarra**	**55.31**	**325**	P	**P**	**01 24 57.9**	**-2.7**
NB2				pmax	pmax		
	comp=Z,505nm,2.1s						
NOA	**NORSAR Array B**	**55.31**	**325**	P	**P**	**01 25 00.5**	**-0.2**
	comp=Z,21nm,0.8s,baz=82,slow=7.2,SNR=54						
NOA				LR	LR	01 50 29.9	
	comp=Z,1μm,18.8s,baz=90,slow=38						
PVCC	**Panska Ves**	**55.39**	**312**	*e*P	**P**	**01 25 02.4**	**+1.2**
PVCC				*e*pP	**pP**	**01 25 05.0**	**-1.9**
PVCC				AMS	AMS	01 50 00.0	
	comp=Z,900nm,17.3s						
PVCC	**Panska Ves**	**55.39**	**312**	*e*P	**P**	**01 25 02.4**	**+1.2**
PVCC				MLR	MLR		
	comp=Z,900nm,17.3s						
GOPC	**GO Pecny, Ondr**	**55.39**	**311**	*e*P	**P**	**01 25 01.6**	**+0.3**
GOPC				*e*pP	**pP**	**01 25 05.0**	**-2.0**
GOPC				AMS	AMS	01 50 30.0	
	comp=Z,1μm,22.3s						
GOPC	**GO Pecny, Ondr**	**55.39**	**311**	*e*P	**P**	**01 25 01.6**	**+0.3**
GOPC				MLR	MLR		
	comp=Z,1μm,22.3s						
RUE	**Ruedersdorf**	**55.44**	**314**	*e*P	**P**	**01 25 01.9**	**+0.3**
	comp=Z,41nm,1.0s,baz=75,slow=7.0						
TBLU	**Trondheim**	**55.45**	**327**	*e*P	**P**	**01 25 01.6**	**+0.1**
NBO00	**NORSAR Array S**	**55.52**	**325**	IAmb	IAmb	01 25 05.7	
	comp=Z,48nm,1.1s						
PRU	**Pruhonice**	**55.53**	**311**	*e*P	**P**	**01 25 03.2**	**+1.0**
PRU				*e*pP	**pP**	**01 25 06.1**	**-1.8**
PRU				AMS	AMS	01 50 30.0	
	comp=Z,1μm,17.0s						
PRU	**Pruhonice**	**55.53**	**311**	*e*P	**P**	**01 25 03.2**	**+1.0**
PRU				MLR	MLR		
	comp=Z,1μm,17.0s						
ARSA	**Arzberg**	**55.55**	**308**	*e*pP	**P**	**01 25 03.7**	**+1.2**
	comp=Z,30nm,1.4s						
PRA	**Prague**	**55.58**	**311**	*e*P	**P**	**01 25 03.6**	**+1.0**
PRA				*e*pP	**pP**	**01 25 06.4**	**-1.9**
PRA				AMS	AMS	01 50 40.0	
	comp=Z,1μm,21.9s						
PRA	**Prague**	**55.58**	**311**	*e*P	**P**	**01 25 03.6**	**+1.0**
PRA				MLR	MLR		
	comp=Z,1μm,21.9s						
BRG	**Berggiesshubel**	**55.70**	**312**	*e*P	**P**	**01 25 04.0**	**+0.6**
	comp=Z,32nm,0.9s,baz=75,slow=7.0						
BRG	**Berggiesshubel**	**55.70**	**312**	*i* P	**P**	**01 25 04.1**	**+0.6**
BRG				S	**S**	**01 32 53.0**	**+3.5**
BRG				pmax	pmax		
	comp=Z,32nm,0.9s						
BRG				MLR	MLR		
	comp=N,735nm,20.2s						
BRG				MLR	MLR		
	comp=E,621nm,20.9s						
BRG				MLR	MLR		
	comp=Z,948nm,18.1s						
OSL	**Oslo**	**55.72**	**323**	*e*P	**P**	**01 25 04.2**	**+0.8**
PBCC	**Pribram**	**55.94**	**311**	*e*P	**P**	**01 25 06.1**	**+0.9**
PBCC				*e*pP	**pP**	**01 25 09.2**	**-1.7**
SOKA	**Soboth**	**56.02**	**307**	pP	**P**	**01 25 06.6**	**+0.7**
	comp=Z,78nm,1.6s,SNR=12						
FBE	**Freiberg**	**56.05**	**312**	*e*P	**P**	**01 25 06.8**	**+0.8**
	comp=Z,46nm,1.1s,baz=75,slow=7.0						
CLL	**Collm**	**56.17**	**313**	*e*P	**P**	**01 25 07.0**	**+0.2**
	comp=Z,35nm,1.1s,baz=75,slow=7.0						
CLL	**Collm**	**56.17**	**313**	⇓*i*P	**P**	**01 25 07.0**	**+0.2**
	comp=Z,70nm,1.6s						
CLL				*e*PPP	PPP	01 28 22.0	
CLL				*e*SS	**SS**	**01 36 42.0**	**+0.2**
CLL	**Collm**	**56.17**	**313**	IAmb	IAmb	01 25 11.1	
	comp=Z,33nm,1.1s						
CLL	**Collm**	**56.17**	**313**	⇓*i*P	**P**	**01 25 07.0**	**+0.2**
CLL				pmax	pmax		
	comp=Z,70nm,1.6s						
DOMB	**Dombas**	**56.17**	**326**	*e*P	**P**	**01 25 07.0**	**+0.3**
MOA	**Molln**	**56.22**	**309**	*e*pP	**P**	**01 25 06.9**	**-0.4**
	comp=Z,39nm,1.6s,SNR=6.5						
KONO	**Kongsberg**	**56.33**	**323**	*e*P	**P**	**01 25 08.5**	**+0.7**
KONO	**Kongsberg**	**56.33**	**323**	P	**P**	**01 25 08.1**	**+0.3**
KONO				IAmb	IAmb	01 25 11.1	
	comp=Z,55nm,1.4s						
KONO	**Kongsberg**	**56.33**	**323**	⇑*i*P	**P**	**01 25 06.3**	**-1.5**
KONO				pmax	pmax		
	comp=Z,25nm,1.1s						
GEC2	**GERESS Array S**	**56.33**	**310**	*e*P	**P**	**01 25 08.9**	**+0.8**
	comp=Z,68nm,1.1s,baz=75,slow=7.0						
GEC2	**GERESS Array S**	**56.33**	**310**	P	**P**	**01 25 08.4**	**+0.2**
GERES	**GERESS Array B**	**56.33**	**310**	P	**P**	**01 25 08.8**	**+0.6**
	comp=Z,30nm,0.9s,baz=77,slow=7.0,SNR=52						
GERES				LR	LR	01 51 31.6	
	comp=Z,1μm,21.6s,baz=78,slow=38						
GERES	**GERESS Array B**	**56.33**	**310**	P	**P**	**01 25 08.3**	**+0.2**
KHC	**Kasperske Hory**	**56.34**	**310**	*e*P	**P**	**01 25 08.6**	**+0.4**
KHC				*e*pP	**pP**	**01 25 11.6**	**-2.2**
KHC				AMS	AMS	01 51 00.0	
	comp=Z,800nm,17.1s						
KHC	**Kasperske Hory**	**56.34**	**310**	⇑*i*P	**P**	**01 25 09.5**	**+1.3**
KHC				pmax	pmax		
	comp=Z,37nm,1.1s						
OBKA	**Obir**	**56.39**	**307**	*e*pP	**P**	**01 25 09.1**	**+0.5**
	comp=Z,38nm,1.3s						
TANN	**Tannenbergstha**	**56.72**	**312**	*e*P	**P**	**01 25 11.4**	**+0.5**
	comp=Z,140nm,1.7s,baz=75,slow=7.0						
NKC	**Novy Kostel**	**56.77**	**312**	*e*P	**P**	**01 25 12.2**	**+1.0**
NKC				*e*pP	**pP**	**01 25 14.5**	**-2.4**
NKC				AMS	AMS	01 50 30.0	
	comp=Z,1μm,17.2s						
NKC	**Novy Kostel**	**56.77**	**312**	*e*P	**P**	**01 25 12.2**	**+1.0**
NKC				MLR	MLR		
	comp=Z,1μm,17.2s						
WET	**Wettzell**	**56.78**	**310**	*e*P	**P**	**01 25 12.0**	**+0.8**
	comp=Z,39nm,1.2s,baz=75,slow=7.0						
MOL	**Molde**	**56.78**	**327**	*e*P	**P**	**01 25 11.8**	**+0.8**
WERN	**Wernitzgruen**	**56.81**	**312**	*e*P	**P**	**01 25 12.1**	**+0.6**
	comp=Z,60nm,1.6s,baz=75,slow=7.0						
GUNZ	**Gunzen**	**56.81**	**312**	*e*P	**P**	**01 25 12.1**	**+0.6**
	comp=Z,42nm,1.0s,baz=75,slow=7.0						
PLN	**Plauen**	**56.89**	**312**	*e*P	**P**	**01 25 12.5**	**+0.5**
	comp=Z,33nm,1.2s,baz=75,slow=7.0						
NEUB	**Neuenburg**	**56.95**	**313**	*e*P	**P**	**01 25 12.7**	**+0.3**
	comp=Z,66nm,1.0s,baz=75,slow=7.0						
MYKA	**Terra Mystica**	**56.96**	**307**	*e*pP	**P**	**01 25 13.0**	**+0.4**
	comp=Z,12nm,1.0s						
TIP	**Timpagrande**	**57.02**	**298**	P	**P**	**01 25 12.9**	**-0.2**
TIP				IAmb	IAmb	01 25 16.2	
	comp=Z,26nm,1.1s						
KBA	**Koelnbreinsper**	**57.03**	**308**	*e*pP	**P**	**01 25 14.0**	**+0.8**
	comp=Z,30nm,1.1s						
ROTZ	**Rotzenmuhle**	**57.04**	**311**	*e*P	**P**	**01 25 14.1**	**+1.0**
	comp=Z,96nm,1.4s,baz=75,slow=7.0						
MANZ	**Manzenberg**	**57.05**	**311**	*e*P	**P**	**01 25 14.0**	**+0.8**
	comp=Z,53nm,1.4s,baz=75,slow=7.0						
GOET	**G??ttrup**	**57.05**	**320**	*i* P	**P**	**01 25 14.9**	**+2.0**
	comp=Z,114nm,0.9s						
BSEG	**Bad Segeberg**	**57.15**	**316**	*e*P	**P**	**01 25 14.7**	**+1.0**
	comp=Z,49nm,0.9s,baz=75,slow=7.0						
MOX	**Moxa**	**57.19**	**312**	*e*P	**P**	**01 25 14.7**	**+0.6**
	comp=Z,43nm,1.2s,baz=75,slow=7.0						
MOX				*e*L	L	01 51 25.9	
	comp=Z,559nm,20.3s						
MUD	**Monsted U'grnd**	**57.21**	**319**	*i* P	**P**	**01 25 14.8**	**+0.7**
	comp=Z,53nm,1.2s						
MUD	**Monsted U'grnd**	**57.21**	**319**	*i* P	**P**	**01 25 14.8**	**+0.7**
MUD				pmax	pmax		
	comp=Z,53nm,1.2s						
MUD				MLR	MLR		
	comp=Z,2μm,13.0s						
RJOB	**Jochberg**	**57.21**	**309**	*e*P	**P**	**01 25 14.6**	**+0.2**
	comp=Z,125nm,2.2s,baz=75,slow=7.0						
NRDL	**Niedersach Rie**	**57.62**	**315**	*e*P	**P**	**01 25 18.1**	**+1.1**
	comp=Z,98nm,1.1s,baz=75,slow=7.0						
CLZ	**Clausthal**	**57.63**	**314**	*e*P	**P**	**01 25 17.9**	**+0.6**

comp=Z,102nm,1.1s,baz=75,slow=7.0
ABTA Abfaltersbach 57.67 308 eP P 01 25 16.6 -1.1
comp=Z,17nm,1.6s
GRA1 Grafenberg Arr 57.68 311 P P 01 25 18.3 +0.7
GRF Grafenberg Arr 57.68 311 eP P 01 25 18.7 +1.1
comp=Z,73nm,1.1s,baz=75,slow=7.0
GRF eL L 01 52 15.9
comp=Z,1μm,18.7s
GRF Grafenberg Arr 57.68 311 P P 01 25 18.3 +0.7
GRF pmax pmax
comp=Z,63nm,1.0s
STAL STALIGIAL 57.68 307 IAmb IAmb 01 25 20.9
comp=Z,45nm,1.2s
GTTG Gottingen 57.96 314 eP P 01 25 20.1 +0.6
comp=Z,83nm,1.1s,baz=75,slow=7.0
RETH Rethem/Aller, 58.00 315 eP P 01 25 20.5 +0.8
comp=Z,30nm,1.2s,baz=75,slow=7.0
WTTA Wattenberg 58.10 308 eP P 01 25 20.2 -0.5
comp=Z,33nm,1.2s
WATA Walderalm 58.12 309 epP P 01 25 20.4 -0.5
comp=Z,40nm,1.3s
SQTA Sankt Quirin 58.39 308 epP P 01 25 22.3 -0.4
comp=Z,30nm,1.1s
MOTA Moosalm 58.42 309 epP P 01 25 22.8 -0.2
comp=Z,54nm,1.9s
CTI Castel Tesino 58.45 307 IAmb IAmb 01 25 30.1
comp=Z,43nm,1.2s
RETA Reutte 58.60 309 epP P 01 25 24.1 0.0
comp=Z,27nm,1.1s,SNR=7.1
TEOL Teolo 58.65 306 IAmb IAmb 01 25 28.2
comp=Z,43nm,1.1s
FETA Feichten 58.76 308 eP P 01 25 24.4 -1.0
comp=Z,33nm,1.1s,SNR=5.7
NOR Nord 58.98 350 i P P 01 25 26.0 -0.2
comp=Z,62nm,1.4s
NOR Nord 58.98 350 i P P 01 25 26.0 -0.2
NOR pmax pmax
comp=Z,62nm,1.4s
NOR MLR MLR
comp=Z,1μm,14.0s
IBBN Ibbenburen 59.06 315 eP P 01 25 27.7 +0.6
comp=Z,160nm,2.0s,baz=75,slow=7.0
STU Stuttgart 59.22 311 P P 01 25 28.4 +0.1
STU pmax pmax
comp=Z,56nm,1.4s
DAVA Damuels 59.23 309 epP P 01 25 28.6 -0.1
comp=Z,36nm,1.1s
TNS Taunus Mts 59.25 312 eP P 01 25 28.9 +0.3
comp=Z,96nm,1.6s,baz=75,slow=7.0
BUG Bochum--Univer 59.60 314 eP P 01 25 31.4 +0.5
comp=Z,49nm,1.1s,baz=75,slow=7.0
KMBO Kilima Mbogo 59.86 246 P P 01 25 32.8 -0.6
comp=Z,9.0nm,1.1s,baz=44,slow=9.6,SNR=13
KMBO Kilima Mbogo 59.86 246 i P P 01 25 34.8 +1.3
SNR=7.7
KMBO Kilima Mbogo 59.86 246 P P 01 25 32.9 -0.6
KMBO IAmb IAmb 01 25 36.7
comp=Z,22nm,1.2s
KMBO Kilima Mbogo 59.86 246 i P P 01 25 34.9 +1.4
KMBO pmax pmax
comp=Z,9.0nm,1.0s
BFO Black Forest 59.90 310 eP P 01 25 33.0 0.0
comp=Z,34nm,1.3s,baz=75,slow=7.0
BFO Black Forest 59.90 310 P P 01 25 32.9 -0.2
BFO IAmb IAmb 01 25 37.4
comp=Z,29nm,1.2s
BFO Black Forest 59.90 310 P P 01 25 32.9 -0.2
BFO pmax pmax
comp=Z,29nm,1.2s
CDF Champ du Feu 60.54 311 eP P 01 25 37.1 -0.4
CDF pmax pmax
comp=Z,51nm,1.1s
MEM Membach 60.62 313 P P 01 25 37.4 -0.5
comp=Z,26nm,1.3s
ECH Echery 60.68 311 IAmb IAmb 01 25 42.4
comp=Z,28nm,1.0s
WLF Walferdange 60.83 312 eP P 01 25 40.2 +0.8
comp=Z,132nm,1.8s,baz=75,slow=7.0
WLF Walferdange 60.83 312 P P 01 25 39.8 +0.4
WLF pmax pmax
comp=Z,227nm,1.3s
HINF Hinteralfeld 61.00 310 eP P 01 25 40.1 -0.5
HINF pmax pmax
comp=Z,33nm,1.2s
BCLA Clavier 61.10 313 P P 01 25 42.0 +0.9
comp=Z,30nm,1.4s
DAG Danmarks Havn 61.23 346 i P P 01 25 41.4 -0.3
comp=Z,15nm,0.8s
DAG Danmarks Havn 61.23 346 i P P 01 25 41.4 -0.3
DAG pmax pmax
comp=Z,15nm,0.8s
HAU Haudompre 61.26 311 eP P 01 25 44.6 +2.2
HAU pmax pmax
comp=Z,43nm,1.5s
BMRD Maredsous 61.47 313 P P 01 25 43.9 +0.2
GIVF Givet 61.50 313 eP P 01 25 43.7 -0.2
GIVF pmax pmax
comp=Z,24nm,1.0s
DOU Dourbes 61.64 313 P P 01 25 45.5 +0.6
LPG La Plagne 61.87 308 eP P 01 25 47.1 +0.3
LPG pmax pmax
comp=Z,62nm,1.2s
LPL La Plagne 61.87 308 eP P 01 25 46.6 -0.2
LPL pmax pmax
comp=Z,91nm,1.3s
BAIF Baives 61.89 313 P P 01 25 46.4 -0.1
BAIF pmax pmax
comp=Z,24nm,1.0s
WACR West Acre 63.05 317 eP P 01 25 54.5 +0.3
WACR IAmb IAmb 01 25 58.6
comp=Z,144nm,0.9s
LOR Lormes 63.09 310 eP P 01 25 56.4 +1.7
LOR pmax pmax
comp=Z,36nm,1.3s
DRUM Mains of Drumt 63.21 322 eP P 01 25 55.5 +0.3
LMK Market Rasen 63.32 318 eP P 01 25 58.3 +2.3
LMK IAmb IAmb 01 26 00.1
comp=Z,168nm,1.0s
SMF Signal de Mont 63.34 310 eP P 01 25 57.2 +0.9
SMF pmax pmax
comp=Z,76nm,1.3s
SSF Saint Saulge 63.40 310 eP P 01 25 58.6 +2.0
SSF pmax pmax
comp=Z,31nm,1.1s
VIVF Saint-Julien-l 63.47 308 eP P 01 25 59.5 +2.3
VIVF pmax pmax
comp=Z,56nm,1.5s
AVF Avril sur Loir 63.59 310 eP P 01 25 57.3 -0.6
AVF pmax pmax
comp=Z,55nm,1.2s
EDMD Edmundbyers 63.71 320 eP P 01 25 58.6 0.0
KEST Kesra 63.76 297 P P 01 25 58.8 -0.5
comp=Z,13nm,0.9s,baz=354,slow=3.1,SNR=6.9
KEST LR LR 01 58 59.9
comp=Z,355nm,18.1s,baz=23,slow=41
KEST Kesra 63.76 297 IAmb IAmb 01 26 02.6
comp=Z,30nm,1.1s
EDI Edinburgh 63.94 321 eP P 01 26 00.3 +0.2
EDI IAmb IAmb 01 26 01.0
comp=Z,108nm,1.3s
GAMB Gambell 63.99 29 P P 01 25 59.6 -0.6
BGF Bois d'Agland 64.00 310 eP P 01 26 02.6 +1.9
BGF pmax pmax
comp=Z,22nm,1.1s
LBWR Ladybower, Pea 64.12 318 eP P 01 26 04.5 +3.2
LBWR IAmb IAmb 01 26 05.6
comp=Z,159nm,1.8s
ESK Eskdalemuir 64.19 321 eP P 01 26 00.6 -1.1
ESK Eskdalemuir 64.19 321 P P 01 26 01.1 -0.6
ESK Eskdalemuir 64.19 321 P P 01 26 01.1 -0.6
ESK pmax pmax
comp=Z,46nm,1.0s
KESW Keswick, Cumbr 64.41 320 eP P 01 26 05.4 +2.2
KESW IAmb IAmb 01 26 07.2
comp=Z,93nm,1.2s
MBAR Mbarara 64.56 251 P P 01 26 05.0 +0.1
MBAR IAmb IAmb 01 26 08.0
comp=Z,24nm,1.2s
MBAR Mbarara 64.56 251⇑i P P 01 26 06.8 +1.9
MBAR pmax pmax
comp=Z,16nm,1.1s
WOL Wolverton 64.64 316 eP P 01 26 07.0 +2.2
WOL IAmb IAmb 01 26 08.1
comp=Z,68nm,1.0s
PGBU Glenifferbraes 64.66 321 eP P 01 26 07.6 +2.9
SCO Scoresbysund 65.06 340 P P 01 26 07.2 +0.1
SCO IAmb IAmb 01 26 12.1
comp=Z,20nm,0.9s
SCO Scoresbysund 65.06 340 P P 01 26 07.2 +0.1
SCO pmax pmax
comp=Z,20nm,0.9s
LDF La Druitiere 65.06 313 eP P 01 26 09.4 +1.9
LDF pmax pmax
comp=Z,55nm,1.2s
HLM1 Long Mynd 65.11 318 eP P 01 26 08.1 +0.3
HLM1 IAmb IAmb 01 26 11.2
comp=Z,77nm,1.1s
FOEL Foel Wylfa 65.14 318 eP P 01 26 08.4 +0.4
FOEL IAmb IAmb 01 26 11.6
comp=Z,79nm,1.0s
CAF Calviac 65.15 309 eP P 01 26 10.8 +2.6
CAF pmax pmax
comp=Z,45nm,1.3s
RDOG Red Dog Mine 65.30 23 P P 01 26 08.2 -0.5
IOMK Kirk Michael 65.33 320 eP P 01 26 11.2 +2.0
MONM Monmouth 65.34 317 eP P 01 26 09.2 0.0
MONM IAmb IAmb 01 26 11.9
comp=Z,76nm,1.2s
RJF Les Rejaudoux 65.35 309 eP P 01 26 12.3 +2.8
RJF pmax pmax
comp=Z,82nm,1.5s
MCH1 Michaelchurch 65.38 317 eP P 01 26 09.1 -0.5
MCH1 IAmb IAmb 01 26 12.8
comp=Z,63nm,1.1s
GRR Gorron 65.59 313 eP P 01 26 10.0 -1.0
GRR pmax pmax
comp=Z,32nm,1.0s
ABPO Ambohimpanom 66.06 224 P P 01 26 13.5 -1.0
ABPO Ambohimpanom 66.06 224 P P 01 26 13.5 -1.0
ABPO pmax pmax
comp=Z,67nm,1.3s
ANM Nome 66.13 27 P P 01 26 13.3 -0.8
ANM IAmb IAmb 01 26 19.6
comp=Z,14nm,1.0s
ANM Nome 66.13 27 P P 01 26 13.3 -0.8
ANM pmax pmax
comp=Z,15nm,1.0s
ADK Adak 66.54 42 P P 01 26 16.7 -0.2
ADK Adak 66.54 42 P P 01 26 16.7 -0.2
ADK pmax pmax
comp=Z,112nm,1.4s
SGMF Saint Gilles 66.68 313 eP P 01 26 20.2 +2.3
SGMF pmax pmax
comp=Z,139nm,1.7s
BORG Borgarnes 67.90 334 LR LR 01 55 38.3
comp=Z,2μm,21.0s,baz=65,slow=36
SUMG Summit 67.92 345 i P P 01 26 25.0 -0.9
comp=Z,412nm,2.0s
SUMG Summit 67.92 345 P P 01 26 25.4 -0.5
SUMG Summit 67.92 345 i P P 01 26 25.0 -0.9
SUMG pmax pmax
comp=Z,410nm,2.0s
WB0 Warramunga Arr 68.56 134 P P 01 26 29.2 -1.0
WB0 IAmb IAmb 01 26 33.1
comp=Z,18nm,0.8s
WRAB Tennant Creek 68.67 134 P P 01 26 29.7 -1.1
WRAB IAmb IAmb 01 26 33.4
comp=Z,22nm,0.9s
WRAB Tennant Creek 68.67 134⇑i P P 01 26 32.9 +2.1
WRAB pmax pmax
comp=Z,18nm,1.0s
WRA Warramunga Arr 68.67 134 P P 01 26 30.4 -0.4
comp=Z,6.7nm,0.6s,baz=327,slow=6.1,SNR=10.0
WRA Warramunga Arr 68.67 134 P P 01 26 29.8 -1.0
WR0 Warramunga Arr 68.80 134 IAmb IAmb 01 26 33.9
comp=Z,30nm,1.3s
TULEG Thule 68.98 355 IAmb IAmb 01 26 36.3
comp=Z,17nm,1.0s
TOLK Toolik Lake Re 69.02 20 IAmb IAmb 01 26 36.5
comp=Z,8.1nm,0.8s
TOLK Toolik Lake Re 69.02 20 P P 01 26 32.5 +0.1
baz=310
IMAR Indian Mountai 69.44 23 P P 01 26 34.5 -0.5
KULLO Kullorsuaq 69.56 351 i P P 01 26 34.2 -1.4
comp=Z,39nm,1.1s
KULLO Kullorsuaq 69.56 351 i P P 01 26 34.2 -1.4
KULLO pmax pmax
comp=Z,39nm,1.1s
PMG Port Moresby 69.81 117 P P 01 26 37.6 -0.4
PMG IAmb IAmb 01 26 44.3
comp=Z,26nm,0.9s
PMG Port Moresby 69.81 117ceP P 01 26 38.0 0.0
PMG pmax pmax
comp=Z,125nm,1.0s
MLY Manley 71.02 23 P P 01 26 43.9 -0.8
BMAR Burnt Mountain 71.22 19 P P 01 26 45.8 -0.2
AS31 Alice Springs 71.31 137 P P 01 26 46.4 -0.6
ASAR Alice Springs 71.31 137 P P 01 26 46.6 -0.4
comp=Z,5.7nm,0.8s,baz=324,slow=6.2,SNR=42
ASAR LR LR 02 02 02.9
comp=Z,116nm,18.3s,baz=312,slow=39
ASAR Alice Springs 71.31 137 P P 01 26 46.0 -0.9
ESDC Sonseca Array 71.48 306 P P 01 26 47.8 -0.2
comp=Z,6.4nm,1.0s,baz=56,slow=5.9,SNR=13
ESDC LR LR 02 02 05.1
comp=Z,198nm,21.1s,baz=80,slow=39
ESDC Sonseca Array 71.48 306 P P 01 26 47.5 -0.5
NEA Nenana 71.85 23 P P 01 26 49.5 -0.2
NEA IAmb IAmb 01 26 53.8
comp=Z,19nm,1.0s
PPLA Purkeypile 71.91 25 P P 01 26 49.6 -0.7
PPLA IAmb IAmb 01 26 54.0
comp=Z,17nm,0.9s
KTH Kantishna Hill 71.92 24 IAmb IAmb 01 27 04.7
comp=Z,25nm,1.4s
POKR Poker Flat Res 72.00 22 P P 01 26 50.9 +0.3
baz=313
TCOL CIGO, UAF Yank 72.03 22 P P 01 26 50.8 0.0
baz=313
COLA College 72.04 22 P P 01 26 50.4 -0.4
COLA IAmb IAmb 01 26 55.3
comp=Z,41nm,1.5s
COLA College 72.04 22 P P 01 26 50.4 -0.4
COLA pmax pmax
comp=Z,41nm,1.5s
CCB Clear Creek Bu 72.21 22 P P 01 26 53.0 +1.2
WRH Wood River Hil 72.24 23 P P 01 26 52.6 +0.6
PRP Porcupine Dome 72.30 21 P P 01 26 52.5 -0.1
ILAR Eielson Array 72.41 22 P P 01 26 52.5 -0.6
comp=Z,3.7nm,0.9s,baz=295,slow=4.7,SNR=16
ILAR PP PP 01 29 24.7 -8.7
comp=Z,3.2nm,1.2s,baz=309,slow=6.1,SNR=6.2
ILAR LR LR 02 02 39.2
comp=Z,172nm,18.2s,baz=323,slow=39
ILAR Eielson Array 72.41 22 P P 01 26 52.6 -0.5
ILAR Eielson Array 72.41 22 P P 01 26 52.6 -0.5
TAM Tamanrasset 72.63 286 P P 01 26 54.9 -0.4
TAM Tamanrasset 72.63 286 P P 01 26 54.9 -0.4
TAM pmax pmax
comp=Z,4.0nm,0.8s
HDA Harding Lake 72.64 22 P P 01 26 55.5 +1.1
baz=314
SKT Skwentna 72.73 26 IAmb IAmb 01 26 59.4
comp=Z,18nm,0.8s
INK Inuvik 73.28 15 P P 01 26 57.1 -1.0
INK IAmb IAmb 01 26 59.9
comp=Z,19nm,1.4s
INK Inuvik 73.28 15 P P 01 26 57.1 -1.0
INK pmax pmax
comp=Z,19nm,1.4s
SUA Susitna One 73.36 26 IAmb IAmb 01 27 01.6
comp=Z,29nm,1.4s
PMR Palmer 73.84 25 P P 01 27 01.2 -0.3
PMR Palmer 73.84 25 P P 01 27 01.2 -0.3
PMR pmax pmax
comp=Z,9.0nm,0.7s
SCRK Sand Creek 73.87 22 P P 01 27 01.6 -0.2
RC01 Rabbit Creek A 73.97 26 P P 01 27 02.9 +0.6
RC01 IAmb IAmb 01 27 06.7
comp=Z,33nm,1.2s
SML Sawmill 73.98 25 P P 01 27 02.0 -0.5
SML IAmb IAmb 01 27 10.7
comp=Z,47nm,1.2s
SML Sawmill 73.98 25 P P 01 27 02.0 -0.5
SML pmax pmax
comp=Z,47nm,1.2s
EPYK Eagle Plains 74.08 18 P P 01 27 02.2 -0.7
baz=322
EGAK Eagle 74.11 20 P P 01 27 03.2 +0.1
C36M Paulatuk 74.22 12 IAmb IAmb 01 27 04.9
comp=Z,30nm,1.4s
C36M Paulatuk 74.22 12 P P 01 27 03.0 -0.7
baz=332
SFJD Kangerlussuaq 74.91 345 i P P 01 27 08.3 +0.7
SFJD Kangerlussuaq 74.91 345 P P 01 27 07.5 -0.1
SFJD IAmb IAmb 01 27 10.2
comp=Z,45nm,1.2s
SFJD Kangerlussuaq 74.91 345 i P P 01 27 08.3 +0.7
BCAR Beaver Creek A 75.21 21 P P 01 27 08.7 -0.8
LSZ Lusaka 75.87 240 P P 01 27 13.2 -0.9
LSZ IAmb IAmb 01 27 17.2
comp=Z,28nm,1.0s
LSZ Lusaka 75.87 240 P P 01 27 13.2 -0.9
LSZ pmax pmax
comp=Z,28nm,1.0s
MCARA McCarthy VSAT 76.07 23 P P 01 27 14.5 0.0
MCARA IAmb IAmb 01 27 19.9
comp=Z,16nm,0.8s
TORD Torodi Ar. Bea 80.73 280 P P 01 27 40.9 -0.2
comp=Z,13nm,1.1s,baz=49,slow=4.0,SNR=24
TORD PP PP 01 30 46.4 +1.4
comp=Z,2.6nm,1.1s,baz=79,slow=5.5,SNR=5.5
TORD LR LR 02 07 52.3
comp=Z,270nm,18.3s,baz=40,slow=39
TORD Torodi Ar. Bea 80.73 280 P P 01 27 39.8 -1.2
STKA Stephens Creek 81.94 137 P P 01 27 44.7 -2.2
comp=Z,10nm,0.8s,baz=327,slow=7.2,SNR=13
STKA Stephens Creek 81.94 137 P P 01 27 45.8 -1.2
STKA Stephens Creek 81.94 137 P P 01 27 45.8 -1.2
STKA pmax pmax
comp=Z,3.0nm,0.9s
YKA Yellowknife Ar 82.07 11 P P 01 27 45.9 -1.3
comp=Z,4.0nm,0.8s,baz=331,slow=5.2,SNR=28
YKA PP PP 01 30 40.6 -14
comp=Z,0.3nm,0.9s,baz=342,slow=7.6,SNR=4.7
YKA LR LR 02 06 28.6
comp=Z,140nm,21.1s,baz=0.0,slow=37
YKA Yellowknife Ar 82.07 11 i P P 01 27 47.7 +0.4
YKA pmax pmax
comp=Z,4.0nm,0.8s
LBTB Lobatse 84.11 235 P P 01 27 58.0 -0.5
LBTB Lobatse 84.11 235 P P 01 27 58.0 -0.5
LBTB pmax pmax
comp=Z,47nm,1.1s
TSUM Tsumeb 86.17 244 P P 01 28 08.9 -0.1
TSUM IAmb IAmb 01 28 12.4
comp=Z,19nm,1.2s
BOSA Boshof 86.72 232 P P 01 28 10.6 -0.8
comp=Z,38nm,1.1s,baz=40,slow=5.0,SNR=23
BOSA LR LR 02 05 10.2
comp=Z,104nm,20.5s,baz=52,slow=34
BOSA Boshof 86.72 232 P P 01 28 10.6 -0.8
CRZF Crozet Islands 86.73 205 P P 01 28 10.9 +0.1
FCC Fort Churchill 87.67 2 P P 01 28 14.0 -1.5
FCC IAmb IAmb 01 28 18.2
comp=Z,18nm,1.4s
FCC Fort Churchill 87.67 2 P P 01 28 14.0 -1.5
FCC pmax pmax
comp=Z,18nm,1.4s
CAN Canberra 88.70 135 P P 01 28 20.6 -0.1
CAN IAmb IAmb 01 28 23.9
comp=Z,20nm,1.3s
CAN Canberra 88.70 135 P P 01 28 20.6 -0.1
CAN pmax pmax
comp=Z,20nm,1.3s
SCHQ Schefferville 89.27 346 P P 01 28 21.6 -1.6
comp=Z,11nm,0.9s,baz=20,slow=6.2,SNR=13
SCHQ LR LR 02 13 22.1
comp=Z,275nm,18.1s,baz=26,slow=39
SCHQ Schefferville 89.27 346 P P 01 28 22.4 -0.7
SCHQ IAmb IAmb 01 28 25.7
comp=Z,14nm,0.9s
DBIC Dimbokro 89.66 278 P P 01 28 24.4 -1.3
comp=Z,3.1nm,0.7s,baz=22,slow=4.0,SNR=5.3
DBIC LR LR 02 11 01.8
comp=Z,218nm,18.6s,baz=40,slow=37
FFC Flin Flon 91.24 6 P P 01 28 31.4 -0.9
FFC IAmb IAmb 01 28 36.0
comp=Z,21nm,1.3s
FFC Flin Flon 91.24 6 P P 01 28 31.5 -0.9
FFC pmax pmax
comp=Z,21nm,1.3s
DRLN Deer Lake 92.08 339 P P 01 28 35.9 -0.5
DRLN IAmb IAmb 01 28 39.3
comp=Z,15nm,0.9s
DZM Mont Dzumac 92.13 115 eLR LR 01 58 15.0
comp=Z,327nm,27.1s
ULM Lac du Bonnet 96.12 3 LR LR 02 16 50.6
comp=Z,180nm,18.4s,baz=358,slow=38
CBYP Canovanas 122.94 331 PKPdf 01 34 22.8 -1.4
PPT2 Papeete2 125.33 88 eLR LR 02 13 35.5
comp=Z,756nm,35.8s
TBI Tubuai 128.07 95 eLR LR 02 14 53.0
comp=Z,246nm,38.8s
SAML Samuel 144.48 308 PKPab 01 35 02.5 0.0
SAML Samuel 144.48 308 PKIKP PKPab 01 35 02.5 0.0
CPUP Villa Florida 150.16 276 PKPbc PKPdf 01 35 15.5 +2.2
comp=Z,12nm,0.8s,baz=68,slow=2.6,SNR=11
CPUP Villa Florida 150.16 276 PKPdf 01 35 12.2 -1.2
CPUP Villa Florida 150.16 276 PKIKP PKPdf 01 35 12.2 -1.2

IDC 11 01:24:28.9±4.7, 62°.40S×130°.88E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.9/23, mbtmp3.9/3, Error ellipse: s-maj=224.3km s-min=61.9km az=82.0, South of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	31.30	18	P	P	01 30 50.5	0.0
	3.9nm,0.8s,baz=186,slow=11,SNR=4.7						
ASAR	Alice Springs	38.77	4	P	P	01 31 54.9	-0.1
	1.7nm,0.8s,baz=174,slow=9.2,SNR=12						
WRA	Warramunga Arr	42.49	5	P	P	01 32 25.5	-0.1
	0.7nm,0.8s,baz=193,slow=7.9,SNR=3.5						
YKA	Yellowknife Ar	150.86	60	PKPbc	PKPbc	01 44 21.3	-0.3
	0.1nm,0.4s,baz=246,slow=2.6,SNR=1.6						

IDC 11 01:31:11.3±1.3, 33°.67N×89°.10E, h0km, mb3.5/9, mb1 3.8/12, mb1mx3.6/44, mbtmp3.6/12, ML2.9/3, Error ellipse: s-maj=33.1km s-min=25.5km az=51.0

ISC 11 01:31:14.2±1.1, 33°.8N±0°.2×89°.1E±0°.2, h17km, n12, σ0^s.93/12, mb3.6/8, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
MKAR	Makanchi Array	13.99	340	Pn	Pn	01 34 30.8	-0.8
	0.1nm,0.3s,baz=133,slow=14,SNR=3.6						
KURBB	Kurchatov Arra	18.53	338	P	P	01 35 29.8	+0.2
	0.0nm,0.3s,baz=148,slow=12,SNR=6.1						
SONM	Songino Array	19.10	38	P	Pn	01 35 37.3	+0.3
	0.1nm,0.3s,baz=241,slow=11,SNR=8.9						
ZALV	Zalesovo Beam	20.38	353	P	P	01 35 50.4	+0.6
	1.3nm,0.8s,baz=163,slow=11,SNR=9.0						
BVAR	Borovoye Array	23.43	331	P	P	01 36 24.1	+1.8
	1.0nm,0.9s,baz=143,slow=13,SNR=4.7						
BRTR	Keskin Array B	44.26	294	P	P	01 39 23.2	+0.3
	0.8nm,0.9s,baz=137,slow=4.4,SNR=3.9						
FINES	FINESS Array B	48.18	325	P	P	01 39 54.7	+1.4
	1.0nm,0.8s,baz=94,slow=5.6,SNR=1.4						
NOA	NORSAR Array B	55.36	325	P	P	01 40 46.9	-0.1
	1.2nm,0.9s,baz=82,slow=7.2,SNR=3.3						
GERES	GERESS Array B	56.36	310	P	P	01 40 53.3	-1.0
	0.6nm,0.8s,baz=106,slow=8.5,SNR=5.3						
WRA	Warramunga Arr	68.64	134	P	P	01 42 16.7	+0.1
	0.6nm,0.8s,baz=326,slow=6.0,SNR=2.2						
TORD	Torodi Ar. Bea	80.72	280	P	P	01 43 26.7	-0.2
	0.3nm,0.9s,baz=56,slow=5.4,SNR=1.4						
YKA	Yellowknife Ar	82.16	11	P	P	01 43 33.1	-0.6
	0.1nm,0.3s,baz=316,slow=5.2,SNR=2.8						

IDC 11 01:41:09.6±0.8, 11°.20S×164°.90E, h0km, mb4.1/9, mb1 4.3/12, mb1mx4.1/32, mbtmp4.2/12, ML4.3/4, MS3.4/4, Ms1 3.4/4, ms1mx3.1/35, Error ellipse: s-maj=23.5km s-min=20.2km az=123.0

NEIC 11 01:41:10.9±0.9, 11°.2S±0°.1×164°.9E±0°.1, h16km±6km, mb4.5/8, Error ellipse: s-maj=22.1km s-min=11.3km az=224.0

ISC 11 01:41:13.9±0.7, 11°.23S±0°.10×164°.91E±0°.09, h31km, n35, σ0^s.87/30, mb4.2/12, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
SANVU	Saraoutou	4.75	152	Pn	Pn	01 42 22.2	-1.1

HNR Honiara 5.20 290 Pn Pn 01 42 28.5 -1.1
26nm,0.3s,baz=173,slow=7.7,SNR=3.3
HNR Sn Sn 01 43 29.6 +1.1
42nm,0.3s,baz=209,slow=23,SNR=6.8
HNR LR LR 01 44 46.3
comp=Z,284nm,19.2s,baz=172,slow=42
HNR Honiara 5.20 290 Pn 01 42 28.1 -1.4
HNR Sn 01 43 28.0 -0.5
DZM Mont Dzumac 10.88 172 Pn Pn 01 43 47.9 +0.3
1.4nm,0.3s,baz=324,slow=13,SNR=13
DZM LR LR 01 46 59.0
comp=Z,168nm,20.7s,baz=214,slow=32
DZM Mont Dzumac 10.88 172 Pn 01 43 47.7 +0.2
NOUC Port Laguerre 10.89 173 Pn Pn 01 43 47.0 -0.7
PMG Port Moresby 17.56 274 LR LR 01 51 35.5
comp=Z,217nm,18.8s,baz=28,slow=36
CTA Charters Tower 19.98 242 P P 01 45 45.0 +1.1
0.3nm,0.3s,baz=80,slow=16,SNR=2.7
AFI Afiamalu 22.91 99 LR LR 01 53 48.2
comp=Z,63nm,21.4s,baz=340,slow=33
H11S2 WAKE ISLAND Hy 29.59 3 T T 02 18 23.1
baz=184,slow=76,SNR=48
H11S3 WAKE ISLAND Hy 29.59 3 T T 02 18 27.3
baz=184,slow=76,SNR=32
H11S1 WAKE ISLAND Hy 29.61 3 T T 02 18 24.2
baz=184,slow=76,SNR=31
BKZ Black Stump Fm 29.67 162 P Pn 01 47 16.8 -0.1
BKZ IAmb IAmb 01 47 25.9
comp=Z,5.9nm,1.0s
STKA Stephens Creek 29.74 223 P P 01 47 18.5 +0.9
comp=Z,2.7nm,0.6s,baz=24,slow=12,SNR=6.4
STKA Stephens Creek 29.74 223 P P 01 47 17.6 0.0
WR0 Warramunga Arr 30.46 250 P P 01 47 23.3 -0.9
WR0 IAmb IAmb 01 47 39.6
comp=Z,5.2nm,1.0s
WB0 Warramunga Arr 30.56 250 P P 01 47 24.6 -0.4
WB2 Warramunga Arr 30.64 250 P P 01 47 24.3 -1.4
WB2 IAmb IAmb 01 47 35.9
comp=Z,8.5nm,1.1s
WRA Warramunga Arr 30.65 250 P P 01 47 25.7 -0.1
comp=Z,1.6nm,0.5s,baz=80,slow=9.1,SNR=10
WRA Warramunga Arr 30.65 250 P P 01 47 24.0 -1.7
H11N1 WAKE ISLAND Hy 30.81 4 T T 02 19 58.6
baz=182,slow=76,SNR=29
H11N3 WAKE ISLAND Hy 30.82 4 T T 02 19 54.5
baz=182,slow=76,SNR=7.2
H11N2 WAKE ISLAND Hy 30.83 4 T T 02 20 00.1
baz=182,slow=76,SNR=9.4
ASAR Alice Springs 31.97 243 P P 01 47 37.0 -0.4
comp=Z,1.2nm,0.6s,baz=64,slow=10,SNR=20
ASAR PcP PcP 01 50 27.8 +0.5
comp=Z,0.7nm,0.8s,baz=96,slow=2.5,SNR=4.8
CMAR Chiang Mai Arr 71.43 294 P P 01 52 32.7 +0.9
comp=Z,1.0nm,0.3s,baz=104,slow=3.8,SNR=3.9
SONM Songino Array 78.33 324 P P 01 53 12.4 +1.2
comp=Z,0.7nm,0.9s,baz=139,slow=9.0,SNR=3.4
SONM Songino Array 78.33 324 P P 01 53 10.9 -0.3
QSPA South Pole Qui 78.77 180 P P 01 53 14.3 +0.9
comp=Z,4.6nm,0.7s,baz=14,slow=1.0,SNR=15
QSPA South Pole Qui 78.77 180 P P 01 53 13.5 +0.1
QSPA IAmb IAmb 01 53 24.8
comp=Z,6.7nm,0.9s
ILAR Eielson Array 83.95 19 P P 01 53 41.3 +0.8
comp=Z,0.3nm,0.7s,baz=222,slow=6.1,SNR=3.6
NVAR Mina Array Bea 86.77 50 P P 01 53 56.1 +0.5
comp=Z,0.6nm,0.8s,baz=235,slow=7.3,SNR=3.8
NVAR Mina Array Bea 86.77 50 P P 01 53 54.5 -1.1
MKAR Makanchi Array 93.10 317 P P 01 54 24.6 -0.2
comp=Z,0.9nm,0.8s,baz=102,slow=5.5,SNR=8.9
MKAR Makanchi Array 93.10 317 P P 01 54 24.0 -0.8
ARCES ARCESS Array B 116.31 345 PKP PKiKP 01 59 53.5 -0.2
comp=Z,3.5nm,0.9s,baz=54,slow=6.8,SNR=4.3

IDC 11 02:14:54.5±0.4, 35.93N×82.51E, h0km, mb4.7/48, mb1 4.8/53, mb1mx4.8/53, mbtmp4.8/53, ML4.6/5, MS4.8/43, Ms1 4.8/43, ms1mx4.8/49, Error ellipse: s-maj=11.0km s-min=8.9km az=10.0
NEIC 11 02:14:56.0±1.4, 36.00N±0.06×82.49E±0.07, h10km±1km, mb5.2/148, Error ellipse: s-maj=10.2km s-min=9.5km az=192.0
NNC 11 02:14:56.6±1.9, 36.24N×82.61E, h0km, mb5.5, mpv5.5, Error ellipse: s-maj=22.8km s-min=14.3km az=100.0
BJI 11 02:14:56.3±0.0, 36.15N×82.46E, h11km, mB5.3/53, mb4.7/59, ML5.4/7, Ms5.4/78, Ms7 5.2/71
MOS 11 02:14:57.6±1.3, 36.06N×82.44E, h26km, mb5.4/74, MS5.1/26, Error ellipse: s-maj=5.5km s-min=2.9km az=123.0
GCMT 11 02:14:57.0±0.1, 36.16N±0.01×82.52E±0.01, h22km, MW5.3/145, Moment Tensor Solution. s100,c139; s145,c270; Duration: 1s1 Moment tensor: Scale 10^{17} Nm; Mrr-0.07±.02; Mθθ-1.15±.02; Mφφ1.22±.02; Mrθ0.16±.03; Mrφ-0.11±.01; Mθφ-0.28±.03; Best double couple: Mo1.23000×10^{17} NP1:φs223.00000°, δ76.00000°, λ3.00000°. NP2:φs132.00000°, δ87.00000°, λ166.00000°. Principal axes: T 1.2850, Plg12.0000°, Azm87.0000°; N -0.1110, Plg76.0000°, Azm301.0000°; P -1.1760, Plg8.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
BGR 11 02:15:06.4±0.0, 36.74N×81.86E, h33km, mb5.2, Ms5.2
ISC 11 02:14:56.2±0.4, 35.93N±0.03×82.44E±0.03, h8km±2km, h8km:pP-P, n703, σ2°32/757, mb5.1/232, MS5.0/88, 30C-54D, Xizang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JOSI Joshimath 5.88 205 eP Pn 02 16 27.0 +3.1
DHRM DHARAMSHALA 6.28 236 ex Sg 02 18 17.0 -0.9
SMLA Simla 6.51 224 eP Pn 02 16 35.4 +3.2
SMLA IAmb IAmb 02 16 42.6
comp=Z,47nm,0.8s
DDI Dehra Dun 6.70 215 eP Pn 02 16 38.5 +3.6
DDI IAmb IAmb 02 17 07.0
comp=Z,203nm,0.6s
PRZ Przheval'sk 7.26 336 Pn 02 16 42.0 -0.7
PRZ Sn Sn 02 18 02.6 -2.7
PRZ Przheval'sk 7.26 336 P Pn 02 16 42.0 -0.7
PRZ 02 18 02.7
KDJ Kajisay 7.42 328 Pn 02 16 44.9 -0.1
KDJ Sn Sn 02 18 07.7 -1.7
NRN Naryn 7.45 319 Pn 02 16 44.9 -0.6
NRN Sn Sn 02 18 11.2 +0.8
NRN Naryn 7.45 319 P Pn 02 16 44.9 -0.6
NRN 02 18 11.2
SHLS Shalkode 7.58 343 eP Pn 02 16 45.3 -1.7
SHLS eLR LR 02 19 56.1
comp=Z,4μm,15.0s
SHLS Shalkode 7.58 343 eP Pn 02 16 45.3 -1.7
SHLS MLR MLR
comp=Z,4μm,15.0s
DANN Dangsing 7.64 171 eP Pn 02 16 48.0 -0.1
comp=Z,457nm,0.8s
UZB Uzynbulak 7.67 341 eP Pn 02 16 48.2 -0.3
UZB eS Sn 02 18 14.6 -1.0
UZB eLR LR 02 20 03.7
UZB Uzynbulak 7.67 341 eP Pn 02 16 48.1 -0.3
UZB eS Sn 02 18 14.5 -1.0
PDGK Podgornoye 7.73 344 ⇑Pn Pn 02 16 48.6 -0.5
comp=Z,248nm,0.7s
PDGK ⇓Sn Sn 02 18 13.1 -3.9
comp=Z,624nm,1.1s
PDGK ⇓Lg Lg 02 18 55.2
comp=Z,1μm,1.0s
PDGK Podgornoye 7.73 344 i P Pn 02 16 48.6 -0.5
PDGK pmax pmax
comp=Z,248nm,0.7s
SATY Saty 7.77 338 eP Pn 02 16 49.2 -0.6
SATY eLR LR 02 19 53.7
SATY Saty 7.77 338 eP Pn 02 16 49.1 -0.6
ZHN Zhinishke 7.86 338 eP Pn 02 16 50.8 -0.2
ZHN eLR LR 02 20 01.4
comp=Z,2μm,14.8s
ZHN Zhinishke 7.86 338 eP Pn 02 16 50.7 -0.2
ZHN MLR MLR
comp=Z,2μm,15.0s
CHCP Chirah Chowk 7.88 256 P Pn 02 16 52.4 +1.2
NIL Nilore 7.90 256 Pn 02 16 51.5 +0.2
NIL Nilore 7.90 256 P Pn 02 16 51.5 +0.2
ULHL Ulahol 7.94 324 P Pn 02 16 52.8 +0.8
SNR=16
KPKS Kokpek 8.06 340 eP Pn 02 16 52.6 -1.0
KPKS eLR LR 02 20 20.1
comp=Z,3μm,13.0s
KPKS Kokpek 8.06 340 eP Pn 02 16 52.6 -1.0
KPKS MLR MLR
comp=Z,3μm,13.0s
GKN Gorkha 8.12 166 eP Pn 02 16 55.0 +0.4
comp=Z,295nm,0.8s
KOLN Koldanda 8.20 173 eP Pn 02 16 55.2 -0.4
comp=Z,289nm,0.6s
TNSS Tian-Shan 8.27 331 eP Pn 02 16 56.1 -0.7
TNSS Tian-Shan 8.27 331 eP Pn 02 16 56.1 -0.7
KZA Kyzart 8.31 320 P Pn 02 16 58.6 +1.4
SNR=32
MDOK Medeo 8.34 332 eP Pn 02 16 57.2 -0.3
MDOK eLR LR 02 19 45.0
comp=Z,8μm,12.1s
MDOK Medeo 8.34 332 ⇑Pn Pn 02 16 57.2 -0.3
comp=Z,190nm,1.0s
MDOK Pg Pb 02 17 24.6 +3.7
comp=Z,215nm,0.9s
MDOK ⇑Lg Lg 02 19 17.3
comp=Z,753nm,1.1s
MDOK Medeo 8.34 332 eP Pn 02 16 57.1 -0.3
MDOK MLR MLR
comp=E,8μm,12.0s
KNDC Almaty 8.41 332 ⇑Pn Pn 02 16 59.1 +0.6
comp=E,254nm,1.2s
KNDC ⇑Pg Pb 02 17 26.0 +3.9
comp=E,298nm,0.8s
KNDC ⇑Lg Lg 02 19 15.2
comp=E,2μm,0.9s
KNDC Almaty 8.41 332 P Pn 02 16 59.1 +0.6
AAA Alma-Ata 8.43 331 eP Pn 02 16 58.1 -0.5
AAA eLR LR 02 20 12.1
comp=E,4μm,12.0s
AAA Alma-Ata 8.43 331 eP Pn 02 16 58.1 -0.5
AAA MLR MLR
comp=Z,4μm,12.0s
KKN Kakani 8.47 163 eP Pn 02 16 59.7 +0.3
comp=Z,242nm,0.8s
NDI New Delhi 8.47 213 eP Pn 02 17 00.5 +1.3
GUN Gumba 8.51 159 eP Pn 02 17 00.6 +0.5
comp=Z,743nm,0.8s
MTBS Maitube 8.56 329 eP Pn 02 17 00.4 0.0
MTBS Maitube 8.56 329 eP Pn 02 17 00.4 0.0
DMN Daman 8.60 164 eP Pn 02 17 01.6 +0.4
comp=Z,399nm,0.9s
PKIN Phulchoki 8.70 162 eP Pn 02 17 03.0 +0.4
comp=Z,285nm,0.7s
PKI Pulchoki 8.71 162 eP Pn 02 17 03.1 +0.3
comp=Z,507nm,0.9s
UCH Uchtor 8.80 318 P Pn 02 17 04.9 +0.8
SNR=75
JIRN Jiri 8.84 158 eP Pn 02 17 05.3 +0.7
comp=Z,465nm,0.6s
WMQ Urumqi 8.85 26 eP Pn 02 17 03.9 -0.5
WMQ pP Pg 02 17 10.2 -35
WMQ sP 02 17 12.9
WMQ S Sn 02 18 41.1 -3.3
WMQ S Sg 02 18 46.7 -53
WMQ smax smax
comp=Z,510nm,1.3s
WMQ smax smax
comp=Z,660nm,1.9s
WMQ LR LR
comp=Z,12μm,16.9s
WMQ LR LR
comp=Z,12μm,13.9s
WMQ LR LR
comp=Z,9μm,24.5s
WMQ Urumqi 8.85 26 Pn 02 17 03.4 -1.1
WMQ Sn Sn 02 18 39.4 -5.0
KBK Karagaybulak 8.88 321 P Pn 02 17 06.3 +1.3
SNR=33
CEP Cherat 8.91 259 P Pn 02 17 05.5 +0.2
CHKK Chushkaly 8.95 334 eP Pn 02 17 05.0 -0.8
CHKK Chushkaly 8.95 334 eP Pn 02 17 05.0 -0.8
AAK Ala-Archa 9.10 320 Pn Pn 02 17 09.2 +1.3
comp=Z,2.6nm,0.3s,baz=134,slow=10,SNR=82
AAK Lg Lg 02 19 37.7
comp=Z,8.6nm,0.3s,baz=228,slow=21,SNR=5.1
AAK LR LR 02 21 01.9
comp=Z,6μm,18.5s,baz=126,slow=40
AAK Ala-Archa 9.10 320 P Pn 02 17 10.0 +2.0
SNR=36
AAK Ala-Archa 9.10 320 i P Pn 02 17 10.0 +2.0
SNR=52
AAK Ala-Archa 9.10 320 ⇑Pn Pn 02 17 09.8 +1.9
comp=Z,75nm,0.9s
AAK ⇑Pg 02 17 38.8
comp=Z,185nm,0.8s
AAK ⇑Lg Lg 02 19 41.0
comp=Z,943nm,1.2s
AAK Ala-Archa 9.10 320 Pn 02 17 07.8 -0.1
AAK Sn Sn 02 18 48.0 -2.5
AAK Ala-Archa 9.10 320 d i P Pn 02 17 09.9 +2.0
FRU1 Bishkek 9.15 321 Pn 02 17 07.4 -1.2
FRU1 Sn Sn 02 18 50.9 -0.8
FRU1 Bishkek 9.15 321 P Pn 02 17 07.4 -1.2
FRU1 02 18 50.9
ARSB Arslanbob 9.15 309 Pn 02 17 08.2 -0.4
ARSB Sn Sn 02 18 49.4 -2.5
AML Almayashu 9.20 315 P Pn 02 17 11.8 +2.3
SNR=21
CHMS Chumysh 9.23 322 P Pn 02 17 11.0 +1.4
SNR=31
CHMS Chumysh 9.23 322 ⇓Pn Pn 02 17 10.2 +0.6
comp=Z,35nm,0.7s
CHMS ⇓Pg 02 17 42.3
comp=Z,102nm,0.8s
CHMS ⇑Lg Lg 02 19 46.5
comp=Z,750nm,1.4s
KUU Kurty 9.23 331 eP Pn 02 17 08.6 -1.1
KUU eLR LR 02 20 42.4
comp=Z,3μm,9.5s
KUU Kurty 9.23 331 eP Pn 02 17 08.5 -1.1
KUU MLR MLR
comp=Z,3μm,10.0s
THW Thamme Wali 9.38 254 P Pn 02 17 14.0 +2.3
EKS2 Erkin-Say 9.50 318 P Pn 02 17 16.1 +2.8
SNR=64
USP Ospenovka 9.55 323 P Pn 02 17 15.9 +1.9
SNR=9.6
LSA Lhasa 9.60 128 P Pn 02 17 19.7 +4.5
LSA pP 02 17 23.3
LSA S Sn 02 19 14.9 +11
LSA pmax pmax
comp=Z,45nm,1.6s
LSA LR LR
comp=Z,98μm,15.7s
LSA LR LR
comp=Z,80μm,15.7s
LSA LR LR
comp=Z,47μm,12.1s
LSA Lhasa 9.60 128 Pn 02 17 14.3 -0.9
LSA Lhasa 9.60 128 P Pn 02 17 14.3 -0.9
SGDS Sogindy 9.62 324 eP Pn 02 17 16.1 +1.0
SGDS eLR LR 02 21 01.0
comp=Z,484nm,8.7s
RAMN Ramite 9.63 157 eP Pn 02 17 14.8 -0.5
comp=Z,643nm,0.8s
TAPN Taplejung 9.66 151 eP Pn 02 17 16.0 +0.2
comp=Z,232nm,0.9s
ODAN Odare 9.98 154 eP Pn 02 17 19.9 -0.2
comp=Z,678nm,1.0s
BTK Batken 10.06 298 Pn 02 17 20.0 -1.0
BTK Sn Sn 02 19 13.2 -0.9
BTK Batken 10.06 298 P Pn 02 17 20.0 -1.0
BTK 02 19 13.2
GTK Tadong 10.06 147 eP Pn 02 17 18.7 -2.4
MK31 Makanchi Array 10.85 359 ⇓Pn Pn 02 17 29.9 -1.9
comp=Z,176nm,0.8s,baz=182,slow=12,SNR=1703
MK31 ⇑Sn Sn 02 19 28.3 -5.2
comp=Z,95nm,0.8s,baz=184,slow=24,SNR=5.0
MK31 ⇑Lg Lg 02 20 29.6
comp=Z,264nm,0.9s
MK31 Makanchi Array 10.85 359 Pn 02 17 30.1 -1.7
MK31 Sn Sn 02 19 28.9 -4.5
MK31 Makanchi Array 10.85 359 P Pn 02 17 30.1 -1.7
MK31 02 19 28.9
MKAR Makanchi Array 10.85 359 Pn Pn 02 17 29.9 -1.9
comp=Z,21nm,0.3s,baz=187,slow=11,SNR=490
MKAR Sn Sn 02 19 26.5 -7.0
comp=Z,9.0nm,0.3s,baz=183,slow=24,SNR=4.8
MKAR LR LR 02 22 34.0
comp=Z,7μm,18.4s,baz=180,slow=42
MKAR Makanchi Array 10.85 359 Pn 02 17 29.5 -2.3
MKAR Sn 02 19 30.6 -2.8
MKAR Makanchi Array 10.85 359 P Pn 02 17 30.0 -1.9
MAKZ Makanchi 10.87 358 ⇓Pn Pn 02 17 30.1 -2.0
comp=Z,330nm,0.8s
MAKZ ⇑Sn Sn 02 19 27.6 -6.3
comp=Z,119nm,0.7s
MAKZ ⇑Lg Lg 02 20 33.3
comp=Z,347nm,1.4s
MAKZ Makanchi 10.87 358 Pn 02 17 30.5 -1.6
MAKZ Sn Sn 02 19 29.2 -4.7
MAKZ Makanchi 10.87 358 P Pn 02 17 30.1 -2.0
KBL Kabul 11.05 267 Pn 02 17 35.0 +0.2
KBL Sn Sn 02 19 37.9 -0.7
KBL Kabul 11.05 267 P Pn 02 17 35.9 +1.2
KBL pmax pmax
comp=Z,119nm,0.8s
BTLS Baital 11.12 328 eP Pn 02 17 34.2 -1.2
BTLS Baital 11.12 328 eP Pn 02 17 34.2 -1.2
JBG Jabagly 11.28 309 eP Pn 02 17 37.8 0.0
JBG MLR MLR
comp=Z,2μm,13.0s
IUG Iuzhnay 11.47 306 eP Pn 02 17 39.8 -0.5
IUG eLR LR 02 22 18.4
IUG Iuzhnay 11.47 306 eP Pn 02 17 39.8 -0.5
TAS Tashkent 11.61 302 P Pn 02 17 42.5 +0.4
TAS pmax pmax
comp=Z,102nm,0.9s
ZSN Zaisan 11.65 8 eP Pn 02 17 39.5 -3.3
ZSN eLR LR 02 23 25.1
comp=Z,928nm,10.4s
ZSN Zaisan 11.65 8 eP Pn 02 17 39.4 -3.3
ZSN MLR MLR
comp=Z,928nm,10.0s
KK31 Karatay Array 11.66 311 ⇑Pn Pn 02 17 40.9 -2.0
comp=Z,12nm,0.6s,baz=120,slow=11,SNR=74
KK31 ⇑Pg 02 18 26.6
comp=Z,32nm,0.7s,baz=134,slow=15,SNR=4.3
KK31 ⇓Lg Lg 02 21 06.8
comp=Z,241nm,1.1s,baz=125,slow=26,SNR=3.8
KK31 Karatay Array 11.66 311 Pn 02 17 41.8 -1.1
KK31 Sn Sn 02 19 52.6 -0.7
KK31 Karatay Array 11.66 311 eP Pn 02 17 41.6 -1.3
KKAR Karatay Array 11.66 311 Pn 02 17 41.5 -1.4
KKAR Sn Sn 02 19 50.4 -2.9
KKAR Karatay Array 11.66 311 Pn 02 17 41.8 -1.1
KKAR Karatay Array 11.66 311 P Pn 02 17 41.8 -1.1
KKAR 02 19 50.4
CHM Chimkent 11.83 306 eP Pn 02 17 44.1 -1.1
CHM eLR LR 02 22 27.5
comp=Z,567nm,10.9s
CHM Chimkent 11.83 306 eP Pn 02 17 44.1 -1.1
BOK Bokaro 12.46 165 eP Pn 02 17 51.6 -2.3
BOK IAmb IAmb 02 17 53.8
comp=Z,245nm,0.9s
JBP Jabalpur 12.90 190 ex Pn 02 18 10.9 +11
JBP AMB AMB 02 18 11.4
comp=Z,96nm,0.9s
JBP eS Sn 02 20 21.3 -2.3
JBP AMS AMS 02 23 15.8
comp=Z,9μm,12.0s
SHL Shillong 13.13 139 eP Pn 02 18 00.4 -2.7
SHL IAmb IAmb 02 18 06.0
comp=Z,12nm,0.8s
SHL Shillong 13.13 139 Pn 02 17 59.8 -3.3
SHL Shillong 13.13 139 P Pn 02 18 02.1 -1.0
SNR=7.5
SHL Shillong 13.13 139 P Pn 02 17 59.8 -3.3
BHPL Bhopal 13.38 200 ex Pn 02 17 56.7 -10
GTA Gaotai 14.19 71 eP Pn 02 18 15.6 -2.0
GTA pP P 02 18 19.3 -5.8
GTA sP 02 18 22.3
GTA S Sn 02 20 58.6 +3.4
GTA sS S 02 21 03.4 -13
GTA pmax pmax
comp=Z,14nm,2.3s
GTA pmax pmax
comp=Z,410nm,7.9s
GTA LR LR
comp=Z,9μm,15.5s
GTA LR LR
comp=Z,11μm,11.0s
GTA LR LR
comp=Z,12μm,11.0s
SEM Semipalatinsk 14.56 354 eP Pn 02 18 16.7 -5.9
SEM eLR LR 02 24 26.8
comp=Z,1μm,11.2s
SEM Semipalatinsk 14.56 354 eP Pn 02 18 16.7 -5.9
SEM MLR MLR
comp=Z,1μm,11.0s
KURBB Kurchatov Arra 14.96 350 Pn Pn 02 18 23.7 -4.0
comp=Z,0.3nm,0.6s,baz=172,slow=12,SNR=31
KURBB Lg Lg 02 22 58.7
comp=Z,0.3nm,0.3s,baz=137,slow=52,SNR=2.0
KURBB Kurchatov Arra 14.96 350 ⇓P Pn 02 18 23.2 -4.6
comp=Z,125nm,1.4s
KURK Kurchatov 15.03 351 ⇓P Pn 02 18 23.9 -4.9
comp=Z,138nm,1.2s
KURK Kurchatov 15.03 351 Pn 02 18 24.8 -4.0
KURK Kurchatov 15.03 351 d i P Pn 02 18 24.1 -4.7
KURK pmax pmax
comp=Z,59nm,0.9s
BRZS Berezniki 15.74 336 eP Pn 02 18 34.3 -3.9
BRZS eLR LR 02 24 44.1
comp=Z,802nm,10.0s
BRZS Berezniki 15.74 336 eP Pn 02 18 34.2 -3.9
BRZS MLR MLR
comp=Z,803nm,10.0s
BWNR Bhubaneshwar 15.86 168 ex Pn 02 18 36.7 -3.1
BWNR IAmb IAmb 02 18 38.1
comp=Z,70nm,0.8s
BWNR eS Sn 02 21 28.6 -7.1
SAIH SAIHA 16.23 143 eP Pn 02 18 41.9 -2.9
SAIH IAmb IAmb 02 18 47.3
comp=Z,104nm,1.3s
HRA Herat 16.59 271 Pn 02 18 48.7 -0.7
RPR Rampur 17.23 190 eP Pn 02 18 56.3 -1.0
RPR IAmb IAmb 02 18 59.9
comp=Z,47nm,1.3s
RPR e 02 21 53.0
RPR IVMs_BB IVMs_BB 02 25 50.7
comp=Z,2μm,10.5s
LZH Lanzhou 17.32 83 eP Pn 02 18 57.3 -1.1
LZH pP pP 02 19 02.3 -1.3
LZH S S 02 22 18.7 -1.6
LZH pmax pmax
comp=Z,49nm,1.2s
LZH pmax pmax
comp=Z,1μm,6.0s
LZH LR LR
comp=Z,12μm,12.8s
LZH LR LR
comp=Z,11μm,12.5s
LZH LR LR
comp=Z,12μm,13.6s
SRSP Sriramsagar 17.32 193 eP Pn 02 18 51.8 -6.6
SRSP IAmb IAmb 02 18 59.6
comp=Z,16nm,1.0s
SRSP e 02 22 01.1
SRSP IVMs_BB IVMs_BB 02 25 52.0
comp=Z,3μm,10.6s
CHLP Challavanipeta 17.42 175 eP Pn 02 18 54.8 -4.8
CHLP IAmb IAmb 02 19 03.3
comp=Z,21nm,0.9s
CHLP eS Sn 02 22 10.2 -3.4
CHLP IVMs_BB IVMs_BB 02 25 43.1
comp=Z,1μm,9.7s
ZAA0 Zalesovo Array 18.09 5 Pn 02 19 03.6 -4.1
ZAA0 IAmb IAmb 02 19 11.6
comp=Z,156nm,0.8s
ZALV Zalesovo Beam 18.09 5 P Pn 02 19 03.4 -4.3
comp=Z,4.1nm,0.3s,baz=191,slow=12,SNR=357
ZALV LR LR 02 26 56.7
comp=Z,4μm,18.9s,baz=188,slow=40
ZALV Zalesovo Beam 18.09 5 P Pn 02 19 03.5 -4.2
GGR Gangavaram 18.14 187 eP Pn 02 19 07.6 -1.1
GGR IAmb IAmb 02 19 11.3
comp=Z,23nm,1.0s
GGR eS Sn 02 22 29.0 -2.4
GGR IVMs_BB IVMs_BB 02 28 16.6
comp=Z,2μm,6.1s
CD2 Chengdu 18.47 100 P P 02 19 11.3 -1.3
CD2 S Sn 02 22 41.4 +2.2
CD2 sS sS 02 22 48.2 -1.3

CD2 pmax pmax
comp=Z,50nm,1.2s
CD2 pmax pmax
comp=Z,1µm,4.6s
CD2 LR LR
comp=Z,14µm,11.4s
CD2 LR LR
comp=Z,13µm,11.6s
CD2 LR LR
comp=Z,16µm,12.3s
KLRI Killari 18.53 198 *e*P **P 02 19 12.7 -0.6**
KLRI IAmb IAmb 02 19 14.3
comp=Z,27nm,1.0s
KLRI *e*S **Sn 02 22 42.1 +1.4**
KLRI IVMs_BB IVMs_BB 02 26 29.9
comp=Z,3µm,9.7s
PVM Polavaram 18.62 182 *e*P **P 02 19 13.6 -0.6**
PVM IAmb IAmb 02 19 15.5
comp=Z,11nm,0.9s
PVM *e* 02 22 27.4
PVM IVMs_BB IVMs_BB 02 26 32.5
comp=Z,1µm,10.9s
HYBB Hyderabad (bro 18.76 192 *e*P **P 02 19 14.3 -1.4**
HYBB IAmb IAmb 02 19 16.5
comp=Z,17nm,0.8s
HYBB *e*S **S 02 22 48.9 -0.7**
HYBB IVMs_BB IVMs_BB 02 26 40.1
comp=Z,3µm,11.6s
HYB Hyderabad 18.76 192 *i* P **P 02 19 14.0 -1.8**
HYB *i* LR LR
comp=Z,4.9nm,12.0s
HYB Hyderabad 18.76 192 *e*x **P 02 19 13.2 -2.5**
HYB IAmb IAmb 02 19 16.8
comp=Z,29nm,0.7s
BVAR Borovoye Array 19.09 337 P **P 02 19 18.7 -0.4**
comp=Z,9.6nm,0.3s,baz=139,slow=10,SNR=147
BRVK Borovoye 19.15 337 ⇓P **Pn 02 19 19.8 -0.8**
comp=Z,187nm,0.7s
BRVK Borovoye 19.15 337 P **P 02 19 18.8 -0.9**
BRVK Borovoye 19.15 337 *i* P **P 02 19 19.4 -0.3**
BRVK pmax pmax
comp=Z,187nm,0.7s
MYLAV Mylavaram 19.17 185 *e*P **P 02 19 19.9 -0.4**
MYLAV IAmb IAmb 02 19 22.1
comp=Z,19nm,0.9s
MYLAV *e*S **Sn 02 22 56.9 +0.7**
MYLAV IVMs_BB IVMs_BB 02 26 51.0
comp=Z,1µm,9.4s
ASHT Ashkhabad 19.33 283 P **P 02 19 21.4 -0.4**
ASHT IAmb IAmb 02 19 27.1
comp=Z,225nm,1.1s
ASHT Ashkhabad 19.33 283 P **P 02 19 21.4 -0.4**
ASHT pmax pmax
comp=Z,225nm,1.1s
NJS Nagarjunasagar 19.50 189 *e*P **P 02 19 22.4 -1.4**
NJS IAmb IAmb 02 19 27.2
comp=Z,54nm,1.1s
NJS *e*S **Sn 02 23 03.8 -0.2**
NJS IVMs_BB IVMs_BB 02 27 27.6
comp=Z,1µm,8.6s
GEYT Alibeck 19.54 283 P **P 02 19 24.1 -0.2**
comp=Z,0.8nm,0.3s,baz=108,slow=9.5,SNR=50
GEYT LR LR 02 28 53.3
comp=Z,4µm,18.3s,baz=75,slow=43
GEYT Alibeck 19.54 283 P **P 02 19 22.8 -1.4**
GYA0B ALIBECK ARRAY 19.54 283 IAmb IAmb 02 19 29.1
comp=Z,105nm,1.0s
SRLM Srisailam 20.00 190 *e*P **P 02 19 26.0 -3.4**
SRLM IAmb IAmb 02 19 32.7
comp=Z,38nm,1.0s
SRLM *e*S **S 02 23 15.5 +1.0**
SRLM IVMs_BB IVMs_BB 02 27 27.0
comp=Z,2µm,9.1s
ADKI Addanki 20.13 187 *e*P **P 02 19 29.5 -1.1**
ADKI IAmb IAmb 02 19 31.9
comp=Z,18nm,0.9s
ADKI *e*S **S 02 23 13.9 -3.0**
ADKI IVMs_BB IVMs_BB 02 27 29.8
comp=Z,1µm,9.9s
MOY Mondy 20.56 34 *e*P **P 02 19 35.7 +0.4**
MOY pmax pmax
comp=Z,409nm,2.2s
ZAK Zakamensk 20.87 40 *e*P **P 02 19 38.2 -0.4**
ZAK pmax pmax
comp=Z,67nm,1.0s
AB31 Akbulak array 21.15 316 ⇑P **P 02 19 40.2 -1.4**
comp=Z,51nm,0.8s,baz=112,slow=11,SNR=407
AB31 Akbulak array 21.15 316 *e*P **P 02 19 39.8 -1.8**
ABKAR Akbulak array 21.15 316 P **P 02 19 40.9 -0.7**
ABKAR IAmb IAmb 02 19 46.9
comp=Z,58nm,0.8s
ABKAR Akbulak array 21.15 316 P **P 02 19 40.4 -1.2**
SONM Songino Array 21.34 49 P **P 02 19 43.8 +0.1**
comp=Z,12nm,0.7s,baz=239,slow=12,SNR=95
SONM LR LR 02 28 31.6
comp=Z,6µm,18.6s,baz=242,slow=38
SONM Songino Array 21.34 49 P **P 02 19 43.4 -0.3**
URV Uravakonda 21.41 194 *e*P **P 02 19 42.8 -1.8**
URV IAmb IAmb 02 19 47.7
comp=Z,76nm,0.8s
URV *e*S **S 02 23 42.7 +0.3**
URV IVMs_BB IVMs_BB 02 28 16.2
comp=Z,6µm,9.9s
ULN Ulaanbaatar 21.75 49 P **P 02 19 47.9 -0.3**
ULN IAmb IAmb 02 19 56.0
comp=Z,157nm,1.2s
ULN Ulaanbaatar 21.75 49 P **P 02 19 47.9 -0.3**
ULN pmax pmax
comp=Z,157nm,1.3s
XAN Xi'an 21.76 87 P **P 02 19 49.6 +1.4**
XAN pP sP 02 19 59.6 +6.0
XAN PP **PnPn 02 20 16.4 +7.3**
XAN LR LR
comp=Z,5µm,12.7s
XAN LR LR
comp=Z,7µm,15.1s
XAN LR LR
comp=Z,8µm,16.3s
XAN Xi'an 21.76 87 P **P 02 19 47.4 -0.8**
XAN Xi'an 21.76 87 P **P 02 19 47.4 -0.8**
XAN pmax pmax
comp=Z,29nm,1.1s
GOA Goa 21.77 203 *e*x **P 02 19 45.2 -3.2**
GOA IAmb IAmb 02 19 53.1
comp=Z,296nm,1.4s
TLY Talaya 21.83 37 P **P 02 19 49.2 +0.4**
comp=Z,13nm,0.8s,baz=243,slow=7.2,SNR=15
TLY LR LR 02 29 09.3
comp=Z,4µm,20.5s,baz=230,slow=39
TLY Talaya 21.83 37 P **P 02 19 47.8 -1.1**
TLY Talaya 21.83 37*c i* P **P 02 19 50.6 +1.7**
TLY *e* 02 20 11.8
TLY *e*S **S 02 23 48.3 -1.9**
TLY *e*SS Sn 02 24 12.7 +13
TLY pmax pmax
comp=Z,90nm,1.0s
TLY MLR MLR
comp=Z,10µm,18.0s
BTO Baotou 22.11 69 *e*P **P 02 19 49.9 -2.1**
SKHT Srikalahasti 22.23 187 *e*P **P 02 19 52.0 -1.4**
SKHT IAmb IAmb 02 20 05.5
comp=Z,29nm,1.0s
SKHT *e*S **S 02 23 57.3 -1.0**
SKHT IVMs_BB IVMs_BB 02 29 10.1
comp=Z,1µm,8.6s
CHTO Chiang Mai 22.42 135 P **P 02 19 54.8 -0.7**
CHTO Chiang Mai 22.42 135 P **P 02 19 54.8 -0.7**
CHTO pmax pmax
comp=Z,27nm,1.0s
IRK Irkutsk 22.48 37 *e*P **P 02 19 56.8 +0.9**
IRK *e* 02 24 48.3
IRK pmax pmax
comp=Z,398nm,2.1s
CM31 Chiang Mai Arr 22.71 136 P **P 02 19 58.4 0.0**
CM31 Chiang Mai Arr 22.71 136 P **P 02 19 59.2 +0.7**
SNR=11
CMAR Chiang Mai Arr 22.71 136 P **P 02 19 58.4 -0.1**
comp=Z,14nm,0.7s,baz=311,slow=9.9,SNR=22
GYA Guiyang 22.72 108 ⇑*i* P **P 02 19 59.3 +0.6**
GYA PP **PnPn 02 20 27.5 +5.1**
GYA S **S 02 24 05.8 -1.8**
GYA SS **SnSn 02 24 46.9 +10**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,690nm,4.1s
GYA LR LR
comp=Z,4µm,13.7s
GYA LR LR
comp=Z,2µm,12.6s
GYA LR LR
comp=Z,4µm,14.9s
AKTO Aktyubinsk 22.82 317 P **P 02 19 59.5 0.0**
comp=Z,29nm,0.7s,baz=111,slow=11,SNR=22
AKTO LR LR 02 29 56.1
comp=Z,5µm,18.5s,baz=125,slow=39
AKTO Aktyubinsk 22.82 317 ⇑P **P 02 19 59.0 -0.4**
comp=Z,56nm,0.8s
AKTO Aktyubinsk 22.82 317 *i* P **P 02 20 00.1 +0.6**
AKTO pmax pmax
comp=Z,56nm,0.8s
HHC Hu-ho-hao-te 23.29 69 *e*P **P 02 20 03.2 -1.3**
HHC PP **PnPn 02 20 33.9 +3.8**
HHC S **S 02 24 16.6 -0.6**
HHC pmax pmax
comp=Z,210nm,6.8s
HHC LR LR
comp=Z,1µm,10.6s
HHC LR LR
comp=Z,2µm,11.4s
HHC LR LR
comp=Z,2µm,14.9s
ENH Enshi 23.31 96 P **P 02 20 04.0 -0.7**
ENH IAmb IAmb 02 20 14.8
comp=Z,38nm,1.0s
TIY Taiyuan 24.03 77 *e*P **P 02 20 12.2 +0.5**
TIY S **S 02 24 23.2 -5.8**
TIY pmax pmax
comp=Z,56nm,1.2s
TIY LR LR
comp=Z,2µm,12.0s
TIY LR LR
comp=Z,5µm,11.9s
TIY LR LR
comp=Z,8µm,13.4s
WSAR Wadi Sarin 24.19 245 P **P 02 20 14.9 +1.6**
comp=Z,16nm,0.7s,baz=107,slow=8.0,SNR=10
WSAR LR LR 02 31 20.0
comp=Z,3µm,21.4s,baz=72,slow=41
WSAR Wadi Sarin 24.19 245 P **P 02 20 17.4 +4.2**
SNR=9.4
BANOM Banah 24.48 253 *i* P **P 02 20 17.3 +1.4**
SNR=5.9
BANOM Banah 24.48 253 P **P 02 20 21.0 +5.1**
SNR=9.0
BANOM P **P 02 20 21.0 +5.1**
SNR=9.0
SHME Shamm 24.54 254 *i* P **P 02 20 17.9 +1.4**
SNR=27
SMDO Samad 24.73 245 P P 02 20 28.0 +10
SNR=7.7
SMDO P P 02 20 28.0 +10
SNR=7.7
MDH Madha 24.80 252 *i* P **P 02 20 20.3 +1.6**
SNR=16
MDH Madha 24.80 252 P **P 02 20 25.0 +6.3**
SNR=10
MDH P **P 02 20 25.0 +6.3**
SNR=10
MSFE Esma-Masafi 24.88 252 *i* P **P 02 20 22.0 +2.6**
SNR=17
HOQ Hoqain 24.97 247 P P 02 20 29.1 +8.8
SNR=9.9
UOSS Minazif 25.06 251 P **P 02 20 25.3 +4.2**
UOSS Minazif 25.06 251 P **P 02 20 21.5 +0.4**
HATD Hatta, Dubai 25.18 251 *i* P **P 02 20 25.2 +3.0**
SNR=8.0
HATD Hatta, Dubai 25.18 251 P P 02 20 31.0 +8.8
SNR=9.2
HATD P P 02 20 31.0 +8.8
SNR=9.2
SOHO SOHO 25.25 249 P P 02 20 31.0 +8.3
SNR=11
ASHO Ashiyiah 25.31 251 *i* P **P 02 20 26.9 +3.5**
SNR=29
ASHO Ashiyiah 25.31 251 P **P 02 20 28.1 +4.7**
SNR=30
ASHO P **P 02 20 28.1 +4.7**
SNR=30
NAZ Nazwa, Dubai 25.45 252 *i* P **P 02 20 27.0 +2.4**
SNR=13
NAZ Nazwa, Dubai 25.45 252 P **P 02 20 31.0 +6.3**
SNR=17
NAZ P **P 02 20 31.0 +6.3**
SNR=17
SVE Sverdlovsk 25.54 332⇓*e*P **P 02 20 27.1 +2.0**
SVE *e*S **S 02 24 54.3 +1.5**
SVE pmax pmax
comp=Z,115nm,1.2s
SVE MLR MLR
comp=Z,3µm,13.0s
FAQ Al Faqa, Dubai 25.64 252 *i* P **P 02 20 30.4 +4.1**
SNR=11
ARQ Araqi 25.70 248 P **P 02 20 33.0 +6.0**
SNR=9.6
ARQ P **P 02 20 33.0 +6.0**
SNR=9.6
ALNE Al Ain 25.89 250 *i* P **P 02 20 34.0 +5.4**
SNR=10
PBA Port Blair 25.90 156 P P 02 20 29.8 +1.1
PBA IAmb IAmb 02 20 47.5
comp=Z,105nm,1.5s
MHTO MHTO 26.07 242 P P 02 20 38.0 +7.7
SNR=13
MHTO P P 02 20 38.0 +7.7
SNR=13
ARU Arti 26.10 329 P **P 02 20 31.4 +1.2**
comp=Z,11nm,0.6s,baz=138,slow=6.4,SNR=41
ARU LR LR 02 31 55.1
comp=Z,1µm,19.9s,baz=124,slow=39
ARU Arti 26.10 329 P **P 02 20 29.9 -0.2**
ARU Arti 26.10 329*d i* P **P 02 20 31.3 +1.2**
ARU 02 21 06.7
ARU 02 23 58.2
ARU S **S 02 25 01.0 -0.5**
ARU SS **SnSn 02 25 56.5 -2.7**
ARU pmax pmax
comp=Z,125nm,1.4s
ARU MLR MLR
comp=Z,1µm,13.0s
AJN Ajban 26.20 252 *i* P **P 02 20 37.7 +6.3**
SNR=15
AJN Ajban 26.20 252 P **P 02 20 37.3 +5.9**
SNR=12
AJN P **P 02 20 37.3 +5.9**
SNR=12
BJT Baijiatuau 26.80 71 P **P 02 20 35.4 -1.3**
BJT Baijiatuau 26.80 71 P **P 02 20 35.4 -1.3**
BJT pmax pmax
comp=Z,23nm,1.2s
BJI Beijing 26.80 71 P **P 02 20 38.4 +1.7**
BJI sP **sP 02 20 42.8 +0.5**
BJI S **S 02 25 13.5 +0.5**
BJI pmax pmax
comp=Z,18nm,1.0s
BJI LR LR
comp=Z,2µm,15.9s
BJI LR LR
comp=Z,2µm,12.7s
BJI LR LR
comp=Z,2µm,22.6s
LKRN Lenkeran, Azer 26.83 286 P **P 02 20 37.8 +0.8**
DQM DQM 27.06 241 P **P 02 20 45.6 +6.4**
DQM P **P 02 20 45.6 +6.4**
WHN Wuhan 27.15 92 ⇑P **P 02 20 45.8 +5.9**
WHN S **S 02 25 25.5 +6.9**
WHN LR LR
comp=Z,8µm,8.8s
WHN LR LR
comp=Z,5µm,8.9s
WHN LR LR
comp=Z,10µm,12.7s
CIT Chita 27.29 44 *e*P **P 02 20 44.8 +3.8**
AKT Akhty 27.53 292 *e*P **P 02 20 43.7 +0.3**
AKT *e* 02 21 28.2
AKT *e*S **S 02 25 25.8 +1.1**
AKT pmax pmax
comp=Z,54nm,1.1s
MAK Makhachkala 27.73 295 *e*P **P 02 20 45.1 +0.1**
MAK *e*S **S 02 25 25.1 -2.5**
MAK pmax pmax
comp=Z,204nm,1.2s
MAK MLR MLR
comp=Z,3µm,14.0s
SEKA Sheki 27.93 292 P **P 02 20 48.0 +1.1**
MNGR Mingechevir, A 28.02 291 P **P 02 20 49.5 +1.8**
PALK Pallekele 28.57 184 P **P 02 20 53.6 +0.8**
comp=Z,4.0nm,0.6s,baz=353,slow=11,SNR=4.2
PALK LR LR 02 33 00.4
comp=Z,2µm,19.9s,baz=347,slow=38
PALK Pallekele 28.57 184 P **P 02 20 51.9 -0.9**
GANJ Ganja 28.61 290 P **P 02 20 54.7 +1.7**
GROC Groznyy 29.00 296 *e*P P 02 20 51.4 -4.9
GROC pmax pmax
comp=Z,26nm,0.9s
NAX Nakhchivan 29.34 288 P **P 02 21 01.3 +1.8**
QIZ Qiongzhong 29.42 118 P **P 02 21 00.4 +0.1**
QIZ S **S 02 25 54.9 +0.3**
QIZ LR LR
comp=Z,4µm,16.2s
QIZ LR LR
comp=Z,4µm,13.2s
QIZ LR LR
comp=Z,3µm,12.8s
TBLG Delisi 29.77 293 **P 02 21 03.1 -0.1**
TBLG Delisi 29.77 293 P **P 02 21 03.1 -0.1**
TBLG pmax pmax
comp=Z,5.0nm,0.7s
GNI Garni 29.84 290 P **P 02 21 05.4 +1.3**
comp=Z,2.6nm,0.8s,baz=115,slow=4.1,SNR=2.4
GNI LR LR 02 34 54.5
comp=Z,770nm,20.4s,baz=80,slow=40
GNI Garni 29.84 290 P **P 02 21 03.0 -1.1**
BOD Bodaibo 30.27 34 *e*P **P 02 21 10.2 +2.7**
BOD pmax pmax
comp=Z,27nm,2.2s
NJ2 Nanjing 30.32 87 *e*P **P 02 21 07.8 -0.4**
NJ2 S **S 02 26 07.6 -0.9**
NJ2 sS **sS 02 26 15.2 +0.1**
NJ2 pmax pmax
comp=Z,14nm,0.6s
NJ2 pmax pmax
comp=Z,560nm,5.1s
NJ2 LR LR
comp=Z,2µm,9.9s
NJ2 LR LR
comp=Z,3µm,14.2s
NJ2 LR LR
comp=Z,4µm,13.7s
ZEI Tsey 30.38 295 *e*P **P 02 21 13.1 +4.3**
ZEI pmax pmax
comp=Z,7.0nm,0.9s
ONI Oni 30.71 295 P **P 02 21 13.3 +1.7**
AKH Akhalkalaki 30.71 292 ⇓P **P 02 21 13.1 +1.3**
AKH Akhalkalaki 30.71 292 P **P 02 21 11.3 -0.5**
AKH Akhalkalaki 30.71 292 P **P 02 21 11.3 -0.5**
AKH pmax pmax
comp=Z,10.0nm,1.1s
WHFO Wadi Hawf 31.06 242 P P 02 21 21.1 +6.2
WHFO P P 02 21 21.1 +6.2
DL2 Dalian 31.10 73 P **P 02 21 17.2 +2.2**
DL2 S **S 02 26 22.8 +2.2**
DL2 pmax pmax
comp=Z,38nm,1.1s
DL2 pmax pmax
comp=Z,350nm,4.1s
DL2 LR LR
comp=Z,3µm,16.0s
DL2 LR LR
comp=Z,2µm,13.0s
DL2 LR LR
comp=Z,3µm,18.6s
KBZ Khabaz 31.12 297 LR LR 02 35 43.8
comp=Z,2µm,19.2s,baz=90,slow=40
KIV Kislovodsk 31.27 297 *e*P **P 02 21 20.4 +3.8**
KIV *e*S **S 02 26 26.6 +3.2**
KIV pmax pmax
comp=Z,11nm,1.0s
KIV MLR MLR
comp=Z,5µm,15.0s
KIRV Kirov 31.34 327 P **P 02 21 17.1 +0.2**
comp=Z,48nm,0.6s,baz=116,slow=5.1,SNR=26
KIRV LR LR 02 33 48.4
comp=Z,826nm,19.9s,baz=131,slow=36
BCA Borcka 32.12 292 ⇓P **P 02 21 24.0 +0.1**
SNY Shenyang 32.33 67 ⇓P **P 02 21 22.3 -3.4**
SNY S **S 02 26 33.6 -6.1**
SNY pmax pmax
comp=Z,11nm,1.4s
SNY pmax pmax
comp=Z,230nm,6.0s
SNY LR LR
comp=Z,2µm,11.4s
SNY LR LR
comp=Z,4µm,13.2s
SNY LR LR
comp=Z,5µm,12.3s
SSE Sheshan 32.51 87 P **P 02 21 26.1 -1.4**
SSE S **S 02 26 42.8 0.0**
SSE pmax pmax
comp=Z,9.0nm,1.2s
SSE pmax pmax
comp=Z,230nm,4.7s
SSE LR LR
comp=Z,2µm,17.4s
SSE LR LR
comp=Z,1µm,16.6s
VRH Novokhopyorsk 32.74 311 *e*P **P 02 21 28.2 -1.1**
VRH pmax pmax
comp=Z,40nm,0.7s
VRH MLR MLR
comp=Z,4µm,14.0s
QZH Quanzhou 32.87 99 *e*P **P 02 21 33.0 +2.4**
QZH *e*S S 02 26 57.5 +9.2
QZH LR LR
comp=Z,980nm,5.7s
QZH LR LR
comp=Z,5µm,10.9s
QZH LR LR
comp=Z,5µm,9.9s
LHMI Lhok Sumawe 33.34 153 P **P 02 21 35.4 +0.5**
SOC Sochi 33.43 296 *e*P **P 02 21 36.0 +0.7**
SOC *e* 02 22 41.7
SOC *e*PPP PPP 02 22 57.0
SOC *e*S **S 02 26 55.1 -1.7**
SOC pmax pmax
comp=Z,16nm,0.9s
SOC MLR MLR
comp=Z,2µm,16.0s
CN2 Changchun 33.62 63 *e*P **P 02 21 38.1 +1.1**
CN2 *e*sP sP 02 21 45.1 +2.5
CN2 *e*S **S 02 26 57.7 -2.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,3µm,17.0s
CN2 LR LR
comp=Z,2µm,17.0s
CN2 LR LR
comp=Z,3µm,19.0s
RAYN Ar Rayn 34.18 259 P **P 02 21 42.1 -0.1**
RAYN IAmb IAmb 02 21 51.2
comp=Z,32nm,1.4s
RAYN Ar Rayn 34.18 259 P **P 02 21 42.1 -0.1**
RAYN pmax pmax
comp=Z,32nm,1.4s
VORD Divnogorie 34.21 310 *e*P **P 02 21 41.5 -0.5**
VORD pmax pmax
comp=Z,40nm,0.8s
VSR Storozhevoye 34.33 310 *e*P **P 02 21 42.3 -0.8**
VSR pmax pmax
comp=Z,40nm,0.8s
VSR MLR MLR
comp=Z,4µm,15.0s
PRGR Permogore 34.56 330 *e*P **P 02 21 45.8 +0.9**
PRGR *e* 02 24 23.6
PRGR pmax pmax
comp=Z,60nm,0.9s
ANN Anapa 35.04 299 *e*P **P 02 21 52.0 +2.7**
ANN *e**PP **sP 02 21 55.2 +0.3**
ANN *e* 02 23 05.6
ANN *e*S **S 02 27 24.6 +3.0**
ANN *e*SS **SnSn 02 29 41.3 +4.3**
ANN pmax pmax
comp=Z,86nm,1.7s

ANN				MLR	MLR		
	comp=E,2μm,13.0s						
ANN				MLR	MLR		
	comp=N,2μm,13.0s						
ANN				MLR	MLR		
	comp=Z,2μm,13.0s						
INCN	**Inchon**	**35.22**	**74**	P	**P**	**02 21 49.6**	**-1.4**
INCN				IAmb	IAmb	02 21 53.7	
	comp=Z,43nm,1.1s						
INCN	**Inchon**	**35.22**	**74**	P	**P**	**02 21 49.6**	**-1.4**
INCN				pmax	pmax		
	comp=Z,43nm,1.1s						
ZEA	**Zeya**	**35.70**	**46**	*e*P	**P**	**02 21 57.0**	**+2.1**
ZEA				*e*SS	SS	02 30 18.0	+11
ZEA				pmax	pmax		
	comp=Z,73nm,1.6s						
ZEA				MLR	MLR		
	comp=Z,4μm,12.0s						
ZEA				MLR	MLR		
	comp=E,3μm,13.0s						
ZEA				MLR	MLR		
	comp=N,1μm,10.0s						
YULB	**Yu-li**	**35.77**	**100**	P	**P**	**02 21 55.7**	**-0.2**
YULB				IAmb	IAmb	02 22 00.1	
	comp=Z,43nm,1.1s						
TWG	**Pinlang**	**35.88**	**101**	P	**P**	**02 21 55.8**	**-0.9**
GAZ	**Gaziantep**	**36.10**	**286**	P	**P**	**02 21 56.0**	**-2.6**
GAZ				IAmb	IAmb	02 22 09.2	
	comp=Z,18nm,1.0s						
MOS	**Moscow**	**36.16**	**317**	*e*P	**P**	**02 21 59.0**	**+0.3**
MOS				*e*S	**S**	**02 27 39.3**	**+0.8**
MOS				pmax	pmax		
	comp=Z,153nm,1.2s						
MOS				pmax	pmax		
	comp=Z,500nm,2.2s						
MOS				MLR	MLR		
	comp=Z,2μm,19.0s						
KSAR	**Wonju Array Be**	**36.20**	**74**	P	**P**	**02 21 58.2**	**-1.2**
KSAR	**Wonju Array Be**	**36.20**	**74**	P	**P**	**02 21 58.2**	**-1.2**
KSRS	**Korea Array**	**36.23**	**74**	P	**P**	**02 21 57.9**	**-1.7**
	comp=Z,6.3nm,0.9s,baz=270,slow=8.0,SNR=11						
KSRS				LR	LR	02 37 43.2	
	comp=Z,1μm,21.4s,baz=283,slow=38						
MDJ	**Mudanjiang**	**36.57**	**61**	P	**P**	**02 22 04.8**	**+2.4**
MDJ				pmax	pmax		
	comp=Z,15nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,150nm,6.1s						
OBN	**Obninsk**	**36.60**	**316**	P	**P**	**02 22 02.2**	**-0.4**
	comp=Z,13nm,0.8s,baz=116,slow=3.3,SNR=19						
OBN	**Obninsk**	**36.60**	**316**	P	**P**	**02 22 02.1**	**-0.4**
OBN	**Obninsk**	**36.60**	**316**	d *i*P	**P**	**02 22 03.3**	**+0.8**
OBN				*e*		02 23 26.0	
OBN				*e*S	**S**	**02 27 48.9**	**+3.6**
OBN				pmax	pmax		
	comp=Z,56nm,0.9s						
OBN				MLR	MLR		
	comp=Z,3μm,19.0s						
KLMR	**Klimovskoe**	**36.84**	**326**	*e*P	**P**	**02 22 03.8**	**-0.7**
KLMR				*e*		02 23 22.8	
KLMR				*e*S	**S**	**02 27 43.8**	**-5.0**
KLMR				pmax	pmax		
	comp=Z,153nm,1.2s						
KLMR	**Klimovskoe**	**36.84**	**326**	*e*P	**P**	**02 22 03.9**	**-0.6**
KLMR				AMP		02 22 08.8	
	comp=Z,153nm,1.2s						
KLMR				*e*PP	**PP**	**02 23 22.8**	**-5.4**
KLMR				*e*S	**S**	**02 27 43.9**	**-4.9**
KLMR				*e*S	**S**	**02 27 43.9**	**-4.9**
KLMR				LQ	LQ	02 33 52.4	
KLMR				LQ	LQ	02 33 52.4	
KLMR				LR	LR	02 36 16.6	
SIM	**Simferopol'**	**37.39**	**299**	d *e*P	**P**	**02 22 10.0**	**+0.6**
SIM				*e*S	**S**	**02 28 01.0**	**+3.4**
SIM				pmax	pmax		
	comp=Z,32nm,1.0s						
SIM				MLR	MLR		
	comp=N,1μm,13.0s						
KLR	**Kul'dur**	**37.99**	**54**	P	**P**	**02 22 13.4**	**-1.1**
	comp=N,4.7nm,0.9s,baz=275,slow=9.8,SNR=15						
KLR				LR	LR	02 38 24.3	
	comp=N,2μm,21.2s,baz=268,slow=37						
KLR	**Kul'dur**	**37.99**	**54**	⇑*e*P	**P**	**02 22 15.8**	**+1.3**
KLR				pmax	pmax		
	comp=Z,22nm,1.0s						
ILGA	**Ilgaz**	**38.08**	**293**	P	**P**	**02 22 15.9**	**+0.3**
ILGA				IAmb	IAmb	02 22 25.6	
	comp=Z,36nm,1.0s						
USRK	**Ussuriysk Ar.**	**38.31**	**62**	LR	LR	02 39 30.4	
	comp=Z,3μm,18.2s,baz=267,slow=39						
BR131	**Keskin Array S**	**38.36**	**291**	P	**P**	**02 22 17.4**	**-0.4**
BR131	**Keskin Array S**	**38.36**	**291**	P	**P**	**02 22 18.6**	**+0.8**
	SNR=11						
BR131	**Keskin Array S**	**38.36**	**291**	P	**P**	**02 22 17.4**	**-0.4**
BR131				pmax	pmax		
	comp=Z,20nm,1.1s						
BRTR	**Keskin Array B**	**38.36**	**291**	P	**P**	**02 22 17.8**	**0.0**
	comp=Z,9.3nm,0.9s,baz=95,slow=6.9,SNR=52						
BRTR				LR	LR	02 40 11.1	
	comp=Z,737nm,19.5s,baz=43,slow=40						
TMCR	**Tamitsa**	**38.81**	**331**	*e*P	**P**	**02 22 21.6**	**+0.5**
TMCR				pmax	pmax		
	comp=Z,142nm,1.1s						
ANTO	**Ankara**	**38.97**	**291**	⇓P	**P**	**02 22 24.1**	**+1.2**
ANTO	**Ankara**	**38.97**	**291**	P	**P**	**02 22 22.9**	**0.0**
ANTO				IAmb	IAmb	02 22 32.8	
	comp=Z,32nm,1.0s						
ANTO	**Ankara**	**38.97**	**291**	P	**P**	**02 22 22.9**	**0.0**
ANTO				pmax	pmax		
	comp=Z,32nm,1.0s						
BR231	**Keskin MP Arra**	**38.99**	**291**	P	**P**	**02 22 23.4**	**+0.3**
YAK	**Yakutsk**	**39.19**	**33**	P	**P**	**02 22 24.0**	**-0.3**
	comp=Z,16nm,0.5s,baz=215,slow=3.3,SNR=9.2						
YAK	**Yakutsk**	**39.19**	**33**	P	**P**	**02 22 24.4**	**+0.1**
YAK				IAmb	IAmb	02 22 28.1	
	comp=Z,43nm,0.8s						
YAK	**Yakutsk**	**39.19**	**33**	*e*P	**P**	**02 22 26.4**	**+2.1**
YAK				*e**PP	**sP**	**02 22 30.8**	**+0.9**
YAK				*e*		02 24 01.3	
YAK				*e*PPP	PPP	02 24 17.3	
YAK				*e*		02 24 38.1	
YAK				*e*S	**S**	**02 28 24.6**	**+0.2**
YAK				*e**SS	**sS**	**02 28 32.6**	**+1.6**
YAK				*e*SSS	SSS	02 31 43.3	
YAK				pmax	pmax		
	comp=Z,42nm,0.8s						
YAK				pmax	pmax		
	comp=E,27nm,1.3s						
YAK				pmax	pmax		
	comp=N,15nm,1.3s						
YAK				pmax	pmax		
	comp=Z,17nm,0.6s						
YAK				pmax	pmax		
	comp=N,15nm,1.0s						
YAK				pmax	pmax		
	comp=E,21nm,1.4s						
YAK				smax	smax		
	comp=N,372nm,3.0s						
YAK				smax	smax		
	comp=E,189nm,4.4s						
YAK				MLR	MLR		
	comp=Z,2μm,20.0s						
YAK				MLR	MLR		
	comp=E,1μm,21.0s						
YAK				MLR	MLR		
	comp=N,665nm,15.0s						
JNU	**Nakatsue**	**39.68**	**80**	LR	LR	02 40 26.8	
	comp=N,2μm,20.6s,baz=296,slow=39						
AKASG	**Malin Array Be**	**40.55**	**308**	P	**P**	**02 22 34.8**	**-0.9**
	comp=N,8.5nm,0.8s,baz=77,slow=7.3,SNR=17						
AKASG				PP	**PP**	**02 24 12.0**	**+3.1**
	comp=N,6.8nm,0.9s,baz=84,slow=11,SNR=6.1						
AKASG				LR	LR	02 41 10.2	
	comp=N,3μm,20.4s,baz=85,slow=39						
AKASG	**Malin Array Be**	**40.55**	**308**	P	**P**	**02 22 36.0**	**+0.3**
AKASG	**Malin Array Be**	**40.55**	**308**	P	**P**	**02 22 36.0**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,8.0nm,1.3s						
AKBB	**Malin Array Si**	**40.55**	**308**	IAmb	IAmb	02 22 42.8	
	comp=Z,38nm,0.9s						
AKBB	**Malin Array Si**	**40.55**	**308**	d *i*P	**P**	**02 22 38.6**	**+2.9**
TGY	**Tagaytay City**	**40.73**	**112**	LR	LR	02 40 32.5	
	comp=Z,1μm,21.7s,baz=316,slow=38						
PUL	**Pulkovo**	**40.88**	**322**	⇓*i*P	**P**	**02 22 42.1**	**+3.7**
PUL				pmax	pmax		
	comp=Z,113nm,0.9s						
KIS	**Kishinev**	**40.94**	**303**	*e*P	**P**	**02 22 39.0**	**-0.1**
KIS				*e*S	S	02 28 30.0	-21
KIS				*e*SS	SS	02 31 30.0	-22
KIS				*e*SSS	SSS	02 32 16.0	
KIS				*e*LQ	LQ	02 34 40.0	
	comp=Z,2μm,20.0s						
KIS				LRM	MLR	02 41 50.0	
	comp=Z,2μm,15.0s						
MILM	**Milestii Mici**	**40.95**	**303**	⇓P	**P**	**02 22 38.4**	**-0.7**
GRNR	**Gornyy**	**41.03**	**51**	⇓*i*P	**P**	**02 22 44.3**	**+4.5**
GRNR				*e*S	**S**	**02 28 57.7**	**+5.5**
GRNR				pmax	pmax		
	comp=Z,30nm,1.2s						
GRNR				MLR	MLR		
	comp=Z,1μm,14.0s						
JURR	**Jurilovca**	**41.12**	**299**	⇓P	**P**	**02 22 39.9**	**-0.6**
ISP	**Isparta**	**41.14**	**289**	P	**P**	**02 22 40.5**	**-0.5**
ISP	**Isparta**	**41.14**	**289**	P	**P**	**02 22 40.5**	**-0.5**
ISP				pmax	pmax		
	comp=Z,21nm,1.0s						
SORM	**Soroca**	**41.18**	**305**	⇓P	**P**	**02 22 40.0**	**-1.0**
SORM	**Soroca**	**41.18**	**305**	P	**P**	**02 22 40.0**	**-1.0**
JOF	**Joensuu**	**41.19**	**327**	P	**P**	**02 22 42.8**	**+1.9**
JOF				pmax	pmax		
	comp=Z,57nm,1.1s						
LEOM	**Leova**	**41.38**	**302**	⇓P	**P**	**02 22 42.4**	**-0.2**
LEOM	**Leova**	**41.38**	**302**	P	**P**	**02 22 42.4**	**-0.2**
TOPG	**Topolog**	**41.46**	**300**	⇓P	**P**	**02 22 43.7**	**+0.4**
TIRR	**Tirgusor**	**41.48**	**299**	P	**P**	**02 22 43.6**	**0.0**
TIRR				IAmb	IAmb	02 22 52.9	
	comp=Z,46nm,1.3s						
TIRR	**Tirgusor**	**41.48**	**299**	P	**P**	**02 22 43.6**	**0.0**
TIRR				pmax	pmax		
	comp=Z,46nm,1.3s						
MICGM	**Minsk**	**41.49**	**314**	*e*P	**P**	**02 22 46.0**	**+2.5**
MICGM				*e*LR	LR	02 38 58.0	
MICGM				LRM	MLR	02 42 16.0	
	comp=Z,5.4nm,16.0s						
MNK	**Minsk**	**41.49**	**314**	*e*P	**P**	**02 22 46.0**	**+2.5**
MNK				MLR	MLR		
	comp=Z,5μm,16.0s						
MFTR	**Murfatlar**	**41.51**	**299**	⇓P	**P**	**02 22 43.0**	**-0.8**
LVZ	**Lovozero**	**41.66**	**335**	P	**P**	**02 22 45.0**	**+0.2**
LVZ				IAmb	IAmb	02 22 48.6	
	comp=Z,59nm,1.1s						
LVZ	**Lovozero**	**41.66**	**335**	⇓*i*P	**P**	**02 22 48.1**	**+3.3**
LVZ				pmax	pmax		
	comp=Z,38nm,1.0s						
PSN	**Preselentsi**	**41.76**	**298**	*e*P	**P**	**02 22 45.6**	**-0.2**
HARR	**Harsova**	**41.80**	**299**	⇓P	**P**	**02 22 46.6**	**+0.4**
HARR	**Harsova**	**41.80**	**299**	P	**P**	**02 22 46.5**	**+0.4**
ELL	**Elmali**	**41.88**	**287**	P	**P**	**02 22 49.5**	**+2.4**
ICOR	**Ion Corvin**	**41.97**	**299**	⇓P	**P**	**02 22 48.4**	**+0.9**
GHRR		**42.00**	**301**	⇓P	**P**	**02 22 48.1**	**+0.3**
NACGM	**Naroch**	**42.15**	**315**	*e*P	**P**	**02 22 51.0**	**+2.1**
NACGM				*e*S	**S**	**02 29 14.0**	**+5.3**
NACGM				*e*SS	**SS**	**02 32 06.0**	**-10**
NACGM				*e*SSS	SSS	02 33 03.0	
NACGM				*e*LQ	LQ	02 37 10.0	
NACGM				*e*LR	LR	02 40 20.0	
NACGM				LRM	MLR	02 44 18.0	
	comp=Z,5.7nm,18.0s						
ODBI	**Odobesti**	**42.28**	**301**	⇓P	**P**	**02 22 50.0**	**0.0**
TESR	**Tescani**	**42.47**	**302**	⇓P	**P**	**02 22 51.4**	**-0.3**
MANT	**Manisa**	**42.48**	**290**	P	**P**	**02 22 51.4**	**-0.7**
MANT				IAmb	IAmb	02 23 01.9	
	comp=Z,59nm,1.2s						
VRI	**Vrincioaia**	**42.49**	**301**	⇓P	**P**	**02 22 52.5**	**+0.7**
VRI	**Vrincioaia**	**42.49**	**301**	P	**P**	**02 22 52.9**	**+1.1**
VRI				pmax	pmax		
	comp=Z,31nm,1.3s						
VSU	**Vasula**	**42.49**	**320**	*e*P	**P**	**02 22 53.2**	**+1.6**
VSU	**Vasula**	**42.49**	**320**	⇑*i*P	**P**	**02 22 54.2**	**+2.6**
VSU				pmax	pmax		
	comp=Z,120nm,0.8s						
IIGN	**Ignalina**	**42.50**	**315**	*e*P	**P**	**02 22 52.5**	**+0.7**
IIGN				IAmb	IAmb	02 22 58.5	
	comp=Z,14nm,0.9s						
IZAR	**Zarasai**	**42.51**	**316**	*e*P	**P**	**02 22 52.9**	**+1.1**
PLOR	**Plostina**	**42.55**	**301**	⇓P	**P**	**02 22 52.7**	**+0.4**
PLOR	**Plostina**	**42.55**	**301**	P	**P**	**02 22 52.7**	**+0.4**
ISAL	**Salakas**	**42.57**	**316**	*e*P	**P**	**02 22 53.1**	**+0.9**
ISAL				IAmb	IAmb	02 22 59.4	
	comp=Z,22nm,0.9s						
KSM	**Kuching**	**42.93**	**137**	P	**P**	**02 22 56.1**	**+0.5**
RAZG	**Razgrad**	**42.98**	**298**	⇓P	**P**	**02 22 56.3**	**+0.6**
TIXI	**Tiksi**	**43.00**	**20**	P	**P**	**02 22 55.8**	**+0.3**
	comp=Z,9.4nm,0.8s,baz=240,slow=5.1,SNR=17						
TIXI				PP	**PP**	**02 24 33.3**	**-1.8**
	comp=Z,3.6nm,0.6s,baz=244,slow=8.7,SNR=5.3						
TIXI	**Tiksi**	**43.00**	**20**	P	**P**	**02 22 54.9**	**-0.7**
TIXI	**Tiksi**	**43.00**	**20**	⇓*i*P	**P**	**02 22 55.9**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MLR	**Muntele Rosu**	**43.08**	**301**	P	**P**	**02 22 56.8**	**0.0**
	comp=Z,19nm,0.8s,baz=36,slow=1.5,SNR=31						
MLR				PcP	**PcP**	**02 24 47.3**	**+0.7**
	comp=Z,22nm,1.0s,baz=83,slow=3.8,SNR=5.8						
MLR	**Muntele Rosu**	**43.08**	**301**	⇑P	**P**	**02 22 58.2**	**+1.4**
MLR	**Muntele Rosu**	**43.08**	**301**	P	**P**	**02 22 56.2**	**-0.6**
MLR				IAmb	IAmb	02 23 09.4	
	comp=Z,39nm,0.8s						
MLR					**PcP**	**02 24 46.1**	**-0.6**
FIA1	**FINESS Array S**	**43.25**	**324**	P	**P**	**02 22 58.4**	**+0.7**
FIA1				IAmb	IAmb	02 23 02.2	
	comp=Z,36nm,0.8s						
FINES	**FINESS Array B**	**43.25**	**324**	P	**P**	**02 22 57.2**	**-0.5**
	comp=Z,23nm,0.7s,baz=102,slow=8.2,SNR=38						
FINES				LR	LR	02 41 13.3	
	comp=Z,1μm,19.9s,baz=102,slow=36						
FINES	**FINESS Array B**	**43.25**	**324**	*i* P	**P**	**02 22 59.2**	**+1.5**
FINES				pmax	pmax		
	comp=Z,23nm,0.7s						
BURAR	**Bucovina Array**	**43.33**	**304**	⇓P	**P**	**02 22 58.3**	**-0.4**
BURAR	**Bucovina Array**	**43.33**	**304**	P	**P**	**02 22 58.3**	**-0.4**
BURAR	**Bucovina Array**	**43.33**	**304**	P	**P**	**02 22 58.2**	**-0.4**
DOPR	**Dopca**	**43.41**	**302**	⇓P	**P**	**02 22 59.8**	**+0.5**
ELND	**Elena**	**43.54**	**297**	⇓P	**P**	**02 23 00.1**	**-0.2**
VOIR		**43.72**	**301**	⇓P	**P**	**02 23 01.8**	**-0.1**
VOIR		**43.72**	**301**	P	**P**	**02 23 01.7**	**-0.1**
ZIMR		**43.78**	**298**	⇓P	**P**	**02 23 02.9**	**+0.7**
ZIMR		**43.78**	**298**	P	P	02 23 12.2	+10
PABE	**Paberze**	**43.79**	**316**	*e*P	**P**	**02 23 02.4**	**+0.3**
PABE				IAmb	IAmb	02 23 09.0	
	comp=Z,87nm,0.9s						
EZN	**Ezine**	**43.85**	**293**	P	P	02 23 07.7	+4.8
HUMR	**Humele**	**43.90**	**300**	⇓P	**P**	**02 23 03.2**	**0.0**
LVV	**L'vov**	**43.91**	**307**	*e*P	**P**	**02 23 02.7**	**-0.5**
LVV				*e*S	**S**	**02 29 37.8**	**+3.2**
LVV				*e*SS	**SS**	**02 32 45.0**	**-5.7**
LVV				MLR	MLR		
	comp=E,2μm,19.0s						
LVV				MLR	MLR		
	comp=Z,2μm,19.0s						
LVV				MLR	MLR		
	comp=N,600nm,16.0s						
ARCR	**ARCALIA**	**43.97**	**303**	⇓P	**P**	**02 23 05.4**	**+1.6**
ARR	**Arges**	**44.02**	**301**	⇑P	**P**	**02 23 04.6**	**+0.4**
MJB9	**Matsu-Tunnel**	**44.43**	**72**	P	**P**	**02 23 06.6**	**-1.0**
MAT	**Matsushiro**	**44.43**	**72**	P	**P**	**02 23 06.8**	**-0.8**
MAT				S	S	02 29 52.2	+10
MJAR	**Matsushiro Arr**	**44.43**	**72**	P	**P**	**02 23 07.2**	**-0.4**
	comp=N,5.0nm,0.9s,baz=292,slow=8.4,SNR=6.0						
MJAR				LR	LR	02 42 00.4	
	comp=N,1μm,21.2s,baz=245,slow=37						
MJAR	**Matsushiro Arr**	**44.43**	**72**	P	**P**	**02 23 07.5**	**-0.1**
MJAR	**Matsushiro Arr**	**44.43**	**72**	P	**P**	**02 23 07.5**	**-0.1**
MJAR				pmax	pmax		
	comp=Z,8.0nm,1.4s						
LOT	**Lotru**	**44.60**	**301**	⇓P	**P**	**02 23 09.8**	**+0.8**
KWP	**Kalwaria Pacla**	**44.78**	**307**	*e*P	**P**	**02 23 14.6**	**+4.4**
KWP	**Kalwaria Pacla**	**44.78**	**307**	IAmb	IAmb	02 23 26.7	
	comp=Z,46nm,1.3s						
KWP	**Kalwaria Pacla**	**44.78**	**307**	*e*P	**P**	**02 23 14.6**	**+4.4**
PBUR	**Paburge**	**44.95**	**316**	*e*P	**P**	**02 23 12.9**	**+1.5**
TRPA	**Tarpa**	**45.06**	**305**	⇓P	**P**	**02 23 13.1**	**+0.7**
DRGR		**45.13**	**303**	⇑P	**P**	**02 23 13.5**	**+0.4**
DRGR		**45.13**	**303**	P	**P**	**02 23 13.4**	**+0.4**
KOLS	**Kolonicke sedl**	**45.14**	**306**	*e*P	**P**	**02 23 12.7**	**-0.4**
KOLS				pmax	pmax		
	comp=Z,19nm,1.6s						
KOLS	**Kolonicke sedl**	**45.14**	**306**	*e*P	**P**	**02 23 12.7**	**-0.4**
UZH	**Uzhgorod**	**45.16**	**306**	*e*P	**P**	**02 23 13.8**	**+0.6**
UZH				*e*		02 23 20.3	
UZH				*i*		02 23 24.0	
UZH				*i*		02 24 58.8	
UZH				*e*		02 25 43.4	
UZH				*e*S	**S**	**02 29 53.0**	**+0.2**
UZH				*e*		02 33 13.2	
GZR	**Gura Zlata**	**45.30**	**301**	⇑P	**P**	**02 23 13.8**	**-0.7**
ARCES	**ARCESS Array B**	**45.36**	**336**	P	**P**	**02 23 14.1**	**-0.4**
	comp=Z,15nm,0.8s,baz=95,slow=7.5,SNR=22						
ARCES				LR	LR	02 43 45.1	
	comp=Z,1μm,19.0s,baz=113,slow=38						
ARCES	**ARCESS Array B**	**45.36**	**336**	P	**P**	**02 23 14.2**	**-0.3**
ARE0	**ARCESS Array S**	**45.36**	**336**	*e*P	**P**	**02 23 14.9**	**+0.4**
ARE0	**ARCESS Array S**	**45.36**	**336**	P	**P**	**02 23 12.8**	**-1.7**
VTS	**Vitosha**	**45.51**	**297**	⇓P	**P**	**02 23 17.1**	**+0.8**
VTS	**Vitosha**	**45.51**	**297**	P	**P**	**02 23 17.0**	**+0.8**
CRVS	**Cervenica-Dubn**	**45.67**	**306**	*e*P	**P**	**02 23 17.2**	**-0.1**
CRVS				pmax	pmax		
	comp=Z,16nm,1.1s						
CRVS	**Cervenica-Dubn**	**45.67**	**306**	*e*P	**P**	**02 23 17.2**	**-0.1**
BEL	**Belsk**	**45.79**	**310**	*e*P	P	02 23 22.7	+4.6
BEL	**Belsk**	**45.79**	**310**	*e*P	**P**	**02 23 22.7**	**+4.5**
ASAJ	**Asahikawa**	**45.88**	**60**	P	**P**	**02 23 18.2**	**-0.8**
	comp=Z,2.5nm,0.4s,baz=353,slow=8.1,SNR=2.9						
ASAJ				LR	LR	02 43 54.6	
	comp=Z,2μm,19.3s,baz=285,slow=38						
JKA	**Kamikawa-asahi**	**45.88**	**60**	P	**P**	**02 23 18.2**	**-0.8**
KTK1	**Kautokeino**	**46.00**	**335**	*e*P	**P**	**02 23 20.0**	**+0.4**
BZS	**Buzias**	**46.07**	**302**	⇓P	**P**	**02 23 21.1**	**+0.7**
BZS	**Buzias**	**46.07**	**302**	P	**P**	**02 23 21.1**	**+0.7**
HAMF	**Hammerfest**	**46.28**	**337**	*e*P	**P**	**02 23 22.2**	**+0.5**
NIE	**Niedzica**	**46.36**	**307**	*e*P	**P**	**02 23 23.2**	**+0.4**
NIE	**Niedzica**	**46.36**	**307**	*e*P	**P**	**02 23 23.2**	**+0.4**
OJC	**Ojcow**	**46.58**	**308**	*e*P	**P**	**02 23 28.6**	**+4.2**
OJC	**Ojcow**	**46.58**	**308**	IAmb	IAmb	02 23 29.6	
	comp=Z,41nm,1.4s						
OJC	**Ojcow**	**46.58**	**308**	*e*P	**P**	**02 23 28.6**	**+4.2**
JHJ	**Hachijo jima 2**	**46.74**	**76**	LR	LR	02 43 56.3	
	comp=Z,3μm,21.8s,baz=287,slow=37						
PSZ	**Piszkesteto**	**46.85**	**305**	P	**P**	**02 23 26.3**	**-0.3**
PSZ				IAmb	IAmb	02 23 36.2	
	comp=Z,17nm,1.1s						
PSZ	**Piszkesteto**	**46.85**	**305**	P	**P**	**02 23 26.3**	**-0.3**
PSZ				pmax	pmax		
	comp=Z,17nm,1.1s						
VYHS	**Vyhne**	**47.45**	**306**	*e*P	**P**	**02 23 31.3**	**0.0**
VYHS				pmax	pmax		
	comp=Z,90nm,2.2s						
VYHS	**Vyhne**	**47.45**	**306**	*e*P	**P**	**02 23 31.2**	**0.0**
TRO	**Tromso**	**47.63**	**335**	*e*P	**P**	**02 23 32.1**	**-0.2**
OKC	**Ostrava-Krasne**	**47.69**	**308**	*e*P	P	02 23 38.5	+5.4
OKC				*e*x	x	02 23 46.0	
OKC				*e*S	**S**	**02 30 33.7**	**+4.6**
OKC				AMS	AMS	02 45 00.0	
	comp=Z,2μm,19.4s						
OKC	**Ostrava-Krasne**	**47.69**	**308**	*e*P	P	02 23 38.5	+5.4
OKC				*e*		02 23 46.0	
OKC				*e*S	**S**	**02 30 33.7**	**+4.6**
OKC				MLR	MLR		
	comp=Z,2μm,19.4s						
GKP	**Gorka Klasztor**	**47.82**	**313**	*e*P	**P**	**02 23 37.8**	**+3.8**
GKP	**Gorka Klasztor**	**47.82**	**313**	*e*P	**P**	**02 23 37.8**	**+3.8**
MORC	**Moravsky Berou**	**48.09**	**308**	*e*P	**P**	**02 23 36.6**	**+0.4**
MORC	**Moravsky Berou**	**48.09**	**308**	⇑P	**P**	**02 23 35.0**	**-1.3**
MORC	**Moravsky Berou**	**48.09**	**308**	IAmb	IAmb	02 23 49.8	
	comp=Z,18nm,1.1s						
MORC	**Moravsky Berou**	**48.09**	**308**	P	**P**	**02 23 34.9**	**-1.3**
JAVC	**Velka Javorina**	**48.15**	**307**	*e*P	**P**	**02 23 37.5**	**+0.7**
YUK	**Yuzh-Kuril'sk**	**48.19**	**60**	*e*P	**P**	**02 23 36.5**	**-0.5**
YUK				*i* S	**S**	**02 30 35.1**	**-1.2**
YUK				pmax	pmax		
	comp=Z,326nm,1.2s						
KCP	**Kidapawan**	**48.44**	**116**	⇓*i*P	**P**	**02 23 41.7**	**+2.3**
MODS	**Modra-Piesok**	**48.50**	**306**	*e*P	**P**	**02 23 43.5**	**+4.1**
MODS				pmax	pmax		
	comp=Z,24nm,1.3s						
MODS	**Modra-Piesok**	**48.50**	**306**	*e*P	**P**	**02 23 43.5**	**+4.1**
KRLC	**Kraliky**	**48.52**	**308**	*e*P	**P**	**02 23 39.3**	**-0.3**
KRLC				*e*pP	**pP**	**02 23 42.5**	**-1.1**
KRLC				*e*S	**S**	**02 30 45.9**	**+4.9**
KRLC				AMS	AMS	02 45 20.0	
	comp=Z,2μm,20.2s						
KRLC	**Kraliky**	**48.52**	**308**	*e*P	**P**	**02 23 39.3**	**-0.3**
KRLC				*e*		02 23 42.5	
KRLC				*e*S	**S**	**02 30 45.9**	**+4.9**
KRLC				MLR	MLR		
	comp=Z,2μm,20.2s						
ZST	**Bratislava**	**48.64**	**306**	*e*P	**P**	**02 23 44.0**	**+3.5**
ZST	**Bratislava**	**48.64**	**306**	*e*P	**P**	**02 23 44.0**	**+3.5**
KSP	**Ksiaz**	**48.71**	**309**	*e*P	P	02 23 45.5	+4.6
KSP	**Ksiaz**	**48.71**	**309**	*e*P	**P**	**02 23 45.5**	**+4.5**
STEI	**Steigen**	**48.72**	**332**	*e*P	**P**	**02 23 41.8**	**+1.1**
DPC	**Dobruska-Polom**	**48.77**	**309**	*e*P	**P**	**02 23 42.0**	**+0.5**
DPC				*e*pP	**pP**	**02 23 44.8**	**-0.7**
DPC				*e*S	**S**	**02 30 42.8**	**-1.7**
DPC				AMS	AMS	02 45 40.0	
	comp=Z,2μm,19.8s						
DPC	**Dobruska-Polom**	**48.77**	**309**	*e*P	**P**	**02 23 42.0**	**+0.5**
DPC				*e*S	**S**	**02 30 42.8**	**-1.7**
DPC				MLR	MLR		
	comp=Z,2μm,19.8s						
VRAC	**Vranov**	**48.77**	**307**	*e*P	**P**	**02 23 41.8**	**+0.3**
VRAC	**Vranov**	**48.77**	**307**	P	**P**	**02 23 42.0**	**+0.5**
	comp=Z,6.4nm,0.8s,baz=81,slow=9.5,SNR=10						
VRAC	**Vranov**	**48.77**	**307**	⇑P	**P**	**02 23 41.0**	**-0.5**
VRAC	**Vranov**	**48.77**	**307**	P	**P**	**02 23 42.0**	**+0.5**
OSTC	**Ostas**	**48.81**	**309**	*e*P	**P**	**02 23 42.1**	**+0.4**
OSTC				*e*x	x	02 23 44.9	
OSTC				AMS	AMS	02 45 40.0	
	comp=Z,2μm,17.8s						
CHVC	**Chvalec**	**48.90**	**309**	*e*P	**P**	**02 23 42.8**	**+0.3**
CHVC				*e*x	x	02 23 45.7	
CHVC				AMS	AMS	02 45 30.0	
	comp=Z,2μm,17.5s						
UPC	**Upice**	**48.94**	**309**	*e*P	**P**	**02 23 43.3**	**+0.6**
UPC				*e*x	x	02 23 46.1	
UPC				*e*x	x	02 23 56.9	
UPC				*e*S	**S**	**02 30 44.9**	**-1.9**
UPC				AMS	AMS	02 45 40.0	
	comp=Z,3μm,18.7s						
UPC	**Upice**	**48.94**	**309**	*e*P	**P**	**02 23 43.3**	**+0.6**
UPC				*e*		02 23 56.9	
UPC				*e*S	**S**	**02 30 44.9**	**-1.9**
UPC				MLR	MLR		
	comp=Z,3μm,18.7s						
KRUC	**Moravsky**	**48.95**	**307**	*e*P	**P**	**02 23 42.6**	**-0.2**
MA2	**Magadan**	**49.05**	**39**	P	**P**	**02 23 43.5**	**+0.1**
	comp=Z,14nm,0.8s,baz=279,slow=9.5,SNR=3.5						
MA2				LR	LR	02 45 19.6	
	comp=Z,3μm,19.2s,baz=274,slow=37						
MA2	**Magadan**	**49.05**	**39**	P	**P**	**02 23 43.0**	**-0.4**
MA2	**Magadan**	**49.05**	**39**		**P**	**02 23 43.6**	**+0.3**
MA2	**Magadan**	**49.05**	**39**	⇓*i*P	**P**	**02 23 46.3**	**+2.9**
MA2				pmax	pmax		
	comp=Z,31nm,0.9s						
HFS	**Hagfors**	**49.23**	**322**	P	**P**	**02 23 44.3**	**-0.4**
	comp=Z,31nm,0.7s,baz=90,slow=8.9,SNR=30						
LOF	**Lofoten**	**49.37**	**333**	*e*P	**P**	**02 23 46.1**	**+0.4**
KONS	**Konsvik**	**49.45**	**330**	*e*P	**P**	**02 23 46.9**	**+0.6**
TREC	**Trest**	**49.49**	**308**	*e*P	**P**	**02 23 49.3**	**+2.3**
TREC				*e*x	x	02 23 57.0	
TREC				AMS	AMS	02 45 30.0	
	comp=Z,2μm,16.1s						
TREC	**Trest**	**49.49**	**308**	*e*P	**P**	**02 23 49.3**	**+2.3**
TREC				*e*		02 23 57.0	
TREC				MLR	MLR		
	comp=Z,2μm,16.1s						
CONA	**Conrad Observa**	**49.51**	**306**	*e*pP	**P**	**02 23 48.2**	**+0.9**
	comp=Z,27nm,1.0s,SNR=6.1						
MPSI	**Mapaga**	**49.63**	**127**	P	**P**	**02 23 49.2**	**+0.8**
	comp=Z,16nm,1.1s						
SEY	**Seymchan**	**49.69**	**34**	P	**P**	**02 23 47.3**	**-1.0**
	comp=Z,22nm,0.8s,baz=258,slow=10,SNR=13						
SEY	**Seymchan**	**49.69**	**34**	⇓*i*P	**P**	**02 23 48.5**	**+0.2**
GOPC	**GO Pecny, Ondr**	**49.82**	**308**	*e*P	**P**	**02 23 51.8**	**+2.3**
GOPC				*e*S	**S**	**02 30 59.3**	**+0.1**
GOPC				AMS	AMS	02 46 10.0	
	comp=Z,3μm,20.9s						
GOPC	**GO Pecny, Ondr**	**49.82**	**308**	*e*P	**P**	**02 23 51.8**	**+2.3**
GOPC				*e*S	**S**	**02 30 59.3**	**+0.1**
GOPC				MLR	MLR		
	comp=Z,3μm,20.9s						
PVCC	**Panska Ves**	**49.85**	**309**	*e*P	**P**	**02 23 52.7**	**+3.1**

PVCC AMS AMS 02 45 10.0
comp=Z,2µm,21.5s
PVCC Panska Ves 49.85 309 eP P 02 23 52.7 +3.1
PVCC MLR MLR
comp=Z,2µm,21.5s
ARSA Arzberg 49.88 305 epP P 02 23 49.8 -0.1
comp=Z,11nm,0.9s
PRU Pruhonice 49.96 309 eP P 02 23 51.1 +0.6
PRU epP sP 02 23 55.5 -0.7
PRU eS S 02 31 06.0 +4.9
PRU AMS AMS 02 46 20.0
comp=Z,3µm,19.8s
PRU Pruhonice 49.96 309 eP P 02 23 51.1 +0.6
PRU e 02 23 55.5
PRU eS S 02 31 06.0 +4.9
PRU MLR MLR
comp=Z,3µm,19.8s
PRA Prague 50.02 309 eP P 02 23 54.4 +3.5
PRA eS S 02 31 06.7 +4.9
PRA AMS AMS 02 46 20.0
comp=Z,3µm,20.8s
PRA Prague 50.02 309 eP P 02 23 54.4 +3.5
PRA eS S 02 31 06.7 +4.9
PRA MLR MLR
comp=Z,3µm,20.8s
HSPB Hornsund (broa 50.13 344 eP P 02 23 51.8 +0.4
BRG Berggiesshubel 50.17 310 eP P 02 23 55.8 +3.7
comp=Z,22nm,0.8s,baz=77,slow=7.5
BRG Berggiesshubel 50.17 310 eP P 02 23 52.3 +0.2
BRG e 02 25 11.5
BRG e 02 25 49.5
BRG S S 02 31 08.0 +4.0
BRG pmax pmax
comp=Z,6.0nm,1.1s
BRG pmax pmax
comp=Z,13nm,1.1s
BRG MLR MLR
comp=N,2µm,14.6s
BRG MLR MLR
comp=E,2µm,18.1s
BRG MLR MLR
comp=Z,3µm,18.8s
SPA0 Spitsbergen Ar 50.24 346 eP P 02 23 52.5 +0.2
SPITS Spitsbergen Ar 50.24 346 P P 02 23 51.4 -0.9
comp=Z,7.0nm,0.9s,baz=90,slow=19,SNR=2.7
NC602 NORSAR Array S 50.26 323 eP P 02 23 53.5 +0.9
NORES NORESS Array B 50.26 323 P P 02 23 54.3 +1.7
NORES pmax pmax
comp=Z,26nm,0.8s
SOKA Soboth 50.33 304 epP P 02 23 54.2 +0.7
comp=Z,39nm,1.1s,SNR=5.9
NB2 NORSAR Subarra 50.40 323 P P 02 23 52.8 -0.9
comp=Z,52nm,0.9s,baz=86,slow=7.9
NB2 NORSAR Subarra 50.40 323 P P 02 23 52.8 -0.9
baz=86,slow=7.9
NB2 NORSAR Subarra 50.40 323 P P 02 23 52.5 -1.2
NB2 pmax pmax
comp=Z,90nm,1.1s
NOA NORSAR Array B 50.40 323 P P 02 23 52.7 -0.9
comp=Z,22nm,0.8s,baz=86,slow=7.5,SNR=49
NOA LR LR 02 47 30.3
comp=Z,1µm,20.2s,baz=90,slow=39
FBE Freiberg 50.53 310 eP P 02 23 58.7 +3.9
comp=Z,31nm,1.1s,baz=77,slow=7.5
MOA Molln 50.58 306 epP P 02 23 55.6 +0.4
comp=Z,15nm,0.9s
CLL Collm 50.68 311 eP P 02 23 59.1 +3.2
comp=Z,20nm,0.9s,baz=77,slow=7.5
CLL Collm 50.68 311 eP P 02 23 55.0 -0.9
CLL ePmax 02 23 58.0
comp=Z,20nm,0.9s
CLL eS S 02 31 13.0 +2.0
CLL e(SS) 02 35 12.0
CLL Collm 50.68 311 IAmb IAmb 02 24 01.1
comp=Z,19nm,0.8s
CLL Collm 50.68 311 eP P 02 23 58.0 +2.1
CLL eS S 02 31 13.0 +2.0
CLL pmax pmax
comp=Z,20nm,0.9s
OBKA Obir 50.70 304 epP P 02 23 57.1 +0.8
comp=Z,24nm,1.1s
TBLU Trondheim 50.70 326 eP P 02 23 55.5 -0.4
GEC2 GERESS Array S 50.73 307 eP P 02 24 00.5 +4.0
comp=Z,34nm,1.0s,baz=77,slow=7.5
GEC2 GERESS Array S 50.73 307 IAmb IAmb 02 24 02.3
comp=Z,30nm,0.9s
GERES GERESS Array B 50.73 307 P P 02 23 57.0 +0.5
comp=Z,17nm,0.7s,baz=77,slow=6.0,SNR=25
GERES LR LR 02 48 40.3
comp=Z,2µm,21.9s,baz=82,slow=40
GERES GERESS Array B 50.73 307 P P 02 23 55.9 -0.6
GERES GERESS Array B 50.73 307 P P 02 23 57.0 +0.5
OSL Oslo 50.73 322 eP P 02 23 56.9 +0.7
KHC Kasperske Hory 50.75 308 eP P 02 23 57.3 +0.8
KHC epP pP 02 23 59.7 -0.9
KHC ex x 02 24 07.8
KHC eS S 02 31 12.9 +0.8
KHC AMS AMS 02 46 10.0
comp=Z,2µm,18.6s
KHC Kasperske Hory 50.75 308 eP P 02 23 57.3 +0.8
KHC e 02 24 07.8
KHC eS S 02 31 12.9 +0.8
KHC MLR MLR
comp=Z,2µm,18.6s
TANN Tannenbergstha 51.19 310 eP P 02 24 02.5 +2.7
comp=Z,36nm,1.0s,baz=77,slow=7.5
WET Wettzell 51.19 308 eP P 02 24 03.9 +4.0
comp=Z,21nm,1.0s,baz=77,slow=7.5
NKC Novy Kostel 51.23 309 AMS AMS 02 47 10.0
comp=Z,3µm,22.4s
WERN Wernitzgruen 51.27 309 eP P 02 24 04.3 +3.9
comp=Z,65nm,2.1s,baz=77,slow=7.5
KBS Kingsbay 51.28 346 eP P 02 24 00.0 0.0
GUNZ Gunzen 51.28 309 eP P 02 24 04.3 +3.8
comp=Z,23nm,0.9s,baz=77,slow=7.5
KONO Kongsberg 51.33 322 eP P 02 24 01.4 +0.7
KONO Kongsberg 51.33 322⇓iP P 02 24 02.3 +1.6
KONO pmax pmax
comp=Z,36nm,1.1s
DOMB Dombas 51.34 325 eP P 02 24 00.9 +0.1
KBA Koelnbreinsper 51.36 305 epP P 02 24 01.5 +0.1
comp=Z,14nm,1.2s
PLN Plauen 51.37 310 eP P 02 24 04.7 +3.6
comp=Z,15nm,1.1s,baz=77,slow=7.5
NEUB Neuenburg 51.45 311 eP P 02 24 05.2 +3.5
comp=Z,43nm,0.9s,baz=77,slow=7.5
ROTZ Rotzenmuhle 51.49 309 eP P 02 24 06.3 +4.2
comp=Z,25nm,1.2s,baz=77,slow=7.5
MANZ Manzenberg 51.50 309 eP P 02 24 06.1 +3.9
comp=Z,24nm,1.6s,baz=77,slow=7.5
MOX Moxa 51.67 310 eP P 02 24 07.2 +3.8
comp=Z,20nm,1.1s,baz=77,slow=7.5
MOX eL L 02 46 40.2
comp=Z,2µm,21.2s
BSEG Bad Segeberg 51.80 314 eP P 02 24 08.3 +4.0
comp=Z,38nm,0.9s,baz=77,slow=7.5
SKAR Skarslia 51.85 323 eP P 02 24 05.5 +0.9
MOL Molde 51.99 325 eP P 02 24 06.1 +0.5
ABTA Abfaltersbach 52.00 305 epP P 02 24 08.8 +2.8
comp=Z,7.3nm,0.9s
MUD Monsted U'grnd 52.00 318 iP P 02 24 08.0 +2.3
comp=Z,55nm,1.2s
MUD Monsted U'grnd 52.00 318 iP P 02 24 08.0 +2.3
MUD pmax pmax
comp=Z,55nm,1.2s
GRA1 Grafenberg Arr 52.13 309 P P 02 24 06.4 -0.4
GRA1 IAmb IAmb 02 24 13.2
comp=Z,37nm,0.9s
GRF Grafenberg Arr 52.13 309 eL L 02 47 58.6
comp=Z,3µm,20.7s
GRF Grafenberg Arr 52.13 309 P P 02 24 06.4 -0.4
GRF pmax pmax
comp=Z,37nm,0.9s
CLZ Clausthal 52.18 312 eP P 02 24 11.0 +3.8
comp=Z,22nm,1.1s,baz=77,slow=7.5
NRDL Niedersach Rie 52.20 312 eP P 02 24 11.4 +4.2
comp=Z,89nm,1.4s,baz=77,slow=7.5
AKN Aaknes 52.29 325 eP P 02 24 08.3 +0.4
WTTA Wattenberg 52.45 306 epP P 02 24 12.1 +2.7
comp=Z,21nm,1.0s
FUR Furstenfeldbru 52.46 307 eP P 02 24 13.5 +4.2
comp=Z,55nm,0.9s,baz=77,slow=7.5
WATA Walderalm 52.47 306 epP P 02 24 11.8 +2.3
comp=Z,14nm,1.1s
GTTG Gottingen 52.49 311 eP P 02 24 13.5 +4.0
comp=Z,41nm,1.0s,baz=77,slow=7.5

RETH Rethem/Aller, 52.60 313 eP P 02 24 14.0 +3.8
comp=Z,23nm,0.9s,baz=77,slow=7.5
SNART Snartemo 52.74 320 eP P 02 24 11.8 +0.7
SQTA Sankt Quirin 52.74 306 epP P 02 24 13.1 +1.5
comp=Z,14nm,0.7s
CTI Castel Tesino 52.76 304 P P 02 24 10.5 -1.2
CTI Castel Tesino 52.76 304 P P 02 24 10.5 -1.2
MOTA Moosalm 52.78 306 epP P 02 24 12.6 +0.8
comp=Z,19nm,1.1s
ODD1 Odda 52.78 322 eP P 02 24 11.8 +0.2
TEOL Teolo 52.93 303 IAmb IAmb 02 24 25.2
comp=Z,30nm,0.8s
RETA Reutte 52.96 306 epP P 02 24 13.3 +0.1
comp=Z,27nm,0.9s,SNR=5.1
FETA Feichten 53.11 306 epP P 02 24 13.7 -0.6
comp=Z,17nm,0.9s
UBR Ueberruh 53.34 307 eP P 02 24 19.5 +3.6
comp=Z,22nm,1.0s,baz=77,slow=7.5
BER Bergen 53.34 323 eP P 02 24 16.7 +1.1
ASK Askoy 53.40 323 eP P 02 24 16.9 +0.9
FUORN Ofenpass-Fuorn 53.52 305 P P 02 24 18.0 +0.5
FUORN IAmb IAmb 02 24 29.6
comp=Z,15nm,0.8s
DAVA Damuels 53.59 306 epP P 02 24 17.1 -0.7
comp=Z,30nm,1.0s
STU Stuttgart 53.64 308 eP P 02 24 21.8 +3.8
baz=77,slow=7.5
STU Stuttgart 53.64 308 P P 02 24 18.4 +0.4
STU IAmb IAmb 02 24 23.8
comp=Z,40nm,1.2s
STU Stuttgart 53.64 308 P P 02 24 18.4 +0.4
STU pmax pmax
comp=Z,40nm,1.2s
IBBN Ibbenburen 53.65 313 eP P 02 24 21.7 +3.8
comp=Z,24nm,0.9s,baz=77,slow=7.5
DAVOX Davos/Dischmat 53.73 306 P P 02 24 18.4 -0.6
comp=Z,6.6nm,0.8s
PETK Petropavlovsk- 53.80 46 P P 02 24 20.1 +1.1
comp=Z,7.1nm,0.7s,baz=176,slow=6.5,SNR=5.4
PETK LR LR 02 48 42.8
comp=Z,1µm,18.3s,baz=266,slow=38
PETK Petropavlovsk- 53.80 46 P P 02 24 17.9 -1.2
BUG Bochum--Univer 54.15 312 eP P 02 24 25.4 +3.8
comp=Z,40nm,1.2s,baz=77,slow=7.5
BFO Black Forest 54.31 308 P P 02 24 23.7 +0.8
BFO IAmb IAmb 02 24 39.8
comp=Z,27nm,1.4s
BFO Black Forest 54.31 308 P P 02 24 23.7 +0.8
BFO pmax pmax
comp=Z,27nm,1.4s
TNTI Ternate 54.38 120 P P 02 24 25.5 +1.7
comp=Z,2µmcomp=Z,56nm,1.0s
TNTI Ternate 54.38 120 P P 02 24 22.9 -0.9
AHRW Bad Neuenahr-A 54.50 311 eP P 02 24 28.2 +3.9
comp=Z,37nm,1.3s,baz=77,slow=7.5
BILL Bilibino 54.96 27 P P 02 24 27.1 -0.2
BILL IAmb IAmb 02 24 31.2
comp=Z,13nm,0.8s
BILL Bilibino 54.96 27⇑iP P 02 24 28.4 +1.1
BILL i 02 24 41.0
BILL e 02 26 30.3
BILL eS S 02 32 17.4 +8.4
BILL eSS SS 02 35 52.7 +0.8
BILL pmax pmax
comp=Z,14nm,0.9s
BILL MLR MLR
comp=Z,2µm,16.0s
CDF Champ du Feu 54.96 308 eP P 02 24 31.6 +3.8
CDF pmax pmax
comp=Z,28nm,1.0s
ECH Echery 55.10 308 P P 02 24 27.8 -0.9
ECH IAmb IAmb 02 24 37.7
comp=Z,24nm,1.2s
ECH Echery 55.10 308 P P 02 24 27.8 -0.9
ECH pmax pmax
comp=Z,24nm,1.2s
MEM Membach 55.14 311 P P 02 24 33.0 +4.2
comp=Z,12nm,0.9s
WLF Walferdange 55.32 310 eP P 02 24 34.4 +4.2
comp=Z,36nm,0.9s,baz=77,slow=7.5
WLF Walferdange 55.32 310 P P 02 24 33.9 +3.7
comp=Z,30nm,0.9s
WLF Walferdange 55.32 310 P P 02 24 30.6 +0.4
WLF Walferdange 55.32 310 P P 02 24 30.6 +0.4
SANI Sanana 55.45 123 P P 02 24 31.4 -0.1
comp=Z,17nm,1.0s
SENIN Lac Senin/Sane 55.56 306 P P 02 24 33.0 +0.8
SENIN IAmb IAmb 02 24 42.6
comp=Z,30nm,1.2s
HAU Haudompre 55.68 308 eP P 02 24 36.5 +3.7
HAU pmax pmax
comp=Z,29nm,1.2s
KMBO Kilima Mbogo 55.91 239 P P 02 24 35.9 +0.7
comp=Z,4.4nm,0.9s,baz=47,slow=11,SNR=8.5
KMBO LR LR 02 48 20.8
comp=Z,671nm,20.4s,baz=38,slow=36
KMBO Kilima Mbogo 55.91 239 P P 02 24 34.2 -0.9
BMRD Maredsous 55.99 311 P P 02 24 39.4 +4.5
comp=Z,17nm,0.9s
GIVF Givet 56.01 311 eP P 02 24 38.2 +3.0
GIVF pmax pmax
comp=Z,20nm,0.9s
NOR Nord 56.02 350 iP P 02 24 35.0 +0.3
comp=Z,60nm,1.4s
NOR Nord 56.02 350 iP P 02 24 35.0 +0.3
NOR pmax pmax
comp=Z,60nm,1.4s
LPG La Plagne 56.20 305 eP P 02 24 37.7 +0.8
LPG pmax pmax
comp=Z,31nm,0.9s
LPL La Plagne 56.20 305 eP P 02 24 37.8 +0.9
LPL pmax pmax
comp=Z,39nm,1.0s
BNI Bardonecchia 56.39 304 P P 02 24 37.7 -0.4
BNI IAmb IAmb 02 24 52.1
comp=Z,47nm,1.4s
BNI Bardonecchia 56.39 304 P P 02 24 37.7 -0.4
BNI pmax pmax
comp=Z,47nm,1.4s
BAIF Baives 56.40 311 eP P 02 24 42.3 +4.4
BAIF pmax pmax
comp=Z,40nm,2.1s
LOR Lormes 57.51 308 eP P 02 24 49.1 +3.2
LOR pmax pmax
comp=Z,12nm,0.8s
SSF Saint Saulge 57.80 308 eP P 02 24 51.4 +3.5
SSF pmax pmax
comp=Z,15nm,0.8s
DAG Danmarks Havn 57.82 345 iP P 02 24 49.0 +1.4
DAG Danmarks Havn 57.82 345 iP P 02 24 49.0 +1.4
KEST Kesra 57.88 293 P P 02 24 50.6 +1.9
comp=Z,4.2nm,0.8s,baz=0.0,slow=6.1,SNR=2.9
KEST LR LR 02 53 35.8
comp=Z,553nm,18.8s,baz=348,slow=40
AVF Avril sur Loir 57.99 307 eP P 02 24 51.6 +2.4
AVF pmax pmax
comp=Z,34nm,1.0s
TCF Toulx Ste Croi 58.91 307 eP P 02 24 56.4 +0.7
TCF pmax pmax
comp=Z,34nm,1.2s
EKA Eskdalemuir Ar 59.00 318 P P 02 24 57.2 +1.1
comp=Z,16nm,1.0s,baz=77,slow=8.4,SNR=12
CAF Calviac 59.50 306 eP P 02 25 02.6 +2.8
CAF pmax pmax
comp=Z,225nm,2.5s
LDF La Druitiere 59.56 310 eP P 02 25 00.3 +0.2
LDF pmax pmax
comp=Z,22nm,0.6s
FLN La Foliniere 59.72 311 eP P 02 25 04.7 +3.5
FLN pmax pmax
comp=Z,103nm,1.8s
GUMO Guam 59.89 95 LR LR 02 50 43.8
comp=Z,267nm,21.1s,baz=313,slow=36
GRR Gorron 60.09 310 eP P 02 25 05.3 +1.5
GRR pmax pmax
comp=Z,43nm,0.8s
SOEI Soe 60.14 131 P P 02 25 07.4 +2.8
comp=Z,2µmcomp=Z,40nm,1.0s
SOEI Soe 60.14 131 P P 02 25 03.8 -0.8
MBAR Mbarara 60.21 245 P P 02 25 03.7 -1.5
MBAR IAmb IAmb 02 25 11.1
comp=Z,11nm,1.0s
MBAR Mbarara 60.21 245 P P 02 25 03.7 -1.5
MBAR pmax pmax
comp=Z,11nm,1.0s
MFF Saint Martin d 60.31 308 eP P 02 25 09.7 +4.4

MFF pmax pmax
comp=Z,177nm,2.1s
FAKI Fak Fak 60.42 119 P P 02 25 07.4 +0.9
FAKI Fak Fak 60.42 119 P P 02 25 05.3 -1.1
FAKI IAmb IAmb 02 25 09.3
comp=Z,18nm,1.0s
SGMF Saint Gilles 61.19 311 eP P 02 25 15.3 +4.0
SGMF pmax pmax
comp=Z,62nm,1.3s
ETSF Etsaut 62.04 304 eP P 02 25 21.9 +4.7
ETSF pmax pmax
comp=Z,161nm,2.2s
SUMG Summit 64.44 343 iP P 02 25 34.7 +1.7
comp=Z,98nm,1.1s
SUMG Summit 64.44 343 P P 02 25 31.9 -1.1
SUMG Summit 64.44 343 iP P 02 25 34.7 +1.7
SUMG pmax pmax
comp=Z,98nm,1.1s
RDOG Red Dog Mine 65.53 22 P P 02 25 40.7 +1.0
RDOG IAmb IAmb 02 25 45.4
comp=Z,20nm,1.3s
ESDC Sonseca Array 65.75 302 P P 02 25 39.8 -1.9
comp=Z,1.9nm,0.7s,baz=60,slow=5.7,SNR=3.5
ESDC LR LR 02 59 52.2
comp=Z,727nm,18.3s,baz=70,slow=41
ESDC Sonseca Array 65.75 302 P P 02 25 40.8 -0.9
TULEG Thule 66.34 353 IAmb IAmb 02 25 46.9
comp=Z,24nm,1.0s
KULLO Kullorsuaq 66.58 349 iP P 02 25 47.5 +1.2
comp=Z,24nm,1.0s
KULLO Kullorsuaq 66.58 349 iP P 02 25 47.5 +1.2
KULLO pmax pmax
comp=Z,24nm,1.0s
TAM Tamanrasset 66.76 282 P P 02 25 47.5 -1.0
TAM Tamanrasset 66.76 282 P P 02 25 47.5 -1.0
TAM pmax pmax
comp=Z,4.0nm,1.1s
COI Coimbra 68.51 305 eP P 02 26 03.7 +4.6
TOLK Toolik Lake Re 68.86 18 P P 02 25 59.4 -1.4
baz=317
EVO Evora 69.06 303 eP P 02 26 03.9 +1.3
PBEJ Beja 69.21 302 eP P 02 26 08.1 +4.6
PVAQ Vaqueiros 69.42 302 eP P 02 26 09.4 +4.6
IMAR Indian Mountai 69.62 21 P P 02 26 04.9 -0.6
RES Resolute Bay 69.65 359 P P 02 26 04.0 -1.5
comp=Z,1.9nm,0.8s,baz=29,slow=9.9,SNR=8.4
RES PP PP 02 28 37.5 -1.3
comp=Z,0.8nm,0.6s,baz=62,slow=5.0,SNR=4.0
COLD Coldfoot 69.73 19 IAmb IAmb 02 26 12.8
comp=Z,24nm,1.0s
BMAR Burnt Mountain 71.01 17 P P 02 26 12.8 -1.3
TTA Tatalina 71.02 24 P P 02 26 13.4 -0.8
TTA Tatalina 71.02 24 P P 02 26 13.5 -0.8
SFJD Kangerlussuaq 71.37 342 iP P 02 26 15.7 -0.5
SFJD Kangerlussuaq 71.37 342 iP P 02 26 15.7 -0.5
MDM Murphy Dome 71.95 20 IAmb IAmb 02 26 25.6
comp=Z,32nm,1.3s
POKR Poker Flat Res 72.06 20 P P 02 26 19.5 -0.9
baz=319
TCOL CIGO, UAF Yank 72.12 20 P P 02 26 20.3 -0.4
baz=319
COLA College 72.12 20 P P 02 26 18.5 -2.2
COLA College 72.12 20 P P 02 26 18.5 -2.2
COLA pmax pmax
comp=Z,34nm,0.9s
PRP Porcupine Dome 72.26 19 IAmb IAmb 02 26 28.1
comp=Z,34nm,1.3s
LSZ Lusaka 72.27 235 P P 02 26 21.6 -0.8
LSZ Lusaka 72.27 235 P P 02 26 21.6 -0.8
LSZ pmax pmax
comp=Z,5.0nm,0.9s
PPLA Purkeypile 72.29 23 IAmb IAmb 02 26 25.8
comp=Z,38nm,1.2s
CCB Clear Creek Bu 72.31 20 IAmb IAmb 02 26 27.2
comp=Z,18nm,1.0s
WRH Wood River Hil 72.36 21 IAmb IAmb 02 26 27.3
comp=Z,20nm,1.1s
IL31 72.47 20 IAmb IAmb 02 26 27.9
comp=Z,20nm,1.0s
ILAR Eielson Array 72.47 20 P P 02 26 21.6 -1.3
comp=Z,8.1nm,1.0s,baz=304,slow=3.6,SNR=43
ILAR PP PP 02 29 06.3 +3.0
comp=Z,3.8nm,0.9s,baz=309,slow=6.5,SNR=6.9
ILAR LR LR 03 03 43.2
comp=Z,1µm,18.4s,baz=340,slow=40
ILAR Eielson Array 72.47 20 P P 02 26 22.1 -0.8
ILAR Eielson Array 72.47 20 P P 02 26 22.1 -0.8
INK Inuvik 72.65 13 P P 02 26 22.9 -0.9
comp=Z,13nm,1.0s,baz=347,slow=6.9,SNR=17
MCK McKinley 72.67 21 IAmb IAmb 02 26 36.5
comp=Z,27nm,1.4s
HDA Harding Lake 72.73 20 IAmb IAmb 02 26 27.6
comp=Z,39nm,1.4s
HDA Harding Lake 72.73 20 P P 02 26 23.3 -1.2
baz=320
RND Reindeer 72.94 22 IAmb IAmb 02 26 31.3
comp=Z,44nm,1.5s
C36M Paulatuk 73.23 10 P P 02 26 26.1 -1.2
baz=338
EPYK Eagle Plains 73.68 15 IAmb IAmb 02 26 34.0
comp=Z,38nm,1.3s
EPYK Eagle Plains 73.68 15 P P 02 26 28.9 -1.1
baz=328
SUA Susitna One 73.80 24 IAmb IAmb 02 26 34.3
comp=Z,20nm,1.0s
EGAK Eagle 73.97 18 IAmb IAmb 02 26 36.1
comp=Z,38nm,1.4s
WB0 Warramunga Arr 74.06 130 IAmb IAmb 02 26 35.2
comp=Z,43nm,1.4s
DOT Dot Lake 74.12 20 IAmb IAmb 02 26 38.0
comp=Z,16nm,1.0s
WRA Warramunga Arr 74.15 130 P P 02 26 32.0 -1.4
comp=Z,11nm,0.7s,baz=325,slow=5.9,SNR=16
WRA LR LR 03 03 24.3
comp=Z,142nm,21.6s,baz=325,slow=39
WRA Warramunga Arr 74.15 130 P P 02 26 32.5 -0.9
WRA Warramunga Arr 74.15 130 P P 02 26 32.5 -0.9
GHO Glory Hole Cre 74.15 23 P P 02 26 32.2 -0.7
GHO IAmb IAmb 02 26 40.7
comp=Z,31nm,1.1s
WB2 Warramunga Arr 74.16 130 IAmb IAmb 02 26 37.6
comp=Z,24nm,0.9s
PMR Palmer 74.22 23 P P 02 26 32.8 -0.4
PMR IAmb IAmb 02 26 45.3
comp=Z,18nm,1.2s
PMR Palmer 74.22 23 P P 02 26 32.8 -0.4
PMR pmax pmax
comp=Z,18nm,1.2s
PAX Paxson 74.27 21 IAmb IAmb 02 26 39.9
comp=Z,24nm,1.1s
WR0 Warramunga Arr 74.29 130 IAmb IAmb 02 26 36.5
comp=Z,41nm,1.4s
RC01 Rabbit Creek A 74.41 23 P 02 26 37.4 +3.1
KNK Knik Glacier 74.57 23 P P 02 26 35.2 -0.1
SCM Sheep Creek Mo 74.60 22 P P 02 26 35.0 -0.6
SCM Sheep Creek Mo 74.60 22 P P 02 26 35.0 -0.6
SCM pmax pmax
comp=Z,72nm,1.5s
TOA0 Torodi Ar. Sit 74.98 275 P P 02 26 37.0 -1.4
TORD Torodi Ar. Bea 74.98 275 P P 02 26 36.7 -1.7
comp=Z,3.3nm,0.7s,baz=49,slow=5.6,SNR=19
TORD LR LR 03 03 25.7
comp=Z,673nm,18.7s,baz=20,slow=39
TORD Torodi Ar. Bea 74.98 275 P P 02 26 37.0 -1.4
DAWY Dawson 75.00 18 IAmb IAmb 02 26 41.2
comp=Z,36nm,1.4s
BCAR Beaver Creek A 75.21 19 P P 02 26 38.4 -0.7
ASAR Alice Springs 76.68 133 P P 02 26 47.1 -0.7
comp=Z,15nm,0.9s,baz=319,slow=5.7,SNR=34
ASAR LR LR 03 05 22.7
comp=Z,122nm,19.0s,baz=312,slow=40
ASAR Alice Springs 76.68 133 P P 02 26 46.8 -1.0
BALM Baldy 76.70 21 IAmb IAmb 02 26 52.0
comp=Z,30nm,1.1s
CTGM Chitina Glacie 77.05 20 P P 02 26 48.4 -1.3
CTGM IAmb IAmb 02 26 56.0
comp=Z,17nm,0.9s
HYT Haines Junctio 78.20 19 IAmb IAmb 02 27 00.3
comp=Z,11nm,0.8s
YKA Yellowknife Ar 80.96 8 P P 02 27 10.1 -0.7
comp=Z,6.9nm,0.7s,baz=339,slow=5.3,SNR=47
YKA LR LR 03 05 33.5
comp=Z,487nm,21.3s,baz=0.0,slow=38
DLBC Dease Lake 82.14 17 P P 02 27 17.5 +0.2
comp=Z,6.4nm,0.8s,baz=325,slow=12,SNR=4.3
BOSA Boshof 83.78 228 P P 02 27 24.5 -1.6

comp=Z,6.3nm,0.9s,baz=33,slow=8.1,SNR=8.1
BOSA LR LR 03 03 11.6
comp=Z,139nm,20.1s,baz=46,slow=35
BOSA Boshof 83.78 228 IAmb IAmb 02 27 41.5
comp=Z,18nm,1.2s
DBIC Dimbokro 83.95 274 P **P** 02 27 26.9 -0.4
comp=Z,5.4nm,1.0s,baz=0.2,slow=3.6,SNR=3.5
DBIC LR LR 03 08 19.5
comp=Z,783nm,19.4s,baz=40,slow=38
DBIC Dimbokro 83.95 274 IAmb IAmb 02 27 42.1
comp=Z,16nm,1.1s
KIC Kosan Boka 84.04 274 ePKIKP **P** 02 27 29.9 +2.2
comp=Z,23nm,0.9s
TIC Toumodi 84.10 274 ePKIKP **P** 02 27 30.3 +2.2
comp=Z,2.1nm,0.3s
LIC Lamto 84.35 274 ePKIKP **P** 02 27 30.1 +0.8
comp=Z,34nm,1.2s
FCC Fort Churchill 85.62 358 P **P** 02 27 34.4 -0.5
FCC IAmb IAmb 02 27 42.6
comp=Z,12nm,1.4s
FCC Fort Churchill 85.62 358 P **P** 02 27 34.4 -0.5
FCC pmax pmax
comp=Z,12nm,1.4s
SCHQ Schefferville 85.82 343 P **P** 02 27 36.4 +0.4
comp=Z,3.0nm,0.7s,baz=18,slow=4.6,SNR=8.4
SCHQ LR LR 03 10 41.4
comp=Z,517nm,20.2s,baz=25,slow=39
STKA Stephens Creek 87.31 133 P **P** 02 27 41.7 -1.8
comp=Z,4.9nm,0.8s,baz=317,slow=6.3,SNR=6.3
STKA LR LR 03 11 16.7
comp=Z,260nm,19.7s,baz=312,slow=39
FFC Flin Flon 89.63 3 P **P** 02 27 53.5 -0.8
FFC IAmb IAmb 02 27 59.2
comp=Z,21nm,1.4s
FFC Flin Flon 89.63 3 P **P** 02 27 53.5 -0.8
FFC pmax pmax
comp=Z,21nm,1.4s
LLLB Lillooet 91.20 15 IAmb IAmb 02 28 09.1
comp=Z,17nm,1.4s
ULM Lac du Bonnet 94.18 359 P **P** 02 28 15.8 +0.3
comp=Z,2.0nm,0.8s,baz=0.7,slow=2.1,SNR=4.8
ULM LR LR 03 15 16.1
comp=Z,373nm,20.0s,baz=356,slow=38
NEW Newport 94.38 13 P **P** 02 28 17.2 +0.7
comp=Z,2.3nm,0.8s,baz=351,slow=7.7,SNR=6.9
JTMT Jette 95.36 11 P **P** 02 28 22.0 +0.9
JTMT IAmb IAmb 02 28 25.9
comp=Z,5.9nm,1.0s
DGMT Dagmar 95.76 4 P **P** 02 28 21.4 -1.4
DGMT IAmb IAmb 02 28 29.8
comp=Z,11nm,1.0s
DZM Mont Dzumac 98.02 111 eLR LR 03 00 31.5
comp=Z,610nm,27.8s
PPT2 Papeete2 130.68 82 eLR LR 03 15 22.3
comp=Z,516nm,28.8s
TBI Tubuai 133.66 89 eLR LR 03 16 54.2
comp=Z,388nm,26.0s
CPUP Villa Florida 144.47 274 PKP **PKPab** 02 34 31.6 0.0
comp=Z,3.4nm,0.8s,baz=57,slow=5.0,SNR=6.2
CPUP Villa Florida 144.47 274 PKPbc 02 34 32.4 +0.5
CPUP Villa Florida 144.47 274 PKIKP PKPbc 02 34 32.4 +0.5
RKT Rikitea 145.24 79 eLR LR 03 22 18.9
comp=Z,359nm,32.8s
LPAZ La Paz 147.32 299 PKPbc **PKPbc** 02 34 41.4 -0.2
comp=Z,3.3nm,0.8s,baz=76,slow=6.1,SNR=9.5
LPAZ La Paz 147.32 299 PKPdf **PKPdf** 02 34 36.6 -2.7
LPAZ **PKPbc** 02 34 41.6 0.0

NEIC 11 02:23:45.0±1.2, 21°.38S±0°.06×67°.2W±0°.1, $h181^{km}\pm4^{km}$, mb4.2/9, Error ellipse: s-maj=14.0km s-min=8.5km az=98.0
SJA 11 02:23:45.2±0.7, 21°.47S×67°.29W, $h206^{km}\pm5^{km}$, ML3.6, MW3.7
IDC 11 02:23:45.6±0.8, 21°.38S×67°.19W, $h180^{km}\pm9^{km}$, mb3.6/5, mb1 3.7/13, mb1mx3.5/39, mbtmp4.1/13, Error ellipse: s-maj=15.3km s-min=10.9km az=101.0
VAO 11 02:23:46.1±0.3, 21°.48S×67°.52W, $h218^{km}\pm6^{km}$, mb3.9
GUC 11 02:23:46.9±0.6, 21°.34S×67°.74W, $h219^{km}\pm8^{km}$, ML4.3
SCB 11 02:23:46.6±1.7, 21°.45S×67°.29W, $h210^{km}\pm8^{km}$, ML3.7/7, Error ellipse: s-maj=4.6km s-min=3.3km az=0.0
ISC 11 02:23:45.8±0.6, 21°.41S±0°.04×67°.30W±0°.03, $h192^{km}\pm6^{km}$, n105, σ1s.31/144, mb4.0/7, 4C-7D, Chile-Bolivia border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MOCB Mochara 1.56 85 P **Pn** 02 24 20.5 +0.7
MOCB S **Sn** 02 24 45.8 -0.3
YJA Yavi 1.83 115 P **Pn** 02 24 23.6 +1.2
YJA S **Sn** 02 24 50.0 -0.8
YJA AML AML 02 24 51.5
656nm,0.5s
YJA Yavi 1.83 115 iP **Pn** 02 24 23.6 +1.2
YJA eS **Sn** 02 24 51.6 +0.8
YJA IAML 02 24 54.3
comp=Z,142nm,0.6s
PB09 IPOC Station P 1.85 258⇑iP **Pn** 02 24 23.4 +1.1
PB09 iS **Sn** 02 24 51.2 +0.6
PB09 IPOC Station P 1.85 258 iP **Pn** 02 24 23.4 +1.1
PB09 eS **Sn** 02 24 52.0 +1.3
PB09 IAML 02 24 57.8
comp=Z,233nm,0.4s
LVC Limon Verde 1.91 231 P **Pn** 02 24 24.0 +0.8
comp=Z,60nm,0.3s,baz=50,slow=10.0,SNR=565
LVC S **Sn** 02 24 52.2 0.0
comp=Z,21nm,0.3s,baz=214,slow=18,SNR=4.4
LVC Limon Verde 1.91 231 eP **Pn** 02 24 23.7 +0.5
LVC eS **Sn** 02 24 52.3 0.0
LVC Limon Verde 1.91 231 **Pn** 02 24 22.7 -0.5
LVC **Sn** 02 24 51.2 -1.1
LVC Limon Verde 1.91 231⇑iP **Pn** 02 24 24.0 +0.8
PB01 IPOC Station P 2.07 280⇓iP **Pn** 02 24 24.9 +0.3
PB01 iS **Sn** 02 24 54.1 -0.5
PB01 IAML 02 24 56.1
comp=N,865nm,0.4s
PB01 IPOC Station P 2.07 280 P **Pn** 02 24 25.1 +0.5
PB01 S **Sn** 02 24 54.8 +0.1
PB01 AML AML 02 24 55.9
comp=N,117nm,0.3s
PB01 IPOC Station P 2.07 280 **Pn** 02 24 24.3 -0.3
PB01 Sn **Sn** 02 24 53.3 -1.4
PB08 IPOC Station P 2.14 306⇓iP **Pn** 02 24 26.9 +1.3
PB08 iS **Sn** 02 24 57.3 +0.7
PB08 IPOC Station P 2.14 306 P **Pn** 02 24 27.0 +1.3
PB08 S **Sn** 02 24 56.9 +0.3
PB08 AML AML 02 24 58.0
comp=N,159nm,0.5s
PB02 IPOC Station P 2.42 272⇓iP **Pn** 02 24 28.6 +0.2
PB02 iS **Sn** 02 25 00.2 -1.3
PB02 IPOC Station P 2.42 272 P **Pn** 02 24 28.9 +0.5
PB02 S **Sn** 02 24 59.9 -1.6
PB02 AML AML 02 25 01.6
comp=N,747nm,0.5s
PB07 IPOC Station P 2.43 262⇑iP **Pn** 02 24 29.2 +0.6
PB07 iS **Sn** 02 25 00.5 -1.3
PB07 IAML 02 25 01.8
comp=N,2μm,0.2s
PB06 IPOC Station P 2.47 238⇑iP **Pn** 02 24 29.3 +0.3
PB06 iS **Sn** 02 25 01.8 -0.9
PB06 IAML 02 25 03.9
comp=E,590nm,0.1s
PB06 IPOC Station P 2.47 238 P **Pn** 02 24 29.5 +0.4
PB06 S **Sn** 02 25 01.4 -1.3
PB06 IPOC Station P 2.47 238 iP **Pn** 02 24 29.4 +0.4
PB06 eS **Sn** 02 25 02.3 -0.4
PB06 IAML 02 25 09.0
comp=Z,278nm,0.6s
GO01 Chusmiza 2.48 314⇓iP **Pn** 02 24 30.2 +0.7
GO01 iS **Sn** 02 25 06.2 +2.8
GO01 IAML 02 25 08.4
comp=N,720nm,0.1s
GO01 Chusmiza 2.48 314 **Pn** 02 24 28.3 -1.2
GO01 Sn **Sn** 02 25 02.2 -1.2
PB15 IPOC Station P 2.69 228⇑iP **Pn** 02 24 32.1 +0.5
PB15 iS **Sn** 02 25 07.4 0.0
PB15 IPOC Station P 2.69 228 iP **Pn** 02 24 32.3 +0.7
PB15 eS **Sn** 02 25 06.6 -0.8
PB11 IPOC Station P 2.75 306⇓iP **Pn** 02 24 32.5 +0.2
PB11 iS **Sn** 02 25 06.8 -1.6
PB11 IAML 02 25 08.8
comp=E,1μm,0.2s
PB11 IPOC Station P 2.75 306 P **Pn** 02 24 32.4 +0.2
PB11 S **Sn** 02 25 06.9 -1.6
PB11 IPOC Station P 2.75 306 **Pn** 02 24 31.6 -0.7
PB11 Sn **Sn** 02 25 06.7 -1.6
PB04 IPOC Station P 2.80 250 P **Pn** 02 24 33.2 +0.3
PB04 S **Sn** 02 25 07.5 -2.0
PB04 AML AML 02 25 08.8
comp=E,150nm,0.4s
PB04 IPOC Station P 2.80 250 **Pn** 02 24 32.5 -0.3
PB04 Sn **Sn** 02 25 08.0 -1.5
PB04 IPOC Station P 2.80 250 iP **Pn** 02 24 33.1 +0.3
PB04 eS **Sn** 02 25 09.2 -0.3
TA01 Diego Aracena 2.82 287 eP **Pn** 02 24 32.4 -0.4
TA01 iS **Sn** 02 25 07.3 -2.3
TA01 IAML 02 25 08.5
comp=E,730nm,0.2s
MNMC Minye Minye 3.13 316⇓iP **Pn** 02 24 37.6 +0.7
MNMC iS **Sn** 02 25 16.2 -0.5
MNMC IAML 02 25 19.0
comp=E,1μm,0.2s
MNMC Minye Minye 3.13 316 P **Pn** 02 24 37.6 +0.7
MNMC Minye Minye 3.13 316 **Pn** 02 24 36.4 -0.5
MNMC Sn **Sn** 02 25 13.9 -2.7
PSGC Pisagua 3.20 304 P **Pn** 02 24 37.3 -0.3
PSGC S **Sn** 02 25 15.4 -2.6
PSGC AML AML 02 25 17.6
comp=E,110nm,0.3s
BS03 Mojotorillo 3.44 53 P **Pn** 02 24 40.8 -0.1
BS03 S **Sn** 02 25 20.6 -3.2
BS03 AML AML 02 25 22.3
comp=E,141nm,0.7s
AZAP Zapla 3.48 144⇓iP **Pn** 02 24 41.4 +0.3
AZAP eS **Sn** 02 25 23.0 -1.4
AZAP IAML 02 25 24.8
comp=Z,169nm,0.4s
PB10 IPOC Station P 3.67 235 P **Pn** 02 24 42.9 -0.2
PB10 IPOC Station P 3.67 235 **Pn** 02 24 42.9 -0.2
PB10 IPOC Station P 3.67 235 iP **Pn** 02 24 43.2 +0.1
PB10 IAML 02 25 31.1
comp=Z,45nm,0.1s
SLA San Lorenzo 3.69 154 P **Pn** 02 24 44.9 +1.3
SLA San Lorenzo 3.69 154 eP **Pn** 02 24 44.2 +0.6
SLA IAML 02 25 36.3
comp=Z,42nm,0.6s
BS06 Camiri 3.79 70 P **Pn** 02 24 45.0 +0.2
BS08 Valle Grande 4.17 47 P **Pn** 02 24 49.3 -0.4
GO02 Mina Guanaco 4.29 209 **Pn** 02 24 50.5 -0.7
GO02 Sn **Sn** 02 25 41.5 -1.2
PB14 IPOC Station P 4.29 221 iP **Pn** 02 24 51.0 -0.3
PB14 IAML 02 25 45.0
comp=Z,94nm,0.4s
BBOJ La Paz, Jacaqu 4.49 349 P **Pn** 02 24 56.2 +2.1
BBOE La Paz, Chanca 4.62 352 P **Pn** 02 24 56.9 +1.2
BBOD La Paz, Gloria 4.90 345 P **Pn** 02 25 00.9 +1.6
LPAZ La Paz 5.15 351 P **Pn** 02 25 04.0 +1.3
comp=Z,3.3nm,0.3s,baz=168,slow=5.8,SNR=70
LPAZ S **Sn** 02 26 01.1 -2.0
comp=Z,0.9nm,0.3s,baz=55,slow=22,SNR=9.2
LPAZ La Paz 5.15 351 P **Pn** 02 25 03.8 +1.1
LPAZ La Paz 5.15 351 eP **Pn** 02 25 03.8 +1.1
LPAZ La Paz 5.15 351 **Pn** 02 25 00.5 -2.2
LPAZ **Sn** 02 26 01.2 -1.8
LPAZ La Paz 5.15 351⇑iP **Pn** 02 25 04.0 +1.3
BBOB La Paz, Bander 5.30 351 P **Pn** 02 25 05.3 +0.9
AHML Horco Molle 5.65 162 P **Pn** 02 25 07.2 -1.2
GO03 Copiap 6.71 203 **Pn** 02 25 20.2 -2.0
SIV San Ignacio 7.99 49 P **Pn** 02 25 36.8 -2.2
comp=Z,13nm,0.3s,baz=239,slow=11,SNR=278
SIV S Sn 02 26 49.8 -19
comp=Z,2.0nm,0.3s,baz=235,slow=17,SNR=4.5
ACCO Cerro Coronel 9.28 189 iP **Pn** 02 25 55.5 -0.5
GO04 Tololo Observa 9.28 199 Pn **Pn** 02 25 52.9 -3.1
CFA Coronel Fontan 10.19 185 P **Pn** 02 26 06.5 -1.1
comp=Z,1.2nm,0.3s,baz=334,slow=8.8,SNR=26
CFA S **Sn** 02 27 53.9 -7.4
comp=Z,1.1nm,0.3s,baz=268,slow=23,SNR=6.7
CPUP Villa Florida 10.36 120 P **Pn** 02 26 10.6 +0.8
comp=Z,1.0nm,0.3s,baz=304,slow=12,SNR=19
CPUP Villa Florida 10.36 120 eP **Pn** 02 26 11.6 +1.8
CPUP Villa Florida 10.36 120 **Pn** 02 26 09.7 0.0
AQDB Aquidauana 10.88 87 eP **Pn** 02 26 18.8 +2.2
SALV Santo Antonio 12.29 65 eP **P** 02 26 37.9 -1.3
PP1B Ponte de Pedra 12.31 74 eP **P** 02 26 37.9 -1.6
ITQB Itaqui 12.67 133 eP **Pn** 02 26 39.7 +0.4
SAML Samuel 13.01 18 Pn **Pn** 02 26 41.9 -1.8
NNA Nana 13.08 314 P **P** 02 26 47.0 -1.1
comp=Z,1.1nm,0.3s,baz=152,slow=7.9,SNR=5.4
PTGB Pitanga 14.40 106 eP **Pn** 02 27 00.9 -0.3
ITAB Concordia 14.99 116 eP **P** 02 27 09.4 +0.3
CPSB Cacapava Do Su 15.34 129 eP **P** 02 27 13.8 +0.8
ARAG Araguaiana, MT 15.74 71 eP **P** 02 27 19.1 +1.7
PLTB Pedras Altas 16.00 133 eP **Pn** 02 27 21.5 +0.9
FRTB Fartura 16.52 100 eP **P** 02 27 27.7 +0.8
CNLB Canela 16.81 121 eP **P** 02 27 29.5 +0.3
BB19B Bebedouro 17.51 92 eP **P** 02 27 37.9 +0.9
IPMB Ipameri, GO 18.29 83 eP **P** 02 27 46.5 +0.9
VAO Valinhos 18.90 99 eP **P** 02 27 52.4 +0.3
BDFB Brasilia 19.16 76 P **P** 02 27 55.0 0.0
comp=Z,1.5nm,0.3s,baz=248,slow=6.8,SNR=12
BDFB Brasilia 19.16 76 P **P** 02 27 53.7 -1.3
BDFB IAmb IAmb 02 27 58.7
comp=Z,5.5nm,0.4s
PLCA Paso Flores 19.46 187 P **P** 02 27 59.0 +1.0
comp=Z,0.1nm,0.3s,baz=15,slow=13,SNR=4.8
PLCA Paso Flores 19.46 187 P **P** 02 27 58.6 +0.7
PEXB Peixe 20.39 66 eP **P** 02 28 07.9 -0.2
JANB Januaria 22.72 78 eP **P** 02 28 30.5 -1.0
SMTB Santa Maria do 22.72 60 eP **P** 02 28 31.6 +0.1
RUSC La Rusia 27.72 348 P **P** 02 29 16.1 -1.0
NBLA Lagarto - SE 30.12 75 eP **P** 02 29 36.8 -1.0
NBPS Pedro II - PI 30.26 60 eP **P** 02 29 38.8 -0.3
EFI East Falkland 31.06 169 P **P** 02 29 46.7 +1.2
EFI IAmb IAmb 02 29 50.9
comp=Z,24nm,1.1s
FDF Fort de France 36.42 10 P **P** 02 30 31.4 -0.8
TKL Tuckaleechee C 58.86 344 P **P** 02 33 24.6 +0.2
comp=Z,2.1nm,0.7s,baz=148,slow=13,SNR=2.7
TKL Tuckaleechee C 58.86 344 P **P** 02 33 24.7 +0.2
TKL IAmb IAmb 02 33 25.4
comp=Z,3.8nm,0.9s
ULM Lac du Bonnet 75.69 342 P **P** 02 35 10.6 +0.8
comp=Z,1.3nm,0.6s,baz=120,slow=4.4,SNR=3.1
ULM Lac du Bonnet 75.69 342 P **P** 02 35 10.2 +0.4
ULM IAmb IAmb 02 35 14.0
comp=Z,1.1nm,0.8s
ULM PcP **PcP** 02 35 22.3 +0.7
TOA0 Torodi Ar. Sit 75.92 70 P **P** 02 35 11.7 -0.2
TOA0 IAmb IAmb 02 35 13.0
comp=Z,3.3nm,1.1s
TORD Torodi Ar. Bea 75.92 70 P **P** 02 35 11.8 -0.1
comp=Z,1.6nm,0.4s,baz=253,slow=5.4,SNR=62
TORD Torodi Ar. Bea 75.92 70 P **P** 02 35 11.4 -0.4
NVAR Mina Array Bea 76.35 321 P **P** 02 35 16.4 +2.4
comp=Z,0.2nm,0.5s,baz=140,slow=5.8,SNR=2.3
YKA Yellowknife Ar 91.61 340 P **P** 02 36 31.9 +1.5
comp=Z,0.4nm,0.6s,baz=132,slow=4.3,SNR=8.1
ASAR Alice Springs 130.67 206 PKP **PKiKP** 02 42 36.0 +0.4
comp=Z,1.3nm,1.1s,baz=134,slow=2.2,SNR=4.9
KSH Kashi 143.87 52 PKP PKPab 02 42 51.3 -4.9
KSH pPKP pPKPdf 02 43 54.0 +4.2
KSH sPKP 02 44 14.8
KSH PP **PP** 02 46 13.9 -0.2
MKAR Makanchi Array 144.67 37 PKP **PKPdf** 02 43 00.6 +1.0
comp=Z,0.6nm,0.8s,baz=303,slow=3.1,SNR=6.5
MKAR Makanchi Array 144.67 37 PKPbc PKPbc 02 42 59.8 +0.9

JMA 11 02:37:47.0±0.2, 33°.24N×141°.01E, $h51^{km}$, M3.5
IDC 11 02:37:49.7±3.4, 33°.15N×140°.74E, $h62^{km}\pm26^{km}$, mb3.4/3, mb1 3.7/4, mb1mx3.1/28, mbtmp3.6/4, ML2.5/1, MS4.1/2, Ms1 4.1/2, ms1mx3.3/28, Error ellipse: s-maj=49.4km s-min=13.3km az=84.0
NEIC 11 02:37:49.2±1.5, 33°.15N±0°.09×140°.8E±0°.1, $h66^{km}\pm10^{km}$, mb4.5/10, Error ellipse: s-maj=13.2km s-min=12.4km az=127.0
ISC 11 02:37:47.5±1.7, 33°.19N±0°.06×141°.00E±0°.09, $h46^{km}\pm15^{km}$, n44, σ1s.04/45, mb4.4/7, Southeast of Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JHJ2 Mitsune 0.99 266 P **Pn** 02 38 05.2 +0.1
JHJ2 eS **Sn** 02 38 18.7 +0.8
JHJ2 Mitsune 0.99 266 **Pn** 02 38 05.1 +0.1
JHJ2 Sn **Sn** 02 38 18.4 +0.5
JHCJ Hachijojimakas 1.01 263 P **Pn** 02 38 05.2 -0.1
JHJ Hachijo jima 2 1.02 266 P **Pn** 02 38 05.2 -0.2
424nm,0.3s,baz=93,slow=20,SNR=25
JHJ S **Sn** 02 38 17.5 -1.1
724nm,0.3s,baz=144,slow=23,SNR=23
JMKN Mikurajimanish 1.36 301 P **Pn** 02 38 09.9 -0.2
BSO1 Boso 1 1.46 359 P **Pn** 02 38 11.0 +0.1
BSO3 Boso 3 1.65 346 P **Pn** 02 38 13.9 +0.1
JKO Kozu shima 1.84 303 P **Pn** 02 38 16.8 +0.2
JKO S **Sn** 02 38 38.6 -0.1
BSO4 Boso 4 1.87 343 P **Pn** 02 38 17.5 +0.5
JIM2 Oshima 3 2.00 320 P **Pn** 02 38 18.8 -0.1
JIZS Izushimoda 2.33 311 P **Pn** 02 38 23.9 +0.6
JOD2 Odawara 2 2.60 323 P **Pn** 02 38 27.1 0.0
JOD2 eS **Sn** 02 38 54.9 -2.6
TK02 Tokai 2 2.81 286 P **Pn** 02 38 30.8 +1.1
TK02 eS **Sn** 02 39 02.7 +0.5
SHZ3 Shizuoka 3 2.97 310 P **Pn** 02 38 33.9 +1.7
JYN Shimob 3.06 319 P **Pn** 02 38 35.0 +1.5
MJAR Matsushiro Arr 4.05 326 P **Pn** 02 38 48.1 +1.1
0.3nm,0.3s,baz=147,slow=11,SNR=7.1
MJAR S **Sn** 02 39 33.2 0.0
0.2nm,0.3s,baz=270,slow=13,SNR=6.2
MJAR Matsushiro Arr 4.05 326 **Pn** 02 38 47.9 +0.9
MJAR **Sn** 02 39 31.8 -1.4
MAJO Matsushiro 4.05 326 Pn **Pn** 02 38 48.9 +1.9
MAT Matsushiro 4.05 326 P **Pn** 02 38 49.3 +2.3
MAT S **Sn** 02 39 33.2 0.0
MJB9 Matsu-Tunnel 4.06 326 Pn **Pn** 02 38 48.4 +1.3
ANA2 Anatahan 17.31 165 **Pn** 02 41 45.9 0.0
XAN Xi'an 26.67 281 P **P** 02 43 23.5 +1.3
XAN pP pP 02 43 31.2 -2.6
H11N2 WAKE ISLAND Hy 26.70 114 T T 03 12 19.0
baz=306,slow=75,SNR=14
H11N1 WAKE ISLAND Hy 26.70 114 T T 03 12 22.4
baz=306,slow=75,SNR=16
H11N3 WAKE ISLAND Hy 26.71 114 T T 03 12 23.3
baz=306,slow=75,SNR=14
H11S3 WAKE ISLAND Hy 27.27 116 T T 03 12 58.5
baz=310
H11S1 WAKE ISLAND Hy 27.27 116 T T 03 13 02.0
baz=310
H11S2 WAKE ISLAND Hy 27.28 116 T T 03 13 05.5
baz=310
YAK Yakutsk 29.75 349 P **P** 02 43 49.7 +0.4
SONM Songino Array 29.81 310 P **P** 02 43 49.0 -1.1
PMG Port Moresby 42.77 171 LR LR 03 02 17.4
comp=Z,237nm,20.9s,baz=296,slow=34
MKAR Makanchi Array 45.96 305 P **P** 02 46 05.2 -0.7
0.1nm,0.3s,baz=91,slow=10,SNR=1.9
KURK Kurchatov 48.10 311 P **P** 02 46 20.6 -2.0
RC01 Rabbit Creek A 51.65 35 P **P** 02 46 51.2 +1.9
RC01 IAmb IAmb 02 46 54.2
comp=Z,4.1nm,0.9s
WB0 Warramunga Arr 53.04 188 P **P** 02 46 59.1 -1.0
WR0 Warramunga Arr 53.21 188 P **P** 02 47 00.8 -0.5
WR0 IAmb IAmb 02 47 01.6
comp=Z,2.4nm,0.4s
WB2 Warramunga Arr 53.22 188 P **P** 02 47 00.9 -0.4
WB2 IAmb IAmb 02 47 01.5
comp=Z,3.2nm,0.8s
WRA Warramunga Arr 53.22 188 P **P** 02 47 01.2 -0.1
comp=Z,1.4nm,0.4s,baz=4.3,slow=7.6,SNR=5.5
WRA Warramunga Arr 53.22 188 P **P** 02 47 00.5 -0.9
DOT Dot Lake 54.21 32 P **P** 02 47 07.8 -0.4
DOT IAmb IAmb 02 47 12.8
comp=Z,3.6nm,0.8s
ASAR Alice Springs 56.95 188 P **P** 02 47 28.2 0.0
comp=Z,0.4nm,0.3s,baz=4.8,slow=5.5,SNR=11
ASAR Alice Springs 56.95 188 P **P** 02 47 27.8 -0.4
DZM Mont Dzumac 60.08 153 LR LR 03 10 22.1
comp=Z,178nm,21.5s,baz=5.5,slow=32
CLL Collm 84.25 330 eP **P** 02 50 15.0 +0.9

THE 11 02:39:33.6, 38°.20N×20°.41E, $h14^{km}$, ML2.8/8, Error ellipse: s-maj=0.9km s-min=0.4km az=264.0
ATH 11 02:39:33.9, 38°.21N×20°.42E, $h13^{km}\pm1^{km}$, ML2.6/3, Error ellipse: s-maj=1.9km s-min=0.9km az=255.0
ISC 11 02:39:33.6±1.3, 38°.20N±0°.03×20°.41E±0°.05, $h15^{km}\pm5^{km}$, n23, σ0s.33/40, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LXR1 Lixouri, Cepha 0.02 88 P **Pg** 02 39 36.2 0.0
LXR1 S **Sg** 02 39 37.8 -0.1
27μm,0.3s
CHV1 Chavriata, Kef 0.03 236 P **Pg** 02 39 36.2 0.0
CHV1 S **Sg** 02 39 38.0 +0.1
27μm,0.2s
KEF3 Kipouria, Keph 0.05 273 P **Pg** 02 39 36.3 0.0
KEF3 S **Sg** 02 39 38.1 0.0
KEF4 Livadi, Kephal 0.06 9 P **Pg** 02 39 36.2 -0.2
KEF4 S **Sg** 02 39 38.1 -0.2
ARG2 Argostoli 0.06 110 P **Pg** 02 39 36.4 0.0
ARG2 S **Sg** 02 39 38.0 -0.3
15μm,0.1s
KEF2 Argostoli. Kep 0.07 121 P **Pg** 02 39 36.4 0.0
KEF2 S **Sg** 02 39 38.3 -0.1
KEF1 Kardakata, Kep 0.09 31 P **Pg** 02 39 36.5 -0.2
KEF1 S **Sg** 02 39 38.2 -0.5
VLS Valsamata 0.14 99 P **Pg** 02 39 37.2 -0.1
VLS S **Sg** 02 39 39.7 -0.1
4μm,0.1s
VLS Valsamata 0.14 99 P **Pg** 02 39 37.2 -0.1
VLS S **Sg** 02 39 39.8 -0.1
VLS AML AML 02 39 39.9
comp=N,9431μm,0.1s
VLS AML AML 02 39 39.9
comp=E,5617μm,0.1s
VSK1 VASILIKIADES 0.24 30 P **Pg** 02 39 38.9 0.0
VSK1 S **Sg** 02 39 42.8 +0.3
comp=E,2μm,0.5s
FSK Fiskardo 0.28 24 P **Pg** 02 39 39.5 -0.1
FSK S **Sg** 02 39 43.9 +0.2
comp=E,1μm,0.2s
FSK Fiskardo 0.28 24 P **Pg** 02 39 39.5 -0.1
FSK S **Sg** 02 39 43.9 +0.2
FSK AML AML 02 39 44.2
comp=N,2348μm,0.2s
FSK AML AML 02 39 44.3
comp=E,2424μm,0.2s
VLMS Volimes, Zakyn 0.38 148 P **Pg** 02 39 41.6 +0.3
VLMS S **Sb** 02 39 47.7 0.0
VLMS AML AML 02 39 48.4
comp=E,4372μm,0.2s
VLMS AML AML 02 39 49.6
comp=N,3052μm,0.1s
EVGI Lefkada island 0.46 24 P **Pg** 02 39 42.5 -0.3
EVGI S **Sg** 02 39 49.5 +0.5
EVGI Lefkada island 0.46 24 P **Pg** 02 39 42.4 -0.3
EVGI S **Sg** 02 39 49.4 +0.3
LKD2 Lefkada island 0.62 18 P **Pg** 02 39 45.2 -0.5
LKD2 Lefkada island 0.62 18 P **Pg** 02 39 45.2 -0.5
KRI1 kERI 0.62 149 P **Pg** 02 39 45.2 -0.6
KRI1 S **Sb** 02 39 55.0 +0.2
comp=N,640nm,0.2s
AST1 Astakos 0.63 57 P **Pg** 02 39 45.7 -0.3
AST1 S **Sb** 02 39 55.7 +0.7
comp=N,328nm,0.3s
TSLK Tsoukalades, L 0.65 17 P **Pg** 02 39 46.0 -0.4
TSLK Tsoukalades, L 0.65 17 P **Pg** 02 39 45.6 -0.8
RLS Riolos of Patr 0.84 99 P **Pg** 02 39 49.6 -0.3
PVO Paravola 0.97 64 P **Pb** 02 39 52.1 +0.1

RSNC 11 02:47:14.9±1.1, 6°.82N×73°.10W, $h154^{km}\pm4^{km}$, ML3.4, Mw3.6
IDC 11 02:47:18.2±2.5, 6°.42N×75°.39W, $h177^{km}\pm40^{km}$, mb3.5/2, mb1 3.7/2, mb1mx3.0/29, mbtmp4.0/2, MS4.4/1, Ms1 4.4/1, ms1mx3.2/18, Error ellipse: s-maj=81.1km s-min=38.1km az=93.0
ISC 11 02:47:13.6±0.9, 6°.82N±0°.03×73°.12W±0°.04, $h162^{km}\pm6^{km}$, n34, σ1s.47/62, 1C-7D, Northern Colombia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BARC Barichara 0.23 195⇑eP **Pn** 02 47 35.4 -0.3
BARC eS **Sn** 02 47 51.6 -1.0
BARC i 02 47 52.4
comp=Z,627nm,0.7s
BRRC Barranca, Sant 0.65 296⇓eP **Pn** 02 47 37.4 +0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BRRC				eS	Sn	02 47 55.0	-0.1
BRRC				i		02 47 57.3	
	comp=Z,278nm,0.3s						
BRRC				i		02 47 57.7	
	comp=Z,266nm,0.4s						
PAMC	Pamplona, Colo	0.67	39⇓	eP	Pn	02 47 38.2	+0.4
PAMC				eS	Sn	02 47 55.6	-0.6
PAMC				i		02 47 57.3	
	comp=Z,497nm,0.6s						
RUSC	La Rusia	0.92	177⇓	eP	Pn	02 47 39.2	-0.3
RUSC				eS	Sn	02 47 58.2	-1.2
RUSC				i		02 48 00.6	
	comp=Z,111nm,0.5s						
RUSC				i		02 48 01.4	
	comp=Z,109nm,0.4s						
PTBC	PUERTO BERRIO,	1.35	258	eP	Pn	02 47 41.9	-0.8
PTBC				eS	Sn	02 48 03.3	-1.6
PTBC				i		02 48 10.6	
	comp=Z,496nm,0.3s						
PTBC				i		02 48 11.0	
	comp=Z,540nm,0.4s						
TAMC	Tame, Arauca	1.38	106⇓	iP	Pn	02 47 43.5	+0.6
TAMC				eS	Sn	02 48 05.2	-0.2
TAMC				i		02 48 10.1	
	comp=Z,124nm,0.9s						
OCAC	Ocana	1.43	352	eP	Pn	02 47 43.7	+0.1
OCAC				eS	Sn	02 48 06.7	+0.1
OCAC				i		02 48 10.4	
	comp=Z,313nm,0.6s						
OCAC				i		02 48 10.6	
	comp=Z,246nm,0.3s						
SPBC	San Pablo de B	1.49	219⇓	iP	Pn	02 47 44.2	0.0
SPBC				eS	Sn	02 48 07.2	-0.4
SPBC				i		02 48 13.6	
	comp=Z,324nm,0.3s						
SPBC				i		02 48 13.6	
	comp=Z,332nm,0.3s						
ZARC	Zaragoza, Cauc	1.85	291	eP	Pn	02 47 48.0	+0.2
ZARC				eS	Sn	02 48 14.0	-0.1
ZARC				i		02 48 20.3	
	comp=Z,304nm,0.3s						
ZARC				i		02 48 20.5	
	comp=Z,312nm,0.3s						
NORC	Norcasia	2.14	234	eP	Pn	02 47 51.5	+0.4
NORC				eS	Sn	02 48 20.6	+0.6
NORC				i		02 48 21.5	
	comp=Z,112nm,0.3s						
NORC				i		02 48 25.9	
	comp=Z,114nm,0.2s						
SMLC	San Martn de	2.18	335	eP	Pn	02 47 51.6	0.0
SMLC				eS	Sn	02 48 20.5	-0.5
SMLC				i		02 48 27.6	
	comp=Z,240nm,0.4s						
SMLC				i		02 48 27.8	
	comp=Z,234nm,0.3s						
CHIC	Chingaza	2.26	196⇓	eP	Pn	02 47 53.0	+0.1
CHIC				eS	Sn	02 48 23.4	+0.2
CHIC				i		02 48 30.8	
	comp=Z,103nm,0.4s						
CHIC				i		02 48 32.0	
	comp=Z,89nm,0.6s						
ROSC	El Rosal	2.30	211	P	Pn	02 47 55.2	+1.8
	comp=Z,41nm,0.3s,baz=324,slow=22,SNR=38						
ROSC				S	Sn	02 48 22.2	-1.8
	comp=Z,32nm,0.3s,baz=117,slow=18,SNR=7.2						
ROSC	El Rosal	2.30	211⇓	eP	Pn	02 47 55.0	+1.6
ROSC				eS	Sn	02 48 25.9	+1.9
ROSC				i		02 48 29.1	
	comp=Z,181nm,0.6s						
ROSC				i		02 48 29.9	
	comp=Z,193nm,0.4s						
CVER	Cruz Verde, Cu	2.47	203	eP	Pn	02 47 56.7	+1.2
CVER				i		02 48 35.5	
	comp=Z,1μm,0.4s						
HELC	Santa Helena	2.47	256	eP	Pn	02 47 57.6	+2.3
HELC				eS	Sn	02 48 28.4	+0.9
HELC				i		02 48 34.2	
	comp=Z,152nm,0.5s						
HELC				i		02 48 34.2	
	comp=Z,153nm,0.8s						
UREC	San Jos de Ur	2.56	291	eP	Pn	02 47 55.2	-0.9
UREC				eS	Sn	02 48 25.8	-3.3
UREC				i		02 48 38.9	
	comp=Z,164nm,0.2s						
GUY2C	Guyana, Caldas	2.73	235	eP	Pn	02 47 59.4	+0.7
GUY2C				eS	Sn	02 48 34.3	+0.8
GUY2C				i		02 48 40.0	
	comp=Z,133nm,0.4s						
GUY2C				i		02 48 46.1	
	comp=Z,228nm,0.9s						
VILC	Villavicencio,	2.75	192	eP	Pn	02 47 58.5	0.0
VILC				eS	Sn	02 48 33.3	0.0
VILC				i		02 48 43.3	
	comp=Z,116nm,0.5s						
PTGC	Puerto Gaitan,	2.78	159	eP	Pn	02 47 58.3	-0.5
PTGC				eS	Sn	02 48 31.6	-2.3
PTGC				i		02 48 32.3	
	comp=Z,89nm,0.5s						
PTGC				i		02 48 34.2	
	comp=Z,105nm,0.4s						
CBOC	Ciudad Bolivar	3.02	252	eP	Pn	02 48 03.1	+1.2
CBOC				eS	Sn	02 48 40.3	+0.9
CBOC				i		02 48 48.5	
	comp=Z,59nm,0.6s						
CBOC				i		02 48 51.0	
	comp=Z,46nm,0.7s						
DBBC	Dabeiba	3.07	274	eP	Pn	02 48 02.6	+0.2
DBBC				eS	Sn	02 48 38.4	-1.9
DBBC				i		02 48 41.1	
	comp=Z,111nm,0.4s						
CODC	Agustn Codazz	3.11	354	eP	Pn	02 48 03.1	+0.2
CODC				eS	Sn	02 48 40.9	-0.3
CODC				i		02 48 47.8	
	comp=Z,51nm,0.2s						
CODC				i		02 48 49.2	
	comp=Z,55nm,0.4s						
ARGC	Ariguani, Magd	3.22	340	eP	Pn	02 48 05.3	+1.0
ARGC				eS	Sn	02 48 44.5	+0.9
ARGC				i		02 48 57.1	
	comp=Z,50nm,0.3s						
PRAC	Prado	3.55	210	eP	Pn	02 48 08.9	+0.5
PRAC				eS	Sn	02 48 52.0	+0.9
PRAC				i		02 48 54.7	
	comp=Z,114nm,0.7s						
PRAC				i		02 48 55.5	
	comp=Z,94nm,0.4s						
ORTC	Ortega, Tolima	3.58	216	eP	Pn	02 48 09.7	+0.8
ORTC				eS	Sn	02 48 53.1	+1.2
ORTC				i		02 48 58.6	
	comp=Z,78nm,0.6s						
ORTC				i		02 48 59.1	
	comp=Z,74nm,0.5s						
PLMC	San Jos del P	3.67	239	eP	Pn	02 48 10.6	+0.5
PLMC				eS	Sn	02 48 49.1	-4.9
PLMC				i		02 48 49.9	
	comp=Z,664nm,0.1s						
SJCC	San Jacinto, C	3.67	327	eP	Pn	02 48 09.1	-1.0
SJCC				eS	Sn	02 48 51.0	-3.0
SJCC				i		02 48 54.1	
	comp=Z,65nm,0.5s						
PTAC	Punta Ardita,	4.66	274	eP	Pn	02 48 22.3	-0.6
PTAC				eS	Sn	02 49 14.9	-2.0
MACC	Macarena, Meta	4.70	189	eP	Pn	02 48 22.2	-1.2
MACC				eS	Sn	02 49 12.7	-5.2
ULM	Lac du Bonnet	47.29	340	P	P	02 55 31.2	+0.5
	comp=Z,0.9nm,0.4s,baz=144,slow=5.9,SNR=2.2						
PDAR	Pinedale Array	48.08	324	LR	LR	03 17 22.3	
	comp=Z,451nm,21.9s,baz=353,slow=38						
YKA	Yellowknife Ar	63.27	340	P	P	02 57 24.9	+0.1
	comp=Z,0.8nm,0.6s,baz=134,slow=6.7,SNR=20						
ASAR	Alice Springs	149.11	234	PKPbc	PKPdf	03 06 40.6	+1.2
	comp=Z,0.2nm,0.4s,baz=107,slow=3.1,SNR=1.7						

IDC 11 02:58:15.0±2.3, 17.81N×145.62E, h354km±24km, mb3.2/10, mb1 3.4/12, mb1mx3.1/54, mbtmp3.9/12, Error ellipse: s-maj=23.9km s-min=13.6km az=85.0
NEIC 11 02:58:15.7±1.8, 17.7N±0.1×145.6E±0.2, h367km±5km, mb3.7/11, Error ellipse: s-maj=27.6km s-min=14.1km az=106.0
ISC 11 02:58:14.8±0.7, 17.82N±0.08×145.5E±0.2, h350km, n33, σ1.11/36, mb3.5/14, Mariana Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SARN	Sarigan	1.15	165	Pn	Pn	02 59 03.7	+2.4
ANA2	Anatahan	1.49	171	Pn	Pn	02 59 05.1	+2.1
ANA2				S	S	02 59 43.4	+1.8
GUMO	Guam	4.25	188	P	Pn	02 59 27.8	+1.4
	7.5nm,0.3s,baz=196,slow=22,SNR=1.8						
GUMO				S	S	03 00 22.1	-2.1
	5.1nm,0.3s,baz=19,slow=21,SNR=1.8						
GUMO	Guam	4.25	188		Pn	02 59 27.1	+0.6
GUMO					S	03 00 24.9	+0.7
MJAR	Matsushiro Arr	19.72	342	P	P	03 02 18.5	-1.4
	0.1nm,0.3s,baz=153,slow=7.6,SNR=2.5						
MJAR	Matsushiro Arr	19.72	342	P	P	03 02 19.4	-0.6
KSAR	Wonju Array Be	24.92	325	P	P	03 03 08.1	+0.8
WB0	Warramunga Arr	38.91	197	P	P	03 05 07.8	-0.3
WR0	Warramunga Arr	39.05	196	P	P	03 05 07.7	-1.5
WR0				IAmb	IAmb	03 05 11.3	
	comp=Z,3.5nm,1.1s						
WB2	Warramunga Arr	39.08	197	P	P	03 05 09.5	0.0
WRA	Warramunga Arr	39.09	197	P	P	03 05 09.6	0.0
	comp=Z,3.0nm,0.6s,baz=7.0,slow=8.9,SNR=10.0						
WRA	Warramunga Arr	39.09	197	P	P	03 05 08.9	-0.7
AS31	Alice Springs	42.75	196	P	P	03 05 39.0	-0.2
ASAR	Alice Springs	42.75	196	P	P	03 05 38.5	-0.7
	comp=Z,0.5nm,0.4s,baz=12,slow=7.9,SNR=9.2						
ASAR	Alice Springs	42.75	196	P	P	03 05 37.2	-1.9
SONM	Songino Array	43.70	322	P	P	03 05 47.2	+0.7
	comp=Z,0.9nm,0.6s,baz=132,slow=8.3,SNR=8.4						
SONM	Songino Array	43.70	322	P	P	03 05 46.9	+0.4
ZALV	Zalesovo Beam	58.58	323	P	P	03 07 36.2	+0.4
	comp=Z,0.8nm,0.3s,baz=105,slow=9.1,SNR=3.5						
ZALV	Zalesovo Beam	58.58	323	P	P	03 07 35.8	0.0
MK31	Makanchi Array	58.92	314	P	P	03 07 39.2	+1.0
MKAR	Makanchi Array	58.92	314	P	P	03 07 39.3	+1.1
	comp=Z,0.6nm,0.4s,baz=89,slow=8.4,SNR=17						
MKAR	Makanchi Array	58.92	314	P	P	03 07 38.6	+0.4
MAKZ	Makanchi	59.13	314	P	P	03 07 40.4	+0.7
MAKZ				IAmb	IAmb	03 07 41.4	
	comp=Z,1.9nm,0.8s						
KURK	Kurchatov	61.78	318	P	P	03 07 57.0	-0.3
KURK				IAmb	IAmb	03 07 58.9	
	comp=Z,2.1nm,0.6s						
KURBB	Kurchatov Arra	61.83	318	P	P	03 07 58.1	+0.5
	comp=Z,3.7nm,0.5s,baz=96,slow=7.4,SNR=50						
ILAR	Eielson Array	64.52	26	P	P	03 08 14.0	-1.0
	comp=Z,0.5nm,0.7s,baz=247,slow=6.1,SNR=8.6						
ILAR	Eielson Array	64.52	26	P	P	03 08 14.5	-0.5
BVAR	Borovoye Array	67.01	321	P	P	03 08 31.0	+0.1
	comp=Z,2.3nm,0.5s,baz=98,slow=7.5,SNR=18						
ABKAR	Akbulak array	73.83	317	P	P	03 09 10.9	-1.0
ABKAR	Akbulak array	73.83	317	P	P	03 09 11.2	-0.7
ABKAR				IAmb	IAmb	03 09 13.4	
	comp=Z,1.3nm,0.7s						
YKA	Yellowknife Ar	78.86	28	P	P	03 09 39.6	0.0
	comp=Z,0.2nm,0.5s,baz=285,slow=5.4,SNR=3.3						
NVAR	Mina Array Bea	83.85	52	P	P	03 10 06.6	+0.2
	comp=Z,0.3nm,0.6s,baz=273,slow=5.6,SNR=4.1						
NVAR	Mina Array Bea	83.85	52	P	P	03 10 04.4	-1.9

IDC 11 03:26:07.4±4.8, 34.28N×88.77E, h0km, mb3.9/2, mb1 3.7/6, mb1mx3.4/56, mbtmp3.6/6, ML2.6/2, Error ellipse: s-maj=79.1km s-min=49.7km az=166.0
ISC 11 03:26:11.1±4.1, 34.6N±0.4×88.7E±0.2, h10km, n6, σ0.75/6, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MKAR	Makanchi Array	13.09	340	Pn	Pn	03 29 16.8	-0.2
	0.0nm,0.3s,baz=154,slow=10,SNR=2.5						
KURBB	Kurchatov Arra	17.63	338	P	P	03 30 17.5	-0.1
	0.0nm,0.3s,baz=147,slow=12,SNR=7.6						
SONM	Songino Array	18.68	40	P	Pn	03 30 29.4	-0.4
	baz=245,slow=11,SNR=5.8						
ZALV	Zalesovo Beam	19.51	353	P	Pn	03 30 40.7	+1.1
	baz=168,slow=7.6,SNR=4.4						
HFS	Hagfors	53.39	323	P	P	03 35 30.3	-0.3
	1.6nm,0.7s,baz=102,slow=12,SNR=4.0						
NOA	NORSAR Array B	54.48	324	P	P	03 35 38.9	+0.3
	1.0nm,0.8s,baz=83,slow=7.0,SNR=3.5						

GUC 11 03:38:48.7±0.8, 35.44S×71.95W, h36km±2km, ML4.3
VAO 11 03:38:48.2±0.8, 35.19S×71.68W, h10km, mb4.5
NEIC 11 03:38:48.1±1.7, 35.40S±0.05×72.0W±0.2, h46km±5km, Error ellipse: s-maj=19.0km s-min=7.5km az=94.0
IDC 11 03:38:49.7±0.7, 35.29S×72.09W, h52km±5km, mb3.9/12, mb1 4.0/16, mb1mx3.9/28, mbtmp4.1/16, MS3.5/2, Ms1 3.5/2, ms1mx3.0/25, Error ellipse: s-maj=19.0km s-min=12.3km az=106.0
ISC 11 03:38:48.4±0.6, 35.32S±0.05×72.12W±0.07, h42km±4km, h42km:pP-P, n69, σ1.38/91, mb4.5/16, 2C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GO05	Huala	0.35	27⇑	iP	Pn	03 38 58.1	+0.7
GO05				eS	Sn	03 39 04.5	+0.7
GO05					IAML	03 39 05.1	
	comp=E,37μm,0.2s						
GO05	Huala	0.35	27		Pn	03 38 58.4	+0.9
GO05				Sn	Sn	03 39 04.4	+0.7
BO02	Sierra Bellavi	1.22	65	eP	Pn	03 39 09.0	-0.1
BO02				eS	Sn	03 39 23.6	-0.8
BO02					IAML	03 39 28.0	
	comp=E,11μm,0.2s						
MT01	Popeta	1.62	27⇑	iP	Pn	03 39 15.4	+0.9
MT01				eS	Sn	03 39 36.4	+2.2
MT01					IAML	03 39 41.4	
	comp=E,4μm,0.3s						
ANTU	Antumapu	2.14	36	eP	Pn	03 39 24.7	+3.1
ANTU				eS	Sn	03 39 49.2	+2.3
LMEL	Las Melosas	2.16	48	eP	Pn	03 39 23.6	+1.5
LMEL				eS	Sn	03 39 49.3	+1.6
LMEL					IAML	03 39 57.9	
	comp=N,2μm,0.3s						
STL	Santa Lucia	2.24	33	eP	Pn	03 39 24.5	+1.4
STL				eS	Sn	03 39 52.0	+2.4
MT03	Universidad Ad	2.26	37	eP	Pn	03 39 24.7	+1.3
MT03				eS	Sn	03 39 52.2	+2.2
MT03					IAML	03 40 03.5	
	comp=N,3μm,0.4s						
PEL	Peldehue	2.48	29		Pn	03 39 27.1	+0.8
PEL				Sn	Sn	03 39 55.7	+0.4
FCH	Farellones	2.50	38	eP	Pn	03 39 28.0	+1.2
FCH				eS	Sn	03 39 58.5	+2.2
FCH					IAML	03 40 05.8	
	comp=N,1μm,0.5s						
ROC1	El Roble	2.51	22		Pn	03 39 27.9	+1.0
ROC1				Sn	Sn	03 39 57.5	+1.0
ROCH	El Roble	2.52	22	eP	Pn	03 39 28.0	+1.0
ROCH				eS	Sn	03 40 00.4	+3.8
ROCH					IAML	03 40 11.7	
	comp=E,2μm,0.5s						
CFA	Coronel Fontan	4.92	42	P	Pn	03 40 00.1	+0.1
	comp=E,5.4nm,0.3s,baz=214,slow=11,SNR=41						
CFA				S	Sn	03 40 58.3	+2.6
	comp=E,4.1nm,0.3s,baz=238,slow=18,SNR=1.9						
CFA				LR	LR	03 42 05.6	
	comp=E,316nm,21.2s,baz=118,slow=40						
GO04	Tololo Observa	5.25	13		Pn	03 40 04.4	-0.2
GO04				Sn	Sn	03 41 00.5	-3.5
PLCA	Paso Flores	5.54	168	P	Pn	03 40 11.1	+2.7
	comp=E,1.5nm,0.3s,baz=17,slow=14,SNR=42						
PLCA	Paso Flores	5.54	168	eP	Pn	03 40 11.7	+3.2
PLCA	Paso Flores	5.54	168	Pn	Pn	03 40 05.8	-2.6
GO03	Copiap	7.87	12	Pn	Pn	03 40 39.1	-1.3
GO03				Sn	Sn	03 42 05.7	-2.4
GO02	Mina Guanaco	10.36	13	Pn	Pn	03 41 13.7	-1.0
PB01	IPOC Station P	14.41	10		P	03 42 09.2	-0.6
CPUP	Villa Florida	15.53	59	P	Pn	03 42 24.1	-0.4
	comp=E,0.1nm,0.3s,baz=78,slow=15,SNR=1.2						
CPUP				LR	LR	03 48 54.3	
	comp=E,266nm,21.8s,baz=64,slow=39						
CPUP	Villa Florida	15.53	59	P	Pn	03 42 23.2	-1.3
PB11	IPOC Station P	15.65	9		Pn	03 42 26.9	+0.7
PB11					IAmb	03 42 32.8	
	comp=Z,19nm,0.9s						
GO01	Chusmiza	15.80	10	Pn	Pn	03 42 27.8	-0.7
MNMC	Minye Minye	16.28	9		Pn	03 42 34.5	+0.2
MNMC				IAmb	IAmb	03 42 40.4	
	comp=Z,17nm,0.8s						
ITAB	Concordia	18.87	70	eP	P	03 43 04.1	-1.0
LPAZ	La Paz	19.29	12	P	Pn	03 43 11.2	-0.4
	comp=Z,0.2nm,0.3s,baz=183,slow=6.5,SNR=11						
LPAZ	La Paz	19.29	12	eP	Pn	03 43 11.5	-0.2
LPAZ	La Paz	19.29	12		Pn	03 43 12.0	+0.4
PTGB	Pitanga	20.29	64	eP	P	03 43 19.9	-0.8
AQDB	Aquidauana	20.68	49	eP	P	03 43 24.5	-0.2
TRCB	Terra Rica	21.07	59	eP	P	03 43 28.7	-0.4
SIV	San Ignacio	21.64	30	P	P	03 43 34.1	-1.1
	comp=Z,5.1nm,0.7s,baz=222,slow=10,SNR=26						
PCMB	Pacaembu	22.80	59	eP	P	03 43 47.3	-0.3
FRTB	Fartura	22.94	65	eP	P	03 43 49.2	+0.1
C2SB	Chapadao do Su	23.73	51	eP	P	03 43 56.8	0.0
SALV	Santo Antonio	24.29	41	eP	P	03 44 02.1	+0.2
CLDB	Colider	28.51	35	eP	P	03 44 40.5	+0.6
BDFB	Brasilia	29.15	54	P	P	03 44 43.9	-1.8
	comp=Z,2.4nm,0.7s,baz=240,slow=3.3,SNR=3.9						
BDFB	Brasilia	29.15	54	P	P	03 44 45.0	-0.7
BDFB				IAmb	IAmb	03 45 02.4	
	comp=Z,4.6nm,0.9s						
RUSC	La Rusia	41.00	359	P	P	03 46 29.2	+1.2
SNAA	Sanae	50.39	157	P	P	03 47 41.6	+0.6
	comp=Z,2.2nm,0.8s,baz=302,slow=3.8,SNR=4.5						
SNAA	Sanae	50.39	157	P	P	03 47 40.1	-1.0
QSPA	South Pole Qui	54.92	180	P	P	03 48 15.5	+0.8
	comp=Z,3.1nm,0.8s,baz=138,slow=4.1,SNR=6.5						
QSPA				pP	pP	03 48 28.6	+1.7
	comp=Z,5.4nm,1.0s,baz=135,slow=8.2,SNR=5.8						
QSPA	South Pole Qui	54.92	180	P	P	03 48 13.9	-0.7
QSPA				IAmb	IAmb	03 48 31.2	
	comp=Z,5.5nm,0.9s						
TXAR	Lajitas Array	70.85	331	P	P	03 50 00.6	-0.3
	comp=Z,0.9nm,0.7s,baz=139,slow=6.6,SNR=4.6						
TXAR				pP	pP	03 50 14.3	+0.8
	comp=Z,0.7nm,0.6s,baz=151,slow=8.0,SNR=3.7						
TXAR	Lajitas Array	70.85	331	P	P	03 50 00.4	-0.5
TXAR					pP	03 50 12.7	-0.8
MAW	Mawson	71.94	163	P	P	03 50 07.3	+0.4
	comp=Z,4.9nm,0.9s,baz=170,slow=6.5,SNR=3.6						
MAW	Mawson	71.94	163	P	P	03 50 06.3	-0.5
V48A	Smith Brothers	72.01	347	P	P	03 50 08.6	+1.0
WVT	Waverly	72.58	347	P	P	03 50 11.4	+0.4
CCM	Cathedral Cave	75.13	344	P	P	03 50 26.5	+0.7
CCM				IAmb	IAmb	03 50 27.4	
	comp=Z,4.0nm,0.8s						
LIC	Lamto	75.26	71	eP	P	03 50 27.2	0.0
	comp=Z,6.3nm,0.3s						
TIC	Toumodi	75.53	71	eP	P	03 50 28.6	-0.2
KIC	Kosan Boka	75.56	71	eP	P	03 50 28.7	-0.3
	comp=Z,22nm,0.9s						
DBIC	Dimbokro	75.67	71	P	P	03 50 29.4	-0.1
	comp=Z,5.0nm,0.8s,baz=189,slow=7.0,SNR=7.4						
DBIC				pP	sP	03 50 45.4	-1.7
	comp=Z,2.8nm,0.7s,baz=225,slow=5.6,SNR=2.6						
DBIC	Dimbokro	75.67	71	P	P	03 50 28.1	-1.4
DBIC				IAmb	IAmb	03 50 30.6	
	comp=Z,5.0nm,0.8s						
BOSA	Boshof	79.52	118	P	P	03 50 50.5	-0.6
	comp=Z,3.8nm,0.8s,baz=245,slow=4.7,SNR=6.6						
BOSA	Boshof	79.52	118	P	P	03 50 49.7	-1.4
BOSA				IAmb	IAmb	03 50 52.4	
	comp=Z,6.7nm,1.0s						
TOA0	Torodi Ar. Sit	84.72	70	P	P	03 51 17.2	-1.0
TORD	Torodi Ar. Bea	84.72	70	P	P	03 51 18.4	+0.1
	comp=Z,2.1nm,0.7s,baz=260,slow=4.0,SNR=14						
TORD				pP	sP	03 51 34.9	-1.1
	comp=Z,3.7nm,0.9s,baz=257,slow=4.0,SNR=9.8						
TORD	Torodi Ar. Bea	84.72	70	P	P	03 51 17.2	-1.0
PDAR	Pinedale Array	84.91	333	P	P	03 51 20.6	+1.7
	comp=Z,0.1nm,0.5s,baz=149,slow=7.2,SNR=2.1						
NVAR	Mina Array Bea	84.93	325	P	P	03 51 20.2	+1.1
	comp=Z,0.1nm,0.4s,baz=161,slow=10,SNR=3.7						
NVAR				pP	pP	03 51 33.0	+1.1
	comp=Z,0.4nm,0.7s,baz=152,slow=7.5,SNR=3.4						
ULM	Lac du Bonnet	87.75	345	P	P	03 51 32.9	+0.6
	comp=Z,1.5nm,0.5s,baz=222,slow=2.4,SNR=5.5						
MOD	Modoc Plateau	88.62	326	P	P	03 51 36.8	-0.1
MOD				IAmb	IAmb	03 51 52.6	
	comp=Z,1.7nm,0.6s						
ZALV	Zalesovo Beam	155.37	34	PKP	PKPdf	03 58 37.2	+0.7
	comp=Z,0.3nm,0.4s,baz=291,slow=20,SNR=1.9						
ZALV				PKPbc	PKPbc	03 58 51.2	
	comp=Z,0.4nm,0.4s,baz=50,slow=30,SNR=2.3						
MKAR	Makanchi Array	157.66	51	PKPab	PKPab	03 59 09.5	-2.7
	comp=Z,1.0nm,0.8s,baz=296,slow=4.4,SNR=7.5						
MKAR				pPKPab	sPKPab	03 59 29.4	-0.6
	comp=Z,0.9nm,0.8s,baz=292,slow=2.9,SNR=4.2						
SONM	Songino Array	167.45	5	PKPab	PKPab	03 59 55.7	+0.7
	comp=Z,0.6nm,0.8s,baz=322,slow=5.0,SNR=4.4						

ATH 11 04:05:37.3, 38.22N×20.41E, h13km±1km, ML2.7/3, Error ellipse: s-maj=2.0km s-min=1.0km az=257.0
THE 11 04:05:37.2, 38.21N×20.44E, h14km, ML3.0/6, Error ellipse: s-maj=0.9km s-min=0.3km az=192.0
ISC 11 04:05:36.6±1.2, 38.22N±0.03×20.44E±0.07, h16km±6km, n17, σ0.22/34, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LXR1	Lixouri, Cepha	0.02	190	P	Pg	04 05 39.6	+0.2
LXR1				S	Sg	04 05 41.5	+0.2
	12μm,0.2s						
LXRA	Lixouri, Kepha	0.02	192	P	Pg	04 05 39.6	+0.2
LXRA				S	Sg	04 05 41.4	0.0
KEF4	Livadi, Kephal	0.04	339	P	Pg	04 05 39.7	+0.1
KEF4				S	Sg	04 05 41.3	-0.2
ARGA	Argostoli. Kep	0.05	147	P	Pg	04 05 39.7	+0.1
ARGA				S	Sg	04 05 41.4	-0.2
ARG2	Argostoli	0.06	140	P	Pg	04 05 39.8	+0.2
ARG2				S	Sg	04 05 41.5	-0.1
	14μm,0.1s						
CHV1	Chavriata, Kef	0.06	232	P	Pg	04 05 39.7	0.0
CHV1				S	Sg	04 05 41.7	0.0
	22μm,0.2s						
KEF2	Argostoli. Kep	0.07	148	P	Pg	04 05 39.9	+0.2
KEF2				S	Sg	04 05 41.5	-0.3
KEF3	Kipouria, Keph	0.08	257	P	Pg	04 05 39.8	0.0
KEF3				S	Sg	04 05 41.7	-0.3
VLS	Valsamata	0.12	111	P	Pb	04 05 40.5	0.0
VLS				S	Sb	04 05 43.1	-0.1
	9μm,0.1s						
VLS	Valsamata	0.12	111	P	Pb	04 05 40.6	0.0
VLS				S	Sb	04 05 42.9	-0.3
VLS				AML	AML	04 05 43.2	
	comp=N,13604μm,0.1s						
VLS				AML	AML	04 05 43.3	
	comp=E,18394μm,0.1s						
VSK1	VASILIKIADES	0.21	27	P	Pb	04 05 42.0	-0.1
VSK1				S	Sb	04 05 45.6	-0.1
	comp=E,4μm,0.2s						
KONA	Konidatara, Ke	0.23	26	P	Pb	04 05 42.3	-0.1
KONA				S	Sb	04 05 46.2	0.0
FSK	Fiskardo	0.26	22	P	Pb	04 05 42.7	-0.1
FSK				S	Sb	04 05 46.8	-0.2
	comp=E,915nm,0.3s						
FSK	Fiskardo	0.26	22	P	Pb	04 05 42.7	-0.1
FSK				S	Sb	04 05 46.8	-0.2
FSK				AML	AML	04 05 47.9	
	comp=E,2290μm,0.2s						
FSK				AML	AML	04 05 50.4	
	comp=N,1341μm,0.5s						
VLMS	Volimes, Zakyn	0.39	153	P	Pb	04 05 44.8	-0.2
VLMS				S	Sb	04 05 51.2	+0.5
VLMS				AML	AML	04 05 51.8	
	comp=E,2651μm,0.4s						
VLMS				AML	AML	04 05 53.5	
	comp=N,3258μm,0.2s						
EVGI	Lefkada island	0.43	23	P	Pb	04 05 45.8	0.0
EVGI				S	Sb	04 05 52.6	+0.5
EVGI	Lefkada island	0.43	23	P	Pb	04 05 45.9	0.0
EVGI				S	Sb	04 05 52.5	+0.5

TEH 11 04:09:27.0, 26.62N×57.83E, h14km, ML3.1
OMAN 11 04:09:29.5±1.7, 26.68N×57.90E, h13km±11km, ml3.0/11, Error ellipse: s-maj=4.8km s-min=3.3km az=231.0
ISC 11 04:09:24.1±1.1, 26.45N±0.04×58.12E±0.06, h10km, n27, σ1.11/30, Southern Iran

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JSK1	Jask	0.86	201	ePg	Pb	04 09 40.8	-0.4
KHNJ	Kahnooj	1.54	346	ePg	Pn	04 09 51.6	-0.1

NIAN	Nian	1.60	314	ePg	Pn	04 09 52.0	-0.4
NIAN				e		04 10 14.5	
BANOM	Banah	1.72	253	P	Pg	04 09 57.0	-0.1
	SNR=11						
BANOM				S	Sb	04 10 18.5	+1.0
BANOM	Banah	1.72	253	eP	Pb	04 09 55.8	0.0
SHME	Shamm	1.82	258	eP	Pb	04 09 57.7	+0.1
GENO	Geno	1.98	299	eP	Pn	04 09 58.8	+0.9
GENO				eSg	Sn	04 10 21.2	-1.7
GENO				e		04 10 26.0	
MDH	Madha	2.00	236	P	Pg	04 10 03.1	+0.6
MDH	Madha	2.00	236	eP	Pb	04 09 59.4	-1.2
UOSS	Minazif	2.29	230	P	Pb	04 10 06.1	+0.6
UOSS	Minazif	2.29	230	eP	Pb	04 10 05.5	0.0
HATD	Hatta, Dubai	2.41	228	P	Pg	04 10 09.2	-1.3
HATD	Hatta, Dubai	2.41	228	eP	Pb	04 10 07.5	-0.2
ASHO	Ashiyiah	2.56	227	P	Pg	04 10 12.0	-1.2
	SNR=7.6						
ASHO	Ashiyiah	2.56	227	eP	Pb	04 10 10.2	0.0
SOHO	SOHO	2.71	212	eP	Pb	04 10 11.5	-1.3
HOQ	Hoqain	2.94	195	P	Pb	04 10 16.5	-0.3
WSAR	Wadi Sarin	3.23	172	P	Pb	04 10 22.6	+1.0
	SNR=21						
SMDO	Samad	3.37	181	P	Pb	04 10 23.1	-1.0
NGRK	Negar Kerman	3.42	339	eP	Pn	04 10 20.3	+2.5
NGRK				e		04 10 28.5	
ARQ	Araqi	3.42	205	P	Pb	04 10 25.6	+0.8
	SNR=9.5						
CHMN	Cheshme madani	3.44	352	eP	Pb	04 10 23.0	-2.4
CHMN				e		04 10 35.9	
TVBK	TV Kerman	3.73	342	e	Pg	04 10 37.2	+1.6
BSY	Bisya	3.78	193	P	Pb	04 10 30.4	-0.6
BSY				S	Sb	04 11 18.0	+1.2
WBK	Wadi Bani Khal	3.90	168	P	Pb	04 10 32.2	-0.8
	SNR=18						
JMDO	Jabal Madar	4.06	180	P	Pb	04 10 34.5	-1.2
KLNJ	Kolanjah	7.32	310	eP	Pn	04 11 11.5	+0.1

IDC **11** *04:11:43.4±1.2, 33.°85N×89.°32E, h0km, mb3.7/8, mb1 3.9/12, mb1mx3.6/49, mbtmp3.7/12, ML2.9/3, MS2.9/3, Ms1 3.0/3, ms1mx2.6/41, Error ellipse: s-maj=36.7km s-min=21.3km az=53.0*

ISC 11 04:11:48.2±0.9, 34.°0N±0.°1×89.°5E±0.°2, h33km, n15, σ0§92/14, mb3.9/7, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.93	339	Pn	Pn	04 15 02.0	-1.1
	0.1nm,0.3s,baz=138,slow=14,SNR=2.8						
AAK	Ala-Archa	14.59	311	Pn	Pn	04 15 13.8	+1.4
	0.1nm,0.3s,baz=182,slow=5.9,SNR=2.1						
AAK				LR	LR	04 22 05.5	
	comp=Z,40nm,19.0s,baz=148,slow=43						
CMAR	Chiang Mai Arr	17.61	149	P	P	04 15 51.7	-0.1
	0.9nm,0.3s,baz=329,slow=12,SNR=1.9						
CMAR				LR	LR	04 23 14.5	
	comp=Z,29nm,19.4s,baz=185,slow=39						
KURBB	Kurchatov Arra	18.48	338	P	P	04 15 59.8	-1.3
	0.0nm,0.3s,baz=145,slow=12,SNR=12						
SONM	Songino Array	18.79	37	P	P	04 16 06.4	+1.5
	0.1nm,0.3s,baz=241,slow=12,SNR=6.6						
ZALV	Zalesovo Beam	20.25	352	P	P	04 16 21.6	+1.1
	3.1nm,0.8s,baz=170,slow=12,SNR=14						
BVAR	Borovoye Array	23.42	330	P	P	04 16 54.1	0.0
	0.7nm,0.6s,baz=139,slow=14,SNR=4.7						
GEYT	Alibeck	25.63	288	LR	LR	04 29 05.6	
	comp=Z,48nm,20.3s,baz=5.0,slow=41						
BRTR	Keskin Array B	44.45	294	P	P	04 19 56.1	-0.1
	0.6nm,0.8s,baz=61,slow=6.9,SNR=3.7						
AKASG	Malin Array Be	46.26	310	P	P	04 20 09.8	-0.4
	1.1nm,0.7s,baz=79,slow=7.2,SNR=6.0						
FINES	FINESS Array B	48.20	325	P	P	04 20 24.6	-0.5
	1.1nm,0.9s,baz=81,slow=14,SNR=4.0						
NB2	NORSAR Subarra	55.38	325	P	P	04 21 18.8	0.0
	comp=Z,2.8nm,0.8s,baz=82,slow=7.4						
NOA	NORSAR Array B	55.38	325	P	P	04 21 19.1	+0.3
	comp=Z,0.6nm,0.6s,baz=82,slow=7.2,SNR=3.5						
GERES	GERESS Array B	56.47	310	P	P	04 21 26.8	-0.1
	comp=Z,1.1nm,0.7s,baz=70,slow=5.8,SNR=5.4						
WRA	Warramunga Arr	68.55	135	P	P	04 22 47.4	-0.3
	comp=Z,0.6nm,0.8s,baz=323,slow=6.3,SNR=2.3						

NEIC **11** *04:14:49.3±1.6, 25.°43N±0.°04×99.°13W±0.°06, h41km±9km, mb4.0/4, Md4.1/9(MEX), Error ellipse: s-maj=7.8km s-min=5.6km az=86.0*

MEX **11** *04:14:51.6±1.2, 25.°46N×99.°56W, h2km, MD4.1*

ISC 11 04:14:45.8±0.8, 25.°54N±0.°04×99.°20W±0.°06, h10km, n21, σ2§74/29, Northern Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNIG	Linares	0.69	201		Pb	04 15 01.6	+1.8
LNIG					Sb	04 15 10.6	+1.2
LNIG	Linares	0.69	201	eP	Pb	04 15 01.6	+1.8
	baz=350,slow=14						
LNIG				i S	Sb	04 15 10.6	+1.2
MNIG	Monterrey	0.99	274	eP	Pg	04 15 03.6	-1.3
MNIG				eS	Sg	04 15 14.4	-3.4
833A	Chaparral WMA,	2.78	356	Pn	Pb	04 15 34.4	-1.1
833A				Sn	Sb	04 16 01.1	+2.1
JCT	Junction City	4.95	354		Pn	04 16 04.3	+4.1
JCT					Sn	04 16 59.5	+2.0
JCT	Junction City	4.95	354	i P	Pn	04 16 04.6	+4.4
JCT				i S	Sn	04 17 00.3	+2.7
TXAR	Lajitas Array	5.48	315	Pn	Pn	04 16 13.0	+5.3
TXAR				Sn	Sn	04 17 13.4	+2.6
TX31	Lajitas Ar. Si	5.48	315		Pn	04 16 10.3	+2.6
TX31				Sn	Sn	04 17 12.9	+2.1
TX32	Lajitas Array	5.48	315		Pn	04 16 10.4	+2.8
TX32				Sn	Sn	04 17 12.9	+2.0
HPIG		5.97	285		Pn	04 16 16.6	+2.1
UNM	Universidad Na	6.18	180	Pn	Pn	04 16 15.0	-2.5
ABTX	Abilene, Hawle	7.07	357	Pn	Pn	04 16 32.7	+3.4
MNTX	Cornudas Mount	8.20	320		Pn	04 16 47.4	+2.6
MNTX	Cornudas Mount	8.20	320	eP	Pn	04 16 49.3	+4.5
MSTX	Muleshoe	8.96	341		Pn	04 16 58.1	+2.8
WMOK	Wichita Mounta	9.17	2		Pn	04 17 01.6	+3.4
AMTX	Amarillo	9.55	348	Pn	Pn	04 17 05.5	+2.0
SMCO	Snowmass	15.09	336	Pn	Pn	04 18 20.1	+0.7
BG3	Lake Jocassee	16.90	52	P	Pn	04 18 39.0	-3.4
BG3				IAmb	IAmb	04 18 44.7	
	comp=Z,5.0nm,0.4s						
ESTN	Estel	17.29	133		Pn	04 18 46.7	-0.8
ESTN				IAmb	IAmb	04 18 48.1	
	comp=Z,11nm,0.9s						
OMMB	Old Mammoth Mi	20.68	310	P	P	04 19 23.6	-2.7

NIED **11** *04:23:00, 37.°20N×141.°50E, h47km, Mw3.8 Best double couple: M0 6.39000×10^14 NP1:φs18.00000°, δ85.00000°, λ86.00000°. NP2:φs239.00000°, δ6.00000°, λ132.00000°.*

JMA **11** *04:23:40.8±0.1, 37.°20N×141.°39E, h48km±1km, M3.8*

JMA Felt I J1.

IDC **11** *04:23:41.1±2.8, 37.°28N×141.°43E, h44km±25km, mb3.6/7, mb1 3.7/9, mb1mx3.5/33, mbtmp3.8/9, ML3.2/5, MS3.0/2, Ms1 3.0/2, ms1mx2.5/38, Error ellipse: s-maj=29.4km s-min=18.5km az=115.0*

ISC 11 04:23:40.7±1.2, 37.°19N±0.°05×141.°52E±0.°08, h44km±9km, n31, σ1§59/35, mb3.8/8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.54	289	P	Pn	04 23 51.1	-1.1
JFK				S	Sn	04 23 58.1	-2.2
ONAJ	Iwakimizuishiy	0.58	262	P	Pn	04 23 51.7	-1.0
ONAJ				S	Sn	04 23 59.2	-2.0
JMST	Minamisoumatoc	0.73	317	P	Pn	04 23 53.7	-0.9
JMST				S	Sn	04 24 02.9	-1.8
JFFD	Fukushimafurud	0.77	263	P	Pn	04 23 54.1	-1.0
JFFD				S	Sn	04 24 03.3	-2.3
JMM	Marumori	0.89	320	P	Pn	04 23 55.9	-0.8
JMM				S	Sn	04 24 06.9	-1.6
JHO	Hitachi	0.95	233	P	Pn	04 23 56.3	-1.3
JHO				S	Sn	04 24 07.8	-2.3
JFT	Otama	1.00	290	P	Pn	04 23 57.9	-0.3
JFT				S	Sn	04 24 09.8	-1.3
JIO	Ouri	1.27	354	P	Pn	04 24 01.7	-0.3
JIO				S	Sn	04 24 16.5	-1.3
JOU	Okura	1.36	330	P	Pn	04 24 03.2	0.0
JFY	Yanaizu	1.46	279	P	Pn	04 24 04.1	-0.5
JYS	Shirataka	1.54	312	P	Pn	04 24 06.0	+0.3
JYS				S	Sn	04 24 24.5	-0.1
MJAR	Matsushiro Arr	2.73	257	P	Pn	04 24 22.2	+0.2
	1.8nm,0.3s,baz=75,slow=15,SNR=25						
MAT	Matsushiro	2.73	257	P	Pn	04 24 22.7	+0.7
MAT				S	Sn	04 24 55.7	+1.9
ASAJ	Asahikawa	6.97	6	P	Pn	04 25 19.5	-0.7
	0.7nm,0.3s,baz=209,slow=13,SNR=2.1						
ASAJ				S	Sn	04 26 35.3	-2.8
	0.5nm,0.3s,baz=172,slow=32,SNR=2.0						
USRK	Ussuriysk Ar.	10.06	317	P	Pn	04 26 05.7	+3.2
	baz=128,slow=12,SNR=8.5						
KSRS	Korea Array	10.83	276	P	Pn	04 26 16.4	+3.3
	0.2nm,0.3s,baz=83,slow=14,SNR=4.1						
KSRS				LR	LR	04 29 57.6	
	comp=Z,45nm,20.0s,baz=46,slow=35						
SONM	Songino Array	27.77	304	P	P	04 29 24.9	-0.4
	1.4nm,0.6s,baz=104,slow=9.0,SNR=13						
H11N2	WAKE ISLAND Hy	28.16	121	T	T	04 59 07.9	
H11N1	WAKE ISLAND Hy	28.16	121	T	T	04 59 14.2	
	baz=200,slow=74,SNR=107						
H11N3	WAKE ISLAND Hy	28.18	121	T	T	04 59 05.4	
	baz=313,slow=74,SNR=105						
H11S1	WAKE ISLAND Hy	28.88	123	T	T	04 59 59.3	
	baz=316						
H11S3	WAKE ISLAND Hy	28.88	123	T	T	05 00 15.7	
	baz=316						
H11S2	WAKE ISLAND Hy	28.89	123	T	T	05 00 08.5	
	baz=316						
ZALV	Zalesovo Beam	41.87	312	P	P	04 31 26.1	-0.2
	2.4nm,0.8s,baz=93,slow=7.8,SNR=8.2						
MKAR	Makanchi Array	44.11	302	P	P	04 31 43.9	-0.7
	0.4nm,0.6s,baz=88,slow=9.3,SNR=7.0						
ILAR	Eielson Array	49.32	32	P	P	04 32 26.1	+1.1
	0.4nm,0.7s,baz=265,slow=5.8,SNR=8.0						
ILAR				pP	pP	04 32 39.5	+2.2
	0.4nm,0.8s,baz=270,slow=5.7,SNR=3.0						
WRA	Warramunga Arr	57.22	188	P	P	04 33 23.6	+0.1
	0.9nm,0.7s,baz=6.7,slow=7.3,SNR=5.5						
YKA	Yellowknife Ar	63.63	30	pP	pP	04 34 20.2	+0.9
	0.3nm,0.6s,baz=302,slow=6.4,SNR=4.0						
FINES	FINESS Array B	68.72	332	P	P	04 34 39.2	-0.1
	1.7nm,0.9s,baz=60,slow=12,SNR=1.8						
AKASG	Malin Array Be	74.23	322	P	P	04 35 11.2	-1.5
	0.4nm,0.4s,baz=43,slow=5.7,SNR=2.9						
BRTR	Keskin Array B	78.81	312	LR	LR	05 15 04.0	
	comp=Z,14nm,18.3s,baz=234,slow=39						

JMA 11 04:29:02.5±0.1, 32.°41N×140.°85E, h6km, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	1.11	307	P	Pg	04 29 23.2	-0.5
JHCJ				eS	Sg	04 29 37.9	-0.2
JHJ2	Mitsune	1.12	309	P	Pg	04 29 23.8	-0.1
JHJ2				eS	Sg	04 29 38.7	+0.3
BSO1	Boso 1	2.24	3	P	Pn	04 29 41.0	+1.4
BSO1				eS	Sb	04 30 09.1	-1.7
BSO3	Boso 3	2.40	353	P	Pn	04 29 43.0	+0.9
BSO3				eS	Sn	04 30 12.5	+0.8
BSO4	Boso 4	2.61	351	P	Pn	04 29 46.7	+1.6
BSO4				eS	Sn	04 30 19.0	+1.9
JOD2	Odawara 2	3.20	333	P	Pn	04 29 54.4	+1.0
JOD2				eS	Sn	04 30 33.1	+1.2
JHU	Hanno	3.67	340	P	Pn	04 30 01.8	+2.0
JRY	Ryogami san	3.94	336	P	Pn	04 30 05.8	+2.2
JRY				eS	Sn	04 30 52.6	+2.4
JAG	Ashikaga	4.17	344	P	Pn	04 30 08.1	+1.4
MAT	Matsushiro	4.67	333	P	Pn	04 30 17.4	+3.9
MAT				S	Sn	04 31 12.8	+4.8

IDC **11** *04:39:39.3±5.3, 36.°20N×73.°13E, h86km±40km, mb3.4/10, mb1 3.5/15, mb1mx3.3/47, mbtmp3.8/15, Error ellipse: s-maj=40.8km s-min=20.5km az=156.0*

ISC 11 04:39:32.9±1.2, 36.°0N±0.°1×73.°3E±0.°1, h35km, n19, σ2§04/20, mb3.7/10, 4C, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	Thein Dam	4.08	150	eP	Pn	04 40 40.0	+7.3
THN				eS	Sn	04 41 30.5	+11
AAK	Ala-Archa	6.70	8	P	Pn	04 41 12.8	+4.0
	0.6nm,0.3s,baz=145,slow=5.0,SNR=6.9						
AAK				S	Sn	04 42 25.1	+1.1
	0.5nm,0.3s,baz=326,slow=22,SNR=6.4						
AAK	Ala-Archa	6.70	8	⇑Pn	Pn	04 41 12.8	+4.0
	1.4nm,0.5s						
AAK				⇑Sn	Sn	04 42 21.0	-3.0
	5.9nm,0.8s						
KK31	Karatay Array	7.42	344	⇑Pn	Pn	04 41 22.9	+4.3
	1.3nm,0.2s,baz=154,slow=13,SNR=61						
KK31				⇑Sn	Sn	04 42 40.6	-0.9
	1.9nm,0.3s,baz=152,slow=23,SNR=6.3						
MKAR	Makanchi Array	12.71	29	P	P	04 42 38.9	-3.0
	0.1nm,0.3s,baz=209,slow=13,SNR=5.7						
KURBB	Kurchatov Arra	15.10	13	P	P	04 43 06.6	-1.7
	0.1nm,0.3s,baz=203,slow=10,SNR=6.1						
BVAR	Borovoye Array	17.15	354	P	P	04 43 30.3	-0.7
	0.3nm,0.3s,baz=165,slow=12,SNR=11						
AKTO	Aktyubinsk	18.18	327	P	Pn	04 43 42.6	+0.3
	0.7nm,0.3s,baz=125,slow=13,SNR=10						
ZALV	Zalesovo Beam	19.67	21	P	Pn	04 43 58.6	-1.6
	0.1nm,0.3s,baz=214,slow=12,SNR=2.6						
SONM	Songino Array	27.11	54	P	P	04 45 15.2	+2.7
	0.2nm,0.5s,baz=246,slow=9.3,SNR=1.8						
ASF	Jabal al Asfar	30.28	273	P	P	04 45 42.5	+1.7
	1.2nm,0.5s,baz=77,slow=3.7,SNR=4.9						
AKASG	Malin Array Be	34.71	309	P	P	04 46 18.8	-0.4
	0.4nm,0.4s,baz=105,slow=11,SNR=3.2						
FINES	FINESS Array B	38.94	326	P	P	04 46 55.0	0.0
	1.0nm,0.4s,baz=119,slow=9.8,SNR=9.5						
ARCES	ARCESS Array B	42.32	337	P	P	04 47 22.5	-0.4
	3.3nm,0.9s,baz=101,slow=6.5,SNR=7.8						
NOA	NORSAR Array B	45.90	323	P	P	04 47 50.9	-0.8
	0.9nm,0.8s,baz=119,slow=5.5,SNR=2.7						
TORD	Torodi Ar. Bea	67.57	270	P	P	04 50 24.6	-1.5
	0.3nm,0.4s,baz=54,slow=6.0,SNR=8.2						
INK	Inuvik	74.09	10	P	P	04 51 04.3	-0.6
	0.7nm,0.5s,baz=138,slow=6.9,SNR=5.4						
ILAR	Eielson Array	74.74	17	P	P	04 51 08.3	-0.4
	0.1nm,0.5s,baz=304,slow=6.4,SNR=1.6						
YKA	Yellowknife Ar	81.65	4	P	P	04 51 47.1	+0.1
	0.1nm,0.5s,baz=343,slow=5.2,SNR=2.0						

IDC 11 05:04:49.6±3.0, 31.°67S×178.°20W, h0km, mb4.3/2, mb1 4.4/3, mb1mx3.9/21, mbtmp4.2/3, ML3.0/1, MS3.8/1, Ms1 3.8/1, ms1mx3.7/26, Error ellipse: s-maj=69.5km s-min=36.8km az=114.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.62	209	Pn	Pn	05 06 41.8	0.0
	0.2nm,0.3s,baz=179,slow=14,SNR=1.7						
URZ				Sn	Sn	05 08 09.3	+0.4
	1.0nm,0.3s,baz=120,slow=22,SNR=7.2						
CTA	Charters Tower	33.85	281	LR	LR	05 23 18.5	
	comp=Z,173nm,21.0s,baz=52,slow=33						
ASAR	Alice Springs	42.89	268	P	P	05 12 50.1	0.0
	0.8nm,0.7s,baz=120,slow=7.8,SNR=7.2						
WRA	Warramunga Arr	43.99	274	P	P	05 12 58.8	-0.2
	2.5nm,0.3s,baz=113,slow=8.0,SNR=30						
FINES	FINESS Array B	146.27	339	PKPbc	PKPdf	05 24 30.5	+0.3
	0.7nm,0.5s,baz=58,slow=5.0,SNR=6.8						

IDC **11** *05:40:05.6±1.5, 3.°87S×103.°65W, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.9/34, mbtmp3.9/34, MS4.0/23, Ms1 4.0/23, ms1mx3.9/35, Error ellipse: s-maj=57.2km s-min=17.8km az=54.0*

NEIC **11** *05:40:08.7±1.4, 3.°8S±0.°1×103.°4W±0.°2, h10km±1km, mb4.5/11, Error ellipse: s-maj=38.5km s-min=10.4km az=243.0*

GCMT **11** *05:40:12.7±0.4, 3.°70S±0.°02×103.°52W±0.°02, h18km±1km, MW4.8/79, Moment Tensor Solution. s23,c27; s79,c107; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.82±.09; Mθθ0.95±.08; Mφφ-0.13±.08; Mrθ0.60±.18; Mrφ1.91±.07; Mθφ-0.05±.17; Best double couple: M0 2.10700×10^16 NP1:φs9.00000°, δ67.00000°, λ-168.00000°. NP2: φs275.00000°, δ79.00000°, λ-23.00000°. Principal axes: T 2.4560, Plg8.0000°, Azm324.0000°; N -0.6990, Plg64.0000°, Azm71.0000°; P -1.7580, Plg24.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 05:40:07.8±1.3, 3.°8S±0.°2×103.°5W±0.°2, h10km, n50, σ1§13/23, mb4.4/15, MS3.9/26, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	23.83	193	LR	LR	05 52 11.8	
	comp=Z,235nm,20.0s,baz=349,slow=31						
ATAH	Atahualpa	25.20	99	P	P	05 45 34.2	-0.1
	3.2nm,0.6s,baz=207,slow=11,SNR=2.5						
NNA	Nana	27.59	109	LR	LR	05 54 04.9	
	comp=Z,315nm,18.1s,baz=290,slow=30						
TEIG	Tepich	28.20	31	LR	LR	05 55 45.9	
	comp=Z,257nm,18.1s,baz=140,slow=33						
LPIG	La Paz	28.55	347	LR	LR	05 54 30.8	
	comp=Z,380nm,21.0s,baz=164,slow=30						
ROSC	El Rosal	30.39	74	LR	LR	05 56 08.0	
	comp=Z,161nm,20.5s,baz=174,slow=32						
RUSC	La Rusia	31.87	73	P	P	05 46 32.6	-1.4
TXAR	Lajitas Array	32.98	360	P	P	05 46 43.1	+0.1
	0.4nm,0.8s,baz=162,slow=9.2,SNR=2.6						
SDV	Santo Domingo	35.12	69	LR	LR	05 58 58.8	
	comp=Z,129nm,18.8s,baz=250,slow=32						
SDV	Santo Domingo	35.12	69	P	P	05 47 02.5	+0.5
RKT	Rikitea	35.97	235	eLR	LR	05 57 16.4	
	comp=Z,285nm,25.5s						
RKT	Rikitea	35.97	235	eT	T	06 24 47.1	
	2.1nm,0.3s						
LPAZ	La Paz	36.88	112	LR	LR	05 59 48.9	
	comp=Z,169nm,20.8s,baz=288,slow=32						
LVC	Limon Verde	38.33	122	LR	LR	05 59 09.9	
	comp=Z,255nm,19.2s,baz=290,slow=30						
Y14A	Wickenburg	38.62	347	P	P	05 47 31.4	0.0
X18A	Snowflake	38.64	351	P	P	05 47 33.4	+1.7
MIAR	Mount Ida	39.30	13	P	P	05 47 37.1	+0.1
MIAR				IAmb	IAmb	05 47 38.6	
	comp=Z,12nm,1.2s						
CFA	Coronel Fontan	43.13	134	P	P	05 48 09.3	+0.6
	comp=Z,1.7nm,0.6s,baz=303,slow=9.4,SNR=5.1						
CFA				LR	LR	06 01 48.5	
	comp=Z,298nm,18.5s,baz=288,slow=30						
SIV	San Ignacio	43.40	109	LR	LR	06 04 12.0	
	comp=Z,382nm,19.0s,baz=301,slow=33						
NVAR	Mina Array Bea	44.23	343	P	P	05 48 15.9	-1.7
	comp=Z,0.2nm,0.6s,baz=162,slow=9.2,SNR=2.3						
NVAR				LR	LR	06 02 53.9	
	comp=Z,178nm,19.1s,baz=182,slow=31						
DUG	Dugway, Tooele	44.64	350	P	P	05 48 20.8	0.0
DUG				IAmb	IAmb	05 48 25.4	
	comp=Z,7.3nm,1.1s						
PNTR	Pine Nut	45.22	342	P	P	05 48 26.3	+0.8
PNTR				IAmb	IAmb	05 48 34.5	
	comp=Z,7.5nm,1.0s						
HWUT	Hardware Ranch	45.82	352	P	P	05 48 31.2	+1.0
HWUT				IAmb	IAmb	05 48 38.9	
	comp=Z,5.5nm,0.8s						
PD31	Pinedale Array	46.71	354	P	P	05 48 37.6	+0.4
PDAR	Pinedale Array	46.71	354	P	P	05 48 37.3	+0.1
	comp=Z,3.3nm,0.9s,baz=171,slow=6.5,SNR=17						
PDAR				LR	LR	06 05 45.8	
	comp=Z,72nm,20.2s,baz=185,slow=33						
PPT	Papeete	47.14	250	LR	LR	06 03 03.0	
	comp=Z,44nm,18.6s,baz=186,slow=29						
PPT2	Papeete2	47.15	250	eLR	LR	06 01 54.4	
	comp=Z,191nm,28.8s						
PLCA	Paso Flores	47.20	146	LR	LR	06 03 34.2	
	comp=Z,282nm,19.5s,baz=336,slow=30						
TBI	Tubuai	48.42	242	eLR	LR	06 02 44.8	
	comp=Z,214nm,29.8s						
MCMT	McKenzie Canyo	49.16	351	P	P	05 48 56.4	+0.2
CPUP	Villa Florida	49.50	122	P	P	05 48 59.1	+0.3
	comp=Z,1.0nm,1.1s,baz=280,slow=12,SNR=1.9						
CPUP				LR	LR	06 07 29.3	
	comp=Z,101nm,18.9s,baz=286,slow=33						
ULM	Lac du Bonnet	54.27	6	P	P	05 49 33.4	-0.6
	comp=Z,3.2nm,0.8s,baz=206,slow=9.0,SNR=5.6						
ULM				LR	LR	06 11 37.6	
	comp=Z,183nm,19.4s,baz=181,slow=35						
BDFB	Brasilia	55.77	106	LR	LR	06 11 43.7	
	comp=Z,99nm,19.9s,baz=338,slow=34						
USHA	Ushuaia	58.22	157	LR	LR	06 09 32.7	
	comp=Z,335nm,18.4s,baz=286,slow=30						
SCHQ	Schefferville	65.86	22	LR	LR	06 18 38.8	
	comp=Z,73nm,20.1s,baz=18,slow=35						
YKA	Yellowknife Ar	66.69	354	P	P	05 50 57.5	-1.1
	comp=Z,1.2nm,0.8s,baz=164,slow=6.5,SNR=12						
YKA				LR	LR	06 17 41.0	
	comp=Z,87nm,19.9s,baz=0.0,slow=34						
KDAK	Kodiak Island	72.90	335	LR	LR	06 15 43.1	
	comp=Z,176nm,18.5s,baz=132,slow=29						
IL31		75.48	342	P	P	05 51 53.9	+2.1
IL31				IAmb	IAmb	05 51 59.3	
	comp=Z,3.3nm,0.9s						
ILAR	Eielson Array	75.48	342	P	P	05 51 52.2	+0.3
	comp=Z,1.3nm,0.8s,baz=153,slow=5.0,SNR=16						
PRP	Porcupine Dome	75.61	343	P	P	05 51 55.2	+2.4
PRP				IAmb	IAmb	05 52 02.0	
	comp=Z,5.3nm,1.0s						
IMAR	Indian Mountai	78.43	341	P	P	05 52 08.8	+0.3
RES	Resolute Bay	78.57	2	LR	LR	06 25 22.3	
	comp=Z,111nm,21.8s,baz=183,slow=35						
H11N3	WAKE ISLAND Hy	90.89	290	T	T	07 33 48.5	
	baz=95,slow=74,SNR=32						
H11N2	WAKE ISLAND Hy	90.91	290	T	T	07 33 49.4	
	baz=95,slow=74,SNR=25						
H11N1	WAKE ISLAND Hy	90.91	290	T	T	07 33 43.5	
	baz=95,slow=74,SNR=22						
H11S2	WAKE ISLAND Hy	91.01	288	T	T	07 33 59.6	
	baz=94,slow=74,SNR=62						
H11S1	WAKE ISLAND Hy	91.01	288	T	T	07 33 48.3	
	baz=94,slow=74,SNR=57						
H11S3	WAKE ISLAND Hy	91.03	288	T	T	07 33 47.4	
	baz=94,slow=74,SNR=54						
PETK	Petropavlovsk-	98.34	323	LR	LR	06 30 02.2	
	comp=Z,86nm,19.4s,baz=61,slow=30						
CMAR	Chiang Mai Arr	153.67	305	PKPbc	PKPbc	06 00 06.1	-1.9
	comp=Z,1.2nm,0.3s,baz=197,slow=1.3,SNR=4.3						

IDC 11 05:42:16.1±66.0, 21.°95S×174.°81W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/31, mbtmp4.1/3, MS3.3/1, Ms1 3.3/1, ms1mx2.6/28, Error ellipse: s-maj=1237.0km s-min=195.3km az=86.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.88	246	P	P	05 49 51.2	-0.6
	1.0nm,0.5s,baz=108,slow=8.3,SNR=3.4						
ASAR	Alice Springs	47.10	258	P	P	05 50 50.4	+0.2
	2.5nm,0.8s,baz=94,slow=8.0,SNR=25						
WRA	Warramunga Arr	47.36	263	P	P	05 50 52.0	-0.1
	2.7nm,0.6s,baz=96,slow=8.2,SNR=13						
GUMO	Guam	53.02	308	LR	LR	06 10 22.3	
	comp=Z,33nm,20.9s,baz=4.0,slow=32						

NIED **11** *06:05:00, 41.°90N×142.°30E, h59km, Mw4.8 Best double couple: M0 1.50000×10^16 NP1:φs26.00000°, δ65.00000°, λ82.00000°. NP2:φs225.00000°, δ26.00000°, λ107.00000°.*

BJI **11** *06:05:27.7±0.0, 41.°78N×142.°35E, h67km, mB5.0/37, mb4.8/57, Ms4.1/19, Ms7 3.9/19*

JMA **11** *06:05:29.8±0.2, 41.°92N×142.°33E, h72km±3km, M4.6*

JMA Felt II J1.

MOS **11** *06:05:29.3±1.0, 41.°98N×142.°26E, h63km, mb5.1/67, Error ellipse: s-maj=5.8km s-min=3.9km az=103.5*

GCMT **11** *06:05:31.0±0.3, 42.°03N±0.°03×142.°47E±0.°04, h75km±4km, MW4.8/70, Moment Tensor Solution. s23,c27; s70,c86; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.30±.10; Mθθ-0.09±.11; Mφφ-1.21±.11; Mrθ0.34±.06; Mrφ-0.82±.11; Mθφ0.85±.06; Best double couple: M0 1.73700×10^16 NP1:φs213.00000°, δ29.00000°, λ98.00000°. NP2: φs24.00000°, δ61.00000°, λ85.00000°. Principal axes: T 1.5670, Plg74.0000°, Azm283.0000°; N 0.3410, Plg4.0000°, Azm26.0000°; P -1.9070, Plg16.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **11** *06:05:31.0±1.5, 41.°94N±0.°07×142.°38E±0.°09, h66km±6km, mb4.8/96 Error ellipse: s-maj=10.8km s-min=8.7km*

az=128.0
IDC 11 06:05:32.0±0.7, 42.00N×142.26E, h74km±5km, mb4.3/32, mb1 4.4/38, mb1mx3.4/58, mbtmp4.6/38, MS3.6/28, Ms1 3.6/28, ms1mx3.5/45, Error ellipse: s-maj=10.8km s-min=7.0km az=115.0
ISC 11 06:05:30.9±0.5, 41.96N±0.04×142.29E±0.03, h66km±3km, h66km:pP-P, n428, σ1.13/441, mb4.8/165, 36C-30D, Hokkaido region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JSHD Hidakashinhida 0.47 16 ⇑P Pn 06 05 42.9 -0.2
JSHD eS Sn 06 05 52.8 +0.9
JNBK Urakawa-nobuka 0.47 47 ⇑P Pn 06 05 42.1 -1.0
JNBK eS Sn 06 05 52.2 +0.2
ERM Erimo 0.65 85 Pn 06 05 44.5 -0.4
ERM Erimo 0.65 85c iP Pn 06 05 44.6 -0.3
JEM Erimo 0.65 85 ⇑P Pn 06 05 44.5 -0.4
JIAM Iburiatsuma 0.71 337 ⇓P Pn 06 05 46.5 +0.8
JIAM eS Sn 06 05 58.7 +2.1
JBT2 Biratori 2 0.82 4 ⇓P Pn 06 05 46.7 -0.3
JKB Kayabe 0.94 266 ⇓P Pn 06 05 47.8 -0.7
JKB eS Sn 06 06 01.2 -0.3
JCH Churui 1.03 50 ⇑P Pn 06 05 49.4 -0.1
JNB Noboribetsu 1.06 299 ⇓P Pn 06 05 49.3 -0.7
JNB eS Sn 06 06 03.4 -0.8
JEW Eniwo 1.08 325 ⇓P Pn 06 05 50.5 +0.3
JEW eS Sn 06 06 05.6 +1.0
JOT Ohata 1.10 239 ⇓P Pn 06 05 49.9 -0.6
JFR Furan 1.22 10 ⇓P Pn 06 05 51.8 -0.3
JYM2 Yakumo 2 1.44 277 ⇓P Pn 06 05 54.5 -0.5
JISS Ishikarishitsu 1.46 334 ⇓P Pn 06 05 55.5 +0.3
JISS eS Sn 06 06 14.3 +0.7
JSR Shiriuchi 1.47 253 ⇓P Pn 06 05 54.8 -0.5
JSR eS Sn 06 06 14.1 +0.4
JOB Onbets 1.48 50 ⇑P Pn 06 05 56.3 +0.9
JTM Tenmabayashi 1.49 219 ⇓P Pn 06 05 55.4 -0.3
JTM eS Sn 06 06 14.9 +0.6
JAB Ashibetsu 1.54 358 ⇓P Pn 06 05 56.9 +0.6
JAB eS Sn 06 06 17.3 +1.8
JANG Nango 1.69 201 P Pn 06 05 57.9 -0.5
JANG eS Sn 06 06 18.4 -0.7
JAR Ashorobuto 1.72 39 P Pn 06 05 58.6 -0.1
JAR eS Sn 06 06 19.8 0.0
JOMM Oshimamatsumae 1.77 256 P Pn 06 05 59.1 -0.2
JOMM eS Sn 06 06 20.4 -0.4
JHR Hokuryu 1.83 347 ⇓P Pn 06 06 01.1 +1.0
JHR eS Sn 06 06 24.6 +2.3
ASAJ Asahikawa 2.16 6 P Pn 06 06 05.5 +0.8
82nm,0.3s,baz=196,slow=13,SNR=212
ASAJ S Sn 06 06 31.6 +1.1
71nm,0.3s,baz=193,slow=29,SNR=18
JKA Kamikawa-asahi 2.16 6 Pn 06 06 05.5 +0.8
JKA Sn 06 06 31.6 +1.1
NMR Nemuro--Hokkai 2.90 60 eP Pn 06 06 13.4 -1.2
NMR iS Sn 06 06 44.9 -3.4
GLVR Golovnino 2.96 52 eP Pn 06 06 15.8 +0.3
GLVR iS Sn 06 06 48.8 -1.1
GLVR pmax pmax
comp=E,112nm,0.3s
GLVR pmax pmax
comp=Z,974nm,0.3s
GLVR pmax pmax
comp=N,75nm,0.2s
GLVR smax smax
comp=N,3μm,0.4s
GLVR smax smax
comp=E,6μm,0.4s
GRPR Tuman 3.26 50 eP Pn 06 06 19.8 +0.2
GRPR iS Sn 06 06 56.2 -1.0
GRPR pmax pmax
comp=Z,752nm,0.4s
GRPR pmax pmax
comp=N,152nm,0.3s
GRPR pmax pmax
comp=E,124nm,0.2s
GRPR smax smax
comp=N,4μm,0.3s
GRPR smax smax
comp=E,4μm,0.3s
YUK Yuzh-Kuril'sk 3.34 50c iP Pn 06 06 21.3 +0.7
YUK iS Sn 06 06 58.6 -0.4
YUK pmax pmax
comp=Z,2μm,0.3s
YUK pmax pmax
comp=E,253nm,0.2s
YUK smax smax
comp=E,3μm,0.3s
YUK smax smax
comp=N,2μm,0.2s
YSS Yuzh-Sakhalins 5.00 4 Pn 06 06 45.0 +1.6
YSS Yuzh-Sakhalins 5.00 4⇑iP Pn 06 06 45.4 +2.1
YSS eS Sn 06 07 42.8 +3.0
YSS pmax pmax
comp=Z,70nm,0.7s
YSS smax smax
comp=N,90nm,1.1s
YSS smax smax
comp=E,40nm,0.7s
YSS MLR MLR
comp=Z,600nm,12.0s
TEY Ternei 5.15 308⇓eP Pn 06 06 45.7 +0.3
TEY pmax pmax
comp=N,30nm,0.7s
TEY pmax pmax
comp=E,40nm,0.7s
TEY pmax pmax
comp=Z,100nm,0.6s
KUR Kuril'sk 5.20 49ceP Pn 06 06 46.9 +0.8
KUR iS Sn 06 07 47.2 +2.5
KUR pmax pmax
comp=Z,308nm,0.4s
KUR pmax pmax
comp=N,138nm,0.3s
KUR pmax pmax
comp=E,76nm,0.3s
KUR smax smax
comp=N,282nm,0.3s
KUR smax smax
comp=E,335nm,0.3s
MJB9 Matsu-Tunnel 6.27 212 Pn 06 07 02.2 +1.4
MAJO Matsushiro 6.27 212 Pn 06 07 01.8 +0.9
MAJO Matsushiro 6.27 212c iP Pn 06 07 01.7 +0.9
MAT Matsushiro 6.27 212 P Pn 06 07 02.0 +1.2
MAT S Sn 06 08 09.2 -1.9
MJAR Matsushiro Arr 6.27 212 P Pn 06 07 02.0 +1.2
comp=E,0.8nm,0.3s,baz=29,slow=16,SNR=22
MJAR LR LR 06 10 02.1
comp=E,292nm,22.0s,baz=20,slow=43
INU Inuyama 7.79 214 Pn 06 07 23.5 +2.0
USA0B Ussuriysk Arra 7.87 290 Pn 06 07 23.2 +0.7
USA0B Ussuriysk Arra 7.87 290d iP Pn 06 07 24.8 +2.2
USRK Ussuriysk Ar. 7.87 290 P Pn 06 07 22.6 0.0
baz=94,slow=14,SNR=46
USRK LR LR 06 10 29.6
comp=E,399nm,19.5s,baz=100,slow=38
USRK Ussuriysk Ar. 7.87 290 Pn 06 07 23.6 +1.1
USRK Ussuriysk Ar. 7.87 290 P Pn 06 07 23.7 +1.1
MSHR Mys Shultsa 8.28 278⇑eP Pn 06 07 28.9 +0.7
TYV Tymovskoe 8.91 1 eP Pn 06 07 38.1 +1.4
TYV eS Sn 06 09 19.6 +4.2
TYV pmax pmax
comp=Z,27nm,1.0s
TYV smax smax
comp=E,6.0nm,1.0s
MDJ Mudanjiang 9.63 290 P Pn 06 07 50.0 +3.3
MDJ pmax pmax
comp=E,39nm,1.2s
MDJ pmax pmax
comp=E,230nm,5.7s
MDJ Mudanjiang 9.63 290 Pn 06 07 48.1 +1.3
GRNR Gornyy 9.69 337⇑iP Pn 06 07 46.6 -0.9
GRNR eS Sn 06 09 35.1 +0.4
GRNR pmax pmax
comp=Z,7.0nm,0.7s
GRNR smax smax
comp=N,6.0nm,0.9s
KLR Kul'dur 10.36 318 P Pn 06 07 58.7 +2.2
comp=N,0.5nm,0.3s,baz=123,slow=14,SNR=75
KLR LR LR 06 12 12.1
comp=N,362nm,18.6s,baz=157,slow=39
KLR Kul'dur 10.36 318c iP Pn 06 07 59.6 +3.1
KSRS Korea Array 11.95 253 P Pn 06 08 20.3 +2.0
comp=N,2.5nm,0.3s,baz=60,slow=14,SNR=23
KSRS LR LR 06 12 29.7
comp=N,346nm,21.2s,baz=68,slow=35
KS19 Wonju Array Si 11.96 253 Pn 06 08 21.1 +2.6
KSAR Wonju Array Be 11.98 253 Pn Pn 06 08 18.9 +0.1
KSAR Wonju Array Be 11.98 253 P Pn 06 08 18.9 +0.1
JNU Nakatsue 12.64 229 P Pn 06 08 27.8 +0.1
comp=N,0.7nm,0.3s,baz=0.0,slow=5.1,SNR=3.5
JNU Nakatsue 12.64 229 Pn Pn 06 08 27.5 -0.3
JCJ Chichijima 14.83 180 LR LR 06 15 10.2
comp=N,27nm,19.8s,baz=340,slow=39
PEA0B Petropavlovsk- 15.21 38 Pn Pn 06 08 59.3 -2.3
PEA0B IAmb IAmb 06 09 14.6
comp=Z,55nm,1.4s
PEA0B Petropavlovsk- 15.21 38 P Pn 06 08 59.3 -2.3
PEA0B pmax pmax
comp=Z,55nm,1.4s
PETK Petropavlovsk- 15.21 38 P Pn 06 09 00.1 -1.5
comp=Z,0.4nm,0.3s,baz=201,slow=15,SNR=4.8
PETK LR LR 06 16 22.7
comp=Z,82nm,18.5s,baz=237,slow=43
PETK Petropavlovsk- 15.21 38 Pn 06 09 01.4 -0.2
PETK Petropavlovsk- 15.21 38 P Pn 06 09 01.4 -0.2
ZEA Zeya 15.48 325 eP Pn 06 09 05.5 +0.5
ZEA pmax pmax
comp=Z,29nm,1.0s
ZEA pmax pmax
comp=N,93nm,1.4s
ZEA pmax pmax
comp=E,56nm,1.4s
ZEA pmax pmax
comp=Z,78nm,1.2s
PET Petropavlovsk 15.60 39 eP P 06 09 08.1 -1.4
DL2 Dalian 16.03 266 P Pn 06 09 12.7 +0.7
DL2 epP pP 06 09 22.9 -5.0
DL2 eS Sn 06 12 10.1 +1.3
DL2 pmax pmax
comp=Z,42nm,1.0s
DL2 LR LR
comp=Z,210nm,11.2s
DL2 LR LR
comp=Z,290nm,13.4s
DL2 LR LR
comp=Z,200nm,13.5s
BJI Beijing 19.79 273⇓eP P 06 09 54.4 -1.2
BJI pmax pmax
comp=Z,28nm,1.1s
BJT Baijiatuau 19.80 273 IAmb IAmb 06 09 55.1
comp=Z,40nm,1.2s
TIA Tai'an 20.33 262 P P 06 09 59.8 -1.8
TIA pmax pmax
comp=Z,29nm,0.9s
NJ2 Nanjing 21.11 250 eP P 06 10 10.1 +0.1
NJ2 pmax pmax
comp=Z,17nm,0.7s
YAK Yakutsk 21.47 344 eP P 06 10 10.0 -3.5
YAK e 06 10 30.4
YAK eS S 06 14 00.3 -7.5
YAK e 06 14 11.2
YAK e*SS Sn 06 14 21.7 +2.3
YAK pmax pmax
comp=Z,19nm,0.9s
YAK pmax pmax
comp=N,9.0nm,0.9s
YAK pmax pmax
comp=E,2.0nm,0.7s
YAK smax smax
comp=N,160nm,1.5s
YAK smax smax
comp=E,102nm,1.4s
SEY Seymchan 21.83 12 P P 06 10 15.4 -2.0
comp=E,2.6nm,0.5s,baz=201,slow=5.5,SNR=9.1
SEY Seymchan 21.83 12⇓eP P 06 10 15.1 -2.3
HHC Hu-ho-hao-te 23.02 278 eP P 06 10 31.3 +0.9
WHN Wuhan 25.14 252 ⇑P P 06 10 46.6 -3.1
ULN Ulaanbaatar 25.49 295 P P 06 10 53.8 +0.9
ULN Ulaanbaatar 25.49 295 P P 06 10 53.8 +0.9
ULN pmax pmax
comp=Z,15nm,1.1s
SONM Songino Array 25.93 295 P P 06 10 56.9 0.0
comp=Z,4.9nm,0.5s,baz=75,slow=8.3,SNR=55
SONM PcP PcP 06 14 24.2 +0.3
comp=Z,0.6nm,0.5s,baz=103,slow=1.7,SNR=4.6
SONM LR LR 06 21 47.1
comp=Z,206nm,21.8s,baz=66,slow=38
SONM Songino Array 25.93 295 P P 06 10 57.0 +0.1
SONM Songino Array 25.93 295 P P 06 10 57.0 +0.1
SONM pmax pmax
comp=Z,16nm,1.4s
TPUB Ta-pu 25.94 231 P P 06 10 56.0 -1.0
TPUB IAmb IAmb 06 11 13.8
comp=Z,43nm,1.3s
XAN Xi'an 27.33 264 P P 06 11 09.8 +0.2
XAN pmax pmax
comp=Z,16nm,1.2s
XAN Xi'an 27.33 264 P P 06 11 07.9 -1.6
XAN IAmb IAmb 06 11 11.2
comp=Z,18nm,1.0s
XAN Xi'an 27.33 264 P P 06 11 07.9 -1.6
XAN pmax pmax
comp=Z,19nm,1.0s
TLY Talaya 27.88 304 P P 06 11 14.8 +0.5
comp=Z,2.1nm,0.4s,baz=110,slow=8.6,SNR=12
TLY Talaya 27.88 304 P P 06 11 14.8 +0.5
TLY Talaya 27.88 304c iP P 06 11 14.1 -0.1
TLY pmax pmax
comp=Z,10.0nm,1.1s
ZAK Zakamensk 28.02 301 eP P 06 11 14.9 -0.8
ZAK pmax pmax
comp=Z,5.0nm,1.3s
BILL Bilibino 29.12 18⇑eP P 06 11 25.3 +0.2
BILL pmax pmax
comp=Z,2.0nm,0.9s
MOY Mondy 29.52 303 eP P 06 11 28.9 -0.1
MOY pmax pmax
comp=Z,21nm,1.4s
LZH Lanzhou 30.26 272 eP P 06 11 35.1 -0.6
LZH pmax pmax
comp=Z,18nm,1.2s
H11N2 WAKE ISLAND Hy 30.42 129 T T 06 43 17.8
baz=323,slow=75,SNR=698
H11N1 WAKE ISLAND Hy 30.43 129 T T 06 43 19.0
baz=323,slow=75,SNR=648
H11N3 WAKE ISLAND Hy 30.44 129 T T 06 43 19.0
baz=323,slow=75,SNR=549
TIXI Tiksi 30.50 352⇓eP P 06 11 33.8 -3.4
TIXI pmax pmax
comp=Z,2.0nm,1.1s
H11S1 WAKE ISLAND Hy 31.28 131 T T 06 44 22.2
baz=325,slow=76,SNR=698
H11S3 WAKE ISLAND Hy 31.28 131 T T 06 44 22.8
baz=325,slow=76,SNR=408
H11S2 WAKE ISLAND Hy 31.30 131 T T 06 44 23.6
baz=325,slow=76,SNR=502
GTA Gaotai 32.08 280 eP P 06 11 51.4 -0.2
GTA PcP PcP 06 14 40.8 +1.2
GTA pmax pmax
comp=Z,4.0nm,0.8s
GTA pmax pmax
comp=Z,140nm,6.5s
GTA LR LR
comp=Z,250nm,14.8s
GTA LR LR
comp=Z,190nm,8.9s
CD2 Chengdu 32.66 263 P P 06 11 55.3 -1.3
CD2 pmax pmax
comp=Z,10.0nm,0.5s
ZAA0 Zalesovo Array 39.25 308 IAmb IAmb 06 12 53.7
comp=Z,23nm,1.1s
ZALV Zalesovo Beam 39.25 308 P P 06 12 52.6 0.0
comp=Z,8.1nm,0.5s,baz=88,slow=7.5,SNR=45
ZALV PcP PcP 06 15 00.7 +0.4
comp=Z,2.9nm,0.5s,baz=84,slow=2.5,SNR=4.8
ZALV LR LR 06 29 57.3
comp=Z,132nm,19.2s,baz=74,slow=37
ZALV Zalesovo Beam 39.25 308 P P 06 12 52.3 -0.4
WMQ Urumqi 39.43 292 eP P 06 12 54.3 -0.1
WMQ pP pP 06 13 11.8 +1.2
WMQ sP sP 06 13 18.2 0.0
WMQ pmax pmax
comp=Z,13nm,1.3s
WMQ pmax pmax
comp=Z,71nm,3.7s
WMQ LR LR
comp=Z,770nm,29.1s
WMQ LR LR
comp=Z,550nm,29.1s
WMQ Urumqi 39.43 292 IAmb IAmb 06 12 57.6
comp=Z,30nm,1.3s
IMAR Indian Mountai 42.11 33 P P 06 13 15.8 -0.2
MK31 Makanchi Array 42.25 298 IAmb IAmb 06 13 18.5
comp=Z,16nm,0.9s
MK31 Makanchi Array 42.25 298 iP P 06 13 16.9 -0.6
MKAR Makanchi Array 42.25 298 P P 06 13 17.4 -0.1
comp=Z,12nm,0.9s,baz=81,slow=8.7,SNR=65
MKAR pP pP 06 13 35.0 +1.2
comp=Z,3.2nm,0.5s,baz=82,slow=9.4,SNR=5.7
MKAR PcP PcP 06 15 10.6 +0.4
comp=Z,0.8nm,0.4s,baz=42,slow=3.1,SNR=3.6
MKAR LR LR 06 31 59.8
comp=Z,68nm,19.7s,baz=128,slow=38
MAKZ Makanchi 42.45 298 P P 06 13 19.0 -0.1
MAKZ IAmb IAmb 06 13 20.2
comp=Z,26nm,1.1s
MAKZ Makanchi 42.45 298 iP P 06 13 17.5 -1.6
MAKZ pmax pmax
comp=Z,29nm,1.1s
LSA Lhasa 42.65 270 P P 06 13 22.6 +1.1
LSA IAmb IAmb 06 13 23.9
comp=Z,29nm,1.4s
LSA Lhasa 42.65 270 P P 06 13 22.6 +1.1
LSA pmax pmax
comp=Z,29nm,1.4s
PPLA Purkeypile 42.80 38 P P 06 13 22.8 +0.9
PPLA IAmb IAmb 06 13 23.8
comp=Z,24nm,1.5s
KDAK Kodiak Island 43.06 45 P P 06 13 24.1 +0.2
KDAK Kodiak Island 43.06 45 P P 06 13 24.1 +0.2
KDAK pmax pmax
comp=Z,69nm,1.5s
KTH Kantishna Hill 43.34 37 IAmb IAmb 06 13 28.5
comp=Z,15nm,1.0s
CHTO Chiang Mai 43.34 251 P P 06 13 27.6 +1.0
CHTO IAmb IAmb 06 13 32.7
comp=Z,7.8nm,0.6s
CHTO Chiang Mai 43.34 251 P P 06 13 27.6 +1.0
CHTO pmax pmax
comp=Z,8.0nm,0.6s
SUA Susitna One 43.57 40 P P 06 13 29.0 +0.9
SUA IAmb IAmb 06 13 47.0
comp=Z,22nm,1.5s
KURK Kurchatov 43.57 304 P P 06 13 27.8 -0.2
KURK Kurchatov 43.57 304c iP P 06 13 27.9 -0.2
KURK pmax pmax
comp=Z,48nm,1.3s
CMAR Chiang Mai Arr 43.58 251 P P 06 13 29.4 +0.9
comp=Z,2.4nm,0.4s,baz=40,slow=8.5,SNR=8.4
CMAR PcP PcP 06 15 16.4 +1.3
comp=Z,1.8nm,0.4s,baz=14,slow=6.3,SNR=8.2
CMAR LR LR 06 32 56.9
comp=Z,83nm,18.7s,baz=45,slow=38
TRF Thorofare Moun 43.63 37 P P 06 13 29.4 +0.9
KURBB Kurchatov Arra 43.65 304 P P 06 13 28.7 0.0
comp=Z,20nm,0.7s,baz=78,slow=8.5,SNR=54
BRLK Bradley Lake 43.69 42 P P 06 13 28.7 -0.2
BRLK IAmb IAmb 06 13 38.9
comp=Z,11nm,1.0s
BWN Browne 43.95 36 P P 06 13 30.5 -0.4
SHL Shillong 44.34 265 P P 06 13 35.7 +1.0
SHL IAmb IAmb 06 13 40.4
comp=Z,9.8nm,0.9s
SHL Shillong 44.34 265 P P 06 13 35.7 +1.0
SHL pmax pmax
comp=Z,10.0nm,0.9s
GHO Glory Hole Cre 44.41 39 P P 06 13 35.5 +0.8
GHO IAmb IAmb 06 13 36.0
comp=Z,11nm,0.9s
CCB Clear Creek Bu 44.63 35 P P 06 13 36.4 0.0
KNK Knik Glacier 44.67 40 P P 06 13 37.7 +1.0
KNK IAmb IAmb 06 13 40.1
comp=Z,22nm,1.3s
DHY Denali Highway 44.98 37 P P 06 13 39.7 +0.4
IL31 45.02 35 P P 06 13 39.3 -0.1
IL31 IAmb IAmb 06 13 40.8
comp=Z,13nm,1.1s
ILAR Eielson Array 45.02 35 P P 06 13 39.0 -0.4
comp=Z,9.1nm,1.0s,baz=269,slow=6.4,SNR=45
ILAR LR LR 06 34 30.0
comp=Z,23nm,18.0s,baz=219,slow=39
ILAR Eielson Array 45.02 35 P P 06 13 38.8 -0.6
ILAR Eielson Array 45.02 35 P P 06 13 39.0 -0.4
HDA Harding Lake 45.02 35 P P 06 13 39.3 -0.2
SCM Sheep Creek Mo 45.15 39 P P 06 13 41.5 +0.9
SCM IAmb IAmb 06 13 42.5
comp=Z,14nm,1.0s
SCM Sheep Creek Mo 45.15 39 P P 06 13 41.5 +0.9
SCM pmax pmax
comp=Z,14nm,1.0s
MRSI Marisa 45.19 209 P P 06 13 42.2 +0.9
comp=Z,49nm,1.1s
PDGK Podgornoye 45.23 294 iP P 06 13 40.5 -1.1
PDGK pmax pmax
comp=Z,3.0nm,0.4s
PRP Porcupine Dome 45.52 34 P P 06 13 43.7 +0.1
PRP IAmb IAmb 06 13 45.5
comp=Z,8.0nm,0.9s
BMAR Burnt Mountain 45.73 31 P P 06 13 46.0 +1.0
SCRK Sand Creek 46.36 36 P P 06 13 49.5 -0.7
SCRK IAmb IAmb 06 13 50.9
comp=Z,8.8nm,0.8s
TAPN Taplejung 46.46 270 eP P 06 13 52.4 +0.8
comp=Z,63nm,1.0s
ODAN Odare 46.97 269 eP P 06 13 56.1 +0.6
comp=Z,23nm,0.3s
KDJ Kajisay 47.26 293 P P 06 13 57.9 +0.3
KDJ Kajisay 47.26 293 P P 06 13 57.9 +0.3
KDJ pmax pmax
comp=Z,32nm,1.4s
JIRN Jiri 47.43 271 eP P 06 13 59.6 +0.4
comp=Z,25nm,0.4s
EGAK Eagle 47.45 34 P P 06 13 58.9 +0.4
EGAK IAmb IAmb 06 13 59.3
comp=Z,9.3nm,1.1s
BCAR Beaver Creek A 47.49 37 P P 06 14 00.2 +1.3
RAMN Ramite 47.51 270 eP P 06 14 00.0 +0.3
comp=Z,41nm,0.7s
GUN Gumba 47.52 272 eP P 06 14 00.3 +0.3
comp=Z,64nm,0.5s
BALM Baldy 47.65 40 P P 06 14 01.5 +1.2
BALM IAmb IAmb 06 14 01.6
comp=Z,12nm,1.1s
BVAR Borovoye Array 47.87 309 P P 06 14 02.2 +0.3
comp=Z,11nm,0.4s,baz=76,slow=8.7,SNR=125
BVAR PcP PcP 06 15 30.0 +0.5
comp=Z,2.4nm,0.7s,baz=87,slow=6.2,SNR=3.3
BRVK Borovoye 47.92 309 P P 06 14 02.8 +0.5
BRVK IAmb IAmb 06 14 03.2
comp=Z,8.8nm,0.6s
BRVK Borovoye 47.92 309 iP P 06 14 01.7 -0.6
BRVK pmax pmax
comp=Z,12nm,1.0s
BARN Barnard Glacie 47.97 39 P P 06 14 04.1 +1.3
BARN IAmb IAmb 06 14 04.7
comp=Z,9.2nm,0.9s
KKN Kakani 48.03 272 eP P 06 14 04.2 +0.4
comp=Z,49nm,0.8s
PKI Pulchoki 48.06 272 eP P 06 14 04.2 +0.1
comp=Z,22nm,0.6s
PKIN Phulchoki 48.06 272 eP P 06 14 04.2 +0.1
comp=Z,16nm,0.5s
CTGM Chitina Glacie 48.15 40 P P 06 14 04.8 +0.7
CTGM IAmb IAmb 06 14 07.0
comp=Z,15nm,1.2s
DMN Daman 48.26 272 eP P 06 14 05.8 +0.2
comp=Z,34nm,0.8s
DAWY Dawson 48.34 35 P P 06 14 05.9 +0.5
GKN Gorkha 48.40 273 eP P 06 14 06.7 +0.2
comp=Z,30nm,0.4s
KBK Karagaybulak 48.57 295 P P 06 14 08.1 +0.4
SNR=21
KZA Kyzart 48.60 294 P P 06 14 09.3 +1.1
SNR=6.8
USP Ospenovka 48.63 296 P P 06 14 08.0 0.0
SNR=9.8
DANN Dangsing 48.87 273 eP P 06 14 11.0 +0.7
comp=Z,96nm,0.5s
AAK Ala-Archa 48.89 295 LR LR 06 36 31.3
comp=Z,69nm,18.3s,baz=78,slow=38
AAK Ala-Archa 48.89 295 P P 06 14 10.3 +0.2
SNR=8.7
AAK Ala-Archa 48.89 295 P P 06 14 09.6 -0.5
AAK IAmb IAmb 06 14 10.6
comp=Z,7.2nm,0.5s

AAK Ala-Archa 48.89 295 ceP P 06 14 10.0 -0.1
AAK pmax pmax
comp=Z,5.0nm,0.5s
EPYK Eagle Plains 48.95 32 IAmb IAmb 06 14 19.3
comp=Z,8.2nm,0.8s
KSH Kashi 49.16 291 P P 06 14 16.1 +3.9
KSH pP sP 06 14 34.4 -1.9
KSH sP pP 06 14 40.6 +12
KSH PcP PcP 06 15 36.5 +1.9
KSH S S 06 21 17.3 +4.5
KSH pmax pmax
comp=Z,9.0nm,1.1s
KSH pmax pmax
comp=Z,170nm,6.3s
KSH LR LR
comp=Z,140nm,4.8s
KSH LR LR
comp=Z,130nm,8.4s
KSH LR LR
comp=Z,210nm,8.3s
KOLN Koldanda 49.30 273 eP P 06 14 13.7 +0.3
comp=Z,32nm,0.4s
EKS2 Erkin-Say 49.36 295 P P 06 14 13.9 +0.2
SNR=8.4
KSM Kuching 49.51 224 P P 06 14 15.2 +0.3
AML Almayashu 49.63 295 P P 06 14 16.7 +0.6
SNR=8.7
INK Inuvik 49.72 29 P P 06 14 15.8 0.0
comp=Z,2.4nm,0.5s,baz=283,slow=5.8,SNR=24
KK31 Karatay Array 51.37 297 eP P 06 14 28.1 -0.6
KKAR Karatay Array 51.37 297 P P 06 14 28.4 -0.3
KKAR Karatay Array 51.37 297 IAmb IAmb 06 14 28.9
comp=Z,12nm,0.6s
KKAR Karatay Array 51.37 297 P P 06 14 28.4 -0.3
SVE Sverdlovsk 51.98 316⇓eP P 06 14 33.7 +0.7
SVE pmax pmax
comp=Z,30nm,0.9s
BTK Batken 52.49 293 P P 06 14 36.8 -0.3
BTK IAmb IAmb 06 14 40.5
comp=Z,6.3nm,0.7s
BTK Batken 52.49 293 P P 06 14 36.8 -0.3
BTK pmax pmax
comp=Z,6.0nm,0.7s
C36M Paulatuk 52.70 26 IAmb IAmb 06 14 39.1
comp=Z,15nm,1.2s
ARU Arti 53.19 316 LR LR 06 39 46.3
comp=Z,111nm,19.5s,baz=59,slow=39
ARU Arti 53.19 316 P P 06 14 41.5 -0.5
ARU Arti 53.19 316 c iP P 06 14 41.9 0.0
ARU *PP pP 06 15 00.2 +1.4
ARU 06 15 44.2
ARU S S 06 22 10.5 +2.9
ARU SS SS 06 25 45.5 -1.7
ARU pmax pmax
comp=Z,27nm,1.0s
NIL Nilore 53.85 285 P P 06 14 48.3 +1.2
NIL pmax pmax
comp=Z,18nm,0.8s
PSI Prapat 54.98 237 P P 06 14 56.1 +0.5
comp=Z,6.2nm,0.7s,baz=333,slow=2.3,SNR=6.1
RPSI Rantau Prapat 55.06 237 P P 06 14 56.1 0.0
ABKAR Akbulak array 55.37 308 P P 06 14 58.2 +0.4
SPA0 Spitsbergen Ar 55.83 348 P P 06 15 00.7 -0.1
AKTO Aktyubinsk 55.97 310 LR LR 06 40 20.9
comp=Z,98nm,19.7s,baz=52,slow=37
AKTO Aktyubinsk 55.97 310 iP P 06 15 00.8 -1.3
AKTO pmax pmax
comp=Z,7.0nm,1.1s
KBL Kabul 56.40 288 P P 06 15 04.9 -0.8
KBL pmax pmax
comp=Z,12nm,0.9s
KIRV Kirov 56.78 321 LR LR 06 43 38.6
comp=Z,45nm,19.9s,baz=122,slow=40
PRGR Permogore 57.05 326 eP P 06 15 08.8 -0.8
PRGR pmax pmax
comp=Z,19nm,1.1s
RES Resolute Bay 57.67 15 P P 06 15 13.1 -0.7
comp=Z,4.7nm,0.6s,baz=310,slow=5.9,SNR=35
RES Resolute Bay 57.67 15 P P 06 15 12.9 -0.8
RES IAmb IAmb 06 15 14.0
comp=Z,8.8nm,0.9s
TMCR Tamitsa 58.78 330 eP P 06 15 19.7 -2.0
KEV Kevo 59.09 338 P P 06 15 23.6 -0.2
KEV Kevo 59.09 338 P P 06 15 23.6 -0.2
KEV pmax pmax
comp=Z,63nm,1.4s
YKA Yellowknife Ar 59.23 32 P P 06 15 25.1 +0.2
comp=Z,1.7nm,0.3s,baz=304,slow=6.6,SNR=48
YKA LR LR 06 43 16.3
comp=Z,35nm,18.3s,baz=0.0,slow=38
ARCES ARCESS Array B 59.64 339 P P 06 15 27.4 -0.2
comp=Z,1.8nm,0.5s,baz=49,slow=8.5,SNR=15
ARCES LR LR 06 46 42.5
comp=Z,91nm,18.3s,baz=344,slow=42
ARCES ARCESS Array B 59.64 339 P P 06 15 27.8 +0.2
ARCES ARCESS Array B 59.64 339 P P 06 15 27.8 +0.2
KLMR Klimovskoe 59.99 327 eP P 06 15 28.6 -1.5
KLMR pmax pmax
comp=Z,25nm,1.4s
KLMR Klimovskoe 59.99 327 eP P 06 15 28.7 -1.4
KLMR AMP 06 15 30.8
comp=Z,25nm,1.4s
SGF Sodankyl 60.69 337 P P 06 15 34.1 -0.7
SGF pmax pmax
comp=Z,25nm,2.6s
MSF Maaselka 60.88 334 P P 06 15 35.8 -0.3
DAG Danmarks Havn 60.93 355 iP P 06 15 35.5 -0.7
DAG Danmarks Havn 60.93 355 iP P 06 15 35.5 -0.7
WB0 Warramunga Arr 61.85 188 P P 06 15 42.7 -0.4
WB0 IAmb IAmb 06 15 47.1
comp=Z,21nm,1.4s
JOF Joensuu 61.96 331 P P 06 15 42.9 -0.5
JOF pmax pmax
comp=Z,7.0nm,1.3s
WR0 Warramunga Arr 62.02 188 P P 06 15 43.7 -0.6
WR0 IAmb IAmb 06 16 01.8
comp=Z,14nm,1.4s
WRA Warramunga Arr 62.03 188 P P 06 15 43.6 -0.7
comp=Z,1.4nm,0.3s,baz=5.9,slow=6.8,SNR=5.4
GEYT Alibeck 62.12 297 P P 06 15 45.0 0.0
comp=Z,9.3nm,0.8s,baz=23,slow=4.8,SNR=14
GEYT LR LR 06 44 56.0
comp=Z,106nm,20.4s,baz=40,slow=38
OUL Oulu 62.42 335 P P 06 15 45.9 -0.5
OUL pmax pmax
comp=Z,18nm,1.9s
MOS Moscow 63.73 322 eP P 06 15 54.4 -0.8
SUF Sumiainen 63.91 333 P P 06 15 55.7 -0.6
SUF pmax pmax
comp=Z,16nm,0.9s
PALK Pallekele 64.17 256 P P 06 15 58.8 +0.1
comp=Z,4.3nm,0.7s,baz=29,slow=8.5,SNR=3.9
VRH Novokhopyorsk 64.42 317 eP P 06 15 58.9 -0.9
VRH pmax pmax
comp=Z,10.0nm,0.7s
OBN Obninsk 64.59 322 ceP P 06 15 59.7 -1.1
OBN i 06 18 24.3
OBN pmax pmax
comp=Z,17nm,0.4s
OBN MLR MLR
comp=Z,81nm,16.0s
FINES FINESS Array B 64.79 332 P P 06 16 01.7 -0.4
comp=Z,11nm,0.4s,baz=55,slow=6.9,SNR=201
FINES LR LR 06 46 47.8
comp=Z,159nm,19.0s,baz=38,slow=38
FINES FINESS Array B 64.79 332 P P 06 16 01.6 -0.5
VAF Ylistaro 64.85 334 P P 06 16 02.1 -0.3
VAF pmax pmax
comp=Z,21nm,1.2s
VSR Storozhevoye 65.71 318 eP P 06 16 07.6 -0.6
VSR pmax pmax
comp=Z,20nm,1.1s
ASAR Alice Springs 65.76 188 P P 06 16 08.6 -0.2
comp=Z,0.9nm,0.5s,baz=5.9,slow=7.5,SNR=20
ASAR pP pP 06 16 28.9 +2.9
comp=Z,1.4nm,0.6s,baz=8.7,slow=7.8,SNR=7.2
ASAR Alice Springs 65.76 188 P P 06 16 07.7 -1.1
SUMG Summit 65.76 0 iP P 06 16 09.1 +0.4
SUMG Summit 65.76 0 P P 06 16 09.2 +0.4
SUMG IAmb IAmb 06 16 11.6
comp=Z,8.1nm,1.1s
SUMG Summit 65.76 0 P P 06 16 09.2 +0.5
SUMG pmax pmax
comp=Z,8.0nm,1.1s
NEW Newport 66.17 46 P P 06 16 12.2 +1.0

comp=Z,0.6nm,0.4s,baz=316,slow=5.9,SNR=5.8
VSU Vasula 66.57 329⇑eP P 06 16 13.6 0.0
VSU pmax pmax
comp=Z,84nm,1.3s
AKT Akhty 66.73 305 eP P 06 16 15.2 +0.1
AKT e*PP pP 06 16 31.5 -1.0
AKT e 06 16 43.6
AKT pmax pmax
comp=Z,28nm,1.0s
DZM Mont Dzumac 67.52 156 eLR LR 06 36 43.6
comp=Z,116nm,23.6s
JTMT Jette 67.99 45 P P 06 16 24.2 +1.2
ZEI Tsey 68.24 308 eP P 06 16 23.4 -1.3
ZEI pmax pmax
comp=Z,6.0nm,0.6s
KBZ Khabaz 68.25 310 P P 06 16 25.3 +0.9
comp=Z,8.4nm,0.8s,baz=67,slow=3.6,SNR=16
KBZ LR LR 06 51 50.8
comp=Z,54nm,18.5s,baz=20,slow=41
KBZ Khabaz 68.25 310 ceP P 06 16 25.1 +0.7
NEY Neytrino 68.64 309⇓eP P 06 16 28.7 +1.5
NEY pmax pmax
comp=Z,2.0nm,1.0s
AKH Akhalkalaki 69.32 307 ⇑P P 06 16 32.8 +1.3
AKH Akhalkalaki 69.32 307 ⇑P P 06 16 32.7 +1.3
GNI Garni 69.35 306 ceP P 06 16 32.7 +1.1
GNI pmax pmax
comp=Z,50nm,1.3s
NC405 NORSAR Array S 69.71 337 IAmb IAmb 06 16 43.6
comp=Z,22nm,1.4s
NC303 NORSAR Array S 69.72 337 P P 06 16 33.5 +0.2
NB201 NORSAR Array S 69.88 337 P P 06 16 34.3 0.0
NB2 NORSAR Subarra 69.91 337 P P 06 16 34.1 -0.4
comp=Z,4.6nm,0.5s,baz=35,slow=6.5
NOA NORSAR Array B 69.91 337 P P 06 16 34.1 -0.4
comp=Z,0.5nm,0.4s,baz=36,slow=6.1,SNR=23
NOA LR LR 06 50 40.6
comp=Z,51nm,21.6s,baz=35,slow=39
NBO00 NORSAR Array S 70.05 337 P P 06 16 35.7 +0.3
NC602 NORSAR Array S 70.06 337 P P 06 16 35.4 0.0
NC602 IAmb IAmb 06 16 47.2
comp=Z,17nm,1.1s
NORES NORESS Array B 70.06 337 P P 06 16 35.1 -0.3
NORES pmax pmax
comp=Z,2.0nm,0.4s
EGMT Eagleton 70.16 43 IAmb IAmb 06 16 38.5
comp=Z,7.2nm,0.8s
NAO01 NORSAR Array S 70.17 337 P P 06 16 35.9 -0.1
AKASG Malin Array Be 70.84 322 P P 06 16 40.0 -0.3
comp=Z,6.2nm,0.5s,baz=44,slow=6.6,SNR=27
AKASG Malin Array Be 70.84 322 P P 06 16 40.7 +0.4
AKASG Malin Array Be 70.84 322 P P 06 16 40.7 +0.4
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 70.84 322 IAmb IAmb 06 16 40.9
comp=Z,12nm,0.8s
AKBB Malin Array Si 70.84 322 c iP P 06 16 39.7 -0.5
SFJD Kangerlussuaq 70.92 5 LR LR 06 49 09.9
comp=Z,58nm,21.1s,baz=345,slow=37
UOSS Minazif 71.00 287 P P 06 16 42.0 +0.3
UOSS IAmb IAmb 06 16 42.5
comp=Z,10nm,0.8s
KVN Kaiserville 71.27 54 P P 06 16 43.4 0.0
KVN Kaiserville 71.27 54 P P 06 16 43.4 0.0
KVN pmax pmax
comp=Z,5.0nm,1.0s
NVAR Mina Array Bea 71.54 55 P P 06 16 46.4 +1.4
comp=Z,2.5nm,0.9s,baz=290,slow=5.5,SNR=15
NVAR LR LR 06 47 57.2
comp=Z,12nm,18.9s,baz=290,slow=36
NVAR Mina Array Bea 71.54 55 P P 06 16 46.0 +1.0
FRB Frobisher Bay 71.83 14 P P 06 16 45.4 -0.6
comp=Z,4.5nm,0.7s,baz=332,slow=7.4,SNR=16
SORM Soroca 73.03 320 ⇑P P 06 16 53.3 -0.2
SORM Soroca 73.03 320 P P 06 16 53.2 -0.2
R11A Troy Canyon, C 73.23 53 P P 06 16 55.5 +0.4
DUG Dugway, Tooele 73.66 50 P P 06 16 57.7 +0.2
DUG Dugway, Tooele 73.66 50 P P 06 16 57.7 +0.2
DUG pmax pmax
comp=Z,3.0nm,0.8s
TPNV Topopah Spring 73.74 55 P P 06 16 57.7 -0.3
TPNV Topopah Spring 73.74 55 P P 06 16 57.7 -0.3
TPNV pmax pmax
comp=Z,4.0nm,1.0s
PD31 Pinedale Array 73.76 47 P P 06 16 57.8 -0.4
PDAR Pinedale Array 73.76 47 P P 06 16 58.8 +0.6
comp=Z,2.6nm,0.7s,baz=265,slow=2.1,SNR=26
PDAR pP pP 06 17 18.3 +2.2
comp=Z,0.6nm,0.5s,baz=136,slow=0.7,SNR=3.3
PDAR Pinedale Array 73.76 47 P P 06 16 58.6 +0.4
KVT Kavak 73.84 311 P P 06 17 00.3 +1.9
KWP Kalwaria Pacla 74.53 324 eP P 06 17 03.0 +0.8
KWP Kalwaria Pacla 74.53 324 eP P 06 17 03.0 +0.8
BUR08 Bucovina Ar. S 74.87 321 IAmb IAmb 06 17 05.6
comp=Z,7.3nm,0.8s
BURAR Bucovina Array 74.88 321 ⇓P P 06 17 05.1 +0.7
BURAR Bucovina Array 74.88 321 P P 06 17 04.8 +0.4
BURAR Bucovina Array 74.88 321 P P 06 17 05.4 +1.0
TESR Tescani 75.00 320 ⇑P P 06 17 05.5 +0.5
ULM Lac du Bonnet 75.03 34 P P 06 17 04.8 -0.3
comp=Z,2.4nm,0.4s,baz=310,slow=6.1,SNR=9.8
ULM LR LR 06 52 11.8
comp=Z,36nm,18.5s,baz=343,slow=37
ULM Lac du Bonnet 75.03 34 IAmb IAmb 06 17 05.9
comp=Z,7.9nm,1.1s
ULM Lac du Bonnet 75.03 34 deP P 06 17 05.0 -0.1
JURR Jurilovca 75.14 317 ⇑P P 06 17 06.2 +0.4
KOLS Kolonicke sedl 75.24 324 eP P 06 17 06.8 +0.5
KOLS pmax pmax
comp=Z,6.0nm,1.1s
KOLS Kolonicke sedl 75.24 324 eP P 06 17 06.8 +0.5
OJC Ojcow 75.34 326 eP P 06 17 07.6 +0.7
OJC Ojcow 75.34 326 eP P 06 17 07.6 +0.7
VRI Vrincioaia 75.42 319 ⇑P P 06 17 09.4 +1.9
VRI Vrincioaia 75.42 319 P P 06 17 09.0 +1.6
VRI pmax pmax
comp=Z,7.0nm,1.3s
PLOR Plostina 75.47 319 ⇑P P 06 17 09.2 +1.5
PLOR Plostina 75.47 319 P P 06 17 09.2 +1.5
CRVS Cervenica-Dubn 75.62 324 eP P 06 17 09.2 +0.7
CRVS pmax pmax
comp=Z,9.0nm,1.0s
CRVS Cervenica-Dubn 75.62 324 eP P 06 17 09.2 +0.7
OZUR 75.71 320 ⇓P P 06 17 10.6 +1.5
TRPA Tarpa 75.72 323 ⇑P P 06 17 10.1 +1.1
RSSD Black Hills 75.73 43 P P 06 17 09.6 +0.1
RSSD Black Hills 75.73 43 P P 06 17 09.6 +0.1
RSSD pmax pmax
comp=Z,4.0nm,0.9s
NIE Niedzica 75.73 325 eP P 06 17 10.0 +0.8
NIE Niedzica 75.73 325 eP P 06 17 10.0 +0.8
DOPR Dopca 76.00 320 ⇓P P 06 17 12.1 +1.4
MLR Muntele Rosu 76.08 320 ⇑P P 06 17 12.8 +1.5
MLR Muntele Rosu 76.08 320 P P 06 17 11.4 +0.1
MLR IAmb IAmb 06 17 13.0
comp=Z,9.4nm,1.3s
MLR Muntele Rosu 76.08 320 P P 06 17 11.4 +0.1
MLR pmax pmax
comp=Z,9.0nm,1.3s
BR131 Keskin Array S 76.11 311 ceP P 06 17 11.8 +0.2
BRTR Keskin Array B 76.11 311 P P 06 17 11.9 +0.3
comp=Z,2.9nm,0.7s,baz=71,slow=4.4,SNR=15
BRTR PP PP 06 20 02.9 +0.2
comp=Z,0.9nm,0.8s,baz=15,slow=6.0,SNR=3.7
BRTR LR LR 06 57 37.8
comp=Z,20nm,20.2s,baz=12,slow=41
KSP Ksiaz 76.28 328 eP P 06 17 13.1 +0.9
KSP Ksiaz 76.28 328 eP P 06 17 13.1 +0.9
OSTC Ostas 76.53 328 eP P 06 17 15.6 +1.9
VOIR 76.55 320 ⇓P P 06 17 14.9 +0.9
CHVC Chvalec 76.57 328 eP P 06 17 14.5 +0.6
MORC Moravsky Berou 76.61 327 eP P 06 17 14.7 +0.6
MORC Moravsky Berou 76.61 327 ⇑P P 06 17 15.0 +0.9
MORC Moravsky Berou 76.61 327 P P 06 17 16.0 +1.9
DRGR 76.64 322 ⇓P P 06 17 15.2 +0.8
DRGR 76.64 322 P P 06 17 15.1 +0.7
DRGR pmax pmax
comp=Z,12nm,1.8s
UPC Upice 76.65 328 eP P 06 17 14.9 +0.6
UPC Upice 76.65 328 eP P 06 17 14.9 +0.6
DPC Dobruska-Polom 76.65 328 eP P 06 17 15.1 +0.7
DPC Dobruska-Polom 76.65 328 eP P 06 17 15.1 +0.7
KRLC Kraliky 76.68 327 eP P 06 17 15.3 +0.7
KRLC ePCP PcP 06 17 27.1 +1.4

KRLC Kraliky 76.68 327 eP P 06 17 15.3 +0.7
KRLC e 06 17 27.1
PSZ Piszkesteto 77.05 324 ⇓P P 06 17 17.8 +1.1
PSZ Piszkesteto 77.05 324 P P 06 17 18.2 +1.5
VYHS Vyhne 77.06 325 eP P 06 17 17.7 +1.0
VYHS Vyhne 77.06 325 eP P 06 17 17.7 +1.0
BRG Berggiesshubel 77.16 329 eP P 06 17 17.5 +0.3
BRG pmax pmax
comp=Z,9.0nm,1.1s
CLL Collm 77.17 330 iP P 06 17 16.9 -0.3
comp=Z,10.0nm,0.7s
CLL e(sP) sP 06 17 41.0 -1.1
CLL Collm 77.17 330 iP P 06 17 16.9 -0.3
CLL e*SP sP 06 17 41.0 -1.1
CLL pmax pmax
comp=Z,10.0nm,0.7s
JAVC Velka Javorina 77.27 326 eP P 06 17 19.3 +1.4
VRAC Vranov 77.36 327 eP P 06 17 19.3 +1.0
VRAC Vranov 77.36 327 ⇓P P 06 17 19.8 +1.4
VRAC Vranov 77.36 327 P P 06 17 20.2 +1.9
KRUC Moravsky 77.64 327 eP P 06 17 20.2 +0.4
KRUC Moravsky 77.64 327 P P 06 17 21.0 +1.2
KRUC pmax pmax
comp=Z,18nm,1.4s
PRU Pruhonice 77.64 329 eP P 06 17 20.6 +0.8
PRU Pruhonice 77.64 329 eP P 06 17 20.6 +0.8
MODS Modra-Piesok 77.81 326 eP P 06 17 21.0 +0.1
MODS pmax pmax
comp=Z,12nm,1.1s
MODS Modra-Piesok 77.81 326 eP P 06 17 21.0 +0.1
TREC Trest 77.82 328 eP P 06 17 22.1 +1.2
TREC Trest 77.82 328 eP P 06 17 22.1 +1.2
BZS Buzias 78.03 322 P P 06 17 22.6 +0.5
BZS pmax pmax
comp=Z,10.0nm,1.2s
PLVB Pleven 78.26 319 ⇑P P 06 17 23.9 +0.5
EYMN Ely 78.64 34 IAmb IAmb 06 17 26.2
comp=Z,9.6nm,1.1s
KHC Kasperske Hory 78.70 328 eP P 06 17 26.2 +0.4
KHC ex x 06 17 29.1
KHC Kasperske Hory 78.70 328⇓eP P 06 17 26.7 +0.9
KHC pmax pmax
comp=Z,34nm,1.1s
ESK Eskdalemuir 78.74 341 P P 06 17 26.1 +0.3
CONA Conrad Observa 78.75 327 eP P 06 17 27.1 +1.0
comp=Z,12nm,1.3s
GERES GERESS Array B 78.88 328 P P 06 17 26.7 -0.2
comp=Z,1.2nm,0.4s,baz=38,slow=5.6,SNR=12
GERES LR LR 06 55 59.4
comp=Z,49nm,18.7s,baz=70,slow=38
GERES GERESS Array B 78.88 328 P P 06 17 27.3 +0.4
GERES GERESS Array B 78.88 328 P P 06 17 27.3 +0.4
WET Wettzell 78.96 329 P P 06 17 28.3 +1.1
WET pmax pmax
comp=Z,10.0nm,1.4s
VTS Vitosha 79.51 319 ⇑P P 06 17 31.4 +0.9
VTS Vitosha 79.51 319 P P 06 17 32.4 +1.9
SOKA Soboth 80.08 326 eP P 06 17 33.9 +0.4
comp=Z,11nm,0.7s
OBKA Obir 80.42 326 eP P 06 17 35.6 +0.4
comp=Z,8.6nm,0.7s
SCHQ Schefferville 80.42 17 P P 06 17 35.1 +0.2
comp=Z,3.3nm,0.6s,baz=341,slow=4.6,SNR=6.0
SCHQ Schefferville 80.42 17 P P 06 17 35.2 +0.2
SCHQ IAmb IAmb 06 17 35.6
comp=Z,7.5nm,1.0s
KBA Koelnbreinsper 80.45 327 eP P 06 17 35.7 +0.2
comp=Z,15nm,1.2s
KBA Koelnbreinsper 80.45 327 P P 06 17 36.5 +1.0
KBA pmax pmax
comp=Z,12nm,1.2s
MYKA Terra Mystica 80.69 327 eP P 06 17 36.5 -0.2
comp=Z,2.8nm,0.5s
KNT Kendrikon 80.77 318 P P 06 17 37.2 +0.1
KNT pmax pmax
comp=Z,6.0nm,1.2s
ANMO Albuquerque 80.92 51 deP P 06 17 40.0 +1.7
ANMO pmax pmax
comp=Z,1.0nm,1.0s
WATA Walderalm 80.94 329 iP P 06 17 38.5 +0.4
comp=Z,5.9nm,0.5s
WTTA Wattenberg 80.98 328 iP P 06 17 38.6 +0.3
comp=Z,8.3nm,0.8s
GIVF Givet 81.04 334 eP P 06 17 37.5 -0.9
GIVF pmax pmax
comp=Z,23nm,1.2s
MOTA Moosalm 81.12 329 eP P 06 17 39.2 +0.2
comp=Z,18nm,1.0s,SNR=6.7
RETA Reutte 81.13 329 iP P 06 17 39.5 +0.5
comp=Z,9.7nm,0.9s
GRG Griva 81.17 318 eP P 06 17 39.5 +0.2
GRG pmax pmax
comp=Z,7.0nm,1.7s
SQTA Sankt Quirin 81.18 329 eP P 06 17 39.9 +0.5
comp=Z,10nm,0.9s
FETA Feichten 81.53 329 eP P 06 17 41.3 +0.1
comp=Z,8.7nm,1.0s,SNR=6.3
PDG Podgorica 81.56 321 ⇑P P 06 17 41.6 +0.4
PDG Podgorica 81.56 321 P P 06 17 41.6 +0.4
DAVA Damuels 81.63 329 iP P 06 17 42.1 +0.3
comp=Z,16nm,1.0s
CDF Champ du Feu 81.64 332 eP P 06 17 41.2 -0.5
CDF pmax pmax
comp=Z,63nm,2.2s
SLE Schleitheim 81.75 331 P P 06 17 41.9 -0.3
CTI Castel Tesino 81.97 328 P P 06 17 43.0 -0.5
CTI IAmb IAmb 06 17 43.4
comp=Z,7.1nm,0.6s
CTI Castel Tesino 81.97 328 P P 06 17 43.0 -0.5
CTI pmax pmax
comp=Z,7.0nm,0.6s
DAVOX Davos/Dischmat 82.06 329 P P 06 17 44.4 +0.3
comp=Z,3.5nm,0.6s,baz=8.1,slow=7.1,SNR=6.0
KARP Karpathos 82.69 312 P P 06 17 47.9 +0.6
KARP IAmb IAmb 06 18 05.6
comp=Z,18nm,1.0s
VLDQ Val d'Or 83.68 26 IAmb IAmb 06 17 52.0
comp=Z,14nm,1.0s
LOR Lormes 83.81 333 P P 06 17 52.9 0.0
LOR pmax pmax
comp=Z,18nm,0.9s
LDF La Druitiere 83.93 336 eP P 06 17 53.3 -0.1
LDF pmax pmax
comp=Z,33nm,1.3s
SSF Saint Saulge 84.11 333 eP P 06 17 53.8 -0.6
SSF pmax pmax
comp=Z,38nm,1.6s
LPL La Plagne 84.30 330 eP P 06 17 55.6 -0.1
LPL pmax pmax
comp=Z,10.0nm,1.0s
LPG La Plagne 84.31 330 eP P 06 17 55.9 +0.1
LPG pmax pmax
comp=Z,14nm,1.0s
SMF Signal de Mont 84.36 333 eP P 06 17 55.2 -0.5
SMF pmax pmax
comp=Z,69nm,2.0s
AVF Avril sur Loir 84.40 333 eP P 06 17 55.4 -0.4
AVF pmax pmax
comp=Z,13nm,0.7s
D53A Lac Vacive, Po 84.50 26 P P 06 17 56.5 +0.1
D53A IAmb IAmb 06 17 56.9
comp=Z,6.6nm,0.9s
MBDF Montbardon 84.96 330 eP P 06 17 59.4 +0.5
MBDF pmax pmax
comp=Z,32nm,1.4s
ROSF Rostrenen 85.08 338 eP P 06 17 59.7 +0.5
ROSF pmax pmax
comp=Z,294nm,2.0s
ORIF Oris-en-Rattie 85.12 331 P P 06 17 59.7 0.0
ORIF pmax pmax
comp=Z,19nm,2.3s
TCF Toulx Ste Croi 85.22 333 eP P 06 18 00.0 0.0
TCF pmax pmax
comp=Z,65nm,1.5s
ISO Isola 85.32 329 P P 06 18 00.2 -0.4
WMOK Wichita Mounta 85.36 46 P P 06 18 01.3 +0.3
WMOK pmax pmax
comp=Z,4.0nm,2.1s
QUIF Quistinic 85.43 338 eP P 06 18 01.1 +0.1
QUIF pmax pmax
comp=Z,158nm,1.8s
PMOR Pomariorio Ree 85.56 115 eT T 07 51 56.0
comp=Z,24nm,0.2s
VIVF Saint-Julien-l 85.62 331 eP P 06 18 02.0 0.0
VIVF pmax pmax

comp=Z,16nm,1.1s
MFF Saint Martin d 85.71 335 P P 06 18 02.5 +0.1
MFF pmax pmax
comp=Z,46nm,1.6s
FRF La Foret Royal 86.00 329 eP P 06 18 01.3 -2.6
PPT Papeete 86.26 117 LR LR 06 47 36.3
comp=Z,53nm,21.4s,baz=8.0,slow=29
PPT2 Papeete2 86.28 117 eLR LR 06 45 30.9
comp=Z,151nm,26.0s
PPT2 Papeete2 86.28 117 eT T 07 52 50.8
comp=Z,5.1nm,0.3s
RJF Les Rejaudoux 86.32 333 eP P 06 18 05.6 +0.2
RJF pmax pmax
comp=Z,83nm,1.9s
PAE Paea 86.33 118 eT T 07 52 53.5
comp=Z,0.7nm,0.3s
CAF Calviac 86.47 333 eP P 06 18 06.7 +0.5
CAF pmax pmax
comp=Z,41nm,1.2s
TXAR Lajitas Array 86.59 53 P P 06 18 08.1 +0.9
comp=Z,1.0nm,0.5s,baz=282,slow=3.6,SNR=6.3
LFF La Frestale 86.90 334 eP P 06 18 08.6 +0.3
LFF pmax pmax
comp=Z,24nm,1.2s
MEH Mehetia 87.48 117 eT T 07 54 20.3
comp=Z,10nm,0.2s
MTLF Montolieu 87.81 332 eP P 06 18 10.6 -2.1
MTLF pmax pmax
comp=Z,88nm,2.3s
ETSF Etsaut 89.14 334 eP P 06 18 19.4 +0.3
ETSF pmax pmax
comp=Z,77nm,1.9s
SJPF Ste Jean 89.17 334 eP P 06 18 20.6 +1.5
SJPF pmax pmax
comp=Z,115nm,1.6s
TBI Tubuai 90.49 121 eT T 07 58 05.9
comp=Z,12nm,0.4s
KEST Kesra 91.50 323 P P 06 18 29.9 -0.3
comp=Z,3.9nm,0.9s,baz=350,slow=6.1,SNR=4.2
KEST LR LR 07 02 48.3
comp=Z,64nm,20.1s,baz=306,slow=38
TORD Torodi Ar. Bea 114.26 317 PKP PKiKP 06 24 02.6 -0.6
comp=Z,0.2nm,0.5s,baz=13,slow=1.8,SNR=3.6
SNAA Sanae 145.64 199 PKPdf PKPab 06 25 02.4 +1.2
VNA2 Neumayer--Watz 147.22 198 PKPdf PKPbc 06 25 05.6 +0.2
baz=128,slow=2.0
BDFB Brasilia 152.30 22 PKPbc PKiKP 06 25 20.0 +0.1
comp=Z,3.0nm,0.8s,baz=117,slow=2.3,SNR=4.6
BDFB PKPab PKPab 06 25 30.5 +0.8
comp=Z,1.6nm,0.4s,baz=143,slow=1.3,SNR=4.1
BDFB Brasilia 152.30 22 PKIKP PKiKP 06 25 20.0 +0.1

SOME 11 06:08:43.0, 41.18N×71.03E, h0km
KRNET 11 06:08:44.0±0.1, 41.39N×71.01E, mb2.5
NNC 11 06:08:44.7±3.2, 41.23N×71.04E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=26.8km s-min=9.2km az=14.0
ISC 11 06:08:45.3±1.4, 41.35N±0.06×71.13E±0.03, h12km±14km, n16, σ1.28/28, 12C-6D, Kyrgyzstan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
IUG Iuzhnay 1.14 314 eP Pg 06 09 06.6 -0.7
0.8nm,0.4s
IUG eS Sg 06 09 22.3 +0.1
14nm,0.6s
IUG Iuzhnay 1.14 314 P Pg 06 09 07.7 +0.4
3.4nm,0.4s
IUG S Sg 06 09 22.3 +0.1
14nm,0.6s
BTK Batken 1.31 190 ⇑iP Pn 06 09 09.3 -0.2
baz=86
BTK ⇑iS Sn 06 09 28.5 +1.5
baz=86
ARSB Arslanbob 1.40 90 ⇑iP Pg 06 09 12.3 +0.2
baz=92
ARSB ⇑iS Sg 06 09 32.6 +2.3
baz=92
KK31 Karatay Array 1.81 346 ⇑Pg Pg 06 09 20.5 +0.4
3.2nm,0.5s,baz=168,slow=15,SNR=71
KK31 ⇑Lg Lg 06 09 47.1
14nm,0.6s,baz=163,slow=30,SNR=18
AML Almayashu 2.07 67 ⇑iP Pb 06 09 23.3 +0.2
baz=69
AML ⇑iS Sg 06 09 52.6 +0.6
baz=69
MRKS Merke 2.09 48 eP Pg 06 09 25.8 +0.3
3.5nm,0.6s
MRKS eS Sg 06 09 54.2 +1.6
5.1nm,0.5s
MRKS Merke 2.09 48 Pg Pg 06 09 26.7 +1.3
2.8nm,0.4s
MRKS Lg Lg 06 09 55.3
5.1nm,0.5s
EKS2 Erkin-Say 2.37 56 ⇓iP Pb 06 09 26.7 -1.3
baz=57
EKS2 ⇓iS Sb 06 09 58.2 +1.0
baz=57
ARLS Aral 2.45 77 ⇓iP Pb 06 09 28.8 -0.6
baz=78
ARLS ⇓iS Sb 06 10 01.2 +1.6
baz=78
UCH Uchtor 2.68 70 ⇑iP Pb 06 09 32.2 -1.2
baz=71
UCH ⇑iS Sb 06 10 06.6 +0.1
baz=71
AAK Ala-Archa 2.82 62 ⇑Pg Pb 06 09 36.6 +0.9
2.4nm,1.1s
AAK ⇑Lg Lg 06 10 15.5
7.7nm,1.1s
KZA Kyzart 3.17 75 ⇓iP Pb 06 09 39.1 -2.7
baz=76
KZA ⇓iS Sb 06 10 19.0 -1.5
baz=76
DGS Degeres 3.93 60 eP Pg 06 09 58.8 -1.7
1.3nm,0.5s
DGS eS Sg 06 10 51.6 +0.1
2.4nm,0.7s
KST Kastek 3.97 63 eP Pg 06 09 59.5 -1.8
2.6nm,0.8s
KST eS Sg 06 10 52.7 -0.1
2.3nm,0.9s
KST Kastek 3.97 63 Pg Pg 06 09 59.9 -1.5
2.3nm,0.8s
KST Lg Lg 06 10 51.9
2.2nm,0.6s

ROM 11 06:16:28.7±0.1, 43.392N±0.003×12.515E±0.004, h5km±1km, ML1.4/1, Error ellipse: s-maj=0.4km s-min=0.1km az=63.0, Central Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ATFO Monte Foce - G 0.05 121 P Pg 06 16 30.1 +0.1
ATFO S Sg 06 16 31.1 +0.2
ATVO AVT- Monte Val 0.08 263 P Pg 06 16 30.6 +0.1
ATVO S Sg 06 16 32.0 +0.3
ATPI Pietralunga - 0.10 306 P Pg 06 16 31.1 +0.3
ATPI S Sg 06 16 33.2 +0.9
MURB Monte Urbino 0.13 177 P Pg 06 16 31.8 +0.5
MURB S Sg 06 16 34.1 +1.0
MURB AML AML
comp=E,297μm,0.7s
MURB AML AML
comp=N,266μm,0.9s
NARO Abbazia di Nar 0.22 12 P Pg 06 16 33.6 +0.5
NARO S Sg 06 16 37.6 +1.5

IDC 11 06:29:25.4±0.7, 33.75N×89.21E, h0km, mb3.8/15, mb1 4.0/18, mb1mx3.8/59, mbtmp3.8/18, ML3.1/2, MS3.7/1, Ms1 3.7/1, ms1mx2.7/43, Error ellipse: s-maj=24.3km s-min=15.5km az=46.0
ISC 11 06:29:28.4±0.7, 33.9N±0.1×89.2E±0.1, h17km, n21, σ0.81/20, mb4.0/14, Xizang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MKAR Makanchi Array 13.95 340 Pn Pn 06 32 44.1 -1.1
0.1nm,0.3s,baz=145,slow=13,SNR=6.5
CMAR Chiang Mai Arr 17.63 148 P Pn 06 33 34.1 +0.8
0.3nm,0.3s,baz=313,slow=12,SNR=5.5
KURBB Kurchatov Arra 18.50 338 P P 06 33 43.0 -0.5
baz=145,slow=12,SNR=13
SONM Songino Array 19.04 38 P Pn 06 33 51.1 +0.7
0.1nm,0.3s,baz=230,slow=11,SNR=15
ZALV Zalesovo Beam 20.34 353 P P 06 34 04.0 +0.4
4.6nm,0.9s,baz=163,slow=11,SNR=5.1
TLY Talaya 20.68 26 LR LR 06 43 29.0
comp=Z,193nm,18.7s,baz=86,slow=41
BVAR Borovoye Array 23.41 331 P P 06 34 37.5 +1.2
1.6nm,0.8s,baz=129,slow=11,SNR=7.2
KLR Kul'dur 34.87 51 P P 06 36 19.3 +0.7
1.2nm,0.7s,baz=249,slow=7.2,SNR=4.1
BRTR Keskin Array B 44.27 294 P P 06 37 37.5 +0.2
0.8nm,0.8s,baz=120,slow=8.8,SNR=4.5
FINES FINESS Array B 48.16 325 P P 06 38 07.3 0.0
1.1nm,0.6s,baz=96,slow=12,SNR=4.6
MLR Muntele Rosu 48.88 304 P P 06 38 15.1 +1.8
5.7nm,0.9s,baz=56,slow=7.3,SNR=7.8
HFS Hagfors 54.25 323 P P 06 38 53.1 +0.1
3.0nm,0.7s,baz=76,slow=7.8,SNR=5.4
NB2 NORSAR Subarra 55.34 325 P P 06 39 01.2 +0.2
comp=Z,1.3nm,0.7s,baz=82,slow=7.4
NOA NORSAR Array B 55.34 325 P P 06 39 01.0 0.0
comp=Z,1.6nm,0.7s,baz=82,slow=7.2,SNR=7.0
GERES GERESS Array B 56.36 310 P P 06 39 09.5 +0.9
comp=Z,1.1nm,0.7s,baz=72,slow=6.0,SNR=4.1
WRA Warramunga Arr 68.64 134 P P 06 40 30.5 -0.3
comp=Z,0.8nm,0.7s,baz=323,slow=6.1,SNR=4.9
ASAR Alice Springs 71.28 137 P P 06 40 46.5 -0.4
comp=Z,0.4nm,0.6s,baz=316,slow=6.6,SNR=7.0
ILAR Eielson Array 72.43 22 P P 06 40 53.0 -0.4
comp=Z,0.3nm,0.8s,baz=308,slow=4.4,SNR=4.0
TORD Torodi Ar. Bea 80.75 280 P P 06 41 40.5 -0.8
comp=Z,0.3nm,0.7s,baz=61,slow=5.5,SNR=2.6
STKA Stephens Creek 81.92 137 P P 06 41 46.1 -0.9
comp=Z,0.8nm,0.4s,baz=315,slow=8.6,SNR=2.9
YKA Yellowknife Ar 82.10 11 P P 06 41 47.0 -0.6
comp=Z,0.1nm,0.6s,baz=325,slow=6.1,SNR=3.8

NNC 11 06:31:03.7±2.4, 54.46N×86.44E, h0km, mb3.0, mpv2.9, 5C-5D, Error ellipse: s-maj=28.0km s-min=12.4km az=162.0, Suspected Mining explosion., Southwestern Siberia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ZAA0 Zalesovo Array 1.08 242 ⇑P Pg 06 31 23.8 -0.5
0.7nm,1.2s
ZAA0 ⇓S Sb 06 31 39.3 -0.6
16nm,1.3s
KURK Kurchatov 6.06 235 ⇑Pn Pn 06 32 38.3 +3.8
1.4nm,0.5s
KURK ⇑Lg Lg 06 34 16.4
12nm,1.1s
KURBB Kurchatov Arra 6.17 235 ⇓Pn Pn 06 32 37.8 +1.9
1.1nm,0.6s
KURBB ⇓Lg Lg 06 34 21.4
15nm,1.3s
MK31 Makanchi Array 8.11 201 Pn Pn 06 33 01.4 -1.3
4.7nm,1.4s,baz=24,slow=13,SNR=5.1
MK31 ⇓Sn Sn 06 34 36.1 +1.1
0.4nm,0.5s,baz=23,slow=27,SNR=7.7
MK31 ⇑Lg Lg 06 35 20.9
4.3nm,1.0s
MAKZ Makanchi 8.17 202 ⇓Sn Sn 06 34 38.1 +1.7
1.6nm,0.9s
MAKZ ⇑Lg Lg 06 35 24.7
4.1nm,1.2s

IDC 11 06:46:07.8±0.9, 8.60S×112.35E, h0km, mb4.2/12, mb1 4.2/13, mb1mx4.0/40, mbtmp4.2/13, ML4.0/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/31, Error ellipse: s-maj=45.9km s-min=14.3km az=54.0
NEIC 11 06:46:18.7±1.1, 8.6S±0.1×112.56E±0.06, h89km±8km, mb4.2/5, Error ellipse: s-maj=20.9km s-min=8.6km az=190.0
DJA 11 06:46:18.1±0.6, 9°S±4°×11°2E±°, h34km±10km, M4.5/18, mB5.2/2, mb4.5/3, MLv4.4/18, Mw(mB)4.6/2
ISC 11 06:46:18.7±0.6, 8.75S±0.08×112.49E±0.04, h91km, n46, σ1.04/47, mb4.1/14, Jawa

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PCJI Pacitan 1.41 293 P Pn 06 46 42.2 -1.2
PCJI S Sn 06 46 59.6 -2.4
JAGI Jajag, Banyuwa 1.67 81 P Pn 06 46 45.5 -1.2
JAGI Jajag, Banyuwa 1.67 81 Pn 06 46 45.4 -1.2
JAGI Sn Sn 06 47 05.5 -2.4
NGJI Ngawi 1.71 323 P Pn 06 46 48.1 +0.9
NGJI S Sn 06 47 09.1 +0.4
WOJI Wonogiri, Jawa 1.79 300 P Pn 06 46 47.3 -1.0
WOJI S Sn 06 47 09.0 -1.7
GRJI Gresik 1.82 360 P Pn 06 46 48.9 +0.2
UGM Wanagama 2.11 293 P Pn 06 46 51.8 -0.7
UGM Wanagama 2.11 293 Pn 06 46 52.1 -0.4
KMMI Kalianget 2.23 41 P Pn 06 46 53.7 -0.3
IGBI Denpasar 2.63 92 P Pn 06 46 58.8 -0.5
SMRI Semarang 2.64 310 P Pn 06 46 59.6 +0.1
SMRI Semarang 2.64 310 Pn 06 46 59.6 +0.1
DNP Denpasar 2.69 89 P Pn 06 46 59.5 -0.6
UWJI Ujung Watu 2.77 326 P Pn 06 47 01.2 0.0
SRBI Singaraja 2.77 77 P Pn 06 47 00.9 -0.3
KPJI Karang Pucung 3.79 291 P Pn 06 47 15.2 +0.2
CMJI Cimerak 4.11 283 P Pn 06 47 18.2 -1.1
CISI Cisompet, Garu 4.78 284 P Pn 06 47 27.8 -0.6
CISI Cisompet, Garu 4.78 284 Pn 06 47 28.4 0.0
PLAI Plampang 5.23 91 P Pn 06 47 34.7 +0.2
0.5nm1μm83nm,0.9s
CNJI Cibinong 5.50 285 P Pn 06 47 36.3 -1.8
0.6nm4μm44nm,0.9s
KAPI Kappang 8.11 63 LR LR 06 51 19.9
comp=Z,44nm,20.4s,baz=214,slow=38
FITZ Fitzroy Crossi 15.80 127 Pn Pn 06 49 55.5 -0.6
comp=Z,5.0nm,0.3s,baz=315,slow=8.0,SNR=7.4
FITZ Sn Sn 06 52 36.7 -14
0.4nm,0.3s,baz=23,slow=20,SNR=6.0
WB0 Warramunga Arr 23.86 120 P P 06 51 24.1 +0.1
WB0 IAmb IAmb 06 51 33.8
comp=Z,15nm,1.4s
WRA Warramunga Arr 23.88 120 P P 06 51 24.6 +0.4
comp=Z,1.4nm,0.5s,baz=297,slow=11,SNR=14
WRA Warramunga Arr 23.88 120 IAmb IAmb 06 51 26.9
comp=Z,0.4nm,1.3s
WR0 Warramunga Arr 24.06 120 P P 06 51 27.0 +1.2
WR0 IAmb IAmb 06 51 27.4
comp=Z,7.5nm,0.6s
ASAR Alice Springs 25.30 128 P P 06 51 38.0 +1.0
comp=Z,1.2nm,0.5s,baz=303,slow=9.3,SNR=22
ASAR PcP PcP 06 55 09.7 +1.7
comp=Z,0.5nm,0.4s,baz=320,slow=1.9,SNR=5.2
ASAR Alice Springs 25.30 128 P P 06 51 37.5 +0.5
STKA Stephens Creek 35.49 135 P P 06 53 08.6 +1.8
comp=Z,6.0nm,0.5s,baz=314,slow=9.0,SNR=29
STKA PcP PcP 06 55 36.1 +1.7
comp=Z,2.2nm,0.4s,baz=1.7,slow=4.1,SNR=7.2
STKA Stephens Creek 35.49 135 P P 06 53 07.9 +1.1
STKA IAmb IAmb 06 53 09.2
comp=Z,1.3nm,0.6s
USRK Ussuriysk Ar. 55.58 17 P P 06 55 44.7 -0.1
comp=Z,3.9nm,0.8s,baz=226,slow=3.1,SNR=7.5
SONM Songino Array 56.59 355 P P 06 55 52.0 -0.1
comp=Z,0.9nm,0.6s,baz=178,slow=8.2,SNR=9.1
SONM Songino Array 56.59 355 IAmb IAmb 06 55 52.6
comp=Z,0.7nm,0.6s
KSH Kashi 58.75 327 P P 06 56 14.7 +7.3
KLR Kul'dur 60.15 14 P P 06 56 16.0 -0.7
comp=Z,1.0nm,0.5s,baz=204,slow=4.7,SNR=9.1
MKAR Makanchi Array 61.49 337 P P 06 56 25.4 -0.5
comp=Z,1.7nm,0.6s,baz=148,slow=7.6,SNR=23
MKAR Makanchi Array 61.49 337 P P 06 56 24.6 -1.3
OPO Ambohidratompo 63.92 254 LR LR 07 20 32.8
comp=Z,34nm,20.6s,baz=294,slow=32
KURBB Kurchatov Arra 66.06 337 P P 06 56 55.0 -0.7
comp=Z,0.7nm,0.5s,baz=152,slow=6.0,SNR=6.5
ZALV Zalesovo Beam 66.69 343 P P 06 56 58.5 -1.2
comp=Z,1.4nm,0.5s,baz=155,slow=4.9,SNR=5.7
BVAR Borovoye Array 71.18 335 P P 06 57 27.0 -0.5
comp=Z,0.5nm,0.6s,baz=139,slow=11,SNR=3.6
ABKAR Akbulak array 73.75 327 P P 06 57 42.2 -0.8
AKTO Aktyubinsk 75.45 327 P P 06 57 52.9 +0.1
comp=Z,1.0nm,0.6s,baz=114,slow=10.0,SNR=4.4
BRTR Keskin Array B 87.06 311 P P 06 58 54.9 +0.3
comp=Z,1.2nm,0.8s,baz=116,slow=5.6,SNR=6.2
YKA Yellowknife Ar 116.50 22 PKP PKiKP 07 04 52.5 +0.9
comp=Z,0.2nm,0.5s,baz=342,slow=2.0,SNR=5.0

IDC 11 07:10:12.3±12.0, 4.56S×101.99W, h0km, mb3.6/3, mb1 4.0/3, mb1mx3.5/37, mbtmp3.6/3, MS3.4/5, Ms1 3.4/5, ms1mx3.1/20, Error ellipse: s-maj=494.6km s-min=192.8km az=108.0, Central East Pacific Rise

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
APG El Apazote 22.55 30 LR LR 07 22 12.1
comp=Z,106nm,21.1s,baz=221,slow=32
CMIG Matias Romero 22.63 18 LR LR 07 22 05.9
comp=Z,119nm,20.5s,baz=210,slow=32
TEIG Tepich 28.08 28 LR LR 07 25 57.9
comp=Z,91nm,18.9s,baz=146,slow=34
LPAZ La Paz 35.21 112 LR LR 07 30 34.6
comp=Z,38nm,18.1s,baz=304,slow=35
PDAR Pinedale Array 47.61 352 P P 07 18 50.1 -0.3
0.8nm,0.8s,baz=165,slow=7.5,SNR=7.8
SCHQ Schefferville 65.98 21 LR LR 07 48 37.9
comp=Z,35nm,21.0s,baz=348,slow=35
YKA Yellowknife Ar 67.56 354 P P 07 21 10.4 +0.1
0.2nm,0.5s,baz=159,slow=5.9,SNR=5.6
ILAR Eielson Array 76.63 342 P P 07 22 04.7 0.0
0.4nm,0.9s,baz=163,slow=6.6,SNR=4.6
H11S2 WAKE ISLAND Hy 92.67 288 T T 09 04 01.4
baz=94,slow=75,SNR=13
H11S1 WAKE ISLAND Hy 92.67 288 T T 09 04 03.2
baz=94,slow=75,SNR=15
H11S3 WAKE ISLAND Hy 92.68 288 T T 09 04 02.7
baz=94,slow=75,SNR=17

UCR 11 07:16:28.3±1.6, 8.79N×83.03W, h28km±6km, MW3.6, 1C, Costa Rica

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
EDSV San Vito 0.07 66 eP Pb 07 16 34.3 +1.0
EDSV eS Sb 07 16 37.6 +0.9
BRU2 Volcan 0.34 90 ⇑iP Pb 07 16 36.0 -0.2
BRU2 eS Sb 07 16 41.8 +0.1
EDLM Las Mercedes 0.73 311 eP Pb 07 16 41.8 -0.7
EDLM eS Sb 07 16 52.5 +0.3
LCR2 La Lucha 2 1.34 315 eP Pn 07 16 51.4 0.0

IDC 11 07:29:09.4±2.0, 8.34S×119.62E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.6/30, mbtmp3.7/4, ML3.7/1, Error ellipse: s-maj=212.6km s-min=23.6km az=54.0, Flores region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 18.33 131 P Pn 07 33 24.7 -0.7
0.3nm,0.8s,baz=307,slow=13,SNR=7.0
ASAR Alice Springs 20.48 140 P P 07 33 49.4 +0.3
2.2nm,0.5s,baz=312,slow=9.8,SNR=39
STKA Stephens Creek 31.08 142 P P 07 35 29.6 +0.1
0.9nm,0.4s,baz=315,slow=10,SNR=8.1
MKAR Makanchi Array 64.15 332 P P 07 39 45.7 -0.1
0.3nm,0.9s,baz=127,slow=5.9,SNR=2.4

NEIC 11 08:33:29.9±1.1, 4.87N±0.08×34.77E±0.05, h10km±1km, mb4.4/14, Error ellipse: s-maj=13.8km s-min=7.3km az=160.0
IDC 11 08:33:29.0±1.2, 4.92N×34.89E, h0km, mb3.9/4, mb1 4.1/6, mb1mx3.6/53, mbtmp4.0/6, ML3.3/1, MS3.4/9, Ms1 3.4/9, ms1mx3.0/44, Error ellipse: s-maj=33.1km s-min=25.0km az=139.0
AAE 11 08:33:32.5, 5.03N×32.64E
ISC 11 08:33:29.7±0.5, 4.85N±0.05×34.79E±0.07, h10km, n44, σ1.33/44, mb4.2/10, MS3.4/8, 1D, Sudan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TEBE Entebbe 5.29 206 eP Pn 08 34 52.5 +3.4
TEBE eS Sg 08 36 19.1 -0.8
FURI Furi 5.58 44 eP Pb 08 35 08.3 +0.8
FURI eS Sg 08 36 26.7 -2.3
FURI Furi 5.58 44 Pn Pn 08 34 53.6 +0.5
FURI Pg Pg 08 35 16.4 -0.3
FURI Furi 5.58 44 eP Pb 08 35 08.3 +0.8
FURI eS Sg 08 36 26.7 -2.3
AAE Adis Abeba 5.73 43 eP Pb 08 35 07.8 -2.3
AAE eS Sg 08 36 36.5 +2.5
AAE Adis Abeba 5.73 43 eP Pb 08 35 07.8 -2.3
AAE eS Sg 08 36 36.5 +2.5
KMBO Kilima Mbogo 6.43 157 Pn Pn 08 35 06.9 +2.1
0.7nm,0.3s,baz=326,slow=15,SNR=6.2
KMBO Lg Lg 08 36 45.9
2.3nm,0.3s,baz=58,slow=19,SNR=3.9
KMBO Kilima Mbogo 6.43 157 Pn 08 35 05.8 +1.0
KMBO Sn Sn 08 36 17.5 -0.9
MBAR Mbarara 6.76 217 Pn Pn 08 35 10.3 +1.1
baz=17,slow=20
MBAR Lg Lg 08 36 59.4
152nm,0.3s,baz=120,slow=23,SNR=18
MBAR LR LR 08 38 06.6
comp=Z,355nm,18.0s,baz=56,slow=40
MBAR Mbarara 6.76 217 eP Pn 08 35 10.8 +1.6
MBAR eS Sb 08 36 59.9 +11
MBAR Mbarara 6.76 217 Pn 08 35 09.5 +0.3
MBAR Sn Sn 08 36 23.5 -2.9
ATD Arta Tunnel 10.38 50 eP Pn 08 36 46.6 +48
ATD eS 08 39 03.1
ATD Arta Tunnel 10.38 50 Pn Pn 08 35 59.0 +0.2
ATD Arta Tunnel 10.38 50 eP Pn 08 36 46.6 +48
ATD eS 08 39 03.1
LSZ Lusaka 21.04 198 LR LR 08 45 33.0
comp=Z,55nm,18.5s,baz=66,slow=34
LSZ Lusaka 21.04 198 P P 08 38 14.0 -0.1
MSEY Mahe Island 22.73 114 P P 08 38 32.0 -0.2
TOA0 Torodi Ar. Sit 33.67 286 P P 08 40 11.3 +0.1
TOA0 IAmb IAmb 08 40 28.9
comp=Z,12nm,1.8s
TORD Torodi Ar. Bea 33.67 286 P P 08 40 12.9 +1.7
comp=Z,1.3nm,0.9s,baz=96,slow=8.9,SNR=5.9
TORD LR LR 08 53 13.4
comp=Z,86nm,18.2s,baz=95,slow=35
TORD Torodi Ar. Bea 33.67 286 P P 08 40 11.2 0.0
BR131 Keskin Array S 34.73 358 P P 08 40 20.8 +0.5
BRTR Keskin Array B 34.73 358 P P 08 40 20.4 +0.2
LIT Litokhoron 36.80 344 P P 08 40 38.7 +0.8
HRA Herat 38.88 37 P P 08 40 55.6 -0.2
HRA IAmb IAmb 08 41 00.5
comp=Z,2.7nm,0.5s
GEYT Alibeck 39.20 30 LR LR 08 57 09.7
comp=Z,43nm,18.0s,baz=235,slow=36
GEYT Alibeck 39.20 30 P P 08 40 58.0 -0.2
DBIC Dimbokro 39.48 275 LR LR 08 56 01.5
comp=Z,67nm,19.8s,baz=80,slow=34
BURAR Bucovina Array 43.39 351 P P 08 41 32.8 +0.2
SALO Salr 45.78 336 P P 08 41 50.6 -1.0
GERES GERESS Array B 47.37 341 P P 08 42 04.5 +0.4
AKTO Aktyubinsk 49.45 19 LR LR 09 04 26.6
comp=Z,20nm,18.3s,baz=180,slow=38
KK31 Karatay Array 49.48 34 P P 08 42 20.7 +0.2
KK31 IAmb IAmb 08 42 21.9
comp=Z,3.0nm,1.0s
KKAR Karatay Array 49.48 34 P P 08 42 20.5 +0.1
KKAR IAmb IAmb 08 42 21.9
comp=Z,3.0nm,1.0s
KKAR Karatay Array 49.48 34 P P 08 42 20.7 +0.2
MK31 Makanchi Array 58.43 36 P P 08 43 25.5 -0.3
MKAR Makanchi Array 58.43 36 P P 08 43 25.9 +0.1
comp=Z,1.0nm,0.8s,baz=243,slow=5.3,SNR=10.0
MKAR Makanchi Array 58.43 36 P P 08 43 25.2 -0.6
KURBB Kurchatov Arra 58.45 31 P P 08 43 26.0 +0.2
comp=Z,1.2nm,0.5s,baz=237,slow=7.5,SNR=7.5
KURBB Kurchatov Arra 58.45 31 ⇓Pn P 08 43 26.0 +0.2
comp=Z,1.4nm,0.3s,baz=59,slow=14
KURK Kurchatov 58.55 31 P P 08 43 25.8 -0.7
KURK IAmb IAmb 08 43 26.1
comp=Z,1.7nm,0.8s
LSA Lhasa 58.56 58 P P 08 43 27.4 -0.2
LSA IAmb IAmb 08 43 29.1
comp=Z,12nm,1.6s
CMAR Chiang Mai Arr 63.98 72 P P 08 44 03.4 -0.5
comp=Z,0.5nm,0.3s,baz=278,slow=7.7,SNR=5.4
CMAR LR LR 09 09 56.4
comp=Z,9.9nm,21.9s,baz=195,slow=34
BDFB Brasilia 84.39 254 LR LR 09 20 30.0
comp=Z,43nm,18.9s,baz=162,slow=33

KSRS	Korea Array	89.57	53	LR	LR	09 29 28.0	
	comp=Z,14nm,19.9s,baz=220,slow=38						

IDC 11 08:33:47.3±13.0,12°.02S×166°.23E,h126km±147km, mb3.7/4,mb1 3.9/5,mb1mx3.4/37,mbtmp4.1/5,ML3.1/1, MS2.6/1,Ms1 2.6/1,ms1mx2.3/40,Error ellipse: s-maj=107.0km s-min=53.9km az=146.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.69	292	LR	LR	08 37 32.3	
	comp=Z,57nm,21.6s,baz=146,slow=34						
DZM	Mont Dzumac	9.99	179	P	Pn	08 36 07.7	0.0
	0.2nm,0.3s,baz=304,slow=18,SNR=4.8						
DZM				S	Sn	08 37 58.6	+0.5
	0.1nm,0.3s,baz=270,slow=20,SNR=2.2						
WRA	Warramunga Arr	31.61	251	P	P	08 39 58.3	-0.1
	2.6nm,0.4s,baz=79,slow=8.5,SNR=3.2						
ASAR	Alice Springs	32.79	245	P	P	08 40 08.5	-0.3
	0.7nm,0.8s,baz=71,slow=9.1,SNR=8.6						
CMAR	Chiang Mai Arr	72.94	294	P	P	08 45 04.3	+0.9
	0.5nm,0.3s,baz=101,slow=4.7,SNR=4.1						
MKAR	Makanchi Array	94.56	317	P	P	08 46 52.8	-0.9
	0.5nm,0.7s,baz=95,slow=6.3,SNR=4.1						

KRAR 11 08:41:53.6±0.1,54°.10N×87°.11E,M2.4,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)

NNC 11 08:41:48.9±3.6,54°.03N×87°.29E,h0km,mb3.1,mpv2.9, 4C-5D,Error ellipse: s-maj=29.7km s-min=17.1km az=26.0,Suspected Mining explosion.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.46	268	⇓P	Pn	08 42 15.7	-0.8
	0.5nm,0.3s						
ZAA0				⇓S	Sg	08 42 35.7	-0.1
	4.6nm,0.9s						
KURK	Kurchatov	6.26	242	⇑Sn	Sn	08 44 36.2	+1.7
	2.4nm,1.1s						
KURK				⇓Lg	Lg	08 45 08.0	
	3.4nm,1.0s						
KURBB	Kurchatov Arra	6.36	241	⇑Sn	Sn	08 44 37.4	+0.3
	2.8nm,0.7s						
KURBB				⇓Lg	Lg	08 45 13.2	
	7.5nm,1.2s,baz=61,slow=30						
MK31	Makanchi Array	7.91	206	⇓Pn	Pn	08 43 42.8	-2.3
	1.4nm,0.8s,baz=239,slow=4.8,SNR=8.1						
MK31				⇑Sn	Sn	08 45 18.9	+3.6
	1.5nm,1.1s,baz=155,slow=52,SNR=4.8						
MK31				⇑Lg	Lg	08 46 03.1	
	4.5nm,1.1s,baz=13,slow=35,SNR=5.3						

IDC 11 08:43:13.3±6.0,4°.71S×153°.53E,h124km±35km,mb3.1/3, mb1 3.4/4,mb1mx3.7/35,mbtmp3.7/4,Error ellipse: s-maj=71.2km s-min=30.2km az=94.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.55	285	P	Pn	08 43 40.9	-0.8
	15nm,0.3s,baz=59,slow=1.5,SNR=5.3						
KRVT				S	Sn	08 44 03.2	+0.1
	27nm,0.3s,baz=8.4,slow=18,SNR=10						
PMG	Port Moresby	7.85	233	P	Pn	08 45 06.1	+1.3
	3.7nm,0.3s,baz=41,slow=11,SNR=5.7						
WRA	Warramunga Arr	24.05	229	P	P	08 48 17.3	+0.2
	0.9nm,0.7s,baz=52,slow=9.5,SNR=8.9						
ASAR	Alice Springs	26.71	223	P	P	08 48 40.4	-0.8
	0.2nm,0.4s,baz=55,slow=8.7,SNR=6.5						
MKAR	Makanchi Array	80.73	319	P	P	08 55 13.5	+0.5
	0.3nm,0.8s,baz=79,slow=7.6,SNR=3.6						

ANF 11 08:49:20.6±1.2,36°.08N×97°.30W,h0km,ML3.8/8,Error ellipse: s-maj=17.6km s-min=4.4km az=165.0

NEIC 11 08:49:21.6±1.2,36°.13N±0°.03×97°.28W±0°.04,h3km±7km, Error ellipse: s-maj=4.9km s-min=3.6km az=132.0

TUL 11 08:49:21.4±1.4,36°.127N±0°.009×97°.30W±0°.05,h8km±6km, ML3.0,Error ellipse: s-maj=6.1km s-min=1.2km az=92.0

ISC 11 08:49:21.3±1.7,36°.13N±0°.05×97°.27W±0°.04,h3km±13km, n44,σ0s.88/56,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.48	190	Pg	Pg	08 49 30.8	+0.2
ADOK					Sg	08 49 37.4	+0.6
OKCFA	Oklahoma City	0.72	192	Pg	Pg	08 49 35.2	0.0
OKCFA					Sg	08 49 45.0	+0.4
TUL1	Leonard	1.22	100		Pn	08 49 44.0	-1.3
TUL1				Sg	Sn	08 50 00.8	-1.4
TUL1	Leonard	1.22	100	P	Pn	08 49 44.3	-1.0
	baz=279						
TUL1				S	Sn	08 50 01.1	-1.2
	baz=279						
U32A	Winter Ranch,	1.42	281		Pb	08 49 47.2	-1.3
WMOK	Wichita Mounta	1.85	222		Pb	08 49 54.5	-1.4
WMOK	Wichita Mounta	1.85	222	Pb	Pb	08 49 54.4	-1.4
	baz=42						
WMOK				Sb	Sb	08 50 19.2	-0.2
	baz=42						
HHAR	Hobbs	2.70	86		Pn	08 50 06.0	+0.4
W39A	Magazine	2.99	107		Pn	08 50 09.9	+0.3
W39A	Magazine	2.99	107	P	Pn	08 50 09.7	+0.2
	baz=289						
W39A				Sb	Sb	08 50 53.8	+1.7
	baz=289						
CBKS	Cedar Bluff	3.32	325	Pn	Pn	08 50 15.6	+1.3
MIAR	Mount Ida	3.41	116		Pn	08 50 16.4	+1.1
MIAR	Mount Ida	3.41	116	P	Pn	08 50 16.2	+0.9
	baz=298						
MIAR				S	Sn	08 50 57.3	+1.0
	baz=298						
U40A	Yellville	3.58	85	Pn	Pn	08 50 18.0	+0.3
U40A	Yellville	3.58	85	P	Pn	08 50 17.3	-0.4
	baz=267						
AMTX	Amarillo	3.80	252		Pn	08 50 20.3	-0.6
AMTX	Amarillo	3.80	252	Pb	Pb	08 50 27.6	-1.5
	baz=70						
AMTX				S	Sn	08 51 05.9	-0.2
	baz=70						
X40A	Basin Creek Fa	3.98	113		Pn	08 50 24.2	+1.0
ABTX	Abilene, Hawle	4.01	210		Pn	08 50 23.9	+0.2
ABTX	Abilene, Hawle	4.01	210	Pb	Pb	08 50 31.4	-1.1
	baz=29						
ABTX				Sb	Sb	08 51 23.3	+1.9
	baz=29						
WHTX	Lake Whitney,	4.13	182	Pn	Pn	08 50 26.1	+0.8
WHAR	Wooly Hollow	4.14	100		Pn	08 50 26.2	+0.8
MGMO	Mountain Grove	4.15	74		Pn	08 50 27.3	+1.7
W41B	Gary Mavity, V	4.20	102		Pn	08 50 27.1	+0.9
W41B				Sn	Sn	08 51 16.1	+0.3
W41B	Gary Mavity, V	4.20	102	P	Pn	08 50 25.7	-0.5
	baz=284						
W41B				S	Sn	08 51 15.9	+0.1
	baz=284						
237A	Washetta, Mont	4.29	163	Pn	Pn	08 50 26.9	-0.6
LCAR	Lake Charles	4.96	89	Pn	Pn	08 50 36.0	-0.6
LCAR					Sn	08 51 34.0	-0.4
MSTX	Muleshoe	5.00	246		Pn	08 50 37.7	+0.4
KSCO	Kaye Shedlock'	5.14	306		Pn	08 50 39.7	+0.5
CCM	Cathedral Cave	5.19	66		Pn	08 50 40.2	+0.4
BGNE	Belgrade	5.32	353	Pn	Pn	08 50 41.4	-0.2
T25A	Trinidad	5.83	282	Pn	Pn	08 50 48.8	0.0
JCT	Junction City	6.02	201		Pn	08 50 51.5	+0.3
OXF	Oxford	6.63	102	Pn	Pn	08 50 59.1	-0.5
SDCO	Great Sand Dun	6.79	286	Pn	Pn	08 51 02.3	+0.3
Q24A	Divide	6.87	297	Pn	Pn	08 51 03.7	+0.5
P43A	Skaggs, Pawnee	7.06	58	Pn	Pn	08 51 05.8	+0.2
ISCO	Idaho Springs	7.54	302	Pn	Pn	08 51 13.4	+1.0
L40A	Anamosa	7.57	37	Pn	Pn	08 51 13.4	+1.0
ECSD	EROS Data Cent	7.61	4	Pn	Pn	08 51 12.5	-0.6
HDIL	Hopedale	7.67	52		Pn	08 51 14.3	+0.4
N23A	Red Feather La	8.30	308		Pn	08 51 22.5	-0.2
TXAR	Lajitas Array	8.65	220	Pn	Pn	08 51 28.7	+1.2
TX31	Lajitas Ar. Si	8.65	220		Pn	08 51 27.6	+0.1

NEIC 11 08:58:29.7±1.3,6°.37S±0°.06×151°.95E±0°.09,h35km±1km, mb4.3/12,Error ellipse: s-maj=14.9km s-min=9.4km az=105.0

IDC 11 08:58:31.8±3.7,6°.31S×151°.88E,h50km±24km,mb3.8/6, mb1 4.2/7,mb1mx3.7/42,mbtmp4.2/7,ML2.9/1,MS3.2/3, Ms1 3.2/3,ms1mx2.7/31,Error ellipse: s-maj=55.3km s-min=9.2km az=118.0

ISC 11 08:58:29.9±0.6,6°.37S±0°.06×152°.00E±0°.08,h37km,n33, σ0s.97/35,mb4.3/12,1C-3D,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.05	1	P	Pn	08 59 02.6	+0.8
	252nm,0.3s,baz=221,slow=1.6,SNR=103						
KRVT				S	Sn	08 59 27.4	+1.3
	198nm,0.3s,baz=19,slow=3.9,SNR=8.7						
KRVT				LR	LR	09 00 08.4	
	comp=Z,235nm,19.1s,baz=192,slow=48						
RABL	Rabaul	2.17	4	Pn	Pn	08 59 04.0	+0.6
RABL				Sn	Sn	08 59 29.7	+0.6
PMG	Port Moresby	5.66	237	P	Pn	08 59 53.6	+2.1
	22nm,0.3s,baz=50,slow=9.4,SNR=61						
PMG				S	Sn	09 00 57.0	+1.7
	38nm,0.3s,baz=82,slow=21,SNR=17						
PMG	Port Moresby	5.66	237		Pn	08 59 52.6	+1.1
PMG				Sn	Sn	09 00 53.9	-1.5
MANU	Manus Island	6.31	313	Pn	Pn	09 00 02.1	+1.7
HNR	Honiara	8.44	112	LR	LR	09 03 39.1	
	comp=Z,113nm,21.5s,baz=230,slow=36						
SANVU	Saraoutou	17.43	122		Pn	09 02 31.1	+0.8
SANVU				IAmb	IAmb	09 02 44.5	
	comp=Z,30nm,1.2s						
FAKI	Fak Fak	19.98	279	P	P	09 02 58.8	-0.5
NOUC	Port Laguerre	20.87	140	P	P	09 03 09.2	+0.3
NOUC				IAmb	IAmb	09 03 25.2	
	comp=Z,18nm,1.0s						
DZM	Mont Dzumac	20.94	140	LR	LR	09 10 14.8	
	comp=Z,142nm,20.1s,baz=20,slow=33						
WR0	Warramunga Arr	21.68	230	P	P	09 03 17.2	-0.4
WR0				IAmb	IAmb	09 03 20.6	
	comp=Z,11nm,0.9s						
WB2	Warramunga Arr	21.81	230	P	P	09 03 18.6	-0.5
WB2				IAmb	IAmb	09 03 22.4	
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	21.82	230	P	P	09 03 18.7	-0.4
	comp=Z,9.7nm,0.8s,baz=52,slow=10.0,SNR=38						
WRA	Warramunga Arr	21.82	230	P	P	09 03 18.8	-0.4
AS31	Alice Springs	24.46	223	P	P	09 03 45.3	-0.3
AS31				IAmb	IAmb	09 03 47.7	
	comp=Z,4.7nm,0.6s						
ASAR	Alice Springs	24.46	223	P	P	09 03 46.0	+0.4
	comp=Z,13nm,0.6s,baz=56,slow=8.7,SNR=130						
ASAR	Alice Springs	24.46	223	P	P	09 03 45.6	0.0
STKA	Stephens Creek	27.18	200	P	P	09 04 09.3	-0.6
FITZ	Fitzroy Crossi	28.23	243	P	P	09 04 19.1	-0.4
	comp=Z,9.9nm,0.7s,baz=66,slow=6.7,SNR=12						
FITZ				LR	LR	09 15 56.7	
	comp=Z,38nm,20.4s,baz=132,slow=37						
SONM	Songino Array	67.23	329	P	P	09 09 20.5	-0.1
	comp=Z,0.4nm,0.6s,baz=143,slow=5.0,SNR=5.5						
SONM	Songino Array	67.23	329	P	P	09 09 20.2	-0.3
LSA	Lhasa	68.47	305	P	P	09 09 27.8	-1.4
LSA				IAmb	IAmb	09 09 29.2	
	comp=Z,2.2nm,0.7s						
VNDA	Vanda	71.30	178	P	P	09 09 45.6	+0.4
SKT	Skwentna	80.67	24	P	P	09 10 38.2	-0.6
MKAR	Makanchi Array	80.98	319	P	P	09 10 40.3	-0.5
	comp=Z,0.4nm,0.9s,baz=101,slow=7.5,SNR=3.7						
MKAR	Makanchi Array	80.98	319	P	P	09 10 41.2	+0.4
ZALV	Zalesovo Beam	82.01	327	P	P	09 10 44.9	-1.0
IMAR	Indian Mountai	82.12	20	P	P	09 10 47.0	+0.7
ILAR	Eielson Array	83.90	22	P	P	09 10 56.3	+0.7
	comp=Z,0.4nm,0.8s,baz=245,slow=3.9,SNR=4.7						
KURK	Kurchatov	84.51	322	⇑Pg	P	09 10 57.1	-1.8
	comp=Z,1.7nm,1.0s						
KURK				⇓Lg	Lg	09 11 29.2	
	comp=Z,1.8nm,0.8s						
KURBB	Kurchatov Arra	84.53	322	⇓Pg	P	09 10 57.4	-1.7
	comp=Z,3.3nm,1.2s						
KURBB				⇓Lg	Lg	09 11 29.4	
	comp=Z,7.7nm,0.8s,baz=305,slow=30						
TORD	Torodi Ar. Bea	149.99	285	PKPbc	PKPbc	09 18 17.6	+0.1
	comp=Z,2.1nm,0.6s,baz=75,slow=3.4,SNR=11						
TORD	Torodi Ar. Bea	149.99	285		PKPbc	09 18 17.3	-0.2

IDC 11 09:05:28.5±1.0,52°.98S×106°.73E,h0km,mb4.5/8, mb1 4.7/8,mb1mx4.2/31,mbtmp4.5/8,MS3.5/3,Ms1 3.4/3, ms1mx3.0/20,Error ellipse: s-maj=40.3km s-min=17.7km az=104.0

NEIC 11 09:05:30.0±1.3,52°.9S±0°.1×106°.8E±0°.3,h10km±1km, mb4.5/10,Error ellipse: s-maj=32.6km s-min=21.4km az=284.0

ISC 11 09:05:29.8±0.8,52°.9S±0°.1×106°.8E±0°.2,h10km,n63, σ0s.57/59,mb4.5/13,MS3.3/3,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	18.75	19	T	T	09 29 24.2	
	baz=193,slow=75,SNR=8.4						
H01W1	Cape Leeuwin H	18.76	19	T	T	09 29 24.9	
	baz=193,slow=75,SNR=9.7						
H01W3	Cape Leeuwin H	18.77	19	T	T	09 29 25.1	
	baz=193,slow=75,SNR=10						
NWAO	Narrogin (SRO)	21.35	25	LR	LR	09 16 00.2	
	comp=Z,120nm,19.2s,baz=188,slow=30						
NWAO	Narrogin (SRO)	21.35	25	P	P	09 10 14.7	-2.3
NWAO				IAmb	IAmb	09 10 16.3	
	comp=Z,29nm,1.1s						
VNDA	Vanda	31.55	160	P	P	09 11 51.7	0.0
	comp=Z,3.0nm,0.6s,baz=292,slow=8.3,SNR=7.3						
VNDA	Vanda	31.55	160	P	P	09 11 51.4	-0.3
STKA	Stephens Creek	32.72	64	P	P	09 12 03.4	+1.0
	comp=Z,6.4nm,0.8s,baz=204,slow=7.3,SNR=15						
STKA				PcP	PcP	09 14 47.5	-0.2
	comp=Z,2.8nm,0.6s,baz=293,slow=1.0,SNR=8.9						
STKA				LR	LR	09 22 53.0	
	comp=Z,42nm,18.8s,baz=204,slow=32						
STKA	Stephens Creek	32.72	64	P	P	09 12 02.6	+0.2
STKA					PcP	09 14 47.6	-0.2
ASAR	Alice Springs	35.72	46	P	P	09 12 28.8	+0.3
	comp=Z,5.6nm,0.5s,baz=209,slow=7.9,SNR=138						
ASAR				PcP	PcP	09 14 55.6	-0.9
	comp=Z,0.8nm,0.8s,baz=206,slow=2.2,SNR=7.6						
AS31	Alice Springs	35.72	46	P	P	09 12 28.6	0.0
AS31				IAmb	IAmb	09 12 29.4	
	comp=Z,3.0nm,0.5s						
QSPA	South Pole Qui	37.21	180	P	P	09 12 40.8	-0.3
	comp=Z,2.9nm,0.6s,baz=285,slow=3.4,SNR=8.3						
QSPA	South Pole Qui	37.21	180	P	P	09 12 40.7	-0.3
QSPA				IAmb	IAmb	09 12 41.1	
	comp=Z,3.9nm,0.8s						
FITZ	Fitzroy Crossi	37.74	30	P	P	09 12 47.8	+2.1
	comp=Z,5.1nm,0.7s,baz=221,slow=16,SNR=3.8						
WRA	Warramunga Arr	39.20	43	P	P	09 12 58.4	+0.4
	comp=Z,11nm,0.8s,baz=211,slow=8.0,SNR=39						
WB2	Warramunga Arr	39.20	44	P	P	09 12 58.4	+0.4
WB2				IAmb	IAmb	09 12 59.3	
	comp=Z,15nm,0.9s						
WR0	Warramunga Arr	39.27	44	P	P	09 12 58.3	-0.2
WR0				IAmb	IAmb	09 12 59.4	
	comp=Z,9.3nm,0.8s						
WB0	Warramunga Arr	39.38	43	P	P	09 12 59.8	+0.3
WB0				IAmb	IAmb	09 13 00.2	
	comp=Z,6.1nm,0.6s						
BKZ	Black Stump Fm	48.40	103	P	P	09 14 11.8	0.0
CMAR	Chiang Mai Arr	71.40	352	P	P	09 16 50.8	+0.9
	comp=Z,3.9nm,0.6s,baz=194,slow=5.2,SNR=19						
KMBO	Kilima Mbogo	76.87	286	LR	LR	09 47 15.2	
	comp=Z,41nm,18.8s,baz=112,slow=33						
PLCA	Paso Flores	86.70	182	P	P	09 18 13.7	0.0
	comp=Z,1.1nm,0.8s,baz=194,slow=4.2,SNR=3.7						
PLCA	Paso Flores	86.70	182	P	P	09 18 13.9	+0.3
ILAR	Eielson Array	142.37	42	PKhKP	PKPpre	09 24 57.0	
	comp=Z,0.4nm,0.8s,baz=234,slow=2.4,SNR=4.4						
BMAR	Burnt Mountain	143.97	38		PKPdf	09 25 03.1	-0.8
BCAR	Beaver Creek A	144.02	46		PKPbc	09 25 03.3	+1.1
214A	Organ Pipe Nat	144.66	110		PKPdf	09 25 06.1	-0.2
Y12C	Blythe	144.98	107		PKPdf	09 25 06.8	0.0
WAKR	Walker	145.29	96		PKPab	09 25 07.5	+0.2
DAWY	Dawson	145.31	45		PKPdf	09 25 06.9	+0.5
NVAR	Mina Array Bea	145.93	97	PKPbc	PKPbc	09 25 09.4	+0.2
	comp=Z,5.4nm,0.7s,baz=226,slow=5.0,SNR=55						
NVAR	Mina Array Bea	145.93	97		PKPbc	09 25 09.3	+0.1
Y14A	Wickenburg	146.00	108	PKPbc	PKPab	09 25 09.8	-0.1
NV11	Mina Array Sit	146.01	97	PKPbc	PKPab	09 25 10.4	+0.4
TUC	Tucson	146.07	112	PKPbc	PKPab	09 25 10.3	+0.1
TX31	Lajitas Ar. Si	147.53	124		PKPbc	09 25 13.6	-0.3
TX32	Lajitas Array	147.53	124		PKPbc	09 25 13.6	-0.3
TXAR	Lajitas Array	147.53	124	PKPbc	PKPbc	09 25 13.8	-0.1
	comp=Z,2.0nm,0.8s,baz=190,slow=6.2,SNR=8.6						
TXAR	Lajitas Array	147.53	124		PKPbc	09 25 13.4	-0.5
WUAZ	Wupatki	148.06	108		PKPbc	09 25 14.9	-0.3
WVOR	Wild Horse Val	148.16	91		PKPbc	09 25 16.2	+0.9
INK	Inuvik	148.24	38		PKPbc	09 25 14.2	-0.2
MNTX	Cornudas Mount	148.54	120		PKPbc	09 25 16.1	-0.4
J08A	Circle Bar Ran	148.79	89		PKPbc	09 25 17.0	+0.2
ELK	Elko	149.22	96		PKPbc	09 25 18.4	+0.3
MTPU	Mount Pierson	149.32	103		PKiKP	09 25 19.6	-0.3
G08A	Pilot Rock	149.53	86		PKPbc	09 25 19.2	+0.6
HAWA	Hanford	149.75	84		PKPbc	09 25 19.4	+0.4
DUG	Dugway, Tooele	150.34	99		PKPbc	09 25 21.2	+0.4
JCT	Junction City	150.35	129		PKPbc	09 25 20.8	-0.2
ANMO	Albuquerque	150.43	114		PKPbc	09 25 21.6	+0.3
D08A	Wollman Farm,	150.44	83		PKiKP	09 25 21.3	0.0
B08A	Colville Reser	150.79	80		PKPbc	09 25 21.4	-0.1
SRU	San Rafael Swe	151.00	103		PKiKP	09 25 23.3	+0.2
435B	Jarrell	151.63	132		PKiKP	09 25 24.7	+0.3
MSTX	Muleshoe	151.68	120		PKPbc	09 25 23.7	-0.4
ABTX	Abilene, Hawle	152.20	126		PKPbc	09 25 25.4	+0.2
AMTX	Amarillo	152.96	120		PKPbc	09 25 26.5	-0.4
FXWY	Fox Creek	153.45	95		PKiKP	09 25 28.4	+0.4
PDAR	Pinedale Array	153.84	98	PKPbc	PKPbc	09 25 28.4	-0.3
	comp=Z,0.6nm,0.6s,baz=209,slow=2.5,SNR=7.2						
PDAR	Pinedale Array	153.84	98		PKPbc	09 25 27.9	-0.9
WMOK	Wichita Mounta	154.32	125		PKPbc	09 25 29.7	-0.1
YKA	Yellowknife Ar	156.31	50	PKPbc	PKPbc	09 25 32.6	
	comp=Z,0.2nm,0.7s,baz=282,slow=1.8,SNR=4.3						
YKA				PKPab	PKPab	09 25 51.8	+0.2
	comp=Z,1.7nm,0.8s,baz=272,slow=4.4,SNR=19						

NEIC 11 09:12:19.7±2.2,56°.02N±0°.07×153°.22W±0°.10,h35km±8km, Error ellipse: s-maj=12.2km s-min=4.6km az=143.0

AEIC 11 09:12:20.3±2.5,56°.04N±0°.08×153°.22W±0°.10,h29km±6km, ML3.2/27,Error ellipse: s-maj=12.5km s-min=6.0km az=153.0

IDC 11 09:12:22.1±5.3,56°.31N×153°.90W,h46km±75km,mb3.1/2, mb1 3.7/3,mb1mx3.2/39,mbtmp3.4/3,ML3.2/1,Error ellipse: s-maj=82.9km s-min=39.9km az=122.0

ISC 11 09:12:20.1±1.2,56°.12N±0°.08×153°.13W±0°.05,h22km,n71, σ1s.64/99,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SII	Sitkinak Islan	0.73	308		Pb	09 12 33.3	-0.8
SII				Sn	Sb	09 12 44.1	+0.3
OHAK	Old Harbor	1.11	356		Pn	09 12 39.8	-0.5
CHIR	Chirikof Islan	1.43	259		Pn	09 12 42.2	-2.4
CHIR					Sn	09 12 58.7	-4.1
KDAK	Kodiak Island	1.70	10	P	Pn	09 12 48.2	-0.1
	30nm,0.3s,baz=209,slow=13,SNR=274						
KDAK				S	Sn	09 13 08.4	-0.9
	16nm,0.3s,baz=108,slow=23,SNR=21						
KDAK	Kodiak Island	1.70	10		Sn	09 13 08.8	-0.6
KDAK	Kodiak Island	1.70	10	Pn	Pn	09 12 48.4	+0.1
PLK3	Peulik 3	2.33	314		Pn	09 12 56.6	-0.4
PLK2	Peulik 2	2.40	315		Pn	09 12 57.7	-0.3
ANCK	Angle Creek	2.45	329		Pn	09 12 58.2	-0.5
KAHC	Katmai Hardscr	2.73	339		Pn	09 13 02.7	0.0
VNHG	Veniaminof 1	3.37	274		Pn	09 13 10.4	-1.1
CNPM	China Poot	3.56	16		Pn	09 13 14.4	+0.4
CNPM				Sn	Sn	09 13 55.7	+0.3
BRLK	Bradley Lake	3.85	17		Pn	09 13 18.0	+0.1
BRLK				Sn	Sn	09 14 01.0	-1.4
BRSE	Bradley Lake S	3.85	18		Pn	09 13 17.5	-0.4
SDPT	Sand Point	4.22	263		Pn	09 13 20.0	-3.0
SDPT				Sn	Sn	09 14 07.3	-4.2
RSO	Redoubt South	4.36	2		Pn	09 13 25.6	+0.5
RSO				Sn	Sn	09 14 15.4	+0.1
RDWB	Redoubt West	4.39	2		Pn	09 13 25.7	+0.3
SEW	Seward	4.45	24		Pn	09 13 26.0	0.0
SEW				Sn	Sn	09 14 14.7	-2.5
DFR	Drift River	4.49	3		Pn	09 13 27.1	+0.2
SLKM	Skilak Lake	4.66	18		Pn	09 13 28.5	-0.6
CKL	Chakachamna La	5.11	4		Pn	09 13 36.0	+0.6
DT1	Dutton Round H	5.28	263		Pn	09 13 35.7	-1.9
RC01	Rabbit Creek A	5.29	18		Pn	09 13 37.4	-0.3
RC01				Sn	Sn	09 14 40.1	+2.2
PWL	Port Wells	5.38	26		Pn	09 13 37.8	-1.1
SUA	Susitna One	5.50	12		Pn	09 13 40.7	0.0
SUA				Sn	Sn	09 14 45.9	+2.6
HIN	Hinchinbrook I	5.54	36	Pn	Pn	09 13 41.3	+0.2
HIN				Sn	Sn	09 14 40.5	-3.5
GLI	Glacier Island	5.73	31	Pn	Pn	09 13 43.9	+0.3
GLI				Sn	Sn	09 14 49.4	+0.8
FID	Port Fidalgo	5.81	34		Pn	09 13 43.5	-1.3
FID				Sn	Sn	09 14 50.4	-0.3
KNK	Knik Glacier	5.84	23	Pn	Pn	09 13 46.8	+1.5
KNK				Sn	Sn	09 14 52.8	+1.3
EYAK	Cordova Ski Ar	5.90	38	Pn	Pn	09 13 45.4	-0.7
SKT	Skwentna	5.94	7	Pn	Pn	09 13 48.6	+2.0
SKT				Sn	Sn	09 14 53.4	-0.5
GHO	Glory Hole Cre	6.07	19	Pn	Pn	09 13 47.0	-1.5
GHO				Sn	Sn	09 14 56.6	-0.7
RAGM	Ragged Mountai	6.18	43	Pn	Pn	09 13 49.4	-0.5
RAGM				Sn	Sn	09 14 58.2	-1.7
SML	Sawmill	6.22	22	Pn	Pn	09 13 50.1	-0.4
HMT	Hamilton	6.31	44	Pn	Pn	09 13 52.0	+0.3
HMT				Sn	Sn	09 15 01.7	-1.3
SCM	Sheep Creek Mo	6.47	25		Pn	09 13 53.9	0.0
SCM				Sn	Sn	09 15 05.6	-1.4
WAX	Waxell Ridge	6.94	47	Pn	Pn	09 14 01.9	+1.5
TGL	Tana Glacier	7.13	45	Pn	Pn	09 14 03.5	+0.5
MESA	MESA	7.18	51	Pn	Pn	09 14 01.6	-2.1
MESA				Sn	Sn	09 15 25.0	+0.4
VRDI	Verde Repeater	7.19	41	Pn	Pn	09 14 02.2	-1.7
VRDI				Sn	Sn	09 15 20.7	-4.2
MCARA	McCarthy VSAT	7.45	41	Pn	Pn	09 14 06.3	-0.9
MCARA				Sn	Sn	09 15 29.9	-1.0
BALM	Baldy	7.49	44	Pn	Pn	09 14 08.0	+0.1
BALM				Sn	Sn	09 15 27.3	-4.7
TRF	Thorofare Moun	7.49	10	Pn	Pn	09 14 08.0	0.0
TRF				Sn	Sn	09 15 31.9	-0.4
KTH	Kantishna Hill	7.54	8	Pn	Pn	09 14 09.9	+1.2
KTH				Sn	Sn	09 15 31.6	-1.7
DHY	Denali Highway	7.56	20	Pn	Pn	09 14 09.5	+0.5
DHY				Sn	Sn	09 15 31.9	-2.0
RND	Reindeer	7.62	15	Pn	Pn	09 14 10.5	+0.7
RND				Sn	Sn	09 15 35.4	0.0
BARN	Barnard Glacie	7.77	46	Pn	Pn	09 14 09.9	-2.0
BARN					Sn	09 15 35.7	-3.5
CTGM	Chitina Glacie	7.85	47	Pn	Pn	09 14 14.0	+1.1
CTGM				Sn	Sn	09 15 36.5	-4.5
PAX	Paxson	7.89	26	Pn	Pn	09 14 15.5	+2.0
PAX				Sn	Sn	09 15 41.3	-0.7
PCA	Pinnacle	7.90	54	Pn	Pn	09 14 13.6	+0.1
PCA				Sn	Sn	09 15 41.9	-0.2
MCK	McKinley	7.92	14	Pn	Pn	09 14 14.6	+0.8
MCK				Sn	Sn	09 15 41.0	-1.6
WRH	Wood River Hil	8.74	15	Pn	Pn	09 14 26.1	+1.1
WRH				Sn	Sn	09 16 03.2	+0.4
HDA	Harding Lake	8.86	18	Pn	Pn	09 14 27.5	+0.9
HDA				Sn	Sn	09 16 07.3	+1.7
CCB	Clear Creek Bu	8.95	15	Pn	Pn	09 14 29.0	+1.2
CCB				Sn	Sn	09 16 05.2	-2.6
MLY	Manley	9.02	6	Pn	Pn	09 14 29.3	+0.4
MDM	Murphy Dome	9.19	13	Pn	Pn	09 14 32.8	+1.6
IL31		9.21	17		Pn	09 14 33.2	+1.9
ILAR	Eielson Array	9.21	17	P	Pn	09 14 31.4	0.0
	0.2nm,0.3s,baz=204,slow=14,SNR=9.6						
HYT	Haines Junctio	9.44	54	Pn	Pn	09 14 35.0	+0.4
IMAR	Indian Mountai	9.90	359	Pn	Pn	09 14 40.2	-0.7
PRP	Porcupine Dome	10.13	18	Pn	Pn	09 14 45.5	+1.5
FYU	Fort Yukon	11.14	17	Pn	Pn	09 14 57.0	-0.6
BMAR	Burnt Mountain	12.03	16	Pn	Pn	09 15 07.5	-2.5
YKA	Yellowknife Ar	20.42	56	P	Pn	09 16 57.8	+0.3
	0.9nm,0.8s,baz=269,slow=12,SNR=7.9						
NVAR	Mina Array Bea	29.09	113	P	P	09 18 22.3	+3.2
	0.1nm,0.4s,baz=304,slow=9.7,SNR=4.2						
H11N2	WAKE ISLAND Hy	46.97	236	T	T	10 11 13.7	
	baz=29,slow=76,SNR=31						
H11N3	WAKE ISLAND Hy	46.98	236	T	T	10 11 14.1	
	baz=29,slow=76,SNR=27						

H11N1	WAKE ISLAND Hy	46.99	236	T	T	10 11 15.1	
	baz=29,slow=76,SNR=19						
H11S1	WAKE ISLAND Hy	48.12	235	T	T	10 12 39.6	
	baz=29,slow=76,SNR=42						
H11S2	WAKE ISLAND Hy	48.14	235	T	T	10 12 40.7	
	baz=29,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	48.14	235	T	T	10 12 41.2	
	baz=29,slow=76,SNR=16						

AEIC 11 09:12:55.0±2.4, 52.5N±0.1×170.6W±0.1, h26km±4km, mb4.0/6(NEIC), Error ellipse: s-maj=23.0km s-min=3.6km az=157.0
NEIC 11 09:12:55.4±2.0, 52.2N±0.1×170.5W±0.1, h48km±10km, Error ellipse: s-maj=24.1km s-min=3.4km az=151.0
IDC 11 09:13:00.9±7.9, 52.44N×170.6W, h87km±72km, mb3.5/9, mb1 3.7/10, mb1mx3.4/44, mbtmp3.8/10, ML3.6/1, MS3.0/5, Ms1 3.0/5, ms1mx2.7/32, Error ellipse: s-maj=33.5km s-min=18.0km az=172.0
ISC 11 09:12:56.8±1.0, 52.4N±0.2×170.56W±0.07, h55km, n44, σ1.04/40, mb4.0/10, MS3.2/3, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.18	60		Pn	09 13 15.5	-1.6
NIKH	Nikolski High	1.18	60		Sn	09 13 30.3	-1.9
NIKH	Nikolski High	1.18	60		Sn	09 13 30.8	-1.4
OKSP	Okmok Steeple	1.62	57		Pn	09 13 21.6	-1.4
OKSP					Sn	09 13 41.9	-0.9
OKTU	Okmok Mt. Tuli	1.81	56		Pn	09 13 25.3	-0.4
OKFG	Magazine Ridge	1.90	57		Pn	09 13 26.4	-0.3
OKFG					Sn	09 13 49.9	+0.4
KOFP	Korovin Flat P	2.17	268		Pn	09 13 30.3	-0.3
ATKA	Atka Island	2.24	266		Pn	09 13 29.7	-1.8
ATKA				Sn	Sn	09 13 56.3	-1.6
ATKA	Atka Island	2.24	266		LR	09 13 57.0	
MSW	Makushin Switc	2.73	55		Pn	09 13 39.8	+1.7
AKUT	Akutan	3.36	57	Pn	Pn	09 13 45.4	-1.3
GSMY	Great Sitkin M	3.40	266		Pn	09 13 47.1	-0.2
ADK	Adak	3.81	265		Pn	09 13 52.3	-0.6
ADK				Sn	Sn	09 14 38.8	+2.4
KIWB	Kanaga Island	4.10	265	Pn	Pn	09 13 55.1	-1.7
KIWB				Sn	Sn	09 14 42.5	-1.0
KDAK	Kodiak Island	11.61	55	LR	LR	09 20 28.2	
	comp=Z,52nm,18.1s,baz=241,slow=38						
BPAW	Bear Paw Mtn.	15.52	33	Pn	Pn	09 16 31.2	-0.6
BPAW				IAmb	IAmb	09 16 48.3	
	comp=Z,6.4nm,1.4s						
PEA0B	Petropavlovsk-	19.15	285	P	Pn	09 17 16.2	-0.4
PETK	Petropavlovsk-	19.15	285	P	Pn	09 17 16.4	-0.2
	comp=Z,0.9nm,0.3s,baz=90,slow=13,SNR=25						
PETK				LR	LR	09 24 59.0	
	comp=Z,22nm,19.4s,baz=55,slow=38						
PETK	Petropavlovsk-	19.15	285	P	Pn	09 17 16.0	-0.6
HYT	Haines Junctio	19.85	52	P	P	09 17 22.7	-0.3
HYT				IAmb	IAmb	09 17 27.5	
	comp=Z,4.9nm,0.7s						
INK	Inuvik	23.72	34	P	P	09 18 04.0	+0.6
	comp=Z,0.7nm,0.5s,baz=237,slow=8.1,SNR=7.3						
INK	Inuvik	23.72	34	P	P	09 18 03.9	+0.6
YKA	Yellowknife Ar	30.77	49	P	P	09 19 07.6	+1.1
	comp=Z,0.1nm,0.4s,baz=273,slow=8.3,SNR=4.1						
H11N2	WAKE ISLAND Hy	37.03	217	T	T	09 59 16.1	
	baz=23,slow=76,SNR=15						
H11N3	WAKE ISLAND Hy	37.04	217	T	T	09 59 16.9	
	baz=23,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	37.05	217	T	T	09 59 24.0	
	baz=23,slow=76,SNR=9.6						
H11S1	WAKE ISLAND Hy	38.23	216	T	T	10 00 43.9	
	baz=22,slow=76,SNR=123						
H11S2	WAKE ISLAND Hy	38.24	216	T	T	10 00 47.1	
	baz=22,slow=76,SNR=155						
H11S3	WAKE ISLAND Hy	38.24	216	T	T	10 00 48.5	
	baz=22,slow=76,SNR=117						
PDAR	Pinedale Array	41.11	78	P	P	09 20 36.7	+1.3
	comp=Z,0.9nm,0.7s,baz=294,slow=2.3,SNR=12						
KSRS	Korea Array	44.68	276	LR	LR	09 40 05.6	
	comp=Z,14nm,19.0s,baz=140,slow=36						
SONM	Songino Array	50.66	300	P	P	09 21 51.0	+0.7
	comp=Z,0.5nm,0.5s,baz=72,slow=6.7,SNR=6.3						
SONM				pP	pP	09 22 05.2	+0.4
	comp=Z,1.3nm,0.8s,baz=47,slow=6.4,SNR=8.8						
SONM				LR	LR	09 46 48.2	
	comp=Z,22nm,18.1s,baz=340,slow=40						
SONM	Songino Array	50.66	300	P	P	09 21 50.9	+0.6
ARCES	ARCESS Array B	57.81	353	P	P	09 22 42.4	+0.5
	comp=Z,4.6nm,1.0s,baz=15,slow=6.7,SNR=4.1						
KURK	Kurchatov	61.86	318	P	P	09 23 09.0	-0.8
KURK				IAmb	IAmb	09 23 17.9	
	comp=Z,2.7nm,1.1s						
MKAR	Makanchi Array	63.25	313	P	P	09 23 19.1	-0.2
	comp=Z,0.2nm,0.3s,baz=49,slow=5.7,SNR=5.5						
MKAR	Makanchi Array	63.25	313	P	P	09 23 19.4	+0.2
ARU	Arti	64.25	332	LR	LR	09 54 19.4	
	comp=Z,16nm,19.4s,baz=22,slow=39						
FINES	FINESS Array B	65.73	351	P	P	09 23 35.4	+0.3
	comp=Z,0.9nm,0.4s,baz=46,slow=8.2,SNR=11						
FINES	FINESS Array B	65.73	351	P	P	09 23 34.7	-0.4
ABKAR	Akbulak array	70.02	327	P	P	09 24 01.7	-0.6
CMAR	Chiang Mai Arr	75.90	282	P	P	09 24 38.1	+0.6
	comp=Z,1.5nm,0.3s,baz=22,slow=6.5,SNR=5.0						
ASAR	Alice Springs	89.86	229	P	P	09 25 49.3	-0.1
	comp=Z,0.8nm,1.0s,baz=19,slow=3.5,SNR=3.5						
ASAR	Alice Springs	89.86	229	P	P	09 25 48.6	-0.9

IDC 11 09:27:03.5±5.3, 38.19N×75.51E, h109km±38km, mb3.4/4, mb1 3.3/8, mb1mx3.0/48, mbtmp3.6/8, Error ellipse: s-maj=41.9km s-min=35.6km az=154.0
NNC 11 09:27:06.5±3.4, 38.71N×75.52E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=24.0km s-min=18.0km az=172.0
ISC 11 09:26:52.2±1.7, 37.8N±0.1×75.5E±0.1, h10km, n19, σ2.86/20, mb3.8/4, 4C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.92	352	P	Pn	09 28 11.1	+4.7
	0.6nm,0.3s,baz=144,slow=5.8,SNR=7.1						
AAK				S	Sn	09 29 01.1	-2.4
	2.3nm,0.3s,baz=350,slow=16,SNR=9.5						
AAK	Ala-Archa	4.92	352	⇓Pn	Pn	09 28 10.4	+4.0
	1.8nm,0.5s						
AAK				⇑Pg	Pb	09 28 21.2	+2.6
	5.0nm,0.8s						
AAK				⇑Sn	Sn	09 28 59.5	-4.0
	8.9nm,0.6s						
AAK				⇓Lg	Lg	09 29 16.4	
	8.7nm,0.8s						
MRKS	Merke	5.26	342	Pg	Pn	09 28 16.2	+5.2
	5.0nm,0.3s						
MRKS				Lg	Lg	09 29 08.5	
	11nm,0.3s						
KST	Kastek	5.29	4	Pg	Pb	09 28 24.6	-0.2
	5.5nm,0.2s						
KST				Lg	Lg	09 29 22.8	
	7.3nm,0.6s						
IZV	Izvestkoviy	5.34	9	Pg	Pb	09 28 25.9	+0.2
	4.8nm,0.9s						
IZV				Lg	Lg	09 29 25.4	
	5.0nm,0.4s						
DGS	Degeres	5.47	2	Pg	Pb	09 28 27.3	-0.7
	6.4nm,0.4s						
DGS				Lg	Lg	09 29 27.7	
	6.5nm,0.5s						
SGDS	Sogindy	5.71	354	Pg	Pb	09 28 27.8	-4.2
	1.7nm,0.5s						
SGDS				Lg	Lg	09 29 28.8	
	3.6nm,0.9s						
KRBS	Karabastau	5.93	2	Pg	Pb	09 28 35.2	-0.5
	3.7nm,0.4s						
KRBS				Lg	Lg	09 29 41.6	
	2.0nm,0.4s						
IUG	Iuzhnay	6.04	318	Pg	Pn	09 28 26.9	+5.1
	1.5nm,0.1s						
IUG				Lg	Lg	09 29 27.3	
	27nm,0.4s						
PDGK	Podgornoye	6.35	28	⇓Pn	Pn	09 28 29.8	+3.9
	3.7nm,0.4s						
PDGK				⇓Sn	Sn	09 29 35.5	-3.1
	8.2nm,0.7s						
KK31	Karatay Array	6.53	326	⇑Pn	Pn	09 28 32.0	+3.7
	0.4nm,0.2s,baz=132,slow=14,SNR=19						
KK31				⇑Sn	Sn	09 29 40.2	-2.7
	2.6nm,0.3s,baz=134,slow=23,SNR=5.3						
MKAR	Makanchi Array	10.34	27	P	Pn	09 29 23.1	+2.5
	0.1nm,0.3s,baz=197,slow=14,SNR=7.2						
BVAR	Borovoye Array	15.66	349	P	Pn	09 30 35.7	+2.9
	0.4nm,0.3s,baz=154,slow=11,SNR=11						
ZALV	Zalesovo Beam	17.42	19	P	Pn	09 30 54.2	-1.0
	0.2nm,0.3s,baz=210,slow=10.0,SNR=3.0						
AKTO	Aktyubinsk	17.76	321	P	Pn	09 30 59.5	+0.1
	0.1nm,0.3s,baz=112,slow=13,SNR=4.9						
FINES	FINESS Array B	38.49	324	P	P	09 34 12.0	-2.1
	1.1nm,0.7s,baz=113,slow=9.2,SNR=3.4						
ARCES	ARCESS Array B	41.39	336	P	P	09 34 35.9	-2.3
	1.2nm,0.5s,baz=107,slow=9.2,SNR=10						
TORD	Torodi Ar. Bea	69.29	271	P	P	09 37 59.0	-1.0
	0.4nm,0.4s,baz=43,slow=5.8,SNR=3.5						
YKA	Yellowknife Ar	79.75	5	P	P	09 38 56.4	-3.7
	0.2nm,0.6s,baz=345,slow=5.7,SNR=4.1						

ATH 11 09:46:31.6, 38.13N×20.39E, h6km±2km, ML2.6/11, Error ellipse: s-maj=2.4km s-min=0.9km az=347.0
THE 11 09:46:32.0, 38.15N×20.43E, h5km±1km, ML2.8/7, Error ellipse: s-maj=1.2km s-min=0.5km az=281.0
ISC 11 09:46:31.8±1.0, 38.14N±0.03×20.42E±0.03, h6km±5km, n35, σ0.63/61, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.05	323	P	Pg	09 46 33.4	+0.2
CHV1				S	Sg	09 46 34.5	+0.3
	25μm,0.5s						
KEF2	Argostoli. Kep	0.06	64	P	Pg	09 46 33.2	-0.1
KEF2				S	Sg	09 46 34.3	0.0
ARGA	Argostoli. Kep	0.06	51	P	Pg	09 46 33.2	0.0
ARGA				S	Sg	09 46 34.5	+0.2
LXR1	Lixouri, Cepha	0.06	12	P	Pg	09 46 33.4	+0.1
LXR1				S	Sg	09 46 34.5	+0.1
	35μm,0.9s						
LXRA	Lixouri, Kepha	0.06	11	P	Pg	09 46 33.4	+0.1
LXRA				S	Sg	09 46 35.1	+0.7
ARG2	Argostoli	0.06	54	P	Pg	09 46 33.3	0.0
ARG2				S	Sg	09 46 34.5	+0.1
	61μm,0.3s						
KEF3	Kipouria, Keph	0.09	317	P	Pg	09 46 34.1	+0.4
KEF3				S	Sg	09 46 36.0	+1.0
KEF4	Livadi, Kephal	0.12	1	P	Pg	09 46 34.6	+0.4
KEF4				S	Sg	09 46 37.3	+1.4
VLS	Valsamata	0.14	74	P	Pg	09 46 34.4	-0.2
VLS				S	Sg	09 46 36.7	+0.2
	5μm,0.3s						
VLS	Valsamata	0.14	74	P	Pg	09 46 34.6	+0.1
VLS				S	Sg	09 46 36.8	+0.4
VLS				AML	AML	09 46 37.0	
	comp=E,14598μm,0.1s						
VLS				AML	AML	09 46 40.6	
	comp=N,11634μm,0.4s						
KEF1	Kardakata, Kep	0.14	15	P	Pg	09 46 34.7	+0.1
KEF1				S	Sg	09 46 37.1	+0.5
VSK1	VASILIKIADES	0.29	22	P	Pg	09 46 37.4	0.0
VSK1				S	Sg	09 46 41.4	+0.1
	comp=N,2μm,0.5s						
KONA	Konidatara, Ke	0.31	22	P	Pg	09 46 37.7	-0.1
KONA				S	Sg	09 46 42.5	+0.6
VLMS	Volimes, Zakyn	0.33	144	P	Pg	09 46 38.6	+0.5
VLMS				S	Sg	09 46 43.5	+1.1
VLMS				AML	AML	09 46 47.2	
	comp=E,4456μm,0.2s						
VLMS				AML	AML	09 46 49.2	
	comp=N,6798μm,0.3s						
FSK	Fiskardo	0.34	19	P	Pg	09 46 38.1	-0.2
FSK	Fiskardo	0.34	19	P	Pg	09 46 38.0	-0.2
FSK				S	Sg	09 46 43.4	+0.7
EVGI	Lefkada island	0.51	21	P	Pg	09 46 41.2	-0.5
EVGI				S	Sg	09 46 49.4	+1.0
EVGI	Lefkada island	0.51	21	P	Pg	09 46 41.4	-0.3
EVGI				S	Sb	09 46 49.7	-1.2
KRI1	kERI	0.57	147	P	Pg	09 46 42.7	0.0
KRI1				S	Sb	09 46 51.5	-1.1
	comp=N,1μm,0.8s						
MGNA	Meganis	0.59	29	P	Pg	09 46 42.8	-0.4
MGNA				S	Sg	09 46 52.0	+1.1
MGNA				AML	AML	09 46 56.3	
	comp=N,671μm,0.6s						
MGNA				AML	AML	09 46 57.3	
	comp=E,949μm,0.7s						
LKD2	Lefkada island	0.67	16	P	Pg	09 46 44.5	-0.2
LKD2				S	Sb	09 46 54.9	-0.7
	comp=E,230nm,1.1s						
LKD2	Lefkada island	0.67	16	P	Pg	09 46 44.5	-0.2
PDO	Prodromos	0.75	52	P	Pg	09 46 46.4	+0.2
PDO				S	Sb	09 46 57.9	+0.1
PVO	Paravola	0.99	61	P	Pg	09 46 50.7	0.0
PVO				S	Sb	09 47 05.6	+0.9
PVO				AML	AML	09 47 12.1	
	comp=E,951μm,0.5s						
PVO				AML	AML	09 47 13.6	
	comp=N,902μm,0.7s						
DRO	Drossia	1.03	100	P	Pg	09 46 51.4	-0.2
DRO				S	Sb	09 47 06.4	+0.5
DRO				AML	AML	09 47 20.3	
	comp=E,904μm,0.5s						
DRO				AML	AML	09 47 20.7	
	comp=N,940μm,0.7s						
AMT	Artemida-Makis	1.19	120	P	Pg	09 46 53.8	-0.7
AMT				AML	AML	09 47 19.8	
	comp=E,607μm,0.5s						
AMT				AML	AML	09 47 22.9	
	comp=N,582μm,0.7s						
ANX	Ano Chora	1.26	69	P	Pg	09 46 56.5	+0.6
ANX				S	Sn	09 47 13.1	-0.3
ANX				AML	AML	09 47 25.6	
	comp=N,469μm,0.6s						
ANX				AML	AML	09 47 26.5	
	comp=E,381μm,0.5s						
SERG	Sergoula	1.31	78	P	Pn	09 46 56.4	-0.3
SERG				S	Sn	09 47 16.0	+1.4
SERG				AML	AML	09 47 24.7	
	comp=N,326μm,0.5s						
SERG				AML	AML	09 47 25.7	
	comp=E,256μm,0.6s						
TRIZ	Trizonia	1.32	80	P	Pn	09 46 55.9	-0.8
KLV	Kalavryta, Ach	1.37	94	P	Pn	09 46 57.6	+0.1
KLV				S	Sn	09 47 17.6	+1.9
KLV				AML	AML	09 47 26.6	
	comp=E,217μm,0.7s						
KLV				AML	AML	09 47 30.4	
	comp=N,145μm,0.6s						
KALE	Kalithea	1.38	79	P	Pb	09 46 57.7	-0.2
KALE				AML	AML	09 47 30.0	
	comp=N,243μm,0.6s						
KALE				AML	AML	09 47 31.3	
	comp=E,182μm,0.5s						
MAKR	Makrakomi, Fth	1.60	56	P	Pg	09 47 02.7	+0.3
AGG	Agios Georgios	1.73	59	P	Pg	09 47 05.5	+0.5
THL	Klokotos Trika	1.89	41	P	Pb	09 47 06.3	-0.3
DID	Didima	2.32	105	P	Pb	09 47 12.9	-1.0
DID				AML	AML	09 47 57.2	
	comp=N,159μm,0.7s						
DID				AML	AML	09 47 58.1	
	comp=E,97μm,0.5s						

ATH 11 09:50:57.8, 38.16N×20.42E, h11km±2km, ML2.6/4, Error ellipse: s-maj=2.2km s-min=1.2km az=250.0
THE 11 09:50:57.5, 38.16N×20.46E, h13km, ML2.9/6, Error ellipse: s-maj=1.1km s-min=0.6km az=192.0
ISC 11 09:50:56.9±1.0, 38.16N±0.03×20.46E±0.05, h16km±5km, n19, σ0.44/36, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF2	Argostoli. Kep	0.02	65	P	Pg	09 50 59.6	-0.2
KEF2				S	Sg	09 51 01.4	-0.2
ARG2	Argostoli	0.03	44	P	Pg	09 50 59.7	-0.1
ARG2				S	Sg	09 51 01.6	-0.1
	16μm,0.2s						
LXR1	Lixouri, Cepha	0.05	340	P	Pg	09 51 00.2	+0.3
LXR1				S	Sg	09 51 01.9	+0.1
	16μm,0.3s						
LXRA	Lixouri, Kepha	0.05	339	P	Pg	09 50 59.9	+0.1
LXRA				S	Sg	09 51 02.0	+0.2
CHV1	Chavriata, Kef	0.07	295	P	Pg	09 50 59.9	-0.1
CHV1				S	Sg	09 51 01.8	-0.2
	32μm,0.4s						
KEF3	Kipouria, Keph	0.10	299	P	Pg	09 51 00.3	0.0
KEF3				S	Sg	09 51 02.5	-0.1
VLS	Valsamata	0.10	78	P	Pb	09 51 00.5	-0.1
VLS				S	Sb	09 51 02.9	-0.1
	7μm,0.1s						
VLS	Valsamata	0.10	78	P	Pb	09 51 00.5	-0.1
VLS				S	Sb	09 51 02.9	-0.1
VLS				AML	AML	09 51 03.1	
	comp=N,20257μm,0.2s						
VLS				AML	AML	09 51 03.2	
	comp=E,8600μm,0.1s						
KEF1	Kardakata, Kep	0.12	4	P	Pb	09 51 00.7	-0.2
KEF1				S	Sb	09 51 03.3	-0.3
VSK1	VASILIKIADES	0.27	18	P	Pb	09 51 03.0	-0.4
VSK1				S	Sg	09 51 06.7	0.0
	comp=E,2μm,0.2s						
KONA	Konidatara, Ke	0.28	18	P	Pb	09 51 03.2	-0.4
KONA				S	Sb	09 51 07.8	-0.4
FSK	Fiskardo	0.31	15	P	Pg	09 51 03.6	0.0
FSK				S	Sb	09 51 08.7	-0.4
	comp=E,608nm,0.3s						
FSK	Fiskardo	0.31	15	P	Pg	09 51 03.5	-0.1
FSK				S	Sb	09 51 08.5	-0.5
FSK				AML	AML	09 51 09.0	
	comp=N,1129μm,0.4s						
FSK				AML	AML	09 51 09.9	
	comp=E,1267μm,0.2s						
VLMS	Volimes, Zakyn	0.32	150	P	Pb	09 51 04.2	-0.1
VLMS				S	Sb	09 51 10.0	+0.7
VLMS				AML	AML	09 51 10.2	
	comp=E,3660μm,0.2s						
VLMS				AML	AML	09 51 10.3	
	comp=N,2779μm,0.1s						
EVGI	Lefkada island	0.49	18	P	Pg	09 51 06.6	-0.1
EVGI	Lefkada island	0.49	18	P	Pb	09 51 08.3	+1.1
EVGI				S	Sb	09 51 14.7	+0.5
MGNA	Meganis	0.56	27	P	Pb	09 51 09.5	+1.1
MGNA				S	Sb	09 51 17.0	+0.8
LKD2	Lefkada island	0.65	14	P	Pb	09 51 10.1	+0.1
LKD2				S	Sb	09 51 19.7	+0.9
TSLK	Tsoukalades, L	0.69	13	P	Pn	09 51 11.7	-0.3

IDC 11 10:03:11.4±2.5, 26.91N×52.84E, h0km, mb3.6/5, mb1 3.6/5, mb1mx3.5/31, mbtmp3.6/5, MS3.2/1, Ms1 3.2/1, ms1mx2.3/51, Error ellipse: s-maj=62.7km s-min=26.5km az=157.0, Persian Gulf

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRTR	Keskin Array B	20.46	313	P	P	10 07 50.3	-0.5
	1.0nm,0.6s,baz=138,slow=13,SNR=6.3						
MKAR	Makanchi Array	30.54	42	P	P	10 09 25.7	-0.8
	0.2nm,0.4s,baz=230,slow=8.3,SNR=7.9						
ZALV	Zalesovo Beam	35.83	32	P	P	10 10 13.1	+0.6
	0.7nm,0.4s,baz=247,slow=7.4,SNR=3.1						
FINES	FINESS Array B	38.93	340	P	P	10 10 38.7	0.0
	1.8nm,0.9s,baz=133,slow=8.1,SNR=3.5						
FINES				LR	LR	10 30 41.6	
	comp=Z,29nm,18.7s,baz=244,slow=42						
TORD	Torodi Ar. Bea	49.65	264	P	P	10 12 05.2	0.0
	0.3nm,0.6s,baz=77,slow=8.3,SNR=3.1						

ATH 11 10:07:35.7, 38.18N×20.37E, h14km±1km, ML3.1/5, Error ellipse: s-maj=1.8km s-min=1.1km az=253.0
THE 11 10:07:35.9, 38.19N×20.41E, h14km, ML3.6/7, Error ellipse: s-maj=1.4km s-min=0.7km az=265.0
ISC 11 10:07:35.6±1.2, 38.18N±0.03×20.39E±0.05, h16km±5km, n32, σ0.43/55, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.01	279	P	Pg	10 07 38.5	+0.2
CHV1				S	Sg	10 07 39.8	-0.3
	206μm,0.5s						
LXRA	Lixouri, Kepha	0.04	62	P	Pg	10 07 38.5	0.0
LXRA				S	Sg	10 07 40.2	-0.1
LXR1	Lixouri, Cepha	0.04	62	P	Pg	10 07 38.6	+0.2
LXR1				S	Sg	10 07 40.4	+0.1
	163μm,0.4s						
KEF3	Kipouria, Keph	0.04	301	P	Pg	10 07 38.5	0.0
KEF3				S	Sg	10 07 40.4	0.0
ARGA	Argostoli. Kep	0.07	94	P	Pg	10 07 38.5	-0.2
ARGA				S	Sg	10 07 40.3	-0.3
ARG2	Argostoli	0.07	93	P	Pg	10 07 38.6	-0.1
ARG2				S	Sg	10 07 40.4	-0.3
	84μm,0.2s						
KEF2	Argostoli. Kep	0.07	103	P	Pg	10 07 38.6	-0.2
KEF2				S	Sg	10 07 40.2	-0.5
KEF4	Livadi, Kephal	0.08	18	P	Pg	10 07 38.8	0.0
KEF4				S	Sg	10 07 40.9	0.0
KEF1	Kardakata, Kep	0.11	32	P	Pg	10 07 39.0	-0.2
KEF1				S	Sg	10 07 41.2	-0.2
VLS	Valsamata	0.15	92	P	Pg	10 07 39.6	-0.1
VLS				S	Sg	10 07 41.6	-0.8
	25μm,0.2s						
VLS	Valsamata	0.15	92	P	Pg	10 07 39.5	-0.2
VLS				S	Sg	10 07 42.1	-0.2
VLS				AML	AML	10 07 42.3	
	comp=N,51266μm,0.2s						
VLS				AML	AML	10 07 42.3	
	comp=E,35039μm,0.1s						
VSK1	VASILIKIADES	0.26	30	P	Pg	10 07 41.3	-0.1
VSK1				S	Sg	10 07 45.6	+0.3
	comp=E,10μm,0.2s						
KONA	Konidatara, Ke	0.28	30	P	Pg	10 07 41.5	-0.2
KONA				S	Sg	10 07 46.1	+0.3
FSK	Fiskardo	0.31	26	P	Pg	10 07 41.9	-0.2
FSK				S	Sg	10 07 46.4	-0.2
FSK	Fiskardo	0.31	26	P	Pg	10 07 41.9	-0.2
FSK				S	Sg	10 07 46.3	-0.2
VLMS	Volimes, Zakyn	0.37	145	P	Pg	10 07 43.3	+0.1
VLMS				S	Sb	10 07 49.5	0.0
VLMS				AML	AML	10 07 49.9	
	comp=E,23869μm,0.3s						
VLMS				AML	AML	10 07 55.5	
	comp=N,13725μm,0.4s						
EVGI	Lefkada island	0.48	25	P	Pg	10 07 44.9	-0.4
EVGI				S	Sg	10 07 51.5	-0.4
EVGI	Lefkada island	0.48	25	P	Pg	10 07 45.0	-0.4
EVGI				S	Sb	10 07 52.8	+0.1
MGNA	Meganis	0.57	33	P	Pg	10 07 46.3	-0.6
KRI1	kERI	0.62	147	P	Pg	10 07 47.4	-0.4
LKD2	Lefkada island	0.64	19	P	Pg	10 07 47.9	-0.3
LKD2				S	Sg	10 07 57.0	+0.2
	comp=N,595nm,0.4s						
LKD2	Lefkada island	0.64	19	P	Pg	10 07 47.8	-0.5
AST1	Astakos	0.65	56	P	Pg	10 07 47.2	-1.3
AST1				S	Sb	10 07 58.4	+0.8
	comp=N,2μm,0.4s						
TSLK	Tsoukalades, L	0.67	18	P	Pg	10 07 48.6	-0.3
TSLK	Tsoukalades, L	0.67	18	P	Pg	10 07 47.9	-1.0
PDO	Prodromos	0.75	56	P	Pg	10 07 50.4	+0.2
PDO				S	Sb	10 08 01.5	+1.2
PDO				AML	AML	10 08 07.1	
	comp=N,2421μm,0.6s						
PDO				AML	AML	10 08 08.3	
	comp=E,2371μm,0.5s						
RLS	Riolos of Patr	0.85	98	P	Pg	10 07 52.6	+0.3
RLS				S	Sn	10 08 04.6	-0.6
RLS				AML	AML	10 08 07.4	
	comp=E,430μm,0.4s						
RLS				AML	AML	10 08 15.4	
	comp=N,443μm,0.4s						
PVO	Paravola	0.99	64	P	Pb	10 07 54.5	+0.1
PVO	Paravola	0.99	64	P	Pb	10 07 54.4	-0.1
PVO				S	Sn	10 08 09.2	+0.6
PVO				AML	AML	10 08 14.1	
	comp=E,1306μm,0.4s						
PVO				AML	AML	10 08 15.7	
	comp=N,1505μm,0.6s						
DRO	Drossia	1.06	102	P	Pb	10 07 55.2	-0.5
DRO	Drossia	1.06	102	P	Pg	10 07 56.5	+0.3
TRIZ	Trizonia	1.33	82	P	Pb	10 08 00.7	+0.4

UCR 11 10:09:58.8±1.3, 4.51N×82.36W, h35km±999km, MW4.1
UPA 11 10:10:01.0±1.8, 4.62N×82.55W, h20km±259km, MW3.6
ISC 11 10:10:02.8±4.0, 4.6N±0.2×82.54W±0.07, h35km, n16, σ1.53/26, South of Panama

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
CACAO El Cacao, Vera 3.17 32 eP Pn 10 10 49.1 -1.2
CACAO eS Sn 10 11 26.7 -0.2
GMAL Guarumal, Vera 3.37 23 eP Pn 10 10 55.0 +2.0
GMAL eS Sn 10 11 32.7 +0.8
AZU Azuero 3.87 36 eP Pn 10 11 00.7 +0.9
AZU eS Sn 10 11 43.9 -0.1
AZU Azuero 3.87 36 eP Pn 10 11 39.7 -4.4
BCO2 Palmira 4.06 0 eP Pn 10 11 01.4 -1.2
BCO2 eS Sn 10 11 47.1 -2.0
BRU2 Volcan 4.14 358 eP Pn 10 11 02.9 -0.8
BRU2 eS Sn 10 11 51.8 +0.8
EDLM Las Mercedes 4.74 347 eP Pn 10 11 10.7 -1.1
BCIP Isla Barro Col 5.25 31 eP Pn 10 11 19.8 +1.1
BCIP eS Sn 10 12 20.2 +2.1
LCR2 La Lucha 2 5.28 344 eP Pn 10 11 18.1 -1.4
LCR2 eS Sn 10 12 20.2 +0.9
CVTR Volcan Turrial 5.49 347 eP Pn 10 11 22.1 -0.4
HDC Heredia 5.56 344 eP Pn 10 11 22.2 -1.0
HDC eS Sn 10 12 27.2 +1.2
HDC Heredia 5.56 344 eP Pn 10 11 22.5 -0.7
JTS Las Juntas de 6.11 337 eP Pn 10 11 31.4 +0.7
JTS eS Sn 10 12 39.5 0.0
JTS Las Juntas de 6.11 337 eP Pn 10 11 29.2 -1.5
JTS eS Sn 10 12 41.7 +2.2
CUI Cuipilapa 6.53 337 eP Pn 10 11 36.1 -0.3
BUEV Buena Vista 6.75 335 eP Pn 10 11 40.1 +0.6

ISC 11 10:12:39.1±2.1, 51.62N±0.09×16.37E±0.08, h0km, n12, σ0§98/23, Poland

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
KSP Ksiaz 0.78 183 ePg Pb 10 12 55.0 -0.5
KSP eSg Sg 10 13 04.6 +0.6
CHVC Chvalec 1.05 191 ePG Pg 10 12 59.6 +0.4
CHVC eSG Sg 10 13 12.5 -0.2
OSTC Ostas 1.07 185 ePG Pb 10 13 00.2 -0.2
OSTC eSG Sg 10 13 13.5 +0.2
UPC Upice 1.13 192 ePG Pg 10 13 00.9 +0.1
UPC eSG Sg 10 13 14.3 -1.1
comp=Z,14nm,0.3s
DPC Dobruska-Polom 1.27 181 ePG Pg 10 13 03.5 +0.1
DPC eSG Sg 10 13 19.1 -0.7
comp=Z,4.1nm,0.2s
PVCC Panska Ves 1.57 227 ePG Pn 10 13 07.5 -0.7
PVCC eSG Sn 10 13 26.9 -2.4
comp=Z,23nm,0.3s
GOPC GO Pecny, Ondr 1.98 211 eSG Sn 10 13 39.1 -0.2
MORC Moravsky Berou 1.99 157 ePN Pb 10 13 15.2 -0.9
MORC eSG Sg 10 13 42.8 -0.1
PRU Pruhonice 2.00 216 ePG Pn 10 13 15.4 +1.3
PRU eSG Sn 10 13 39.8 0.0
comp=Z,6.8nm,0.5s
CLL Collm 2.13 263 ePg Pn 10 13 17.0 +1.1
CLL eSg Sn 10 13 42.0 -0.9
NKC Novy Kostel 2.84 242 eSG Sb 10 14 05.8 -0.1
comp=Z,7.8nm,0.6s
KHC Kasperske Hory 3.06 217 ePN Pn 10 13 29.9 +1.1
KHC ePG Pb 10 13 33.9 -0.6
KHC eSG Sb 10 14 13.4 +1.9

IDC 11 10:15:54.6±5.2, 28.71N×81.79E, h0km, mb3.8/4, mb1 3.8/6, mb1mx3.4/55, mbtmp3.7/6, ML3.7/2, MS2.4/1, Ms1 2.4/1, ms1mx2.1/54, Error ellipse: s-maj=91.3km s-min=48.5km az=178.0

ISC 11 10:16:00.7±2.5, 28.9N±0.3×82.0E±0.1, h40km, n9, σ1§43/10, mb3.9/4, Nepal-India border region

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
LGTI Lohaghat 1.62 292 ex Sn 10 16 48.9 +2.5
LGTI ex x 10 17 10.6
PTH Pithoragarh 1.68 295 ex Sn 10 16 26.4 -1.4
PTH ex Sn 10 16 49.2 +1.0
NDI New Delhi 4.17 269 ex Sn 10 17 50.0 +0.6
NDI ex x 10 18 12.5
AAK Ala-Archa 15.03 338 Pn Pn 10 19 29.2 -1.2
0.3nm,0.3s,baz=108,slow=6.4,SNR=3.8
AAK Lg Lg 10 24 00.1
0.1nm,0.3s,baz=15,slow=21,SNR=2.9
AAK LR LR 10 26 19.2
comp=Z,16nm,21.3s,baz=104,slow=41
MKAR Makanchi Array 17.92 1 P Pn 10 20 06.6 -0.2
0.3nm,0.3s,baz=187,slow=10,SNR=9.1
ZALV Zalesovo Beam 25.16 4 P P 10 21 22.1 0.0
1.1nm,0.4s,baz=181,slow=8.7,SNR=5.7
SONM Songino Array 26.77 38 P P 10 21 38.6 +1.8
0.5nm,0.7s,baz=232,slow=10,SNR=4.3
FINES FINESS Array B 48.90 328 P P 10 24 42.5 +0.2
1.0nm,0.6s,baz=112,slow=9.0,SNR=7.6
ARCES ARCESS Array B 51.70 338 P P 10 25 03.1 -0.3
2.3nm,0.8s,baz=106,slow=9.5,SNR=3.5

BJI 11 10:16:52.1±0.0, 6.64S×131.19E, h74km, mB5.2/42, mb5.0/63, Ms4.6/11, Ms7 4.4/10
MOS 11 10:16:57.3±1.0, 6.20S×130.82E, h81km, mb5.0/42, Error ellipse: s-maj=8.4km s-min=5.6km az=113.6
NEIC 11 10:16:57.8±2.0, 6.18S±0.05×130.81E±0.06, h72km±4km, mb5.0/73, Error ellipse: s-maj=8.9km s-min=6.7km az=83.0
GCMT 11 10:16:57.8±0.2, 6.23S±0.02×130.79E±0.02, h56km±1km, MW5.0/85, Moment Tensor Solution. s43,c48; s85,c114; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.09±.15; Mθθ-3.27±.10; Mφφ1.19±.12; Mrθ1.08±.08; Mrφ0.22±.09; Mθφ-1.27±.08; Best double couple: M0 3.30300×10^16 NP1:φs243.00000°, δ43.00000°, λ40.00000°. NP2: φs121.00000°, δ64.00000°, λ125.00000°. Principal axes: T 3.0810, Plg56.0000°, Azm77.0000°; N 0.4560, Plg31.0000°, Azm283.0000°; P -3.5260, Plg12.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
DJA 11 10:16:59.7±0.2, 6°S±3°×13°1E±°, h81km±3km, M5.1/28, mb4.9/28, mB5.5/19, MLv5.5/12, Mw(mB)5.0/19, Mwp4.9/1
IDC 11 10:17:00.7±0.4, 6.25S×130.84E, h96km±3km, mb4.5/32, mb1 4.5/34, mb1mx4.5/46, mbtmp4.9/34, MS3.8/16, Ms1 3.8/16, ms1mx3.5/38, Error ellipse: s-maj=12.4km s-min=8.5km az=62.0
KLM 11 10:17:04.0, 5.97S×130.93E, h124km, mb4.8

ISC 11 10:16:58.9±0.2, 6.22S±0.03×130.84E±0.04, h86km, n451, σ1§39/471, mb5.0/90, 13C-11D, Banda Sea

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
SAUI Saumlaki 1.81 166 P Pn 10 17 28.0 -0.6
SAUI Saumlaki 1.81 166 Pn Pn 10 17 28.2 -0.4
SAUI Sn Sn 10 17 48.6 -2.4
BNDI Bandanaira 1.93 331 P Pn 10 17 29.4 -0.6
MSAI Masohi 3.43 326 P Pn 10 17 50.5 +0.2
FAKI Fak Fak 3.56 23 P Pn 10 17 50.6 -1.4
FAKI Fak Fak 3.56 23 P Pn 10 17 50.7 -1.4
FAKI Sn Sn 10 18 28.9 -4.2
AAI Ambon 3.64 313 P Pn 10 17 52.9 -0.2
AAI Ambon 3.64 313 P Pn 10 17 53.1 0.0
NLAI Namlea 4.76 308 P Pn 10 18 10.8 +2.5
SIJI Sorong 5.33 5 P Pn 10 18 13.8 -2.3
52nm,0.3s,baz=218,slow=10,SNR=76
SIJI S Sn 10 19 10.8 -5.4
55nm,0.3s,baz=124,slow=23,SNR=8.6
SIJI LR LR 10 20 51.0
comp=Z,770nm,21.9s,baz=206,slow=43
SWI Sorong 5.33 4 P Pn 10 18 15.0 -1.1
4.9nm14μm305nm,0.8s
SWI Sorong 5.33 4 P Pn 10 18 14.8 -1.3
SWI pmax pmax
comp=Z,303nm,0.9s
RKPI Ransiki, Papua 5.74 36 P Pn 10 18 20.9 -0.7
comp=Z,19nmcomp=Z,17μmcomp=Z,939nm,0.8s
SANI Sanana 6.37 310 P Pn 10 18 31.7 +1.4
comp=Z,2.4nmcomp=Z,7μmcomp=Z,810nm,1.0s
LBMI Labuha 6.47 329 P Pn 10 18 33.0 +1.4
comp=Z,2.5nmcomp=Z,4μmcomp=Z,252nm,1.0s
MTN Manton Dam 6.59 178 P Pn 10 18 30.3 -2.9
baz=6.6,SNR=776
KDU Kakadu 6.63 166 P Pn 10 18 30.6 -3.1
baz=6.6,SNR=1000
SOEI Soe 7.40 241 P Pn 10 18 45.8 +1.4
comp=Z,2.2nmcomp=Z,3μmcomp=Z,338nm,0.8s
SOEI Soe 7.40 241 Pn Pn 10 18 45.2 +0.8
SOEI Sn Sn 10 20 03.7 -3.3
WAMI Wamena 8.17 74 P Pn 10 18 56.7 +1.8
comp=Z,465nm,0.7s
KDI Kendari 8.49 285 P Pn 10 19 01.9 +2.7
SMPI Sarmi 8.90 62 P Pn 10 19 04.2 -0.6
comp=Z,77nm,0.5s
LUWI Luwuk 9.55 302 P Pn 10 19 15.5 +1.8
comp=Z,3μmcomp=Z,166nm,1.0s
LUWI Luwuk 9.55 302 Pn Pn 10 19 12.4 -1.3
LUWI Sn Sn 10 20 56.2 -3.2
KMSI Cibinong 9.62 314 P Pn 10 19 16.3 +1.8
comp=Z,146nm,0.9s
KNRA Kununurra 9.62 192 P Pn 10 19 10.5 -4.1
baz=9.6,SNR=604
MMPI Merauke 9.72 104 P Pn 10 19 15.2 -0.8
comp=Z,68nmcomp=Z,3.6nm,0.8s
GENI Genyem 9.97 69 P Pn 10 19 18.8 -0.6
comp=Z,2μmcomp=Z,174nm,0.5s
JAY Jayapura 10.50 70 P Pn 10 19 25.9 -0.7
JAY pmax pmax
comp=Z,48nm,0.9s
APSI Ampana 10.58 300 P Pn 10 19 30.8 +3.1
comp=Z,1μmcomp=Z,87nm,0.9s
BKSI Bulukumba 10.70 274 P Pn 10 19 31.5 +2.1
comp=Z,1μmcomp=Z,92nm,1.2s
BNSI Bone 10.84 279 P Pn 10 19 34.4 +3.1
comp=Z,88nm,0.9s
MRSI Marisa 11.10 306 P Pn 10 19 36.5 +1.7
comp=Z,2μmcomp=Z,164nm,1.1s
KAPI Kappang 11.10 276 P Pn 10 19 36.2 +1.4
comp=Z,5.8nm,0.3s,baz=86,slow=10,SNR=12
SPSI Sidrap Palu 11.26 281 P Pn 10 19 40.5 +3.6
comp=Z,1μmcomp=Z,50nm,1.6s
TTSI Tana Toraja 11.43 286 P Pn 10 19 48.6 +9.3
MPSI Mapaga 12.72 300 P Pn 10 19 58.4 +1.8
comp=Z,604nmcomp=Z,35nm,1.0s
FITZ Fitzroy Crossi 12.85 203 P Pn 10 19 52.5 -5.9
comp=Z,14nm,0.3s,baz=36,slow=10,SNR=88
FITZ S Sn 10 22 07.2 -12
comp=Z,9.0nm,0.3s,baz=112,slow=17,SNR=5.8
FITZ LR LR 10 25 45.7
comp=Z,842nm,18.6s,baz=32,slow=41
WB0 Warramunga Arr 13.90 166 Pn 10 20 06.0 -6.2
WRAB Tennant Creek 14.05 166 Pn Pn 10 20 08.3 -5.9
WRAB Tennant Creek 14.05 166 d iP Pn 10 20 07.9 -6.3
WRAB pmax pmax
comp=Z,49nm,0.5s
WRA Warramunga Arr 14.06 166 P Pn 10 20 07.8 -6.4
comp=Z,22nm,0.3s,baz=348,slow=13,SNR=95
WRA S Sn 10 22 35.7 -13
comp=Z,23nm,0.3s,baz=350,slow=22,SNR=10
WRA LR LR 10 26 22.8
comp=Z,1μm,20.6s,baz=330,slow=40
WRA Warramunga Arr 14.06 166 Pn 10 20 07.4 -6.9
WRA Warramunga Arr 14.06 166 i P Pn 10 20 07.9 -6.4
WRA pmax pmax
comp=Z,84nm,0.5s
WB2 Warramunga Arr 14.06 166 Pn 10 20 07.8 -6.5
WR0 Warramunga Arr 14.12 166 Pn 10 20 08.7 -6.4
COEN Coen 14.37 123 P Pn 10 20 14.8 -3.4
baz=14,SNR=26
PMG Port Moresby 16.47 102 P Pn 10 20 45.9 +1.0
comp=Z,6.2nm,0.3s,baz=266,slow=5.8,SNR=19
PMG S Sn 10 23 36.0 -11
comp=Z,4.3nm,0.3s,baz=182,slow=21,SNR=9.7
PMG Port Moresby 16.47 102 Pn Pn 10 20 44.5 -0.4
PMG IAmb IAmb 10 20 47.2
comp=Z,71nm,0.7s
PMG Port Moresby 16.47 102 c iP Pn 10 20 46.1 +1.2
PMG pmax pmax
comp=Z,251nm,0.8s
QIS Mount Isa 16.60 150 P Pn 10 20 42.3 -4.2
baz=16,SNR=61
JAGI Jajag, Banyuwa 16.70 261 Pn Pn 10 20 44.7 -3.2
AS31 Alice Springs 17.60 171 P 10 20 55.4 -3.2
AS31 IAmb IAmb 10 20 57.3
comp=Z,48nm,0.5s
ASAR Alice Springs 17.60 171 P P 10 20 54.9 -3.7
comp=Z,29nm,0.3s,baz=348,slow=13,SNR=625
ASAR S Sn 10 24 01.4 -13
comp=Z,7.2nm,0.3s,baz=353,slow=24,SNR=10
ASAR LR LR 10 28 19.5
comp=Z,722nm,19.0s,baz=354,slow=39
ASAR Alice Springs 17.60 171 P 10 20 55.3 -3.2
ASAR Alice Springs 17.60 171 P P 10 20 55.3 -3.2
MTSU Mount Surprise 17.70 133 P P 10 20 58.1 -1.6
baz=18,SNR=35
SPMM Sapulut 18.00 307 P Pn 10 21 04.0 +0.4
WRKA Warakurna 18.87 187 P P 10 21 10.6 -1.9
baz=19,SNR=219
KKM Kota Kinabalu 19.01 310 P Pn 10 21 14.9 -1.0
CTA Charters Tower 20.35 134 P P 10 21 28.4 -0.2
comp=Z,32nm,0.8s,baz=317,slow=13,SNR=25
CTA S S 10 25 09.9 -2.2
comp=Z,8.7nm,0.5s,baz=356,slow=17,SNR=4.2
CTAO Charters Tower 20.35 134 P P 10 21 30.3 +1.7
CTAO pmax pmax
comp=Z,65nm,1.2s
KRVT Keravat (AS076 21.18 86 P P 10 21 38.4 +0.8
comp=Z,85nm,0.8s,baz=103,slow=5.4,SNR=9.6
KRVT LR LR 10 30 55.7
comp=Z,186nm,20.3s,baz=236,slow=39
KSM Kuching 21.88 290 P P 10 21 45.0 0.0
GIRL Giralia 22.88 223 P P 10 21 56.2 +0.7
baz=23,SNR=6.3
LEM Lembang 23.08 267 LR LR 10 32 26.6
comp=Z,156nm,21.2s,baz=92,slow=40
QLP Quilpie 23.94 149 P P 10 22 06.5 +1.3
baz=24,SNR=9.9
GUMO Guam 24.11 35 P P 10 22 07.9 +1.1
comp=Z,108nm,0.8s,baz=133,slow=9.0,SNR=5.2
GUMO Guam 24.11 35 P P 10 22 07.4 +0.6
FORT Forrest 24.57 186 P P 10 22 11.4 +0.5
baz=25,SNR=84
KMBL Kambalda 26.39 197 P P 10 22 27.9 +0.5
baz=26,SNR=94
RMQ Roma 26.42 142 P P 10 22 27.6 -0.2
baz=26,SNR=5.3
MORW Morawa 26.69 210 P P 10 22 31.2 +1.0
baz=27,SNR=3.5
BBOO Buckleboo 26.90 170 P P 10 22 32.0 +0.1
baz=27,SNR=34
STKA Stephens Creek 27.44 160 P P 10 22 37.6 +0.7
baz=27,SNR=7.4
STKA Stephens Creek 27.44 160 P P 10 22 36.6 -0.2
comp=Z,3.3nm,0.5s,baz=327,slow=9.3,SNR=12
STKA LR LR 10 34 43.7
comp=Z,790nm,18.6s,baz=343,slow=39
STKA Stephens Creek 27.44 160 P P 10 22 37.5 +0.7
STKA Stephens Creek 27.44 160 P P 10 22 37.5 +0.7
STKA pmax pmax
comp=Z,2.0nm,0.7s
BLDU Ballidu 27.67 207 P P 10 22 39.6 +0.7
baz=28,SNR=9.3
KLBR Kellerberrin 28.06 204 P P 10 22 42.9 +0.5
baz=28,SNR=9.0
HTT Hallett 28.10 166 P P 10 22 43.6 +0.9
baz=28,SNR=13
CMSA Cobar Meteorol 28.77 153 P P 10 22 49.8 +1.2
baz=29,SNR=18
HNR Honiara 29.00 98 P P 10 22 50.5 -0.4
comp=Z,92nm,0.8s,baz=79,slow=1.0,SNR=3.8
HNR LR LR 10 35 46.3
comp=Z,146nm,18.6s,baz=268,slow=39
NWAO Narrogin (SRO) 29.44 204 P P 10 22 55.2 +0.6
baz=30,SNR=8.5
NWAO Narrogin (SRO) 29.44 204 P P 10 22 53.6 -1.0
comp=Z,8.9nm,0.7s,baz=50,slow=7.6,SNR=11
NWAO LR LR 10 35 32.6
comp=Z,418nm,21.4s,baz=12,slow=38
JRMM Jerantut 30.05 289 P P 10 23 00.0 -0.2
YULB Yu-li 30.87 343 P P 10 23 06.8 -0.5
ARMA Armidale 31.01 143 P P 10 23 08.8 +0.2
baz=31,SNR=5.3
RKGY Rocky Gully 31.02 203 P P 10 23 10.5 +1.9
baz=31,SNR=5.5
SSLB Suanglung 31.35 342 P P 10 23 10.4 -1.1
IPM Ipoh 31.61 289 P P 10 23 14.0 0.0
ARPS Mount Arapiles 32.03 163 P P 10 23 18.7 +1.3
baz=32,SNR=7.7
KULM Kulim 32.24 290 P P 10 23 22.0 +2.5
YNG Young 32.32 152 P P 10 23 20.5 +0.5
baz=32,SNR=8.9
RPSI Rantau Prapat 33.08 285 P P 10 23 26.1 -0.7
PSI Prapat 33.11 285 P P 10 23 26.1 -1.1
comp=Z,7.0nm,0.4s,baz=16,slow=2.0,SNR=4.0
CAN Canberra 33.44 152 P P 10 23 30.8 +1.0
CAN IAmb IAmb 10 23 32.4
comp=Z,15nm,0.9s
CAN Canberra 33.44 152 P P 10 23 30.8 +1.0
CAN pmax pmax
comp=Z,15nm,0.9s
SANVU Saraoutou 36.82 107 P P 10 24 00.7 +1.7
PBKT Sadao Pong 37.23 308 P P 10 24 02.5 +0.1
NOUC Port Laguerre 37.70 118 P P 10 24 05.9 -0.4
DZM Mont Dzumac 37.81 118 P P 10 24 07.5 +0.1
comp=Z,14nm,1.0s,baz=343,slow=12,SNR=4.5
DZM Mont Dzumac 37.81 118 P P 10 24 07.7 +0.2
DZM IAmb IAmb 10 24 10.1
comp=Z,35nm,1.2s
NJ2 Nanjing 39.73 344 eP P 10 24 24.2 +1.0
NJ2 pmax pmax
comp=Z,16nm,1.0s
WHN Wuhan 39.82 338 ⇓P P 10 24 25.2 +1.3
WHN pmax pmax
comp=Z,52nm,0.8s
CM31 Chiang Mai Arr 39.89 309 P P 10 24 25.6 +0.9
CM31 IAmb IAmb 10 24 26.1
comp=Z,21nm,0.8s
CMAR Chiang Mai Arr 39.89 309 P P 10 24 25.2 +0.5
comp=Z,16nm,0.8s,baz=142,slow=7.7,SNR=92
CMAR LR LR 10 41 51.1
comp=Z,46nm,21.9s,baz=126,slow=37
CMAR Chiang Mai Arr 39.89 309 ceP P 10 24 25.2 +0.5
CMAR pmax pmax
comp=Z,18nm,0.8s
GYA Guiyang 40.06 325 ⇓iP P 10 24 26.7 +0.6
GYA pP pwP 10 24 48.5 -1.9
GYA PP PP 10 25 58.4 -1.5
GYA S S 10 30 30.7 +4.6
GYA SS SS 10 33 26.5 -0.3
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,110nm,5.5s
GYA LR LR
comp=Z,270nm,17.7s
GYA LR LR
comp=Z,210nm,17.1s
GYA LR LR
comp=Z,140nm,17.3s
CHTO Chiang Mai 40.09 309 P P 10 24 27.1 +0.7
CHTO Chiang Mai 40.09 309 P P 10 24 27.1 +0.7
CHTO pmax pmax
comp=Z,29nm,0.8s
MAJO Matsushiro 43.09 9 P P 10 24 49.9 -0.7
MAJO Matsushiro 43.09 9 ⇑eP P 10 24 49.9 -0.7
MAJO pmax pmax
comp=Z,19nm,1.0s
MAT Matsushiro 43.09 9 P P 10 24 49.6 -1.0
MJAR Matsushiro Arr 43.09 9 P P 10 24 50.2 -0.4
comp=Z,9.5nm,0.9s,baz=187,slow=9.8,SNR=14
MJAR pP sP 10 25 14.8 -3.0
comp=Z,12nm,0.7s,baz=180,slow=8.6,SNR=7.3
MJB9 Matsu-Tunnel 43.09 9 P P 10 24 50.4 -0.2
MJB9 IAmb IAmb 10 24 51.1
comp=Z,18nm,1.0s
KSRS Korea Array 43.53 357 P P 10 24 55.1 +1.0
comp=Z,3.8nm,0.5s,baz=173,slow=8.4,SNR=18
KS19 Wonju Array Si 43.58 357 P P 10 24 54.0 -0.5
KS19 IAmb IAmb 10 25 00.4
comp=Z,33nm,1.4s
XAN Xi'an 45.09 334 P P 10 25 06.4 -0.3
XAN pmax pmax
comp=Z,17nm,0.9s
XAN Xi'an 45.09 334 P P 10 25 06.5 -0.3
XAN IAmb IAmb 10 25 07.3
comp=Z,27nm,1.1s
XAN Xi'an 45.09 334 P P 10 25 06.5 -0.3
XAN pmax pmax
comp=Z,27nm,1.1s
CD2 Chengdu 45.11 326 P P 10 25 06.4 -0.5
CD2 pmax pmax
comp=Z,10.0nm,0.5s
MSVF Nonsavu 47.45 108 deP P 10 25 25.8 +0.3
MSVF pmax pmax
comp=Z,44nm,3.2s
BJT Baijiatuau 47.96 345 P P 10 25 29.6 +0.7
BJT IAmb IAmb 10 25 30.4
comp=Z,21nm,1.0s
BJT Baijiatuau 47.96 345 P P 10 25 29.6 +0.7
BJT pmax pmax
comp=Z,21nm,1.0s
BJI Beijing 47.98 345 ⇑eP P 10 25 29.2 +0.2
BJI pmax pmax
comp=Z,20nm,0.9s
MSHR Mys Shultsa 48.56 0 ⇑eP P 10 25 34.5 +1.0
LZH Lanzhou 49.12 331 eP P 10 25 39.4 +1.2
LZH ePP PP 10 27 33.0 +0.3
LZH pmax pmax
comp=Z,21nm,1.2s
LZH pmax pmax
comp=Z,89nm,4.9s
SHL Shillong 49.30 311 P P 10 25 39.5 -0.2
SHL Shillong 49.30 311 P P 10 25 39.5 -0.2
SHL pmax pmax
comp=Z,23nm,0.8s
HHC Hu-ho-hao-te 50.07 341 eP P 10 25 48.3 +3.1
HHC pmax pmax
comp=Z,6.0nm,0.8s
HHC pmax pmax
comp=Z,59nm,7.0s
USA0B Ussuriysk Arra 50.19 1 P P 10 25 47.1 +1.2
USA0B IAmb IAmb 10 25 47.2
comp=Z,10nm,0.7s
USA0B Ussuriysk Arra 50.19 1 deP P 10 25 46.8 +0.9
USRK Ussuriysk Ar. 50.19 1 P P 10 25 46.7 +0.8
comp=Z,9.5nm,0.6s,baz=188,slow=7.5,SNR=39
USRK pP pwP 10 26 10.2 -4.0
comp=Z,3.0nm,0.5s,baz=185,slow=7.6,SNR=4.5
USRK Ussuriysk Ar. 50.19 1 P P 10 25 47.1 +1.3
USRK Ussuriysk Ar. 50.19 1 P P 10 25 47.2 +1.3
MDJ Mudanjiang 50.61 359 P P 10 25 49.6 +0.6
MDJ IAmb IAmb 10 25 51.0
comp=Z,15nm,0.8s
WHZ Wether Hill Ro 50.89 147 P P 10 25 51.6 +0.3
WHZ IAmb IAmb 10 25 53.0
comp=Z,27nm,1.1s
HIZ Hauiti 51.12 136 P P 10 25 54.0 +0.9
HIZ IAmb IAmb 10 25 56.6
comp=Z,25nm,1.0s
RPZ Rata Peaks 51.35 143 P P 10 25 55.3 +0.6
comp=Z,18nm,0.9s,baz=325,slow=1.4,SNR=5.9
RPZ Rata Peaks 51.35 143 P P 10 25 56.3 +1.6
PALK Pallekele 51.79 284 P P 10 25 57.8 -0.7
comp=Z,3.8nm,0.7s,baz=71,slow=9.6,SNR=4.3
KHZ Kahutara 52.16 141 P P 10 26 01.7 +0.9
LSA Lhasa 52.22 315 P P 10 26 02.0 0.0
LSA pmax pmax
comp=Z,48nm,1.1s
BKZ Black Stump Fm 52.56 136 P P 10 26 04.8 +1.0
BKZ IAmb IAmb 10 26 06.1
comp=Z,25nm,1.0s
URZ Urewera 52.60 134 P P 10 26 05.1 +1.0
URZ IAmb IAmb 10 26 23.8
comp=Z,19nm,1.0s
ODAN Odare 53.39 310 eP P 10 26 10.3 0.0
comp=Z,61nm,0.8s
TAPN Taplejung 53.40 311 eP P 10 26 10.5 0.0
comp=Z,41nm,0.6s
GTA Gaotai 53.70 330 eP P 10 26 13.2 +0.9
GTA pmax pmax
comp=Z,15nm,1.2s
YSS Yuzh-Sakhalins 53.98 10 P P 10 26 13.0 -0.9
YSS IAmb IAmb 10 26 15.1
comp=Z,15nm,0.7s
YSS Yuzh-Sakhalins 53.98 10 ⇓eP P 10 26 14.4 +0.4
YSS e 10 26 39.0
YSS pmax pmax
comp=Z,20nm,0.7s
RAMN Ramite 54.04 310 eP P 10 26 15.4 +0.3
comp=Z,104nm,0.6s
JIRN Jiri 54.72 310 eP P 10 26 20.2 +0.1
GUN Gumba 55.08 310 eP P 10 26 22.7 -0.1
comp=Z,92nm,0.7s
KLR Kul'dur 55.22 1 P P 10 26 23.6 +0.7
comp=Z,8.5nm,0.9s,baz=209,slow=3.8,SNR=22
KLR Kul'dur 55.22 1 deP P 10 26 24.0 +1.1

KLR pmax pmax
comp=Z,18nm,1.1s
PKI Pulchoki 55.27 310 eP P 10 26 23.5 -0.6
PKIN Phulchoki 55.28 310 eP P 10 26 23.5 -0.6
KKN Kakani 55.47 310 eP P 10 26 25.4 0.0
DMN Daman 55.52 310 eP P 10 26 25.8 0.0
GKN Gorkha 56.07 310 eP P 10 26 29.8 +0.2
comp=Z,35nm,0.2s
KOLN Koldanda 56.76 309 eP P 10 26 34.8 +0.2
comp=Z,81nm,0.9s
DANN Dangsing 56.92 310 eP P 10 26 35.8 0.0
GRNR Gornyy 56.96 4⇑iP P 10 26 36.5 +1.2
GRNR pmax pmax
comp=Z,7.0nm,1.2s
KNTN Kanton 57.34 89 P P 10 26 39.8 +1.1
TYV Tymovskoe 57.76 9 eP P 10 26 42.1 +1.2
TYV pmax pmax
comp=Z,6.0nm,0.8s
ULN Ulaanbaatar 57.79 341 P P 10 26 42.0 +0.6
ULN IAmb IAmb 10 26 43.8
comp=Z,17nm,0.8s
ULN Ulaanbaatar 57.79 341 P P 10 26 42.0 +0.6
ULN pmax pmax
comp=Z,17nm,0.8s
SONM Songino Array 57.98 341 P P 10 26 43.9 +1.2
comp=Z,6.1nm,0.7s,baz=164,slow=6.1,SNR=45
SONM Songino Array 57.98 341 P P 10 26 43.5 +0.8
ZEA Zeya 59.81 358 eP P 10 26 56.2 +1.2
ZEA pmax pmax
comp=Z,26nm,0.8s
ZAK Zakamensk 61.21 340 eP P 10 27 05.4 +0.6
ZAK pmax pmax
comp=Z,6.0nm,1.1s
TLY Talaya 62.20 341 P P 10 27 12.1 +0.8
comp=Z,2.3nm,0.6s,baz=175,slow=5.9,SNR=8.3
TLY Talaya 62.20 341 eP P 10 27 12.7 +1.4
TLY pmax pmax
comp=Z,16nm,0.9s
MOY Mondy 63.07 340 eP P 10 27 19.0 +1.8
MOY pmax pmax
comp=Z,39nm,2.2s
WMQ Urumqi 63.20 326 eP P 10 27 19.8 +1.6
WMQ pmax pmax
comp=Z,25nm,1.1s
WMQ pmax pmax
comp=Z,52nm,3.7s
WMQ LR LR
comp=Z,310nm,29.3s
PEA0B Petropavlovsk- 63.33 18 P P 10 27 20.5 +1.8
PEA0B Petropavlovsk- 63.33 18⇑eP P 10 27 19.6 +0.9
PETK Petropavlovsk- 63.33 18 P P 10 27 20.2 +1.4
comp=Z,13nm,0.8s,baz=193,slow=6.1,SNR=8.2
PETK Petropavlovsk- 63.33 18 P P 10 27 20.7 +1.9
PETK Petropavlovsk- 63.33 18 P P 10 27 20.7 +1.9
PET Petropavlovsk 63.55 18⇑eP P 10 27 22.3 +2.1
PET pmax pmax
comp=Z,38nm,1.1s
BOD Bodaibo 65.27 350 eP P 10 27 31.2 -0.1
BOD pmax pmax
comp=Z,12nm,1.2s
MA2 Magadan 67.47 11 P P 10 27 46.1 +0.7
MA2 IAmb IAmb 10 27 47.7
comp=Z,22nm,0.9s
MA2 Magadan 67.47 11 P P 10 27 46.1 +0.7
MA2 pmax pmax
comp=Z,22nm,0.9s
KSH Kashi 68.02 317 P P 10 27 50.9 +1.5
KSH pP pP 10 28 04.9 -4.6
KSH S S 10 36 44.7 +2.5
KSH ScS SKKSac 10 37 40.3 0.0
KSH pmax pmax
comp=Z,9.0nm,1.1s
KSH pmax pmax
comp=Z,130nm,7.0s
KSH LR LR
comp=Z,130nm,9.0s
MK31 Makanchi Array 68.04 326 P P 10 27 50.1 +0.9
MK31 Makanchi Array 68.04 326 P P 10 27 50.1 +0.9
MK31 pmax pmax
comp=Z,29nm,0.9s
MKAR Makanchi Array 68.04 326 P P 10 27 50.4 +1.2
comp=Z,35nm,0.8s,baz=124,slow=8.0,SNR=253
MKAR pP PcP 10 28 14.4 -0.5
comp=Z,12nm,0.7s,baz=116,slow=7.9,SNR=3.8
YAK Yakutsk 68.05 359 P P 10 27 49.6 +0.7
comp=Z,46nm,0.8s,baz=5.2,slow=1.8,SNR=22
YAK LR LR 10 56 54.6
comp=Z,21nm,21.1s,baz=91,slow=35
YAK Yakutsk 68.05 359 eP P 10 27 48.5 -0.4
YAK e 10 28 12.7
YAK e 10 30 15.8
YAK eS S 10 36 40.8 -0.6
YAK eSS SS 10 41 09.0 +3.4
YAK pmax pmax
comp=Z,61nm,0.9s
YAK pmax pmax
comp=E,2.0nm,0.8s
YAK pmax pmax
comp=N,23nm,1.0s
YAK pmax pmax
comp=Z,5.0nm,0.5s
YAK smax smax
comp=N,38nm,2.0s
YAK smax smax
comp=E,67nm,2.5s
MAKZ Makanchi 68.22 326 P P 10 27 50.9 +0.5
MAKZ Makanchi 68.22 326 P P 10 27 50.9 +0.5
MAKZ pmax pmax
comp=Z,37nm,1.0s
KDJ Kajisay 68.51 320 P P 10 27 53.2 +0.7
KDJ IAmb IAmb 10 27 55.1
comp=Z,20nm,0.9s
KDJ Kajisay 68.51 320 P P 10 27 53.2 +0.7
KDJ pmax pmax
comp=Z,20nm,1.0s
BOOM Boomskoye usch 69.49 320 P P 10 27 57.6 -0.9
BOOM IAmb IAmb 10 28 01.0
comp=Z,22nm,1.0s
BOOM Boomskoye usch 69.49 320 P P 10 27 57.6 -0.9
BOOM pmax pmax
comp=Z,22nm,1.0s
KZA Kyzart 69.73 319 P P 10 28 02.2 +1.8
SNR=17
KBK Karagaybulak 70.21 320 P P 10 28 04.5 +1.6
SNR=8.0
UCH Uchtor 70.28 319 P P 10 28 05.6 +1.8
SNR=27
AAK Ala-Archa 70.49 319 P P 10 28 06.1 +1.4
comp=Z,16nm,1.0s,baz=177,slow=4.2,SNR=26
AAK pP pwP 10 28 30.5 -2.4
comp=Z,4.2nm,0.4s,baz=99,slow=4.4,SNR=3.9
AAK LR LR 11 02 36.1
comp=Z,22nm,20.7s,baz=104,slow=39
AAK Ala-Archa 70.49 319 P P 10 28 06.3 +1.6
SNR=15
AAK Ala-Archa 70.49 319 P P 10 28 04.9 +0.2
AAK IAmb IAmb 10 28 07.4
comp=Z,19nm,1.0s
AAK Ala-Archa 70.49 319 iP P 10 28 06.2 +1.5
AAK pmax pmax
comp=Z,35nm,1.7s
CHMS Chumysh 70.50 320 P P 10 28 05.6 +1.1
SNR=5.8
AML Almayashu 70.78 319 P P 10 28 08.4 +1.7
SNR=32
USP Ospenovka 70.79 320 P P 10 28 07.7 +1.3
SNR=24
ARSB Arslanbob 70.88 318 P P 10 28 07.7 +0.7
ARSB Arslanbob 70.88 318 P P 10 28 07.7 +0.7
ARSB pmax pmax
comp=Z,38nm,0.9s
SEY Seymchan 70.89 10⇑eP P 10 28 08.0 +1.6
EKS2 Erkin-Say 70.97 319 P P 10 28 09.4 +1.9
SNR=15
ZAA0 Zalesovo Array 71.26 333 P P 10 28 09.3 +0.5
ZAA0 IAmb IAmb 10 28 10.0
comp=Z,21nm,1.2s
ZALV Zalesovo Beam 71.26 333 P P 10 28 08.8 0.0
comp=Z,9.5nm,0.9s,baz=108,slow=4.8,SNR=30
KURBB Kurchatov Arra 72.29 328 P P 10 28 15.7 +0.6
comp=Z,10nm,0.7s,baz=128,slow=4.9,SNR=11
KURK Kurchatov 72.29 328 P P 10 28 14.6 -0.5
KURK IAmb IAmb 10 28 17.0
comp=Z,21nm,1.1s
KURK Kurchatov 72.29 328 deP P 10 28 16.1 +1.0
KURK pmax pmax
comp=Z,22nm,1.3s
VNDA Vanda 73.12 173 P P 10 28 19.7 +0.1
comp=Z,7.2nm,1.0s,baz=325,slow=7.8,SNR=6.8
VNDA LR LR 10 59 45.7
comp=Z,134nm,19.3s,baz=351,slow=35
VNDA Vanda 73.12 173 P P 10 28 20.3 +0.7
VNDA IAmb IAmb 10 28 22.3
comp=Z,28nm,1.2s
VNDA Vanda 73.12 173 P P 10 28 20.3 +0.7
VNDA pmax pmax
comp=Z,28nm,1.3s
KK31 Karatay Array 73.31 318 P P 10 28 21.7 +0.3
KK31 IAmb IAmb 10 28 23.4
comp=Z,19nm,1.0s
KK31 Karatay Array 73.31 318 P P 10 28 21.7 +0.3
KK31 pmax pmax
comp=Z,19nm,1.0s
KKAR Karatay Array 73.31 318 P P 10 28 22.2 +0.9
KKAR Karatay Array 73.31 318 P P 10 28 21.9 +0.5
KKAR IAmb IAmb 10 28 23.4
comp=Z,19nm,1.0s
KKAR Karatay Array 73.31 318 P P 10 28 22.2 +0.9
MAW Mawson 75.98 201 P P 10 28 36.7 +0.4
comp=Z,6.0nm,1.0s,baz=58,slow=7.8,SNR=5.3
MAW LR LR 10 59 56.4
comp=Z,107nm,18.9s,baz=60,slow=34
MAW Mawson 75.98 201 P P 10 28 36.1 -0.2
HRA Herat 76.14 308 P P 10 28 39.0 +0.8
WSAR Wadi Sarin 76.28 296 P P 10 28 40.5 +1.6
comp=Z,11nm,1.0s,baz=126,slow=8.7,SNR=5.2
TIXI Tiksi 77.72 359 LR LR 11 03 17.2
comp=Z,25nm,21.0s,baz=178,slow=36
TIXI Tiksi 77.72 359 P P 10 28 46.0 +0.1
TIXI IAmb IAmb 10 28 47.3
comp=Z,12nm,0.8s
TIXI Tiksi 77.72 359⇑eP P 10 28 45.6 -0.3
TIXI pmax pmax
comp=Z,13nm,0.8s
BVAR Borovoye Array 77.85 327 P P 10 28 47.4 +0.3
comp=Z,11nm,0.9s,baz=134,slow=4.3,SNR=13
BVAR pP pwP 10 29 12.2 -4.2
comp=Z,2.3nm,0.4s,baz=114,slow=8.7,SNR=3.2
BRVK Borovoye 77.93 327 P P 10 28 47.6 +0.2
BRVK IAmb IAmb 10 28 49.2
comp=Z,19nm,1.1s
BRVK Borovoye 77.93 327 P P 10 28 47.6 +0.2
BRVK pmax pmax
comp=Z,19nm,1.1s
BILL Bilibino 78.17 13deP P 10 28 49.4 +0.9
BILL pmax pmax
comp=Z,2.0nm,1.2s
UOSS Minazif 78.82 297 P P 10 28 53.1 +0.1
GEYT Alibeck 80.35 310 P P 10 29 01.8 +0.7
comp=Z,7.1nm,0.8s,baz=174,slow=2.8,SNR=14
GEYT LR LR 11 11 31.4
comp=Z,17nm,18.3s,baz=15,slow=41
GEYT Alibeck 80.35 310 P P 10 28 59.3 -1.8
GYA0B ALIBECK ARRAY 80.35 310 P P 10 29 00.4 -0.7
ABKAR Akbulak array 82.42 321 P P 10 29 11.8 +0.1
ABKAR Akbulak array 82.42 321 P P 10 29 12.0 +0.3
ABKAR IAmb IAmb 10 29 14.3
comp=Z,9.0nm,1.0s
QSPA South Pole Qui 83.75 180 P P 10 29 18.6 +0.2
AKTO Aktyubinsk 83.97 322 P P 10 29 20.1 +0.4
comp=Z,3.9nm,0.7s,baz=102,slow=3.8,SNR=14
SVE Sverdlovsk 84.54 329 eP P 10 29 23.3 +0.9
SVE pmax pmax
comp=Z,35nm,1.3s
ANM Nome 84.69 23 P P 10 29 23.2 +0.2
ANM Nome 84.69 23 P P 10 29 23.2 +0.2
ANM pmax pmax
comp=Z,7.0nm,0.9s
SYO Syowa Base 84.69 201⇑eP P 10 29 23.0 +0.1
SYO Syowa Base 84.69 201⇑epP pP 10 29 45.0 +1.3
ARU Arti 85.49 328 P P 10 29 26.6 -0.6
ARU IAmb IAmb 10 29 28.4
comp=Z,12nm,0.9s
ARU Arti 85.49 328d iP P 10 29 26.7 -0.4
ARU 10 32 41.8
ARU S S 10 39 47.8 -3.7
ARU SS SS 10 45 29.0 +0.1
ARU pmax pmax
comp=Z,14nm,1.0s
RDOG Red Dog Mine 87.09 20 P P 10 29 34.9 +0.1
RDOG IAmb IAmb 10 29 36.7
comp=Z,9.6nm,0.8s
TTA Tatalina 87.92 26 P P 10 29 40.7 +1.7
TTA IAmb IAmb 10 29 41.6
comp=Z,14nm,1.0s
TTA Tatalina 87.92 26 P P 10 29 40.7 +1.7
TTA pmax pmax
comp=Z,14nm,1.0s
RAYN Ar Rayn 88.20 294 P P 10 29 41.3 +0.2
RAYN IAmb IAmb 10 29 42.7
comp=Z,14nm,0.9s
RAYN Ar Rayn 88.20 294 P P 10 29 41.3 +0.2
RAYN pmax pmax
comp=Z,14nm,0.9s
IMAR Indian Mountai 89.75 23 P P 10 29 47.9 +0.5
SUA Susitna One 89.91 28 P P 10 29 49.7 +1.3
SUA IAmb IAmb 10 29 50.4
comp=Z,12nm,1.0s
MLY Manley 90.73 25 P P 10 29 52.9 +0.8
RND Reindeer 91.19 26 P P 10 29 54.3 +0.1
RND IAmb IAmb 10 29 54.9
comp=Z,10nm,0.8s
RND Reindeer 91.19 26 P P 10 29 54.3 +0.1
RND pmax pmax
comp=Z,10.0nm,0.8s
COLD Coldfoot 91.43 22 P P 10 29 56.4 +1.2
WRH Wood River Hil 91.72 25 P P 10 29 56.8 +0.2
WRH IAmb IAmb 10 29 57.2
comp=Z,8.4nm,0.9s
CCB Clear Creek Bu 91.88 25 P P 10 29 57.1 -0.2
HDA Harding Lake 92.20 26 P P 10 29 58.4 -0.4
HDA IAmb IAmb 10 29 59.6
comp=Z,5.9nm,0.9s
HDA Harding Lake 92.20 26 P P 10 29 58.6 -0.2
baz=260
IL31 92.29 25 P P 10 29 58.6 -0.6
IL31 IAmb IAmb 10 29 59.1
comp=Z,4.1nm,0.8s
ILAR Eielson Array 92.29 25 P P 10 29 58.2 -1.0
comp=Z,3.2nm,0.7s,baz=273,slow=4.4,SNR=30
ILAR pP pP 10 30 23.6 +3.6
comp=Z,0.7nm,0.5s,baz=248,slow=4.7,SNR=2.0
KBZ Khabaz 92.77 314⇑eP P 10 30 01.7 -0.1
FYU Fort Yukon 93.24 23 P P 10 30 04.7 +1.2
KMBO Kilima Mbogo 93.45 268 P P 10 30 07.5 +1.5
comp=Z,0.9nm,0.3s,baz=342,slow=3.3,SNR=3.2
KMBO Kilima Mbogo 93.45 268 P P 10 30 03.7 -2.3
KMBO Kilima Mbogo 93.45 268 iP P 10 30 08.1 +2.1
KMBO pmax pmax
comp=Z,1.0nm,0.3s
BMAR Burnt Mountain 93.61 23 P P 10 30 05.9 +0.6
BCAR Beaver Creek A 94.30 27 P P 10 30 09.6 +1.0
DAWY Dawson 95.44 26 P P 10 30 14.9 +1.2
KLMR Klimovskoe 96.03 331 eP P 10 30 14.2 -2.2
KLMR pmax pmax
comp=Z,11nm,1.1s
KLMR Klimovskoe 96.03 331 eP P 10 30 14.3 -2.2
KLMR AMP 10 30 15.8
comp=Z,11nm,1.1s
EPYK Eagle Plains 96.63 24 P P 10 30 19.7 +0.6
EPYK Eagle Plains 96.63 24 P P 10 30 19.3 +0.2
baz=270
INK Inuvik 97.83 22 P P 10 30 24.1 -0.3
INK Inuvik 97.83 22 P P 10 30 24.1 -0.3
INK pmax pmax
comp=Z,11nm,1.2s
BRTR Keskin Array B 99.48 309 P Pdif 10 30 32.9 +0.2
comp=Z,0.5nm,0.7s,baz=96,slow=3.8,SNR=3.9
BRTR Keskin Array B 99.48 309 Pdif 10 30 31.9 -0.7
C36M Paulatuk 101.09 20 P Pdif 10 30 39.2 +0.3
baz=282
YKA Yellowknife Ar 106.68 26 Pdiff Pdif 10 31 04.3 +0.4
comp=Z,0.9nm,1.1s,baz=295,slow=4.8,SNR=4.6
YKA PKiKP PKiKP 10 35 14.0 +0.1
comp=Z,0.6nm,0.6s,baz=289,slow=1.8,SNR=13
YKA PKKPbc PKKPbc 10 46 33.5 -2.2
comp=Z,0.4nm,0.6s,baz=97,slow=2.6,SNR=5.7
VYHS Vyhne 109.16 319 eP Pdif 10 31 18.8 +3.5
VYHS Vyhne 109.16 319 ePDIFF Pdif 10 31 18.8 +3.5
NVAR Mina Array Bea 110.15 51 PP PP 10 35 49.1 -7.3
comp=Z,0.3nm,0.6s,baz=226,slow=0.9,SNR=3.9
KONO Kongsberg 110.77 332⇓iPKIKP PKiKP 10 35 18.8 -2.8
KONO pmax pmax
comp=Z,58nm,2.5s
214A Organ Pipe Nat 115.58 58 P PKiKP 10 35 33.7 +2.0
baz=279
PDAR Pinedale Array 115.75 45 PKP PKPdf 10 35 33.2 +1.2
comp=Z,0.5nm,0.6s,baz=236,slow=1.6,SNR=5.1
PDAR pPKP pPKiKP 10 35 58.9 +5.2
comp=Z,0.7nm,0.7s,baz=258,slow=3.2,SNR=4.3
PDAR Pinedale Array 115.75 45 PKiKP 10 35 31.7 -0.3
WUAZ Wupatki 116.12 53 P PKiKP 10 35 35.0 +2.1
baz=282
LAO LASA Array 116.75 40 P PKiKP 10 35 35.7 +2.1
baz=291
TUC Tucson 117.21 57 P PKiKP 10 35 35.8 +0.9
baz=280
O20A White River Ci 117.43 48 PKPdf 10 35 35.0 -0.3
O20A White River Ci 117.43 48 P PKiKP 10 35 37.2 +1.9
baz=286
K22A Casper 117.92 45 P PKPdf 10 35 36.2 +0.1
baz=289
MVCO Mesa Verde 118.00 51 P PKiKP 10 35 37.7 +1.1
baz=284
N23A Red Feather La 118.88 46 P PKiKP 10 35 39.6 +1.4
baz=288
RSSD Black Hills 119.11 42 PKPdf 10 35 38.3 -0.1
RSSD Black Hills 119.11 42 PKIKP PKPdf 10 35 38.3 -0.1
RSSD Black Hills 119.11 42 P PKiKP 10 35 38.9 +0.4
baz=292
S22A 4UR Ranch, Cre 119.15 50 P PKiKP 10 35 40.7 +1.9
baz=286
ISCO Idaho Springs 119.46 48 P PKiKP 10 35 41.5 +2.1
baz=288
121A Cookes Peak, D 119.66 56 P PKiKP 10 35 41.9 +2.1
baz=282
Y22D IRIS PASSCAL I 120.01 54 P PKiKP 10 35 42.4 +1.9
baz=284
SDCO Great Sand Dun 120.16 50 P PKiKP 10 35 42.6 +1.8
baz=287
ANMO Albuquerque 120.17 53 PKiKP 10 35 41.4 +0.6
ANMO Albuquerque 120.17 53 PKIKP PKiKP 10 35 41.4 +0.6
ANMO Albuquerque 120.17 53 P PKiKP 10 35 42.3 +1.5
baz=285
T25A Trinidad 121.16 50 P PKiKP 10 35 44.2 +1.4
baz=288
ULM Lac du Bonnet 121.34 33 PKP PKPdf 10 35 42.2 0.0
comp=Z,2.7nm,0.7s,baz=301,slow=4.0,SNR=4.4
ULM pPKP pPKPdf 10 36 07.9 +4.0
comp=Z,1.9nm,0.6s,baz=60,slow=2.6,SNR=2.9
ULM Lac du Bonnet 121.34 33 PKPdf 10 35 42.0 -0.2
MNTX Cornudas Mount 121.83 57 P PKiKP 10 35 45.5 +1.5
baz=284
MSTX Muleshoe 123.36 53 PKiKP 10 35 48.3 +1.3
MSTX Muleshoe 123.36 53 P PKiKP 10 35 48.4 +1.4
baz=287
TXAR Lajitas Array 123.81 59 PKP PKiKP 10 35 49.3 +1.3
comp=Z,1.3nm,0.9s,baz=197,slow=1.3,SNR=6.2
TXAR pPKP sPKPdf 10 36 15.0 -2.5
comp=Z,1.0nm,0.6s,baz=228,slow=1.5,SNR=4.4
TXAR Lajitas Array 123.81 59 PKPdf 10 35 47.9 +0.2
AMTX Amarillo 123.95 52 PKPdf 10 35 47.0 -0.9
AMTX Amarillo 123.95 52 P PKiKP 10 35 49.4 +1.3
baz=288
CBKS Cedar Bluff 124.08 47 P PKiKP 10 35 49.5 +1.3
baz=292
ECSD EROS Data Cent 124.15 40 PKiKP 10 35 48.5 +0.4
ECSD EROS Data Cent 124.15 40 P PKiKP 10 35 48.7 +0.5
baz=298
BGNE Belgrade 124.17 43 P PKiKP 10 35 49.9 +1.6
baz=295
EYMN Ely 125.01 34 P PKiKP 10 35 50.0 +0.3
baz=305
E38A The Farm, Brul 125.74 35 PKPdf 10 35 50.8 0.0
SPMN Marine on St. 125.77 37 P PKiKP 10 35 51.9 +0.7
baz=302
KSU1 Kansas State U 126.20 45 P PKiKP 10 35 53.3 +0.9
baz=295
WMOK Wichita Mounta 126.26 51 PKiKP 10 35 53.5 +0.9
WMOK Wichita Mounta 126.26 51 PKIKP PKiKP 10 35 53.5 +0.9
WMOK Wichita Mounta 126.26 51 P PKiKP 10 35 53.3 +0.7
baz=290
ABTX Abilene, Hawle 126.27 54 P PKiKP 10 35 53.7 +1.0
baz=288
JCT Junction City 126.77 56 PKPdf 10 35 53.6 +0.4
JCT Junction City 126.77 56 PKIKP PKPdf 10 35 53.7 +0.4
JCT Junction City 126.77 56 P PKiKP 10 35 55.3 +1.5
baz=286
TUL1 Leonard 128.10 49 P PKiKP 10 35 57.7 +1.4
baz=294
JFWS Jewell Farm 128.57 38 P PKiKP 10 35 57.0 +0.1
baz=304
E44A Grand Marais A 128.82 32 P PKiKP 10 35 58.0 +0.7
baz=310
PLCA Paso Flores 129.31 159 PKP PKiKP 10 36 00.0 +1.4
comp=Z,1.5nm,0.7s,baz=78,slow=2.4,SNR=7.6
PLCA pPKP sPKPdf 10 36 25.0 -3.0
comp=Z,1.0nm,0.6s,baz=10,slow=1.9,SNR=2.7
PLCA SKPbc SKPbc 10 39 14.1 +2.1
comp=Z,2.7nm,0.8s,baz=266,slow=3.2,SNR=8.9
TORD Torodi Ar. Bea 129.47 282 PKP PKiKP 10 36 00.1 +0.6
comp=Z,2.3nm,1.0s,baz=54,slow=2.1,SNR=7.2
TORD pPKP sPKPdf 10 36 25.6 -3.1
comp=Z,1.9nm,0.8s,baz=88,slow=2.4,SNR=5.8
TORD SKPbc SKPbc 10 39 14.6 +1.4
comp=Z,2.6nm,0.9s,baz=69,slow=4.4,SNR=8.1
TORD Torodi Ar. Bea 129.47 282 PKiKP 10 35 59.6 +0.1
D46A Sault St. Mari 129.62 31 P PKiKP 10 35 59.6 +0.7
baz=313
F45A CMU Biological 129.64 33 P PKiKP 10 35 59.5 +0.6
baz=310
W39A Magazine 129.88 49 P PKiKP 10 36 00.4 +0.5
baz=295
D47A Chapleau 129.97 30 P PKiKP 10 36 00.0 +0.4
baz=314
U40A Yellville 130.07 47 PKPdf 10 35 59.9 +0.5
U40A Yellville 130.07 47 P PKPdf 10 35 59.9 +0.5
baz=296
G46A Petoskey 130.23 33 P PKiKP 10 36 00.4 +0.2
baz=311
E47A Iron Bridge 130.30 31 P PKiKP 10 36 00.4 +0.1
baz=313
CCM Cathedral Cave 130.43 44 PKPdf 10 36 00.1 +0.1
CCM Cathedral Cave 130.43 44 PKIKP PKPdf 10 36 00.1 +0.1
CCM Cathedral Cave 130.43 44 P PKiKP 10 36 01.0 +0.2
baz=299
D48A Paudash Townsh 130.52 29 P PKiKP 10 36 01.3 +0.5
baz=315
E48A Lockeyer 130.84 30 P PKiKP 10 36 01.7 +0.2
baz=315
G47A Hillman 130.86 32 P PKiKP 10 36 01.9 +0.5
baz=312
LSQQ Lebel-sur-Quev 131.25 24 P PKiKP 10 36 02.4 +0.2
baz=322
F49A Sandfield 131.40 30 P PKiKP 10 36 02.8 +0.3
baz=314
D50A G1974 Best Tow 131.46 28 P PKiKP 10 36 02.7 +0.1
baz=318
H48A Harrisville 131.46 32 P PKiKP 10 36 03.5 +0.8
baz=312
J47A Sunmer 131.59 35 P PKiKP 10 36 04.0 +1.0
baz=310
K47A Vermontville 131.84 35 P PKiKP 10 36 03.5 -0.1
baz=309
E51A G1948 Merrick 132.08 28 P PKiKP 10 36 04.3 +0.4
baz=318
J48A Bridge Port 132.13 34 P PKiKP 10 36 04.7 +0.6
baz=311
L47A Sherwood 132.15 36 P PKiKP 10 36 04.7 +0.5
baz=308
I49A Point Hope 132.23 33 P PKiKP 10 36 05.0 +0.7
baz=312
D52A ZEK Kipawa Sen 132.25 27 P PKiKP 10 36 04.7 +0.5
baz=319
L48A N Adams 132.62 36 P PKiKP 10 36 04.9 -0.2
baz=309
F52A Sundridge 132.71 29 P PKiKP 10 36 05.7 +0.5
baz=318
D54A Lac Fusel, La 132.88 25 P PKiKP 10 36 05.3 -0.2
baz=322
M49A Liberty Center 133.18 36 P PKiKP 10 36 07.0 +0.7
baz=309
O48A Farmland 133.22 38 P PKiKP 10 36 06.7 +0.3
baz=307
I51A Listowel 133.28 32 P PKiKP 10 36 07.1 +0.7
baz=314
N49A Columbus Grove 133.40 37 P PKiKP 10 36 07.3 +0.5
baz=308

D55A	Sainte-Anne-du	133.49	25	P	PKiKP	10 36 07.3	+0.6
	baz=323						
G53A	Haliburton	133.53	29	P	PKiKP	10 36 07.7	+0.8
	baz=318						
WCI	Wyandotte Cave	133.67	41	P	PKiKP	10 36 07.6	+0.2
	baz=304						
WVT	Waverly	133.75	44	P	PKiKP	10 36 08.0	+0.4
	baz=301						
D56A	ZEC Mazanza, M	133.76	24	P	PKiKP	10 36 07.9	+0.6
	baz=324						
O49A	Covington	133.76	38	P	PKiKP	10 36 07.8	+0.3
	baz=308						
P49A	Miami Univ. Ec	133.92	39	P	PKiKP	10 36 08.6	+0.7
	baz=307						
H53A	Bobcaygeon	133.96	29	P	PKiKP	10 36 08.1	+0.4
	baz=318						
O50A	Cable	134.22	37	P	PKiKP	10 36 08.1	-0.3
	baz=309						
P50A	Jamestown	134.44	38	P	PKiKP	10 36 09.2	+0.3
	baz=308						
N51A	Ashland	134.47	36	P	PKiKP	10 36 08.6	-0.3
	baz=310						
ACSO	Alum Creek Sta	134.55	37	P	PKiKP	10 36 09.5	+0.4
	baz=309						
S49A	Springfield	134.57	41	P	PKiKP	10 36 09.6	+0.4
	baz=305						
T49A	Edmonton	134.79	42	P	PKiKP	10 36 10.4	+0.6
	baz=304						
O51A	Pataskala	134.82	37	P	PKiKP	10 36 10.2	+0.6
	baz=310						
N52A	McGinn's Farm,	134.93	35	P	PKiKP	10 36 10.5	+0.7
	baz=311						
U49A	Red Boiling Sp	134.96	43	P	PKiKP	10 36 10.7	+0.6
	baz=303						
P51A	Williamsport	134.97	38	P	PKiKP	10 36 10.2	+0.2
	baz=309						
M53A	WI Miller and	135.09	34	P	PKiKP	10 36 10.7	+0.5
	baz=313						
S50A	Richmond	135.21	41	P	PKiKP	10 36 10.7	+0.1
	baz=306						
T50A	Nancy	135.30	42	P	PKiKP	10 36 11.5	+0.8
	baz=305						
W49A	Belvidere	135.36	45	P	PKiKP	10 36 11.3	+0.4
	baz=302						
K55A	Perry	135.56	31	P	PKiKP	10 36 11.7	+0.5
	baz=317						
M54A	Oil Creek Stat	135.59	33	P	PKiKP	10 36 11.7	+0.5
	baz=314						
U50A	Jamestown	135.64	42	P	PKiKP	10 36 12.0	+0.5
	baz=304						
S51A	Beattyville	135.75	40	P	PKiKP	10 36 12.2	+0.6
	baz=307						
L55A	Hinsdale	135.77	31	P	PKPdf	10 36 11.0	+1.0
	baz=316						
Q52A	Bidwell	135.78	38	P	PKiKP	10 36 12.2	+0.6
	baz=309						
N54A	Moraine State	135.79	34	P	PKiKP	10 36 11.9	+0.3
	baz=313						
V50A	Pikevile	135.88	43	P	PKiKP	10 36 12.6	+0.6
	baz=303						
LRAL	Lakeview Retre	135.88	48	P	PKPdf	10 36 11.0	+0.6
	baz=299						
E61A	Lac Etchemin	135.91	21	P	PKiKP	10 36 12.5	+0.8
	baz=329						
P53A	Whipple	135.97	36	P	PKiKP	10 36 12.4	+0.3
	baz=311						
W50A	Signal Mountai	135.98	44	P	PKiKP	10 36 12.9	+0.7
	baz=303						
DBIC	Dimbokro	135.99	273	PKP	PKiKP	10 36 13.0	+0.2
	comp=Z,1.3nm,0.7s,baz=359,slow=6.1,SNR=3.1						
DBIC	Dimbokro	135.99	273	PKIKP	PKiKP	10 36 13.0	+0.2
J57A	Williamstown	136.07	28	P	PKiKP	10 36 12.8	+0.7
	baz=320						
O54A	Avella	136.10	35	P	PKiKP	10 36 12.2	0.0
	baz=312						
H58A	Gabriels	136.10	26	P	PKiKP	10 36 12.5	+0.3
	baz=323						
U51A	La Follette	136.21	42	P	PKiKP	10 36 13.6	+1.0
	baz=305						
L56A	Greenwood	136.25	31	P	PKiKP	10 36 13.7	+1.1
	baz=317						
M56A	Emporium	136.40	32	P	PKiKP	10 36 13.3	+0.5
	baz=316						
P54A	Burton	136.42	36	P	PKiKP	10 36 14.1	+1.1
	baz=312						
J58A	Remsen	136.44	28	P	PKiKP	10 36 13.6	+0.7
	baz=321						
Z50A	Ashland	136.56	47		PKiKP	10 36 12.8	-0.6
Z50A	Ashland	136.56	47	P	PKiKP	10 36 14.0	+0.5
	baz=300						
L57A	Andrews Acres	136.71	30	P	PKiKP	10 36 14.0	+0.5
	baz=318						
J59A	Piesco	136.71	27	P	PKPdf	10 36 12.7	+1.0
	baz=322						
V52A	Sevierville	136.80	42	P	PKiKP	10 36 14.9	+1.1
	baz=305						
W52A	Murphy	136.99	43	P	PKiKP	10 36 15.0	+0.7
	baz=304						
M57A	Sunshine Farm,	137.05	31	P	PKiKP	10 36 14.8	+0.7
	baz=317						
Q55A	Buckhannon	137.06	36	P	PKiKP	10 36 15.1	+0.8
	baz=312						
SSPA	Standing Stone	137.16	33	P	PKiKP	10 36 15.1	+0.6
	baz=316						
U53A	Fall Branch	137.16	41	P	PKiKP	10 36 15.0	+0.4
	baz=307						
X52A	Dahlonega	137.29	44	P	PKiKP	10 36 15.5	+0.6
	baz=304						
V53A	Saluda	137.42	42	P	PKiKP	10 36 16.4	+1.2
	baz=306						
P56A	Dayton Farm, R	137.43	34	P	PKiKP	10 36 15.4	+0.5
	baz=314						
L59A	Walton	137.45	29	P	PKiKP	10 36 15.1	+0.1
	baz=320						
W53A	Cullowhee	137.47	43	P	PKiKP	10 36 15.1	-0.3
	baz=305						
R55A	Marlinton	137.50	37	P	PKiKP	10 36 15.7	+0.4
	baz=311						
T55A	Pulaski	137.84	39	P	PKiKP	10 36 16.1	+0.2
	baz=309						
P57A	Homestead Farm	137.90	34	P	PKiKP	10 36 16.1	+0.1
	baz=315						
G65A	Princeton	137.99	19	P	PKiKP	10 36 16.0	+0.1
	baz=332						
JTS	Las Juntas de	144.36	81		PKPdf	10 36 26.0	-0.2
JTS	Las Juntas de	144.36	81	PKIKP	PKPdf	10 36 26.0	-0.2
ESPN	Las Esperanzas	144.83	78		PKPdf	10 36 28.0	+1.0
PB04	IPOC Station P	144.96	145		PKPdf	10 36 28.8	+1.5
LVC	Limon Verde	145.44	147	PKPbc	PKPab	10 36 30.7	+2.0
LVC	Limon Verde	145.44	147	PKP2	PKPab	10 36 30.7	+2.0
CPUP	Villa Florida	146.69	167	PKPbc	PKPbc	10 36 31.7	+0.1
	comp=Z,8.4nm,0.9s,baz=213,slow=2.5,SNR=17						
CPUP				pPKPbc	sPKPdf	10 36 58.7	-1.3
	comp=Z,4.9nm,0.7s,baz=41,slow=2.6,SNR=4.4						
NNA	Nana	147.06	123	PKPbc	PKPbc	10 36 33.0	-0.1
NNA	Nana	147.06	123	PKP2	PKPbc	10 36 33.0	-0.1
LPAZ	La Paz	150.80	140	PKP	PKPdf	10 36 37.2	-0.4
	comp=Z,0.9nm,0.7s,baz=228,slow=2.5,SNR=4.8						
LPAZ				pPKPbc	PKiKP	10 36 45.4	+1.5
	comp=Z,17nm,0.9s,baz=108,slow=1.5,SNR=34						
LPAZ				pPKPbc	pPKPab	10 37 10.3	-1.5
	comp=Z,4.7nm,0.3s,baz=36,slow=2.5,SNR=4.9						
LPAZ	La Paz	150.80	140	PKPbc	PKiKP	10 36 44.7	+0.8
LPAZ	La Paz	150.80	140	PKIKP	PKiKP	10 36 44.7	+0.8
FLOC	Florencia	153.18	99		PKPbc	10 36 47.8	-0.2
SDV	Santo Domingo	158.55	82		PKPdc	10 36 48.4	+0.6
SDV				PKPab	PKPab	10 37 24.7	+1.6

IDC 11 10:32:57.0±0.7, 15.82N×147.57E, h0km, mb4.1/18, mb1 4.3/19, mb1mx4.1/58, mbtmp4.1/19, ML4.2/1, MS3.2/5, Ms1 3.2/5, ms1mx2.8/38, Error ellipse: s-maj=21.3km s-min=14.0km az=105.0

NEIC 11 10:32:58.7±1.9, 15.76N±0.07×147.64E±0.09, h12km±4km, mb4.5/24, Error ellipse: s-maj=12.3km s-min=9.1km az=65.0

ISC 11 10:32:58.0±0.5, 15.73N±0.06×147.62E±0.07, h10km, n70, σ1.07/63, mb4.4/29, MS3.2/4, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANA2	Anatahan	1.94	289	Pn	Pn	10 33 32.3	+1.3
ANA2				Sn	Sn	10 33 54.9	-0.5
SARN	Sarigan	2.02	299		Pn	10 33 32.8	+0.7
SARN				Sn	Sn	10 33 58.4	+0.4
GUMO	Guam	3.41	232	Pn	Pn	10 33 53.3	+2.0
	23nm,0.3s,baz=174,slow=5.7,SNR=11						
GUMO				Sn	Sn	10 34 29.4	-2.3
	48nm,0.3s,baz=31,slow=23,SNR=14						
GUMO				LR	LR	10 35 25.8	
	comp=Z,168nm,19.6s,baz=122,slow=43						
PATS	Pohnpei	13.70	129		Pn	10 36 10.4	-2.1
H11S3	WAKE ISLAND Hy	18.43	79	T	T	10 55 27.9	
	baz=263,slow=74,SNR=14						
H11S1	WAKE ISLAND Hy	18.44	79	T	T	10 55 35.3	
	baz=263,slow=74,SNR=12						
H11S2	WAKE ISLAND Hy	18.45	79	T	T	10 55 36.8	
	baz=263,slow=74,SNR=9.7						
H11N1	WAKE ISLAND Hy	18.78	75	T	T	10 55 56.7	
	baz=262,slow=75,SNR=5.9						
H11N2	WAKE ISLAND Hy	18.78	75	T	T	10 55 57.6	
H11N3	WAKE ISLAND Hy	18.79	75	T	T	10 55 57.7	
	baz=251,slow=75,SNR=5.3						
MJAR	Matsushiro Arr	22.36	340	P	P	10 37 55.3	-1.0
	1.3nm,0.5s,baz=150,slow=9.4,SNR=5.3						
MJAR	Matsushiro Arr	22.36	340	P	P	10 37 54.7	-1.6
MAJO	Matsushiro	22.36	340	P	P	10 37 53.9	-2.4
SIJI	Sorong	23.09	226	P	P	10 38 04.9	+0.7
	1.7nm,0.3s,baz=8.3,slow=9.3,SNR=4.9						
FAKI	Fak Fak	23.97	221	P	P	10 38 13.6	+0.8
FAKI				IAmb	IAmb	10 38 14.2	
	comp=Z,13nm,1.0s						
PMG	Port Moresby	24.98	181	LR	LR	10 46 48.2	
	comp=Z,47nm,21.7s,baz=44,slow=33						
YHNB	Yeheng	26.15	294	P	P	10 38 29.1	-3.7
KSRS	Korea Array	27.79	325	P	P	10 38 46.1	-1.1
	comp=Z,1.0nm,0.7s,baz=149,slow=9.2,SNR=4.5						
HNR	Honiara	27.82	153	LR	LR	10 48 01.7	
	comp=Z,40nm,20.4s,baz=310,slow=32						
CTA	Charters Tower	35.62	182	LR	LR	10 55 31.3	
	comp=Z,108nm,19.2s,baz=119,slow=38						
WB0	Warramunga Arr	37.59	201	P	P	10 40 11.4	-1.6
WB0				IAmb	IAmb	10 40 28.1	
	comp=Z,7.7nm,1.2s						
WR0	Warramunga Arr	37.72	200	P	P	10 40 15.2	+1.1
WR0				IAmb	IAmb	10 40 32.9	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	37.78	201	P	P	10 40 15.1	+0.5
	comp=Z,2.1nm,0.8s,baz=23,slow=9.1,SNR=7.0						
ASAR	Alice Springs	41.39	199	P	P	10 40 45.1	+0.5
	comp=Z,0.7nm,0.7s,baz=26,slow=7.1,SNR=11						
ASAR	Alice Springs	41.39	199	P	P	10 40 45.5	+0.8
CMAR	Chiang Mai Arr	46.50	281	P	P	10 41 26.4	+0.5
	comp=Z,2.6nm,0.7s,baz=74,slow=6.0,SNR=15						
SONM	Songino Array	46.60	322	P	P	10 41 26.8	+0.3
	comp=Z,1.2nm,0.6s,baz=136,slow=7.5,SNR=9.4						
SONM	Songino Array	46.60	322	P	P	10 41 26.6	+0.2
SEY	Seymchan	47.27	3	P	P	10 41 31.9	+0.7
	comp=Z,1.8nm,0.8s,baz=195,slow=9.1,SNR=4.3						
STKA	Stephens Creek	47.68	187	P	P	10 41 35.6	+0.8
	comp=Z,2.0nm,0.8s,baz=339,slow=12,SNR=3.4						
BILL	Bilibino	53.64	9	P	P	10 42 19.2	-0.2
TIXI	Tiksi	57.02	353	P	P	10 42 43.2	-0.4
TIXI				IAmb	IAmb	10 42 46.4	
	comp=Z,3.9nm,0.5s						
ZALV	Zalesovo Beam	61.48	323	P	P	10 43 15.8	+1.0
	comp=Z,1.1nm,0.5s,baz=110,slow=6.8,SNR=4.9						
MK31	Makanchi Array	61.84	315	P	P	10 43 17.4	-0.1
MKAR	Makanchi Array	61.84	315	P	P	10 43 17.4	-0.1
	comp=Z,2.3nm,0.6s,baz=92,slow=7.8,SNR=39						
MAKZ	Makanchi	62.06	315	P	P	10 43 19.2	+0.3
IMAR	Indian Mountai	63.19	23	P	P	10 43 27.2	+1.1
MLY	Manley	64.02	25	P	P	10 43 32.5	+0.9
MLY				IAmb	IAmb	10 43 33.3	
	comp=Z,3.9nm,1.1s						
KURK	Kurchatov	64.70	319	P	P	10 43 35.8	-0.5
CCB	Clear Creek Bu	65.09	25	P	P	10 43 38.8	+0.2
KDJ	Kajisay	65.18	309	P	P	10 43 40.5	+0.7
ILAR	Eielson Array	65.50	25	P	P	10 43 40.6	-0.7
	comp=Z,0.7nm,0.7s,baz=259,slow=5.2,SNR=6.2						
ILAR	Eielson Array	65.50	25	P	P	10 43 40.9	-0.3
NRN	Naryn	66.05	309	P	P	10 43 46.4	+0.7
BOOM	Boomskoye usch	66.10	310	P	P	10 43 46.1	+0.4
BOOM				IAmb	IAmb	10 43 54.1	
	comp=Z,7.0nm,1.2s						
BMAR	Burnt Mountain	67.11	23	P	P	10 43 52.7	+1.2
BCAR	Beaver Creek A	67.32	28	P	P	10 43 51.6	-1.4
ARSB	Arslanbob	68.33	309	P	P	10 43 59.4	-0.4
ARSB				IAmb	IAmb	10 44 15.0	
	comp=Z,4.6nm,1.0s						
BVAR	Borovoye Array	69.93	321	P	P	10 44 08.8	-0.6
	comp=Z,1.3nm,0.4s,baz=98,slow=6.8,SNR=16						
BRVK	Borovoye	69.99	321	P	P	10 44 10.1	+0.3
BRVK				IAmb	IAmb	10 44 14.7	
	comp=Z,3.5nm,1.1s						
KK31	Karatay Array	70.08	311	P	P	10 44 10.5	-0.1
KK31				IAmb	IAmb	10 44 16.8	
	comp=Z,5.4nm,1.4s						
KKAR	Karatay Array	70.08	311	P	P	10 44 10.5	-0.1
KKAR	Karatay Array	70.08	311	P	P	10 44 10.0	-0.5
KKAR				IAmb	IAmb	10 44 16.8	
	comp=Z,5.4nm,1.4s						
INK	Inuvik	71.38	23	P	P	10 44 18.1	+0.2
	comp=Z,1.7nm,0.7s,baz=294,slow=9.0,SNR=8.0						
INK	Inuvik	71.38	23	P	P	10 44 18.2	+0.3
INK				IAmb	IAmb	10 44 19.0	
	comp=Z,2.7nm,0.8s						
C36M	Paulatuk	74.81	22	P	P	10 44 38.9	+0.7
C36M				IAmb	IAmb	10 44 52.8	
	comp=Z,3.7nm,0.9s						
ABKAR	Akbulak array	76.76	318	P	P	10 44 48.9	-0.8
YKA	Yellowknife Ar	79.74	28	P	P	10 45 06.2	+0.2
	comp=Z,1.2nm,0.7s,baz=284,slow=5.7,SNR=23						
RES	Resolute Bay	81.86	14	P	P	10 45 18.0	+0.9
NVAR	Mina Array Bea	83.51	52	P	P	10 45 28.7	+2.0
	comp=Z,0.3nm,0.6s,baz=246,slow=6.8,SNR=2.5						
ARCES	ARCESS Array B	85.86	343	P	P	10 45 37.7	0.0
	comp=Z,5.0nm,0.8s,baz=69,slow=6.7,SNR=12						
FINES	FINESS Array B	90.33	336	P	P	10 45 57.8	-1.4
	comp=Z,3.4nm,0.5s,baz=66,slow=4.9,SNR=26						
FINES	FINESS Array B	90.33	336	P	P	10 45 57.9	-1.2
AKASG	Malin Array Be	94.78	326	LR	LR	11 30 46.1	
	comp=Z,15nm,21.5s,baz=80,slow=37						
DBIC	Dimbokro	144.81	307	PKP	PKPab	10 52 35.2	0.0
	comp=Z,4.9nm,0.4s,baz=30,slow=3.7,SNR=19						
DBIC	Dimbokro	144.81	307		PKPab	10 52 35.4	+0.2
KIC	Kosan Boka	144.92	307	ePKP1	PKPab	10 52 35.6	0.0
	comp=Z,15nm,0.7s						
TIC	Toumodi	144.95	307	ePKP1	PKPab	10 52 35.6	-0.2
	comp=Z,10nm,0.4s						
LIC	Lamto	145.22	307	ePKP1	PKPbc	10 52 36.5	-0.1
	comp=Z,22nm,0.6s						
LPAZ	La Paz	145.65	96	PKPbc	PKPab	10 52 39.9	+0.8
	comp=Z,1.0nm,0.5s,baz=350,slow=1.1,SNR=7.0						

DJA 11 10:44:26.3±2.3, 2°S±12°×9°9E±1°2, h52km±39km, M3.7/5, MLv3.7/5

IDC 11 10:44:29.8±3.8, 0.75S×100.71E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.4/52, mbtmp3.6/5, ML4.2/1, Error ellipse: s-maj=177.4km s-min=21.3km az=57.0

ISC 11 10:44:26.0±1.1, 1.54S±0.08×99.43E±0.07, h10km, n9, σ1.32/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	Saibi	0.40	302	P	Pn	10 44 36.9	-1.0
PDSI	Padang	1.20	59	P	Pn	10 44 48.3	-0.7
PDSI				S	Sb	10 45 04.7	+0.1
PPSI	Pulau Pagai	1.34	155	P	Pn	10 44 50.3	-0.6
KRJI	Kerinci	2.10	105	P	Pn	10 45 00.5	-0.9
KRJI				S	Sn	10 45 08.0	-20
CMAR	Chiang Mai Arr	19.88	359	P	P	10 48 56.3	-1.3
	0.3nm,0.3s,baz=169,slow=11,SNR=4.5						
WRA	Warramunga Arr	38.71	121	P	P	10 51 50.7	+0.1
	0.5nm,1.0s,baz=303,slow=9.1,SNR=3.3						
ASAR	Alice Springs	39.98	126	P	P	10 52 01.3	+0.1
	0.3nm,0.6s,baz=303,slow=7.3,SNR=3.3						
MKAR	Makanchi Array	50.44	345	P	P	10 53 26.7	+2.8
	0.6nm,0.4s,baz=163,slow=8.8,SNR=8.0						
ZALV	Zalesovo Beam	56.62	350	P	P	10 54 09.1	+0.1
	0.8nm,0.5s,baz=174,slow=5.7,SNR=4.1						

IDC 11 10:57:40.7±5.0, 27.33N×65.58E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.3/41, mbtmp3.6/4, Error ellipse: s-maj=132.9km s-min=33.2km az=139.0

ISC 11 10:57:43.5±3.9, 27.4N±0.6×65.6E±0.4, h18km, n5, σ0.83/5, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	8.44	39	P	Pn	10 59 44.9	-0.1
MKAR	Makanchi Array	23.45	30	P	P	11 02 51.6	-0.2
	0.4nm,0.6s,baz=219,slow=9.4,SNR=5.7						
BVAR	Borovoye Array	25.89	7	P	P	11 03 15.2	+1.0
	0.4nm,0.5s,baz=171,slow=10,SNR=4.4						
ARCES	ARCESS Array B	48.15	342	P	P	11 06 21.6	-0.6
	2.4nm,0.8s,baz=140,slow=7.1,SNR=4.1						
TORD	Torodi Ar. Bea	61.02	270	P	P	11 07 56.5	+0.1
	0.8nm,0.8s,baz=59,slow=7.6,SNR=4.7						

ECX 11 10:58:50.7±0.6, 32.21N×115.33W, h6km±3km, MD2.8, ML3.0

NEIC 11 10:58:51.8±1.9, 32.22N±0.02×115.24W±0.03, h13km±1km, Error ellipse: s-maj=3.6km s-min=3.0km az=80.0

PAS 11 10:58:52.9±2.1, 32.21N±0.01×115.28W±0.02, h5km±6km, ML2.6/71, ML3.0(ECX), Error ellipse: s-maj=2.5km s-min=1.2km az=48.0

MEX 11 10:58:54.0±0.5, 32.32N×115.07W, h30km±7km, MD3.6

ISC 11 10:58:52.0±1.0, 32.24N±0.02×115.27W±0.02, h13km±8km, n63, σ0.66/88, 6C-5D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBIG	Mexicali	0.18	19	eP	Pb	10 58 57.3	+0.1
MBIG	Mexicali	0.18	19	iP	Pb	10 58 58.0	+0.8
MBIG				iS	Sb	10 59 02.0	+1.3
CPBX	Cerro Prieto	0.19	351	⇑eP	Pb	10 58 56.9	-0.5
CPBX				eS	Sb	10 59 01.5	+0.6
CPBX				⇑e		10 59 03.6	
CPBX				IAML		10 59 03.6	
	comp=N,10μm,0.3s						
CPBX				IAML		10 59 05.7	
	comp=E,12μm,0.3s						
CPBX				⇑e		10 59 05.7	
CPBX	Cerro Prieto	0.19	351		Pg	10 58 56.5	+0.2
UABX	UABC, Campus M	0.42	340	eP	Pb	10 59 01.2	-0.1
UABX				eS	Sb	10 59 08.7	+1.1
UABX	UABC, Campus M	0.42	340		Pb	10 59 01.2	-0.1
DREC	Desert Rsrch C	0.59	345	⇓eP	Pb	10 59 05.1	+1.0
DREC	Desert Rsrch C	0.59	345		Pb	10 59 05.1	+1.0
ESJX	Sierra Juarez	0.62	248	⇑eP	Pg	10 59 04.1	-0.1
ESJX				eS	Sg	10 59 12.2	-0.2
ESJX	Sierra Juarez	0.62	248		Pg	10 59 04.1	-0.1
ESJX					Sg	10 59 12.3	-0.2
SNR	Schaffner Ranc	0.64	347		Pb	10 59 06.0	+0.9
WESC	Westside Schoo	0.65	323	⇓eP	Pb	10 59 06.0	+0.7
WESC	Westside Schoo	0.65	323		Pb	10 59 05.8	+0.6
ERMX	Rumorosa	0.72	297	⇓eP	Pb	10 59 06.7	+0.2
ERMX				eS	Sb	10 59 16.5	+0.3
COK2	Cook Ranch 2	0.73	328	⇑iP	Pb	10 59 07.0	+0.5
COK2	Cook Ranch 2	0.73	328		Pb	10 59 06.9	+0.5
RMX	La Rumorosa	0.78	298		Pg	10 59 06.6	-0.5
RMX					Sg	10 59 15.9	-1.5
ECBX	El Chinero	0.78	166	eP	Pg	10 59 07.2	0.0
ECBX				eS	Sb	10 59 18.5	+0.6
IKP	In-Ko-Pah, Jac	0.82	300	eP	Pg	10 59 08.3	+0.3
IKP	In-Ko-Pah, Jac	0.82	300		Pg	10 59 08.2	+0.2
IKP					Sb	10 59 19.5	+0.3
CRR	Carrizo Plain	0.88	318		Pb	10 59 09.4	+0.3
GLA	Glamis	0.90	24		Pb	10 59 09.8	+0.3
GLA	Glamis	0.90	24	Pg	Pg	10 59 08.1	-1.3
CBKC	Canebrake	1.06	309		Pn	10 59 12.9	+0.3
MONP2	Monument Peak	1.17	304	eP	Pb	10 59 14.5	+0.2
MONP2				eS	Sg	10 59 30.2	+0.2
MONP2	Monument Peak	1.17	304		Pn	10 59 14.7	+0.3
MONP2					Sb	10 59 29.8	+0.3
TKX	Tecate	1.18	287		Sb	10 59 29.9	+0.4
CBX	Cerro Bola	1.18	274	eP	Pn	10 59 14.1	-0.3
CBX				eS	Sb	10 59 30.2	+0.5
CBX				IAML		10 59 32.2	
	comp=N,362nm,0.5s						
CBX				⇓e		10 59 32.2	
CBX	Cerro Bola	1.18	274		Pn	10 59 14.2	-0.3
CBX					Sb	10 59 30.2	+0.5
CBX	Cerro Bola	1.18	274	iP	Pb	10 59 14.8	+0.4
CBX				eS	Sg	10 59 30.7	+0.4
SPIG	San Pedro Mart	1.20	188	eP	Pb	10 59 14.2	-0.5
SPIG				iS	Sn	10 59 31.1	+0.1
SPX	San Pedro Mart	1.21	188	eP	Pg	10 59 15.7	+0.4
SPX				IAML		10 59 33.3	
	comp=N,182nm,0.3s						
SPX				⇑e		10 59 33.3	
SPX	San Pedro Mart	1.21	188		Pg	10 59 15.8	+0.4
SPX	San Pedro Mart	1.21	188	iP	Pn	10 59 14.3	-0.6
SPX				iS	Sb	10 59 30.2	-0.3
TJIG	Tijuana	1.21	280	eP	Pn	10 59 14.4	-0.2
TJIG				eS	Sb	10 59 30.4	+0.1
TJIG	Tijuana	1.21	280	eP	Pb	10 59 15.2	+0.5
TJIG				iS	Sb	10 59 30.7	+0.5
CCX	Cicese	1.24	253	eP	Pn	10 59 15.2	+0.1
CCX				eS	Sb	10 59 31.4	+0.2
CCX	Cicese	1.24	253		Sb	10 59 31.4	+0.2
SFX	San Felipe	1.25	163	eP	Pb	10 59 15.6	+0.3
SFX				eS	Sg	10 59 32.3	+0.1
SFX	San Felipe	1.25	163		Pb	10 59 15.7	+0.3
SFX					Sg	10 59 32.2	+0.1
BAR	Barrett	1.27	291	⇓eP	Pn	10 59 15.7	+0.3
BAR	Barrett	1.27	291	Pn	Pn	10 59 13.1	-2.3
BAR				Sn	Sb	10 59 32.5	+0.5
113A	Mohawk Valley,	1.38	67	Pn	Pn	10 59 16.7	-0.2
113A				Sn	Sn	10 59 33.8	-1.2
OLP	Otay Lakes Par	1.45	285	eP	Pg	10 59 19.9	-0.1
OLP	Otay Lakes Par	1.45	285		Pb	10 59 19.2	+0.3
OLP					Sb	10 59 37.8	+0.5
EML	El Monte Cty P	1.48	297	eP	Pb	10 59 19.6	+0.1
EML	El Monte Cty P	1.48	297		Sb	10 59 38.7	+0.6
SDRC	San Diego Road	1.50	290		Sb	10 59 39.5	+0.9
DPP	Dos Picos Cty	1.60	299		Sb	10 59 42.7	+1.1
Y12C	Blythe	1.64	22		Pn	10 59 20.3	-0.2
Y12C				Sn	Sn	10 59 41.6	+0.2
109C	Camp Elliot, M	1.68	293		Pn	10 59 20.2	-0.9
XPFO	Pion Flat	1.70	324	Pn	Pn	10 59 20.7	-0.7
PFO	Pinyon Flats O	1.70	324	Pn	Pn	10 59 20.7	-0.8
SQX	San Quintin	1.73	198	eP	Pn	10 59 21.4	-0.4
DNR	Dunn Ranch,Anz	1.75	320		Sg	10 59 47.8	-0.7
214A	Organ Pipe Nat	2.10	97	Pn	Pn	10 59 25.7	-1.2
Y14A	Wickenburg	2.55	48	Pn	Pn	10 59 32.7	-0.4
W13A	Hualapai Mount	3.08	22	Pn	Pn	10 59 39.4	-1.1
GSC	Goldstone, Bar	3.32	338	Pn	Pn	10 59 43.3	-0.4
X16A	Lo Mia Camp, P	3.87	55	Pn	Pn	10 59 53.0	+1.5
TPNV	Topopah Spring	4.77	351	Pn	Pn	11 00 02.6	-1.1
X18A	Snowflake	5.00	61	Pn	Pn	11 00 06.9	-0.1
W18A	Petrified Fore	5.44	57	Pn	Pn	11 00 13.7	+0.8

ATH 11 11:06:57.4, 38.16N×20.39E, h11km, ML2.8/19, Error ellipse: s-maj=1.3km s-min=0.8km az=252.0

THE 11 11:06:58.0, 38.19N×20.41E, h9km, ML3.0/5, Error ellipse: s-maj=0.9km s-min=0.4km az=260.0

ISC 11 11:06:57.5±1.0, 38.17N±0.02×20.40E±0.04, h11km±4km, n52, σ0.45/74, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	322	P	Pg	11 06 59.5	0.0
CHV1				S	Sg	11 07 00.9	+0.1
LXRA	Lixouri, Kepha	0.04	48	P	Pg	11 06 59.5	-0.1
LXRA				S	Sg	11 07 01.3	+0.2
LXR1	Lixouri, Cepha	0.05	48	P	Pg	11 06 59.8	+0.2
LXR1				S	Sg	11 07 01.4	+0.2
KEF3	Kipouria, Keph	0.05	312	P	Pg	11 06 59.8	+0.1
KEF3				S	Sg	11 07 01.2	-0.1
ARGA	Argostoli. Kep	0.07	84	P	Pg	11 07 00.0	+0.2
ARGA				S	Sg	11 07 01.4	-0.1
KEF2	Argostoli. Kep	0.07	94	P	Pg	11 07 00.1	+0.3
KEF2				S	Sg	11 07 01.7	0.0
ARG2	Argostoli	0.07	84	P	Pg	11 07 00.1	+0.2
ARG2				S	Sg	11 07 01.2	-0.4
KEF4	Livadi, Kephal	0.09	15	P	Pg	11 07 00.1	0.0
KEF4				S	Sg	11 07 02.2	+0.2
KEF1	Kardakata, Kep	0.12	29	P	Pg	11 07 00.6	0.0
KEF1				S	Sg	11 07 02.5	-0.2
VLS	Valsamata	0.15	87	P	Pg	11 07 01.2	+0.2
VLS				S	Sg	11 07 03.7	+0.2
	23μm,0.1s						
VLS	Valsamata	0.15	87	P	Pg	11 07 01.2	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VLS				S	Sg	11 07 03.8	+0.2
VLS				AML	AML	11 07 04.1	
	comp=E,61954μm,0.1s						
VLS				AML	AML	11 07 04.6	
	comp=N,29442μm,0.2s						
VSK1	VASILIKIADES	0.27	29	P	Pg	11 07 03.3	+0.2
VSK1				S	Sg	11 07 06.5	-0.4
	comp=N,7μm,0.3s						
KONA	Konidatara, Ke	0.29	29	P	Pg	11 07 03.5	+0.1
KONA				S	Sg	11 07 08.2	+0.9
FSK	Fiskardo	0.32	24	P	Pg	11 07 03.9	0.0
FSK				S	Sg	11 07 08.2	0.0
	comp=N,2μm,0.2s						
FSK	Fiskardo	0.32	24	P	Pg	11 07 03.9	0.0
FSK				S	Sg	11 07 09.0	+0.8
FSK				AML	AML	11 07 09.4	
	comp=N,2597μm,0.2s						
FSK				AML	AML	11 07 09.5	
	comp=E,3638μm,0.1s						
VLMS	Volimes, Zakyn	0.36	144	P	Pg	11 07 05.0	+0.3
VLMS				S	Sg	11 07 10.0	+0.5
VLMS				AML	AML	11 07 12.2	
	comp=E,9455μm,0.1s						
VLMS				AML	AML	11 07 12.2	
	comp=N,11648μm,0.3s						
EVGI	Lefkada island	0.49	24	P	Pg	11 07 07.1	-0.1
EVGI				S	Sg	11 07 14.5	+0.8
EVGI	Lefkada island	0.49	24	P	Pg	11 07 07.1	-0.1
EVGI				S	Sb	11 07 14.8	-0.7
ZAK2	Zakynthos	0.55	134	P	Pb	11 07 08.9	-0.2
ZAK2				S	Sb	11 07 16.8	-0.2
MGNA	Meganis	0.58	33	P	Pg	11 07 08.4	-0.3
KRI1	kERI	0.61	147	P	Pg	11 07 09.3	0.0
KRI1				S	Sb	11 07 18.7	+0.1
	comp=N,3μm,0.3s						
LKD2	Lefkada island	0.65	18	P	Pg	11 07 09.8	-0.3
LKD2				S	Sb	11 07 19.7	-0.3
	comp=N,435nm,0.2s						
LKD2	Lefkada island	0.65	18	P	Pg	11 07 09.9	-0.3
TSLK	Tsoukalades, L	0.69	17	P	Pg	11 07 10.8	0.0
TSLK	Tsoukalades, L	0.69	17	P	Pg	11 07 11.0	+0.2
PDO	Prodromos	0.75	55	P	Pb	11 07 12.4	-0.2
PDO				AML	AML	11 07 24.3	
	comp=E,2088μm,0.5s						
PDO				AML	AML	11 07 28.7	
	comp=N,2828μm,0.4s						
RLS	Riolos of Patr	0.85	97	P	Pg	11 07 13.7	-0.2
RLS	Riolos of Patr	0.85	97	P	Pg	11 07 13.6	-0.4
RLS				AML	AML	11 07 30.2	
	comp=E,696μm,0.3s						
RLS				AML	AML	11 07 36.3	
	comp=N,778μm,0.4s						
PVO	Paravola	0.99	63	P	Pb	11 07 16.7	0.0
PVO	Paravola	0.99	63	P	Pg	11 07 16.5	-0.1
PVO				S	Sb	11 07 30.3	+0.5
PVO				AML	AML	11 07 33.2	
	comp=E,3020μm,0.3s						
PVO				AML	AML	11 07 38.9	
	comp=N,1795μm,0.5s						
DRO	Drossia	1.06	101	P	Pb	11 07 17.6	-0.3
DRO	Drossia	1.06	101	P	Pb	11 07 17.5	-0.3
DRO				AML	AML	11 07 43.0	
	comp=N,2120μm,0.6s						
DRO				AML	AML	11 07 44.7	
	comp=E,1635μm,0.5s						
AMT	Artemida-Makis	1.22	121	P	Pn	11 07 20.1	-0.4
AMT				AML	AML	11 07 44.2	
	comp=N,1260μm,0.8s						
AMT				AML	AML	11 07 46.0	
	comp=E,1065μm,0.5s						
LAKA	Lakka	1.25	86	P	Pn	11 07 20.7	-0.2
LAKA				AML	AML	11 07 43.0	
	comp=E,350μm,0.5s						
LAKA				AML	AML	11 07 44.3	
	comp=N,451μm,0.5s						
ANX	Ano Chora	1.27	70	P	Pn	11 07 20.9	-0.3
ANX				AML	AML	11 07 46.2	
	comp=N,1224μm,0.5s						
ANX				AML	AML	11 07 47.1	
	comp=E,1096μm,0.7s						
SERG	Sergoula	1.33	79	P	Pn	11 07 21.7	-0.3
SERG				AML	AML	11 07 47.5	
	comp=E,804μm,0.7s						
SERG				AML	AML	11 07 48.2	
	comp=N,826μm,0.6s						
TRIZ	Trizonia	1.33	81	P	Pn	11 07 21.8	-0.2
EVR	Evrytania	1.34	56	P	Pg	11 07 23.5	+0.4
EVR				AML	AML	11 07 51.9	
	comp=E,347μm,0.7s						
EVR				AML	AML	11 07 53.2	
	comp=N,320μm,0.7s						
KALE	Kalithea	1.39	80	P	Pn	11 07 22.6	-0.3
KALE				AML	AML	11 07 50.0	
	comp=E,382μm,0.4s						
KALE				AML	AML	11 07 50.6	
	comp=N,733μm,0.5s						
KLV	Kalavryta, Ach	1.39	95	P	Pn	11 07 22.7	-0.2
KLV				AML	AML	11 07 54.5	
	comp=N,284μm,0.7s						
KLV				AML	AML	11 08 02.5	
	comp=E,224μm,0.8s						
ITM	Ithomi	1.57	129	P	Pb	11 07 26.3	-0.1
MAKR	Makrakomi, Fth	1.60	58	P	Pg	11 07 28.8	+0.6
MAKR				AML	AML	11 07 59.4	
	comp=N,460μm,0.5s						
MAKR				AML	AML	11 08 02.6	
	comp=E,545μm,0.7s						
KEK	Kerkira	1.61	343	P	Pb	11 07 27.1	-0.1
PYL	PYLOS	1.66	140	P	Pb	11 07 28.3	+0.2
AGG	Agios Georgios	1.74	60	P	Pg	11 07 30.6	-0.3
AGG				AML	AML	11 08 03.7	
	comp=N,290μm,0.5s						
AGG				AML	AML	11 08 06.0	
	comp=E,270μm,0.4s						
AXAR	Agios Charalam	1.87	71	P	Pb	11 07 32.5	+0.7
AXAR				AML	AML	11 08 12.7	
	comp=E,717μm,0.5s						
AXAR				AML	AML	11 08 14.7	
	comp=N,636μm,0.5s						
THL	Klokotos Trika	1.88	42	P	Pb	11 07 31.8	0.0
THL				AML	AML	11 08 03.6	
	comp=N,152μm,0.7s						
THL				AML	AML	11 08 14.9	
	comp=E,161μm,0.5s						
PROD	Prodromos	1.98	87	P	Pb	11 07 33.2	-0.3
LTK	Loutraki	2.04	93	P	Pb	11 07 33.8	-0.7
VIL2	Platees	2.26	88	P	Pb	11 07 37.5	-0.9
DID	Didima	2.34	106	P	Pb	11 07 38.4	-1.4
DID				AML	AML	11 08 16.2	
	comp=N,179μm,0.4s						
DID				AML	AML	11 08 21.4	
	comp=E,208μm,0.4s						
VLY	Voula,Athens	2.70	96	P	Pn	11 07 42.9	+2.1

IDC **11** *11:16:06.6±1.2, 34.16N×136.28E, h374km±14km, mb2.5/5, mb1 2.7/10, mb1mx2.6/48, mbtmp3.3/10, Error ellipse: s-maj=20.4km s-min=16.2km az=83.0*

JMA **11** *11:16:06.1±0.3, 34.22N×136.17E, h386km±3km, M2.8*

ISC 11 11:16:06.7±0.8, **34.26N**±0.10×**136.27E**±0.08, **h378**km±7km, **n28**, σ1°**34**/35, **mb2.6**/5, **Western Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JKN2	Miekihoku	0.03	163	P	Pn	11 16 54.2	+0.5
JKN2				eS	S	11 17 31.5	+0.1
JMMH	Miemihama	0.48	204	P	Pn	11 16 54.4	+0.3
JWY	Kouya	0.56	266	P	Pn	11 16 54.6	+0.3
JWY				S	S	11 17 31.7	-0.8
JHE	Heguri	0.62	309	P	Pn	11 16 54.6	+0.4
JTNC	Tanabenakahech	0.70	231	P	Pn	11 16 54.7	+0.1
JWT	Wachi	1.24	325	P	Pn	11 16 56.5	+0.2
JYTA	Yamagatataniai	1.38	16	P	Pn	11 16 58.0	+1.1
JAI	Aioi	1.58	253	P	Pn	11 16 57.7	-0.4
JNY	Yasuok	1.71	50	P	Pn	11 17 00.1	+1.3
JKG	Kaga	2.01	2	P	Pn	11 17 01.2	+0.7
JOD2	Odawara 2	2.53	66	P	Pn	11 17 06.7	+2.4
JHS	Saijyo	2.70	287	P	Pn	11 17 05.3	-0.4
MJAR	Matsushiro Arr	2.77	34	P	Pn	11 17 07.5	+1.3
	0.2nm,0.3s,baz=207,slow=7.9,SNR=18						
JHU	Hanno	2.94	57	P	Pn	11 17 09.1	+1.5
JHU				eS	S	11 17 58.2	+1.4
JAG	Ashikaga	3.38	49	P	Pn	11 17 11.9	+0.4
JAG				S	S	11 18 02.9	-1.0
BSO4	Boso 4	3.44	77	P	Pn	11 17 12.8	+0.9
JYT	Yasato	3.77	58	P	Pn	11 17 15.0	0.0
JYT				eS	S	11 18 07.3	-3.0
JHO	Hitachi	4.22	55	P	Pn	11 17 19.6	+0.1
JHO				eS	S	11 18 16.7	-1.8
JNU	Nakatsue	4.63	257	P	Pn	11 17 22.6	-1.2
	0.6nm,0.3s,baz=290,slow=1.1,SNR=4.6						
JFK	Kawauchi	4.86	49	P	Pn	11 17 25.9	-0.2
JFK				S	S	11 18 26.9	-3.6
KSRS	Korea Array	7.48	298	P	Pn	11 17 55.1	0.0
	0.2nm,0.3s,baz=117,slow=11,SNR=5.5						
USRK	Ussuriysk Ar.	10.46	343	P	Pn	11 18 30.4	+0.6
	baz=153,slow=11,SNR=7.1						
ASAJ	Asahikawa	10.99	25	P	P	11 18 35.2	-0.6
	0.6nm,0.3s,baz=202,slow=16,SNR=9.7						
SONM	Songino Array	26.10	310	P	P	11 21 10.4	+2.8
	0.1nm,0.3s,baz=112,slow=11,SNR=2.9						
MKAR	Makanchi Array	42.11	304	P	P	11 23 22.7	-0.6
	0.1nm,0.5s,baz=94,slow=12,SNR=3.1						
WRA	Warramunga Arr	53.94	182	P	P	11 24 51.8	-1.1
	0.6nm,0.9s,baz=0.2,slow=7.7,SNR=4.2						
ILAR	Eielson Array	54.05	31	P	P	11 24 53.6	+0.4
	0.1nm,0.5s,baz=266,slow=7.1,SNR=4.6						
ASAR	Alice Springs	57.65	183	P	P	11 25 19.4	+0.4
	0.2nm,0.8s,baz=12,slow=13,SNR=4.2						

IDC **11** *11:17:27.0±3.5, 30.83S×178.25W, h0km, mb4.3/3, mb1 4.3/4, mb1mx3.9/44, mbtmp4.1/4, ML3.2/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/33, Error ellipse: s-maj=76.7km s-min=23.3km az=115.0*

NEIC **11** *11:17:27.4±2.3, 30.9S±0.1×178.2W±0.1, h12km±11km, mb4.2/6, Error ellipse: s-maj=43.3km s-min=8.6km az=110.0*

ISC 11 11:17:26.0±2.2, **30.9S**±0.1×**178.0W**±0.4, **h10**km, **n16**, σ1°**75**/19, **mb4.4**/5, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.60	3	Pn	Pn	11 17 56.6	+2.2
	168nm,0.3s,baz=224,slow=23,SNR=7.8						
RAO				Sn	Sn	11 18 10.1	-5.0
	450nm,0.3s,baz=54,slow=22,SNR=8.6						
MXZ	Matakaoa Point	7.35	204	Pn	Pn	11 19 13.0	-0.4
URZ	Urewera	8.41	207	Pn	Pn	11 19 28.9	+1.0
	0.3nm,0.3s,baz=269,slow=5.2,SNR=9.8						
URZ				Sn	Sn	11 21 04.3	+1.5
	2.6nm,0.3s,baz=139,slow=19,SNR=11						
URZ	Urewera	8.41	207		Pn	11 19 27.6	-0.2
URZ					Sn	11 21 02.6	-0.2
BKZ	Black Stump Fm	9.43	207	Pn	Pn	11 19 42.8	+0.8
BKZ				Sn	Sn	11 21 25.2	-3.0
DZM	Mont Dzumac	16.44	298	LR	LR	11 25 56.5	
	comp=Z,61nm,21.7s,baz=36,slow=31						
STKA	Stephens Creek	34.38	258	P	P	11 24 14.9	+1.7
	6.0nm,0.8s,baz=81,slow=10,SNR=14						
STKA	Stephens Creek	34.38	258	P	P	11 24 14.1	+0.8
STKA				IAmb	IAmb	11 24 17.3	
	comp=Z,1.4nm,0.8s						
AS31	Alice Springs	43.09	267	P	P	11 25 25.6	-0.9
ASAR	Alice Springs	43.09	267	P	P	11 25 26.9	+0.4
	comp=Z,1.4nm,0.7s,baz=104,slow=7.2,SNR=21						
ASAR	Alice Springs	43.09	267	P	P	11 25 25.6	-0.9
WR0	Warramunga Arr	43.94	273	P	P	11 25 33.6	+0.2
WB2	Warramunga Arr	44.11	273	P	P	11 25 35.0	+0.3
WB2				IAmb	IAmb	11 25 53.1	
	comp=Z,7.6nm,1.4s						
WRA	Warramunga Arr	44.12	273	P	P	11 25 35.1	+0.3
	comp=Z,3.1nm,0.6s,baz=113,slow=7.5,SNR=32						
WRA	Warramunga Arr	44.12	273	P	P	11 25 34.1	-0.7
WB0	Warramunga Arr	44.14	273	P	P	11 25 35.1	+0.1
WB0				IAmb	IAmb	11 25 36.8	
	comp=Z,4.1nm,0.6s						

NIED **11** *11:28:00, 34.20N×140.20E, h71km, Mw3.8 Best double couple: M0 5.94000×10^14 NP1: φs 242.00000°, δ82.00000°, λ109.00000°. NP2: φs 354.00000°, δ21.00000°, λ23.00000°.*

NEIC **11** *11:28:56.3±2.2, 34.25N±0.04×140.7E±0.1, h90km±8km, mb4.4/21, Error ellipse: s-maj=12.8km s-min=6.0km az=86.0*

IDC **11** *11:28:59.0±1.1, 34.21N×140.28E, h94km±8km, mb3.7/10, mb1 3.8/15, mb1mx3.5/48, mbtmp4.0/15, MS2.3/2, Ms1 2.3/2, ms1mx1.2/50, Error ellipse: s-maj=24.5km s-min=7.6km az=76.0*

JMA **11** *11:28:59.2±0.2, 34.20N×140.16E, h87km±2km, M3.6*

ISC 11 11:28:57.8±0.7, **34.22N**±0.04×**140.35E**±0.05, **h92**km±6km, **n81**, σ1°**75**/97, **mb4.2**/21, **5C-3D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSO3	Boso 3	0.60	13	⇑P	Pn	11 29 15.5	+2.2
BSO3				X		11 29 29.1	
BSO1	Boso 1	0.68	50	P	Pn	11 29 16.9	+3.2
BSO1				X		11 29 30.9	
JMKN	Mikurajimanish	0.71	243	P	Pn	11 29 14.3	-0.2
JMKN				S	Sn	11 29 25.4	-1.7
BSO4	Boso 4	0.77	360	⇑P	Pn	11 29 17.3	+2.2
BSO4				eX		11 29 32.4	
JNIO	Niijimaoohara	0.90	279	P	Pn	11 29 16.2	-0.3
JNIO				S	Sn	11 29 29.2	-1.3
JIM2	Oshima 3	0.90	304	⇑P	Pn	11 29 16.4	-0.2
JIM2				S	Sn	11 29 29.4	-1.3
JTHY	Toshimahigashi	0.93	289	P	Pn	11 29 16.7	-0.1
JTHY				S	Sn	11 29 30.7	-0.4
JSKK	Shikinejimakit	0.95	277	P	Pn	11 29 16.5	-0.5
JSKK				S	Sn	11 29 29.4	-2.1
JKO	Kozu shima	1.00	268	P	Pn	11 29 16.9	-0.7
JKO				S	Sn	11 29 30.4	-2.2
JHJ2	Mitsune	1.19	202	⇓P	Pn	11 29 20.9	+1.0
JHJ2				S	Sn	11 29 37.2	+0.8
JHJ2	Mitsune	1.19	202		Pn	11 29 20.8	+1.0
JHJ2					Sn	11 29 37.9	+1.4
JHJ	Hachijo jima 2	1.19	203	P	Pn	11 29 20.9	+1.0
	366nm,0.3s,baz=129,slow=24,SNR=12						
JHJ				S	Sn	11 29 37.3	+0.8
	788nm,0.3s,baz=238,slow=22,SNR=15						
JIZS	Izushimoda	1.31	293	⇑P	Pn	11 29 21.0	-0.3
JIZS				S	Sn	11 29 37.0	-2.0
JOD2	Odawara 2	1.47	316	⇑P	Pn	11 29 23.3	0.0
JOD2				S	Sn	11 29 41.6	-0.9
JFNN	Fujinakano	1.68	306	⇓P	Pn	11 29 26.5	+0.6
JFNN				S	Sn	11 29 46.4	-0.8
SHZ3	Shizuoka 3	1.95	296	P	Pn	11 29 30.0	+0.5
JYN	Shimob	1.95	311	⇓P	Pn	11 29 30.2	+0.7
JYN				eS	Sn	11 29 53.6	-0.1
TK04	Tokai 4	2.05	275	P	Pn	11 29 31.0	+0.4
TK04				S	Sn	11 29 55.6	-0.1
TK02	Tokai 2	2.17	264	P	Pn	11 29 32.2	+0.2
MJAR	Matsushiro Arr	2.90	324	P	Pn	11 29 43.0	+1.0
	3.0nm,0.3s,baz=147,slow=11,SNR=125						
MJAR				S	Sn	11 30 16.1	+0.1
	1.4nm,0.3s,baz=299,slow=27,SNR=5.0						
MJAR				LR	LR	11 30 32.1	
	comp=Z,38nm,18.5s,baz=130,slow=33						
MJAR	Matsushiro Arr	2.90	324		Pn	11 29 46.4	+4.3
MJAR					Sn	11 30 15.7	-0.4
MAJO	Matsushiro	2.90	324		Pn	11 29 43.5	+1.4
MAJO				Sn	Sn	11 30 18.1	+1.9
MAT	Matsushiro	2.90	324	P	Pn	11 29 43.3	+1.2
MAT				S	Sn	11 30 16.8	+0.7
MJB9	Matsu-Tunnel	2.91	324		Pn	11 29 43.3	+1.2
MJB9				Sn	Sn	11 30 18.1	+1.8
INU	Inuyama	2.96	293	P	Pn	11 29 43.5	+0.7
JCJ	Chichijima	7.28	167	P	Pn	11 30 41.2	-0.2
	14nm,0.3s,baz=274,slow=20,SNR=4.1						
JCJ				S	Sn	11 31 58.5	-4.0
	6.1nm,0.3s,baz=283,slow=23,SNR=1.8						
ERM	Erimo	8.09	15	Pn	Pn	11 30 52.3	-0.1
ERM				Sn	Sn	11 32 14.7	-7.5
ASAJ	Asahikawa	10.04	9	P	Pn	11 31 18.9	+0.1
	0.7nm,0.3s,baz=234,slow=12,SNR=11						
ASAJ				S	Sn	11 33 05.7	-3.9
	0.5nm,0.3s,baz=21,slow=32,SNR=4.8						
JKA	Kamikawa-asahi	10.04	9		Pn	11 31 18.9	+0.1
JKA					Sn	11 33 05.7	-3.9
KSRS	Korea Array	10.59	291	P	Pn	11 31 29.4	+2.9
	0.2nm,0.3s,baz=110,slow=14,SNR=7.3						
KSRS				LR	LR	11 35 29.1	
	comp=Z,16nm,18.9s,baz=115,slow=37						
KSAR	Wonju Array Be	10.62	291	Pn	Pn	11 31 28.9	+2.0
KLR	Kul'dur	16.30	340	P	Pn	11 32 40.5	-0.5
	0.9nm,0.3s,baz=156,slow=11,SNR=16						
NJ2	Nanjing	18.13	269	eP	Pn	11 33 04.9	+1.5
HHC	Hu-ho-hao-te	23.70	295	eP	P	11 34 02.6	+1.4
H11N2	WAKE ISLAND Hy	27.61	115	T	T	12 03 42.2	
	baz=306,slow=75,SNR=26						
H11N1	WAKE ISLAND Hy	27.62	115	T	T	12 03 45.8	
	baz=306,slow=75,SNR=27						
H11N3	WAKE ISLAND Hy	27.63	115	T	T	12 03 40.6	
	baz=306,slow=75,SNR=23						
H11S3	WAKE ISLAND Hy	28.21	117	T	T	12 04 35.6	
	baz=310,slow=76						
H11S1	WAKE ISLAND Hy	28.21	117	T	T	12 04 37.2	
	baz=310,slow=76						
H11S2	WAKE ISLAND Hy	28.23	117	T	T	12 04 45.0	
	baz=310,slow=76						
SONM	Songino Array	28.74	309	P	P	11 34 46.0	-0.6
	0.2nm,0.3s,baz=109,slow=9.3,SNR=3.8						
CD2	Chengdu	30.91	274	eP	P	11 35 06.0	+0.2
TLY	Talaya	31.60	315	P	P	11 35 11.5	-0.1
TLY				IAmb	IAmb	11 35 14.6	
	comp=Z,3.6nm,0.8s						
FAKI	Fak Fak	37.72	193	P	P	11 36 04.2	-0.4
FAKI				IAmb	IAmb	11 36 07.0	
	comp=Z,10nm,1.1s						
TIXI	Tiksi	37.98	354	P	P	11 36 03.9	-2.2
TIXI				IAmb	IAmb	11 36 08.7	
	comp=Z,2.3nm,0.8s						
WMQ	Urumqi	41.40	300	eP	P	11 36 37.8	+2.8
ZAA0	Zalesovo Array	43.22	315	P	P	11 36 50.3	+0.8
ZAA0				IAmb	IAmb	11 36 50.9	
	comp=Z,4.5nm,1.2s						
ZALV	Zalesovo Beam	43.22	315	P	P	11 36 49.9	+0.4
	comp=Z,0.8nm,0.3s,baz=118,slow=8.6,SNR=5.5						
ZALV	Zalesovo Beam	43.22	315	P	P	11 36 50.2	+0.7
MK31	Makanchi Array	44.93	304	P	P	11 37 04.1	+0.7
MKAR	Makanchi Array	44.93	304	P	P	11 37 03.8	+0.5
	comp=Z,2.3nm,0.6s,baz=90,slow=10.0,SNR=36						
MAKZ	Makanchi	45.14	304	P	P	11 37 05.6	+0.6
KURK	Kurchatov	47.03	310	P	P	11 37 20.2	+0.5
KURK				IAmb	IAmb	11 37 20.8	
	comp=Z,4.4nm,0.7s						
BRVK	Borovoye	51.91	314	P	P	11 37 57.9	+1.1
ILAR	Eielson Array	52.34	31	P	P	11 38 02.6	+2.9
	comp=Z,0.4nm,0.8s,baz=271,slow=6.5,SNR=4.5						
KK31	Karatay Array	53.82	302	P	P	11 38 11.4	+0.4
KK31				IAmb	IAmb	11 38 12.3	
	comp=Z,3.2nm,0.7s						
KKAR	Karatay Array	53.82	302	P	P	11 38 11.4	+0.4
KKAR	Karatay Array	53.82	302	P	P	11 38 11.4	+0.4
KKAR				IAmb	IAmb	11 38 12.3	
	comp=Z,3.2nm,0.7s						
WB0	Warramunga Arr	53.98	187	P	P	11 38 12.5	+0.2
WRAB	Tennant Creek	54.15	187	P	P	11 38 12.9	-0.7
WR0	Warramunga Arr	54.16	187	P	P	11 38 14.1	+0.5
WR0				IAmb	IAmb	11 38 24.0	
	comp=Z,12nm,1.5s						
WB2	Warramunga Arr	54.16	187	P	P	11 38 12.6	-1.0
WB2				IAmb	IAmb	11 38 14.6	
	comp=Z,3.8nm,0.7s						
WRA	Warramunga Arr	54.16	187	P	P	11 38 14.3	+0.7
	comp=Z,2.8nm,0.5s,baz=2.2,slow=7.6,SNR=33						
WRA	Warramunga Arr	54.16	187	P	P	11 38 13.3	-0.3
TGL	Tana Glacier	54.52	36	P	P	11 38 12.2	-3.7
AS31	Alice Springs	57.89	187	P	P	11 38 40.7	+0.5
ASAR	Alice Springs	57.89	187	P	P	11 38 40.9	+0.7
	comp=Z,1.0nm,0.7s,baz=20,slow=11,SNR=26						
ASAR	Alice Springs	57.89	187	P	P	11 38 41.1	+0.9
ABKAR	Akbulak array	59.11	311	P	P	11 38 48.8	+0.4
ABKAR	Akbulak array	59.11	311	P	P	11 38 49.5	+1.1
ABKAR				IAmb	IAmb	11 38 50.0	
	comp=Z,1.7nm,0.5s						
ARCES	ARCESS Array B	66.32	340	P	P	11 39 37.6	+1.6
	comp=Z,3.1nm,0.9s,baz=34,slow=7.1,SNR=3.0						
FIA1	FINESS Array S	70.89	332	P	P	11 40 04.5	0.0
FINES	FINESS Array B	70.90	332	P	P	11 40 05.7	+1.2
	comp=Z,0.8nm,0.5s,baz=57,slow=7.0,SNR=6.2						
KBZ	Khabaz	72.08	311	P	P	11 40 13.2	+1.3
	comp=Z,1.4nm,0.7s,baz=356,slow=1.6,SNR=4.0						
AKASG	Malin Array Be	75.99	322	P	P	11 40 35.7	+1.2
	comp=Z,0.5nm,0.4s,baz=45,slow=6.4,SNR=4.6						
GCMT	Greycliff	78.36	42	P	P	11 40 46.5	-1.7
YNE	Yellowstone No	78.64	43	P	P	11 40 44.6	-5.3
LKWY	Lake	78.69	43	P	P	11 40 46.4	-3.8
LKWY				IAmb	IAmb	11 41 02.8	
	comp=Z,5.0nm,0.7s						
VYHS	Vyhne	82.54	325	eP	P	11 41 08.3	-2.0
LPAZ	La Paz	148.82	62	PKPbc	PKPdf	11 48 34.4	+2.5
	comp=Z,0.9nm,0.4s,baz=232,slow=5.1,SNR=4.3						
LPAZ	La Paz	148.82	62		PKPdf	11 48 33.2	+1.3

IDC 11 11:29:02.7±1.7, **9.51S**×**125.74E**, **h0**km, **mb3.4**/1, **mb1 3.7**/4, **mb1mx3.4**/31, **mbtmp3.5**/4, **ML3.5**/3, **Error ellipse: s-maj=65.9km s-min=21.9km az=68.0**, **Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	8.54	181	Pn	Pn	11 31 09.5	+1.8
	0.5nm,0.3s,baz=359,slow=9.0,SNR=6.4						
FITZ				Sn	Sn	11 32 45.9	+0.9
	0.6nm,0.3s,baz=167,slow=9.1,SNR=3.8						
WRA	Warramunga Arr	13.29	142	Pn	Pn	11 32 12.3	-0.5
	0.3nm,0.3s,baz=318,slow=13,SNR=14						
WRA				Sn	Sn	11 34 40.0	-1.5
	0.2nm,0.3s,baz=317,slow=28,SNR=5.7						
ASAR	Alice Springs	16.10	152	Pn	Pn	11 32 50.8	+0.2
	0.1nm,0.3s,baz=322,slow=11,SNR=9.7						
ASAR				Sn	Sn	11 35 49.7	-0.3
	0.1nm,0.3s,baz=323,slow=14,SNR=4.5						
MKAR	Makanchi Array	68.11	329	P	P	11 40 04.3	-0.1
	0.2nm,0.5s,baz=126,slow=7.3,SNR=3.0						

IDC **11** *11:40:54.9±0.9, 0.91N×126.16E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.7/49, mbtmp3.9/7, ML3.4/1, MS3.2/1, Ms1 3.4/1, ms1mx2.4/39, Error ellipse: s-maj=55.3km s-min=13.9km az=66.0*

NEIC **11** *11:40:56±1.1, 0.9N±0.1×126.30E±0.06, h10km±5km, mb4.2/10, Error ellipse: s-maj=20.5km s-min=6.9km az=192.0*

DJA **11** *11:41:02.0±0.7, 1°N±3°×12°7E±°, h20km±7km, M3.8/11, MLv3.8/11*

ISC 11 11:40:56.1±0.7, **0.90N**±0.06×**126.33E**±0.05, **h10**km, **n30**, σ1°**33**/33, **mb4.0**/11, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.05	97	P	Pg	11 41 16.6	+0.3
TNTI				S	Sg	11 41 27.3	-2.6
TNTI	Ternate	1.05	97	Pg	Pg	11 41 16.7	+0.4
TNTI				Sg	Sg	11 41 30.4	+0.4
LBMI	Labuha	1.93	142	P	Pg	11 41 35.0	+1.9
LBMI				S	Sg	11 41 59.1	+1.0
KMSI	Cibinong	2.37	262	P	Pg	11 41 48.3	+6.7
KMSI				S	Sg	11 42 22.7	+10
SANI	Sanana	2.95	187	P	Pg	11 41 51.8	-0.9
NLAI	Namlea	4.18	169	P	Pb	11 42 07.3	-2.6
MRSI	Marisa	4.41	265	P	Pb	11 42 14.4	+0.7
SWI	Sorong	5.23	110	P	Pn	11 42 15.8	+1.3
SIJI	Sorong	5.24	110	Pn	Pn	11 42 16.7	+2.1
	1.3nm,0.3s,baz=288,slow=15,SNR=5.4						
FAKI	Fak Fak	7.03	123	Pn	Pn	11 42 39.0	-0.2
FAKI				Sn	Sn	11 43 59.6	+0.3
WB0	Warramunga Arr	22.01	159	P	P	11 45 51.4	+0.6
WB0				IAmb	IAmb	11 45 54.3	
	comp=Z,10nm,1.1s						
WRA	Warramunga Arr	22.15	160	P	P	11 45 52.9	+0.5
	comp=Z,2.3nm,0.3s,baz=336,slow=11,SNR=39						
WRA	Warramunga Arr	22.15	160	P	P	11 45 52.5	+0.2
WB2	Warramunga Arr	22.16	160	P	P	11 45 52.9	+0.5
WB2				IAmb	IAmb	11 45 59.7	
	comp=Z,7.8nm,0.5s						
WR0	Warramunga Arr	22.24	159	P	P	11 45 53.1	-0.2
WR0				IAmb	IAmb	11 46 01.9	
	comp=Z,4.6nm,0.9s						
GUMO	Guam	22.27	55	P	P	11 45 53.8	+0.2
AS31	Alice Springs	25.50	164	P	P	11 46 25.5	+0.5
AS31				IAmb	IAmb	11 46 29.6	
	comp=Z,1.9nm,0.9s						
ASAR	Alice Springs	25.51	164	P	P	11 46 25.4	+0.4
	comp=Z,1.8nm,0.4s,baz=333,slow=7.6,SNR=41						
ASAR				S	S	11 50 56.9	+4.3

	comp=Z,1.1nm,1.2s,baz=346,slow=18,SNR=4.3						
CMAR	Chiang Mai Arr	32.05	305	LR	LR	12 02 40.5	
	comp=Z,36nm,18.7s,baz=188,slow=41						
STKA	Stephens Creek	35.66	157	P	P	11 47 54.9	+0.2
	comp=Z,1.0nm,0.4s,baz=337,slow=8.5,SNR=5.4						
STKA	Stephens Creek	35.66	157	P	P	11 47 54.5	-0.1
SONM	Songino Array	49.85	343	P	P	11 49 49.1	-0.5
	comp=Z,0.5nm,0.8s,baz=155,slow=10,SNR=4.6						
MK31	Makanchi Array	59.66	326	P	P	11 51 00.2	-0.4
MKAR	Makanchi Array	59.66	326	P	P	11 51 00.6	-0.1
	comp=Z,0.5nm,0.5s,baz=120,slow=8.8,SNR=15						
MKAR	Makanchi Array	59.66	326	P	P	11 51 00.1	-0.6
TUWZ	Tuamarina	60.23	140	P	P	11 51 05.5	+0.9
BKZ	Black Stump Fm	60.78	137	P	P	11 51 06.3	-2.2
BKZ				IAmb	IAmb	11 51 10.7	
	comp=Z,9.7nm,1.2s						
AFI	Afiamalu	63.02	106	P	P	11 51 23.8	-0.3
KURBB	Kurchatov Arra	63.91	328	P	P	11 51 28.8	-0.4
	comp=Z,0.7nm,0.4s,baz=110,slow=5.3,SNR=3.5						
ABKAR	Akbulak array	74.08	321	P	P	11 52 31.9	-0.6

VIE **11** *12:01:14.0±1.1, 50.04N×18.52E, h0km, mb2.1/3, ml2.5/4, Error ellipse: s-maj=8.4km s-min=7.9km az=67.0 30 km NE of Ostrava Suspected Mining induced.*
IPEC **11** *12:01:15.4±0.2, 50.06N×18.46E, h1km±2km, ML2.0/3, Error ellipse: s-maj=2.0km s-min=1.1km az=160.0*
PRU **11** *12:01:16.1±0.0, 50.07N×18.40E, h0km*
ISC 11 12:01:15.1±0.8, 50.03N±0.03×18.40E±0.02, h0km, n27, σ0.70/48, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.25	221	ePG	Pb	12 01 21.5	-1.1
OKC				eSG	Sb	12 01 26.4	-1.1
	comp=Z,162nm,0.7s						
MORC	Moravsky Berou	0.61	246	ePG	Pb	12 01 27.9	-0.8
MORC				eSG	Sg	12 01 36.0	+1.2
MORC	Moravsky Berou	0.61	246	ePg	Pb	12 01 27.8	-0.9
	baz=64						
MORC				eSg	Sg	12 01 35.9	+1.2
	26nm,0.2s,baz=64						
OJC	Ojcow	0.92	78	ePg	Pg	12 01 32.0	-0.7
OJC				eSg	Sg	12 01 44.6	0.0
KRLC	Kraliky	1.04	273	ePG	Pg	12 01 34.9	-0.3
KRLC				eSG	Sg	12 01 49.0	+0.3
	comp=Z,48nm,0.5s						
JAVC	Velka Javorina	1.27	202	ePG	Pn	12 01 40.6	+0.5
DPC	Dobruska-Polom	1.37	284	ePG	Pg	12 01 41.5	0.0
DPC				eSG	Sb	12 01 59.9	0.0
	comp=Z,43nm,0.4s						
NIE	Niedzica	1.38	116	ePg	Pb	12 01 41.7	-0.1
NIE				eSg	Sn	12 02 01.4	+0.9
VRAC	Vranov	1.38	239	ePG	Pb	12 01 41.8	0.0
VRAC				eSG	Sn	12 02 00.3	-0.3
VRAC	Vranov	1.38	239	ePg	Pb	12 01 41.8	0.0
	baz=58						
VRAC				eSg	Sn	12 02 00.3	-0.3
	19nm,0.3s,baz=58						
OSTC	Ostas	1.50	291	ePG	Pn	12 01 43.0	-0.3
OSTC				eSG	Sn	12 02 03.9	+0.3
	comp=Z,26nm,0.4s						
VYHS	Vyhne	1.56	169	ePG	Pb	12 01 44.6	-0.3
VYHS				eSG	Sg	12 02 05.3	0.0
KSP	Ksiaz	1.57	302	ePg	Pg	12 01 46.3	+1.0
KSP				eSg	Sg	12 02 05.9	+0.2
CHVC	Chvalec	1.60	291	ePG	Pb	12 01 45.3	-0.4
CHVC				eSG	Sn	12 02 05.8	-0.4
	comp=Z,11nm,0.4s						
UPC	Upice	1.61	288	ePG	Pb	12 01 45.6	-0.1
UPC				eSG	Sg	12 02 07.1	+0.4
	comp=Z,24nm,0.5s						
KRUC	Moravsky	1.63	234	ePN	Pb	12 01 45.7	-0.3
KRUC				eSG	Sg	12 02 07.8	+0.4
KRUC	Moravsky	1.63	234	ePn	Pb	12 01 45.7	-0.3
	baz=53						
KRUC				eSg	Sg	12 02 07.7	+0.4
	12nm,0.4s,baz=53						
MODS	Modra-Piesok	1.81	204	ePG	Pg	12 01 49.7	-0.2
MODS				eSG	Sn	12 02 11.6	+0.3
STHS	Stebnicka Huta	1.94	107	ePN	Pb	12 01 51.5	+0.1
STHS				eSN	Sg	12 02 18.3	+0.7
STHS				eLG	Lg	12 02 23.7	
GOPC	GO Pecny, Ondr	2.34	269	eSG	Sg	12 02 30.1	-0.1
	comp=Z,30nm,1.0s						
PRU	Pruhonice	2.49	271	eSG	Sg	12 02 34.2	-0.9
	comp=Z,9.1nm,0.6s						
PVCC	Panska Ves	2.51	283	eSG	Sg	12 02 36.4	+0.7
	comp=Z,27nm,0.7s						
CONA	Conrad Observa	2.69	219	ePn	Pn	12 01 59.1	-0.6
	0.2nm,0.1s						
CONA				Sn	Sn	12 02 33.5	+0.6
	1.6nm,0.2s						
KHC	Kasperske Hory	3.27	256	ePG	Pb	12 02 15.7	+1.7
KHC				eSG	Sg	12 03 00.1	+0.1
MOA	Molln	3.49	233	ePn	Pn	12 02 11.9	+1.2
	0.4nm,0.2s						
MOA				eSn	Sn	12 02 52.4	-0.3
	4.8nm,0.4s						
CLL	Collm	3.67	292	eSg	Sg	12 03 11.0	-1.8
NKC	Novy Kostel	3.84	275	eSG	Sg	12 03 17.8	-0.5

IDC **11** *12:09:46.5±3.4, 7.44S×127.72E, h103km±31km, mb3.8/9, mb1 4.1/12, mb1mx3.9/26, mbtmp4.3/12, MS3.1/1, Ms1 3.1/1, ms1mx2.4/30, Error ellipse: s-maj=34.4km s-min=13.3km az=73.0*
NEIC **11** *12:09:49.9±1.6, 7.69S±0.07×127.83E±0.06, h148km±7km, mb4.0/14, Error ellipse: s-maj=10.0km s-min=8.8km az=146.0*
DJA **11** *12:09:51.1±0.4, 8°S±4°×12°8E±°, h186km±13km, M4.2/11, mB4.4/3, mb4.1/7, MLv4.3/11, Mw(mB)3.5/3*
ISC 11 12:09:50.3±0.4, 7.73S±0.04×127.82E±0.05, h150km, n55, σ1.77/64, mb4.0/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.46	94	P	Pn	12 10 47.4	+3.9
SAUI	Saumlaki	3.46	94	Pn	Pn	12 10 42.0	-1.5
SAUI					Sn	12 11 22.5	-2.2
BNDI	Bandanaira	3.80	33	P	Pn	12 10 50.0	+2.1
AAI	Ambon	4.03	5	P	Pn	12 10 51.9	+0.9
SOEI	Soe	4.05	240	P	Pn	12 10 52.1	+0.8
SOEI	Soe	4.05	240		Pn	12 10 51.8	+0.5
SOEI				Sn	Sn	12 11 38.4	-0.3
MSAI	Masohi	4.49	14	P	Pn	12 10 58.5	+1.5
NLAI	Namlea	4.52	351	P	Pn	12 10 58.7	+1.3
SANI	Sanana	5.93	342	P	Pn	12 11 16.1	0.0
	0.1nm393nm37nm,0.9s						
FAKI	Fak Fak	6.50	43	P	Pn	12 11 24.8	+1.1
	0.1nm29nm,0.8s						
FAKI	Fak Fak	6.50	43		Pn	12 11 23.0	-0.7
FAKI				Sn	Sn	12 12 35.8	-1.1
SIJI	Sorong	7.63	27	P	Pn	12 11 40.2	+1.4
	4.3nm,0.3s,baz=221,slow=22,SNR=16						
SIJI				S	Sn	12 13 06.0	+1.9
	0.9nm,0.3s,baz=11,slow=19,SNR=4.4						
SWI	Sorong	7.63	27	P	Pn	12 11 39.5	+0.7
	0.1nm666nm17nm,0.7s						
FITZ	Fitzroy Crossi	10.52	191	P	Pn	12 12 17.3	+0.1
	8.1nm,0.3s,baz=3.5,slow=8.5,SNR=59						
FITZ				S	Sn	12 14 08.7	-5.0
	2.5nm,0.3s,baz=104,slow=23,SNR=3.4						
WB0	Warramunga Arr	13.56	153		Pn	12 12 56.9	+0.3
WRAB	Tennant Creek	13.62	153		Pn	12 12 58.2	0.0
WRA	Warramunga Arr	13.69	153	P	Pn	12 12 58.2	-0.1
	7.9nm,0.3s,baz=322,slow=13,SNR=71						
WRA				S	Sn	12 15 26.4	-3.6
	5.2nm,0.3s,baz=332,slow=23,SNR=6.9						
WRA	Warramunga Arr	13.69	153		Pn	12 12 57.1	-1.3
WB2	Warramunga Arr	13.69	153		Pn	12 12 58.7	+0.3
WR0	Warramunga Arr	13.79	153		Pn	12 13 00.0	+0.4
AS31	Alice Springs	16.89	160	Pn	Pn	12 13 41.3	+3.4
AS31				IAmb	IAmb	12 13 49.5	
	comp=Z,9.6nm,0.4s						
ASAR	Alice Springs	16.89	160	P	Pn	12 13 41.4	+3.4
	comp=Z,3.3nm,0.3s,baz=335,slow=10.0,SNR=91						
ASAR				S	S	12 16 43.2	-2.6
	comp=Z,2.1nm,0.3s,baz=319,slow=17,SNR=9.9						
ASAR				LR	LR	12 21 05.5	
	comp=Z,65nm,19.3s,baz=280,slow=40						
ASAR	Alice Springs	16.89	160	P	Pn	12 13 39.7	+1.8
ASAR					S	12 16 45.3	-0.5
SBUM	Sibu	18.56	302	P	P	12 13 52.9	-2.9
SBUM				IAmb	IAmb	12 13 58.1	
	comp=Z,3.8nm,0.8s						
CISI	Cisompet, Garu	19.83	269	P	Pn	12 14 12.1	-0.7
STKA	Stephens Creek	27.24	154	P	P	12 15 24.2	+3.8
	comp=Z,2.1nm,0.5s,baz=332,slow=8.4,SNR=13						
STKA	Stephens Creek	27.24	154	P	P	12 15 23.1	+2.7
TPUB	Ta-pu	31.63	347	P	P	12 15 57.9	-1.3
CMAR	Chiang Mai Arr	38.59	313	P	P	12 16 58.0	-0.9
	comp=Z,1.3nm,0.3s,baz=142,slow=7.1,SNR=5.6						
MJAR	Matsushiro Arr	45.10	12	P	P	12 17 49.5	-2.0
	comp=Z,1.1nm,0.6s,baz=190,slow=9.5,SNR=4.2						
HHC	Hu-ho-hao-te	50.60	344	eP	P	12 18 36.1	+2.2
USRK	Ussuriysk Ar.	51.82	4	P	P	12 18 42.5	-0.3
	comp=Z,1.1nm,0.6s,baz=201,slow=9.4,SNR=5.8						
USRK	Ussuriysk Ar.	51.82	4	P	P	12 18 42.4	-0.4
GTA	Gaotai	53.60	333	eP	P	12 18 56.1	-0.1
SONM	Songino Array	58.48	343	P	P	12 19 30.5	-0.1
	comp=Z,0.8nm,0.6s,baz=167,slow=8.4,SNR=5.8						
WMQ	Urumqi	62.85	328	eP	P	12 20 01.4	+1.1
PETK	Petropavlovsk-	65.70	19	P	P	12 20 18.1	-0.4
	comp=Z,5.9nm,1.0s,baz=193,slow=6.1,SNR=5.4						
MK31	Makanchi Array	67.67	328	P	P	12 20 30.5	-0.7
MK31				IAmb	IAmb	12 20 31.7	
	comp=Z,1.3nm,0.8s						
MKAR	Makanchi Array	67.67	328	P	P	12 20 30.7	-0.5
	comp=Z,1.5nm,0.7s,baz=128,slow=8.1,SNR=21						
BOOM	Boomskoye usch	68.74	321	P	P	12 20 37.9	-0.3
AAK	Ala-Archa	69.72	321	P	P	12 20 44.2	0.0
AAK				IAmb	IAmb	12 20 44.6	
	comp=Z,1.6nm,0.8s						
ARSB	Arslanbob	70.00	319	P	P	12 20 45.9	0.0
ARSB				IAmb	IAmb	12 20 57.5	
	comp=Z,6.6nm,1.3s						
ZAA0	Zalesovo Array	71.30	335	P	P	12 20 52.1	-1.1
ZAA0				IAmb	IAmb	12 20 53.5	
	comp=Z,1.9nm,0.5s						
ZALV	Zalesovo Beam	71.30	335	P	P	12 20 52.3	-1.0
	comp=Z,1.7nm,0.3s,baz=140,slow=5.0,SNR=9.4						
ZALV	Zalesovo Beam	71.30	335	P	P	12 20 52.4	-0.9
VNDA	Vanda	72.00	173	P	P	12 21 00.3	+3.2
	comp=Z,1.8nm,0.7s,baz=318,slow=7.5,SNR=5.1						
KURK	Kurchatov	72.03	330	P	P	12 20 56.9	-0.8
KURK				IAmb	IAmb	12 20 58.2	
	comp=Z,3.3nm,0.9s						
MAW	Mawson	73.49	201	P	P	12 21 06.1	0.0
TIXI	Tiksi	79.21	0	P	P	12 21 37.9	-0.3
ABKAR	Akbulak array	81.74	322	P	P	12 21 51.5	-0.7
QSPA	South Pole Qui	82.25	180	P	P	12 21 55.2	+0.5
QSPA				IAmb	IAmb	12 22 11.6	
	comp=Z,3.4nm,1.2s						
TORD	Torodi Ar. Bea	126.82	281	PKP	PKiKP	12 28 37.6	-0.1
	comp=Z,1.4nm,0.7s,baz=57,slow=2.1,SNR=7.0						
TORD	Torodi Ar. Bea	126.82	281		PKiKP	12 28 37.1	-0.6
CPUP	Villa Florida	145.78	172	PKPbc	PKiKP	12 29 14.4	-1.6
	comp=Z,1.0nm,0.4s,baz=29,slow=1.9,SNR=3.8						
LPAZ	La Paz	151.39	147	PKPbc	PKiKP	12 29 30.3	+1.8
	comp=Z,0.8nm,0.4s,baz=50,slow=8.3,SNR=3.8						
LPAZ				PKPab	PKPab	12 29 39.9	+3.3
	comp=Z,1.6nm,0.5s,baz=203,slow=5.9,SNR=5.5						

JMA **11** *12:13:05.8±0.2, 23.97N×122.43E, h25km±4km, M2.3*
TAP **11** *12:13:06.4, 24.05N×122.41E, h34km, ML2.6, C*
ISC 11 12:13:04.5±1.1, 24.01N±0.03×122.41E±0.02, h15km±9km, n61, σ0.67/88, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.60	334	P	Pn	12 13 17.9	-0.5
	baz=327						
EOS1				S	Sn	12 13 27.0	-0.8
	baz=327						
JYNG	Yonagunijimaku	0.65	48	P	Pn	12 13 18.6	-0.6
JYNG				eS	Sb	12 13 27.3	+0.8
YOJ	Yonaguni jima	0.70	50	eP	Pn	12 13 19.6	-0.3
	baz=52						
YOJ				eS	Sn	12 13 29.9	-0.6
	baz=52						
YOJ	Yonaguni jima	0.70	50	P	Pn	12 13 19.6	-0.3
YOJ				S	Sn	12 13 29.9	-0.6
ENA	Nanau	0.74	304	eP	Pn	12 13 20.3	-0.2
	baz=310						
TWD	Chiawan	0.75	275	eS	Sb	12 13 30.4	+1.0
	baz=272						
NACB	Ninganchiao	0.77	282	eP	Pb	12 13 20.4	+0.8
	baz=266						
TWC	Suao	0.79	319	eP	Pn	12 13 20.7	-0.3
	baz=318						
TWC				eS	Sb	12 13 30.6	+0.2
	baz=318						
ETLH	Xiulin Townshi	0.87	283	eP	Pn	12 13 22.3	0.0
	baz=269						
ETLH				eS	Sb	12 13 34.1	+1.1
	baz=269						
ESL	Shilin	0.92	258	eP	Pb	12 13 22.4	+0.2
	baz=247						
ESL				eS	Sb	12 13 35.0	+0.8
	baz=247						
EGFH	Guangfu	0.97	250	eS	Sb	12 13 36.3	+0.7
	baz=246						
ENTT	Nioudou	0.99	309	eP	Pn	12 13 24.4	+0.5
	baz=294						
ENTT				eS	Sb	12 13 37.5	+1.1
	baz=294						
NDT	Datong Townshi	1.01	306	eP	Pn	12 13 24.6	+0.4
	baz=292						
NDT				eS	Sb	12 13 37.9	+1.1
	baz=292						
SLBB	Yuanshan	1.02	316	eP	Pn	12 13 25.3	+0.9
	baz=314						
NNSB	Datong	1.03	294	eP	Pn	12 13 24.8	+0.3
	baz=280						
NNSH	Datong	1.03	294	eP	Pn	12 13 24.7	+0.2
	baz=280						
NNS	Nan Shan	1.04	294	eS	Sb	12 13 37.8	-0.1
	baz=282						
HGSD	Ruisui	1.04	241	eP	Pb	12 13 24.0	-0.3
	baz=238						
WHF	Hehuan Shan	1.06	277	eS	Sg	12 13 38.5	-0.6
	baz=264						
TIPB	Shuangxi	1.10	331	eP	Pn	12 13 25.6	+0.2
	baz=329						
TIPB				eS	Sb	12 13 39.8	+0.4
	baz=329						
EHY	Hungye	1.12	244	eP	Pb	12 13 25.6	-0.1
	baz=254						
EHY				eS	Sb	12 13 40.5	+0.5
	baz=254						
NWLT	Wulai	1.13	313	eS	Sb	12 13 40.4	+0.2
	baz=310						
OWD	Renai	1.13	267	eS	Sb	12 13 40.4	-0.1
	baz=264						
CHGB	Renai	1.14	273	eP	Pn	12 13 26.4	+0.3
	baz=261						
YHNB	Yeheng	1.15	305	eP	Pg	12 13 26.7	-0.1
	baz=292						
YHNB				eS	Sb	12 13 40.8	-0.2
	baz=292						
TWT	Tachien	1.16	282	eS	Sb	12 13 41.6	+0.4
	baz=269						
NSK	Sanguang	1.17	305	P	Pn	12 13 26.8	+0.4
	baz=291						
TDCB	Techi	1.17	282	eP	Pg	12 13 27.0	-0.2
	baz=269						
TDCB				eS	Sb	12 13 41.7	0.0
	baz=269						
VWDT	VWDT	1.19	258	eP	Pg	12 13 27.4	-0.2
	baz=255						
VWDT				eS	Sb	12 13 41.9	-0.2
	baz=255						
YULB	Yu-li	1.20	239	eP	Pn	12 13 26.7	0.0
	baz=252						
YULB				eS	Sb	12 13 41.7	-0.5
	baz=252						
TWF1	Yuli	1.22	238	P	Pn	12 13 27.2	+0.2
	baz=225						
TWF1				eS	Sb	12 13 42.5	-0.2
	baz=225						
IRIF	Iriomote-Funau	1.24	75	P	Pg	12 13 28.6	+0.1
IRIF				eS	Sg	12 13 45.4	+0.6
FULB	Fuli	1.31	232	eP	Pn	12 13 27.9	-0.4
	baz=218						
FULB				eS	Sb	12 13 45.0	-0.4
	baz=218						
CHKT	Chengkung	1.32	227	eS	Sb	12 13 45.0	-0.9
	baz=224						
SSLB	Suanglung	1.35	261	eP	Pn	12 13 29.2	+0.3
	baz=258						
SSLB				eS	Sb	12 13 46.0	-0.8
	baz=258						
DPDB	Guoxing	1.36	271	eS	Sn	12 13 45.7	-1.2
	baz=261						
WHP	Taichung City	1.37	281	eP	Pg	12 13 30.7	-0.2
	baz=270						
YM10	YM10	1.38	326	eP	Pn	12 13 29.1	-0.2
	baz=324						
LIOB	Emei	1.42	297	eP	Pg	12 13 31.5	-0.4
	baz=294						
TYC	Yuchr	1.43	266	eP	Pb	12 13 30.9	0.0
	baz=263						
JKRS	Kuro-shima	1.47	81	P	Pb	12 13 31.7	+0.1
JKRS				S	Sb	12 13 50.6	+0.4
ELDTW	Lidau	1.52	238	eP	Pn	12 13 31.0	-0.3
	baz=235						
ELDTW				eS	Sn	12 13 49.3	-1.5
	baz=235						
JIJ	Ishigaki jima	1.62	77	P	Pn	12 13 33.1	+0.6
JIJ				eS	Sn	12 13 52.9	-0.2
CHN5	Tsauling	1.64	256	eS	Sb	12 13 55.3	+0.1
	baz=245						
TWGBT	Beinan	1.71	226	eP	Pn	12 13 33.6	-0.1
	baz=235						
TWG	Pinlang	1.71	226	eP	Pn	12 13 33.6	-0.2
	baz=236						
TWG				eS	Sn	12 13 54.2	-1.2
	baz=236						
TPUB	Ta-pu	1.78	247	eP	Pb	12 13 36.8	-0.2
	baz=245						
CHN4	Tsaushan	1.79	249	eP	Pb	12 13 37.3	+0.2
	baz=247						
WTP	Ta-pu	1.82	246	eP	Pb	12 13 37.1	-0.4
	baz=243						
WTP				eS	Sn	12 13 59.2	+1.1
	baz=243						
JISG	Ishigakijimahi	1.82	71	P	Pb	12 13 36.7	-0.9
JISG				eS	Sn	12 13 58.7	+0.6
RLNB	Erlin	1.88	267	eS	Sb	12 14 01.5	-0.4
	baz=277						
SLGT	Liugui	1.91	238	eP	Pn	12 13 38.1	+1.5
	baz=229						
CHN1	Nanshi	1.92	245	eS	Sb	12 14 02.9	-0.1
	baz=243						
TWK	Hsinying	1.92	248	eP	Pb	12 13 39.1	-0.1
	baz=245						
TWK				eS	Sn	12 14 01.9	+1.4
	baz=245						
SNST	Tainan City	1.93	246	eP	Pb	12 13 39.3	-0.1
	baz=244						
ECL	Taimali	1.95	224	eS	Sn	12 13 59.8	-1.4
	baz=221						
SSD	Sandimen	2.07	233	eP	Pn	12 13 40.2	+1.5
	baz=224						
LAY	Lan-yu	2.12	202	eP	Pn	12 13 40.3	+0.8
	baz=200						
MASBT	Mashibuluo	2.15	230	eP	Pn	12 13 41.0	+1.1
	baz=224						
MASBT				eS	Sn	12 14 06.1	-0.1
	baz=224						
EAST	Anshuo	2.17	222	eP	Pn	12 13 40.5	+0.4
	baz=220						
SCZT	Fangliau	2.32	226	eP	Pn	12 13 44.2	+2.0
	baz=224						

SJA **11** *12:16:13.5±0.9, 32.46S×70.88W, h98km±16km, ML3.1, MW3.3*
GUC **11** *12:16:14.4±0.6, 32.49S×70.82W, h71km±3km, ML3.7*
ISC 11 12:16:14.2±1.5, 32.48S±0.03×70.92W±0.05, h87km±11km, n27, σ1.31/50, 5C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO04	Los Peladeros	0.44	354	⇑iP	Pn	12 16 28.6	+0.1
CO04				iS	Sn	12 16 39.0	-0.2
ROCH	El Roble	0.50	189	⇓iP	Pn	12 16 28.8	-0.2
ROCH				iS	Sn	12 16 39.5	-0.4
ROCH					IAML	12 16 40.1	
	comp=E,3μm,0.3s						
ROC1	El Roble	0.50	189	iP	Pn	12 16 28.8	-0.2
ROC1				iS	Sn	12 16 39.7	-0.3
PEL	Peldehue	0.69	163	⇑eP	Pn	12 16 29.8	-0.7
PEL				iS	Sn	12 16 41.8	-0.8
PEL					IAML	12 16 43.2	
	comp=E,6μm,0.2s						
VA01	Torpederas	0.82	228	⇓iP	Pn	12 16 32.3	+0.6
VA01				iS	Sn	12 16 45.8	+1.1
VA01					IAML	12 16 49.0	
	comp=E,2μm,0.1s						
CLCH	Cerro Calan	0.97	161	⇑iP	Pn	12 16 33.4	-0.1
CLCH				iS	Sn	12 16 47.7	-0.2
CLCH					IAML	12 16 49.2	
	comp=E,4μm,0.7s						
STL	Santa Lucia	0.98	166	eP	Pn	12 16 33.5	-0.1
STL				iS	Sn	12 16 47.6	-0.6
STL					IAML	12 16 49.2	
	comp=E,4μm,0.3s						
MT03	Universidad Ad	1.07	161	⇑eP	Pn	12 16 34.7	0.0
MT03				iS	Sn	12 16 49.6	-0.4
MT01	Popeta	1.41	191	⇓iP	Pn	12 16 39.1	+0.4
MT01				iS	Sn	12 16 58.0	+0.8
MT01					IAML	12 16 58.3	
	comp=E,2μm,0.1s						
LMEL	Las Melosas	1.49	156	eP	Pn	12 16 40.1	+0.2
LMEL				iS	Sn	12 16 59.7	+0.4
RTLS	Leoncito	1.54	64	iP	Pn	12 16 41.1	+0.6
RTLS					IAML	12 16 41.5	
	comp=Z,247nm,0.4s						
RTLS				iS	Sn	12 17 01.7	+1.2
ARCO	CERRO ARCO	1.72	103	iP	Pn	12 16 43.8	+1.0
ARCO				iS	Sn	12 17 05.3	+0.9
ASAL	Salagasta	1.77	94	iP	Pn	12 16 44.3	+0.9
ASAL				iS	Sn	12 17 06.7	+1.2
AAGR	Agrelo	1.86	110	iP	Pn	12 16 45.6	+0.9
AAGR				iS	Sn	12 17 08.2	+0.4
RTCV	Cerro Valdivia	2.11	74	iP	Pn	12 16 48.5	+0.7
RTCV				iS	Sn	12 17 14.8	+1.3
ZON	Zonda	2.12	65	iP	Pn	12 16 48.6	+0.6
ZON				iS	Sn	12 17 14.4	+0.6
ZON					IAML	12 17 20.3	
	comp=Z,76nm,0.3s						
GO04	Tololo Observa	2.30	3	⇑eP	Pn	12 16 50.4	-0.2
GO04				iS	Sn	12 17 17.6	-0.8
GO04	Tololo Observa	2.30	3	iP	Pn	12 16 51.1	+0.5
GO04				iS	Sn	12 17 19.4	+1.1
RTLL	Cerro Villicun	2.38	62	iP	Pn	12 16 51.6	+0.2
RTLL				iS	Sn	12 17 18.1	-1.7
RTLL					IAML	12 17 26.1	
	comp=Z,100nm,0.4s						
CFA	Coronel Fontan	2.44	70	iP	Pn	12 16 52.2	0.0
CFA				iS	Sn	12 17 21.7	+0.4
ACCO	Cerro Coronel	2.46	41	iP	Pn	12 16 53.9	+1.1
ACCO				eS	Sn	12 17 20.6	-1.7
AMOG	MOGNA	2.58	54	iP	Pn	12 16 54.5	+0.4
AROD	Rodeo	2.62	29	iP	Pn	12 16 56.8	+2.0
GO05	Huala	2.66	198	iP	Pn	12 16 54.6	-0.6
ACDV	Cuesta del Vie	2.77	34	iP	Pn	12 16 58.3	+1.6
ACDV				iS	Sn	12 17 24.2	-5.2
ACDV					IAML	12 17 33.5	
	comp=Z,60nm,0.3s						
ACAN	Cantantal	3.16	87	iP	Pn	12 17 01.6	-0.3
ACAN				iS	Sn	12 17 34.2	-4.5
AGUA	GUANDACOL	3.64	36	iP	Pn	12 17 09.5	+1.1

BJI **11** *12:33:48.8±0.0, 36.11N×82.52E, h7km, ML3.6/8*
IDC **11** *12:33:50.8±3.4, 36.36N×82.56E, h0km, mb3.2/2, mb1 3.6/7, mb1mx3.4/48, mbtmp3.6/7, ML3.5/4, MS2.9/1, Ms1 2.9/1, ms1mx2.2/33, Error ellipse: s-maj=41.5km s-min=28.7km az=19.0*
NNC **11** *12:33:52.1±6.0, 36.37N×82.58E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=65.7km s-min=43.7km az=71.0*
ISC 11 12:33:51.2±1.9, 36.2N±0.1×82.6E±0.1, h10km, n13, σ1.79/17, 5C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	7.49	342	⇓Pn	Pn	12 35 41.2	+0.6
	3.3nm,0.4s						
PDGK				⇑Sn	Sn	12 37 05.1	-0.5
	12nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PDGK				⇑Lg	Lg	12 37 43.7	
	25nm,0.8s						
WMQ	Urumqi	8.52	26	eP	Pn	12 35 57.2	+2.6
WMQ				S	Sn	12 37 30.1	-0.6
WMQ				smax	smax		
	comp=N,9.0nm,1.3s						
WMQ				smax	smax		
	comp=E,13nm,0.7s						
AAK	Ala-Archa	8.97	318	Pn	Pn	12 36 01.6	+0.7
	0.3nm,0.3s,baz=165,slow=12,SNR=2.4						
AAK				Pg	Pg	12 36 31.6	-11
	0.3nm,0.3s,baz=203,slow=16,SNR=3.0						
AAK				Lg	Lg	12 38 30.5	
	0.4nm,0.3s,baz=307,slow=19,SNR=3.8						
MK31	Makanchi Array	10.56	359	⇑Pn	Pn	12 36 22.1	-0.4
	1.1nm,0.4s,baz=184,slow=12,SNR=49						
MK31				⇑Sn	Sn	12 38 24.5	+3.7
	1.0nm,0.5s						
MK31				⇓Lg	Lg	12 39 24.6	
	1.5nm,0.6s,baz=176,slow=28						
MKAR	Makanchi Array	10.56	359	Pn	Pn	12 36 22.5	0.0
	0.8nm,0.3s,baz=193,slow=11,SNR=43						
MKAR				Sn	Sn	12 38 17.6	-3.2
	0.1nm,0.3s,baz=79,slow=7.5,SNR=2.7						
MKAR				Lg	Lg	12 39 23.9	
	0.1nm,0.3s,baz=168,slow=29,SNR=2.8						
MAKZ	Makanchi	10.58	358	⇓Pn	Pn	12 36 23.0	+0.2
	3.7nm,0.5s						
MAKZ				⇑Sn	Sn	12 38 21.2	-0.1
	1.4nm,0.5s						
KURBB	Kurchatov Arra	14.69	350	Pn	Pn	12 37 17.0	-1.9
	baz=174,slow=11,SNR=5.0						
LZH	Lanzhou	17.13	84	eP	Pn	12 37 49.8	-1.1
LZH				pP	pP	12 37 54.0	-2.7
LZH				sP	sP	12 37 57.1	-1.5
ZALV	Zalesovo Beam	17.78	4	P	Pn	12 37 56.2	-2.4
	0.2nm,0.3s,baz=193,slow=12,SNR=10						
BVAR	Borovoye Array	18.87	337	P	Pn	12 38 11.0	-0.9
	0.6nm,0.3s,baz=142,slow=9.6,SNR=20						
SONM	Songino Array	21.03	49	P	P	12 38 36.0	+0.9
	0.4nm,0.5s,baz=231,slow=8.3,SNR=3.9						
TLY	Talaya	21.50	38	LR	LR	12 48 11.4	
	comp=Z,28nm,18.0s,baz=216,slow=40						
AKTO	Aktyubinsk	22.71	316	P	P	12 38 53.0	0.0
	1.1nm,0.6s,baz=120,slow=13,SNR=4.5						

IDC **11** *12:41:01.9±1.5, 27.°32N×52.°82E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.5/49, mbtmp3.7/9, ML3.6/1, MS3.1/1, Ms1 3.1/1, ms1mx2.1/51, Error ellipse: s-maj=32.8km s-min=23.4km az=168.0*

TEH **11** *12:41:03.0, 27.°21N×52.°81E, h12km, ML3.5*

DSN **11** *12:41:05.0±1.9, 27.°23N×52.°85E, h15km, ML3.8/7, Error ellipse: s-maj=38.6km s-min=7.6km az=3.0*

OMAN **11** *12:41:11.6±11.0, 26.°85N×53.°10E, h10km, ml3.4/8, Error ellipse: s-maj=318.9km s-min=5.1km az=330.0*

ISC 11 12:41:02.9±0.7, 27.°21N×52.°82E±0.°04×52.°82E±0.°05, h10km, n59, σ1§55/69, mb3.5/7, Southern Iran

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LMD1	Lamerd	0.34	67	eSg	Sg	12 41 15.0	+0.9
LMD1				ePg	Pg	12 41 09.8	+0.2
LMD1				e		12 41 19.4	
JHRM	Jahrom	1.46	27	ePg	Pg	12 41 30.5	-0.3
JHRM				e		12 42 02.3	
LAR1	LAR	1.46	71	ePg	Pg	12 41 31.5	+0.6
GHB	Gharebagh	2.17	354	ePn	Pb	12 41 41.4	-1.2
GHB				e		12 42 33.6	
JRN	Qarnain Island	2.26	179	ePn	Pb	12 41 42.8	-1.0
IKAZ	Kazeroun	2.70	342	ePn	Pn	12 41 47.5	+0.8
IKAZ				e		12 42 38.8	
GENO	Geno	2.99	86	ePn	Pn	12 41 52.2	+1.6
GENO				e		12 42 53.5	
SHME	Shamm	3.19	110	P	Pn	12 41 54.6	+1.4
SHME	Shamm	3.19	110	ePn	Pn	12 41 54.7	+1.5
SLWR	Sila	3.29	198	ePn	Pn	12 41 55.3	+0.8
BANOM	Banah	3.37	112	iP	Pn	12 41 57.0	+1.3
	SNR=13						
BANOM				S	Sn	12 42 35.9	+0.1
BANOM	Banah	3.37	112	P	Pn	12 41 57.0	+1.3
	SNR=13						
BANOM	Banah	3.37	112	ePn	Pn	12 41 56.9	+1.3
NAZ	Nazwa, Dubai	3.38	130	P	Pn	12 41 58.1	+2.4
NAZ	Nazwa, Dubai	3.38	130	ePn	Pn	12 41 58.4	+2.6
MSFE	Esma-Masafi	3.52	121	iP	Pn	12 41 59.3	+1.6
	SNR=7.6						
MSFE	Esma-Masafi	3.52	121	ePn	Pn	12 41 59.4	+1.7
MZWR	Madinat Zayed	3.57	164	ePn	Pn	12 42 00.4	+2.1
NIAN	Nian	3.59	84	ePn	Pn	12 41 59.7	+1.1
NIAN				e		12 43 11.3	
MDH	Madha	3.66	121	P	Pn	12 42 01.3	+1.7
MDH	Madha	3.66	121	S	Sn	12 42 42.1	-0.7
MDH	Madha	3.66	121	ePn	Pn	12 42 01.1	+1.5
UOSS	Minazif	3.79	126	iP	Pn	12 42 02.9	+1.5
	SNR=5.5						
UOSS	Minazif	3.79	126	P	Pb	12 42 05.9	-4.0
UOSS	Minazif	3.79	126	ePn	Pn	12 42 02.7	+1.3
HATD	Hatta, Dubai	3.81	128	P	Pn	12 42 03.7	+2.0
HATD	Hatta, Dubai	3.81	128	P	Pn	12 42 04.1	+2.4
HATD				S	Sn	12 42 46.1	-0.5
HATD	Hatta, Dubai	3.81	128	ePn	Pn	12 42 03.6	+1.9
ASHO	Ashiyiah	3.85	130	iP	Pn	12 42 04.1	+1.8
	SNR=20						
ASHO	Ashiyiah	3.85	130	P	Pn	12 42 04.1	+1.8
	SNR=20						
ASHO				S	Sn	12 42 47.0	-0.7
	SNR=7.6						
ASHO	Ashiyiah	3.85	130	ePn	Pn	12 42 04.0	+1.8
KLNJ	Kolanjah	3.93	344	ePn	Pn	12 42 03.1	-0.6
NGRK	Negar Kerman	4.21	54	e		12 42 14.9	
NGRK				ePn	Pn	12 42 08.9	+1.3
TVBK	TV Kerman	4.43	51	ePn	Pn	12 42 12.9	+2.3
IMEH	Mehriz	4.45	20	ePn	Pn	12 42 12.0	+1.3
KHGB	Koh Gabri	4.50	45	ePn	Pn	12 42 13.1	+1.7
KHGB				e		12 42 14.4	
SOHO	SOHO	4.54	132	P	Pn	12 42 13.0	+1.3
	SNR=6.9						
SOHO				S	Sn	12 43 04.6	0.0
IRAM	Ramesheh	4.60	355	ePn	Pn	12 42 12.5	-0.2
ISAD	Sadrabad	4.75	9	ePn	Pn	12 42 16.6	+1.8
CHMN	Cheshme madani	4.92	56	ePn	Pn	12 42 20.0	+2.7
IBAF	Bafgh	4.98	28	ePn	Pn	12 42 19.4	+1.5
HOQ	Hoqain	5.44	131	P	Pn	12 42 26.3	+2.2
	SNR=7.8						
HOQ				S	Sn	12 43 25.3	-1.4
HOQ				S	Sn	12 43 27.0	+0.2
	SNR=6.5						
BSY	Bisya	5.96	137	P	Pn	12 42 34.8	+3.5
BSY				S	Sn	12 43 39.5	-0.2
ANAR	Anarak	6.01	7	ePn	Pn	12 42 33.5	+1.5
SMDO	Samad	6.29	130	P	Pn	12 42 38.3	+2.4
SMDO				S	Sn	12 43 46.5	-1.4
WSAR	Wadi Sarin	6.58	126	Pn	Pn	12 42 40.8	+1.0
	1.1nm,0.3s,baz=321,slow=10,SNR=8.2						
WSAR				Sn	Sn	12 43 54.1	-0.9
	1.4nm,0.3s,baz=175,slow=20,SNR=6.8						
TPRV	Parvadeh(Tabas	6.70	29	ePn	Pn	12 42 42.0	+0.6
WBK	Wadi Bani Khal	7.22	128	P	Pn	12 42 51.0	+2.4
	SNR=6.9						
RAYN	Ar Rayn	7.56	243	iP	Pn	12 42 53.7	+0.4
	SNR=6.3						
NHDN	Nehbandan	7.57	55	ePn	Pn	12 42 54.3	+0.9
MHTO	MHTO	7.78	142	P	Pn	12 42 58.0	+1.8
	SNR=14						
BRTR	Keskin Array B	20.24	313	P	P	12 45 39.0	+0.5
	1.1nm,0.5s,baz=136,slow=12,SNR=9.3						
BVAR	Borovoye Array	28.92	22	P	P	12 47 01.6	-0.4
	0.5nm,0.5s,baz=213,slow=11,SNR=4.5						
MKAR	Makanchi Array	30.32	42	P	P	12 47 14.7	+0.1
	0.3nm,0.4s,baz=232,slow=9.6,SNR=6.2						
MKAR				LR	LR	13 01 02.9	
	comp=Z,34nm,18.0s,baz=191,slow=40						
KURBB	Kurchatov Arra	30.49	33	P	P	12 47 15.8	-0.1
	0.3nm,0.7s,baz=229,slow=8.6,SNR=4.4						
ZALV	Zalesovo Beam	35.58	33	P	P	12 48 00.1	-0.2
	1.3nm,0.5s,baz=236,slow=9.1,SNR=5.4						
FINES	FINESS Array B	38.64	340	P	P	12 48 25.2	-1.0
	0.8nm,0.5s,baz=143,slow=12,SNR=5.5						
TORD	Torodi Ar. Bea	49.66	264	P	P	12 49 55.9	+0.7
	0.3nm,0.5s,baz=56,slow=5.0,SNR=2.9						
YKA	Yellowknife Ar	90.04	354	P	P	12 54 02.4	-0.2
	0.4nm,0.8s,baz=4.7,slow=4.8,SNR=5.5						

KRSC **11** *12:46:38.3±1.5, 52.°75N×160.°79E, h42km±15km, ML4.7*

MOS **11** *12:46:38.4±1.3, 52.°73N×160.°76E, h44km, mb4.5/25, Error ellipse: s-maj=6.0km s-min=4.0km az=92.9*

NEIC **11** *12:46:41.8±1.8, 52.°94N±0.°09×160.°56E±0.°05, h31km±4km, mb4.4/71, Error ellipse: s-maj=13.3km s-min=4.4km az=182.0*

IDC **11** *12:46:45.4±1.7, 52.°97N×160.°45E, h66km±14km, mb3.8/28, mb1 4.0/32, mb1mx3.9/44, mbtmp4.1/32, MS3.6/19, Ms1 3.5/19, ms1mx3.3/52, Error ellipse: s-maj=15.0km s-min=10.0km az=151.0*

ISC 11 12:46:40.2±1.1, 52.°78N±0.°04×160.°66E±0.°03, h26km±7km, n271, σ1§41/304, mb4.3/69, MS3.5/18, 9C-3D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.50	310	eP	Pb	12 46 50.1	-0.3
SPN				eS	Sb	12 46 57.0	-0.3
SPN	Mys Shipunski	0.50	310	PN	Pb	12 46 50.1	-0.3
SPN				S	Sb	12 46 57.0	-0.3
NLC	Nalytchevo	0.88	297	eP	Pb	12 46 55.9	-1.0
NLC				eS	Sb	12 47 07.7	-0.6
NLC	Nalytchevo	0.88	297	PN	Pb	12 46 55.9	-1.0
NLC				S	Sb	12 47 07.7	-0.6
DALK	Dalny	1.18	283	eP	Pn	12 47 00.8	-0.3
DALK				eS	Sn	12 47 16.1	-0.2
DALK	Dalny	1.18	283	PN	Pn	12 47 00.8	-0.3
DALK				S	Sn	12 47 16.1	-0.2
SDLR	Sedlovina	1.18	296	eP	Pn	12 47 01.1	-0.1
SDLR				eS	Sb	12 47 17.1	+0.2
SDLR	Sedlovina	1.18	296	PN	Pn	12 47 01.1	-0.1
SDLR				S	Sb	12 47 17.1	+0.2
UGLR	Uglovaya	1.19	292	eP	Pn	12 47 01.5	+0.2
UGLR				eS	Sb	12 47 17.4	+0.3
UGLR	Uglovaya	1.19	292	PN	Pn	12 47 01.5	+0.2
UGLR				S	Sb	12 47 17.4	+0.3
SMAR	Somma	1.22	294	eP	Pn	12 47 01.5	-0.3
SMAR				eS	Sb	12 47 17.8	-0.4
SMAR	Somma	1.22	294	PN	Pn	12 47 01.5	-0.3
SMAR				S	Sb	12 47 17.8	-0.4
PET	Petropavlovsk	1.24	282	eP	Pn	12 47 01.7	-0.1
PET				eS	Sb	12 47 18.1	-0.3
PET	Petropavlovsk	1.24	282		Pn	12 47 01.6	-0.1
PET				Sn	Sn	12 47 17.9	+0.2
PET	Petropavlovsk	1.24	282	ePN	Pn	12 47 01.8	-0.1
PET				eS	Sn	12 47 16.8	-0.9
PET				pmax	pmax		
	comp=Z,700nm,0.5s						
PET				pmax	pmax		
	comp=Z,779nm,0.4s						
PET				smax	smax		
	comp=E,900nm,1.3s						
PET				smax	smax		
	comp=N,5μm,0.6s						
PET				smax	smax		
	comp=E,6μm,0.5s						
PET				smax	smax		
	comp=N,7μm,0.5s						
PET				smax	smax		
	comp=E,9μm,0.5s						
AVH	Avacha	1.26	293	eP	Pn	12 47 02.3	+0.1
AVH	Avacha	1.26	293	PN	Pn	12 47 02.3	+0.1
KRER	Koryakskii	1.27	295	eP	Pn	12 47 02.5	0.0
KRER				eS	Sb	12 47 19.8	+0.4
KRER	Koryakskii	1.27	295	PN	Pn	12 47 02.5	0.0
KRER				S	Sb	12 47 19.8	+0.4
KOK	Koryaka	1.32	293	eP	Pn	12 47 03.1	-0.1
KOK	Koryaka	1.32	293	PN	Pn	12 47 03.1	-0.1
KRX	Arik	1.34	296	eP	Pn	12 47 03.4	-0.1
KRX				eS	Sb	12 47 21.1	-0.5
KRX	Arik	1.34	296	PN	Pn	12 47 03.4	-0.1
KRX				S	Sb	12 47 21.1	-0.5
RUS	Russkaya	1.35	256	eP	Pn	12 47 03.8	+0.3
RUS				eS	Sn	12 47 21.1	+0.5
RUS	Russkaya	1.35	256	PN	Pn	12 47 03.8	+0.3
RUS				S	Sn	12 47 21.1	+0.5
KRMR	Karymshinskiy	1.54	273	eP	Pn	12 47 05.9	-0.1
KRMR				eS	Sn	12 47 25.5	+0.5
KRMR	Karymshinskiy	1.54	273	PN	Pn	12 47 05.9	-0.1
KRMR				S	Sn	12 47 25.5	+0.5
MTVR	Mutnovka	1.54	260	eP	Pn	12 47 06.5	+0.4
MTVR	Mutnovka	1.54	260	PN	Pn	12 47 06.5	+0.4
GRL	Gorelyy	1.59	263	eP	Pn	12 47 07.4	+0.5
GRL	Gorelyy	1.59	263	PN	Pn	12 47 07.4	+0.5
ASAK	Asacha	1.73	258	eP	Pn	12 47 09.8	+1.1
ASAK	Asacha	1.73	258	PN	Pn	12 47 09.8	+1.1
PETK	Petropavlovsk-	1.82	282	P	Pn	12 47 10.7	+0.8
	comp=E,106nm,0.3s,baz=103,slow=20,SNR=459						
PETK				S	Sb	12 47 33.6	-1.6
	comp=E,127nm,0.3s,baz=95,slow=18,SNR=13						
PETK				LR	LR	12 47 58.8	
	comp=E,1μm,18.7s,baz=88,slow=44						
APC	Apacha	2.13	275	eP	Pn	12 47 16.0	+1.9
APC				eS	Sb	12 47 42.6	-1.4
APC	Apacha	2.13	275	PN	Pn	12 47 16.0	+1.9
APC				S	Sb	12 47 42.6	-1.4
KZV	Kizimen	2.34	355	eP	Pn	12 47 18.1	+0.8
KZV				eS	Sn	12 47 46.2	+0.9
KZV	Kizimen	2.34	355	PN	Pn	12 47 18.1	+0.8
KZV				S	Sn	12 47 46.2	+0.9
TUMD	Tumrok D	2.43	357	eP	Pn	12 47 19.1	+0.8
TUMD				eS	Sn	12 47 48.1	+0.9
TUMR	Tumrok	2.52	353	eP	Pn	12 47 21.1	+1.4
TUMR				eS	Sn	12 47 51.3	+1.7
TUMR	Tumrok	2.52	353	PN	Pn	12 47 21.1	+1.4
TUMR				S	Sn	12 47 51.3	+1.7
PAU	Pauzhetka	2.71	242	eP	Pn	12 47 25.0	+2.9
PAU				eS	Sb	12 47 58.5	-2.3
PAU	Pauzhetka	2.71	242	PN	Pn	12 47 25.0	+2.9
PAU				S	Sb	12 47 58.5	-2.3
KMNR	Kamenistaya	2.99	355	eP	Pn	12 47 28.4	+2.3
KMNR	Kamenistaya	2.99	355	PN	Pn	12 47 28.4	+2.3
BZMR	Bezymyannaya	3.16	358	eP	Pn	12 47 31.1	+2.7
BZMR	Bezymyannaya	3.16	358	PN	Pn	12 47 31.1	+2.7
ZLN	Zelenaya	3.24	1	eP	Pn	12 47 32.0	+2.5
ZLN	Zelenaya	3.24	1	PN	Pn	12 47 32.0	+2.5
KOZ	Kozyrevsk	3.31	352	eP	Pn	12 47 32.5	+2.1
KOZ	Kozyrevsk	3.31	352	PN	Pn	12 47 32.5	+2.1
CIRR	Tsirk	3.34	1	eP	Pn	12 47 33.5	+2.6
CIRR	Tsirk	3.34	1	PN	Pn	12 47 33.5	+2.6
ESO	Esso	3.35	341	eP	Pn	12 47 32.5	+1.6
ESO				eS	Sn	12 48 11.0	+1.1
ESO	Esso	3.35	341	PN	Pn	12 47 32.5	+1.6
ESO				S	Sn	12 48 11.0	+1.1
KRSR	Krestovskiy	3.44	359	eP	Pn	12 47 34.0	+1.7
KRSR	Krestovskiy	3.44	359	PN	Pn	12 47 34.0	+1.7
SKR	Severo-Kuril's	3.52	235	eP	Pn	12 47 34.8	+1.6
SKR				eS	Sn	12 48 15.6	+1.6
SKR	Severo-Kuril's	3.52	235	ePN	Pn	12 47 37.7	+4.5
SKR				eS	Sb	12 48 20.5	-3.5
SKR				pmax	pmax		
	comp=Z,92nm,1.1s						
SKR				smax	smax		
	comp=N,443nm,0.8s						
SKR				smax	smax		
	comp=E,133nm,0.6s						
KLY	Klyuchi	3.54	360	eP	Pn	12 47 35.4	+1.9
KLY	Klyuchi	3.54	360	PN	Pn	12 47 35.4	+1.9
SRDR	Sredinnyy	3.58	352	eP	Pn	12 47 35.6	+1.4
SRDR	Sredinnyy	3.58	352	PN	Pn	12 47 35.6	+1.4
KBTR	Krutoberegovo	3.66	19	eP	Pn	12 47 35.1	0.0
KBTR	Krutoberegovo	3.66	19	PN	Pn	12 47 35.1	0.0
KBG	Krutoberegovo	3.68	18	eP	Pn	12 47 37.3	+1.9
KBG				eS	Sn	12 48 19.8	+1.9
KBG	Krutoberegovo	3.68	18	PN	Pn	12 47 37.3	+1.9
KBG				S	Sn	12 48 19.8	+1.9
BDR	Baidarnaya	3.81	5	eP	Pn	12 47 40.0	+2.7
BDR	Baidarnaya	3.81	5	PN	Pn	12 47 40.0	+2.7
SRKR	Sorokina	3.89	4	eP	Pn	12 47 41.0	+2.6
SRKR	Sorokina	3.89	4	PN	Pn	12 47 41.0	+2.6
BKI	Bering	3.96	50	eP	Pn	12 47 38.5	-0.8
BKI				eS	Sn	12 48 20.2	-4.7
BKI	Bering	3.96	50	PN	Pn	12 47 38.5	-0.8
SMY	Shemya	8.16	85	Pn	Pn	12 48 37.4	+0.5
SMY				Sn	Sn	12 50 05.3	-2.9
TILK	Tilichiki	8.25	19	eP	Pn	12 48 40.7	+2.6
TILK	Tilichiki	8.25	19	PN	Pn	12 48 40.7	+2.6
MA2	Magadan	8.75	325	LR	LR	12 52 38.0	
	comp=E,292nm,18.1s,baz=116,slow=41						
SEY	Seymchan	11.08	340	P	Pn	12 49 19.4	+2.5
	baz=162,slow=19,SNR=1.7						
UGL	Uglegorsk	12.29	260	ePN	P	12 49 42.4	-3.1
UGL				pmax	pmax		
	comp=Z,33nm,0.9s						
UGL				pmax	pmax		
	comp=Z,700nm,5.7s						
GSTR	Great Sitkin T	14.21	83	Pn	Pn	12 49 58.5	-1.1
JKA	Kamikawa-asahi	14.76	241		Pn	12 50 08.7	+1.6
ASAJ	Asahikawa	14.76	241	P	Pn	12 50 08.7	+1.6
	comp=Z,0.9nm,0.3s,baz=74,slow=14,SNR=14						
GRNR	Gornyy	15.12	272	⇑iP	Pn	12 50 10.5	-1.4
GRNR				eS	Sn	12 52 56.7	-1.7
GRNR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GRNR				smax	smax		
	comp=E,6.0nm,0.8s						
GRNR				MLR	MLR		
	comp=Z,150nm,16.0s						
BILL	Bilibino	15.54	8	Pn	Pn	12 50 18.1	+0.7
BILL	Bilibino	15.54	8	⇑eP	Pn	12 50 18.2	+0.8
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ERM	Erimo	15.97	235	Pn	P	12 50 25.4	-0.9
ERM				IAmb	IAmb	12 50 39.7	
	comp=Z,46nm,1.4s						
ERM	Erimo	15.97	235	P	P	12 50 25.4	-0.9
ERM				pmax	pmax		
	comp=Z,46nm,1.4s						
KLR	Kul'dur	18.48	271	P	P	12 50 53.3	-0.7
	comp=Z,0.1nm,0.3s,baz=84,slow=12,SNR=6.3						
KLR	Kul'dur	18.48	271	⇓eP	P	12 50 53.4	-0.6
YAK	Yakutsk	18.90	311	P	P	12 50 57.2	-1.3
	comp=Z,0.1nm,0.3s,baz=83,slow=7.1,SNR=3.3						
YAK	Yakutsk	18.90	311	eP	P	12 50 57.6	-0.9
YAK				eS	Sn	12 54 25.1	-4.7
YAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.3s						
YAK				smax	smax		
	comp=E,67nm,3.5s						
YAK				MLR	MLR		
	comp=Z,185nm,17.0s						
YAK				MLR	MLR		
	comp=E,131nm,15.0s						
YAK				MLR	MLR		
	comp=N,61nm,16.0s						
ZEA	Zeya	19.91	286	eP	Pn	12 51 12.2	+0.8
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,14.0s						
USA0B	Ussuriysk Arra	20.73	257	P	P	12 51 18.3	-0.4
USA0B	Ussuriysk Arra	20.73	257	⇑eP	P	12 51 18.0	-0.7
USRK	Ussuriysk Ar.	20.73	257	P	P	12 51 18.1	-0.6
	comp=Z,5.3nm,0.8s,baz=60,slow=9.8,SNR=8.4						
USRK	Ussuriysk Ar.	20.73	257	P	P	12 51 18.6	-0.1
USRK	Ussuriysk Ar.	20.73	257	P	P	12 51 18.6	-0.1
ANM	Nome	20.93	42	P	P	12 51 20.4	-0.1
ANM	Nome	20.93	42	P	P	12 51 20.5	-0.1
ANM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VLA	Vladivostok	21.43	255	⇑eP	P	12 51 24.2	-1.9
VLA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MJB9	Matsu-Tunnel	22.62	233	P	P	12 51 40.9	+1.8
MAJO	Matsushiro	22.63	233	P	P	12 51 40.9	+1.8
MAJO	Matsushiro	22.63	233	⇑eP	P	12 51 40.9	+1.8
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MAT	Matsushiro	22.63	233	P	P	12 51 40.9	+1.8
MJAR	Matsushiro Arr	22.63	233	P	P	12 51 39.5	+0.4
	comp=Z,1.1nm,0.4s,baz=248,slow=32,SNR=4.4						
MJAR	Matsushiro Arr	22.63	233	P	P	12 51 40.0	+0.9
RDOG	Red Dog Mine	23.10	35	P	P	12 51 44.4	+0.7
RDOG				IAmb	IAmb	12 51 45.4	
	comp=Z,10nm,0.8s						
TIXI	Tiksi	23.51	335	P	P	12 51 45.7	-2.0
	comp=Z,2.1nm,0.6s,baz=128,slow=8.7,SNR=7.0						
TIXI	Tiksi	23.51	335	P	P	12 51 45.5	-2.2
TIXI	Tiksi	23.51	335	⇑eP	P	12 51 46.2	-1.5
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HIA	Hailar	25.72	279	P	P	12 52 06.9	-1.4
HIA				IAmb	IAmb	12 52 13.2	
	comp=Z,7.9nm,1.0s						
HIA	Hailar	25.72	279	P	P	12 52 06.9	-1.4
HIA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
IMAR	Indian Mountai	26.00	42	P	P	12 52 10.6	0.0
OHAK	Old Harbor	26.38	62	P	P	12 52 13.8	-0.3
PPLA	Purkeypile	26.45	49	P	P	12 52 13.3	-1.6
PPLA				IAmb	IAmb	12 52 14.8	
	comp=Z,16nm,1.4s						
KTH	Kantishna Hill	27.03	47	P	P	12 52 20.8	+0.8
KTH				IAmb	IAmb	12 52 25.3	
	comp=Z,7.9nm,1.3s						
MLY	Manley	27.16	44	P	P	12 52 21.3	+0.2
TRF	Thorofare Moun	27.31	48	P	P	12 52 23.0	+0.3
TRF				IAmb	IAmb	12 52 23.8	
	comp=Z,8.7nm,1.2s						
KSRS	Korea Array	27.42	249	P	P	12 52 25.2	+1.6
	comp=Z,3.4nm,1.0s,baz=50,slow=8.4,SNR=7.1						
KSRS				LR	LR	13 02 22.4	
	comp=Z,64nm,20.1s,baz=44,slow=34						
RND	Reindeer	27.96	48	P	P	12 52 27.6	-0.7
RND				IAmb	IAmb	12 52 45.4	
	comp=Z,8.1nm,1.3s						
RND	Reindeer	27.96	48	P	P	12 52 27.6	-0.7
RND				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CCB	Clear Creek Bu	28.40	45	P	P	12 52 31.4	-0.8
DHY	Denali Highway	28.64	48	P	P	12 52 33.6	-0.9
DHY				IAmb	IAmb	12 52 40.9	
	comp=Z,12nm,1.5s						
SCM	Sheep Creek Mo	28.76	51	P	P	12 52 35.6	+0.1
SCM	Sheep Creek Mo	28.76	51	P	P	12 52 35.6	+0.1
SCM				pmax	pmax		
	comp=Z,18nm,1.3s						
IL31		28.79	45	P	P	12 52 35.4	-0.2
ILAR	Eielson Array	28.79	45	P	P	12 52 35.5	-0.1
	comp=Z,1.1nm,0.8s,baz=261,slow=8.5,SNR=14						
ILAR				LR	LR	13 03 54.3	
	comp=Z,33nm,21.4s,baz=330,slow=36						
ILAR	Eielson Array	28.79	45	P	P	12 52 36.4	+0.7
JNU	Nakatsue	29.02	239	LR	LR	13 04 51.9	
	comp=Z,29nm,20.6s,baz=44,slow=38						
PRP	Porcupine Dome	29.36	43	P	P	12 52 40.9	0.0
BMAR	Burnt Mountain	29.76	39	P	P	12 52 45.4	+1.1
CRQM	Cirque	30.92	53	P	P	12 52 55.4	+0.7
BCAR	Beaver Creek A	31.17	48	P	P	12 52 57.4	+0.6
EGAK	Eagle	31.24	45	P	P	12 52 56.8	-0.5
EGAK				IAmb	IAmb	12 52 57.8	
	comp=Z,4.6nm,0.8s						
DAWY	Dawson	32.09	46	P	P	12 53 05.1	+0.3
DAWY				IAmb	IAmb	12 53 09.8	
	comp=Z,5.3nm,1.5s						
H11N2	WAKE ISLAND Hy	33.34	169	T	T	13 28 42.1	
	baz=353,slow=76,SNR=149						
H11N3	WAKE ISLAND Hy	33.36	169	T	T	13 28 43.0	
	baz=353,slow=76,SNR=144						
H11N1	WAKE ISLAND Hy	33.36	169	T	T	13 28 38.5	
	baz=353,slow=76						
INK	Inuvik	33.91	37	P	P	12 53 18.9	-1.6
	comp=Z,1.0nm,0.7s,baz=295,slow=5.9,SNR=5.9						
INK	Inuvik	33.91	37	P	P	12 53 20.6	+0.1
INK				IAmb	IAmb	12 53 37.1	
	comp=Z,4.5nm,1.3s						
INK	Inuvik	33.91	37	P	P	12 53 20.6	+0.1
INK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
SONM	Songino Array	34.30	284	P	P	12 53 23.1	-1.3
	comp=Z,0.4nm,0.5s,baz=60,slow=7.5,SNR=4.7						
SONM				PcP	PcP	12 56 00.4	+0.3
	comp=Z,0.7nm,0.6s,baz=75,slow=2.0,SNR=5.0						
SONM				LR	LR	13 08 44.1	
	comp=Z,132nm,18.6s,baz=74,slow=39						
SONM	Songino Array	34.30	284	P	P	12 53 24.4	0.0
SONM	Songino Array	34.30	284	P	P	12 53 24.4	0.0
SONM				pmax	pmax		
	comp=Z,1.0nm,1.3s						
H11S1	WAKE ISLAND Hy	34.53	170	T	T	13 30 05.3	
	baz=352,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	34.54	170	T	T	13 30 05.7	

	baz=352,slow=76						
H11S2	WAKE ISLAND Hy	34.55	170	T	T	13 30 06.3	
	baz=352,slow=76						
HHC	Hu-ho-hao-te	34.98	270	eP	P	12 53 30.6	+0.3
NJ2	Nanjing	36.48	252	eP	P	12 53 43.0	-0.1
C36M	Paulatuk	37.11	35	P	P	12 53 48.0	0.0
C36M				IAmb	IAmb	12 53 49.3	
	comp=Z,7.5nm,1.1s						
GTA	Gaotai	42.98	277	eP	P	12 54 38.0	+0.8
GTA				pP	pP	12 54 42.2	-2.8
GTA				sP	sP	12 54 45.1	-2.9
YKA	Yellowknife Ar	43.16	43	P	P	12 54 38.7	+0.5
	comp=Z,1.5nm,0.8s,baz=298,slow=8.2,SNR=16						
YKA				PcP	PcP	12 56 28.5	+1.2
	comp=Z,0.2nm,0.8s,baz=343,slow=2.3,SNR=3.6						
ZALV	Zalesovo Beam	43.23	303	LR	LR	13 13 49.5	
	comp=Z,91nm,18.4s,baz=71,slow=38						
RES	Resolute Bay	43.48	22	P	P	12 54 41.3	+0.6
RES	Resolute Bay	43.48	22	P	P	12 54 41.3	+0.6
RES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LLLB	Lillooet	45.87	60	P	P	12 54 59.4	-0.7
WMQ	Urumqi	47.40	290	eP	P	12 55 14.1	+2.0
WMQ				pP	sP	12 55 23.4	+0.5
WMQ				PcP	PcP	12 56 45.4	+3.0
SPA0	Spitsbergen Ar	47.50	351	P	P	12 55 12.4	0.0
KURK	Kurchatov	48.19	302⇑	eP	P	12 55 16.7	-1.4
KURK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
MK31	Makanchi Array	48.60	296	P	P	12 55 19.6	-1.7
MK31	Makanchi Array	48.60	296	P	P	12 55 19.6	-1.7
MK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR	Makanchi Array	48.60	296	P	P	12 55 19.6	-1.8
	comp=Z,0.7nm,0.5s,baz=58,slow=5.7,SNR=7.6						
MKAR				LR	LR	13 17 02.9	
	comp=Z,57nm,18.8s,baz=68,slow=38						
MKAR	Makanchi Array	48.60	296	P	P	12 55 19.7	-1.6
MAKZ	Makanchi	48.76	296	P	P	12 55 20.8	-1.8
MAKZ	Makanchi	48.76	296	P	P	12 55 20.8	-1.8
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	Borovoye Array	50.85	309	P	P	12 55 36.3	-2.0
	comp=Z,0.7nm,0.5s,baz=65,slow=9.5,SNR=6.1						
WALA	Waterton Lakes	50.94	58	P	P	12 55 40.0	+0.7
WALA				IAmb	IAmb	12 55 52.7	
	comp=Z,7.6nm,1.4s						
JTMT	Jette	51.58	59	P	P	12 55 45.5	+1.5
JTMT				IAmb	IAmb	12 55 45.8	
	comp=Z,4.9nm,0.9s						
BEKR	Beckworth	53.38	70	P	P	12 55 58.5	+0.9
FCC	Fort Churchill	53.51	39	P	P	12 55 58.5	+0.6
FCC	Fort Churchill	53.51	39	P	P	12 55 58.6	+0.6
FCC				pmax	pmax		
	comp=Z,11nm,1.5s						
ARCES	ARCESS Array B	53.69	342	P	P	12 55 57.8	-1.4
	comp=Z,3.7nm,0.9s,baz=46,slow=7.6,SNR=7.3						
ARCES	ARCESS Array B	53.69	342	P	P	12 55 58.5	-0.7
ARCES	ARCESS Array B	53.69	342	P	P	12 55 58.5	-0.7
ARU	Arti	53.86	318	P	P	12 55 58.4	-2.2
	comp=Z,0.7nm,0.5s,baz=70,slow=3.0,SNR=3.4						
ARU	Arti	53.86	318d	iP	P	12 55 59.7	-0.9
ARU				S	S	13 03 33.1	-0.5
ARU				SS	SKiKP	13 07 08.1	-3.5
ARU				pmax	pmax		
	comp=Z,4.0nm,1.1s						
PNTR	Pine Nut	54.34	70	P	P	12 56 06.4	+1.8
PNTR				IAmb	IAmb	12 56 07.1	
	comp=Z,3.9nm,0.8s						
WAKR	Walker	54.83	71	P	P	12 56 09.9	+1.7
WAKR				IAmb	IAmb	12 56 10.3	
	comp=Z,2.8nm,0.6s						
QLMT	Earthquake Lak	54.98	60	P	P	12 56 10.2	+1.0
KVN	Kaiserville	55.22	70	P	P	12 56 12.5	+1.5
KVN	Kaiserville	55.22	70	P	P	12 56 12.5	+1.5
KVN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
RYN	Ryan	55.27	70	P	P	12 56 12.7	+1.4
RYN				IAmb	IAmb	12 56 13.1	
	comp=Z,2.9nm,0.8s						
YHH	Holmes Hill	55.31	60	P	P	12 56 12.4	+0.7
AAK	Ala-Archa	55.52	297	P	P	12 56 11.5	-1.6
	comp=Z,2.6nm,0.9s,baz=132,slow=15,SNR=3.4						
AAK	Ala-Archa	55.52	297	P	P	12 56 13.5	+0.4
AAK				IAmb	IAmb	12 56 17.2	
	comp=Z,2.1nm,0.8s						
AAK	Ala-Archa	55.52	297⇓	eP	P	12 56 11.9	-1.2
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NVAR	Mina Array Bea	55.53	70	P	P	12 56 14.8	+1.6
	comp=Z,1.3nm,0.6s,baz=299,slow=7.5,SNR=15						
NVAR	Mina Array Bea	55.53	70	P	P	12 56 14.0	+0.8
NV11	Mina Array Sit	55.61	70	P	P	12 56 13.6	-0.2
NV11				IAmb	IAmb	12 56 15.6	
	comp=Z,2.1nm,0.8s						
ELK	Elko	55.67	66	P	P	12 56 15.5	+1.2
ELK	Elko	55.67	66	P	P	12 56 15.5	+1.2
ELK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
RLMT	Red Lodge	55.91	59	P	P	12 56 17.4	+1.4
MSF	Maaselka	56.03	338	P	P	12 56 15.7	-0.4
AHID	Auburn Hatcher	56.55	62	P	P	12 56 21.4	+0.9
AHID				IAmb	IAmb	12 56 22.7	
	comp=Z,5.5nm,1.1s						
SPUT	South Promonto	56.83	64	P	P	12 56 23.9	+1.5
KSH	Kashi	56.84	293	P	P	12 56 26.6	+4.1
KSH				pP	sP	12 56 34.2	+0.8
HWUT	Hardware Ranch	57.10	63	P	P	12 56 26.2	+1.8
HWUT				IAmb	IAmb	12 56 26.7	
	comp=Z,4.3nm,0.9s						
KK31	Karatay Array	57.33	300	P	P	12 56 24.5	-1.3
KK31				IAmb	IAmb	12 56 29.4	
	comp=Z,1.8nm,0.8s						
KK31	Karatay Array	57.33	300	P	P	12 56 24.5	-1.3
KK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KKAR	Karatay Array	57.33	300	P	P	12 56 25.6	-0.2
KKAR	Karatay Array	57.33	300	P	P	12 56 24.3	-1.5
KKAR				IAmb	IAmb	12 56 29.4	
	comp=Z,1.8nm,0.8s						
KKAR	Karatay Array	57.33	300	P	P	12 56 25.6	-0.2
PD31	Pinedale Array	57.38	61	P	P	12 56 27.1	+0.8
PD31				IAmb	IAmb	12 56 28.4	
	comp=Z,3.1nm,1.0s						
PDAR	Pinedale Array	57.38	61	P	P	12 56 27.5	+1.1
	comp=Z,2.6nm,0.9s,baz=323,slow=2.4,SNR=18						
PDAR				LR	LR	13 22 46.8	
	comp=Z,15nm,18.1s,baz=338,slow=38						
PDAR	Pinedale Array	57.38	61	P	P	12 56 26.9	+0.6
DUG	Dugway, Tooele	57.40	65	P	P	12 56 27.1	+0.7
DUG				pmax	pmax		
	comp=Z,6.0nm,1.2s						
OUL	Oulu	57.42	339	P	P	12 56 25.4	-0.6
FRB	Frobisher Bay	57.66	23	P	P	12 56 27.1	-0.6
FRB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TPNV	Topopah Spring	57.73	70	P	P	12 56 30.4	+1.6
TPNV				IAmb	IAmb	12 56 30.6	
	comp=Z,3.9nm,1.1s						
TPNV	Topopah Spring	57.73	70	P	P	12 56 30.4	+1.6
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
JLU	Jordanelle	57.86	64	P	P	12 56 31.4	+1.6
ABKAR	Akbulak array	58.24	306	P	P	12 56 31.2	-0.9
CMAR	Chiang Mai Arr	58.45	259	P	P	12 56 33.9	-0.1
	comp=Z,0.5nm,0.3s,baz=100,slow=7.3,SNR=8.3						
CMAR				LR	LR	13 23 08.4	
	comp=Z,42nm,19.1s,baz=112,slow=37						
ULM	Lac du Bonnet	58.78	47	P	P	12 56 34.7	-1.1
	comp=Z,1.5nm,0.6s,baz=277,slow=4.5,SNR=5.2						
ULM				LR	LR	13 24 22.6	
	comp=Z,47nm,18.1s,baz=50,slow=38						
RDMU	Red Mountain	58.90	63	P	P	12 56 38.8	+1.8
RSSD	Black Hills	59.29	57	P	P	12 56 40.6	+0.9
RSSD	Black Hills	59.29	57	P	P	12 56 40.6	+0.9
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SUF	Sumiainen	59.41	338	P	P	12 56 40.0	0.0
SUF				pmax	pmax		
	comp=Z,17nm,0.8s						
FIA1	FINESS Array S	60.54	337	P	P	12 56 48.0	+0.3
FINES	FINESS Array B	60.54	337	P	P	12 56 47.0	-0.7
	comp=Z,4.0nm,0.6s,baz=38,slow=8.7,SNR=17						
FINES				LR	LR	13 26 08.7	
	comp=Z,29nm,18.2s,baz=10.0,slow=39						
FINES	FINESS Array B	60.54	337	P	P	12 56 47.9	+0.2
FINES	FINESS Array B	60.54	337	iP	P	12 56 47.5	-0.2
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ISCO	Idaho Springs	61.57	61	P	P	12 56 56.5	+1.0
ISCO				pmax	pmax		
	comp=Z,9.0nm,1.6s						
S22A	4UR Ranch, Cre	62.41	63	P	P	12 57 02.0	+0.9
S22A				IAmb	IAmb	12 57 03.7	
	comp=Z,3.2nm,1.1s						
VSU	Vasula	62.98	335	P	P	12 57 04.0	-0.1
VSU				pmax	pmax		
	comp=Z,37nm,2.9s						
PMG	Port Moresby	63.01	195	P	P	12 57 07.4	+2.6
PMG				pmax	pmax		
	comp=Z,27nm,1.2s						
X18A	Snowflake	63.03	68	P	P	12 57 06.3	+1.2
X18A				IAmb	IAmb	12 57 07.5	
	comp=Z,3.0nm,0.8s						
NC405	NORSAR Array S	63.78	344	P	P	12 57 08.9	-0.6
NC204	NORSAR Array S	63.79	344	P	P	12 57 09.4	-0.2
NB2	NORSAR Subarra	63.94	344	P	P	12 57 09.9	-0.6
	comp=Z,0.4nm,0.5s,baz=25,slow=6.9						
NOA	NORSAR Array B	63.94	344	P	P	12 57 08.9	-1.5
	comp=Z,1.4nm,0.8s,baz=22,slow=6.7,SNR=4.9						
NOA				LR	LR	13 29 54.3	
	comp=Z,21nm,18.1s,baz=10.0,slow=41						
NOA	NORSAR Array B	63.94	344	P	P	12 57 09.0	-1.5
HFS	Hagfors	64.35	342	LR	LR	13 28 11.9	
	comp=Z,29nm,18.2s,baz=39,slow=39						
SCHQ	Schefferville	65.77	28	P	P	12 57 22.5	0.0
	comp=Z,3.2nm,0.7s,baz=340,slow=5.4,SNR=6.4						
SCHQ	Schefferville	65.77	28	P	P	12 57 22.6	0.0
GEYT	Alibeck	67.54	303	LR	LR	13 29 30.0	
	comp=Z,64nm,19.4s,baz=15,slow=38						
WMOK	Wichita Mounta	68.97	60	P	P	12 57 43.4	+0.3
WMOK				IAmb	IAmb	12 57 44.2	
	comp=Z,3.8nm,0.9s						
WMOK	Wichita Mounta	68.97	60	P	P	12 57 43.4	+0.3
WMOK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AKASG	Malin Array Be	69.06	329	P	P	12 57 41.8	-1.5
	comp=Z,3.3nm,0.4s,baz=30,slow=7.1,SNR=12						
AKBB	Malin Array Si	69.06	329⇑	eP	P	12 57 41.8	-1.5
HDIL	Hopedale	69.16	50	P	P	12 57 43.6	-0.5
KBZ	Khabaz	70.00	317	P	P	12 57 48.9	-0.3
	comp=Z,5.5nm,1.0s,baz=188,slow=2.3,SNR=8.9						
KBZ				LR	LR	13 33 52.0	
	comp=Z,53nm,18.0s,baz=16,slow=40						
KBZ	Khabaz	70.00	317	ceP	P	12 57 49.4	+0.2
ABTX	Abilene, Hawle	70.13	62	P	P	12 57 50.1	-0.2
ABTX				IAmb	IAmb	12 57 51.4	
	comp=Z,3.9nm,0.9s						
TX31	Lajitas Ar. Si	70.44	67	P	P	12 57 52.7	+0.4
TX31				IAmb	IAmb	12 57 53.5	
	comp=Z,2.8nm,0.7s						
TX32	Lajitas Array	70.44	67	P	P	12 57 52.2	-0.2
TX32				IAmb	IAmb	12 57 53.5	
	comp=Z,2.9nm,0.7s						
TXAR	Lajitas Array	70.44	67	P	P	12 57 53.2	+0.9
	comp=Z,3.0nm,0.7s,baz=303,slow=4.5,SNR=18						
TXAR	Lajitas Array	70.44	67	P	P	12 57 53.1	+0.7
AFI	Afiamalu	70.54	152	LR	LR	13 21 45.7	
	comp=Z,46nm,21.2s,baz=281,slow=30						
TRQ	Mont Tremblant	70.66	37	P	P	12 57 52.5	-0.9
U40A	Yellville	70.75	55	P	P	12 57 53.5	-0.5
CLL	Collm	72.77	339	epP	pP	12 58 15.0	+1.4
BUR08	Bucovina Ar. S	72.99	330	P	P	12 58 07.3	-0.2
BUR08				IAmb	IAmb	12 58 20.3	
	comp=Z,2.8nm,0.8s						
BURAR	Bucovina Array	73.01	330	P	P	12 58 06.6	-0.9
BURAR	Bucovina Array	73.01	330	P	P	12 58 06.6	-0.9
WVT	Waverly	73.38	52	P	P	12 58 09.7	0.0
VYHS	Vyhne	74.01	335	eP	P	12 58 08.9	-4.3
VYHS	Vyhne	74.01	335	eP	P	12 58 08.9	-4.3
MLR	Muntele Rosu	74.69	329	P	P	12 58 17.6	+0.2
	comp=Z,1.6nm,0.6s,baz=349,slow=3.3,SNR=3.4						
GERES	GERESS Array B	74.93	338	P	P	12 58 18.8	+0.1
	comp=Z,0.3nm,0.4s,baz=51,slow=5.2,SNR=3.6						
GERES				LR	LR	13 35 42.2	
	comp=Z,26nm,18.6s,baz=262,slow=39						
GERES	GERESS Array B	74.93	338	P	P	12 58 18.6	-0.1
GERES	GERESS Array B	74.93	338	P	P	12 58 18.6	-0.1
WRA	Warramunga Arr	75.94	205	P	P	12 58 25.3	+0.7
	comp=Z,1.1nm,0.6s,baz=20,slow=6.0,SNR=7.2						
WRA	Warramunga Arr	75.94	205	P	P	12 58 25.4	+0.8
BRTR	Keskin Array B	77.08	321	LR	LR	13 38 43.0	
	comp=Z,18nm,19.1s,baz=9.0,slow=41						
DAVOX	Davos/Dischmat	77.72	340	LR	LR	13 36 35.6	
	comp=Z,19nm,19.1s,baz=250,slow=39						
AS31	Alice Springs	79.61	205	P	P	12 58 46.2	+1.2
ASAR	Alice Springs	79.62	205	P	P	12 58 46.0	+1.0
	comp=Z,1.3nm,0.6s,baz=15,slow=5.5,SNR=34						
ASAR	Alice Springs	79.62	205	P	P	12 58 46.6	+1.6
STKA	Stephens Creek	85.93	196	P	P	12 59 18.5	+1.0
	comp=Z,3.3nm,1.3s,baz=342,slow=13,SNR=2.8						
STKA	Stephens Creek	85.93	196	P	P	12 59 19.0	+1.5
STKA				IAmb	IAmb	12 59 34.8	
	comp=Z,2.4nm,1.4s						

*THE **11** 12:49:01.8, 38°.37N×20°.50E, h7km±1km, ML2.5/12, Error ellipse: s-maj=1.3km s-min=0.3km az=290.0*
*ATH **11** 12:49:01.4, 38°.39N×20°.43E, h8km±2km, ML2.5/9, Error ellipse: s-maj=2.7km s-min=0.6km az=173.0*
ISC 11 12:49:01.5±0.9, 38°.38N±0°.02×20°.48E±0°.03, h8km±5km, n42, σ0.65/77, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	VASILIKIADES	0.08	65	P	Pg	12 49 03.5	0.0
VSK1				S	Sg	12 49 04.7	-0.2
	12µm,0.1s						
KONA	Konidatara, Ke	0.09	57	P	Pg	12 49 03.7	0.0
KONA				S	Sg	12 49 05.7	+0.5
KEF1	Kardakata, Kep	0.10	183	P	Pg	12 49 03.8	0.0
KEF1				S	Sg	12 49 05.9	+0.5
FSK	Fiskardo	0.11	39	P	Pg	12 49 03.9	0.0
FSK				S	Sg	12 49 05.9	+0.3
	4µm,0.3s						
FSK	Fiskardo	0.11	39	P	Pg	12 49 04.0	0.0
FSK				S	Sg	12 49 06.0	+0.3
FSK				AML	AML	12 49 06.1	
	comp=N,4504µm,0.2s						
FSK				AML	AML	12 49 06.3	
	comp=E,9184µm,0.3s						
KEF4	Livadi, Kephal	0.12	199	P	Pg	12 49 04.3	+0.1
KEF4				S	Sg	12 49 06.9	+0.8
LXR1	Lixouri, Cepha	0.18	190	P	Pg	12 49 05.4	+0.3
LXR1				S	Sg	12 49 08.3	+0.7
	comp=E,18µm,0.4s						
LXRA	Lixouri, Kepha	0.18	190	P	Pg	12 49 05.5	+0.3
LXRA				S	Sg	12 49 09.0	+1.4
ARG2	Argostoli	0.20	177	P	Pg	12 49 05.6	+0.1
ARG2				S	Sg	12 49 08.7	+0.5
	comp=Z,9µm,0.2s						
ARGA	Argostoli. Kep	0.20	179	P	Pg	12 49 05.5	0.0
ARGA				S	Sg	12 49 09.0	+0.8
KEF3	Kipouria, Keph	0.20	210	P	Pg	12 49 05.6	+0.1
KEF3				S	Sg	12 49 09.2	+0.9
CHV1	Chavriata, Kef	0.21	201	P	Pg	12 49 05.7	+0.1
CHV1				S	Sg	12 49 09.4	+0.9
	comp=E,10µm,0.3s						
KEF2	Argostoli. Kep	0.21	178	P	Pg	12 49 05.8	+0.1
KEF2				S	Sg	12 49 09.4	+0.8
VLS	Valsamata	0.22	156	P	Pg	12 49 05.8	-0.1
VLS				S	Sg	12 49 09.5	+0.7
	comp=E,2µm,0.1s						
VLS	Valsamata	0.22	156	P	Pg	12 49 05.8	-0.1
VLS				S	Sg	12 49 10.6	+1.7
VLS				AML	AML	12 49 10.6	
	comp=E,3770µm,0.1s						
VLS				AML	AML	12 49 10.9	
	comp=N,3166µm,0.1s						
EVGI	Lefkada island	0.28	30	P	Pg	12 49 07.4	+0.3
EVGI				S	Sg	12 49 11.6	+0.7
EVGI	Lefkada island	0.28	30	P	Pg	12 49 07.3	+0.3
EVGI				S	Sg	12 49 12.1	+1.2
MGNA	Meganis	0.37	41	P	Pg	12 49 09.0	+0.2
MGNA				S	Sg	12 49 15.0	+1.3
MGNA				AML	AML	12 49 15.2	
	comp=E,2070µm,0.2s						
MGNA				AML	AML	12 49 15.4	
	comp=N,3044µm,0.3s						
LKD2	Lefkada island	0.43	19	P	Pg	12 49 09.9	-0.1
LKD2				S	Sg	12 49 16.1	+0.4
	comp=N,342nm,0.3s						
LKD2	Lefkada island	0.43	19	P	Pg	12 49 09.7	-0.3
LKD2				S	Sg	12 49 15.8	+0.1
LKD2				AML	AML	12 49 20.6	
	comp=E,662µm,0.2s						
LKD2				AML	AML	12 49 23.7	
	comp=N,688µm,0.4s						
TSLK	Tsoukalades, L	0.47	17	P	Pg	12 49 10.7	+0.1
TSLK				S	Sg	12 49 17.7	+0.9
	comp=N,530nm,0.4s						
TSLK	Tsoukalades, L	0.47	17	P	Pg	12 49 10.7	+0.1
TSLK				S	Sg	12 49 17.3	+0.5
TSLK				AML	AML	12 49 19.6	
	comp=E,1145µm,0.4s						
TSLK				AML	AML	12 49 21.8	
	comp=N,973µm,0.5s						
AST1	Astakos	0.51	71	P	Pg	12 49 11.7	+0.4
AST1				S	Sg	12 49 18.6	+0.6
	comp=N,1µm,0.3s						
VLMS	Volimes, Zakyn	0.52	164	P	Pg	12 49 11.2	-0.4
VLMS				S	Sb	12 49 20.3	-0.4
VLMS				AML	AML	12 49 22.6	
	comp=N,2342µm,0.4s						
VLMS				AML	AML	12 49 22.9	
	comp=E,2136µm,0.2s						
PDO	Prodromos	0.60	68	P	Pg	12 49 13.1	+0.1
PDO				S	Sg	12 49 21.5	+0.7
PDO	Prodromos	0.60	68	P	Pg	12 49 13.2	+0.2
PDO				S	Sb	12 49 23.0	+0.2
KRI1	kERI	0.76	159	P	Pg	12 49 15.3	-0.9
KRI1				S	Sg	12 49 26.9	+0.8
	comp=E,685nm,0.3s						
RLS	Riolos of Patr	0.84	112	P	Pg	12 49 17.7	0.0
RLS				S	Sg	12 49 29.3	+0.7
	comp=E,110nm,0.6s						
RLS	Riolos of Patr	0.84	112	P	Pg	12 49 17.8	0.0
RLS				S	Sb	12 49 31.4	+1.5
PVO	Paravola	0.86	73	P	Pg	12 49 17.9	-0.1
PVO				S	Sg	12 49 29.5	+0.4
	comp=E,258nm,0.6s						
PVO	Paravola	0.86	73	P	Pg	12 49 18.2	+0.3
PVO				S	Sb	12 49 30.8	+0.4
PVO				AML	AML	12 49 37.4	
	comp=E,501µm,0.5s						
PVO				AML	AML	12 49 39.1	
	comp=N,576µm,0.3s						
DRO	Drossia	1.06	113	P	Pg	12 49 21.6	-0.2
DRO				S	Sn	12 49 37.6	-0.1
DRO				AML	AML	12 49 43.8	
	comp=N,508µm,0.6s						
DRO				AML	AML	12 49 44.8	
	comp=E,573µm,0.5s						
ANX	Ano Chora	1.15	79	P	Pg	12 49 23.3	-0.3
ANX				S	Sn	12 49 41.1	+1.0
ANX				AML	AML	12 49 48.4	
	comp=E,403µm,0.8s						
ANX				AML	AML	12 49 49.8	
	comp=N,538µm,0.5s						
IGT	Igoumenitsa	1.16	354	P	Pg	12 49 23.7	-0.1
IGT				S	Sb	12 49 38.9	-0.2
TRIZ	Trizonia	1.25	90	P	Pn	12 49 24.4	-1.0
AMT	Artemida-Makis	1.29	130	P	Pn	12 49 26.3	+0.4
KALE	Kalithea	1.31	89	P	Pn	12 49 25.1	-1.0
KLV	Kalavryta, Ach	1.36	104	P	Pn	12 49 26.3	-0.6
MAKR	Makrakomi, Fth	1.44	63	P	Pn	12 49 28.2	+0.2
AGG	Agios Georgios	1.59	65	P	Pg	12 49 32.1	+0.2
THL	Klokotos Trika	1.69	45	P	Pg	12 49 34.1	+0.3
THL				S	Sg	12 49 57.3	+1.6
DID	Didima	2.35	111	P	Pb	12 49 42.7	-1.4

*IDC **11** 12:49:55.9±0.8, 52°.95N×160°.63E, h0km, mb3.7/10, mb1 3.9/11, mb1mx3.7/42, mbtmp3.7/11, ML3.6/1, Error ellipse: s-maj=28.3km s-min=14.9km az=164.0*
*KRSC **11** 12:49:57.2±1.3, 52°.75N×160°.75E, h31km±16km, ML4.3*
*MOS **11** 12:49:58.6±1.0, 52°.72N×160°.77E, h30km, mb4.1/2, Error ellipse: s-maj=7.6km s-min=5.1km az=95.4*
*NEIC **11** 12:49:59.7±1.9, 52°.9N±0°.2×160°.69E±0°.09, h27km±6km, mb4.3/10, Error ellipse: s-maj=22.0km s-min=8.0km az=176.0*
ISC 11 12:49:59.3±1.4, 52°.80N±0°.04×160°.66E±0°.04, h25km±10km, n107, σ1.39/133, mb4.1/15, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.49	308	eP	Pb	12 50 08.8	-0.5
SPN				eS	Sb	12 50 15.6	-0.5
SPN	Mys Shipunski	0.49	308	PN	Pb	12 50 08.8	-0.5
SPN				S	Sb	12 50 15.6	-0.5
SDLR	Sedlovina	1.18	295	eP	Pn	12 50 19.6	-0.6
SDLR				eS	Sn	12 50 35.2	-0.3
SDLR	Sedlovina	1.18	295	PN	Pn	12 50 19.6	-0.6
SDLR				S	Sn	12 50 35.2	-0.3
DALK	Dalny	1.18	282	eP	Pn	12 50 19.4	-0.7
DALK				eS	Sn	12 50 35.4	0.0
DALK	Dalny	1.18	282	PN	Pn	12 50 19.4	-0.7
DALK				S	Sn	12 50 35.4	0.0
UGLR	Uglovaya	1.18	291	eP	Pn	12 50 20.0	-0.3
UGLR				eS	Sn	12 50 36.1	+0.4
UGLR	Uglovaya	1.18	291	PN	Pn	12 50 20.0	-0.3
UGLR				S	Sn	12 50 36.1	+0.4
SMAR	Somma	1.22	293	eP	Pn	12 50 20.3	-0.6
SMAR	Somma	1.22	293	PN	Pn	12 50 20.3	-0.6
PET	Petropavlovsk	1.24	281	eP	Pn	12 50 20.3	-0.6
PET				eS	Sn	12 50 36.7	-0.1
PET	Petropavlovsk	1.24	281		Pn	12 50 20.4	-0.5
PET				Sn	Sn	12 50 36.2	-0.5
PET	Petropavlovsk	1.24	281	ePN	Pn	12 50 20.1	-0.8
PET				eS	Sn	12 50 36.3	-0.5
PET				pmax	pmax		
	comp=Z,517nm,0.4s						
PET				smax	smax		
	comp=N,2µm,0.5s						
PET				smax	smax		
	comp=E,2µm,0.3s						
AVH	Avacha	1.25	293	eP	Pn	12 50 20.9	-0.3
AVH	Avacha	1.25	293	PN	Pn	12 50 20.9	-0.3
KRER	Koryakskii	1.26	294	eP	Pn	12 50 21.1	-0.4
KRER				eS	Sn	12 50 38.3	+0.6
KRER	Koryakskii	1.26	294	PN	Pn	12 50 21.1	-0.4
KRER				S	Sn	12 50 38.3	+0.6
KOK	Koryaka	1.32	293	eP	Pn	12 50 22.1	-0.1
KOK				eS	Sn	12 50 40.0	+1.0
KOK	Koryaka	1.32	293	PN	Pn	12 50 22.1	-0.1
KOK				S	Sn	12 50 40.0	+1.0
KRX	Arik	1.34	296	eP	Pn	12 50 22.1	-0.4
KRX				eS	Sn	12 50 39.2	-0.3
KRX	Arik	1.34	296	PN	Pn	12 50 22.1	-0.4
KRX				S	Sn	12 50 39.2	-0.3
RUS	Russkaya	1.36	255	eP	Pn	12 50 22.3	-0.3
RUS				eS	Sn	12 50 40.0	+0.2
RUS	Russkaya	1.36	255	PN	Pn	12 50 22.3	-0.3
RUS				S	Sn	12 50 40.0	+0.2
KRMR	Karymshinskiy	1.54	272	eP	Pn	12 50 24.4	-0.7
KRMR				eS	Sn	12 50 43.3	-0.9
KRMR	Karymshinskiy	1.54	272	PN	Pn	12 50 24.4	-0.7
KRMR				S	Sn	12 50 43.3	-0.9
MTVR	Mutnovka	1.54	259	eP	Pn	12 50 25.3	0.0
MTVR	Mutnovka	1.54	259	PN	Pn	12 50 25.3	0.0
GRL	Gorelyy	1.60	262	eP	Pn	12 50 26.2	+0.2
GRL	Gorelyy	1.60	262	PN	Pn	12 50 26.2	+0.2
ASAK	Asacha	1.74	257	eP	Pn	12 50 28.7	+0.8
ASAK				eS	Sn	12 50 51.1	+1.9
ASAK	Asacha	1.74	257	PN	Pn	12 50 28.7	+0.8
ASAK				S	Sn	12 50 51.1	+1.9
PETK	Petropavlovsk-	1.82	281	Pn	Pn	12 50 29.4	+0.5
	comp=E,56nm,0.3s,baz=103,slow=20,SNR=19						
PETK				Sn	Sn	12 50 52.7	+1.5
	comp=E,78nm,0.3s,baz=76,slow=32,SNR=9.6						
APC	Apacha	2.13	275	eP	Pn	12 50 34.6	+1.4
APC				eS	Sn	12 51 01.1	+2.3
APC	Apacha	2.13	275	PN	Pn	12 50 34.6	+1.4
APC				S	Sn	12 51 01.1	+2.3
KZV	Kizimen	2.33	355	eP	Pn	12 50 37.5	+1.4
KZV				eS	Sn	12 51 05.9	+1.9
KZV	Kizimen	2.33	355	PN	Pn	12 50 37.5	+1.4
KZV				S	Sn	12 51 05.9	+1.9
TUMD	Tumrok D	2.41	356	eP	Pn	12 50 37.8	+0.6

TUMD				eS	Sn	12 51 06.7	+0.8
TUMR	**Tumrok**	**2.51**	**353**	eP	**Pn**	**12 50 39.8**	**+1.3**
TUMR				eS	Sn	12 51 10.0	+1.7
TUMR	**Tumrok**	**2.51**	**353**	PN	**Pn**	**12 50 39.8**	**+1.3**
TUMR				S	Sn	12 51 10.0	+1.7
PAU	**Pauzhetka**	**2.72**	**242**	eP	**Pn**	**12 50 43.8**	**+2.5**
PAU	**Pauzhetka**	**2.72**	**242**	PN	**Pn**	**12 50 43.8**	**+2.5**
KMNR	**Kamenistaya**	**2.97**	**355**	eP	**Pn**	**12 50 47.4**	**+2.5**
KMNR	**Kamenistaya**	**2.97**	**355**	PN	**Pn**	**12 50 47.4**	**+2.5**
KIRR	**Kirishev**	**3.17**	**357**	eP	**Pn**	**12 50 49.9**	**+2.3**
KIRR	**Kirishev**	**3.17**	**357**	PN	**Pn**	**12 50 49.9**	**+2.3**
ZLN	**Zelenaya**	**3.23**	**1**	eP	**Pn**	**12 50 51.8**	**+3.4**
ZLN	**Zelenaya**	**3.23**	**1**	PN	**Pn**	**12 50 51.8**	**+3.4**
KOZ	**Kozyrevsk**	**3.30**	**352**	eP	**Pn**	**12 50 52.2**	**+2.9**
KOZ	**Kozyrevsk**	**3.30**	**352**	PN	**Pn**	**12 50 52.2**	**+2.9**
CIRR	**Tsirk**	**3.32**	**1**	eP	**Pn**	**12 50 49.8**	**0.0**
CIRR	**Tsirk**	**3.32**	**1**	PN	**Pn**	**12 50 49.8**	**0.0**
ESO	**Esso**	**3.34**	**341**	eP	**Pn**	**12 50 51.3**	**+1.5**
ESO	**Esso**	**3.34**	**341**	PN	**Pn**	**12 50 51.3**	**+1.5**
KLY	**Klyuchi**	**3.52**	**360**	eP	**Pn**	**12 50 54.8**	**+2.5**
KLY	**Klyuchi**	**3.52**	**360**	PN	**Pn**	**12 50 54.8**	**+2.5**
SKR	**Severo-Kuril's**	**3.53**	**235**	eP	**Pn**	**12 50 54.8**	**+2.4**
SKR				eS	Sn	12 51 34.4	+1.1
SKR	**Severo-Kuril's**	**3.53**	**235**	PN	**Pn**	**12 50 54.8**	**+2.4**
SKR				S	Sn	12 51 34.4	+1.1
KBTR	**Krutoberegovo**	**3.64**	**19**	eP	**Pn**	**12 50 55.7**	**+1.7**
KBTR	**Krutoberegovo**	**3.64**	**19**	PN	**Pn**	**12 50 55.7**	**+1.7**
KBG	**Krutoberegovo**	**3.66**	**18**	eP	**Pn**	**12 50 56.0**	**+1.8**
KBG	**Krutoberegovo**	**3.66**	**18**	PN	**Pn**	**12 50 56.0**	**+1.8**
BDR	**Baidarnaya**	**3.79**	**5**	eP	**Pn**	**12 50 58.6**	**+2.5**
BDR	**Baidarnaya**	**3.79**	**5**	PN	**Pn**	**12 50 58.6**	**+2.5**
SRKR	**Sorokina**	**3.88**	**4**	eP	**Pn**	**12 51 00.4**	**+3.2**
SRKR	**Sorokina**	**3.88**	**4**	PN	**Pn**	**12 51 00.4**	**+3.2**
BKI	**Bering**	**3.95**	**50**	eP	**Pn**	**12 50 57.1**	**-1.1**
BKI	**Bering**	**3.95**	**50**	PN	**Pn**	**12 50 57.1**	**-1.1**
SMY	**Shemya**	**8.15**	**85**	Pn	**Pn**	**12 51 55.7**	**-0.2**
SMY	**Shemya**	**8.15**	**85**	PN	**Pn**	**12 51 55.7**	**-0.2**
JKA	**Kamikawa-asahi**	**14.77**	**241**		**Pn**	**12 53 26.9**	**+0.6**
ASAJ	**Asahikawa**	**14.77**	**241**	Pn	**Pn**	**12 53 26.9**	**+0.6**
	comp=E,0.4nm,0.3s,baz=72,slow=7.5,SNR=5.8						
ASAJ	**Asahikawa**	**14.77**	**241**	P	**Pn**	**12 53 27.0**	**+0.6**
USRK	**Ussuriysk Ar.**	**20.74**	**257**	P	**P**	**12 54 38.7**	**+0.9**
	comp=E,2.3nm,0.8s,baz=61,slow=12,SNR=3.4						
MAJO	**Matsushiro**	**22.64**	**233**	P	**P**	**12 54 59.8**	**+1.5**
MAJO				IAmb	IAmb	12 55 10.7	
	comp=Z,6.7nm,0.8s						
MAJO	**Matsushiro**	**22.64**	**233**	P	**P**	**12 54 59.8**	**+1.5**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MJAR	**Matsushiro Arr**	**22.64**	**233**	P	**P**	**12 54 59.8**	**+1.5**
	comp=Z,1.8nm,0.7s,baz=23,slow=10,SNR=5.4						
MJAR	**Matsushiro Arr**	**22.64**	**233**	P	**P**	**12 54 59.3**	**+1.0**
IMAR	**Indian Mountai**	**25.99**	**42**	P	**P**	**12 55 29.9**	**+0.3**
BPAW	**Bear Paw Mtn.**	**27.00**	**46**	P	**P**	**12 55 38.8**	**+0.1**
BPAW				IAmb	IAmb	12 55 39.5	
	comp=Z,12nm,1.5s						
KTH	**Kantishna Hill**	**27.01**	**48**	P	**P**	**12 55 40.2**	**+1.2**
MLY	**Manley**	**27.14**	**44**	P	**P**	**12 55 39.7**	**-0.4**
TRF	**Thorofare Moun**	**27.30**	**48**	P	**P**	**12 55 41.3**	**-0.3**
TRF				IAmb	IAmb	12 55 54.9	
	comp=Z,8.8nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**33.36**	**169**	T	T	13 31 59.4	
	baz=353,slow=76,SNR=11						
H11N3	**WAKE ISLAND Hy**	**33.37**	**169**	T	T	13 31 59.8	
	baz=353,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	**33.38**	**169**	T	T	13 31 59.4	
	baz=353,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**34.55**	**170**	T	T	13 33 22.1	
H11S3	**WAKE ISLAND Hy**	**34.56**	**170**	T	T	13 33 26.9	
H11S2	**WAKE ISLAND Hy**	**34.56**	**170**	T	T	13 33 26.9	
YKA	**Yellowknife Ar**	**43.15**	**43**	P	**P**	**12 57 57.1**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=298,slow=8.2,SNR=4.2						
MK31	**Makanchi Array**	**48.59**	**296**	P	**P**	**12 58 39.3**	**-1.1**
MK31	**Makanchi Array**	**48.59**	**296**	P	**P**	**12 58 39.3**	**-1.1**
MK31				pmax	pmax		
	comp=Z,2.0nm,1.5s						
MKAR	**Makanchi Array**	**48.59**	**296**	P	**P**	**12 58 38.8**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=46,slow=5.1,SNR=4.3						
MKAR	**Makanchi Array**	**48.59**	**296**	P	**P**	**12 58 39.1**	**-1.3**
MKAR	**Makanchi Array**	**48.59**	**296**	P	**P**	**12 58 39.1**	**-1.3**
NVAR	**Mina Array Bea**	**55.52**	**70**	P	**P**	**12 59 33.4**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=297,slow=8.0,SNR=3.4						
PDAR	**Pinedale Array**	**57.37**	**61**	P	**P**	**12 59 46.0**	**+0.6**
	comp=Z,0.2nm,0.8s,baz=321,slow=2.1,SNR=4.1						
PDAR	**Pinedale Array**	**57.37**	**61**	P	**P**	**12 59 46.4**	**+1.0**
FINES	**FINESS Array B**	**60.53**	**337**	P	**P**	**13 00 06.4**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=46,slow=8.0,SNR=5.0						
VLDQ	**Val d'Or**	**67.99**	**38**	P	**P**	**13 00 52.7**	**-3.1**
AKASG	**Malin Array Be**	**69.04**	**329**	P	**P**	**13 01 01.2**	**-1.2**
	comp=Z,0.7nm,0.4s,baz=29,slow=6.9,SNR=4.1						
TX31	**Lajitas Ar. Si**	**70.43**	**67**	P	**P**	**13 01 10.5**	**-0.9**
TX31				IAmb	IAmb	13 01 12.5	
	comp=Z,3.9nm,1.3s						
TX32	**Lajitas Array**	**70.43**	**67**	P	**P**	**13 01 10.6**	**-0.8**
TX32				IAmb	IAmb	13 01 12.5	
	comp=Z,4.5nm,1.4s						
TXAR	**Lajitas Array**	**70.44**	**67**	P	**P**	**13 01 11.3**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=297,slow=5.5,SNR=4.9						
TXAR	**Lajitas Array**	**70.44**	**67**	P	**P**	**13 01 10.4**	**-1.0**
TXAR	**Lajitas Array**	**70.44**	**67**	P	**P**	**13 01 10.4**	**-1.0**
CLL	**Collm**	**72.75**	**339**	epP	pP	13 01 33.0	+0.4
ASAR	**Alice Springs**	**79.63**	**205**	P	**P**	**13 02 04.7**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=13,slow=5.3,SNR=6.3						

*IDC **11** 13:01:57.0±2.0, 14°.18N×119°.71E, h0km, mb3.4/3, mb1 3.8/3, mb1mx3.3/48, mbtmp3.5/3, Error ellipse: s-maj=44.0km s-min=21.5km az=2.0*
*NEIC **11** 13:01:59.0±1.1, 14°.0N±0°.1×119°.63E±0°.07, h10km±2km, mb4.4/7, Error ellipse: s-maj=17.2km s-min=11.8km az=192.0*
ISC 11 13:01:59.2±0.8**, 14°.12N**±0°.06×**119°.69E**±0°.09**, h10km, n15, σ1s39**/17**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**1.21**	**91**	Pn	**Pn**	**13 02 20.4**	**-1.9**
	110nm,0.3s,baz=358,slow=2.4,SNR=10.0						
TGY				Sn	**Sn**	**13 02 41.0**	**+2.2**
	191nm,0.3s,baz=325,slow=23,SNR=8.2						
ENPP	**El Nido**	**2.91**	**185**	eP	**Pg**	**13 02 55.1**	**+0.1**
ENPP				eS	**Sg**	**13 03 35.5**	**+2.8**
YULB	**Yu-li**	**9.35**	**9**	Pn	**Pn**	**13 04 15.4**	**+1.3**
YOJ	**Yonaguni jima**	**10.75**	**16**	Pn	**Pn**	**13 04 35.1**	**+1.8**
ENH	**Enshi**	**18.63**	**331**	P	**Pn**	**13 06 18.0**	**+0.7**
ENH				IAmb	IAmb	13 06 23.0	
	comp=Z,30nm,2.0s						
CMAR	**Chiang Mai Arr**	**20.37**	**285**	P	**P**	**13 06 35.8**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=84,slow=8.7,SNR=5.4						
FAKI	**Fak Fak**	**21.01**	**143**	P	**P**	**13 06 42.5**	**-0.7**
FAKI				IAmb	IAmb	13 07 33.4	
	comp=Z,20nm,1.1s						
KSAR	**Wonju Array Be**	**24.35**	**16**	P	**P**	**13 07 16.9**	**-0.5**
WB0	**Warramunga Arr**	**36.65**	**156**	P	**P**	**13 09 05.4**	**-0.8**
WB0				IAmb	IAmb	13 09 09.7	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**36.79**	**157**	P	**P**	**13 09 06.9**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=334,slow=9.5,SNR=8.1						
WRA	**Warramunga Arr**	**36.79**	**157**	P	**P**	**13 09 06.6**	**-0.8**
WB2	**Warramunga Arr**	**36.79**	**157**	P	**P**	**13 09 07.0**	**-0.4**
WR0	**Warramunga Arr**	**36.88**	**156**	P	**P**	**13 09 06.9**	**-1.3**
ASAR	**Alice Springs**	**40.04**	**160**	P	**P**	**13 09 34.5**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=337,slow=7.2,SNR=16						
NWAO	**Narrogin (SRO)**	**46.84**	**183**	P	**P**	**13 10 28.4**	**-1.1**

*NEIC **11** 13:18:52.7±1.4, 6°.15S±0°.07×147°.13E±0°.08, h109km±9km, mb4.3/11, Error ellipse: s-maj=12.8km s-min=8.7km az=126.0*
*IDC **11** 13:18:53.1±0.8, 6°.23S×147°.17E, h114km±7km, mb3.6/9, mb1 3.6/12, mb1mx3.5/44, mbtmp3.9/12, MS2.2/1, Ms1 2.2/1, ms1mx2.1/17, Error ellipse: s-maj=23.0km s-min=11.0km az=98.0*
ISC 11 13:18:50.8±0.6**, 6°.03S**±0°.05×**147°.0E**±0°.1**, h78km, n31, σ1s70**/35**, mb4.0**/11**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.36**	**177**	P	**Pn**	**13 19 41.9**	**+0.8**
	14nm,0.3s,baz=29,slow=10.0,SNR=124						
PMG				S	**Sn**	**13 20 18.5**	**-1.3**
	53nm,0.3s,baz=36,slow=22,SNR=7.7						
PMG				LR	LR	13 20 38.0	
	comp=Z,39nm,19.8s,baz=148,slow=33						
PMG	**Port Moresby**	**3.36**	**177**	Pn	**Pn**	**13 19 41.7**	**+0.7**
PMG				Sn	**Sn**	**13 20 18.7**	**-1.1**
MANU	**Manus Island**	**3.98**	**5**	Pn	**Pn**	**13 19 52.9**	**+3.5**
KRVT	**Keravat (AS076**	**5.29**	**71**	P	**Pn**	**13 20 09.0**	**+1.7**
	1.5nm,0.3s,baz=125,slow=10.0,SNR=2.8						
RABL	**Rabaul**	**5.45**	**71**	Pn	**Pn**	**13 20 10.7**	**+1.1**
CTA	**Charters Tower**	**13.99**	**183**	P	**Pn**	**13 22 08.9**	**+3.3**
	1.0nm,0.3s,baz=0.4,slow=12,SNR=10						
WR0	**Warramunga Arr**	**18.40**	**220**	P	**P**	**13 22 59.6**	**-0.2**
WR0				IAmb	IAmb	13 23 53.7	
	comp=Z,41nm,1.9s						
WRAB	**Tennant Creek**	**18.50**	**221**	P	**P**	**13 23 00.7**	**-0.3**
WRAB				IAmb	IAmb	13 23 13.7	
	comp=Z,10.0nm,0.8s						
WB2	**Warramunga Arr**	**18.51**	**220**	P	**P**	**13 22 59.8**	**-1.3**
WB2				IAmb	IAmb	13 23 40.3	
	comp=Z,23nm,1.6s						
WRA	**Warramunga Arr**	**18.52**	**221**	P	**P**	**13 23 00.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=40,slow=12,SNR=8.7						
WRA				pP	**pP**	**13 23 19.9**	**+3.2**
	comp=Z,0.2nm,0.3s,baz=42,slow=12,SNR=3.2						
GUMO	**Guam**	**19.61**	**354**	P	**Pn**	**13 23 14.0**	**-1.1**
ASAR	**Alice Springs**	**21.60**	**214**	P	**P**	**13 23 34.1**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=46,slow=9.5,SNR=19						
ASAR				pP	**pP**	**13 23 54.0**	**+3.5**
	comp=Z,0.9nm,0.6s,baz=34,slow=13,SNR=5.3						
ASAR	**Alice Springs**	**21.60**	**214**	P	**P**	**13 23 33.9**	**-0.6**
ANA2	**Anatahan**	**22.26**	**357**	P	**P**	**13 23 41.1**	**-0.5**
FITZ	**Fitzroy Crossi**	**24.05**	**238**	P	**P**	**13 23 58.6**	**-0.4**
	comp=Z,2.5nm,0.5s,baz=55,slow=7.6,SNR=6.1						
KULM	**Kulim**	**47.62**	**283**	P	**P**	**13 27 19.4**	**-0.1**
KULM				IAmb	IAmb	13 29 04.5	
	comp=Z,9.2nm,1.1s						
USRK	**Ussuriysk Ar.**	**51.80**	**346**	P	**P**	**13 27 50.6**	**-0.1**
	comp=Z,1.6nm,0.9s,baz=179,slow=8.5,SNR=2.7						
PETK	**Petropavlovsk-**	**59.61**	**7**	P	**P**	**13 28 46.9**	**+0.5**
	comp=Z,4.5nm,1.0s,baz=169,slow=9.4,SNR=4.9						
SONM	**Songino Array**	**64.43**	**331**	P	**P**	**13 29 19.0**	**0.0**
	comp=Z,0.2nm,0.3s,baz=149,slow=3.5,SNR=3.6						
SONM	**Songino Array**	**64.43**	**331**	IAmb	IAmb	13 29 19.8	
	comp=Z,1.5nm,1.3s						
SEY	**Seymchan**	**68.89**	**3**	P	**P**	**13 29 46.9**	**0.0**
	comp=Z,1.5nm,0.7s,baz=81,slow=23,SNR=5.3						
MK31	**Makanchi Array**	**77.52**	**320**	P	**P**	**13 30 36.9**	**-1.2**
MKAR	**Makanchi Array**	**77.52**	**320**	P	**P**	**13 30 37.2**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=98,slow=7.5,SNR=6.9						
MKAR	**Makanchi Array**	**77.52**	**320**	P	**P**	**13 30 36.8**	**-1.4**
MAKZ	**Makanchi**	**77.73**	**320**	P	**P**	**13 30 38.1**	**-1.2**
MAKZ				IAmb	IAmb	13 31 23.8	
	comp=Z,8.8nm,2.0s						
ZAA0	**Zalesovo Array**	**79.04**	**328**	P	**P**	**13 30 44.1**	**-2.2**
ZALV	**Zalesovo Beam**	**79.04**	**328**	P	**P**	**13 30 44.2**	**-2.1**
	comp=Z,0.7nm,0.4s,baz=97,slow=6.3,SNR=4.1						
ZALV	**Zalesovo Beam**	**79.04**	**328**	P	**P**	**13 30 43.8**	**-2.5**
ILAR	**Eielson Array**	**85.50**	**23**	P	**P**	**13 31 17.9**	**-1.9**
	comp=Z,1.1nm,0.6s,baz=255,slow=4.9,SNR=21						
TORD	**Torodi Ar. Bea**	**145.10**	**284**	PKPbc	**PKPab**	**13 38 18.6**	**-1.4**
	comp=Z,2.1nm,0.7s,baz=70,slow=3.9,SNR=12						
TORD				pPKPbc	**sPKPdf**	**13 38 48.8**	**-2.5**
	comp=Z,2.1nm,0.9s,baz=88,slow=3.6,SNR=6.0						
TORD	**Torodi Ar. Bea**	**145.10**	**284**		**PKPab**	**13 38 18.9**	**-1.2**

*NIED **11** 13:25:00, 37°.30N×141°.80E, h35km, Mw3.6 Best double couple: M0 3.16000×10¹⁴ NP1: φs274.00000°, δ81.00000°, λ-107.00000°. NP2: φs157.00000°, δ19.00000°, λ-28.00000°.*
JMA 11 13:25:08.5±0.2**, 37°.32N**×**141°.78E, h41**km±3km**, M3.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.72**	**274**	P	Pn	13 25 22.3	0.0
JFK				S	Sn	13 25 31.7	-0.6
ONAJ	**Iwakimizuishiy**	**0.81**	**255**	P	Pn	13 25 23.5	-0.1
ONAJ				S	Sn	13 25 33.9	-0.6
JMST	**Minamisoumatoc**	**0.82**	**300**	P	Pn	13 25 23.6	+0.1
JMST				S	Sn	13 25 34.0	-0.5
JMM	**Marumori**	**0.95**	**305**	P	Pn	13 25 25.7	+0.3
JMM				S	Sn	13 25 38.1	+0.3
JFFD	**Fukushimafurud**	**1.00**	**257**	P	Pn	13 25 26.2	+0.1
JFFD				S	Sn	13 25 38.7	-0.3
JFT	**Otama**	**1.17**	**280**	P	Pn	13 25 29.5	+1.1
JFT				S	Sn	13 25 44.1	+1.0
JIO	**Ouri**	**1.18**	**343**	P	Pn	13 25 28.7	+0.1
JIO				S	Sn	13 25 42.7	-0.7
JHO	**Hitachi**	**1.20**	**234**	P	Pn	13 25 28.5	-0.3
JHO				S	Sn	13 25 42.3	-1.6
JOU	**Okura**	**1.37**	**320**	P	Pn	13 25 32.5	+1.4
JOU				S	Sn	13 25 49.2	+1.2
JYS	**Shirataka**	**1.63**	**304**	eS	Sn	13 25 57.0	+2.5
JMK	**Ichinoseki**	**1.69**	**345**	P	Pn	13 25 36.2	+0.7
JMK				eS	Sn	13 25 56.8	+0.9
MAT	**Matsushiro**	**2.97**	**256**	P	Pn	13 25 56.0	+2.9
MAT				S	Sn	13 26 31.1	+3.7

*ATH **11** 13:42:48.4, 38°.19N×20°.37E, h8km±1km, ML2.8/2, Error ellipse: s-maj=2.0km s-min=1.2km az=268.0*
*THE **11** 13:42:48.4, 38°.17N×20°.36E, h7km, ML2.6/8, Error ellipse: s-maj=0.9km s-min=0.5km az=113.0*
ISC 11 13:42:47.6±1.4**, 38°.18N**±0°.03×**20°.36E**±0°.06**, h11**km±5km**, n22, σ0s47**/40**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.02**	**67**	P	**Pg**	**13 42 49.6**	**+0.1**
CHV1				S	**Sg**	**13 42 50.6**	**-0.3**
	93μm,0.1s						
KEF3	**Kipouria, Keph**	**0.03**	**347**	P	**Pg**	**13 42 49.8**	**+0.2**
KEF3				S	**Sg**	**13 42 51.0**	**0.0**
LXR1	**Lixouri, Cepha**	**0.07**	**68**	P	**Pg**	**13 42 50.2**	**+0.3**
LXR1				S	**Sg**	**13 42 51.4**	**-0.2**
	47μm,0.3s						
LXRA	**Lixouri, Kepha**	**0.07**	**68**	P	**Pg**	**13 42 50.2**	**+0.3**
LXRA				S	**Sg**	**13 42 51.5**	**-0.1**
ARGA	**Argostoli. Kep**	**0.10**	**89**	P	**Pg**	**13 42 50.6**	**+0.4**
ARGA				S	**Sg**	**13 42 52.4**	**+0.2**
KEF4	**Livadi, Kephal**	**0.10**	**33**	P	**Pg**	**13 42 50.7**	**+0.4**
KEF4				S	**Sg**	**13 42 52.5**	**+0.2**
KEF2	**Argostoli. Kep**	**0.10**	**95**	P	**Pg**	**13 42 50.7**	**+0.4**
KEF2				S	**Sg**	**13 42 52.5**	**+0.2**
ARG2	**Argostoli**	**0.10**	**88**	P	**Pg**	**13 42 50.7**	**+0.4**
ARG2				S	**Sg**	**13 42 52.5**	**+0.2**
	11μm,0.1s						
KEF1	**Kardakata, Kep**	**0.14**	**41**	P	**Pg**	**13 42 51.2**	**+0.4**
KEF1				S	**Sg**	**13 42 53.2**	**+0.1**
VLS	**Valsamata**	**0.18**	**89**	P	**Pg**	**13 42 51.9**	**+0.3**
VLS				S	**Sg**	**13 42 54.6**	**+0.3**
	10μm,0.1s						
VLS	**Valsamata**	**0.18**	**89**	P	**Pg**	**13 42 51.9**	**+0.3**
VLS				S	**Sg**	**13 42 54.7**	**+0.3**
VLS				AML	AML	13 42 54.9	
	comp=E,26936μm,0.1s						
VLS				AML	AML	13 42 55.0	
	comp=N,9045μm,0.1s						
VSK1	**VASILIKIADES**	**0.28**	**35**	P	**Pg**	**13 42 53.9**	**+0.5**
VSK1				S	**Sg**	**13 42 58.4**	**+1.1**
	comp=N,1μm,0.2s						
KONA	**Konidatara, Ke**	**0.30**	**34**	P	**Pg**	**13 42 54.1**	**+0.4**
FSK	**Fiskardo**	**0.33**	**30**	P	**Pg**	**13 42 54.5**	**+0.3**
FSK				S	**Sg**	**13 42 59.1**	**+0.5**
	comp=N,635nm,0.2s						
FSK	**Fiskardo**	**0.33**	**30**	P	**Pg**	**13 42 54.5**	**+0.3**
VLMS	**Volimes, Zakyn**	**0.38**	**141**	P	**Pg**	**13 42 55.9**	**+0.7**
VLMS				S	**Sb**	**13 43 02.5**	**+0.1**
VLMS				AML	AML	13 43 02.6	
	comp=E,3070μm,0.2s						
VLMS				AML	AML	13 43 03.4	
	comp=N,2388μm,0.2s						
EVGI	**Lefkada island**	**0.50**	**28**	P	**Pg**	**13 42 57.9**	**+0.5**
EVGI				S	**Sb**	**13 43 05.4**	**-0.4**
EVGI	**Lefkada island**	**0.50**	**28**	P	**Pg**	**13 42 57.8**	**+0.3**
KRI1	**kERI**	**0.63**	**144**	P	**Pg**	**13 43 00.1**	**+0.3**
LKD2	**Lefkada island**	**0.66**	**21**	P	**Pb**	**13 43 01.2**	**+0.1**
LKD2				S	**Sb**	**13 43 09.9**	**-0.4**
	comp=N,80nm,0.4s						
TSLK	**Tsoukalades, L**	**0.69**	**20**	P	**Pg**	**13 43 01.5**	**+0.5**
TSLK				S	**Sb**	**13 43 11.6**	**+0.4**
	comp=N,152nm,0.7s						
PDO	**Prodromos**	**0.78**	**57**	P	**Pg**	**13 43 02.7**	**+0.1**
PDO				S	**Sn**	**13 43 14.5**	**-1.6**

*NEIC **11** 13:55:17.6±1.4, 15°.9N±0°.1×96°.39W±0°.04, h33km±5km, Error ellipse: s-maj=15.5km s-min=5.0km az=184.0*
*MEX **11** 13:55:18.2±0.8, 15°.79N×96°.42W, h44km±9km, MD4.2*
ISC 11 13:55:17.6±1.2**, 15°.84N**±0°.04×**96°.42W**±0°.03**, h32**km±10km**, n26, σ1s27**/46**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PANG	**Puerto Angel**	**0.18**	**197**		**Pn**	**13 55 24.0**	**-0.1**
PANG					**Sn**	**13 55 29.1**	**+1.0**
PANG	**Puerto Angel**	**0.18**	**197**	eP	**Pn**	**13 55 24.0**	**-0.1**
PANG				i S	**Sn**	**13 55 29.1**	**+1.0**
HUIG	**Huatulco**	**0.31**	**104**		**Pb**	**13 55 25.4**	**0.0**
HUIG					**Sn**	**13 55 30.8**	**-0.5**
HUIG	**Huatulco**	**0.31**	**104**	eP	**Pb**	**13 55 25.4**	**0.0**
HUIG				eS	**Sn**	**13 55 30.8**	**-0.5**
PEIG	**Puerto Escondi**	**0.72**	**283**	eP	**Pn**	**13 55 30.2**	**-1.3**
PEIG				i S	**Sn**	**13 55 40.6**	**-0.9**
OXBJ	**Oaxaca**	**1.25**	**346**		**Pn**	**13 55 38.3**	**-0.7**
OXBJ					**Sn**	**13 55 53.8**	**-1.1**
OXBJ	**Oaxaca**	**1.25**	**346**	i P	**Pn**	**13 55 38.3**	**-0.7**
OXBJ				i S	**Sn**	**13 55 53.8**	**-1.1**
VHO	**Vista Hermosa**	**1.26**	**346**	i P	**Pn**	**13 55 38.5**	**-0.6**
VHO				i S	**Sn**	**13 55 54.3**	**-0.8**
YOIG	**Yosondua**	**1.48**	**313**	eP	**Pn**	**13 55 42.0**	**-0.3**
YOIG				eS	**Sn**	**13 55 59.4**	**-1.2**
PNIG	**Pinotepa**	**1.73**	**289**		**Pn**	**13 55 44.5**	**-1.0**
PNIG					**Sn**	**13 56 04.5**	**-2.0**
PNIG	**Pinotepa**	**1.73**	**289**	eP	**Pn**	**13 55 44.5**	**-1.0**
PNIG				i S	**Sn**	**13 56 04.5**	**-2.0**
CMIG	**Matias Romero**	**1.93**	**50**		**Pn**	**13 55 47.2**	**-0.9**
CMIG					**Sn**	**13 56 09.5**	**-1.8**
CMIG	**Matias Romero**	**1.93**	**50**	eP	**Pn**	**13 55 47.2**	**-0.9**
CMIG				i S	**Sn**	**13 56 09.5**	**-1.8**
TOIG	**Toxpalan**	**2.33**	**345**	eP	**Pn**	**13 55 55.7**	**+2.0**
TOIG				i S	**Sn**	**13 56 21.0**	**-0.2**
HLIG	**Huajuapan de L**	**2.38**	**326**	i P	**Pn**	**13 55 57.4**	**+2.8**
HLIG				i S	**Sn**	**13 56 22.5**	**-0.3**
TLIG	**Tlapa**	**2.68**	**310**		**Pn**	**13 56 01.0**	**+2.5**
TLIG	**Tlapa**	**2.68**	**310**		**Sn**	**13 56 31.1**	**+1.1**
TLIG	**Tlapa**	**2.68**	**310**	eP	**Pn**	**13 56 02.3**	**+3.7**
TLIG				i S	**Sn**	**13 56 31.1**	**+1.1**
PCIG		**3.08**	**92**		**Pn**	**13 56 04.0**	**0.0**
PCIG					**Sn**	**13 56 39.2**	**-0.6**
PCIG		**3.08**	**92**	eP	**Pn**	**13 56 04.0**	**0.0**
PCIG				i S	**Sn**	**13 56 39.2**	**-0.6**
TGIG		**3.30**	**73**		**Pb**	**13 56 16.2**	**+0.7**
TGIG					**Sn**	**13 56 46.3**	**+1.1**
TGIG		**3.30**	**73**	i P	**Pb**	**13 56 16.2**	**+0.7**
TGIG				i S	**Sn**	**13 56 46.3**	**+1.1**
CCIG	**Comitan**	**4.14**	**83**	Pn	**Pn**	**13 56 18.0**	**-0.7**
TEIG	**Tepich**	**8.89**	**59**	Pn	**Pn**	**13 57 23.3**	**-0.4**
W41B	**Gary Mavity, V**	**19.61**	**10**	P	**P**	**13 59 42.9**	**-0.3**
W41B				IAmb	IAmb	13 59 55.5	
	comp=Z,12nm,1.6s						
U40A	**Yellville**	**20.68**	**8**	P	**P**	**13 59 55.0**	**+0.2**
U40A				IAmb	IAmb	14 00 10.5	
	comp=Z,3.4nm,1.0s						

*ATH **11** 14:27:23.3, 37°.94N×26°.75E, h30km±1km, ML2.7/2, Error ellipse: s-maj=4.5km s-min=1.3km az=64.0*
*DDA **11** 14:27:23.1, 38°.05N×27°.04E, h7km±6km, ML2.4*
*ISK **11** 14:27:23.3, 38°.06N×26°.92E, h6km, ML2.7/17*
*THE **11** 14:27:24.4, 37°.97N×26°.78E, h15km±1km, ML2.3/5, Error ellipse: s-maj=1.4km s-min=0.7km az=74.0*
ISC 11 14:27:22.9±0.8**, 38°.04N**±0°.02×**26°.89E**±0°.02**, h17**km±6km**, n39, σ0s81**/57**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMLD	**Gumuldur**	**0.04**	**25**	PG	**Pg**	**14 27 25.3**	**-0.6**
SMG	**Samos**	**0.33**	**188**	P	**Pg**	**14 27 29.9**	**+0.1**
SMG				S	**Sg**	**14 27 35.1**	**+0.5**
	2μm,0.4s						
SMG	**Samos**	**0.33**	**188**	P	**Pg**	**14 27 30.0**	**+0.1**
SMG				S	**Sg**	**14 27 35.5**	**+0.9**
SMG				AML	AML	14 27 35.6	
	comp=N,4137μm,0.4s						
SMG				AML	AML	14 27 37.9	
	comp=E,1996μm,0.5s						
BLCB	**Balcova**	**0.37**	**19**	PG	**Pg**	**14 27 30.1**	**-0.4**
BLCB				SG	**Sg**	**14 27 35.3**	**-0.3**
GCAM	**G?zelcaml?**	**0.43**	**141**	PG	**Pg**	**14 27 31.9**	**+0.3**
GCAM				SG	**Sb**	**14 27 38.3**	**+0.1**
KRBN	**Karaburun**	**0.61**	**334**	PG	**Pb**	**14 27 35.6**	**+0.4**
KRBN				SG	**Sg**	**14 27 43.6**	**+0.4**
FOCM	**Foa**	**0.69**	**349**	PG	**Pb**	**14 27 36.8**	**+0.4**
FOCM				SG	**Sb**	**14 27 46.2**	**+0.6**
CHOS	**Chios island**	**0.75**	**298**	P	**Pg**	**14 27 37.2**	**-0.3**
CHOS				S	**Sb**	**14 27 48.9**	**+1.5**
	comp=E,670nm,0.2s						
CHOS	**Chios island**	**0.75**	**298**	P	**Pg**	**14 27 37.4**	**-0.1**
CHOS				S	**Sg**	**14 27 48.0**	**+0.6**
CHOS				AML	AML	14 27 49.8	
	comp=E,1662μm,0.3s						
CHOS				AML	AML	14 27 50.7	
	comp=N,1055μm,0.3s						
CHOS	**Chios island**	**0.75**	**298**	PG	**Pb**	**14 27 38.3**	**+0.8**
CHOS				SG	**Sb**	**14 27 49.2**	**+1.8**
AYDB	**Zeytinkoy-Aydi**	**0.79**	**96**	PG	**Pb**	**14 27 38.8**	**+0.5**
AYDB				SG	**Sb**	**14 27 49.6**	**+0.8**
ZEDA	**zmir-Bergama**	**0.94**	**9**	i P	**Pb**	**14 27 40.6**	**0.0**
ZEDA				i S	**Sg**	**14 27 53.9**	**+0.5**
ZEDA				IAML		14 27 56.0	
	comp=E,244nm,0.8s						
ZEDA				IAML		14 27 57.0	
	comp=N,134nm,0.3s						
BODT	**Bodrum**	**1.03**	**161**	P	**Pb**	**14 27 42.5**	**+0.2**
BODT				S	**Sb**	**14 27 56.4**	**+0.9**
BODT	**Bodrum**	**1.03**	**161**	PG	**Pb**	**14 27 42.4**	**+0.2**
DKL	**Dikili**	**1.03**	**1**	PG	**Pg**	**14 27 43.0**	**+0.1**
GOMA	**Golmarmara-Man**	**1.05**	**50**	PG	**Pn**	**14 27 43.1**	**+0.3**
AKHS	**Akhisar**	**1.11**	**40**	i P	**Pb**	**14 27 43.4**	**-0.2**
AKHS				IAML		14 28 02.0	
	comp=E,40nm,0.2s						
AKS	**Akhisar**	**1.11**	**40**	PG	**Pg**	**14 27 44.4**	**+0.1**
PRK	**Paraskevi**	**1.30**	**338**	P	**Pn**	**14 27 47.1**	**+0.8**
PRK				S	**Sg**	**14 28 04.8**	**-0.1**
	comp=E,112nm,0.5s						
PRK	**Paraskevi**	**1.30**	**338**	P	**Pg**	**14 27 48.3**	**+0.3**
YER	**Yerkesik**	**1.43**	**129**	PN	**Pg**	**14 27 50.4**	**+0.1**
SIGR	**SIGRI**	**1.43**	**326**	PN	**Pg**	**14 27 50.3**	**0.0**
AMGA	**Amorgos Island**	**1.44**	**214**	P	**Pn**	**14 27 47.2**	**-1.0**
AMGA				S	**Sn**	**14 28 05.7**	**-1.1**
	comp=E,95nm,0.5s						
AMGA	**Amorgos Island**	**1.44**	**214**	P	**Pn**	**14 27 47.3**	**-1.0**
APE	**Apeiranthos**	**1.45**	**229**	P	**Pn**	**14 27 47.6**	**-0.8**
APE				S	**Sn**	**14 28 05.0**	**-2.1**
	comp=E,42nm,0.2s						
APE	**Apeiranthos**	**1.45**	**229**	P	**Pn**	**14 27 47.7**	**-0.7**
KULA	**Kula-Manisa**	**1.47**	**71**	P	**Pg**	**14 27 51.4**	**+0.2**
KULA	**Kula-Manisa**	**1.47**	**71**	PN	**Pg**	**14 27 50.6**	**-0.6**
STEP	**BALIKESIR_Sava**	**1.48**	**26**	i P	**Pg**	**14 27 51.0**	**-0.5**
STEP				i S	**Sg**	**14 28 10.3**	**-0.5**
STEP				IAML		14 28 14.0	
	comp=N,99nm,0.4s						
STEP				IAML		14 28 14.0	
	comp=E,128nm,0.3s						
BAYC	**CANAKKALE_Bayr**	**1.72**	**351**	i P	**Pn**	**14 27 52.0**	**-0.1**
TURN	**Turunc**	**1.79**	**130**	PN	**Pn**	**14 27 53.8**	**+0.8**
BALY	**Balya**	**1.79**	**18**	i P	**Pb**	**14 27 54.7**	**-0.6**
BALY				i S	**Sg**	**14 28 19.5**	**-1.1**
BALY				IAML		14 28 21.0	
	comp=N,98nm,0.5s						
BALY				IAML		14 28 22.0	
	comp=E,54nm,0.3s						
IOSP	**Ios island**	**1.83**	**225**	P	**Pn**	**14 27 52.6**	**-0.9**
EZN	**Ezine**	**1.84**	**346**	PN	**Pb**	**14 27 56.2**	**+0.2**
DALY	**Dalyan (Mula)**	**1.86**	**130**	PN	**Pb**	**14 27 56.5**	**+0.2**
BOZC	**Bozcaada**	**1.92**	**340**	PN	**Pb**	**14 27 56.8**	**-0.6**
SIMA	**Simav-Kutahya**	**1.94**	**57**	PN	**Pb**	**14 27 57.4**	**-0.5**
DURS	**Dursunbey**	**1.99**	**38**	i P	**Pb**	**14 27 57.7**	**-1.0**
DURS				i S	**Sg**	**14 28 25.4**	**-1.5**
DURS				IAML		14 28 27.0	
	comp=N,26nm,0.3s						
DURS				IAML		14 28 29.0	
	comp=E,32nm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TVSB	**Tavsanli**	**2.45**	**54**	PN	**Pn**	**14 28 04.6**	**+2.4**

IDC 11 14:28:33.4±0.8, 33°.83N×89°.06E, h0km, mb3.6/10, mb1 3.7/15, mb1mx3.6/59, mbtmp3.6/15, ML3.2/5, MS3.2/16, Ms1 3.2/16, ms1mx3.1/46, Error ellipse: s-maj=31.6km s-min=15.4km az=49.0

ISC 11 14:28:36.0±0.7, 33°.96N±0°.08×89°.2E±0°.1, h17km, n32, σ0s.97/25, mb3.6/9, MS3.2/13, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUN	**Gumba** 31nm,0.6s	**6.67**	**206**	*e*P	**Pn**	**14 30 15.6**	**+2.0**
TAPN	**Taplejung** 20nm,0.6s	**6.71**	**191**	*e*P	**Pn**	**14 30 14.6**	**+0.5**
JIRN	**Jiri** 27nm,0.4s	**6.79**	**203**	*e*P	**Pn**	**14 30 17.3**	**+2.0**
KKN	**Kakani**	**7.01**	**210**	*e*P	**Pn**	**14 30 19.0**	**+0.9**
PKIN	**Phulchoki** 10nm,0.6s	**7.15**	**208**	*e*P	**Pn**	**14 30 20.9**	**+0.8**
PKI	**Pulchoki**	**7.16**	**208**	*e*P	**Pn**	**14 30 20.5**	**+0.3**
DMN	**Daman** 12nm,0.6s	**7.24**	**210**	*e*P	**Pn**	**14 30 21.5**	**+0.1**
ODAN	**Odare** 46nm,0.4s	**7.25**	**193**	*e*P	**Pn**	**14 30 20.8**	**-0.6**
RAMN	**Ramite** 18nm,0.5s	**7.34**	**198**	*e*P	**Pn**	**14 30 22.2**	**-0.5**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=154,slow=14,SNR=4.1	**13.85**	**340**	Pn	**Pn**	**14 31 50.6**	**-0.8**
MKAR				LR	LR	14 37 41.1	
	comp=Z,50nm,19.9s,baz=162,slow=39						
AAK	**Ala-Archa** 0.1nm,0.3s,baz=126,slow=8.6,SNR=4.0	**14.42**	**311**	Pn	**Pn**	**14 31 59.2**	**-0.3**
CMAR	**Chiang Mai Arr** 0.2nm,0.3s,baz=328,slow=13,SNR=9.2	**17.73**	**148**	P	**Pn**	**14 32 41.0**	**-1.1**
CMAR				LR	LR	14 39 21.3	
	comp=Z,37nm,18.2s,baz=216,slow=37						
KURBB	**Kurchatov Arra** 0.0nm,0.3s,baz=148,slow=12,SNR=7.5	**18.39**	**338**	P	**P**	**14 32 50.1**	**+0.1**
SONM	**Songino Array** 0.1nm,0.3s,baz=228,slow=12,SNR=10	**18.94**	**38**	P	**P**	**14 32 57.7**	**+1.5**
SONM				LR	LR	14 40 42.5	
	comp=Z,23nm,19.1s,baz=152,slow=38						
ZALV	**Zalesovo Beam** 2.3nm,0.7s,baz=172,slow=12,SNR=9.4	**20.22**	**352**	P	**P**	**14 33 11.5**	**+1.5**
ZALV				LR	LR	14 42 15.7	
	comp=Z,51nm,18.6s,baz=214,slow=40						
TLY	**Talaya**	**20.57**	**26**	LR	LR	14 41 45.6	
	comp=Z,59nm,19.1s,baz=212,slow=38						
BVAR	**Borovoye Array** 0.4nm,0.6s,baz=145,slow=8.6,SNR=3.2	**23.31**	**331**	P	**P**	**14 33 44.5**	**+1.5**
GEYT	**Alibeck** 2.6nm,0.7s,baz=97,slow=11,SNR=6.1	**25.41**	**288**	P	**P**	**14 34 02.4**	**-0.3**
GEYT				LR	LR	14 46 08.6	
	comp=Z,76nm,21.2s,baz=5.0,slow=42						
AKTO	**Aktyubinsk**	**28.09**	**315**	LR	LR	14 47 13.3	
	comp=Z,50nm,19.1s,baz=120,slow=40						
ARU	**Arti**	**30.72**	**326**	LR	LR	14 48 28.9	
	comp=Z,44nm,19.1s,baz=109,slow=39						
KLR	**Kul'dur**	**34.79**	**51**	LR	LR	14 49 29.6	
	comp=Z,25nm,18.7s,baz=234,slow=36						
KIRV	**Kirov**	**36.08**	**325**	LR	LR	14 52 48.0	
	comp=Z,52nm,18.1s,baz=209,slow=40						
TIXI	**Tiksi**	**43.11**	**17**	LR	LR	14 55 16.3	
	comp=Z,25nm,19.0s,baz=29,slow=37						
BRTR	**Keskin Array B** 1.0nm,1.0s,baz=62,slow=6.7,SNR=4.1	**44.23**	**294**	P	**P**	**14 36 44.4**	**-0.2**
AKASG	**Malin Array Be** 0.2nm,0.2s,baz=81,slow=6.1,SNR=4.2	**46.08**	**310**	P	**P**	**14 36 58.1**	**-0.8**
AKASG				LR	LR	14 58 30.8	
	comp=Z,37nm,18.2s,baz=160,slow=39						
FINES	**FINESS Array B** 0.9nm,0.6s,baz=87,slow=8.8,SNR=3.5	**48.07**	**325**	P	**P**	**14 37 13.8**	**-0.4**
FINES				LR	LR	14 59 25.0	
	comp=Z,54nm,19.0s,baz=117,slow=38						
NB2	**NORSAR Subarra** comp=Z,2.0nm,0.7s,baz=82,slow=7.4	**55.25**	**325**	P	**P**	**14 38 07.4**	**-0.6**
NOA	**NORSAR Array B** comp=Z,1.0nm,0.7s,baz=83,slow=7.2,SNR=5.1	**55.25**	**325**	P	**P**	**14 38 07.6**	**-0.4**
NOA				LR	LR	15 03 46.7	
	comp=Z,26nm,20.9s,baz=75,slow=38						
GERES	**GERESS Array B** comp=Z,0.3nm,0.4s,baz=82,slow=7.0,SNR=4.3	**56.29**	**310**	P	**P**	**14 38 15.5**	**-0.2**
GERES				LR	LR	15 04 50.1	
	comp=Z,48nm,19.7s,baz=119,slow=39						
KMBO	**Kilima Mbogo**	**59.91**	**245**	LR	LR	15 03 41.1	
	comp=Z,24nm,21.1s,baz=344,slow=35						
WRA	**Warramunga Arr** comp=Z,0.4nm,0.6s,baz=323,slow=6.2,SNR=6.6	**68.72**	**134**	P	**P**	**14 39 39.1**	**+0.1**
ASAR	**Alice Springs** comp=Z,0.3nm,0.6s,baz=321,slow=6.5,SNR=8.3	**71.36**	**137**	P	**P**	**14 39 55.3**	**+0.2**

WEL 11 14:41:13.6, 40°.6S±0°.7×17°.6E±°, h31km±1km, M3.4/89, ML3.8/15, MLv3.4/89, Error ellipse: s-maj=0.0km s-min=0.0km az=96.6, North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRWZ	**Pori Road**	**0.10**	**62**	P	Pn	14 41 19.5	+0.4
PRWZ				S	Sb	14 41 23.4	+0.5
TIWZ	**Tintock**	**0.17**	**172**	P	Pn	14 41 20.1	0.0
TIWZ				S	Sn	14 41 24.7	+0.5
MRZ	**Mangatainoka R**	**0.22**	**254**	P	Pn	14 41 20.6	-0.1
MRZ				S	Sn	14 41 25.1	0.0
POWZ	**Post Office Ro**	**0.22**	**343**	P	Pn	14 41 20.5	-0.3
BFZ	**Birch Farm**	**0.31**	**105**	P	Pb	14 41 21.4	+0.1
BFZ				S	Sn	14 41 27.6	+0.1
DVHZ	**Dannevirke**	**0.39**	**38**	P	Pb	14 41 22.2	-0.1
HOWZ	**Holdsworth Sta**	**0.39**	**221**	P	Pn	14 41 23.0	-0.1
HOWZ				S	Sn	14 41 29.6	+0.1
CPWZ	**Castlepoint**	**0.41**	**139**	P	Pn	14 41 23.5	+0.3
ANWZ	**Angora Road**	**0.49**	**73**	P	Pb	14 41 24.1	+0.1
ANWZ				S	Sn	14 41 32.5	+0.5
TMWZ	**Te Maipa**	**0.50**	**177**	P	Pn	14 41 24.5	-0.2
TMWZ				S	Sn	14 41 32.9	+0.6
TSZ	**Takapari Road**	**0.55**	**9**	P	Pb	14 41 24.9	0.0
OGWZ	**Otaki Gorge**	**0.56**	**247**	P	Pn	14 41 25.6	+0.2
OHWZ	**Ohakea**	**0.57**	**314**	P	Pn	14 41 26.4	+0.9
MTW	**Mount Morrison**	**0.61**	**206**	P	Pb	14 41 25.9	0.0
PRHZ	**Porangahau**	**0.69**	**61**	P	Pb	14 41 26.7	-0.4
WPHZ	**Waipukurau**	**0.70**	**40**	P	Pb	14 41 27.5	+0.2
PNHZ	**Pukenui**	**0.74**	**21**	P	Pb	14 41 27.8	0.0
KIW	**Kapiti Island**	**0.76**	**250**	P	Pb	14 41 28.7	+0.3
CAW	**Cannon Point**	**0.78**	**230**	P	Pb	14 41 28.6	-0.1
TRWZ	**Traveller**	**0.80**	**189**	P	Pb	14 41 28.5	-0.3
PAWZ	**Paruwai Farm**	**0.84**	**202**	P	Pb	14 41 28.9	-0.4
MSWZ	**Moikau Station**	**0.93**	**209**	P	Pn	14 41 29.9	-0.6
PXZ	**Pawanui**	**0.96**	**54**	P	Pn	14 41 30.3	-0.5
KRHZ	**Kereru**	**1.04**	**23**	P	Pn	14 41 31.9	0.0
PLWZ	**Palliser**	**1.07**	**205**	P	Pn	14 41 31.6	-0.8
WEL	**Wellington**	**1.07**	**230**	P	Pn	14 41 32.3	-0.1
WAZ	**Wanganui**	**1.08**	**322**	P	Pb	14 41 34.3	+0.6
BHW	**Baring Head**	**1.10**	**222**	P	Pn	14 41 32.3	-0.4
BHHZ	**Black Hill Sta**	**1.12**	**8**	P	Pn	14 41 33.5	+0.3
KAHZ	**Kahuranaki**	**1.12**	**44**	P	Pn	14 41 32.9	-0.3
MOVZ	**Moawhango**	**1.20**	**356**	P	Pb	14 41 34.8	+0.6
MTVZ	**Mangateitei**	**1.25**	**346**	P	Pb	14 41 35.8	-0.8
KWHZ	**Kaweka Forest**	**1.26**	**21**	P	Pn	14 41 35.1	+0.1
TRVZ	**Turoa**	**1.32**	**350**	P	Pb	14 41 37.4	-0.5
MCHZ	**McNeill Hill**	**1.33**	**30**	P	Pn	14 41 35.9	0.0
WHVZ	**Whangaehu Hut**	**1.33**	**351**	P	Pb	14 41 37.7	-0.4
TCW	**Tory Channel**	**1.34**	**243**	P	Pn	14 41 36.0	-0.1
TUVZ	**Tukino**	**1.34**	**353**	P	Pb	14 41 37.7	-0.5
DRZ	**Dome Shelter**	**1.34**	**350**	P	Pb	14 41 38.0	-0.3
FWVZ	**Far West T-bar**	**1.37**	**350**	P	Pb	14 41 38.0	-0.7
PKVZ	**Pokaka**	**1.37**	**343**	P	Pb	14 41 37.7	-0.9
NGZ	**Ngauruhoe**	**1.44**	**352**	P	Pb	14 41 38.8	-1.0
DUWZ	**D'Urville Isla**	**1.48**	**262**	P	Pn	14 41 38.5	+0.4
WTVZ	**West Tongariro**	**1.50**	**352**	P	Pn	14 41 39.6	+1.2
KRVZ	**Karewarewa**	**1.52**	**354**	P	Pb	14 41 39.9	-1.2
BKZ	**Black Stump Fm**	**1.52**	**19**	P	Pn	14 41 38.4	-0.2
TWVZ	**Taurewa**	**1.56**	**348**	P	Pn	14 41 40.2	+0.9
ARHZ	**Aropaoanui**	**1.60**	**34**	P	Pn	14 41 39.5	-0.2
RITZ	**Rihia Road**	**1.62**	**0**	P	Pn	14 41 41.1	+1.1
KATZ	**Kakaramea**	**1.63**	**356**	P	Pn	14 41 41.4	+1.2
TUWZ	**Tuamarina**	**1.67**	**240**	P	Pn	14 41 39.9	-0.6
NMHZ	**Naumai**	**1.67**	**26**	P	Pn	14 41 41.5	+0.8
VRZ	**Vera Road**	**1.70**	**330**	P	Pn	14 41 42.6	+1.5
HATZ	**Hinemaiaia**	**1.72**	**6**	P	Pn	14 41 41.6	+0.3
RATZ	**Rangitukua**	**1.73**	**358**	P	Pn	14 41 42.3	+0.7
MRHZ	**Matea Rd**	**1.82**	**14**	P	Pn	14 41 42.8	-0.1
WHHZ	**Waihua**	**1.86**	**35**	P	Pn	14 41 42.8	-0.4
BSWZ	**Blackbirch Sta**	**1.86**	**233**	P	Pn	14 41 42.6	-0.6
WATZ	**Wairara**	**1.90**	**357**	P	Pn	14 41 44.2	+0.5
MTHZ	**Maungataniwha**	**1.91**	**24**	P	Pn	14 41 44.4	+0.4
RAHZ	**Arahi**	**1.93**	**30**	P	Pn	14 41 44.1	-0.3
WHTZ	**Whakaora**	**1.94**	**2**	P	Pn	14 41 45.1	+0.8
NNZ	**Nelson**	**1.97**	**251**	P	Pn	14 41 45.1	+0.3
ALRZ	**Allen Road**	**2.07**	**11**	P	Pn	14 41 46.3	+0.1
KUTZ	**Kaahu Road**	**2.11**	**359**	P	Pn	14 41 47.3	+0.5
KNZ	**Kokohu**	**2.11**	**42**	P	Pn	14 41 45.4	-1.3
PRRZ	**Plateau Road**	**2.14**	**11**	P	Pn	14 41 47.3	+0.1
MHGZ	**Mahia Peninsul**	**2.14**	**48**	P	Pn	14 41 45.6	-1.5
SNGZ	**Shannon Station**	**2.15**	**33**	P	Pn	14 41 46.4	-0.8
RTZ	**Ruatahuna**	**2.17**	**24**	P	Pn	14 41 47.5	-0.1
HIZ	**Hauiti**	**2.23**	**339**	P	Pn	14 41 49.5	+1.2
MUGZ	**Murupara**	**2.24**	**19**	P	Pn	14 41 47.8	-0.6
TLZ	**Tolley Road**	**2.28**	**354**	P	Pn	14 41 50.4	+1.2
PRGZ	**Paritu Road**	**2.29**	**44**	P	Pn	14 41 48.2	-1.1
HSRZ	**Hossack Road**	**2.31**	**8**	P	Pn	14 41 49.6	+0.2
RIGZ	**Rimuhau**	**2.40**	**38**	P	Pn	14 41 49.3	-1.4
RAGZ	**Rawiri**	**2.43**	**30**	P	Pn	14 41 50.0	-1.1
THZ	**Tophouse**	**2.51**	**242**	P	Pn	14 41 51.3	-0.9
KHZ	**Kahutara**	**2.51**	**223**	P	Pn	14 41 50.5	-1.7
URZ	**Urewera**	**2.54**	**23**	P	Pn	14 41 50.8	-1.7
QRZ	**Quartz Range**	**2.54**	**264**	P	Pn	14 41 52.6	0.0
MWZ	**Matawai**	**2.61**	**30**	P	Pn	14 41 51.9	-1.7
TKGZ	**Te Karaka**	**2.66**	**36**	P	Pn	14 41 52.5	-1.7
CNGZ	**Carnagh Statio**	**2.79**	**41**	P	Pn	14 41 54.7	-1.4
TOZ	**Tahuroa Road**	**2.88**	**354**	P	Pn	14 41 57.9	+0.6
RUGZ	**Raukumara Rang**	**2.99**	**29**	P	Pn	14 41 57.5	-1.4
PUZ	**Puketiti**	**3.14**	**37**	P	Pn	14 41 59.0	-1.9
GVZ	**Greta Valley S**	**3.17**	**221**	P	Pn	14 41 59.2	-2.1
HAZ	**Te Kaha**	**3.21**	**28**	P	Pn	14 42 00.7	-1.2
PKGZ	**Pakihiroa**	**3.21**	**33**	P	Pn	14 42 00.7	-1.2
DSZ	**Denniston Nort**	**3.26**	**248**	P	Pn	14 42 01.9	-0.7
WMGZ	**Waiomatatini S**	**3.42**	**36**	P	Pn	14 42 02.8	-1.8
LTZ	**Lake Taylor**	**3.46**	**230**	P	Pn	14 42 03.5	-1.8
AWAZ	**Awhitu Peninsu**	**3.66**	**345**	P	Pn	14 42 09.7	+1.8
OKCZ	**Okains Bay**	**3.75**	**213**	P	Pn	14 42 06.6	-2.6
MQZ	**McQueen's Vall**	**3.91**	**216**	P	Pn	14 42 08.2	-3.2
INZ	**Inchbonnie**	**3.92**	**236**	P	Pn	14 42 09.8	-1.8
AKCZ	**Akaroa Harbour**	**3.93**	**213**	P	Pn	14 42 09.2	-2.6
OXZ	**Oxford**	**3.94**	**225**	P	Pn	14 42 08.8	-3.0
RPZ	**Rata Peaks**	**4.73**	**227**	P	Pn	14 42 20.8	-1.9
ODZ	**Otahua Downs**	**5.86**	**219**	P	Pn	14 42 35.4	-2.8
SYZ	**Scrubby Hill**	**7.68**	**217**	P	Pn	14 43 04.1	+1.0

BEO 11 14:43:29.0±1.2, 43°.82N×22°.91E, h0km, ML1.8/3, Mining explosion., Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VTS	**Vitosha**	**1.22**	**168**	*e*Pn	Pn	14 43 54.0	+0.5
VTS				*e*Sn	Sn	14 44 11.2	+0.5
BARS	**Barje**	**1.28**	**219**	*e*Pn	Pb	14 43 53.8	-0.1
BARS				*e*Sn	Sn	14 44 12.5	+0.6
BOSS	**Bosilegrad**	**1.35**	**193**	*e*Pn	Pg	14 43 54.2	-0.7
BOSS				*e*Sn	Sn	14 44 13.8	-0.1

SKO 11 14:44:02.1, 42°.12N×22°.92E, h15km, Bulgaria

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STIP	**Stip**	**0.69**	**232**	*e*Pg	Pg	14 44 12.1	-3.6
STIP				*e*Sg	Sg	14 44 20.1	-4.7
VAY	**Valandovo**	**0.84**	**198**	*e*Pg	Pn	14 44 19.3	-0.1
VAY				*e*Sg	Sn	14 44 32.1	+0.6
VAY				*e*Lg	Lg	14 44 33.1	
	comp=E,18nm,0.9s						
VAY				*e*Lg	Lg	14 44 33.9	
	comp=N,17nm,0.9s						

SJA 11 14:51:45.8±0.8, 31°.70S×69°.73W, h112km±4km, ML3.1, MW3.2

GUC 11 14:51:46.3±0.7, 31°.75S×70°.09W, h144km±11km, ML3.3

ISC 11 14:51:45.8±1.5, 31°.69S±0°.03×69°.69W±0°.03, h125km±10km, n27, σ0s.92/49, 5C-1D, San Juan Province

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.35**	**108**	*i* P	**Pn**	**14 52 03.5**	**-0.4**
RTLS				*i* S	**Sn**	**14 52 16.7**	**-0.9**
RTLS					IAML	14 52 16.8	
	comp=Z,461nm,0.2s						
ZON	**Zonda**	**0.87**	**81**	*i* P	**Pn**	**14 52 07.5**	**+0.4**
ZON				*i* S	**Sn**	**14 52 23.2**	**-0.1**
ZON					IAML	14 52 28.4	
	comp=Z,212nm,0.4s						
RTCV	**Cerro Valdivia**	**0.99**	**100**	*i* P	**Pn**	**14 52 08.5**	**+0.3**
RTCV				*i* S	**Sn**	**14 52 25.1**	**-0.1**
RTLL	**Cerro Villicun**	**1.10**	**71**	*i* P	**Pn**	**14 52 09.2**	**-0.1**
RTLL				*i* S	**Sn**	**14 52 26.4**	**-0.6**
RTLL					IAML	14 52 28.3	
	comp=Z,416nm,0.5s						
CO04	**Los Peladeros**	**1.15**	**252**	⇑*i* P	**Pn**	**14 52 09.7**	**-0.3**
CO04				*i* S	**Sn**	**14 52 27.8**	**-0.6**
CO04					IAML	14 52 30.0	
	comp=N,1μm,0.5s						
ASAL	**Salagasta**	**1.15**	**141**	*i* P	**Pn**	**14 52 10.3**	**+0.5**
CO02	**Combarbal**	**1.22**	**293**	⇑*i* P	**Pn**	**14 52 10.8**	**+0.2**
CO02				*i* S	**Sn**	**14 52 29.4**	**0.0**
CO02					IAML	14 52 31.7	
	comp=E,2μm,0.4s						
ACCO	**Cerro Coronel**	**1.22**	**26**	*i* P	**Pn**	**14 52 11.3**	**+0.4**
ACCO				*i* S	**Sn**	**14 52 30.2**	**+0.4**
CFA	**Coronel Fontan**	**1.24**	**86**	*i* P	**Pn**	**14 52 10.9**	**+0.2**
CFA				*i* S	**Sn**	**14 52 29.2**	**-0.5**
AMOG	**MOGNA**	**1.27**	**54**	*i* P	**Pn**	**14 52 11.3**	**+0.3**
AMOG				*i* S	**Sn**	**14 52 28.9**	**-1.3**
ARCO	**CERRO ARCO**	**1.31**	**151**	*i* P	**Pn**	**14 52 12.5**	**+0.8**
ARCO				*i* S	**Sn**	**14 52 31.8**	**+0.5**
ARCO					IAML	14 52 33.6	
	comp=Z,145nm,0.6s						
AROD	**Rodeo**	**1.53**	**7**	*i* P	**Pn**	**14 52 15.5**	**+1.2**
AROD				*i* S	**Sn**	**14 52 36.8**	**+0.9**
AAGR	**Agrelo**	**1.57**	**153**	*i* P	**Pn**	**14 52 15.1**	**+0.6**
AAGR				*i* S	**Sn**	**14 52 36.4**	**+0.1**
PEL	**Peldehue**	**1.68**	**210**	⇑*i* P	**Pn**	**14 52 15.7**	**+0.1**
PEL				*i* S	**Sn**	**14 52 38.2**	**-0.2**
PEL					IAML	14 52 40.1	
	comp=N,154nm,0.3s						
ROCH	**El Roble**	**1.70**	**221**	⇑*i* P	**Pn**	**14 52 15.8**	**-0.3**
ROCH				*i* S	**Sn**	**14 52 38.3**	**-0.8**
ROCH					IAML	14 52 41.1	
	comp=N,215nm,0.3s						
ROC1	**El Roble**	**1.70**	**221**	*i* P	**Pn**	**14 52 15.8**	**-0.3**
ROC1				*i* S	**Sn**	**14 52 38.5**	**-0.8**
FCH	**Farellones**	**1.71**	**197**	⇑*i* P	**Pn**	**14 52 17.4**	**+1.1**
FCH				*i* S	**Sn**	**14 52 40.9**	**+1.3**
FCH					IAML	14 52 45.0	
	comp=E,210nm,0.2s						
GO04	**Tololo Observa**	**1.79**	**327**	⇓*i* P	**Pn**	**14 52 17.2**	**+0.1**
GO04				*i* S	**Sn**	**14 52 40.7**	**-0.4**
GO04					IAML	14 52 46.9	
	comp=N,887nm,0.5s						
GO04	**Tololo Observa**	**1.79**	**327**	*i* P	**Pn**	**14 52 17.3**	**+0.1**
GO04				*i* S	**Sn**	**14 52 40.8**	**-0.4**
CLCH	**Cerro Calan**	**1.84**	**203**	*i* S	**Sn**	**14 52 42.3**	**+0.2**
CLCH					IAML	14 52 44.9	
	comp=E,198nm,0.6s						
MT03	**Universidad Ad**	**1.93**	**201**	*e*S	**Sn**	**14 52 43.9**	**0.0**
MT03					IAML	14 52 47.1	
	comp=N,558nm,0.2s						
LMEL	**Las Melosas**	**2.19**	**191**	*i* S	**Sn**	**14 52 52.3**	**+2.5**
LMEL					IAML	14 52 55.9	
	comp=N,105nm,0.3s						
ACAN	**Cantantal**	**2.20**	**106**	*i* P	**Pn**	**14 52 22.5**	**+0.5**
ACAN				*i* S	**Sn**	**14 52 48.9**	**-0.9**
AGUA	**GUANDACOL**	**2.43**	**25**	*i* P	**Pn**	**14 52 26.3**	**+1.3**
AGUA				*i* S	**Sn**	**14 52 55.7**	**+0.7**
VCA	**Vinchina**	**3.21**	**24**	*i* P	**Pn**	**14 52 36.4**	**+1.2**
VCA				*i* S	**Sn**	**14 53 14.7**	**+1.4**
VCA					IAML	14 53 18.6	
	comp=Z,42nm,0.2s						
GO05	**Huala**	**3.80**	**209**	*i* P	**Pn**	**14 52 41.6**	**-1.2**
CYA	**Choya**	**4.67**	**47**	*i* P	**Pn**	**14 52 53.4**	**-1.0**
CYA				*i* S	**Sn**	**14 53 44.8**	**-3.0**
CYA					IAML	14 53 47.0	
	comp=Z,12nm,0.5s						

SJA 11 14:57:47.5±0.7, 21°.79S×68°.62W, h131km±4km, ML3.8, MW3.7

NEIC 11 14:57:48.5±1.6, 21°.83S±0°.05×68°.67W±0°.08, h127km±5km, Error ellipse: s-maj=11.9km s-min=4.0km az=62.0

VAO 11 14:57:48.8±0.8, 21°.93S×68°.81W, h171km±8km, mb4.2

IDC 11 14:57:48.9±0.8, 21°.95S×68°.47W, h123km±11km, mb3.6/5, mb1 3.7/7, mb1mx3.5/32, mbtmp3.9/7, Error ellipse: s-maj=31.3km s-min=24.4km az=69.0

GUC 11 14:57:49.0±0.7, 21°.80S×68°.57W, h124km±3km, ML4.0

ISC 11 14:57:48.1±0.6, 21°.85S±0°.04×68°.65W±0°.04, h132km±6km, n91, σ1s.32/124, mb4.0/6, 17C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.56**	**275**	⇑*i* P	**Pn**	**14 58 08.2**	**+0.3**
PB09				*i* S	**Sn**	**14 58 23.4**	**+0.6**
PB09					IAML	14 58 25.0	
	comp=E,3μm,0.1s						
PB09	**IPOC Station P**	**0.56**	**275**	*i* P	**Pn**	**14 58 08.2**	**+0.3**
PB09				*i* S	**Sn**	**14 58 22.8**	**0.0**
PB09					IAML	14 58 25.7	
	comp=Z,2μm,0.2s						
LVC	**Limon Verde**	**0.80**	**198**	⇓*i* P	**Pn**	**14 58 10.4**	**+0.5**
LVC				*i* S	**Sn**	**14 58 26.2**	**-0.1**
LVC	**Limon Verde** comp=Z,82nm,0.3s,baz=34,slow=7.9,SNR=417	**0.80**	**198**	P	**Pn**	**14 58 10.2**	**+0.4**
LVC				S	**Sn**	**14 58 26.0**	**-0.4**
	comp=Z,312nm,0.3s,baz=270,slow=20,SNR=170						
LVC	**Limon Verde**	**0.80**	**198**	*i* P	**Pn**	**14 58 10.2**	**+0.4**
LVC				*i* S	**Sn**	**14 58 26.5**	**+0.1**
PB03	**IPOC Station P**	**1.05**	**259**	⇑*i* P	**Pn**	**14 58 12.4**	**+0.7**
PB03				*i* S	**Sn**	**14 58 29.9**	**+0.3**
PB03					IAML	14 58 31.4	
	comp=E,3μm,0.4s						
PB03	**IPOC Station P**	**1.05**	**259**	*i* P	**Pn**	**14 58 12.4**	**+0.7**
PB03				*i* S	**Sn**	**14 58 30.0**	**+0.3**
PB01	**IPOC Station P**	**1.12**	**315**	⇑*i* P	**Pn**	**14 58 12.2**	**-0.2**
PB01				*i* S	**Sn**	**14 58 29.9**	**-0.8**
PB01					IAML	14 58 32.2	
	comp=E,4μm,0.2s						
PB01	**IPOC Station P**	**1.12**	**315**	Pn	**Pn**	**14 58 12.2**	**-0.2**
PB01				Sn	**Sn**	**14 58 29.5**	**-1.3**
PB07	**IPOC Station P**	**1.16**	**276**	⇑*i* P	**Pn**	**14 58 13.3**	**+0.5**
PB07				*i* S	**Sn**	**14 58 32.2**	**+0.6**
PB07					IAML	14 58 33.3	
	comp=E,3μm,0.2s						
PB07	**IPOC Station P**	**1.16**	**276**	*i* P	**Pn**	**14 58 13.5**	**+0.7**
PB07				*i* S	**Sn**	**14 58 32.2**	**+0.6**
PB06	**IPOC Station P**	**1.21**	**225**	⇑*i* P	**Pn**	**14 58 14.4**	**+1.1**
PB06				*i* S	**Sn**	**14 58 33.8**	**+1.2**
PB06					IAML	14 58 34.7	
	comp=N,2μm,0.5s						
PB06	**IPOC Station P**	**1.21**	**225**	*i* P	**Pn**	**14 58 14.5**	**+1.1**
PB06				*i* S	**Sn**	**14 58 34.0**	**+1.4**
PB06					IAML	14 58 36.6	
	comp=Z,1μm,0.2s						
PB02	**IPOC Station P**	**1.27**	**294**	⇑*i* P	**Pn**	**14 58 14.2**	**+0.3**
PB02				*i* S	**Sn**	**14 58 33.4**	**-0.3**
PB02					IAML	14 58 35.2	
	comp=E,5μm,0.3s						
PB02	**IPOC Station P**	**1.27**	**294**	*i* P	**Pn**	**14 58 14.3**	**+0.3**
PB02				*i* S	**Sn**	**14 58 33.7**	**+0.1**
PB04	**IPOC Station P**	**1.48**	**250**	⇑*i* P	**Pn**	**14 58 17.0**	**+0.8**
PB04				*i* S	**Sn**	**14 58 38.1**	**+0.5**
PB04					IAML	14 58 40.7	
	comp=N,2μm,0.2s						
PB04	**IPOC Station P**	**1.48**	**250**	Pn	**Pn**	**14 58 17.0**	**+0.8**
PB04				Sn	**Sn**	**14 58 37.6**	**0.0**
PB04	**IPOC Station P**	**1.48**	**250**	*i* P	**Pn**	**14 58 17.0**	**+0.8**
PB04				*i* S	**Sn**	**14 58 38.6**	**+1.0**
PB04					IAML	14 58 42.3	
	comp=Z,1μm,0.2s						
PB15	**IPOC Station P**	**1.56**	**209**	⇑*i* P	**Pn**	**14 58 18.4**	**+1.2**
PB15				*i* S	**Sn**	**14 58 40.8**	**+1.5**
PB15	**IPOC Station P**	**1.56**	**209**	*i* P	**Pn**	**14 58 18.5**	**+1.4**
PB15				*i* S	**Sn**	**14 58 41.7**	**+2.4**
PATCX	**Punta Patache**	**1.73**	**306**	⇑*i* P	**Pn**	**14 58 19.1**	**0.0**
PATCX				*i* S	**Sn**	**14 58 42.4**	**-0.3**
PATCX					IAML	14 58 44.9	
	comp=N,2μm,0.3s						
PATCX	**Punta Patache**	**1.73**	**306**	*i* P	**Pn**	**14 58 19.2**	**+0.1**
PATCX				*i* S	**Sn**	**14 58 42.4**	**-0.3**
PB05	**IPOC Station P**	**1.75**	**235**	⇑*i* P	**Pn**	**14 58 20.2**	**+0.9**
PB05				*i* S	**Sn**	**14 58 44.1**	**+0.9**
PB05					IAML	14 58 46.4	
	comp=E,785nm,0.2s						
PB05	**IPOC Station P**	**1.75**	**235**	*i* P	**Pn**	**14 58 20.3**	**+0.9**
PB05				*i* S	**Sn**	**14 58 43.7**	**+0.4**
PB08	**IPOC Station P**	**1.76**	**344**	⇑*i* P	**Pn**	**14 58 20.0**	**+0.3**
PB08				*i* S	**Sn**	**14 58 43.3**	**-0.5**
PB08					IAML	14 58 45.4	
	comp=E,1μm,0.6s						
PB08	**IPOC Station P**	**1.76**	**344**	*i* P	**Pn**	**14 58 20.2**	**+0.5**
PB08				*i* S	**Sn**	**14 58 43.5**	**-0.2**
TA01	**Diego Aracena**	**1.92**	**311**	⇑*i* P	**Pn**	**14 58 20.7**	**-0.5**
TA01				*i* S	**Sn**	**14 58 45.6**	**-0.8**
TA01					IAML	14 58 48.6	
	comp=E,1μm,0.2s						
GO01	**Chusmiza**	**2.23**	**347**	⇑*i* P	**Pn**	**14 58 25.4**	**-0.1**
GO01	**Chusmiza**	**2.23**	**347**	Pn	**Pn**	**14 58 25.4**	**-0.1**
PB11	**IPOC Station P**	**2.28**	**335**	⇑*i* P	**Pn**	**14 58 25.1**	**-0.6**
PB11	**IPOC Station P**	**2.28**	**335**	Pn	**Pn**	**14 58 24.9**	**-0.8**
PB11	**IPOC Station P**	**2.28**	**335**	*i* P	**Pn**	**14 58 25.2**	**-0.6**
PB11				*i* S	**Sn**	**14 58 53.3**	**-1.4**
PB10	**IPOC Station P**	**2.42**	**226**	⇑*i* P	**Pn**	**14 58 28.1**	**+0.7**
PB10	**IPOC Station P**	**2.42**	**226**	Pn	**Pn**	**14 58 27.8**	**+0.4**
PB10	**IPOC Station P**	**2.42**	**226**	*i* P	**Pn**	**14 58 28.0**	**+0.7**
PB10				*i* S	**Sn**	**14 58 56.5**	**-1.1**
PB10					IAML	14 59 14.8	
	comp=Z,237nm,0.4s						
PSGC	**Pisagua**	**2.63**	**328**	⇑*i* P	**Pn**	**14 58 28.6**	**-1.5**
PSGC				*e*S	**Sn**	**14 59 00.1**	**-2.4**
PSGCX	**Pisagua**	**2.63**	**328**	*i* P	**Pn**	**14 58 28.6**	**-1.5**
PSGCX				*i* S	**Sn**	**14 59 00.7**	**-1.8**
MNMC	**Minye Minye**	**2.84**	**342**	⇑*i* P	**Pn**	**14 58 32.7**	**-0.3**
MNMC	**Minye Minye**	**2.84**	**342**	Pn	**Pn**	**14 58 32.7**	**-0.3**
MNMCX	**Minye Minye**	**2.84**	**342**	*i* P	**Pn**	**14 58 32.8**	**-0.3**
MNMCX				*i* S	**Sn**	**14 59 07.6**	**0.0**
YJA	**Yavi**	**2.93**	**97**	*i* P	**Pn**	**14 58 35.0**	**+0.8**
YJA				*i* S	**Sn**	**14 59 10.2**	**+0.4**
PB14	**IPOC Station P**	**3.21**	**210**	*i* P	**Pn**	**14 58 38.2**	**+0.5**
PB14					IAML	14 59 28.8	
	comp=Z,176nm,0.3s						
GO02	**Mina Guanaco**	**3.41**	**195**	Pn	**Pn**	**14 58 41.0**	**+0.5**
LPAZ	**La Paz** comp=Z,1.0nm,0.3s,baz=194,slow=6.1,SNR=19	**5.55**	**5**	P	**Pn**	**14 59 11.0**	**+1.8**
LPAZ	**La Paz**	**5.55**	**5**	*e*P	**Pn**	**14 59 10.5**	**+1.3**
LPAZ	**La Paz**	**5.55**	**5**	Pn	**Pn**	**14 59 10.6**	**+1.4**
GO03	**Copiap**	**5.90**	**194**	Pn	**Pn**	**14 59 11.9**	**-1.5**
GO03	**Copiap**	**5.90**	**194**	*i* P	**Pn**	**14 59 12.4**	**-1.0**
VCA	**Vinchina**	**6.87**	**177**	*i* P	**Pn**	**14 59 30.6**	**+4.1**
VCA					IAML	15 00 55.8	
	comp=Z,8.0nm,0.3s						
GO04	**Tololo Observa**	**8.52**	**193**	*i* P	**Pn**	**14 59 46.0**	**-2.7**
ACCO	**Cerro Coronel**	**8.71**	**182**	*i* P	**Pn**	**14 59 50.6**	**-0.8**
CFA	**Coronel Fontan** comp=Z,0.4nm,0.3s,baz=356,slow=14,SNR=5.6	**9.73**	**178**	P	**Pn**	**15 00 03.5**	**-1.2**
CFA				S	**Sn**	**15 01 45.2**	**-7.1**
	comp=Z,0.6nm,0.3s,baz=207,slow=18,SNR=3.1						
CFA	**Coronel Fontan**	**9.73**	**178**	*i* P	**Pn**	**15 00 03.9**	**-0.8**
SALV	**Santo Antonio**	**13.61**	**66**	*e*P	**Pn**	**15 00 56.8**	**+1.0**
PP1B	**Ponte de Pedra**	**13.63**	**74**	*e*P	**Pn**	**15 00 57.0**	**+0.8**
TRCB	**Terra Rica**	**14.85**	**97**	*e*P	**Pn**	**15 01 11.7**	**+0.1**
PTGB	**Pitanga**	**15.50**	**104**	*e*P	**P**	**15 01 21.9**	**+0.6**
ITAB	**Concordia**	**15.95**	**113**	*e*P	**Pn**	**15 01 25.1**	**-0.1**
CPSB	**Capacava Do Su**	**16.09**	**125**	*e*P	**Pn**	**15 01 26.1**	**-0.7**
PCMB	**Pacaembu**	**16.16**	**92**	*e*P	**Pn**	**15 01 27.7**	**-0.1**
CLDB	**Colider**	**16.45**	**50**	*e*P	**Pn**	**15 01 31.5**	**+0.1**
PLTB	**Pedras Altas**	**16.65**	**130**	*e*P	**Pn**	**15 01 32.5**	**-1.2**
ARAG	**Araguaiana, MT**	**17.06**	**72**	*e*P	**P**	**15 01 38.3**	**-0.2**
ITRB	**Iturama**	**17.23**	**86**	*e*P	**P**	**15 01 40.0**	**-0.4**
CNLB	**Canela**	**17.68**	**118**	*e*P	**P**	**15 01 43.6**	**-1.6**
FRTB	**Fartura**	**17.69**	**98**	*e*P	**P**	**15 01 44.7**	**-0.6**
BB19B	**Bebedouro**	**18.75**	**91**	*e*P	**P**	**15 01 56.1**	**-0.8**
PLCA	**Paso Flores**	**18.90**	**184**	*e*P	**P**	**15 01 55.5**	**-3.0**
PLCA	**Paso Flores**	**18.90**	**184**	P	**P**	**15 01 59.1**	**+0.6**
PLCA				IAmb	IAmb	15 02 13.1	
	comp=Z,13nm,1.5s						
RCLB	**Rio Claro- Sao**	**19.57**	**96**	*e*P	**P**	**15 02 05.4**	**-0.6**

IPMB	Ipameri, GO	19.59	82	eP	P	15 02 05.0	-1.1
VAO	Valinhos	20.08	97	eP	P	15 02 10.4	-1.0
PARB	Paraibuna	21.31	98	eP	P	15 02 23.5	-1.1
BSCB	Bom Sucesso	22.24	92	eP	P	15 02 33.1	-1.2
ESAR	Angra dos Reis	22.40	98	eP	P	15 02 33.1	-2.7
OTAV	Otavalo	23.94	335	eP	P	15 02 47.7	-3.1
SMTB	Santa Maria do	24.02	61	eP	P	15 02 50.1	-0.8
JANB	Januaria	24.03	78	eP	P	15 02 49.5	-1.7
BSFB	Barra de Sao F	26.23	88	eP	P	15 03 09.6	-1.4
NBRF	Rio Formoso -	34.79	73	eP	P	15 04 24.7	-1.7
DBIC	Dimbokro	68.60	73	P	P	15 08 37.8	+0.4
	comp=Z,1.8nm,0.7s,baz=229,slow=8.4,SNR=3.5						
DBIC	Dimbokro	68.60	73	IAmb	IAmb	15 08 55.4	
	comp=Z,24nm,1.7s						
PDAR	Pinedale Array	74.53	330	P	P	15 09 14.8	+2.3
	comp=Z,0.2nm,0.5s,baz=122,slow=7.8,SNR=3.0						
NVAR	Mina Array Bea	75.91	322	P	P	15 09 23.8	+3.3
	comp=Z,0.5nm,0.7s,baz=163,slow=6.6,SNR=4.5						
TOA0	Torodi Ar. Sit	77.24	70	P	P	15 09 28.0	-0.2
TOA0				IAmb	IAmb	15 09 31.8	
	comp=Z,7.8nm,1.4s						
TORD	Torodi Ar. Bea	77.24	70	P	P	15 09 29.6	+1.3
	comp=Z,1.0nm,0.4s,baz=257,slow=5.5,SNR=12						
TORD	Torodi Ar. Bea	77.24	70	P	P	15 09 28.2	-0.1
YKA	Yellowknife Ar	91.59	340	P	P	15 10 41.6	+2.0
	comp=Z,1.0nm,0.7s,baz=136,slow=4.4,SNR=15						
MODS	Modra-Piesok	103.40	43	ePDIFF	Pdif	15 11 33.3	0.0
MKAR	Makanchi Array	145.77	36	PKPbc	PKPab	15 17 13.3	+1.0
	comp=Z,0.2nm,0.5s,baz=338,slow=3.4,SNR=4.7						
MKAR	Makanchi Array	145.77	36	PKPbc	PKPbc	15 17 13.0	+1.3

IDC 11 15:03:10.6±1.2, 37°.70N×133°.19E, h460km±16km, mb2.7/4, mb1 2.9/8, mb1mx2.6/43, mbtmp3.6/8, Error ellipse: s-maj=30.4km s-min=16.3km az=103.0

ISC 11 15:03:10.2±0.9, 37°.7N±0°.1×133°.4E±0°.1, h450km, n8, σ0§89/8, mb3.0/4, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	4.33	268	P	P	15 04 28.6	+0.4
	0.4nm,0.3s,baz=84,slow=10,SNR=9.2						
JNU	Nakatsue	5.00	205	P	P	15 04 35.5	+0.8
	0.9nm,0.3s,baz=71,slow=2.9,SNR=8.4						
USRK	Ussuriysk Ar.	6.58	351	P	P	15 04 50.9	+0.6
	baz=177,slow=9.4,SNR=69						
ASAJ	Asahikawa	9.48	45	P	P	15 05 21.4	0.0
	0.5nm,0.3s,baz=224,slow=13,SNR=12						
ILAR	Eielson Array	52.36	32	P	P	15 11 39.1	+0.6
	0.2nm,0.5s,baz=281,slow=9.1,SNR=5.6						
WRA	Warramunga Arr	57.34	179	P	P	15 12 13.5	-0.6
	0.3nm,0.4s,baz=354,slow=7.5,SNR=3.6						
FINES	FINESS Array B	65.12	330	P	P	15 13 03.4	-1.4
	1.7nm,0.9s,baz=40,slow=7.3,SNR=4.2						
YKA	Yellowknife Ar	66.35	28	P	P	15 13 12.7	+0.1
	0.2nm,0.6s,baz=303,slow=6.7,SNR=2.7						

IDC 11 15:09:57.2±3.8, 29°.58S×176°.17W, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.7/41, mbtmp3.7/4, ML3.2/1, Error ellipse: s-maj=57.2km s-min=37.7km az=60.0

NEIC 11 15:09:57.5±1.6, 29°.58S±0°.09×176°.07W±0°.07, h10km±1km, mb4.7/10, Error ellipse: s-maj=15.6km s-min=10.1km az=177.0

ISC 11 15:09:60.0±1.0, 29°.55S±0°.10×176°.12W±0°.08, h28km, n19, σ1§10/21, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.60	280	Pn	Pn	15 10 25.2	-1.2
	93nm,0.3s,baz=108,slow=20,SNR=4.2						
RAO				Sn	Sb	15 10 49.3	+0.7
	177nm,0.3s,baz=18,slow=20,SNR=4.8						
RAO	Raoul Island	1.60	280		Pb	15 10 27.9	-1.0
URZ	Urewera	10.34	211	Pn	Pn	15 12 25.3	-1.1
	0.2nm,0.3s,baz=48,slow=11,SNR=3.1						
URZ				Sn	Sn	15 14 22.4	+1.0
	2.2nm,0.3s,baz=134,slow=19,SNR=11						
URZ	Urewera	10.34	211		Pn	15 12 24.7	-1.7
BKZ	Black Stump Fm	11.36	210	Pn	Pn	15 12 38.9	-1.5
THZ	Tophouse	15.08	213	Pn	Pn	15 13 31.7	+0.5
THZ				IAmb	IAmb	15 13 59.4	
	comp=Z,60nm,1.5s						
KHZ	Kahutara	15.30	210	Pn	Pn	15 13 33.6	-0.4
KHZ				IAmb	IAmb	15 13 52.0	
	comp=Z,160nm,2.0s						
LTZ	Lake Taylor	16.17	212	Pn	Pn	15 13 44.3	-0.9
LTZ				IAmb	IAmb	15 14 04.8	
	comp=Z,21nm,1.3s						
RPZ	Rata Peaks	17.45	212	Pn	Pn	15 14 00.4	-0.9
RPZ				IAmb	IAmb	15 14 18.6	
	comp=Z,76nm,1.7s						
PPTF	Pamatai, Papee	27.03	70	P	P	15 15 39.7	-0.3
PPT	Papeete	27.03	70	P	P	15 15 39.7	-0.3
STKA	Stephens Creek	36.26	255	P	P	15 17 02.4	+1.5
	comp=Z,1.3nm,0.9s,baz=95,slow=11,SNR=3.6						
AS31	Alice Springs	44.79	265	P	P	15 18 12.5	+1.0
ASAR	Alice Springs	44.79	265	P	P	15 18 13.4	+1.8
	comp=Z,0.4nm,0.5s,baz=103,slow=7.5,SNR=28						
ASAR	Alice Springs	44.79	265	P	P	15 18 12.6	+1.0
WB2	Warramunga Arr	45.70	270	P	P	15 18 20.0	+1.3
WB2				IAmb	IAmb	15 18 59.9	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	45.71	270	P	P	15 18 18.8	-0.1
	comp=Z,0.4nm,0.3s,baz=109,slow=7.8,SNR=5.0						
WB0	Warramunga Arr	45.73	271	P	P	15 18 19.6	+0.6
WB0				IAmb	IAmb	15 19 22.4	
	comp=Z,31nm,1.9s						
WRMHI	West Rim	52.66	25	P	P	15 19 12.1	+0.2

NCEDC 11 15:11:24.4±1.4, 35°.54N±0°.01×121°.25W±0°.02, h4km±5km, Md2.8/92, Error ellipse: s-maj=3.2km s-min=1.4km az=56.0

NEIC 11 15:11:24.1±1.0, 35°.52N±0°.03×121°.29W±0°.04, h16km±2km, Error ellipse: s-maj=5.8km s-min=1.4km az=225.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCBM	Cambria	0.18	91		Pg	15 11 27.9	-0.8
PHCM	Hearst Castle	0.19	35		Pg	15 11 28.2	-0.7
ARDC	Alexander Ranc	0.26	103		Pg	15 11 29.5	-0.4
ARDC					Sg	15 11 33.2	-0.6
BLDC	Black Mountain	0.31	88		Pg	15 11 30.7	-0.1
BLDC					Sg	15 11 35.3	0.0
PHSB	Hesperia Broad	0.35	32		Pg	15 11 31.4	-0.2
RAMR	Ramage Ranch	0.36	72		Pg	15 11 31.4	-0.2
RAMR					Sg	15 11 36.8	+0.2
PAPM	Alder Peak	0.39	351		Pg	15 11 32.0	-0.3
PANM	San Antonio Re	0.40	50		Pg	15 11 32.2	-0.2
LSDC	Los Osos Digit	0.43	122		Pg	15 11 33.0	+0.2
VPDC	Valencia Peak	0.44	129		Pb	15 11 33.5	-0.1
PTAM	Tassajara Cree	0.49	105		Pg	15 11 34.0	0.0
EFD	Emergency Oper	0.50	114		Pg	15 11 34.0	-0.2
DPD	Davis Peak	0.50	125		Pb	15 11 34.6	-0.1
PCCM	Crazy Canyon	0.57	10		Pb	15 11 35.6	+0.1
PPO	Portuguese Can	0.65	58		Pb	15 11 37.0	-0.1
BAPM	Anderson Peak	0.71	336		Pb	15 11 38.5	+0.3
PVCM	Vineyard Canyo	0.73	57		Pb	15 11 38.1	-0.4
PKD	Bear Valley Ra	0.74	55		Pb	15 11 38.1	-0.5
TCHL	Shandon	0.74	77		Pb	15 11 38.8	+0.1
LRC	Lone Oak Road	0.75	15		Pg	15 11 38.4	-0.4
PSTM	Stockdale Moun	0.75	57		Pg	15 11 38.3	-0.5
TSCN	Private Proper	0.77	88		Pg	15 11 39.3	+0.2
PMCM	McMillan Canyo	0.77	75		Pg	15 11 39.3	+0.1
PMPB	Monarch Peak	0.80	30		Pb	15 11 39.4	-0.3
BPOM	Post Ranch	0.81	331		Pb	15 11 39.6	-0.1
PHFM	Heflinger Ranc	0.81	63		Pb	15 11 39.7	-0.1
GHC	Gold Hill	0.82	68		Pb	15 11 39.8	-0.3
PMLM	Mount Lospe	0.84	138		Pb	15 11 40.1	-0.3
TRAM	Private Proper	0.84	79		Pb	15 11 40.5	+0.1
PSNM	Stone Corral	0.85	72		Pb	15 11 40.3	-0.2
BSMM	Soledad Missio	0.87	352		Pb	15 11 40.7	-0.1
CTM	Castle Mountai	0.87	62		Pg	15 11 41.3	+0.1
THIS	South End of C	0.89	77		Pb	15 11 41.1	0.0
PTRM	Twissleman Ran	0.89	81		Pb	15 11 41.2	0.0
HAST	Hastings Reser	0.89	346		Pb	15 11 40.9	-0.4
LRV	Little Rabbit	0.93	14		Pn	15 11 42.8	+0.2
BPIM	Pinnacles	0.97	6		Pb	15 11 42.3	-0.3
BBNM	San Benito	1.00	10		Pg	15 11 43.4	-0.1
PARM	Anticline Ridg	1.06	46		Pg	15 11 44.8	+0.2
BBGB	Big Mountain B	1.07	11		Pn	15 11 44.6	0.0
SCZ	Santa Cruz	1.08	355		Pb	15 11 43.8	-0.6
BPCNC	Pine Canyon	1.08	345		Pb	15 11 44.7	+0.1
BJOM	Mount Johnson	1.10	359		Pb	15 11 43.3	-1.5
BAVM	Antelope Valle	1.14	10		Pb	15 11 45.5	0.0
BLRM	Lewis Ranch	1.14	1		Pg	15 11 45.9	-0.3
BEHM	Elkhorn Ranch	1.14	5		Pg	15 11 46.3	0.0
BEMM	Emmet	1.15	8		Pb	15 11 45.8	+0.2
BSRM	Salinas Radio	1.16	351		Pn	15 11 45.3	-0.4
BCGM	Cienega Road	1.19	358		Pn	15 11 46.1	0.0
HMOM	Monterey	1.19	335		Pn	15 11 46.0	-0.1
CARC	Carrizo Plain	1.20	100		Pn	15 11 46.2	-0.1
BMSM	Mercy Hot Spri	1.20	19		Pg	15 11 47.1	-0.2
BHRM	Hodges Ranch	1.20	1		Pg	15 11 47.2	-0.2
BVYM	Vineyard	1.23	355		Pn	15 11 46.1	-0.6
FRP	Fremont Peak	1.24	352		Pn	15 11 46.4	-0.5
SAO	San Andreas Ge	1.25	354		Pn	15 11 46.4	-0.5
SAO	San Andreas Ge	1.25	354	Pg	Pn	15 11 46.2	-0.7
BSLM	Silva Ranch	1.25	358		Pg	15 11 48.4	+0.1
HJSM	John Smith Roa	1.29	360		Pg	15 11 48.6	-0.5
HJGM	San Juan Grade	1.29	350		Pb	15 11 48.0	-0.1
HERM	Elkhorn Road	1.32	345		Pb	15 11 48.5	0.0
HTUM	Tustin Road	1.33	348		Pn	15 11 48.2	+0.1
HLTM	Lone Tree Road	1.36	359		Pb	15 11 49.5	+0.3
BRMM	Rolling Bench	1.36	16		Pg	15 11 50.3	-0.1
HCOM	Corn Cob Canyo	1.40	346		Pb	15 11 49.6	-0.4
SFJWR	San Luis Fatjo	1.53	3		Pb	15 11 51.8	-0.2
HPCM	Pacheco Lake	1.53	0		Pb	15 11 51.8	-0.5
HLPM	Lions Peak	1.54	350		Pn	15 11 51.1	+0.1
JRGM	Rodeo Gulch Ro	1.61	340		Pn	15 11 51.9	0.0
MRHM	Rocky Hill	1.94	66		Pn	15 11 56.3	-0.2
MHDM	Hidden Dam	1.95	35		Pn	15 11 57.3	+0.7
WOFM	Oak Flat	2.10	89		Pn	15 11 58.3	-0.4
MMIM	Miami Mountain	2.27	33		Pn	15 12 02.2	+1.2
ISA	Isabella, Lake	2.30	86		Pn	15 12 01.4	0.0
CMB	Columbia Colle	2.61	16		Pn	15 12 07.2	+1.5
MWC	Mount Wilson	2.95	115	Pn	Pn	15 12 09.8	-0.8
WAKR	Walker	3.32	26	Pn	Pn	15 12 17.6	+1.9
TPNV	Topopah Spring	4.31	69	Pn	Pn	15 12 28.3	-0.9
KVN	Kaiserville	4.34	35	Pn	Pn	15 12 30.0	+0.3

NIED 11 15:22:00, 35°.60N×141°.10E, h5km, Mw3.9 Best double couple: Mo8.17000×10[14] NP1:φs23.00000°, δ81.00000°, λ-74.00000°. NP2:φs140.00000°, δ19.00000°, λ-151.00000°.

IDC 11 15:22:03.2±1.0, 35°.61N×140°.98E, h0km, mb3.6/8, mb1 3.7/11, mb1mx3.6/43, mbtmp3.6/11, ML2.7/3, MS3.0/2, Ms1 3.0/2, ms1mx2.4/40, Error ellipse: s-maj=26.0km s-min=18.4km az=82.0

JMA 11 15:22:05.6±0.2, 35°.62N×141°.03E, h16km±1km, M4.2

JMA Felt II J1.

ISC 11 15:22:04.5±1.5, 35°.61N±0°.04×141°.05E±0°.06, h11km±9km, n30, σ0§85/31, mb3.7/8, 5C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.18	301	⇑P	Pb	15 22 09.7	-0.2
CHOJ				S	Sg	15 22 12.6	+1.5
JSMT	Sammumatsuo	0.49	274	⇑P	Pb	15 22 15.3	+0.1
JSMT				S	Sb	15 22 21.8	-0.6
JIHU	Itakohorinouch	0.55	310	⇑P	Pb	15 22 16.7	+0.5
JIHU				S	Sb	15 22 25.0	+0.8
JCN	Nagara	0.72	255	⇑P	Pn	15 22 19.9	-0.7
JCN				S	Sn	15 22 30.9	-0.7
KTR	Katsuura	0.76	233	⇑P	Pb	15 22 19.9	+0.2
KTR				S	Sb	15 22 29.9	-0.1
BSO4	Boso 4	0.85	223	⇓P	Pn	15 22 22.2	-0.1
BSO3	Boso 3	0.92	209	⇓P	Pn	15 22 22.7	-0.4
JYT	Yasato	0.93	312	⇓P	Pg	15 22 21.8	-0.6
JYT				S	Sg	15 22 33.7	-0.8
BSO1	Boso 1	0.96	184	P	Pb	15 22 22.7	-0.1
JHO	Hitachi	1.07	339	⇓P	Pb	15 22 24.1	-1.0
MJAR	Matsushiro Arr	2.48	293	Pn	Pn	15 22 44.6	-0.3
	0.7nm,0.3s,baz=95,slow=8.3,SNR=47						
MJAR				Sn	Sb	15 23 21.1	+1.3
	1.8nm,0.3s,baz=250,slow=24,SNR=8.1						
MAT	Matsushiro	2.48	293	P	Pn	15 22 45.3	+0.4
MAT				S	Sb	15 23 21.2	+1.4
ASAJ	Asahikawa	8.58	7	Pn	Pn	15 24 07.3	-1.2
	0.4nm,0.3s,baz=215,slow=16,SNR=7.7						
ASAJ				Sn	Sn	15 25 45.2	-0.1
	baz=74,slow=18,SNR=1.9						
KSRS	Korea Array	10.72	284	LR	LR	15 28 56.7	
	comp=Z,62nm,19.4s,baz=72,slow=39						
USRK	Ussuriysk Ar.	11.04	324	Pn	Pn	15 24 40.5	-1.8
	baz=140,slow=14,SNR=3.2						
KLR	Kul'dur	15.23	336	LR	LR	15 31 09.6	
	comp=Z,54nm,18.0s,baz=77,slow=36						
H11N2	WAKE ISLAND Hy	27.71	118	T	T	15 56 52.7	
	baz=310,slow=75,SNR=244						
H11N1	WAKE ISLAND Hy	27.71	118	T	T	15 56 51.5	
	baz=310,slow=75,SNR=172						
H11N3	WAKE ISLAND Hy	27.73	118	T	T	15 56 47.2	
	baz=310,slow=75,SNR=166						
SONM	Songino Array	28.36	306	P	P	15 27 58.5	-0.2
	0.3nm,0.7s,baz=108,slow=8.5,SNR=2.8						
H11S1	WAKE ISLAND Hy	28.37	120	T	T	15 57 40.2	
	baz=312,slow=76,SNR=1454						
H11S3	WAKE ISLAND Hy	28.37	120	T	T	15 57 40.2	
	baz=312,slow=76,SNR=1279						
H11S2	WAKE ISLAND Hy	28.38	120	T	T	15 57 41.4	
	baz=312,slow=76,SNR=1208						
ZALV	Zalesovo Beam	42.67	314	P	P	15 30 01.0	0.0
	0.8nm,0.5s,baz=102,slow=7.5,SNR=3.5						
MKAR	Makanchi Array	44.64	303	P	P	15 30 17.2	+0.2
	0.8nm,0.6s,baz=92,slow=10.0,SNR=12						
ILAR	Eielson Array	50.85	32	P	P	15 31 06.5	+1.5
	0.3nm,0.9s,baz=281,slow=9.1,SNR=4.2						
WRA	Warramunga Arr	55.61	188	P	P	15 31 39.8	-0.6
	1.0nm,0.8s,baz=3.5,slow=7.6,SNR=6.9						
ASAR	Alice Springs	59.34	188	P	P	15 32 07.4	+0.7
	0.2nm,0.8s,baz=17,slow=12,SNR=8.0						
YKA	Yellowknife Ar	65.19	30	P	P	15 32 46.3	+0.9
	0.5nm,0.8s,baz=299,slow=6.9,SNR=4.1						
FINES	FINESS Array B	69.94	332	P	P	15 33 15.3	-0.1
	1.3nm,0.9s,baz=56,slow=8.5,SNR=3.5						

IDC 11 15:38:32.4±0.8, 19°.46N×121°.57E, h0km, mb3.9/11, mb1 4.0/12, mb1mx3.9/39, mbtmp3.9/12, ML4.1/1, MS3.3/10, Ms1 3.4/10, ms1mx3.0/42, Error ellipse: s-maj=27.4km s-min=17.3km az=74.0

NEIC 11 15:38:35.6±1.6, 19°.50N±0°.09×121°.69E±0°.09, h25km±6km, mb4.7/21, Error ellipse: s-maj=13.6km s-min=12.3km az=147.0

ISC 11 15:38:33.8±0.5, 19°.55N±0°.03×121°.70E±0°.08, h10km, n70, σ1§45/65, mb4.2/20, MS3.2/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	1.34	166	eP	Pn	15 39 00.6	+0.9
SGCP				eS	Sg	15 39 20.3	+3.3
APYP	Conner	1.74	194	eP	Pn	15 39 03.9	-0.1
APYP				eS	Sb	15 39 27.4	-0.2
ABRA	Dolores	2.11	206	eP	Pn	15 39 09.6	+0.4
ABRA				eS	Sn	15 39 37.3	+1.8
CAUP	Cauayan	2.60	177	eP	Pb	15 39 19.4	-1.0
CAUP				eS	Sg	15 39 55.2	-2.1
TWG	Pinlang	3.30	350		Pn	15 39 22.2	-3.3
SMPP	San Manuel, Pa	3.52	196	eP	Pn	15 39 29.9	+1.3
SMPP				eS	Sn	15 40 12.1	+1.7
YULB	Yu-li	3.84	354		Pn	15 39 32.6	-0.3
TPUB	Ta-pu	3.86	345		Pn	15 39 33.1	-0.2
SSLB	Suanglung	4.27	351		Pn	15 39 39.0	+0.1
NACB	Ninganchiao	4.60	359	Pn	Pn	15 39 44.6	+1.2
YHNB	Yeheng	5.10	357		Pn	15 39 51.1	+0.8
TATO	Taipei	5.40	358	Pn	Pn	15 39 56.2	+1.8
KNMB	Chin-men Tao	5.77	328	Pn	Pn	15 40 01.5	+2.0
HKPS	Hong Kong Po S	7.57	292	Pn	Pn	15 40 21.5	-2.7
JOW	Kunigami	9.44	39	Pn	Pn	15 40 48.0	-1.8
JNU	Nakatsue	15.81	29	LR	LR	15 49 00.4	
	comp=Z,69nm,18.4s,baz=198,slow=39						
XAN	Xi'an	18.37	324	P	Pn	15 42 56.4	+7.7
XAN				pP	sP	15 43 04.1	+12
KMI	Kunming	18.39	291	P	P	15 42 55.5	+6.3
KMI				sP	sP	15 43 41.3	+48
KSAR	Wonju Array Be	18.62	16	P	P	15 42 50.9	-0.6
KSRS	Korea Array	18.65	16	P	P	15 42 53.4	+1.7
	0.6nm,0.3s,baz=197,slow=11,SNR=18						
KSRS				LR	LR	15 50 20.2	
	comp=Z,64nm,18.9s,baz=201,slow=38						
KS19	Wonju Array Si	18.68	15	P	P	15 42 52.6	+0.6
KS19				IAmb	IAmb	15 43 03.7	
	comp=Z,32nm,1.3s						
PBKT	Sadao Pong	19.93	265	P	P	15 43 05.1	-0.8
BJT	Baijiatuau	20.94	348	P	P	15 43 16.5	-0.2
BJT				IAmb	IAmb	15 43 21.5	
	comp=Z,12nm,0.9s						
JHJ	Hachijo jima 2	21.06	46	LR	LR	15 49 29.5	
	comp=Z,662nm,20.0s,baz=350,slow=31						
CM31	Chiang Mai Arr	21.54	271	P	P	15 43 23.4	0.0
CMAR	Chiang Mai Arr	21.54	271	P	P	15 43 23.5	0.0
	comp=Z,2.6nm,1.1s,baz=74,slow=9.2,SNR=10.0						
CMAR				LR	LR	15 50 24.6	
	comp=Z,61nm,21.3s,baz=151,slow=33						
GUMO	Guam	22.97	101	P	P	15 43 37.6	-1.0
GUMO				IAmb	IAmb	15 44 15.0	
	comp=Z,66nm,1.0s						
USA0B	Ussuriysk Arra	26.04	17	P	P	15 44 07.2	+0.1
USA0B				IAmb	IAmb	15 44 54.2	
	comp=Z,35nm,1.9s						
USRK	Ussuriysk Ar.	26.04	17	P	P	15 44 08.4	+1.3
	comp=Z,2.0nm,0.6s,baz=214,slow=7.3,SNR=7.5						
USRK				LR	LR	15 55 08.9	
	comp=Z,46nm,19.4s,baz=321,slow=38						
USRK	Ussuriysk Ar.	26.04	17	P	P	15 44 07.4	+0.3
PSI	Prapat	27.79	236	LR	LR	15 54 04.7	
	comp=Z,56nm,21.1s,baz=354,slow=34						
SOEI	Soe	29.23	175	P	P	15 44 34.8	-1.3
SOEI				IAmb	IAmb	15 45 05.6	
	comp=Z,36nm,1.3s						
UGM	Wanagama	29.43	203	P	P	15 44 38.0	+0.2
SONM	Songino Array	30.83	340	P	P	15 44 50.6	+0.5
	comp=Z,1.7nm,0.8s,baz=154,slow=8.2,SNR=8.7						
SONM				LR	LR	15 58 42.1	
	comp=Z,31nm,21.9s,baz=198,slow=39						
SONM	Songino Array	30.83	340	P	P	15 44 50.2	+0.2
WRA	Warramunga Arr	41.16	162	P	P	15 46 18.0	-0.5
	comp=Z,0.8nm,0.8s,baz=342,slow=9.3,SNR=3.5						
WB2	Warramunga Arr	41.16	162	P	P	15 46 15.4	-3.1
WB2				IAmb	IAmb	15 47 34.9	
	comp=Z,40nm,1.9s						
WR0	Warramunga Arr	41.24	162	P	P	15 46 17.9	-1.3
WR0				IAmb	IAmb	15 46 30.1	
	comp=Z,22nm,1.8s						
MK31	Makanchi Array	42.07	319	P	P	15 46 25.9	+0.1
MKAR	Makanchi Array	42.07	319	P	P	15 46 26.6	+0.8
	comp=Z,3.7nm,0.9s,baz=114,slow=10,SNR=34						
MKAR				PcP	PcP	15 48 20.9	+0.3
	comp=Z,0.4nm,0.9s,baz=106,slow=4.7,SNR=3.7						
MKAR	Makanchi Array	42.07	319	P	P	15 46 25.7	-0.1
MKAR					PcP	15 48 20.6	0.0
MAKZ	Makanchi	42.27	319	P	P	15 46 28.0	+0.6
H11S3	WAKE ISLAND Hy	42.45	84	T	T	16 32 02.6	
	baz=279,slow=75,SNR=125						
H11S1	WAKE ISLAND Hy	42.46	84	T	T	16 32 03.2	
	baz=279,slow=75,SNR=256						
H11N1	WAKE ISLAND Hy	42.47	82	T	T	16 32 03.3	
	baz=278,slow=75,SNR=382						
H11N2	WAKE ISLAND Hy	42.47	82	T	T	16 32 03.5	
	baz=278,slow=75,SNR=320						
H11S2	WAKE ISLAND Hy	42.47	84	T	T	16 32 03.7	
	baz=279,slow=75,SNR=161						
H11N3	WAKE ISLAND Hy	42.48	82	T	T	16 32 05.6	
	baz=278,slow=75,SNR=234						
PETK	Petropavlovsk-	43.50	31	LR	LR	16 06 57.3	
	comp=Z,32nm,18.2s,baz=37,slow=39						
KSH	Kashi	43.94	307	P	P	15 46 43.0	+1.8
KSH				PcP	PcP	15 48 28.5	+1.4
KSH				sS	S	15 52 23.5	-49
KSH				S	S	15 53 14.0	+1.0
ZALV	Zalesovo Beam	44.42	330	P	P	15 46 44.6	0.0
	comp=Z,1.5nm,0.8s,baz=127,slow=9.3,SNR=6.9						
ZALV				LR	LR	16 06 40.2	
	comp=Z,30nm,18.1s,baz=87,slow=38						
ASAR	Alice Springs	44.58	164	P	P	15 46 46.0	-0.3
	comp=Z,0.3nm,0.6s,baz=345,slow=7.1,SNR=10						
TIXI	Tiksi	52.27	3	P	P	15 47 44.4	-0.5
TIXI				IAmb	IAmb	15 47 45.1	
	comp=Z,3.9nm,1.1s						
GNI	Garni	67.86	306	P	P	15 49 31.0	-1.7
GNI				IAmb	IAmb	15 49 41.3	
	comp=Z,28nm,1.8s						
IMAR	Indian Mountai	70.11	26	P	P	15 49 46.9	+0.9
ILAR	Eielson Array	73.11	27	P	P	15 50 06.6	+2.5
	comp=Z,0.4nm,0.9s,baz=266,slow=6.2,SNR=4.7						
ILAR	Eielson Array	73.11	27	P	P	15 50 02.6	-1.5
DHY	Denali Highway	73.19	28	P	P	15 50 04.6	-0.1
DHY				IAmb	IAmb	15 51 31.8	
	comp=Z,19nm,1.7s						
BMAR	Burnt Mountain	73.54	24	P	P	15 50 07.3	+0.6
GLI	Glacier Island	73.71	31	P	P	15 50 07.2	-0.5
BCAR	Beaver Creek A	75.67	28	P	P	15 50 18.4	-0.7
FIA1	FINESS Array S	75.68	330	P	P	15 50 18.9	-0.2
FINES	FINESS Array B	75.68	330	P	P	15 50 18.9	-0.1
	comp=Z,3.3nm,0.8s,baz=71,slow=6.5,SNR=6.1						
BARN	Barnard Glacie	76.25	30	P	P	15 50 22.5	-0.1
AKASG	Malin Array Be	76.65	319	P	P	15 50 23.4	-1.5
	comp=Z,1.8nm,0.9s,baz=65,slow=5.6,SNR=5.8						
AKASG	Malin Array Be	76.65	319	IAmb	IAmb	15 50 25.0	
	comp=Z,1.5nm,1.1s						
AKBB	Malin Array Si	76.65	319	P	P	15 50 23.6	-1.3
AKBB				IAmb	IAmb	15 51 50.6	
	comp=Z,13nm,1.6s						
HFS	Hagfors	81.83	331	LR	LR	16 30 12.2	
	comp=Z,44nm,18.7s,baz=82,slow=38						
VYHS	Vyhne	83.76	319	eP	P	15 51 02.6	-0.6
YKA	Yellowknife Ar	87.03	23	P	P	15 51 19.4	+0.2
	comp=Z,0.7nm,0.6s,baz=305,slow=5.0,SNR=12						

HEL 11 15:44:40.5, 67°.83N×20°.20E, h0km, ML1.7, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	23	iP	Pg	15 44 40.9	-2.1
KUA				iS	Sg	15 44 43.1	-1.6
RATU	Laukkuluspa	0.23	268	iP	Pg	15 44 42.6	-2.3
KOVU	Salmi	0.39	358	iP	Pg	15 44 46.8	-1.2
LANU	Lannavaara	0.71	71	eP	Pg	15 44 53.1	-0.9
LANU				eS	Sg	15 45 02.2	-1.0
MASU	Masugnsbyn	0.79	118	iP	Pg	15 44 53.9	-1.6
MASU				iS	Sg	15 45 05.1	-0.5
KIF	Kilpisjarvi	1.20	10	eP	Pg	15 45 02.7	-0.7
KIF				eS	Sg	15 45 18.4	-0.5
KIF				MSG		15 45 22.2	
	comp=Z,7.9nm,0.2s						
KIF	Kilpisjarvi	1.20	10	eP	Pg	15 45 03.6	+0.2
PAJU	Pajala	1.39	125	eP	Pg	15 45 04.1	-3.0
HEF	Hetta	1.42	64	eP	Pn	15 45 05.0	-2.5
HEF				eS	Sg	15 45 23.9	-2.0
HEF				MSG		15 45 29.9	
	comp=Z,6.1nm,0.2s						
HEF	Hetta	1.42	64	eP	Pn	15 45 07.2	-0.3
ERTU	Ertsjaerv	1.50	148	eP	Pn	15 45 06.3	-2.3
ERTU				eS	Sg	15 45 26.4	-2.3
TOF	Tornio	2.40	135	eP	Pn	15 45 20.7	-0.2
TOF				eS	Sn	15 45 51.0	+0.1
SGF	Sodankyl	2.45	96	eP	Pn	15 45 22.4	+0.8
SGF				eS	Sn	15 45 51.4	-0.8
RNF	Rovaniemi	2.58	116	eP	Pn	15 45 23.5	+0.1
RNF				eS	Sn	15 45 55.2	-0.1
ARE0	ARCESS Array S	2.58	46	eP	Pn	15 45 23.5	-0.1
ARE0				eS	Sn	15 45 55.2	-0.4

BER 11 15:44:46.6±0.8, 62°.78N×7°.33E, h0km, ML1.0, Suspected explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOL	Molde	0.24	155	eP	Pg	15 44 50.6	-0.6
MOL				eS	Sg	15 44 54.2	0.0
MOL				IAML		15 44 57.7	
	comp=Z,27nm,0.6s						
AKN	Aaknes	0.63	194	eP	Pg	15 44 57.4	-1.2
AKN				eS	Sg	15 45 06.2	-0.5
AKN				IAML		15 45 08.1	
	comp=Z,8.6nm,0.5s						
DOMB	Dombas	1.10	132	eP	Pg	15 45 06.1	-1.5
DOMB				eS	Sg	15 45 20.8	-1.0
DOMB				IAML		15 45 26.9	
	comp=Z,2.2nm,0.5s						
HYA	Hoyanger	1.71	199	eP	Pn	15 45 16.5	-1.1

HYA eSg Sn 15 45 39.9 -0.2
HYA IAML 15 45 45.7
comp=Z,4.8nm,0.7s
SKAR Skarslia 2.16 167 eP Pn 15 45 20.8 -3.1
SKAR IAML 15 46 06.7
comp=Z,1.6nm,0.8s
NC602 NORSAR Array S 2.87 134 eS Sn 15 46 05.4 -3.3
NC602 IAML 15 46 16.3
comp=Z,1.4nm,0.6s

NNC 11 15:54:12.5±5.1, 37°.08N×70°.46E, h0km, mb3.7, mpv3.3, 4C-2D, Error ellipse: s-maj=41.8km s-min=37.3km az=125.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.02**	**0**	⇑Pn	Pn	15 55 43.6	+0.8
	0.8nm,0.3s,baz=187,slow=13,SNR=44						
KK31				⇓Sn	Sn	15 56 54.0	+1.5
	3.5nm,0.3s,baz=186,slow=23,SNR=15						
AAK	**Ala-Archa**	**6.36**	**28**	⇑Pn	Pn	15 55 47.2	-0.4
	3.2nm,1.0s						
AAK				⇑Sn	Sn	15 57 02.2	+1.1
	3.7nm,0.6s						
CHMS	**Chumysh**	**6.77**	**28**	⇑Pn	Pn	15 55 52.9	-0.2
	1.4nm,0.7s						
CHMS				⇓Sn	Sn	15 57 11.4	+0.5
	2.8nm,0.5s						

NIED 11 16:31:00, 25°.20N×121°.60E, h5km, Mw4.0 Best double couple: M₀1.29000×10¹⁵ NP1:φs34.00000°, δ71.00000°, λ-55.00000°. NP2:φs148.00000°, δ39.00000°, λ-150.00000°.
JMA 11 16:31:01.6±0.2, 25°.16N×121°.58E, h11km±2km, M3.7
IDC 11 16:31:01.2±0.8, 25°.07N×121°.51E, h0km, mb3.6/9, mb1 3.8/10, mb1mx3.6/42, mbtmp3.6/10, ML3.2/1, MS3.0/5, Ms1 3.1/5, ms1mx2.8/37, Error ellipse: s-maj=25.4km s-min=18.3km az=83.0
TAP 11 16:31:02.1, 25°.13N×121°.57E, h6km, ML4.2, B
NEIC 11 16:31:02.8±1.2, 25°.13N±0°.04×121°.47E±0°.05, h9km±4km, Error ellipse: s-maj=6.8km s-min=5.0km az=123.0
BJI 11 16:31:03.2±0.0, 25°.06N×121°.57E, h26km, mB4.2/3, mb4.0/10, ML4.1/7, Ms3.8/3
ISC 11 16:31:02.4±0.6, 25°.15N±0°.02×121°.56E±0°.02, h6km±3km, n172, σ0§85/236, mb3.7/13, MS3.1/3, 27C-26D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YM10	**YM10** baz=338	**0.01**	**21**	⇑iP	**Pg**	**16 31 03.8**	**+0.3**
YM01	**YM01** baz=355	**0.01**	**83**	P	**Pg**	**16 31 03.7**	**+0.2**
YM04	**YM04** baz=304	**0.02**	**296**	⇑P	**Pg**	**16 31 03.8**	**+0.3**
YM04	baz=304			S	**Sg**	**16 31 04.6**	**+0.3**
YM11	**YM11** baz=5.0	**0.03**	**38**	⇑iP	**Pg**	**16 31 03.9**	**+0.3**
YM11	baz=5.0			S	**Sg**	**16 31 04.9**	**+0.4**
YM03	**YM03** baz=328	**0.04**	**336**	⇓P	**Pg**	**16 31 04.0**	**+0.3**
YM03	baz=328			eS	**Sg**	**16 31 05.2**	**+0.5**
YM08	**YM08** baz=17	**0.05**	**35**	⇑iP	**Pg**	**16 31 03.9**	**+0.1**
YM08	baz=17			eS	**Sg**	**16 31 04.9**	**0.0**
ANP	**Anpu** baz=323	**0.05**	**321**	⇓iP	**Pg**	**16 31 04.1**	**+0.2**
ANP	baz=323			iS	**Sg**	**16 31 05.3**	**+0.4**
NTST	**Danshui** baz=287	**0.10**	**281**	⇑P	**Pg**	**16 31 05.5**	**+1.0**
NTST	baz=287			iS	**Sg**	**16 31 08.0**	**+2.0**
TAP	**Taipei** baz=217	**0.12**	**204**	⇓iP	**Pg**	**16 31 05.2**	**+0.4**
TAP	baz=217			S	**Sg**	**16 31 07.3**	**+0.9**
TWS1	**Kuangyinshan** baz=249	**0.13**	**251**	⇑P	**Pg**	**16 31 06.1**	**+1.0**
TWS1	baz=249			S	**Sg**	**16 31 08.9**	**+2.0**
TWY	**Chenhua** baz=4.0	**0.14**	**17**	⇑iP	**Pg**	**16 31 06.0**	**+0.8**
TWY	baz=4.0			S	**Sg**	**16 31 08.3**	**+1.3**
TWA	**Mucha** baz=159	**0.17**	**171**	⇓iP	**Pg**	**16 31 06.3**	**+0.6**
TWA	baz=159			S	**Sg**	**16 31 09.1**	**+1.2**
TATO	**Taipei**	**0.18**	**200**		**Pg**	**16 31 06.4**	**+0.4**
NHDH	**Xindian Distri** baz=201	**0.18**	**189**	⇓iP	**Pg**	**16 31 06.7**	**+0.7**
NHDH	baz=201			S	**Sg**	**16 31 09.3**	**+0.9**
NWF	**Wu-fen Shan** baz=107	**0.22**	**110**	⇑iP	**Pg**	**16 31 07.2**	**+0.5**
NWF	baz=107			S	**Sg**	**16 31 10.2**	**+0.6**
WFSB	**Wu-fen Shan** baz=107	**0.22**	**110**	⇑P	**Pg**	**16 31 07.2**	**+0.6**
WFSB	baz=107			S	**Sg**	**16 31 10.2**	**+0.7**
TIPB	**Shuangxi** baz=124	**0.30**	**125**	⇑P	**Pg**	**16 31 08.7**	**+0.5**
TIPB	baz=124			iS	**Sg**	**16 31 12.7**	**+0.5**
NWLT	**Wulai** baz=190	**0.37**	**188**	⇓iP	**Pg**	**16 31 10.0**	**+0.4**
NWLT	baz=190			S	**Sg**	**16 31 14.4**	**0.0**
NCU	**National Centr** baz=246	**0.38**	**243**	⇑iP	**Pb**	**16 31 11.2**	**-0.3**
NCU	baz=246			S	**Sb**	**16 31 17.3**	**-0.3**
NCUH	**Zhongli** baz=247	**0.38**	**242**	⇑iP	**Pb**	**16 31 11.3**	**-0.2**
NCUH	baz=247			S	**Sb**	**16 31 17.6**	**-0.1**
NTC	**Toucheng** baz=127	**0.38**	**139**	⇑P	**Pg**	**16 31 10.3**	**+0.6**
NTC	baz=127			S	**Sg**	**16 31 15.5**	**+0.8**
SLBB	**Yuanshan** baz=185	**0.40**	**170**	⇓iP	**Pg**	**16 31 10.6**	**+0.6**
SLBB	baz=185			S	**Sg**	**16 31 15.9**	**+0.7**
WLTB	**Daxi** baz=217	**0.40**	**224**	⇑iP	**Pb**	**16 31 11.6**	**-0.3**
WLTB	baz=217			S	**Sb**	**16 31 17.8**	**-0.5**
TWB1	**Santiao Chiao** baz=107	**0.41**	**109**	⇑iP	**Pg**	**16 31 11.1**	**+0.7**
TWB1	baz=107			S	**Sg**	**16 31 16.2**	**+0.4**
ILA	**Ilan** baz=155	**0.42**	**155**	⇓P	**Pg**	**16 31 11.2**	**+0.8**
ILA	baz=155			S	**Sg**	**16 31 17.1**	**+1.2**
TWE	**Neicheng** baz=166	**0.43**	**167**	⇓iP	**Pg**	**16 31 11.5**	**+0.8**
TWE	baz=166			eS	**Sg**	**16 31 17.0**	**+0.6**
NSK	**Sanguang** baz=204	**0.50**	**201**	⇓iP	**Pg**	**16 31 12.5**	**+0.5**
YHNB	**Yeheng** baz=203	**0.50**	**199**	⇓P	**Pg**	**16 31 12.5**	**+0.4**
YHNB	**Yeheng**	**0.50**	**199**		**Pg**	**16 31 12.4**	**+0.4**
ENTT	**Nioudou** baz=191	**0.50**	**179**	⇓iP	**Pg**	**16 31 12.7**	**+0.7**
ENTT	baz=191			eS	**Sg**	**16 31 18.9**	**+0.3**
NDT	**Datong Townshi** baz=186	**0.54**	**184**	⇓iP	**Pg**	**16 31 13.3**	**+0.6**
NDT	baz=186			S	**Sg**	**16 31 19.7**	**-0.2**
TWC	**Suao** baz=153	**0.60**	**153**	⇓iP	**Pg**	**16 31 14.0**	**+0.2**
TWC	baz=153			eS	**Sg**	**16 31 22.6**	**+1.0**
SBCB	**Hsinchu** baz=253	**0.63**	**236**	⇑P	**Pb**	**16 31 15.9**	**+0.1**
SBCB	baz=253			S	**Sb**	**16 31 25.5**	**+0.7**
HSN	**Hsinchu** baz=256	**0.63**	**237**	⇑P	**Pg**	**16 31 15.1**	**+0.6**
HSN	baz=256			S	**Sg**	**16 31 24.0**	**+1.2**
PCYT	**Pengchaiyu** baz=52	**0.67**	**44**	eP	**Pg**	**16 31 16.1**	**+0.8**
LIOB	**Emei** baz=243	**0.70**	**225**	⇑iP	**Pb**	**16 31 17.0**	**0.0**
LIOB	baz=243			eS	**Sb**	**16 31 27.1**	**+0.2**
NSTT	**Nanjuang** baz=246	**0.72**	**225**	⇑iP	**Pg**	**16 31 17.2**	**+1.0**
NSTT	baz=246			eS	**Sb**	**16 31 27.7**	**+0.2**
NNS	**Nan Shan** baz=179	**0.72**	**193**	⇓iP	**Pg**	**16 31 16.5**	**+0.2**
NNSB	**Datong** baz=181	**0.73**	**193**	⇓P	**Pg**	**16 31 16.5**	**+0.1**
NNSB	baz=181			eS	**Sb**	**16 31 27.8**	**-0.1**
NNSH	**Datong** baz=182	**0.73**	**193**	⇓P	**Pg**	**16 31 16.5**	**+0.1**
NNSH	baz=182			eS	**Sb**	**16 31 27.3**	**-0.6**
ENA	**Nanau** baz=167	**0.73**	**167**	eP	**Pg**	**16 31 16.5**	**0.0**
EOS1	**EOS1** baz=148	**0.79**	**139**	eP	**Pg**	**16 31 17.8**	**+0.3**
EOS1	baz=148			eS	**Sb**	**16 31 30.3**	**+0.9**
NMLH	**Miaoli** baz=249	**0.92**	**229**	⇑P	**Pg**	**16 31 20.9**	**+0.8**
NMLH	baz=249			S	**Sb**	**16 31 34.5**	**+1.2**
ETLH	**Xiulin Townshi** baz=185	**0.94**	**184**	⇓eP	**Pg**	**16 31 20.4**	**+0.1**
ETLH	baz=185			eS	**Sb**	**16 31 34.1**	**+0.3**
TWT	**Tachien** baz=193	**0.95**	**201**	P	**Pg**	**16 31 21.0**	**+0.3**
TWT	baz=193			S	**Sb**	**16 31 34.9**	**+0.5**
TDCB	**Techi** baz=194	**0.96**	**202**	⇓P	**Pg**	**16 31 20.7**	**0.0**
TDCB	baz=194			S	**Sg**	**16 31 34.1**	**+0.9**
NACB	**Ninganchiao** baz=190	**0.97**	**178**	⇓P	**Pg**	**16 31 20.7**	**-0.2**
NACB	baz=190			eS	**Sb**	**16 31 34.6**	**0.0**
NACB	**Ninganchiao**	**0.97**	**178**		**Pg**	**16 31 20.7**	**-0.2**
NSY	**Sanyi** baz=243	**1.02**	**225**	⇑P	**Pg**	**16 31 22.5**	**+0.5**
NSY	baz=243			eS	**Sb**	**16 31 37.2**	**+0.9**
WHP	**Taichung City** baz=204	**1.03**	**213**	eP	**Pg**	**16 31 22.5**	**+0.4**
WHP	baz=204			eS	**Sb**	**16 31 36.5**	**+0.1**
WHF	**Hehuan Shan** baz=196	**1.03**	**195**	⇓P	**Pg**	**16 31 22.2**	**+0.1**
WHF	baz=196			eS	**Sb**	**16 31 37.3**	**+0.4**
PTSB	**Yuanli** baz=234	**1.04**	**228**	eP	**Pg**	**16 31 22.4**	**+0.1**
TWD	**Chiawan** baz=189	**1.06**	**178**	eP	**Pg**	**16 31 22.5**	**-0.2**
TWD	baz=189			eS	**Sb**	**16 31 37.7**	**+0.4**
TWQ1	**Liyutan** baz=246	**1.07**	**222**	⇑iP	**Pg**	**16 31 22.9**	**0.0**
TWQ1	baz=246			S	**Sb**	**16 31 37.9**	**+0.4**
CHGB	**Renai** baz=186	**1.14**	**198**	⇓P	**Pg**	**16 31 23.8**	**-0.4**
CHGB	baz=186			eS	**Sn**	**16 31 40.9**	**-0.1**
WDJ	**Dajia District** baz=243	**1.15**	**227**	⇑P	**Pg**	**16 31 24.1**	**-0.3**
WDJ	baz=243			eS	**Sb**	**16 31 40.2**	**+0.3**
HWA	**Hwalien** baz=177	**1.16**	**178**	eP	**Pn**	**16 31 25.5**	**+0.3**
HWA	baz=177			eS	**Sg**	**16 31 40.0**	**+0.3**
OWD	**Renai** baz=199	**1.23**	**196**	eP	**Pg**	**16 31 25.4**	**-0.6**
ENLB	**Shoufeng** baz=181	**1.24**	**178**	eP	**Pb**	**16 31 25.1**	**-1.0**
DPDB	**Guoxing** baz=201	**1.25**	**208**	eP	**Pb**	**16 31 26.2**	**-0.2**
DPDB	baz=201			eS	**Sg**	**16 31 42.8**	**+0.3**
TCU	**Taichung** baz=241	**1.28**	**219**	eP	**Pn**	**16 31 26.3**	**-0.5**
TCU	baz=241			eS	**Sn**	**16 31 44.3**	**+0.1**
ESL	**Shilin** baz=184	**1.33**	**185**	eP	**Pn**	**16 31 27.1**	**-0.5**
ESL	baz=184			eS	**Sb**	**16 31 44.7**	**-0.4**
TYC	**Yuchr** baz=211	**1.39**	**207**	eP	**Pn**	**16 31 27.9**	**-0.4**
WCHH	**Zhanghua** baz=244	**1.40**	**221**	eP	**Pn**	**16 31 27.7**	**-0.7**
WCHH	baz=244			eS	**Sg**	**16 31 47.7**	**+0.5**
VWDT	**VWDT** baz=211	**1.44**	**195**	eP	**Pn**	**16 31 28.7**	**-0.3**
SSLB	**Suanglung** baz=194	**1.46**	**202**	eP	**Pn**	**16 31 28.9**	**-0.5**
SSLB	**Suanglung**	**1.46**	**202**		**Pn**	**16 31 28.8**	**-0.5**
EGFH	**Guangfu** baz=186	**1.47**	**185**	eP	**Pn**	**16 31 29.6**	**+0.1**
YOJ	**Yonaguni jima** baz=115	**1.49**	**117**	eP	**Pn**	**16 31 30.2**	**+0.5**
YOJ	**Yonaguni jima**	**1.49**	**117**	P	**Pn**	**16 31 28.3**	**-1.4**
YOJ				eS	**Sn**	**16 31 47.8**	**-1.6**
YOJ	**Yonaguni jima**	**1.49**	**117**		**Pn**	**16 31 30.5**	**+0.8**
WNT	**Mingjian** baz=217	**1.49**	**212**	eP	**Pn**	**16 31 29.6**	**-0.2**
WJS	**Zhushan** baz=214	**1.52**	**210**	eP	**Pn**	**16 31 29.7**	**-0.4**
WHYT	**Xinyi Township** baz=199	**1.58**	**204**	eP	**Pn**	**16 31 30.8**	**-0.1**
WHYT	baz=199			eS	**Sn**	**16 31 51.9**	**+0.1**
EHY	**Hungye** baz=173	**1.65**	**188**	eP	**Pn**	**16 31 32.1**	**+0.2**
EHY	baz=173			eS	**Sb**	**16 31 54.1**	**0.0**
HGSD	**Ruisui** baz=183	**1.65**	**184**	eP	**Pb**	**16 31 33.3**	**+0.1**
HGSD	baz=183			eS	**Sn**	**16 31 53.8**	**+0.4**
PTTC	**Pingtan** baz=286	**1.66**	**283**	⇓eP	**Pn**	**16 31 30.3**	**-1.6**
PTTC	baz=286			eS	**Sn**	**16 31 52.5**	**-1.1**
RLNB	**Erlin** baz=221	**1.66**	**221**	eP	**Pn**	**16 31 31.4**	**-0.6**
RLNB	baz=221			eS	**Sn**	**16 31 53.1**	**-0.5**
WGK	**Gukeng** baz=235	**1.71**	**212**	eP	**Pn**	**16 31 32.6**	**-0.2**
WGK	baz=235			eS	**Sn**	**16 31 55.1**	**+0.1**
WDLH	**Douliu** baz=217	**1.72**	**213**	eP	**Pn**	**16 31 32.3**	**-0.6**
WTCT	**Ta-ch'eng** baz=245	**1.73**	**223**	eP	**Pn**	**16 31 31.9**	**-1.0**
CHN5	**Tsauling** baz=211	**1.74**	**208**	⇓P	**Pn**	**16 31 32.7**	**-0.5**
YUS	**Yu-Shan** baz=187	**1.74**	**199**	eP	**Pn**	**16 31 34.0**	**+0.5**
YULB	**Yu-li** baz=169	**1.76**	**188**	eP	**Pn**	**16 31 33.3**	**-0.2**
YULB	baz=169			eS	**Sn**	**16 31 55.8**	**-0.4**
YULB	**Yu-li**	**1.76**	**188**		**Pn**	**16 31 33.0**	**-0.5**
ALS	**Alishan** baz=206	**1.77**	**203**	eP	**Pn**	**16 31 33.6**	**-0.1**
MATB	**Ma-tsu** baz=303	**1.77**	**305**	eP	**Pn**	**16 31 32.0**	**-1.5**
MATB	baz=303			eS	**Sn**	**16 32 56.7**	**+0.4**
TWF1	**Yuli** baz=173	**1.80**	**188**	eP	**Pn**	**16 31 34.4**	**+0.4**
VWUC	**VWUC** baz=272	**1.92**	**266**	eP	**Pn**	**16 31 34.3**	**-1.3**
WSF	**Szhu** baz=217	**1.93**	**219**	eP	**Pn**	**16 31 36.1**	**+0.3**
WSF	baz=217			eS	**Sn**	**16 32 00.2**	**-0.2**
CHY	**Chiayi** baz=215	**1.94**	**212**	eP	**Pn**	**16 31 35.5**	**-0.4**
FULB	**Fuli** baz=174	**1.95**	**187**	eP	**Pn**	**16 31 36.7**	**+0.6**
CHN4	**Tsaushan** baz=233	**1.99**	**206**	P	**Pn**	**16 31 36.5**	**-0.1**
ELDTW	**Lidau** baz=214	**2.01**	**194**	eP	**Pn**	**16 31 37.7**	**+0.7**
WLGB	**Puzi** baz=212	**2.02**	**215**	eP	**Pn**	**16 31 36.2**	**-0.7**
WLGB	baz=212			eS	**Sn**	**16 32 02.7**	**+0.2**
TPUB	**Ta-pu** baz=207	**2.02**	**205**	⇑eP	**Pn**	**16 31 36.9**	**-0.2**
TPUB	**Ta-pu**	**2.02**	**205**		**Pn**	**16 31 36.5**	**-0.6**
CHKT	**Chengkung** baz=186	**2.04**	**185**	eP	**Pn**	**16 31 37.6**	**+0.3**
WTP	**Ta-pu** baz=206	**2.08**	**205**	eP	**Pn**	**16 31 37.9**	**0.0**
STYT	**Tauyuan** baz=218	**2.10**	**200**	eP	**Pn**	**16 31 38.6**	**+0.4**
TWK	**Hsinying** baz=235	**2.11**	**208**	⇑eP	**Pn**	**16 31 37.9**	**-0.4**
IRIF	**Iriomote-Funau**	**2.13**	**112**	P	**Pn**	**16 31 37.0**	**-1.6**
LYJJ	**Jianjiangzhen** baz=308	**2.14**	**311**	eP	**Pn**	**16 31 39.7**	**+1.1**
LYJJ	baz=308			eS	**Sn**	**16 32 06.7**	**+1.1**
SNST	**Tainan City** baz=234	**2.15**	**207**	eP	**Pn**	**16 31 38.8**	**+0.1**
XPSS	**Dashiqiu** baz=324	**2.16**	**326**	eP	**Pn**	**16 31 37.6**	**-1.3**
XPSS	baz=324			eS	**Sn**	**16 32 07.3**	**+1.2**
CHN1	**Nanshi** baz=227	**2.17**	**206**	⇓eP	**Pn**	**16 31 39.2**	**+0.2**
CHN1	baz=227			eS	**Sn**	**16 32 06.2**	**0.0**
CHN8	**Yiju** baz=210	**2.17**	**215**	⇑P	**Pn**	**16 31 38.5**	**-0.5**
CHN8	baz=210			eS	**Sn**	**16 32 06.1**	**-0.2**
PTMZ	**Houxiangcun** baz=271	**2.21**	**268**	eP	**Pn**	**16 31 38.3**	**-1.3**
PTMZ	baz=271			S	**Sn**	**16 32 08.3**	**+1.0**
SGST	**Jiashian** baz=204	**2.24**	**204**	eP	**Pn**	**16 31 39.7**	**-0.4**
SLGT	**Liugui** baz=202	**2.30**	**201**	eP	**Pn**	**16 31 42.5**	**+1.7**
HATJ	**Hateruma jima**	**2.32**	**117**	eS	**Sn**	**16 32 08.8**	**-1.1**
TWG	**Pinlang** baz=178	**2.36**	**191**	eP	**Pn**	**16 31 40.1**	**-1.5**
TWG	**Pinlang**	**2.36**	**191**		**Pn**	**16 31 39.7**	**-1.9**
TWGBT	**Beinan** baz=178	**2.36**	**191**	eP	**Pn**	**16 31 39.9**	**-1.8**
JKRS	**Kuro-shima**	**2.41**	**112**	P	**Pn**	**16 31 41.4**	**-0.9**
JKRS				eS	**Sn**	**16 32 11.3**	**-0.8**
PNG	**Penghu** baz=239	**2.41**	**230**	⇓eP	**Pn**	**16 31 40.8**	**-1.6**
PHUB	**P'eng-hu** baz=238	**2.43**	**229**	eP	**Pn**	**16 31 40.7**	**-2.0**
MHZQ	**Yeshan** baz=297	**2.47**	**293**	eP	**Pn**	**16 31 42.1**	**-1.1**
MHZQ	baz=297			eS	**Sn**	**16 32 15.4**	**+1.7**
JIJ	**Ishigaki jima**	**2.48**	**108**	P	**Pn**	**16 31 42.4**	**-0.9**
JIJ				S	**Sn**	**16 32 13.8**	**-0.1**
SSD	**Sandimen** baz=200	**2.53**	**200**	eP	**Pn**	**16 31 46.5**	**+2.4**
WDGT	**Dungji** baz=247	**2.55**	**223**	eP	**Pn**	**16 31 44.8**	**+0.4**
JISG	**Ishigakijimahi**	**2.56**	**102**	P	**Pn**	**16 31 44.3**	**-0.2**
ECL	**Taimali** baz=180	**2.60**	**192**	eP	**Pn**	**16 31 46.3**	**+1.4**
SGLT	**Jiouru** baz=201	**2.60**	**202**	eP	**Pb**	**16 31 47.9**	**-1.5**
MASBT	**Mashibuluo** baz=197	**2.66**	**199**	eP	**Pn**	**16 31 47.1**	**+1.3**
QZH	**Quanzhou**	**2.70**	**266**	⇑iPn	**Pn**	**16 31 45.0**	**-1.3**
QZH				Sn	**Sn**	**16 32 17.0**	**-2.3**
QZH	comp=N,510nm,0.6s			smax	smax		
QZH	comp=E,260nm,0.5s			smax	smax		
VCHM	**Qimei** baz=236	**2.74**	**226**	eP	**Pn**	**16 31 46.3**	**-0.5**
SSPT	**Xinbi** baz=197	**2.80**	**199**	eP	**Pn**	**16 31 49.7**	**+2.0**
EAST	**Anshuo** baz=182	**2.83**	**193**	eP	**Pn**	**16 31 50.0**	**+1.9**
SCZT	**Fangliau** baz=213	**2.89**	**197**	eP	**Pn**	**16 31 49.9**	**+0.9**
JTJ	**Tarama**	**2.90**	**99**	P	**Pn**	**16 31 48.9**	**-0.2**
KNM	**Kinmen** baz=262	**2.93**	**256**	eP	**Pn**	**16 31 50.1**	**+0.6**
KNMB	**Chin-men Tao** baz=262	**2.96**	**257**	eP	**Pn**	**16 31 48.8**	**-1.1**
KNMB	**Chin-men Tao**	**2.96**	**257**		**Pn**	**16 31 48.4**	**-1.5**
AXDP	**Jialang** baz=270	**3.26**	**266**	eP	**Pn**	**16 31 53.2**	**-0.9**
JMJ	**Miyako jima 2** baz=97	**3.41**	**95**	eP	**Pn**	**16 31 58.2**	**+2.1**
ZZJH	**Jiuhuzhen** baz=264	**3.63**	**260**	eP	**Pn**	**16 31 58.3**	**-0.8**
ZPLA	**Ao Xicun** baz=258	**3.67**	**252**	eP	**Pn**	**16 31 58.8**	**-0.9**
SSE	**Sheshan**	**5.94**	**357**	Pn	**Pn**	**16 32 29.6**	**-1.2**
NJ2	**Nanjing**	**7.28**	**342**	eP	Pn	16 32 59.6	+10
NJ2				S	Sb	16 34 27.4	-8.9
WHN	**Wuhan**	**8.34**	**312**	P	Pn	16 33 15.9	+12
WHN				S	Sb	16 34 57.4	-9.4
JNU	**Nakatsue**	**11.38**	**44**	LR	LR	16 38 25.7	
	comp=Z,47nm,21.2s,baz=238,slow=39						
KSAR	**Wonju Array Be**	**13.39**	**22**	Pn	**Pn**	**16 34 12.4**	**-0.6**
KSRS	**Korea Array**	**13.42**	**22**	Pn	**Pn**	**16 34 13.4**	**0.0**
	0.1nm,0.3s,baz=204,slow=14,SNR=3.2						
CD2	**Chengdu**	**16.73**	**294**	eP	**Pn**	**16 34 55.0**	**-2.4**
HHC	**Hu-ho-hao-te**	**17.74**	**334**	eP	**Pn**	**16 35 10.7**	**+0.5**
HHC	comp=Z,6.0nm,1.0s			pmax	pmax		
HHC	comp=Z,38nm,5.2s			pmax	pmax		
MJAR	**Matsushiro Arr**	**18.23**	**48**	LR	LR	16 42 39.0	
	comp=Z,47nm,18.9s,baz=215,slow=38						
CMAR	**Chiang Mai Arr**	**22.01**	**257**	P	**P**	**16 35 58.5**	**+0.8**
	0.6nm,1.0s,baz=53,slow=9.1,SNR=5.0						
CMAR				LR	LR	16 44 43.2	
	comp=Z,62nm,18.1s,baz=80,slow=37						
GTA	**Gaotai**	**23.16**	**313**	eP	**P**	**16 36 08.3**	**-1.5**
GTA				pP	pP	16 36 12.5	+1.0
GTA	comp=Z,1.0nm,0.6s			pmax	pmax		
ASAJ	**Asahikawa**	**25.52**	**37**	P	**P**	**16 36 32.7**	**+1.0**
	4.0nm,0.8s,baz=225,slow=16,SNR=4.5						
JKA	**Kamikawa-asahi**	**25.52**	**37**	P	**P**	**16 36 32.7**	**+1.0**
SONM	**Songino Array**	**25.62**	**336**	P	**P**	**16 36 32.8**	**0.0**
	0.6nm,0.7s,baz=155,slow=10,SNR=7.0						
SONM				LR	LR	16 48 23.5	
	comp=Z,30nm,19.7s,baz=186,slow=41						
SONM	**Songino Array**	**25.62**	**336**	P	**P**	**16 36 32.7**	**0.0**
MK31	**Makanchi Array**	**37.89**	**315**	P	**P**	**16 38 19.9**	**-0.4**
MKAR	**Makanchi Array**	**37.89**	**315**	P	**P**	**16 38 19.5**	**-0.8**
	0.4nm,0.7s,baz=96,slow=9.9,SNR=5.3						
MAKZ	**Makanchi**	**38.10**	**315**	P	**P**	**16 38 20.6**	**-1.5**
MAKZ	comp=Z,2.9nm,1.4s			IAmb	IAmb	16 38 21.4	
ZALV	**Zalesovo Beam**	**39.63**	**326**	P	**P**	**16 38 33.9**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=111,slow=8.6,SNR=4.4						
ZALV	**Zalesovo Beam**	**39.63**	**326**	P	**P**	**16 38 33.5**	**-1.2**
KKAR	**Karatay Array**	**45.17**	**307**	P	**P**	**16 39 19.7**	**-0.3**
WB0	**Warramunga Arr**	**46.36**	**163**	P	**P**	**16 39 29.8**	**+0.2**
WRA	**Warramunga Arr**	**46.51**	**163**	P	**P**	**16 39 30.4**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=345,slow=8.5,SNR=9.5						
WRA	**Warramunga Arr**	**46.51**	**163**	IAmb	IAmb	16 39 32.1	
	comp=Z,0.3nm,1.4s						
WB2	**Warramunga Arr**	**46.51**	**163**	P	**P**	**16 39 31.9**	**+1.1**
WB2	comp=Z,5.9nm,0.9s			IAmb	IAmb	16 39 33.2	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WR0	**Warramunga Arr**	**46.58**	**163**	P	**P**	**16 39 30.9**	**-0.3**
WR0				IAmb	IAmb	16 39 33.3	
	comp=Z,4.1nm,0.9s						
ASAR	**Alice Springs**	**49.98**	**165**	P	**P**	**16 39 55.6**	**-1.9**
	comp=Z,0.8nm,0.7s,baz=340,slow=7.0,SNR=11						
ASAR	**Alice Springs**	**49.98**	**165**	P	**P**	**16 39 57.9**	**+0.4**
ABKAR	**Akbulak array**	**53.02**	**314**	P	**P**	**16 40 20.1**	**+0.1**
ILAR	**Eielson Array**	**68.21**	**27**	P	**P**	**16 42 05.2**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=276,slow=8.1,SNR=4.7						
BMAR	**Burnt Mountain**	**68.52**	**24**	P	**P**	**16 42 06.7**	**+1.3**
RES	**Resolute Bay**	**77.66**	**9**	LR	LR	17 19 04.0	
	comp=Z,12nm,21.8s,baz=90,slow=37						
VYHS	**Vyhne**	**79.47**	**319**	eP	**P**	**16 43 11.0**	**+1.2**
YKA	**Yellowknife Ar**	**81.96**	**23**	P	**P**	**16 43 22.6**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=314,slow=5.3,SNR=3.3						

ATH 11 16:34:56.7,38.19N×20.36E,h8km±2km,ML1.8/1,Error ellipse: s-maj=3.3km s-min=1.4km az=264.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.01**	**312**	P	Pg	16 34 58.3	+0.1
KEF3				S	Sg	16 34 59.3	0.0
LXRA	**Lixouri, Kepha**	**0.06**	**84**	P	Pg	16 34 58.5	-0.1
KEF4	**Livadi, Kephal**	**0.08**	**38**	P	Pg	16 34 59.0	+0.1
KEF4				S	Sg	16 35 00.7	+0.3
ARGA	**Argostoli. Kep**	**0.09**	**100**	P	Pg	16 34 59.2	+0.1
KEF2	**Argostoli. Kep**	**0.10**	**106**	P	Pg	16 34 59.3	+0.1
KEF2				S	Sg	16 35 01.1	+0.2
KEF1	**Kardakata, Kep**	**0.12**	**46**	P	Pg	16 34 59.5	0.0
KEF1				S	Sg	16 35 01.3	0.0
VLS	**Valsamata**	**0.18**	**95**	P	Pg	16 35 00.4	-0.1
VLS				S	Sg	16 35 03.4	+0.3
VLS				AML	AML	16 35 03.5	
	comp=E,904μm,0.1s						
VLS				AML	AML	16 35 03.6	
	comp=N,928μm,0.1s						
KONA	**Konidatara, Ke**	**0.28**	**35**	P	Pg	16 35 00.7	-1.7
KONA				S	Sg	16 35 02.5	-3.7
FSK	**Fiskardo**	**0.31**	**31**	P	Pg	16 35 00.7	-2.2
FSK				S	Sg	16 35 01.9	-5.1
FSK				AML	AML	16 35 03.1	
	comp=E,3376μm,0.2s						
FSK				AML	AML	16 35 03.2	
	comp=N,2047μm,0.3s						
EVGI	**Lefkada island**	**0.48**	**28**	P	Pg	16 35 03.8	-2.4
EVGI				S	Sg	16 35 08.3	-4.3
MGNA	**Meganis**	**0.57**	**36**	P	Pg	16 35 05.4	-2.4
MGNA				S	Sg	16 35 10.2	-5.1
MGNA				AML	AML	16 35 12.1	
	comp=E,650μm,0.1s						
MGNA				AML	AML	16 35 12.1	
	comp=N,702μm,0.1s						
LKD2	**Lefkada island**	**0.64**	**21**	P	Pg	16 35 06.2	-2.9
LKD2				S	Sg	16 35 13.2	-4.2
TSLK	**Tsoukalades, L**	**0.67**	**20**	P	Pg	16 35 07.0	-2.7
TSLK				S	Sg	16 35 13.2	-5.2

*IDC **11** 16:37:19.8±3.0, 14.30S×66.19E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/35, mbtmp3.6/4, MS3.8/2, Ms1 3.9/2, ms1mx2.9/31, Error ellipse: s-maj=103.8km s-min=33.9km az=57.0*

*NEIC **11** 16:37:23.4±1.1, 14.0S±0.1×66.7E±0.2, h10km±1km, mb4.5/6, Error ellipse: s-maj=37.3km s-min=21.4km az=255.0*

ISC 11 16:37:23.4±1.0,**14.0S**±0.2×**66.6E**±0.2,**h10km,n26, σ0.79**/14,**mb3.8**/5,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**8.56**	**43**	T	T	16 48 45.5	
	baz=223,slow=75						
H08S2	**Diego Garcia H**	**8.58**	**43**	T	T	16 48 46.9	
	baz=223,slow=75						
H08S3	**Diego Garcia H**	**8.58**	**43**	T	T	16 48 46.8	
	baz=223,slow=75						
H08N3	**Diego Garcia H**	**8.76**	**30**	T	T	16 48 50.6	
	baz=210,slow=76						
H08N1	**Diego Garcia H**	**8.78**	**30**	T	T	16 48 50.8	
	baz=210,slow=76						
H08N2	**Diego Garcia H**	**8.78**	**30**	T	T	16 48 55.8	
	baz=210,slow=76						
MSEY	**Mahe Island**	**14.38**	**309**	P	**P**	**16 40 54.5**	**+0.2**
MNCI	**Minicoy**	**23.07**	**16**	P	**P**	**16 42 28.7**	**-0.5**
CMAR	**Chiang Mai Arr**	**45.36**	**46**	LR	LR	17 02 37.1	
	comp=Z,34nm,19.7s,baz=175,slow=33						
H01W3	**Cape Leeuwin H**	**47.48**	**125**	T	T	17 36 55.2	
	baz=283,slow=75						
H01W2	**Cape Leeuwin H**	**47.48**	**125**	T	T	17 36 55.4	
	baz=283,slow=75						
H01W1	**Cape Leeuwin H**	**47.49**	**125**	T	T	17 36 56.5	
	baz=283,slow=75						
CASY	**Casey**	**59.80**	**161**	P	**P**	**16 47 28.8**	**+0.3**
MKAR	**Makanchi Array**	**62.15**	**12**	P	**P**	**16 47 44.8**	**+0.1**
	0.6nm,0.9s,baz=207,slow=8.1,SNR=3.8						
MKAR	**Makanchi Array**	**62.15**	**12**	P	**P**	**16 47 44.6**	**-0.2**
ABKAR	**Akbulak array**	**63.27**	**355**	P	**P**	**16 47 51.5**	**-0.6**
ASAR	**Alice Springs**	**63.92**	**110**	P	**P**	**16 47 56.4**	**-0.8**
	0.4nm,0.7s,baz=278,slow=6.3,SNR=7.2						
WRA	**Warramunga Arr**	**64.68**	**106**	P	**P**	**16 48 02.9**	**+0.7**
	0.7nm,0.7s,baz=269,slow=5.9,SNR=4.5						
WRA	**Warramunga Arr**	**64.68**	**106**	P	**P**	**16 48 01.9**	**-0.2**
WB2	**Warramunga Arr**	**64.69**	**106**	P	**P**	**16 48 02.5**	**+0.3**
WR0	**Warramunga Arr**	**64.87**	**106**	P	**P**	**16 48 03.0**	**-0.3**
ZAA0	**Zalesovo Array**	**69.47**	**11**	P	**P**	**16 48 32.8**	**+1.1**
ZAA0				IAmb	IAmb	16 50 35.3	
	comp=Z,5.8nm,1.7s						
SONM	**Songino Array**	**71.06**	**27**	P	**P**	**16 48 42.8**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=225,slow=5.9,SNR=5.6						
SONM	**Songino Array**	**71.06**	**27**	IAmb	IAmb	16 48 44.1	
	comp=Z,0.7nm,0.9s						
CTA	**Charters Tower**	**75.75**	**107**	LR	LR	17 20 12.8	
	comp=Z,196nm,21.4s,baz=284,slow=34						
PDAR	**Pinedale Array**	**151.17**	**354**	PKPbc	**PKPbc**	**16 57 16.0**	**-1.5**
	comp=Z,0.8nm,0.6s,baz=72,slow=2.9,SNR=5.0						

*IDC **11** 16:49:06.0±1.0, 22.08S×175.19W, h0km, mb4.1/7, mb1 4.3/8, mb1mx4.0/37, mbtmp4.1/8, ML3.9/1, MS2.6/2, Ms1 2.6/2, ms1mx2.5/32, Error ellipse: s-maj=35.3km s-min=25.3km az=122.0*

*NEIC **11** 16:49:06.3±2.2, 22.17S±0.08×174.6W±0.1, h30km±5km, mb4.7/13, Error ellipse: s-maj=20.6km s-min=10.1km az=111.0*

ISC 11 16:49:06.4±0.6,**22.22S**±0.08×**174.6W**±0.1,**h27km,n30, σ2.19**/31,**mb4.4**/10,**Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**7.63**	**203**	Pn	**Pn**	**16 50 55.2**	**-0.5**
RAO				Sn	**Sn**	**16 52 17.4**	**-3.9**
AFI	**Afiamalu**	**8.68**	**18**	Pn	**Pn**	**16 51 09.9**	**-0.4**
	9.1nm,0.3s,baz=202,slow=16,SNR=8.6						
AFI				Sn	**Sn**	**16 52 40.7**	**-6.7**
	4.1nm,0.3s,baz=225,slow=20,SNR=3.6						
AFI				LR	LR	16 53 52.8	
	comp=Z,43nm,20.5s,baz=195,slow=33						
AFI	**Afiamalu**	**8.68**	**18**		**Pn**	**16 51 08.9**	**-1.4**
RAR	**Rarotonga**	**13.78**	**89**	Pn	**Pn**	**16 52 19.6**	**-0.6**
	4.5nm,0.3s,baz=254,slow=7.7,SNR=9.2						
RAR				Sn	Sn	16 54 41.4	-11
	1.4nm,0.3s,baz=94,slow=15,SNR=2.9						
RAR				LR	LR	16 57 00.7	
	comp=Z,25nm,21.5s,baz=268,slow=33						
URZ	**Urewera**	**17.52**	**202**	P	**P**	**16 53 09.6**	**0.0**
	0.4nm,0.3s,baz=14,slow=19,SNR=2.9						
URZ				S	Sn	16 56 02.9	-20
	0.5nm,0.3s,baz=139,slow=20,SNR=5.5						
BKZ	**Black Stump Fm**	**18.54**	**202**	P	**P**	**16 53 20.6**	**-0.4**
BKZ				IAmb	IAmb	16 53 24.3	
	comp=Z,24nm,1.4s						
MSWZ	**Moikau Station**	**20.98**	**202**	P	**P**	**16 53 48.2**	**+0.7**
TUWZ	**Tuamarina**	**21.46**	**204**	P	**P**	**16 53 50.9**	**-1.7**
KHZ	**Kahutara**	**22.46**	**204**	P	**P**	**16 54 03.7**	**+0.3**
LTZ	**Lake Taylor**	**23.26**	**205**	P	**P**	**16 54 12.2**	**+0.5**
LTZ				IAmb	IAmb	16 55 01.2	
	comp=Z,56nm,1.6s						
MQZ	**McQueen's Vall**	**23.91**	**203**	P	**P**	**16 54 18.6**	**+0.7**
MQZ				IAmb	IAmb	16 54 25.4	
	comp=Z,70nm,1.7s						
RPZ	**Rata Peaks**	**24.53**	**206**	P	**P**	**16 54 23.8**	**+0.2**
RPZ				IAmb	IAmb	16 54 46.7	
	comp=Z,28nm,1.3s						
FOZ	**Fox Glacier**	**24.90**	**208**	P	**P**	**16 54 27.6**	**+0.7**
TAOE	**Nuku Hiva Isla**	**35.61**	**74**	P	**P**	**16 56 01.9**	**-0.3**
AS31	**Alice Springs**	**47.27**	**258**	P	**P**	**16 57 35.4**	**-2.4**
ASAR	**Alice Springs**	**47.27**	**258**	P	**P**	**16 57 36.5**	**-1.3**
	comp=Z,1.2nm,0.8s,baz=109,slow=6.2,SNR=11						
ASAR	**Alice Springs**	**47.27**	**258**	P	**P**	**16 57 35.5**	**-2.2**
WR0	**Warramunga Arr**	**47.37**	**263**	P	**P**	**16 57 36.9**	**-1.6**
WB0	**Warramunga Arr**	**47.55**	**263**	P	**P**	**16 57 38.3**	**-1.5**
WB2	**Warramunga Arr**	**47.55**	**263**	P	**P**	**16 57 38.4**	**-1.4**
WRA	**Warramunga Arr**	**47.56**	**263**	P	**P**	**16 57 38.5**	**-1.5**
	comp=Z,0.7nm,0.5s,baz=101,slow=8.0,SNR=14						
QSPA	**South Pole Qui**	**67.86**	**180**	P	P	17 00 07.4	+5.3
	comp=Z,1.9nm,0.8s,baz=62,slow=1.8,SNR=7.4						
QSPA	**South Pole Qui**	**67.86**	**180**	P	**P**	**17 00 02.4**	**+0.3**
PETK	**Petropavlovsk-**	**78.79**	**343**	P	**P**	**17 01 09.1**	**+2.7**
	comp=Z,5.8nm,1.0s,baz=134,slow=8.1,SNR=4.7						
NVAR	**Mina Array Bea**	**80.12**	**42**	P	**P**	**17 01 18.5**	**+4.2**
	comp=Z,0.3nm,0.5s,baz=224,slow=7.6,SNR=3.6						
NVAR	**Mina Array Bea**	**80.12**	**42**	P	**P**	**17 01 14.1**	**-0.2**
ILAR	**Eielson Array**	**89.31**	**11**	P	**P**	**17 02 03.0**	**+3.3**
	comp=Z,0.8nm,1.1s,baz=207,slow=5.8,SNR=3.1						
CMAR	**Chiang Mai Arr**	**93.71**	**288**	P	**P**	**17 02 23.9**	**+2.7**
	comp=Z,0.8nm,0.3s,baz=115,slow=3.2,SNR=5.6						
AKASG	**Malin Array Be**	**146.04**	**333**	PKPbc	**PKiKP**	**17 08 46.3**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=38,slow=4.0,SNR=6.8						
AKASG	**Malin Array Be**	**146.04**	**333**		**PKiKP**	**17 08 45.8**	**-1.1**

*IDC **11** 16:51:28.1±0.6, 12.06N×143.87E, h0km, mb4.4/19, mb1 4.5/19, mb1mx4.3/42, mbtmp4.4/19, MS3.6/20, Ms1 3.6/20, ms1mx3.4/48, Error ellipse: s-maj=19.9km s-min=13.1km az=90.0*

*BJI **11** 16:51:33.1±0.0, 11.93N×144.01E, h62km, mB5.0/35, mb4.6/46, Ms4.4/8, Ms7 4.1/5*

*DJA **11** 16:51:37.3±2.6, 12°N±14°×14°4E±1°9, h56km±33km, M4.8/10, mb4.8/10, mB6.7/1, Mw(mB)6.5/1*

*NEIC **11** 16:51:37.9±1.3, 12.26N±0.09×143.8E±0.1, h63km±8km, mb4.8/66, Error ellipse: s-maj=17.6km s-min=10.8km az=121.0*

ISC 11 16:51:33.0±0.4,**12.14N**±0.06×**143.85E**±0.07,**h26km,n134, σ1.07**/128,**mb4.8**/58,**MS3.6**/22,**1D,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.75**	**35**	Pn	**Pn**	**16 52 02.4**	**+0.7**
	362nm,0.3s,baz=289,slow=2.3,SNR=99						
GUMO				Sn	**Sb**	**16 52 26.6**	**+0.5**
	771nm,0.3s,baz=31,slow=24,SNR=27						
ANA2	**Anatahan**	**4.55**	**23**		**Pn**	**16 52 43.5**	**+3.2**
SARN	**Sarigan**	**4.91**	**22**		**Pn**	**16 52 48.6**	**+3.4**
SMPI	**Sarmi**	**14.94**	**200**	P	**Pn**	**16 55 04.0**	**+1.4**
	20nm,1.2s						
GENI	**Genyem**	**15.09**	**194**	P	**Pn**	**16 55 05.5**	**+0.9**
	52nm,1.2s						
AAI	**Ambon**	**22.12**	**226**	P	**P**	**16 56 27.6**	**+0.9**
	29nm,0.8s						
WAKE	**Wake Island**	**23.06**	**69**	P	**P**	**16 56 39.0**	**+2.3**
H11N1	**WAKE ISLAND Hy**	**23.39**	**68**	T	T	17 21 14.7	
	baz=255,slow=75						
H11N2	**WAKE ISLAND Hy**	**23.39**	**68**	T	T	17 21 20.3	
	baz=255,slow=75						
H11N3	**WAKE ISLAND Hy**	**23.40**	**68**	T	T	17 21 15.8	
	baz=255,slow=75						
SAUI	**Saumlaki**	**23.56**	**213**	P	**P**	**16 56 44.2**	**+2.5**
JNU	**Nakatsue**	**24.03**	**332**	P	**P**	**16 56 44.8**	**-1.2**
	6.1nm,0.7s,baz=206,slow=4.0,SNR=6.3						
JNU				LR	LR	17 05 01.0	
	comp=Z,68nm,20.1s,baz=172,slow=34						
JNU	**Nakatsue**	**24.03**	**332**	P	**P**	**16 56 46.1**	**+0.2**
NACB	**Ninganchiao**	**24.25**	**303**	P	**P**	**16 56 48.8**	**+0.7**
NACB				IAmb	IAmb	16 56 55.0	
	comp=Z,31nm,1.1s						
SSLB	**Suanglung**	**24.62**	**301**	P	**P**	**16 56 49.7**	**-1.9**
SSLB				IAmb	IAmb	16 57 31.5	
	comp=Z,80nm,1.7s						
MRSI	**Marisa**	**24.63**	**244**	P	**P**	**16 56 52.2**	**+0.6**
	comp=Z,54nm,1.2s						
YHNB	**Yeheng**	**24.65**	**304**	P	**P**	**16 56 50.8**	**-1.0**
LUWI	**Luwuk**	**24.69**	**239**	P	**P**	**16 56 54.2**	**+2.1**
TPUB	**Ta-pu**	**24.70**	**300**	P	**P**	**16 56 51.9**	**-0.4**
TPUB				IAmb	IAmb	16 57 09.7	
	comp=Z,55nm,1.4s						
MJAR	**Matsushiro Arr**	**24.82**	**349**	P	**P**	**16 56 51.6**	**-1.6**
	comp=Z,4.2nm,0.9s,baz=168,slow=8.9,SNR=5.7						
MJAR				LR	LR	17 05 44.2	
	comp=Z,228nm,18.1s,baz=175,slow=34						
MJAR	**Matsushiro Arr**	**24.82**	**349**	P	**P**	**16 56 52.4**	**-0.7**
MAJO	**Matsushiro**	**24.82**	**349**	P	**P**	**16 56 52.5**	**-0.7**
MAJO				IAmb	IAmb	16 57 26.3	
	comp=Z,44nm,1.6s						
MAT	**Matsushiro**	**24.82**	**349**	P	**P**	**16 56 51.6**	**-1.6**
MJB9	**Matsu-Tunnel**	**24.83**	**349**	P	**P**	**16 56 52.5**	**-0.7**
MJB9				IAmb	IAmb	16 57 26.3	
	comp=Z,44nm,1.6s						
APSI	**Ampana**	**25.57**	**241**	P	**P**	**16 56 59.7**	**-0.5**
	comp=Z,16nm,1.2s						
HNR	**Honiara**	**26.75**	**143**	LR	LR	17 07 31.5	
	comp=Z,77nm,18.6s,baz=342,slow=36						
KSRS	**Korea Array**	**28.97**	**333**	P	**P**	**16 57 30.1**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=140,slow=8.6,SNR=4.5						
KSRS				LR	LR	17 08 16.2	
	comp=Z,58nm,18.9s,baz=145,slow=35						
NJ2	**Nanjing**	**30.34**	**315**	eP	**P**	**16 57 44.0**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,19nm,0.5s						
WB2	**Warramunga Arr**	**33.22**	**196**	P	**P**	**16 58 07.5**	**-0.6**
WB2				IAmb	IAmb	16 58 58.9	
	comp=Z,18nm,1.5s						
WRA	**Warramunga Arr**	**33.23**	**196**	P	**P**	**16 58 06.2**	**-1.9**
	comp=Z,1.8nm,0.6s,baz=19,slow=9.7,SNR=8.1						
WRA				LR	LR	17 12 47.9	
	comp=Z,144nm,18.2s,baz=255,slow=39						
WRA	**Warramunga Arr**	**33.23**	**196**	P	**P**	**16 58 08.3**	**+0.2**
USA0B	**Ussuriysk Arra**	**33.54**	**344**	P	**P**	**16 58 11.8**	**+1.3**
USA0B				IAmb	IAmb	16 58 48.1	
	comp=Z,6.6nm,0.8s						
USRK	**Ussuriysk Ar.**	**33.54**	**344**	P	**P**	**16 58 10.2**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=116,slow=10,SNR=4.2						
USRK				LR	LR	17 10 27.3	
	comp=Z,88nm,18.8s,baz=177,slow=34						
KSM	**Kuching**	**34.90**	**255**	P	**P**	**16 58 22.0**	**-0.7**
ENH	**Enshi**	**36.56**	**305**	P	**P**	**16 58 37.2**	**+0.3**
ASAR	**Alice Springs**	**36.89**	**195**	P	**P**	**16 58 37.9**	**-1.9**
	comp=Z,1.1nm,0.8s,baz=18,slow=11,SNR=9.2						
ASAR				LR	LR	17 14 09.4	
	comp=Z,107nm,20.3s,baz=352,slow=37						
ASAR	**Alice Springs**	**36.89**	**195**	P	**P**	**16 58 40.5**	**+0.8**
BJI	**Beijing**	**36.99**	**324**⇓	eP	**P**	**16 58 40.5**	**+0.2**
BJI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**40.24**	**321**	eP	**P**	**16 59 09.3**	**+1.5**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,75nm,7.3s						
DZM	**Mont Dzumac**	**40.59**	**147**	P	**P**	**16 59 08.2**	**-2.6**
	comp=Z,7.6nm,0.9s,baz=52,slow=18,SNR=3.1						
DZM				LR	LR	17 12 13.2	
	comp=Z,90nm,21.3s,baz=32,slow=31						
KMI	**Kunming**	**40.87**	**294**	P	**P**	**16 59 14.5**	**+1.1**
KMI				pP	pwP	16 59 29.7	+4.2
KMI				pmax	pmax		
	comp=Z,190nm,6.6s						
KMI				LR	LR		
	comp=Z,150nm,5.6s						
CD2	**Chengdu**	**41.42**	**303**	eP	**P**	**16 59 17.0**	**-0.7**
PBKT	**Sadao Pong**	**41.71**	**281**	P	**P**	**16 59 21.6**	**+1.5**
PETK	**Petropavlovsk-**	**42.34**	**12**	LR	LR	17 14 06.4	
	comp=Z,71nm,19.9s,baz=242,slow=32						
IPM	**Ipoh**	**43.00**	**264**	P	**P**	**16 59 31.2**	**+0.5**
IPM				IAmb	IAmb	17 00 45.0	
	comp=Z,28nm,1.7s						
LZH	**Lanzhou**	**43.17**	**310**	eP	**P**	**16 59 32.2**	**+0.2**
LZH				pP	pwP	16 59 49.2	+4.2
LZH				sP	sP	16 59 56.8	+16
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,69nm,4.3s						
KULM	**Kulim**	**43.19**	**265**	P	**P**	**16 59 33.2**	**+1.0**
CMAR	**Chiang Mai Arr**	**43.68**	**284**	P	**P**	**16 59 36.4**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=87,slow=6.9,SNR=21						
CMAR				LR	LR	17 18 07.7	
	comp=Z,58nm,19.3s,baz=141,slow=37						
STKA	**Stephens Creek**	**43.82**	**183**	P	**P**	**16 59 36.0**	**-0.9**
	comp=Z,2.3nm,0.8s,baz=349,slow=8.3,SNR=4.4						
STKA	**Stephens Creek**	**43.82**	**183**	P	**P**	**16 59 37.7**	**+0.8**
ULN	**Ulaanbaatar**	**47.02**	**327**	P	**P**	**17 00 01.0**	**-1.3**
SONM	**Songino Array**	**47.35**	**326**	P	**P**	**17 00 04.4**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=143,slow=8.2,SNR=13						
SONM				PcP	**PcP**	**17 01 35.5**	**0.0**
	comp=Z,1.4nm,0.7s,baz=148,slow=4.6,SNR=5.2						
SONM				LR	LR	17 20 55.8	
	comp=Z,132nm,18.8s,baz=128,slow=37						
SONM	**Songino Array**	**47.35**	**326**	P	**P**	**17 00 04.0**	**-0.9**
YAK	**Yakutsk**	**50.85**	**351**	P	**P**	**17 00 30.0**	**-1.3**
AFI	**Afiamalu**	**51.03**	**119**	LR	LR	17 18 54.2	
	comp=Z,27nm,18.3s,baz=281,slow=32						
TLY	**Talaya**	**51.06**	**329**	P	**P**	**17 00 33.0**	**0.0**
TLY				IAmb	IAmb	17 00 34.8	
	comp=Z,8.5nm,1.3s						
GSTR	**Great Sitkin T**	**51.25**	**31**	P	**P**	**17 00 33.7**	**-0.8**
NWAO	**Narrogin (SRO)**	**51.52**	**209**	P	**P**	**17 00 38.2**	**+1.5**
LSA	**Lhasa**	**51.78**	**298**	P	**P**	**17 00 39.6**	**+0.2**
LSA				IAmb	IAmb	17 00 44.0	
	comp=Z,4.6nm,0.7s						
TAPN	**Taplejung**	**54.54**	**295**	eP	**P**	**17 00 59.5**	**0.0**
	comp=Z,5.3nm,0.5s						
JIRN	**Jiri**	**55.91**	**295**	eP	**P**	**17 01 09.4**	**-0.1**
	comp=Z,15nm,0.6s						
GUN	**Gumba**	**56.20**	**295**	eP	**P**	**17 01 11.6**	**0.0**
	comp=Z,34nm,1.0s						
PKI	**Pulchoki**	**56.59**	**295**	eP	**P**	**17 01 13.5**	**-0.9**
PKIN	**Phulchoki**	**56.60**	**295**	eP	**P**	**17 01 13.6**	**-0.8**
	comp=Z,5.2nm,0.7s						
KKN	**Kakani**	**56.72**	**295**	eP	**P**	**17 01 13.5**	**-1.6**
DMN	**Daman**	**56.86**	**295**	eP	**P**	**17 01 15.9**	**-0.3**
GKN	**Gorkha**	**57.30**	**295**	eP	**P**	**17 01 18.7**	**-0.5**
WMQ	**Urumqi**	**57.42**	**314**	eP	**P**	**17 01 20.7**	**+1.1**
WMQ				sP	pwP	17 01 46.2	+14
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,84nm,4.5s						
WMQ				LR	LR		
	comp=Z,510nm,28.9s						
WMQ				LR	LR		
	comp=Z,570nm,28.9s						
WMQ	**Urumqi**	**57.42**	**314**	P	**P**	**17 01 19.9**	**+0.3**
WMQ				IAmb	IAmb	17 01 21.5	
	comp=Z,10nm,1.1s						
BILL	**Bilibino**	**57.75**	**10**	P	**P**	**17 01 21.3**	**-0.1**
BILL				IAmb	IAmb	17 01 22.4	
	comp=Z,7.0nm,1.1s						
DANN	**Dangsing**	**58.09**	**296**	eP	**P**	**17 01 24.6**	**-0.3**
	comp=Z,26nm,0.7s						
KOLN	**Koldanda**	**58.21**	**295**	eP	**P**	**17 01 25.1**	**-0.5**
	comp=Z,18nm,0.9s						
MK31	**Makanchi Array**	**61.85**	**317**	P	**P**	**17 01 49.9**	**-0.1**
MKAR	**Makanchi Array**	**61.85**	**317**	P	**P**	**17 01 50.4**	**+0.3**
	comp=Z,4.1nm,0.8s,baz=93,slow=8.9,SNR=39						
MKAR				LR	LR	17 30 41.1	
	comp=Z,52nm,18.7s,baz=99,slow=38						
MKAR	**Makanchi Array**	**61.85**	**317**	P	**P**	**17 01 49.9**	**-0.1**
MAKZ	**Makanchi**	**62.06**	**317**	P	**P**	**17 01 51.6**	**+0.1**
MAKZ				IAmb	IAmb	17 01 53.0	
	comp=Z,6.4nm,0.8s						
ZAA0	**Zalesovo Array**	**62.23**	**325**	P	**P**	**17 01 51.7**	**-0.7**
ZALV	**Zalesovo Beam**	**62.23**	**325**	P	**P**	**17 01 51.8**	**-0.6**
	comp=Z,1.8nm,0.5s,baz=110,slow=6.6,SNR=8.3						
ZALV				PcP	**PcP**	**17 02 31.5**	**-0.6**
	comp=Z,1.8nm,0.5s,baz=124,slow=4.6,SNR=5.5						
ZALV				LR	LR	17 29 38.4	
	comp=Z,69nm,19.2s,baz=78,slow=37						
ZALV	**Zalesovo Beam**	**62.23**	**325**	P	**P**	**17 01 51.5**	**-0.8**
ANM	**Nome**	**62.90**	**22**	P	**P**	**17 01 56.5**	**-0.3**
KURK	**Kurchatov**	**65.05**	**320**	P	**P**	**17 02 10.6**	**-0.4**
KSH	**Kashi**	**65.33**	**308**	P	**P**	**17 02 16.4**	**+3.1**
KSH				S	**S**	**17 10 57.3**	**+1.3**
KSH				pmax	pmax		
	comp=Z,140nm,4.5s						
KSH				LR	LR		
	comp=Z,28nm,7.3s						
KSH				LR	LR		
	comp=Z,120nm,12.9s						
NIL	**Nilore**	**67.28**	**301**	P	**P**	**17 02 25.6**	**-0.2**
BPAW	**Bear Paw Mtn.**	**68.40**	**25**	P	**P**	**17 02 31.8**	**-0.5**
BPAW				IAmb	IAmb	17 02 33.1	
	comp=Z,8.5nm,1.1s						
MLY	**Manley**	**68.78**	**24**	P	**P**	**17 02 34.4**	**-0.3**
MLY				IAmb	IAmb	17 03 22.2	
	comp=Z,28nm,1.9s						
BTK	**Batken**	**69.33**	**308**	P	**P**	**17 02 38.2**	**-0.3**
SCM	**Sheep Creek Mo**	**69.42**	**28**	P	**P**	**17 02 39.3**	**+0.6**
KK31	**Karatay Array**	**69.66**	**312**	P	**P**	**17 02 40.5**	**+0.1**
KKAR	**Karatay Array**	**69.66**	**312**	P	**P**	**17 02 40.1**	**-0.4**
KKAR	**Karatay Array**	**69.66**	**312**	P	**P**	**17 02 40.6**	**+0.2**
KKAR				IAmb	IAmb	17 02 41.7	
	comp=Z,6.9nm,1.0s						
WRH	**Wood River Hil**	**69.72**	**25**	P	**P**	**17 02 39.4**	**-1.0**
WRH				IAmb	IAmb	17 02 40.5	
	comp=Z,8.3nm,1.0s						
IL31		**70.30**	**25**	P	**P**	**17 02 41.8**	**-2.1**
ILAR	**Eielson Array**	**70.30**	**25**	P	**P**	**17 02 42.4**	**-1.6**
	comp=Z,4.3nm,1.0s,baz=254,slow=4.7,SNR=21						
ILAR	**Eielson Array**	**70.30**	**25**	P	**P**	**17 02 42.1**	**-1.8**
PAX	**Paxson**	**70.51**	**27**	P	**P**	**17 02 44.7**	**-0.7**
BRVK	**Borovoye**	**70.51**	**322**	P	**P**	**17 02 45.2**	**-0.2**
BRVK				IAmb	IAmb	17 02 46.6	
	comp=Z,8.7nm,0.7s						
KBL	**Kabul**	**70.76**	**302**	P	**P**	**17 02 46.9**	**-0.7**
KBL				IAmb	IAmb	17 02 49.6	
	comp=Z,9.7nm,1.0s						
DOT	**Dot Lake**	**71.27**	**27**	P	**P**	**17 02 49.9**	**0.0**
DOT				IAmb	IAmb	17 02 51.0	
	comp=Z,7.9nm,1.0s						
FYU	**Fort Yukon**	**71.38**	**24**	P	**P**	**17 02 51.4**	**+1.0**
BMAR	**Burnt Mountain**	**71.81**	**23**	P	**P**	**17 02 53.7**	**+0.6**
BCAR	**Beaver Creek A**	**72.18**	**27**	P	**P**	**17 02 55.1**	**-0.3**
DAWY	**Dawson**	**73.37**	**27**	P	**P**	**17 03 02.7**	**+0.2**
DAWY				IAmb	IAmb	17 03 04.2	
	comp=Z,10.0nm,1.1s						
EPYK	**Eagle Plains**	**74.72**	**24**	P	**P**	**17 03 10.5**	**+0.1**
INK	**Inuvik**	**76.08**	**22**	P	**P**	**17 03 17.9**	**-0.1**
INK				IAmb	IAmb	17 03 19.6	
	comp=Z,22nm,1.1s						
ABKAR	**Akbulak array**	**76.94**	**318**	P	**P**	**17 03 22.5**	**-0.8**
ARU	**Arti**	**77.39**	**325**	P	**P**	**17 03 24.9**	**-0.7**
AKTO	**Aktyubinsk**	**78.11**	**319**	LR	LR	17 40 49.6	
	comp=Z,28nm,18.9s,baz=85,slow=38						
GEYT	**Alibeck**	**79.31**	**307**	P	**P**	**17 03 37.1**	**+0.4**
	comp=Z,5.4nm,1.0s,baz=0.0,slow=0.4,SNR=10						
GEYT				LR	LR	17 42 41.5	
	comp=Z,42nm,19.6s,baz=175,slow=39						
GEYT	**Alibeck**	**79.31**	**307**	P	**P**	**17 03 36.4**	**-0.4**
C36M	**Paulatuk**	**79.47**	**21**	P	**P**	**17 03 37.0**	**+0.1**
YBH	**Yreka Blue Hor**	**84.57**	**49**	P	**P**	**17 04 04.5**	**+0.1**
YKA	**Yellowknife Ar**	**84.60**	**27**	P	**P**	**17 04 04.0**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=286,slow=5.3,SNR=30						
PINE	**Pine Mountain**	**85.42**	**46**	P	**P**	**17 04 09.8**	**+1.0**
PINE				IAmb	IAmb	17 04 12.7	
	comp=Z,12nm,1.1s						
B08A	**Colville Reser**	**85.51**	**42**	P	**P**	**17 04 09.2**	**+0.3**
B08A				IAmb	IAmb	17 04 09.9	
	comp=Z,7.6nm,1.0s						
RES	**Resolute Bay**	**86.18**	**13**	P	**P**	**17 04 12.0**	**+0.4**
RES				IAmb	IAmb	17 04 13.1	
	comp=Z,9.1nm,0.9s						
KLMR	**Klimovskoe**	**86.35**	**332**	eP	**P**	**17 04 10.6**	**-2.1**
KLMR				AMP		17 04 12.1	
	comp=Z,9.0nm,1.0s						
BEKR	**Beckworth**	**86.71**	**50**	P	**P**	**17 04 15.3**	**+0.1**
BEKR				IAmb	IAmb	17 04 31.2	
	comp=Z,18nm,1.9s						
E09A	**Wood Farm, Sta**	**86.73**	**43**	P	**P**	**17 04 15.6**	**+0.7**
E09A				IAmb	IAmb	17 04 23.6	
	comp=Z,9.1nm,1.1s						
NEW	**Newport**	**86.97**	**41**	P	**P**	**17 04 16.8**	**+0.7**
NEW				IAmb	IAmb	17 04 18.5	
	comp=Z,7.9nm,0.9s						
BMO	**Blue Mountains**	**87.71**	**45**	P	**P**	**17 04 20.3**	**+0.5**
BMO				IAmb	IAmb	17 04 23.6	
	comp=Z,5.9nm,0.8s						
ARCES	**ARCESS Array B**	**88.15**	**342**	P	**P**	**17 04 20.9**	**-0.4**
	comp=Z,2.9nm,0.5s,baz=68,slow=7.8,SNR=23						
ARCES				LR	LR	17 49 03.9	
	comp=Z,22nm,18.1s,baz=226,slow=39						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
RYN	**Ryan**	**88.38**	**51**	P	**P**	**17 04 23.7**	**+0.5**
NVAR	**Mina Array Bea**	**88.60**	**51**	P	**P**	**17 04 25.4**	**+1.1**
	comp=Z,3.9nm,0.7s,baz=267,slow=5.4,SNR=16						
NVAR	**Mina Array Bea**	**88.60**	**51**	P	**P**	**17 04 24.7**	**+0.3**
NV11	**Mina Array Sit**	**88.71**	**51**	P	**P**	**17 04 25.6**	**+0.9**
NV11				IAmb	IAmb	17 04 28.9	
	comp=Z,3.8nm,0.9s						
MFID	**Camas Ranch**	**89.12**	**46**	P	**P**	**17 04 26.8**	**+0.3**
MFID				IAmb	IAmb	17 04 30.3	
	comp=Z,8.2nm,1.0s						
ELK	**Elko**	**90.28**	**48**	P	**P**	**17 04 31.7**	**-0.5**
ELK				IAmb	IAmb	17 04 36.5	
	comp=Z,4.0nm,0.9s						
TPNV	**Topopah Spring**	**90.55**	**52**	P	**P**	**17 04 33.9**	**+0.4**
TPNV				IAmb	IAmb	17 04 36.3	
	comp=Z,4.8nm,1.0s						
FINES	**FINESS Array B**	**92.05**	**335**	P	**P**	**17 04 37.9**	**-1.6**
	comp=Z,5.0nm,0.6s,baz=65,slow=4.9,SNR=21						
FINES				LR	LR	17 49 28.6	
	comp=Z,41nm,18.2s,baz=32,slow=38						
BRTR	**Keskin Array B**	**97.33**	**313**	LR	LR	17 51 43.7	
	comp=Z,7.3nm,21.4s,baz=253,slow=37						
NOA	**NORSAR Array B**	**98.04**	**339**	P	**P**	**17 05 05.2**	**-1.8**
	comp=Z,1.4nm,0.8s,baz=49,slow=4.9,SNR=3.2						
NOA				LR	LR	17 53 02.1	
	comp=Z,27nm,18.6s,baz=255,slow=38						
KIC	**Kosan Boka**	**143.76**	**299**	*e*PKP2	PKPbc	17 11 04.0	-0.5
	comp=Z,30nm,1.4s						
TIC	**Toumodi**	**143.85**	**299**	*e*PKP2	PKPab	17 11 03.1	-1.0
LIC	**Lamto**	**144.07**	**299**	*e*PKP2	**PKPab**	**17 11 04.8**	**-0.1**
	comp=Z,38nm,1.4s						

*SJA **11** 16:54:43.9±0.8, 31.°26S×68.°45W, h106km±2km, ML3.4, MW3.5*
*GUC **11** 16:54:44.0±0.6, 31.°24S×68.°53W, h118km±70km, ML3.5*
ISC 11 16:54:44.9±1.4,**31.°25S**±0.°03×**68.°43W**±0.°05,**h105**km±8km, **n29**,σ0s.54/49,**2C-1D,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	**0.09**	**208**	*e*P	**Pn**	**16 54 59.2**	**-0.4**
RTLL				IAML		16 54 59.4	
	comp=Z,966nm,0.4s						
RTLL				*i* S	**Sn**	**16 55 10.3**	**-0.2**
SJA	**San Juan**	**0.30**	**202**	*e*P	**Pn**	**16 55 00.0**	**-0.1**
SJA				IAML		16 55 00.3	
	comp=Z,1µm,0.3s						
AMOG	**MOGNA**	**0.32**	**350**	*e*P	**Pn**	**16 55 00.2**	**0.0**
AMOG				*i* S	**Sn**	**16 55 11.7**	**0.0**
ZON	**Zonda**	**0.36**	**216**	*e*P	**Pn**	**16 55 00.1**	**-0.4**
ZON				IAML		16 55 00.2	
	comp=Z,592nm,0.2s						
ZON				*i* S	**Sn**	**16 55 11.8**	**-0.3**
CFA	**Coronel Fontan**	**0.39**	**155**	*e*P	**Pn**	**16 55 00.3**	**-0.3**
CFA				*i* S	**Sn**	**16 55 12.5**	**+0.2**
RTCV	**Cerro Valdivia**	**0.61**	**189**	*e*P	**Pn**	**16 55 01.8**	**-0.3**
RTCV				*i* S	**Sn**	**16 55 14.8**	**-0.3**
ACCO	**Cerro Coronel**	**0.86**	**320**	*e*P	**Pn**	**16 55 04.7**	**0.0**
ACCO				*i* S	**Sn**	**16 55 20.3**	**+0.9**
RTLS	**Leoncito**	**0.92**	**233**	*e*P	**Pn**	**16 55 05.3**	**+0.1**
RTLS				*i* S	**Sn**	**16 55 21.5**	**+1.0**
RTLS				IAML		16 55 22.7	
	comp=Z,472nm,0.5s						
ACDV	**Cuesta del Vie**	**1.23**	**331**	*e*P	**Pn**	**16 55 08.5**	**0.0**
ACDV				*i* S	**Sn**	**16 55 26.7**	**+0.4**
ASAL	**Salagasta**	**1.38**	**194**	*e*P	**Pn**	**16 55 10.0**	**0.0**
ASAL				*i* S	**Sn**	**16 55 29.6**	**+0.5**
AROD	**Rodeo**	**1.41**	**320**	*e*P	**Pn**	**16 55 10.9**	**+0.2**
AROD				*i* S	**Sn**	**16 55 30.6**	**+0.5**
ACAN	**Cantantal**	**1.47**	**134**	*e*P	**Pn**	**16 55 11.4**	**+0.4**
ACAN				*i* S	**Sn**	**16 55 31.1**	**+0.2**
ARCO	**CERRO ARCO**	**1.64**	**195**	*e*P	**Pn**	**16 55 13.3**	**0.0**
ARCO				*i* S	**Sn**	**16 55 35.8**	**+0.9**
ARCO				IAML		16 55 36.9	
	comp=Z,612nm,0.7s						
AGUA	**GUANDACOL**	**1.76**	**358**	*e*P	**Pn**	**16 55 15.2**	**+0.4**
AAGR	**Agrelo**	**1.86**	**190**	*e*P	**Pn**	**16 55 16.1**	**0.0**
AAGR				*i* S	**Sn**	**16 55 39.1**	**-0.6**
CO02	**Combarbal**	**2.20**	**271**	*i* P	**Pn**	**16 55 20.2**	**-0.2**
CO02				*i* S	**Sn**	**16 55 47.3**	**-0.3**
CO02				IAML		16 55 50.5	
	comp=N,589nm,0.4s						
GO04	**Tololo Observa**	**2.31**	**297**	⇓*i*P	**Pn**	**16 55 21.6**	**-0.3**
GO04				*e*S	**Sn**	**16 55 50.1**	**-0.1**
GO04	**Tololo Observa**	**2.31**	**297**	*e*P	**Pn**	**16 55 21.6**	**-0.3**
GO04				*i* S	**Sn**	**16 55 50.6**	**+0.3**
CO04	**Los Peladeros**	**2.31**	**249**	⇑*i*P	**Pn**	**16 55 21.1**	**-0.8**
CO04				*i* S	**Sn**	**16 55 49.9**	**-0.4**
CO04				IAML		16 55 53.0	
	comp=N,377nm,0.2s						
VCA	**Vinchina**	**2.52**	**4**	*e*P	**Pn**	**16 55 24.9**	**+0.4**
VCA				IAML		16 56 02.0	
	comp=Z,103nm,0.3s						
FCH	**Farellones**	**2.60**	**217**	⇑*i*P	**Pn**	**16 55 26.1**	**+0.3**
FCH				*i* S	**Sn**	**16 55 58.2**	**+1.0**
FCH				IAML		16 56 07.1	
	comp=E,119nm,0.2s						
PEL	**Peldehue**	**2.69**	**225**	*e*P	**Pn**	**16 55 25.9**	**-0.7**
PEL				*i* S	**Sn**	**16 55 58.3**	**-0.4**
PEL				IAML		16 56 02.5	
	comp=N,115nm,0.3s						
PEL	**Peldehue**	**2.69**	**225**	*e*P	**Pn**	**16 55 26.2**	**-0.5**
ROCH	**El Roble**	**2.78**	**231**	IAML		16 56 03.0	
	comp=E,227nm,0.3s						
CLCH	**Cerro Calan**	**2.79**	**219**	*e*P	**Pn**	**16 55 28.1**	**+0.1**
CLCH				*i* S	**Sn**	**16 56 02.5**	**+1.4**
CLCH				IAML		16 56 09.5	
	comp=E,191nm,0.6s						
ROC1	**El Roble**	**2.79**	**231**	*e*P	**Pn**	**16 55 27.1**	**-1.2**
MT03	**Universidad Ad**	**2.84**	**218**	*e*P	**Pn**	**16 55 28.6**	**-0.2**
MT03				*e*S	**Sn**	**16 56 03.1**	**+0.5**
LMEL	**Las Melosas**	**2.99**	**210**	*e*P	**Pn**	**16 55 31.0**	**+0.2**
LMEL				IAML		16 56 17.5	
	comp=N,61nm,0.1s						
CYA	**Choya**	**3.61**	**40**	*e*P	**Pn**	**16 55 37.8**	**-1.3**

*NEIC **11** 17:13:18.1±1.6, 12.°09S±0.°08×166.°6E±0.°1, h140km±8km, mb4.7/13, Error ellipse: s-maj=18.7km s-min=4.5km az=51.0*
*IDC **11** 17:13:18.2±2.8, 12.°05S×166.°59E, h142km±26km, mb3.7/10, mb1 3.8/12, mb1mx3.6/41, mbtmp4.1/12, MS3.4/1, Ms1 3.4/1, ms1mx2.5/28, Error ellipse: s-maj=20.2km s-min=17.1km az=54.0*
ISC 11 17:13:19.0±0.6,**12.°14S**±0.°07×**166.°6E**±0.°1,**h150**km,**n32**, σ1s.10/35,**mb4.2**/14,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**3.35**	**169**		**Pn**	**17 14 10.2**	**-0.6**
HNR	**Honiara**	**7.04**	**292**	P	**Pn**	**17 15 00.2**	**+0.5**
	5.8nm,0.3s,baz=162,slow=9.6,SNR=3.5						
HNR	**Honiara**	**7.04**	**292**		**Pn**	**17 14 58.8**	**-0.9**
DZM	**Mont Dzumac**	**9.88**	**181**	P	**Pn**	**17 15 38.2**	**+0.6**
	1.8nm,0.3s,baz=308,slow=18,SNR=32						
DZM				S	**Sn**	**17 17 24.4**	**-2.7**
	1.2nm,0.3s,baz=126,slow=22,SNR=8						
DZM	**Mont Dzumac**	**9.88**	**181**		**Pn**	**17 15 36.2**	**-1.3**
DZM					**Sn**	**17 17 26.6**	**-0.4**
NOUC	**Port Laguerre**	**9.91**	**181**	Pn	**Pn**	**17 15 39.4**	**+1.5**
AFI	**Afiamalu**	**21.17**	**97**	P	**P**	**17 17 53.1**	**+0.3**
	6.9nm,0.5s,baz=73,slow=19,SNR=5.1						
AFI	**Afiamalu**	**21.17**	**97**	P	**P**	**17 17 52.8**	**+0.1**
AFI				IAmb	IAmb	17 17 59.0	
	comp=Z,22nm,1.1s						
MANU	**Manus Island**	**21.51**	**296**	P	**P**	**17 17 56.2**	**-0.1**
MANU				IAmb	IAmb	17 18 10.1	
	comp=Z,42nm,1.6s						
BKZ	**Black Stump Fm**	**28.32**	**164**	P	**P**	**17 18 59.7**	**+0.9**
BKZ				IAmb	IAmb	17 19 00.7	
	comp=Z,16nm,1.3s						
QRZ	**Quartz Range**	**29.05**	**171**	P	**P**	**17 19 03.0**	**-2.1**
LTZ	**Lake Taylor**	**30.93**	**172**	P	**P**	**17 19 21.7**	**0.0**
LTZ				IAmb	IAmb	17 19 29.1	
	comp=Z,28nm,1.5s						
RPZ	**Rata Peaks**	**31.70**	**174**	P	**P**	**17 19 30.0**	**+1.5**
	comp=Z,3.9nm,0.4s,baz=360,slow=1.7,SNR=6.0						
RPZ	**Rata Peaks**	**31.70**	**174**	P	**P**	**17 19 29.1**	**+0.6**
RPZ				IAmb	IAmb	17 19 31.7	
	comp=Z,29nm,1.1s						
WB0	**Warramunga Arr**	**31.81**	**252**	P	**P**	**17 19 31.1**	**+1.4**
WRA	**Warramunga Arr**	**31.89**	**252**	P	**P**	**17 19 30.1**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=84,slow=9.0,SNR=4.3						
MQZ	**McQueen's Vall**	**31.89**	**172**	P	**P**	**17 19 31.5**	**+1.5**
AS31	**Alice Springs**	**33.05**	**245**	P	**P**	**17 19 40.4**	**-0.1**
ASAR	**Alice Springs**	**33.05**	**245**	P	**P**	**17 19 40.4**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=70,slow=9.6,SNR=24						
ASAR				PcP	**PcP**	**17 22 21.3**	**+0.6**
	comp=Z,0.1nm,0.6s,baz=80,slow=2.6,SNR=6.1						
ASAR	**Alice Springs**	**33.05**	**245**	P	**P**	**17 19 38.9**	**-1.6**
ASAR					**PcP**	**17 22 20.8**	**+0.1**
PPT	**Papeete**	**42.66**	**103**	LR	LR	17 34 58.8	
	comp=Z,50nm,21.5s,baz=198,slow=30						
KKM	**Kota Kinabalu**	**53.23**	**287**	P	**P**	**17 22 23.0**	**+0.4**
KKM				IAmb	IAmb	17 22 24.4	
	comp=Z,13nm,0.8s						
JNU	**Nakatsue**	**56.43**	**324**	P	**P**	**17 22 44.3**	**-0.9**
KSRS	**Korea Array**	**61.23**	**325**	P	**P**	**17 23 16.7**	**-1.4**
	comp=Z,1.0nm,0.7s,baz=129,slow=7.2,SNR=3.5						
SBA	**Scott Base**	**65.71**	**180**	P	**P**	**17 23 49.0**	**+2.0**
KLR	**Kul'dur**	**68.37**	**336**	P	**P**	**17 24 04.0**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=247,slow=2.0,SNR=5.0						
CMAR	**Chiang Mai Arr**	**73.29**	**294**	P	**P**	**17 24 35.7**	**+1.2**
	comp=Z,1.5nm,0.7s,baz=128,slow=4.7,SNR=16						
SONM	**Songino Array**	**80.02**	**324**	P	**P**	**17 25 11.6**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=137,slow=5.2,SNR=10						
SONM	**Songino Array**	**80.02**	**324**	P	**P**	**17 25 11.9**	**0.0**
ILAR	**Eielson Array**	**84.29**	**18**	P	**P**	**17 25 32.2**	**-1.3**
	comp=Z,0.7nm,0.9s,baz=223,slow=6.0,SNR=5.3						
ILAR	**Eielson Array**	**84.29**	**18**	P	**P**	**17 25 33.5**	**-0.1**
MKAR	**Makanchi Array**	**94.86**	**317**	P	**P**	**17 26 23.8**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=90,slow=6.6,SNR=15						

*IDC **11** 17:19:32.8±3.2, 9.°96S×118.°61E, h0km, mb3.4/2, mb1 3.2/4, mb1mx3.2/39, mbtmp3.1/4, ML2.8/2, Error ellipse: s-maj=182.5km s-min=27.3km az=52.0*
*DJA **11** 17:19:37.6±0.4, 10.°S±5.°×11.°9E±.°, h10km, M4.1/9, mb4.2/2, MLv4.1/9*
ISC 11 17:19:35.7±1.0,**9.°8S**±0.°1×**118.°96E**±0.°06,**h10**km,**n15**, σ1s.61/15,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.33**	**83**	P	**Pn**	**17 20 00.5**	**+0.2**
WSI				S	**Sb**	**17 20 17.4**	**-0.4**
PLAI	**Plampang**	**1.53**	**310**	P	**Pn**	**17 20 03.6**	**+0.5**
PLAI				S	**Sn**	**17 20 22.1**	**-1.0**
DNP	**Denpasar**	**3.87**	**287**	P	**Pn**	**17 20 37.3**	**+1.9**
IGBI	**Denpasar**	**3.90**	**285**	P	**Pn**	**17 20 38.5**	**+2.8**
IGBI				S	**Sn**	**17 21 20.9**	**-0.6**
BKSI	**Bulukumba**	**4.62**	**15**	P	**Pn**	**17 20 46.7**	**+1.1**
JAGI	**Jajag, Banyuwa**	**4.93**	**285**	P	**Pn**	**17 20 52.2**	**+2.2**
SOEI	**Soe**	**5.23**	**90**	P	**Pn**	**17 20 56.7**	**+2.5**
	0.2nm33nm,0.7s						
BNSI	**Bone**	**5.51**	**12**	P	**Pn**	**17 20 59.0**	**+1.2**
WRA	**Warramunga Arr**	**17.93**	**126**	P	**Pn**	**17 23 45.6**	**+0.2**
	0.1nm,0.3s,baz=298,slow=13,SNR=3.5						
ASAR	**Alice Springs**	**19.83**	**136**	P	**P**	**17 24 07.4**	**+0.6**
	0.0nm,0.3s,baz=309,slow=10,SNR=4.0						
H08S2	**Diego Garcia H**	**45.95**	**269**	T	T	18 17 05.1	
	baz=96,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**45.96**	**269**	T	T	18 17 06.0	
	baz=96,slow=76,SNR=15						
H08S1	**Diego Carcia H**	**45.97**	**269**	T	T	18 17 09.1	
	baz=96,slow=76,SNR=8.5						
SONM	**Songino Array**	**58.48**	**350**	P	**P**	**17 29 31.4**	**-0.7**
	0.3nm,0.5s,baz=164,slow=8.5,SNR=4.8						
MKAR	**Makanchi Array**	**65.17**	**333**	P	**P**	**17 30 15.4**	**-1.7**
	0.2nm,0.5s,baz=146,slow=7.5,SNR=3.4						

*ATH **11** 17:28:04.8, 33.°84N×25.°09E, h21km±2km, ML3.1/6, Error ellipse: s-maj=3.9km s-min=1.7km az=346.0*
*ISK **11** 17:28:06.4, 34.°07N×25.°21E, h7km, ML3.4/12*
*THE **11** 17:28:08.7, 34.°08N×25.°04E, h0km±1km, ML2.9/6, Error ellipse: s-maj=3.4km s-min=0.9km az=178.0*
*NIC **11** 17:28:09.1±0.0, 33.°70N×25.°49E, h19km±11km, Ml3.2/4*
*IDC **11** 17:28:09.0±2.7, 34.°14N×25.°09E, h30km±17km, mb3.7/7, mb1 3.7/12, mb1mx3.5/40, mbtmp3.8/12, ML3.8/5, Error ellipse: s-maj=23.1km s-min=18.4km az=50.0*
*HLW **11** 17:28:12.1, 33.°94N×25.°41E, h23km±13km, Md4.3, Ml4.0*
*GII **11** 17:28:15.8±0.0, 33.°92N×25.°93E, h10km, MD3.3/3*
ISC 11 17:28:08.4±1.2,**33.°91N**±0.°04×**25.°22E**±0.°04,**h31**km±10km, **n91**,σ1s.76/122,**mb3.9**/7,**Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	**Sivas**	**1.15**	**343**	P	**Pn**	**17 28 26.9**	**-1.5**
SIVA				S	**Sb**	**17 28 41.7**	**-2.6**
	2µm,0.7s						
SIVA	**Sivas**	**1.15**	**343**	P	**Pn**	**17 28 27.0**	**-1.3**
SIVA				S	**Sb**	**17 28 43.0**	**-1.3**
SIVA				AML	AML	17 28 51.5	
	comp=N,4329µm,0.5s						
SIVA				AML	AML	17 28 53.0	
	comp=E,5218µm,0.8s						
FRMA	**Ierapetra Chan**	**1.18**	**21**	P	**Pb**	**17 28 30.3**	**+0.1**
FRMA				S	**Sb**	**17 28 48.0**	**+2.9**
	comp=E,130nm,0.5s						
TMBK	**Timbaki Herakl**	**1.21**	**342**	P	**Pn**	**17 28 28.4**	**-0.8**
TMBK				S	**Sn**	**17 28 43.0**	**-1.6**
	comp=E,648nm,0.7s						
LAST	**Lasithi**	**1.26**	**10**	P	**Pn**	**17 28 29.8**	**-0.1**
LAST	**Lasithi**	**1.26**	**10**	P	**Pn**	**17 28 29.9**	**-0.1**
LAST				S	**Sb**	**17 28 50.1**	**+2.4**
LAST				AML	AML	17 28 52.1	
	comp=N,631µm,0.6s						
LAST				AML	AML	17 28 56.8	
	comp=E,712µm,0.5s						
GVD	**Gavdhos**	**1.31**	**315**	P	**Pn**	**17 28 29.8**	**-0.7**
GVD				S	**Sn**	**17 28 45.0**	**-2.0**
	comp=E,868nm,0.5s						
GVD	**Gavdhos**	**1.31**	**315**	P	**Pn**	**17 28 29.9**	**-0.7**
GVD				S	**Sn**	**17 28 47.8**	**+0.8**
GVD				AML	AML	17 28 56.5	
	comp=E,2104µm,0.5s						
GVD				AML	AML	17 29 01.0	
	comp=N,1382µm,0.5s						
GVD	**Gavdhos**	**1.31**	**315**	PN	**Pn**	**17 28 29.9**	**-0.7**
GVD				SN	**Sn**	**17 28 47.4**	**+0.4**
GVDS	**Gavdos**	**1.31**	**315**	P	**Pn**	**17 28 29.7**	**-0.9**
GVDS				S	**Sn**	**17 28 46.9**	**-0.2**
GVDS	**Gavdos**	**1.31**	**315**	PN	**Pn**	**17 28 29.9**	**-0.7**
GVDS				SN	**Sn**	**17 28 47.5**	**+0.4**
NPS	**Neapolis**	**1.39**	**14**	P	**Pn**	**17 28 32.3**	**+0.7**
NPS				S	**Sb**	**17 28 50.5**	**-0.5**
	comp=N,318nm,0.5s						
NPS	**Neapolis**	**1.39**	**14**	P	**Pn**	**17 28 32.2**	**+0.6**
KSTL	**Kastelli Herak**	**1.39**	**355**	P	**Pn**	**17 28 30.4**	**-1.3**
IDI	**Anoyia**	**1.40**	**349**	Pg	**Pn**	**17 28 30.7**	**-1.1**
	comp=N,12nm,0.3s,baz=174,slow=13,SNR=108						
IDI				Lg	Lg	17 28 47.2	
	comp=N,28nm,0.3s,baz=239,slow=19,SNR=10						
IDI	**Anoyia**	**1.40**	**349**	P	**Pn**	**17 28 31.2**	**-0.6**
IDI				AML	AML	17 28 56.0	
	comp=E,587µm,0.6s						
IDI				AML	AML	17 28 59.7	
	comp=N,742µm,0.5s						
IDI	**Anoyia**	**1.40**	**349**	PN	**Pn**	**17 28 31.0**	**-0.8**
IDI				SN	**Sn**	**17 28 48.3**	**-0.9**
HRKL	**Herakleio**	**1.40**	**356**	P	**Pn**	**17 28 31.6**	**-0.1**
HRKL	**Herakleio**	**1.40**	**356**	PN	**Pn**	**17 28 30.6**	**-1.1**
HRKL				SN	**Sn**	**17 28 48.3**	**-0.8**
ZKR	**Zakros**	**1.46**	**34**	P	**Pb**	**17 28 34.1**	**-0.8**
ZKR				S	**Sb**	**17 28 54.3**	**+1.2**
	comp=N,305nm,0.6s						
ZKR	**Zakros**	**1.46**	**34**	P	**Pb**	**17 28 34.4**	**-0.5**
ZKR				S	**Sb**	**17 28 54.4**	**+1.4**
ZKR				AML	AML	17 29 09.2	
	comp=N,277µm,0.7s						
ZKR				AML	AML	17 29 12.3	
	comp=E,938µm,0.6s						
ZKR	**Zakros**	**1.46**	**34**	PN	**Pn**	**17 28 32.2**	**-0.4**
ZKR	**Zakros**	**1.46**	**34**	P	**Pb**	**17 28 34.4**	**-0.5**
ZKR				S	**Sb**	**17 28 56.0**	**+2.9**
ZKR				AML	AML	17 29 11.9	
	comp=E,0.9nm,0.6s						
ZKR				AML	AML	17 29 11.9	
	comp=E,0.9nm,0.6s						
VAM	**Vamos**	**1.71**	**331**	P	**Pn**	**17 28 35.4**	**-0.6**
VAM	**Vamos**	**1.71**	**331**	P	**Pn**	**17 28 35.5**	**-0.5**
VAM				S	**Sn**	**17 28 58.6**	**+1.7**
VAM				AML	AML	17 29 19.0	
	comp=E,783µm,0.7s						
VAM				AML	AML	17 29 21.3	
	comp=N,855µm,0.5s						
IMMV	**Iera Moni Meta**	**1.85**	**327**	P	**Pn**	**17 28 37.5**	**-0.4**
IMMV	**Iera Moni Meta**	**1.85**	**327**	PN	**Pn**	**17 28 37.7**	**-0.3**
RODP	**Rodopos**	**2.03**	**324**	PN	**Pn**	**17 28 40.4**	**-0.1**
KARP	**Karpathos**	**2.29**	**44**	P	**Pn**	**17 28 46.4**	**+2.4**
KARP	**Karpathos**	**2.29**	**44**	P	**Pn**	**17 28 46.4**	**+2.4**
KARP				S	**Sb**	**17 29 14.6**	**-2.2**
KARP	**Karpathos**	**2.29**	**44**	P	**Pn**	**17 28 46.3**	**+2.3**
KARP				S	**Sb**	**17 29 14.7**	**-2.2**
KARP				AML	AML	17 29 41.2	
	comp=N,0.3nm,0.7s						
KARP				AML	AML	17 29 41.2	
	comp=N,0.3nm,0.7s						
KARP				AML	AML	17 29 49.3	
	comp=N,0.2nm,0.9s						
KARP				AML	AML	17 29 49.3	
	comp=N,0.2nm,0.9s						
SLUM	**Salum**	**2.42**	**180**	P	**Pb**	**17 28 49.8**	**-1.4**
	baz=185						
SANT	**Santorini**	**2.46**	**5**	PN	**Pn**	**17 28 45.5**	**-0.9**
ANKY	**Antikythira Is**	**2.50**	**322**	P	**Pn**	**17 28 46.3**	**-0.7**
THT2	**Imerovigli**	**2.52**	**4**	PN	**Pn**	**17 28 46.5**	**-0.7**
KTHA	**Kythira Island**	**2.93**	**324**	P	**Pn**	**17 28 53.0**	**+0.2**
KTHA	**Kythira Island**	**2.93**	**324**	PN	**Pn**	**17 28 52.9**	**+0.1**
APE	**Apeiranthos**	**3.16**	**5**	PN	**Pn**	**17 28 54.9**	**-1.1**
ARG	**Arkhangelos**	**3.31**	**45**	P	**Pn**	**17 29 00.5**	**+2.3**
ARG	**Arkhangelos**	**3.31**	**45**	PN	**Pn**	**17 28 58.7**	**+0.6**
ARG	**Arkhangelos**	**3.31**	**45**	P	**Pn**	**17 29 00.4**	**+2.3**
VLI	**Veliai**	**3.36**	**327**	P	**Pn**	**17 28 58.8**	**0.0**
DAT	**Datca**	**3.41**	**34**	PN	**Pn**	**17 28 59.7**	**+0.2**
DALY	**Dalyan (Mula)**	**4.04**	**43**	PN	**Pn**	**17 29 09.4**	**+1.4**
TURN	**Turunc**	**4.05**	**42**	PN	**Pn**	**17 29 05.1**	**-3.0**
FETY	**Fethiye**	**4.17**	**48**	PN	**Pn**	**17 29 10.7**	**+0.8**
ITM	**Ithomi**	**4.22**	**321**	PN	**Pn**	**17 29 11.3**	**+0.7**
KSL	**Kastellorizon**	**4.22**	**57**	P	**Pn**	**17 29 11.8**	**+1.2**
KSL	**Kastellorizon**	**4.22**	**57**	P	**Pn**	**17 29 11.8**	**+1.2**
KSL				S	**Sn**	**17 30 01.6**	**+2.8**
AKAS	**Kas**	**4.28**	**56**	PN	**Pn**	**17 29 13.4**	**+1.9**
AYDB	**Zeytinkoy-Aydi**	**4.57**	**28**	PN	**Pn**	**17 29 16.2**	**+0.7**
SWA2		**4.66**	**177**	P	**Pn**	**17 29 20.6**	**+4.0**
	baz=179						
SWA2				AMP		17 30 00.0	
	baz=179						
SWA2				S	**Sn**	**17 30 12.0**	**+2.3**
	baz=179						
ELL	**Elmali**	**4.77**	**52**	P	**Pn**	**17 29 20.8**	**+2.6**
KLV	**Kalavryta, Ach**	**4.81**	**330**	P	**Pn**	**17 29 17.9**	**-0.9**
HBRG	**Burj al `Arab**	**5.14**	**129**	S	**Sn**	**17 30 19.9**	**-1.6**
	baz=130						
HBRG				AMP		17 30 00.0	
	baz=130						
AKMS	**Akamas**	**5.98**	**77**	P	**Pn**	**17 29 35.4**	**+0.6**
AKMS				AML	AML	17 30 38.9	
	comp=N,0.1nm,0.3s						
ALFC	**Alefka**	**6.22**	**76**	P	**Pn**	**17 29 38.3**	**+0.3**
ALFC				AML	AML	17 30 52.4	
	comp=N,0.1nm,0.3s						
SZAC	**Souni**	**6.40**	**80**	P	**Pn**	**17 29 41.1**	**+0.6**
SZAC				S	**Sn**	**17 30 52.8**	**+0.3**
ASGA	**Asgata**	**6.70**	**80**	P	**Pn**	**17 29 45.8**	**+1.2**
CSS	**Mathiatis**	**6.79**	**79**	P	**Pn**	**17 29 46.1**	**+0.3**
CSS	**Mathiatis**	**6.79**	**79**	Pn	**Pn**	**17 29 47.2**	**+1.4**
HSAF	**As Saff**	**6.89**	**127**	P	**Pn**	**17 29 50.9**	**+3.6**
	baz=127						
GLL	**Jalalah**	**7.02**	**126**	P	**Pn**	**17 29 51.9**	**+2.9**
	baz=127						
HFRF	**Wahat Farafira**	**7.25**	**158**	P	**Pn**	**17 29 55.5**	**+3.3**
	baz=159						
HFRF				S	**Sn**	**17 31 12.7**	**-0.8**
	baz=159						
NBNS	**Bani Suef**	**7.41**	**134**	P	**Pn**	**17 29 57.8**	**+3.4**
	baz=134						
NBNS				S	**Sn**	**17 31 15.6**	**-1.8**
	baz=134						
RSH		**7.77**	**110**	P	**Pn**	**17 30 00.5**	**+1.1**
	baz=110						
KZIT	**Kziot**	**8.32**	**109**	Pn	**Pn**	**17 30 08.6**	**+1.7**
SLTI	**Sal'it**	**8.41**	**99**	Pn	**Pn**	**17 30 10.5**	**+2.3**
AMAZ	**Amatzia**	**8.51**	**104**	Pn	**Pn**	**17 30 11.9**	**+2.4**
AMAZ				Sn	**Sn**	**17 31 42.3**	**-2.2**
MMAI	**Mount Meron Ar**	**8.56**	**93**	Pn	**Pn**	**17 30 11.5**	**+1.3**
	comp=N,1.1nm,0.3s,baz=263,slow=12,SNR=5.7						
MMAI				Sn	**Sn**	**17 31 42.6**	**-3.2**
	comp=N,4.1nm,0.3s,baz=270,slow=18,SNR=9.1						
MMLI	**Mount Malkishu**	**8.68**	**97**	Pn	**Pn**	**17 30 14.0**	**+2.1**
YTIR	**Yattir**	**8.73**	**104**	Pn	**Pn**	**17 30 14.4**	**+1.8**
YTIR				Sn	**Sn**	**17 31 46.9**	**-3.0**
NATI	**Neve Ativ**	**8.80**	**91**	Pn	**Pn**	**17 30 15.3**	**+1.8**
HMDT	**Nahal Hemdat**	**8.81**	**98**	Pn	**Pn**	**17 30 16.0**	**+2.4**
HMDT				Sn	**Sn**	**17 31 48.1**	**-3.7**
DSI	**Dead Sea**	**8.88**	**102**	Pn	**Pn**	**17 30 16.7**	**+2.2**
PRNI	**Paran**	**9.03**	**110**	Pn	**Pn**	**17 30 19.4**	**+2.8**
GHAJ	**Ghor Haditha**	**9.11**	**104**	Pn	**Pn**	**17 30 19.7**	**+2.0**
GHAJ				Sn	**Sn**	**17 31 56.1**	**-3.1**
HRFI	**Mount Harif**	**9.19**	**112**	Pn	**Pn**	**17 30 21.6**	**+2.7**
MBRI	**Mt Berech**	**9.21**	**114**	Pn	**Pn**	**17 30 21.6**	**+2.4**
EIL	**Elat**	**9.30**	**114**	Pn	**Pn**	**17 30 22.4**	**+2.1**
	comp=N,0.8nm,0.3s,baz=308,slow=2.7,SNR=22						
EIL				Sn	**Sn**	**17 32 01.9**	**-2.1**
	comp=N,1.5nm,0.3s,baz=118,slow=2.3,SNR=7.1						
EIL	**Elat**	**9.30**	**114**	Pn	**Pn**	**17 30 22.4**	**+2.1**
EIL				Sn	**Sn**	**17 32 01.5**	**-2.4**
ASF	**Jabal al Asfar**	**9.96**	**97**	Pn	**Pn**	**17 30 30.7**	**+1.3**
	comp=N,0.3nm,0.3s,baz=180,slow=7.1,SNR=2.1						
ASF				Sn	**Sn**	**17 32 19.6**	**-0.6**
	comp=N,0.3nm,0.3s,baz=209,slow=10,SNR=2.6						
AKASG	**Malin Array Be**	**17.03**	**9**	Pn	**Pn**	**17 32 03.0**	**-1.1**
	comp=N,0.9nm,0.3s,baz=198,slow=11,SNR=4.7						
GERES	**GERESS Array B**	**17.21**	**334**	Pn	**Pn**	**17 32 05.3**	**-1.1**
	comp=N,0.2nm,0.3s,baz=147,slow=12,SNR=8.6						
HFS	**Hagfors**	**27.30**	**347**	P	**P**	**17 33 48.7**	**-1.2**
	comp=N,3.4nm,0.9s,baz=148,slow=9.5,SNR=6.1						
FINES	**FINESS Array B**	**27.55**	**1**	P	**P**	**17 33 49.4**	**-2.8**
	comp=N,3.1nm,1.1s,baz=167,slow=8.4,SNR=4.6						
TORD	**Torodi Ar. Bea**	**29.74**	**232**	P	**P**	**17 34 13.8**	**+1.7**
	comp=N,0.4nm,0.3s,baz=29,slow=8.3,SNR=6.0						
ARCES	**ARCESS Array B**	**35.67**	**0**	P	P	17 35 00.5	-2.8
	comp=N,1.5nm,0.8s,baz=169,slow=9.7,SNR=4.5						
MKAR	**Makanchi Array**	**44.43**	**55**	P	**P**	**17 36 17.6**	**+1.3**
	comp=N,0.8nm,0.5s,baz=266,slow=8.2,SNR=20						
ZALV	**Zalesovo Beam**	**45.84**	**45**	P	**P**	**17 36 27.5**	**+0.2**
	comp=N,1.0nm,0.3s,baz=255,slow=7.0,SNR=3.7						
SONM	**Songino Array**	**60.24**	**50**	P	**P**	**17 38 14.8**	**+1.1**
	comp=N,0.3nm,0.7s,baz=300,slow=6.3,SNR=2.7						

*HEL **11** 18:05:20.9±0.0, 67.°08N×20.°93E, h0km, ML2.1, ML2.1(UPP), Explosion*
*UPP **11** 18:05:20.3±0.1, 67.°08N×20.°94E, h0km, ML2.1, Explosion*
*NAO **11** 18:05:20.7±0.8, 67.°08N×21.°04E, ML2.5*
*IDC **11** 18:05:21.1±1.0, 67.°06N×20.°98E, h0km, mb1 2.9/3, mb1mx2.8/33, mbtmp2.8/3, ML2.0/3, Error ellipse: s-maj=16.3km s-min=8.4km az=107.0*
*BER **11** 18:05:23.1±3.0, 67.°06N×20.°96E, h0km, ML1.6, ML2.5(NAO), Suspected explosion*
ISC 11 18:05:20.2±0.7,**67.°07N**±0.°02×**20.°93E**±0.°02,**h0**km,**n70**, σ1s.01/103,**Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.15**	**292**	P	**Pg**	**18 05 23.5**	**+0.4**
DUNU				S	**Sg**	**18 05 25.4**	**+0.3**
DUNU	**Dundret**	**0.15**	**292**	*i* P	**Pg**	**18 05 23.5**	**+0.4**
DUNU				*i* S	**Sg**	**18 05 25.4**	**+0.3**
MASU	**Masugnsbyn**	**0.57**	**46**	P	**Pg**	**18 05 31.0**	**-0.1**
MASU	**Masugnsbyn**	**0.57**	**46**	*i* P	**Pg**	**18 05 31.0**	**-0.1**
ERTU	**Ertsjaerv**	**0.72**	**135**	P	**Pg**	**18 05 33.9**	**+0.1**
ERTU				S	**Sb**	**18 05 45.3**	**-0.6**
ERTU	**Ertsjaerv**	**0.72**	**135**	*i* P	**Pg**	**18 05 33.9**	**+0.1**
ERTU				*i* S	**Sb**	**18 05 45.3**	**-0.6**
PAJU	**Pajala**	**0.86**	**92**	P	**Pg**	**18 05 36.2**	**-0.3**
PAJU	**Pajala**	**0.86**	**92**	*i* P	**Pg**	**18 05 36.2**	**-0.3**
HARU	**Harads**	**0.91**	**179**	P	**Pg**	**18 05 37.3**	**-0.1**
HARU	**Harads**	**0.91**	**179**	*e*P	**Pg**	**18 05 37.3**	**-0.1**
RATU	**Laukkuluspa**	**0.92**	**326**	P	**Pg**	**18 05 37.3**	**-0.5**
RATU	**Laukkuluspa**	**0.92**	**326**	*e*P	**Pg**	**18 05 37.3**	**-0.5**
KUA	**Kurravaara**	**0.92**	**346**	P	**Pg**	**18 05 37.2**	**-0.6**
KUA				S	**Sg**	**18 05 50.1**	**+0.4**
KUA	**Kurravaara**	**0.92**	**346**	*e*P	**Pg**	**18 05 37.2**	**-0.6**
KUA				*e*S	**Sg**	**18 05 50.1**	**+0.4**
SALU	**Saltoluokta**	**0.99**	**290**	*e*P	**Pn**	**18 05 41.4**	**+0.1**
SALU				*e*S	**Sn**	**18 05 55.6**	**-0.5**

LANU Lannavaara 1.07 22 P Pg 18 05 39.7 -1.0
LANU Lannavaara 1.07 22 eP Pg 18 05 39.5 -1.1
LANU eSB Sg 18 05 55.1 +0.7
SJUU Sjulsmark 1.59 170 P Pn 18 05 49.6 +0.1
SJUU Sjulsmark 1.59 170 eP Pn 18 05 49.6 +0.1
TOF Tornio 1.68 125 ePG Pn 18 05 51.1 +0.4
baz=308
TOF MSG 18 06 10.6
comp=Z,20nm,0.2s
TOF eSN Sg 18 06 15.1 +1.1
HEF Hetta 1.70 36 Pg Pn 18 05 50.7 -0.4
HEF Lg Lg 18 06 13.0
HEF Hetta 1.70 36 eP Pn 18 05 50.7 -0.4
HEF MSG 18 06 10.6
comp=Z,16nm,0.2s
HEF eSN Sn 18 06 13.7 +0.1
HEF Hetta 1.70 36 eP Pn 18 05 50.9 -0.2
HEF eS Sn 18 06 13.6 0.0
LILU Lilltraesk 1.84 194 P Pn 18 05 53.5 +0.6
LILU Lilltraesk 1.84 194 eP Pn 18 05 53.5 +0.6
KIF Kilpisjarvi 1.95 359 Pn Pb 18 05 56.0 -0.5
KIF Lg Lg 18 06 22.3
KIF Kilpisjarvi 1.95 359 ePG Pb 18 05 56.3 -0.2
baz=175
KIF MSG 18 06 19.6
comp=Z,22nm,0.2s
KIF eSG Sg 18 06 22.6 -0.1
KIF Kilpisjarvi 1.95 359 eP Pb 18 05 56.3 -0.2
KIF eS Sn 18 06 20.4 +0.8
RNF Rovaniemi 2.06 100 ePB Pn 18 05 57.0 +1.0
RNF eSG Sb 18 06 24.6 0.0
KTK1 Kautokeino 2.14 23 Pn Pn 18 05 58.2 +1.1
KTK1 Lg Lg 18 06 27.4
KTK1 Kautokeino 2.14 23 eP Pn 18 05 58.0 +0.9
KTK1 eS Sn 18 06 22.2 -2.1
KTK1 IAML 18 06 29.7
comp=Z,7.7nm,0.3s
SGF Sodankyl 2.21 78 eP Pn 18 05 59.0 +1.0
baz=259
SGF eSG Sb 18 06 29.0 +0.3
STEI Steigen 2.35 294 Pn Pn 18 06 00.6 +0.7
STEI Sn Sn 18 06 31.0 +1.4
STEI Steigen 2.35 294 eP Pn 18 06 00.7 +0.7
STEI IAML 18 06 39.4
comp=Z,5.7nm,0.7s
BURU Burvik 2.50 176 P Pn 18 06 03.4 +1.3
BURU Burvik 2.50 176 eP Pn 18 06 03.3 +1.3
baz=357
MOR8 Moi Rana 2.74 254 Pn Pn 18 06 06.3 +0.9
MOR8 Moi Rana 2.74 254 eP Pn 18 06 05.7 +0.4
MOR8 IAML 18 06 47.9
comp=Z,5.6nm,0.3s
OUL Oulu 2.84 132 ePB Pb 18 06 09.7 -1.9
OBF0 Syolatti, Pyha 2.92 151 ePB Pb 18 06 11.0 -1.9
ARCES ARCESS Array B 3.01 32 Pn Pn 18 06 09.7 +0.7
comp=Z,0.4nm,0.3s,baz=211,slow=14,SNR=80
ARCES Sn Sn 18 06 48.1 +2.4
comp=Z,0.9nm,0.3s,baz=225,slow=22,SNR=10
ARE0 ARCESS Array S 3.01 32 eP Pn 18 06 09.4 +0.4
baz=212
ARE0 eS Sn 18 06 45.6 -0.1
ARA0 ARCESS Array S 3.01 32 Pn Pn 18 06 09.3 +0.3
baz=214,slow=14
ARA0 Sn Sn 18 06 47.3 +1.6
baz=205,slow=28
ARA0 ARCESS Array S 3.01 32 Pn Pn 18 06 09.3 +0.3
baz=214,slow=14
ARA0 Sn Sn 18 06 47.3 +1.6
baz=205,slow=28
OUF Merijarvi 3.13 148 ePB Pb 18 06 16.1 -0.5
OUF MSG 18 06 53.0
comp=Z,3.0nm,0.2s
KONS Konsvik 3.15 263 eP Pn 18 06 12.2 +1.3
UMAU Umeaa 3.20 182 eP Pn 18 06 12.6 +1.0
VRF Varrio 3.42 74 eP Pn 18 06 16.1 +1.5
VRF eSG Sb 18 07 05.3 +1.7
MSF Maaselka 3.45 106 eP Pn 18 06 17.6 +2.5
KEV Kevo 3.51 37 Pn Pn 18 06 15.8 -0.1
KEV Sn Sn 18 06 59.4 +1.4
KEV Kevo 3.51 37 eP Pn 18 06 16.2 +0.2
KEV eS Sn 18 06 59.5 +1.4
KEV Kevo 3.51 37 eP Pn 18 06 16.0 +0.1
KEV eS Sn 18 06 55.2 -2.9
HAMF Hammerfest 3.73 14 eP Pn 18 06 20.6 +1.8
HAMF eS Sn 18 07 02.9 -0.5
HAMF IAML 18 07 29.9
comp=Z,5.2nm,0.6s
KU6 Riekki 3.73 102 eP Pn 18 06 20.0 +1.1
baz=286
HUSU Husum 3.81 192 eP Pn 18 06 21.1 +1.1
baz=8.0
HUSU eS Sn 18 07 06.4 +1.1
VAF Ylistaro 4.11 169 eP Pn 18 06 25.7 +1.6
NOD Norderasen 4.44 218 eP Pn 18 06 29.1 +0.4
NSS Namsos 4.48 240 eP Pn 18 06 31.4 +2.2
NSS IAML 18 07 29.5
comp=Z,1.9nm,0.2s
APA0 Apatity Array 4.70 78 Pn Pn 18 06 33.2 +1.0
baz=266,slow=10
APA0 Sn Sn 18 07 26.2 -1.1
baz=278,slow=28
APA0 Lg Lg 18 07 45.9
baz=270,slow=22
APA0 Apatity Array 4.70 78 Pn Pn 18 06 33.2 +1.0
baz=266,slow=10
APA0 Sn Sn 18 07 26.2 -1.1
baz=278,slow=28
FIA0 FINESS Array S 6.07 156 Pn Pn 18 06 52.2 +1.2
baz=341,slow=16
FIA0 Sn Sn 18 08 00.3 -0.8
baz=349,slow=28
FIA0 FINESS Array S 6.07 156 Pn Pn 18 06 52.2 +1.2
baz=341,slow=16
FIA0 Sn Sn 18 08 00.3 -0.8
baz=349,slow=28
FINES FINESS Array B 6.07 156 Pn Pn 18 06 52.0 +1.0
comp=Z,0.1nm,0.3s,baz=342,slow=12,SNR=8.5
FINES Sn Sn 18 08 01.9 +0.8
comp=Z,0.2nm,0.3s,baz=342,slow=22,SNR=6.9
FINES Lg Lg 18 08 31.5
comp=Z,0.2nm,0.3s,baz=350,slow=34,SNR=3.0
NB2 NORSAR Subarra 7.39 220 Pn Pn 18 07 09.2 +0.1
baz=22,slow=12
NB2 NORSAR Subarra 7.39 220 Pn Pn 18 07 09.2 +0.1
baz=22,slow=12
NOA NORSAR Array B 7.39 220 Pn Pn 18 07 08.8 -0.4
comp=Z,0.0nm,0.3s,baz=35,slow=14,SNR=6.8
NOA Sn Sn 18 08 31.3 -2.3
comp=Z,0.0nm,0.3s,baz=36,slow=16,SNR=3.3
NRA0 NORESS Array S 7.58 217 Pn Pn 18 07 10.9 -0.8
NRA0 NORESS Array S 7.58 217 Pn Pn 18 07 10.9 -0.8
HFS Hagfors 7.66 208 Pn Pn 18 07 12.4 -0.5
baz=27,slow=14
HFS Hagfors 7.66 208 Pn Pn 18 07 12.4 -0.5
baz=27,slow=14

IDC 11 18:10:11.0±1.0, 67.04N×21.13E, h0km, mb1 2.8/3, mb1mx2.7/39, mbtmp2.7/3, ML2.0/3, Error ellipse: s-maj=16.7km s-min=8.5km az=107.0
NAO 11 18:10:10.5±0.7, 67.08N×21.03E, ML2.6
HEL 11 18:10:10.9±0.1, 67.05N×20.98E, h0km, ML2.4, ML2.7(UPP), Explosion
UPP 11 18:10:10.2±0.1, 67.05N×20.97E, h0km, ML2.7, Explosion
BER 11 18:10:12.8±3.9, 67.10N×20.96E, h0km, ML1.6, Suspected explosion
ISC 11 18:10:10.1±0.7, **67.05N**±0.02×**20.96E**±0.03, **h0km, n51,** σ0.73/76, **Sweden**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DUNU Dundret 0.17 295 P Pg 18 10 13.8 +0.5
DUNU S Sg 18 10 16.6 +1.1
DUNU Dundret 0.17 295 i P Pg 18 10 13.8 +0.5
DUNU i S Sg 18 10 16.6 +1.1
MASU Masugnsbyn 0.57 44 P Pg 18 10 21.2 +0.2
MASU Masugnsbyn 0.57 44 i P Pg 18 10 21.2 +0.2
PAJU Pajala 0.84 91 P Pg 18 10 25.9 -0.3
PAJU Pajala 0.84 91 i P Pg 18 10 25.9 -0.3
HARU Harads 0.89 180 P Pg 18 10 26.8 -0.3
HARU Harads 0.89 180 i P Pg 18 10 26.8 -0.3
KUA Kurravaara 0.94 345 P Pg 18 10 27.6 -0.5
KUA S Sg 18 10 40.6 +0.4
KUA Kurravaara 0.94 345 eP Pg 18 10 27.6 -0.5
KUA eS Sg 18 10 40.6 +0.4
RATU Laukkuluspa 0.94 326 P Pg 18 10 27.6 -0.4
RATU S Sg 18 10 40.6 +0.4
RATU Laukkuluspa 0.94 326 eP Pg 18 10 27.6 -0.4
RATU eS Sg 18 10 40.6 +0.4
LANU Lannavaara 1.08 21 P Pg 18 10 30.1 -0.7
LANU S Sb 18 10 45.9 -0.3
LANU Lannavaara 1.08 21 eP Pg 18 10 30.0 -0.7
LANU eSB Sb 18 10 45.5 -0.7
SJUU Sjulsmark 1.57 170 P Pn 18 10 39.0 -0.2
SJUU S Sg 18 11 00.9 +0.4
SJUU Sjulsmark 1.57 170 eP Pn 18 10 39.0 -0.2
SJUU eS Sg 18 11 00.9 +0.4
HEF Hetta 1.71 36 Pg Pn 18 10 41.1 0.0
HEF Lg Lg 18 11 03.3
HEF Hetta 1.71 36 eP Pn 18 10 40.9 -0.2
HEF MSG 18 11 03.8
comp=Z,20nm,0.2s
HEF eSN Sg 18 11 06.5 +1.6
HEF Hetta 1.71 36 Pg Pn 18 10 41.1 0.0
HEF Sg Sn 18 11 03.3 -0.2
LILU Lilltraesk 1.83 195 P Pn 18 10 43.1 +0.4
LILU Lilltraesk 1.83 195 eP Pn 18 10 43.1 +0.4
KIF Kilpisjarvi 1.96 358 Pn Pn 18 10 46.3 -0.4
KIF Lg Lg 18 11 13.2
KIF Kilpisjarvi 1.96 358 ePB Pb 18 10 46.2 -0.5
KIF MSG 18 11 11.8
comp=Z,35nm,0.2s
KIF eSG Sg 18 11 13.1 0.0
KIF Kilpisjarvi 1.96 358 Pn Pb 18 10 46.3 -0.4
KIF Sg Sg 18 11 13.2 +0.1
KTK1 Kautokeino 2.15 22 Pn Pn 18 10 48.4 +1.3
KTK1 Lg Lg 18 11 16.7
KTK1 Kautokeino 2.15 22 eP Pb 18 10 48.5 -1.2
KTK1 eS Sn 18 11 13.0 -1.4
KTK1 IAML 18 11 19.3
comp=Z,9.7nm,0.3s
SGF Sodankyl 2.20 77 ePB Pn 18 10 48.9 +1.1
baz=260
SGF eSG Sb 18 11 18.6 +0.2
STEI Steigen 2.37 294 Pn Pn 18 10 50.8 +0.6
STEI Lg Lg 18 11 25.1
STEI Steigen 2.37 294 eP Pn 18 10 50.7 +0.6
STEI eS Sn 18 11 20.3 +0.4
STEI IAML 18 11 30.9
comp=Z,4.5nm,0.3s
BURU Burvik 2.48 176 P Pn 18 10 53.0 +1.3
BURU Burvik 2.48 176 eP Pn 18 10 53.0 +1.3
MOR8 Moi Rana 2.75 254 Pn Pn 18 10 55.8 +0.5
MOR8 Moi Rana 2.75 254 eP Pn 18 10 55.8 +0.5
MOR8 IAML 18 11 34.6
comp=Z,8.2nm,0.5s
ARA0 ARCESS Array S 3.01 32 Pn Pn 18 10 59.3 +0.3
baz=209,slow=14
ARA0 ARCESS Array S 3.01 32 Pn Pn 18 10 59.3 +0.3
baz=209,slow=14
ARCES ARCESS Array B 3.01 32 Pn Pn 18 10 59.5 +0.5
comp=Z,0.4nm,0.3s,baz=212,slow=14,SNR=23
ARCES Sn Sn 18 11 37.2 +1.5
comp=Z,0.8nm,0.3s,baz=205,slow=23,SNR=10
UMAU Umeaa 3.18 182 eS Sn 18 11 40.7 +0.8
VRF Varrio 3.41 74 eP Pn 18 11 05.4 +0.9
VRF eSB Sb 18 11 53.5 +0.2
MSF Maaselka 3.44 106 eP Pn 18 11 05.7 +0.9
baz=291
APA0 Apatity Array 4.69 78 Pn Pn 18 11 22.6 +0.6
baz=264,slow=10
APA0 Sn Sn 18 12 16.9 0.0
baz=268,slow=28
APA0 Apatity Array 4.69 78 Pn Pn 18 11 22.6 +0.6
baz=264,slow=10
APA0 Sn Sn 18 12 16.9 0.0
baz=268,slow=28
FIA0 FINESS Array S 6.05 156 Pn Pn 18 11 41.6 +1.0
baz=348,slow=12
FIA0 Sn Sn 18 12 50.8 +0.2
baz=352,slow=28
FIA0 FINESS Array S 6.05 156 Pn Pn 18 11 41.6 +1.0
baz=348,slow=12
FIA0 Sn Sn 18 12 50.8 +0.2
baz=352,slow=28
FINES FINESS Array B 6.05 156 Pn Pn 18 11 41.9 +1.2
comp=Z,0.1nm,0.3s,baz=346,slow=13,SNR=12
FINES Sn Sn 18 12 49.4 -1.2
comp=Z,0.1nm,0.3s,baz=343,slow=22,SNR=4.8
FINES Lg Lg 18 13 19.9
comp=Z,0.2nm,0.3s,baz=342,slow=35,SNR=3.1
NB2 NORSAR Subarra 7.39 220 Pn Pn 18 11 58.4 -0.6
baz=22,slow=16
NB2 NORSAR Subarra 7.39 220 Pn Pn 18 11 58.4 -0.6
baz=22,slow=16
NOA NORSAR Array B 7.39 220 Pn Pn 18 11 58.8 -0.2
comp=Z,0.0nm,0.3s,baz=4.8,slow=15,SNR=5.7
NOA Sn Sn 18 13 21.1 -2.4
comp=Z,0.0nm,0.3s,baz=17,slow=17,SNR=3.2
NRA0 NORESS Array S 7.57 218 Pn Pn 18 12 01.9 +0.3
baz=47,slow=14
NRA0 NORESS Array S 7.57 218 Pn Pn 18 12 01.9 +0.3
baz=47,slow=14
HFS Hagfors 7.66 208 Pn Pn 18 12 02.3 -0.4
baz=33,slow=16
HFS Hagfors 7.66 208 Pn Pn 18 12 02.3 -0.4
baz=33,slow=16

IDC 11 18:12:35.0±8.3, 18.64S×169.27E, h223km±51km, mb3.6/4, mb1 3.7/5, mb1mx3.3/35, mbtmp4.1/5, MS2.7/1, Ms1 2.7/1, ms1mx2.3/26, Error ellipse: s-maj=121.0km s-min=76.5km az=114.0
NEIC 11 18:12:39.1±1.9, 18.64S±0.10×168.7E±0.2, h229km±11km, mb4.4/9, Error ellipse: s-maj=25.0km s-min=14.4km az=93.0
ISC 11 18:12:35.9±1.5, **18.54S**±0.08×**168.9E**±0.2, **h200km, n18,** σ1.66/18, **mb4.3/7, Vanuatu Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 3.49 331 Pn Pn 18 13 33.5 +2.0
DZM Mont Dzumac 4.22 213 P Pn 18 13 41.6 +1.1
2.6nm,0.3s,baz=53,slow=20,SNR=30
DZM S Sn 18 14 34.9 +3.5
0.2nm,0.3s,baz=108,slow=20,SNR=1.8
DZM Mont Dzumac 4.22 213 Pn 18 13 41.3 +0.8
NOUC Port Laguerre 4.32 214 Pn 18 13 42.9 +1.3
URZ Urewera 20.91 162 P P 18 17 05.0 +2.1
URZ IAmb IAmb 18 17 26.8
comp=Z,19nm,1.2s
MLZ Mavora Lakes 26.76 181 P P 18 17 56.5 -0.6
STKA Stephens Creek 27.98 236 P P 18 18 07.6 -0.5
comp=Z,0.9nm,0.6s,baz=56,slow=11,SNR=2.9
STKA Stephens Creek 27.98 236 P P 18 18 07.5 -0.5
TAU Tasmania Unive 30.41 212 P P 18 18 26.3 -3.1
WR0 Warramunga Arr 32.47 262 P P 18 18 46.7 -1.0
WR0 IAmb IAmb 18 19 15.5
comp=Z,11nm,1.5s
WB0 Warramunga Arr 32.62 262 P P 18 18 48.1 -0.9
WB2 Warramunga Arr 32.64 262 P P 18 18 48.1 -1.2
WB2 IAmb IAmb 18 19 04.2
comp=Z,12nm,1.4s
WRA Warramunga Arr 32.66 262 P P 18 18 48.1 -1.2
comp=Z,0.7nm,0.4s,baz=97,slow=8.2,SNR=13
WRA Warramunga Arr 32.66 262 P P 18 18 48.1 -1.2
AS31 Alice Springs 33.02 255 P P 18 18 52.1 -0.4
AS31 IAmb IAmb 18 18 52.4
comp=Z,5.1nm,0.3s
ASAR Alice Springs 33.02 255 P P 18 18 51.8 -0.7
comp=Z,5.3nm,0.4s,baz=83,slow=8.5,SNR=278
GUMO Guam 39.77 322 LR LR 18 37 36.9
comp=Z,10.0nm,18.3s,baz=195,slow=38
FITZ Fitzroy Crossi 41.02 264 P P 18 19 59.9 0.0
comp=Z,2.1nm,0.7s,baz=108,slow=9.6

IDC 11 18:23:53.4±1.7, **10.11S**×**125.12E, h0km, mb3.4/1, mb1 3.4/4, mb1mx3.2/39, mbtmp3.2/4, ML3.1/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/13, Error ellipse: s-maj=101.2km s-min=27.5km az=65.0, Timor Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FITZ Fitzroy Crossi 7.96 176 Pn Pn 18 25 50.9 +0.4
0.2nm,0.3s,baz=346,slow=4.2,SNR=2.4
FITZ Sn Sn 18 27 15.7 -5.5
0.4nm,0.3s,baz=120,slow=20,SNR=3.6
WRA Warramunga Arr 13.22 139 Pn Pn 18 27 03.1 +0.6
0.1nm,0.3s,baz=315,slow=15,SNR=4.9
WRA Sn Sn 18 29 28.0 -2.4
0.1nm,0.3s,baz=297,slow=26,SNR=3.9
ASAR Alice Springs 15.88 149 Pn Pn 18 27 37.2 -1.2
0.1nm,0.3s,baz=323,slow=12,SNR=5.4
ASAR Sn Sn 18 30 28.5 -6.8
0.1nm,0.3s,baz=316,slow=22,SNR=3.1
PMG Port Moresby 21.73 90 LR LR 18 38 47.3
comp=Z,38nm,19.6s,baz=273,slow=41
MKAR Makanchi Array 68.32 330 P P 18 34 56.5 0.0
0.2nm,0.7s,baz=139,slow=5.3,SNR=2.6

ATH 11 18:24:56.5, 38.19N×20.29E, h6km±2km, ML2.6/2, Error ellipse: s-maj=3.0km s-min=1.5km az=66.0
THE 11 18:24:57.5, 38.19N×20.34E, h4km±1km, ML2.3/8, Error ellipse: s-maj=2.1km s-min=0.6km az=110.0
ISC 11 18:24:56.5±1.9, **38.18N**±0.04×**20.29E**±0.09, **h7km**±7km, **n20,** σ0.34/36, **Greece**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF3 Kipouria, Keph 0.05 64 P Pg 18 24 58.0 0.0
KEF3 S Sg 18 24 58.9 -0.3
CHV1 Chavriata, Kef 0.07 88 P Pg 18 24 58.3 0.0
CHV1 S Sg 18 24 59.5 0.0
34μm,0.1s
LXRA Lixouri, Kepha 0.12 81 P Pg 18 24 59.1 +0.1
LXRA S Sg 18 25 00.9 +0.2
LXR1 Lixouri, Cepha 0.12 81 P Pg 18 24 59.1 +0.1
LXR1 S Sg 18 25 01.0 +0.3
9μm,0.2s
KEF4 Livadi, Kephal 0.13 54 P Pg 18 24 59.3 +0.1
KEF4 S Sg 18 25 01.3 +0.2
ARGA Argostoli. Kep 0.15 92 P Pg 18 24 59.7 +0.2
ARGA S Sg 18 25 02.0 +0.4
ARG2 Argostoli 0.15 91 P Pg 18 24 59.9 +0.2
ARG2 S Sg 18 25 01.7 -0.1
6μm,0.1s
KEF2 Argostoli. Kep 0.15 96 P Pg 18 24 59.8 +0.2
KEF2 S Sg 18 25 02.2 +0.4
VLS Valsamata 0.23 91 P Pg 18 25 01.0 -0.2
VLS S Sg 18 25 04.3 0.0
3μm,0.1s
VLS Valsamata 0.23 91 P Pg 18 25 01.0 -0.2
VLS S Sg 18 25 04.4 +0.1
VLS AML AML 18 25 04.5
comp=N,5746μm,0.1s
VLS AML AML 18 25 04.5
comp=E,6707μm,0.1s
VSK1 VASILIKIADES 0.31 43 P Pg 18 25 02.7 +0.1
VSK1 S Sg 18 25 06.5 -0.3
comp=E,658nm,0.1s
KONA Konidatara, Ke 0.33 42 P Pg 18 25 02.9 0.0
KONA S Sg 18 25 07.8 +0.5
FSK Fiskardo 0.35 37 P Pg 18 25 03.2 -0.1
FSK S Sg 18 25 08.5 +0.6
comp=E,485nm,0.1s
FSK Fiskardo 0.35 37 P Pg 18 25 03.0 -0.4
VLMS Volimes, Zakyn 0.42 136 P Pg 18 25 04.7 +0.1
VLMS AML AML 18 25 12.1
comp=E,1596μm,0.2s
VLMS AML AML 18 25 12.2
comp=N,1628μm,0.2s
EVGI Lefkada island 0.52 33 P Pg 18 25 06.5 -0.1
EVGI S Sg 18 25 14.5 +1.0
EVGI Lefkada island 0.52 33 P Pg 18 25 06.3 -0.3
KRI1 kERI 0.67 141 P Pb 18 25 10.5 +0.1
LKD2 Lefkada island 0.67 25 P Pg 18 25 09.8 +0.4
LKD2 S Sb 18 25 19.4 -0.7
comp=N,80nm,0.6s
TSLK Tsoukalades, L 0.70 24 P Pg 18 25 10.3 +0.3
TSLK S Sb 18 25 20.4 -0.6
comp=N,110nm,0.7s

IPEC 11 18:28:29.9±0.2, 50.23N×18.80E, h2km±1km, ML2.6/3, Error ellipse: s-maj=2.2km s-min=1.1km az=168.0
BGR 11 18:28:30.5±0.4, 50.21N×18.77E, h1km, ML3.0/15, Error ellipse: s-maj=6.7km s-min=4.4km az=14.0
VIE 11 18:28:30.1±1.1, 50.34N×18.66E, h0km, mb2.4/3, ml3.0/5, Error ellipse: s-maj=13.5km s-min=5.1km az=156.0 25 km WNW of Katowice Suspected Mining induced.
PRU 11 18:28:30.1±0.0, 50.25N×18.75E, h0km
IDC 11 18:28:31.2±1.0, 50.29N×18.52E, h0km, mb1 3.5/5, mb1mx3.1/40, mbtmp3.3/5, ML2.9/5, Error ellipse: s-maj=21.5km s-min=7.6km az=138.0
ISC 11 18:28:28.9±0.7, **50.22N**±0.03×**18.77E**±0.02, **h0km, n63,** σ1.06/105, **5C-2D, Poland**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
OKC Ostrava-Krasne 0.56 226 ePG Pb 18 28 41.1 -0.4
OKC eSG Sb 18 28 48.1 -1.9
comp=Z,149nm,0.6s
OKC Ostrava-Krasne 0.56 226 ePg Pb 18 28 41.6 +0.1
OJC Ojcow 0.66 90 ePg Pg 18 28 42.2 +0.6
OJC Ojcow 0.66 90 i Pg Pg 18 28 42.1 +0.6
OJC eSg Sg 18 28 51.5 +1.4
MORC Moravsky Berou 0.91 241 ePG Pb 18 28 47.6 +0.1
MORC eSG Sb 18 28 58.7 -1.4
MORC Moravsky Berou 0.91 241 ePg Pb 18 28 47.7 +0.1
MORC eSg Sb 18 29 00.5 +0.4
MORC Moravsky Berou 0.91 241 ⇑P Pb 18 28 47.6 +0.1
MORC Moravsky Berou 0.91 241 ePg Pb 18 28 47.5 +0.1
baz=60
MORC eSg Sb 18 28 58.7 -1.4
96nm,0.3s,baz=60
NIE Niedzica 1.28 129 ePg Pg 18 28 53.9 +0.5
NIE Niedzica 1.28 129 ePg Pg 18 28 53.9 +0.5
NIE eSg Sn 18 29 12.7 +0.8
KRLC Kraliky 1.29 264 ePG Pb 18 28 53.8 +0.3
KRLC eSG Sb 18 29 10.5 -0.5
comp=Z,84nm,0.6s
JAVC Velka Javorina 1.54 208 ePN Pb 18 28 58.6 +0.3
JAVC Velka Javorina 1.54 208 ePn Pb 18 28 58.7 +0.3
JAVC eSg Sn 18 29 19.9 +1.5
JAVC Velka Javorina 1.54 208 ePn Pb 18 28 58.6 +0.3
baz=28
DPC Dobruska-Polom 1.57 276 ePG Pn 18 28 58.6 +0.6
DPC eSG Sb 18 29 20.1 +0.8
comp=Z,70nm,0.5s
DPC Dobruska-Polom 1.57 276 ePn Pb 18 28 58.7 +0.6
DPC eSg Sb 18 29 20.3 +1.0
OSTC Ostas 1.67 282 ePG Pn 18 28 59.9 +0.6
OSTC eSG Sg 18 29 22.6 +0.2
comp=Z,43nm,0.4s
VRAC Vranov 1.68 238 ePN Pb 18 29 00.8 +0.1
VRAC eSG Sg 18 29 23.1 +0.3
VRAC Vranov 1.68 238 Pg Pb 18 29 00.8 +0.1
5.3nm,0.3s,baz=54,slow=16,SNR=29
VRAC Lg Lg 18 29 22.2
19nm,0.3s,baz=68,slow=17,SNR=30
VRAC Vranov 1.68 238 ePn Pb 18 29 00.8 +0.1
VRAC eSn Sg 18 29 22.6 -0.2
VRAC Vranov 1.68 238 ⇓P Pb 18 29 00.8 +0.1
VRAC Vranov 1.68 238 ePn Pb 18 29 00.7 +0.1
baz=56
VRAC eSg Sg 18 29 23.1 +0.3
67nm,0.2s,baz=56
KSP Ksiaz 1.70 292 ePg Pg 18 29 02.0 +0.6
KSP Ksiaz 1.70 292 ePg Pg 18 29 02.2 +0.8
KSP eSg Sg 18 29 24.6 +1.3
VYHS Vyhne 1.73 178 ePN Pb 18 29 00.5 +0.3
VYHS eSN Sb 18 29 24.0 +0.2
CHVC Chvalec 1.77 283 ePG Pn 18 29 01.5 +0.7
CHVC eSG Sb 18 29 25.4 +0.4
comp=Z,40nm,0.6s
UPC Upice 1.79 280 ePG Pb 18 29 02.7 +0.2
UPC eSG Sg 18 29 27.1 +0.9
comp=Z,55nm,0.7s
SMOL Smolenice 1.92 208 ePN Pn 18 29 03.1 +0.3
SMOL eSN Sn 18 29 26.4 -1.3
SMOL eLG Lg 18 29 37.4
KRUC Moravsky 1.93 234 ePn Pn 18 29 03.8 +0.8
KRUC eSG Sg 18 29 30.9 0.0
KRUC Moravsky 1.93 234 ePg Pb 18 29 04.7 -0.2
KRUC eSg Sg 18 29 30.6 -0.2
KRUC Moravsky 1.93 234 ePn Pn 18 29 03.7 +0.8
baz=52

KRUC				eSg	Sg	18 29 30.9	0.0
	42nm,0.4s,baz=52						
MODS	Modra-Piesok	2.09	208	ePN	Pn	18 29 06.5	+1.3
MODS				eSN	Sn	18 29 31.6	-0.3
MODS				eLG	Lg	18 29 51.8	
ZST	Bratislava	2.31	209	ePN	Pn	18 29 07.9	-0.2
ZST				eSN	Sn	18 29 36.5	-0.6
TREC	Trest	2.32	248	eSG	Sg	18 29 42.8	-0.6
	comp=Z,49nm,0.7s						
TREC	Trest	2.32	248	ePn	Pn	18 29 09.2	+0.9
TREC				eSg	Sb	18 29 41.3	+0.5
PSZ	Piszkesteto	2.42	162	⇑P	Pn	18 29 10.4	+0.6
GOPC	GO Pecny, Ondr	2.58	265	ePN	Pn	18 29 12.4	+0.5
GOPC				ePG	Pb	18 29 16.7	+0.7
GOPC				eSG	Sg	18 29 51.2	-0.6
	comp=Z,50nm,1.0s						
KOLS	Kolonicke sedl	2.62	118	ePN	Pn	18 29 12.3	-0.2
KOLS				eSN	Sn	18 29 44.5	-0.5
KOLS				eLG	Lg	18 30 19.2	
PVCC	Panska Ves	2.71	278	ePN	Pn	18 29 14.3	+0.7
PVCC				eSG	Sg	18 29 56.6	+0.9
	comp=Z,47nm,0.4s						
PVCC	Panska Ves	2.71	278	ePn	Pn	18 29 14.6	+1.1
PVCC				eSg	Sg	18 29 57.2	+1.5
PRU	Pruhonice	2.73	267	ePG	Pb	18 29 18.9	+0.4
PRU				eSG	Sg	18 29 55.5	-1.0
	comp=Z,20nm,0.3s						
PRU	Pruhonice	2.73	267	ePg	Pg	18 29 22.1	+1.0
PRU				eSg	Sg	18 29 54.7	-1.8
PRA	Prague	2.79	268	eSG	Sg	18 29 58.2	-0.3
	comp=Z,37nm,0.6s						
CONA	Conrad Observa	2.99	221	ePn	Pn	18 29 18.5	+1.0
	1.2nm,0.5s						
CONA				eSn	Sn	18 29 54.6	+0.5
	10nm,0.3s						
PBCC	Pribram	3.13	262	ePG	Pb	18 29 26.5	+1.2
PBCC				eSG	Sg	18 30 09.4	+0.1
BRG	Berggiesshubel	3.15	284	ePg	Pg	18 29 29.3	+0.2
BRG				eSg	Sg	18 30 10.6	+0.7
TRPA	Tarpa	3.24	129	⇑P	Pn	18 29 21.5	+0.6
KHC	Kasperske Hory	3.54	254	ePN	Pn	18 29 26.0	+0.9
KHC				eSG	Sg	18 30 22.6	0.0
	comp=Z,41nm,0.5s						
KHC	Kasperske Hory	3.54	254	ePn	Pn	18 29 25.9	+0.7
KHC				ePg	Pg	18 29 36.5	-0.3
GERES	GERESS Array B	3.58	249	Pn	Pn	18 29 26.6	+1.0
	0.3nm,0.3s,baz=66,slow=15,SNR=6.3						
GERES				Sn	Sn	18 30 07.6	-1.0
	1.9nm,0.3s,baz=56,slow=23,SNR=6.9						
GERES				Lg	Lg	18 30 20.8	
	5.1nm,0.3s,baz=66,slow=27,SNR=9.2						
ARSA	Arzberg	3.67	217	Pn	Pn	18 29 28.5	+1.6
	1.1nm,0.3s						
MOA	Molln	3.80	233	ePn	Pn	18 29 30.1	+1.5
	0.4nm,0.1s						
MOA				Sg	Sg	18 30 28.9	-1.8
	16nm,0.5s						
CLL	Collm	3.82	289	ePg	Pg	18 29 43.0	+1.0
CLL				eSg	Sg	18 30 30.0	-1.4
	comp=Z,107nm,1.9s						
CLL	Collm	3.82	289	eSg	Sg	18 30 31.5	+0.1
NKC	Novy Kostel	4.06	273	eSG	Sg	18 30 38.3	-0.8
	comp=Z,19nm,0.6s						
BURAR	Bucovina Array	4.99	119	⇓P	Pn	18 29 45.7	+0.6
BZS	Buzias	4.99	156	⇑P	Pn	18 29 45.8	+0.8
BSD	Bornholm Skovb	5.43	336	iP	Pn	18 29 51.2	+0.2
BSD				iS	Sn	18 30 48.6	-5.5
GZR	Gura Zlata	5.54	149	⇑P	Pn	18 29 53.7	+1.1
AKASG	Malin Array Be	6.70	82	Pn	Pn	18 30 09.6	+1.3
	comp=Z,0.4nm,0.3s,baz=270,slow=12,SNR=3.1						
AKASG				Sn	Sn	18 31 21.0	-4.2
	comp=Z,0.6nm,0.3s,baz=269,slow=23,SNR=3.0						
AKASG				Lg	Lg	18 32 02.2	
	comp=Z,1.1nm,0.3s,baz=275,slow=26,SNR=5.4						
DAVOX	Davos/Dischmat	6.83	243	Pn	Pn	18 30 11.2	+0.7
	comp=Z,0.3nm,0.3s,baz=12,slow=19,SNR=3.4						
DAVOX				Sn	Sn	18 31 27.3	-1.7
	comp=Z,0.2nm,0.3s,baz=248,slow=19,SNR=2.3						
DAVOX				Lg	Lg	18 32 08.9	
	comp=Z,0.9nm,0.3s,baz=156,slow=23,SNR=5.1						
FINES	FINESS Array B	11.96	17	Pn	Pn	18 31 17.1	-3.3
	comp=Z,0.2nm,0.3s,baz=206,slow=12,SNR=8.1						
FINES				Sn	Sn	18 33 23.0	-11
	comp=Z,0.4nm,0.3s,baz=198,slow=21,SNR=8.7						
ARCES	ARCESS Array B	19.64	7	Pn	P	18 32 58.0	-0.8
	comp=Z,0.1nm,0.3s,baz=196,slow=13,SNR=5.8						

SOME 11 18:34:48.9,41°.50N×79°.22E,h15km
NNC 11 18:34:50.5±1.0,41°.55N×79°.19E,h0km,mb3.6,mpv3.3,
Error ellipse: s-maj=7.2km s-min=3.9km az=159.0
KRNET 11 18:34:51.2±0.1,41°.57N×79°.15E,h9km,mb3.0
ISC 11 18:34:51.3±1.6,41°.55N±0°.07×79°.18E±0°.05,h10km,n58,
σ1§77/95,27C-17D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.09	328	⇑iP	Pg	18 35 11.2	-1.1
	baz=29						
PRZ				⇑iS	Sb	18 35 26.4	-0.4
	baz=29						
UZB	Uzynbulak	1.60	356	eP	Pn	18 35 19.6	-0.1
	6.6nm,0.2s						
UZB				eS	Sg	18 35 42.3	-0.3
	27nm,0.2s						
UZB	Uzynbulak	1.60	356	P	Pn	18 35 19.6	-0.1
	6.6nm,0.2s						
UZB				S	Sg	18 35 42.3	-0.3
	39nm,0.3s						
KDJ	Kajisay	1.60	292	⇑iP	Pb	18 35 20.8	-0.2
	baz=91						
KDJ				⇑iS	Sg	18 35 41.9	-0.8
	baz=91						
SHLS	Shalkode	1.62	7	eP	Pb	18 35 21.1	-0.2
	22nm,0.2s						
SHLS				eS	Sg	18 35 44.3	+1.0
	221nm,0.4s						
SHLS	Shalkode	1.62	7	P	Pb	18 35 21.1	-0.2
	22nm,0.2s						
SHLS				S	Sg	18 35 44.3	+1.0
	221nm,0.4s						
ANVS	Anan'yevo	1.66	318	⇑iP	Pb	18 35 22.0	-0.1
	baz=18						
ANVS				⇑iS	Sg	18 35 44.6	-0.2
	baz=18						
ZHN	Zhinishke	1.70	341	eP	Pb	18 35 21.8	-1.0
	14nm,0.2s						
ZHN				eS	Sg	18 35 45.5	-0.6
	35nm,0.2s						
PDGK	Podgornoye	1.79	7	⇓Pg	Pn	18 35 22.8	+0.4
	6.1nm,0.4s						
PDGK				⇓Lg	Lg	18 35 49.3	
	69nm,0.7s						
KPKS	Kokpek	1.95	349	eP	Pb	18 35 26.0	-0.9
	40nm,0.1s						
KPKS				eS	Sg	18 35 52.8	-1.1
	151nm,0.4s						
KURS	Kuram	2.07	339	eP	Pb	18 35 28.8	-0.2
	16nm,0.5s						
KURS				eS	Sg	18 35 57.2	-0.6
	39nm,0.3s						
KURS	Kuram	2.07	339	Pg	Pb	18 35 28.8	-0.2
	16nm,0.5s						
KURS				Lg	Lg	18 35 57.2	
	39nm,0.3s						
TNSS	Tian-Shan	2.22	313	⇑iP	Pb	18 35 31.7	0.0
	15nm,0.2s						
TNSS				eS	Sg	18 36 02.3	-0.4
	33nm,0.2s						
TNSS	Tian-Shan	2.22	313	Pg	Pb	18 35 31.7	0.0
	15nm,0.2s						
TNSS				Lg	Lg	18 36 02.3	
	33nm,0.2s						
MDOK	Medeo	2.25	316	eP	Pb	18 35 32.0	-0.2
	9.9nm,0.2s						
MDOK				eS	Sg	18 36 02.8	-0.9
	52nm,0.7s						
MDOK	Medeo	2.25	316	⇑Pg	Pb	18 35 31.9	-0.2
	7.4nm,0.5s						
MDOK				Lg	Lg	18 36 02.7	
	55nm,0.7s						
MDOK	Medeo	2.25	316	Pg	Pb	18 35 32.0	-0.2
	9.9nm,0.2s						
MDOK				Lg	Lg	18 36 02.8	
	52nm,0.7s						
KOTS	Kotyrbulak	2.27	318	eP	Pb	18 35 32.7	+0.2
	35nm,0.2s						
KOTS				eS	Sg	18 36 04.0	-0.3
	120nm,0.5s						
KOTS	Kotyrbulak	2.27	318	Pg	Pb	18 35 32.7	+0.2
	35nm,0.2s						
KOTS				Lg	Lg	18 36 03.9	
	120nm,0.5s						
ULHL	Ulahol	2.30	289	⇓iP	Pb	18 35 32.0	-0.9
	baz=88						
ULHL				⇓iS	Sb	18 36 01.8	+0.3
	baz=88						
KNDC	Almaty	2.33	316	⇑Pg	Pg	18 35 34.4	-1.6
	5.8nm,0.5s						
KNDC				⇓Lg	Lg	18 36 05.6	
	70nm,0.6s						
NRN	Naryn	2.39	268	⇑iP	Pb	18 35 33.1	-1.5
	baz=68						
NRN				⇑iS	Sb	18 36 04.5	+0.3
	baz=68						
IZV	Izvestkoviy	2.41	309	eP	Pb	18 35 34.9	0.0
	14nm,0.4s						
IZV				eS	Sg	18 36 07.9	-0.8
	115nm,0.5s						
IZV	Izvestkoviy	2.41	309	Pg	Pb	18 35 34.9	0.0
	14nm,0.4s						
IZV				Lg	Lg	18 36 07.9	
	115nm,0.5s						
MTBS	Maitube	2.57	309	eP	Pb	18 35 37.7	+0.1
	8.4nm,0.2s						
MTBS				eS	Sg	18 36 12.7	-1.2
	36nm,0.3s						
MTBS	Maitube	2.57	309	Pg	Pb	18 35 37.7	+0.1
	8.4nm,0.2s						
MTBS				Lg	Lg	18 36 12.7	
	36nm,0.3s						
BOOM	Boomskoye usch	2.58	292	⇑iP	Pb	18 35 36.3	-1.5
	baz=92						
BOOM				⇑iS	Sb	18 36 08.4	-1.3
	baz=92						
CHKK	Chushkaly	2.81	326	eP	Pb	18 35 40.9	-0.7
	9.3nm,0.2s						
CHKK				eS	Sg	18 36 18.1	-3.3
	105nm,0.6s						
CHKK	Chushkaly	2.81	326	Pg	Pb	18 35 40.9	-0.7
	9.3nm,0.2s						
CHKK				Lg	Lg	18 36 18.2	
	105nm,0.6s						
KST	Kastek	2.81	303	eP	Pb	18 35 39.9	-1.8
	7.4nm,0.5s						
KST				eS	Sb	18 36 17.4	+1.3
	100nm,0.6s						
KST	Kastek	2.81	303	Pg	Pb	18 35 39.9	-1.8
	7.4nm,0.5s						
KST				Lg	Lg	18 36 17.4	
	100nm,0.6s						
DJR	Jarkent	2.81	9	eP	Pb	18 35 40.5	-1.2
	1.6nm,0.1s						
DJR				eS	Sb	18 36 17.9	+1.6
	18nm,0.3s						
DJR	Jarkent	2.81	9	Pg	Pb	18 35 40.4	-1.2
	1.6nm,0.1s						
DJR				Lg	Lg	18 36 17.9	
	18nm,0.3s						
KTBS	Karatobe	2.83	320	eP	Pb	18 35 42.5	+0.5
	3.5nm,0.2s						
KTBS				eS	Sg	18 36 19.9	-2.4
	45nm,0.4s						
KTBS	Karatobe	2.83	320	Pg	Pb	18 35 42.5	+0.5
	3.5nm,0.2s						
KTBS				Lg	Lg	18 36 19.9	
	45nm,0.4s						
ARXS	Arharly	2.84	340	eP	Pb	18 35 42.0	0.0
	5.6nm,0.5s						
ARXS				eS	Sg	18 36 20.0	-2.4
	23nm,0.3s						
ARXS	Arharly	2.84	340	Pg	Pb	18 35 42.0	0.0
	5.6nm,0.5s						
ARXS				Lg	Lg	18 36 20.0	
	23nm,0.3s						
KZA	Kyzart	2.98	281	⇑iP	Pb	18 35 41.9	-2.8
	baz=81						
KZA				⇑iS	Sb	18 36 18.7	-2.6
	baz=81						
DGS	Degeres	3.03	305	eP	Pb	18 35 43.7	-1.7
	2.2nm,0.3s						
DGS				eS	Sb	18 36 23.2	+0.7
	22nm,0.3s						
DGS	Degeres	3.03	305	Pg	Pb	18 35 43.7	-1.7
	2.2nm,0.3s						
DGS				Lg	Lg	18 36 23.2	
	22nm,0.3s						
KUU	Kurty	3.14	319	eP	Pb	18 35 47.4	+0.3
	2.1nm,0.3s						
KUU				eS	Sg	18 36 29.2	-2.8
	48nm,0.7s						
KBK	Karagaybulak	3.33	291	⇓iP	Pn	18 35 46.7	+3.1
	baz=91						
KBK				⇓iS	Sn	18 36 26.6	+3.2
	baz=91						
KRBS	Karabastau	3.35	311	eP	Pb	18 35 51.4	+0.5
	3.7nm,0.3s						
KRBS				eS	Sg	18 36 36.0	-3.0
	6.3nm,0.4s						
KRBS	Karabastau	3.35	311	Pg	Pb	18 35 51.6	+0.7
	3.7nm,0.3s						
KRBS				Lg	Lg	18 36 36.0	
	6.3nm,0.4s						
UCH	Uchtor	3.54	282	⇑iP	Pn	18 35 49.5	+2.7
	baz=82						
UCH				⇑iS	Sn	18 36 32.0	+3.0
	baz=82						
CHMS	Chumysh	3.59	295	⇑iP	Pn	18 35 49.9	+2.9
	baz=95						
CHMS				⇑iS	Sn	18 36 32.6	+3.2
	baz=95						
CHMS	Chumysh	3.59	295	⇑Pg	Pg	18 35 57.2	-2.8
	2.2nm,0.8s						
CHMS				⇑Lg	Lg	18 36 45.7	
	12nm,0.6s						
AAK	Ala-Archa	3.65	289	⇓eP	Pn	18 35 50.7	+2.8
	baz=89						
AAK				⇓iS	Sn	18 36 34.5	+3.4
	baz=89						
AAK	Ala-Archa	3.65	289	⇑Pg	Pb	18 35 57.0	+1.1
	2.2nm,0.7s						
AAK				⇑Lg	Lg	18 36 48.0	
	7.4nm,0.5s						
KAPS	Kapalarasan	3.73	2	eP	Pb	18 35 57.3	-0.1
	1.7nm,0.4s						
KAPS				eS	Sg	18 36 46.7	-4.4
	6.0nm,0.3s						
KAPS	Kapalarasan	3.73	2	Pg	Pb	18 35 57.3	-0.1
	1.3nm,0.4s						
KAPS				Lg	Lg	18 36 46.7	
	7.3nm,0.4s						
AML	Almayashu	4.13	280	⇓iP	Pn	18 35 57.6	+2.8
	baz=80						
AML				⇓iS	Sn	18 36 46.2	+2.8
	baz=80						
EKS2	Erkin-Say	4.17	287	⇑iP	Pn	18 35 57.9	+2.9
	baz=87						
EKS2				⇑iS	Sn	18 36 46.6	+2.8
	baz=87						
BTLS	Baital	5.11	315	eP	Pb	18 36 23.0	+2.2
	0.5nm,0.2s						
BTLS				eS	Sg	18 37 31.3	-4.1
	3.7nm,0.5s						
BTLS	Baital	5.11	315	Pg	Pb	18 36 23.0	+2.2
	0.5nm,0.2s						
BTLS				Lg	Lg	18 37 31.3	
	3.7nm,0.5s						
MAKZ	Makanchi	5.63	20	⇑Pn	Pn	18 36 16.7	+1.7
	2.5nm,1.4s						
MAKZ				⇓Sn	Sn	18 37 20.2	+0.5
	2.2nm,1.2s						
MAKZ				⇓Lg	Lg	18 37 49.9	
	0.9nm,0.7s						
MK31	Makanchi Array	5.70	22	⇑Pn	Pn	18 36 18.2	+2.3
	0.2nm,0.3s,baz=202,slow=13,SNR=13						
MK31				⇓Sn	Sn	18 37 22.5	+1.1
	0.8nm,0.6s						
MK31				⇓Lg	Lg	18 37 50.9	
	0.8nm,0.5s						
KK31	Karatay Array	6.61	286	⇓Pg	Pg	18 36 53.2	-4.5
	0.2nm,0.5s,baz=100,slow=15						
KK31				⇓Lg	Lg	18 38 23.2	
	1.6nm,0.6s,baz=99,slow=28,SNR=8.1						

KRNET 11 18:51:03.9±0.1,39°.02N×78°.07E,mb3.1
SOME 11 18:51:05.1,39°.48N×78°.20E,h5km
NNC 11 18:51:06.2±1.7,39°.51N×78°.12E,h0km,mb3.6,mpv3.2,
Error ellipse: s-maj=11.2km s-min=9.5km az=167.0
ISC 11 18:51:04.6±3.1,39°.5N±0°.1×78°.12E±0°.05,h15km,n30,
σ2§27/48,13C-8D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn	2.56	321	⇓iP	Pg	18 51 52.3	-1.4
	baz=27						
NRN				⇓iS	Sg	18 52 27.9	+1.1
	baz=27						
KDJ	Kajisay	2.77	345	⇑iP	Pg	18 51 56.7	-1.0
	baz=48						
KDJ				⇑iS	Sg	18 52 34.8	+1.1
	baz=48						
PRZ	Przheval'sk	3.04	4	⇑iP	Pb	18 52 00.5	+2.0
	baz=4.0						
PRZ				⇑iS	Sg	18 52 41.6	-0.7
	baz=4.0						
ULHL	Ulahol	3.14	334	⇓eP	Pb	18 52 01.3	+1.1
	baz=37						
ULHL				⇓iS	Sg	18 52 43.4	-1.9
	baz=37						
ANVS	Anan'yevo	3.35	354	⇑iP	Pb	18 52 05.0	+1.2
	baz=56						
ANVS				⇑iS	Sg	18 52 49.6	-2.6
	baz=56						
KZA	Kyzart	3.41	321	⇓iP	Pb	18 52 05.4	+0.4
	baz=26						
KZA				⇓iS	Sb	18 52 50.1	+3.7
	baz=26						
BOOM	Boomskoye usch	3.46	332	⇑iP	Pb	18 52 05.8	+0.2
	baz=36						
BOOM				⇑iS	Sb	18 52 50.8	+3.3
	baz=36						
TNSS	Tian-Shan	3.69	347	eP	Pg	18 52 13.8	-1.6
	3.3nm,0.3s						
TNSS				eS	Sg	18 53 03.3	+0.1
	7.4nm,0.4s						
TNSS	Tian-Shan	3.69	347	Pg	Pg	18 52 13.8	-1.6
	3.3nm,0.3s						
TNSS				Lg	Lg	18 53 03.3	
	7.4nm,0.4s						
UZB	Uzynbulak	3.76	10	eP	Pg	18 52 13.9	-2.6
	2.1nm,0.2s						
UZB				eS	Sg	18 53 03.9	-1.4
	8.2nm,0.3s						
UZB	Uzynbulak	3.76	10	Pg	Pg	18 52 13.9	-2.6
	2.1nm,0.2s						
UZB				Lg	Lg	18 53 03.9	
	8.2nm,0.3s						
MDOK	Medeo	3.80	348	eP	Pg	18 52 15.7	-1.6
	3.5nm,0.7s						
MDOK				eS	Sg	18 53 06.7	+0.1
	6.5nm,0.6s						
MDOK	Medeo	3.80	348	⇓Pg	Pg	18 52 14.6	-2.7
	11nm,1.4s						
MDOK				⇑Lg	Lg	18 53 05.2	
	9.9nm,0.7s						
SHLS	Shalkode	3.84	15	eP	Pg	18 52 17.4	-0.7
	4.9nm,0.4s						
SHLS				eS	Sg	18 53 10.0	+2.0
	17nm,0.6s						
SHLS	Shalkode	3.84	15	Pg	Pg	18 52 17.4	-0.7
	4.9nm,0.4s						
SHLS				Lg	Lg	18 53 10.0	
	17nm,0.6s						
KOTS	Kotyrbulak	3.86	349	eP	Pg	18 52 16.6	-1.9
	4.6nm,0.3s						
KOTS				eS	Sg	18 53 08.0	-0.4
	8.3nm,0.5s						
KOTS	Kotyrbulak	3.86	349	Pg	Pg	18 52 16.6	-1.9
	4.6nm,0.3s						
KOTS				Lg	Lg	18 53 08.0	
	8.3nm,0.5s						
KST	Kastek	3.94	336	eP	Pg	18 52 17.9	-2.2
	1.7nm,0.3s						
KST				eS	Sg	18 53 10.2	-0.9
	3.6nm,0.7s						
KST	Kastek	3.94	336	Pg	Pb	18 52 17.0	+3.2
	1.7nm,0.3s						
KST				Lg	Lg	18 53 09.5	
	3.6nm,0.7s						
PDGK	Podgornoye	4.01	14	Pg	Pb	18 52 17.3	+2.2
	0.7nm,0.3s						
PDGK				Lg	Lg	18 53 08.9	
	4.0nm,0.5s						
PDGK	Podgornoye	4.01	14	⇑Pg	Pb	18 52 17.0	+1.9
	1.5nm,0.5s						
PDGK				⇓Lg	Lg	18 53 08.8	
	5.8nm,0.5s						
KPKS	Kokpek	4.04	6	eP	Pb	18 52 18.4	+2.9
	3.9nm,0.2s						
KPKS				eS	Sg	18 53 10.8	-3.3
	20nm,0.5s						
AAK	Ala-Archa	4.20	320	⇑iP	Pb	18 52 16.3	-2.0
	baz=24						
AAK				⇑iS	Sb	18 53 09.0	+0.1
	baz=24						
AAK	Ala-Archa	4.20	320	⇑Pg	Pb	18 52 20.1	+1.8
	3.4nm,1.1s						
AAK				Lg	Lg	18 53 18.6	
	8.9nm,1.0s						
KTBS	Karatobe	4.39	346	eP	Pg	18 52 25.6	-3.1
	1.2nm,0.3s						
KTBS				eS	Sg	18 53 23.5	-2.1
	10.0nm,0.6s						
KTBS	Karatobe	4.39	346	Pg	Pg	18 52 25.7	-3.1
	1.2nm,0.3s						
KTBS				Lg	Lg	18 53 23.5	
	10.0nm,0.6s						
KUU	Kurty	4.64	344	eP	Pb	18 52 29.1	+3.5
	0.8nm,0.2s						
KUU				eS	Sg	18 53 29.8	-3.6
	5.7nm,0.9s						
KUU	Kurty	4.64	344	Pg	Pb	18 52 29.1	+3.5
	0.8nm,0.2s						
KUU				Lg	Lg	18 53 29.8	
	5.7nm,0.9s						
DJR	Jarkent	5.04	14	eP	Pg	18 52 37.5	-3.5
	0.4nm,0.2s						
DJR				eS	Sg	18 53 43.8	-2.4
	3.0nm,0.5s						
DJR	Jarkent	5.04	14	Pg	Pg	18 52 37.5	-3.5
	0.4nm,0.2s						
DJR				Lg	Lg	18 53 43.8	
	3.0nm,0.4s						

IDC 11 19:17:30.7±5.8,3°.67S×140°.56E,h0km,mb3.0/2,
mb1 3.4/3,mb1mx3.3/23,mbtmp3.2/3,ML3.7/1,Error
ellipse: s-maj=215.7km s-min=33.4km az=89.0,Irian
Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.27	200	P	Pn	19 21 33.5	0.0
	0.3nm,0.3s,baz=18,slow=12,SNR=6.3						
ASAR	Alice Springs	20.89	197	P	P	19 22 14.5	-0.3
	0.3nm,0.5s,baz=28,slow=10,SNR=8.3						
MKAR	Makanchi Array	71.68	322	P	P	19 28 54.6	+0.2
	0.2nm,0.7s,baz=99,slow=7.5,SNR=3.6						

IDC 11 20:02:17.2±3.1,18°.39N×146°.53E,h48km±31km,mb3.7/14,
mb1 3.8/15,mb1mx3.7/33,mbtmp3.9/15,ML3.6/2,MS3.4/18,
Ms1 3.4/18,ms1mx3.3/34,Error ellipse: s-maj=25.9km
s-min=14.3km az=91.0
NEIC 11 20:02:18.0±2.0,18°.43N±0°.07×146°.2E±0°.1,h53km±7km,
mb4.8/32,Error ellipse: s-maj=16.8km s-min=10.2km
az=93.0
ISC 11 20:02:18.7±0.5,18°.36N±0°.05×146°.34E±0°.09,h64km,n80,
σ1§40/67,mb4.5/25,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	Sarigan	1.73	198		Pn	20 02 46.7	0.0
ANA2	Anatahan	2.09	197		Pn	20 02 51.6	+0.1
GUMO	Guam	4.95	197	P	Pn	20 03 31.8	+1.3
	18nm,0.3s,baz=14,slow=8.0,SNR=8.3						
GUMO				S	Sn	20 04 27.4	+0.9
	baz=15,slow=20,SNR=2.8						
GUMO				LR	LR	20 05 19.0	
	comp=Z,329nm,22.0s,baz=30,slow=36						

GUMO Guam 4.95 197 Pn 20 03 31.3 +0.8
GUMO Sn 20 04 25.6 -0.9
JHJ2 Mitsune 15.82 330 Pn Pn 20 05 54.9 -2.5
PATS Pohnpei 16.34 133 Pn Pn 20 05 59.9 -4.2
PATS IAmb IAmb 20 06 41.1
comp=Z,123nm,1.2s
H11S3 WAKE ISLAND Hy 19.30 86 T T 20 26 05.5
baz=273,slow=74,SNR=7.5
H11S1 WAKE ISLAND Hy 19.32 86 T T 20 26 06.1
baz=273,slow=74,SNR=6.1
H11S2 WAKE ISLAND Hy 19.32 86 T T 20 26 07.8
baz=273,slow=74,SNR=6.7
H11N1 WAKE ISLAND Hy 19.47 83 T T 20 26 21.4
baz=267,slow=74,SNR=10
H11N2 WAKE ISLAND Hy 19.48 83 T T 20 26 20.3
baz=267,slow=74,SNR=11
MJAR Matsushiro Arr 19.48 340 P P 20 06 39.5 -1.0
comp=Z,0.0nm,0.3s,baz=153,slow=9.4,SNR=2.9
MJAR Matsushiro Arr 19.48 340 P P 20 06 39.1 -1.4
MAJO Matsushiro 19.48 340 P P 20 06 39.7 -0.8
MAJO IAmb IAmb 20 07 04.9
comp=Z,63nm,1.6s
MJB9 Matsu-Tunnel 19.49 340 P P 20 06 39.5 -1.0
MJB9 IAmb IAmb 20 07 04.9
comp=Z,60nm,1.6s
H11N3 WAKE ISLAND Hy 19.49 83 T T 20 26 20.3
baz=267,slow=74,SNR=8.7
JNU Nakatsue 20.22 320 P P 20 06 46.6 -1.9
JNU IAmb IAmb 20 07 08.8
comp=Z,121nm,1.8s
KWAJ Kwajalein Atol 22.73 112 P P 20 07 15.9 +0.3
RABL Rabaul 23.13 165 P P 20 07 18.2 -1.4
RABL IAmb IAmb 20 07 21.5
comp=Z,37nm,1.1s
ERM Erimo 23.74 354 P P 20 07 21.5 -3.5
ERM IAmb IAmb 20 07 54.1
comp=Z,34nm,1.3s
SIJI Sorong 24.19 219 P P 20 07 30.6 +1.3
comp=Z,21nm,1.0s,baz=20,slow=11,SNR=12
KSAR Wonju Array Be 24.97 323 P P 20 07 35.0 -1.2
KS19 Wonju Array Si 25.02 323 P P 20 07 35.0 -1.8
KS19 IAmb IAmb 20 08 28.0
comp=Z,112nm,1.8s
KS19 PcP 20 11 11.0 +0.8
PMG Port Moresby 27.60 178 P P 20 07 59.0 -1.1
comp=Z,17nm,0.7s,baz=353,slow=7.0,SNR=4.6
PMG Port Moresby 27.60 178 P P 20 08 00.3 +0.2
PMG IAmb IAmb 20 08 02.1
comp=Z,57nm,1.3s
USRK Ussuriysk Ar. 28.45 338 LR LR 20 18 40.9
comp=Z,32nm,20.8s,baz=144,slow=34
KLR Kul'dur 32.98 342 LR LR 20 22 38.8
comp=Z,28nm,19.1s,baz=172,slow=37
PETK Petropavlovsk- 35.79 12 LR LR 20 21 23.9
comp=Z,98nm,22.0s,baz=240,slow=32
UBPT Khong Chiam 39.19 272 P P 20 09 39.7 -1.1
SANVU Saraoutou 39.38 147 P P 20 09 42.3 +0.1
WB0 Warramunga Arr 39.66 198 P P 20 09 44.6 0.0
WB0 IAmb IAmb 20 10 08.6
comp=Z,8.8nm,1.1s
WR0 Warramunga Arr 39.80 197 P P 20 09 46.9 +1.1
WR0 IAmb IAmb 20 10 11.0
comp=Z,26nm,1.7s
WB2 Warramunga Arr 39.84 198 P P 20 09 47.3 +1.2
WB2 IAmb IAmb 20 11 04.1
comp=Z,16nm,1.4s
WRA Warramunga Arr 39.84 198 P P 20 09 46.5 +0.4
comp=Z,3.7nm,1.1s,baz=33,slow=8.8,SNR=13
WRA Warramunga Arr 39.84 198 P P 20 09 46.5 +0.4
MA2 Magadan 41.29 3 LR LR 20 25 19.1
comp=Z,41nm,20.0s,baz=174,slow=34
JAGI Jajag, Banyuwa 41.47 233 P P 20 09 57.6 -2.1
AS31 Alice Springs 43.50 197 P P 20 10 17.8 +1.8
ASAR Alice Springs 43.50 197 P P 20 10 16.8 +0.8
comp=Z,0.7nm,0.6s,baz=19,slow=9.4,SNR=15
ASAR LR LR 20 29 41.7
comp=Z,66nm,18.4s,baz=358,slow=38
ASAR Alice Springs 43.50 197 P P 20 10 15.8 -0.2
SONM Songino Array 43.79 321 P P 20 10 19.7 +1.5
comp=Z,0.3nm,0.4s,baz=124,slow=7.8,SNR=7.7
SONM LR LR 20 29 32.7
comp=Z,48nm,20.8s,baz=100,slow=37
SONM Songino Array 43.79 321 P P 20 10 16.8 -1.5
CMAR Chiang Mai Arr 44.87 278 P P 20 10 29.7 +2.6
comp=Z,0.3nm,0.7s,baz=71,slow=8.4,SNR=3.5
CMAR LR LR 20 27 59.2
comp=Z,27nm,21.0s,baz=138,slow=34
YAK Yakutsk 45.17 349 P P 20 10 29.1 +0.3
YAK IAmb IAmb 20 10 55.4
comp=Z,17nm,1.1s
TLY Talaya 47.19 325 LR LR 20 31 36.7
comp=Z,38nm,20.3s,baz=114,slow=37
STKA Stephens Creek 50.16 185 P P 20 11 08.3 +0.5
comp=Z,3.3nm,0.8s,baz=5.1,slow=9.3,SNR=6.2
STKA LR LR 20 35 47.4
comp=Z,60nm,18.2s,baz=23,slow=40
STKA Stephens Creek 50.16 185 P P 20 11 08.3 +0.5
ZALV Zalesovo Beam 58.66 323 P P 20 12 08.2 -1.0
comp=Z,1.0nm,0.7s,baz=101,slow=7.4,SNR=2.5
ZALV Zalesovo Beam 58.66 323 P P 20 12 08.6 -0.7
MK31 Makanchi Array 59.14 314 P P 20 12 12.8 0.0
MKAR Makanchi Array 59.14 314 P P 20 12 11.8 -1.0
comp=Z,0.3nm,0.6s,baz=96,slow=8.8,SNR=3.9
MAKZ Makanchi 59.35 314 P P 20 12 13.3 -0.9
IMAR Indian Mountai 61.28 24 P P 20 12 29.1 +2.0
BPAW Bear Paw Mtn. 61.79 26 P P 20 12 32.5 +2.0
BPAW IAmb IAmb 20 13 30.4
comp=Z,12nm,1.4s
TRF Thorofare Moun 61.90 27 P P 20 12 32.5 +1.0
TRF IAmb IAmb 20 13 04.3
comp=Z,25nm,1.7s
KURK Kurchatov 61.93 318 P P 20 12 31.0 -0.7
KURK IAmb IAmb 20 13 23.9
comp=Z,12nm,1.6s
ILAR Eielson Array 63.68 26 P P 20 12 42.2 -0.8
comp=Z,0.5nm,0.9s,baz=261,slow=5.0,SNR=4.2
ILAR LR LR 20 36 57.3
comp=Z,43nm,21.9s,baz=284,slow=33
ILAR Eielson Array 63.68 26 P P 20 12 42.0 -1.1
PALK Pallekele 64.66 269 LR LR 20 39 25.2
comp=Z,46nm,18.4s,baz=95,slow=34
MESA MESA 65.16 32 P P 20 12 53.7 +0.6
BMAR Burnt Mountain 65.18 23 P P 20 12 54.8 +1.9
KK31 Karatay Array 67.46 310 P P 20 13 07.5 -0.4
KKAR Karatay Array 67.46 310 P P 20 13 09.1 +1.3
KKAR Karatay Array 67.46 310 P P 20 13 07.7 -0.2
KKAR IAmb IAmb 20 14 00.7
comp=Z,9.3nm,1.7s
SIT Sitka 68.46 35 P P 20 13 16.0 +2.2
INK Inuvik 69.44 23 P P 20 13 19.0 -0.7
comp=Z,0.7nm,0.4s,baz=253,slow=7.0,SNR=4.3
ABKAR Akbulak array 74.00 317 P P 20 13 48.6 +1.1
YKA Yellowknife Ar 78.00 28 P P 20 14 08.9 -1.1
comp=Z,0.6nm,0.6s,baz=286,slow=5.7,SNR=7.1
YKA LR LR 20 47 39.8
comp=Z,56nm,20.4s,baz=0.0,slow=35
RES Resolute Bay 79.61 14 P P 20 14 21.0 +2.5
NVAR Mina Array Bea 82.87 52 P P 20 14 37.9 +1.0
comp=Z,0.5nm,0.6s,baz=280,slow=5.4,SNR=5.5
NVAR LR LR 20 47 59.0
comp=Z,29nm,18.9s,baz=232,slow=33
NVAR Mina Array Bea 82.87 52 P P 20 14 37.5 +0.6
ARCES ARCESS Array B 83.00 342 P P 20 14 38.5 +1.8
comp=Z,3.9nm,0.7s,baz=61,slow=8.5,SNR=8.0
ARCES ARCESS Array B 83.00 342 P P 20 14 37.3 +0.7
ARE0 ARCESS Array S 83.00 342 P P 20 14 38.2 +1.6
FINES FINESS Array B 87.45 335 P P 20 14 59.4 +0.5
comp=Z,0.8nm,0.4s,baz=52,slow=5.2,SNR=9.1
FINES FINESS Array B 87.45 335 P P 20 14 59.3 +0.3
PDAR Pinedale Array 87.62 46 LR LR 20 49 43.7
comp=Z,22nm,19.4s,baz=2.0,slow=32
ULM Lac du Bonnet 92.53 35 LR LR 20 57 24.5
comp=Z,26nm,18.6s,baz=328,slow=36
NOA NORSAR Array B 93.10 340 LR LR 21 00 47.5
comp=Z,16nm,20.8s,baz=25,slow=38
BRTR Keskin Array B 94.79 314 LR LR 21 01 45.3
comp=Z,12nm,21.9s,baz=22,slow=38

IDC 11 20:16:26.1±2.6, 5.51S×130.74E, h0km, mb3.4/1, mb1 3.6/3, mb1mx3.3/30, mbtmp3.4/3, ML3.4/2, Error ellipse: s-maj=155.2km s-min=31.8km az=71.0, Banda Sea

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

WRA Warramunga Arr 14.77 167 Pn Pn 20 19 55.7 -0.8
0.1nm,0.3s,baz=350,slow=13,SNR=8.9
WRA Sn Sn 20 22 25.9 -15
0.1nm,0.3s,baz=340,slow=21,SNR=4.7
ASAR Alice Springs 18.31 171 P P 20 20 42.0 -0.1
0.3nm,0.3s,baz=353,slow=10,SNR=20
MKAR Makanchi Array 67.39 326 P P 20 27 23.5 +0.1
0.2nm,0.4s,baz=116,slow=6.8,SNR=4.2

NIED 11 20:22:00, 41.00N×142.00E, h68km, Mw3.7 Best double couple: Mo3.75000×10^14 NP1:φs221.00000°, δ74.00000°, λ-86.00000°. NP2:φs25.00000°, δ17.00000°, λ-105.00000°.
JMA 11 20:22:08.9±0.1, 41.04N×142.05E, h56km±2km, M3.6
JMA Felt I J1.
IDC 11 20:22:10.2±2.0, 41.03N×142.05E, h77km±20km, mb3.4/6, mb1 3.5/9, mb1mx3.2/43, mbtmp3.7/9, Error ellipse: s-maj=29.1km s-min=14.9km az=95.0
ISC 11 20:22:08.9±0.9, 41.04N±0.04×142.00E±0.05, h59km±8km, n39, σ1.01/48, mb3.6/6, 6D, Hokkaido region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

JARK Aomorirokkasho 0.48 266 ⇓P Pn 20 22 20.8 +0.2
JARK S Sn 20 22 29.2 +0.2
JAHD Aomorihigashid 0.55 294 ⇓P Pn 20 22 21.5 +0.2
JAHD S Sn 20 22 30.7 +0.4
JTM Tenmabayashi 0.75 250 ⇓P Pn 20 22 24.1 +0.4
JTM S Sn 20 22 34.9 +0.4
JANG Nango 0.76 209 ⇓P Pn 20 22 23.8 -0.1
JANG S Sn 20 22 34.4 -0.4
JOT Ohata 0.79 296 ⇓P Pn 20 22 24.3 +0.1
JOT S Sn 20 22 35.5 0.0
JKB Kayabe 1.11 320 ⇓P Pn 20 22 28.6 +0.2
JKB S Sn 20 22 42.7 -0.2
JSR Shiriuchi 1.29 293 P Pn 20 22 31.4 +0.7
JSR S Sn 20 22 48.3 +1.3
JEM Erimo 1.30 41 P Pn 20 22 31.5 +0.6
JEM eS Sn 20 22 47.4 0.0
JAH Hinai 1.34 231 P Pn 20 22 32.3 +0.9
JAH eS Sn 20 22 49.5 +1.2
JNBK Urakawa-nobuka 1.36 24 P Pn 20 22 32.2 +0.6
JIW Iwasaki 1.58 254 P Pn 20 22 35.4 +0.8
JOMM Oshimamatsumae 1.58 288 P Pn 20 22 34.8 +0.2
JOMM S Sn 20 22 53.9 0.0
JIAM Iburiatsuma 1.58 358 P Pn 20 22 33.9 -0.7
JIAM eS Sn 20 22 52.1 -1.9
JNB Noboribetsu 1.60 334 P Pn 20 22 34.8 0.0
JNB S Sn 20 22 53.9 -0.5
JYM2 Yakumo 2 1.63 312 P Pn 20 22 36.1 +0.8
JYM2 eS Sn 20 22 56.1 +0.9
JOM Ohasama 1.66 199 P Pn 20 22 36.2 +0.5
JBT2 Biratori 2 1.76 9 P Pn 20 22 37.9 +0.9
JEW Eniwo 1.84 347 P Pn 20 22 38.8 +0.6
JEW eS Sn 20 23 01.4 +1.0
JCH Churui 1.87 32 P Pn 20 22 39.3 +0.7
JCH eS Sn 20 23 01.4 +0.3
ASAJ Asahikawa 3.10 8 P Pn 20 22 56.9 +1.5
3.9nm,0.3s,baz=212,slow=8.7,SNR=42
ASAJ S Sn 20 23 33.3 +2.1
3.1nm,0.3s,baz=255,slow=20,SNR=4.7
MJAR Matsushiro Arr 5.38 215 P Pn 20 23 28.9 +2.3
0.1nm,0.3s,baz=28,slow=16,SNR=5.1
USRK Ussuriysk Ar. 8.03 296 P Pn 20 24 04.7 +1.9
baz=99,slow=14,SNR=9.2
SONM Songino Array 26.14 297 P P 20 27 36.0 -1.4
0.4nm,0.7s,baz=93,slow=9.4,SNR=3.5
H11N2 WAKE ISLAND Hy 30.02 128 T T 20 59 50.5
baz=320,slow=75,SNR=24
H11N1 WAKE ISLAND Hy 30.03 128 T T 20 59 51.3
baz=320,slow=75,SNR=27
H11N3 WAKE ISLAND Hy 30.04 128 T T 20 59 51.1
baz=320,slow=75,SNR=20
H11S1 WAKE ISLAND Hy 30.85 129 T T 21 00 53.2
baz=322,slow=76,SNR=12
H11S3 WAKE ISLAND Hy 30.86 129 T T 21 00 52.9
baz=322,slow=76,SNR=14
H11S2 WAKE ISLAND Hy 30.87 129 T T 21 00 51.6
baz=322,slow=76,SNR=8.5
ZALV Zalesovo Beam 39.65 309 P P 20 29 35.1 +0.5
0.7nm,0.5s,baz=84,slow=12,SNR=3.3
MKAR Makanchi Array 42.49 299 P P 20 29 57.5 -0.6
0.4nm,0.6s,baz=86,slow=11,SNR=9.2
RAMN Ramite 47.29 271 eP P 20 30 31.2 -5.6
GUN Gumba 47.33 272 eP P 20 30 37.8 +0.6
11nm,0.3s
PKI Pulchoki 47.87 272 eP P 20 30 39.1 -2.2
GKN Gorkha 48.22 273 eP P 20 30 44.2 +0.3
3.5nm,0.2s
DANN Dangsing 48.71 274 eP P 20 30 49.6 +1.9
18nm,0.5s
WRA Warramunga Arr 61.09 188 P P 20 32 15.6 -1.1
1.3nm,0.6s,baz=4.6,slow=7.5,SNR=3.4
ASAR Alice Springs 64.81 188 P P 20 32 40.8 -0.7
0.2nm,0.4s,baz=1.1,slow=6.9,SNR=5.3
FINES FINESS Array B 65.50 332 P P 20 32 45.4 0.0
1.3nm,0.5s,baz=53,slow=6.6,SNR=10

SOME 11 20:36:59.3, 41.70N×80.80E, h15km
NNC 11 20:37:02.0±1.1, 41.75N×80.65E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=8.4km s-min=5.5km az=159.0
KRNET 11 20:37:03.5±0.1, 41.86N×80.76E, mb3.2
ISC 11 20:37:02.1±1.8, 41.70N±0.07×80.59E±0.07, h10km, n46, σ1.63/71, 19C-15D, Southern Xinjiang

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SHLS Shalkode 1.67 330 eP Pn 20 37 29.6 -2.0
289nm,0.1s
SHLS eS Sn 20 37 51.7 -1.5
201nm,0.3s
PRZ Przheval'sk 1.81 296 ⇓iP Pg 20 37 37.6 +0.9
baz=91
PRZ ⇓iS Sg 20 38 03.1 +2.9
baz=91
PDGK Podgornoye 1.82 334 ⇑Pn Pb 20 37 34.2 -1.3
57nm,0.5s
PDGK ⇑Lg Lg 20 38 00.6
130nm,0.7s
UZB Uzynbulak 1.85 322 eP Pb 20 37 35.8 -0.4
55nm,0.2s
UZB eS Sg 20 38 01.6 0.0
230nm,0.2s
UZB Uzynbulak 1.85 322 Pg Pb 20 37 35.7 -0.4
48nm,0.2s
UZB Lg Lg 20 38 01.6
267nm,0.4s
ZHN Zhinishke 2.16 313 eP Pb 20 37 41.9 +0.5
41nm,0.1s
ZHN eS Sg 20 38 12.2 +0.5
99nm,0.2s
ZHN Zhinishke 2.16 313 Pg Pb 20 37 41.9 +0.5
38nm,0.1s
ZHN Lg Lg 20 38 12.2
99nm,0.3s
ANVS Anan'yevo 2.42 297 ⇑iP Pb 20 37 46.9 +1.0
baz=93
ANVS ⇑iS Sg 20 38 18.5 -1.4
baz=93
KURS Kuram 2.52 316 eP Pb 20 37 47.3 -0.2
16nm,0.3s
KURS eS Sg 20 38 22.2 -0.9
59nm,0.5s
KURS Kuram 2.52 316 Pg Pb 20 37 46.9 -0.6
16nm,0.3s
KURS Lg Lg 20 38 21.1
59nm,0.5s
KDJ Kajisay 2.58 281 ⇑iP Pb 20 37 49.9 +1.4
baz=77
KDJ ⇑iS Sg 20 38 23.7 -1.3
baz=77
DJR Jarkent 2.69 348 eP Pb 20 37 48.6 -1.8
4.5nm,0.3s
DJR eS Sb 20 38 24.6 +1.1
117nm,0.6s
DJR Jarkent 2.69 348 Pg Pb 20 37 48.5 -1.8
3.9nm,0.2s
DJR Lg Lg 20 38 24.6
113nm,0.4s
MNBS Baschi 2.87 327 eP Pb 20 37 52.8 -0.6
15nm,0.2s
MNBS eS Sg 20 38 31.2 -2.9
184nm,0.3s
MNBS Baschi 2.87 327 Pg Pb 20 37 52.8 -0.6
15nm,0.2s
MNBS Lg Lg 20 38 31.2
184nm,0.3s
KOTS Kotyrbulak 2.99 302 eP Pb 20 37 55.6 0.0
24nm,0.1s
KOTS eS Sg 20 38 36.6 -1.6
144nm,0.3s
KOTS Kotyrbulak 2.99 302 Pg Pb 20 37 55.6 0.0
24nm,0.1s
KOTS Lg Lg 20 38 36.6
144nm,0.3s
MDOK Medeo 3.00 300 eP Pb 20 37 55.3 -0.4
8.4nm,0.4s
MDOK eS Sb 20 38 35.5 +3.1
51nm,0.4s
MDOK Medeo 3.00 300 ⇓Pn Pb 20 37 53.7 -2.0
5.9nm,0.4s
MDOK ⇓Lg Lg 20 38 38.0
42nm,0.6s
MDOK Medeo 3.00 300 Pg Pb 20 37 54.1 -1.6
12nm,0.3s
MDOK Lg Lg 20 38 34.8
51nm,0.4s
TNSS Tian-Shan 3.01 297 eP Pb 20 37 56.9 +0.9
12nm,0.2s
TNSS eS Sg 20 38 38.8 0.0
48nm,0.6s
TNSS Tian-Shan 3.01 297 Pg Pb 20 37 56.9 +0.9
12nm,0.2s
TNSS Lg Lg 20 38 38.8
48nm,0.6s
KNDC Almaty 3.08 301 ⇑Pg Pb 20 37 57.4 +0.5
12nm,0.5s
KNDC ⇑Lg Lg 20 38 43.0
52nm,0.8s
ARXS Arharly 3.22 322 eP Pb 20 37 59.2 -0.3
6.7nm,0.4s
ARXS eS Sg 20 38 42.0 -3.6
71nm,0.4s
ARXS Arharly 3.22 322 Pg Pb 20 37 59.2 -0.3
6.7nm,0.4s
ARXS Lg Lg 20 38 42.0
71nm,0.4s
IZV Izvestkoviy 3.23 296 eP Pb 20 38 00.8 +1.1
6.9nm,0.2s
IZV eS Sg 20 38 45.3 -0.6
83nm,0.4s
IZV Izvestkoviy 3.23 296 Pg Pb 20 38 00.8 +1.1
6.9nm,0.2s
IZV Lg Lg 20 38 45.3
83nm,0.4s
MTBS Maitube 3.39 296 eP Pb 20 38 03.7 +1.4
7.4nm,0.3s
MTBS eS Sg 20 38 49.7 -1.4
38nm,0.3s
MTBS Maitube 3.39 296 Pg Pb 20 38 03.7 +1.4
7.4nm,0.3s
MTBS Lg Lg 20 38 49.7
38nm,0.3s
CHKK Chushkaly 3.41 310 eP Pb 20 38 03.6 +1.0
4.5nm,0.2s
CHKK eS Sg 20 38 49.2 -2.4
62nm,0.4s
CHKK Chushkaly 3.41 310 Pg Pb 20 38 03.6 +1.0
4.5nm,0.2s
CHKK Lg Lg 20 38 49.2
62nm,0.4s
NRN Naryn 3.45 267 ⇑iP Pb 20 38 02.8 -0.7
baz=65
NRN ⇑iS Sb 20 38 45.9 +0.2
baz=65
KTBS Karatobe 3.51 306 eP Pb 20 38 05.1 +0.8
11nm,0.3s
KTBS eS Sg 20 38 52.3 -2.5
125nm,0.4s
KTBS Karatobe 3.51 306 Pg Pb 20 38 05.1 +0.8
11nm,0.3s
KTBS Lg Lg 20 38 52.3
125nm,0.4s
BOOM Boomskoye usch 3.55 284 ⇑iP Pb 20 38 03.4 -1.6
baz=82
BOOM ⇑iS Sb 20 38 46.8 -1.4
baz=82
KST Kastek 3.68 293 eP Pb 20 38 08.6 +1.3
9.9nm,0.3s
KST eS Sg 20 38 58.7 -1.5
42nm,0.5s
KST Kastek 3.68 293 Pg Pb 20 38 08.5 +1.3
9.9nm,0.3s
KST Lg Lg 20 38 58.7
42nm,0.5s
KAPS Kapalarasan 3.69 346 eP Pb 20 38 05.8 -1.6
14nm,0.3s
KAPS eS Sb 20 38 54.4 +2.2
38nm,0.3s
KUU Kurty 3.82 306 eP Pb 20 38 11.3 +1.8
6.1nm,0.5s
KUU eS Sg 20 39 02.4 -2.2
27nm,0.4s
CHMS Chumysh 4.52 289 ⇓Pg Pg 20 38 26.2 -2.4
6.3nm,0.9s
CHMS ⇓Lg Lg 20 39 25.8
6.5nm,0.5s
AAK Ala-Archa 4.62 284 ⇓Pg Pg 20 38 28.6 -2.1
7.3nm,1.0s
AAK ⇓Lg Lg 20 39 29.0
7.6nm,0.6s
MAKZ Makanchi 5.20 11 ⇓Pn Pn 20 38 20.4 +0.4
6.0nm,0.4s
MAKZ ⇓Sn Sn 20 39 21.9 +2.0
3.0nm,0.5s
MAKZ ⇑Lg Lg 20 39 43.8
4.5nm,0.6s
MK31 Makanchi Array 5.23 13 ⇓Pn Pn 20 38 20.4 0.0
1.7nm,0.4s,baz=191,slow=13,SNR=101
MK31 ⇑Sn Sn 20 39 22.5 +1.8
7.7nm,0.7s,baz=191,slow=25,SNR=7.5
MK31 ⇑Lg Lg 20 39 43.8
4.3nm,0.6s,baz=162,slow=40,SNR=4.4
KK31 Karatay Array 7.59 284 ⇑Pg Pg 20 39 22.9 -4.4
0.3nm,0.3s
KK31 ⇓Lg Lg 20 41 07.3
2.1nm,0.6s,baz=94,slow=27,SNR=5.3
KURBB Kurchatov Arra 9.03 352 ⇑Pn Pn 20 39 13.8 +1.4
1.8nm,0.8s
KURBB ⇓Sn Sn 20 40 59.0 +4.8
5.5nm,0.8s
KURBB ⇓Lg Lg 20 41 48.2
13nm,0.8s
KURK Kurchatov 9.12 352 ⇑Pn Pn 20 39 13.8 +0.3
1.0nm,0.5s
KURK ⇓Sn Sn 20 40 59.4 +3.2
2.3nm,0.6s
KURK ⇓Lg Lg 20 41 48.5
6.7nm,0.9s

IDC 11 20:45:59.0±1.6, 5.48S×151.53E, h69km±11km, mb3.6/7, mb1 3.9/8, mb1mx3.6/32, mbtmp3.9/8, MS3.8/1, Ms1 3.8/1, ms1mx2.6/26, Error ellipse: s-maj=50.3km s-min=9.5km az=125.0
ISC 11 20:45:57.6±1.3, 5.6S±0.2×151.6E±0.3, h57km, n11, σ1.02/12, mb3.8/7, New Britain region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

KRVT Keravat (AS076 1.31 18 P Pn 20 46 19.9 +0.3
622nm,0.3s,baz=186,slow=1.1,SNR=225
KRVT S Sn 20 46 37.4 +1.3
470nm,0.3s,baz=192,slow=24,SNR=19
PMG Port Moresby 5.85 229 P Pn 20 47 21.3 -0.5
2.7nm,0.3s,baz=22,slow=12,SNR=7.6
PMG S Sn 20 48 29.5 +2.0
2.4nm,0.3s,baz=131,slow=21,SNR=6.6
WRA Warramunga Arr 22.07 228 P P 20 50 48.3 +0.3
2.6nm,0.5s,baz=52,slow=10,SNR=29
ASAR Alice Springs 24.81 222 P P 20 51 15.4 +0.8
2.4nm,0.7s,baz=58,slow=8.6,SNR=25
FITZ Fitzroy Crossi 28.27 242 P P 20 51 45.8 0.0
2.1nm,0.4s,baz=51,slow=9.3,SNR=6.1
RAR Rarotonga 49.55 113 LR LR 21 14 02.7
comp=Z,100nm,19.5s,baz=256,slow=34
SONM Songino Array 66.35 329 P P 20 56 40.1 -0.4
0.3nm,0.6s,baz=147,slow=5.7,SNR=3.9
MKAR Makanchi Array 80.13 319 P P 20 58 00.8 -0.8
0.1nm,0.4s,baz=104,slow=6.1,SNR=4.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ILAR	Eielson Array	83.30	22	P	P	20 58 17.3	-0.6
	0.5nm,0.7s,baz=241,slow=5.6,SNR=9.1						
NVAR	Mina Array Bea	93.47	52	P	P	20 59 08.2	+0.6
	0.3nm,0.6s,baz=258,slow=4.9,SNR=5.2						
TORD	Torodi Ar. Bea	149.41	286	PKPbc	PKPbc	21 05 40.4	-1.0
	0.5nm,0.3s,baz=82,slow=2.3,SNR=15						

IDC 11 20:48:39.6±1.3,20.30S×172.88E,h0km,mb3.6/5, mb1 4.0/7,mb1mx3.8/32,mbtmp3.8/7,ML3.7/2,MS3.5/18, Ms1 3.5/18,ms1mx3.4/34,Error ellipse: s-maj=36.6km s-min=26.8km az=157.0

GCMT 11 20:48:45.7±0.4,20.49S±0.02×172.68E±0.02,h23km±1km, MW4.7/66,Moment Tensor Solution. s16,c16; s66,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-0.69±.14; Mθθ0.28±.11; Mφφ0.41±.09; Mrθ0.19±.14; Mrφ1.48±.07; Mθφ-0.09±.12; Best double couple: M0 1.51900×10^{16} NP1:φs0.00000°,δ74.00000°,λ-16.00000°. NP2: φs267.00000°,δ77.00000°,λ-16.00000°. Principal axes: T 1.8270, Plg2.0000°, Azm314.0000°; N -0.6160, Plg69.0000°, Azm48.0000°; P -1.2110, Plg21.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC 11 20:48:45.7±2.2,20.5S±0.1×172.80E±0.09,h40km±3km, mb4.6/4 Error ellipse: s-maj=17.6km s-min=11.8km az=167.0

ISC 11 20:48:45.0±0.7,20.45S±0.09×172.81E±0.09,h35km,n39, σ1.24/26,mb3.6/7,MS3.6/17,Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.64	62		Pn	20 50 07.5	+1.0
DZM	Mont Dzumac	6.15	254	ePn	Pn	20 50 12.8	-0.7
	47nm,1.3s						
DZM				eLR	LR	20 51 37.0	
	comp=Z,535nm,26.7s						
DZM	Mont Dzumac	6.15	254	Pn	Pn	20 50 13.9	+0.4
	0.8nm,0.3s,baz=36,slow=20,SNR=7.1						
DZM				LR	LR	20 52 11.2	
	comp=Z,234nm,22.0s,baz=6.0,slow=34						
DZM	Mont Dzumac	6.15	254		Pn	20 50 13.6	+0.1
NOUC	Port Laguerre	6.29	254		Pn	20 50 14.9	-0.3
SANVU	Saraoutou	7.29	312		Pn	20 50 30.6	+1.6
HNR	Honiara	16.55	310	LR	LR	20 58 00.7	
	comp=Z,200nm,19.9s,baz=188,slow=34						
HNR	Honiara	16.55	310	P	Pn	20 52 33.9	-0.6
HNR				IAmb	IAmb	20 52 46.9	
	comp=Z,95nm,1.2s						
HIZ	Hauiti	18.09	175	P	P	20 52 55.0	+1.4
URZ	Urewera	18.14	169	P	P	20 52 55.9	+1.8
	comp=Z,0.6nm,0.3s,baz=0.6,slow=9.1,SNR=5.4						
URZ				LR	LR	20 58 12.7	
	comp=Z,266nm,21.7s,baz=348,slow=31						
URZ	Urewera	18.14	169	P	Pn	20 52 55.2	+1.2
TUWZ	Tuamarina	20.94	178	P	P	20 53 24.4	-0.3
BHW	Baring Head	20.97	176	P	P	20 53 23.6	-1.4
MSWZ	Moikau Station	21.00	175	P	P	20 53 26.1	+0.7
PLWZ	Palliser	21.16	175	P	P	20 53 27.3	+0.2
RPZ	Rata Peaks	23.25	183	LR	LR	21 01 59.5	
	comp=Z,83nm,18.9s,baz=30,slow=34						
KRVT	Keravat (AS076	25.82	306	P	P	20 54 13.4	+0.3
	comp=Z,15nm,0.6s,baz=105,slow=11,SNR=4.2						
KRVT				LR	LR	21 02 32.5	
	comp=Z,76nm,20.5s,baz=142,slow=32						
PMG	Port Moresby	27.06	290	LR	LR	21 03 05.3	
	comp=Z,181nm,18.3s,baz=98,slow=32						
STKA	Stephens Creek	30.14	241	LR	LR	21 05 58.5	
	comp=Z,159nm,18.5s,baz=34,slow=34						
TBI	Tubuai	35.06	102	eLQ	LQ	21 03 16.2	
	comp=Z,262nm,29.2s						
TBI				eLR	LR	21 04 48.4	
	comp=Z,174nm,30.2s						
PPT2	Papeete2	35.63	92	eLR	LR	21 05 06.9	
	comp=Z,145nm,25.8s						
WB0	Warramunga Arr	36.03	264	P	P	20 55 45.0	+1.8
WB0				IAmb	IAmb	20 55 58.3	
	comp=Z,6.4nm,1.1s						
WRA	Warramunga Arr	36.05	264	P	P	20 55 41.8	-1.6
	comp=Z,0.4nm,0.9s,baz=101,slow=8.3,SNR=3.6						
WRA				LR	LR	21 10 36.4	
	comp=Z,130nm,21.1s,baz=225,slow=36						
ASAR	Alice Springs	36.13	258	P	P	20 55 44.0	0.0
	comp=Z,0.4nm,0.5s,baz=91,slow=9.1,SNR=6.3						
ASAR				LR	LR	21 09 41.2	
	comp=Z,100nm,19.2s,baz=92,slow=35						
ASAR	Alice Springs	36.13	258	P	P	20 55 44.4	+0.4
MJAR	Matsushiro Arr	65.43	330	LR	LR	21 22 13.9	
	comp=Z,29nm,21.6s,baz=80,slow=31						
KSRS	Korea Array	71.43	324	LR	LR	21 26 58.2	
	comp=Z,19nm,20.6s,baz=136,slow=32						
PETK	Petropavlovsk-	74.41	351	LR	LR	21 28 33.5	
	comp=Z,43nm,19.9s,baz=239,slow=32						
MA2	Magadan	81.75	349	LR	LR	21 31 31.8	
	comp=Z,47nm,19.8s,baz=102,slow=32						
CMAR	Chiang Mai Arr	82.06	293	P	P	21 01 03.0	+0.8
	comp=Z,0.5nm,0.8s,baz=126,slow=4.7,SNR=3.8						
CMAR				LR	LR	21 37 32.3	
	comp=Z,9.6nm,19.6s,baz=180,slow=36						
NVAR	Mina Array Bea	87.12	47	P	P	21 01 25.5	-2.1
	comp=Z,0.2nm,0.5s,baz=216,slow=9.0,SNR=2.5						
NVAR				LR	LR	21 32 43.1	
	comp=Z,34nm,20.3s,baz=299,slow=30						
NVAR	Mina Array Bea	87.12	47	P	P	21 01 25.1	-2.5
ILAR	Eielson Array	90.42	16	P	P	21 01 41.8	-0.5
	comp=Z,0.5nm,0.8s,baz=205,slow=5.4,SNR=4.9						
ILAR	Eielson Array	90.42	16	P	P	21 01 40.4	-1.9
TXAR	Lajitas Array	94.41	60	LR	LR	21 38 07.4	
	comp=Z,21nm,18.6s,baz=0.0,slow=32						
PDAR	Pinedale Array	95.00	46	LR	LR	21 41 46.5	
	comp=Z,18nm,18.3s,baz=208,slow=34						
PLCA	Paso Flores	95.38	137	LR	LR	21 34 17.4	
	comp=Z,30nm,21.6s,baz=260,slow=29						
GERES	GERESS Array B	147.09	334	PKPbc	PKPbc	21 08 24.5	+0.3
	comp=Z,0.2nm,0.3s,baz=44,slow=3.3,SNR=4.0						
GERES	GERESS Array B	147.09	334		PKPdf	21 08 22.1	0.0

UCR 11 21:10:36.2±0.9,10.30N×84.31W,h92km±3km,MD3.7, Costa Rica

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEDE	Laguna Cedeo	0.43	296	eP	Pn	21 10 51.2	+0.5
CEDE				eS	Sn	21 11 02.1	+0.6
ARE1	Arenal 1	0.43	292	eP	Pn	21 10 51.1	+0.4
ARE1				eS	Sn	21 11 02.5	+1.0
CVTR	Volcan Turrial	0.61	117	eP	Pn	21 10 52.3	-0.2
LCR2	La Lucha 2	0.63	152	eP	Pn	21 10 52.5	+0.1
LCR2				eS	Sn	21 11 05.4	+0.8
JTS	Las Juntas de	0.63	269	eP	Pn	21 10 51.9	-0.4
JTS				eS	Sn	21 11 04.2	-0.1
PTEN	Parque Tenorio	0.79	302	iP	Pn	21 10 54.0	+0.2
CUI	Cuipilapa	0.91	293	eP	Pn	21 10 55.4	+0.3
CUI				eS	Sn	21 11 10.1	+0.7
COLC	Colonia	0.95	292	iP	Pn	21 10 55.7	+0.2
COLC				iS	Sn	21 11 10.3	+0.2
BUAI	Buenos Aires	1.16	300	iP	Pn	21 10 58.0	+0.1
GUAI	GUAI	1.18	269	iP	Pn	21 10 58.5	+0.4
LAPC	Finca la Perla	1.20	293	iP	Pn	21 10 58.4	0.0
BRU2	Volcan	2.19	133	eP	Pn	21 11 11.8	+0.7
BRU2				eS	Sn	21 11 38.5	+0.7

NIED 11 21:34:00,38.30N×141.50E,h8km,Mw3.8 Best double couple: M0 5.96000×10^{14} NP1:φs328.00000°,δ73.00000°, λ120.00000°. NP2:φs85.00000°,δ34.00000°,λ32.00000°.

JMA 11 21:34:32.6,38.29N×141.51E,h19km±1km,M4.2 Broadband fault plane solution: P waves. NP1: φs81.00000°,δ50.00000°,λ42.00000°. NP2:φs321.00000°, δ59.00000°,λ132.00000°. Principal axes: T Plg55.0000°, Azm286.0000°; N Plg35.0000°, Azm116.0000°; P Plg5.0000°, Azm23.0000°;

JMA Felt II J1.

IDC 11 21:34:36.1±2.1,38.31N×141.39E,h47km±19km,mb3.5/11, mb1 3.6/15,mb1mx3.4/48,mbtmp3.6/15,ML3.0/4,MS2.7/3, Ms1 2.7/3,ms1mx2.4/37 Error ellipse: s-maj=20.9km s-min=13.4km az=111.0

ISC 11 21:34:32.4±0.8,38.29N±0.03×141.53E±0.05,h18km±2km, n46,σ0.74/52,mb3.9/11,5C-8D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.05	296	⇑P	Pg	21 34 35.9	+0.1
JIKH				S	Sg	21 34 37.7	-0.4
JIO	Ouri	0.22	320	⇓P	Pg	21 34 37.7	0.0
JIO				S	Sb	21 34 40.7	-0.1
JKMT	Kesennumamotoy	0.53	355	⇓P	Pg	21 34 42.7	-0.3
JKMT				eS	Sg	21 34 49.4	-0.7
JOFO	Osakifurukawao	0.58	303	⇑P	Pg	21 34 44.1	+0.1
JOFO				S	Sg	21 34 52.5	+0.8
JOU	Okura	0.68	277	⇑P	Pb	21 34 45.7	-0.1
JOU				S	Sg	21 34 55.0	0.0
JMK	Ichinoseki	0.71	340	⇓P	Pb	21 34 45.7	-0.5
JMK				S	Sb	21 34 55.3	-0.2
JMM	Marumori	0.71	234	⇓P	Pb	21 34 45.6	-0.7
JMM				S	Sb	21 34 54.9	-0.9
OFUJ	Ofunato	0.80	8	⇓P	Pb	21 34 47.4	-0.4
JFK	Kawauchi	1.05	210	⇓P	Pb	21 34 51.3	-0.8
JFK				S	Sb	21 35 05.1	-0.5
JYK	Kaneyama	1.11	305	⇑P	Pn	21 34 52.3	-0.8
JYS	Shirataka	1.15	267	⇑P	Pn	21 34 53.5	-0.1
JYS				S	Sb	21 35 08.3	-0.1
JOM	Ohasama	1.20	351	⇓P	Pn	21 34 53.9	-0.4
JOM				S	Sn	21 35 09.9	-0.2
JFT	Otama	1.22	231	⇓P	Pn	21 34 54.5	0.0
JFT				S	Sb	21 35 10.0	-0.2
MJAR	Matsushiro Arr	3.16	238	P	Pn	21 35 23.5	+2.2
	0.3nm,0.3s,baz=37,slow=14,SNR=22						
MJAR				S	Sb	21 36 07.8	+1.5
	0.7nm,0.3s,baz=84,slow=25,SNR=3.7						
ASAJ	Asahikawa	5.88	8	P	Pn	21 35 59.2	+0.6
	1.6nm,0.3s,baz=197,slow=14,SNR=12						
ASAJ				S	Sn	21 37 07.3	+1.8
	0.9nm,0.3s,baz=310,slow=19,SNR=3.1						
ASAJ				LR	LR	21 38 39.3	
	comp=Z,36nm,21.6s,baz=84,slow=41						
USRK	Ussuriysk Ar.	9.30	312	P	Pn	21 36 45.2	-0.3
	baz=122,slow=14,SNR=4.7						
JNU	Nakatsue	10.07	242	LR	LR	21 40 52.3	
	comp=Z,74nm,18.2s,baz=348,slow=38						
KSRS	Korea Array	10.79	270	P	Pn	21 37 07.0	+1.1
	0.1nm,0.3s,baz=74,slow=14,SNR=2.7						
KSRS				LR	LR	21 40 55.4	
	comp=Z,41nm,18.2s,baz=105,slow=35						
SONM	Songino Array	27.18	302	P	P	21 40 13.7	-1.2
	0.1nm,0.6s,baz=110,slow=9.4,SNR=6.0						
H11N2	WAKE ISLAND Hy	28.73	123	T	T	22 10 29.1	
	baz=316,slow=76,SNR=664						
H11N1	WAKE ISLAND Hy	28.74	123	T	T	22 10 33.4	
	baz=316,slow=76,SNR=700						
H11N3	WAKE ISLAND Hy	28.75	123	T	T	22 10 34.1	
	baz=316,slow=76,SNR=681						
H11S1	WAKE ISLAND Hy	29.48	125	T	T	22 11 27.7	
	baz=318,slow=76,SNR=451						
H11S3	WAKE ISLAND Hy	29.48	125	T	T	22 11 27.9	
	baz=318,slow=76,SNR=535						
H11S2	WAKE ISLAND Hy	29.50	125	T	T	22 11 29.3	
	baz=318,slow=76,SNR=510						
ZALV	Zalesovo Beam	41.15	311	P	P	21 42 15.2	-0.1
	2.6nm,0.7s,baz=82,slow=7.9,SNR=10						
MKAR	Makanchi Array	43.54	301	P	P	21 42 35.0	+0.1
	1.8nm,0.7s,baz=86,slow=9.9,SNR=24						
TAPN	Taplejung	45.96	273	eP	P	21 42 54.9	+0.2
JIRN	Jiri	47.01	274	eP	P	21 43 03.5	+0.4
RAMN	Ramite	47.02	273	eP	P	21 43 03.0	0.0
GUN	Gumba	47.13	275	eP	P	21 43 04.6	+0.6
	7.9nm,0.4s						
KKN	Kakani	47.66	275	eP	P	21 43 08.4	+0.4
PKI	Pulchoki	47.66	274	eP	P	21 43 08.1	0.0
	3.2nm,0.5s						
PKIN	Phulchoki	47.67	274	eP	P	21 43 08.1	0.0
	3.5nm,0.6s						
DMN	Daman	47.88	275	eP	P	21 43 10.0	+0.3
GKN	Gorkha	48.06	275	eP	P	21 43 11.4	+0.3
	33nm,1.1s						
ILAR	Eielson Array	48.39	33	P	P	21 43 13.4	+0.5
	0.2nm,0.7s,baz=272,slow=6.2,SNR=4.4						
DANN	Dangsing	48.59	276	eP	P	21 43 15.8	+0.5
	43nm,0.6s						
KOLN	Koldanda	48.98	276	eP	P	21 43 18.8	+0.6
WRA	Warramunga Arr	58.31	188	P	P	21 44 26.1	-0.1
	0.6nm,0.4s,baz=4.1,slow=7.2,SNR=17						
ASAR	Alice Springs	62.04	188	P	P	21 44 51.2	-0.5
	0.5nm,0.6s,baz=9.1,slow=5.1,SNR=11						
YKA	Yellowknife Ar	62.68	30	P	P	21 44 55.8	+0.2
	0.1nm,0.4s,baz=199,slow=6.8,SNR=2.8						
FINES	FINESS Array B	67.75	332	P	P	21 45 27.0	-1.5
	1.3nm,0.7s,baz=30,slow=11,SNR=3.8						
AKASG	Malin Array Be	73.36	322	P	P	21 46 01.8	-1.1
	0.8nm,0.4s,baz=44,slow=5.7,SNR=7.7						
PDAR	Pinedale Array	76.73	46	P	P	21 46 24.5	+1.7
	0.2nm,0.6s,baz=284,slow=4.5,SNR=2.2						
TXAR	Lajitas Array	89.29	52	P	P	21 47 27.8	0.0
	0.2nm,0.6s,baz=347,slow=3.7,SNR=2.5						

ATH 11 21:35:23.7,38.18N×20.27E,h8km±3km,ML2.8/5,Error ellipse: s-maj=3.4km s-min=1.2km az=87.0

THE 11 21:35:24.2,38.19N×20.30E,h7km±1km,ML2.8/6,Error ellipse: s-maj=1.6km s-min=0.4km az=94.0

ISC 11 21:35:23.9±1.8,38.18N±0.03×20.28E±0.08,h9km±5km, n28,σ0.39/50,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.06	62	P	Pg	21 35 25.7	-0.1
CHV1	Chavriata, Kef	0.08	84	P	Pg	21 35 25.9	-0.1
CHV1				S	Sg	21 35 27.1	-0.5
LXRA	Lixouri, Kepha	0.12	78	P	Pg	21 35 26.8	+0.1
LXRA				S	Sg	21 35 28.7	0.0
LXR1	Lixouri, Cepha	0.13	78	P	Pg	21 35 26.8	+0.1
LXR1				S	Sg	21 35 28.6	-0.1
	43μm,0.2s						
KEF4	Livadi, Kephal	0.14	54	P	Pg	21 35 27.0	0.0
KEF4				S	Sg	21 35 29.1	0.0
ARGA	Argostoli. Kep	0.15	89	P	Pg	21 35 27.3	+0.1
ARGA				S	Sg	21 35 29.5	0.0
ARG2	Argostoli	0.16	89	P	Pg	21 35 27.4	+0.1
ARG2				S	Sg	21 35 29.7	0.0
KEF2	Argostoli. Kep	0.16	93	P	Pg	21 35 27.5	+0.2
KEF2				S	Sg	21 35 29.7	+0.1
VLS	Valsamata	0.24	89	P	Pg	21 35 28.6	-0.2
VLS				S	Sg	21 35 32.0	-0.1
	15μm,0.1s						
VLS	Valsamata	0.24	89		Pg	21 35 28.6	-0.2
VLS					Sg	21 35 32.0	-0.1
VLS				AML	AML	21 35 32.2	
	comp=N,21630μm,0.2s						
VLS				AML	AML	21 35 32.2	
	comp=E,38007μm,0.1s						
VSK1	VASILIKIADES	0.32	43	P	Pg	21 35 30.3	0.0
VSK1				S	Sg	21 35 34.5	-0.1
	comp=E,3μm,0.2s						
KONA	Konidatara, Ke	0.34	42	P	Pg	21 35 30.5	0.0
KONA				S	Sg	21 35 35.7	+0.6
VLMS	Volimes, Zakyn	0.42	135	P	Pg	21 35 32.3	+0.2
VLMS				S	Sg	21 35 38.7	+0.9
VLMS				AML	AML	21 35 39.8	
	comp=E,4293μm,0.2s						
VLMS				AML	AML	21 35 39.8	
	comp=N,6689μm,0.2s						
EVGI	Lefkada island	0.53	33	P	Pg	21 35 34.0	-0.2
EVGI				S	Sg	21 35 41.9	+0.7
EVGI	Lefkada island	0.53	33	P	Pg	21 35 34.1	-0.2
EVGI				S	Sg	21 35 42.1	+0.8
MGNA	Meganis	0.62	40	P	Pg	21 35 35.5	-0.4
MGNA				S	Sg	21 35 43.8	-0.3
KRI1	kERI	0.66	140	P	Pg	21 35 36.3	-0.4
KRI1				S	Sb	21 35 46.9	-0.1
	comp=N,798nm,0.2s						
LKD2	Lefkada island	0.68	26	P	Pg	21 35 36.7	-0.3
LKD2				S	Sg	21 35 46.2	+0.3
	comp=N,152nm,0.3s						
LKD2	Lefkada island	0.68	26	P	Pg	21 35 36.5	-0.6
TSLK	Tsoukalades, L	0.71	24	P	Pg	21 35 37.0	-0.6
TSLK				S	Sg	21 35 47.2	+0.3
	comp=N,245nm,0.6s						
TSLK	Tsoukalades, L	0.71	24	P	Pg	21 35 37.0	-0.6
AST1	Astakos	0.73	60	P	Pg	21 35 37.5	-0.5
AST1				S	Sg	21 35 48.0	+0.4
RLS	Riolos of Patr	0.94	97	P	Pg	21 35 41.4	-0.6
PVO	Paravola	1.07	65	P	Pg	21 35 44.2	-0.3
PVO				S	Sb	21 35 59.0	+0.3
PVO				AML	AML	21 36 05.3	
	comp=E,622μm,0.3s						
PVO				AML	AML	21 36 07.4	
	comp=N,489μm,0.5s						
DRO	Drossia	1.15	101	P	Pg	21 35 45.1	-0.8
DRO	Drossia	1.15	101	P	Pg	21 35 45.2	-0.8
DRO				S	Sn	21 36 01.9	-0.1
DRO				AML	AML	21 36 08.3	
	comp=E,625μm,0.4s						
DRO				AML	AML	21 36 14.5	
	comp=N,509μm,0.4s						
ANX	Ano Chora	1.35	72	P	Pn	21 35 49.3	+0.2
ANX				S	Sn	21 36 07.6	+0.4
ANX				AML	AML	21 36 15.7	
	comp=E,212μm,0.6s						
ANX				AML	AML	21 36 16.9	
	comp=N,364μm,0.5s						
SERG	Sergoula	1.42	80	P	Pn	21 35 49.8	-0.1

IDC 11 21:42:08.3±2.5,14.22N×92.59W,h0km,mb3.7/1, mb1 3.8/5,mb1mx3.5/49,mbtmp3.5/5,ML3.5/4,MS3.1/4, Ms1 3.1/4,ms1mx2.6/41,Error ellipse: s-maj=36.8km s-min=15.9km az=9.0

GCG 11 21:42:09.4±0.4,14.02N×92.79W,h34km±226km,MD4.2

MEX 11 21:42:14.1±0.9,14.20N×92.76W,h16km±210km,MD4.0

NEIC 11 21:42:14.4±4.6,14.22N±0.08×92.63W±0.04,h36km±12km, Error ellipse: s-maj=11.9km s-min=5.7km az=189.0

ISC 11 21:42:10.1±1.8,14.30N±0.06×92.61W±0.05,h6km±10km, n31,σ1.95/40,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		0.70	29		Pn	21 42 27.8	+1.2
THIG					Sn	21 42 37.3	-0.4
THIG		0.70	29	iP	Pn	21 42 27.8	+1.2
THIG				eS	Sn	21 42 37.3	-0.4
ERG	Entre ros, C	1.02	82	eP	Pn	21 42 31.7	+0.7
STG3	Santiaguito 3,	1.09	68	eP	Pn	21 42 32.7	+0.5
PCIG		1.52	337		Pg	21 42 38.2	-1.1
PCIG					Sn	21 42 55.4	-2.6
PCIG		1.52	337	iP	Pg	21 42 38.2	-1.1
PCIG				iS	Sn	21 42 55.4	-2.6
FUG	Fuego 3	1.72	85	eP	Pn	21 42 40.5	-0.3
FUG				eS	Sg	21 43 04.8	-0.8
PCG	Pacaya	1.95	87	eP	Pn	21 42 44.0	0.0
PCG				eS	Sb	21 43 10.6	-0.2
CCIG	Comitan	2.03	13		Pg	21 42 49.8	+0.7
CCIG					Sn	21 43 05.0	-5.9
CCIG	Comitan	2.03	13		Pg	21 42 49.3	+0.2
CCIG					Sg	21 43 16.7	+1.3
CCIG	Comitan	2.03	13	iP	Pg	21 42 49.3	+0.2
CCIG				iS	Sg	21 43 16.7	+1.3
IXG	Ixpaco	2.11	93	eP	Pn	21 42 45.3	-0.9
APG	El Apazote	2.20	71	Pn	Pn	21 42 45.5	-2.0
	4.0nm,0.3s,baz=299,slow=19,SNR=8.7						
APG				Lg	Lg	21 43 18.5	
	11nm,0.3s,baz=315,slow=20,SNR=4.4						
APG				LR	LR	21 43 57.1	
	comp=Z,344nm,18.9s,baz=246,slow=49						
NBG	Las Nubes	2.21	82	eP	Pb	21 42 49.6	-1.2
TGIG		2.52	349		Pb	21 42 53.9	-1.9
TGIG					Sb	21 43 26.2	-1.0
TGIG		2.52	349	iP	Pb	21 42 53.9	-1.9
TGIG				eS	Sb	21 43 26.2	-1.0
CMIG	Matias Romero	3.54	322	Pn	Pn	21 43 07.2	+1.5
	1.8nm,0.3s,baz=144,slow=12,SNR=12						
CMIG				Sn	Sn	21 43 49.4	+1.6
	3.5nm,0.3s,baz=87,slow=8.9,SNR=7.7						
CMIG				Lg	Lg	21 44 01.4	
	5.3nm,0.3s,baz=214,slow=14,SNR=3.7						
TGUH	Tegucigalpa,Un	5.18	92	Pn	Pn	21 43 31.1	+2.7
TEIG	Tepich	7.21	34	Pn	Pn	21 43 57.8	+1.7
	2.0nm,0.3s,baz=254,slow=1.6,SNR=9.6						
TEIG				LR	LR	21 47 14.8	
	comp=Z,146nm,21.3s,baz=139,slow=42						
TXAR	Lajitas Array	18.13	327	P	P	21 46 23.0	-0.2
	0.1nm,0.3s,baz=156,slow=13,SNR=3.0						
TXAR	Lajitas Array	18.13	327	P	Pn	21 46 22.0	-0.8
Z50A	Ashland	19.83	17	P	Pn	21 46 44.8	+1.5
Z50A				IAmb	IAmb	21 46 54.3	
	comp=Z,25nm,1.5s						
Y49A	Blount Mountai	20.27	15	P	Pn	21 46 50.0	+1.5
CPCT	Cooper Cave	22.29	18	P	P	21 47 13.1	+4.9
CPCT				IAmb	IAmb	21 47 19.3	
	comp=Z,9.6nm,1.3s						
TKL	Tuckaleechee C	22.71	19	LR	LR	21 57 00.7	
	comp=Z,54nm,18.5s,baz=166,slow=39						
SJG	San Juan	25.68	78	LR	LR	21 57 37.1	
	comp=Z,40nm,19.9s,baz=120,slow=36						
O44A	Mansfield	26.02	7	P	P	21 47 48.1	+4.1
SRU	San Rafael Swe	29.33	331	P	P	21 48 14.4	+0.5
JLU	Jordanelle	30.95	331	P	P	21 48 28.0	-0.4
YKA	Yellowknife Ar	50.60	347	P	P	21 51 09.0	-0.6
	comp=Z,0.6nm,0.6s,baz=150,slow=7.6,SNR=8.8						
CMAR	Chiang Mai Arr	145.52	340	PKPbc	PKPbc	22 01 48.6	-1.6
	comp=Z,0.5nm,1.0s,baz=343,slow=2.8,SNR=4.3						

IDC 11 21:48:25.9±3.9,20.78S×138.83E,h0km,mb1 3.1/3, mb1mx3.0/26,mbtmp2.9/3,ML2.4/3,Error ellipse: s-maj=31.6km s-min=23.8km az=50.0,Queensland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	4.29	280	Pn	Pn	21 49 30.7	-1.9
	0.1nm,0.3s,baz=93,slow=13,SNR=6.2						
WRA				Sn	Sn	21 50 25.6	+2.2
	0.3nm,0.3s,baz=104,slow=25,SNR=5.6						
WRA				Lg	Lg	21 50 43.8	
	0.6nm,0.3s,baz=102,slow=27,SNR=7.1						
ASAR	Alice Springs	5.39	237	Pn	Pn	21 49 47.9	+0.2
	0.1nm,0.3s,baz=55,slow=14,SNR=7.4						
ASAR				Sn	Sn	21 50 52.4	+1.9
	0.5nm,0.3s,baz=59,slow=24,SNR=17						
ASAR				Lg	Lg	21 51 16.8	
	0.3nm,0.3s,baz=57,slow=22,SNR=5.8						
STKA	Stephens Creek	11.32	168	Pn	Pn	21 51 09.6	+0.5
	0.1nm,0.3s,baz=345,slow=12,SNR=2.1						

IDC 11 21:56:44.2±47.0,15.21S×172.17W,h0km,mb4.5/3, mb1 4.6/3,mb1mx3.8/31,mbtmp4.5/3,Error ellipse: s-maj=917.3km s-min=178.3km az=79.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	45.16	240	P	P	22 05 03.1	+0.1
	2.7nm,0.5s,baz=96,slow=10,SNR=9.2						
WRA	Warramunga Arr	51.04	257	P	P	22 05 48.2	-0.4
	1.2nm,0.5s,baz=93,slow=7.1,SNR=22						
ASAR	Alice Springs	51.29	252	P	P	22 05 50.5	0.0
	8.9nm,0.4s,baz=89,slow=8.1,SNR=178						

IDC 11 22:10:16.2±1.8,56.29S×27.58W,h0km,mb3.9/1, mb1 3.9/1,mb1mx3.5/22,mbtmp3.9/1,Error ellipse: s-maj=99.1km s-min=70.9km az=145.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	73.37	30	P	P	22 21 49.8	0.0
	0.9nm,0.7s,baz=200,slow=6.7,SNR=5.3						
YKA	Yellowknife Ar	136.20	318	PKP	PKPdf	22 29 36.4	-1.5
	0.1nm,0.4s,baz=121,slow=2.3,SNR=3.8						
ILAR	Eielson Array	150.11	311	PKPbc	PKPbc	22 30 07.2	-0.1
	1.7nm,0.7s,baz=100,slow=3.5,SNR=17						
SONM	Songino Array	150.96	87	PKPbc	PKPbc	22 30 09.8	-0.2
	0.9nm,0.5s,baz=225,slow=1.8,SNR=9.9						

STR 11 22:13:40.2±0.9,48°N±3°×°±°,h10km±7km,MLv1.5/6

LDG 11 22:13:39.5±0.0,48.34N×6.65E,h3km,Md1.7/2,Ml1.7/11, Error ellipse: s-maj=0.8km s-min=0.6km az=177.0, France

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ECH	Echery	0.36	110	Pg	Pg	22 13 46.5	0.0
ECH				Sg	Sg	22 13 51.0	-0.1
HAU	Haudompre	0.39	212	ePg	Pg	22 13 47.1	+0.1
HAU				eSg	Sg	22 13 52.3	+0.2

2.1nm,0.2s
CDF Champ du Feu 0.42 80 ePg Pg 22 13 47.6 0.0
CDF eSg Sg 22 13 53.3 +0.2
6.2nm,0.2s
WLS Welschbruch 0.47 81 Pg Pg 22 13 48.5 -0.1
WLS Sg Sg 22 13 54.8 0.0
HINF Hinteralfeld 0.54 165 ePg Pg 22 13 49.8 0.0
HINF Hinteralfeld 0.54 165 eP Pb 22 13 50.9 -0.7
HINF eSg Sg 22 13 56.6 -0.2
7.4nm,0.1s
PAGF Fort de Pagny 0.65 290 ePg Pg 22 13 52.0 0.0
baz=109
PAGF eSg Sg 22 14 00.6 +0.1
1.3nm,0.1s,baz=110
KIZ Kirchzarten 0.93 114 Pg Pg 22 13 57.0 -0.3
KIZ Sg Sg 22 14 09.0 -0.4
LOMF Lomont 0.99 173 Pn Pb 22 13 59.2 -0.2
LOMF Sg Sg 22 14 11.5 +0.1
OPP Oppenau 1.03 81 Pg Pg 22 13 58.9 -0.4
OPP Sg Sg 22 14 12.4 -0.4
MEZF Maizieres J'vi 1.08 279 ePg Pg 22 13 59.4 -0.8
MEZF eSg Sg 22 14 13.8 -0.3
2.3nm,0.3s
SFTF Sexfontaines 1.09 264 ePg Pg 22 14 00.0 -0.3
SFTF eSg Sg 22 14 14.0 -0.4
2.3nm,0.2s
CHMF Charmoille 1.09 180 Pn Pg 22 13 60.0 -0.4
CABF La Chapelle 1.77 193 ePn Pn 22 14 09.7 -1.4
CABF La Chapelle 1.77 193 ePg Pb 22 14 12.1 -0.5
CABF eSn Sn 22 14 30.8 -3.4
CABF eSg Sb 22 14 35.1 -0.2
0.6nm,0.2s
GIVF Givet 2.13 327 ePn Pn 22 14 14.3 -1.7
GIVF eSn Sn 22 14 39.8 -3.2
3.2nm,0.3s
LOR Lormes 2.17 241 ePn Pn 22 14 14.9 -1.6
LOR Lormes 2.17 241 ePg Pb 22 14 19.6 +0.3
baz=62
LOR eSg Sb 22 14 47.8 +1.2
1.2nm,0.2s,baz=60
BAIF Baives 2.35 318 ePn Pn 22 14 17.1 -1.9
BAIF Baives 2.35 318 ePg Pb 22 14 23.0 +0.5
BAIF eSn Sn 22 14 44.9 -3.5
BAIF eSg Sb 22 14 53.4 +1.5
0.2nm,0.2s
SSF Saint Saulge 2.48 240 ePg Pb 22 14 25.6 +0.9
SSF eSg Sb 22 14 56.5 +0.9
0.7nm,0.3s
SMF Signal de Mont 2.55 229 ePn Pn 22 14 19.8 -1.9
SMF Signal de Mont 2.55 229 ePg Pb 22 14 27.0 +1.1
SMF eSn Sn 22 14 49.6 -3.7
SMF eSg Sg 22 14 59.8 -1.6
0.8nm,0.3s
AVF Avril sur Loir 2.72 236 ePn Pn 22 14 21.8 -2.2
AVF Avril sur Loir 2.72 236 ePg Pb 22 14 29.9 +1.2
AVF eSg Sg 22 15 05.0 -1.8
0.2nm,0.2s

IDC 11 22:14:43.1±306.0,36.03N×116.45W,h0km,Error ellipse: s-maj=144.2km s-min=58.6km az=180.0, California-Nevada border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
I57US PINON FLAT INF 2.42 180 i 22 30 40.0
baz=360,slow=309,SNR=1.9
I56US NEWPORT INFRAS12.23 358 i 23 33 20.0
baz=178,slow=328,SNR=0.7
I10CA LAC DU BONNET 20.47 40 i 00 20 20.3
baz=231,slow=328,SNR=2.0

IDC 11 22:15:19.4±1.0,24.00N×124.78E,h0km,mb3.5/8, mb1 3.7/9,mb1mx3.4/46,mbtmp3.5/9,ML3.2/1,MS3.1/4, Ms1 3.1/4,ms1mx2.6/37,Error ellipse: s-maj=43.7km s-min=19.6km az=68.0
JMA 11 22:15:22.3±0.2,24.27N×125.18E,h33km,M3.4
ISC 11 22:15:22.9±1.3,24.29N±0.08×125.15E±0.06,h22km±8km, n22,σ1°28/27,mb3.4/8,MS3.0/4,Southwestern Ryukyu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JMJ2 Miyako jima3 0.47 20 P Pb 22 15 32.4 -0.2
JMJ2 S Sb 22 15 39.6 +0.4
JOGS Gusukube 0.52 26 P Pb 22 15 33.1 -0.3
JOGS S Sb 22 15 41.1 +0.6
JIRB Irabujima 0.54 2 P Pb 22 15 33.1 -0.5
JIRB S Sb 22 15 41.2 +0.3
JTJ Tarama 0.54 310 P Pb 22 15 33.7 0.0
JTJ S Sb 22 15 41.8 +0.8
JIKM Ikemajima 0.64 8 P Pn 22 15 34.9 -1.7
JIKM S Sn 22 15 44.8 -1.2
JISG Ishigakijimahi 0.82 291 P Pn 22 15 37.6 -1.5
JISG eS Sn 22 15 49.2 -1.4
JIJ Ishigaki jima 0.92 275 P Pn 22 15 39.7 -0.8
JIJ eS Sb 22 15 52.6 +0.5
JKRS Kuro-shima 1.04 267 P Pb 22 15 42.3 0.0
JKRS S Sb 22 15 56.5 +0.9
HATJ Hateruma jima 1.25 260 P Pn 22 15 44.4 -0.6
IRIF Iriomote-Funau 1.30 272 P Pn 22 15 44.4 -1.3
MJAR Matsushiro Arr 16.59 40 P P 22 19 19.8 +3.3
0.1nm,0.3s,baz=196,slow=8.2,SNR=3.9
USRK Ussuriysk Ar. 20.63 14 LR LR 22 28 04.0
comp=Z,51nm,18.5s,baz=338,slow=36
MKAR Makanchi Array 40.82 314 P P 22 23 01.8 -1.0
0.1nm,0.3s,baz=98,slow=9.3,SNR=5.0
MKAR LR LR 22 39 48.5
comp=Z,18nm,18.2s,baz=207,slow=36
ZALV Zalesovo Beam 42.17 325 P P 22 23 13.8 +0.1
0.3nm,0.3s,baz=110,slow=8.6,SNR=2.5
WRA Warramunga Arr 44.87 168 P P 22 23 33.5 -2.2
0.7nm,0.4s,baz=348,slow=8.7,SNR=13
ASAR Alice Springs 48.42 169 P P 22 24 02.1 -1.5
0.3nm,0.6s,baz=358,slow=14,SNR=6.8
BVAR Borovoye Array 49.91 320 P P 22 24 14.7 0.0
0.1nm,0.3s,baz=74,slow=6.2,SNR=2.1
ARU Arti 57.21 323 LR LR 22 52 24.4
comp=Z,18nm,19.7s,baz=40,slow=39
AKTO Aktyubinsk 57.23 316 LR LR 22 50 56.5
comp=Z,15nm,18.8s,baz=280,slow=37
FINES FINESS Array B 73.17 330 P P 22 26 52.6 +1.1
1.0nm,0.9s,baz=101,slow=7.5,SNR=2.3
BRTR Keskin Array B 76.01 307 P P 22 27 08.9 +0.2
0.1nm,0.5s,baz=72,slow=4.7,SNR=2.3
YKA Yellowknife Ar 81.44 24 P P 22 27 39.8 +1.9
0.2nm,0.7s,baz=302,slow=4.9,SNR=2.9

IDC 11 22:23:30.4±2.7,6.93S×128.31E,h0km,mb3.5/1, mb1 3.6/3,mb1mx3.3/40,mbtmp3.4/3,ML3.2/2,Error ellipse: s-maj=311.9km s-min=32.0km az=66.0,Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 14.19 156 Pn Pn 22 26 52.0 -0.9
0.1nm,0.3s,baz=334,slow=13,SNR=2.1
WRA Sn Sn 22 29 14.7 -17
0.3nm,0.3s,baz=340,slow=26,SNR=5.2
ASAR Alice Springs 17.48 163 P P 22 27 36.5 -0.6
0.1nm,0.3s,baz=339,slow=9.9,SNR=3.3
MKAR Makanchi Array 67.26 328 P P 22 34 26.9 0.0
0.2nm,0.4s,baz=124,slow=7.6,SNR=9.6

IDC 11 22:26:30.5±0.8,12.68N×87.79W,h77km±6km,mb3.8/12, mb1 4.0/17,mb1mx3.7/47,mbtmp4.1/17,MS2.9/5, Ms1 2.8/5,ms1mx2.6/29,Error ellipse: s-maj=25.6km s-min=9.5km az=52.0
NEIC 11 22:26:30.7±3.0,12.65N±0.06×87.86W±0.05,h76km±5km, mb4.3/39,Md4.5(SNET),Error ellipse: s-maj=10.0km s-min=6.4km az=211.0
UCR 11 22:26:31.2±1.3,12.59N×88.01W,h48km±40km,MD4.3, ML4.5,mb4.3(NEIC)
INET 11 22:26:31.2,12.57N×87.96W,h29km,ML4.7
GCG 11 22:26:32.1±1.1,12.40N×88.14W,h70km±300km,MD4.5
SNET 11 22:26:32.1±0.7,12.66N×88.04W,h50km±16km,ML4.5
ISC 11 22:26:30.2±0.7,12.65N±0.05×87.89W±0.04,h73km±5km, n113,σ1°36/130,mb4.3/26,2C,Near coast of Nicaragua

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CNCH Conchagua 0.63 5⇑eP Pn 22 26 45.1 +0.3
CNCH eS Sn 22 26 56.7 +1.1
CNCH Conchagua 0.63 5⇑eP Pn 22 26 45.1 +0.3
CNCH eS Sn 22 26 56.7 +1.1
LCND La Caada 0.66 0 eP Pn 22 26 45.4 +0.4
LCND eS Sn 22 26 55.7 -0.2
LCND La Caada 0.66 0 eP Pn 22 26 45.4 +0.4
LCND eS Sn 22 26 55.7 -0.2
BLLM Bellamira 0.86 337 eP Pn 22 26 47.4 +0.1
BLLM Bellamira 0.86 337 eP Pn 22 26 47.4 +0.1
VSM San Miguel 0.86 335 eP Pn 22 26 48.1 +0.5
VSM San Miguel 0.86 335 eP Pn 22 26 48.1 +0.5
LCY Lacayo 0.87 333 eP Pn 22 26 47.4 0.0
LCY Lacayo 0.87 333 eP Pn 22 26 47.4 0.0
RANC El Ranchito 0.87 334 eP Pn 22 26 47.6 0.0
RANC eS Sn 22 26 59.7 -0.7
RANC IAML 22 27 03.0
comp=Z,13μm,0.2s
RANC El Ranchito 0.87 334 eP Pn 22 26 47.6 0.0
RANC eS Sn 22 26 59.7 -0.7
RANC IAML 22 27 03.0
comp=Z,13μm,0.2s
PACA Pacayal 0.92 333 eP Pn 22 26 48.2 +0.1
PACA eS Sn 22 27 00.8 -0.5
PACA IAML 22 27 03.3
comp=Z,37μm,0.2s
PACA Pacayal 0.92 333 eP Pn 22 26 48.2 +0.1
PACA eS Sn 22 27 00.8 -0.5
PACA IAML 22 27 03.3
comp=Z,37μm,0.2s
ALJI Alcalda de J 0.94 316 eP Pn 22 26 47.5 -0.8
ALJI Alcalda de J 0.94 316 eP Pn 22 26 47.5 -0.8
TECA Tecapa 1.03 325 eP Pn 22 26 49.4 -0.1
TECA Tecapa 1.03 325 eP Pn 22 26 49.4 -0.1
COEB Comit de Eme 1.05 324 eP Pn 22 26 49.6 -0.1
COEB eS Sn 22 27 03.3 -0.8
COEB IAML 22 27 09.4
comp=Z,4μm,0.3s
COEB Comit de Eme 1.05 324 eP Pn 22 26 49.6 -0.1
COEB eS Sn 22 27 03.3 -0.8
COEB IAML 22 27 09.4
comp=Z,4μm,0.3s
FAGO Alcalda de S 1.06 349 eP Pn 22 26 50.1 +0.3
FAGO eS Sn 22 27 04.5 +0.3
FAGO Alcalda de S 1.06 349 eP Pn 22 26 50.1 +0.3
FAGO eS Sn 22 27 04.5 +0.3
UESV Universidad de 1.31 319 eP Pn 22 26 53.0 +0.1
UESV Universidad de 1.31 319 eP Pn 22 26 53.0 +0.1
COEG Centro de Oper 1.36 315 eP Pn 22 26 53.5 -0.1
COEG eS Sn 22 27 10.3 -0.9
COEG IAML 22 27 14.2
comp=Z,9μm,0.3s
COEG Centro de Oper 1.36 315 eP Pn 22 26 53.5 -0.1
COEG eS Sn 22 27 10.3 -0.9
COEG IAML 22 27 14.2
comp=Z,9μm,0.3s
PAVA Las Pavas 1.47 316 eP Pn 22 26 55.3 +0.2
PAVA Las Pavas 1.47 316 eP Pn 22 26 55.3 +0.2
LFRS El Faro 1.50 311 eP Pn 22 26 55.4 0.0
TGUH Tegucigalpa,Un 1.53 23 Pn 22 26 57.3 +1.5
ESTN Estel 1.55 73 Pn Pn 22 26 57.0 +0.9
ESTN Sn 22 27 12.6 -3.1
LBRS Las Brisas 1.56 314 eP Pn 22 26 56.8 +0.6
LFU La Fuente 1.62 313 eP Pn 22 26 57.4 +0.4
LFU La Fuente 1.62 313 eP Pn 22 26 57.4 +0.4
CUSC Alcaldia de Cu 1.65 311 eP Pn 22 26 58.0 +0.6
CUSC Alcaldia de Cu 1.65 311 eP Pn 22 26 58.0 +0.6
SNET Serv Nac Est T 1.66 309 Pn 22 26 57.9 +0.3
BOQS Boqueron 1.73 309 eP Pn 22 26 59.1 +0.5
CEVE Cerro Verde 2.05 305 eP Pn 22 27 03.4 +0.4
CEVE IAML 22 27 34.1
comp=Z,4μm,0.3s
CEVE Cerro Verde 2.05 305 eP Pn 22 27 03.4 +0.4
CEVE IAML 22 27 34.1
comp=Z,4μm,0.3s
SBLS San Blas 2.06 305 eP Pn 22 27 03.4 +0.4
SBLS San Blas 2.06 305 eP Pn 22 27 03.4 +0.4
ACON Acoyapa 2.74 104 Pn 22 27 12.0 0.0
IXG Ixpaco 2.91 302 eP Pn 22 27 15.7 +1.3
NY14 Universidad de 3.05 130 i P Pn 22 27 17.7 +1.5
NBG Las Nubes 3.07 309 eP Pn 22 27 19.2 +2.5
PCG Pacaya 3.16 304 eS Sn 22 27 57.6 +2.9
COLC Colonia 3.29 126 i P Pn 22 27 21.7 +2.2
GUAI GUAI 3.32 135 i P Pn 22 27 20.9 +1.0
GUAI i S Sn 22 27 56.1 -2.1
CUI Cuipilapa 3.33 126 i P Pn 22 27 22.1 +2.1
FUG Fuego 3 3.38 302 eP Pn 22 27 23.6 +2.7
FUG eS Sn 22 28 02.9 +2.9
APG El Apazote 3.42 313 P Pn 22 27 23.5 +2.0
comp=Z,4.5nm,0.3s,baz=90,slow=14,SNR=3.8
ESPN Las Esperanzas 3.54 97 Pn 22 27 23.9 +1.0
JTS Las Juntas de 3.71 129 P Pn 22 27 26.5 +1.2
comp=Z,7.7nm,0.3s,baz=349,slow=13,SNR=21
JTS S Sn 22 28 07.1 -0.8
comp=Z,8.3nm,0.3s,baz=223,slow=11,SNR=3.5
JTS Las Juntas de 3.71 129 Pn 22 27 26.7 +1.5
JTS Sn 22 28 05.5 -2.4
STG3 Santiaguito 3, 4.12 300 eP Pn 22 27 33.0 +2.0
STG3 eS Sn 22 28 19.9 +1.8
TEIG Tepich 7.55 357 P Pn 22 28 19.3 +1.7
comp=Z,2.9nm,0.3s,baz=229,slow=24,SNR=14
TEIG Tepich 7.55 357 Pn Pn 22 28 20.3 +2.7
CMIG Matias Romero 8.07 304 P Pn 22 28 26.2 +1.4
comp=Z,0.8nm,0.3s,baz=121,slow=11,SNR=8.1
CMIG S Sn 22 29 51.8 -2.9
baz=56,slow=7.0,SNR=2.8
MTDJ Mount Denham 11.42 60 Pn Pn 22 29 13.9 +3.2
ROSC El Rosal 15.49 119 LR LR 22 36 48.9
comp=Z,26nm,21.2s,baz=218,slow=40
SDV Santo Domingo 17.36 101 P Pn 22 30 27.5 -0.6
comp=Z,0.2nm,0.3s,baz=254,slow=9.0,SNR=3.6
GRTK Grand Turk 18.27 59 P P 22 30 36.4 -1.8
GOGA Godfrey 21.06 10 P P 22 31 11.0 +2.6
GOGA IAmb IAmb 22 31 13.2
comp=Z,9.9nm,0.9s
Y49A Blount Mountai 21.16 3 P P 22 31 12.0 +2.6
HUMP Col San Antoni 21.93 73 P P 22 31 16.5 -1.4
HUMP IAmb IAmb 22 31 28.9
comp=Z,20nm,1.2s
TX32 Lajitas Array 22.15 321 IAmb IAmb 22 31 23.4
comp=Z,10nm,0.9s
TXAR Lajitas Array 22.15 321 P P 22 31 21.7 +1.5
comp=Z,8.7nm,0.8s,baz=143,slow=9.2,SNR=61
TXAR LR LR 22 41 47.7
comp=Z,15nm,19.5s,baz=0.0,slow=41
TXAR Lajitas Array 22.15 321 P P 22 31 19.9 -0.3
TX31 Lajitas Ar. Si 22.15 321 P P 22 31 19.9 -0.4
TX31 IAmb IAmb 22 31 23.4
comp=Z,10nm,0.9s
MIAR Mount Ida 22.41 348 P P 22 31 24.0 +1.2
MIAR IAmb IAmb 22 31 26.8
comp=Z,7.9nm,0.9s
Y58A Scranton 22.45 18 P P 22 31 23.0 -0.2
BG3 Lake Jocassee 22.70 11 P P 22 31 28.0 +2.1
STVI Saint Thomas 22.81 73 P P 22 31 28.2 +1.0
STVI IAmb IAmb 22 31 32.4
comp=Z,20nm,1.1s
CPCT Cooper Cave 22.91 7 P P 22 31 27.7 -0.4
TKL Tuckaleechee C 23.21 9 P P 22 31 31.6 +0.5
comp=Z,5.3nm,0.8s,baz=188,slow=7.2,SNR=4.3
FNO Franklin 24.10 341 P P 22 31 40.3 +1.2
U54A Nelsons Funny 24.39 12 P P 22 31 43.8 +2.0
U54A IAmb IAmb 22 31 47.2
comp=Z,8.9nm,0.7s
MSTX Muleshoe 25.18 330 P P 22 31 47.8 -1.3
WCI Wyandotte Cave 25.52 3 P P 22 31 52.0 +0.1
R53A Hurricane 26.12 11 P P 22 31 57.3 -0.1
R53A IAmb IAmb 22 32 04.0
comp=Z,22nm,1.4s
Q54A Coxs Mills 26.97 12 IAmb IAmb 22 32 11.8
comp=Z,13nm,0.9s
SDCO Great Sand Dun 29.53 331 P P 22 32 30.4 +2.2
M54A Oil Creek Stat 29.64 13 P P 22 32 29.5 +0.7
M54A IAmb IAmb 22 32 31.8
comp=Z,4.7nm,0.8s
N59A State Game Lan 30.10 19 P P 22 32 34.6 +1.7
N59A IAmb IAmb 22 32 37.2
comp=Z,7.1nm,1.2s
SAML Samuel 32.60 130 P P 22 32 55.2 0.0
SADO Sadowa 32.88 12 P P 22 32 56.6 -0.6
comp=Z,1.9nm,0.5s,baz=250,slow=7.2,SNR=5.8
SADO pP pP 22 33 16.1 +1.5
comp=Z,3.3nm,0.6s,baz=242,slow=5.1,SNR=3.0
PD31 Pinedale Array 35.40 332 IAmb IAmb 22 33 30.8
comp=Z,4.2nm,1.4s
PDAR Pinedale Array 35.40 332 P P 22 33 20.2 +0.9
comp=Z,0.8nm,0.5s,baz=127,slow=11,SNR=12
PDAR Pinedale Array 35.40 332 P P 22 33 20.1 +0.8
MDP Montagnes des 35.59 99 LR LR 22 50 30.7
comp=Z,17nm,18.5s,baz=79,slow=41
SNOW Snow King Moun 36.49 332 P P 22 33 28.9 +0.2
MOOW Moose Ponds 36.70 332 IAmb IAmb 22 33 32.4
comp=Z,2.9nm,0.7s
RLMT Red Lodge 37.14 335 IAmb IAmb 22 33 36.4
comp=Z,5.5nm,1.2s
ULM Lac du Bonnet 38.06 352 P P 22 33 40.6 -0.9
comp=Z,2.6nm,0.6s,baz=178,slow=9.3,SNR=7.9
ULM LR LR 22 51 45.1
comp=Z,12nm,18.7s,baz=248,slow=40
ULM Lac du Bonnet 38.06 352 IAmb IAmb 22 33 41.2
comp=Z,3.4nm,0.6s
F10A Beach Ranch, E 41.47 329 P P 22 34 10.9 +0.9
F10A IAmb IAmb 22 34 13.5
comp=Z,9.4nm,1.4s
NEW Newport 43.03 331 P P 22 34 22.5 -0.1
comp=Z,1.2nm,0.5s,baz=116,slow=18,SNR=2.8
SCHQ Schefferville 45.22 17 P P 22 34 39.1 -0.8
comp=Z,4.4nm,0.5s,baz=215,slow=6.3,SNR=25
SCHQ Schefferville 45.22 17 IAmb IAmb 22 34 39.9
comp=Z,5.2nm,0.7s
BDFB Brasilia 48.44 124 LR LR 22 56 52.9
comp=Z,44nm,18.6s,baz=295,slow=38
CPUP Villa Florida 48.83 143 P P 22 35 07.4 -1.0
comp=Z,1.7nm,0.6s,baz=321,slow=8.5,SNR=5.2
YKA Yellowknife Ar 53.31 345 P P 22 35 40.4 -1.2
comp=Z,0.6nm,0.5s,baz=147,slow=7.0,SNR=11
YKA pP pP 22 36 00.1 0.0
comp=Z,0.7nm,0.6s,baz=141,slow=7.5,SNR=7.3
YKA PcP PcP 22 36 47.1 -1.1
comp=Z,0.6nm,0.8s,baz=143,slow=5.0,SNR=4.4
PLCA Paso Flores 55.49 164 P P 22 35 58.6 +0.9
comp=Z,3.0nm,1.0s,baz=10,slow=7.0,SNR=4.4
PLCA Paso Flores 55.49 164 P P 22 35 58.1 +0.5
DLBC Dease Lake 55.55 335 P P 22 35 58.2 +0.3
comp=Z,2.5nm,0.7s,baz=172,slow=6.2,SNR=2.8
DLBC pP pP 22 36 16.3 -0.3
comp=Z,3.6nm,0.7s,baz=73,slow=4.2,SNR=3.0
ILAR Eielson Array 65.67 336 P P 22 37 05.8 -0.7
comp=Z,0.4nm,0.8s,baz=177,slow=5.7,SNR=6.6
ILAR pP pP 22 37 25.6 -0.1
comp=Z,0.5nm,0.5s,baz=164,slow=4.9,SNR=4.0
WMQ Urumqi 123.66 4 eP PKiKP 22 45 20.6 +0.5
KSH Kashi 125.97 15 PKP PKPdf 22 45 17.6 -6.9
KSH sPKP 22 45 58.9
KSH PP PP 22 47 17.0 -0.1
WRA Warramunga Arr 138.91 254 PKP PKPdf 22 45 50.1 +0.9
comp=Z,0.6nm,0.6s,baz=96,slow=2.4,SNR=3.3
ASAR Alice Springs 138.94 248 PKP PKPdf 22 45 49.7 +0.5
comp=Z,0.8nm,1.0s,baz=100,slow=3.1,SNR=4.2
ASAR Alice Springs 138.94 248 PKPdf 22 45 49.2 +0.1
CMAR Chiang Mai Arr 148.37 348 PKPbc PKPdf 22 46 06.2 +0.5
comp=Z,0.4nm,0.4s,baz=337,slow=4.3,SNR=4.0

IDC 11 22:32:10.2±1.5,55.65S×28.29W,h0km,mb4.2/4, mb1 4.3/4,mb1mx3.9/32,mbtmp4.2/4,MS3.2/4,Ms1 3.2/4, ms1mx2.9/28,Error ellipse: s-maj=66.0km s-min=29.5km az=11.0
NEIC 11 22:32:16.3±1.9,55.5S±0.2×28.5W±0.1,h35km±6km, mb4.3/6,Error ellipse: s-maj=24.2km s-min=9.3km az=188.0
ISC 11 22:32:17.2±0.7,55.5S±0.1×28.7W±0.1,h45km,n29, σ1°21/25,mb4.3/5,MS3.0/4,South Sandwich Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HOPE Hope Point 4.65 282 Pn 22 33 25.4 +0.7
HOPE Sn 22 34 14.3 -3.1
VNA3 Neumayer Olymp 17.77 160 P Pn 22 36 20.2 -0.7
VNA2 Neumayer--Watz 18.00 157 P P 22 36 23.5 -0.2
baz=316,slow=13
SNAA Sanae 19.57 156 P P 22 36 40.3 -0.6
SNAA Sanae 19.57 156 P P 22 36 40.3 -0.6
PLCA Paso Flores 31.05 281 LR LR 22 50 27.4
comp=Z,28nm,18.3s,baz=161,slow=35
QSPA South Pole Qui 34.72 180 P P 22 39 03.8 +1.3
CPUP Villa Florida 35.82 313 P P 22 39 13.0 +0.9
1.3nm,0.6s,baz=145,slow=9.5,SNR=3.8
CPUP LR LR 22 53 01.1
comp=Z,23nm,18.9s,baz=156,slow=35
CPUP Villa Florida 35.82 313 P P 22 39 13.3 +1.2
CPUP IAmb IAmb 22 39 15.9
comp=Z,4.3nm,1.1s
CFA Coronel Fontan 36.56 294 P P 22 39 19.2 +0.7
comp=Z,2.0nm,0.5s,baz=181,slow=7.4,SNR=3.7
MAW Mawson 41.08 144 LR LR 22 55 22.7
comp=Z,89nm,18.4s,baz=238,slow=34
H10N1 ASCENSION HYDR48.89 19 T T 23 33 26.6
baz=190
H10N3 ASCENSION HYDR48.89 19 T T 23 33 29.5
baz=190
H10N2 ASCENSION HYDR48.91 19 T T 23 33 26.6
baz=190
LPAZ La Paz 49.37 307 P P 22 41 04.2 +1.4
comp=Z,2.0nm,0.6s,baz=169,slow=2.5,SNR=8.6
LPAZ LR LR 23 04 41.3
comp=Z,13nm,18.7s,baz=155,slow=39
LPAZ La Paz 49.37 307 P P 22 41 03.0 +0.2
LPAZ IAmb IAmb 22 41 05.5
comp=Z,2.8nm,0.8s
TOA0 Torodi Ar. Sit 73.05 31 P P 22 43 41.7 -0.5
TOA0 IAmb IAmb 22 43 45.3
comp=Z,2.7nm,0.8s
TORD Torodi Ar. Bea 73.05 31 P P 22 43 41.9 -0.4
comp=Z,2.7nm,0.8s,baz=200,slow=6.7,SNR=19
TORD Torodi Ar. Bea 73.05 31 P P 22 43 40.9 -1.4
FINES FINESS Array B 124.34 28 PKP PKPdf 22 51 06.7 -2.8
comp=Z,0.9nm,0.7s,baz=222,slow=2.6,SNR=4.7
YKA Yellowknife Ar 135.21 319 PKP PKPdf 22 51 29.1 -1.1
comp=Z,0.4nm,0.6s,baz=136,slow=2.1,SNR=7.0
INK Inuvik 144.86 321 PKPbc PKPdf 22 51 47.5 +0.1
comp=Z,6.0nm,0.9s,baz=74,slow=2.1,SNR=16
INK Inuvik 144.86 321 PKPdf 22 51 48.2 +0.8
DAWY Dawson 145.80 313 PKPbc 22 51 50.5 +0.6
BCAR Beaver Creek A 146.49 311 PKPab 22 51 53.2 +0.1
BMAR Burnt Mountain 148.72 318 PKPbc 22 51 58.9 +1.0
ILAR Eielson Array 149.12 313 PKPbc PKPbc 22 51 59.9 +0.9
comp=Z,1.9nm,0.6s,baz=124,slow=1.6,SNR=21
ILAR Eielson Array 149.12 313 PKiKP 22 52 00.0 -0.1
SONM Songino Array 151.56 87 PKPbc PKPbc 22 52 05.1 -0.4
comp=Z,1.0nm,0.6s,baz=226,slow=4.1,SNR=9.5

IDC 11 22:33:01.9±1.3,5.91S×153.60E,h0km,mb3.7/7, mb1 3.8/8,mb1mx3.6/38,mbtmp3.7/8,ML3.2/1,MS3.1/1, Ms1 3.0/1,ms1mx2.3/40,Error ellipse: s-maj=36.4km s-min=23.8km az=103.0
ISC 11 22:33:06.9±1.2,5.9S±0.2×153.5E±0.2,h32km,n10, σ1°50/10,mb3.5/7,New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRVT Keravat (AS076 2.17 317 Pn Pn 22 33 38.4 -2.4
7.2nm,0.3s,baz=79,slow=5.2,SNR=7.5
KRVT Sn Sn 22 34 07.7 +1.2
20nm,0.3s,baz=238,slow=12,SNR=6.0
WRA Warramunga Arr 23.29 231 P P 22 38 12.1 -0.1
0.2nm,0.5s,baz=56,slow=9.2,SNR=4.1
ASAR Alice Springs 25.86 225 P P 22 38 35.6 -0.3
0.4nm,0.4s,baz=60,slow=8.9,SNR=7.6
STKA Stephens Creek 28.16 202 LR LR 22 49 52.0
comp=Z,36nm,18.4s,baz=217,slow=36
SONM Songino Array 67.62 328 P P 22 44 02.4 +1.6
0.3nm,0.7s,baz=144,slow=5.6,SNR=4.6
MKAR Makanchi Array 81.61 319 P P 22 45 23.6 +1.7
0.5nm,0.7s,baz=94,slow=7.8,SNR=8.7
ZALV Zalesovo Beam 82.45 326 P P 22 45 26.8 +0.8
1.2nm,0.4s,baz=108,slow=5.5,SNR=7.8
ILAR Eielson Array 82.90 22 P P 22 45 27.0 -1.1
0.3nm,0.9s,baz=242,slow=6.4,SNR=3.4
BVAR Borovoye Array 90.54 323 P P 22 46 06.1 +0.3
0.9nm,0.6s,baz=104,slow=6.3,SNR=8.2
TORD Torodi Ar. Bea 151.31 287 PKPbc PKPbc 22 52 57.4 -1.0
0.6nm,0.6s,baz=58,slow=2.3,SNR=4.3

IDC 11 22:37:48.2±2.2, 24.48S×179.87W, h497km±19km, mb3.3/6, mb1 3.5/7, mb1mx3.2/37, mbtmp4.2/7, Error ellipse: s-maj=43.6km s-min=20.2km az=163.0

ISC 11 22:37:48.6±1.0, 24.5S±0.3×179.9W±0.2, h505km, n12, σ0.96/15, mb3.6/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.79	278	P	P	22 40 35.6	-0.1
	0.6nm,0.3s,baz=82,slow=17,SNR=10						
CTA	Charters Tower	31.59	271	P	P	22 43 30.4	+0.9
	6.1nm,0.4s,baz=96,slow=10.0,SNR=8.2						
STKA	Stephens Creek	34.62	249	P	P	22 43 55.0	0.0
	0.6nm,0.4s,baz=100,slow=10,SNR=4.2						
ASAR	Alice Springs	42.05	261	P	P	22 44 55.9	+0.1
	0.9nm,0.5s,baz=93,slow=7.5,SNR=15						
ASAR				ScP	ScP	22 49 42.6	+1.2
	0.3nm,0.8s,baz=111,slow=5.1,SNR=3.2						
WRA	Warramunga Arr	42.48	267	P	P	22 44 58.6	-0.5
	2.2nm,0.3s,baz=97,slow=8.3,SNR=47						
WRA				ScP	ScP	22 49 44.5	+1.4
	1.4nm,0.9s,baz=101,slow=3.7,SNR=5.9						
TXAR	Lajitas Array	90.64	58	P	P	22 49 57.6	+0.4
	0.6nm,0.7s,baz=224,slow=6.9,SNR=7.7						
PDAR	Pinedale Array	93.02	44	P	P	22 50 09.1	+1.1
	0.5nm,1.0s,baz=225,slow=3.4,SNR=3.3						
ARCES	ARCESS Array B	132.45	348	PKP	PKiKP	22 56 04.2	-1.4
	0.9nm,0.7s,baz=42,slow=2.8,SNR=6.4						
FINES	FINESS Array B	139.00	341	PKP	PKiKP	22 56 18.3	-0.9
	0.8nm,0.6s,baz=31,slow=1.1,SNR=4.0						
FINES				SKPbc	SKPbc	22 59 03.8	-0.3
	2.2nm,0.8s,baz=29,slow=4.4,SNR=6.2						
AKASG	Malin Array Be	145.49	327	PKPbc	PKPbc	22 56 28.8	-1.1
	0.4nm,0.3s,baz=42,slow=4.2,SNR=6.5						
BRTR	Keskin Array B	147.99	307	PKPbc	PKPbc	22 56 36.1	-1.1
	0.4nm,0.6s,baz=95,slow=5.2,SNR=4.2						
TORD	Torodi Ar. Bea	168.65	188	PKPab	PKPab	22 58 10.8	-0.4
	0.6nm,0.7s,baz=176,slow=1.9,SNR=5.5						

ATH 11 22:50:53.0, 38.16N×20.42E, h14km±1km, ML2.6/5, Error ellipse: s-maj=2.0km s-min=1.1km az=246.0

THE 11 22:50:53.3, 38.15N×20.42E, h13km, ML2.9/9, Error ellipse: s-maj=1.0km s-min=0.5km az=263.0

ISC 11 22:50:53.1±1.1, 38.15N±0.03×20.43E±0.04, h14km±5km, n29, σ0.41/50, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARGA	Argostoli. Kep	0.05	54	P	Pg	22 50 55.7	-0.1
ARGA				S	Sg	22 50 57.3	-0.2
KEF2	Argostoli. Kep	0.05	70	P	Pg	22 50 55.7	-0.1
KEF2				S	Sg	22 50 57.3	-0.3
LXRA	Lixouri, Kepha	0.05	5	P	Pg	22 50 55.8	0.0
LXRA				S	Sg	22 50 57.7	+0.1
LXR1	Lixouri, Cepha	0.05	6	P	Pg	22 50 55.8	0.0
LXR1				S	Sg	22 50 57.9	+0.3
	40μm,0.1s						
CHV1	Chavriata, Kef	0.05	311	P	Pg	22 50 55.7	-0.1
CHV1				S	Sg	22 50 57.5	-0.1
	26μm,0.2s						
ARG2	Argostoli	0.05	57	P	Pg	22 50 55.8	0.0
ARG2				S	Sg	22 50 57.5	-0.2
	57μm,0.1s						
KEF3	Kipouria, Keph	0.09	309	P	Pg	22 50 56.0	-0.2
KEF3				S	Sg	22 50 58.0	-0.1
KEF4	Livadi, Kephal	0.11	357	P	Pg	22 50 56.3	-0.1
KEF4				S	Sg	22 50 58.6	0.0
VLS	Valsamata	0.13	78	P	Pg	22 50 56.5	-0.2
VLS				S	Sg	22 50 59.1	0.0
	11μm,0.1s						
VLS	Valsamata	0.13	78	P	Pg	22 50 56.6	-0.2
VLS				S	Sg	22 50 58.9	-0.2
VLS				AML	AML	22 50 59.2	
	comp=E,23294μm,0.1s						
VLS				AML	AML	22 50 59.3	
	comp=N,25129μm,0.2s						
VSK1	VASILIKIADES	0.28	22	P	Pg	22 50 59.0	-0.1
VSK1				S	Sg	22 51 03.3	+0.2
	comp=N,4μm,0.1s						
KONA	Konidatara, Ke	0.30	22	P	Pg	22 50 59.2	-0.2
VLMS	Volimes, Zakyn	0.33	146	P	Pg	22 51 00.0	+0.1
VLMS				S	Sb	22 51 05.8	-0.1
VLMS				AML	AML	22 51 06.1	
	comp=E,6093μm,0.2s						
VLMS				AML	AML	22 51 09.0	
	comp=N,3619μm,0.3s						
EVGI	Lefkada island	0.50	20	P	Pg	22 51 02.7	-0.4
EVGI				S	Sg	22 51 10.4	+0.6
EVGI	Lefkada island	0.50	20	P	Pg	22 51 02.7	-0.4
KRI1	kERI	0.57	148	P	Pg	22 51 04.1	-0.3
KRI1				S	Sb	22 51 13.7	+0.7
	comp=N,758nm,0.2s						
MGNA	Meganis	0.58	29	P	Pg	22 51 03.7	-0.9
AST1	Astakos	0.65	53	P	Pg	22 51 05.5	-0.3
AST1				S	Sb	22 51 15.2	+0.1
	comp=N,498nm,0.1s						
LKD2	Lefkada island	0.66	15	P	Pg	22 51 05.8	-0.4
LKD2				S	Sb	22 51 16.1	+0.5
	comp=N,182nm,0.3s						
LKD2	Lefkada island	0.66	15	P	Pg	22 51 05.7	-0.4
TSLK	Tsoukalades, L	0.70	15	P	Pg	22 51 06.5	-0.3
TSLK				S	Sb	22 51 17.4	+0.9
	comp=N,255nm,0.3s						
TSLK	Tsoukalades, L	0.70	15	P	Pg	22 51 06.4	-0.3
TSLK				S	Sb	22 51 16.6	0.0
PDO	Prodromos	0.74	53	P	Pg	22 51 07.1	-0.5
PDO				S	Sb	22 51 18.9	+1.1
PDO	Prodromos	0.74	53	P	Pg	22 51 06.9	-0.7
PDO				S	Sb	22 51 18.5	+0.6
PDO				AML	AML	22 51 26.6	
	comp=N,562μm,0.3s						
PDO				AML	AML	22 51 27.9	
	comp=E,490μm,0.3s						
RLS	Riolos of Patr	0.82	96	P	Pg	22 51 08.9	-0.2
RLS				S	Sb	22 51 21.1	+1.0
PVO	Paravola	0.98	61	P	Pb	22 51 11.8	0.0
PVO	Paravola	0.98	61	P	Pb	22 51 11.9	0.0
PVO				AML	AML	22 51 28.4	
	comp=E,623μm,0.3s						
PVO				AML	AML	22 51 28.4	
	comp=N,383μm,0.3s						
DRO	Drossia	1.03	101	P	Pb	22 51 12.5	-0.2
DRO				AML	AML	22 51 31.7	
	comp=N,389μm,0.2s						
DRO				AML	AML	22 51 31.9	
	comp=E,523μm,0.3s						
ANX	Ano Chora	1.25	69	P	Pn	22 51 16.1	-0.2

IDC 11 23:03:14.8±1.4, 44.98N×109.95W, h0km, mb3.4/1, mb1 3.7/6, mb1mx3.4/63, mbtmp3.6/6, ML3.5/5, MS2.7/5, Ms1 2.7/5, ms1mx2.5/25, Error ellipse: s-maj=21.3km s-min=12.0km az=79.0

UUSS 11 23:03:16.7±2.6, 44.75N±0.04×110.80W±0.07, h11km±4km, ML3.5/10, Error ellipse: s-maj=7.1km s-min=6.0km az=83.0

NEIC 11 23:03:17.3±3.0, 44.72N±0.03×110.77W±0.05, h9km±3km, Error ellipse: s-maj=5.6km s-min=4.4km az=114.0

ISC 11 23:03:17.1±0.8, 44.73N±0.03×110.77W±0.02, h14km±4km, n70, σ1.85/85, Yellowstone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YNM	Yellowstone No	0.05	98		Pg	23 03 20.1	0.0
YNM					Sg	23 03 21.3	-0.8
YNR	Norris Junctio	0.07	105		Pg	23 03 20.2	0.0
YNR					Sg	23 03 21.9	-0.5
YHH	Holmes Hill	0.08	314		Pg	23 03 20.0	-0.4
YHH					Sg	23 03 21.2	-1.4
YMR	Madison River	0.15	245		Pg	23 03 21.3	+0.2
YUF	Upper Falls	0.19	96		Pg	23 03 22.9	+1.2
YHB	Horse Butte	0.30	274		Pb	23 03 23.8	-0.7
YHB				Sg	Sg	23 03 28.0	+0.1
LKWY	Lake	0.31	122		Pb	23 03 25.0	+0.3
YHL	Hebgen Lake	0.32	292		Pb	23 03 24.4	-0.4
H17A	Grant Village	0.37	158		Pb	23 03 25.8	+0.2
YMP	Mirror Lake Pl	0.44	89		Pb	23 03 27.7	+0.9
YPP	Pitchstone Pla	0.46	183		Pb	23 03 27.3	+0.1
QLMT	Earthquake Lak	0.48	282		Pb	23 03 26.9	-0.6
YNE	Yellowstone No	0.61	63		Pb	23 03 29.8	+0.2
FLWY	Flagg Ranch	0.65	175		Pb	23 03 30.5	0.0
MOOW	Moose Ponds	0.98	179		Pg	23 03 36.0	-0.2
FXWY	Fox Creek	1.11	190		Pg	23 03 37.8	-0.7
RLMT	Red Lodge	1.14	69	Pn	Pn	23 03 39.2	+0.4
SNOW	Snow King Moun	1.27	179		Pg	23 03 41.4	-0.2
GCMT	Greycliff	1.31	36		Pg	23 03 42.3	-0.1
REDW	Red Top Meadow	1.37	182		Pb	23 03 42.8	+0.1
DLMT	Dillon	1.44	297		Pg	23 03 44.0	-0.8
MCMT	McKenzie Canyo	1.48	274		Pb	23 03 44.8	+0.2
AHID	Auburn Hatcher	1.98	187		Pn	23 03 51.9	+1.5
PD31	Pinedale Array	2.15	155	Pn	Pb	23 03 55.4	-0.7
PDAR	Pinedale Array	2.15	155	Pn	Pb	23 03 56.1	+0.1
	6.7nm,0.3s,baz=356,slow=14,SNR=136						
PDAR	Pinedale Array	2.15	155		Pb	23 03 55.0	-1.0
MSO	Missoula	3.05	315		Pn	23 04 06.2	+1.2
HWUT	Hardware Ranch	3.18	191	Pn	Pn	23 04 09.0	+2.1
HVU	Hansel Valley	3.29	207	Pn	Pn	23 04 11.0	+2.6
EGMT	Eagleton	3.37	12		Pn	23 04 11.3	+2.0
SPUT	South Promonto	3.64	200	Pn	Pn	23 04 13.4	+0.2
TCUT	Toone Canyon	3.64	188	Pn	Pn	23 04 15.6	+2.3
K22A	Casper	3.72	123	Pn	Pn	23 04 15.8	+1.5
LAO	LASA Array	3.74	57	Pn	Pn	23 04 15.6	+1.1
JTMT	Jette	3.88	322		Pn	23 04 16.0	-0.4
MFID	Camas Ranch	3.88	252	Pn	Pn	23 04 16.7	+0.3
MFID				Pg	Pg	23 04 28.6	-2.7
MFID				Sg	Sb	23 05 15.2	+3.1
RWWY	Rawlins	4.00	138	Pn	Pn	23 04 16.9	-1.4
CTU	Camp Tracy	4.10	190	Pn	Pn	23 04 19.4	-0.2
CTU				Pg	Pb	23 04 31.9	+2.7
BGU	Big Grassy Mou	4.15	204	Pn	Pn	23 04 20.7	+0.4
BGU				Pg	Pb	23 04 31.1	+1.1
JLU	Jordanelle	4.16	187	Pn	Pn	23 04 18.4	-2.0
JLU				Pg	Pb	23 04 33.1	+2.9
RDMU	Red Mountain	4.25	168	Pn	Pn	23 04 20.6	-1.1
RDMU				Pg	Pg	23 04 37.2	-1.4
BMO	Blue Mountains	4.65	274	Pn	Pn	23 04 27.8	+0.8
BMO				Pg	Pg	23 04 45.6	-0.6
BMO					LR	23 05 44.1	
F10A	Beach Ranch, E	4.72	288	Pn	Pn	23 04 26.8	-1.1
F10A					LR	23 05 44.2	
MPU	Maple Canyon	4.76	188	Pn	Pn	23 04 27.3	-1.3
MPU				Pg	Pg	23 04 46.2	-2.0
DUG	Dugway, Tooele	4.78	199	Pn	Pn	23 04 28.3	-0.5
DUG				Pg	Pg	23 04 45.7	-3.0
WALA	Waterton Lakes	4.83	335	Pg	Pg	23 04 47.3	-2.3
WALA					LR	23 05 47.0	
RSSD	Black Hills	4.86	95	Pn	Pn	23 04 30.6	+0.5
RSSD				Pg	Pg	23 04 48.9	-1.4
RSSD				Sg	Sg	23 05 48.6	-4.6
NLU	North Lily Min	4.87	192	Pn	Pn	23 04 30.2	+0.1
O20A	White River Ci	4.96	157	Pn	Pn	23 04 31.5	+0.1
ELK	Elko	5.17	221	Pn	Pb	23 04 43.9	-3.6
	0.6nm,0.3s,baz=39,slow=13,SNR=10						
ELK				Sn	Sb	23 05 51.5	+2.1
	0.3nm,0.3s,baz=98,slow=3.3,SNR=1.7						
ELK				LR	LR	23 06 43.4	
	comp=Z,73nm,21.3s,baz=44,slow=36						
ELK	Elko	5.17	221	Pn	Pn	23 04 32.9	-1.3
ELK				Pg	Pb	23 04 44.2	-3.2
TMUT	Trail Mountain	5.44	184	Pn	Pn	23 04 37.5	-0.6
NEW	Newport	5.63	311	Pn	Pn	23 04 44.7	+4.3
	1.4nm,0.3s,baz=119,slow=11,SNR=11						
NEW				Lg	Lg	23 06 12.1	
	1.5nm,0.3s,baz=178,slow=13,SNR=8.0						
NEW	Newport	5.63	311	Pn	Pn	23 04 39.3	-1.1
NEW					LR	23 06 16.9	
J08A	Circle Bar Ran	5.72	259	Pn	Pn	23 04 41.1	-0.6
G08A	Pilot Rock	5.83	278	Pn	Pn	23 04 41.5	-1.8
G08A				Sg	Sb	23 06 15.5	+7.1
DGMT	Dagmar	5.87	48	Pn	Pn	23 04 43.3	-0.4
DGMT				Pg	Pg	23 05 06.1	-3.4
DGMT					LR	23 06 21.5	
C09A	Chrisman Ranch	6.04	303	Pn	Pn	23 04 45.2	-0.7
C09A					LR	23 06 26.2	
E08A	Dider Farm, El	6.07	290	Pn	Pn	23 04 45.0	-1.5
E08A					LR	23 06 31.3	
D08A	Wollman Farm,	6.14	295	Pn	Pn	23 04 46.2	-1.2
D08A					LR	23 06 31.6	
SMCO	Snowmass	6.23	152	Pn	Pn	23 04 48.3	-0.7
SMCO				Pg	Pg	23 05 12.8	-3.6
B08A	Colville Reser	6.93	305	Pn	Pn	23 04 57.1	-1.1
B08A					LR	23 06 54.6	
NVAR	Mina Array Bea	8.45	224	Pn	Pn	23 05 28.4	+9.1
	0.1nm,0.3s,baz=45,slow=15,SNR=1.9						
NVAR	Mina Array Bea	8.45	224	Pn	Pn	23 05 18.3	-1.0
YBH	Yreka Blue Hor	9.22	255	LR	LR	23 08 56.2	
	comp=Z,42nm,18.5s,baz=58,slow=35						
ULM	Lac du Bonnet	11.48	56	LR	LR	23 10 02.8	
	comp=Z,36nm,18.9s,baz=300,slow=38						
TXAR	Lajitas Array	16.37	157	LR	LR	23 13 07.0	
	comp=Z,16nm,19.6s,baz=0.0,slow=36						
YKA	Yellowknife Ar	17.93	354	P	Pn	23 07 22.6	-3.1
	0.1nm,0.3s,baz=172,slow=12,SNR=5.2						
ILAR	Eielson Array	28.30	328	P	P	23 09 12.1	+2.3
	0.3nm,0.7s,baz=122,slow=7.8,SNR=4.8						
KSRS	Korea Array	82.53	317	LR	LR	23 55 18.9	
	comp=Z,5.8nm,18.2s,baz=65,slow=38						

HEL 11 23:05:11.3, 67.12N×20.54E, h0km, ML1.2, Explosion

UPP 11 23:05:11.8±0.0, 67.18N×20.68E, h0km, ML1.9, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	Dundret	0.08	217	P	Pg	23 05 13.6	+0.3
DUNU				S	Sg	23 05 15.0	+0.8
DUNU	Dundret	0.08	217	i P	Pg	23 05 13.6	+0.3
DUNU				i S	Sg	23 05 15.0	+0.8
MASU	Masugnsbyn	0.58	61	P	Pg	23 05 23.0	+0.1
MASU	Masugnsbyn	0.58	61	i P	Pg	23 05 23.0	+0.1
RATU	Laukkuluspa	0.77	327	P	Pg	23 05 26.2	-0.3
RATU	Laukkuluspa	0.77	327	i P	Pg	23 05 26.2	-0.3
KUA	Kurravaara	0.79	350	P	Pg	23 05 26.6	-0.3
KUA	Kurravaara	0.79	350	i P	Pg	23 05 26.6	-0.3
ERTU	Ertsjaerv	0.87	136	P	Pg	23 05 27.7	-0.6
ERTU	Ertsjaerv	0.87	136	eP	Pg	23 05 26.8	-1.5
ERTU				eS	Sg	23 05 37.3	-2.3
PAJU	Pajala	0.96	98	P	Pg	23 05 29.7	-0.5
PAJU	Pajala	0.96	98	eP	Pg	23 05 29.7	-0.5
LANU	Lannavaara	1.00	29	P	Pg	23 05 30.6	-0.4
LANU	Lannavaara	1.00	29	eP	Pg	23 05 30.4	-0.6
HARU	Harads	1.03	173	P	Pg	23 05 30.9	-0.6
HARU	Harads	1.03	173	eP	Pg	23 05 30.9	-0.6
HEF	Hetta	1.67	41	ePN	Pb	23 05 43.0	-0.4
	baz=225						
HEF				MSG		23 06 03.7	
	comp=Z,0.7nm,0.2s						
HEF				eSN	Sg	23 06 05.9	+0.5
SJUU	Sjulsmark	1.72	167	P	Pn	23 05 42.9	0.0
SJUU	Sjulsmark	1.72	167	eP	Pn	23 05 42.9	0.0
TOF	Tornio	1.83	126	ePG	Pb	23 05 46.1	+0.1
TOF				MSG		23 06 06.2	
	comp=Z,1.5nm,0.2s						
TOF				eSN	Sb	23 06 09.7	+0.4
KIF	Kilpisjarvi	1.83	1	ePN	Pb	23 05 45.7	-0.4
KIF				MSG		23 06 08.8	
	comp=Z,1.4nm,0.2s						
KIF				eSG	Sg	23 06 11.2	+0.6
RNF	Rovaniemi	2.18	103	ePG	Pb	23 05 51.2	-0.9
RNF				eSG	Sb	23 06 19.4	-0.1
SGF	Sodankyl	2.28	81	eSG	Sb	23 06 22.7	+0.3
ARE0	ARCESS Array S	2.96	35	eP	Pn	23 06 01.1	+1.1
ARE0				eSG	Sb	23 06 42.9	+0.8

UPP 11 23:05:52.1±0.0, 67.20N×20.63E, h0km, ML1.8, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	Dundret	0.08	199	P	Pg	23 05 53.9	+0.3
MASU	Masugnsbyn	0.59	63	P	Pg	23 06 03.4	0.0
MASU				S	Sg	23 06 11.4	+0.4
RATU	Laukkuluspa	0.75	328	P	Pg	23 06 05.9	-0.5
KUA	Kurravaara	0.77	352	P	Pg	23 06 06.7	-0.1
ERTU	Ertsjaerv	0.89	136	P	Pg	23 06 08.2	-0.9
PAJU	Pajala	0.98	99	P	Pg	23 06 10.2	-0.7
LANU	Lannavaara	1.00	31	P	Pg	23 06 11.0	-0.3

IDC 11 23:06:18.8±1.0, 19.10N×121.42E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/53, mbtmp3.6/6, Error ellipse: s-maj=72.2km s-min=19.3km az=68.0

ISC 11 23:06:25.1±1.1, 19.1N±0.2×121.3E±0.5, h46km, n12, σ0.66/6, mb3.5/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	31.17	340	P	P	23 12 39.8	0.0
	0.4nm,0.8s,baz=150,slow=6.0,SNR=3.3						
WRA	Warramunga Arr	40.81	161	P	P	23 14 01.5	-0.8
	0.1nm,0.3s,baz=348,slow=8.9,SNR=9.5						
MKAR	Makanchi Array	42.21	320	P	P	23 14 13.4	-0.1
	0.8nm,0.8s,baz=114,slow=9.7,SNR=8.8						
H11S3	WAKE ISLAND Hy	42.88	83	T	T	00 00 04.9	
	baz=276,slow=74,SNR=8.1						
H11S1	WAKE ISLAND Hy	42.89	83	T	T	00 00 07.5	
	baz=276						
H11S2	WAKE ISLAND Hy	42.90	83	T	T	00 00 08.4	
	baz=276,slow=74						
H11N1	WAKE ISLAND Hy	42.91	81	T	T	00 00 20.4	
	baz=277,slow=75,SNR=8.9						
H11N2	WAKE ISLAND Hy	42.91	81	T	T	00 00 19.3	
	baz=277,slow=75,SNR=7.2						
H11N3	WAKE ISLAND Hy	42.92	81	T	T	00 00 23.6	
	baz=277,slow=75,SNR=5.8						
ASAR	Alice Springs	44.20	163	P	P	23 14 30.6	+0.8
	0.3nm,0.3s,baz=343,slow=7.0,SNR=9.4						
ZALV	Zalesovo Beam	44.66	330	P	P	23 14 33.2	+0.1
	0.4nm,0.5s,baz=105,slow=7.5,SNR=3.7						
YKA	Yellowknife Ar	87.64	23	P	P	23 19 08.4	+0.1
	0.7nm,0.6s,baz=311,slow=4.6,SNR=12						

MEX 11 23:19:10.9±0.3, 14.87N×91.64W, h24km±58km, MD3.6

GCG 11 23:19:13.6±0.6, 14.87N×91.51W, h1km±645km, MD3.4

ISC 11 23:19:10.7±1.0, 15.0N±0.1×91.60W±0.08, h10km, n5, σ2.63/8, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.30	174	eP	Pg	23 19 18.2	+1.3
FUG	Fuego 3	0.93	127	eP	Pn	23 19 29.2	-0.7
FUG				eS	Sn	23 19 42.0	-1.4
IXG	Ixpaco	1.40	126	eP	Pg	23 19 37.7	+0.1
PCIG		1.70	294	i P	Pn	23 19 40.6	+0.2
PCIG				i S	Sn	23 19 57.2	-5.1
TGIG		2.28	320	i P	Pb	23 19 53.2	+1.2
TGIG				i S	Sb	23 20 22.2	+1.8

IDC 11 23:23:26.6±11.0, 16.49S×178.98W, h382km±121km, mb3.0/5, mb1 3.4/5, mb1mx3.1/22, mbtmp3.7/5, Error ellipse: s-maj=57.2km s-min=33.8km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.37	258	P	P	23 31 01.2	+0.1
	0.4nm,0.7s,baz=97,slow=6.7,SNR=6.2						
ASAR	Alice Springs	44.67	253	P	P	23 31 03.3	-0.2
	0.6nm,0.4s,baz=89,slow=8.2,SNR=14						
MJAR	Matsushiro Arr	66.45	323	P	P	23 33 35.8	-0.5
	1.2nm,0.5s,baz=150,slow=9.9,SNR=3.9						
NVAR	Mina Array Bea	78.79	44	P	P	23 34 48.0	-0.5
	0.4nm,0.5s,baz=223,slow=9.9,SNR=5.2						
ILAR	Eielson Array	84.63	13	P	P	23 35 19.1	+1.3
	0.3nm,0.4s,baz=220,slow=5.6,SNR=5.5						
BRTR	Keskin Array B	143.39	316	PKP	PKPbc	23 42 15.3	+0.7
	0.5nm,0.5s,baz=119,slow=3.9,SNR=5.6						
GERES	GERESS Array B	146.10	345	PKPbc	PKPbc	23 42 22.0	-0.6
	0.7nm,0.7s,baz=5.7,slow=4.0,SNR=5.1						

ASRS 11 23:29:11.4±0.2, 52°N±1°×9°5E±°, h5km, MLh3.6/18, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TDJR	Todzha	0.67	97	Pg	Pb	23 29 26.6	+0.9
TDJR				Sg	Sb	23 29 34.4	-0.9
KZLR	Kyzyl	0.85	204	Pg	Pn	23 29 29.5	-0.6
KZLR				Sg	Sg	23 29 39.2	+0.3
CERR	Cheremushki	2.22	281	Pg	Pg	23 29 55.7	+1.8
CERR				Sg	Sg	23 30 25.8	+3.2
DJOS	Djoyskaya Sosn	2.22	279	Pg	Pg	23 29 55.6	+1.6
DJOS				Sg	Sg	23 30 25.7	+3.0
DJO	Djoy, Khakassi	2.33	279	Pg	Pg	23 29 57.4	+1.3
DJO				Sg	Sg	23 30 28.1	+1.9
MINR	Mina	2.47	349	Pg	Pg	23 30 03.8	+5.1
MINR				Sg	Sg	23 30 38.3	+7.7
ABNR	Abakan	2.49	301	Pg	Pg	23 29 59.5	+0.5
ABNR				Sg	Sg	23 30 34.4	+3.2
ORY	Orie	2.52	1	Pg	Pg	23 30 04.1	+4.3
ORY				Sg	Sg	23 30 34.1	+1.7
ORL	Orlik	2.93	87	Pg	Pb	23 30 05.9	+1.7
ORL				Sg	Sg	23 30 43.9	-1.7
VEH	Verkhnyaya Baz	2.94	287	Pg	Pb	23 30 05.5	+1.1
VEH				Sg	Sg	23 30 50.0	+4.1
MOY	Mondy	3.78	100	Pg	Pb	23 30 20.8	+2.1
MOY				Sg	Sg	23 31 08.9	-4.0
LUZB	Luzhba, Kemero	3.87	290	Pg	Pb	23 30 19.0	-1.1
LUZB				Sg	Sg	23 31 15.8	+0.2
SHTK	Zheleznogorsk-	3.94	349	Pg	Pg	23 30 28.4	+1.5
SHTK				Sg	Sg	23 31 18.6	+0.7
GZLN	Zheleznogorsk	3.97	350	Pg	Pg	23 30 29.0	+1.6
GZLN				Sg	Sg	23 31 22.4	+3.6
TASR	Tashtagol	4.35	276	Pg	Pg	23 30 35.9	+1.1
TASR				Sg	Sg	23 31 31.6	+0.4
ULGR	Ulagan, Altay	4.78	250	Pg	Pg	23 30 43.0	+0.1
ULGR				Sg	Sg	23 31 43.9	-0.8
ARTR	Artybash	4.81	265	Pg	Pg	23 30 44.1	+0.6
ARTR				Sg	Sg	23 31 47.2	+1.5
CUR	Chagan-Uzun	4.81	243	Pg	Pg	23 30 45.5	+1.9
CUR				Sg	Sg	23 31 44.8	-1.1
AKAR	Aktash	5.11	248	Pg	Pg	23 30 47.9	-1.3
AKAR				Sg	Sg	23 31 52.8	-2.6
CHBI	Chibit, Altay	5.18	248	Pg	Pg	23 30 49.5	-1.1
CHBI				Sg	Sg	23 31 57.8	+0.2
ELT	Eltsovka	5.37	282	Pg	Pg	23 31 01.0	+6.8
ELT				Sg	Sg	23 32 05.2	+1.5
TLY	Talaya	5.39	95	Pg	Pg	23 30 54.7	+0.2
TLY				Sg	Sb	23 31 56.9	+6.1
DGZ	Jazzator, Alta	5.53	243	Pg	Pg	23 30 56.4	-0.9
DGZ				Sg	Sg	23 32 07.1	-1.8
GALT	Gorno-Altaysk,	5.60	268	Pg	Pg	23 30 57.5	-1.0
GALT				Sg	Sg	23 32 08.9	-2.1
SALR	Pechorkino, Sa	5.89	293	Pg	Pg	23 31 06.8	+2.7
SALR				Sg	Sg	23 32 23.3	+3.0
TUNR	Tungur	5.92	250	Pg	Pg	23 31 05.6	+0.9
TUNR				Sg	Sg	23 32 22.3	+1.0
TRG	Tyrgan	6.91	83	Pg	Pg	23 31 22.3	-1.4
TRG				Sg	Sg	23 32 47.1	-6.0
NVSII	Novosibirsk	7.38	293	Sg	Sg	23 33 10.6	+2.4
NVS	Novosibirsk	7.38	293	Sg	Sg	23 33 10.6	+2.3
ULN	Ulaanbaatar	9.00	116	Sg	Sn	23 33 53.4	+49

ARE 11 23:51:19±2.8, 10.63S±0.08×75.06W±0.06, h33km±3km, Error ellipse: s-maj=12.3km s-min=5.8km az=146.0

NEIC 11 23:51:21.7±1.3, 10.63S±0.07×74.98W±0.09, h65km±7km, mb4.2/4, ML4.3(ARE), Error ellipse: s-maj=13.5km s-min=9.9km az=72.0

IDC 11 23:51:23.2±2.1, 10.58S×75.11W, h71km±22km, mb3.5/6, mb1 3.7/10, mb1mx3.5/33, mbtmp3.8/10, MS3.0/8, Ms1 3.0/8, ms1mx2.8/27, Error ellipse: s-maj=20.6km s-min=11.6km az=80.0

ISC 11 23:51:20.0±0.6, 10.56S±0.07×74.92W±0.08, h41km, n23, σ1.53/20, mb3.7/6, MS2.9/4, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.36	233	P	Pn	23 51 57.2	+0.9
	24nm,0.3s,baz=40,slow=19,SNR=45						
NNA				S	Sn	23 52 24.5	+0.4
	75nm,0.3s,baz=355,slow=23,SNR=13						
NNA				LR	LR	23 52 53.1	
	comp=Z,276nm,18.8s,baz=2.5,slow=41						
NNA	Nana	2.36	233		Pn	23 51 56.5	+0.2
ATAH	Atahualpa	4.83	314	P	Pn	23 52 32.4	+1.8
	5.6nm,0.3s,baz=129,slow=4.2,SNR=19						
ATAH				S	Sn	23 53 27.1	+1.5
	2.5nm,0.3s,baz=119,slow=19,SNR=2.2						

ATAH LR LR 23 54 26.6
comp=Z,129nm,19.0s,baz=90,slow=39
SAML Samuel 11.68 83 Pn 23 54 06.0 +1.8
LVC Limon Verde 13.29 155 LR LR 00 00 00.9
comp=Z,66nm,18.3s,baz=338,slow=39
SIV San Ignacio 14.52 113 P **P 23 54 46.7 -2.0**
0.2nm,0.3s,baz=298,slow=15,SNR=3.9
SIV LR LR 00 00 46.8
comp=Z,50nm,20.9s,baz=278,slow=38
RUSC La Rusia 16.45 6 Pn **P 23 55 10.3 -0.4**
SDV Santo Domingo 19.78 13 P **Pn 23 55 47.9 -1.0**
0.3nm,0.3s,baz=246,slow=16,SNR=3.5
CFA Coronel Fontan 21.84 165 P **P 23 56 10.8 +1.8**
0.9nm,0.3s,baz=339,slow=11,SNR=3.6
CFA LR LR 00 03 52.6
comp=Z,38nm,18.5s,baz=20,slow=34
CPUP Villa Florida 22.86 136 P **P 23 56 21.8 +1.9**
0.6nm,0.4s,baz=316,slow=5.3,SNR=3.5
CPUP Villa Florida 22.86 136 IAmb IAmb 23 56 23.5
comp=Z,18nm,1.8s
BDFB Brasilia 26.68 104 LR LR 00 08 17.9
comp=Z,86nm,19.3s,baz=268,slow=38
APG El Apazote 29.70 328 LR LR 00 07 30.2
comp=Z,22nm,18.4s,baz=268,slow=33
PLCA Paso Flores 30.30 173 LR LR 00 09 05.4
comp=Z,28nm,18.5s,baz=164,slow=35
TXAR Lajitas Array 48.39 326 P **P 23 59 57.8 -0.5**
comp=Z,0.4nm,0.7s,baz=134,slow=7.2,SNR=4.8
ULM Lac du Bonnet 63.26 345 P **P 00 01 43.4 -0.9**
comp=Z,1.9nm,0.7s,baz=152,slow=8.6,SNR=5.1
YKA Yellowknife Ar 79.04 342 P **P 00 03 18.7 -0.8**
comp=Z,0.5nm,0.7s,baz=134,slow=6.3,SNR=7.3
TORD Torodi Ar. Bea 79.60 74 P **P 00 03 24.9 +1.3**
comp=Z,2.2nm,0.8s,baz=267,slow=5.3,SNR=12
TORD Torodi Ar. Bea 79.60 74 P **P 00 03 24.9 +1.3**
ZALV Zalesovo Beam 133.80 16 PKP **PKPdf 00 10 32.1 -0.2**
comp=Z,0.4nm,0.6s,baz=288,slow=1.4,SNR=2.8
ASAR Alice Springs 135.82 219 PKP **PKPdf 00 10 36.9 -0.3**
comp=Z,0.3nm,0.8s,baz=132,slow=2.6,SNR=3.0
WRA Warramunga Arr 138.18 224 PKP **PKPdf 00 10 40.3 -1.3**
comp=Z,0.4nm,0.6s,baz=132,slow=2.0,SNR=3.0
SONM Songino Array 142.83 359 PKP **PKPdf 00 10 46.0 -3.3**
comp=Z,0.3nm,0.7s,baz=329,slow=2.5,SNR=2.6

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*BJI **12** 00:09:35.2±0.0, 14.°65S×167.°59E, h110km, mB5.2/42, mb5.4/73*
*IDC **12** 00:09:36.7±0.5, 15.°04S×167.°40E, h113km±3km, mb5.0/32, mb1 5.0/34, mb1mx5.0/37, mbtmp5.3/34, MS3.8/20, Ms1 3.8/20, ms1mx3.7/33, Error ellipse: s-maj=8.6km s-min=7.4km az=78.0*
*MOS **12** 00:09:36.8±1.0, 14.°98S×167.°32E, h123km, mb5.3/29, Error ellipse: s-maj=8.5km s-min=6.4km az=124.6*
*NEIC **12** 00:09:37.3±1.4, 15.°04S±0.°06×167.°34E±0.°06, h121km±3km, mb5.2/183, Error ellipse: s-maj=10.3km s-min=6.5km az=224.0*
*GCMT **12** 00:09:37.3±0.1, 15.°01S±0.°01×167.°23E±0.°01, h117km, MW5.3/145, Moment Tensor Solution. s109,c154; s145,c249; Duration: 1s1 Moment tensor: Scale 10[17] Nm; Mrr1.09±.01; Mθθ-0.04±.02; Mφφ-1.04±.02; Mrθ-0.09±.01; Mrφ-0.26±.02; Mθφ-0.31±.01; Best double couple: M0 1.14300×10[17] NP1:φs13.00000°, δ37.00000°, λ89.00000°. NP2:φs194.00000°, δ53.00000°, λ91.00000°. Principal axes: T 1.1380, Plg82.0000°, Azm108.0000°; N 0.0200, Plg1.0000°, Azm14.0000°; P -1.1490, Plg8.0000°, Azm284.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **12** 00:09:40.0, 15.°24S×167.°31E, h129km, mb5.5*
ISC 12 00:09:37.0±0.3, **15.°04S**±0.°04×**167.°33E**±0.°04, **h119**km±2km, **h118**km**:pP-P, n637, σ1§36/640, mb5.2/165, 34C-32D, Vanuatu Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 0.42 196 Pn **Pn 00 09 53.5 -0.8**
DZM Mont Dzumac 7.04 187 *e*Pn **Pn 00 11 18.0 +0.4**
919nm,1.0s
DZM *e*Sn **Sn 00 12 34.0 -2.2**
3µm,1.0s
DZM *e*LR LR 00 12 52.9
comp=Z,2µm,33.9s
DZM Mont Dzumac 7.04 187 P **Pn 00 11 18.5 +0.9**
53nm,0.3s,baz=358,slow=13,SNR=110
DZM S **Sn 00 12 37.0 +0.8**
11nm,0.3s,baz=142,slow=23,SNR=3.4
NOUC Port Laguerre 7.09 188 Pn 00 11 18.9 +0.8
HNR Honiara 9.12 307 P **Pn 00 11 47.1 +1.5**
76nm,0.3s,baz=184,slow=3.7,SNR=77
HNR S **Sn 00 13 28.2 +1.7**
49nm,0.3s,baz=182,slow=21,SNR=4.0
HNR Honiara 9.12 307 *e*P **Pn 00 11 46.0 +0.4**
HNR Honiara 9.12 307 Pn 00 11 46.6 +1.0
MSVF Nonsavu 10.63 106 Pn 00 12 10.0 +3.9
MSVF Nonsavu 10.63 106 P **Pn 00 12 10.0 +3.9**
FUNA Funafuti 13.30 62 Pn 00 12 43.0 +1.7
NFK Norfolk Island 13.95 178 P **P 00 12 54.4 +0.7**
baz=14,SNR=5.0
TARA Tarawa 17.21 19 P **Pn 00 13 30.5 +0.3**
KRVT Keravat (AS076 18.46 304 P **P 00 13 41.9 -1.8**
6.8nm,0.3s,baz=20,slow=15,SNR=3.9
KRVT S **Sn 00 17 12.9 +0.8**
4.2nm,0.3s,baz=45,slow=23,SNR=3.1
RAO Raoul Island 19.64 139 P **Pn 00 13 57.7 -1.2**
52nm,0.3s,baz=197,slow=12,SNR=4.7
RAO Raoul Island 19.64 139 P **Pn 00 13 57.8 -1.1**
RAO Raoul Island 19.64 139 P **Pn 00 13 57.8 -1.1**
RAO pmax pmax
comp=Z,982nm,1.3s
AFI Afiamalu 20.27 89 P **P 00 14 03.7 +0.3**
comp=Z,329nm,1.0s,baz=275,slow=17,SNR=14
AFI Afiamalu 20.27 89 P **P 00 14 04.3 +0.9**
AFI Afiamalu 20.27 89 P **P 00 14 04.3 +0.9**
AFI pmax pmax
comp=Z,283nm,0.9s
PMG Port Moresby 20.48 284 P Pn 00 14 07.9 -1.0
comp=Z,96nm,0.9s,baz=96,slow=6.7,SNR=28
PMG S **S 00 17 46.3 -2.3**
comp=Z,7.8nm,0.3s,baz=190,slow=11,SNR=3.2
PMG Port Moresby 20.48 284 P Pn 00 14 07.3 -1.5
PMG IAmb IAmb 00 14 32.8
comp=Z,213nm,1.1s
PMG Port Moresby 20.48 284 *d i*P Pn 00 14 07.5 -1.4
PMG pmax pmax
comp=Z,734nm,1.2s
CTA Charters Tower 20.70 253 P Pn 00 14 10.3 -1.1
comp=Z,47nm,0.9s,baz=78,slow=13,SNR=30
CTA S **S 00 17 53.5 +0.8**
comp=Z,4.0nm,0.8s,baz=261,slow=7.6,SNR=2.2
CTA PcP **PcP 00 18 13.9 +0.7**
comp=Z,8.7nm,0.6s,baz=123,slow=4.8,SNR=7.8
NIUE Niue 22.11 104 P **P 00 14 22.1 -0.8**
baz=22
MTSU Mount Surprise 22.26 259 P **P 00 14 26.2 +1.7**
baz=22,SNR=49
RIV Riverview 23.74 215 P **P 00 14 40.4 +2.0**
baz=24
KNTN Kanton 23.99 61 P **P 00 14 40.7 -0.1**
KNTN IAmb IAmb 00 14 41.4
comp=Z,128nm,1.1s
HIZ Hauiti 24.30 166 P **P 00 14 44.7 +1.3**
QLP Quilpie 24.40 238 P **P 00 14 46.3 +1.9**
baz=24,SNR=16
MXZ Matakaoa Point 24.45 159 P **P 00 14 45.4 +0.6**
URZ Urewera 24.69 161 P **P 00 14 47.2 +0.3**
comp=Z,290nm,0.9s,baz=355,slow=5.2,SNR=27
URZ S **S 00 18 59.3 -0.7**
comp=Z,11nm,0.8s,baz=344,slow=24,SNR=2.9
URZ Urewera 24.69 161 P **P 00 14 47.7 +0.8**
BKZ Black Stump Fm 25.35 163 P **P 00 14 53.4 +0.5**
YNG Young 25.67 218 P **P 00 14 57.7 +1.8**
baz=26,SNR=11
CMSA Cobar Meteorol 25.70 227 P **P 00 14 57.5 +1.4**
baz=26,SNR=39
CNB Canberra Magne 25.83 215 P **P 00 14 59.1 +1.7**
baz=26,SNR=20
CAN Canberra 26.04 216 P **P 00 15 00.8 +1.5**
CAN IAmb IAmb 00 15 02.0
comp=Z,79nm,1.4s
CAN Canberra 26.04 216 P **P 00 15 00.8 +1.5**
CAN pmax pmax
comp=Z,79nm,1.4s
THZ Tophouse 27.06 171 IAmb IAmb 00 15 09.8
comp=Z,64nm,0.9s
MILA Mila 27.23 213 P **P 00 15 11.5 +1.5**
baz=27,SNR=3.5
KHZ Kahutara 27.80 170 IAmb IAmb 00 15 16.1
comp=Z,75nm,1.0s
FOZ Fox Glacier 28.47 176 IAmb IAmb 00 15 22.8
comp=Z,94nm,1.0s
RPZ Rata Peaks 28.75 174 P **P 00 15 23.9 +0.5**
comp=Z,53nm,0.7s,baz=162,slow=5.2,SNR=22
RPZ Rata Peaks 28.75 174 IAmb IAmb 00 15 25.6
comp=Z,77nm,0.9s
STKA Stephens Creek 28.83 230 P **P 00 15 26.0 +1.8**
baz=29,SNR=118
STKA Stephens Creek 28.83 230 P **P 00 15 26.2 +2.0**
comp=Z,105nm,0.8s,baz=44,slow=7.8,SNR=178
STKA PcP **PcP 00 18 31.6 +0.5**
comp=Z,35nm,0.9s,baz=30,slow=3.4,SNR=9.6
STKA S **S 00 20 06.2 +0.6**
comp=Z,0.5nm,0.3s,baz=174,slow=21,SNR=1.6
STKA ScP **ScP 00 22 02.8 +1.1**
comp=Z,13nm,0.8s,baz=45,slow=3.1,SNR=16
STKA PKiKP **PKiKP 00 26 04.3 -1.2**
comp=Z,2.6nm,0.6s,baz=334,slow=1.2,SNR=8.5
STKA LR LR 00 26 10.8
comp=Z,230nm,19.1s,baz=84,slow=34
STKA Stephens Creek 28.83 230 P **P 00 15 25.6 +1.4**
STKA Stephens Creek 28.83 230 ScP 00 22 03.3 +1.6
ODZ Otahua Downs 30.04 175 IAmb IAmb 00 15 36.5
comp=Z,86nm,1.3s
MLZ Mavora Lakes 30.23 179 IAmb IAmb 00 15 39.7
comp=Z,57nm,0.9s
WHZ Wether Hill Ro 30.76 179 IAmb IAmb 00 15 42.1
comp=Z,60nm,0.9s
SMPI Sarmi 31.07 292 P **P 00 15 45.0 +0.9**
comp=Z,53nm,1.1s
HTT Hallett 31.56 229 P **P 00 15 50.1 +1.9**
baz=32
WR0 Warramunga Arr 31.61 256 P **P 00 15 49.9 +1.0**
WB0 Warramunga Arr 31.74 257 P **P 00 15 49.9 -0.1**
WRAB Tennant Creek 31.79 256 P **P 00 15 51.8 +1.4**
WRAB IAmb IAmb 00 16 18.1
comp=Z,94nm,1.7s
WRAB Tennant Creek 31.79 256 *c e*P **P 00 15 50.4 0.0**
WRAB pmax pmax
comp=Z,21nm,1.1s
WRA Warramunga Arr 31.80 256 P **P 00 15 50.0 -0.6**
comp=Z,13nm,0.9s,baz=85,slow=8.4,SNR=12
WRA pP **pP 00 16 16.2 +0.4**
comp=Z,5.9nm,0.7s,baz=86,slow=8.8,SNR=4.2
WRA PcP **PcP 00 18 39.1 +0.1**
comp=Z,25nm,0.9s,baz=88,slow=2.7,SNR=16
WRA S **S 00 20 47.1 -5.3**
comp=Z,3.2nm,1.0s,baz=82,slow=16,SNR=5.8
WRA ScP **ScP 00 22 12.8 +1.1**
comp=Z,4.8nm,0.8s,baz=87,slow=3.1,SNR=8.6
WRA PKiKP **PKiKP 00 26 06.5 -1.3**
comp=Z,4.8nm,0.7s,baz=346,slow=0.4,SNR=40
WRA LR LR 00 28 49.0
comp=Z,573nm,18.2s,baz=85,slow=36
WRA Warramunga Arr 31.80 256 P **P 00 15 50.3 -0.2**
WRA Warramunga Arr 31.80 256 ScP 00 22 14.3 +2.6
RAR Rarotonga 31.82 106 P **P 00 15 51.6 +0.9**
RAR Rarotonga 31.82 106 P **P 00 15 51.6 +0.9**
RAR pmax pmax
comp=Z,943nm,2.0s
ASAR Alice Springs 32.61 250 P **P 00 15 57.8 +0.2**
comp=Z,37nm,0.9s,baz=82,slow=9.1,SNR=115
ASAR pP **pP 00 16 23.3 -0.1**
comp=Z,32nm,0.9s,baz=78,slow=8.8,SNR=5.6
ASAR PcP **PcP 00 18 41.2 -0.1**
comp=Z,18nm,0.9s,baz=85,slow=2.2,SNR=11
ASAR S **S 00 21 01.9 -3.1**
comp=Z,5.6nm,1.0s,baz=72,slow=17,SNR=9.8
ASAR ScP **ScP 00 22 15.4 +1.0**
comp=Z,10nm,0.9s,baz=88,slow=3.5,SNR=17
ASAR PKiKP **PKiKP 00 26 06.8 -1.5**
comp=Z,2.1nm,0.6s,baz=97,slow=1.4,SNR=29
ASAR LR LR 00 28 51.1
comp=Z,233nm,20.0s,baz=84,slow=35
ASAR Alice Springs 32.61 250 P **P 00 15 57.2 -0.4**
ASAR Alice Springs 32.61 250 ScP 00 22 14.7 +0.3
TAU Tasmania Unive 32.65 208 P **P 00 15 58.2 +0.6**
TAU IAmb IAmb 00 15 59.9
comp=Z,74nm,1.1s
TAU Tasmania Unive 32.65 208 P **P 00 15 58.2 +0.6**
TAU pmax pmax
comp=Z,74nm,1.1s
BBOO Buckleboo 33.43 232 P **P 00 16 06.1 +1.5**
baz=34,SNR=39
SAUI Saumlaki 35.95 277 P **P 00 16 29.3 +2.8**
GUMO Guam 36.10 321 LR LR 00 30 14.5
comp=Z,142nm,18.6s,baz=148,slow=34
FAKI Fak Fak 36.61 286 P **P 00 16 33.2 +1.1**
FAKI IAmb IAmb 00 17 01.0
comp=Z,45nm,1.1s
KNRA Kununurra 37.16 264 P **P 00 16 37.4 +0.8**
baz=37,SNR=12
WRKA Warakurna 37.87 249 P **P 00 16 43.1 +0.4**
baz=38,SNR=17
BNDI Bandanaira 38.26 282 P **P 00 16 43.9 -2.1**
comp=Z,12µmcomp=Z,117nm,1.2s
SWI Sorong 38.30 288 P **P 00 16 47.7 +1.4**
comp=Z,50nm,1.3s
SWI Sorong 38.30 288 P **P 00 16 48.8 +2.5**
SWI pmax pmax
comp=Z,35nm,1.3s
FITZ Fitzroy Crossi 40.01 260 P **P 00 17 01.5 +1.0**
comp=Z,20nm,0.8s,baz=93,slow=8.1
FITZ pP **pP 00 17 27.2 +0.2**
comp=Z,24nm,0.8s,baz=90,slow=10,SNR=3.5
NLAI Namlea 41.32 282 P **P 00 17 13.5 +2.1**
comp=Z,80nm,1.3s
PAE Paea 41.37 100 *e*P **P 00 17 11.8 +0.1**
comp=Z,64nm,1.0s
PPT2 Papeete2 41.38 100 *e*P **P 00 17 12.3 +0.4**
comp=Z,518nm,1.2s
PPT2 *e*S **S 00 23 17.4 -0.7**
comp=Z,207nm,24.8s
PPT2 *e*LR LR 00 29 03.0
comp=Z,1µm,30.0s
PPT Papeete 41.38 100 P **P 00 17 12.4 +0.6**
comp=Z,326nm,0.8s,baz=339,slow=2.2,SNR=25
PPT LR LR 00 30 51.2
comp=Z,265nm,20.7s,baz=248,slow=31
PPT Papeete 41.38 100 P **P 00 17 12.8 +1.1**
PPT Papeete 41.38 100 P **P 00 17 12.9 +1.1**
PPTF Pamatai, Papee 41.39 100 P **P 00 17 12.4 +0.5**
TBI Tubuai 41.51 108 *e*P **P 00 17 13.0 +0.2**
comp=Z,175nm,0.8s
TBI *e*S **S 00 23 18.6 -1.2**
comp=Z,195nm,26.8s
TBI *e*LQ LQ 00 27 02.4
comp=Z,647nm,29.2s
TBI *e*LR LR 00 29 04.5
comp=Z,1µm,33.2s
TIAR Tiarei 41.60 100 *e*P **P 00 17 14.0 +0.4**
comp=Z,132nm,1.0s
SOEI Soe 42.33 272 P **P 00 17 21.2 +1.5**
SOEI IAmb IAmb 00 18 07.8
comp=Z,74nm,1.1s
SANI Sanana 42.77 284 P **P 00 17 24.1 +1.0**
comp=Z,717nmcomp=Z,43nm,0.9s
MEH Mehetia 42.80 100 *e*P **P 00 17 23.2 -0.1**
comp=Z,247nm,1.2s
PMOR Pomariorio Ree 43.19 96 *e*P **P 00 17 26.9 +0.4**
comp=Z,1µm,1.3s
VAH Vaihoa 43.42 96 *e*P **P 00 17 28.5 +0.2**
comp=Z,666nm,1.3s
LUWI Luwuk 46.13 283 P **P 00 17 51.5 +1.6**
comp=Z,7µmcomp=Z,51nm,1.0s
LUWI Luwuk 46.13 283 P **P 00 17 51.8 +1.9**
LUWI IAmb IAmb 00 17 55.1
comp=Z,49nm,0.9s
DAV Davao City (W) 46.85 295 LR LR 00 37 06.8
comp=Z,62nm,18.2s,baz=77,slow=35
KCP Kidapawan 47.25 295 ⇓*e*P **P 00 17 59.3 +0.6**
BKSI Bulukumba 47.36 277 P **P 00 18 00.6 +1.2**
comp=Z,409nmcomp=Z,22nm,0.8s
MRSI Marisa 47.44 285 P **P 00 17 59.7 -0.3**
comp=Z,23nm,0.9s
BNSI Bone 47.63 278 P **P 00 18 02.4 +0.9**
comp=Z,770nmcomp=Z,64nm,1.1s
KLBR Kellerberrin 48.00 241 P **P 00 18 04.5 +0.3**
baz=48,SNR=13
SPSI Sidrap Palu 48.07 278 P **P 00 18 04.9 0.0**
comp=Z,25nm,1.2s
JCJ Chichijima 48.48 330 LR LR 00 35 18.6
comp=Z,184nm,19.5s,baz=39,slow=32
NWAO Narrogin (SRO) 48.63 239 P **P 00 18 09.5 +0.4**
baz=49,SNR=9.5
NWAO Narrogin (SRO) 48.63 239 P **P 00 18 08.9 -0.1**
NWAO Narrogin (SRO) 48.63 239 P **P 00 18 08.9 -0.1**
NWAO pmax pmax
comp=Z,91nm,1.0s
PLAI Plampang 48.79 271 P **P 00 18 11.0 +0.6**
comp=Z,64nm,1.5s
KEKH Kekaha 48.97 42 P **P 00 18 13.3 +1.7**
MPSI Mapaga 49.30 284 P **P 00 18 15.1 +0.8**
comp=Z,56nm,1.0s
MUN Mundaring 49.36 241 P **P 00 18 15.2 +0.7**
baz=49,SNR=10
UWE Uwekahuna 50.26 48 P **P 00 18 24.0 +2.4**
OBL Observatory Le 50.26 48 P **P 00 18 22.6 +1.0**
HATHI Halema'uma'u T 50.28 48 P **P 00 18 23.6 +1.8**
TAOE Nuku Hiva Isla 51.66 89 *e*P **P 00 18 31.8 -0.4**
comp=Z,386nm,1.3s
TGY Tagaytay City 54.26 300 P **P 00 18 52.9 +1.8**
comp=Z,178nm,0.3s,baz=121,slow=5.9,SNR=4.5
JHJ Hachijo jima 2 54.64 332 P **P 00 18 53.9 +0.3**
comp=Z,631nm,0.6s,baz=92,slow=16,SNR=3.4
KKM Kota Kinabalu 54.81 289 P **P 00 18 55.9 +0.6**
RKT Rikitea 54.83 108 *e*P **P 00 18 54.8 -0.4**
comp=Z,131nm,1.0s
RKT Rikitea 54.83 108 *e*LQ LQ 00 32 58.2
comp=Z,228nm,26.2s
RKT *e*LR LR 00 35 19.8
comp=Z,840nm,29.0s
PCJI Pacitan 55.30 270 P **P 00 18 58.8 +0.1**
comp=Z,112nm,1.2s
WOJI Wonogiri, Jawa 55.62 271 P **P 00 19 01.8 +0.8**
comp=Z,38nm,1.4s
SBUM Sibu 57.23 283 P **P 00 19 13.1 +0.7**
KPJI Karang Pucung 57.66 271 P P 00 19 27.2 +12
MJAR Matsushiro Arr 58.21 333 P **P 00 19 18.4 -0.4**
comp=Z,14nm,0.7s,baz=162,slow=7.9,SNR=28
MJAR pP **pP 00 19 46.9 -0.1**
comp=Z,5.7nm,0.8s,baz=160,slow=7.1,SNR=2.2
MJAR PcP **PcP 00 20 09.0 +0.1**
comp=Z,4.1nm,0.7s,baz=163,slow=3.9,SNR=2.6
MJAR LR LR 00 41 45.7
comp=Z,51nm,21.8s,baz=120,slow=33
MJAR Matsushiro Arr 58.21 333 P **P 00 19 18.2 -0.6**
MAJO Matsushiro 58.21 333 P **P 00 19 18.8 0.0**
MAJO IAmb IAmb 00 19 20.7
comp=Z,38nm,0.9s
MAJO Matsushiro 58.21 333 *c i*P **P 00 19 18.4 -0.4**
MAJO pmax pmax
comp=Z,29nm,0.9s
MAT Matsushiro 58.21 333 P **P 00 19 18.5 -0.3**
MAT *e*S **S 00 27 10.8 -0.6**
MJB9 Matsu-Tunnel 58.21 333 IAmb IAmb 00 19 20.7
comp=Z,39nm,0.9s
CISI Cisompet, Garu 58.69 270 P **P 00 19 24.0 +1.3**
comp=Z,4µmcomp=Z,57nm,0.9s
CISI Cisompet, Garu 58.69 270 P **P 00 19 22.4 -0.3**
KSM Kuching 58.72 281 P **P 00 19 22.9 0.0**
KSM Kuching 58.72 281 P **P 00 19 24.0 +1.2**
YULB Yu-li 59.04 310 IAmb IAmb 00 19 27.9
comp=Z,23nm,0.7s
JNU Nakatsue 59.21 325 LR LR 00 40 14.3
comp=Z,124nm,21.3s,baz=172,slow=31
JNU Nakatsue 59.21 325 P **P 00 19 26.2 +0.4**
TPI Tanjungpandan 60.02 276 P **P 00 19 32.4 +0.6**
comp=Z,29nm,0.9s
ERM Erimo 60.99 340 *c e*P **P 00 19 38.3 +0.6**
ERM pmax pmax
comp=Z,18nm,0.7s
KASI Kota Agung 62.37 272 P **P 00 19 47.3 -0.3**
comp=Z,84nm,1.0s
VNDA Vanda 62.55 181 P **P 00 19 48.2 +0.5**
comp=Z,25nm,0.8s,baz=2.7,slow=6.5,SNR=29
VNDA PcP **PcP 00 20 26.3 +0.6**
comp=Z,16nm,0.9s,baz=102,slow=3.3,SNR=3.0
VNDA LR LR 00 45 09.9
comp=Z,64nm,18.0s,baz=16,slow=34
VNDA Vanda 62.55 181 P **P 00 19 47.9 +0.1**
SBA Scott Base 62.83 180 P **P 00 19 50.2 +0.6**
SBA Scott Base 62.83 180 P **P 00 19 50.2 +0.6**
SBA pmax pmax
comp=Z,172nm,1.0s
MDSI Maura Dua 62.93 273 P **P 00 19 50.5 -0.8**
comp=Z,612nmcomp=Z,31nm,0.8s
JKA Kamikawa-asahi 63.05 340 P **P 00 19 52.7 +1.2**
ASAJ Asahikawa 63.05 340 P **P 00 19 52.7 +1.2**
CASY Casey 63.26 202 P **P 00 19 52.8 +0.2**
TJN Taejon 63.56 325 *d e*P **P 00 19 54.5 -0.5**
KSRS Korea Array 64.03 326 P **P 00 19 58.7 +0.7**
comp=Z,12nm,0.8s,baz=140,slow=6.9,SNR=33
KSRS pP **pP 00 20 26.6 -0.1**
comp=Z,6.3nm,0.9s,baz=140,slow=6.9,SNR=2.9
KSRS LR LR 00 45 10.3
comp=Z,43nm,20.8s,baz=126,slow=33
KSAR Wonju Array Be 64.04 326 P **P 00 19 57.8 -0.3**
KSAR Wonju Array Be 64.04 326 P **P 00 19 57.8 -0.3**
KS19 Wonju Array Si 64.09 326 P **P 00 19 58.1 -0.4**
KS19 IAmb IAmb 00 20 30.4
comp=Z,92nm,1.6s
DLV T Lat 64.14 291 IAmb IAmb 00 20 02.9
comp=Z,55nm,1.2s
YSS Yuzh-Sakhalins 65.54 342 P **P 00 20 08.3 +0.7**
YSS Yuzh-Sakhalins 65.54 342 *a i*P **P 00 20 09.1 +1.5**
YSS *e**PP **PcP 00 20 38.9 +0.5**
YSS *e*S **S 00 28 44.8 +1.5**
YSS pmax pmax
comp=Z,90nm,1.2s
NJ2 Nanjing 65.94 316 *e*P **P 00 20 11.5 +1.0**
NJ2 pmax pmax
comp=Z,33nm,0.8s
MSHR Mys Shultsa 66.28 332 ⇑*e*P **P 00 20 12.4 -0.1**
JRMM Jerantut 66.90 281 P **P 00 20 18.0 +0.9**
USA0B Ussuriysk Arra 67.19 333 IAmb IAmb 00 20 21.6
comp=Z,40nm,1.0s
USA0B Ussuriysk Arra 67.19 333 *c i*P **P 00 20 18.9 +0.7**
USRK Ussuriysk Ar. 67.19 333 P **P 00 20 19.1 +0.9**
comp=Z,15nm,0.6s,baz=131,slow=6.3,SNR=29
USRK Ussuriysk Ar. 67.19 333 P **P 00 20 18.4 +0.1**
BKNI Bangkinang 67.23 277 P **P 00 20 21.2 +2.1**
comp=Z,99nm,0.7s
BKNI Bangkinang 67.23 277 P **P 00 20 19.6 +0.5**
PDSI Padang 67.44 275 P **P 00 20 21.5 +1.0**
comp=Z,11nm,0.5s
WHN Wuhan 68.19 312 ⇑P **P 00 20 25.3 +0.5**
WHN pmax pmax
comp=Z,94nm,0.7s
PET Petropavlovsk 68.20 354 *e*P **P 00 20 24.7 +0.4**
PET pmax pmax
comp=Z,58nm,1.3s
PEA0B Petropavlovsk- 68.38 354 P **P 00 20 25.5 0.0**
PEA0B Petropavlovsk- 68.38 354 *d e*P **P 00 20 26.1 +0.6**
PETK Petropavlovsk- 68.38 354 P **P 00 20 26.4 +0.9**
comp=Z,46nm,0.9s,baz=158,slow=7.8,SNR=25
PETK LR LR 00 46 00.8
comp=Z,64nm,19.6s,baz=242,slow=32
PETK Petropavlovsk- 68.38 354 P **P 00 20 25.7 +0.2**
IPM Ipoh 68.46 281 IAmb IAmb 00 20 28.9
comp=Z,65nm,1.0s
IPM Ipoh 68.46 281 P **P 00 20 28.0 +1.1**
DL2 Dalian 68.58 323 P **P 00 20 27.7 +0.7**
DL2 pP **pP 00 20 54.6 -1.5**
DL2 sP **sP 00 21 08.9 +0.1**
DL2 S **S 00 29 20.7 +0.6**
DL2 pmax pmax
comp=Z,69nm,0.7s
MDJ Mudanjiang 68.58 332 P **P 00 20 27.7 +0.8**
MDJ pmax pmax
comp=Z,65nm,1.3s
MDJ pmax pmax
comp=Z,190nm,4.5s
MDJ Mudanjiang 68.58 332 P **P 00 20 27.0 +0.1**
MDJ IAmb IAmb 00 20 30.7
comp=Z,52nm,0.8s
KULM Kulim 69.06 282 IAmb IAmb 00 20 32.6
comp=Z,65nm,1.1s
KULM Kulim 69.06 282 P **P 00 20 32.0 +1.4**
TYV Tymovskoe 69.09 344 *e*P **P 00 20 30.9 +1.0**
TYV pmax pmax
comp=Z,200nm,2.1s
TYV pmax pmax
comp=Z,31nm,1.2s
TIA Tai'an 69.61 318 P **P 00 20 33.5 0.0**
TIA pmax pmax
comp=Z,38nm,1.0s

RPSI Rantau Prapat 69.93 279 P P 00 20 35.9 0.0
RPSI IAmb IAmb 00 20 37.1
comp=Z,84nm,1.2s
CN2 Changchun 69.94 329 eP P 00 20 35.8 +0.5
CN2 pmax pmax
comp=Z,50nm,0.7s
PSI Prapat 69.96 279 P P 00 20 36.0 -0.3
comp=Z,36nm,1.0s,baz=131,slow=4.7,SNR=28
GRNR Gornyy 70.90 340⇑iP P 00 20 42.5 +1.4
GRNR eS S 00 29 51.2 +4.3
GRNR pmax pmax
comp=Z,60nm,1.2s
GRNR smax smax
comp=E,3.0nm,1.0s
KLR Kul'dur 71.31 336 P P 00 20 44.6 +1.1
comp=E,15nm,0.6s,baz=133,slow=5.8,SNR=40
KLR Kul'dur 71.31 336c iP P 00 20 44.1 +0.5
KLR pmax pmax
comp=Z,52nm,1.4s
ENH Enshi 71.61 309 P P 00 20 45.6 -0.2
GYA Guiyang 71.94 305⇑iP P 00 20 48.9 +0.9
GYA pP pP 00 21 17.6 +0.3
GYA PP PP 00 23 32.8 +3.3
GYA S S 00 30 01.9 +1.9
GYA sS sS 00 30 49.1 -0.4
GYA SS SS 00 34 34.0 -5.3
GYA pmax pmax
comp=Z,50nm,0.6s
GYA pmax pmax
comp=Z,180nm,4.1s
SLVN Son La 71.96 299 IAmb IAmb 00 20 50.9
comp=Z,30nm,1.1s
BJT Baijiatuau 72.53 321 IAmb IAmb 00 20 52.9
comp=Z,28nm,0.8s
BJI Beijing 72.54 321⇑iP P 00 20 51.8 +0.7
BJI pP pP 00 21 19.1 -1.3
BJI S S 00 30 07.2 +1.2
BJI pmax pmax
comp=Z,35nm,0.7s
BJI LR LR
comp=Z,220nm,17.1s
BJI LR LR
comp=Z,170nm,9.8s
PBKT Sadao Pong 72.63 293 P P 00 20 53.0 +0.9
PBKT IAmb IAmb 00 20 54.9
comp=Z,45nm,0.9s
MLSI Meulaboh, Aceh 72.79 279 P P 00 20 53.8 +0.7
comp=Z,235nm,1.1s
TIY Taiyuan 73.53 317 eP P 00 20 58.3 +1.2
XAN Xi'an 73.94 313 P P 00 21 00.3 +0.8
XAN pmax pmax
comp=Z,53nm,1.0s
XAN Xi'an 73.94 313 P P 00 21 00.0 +0.5
XAN IAmb IAmb 00 21 01.3
comp=Z,50nm,0.8s
XAN Xi'an 73.94 313 P P 00 21 00.0 +0.5
XAN pmax pmax
comp=Z,49nm,0.8s
QSPA South Pole Qui 74.99 180 P P 00 21 05.6 +0.4
CM31 Chiang Mai Arr 75.13 294 P P 00 21 07.5 +0.9
CM31 IAmb IAmb 00 21 09.6
comp=Z,51nm,0.9s
CMAR Chiang Mai Arr 75.13 294 P P 00 21 08.5 +1.9
comp=Z,31nm,0.9s,baz=127,slow=4.2,SNR=116
CMAR pP pP 00 21 35.4 -0.9
comp=Z,5.6nm,0.9s,baz=126,slow=4.6,SNR=1.7
CHTO Chiang Mai 75.26 294 P P 00 21 08.3 +0.9
CHTO IAmb IAmb 00 21 10.0
comp=Z,42nm,0.8s
CHTO Chiang Mai 75.26 294 P P 00 21 08.3 +0.9
CHTO pmax pmax
comp=Z,42nm,0.9s
MA2 Magadan 75.56 351 P P 00 21 08.2 -0.1
comp=Z,20nm,0.8s,baz=152,slow=7.7,SNR=5.8
MA2 Magadan 75.56 351 IAmb IAmb 00 21 09.1
comp=Z,33nm,0.9s
MA2 Magadan 75.56 351ceP P 00 21 07.8 -0.4
MA2 pmax pmax
comp=Z,35nm,0.9s
HHC Hu-ho-hao-te 75.86 320 eP P 00 21 12.2 +1.7
HHC pmax pmax
comp=Z,22nm,0.8s
HHC pmax pmax
comp=Z,52nm,6.7s
CD2 Chengdu 76.24 308 ⇑P P 00 21 13.8 +1.0
CD2 pmax pmax
comp=Z,70nm,0.7s
HIA Hailar 76.58 330 P P 00 21 14.2 -0.1
HIA Hailar 76.58 330c iP P 00 21 14.6 +0.3
HIA pmax pmax
comp=Z,249nm,1.5s
ZEA Zeya 76.60 337 eP P 00 21 15.5 +1.3
ZEA pmax pmax
comp=Z,64nm,1.0s
BTO Baotou 76.69 319 eP P 00 21 16.7 +1.5
LZH Lanzhou 78.57 312 eP P 00 21 27.5 +1.7
LZH sP sP 00 22 09.1 +0.8
LZH S S 00 31 13.1 0.0
LZH pmax pmax
comp=Z,76nm,1.1s
LZH pmax pmax
comp=Z,230nm,4.3s
LZH LR LR
comp=Z,170nm,14.4s
LZH LR LR
comp=Z,190nm,14.3s
LZH LR LR
comp=Z,240nm,15.2s
SEY Seymchan 78.60 353 P P 00 21 25.9 +0.7
comp=Z,26nm,0.9s,baz=159,slow=5.7,SNR=32
SEY Seymchan 78.60 353⇓eP P 00 21 25.8 +0.7
SEY i*PP pP 00 21 55.5 +1.0
KDAK Kodiak Island 79.74 21 P P 00 21 32.5 +1.1
comp=Z,9.2nm,1.0s,baz=224,slow=3.4,SNR=3.3
MAW Mawson 81.61 202 P P 00 21 42.3 +0.9
baz=82,SNR=20
MAW Mawson 81.61 202 P P 00 21 42.1 +0.7
comp=Z,26nm,0.8s,baz=107,slow=7.3,SNR=19
MAW LR LR 00 53 29.9
comp=Z,83nm,20.3s,baz=64,slow=32
MAW Mawson 81.61 202 P P 00 21 41.8 +0.4
KOHI KOHIMA 81.93 299 eP P 00 21 43.1 -1.0
ANM Nome 82.06 12 P P 00 21 44.2 +0.6
ANM Nome 82.06 12 P P 00 21 44.2 +0.6
ANM pmax pmax
comp=Z,18nm,1.2s
YAK Yakutsk 82.34 343 P P 00 21 45.3 +0.2
YAK Yakutsk 82.34 343c iP P 00 21 45.2 +0.1
YAK e*PP pP 00 22 14.2 -0.7
YAK e 00 24 52.3
YAK eS S 00 31 51.9 +1.0
YAK e*SS sS 00 32 39.3 -2.8
YAK eSS SS 00 37 09.8 -4.7
YAK pmax pmax
comp=Z,146nm,1.0s
YAK pmax pmax
comp=N,64nm,1.1s
YAK pmax pmax
comp=E,31nm,1.0s
YAK pmax pmax
comp=Z,79nm,3.0s
YAK pmax pmax
comp=N,73nm,3.0s
YAK pmax pmax
comp=E,98nm,3.2s
YAK smax smax
comp=N,40nm,1.9s
YAK smax smax
comp=E,39nm,2.6s
ULN Ulaanbaatar 82.42 324 P P 00 21 46.3 +0.2
ULN Ulaanbaatar 82.42 324 P P 00 21 46.3 +0.2
ULN pmax pmax
comp=Z,63nm,0.8s
SONM Songino Array 82.78 324 P P 00 21 48.6 +0.6
comp=Z,26nm,0.8s,baz=152,slow=7.7,SNR=198
SONM pP pP 00 22 17.8 -0.3
comp=Z,8.6nm,1.2s,baz=122,slow=7.2,SNR=1.7
SONM Songino Array 82.78 324 P P 00 21 48.0 0.0
BILL Bilibino 82.86 360 P P 00 21 47.5 -0.2
BILL IAmb IAmb 00 21 49.7
comp=Z,52nm,1.1s
BILL Bilibino 82.86 360d iP P 00 21 48.0 +0.3
BILL i*PP pwP 00 22 19.2 -0.8
BILL S S 00 31 54.0 -2.0
BILL e 00 32 52.6
BILL SSS SSS 00 40 53.0
BILL pmax pmax
comp=Z,64nm,1.3s
GTA Gaotai 82.92 314 ⇑P P 00 21 50.0 +1.1
GTA pmax pmax
comp=Z,62nm,1.2s
SUA Susitna One 83.17 19 IAmb IAmb 00 21 52.7
comp=Z,66nm,1.4s
RC01 Rabbit Creek A 83.21 19 IAmb IAmb 00 21 51.3
comp=Z,31nm,1.0s
TEZP TEZPUR 83.35 300 eP P 00 21 50.0 -1.2
PMR Palmer 83.78 19 IAmb IAmb 00 21 53.1
comp=Z,36nm,1.2s
KNK Knik Glacier 83.86 20 IAmb IAmb 00 22 02.7
comp=Z,57nm,1.6s
GHO Glory Hole Cre 83.98 19 IAmb IAmb 00 22 06.1
comp=Z,68nm,1.7s
KMRM Mail Ridge 84.28 46 IAmb IAmb 00 22 31.2
comp=Z,39nm,1.5s
KTH Kantishna Hill 84.71 17 P P 00 21 56.0 -1.4
KTH IAmb IAmb 00 21 58.5
comp=Z,24nm,1.0s
BOD Bodaibo 84.78 334 eP P 00 21 57.7 0.0
BOD pmax pmax
comp=Z,67nm,1.6s
TRF Thorofare Moun 84.82 18 IAmb IAmb 00 21 59.2
comp=Z,20nm,0.9s
O02D Mt. Diablo Mer 84.90 46 P P 00 22 00.1 +1.2
baz=246
PKM Mcpherson Peak 85.00 52 P P 00 22 02.1 +2.5
baz=248
RND Reindeer 85.22 18 IAmb IAmb 00 22 39.2
comp=Z,29nm,1.0s
WDC Whiskeytown Da 85.24 46 IAmb IAmb 00 22 36.3
comp=Z,30nm,1.4s
N02D Trinity Center 85.29 46 P P 00 22 01.7 +0.9
baz=246
K02D Willamette Mer 85.36 44 P P 00 22 03.0 +1.9
baz=245
M02C Callahan 85.36 45 P P 00 22 00.9 -0.2
baz=245
DHY Denali Highway 85.43 19 IAmb IAmb 00 22 45.7
comp=Z,35nm,1.8s
MCK McKinley 85.43 18 IAmb IAmb 00 22 40.2
comp=Z,25nm,1.1s
ORV Oroville 85.56 47 P P 00 22 01.6 -0.5
ORV Oroville 85.56 47 P P 00 22 01.6 -0.5
ORV pmax pmax
comp=Z,6.0nm,1.0s
BWN Browne 85.61 18 IAmb IAmb 00 22 41.0
comp=Z,54nm,1.0s
O03E Paynes Creek 85.64 46 P P 00 22 01.7 -0.8
baz=246
LSA Lhasa 85.77 302 P P 00 22 05.1 +1.2
LSA pmax pmax
comp=Z,220nm,0.9s
LSA Lhasa 85.77 302 iP P 00 22 05.2 +1.3
SNR=21
LSA Lhasa 85.77 302 IAmb IAmb 00 22 06.1
comp=Z,43nm,0.8s
ZAK Zakamensk 85.84 325 eP P 00 22 03.5 +0.2
ZAK pmax pmax
comp=Z,46nm,0.9s
IMAR Indian Mountai 85.85 15 P P 00 22 03.5 +0.6
NEA Nenana 86.02 17 IAmb IAmb 00 22 42.7
comp=Z,33nm,1.7s
L04D Klamath Falls 86.08 45 P P 00 22 05.6 +0.8
baz=246
M04C Macdoel 86.22 45 P P 00 22 06.0 +0.6
baz=246
TLY Talaya 86.28 326 P P 00 22 05.3 0.0
comp=Z,25nm,0.7s,baz=162,slow=3.4,SNR=43
TLY Talaya 86.28 326 P P 00 22 05.4 0.0
TLY IAmb IAmb 00 22 06.7
comp=Z,32nm,0.7s
TLY Talaya 86.28 326c iP P 00 22 05.2 -0.1
TLY pmax pmax
comp=Z,26nm,0.8s
ISA Isabella, Lake 86.30 52 P P 00 22 06.0 +0.1
baz=249
EDW2 Edwards Air Fo 86.39 53 P P 00 22 06.3 0.0
baz=249
BFSC Mount Baldy Ra 86.42 53 P P 00 22 06.4 -0.2
baz=249
BEKR Beckworth 86.49 47 IAmb IAmb 00 25 15.9
comp=Z,18nm,0.6s
HDA Harding Lake 86.53 18 IAmb IAmb 00 22 45.2
comp=Z,23nm,0.9s
HDA Harding Lake 86.53 18 P P 00 22 05.7 -0.6
baz=224
MURC Murrieta 86.55 54 P P 00 22 06.6 -0.5
baz=250
COLA College 86.60 18 P P 00 22 06.3 -0.2
COLA IAmb IAmb 00 22 45.6
comp=Z,15nm,0.8s
COLA College 86.60 18 P P 00 22 06.3 -0.2
COLA pmax pmax
comp=Z,15nm,0.9s
WAKR Walker 86.63 49 IAmb IAmb 00 22 43.6
comp=Z,23nm,1.1s
I04A Tendick Farm, 86.65 43 P P 00 22 07.8 +0.4
baz=246
RIDG Independent Ri 86.70 19 IAmb IAmb 00 22 35.8
comp=Z,32nm,1.6s
ILAR Eielson Array 86.81 18 P P 00 22 06.2 -1.4
comp=Z,8.6nm,0.8s,baz=236,slow=5.6,SNR=65
ILAR PKKP PKKPdf 00 40 00.1 +2.2
comp=Z,2.0nm,0.7s,baz=349,slow=2.4,SNR=18
ILAR PKPPKP P'P'df 00 48 00.7 -6.3
comp=Z,0.5nm,0.8s,baz=338,slow=1.9,SNR=5.4
ILAR LR LR 00 55 13.0
comp=Z,48nm,19.3s,baz=244,slow=32
LRMC Laurel Mtn Rad 86.84 52 P P 00 22 08.6 0.0
baz=249
CWC Cottonwood Cre 86.88 51 P P 00 22 08.8 0.0
baz=249
POKR Poker Plat Res 86.90 18 P P 00 22 07.0 -1.0
baz=223
MONP2 Monument Peak 86.92 55 P P 00 22 09.2 +0.1
baz=250
TIN Tinemaha, Big 86.99 51 P P 00 22 09.4 +0.1
baz=249
IKP In-Ko-Pah, Jac 87.08 55 P P 00 22 10.3 +0.5
baz=250
PAHR Pah Rah Range 87.12 48 IAmb IAmb 00 22 45.6
comp=Z,22nm,1.3s
PFO Pinyon Flats O 87.13 54 P P 00 22 10.4 +0.3
PFO Pinyon Flats O 87.13 54 P P 00 22 10.4 +0.3
PFO pmax pmax
comp=Z,16nm,1.3s
PFO Pinyon Flats O 87.13 54 P P 00 22 09.8 -0.2
baz=250
TPFO Pinon Flats 87.14 54 P P 00 22 10.0 -0.1
baz=250
XPFO Pion Flat 87.14 54 P P 00 22 10.3 +0.3
MPMC Manual Prospec 87.19 52 P P 00 22 09.9 -0.5
baz=249
J05D Fort Rock, OR 87.23 44 P P 00 22 11.1 +0.8
baz=246
BCAR Beaver Creek A 87.25 21 P P 00 22 09.9 +0.1
RYN Ryan 87.35 49 IAmb IAmb 00 22 12.6
comp=Z,30nm,1.8s
SWSC Sam W. Stewart 87.43 55 P P 00 22 11.4 +0.1
baz=250
NVAR Mina Array Bea 87.43 49 P P 00 22 11.0 -0.5
comp=Z,2.3nm,0.6s,baz=237,slow=6.5,SNR=15
NVAR pP pP 00 22 40.2 -0.9
comp=Z,3.7nm,1.0s,baz=227,slow=4.6,SNR=3.8
NVAR PKKPbc PKKPbc 00 40 00.6 -1.5
comp=Z,1.1nm,0.7s,baz=96,slow=4.2,SNR=8.6
NVAR PKPPKP P'P'df 00 48 05.0 -3.1
comp=Z,4.0nm,1.0s,baz=77,slow=2.6,SNR=12
NVAR LR LR 00 52 36.7
comp=Z,44nm,21.7s,baz=314,slow=30
NVAR Mina Array Bea 87.43 49 P P 00 22 11.1 -0.5
GSC Goldstone, Bar 87.45 53 P P 00 22 11.6 +0.2
baz=250
BELC Belle Mtn. Jos 87.63 54 P P 00 22 12.3 -0.1
baz=250
HEC Hector,Ludlow 87.65 53 P P 00 22 12.0 -0.4
baz=250
MOY Mondy 87.72 325 eP P 00 22 12.5 +0.1
MOY pmax pmax
comp=Z,51nm,3.2s
D03D Eldon 87.78 39 P P 00 22 13.8 +1.2
baz=245
FURC Furnace Creek, 87.81 51 P P 00 22 13.2 +0.2
baz=250
KVN Kaiserville 87.81 49 IAmb IAmb 00 22 14.5
comp=Z,30nm,1.7s
TAPN Taplejung 87.88 299 eP P 00 22 14.2 +0.2
comp=Z,100nm,0.8s
BC3 Big Chuckawall 87.94 54 P P 00 22 14.1 +0.2
baz=250
G05D Wamic, OR 87.96 42 P P 00 22 14.6 +1.0
baz=246
ODAN Odare 88.00 298 eP P 00 22 14.8 +0.3
comp=Z,176nm,0.8s
SHOC Shoshone, Teco 88.06 52 P P 00 22 14.5 +0.2
baz=250
F05D White Salmon 88.12 41 P P 00 22 13.6 -0.8
baz=246
GMRC Granite Mounta 88.15 53 P P 00 22 15.0 +0.1
baz=250
TUQ Turquoise Moun 88.17 53 P P 00 22 15.0 +0.1
baz=250
GLA Glamis 88.23 55 P P 00 22 15.9 +0.7
baz=251
IRM Iron Mountain 88.35 54 P P 00 22 16.3 +0.6
baz=251
SYO Syowa Base 88.42 197⇑eP P 00 22 12.0 -3.3
SYO Syowa Base 88.42 197⇓ePcP P 00 22 14.0 -1.3
SYO Syowa Base 88.42 197⇓epP pP 00 22 47.0 +1.0
TPNV Topopah Spring 88.44 51 P P 00 22 16.6 +0.4
baz=250
PALK Pallekele 88.62 278 P P 00 22 18.0 +0.5
comp=Z,26nm,0.8s,baz=112,slow=3.0,SNR=18
PALK Pallekele 88.62 278 iP P 00 22 18.8 +1.3
SNR=8.5
PALK Pallekele 88.62 278 P P 00 22 18.2 +0.7
PALK IAmb IAmb 00 22 19.8
comp=Z,34nm,0.9s
PALK Pallekele 88.62 278ceP P 00 22 18.3 +0.8
PALK pmax pmax
comp=Z,48nm,0.9s
WVOR Wild Horse Val 88.66 45 IAmb IAmb 00 22 58.3
comp=Z,19nm,1.4s
I07A Izee 88.69 44 IAmb IAmb 00 22 18.7
comp=Z,39nm,1.7s
B05A Bryant 88.69 39 P P 00 22 17.8 +0.9
baz=246
RAMN Ramite 88.70 298 eP P 00 22 18.0 +0.2
comp=Z,61nm,0.7s
Y12C Blythe 88.70 55 IAmb IAmb 00 22 52.7
comp=Z,22nm,1.1s
Y12C Blythe 88.70 55 P P 00 22 17.4 +0.1
baz=251
TOLK Toolik Lake Re 88.94 14 IAmb IAmb 00 23 11.2
comp=Z,21nm,1.6s
TOLK Toolik Lake Re 88.94 14 P P 00 22 18.2 +0.5
baz=221
113A Mohawk Valley, 88.99 56 IAmb IAmb 00 22 20.4
comp=Z,34nm,1.9s
SHPR Sheep Range 89.11 52 IAmb IAmb 00 22 55.3
comp=Z,26nm,1.2s
J08A Circle Bar Ran 89.12 45 IAmb IAmb 00 22 54.4
comp=Z,15nm,1.1s
LTY Liberty 89.17 40 IAmb IAmb 00 22 56.7
comp=Z,32nm,1.8s
PDMCI Parker Dam,Lak 89.18 54 P P 00 22 19.8 +0.2
baz=251
JIRN Jiri 89.26 299 eP P 00 22 20.6 0.0
BMAR Burnt Mountain 89.36 17 P P 00 22 20.0 +0.3
R11A Troy Canyon, C 89.41 50 P P 00 22 20.6 -0.2
baz=250
214A Organ Pipe Nat 89.50 57 P P 00 22 21.4 +0.2
baz=252
HAWA Hanford 89.56 41 IAmb IAmb 00 22 58.0
comp=Z,57nm,1.9s
GUN Gumba 89.59 299 eP P 00 22 22.2 +0.1
comp=Z,86nm,0.9s
W13A Hualapai Mount 89.63 54 IAmb IAmb 00 22 57.7
comp=Z,18nm,1.1s
PKI Pulchoki 89.89 298 eP P 00 22 23.2 -0.3
comp=Z,109nm,0.9s
E08A Dider Farm, El 89.89 42 IAmb IAmb 00 22 57.9
comp=Z,22nm,1.2s
PKIN Phulchoki 89.91 298 eP P 00 22 23.1 -0.4
comp=Z,76nm,0.9s
KKN Kakani 90.07 299 eP P 00 22 24.1 0.0
comp=Z,82nm,0.9s
HSIG 90.16 60 P P 00 22 23.9 -0.3
HSIG IAmb IAmb 00 22 24.1
comp=Z,45nm,2.0s
DMN Daman 90.16 298 eP P 00 22 24.8 +0.2
comp=Z,150nm,1.0s
TIXI Tiksi 90.29 349 P P 00 22 23.4 -0.5
TIXI IAmb IAmb 00 22 25.1
comp=Z,24nm,1.1s
TIXI Tiksi 90.29 349deP P 00 22 23.7 -0.1
TIXI pmax pmax
comp=Z,27nm,1.1s
B08A Colville Reser 90.43 40 IAmb IAmb 00 22 59.7
comp=Z,26nm,1.4s
BMO Blue Mountains 90.44 43 IAmb IAmb 00 22 59.6
comp=Z,13nm,1.1s
GKN Gorkha 90.67 299 eP P 00 22 26.4 -0.5
comp=Z,153nm,1.1s
F10A Beach Ranch, E 90.89 42 IAmb IAmb 00 23 01.5
comp=Z,16nm,1.1s
EPYK Eagle Plains 91.03 20 P P 00 22 29.8 +2.3
baz=233
TUC Tucson 91.25 57 P P 00 22 30.2 +0.8
TUC IAmb IAmb 00 23 05.6
comp=Z,13nm,1.1s
TUC Tucson 91.25 57 P P 00 22 30.2 +0.8
TUC pmax pmax
comp=Z,13nm,1.1s
TUC Tucson 91.25 57 P P 00 22 29.9 +0.5
baz=253
U15A North Rim 91.28 53 IAmb IAmb 00 23 05.7
comp=Z,24nm,1.1s
X16A Lo Mia Camp, P 91.34 55 IAmb IAmb 00 23 05.9
comp=Z,12nm,0.9s
KOLN Koldanda 91.49 298 eP P 00 22 29.9 -0.8
DANN Dangsing 91.51 299 eP P 00 22 30.1 -0.8
comp=Z,30nm,0.6s
WUAZ Wupatki 91.72 54 IAmb IAmb 00 23 07.5
comp=Z,16nm,1.0s
WUAZ Wupatki 91.72 54 P P 00 22 32.3 +0.8
baz=253
NEW Newport 91.77 40 P P 00 22 31.7 +0.4
baz=249
DUG Dugway, Tooele 92.04 49 P P 00 22 34.4 +1.5
baz=252
NVL N'lazarevskaya 92.75 188⇓iP P 00 22 35.0 -0.5
NVL pmax pmax
comp=Z,108nm,0.9s
W18A Petrified Fore 92.89 55 P P 00 22 37.0 0.0
W18A IAmb IAmb 00 23 13.1
comp=Z,14nm,0.9s
W18A Petrified Fore 92.89 55 P P 00 22 37.1 +0.1
baz=254
WMQ Urumqi 92.99 315 eP P 00 22 37.7 +0.6
WMQ pP pP 00 23 04.5 -3.1
WMQ sP sP 00 23 16.5 -3.6
WMQ pmax pmax
comp=Z,32nm,1.1s
WMQ pmax pmax
comp=Z,98nm,4.9s
WMQ LR LR
comp=Z,330nm,29.0s
WMQ LR LR
comp=Z,820nm,29.0s
WMQ LR LR
comp=Z,320nm,29.1s
INK Inuvik 93.17 19 PKKP PKKPdf 00 39 44.7 -1.9
comp=Z,2.8nm,0.8s,baz=52,slow=4.9,SNR=6.7
SNAA Sanae 93.24 183 P P 00 22 36.9 -0.9
SNAA Sanae 93.24 183 P P 00 22 37.3 -0.6
comp=Z,40nm,0.6s,baz=202,slow=5.9,SNR=25
SNAA PKKP PKKPdf 00 39 43.9 -0.7
comp=Z,1.4nm,0.9s,baz=60,slow=6.9,SNR=3.0
SNAA Sanae 93.24 183 P P 00 22 36.4 -1.4
SNAA Sanae 93.24 183c iP P 00 22 37.1 -0.7
121A Cookes Peak, D 93.75 57 P P 00 22 41.3 +0.3
baz=255
VNA3 Neumayer Olymp 93.90 181 P P 00 22 39.7 -1.1
VNA2 Neumayer--Watz 94.17 182 P P 00 22 41.3 -0.8
baz=176,slow=3.8
VNA1 Neumayer--Stat 94.47 181 P P 00 22 42.8 -0.6
PDAR Pinedale Array 95.12 47 P P 00 22 46.1 -1.0
comp=Z,0.2nm,0.5s,baz=247,slow=3.5,SNR=2.8
PDAR PP PP 00 26 36.5 -2.1

comp=Z,1.1nm,1.0s,baz=242,slow=3.2,SNR=4.4
PDAR PKKP PKKPbc 00 39 40.8 -1.8
comp=Z,0.9nm,0.7s,baz=89,slow=5.8,SNR=6.7
PDAR PKPPKP 00 47 53.2
comp=Z,0.9nm,0.8s,baz=104,slow=4.7,SNR=5.9
PDAR LR LR 00 58 33.3
comp=Z,27nm,19.3s,baz=242,slow=31
ANMO Albuquerque 95.44 55⇓eP **P 00 22 47.3 -1.4**
ANMO pmax pmax
comp=Z,9.0nm,3.8s
ANMO Albuquerque 95.44 55 P **P 00 22 47.8 -1.0**
baz=256
MNTX Cornudas Mount 95.51 59 P **P 00 22 49.6 +0.7**
baz=256
SMCO Snowmass 96.08 51 pwP 00 23 26.1 +0.3
TX31 Lajitas Ar. Si 96.38 61 P **P 00 22 52.8 -0.2**
TX31 IAmb IAmb 00 24 44.6
comp=Z,18nm,1.9s
TX32 Lajitas Array 96.38 61 IAmb IAmb 00 24 44.6
comp=Z,19nm,1.9s
TXAR Lajitas Array 96.38 61 P **P 00 22 52.7 -0.3**
comp=Z,1.1nm,0.6s,baz=220,slow=5.8,SNR=14
TXAR pP **pP 00 23 23.0 +0.3**
comp=Z,1.3nm,0.8s,baz=236,slow=6.4,SNR=3.9
TXAR PP **PP 00 26 48.4 -0.1**
comp=Z,1.3nm,1.0s,baz=243,slow=5.5,SNR=6.9
TXAR S **SKSac 00 33 19.0 0.0**
comp=Z,0.3nm,0.5s,baz=240,slow=16,SNR=6.8
TXAR PKKP **PKKPdf 00 39 39.4 -0.3**
comp=Z,0.4nm,0.7s,baz=59,slow=3.5,SNR=2.6
TXAR LR LR 01 02 04.0
comp=Z,25nm,18.0s,baz=0.0,slow=33
TXAR Lajitas Array 96.38 61 P **P 00 22 52.9 -0.1**
TXAR Lajitas Array 96.38 61 P **P 00 22 52.9 -0.1**
MKAR Makanchi Array 97.47 316 P Pdif 00 22 57.6 +0.2
comp=Z,26nm,0.7s,baz=96,slow=6.2,SNR=250
MKAR pP pP 00 23 25.9 -2.1
comp=Z,3.6nm,0.8s,baz=121,slow=6.0,SNR=1.9
MKAR PP **PP 00 26 55.5 -0.7**
comp=Z,1.3nm,0.9s,baz=120,slow=8.5,SNR=3.7
MKAR PKiKP **PKiKP 00 27 30.7 -0.9**
comp=Z,2.1nm,1.0s,baz=147,slow=2.0,SNR=8.0
MKAR S **SKSac 00 33 22.9 -0.9**
comp=Z,0.7nm,0.8s,baz=98,slow=7.5,SNR=5.9
MKAR PKKPbc **PKKPbc 00 39 34.9 -1.2**
comp=Z,0.7nm,0.7s,baz=270,slow=4.0,SNR=7.8
MKAR LR LR 01 10 10.9
comp=Z,23nm,18.4s,baz=82,slow=37
MKAR Makanchi Array 97.47 316 P **P 00 22 57.1 -0.3**
ZALV Zalesovo Beam 97.67 324 P **P 00 22 57.7 -0.4**
comp=Z,20nm,0.7s,baz=116,slow=4.6,SNR=101
ZALV pP **pP 00 23 28.0 -0.6**
comp=Z,5.6nm,0.9s,baz=132,slow=6.2,SNR=3.1
ZALV PKiKP **PKiKP 00 27 32.2 +0.5**
comp=Z,0.6nm,0.5s,baz=151,slow=1.5,SNR=2.7
ZALV S **SKSac 00 33 21.7 -2.6**
comp=Z,0.3nm,0.5s,baz=94,slow=5.8,SNR=2.0
ZALV LR LR 01 08 24.9
comp=Z,28nm,18.0s,baz=86,slow=36
ZALV Zalesovo Beam 97.67 324 P **P 00 22 56.9 -1.2**
MAKZ Makanchi 97.68 316 P **P 00 22 57.9 -0.5**
MAKZ Makanchi 97.68 316 P **P 00 22 57.9 -0.5**
MAKZ pmax pmax
comp=Z,25nm,1.1s
YKA Yellowknife Ar 97.80 27 P **P 00 22 57.6 -0.9**
comp=Z,5.0nm,1.0s,baz=254,slow=4.8,SNR=32
YKA PP **PP 00 26 57.3 -1.1**
comp=Z,0.8nm,1.0s,baz=249,slow=7.0,SNR=4.2
YKA PKiKP **PKiKP 00 27 31.4 -0.3**
comp=Z,0.3nm,0.5s,baz=228,slow=1.8,SNR=3.9
YKA PKKPbc **PKKPbc 00 39 33.0 -2.8**
comp=Z,4.8nm,0.7s,baz=69,slow=2.5,SNR=42
YKA PKPPKP **P'P'df 00 47 45.3 -1.5**
comp=Z,0.5nm,0.9s,baz=66,slow=1.8,SNR=5.3
YKA LR LR 01 03 01.4
comp=Z,27nm,19.7s,baz=0.0,slow=33
KURK Kurchatov 100.67 320 PKiKP 00 27 36.8 -0.4
KURK Kurchatov 100.67 320 Pdif 00 23 11.1 -0.5
KURK Kurchatov 100.67 320deP **Pdif 00 23 11.5 -0.1**
KURBB Kurchatov Arra 100.71 320 P **Pdif 00 23 11.1 -0.7**
comp=Z,2.1nm,0.9s,baz=95,slow=4.9,SNR=11
KURBB PP **PP 00 27 19.6 -1.2**
comp=Z,1.1nm,0.9s,baz=101,slow=7.3,SNR=4.0
KURBB PKiKP **PKiKP 00 27 36.8 -0.4**
comp=Z,1.6nm,0.8s,baz=121,slow=2.2,SNR=7.5
AAK Ala-Archa 102.08 311 P **Pdif 00 23 18.5 +0.3**
KKAR Karatay Array 105.04 311 Pdif 00 23 30.4 -0.9
KKAR Karatay Array 105.04 311 P **Pdif 00 23 30.4 -0.9**
ULM Lac du Bonnet 105.73 41 PKKP **PKKPdf 00 39 24.4 +1.4**
comp=Z,2.0nm,0.5s,baz=74,slow=3.9,SNR=5.8
BVAR Borovoye Array 106.02 321 Pdiff **Pdif 00 23 35.0 -0.3**
comp=Z,1.3nm,0.6s,baz=121,slow=7.1,SNR=8.6
BVAR PKiKP **PKiKP 00 27 46.2 -0.7**
comp=Z,0.9nm,0.4s,baz=116,slow=3.4,SNR=6.2
BVAR PP **PP 00 27 59.6 -0.7**
comp=Z,0.7nm,0.5s,baz=107,slow=8.0,SNR=3.1
RES Resolute Bay 106.46 16 PKKPbc PKKPbc 00 39 07.9 -2.7
comp=Z,2.7nm,0.6s,baz=118,slow=2.8,SNR=17
RES PKKPab **PKKPab 00 39 23.6 +0.9**
comp=Z,2.3nm,0.8s,baz=76,slow=5.0,SNR=7.4
OPO Ambohidratompo112.24 242 PKiKP **PKiKP 00 28 00.4 +0.6**
comp=Z,14nm,0.8s,baz=130,slow=2.3,SNR=13
ARU Arti 112.78 325 i PKIKP **PKiKP 00 27 58.8 -0.6**
ARU 00 28 51.8
ARU 00 35 00.6
ARU SS SS 00 44 20.3 -1.7
GEYT Alibeck 114.16 305 PKP PKPdf 00 28 02.6 -0.1
comp=Z,3.6nm,0.7s,baz=342,slow=1.9,SNR=14
GEYT Alibeck 114.16 305 PKiKP 00 28 02.9 +0.2
KBS Kingsbay 115.02 355 ePKPdf **PKiKP 00 28 03.4 +0.2**
UOSS Minazif 115.10 291 P **PKPdf 00 28 03.9 -1.0**
BANOM Banah 115.11 292 P **PKPdf 00 28 04.7 -0.2**
HATD Hatta, Dubai 115.16 291 P **PKPdf 00 28 04.6 -0.4**
ASHO Ashiyiah 115.21 290 P **PKPdf 00 28 04.1 -1.1**
SPA0 Spitsbergen Ar 115.25 354 ePKPdf **PKiKP 00 28 03.7 0.0**
SHME Shamm 115.26 292 P **PKPdf 00 28 04.4 -0.8**
ALNE Al Ain 115.42 290 P **PKPdf 00 28 05.3 -0.3**
HOPEN Hopen 115.48 351 epPKPdf pPKiKP 00 28 36.6 +0.9
LPAZ La Paz 117.02 117 PKKPbc PKKPbc 00 38 34.5 -0.3
comp=Z,1.5nm,0.6s,baz=35,slow=8.0,SNR=6.1
LPAZ PKKP **PKKPdf 00 39 03.1 +1.7**
comp=Z,1.9nm,0.3s,baz=308,slow=5.1,SNR=12
PRGR Permogore 117.97 333 ePKIKP **PKPdf 00 28 05.8 -3.4**
PRGR pmax pmax
comp=Z,16nm,0.9s
HAMF Hammerfest 120.17 347 ePKPdf **PKPdf 00 28 12.6 -0.7**
CPUP Villa Florida 120.20 133 PKP **PKPdf 00 28 14.4 -0.3**
comp=Z,0.9nm,0.5s,baz=307,slow=4.2,SNR=3.1
CPUP PKKPbc **PKKPbc 00 38 21.5 -1.3**
comp=Z,2.4nm,0.8s,baz=57,slow=5.4,SNR=4.6
SUMG Summit 120.53 9 PKIKP **PKPdf 00 28 14.2 -0.3**
SUMG Summit 120.53 9 PKP **PKPdf 00 28 14.2 -0.3**
ARCES ARCESS Array B 120.57 345 PKP **PKPdf 00 28 13.8 -0.3**
comp=Z,20nm,0.6s,baz=55,slow=1.3,SNR=111
ARCES PKKPab **PKKPab 00 38 18.6 -2.0**
comp=Z,2.2nm,0.7s,baz=238,slow=2.9,SNR=7.7
ARCES ARCESS Array B 120.57 345 PKPdf 00 28 13.2 -0.9
ARE0 ARCESS Array S 120.57 345 ePKPdf **PKPdf 00 28 13.8 -0.3**
KLMR Klimovskoe 120.99 333 ePKIKP **PKPdf 00 28 13.3 -1.8**
KLMR pmax pmax
comp=Z,35nm,1.3s
KLMR Klimovskoe 120.99 333 ePKPdf **PKPdf 00 28 13.3 -1.8**
KLMR AMP 00 28 15.5
comp=Z,35nm,1.3s
KTK1 Kautokeino 121.50 346 ePKPdf **PKPdf 00 28 15.1 -0.8**
TRO Tromso 121.98 348 ePKPdf **PKPdf 00 28 16.4 -0.4**
SCHQ Schefferville 122.53 34 PKP **PKPdf 00 28 17.5 -0.8**
comp=Z,2.0nm,0.8s,baz=293,slow=2.2,SNR=7.2
SCHQ PKKPab **PKKPab 00 38 13.7 +1.1**
comp=Z,5.6nm,0.6s,baz=98,slow=3.3,SNR=24
SUR Sutherland 122.98 214 PKP **PKiKP 00 28 20.6 +0.2**
comp=Z,35nm,0.9s,baz=132,slow=2.3,SNR=30
GROC Groznyy 123.05 312 i PKIKP **PKPdf 00 28 19.3 -0.3**
GROC pmax pmax
comp=Z,20nm,0.7s
SDV Santo Domingo 123.10 89 PKPdf 00 28 19.5 -1.3
SIV San Ignacio 123.12 121 PKKPab PKKPab 00 38 11.3 -1.5
comp=Z,1.1nm,0.8s,baz=102,slow=6.5,SNR=5.3
BOSA Boshof 123.17 220 PKP **PKPdf 00 28 20.5 0.0**
comp=Z,35nm,0.8s,baz=114,slow=2.0,SNR=60
BOSA Boshof 123.17 220 PKiKP 00 28 20.7 -0.1
BOSA Boshof 123.17 220 PKIKP **PKiKP 00 28 20.7 -0.1**
VRH Novokhopyorsk 123.67 322 ePKIKP **PKPdf 00 28 19.9 -0.6**
VRH pmax pmax
comp=Z,50nm,0.6s
STEI Steigen 124.16 348 ePKPdf **PKPdf 00 28 20.4 -0.6**

GNI Garni 124.36 309 i P **PKiKP 00 28 23.1 +0.3**
SNR=14
GNI Garni 124.36 309 PKiKP 00 28 23.0 +0.2
GNI Garni 124.36 309d i PKIKP **PKiKP 00 28 23.2 +0.4**
GNI pmax pmax
comp=Z,49nm,0.7s
ZEI Tsey 124.50 312 i PKIKP **PKPdf 00 28 22.1 -0.6**
ZEI pmax pmax
comp=Z,15nm,0.9s
GOF Gofitskoye 124.59 315⇑ePKIKP **PKiKP 00 28 23.0 +0.2**
RAYN Ar Rayn 124.75 288 i P **PKiKP 00 28 23.8 -0.1**
SNR=21
RAYN Ar Rayn 124.75 288 PKPdf 00 28 23.4 -0.1
RAYN Ar Rayn 124.75 288 PKIKP **PKPdf 00 28 23.4 -0.1**
DAMY Dhamar 124.97 277 PKiKP 00 28 25.1 +0.3
OBN Obninsk 124.99 328d i PKIKP **PKPdf 00 28 22.9 0.0**
OBN e 00 28 54.2
OBN i 00 29 07.0
OBN e 00 41 36.9
OBN pmax pmax
comp=Z,21nm,0.8s
KBZ Khabaz 125.00 313 PKP **PKiKP 00 28 23.7 0.0**
comp=Z,7.2nm,0.8s,baz=108,slow=3.1,SNR=23
KBZ Khabaz 125.00 313c i PKIKP **PKPdf 00 28 23.0 -0.3**
KIV Kislovodsk 125.10 313 ⇑P **PKPdf 00 28 23.2 -0.5**
KIV Kislovodsk 125.10 313 i P **PKPdf 00 28 24.0 0.0**
SNR=7.7
KIV Kislovodsk 125.10 313 PKPdf 00 28 23.3 -0.4
KIV Kislovodsk 125.10 313 ePKIKP **PKPdf 00 28 23.2 -0.4**
KIV pmax pmax
comp=Z,37nm,1.0s
VSR Storozhevoye 125.17 323 ePKIKP **PKPdf 00 28 22.7 -0.7**
VSR pmax pmax
comp=Z,30nm,0.7s
NEY Neytrino 125.24 313d i PKIKP **PKPdf 00 28 25.0 +0.6**
LBTB Lobatse 125.43 224 PKP **PKPdf 00 28 25.1 +0.2**
comp=Z,30nm,0.7s,baz=151,slow=2.6,SNR=46
LBTB Lobatse 125.43 224 PKiKP 00 28 25.4 +0.1
MOR8 Moi Rana 125.81 347 ePKPdf **PKPdf 00 28 23.5 -0.8**
KONS Konsvik 125.81 348 ePKPdf **PKPdf 00 28 24.2 +0.1**
FIA1 FINESS Array S 126.03 338 PKPdf 00 28 24.1 -0.7
FINES FINESS Array B 126.03 338 PKP **PKPdf 00 28 24.5 -0.3**
comp=Z,12nm,0.9s,baz=21,slow=2.7,SNR=34
FINES FINESS Array B 126.03 338 PKPdf 00 28 23.8 -0.9
MATP Matopo 126.34 230 PKP **PKPdf 00 28 26.0 -0.8**
comp=Z,52nm,1.0s,baz=140,slow=1.9,SNR=59
BCA Borcka 126.44 311 ⇓P **PKiKP 00 28 26.7 0.0**
VSU Vasula 127.72 335d i PKIKP **PKPdf 00 28 27.8 -0.2**
NSS Namsos 127.75 347 ePKPdf **PKPdf 00 28 27.9 -0.1**
KMBO Kilima Mbogo 128.09 256 PKP **PKiKP 00 28 31.9 +0.8**
comp=Z,17nm,0.9s,baz=65,slow=4.5,SNR=34
KMBO Kilima Mbogo 128.09 256 i P **PKiKP 00 28 31.6 +0.6**
SNR=14
KMBO Kilima Mbogo 128.09 256 PKPdf 00 28 30.4 -0.1
KMBO Kilima Mbogo 128.09 256 PKIKP **PKPdf 00 28 30.4 -0.1**
LSZ Lusaka 129.62 235 PKP **PKPdf 00 28 33.7 -0.2**
comp=Z,25nm,0.7s,baz=155,slow=1.8,SNR=63
LSZ SKPbc SKPbc 00 31 46.8 +2.2
comp=Z,8.2nm,1.0s,baz=117,slow=4.5,SNR=7.2
NACGM Naroch 129.90 331 e **PKPdf 00 28 32.0 -0.3**
MOL Molde 130.43 348 ePKPdf **PKPdf 00 28 33.0 -0.1**
DOMB Dombas 130.57 347 ePKPdf **PKPdf 00 28 33.2 -0.3**
DOMB ePP **PP 00 30 49.7 +0.6**
NB2 NORSAR Subarra130.94 345 PKPdf **PKPdf 00 28 34.1 -0.1**
comp=Z,11nm,1.1s,baz=31,slow=1.9
NB2 NORSAR Subarra130.94 345 PKPdf **PKPdf 00 28 34.1 -0.1**
baz=31,slow=1.9
NOA NORSAR Array B 130.94 345 PKP **PKPdf 00 28 34.3 +0.1**
comp=Z,5.5nm,0.7s,baz=34,slow=2.0,SNR=22
NOA SKPbc **SKPab 00 31 48.7 +0.6**
comp=Z,3.4nm,0.8s,baz=31,slow=3.1,SNR=8.9
AKASG Malin Array Be 131.02 326 PKhKP PKPpre 00 28 19.4
comp=Z,0.9nm,0.6s,baz=66,slow=3.1,SNR=4.4
AKASG PKP **PKPdf 00 28 34.4 -0.2**
comp=Z,3.2nm,0.7s,baz=58,slow=2.2,SNR=20
AKASG SKPbc **SKPab 00 31 49.0 +0.3**
comp=Z,8.9nm,0.9s,baz=46,slow=4.8,SNR=22
AKBB Malin Array Si 131.02 326⇓i PKIKP **PKPdf 00 28 34.4 -0.2**
NC602 NORSAR Array S 131.12 344 ePKPdf **PKPdf 00 28 34.5 +0.1**
BZK Bozkurt 131.78 313 ⇑P **PKPdf 00 28 36.3 0.0**
FOO Floro 131.80 349 ePKPdf **PKiKP 00 28 36.6 -0.1**
SKAR Skarslia 131.95 346 ePKPdf **PKPdf 00 28 36.0 -0.1**
ILGA Ilgaz 132.28 312 PKiKP 00 28 38.3 -0.4
BR131 Keskin Array S 132.75 311d i PKIKP **PKPdf 00 28 39.0 +0.6**
BRTR Keskin Array B 132.75 311 PKhKP PKPpre 00 28 27.9
comp=Z,1.0nm,0.8s,baz=126,slow=3.6,SNR=5.8
BRTR PKP **PKPdf 00 28 38.4 0.0**
comp=Z,7.0nm,0.9s,baz=142,slow=3.6,SNR=19
BRTR PP **PP 00 31 04.8 +0.3**
comp=Z,1.1nm,0.8s,baz=106,slow=5.1,SNR=4.1
BRTR SKPbc **SKPbc 00 31 55.9 +0.8**
comp=Z,4.6nm,1.2s,baz=132,slow=1.8,SNR=6.7
BRTR Keskin Array B 132.75 311 PKPdf **PKPdf 00 28 38.1 -0.3**
BRTR Keskin Array B 132.75 311 SKPbc 00 31 55.3 +0.3
BRTR Keskin Array B 132.75 311c i PKIKP **PKPdf 00 28 38.7 +0.3**
BRTR pmax pmax
comp=Z,7.0nm,0.7s
SORM Soroca 132.82 323 ⇑P **PKPdf 00 28 37.1 -0.9**
MILM Milestii Mici 133.15 322 ⇑P **PKPdf 00 28 37.9 -0.8**
ANTO Ankara 133.33 311 ⇑P **PKPdf 00 28 39.4 0.0**
ANTO Ankara 133.33 311 PKPdf 00 28 39.7 +0.3
ANTO Ankara 133.33 311 PKIKP **PKPdf 00 28 39.7 +0.3**
BDFB Brasilia 133.65 130 PKP **PKPdf 00 28 41.2 +0.4**
comp=Z,4.7nm,0.7s,baz=248,slow=3.0,SNR=7.3
BDFB SKPbc **SKPbc 00 31 59.0 +0.3**
comp=Z,0.7nm,0.4s,baz=177,slow=5.0,SNR=3.2
BDFB Brasilia 133.65 130 PKPdf 00 28 40.4 -0.4
MBAR Mbarara 134.36 254 PKP **PKiKP 00 28 43.0 -0.7**
comp=Z,16nm,0.8s,baz=24,slow=2.9,SNR=18
MBAR SKPab **SKPab 00 32 04.4 -0.1**
comp=Z,2.7nm,0.2s,baz=90,slow=3.0,SNR=5.2
MBAR Mbarara 134.36 254 PKPdf 00 28 42.3 0.0
MBAR Mbarara 134.36 254 PKIKP **PKPdf 00 28 42.3 0.0**
LEF Lefka 134.60 305 ⇓P **PKPdf 00 28 42.9 -0.4**
BEL Belsk 134.62 331 eP **PKPdf 00 28 41.5 +0.2**
BEL Belsk 134.62 331 ePKIKP **PKPdf 00 28 41.5 +0.2**
TESR Tescani 134.65 322 ⇓P **PKPdf 00 28 41.5 -0.1**
MANR Mangalia 134.72 318 ⇓P **PKPdf 00 28 43.8 +0.6**
HARR Harsova 134.75 319 ⇓P **PKPdf 00 28 42.4 +0.6**
TSUM Tsumeb 134.78 222 PKhKP PKPpre 00 28 34.6
comp=Z,2.1nm,0.6s,baz=130,slow=4.5,SNR=13
TSUM PKP **PKPdf 00 28 42.7 -0.1**
comp=Z,17nm,1.0s,baz=112,slow=1.9,SNR=23
TSUM SKPab **SKPab 00 32 06.8 +0.7**
comp=Z,3.7nm,1.0s,baz=145,slow=6.1,SNR=3.7
TSUM Tsumeb 134.78 222 PKPpre 00 28 33.5
TSUM **PKPdf 00 28 42.6 -0.2**
BURAR Bucovina Array 134.89 324 ⇓P **PKPdf 00 28 42.8 +0.6**
BURAR Bucovina Array 134.89 324 PKPpre 00 28 30.6
KWP Kalwaria Pacla 135.09 328 eP **PKPdf 00 28 41.8 -0.5**
KWP Kalwaria Pacla 135.09 328 ePKIKP **PKPdf 00 28 41.8 -0.5**
AMRR Amara 135.16 319 ⇓P PKPpre 00 28 27.1
GKP Gorka Klasztor 135.17 335 eP **PKPdf 00 28 42.9 +0.6**
GKP Gorka Klasztor 135.17 335 ePKIKP **PKPdf 00 28 42.9 +0.6**
MLR Muntele Rosu 135.59 321 ⇓P **PKPdf 00 28 43.5 -0.1**
KOLS Kolonicke sedl 135.74 327 ePKIKP **PKiKP 00 28 44.4 -0.8**
KOLS Kolonicke sedl 135.74 327 ePKP **PKiKP 00 28 44.4 -0.8**
UZH Uzhgorod 135.91 327 ePKHKP PKPpre 00 28 35.1
UZH i 00 28 41.8
TRPA Tarpa 136.08 326 ⇑P **PKPdf 00 28 44.3 +0.1**
OJC Ojcow 136.16 330 eP **PKPdf 00 28 44.5 +0.2**
OJC Ojcow 136.16 330 PKPdf 00 28 44.2 -0.1
OJC Ojcow 136.16 330 ePKIKP **PKPdf 00 28 44.5 +0.2**
CRVS Cervenica-Dubn 136.18 328 ePKIKP **PKPdf 00 28 44.9 +0.5**
CRVS Cervenica-Dubn 136.18 328 ePKP **PKPdf 00 28 44.9 +0.5**
NIE Niedzica 136.44 329 eP **PKPdf 00 28 45.9 -0.7**
NIE Niedzica 136.44 329 ePKIKP **PKiKP 00 28 45.9 -0.7**
ARR Arges 136.44 322 ⇓P **PKPdf 00 28 46.0 -0.8**
HUMR Humele 136.67 320 ⇓P **PKPdf 00 28 45.2 -0.2**
DRGR 136.77 324 ⇓P PKPpre 00 28 36.6
ELND Elena 136.89 318 ⇓P **PKPdf 00 28 46.1 +0.2**
KSP Ksiaz 137.34 333 eP **PKPdf 00 28 47.0 +0.5**
KSP Ksiaz 137.34 333 ePKIKP **PKPdf 00 28 47.0 +0.5**
PLVB Pleven 137.47 319 ⇓P **PKPdf 00 28 47.4 +0.5**
GZR Gura Zlata 137.53 323 ⇓P **PKPdf 00 28 47.1 0.0**
MORC Moravsky Berou 137.53 331 ePKP **PKPdf 00 28 47.2 +0.3**
OSTC Ostas 137.58 333 ePKPpre PKPpre 00 28 41.2
OSTC ePKPDF **PKPdf 00 28 47.8 +0.9**
PSZ Piszkesteto 137.61 328 PKPdf 00 28 47.9 +0.8
PSZ Piszkesteto 137.61 328 PKIKP **PKPdf 00 28 47.9 +0.8**
KRLC Kraliky 137.67 332 ePKPpre PKPpre 00 28 38.2
KRLC ePKPDF **PKPdf 00 28 47.0 -0.2**
KRLC Kraliky 137.67 332 ePKHKP PKPpre 00 28 38.2

KRLC e 00 28 47.0
DPC Dobruska-Polom 137.68 333 ePKPDF PKPpre 00 28 36.9
DPC ex x 00 28 48.2
DPC Dobruska-Polom 137.68 333 ePKHKP PKPpre 00 28 36.9
DPC e 00 28 48.2
UPC Upice 137.71 333 ePKPpre PKPpre 00 28 36.3
UPC Upice 137.71 333 ePKHKP PKPpre 00 28 36.3
VYHS Vyhne 137.77 329 ePKIKP **PKPdf 00 28 47.7 +0.4**
VYHS Vyhne 137.77 329 ePKP **PKPdf 00 28 47.7 +0.4**
BZS Buzias 138.07 324 ⇓P **PKPdf 00 28 47.7 -0.2**
JAVC Velka Javorina 138.10 330 ePKP **PKiKP 00 28 49.2 -0.9**
PVCC Panska Ves 138.31 334 ePKPpre PKPpre 00 28 41.9
PVCC ePKPDF **PKPdf 00 28 49.2 +1.0**
PVCC Panska Ves 138.31 334 ePKHKP PKPpre 00 28 41.9
PVCC e 00 28 49.2
BRG Berggiesshubel 138.32 335 ePKHKP PKPpre 00 28 40.2
BRG e 00 28 48.5
BRG pmax pmax
comp=Z,6.0nm,0.7s
BRG pmax pmax
comp=Z,45nm,1.8s
CLL Collm 138.36 336 ePKPpre PKPpre 00 28 40.0
CLL ePKPdf **PKPdf 00 28 48.0 -0.3**
CLL i PKiKP **PKiKP 00 28 50.5 +0.1**
comp=Z,15nm,1.1s
CLL epPKiKP pPKiKP 00 29 26.0 +4.1
CLL Collm 138.36 336 ePKHKP PKPpre 00 28 40.0
CLL e 00 28 48.0
CLL pmax pmax
comp=Z,15nm,1.1s
KRUC Moravsky 138.57 331 ePKP **PKPdf 00 28 48.6 -0.2**
MODS Modra-Piesok 138.62 330 ePKIKP **PKiKP 00 28 50.5 -0.6**
MODS Modra-Piesok 138.62 330 ePKP **PKiKP 00 28 50.5 -0.6**
GOPC GO Pecny, Ondr 138.68 333 ePKPpre PKPpre 00 28 42.2
GOPC ePKPDF **PKPdf 00 28 49.5 +0.5**
GOPC GO Pecny, Ondr 138.68 333 ePKHKP PKPpre 00 28 42.2
GOPC e 00 28 49.5
PRU Pruhonice 138.73 333 ePKPpre PKPpre 00 28 43.6
PRU ePKPDF **PKPdf 00 28 49.7 +0.7**
PRU Pruhonice 138.73 333 ePKIKP **PKPdf 00 28 43.6 -5.4**
VTS Vitosha 138.73 319 ⇑P PKPdf 00 28 40.3 -9.2
ZST Bratislava 138.83 330 ePKIKP **PKiKP 00 28 50.9 -0.6**
ZST Bratislava 138.83 330 ePKP **PKiKP 00 28 50.9 -0.6**
MORH Mrgy, Hungar 139.35 326 eP **PKPdf 00 28 50.4 +0.1**
NKC Novy Kostel 139.42 335 ePKPpre PKPpre 00 28 42.8
NKC Novy Kostel 139.42 335 ePKHKP PKPpre 00 28 42.8
CONA Conrad Observa 139.62 330 ePKPdf **PKPdf 00 28 45.8 -5.1**
comp=Z,5.7nm,0.9s
KHC Kasperske Hory 139.79 333 ePKPpre PKPpre 00 28 44.7
KHC ePKPDF **PKPdf 00 28 50.6 -0.4**
KHC Kasperske Hory 139.79 333 ePKHKP PKPpre 00 28 44.7
KHC e 00 28 50.6
DIVS Divibare 139.90 323 eP **PKPdf 00 28 49.3 -2.2**
GERES GERESS Array B 139.95 333 PKhKP PKPpre 00 28 44.0
comp=Z,3.8nm,0.8s,baz=72,slow=4.3,SNR=25
GERES PKP **PKPdf 00 28 50.8 -0.6**
comp=Z,5.5nm,0.7s,baz=49,slow=1.9,SNR=14
BBLS Lazići 140.37 323 eP **PKPdf 00 28 51.6 -0.7**
MOA Molln 140.42 331 ePKPdf **PKPdf 00 28 47.9 -4.3**
comp=Z,31nm,1.9s
HAPS Han Pijesak,Bl 140.50 324 eP PKPdf 00 28 44.2 -8.4
RUDO Rudo 140.54 323 eP PKPdf 00 28 44.3 -8.2
DOB Doboj 140.59 325 eP PKPdf 00 28 44.6 -7.9
SOKA Soboth 140.90 329 ePKPdf **PKPdf 00 28 47.9 -5.3**
comp=Z,7.2nm,0.9s
BLY Banja Luka 141.08 326 eP **PKPdf 00 28 45.8 -7.7**
CRES Cresnjev 141.28 328 eP **PKPdf 00 28 47.9 -5.9**
MGRS Mrkonjic Grad 141.35 325 eP **PKPdf 00 28 46.9 -7.1**
KBA Koelnbreinsper 141.41 331 ePKPdf **PKPdf 00 28 49.2 -5.0**
comp=Z,13nm,0.8s
LJU Ljubljana 141.59 329 eP **PKPdf 00 28 47.9 -6.5**
MYKA Terra Mystica 141.60 331 ePKPdf **PKPdf 00 28 48.2 -6.2**
comp=Z,4.0nm,0.7s
WATA Walderalm 142.02 333 ePKPdf **PKPdf 00 28 51.1 -4.2**
comp=Z,9.7nm,0.8s
ABTA Abfaltersbach 142.04 332 i PKPdf **PKPdf 00 28 50.1 -5.2**
WTTA Wattenberg 142.05 333 ePKPdf **PKPdf 00 28 51.0 -4.3**
comp=Z,38nm,1.6s,SNR=7.6
MOTA Moosalm 142.22 333 ePKPdf **PKPdf 00 28 51.6 -4.1**
comp=Z,26nm,0.9s,SNR=8.2
RETA Reutte 142.25 334 ePKPdf **PKPdf 00 28 51.8 -3.8**
comp=Z,16nm,0.9s
SQTA Sankt Quirin 142.27 333 ePKPdf **PKPdf 00 28 51.7 -4.0**
comp=Z,25nm,0.8s,SNR=8.2
FETA Feichten 142.63 333 ePKPdf **PKPdf 00 28 53.3 -3.1**
comp=Z,44nm,0.8s,SNR=13
DAVA Damuels 142.78 334 ePKPdf **PKPdf 00 28 53.9 -2.7**
comp=Z,32nm,0.7s,SNR=13
TEOL Teolo 143.47 331 PKPbc 00 28 55.8 +0.6
TUE Stuetta 143.65 334 PKPbc 00 28 56.9 +0.9
MATE Matera 143.90 321 ⇑P PKPbc 00 28 56.9 +0.3
PRMA PARMA 144.55 331 PKPdf 00 28 59.7 +0.1
TIP Timpagrande 144.72 319 ⇑P **PKPdf 00 29 00.0 -0.1**
TIP Timpagrande 144.72 319 PKPdf 00 29 00.2 0.0
AQU L'Aquila 144.72 326 eP PKPbc 00 28 59.5 +0.3
CEL Celeste 145.80 318 PKPbc 00 29 02.1 +0.1
SHEL Horse Pasture 148.44 193 PKPbc 00 29 10.7 0.0
SHEL Horse Pasture 148.44 193 PKP2 **PKPbc 00 29 10.7 0.0**
RCBR Riachuelo 149.02 130 PKPbc 00 29 11.1 -1.1
RCBR Riachuelo 149.02 130 PKIKP **PKPbc 00 29 11.1 -1.1**
KEST Kesra 151.49 320 PKPbc **PKiKP 00 29 18.2 +0.2**
comp=Z,54nm,0.7s,baz=205,slow=0.2,SNR=51
PBRG Braganca 152.84 350 ePKPbc **PKPbc 00 29 20.4 0.0**
PBRG Braganca 152.84 350 ePKPab **PKPab 00 29 33.1 +1.4**
PVRL Vila Real 153.51 352 ePKPdf **PKPdf 00 29 13.5 -0.6**
PVRL Vila Real 153.51 352 ePKPbc **PKiKP 00 29 22.2 +0.2**
PVRL Vila Real 153.51 352 ePKPab **PKPab 00 29 35.9 +1.4**
PVIS Viseu 154.08 350 ePKPab **PKPab 00 29 37.4 +0.4**
ESDC Sonseca Array 154.30 344 PKP **PKPdf 00 29 15.1 -0.2**
comp=Z,1.7nm,1.0s,baz=352,slow=3.1,SNR=5.2
ESDC PKPbc **PKiKP 00 29 24.0 +0.3**
comp=Z,1.3nm,0.6s,baz=16,slow=2.8,SNR=12
ESDC PKPab **PKPab 00 29 38.4 +0.5**
comp=Z,4.7nm,0.8s,baz=20,slow=3.5,SNR=11
ESDC Sonseca Array 154.30 344 PKPdf 00 29 15.1 -0.2
ESDC **PKiKP 00 29 23.9 +0.3**
ESDC PKPab **PKPab 00 29 37.6 -0.3**
MTE Manteigas 154.34 351 ePKPdf **PKPdf 00 29 15.2 -0.1**
MTE Manteigas 154.34 351 ePKPbc **PKiKP 00 29 24.2 +0.5**
MTE Manteigas 154.34 351 ePKPab **PKPab 00 29 39.4 +1.3**
COI Coimbra 154.65 352 ePKPdf **PKPdf 00 29 12.8 -2.9**
COI Coimbra 154.65 352 ePKPab **PKPab 00 29 40.2 +0.9**
PCAS Casmilo, Conde 154.82 352 ePKPab **PKPab 00 29 41.4 +1.4**
PCBR Castelo Branco 154.88 351 ePKPbc **PKiKP 00 29 24.8 0.0**
PCBR Castelo Branco 154.88 351 ePKPab **PKPab 00 29 41.7 +1.4**
PBEJ Beja 156.72 350 ePKPab **PKPab 00 29 49.3 +1.1**
PCVE Castro Verde 157.13 350 ePKPab **PKPab 00 29 51.8 +1.8**
MORF Marmelete 157.54 352 ePKPdf **PKPdf 00 29 17.7 -1.9**
MORF Marmelete 157.54 352 ePKPab **PKPab 00 29 52.0 +0.1**
TOA0 Torodi Ar. Sit 165.93 264 PKPdf 00 29 28.2 -0.6
TOA0 PKPab **PKPab 00 30 28.8 -0.6**
TORD Torodi Ar. Bea 165.93 264 PKP **PKPdf 00 29 28.1 -0.7**
comp=Z,17nm,0.6s,baz=67,slow=0.5,SNR=95
TORD PKPab **PKPab 00 30 29.3 -0.1**
comp=Z,13nm,1.1s,baz=97,slow=3.5,SNR=9.1
TORD Torodi Ar. Bea 165.93 264 PKPdf 00 29 27.8 -1.0
TORD PKPab **PKPab 00 30 27.9 -1.5**
KIC Kosan Boka 168.38 223 ePKIKP **PKPdf 00 29 29.8 -0.9**
comp=Z,94nm,0.9s
KIC Kosan Boka 168.38 223 eP **PKPab 00 30 39.7 -0.3**
comp=Z,21nm,1.0s
LIC Lamto 168.46 221 ePKIKP **PKPdf 00 29 29.8 -0.9**
comp=Z,115nm,1.0s
LIC Lamto 168.46 221 eP **PKPab 00 30 41.4 +1.1**
comp=Z,44nm,0.8s
DBIC Dimbokro 168.68 224 PKP **PKPdf 00 29 29.9 -0.9**
comp=Z,26nm,0.9s,baz=170,slow=0.5,SNR=35
DBIC PKPab **PKPab 00 30 42.0 +0.7**
comp=Z,5.9nm,0.8s,baz=120,slow=8.4,SNR=4.3
DBIC Dimbokro 168.68 224 PKPdf 00 29 30.1 -0.8
TIC Toumodi 168.77 223 ePKIKP **PKPdf 00 29 30.0 -0.9**
comp=Z,72nm,1.0s
TIC Toumodi 168.77 223 eP **PKPab 00 30 42.9 +1.1**
comp=Z,34nm,0.7s

IDC 12 00:34:09.2±2.6, 17.34S×173.67W, h0km, mb3.8/3, mb1 4.1/4, mb1mx3.7/30, mbtmp3.9/4, ML4.0/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/29, Error ellipse: s-maj=133.5km s-min=27.4km az=142.0, Tonga Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

AFI	Afiamalu 9.8nm,0.3s,baz=47,slow=3.2,SNR=5.8	3.86	28	Pn	Pn	00 35 10.3	+0.3
AFI	23nm,0.3s,baz=41,slow=21,SNR=15			Sn	Sn	00 35 45.7	-10
AFI	comp=Z,53nm,18.2s,baz=288,slow=30			LR	LR	00 36 06.7	
DZM	Mont Dzumac comp=Z,56nm,19.6s,baz=184,slow=33	19.30	253	LR	LR	00 44 41.6	
WRA	Warramunga Arr 0.8nm,1.1s,baz=95,slow=7.6,SNR=4.1	49.18	258	P	P	00 42 58.9	-0.6
WRA	0.1nm,0.5s,baz=100,slow=3.6,SNR=2.8			PcP	PcP	00 44 22.6	-0.3
ASAR	Alice Springs 3.5nm,0.6s,baz=88,slow=8.5,SNR=44	49.29	253	P	P	00 43 00.6	+0.3
PMSA	Palmer Station comp=Z,85nm,18.1s,baz=358,slow=36	82.52	156	LR	LR	01 24 11.2	
PDAR	Pinedale Array 0.3nm,0.7s,baz=200,slow=4.8,SNR=2.7	83.87	42	P	P	00 46 41.0	-0.2
BRTR	Keskin Array B 1.0nm,0.8s,baz=45,slow=4.9,SNR=7.1	147.47	319	PKPbc	PKPbc	00 53 54.8	-0.8

*JMA **12** 00:34:58.8±0.2, 23°.59N×121°.78E, h16km±4km, M3.5*
*TAP **12** 00:34:59.9, 23°.63N×121°.67E, h17km, ML3.6, C*
ISC 12 00:34:59.4±0.9**, 23°.62N**±0°.01×**121°.71E**±0°.02**, h17**km±6km**,**
n115, σ0ˢ.49/189**, 15D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	Guangfu baz=291	0.26	280	⇓P	Pg	00 35 05.3	+0.2
EGFH	baz=291			eS	Sg	00 35 09.4	+0.2
HGSD	Ruisui baz=235	0.29	243	⇓P	Pg	00 35 05.9	+0.2
HGSD	baz=235			S	Sg	00 35 10.3	+0.3
ENLB	Shoufeng baz=345	0.29	341	⇓P	Pg	00 35 05.5	-0.3
ENLB	baz=345			S	Sb	00 35 10.9	+0.1
ESL	Shilin baz=306	0.31	307	⇓iP	Pg	00 35 05.9	-0.2
ESL	baz=306			S	Sg	00 35 10.3	-0.4
HWA	Hwalien baz=349	0.36	345	eP	Pb	00 35 07.7	+0.4
HWA	baz=349			eS	Sb	00 35 13.9	+1.1
EHY	Hungye baz=258	0.37	252	⇓P	Pg	00 35 07.3	+0.2
EHY	baz=258			S	Sb	00 35 13.3	+0.4
YULB	Yu-li baz=232	0.44	239	eP	Pb	00 35 08.6	-0.1
YULB	baz=232			S	Sb	00 35 15.3	+0.4
TWF1	Yuli baz=228	0.46	234	P	Pb	00 35 09.3	+0.2
TWF1	baz=228			S	Sb	00 35 16.3	+0.7
TWD	Chiawan baz=349	0.47	348	⇓P	Pb	00 35 09.1	0.0
TWD	baz=349			eS	Sb	00 35 16.3	+0.6
VWDT	VWDT baz=286	0.53	284	⇓P	Pb	00 35 10.2	0.0
VWDT	baz=286			S	Sg	00 35 17.4	+0.2
NACB	Ninganchiao baz=355	0.56	350	⇓P	Pg	00 35 10.5	0.0
NACB	baz=355			S	Sb	00 35 18.5	+0.1
FULB	Fuli baz=210	0.57	222	eP	Pb	00 35 10.9	+0.1
FULB	baz=210			eS	Sb	00 35 19.8	+1.2
OWD	Renai baz=306	0.59	304	⇓P	Pg	00 35 10.9	-0.2
OWD	baz=306			S	Sg	00 35 18.4	-0.6
CHKT	Chengkung baz=194	0.61	211	eP	Pb	00 35 11.6	0.0
CHKT	baz=194			S	Sb	00 35 20.5	+0.8
ETLH	Xiulin Townshi baz=342	0.62	341	eP	Pg	00 35 11.6	0.0
ETLH	baz=342			eS	Sb	00 35 20.5	+0.4
CHGB	Renai baz=322	0.65	312	⇓P	Pg	00 35 12.2	-0.1
CHGB	baz=322			S	Sg	00 35 20.5	-0.5
WHF	Hehuan Shan baz=324	0.66	322	⇓P	Pg	00 35 12.1	-0.4
WHF	baz=324			S	Sg	00 35 21.0	-0.4
YUS	Yu-Shan baz=260	0.70	259	eP	Pg	00 35 13.3	0.0
YUS	baz=260			S	Sg	00 35 22.8	0.0
SSLB	Suanglung baz=293	0.71	284	⇓P	Pb	00 35 12.8	-0.5
SSLB	baz=293			S	Sg	00 35 21.8	-1.0
ELDTW	Lidau baz=244	0.77	236	eP	Pb	00 35 13.5	-0.7
ELDTW	baz=244			eS	Sb	00 35 24.2	-0.2
WHYT	Xinyi Township baz=269	0.79	276	P	Pb	00 35 14.7	+0.1
WHYT	baz=269			eS	Sb	00 35 24.7	-0.2
ENA	Nanau baz=356	0.80	2	eP	Pg	00 35 15.1	0.0
ENA	baz=356			eS	Sg	00 35 26.2	+0.5
TDCB	Techi baz=315	0.80	322	⇓P	Pb	00 35 14.9	0.0
TDCB	baz=315			S	Sb	00 35 25.1	-0.5
DPDB	Guoxing baz=301	0.82	300	⇓P	Pb	00 35 15.2	-0.1
DPDB	baz=301			S	Sb	00 35 26.2	+0.2
ALS	Alishan baz=263	0.83	262	eP	Pb	00 35 15.6	+0.1
ALS	baz=263			eS	Sb	00 35 26.4	-0.1
NNSB	Datong baz=340	0.85	340	⇓P	Pb	00 35 15.8	0.0
NNSB	baz=340			S	Sb	00 35 26.5	-0.5
NNSH	Datong baz=339	0.85	340	eP	Pb	00 35 15.9	+0.1
NNSH	baz=339			eS	Sb	00 35 26.9	-0.2
NNS	Nan Shan baz=340	0.87	340	P	Pb	00 35 16.1	0.0
NNS	baz=340			S	Sb	00 35 27.4	-0.1
WJS	Zhushan baz=286	0.92	283	eP	Pn	00 35 17.5	+0.1
WJS	baz=286			eS	Sn	00 35 30.8	+0.6
TWH	Lutao baz=194	0.93	193	eP	Pb	00 35 16.3	-0.8
CHN5	Tsauling baz=262	0.94	269	eP	Pg	00 35 17.7	0.0
CHN5	baz=262			eS	Sb	00 35 29.4	-0.1
WHP	Taichung City baz=314	0.95	313	eP	Pb	00 35 17.3	-0.1
WHP	baz=314			S	Sb	00 35 30.2	+0.3
WNT	Mingjian baz=287	0.97	285	eP	Pg	00 35 18.3	+0.1
STYT	Tauyuan baz=239	0.98	242	P	Pb	00 35 17.9	-0.1
STYT	baz=239			S	Sb	00 35 30.9	+0.2
TWGBT	Beinan baz=218	0.99	216	eP	Pb	00 35 16.5	-1.5
TWG	Pinlang baz=218	0.99	216	eP	Pb	00 35 16.5	-1.5
NDT	Datong Townshi baz=348	0.99	350	eP	Pb	00 35 18.1	0.0
NDT	baz=348			eS	Sg	00 35 31.5	-0.2
TWC	Suao baz=356	0.99	8	eP	Pg	00 35 18.9	+0.3
TWC	baz=356			eS	Sg	00 35 31.6	-0.1
EOS1	EOS1 baz=32	1.00	23	eP	Pg	00 35 20.1	+1.4
TTN	Taitung baz=202	1.01	211	eP	Pg	00 35 19.4	+0.5
TTN	baz=202			eS	Sg	00 35 32.1	0.0
ENTT	Nioudou baz=343	1.02	353	eP	Pb	00 35 18.7	+0.1
ENTT	baz=343			eS	Sg	00 35 32.5	-0.1
TPUB	Ta-pu baz=254	1.04	252	P	Pn	00 35 19.2	+0.1
TPUB	baz=254			S	Sb	00 35 32.5	+0.3
WGK	Gukeng baz=275	1.05	274	eP	Pn	00 35 19.4	+0.2
WGK	baz=275			eS	Sb	00 35 33.1	+0.6
CHN4	Tsaushan baz=257	1.06	255	eP	Pn	00 35 19.6	+0.2
CHN4	baz=257			eS	Sg	00 35 34.3	+0.6
WTP	Ta-pu baz=251	1.07	250	eP	Pn	00 35 19.6	0.0
WTP	baz=251			eS	Sb	00 35 33.5	+0.4
WDLH	Douliu baz=276	1.07	274	eP	Pn	00 35 19.6	+0.1
TCU	Taichung baz=301	1.08	299	eP	Pn	00 35 20.0	+0.3
YHNB	Yeheng baz=343	1.08	344	P	Pb	00 35 19.7	-0.1
YHNB	baz=343			S	Sb	00 35 33.6	0.0
TWE	Neicheng baz=349	1.09	358	eP	Pb	00 35 19.9	+0.1
TWE	baz=349			eS	Sb	00 35 33.7	-0.1
NSK	Sanguang baz=343	1.10	343	P	Pb	00 35 19.9	0.0
NSK	baz=343			S	Sb	00 35 33.6	-0.3
TWQ1	Liyutan baz=312	1.12	310	eP	Pg	00 35 21.2	+0.2
TWQ1	baz=312			eS	Sg	00 35 35.7	0.0
SLBB	Yuanshan baz=347	1.13	357	eP	Pn	00 35 20.4	0.0
SLBB	baz=347			eS	Sb	00 35 35.0	+0.2
CHN2	Minshiung baz=268	1.13	266	eP	Pn	00 35 20.4	0.0
WCHH	Zhanghua baz=296	1.15	294	eP	Pn	00 35 20.4	-0.2
SLGT	Liugui baz=240	1.16	237	eP	Pb	00 35 21.1	+0.2
NWLT	Wulai baz=339	1.16	351	eP	Pn	00 35 20.2	-0.6
NWLT	baz=339			S	Sb	00 35 35.8	-0.1
SGST	Jiashian baz=244	1.16	243	P	Pn	00 35 20.6	-0.2
SGST	baz=244			eS	Sn	00 35 36.5	+0.2
CHN1	Nanshi baz=249	1.17	248	eP	Pg	00 35 21.6	-0.3
CHN1	baz=249			eS	Sg	00 35 37.0	-0.2
NSY	Sanyi baz=314	1.17	313	eP	Pg	00 35 22.4	+0.3
NSY	baz=314			eS	Sg	00 35 37.5	+0.2
TWK	Hsinying baz=253	1.17	253	P	Pb	00 35 21.5	+0.3
TWK	baz=253			eS	Sn	00 35 37.0	+0.4
SNST	Tainan City baz=251	1.18	250	eP	Pb	00 35 21.6	+0.4
SNST	baz=251			eS	Sg	00 35 37.5	-0.1
CHY	Chiayi baz=266	1.18	264	eP	Pg	00 35 22.1	-0.1
NSTT	Nanjuang baz=328	1.19	327	eP	Pb	00 35 21.6	+0.1
NSTT	baz=328			eS	Sn	00 35 37.0	0.0
LIOB	Emei baz=329	1.20	328	eP	Pg	00 35 22.2	-0.3
LIOB	baz=329			eS	Sn	00 35 37.8	+0.6
WDJ	Dajia District baz=309	1.21	307	eP	Pb	00 35 22.0	+0.1
WDJ	baz=309			eS	Sg	00 35 39.0	+0.3
PTSB	Yuanli baz=314	1.23	312	eP	Pn	00 35 22.0	+0.2
PTSB	baz=314			eS	Sg	00 35 39.1	-0.1
NTC	Toucheng baz=2.0	1.23	5	eP	Pn	00 35 21.6	-0.2
ECL	Taimali baz=217	1.23	214	eP	Pn	00 35 21.6	-0.2
NMLH	Miaoli baz=319	1.24	318	eP	Pb	00 35 22.2	0.0
RLNB	Erlin baz=284	1.26	282	eP	Pn	00 35 22.2	0.0
RLNB	baz=284			eS	Sg	00 35 40.1	-0.1
WLTB	Daxi baz=348	1.29	341	eP	Pg	00 35 24.1	-0.3
WLGB	Puzi baz=266	1.30	264	eP	Pb	00 35 23.1	-0.1
SSD	Sandimen baz=228	1.32	229	eP	Pb	00 35 23.5	-0.1
SSD	baz=228			eS	Sb	00 35 40.3	+0.1
SBCB	Hsinchu baz=331	1.34	331	eP	Pb	00 35 24.3	+0.3
NHDH	Xindian Distri baz=350	1.34	353	eP	Pn	00 35 23.1	-0.2
TIPB	Shuangxi baz=349	1.35	5	eP	Pb	00 35 23.9	-0.2
TATO	Taipei baz=351	1.36	352	eP	Pn	00 35 24.0	+0.5
TATO	baz=351			eS	Sn	00 35 41.3	+0.1
WSF	Szhu baz=273	1.36	271	eP	Pb	00 35 24.1	-0.2
JYNG	Yonagunijimaku	1.40	54	P	Pn	00 35 23.9	-0.2
JYNG				eS	Sn	00 35 42.3	+0.1
TWB1	Santiao Chiao baz=8.0	1.40	11	P	Pn	00 35 24.5	+0.4
MASBT	Mashibuluo baz=216	1.41	225	eP	Pn	00 35 23.9	-0.4
TWM1	Shoushan baz=223	1.42	236	eP	Pg	00 35 26.9	+0.1
NWF	Wu-fen Shan baz=345	1.44	3	eP	Pb	00 35 25.6	-0.2
WFSB	Wu-fen Shan baz=345	1.44	3	eP	Pb	00 35 25.5	-0.3
EAST	Anshuo baz=216	1.47	213	eP	Pn	00 35 24.5	-0.5
YM01	YM01 baz=353	1.52	355	eP	Pn	00 35 26.5	+0.7
YM10	YM10 baz=353	1.53	355	eP	Pn	00 35 26.5	+0.5
YM11	YM11 baz=353	1.54	356	eP	Pn	00 35 26.1	0.0
YM08	YM08 baz=354	1.56	356	eP	Pn	00 35 25.6	-0.8
LAY	Lan-yu baz=188	1.58	185	eP	Pn	00 35 25.4	-1.2
SCZT	Fangliau baz=206	1.60	219	eP	Pb	00 35 28.4	0.0
SCZT	baz=206			eS	Sb	00 35 48.8	+0.5
WLCH	Liuqiu baz=227	1.76	224	eP	Pn	00 35 29.9	+0.9
TWKBT	Hengchun baz=197	1.87	206	eP	Pn	00 35 31.4	+0.9
TWKBT	baz=197			eS	Sn	00 35 54.0	+0.3
TWK1	Hengchun baz=197	1.87	207	eP	Pb	00 35 31.9	-1.1
TWK1	baz=197			eS	Sn	00 35 54.1	+0.5
WDGT	Dungji baz=261	1.91	260	eP	Pn	00 35 31.1	0.0
WDGT	baz=261			eS	Sn	00 35 54.2	-0.6
PHUB	P'eng-hu baz=268	1.96	267	P	Pn	00 35 32.3	+0.5
PHUB	baz=268			eS	Sn	00 35 55.9	-0.1
HATJ	Hateruma jima	1.97	77	P	Pn	00 35 31.8	-0.1
HATJ				eS	Sn	00 35 55.8	-0.4
IRIF	Iriomote-Funau	1.98	69	P	Pn	00 35 32.9	+0.8
IRIF				S	Sn	00 35 56.6	+0.1
VCHM	Qimei baz=259	2.13	259	eP	Pn	00 35 34.0	-0.1
VCHM	baz=259			eS	Sn	00 35 59.0	-1.2
JKRS	Kuro-shima	2.19	73	P	Pn	00 35 35.5	+0.5
JKRS				eS	Sn	00 36 02.1	+0.3
JIJ	Ishigaki jima	2.35	71	P	Pn	00 35 37.1	0.0
JIJ				S	Sn	00 36 04.7	-0.9
VWUC	VWUC baz=307	2.47	304	eP	Pn	00 35 39.0	+0.2
VWUC	baz=307			eS	Sn	00 36 07.3	-1.2
JISG	Ishigakijimahi	2.57	68	P	Pn	00 35 40.0	-0.1
JISG				eS	Sn	00 36 09.3	-1.6
PTTC	Pingtan baz=320	2.57	317	eP	Pn	00 35 40.1	0.0
PTTC	baz=320			eS	Sn	00 36 09.9	-1.1
PTMZ	Houxiangcun baz=305	2.75	301	eP	Pn	00 35 43.0	+0.4
JTJ	Tarama	2.92	69	P	Pn	00 35 45.5	+0.5
JTJ				eS	Sn	00 36 19.7	+0.1
MATB	Ma-tsu baz=331	2.98	328	eP	Pn	00 35 46.1	+0.2
KNM	Kinmen baz=288	3.10	285	eP	Pn	00 35 49.4	+2.0
KNMB	Chin-men Tao baz=277	3.15	286	eP	Pn	00 35 48.1	0.0
LYJJ	Jianjiangzhen baz=331	3.41	329	eP	Pn	00 35 51.0	-0.7
MHZQ	Yeshan baz=319	3.46	316	eP	Pn	00 35 53.2	+0.8
MHZQ	baz=319			eS	Sn	00 36 32.3	-0.8
XPSS	Dashiqiu baz=349	3.57	338	eP	Pn	00 35 54.0	+0.1
ZPLA	Ao Xicun baz=278	3.64	276	eP	Pn	00 35 55.4	+0.5
AXDP	Jialang baz=294	3.64	291	eP	Pn	00 35 55.0	+0.2
ZZJH	Jiuhuzhen baz=285	3.82	284	eP	Pn	00 35 57.7	+0.4

*NEIC **12** 01:10:57.2±0.9, 37°.10S±0°.07×74°.9W±0°.1, h24km±8km,*
Error ellipse: s-maj=13.0km s-min=8.5km az=120.0
*GUC **12** 01:10:58.5±0.8, 36°.99S×74°.97W, h18km±6km, ML4.1*
*IDC **12** 01:11:04.6±1.0, 37°.37S×73°.79W, h0km, mb4.0/7,*
mb1 4.0/10, mb1mx3.9/31, mbtmp3.9/10, ML3.8/3, MS3.7/4,
Ms1 3.6/4, ms1mx3.3/20, Error ellipse: s-maj=27.5km
s-min=15.8km az=82.0
*VAO **12** 01:11:06.2±1.0, 37°.42S×73°.90W, h10km, mb4.5*
ISC 12 01:10:59.1±0.7**, 37°.10S**±0°.04×**74°.95W**±0°.08**, h10**km**, n59,**
σ3ˢ.23/63**, mb4.0**/8**, 2C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	San Pedro de C	1.50	81	eP	Pn	01 11 24.0	-2.0
CCSP				iS	Sn	01 11 42.1	-3.4
BI04	Isla Mocha	1.56	148	iP	Pn	01 11 25.9	-0.9
BI04				iS	Sn	01 11 41.9	-5.2
BI04	comp=E,5μm,0.6s			IAML		01 11 45.7	
CCHI	Chillan	2.36	79	eP	Pn	01 11 36.3	-1.5
CCHI				iS	Sn	01 12 05.9	-0.9
CCHI	comp=E,2μm,0.5s			IAML		01 12 14.0	
LC01	Cunco	3.02	127	⇑iP	Pn	01 11 41.9	-5.1
LC01				iS	Sn	01 12 18.9	-4.3
LC01	comp=E,517nm,0.7s			IAML		01 12 25.6	
GO05	Huala	3.21	50	⇑iP	Pg	01 12 01.8	+1.1
GO05				iS	Sg	01 12 45.3	+3.0
GO05	comp=E,273nm,0.6s			IAML		01 12 54.9	
GO05	Huala	3.21	50		Pn	01 11 46.0	-3.6
GO05				Sn	Sn	01 12 23.8	-4.3
BO02	Sierra Bellavi	4.09	57	eP	Pn	01 12 03.2	+1.5
PLCA	Paso Flores comp=E,1.0nm,0.3s,baz=325,slow=13,SNR=11	4.99	138	Pn	Pn	01 12 11.4	-2.8
PLCA	comp=E,1.1nm,0.3s,baz=350,slow=7.3,SNR=3.1			Sn	Sn	01 12 59.8	-12
PLCA	comp=E,2.3nm,0.3s,baz=245,slow=23,SNR=3.5			Lg	Lg	01 13 19.1	
PLCA	Paso Flores	4.99	138	eP	Pn	01 12 10.4	-3.8
PLCA	Paso Flores	4.99	138		Pn	01 12 10.4	-3.8
PLCA					Sn	01 13 07.3	-4.6
ROC1	El Roble	5.23	39		Pn	01 12 14.2	-3.4
ROC1				Sn	Sn	01 13 13.3	-4.7
PEL	Peldehue	5.27	43		Pn	01 12 14.7	-3.3
PEL				Sn	Sn	01 13 13.7	-5.1
CFA	Coronel Fontan comp=E,1.9nm,0.3s,baz=209,slow=2.7,SNR=9.0	7.80	47	Pn	Pn	01 12 54.8	+2.1
CFA	comp=E,0.9nm,0.3s,baz=311,slow=16,SNR=2.2			Sn	Sn	01 14 17.5	-3.6
CFA	comp=E,0.0nm,0.3s,baz=132,slow=19,SNR=3.4			Lg	Lg	01 15 05.6	
CFA	comp=E,504nm,21.6s,baz=230,slow=42			LR	LR	01 16 15.1	
CPUP	Villa Florida comp=E,0.1nm,0.3s,baz=226,slow=10,SNR=2.9	18.41	59	P	P	01 15 14.8	+0.4
CPUP	comp=E,132nm,21.8s,baz=232,slow=37			LR	LR	01 22 03.8	
CPUP	Villa Florida	18.41	59	eP	P	01 15 15.5	+1.1
MNMC	Minye Minye	18.51	16	P	Pn	01 15 10.0	-5.9
MNMC	comp=Z,17nm,0.9s			IAmb	IAmb	01 15 28.8	
EFI	East Falkland	18.85	146	P	P	01 15 15.3	-3.8
EFI	comp=Z,47nm,1.1s			IAmb	IAmb	01 15 18.9	
CNLB	Canela	21.57	76	eP	P	01 15 48.6	-0.3
LPAZ	La Paz comp=Z,4.9nm,1.0s,baz=156,slow=7.2,SNR=8.1	21.59	18	P	P	01 15 58.3	+8.5
LPAZ	La Paz	21.59	18	eP	P	01 15 58.1	+8.3
LPAZ	La Paz	21.59	18	P	P	01 15 45.0	-4.8
ITAB	Concordia	21.63	70	eP	P	01 15 49.3	-0.1
PTGB	Pitanga	23.12	64	eP	P	01 16 06.3	+0.8
AQDB	Aquidauana	23.57	51	eP	P	01 16 11.8	+2.0
TRCB	Terra Rica	23.94	60	eP	P	01 16 14.5	+1.0
SIV	San Ignacio comp=Z,2.6nm,0.9s,baz=231,slow=9.8,SNR=9.7	24.36	34	P	P	01 16 21.2	+3.8
SIV	comp=Z,208nm,21.5s,baz=222,slow=41			LR	LR	01 27 34.4	
PCMB	Pacaembu	25.68	60	eP	P	01 16 30.7	+1.4
FRTB	Fartura	25.77	65	eP	P	01 16 31.9	+1.8
PP1B	Ponte de Pedra	26.26	48	eP	P	01 16 38.1	+3.4
C2SB	Chapadao do Su	26.63	53	eP	P	01 16 41.8	+3.8
SALV	Santo Antonio	27.15	44	eP	P	01 16 46.3	+3.7
SPB	Sao Paulo	27.18	68	eP	P	01 16 43.9	+1.0
ITRB	Iturama	27.59	58	eP	P	01 16 48.6	+1.9
RCLB	Rio Claro- Sao	27.81	66	eP	P	01 16 51.3	+2.6
VAO	Valinhos	27.88	68	eP	P	01 16 50.7	+1.4
BB19B	Bebedouro	27.95	62	eP	P	01 16 53.1	+3.3
ARAG	Araguaiana, MT	29.58	50	eP	P	01 17 06.8	+2.5
SAML	Samuel	29.98	24	eP	P	01 17 15.0	+7.1
IPMB	Ipameri, GO	30.24	58	eP	P	01 17 11.1	+0.9
CLDB	Colider	31.30	38	eP	P	01 17 23.1	+3.6
BDFB	Brasilia comp=Z,2.2nm,1.0s,baz=216,slow=10,SNR=2.5	32.04	55	P	P	01 17 25.9	-0.2
BDFB	comp=Z,212nm,19.2s,baz=263,slow=39			LR	LR	01 31 37.6	
SJMB	Sao Joao De Ma	34.77	67	eP	P	01 17 50.7	+0.9
JANB	Januaria	34.95	59	eP	P	01 17 53.4	+1.9
SMTB	Santa Maria do	37.47	48	eP	P	01 18 16.2	+3.2
NBPN	Ponto Novo - B	40.74	59	eP	P	01 18 41.6	+1.2
ROSC	El Rosal	41.73	1	P	P	01 18 44.6	-4.2
NBLA	Lagarto - SE	42.32	62	eP	P	01 18 55.8	+2.5
NBTA	Tacaratu-PE	43.44	60	eP	P	01 19 05.1	+2.7
NBMA	Muriti-CE	44.23	57	eP	P	01 19 11.6	+2.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNAA	Sanae	49.65	157	P	P	01 19 47.2	-3.3
SNAA				IAmb	IAmb	01 19 53.4	
	comp=Z,7.2nm,1.1s						
QSPA	South Pole Qui	53.14	180	P	P	01 20 21.6	+4.7
	comp=Z,4.2nm,1.0s,baz=123,slow=4.0,SNR=8.8						
TXAR	Lajitas Array	71.36	334	P	P	01 22 30.4	+11
	comp=Z,1.2nm,1.1s,baz=155,slow=4.9,SNR=3.9						
TXAR	Lajitas Array	71.36	334	P	P	01 22 16.1	-3.1
BOSA	Boshof	80.70	119	P	P	01 23 15.1	+2.2
	comp=Z,1.9nm,0.8s,baz=203,slow=6.0,SNR=4.5						
TORD	Torodi Ar. Bea	87.47	72	P	P	01 23 50.2	+3.0
	comp=Z,0.6nm,0.8s,baz=231,slow=4.2,SNR=5.6						
VYHS	Vyhne	118.92	49	ePKP	PKiKP	01 29 46.9	-0.5
ZALV	Zalesovo Beam	158.11	33	PKP	PKPdf	01 31 01.0	+5.4
	comp=Z,0.3nm,0.4s,baz=250,slow=2.9,SNR=3.4						
ZALV				PKPab	PKPab	01 31 35.6	+6.3
	comp=Z,0.8nm,0.5s,baz=305,slow=5.2,SNR=5.1						
MKAR	Makanchi Array	160.56	53	PKPab	PKPab	01 31 44.5	+4.2
	comp=Z,0.3nm,0.7s,baz=292,slow=6.4,SNR=4.3						
SONM	Songino Array	169.22	355	PKPab	PKPab	01 32 27.2	+8.8
	comp=Z,0.5nm,0.9s,baz=350,slow=1.6,SNR=2.9						

*THE **12** 01:18:04.4, 38.17N×20.39E, h11km, ML2.5/7, Error ellipse: s-maj=1.0km s-min=0.6km az=259.0*
*ATH **12** 01:18:04.2, 38.17N×20.42E, h14km±1km, ML2.6/5, Error ellipse: s-maj=2.1km s-min=1.1km az=243.0*
ISC 12 01:18:04.2±1.0, **38.17N**±0.03×**20.41E**±0.04, **h13**km±4km, **n39**, σ**0.38**/61, **Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	303	P	Pg	01 18 06.5	0.0
CHV1				S	Sg	01 18 08.0	-0.1
LXRA	Lixouri, Kepha	0.04	42	P	Pg	01 18 06.7	+0.1
LXRA				S	Sg	01 18 08.3	0.0
LXR1	Lixouri, Cepha	0.04	42	P	Pg	01 18 06.7	+0.1
LXR1				S	Sg	01 18 08.3	0.0
KEF3	Kipouria, Keph	0.06	305	P	Pg	01 18 06.8	+0.1
KEF3				S	Sg	01 18 08.4	-0.2
ARGA	Argostoli. Kep	0.06	85	P	Pg	01 18 06.8	0.0
ARGA				S	Sg	01 18 08.3	-0.3
KEF2	Argostoli. Kep	0.07	95	P	Pg	01 18 06.8	0.0
KEF2				S	Sg	01 18 08.4	-0.3
ARG2	Argostoli	0.07	84	P	Pg	01 18 06.9	+0.1
ARG2				S	Sg	01 18 08.3	-0.4
KEF4	Livadi, Kephal	0.09	10	P	Pg	01 18 07.3	+0.2
KEF4				S	Sg	01 18 09.3	+0.2
KEF1	Kardakata, Kep	0.12	26	P	Pg	01 18 07.5	+0.1
KEF1				S	Sg	01 18 09.9	+0.1
VLS	Valsamata	0.15	88	P	Pg	01 18 07.8	-0.1
VLS				S	Sg	01 18 10.2	-0.2
VLS	Valsamata	0.15	88	P	Pg	01 18 07.8	-0.1
VLS				S	Sg	01 18 10.3	-0.2
VLS				AML	AML	01 18 10.5	
	comp=N,40424μm,0.1s						
VLS				AML	AML	01 18 10.7	
	comp=E,31182μm,0.1s						
VSK1	VASILIKIADES	0.27	28	P	Pg	01 18 10.0	+0.1
VSK1				S	Sg	01 18 14.4	+0.7
	comp=E,2μm,0.3s						
KONA	Konidatara, Ke	0.28	27	P	Pg	01 18 10.3	+0.1
KONA				S	Sg	01 18 14.1	-0.1
KFL	Anninata	0.31	101	P	Pg	01 18 10.6	0.0
KFL	Anninata	0.31	101	P	Pg	01 18 10.6	0.0
KFL				S	Sg	01 18 15.5	+0.7
VLMS	Volimes, Zakyn	0.36	145	P	Pg	01 18 11.6	+0.2
VLMS				AML	AML	01 18 18.0	
	comp=N,3226μm,0.4s						
VLMS				AML	AML	01 18 22.3	
	comp=E,3024μm,0.2s						
EVGI	Lefkada island	0.49	24	P	Pg	01 18 13.9	0.0
EVGI				S	Sb	01 18 21.5	-0.3
EVGI	Lefkada island	0.49	24	P	Pg	01 18 13.9	0.0
MGNA	Meganis	0.57	32	P	Pg	01 18 15.2	-0.2
KRI1	kERI	0.60	147	P	Pg	01 18 15.8	-0.2
KRI1				S	Sb	01 18 25.6	+0.5
	comp=E,880nm,0.3s						
LKD2	Lefkada island	0.65	18	P	Pg	01 18 16.6	-0.3
LKD2				S	Sb	01 18 26.9	+0.5
	comp=E,198nm,0.5s						
LKD2	Lefkada island	0.65	18	P	Pg	01 18 16.6	-0.3
AST1	Astakos	0.65	55	P	Pg	01 18 16.8	-0.2
AST1				S	Sb	01 18 26.8	+0.3
	comp=E,438nm,0.2s						
TSLK	Tsoukalades, L	0.68	17	P	Pg	01 18 17.2	-0.3
TSLK	Tsoukalades, L	0.68	17	P	Pg	01 18 17.1	-0.4
PDO	Prodromos	0.75	55	P	Pg	01 18 18.6	-0.1
PDO				S	Sn	01 18 30.7	-1.0
	comp=E,540nm,0.5s						
PDO	Prodromos	0.75	55	P	Pg	01 18 18.6	-0.1
PDO				AML	AML	01 18 37.2	
	comp=E,607μm,0.6s						
PDO				AML	AML	01 18 38.5	
	comp=N,937μm,0.4s						
RLS	Riolos of Patr	0.84	97	P	Pg	01 18 20.1	-0.4
RLS				S	Sn	01 18 33.4	-0.7
	comp=N,128nm,0.4s						
RLS	Riolos of Patr	0.84	97	P	Pg	01 18 20.2	-0.4
PVO	Paravola	0.99	63	P	Pb	01 18 23.2	0.0
PVO				S	Sn	01 18 39.3	+1.7
	comp=N,290nm,0.4s						
PVO	Paravola	0.99	63	P	Pb	01 18 23.2	0.0
PVO				AML	AML	01 18 39.6	
	comp=N,701μm,0.3s						
PVO				AML	AML	01 18 43.6	
	comp=E,436μm,0.4s						
DRO	Drossia	1.05	102	P	Pb	01 18 24.0	-0.3
AMT	Artemida-Makis	1.21	121	P	Pb	01 18 27.4	+0.3
ANX	Ano Chora	1.26	70	P	Pn	01 18 27.5	-0.1
ANX				AML	AML	01 18 52.2	
	comp=E,277μm,0.5s						
ANX				AML	AML	01 18 55.4	
	comp=N,242μm,0.8s						
SERG	Sergoula	1.32	79	P	Pn	01 18 28.0	-0.5
TRIZ	Trizonia	1.33	81	P	Pn	01 18 28.3	-0.2
TRIZ				S	Sg	01 18 47.4	+0.4
EVR	Evrytania	1.33	56	P	Pn	01 18 28.5	-0.1
KALE	Kalithea	1.38	80	P	Pn	01 18 29.0	-0.3
KLV	Kalavryta, Ach	1.38	95	P	Pn	01 18 29.5	+0.2

IDC 12 01:25:46.2±2.0, **4.74S**×**154.48E**, **h0**km, **mb3.4**/3, **mb1 3.7**/4, **mb1mx3.4**/23, **mbtmp3.5**/4, **Error ellipse: s-maj=40.7km s-min=39.0km az=126.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.48	280	Pn	Pn	01 26 27.2	-0.7
	baz=96,slow=18,SNR=2.3						
KRVT				Sn	Sb	01 27 01.7	-1.1
	18nm,0.3s,baz=323,slow=7.6,SNR=6.2						
WRA	Warramunga Arr	24.76	231	P	P	01 31 09.9	+0.1
	0.3nm,0.3s,baz=54,slow=9.8,SNR=6.5						
ASAR	Alice Springs	27.34	225	P	P	01 31 33.0	-0.2
	0.3nm,0.4s,baz=56,slow=9.0,SNR=5.8						
MKAR	Makanchi Array	81.38	319	P	P	01 38 05.3	+0.3
	0.1nm,0.5s,baz=108,slow=4.7,SNR=3.2						
TORD	Torodi Ar. Bea	151.87	289	PKPbc	PKPbc	01 45 43.9	-0.3
	0.5nm,1.0s,baz=89,slow=1.5,SNR=4.4						

*NEIC **12** 01:48:50.5±1.7, 5.05S±0.07×126.69E±0.06, h10km±4km, mb4.4/15, Error ellipse: s-maj=9.9km s-min=9.1km az=175.0*
*IDC **12** 01:48:51.8±0.7, 4.80S×126.56E, h0km, mb4.2/15, mb1 4.3/16, mb1mx4.2/36, mbtmp4.2/16, ML4.4/1, MS3.4/12, Ms1 3.4/12, ms1mx3.2/36, Error ellipse: s-maj=24.5km s-min=15.7km az=55.0*
*DJA **12** 01:48:55.0±1.2, 5°S±5°×12°7E±°, h26km±14km, M4.6/15, mB5.1/8, mb5.1/11, MLv4.6/15, Mw(mB)4.5/8*
ISC 12 01:48:51.6±0.5, **4.96S**±0.05×**126.67E**±0.05, **h10**km, **n71**, σ**1.61**/69, **mb4.0**/14, **MS3.2**/9, **Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NLAI	Namlea	1.77	14	P	Pn	01 49 21.6	-0.6
AAI	Ambon	1.98	50	P	Pn	01 49 26.1	+0.9
AAI				S	Sn	01 49 51.0	+0.9
MSAI	Masohi	2.77	55	P	Pn	01 49 36.3	+0.3
SANI	Sanana	2.97	347	P	Pn	01 49 38.7	-0.2
SANI				S	Sn	01 50 11.1	-3.5
BNDI	Bandanaira	3.25	82	P	Pn	01 49 43.0	+0.3
KDI	Kendari	4.16	284	P	Pn	01 49 55.2	0.0
LBMI	Labuha	4.38	11	P	Pn	01 50 00.5	+2.3
LBMI				S	Sn	01 50 50.3	+1.0
SOEI	Soe	5.32	206	Pn	Pn	01 50 09.5	-1.8
LUWI	Luwuk	5.51	315	P	Pn	01 50 13.9	+0.2
	2.5nm9μm522nm,0.6s						
LUWI	Luwuk	5.51	315		Pn	01 50 13.8	+0.2
LUWI				Sn	Sn	01 51 18.7	+1.5
TNTI	Ternate	5.74	7	P	Pn	01 50 18.8	+1.9
	0.4nm95nm,0.9s						
TNTI	Ternate	5.74	7	Pn	Pn	01 50 16.3	-0.6
FAKI	Fak Fak	5.92	70	P	Pn	01 50 21.5	+2.0
	0.3nm947nm107nm,0.7s						
FAKI	Fak Fak	5.92	70		Pn	01 50 17.6	-1.8
SWI	Sorong	6.13	49	P	Pn	01 50 23.0	+0.7
	0.7nm2μm202nm,1.1s						
SIJI	Sorong	6.13	49	Pn	Pn	01 50 22.7	+0.4
	8.7nm,0.3s,baz=247,slow=3.6,SNR=8.6						
SIJI				Sn	Sn	01 51 30.7	-1.9
	10nm,0.3s,baz=99,slow=22,SNR=6.3						
BKSI	Bulukumba	6.53	267	P	Pn	01 50 29.4	+1.6
	0.4nm1μm105nm,0.7s						
KAPI	Kappang	6.89	269	Pn	Pn	01 50 35.5	+2.8
	8.9nm,0.3s,baz=113,slow=5.5,SNR=38						
KAPI				Sn	Sn	01 51 51.9	+0.6
	2.1nm,0.3s,baz=249,slow=23,SNR=2.7						
KAPI				LR	LR	01 53 20.9	
	comp=Z,537nm,20.6s,baz=114,slow=40						
SPSI	Sidrap Palu	6.95	278	P	Pn	01 50 34.6	+1.0
	0.7nm2μm204nm,0.6s						
TTSI	Tana Toraja	7.10	285	P	Pn	01 50 37.1	+1.6
	0.2nm2μm40nm,0.8s						
MRSI	Marisa	7.18	319	P	Pn	01 50 36.3	-0.4
	0.7nm79nm,0.5s						
MPSI	Mapaga	8.57	308	P	Pn	01 50 55.5	-0.3
KNRA	Kununurra	10.84	169		Pn	01 51 25.1	-1.8
FITZ	Fitzroy Crossi	13.09	184	Pn	Pn	01 51 57.3	-0.4
	0.7nm,0.3s,baz=26,slow=14,SNR=7.3						
FITZ				LR	LR	01 57 59.7	
	comp=Z,160nm,18.8s,baz=14,slow=41						
FITZ	Fitzroy Crossi	13.09	184		Pn	01 51 56.6	-1.1
SBUM	Sibu	16.21	297	P	P	01 52 41.1	-1.6
WB0	Warramunga Arr	16.52	154		Pn	01 52 41.6	-2.0
WB0				IAmb	IAmb	01 52 50.8	
	comp=Z,35nm,0.9s						
WRAB	Tennant Creek	16.65	154	Pn	Pn	01 52 43.0	-2.2
WRAB				IAmb	IAmb	01 52 52.2	
	comp=Z,20nm,0.8s						
WRA	Warramunga Arr	16.66	154	Pn	Pn	01 52 44.2	-1.1
	comp=Z,0.7nm,0.3s,baz=332,slow=12,SNR=23						
WRA	Warramunga Arr	16.66	154	P	P	01 52 44.8	-2.9
WB2	Warramunga Arr	16.66	154	Pn	Pn	01 52 43.6	-1.7
WB2				IAmb	IAmb	01 52 52.3	
	comp=Z,30nm,1.0s						
WR0	Warramunga Arr	16.76	153	P	Pn	01 52 45.4	-1.2
WR0				IAmb	IAmb	01 52 53.4	
	comp=Z,20nm,0.8s						
KSM	Kuching	17.55	291	P	Pn	01 52 55.9	-0.6
KSM				IAmb	IAmb	01 53 01.0	
	comp=Z,29nm,1.1s						
AS31	Alice Springs	19.86	160		Pn	01 53 22.5	-2.1
AS31				IAmb	IAmb	01 53 37.1	
	comp=Z,6.6nm,0.6s						
ASAR	Alice Springs	19.86	160	P	Pn	01 53 27.0	+2.4
	comp=Z,34nm,1.0s,baz=344,slow=12,SNR=107						
ASAR				LR	LR	02 01 41.9	
	comp=Z,109nm,18.4s,baz=335,slow=38						
ASAR	Alice Springs	19.86	160	P	P	01 53 20.6	-2.4
PMG	Port Moresby	20.80	103	P	Pn	01 53 37.5	+1.9
	comp=Z,5.1nm,0.2s,baz=168,slow=22,SNR=3.2						
PMG				LR	LR	02 01 59.8	
	comp=Z,101nm,21.1s,baz=302,slow=38						
CTA	Charters Tower	24.27	130	P	P	01 54 14.0	+4.8
	comp=Z,5.7nm,0.9s,baz=312,slow=16,SNR=3.2						
KRVT	Keravat (AS076	25.28	90	LR	LR	02 06 20.9	
	comp=Z,86nm,18.0s,baz=274,slow=41						
RPSI	Rantau Prapat	28.75	285	P	P	01 54 46.9	-2.7
RPSI				IAmb	IAmb	01 54 51.9	
	comp=Z,9.9nm,1.0s						
PSI	Prapat	28.77	285	P	P	01 54 50.7	+0.7
	comp=Z,7.9nm,0.9s,baz=152,slow=5.4,SNR=6.0						
PSI				LR	LR	02 06 36.2	
	comp=Z,202nm,18.7s,baz=102,slow=37						
NWAO	Narrogin (SRO)	29.18	196	LR	LR	02 07 01.5	
	comp=Z,52nm,20.9s,baz=55,slow=37						
STKA	Stephens Creek	30.21	154	P	P	01 55 04.2	+1.8
	comp=Z,2.1nm,0.8s,baz=343,slow=9.2,SNR=2.9						
STKA				LR	LR	02 09 27.2	
	comp=Z,68nm,18.2s,baz=357,slow=41						
STKA	Stephens Creek	30.21	154	P	P	01 55 00.4	-2.0
CMAR	Chiang Mai Arr	35.90	311	P	P	01 55 52.3	+0.1
	comp=Z,1.6nm,0.3s,baz=137,slow=7.2,SNR=6.8						
CMAR				LR	LR	02 13 05.7	
	comp=Z,40nm,18.7s,baz=140,slow=41						
WHN	Wuhan	37.22	342	P	P	01 56 10.7	+7.4
ENH	Enshi	38.71	336	P	P	01 56 15.0	-1.0
KSRS	Korea Array	42.22	1	P	P	01 56 45.7	+0.9
	comp=Z,2.6nm,0.8s,baz=180,slow=10,SNR=6.6						
KSRS				LR	LR	02 15 22.5	
	comp=Z,13nm,19.1s,baz=160,slow=38						
XAN	Xi'an	42.27	338	P	P	01 56 51.6	+6.2
XAN				pP	pwP	01 56 59.4	+7.1
MJAR	Matsushiro Arr	42.68	14	P	P	01 56 48.3	-0.3
	comp=Z,0.9nm,0.3s,baz=257,slow=22,SNR=2.9						
MJAR				LR	LR	02 11 36.4	
	comp=Z,36nm,21.6s,baz=180,slow=32						
MJAR	Matsushiro Arr	42.68	14	P	P	01 56 48.4	-0.2
USRK	Ussuriysk Ar.	49.17	5	P	P	01 57 40.1	+0.4
	comp=Z,1.8nm,0.6s,baz=192,slow=5.9,SNR=7.0						
USRK	Ussuriysk Ar.	49.17	5	P	P	01 57 38.9	-0.9
MDJ	Mudanjiang	49.42	3	P	P	01 57 48.2	+6.5
GTA	Gaotai	50.64	333	eP	P	01 57 57.9	+6.7
GTA				pP	pwP	01 58 02.2	+4.1
GTA				sP	sP	01 58 05.6	+12
SONM	Songino Array	55.52	344	P	P	01 58 27.5	+0.5
	comp=Z,1.2nm,0.9s,baz=156,slow=5.4,SNR=6.6						
SONM	Songino Array	55.52	344	P	P	01 58 27.1	+0.1
MKAR	Makanchi Array	64.74	328	P	P	01 59 30.4	+0.3
	comp=Z,1.0nm,0.5s,baz=143,slow=9.1,SNR=11						
ZALV	Zalesovo Beam	68.33	335	P	P	01 59 52.1	-0.8
	comp=Z,0.3nm,0.2s,baz=147,slow=10,SNR=3.2						
ZALV	Zalesovo Beam	68.33	335	P	P	01 59 51.5	-1.4
KURK	Kurchatov	69.08	330	P	P	01 59 57.1	-0.6
MAW	Mawson	75.64	201	LR	LR	02 30 41.0	
	comp=Z,29nm,19.7s,baz=60,slow=33						
GEYT	Alibeck	76.38	311	P	P	02 00 42.8	+1.3
	comp=Z,0.7nm,0.5s,baz=98,slow=7.4,SNR=3.1						
GEYT	Alibeck	76.38	311	P	P	02 00 40.6	-0.9
KBZ	Khabaz	88.90	314	P	P	02 01 49.0	+2.7
	comp=Z,0.4nm,0.7s,baz=119,slow=5.2,SNR=1.7						
ILAR	Eielson Array	92.93	25	P	P	02 02 06.4	+1.7
	comp=Z,0.4nm,0.9s,baz=256,slow=3.3,SNR=3.1						
TORD	Torodi Ar. Bea	125.15	283	PKP	PKiKP	02 07 54.8	+1.0
	comp=Z,0.6nm,1.0s,baz=48,slow=2.1,SNR=2.5						
TORD	Torodi Ar. Bea	125.15	283		PKiKP	02 07 52.9	-0.9
TXAR	Lajitas Array	126.67	57	PKP	PKiKP	02 07 59.0	+2.3
	comp=Z,0.1nm,0.7s,baz=276,slow=1.6,SNR=2.4						
TXAR	Lajitas Array	126.67	57		PKPdf	02 07 55.2	-1.0
CPUP	Villa Florida	148.65	173	PKPbc	PKiKP	02 08 40.1	-1.2
	comp=Z,0.7nm,0.3s,baz=189,slow=3.1,SNR=2.7						

*RSNC **12** 01:56:29.7±1.0, 8.03N×74.66W, h16km±3km, ML3.5, Mw3.6*
*IDC **12** 01:56:34.5±2.9, 7.92N×74.45W, h111km±32km, mb3.3/1, mb1 3.5/4, mb1mx3.1/38, mbtmp3.8/4, Error ellipse: s-maj=40.8km s-min=10.3km az=128.0*
ISC 12 01:56:29.0±1.0, **8.06N**±0.02×**74.72W**±0.03, **h31**km±9km, **n29**, σ**1.67**/50, **5C-2D**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZARC	Zaragoza, Cauc	0.58	194	⇓eP	Pb	01 56 40.3	-0.5
ZARC				⇑iP	Pb	01 56 40.3	-0.5
ZARC				eS	Sb	01 56 48.4	-0.5
ZARC				i		01 56 49.4	
	comp=N,5μm,0.3s						
ZARC				i		01 56 49.6	
	comp=Z,3μm,0.3s						
UREC	San Jos de Ur	0.86	249	⇑iP	Pb	01 56 45.2	-0.3
UREC				eS	Sn	01 56 58.1	+1.4
UREC				i		01 57 00.9	
	comp=Z,2μm,0.2s						
SMLC	San Martn de	0.97	41	eP	Pn	01 56 46.9	+0.4
SMLC				eS	Sn	01 57 00.2	+0.8
SMLC				i		01 57 01.0	
	comp=Z,2μm,0.1s						
BRRC	Barranca, Sant	1.38	134	⇑iP	Pn	01 56 51.7	-0.4
OCAC	Ocana	1.40	83	⇑eP	Pn	01 56 52.0	-0.5
OCAC				eS	Sb	01 57 11.1	-1.0
OCAC				i		01 57 17.7	
	comp=Z,491nm,0.3s						
PTBC	PUERTO BERRIO,	1.53	170	eP	Pn	01 56 54.2	-0.1
PTBC				eS	Sn	01 57 14.7	+1.5
PTBC				i		01 57 16.1	
	comp=Z,488nm,0.3s						
DBBC	Dabeiba	1.81	235	eP	Pn	01 56 59.0	+0.9
DBBC				eS	Sb	01 57 23.1	-0.7
ARGC	Ariguani, Magd	1.84	15	eP	Pb	01 57 03.0	+0.9
ARGC				eS	Sb	01 57 29.9	+5.1
ARGC				i		01 57 32.9	
	comp=Z,161nm,0.3s						
SJCC	San Jacinto, C	1.88	346	⇓eP	Pb	01 57 00.8	-1.9
SJCC				eS	Sb	01 57 26.1	+0.2
HELC	Santa Helena	2.02	204	eP	Pn	01 57 02.6	+1.2
HELC				eS	Sn	01 57 28.1	+2.3
HELC				i		01 57 31.1	
	comp=Z,292nm,0.3s						
BARC	Barichara	2.11	134	eP	Pn	01 57 02.7	+0.3
BARC				eS	Sn	01 57 28.9	+1.2
PAMC	Pamplona, Colo	2.12	110	eP	Pn	01 57 03.4	+0.5
CODC	Agustn Codazz	2.25	34	eP	Pn	01 57 05.1	+1.0
CODC				eS	Sb	01 57 35.1	-1.2
CODC				i		01 57 40.3	
	comp=Z,122nm,0.3s						
SPBC	San Pablo de B	2.48	165	eP	Pn	01 57 07.9	+0.6
SPBC				eS	Sn	01 57 39.8	+3.1
NORC	Norcasia	2.49	184	⇑eP	Pn	01 57 07.5	0.0
NORC				eS	Sb	01 57 41.2	-2.1
CBOC	Ciudad Bolivar	2.53	211	eP	Pb	01 57 12.5	-1.4
CBOC				eS	Sb	01 57 47.0	+2.2
CAPC	Capurgana	2.67	283	eP	Pn	01 57 10.7	+0.8
CAPC				eS	Sn	01 57 41.9	+0.6
RUSC	La Rusia	2.70	143	eP	Pn	01 57 11.6	+0.9
RUSC				eS	Sn	01 57 45.5	+3.0
RUSC				i		01 57 47.9	
	comp=Z,112nm,0.2s						
GUY2C	Guyana, Caldas	2.89	193	eP	Pn	01 57 14.1	+0.7
PTAC	Punta Ardita,	3.20	254	eP	Pn	01 57 18.3	+1.1
PTAC				eS	Sn	01 57 54.9	+0.6
PTAC				i		01 58 02.0	
	comp=Z,289nm,0.2s						
RREF	El Recreo	3.20	191	eP	Pn	01 57 19.3	+1.5
RREF				i		01 58 11.4	
	comp=Z,91nm,0.4s						
ROSC	El Rosal	3.22	173	P	Pn	01 57 20.0	+2.1
	comp=Z,2.5nm,0.3s,baz=242,slow=23,SNR=2.9						
ROSC				S	Sn	01 57 58.9	+3.4
	comp=Z,12nm,0.3s,baz=12,slow=22,SNR=13						
ROSC	El Rosal	3.22	173	eP	Pb	01 57 25.9	+0.1
ANIL	Santa Ana	3.61	191	eP	Pb	01 57 31.2	-1.2
SDV	Santo Domingo	4.12	78	P	Pn	01 57 31.6	+1.5
	comp=Z,6.3nm,0.3s,baz=325,slow=12,SNR=68						
SDV				S	Sn	01 58 19.7	+2.3
	comp=Z,42nm,0.3s,baz=2.1,slow=23,SNR=16						
PCRV	Puerto La Cruz	10.17	77	P	Pn	01 58 54.0	+0.9
	comp=Z,0.7nm,0.3s,baz=277,slow=4.5,SNR=3.5						
PCRV				S	Sn	02 00 43.1	-3.1
	comp=Z,0.4nm,0.3s,baz=130,slow=21,SNR=4.1						
YKA	Yellowknife Ar	61.56	340	P	P	02 06 41.0	-2.1
	comp=Z,0.3nm,0.5s,baz=135,slow=6.9,SNR=8.1						
ASAR	Alice Springs	148.50	237	PKPbc	PKPdf	02 16 09.0	-1.0
	comp=Z,0.2nm,0.6s,baz=128,slow=3.7,SNR=4.7						
WRA	Warramunga Arr	149.50	244	PKPbc	PKPdf	02 16 12.3	+0.6
	comp=Z,0.4nm,0.4s,baz=107,slow=3.0,SNR=7.4						

*IDC **12** 01:59:46.3±0.9, 58.38N×33.76W, h0km, mb3.6/9, mb1 3.9/11, mb1mx3.6/45, mbtmp3.7/11, ML2.8/2, Error ellipse: s-maj=32.5km s-min=17.8km az=1.0*
*NEIC **12** 01:59:48.3±0.9, 58.5N±0.1×33.8W±0.2, h14km±4km, mb4.7/6, Error ellipse: s-maj=18.0km s-min=15.7km az=223.0*
ISC 12 01:59:48.2±0.6, **58.5N**±0.1×**33.93W**±0.09, **h10**km, **n25**, σ**0.95**/30, **mb3.8**/13, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANGG	Ammassalik, Gr	7.37	348	Pn	Pn	02 01 34.1	-1.6
BORG	Borgarnes	8.68	38	Pn	Pn	02 01 53.8	+0.2
	0.3nm,0.3s,baz=228,slow=3.3,SNR=3.8						
SUMG	Summit	14.28	354	Pn	Pn	02 03 09.4	-1.1
SCHQ	Schefferville	18.34	273	P	P	02 04 02.9	+0.5
	0.2nm,0.3s,baz=65,slow=9.2,SNR=6.0						
SCHQ	Schefferville	18.34	273	P	P	02 04 02.7	+0.3
ROSA	Rosais	20.11	167	P	P	02 04 22.4	+0.5
E63A	Oxbow	23.94	255	P	P	02 05 02.6	+0.5
E63A				IAmb	IAmb	02 05 03.9	
	comp=Z,73nm,1.8s						
ARCES	ARCESS Array B	27.07	42	P	P	02 05 33.5	+3.1
	comp=Z,3.1nm,0.8s,baz=275,slow=11,SNR=4.2						
ULM	Lac du Bonnet	35.81	284	P	P	02 06 47.6	+0.3
	comp=Z,1.1nm,0.7s,baz=45,slow=10.0,SNR=3.2						
AKASG	Malin Array Be	36.14	74	P	P	02 06 48.9	-1.2
	comp=Z,0.6nm,0.5s,baz=307,slow=8.4,SNR=5.3						
YKA	Yellowknife Ar	37.52	311	P	P	02 07 02.1	+0.3
	comp=Z,1.1nm,0.8s,baz=60,slow=9.2,SNR=7.7						
YKA				PcP	PcP	02 09 18.8	-0.7
	comp=Z,0.3nm,0.7s,baz=46,slow=2.9,SNR=5.9						
BMAR	Burnt Mountain	44.49	329	P	P	02 08 00.6	+1.4
ILAR	Eielson Array	47.09	327	P	P	02 08 21.0	+1.4
	comp=Z,1.2nm,0.8s,baz=41,slow=6.5,SNR=16						
ILAR				PcP	PcP	02 09 51.0	-0.3
	comp=Z,0.7nm,0.8s,baz=16,slow=2.1,SNR=6.8						
ILAR	Eielson Array	47.09	327	P	P	02 08 19.9	+0.3
ILAR					PcP	02 09 51.1	-0.1
HDA	Harding Lake	47.38	327	P	P	02 08 20.9	-1.0
HDA				IAmb	IAmb	02 08 22.1	
	comp=Z,23nm,2.0s						
PDAR	Pinedale Array	47.80	286	P	P	02 08 25.2	-0.5
	comp=Z,0.4nm,0.6s,baz=55,slow=6.5,SNR=4.5						
PDAR	Pinedale Array	47.80	286	P	P	02 08 25.6	-0.2
TORD	Torodi Ar. Bea	52.53	134	P	P	02 09 00.7	-0.8
	comp=Z,0.6nm,0.8s,baz=347,slow=10,SNR=3.3						
TORD	Torodi Ar. Bea	52.53	134	P	P	02 09 00.8	-0.7
KVN	Kaiserville	54.87	289	P	P	02 09 18.6	-0.1
KVN				IAmb	IAmb	02 09 20.6	
	comp=Z,2.6nm,0.9s						
TXAR	Lajitas Array	55.00	270	P	P	02 09 19.9	+0.2
	comp=Z,0.3nm,0.8s,baz=52,slow=6.3,SNR=3.5						
TXAR				PcP	PcP	02 10 21.3	0.0
	comp=Z,0.1nm,0.5s,baz=52,slow=4.7,SNR=3.2						
TXAR	Lajitas Array	55.00	270	P	P	02 09 19.6	0.0
TXAR					PcP	02 10 20.7	-0.5
NVAR	Mina Array Bea	55.45	288	P	P	02 09 23.7	+0.8
	comp=Z,0.5nm,0.6s,baz=50,slow=6.2,SNR=6.2						
NVAR	Mina Array Bea	55.45	288	P	P	02 09 23.3	+0.4
MKAR	Makanchi Array	62.70	44	P	P	02 10 12.1	-0.7
	comp=Z,0.2nm,0.4s,baz=5.2,slow=5.0,SNR=6.2						

*NEIC **12** 02:24:49.4±1.0, 21.18S±0.09×174.1W±0.1, h14km±6km, mb4.5, Error ellipse: s-maj=21.7km s-min=9.5km az=118.0*
*IDC **12** 02:24:51.3±0.9, 21.27S×174.58W, h0km, mb4.1/10, mb1 4.3/10, mb1mx4.1/30, mbtmp4.0/10, MS3.4/10, Ms1 3.5/10, ms1mx3.3/26, Error ellipse: s-maj=37.8km s-min=20.7km az=147.0*
ISC 12 02:24:49.1±0.6, **21.32S**±0.08×**173.93W**±0.08, **h10**km, **n37**, σ**2.93**/26, **mb4.2**/12, **MS3.4**/9, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	Niue	4.37	60	Pn	Pn	02 25 56.5	+0.9
NIUE				Sn	Sn	02 26 43.3	-3.3
AFI	Afiamalu	7.64	16	Pn	Pn	02 26 40.4	-0.3
	2.5nm,0.3s,baz=248,slow=19,SNR=3.2						
AFI				Sn	Sn	02 28 00.6	-6.9
	2.2nm,0.3s,baz=198,slow=19,SNR=3.2						
AFI				LR	LR	02 29 47.2	
	comp=Z,226nm,18.6s,baz=192,slow=38						
AFI	Afiamalu	7.64	16		Sn	02 28 10.4	+2.9
AFI	Afiamalu	7.64	16	Pn	Pn	02 26 39.6	-1.1
MSVF	Nonsavu	8.36	294		Pn	02 26 57.6	+7.1
RAR	Rarotonga	13.20	92	Pn	Pn	02 27 56.3	-0.4
	4.9nm,0.3s,baz=247,slow=11,SNR=8.4						
RAR				Sn	Sn	02 30 01.9	-22

	baz=266,slow=23,SNR=3.0						
RAR				LR	LR	02 33 48.1	
	comp=Z,157nm,18.1s,baz=278,slow=39						
DZM	**Mont Dzumac**	**18.26**	**264**	*e*P	**P**	**02 29 05.3**	**+2.3**
	56nm,1.7s						
DZM	**Mont Dzumac**	**18.26**	**264**	LR	LR	02 34 03.1	
	comp=Z,72nm,18.9s,baz=219,slow=31						
URZ	**Urewera**	**18.57**	**203**	S	**Sn**	**02 32 27.2**	**-6.9**
	0.3nm,0.3s,baz=0.0,slow=20,SNR=2.4						
TBI	**Tubuai**	**22.72**	**100**	*e*LR	LR	02 35 03.9	
	comp=Z,201nm,31.8s						
PPT2	**Papeete2**	**23.25**	**85**	*e*LR	LR	02 35 35.0	
	comp=Z,80nm,22.0s						
PPT	**Papeete**	**23.26**	**85**	LR	LR	02 37 42.6	
	comp=Z,111nm,19.2s,baz=210,slow=32						
RPZ	**Rata Peaks**	**25.59**	**206**	LR	LR	02 40 31.4	
	comp=Z,141nm,18.6s,baz=36,slow=37						
RPZ	**Rata Peaks**	**25.59**	**206**	P	**P**	**02 30 20.3**	**+1.8**
RPZ				IAmb	IAmb	02 30 27.9	
	comp=Z,5.8nm,0.7s						
STKA	**Stephens Creek**	**40.89**	**246**	P	**P**	**02 32 30.4**	**-1.2**
	comp=Z,2.3nm,0.7s,baz=96,slow=12,SNR=6.5						
AS31	**Alice Springs**	**48.04**	**257**	P	**P**	**02 33 27.3**	**-1.7**
AS31				IAmb	IAmb	02 33 29.5	
	comp=Z,1.5nm,0.8s						
ASAR	**Alice Springs**	**48.04**	**257**	P	**P**	**02 33 28.3**	**-0.7**
	comp=Z,5.3nm,0.9s,baz=91,slow=8.2,SNR=47						
ASAR				LR	LR	02 51 54.0	
	comp=Z,22nm,19.3s,baz=91,slow=34						
ASAR	**Alice Springs**	**48.04**	**257**	P	**P**	**02 33 26.5**	**-2.5**
WRA	**Warramunga Arr**	**48.26**	**262**	P	**P**	**02 33 29.6**	**-1.1**
	comp=Z,4.1nm,0.9s,baz=99,slow=7.4,SNR=12						
WRA	**Warramunga Arr**	**48.26**	**262**	P	**P**	**02 33 29.0**	**-1.7**
VNDA	**Vanda**	**57.47**	**186**	LR	LR	03 00 00.2	
	comp=Z,20nm,18.0s,baz=190,slow=37						
QSPA	**South Pole Qui**	**68.76**	**180**	P	**P**	**02 35 57.5**	**+4.3**
	comp=Z,2.0nm,0.9s,baz=44,slow=0.7,SNR=4.0						
QSPA	**South Pole Qui**	**68.76**	**180**	P	**P**	**02 35 54.3**	**+1.1**
QSPA				IAmb	IAmb	02 36 05.7	
	comp=Z,4.0nm,1.1s						
MJAR	**Matsushiro Arr**	**73.17**	**321**	P	**P**	**02 36 21.6**	**+1.4**
	comp=Z,1.0nm,0.3s,baz=148,slow=7.0,SNR=4.5						
MJAR	**Matsushiro Arr**	**73.17**	**321**	P	**P**	**02 36 19.9**	**-0.3**
NVAR	**Mina Array Bea**	**79.06**	**41**	P	P	02 36 59.7	+5.7
	comp=Z,0.4nm,0.6s,baz=226,slow=8.4,SNR=5.6						
NVAR	**Mina Array Bea**	**79.06**	**41**	P	**P**	**02 36 53.2**	**-0.8**
TXAR	**Lajitas Array**	**84.33**	**56**	P	P	02 37 28.3	+6.5
	comp=Z,0.5nm,1.1s,baz=235,slow=7.5,SNR=2.8						
PLCA	**Paso Flores**	**85.93**	**132**	LR	LR	03 12 11.7	
	comp=Z,23nm,18.1s,baz=200,slow=33						
PDAR	**Pinedale Array**	**86.99**	**42**	LR	LR	03 14 26.5	
	comp=Z,24nm,18.9s,baz=312,slow=34						
ILAR	**Eielson Array**	**88.31**	**11**	P	**P**	**02 37 44.8**	**+4.3**
	comp=Z,0.4nm,0.8s,baz=220,slow=5.0,SNR=5.1						
CMAR	**Chiang Mai Arr**	**93.98**	**288**	P	**P**	**02 38 09.3**	**+1.4**
	comp=Z,1.1nm,0.4s,baz=127,slow=2.9,SNR=8.9						
YKA	**Yellowknife Ar**	**95.69**	**24**	P	P	02 38 19.5	+4.8
	comp=Z,0.2nm,0.8s,baz=248,slow=3.3,SNR=2.9						
LPAZ	**La Paz**	**98.22**	**111**	LR	LR	03 16 41.3	
	comp=Z,46nm,18.0s,baz=117,slow=32						
AKASG	**Malin Array Be**	**145.50**	**334**	PKPbc	**PKiKP**	**02 44 29.6**	**-1.7**
	comp=Z,0.7nm,0.4s,baz=36,slow=4.1,SNR=8.8						
BRTR	**Keskin Array B**	**150.17**	**314**	PKPbc	**PKPab**	**02 44 43.7**	**-3.0**
	comp=Z,0.9nm,0.8s,baz=150,slow=2.2,SNR=6.1						
GERES	**GERESS Array B**	**151.86**	**349**	PKPbc	**PKiKP**	**02 44 45.9**	**+1.2**
	comp=Z,0.9nm,0.8s,baz=40,slow=2.3,SNR=4.4						

IDC 12 02:28:27.8±2.7,63°.01S×145°.76E,h0km,mb3.4/2, mb1 3.8/3,mb1mx3.6/24,mbtmp3.6/3,ML3.9/1,Error ellipse: s-maj=531.9km s-min=41.2km az=76.0,South of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	**Vanda**	**15.45**	**167**	Pn	Pn	02 32 06.6	+0.1
	0.5nm,0.3s,baz=329,slow=14,SNR=11						
VNDA				Sn	Sn	02 34 46.0	-12
	0.1nm,0.3s,baz=176,slow=3.0,SNR=1.3						
ASAR	**Alice Springs**	**40.12**	**343**	P	P	02 36 05.0	0.0
	0.5nm,0.7s,baz=171,slow=6.6,SNR=2.7						
WRA	**Warramunga Arr**	**43.74**	**344**	P	P	02 36 34.3	-0.2
	0.3nm,0.6s,baz=172,slow=7.2,SNR=2.3						

MEX 12 02:32:38.9±0.5,14°.39N×92°.24W,h1km±5km,MD4.0
GCG 12 02:32:39.7±0.6,14°.94N×92°.00W,h75km±10km,MD3.8
ISC 12 02:32:39.8±2.4,14°.5N±0°.1×92°.23W±0°.08,h26km±18km,n8, σ1^{s}31/15,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.64**	**92**	*e*P	**Pn**	**02 32 53.0**	**-0.1**
ERG				*e*S	**Sn**	**02 33 06.1**	**+3.6**
STG3	**Santiaguito 3,**	**0.68**	**69**	*e*P	**Pb**	**02 32 53.4**	**+0.2**
FUG	**Fuego 3**	**1.34**	**91**	*e*P	**Pn**	**02 33 02.0**	**-1.0**
FUG				*e*S	**Sn**	**02 33 19.0**	**-1.1**
PCIG		**1.56**	**322**	*e*P	**Pn**	**02 33 04.9**	**-0.8**
PCIG				*e*S	**Sn**	**02 33 24.5**	**-0.6**
PCG	**Pacaya**	**1.57**	**93**	*e*P	**Pn**	**02 33 05.6**	**-0.7**
PCG				*e*S	**Sn**	**02 33 25.5**	**-0.4**
IXG	**Ixpaco**	**1.76**	**99**	*e*P	**Pn**	**02 33 07.9**	**-0.8**
IXG				*e*S	**Sn**	**02 33 30.4**	**0.0**
CCIG	**Comitan**	**1.81**	**3**	*e*P	**Pn**	**02 33 09.2**	**-0.2**
CCIG				*e*S	**Sn**	**02 33 31.4**	**-0.1**
CMIG	**Matias Romero**	**3.65**	**316**	*i*P	**Pn**	**02 33 34.9**	**+0.3**
CMIG				*i*S	**Sn**	**02 34 17.9**	**+1.1**

GCG 12 02:55:49.6±1.1,13°.87N×92°.36W,h59km±86km,MD3.7
MEX 12 02:55:49.1±0.5,13°.76N×92°.35W,h13km±159km,MD3.7
ISC 12 02:55:47.4±4.1,13°.9N±0°.1×92°.34W±0°.08,h12km±29km, n11,σ0^{s}73/17,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.94**	**52**	*e*P	**Pn**	**02 56 07.4**	**+1.0**
THIG		**1.04**	**4**	*i*P	**Pb**	**02 56 07.3**	**0.0**
THIG				*e*S	**Sb**	**02 56 21.1**	**+0.1**
STG3	**Santiaguito 3,**	**1.12**	**41**	*e*P	**Pn**	**02 56 09.8**	**+0.7**
FUG	**Fuego 3**	**1.56**	**68**	*e*P	**Pn**	**02 56 15.5**	**+0.3**
FUG				*e*S	**Sb**	**02 56 36.4**	**+0.2**
PCG	**Pacaya**	**1.76**	**72**	*e*P	**Pb**	**02 56 19.4**	**-0.3**
PCG				*e*S	**Sb**	**02 56 42.2**	**+0.3**
IXG	**Ixpaco**	**1.87**	**80**	*e*P	**Pb**	**02 56 19.7**	**+0.4**
PCIG		**2.02**	**335**	*e*P	**Pn**	**02 56 21.1**	**-0.2**
PCIG				*i*S	**Sn**	**02 56 45.3**	**-1.1**
NBG	**Las Nubes**	**2.06**	**69**	*e*P	**Pb**	**02 56 24.1**	**-0.8**
CCIG	**Comitan**	**2.41**	**5**	*e*P	**Pb**	**02 56 29.9**	**-0.9**
CCIG				*e*S	**Sb**	**02 57 00.9**	**+0.3**
TGIG		**2.99**	**345**	*e*P	**Pn**	**02 56 35.8**	**+1.0**
CMIG	**Matias Romero**	**4.04**	**323**	*e*P	**Pn**	**02 56 50.1**	**+1.0**
CMIG				*i*S	**Sn**	**02 57 36.2**	**-0.1**

IDC 12 03:05:31.8±2.3,48°.08N×154°.69E,h0km,mb3.3/3, mb1 3.6/4,mb1mx3.3/27,mbtmp3.3/4,ML2.5/1,MS2.2/1, Ms1 3.3/1,ms1mx2.6/13,Error ellipse: s-maj=53.0km s-min=36.2km az=156.0
MOS 12 03:05:37.3±0.9,48°.67N×156°.49E,h15km,mb4.1/1,Error ellipse: s-maj=54.7km s-min=7.3km az=71.1
SKHL 12 03:05:39.0±0.8,48°.66N×154°.16E,h59km±8km
KRSC 12 03:05:41.8±1.4,48°.79N×156°.42E,h7km±30km,ML4.4
ISC 12 03:05:39.3±1.6,48°.4N±0°.2×154°.8E±0°.2,h42km,n39, σ2^{s}01/38,mb3.4/3,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.41**	**21**	*e*P	**Pn**	**03 06 16.3**	**+0.2**
SKR				*e*S	**Sn**	**03 06 42.5**	**-1.8**
SKR	**Severo-Kuril's**	**2.41**	**21**	*e*P	**Pn**	**03 06 14.5**	**-1.6**
SKR				*e*S	**Sn**	**03 06 41.7**	**-2.6**
SKR				A	A	03 06 45.4	
	110nm,0.4s						
SKR				A	A	03 06 45.4	
	160nm,0.4s						
SKR	**Severo-Kuril's**	**2.41**	**21**	*e*PN	**Pn**	**03 06 16.2**	**+0.2**
SKR				*e*S	**Sn**	**03 06 41.4**	**-2.9**
SKR				smax	smax		
	comp=E,158nm,0.3s						
SKR				smax	smax		
	comp=N,110nm,0.4s						
PAU	**Pauzhetka**	**3.30**	**23**	*e*P	**Pn**	**03 06 28.7**	**+0.4**
PAU				*e*S	**Sn**	**03 07 02.9**	**-3.4**
PAU	**Pauzhetka**	**3.30**	**23**	*e*P	**Pn**	**03 06 28.1**	**-0.2**
PAU				*e*S	**Sn**	**03 07 04.3**	**-2.0**
PAU	**Pauzhetka**	**3.30**	**23**	PN	**Pn**	**03 06 28.7**	**+0.4**
ASAK	**Asacha**	**4.42**	**26**	*e*P	**Pn**	**03 06 44.6**	**+0.8**
ASAK	**Asacha**	**4.42**	**26**	PN	**Pn**	**03 06 44.6**	**+0.8**
GRL	**Gorelyy**	**4.62**	**26**	*e*P	**Pn**	**03 06 47.5**	**+0.9**
GRL	**Gorelyy**	**4.62**	**26**	PN	**Pn**	**03 06 47.5**	**+0.9**
RUS	**Russkaya**	**4.65**	**29**	*e*P	**Pn**	**03 06 46.1**	**-0.8**
RUS				*e*S	Sn	03 07 34.5	-5.1
RUS	**Russkaya**	**4.65**	**29**	*e*P	**Pn**	**03 06 46.1**	**-0.8**
RUS	**Russkaya**	**4.65**	**29**	PN	**Pn**	**03 06 46.1**	**-0.8**
KRMR	**Karymshinskiy**	**4.88**	**25**	*e*P	**Pn**	**03 06 50.4**	**+0.3**
KRMR	**Karymshinskiy**	**4.88**	**25**	PN	**Pn**	**03 06 50.4**	**+0.3**
PETK	**Petropavlovsk-**	**5.03**	**21**	Pn	**Pn**	**03 06 54.1**	**+2.1**
	comp=N,0.8nm,0.3s,baz=167,slow=13,SNR=9.2						
PETK				Sn	**Sn**	**03 07 57.0**	**+8.2**
	comp=N,0.2nm,0.3s,baz=204,slow=17,SNR=1.0						
PET	**Petropavlovsk**	**5.21**	**27**	*e*P	**Pn**	**03 06 54.2**	**-0.3**
DALK	**Dalny**	**5.24**	**27**	*e*P	**Pn**	**03 06 55.9**	**+0.9**
DALK	**Dalny**	**5.24**	**27**	PN	**Pn**	**03 06 55.9**	**+0.9**
KOK	**Koryaka**	**5.43**	**25**	*e*P	**Pn**	**03 06 59.3**	**+1.6**
KOK	**Koryaka**	**5.43**	**25**	*e*P	**Pn**	**03 06 59.3**	**+1.6**
KOK	**Koryaka**	**5.43**	**25**	PN	**Pn**	**03 06 59.3**	**+1.6**
AVH	**Avacha**	**5.44**	**26**	*e*P	**Pn**	**03 07 00.2**	**+2.4**
AVH	**Avacha**	**5.44**	**26**	*e*P	**Pn**	**03 07 00.2**	**+2.4**
AVH	**Avacha**	**5.44**	**26**	PN	**Pn**	**03 07 00.2**	**+2.4**
SDLR	**Sedlovina**	**5.50**	**27**	*e*P	**Pn**	**03 06 58.5**	**-0.1**
SDLR	**Sedlovina**	**5.50**	**27**	PN	**Pn**	**03 06 58.5**	**-0.1**
KRX	**Arik**	**5.50**	**25**	*e*P	**Pn**	**03 06 59.3**	**+0.7**
KRX	**Arik**	**5.50**	**25**	PN	**Pn**	**03 06 59.3**	**+0.7**
H11N2	**WAKE ISLAND Hy**	**30.27**	**157**	T	T	03 44 07.9	
	baz=342,slow=76,SNR=23						
H11N1	**WAKE ISLAND Hy**	**30.29**	**157**	T	T	03 43 45.3	
	baz=342,slow=76,SNR=32						
H11N3	**WAKE ISLAND Hy**	**30.29**	**157**	T	T	03 44 13.5	
	baz=342,slow=76,SNR=26						
H11S1	**WAKE ISLAND Hy**	**31.39**	**158**	T	T	03 45 04.1	
	baz=345,slow=76,SNR=287						
H11S3	**WAKE ISLAND Hy**	**31.40**	**158**	T	T	03 45 04.9	
	baz=345,slow=76,SNR=308						
H11S2	**WAKE ISLAND Hy**	**31.41**	**158**	T	T	03 45 00.0	
	baz=345,slow=76,SNR=221						
MKAR	**Makanchi Array**	**47.17**	**297**	P	**P**	**03 14 06.5**	**-0.9**
	comp=N,0.3nm,0.7s,baz=65,slow=7.7,SNR=3.1						
YKA	**Yellowknife Ar**	**48.89**	**38**	P	**P**	**03 14 20.5**	**+0.1**
	comp=N,0.1nm,0.5s,baz=296,slow=7.2,SNR=2.2						
ARCES	**ARCESS Array B**	**56.62**	**341**	LR	LR	03 43 57.7	
	comp=N,22nm,18.9s,baz=92,slow=40						
TXAR	**Lajitas Array**	**75.69**	**62**	P	**P**	**03 17 20.9**	**+0.6**
	comp=N,0.2nm,0.4s,baz=310,slow=6.3,SNR=4.2						

MEX 12 03:25:51.2±0.4,13°.67N×91°.98W,h20km,MD3.9
GCG 12 03:25:52.0±0.7,13°.96N×92°.38W,h80km±25km,MD3.8
ISC 12 03:25:50.4±3.5,13°.9N±0°.2×92°.3W±0°.1,h2km±14km,n7, σ0^{s}54/12,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.93**	**51**	*e*P	**Pn**	**03 26 10.8**	**+0.4**
ERG				*e*S	**Sn**	**03 26 24.2**	**-0.1**
THIG		**1.05**	**3**	*i*P	**Pg**	**03 26 10.8**	**+0.4**
THIG				*i*S	**Sb**	**03 26 25.8**	**+0.4**
STG3	**Santiaguito 3,**	**1.12**	**40**	*e*P	**Pb**	**03 26 12.7**	**+0.2**
FUG	**Fuego 3**	**1.55**	**67**	*e*P	**Pn**	**03 26 18.7**	**-0.4**
FUG				*e*S	**Sn**	**03 26 39.9**	**0.0**
PCG	**Pacaya**	**1.74**	**72**	*e*P	**Pn**	**03 26 22.3**	**+0.4**
PCG				*e*S	**Sg**	**03 26 45.6**	**-0.9**
IXG	**Ixpaco**	**1.85**	**80**	*e*P	**Pn**	**03 26 23.0**	**-0.3**
CCIG	**Comitan**	**2.42**	**4**	*i*P	**Pn**	**03 26 30.3**	**-0.8**
CCIG				*i*S	**Sn**	**03 27 01.3**	**-0.1**

NIED 12 03:33:00,25°.10N×125°.60E,h53km,Mw4.1 Best double couple: M_o1.67000×10^{15} NP1:ϕ_s244.00000°,δ56.00000°, λ117.00000°. NP2:ϕ_s22.00000°,δ42.00000°,λ56.00000°.
JMA 12 03:33:01.8±0.1,25°.01N×125°.60E,h53km±1km,M3.9
JMA Felt I J1.
IDC 12 03:33:02.7±3.8,25°.09N×125°.53E,h51km±36km,mb3.7/15, mb1 3.8/17,mb1mx3.7/35,mbtmp3.9/17,ML2.6/2,MS3.1/7, Ms1 3.1/7,ms1mx2.9/36,Error ellipse: s-maj=24.2km s-min=18.6km az=69.0
ISC 12 03:33:02.2±0.8,25°.07N±0°.09×125°.55E±0°.07,h47km±8km, n36,σ0^{s}90/41,mb4.0/17,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	**0.31**	**243**	P	**Pn**	**03 33 11.6**	**+0.5**
JIKM				S	**Sn**	**03 33 18.4**	**+0.9**
JOGS	**Gusukube**	**0.33**	**203**	P	**Pn**	**03 33 11.2**	**-0.2**
JOGS				S	**Sn**	**03 33 17.9**	**0.0**
JMJ2	**Miyako jima3**	**0.38**	**212**	P	**Pn**	**03 33 11.8**	**-0.1**
JMJ2				S	**Sn**	**03 33 19.3**	**+0.5**
JIRB	**Irabujima**	**0.42**	**235**	P	**Pn**	**03 33 12.3**	**0.0**
JIRB				S	**Sn**	**03 33 19.9**	**+0.4**
JTJ	**Tarama**	**0.88**	**241**	P	**Pn**	**03 33 18.5**	**+0.3**
JTJ				S	**Sn**	**03 33 30.6**	**+0.6**
JISG	**Ishigakijimahi**	**1.23**	**247**	P	**Pn**	**03 33 23.0**	**+0.1**
JISG				*e*S	**Sn**	**03 33 39.4**	**+1.1**
JIJ	**Ishigaki jima**	**1.46**	**242**	P	**Pn**	**03 33 26.3**	**+0.2**
JIJ				*e*S	**Sn**	**03 33 44.3**	**+0.2**
JKRS	**Kuro-shima**	**1.63**	**240**	P	**Pn**	**03 33 29.2**	**+0.8**
JKE	**Kume jima 2**	**1.68**	**41**	P	**Pn**	**03 33 28.9**	**-0.2**
IRIF	**Iriomote-Funau**	**1.81**	**247**	P	**Pn**	**03 33 31.4**	**+0.5**
IRIF				*e*S	**Sn**	**03 33 53.6**	**+0.9**
HATJ	**Hateruma jima**	**1.88**	**238**	P	**Pn**	**03 33 33.1**	**+1.2**
JAGN	**Aguni-jima**	**2.15**	**45**	P	**Pn**	**03 33 36.6**	**+1.1**
JAGN				*e*S	**Sn**	**03 34 01.9**	**+0.9**
JOW	**Kunigami**	**3.02**	**54**	P	**Pn**	**03 33 47.9**	**+0.4**
	1.2nm,0.3s,baz=152,slow=13,SNR=6.8						
JOW				S	**Sn**	**03 34 23.6**	**+1.3**
	4.2nm,0.3s,baz=151,slow=12,SNR=3.7						
JNU	**Nakatsue**	**9.28**	**29**	LR	LR	03 38 39.9	
	comp=Z,66nm,18.6s,baz=131,slow=36						
KSRS	**Korea Array**	**12.51**	**9**	LR	LR	03 41 01.0	
	comp=Z,37nm,20.9s,baz=195,slow=38						
JCJ	**Chichijima**	**15.08**	**79**	LR	LR	03 41 53.9	
	comp=Z,217nm,20.6s,baz=266,slow=35						
MJAR	**Matsushiro Arr**	**15.76**	**41**	P	**P**	**03 36 43.1**	**-1.1**
	0.1nm,0.3s,baz=223,slow=11,SNR=3.2						
ASAJ	**Asahikawa**	**23.54**	**32**	LR	LR	03 46 51.0	
	comp=Z,19nm,18.7s,baz=269,slow=35						
KLR	**Kul'dur**	**24.60**	**10**	LR	LR	03 49 08.7	
	comp=Z,31nm,18.5s,baz=254,slow=39						
SONM	**Songino Array**	**27.31**	**331**	P	**P**	**03 38 39.4**	**-3.1**
	0.7nm,0.7s,baz=145,slow=9.8,SNR=5.7						
MKAR	**Makanchi Array**	**40.54**	**314**	P	**P**	**03 40 36.6**	**-0.2**
	0.6nm,0.5s,baz=104,slow=10,SNR=11						
ZALV	**Zalesovo Beam**	**41.75**	**325**	P	**P**	**03 40 45.5**	**-1.0**
	1.9nm,0.6s,baz=115,slow=8.3,SNR=10						
ZALV				LR	LR	03 58 16.1	
	comp=Z,48nm,18.2s,baz=68,slow=36						
KURBB	**Kurchatov Arra**	**44.06**	**318**	P	**P**	**03 41 04.4**	**-0.9**
	0.7nm,0.3s,baz=110,slow=8.2,SNR=4.0						
WRA	**Warramunga Arr**	**45.55**	**168**	P	**P**	**03 41 16.3**	**-1.2**
	0.6nm,0.7s,baz=350,slow=8.6,SNR=5.2						
ASAR	**Alice Springs**	**49.12**	**170**	P	**P**	**03 41 46.5**	**+1.3**
	0.3nm,0.6s,baz=353,slow=6.7,SNR=4.1						
GEYT	**Alibeck**	**57.78**	**300**	P	**P**	**03 42 50.4**	**+1.6**
	2.9nm,0.7s,baz=354,slow=1.5,SNR=5.5						
ILAR	**Eielson Array**	**66.59**	**28**	P	**P**	**03 43 47.5**	**+0.2**
	0.4nm,0.6s,baz=263,slow=5.6,SNR=5.8						
KBZ	**Khabaz**	**68.02**	**309**	P	**P**	**03 43 57.0**	**+0.4**
	2.0nm,0.6s,baz=105,slow=2.6,SNR=8.3						
ARCES	**ARCESS Array B**	**70.20**	**338**	P	**P**	**03 44 09.3**	**-0.4**
	2.9nm,0.8s,baz=81,slow=7.5,SNR=7.1						
FINES	**FINESS Array B**	**72.67**	**330**	P	**P**	**03 44 24.5**	**-0.2**
	0.6nm,0.3s,baz=52,slow=5.1,SNR=11						
AKASG	**Malin Array Be**	**74.83**	**319**	P	**P**	**03 44 37.3**	**-0.3**
	0.7nm,0.3s,baz=60,slow=5.7,SNR=5.8						
BRTR	**Keskin Array B**	**75.83**	**307**	P	**P**	**03 44 43.6**	**-0.2**
	2.3nm,0.8s,baz=86,slow=5.5,SNR=16						
NOA	**NORSAR Array B**	**79.27**	**333**	P	**P**	**03 45 02.2**	**-0.2**
	0.9nm,0.7s,baz=35,slow=8.1,SNR=3.4						
NOA				LR	LR	04 24 49.2	
	comp=Z,24nm,19.3s,baz=260,slow=39						
YKA	**Yellowknife Ar**	**80.58**	**24**	P	**P**	**03 45 09.6**	**+0.2**
	0.6nm,0.8s,baz=304,slow=5.4,SNR=4.8						
SUMG	**Summit**	**82.00**	**355**	*i*P	**P**	**03 45 17.7**	**+0.4**
	13nm,0.8s						
GERES	**GERESS Array B**	**84.64**	**322**	P	**P**	**03 45 31.5**	**+0.6**
	1.1nm,0.8s,baz=55,slow=5.1,SNR=9.3						

KRSC 12 03:51:45.2±1.1,51°.04N×157°.93E,h82km±21km,ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**0.82**	**302**	*e*P	Pn	03 52 04.1	+1.7
PAU				*e*S	Sn	03 52 17.4	+2.3
SKR	**Severo-Kuril's**	**1.20**	**253**	*e*S	Sn	03 52 23.8	+0.8
ASAK	**Asacha**	**1.35**	**359**	*e*P	Pn	03 52 10.4	+1.6
ASAK				*e*S	Sn	03 52 28.2	+1.7
RUS	**Russkaya**	**1.45**	**14**	*e*P	Pn	03 52 11.0	+1.1
RUS				*e*S	Sn	03 52 29.1	+0.6
MTVR	**Mutnovka**	**1.46**	**6**	*e*P	Pn	03 52 11.8	+1.6
GRL	**Gorelyy**	**1.52**	**3**	*e*P	Pn	03 52 13.0	+2.0
KRMR	**Karymshinskiy**	**1.80**	**4**	*e*P	Pn	03 52 16.0	+1.5
KRMR				*e*S	Sn	03 52 37.8	+1.1
APC	**Apacha**	**1.95**	**346**	*e*P	Pn	03 52 18.3	+1.8
PET	**Petropavlovsk**	**2.04**	**12**	*e*P	Pn	03 52 19.2	+1.5
DALK	**Dalny**	**2.06**	**14**	*e*S	Sn	03 52 44.6	+1.7
UGLR	**Uglovaya**	**2.24**	**14**	*e*P	Pn	03 52 22.7	+2.2
AVH	**Avacha**	**2.29**	**12**	*e*P	Pn	03 52 23.7	+2.7
AVH				*e*S	Sn	03 52 51.4	+3.0
SMAR	**Somma**	**2.29**	**13**	*e*P	Pn	03 52 23.2	+1.9
KOK	**Koryaka**	**2.30**	**11**	*e*P	Pn	03 52 24.3	+3.1
SDLR	**Sedlovina**	**2.32**	**14**	*e*P	Pn	03 52 23.1	+1.6
KRER	**Koryakskii**	**2.33**	**12**	*e*P	Pn	03 52 23.5	+1.8
KRX	**Arik**	**2.37**	**11**	*e*P	Pn	03 52 24.8	+2.6
KZV	**Kizimen**	**4.33**	**18**	*e*P	Pn	03 52 51.9	+3.2
KBTR	**Krutoberegovo**	**5.94**	**27**	*e*P	Pn	03 53 11.9	+1.4

THE 12 03:55:49.6,38°.21N×20°.37E,h15km,ML2.6/5,Error ellipse: s-maj=0.6km s-min=0.3km az=262.0
ATH 12 03:55:49.5,38°.22N×20°.38E,h16km,ML2.8/4,Error ellipse: s-maj=1.8km s-min=0.9km az=262.0
ISC 12 03:55:49.5±1.0,38°.21N±0°.03×20°.38E±0°.04,h17km±4km, n49,σ0^{s}38/73,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.02**	**257**	P	**Pg**	**03 55 52.2**	**-0.2**
KEF3				S	**Sg**	**03 55 53.9**	**-0.5**
CHV1	**Chavriata, Kef**	**0.03**	**174**	P	**Pg**	**03 55 52.2**	**-0.2**
CHV1				S	**Sg**	**03 55 54.2**	**-0.2**
LXRA	**Lixouri, Kepha**	**0.05**	**100**	P	**Pg**	**03 55 52.5**	**0.0**
LXRA				S	**Sg**	**03 55 54.6**	**0.0**
LXR1	**Lixouri, Cepha**	**0.05**	**99**	P	**Pg**	**03 55 52.5**	**-0.1**
LXR1				S	**Sg**	**03 55 54.6**	**0.0**
KEF4	**Livadi, Kephal**	**0.06**	**36**	P	**Pg**	**03 55 52.5**	**-0.1**
KEF4				S	**Sg**	**03 55 54.7**	**-0.1**
ARGA	**Argostoli. Kep**	**0.09**	**112**	P	**Pg**	**03 55 52.7**	**-0.1**
ARGA				S	**Sg**	**03 55 54.7**	**-0.4**
ARG2	**Argostoli**	**0.09**	**109**	P	**Pg**	**03 55 52.8**	**-0.1**
ARG2				S	**Sg**	**03 55 54.9**	**-0.3**
KEF2	**Argostoli. Kep**	**0.10**	**117**	P	**Pg**	**03 55 52.9**	**-0.1**
KEF2				S	**Sg**	**03 55 55.1**	**-0.2**
KEF1	**Kardakata, Kep**	**0.10**	**46**	P	**Pg**	**03 55 52.8**	**-0.2**
KEF1				S	**Sg**	**03 55 55.0**	**-0.3**
VLS	**Valsamata**	**0.17**	**101**	P	**Pg**	**03 55 53.7**	**-0.2**
VLS				S	**Sg**	**03 55 56.7**	**-0.2**
VLS	**Valsamata**	**0.17**	**101**	P	**Pg**	**03 55 53.7**	**-0.2**
VLS				S	**Sg**	**03 55 56.7**	**-0.2**
VLS				AML	AML	03 55 56.9	
	comp=E,21150μm,0.2s						
VLS				AML	AML	03 55 56.9	
	comp=N,24173μm,0.3s						
VSK1	**VASILIKIADES**	**0.25**	**36**	P	**Pg**	**03 55 54.9**	**-0.2**
VSK1				S	**Sg**	**03 55 58.8**	**-0.1**
	comp=N,3μm,0.2s						
KONA	**Konidatara, Ke**	**0.26**	**35**	P	**Pg**	**03 55 55.1**	**-0.2**
KONA				S	**Sg**	**03 55 59.4**	**+0.1**
KFL	**Anninata**	**0.34**	**107**	P	**Pg**	**03 55 56.4**	**-0.2**
VLMS	**Volimes, Zakyn**	**0.40**	**146**	P	**Pg**	**03 55 57.6**	**-0.1**
VLMS				S	**Sb**	**03 56 04.1**	**+0.1**
VLMS				AML	AML	03 56 04.4	
	comp=E,5605μm,0.2s						
VLMS				AML	AML	03 56 06.1	
	comp=N,5118μm,0.2s						
EVGI	**Lefkada island**	**0.47**	**28**	P	**Pg**	**03 55 58.8**	**-0.1**
EVGI				S	**Sb**	**03 56 05.8**	**-0.1**
EVGI	**Lefkada island**	**0.47**	**28**	P	**Pb**	**03 55 59.3**	**0.0**
EVGI				S	**Sg**	**03 56 05.5**	**+0.2**
MGNA	**Meganis**	**0.55**	**36**	P	**Pg**	**03 55 59.9**	**-0.6**
MGNA				S	**Sg**	**03 56 07.3**	**-0.6**
LKD2	**Lefkada island**	**0.62**	**21**	P	**Pg**	**03 56 01.4**	**-0.3**
LKD2				S	**Sb**	**03 56 10.6**	**+0.2**
	comp=N,225nm,0.2s						
LKD2	**Lefkada island**	**0.62**	**21**	P	**Pg**	**03 56 01.4**	**-0.3**
AST1	**Astakos**	**0.65**	**59**	P	**Pg**	**03 56 01.8**	**-0.5**
AST1				S	**Sb**	**03 56 12.1**	**+0.9**
	comp=N,572nm,0.4s						
TSLK	**Tsoukalades, L**	**0.65**	**19**	P	**Pg**	**03 56 01.9**	**-0.5**
TSLK				S	**Sb**	**03 56 11.9**	**+0.6**
TSLK	**Tsoukalades, L**	**0.65**	**19**	P	**Pg**	**03 56 01.7**	**-0.6**
PDO	**Prodromos**	**0.74**	**58**	P	**Pg**	**03 56 03.8**	**-0.2**
PDO				S	**Sn**	**03 56 15.3**	**-0.8**
	comp=N,490nm,0.3s						
RLS	**Riolos of Patr**	**0.87**	**100**	P	**Pb**	**03 56 05.6**	**-0.5**
RLS	**Riolos of Patr**	**0.87**	**100**	P	**Pb**	**03 56 05.7**	**-0.5**
PVO	**Paravola**	**0.99**	**65**	P	**Pb**	**03 56 08.4**	**+0.2**
PVO	**Paravola**	**0.99**	**65**	P	**Pb**	**03 56 08.4**	**+0.2**
PVO				AML	AML	03 56 28.4	
	comp=N,555μm,0.4s						
PVO				AML	AML	03 56 30.6	
	comp=E,777μm,0.6s						
DRO	**Drossia**	**1.08**	**103**	P	**Pb**	**03 56 10.1**	**+0.3**
DRO	**Drossia**	**1.08**	**103**	P	**Pb**	**03 56 10.0**	**+0.3**
DRO				AML	AML	03 56 33.4	
	comp=E,626μm,0.6s						
DRO				AML	AML	03 56 34.0	
	comp=N,606μm,0.7s						
LAKA	**Lakka**	**1.26**	**88**	P	**Pb**	**03 56 12.9**	**+0.1**
ANX	**Ano Chora**	**1.27**	**72**	P	**Pb**	**03 56 13.3**	**+0.2**
ANX	**Ano Chora**	**1.27**	**72**	P	**Pb**	**03 56 13.4**	**+0.4**
IGT	**Igoumenitsa**	**1.32**	**358**	P	**Pb**	**03 56 13.8**	**-0.1**
IGT				S	**Sg**	**03 56 32.5**	**+0.2**
IGT	**Igoumenitsa**	**1.32**	**358**	P	**Pb**	**03 56 14.1**	**+0.2**
SERG	**Sergoula**	**1.34**	**81**	P	**Pn**	**03 56 13.9**	**+0.5**
SERG	**Sergoula**	**1.34**	**81**	P	**Pn**	**03 56 13.8**	**+0.3**
TRIZ	**Trizonia**	**1.34**	**83**	P	**Pn**	**03 56 13.6**	**+0.1**
TRIZ				S	**Sg**	**03 56 32.4**	**-0.5**
TRIZ	**Trizonia**	**1.34**	**83**	P	**Pn**	**03 56 13.6**	**+0.1**
ALIK	**Aliki, Aigiali**	**1.37**	**87**	P	**Pn**	**03 56 13.8**	**0.0**
KALE	**Kalithea**	**1.40**	**82**	P	**Pn**	**03 56 14.4**	**+0.1**
KLV	**Kalavryta, Ach**	**1.41**	**96**	P	**Pn**	**03 56 15.1**	**+0.7**
KLV	**Kalavryta, Ach**	**1.41**	**96**	P	**Pn**	**03 56 14.9**	**+0.5**
KEK	**Kerkira**	**1.57**	**343**	P	**Pn**	**03 56 16.8**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.59**	**59**	P	**Pb**	**03 56 19.3**	**+0.8**
MAKR				S	**Sg**	**03 56 41.2**	**+0.4**
	comp=N,120nm,0.6s						
MAKR	**Makrakomi, Fth**	**1.59**	**59**	P	**Pb**	**03 56 19.3**	**+0.8**
ITM	**Ithomi**	**1.60**	**129**	P	**Pn**	**03 56 18.9**	**+0.2**
AGG	**Agios Georgios**	**1.73**	**61**	P	**Pb**	**03 56 21.9**	**-0.8**
THL	**Klokotos Trika**	**1.86**	**43**	P	**Pb**	**03 56 23.5**	**+0.5**

ATH 12 03:59:43.2,38°.14N×20°.43E,h9km±1km,ML2.8/9,Error ellipse: s-maj=1.6km s-min=0.9km az=253.0
THE 12 03:59:43.5,38°.17N×20°.40E,h8km,ML2.7/13,Error ellipse: s-maj=0.9km s-min=0.4km az=260.0
ISC 12 03:59:43.4±0.9,38°.16N±0°.02×20°.43E±0°.03,h8km±4km, n54,σ0^{s}54/84,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LXR1	**Lixouri, Cepha**	**0.04**	**10**	P	**Pg**	**03 59 45.1**	**+0.1**
LXR1				S	**Sg**	**03 59 46.5**	**+0.3**
LXRA	**Lixouri, Kepha**	**0.04**	**9**	P	**Pg**	**03 59 45.1**	**+0.1**
LXRA				S	**Sg**	**03 59 46.5**	**+0.3**
ARGA	**Argostoli. Kep**	**0.04**	**64**	P	**Pg**	**03 59 45.1**	**0.0**
ARGA				S	**Sg**	**03 59 46.2**	**+0.1**
CHV1	**Chavriata, Kef**	**0.04**	**305**	P	**Pg**	**03 59 45.1**	**+0.1**
CHV1				S	**Sg**	**03 59 46.4**	**+0.2**
KEF2	**Argostoli. Kep**	**0.05**	**81**	P	**Pg**	**03 59 45.0**	**0.0**
KEF2				S	**Sg**	**03 59 46.2**	**0.0**
ARG2	**Argostoli**	**0.05**	**66**	P	**Pg**	**03 59 45.1**	**0.0**
ARG2				S	**Sg**	**03 59 46.5**	**+0.2**
KEF3	**Kipouria, Keph**	**0.08**	**306**	P	**Pg**	**03 59 45.6**	**+0.2**
KEF3				S	**Sg**	**03 59 47.3**	**+0.4**
KEF4	**Livadi, Kephal**	**0.10**	**358**	P	**Pg**	**03 59 46.1**	**+0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF4				S	Sg	03 59 48.0	+0.6
KEF1	Kardakata, Kep	0.12	16	P	Pg	03 59 46.4	+0.2
KEF1				S	Sg	03 59 48.5	+0.5
VLS	Valsamata	0.13	81	P	Pg	03 59 46.2	0.0
VLS				S	Sg	03 59 48.5	+0.3
VLS	Valsamata	0.13	81	P	Pg	03 59 46.3	0.0
VLS				S	Sg	03 59 48.6	+0.3
VLS				AML	AML	03 59 48.6	
	comp=N,15533μm,0.3s						
VLS				AML	AML	03 59 49.3	
	comp=E,15483μm,0.1s						
VSK1	VASILIKIADES	0.27	23	P	Pg	03 59 49.0	+0.2
VSK1				S	Sg	03 59 53.4	+0.9
	comp=E,4μm,0.4s						
KFL	Anninata	0.29	100	P	Pg	03 59 49.2	+0.1
KONA	Konidatara, Ke	0.29	23	P	Pg	03 59 49.2	+0.1
KONA				S	Sg	03 59 54.0	+1.0
VLMS	Volimes, Zakyn	0.34	147	P	Pg	03 59 50.0	0.0
VLMS				S	Sg	03 59 55.2	+0.8
VLMS				AML	AML	04 00 03.1	
	comp=E,4983μm,0.3s						
VLMS				AML	AML	04 00 04.6	
	comp=N,6459μm,0.3s						
EVGI	Lefkada island	0.50	21	P	Pg	03 59 53.0	0.0
EVGI				S	Sg	04 00 00.5	+1.0
EVGI	Lefkada island	0.50	21	P	Pg	03 59 53.1	+0.1
EVGI				S	Sb	04 00 01.1	-0.7
ZAK2	Zakynthos	0.53	135	P	Pg	03 59 53.9	+0.4
ZAK2				S	Sb	04 00 02.6	0.0
MGNA	Meganis	0.57	30	P	Pg	03 59 54.2	-0.2
MGNA				S	Sb	04 00 03.4	-0.7
KRI1	kERI	0.58	148	P	Pg	03 59 54.0	-0.6
KRI1				S	Sb	04 00 04.2	-0.1
	comp=N,2μm,0.2s						
AST1	Astakos	0.65	53	P	Pg	03 59 55.7	-0.2
AST1				S	Sb	04 00 06.4	+0.3
	comp=N,2μm,0.3s						
LKD2	Lefkada island	0.66	16	P	Pg	03 59 55.7	-0.4
LKD2				S	Sg	04 00 05.3	+0.7
	comp=N,390nm,0.6s						
LKD2	Lefkada island	0.66	16	P	Pg	03 59 55.3	-0.8
TSLK	Tsoukalades, L	0.69	15	P	Pg	03 59 56.5	-0.2
TSLK				S	Sg	04 00 05.8	+0.1
	comp=N,428nm,0.6s						
TSLK	Tsoukalades, L	0.69	15	P	Pg	03 59 56.5	-0.2
PDO	Prodromos	0.74	53	P	Pg	03 59 57.3	-0.3
PDO				S	Sg	04 00 08.0	+0.7
	comp=N,1μm,0.6s						
PDO	Prodromos	0.74	53	P	Pg	03 59 57.0	-0.6
PDO				AML	AML	04 00 15.6	
	comp=E,1612μm,0.4s						
PDO				AML	AML	04 00 15.6	
	comp=N,2295μm,0.5s						
RLS	Riolos of Patr	0.82	97	P	Pg	03 59 59.0	-0.2
RLS				S	Sb	04 00 11.8	+0.6
	comp=N,262nm,0.5s						
RLS	Riolos of Patr	0.82	97	P	Pg	03 59 59.1	-0.2
RLS				AML	AML	04 00 23.7	
	comp=E,554μm,0.5s						
RLS				AML	AML	04 00 27.1	
	comp=N,471μm,0.7s						
PVO	Paravola	0.98	62	P	Pg	04 00 02.1	-0.1
PVO				S	Sn	04 00 17.4	-0.1
	comp=N,890nm,0.4s						
PVO	Paravola	0.98	62	P	Pg	04 00 02.2	+0.1
PVO				AML	AML	04 00 20.7	
	comp=E,2045μm,0.3s						
PVO				AML	AML	04 00 25.0	
	comp=N,1386μm,0.5s						
DRO	Drossia	1.03	101	P	Pg	04 00 02.9	-0.3
DRO				S	Sn	04 00 19.0	+0.1
	comp=N,662nm,0.5s						
DRO	Drossia	1.03	101	P	Pg	04 00 02.8	-0.4
DRO				AML	AML	04 00 29.2	
	comp=N,1200μm,0.5s						
DRO				AML	AML	04 00 29.7	
	comp=E,1399μm,0.4s						
AMT	Artemida-Makis	1.19	121	P	Pn	04 00 06.5	+0.1
LAKA	Lakka	1.22	86	P	Pn	04 00 06.2	-0.7
LAKA				S	Sn	04 00 24.7	+1.1
	comp=E,228nm,0.6s						
ANX	Ano Chora	1.25	69	P	Pn	04 00 06.6	-0.7
ANX				S	Sn	04 00 25.6	+1.2
	comp=E,532nm,0.5s						
ANX	Ano Chora	1.25	69	P	Pn	04 00 06.7	-0.6
ANX				AML	AML	04 00 32.0	
	comp=N,1153μm,0.6s						
ANX				AML	AML	04 00 32.2	
	comp=E,1033μm,0.5s						
SERG	Sergoula	1.31	78	P	Pn	04 00 07.3	-0.7
SERG	Sergoula	1.31	78	P	Pn	04 00 07.1	-0.9
SERG				AML	AML	04 00 37.6	
	comp=N,617μm,0.7s						
SERG				AML	AML	04 00 38.0	
	comp=E,370μm,0.7s						
TRIZ	Trizonia	1.31	80	P	Pn	04 00 07.0	-1.0
TRIZ	Trizonia	1.31	80	P	Pn	04 00 07.1	-1.0
EVR	Evrytania	1.32	55	P	Pg	04 00 08.8	0.0
ALIK	Aliki, Aigiali	1.33	85	P	Pn	04 00 08.1	-0.2
KLV	Kalavryta, Ach	1.36	94	P	Pn	04 00 08.9	+0.1
KLV				S	Sg	04 00 28.6	+1.4
	comp=E,122nm,0.8s						
KLV	Kalavryta, Ach	1.36	94	P	Pn	04 00 08.3	-0.5
KALE	Kalithea	1.37	80	P	Pn	04 00 07.7	-1.2
KALE				S	Sg	04 00 27.7	+0.3
	comp=E,185nm,0.5s						
KALE	Kalithea	1.37	80	P	Pn	04 00 07.9	-1.0
IGT	Igoumenitsa	1.38	357	P	Pn	04 00 08.7	-0.2
ITM	Ithomi	1.54	129	P	Pn	04 00 10.8	-0.3
AGG	Agios Georgios	1.72	59	P	Pg	04 00 16.1	-0.3
AGG				AML	AML	04 00 50.1	
	comp=N,284μm,0.8s						
AGG				AML	AML	04 00 53.7	
	comp=E,261μm,0.9s						
THL	Klokotos Trika	1.87	41	P	Pb	04 00 17.8	0.0
PROD	Prodromos	1.95	86	P	Pb	04 00 18.9	-0.3
LTK	Loutraki	2.01	93	P	Pb	04 00 18.7	+1.0
VIL2	Platees	2.24	88	P	Pb	04 00 23.1	-1.0

*NIED **12** 04:10:00, 28°.00N×130°.20E, h20km, Mw4.2 Best double couple: $M_0$2.03000×10^{15} NP1:ϕ_s4.00000°, δ50.00000°, λ-120.00000°. NP2:ϕ_s225.00000°, δ48.00000°, λ-60.00000°.*

*JMA **12** 04:10:52.9±0.2, 27°.99N×130°.16E, h44km±3km, M3.9*

JMA Felt I J1.

*IDC **12** 04:10:55.7±5.6, 28°.05N×129°.97E, h32km±42km, mb3.7/15, mb1 4.0/16, mb1mx3.9/29, mbtmp3.9/16, ML3.8/1, MS3.3/8, Ms1 3.4/8, ms1mx3.1/34, Error ellipse: s-maj=21.0km s-min=14.9km az=100.0*

*NEIC **12** 04:10:55.7±1.3, 28°.00N±0°.08×130°.0E±0°.1, h41km±3km, mb4.7/11, Error ellipse: s-maj=15.5km s-min=8.8km az=123.0*

ISC 12 04:10:53.8±1.3, **27°.97N**±0°.03×**130°.10E**±0°.04, **h26**km±9km, **n67**, σ0^s**81**/75, **mb3.9**/20, **MS3.2**/6, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JZK	Kikaishima	0.36	342	P	Pb	04 11 02.1	+0.2
JZK				eS	Sb	04 11 09.4	-0.4
JAM	Amami Oshima	0.62	315	P	Pb	04 11 05.7	-0.4
JAM				eS	Sb	04 11 14.6	+0.1
JAMN	Amaminishikomi	0.86	289	P	Pb	04 11 09.5	-0.8
JAMN				eS	Sb	04 11 21.3	0.0
JTK	Tokunoshima	1.03	260	P	Pb	04 11 12.6	-0.1
JTK				eS	Sn	04 11 26.4	+0.1
JTAJ	Takarajima	1.42	326	P	Pn	04 11 17.3	-0.7
JTAJ				eS	Sn	04 11 35.3	-0.6
JOKE	Okinoerabujima	1.48	246	P	Pn	04 11 18.9	0.0
JOKE				eS	Sn	04 11 37.9	+0.5
JYRO	Yoronjima	1.74	238	P	Pn	04 11 22.3	-0.1
JYRO				eS	Sn	04 11 43.3	-0.4
JOW	Kunigami	1.98	236	P	Pn	04 11 25.6	-0.1
JOW				eS	Sn	04 11 49.7	+0.1
JOW	Kunigami	1.98	236	Pn	Pn	04 11 25.8	+0.1
	3.6nm,0.3s,baz=94,slow=19,SNR=4.9						
JOW				Sn	Sn	04 11 49.4	-0.2
	12nm,0.3s,baz=103,slow=16,SNR=7.3						
JOW	Kunigami	1.98	236	Pn	Pn	04 11 25.8	+0.1
JOW					Sn	04 11 50.0	+0.4
JIH	Iheya	2.11	244	P	Pn	04 11 27.3	-0.1
JIH				eS	Sn	04 11 52.3	-0.5
JKDJ	Kitadaitoujima	2.27	152	eS	Sn	04 11 56.3	-0.6
JYAK	Yakushimahirau	2.29	9	P	Pn	04 11 30.0	+0.1
JYAK				eS	Sn	04 11 57.5	+0.2
JNTH	Nagotoyohara	2.35	233	P	Pn	04 11 30.8	+0.1
JNTH				eS	Sn	04 11 58.5	-0.2
JMZ	Minamidaito 2	2.36	155	P	Pn	04 11 30.2	-0.7
JMZ				eS	Sn	04 11 57.6	-1.4
JKC	Kuchinoerabu	2.49	2	P	Pn	04 11 33.2	+0.6
JKC				eS	Sn	04 12 02.2	0.0
JMTN	Minamitane	2.52	16	P	Pn	04 11 33.3	+0.2
JMTN				eS	Sn	04 12 03.3	+0.3
JTN	Tanegashima 3	2.79	16	P	Pn	04 11 37.1	+0.3
JTN				eS	Sn	04 12 10.1	+0.5
JAGN	Aguni-jima	2.89	242	P	Pn	04 11 38.3	+0.1
JAGN				eS	Sn	04 12 12.6	+0.5
JKE	Kume jima 2	3.38	242	P	Pn	04 11 44.9	0.0
JKE				eS	Sn	04 12 23.5	-0.6
JNU	Nakatsue	5.18	7	Pn	Pn	04 12 10.9	+1.2
	4.2nm,0.3s,baz=197,slow=6.2,SNR=21						
JNU				Sn	Sn	04 13 06.9	-1.8
	2.8nm,0.3s,baz=217,slow=20,SNR=3.2						
JNU				LR	LR	04 14 32.4	
	comp=Z,178nm,18.5s,baz=172,slow=42						
JNU	Nakatsue	5.18	7		Pn	04 12 10.7	+0.9
JNU					Sn	04 13 09.6	+0.9
KSRS	Korea Array	9.64	350	Pn	Pn	04 13 20.3	+9.5
	0.2nm,0.3s,baz=175,slow=14,SNR=3.5						
KSRS				LR	LR	04 17 17.2	
	comp=Z,108nm,19.4s,baz=182,slow=40						
JHJ2	Mitsune	9.82	56	Pn	Pn	04 13 14.8	+1.4
XAN	Xi'an	19.12	294	P	P	04 15 14.0	-1.0
DAV	Davao City (W)	21.22	192	LR	LR	04 24 23.4	
	comp=Z,66nm,18.2s,baz=320,slow=38						
KLR	Kul'dur	21.27	3	P	P	04 15 35.6	-2.5
	0.4nm,0.5s,baz=180,slow=6.1,SNR=3.8						
SONM	Songino Array	27.08	323	P	P	04 16 34.8	+0.4
	0.5nm,0.8s,baz=142,slow=5.4,SNR=3.9						
SONM	Songino Array	27.08	323	P	P	04 16 33.2	-1.2
CMAR	Chiang Mai Arr	30.09	258	P	P	04 17 02.2	+0.9
	1.2nm,0.3s,baz=72,slow=8.6,SNR=7.5						
CMAR				LR	LR	04 30 39.7	
	comp=Z,52nm,18.9s,baz=75,slow=40						
PETK	Petropavlovsk-	32.35	31	LR	LR	04 30 54.7	
	comp=Z,29nm,20.8s,baz=52,slow=37						
KAPI	Kappang	34.27	199	LR	LR	04 30 44.4	
	comp=Z,59nm,21.2s,baz=350,slow=35						
H11N2	WAKE ISLAND Hy	34.53	96	T	T	04 54 11.4	
	baz=290,slow=74,SNR=7.2						
H11N1	WAKE ISLAND Hy	34.54	96	T	T	04 54 12.5	
	baz=290,slow=74,SNR=6.6						
H11N3	WAKE ISLAND Hy	34.55	96	T	T	04 54 13.1	
	baz=290,slow=74,SNR=6.5						
H11S3	WAKE ISLAND Hy	34.80	98	T	T	04 54 40.3	
	baz=292						
H11S1	WAKE ISLAND Hy	34.81	98	T	T	04 54 46.2	
	baz=292						
H11S2	WAKE ISLAND Hy	34.82	98	T	T	04 54 46.0	
	baz=292						
MKAR	Makanchi Array	41.66	310	P	P	04 18 38.9	-1.2
	0.2nm,0.4s,baz=91,slow=10,SNR=4.1						
WRA	Warramunga Arr	47.80	175	P	P	04 19 30.4	+1.2
	2.1nm,0.7s,baz=355,slow=8.2,SNR=15						
WRA	Warramunga Arr	47.80	175	P	P	04 19 30.0	+0.8
ASAR	Alice Springs	51.46	176	P	P	04 19 58.8	+1.7
	1.5nm,0.8s,baz=4.8,slow=11,SNR=17						
ASAR	Alice Springs	51.46	176	P	P	04 19 57.2	+0.1
GEYT	Alibeck	59.88	300	LR	LR	04 50 24.2	
	comp=Z,53nm,18.6s,baz=170,slow=40						
SUA	Susitna One	60.72	33	P	P	04 21 03.6	+0.7
SUA				IAmb	IAmb	04 21 05.4	
	comp=Z,8.3nm,0.8s						
RND	Reindeer	61.41	30	P	P	04 21 08.2	+0.6
ILAR	Eielson Array	62.12	29	P	P	04 21 12.6	+0.3
	comp=Z,0.7nm,0.7s,baz=269,slow=5.8,SNR=14						
HDA	Harding Lake	62.14	29	P	P	04 21 13.0	+0.6
HDA				IAmb	IAmb	04 21 13.2	
	comp=Z,5.8nm,1.1s						
SCRK	Sand Creek	63.48	29	P	P	04 21 21.0	-0.5
MENT	Mentasta	63.78	31	IAmb	IAmb	04 21 22.8	
	comp=Z,5.5nm,0.7s						
OBL	Observatory Le	67.94	79	P	P	04 21 49.8	-1.1
KBZ	Khabaz	69.35	309	P	P	04 22 00.9	+1.7
	comp=Z,1.3nm,0.8s,baz=197,slow=7.0,SNR=3.6						
C36M	Paulatuk	69.48	21	IAmb	IAmb	04 22 01.6	
	comp=Z,5.5nm,0.8s						
FINES	FINESS Array B	72.17	331	P	P	04 22 15.5	-0.6
	comp=Z,0.9nm,0.4s,baz=66,slow=5.2,SNR=15						
AKASG	Malin Array Be	75.29	320	P	P	04 22 34.7	+0.2
	comp=Z,0.4nm,0.4s,baz=60,slow=6.8,SNR=3.4						
AKASG				LR	LR	04 58 53.6	
	comp=Z,81nm,18.1s,baz=290,slow=38						
AKASG	Malin Array Be	75.29	320	P	P	04 22 34.4	-0.2
YKA	Yellowknife Ar	76.25	26	P	P	04 22 41.2	+1.4
	comp=Z,2.0nm,0.7s,baz=300,slow=5.6,SNR=28						
BRTR	Keskin Array B	77.28	308	P	P	04 22 46.4	+0.1
	comp=Z,0.5nm,0.7s,baz=86,slow=6.4,SNR=3.8						
BRTR	Keskin Array B	77.28	308	P	P	04 22 45.6	-0.7
NB2	NORSAR Subarra	78.49	334	P	P	04 22 51.9	-0.5
	comp=Z,0.9nm,0.7s,baz=51,slow=5.9						
NOA	NORSAR Array B	78.49	334	P	P	04 22 52.0	-0.4
	comp=Z,0.7nm,0.7s,baz=48,slow=5.4,SNR=3.7						
GERES	GERESS Array B	84.81	324	P	P	04 23 26.5	+0.4
	comp=Z,0.2nm,0.3s,baz=26,slow=4.9,SNR=3.1						
GERES	GERESS Array B	84.81	324	P	P	04 23 25.6	-0.5
NVAR	Mina Array Bea	88.11	47	P	P	04 23 44.1	+1.4
	comp=Z,0.3nm,0.5s,baz=269,slow=4.4,SNR=5.0						
NVAR	Mina Array Bea	88.11	47	P	P	04 23 41.3	-1.3
PDAR	Pinedale Array	90.77	39	P	P	04 23 56.4	+1.3
	comp=Z,0.4nm,0.8s,baz=5.7,slow=1.5,SNR=4.6						
PDAR	Pinedale Array	90.77	39	P	P	04 23 55.0	-0.1

IDC 12 04:22:27.3±2.9, **6°.40S**×**129°.91E**, **h102**km±39km, **mb3.4**/1, **mb1 3.9**/5, **mb1mx3.4**/29, **mbtmp4.1**/5, **Error ellipse: s-maj=71.4km s-min=21.7km az=90.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.66	14	P	Pn	04 23 49.1	+0.1
	8.3nm,0.3s,baz=190,slow=17,SNR=28						
SIJI				S	Sn	04 24 45.9	-6.8
	14nm,0.3s,baz=283,slow=23,SNR=12						
FITZ	Fitzroy Crossi	12.35	199	P	Pn	04 25 20.3	+0.6
	1.3nm,0.3s,baz=16,slow=9.3,SNR=19						
FITZ				S	Sn	04 27 28.9	-6.7
	0.5nm,0.3s,baz=100,slow=18,SNR=3.0						
WRA	Warramunga Arr	14.13	163	P	Pn	04 25 41.0	-2.0
	1.4nm,0.3s,baz=344,slow=13,SNR=15						
WRA				S	Sn	04 28 05.4	-13
	0.4nm,0.3s,baz=350,slow=22,SNR=2.5						
ASAR	Alice Springs	17.59	168	P	Pn	04 26 26.6	+0.5
	0.6nm,0.3s,baz=346,slow=13,SNR=21						
ASAR				S	Sn	04 29 34.4	-7.8
	0.2nm,0.3s,baz=354,slow=29,SNR=4.1						
MKAR	Makanchi Array	67.68	327	P	P	04 33 13.6	0.0
	0.5nm,0.6s,baz=120,slow=8.9,SNR=6.0						

IDC 12 04:30:04.5±2.7, **5°.07S**×**153°.62E**, **h0**km, **mb3.3**/3, **mb1 3.6**/3, **mb1mx3.3**/23, **mbtmp3.3**/3, **Error ellipse: s-maj=187.5km s-min=31.6km az=128.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.89	230	P	P	04 35 19.3	-0.8
	0.5nm,0.4s,baz=58,slow=9.4,SNR=7.8						
ASAR	Alice Springs	26.51	224	P	P	04 35 45.2	+1.2
	0.1nm,0.3s,baz=54,slow=8.1,SNR=1.6						
ILAR	Eielson Array	82.10	22	P	P	04 42 27.2	+0.5
	0.1nm,0.6s,baz=238,slow=5.7,SNR=1.4						
TORD	Torodi Ar. Bea	151.17	288	PKPbc	PKPbc	04 50 00.1	-0.8
	0.3nm,0.4s,baz=72,slow=1.3,SNR=5.2						

*ASRS **12** 05:00:50.7, 54°.54N×86°.50E, M1.6, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 12 05:00:58.1±2.3, **54°.40N**×**86°.43E**, **h0**km, **mb3.6**, **mpv3.2**, **3C-5D**, **Error ellipse: s-maj=22.7km s-min=15.5km az=152.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURK	Kurchatov	6.02	235	⇑Pn	Pn	05 02 28.6	+0.2
	2.5nm,0.9s						
KURK				⇑Sn	Sn	05 03 38.7	+0.7
	2.5nm,0.9s						
KURK				⇓Lg	Lg	05 04 09.3	
	10nm,0.9s						
KURBB	Kurchatov Arra	6.13	235	⇓Pn	Pn	05 02 29.3	-0.4
	1.6nm,0.6s						
KURBB				⇓Sn	Sn	05 03 42.2	+1.7
	9.9nm,0.8s						
KURBB				⇓Lg	Lg	05 04 12.6	
	13nm,0.7s						
MK31	Makanchi Array	8.05	201	Pn	Pn	05 02 57.1	+0.9
	0.9nm,0.8s,baz=22,slow=10,SNR=6.4						
MK31				⇑Sn	Sn	05 04 28.6	+0.6
	1.6nm,0.9s,baz=28,slow=28,SNR=3.9						
MK31				⇓Lg	Lg	05 05 15.7	
	8.1nm,0.9s,baz=28,slow=30,SNR=3.6						

*JMA **12** 05:04:19.6±0.1, 33°.57N×137°.70E, h373km, M3.1*

*IDC **12** 05:04:22.8±1.0, 33°.58N×137°.61E, h330km±10km, mb3.2/13, mb1 3.4/17, mb1mx3.2/38, mbtmp3.9/17, Error ellipse: s-maj=18.4km s-min=12.3km az=77.0*

ISC 12 05:04:24.4±0.7, **33°.69N**±0°.08×**137°.68E**±0°.07, **h352**km, **n37**, σ**2**^{s}**05**/42, **mb3.4**/13, **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TK02	Tokai 2	0.27	14	P	Pn	05 05 06.7	-1.4
TTO3	TONANKAI O.B.S	0.29	306	P	Pn	05 05 06.9	-1.4
TTO4	TONANKAI O.B.S	0.34	339	P	Pn	05 05 06.6	-1.6
TTO2	TONANKAI O.B.S	0.55	275	P	Pn	05 05 06.8	-1.7
TTO1	TONANKAI O.B.S	0.75	265	P	Pn	05 05 07.1	-2.0
JIE	Ise	1.07	311	P	Pn	05 05 08.5	-2.1
JTNC	Tanabenakahech	1.73	275	P	Pn	05 05 11.4	-2.7
JOD2	Odawara 2	1.95	36	P	Pn	05 05 14.1	-1.4
JYTA	Yamagatataniai	2.05	338	P	Pn	05 05 14.6	-1.5
JWT	Wachi	2.46	311	P	Pn	05 05 17.3	-2.0
JRY	Ryogami san	2.53	23	eS	S	05 06 01.1	-3.3
JAI	Aioi	2.69	273	P	Pn	05 05 18.4	-2.8
JKG	Kaga	2.81	337	P	Pn	05 05 20.5	-1.6
MJAR	Matsushiro Arr	2.88	8	P	Pn	05 05 21.4	-1.4
	0.7nm,0.3s,baz=190,slow=10,SNR=36						
MJAR				S	S	05 06 06.6	-3.1
	0.1nm,0.3s,baz=202,slow=20,SNR=6.7						
MAT	Matsushiro	2.88	8	P	Pn	05 05 20.9	-1.8
MAT				eS	S	05 06 06.9	-2.9
MAT	Matsushiro	2.88	8	P	Pn	05 05 21.5	-1.2
MAT				S	S	05 06 06.8	-3.0
BSO1	Boso 1	2.90	70	P	Pn	05 05 19.9	-2.4
BSO1				eS	S	05 06 05.2	-3.8
JAG	Ashikaga	3.09	28	P	Pn	05 05 22.7	-1.9
JAG				S	S	05 06 08.3	-4.9
JMN	Monobe	3.17	272	P	Pn	05 05 22.9	-2.6
JHS	Saijyo	4.00	290	P	Pn	05 05 31.2	-2.2
KSRS	Korea Array	8.79	298	P	Pn	05 06 27.6	-0.3
	0.8nm,0.3s,baz=114,slow=12,SNR=14						
USRK	Ussuriysk Ar.	11.39	339	P	P	05 06 59.8	+0.9
	baz=156,slow=43,SNR=8.1						
KLR	Kul'dur	16.14	346	P	P	05 07 51.3	+0.3
	0.3nm,0.3s,baz=167,slow=8.0,SNR=11						
SONM	Songino Array	27.37	310	P	P	05 09 39.5	+1.0
	1.7nm,0.6s,baz=121,slow=9.3,SNR=15						
CMAR	Chiang Mai Arr	37.72	256	P	P	05 11 07.3	-0.4
	0.6nm,0.3s,baz=46,slow=6.6,SNR=3.5						
ZALV	Zalesovo Beam	42.02	315	P	P	05 11 42.5	+0.3
	0.9nm,0.3s,baz=105,slow=8.7,SNR=3.4						
MKAR	Makanchi Array	43.41	305	P	P	05 11 53.6	+0.2
	0.5nm,0.3s,baz=86,slow=9.8,SNR=20						
WRA	Warramunga Arr	53.43	184	P	P	05 13 08.6	-0.7
	0.9nm,0.4s,baz=360,slow=7.6,SNR=12						
ASAR	Alice Springs	57.15	184	P	P	05 13 35.0	-0.5
	0.4nm,0.3s,baz=18,slow=13,SNR=13						
ARCES	ARCESS Array B	66.04	339	P	P	05 14 33.9	+0.1
	1.6nm,0.8s,baz=59,slow=7.5,SNR=2.9						
YKA	Yellowknife Ar	68.21	28	P	P	05 14 49.5	+2.1
	0.1nm,0.5s,baz=303,slow=5.8,SNR=2.9						
FINES	FINESS Array B	70.33	332	P	P	05 15 01.0	+0.8
	1.5nm,0.4s,baz=58,slow=5.5,SNR=18						
AKASG	Malin Array Be	75.03	321	P	P	05 15 28.4	+0.5
	0.2nm,0.3s,baz=55,slow=6.2,SNR=3.0						
NB2	NORSAR Subarra	76.05	336	P	P	05 15 34.3	+0.8
	comp=Z,0.7nm,0.7s,baz=45,slow=5.6						
NOA	NORSAR Array B	76.05	336	P	P	05 15 34.0	+0.5
	comp=Z,1.0nm,0.7s,baz=44,slow=5.6,SNR=3.9						
NVAR	Mina Array Bea	79.45	51	P	P	05 15 54.7	+2.0
	comp=Z,0.4nm,0.7s,baz=293,slow=5.7,SNR=3.9						
TXAR	Lajitas Array	94.59	50	P	P	05 17 08.0	+1.8
	comp=Z,0.1nm,0.6s,baz=285,slow=4.6,SNR=2.9						

*IDC **12** 05:19:11.4±1.6, 16°.05S×176°.19W, h337km±17km, mb3.5/12, mb1 3.7/13, mb1mx3.5/41, mbtmp4.2/13, Error ellipse: s-maj=45.5km s-min=14.4km az=147.0*

*NEIC **12** 05:19:12.1±1.2, 16°.2S±0°.2×176°.1W±0°.1, h350km±6km, mb4.1/10, Error ellipse: s-maj=31.5km s-min=10.4km az=155.0*

ISC 12 05:19:12.9±0.7, **16°.2S**±0°.2×**176°.0W**±0°.1, **h360**km, **n33**, σ**1**^{s}**02**/34, **mb3.8**/17, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.64	61	P	Pn	05 20 29.6	+0.3
	22nm,0.3s,baz=14,slow=1.5,SNR=36						
AFI				S	S	05 21 29.1	-2.0
	baz=198,slow=20,SNR=2.2						
AFI	Afiamalu	4.64	61		S	05 21 29.0	-2.0
STKA	Stephens Creek	41.50	240	P	P	05 26 25.5	-0.9
	1.2nm,0.4s,baz=103,slow=8.6,SNR=4.7						
STKA	Stephens Creek	41.50	240	P	P	05 26 25.5	-0.9
BBOO	Buckleboo	46.28	240	P	P	05 27 02.9	-1.1
BBOO				IAmb	IAmb	05 27 21.2	
	comp=Z,10nm,1.1s						
AS31	Alice Springs	47.52	253	P	P	05 27 12.7	-1.0
ASAR	Alice Springs	47.52	253	P	P	05 27 12.8	-1.0
	comp=Z,6.6nm,0.4s,baz=88,slow=8.0,SNR=121						
ASAR	Alice Springs	47.52	253	P	P	05 27 12.2	-1.5
MBWA	Marble Bar	60.78	255	P	P	05 28 50.4	+2.0
PETK	Petropavlovsk-	72.69	344	P	P	05 30 01.6	-0.6
	comp=Z,2.6nm,0.6s,baz=122,slow=8.3,SNR=5.0						
QSPA	South Pole Qui	73.83	180	P	P	05 30 09.1	+0.2
QSPA				IAmb	IAmb	05 30 14.7	
	comp=Z,1.7nm,0.9s						
NVAR	Mina Array Bea	76.59	43	P	P	05 30 26.3	+1.3
	comp=Z,0.9nm,0.7s,baz=226,slow=9.0,SNR=6.8						
SEY	Seymchan	82.69	346	P	P	05 30 56.9	+0.3
	comp=Z,2.1nm,0.4s,baz=188,slow=6.9,SNR=4.5						
NEW	Newport	82.78	35	P	P	05 30 58.5	+1.0
	comp=Z,1.4nm,0.8s,baz=245,slow=17,SNR=4.2						
TXAR	Lajitas Array	83.11	57	P	P	05 31 01.9	+2.2
	comp=Z,0.9nm,0.9s,baz=216,slow=6.2,SNR=8.7						
HDA	Harding Lake	83.41	12	P	P	05 31 00.5	+0.3
CCB	Clear Creek Bu	83.44	12	P	P	05 31 00.1	-0.3
SCRK	Sand Creek	83.66	14	P	P	05 31 02.2	+0.5
SCRK				IAmb	IAmb	05 31 03.5	
	comp=Z,4.7nm,1.3s						
IL31		83.74	12	P	P	05 31 02.1	+0.2
IL31				IAmb	IAmb	05 31 02.3	
	comp=Z,7.2nm,1.4s						
ILAR	Eielson Array	83.74	12	P	P	05 31 01.9	0.0
	comp=Z,1.9nm,0.6s,baz=218,slow=5.6,SNR=53						
YHL	Hebgen Lake	84.48	40	P	P	05 31 06.7	+0.2
PDAR	Pinedale Array	84.52	43	P	P	05 31 07.2	+0.5
	comp=Z,0.5nm,0.7s,baz=197,slow=1.5,SNR=5.1						
DAWY	Dawson	84.84	15	P	P	05 31 08.4	+1.0
DAWY				IAmb	IAmb	05 31 09.2	
	comp=Z,3.1nm,0.9s						
INK	Inuvik	89.66	15	P	P	05 31 29.7	-0.5
	comp=Z,0.8nm,0.9s,baz=222,slow=3.2,SNR=4.3						
YKA	Yellowknife Ar	91.83	24	P	P	05 31 40.2	-0.2
	comp=Z,0.2nm,0.6s,baz=235,slow=5.0,SNR=4.1						
SONM	Songino Array	93.83	319	P	P	05 31 50.4	+0.3
	comp=Z,0.2nm,0.6s,baz=116,slow=3.4,SNR=2.3						
BVAR	Borovoye Array	117.01	322	PKP	PKPdf	05 37 14.1	-1.1
	comp=Z,0.4nm,0.5s,baz=93,slow=5.8,SNR=3.1						
ARCES	ARCESS Array B	125.05	351	PKP	PKPdf	05 37 30.1	-0.1
	comp=Z,2.4nm,0.8s,baz=18,slow=1.1,SNR=4.7						
BRTR	Keskin Array B	145.19	318	PKP	PKPbc	05 38 08.9	0.0
	comp=Z,1.7nm,0.8s,baz=137,slow=3.2,SNR=9.9						
BRTR	Keskin Array B	145.19	318		PKPbc	05 38 09.0	0.0
MLR	Muntele Rosu	145.52	332	PKPbc	PKPdf	05 38 07.7	-1.2
	comp=Z,1.1nm,0.5s,baz=24,slow=17,SNR=2.7						
GERES	GERESS Array B	146.52	348	PKPbc	PKPbc	05 38 13.0	+0.5
	comp=Z,0.4nm,0.6s,baz=352,slow=6.0,SNR=3.6						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAVOX	Davos/Dischmat	149.15	352	PKPbc	PKiKP	05 38 20.1	-0.4
	comp=Z,2.6nm,0.6s,baz=246,slow=5.1,SNR=6.5						

IDC **12** *05:20:23.2±1.7,21.61S×174.34W,h0km,mb4.2/9, mb1 4.4/10,mb1mx4.1/36,mbtmp4.2/10,ML3.8/1,MS3.6/13, Ms1 3.6/13,ms1mx3.4/27,Error ellipse: s-maj=68.7km s-min=22.3km az=146.0*

ISC 12 05:20:25.7±1.4,**21.2S**±0.3×**174.5W**±0.2,**h10km,n25, σ1.42**/16,**mb4.1**/9,**MS3.7**/11,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.68	20	Pn	Pn	05 22 15.8	-1.9
	2.0nm,0.3s,baz=311,slow=20,SNR=1.7						
AFI				Sn	Sn	05 23 34.7	-10
	3.0nm,0.3s,baz=323,slow=20,SNR=2.3						
AFI				LR	LR	05 25 19.5	
	comp=Z,348nm,19.1s,baz=192,slow=37						
RAO	Raoul Island	8.62	201	LR	LR	05 25 22.4	
	comp=Z,163nm,21.3s,baz=84,slow=36						
RAR	Rarotonga	13.69	93	Pn	Pn	05 23 28.2	-12
	2.6nm,0.3s,baz=221,slow=10,SNR=5.6						
RAR				Sn	Sn	05 25 41.1	-31
	0.7nm,0.3s,baz=80,slow=18,SNR=1.8						
RAR				LR	LR	05 29 46.4	
	comp=Z,274nm,18.3s,baz=259,slow=42						
DZM	Mont Dzumac	17.79	264	eP	P	05 24 35.3	+0.9
	36nm,1.2s						
DZM				eLR	LR	05 28 52.3	
	comp=Z,120nm,20.9s						
DZM	Mont Dzumac	17.79	264	Pn	P	05 24 35.2	+0.8
	0.3nm,0.3s,baz=77,slow=16,SNR=5.5						
PPT	Papeete	23.73	86	LR	LR	05 33 33.4	
	comp=Z,160nm,18.2s,baz=244,slow=33						
HNR	Honiara	27.27	291	LR	LR	05 35 29.2	
	comp=Z,64nm,18.5s,baz=196,slow=33						
RKT	Rikitea	36.54	101	eLR	LR	05 36 50.3	
	comp=Z,197nm,29.2s						
STKA	Stephens Creek	40.50	245	P	P	05 28 03.2	-1.8
	3.8nm,0.8s,baz=78,slow=9.5,SNR=6.9						
STKA				LR	LR	05 41 37.9	
	comp=Z,60nm,18.8s,baz=31,slow=32						
ASAR	Alice Springs	47.59	257	P	P	05 29 00.9	-1.2
	5.7nm,0.9s,baz=88,slow=8.4,SNR=25						
ASAR				LR	LR	05 49 06.1	
	comp=Z,89nm,18.1s,baz=102,slow=36						
WRA	Warramunga Arr	47.79	262	P	P	05 29 01.9	-1.8
GUMO	Guam	52.83	307	LR	LR	05 49 09.1	
	comp=Z,40nm,20.6s,baz=112,slow=32						
MJAR	Matsushiro Arr	72.77	322	P	P	05 31 55.3	+1.0
	3.2nm,0.8s,baz=157,slow=6.0,SNR=6.0						
PETK	Petropavlovsk-	77.84	343	LR	LR	06 01 06.4	
	comp=Z,35nm,20.0s,baz=232,slow=31						
NVAR	Mina Array Bea	79.29	42	P	P	05 32 32.5	+0.7
	0.4nm,0.6s,baz=225,slow=10.0,SNR=3.1						
NVAR				LR	LR	06 05 56.1	
	comp=Z,63nm,18.3s,baz=243,slow=34						
KSRS	Korea Array	79.63	317	P	P	05 32 35.6	+2.3
	1.5nm,0.7s,baz=126,slow=6.4,SNR=4.6						
KSRS				LR	LR	06 04 19.1	
	comp=Z,20nm,20.1s,baz=144,slow=33						
PLCA	Paso Flores	86.37	132	LR	LR	06 05 58.6	
	comp=Z,48nm,18.0s,baz=234,slow=32						
PDAR	Pinedale Array	87.22	42	LR	LR	06 10 42.7	
	comp=Z,45nm,18.1s,baz=288,slow=34						
SEY	Seymchan	87.84	345	P	P	05 33 14.5	-0.3
	1.4nm,0.7s,baz=130,slow=6.3,SNR=4.4						
ILAR	Eielson Array	88.29	11	P	P	05 33 17.2	+0.3
	0.8nm,1.0s,baz=218,slow=5.7,SNR=4.5						
CMAR	Chiang Mai Arr	93.48	288	P	P	05 33 44.0	+1.8
	2.4nm,0.9s,baz=110,slow=2.2,SNR=9.7						
YKA	Yellowknife Ar	95.78	24	P	P	05 33 52.2	+0.5
	0.1nm,0.5s,baz=243,slow=4.0,SNR=3.6						
AKASG	Malin Array Be	145.17	333	PKPbc	PKPab	05 40 03.3	+0.3
	1.1nm,0.4s,baz=40,slow=4.8,SNR=7.6						
BRTR	Keskin Array B	149.74	314	PKPbc	PKiKP	05 40 15.8	-1.5
	1.4nm,0.9s,baz=90,slow=3.7,SNR=6.6						
GERES	GERESS Array B	151.65	349	PKPbc	PKiKP	05 40 21.4	+0.5
	0.7nm,0.8s,baz=130,slow=2.1,SNR=4.2						

DJA **12** *05:54:16.9±1.4,5°S±11°×12°9E±°,h76km±11km,M3.6/6, MLv3.6/6*

IDC **12** *05:54:18.3±11.0,3.44S×131.29E,h0km,mb3.7/2, mb1 3.9/2,mb1mx3.5/20,mbtmp3.8/2,Error ellipse: s-maj=845.8km s-min=28.3km az=72.0*

ISC 12 05:54:18.5±1.0,**4.16S**±0.10×**129.19E**±0.08,**h10km,n9, σ1.99**/9,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.80	117	P	Pn	05 54 35.1	-0.8
BNDI				S	Sn	05 54 47.3	-0.5
MSAI	Masohi	0.85	342	P	Pn	05 54 37.8	+1.2
AAI	Ambon	1.10	295	P	Pb	05 54 37.6	-2.0
AAI				S	Sn	05 54 54.7	-0.5
NLAI	Namlea	2.28	294	P	Pg	05 55 10.6	+8.4
FAKI	Fak Fak	3.29	68	P	Pn	05 55 10.1	-0.1
SWI	Sorong	3.88	32	P	Pn	05 55 18.4	+0.2
WRA	Warramunga Arr	16.47	163	Pn	P	05 58 11.8	-0.8
ASAR	Alice Springs	19.92	167	P	Pn	05 58 56.3	+4.1
	1.4nm,0.5s,baz=350,slow=9.8,SNR=17						
MKAR	Makanchi Array	65.43	327	P	P	06 05 06.7	+5.1
	1.1nm,0.8s,baz=120,slow=8.1,SNR=10						

IDC **12** *06:24:55.4±0.9,13.15N×49.56E,h0km,mb3.8/15, mb1 4.0/16,mb1mx3.8/45,mbtmp3.8/16,ML4.5/1,MS3.3/11, Ms1 3.3/11,ms1mx3.1/37,Error ellipse: s-maj=21.8km s-min=20.3km az=146.0*

ISC 12 06:24:56.9±0.8,**13.1N**±0.1×**49.6E**±0.1,**h10km,n23, σ0.69**/17,**mb3.7**/15,**MS3.1**/8,**Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	Arta Tunnel	6.76	257	Pn	Pn	06 26 36.5	+0.3
	8.4nm,0.3s,baz=41,slow=22,SNR=15						
ATD				LR	LR	06 28 50.8	
	comp=Z,291nm,19.1s,baz=72,slow=35						
WSAR	Wadi Sarin	13.23	39	LR	LR	06 32 58.9	
	comp=Z,84nm,20.5s,baz=236,slow=37						
KMBO	Kilima Mbogo	18.71	222	LR	LR	06 36 06.8	
	comp=Z,77nm,18.1s,baz=58,slow=36						
EIL	Elat	21.31	323	LR	LR	06 38 05.8	
	comp=Z,74nm,19.4s,baz=128,slow=37						
ASF	Jabal al Asfar	22.23	331	P	P	06 29 54.9	+1.0
	0.7nm,0.4s,baz=139,slow=9.3,SNR=1.7						
MMAI	Mount Meron Ar	23.64	329	LR	LR	06 39 07.2	
	comp=Z,68nm,19.5s,baz=155,slow=36						
GEYT	Alibeck	25.84	16	P	P	06 30 29.2	+0.6
	0.7nm,0.4s,baz=209,slow=14,SNR=1.6						
GEYT				LR	LR	06 40 39.9	
	comp=Z,38nm,20.1s,baz=35,slow=37						
GNI	Garni	27.24	352	LR	LR	06 43 30.2	
	comp=Z,122nm,18.6s,baz=161,slow=41						
BRTR	Keskin Array B	29.98	335	P	P	06 31 06.1	+0.4
	0.7nm,0.8s,baz=144,slow=15,SNR=4.2						
BRTR				LR	LR	06 42 38.7	
	comp=Z,51nm,19.2s,baz=102,slow=36						
KBZ	Khabaz	31.02	351	LR	LR	06 44 32.8	
	comp=Z,59nm,18.9s,baz=190,slow=38						
MATP	Matopo	39.26	212	P	P	06 32 25.6	-0.4
	0.8nm,0.6s,baz=80,slow=6.1,SNR=2.0						
AKASG	Malin Array Be	40.96	340	P	P	06 32 39.7	0.0
	1.4nm,0.5s,baz=153,slow=7.4,SNR=2.6						
MKAR	Makanchi Array	43.35	33	P	P	06 32 59.8	+0.5
	0.4nm,0.6s,baz=224,slow=8.6,SNR=10						
TORD	Torodi Ar. Bea	46.56	276	P	P	06 33 25.4	+0.2
	0.4nm,0.8s,baz=30,slow=26,SNR=3.0						
CMAR	Chiang Mai Arr	47.69	77	P	P	06 33 34.6	+0.5
	1.3nm,0.3s,baz=268,slow=8.6,SNR=1.3						
CMAR				LR	LR	06 54 16.6	
	comp=Z,27nm,18.4s,baz=192,slow=37						
ZALV	Zalesovo Beam	49.28	27	P	P	06 33 44.6	-1.1
	0.4nm,0.3s,baz=238,slow=8.3,SNR=2.0						
FINES	FINESS Array B	51.15	346	P	P	06 33 58.5	-1.3
	1.4nm,0.7s,baz=133,slow=14,SNR=4.2						
NOA	NORSAR Array B	55.31	338	P	P	06 34 29.6	-1.0
	0.9nm,0.7s,baz=123,slow=5.3,SNR=1.7						
NOA				LR	LR	07 03 15.0	
	comp=Z,16nm,18.5s,baz=270,slow=42						
SONM	Songino Array	58.27	42	P	P	06 34 51.4	-0.5
	0.1nm,0.4s,baz=244,slow=7.9,SNR=2.2						
ARCES	ARCESS Array B	58.38	350	P	P	06 34 52.6	+0.5
	5.2nm,0.9s,baz=52,slow=24,SNR=2.6						
WRA	Warramunga Arr	89.60	110	P	P	06 37 55.8	+0.3
	0.5nm,0.6s,baz=297,slow=3.7,SNR=1.4						
ASAR	Alice Springs	90.12	114	P	P	06 37 58.1	+0.3
	0.2nm,0.4s,baz=276,slow=36,SNR=1.6						
NVAR	Mina Array Bea	127.46	348	PKP	PKiKP	06 44 03.5	+0.1
	0.2nm,0.6s,baz=17,slow=0.9,SNR=2.3						

NNC **12** *06:49:28.9±0.2,43.03N×74.92E,h0km,mpv2.6,Error ellipse: s-maj=2.0km s-min=1.1km az=162.0,Suspected Mining explosion.*

SOME **12** *06:49:29.3,43.07N×74.93E*

KNET **12** *06:49:29.1±0.2,43.04N×74.88E,h8km±1km,ml1.2,Error ellipse: s-maj=1.7km s-min=0.4km az=75.0*

ISC 12 06:49:29.0±0.9,**43.04N**±0.03×**74.91E**±0.02,**h0km,n16, σ0.69**/30,**8C-5D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMS	Chumysh	0.13	250	⇑P	Pg	06 49 31.4	0.0
	12nm,0.1s,SNR=75						
CHMS				⇑S	Sg	06 49 33.7	+0.7
	60nm,0.2s						
CHMS	Chumysh	0.13	250	⇑P	Pg	06 49 31.1	-0.2
	2.0nm,0.2s						
CHMS				⇓S	Sg	06 49 33.6	+0.7
	24nm,0.2s						
USP	Ospenovka	0.38	307	⇑P	Pg	06 49 36.2	0.0
	6.5nm,0.1s,SNR=36						
USP				⇑S	Sg	06 49 41.8	+0.7
	14nm,0.2s						
KBK	Karagaybulak	0.39	176	⇑P	Pg	06 49 36.8	+0.4
	7.6nm,0.1s,SNR=34						
KBK				⇓S	Sg	06 49 42.9	+1.5
	48nm,0.3s						
SGDS	Sogindy	0.46	333	P	Pg	06 49 38.1	+0.3
	1.6nm,0.1s						
SGDS				S	Sg	06 49 44.9	+1.2
	3.0nm,0.1s						
AAK	Ala-Archa	0.51	217	⇑P	Pg	06 49 38.7	0.0
	1.0nm,0.1s,SNR=7.8						
AAK				⇓S	Sg	06 49 46.3	+1.0
	7.8nm,0.3s						
AAK	Ala-Archa	0.51	217	⇓P	Pg	06 49 38.0	-0.7
	0.7nm,0.3s						
AAK				⇓S	Sg	06 49 46.3	+1.0
	2.8nm,0.3s						
DGS	Degeres	0.66	72	P	Pg	06 49 41.8	+0.2
	1.8nm,0.3s						
DGS				S	Sg	06 49 51.1	+0.9
	5.4nm,0.3s						
KST	Kastek	0.77	90	P	Pg	06 49 43.9	+0.2
	3.5nm,0.1s						
KST				S	Sg	06 49 54.7	+1.0
	5.1nm,0.6s						
KRBS	Karabastau	0.86	40	P	Pg	06 49 45.5	+0.1
	1.0nm,0.2s						
KRBS				S	Sg	06 49 57.5	+0.9
	1.2nm,0.2s						
EKS2	Erkin-Say	0.92	246	⇑P	Pg	06 49 46.5	-0.1
	1.8nm,0.1s,SNR=12						
IZV	Izvestkoviy	1.25	90	P	Pg	06 49 52.5	-0.4
	3.0nm,0.2s						
IZV				S	Sb	06 50 09.5	-0.7
	2.6nm,0.2s						
MRKS	Merke	1.27	257	P	Pg	06 49 52.7	-0.7
	1.6nm,0.1s						
MRKS				S	Sg	06 50 10.0	+0.1
	4.4nm,0.5s						
KTBS	Karatobe	1.45	62	P	Pn	06 49 55.9	-0.7
	1.9nm,0.2s						
KTBS				S	Sg	06 50 15.1	-0.6
	8.7nm,0.5s						
TNSS	Tian-Shan	1.49	89	P	Pn	06 49 56.9	-0.5
	7.8nm,0.2s						
TNSS				S	Sn	06 50 17.4	-0.4
	5.8nm,0.4s						
BTLS	Baital	2.09	343	Pg	Pb	06 50 08.2	+0.4
	0.6nm,0.2s						
BTLS				Lg	Lg	06 50 36.3	
	4.5nm,0.6s						

VIE **12** *07:22:58.0±0.6,47.06N×9.49E,h6km±5km,ml1.4/3,Error ellipse: s-maj=3.6km s-min=2.2km az=74.0 4 km E of Sargans*

ZUR 12 07:22:57.8,47.08N×9.50E,h7km±1km,MLh1.1/6,1C-2D, Error ellipse: s-maj=2.0km s-min=1.2km az=154.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBUB	Buchserberg Ma	0.08	327	⇓Pg	Pg	07 23 00.2	+0.2
	0.2nm,SNR=1.4						
SBUB				Sg	Sg	07 23 01.7	+0.2
PLONS	Plons/SG	0.09	253	⇑Pg	Pg	07 23 00.2	+0.2
	0.4nm,SNR=2.9						
PLONS				Sg	Sg	07 23 01.7	+0.2
SBUA2	Buchs, Altendo	0.09	346	⇓Pg	Pg	07 23 00.1	+0.2
	0.5nm,SNR=2.7						
DAVA	Damuels	0.33	51	Pg	Pg	07 23 04.7	+0.3
DAVA				Pg	Pg	07 23 04.7	+0.3
	0.1nm,SNR=0.6						
DAVA	Damuels	0.33	51	ePg	Pg	07 23 04.7	+0.3
	1.7nm,0.1s						
DAVA				Sg	Sb	07 23 10.5	-1.3
	5.5nm,0.1s						
PANIX	Pigniu (Panix)	0.36	227	Pg	Pg	07 23 04.9	-0.1
PANIX				Pg	Pg	07 23 04.9	-0.1
	0.1nm,SNR=0.6						
SVAM	Vaz, Muldain	0.38	177	Pg	Pg	07 23 05.6	+0.3
	0.1nm,SNR=0.6						
SVAM				Pg	Pg	07 23 05.6	+0.3
DAVOX	Davos/Dischmat	0.39	139	Pg	Pg	07 23 05.6	+0.1
	0.1nm,SNR=0.9						
DAVOX				Pg	Pg	07 23 05.6	+0.1
FETA	Feichten	0.84	93	Sg	Sg	07 23 25.6	+0.7
	0.4nm,0.2s						
MOTA	Moosalm	1.12	76	Pg	Pn	07 23 20.2	+0.1
	1.4nm,0.1s						
MOTA				eSg	Sn	07 23 35.7	-0.2
	2.1nm,0.1s						
SQTA	Sankt Quirin	1.17	82	Pg	Pn	07 23 21.4	+0.6
	3.5nm,0.2s						

ROM 12 07:24:39.4±0.1,43.019N±0.005×13.097E±0.006, h6km±1km,ML1.5/3,6C-2D,Error ellipse: s-maj=0.6km s-min=0.1km az=199.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	Fiordimonte	0.02	338	⇑eP	Pg	07 24 40.6	0.0
FDMO				S	Sg	07 24 41.3	-0.1
FDMO				AML	AML		
	comp=E,1870μm,0.2s						
FDMO				AML	AML		
	comp=N,2485μm,0.2s						
CESI	CESI - Serrava	0.14	264	⇑eP	Pg	07 24 43.0	+0.7
CESI				S	Sg	07 24 46.0	+1.7
CESI				AML	AML		
	comp=E,53μm,0.2s						
CESI				AML	AML		
	comp=N,128μm,0.8s						
NRCA	Norcia	0.19	176	⇓eP	Pg	07 24 43.4	+0.3
NRCA				S	Sg	07 24 46.9	+1.2
NRCA				AML	AML		
	comp=E,466μm,0.7s						
NRCA				AML	AML		
	comp=N,320μm,1.3s						
SNTG	Esanatoglia	0.26	334	⇑eP	Pg	07 24 45.4	+0.8
SNTG				S	Sb	07 24 49.9	-1.5
EL6	Elcito	0.31	1	⇓eP	Pg	07 24 46.0	+0.5
EL6				S	Sb	07 24 51.5	-1.4
ASSB	Assisi San Ben	0.32	274	⇑eP	Pg	07 24 46.2	+0.5
ASSB				S	Sb	07 24 51.9	-1.3
ASSB				AML	AML		
	comp=N,167μm,0.4s						
ASSB				AML	AML		
	comp=E,127μm,1.6s						
ATCC	AVT- Casa Cast	0.37	297	⇑eP	Pg	07 24 47.3	+0.6
ATCC				S	Sb	07 24 54.0	-0.6
ATCC				AML	AML		
	comp=E,213μm,0.2s						
ATCC				AML	AML		
	comp=N,131μm,0.1s						
GUMA	Gualdo di Mace	0.62	86	⇑eP	Pg	07 24 43.8	-7.5
GUMA				S	Sg	07 24 47.0	-12

NNC 12 07:29:37.6±5.9,54.07N×86.55E,h0km,mb3.5,mpv3.1, 6C,Error ellipse: s-maj=54.8km s-min=41.5km az=89.0, Suspected Mining explosion.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	Kurchatov	5.90	239	⇑Pn	Pn	07 31 04.3	-2.0
	3.6nm,1.3s						
KURK				⇑Lg	Lg	07 32 47.0	
	2.4nm,0.7s						
KURBB	Kurchatov Arra	6.00	238	⇑Pn	Pn	07 31 08.6	+1.0
	1.1nm,0.7s						
KURBB				⇑Lg	Lg	07 32 49.2	
	5.5nm,0.8s						
MK31	Makanchi Array	7.77	202	Pn	Pn	07 31 34.6	+2.6
	baz=29,slow=14,SNR=9.1						
MK31				⇑Sn	Sn	07 33 01.2	+0.6
	0.4nm,0.7s						
MK31				⇑Lg	Lg	07 33 43.3	
	2.6nm,1.1s,baz=23,slow=30,SNR=3.9						

IDC **12** *07:34:35.8±1.2,31.75N×104.44E,h0km,mb3.6/6, mb1 3.8/7,mb1mx3.5/60,mbtmp3.6/7,ML3.4/1,Error ellipse: s-maj=42.9km s-min=21.7km az=60.0*

ISC 12 07:34:37.3±1.3,**31.8N**±0.2×**104.5E**±0.2,**h10km,n7, σ0.49**/7,**mb3.7**/5,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	16.10	5	Pn	Pn	07 38 23.2	-0.6
	0.2nm,0.3s,baz=186,slow=11,SNR=2.7						
KSRS	Korea Array	20.10	67	P	P	07 39 11.6	+0.5
	0.9nm,0.5s,baz=260,slow=9.3,SNR=4.7						
MKAR	Makanchi Array	22.67	318	P	P	07 39 39.2	+0.4
	0.6nm,0.7s,baz=118,slow=12,SNR=7.4						
ZALV	Zalesovo Beam	26.25	333	P	P	07 40 12.7	+0.3
	0.5nm,0.4s,baz=123,slow=10,SNR=2.1						
WRA	Warramunga Arr	58.87	147	P	P	07 44 36.2	-0.2
	1.0nm,0.5s,baz=339,slow=7.3,SNR=3.0						
ASAR	Alice Springs	61.92	149	P	P	07 44 57.2	-0.1
	0.3nm,0.5s,baz=337,slow=6.6,SNR=6.5						
YKA	Yellowknife Ar	80.95	17	P	P	07 46 51.5	-0.1
	0.4nm,0.4s,baz=327,slow=5.2,SNR=6.7						

IDC **12** *07:40:58.9±0.9,37.93N×22.58E,h0km,mb3.8/14, mb1 3.9/17,mb1mx3.7/44,mbtmp3.8/17,ML3.8/3,MS3.0/1, Ms1 3.0/1,ms1mx2.1/50,Error ellipse: s-maj=20.1km s-min=17.1km az=177.0*

ATH **12** *07:41:00.9,37.93N×22.60E,h16km±3km,ML3.6/17,Error ellipse: s-maj=3.8km s-min=0.6km az=69.0*

THE **12** *07:41:01.1,37.93N×22.61E,h10km,ML3.5/35,Error ellipse: s-maj=0.7km s-min=0.3km az=229.0*

ISC 12 07:41:01.1±0.8,**37.93N**±0.01×**22.60E**±0.01,**h15km**±5km**, n129,σ0.73**/189,**mb3.8**/13,**6C-4D,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOUT	Loutraki	0.30	78	P	Pg	07 41 07.5	0.0
LOUT				S	Sg	07 41 11.8	+0.1
	9μm,0.4s						
LOUT	Loutraki	0.30	78	P	Pg	07 41 07.4	0.0
LOUT				S	Sg	07 41 11.8	+0.1
LOUT				AML	AML	07 41 17.3	
	comp=E,3048μm,0.4s						
LOUT				AML	AML	07 41 20.2	
	comp=N,3322μm,0.4s						
LTK	Loutraki	0.31	71	P	Pg	07 41 07.4	-0.1
LTK				S	Sg	07 41 11.0	-0.9
	comp=N,10μm,0.5s						
LTK	Loutraki	0.31	71	P	Pg	07 41 07.4	-0.1
LTK				S	Sg	07 41 11.7	-0.2
LTK				AML	AML	07 41 12.2	
	comp=N,18530μm,0.5s						
LTK				AML	AML	07 41 17.3	
	comp=E,19830μm,0.4s						
KLV	Kalavryta, Ach	0.37	289	P	Pg	07 41 08.4	-0.4
KLV				S	Sg	07 41 13.2	-0.7
	comp=E,6μm,0.3s						
KLV	Kalavryta, Ach	0.37	289	P	Pg	07 41 08.3	-0.4
KLV				S	Sg	07 41 13.4	-0.5
KLV				AML	AML	07 41 14.6	
	comp=E,11147μm,0.3s						
KLV				AML	AML	07 41 14.7	
	comp=N,11707μm,0.3s						
PROD	Prodromos	0.41	35	P	Pg	07 41 09.4	+0.1
PROD				S	Sg	07 41 14.7	-0.3
PROD	Prodromos	0.41	35	P	Pg	07 41 09.4	+0.1
PROD				S	Sg	07 41 15.0	0.0
PROD				AML	AML	07 41 17.8	
	comp=E,31354μm,0.4s						
PROD				AML	AML	07 41 18.8	
	comp=N,38004μm,0.3s						
ALIK	Aliki, Aigiali	0.51	311	P	Pg	07 41 11.1	-0.1
ALIK				S	Sb	07 41 18.5	-0.5
DLFA	Delphi	0.56	352	P	Pg	07 41 11.7	-0.5
DLFA				S	Sg	07 41 19.8	+0.2
VLX	Vlachokerasia	0.58	198	P	Pg	07 41 12.4	-0.1
VLX				S	Sg	07 41 20.7	+0.4
	comp=N,12μm,0.4s						
VLX	Vlachokerasia	0.58	198	P	Pg	07 41 12.5	-0.1
VLX				S	Sg	07 41 20.4	+0.2
VLX				AML	AML	07 41 22.4	
	comp=N,22513μm,0.4s						
VLX				AML	AML	07 41 22.4	
	comp=E,23909μm,0.4s						
LAKA	Lakka	0.58	303	P	Pg	07 41 12.1	-0.4
LAKA				S	Sg	07 41 19.9	-0.4
	comp=E,4μm,0.3s						
LAKA	Lakka	0.58	303	P	Pg	07 41 12.1	-0.4
LAKA				S	Sg	07 41 20.2	-0.1
LAKA				AML	AML	07 41 20.6	
	comp=E,7453μm,0.3s						
LAKA				AML	AML	07 41 20.7	
	comp=N,8113μm,0.2s						
KALE	Kalithea	0.59	322	P	Pg	07 41 12.4	-0.3
KALE				S	Sg	07 41 20.0	-0.6
	comp=N,8μm,0.3s						
KALE	Kalithea	0.59	322	P	Pg	07 41 12.4	-0.3
KALE				S	Sg	07 41 20.1	-0.5
KALE				AML	AML	07 41 24.3	
	comp=N,17658μm,0.4s						
KALE				AML	AML	07 41 24.6	
	comp=E,14887μm,0.3s						
VIL2	Platees	0.60	61	P	Pg	07 41 12.9	0.0
VIL2				S	Sb	07 41 21.9	+0.2
VIL2				AML	AML	07 41 26.3	
	comp=N,9659μm,0.8s						
VIL2				AML	AML	07 41 26.4	
	comp=E,6716μm,0.5s						
TRIZ	Trizonia	0.60	317	P	Pg	07 41 12.6	-0.4
TRIZ				S	Sg	07 41 21.0	0.0
	comp=E,8μm,0.6s						
TRIZ	Trizonia	0.60	317	P	Pg	07 41 12.6	-0.4
VILL	Villia	0.61	67	P	Pg	07 41 12.8	-0.3
VILL				S	Sb	07 41 22.4	+0.4
	comp=E,5μm,0.7s						
SERG	Sergoula	0.65	319	P	Pg	07 41 13.4	-0.4
SERG				S	Sg	07 41 21.9	-0.5
	comp=E,7μm,0.2s						
SERG	Sergoula	0.65	319	P	Pg	07 41 13.4	-0.4
DID	Didima	0.66	129	P	Pg	07 41 13.7	-0.2
DID				S	Sb	07 41 23.4	+0.1
	comp=E,11μm,0.5s						
DID	Didima	0.66	129	P	Pg	07 41 13.5	-0.4
DID				S	Sb	07 41 23.4	+0.1
DID				AML	AML	07 41 24.2	
	comp=N,20988μm,0.4s						
DID				AML	AML	07 41 24.9	
	comp=E,17042μm,0.5s						
KRND	KRANIDI	0.69	141	P	Pg	07 41 14.4	-0.2
KRND				S	Sg	07 41 23.8	0.0
	comp=E,9μm,0.5s						
KRND	KRANIDI	0.69	141	P	Pg	07 41 14.5	-0.1
KRND				S	Sb	07 41 25.1	+0.7
KRND				AML	AML	07 41 26.7	
	comp=N,11323μm,0.4s						
KRND				AML	AML	07 41 28.9	
	comp=E,22965μm,0.5s						

DRO Drossia 0.70 273 P Pg 07 41 14.5 -0.3
DRO S Sb 07 41 24.7 +0.1
comp=E,8µm,0.3s
DRO Drossia 0.70 273 P Pg 07 41 14.5 -0.3
DRO S Sb 07 41 24.8 +0.2
DRO AML AML 07 41 31.2
comp=N,14737µm,0.2s
DRO AML AML 07 41 32.5
comp=E,16483µm,0.3s
UPR University Cam 0.73 299 P Pb 07 41 15.5 -0.1
UPR S Sb 07 41 25.5 0.0
LKR Lokris 0.79 23 P Pg 07 41 15.5 -1.0
LKR S Sb 07 41 27.6 +0.5
LKR Lokris 0.79 23 P Pg 07 41 15.5 -1.0
AMT Artemida-Makis 0.81 241 P Pg 07 41 16.3 -0.5
AMT S Sb 07 41 27.6 0.0
comp=E,6µm,0.4s
AMT Artemida-Makis 0.81 241 P Pg 07 41 16.3 -0.5
AMT S Sb 07 41 28.0 +0.3
AXAR Agios Charalam 0.84 3 P Pg 07 41 17.0 -0.5
ANX Ano Chora 0.85 322 P Pg 07 41 17.0 -0.7
ANX S Sb 07 41 29.4 +0.3
ANX Ano Chora 0.85 322 P Pg 07 41 17.0 -0.7
ANX AML AML 07 41 34.0
comp=N,29218µm,0.5s
ANX AML AML 07 41 34.7
comp=E,19816µm,0.4s
ATH Athens Observa 0.88 87 P Pg 07 41 18.1 -0.1
ATH S Sg 07 41 29.7 -0.1
comp=E,3µm,0.6s
ATH Athens Observa 0.88 87 P Pb 07 41 18.2 +0.1
ATH S Sb 07 41 30.4 +0.6
ATH AML AML 07 41 31.9
comp=E,8025µm,0.7s
ATH AML AML 07 41 32.5
comp=N,5691µm,0.5s
YDRA Hydra 0.90 130 P Pg 07 41 18.3 -0.2
RLS Riolos of Patr 0.91 279 P Pg 07 41 17.7 -0.9
RLS S Sb 07 41 31.5 +1.1
comp=N,2µm,0.5s
RLS Riolos of Patr 0.91 279 P Pg 07 41 17.8 -0.8
ITM Ithomi 0.92 216 P Pg 07 41 18.1 -0.7
ITM S Sb 07 41 31.7 +1.0
comp=N,2µm,0.3s
ITM Ithomi 0.92 216 P Pg 07 41 18.1 -0.7
ATHU Athens Univers 0.94 87 P Pg 07 41 18.8 -0.4
ATHU S Sb 07 41 32.4 +1.0
ATHU Athens Univers 0.94 87 P Pg 07 41 19.0 -0.2
VLY Voula,Athens 0.95 94 P Pb 07 41 19.5 +0.2
VLY S Sb 07 41 32.5 +0.9
comp=N,3µm,0.5s
VLY Voula,Athens 0.95 94 P Pb 07 41 19.5 +0.2
PTL Penteli 1.01 83 P Pg 07 41 20.2 -0.4
PTL S Sg 07 41 33.4 -0.4
comp=N,3µm,0.4s
PTL Penteli 1.01 83 P Pb 07 41 20.4 +0.1
PTL S Sg 07 41 33.3 -0.4
PTL AML AML 07 41 34.9
comp=E,6288µm,0.6s
PTL AML AML 07 41 35.5
comp=N,4376µm,0.3s
PVO Paravola 1.09 310 P Pg 07 41 21.4 -0.8
PVO S Sn 07 41 38.9 +2.1
comp=N,2µm,0.7s
PVO Paravola 1.09 310 P Pg 07 41 21.7 -0.4
MRKA Markates 1.10 45 P Pg 07 41 20.9 -1.4
MRKA S Sn 07 41 37.2 +0.2
comp=N,2µm,0.6s
MRKA Markates 1.10 45 P Pg 07 41 21.2 -1.2
MRKA AML AML 07 41 42.5
comp=E,4762µm,0.4s
MRKA AML AML 07 41 43.8
comp=N,5418µm,0.7s
AGG Agios Georgios 1.12 349 P Pg 07 41 21.2 -1.4
AGG S Sb 07 41 37.2 +0.7
comp=N,2µm,0.4s
AGG Agios Georgios 1.12 349 P Pg 07 41 21.5 -1.1
MAKR Makrakomi, Fth 1.15 341 P Pb 07 41 22.6 -0.1
MAKR S Sn 07 41 38.5 +0.3
comp=N,4µm,0.7s
MAKR Makrakomi, Fth 1.15 341 P Pb 07 41 22.5 -0.1
MAKR S Sn 07 41 38.6 +0.4
MAKR AML AML 07 41 41.6
comp=E,5810µm,0.4s
MAKR AML AML 07 41 44.2
comp=N,5709µm,0.7s
EVR Evrytania 1.17 328 P Pb 07 41 22.8 -0.3
EVR S Sn 07 41 40.0 +1.2
comp=N,2µm,0.8s
EVR Evrytania 1.17 328 P Pb 07 41 22.8 -0.3
EVR S Sn 07 41 39.7 +0.9
EVR AML AML 07 41 43.4
comp=N,4823µm,0.7s
EVR AML AML 07 41 44.8
comp=E,4714µm,0.9s
DYR Agios Nikonas 1.18 190 P Pb 07 41 22.8 -0.4
DYR S Sb 07 41 37.2 -1.1
DYR Agios Nikonas 1.18 190 P Pb 07 41 22.8 -0.4
PYL PYLOS 1.23 214 P Pn 07 41 24.0 +0.2
VLI Veliai 1.23 167 P Pn 07 41 23.8 0.0
VLI S Sb 07 41 40.1 +0.2
comp=E,3µm,0.5s
VLI Veliai 1.23 167 P Pn 07 41 23.8 0.0
MNVA Monemvasia 1.28 164 P Pn 07 41 24.9 +0.4
PDO Prodromos 1.30 302 P Pg 07 41 25.8 -0.4
SKIA Skiathos 1.41 28 P Pn 07 41 26.4 +0.1
SKIA S Sn 07 41 45.3 +0.6
comp=E,1µm,0.7s
SKIA Skiathos 1.41 28 P Pn 07 41 26.5 +0.1
KARY Karystos 1.46 85 P Pn 07 41 26.7 -0.2
KARY S Sn 07 41 45.2 -0.6
comp=E,848nm,0.5s
XOR Xorichti 1.51 18 P Pn 07 41 27.6 -0.1
XOR S Sn 07 41 47.2 0.0
comp=E,1µm,0.8s
AOS Alonnisos 1.60 39 P Pn 07 41 28.4 -0.5
AOS S Sn 07 41 48.5 -0.8
comp=E,1µm,0.7s
VLS Valsamata 1.61 280 P Pb 07 41 30.4 -0.1
EVGI Lefkada island 1.68 295 P Pb 07 41 31.6 -0.1
SERI Serifos 1.68 116 P Pn 07 41 30.3 +0.3
SERI S Sn 07 41 50.7 -0.7
comp=E,590nm,0.6s
FSK Fiskardo 1.69 289 P Pb 07 41 32.2 +0.3
KTHR Kythira 1.69 169 P Pn 07 41 30.8 +0.6
KTHR S Sn 07 41 52.5 +0.9
comp=E,2µm,0.4s
THL Klokotos Trika 1.70 345 P Pn 07 41 31.0 +0.7
THL S Sb 07 41 53.0 -0.3
comp=E,392nm,0.5s
KTHA Kythira Island 1.71 167 P Pn 07 41 30.8 +0.4
LKD2 Lefkada island 1.75 300 P Pb 07 41 33.2 +0.2
TSLK Tsoukalades, L 1.77 301 P Pb 07 41 31.4 +0.1
SKY Skiros Island 1.80 58 P Pn 07 41 31.8 +0.1
SKY S Sn 07 41 55.3 +1.0
ANKY Antikythira Is 2.13 164 P Pn 07 41 36.8 +0.6
ANKY S Sn 07 42 03.2 +0.8
comp=E,635nm,0.6s
PAIG Paliouri 2.17 23 P Pn 07 41 36.3 -0.4
LIT Litokhoron 2.17 358 P Pn 07 41 37.2 +0.4
KPRO Kipourio 2.25 335 P Pn 07 41 38.2 +0.4
KZN Kozani 2.46 345 P Pn 07 41 41.4 +0.5
APE Apeiranthos 2.48 109 ⇑P Pn 07 41 41.6 +0.6
RODP Rodopos 2.54 158 P Pn 07 41 42.3 +0.5
RODP S Sn 07 42 12.6 +0.2
comp=E,210nm,0.4s
OUR Ouranopolis 2.63 24 P Pn 07 41 43.0 -0.1
CHAN Chania 2.67 154 P Pn 07 41 43.5 0.0
CHAN S Sn 07 42 16.1 +0.5
comp=E,380nm,0.6s
HORT Hortiatis 2.70 8 P Pn 07 41 43.8 -0.3
IMMV Iera Moni Meta 2.70 155 P Pn 07 41 44.2 +0.2
VAM Vamos 2.82 152 P Pn 07 41 46.3 +0.6
SOH Sokhos 2.95 11 P Pn 07 41 47.8 +0.3
GRG Griva 3.03 357 P Pn 07 41 48.8 +0.2
IDI Anoyia 3.21 144 Pn Pn 07 41 51.6 +0.5
comp=E,4.3nm,0.3s,baz=315,slow=3.2,SNR=51
IDI Sn Sn 07 42 26.2 -3.0
comp=E,9.1nm,0.3s,baz=304,slow=15,SNR=3.7
SRS Serrai 3.28 13 P Pn 07 41 51.8 -0.2
VAY Valandovo 3.39 360 *i* Pn Pn 07 41 55.0 +1.4
OHR Ohrid 3.47 337 *e*Pn Pn 07 41 57.4 +2.7
LAST Lasithi 3.60 139 P Pn 07 41 57.4 +0.9
LAST S Sn 07 42 39.1 +0.2
comp=E,155nm,0.7s
STIP Stip 3.78 355 *i* Pn Pn 07 42 00.6 +1.7
TIR Tirane 4.02 329 ⇑P Pn 07 42 03.2 +1.1
VTS Vitosha 4.71 6 ⇑P Pn 07 42 12.9 +1.1
TIP Timpagrande 4.75 287 ⇓P Pn 07 42 14.7 +2.4
ELND Elena 5.59 26 ⇑P Pn 07 42 23.7 0.0
LOT Lotru 7.57 6 ⇓P Pn 07 42 51.6 +0.7
VOIR 7.73 13 ⇓P Pn 07 42 54.6 +1.5
MLR Muntele Rosu 7.96 17 Pn Pn 07 42 58.5 +2.1
comp=E,0.9nm,0.3s,baz=152,slow=19,SNR=5.8
MLR Muntele Rosu 7.96 17 ⇑P Pn 07 42 57.2 +0.7
PLOR Plostina 8.47 20 ⇑P Pn 07 43 04.8 +1.5
VRI Vrincioaia 8.51 20 ⇓P Pn 07 43 04.1 +0.3
BRTR Keskin Array B 8.80 75 Pn Pn 07 43 10.8 +2.8
comp=E,0.3nm,0.3s,baz=252,slow=14,SNR=6.3
KRUC Moravsky 12.00 340 *e*SG Sn 07 46 04.7 -0.5
GERES GERESS Array B 12.68 332 LR LR 07 50 18.4
comp=E,74nm,19.7s,baz=288,slow=44
ESDC Sonseca Array 20.75 283 P P 07 45 41.6 +0.2
comp=E,0.5nm,0.5s,baz=76,slow=11,SNR=2.4
HFS Hagfors 22.94 349 P P 07 46 04.0 -0.5
comp=E,1.3nm,0.5s,baz=138,slow=5.2,SNR=1.9
FINES FINESS Array B 23.64 4 P P 07 46 10.0 -1.5
comp=E,0.6nm,0.5s,baz=172,slow=11,SNR=1.2
EKA Eskdalemuir Ar 24.60 323 P P 07 46 20.8 +0.3
comp=E,1.2nm,0.5s,baz=122,slow=9.3,SNR=5.4
TORD Torodi Ar. Bea 30.91 223 P P 07 47 17.4 0.0
comp=E,0.3nm,0.4s,baz=31,slow=8.8,SNR=2.6
ARCES ARCESS Array B 31.71 2 P P 07 47 22.8 -1.1
comp=E,1.5nm,0.8s,baz=201,slow=9.5,SNR=1.7
BVAR Borovoye Array 36.03 50 P P 07 48 02.3 +0.7
comp=E,1.0nm,0.5s,baz=268,slow=4.5,SNR=11
KURBB Kurchatov Arra 41.06 53 P P 07 48 44.0 +0.2
comp=E,2.0nm,0.5s,baz=278,slow=8.7,SNR=5.3
MKAR Makanchi Array 44.03 59 P P 07 49 07.7 -0.4
comp=E,0.7nm,0.4s,baz=274,slow=7.4,SNR=11
ZALV Zalesovo Beam 44.64 48 P P 07 49 12.3 -0.5
comp=E,4.5nm,0.5s,baz=276,slow=8.7,SNR=16
SONM Songino Array 59.34 51 P P 07 51 02.8 +0.1
comp=E,0.5nm,0.3s,baz=262,slow=8.6,SNR=3.2
SCHQ Schefferville 59.75 318 P P 07 51 05.5 +0.3
comp=E,1.3nm,0.5s,baz=67,slow=3.7,SNR=9.5
YKA Yellowknife Ar 74.18 341 P P 07 52 36.9 +0.1
comp=E,0.5nm,0.5s,baz=34,slow=4.9,SNR=8.1
ILAR Eielson Array 77.31 355 P P 07 52 55.1 +0.5
comp=E,0.3nm,0.6s,baz=351,slow=2.9,SNR=6.4
ASAR Alice Springs 120.51 97 PKP PKPdf 07 59 51.3 -1.1
comp=E,0.3nm,0.9s,baz=336,slow=2.3,SNR=2.2

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*GCG **12** 07:43:55.5±0.7, 16.38N×91.30W, h31km±176km, MD3.7*
*MEX **12** 07:43:56.0±0.5, 16.25N×91.01W, h3km, MD4.0*
*NEIC **12** 07:43:57.9±2.9, 16.14N±0.05×91.13W±0.03, h33km±2km,*
Error ellipse: s-maj=7.0km s-min=3.4km az=172.0
ISC 12 07:43:54.1±1.7, 16.18N±0.06×91.20W±0.04, h1km±14km, n17, σ1.63/30, Mexico-Guatemala border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CCIG Comitan 0.91 277 Pn 07 44 14.1 -0.1
CCIG Sn 07 44 28.2 +0.2
CCIG Comitan 0.91 277 Pg Pn 07 44 15.3 +1.1
CCIG Sg Sn 07 44 30.1 +2.0
CCIG Comitan 0.91 277 *e*P Pn 07 44 14.1 -0.1
CCIG *i* S Sn 07 44 28.2 +0.2
STG3 Santiaguito 3, 1.50 194 *e*P Pg 07 44 23.5 +0.5
STG3 *e*S Sg 07 44 45.0 +2.6
THIG 1.63 219 Pn 07 44 21.1 -2.9
THIG 1.63 219 *i* P Pn 07 44 21.1 -2.9
FUG Fuego 3 1.76 169 *e*P Pg 07 44 27.6 -0.2
FUG *e*S Sg 07 44 52.3 +1.8
NBG Las Nubes 1.78 153 *e*P Pb 07 44 27.5 -0.2
NBG *e*S Sg 07 44 52.5 +1.1
TGIG 1.94 288 Pb 07 44 28.8 -1.5
TGIG Sb 07 44 55.1 0.0
TGIG 1.94 288 *e*P Pb 07 44 28.8 -1.5
TGIG *i* S Sb 07 44 55.1 0.0
PCIG 2.00 257 Pb 07 44 30.1 -1.2
PCIG Sg 07 44 59.8 +1.3
PCIG 2.00 257 *e*P Pb 07 44 30.1 -1.2
PCIG *i* S Sg 07 44 59.8 +1.3
IXG Ixpaco 2.12 160 *e*P Pb 07 44 33.0 -0.5
IXG *e*S Sg 07 45 01.5 -1.0
CMIG Matias Romero 3.65 285 Pb 07 44 57.2 -2.2
CMIG Sn 07 45 38.1 +2.6
CMIG Matias Romero 3.65 285 *e*P Pb 07 44 57.2 -2.2
CMIG *e*S Sn 07 45 38.1 +2.6
TGUH Tegucigalpa,Un 4.34 119 Pn Pn 07 45 01.0 -0.3
TEIG Tepich 4.89 34 Pn 07 45 08.1 -0.6

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*INET **12** 08:14:33.6, 12.16N×87.75W, h11km, ML3.6*
SNET 12 08:14:31.7±1.2, 12.10N×87.91W, h9km±10km, ML3.1, Near coast of Nicaragua

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CNCH Conchagua 1.17 4 *e*P Pb 08 14 53.1 -1.1
CNCH *e*S Sb 08 15 10.0 +0.5
CNCH IAML 08 15 16.0
comp=Z,1µm,0.3s
JUCU Jucuarןn 1.19 344 *e*P Pb 08 14 53.7 -0.9
LCND La Caada 1.20 1 *e*P Pb 08 14 53.8 -0.8
ALJI Alcalda de J 1.38 332 *e*S Sb 08 15 14.6 -0.8
TECA Tecapa 1.50 337 *e*P Pn 08 14 58.8 -0.2
COEB Comit de Eme 1.51 337 *e*P Pn 08 14 58.4 -0.7
FAGO Alcalda de S 1.60 353 *e*P Pn 08 14 59.9 -0.2
FAGO *e*S Sn 08 15 20.9 0.0
COEG Centro de Oper 1.78 328 *e*S Sb 08 15 26.8 -0.3
COEG IAML 08 15 29.9
comp=Z,102nm,0.3s
PAVA Las Pavas 1.89 328 *e*P Pn 08 15 04.7 +0.4
PAVA *e*S Sb 08 15 29.9 -0.4
PAVA IAML 08 15 41.7
comp=Z,85nm,0.5s
TGUH Tegucigalpa,Un 2.04 18 *e*P Pn 08 15 05.4 -0.9

NNC 12 08:25:22.9±4.0, 53.23N×87.46E, h0km, mb3.7, mpv3.3, 3C-5D, Error ellipse: s-maj=30.5km s-min=24.6km az=21.0, Suspected Mining explosion., Southwestern Siberia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KURK Kurchatov 6.02 249 ⇓Pn Pn 08 26 53.4 +0.2
2.0nm,0.7s
KURK ⇓Sn Sn 08 28 03.6 +1.0
1.3nm,0.7s
KURK ⇓Lg Lg 08 28 33.4
9.1nm,1.0s
KURBB Kurchatov Arra 6.11 248 ⇓Pn Pn 08 26 53.0 -1.4
3.5nm,0.6s
KURBB ⇓Sn Sn 08 28 06.8 +1.8
3.7nm,0.5s
KURBB ⇑Lg Lg 08 28 38.0
14nm,0.8s
MK31 Makanchi Array 7.25 209 Pn Pn 08 27 11.9 +1.7
0.5nm,0.5s,baz=33,slow=13,SNR=19
MK31 ⇑Sn Sn 08 28 32.8 -0.3
0.9nm,0.7s
MK31 ⇑Lg Lg 08 29 18.4
2.7nm,0.6s,baz=37,slow=28,SNR=9.6

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*NNC **12** 09:19:45.6±1.5, 35.83N×82.67E, h0km, mb6.8, mpv6.7,*
Error ellipse: s-maj=22.2km s-min=11.5km az=73.0
*IDC **12** 09:19:47.5±0.3, 35.91N×82.50E, h0km, mb5.8/49,*
mb1 5.8/54, mb1mx5.8/59, mbtmp5.8/54, ML4.7/4, MS6.9/45,
Ms1 6.9/45, ms1mx6.9/50, Error ellipse: s-maj=9.5km
s-min=7.5km az=23.0
*DNK **12** 09:19:47.2±2.8, 35.42N×82.37E, h4km±66km, mb6.9,*
Ms7.2, Hypocentre not reviewed by the ISC
*MOS **12** 09:19:47.6±0.9, 36.00N×82.61E, h10km, mb6.7/140,*
MS7.1/100, Error ellipse: s-maj=5.3km s-min=2.9km
az=131.7 Broadband fault plane solution: P waves.
M0 1.40000×10[19] NP1:φs232.00000°, δ74.00000°,
λ2.00000°. NP2:φs141.00000°, δ88.00000°, λ164.00000°.
Principal axes: T Plg13.0000°, Azm95.0000°; N
Plg74.0000°, Azm315.0000°; P Plg10.0000°,
Azm188.0000°;
*BJI **12** 09:19:48.3±0.0, 36.14N×82.51E, h10km, mB6.9/73,*
mb5.9/69, ML6.9/6, Ms7.3/84, Ms7 7.3/67
*NEIC **12** 09:19:49.1±1.7, 35.91N±0.06×82.59E±0.08, h10km±1km,*
mb6.6/354, Ms_20 7.2/799, Mwb6.9/60, Mww6.9,
Mwc6.9(GCMT), Error ellipse: s-maj=10.9km
s-min=10.1km az=220.0, Moment Tensor Solution.
Moment tensor: Scale 10[19]Nm; Mrr-0.04; Mθθ-1.88;
Mφφ1.92; Mrθ0.34; Mθφ1.35; Mφr-0.39; Fault plane solution:
M0 2.39000×10[19] NP1:φs242.40000°, δ77.98000°,
λ-3.03000°. NP2:φs333.03000°, δ87.04000°,
λ-167.96000°. Principal axes: T 2.3790, Plg6.0000°,
Azm107.0000°; N 0.0172, Plg78.0000°, Azm347.0000°; P
-2.3962, Plg11.0000°, Azm198.0000°;
*BGR **12** 09:19:50.2±0.0, 35.22N×82.34E, h33km, mb7.0, Ms7.1*
*GCMT **12** 09:19:57.1±0.0, 36.22N×82.57E, h18km, MW6.9/169,*
Moment Tensor Solution. s168,c435; s169,c816;
Duration: 6.9 Moment tensor: Scale 10[19]Nm;
Mrr-0.28±.01; Mθθ-2.23±.01; Mφφ2.51±.01; Mrθ0.27±.03;
Mθφ1.60±.01; Mφr-0.05±.03; Best double couple:
M0 2.87500×10[19] NP1:φs332.00000°, δ85.00000°,
λ-176.00000°. NP2:φs242.00000°, δ86.00000°,
λ-5.00000°. Principal axes: T 3.0000, Plg1.0000°,
Azm287.0000°; N -0.2530, Plg84.0000°, Azm22.0000°; P
-2.7490, Plg6.0000°, Azm197.0000°; nsta1 refers to body
waves, cutoff=50s. nsta2 refers to surface/mantle waves,
cutoff=50s. Triangular moment-rate function
*NEIC **12** 09:19:58, 36.27N×82.59E, h14km, Moment Tensor*
Solution. Moment tensor: Scale 10[19]Nm; Mrr-0.17;
Mθθ-2.28; Mφφ2.45; Mrθ0.31; Mθφ1.57; Mφr-0.24; Fault
plane solution: M0 2.87000×10[19] NP1:φs242.00000°,
δ82.00000°, λ-4.00000°. NP2:φs332.00000°, δ86.00000°,
λ-172.00000°. Principal axes: T 2.9304, Plg3.0000°,
Azm107.0000°; N -0.1246, Plg82.0000°, Azm358.0000°;
P -2.8057, Plg8.0000°, Azm197.0000°;
*NEIC **12** 09:20:00, 36.02N×82.42E, h14km, Moment Tensor*
Solution. Moment tensor: Scale 10[19]Nm; Mrr-0.19;
Mθθ-1.91; Mφφ2.09; Mrθ-0.65; Mθφ1.48; Mφr0.42; Fault
plane solution: M0 2.61000×10[19] NP1:φs62.00000°,
δ75.00000°, λ-9.00000°. NP2:φs154.00000°, δ81.00000°,
λ-164.00000°. Principal axes: T 2.5959, Plg4.0000°,
Azm288.0000°; N 0.0274, Plg72.0000°, Azm184.0000°; P
-2.6233, Plg17.0000°, Azm19.0000°;
ISC 12 09:19:48.4±0.3, 35.88N±0.02×82.58E±0.02, h4km±1km, h4km:pP-P, n2526, σ2.04/2698, mb6.5/511, MS7.2/556, 135C-54D, Xizang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JOSI Joshimath 5.88 206 *ex* Pn 09 21 20.7 +4.2
JOSI *ex* Pg 09 21 43.3 +2.3
DHRM DHARAMSHALA 6.34 237 *e*P Pn 09 21 23.8 +0.9
DHRM *ex* x 09 23 14.0
KSH Kashi 6.38 307 P Pn 09 21 22.3 -0.9
KSH pP Pb 09 21 27.0 -13
KSH S Sn 09 22 31.8 -4.7
KSH Kashi 6.38 307 ⇑*i*Pn Pn 09 21 22.4 -0.8
KSH Sn Sn 09 22 32.9 -3.6
KSH LR LR
comp=E,2984µm,11.6s
KSH LR LR
comp=Z,2150µm,10.2s
SMLA Simla 6.55 225 *e*P Pn 09 21 27.2 +1.8
SMLA IAmb IAmb 09 21 39.5
comp=Z,916nm,0.8s
PTH Pithoragarh 6.62 198 *e*P Pn 09 21 26.8 +0.2
THN Thein Dam 6.64 241 *ex* Pn 09 21 30.0 +3.2
LGTI Lohaghat 6.70 198 *e*P Pn 09 21 27.6 0.0
DDI Dehra Dun 6.71 216 *ex* Pn 09 21 31.4 +3.5
BHK Bhakra 6.80 231 *ex* Pn 09 21 32.0 +3.1
JMU Jammu 7.09 246 *ex* Pn 09 21 35.5 +2.5
KDJ Kajisay 7.53 328 Pn 09 21 38.2 -0.9
KDJ Kajisay 7.53 328 P Pn 09 21 38.2 -0.9
NRN Naryn 7.57 319 Pn 09 21 39.5 -0.3
NRN Sn Sn 09 23 04.5 -1.7
NRN Naryn 7.57 319 P Pn 09 21 39.5 -0.3
NRN 09 23 04.5
DANN Dangsing 7.57 172 *e*P Pn 09 21 41.1 +1.3
comp=Z,5µm,1.0s
SHLS Shalkode 7.66 343 *i* P Pn 09 21 37.4 -3.4
SHLS *e*S Sn 09 23 01.3 -6.8
SHLS *e*LR LR 09 24 47.0
SHLS Shalkode 7.66 343 Pg Pg 09 22 09.6 -5.5
comp=Z,11µm,0.6s
SHLS Lg Lg 09 23 51.5
comp=Z,73µm,1.5s
UZB Uzynbulak 7.76 340 ⇓*i*P Pn 09 21 40.8 -1.5
comp=Z,2µm,2.3s
UZB *e*S Sn 09 23 02.9 -7.8
UZB *e*LR LR 09 24 37.1
PDGK Podgornoye 7.81 343 Pg Pg 09 22 12.7 -5.3
comp=Z,2µm,1.4s
PDGK Lg Lg 09 23 57.1
comp=Z,18µm,2.0s
PDGK Podgornoye 7.81 343 ⇑Pn Pn 09 21 42.7 -0.3
PDGK ⇓Sn Sn 09 23 08.5 -3.4
PDGK ⇓Lg Lg 09 23 55.6
PDGK Podgornoye 7.81 343 P Pn 09 21 40.1 -2.9
PDGK 09 23 07.9
SATY Saty 7.87 337 *e*S Sn 09 23 06.1 -7.1
SATY Saty 7.87 337 Pg Pg 09 22 15.5 -3.5
comp=Z,3µm,1.1s
SATY Lg Lg 09 24 01.5
comp=Z,52µm,2.1s
ZHN Zhinishke 7.95 338 ⇑*i*P Pn 09 21 43.0 -1.9
comp=Z,231nm,1.1s
ZHN *e*S Sn 09 23 10.7 -4.6
ZHN *e*LR LR 09 24 40.1
ZHN Zhinishke 7.95 338 Pg Pg 09 22 15.6 -5.1
comp=Z,3µm,0.7s
ZHN Lg Lg 09 24 00.4
comp=Z,4µm,0.8s
CHCP Chirah Chowk 7.98 257 P Pn 09 21 47.1 +1.9
NIL Nilore 7.99 257 Pn 09 21 45.5 +0.2
NIL Nilore 7.99 257 P Pn 09 21 47.1 +1.7
NIL Nilore 7.99 257 P Pn 09 21 45.6 +0.2
GKN Gorkha 8.04 167 *e*P Pn 09 21 47.5 +1.3
comp=Z,4µm,1.1s
ULHL Ulahol 8.04 324 P Pn 09 21 48.5 +2.3
SNR=117
KOLN Koldanda 8.13 174 *e*P Pn 09 21 47.3 -0.1
comp=Z,3µm,0.9s
KPKS Kokpek 8.15 340 ⇓*i*P Pn 09 21 45.8 -1.8
comp=Z,1µm,1.5s
KPKS *e*S Sn 09 23 12.0 -8.2
KPKS *e*LR LR 09 24 40.1
KURS Kuram 8.33 337 Pg Pg 09 22 23.6 -4.2
comp=Z,6µm,1.5s
KURS Lg Lg 09 24 15.7
comp=Z,31µm,1.9s
TNSS Tian-Shan 8.37 330 ⇓*i*P Pn 09 21 48.9 -2.0
TNSS *e*S Sn 09 23 19.4 -6.7
TNSS Tian-Shan 8.37 330 Pg Pg 09 22 23.5 -5.3
comp=Z,3µm,0.6s
TNSS Lg Lg 09 24 15.1
comp=Z,8µm,1.3s
BOOM Boomskoye usch 8.38 324 Pn 09 21 51.1 +0.4
BOOM Boomskoye usch 8.38 324 P Pn 09 21 51.1 +0.4
KKN Kakani 8.38 163 *e*P Pn 09 21 52.3 +1.4
comp=Z,999nm,0.8s
KZA Kyzart 8.42 320 P Pn 09 21 51.4 -0.2
SNR=605
GUN Gumba 8.42 160 *e*P Pn 09 21 53.0 +1.4
comp=Z,11µm,1.0s
MDOK Medeo 8.44 331 ⇑*i*P Pn 09 21 49.6 -2.0
MDOK *e*S Sn 09 23 20.6 -6.8
MDOK *e*LR LR 09 25 31.3
MDOK Medeo 8.44 331 ⇓Pn Pn 09 21 49.6 -2.0
comp=Z,7µm,1.2s
MDOK ⇓Lg Lg 09 24 16.8
MDOK Medeo 8.44 331 Pg Pg 09 22 25.4 -4.6
comp=Z,3µm,1.1s
MDOK Lg Lg 09 24 18.4
comp=Z,26µm,1.4s
MDOK Medeo 8.44 331 P Pn 09 21 49.6 -2.0
KOTS Kotyrbulak 8.47 332 Pg Pg 09 22 24.7 -6.0
comp=Z,5µm,0.9s
KOTS Lg Lg 09 24 16.9

comp=Z,53μm,1.4s
NDI New Delhi 8.49 214 ex Pn 09 21 54.0 +1.9
KNDC Almaty 8.52 331 ⇑Pn Pn 09 21 54.2 +1.6
KNDC ⇓Lg Lg 09 24 12.2
KNDC Almaty 8.52 331 P Pn 09 21 51.1 -1.4
DMN Daman 8.52 165 eP Pn 09 21 53.9 +1.1
comp=Z,10μm,1.4s
AAA Alma-Ata 8.53 331 eS Sn 09 23 24.6 -4.8
AAA eLR LR 09 24 58.9
AAA Alma-Ata 8.53 331 Pg Pg 09 22 25.1 -6.6
comp=Z,3μm,0.7s
AAA Lg Lg 09 24 17.7
comp=Z,30μm,1.1s
AAA Alma-Ata 8.53 331 eP Pn 09 21 51.5 -1.2
AAA eS Sn 09 23 28.1 -1.3
AAA pmax pmax
comp=Z,10μm,1.9s
AAA smax smax
comp=E,72μm,6.5s
AAA MLR MLR
comp=Z,343μm,13.0s
BHGR Bahadurgarh 8.61 215 eP Pn 09 21 58.4 +4.5
PKI Pulchoki 8.62 163 eP Pn 09 21 55.3 +1.0
PKI Pulchoki 8.62 163 eP Pn 09 21 55.4 +1.1
MTBS Maitube 8.66 329 iP Pn 09 21 53.0 -1.6
MTBS eS Sn 09 23 26.2 -6.5
MTBS Maitube 8.66 329 Pg Pg 09 22 28.6 -5.6
comp=Z,892nm,0.7s
MTBS Lg Lg 09 24 23.5
comp=Z,3μm,0.8s
AYAN Aya Nagar 8.70 214 eP Pn 09 21 58.1 +3.1
DJR Jarkent 8.71 347 Pg Pg 09 22 28.3 -6.9
comp=Z,1μm,1.4s
DJR Lg Lg 09 24 23.6
comp=Z,12μm,1.6s
JIRN Jiri 8.75 158 eP Pn 09 21 57.8 +1.7
KST Kastek 8.79 326 Pg Pg 09 22 30.4 -6.4
comp=Z,4μm,1.3s
KST Lg Lg 09 24 27.6
comp=Z,14μm,1.8s
MNBS Baschi 8.80 340 Pg Pg 09 22 30.0 -6.8
comp=Z,4μm,0.7s
MNBS Lg Lg 09 24 26.1
comp=Z,13μm,1.0s
WMQ Urumqi 8.85 25 P Pn 09 21 55.6 -1.6
WMQ pP Pg 09 22 01.8 -36
WMQ sP 09 22 04.3
WMQ S Sn 09 23 35.4 -2.0
WMQ pmax pmax
comp=Z,3μm,1.3s
WMQ pmax pmax
comp=Z,23μm,3.7s
WMQ smax smax
comp=Z,14μm,1.3s
WMQ smax smax
comp=Z,15μm,1.5s
WMQ LR LR
comp=Z,1534μm,16.7s
WMQ LR LR
comp=Z,1565μm,15.5s
WMQ LR LR
comp=Z,1860μm,20.7s
WMQ Urumqi 8.85 25 Pn 09 21 55.5 -1.6
WMQ Urumqi 8.85 25 P Pn 09 21 55.6 -1.6
UCH Uchtor 8.92 318 P Pn 09 21 58.9 +0.5
SNR=18
KBK Karagaybulak 8.99 321 P Pn 09 21 59.4 +0.3
SNR=344
CEP Cherat 9.01 260 P Pn 09 21 59.7 +0.3
DGS Degeres 9.04 327 Pg Pn 09 22 34.8 +35
comp=Z,2μm,0.8s
DGS Lg Lg 09 24 35.2
comp=Z,7μm,0.9s
KTBS Karatobe 9.04 332 Pg Pn 09 22 35.8 +36
comp=Z,1μm,0.9s
KTBS Lg Lg 09 24 35.9
comp=Z,16μm,1.3s
CHKK Chushkaly 9.05 333 eP Pn 09 21 57.5 -2.4
CHKK eS Sn 09 23 36.7 -5.5
CHKK Chushkaly 9.05 333 Pg Pn 09 22 34.2 +34
comp=Z,986nm,0.9s
CHKK Lg Lg 09 24 34.1
comp=Z,8μm,0.9s
ARXS Arharly 9.09 338 Pg Pn 09 22 35.3 +35
comp=Z,1μm,0.8s
ARXS Lg Lg 09 24 36.2
comp=Z,14μm,1.1s
SARP Sargodha 9.13 247 P Pn 09 22 02.4 +1.4
AAK Ala-Archa 9.21 320 Pn Pn 09 22 02.2 0.0
comp=Z,5.2nm,0.3s,baz=144,slow=12,SNR=129
AAK Lg Lg 09 24 34.8
comp=Z,110nm,0.3s,baz=176,slow=13,SNR=2.9
AAK LR LR 09 26 13.3
comp=Z,107μm,18.2s,baz=140,slow=42
AAK Ala-Archa 9.21 320 P Pn 09 22 01.6 -0.5
SNR=533
AAK Ala-Archa 9.21 320 P Pn 09 22 03.1 +0.9
AAK Ala-Archa 9.21 320 ⇑Pn Pn 09 22 01.5 -0.7
comp=Z,1μm,1.0s
AAK ⇓Pg 09 22 37.3
comp=Z,4μm,0.9s
AAK ⇑Lg Lg 09 24 32.8
AAK Ala-Archa 9.21 320 Pn 09 22 01.7 -0.4
AAK Ala-Archa 9.21 320 P Pn 09 22 01.7 -0.5
AAK Ala-Archa 9.21 320c iP Pn 09 22 01.6 -0.5
AAK pmax pmax
comp=Z,1μm,1.3s
FRU1 Bishkek 9.26 321 Pn 09 22 02.6 -0.2
FRU1 Bishkek 9.26 321 P Pn 09 22 02.6 -0.2
AML Almayashu 9.31 315 P Pn 09 22 04.9 +1.1
SNR=24
KUU Kurty 9.33 331 ⇓iP Pn 09 22 01.2 -2.5
comp=Z,865nm,2.4s
KUU eS Sn 09 23 42.5 -6.5
KUU eLR LR 09 26 16.5
KUU Kurty 9.33 331 Pg Pn 09 22 40.0 +36
comp=Z,1μm,1.7s
KUU Lg Lg 09 24 43.0
comp=Z,12μm,1.2s
CHMS Chumysh 9.34 322 P Pn 09 22 04.6 +0.9
SNR=232
CHMS Chumysh 9.34 322 ⇑Pn Pn 09 22 02.5 -1.3
comp=Z,2μm,1.1s
CHMS ⇑Pg 09 22 37.8
comp=Z,5μm,1.2s
CHMS ⇓Lg Lg 09 24 35.0
comp=Z,9μm,1.1s
CHMS Chumysh 9.34 322 iP Pn 09 22 02.5 -1.3
CHMS pmax pmax
comp=Z,2μm,1.1s
KRBS Karabastau 9.44 328 Pg Pn 09 22 44.9 +40
KRBS Lg Lg 09 24 52.5
THW Thamme Wali 9.47 254 P Pn 09 22 07.1 +1.4
LSA Lhasa 9.48 128 P Pn 09 22 10.8 +4.6
LSA pP 09 22 16.5
LSA pmax pmax
comp=Z,550nm,2.1s
LSA LR LR
comp=Z,6646μm,24.2s
LSA Lhasa 9.48 128 P Pn 09 22 13.3 +7.1
LSA Lhasa 9.48 128 Pn 09 22 10.6 +4.4
LSA Lhasa 9.48 128 P Pn 09 22 10.6 +4.4
RAMN Ramite 9.54 158 eP Pn 09 22 07.1 +0.3
TAPN Taplejung 9.56 151 eP Pn 09 22 08.3 +1.2
comp=Z,16μm,1.8s
EKS2 Erkin-Say 9.61 317 P Pn 09 22 08.6 +1.0
SNR=493
TDK Taldyqorghan 9.65 342 ⇑iP Pn 09 22 05.3 -2.8
TDK eS Sn 09 23 48.9 -8.0
TDK eLR LR 09 25 53.4
TDK Taldyqorghan 9.65 342 Pg Pn 09 22 45.9 +38
TDK Lg Lg 09 24 53.3
USP Ospenovka 9.66 322 P Pn 09 22 08.0 -0.2
SNR=223
KAPS Kapalarasan 9.71 346 Pg Pn 09 22 47.0 +38
KAPS Lg Lg 09 24 56.8
SGDS Sogindy 9.73 323 ⇑iP Pn 09 22 06.9 -2.3
comp=Z,159nm,1.0s
SGDS eS Sn 09 23 54.3 -4.7
SGDS eLR LR 09 26 18.7
SGDS Sogindy 9.73 323 Pg Pn 09 22 46.4 +37
SGDS Lg Lg 09 24 54.7
ODAN Odare 9.88 154 eP Pn 09 22 12.0 +0.5
comp=Z,13μm,1.3s
GTK Tadong 9.95 147 ex Pn 09 22 12.7 +0.3
GTK eP Pn 09 22 13.7 +1.3
GTK IAmb IAmb 09 22 24.6
comp=Z,1μm,0.9s
MRKS Merke 9.97 316 Pg Pn 09 22 53.3 +41
MRKS Lg Lg 09 25 06.9
BTK Batken 10.18 298 Pn Pn 09 22 13.3 -2.1
BTK Batken 10.18 298 P Pn 09 22 13.3 -2.1
MK31 Makanchi Array 10.91 359 ⇓Pn Pn 09 22 22.3 -3.0
comp=Z,5μm,1.1s,baz=178,slow=11
MK31 ⇓Sn Sn 09 24 18.9 -8.9
comp=Z,6μm,0.9s,baz=175,slow=24,SNR=5.4
MK31 ⇑Lg Lg 09 25 30.7
comp=Z,20μm,1.4s
MK31 Makanchi Array 10.91 359 Pn 09 22 22.4 -2.9
MK31 Sn Sn 09 24 19.1 -8.7
MK31 Makanchi Array 10.91 359 iP Pn 09 22 22.2 -3.0
MK31 e 09 24 18.8
MKAR Makanchi Array 10.91 359 Pn Pn 09 22 22.9 -2.4
comp=Z,113nm,0.3s,baz=182,slow=13,SNR=768
MKAR Sn Sn 09 24 20.4 -7.3
comp=Z,223nm,0.3s,baz=182,slow=24,SNR=6.1
MKAR Lg Lg 09 25 33.5
comp=Z,94nm,0.3s,baz=165,slow=28,SNR=4.9
MKAR LR LR 09 27 31.4
comp=Z,968μm,20.2s,baz=174,slow=43
MKAR Makanchi Array 10.91 359 Pn 09 22 21.7 -3.6
MKAR Sn Sn 09 24 20.9 -6.9
MAKZ Makanchi 10.93 358 ⇓Pn Pn 09 22 22.6 -3.1
comp=Z,10μm,1.2s
MAKZ ⇓Sn Sn 09 24 16.8 -12
comp=Z,4μm,1.1s
MAKZ ⇓Lg Lg 09 25 32.0
comp=Z,7μm,1.4s
MAKZ Makanchi 10.93 358 Pn 09 22 22.2 -3.4
MAKZ Sn Sn 09 24 22.8 -5.5
MAKZ Makanchi 10.93 358 P Pn 09 22 22.5 -3.1
KBL Kabul 11.16 267 Pn 09 22 27.4 -1.5
KBL Sn Sn 09 24 29.0 -5.2
KBL Kabul 11.16 267 P Pn 09 22 25.9 -3.0
KBL P Pn 09 22 25.9 -3.0
KBL Kabul 11.16 267 P Pn 09 22 27.4 -1.5
KBL 09 24 29.0
DZA Taraz 11.17 312 ⇑iP Pn 09 22 29.7 +0.8
DZA eS Sn 09 24 31.6 -2.6
DZA eLR LR 09 26 58.9
DZA Taraz 11.17 312 Pg Pn 09 23 14.4 +46
DZA Lg Lg 09 25 44.1
BTLS Baital 11.22 327 iP Pn 09 22 27.7 -1.8
BTLS eS Sn 09 24 29.1 -6.3
BTLS eLR LR 09 26 43.3
BTLS Baital 11.22 327 Pg Pn 09 23 15.7 +46
comp=Z,390nm,1.0s
BTLS Lg Lg 09 25 46.6
comp=Z,462nm,2.4s
JBG Jabagly 11.40 309 Pg Pn 09 23 18.5 +46
JBG Lg Lg 09 25 51.3
AJM Ajmer 11.57 218 iP Pn 09 22 33.0 -1.4
AJM iS Sn 09 24 37.0 -7.1
AJM Ajmer 11.57 218 iP Pn 09 22 33.0 -1.4
AJM ix x 09 24 37.0
IUG Iuzhnay 11.59 306 ⇑iP Pn 09 22 31.8 -3.0
IUG eS Sn 09 24 40.8 -3.8
IUG eLR LR 09 27 23.9
IUG Iuzhnay 11.59 306 Pg Pn 09 23 22.7 +48
comp=Z,633nm,1.5s
IUG Lg Lg 09 25 58.7
comp=Z,26μm,2.3s
ZSN Zaisan 11.69 8 ⇓iP Pn 09 22 32.9 -3.1
ZSN eS Sn 09 24 38.2 -8.7
ZSN eLR LR 09 27 32.4
ZSN Zaisan 11.69 8 Pg Pn 09 23 24.8 +49
TAS Tashkent 11.73 302 Pn 09 22 34.4 -2.1
TAS Tashkent 11.73 302 P Pn 09 22 34.4 -2.1
KK31 Karatay Array 11.78 311 ⇓Pn Pn 09 22 34.6 -2.7
comp=Z,346nm,0.8s,baz=127,slow=11,SNR=1023
KK31 ⇑Pg 09 23 21.6
comp=Z,710nm,0.8s,baz=127,slow=14,SNR=3.8
KK31 ⇑Lg Lg 09 25 59.0
comp=Z,11μm,1.4s
KK31 Karatay Array 11.78 311 Pn 09 22 34.7 -2.7
KK31 Karatay Array 11.78 311 iP Pn 09 22 34.5 -2.7
KKAR Karatay Array 11.78 311 Pn 09 22 34.7 -2.6
KKAR Karatay Array 11.78 311 Pn 09 22 35.0 -2.2
KKAR Karatay Array 11.78 311 P Pn 09 22 34.7 -2.6
CHM Chimkent 11.95 306 ⇑iP Pn 09 22 38.8 -0.8
CHM eLR LR 09 27 22.9
CHM Chimkent 11.95 306 P Pn 09 22 37.7 -1.9
CHM pmax pmax
comp=Z,5μm,1.2s
BRLS Borolday 12.16 310 eLR LR 09 27 31.4
BOK Bokaro 12.38 166 eP Pn 09 22 43.5 -1.9
BOK IAmb IAmb 09 22 47.9
comp=Z,963nm,0.7s
JBP Jabalpur 12.87 191 eP Pn 09 22 52.1 +0.1
JBP ex x 09 25 13.8
JBP ex x 09 25 15.2
ITAN ITANAGAR 12.88 129 ex Pn 09 22 54.5 +2.2
SHL Shillong 13.02 140 eP Pn 09 22 51.8 -2.5
SHL IAmb IAmb 09 23 10.3
comp=Z,3μm,2.2s
SHL Shillong 13.02 140 Pn 09 22 53.0 -1.3
SHL Shillong 13.02 140 P Pn 09 22 53.1 -1.2
SNR=198
SHL Shillong 13.02 140 P Pn 09 22 53.0 -1.3
BHPL Bhopal 13.36 201 ex Pn 09 22 53.6 -5.3
BHPL IAmb IAmb 09 23 13.7
comp=Z,909nm,0.9s
BHPL ex x 09 27 07.2
JASL Jaisalmer 13.37 231 eP Pn 09 22 57.9 -1.1
GTA Gaotai 14.10 70 ⇑P Pn 09 23 07.8 -1.3
GTA pP P 09 23 14.3 -2.7
GTA sP 09 23 18.7
GTA S Sn 09 25 45.6 -0.5
GTA sS S 09 25 50.8 -17
GTA SS SnSn 09 26 02.4 +4.0
GTA pmax pmax
comp=Z,130nm,2.1s
GTA pmax pmax
comp=Z,22μm,9.3s
GTA LR LR
comp=Z,1733μm,16.5s
GTA LR LR
comp=Z,2161μm,11.3s
AGT Agartala 14.11 146 eP Pn 09 23 07.2 -1.9
AGT IAmb IAmb 09 23 23.1
comp=Z,3μm,1.4s
LKP Lekhapani 14.14 123 eP Pn 09 23 10.7 +1.2
LKP IAmb IAmb 09 23 19.6
comp=Z,5μm,1.6s
KOHI KOHIMA 14.15 132 ex Pn 09 23 07.9 -1.9
KOHI IAmb IAmb 09 23 23.1
comp=Z,685nm,0.6s
SEM Semipalatinsk 14.62 354 ⇑iP Pn 09 23 11.5 -4.7
comp=Z,7μm,4.4s
SEM eS Sn 09 25 52.8 -6.0
SEM eLR LR 09 30 03.0
BELO BELONIA 14.75 146 ex Pn 09 23 15.8 -2.1
NGP Nagpur 14.99 193 ex Pn 09 23 15.3 -5.9
NGP ex x 09 23 18.9
NGP ex x 09 26 06.4
KURBB Kurchatov Arra 15.03 350 Pn Pn 09 23 16.6 -4.9
comp=Z,2.4nm,0.3s,baz=173,slow=12,SNR=288
KURBB Lg Lg 09 27 52.1
comp=Z,2.5nm,0.3s,baz=198,slow=24,SNR=4.8
KURK Kurchatov 15.11 350 Pn 09 23 18.2 -4.3
KURK Kurchatov 15.11 350 P Pn 09 23 16.6 -5.9
KURK P Pn 09 23 16.6 -5.9
KURK Kurchatov 15.11 350 iP Pn 09 23 17.0 -5.5
KURK pmax pmax
comp=Z,1μm,1.0s
BWNR Bhubaneshwar 15.78 169 ex Pn 09 23 28.0 -3.5
BWNR eP Pn 09 23 28.2 -3.3
BWNR IAmb IAmb 09 23 40.8
comp=Z,2μm,0.6s
BRZS Berezniki 15.83 336 ⇓iP Pn 09 23 26.8 -5.3
comp=Z,5μm,2.6s
BRZS eLR LR 09 29 36.3
HRA Herat 16.70 271 Pn 09 23 39.5 -4.1
HRA IAmb IAmb 09 23 48.6
comp=Z,5μm,1.5s
BHUJ Bhuj 16.85 225 eP Pn 09 23 42.2 -3.0
BHUJ IAmb IAmb 09 23 52.5
comp=Z,5μm,1.7s
RPR Rampur 17.20 191 eP Pn 09 23 46.6 -3.1
RPR IAmb IAmb 09 23 54.3
comp=Z,706nm,1.1s
RPR IVMs_BB IVMs_BB 09 30 43.3
comp=Z,132μm,11.9s
LZH Lanzhou 17.21 83 ⇑P Pn 09 23 48.3 -1.6
LZH pP pP 09 23 54.4 +0.3
LZH PP sP 09 24 05.9 +11
LZH S Sn 09 27 06.1 +4.3
LZH pmax pmax
comp=Z,950nm,1.5s
LZH pmax pmax
comp=Z,23μm,6.0s
LZH LR LR
comp=Z,1748μm,15.2s
LZH LR LR
comp=Z,1963μm,15.7s
SRSP Sriramsagar 17.29 194 eP Pn 09 23 44.7 -6.2
SRSP IAmb IAmb 09 23 54.5
comp=Z,630nm,1.2s
SRSP e 09 26 51.3
SRSP IVMs_BB IVMs_BB 09 30 44.1
comp=Z,177μm,12.4s
CHLP Challavanipeta 17.35 175 eP Pn 09 23 46.9 -4.6
CHLP IAmb IAmb 09 23 57.3
comp=Z,3μm,1.9s
CHLP eS Sn 09 27 05.4 +0.3
CHLP IVMs_BB IVMs_BB 09 30 41.2
comp=Z,101μm,13.9s
GGR Gangavaram 18.11 187 eP Pn 09 23 57.1 -3.8
GGR IAmb IAmb 09 24 05.0
comp=Z,498nm,1.1s
GGR IVMs_BB IVMs_BB 09 31 09.8
comp=Z,109μm,17.8s
SIMRM Sittwe 18.11 147 Pn 09 24 00.1 -0.9
ZAA0 Zalesovo Array 18.14 4 Pn 09 23 55.9 -5.1
ZAA0 IAmb IAmb 09 24 05.0
comp=Z,9μm,1.7s
ZALV Zalesovo Beam 18.14 4 P Pn 09 23 55.9 -5.2
comp=Z,26nm,0.3s,baz=191,slow=11,SNR=978
ZALV LR LR 09 32 03.4
comp=Z,797μm,18.9s,baz=207,slow=41
ZALV Zalesovo Beam 18.14 4 iP Pn 09 23 55.7 -5.3
ZALV pmax pmax
comp=Z,1μm,0.8s
CD2 Chengdu 18.36 100 ⇑iP P 09 24 04.5 +0.5
CD2 sP sP 09 24 12.4 +4.6
CD2 S Sn 09 27 30.9 +1.6
CD2 pmax pmax
comp=Z,2μm,1.5s
CD2 pmax pmax
comp=Z,60μm,5.9s
KLRI Killari 18.51 198 eP P 09 24 01.0 -4.9
KLRI IAmb IAmb 09 24 10.7
comp=Z,945nm,1.2s
KLRI eS Sn 09 27 31.8 -1.5
KLRI IVMs_BB IVMs_BB 09 31 21.4
comp=Z,185μm,12.4s
PVM Polavaram 18.57 183 eP P 09 24 02.0 -4.4
PVM e 09 24 05.0
PVM IAmb IAmb 09 24 11.7
comp=Z,327nm,1.0s
PVM e 09 27 30.0
PVM IVMs_BB IVMs_BB 09 31 24.0
comp=Z,89μm,14.2s
HYBB Hyderabad (bro 18.73 192 eP P 09 24 02.8 -5.4
HYBB IAmb IAmb 09 24 12.2
comp=Z,502nm,1.1s
HYBB eS Sn 09 27 38.9 +0.5
HYBB IVMs_BB IVMs_BB 09 31 38.0
comp=Z,190μm,11.7s
HYB Hyderabad 18.73 192 iP P 09 24 03.0 -5.2
HYB eS Sn 09 27 32.0 -6.5
HYB eLR LR
comp=Z,110nm,9.0s
HYB Hyderabad 18.73 192 ex P 09 24 03.3 -5.0
HYB IAmb IAmb 09 24 12.6
comp=Z,647nm,0.9s
POO Poona 18.93 206 eP P 09 24 08.1 -2.2
POO IAmb IAmb 09 24 19.5
comp=Z,877nm,1.2s
MYLAV Mylavaram 19.13 186 eP P 09 24 12.2 -0.4
MYLAV IAmb IAmb 09 24 16.9
comp=Z,595nm,1.1s
MYLAV e 09 27 40.0
MYLAV IVMs_BB IVMs_BB 09 31 43.2
comp=Z,116μm,13.2s
BVAR Borovoye Array 19.18 337 P P 09 24 11.1 -1.8
comp=Z,7.9nm,0.3s,baz=140,slow=9.5,SNR=167
BRVK Borovoye 19.24 337 P P 09 24 12.1 -1.5
BRVK IAmb IAmb 09 24 24.5
comp=Z,5μm,1.1s
BRVK Borovoye 19.24 337 P P 09 24 11.4 -2.2
BRVK P P 09 24 11.4 -2.2
BRVK S Sn 09 27 48.7 -1.6
BRVK S Sn 09 27 48.7 -1.6
BRVK Borovoye 19.24 337 P P 09 24 12.1 -1.5
BRVK pmax pmax
comp=Z,5μm,1.1s
ASHT Ashkhabad 19.45 283 P P 09 24 13.5 -2.5
ASHT IAmb IAmb 09 24 30.6
comp=Z,4μm,1.1s
ASHT Ashkhabad 19.45 283 P P 09 24 13.5 -2.5
ASHT pmax pmax
comp=Z,4μm,1.1s
NJS Nagarjunasagar 19.46 189 eP P 09 24 12.6 -3.6
NJS IAmb IAmb 09 24 21.4
comp=Z,1μm,1.3s
NJS eS S 09 27 58.4 +1.7
NJS IVMs_BB IVMs_BB 09 32 00.9
comp=Z,105μm,14.3s
GEYT Alibeck 19.66 283 P P 09 24 16.8 -1.5
comp=Z,1.3nm,0.3s,baz=99,slow=14,SNR=55
GEYT LR LR 09 33 42.5
comp=Z,206μm,19.8s,baz=65,slow=43
GEYT Alibeck 19.66 283 P P 09 24 16.1 -2.2
GYA0B ALIBECK ARRAY 19.66 283 P P 09 24 14.9 -3.4
SRLM Srisailam 19.97 190 eP P 09 24 20.5 -1.3
SRLM IAmb IAmb 09 24 25.2
comp=Z,2μm,1.4s
SRLM e 09 28 01.4
SRLM IVMs_BB IVMs_BB 09 32 17.6
comp=Z,138μm,12.1s
ADKI Addanki 20.09 187 eP P 09 24 23.0 0.0
ADKI IAmb IAmb 09 24 26.3
comp=Z,601nm,1.1s
ADKI eS S 09 28 09.3 +0.1
ADKI IVMsBB 09 32 21.6
comp=Z,124μm,13.3s
KMI Kunming 20.37 116 P P 09 24 27.2 +0.9
KMI IAmb IAmb 09 24 43.7
comp=Z,5μm,1.8s
KMI Kunming 20.37 116 IAMs_20 IAMs_20 09 32 45.3
comp=Z,687nm,18.0s
KMI Kunming 20.37 116 P P 09 24 27.2 +0.9
KMI pmax pmax
comp=Z,5μm,1.8s
KMI MLR MLR
comp=Z,687nm,18.0s
MOY Mondy 20.55 34 eP P 09 24 27.9 0.0
MOY pmax pmax
comp=Z,24μm,3.7s
ZAK Zakamensk 20.84 40 eP P 09 24 31.5 +0.4
ZAK pmax pmax
comp=Z,2μm,1.2s
AB31 Akbulak array 21.27 316 ⇑P P 09 24 34.4 -1.2
comp=Z,2μm,1.1s,baz=113,slow=10,SNR=3776
AB31 Akbulak array 21.27 316 P P 09 24 34.4 -1.2
ABKAR Akbulak array 21.27 316 P P 09 24 34.9 -0.7
ABKAR Akbulak array 21.27 316 P P 09 24 33.6 -2.0
ABKAR IAmb IAmb 09 24 53.2
comp=Z,2μm,1.1s
I34MN SONGINO INFRAS 21.29 49 P P 09 24 40.3 +4.3
baz=260,slow=10,SNR=4.6
I34MN i 11 09 10.0
baz=244,slow=332,SNR=6.3
SONM Songino Array 21.29 49 P P 09 24 36.3 +0.2
comp=Z,1μm,0.9s,baz=240,slow=10,SNR=346
SONM LR LR 09 33 27.3
comp=Z,1085μm,19.7s,baz=240,slow=38
SONM Songino Array 21.29 49 P P 09 24 36.0 -0.1
URV Uravakonda 21.38 194 eP P 09 24 36.2 -0.9
URV IAmb IAmb 09 24 47.6
comp=Z,2μm,1.0s
URV eS S 09 28 34.7 -0.3

URV IVMs_BB IVMs_BB 09 33 08.2
comp=Z,311μm,11.5s
XAN Xi'an 21.65 87 P P 09 24 38.6 -1.3
XAN pP sP 09 24 44.5 +0.8
XAN PP PnPn 09 25 08.3 +8.0
XAN S S 09 28 42.1 +2.0
XAN pmax pmax
comp=Z,18μm,8.1s
XAN LR LR
comp=Z,817μm,15.7s
XAN LR LR
comp=Z,1378μm,15.7s
XAN Xi'an 21.65 87 P P 09 24 39.1 -0.8
XAN IAmb IAmb 09 24 56.7
comp=Z,2μm,1.2s
XAN Xi'an 21.65 87 IAMs_20 IAMs_20 09 33 56.0
comp=Z,1263μm,18.0s
XAN Xi'an 21.65 87 P P 09 24 39.1 -0.8
XAN pmax pmax
comp=Z,2μm,1.2s
XAN MLR MLR
comp=Z,1263μm,18.0s
ULN Ulaanbaatar 21.71 49 P P 09 24 41.4 +0.9
ULN Ulaanbaatar 21.71 49 IAMs_20 IAMs_20 09 33 29.3
comp=Z,1028μm,20.0s
ULN Ulaanbaatar 21.71 49 P P 09 24 41.4 +0.9
ULN pmax pmax
comp=Z,10μm,1.5s
ULN MLR MLR
comp=Z,1028μm,20.0s
GOA Goa 21.76 203 eP P 09 24 39.9 -1.2
GOA IAmb IAmb 09 24 45.5
comp=Z,8μm,1.9s
TLY Talaya 21.81 37 P P 09 24 42.0 +0.6
comp=Z,635nm,1.1s,baz=242,slow=9.2,SNR=120
TLY LR LR 09 33 54.3
comp=Z,896μm,21.6s,baz=230,slow=39
TLY Talaya 21.81 37 P P 09 24 40.9 -0.5
TLY IAmb IAmb 09 25 14.0
comp=Z,3μm,1.3s
TLY IAMs_20 IAMs_20 09 33 16.8
comp=Z,1054μm,22.0s
TLY Talaya 21.81 37 P P 09 24 41.2 -0.2
TLY P P 09 24 41.2 -0.2
TLY Talaya 21.81 37c iP P 09 24 41.0 -0.4
TLY e 09 25 02.9
TLY eS S 09 28 43.1 +0.2
TLY eSS Sn 09 29 09.9 +18
TLY pmax pmax
comp=Z,6μm,1.4s
TLY MLR MLR
comp=Z,1458μm,16.0s
BTO Baotou 22.02 69 eP P 09 24 42.3 -1.6
BTO S S 09 28 41.1 -6.3
SKHT Srikalahasti 22.19 187 eP P 09 24 45.2 -0.6
SKHT IAmb IAmb 09 24 53.6
comp=Z,1μm,1.4s
SKHT IVMs_BB IVMs_BB 09 33 36.5
comp=Z,94μm,13.6s
CHTO Chiang Mai 22.31 135 P P 09 24 46.9 -0.1
CHTO Chiang Mai 22.31 135 P P 09 24 46.9 -0.1
CHTO pmax pmax
comp=Z,1μm,1.4s
CHTO MLR MLR
comp=Z,278μm,20.0s
IRK Irkutsk 22.46 36 eP P 09 24 50.4 +2.0
IRK pmax pmax
comp=Z,22μm,3.8s
CM31 Chiang Mai Arr 22.59 136 P P 09 24 50.0 0.0
CM31 IAmb IAmb 09 25 16.5
comp=Z,2μm,1.4s
CM31 Chiang Mai Arr 22.59 136 P P 09 24 49.8 -0.2
SNR=423
CM31 P P 09 24 49.8 -0.2
SNR=423
CMAR Chiang Mai Arr 22.59 136 P P 09 24 50.8 +0.8
comp=Z,82nm,0.9s,baz=305,slow=12,SNR=55
GYA Guiyang 22.60 108⇑iP P 09 24 50.0 -0.2
GYA PP PnPn 09 25 23.4 +10
GYA S S 09 28 55.9 -2.6
GYA pmax pmax
comp=Z,1μm,1.0s
GYA pmax pmax
comp=Z,20μm,5.5s
GYA LR LR
comp=Z,506μm,14.1s
GYA LR LR
comp=Z,646μm,15.4s
MDRS Chennai 22.81 186 eP P 09 24 52.1 -0.2
MDRS IAmb IAmb 09 25 03.1
comp=Z,6μm,2.1s
I31KZ AKTYUBINSK INF 22.91 317 i 12 03 30.0
baz=113,slow=337,SNR=2.2
AKTO Aktyubinsk 22.94 317 P P 09 24 52.4 -1.1
comp=Z,455nm,1.0s,baz=113,slow=9.1,SNR=92
AKTO LR LR 09 34 55.5
comp=Z,279μm,20.8s,baz=124,slow=40
AKTO Aktyubinsk 22.94 317 ⇓P P 09 24 51.1 -2.3
comp=Z,2μm,1.2s
ENH Enshi 23.19 96 P P 09 24 55.2 -1.1
ENH IAmb IAmb 09 25 36.8
comp=Z,2μm,1.2s
ENH IAMs_20 IAMs_20 09 34 47.3
comp=Z,1077μm,20.0s
HHC Hu-ho-hao-te 23.21 69 eP P 09 25 01.9 +5.5
HHC PP PnPn 09 25 31.8 +10
HHC S S 09 29 07.5 -1.5
HHC Hu-ho-hao-te 23.21 69 eP P 09 24 55.0 -1.4
HHC PP PnPn 09 25 25.7 +4.0
HHC S S 09 29 03.8 -5.2
HHC pmax pmax
comp=Z,18μm,7.9s
HHC LR LR
comp=Z,296μm,17.7s
HHC LR LR
comp=Z,319μm,12.9s
HHC LR LR
comp=Z,563μm,17.3s
SLVN Son La 23.60 122 P P 09 25 01.8 +1.3
SLVN IAmb IAmb 09 25 17.9
comp=Z,2μm,1.5s
TIY Taiyuan 23.93 77 eP P 09 25 03.7 +0.1
TIY S S 09 29 18.0 -2.7
TIY pmax pmax
comp=Z,3μm,1.2s
TIY pmax pmax
comp=Z,24μm,6.0s
TIY LR LR
comp=Z,464μm,11.8s
TIY LR LR
comp=Z,1196μm,12.8s
WSAR Wadi Sarin 24.27 245 P P 09 25 06.9 +0.1
comp=Z,145nm,0.8s,baz=97,slow=7.4,SNR=120
WSAR Wadi Sarin 24.27 245 P P 09 25 07.6 +0.9
SNR=313
JLN Jalan Bani Buh 24.37 242 P P 09 25 10.1 +2.5
SNR=45
WBK Wadi Bani Khal 24.40 244 P P 09 25 10.0 +2.0
SNR=230
WBK P P 09 25 10.0 +2.0
SNR=230
WBK P P 09 25 10.0 +2.0
SNR=230
WBK S S 09 29 33.4 +5.1
WBK S S 09 29 33.4 +5.1
WBK S S 09 29 33.4 +5.1
DGPR DIGLIPUR 24.45 155 eP P 09 25 07.1 -1.3
DGPR IAmb IAmb 09 25 22.0
comp=Z,2μm,1.2s
BIDO Bidbid 24.48 246 P P 09 25 10.7 +2.0
SNR=172
BIDO S S 09 29 35.6 +6.1
BANOM Banah 24.57 254 iP P 09 25 10.5 +0.9
SNR=112
BANOM Banah 24.57 254 P P 09 25 10.8 +1.2
SNR=116
BANOM P P 09 25 10.8 +1.2
SNR=116
BANOM S S 09 29 35.8 +4.8
BANOM S S 09 29 35.8 +4.8
SHME Shamm 24.63 254 iP P 09 25 11.4 +1.3
SNR=101
SMDO Samad 24.81 246 P P 09 25 14.0 +2.2
SNR=199
SMDO P P 09 25 14.0 +2.2
SNR=199

MDH Madha 24.89 252 iP P 09 25 12.9 +0.5
SNR=73
MDH Madha 24.89 252 P P 09 25 14.0 +1.6
SNR=180
MDH P P 09 25 14.0 +1.6
SNR=180
MSFE Esma-Masafi 24.97 253 iP P 09 25 14.6 +1.5
SNR=334
HOQ Hoqain 25.05 248 P P 09 25 16.0 +2.1
SNR=124
HOQ P P 09 25 16.0 +2.1
SNR=124
UOSS Minazif 25.15 252 iP P 09 25 15.1 +0.4
SNR=35
UOSS Minazif 25.15 252 P P 09 25 15.3 +0.6
UOSS IAmb IAmb 09 25 37.9
comp=Z,978nm,1.1s
JMDO Jabal Madar 25.18 244 P P 09 25 18.0 +2.9
SNR=300
JMDO P P 09 25 18.0 +2.9
SNR=300
JMDO P P 09 25 18.0 +2.9
SNR=300
PBKT Sadao Pong 25.25 135 P P 09 25 15.9 +0.2
HATD Hatta, Dubai 25.27 251 iP P 09 25 16.0 +0.2
SNR=46
HATD Hatta, Dubai 25.27 251 P P 09 25 19.3 +3.5
SNR=142
UMQ Umm Al-Quwin 25.27 253 iP P 09 25 18.8 +3.1
SNR=56
UMQ Umm Al-Quwin 25.27 253 P P 09 25 19.2 +3.4
SNR=42
UMQ P P 09 25 19.2 +3.4
SNR=42
UMQ P P 09 25 19.2 +3.4
SNR=42
SOHO SOHO 25.33 250 P P 09 25 18.0 +1.6
SNR=163
SOHO P P 09 25 18.0 +1.6
SNR=163
ASHO Ashiyiah 25.40 251 iP P 09 25 19.1 +2.1
SNR=262
ASHO Ashiyiah 25.40 251 P P 09 25 20.0 +3.0
SNR=490
ASHO P P 09 25 20.0 +3.0
SNR=490
NAZ Nazwa, Dubai 25.54 252 iP P 09 25 20.5 +2.2
SNR=116
NAZ Nazwa, Dubai 25.54 252 P P 09 25 21.0 +2.7
SNR=344
NAZ P P 09 25 21.0 +2.7
SNR=344
NAZ P P 09 25 21.0 +2.7
SNR=344
BSY Bisya 25.62 246 P P 09 25 22.0 +2.9
SNR=115
BSY P P 09 25 22.0 +2.9
SNR=115
BSY P P 09 25 22.0 +2.9
SNR=115
SVE Sverdlovsk 25.64 332c iP P 09 25 18.7 -0.2
SVE eS S 09 29 47.9 +0.3
SVE pmax pmax
comp=Z,3μm,1.4s
SVE MLR MLR
comp=Z,258μm,16.0s
SVE MLR MLR
comp=E,237μm,18.0s
SVE MLR MLR
comp=N,164μm,15.0s
FAQ Al Faqa, Dubai 25.72 252 iP P 09 25 21.7 +1.8
SNR=176
FAQ Al Faqa, Dubai 25.72 252 P P 09 25 23.0 +3.0
SNR=154
FAQ P P 09 25 23.0 +3.0
SNR=154
ARQ Araqi 25.79 248 P P 09 25 23.3 +2.8
SNR=550
ARQ P P 09 25 23.3 +2.8
SNR=550
ARQ P P 09 25 23.3 +2.8
SNR=550
PBA Port Blair 25.81 157 eP P 09 25 20.6 -0.1
PBA Port Blair 25.81 157 P P 09 25 20.4 -0.3
PBA Port Blair 25.81 157 P P 09 25 22.9 +2.2
SNR=54
ALNE Al Ain 25.97 250 iP P 09 25 24.1 +1.9
SNR=208
MHTO MHTO 26.14 242 P P 09 25 26.0 +2.2
SNR=220
MHTO P P 09 25 26.0 +2.2
SNR=220
MHTO P P 09 25 26.0 +2.2
SNR=220
ARU Arti 26.20 329 P P 09 25 23.9 0.0
comp=N,207nm,1.0s,baz=133,slow=6.6,SNR=77
ARU LR LR 09 35 19.1
comp=N,175μm,21.7s,baz=124,slow=36
ARU Arti 26.20 329 P P 09 25 23.2 -0.8
ARU Arti 26.20 329d iP P 09 25 23.1 -0.8
ARU 09 25 59.9
ARU S S 09 29 55.8 -0.6
ARU SS SnSn 09 30 54.5 -0.2
ARU pmax pmax
comp=Z,982nm,1.7s
ARU pmax pmax
comp=Z,5μm,8.0s
ARU MLR MLR
comp=Z,151μm,19.0s
AJN Ajban 26.29 252 iP P 09 25 26.7 +1.7
SNR=181
AJN Ajban 26.29 252 P P 09 25 27.4 +2.4
SNR=178
AJN P P 09 25 27.4 +2.4
SNR=178
AJN P P 09 25 27.4 +2.4
SNR=178
BJT Baijiatuau 26.71 71 P P 09 25 29.0 +0.2
BJT IAmb IAmb 09 25 59.1
comp=Z,1μm,1.3s
BJT Baijiatuau 26.71 71 IAMs_20 IAMs_20 09 36 52.7
comp=Z,649μm,21.0s
BJT Baijiatuau 26.71 71 P P 09 25 29.0 +0.2
BJT pmax pmax
comp=Z,1μm,1.3s
BJT MLR MLR
comp=Z,649μm,21.0s
BJI Beijing 26.72 71 P P 09 25 29.1 +0.3
BJI pP sP 09 25 36.1 +3.3
BJI S S 09 30 02.6 -2.3
BJI pmax pmax
comp=Z,320nm,1.4s
BJI LR LR
comp=Z,401μm,12.4s
BJI LR LR
comp=Z,431μm,21.8s
WHN Wuhan 27.04 92⇓iP P 09 25 32.0 +0.3
WHN sP sP 09 25 40.2 +4.5
WHN S S 09 30 11.6 +1.6
WHN pmax pmax
comp=Z,1μm,1.7s
WHN pmax pmax
comp=Z,16μm,8.8s
DQM DQM 27.13 241 P P 09 25 35.0 +2.3
SNR=104
DQM P P 09 25 35.0 +2.3
SNR=104
DQM P P 09 25 35.0 +2.3
SNR=104
TRD Trivandrum 27.72 192 eP P 09 25 38.9 +0.9
TIA Tai'an 27.85 79 P P 09 25 38.7 -0.3
TIA PcP PcP 09 28 53.3 -1.7
TIA S S 09 30 25.6 +2.8
TIA pmax pmax
comp=Z,350nm,1.4s
TIA pmax pmax
comp=Z,8μm,5.6s
TIA LR LR
comp=Z,508μm,11.9s
MAK Makhachkala 27.86 295⇓iP P 09 25 41.3 +2.3
MAK eS S 09 30 27.7 +4.9
MAK MLR MLR
comp=Z,173μm,13.0s
MAK MLR MLR
comp=E,288μm,14.0s
MAK MLR MLR
comp=N,308μm,14.0s

MZR Muzera 28.29 251 iP P 09 25 44.5 +1.5
SNR=11
MZR Muzera 28.29 251 P P 09 25 45.1 +2.0
SNR=44
PALK Pallekele 28.52 184 P P 09 25 45.3 +0.1
comp=N,60nm,0.9s,baz=12,slow=8.9,SNR=37
PALK LR LR 09 37 51.9
comp=N,113μm,21.5s,baz=8.7,slow=38
PALK Pallekele 28.52 184 P P 09 25 44.8 -0.3
MNCI Minicoy 28.81 200 P P 09 25 46.4 -1.3
UBPT Khong Chiam 28.97 129 P P 09 25 48.6 -0.5
GROC Groznyy 29.12 296 eP P 09 25 49.8 -0.4
GROC e 09 26 41.3
GROC e 09 28 55.7
GROC pmax pmax
comp=Z,801nm,1.2s
GROC MLR MLR
comp=Z,92μm,12.0s
QIZ Qiongzhong 29.30 118 P P 09 25 53.6 +1.5
QIZ S S 09 30 51.0 +5.1
QIZ pmax pmax
comp=Z,9μm,11.3s
QIZ LR LR
comp=Z,352μm,15.7s
QIZ LR LR
comp=Z,584μm,16.7s
QIZ Qiongzhong 29.30 118 P P 09 25 52.6 +0.5
QIZ Qiongzhong 29.30 118 IAMs_20 IAMs_20 09 39 13.2
comp=Z,693μm,19.0s
GZH Guangzhou 29.53 107 P P 09 25 54.3 +0.3
GZH S S 09 30 51.3 +2.0
GZH LR LR
comp=Z,469μm,12.2s
SHAO Shalim 29.74 240 iP P 09 25 56.8 +0.8
SNR=29
SHAO Shalim 29.74 240 P P 09 25 60.0 +4.0
SNR=15
TBLG Delisi 29.89 293 P P 09 25 57.8 +0.6
TBLG Delisi 29.89 293 P P 09 25 57.8 +0.6
TBLG pmax pmax
comp=Z,434nm,1.1s
GNI Garni 29.96 290 P P 09 25 58.4 +0.4
comp=Z,31nm,0.8s,baz=346,slow=2.2,SNR=17
GNI Garni 29.96 290 iP P 09 25 59.6 +1.6
SNR=290
GNI Garni 29.96 290 P P 09 25 58.2 +0.2
GNI Garni 29.96 290d iP P 09 25 58.2 +0.2
GNI pmax pmax
comp=Z,674nm,0.9s
GNI MLR MLR
comp=Z,184μm,16.0s
GUDG Gudauri 30.08 294 P P 09 25 59.8 +0.8
HIA Hailar 30.14 52 P P 09 25 58.7 -0.5
HIA Hailar 30.14 52 IAMs_20 IAMs_20 09 39 02.5
comp=Z,411μm,19.0s
HIA Hailar 30.14 52c iP P 09 25 57.6 -1.7
HIA pmax pmax
comp=Z,1μm,1.1s
KZRT Kazreti 30.16 292 P P 09 26 00.8 +1.3
NJ2 Nanjing 30.22 87 eP P 09 26 00.2 +0.1
NJ2 pP sP 09 26 04.4 +0.4
NJ2 S S 09 31 03.7 +3.6
NJ2 sS sS 09 31 10.4 +5.7
NJ2 pmax pmax
comp=Z,120nm,1.1s
NJ2 pmax pmax
comp=Z,7μm,5.9s
NJ2 LR LR
comp=Z,465μm,19.0s
NJ2 LR LR
comp=Z,555μm,18.0s
BOD Bodaibo 30.26 34 eP P 09 25 59.0 -1.2
BOD pmax pmax
comp=Z,2μm,1.9s
DMTO DMTO 30.43 241 P P 09 26 05.0 +2.9
SNR=29
DMTO P P 09 26 05.0 +2.9
SNR=29
DMTO P P 09 26 05.0 +2.9
SNR=29
ZEI Tsey 30.50 295 eP P 09 26 02.7 -0.1
ZEI eS S 09 31 07.0 +2.2
ZEI pmax pmax
comp=Z,1μm,5.4s
ZEI pmax pmax
comp=Z,391nm,1.7s
ZEI pmax pmax
comp=E,286nm,1.1s
ZEI pmax pmax
comp=N,114nm,1.0s
CMBY CAMPBELL BAY 30.55 157 eP P 09 26 02.6 -0.6
HKPS Hong Kong Po S 30.58 108 P P 09 26 01.3 -2.1
NCK Nalchik 30.73 296 iP P 09 26 04.9 +0.4
NCK pmax pmax
comp=Z,309nm,1.4s
BGD Bogdanovka 30.77 292 P P 09 26 06.8 +1.7
ONI Oni 30.83 295 P P 09 26 05.9 +0.4
AKH Akhalkalaki 30.84 292 ⇑P P 09 26 07.0 +1.3
AKH Akhalkalaki 30.84 292 P P 09 26 06.3 +0.6
AKH Akhalkalaki 30.84 292 P P 09 26 06.3 +0.6
AKH pmax pmax
comp=Z,709nm,1.3s
DL2 Dalian 31.01 73⇑iP P 09 26 06.9 -0.1
DL2 S S 09 31 09.2 -3.2
DL2 pmax pmax
comp=Z,630nm,1.0s
DL2 pmax pmax
comp=Z,13μm,6.6s
DL2 LR LR
comp=Z,408μm,15.4s
DL2 LR LR
comp=Z,596μm,14.7s
RBK Rabkut 31.10 241 P P 09 26 11.0 +3.0
SNR=27
RBK P P 09 26 11.0 +3.0
SNR=27
RBK P P 09 26 11.0 +3.0
SNR=27
WHFO Wadi Hawf 31.14 243 P P 09 26 10.1 +1.7
SNR=38
WHFO P P 09 26 10.1 +1.7
SNR=38
WHFO P P 09 26 10.1 +1.7
SNR=38
GOF Gofitskoye 31.18 299 eP P 09 26 14.3 +5.8
KBZ Khabaz 31.24 297 P P 09 26 09.7 +0.8
comp=Z,34nm,1.1s,baz=88,slow=8.8,SNR=27
KBZ LR LR 09 39 50.5
comp=Z,328μm,21.5s,baz=88,slow=39
KBZ Khabaz 31.24 297c iP P 09 26 08.9 -0.1
KBZ pmax pmax
comp=Z,54nm,1.1s
KBZ MLR MLR
comp=Z,308μm,20.0s
NEY Neytrino 31.37 296 iP P 09 26 10.9 +0.6
NEY pmax pmax
comp=Z,25nm,1.3s
NEY MLR MLR
comp=Z,97μm,19.0s
KIV Kislovodsk 31.40 297 iP P 09 26 12.2 +1.7
SNR=160
KIV Kislovodsk 31.40 297 P P 09 26 10.9 +0.4
KIV IAmb IAmb 09 27 19.5
comp=Z,709nm,1.0s
KIV Kislovodsk 31.40 297 eP P 09 26 09.0 -1.5
KIV eS S 09 31 16.8 -1.8
KIV pmax pmax
comp=Z,2μm,4.8s
KIV pmax pmax
comp=Z,363nm,1.1s
KIV MLR MLR
comp=Z,444μm,15.0s
SHA1 Shidzhatmaz 31.42 297c iP P 09 26 10.7 -0.1
KIRV Kirov 31.45 327 P P 09 26 10.3 -0.3
comp=Z,539nm,0.8s,baz=121,slow=3.0,SNR=6.5
ABTO Aybut 31.84 242 P P 09 26 16.0 +1.4
SNR=43
ABTO P P 09 26 16.0 +1.4
SNR=43
ABTO P P 09 26 16.0 +1.4
SNR=43
BATM Batumi 32.18 293 ⇑P P 09 26 19.8 +2.5
BATM Batumi 32.18 293 P P 09 26 20.2 +2.9
SNY Shenyang 32.25 67 ⇑P P 09 26 16.9 -0.9
SNY pP sP 09 26 26.6 +4.8
SNY PP PP 09 27 28.3 -2.2

SNY S S 09 31 32.4 +0.8
SNY SS SnSn 09 33 28.2 +5.9
SNY pmax pmax
comp=Z,390nm,1.8s
SNY pmax pmax
comp=Z,15µm,9.3s
SNY LR LR
comp=Z,286µm,11.8s
SNY LR LR
comp=Z,860µm,16.5s
SSE Sheshan 32.41 87 P P 09 26 20.0 +0.7
SSE S S 09 31 39.4 +5.1
SSE pmax pmax
comp=Z,200nm,1.3s
SSE pmax pmax
comp=Z,3µm,3.5s
SSE Sheshan 32.41 87 P P 09 26 19.6 +0.2
SSE IAmb IAmb 09 26 34.6
comp=Z,1µm,1.5s
SSE Sheshan 32.41 87 IAMs_20 IAMs_20 09 39 35.3
comp=Z,638µm,20.0s
QZH Quanzhou 32.75 99⇑iP P 09 26 22.1 -0.3
QZH PP PnPn 09 27 31.2 +0.8
QZH S S 09 31 43.1 +3.4
QZH pmax pmax
comp=Z,7µm,8.4s
QZH LR LR
comp=Z,493µm,21.8s
QZH LR LR
comp=Z,1135µm,17.1s
KNMB Chin-men Tao 32.81 100 P P 09 26 21.7 -1.3
VRH Novokhopyorsk 32.86 311 eP P 09 26 23.4 +0.3
VRH e 09 26 26.0
VRH eS S 09 31 38.3 -2.7
VRH pmax pmax
comp=Z,1µm,1.0s
VRH smax smax
comp=E,12µm,6.8s
VRH MLR MLR
comp=Z,210µm,18.0s
LHMI Lhok Sumawe 33.24 153 P P 09 26 27.8 +1.0
comp=Z,29µmcomp=Z,28µmcomp=Z,2µm,1.9s
LHMI Lhok Sumawe 33.24 153 P P 09 26 26.9 +0.2
DLV T Lat 33.40 129 P P 09 26 28.1 -0.2
DLV IAmb IAmb 09 26 37.8
comp=Z,1µm,1.5s
DLV IAMs_20 IAMs_20 09 42 34.6
comp=Z,332µm,18.0s
CN2 Changchun 33.55 63 eP P 09 26 28.3 -0.9
CN2 esP sP 09 26 35.3 +2.1
CN2 ePP PP 09 27 40.1 -4.8
CN2 eS S 09 31 49.4 -2.5
CN2 eSS SnSn 09 33 50.5 -3.3
CN2 pmax pmax
comp=Z,60nm,1.5s
CN2 pmax pmax
comp=Z,11µm,9.0s
CN2 LR LR
comp=Z,400µm,14.0s
CN2 LR LR
comp=Z,567µm,14.0s
SOC Sochi 33.55 297 eP P 09 26 30.9 +1.6
SOC i 09 27 37.3
SOC eS S 09 31 56.6 +4.7
SOC pmax pmax
comp=Z,647nm,1.4s
SOC MLR MLR
comp=Z,256µm,19.0s
MLSI Meulaboh, Aceh 33.94 155 P P 09 26 30.3 -2.6
comp=Z,4µmcomp=Z,169nm,1.1s
RAYN Ar Rayn 34.28 259 iP P 09 26 36.2 +0.3
SNR=312
RAYN Ar Rayn 34.28 259 P P 09 26 36.0 +0.1
RAYN IAmb IAmb 09 26 41.4
comp=Z,944nm,1.4s
RAYN Ar Rayn 34.28 259 P P 09 26 36.0 +0.1
RAYN pmax pmax
comp=Z,944nm,1.4s
RAYN MLR MLR
comp=Z,66µm,21.0s
VORD Divnogorie 34.33 310 eP P 09 26 36.1 +0.2
VORD e 09 26 38.5
VORD eS S 09 32 02.6 -1.1
VORD pmax pmax
comp=Z,1µm,1.5s
VORD smax smax
comp=N,3µm,2.5s
VSR Storozhevoye 34.45 310 eP P 09 26 36.1 -0.8
VSR e 09 26 38.6
VSR eS S 09 32 01.1 -4.5
VSR 09 36 57.0
VSR pmax pmax
comp=Z,840nm,0.9s
VSR smax smax
comp=E,8µm,4.6s
VSR MLR MLR
comp=Z,263µm,21.0s
VORR Voronezh 34.50 311⇑iP P 09 26 36.0 -1.4
VORR pmax pmax
comp=Z,3µm,1.6s
PRGR Permogore 34.66 330⇓iP P 09 26 37.6 -1.0
PRGR pmax pmax
comp=Z,2µm,1.4s
KULM Kulim 34.69 147 P P 09 26 39.5 +0.1
KULM IAmb IAmb 09 26 49.2
comp=Z,988nm,1.3s
KULM Kulim 34.69 147 P P 09 26 40.0 +0.7
SOCY Socotra 34.95 235 P P 09 26 39.9 -1.8
SOCY Socotra 34.95 235 P P 09 26 40.5 -1.2
SNR=29
YHNB Yeheng 35.11 98 P P 09 26 43.0 -0.1
KCSI Kotacane, Aceh 35.12 153 P P 09 26 39.7 -3.4
comp=Z,18µmcomp=Z,3µmcomp=Z,124nm,1.1s
INCN Inchon 35.13 74 P P 09 26 42.0 -1.0
INCN IAmb IAmb 09 26 50.2
comp=Z,972nm,1.1s
INCN Inchon 35.13 74 IAMs_20 IAMs_20 09 41 44.2
comp=Z,291µm,20.0s
INCN Inchon 35.13 74 P P 09 26 42.0 -1.0
INCN pmax pmax
comp=Z,972nm,1.2s
INCN MLR MLR
comp=Z,291µm,20.0s
TPTI 35.15 154 P P 09 26 41.9 -1.4
comp=Z,798nmcomp=Z,49nm,1.2s
ANN Anapa 35.16 299 eP P 09 26 43.4 +0.2
ANN e 09 27 58.2
ANN eS S 09 32 19.1 +2.4
ANN iSSS SSS 09 35 06.1
ANN pmax pmax
comp=Z,5µm,5.7s
ANN pmax pmax
comp=N,278nm,1.5s
ANN pmax pmax
comp=Z,1µm,1.4s
ANN pmax pmax
comp=N,909nm,2.9s
ANN pmax pmax
comp=E,2µm,5.8s
ANN pmax pmax
comp=E,415nm,1.5s
ANN smax smax
comp=E,6µm,8.3s
ANN smax smax
comp=N,28µm,16.0s
ANN MLR MLR
comp=N,673µm,24.0s
ANN MLR MLR
comp=Z,232µm,24.0s
ANN MLR MLR
comp=E,57µm,12.0s
TPUB Ta-pu 35.17 100 P P 09 26 43.6 +0.1
SSLB Suanglung 35.19 99 P P 09 26 43.7 0.0
NACB Ninganchiao 35.52 98 P P 09 26 47.9 +1.4
IPM Ipoh 35.57 147 P P 09 26 45.5 -1.5
IPM Ipoh 35.57 147 P P 09 26 49.0 +2.0
SNSI Sinabang, Aceh 35.65 156 P P 09 26 47.9 +0.3
comp=E,23µmcomp=E,19µmcomp=E,1µm,1.1s
YULB Yu-li 35.66 100 P P 09 26 47.8 +0.1
YULB IAmb IAmb 09 27 06.1
comp=Z,625nm,1.1s
ZEA Zeya 35.66 46 eP P 09 26 47.6 +0.2
ZEA i 09 26 50.0
ZEA i 09 26 53.8
ZEA e 09 28 08.5
ZEA eS S 09 32 23.5 -0.8
ZEA pmax pmax
comp=Z,32µm,9.0s
ZEA pmax pmax
comp=E,22µm,11.0s
TWG Pinlang 35.76 101 P P 09 26 48.6 +0.1
TJN Taejon 35.93 76ceP P 09 26 48.0 -1.9
KS19 Wonju Array Si 36.09 74 P P 09 26 50.4 -0.8
KSAR Wonju Array Be 36.11 74 P P 09 26 50.2 -1.2
KSAR Wonju Array Be 36.11 74 P P 09 26 50.2 -1.2
KSRS Korea Array 36.14 74 P P 09 26 50.8 -0.8
comp=E,173nm,1.2s,baz=274,slow=7.6,SNR=94
KSRS LR LR 09 42 37.0
comp=E,316µm,20.8s,baz=282,slow=38
GAZ Gaziantep 36.22 286 P P 09 26 52.6 +0.1
GAZ IAmb IAmb 09 27 06.9
comp=Z,2µm,1.5s
PSI Prapat 36.22 152 LR LR 09 45 04.6
comp=Z,132µm,18.7s,baz=334,slow=42
PSI Prapat 36.22 152 P P 09 26 50.0 -2.7
MOS Moscow 36.27 318 eP P 09 26 52.6 0.0
MOS e 09 28 20.3
MOS ePPP PPP 09 28 32.4
MOS iS S 09 32 33.2 -0.3
MOS e 09 37 05.0
MOS pmax pmax
comp=Z,11µm,2.8s
MOS pmax pmax
comp=Z,3µm,1.7s
MOS MLR MLR
comp=Z,126µm,20.0s
KAAM Kaadhehdhoo 36.32 196 P P 09 26 52.2 -1.1
KAAM Kaadhehdhoo 36.32 196 P P 09 26 53.3 0.0
SNR=16
RPSI Rantau Prapat 36.32 152 P P 09 26 49.8 -3.5
MDJ Mudanjiang 36.50 61 P P 09 26 54.3 -0.4
MDJ pP sP 09 26 59.4 +0.7
MDJ sP pP 09 27 01.6 +4.1
MDJ PP PP 09 28 17.4 -0.1
MDJ S S 09 32 41.1 +3.9
MDJ SS SnSn 09 35 04.1 -1.2
MDJ pmax pmax
comp=Z,430nm,2.2s
MDJ LR LR
comp=Z,454µm,12.5s
MDJ LR LR
comp=Z,839µm,18.2s
MDJ Mudanjiang 36.50 61 P P 09 26 53.7 -0.9
MDJ IAmb IAmb 09 27 03.2
comp=Z,1µm,1.4s
YOJ Yonaguni jima 36.52 97 IAMs_20 IAMs_20 09 41 09.6
comp=Z,423µm,19.0s
OBN Obninsk 36.72 316 P P 09 26 55.6 -0.8
OBN IAMs_20 IAMs_20 09 42 56.6
comp=Z,295µm,22.0s
OBN Obninsk 36.72 316deP P 09 26 55.5 -0.8
OBN e*PP pP 09 26 58.8 -0.4
OBN e*SP sP 09 27 02.4 +2.1
OBN e 09 28 16.3
OBN ePPP PPP 09 28 33.6
OBN iS S 09 32 39.5 -0.8
OBN pmax pmax
comp=Z,831nm,1.3s
OBN pmax pmax
comp=Z,4µm,2.1s
OBN MLR MLR
comp=Z,227µm,17.0s
JRMM Jerantut 36.75 145 P P 09 26 57.0 -0.1
KLMR Klimovskoe 36.94 326diP P 09 26 57.4 -0.8
KLMR e 09 28 20.2
KLMR eS S 09 32 41.4 -2.2
KLMR pmax pmax
comp=Z,3µm,1.5s
KLMR MLR MLR
comp=Z,103µm,11.0s
KLMR Klimovskoe 36.94 326⇓iP P 09 26 57.4 -0.8
KLMR iP P 09 26 57.4 -0.8
KLMR ⇑iP P 09 26 57.4 -0.8
KLMR AMP 09 27 09.0
comp=Z,3µm,1.5s
KLMR ePP PP 09 28 20.2 -1.9
KLMR eS S 09 32 41.5 -2.2
KLMR eS S 09 32 41.5 -2.2
KLMR LQ LQ 09 38 55.1
KLMR LQ LQ 09 38 55.1
KLMR LR LR 09 40 43.2
KLMR AMP 09 45 09.7
DIKM Dikmen 36.98 294 ⇑P P 09 27 00.8 +2.0
SIM Simferopol' 37.51 299 P P 09 27 02.9 -0.4
SIM pmax pmax
comp=Z,990nm,1.0s
BBP Basco 37.70 103 eP P 09 27 05.9 +0.8
MSHR Mys Shultsa 37.80 65ciP P 09 27 05.3 -0.4
SEVA Sevastopol 37.85 299 ⇓P P 09 27 07.8 +1.6
BZK Bozkurt 37.87 294 ⇓P P 09 27 08.0 +1.7
HWQ Hawqa 37.92 282 eP P 09 27 07.5 +0.5
KLR Kul'dur 37.94 54 P P 09 27 06.0 -0.9
comp=Z,121nm,1.0s,baz=273,slow=9.1,SNR=111
KLR Kul'dur 37.94 54ciP P 09 27 05.5 -1.3
KLR pmax pmax
comp=Z,163nm,1.0s
KLR MLR MLR
comp=Z,512µm,17.0s
ILGA Ilgaz 38.21 293 P P 09 27 08.8 -0.8
ILGA IAmb IAmb 09 27 22.0
comp=Z,2µm,1.2s
I45RU USSURIYSK INFR 38.23 62 i 13 03 30.0
baz=271,slow=332,SNR=2.8
USA0B Ussuriysk Arra 38.24 62 P P 09 27 09.2 -0.3
USA0B Ussuriysk Arra 38.24 62ciP P 09 27 08.1 -1.3
USRK Ussuriysk Ar. 38.24 62 P P 09 27 09.7 +0.2
comp=Z,25nm,0.8s,baz=290,slow=5.5,SNR=50
USRK LR LR 09 44 15.9
comp=Z,755µm,18.6s,baz=267,slow=38
USRK Ussuriysk Ar. 38.24 62 P P 09 27 07.4 -2.0
BHL Bhannes 38.26 281 eP P 09 27 10.3 +0.4
SHBL Chebaa 38.35 280 eP P 09 27 10.8 +0.1
BOLP Bolinao 38.43 111 eP P 09 27 12.6 +1.3
BR131 Keskin Array S 38.48 291 P P 09 27 10.9 -0.9
BR131 Keskin Array S 38.48 291 P P 09 27 11.1 -0.7
SNR=325
BR131 P P 09 27 11.1 -0.7
SNR=325
BR131 P P 09 27 11.1 -0.7
SNR=325
BR131 Keskin Array S 38.48 291 P P 09 27 10.9 -0.9
BR131 pmax pmax
comp=Z,725nm,1.3s
BRTR Keskin Array B 38.48 291 P P 09 27 10.9 -0.9
comp=Z,143nm,0.8s,baz=97,slow=6.3,SNR=142
BRTR Keskin Array B 38.48 291 P P 09 27 11.0 -0.7
BRTR Keskin Array B 38.48 291 iP P 09 27 10.6 -1.1
BRTR pmax pmax
comp=Z,143nm,0.8s
APYP Conner 38.57 107 eP P 09 27 14.2 +1.7
MMAI Mount Meron Ar 38.72 280 LR LR 09 46 16.0
comp=Z,58µm,21.4s,baz=60,slow=41
TMCR Tamitsa 38.91 331 eP P 09 27 12.3 -2.5
TMCR eS S 09 33 10.1 -3.3
TMCR pmax pmax
comp=Z,1µm,1.0s
ANTO Ankara 39.10 291 ⇑P P 09 27 19.0 +2.2
ANTO Ankara 39.10 291 P P 09 27 16.6 -0.2
ANTO IAmb IAmb 09 27 25.5
comp=Z,1µm,1.3s
ANTO Ankara 39.10 291 P P 09 27 16.6 -0.2
ANTO pmax pmax
comp=Z,1µm,1.3s
BR231 Keskin MP Arra 39.12 291 P P 09 27 16.3 -0.7
BR231 IAmb IAmb 09 27 29.4
comp=Z,3µm,1.9s
SMPP San Manuel, Pa 39.15 110 eP P 09 27 17.4 0.0
YAK Yakutsk 39.18 33 P P 09 27 17.1 0.0
comp=Z,270nm,0.8s,baz=245,slow=2.9,SNR=66
YAK Yakutsk 39.18 33 P P 09 27 16.8 -0.3
YAK IAmb IAmb 09 27 23.7
comp=Z,2µm,1.1s
YAK IAMs_20 IAMs_20 09 43 52.1
comp=Z,431µm,22.0s
YAK Yakutsk 39.18 33 eP P 09 27 18.0 +0.9
YAK e 09 28 53.2
YAK eS S 09 33 18.9 +1.5
YAK pmax pmax
comp=Z,2µm,1.1s
YAK pmax pmax
comp=N,321nm,1.1s
YAK pmax pmax
comp=E,1µm,1.1s
YAK pmax pmax
comp=Z,18µm,4.5s
YAK pmax pmax
comp=N,7µm,4.4s
YAK pmax pmax
comp=E,17µm,4.5s
YAK smax smax
comp=N,7µm,3.7s
YAK smax smax
comp=E,41µm,8.7s
YAK MLR MLR
comp=Z,400µm,21.0s
YAK MLR MLR
comp=E,317µm,20.0s
MYKOM Kota Tinggi 39.23 145 P P 09 27 17.4 -0.6
MYKOM Kota Tinggi 39.23 145 P P 09 27 19.0 +1.0
BKNI Bangkinang 39.32 150 P P 09 27 18.0 -0.7
comp=E,18µmcomp=E,13µmcomp=E,759nm,1.4s
BKNI Bangkinang 39.32 150 P P 09 27 17.3 -1.4
BKNI IAmb IAmb 09 27 30.7
comp=Z,2µm,1.4s
CAUP Cauayan 39.55 108 eP P 09 27 22.9 +2.2
JNU Nakatsue 39.58 80 P P 09 27 21.3 +0.4
comp=Z,133nm,1.1s,baz=327,slow=3.3,SNR=18
JNU LR LR 09 45 22.1
comp=Z,435µm,18.3s,baz=294,slow=39
JNU Nakatsue 39.58 80 P P 09 27 20.1 -0.8
JNU IAMs_20 IAMs_20 09 45 02.5
comp=Z,364µm,21.0s
JOW Kunigami 39.75 90 P P 09 27 23.1 +0.8
comp=Z,5.9nm,0.6s,baz=185,slow=13,SNR=4.9
JOW Kunigami 39.75 90 P P 09 27 21.9 -0.4
JOW IAMs_20 IAMs_20 09 45 20.3
comp=Z,406µm,22.0s
CSS Mathiatis 39.80 284 P P 09 27 22.7 0.0
PALP Palanan 39.95 107 eP P 09 27 26.1 +2.1
BALP Baler 40.08 110 eP P 09 27 25.0 -0.1
SISI Saibi 40.09 154 P P 09 27 25.6 +0.5
comp=Z,13µmcomp=Z,8µmcomp=Z,401nm,1.2s
LEF Lefka 40.11 284 ⇑P P 09 27 26.7 +1.5
DAMY Dhamar 40.19 248 P P 09 27 27.7 +1.3
DAMY Dhamar 40.19 248 P P 09 27 28.6 +2.2
SNR=76
MDUB Mudurnu 40.19 293 P P 09 27 25.5 -0.5
MDUB IAMs_20 IAMs_20 09 46 42.3
comp=Z,285µm,21.0s
EIL Elat 40.21 275 LR LR 09 48 17.6
comp=Z,111µm,18.6s,baz=72,slow=43
PDSI Padang 40.22 152 P P 09 27 23.7 -2.5
comp=Z,6µmcomp=Z,411nm,1.2s
TPRI Tanjung Pinang 40.32 145 P P 09 27 27.6 +0.6
comp=Z,30µmcomp=Z,621nm,1.5s
LUBP Lubang 40.33 113 eP P 09 27 28.4 +1.2
RGRI Rengat 40.46 149 P P 09 27 28.7 +0.5
comp=Z,724nmcomp=Z,97µmcomp=Z,218nm,1.1s
TGY Tagaytay City 40.61 112 P P 09 27 31.4 +1.8
comp=Z,314nm,0.4s,baz=309,slow=3.0,SNR=8.2
TGY LR LR 09 45 29.3
comp=Z,402µm,21.5s,baz=352,slow=38
AKASG Malin Array Be 40.67 308 P P 09 27 28.4 -1.2
comp=Z,109nm,1.0s,baz=83,slow=6.7,SNR=87
AKASG LR LR 09 47 15.6
comp=Z,213µm,19.2s,baz=85,slow=41
AKASG Malin Array Be 40.67 308 P P 09 27 28.0 -1.6
AKASG Malin Array Be 40.67 308 iP P 09 27 27.7 -1.9
AKASG pmax pmax
comp=Z,109nm,1.0s
AKBB Malin Array Si 40.67 308 P P 09 27 28.0 -1.6
AKBB IAmb IAmb 09 27 36.5
comp=Z,2µm,1.6s
AKBB Malin Array Si 40.67 308ciP P 09 27 27.4 -2.2
AKBB pmax pmax
comp=Z,545nm,1.0s
AKBB MLR MLR
comp=Z,209µm,20.0s
GRNR Gornyy 40.97 51⇓iP P 09 27 32.1 -0.1
GRNR i 09 27 38.8
GRNR e 09 29 15.2
GRNR eS S 09 33 46.2 +1.5
GRNR pmax pmax
comp=Z,590nm,1.2s
GRNR smax smax
comp=E,10.0nm,1.3s
GRNR MLR MLR
comp=Z,192µm,15.0s
POLP Polilio Island 40.98 111 eP P 09 27 34.6 +2.1
PUL Pulkovo 40.99 322ceP P 09 27 32.0 -0.1
PUL pmax pmax
comp=Z,997nm,1.0s
PUL MLR MLR
comp=Z,140µm,22.0s
KIS Kishinev 41.06 303⇓iP P 09 27 32.0 -0.9
comp=Z,14µm,3.5s
KIS Kishinev 41.06 303 iPP PP 09 29 10.0 +2.6
comp=Z,16µm,16.0s
KIS Kishinev 41.06 303 iPcS PcS 09 33 22.0 -1.5
KIS iS S 09 33 48.0 +2.0
comp=Z,29µm,16.0s
KIS Kishinev 41.06 303 iPsP 09 36 30.0
KIS iSS SS 09 37 02.0 +14
KIS iSSS SSS 09 37 50.0
KIS iScS ScS 09 38 08.0 +30
KIS iLQ LQ 09 39 28.0
KIS iLR LR 09 39 50.0
comp=Z,98µm,13.0s
KIS Kishinev 41.06 303 ⇓P P 09 27 33.9 +0.9
KIS Kishinev 41.06 303⇓iP P 09 27 32.0 -0.9
KIS i 09 29 10.0
KIS iS S 09 33 48.0 +2.0
KIS pmax pmax
comp=Z,14µm,3.5s
KIS pmax pmax
comp=N,3µm,4.0s
KIS pmax pmax
comp=Z,6µm,3.0s
KIS pmax pmax
comp=Z,16µm,16.0s
KIS pmax pmax
comp=N,4µm,6.0s
KIS smax smax
comp=N,29µm,16.0s
MILM Milestii Mici 41.07 303 ⇓P P 09 27 33.9 +0.9
JURR Jurilovca 41.24 299 ⇑P P 09 27 36.3 +1.9
ISP Isparta 41.26 289 P P 09 27 34.4 -0.4
ISP Isparta 41.26 289 P P 09 27 34.4 -0.4
ISP pmax pmax
comp=Z,1µm,1.4s
ENPP El Nido 41.38 117 eP P 09 27 36.5 +0.7
TEY Ternei 41.43 60⇑eP P 09 27 36.4 +0.4
TEY e 09 29 19.5
TEY eS S 09 33 55.1 +3.6
TEY pmax pmax
comp=N,200nm,1.8s
TEY pmax pmax
comp=E,70nm,2.0s
TEY pmax pmax
comp=Z,170nm,2.0s
TEY MLR MLR
comp=E,437µm,14.0s
TEY MLR MLR
comp=N,196µm,12.0s
TEY MLR MLR
comp=Z,631µm,14.0s
LEOM Leova 41.50 302 ⇑P P 09 27 38.4 +1.9
EFOR EFORIE 41.50 298 ⇑P P 09 27 38.4 +1.9
MANR Mangalia 41.57 298 ⇓P P 09 27 38.6 +1.5
TOPG Topolog 41.58 300 ⇓P P 09 27 37.7 +0.5
TIRR Tirgusor 41.61 299 ⇑P P 09 27 38.7 +1.3
TIRR Tirgusor 41.61 299 ⇑P P 09 27 38.7 +1.3
TIRR Tirgusor 41.61 299 P P 09 27 36.6 -0.8
TIRR Tirgusor 41.61 299 P P 09 27 36.6 -0.8
TIRR pmax pmax
comp=Z,4µm,1.6s
MICGM Minsk 41.61 314⇑iP P 09 27 38.0 +0.7
MICGM PM 09 27 40.0
comp=Z,2.6nm,1.0s
MICGM PM 09 27 40.0
comp=E,1.1nm,1.1s
MICGM PM 09 27 42.0
comp=Z,21nm,2.0s
MICGM PM 09 27 42.0
comp=E,17nm,2.0s

MICGM ePP PnPn 09 29 18.0 0.0
MICGM PPM 09 29 23.0
comp=Z,27nm,16.0s
MICGM ePPP PPP 09 29 54.0
MICGM eS S 09 33 54.0 +0.1
MICGM SM 09 34 04.0
comp=N,132nm,19.0s
MICGM SM 09 34 04.0
comp=N,83nm,9.0s
MICGM SM 09 34 05.0
comp=E,68nm,21.0s
MICGM SM 09 34 05.0
comp=E,28nm,15.0s
MICGM eSS SS 09 37 04.0 +5.5
MICGM eSS ScS 09 38 05.0 +24
MICGM eLQ LQ 09 40 30.0
MICGM LQM 09 42 42.0
comp=N,34nm,20.0s
MICGM eLR LR 09 45 10.0
MICGM LRM MLR 09 46 25.0
comp=E,15nm,16.0s
MICGM LRM MLR 09 46 38.0
comp=N,38nm,20.0s
MICGM LRM MLR 09 46 40.0
comp=Z,179nm,16.0s
MNK Minsk 41.61 314c iP P 09 27 38.0 +0.7
MFTR Murfatlar 41.64 299 ⇑P P 09 27 40.1 +2.4
ISK Istanbul-Kandi 41.68 294 P P 09 27 40.3 +2.3
KRJI Kerinci 41.69 151 P P 09 27 40.7 +2.3
comp=Z,19µmcomp=Z,12µmcomp=Z,870nm,1.1s
PPSI Pulau Pagai 41.75 153 P P 09 27 41.6 +2.8
comp=Z,28µmcomp=Z,22µmcomp=Z,2µm,1.3s
LVZ Lovozero 41.76 335 P P 09 27 38.4 0.0
LVZ IAmb IAmb 09 27 45.2
comp=Z,1µm,1.2s
LVZ IAMs_20 IAMs_20 09 46 06.5
comp=Z,247µm,18.0s
LVZ Lovozero 41.76 335c iP P 09 27 38.3 -0.1
LVZ pmax pmax
comp=Z,456nm,1.3s
LVZ MLR MLR
comp=Z,213µm,18.0s
PSN Preselentsi 41.88 298 iP P 09 27 41.7 +2.0
BATP Bataraza 41.89 121 eP P 09 27 41.3 +1.3
IAS Iasi 41.91 303 ⇑P P 09 27 41.2 +1.4
HARR Harsova 41.92 299 ⇑P P 09 27 41.7 +1.7
BIR Birlad 41.95 302 ⇑P P 09 27 42.1 +1.9
TUDR 41.99 301 ⇑P P 09 27 43.1 +2.6
ELL Elmali 42.00 287 P P 09 27 41.1 +0.2
ELL IAMs_20 IAMs_20 09 47 47.4
comp=Z,488µm,22.0s
ELL Elmali 42.00 287 P P 09 27 41.1 +0.2
ELL pmax pmax
comp=Z,4µm,1.1s
ELL MLR MLR
comp=Z,488µm,22.0s
APA Apatity 42.05 334⇑iP P 09 27 42.0 +1.3
APA i 09 29 22.0
APA i 09 29 47.0
APA iS S 09 34 02.0 +1.8
APA i 09 37 04.0
APA pmax pmax
comp=Z,126nm,0.9s
APA MLR MLR
comp=Z,266µm,14.0s
ICOR Ion Corvin 42.09 299 ⇑P P 09 27 43.5 +2.2
GHRR 42.12 302 ⇑P P 09 27 43.7 +2.1
NACGM Naroch 42.27 315 eP P 09 27 40.0 -2.7
NACGM eP pP 09 27 41.0 -4.6
NACGM PM 09 27 53.0
comp=Z,2.5nm,1.0s
NACGM ePP PP 09 29 26.0 +5.7
NACGM ePPP PPP 09 30 22.0
NACGM eS S 09 34 02.0 -1.7
NACGM eSS SS 09 36 44.0 -28
NACGM eSSS SSS 09 38 02.0
NACGM eLQ LQ 09 42 14.0
NACGM eLR LR 09 44 20.0
PETR Petresti 42.28 301 ⇑P P 09 27 45.5 +2.6
IDID Didziasalis 42.32 315 eP P 09 27 46.6 +3.5
AMRR Amara 42.35 299 ⇑P P 09 27 45.5 +2.0
ODBI Odobesti 42.40 301 ⇑P P 09 27 46.2 +2.3
GRER 42.50 301 ⇑P P 09 27 47.2 +2.4
PRD Provadia 42.52 297 iP P 09 27 47.4 +2.5
TESR Tescani 42.59 302 ⇑P P 09 27 46.4 +0.9
NEF NEVSHA 42.60 297 iP P 09 27 47.0 +1.5
MANT Manisa 42.60 290 P P 09 27 45.1 -0.9
MANT IAmb IAmb 09 27 53.9
comp=Z,2µm,1.5s
VSU Vasula 42.61 320 eP P 09 27 46.0 +0.6
VSU IAmb IAmb 09 27 50.3
comp=Z,3µm,1.2s
VSU Vasula 42.61 320d iP P 09 27 44.8 -0.6
VSU pmax pmax
comp=Z,2µm,1.2s
VSU MLR MLR
comp=Z,232µm,18.0s
VRI Vrincioaia 42.61 301 ⇑P P 09 27 47.9 +2.3
IIGN Ignalina 42.62 315 eP P 09 27 47.0 +1.5
IIGN IAmb IAmb 09 27 50.9
comp=Z,316nm,1.2s
IZAR Zarasai 42.63 316 eP P 09 27 47.1 +1.5
BISRR Bisoca 42.67 301 ⇑P P 09 27 48.3 +2.1
PLOR Plostina 42.67 301 ⇑P P 09 27 48.3 +2.1
FETY Fethiye 42.67 287 P P 09 27 47.0 +0.7
ISAL Salakas 42.68 316 eP P 09 27 47.6 +1.5
ISAL IAmb IAmb 09 27 51.4
comp=Z,403nm,1.2s
PRAR RASCA 42.79 304 ⇑P P 09 27 48.3 +1.2
KSM Kuching 42.81 137 P P 09 27 47.8 +0.2
KSM Kuching 42.81 137 P P 09 27 49.0 +1.5
KKM Kota Kinabalu 42.82 126 P P 09 27 48.2 +0.5
KKM IAmb IAmb 09 28 01.4
comp=Z,2µm,1.3s
KKM IAMs_20 IAMs_20 09 47 44.6
comp=Z,283µm,20.0s
TIXI Tiksi 43.01 20 P P 09 27 48.0 -0.5
comp=Z,55nm,0.8s,baz=233,slow=6.0,SNR=78
TIXI Tiksi 43.01 20 P P 09 27 48.3 -0.2
TIXI Tiksi 43.01 20 iP P 09 27 42.2 -6.3
TIXI pmax pmax
comp=Z,831nm,1.7s
TIXI MLR MLR
comp=Z,490µm,19.0s
RAZG Razgrad 43.10 298 ⇑P P 09 27 51.3 +1.7
SULR 43.10 300 ⇓P P 09 27 51.3 +1.7
SBUM Sibu 43.11 134 P P 09 27 50.5 +0.6
SBUM Sibu 43.11 134 P P 09 27 52.0 +2.0
YER Yerkesik 43.16 288 P P 09 27 51.4 +1.2
MLR Muntele Rosu 43.21 301 ⇑P P 09 27 51.8 +1.1
MLR Muntele Rosu 43.21 301 P P 09 27 51.0 +0.4
MLR IAmb IAmb 09 28 01.0
comp=Z,2µm,1.1s
MLR Muntele Rosu 43.21 301 P P 09 27 51.0 +0.4
MLR pmax pmax
comp=Z,2µm,1.1s
MLR MLR MLR
comp=Z,460µm,20.0s
EDRB Edirne 43.23 296 P P 09 27 52.7 +2.0
JMB Yambol 43.24 296 iP P 09 27 53.3 +2.6
OZUR 43.24 302 ⇑P P 09 27 52.2 +1.4
ATD Arta Tunnel 43.28 246 LR LR 09 48 03.3
comp=Z,29µm,18.4s,baz=50,slow=39
ATD Arta Tunnel 43.28 246 iP P 09 27 53.5 +2.0
ATD iS S 09 34 30.7 +11
ATD Arta Tunnel 43.28 246 iP P 09 27 52.5 +1.0
ATD Arta Tunnel 43.28 246 iP P 09 27 53.5 +2.0
ATD iS S 09 34 30.7 +11
FIA1 FINESS Array S 43.36 324 P P 09 27 51.6 +0.2
FIA1 IAmb IAmb 09 28 00.7
comp=Z,3µm,2.0s
FINES FINESS Array B 43.36 324 P P 09 27 50.1 -1.3
comp=Z,199nm,0.8s,baz=100,slow=9.9,SNR=83
FINES LR LR 09 46 01.9
comp=Z,199µm,20.5s,baz=98,slow=36
FINES FINESS Array B 43.36 324 P P 09 27 51.3 -0.1
FINES FINESS Array B 43.36 324 P P 09 27 51.3 -0.1
PVCP Virac 43.36 110 eP P 09 27 50.7 -1.3
SGRR Singureni 43.37 299 ⇑P P 09 27 52.3 +0.5
BURAR Bucovina Array 43.45 304 ⇓P P 09 27 53.8 +1.3
BURAR Bucovina Array 43.45 304 P P 09 27 51.2 -1.4
BURAR Bucovina Array 43.45 304 P P 09 27 50.9 -1.6
BUR08 Bucovina Ar. S 43.46 304 P P 09 27 51.6 -1.0
ARG Arkhangelos 43.53 287 P P 09 27 51.1 -2.1
DOPR Dopca 43.53 302 ⇑P P 09 27 54.9 +1.8
KSI Kapahiang 43.56 150 P P 09 27 51.8 -1.8
comp=Z,15µmcomp=Z,16µmcomp=Z,1µm,1.0s
RCP Roxas 43.58 114⇑eP P 09 27 57.4 +3.6
NKL Nikolayevsk 43.59 48 eP P 09 27 52.5 -0.9
NKL e 09 29 42.8
NKL eS S 09 34 25.8 +2.7
NKL pmax pmax
comp=Z,292nm,1.5s
NKL pmax pmax
comp=N,7.0nm,0.8s
NKL pmax pmax
comp=E,40nm,1.1s
NKL pmax pmax
comp=Z,2µm,4.3s
NKL smax smax
comp=N,14nm,5.1s
NKL smax smax
comp=E,118nm,7.9s
ELND Elena 43.66 297 ⇑P P 09 27 55.3 +1.2
INU Inuyama 43.77 74 P P 09 27 54.4 -0.7
INU IAMs_20 IAMs_20 09 47 21.3
comp=Z,347µm,18.0s
PPBI Pangkal Pinang 43.77 145 P P 09 27 54.6 -0.7
comp=Z,30µmcomp=Z,842nm,1.5s
PMBI Palembang 43.83 147 P P 09 27 54.9 -0.8
comp=Z,28µmcomp=Z,59µmcomp=Z,2µm,1.1s
VOIR 43.84 301 ⇑P P 09 27 57.2 +1.6
ZIMR 43.90 298 ⇓P P 09 27 58.2 +2.1
PABE Paberze 43.91 316 eP P 09 27 57.0 +1.1
BODT Bodrum 43.92 289 P P 09 27 56.1 -0.3
COPA Copaceanca 43.92 299 ⇑P P 09 27 58.0 +1.7
ALN Alexandroupoli 43.95 294 P P 09 27 56.2 -0.2
ALN Alexandroupoli 43.95 294 P P 09 27 56.3 -0.2
ALN Alexandroupoli 43.95 294 P P 09 27 56.3 -0.2
ALN pmax pmax
comp=Z,659nm,1.5s
ALN MLR MLR
comp=Z,37µm,22.0s
EZN Ezine 43.98 293 P P 09 27 55.8 -0.9
GOLR 43.99 300 ⇑P P 09 27 59.0 +2.3
PVL Pavlikeni 44.00 298 iP P 09 28 01.0 +4.1
HUMR Humele 44.03 300 ⇑P P 09 27 58.8 +1.7
LVV L'vov 44.03 307 eP P 09 27 57.7 +0.7
LVV ePPP PPP 09 30 19.7
LVV eS S 09 34 26.8 -2.9
LVV eSS SS 09 37 40.4 -5.8
LVV MLR MLR
comp=E,156µm,19.0s
LVV MLR MLR
comp=N,79µm,16.0s
LVV MLR MLR
comp=Z,185µm,18.0s
GUIM Jordan 44.08 115 eP P 09 27 58.2 +0.5
ARCR ARCALIA 44.09 303 ⇑P P 09 28 00.0 +2.4
SMG Samos 44.12 290 P P 09 27 56.5 -1.4
ARR Arges 44.14 301 ⇓P P 09 28 00.3 +2.2
PRK Paraskevi 44.16 292 P P 09 27 59.1 +1.0
MDB Medias 44.20 302 ⇓P P 09 27 59.8 +1.4
KDZ Kurdzhali 44.25 296 iP P 09 28 01.7 +2.8
RDO Rodhopi 44.27 295 P P 09 27 58.5 -0.5
MJB9 Matsu-Tunnel 44.34 72 P P 09 27 58.9 -0.8
MJB9 IAmb IAmb 09 28 06.2
comp=Z,1µm,2.0s
MJB9 IAMs_20 IAMs_20 09 46 32.0
comp=Z,255µm,21.0s
MAJO Matsushiro 44.34 72 P P 09 27 58.5 -1.2
MAJO IAmb IAmb 09 28 06.2
comp=Z,1µm,2.0s
MAJO Matsushiro 44.34 72 IAMs_20 IAMs_20 09 46 31.0
comp=Z,239µm,21.0s
MAJO Matsushiro 44.34 72c iP P 09 27 59.3 -0.5
MAJO pmax pmax
comp=Z,170nm,1.2s
MAJO MLR MLR
comp=Z,80µm,15.0s
MAT Matsushiro 44.34 72 P P 09 27 57.2 -2.5
MAT S S 09 34 34.7 +0.1
MJAR Matsushiro Arr 44.35 72 P P 09 27 59.8 +0.1
comp=Z,40nm,0.9s,baz=287,slow=8.4,SNR=37
MJAR LR LR 09 46 44.0
comp=Z,217µm,21.1s,baz=270,slow=36
MJAR Matsushiro Arr 44.35 72 P P 09 27 58.4 -1.4
SMTH Samothraki Isl 44.42 294 P P 09 27 59.3 -1.0
KARP Karpathos 44.47 287 P P 09 28 00.7 -0.1
KARP Karpathos 44.47 287 P P 09 28 00.0 -0.8
PLVB Pleven 44.48 298 ⇑P P 09 28 02.3 +1.6
VLAD Vladila 44.53 299 ⇓P P 09 28 03.0 +2.0
CHOS Chios island 44.53 291 P P 09 28 01.7 +0.4
BMR Baia Mare 44.60 304 ⇑P P 09 28 03.5 +1.9
STKI Sintang 44.63 137 P P 09 28 03.4 +1.3
comp=Z,21µmcomp=Z,660nm,1.4s
PLD Plovdiv 44.67 296 iP P 09 28 04.8 +2.5
PLD Plovdiv 44.67 296 P P 09 28 02.7 +0.4
PLD pmax pmax
comp=Z,2µm,1.4s
LOT Lotru 44.73 301 ⇓P P 09 28 03.6 +0.8
RZN Rozhen 44.75 296 iP P 09 28 03.7 +0.5
SLIT Slitere, Latvi 44.90 319 eP P 09 28 03.9 +0.1
KWP Kalwaria Pacla 44.90 307 eP P 09 28 03.0 -1.0
KWP eS S 09 34 43.9 +1.5
KWP eL L 09 49 34.0
comp=Z,321µm,19.6s
KWP Kalwaria Pacla 44.90 307 P P 09 28 03.5 -0.5
KWP IAMs_20 IAMs_20 09 49 48.3
comp=Z,339µm,20.0s
KWP Kalwaria Pacla 44.90 307 P P 09 28 03.5 -0.5
KWP pmax pmax
comp=Z,5µm,1.7s
KWP MLR MLR
comp=Z,339µm,20.0s
TYV Tymovskoe 44.92 51 eP P 09 28 06.0 +1.9
TYV eS S 09 34 47.2 +4.7
TYV pmax pmax
comp=Z,485nm,1.4s
TYV pmax pmax
comp=Z,3µm,5.5s
TYV smax smax
comp=E,21nm,1.8s
MDSI Maura Dua 44.97 149 P P 09 28 01.8 -3.0
comp=E,3µmcomp=E,160nm,1.6s
PGB Panagyurishte 44.97 297 iP P 09 28 08.0 +3.3
THAS Thassos island 44.99 294 P P 09 28 06.5 +1.7
TPI Tanjungpandan 45.02 143 P P 09 28 05.2 0.0
comp=E,19µmcomp=E,8µmcomp=E,417nm,1.5s
KEV Kevo 45.03 336 P P 09 28 04.4 -0.3
KEV Kevo 45.03 336 P P 09 28 04.4 -0.3
KEV pmax pmax
comp=Z,2µm,1.8s
KEV MLR MLR
comp=Z,126µm,21.0s
KAVA Kavala 45.05 295 P P 09 28 04.3 -1.0
PBUR Paburge 45.06 316 eP P 09 28 06.0 +0.8
AMGA Amorgos Island 45.08 289 P P 09 28 05.7 +0.1
TRPA Tarpa 45.18 305 ⇓P P 09 28 07.2 +1.0
DRGR 45.25 303 ⇑P P 09 28 08.2 +1.3
DRGR 45.25 303 P P 09 28 06.4 -0.5
DRGR pmax pmax
comp=Z,355nm,1.5s
DEV Deva 45.26 302 ⇑P P 09 28 09.1 +2.2
KOLS Kolonicke sedl 45.26 306 eP P 09 28 05.9 -1.0
KOLS pmax pmax
comp=Z,2µm,2.3s
KOLS Kolonicke sedl 45.26 306 eP P 09 28 05.9 -1.0
KOLS ePP PP 09 30 03.4 +11
UZH Uzhgorod 45.28 306d iP P 09 28 08.7 +1.7
UZH i 09 29 59.0
UZH iS S 09 34 47.7 -0.1
UZH iSS ScS 09 37 57.7 -6.8
APE Apeiranthos 45.29 289 P P 09 28 05.5 -1.8
APE Apeiranthos 45.29 289 ⇓P P 09 28 08.9 +1.5
APE Apeiranthos 45.29 289 iP P 09 28 06.8 -0.5
APE pmax pmax
comp=Z,347nm,1.0s
ANAF Anafi Island 45.31 288 P P 09 28 07.5 +0.1
ZKR Zakros 45.34 286 P P 09 28 07.4 -0.3
KLSI 45.38 148 P P 09 28 07.8 -0.3
comp=Z,2µmcomp=Z,112nm,1.6s
LWLI Liwa 45.40 149 P P 09 28 05.2 -3.2
comp=Z,271nm,0.8s
GZR Gura Zlata 45.43 301 ⇑P P 09 28 09.7 +1.4
YSS Yuzh-Sakhalins 45.43 57 P P 09 28 07.0 -1.2
YSS IAmb IAmb 09 28 14.9
comp=Z,1µm,1.3s
YSS Yuzh-Sakhalins 45.43 57c iP P 09 28 07.5 -0.7
YSS e*SP sP 09 28 15.4 +3.1
YSS e 09 29 52.8
YSS eS S 09 34 48.7 -1.3
YSS eSS ScS 09 38 05.0 -0.5
YSS pmax pmax
comp=Z,10µm,8.5s
YSS pmax pmax
comp=E,4µm,8.8s
YSS pmax pmax
comp=Z,610nm,1.3s
YSS pmax pmax
comp=Z,16µm,10.5s
YSS pmax pmax
comp=E,6µm,11.3s
YSS smax smax
comp=N,33µm,16.4s
YSS smax smax
comp=E,23µm,14.7s
YSS MLR MLR
comp=Z,424µm,16.0s
YSS MLR MLR
comp=N,202µm,15.0s
YSS MLR MLR
comp=E,353µm,15.0s
ARCES ARCESS Array B 45.46 336 P P 09 28 07.9 -0.2
comp=E,105nm,0.6s,baz=93,slow=7.5,SNR=55
ARCES LR LR 09 47 56.4
comp=E,142µm,21.4s,baz=108,slow=37
ARCES ARCESS Array B 45.46 336 P P 09 28 07.4 -0.7
ARE0 ARCESS Array S 45.46 336 eP P 09 28 09.0 +0.8
ARE0 IVmB_BB 09 28 16.1
comp=Z,17µm,2.5s
ARE0 ePP PP 09 29 53.8 -0.4
ARE0 eS S 09 34 51.5 +1.6
ARE0 eSS SS 09 38 12.4 -0.4
ARE0 IVMsBB 09 48 40.6
comp=Z,78µm,10.2s
ARE0 ARCESS Array S 45.46 336 P P 09 28 07.4 -0.8
PUNG Punghina 45.52 300 ⇑P P 09 28 10.2 +1.3
SKY Skiros Island 45.54 292 P P 09 28 09.9 +0.6
SANT Santorini 45.55 288 P P 09 28 08.5 -0.9
SANT Santorini 45.55 288 ⇑P P 09 28 09.8 +0.4
SANT Santorini 45.55 288 P P 09 28 08.8 -0.5
SANT IAmb IAmb 09 28 16.5
comp=Z,1µm,1.6s
THT1 Athinios (Pele 45.57 288 P P 09 28 09.6 +0.2
IOSP Ios island 45.58 289 P P 09 28 10.1 +0.6
OUR Ouranopolis 45.60 294 P P 09 28 08.7 -1.0
VTS Vitosha 45.63 297 ⇓P P 09 28 11.1 +1.0
VTS Vitosha 45.63 297 iP P 09 28 13.0 +2.9
VTS Vitosha 45.63 297 P P 09 28 09.4 -0.7
VTS IAmb IAmb 09 28 22.6
comp=Z,742nm,1.4s
VTS Vitosha 45.63 297 P P 09 28 09.4 -0.7
VTS pmax pmax
comp=Z,743nm,1.4s
VTS MLR MLR
comp=Z,83µm,21.0s
SRS Serrai 45.70 295 P P 09 28 08.5 -2.0
SRS Serrai 45.70 295 P P 09 28 11.4 +0.9
SRS pmax pmax
comp=Z,402nm,3.1s
FRMA Ierapetra Chan 45.75 286 P P 09 28 09.4 -1.5
NPS Neapolis 45.76 287 P P 09 28 11.8 +0.7
CRVS Cervenica-Dubn 45.79 306 eP P 09 28 11.6 +0.5
CRVS pmax pmax
comp=Z,1µm,1.8s
CRVS Cervenica-Dubn 45.79 306 eP P 09 28 11.6 +0.5
CRVS ePP PP 09 30 07.0 +8.9
ASAJ Asahikawa 45.81 60 P P 09 28 11.9 +0.7
comp=Z,38nm,0.8s,baz=276,slow=6.2,SNR=29
JKA Kamikawa-asahi 45.81 60 P P 09 28 11.9 +0.6
KARY Karystos 45.86 291 P P 09 28 09.9 -1.8
STHS Stebnicka Huta 45.87 307 eP P 09 28 11.5 -0.2
STHS pmax pmax
comp=Z,182nm,1.1s
STHS Stebnicka Huta 45.87 307 eP P 09 28 11.5 -0.2
LAST Lasithi 45.90 287 P P 09 28 10.9 -1.3
KKB Krupnik 45.91 296 iP P 09 28 13.4 +1.3
BEL Belsk 45.91 310 eP P 09 28 11.3 -0.7
BEL eS S 09 35 01.8 +5.0
BEL eL L 09 48 00.9
comp=Z,242µm,22.5s
BEL Belsk 45.91 310 eP P 09 28 11.3 -0.7
BEL eS S 09 35 01.8 +5.0
BEL MLR MLR
comp=Z,242µm,22.5s
PAIG Paliouri 45.93 294 P P 09 28 10.0 -2.3
SOH Sokhos 45.95 295 P P 09 28 13.7 +1.2
AOS Alonnisos 45.97 293 P P 09 28 10.6 -2.0
KASI Kota Agung 46.04 149 P P 09 28 09.6 -3.7
comp=Z,14µmcomp=Z,4µmcomp=Z,218nm,1.1s
SIRR Siria 46.05 303 ⇑P P 09 28 15.4 +2.2
SERI Serifos 46.06 290 P P 09 28 08.4 -5.0
KLNR Kaliningrad 46.08 314 iP P 09 28 13.0 -0.2
KLNR pmax pmax
comp=Z,1µm,1.3s
KLNR MLR MLR
comp=Z,177µm,18.0s
MSLP Maasin 46.08 113 eP P 09 28 15.1 +1.3
KTK1 Kautokeino 46.09 335 eP P 09 28 13.6 +0.4
KTK1 IVmB_BB 09 28 20.8
comp=Z,14µm,2.5s
KTK1 ePP PP 09 30 00.6 -0.3
KTK1 eS S 09 35 00.6 +1.5
HRKL Herakleio 46.15 287 P P 09 28 18.5 +4.5
IACM Heraklion 46.17 287 P P 09 28 19.0 +4.8
BZS Buzias 46.19 302 ⇑P P 09 28 14.7 +0.4
BZS Buzias 46.19 302 P P 09 28 14.7 +0.4
BZS pmax pmax
comp=Z,585nm,1.8s
HORT Hortiatis 46.19 295 P P 09 28 13.8 -0.6
KNT Kendrikon 46.20 295 P P 09 28 14.2 -0.2
BLSI Bandar Lampung 46.21 148 P P 09 28 13.0 -1.7
MDVR Moldovita 46.28 301 ⇑P P 09 28 16.8 +1.8
THE Thessaloniki 46.28 295 P P 09 28 13.8 -1.2
SKIA Skiathos 46.28 293 P P 09 28 15.0 -0.1
PTL Penteli 46.29 291 P P 09 28 13.8 -1.4
MRKA Markates 46.31 292 P P 09 28 14.7 -0.7
ATHU Athens Univers 46.37 291 P P 09 28 16.1 +0.3
HAMF Hammerfest 46.37 337 eP P 09 28 15.7 +0.4
HAMF ePP PP 09 30 04.7 +0.8
HAMF eS S 09 35 04.1 +1.1
HAMF IVMsBB 09 45 47.5
comp=Z,50µm,10.9s
VLY Voula,Athens 46.40 291 P P 09 28 14.7 -1.3
VAY Valandovo 46.41 296 iP P 09 28 16.7 +0.7
VAY Valandovo 46.41 296 P P 09 28 17.2 +1.2
VAY pmax pmax
comp=Z,714nm,1.4s
ATH Athens Observa 46.42 291 P P 09 28 15.1 -1.1
NEO Neokhori 46.43 293 P P 09 28 15.7 -0.6
XOR Xorichti 46.44 293 P P 09 28 15.3 -1.0
SIVA Sivas 46.47 287 P P 09 28 15.8 -0.7
TMBK Timbaki Herakl 46.48 287 P P 09 28 18.2 +1.5
NIE Niedzica 46.48 307 eP P 09 28 16.8 +0.2
NIE eS S 09 35 06.1 +0.9
NIE eL L 09 47 15.2
comp=Z,169µm,24.6s
NIE Niedzica 46.48 307 eP P 09 28 16.8 +0.2
NIE eS S 09 35 06.1 +0.9
NIE MLR MLR
comp=Z,169µm,24.6s
KECS Kecovo 46.49 306 eP P 09 28 17.9 +1.3
KECS pmax pmax
comp=Z,750nm,2.1s
KECS Kecovo 46.49 306 eP P 09 28 17.9 +1.3
PAGZ Pagadian 46.51 117 eP P 09 28 18.2 +1.1
STIP Stip 46.60 296 iP P 09 28 17.1 -0.4
GRG Griva 46.62 295 P P 09 28 16.9 -0.8
GRG Griva 46.62 295 P P 09 28 18.0 +0.3
ERM Erimo 46.66 63 P P 09 28 17.9 0.0
ERM IAmb IAmb 09 28 29.4
comp=Z,948nm,1.6s
ERM Erimo 46.66 63 IAMs_20 IAMs_20 09 49 13.1
comp=Z,278µm,18.0s
ERM Erimo 46.66 63c iP P 09 28 17.8 -0.1
ERM pmax pmax
comp=Z,368nm,1.2s
ERM MLR MLR
comp=Z,287µm,17.0s

VILL Villia 46.67 291 P P 09 28 16.7 -1.5
JHJ2 Mitsune 46.68 76 IAMs_20 IAMs_20 09 49 14.1
comp=Z,262µm,18.0s
OJC Ojcow 46.70 308 eP P 09 28 17.4 -0.8
OJC eS S 09 35 07.8 -0.5
OJC eSS SS 09 38 32.8 -1.4
OJC eL L 09 46 59.2
comp=Z,203µm,25.7s
OJC Ojcow 46.70 308 P P 09 28 18.4 +0.2
OJC IAmb IAmb 09 28 29.4
comp=Z,895nm,1.4s
OJC Ojcow 46.70 308 eP P 09 28 17.4 -0.8
OJC eS S 09 35 07.8 -0.5
OJC MLR MLR
comp=Z,203µm,25.7s
LIT Litokhoron 46.77 294 P P 09 28 18.7 -0.2
LIT Litokhoron 46.77 294 P P 09 28 18.9 +0.1
LIT IAmb IAmb 09 28 35.7
comp=Z,1µm,1.8s
LIT Litokhoron 46.77 294 P P 09 28 19.0 +0.1
LIT pmax pmax
comp=Z,1µm,1.8s
LKR Lokris 46.77 292 P P 09 28 17.4 -1.5
VAM Vamos 46.81 287 P P 09 28 20.6 +1.3
CHAN Chania 46.90 288 P P 09 28 21.1 +1.1
DID Didima 46.92 291 P P 09 28 19.0 -1.1
IMMV Iera Moni Meta 46.97 288 P P 09 28 19.5 -1.0
KTI Kastanea 46.97 295 P P 09 28 19.9 -0.7
PSZ Piszkesteto 46.97 305 ⇑P P 09 28 21.9 +1.5
PSZ Piszkesteto 46.97 305 P P 09 28 20.6 +0.2
PSZ Piszkesteto 46.97 305 P P 09 28 20.6 +0.2
PSZ pmax pmax
comp=Z,3µm,2.0s
LTK Loutraki 46.97 291 P P 09 28 18.8 -1.7
LOUT Loutraki 46.98 291 P P 09 28 18.5 -2.1
KRND KRANIDI 47.02 290 P P 09 28 19.1 -1.8
PBKI Pangkalan Bun 47.03 138 P P 09 28 20.3 -0.8
comp=Z,25µmcomp=Z,20µmcomp=Z,998nm,1.5s
SKO Skopje 47.07 297 iP P 09 28 25.9 +4.7
GVDS Gavdos 47.08 287 P P 09 28 20.7 -0.7
GVD Gavdhos 47.09 287 P P 09 28 21.2 -0.2
AGG Agios Georgios 47.17 293 P P 09 28 19.9 -2.2
AGG Agios Georgios 47.17 293 P P 09 28 21.0 -1.1
AGG Agios Georgios 47.17 293 P P 09 28 21.0 -1.1
KZN Kozani 47.25 295 P P 09 28 21.8 -0.9
THL Klokotos Trika 47.26 294 P P 09 28 22.1 -0.6
KNDR Palaiochora Ch 47.27 287 P P 09 28 23.2 +0.4
SBJI Serang 47.27 147 P P 09 28 20.9 -2.1
comp=Z,188nm,1.1s
MAKR Makrakomi, Fth 47.32 293 P P 09 28 22.9 -0.4
ANKY Antikythira Is 47.37 288 P P 09 28 24.1 +0.5
VLI Veliai 47.38 290 P P 09 28 18.9 -4.8
BUTP Butuan 47.41 114 eP P 09 28 26.0 +1.9
KTHA Kythira Island 47.43 289 P P 09 28 17.6 -6.5
KALE Kalithea 47.49 292 P P 09 28 22.1 -2.5
SERG Sergoula 47.55 292 P P 09 28 23.9 -1.1
TRIZ Trizonia 47.55 292 P P 09 28 23.7 -1.3
CTBH Cotabato--PC H 47.56 117 ⇓iP P 09 28 27.4 +2.1
VYHS Vyhne 47.57 306 eP P 09 28 24.5 -0.6
VYHS pmax pmax
comp=Z,4µm,2.0s
VYHS Vyhne 47.57 306 eP P 09 28 24.5 -0.6
KLV Kalavryta, Ach 47.59 292 P P 09 28 23.1 -2.3
EVR Evrytania 47.59 293 P P 09 28 24.3 -1.2
ANX Ano Chora 47.60 292 P P 09 28 24.8 -0.7
VLX Vlachokerasia 47.61 291 P P 09 28 24.0 -1.6
BUD Budapest 47.62 305 P P 09 28 26.5 +1.1
BUD pmax pmax
comp=Z,747nm,2.3s
DIVS Divibare 47.62 300 eP P 09 28 24.9 -0.7
KPRO Kipourio 47.64 294 P P 09 28 25.4 -0.4
MSEY Mahe Island 47.67 218 P P 09 28 25.0 -1.2
MSEY IAmb IAmb 09 28 27.5
comp=Z,715nm,1.7s
MSEY Mahe Island 47.67 218 P P 09 28 25.0 -1.2
MSEY pmax pmax
comp=Z,715nm,1.7s
MSEY MLR MLR
comp=Z,46µm,19.0s
BUKP Musuan 47.71 115 eP P 09 28 28.1 +1.5
TRO Tromso 47.72 335 eP P 09 28 26.0 +0.1
TRO IVmB_BB 09 28 33.7
comp=Z,16µm,2.5s
TRO ePP PP 09 30 16.8 -0.4
TRO eS S 09 35 24.5 +2.3
TRO IVMsBB 09 48 52.9
comp=Z,63µm,14.3s
PENT Pentalofos 47.74 295 P P 09 28 25.0 -1.6
RAC Raciborz 47.74 308 eP P 09 28 25.9 -0.4
RAC eS S 09 35 22.1 -1.0
RAC MLR MLR
comp=Z,140µm,20.4s
NEST Nestorio 47.75 295 P P 09 28 26.9 +0.2
OHR Ohrid 47.75 296 iP P 09 28 29.4 +2.8
OKC Ostrava-Krasne 47.81 308 eP P 09 28 27.3 +0.4
OKC eS S 09 35 25.2 +1.1
OKC AMS AMS 09 49 50.0
comp=Z,104µm,17.3s
OKC Ostrava-Krasne 47.81 308 eP P 09 28 27.3 +0.4
OKC eS S 09 35 25.2 +1.1
OKC MLR MLR
comp=Z,104µm,17.3s
TEKS Tekeris 47.85 301 eP P 09 28 26.7 -0.6
PHP Peshkopia 47.87 297 P P 09 28 28.1 +0.6
PVO Paravola 47.89 292 P P 09 28 28.3 +0.7
DBJI Dramaga 47.93 147 P P 09 28 25.0 -3.1
comp=Z,259nm,1.7s
GKP Gorka Klasztor 47.93 313 eP P 09 28 28.4 +0.7
GKP eS S 09 35 22.7 -3.0
GKP eSS SS 09 38 58.5 +4.6
GKP eL L 09 47 49.4
comp=Z,109µm,24.3s
GKP Gorka Klasztor 47.93 313 eP P 09 28 28.4 +0.7
GKP eS S 09 35 22.7 -3.0
GKP MLR MLR
comp=Z,109µm,24.3s
DRO Drossia 47.94 292 P P 09 28 28.2 +0.1
AAE Adis Abeba 47.95 247 iP P 09 28 31.6 +2.9
AAE iS S 09 35 37.7 +10
AAE Adis Abeba 47.95 247 iP P 09 28 31.6 +2.9
AAE iS S 09 35 37.7 +10
HOPEN Hopen 47.98 345 eP P 09 28 29.4 +1.6
HOPEN eS S 09 35 28.4 +2.6
HOPEN eSS SS 09 38 56.6 +2.6
ITM Ithomi 48.01 291 P P 09 28 28.9 +0.3
ITM Ithomi 48.01 291 P P 09 28 28.4 -0.2
ITM IAmb IAmb 09 28 41.3
comp=Z,688nm,1.5s
BBLS Lazići 48.09 300 eP P 09 28 29.2 0.0
FURI Furi 48.10 247 iP P 09 28 32.7 +2.9
FURI iS S 09 35 39.4 +10
FURI Furi 48.10 247 iP P 09 28 33.0 +3.1
FURI Furi 48.10 247 iP P 09 28 32.7 +2.9
FURI iS S 09 35 39.4 +10
JAN Janina 48.10 294 P P 09 28 30.6 +1.3
MORH Mrgy, Hungar 48.12 303 eP P 09 28 27.7 -1.6
YUK Yuzh-Kuril'sk 48.12 60c iP P 09 28 29.7 +0.4
RUDO Rudo 48.17 300 eP P 09 28 30.5 +0.7
MORC Moravsky Berou 48.21 308 eP P 09 28 29.0 -1.0
MORC ePP PP 09 30 26.2 +4.1
MORC e 09 33 23.4
MORC eS S 09 35 32.4 +2.6
MORC eSS SS 09 39 00.0 +1.4
MORC Moravsky Berou 48.21 308 ⇑P P 09 28 30.3 +0.3
MORC Moravsky Berou 48.21 308 P P 09 28 29.6 -0.4
MORC Moravsky Berou 48.21 308 P P 09 28 29.6 -0.4
MORC pmax pmax
comp=Z,2µm,1.8s
PYL PYLOS 48.24 290 P P 09 28 28.3 -2.1
SKJI Sukabumi 48.25 147 P P 09 28 28.8 -1.7
comp=Z,14µmcomp=Z,4µmcomp=Z,277nm,1.1s
SKMP Bagumbayan, Su 48.25 117 eP P 09 28 31.2 +0.5
JAVC Velka Javorina 48.27 307 eP P 09 28 30.6 0.0
JAVC ePP PP 09 30 27.7 +5.0
JAVC e 09 33 24.8
JAVC eS S 09 35 36.3 +5.5
JAVC eSS SS 09 39 03.7 +3.9
KCP Kidapawan 48.32 116⇑eP P 09 28 33.2 +1.9
HAPS Han Pijesak,Bl 48.36 300 eP P 09 28 31.1 -0.2
TIR Tirane 48.37 296 ⇓P P 09 28 33.0 +1.7
SMKI Samarinda 48.41 131 P P 09 28 30.3 -1.6
comp=Z,14µmcomp=Z,413nm,1.5s

LKD2 Lefkada island 48.49 293 P P 09 28 31.3 -1.0
IGT Igoumenitsa 48.52 294 P P 09 28 33.0 +0.5
PDG Podgorica 48.54 298 ⇑P P 09 28 33.4 +0.8
PDG Podgorica 48.54 298 eP P 09 28 33.1 +0.5
PDG Podgorica 48.54 298 P P 09 28 30.3 -2.2
PDG IAmb IAmb 09 28 44.6
comp=Z,398nm,1.1s
PDG IAMs_20 IAMs_20 09 52 51.9
comp=Z,152µm,19.0s
EVGI Lefkada island 48.54 293 P P 09 28 33.9 +1.2
TPE Tepelena 48.55 295 P P 09 28 32.7 0.0
LEM Lembang 48.56 146 LR LR 09 50 48.4
comp=Z,141µm,19.5s,baz=302,slow=38
LEM Lembang 48.56 146 P P 09 28 32.0 -1.2
comp=Z,3µmcomp=Z,78nm,1.5s
MODS Modra-Piesok 48.62 306 eP P 09 28 32.6 -0.6
MODS pmax pmax
comp=Z,1µm,1.7s
MODS Modra-Piesok 48.62 306 eP P 09 28 32.6 -0.6
DAV Davao City (W) 48.63 116 LR LR 09 52 30.4
comp=Z,298µm,18.6s,baz=6.0,slow=40
DAV Davao City (W) 48.63 116⇑eP P 09 28 34.0 +0.3
DAV Davao City (W) 48.63 116 P P 09 28 32.9 -0.8
KRLC Kraliky 48.65 308 eP P 09 28 32.6 -0.8
KRLC AMS AMS 09 50 40.0
comp=Z,100µm,18.2s
KRLC Kraliky 48.65 308 eP P 09 28 32.6 -0.8
KRLC MLR MLR
comp=Z,100µm,18.2s
DRME Dracevica, Mon 48.65 298 eP P 09 28 34.0 +0.5
FSK Fiskardo 48.66 293 P P 09 28 33.1 -0.5
VLS Valsamata 48.72 292 P P 09 28 36.5 +2.4
ZST Bratislava 48.77 306 eP P 09 28 34.2 0.0
ZST pmax pmax
comp=Z,6µm,3.0s
ZST Bratislava 48.77 306 eP P 09 28 34.2 0.0
ZST ePP PP 09 30 30.6 +3.5
BJO1 Bjornoya 48.77 341 eP P 09 28 34.4 +0.5
BJO1 ePP PP 09 30 30.1 +3.4
BJO1 eS S 09 35 38.0 +1.1
BJO1 eSS SS 09 39 11.7 +4.9
BJO1 IVMs_BB IVMs_BB 09 53 28.7
comp=Z,93µm,14.6s
BJO1 IVMsBB 09 58 57.8
comp=Z,10µm,48.3s
CNJI Cibinong 48.77 147 P P 09 28 31.9 -2.7
comp=Z,14µmcomp=Z,232nm,1.1s
DOB Doboj 48.80 301 eP P 09 28 35.0 +0.4
STEI Steigen 48.82 332 eP P 09 28 34.3 0.0
STEI IVmB_BB 09 28 42.1
comp=Z,19µm,3.0s
STEI ePP PP 09 30 29.2 +1.9
STEI eS S 09 35 39.6 +1.9
STEI eSS SS 09 39 10.8 +3.1
STEI IVMsBB 09 48 52.0
comp=Z,63µm,13.6s
KSP Ksiaz 48.83 310 eP P 09 28 34.3 -0.4
KSP eS S 09 35 40.9 +2.4
KSP eSS SS 09 39 20.8 +12
KSP eL L 09 48 31.9
comp=Z,188µm,25.7s
KSP Ksiaz 48.83 310 eP P 09 28 34.3 -0.4
KSP eS S 09 35 40.9 +2.4
KSP MLR MLR
comp=Z,188µm,25.7s
BKB Balikpapan 48.86 132 P P 09 28 32.5 -2.8
comp=Z,33µmcomp=Z,19µmcomp=Z,559nm,2.4s
BKB Balikpapan 48.86 132 IAMs_20 IAMs_20 09 50 59.8
comp=Z,231µm,22.0s
VLO Vlora 48.88 295 P P 09 28 38.9 +3.7
DPC Dobruska-Polom 48.89 309 eP P 09 28 35.3 0.0
DPC eS S 09 35 38.6 -0.9
DPC AMS AMS 09 50 30.0
comp=Z,101µm,17.4s
DPC Dobruska-Polom 48.89 309 eP P 09 28 35.3 0.0
DPC eS S 09 35 38.6 -0.9
DPC MLR MLR
comp=Z,101µm,17.4s
VRAC Vranov 48.90 307 eP P 09 28 34.1 -1.2
VRAC ePP PP 09 30 33.3 +5.0
VRAC e 09 33 28.9
VRAC eS S 09 35 41.9 +2.4
VRAC eSS SS 09 39 06.2 -3.5
VRAC Vranov 48.90 307 ⇓P P 09 28 36.3 +1.0
VRAC Vranov 48.90 307 P P 09 28 35.3 0.0
OSTC Ostas 48.93 309 eP P 09 28 35.6 +0.1
OSTC AMS AMS 09 50 40.0
comp=Z,131µm,20.8s
BRY Bratogost 48.93 299 eP P 09 28 36.4 +0.6
MOR8 Moi Rana 49.01 330 eP P 09 28 35.5 -0.3
MOR8 eS S 09 35 40.4 -0.1
MOR8 eSS SS 09 39 13.8 +2.9
MOR8 IVMsBB 09 52 01.2
comp=Z,72µm,13.2s
MA2 Magadan 49.02 39 P P 09 28 35.8 -0.2
comp=Z,251nm,0.8s,baz=270,slow=9.1,SNR=56
MA2 Magadan 49.02 39 P P 09 28 35.3 -0.7
MA2 Magadan 49.02 39c iP P 09 28 34.5 -1.5
MA2 pmax pmax
comp=Z,579nm,1.1s
MA2 MLR MLR
comp=Z,536µm,19.0s
CHVC Chvalec 49.02 309 eP P 09 28 36.5 +0.3
CHVC eS S 09 35 43.6 +2.4
CHVC AMS AMS 09 48 30.0
comp=Z,164µm,24.1s
UPC Upice 49.06 309 eP P 09 28 37.1 +0.6
UPC eS S 09 35 42.7 +0.9
UPC AMS AMS 09 50 50.0
comp=Z,138µm,21.0s
UPC Upice 49.06 309 eP P 09 28 37.1 +0.6
UPC eS S 09 35 42.7 +0.9
UPC MLR MLR
comp=Z,138µm,21.0s
KRUC Moravsky 49.07 307 eP P 09 28 35.9 -0.7
KRUC ePP PP 09 30 35.0 +5.1
KRUC e 09 33 29.7
KRUC eS S 09 35 45.2 +3.4
KRUC eSS SS 09 39 12.5 +0.1
KRUC Moravsky 49.07 307 P P 09 28 36.1 -0.5
HCY Herceg Novi 49.08 298 eP P 09 28 38.1 +1.3
BSD Bornholm Skovb 49.09 315 iP P 09 28 36.6 0.0
comp=Z,1µm,1.6s
BSD i 09 30 32.7
BSD iS S 09 35 43.8 +1.9
BSD Bornholm Skovb 49.09 315 iP P 09 28 36.6 0.0
BSD i 09 30 32.7
BSD iS S 09 35 43.8 +1.9
BSD pmax pmax
comp=Z,1µm,1.6s
BSD MLR MLR
comp=Z,120µm,15.0s
BSD Bornholm Skovb 49.09 315 iP 09 28 36.7
BSD IAmb 09 28 45.5
comp=Z,1µm,1.6s
BSD i 09 30 32.7
BSD iS 09 35 43.8
BSD IAMs_20 09 53 31.3
comp=Z,124µm,14.7s
TREB Trebinje 49.11 299 eP P 09 28 36.7 -0.3
MATI Mati 49.22 115 eP P 09 28 39.9 +1.8
SOP Sopron 49.22 305 P P 09 28 38.1 +0.3
SOP pmax pmax
comp=Z,855nm,2.3s
KUR Kuril'sk 49.25 58deP P 09 28 37.0 -1.0
KUR e 09 30 04.3
KUR e 09 30 37.7
KUR iS S 09 35 46.3 +1.9
KUR pmax pmax
comp=N,2µm,8.3s
KUR pmax pmax
comp=Z,12µm,8.3s
KUR pmax pmax
comp=E,6µm,7.7s
KUR pmax pmax
comp=Z,783nm,1.8s
KUR pmax pmax
comp=E,153nm,1.4s
KUR pmax pmax
comp=N,179nm,1.7s
KUR MLR MLR
comp=Z,174µm,13.0s
KUR MLR MLR
comp=N,74µm,13.0s

KUR MLR MLR
comp=E,175µm,13.0s
CISI Cisompet, Garu 49.30 146 P P 09 28 39.5 +0.8
comp=E,17µmcomp=E,4µmcomp=E,173nm,0.9s
CISI Cisompet, Garu 49.30 146 P P 09 28 36.5 -2.1
BEHE Becsehely 49.33 304 eP P 09 28 35.4 -3.2
DDMP Don Marcelino, 49.38 116 eP P 09 28 39.9 +0.6
BLY Banja Luka 49.44 301 ⇑P P 09 28 40.7 +1.3
BLY Banja Luka 49.44 301 eP P 09 28 39.3 -0.1
BLY Banja Luka 49.44 301 P P 09 28 39.1 -0.3
BLY IAmb IAmb 09 28 51.2
comp=Z,809nm,1.3s
LOF Lofoten 49.47 333 eP P 09 28 39.2 -0.1
LOF IVmB_BB 09 28 46.3
comp=Z,14µm,2.6s
LOF ePP PP 09 30 32.6 -0.6
LOF eS S 09 35 46.0 -1.0
LOF eSS SS 09 39 21.2 +3.0
LOF IVMsBB 09 50 39.2
comp=Z,63µm,12.6s
MPSI Mapaga 49.51 127 P P 09 28 39.1 -1.2
comp=Z,33µmcomp=Z,14µmcomp=Z,679nm,1.6s
KONS Konsvik 49.55 330 eP P 09 28 40.0 +0.1
KONS IVmB_BB 09 28 47.8
comp=Z,13µm,2.9s
KONS ePP PP 09 30 36.1 +2.1
KONS eS S 09 35 53.3 +5.2
MGRS Mrkonjic Grad 49.59 301 eP P 09 28 42.2 +1.6
STOK Stokkvaagen 49.59 330 eP P 09 28 40.3 0.0
STOK eS S 09 35 52.4 +3.8
TREC Trest 49.61 308 eS S 09 35 56.4 +6.9
TREC AMS AMS 09 53 20.0
comp=Z,138µm,21.1s
KPJI Karang Pucung 49.62 145 P P 09 28 38.7 -2.3
comp=Z,23µmcomp=Z,6µmcomp=Z,238nm,1.3s
CONA Conrad Observa 49.63 306 eP P 09 28 40.2 -0.8
comp=Z,946nm,1.4s,SNR=60
COCO West Island 49.67 162 P P 09 28 41.9 +0.5
COCO West Island 49.67 162 P P 09 28 41.9 +0.5
SEY Seymchan 49.68 34 P P 09 28 40.4 -0.6
comp=Z,257nm,0.8s,baz=264,slow=7.0,SNR=243
SEY Seymchan 49.68 34c iP P 09 28 40.7 -0.3
KOGS Kog 49.69 304 eP P 09 28 41.9 +0.6
CMJI Cimerak 49.79 146 P P 09 28 41.0 -1.3
comp=Z,3µmcomp=Z,155nm,1.4s
UWJI Ujung Watu 49.80 142 P P 09 28 43.0 +0.5
comp=Z,1µmcomp=Z,8µmcomp=Z,616nm,1.4s
GOPC GO Pecny, Ondr 49.94 309 eP P 09 28 43.4 +0.1
GOPC AMS AMS 09 51 20.0
comp=Z,160µm,19.2s
GOPC GO Pecny, Ondr 49.94 309 eP P 09 28 43.4 +0.1
GOPC MLR MLR
comp=Z,160µm,19.2s
PVCC Panska Ves 49.97 309 eS S 09 36 00.2 +5.8
PVCC AMS AMS 09 51 20.0
comp=Z,126µm,17.6s
ARSA Arzberg 50.00 305 eP P 09 28 43.7 -0.1
comp=Z,178nm,1.3s,SNR=22
ZAG Zagreb 50.01 303 eP P 09 28 46.2 +2.4
NSS Namsos 50.01 328 eP P 09 28 43.3 -0.2
NSS IVmB_BB 09 28 51.2
comp=Z,11µm,3.1s
NSS eS S 09 35 54.9 +0.3
NSS eSS SS 09 39 32.1 +5.1
NSS IVMs_BB IVMs_BB 09 53 55.1
comp=Z,74µm,13.0s
RGN Rugen 50.08 315 eP P 09 28 45.4 +1.3
comp=Z,9µm,1.9s,baz=78,slow=7.4
RGN Rugen 50.08 315 eP P 09 28 44.9 +0.8
RGN Rugen 50.08 315 P P 09 28 45.0 +0.9
RGN IAMs_20 IAMs_20 09 51 18.9
comp=Z,285µm,21.0s
PRU Pruhonice 50.08 309 eP P 09 28 44.4 +0.1
PRU eS S 09 35 57.3 +1.3
PRU AMS AMS 09 51 10.0
comp=Z,162µm,18.8s
PRU Pruhonice 50.08 309 eP P 09 28 44.4 +0.1
PRU eS S 09 35 57.3 +1.3
PRU MLR MLR
comp=Z,162µm,18.8s
SMRI Semarang 50.09 143 P P 09 28 45.8 +1.1
comp=Z,30µmcomp=Z,34µmcomp=Z,839nm,2.1s
SMRI Semarang 50.09 143 P P 09 28 44.7 -0.1
RUE Ruedersdorf 50.12 312 eP P 09 28 45.2 +0.7
comp=Z,4µm,2.0s,baz=78,slow=7.4
RUE Ruedersdorf 50.12 312 eP P 09 28 44.9 +0.4
PRA Prague 50.14 309 eP P 09 28 45.9 +1.2
PRA AMS AMS 09 51 30.0
comp=Z,149µm,17.1s
PRA Prague 50.14 309 eP P 09 28 45.9 +1.2
PRA MLR MLR
comp=Z,149µm,17.1s
HSPB Hornsund (broa 50.21 344 eP P 09 28 46.2 +1.3
HSPB eS S 09 35 59.3 +2.2
HSPB eL L 09 49 17.8
comp=Z,305µm,25.6s
HSPB Hornsund (broa 50.21 344 eP P 09 28 46.0 +1.1
HSPB ePP PP 09 30 40.8 +1.0
HSPB eS S 09 35 58.6 +1.6
HSPB IVMs_BB IVMs_BB 09 49 13.6
comp=Z,80µm,27.8s
HSPB Hornsund (broa 50.21 344 eP P 09 28 46.2 +1.3
HSPB eS S 09 35 59.3 +2.2
NC405 NORSAR Array S 50.26 323 P P 09 28 44.8 -0.7
BRG Berggiesshubel 50.30 310 eP P 09 28 47.0 +1.2
comp=Z,3µm,1.9s,baz=78,slow=7.4
BRG Berggiesshubel 50.30 310 iP P 09 28 45.5 -0.4
BRG i 09 28 53.8
BRG i 09 30 40.8
BRG S S 09 36 02.0 +3.0
BRG SS SS 09 39 31.0 -1.0
BRG pmax pmax
comp=Z,105nm,1.0s
BRG pmax pmax
comp=Z,1µm,2.1s
BRG MLR MLR
comp=N,412µm,18.6s
BRG MLR MLR
comp=E,155µm,26.3s
BRG MLR MLR
comp=Z,183µm,20.4s
SPA0 Spitsbergen Ar 50.32 346 eP P 09 28 46.2 +0.5
SPA0 IVmB_BB 09 28 54.0
comp=Z,21µm,3.8s
SPA0 ePP PP 09 30 44.1 +3.3
SPA0 eS S 09 36 02.2 +3.5
SPA0 eSS SS 09 39 35.3 +3.6
SPA0 IVMsBB 09 48 47.5
comp=Z,85µm,29.4s
SPA0 Spitsbergen Ar 50.32 346 P P 09 28 44.4 -1.3
SPA0 IAmb IAmb 09 28 53.1
comp=Z,1µm,1.5s
SPITS Spitsbergen Ar 50.32 346 P P 09 28 44.5 -1.3
CRES Cresnjev 50.37 303 eP P 09 28 45.6 -0.9
NC602 NORSAR Array S 50.37 323 eP P 09 28 46.5 +0.2
NC602 IVmB_BB 09 28 54.4
comp=Z,14µm,1.7s
NC602 eS S 09 36 00.6 +0.8
NC602 eSS SS 09 39 35.4 +2.5
NC602 IVMsBB 09 52 23.1
comp=Z,87µm,10.6s
NC602 NORSAR Array S 50.37 323 P P 09 28 45.8 -0.5
NORES NORESS Array B 50.37 323 P P 09 28 46.4 +0.1
NORES pmax pmax
comp=Z,145nm,0.9s
NC303 NORSAR Array S 50.42 324 P P 09 28 45.9 -0.8
COP Copenhagen 50.43 316 iP P 09 28 47.9 +1.1
COP iS S 09 36 03.1 +2.5
COP Copenhagen 50.43 316 iP P 09 28 47.9 +1.1
COP iS S 09 36 03.1 +2.5
COP MLR MLR
comp=Z,93µm,16.0s
COP Copenhagen 50.43 316 iP 09 28 47.9
COP iS 09 36 03.2
COP IAMs_20 09 51 36.5
comp=Z,93µm,15.8s
SOKA Soboth 50.45 304 eP P 09 28 46.9 -0.4
comp=Z,1µm,1.7s,SNR=79
NB201 NORSAR Array S 50.47 323 P P 09 28 46.8 -0.3
TAR1 Taranto 50.48 296 eP P 09 28 50.2 +2.8
PBCC Pribram 50.49 308 eP P 09 28 48.7 +1.3
NB2 NORSAR Subarra 50.51 323 P P 09 28 47.2 -0.2
comp=Z,661nm,1.4s,baz=85,slow=7.9
NB2 NORSAR Subarra 50.51 323 P P 09 28 47.2 -0.2

baz=85,slow=7.9
NB2 NORSAR Subarra 50.51 323 P P 09 28 43.5 -3.9
NB2 pmax pmax
comp=Z,5µm,2.0s
NOA NORSAR Array B 50.51 323 P P 09 28 46.1 -1.3
comp=Z,99nm,0.8s,baz=85,slow=7.3,SNR=162
NOA LR LR 09 52 40.4
comp=Z,155µm,19.8s,baz=95,slow=39
BAI Bari 50.60 297 eP P 09 28 49.2 +0.9
FBE Freiberg 50.65 310 eP P 09 28 49.9 +1.4
comp=Z,5µm,2.1s,baz=78,slow=7.4
NAO01 NORSAR Array S 50.68 323 P P 09 28 48.0 -0.7
MOA Molln 50.70 306 eP P 09 28 48.7 -0.4
comp=Z,71nm,0.9s,SNR=35
NC204 NORSAR Array S 50.71 324 P P 09 28 48.5 -0.5
NBO00 NORSAR Array S 50.72 323 P P 09 28 47.9 -1.1
MRSI Marisa 50.75 125 P P 09 28 50.9 +1.2
comp=Z,31µmcomp=Z,10µmcomp=Z,583nm,1.2s
VISS Visnje 50.79 303 eP P 09 28 50.0 +0.3
VISS eS S 09 36 08.4 +2.4
CLL Collm 50.80 311 eP P 09 28 50.4 +0.7
comp=Z,2µm,1.9s,baz=78,slow=7.4
CLL Collm 50.80 311 eP P 09 28 50.0 +0.3
CLL i Pmax 09 28 55.7
comp=Z,2µm,1.9s
CLL ePmax 09 28 58.0
CLL ePP PP 09 30 48.0 +2.4
CLL ePPPP 09 31 56.0
CLL eS S 09 36 07.0 +1.1
comp=N,44µm,28.2s
CLL eS S 09 36 07.0 +1.1
comp=E,64µm,31.3s
CLL eSS SS 09 39 42.0 +2.0
CLL Lmax 09 50 00.0
CLL Collm 50.80 311 P P 09 28 49.4 -0.2
CLL IAmb IAmb 09 28 59.4
comp=Z,1µm,1.6s
CLL IAMs_20 IAMs_20 09 50 34.1
comp=Z,215µm,22.0s
CLL Collm 50.80 311 eP P 09 28 50.0 +0.3
CLL i 09 28 55.7
CLL eS S 09 36 07.0 +1.1
CLL pmax pmax
comp=Z,2µm,1.9s
TBLU Trondheim 50.81 326 eP P 09 28 48.9 -0.6
TBLU IVmB_BB 09 28 57.0
comp=Z,14µm,2.0s
TBLU eS S 09 36 05.8 +0.1
TBLU eSS SS 09 39 40.3 +0.5
TBLU IVMsBB 09 51 16.4
comp=Z,66µm,21.8s
OBKA Obir 50.82 304 epP P 09 28 50.3 +0.3
comp=Z,185nm,1.4s,SNR=20
SG1 Sgolgore (BA) 50.83 297 eP P 09 28 50.8 +0.7
OSL Oslo 50.84 322 eP P 09 28 49.8 0.0
OSL IVmB_BB 09 28 58.0
comp=Z,12µm,2.6s
OSL eS S 09 36 09.5 +3.2
GEC2 GERESS Array S 50.85 307 eP P 09 28 51.7 +1.5
comp=Z,4µm,2.0s,baz=78,slow=7.4
GEC2 GERESS Array S 50.85 307 P P 09 28 50.0 -0.2
GERES GERESS Array B 50.85 307 P P 09 28 50.1 -0.2
comp=Z,119nm,0.9s,baz=73,slow=3.4,SNR=187
GERES LR LR 09 53 37.0
comp=Z,108µm,21.0s,baz=84,slow=40
GERES GERESS Array B 50.85 307 P P 09 28 49.7 -0.5
MATE Matera 50.86 296 ⇑P P 09 28 51.3 +1.0
KHC Kasperske Hory 50.87 308 eP P 09 28 49.8 -0.5
KHC eS S 09 36 12.5 +5.4
KHC AMS AMS 09 51 10.0
comp=Z,130µm,19.0s
KHC Kasperske Hory 50.87 308 P P 09 28 50.7 +0.4
KHC IAmb IAmb 09 28 59.9
comp=Z,1µm,1.8s
KHC Kasperske Hory 50.87 308c iP P 09 28 50.7 +0.4
KHC pmax pmax
comp=Z,816nm,1.5s
KHC MLR MLR
comp=Z,209µm,20.0s
UGM Wanagama 50.88 143 P P 09 28 50.9 +0.2
UGM IAmb IAmb 09 29 16.9
comp=Z,937nm,1.7s
JCJ Chichijima 50.90 82 LR LR 09 50 35.3
comp=Z,183µm,21.1s,baz=301,slow=36
LJU Ljubljana 50.95 304 eP P 09 28 50.7 -0.2
LJU eS S 09 36 09.8 +1.6
LJU Ljubljana 50.95 304 eP P 09 28 50.7 -0.2
GRJI Gresik 51.01 140 P P 09 28 53.6 +2.0
comp=Z,864nmcomp=Z,3µmcomp=Z,256nm,1.4s
RIY Rijeka 51.15 303 eP P 09 28 53.1 +0.7
SGRT San Giovanni R 51.24 298 P P 09 28 53.2 0.0
SGRT IAmb IAmb 09 29 09.0
comp=Z,1µm,1.9s
TIP Timpagrande 51.27 295 ⇑P P 09 28 54.4 +0.9
TIP Timpagrande 51.27 295 P P 09 28 53.2 -0.3
TIP IAmb IAmb 09 29 06.0
comp=Z,749nm,1.2s
TANN Tannenbergstha 51.31 310 eP P 09 28 54.8 +1.2
comp=Z,6µm,2.1s,baz=78,slow=7.4
WET Wettzell 51.31 308 eP P 09 28 55.1 +1.5
comp=Z,4µm,2.1s,baz=78,slow=7.4
WET Wettzell 51.31 308 P P 09 28 53.4 -0.3
KBS Kingsbay 51.35 346 eP P 09 28 55.0 +1.5
KBS IVmB_BB 09 29 01.3
comp=Z,16µm,3.4s
KBS eS S 09 36 15.3 +2.3
KBS eSS SS 09 39 52.0 +4.0
KBS IVMsBB 09 52 50.9
comp=Z,77µm,18.6s
KBS Kingsbay 51.35 346 P P 09 28 52.8 -0.7
KBS Kingsbay 51.35 346 IAMs_20 IAMs_20 09 53 02.0
comp=Z,197µm,18.0s
KBS Kingsbay 51.35 346 i P P 09 28 52.6 -0.9
KBS pmax pmax
comp=Z,471nm,1.0s
KBS MLR MLR
comp=Z,574µm,17.0s
KBS Kingsbay 51.35 346 i P 09 28 54.7
KBS i 09 30 54.0
KBS IAMs_20 09 52 56.2
comp=Z,447µm,15.9s
NKC Novy Kostel 51.35 309 eP P 09 28 54.5 +0.6
NKC eS S 09 36 18.7 +4.9
NKC AMS AMS 09 52 00.0
comp=Z,166µm,19.7s
NKC Novy Kostel 51.35 309 eP P 09 28 54.5 +0.6
NKC eS S 09 36 18.7 +4.9
NKC MLR MLR
comp=Z,166µm,19.7s
ACER Acerenza 51.38 297 P P 09 28 53.9 -0.4
WERN Wernitzgruen 51.39 309 eP P 09 28 55.6 +1.4
comp=Z,3µm,2.1s,baz=78,slow=7.4
MYKA Terra Mystica 51.40 305 epP P 09 28 55.2 +0.9
comp=Z,295nm,1.8s,SNR=27
GUNZ Gunzen 51.40 310 eP P 09 28 55.5 +1.2
comp=Z,3µm,2.0s,baz=78,slow=7.4
KONO Kongsberg 51.44 322 i P P 09 28 53.3 -1.1
KONO pmax pmax
comp=Z,397nm,1.1s
KONO MLR MLR
comp=Z,132µm,18.0s
PCJI Pacitan 51.45 143 P P 09 28 54.8 -0.1
comp=Z,4µmcomp=Z,234nm,2.0s
DOMB Dombas 51.45 325 eP P 09 28 54.3 -0.2
DOMB IVmB_BB 09 29 02.6
comp=Z,12µm,2.8s
DOMB eS S 09 36 16.4 +1.7
DOMB eSS SS 09 39 50.4 +0.4
DOMB IVMsBB 09 52 35.5
comp=Z,73µm,21.1s
DOMB IVMs_BB IVMs_BB 09 52 35.7
comp=Z,73µm,21.1s
PLN Plauen 51.48 310 eP P 09 28 56.0 +1.2
comp=Z,3µm,2.0s,baz=78,slow=7.4
KBA Koelnbreinsper 51.49 305 eP P 09 28 54.7 -0.4
comp=Z,82nm,1.2s,SNR=33
KBA Koelnbreinsper 51.49 305 P P 09 28 56.0 +0.9
NEUB Neuenburg 51.57 311 eP P 09 28 56.4 +1.0
comp=Z,5µm,2.2s,baz=78,slow=7.4
APSI Ampana 51.59 126 P P 09 28 57.1 +1.1
comp=Z,15µmcomp=Z,9µmcomp=Z,482nm,1.5s
ROTZ Rotzenmuhle 51.61 309 eP P 09 28 57.4 +1.6
comp=Z,3µm,1.9s,baz=78,slow=7.4
PWJI Pagerwojo 51.61 142 P P 09 28 54.5 -1.6
comp=Z,17µmcomp=Z,7µmcomp=Z,222nm,2.1s

MANZ Manzenberg 51.62 309 eP P 09 28 57.4 +1.5
comp=Z,3µm,2.0s,baz=78,slow=7.4
RJOB Jochberg 51.69 306 eP P 09 28 57.8 +1.3
comp=Z,3µm,2.2s,baz=78,slow=7.4
MOX Moxa 51.79 310 eP P 09 28 58.3 +1.2
comp=Z,4µm,2.3s,baz=78,slow=7.4
MOX eL L 09 52 02.2
comp=Z,134µm,20.9s
MOX Moxa 51.79 310 P P 09 28 57.2 +0.1
KMMI Kalianget 51.90 139 P P 09 28 57.6 -0.7
comp=Z,10µmcomp=Z,310nm,1.3s
BSEG Bad Segeberg 51.91 314 eP P 09 28 59.4 +1.4
comp=Z,5µm,2.0s,baz=78,slow=7.4
SKAR Skarslia 51.96 323 eP P 09 28 59.3 +1.0
SKAR IVmB_BB 09 29 07.1
comp=Z,14µm,2.2s
SKAR eS S 09 36 23.7 +1.8
SKAR eSS SS 09 40 01.1 +3.0
SKAR IVMs_BB IVMs_BB 09 55 36.7
comp=Z,80µm,19.6s
GOET G??ttrup 52.00 318 i P P 09 29 00.1 +1.6
comp=Z,2µm,1.1s
GOET G??ttrup 52.00 318 i P 09 29 00.2
GOET IAmb 09 29 05.9
comp=Z,2µm,1.1s
GOET IAMs_20 09 51 58.2
comp=Z,138µm,18.1s
KMSI Cibinong 52.05 123 P P 09 29 01.2 +1.7
comp=Z,1µmcomp=Z,10µmcomp=Z,730nm,1.2s
ASSE Asse, Remlinge 52.06 312 eP P 09 28 60.0 +1.0
comp=Z,4µm,2.4s,baz=78,slow=7.4
TTSI Tana Toraja 52.06 130 P P 09 29 00.0 +0.5
comp=Z,23µmcomp=Z,17µmcomp=Z,690nm,1.3s
MOL Molde 52.10 325 eP P 09 28 59.3 +0.1
MOL IVmB_BB 09 29 07.8
comp=Z,15µm,2.0s
MOL eS S 09 36 27.1 +3.5
MOL eSS SS 09 40 03.1 +2.9
MOL IVMsBB 09 53 46.4
comp=Z,70µm,9.7s
STAL STALIGIAL 52.11 304 P P 09 28 58.4 -1.3
MUD Monsted U'grnd 52.12 318 i P P 09 29 00.6 +1.2
MUD i S S 09 36 24.7 +0.8
MUD Monsted U'grnd 52.12 318 i P P 09 29 00.6 +1.2
MUD i S S 09 36 24.7 +0.8
MUD MLR MLR
comp=Z,170µm,15.0s
MUD Monsted U'grnd 52.12 318 i P 09 29 00.7
MUD i S 09 36 24.7
MUD IAMs_20 09 54 53.0
comp=Z,165µm,14.7s
ABTA Abfaltersbach 52.12 305 eP P 09 28 58.1 -1.7
comp=Z,72nm,1.1s,SNR=15
CEL Celeste 52.21 294 P P 09 28 59.8 -0.7
CEL IAmb IAmb 09 29 12.3
comp=Z,741nm,1.1s
GRC1 Grafenberg Arr 52.22 308 P P 09 29 02.1 +1.7
GRA1 Grafenberg Arr 52.25 309 P P 09 29 01.4 +0.8
GRF Grafenberg Arr 52.25 309 eP P 09 29 02.4 +1.8
comp=Z,6µm,2.1s,baz=78,slow=7.4
GRF eL L 09 53 06.5
comp=Z,210µm,20.2s
GRF Grafenberg Arr 52.25 309 P P 09 29 01.4 +0.8
GRF pmax pmax
comp=Z,2µm,1.5s
PAOL Paolisi 52.30 298 P P 09 29 00.3 -0.8
PAOL IAmb IAmb 09 29 11.0
comp=Z,1µm,1.8s
CLZ Clausthal 52.30 312 eP P 09 29 02.2 +1.2
comp=Z,5µm,2.3s,baz=78,slow=7.4
NRDL Niedersach Rie 52.32 313 eP P 09 29 02.5 +1.6
comp=Z,5µm,1.7s,baz=78,slow=7.4
AKN Aaknes 52.40 325 eP P 09 29 02.4 +0.9
AKN IVmB_BB 09 29 10.2
comp=Z,10µm,2.7s
AKN ePP PP 09 31 03.6 +3.7
AKN eS S 09 36 30.6 +2.9
AKN eSS SS 09 40 06.7 +1.7
AKN IVMs_BB IVMs_BB 09 54 03.0
comp=Z,71µm,16.6s
LUWI Luwuk 52.43 126 P P 09 29 02.2 -0.1
comp=Z,26µmcomp=Z,11µmcomp=Z,644nm,1.2s
LUWI Luwuk 52.43 126 P P 09 29 02.8 +0.5
LUWI IAmb IAmb 09 29 30.9
comp=Z,1µm,1.3s
INTR Introdacqua 52.47 299 P P 09 29 02.2 -0.3
INTR IAmb IAmb 09 29 26.4
comp=Z,777nm,1.4s
WTTA Wattenberg 52.57 306 eP P 09 29 02.5 -0.8
comp=Z,1µm,2.6s,SNR=36
FUR Furstenfeldbru 52.58 307 eP P 09 29 04.8 +1.7
comp=Z,16µm,2.6s,baz=78,slow=7.4
WATA Walderalm 52.59 306 eP P 09 29 02.1 -1.2
comp=Z,949nm,2.4s,SNR=25
GTTG Gottingen 52.61 311 eP P 09 29 04.5 +1.3
comp=Z,6µm,2.1s,baz=78,slow=7.4
GMJI Gumukmas 52.66 140 P P 09 29 02.5 -1.4
comp=Z,18µmcomp=Z,10µmcomp=Z,243nm,2.6s
RETH Rethem/Aller, 52.72 313 eP P 09 29 05.1 +1.2
comp=Z,4µm,2.3s,baz=78,slow=7.4
AQU L'Aquila 52.73 299 eP P 09 29 05.6 +1.3
AQU L'Aquila 52.73 299 P P 09 29 04.3 0.0
AQU IAMs_20 IAMs_20 09 54 46.7
comp=Z,164µm,20.0s
AQU L'Aquila 52.73 299 P P 09 29 04.3 0.0
AQU pmax pmax
comp=Z,383nm,1.1s
AQU MLR MLR
comp=Z,164µm,20.0s
SPSI Sidrap Palu 52.74 131 P P 09 29 04.2 -0.4
comp=Z,25µmcomp=Z,12µmcomp=Z,382nm,1.7s
UBBA Unterbreizbach 52.75 311 eP P 09 29 05.3 +1.1
comp=Z,3µm,2.1s,baz=78,slow=7.4
NRCA Norcia 52.79 300 P P 09 29 05.0 +0.2
NRCA IAmb IAmb 09 29 16.6
comp=Z,574nm,1.1s
NRCA IAMs_20 IAMs_20 09 54 45.2
comp=Z,224µm,21.0s
SNART Snartemo 52.85 320 eP P 09 29 05.5 +0.7
SNART IVmB_BB 09 29 13.8
comp=Z,7µm,1.6s
SNART eS S 09 36 37.4 +3.5
SQTA Sankt Quirin 52.86 306 eP P 09 29 04.4 -0.9
comp=Z,634nm,1.6s,SNR=40
CTI Castel Tesino 52.88 304 P P 09 29 04.6 -0.8
CTI IAmb IAmb 09 29 16.0
comp=Z,654nm,1.3s
CTI IAMs_20 IAMs_20 09 55 46.5
comp=Z,158µm,20.0s
CTI Castel Tesino 52.88 304 P P 09 29 04.6 -0.8
CTI pmax pmax
comp=Z,654nm,1.3s
CTI MLR MLR
comp=Z,158µm,20.0s
ODD1 Odda 52.89 322 eP P 09 29 05.3 +0.1
ODD1 IVmB_BB 09 29 14.1
comp=Z,9µm,2.7s
ODD1 eS S 09 36 41.8 +7.2
ODD1 IVMs_BB IVMs_BB 09 56 33.6
comp=Z,87µm,16.0s
MOTA Moosalm 52.90 306 eP P 09 29 05.1 -0.6
comp=Z,290nm,1.5s,SNR=23
HYA Hoyanger 52.92 324 eP P 09 29 04.1 -1.2
HYA IVmB_BB 09 29 13.9
comp=Z,11µm,2.6s
HYA eS S 09 36 37.4 +2.6
HYA eSS SS 09 40 14.9 +1.8
TEOL Teolo 53.06 304 P P 09 29 06.7 +0.1
TEOL IAmb IAmb 09 29 21.0
comp=Z,646nm,0.9s
BLS5 Blasjo 53.06 322 eP P 09 29 06.9 +0.4
BLS5 IVmB_BB 09 29 15.5
comp=Z,10µm,2.9s
BLS5 eS S 09 36 38.7 +1.9
BLS5 eSS SS 09 40 17.6 +2.2
BLS5 IVMs_BB IVMs_BB 09 55 03.7
comp=Z,73µm,14.4s
MURB Monte Urbino 53.07 301 P P 09 29 07.5 +0.6
RETA Reutte 53.09 306 eP P 09 29 05.1 -1.8
comp=Z,899nm,1.5s,SNR=53
JAGI Jajag, Banyuwa 53.19 140 P P 09 29 05.9 -2.0
comp=Z,19µmcomp=Z,7µmcomp=Z,169nm,1.1s
JAGI Jajag, Banyuwa 53.19 140 P P 09 29 07.1 -0.8
FETA Feichten 53.23 306 eP P 09 29 05.7 -2.3
comp=Z,226nm,1.1s,SNR=45
HLG Helgoland 53.27 315 eP P 09 29 09.3 +1.3

comp=Z,4µm,1.7s,baz=78,slow=7.4
BNSI Bone 53.29 131 P P 09 29 08.2 -0.4
comp=Z,4µmcomp=Z,127nm,1.6s
SKR Severo-Kuril's 53.37 49 eP P 09 29 09.4 +0.6
SKR e 09 30 17.4
SKR e 09 31 14.1
SKR eS S 09 36 40.5 -0.7
SKR e 09 38 52.1
SKR eSS SKiKP 09 40 24.1 -2.0
SKR pmax pmax
comp=Z,160nm,1.4s
SKR pmax pmax
comp=Z,5µm,8.3s
SKR pmax pmax
comp=Z,6µm,11.1s
SKR smax smax
comp=E,9µm,14.5s
SKR MLR MLR
comp=Z,116µm,17.0s
SKR MLR MLR
comp=Z,111µm,16.0s
FOO Floro 53.40 324 eP P 09 29 09.5 +0.7
FOO IVmB_BB 09 29 17.3
comp=Z,8µm,2.7s
FOO eS S 09 36 43.1 +1.9
FOO eSS SS 09 40 23.2 +2.5
FOO IVMsBB 09 57 51.7
comp=Z,69µm,12.1s
SRBI Singaraja 53.44 138 P P 09 29 08.2 -1.5
comp=Z,19µmcomp=Z,15µmcomp=Z,506nm,2.2s
BER Bergen 53.46 323 eP P 09 29 10.0 +0.7
BER IVmB_BB 09 29 17.9
comp=Z,14µm,2.3s
BER eS S 09 36 44.4 +2.3
BER eSS SKiKP 09 40 27.3 +1.3
BER IVMsBB 09 56 55.4
comp=Z,99µm,17.6s
UBR Ueberruh 53.46 307 eP P 09 29 10.7 +1.0
comp=Z,4µm,1.9s,baz=78,slow=7.4
ASK Askoy 53.51 323 eP P 09 29 10.3 +0.6
ASK IVmB_BB 09 29 18.1
comp=Z,13µm,2.3s
ASK eS S 09 36 44.1 +1.3
ASK IVMs_BB IVMs_BB 09 56 49.7
comp=Z,77µm,15.9s
KAPI Kappang 53.55 132 LR LR 09 55 32.3
comp=Z,86µm,18.8s,baz=310,slow=40
SUE Sulen 53.62 324 eP P 09 29 10.6 +0.1
SUE IVmB_BB 09 29 18.9
comp=Z,12µm,2.2s
SUE eS S 09 36 45.4 +1.1
SUE eSS SKiKP 09 40 27.0 +0.9
SUE IVMsBB 09 54 54.0
comp=Z,73µm,12.5s
FUORN Ofenpass-Fuorn 53.65 305 P P 09 29 10.2 -1.0
FUORN IAmb IAmb 09 29 22.0
comp=Z,514nm,1.1s
KMY Karmoy 53.70 321 eP P 09 29 11.5 +0.3
KMY IVmB_BB 09 29 19.8
comp=Z,9µm,2.6s
KMY eS S 09 36 50.5 +5.0
KMY IVMs_BB IVMs_BB 09 54 40.2
comp=Z,84µm,22.4s
DAVA Damuels 53.72 306 eP P 09 29 08.5 -3.2
comp=Z,793nm,1.9s,SNR=58
PEA0B Petropavlovsk- 53.75 46 P P 09 29 11.0 -0.7
PEA0B IAmb IAmb 09 29 27.5
comp=Z,1µm,1.6s
PEA0B Petropavlovsk- 53.75 46c i P P 09 29 10.6 -1.0
PETK Petropavlovsk- 53.75 46 P P 09 29 11.0 -0.6
comp=Z,53nm,0.9s,baz=321,slow=0.8,SNR=62
PETK LR LR 09 53 18.7
comp=Z,234µm,18.6s,baz=286,slow=37
PETK Petropavlovsk- 53.75 46 P P 09 29 10.5 -1.2
PETK Petropavlovsk- 53.75 46 P P 09 29 11.0 -0.6
SALO Salr 53.76 304 P P 09 29 10.9 -0.9
STU Stuttgart 53.76 308 eP P 09 29 13.0 +1.3
comp=Z,4µm,1.9s,baz=78,slow=7.4
IBBN Ibbenburen 53.77 313 eP P 09 29 12.7 +1.0
comp=Z,7µm,2.3s,baz=78,slow=7.4
TOD Tromm 53.79 309 P P 09 29 13.4 +1.4
ZCCA Zocca 53.82 302 P P 09 29 12.2 -0.1
ZCCA IAMs_20 IAMs_20 09 55 49.4
comp=Z,201µm,20.0s
TNS Taunus Mts 53.86 310 eP P 09 29 13.7 +1.2
comp=Z,3µm,2.2s,baz=78,slow=7.4
TNS Taunus Mts 53.86 310 P P 09 29 13.9 +1.4
IGBI Denpasar 54.01 139 P P 09 29 13.6 -0.3
comp=Z,11µmcomp=Z,5µmcomp=Z,292nm,1.1s
BKSI Bulukumba 54.02 131 P P 09 29 14.0 0.0
comp=Z,20µmcomp=Z,7µmcomp=Z,161nm,1.2s
WDD Wied Dalam 54.08 291 P P 09 29 12.5 -1.7
WDD IAmb IAmb 09 29 25.8
comp=Z,849nm,1.0s
PRMA PARMA 54.15 303 P P 09 29 14.7 +0.1
PRMA IAmb IAmb 09 29 27.5
comp=Z,935nm,1.4s
LODK Lodwar 54.18 245 P P 09 29 15.2 -0.1
SNR=177
CORL Corleone 54.25 294 P P 09 29 14.8 -0.7
CORL IAmb IAmb 09 29 33.9
comp=Z,764nm,1.3s
TNTI Ternate 54.26 120 P P 09 29 17.1 +1.4
comp=Z,15µmcomp=Z,16µmcomp=Z,804nm,1.1s
TNTI Ternate 54.26 120 P P 09 29 16.1 +0.3
BUG Bochum--Univer 54.27 312 eP P 09 29 16.6 +1.2
comp=Z,4µm,2.1s,baz=78,slow=7.4
VLC Villacollemand 54.28 302 P P 09 29 16.4 +0.7
VLC IAmb IAmb 09 29 28.6
comp=Z,1µm,1.6s
VLC IAMs_20 IAMs_20 09 56 28.7
comp=Z,153µm,21.0s
TUE Stuetta 54.30 305 P P 09 29 15.1 -0.8
TUE IAmb IAmb 09 29 27.7
comp=Z,1µm,1.6s
TUE IAMs_20 IAMs_20 09 56 50.9
comp=Z,153µm,20.0s
KTD Kalmit 54.32 309 P P 09 29 17.3 +1.4
PET Petropavlovsk 54.33 46 P P 09 29 14.9 -0.9
PET IAmb IAmb 09 29 21.7
comp=Z,763nm,1.3s
PET IAMs_20 IAMs_20 09 53 44.3
comp=Z,182µm,18.0s
PET Petropavlovsk 54.33 46 eP P 09 29 15.0 -0.9
PET e 09 31 25.0
PET ePPP PPP 09 32 31.5
PET eS S 09 36 49.6 -4.6
PET eSS SS 09 40 33.7 -2.0
PET pmax pmax
comp=Z,519nm,1.3s
PET pmax pmax
comp=Z,12µm,6.2s
PET pmax pmax
comp=Z,10µm,14.9s
PET MLR MLR
comp=Z,270µm,16.0s
PET MLR MLR
comp=Z,260µm,16.0s
CASP Castiglione de 54.38 301 P P 09 29 16.8 +0.5
CASP IAmb IAmb 09 29 24.6
comp=Z,1µm,2.0s
CLTB Caltabellotta 54.43 294 P P 09 29 15.2 -1.7
CLTB IAmb IAmb 09 29 27.7
comp=Z,577nm,1.2s
BFO Black Forest 54.43 308 eP P 09 29 17.6 +0.9
comp=Z,4µm,2.3s,baz=78,slow=7.4
BFO Black Forest 54.43 308 P P 09 29 16.9 +0.2
BFO IAmb IAmb 09 29 26.8
comp=Z,1µm,1.8s
BFO Black Forest 54.43 308 P P 09 29 16.9 +0.2
BFO pmax pmax
comp=Z,1µm,1.8s
SLE Schleitheim 54.49 307 P P 09 29 17.5 +0.4
LANF Langenberg 54.59 309 P P 09 29 19.3 +1.5
AHRW Bad Neuenahr-A 54.62 311 eP P 09 29 19.3 +1.4
comp=Z,6µm,2.5s,baz=78,slow=7.4
MSSA Maissana 54.83 303 P P 09 29 17.5 -2.2
MSSA IAmb IAmb 09 29 47.0
comp=Z,842nm,1.5s
BILL Bilibino 54.96 27 P P 09 29 20.2 +0.1
BILL Bilibino 54.96 27c eP P 09 29 19.7 -0.5
BILL i *PP pP 09 29 21.5 -1.6
BILL i *SP sP 09 29 24.6 +0.4
BILL e 09 30 16.7
BILL e 09 31 23.4

BILL i PPP PPP 09 32 38.1
BILL eS S 09 37 04.0 +1.8
BILL i 09 39 07.7
BILL eSS SS 09 40 44.4 -0.7
BILL pmax pmax
comp=Z,1µm,2.8s
BILL pmax pmax
comp=Z,451nm,1.0s
BILL MLR MLR
comp=Z,376µm,14.0s
CDF Champ du Feu 55.09 308 eP P 09 29 21.0 -0.5
CDF pmax pmax
comp=Z,387nm,1.1s
ECH Echery 55.22 308 P P 09 29 22.2 -0.2
ECH IAMs_20 IAMs_20 09 53 38.2
comp=Z,173µm,22.0s
ECH Echery 55.22 308 P P 09 29 22.2 -0.2
ECH pmax pmax
comp=Z,2µm,1.9s
ECH MLR MLR
comp=Z,173µm,22.0s
SANI Sanana 55.33 123 P P 09 29 23.1 -0.4
comp=Z,23µmcomp=Z,15µmcomp=Z,480nm,1.2s
MOF Molkenrain 55.34 308 P P 09 29 24.0 +0.7
LBMI Labuha 55.35 121 P P 09 29 23.7 0.0
comp=Z,18µmcomp=Z,736nm,2.9s
WLF Walferdange 55.44 310 eP P 09 29 25.4 +1.5
comp=Z,5µm,2.2s,baz=78,slow=7.4
WLF Walferdange 55.44 310 P P 09 29 24.5 +0.6
WLF IAmb IAmb 09 29 31.7
comp=Z,488nm,1.0s
WLF Walferdange 55.44 310 P P 09 29 24.5 +0.6
WLF pmax pmax
comp=Z,488nm,1.0s
WLF MLR MLR
comp=Z,118µm,20.0s
PLAI Plampang 55.46 136 P P 09 29 23.5 -0.9
comp=Z,19µmcomp=Z,6µmcomp=Z,221nm,1.0s
HINF Hinteralfeld 55.53 308 eP P 09 29 24.1 -0.6
HINF pmax pmax
comp=Z,382nm,1.0s
BBSI Bau Bau 55.67 129 P P 09 29 26.8 +0.9
comp=Z,3µmcomp=Z,110nm,1.4s
SENIN Lac Senin/Sane 55.68 306 P P 09 29 25.3 -0.7
SENIN IAMs_20 IAMs_20 09 56 44.5
comp=Z,161µm,20.0s
LOMF Lomont 55.69 307 P P 09 29 26.7 +0.9
PGF Pioggiola 55.76 301 eP P 09 29 25.7 -0.7
PGF pmax pmax
comp=Z,541nm,1.5s
HAU Haudompre 55.80 308 eP P 09 29 25.9 -0.7
HAU pmax pmax
comp=Z,616nm,1.5s
KMBO Kilima Mbogo 55.98 239 i P P 09 29 29.6 +1.1
KMBO Kilima Mbogo 55.98 239 P P 09 29 27.8 -0.7
comp=Z,124nm,0.9s,baz=37,slow=10,SNR=152
KMBO LR LR 09 53 07.8
comp=Z,35µm,20.8s,baz=38,slow=36
KMBO Kilima Mbogo 55.98 239 i P P 09 29 29.6 +1.1
KMBO Kilima Mbogo 55.98 239 i P P 09 29 29.5 +1.1
KMBO i S S 09 37 23.9 +6.3
KMBO Kilima Mbogo 55.98 239 i P P 09 29 28.8 +0.3
SNR=120
KMBO Kilima Mbogo 55.98 239 P P 09 29 27.3 -1.2
KMBO Kilima Mbogo 55.98 239 i P P 09 29 29.5 +1.1
KMBO i S S 09 37 23.9 +6.3
NOR Nord 56.09 350 i P P 09 29 28.1 0.0
comp=Z,700nm,1.2s
NOR Nord 56.09 350 i P P 09 29 30.2 +2.1
NOR eS PcP 09 30 24.4 -1.7
NOR Nord 56.09 350 i P P 09 29 28.1 0.0
NOR pmax pmax
comp=Z,700nm,1.2s
NOR MLR MLR
comp=Z,180µm,16.0s
NOR Nord 56.09 350 i P 09 29 28.1
NOR IAmb 09 29 34.8
comp=Z,700nm,1.2s
NOR IAMs_20 09 58 09.9
comp=Z,178µm,16.2s
GIVF Givet 56.13 311 eP P 09 29 29.8 +0.9
GIVF pmax pmax
comp=Z,2µm,1.7s
UCC Uccle 56.21 312 P P 09 29 31.4 +2.0
UCC Uccle 56.21 312 P P 09 29 31.4 +2.0
UCC pmax pmax
comp=Z,314nm,1.5s
UCC MLR MLR
comp=Z,133µm,22.0s
KIBK Kibwezi 56.30 237 P P 09 29 30.5 -0.2
SNR=86
LPG La Plagne 56.32 305 eP P 09 29 29.4 -1.2
LPG pmax pmax
comp=Z,403nm,1.0s
LPL La Plagne 56.32 305 eP P 09 29 29.3 -1.3
LPL pmax pmax
comp=Z,770nm,1.0s
SBF Sospel 56.39 303 eP P 09 29 30.5 -0.4
SBF pmax pmax
comp=Z,557nm,0.9s
CABF La Chapelle 56.40 306 eP P 09 29 31.4 +0.4
CABF pmax pmax
comp=Z,2µm,2.2s
BNI Bardonecchia 56.51 304 P P 09 29 31.1 -0.8
BNI Bardonecchia 56.51 304 P P 09 29 31.1 -0.8
BNI pmax pmax
comp=Z,2µm,1.6s
BNI MLR MLR
comp=Z,116µm,22.0s
BAIF Baives 56.52 311 eP P 09 29 33.8 +2.1
BAIF pmax pmax
comp=Z,3µm,2.0s
YEL1 Yell 56.53 324 eP P 09 29 32.9 +1.4
MBDF Montbardon 56.56 304 eP P 09 29 32.2 0.0
MBDF pmax pmax
comp=Z,360nm,1.2s
LRW Lerwick 56.68 323 eP P 09 29 33.9 +1.3
LRW IAmb IAmb 09 29 41.4
comp=Z,3µm,1.9s
LRW IAMs_20 IAMs_20 09 54 15.7
comp=Z,129µm,17.5s
SAN1 Sandwick 56.74 323⇑eP P 09 29 33.4 +0.4
JMIC Jan Mayen 56.89 337 eP P 09 29 34.4 +0.4
JMIC eS S 09 37 32.9 +5.0
JMIC IVMsBB 10 00 29.3
comp=Z,30µm,13.6s
NLAI Namlea 56.95 123 P P 09 29 34.9 -0.2
comp=Z,8µmcomp=Z,422nm,1.0s
FRF La Foret Royal 57.03 303 eP P 09 29 35.8 +0.4
FRF pmax pmax
comp=Z,790nm,1.6s
ORIF Oris-en-Rattie 57.09 305 eP P 09 29 34.9 -1.0
ORIF pmax pmax
comp=Z,147nm,1.1s
LOR Lormes 57.63 308 eP P 09 29 38.5 -1.1
LOR pmax pmax
comp=Z,366nm,1.2s
WACR West Acre 57.84 315⇑eP P 09 29 41.7 +0.8
WACR IAmb IAmb 09 29 50.5
comp=Z,1µm,0.9s
WACR IAMs_20 IAMs_20 09 54 55.1
comp=Z,127µm,19.7s
SMF Signal de Mont 57.85 307 eP P 09 29 40.3 -0.8
SMF pmax pmax
comp=Z,349nm,0.9s
SSB Saint Sauveur 57.86 305 P P 09 29 40.7 -0.5
SSB IAmb IAmb 09 29 51.3
comp=Z,1µm,1.8s
SSB Saint Sauveur 57.86 305 P P 09 29 40.7 -0.5
SSB pmax pmax
comp=Z,1µm,1.8s
SSB MLR MLR
comp=Z,119µm,22.0s
VIVF Saint-Julien-l 57.92 305 eP P 09 29 42.3 +0.6
VIVF pmax pmax
comp=Z,2µm,2.0s
SSF Saint Saulge 57.92 308 eP P 09 29 40.8 -0.8
SSF pmax pmax
comp=Z,465nm,1.1s
SBV Sambava 57.98 218 P P 09 29 43.0 +0.7
SNR=15
KEST Kesra 58.01 293 P P 09 29 42.6 +0.1
comp=Z,68nm,0.9s,baz=318,slow=2.2,SNR=26
KEST LR LR 09 58 34.2
comp=Z,48µm,18.9s,baz=1.5,slow=40
KEST Kesra 58.01 293 P P 09 29 41.7 -0.8
KEST IAmb IAmb 09 29 50.0
comp=Z,2µm,1.7s
AAI Ambon 58.02 123 P P 09 29 42.7 +0.1
comp=Z,30µmcomp=Z,10µmcomp=Z,518nm,1.9s
ELSH Elham, Standar 58.04 313 IAMs_20 IAMs_20 09 54 45.1
comp=Z,202µm,21.5s
AVF Avril sur Loir 58.12 307 eP P 09 29 42.3 -0.7
AVF pmax pmax
comp=Z,539nm,1.0s
LMK Market Rasen 58.16 316 eP P 09 29 43.9 +0.8
LMK IAmb IAmb 09 29 53.5
comp=Z,4µm,1.4s
LMK IAMs_20 IAMs_20 09 56 47.9
comp=Z,196µm,18.9s
SWI Sorong 58.17 118 P P 09 29 44.4 +0.7
comp=Z,12µmcomp=Z,835nm,1.6s
SIJI Sorong 58.17 118 P P 09 29 44.4 +0.6
comp=Z,251nm,1.0s,baz=323,slow=7.9,SNR=52
SIJI LR LR 09 58 25.0
comp=Z,55µm,18.8s,baz=330,slow=40
DRUM Mains of Drumt 58.25 320 eP P 09 29 44.3 +0.6
DRUM IAmb IAmb 09 29 53.7
comp=Z,1µm,1.3s
DRUM IAMs_20 IAMs_20 09 56 55.6
comp=Z,108µm,16.7s
MLA1 Latheron 58.27 322⇑eP P 09 29 44.6 +0.8
MSAI Masohi 58.28 122 P P 09 29 41.8 -2.6
comp=Z,2µmcomp=Z,151nm,1.1s
CLF Chambon-Foret 58.39 309 P P 09 29 44.3 -0.5
CLF IAMs_20 IAMs_20 09 57 02.1
comp=Z,152µm,20.0s
MCD Coleburn Disti 58.44 321 eP P 09 29 45.0 -0.1
BIGH Upper Bighouse 58.49 322 eP P 09 29 46.3 +0.9
BIGH IAmb IAmb 09 29 54.6
comp=Z,3µm,1.7s
BIGH IAMs_20 IAMs_20 09 57 03.2
comp=Z,144µm,17.3s
BGF Bois d'Agland 58.52 307 eP P 09 29 45.0 -0.8
BGF pmax pmax
comp=Z,459nm,1.5s
HMNX Herstmonceux 58.61 313 IAMs_20 IAMs_20 09 55 02.5
comp=Z,174µm,22.6s
EDMD Edmundbyers 58.63 318 eP P 09 29 46.9 +0.5
EDMD IAmb IAmb 09 29 55.5
comp=Z,3µm,1.9s
EDMD IAMs_20 IAMs_20 09 55 46.4
comp=Z,145µm,25.0s
ESY Stoneypath 58.63 319⇑eP P 09 29 47.9 +1.5
EDU Dundee 58.64 320⇑eP P 09 29 46.9 +0.4
HPK Haverah Park 58.73 317 eP P 09 29 47.5 +0.5
HPK IAmb IAmb 09 29 56.6
comp=Z,1µm,1.2s
HPK IAMs_20 IAMs_20 09 58 50.0
comp=Z,125µm,18.1s
SARN Sarigan 58.83 91 P P 09 29 47.3 -1.1
SARN IAmb IAmb 09 29 57.2
comp=Z,1µm,1.7s
EBL Broad Law 58.91 319⇑eP P 09 29 48.9 +0.5
EDI Edinburgh 58.94 319 IAMs_20 IAMs_20 10 00 17.4
comp=Z,157µm,14.5s
CWF Charnwood Fore 58.95 315 IAMs_20 IAMs_20 09 55 17.2
comp=Z,142µm,22.0s
ANA2 Anatahan 58.97 92 P P 09 29 48.2 -1.1
LBWR Ladybower, Pea 58.97 316 eP P 09 29 49.2 +0.4
LBWR IAmb IAmb 09 29 57.0
comp=Z,10µm,2.6s
LBWR IAMs_20 IAMs_20 09 58 14.8
comp=Z,132µm,16.6s
TCF Toulx Ste Croi 59.03 307 eP P 09 29 49.1 -0.3
TCF pmax pmax
comp=Z,635nm,1.2s
MDO Dochfour 59.05 321 eP P 09 29 50.4 +1.1
CMAH Djebel Manchou 59.08 295 P P 09 29 50.3 +0.4
EAU Auchinoon 59.10 319⇑eP P 09 29 50.3 +0.6
EKA Eskdalemuir Ar 59.12 318 P P 09 29 49.5 -0.3
ESK Eskdalemuir 59.15 318⇑eP P 09 29 50.4 +0.4
ESK IAmb IAmb 09 29 60.0
comp=Z,914nm,1.3s
ESK IAMs_20 IAMs_20 09 58 52.2
comp=Z,112µm,14.6s
ESK Eskdalemuir 59.15 318 P P 09 29 49.6 -0.4
ESK IAmb IAmb 09 30 00.3
comp=Z,909nm,1.2s
ESK Eskdalemuir 59.15 318 P P 09 29 49.6 -0.4
ESK pmax pmax
comp=Z,909nm,1.3s
ESK MLR MLR
comp=Z,98µm,20.0s
DBG Daneborg 59.17 342 i P 09 29 51.1
DBG IAmb 09 29 59.7
comp=Z,776nm,1.5s
DBG IAMs_20 09 58 56.7
comp=Z,102µm,19.0s
ABSA Djebel Ababsia 59.18 295 P P 09 29 51.2 +0.5
INVG Invergeldie, C 59.22 320 eP P 09 29 50.8 +0.3
INVG IAmb IAmb 09 29 58.2
comp=Z,3µm,2.4s
INVG IAMs_20 IAMs_20 10 00 47.0
comp=Z,131µm,17.1s
KESW Keswick, Cumbr 59.34 318 eP P 09 29 52.0 +0.6
KESW IAmb IAmb 09 30 00.6
comp=Z,4µm,2.0s
KESW IAMs_20 IAMs_20 09 55 03.6
comp=Z,154µm,17.6s
CAEH 'Ain El Ouahch 59.43 295 P P 09 29 54.6 +2.3
CAF Calviac 59.62 306 eP P 09 29 53.3 -0.2
CAF pmax pmax
comp=Z,328nm,1.2s
SWN1 Swindon 59.66 314 eP P 09 29 55.0 +1.4
SWN1 IAmb IAmb 09 30 03.0
comp=Z,2µm,1.4s
SWN1 IAMs_20 IAMs_20 09 57 05.8
comp=Z,153µm,19.7s
PGBU Glenifferbraes 59.66 319 eP P 09 29 54.2 +0.7
PGBU IAmb IAmb 09 30 01.7
comp=Z,6µm,2.2s
PGBU IAMs_20 IAMs_20 09 59 25.2
comp=Z,107µm,15.8s
LDF La Druitiere 59.68 310 eP P 09 29 52.8 -1.0
LDF pmax pmax
comp=Z,395nm,0.9s
CKFL Kef-Lekhel 59.68 295 P P 09 29 54.3 +0.1
KPL Plockton 59.75 321 eP P 09 29 54.3 +0.2
KPL IAmb IAmb 09 30 01.9
comp=Z,3µm,2.3s
KPL IAMs_20 IAMs_20 09 59 05.6
comp=Z,213µm,15.3s
GUMO Guam 59.77 95 P P 09 29 55.1 +0.2
comp=Z,70nm,0.9s,baz=304,slow=7.3,SNR=3.1
GUMO LR LR 09 56 47.3
comp=Z,111µm,19.8s,baz=306,slow=37
STRD Stroud 59.77 314 eP P 09 29 54.9 +0.5
STRD IAmb IAmb 09 30 03.6
comp=Z,1µm,1.1s
STRD IAMs_20 IAMs_20 09 59 06.0
comp=Z,103µm,16.7s
BNDI Bandanaira 59.79 122 P P 09 29 54.0 -1.0
comp=Z,25µmcomp=Z,40µmcomp=Z,2µm,1.4s
RJF Les Rejaudoux 59.84 306 eP P 09 29 55.1 +0.1
RJF pmax pmax
comp=Z,424nm,1.2s
FLN La Foliniere 59.84 311 eP P 09 29 56.2 +1.3
FLN pmax pmax
comp=Z,2µm,1.8s
CASM Ain Smara 59.91 295 P P 09 29 55.6 -0.1
HLM1 Long Mynd 59.93 315 eP P 09 29 56.0 +0.5
HLM1 IAmb IAmb 09 30 05.1
comp=Z,2µm,1.5s
HLM1 IAMs_20 IAMs_20 09 55 36.2
comp=Z,142µm,21.6s
FOEL Foel Wylfa 59.98 316 eP P 09 29 56.6 +0.8
FOEL IAmb IAmb 09 30 06.3
comp=Z,2µm,1.2s
FOEL IAMs_20 IAMs_20 09 58 23.6
comp=Z,172µm,19.9s
SOEI Soe 60.02 131 P P 09 29 55.1 -1.6
comp=Z,24µmcomp=Z,26µmcomp=Z,1µm,1.7s
SOEI Soe 60.02 131 P P 09 29 54.7 -2.0
OLDB Oldbury-Upon-S 60.04 314 eP P 09 29 57.6 +1.4
OLDB IAmb IAmb 09 30 05.5
comp=Z,2µm,1.3s
OLDB IAMs_20 IAMs_20 09 57 39.5
comp=Z,117µm,16.7s
MAHO Mahon 60.05 300⇑iP P 09 30 00.9 +4.5
MAHO i S S 09 38 15.3 +5.5
CTEI Djebel Teioual 60.05 295 P P 09 29 56.7 0.0
LEWI Lewis, Hebride 60.08 322 eP P 09 29 57.4 +1.0
LEWI IAmb IAmb 09 30 05.6
comp=Z,2µm,1.9s
LEWI IAMs_20 IAMs_20 09 57 51.6
comp=Z,164µm,18.1s
GAL1 Galloway 60.11 318⇑eP P 09 29 57.0 +0.4
GAL1 IAmb IAmb 09 30 04.8
comp=Z,3µm,2.3s
GAL1 IAMs_20 IAMs_20 10 01 36.0
comp=Z,183µm,14.7s
MTLF Montolieu 60.12 304 eP P 09 29 57.7 +0.8
MTLF pmax pmax
comp=Z,374nm,1.3s
MONM Monmouth 60.12 315 eP P 09 29 57.1 +0.3
MONM IAmb IAmb 09 30 06.2
comp=Z,2µm,1.2s
MONM IAMs_20 IAMs_20 10 01 35.7
comp=Z,103µm,15.8s
MCH1 Michaelchurch 60.18 315 eP P 09 29 57.5 +0.3
MCH1 IAmb IAmb 09 30 06.7
comp=Z,2µm,1.1s
MCH1 IAMs_20 IAMs_20 09 59 49.0
comp=Z,92µm,16.4s
GRR Gorron 60.21 310 eP P 09 29 56.4 -1.1
GRR pmax pmax
comp=Z,586nm,1.0s
DFRA Djebel Bou Aff 60.24 295 P P 09 29 58.5 +0.5
IOMK Kirk Michael 60.25 318 eP P 09 29 58.3 +0.7
IOMK IAmb IAmb 09 30 07.1
comp=Z,5µm,1.7s
IOMK IAMs_20 IAMs_20 09 58 11.2
comp=Z,435µm,19.6s
LLW Llanuwychllyn 60.25 316 eP P 09 29 58.4 +0.8
LLW IAmb IAmb 09 30 07.2
comp=Z,1µm,1.7s
LLW IAMs_20 IAMs_20 09 58 32.0
comp=Z,88µm,18.7s
MBAR Mbarara 60.29 245 P P 09 29 57.5 -1.1
MBAR IAmb IAmb 09 30 09.2
comp=Z,411nm,1.1s
MBAR Mbarara 60.29 245 P P 09 29 57.5 -1.1
MBAR pmax pmax
comp=Z,411nm,1.2s
MBAR MLR MLR
comp=Z,55µm,21.0s
FAKI Fak Fak 60.30 119 P P 09 29 58.5 0.0
comp=Z,26µmcomp=Z,11µmcomp=Z,639nm,1.4s
FAKI Fak Fak 60.30 119 P P 09 29 58.9 +0.4
WME Myndd Eilian 60.42 317⇑eP P 09 30 00.5 +1.8
MFF Saint Martin d 60.43 308 eP P 09 29 58.0 -1.0
MFF pmax pmax
comp=Z,221nm,1.0s
YLL Llanberis 60.43 316 eP P 09 29 59.4 +0.5
WLF1 Llynfaes 60.51 316 eP P 09 30 00.3 +1.0
WLF1 IAmb IAmb 09 30 08.9
comp=Z,5µm,1.8s
WLF1 IAMs_20 IAMs_20 09 57 00.1
comp=Z,260µm,18.7s
WPS Cemaes, Angles 60.52 317⇑eP P 09 30 01.4 +1.9
WPS IAmb IAmb 09 30 08.7
comp=Z,3µm,2.1s
WPS IAMs_20 IAMs_20 09 58 45.8
comp=Z,141µm,19.2s
YRC Rhoscolyn 60.62 316⇑eP P 09 30 00.8 +0.7
JLP Les Platons 60.66 312 eP P 09 30 00.4 0.0
JSA Saint Aubin 60.72 311⇑eP P 09 30 01.8 +1.0
JSA IAmb IAmb 09 30 08.7
comp=Z,4µm,2.4s
JSA IAMs_20 IAMs_20 09 56 46.2
comp=Z,124µm,25.2s
RKPI Ransiki, Papua 60.72 116 P P 09 30 00.3 -1.1
comp=Z,12µmcomp=Z,961nm,1.4s
CKHR Kef el Ahmar 60.73 295 P P 09 30 01.7 +0.3
SET Setif 60.74 295 P P 09 30 02.0 +0.6
GMM Mts of Mourne 61.02 318 eP P 09 30 04.3 +1.5
SCO Scoresbysund 61.25 338 i P P 09 30 06.5 +2.4
SCO i S S 09 38 30.0 +5.7
SCO Scoresbysund 61.25 338 P P 09 30 03.5 -0.6
SCO Scoresbysund 61.25 338 i P P 09 30 06.5 +2.4
SCO i S S 09 38 30.0 +5.7
SCO MLR MLR
comp=Z,84µm,20.0s
SCO Scoresbysund 61.25 338 i P 09 30 06.5
comp=Z,2µm,2.0s
SCO i S 09 38 30.0
SCO IAMs_20 09 57 26.7
comp=Z,84µm,19.8s
SGMF Saint Gilles 61.31 311 eP P 09 30 06.5 +1.5
SGMF pmax pmax
comp=Z,1µm,1.4s
HTL Hartland 61.41 314 eP P 09 30 05.9 +0.3
EPF Esparros 61.50 304 eP P 09 30 08.5 +2.1
EPF pmax pmax
comp=Z,486nm,1.8s
ATAF Djebel Tarf 61.70 295 P P 09 30 09.8 +1.9
ROSF Rostrenen 61.72 311 eP P 09 30 07.1 -0.6
ROSF pmax pmax
comp=Z,384nm,1.0s
QUIF Quistinic 61.82 310 eP P 09 30 08.8 +0.4
QUIF pmax pmax
comp=Z,1µm,1.7s
AKET Djebel Ketaf 61.91 296 P P 09 30 10.8 +1.4
RER Riviere de l'E 62.16 208 P P 09 30 09.6 -1.3
ETSF Etsaut 62.16 304 eP P 09 30 11.7 +0.8
ETSF pmax pmax
comp=Z,470nm,1.4s
CCA1 Carnmenellis 62.17 313 IAMs_20 IAMs_20 09 58 42.0
comp=Z,146µm,20.6s
ABA Alger-Bouzarea 62.21 297 P P 09 30 12.0 +0.8
SAUI Saumlaki 63.24 124 P P 09 30 17.2 -1.1
comp=Z,28µmcomp=Z,33µmcomp=Z,2µm,1.2s
SAUI Saumlaki 63.24 124 P P 09 30 19.3 +1.0
SMY Shemya 63.25 43 P P 09 30 17.8 -0.1
SMY IAMs_20 IAMs_20 09 59 12.9
comp=Z,135µm,20.0s
SMY Shemya 63.25 43 P P 09 30 17.8 -0.1
SMY pmax pmax
comp=Z,1µm,1.2s
SMY MLR MLR
comp=Z,135µm,20.0s
EBNR Beni Rached 63.52 297 P P 09 30 21.8 +1.8
BORG Borgarnes 63.68 332 P P 09 30 22.4 +1.9
BORG Borgarnes 63.68 332 P P 09 30 22.4 +1.9
BORG pmax pmax
comp=Z,2µm,2.0s
BORG MLR MLR
comp=Z,66µm,18.0s
ECHA Ech Chlef 63.70 297 P P 09 30 22.0 +0.9
EANR 'Ain N'Sour 63.98 297 P P 09 30 25.0 +1.9
ABPO Ambohimpanom 64.04 218 P P 09 30 21.8 -1.8
ABPO IAmb IAmb 09 30 38.6
comp=Z,427nm,1.6s
ABPO Ambohimpanom 64.04 218 P P 09 30 21.8 -1.8
ABPO pmax pmax
comp=Z,427nm,1.6s
SMPI Sarmi 64.39 113 P P 09 30 25.5 -0.4
comp=Z,10µmcomp=Z,734nm,1.6s
OJGS Djebel Guires 64.44 296 P P 09 30 32.0 +5.9
SUMG Summit 64.52 343 i P P 09 30 27.7 +1.3
comp=Z,6µm,1.4s
SUMG i 09 32 50.9
SUMG i S S 09 39 11.4 +5.3
SUMG Summit 64.52 343 P P 09 30 25.8 -0.6
SUMG IAMs_20 IAMs_20 10 02 50.0
comp=Z,100µm,19.0s
SUMG Summit 64.52 343 i P P 09 30 27.7 +1.3
SUMG i 09 32 50.9
SUMG i S S 09 39 11.4 +5.3
SUMG pmax pmax
comp=Z,6µm,1.4s
SUMG MLR MLR
comp=Z,250µm,18.0s
SUMG Summit 64.52 343 i P 09 30 27.7
SUMG IAmb 09 30 36.5
comp=Z,6µm,1.4s
SUMG i 09 32 50.9
SUMG i S 09 39 11.4
SUMG IAMs_20 10 02 44.3
comp=Z,248µm,17.7s
OJBR Djebel Berber 64.69 297 P P 09 30 33.0 +5.2
CART Cartagena 64.75 299 P P 09 30 27.3 -0.7
CART Cartagena 64.75 299⇑i P P 09 30 32.9 +4.9
CART i S S 09 39 12.9 +3.7
GAMB Gambell 64.85 28 P P 09 30 28.4 +0.3

GAMB IAmb IAmb 09 30 38.2
comp=Z,436nm,1.3s
UCM Universidad Co 65.09 303⇑ *i* P **P 09 30 35.1 +4.8**
UCM *i* S **S 09 39 16.3 +2.9**
ODJA Bouhanifia 65.17 297 P **P 09 30 30.0 -0.8**
GIRL Giralia 65.46 148 P **P 09 30 32.6 0.0**
GIRL IAmb IAmb 09 30 53.0
comp=Z,593nm,1.1s
GIRL IAMs_20 IAMs_20 09 59 53.8
comp=Z,109μm,22.0s
RDOG Red Dog Mine 65.54 22 P **P 09 30 33.4 +0.7**
RDOG IAmb IAmb 09 31 11.4
comp=Z,478nm,1.5s
SESP Santiago Espad 65.60 300 P **P 09 30 38.4 +4.6**
SNR=7.3
OTSS Djebel Tessala 65.66 297 P P **09 30 29.0 -5.1**
ESBB Sonseca Array 65.87 302 P **P 09 30 34.7 -0.6**
ESDC Sonseca Array 65.87 302 P **P 09 30 34.0 -1.3**
comp=Z,26nm,1.0s,baz=58,slow=6.4,SNR=58
ESDC PKPPKP 09 59 16.0
comp=Z,0.2nm,0.3s,baz=288,slow=2.4,SNR=3.9
ESDC LR LR 10 03 00.4
comp=Z,48μm,18.1s,baz=55,slow=39
ESDC Sonseca Array 65.87 302 P **P 09 30 34.2 -1.2**
GENI Genyem 65.88 112 P **P 09 30 36.6 +1.0**
comp=Z,20μmcomp=Z,18μmcomp=Z,1μm,1.2s
PAB San Pablo 66.19 302 P **P 09 30 37.2 -0.2**
PAB IAmb IAmb 09 30 44.8
comp=Z,545nm,1.4s
PAB San Pablo 66.19 302 P **P 09 30 37.2 -0.2**
PAB pmax pmax
comp=Z,545nm,1.4s
PAB MLR MLR
comp=Z,73μm,21.0s
JAY Jayapura 66.23 112 P **P 09 30 34.8 -3.1**
comp=Z,131nm,1.6s
TULEG Thule 66.41 353 P **P 09 30 37.6 -0.4**
TULEG IAmb IAmb 09 30 44.3
comp=Z,781nm,1.2s
TULEG Thule 66.41 353 *i* P 09 30 38.1
TULEG IAmb 09 30 43.9
comp=Z,763nm,1.2s
TULEG IAMs_20 09 59 57.3
comp=Z,234μm,20.9s
KULLO Kullorsuaq 66.66 349 *i* P **P 09 30 41.2 +1.5**
comp=Z,2μm,1.5s
KULLO Kullorsuaq 66.66 349 *i* P **P 09 30 41.2 +1.5**
KULLO pmax pmax
comp=Z,2μm,1.5s
KULLO MLR MLR
comp=Z,260μm,20.0s
KULLO Kullorsuaq 66.66 349 *i* P 09 30 41.2
KULLO IAmb 09 30 48.4
comp=Z,2μm,1.5s
KULLO IAMs_20 10 01 30.9
comp=Z,261μm,20.4s
PBRG Braganca 66.75 306 *e*P **P 09 30 44.5 +3.6**
comp=Z,625nm,1.9s
PBRG Braganca 66.75 306 *e*PP PP 09 33 07.7 +0.1
PBRG *e*S **S 09 39 37.9 +4.2**
ANM Nome 66.76 26 P **P 09 30 41.5 +1.1**
ANM Nome 66.76 26 P **P 09 30 41.6 +1.1**
ANM pmax pmax
comp=Z,970nm,1.3s
ANM MLR MLR
comp=Z,344μm,18.0s
TAM Tamanrasset 66.88 282 P **P 09 30 42.0 -0.2**
TAM IAmb IAmb 09 30 49.0
comp=Z,703nm,1.8s
TAM Tamanrasset 66.88 282 P **P 09 30 42.0 -0.2**
TAM pmax pmax
comp=Z,703nm,1.8s
TAM MLR MLR
comp=Z,35μm,19.0s
PSA00 Pilbara Seismi 67.15 142 P **P 09 30 42.2 -1.3**
PSA00 IAmb IAmb 09 30 54.1
comp=Z,1μm,1.9s
PSA00 Pilbara Seismi 67.15 142 P **P 09 30 42.6 -0.9**
PSA00 IAmb IAmb 09 30 56.3
comp=Z,188nm,0.9s
PSAD3 Pilbara Seismi 67.18 142 IAMs_20 IAMs_20 10 02 15.3
comp=Z,98μm,21.0s
MELI Melilla 67.20 298⇑ *i* P **P 09 30 47.5 +3.7**
MELI *i* S **S 09 39 44.7 +5.6**
MVO Moncorvo 67.25 305 *e*P **P 09 30 45.2 +1.1**
comp=Z,427nm,1.3s
MVO Moncorvo 67.25 305 *e*PP PP 09 33 12.1 +0.2
MVO *e*S **S 09 39 43.2 +3.5**
MVO *e*SS **SS 09 44 01.6 +3.1**
MVO *e*LR LR 09 51 16.6
comp=Z,83μm,20.0s
GOG Mont Gurugu 67.28 298 P P 09 30 50.0 +5.6
SNR=7.8
GOG P P 09 30 50.0 +5.6
SNR=7.8
KNRA Kununurra 67.36 131 P **P 09 30 44.1 -0.7**
FITZ Fitzroy Crossi 67.40 135 P **P 09 30 45.6 +0.5**
comp=Z,53nm,1.0s,baz=334,slow=5.4,SNR=23
FITZ Fitzroy Crossi 67.40 135 P **P 09 30 44.4 -0.7**
FITZ IAmb IAmb 09 30 49.7
comp=Z,535nm,1.9s
EMAL Malaga-Limoner 67.56 300⇑ *i* P **P 09 30 49.8 +3.7**
EMAL *i* S **S 09 39 43.5 +0.1**
HORN Hornachuelos 67.62 301 P **P 09 30 50.1 +3.7**
SNR=11
TDRA Tendrara 67.62 295 P P 09 30 52.1 +5.3
SNR=16
TDRA P P 09 30 52.1 +5.3
SNR=16
PCAB Cabril 67.65 306 *e*P **P 09 30 47.8 +1.2**
comp=Z,919nm,1.6s
PVRL Vila Real 67.65 305 *e*P **P 09 30 47.5 +0.9**
comp=Z,332nm,1.6s
MTE Manteigas 67.96 305 *e*P **P 09 30 48.9 +0.3**
comp=Z,998nm,1.5s
MTE Manteigas 67.96 305 *e*PP PP 09 33 23.1 +5.0
MTE *e*S **S 09 39 50.6 +2.4**
MTE *e*SS **SS 09 44 13.1 +3.6**
MTE *e*LR LR 09 52 14.1
comp=Z,77μm,18.0s
MTE Manteigas 67.96 305 P **P 09 30 47.9 -0.7**
MTE IAmb IAmb 09 30 56.7
comp=Z,899nm,1.5s
UPNV Upernavik 67.96 348 *i* P 09 30 48.8
UPNV IAmb 09 30 56.9
comp=Z,1μm,1.4s
UPNV IAMs_20 10 05 12.6
comp=Z,164μm,17.1s
PVIS Viseu 68.04 305 *e*P **P 09 30 49.9 +0.8**
comp=Z,633nm,1.6s
PVIS Viseu 68.04 305 *e*PP PP 09 33 18.7 0.0
LIJA Lijar 68.18 300 *i* P **P 09 30 49.0 -1.1**
PCBR Castelo Branco 68.18 304 *e*P **P 09 30 51.1 +1.2**
comp=Z,339nm,1.7s
PCBR Castelo Branco 68.18 304 *e*PP PP 09 33 23.7 +3.8
PVLZ Peæn de 68.24 298⇑ *i* P **P 09 30 53.4 +3.1**
PVLZ *i* S **S 09 39 51.3 -0.2**
AKLM AKL 68.24 297 P **P 09 30 55.0 +4.5**
SNR=18
AKLM P **P 09 30 55.0 +4.5**
SNR=18
PMRV Marv??o 68.32 304 *e*P **P 09 30 51.7 +0.8**
comp=Z,622nm,1.5s
PMRV Marv??o 68.32 304 *e*PP PP 09 33 22.3 +1.1
PMRV *e*S **S 09 39 52.2 -0.3**
PMRV *e*SS **SS 09 44 17.1 +2.0**
PMRV *e*LR LR 09 51 58.1
comp=Z,60μm,20.0s
NUUG Nuugaatsiaq 68.43 346 *i* P 09 30 52.1
NUUG IAmb 09 30 59.8
comp=Z,1μm,1.6s
NUUG IAMs_20 09 59 48.1
comp=Z,182μm,25.5s
COI Coimbra 68.63 305 *e*P **P 09 30 54.1 +1.4**
comp=Z,1μm,1.5s
COI *e*S **S 09 39 59.6 +3.5**
COI Coimbra 68.63 305 P **P 09 30 53.2 +0.5**
COI IAmb IAmb 09 31 08.3
comp=Z,527nm,1.1s
COI IAMs_20 IAMs_20 10 03 25.3
comp=Z,118μm,22.0s
COI Coimbra 68.63 305 P **P 09 30 53.2 +0.5**
COI pmax pmax
comp=Z,527nm,1.1s
COI MLR MLR
comp=Z,118μm,22.0s

CEU Ceuta 68.64 299⇑ *i* P **P 09 30 56.0 +3.1**
CEU *i* S **S 09 39 54.4 -1.9**
ADK Adak 68.65 41 IAMs_20 IAMs_20 10 02 12.6
comp=Z,121μm,21.0s
PESTR Estremoz 68.73 303 *e*S **S 09 40 00.1 +2.7**
PESTR Estremoz 68.73 303 P P 09 30 58.3 +4.9
SNR=9.8
PESTR P P 09 30 58.3 +4.9
SNR=9.8
PESTR Estremoz 68.73 303 P **P 09 30 52.9 -0.5**
PCAS Casmilo, Conde 68.76 305 *e*P **P 09 30 54.2 +0.6**
comp=Z,435nm,1.6s
PCAS Casmilo, Conde 68.76 305 *e*PP PP 09 33 28.9 +3.9
PCAS *e*S **S 09 39 59.2 +1.5**
ANGG Ammassalik, Gr 68.83 337 P **P 09 30 54.1 +0.6**
ANGG Ammassalik, Gr 68.83 337 *i* P 09 30 54.8
ANGG IAmb 09 31 02.4
comp=Z,3μm,1.6s
ANGG IAMs_20 10 05 58.0
comp=Z,79μm,15.6s
PTOM Tomar 68.92 304 *e*P **P 09 30 55.6 +1.1**
comp=Z,863nm,1.6s
PTOM Tomar 68.92 304 *e*PP PP 09 33 29.2 +2.9
CHEFC Chefchaouen 69.01 299 P **P 09 30 60.0 +4.7**
SNR=15
PMTG Montargil 69.06 304 *e*P **P 09 30 56.0 +0.6**
comp=Z,427nm,1.5s
PMTG *e*S **S 09 40 01.9 +0.6**
EVO Evora 69.18 303 *e*P **P 09 30 56.7 +0.5**
comp=Z,552nm,1.6s
EVO Evora 69.18 303⇑ *i* P P 09 31 01.5 +5.3
EVO *i* S **S 09 40 09.0 +6.3**
ISOG Isortoq, Green 69.29 338 *i* P 09 30 57.6
ISOG IAMs_20 10 03 26.1
comp=Z,56μm,19.5s
PBEJ Beja 69.33 302 *e*P **P 09 30 57.8 +0.6**
comp=Z,450nm,1.4s
PBEJ Beja 69.33 302 *e*PP PP 09 33 33.9 +3.9
PVAQ Vaqueiros 69.54 302 *e*P **P 09 30 59.0 +0.6**
comp=Z,789nm,1.5s
PVAQ Vaqueiros 69.54 302 *e*PP PP 09 33 37.0 +5.2
PVAQ *e*S **S 09 40 09.7 +2.7**
PVAQ *e*SS **SS 09 44 37.1 +3.2**
PVAQ *e*LR LR 09 53 13.1
comp=Z,67μm,22.0s
PVAQ Vaqueiros 69.54 302 P **P 09 31 02.4 +4.0**
SNR=9.0
PVAQ P **P 09 31 02.4 +4.0**
SNR=9.0
PVAQ Vaqueiros 69.54 302 P **P 09 30 58.5 0.0**
PVAQ IAmb IAmb 09 31 06.9
comp=Z,476nm,1.2s
MDT Midelt 69.62 296 P **P 09 31 03.2 +4.0**
SNR=20
IMAR Indian Mountai 69.63 21 P **P 09 30 57.8 -0.7**
IFR Ifrane 69.65 297 *e*P **P 09 30 59.3 -0.1**
IFR *i* S **S 09 40 14.8 +6.0**
PCVE Castro Verde 69.65 302 *e*P **P 09 30 59.2 +0.1**
comp=Z,278nm,1.4s
PCVE Castro Verde 69.65 302 *e*PP PP 09 33 35.4 +2.7
PCVE *e*S **S 09 40 08.7 +0.5**
RES Resolute Bay 69.70 359 P **P 09 30 59.0 +0.3**
RES IAMs_20 IAMs_20 10 05 03.8
comp=Z,83μm,18.0s
RES Resolute Bay 69.70 359 P **P 09 30 59.1 +0.3**
RES pmax pmax
comp=Z,198nm,1.3s
RES MLR MLR
comp=Z,83μm,18.0s
COLD Coldfoot 69.75 19 P **P 09 30 59.9 +0.7**
PNCL Nicolau / Gran 69.75 303 *e*P **P 09 31 00.2 +0.5**
comp=Z,489nm,1.4s
PNCL Nicolau / Gran 69.75 303 *e*PP PP 09 33 35.7 +2.2
PNCL *e*S **S 09 40 13.7 +4.4**
PNCL *e*SS **SS 09 44 39.0 +2.0**
PBDV Barranco-do-Ve 69.77 302 *e*P **P 09 31 00.4 +0.5**
comp=Z,885nm,1.3s
PBDV Barranco-do-Ve 69.77 302 *e*PP PP 09 33 38.4 +4.6
PBDV *e*S **S 09 40 10.4 +0.7**
ATKA Atka Island 69.79 40 IAMs_20 IAMs_20 10 01 48.6
comp=Z,201μm,22.0s
ILULI Ilulissat 69.83 344 *i* P **P 09 31 00.9 +1.3**
comp=Z,2μm,1.4s
ILULI Ilulissat 69.83 344 P **P 09 30 59.6 0.0**
ILULI IAMs_20 IAMs_20 10 07 26.3
comp=Z,136μm,18.0s
ILULI Ilulissat 69.83 344 *i* P **P 09 31 00.9 +1.3**
ILULI pmax pmax
comp=Z,2μm,1.4s
ILULI MLR MLR
comp=Z,130μm,17.0s
ILULI Ilulissat 69.83 344 *i* P 09 31 00.9
ILULI IAmb 09 31 08.5
comp=Z,2μm,1.4s
ILULI IAMs_20 10 07 20.8
comp=Z,134μm,17.4s
PMAFR Mafra 69.83 304 *e*P **P 09 31 02.8 +2.6**
comp=Z,823nm,1.6s
PMAFR Mafra 69.83 304 *e*PP PP 09 33 36.9 +2.6
PMAFR *e*S **S 09 40 13.6 +3.2**
LIS Lisbon 69.86 304 *e*P **P 09 30 59.9 -0.5**
LIS *e*S **S 09 40 09.7 -1.0**
LIS AMS AMS 10 00 45.8
comp=N,113μm,17.2s
LIS Lisbon 69.86 304 *e*P **P 09 30 59.9 -0.5**
LIS *e*S **S 09 40 09.7 -1.0**
ARF Arif 70.03 295 P **P 09 31 06.0 +4.3**
SNR=27
ARF P **P 09 31 06.0 +4.3**
SNR=27
PTEO Sao Teotonio 70.16 302 *e*P **P 09 31 03.3 +1.1**
comp=N,522nm,1.4s
PTEO Sao Teotonio 70.16 302 *e*PP PP 09 33 35.5 -1.6
MORF Marmelete 70.23 302 *e*P **P 09 31 02.1 -0.7**
MORF *e*S **S 09 40 14.4 -0.8**
MORF AMS AMS 10 01 44.2
comp=N,143μm,21.4s
MORF Marmelete 70.23 302 *e*P **P 09 31 03.7 +0.9**
comp=N,262nm,1.3s
MORF Marmelete 70.23 302 *e*PP PP 09 33 42.4 +4.6
MORF *e*S **S 09 40 17.1 +1.9**
MORF Marmelete 70.23 302 *e*P **P 09 31 02.1 -0.7**
MORF *e*S **S 09 40 14.4 -0.8**
PFVI Vila Bisbo 70.44 302 *e*P **P 09 31 05.2 +1.2**
comp=N,583nm,1.5s
PFVI *e*S **S 09 40 20.8 +3.3**
PFVI Vila Bisbo 70.44 302 P P 09 31 09.2 +5.3
SNR=7.4
PFVI P P 09 31 09.2 +5.3
SNR=7.4
PFVI Vila Bisbo 70.44 302 IAMs_20 IAMs_20 10 05 47.4
comp=Z,90μm,19.0s
RTC Rabat Centre 70.65 298 P **P 09 31 10.1 +4.8**
SNR=13
RTC Rabat Centre 70.65 298 P **P 09 31 04.5 -0.8**
RTC IAMs_20 IAMs_20 10 04 04.3
comp=Z,160μm,22.0s
ZHG ZHG 70.78 298 P P 09 31 13.0 +6.8
SNR=13
ZHG P P 09 31 13.0 +6.8
SNR=13
TTA Tatalina 71.02 24 P **P 09 31 08.2 +1.0**
TTA Tatalina 71.02 24 P **P 09 31 08.2 +1.0**
MANU Manus Island 71.03 107 P **P 09 31 07.4 -0.5**
BMAR Burnt Mountain 71.03 17 P **P 09 31 08.3 +1.2**
MLY Manley 71.19 21 P **P 09 31 09.0 +0.8**
MLY IAmb IAmb 09 31 22.3
comp=Z,654nm,1.2s
MLY IAMs_20 IAMs_20 10 05 38.8
comp=Z,170μm,20.0s
TZRR Tazzarine 71.36 295 P **P 09 31 14.0 +4.2**
SNR=19
TZRR P **P 09 31 14.0 +4.2**
SNR=19
AVE Averroes 71.41 298 P **P 09 31 14.7 +4.8**
SNR=9.3
AVE Averroes 71.41 298⇑ *i* P **P 09 31 11.0 +1.1**
AVE *i* S **S 09 40 33.4 +4.5**
SFJD Kangerlussuaq 71.46 342 *i* P **P 09 31 10.0 +0.4**
comp=Z,1μm,1.4s
SFJD *i* 09 33 48.3
SFJD Kangerlussuaq 71.46 342 P **P 09 31 10.3 +0.7**
SFJD Kangerlussuaq 71.46 342 IAMs_20 IAMs_20 10 06 12.3
comp=Z,113μm,19.0s
SFJD Kangerlussuaq 71.46 342 *i* P **P 09 31 10.0 +0.4**

SFJD *i* 09 33 48.3
SFJD pmax pmax
comp=Z,1μm,1.4s
SFJD MLR MLR
comp=Z,97μm,18.0s
SFJD Kangerlussuaq 71.46 342 *i* P 09 31 10.0
SFJD IAmb 09 31 19.5
comp=Z,1μm,1.4s
SFJD *i* 09 33 48.4
SFJD IAMs_20 10 06 10.5
comp=Z,97μm,18.3s
FYU Fort Yukon 71.54 18 P **P 09 31 11.9 +1.8**
ZGR Zagora 71.74 294 P **P 09 31 16.0 +3.9**
SNR=27
ZGR P **P 09 31 16.0 +3.9**
SNR=27
BPAW Bear Paw Mtn. 71.80 22 P **P 09 31 12.4 +0.6**
BPAW IAmb IAmb 09 31 26.4
comp=Z,880nm,1.4s
MORW Morawa 71.87 149 P **P 09 31 12.0 -0.5**
MORW IAmb IAmb 09 31 23.9
comp=Z,884nm,1.4s
MDM Murphy Dome 71.97 20 P **P 09 31 13.5 +0.7**
NEA Nenana 72.01 21 P **P 09 31 12.2 -0.8**
NIKH Nikolski High 72.04 37 IAMs_20 IAMs_20 10 02 09.2
comp=Z,92μm,20.0s
POKR Poker Flat Res 72.07 20 P **P 09 31 13.9 +0.6**
baz=319,SNR=212
POKR S **S 09 40 32.6 -3.0**
baz=319
TCOL CIGO, UAF Yank 72.14 20 P **P 09 31 14.3 +0.6**
baz=319,SNR=86
TCOL S **S 09 40 36.8 +0.6**
baz=319
COLA College 72.14 20 P **P 09 31 14.2 +0.5**
COLA College 72.14 20 P **P 09 31 14.2 +0.5**
COLA pmax pmax
comp=Z,1μm,1.5s
COLA MLR MLR
comp=Z,217μm,20.0s
OUZM OUZ 72.17 295 P **P 09 31 19.0 +4.3**
SNR=19
OUZM P **P 09 31 19.0 +4.3**
SNR=19
BWN Browne 72.20 21 P **P 09 31 14.5 +0.4**
KTH Kantishna Hill 72.22 22 P **P 09 31 14.7 +0.4**
KTH IAmb IAmb 09 31 21.3
comp=Z,899nm,1.3s
PRP Porcupine Dome 72.28 19 P **P 09 31 15.6 +0.9**
PRP IAMs_20 IAMs_20 10 06 39.4
comp=Z,138μm,18.0s
PPLA Purkeypile 72.30 23 IAMs_20 IAMs_20 10 08 53.1
comp=Z,137μm,18.0s
CCB Clear Creek Bu 72.32 20 P **P 09 31 14.0 -0.8**
CCB IAmb IAmb 09 31 28.3
comp=Z,559nm,1.3s
LSZ Lusaka 72.33 235 *i* P **P 09 31 13.9 -1.7**
LSZ Lusaka 72.33 235 *i* P **P 09 31 13.9 -1.7**
LSZ Lusaka 72.33 235 P **P 09 31 13.6 -2.1**
LSZ Lusaka 72.33 235 P **P 09 31 13.6 -2.1**
LSZ pmax pmax
comp=Z,444nm,1.5s
LSZ MLR MLR
comp=Z,34μm,19.0s
WRH Wood River Hil 72.37 21 P **P 09 31 14.7 -0.5**
IL31 72.48 20 P **P 09 31 15.2 -0.6**
IL31 IAmb IAmb 09 31 28.9
comp=Z,432nm,1.2s
ILAR Eielson Array 72.48 20 P **P 09 31 14.6 -1.2**
comp=Z,83nm,0.9s,baz=318,slow=5.0,SNR=318
ILAR PP **PP 09 33 55.6 -0.7**
comp=Z,173nm,1.2s,baz=307,slow=6.1,SNR=6.7
ILAR PKPPKP **P'P'df 09 59 00.2 -7.7**
comp=Z,3.6nm,1.2s,baz=218,slow=3.0,SNR=5.2
ILAR LR LR 10 08 38.4
comp=Z,220μm,18.8s,baz=334,slow=40
ILAR Eielson Array 72.48 20 P **P 09 31 14.5 -1.3**
TRF Thorofare Moun 72.49 22 P **P 09 31 15.9 -0.2**
UNV Unalaska Valle 72.65 35 IAMs_20 IAMs_20 10 06 33.1
comp=Z,159μm,18.0s
INK Inuvik 72.68 13 P **P 09 31 16.8 -0.1**
comp=Z,79nm,0.9s,baz=351,slow=7.5,SNR=123
INK LR LR 10 07 10.4
comp=Z,63μm,21.1s,baz=320,slow=39
INK Inuvik 72.68 13 P **P 09 31 16.5 -0.3**
INK IAmb IAmb 09 31 24.1
comp=Z,1μm,1.4s
INK IAMs_20 IAMs_20 10 05 28.0
comp=Z,147μm,20.0s
MCK McKinley 72.68 21 P **P 09 31 17.1 0.0**
MCK McKinley 72.68 21 P **P 09 31 17.1 0.0**
MCK pmax pmax
comp=Z,357nm,1.4s
MCK MLR MLR
comp=Z,219μm,20.0s
HDA Harding Lake 72.75 20 P **P 09 31 16.2 -1.2**
HDA IAmb IAmb 09 31 23.2
comp=Z,556nm,1.5s
HDA IAMs_20 IAMs_20 10 07 03.8
comp=Z,177μm,21.0s
HDA Harding Lake 72.75 20 P **P 09 31 16.7 -0.7**
baz=320,SNR=84
HDA S **S 09 40 44.3 +1.0**
baz=320
HDA S **S 09 40 44.3 +1.0**
baz=320
AKUT Akutan 72.82 35 IAMs_20 IAMs_20 10 02 52.5
comp=Z,148μm,20.0s
OUK Oukaimeden 72.82 296 P **P 09 31 23.0 +4.1**
SNR=21
OUK P **P 09 31 23.0 +4.1**
SNR=21
RND Reindeer 72.95 22 P **P 09 31 18.1 -0.6**
RND IAmb IAmb 09 31 24.9
comp=Z,964nm,1.6s
RND Reindeer 72.95 22 P **P 09 31 18.1 -0.6**
RND pmax pmax
comp=Z,964nm,1.6s
RND MLR MLR
comp=Z,236μm,19.0s
SKT Skwentna 73.17 24 P **P 09 31 20.1 +0.1**
SKT IAmb IAmb 09 31 35.1
comp=Z,635nm,1.1s
SKT IAMs_20 IAMs_20 10 06 39.2
comp=Z,144μm,20.0s
C36M Paulatuk 73.26 10 P **P 09 31 19.0 -1.4**
C36M IAmb IAmb 09 31 26.5
comp=Z,900nm,1.1s
C36M IAMs_20 IAMs_20 10 05 23.0
comp=Z,136μm,22.0s
C36M Paulatuk 73.26 10 P **P 09 31 19.9 -0.4**
baz=338
C36M S **S 09 40 48.3 -0.6**
baz=338
FALS False Pass 73.44 33 IAMs_20 IAMs_20 10 04 11.7
comp=Z,157μm,20.0s
TTIG Tnine Tigouga, 73.59 296 P P 09 31 28.1 +5.0
SNR=16
DHY Denali Highway 73.64 21 P **P 09 31 22.9 0.0**
DHY IAmb IAmb 09 31 37.0
comp=Z,638nm,1.4s
EPYK Eagle Plains 73.70 15 P **P 09 31 23.2 +0.1**
EPYK IAmb IAmb 09 31 36.7
comp=Z,741nm,1.2s
EPYK IAMs_20 IAMs_20 10 05 50.1
comp=Z,111μm,19.0s
EPYK Eagle Plains 73.70 15 P **P 09 31 22.9 -0.2**
baz=328,SNR=77
EPYK S **S 09 40 57.0 +2.8**
baz=328
SUA Susitna One 73.81 24 P **P 09 31 23.8 0.0**
SUA IAmb IAmb 09 31 37.3
comp=Z,622nm,1.1s
RIDG Independent Ri 73.85 20 P **P 09 31 23.7 -0.3**
RIDG IAMs_20 IAMs_20 10 08 39.0
comp=Z,159μm,20.0s
RSO Redoubt South 73.86 25 P **P 09 31 24.4 +0.1**
SCRK Sand Creek 73.90 19 P **P 09 31 24.4 0.0**
WB0 Warramunga Arr 73.94 130 P **P 09 31 24.5 -0.5**
NUUK Nuuk 73.97 341 *i* P 09 31 25.4
NUUK IAmb 09 31 33.2
comp=Z,911nm,1.3s
NUUK IAMs_20 10 08 11.7
comp=Z,87μm,17.0s
EGAK Eagle 73.99 18 P **P 09 31 24.5 -0.2**
EGAK IAmb IAmb 09 31 41.0

comp=Z,553nm,1.2s
EGAK IAMs_20 IAMs_20 10 07 41.6
comp=Z,149µm,20.0s
WRA Warramunga Arr 74.03 130 P P 09 31 25.6 +0.1
comp=Z,146nm,0.8s,baz=325,slow=5.9,SNR=137
WRA PKPPKP P'P'df 09 58 59.5 +4.9
comp=Z,3.4nm,1.1s,baz=133,slow=2.2,SNR=5.9
WRA LR LR 10 08 57.6
comp=Z,33µm,21.6s,baz=330,slow=40
WRAB Tennant Creek 74.03 130 P P 09 31 24.9 -0.7
WRAB Tennant Creek 74.03 130 dP P 09 31 24.9 -0.7
WRAB pmax pmax
comp=Z,361nm,1.1s
WRAB MLR MLR
comp=Z,93µm,26.0s
WB2 Warramunga Arr 74.04 130 P P 09 31 25.1 -0.5
ITZ Itezhi-Tezhi 74.12 237 i S S 09 41 02.1 +1.9
DOT Dot Lake 74.14 20 P P 09 31 25.4 -0.3
DOT IAmb IAmb 09 31 40.0
comp=Z,941nm,1.6s
GHO Glory Hole Cre 74.16 23 P P 09 31 25.9 0.0
GHO IAmb IAmb 09 31 43.5
comp=Z,847nm,1.3s
GHO IAMs_20 IAMs_20 10 08 09.3
comp=Z,186µm,21.0s
WR0 Warramunga Arr 74.17 130 P P 09 31 25.9 -0.4
PMR Palmer 74.23 23 P P 09 31 25.8 -0.3
PMR IAmb IAmb 09 31 40.6
comp=Z,430nm,1.0s
PMR IAMs_20 IAMs_20 10 08 12.2
comp=Z,136µm,21.0s
PMR Palmer 74.23 23 P P 09 31 25.8 -0.3
PMR pmax pmax
comp=Z,430nm,1.0s
PMR MLR MLR
comp=Z,136µm,21.0s
PAX Paxson 74.28 21 P P 09 31 26.7 +0.2
PAX IAmb IAmb 09 31 33.4
comp=Z,1µm,1.6s
PAX Paxson 74.28 21 P P 09 31 26.7 +0.2
PAX pmax pmax
comp=Z,1µm,1.6s
PAX MLR MLR
comp=Z,276µm,22.0s
SML Sawmill 74.32 23 P P 09 31 26.7 -0.1
SML IAMs_20 IAMs_20 10 08 24.5
comp=Z,147µm,20.0s
SDPT Sand Point 74.41 32 IAMs_20 IAMs_20 10 05 45.2
comp=Z,159µm,21.0s
RC01 Rabbit Creek A 74.41 24 P P 09 31 27.0 -0.3
RC01 IAmb IAmb 09 31 43.5
comp=Z,1µm,1.2s
NRS Narsarsuaq 74.46 337 i P P 09 31 28.5 +1.0
NRS Narsarsuaq 74.46 337 P P 09 31 26.8 -0.7
NRS IAMs_20 IAMs_20 10 08 37.2
comp=Z,73µm,19.0s
NRS Narsarsuaq 74.46 337 i P P 09 31 28.5 +1.0
NRS MLR MLR
comp=Z,92µm,16.0s
NRS Narsarsuaq 74.46 337 i P 09 31 28.5
NRS IAMs_20 10 13 59.6
comp=Z,92µm,16.5s
PATS Pohnpei 74.47 93 P P 09 31 27.5 -0.8
KNK Knik Glacier 74.58 23 P P 09 31 28.9 +0.6
KNK IAmb IAmb 09 31 44.0
comp=Z,852nm,1.2s
KNK IAMs_20 IAMs_20 10 07 49.3
comp=Z,154µm,21.0s
SCM Sheep Creek Mo 74.61 22 P P 09 31 27.9 -0.6
SCM IAmb IAmb 09 31 35.3
comp=Z,514nm,1.0s
SCM IAMs_20 IAMs_20 10 07 43.1
comp=Z,172µm,21.0s
SCM Sheep Creek Mo 74.61 22 P P 09 31 27.9 -0.6
SCM pmax pmax
comp=Z,514nm,1.0s
SCM MLR MLR
comp=Z,172µm,21.0s
CHGN Chignik 74.64 30 P P 09 31 27.7 -0.8
CHGN IAmb IAmb 09 31 41.1
comp=Z,627nm,1.6s
MENT Mentasta 74.80 20 P P 09 31 30.0 +0.5
BRLK Bradley Lake 75.02 25 P P 09 31 30.6 -0.2
BRLK IAmb IAmb 09 31 37.2
comp=Z,626nm,1.2s
DAWY Dawson 75.02 18 P P 09 31 30.6 -0.2
DAWY IAmb IAmb 09 31 45.5
comp=Z,1µm,1.6s
TOA0 Torodi Ar. Sit 75.10 276 P P 09 31 31.2 -0.8
TOA0 IAmb IAmb 09 31 41.4
comp=Z,552nm,1.2s
TORD Torodi Ar. Bea 75.10 276 P P 09 31 29.9 -2.1
comp=Z,47nm,0.9s,baz=38,slow=2.9,SNR=140
TORD Torodi Ar. Bea 75.10 276 P P 09 31 30.8 -1.2
CNBA Chernabura Isl 75.14 32 P P 09 31 30.5 -1.1
CNBA IAMs_20 IAMs_20 10 07 44.6
comp=Z,160µm,20.0s
BCAR Beaver Creek A 75.22 19 P P 09 31 32.3 +0.4
SEW Seward 75.25 24 P P 09 31 32.2 +0.2
SEW IAmb IAmb 09 31 38.8
comp=Z,727nm,1.2s
GLI Glacier Island 75.41 23 P P 09 31 33.0 0.0
GLI IAmb IAmb 09 31 39.8
comp=Z,600nm,1.3s
GLI IAMs_20 IAMs_20 10 09 09.4
comp=Z,178µm,21.0s
PMG Port Moresby 75.56 113 P P 09 31 34.9 +0.3
comp=Z,84nm,1.1s,baz=332,slow=6.1,SNR=15
PMG Port Moresby 75.56 113 P P 09 31 35.5 +0.9
PMG IAmb IAmb 09 31 44.0
comp=Z,454nm,1.2s
PMG Port Moresby 75.56 113 IAMs_20 IAMs_20 10 06 50.8
comp=Z,74µm,20.0s
PMG Port Moresby 75.56 113c i P P 09 31 35.5 +0.9
PMG pmax pmax
comp=Z,1µm,1.1s
PMG MLR MLR
comp=Z,252µm,19.0s
COEN Coen 75.68 119 P P 09 31 34.8 -0.4
COEN IAmb IAmb 09 31 44.6
comp=Z,697nm,1.6s
COEN IAMs_20 IAMs_20 10 05 46.5
comp=Z,88µm,22.0s
FID Port Fidalgo 75.71 23 P P 09 31 35.0 +0.3
NWAO Narrogin (SRO) 75.75 150 P P 09 31 34.1 -1.0
comp=Z,223nm,0.9s,baz=334,slow=5.8,SNR=40
NWAO Narrogin (SRO) 75.75 150 P P 09 31 33.8 -1.4
NWAO IAmb IAmb 09 31 45.9
comp=Z,911nm,1.1s
NWAO Narrogin (SRO) 75.75 150 P P 09 31 34.2 -1.0
NWAO pmax pmax
comp=Z,911nm,1.2s
NWAO MLR MLR
comp=Z,57µm,21.0s
MATP Matopo 75.85 232 i P P 09 31 37.6 +1.4
MATP Matopo 75.85 232 i P P 09 31 37.6 +1.4
KDAK Kodiak Island 75.87 27 P P 09 31 36.3 +0.6
comp=Z,159nm,0.9s,baz=6.8,slow=3.4,SNR=17
KDAK Kodiak Island 75.87 27 P P 09 31 35.4 -0.3
GLB Gilahina Butte 75.97 21 P P 09 31 37.4 +1.2
GLB IAmb IAmb 09 31 50.6
comp=Z,686nm,1.5s
HIN Hinchinbrook I 75.97 23 P P 09 31 36.6 +0.4
HIN IAmb IAmb 09 31 52.4
comp=Z,1µm,1.2s
OHAK Old Harbor 76.01 28 P P 09 31 35.9 -0.6
OHAK IAmb IAmb 09 31 43.8
comp=Z,901nm,1.3s
KRVT Keravat (AS076 76.06 106 LR LR 10 03 38.4
comp=Z,114µm,21.6s,baz=314,slow=35
EYAK Cordova Ski Ar 76.09 22 P P 09 31 35.4 -1.5
EYAK IAmb IAmb 09 31 52.4
comp=Z,400nm,1.1s
RABL Rabaul 76.10 106 P P 09 31 38.8 +1.1
RABL IAmb IAmb 09 31 47.5
comp=Z,433nm,1.1s
RABL IAMs_20 IAMs_20 10 02 55.2
comp=Z,135µm,22.0s
SII Sitkinak Islan 76.15 28 P P 09 31 35.7 -1.6
MCARA McCarthy VSAT 76.24 21 P P 09 31 38.6 +0.8
VRDI Verde Repeater 76.24 21 P P 09 31 38.0 0.0
VRDI IAmb IAmb 09 31 53.3
comp=Z,532nm,1.0s
RAGM Ragged Mountai 76.55 22 P P 09 31 40.3 +0.7
RAGM IAmb IAmb 09 31 51.9
comp=Z,788nm,1.1s

AS31 Alice Springs 76.56 133 P P 09 31 39.8 -0.3
ASAR Alice Springs 76.56 133 P P 09 31 39.6 -0.4
comp=Z,86nm,0.7s,baz=319,slow=5.4,SNR=125
ASAR PKKPbc PKKPbc 09 50 52.0 +0.2
comp=Z,1.3nm,1.0s,baz=66,slow=1.1,SNR=4.0
ASAR PKPPKP P'P'df 09 58 54.0 +4.3
comp=Z,3.0nm,1.1s,baz=114,slow=2.1,SNR=6.0
ASAR LR LR 10 10 40.6
comp=Z,35µm,20.2s,baz=311,slow=40
HMT Hamilton 76.71 22 P P 09 31 40.8 +0.4
HMT IAmb IAmb 09 31 47.1
comp=Z,2µm,2.0s
HMT IAMs_20 IAMs_20 10 11 32.5
comp=Z,162µm,19.0s
BALM Baldy 76.72 21 P P 09 31 41.5 +0.9
TGL Tana Glacier 76.80 21 P P 09 31 41.5 +0.4
TGL IAmb IAmb 09 31 48.5
comp=Z,966nm,1.3s
TGL IAMs_20 IAMs_20 10 09 29.1
comp=Z,127µm,19.0s
BARN Barnard Glacie 76.89 20 P P 09 31 41.8 +0.1
BARN IAmb IAmb 09 31 58.1
comp=Z,1µm,1.4s
WAX Waxell Ridge 77.04 21 P P 09 31 44.0 +1.6
CTGM Chitina Glacie 77.06 20 P P 09 31 42.5 -0.1
CTGM IAmb IAmb 09 31 50.3
comp=Z,623nm,1.1s
CTGM IAMs_20 IAMs_20 10 10 43.8
comp=Z,164µm,20.0s
MESA MESA 77.53 21 P P 09 31 46.2 +1.0
PMPST Porto Santo, M 77.80 302 eP P 09 31 50.0 +2.9
comp=Z,821nm,1.6s
PMPST eS S 09 41 44.1 +3.6
PMPS Porto Santo 77.81 302 eP P 09 31 49.3 +2.2
comp=Z,672nm,1.7s
PCA Pinnacle 78.08 20 P P 09 31 47.8 -0.4
PCA IAmb IAmb 09 32 02.9
comp=Z,382nm,1.0s
PCA IAMs_20 IAMs_20 10 07 47.9
comp=Z,179µm,22.0s
HYT Haines Junctio 78.22 19 P P 09 31 50.2 +1.2
HYT IAmb IAmb 09 31 56.5
comp=Z,394nm,1.1s
HYT IAMs_20 IAMs_20 10 09 23.4
comp=Z,93µm,20.0s
PMAR Madeira 78.41 302 eP P 09 31 51.5 +0.9
comp=Z,1µm,1.5s
PMAR Madeira 78.41 302 ePP PP 09 34 43.7 -3.7
FUL Funchal 78.43 302 eP P 09 31 52.5 +2.0
PMOZ Porto Moniz, M 78.54 302 eP P 09 31 53.7 +2.4
comp=Z,502nm,1.8s
PMOZ Porto Moniz, M 78.54 302 ePP PP 09 34 51.1 +2.6
PMOZ eS S 09 41 53.9 +5.2
PMOZ eSS SS 09 46 51.3 0.0
PMOZ eLR LR 09 56 32.8
comp=Z,33µm,18.0s
YKU2 Yakutat 78.73 20 IAMs_20 IAMs_20 10 08 17.0
comp=Z,166µm,21.0s
FORT Forrest 78.87 141 P P 09 31 52.0 -0.7
WHY Whitehorse 79.03 18 P P 09 31 53.4 -0.1
WHY IAMs_20 IAMs_20 10 13 07.8
comp=Z,145µm,20.0s
SKAG Skagway 79.95 19 P P 09 31 59.1 +0.8
SKAG IAmb IAmb 09 32 13.4
comp=Z,796nm,1.1s
SKAG IAMs_20 IAMs_20 10 12 37.3
comp=Z,128µm,19.0s
BART Pico Bartolome 80.81 310 eP PcP 09 32 17.6 +7.4
YKA Yellowknife Ar 81.00 8 P P 09 32 02.2 -1.7
comp=Z,88nm,0.8s,baz=340,slow=5.1,SNR=182
YKA PKKPbc PKKPbc 09 50 39.6 -1.6
comp=Z,0.8nm,0.7s,baz=167,slow=1.9,SNR=5.5
YKA PKPPKP P'P'df 09 58 44.6 -7.9
comp=Z,0.1nm,0.3s,baz=136,slow=2.2,SNR=6.0
YKA LR LR 10 11 27.2
comp=Z,65µm,20.7s,baz=0.0,slow=38
LBTB Lobatse 81.02 230 i P P 09 32 05.6 +1.0
LBTB Lobatse 81.02 230 i P P 09 32 05.6 +1.0
LBTB Lobatse 81.02 230 P P 09 32 03.4 -1.2
LBTB IAmb IAmb 09 32 15.7
comp=Z,542nm,1.4s
LBTB Lobatse 81.02 230 P P 09 32 03.4 -1.2
LBTB pmax pmax
comp=Z,542nm,1.4s
CMLA Cha da Macela 81.04 310 eP PcP 09 32 17.7 +6.6
PSMN Pico do Norte, 81.22 309 eP P 09 32 05.9 +0.3
comp=Z,208nm,1.4s
JIS Juneau Island 81.23 19 P P 09 32 06.2 +1.0
JIS IAMs_20 IAMs_20 10 12 56.0
comp=Z,108µm,19.0s
PSMA Santa Maria 81.27 310 eP P 09 32 06.8 +1.0
comp=Z,661nm,1.2s
PGRA Graciosa 81.73 313 eP P 09 32 08.9 +0.6
comp=Z,198nm,1.2s
CTA Charters Tower 81.99 122 P P 09 32 10.0 +0.2
comp=Z,72nm,0.9s,baz=322,slow=6.9,SNR=31
CTA Charters Tower 81.99 122 P P 09 32 10.0 +0.2
CTAO Charters Tower 81.99 122 IAMs_20 IAMs_20 10 09 42.7
comp=Z,120µm,22.0s
SIT Sitka 82.04 20 P P 09 32 09.9 +0.4
SIT IAmb IAmb 09 32 24.9
comp=Z,504nm,1.1s
SIT Sitka 82.04 20 P P 09 32 09.9 +0.4
SIT pmax pmax
comp=Z,504nm,1.1s
SIT MLR MLR
comp=Z,162µm,20.0s
PMAN Manadas 82.05 312 eP P 09 32 17.2 +7.2
comp=Z,381nm,1.2s
ROSA Rosais 82.09 312 eP P 09 32 07.7 -2.5
comp=Z,291nm,1.5s
DLBC Dease Lake 82.16 17 P P 09 32 11.1 +0.8
DLBC IAmb IAmb 09 32 17.9
comp=Z,469nm,1.2s
DLBC IAMs_20 IAMs_20 10 11 56.5
comp=Z,125µm,20.0s
TSUM Tsumeb 82.32 240 P P 09 32 10.7 -0.9
PICO Pico 82.34 312 eP P 09 32 16.0 +4.4
comp=Z,251nm,1.5s
PCED Cedros 82.42 313 eP P 09 32 14.7 +2.8
comp=Z,294nm,1.4s
WRAK Wrangell Islan 83.39 19 IAMs_20 IAMs_20 10 09 42.2
comp=Z,128µm,22.0s
BOSA Boshof 83.83 228 i P P 09 32 21.6 +2.4
BOSA Boshof 83.83 228 P P 09 32 17.6 -1.8
comp=Z,97nm,0.9s,baz=39,slow=4.9,SNR=57
BOSA LR LR 10 08 03.0
comp=Z,12µm,21.0s,baz=48,slow=35
BOSA Boshof 83.83 228 i P P 09 32 21.6 +2.4
BOSA Boshof 83.83 228 P P 09 32 17.5 -1.8
BOSA IAmb IAmb 09 32 29.8
comp=Z,843nm,1.8s
DBIC Dimbokro 84.06 274 P P 09 32 20.1 -0.7
comp=Z,63nm,1.1s,baz=38,slow=6.1,SNR=38
DBIC PKKPbc PKKPbc 09 50 34.7 +1.3
comp=Z,1.7nm,0.6s,baz=102,slow=9.3,SNR=2.2
DBIC LR LR 10 12 54.7
comp=Z,42µm,20.0s,baz=28,slow=38
DBIC Dimbokro 84.06 274 P P 09 32 20.0 -0.8
KIC Kosan Boka 84.15 274 eP P 09 32 19.3 -1.9
comp=Z,1µm,1.8s
TIC Toumodi 84.21 274 eP P 09 32 19.1 -2.4
comp=Z,1µm,1.9s
LIC Lamto 84.46 274 eP P 09 32 20.8 -2.0
comp=Z,611nm,1.7s
BBOO Buckleboo 84.70 137 P P 09 32 22.4 -1.1
BBOO IAMs_20 IAMs_20 10 11 26.4
comp=Z,77µm,22.0s
HNR Honiara 85.40 105 P P 09 32 30.0 +2.6
FCC Fort Churchill 85.67 358 P P 09 32 27.4 -0.7
FCC IAmb IAmb 09 32 42.9
comp=Z,698nm,1.4s
FCC IAMs_20 IAMs_20 10 13 28.9
comp=Z,127µm,20.0s
FCC Fort Churchill 85.67 358 P P 09 32 27.4 -0.7
FCC pmax pmax
comp=Z,698nm,1.5s
FCC MLR MLR
comp=Z,127µm,20.0s
SCHQ Schefferville 85.91 343 P P 09 32 28.8 -0.5
comp=Z,80nm,1.1s,baz=34,slow=4.0,SNR=25
SCHQ PKKPbc PKKPbc 09 50 32.0 +2.1
comp=Z,1.8nm,0.8s,baz=236,slow=7.3,SNR=1.9
SCHQ LR LR 10 15 47.0
comp=Z,65µm,18.7s,baz=24,slow=39
SCHQ Schefferville 85.91 343 P P 09 32 28.5 -0.9

SCHQ IAMs_20 IAMs_20 10 15 26.2
comp=Z,67µm,20.0s
DIB Dawson Inlet, 86.21 20 IAMs_20 IAMs_20 10 14 18.7
comp=Z,116µm,19.0s
STKA Stephens Creek 87.19 133 P P 09 32 36.3 +0.5
comp=Z,55nm,1.1s,baz=324,slow=6.3,SNR=22
STKA LR LR 10 16 14.3
comp=Z,52µm,20.1s,baz=309,slow=39
STKA Stephens Creek 87.19 133 P P 09 32 34.8 -1.0
DRLN Deer Lake 88.13 335 P P 09 32 39.9 -0.4
DRLN IAMs_20 IAMs_20 10 16 42.4
comp=Z,91µm,18.0s
BBB Bella Bella 88.29 18 IAMs_20 IAMs_20 10 12 46.8
comp=Z,78µm,21.0s
EIDS Eidsvold 88.82 123 P P 09 32 42.9 -0.9
EIDS IAmb IAmb 09 32 53.3
comp=Z,744nm,1.6s
SUR Sutherland 89.19 228 P P 09 32 44.8 -0.7
SUR IAmb IAmb 09 32 56.3
comp=Z,909nm,2.0s
FFC Flin Flon 89.68 3 P P 09 32 46.3 -1.1
FFC Flin Flon 89.68 3 IAMs_20 IAMs_20 10 14 26.8
comp=Z,135µm,21.0s
FFC Flin Flon 89.68 3 P P 09 32 46.3 -1.1
FFC pmax pmax
comp=Z,1µm,2.0s
FFC MLR MLR
comp=Z,135µm,21.0s
LLLB Lillooet 91.22 15 P P 09 32 54.4 -0.4
ARMA Armidale 92.47 126 P P 09 33 00.6 -0.2
ARMA IAMs_20 IAMs_20 10 16 48.2
comp=Z,92µm,22.0s
BATG Bathurst New B 92.57 339 P P 09 33 01.0 0.0
BATG IAmb IAmb 09 33 11.1
comp=Z,417nm,1.4s
A04D Lummi Island 92.81 16 P P 09 33 01.1 -0.9
baz=340,SNR=5.7
A04D S S 09 44 09.3 +1.3
baz=340
GBN Guysborough 92.83 336 P P 09 33 01.3 -0.8
GBN IAmb IAmb 09 33 13.0
comp=Z,385nm,1.2s
GBN IAMs_20 IAMs_20 10 21 55.6
comp=Z,71µm,18.0s
MATQ Matagami 92.95 347 P P 09 33 01.2 -1.5
baz=16
B06A Marblemount 93.28 16 P P 09 33 05.5 +1.3
B06A IAmb IAmb 09 33 16.7
comp=Z,184nm,1.0s
B06A IAMs_20 IAMs_20 10 17 44.6
comp=Z,129µm,21.0s
D63A Stockholm 93.37 340 P P 09 33 03.7 -1.0
baz=23,SNR=16
D63A S S 09 44 14.0 +1.0
baz=23
B05A Bryant 93.38 16 P P 09 33 02.9 -1.8
baz=340,SNR=26
B05A S S 09 44 13.6 +0.5
baz=340
TOO Toolangi 93.46 135 P P 09 33 04.6 -0.5
TOO IAMs_20 IAMs_20 10 21 13.3
comp=Z,68µm,21.0s
TOO Toolangi 93.46 135 P P 09 33 04.6 -0.5
TOO pmax pmax
comp=Z,171nm,1.2s
LMN Caledonia Moun 93.49 338 P P 09 33 05.6 +0.3
LMN IAmb IAmb 09 33 14.9
comp=Z,192nm,1.1s
LMN IAMs_20 IAMs_20 10 18 59.0
comp=Z,88µm,20.0s
LSQQ Lebel-sur-Quev 93.50 347 P P 09 33 03.9 -1.4
baz=16
D62A Allapoint, All 93.58 341 P P 09 33 03.9 -1.7
D62A IAmb IAmb 09 33 14.5
comp=Z,748nm,2.0s
D62A IAMs_20 IAMs_20 10 19 48.3
comp=Z,82µm,20.0s
D62A Allapoint, All 93.58 341 P P 09 33 04.0 -1.6
baz=23,SNR=14
D62A S S 09 44 16.1 +1.2
baz=23
PQI Presque Isle 93.68 340 P P 09 33 05.1 -1.0
PQI IAmb IAmb 09 33 15.7
comp=Z,336nm,1.4s
PQI IAMs_20 IAMs_20 10 19 55.9
comp=Z,103µm,19.0s
D61A St Aubert, Com 93.76 342 P P 09 33 04.6 -1.8
baz=22,SNR=32
D61A S S 09 44 16.4 -0.1
baz=22
NLWA Neilton Lookou 93.78 18 IAMs_20 IAMs_20 10 16 33.9
comp=Z,97µm,19.0s
D03D Eldon 93.84 17 P P 09 33 05.3 -1.5
baz=339,SNR=24
D03D S S 09 44 20.6 +3.5
baz=339
E64A Bridgewater 93.86 340 P P 09 33 05.6 -1.3
baz=24,SNR=13
E64A S S 09 44 19.0 +1.7
baz=24
B08A Colville Reser 93.89 14 P P 09 33 08.4 +1.3
B08A IAmb IAmb 09 33 15.1
comp=Z,615nm,1.8s
B08A IAMs_20 IAMs_20 10 16 43.5
comp=Z,123µm,21.0s
C06D Leavenworth 93.97 16 S S 09 44 18.5 +0.1
baz=341
E63A Oxbow 94.02 340 P P 09 33 07.8 +0.1
E63A IAmb IAmb 09 33 15.3
comp=Z,460nm,1.9s
E63A IAMs_20 IAMs_20 10 20 05.9
comp=Z,82µm,20.0s
E63A Oxbow 94.02 340 P P 09 33 06.0 -1.7
baz=23,SNR=12
E63A S S 09 44 21.4 +2.6
baz=23
CAN Canberra 94.02 131 P P 09 33 07.3 -0.4
CAN IAmb IAmb 09 33 16.8
comp=Z,377nm,1.4s
CAN Canberra 94.02 131 P P 09 33 07.3 -0.4
CAN pmax pmax
comp=Z,377nm,1.4s
CAN MLR MLR
comp=Z,52µm,22.0s
WALA Waterton Lakes 94.17 11 P P 09 33 08.7 +0.1
HAL Halifax 94.19 337 IAMs_20 IAMs_20 10 16 42.7
comp=Z,60µm,22.0s
D60A Saint Jean D'O 94.22 342 P P 09 33 07.1 -1.4
baz=21,SNR=12
D60A S S 09 44 21.7 +1.3
baz=21
LATQ La Tuque 94.22 343 P P 09 33 08.2 -0.4
LATQ La Tuque 94.22 343 P P 09 33 07.1 -1.5
baz=20,SNR=24
ULM Lac du Bonnet 94.23 359 P P 09 33 07.7 -0.9
comp=Z,74nm,1.1s,baz=345,slow=4.6,SNR=30
ULM PP PP 09 36 52.7 -1.5
comp=Z,31nm,1.2s,baz=12,slow=5.9,SNR=4.0
ULM LR LR 10 19 22.5
comp=Z,78µm,18.3s,baz=4.0,slow=38
ULM Lac du Bonnet 94.23 359 P P 09 33 06.7 -1.9
ULM IAMs_20 IAMs_20 10 20 44.3
comp=Z,109µm,20.0s
D04E Lakebay 94.25 17 P P 09 33 06.1 -2.6
baz=340
D59A Saint-Raymond 94.35 343 P P 09 33 06.8 -2.3
baz=20,SNR=17
D59A S S 09 44 21.8 +0.2
baz=20
D05A Enumclaw 94.42 17 IAMs_20 IAMs_20 10 21 26.8
comp=Z,50µm,19.0s
VLDQ Val d'Or 94.50 347 P P 09 33 10.7 +0.9
VLDQ IAmb IAmb 09 33 18.3
comp=Z,709nm,1.9s
VLDQ IAMs_20 IAMs_20 10 19 02.0
comp=Z,62µm,20.0s
F64A Sherman 94.51 340 P P 09 33 10.2 +0.2
F64A IAMs_20 IAMs_20 10 20 31.0
comp=Z,90µm,20.0s
F64A Sherman 94.51 340 P P 09 33 08.9 -1.0
baz=23,SNR=7.2
F64A S S 09 44 24.7 +1.7
baz=23
D58A Chemin du LacG 94.52 343 P P 09 33 08.6 -1.4
baz=20,SNR=32
D58A S S 09 44 20.9 -2.2
baz=20

E61A Lac Etchemin 94.56 342 P P 09 33 08.9 -1.3
baz=22,SNR=12
E61A S S 09 44 24.4 +0.8
baz=22
C09A Chrisman Ranch 94.63 14 P P 09 33 12.0 +1.5
SANVU Saraoutou 94.65 106 IAMs_20 IAMs_20 10 13 40.7
comp=Z,83µm,22.0s
LTY Liberty 94.65 16 P P 09 33 11.6 +0.9
LTY IAMs_20 IAMs_20 10 17 10.9
comp=Z,120µm,22.0s
GGN Saint George 94.76 339 IAMs_20 IAMs_20 10 21 51.6
comp=Z,86µm,19.0s
D57A Chemin Vers le 94.82 344 P P 09 33 10.9 -0.5
baz=19,SNR=32
D57A S S 09 44 26.6 +0.9
baz=19
E60A Ste Agathe de 94.85 342 P P 09 33 10.7 -0.8
baz=21,SNR=16
E60A S S 09 44 26.8 +0.8
baz=21
F63A Nahmakanta, Br 94.86 341 IAMs_20 IAMs_20 10 21 06.3
comp=Z,99µm,19.0s
F63A Nahmakanta, Br 94.86 341 P P 09 33 09.9 -1.7
baz=23
F63A S S 09 44 26.9 +0.7
baz=23
LON Longmire 94.88 17 P P 09 33 11.1 -0.6
LON Longmire 94.88 17 P P 09 33 11.1 -0.6
LON pmax pmax
comp=Z,184nm,1.4s
E04D Cinebar 94.88 17 P P 09 33 10.6 -1.0
baz=340,SNR=19
E04D S S 09 44 28.1 +1.8
baz=340
G65A Princeton 94.90 339 IAMs_20 IAMs_20 10 20 40.2
comp=Z,66µm,18.0s
G65A Princeton 94.90 339 P P 09 33 11.0 -0.7
baz=24,SNR=7.6
G65A S S 09 44 29.2 +2.8
baz=24
D56A ZEC Mazanza, M 94.98 345 P P 09 33 11.9 -0.2
baz=18,SNR=45
D56A S S 09 44 25.7 -1.4
baz=18
E59A St. Maurice 95.01 343 P P 09 33 10.7 -1.5
baz=20
E59A S S 09 44 28.6 +1.3
baz=20
F61A St Evariste 95.11 342 P P 09 33 11.6 -1.1
baz=21,SNR=10
F61A S S 09 44 29.6 +1.3
baz=21
D55A Sainte-Anne-du 95.16 345 P P 09 33 11.7 -1.2
baz=18,SNR=36
D55A S S 09 44 27.1 -1.6
baz=18
G64A Maxfield 95.19 340 P P 09 33 12.2 -0.8
baz=23,SNR=8.1
G64A S S 09 44 30.0 +1.0
baz=23
H66A Whiting 95.20 339 P P 09 33 11.3 -1.9
baz=24
H66A S S 09 44 31.7 +2.6
baz=24
D08A Wollman Farm, 95.21 15 P P 09 33 14.4 +1.2
D08A IAMs_20 IAMs_20 10 20 00.6
comp=Z,65µm,20.0s
F04D Rainier, OR 95.22 18 P P 09 33 11.2 -2.0
baz=340
F03A Seaside 95.22 18 IAMs_20 IAMs_20 10 18 03.0
comp=Z,108µm,22.0s
D54A Lac Fusel, La 95.27 346 P P 09 33 12.0 -1.4
baz=17,SNR=18
D54A S S 09 44 28.7 -1.0
baz=17
E58A La Victoria 95.29 343 P P 09 33 11.8 -1.7
baz=19,SNR=28
E58A S S 09 44 30.4 +0.6
baz=19
EMMW East Machias 95.31 339 IAMs_20 IAMs_20 10 17 47.8
comp=Z,78µm,22.0s
PKME Peaks-Kenny Pk 95.32 340 P P 09 33 13.1 -0.6
PKME IAMs_20 IAMs_20 10 21 28.4
comp=Z,63µm,19.0s
PKME Peaks-Kenny Pk 95.32 340 P P 09 33 12.2 -1.5
baz=23,SNR=7.8
F60A Warwick 95.35 342 P P 09 33 12.0 -1.8
baz=20,SNR=12
F60A S S 09 44 30.7 +0.3
baz=20
JTMT Jette 95.39 11 P P 09 33 13.3 -0.9
JTMT IAmb IAmb 09 33 24.3
comp=Z,286nm,1.1s
JTMT IAMs_20 IAMs_20 10 18 30.2
comp=Z,124µm,21.0s
E57A Chemin Saint G 95.45 344 P P 09 33 13.1 -1.2
baz=19,SNR=22
E57A S S 09 44 31.1 -0.2
baz=19
E07A Sunnyside 95.49 15 P P 09 33 14.4 0.0
E07A IAMs_20 IAMs_20 10 21 41.0
comp=Z,79µm,19.0s
F04A Amboy 95.50 17 IAMs_20 IAMs_20 10 23 36.3
comp=Z,61µm,19.0s
E56A St. Veronique 95.52 345 P P 09 33 13.4 -1.1
baz=18,SNR=14
E56A S S 09 44 32.6 +0.7
baz=18
D53A Lac Vacive, Po 95.54 347 P P 09 33 14.8 +0.1
D53A IAmb IAmb 09 33 30.6
comp=Z,404nm,1.8s
D53A IAMs_20 IAMs_20 10 19 04.0
comp=Z,71µm,21.0s
D53A Lac Vacive, Po 95.54 347 P P 09 33 12.9 -1.7
baz=16,SNR=28
D53A S S 09 44 32.1 +0.1
baz=16
G63A Kingsbury 95.55 341 P P 09 33 13.0 -1.7
baz=22,SNR=7.9
G63A S S 09 44 33.8 +1.7
baz=22
H65A Eastbrook 95.55 340 P P 09 33 12.5 -2.2
baz=23
H65A S S 09 44 35.0 +2.8
baz=23
F59A Saint Guilaume 95.66 343 P P 09 33 12.9 -2.3
baz=20,SNR=7.9
F59A S S 09 44 35.4 +2.4
baz=20
G62A West of Eustis 95.69 341 P P 09 33 15.5 +0.1
G62A IAMs_20 IAMs_20 10 20 36.2
comp=Z,67µm,18.0s
G62A West of Eustis 95.69 341 P P 09 33 13.7 -1.7
baz=22,SNR=10
G62A S S 09 44 36.1 +2.7
baz=22
TRQ Mont Tremblant 95.72 344 P P 09 33 15.6 0.0
HAWA Hanford 95.72 15 IAMs_20 IAMs_20 10 21 57.0
comp=Z,63µm,19.0s
E08A Dider Farm, El 95.72 15 IAMs_20 IAMs_20 10 20 04.2
comp=Z,82µm,21.0s
EGMT Eagleton 95.75 8 P P 09 33 15.0 -0.7
EGMT IAmb IAmb 09 33 27.0
comp=Z,139nm,0.9s
EGMT Eagleton 95.75 8 P P 09 33 14.2 -1.5
baz=350
F05D White Salmon 95.77 17 P P 09 33 14.4 -1.3
baz=341,SNR=14
F05D S S 09 44 38.7 +4.6
baz=341
DGMT Dagmar 95.81 5 P P 09 33 16.0 +0.1
DGMT IAmb IAmb 09 33 26.3
comp=Z,304nm,1.1s
DGMT Dagmar 95.81 5 P P 09 33 13.8 -2.1
baz=354,SNR=42
E55A Montcerf-Lytto 95.82 345 P P 09 33 14.2 -1.7
baz=17,SNR=14
D51A Lot 18 Range I 95.83 348 P P 09 33 15.1 -0.9
baz=15,SNR=8.9
D51A S S 09 44 33.4 -1.1
baz=15
D50A G1974 Best Tow 95.84 348 P P 09 33 14.3 -1.7
baz=14,SNR=24
D50A S S 09 44 32.9 -1.7
baz=14
H64A Troy 95.88 340 P P 09 33 14.5 -1.7
baz=23
H64A S S 09 44 37.5 +2.5
baz=23
E09A Wood Farm, Sta 95.89 14 P P 09 33 17.6 +1.3
E09A IAmb IAmb 09 33 26.6
comp=Z,175nm,1.1s
F58A St-Lin Laurent 95.89 344 P P 09 33 15.0 -1.2
baz=19
F58A S S 09 44 34.8 -0.2
baz=19
G61A St-Isidore-de- 95.89 342 P P 09 33 14.6 -1.7
baz=21,SNR=12
G61A S S 09 44 36.4 +1.3
baz=21
G03D McMinnville, O 95.97 18 P P 09 33 14.8 -1.9
baz=339
D49A Beulah Townshi 95.98 349 P P 09 33 14.6 -2.1
baz=13,SNR=14
D49A S S 09 44 34.6 -1.2
baz=13
E54A Lac Daplat, Po 96.06 346 P P 09 33 15.3 -1.7
baz=16,SNR=14
E54A S S 09 44 35.6 -1.0
baz=16
WVL Waterville 96.07 340 IAMs_20 IAMs_20 10 17 46.1
comp=Z,82µm,21.0s
H63A New Sharon 96.08 341 P P 09 33 14.6 -2.5
baz=22
H63A S S 09 44 36.8 +0.1
baz=22
F07A Phinny Hill Vi 96.11 16 IAMs_20 IAMs_20 10 18 06.3
comp=Z,104µm,20.0s
D48A Paudash Townsh 96.14 349 P P 09 33 15.3 -2.1
baz=13,SNR=44
D48A S S 09 44 35.4 -1.9
baz=13
E53A Dumoine, Ponti 96.21 346 P P 09 33 16.3 -1.5
baz=16,SNR=14
E53A S S 09 44 37.9 0.0
baz=16
G60A Masonville 96.26 342 P P 09 33 17.3 -0.6
baz=20
G60A S S 09 44 39.2 +0.9
baz=20
MSO Missoula 96.34 11 P P 09 33 18.9 +0.4
MSO Missoula 96.34 11 P P 09 33 16.4 -2.1
baz=347
EYMN Ely 96.38 356 P P 09 33 18.1 -0.4
EYMN IAmb IAmb 09 33 28.0
comp=Z,148nm,1.1s
EYMN Ely 96.38 356 P P 09 33 17.9 -0.6
baz=4.8,SNR=42
E51A G1948 Merrick 96.39 348 P P 09 33 17.7 -0.9
baz=14,SNR=33
E51A S S 09 44 36.5 -2.9
baz=14
G05D Wamic, OR 96.41 17 P P 09 33 19.0 +0.3
baz=341
D47A Chapleau 96.45 350 P P 09 33 18.2 -0.6
baz=12,SNR=66
D47A S S 09 44 37.8 -2.1
baz=12
H62A Milan 96.45 341 IAMs_20 IAMs_20 10 23 01.4
comp=Z,82µm,18.0s
H62A Milan 96.45 341 P P 09 33 18.6 -0.3
baz=21,SNR=6.6
H62A S S 09 44 42.3 +2.3
baz=21
F55A Otter Lake 96.47 345 P P 09 33 18.7 -0.2
baz=17,SNR=8.4
F55A S S 09 44 39.1 -1.0
baz=17
G59A Clarenceville 96.48 343 P P 09 33 17.8 -1.1
baz=20
G59A S S 09 44 41.3 +1.2
baz=20
E52A Mattawa 96.48 347 P P 09 33 17.2 -1.8
baz=15,SNR=13
E52A S S 09 44 38.6 -1.6
baz=15
COR Corvallis 96.54 18 IAMs_20 IAMs_20 10 17 39.0
comp=Z,97µm,22.0s
G06A Carlson Farm, 96.57 16 IAMs_20 IAMs_20 10 20 54.7
comp=Z,74µm,21.0s
F10A Beach Ranch, E 96.59 14 P P 09 33 18.9 -0.7
G58A Ormstown 96.62 344 P P 09 33 18.4 -1.1
baz=19,SNR=8.5
G58A S S 09 44 40.8 -0.5
baz=19
MDND Maddock 96.63 1 P P 09 33 19.9 +0.3
MDND IAmb IAmb 09 33 29.3
comp=Z,151nm,1.0s
MDND IAMs_20 IAMs_20 10 22 15.6
comp=Z,102µm,19.0s
MDND Maddock 96.63 1 P P 09 33 18.4 -1.2
baz=358,SNR=13
MDND S S 09 44 39.2 -2.2
baz=358
I64A Boothbay 96.66 340 P P 09 33 18.3 -1.4
baz=22
I64A S S 09 44 42.7 +1.0
baz=22
H61A Lyndonville 96.69 342 P P 09 33 18.8 -1.2
baz=21,SNR=8.0
H61A S S 09 44 42.3 +0.2
baz=21
ALGO Algonquin Park 96.69 347 P P 09 33 19.0 -0.8
baz=16,SNR=12
D46A Sault St. Mari 96.73 351 P P 09 33 18.3 -1.8
baz=11,SNR=30
D46A S S 09 44 39.1 -3.2
baz=11
H04D Lebanon 96.74 18 P P 09 33 18.1 -2.1
baz=340
I63A Otisfield 96.79 341 IAMs_20 IAMs_20 10 19 44.3
comp=Z,78µm,21.0s
I63A Otisfield 96.79 341 P P 09 33 19.4 -1.0
baz=22
I63A S S 09 44 42.7 -0.2
baz=22
FRNY Flat Rock 96.81 343 P P 09 33 20.9 +0.5
FRNY IAmb IAmb 09 33 28.7
comp=Z,264nm,1.9s
FRNY IAMs_20 IAMs_20 10 20 09.7
comp=Z,64µm,21.0s
H60A Morristown 96.86 342 P P 09 33 18.3 -2.4
baz=20,SNR=9.4
H60A S S 09 44 45.2 +1.7
baz=20
E48A Lockeyer 96.88 349 P P 09 33 19.9 -0.9
baz=12,SNR=34
E48A S S 09 44 40.3 -3.3
baz=12
G57A Newington 96.88 344 P P 09 33 19.0 -1.7
baz=18,SNR=9.5
G57A S S 09 44 42.0 -1.6
baz=18
G08A Pilot Rock 96.89 15 IAMs_20 IAMs_20 10 24 24.2
comp=Z,65µm,18.0s
LBNH Lisbon 96.96 342 P P 09 33 20.5 -0.7
LBNH IAmb IAmb 09 33 37.8
comp=Z,479nm,2.0s
LBNH IAMs_20 IAMs_20 10 21 24.8
comp=Z,93µm,19.0s
LBNH Lisbon 96.96 342 P P 09 33 20.5 -0.7
LBNH pmax pmax
comp=Z,479nm,2.0s
LBNH Lisbon 96.96 342 P P 09 33 20.7 -0.5
baz=21
H59A Cadyville 97.01 343 P P 09 33 20.8 -0.6
baz=19,SNR=12
H59A S S 09 44 44.8 0.0
baz=19
F51A Arnstein 97.05 348 P P 09 33 21.0 -0.6
baz=14,SNR=15
F51A S S 09 44 43.8 -1.2
baz=14
D41A Chassel 97.06 354 P Pdif 09 33 21.9 +0.3
D41A IAmb IAmb 09 33 29.3
comp=Z,358nm,1.7s
E47A Iron Bridge 97.06 350 P P 09 33 21.0 -0.6
baz=12,SNR=30
E47A S S 09 44 41.7 -3.4
baz=12
F52A Sundridge 97.08 347 P P 09 33 21.7 0.0
baz=15,SNR=13
F52A S S 09 44 42.3 -3.0
baz=15
VT1 Waterbury 97.08 342 IAMs_20 IAMs_20 10 21 15.2
comp=Z,102µm,18.0s
G55A Calabogie 97.10 345 P P 09 33 20.4 -1.3
baz=17
G55A S S 09 44 45.2 -0.3
baz=17
I62A Tamworth 97.15 341 IAMs_20 IAMs_20 10 23 14.9
comp=Z,79µm,18.0s
I62A Tamworth 97.15 341 P P 09 33 21.4 -0.7
baz=21
I62A S S 09 44 48.7 +2.7
baz=21
E44A Grand Marais A 97.23 352 IAMs_20 IAMs_20 10 21 56.5
comp=Z,78µm,20.0s
E44A Grand Marais A 97.23 352 P P 09 33 21.5 -0.8
baz=9.4
E44A S S 09 44 45.2 -1.4
baz=9.4
G54A Lake Saint Pet 97.23 346 P P 09 33 21.5 -0.9
baz=16,SNR=14
G54A S S 09 44 46.3 -0.4
baz=16
LONY Lake Ozonia 97.24 344 P Pdif 09 33 23.4 +0.8
LONY IAmb IAmb 09 33 30.1
comp=Z,302nm,1.6s
LONY IAMs_20 IAMs_20 10 20 08.2
comp=Z,74µm,21.0s
LONY Lake Ozonia 97.24 344 P P 09 33 21.8 -0.6
baz=18,SNR=22
I05D Terrebonne, OR 97.26 17 P P 09 33 21.9 -0.7
baz=341,SNR=8.4
I05D S S 09 44 48.2 +1.1
baz=341
E46A Sault Ste Mari 97.28 351 P P 09 33 21.8 -0.8
E46A IAmb IAmb 09 33 37.6
comp=Z,276nm,1.6s
I61A Oroboro, Fairl 97.32 342 P P 09 33 20.8 -2.0
baz=20
I61A S S 09 44 50.0 +2.5
baz=20
H58A Gabriels 97.34 343 P P 09 33 22.2 -0.7
baz=19
H58A S S 09 44 50.1 +2.4
baz=19
I03D Drain, OR 97.36 19 P P 09 33 22.8 -0.1
baz=339
D32A Dogwood Acres, 97.36 360 IAMs_20 IAMs_20 10 21 35.0
comp=Z,93µm,21.0s
PLVO Plevna 97.38 346 P P 09 33 22.3 -0.7
PLVO IAmb IAmb 09 33 30.6
comp=Z,181nm,1.6s
PLVO IAMs_20 IAMs_20 10 21 22.6
comp=Z,57µm,18.0s
LAO LASA Array 97.43 6 P Pdif 09 33 23.9 +0.5
LAO IAmb IAmb 09 33 36.2
comp=Z,154nm,1.1s
LAO LASA Array 97.43 6 P P 09 33 21.9 -1.4
baz=353
I04A Tendick Farm, 97.51 18 P P 09 33 22.7 -1.0
baz=340
F49A Sandfield 97.56 349 P P 09 33 22.8 -1.0
baz=12,SNR=27
F49A S S 09 44 47.7 -1.7
baz=12
H57A Richville 97.57 344 P P 09 33 23.4 -0.5
baz=18,SNR=11
H57A S S 09 44 51.1 +1.6
baz=18
F48A Evansville 97.58 350 P P 09 33 23.0 -0.9
baz=12,SNR=29
F48A S S 09 44 47.8 -1.7
baz=12
E43A Lone Tree Farm 97.59 353 P Pdif 09 33 24.3 +0.3
E43A IAmb IAmb 09 33 38.9
comp=Z,248nm,1.8s
E43A IAMs_20 IAMs_20 10 20 32.0
comp=Z,91µm,19.0s
G53A Haliburton 97.60 347 P P 09 33 23.7 -0.3
baz=15,SNR=16
G53A S S 09 44 49.6 -0.2
baz=15
FFD Franklin Falls 97.61 341 IAMs_20 IAMs_20 10 23 36.0
comp=Z,69µm,18.0s
H56A Elgin 97.64 345 P P 09 33 23.6 -0.6
baz=17,SNR=10
H56A S S 09 44 50.9 +0.8
baz=17
J63A Strafford 97.64 341 P P 09 33 22.7 -1.5
baz=21
J63A S S 09 44 52.0 +1.8
baz=21
BMO Blue Mountains 97.65 14 P P 09 33 24.1 -0.3
BMO Blue Mountains 97.65 14 P P 09 33 24.1 -0.3
BMO pmax pmax
comp=Z,66nm,1.3s
BMO MLR MLR
comp=Z,135µm,21.0s
I60A Shoreham 97.67 343 P P 09 33 23.6 -0.7
baz=20,SNR=10
I60A S S 09 44 51.6 +1.1
baz=20
J01E Myrtle Point 97.70 19 P P 09 33 23.4 -1.1
baz=339
E38A The Farm, Brul 97.72 356 P P 09 33 23.6 -1.0
E38A IAMs_20 IAMs_20 10 23 14.6
comp=Z,101µm,19.0s
NCB Newcomb 97.78 343 IAMs_20 IAMs_20 10 21 00.2
comp=Z,51µm,20.0s
I59A Olmsteadville 97.86 343 S S 09 44 53.0 +0.9
baz=19
KEBM Edson Butte 97.86 20 IAMs_20 IAMs_20 10 22 03.1
comp=Z,50µm,18.0s
H55A Tweed 97.87 346 P P 09 33 24.0 -1.2
baz=16,SNR=7.8
H55A S S 09 44 52.4 +0.3
baz=16
PINE Pine Mountain 97.87 17 IAMs_20 IAMs_20 10 21 18.0
comp=Z,81µm,19.0s
J62A Henniker 97.88 341 P P 09 33 23.2 -2.2
baz=21
J62A S S 09 44 55.3 +3.0
baz=21
DZM Mont Dzumac 97.90 111 eSKSac SKSac 09 44 01.0 -3.4
comp=Z,17µm,33.4s
DZM Mont Dzumac 97.90 111 ePS PS 09 46 14.9 -1.9
comp=Z,24µm,33.4s
DZM Mont Dzumac 97.90 111 eLR LR 10 05 17.0
comp=Z,151µm,23.7s
I07A Izee 97.92 16 IAMs_20 IAMs_20 10 20 15.4
comp=Z,88µm,22.0s
GCMT Greycliff 97.96 9 P P 09 33 23.8 -2.1
J61A Chester 97.96 342 P P 09 33 24.6 -1.1
baz=20,SNR=7.0
J61A S S 09 44 54.5 +1.6
baz=20
DLMT Dillon 97.98 11 P Pdif 09 33 26.4 +0.5
DLMT IAmb IAmb 09 33 33.4
comp=Z,127nm,1.2s
DLMT IAMs_20 IAMs_20 10 23 22.6
comp=Z,96µm,19.0s
DELO Deloro Mine 97.99 346 P P 09 33 24.7 -1.1
DELO IAmb IAmb 09 33 33.3
comp=Z,209nm,1.6s
DELO IAMs_20 IAMs_20 10 23 05.8
comp=Z,95µm,20.0s
SADO Sadowa 98.04 347 IAMs_20 IAMs_20 10 20 36.0
comp=Z,114µm,21.0s
COWI Conover 98.06 354 P P 09 33 24.7 -1.4
COWI IAMs_20 IAMs_20 10 21 26.4
comp=Z,105µm,19.0s
J04D Umpqua Nationa 98.10 18 P P 09 33 25.0 -1.6
baz=340
J04D S S 09 44 56.3 +1.7
baz=340
F45A CMU Biological 98.11 352 P P 09 33 24.8 -1.4
baz=9.7,SNR=19
F45A S S 09 44 50.7 -3.3
baz=9.7
H53A Bobcaygeon 98.12 347 P P 09 33 25.2 -1.2
baz=15
H53A S S 09 44 51.9 -2.4
baz=15
I57A Carthage 98.13 344 P P 09 33 24.9 -1.5
baz=18,SNR=5.9
I57A S S 09 44 55.3 +0.9
baz=18
ACCN Adirondack Com 98.20 343 P P 09 33 24.5 -2.2
ACCN IAmb IAmb 09 33 43.0
comp=Z,178nm,1.6s
ACCN IAMs_20 IAMs_20 10 20 41.4

comp=Z,66µm,20.0s
K02D Willamette Mer 98.21 19 S S 09 44 59.6 +4.3
baz=339
J60A Lant Hill Farm 98.27 343 P P 09 33 26.2 -0.9
baz=19,SNR=8.8
J60A S S 09 44 57.5 +1.9
baz=19
J05D Fort Rock, OR 98.28 17 P P 09 33 25.0 -2.4
baz=341
I55A Frankford 98.29 346 P P 09 33 25.4 -1.7
baz=16
I55A S S 09 44 54.3 -1.4
baz=16
H52A Wyevale 98.29 347 P P 09 33 25.6 -1.5
baz=14
H52A S S 09 44 53.8 -1.9
baz=14
K63A Dunstable 98.31 341 P P 09 33 25.2 -2.0
baz=21
K63A S S 09 44 57.7 +1.8
baz=21
J59A Piesco 98.32 343 P Pdif 09 33 28.2 +0.8
J59A IAmb IAmb 09 33 43.7
comp=Z,216nm,1.6s
J59A IAMs_20 IAMs_20 10 21 04.7
comp=Z,80µm,22.0s
J59A Piesco 98.32 343 P P 09 33 26.0 -1.4
baz=19,SNR=13
J59A S S 09 44 57.2 +1.1
baz=19
G46A Petoskey 98.39 351 P P 09 33 25.0 -2.5
baz=10
G46A S S 09 44 54.7 -1.8
baz=10
G47A Hillman 98.40 350 P P 09 33 25.9 -1.7
baz=11,SNR=17
G47A S S 09 44 53.1 -3.4
baz=11
MCMT McKenzie Canyo 98.46 11 P P 09 33 27.5 -0.7
HUMO Hull Mountain 98.48 19 IAMs_20 IAMs_20 10 19 59.3
comp=Z,114µm,22.0s
HRV Adam Dziewonsk 98.49 341 P P 09 33 26.5 -1.5
baz=21
K62A Royalston 98.52 341 P P 09 33 26.6 -1.5
baz=20
K62A S S 09 44 58.7 +0.9
baz=20
WES Weston 98.54 341 IAMs_20 IAMs_20 10 23 59.5
comp=Z,95µm,19.0s
BCX Boston College 98.55 341 IAMs_20 IAMs_20 10 24 08.7
comp=Z,88µm,18.0s
J58A Remsen 98.60 344 IAMs_20 IAMs_20 10 20 36.0
comp=Z,74µm,20.0s
J58A Remsen 98.60 344 P P 09 33 26.1 -2.5
baz=18,SNR=5.4
J58A S S 09 44 59.0 +0.6
baz=18
RLMT Red Lodge 98.67 8 P P 09 33 27.7 -1.4
RLMT IAmb IAmb 09 37 27.8
comp=Z,177nm,1.6s
RLMT Red Lodge 98.67 8 P P 09 33 26.9 -2.2
baz=350
QLMT Earthquake Lak 98.67 10 P Pdif 09 33 30.0 +0.8
YHL Hebgen Lake 98.69 10 P P 09 33 29.3 0.0
YNE Yellowstone No 98.69 9 P Pdif 09 33 29.3 +0.1
J57A Williamstown 98.71 344 P P 09 33 28.1 -0.9
J57A IAMs_20 IAMs_20 10 20 23.9
comp=Z,75µm,20.0s
J57A Williamstown 98.71 344 P P 09 33 27.6 -1.4
baz=17,SNR=9.1
J57A S S 09 45 00.0 +0.7
baz=17
L02E Cave Junction 98.73 19 P P 09 33 27.3 -1.9
baz=339
L02E S S 09 45 04.0 +4.5
baz=339
G45A Suttons Bay 98.76 352 P Pdif 09 33 29.3 +0.1
G45A IAmb IAmb 09 33 44.4
comp=Z,306nm,1.6s
G45A IAMs_20 IAMs_20 10 21 24.0
comp=Z,104µm,20.0s
G45A Suttons Bay 98.76 352 P P 09 33 28.0 -1.2
baz=9.6,SNR=11
G45A S S 09 44 57.5 -2.2
baz=9.6
K04D Chiloquin, OR 98.77 18 Pdiff P 09 33 27.8 -1.7
baz=340
K04D S S 09 45 03.1 +3.0
baz=340
K61A Williamstown 98.77 342 Pdiff P 09 33 27.6 -1.7
baz=20
K61A S S 09 45 02.5 +2.6
baz=20
YHB Horse Butte 98.78 10 P P 09 33 28.0 -1.7
H48A Harrisville 98.78 350 Pdiff P 09 33 27.9 -1.4
baz=12
H48A S S 09 44 56.0 -3.9
baz=12
YHH Holmes Hill 98.79 10 P P 09 33 28.3 -1.5
TRY Troy 98.81 343 IAMs_20 IAMs_20 10 20 10.7
comp=Z,63µm,20.0s
L64A Middleborough 98.83 340 Pdiff P 09 33 28.2 -1.4
baz=22
L64A S S 09 45 02.2 +1.9
baz=22
L61B Northampton 98.83 342 Pdiff P 09 33 27.7 -1.9
baz=20
L61B S S 09 45 02.2 +1.9
baz=20
GLMI Grayling 98.84 351 IAMs_20 IAMs_20 10 20 53.6
comp=Z,107µm,19.0s
GLMI Grayling 98.84 351 Pdiff P 09 33 27.7 -1.9
baz=10
I52A Shelburne 98.90 348 Pdiff P 09 33 28.5 -1.5
baz=14
I52A S S 09 45 00.3 -0.6
baz=14
QUA2 Belchertown 98.91 341 IAMs_20 IAMs_20 10 22 42.3
comp=Z,100µm,19.0s
G40A Rib Lake 98.97 355 IAMs_20 IAMs_20 10 24 37.5
comp=Z,87µm,18.0s
K60A Five Rivers En 98.98 343 Pdiff P 09 33 28.7 -1.5
baz=19
K60A S S 09 45 04.5 +3.0
baz=19
H47A Mio 99.01 350 Pdiff Pdif 09 33 28.4 -1.9
baz=11
H47A S S 09 44 59.7 -2.1
baz=11
L04D Klamath Falls 99.01 18 Pdiff Pdif 09 33 28.6 -2.1
baz=340
L04D S S 09 45 03.1 +0.9
baz=340
J56A Wolcott 99.02 345 IAMs_20 IAMs_20 10 23 38.2
comp=Z,84µm,18.0s
J56A Wolcott 99.02 345 Pdiff Pdif 09 33 28.5 -1.9
baz=17
J56A S S 09 45 02.0 +0.1
baz=17
BRYW Bryant College 99.03 341 IAMs_20 IAMs_20 10 24 31.6
comp=Z,106µm,19.0s
I53A Kortright Cn E 99.03 347 Pdiff Pdif 09 33 29.0 -1.4
baz=15
I53A S S 09 44 59.8 -2.2
baz=15
K59A Cooperstown 99.06 343 Pdiff Pdif 09 33 28.7 -2.0
baz=18
K59A S S 09 45 02.7 +0.3
baz=18
LKWY Lake 99.07 9 P Pdif 09 33 30.1 -0.9
LKWY Lake 99.07 9 P Pdif 09 33 30.1 -0.9
LKWY pmax pmax
comp=Z,69nm,1.0s
L63A North Scituate 99.10 341 Pdiff Pdif 09 33 29.1 -1.7
baz=21
L63A S S 09 45 04.5 +1.9
baz=21
M65A Busby, Falmout 99.12 340 IAMs_20 IAMs_20 10 23 29.0
comp=Z,79µm,19.0s
M65A Busby, Falmout 99.12 340 Pdiff Pdif 09 33 28.8 -2.0
baz=22
SPMN Marine on St. 99.17 357 P Pdif 09 33 29.4 -1.6
SPMN IAMs_20 IAMs_20 10 19 37.8
comp=Z,72µm,20.0s
SPMN Marine on St. 99.17 357 Pdiff Pdif 09 33 29.4 -1.6
baz=3.8
SPMN S S 09 44 59.8 -3.3
baz=3.8

H46A Fife Lake 99.19 351 Pdiff Pdif 09 33 29.7 -1.4
baz=10.0
H46A S S 09 44 60.0 -3.4
baz=10.0
H45A Beulah 99.21 352 Pdiff Pdif 09 33 30.2 -1.1
baz=9.3
H45A S S 09 44 59.5 -4.0
baz=9.3
H17A Grant Village 99.22 10 P Pdif 09 33 33.3 +1.7
H17A IAmb IAmb 09 33 48.7
comp=Z,200nm,1.6s
H17A Grant Village 99.22 10 Pdiff Pdif 09 33 30.7 -0.9
baz=349
L62A Suffield 99.22 342 Pdiff Pdif 09 33 30.9 -0.4
baz=20
L62A S S 09 45 00.4 +0.4
baz=20
J55A Hilton 99.23 346 IAMs_20 IAMs_20 10 23 53.6
comp=Z,78µm,20.0s
J55A Hilton 99.23 346 Pdiff Pdif 09 33 30.9 -0.4
baz=16
J55A S S 09 45 05.1 +1.4
baz=16
KRMB Red Mountain 99.23 20 IAMs_20 IAMs_20 10 18 39.3
comp=Z,114µm,22.0s
K58A Earlville 99.25 344 IAMs_20 IAMs_20 10 20 53.2
comp=Z,77µm,21.0s
K58A Earlville 99.25 344 Pdiff Pdif 09 33 30.8 -0.7
baz=18
K58A S S 09 45 04.6 +0.7
baz=18
M66A Nantucket 99.26 340 Pdiff Pdif 09 33 31.4 -0.1
baz=22
HON Honolulu 99.26 55 IAMs_20 IAMs_20 10 21 60.0
comp=Z,51µm,20.0s
M64A Tiverton 99.29 340 Pdiff Pdif 09 33 29.7 -1.9
baz=21
M64A S S 09 45 04.8 +0.7
baz=21
L61A Hillsdale 1, H 99.29 342 Pdiff Pdif 09 33 29.9 -1.8
baz=19
L61A S S 09 45 05.9 +1.6
baz=19
I51A Listowel 99.30 348 Pdiff Pdif 09 33 29.9 -1.8
baz=13
I51A S S 09 45 02.6 -1.7
baz=13
YPP Pitchstone Pla 99.31 10 P Pdif 09 33 31.6 -0.5
MFID Camas Ranch 99.32 13 IAMs_20 IAMs_20 10 21 08.2
comp=Z,63µm,20.0s
I48A Sherman Twp 99.34 350 Pdiff Pdif 09 33 29.8 -2.1
baz=11
I48A S S 09 45 02.8 -1.8
baz=11
YBH Yreka Blue Hor 99.36 19 IAMs_20 IAMs_20 10 23 17.7
comp=Z,74µm,20.0s
J54A Appleton 99.39 346 IAMs_20 IAMs_20 10 21 21.7
comp=Z,111µm,21.0s
J54A Appleton 99.39 346 Pdiff Pdif 09 33 30.8 -1.2
baz=15
J54A S S 09 45 03.0 -1.9
baz=15
MEDO Medina 99.45 346 IAMs_20 IAMs_20 10 21 13.6
comp=Z,110µm,21.0s
I49A Point Hope 99.46 349 P Pdif 09 33 30.6 -1.7
I49A IAMs_20 IAMs_20 10 19 58.5
comp=Z,65µm,21.0s
I49A Point Hope 99.46 349 Pdiff Pdif 09 33 30.1 -2.2
baz=12
I49A S S 09 45 03.9 -1.7
baz=12
K57A Scipio Center 99.47 345 Pdiff Pdif 09 33 30.4 -2.1
baz=17
K57A S S 09 45 06.1 +0.4
baz=17
FLWY Flagg Ranch 99.50 10 P Pdif 09 33 32.4 -0.4
FLWY IAmb IAmb 09 33 50.1
comp=Z,140nm,1.2s
M04C Macdoel 99.54 18 Pdiff Pdif 09 33 30.7 -2.2
baz=340
H43A Windswept, Lux 99.55 353 P Pdif 09 33 31.8 -1.0
H43A IAmb IAmb 09 33 47.9
comp=Z,303nm,1.9s
H43A IAMs_20 IAMs_20 10 20 23.0
comp=Z,106µm,21.0s
I47A Gladwin 99.62 351 Pdiff Pdif 09 33 31.5 -1.6
baz=11
I47A S S 09 45 05.1 -1.8
baz=11
M02C Callahan 99.64 19 Pdiff Pdif 09 33 33.0 -0.4
baz=339
M63A Gales Ferry 99.65 341 Pdiff Pdif 09 33 33.3 +0.1
baz=21
L60A Shokan 99.65 343 Pdiff Pdif 09 33 32.3 -1.0
baz=19
L59A Walton 99.65 343 IAMs_20 IAMs_20 10 21 43.9
comp=Z,88µm,20.0s
L59A Walton 99.65 343 Pdiff Pdif 09 33 31.8 -1.5
baz=18
K56A Middlesex 99.67 345 Pdiff Pdif 09 33 32.9 -0.5
baz=16
WVOR Wild Horse Val 99.69 16 IAMs_20 IAMs_20 10 21 59.0
comp=Z,74µm,21.0s
KSCT Kent School, K 99.72 342 IAMs_20 IAMs_20 10 23 04.6
comp=Z,74µm,20.0s
J52A Paris 99.76 348 Pdiff Pdif 09 33 32.7 -1.0
baz=14
K55A Perry 99.80 346 Pdiff Pdif 09 33 32.6 -1.3
baz=16
I46A Reed City 99.81 351 Pdiff Pdif 09 33 33.0 -1.0
baz=9.8
I45A Fountain 99.81 352 Pdiff Pdif 09 33 33.0 -1.0
baz=9.2
M62A Hamden 99.83 342 Pdiff Pdif 09 33 33.8 -0.3
baz=20
JCC Jacoby Creek, 99.86 20 IAMs_20 IAMs_20 10 18 55.8
comp=Z,90µm,22.0s
BINY Binghamton 99.86 344 IAMs_20 IAMs_20 10 21 22.4
comp=Z,77µm,20.0s
BINY Binghamton 99.86 344 Pdiff Pdif 09 33 33.4 -0.8
baz=18
KHMM Horse Mountain 99.89 20 IAMs_20 IAMs_20 10 18 57.6
comp=Z,115µm,22.0s
FXWY Fox Creek 99.90 10 IAMs_20 IAMs_20 10 21 56.5
comp=Z,99µm,20.0s
L58A Harry Jones Me 99.98 344 Pdiff Pdif 09 33 34.3 -0.5
baz=18
K54A Basiliko Farm, 100.03 346 Pdiff Pdif 09 33 34.0 -1.0
baz=15
SUSD Miller 100.04 1 IAMs_20 IAMs_20 10 23 55.0
comp=Z,90µm,18.0s
SUSD Miller 100.04 1 Pdiff Pdif 09 33 34.2 -0.8
baz=359
J49A Marlette 100.07 349 Pdiff Pdif 09 33 33.6 -1.5
baz=12
N02D Trinity Center 100.07 19 Pdiff Pdif 09 33 34.6 -0.7
baz=340
RSSD Black Hills 100.15 5 Pdiff Pdif 09 33 34.6 -1.1
baz=355
N63A Mattituck 100.16 341 Pdiff Pdif 09 33 34.4 -1.1
baz=20
M61A Granite Spring 100.18 342 Pdiff Pdif 09 33 34.0 -1.6
baz=19
WSPT Westport, CT 100.20 342 IAMs_20 IAMs_20 10 23 28.4
comp=Z,84µm,19.0s
WVNY West Valley, N 100.21 346 IAMs_20 IAMs_20 10 21 35.7
comp=Z,88µm,20.0s
J48A Bridge Port 100.22 350 IAMs_20 IAMs_20 10 21 56.8
comp=Z,100µm,20.0s
J48A Bridge Port 100.22 350 Pdiff Pdif 09 33 34.7 -1.1
baz=11
L57A Andrews Acres 100.24 345 Pdiff Pdif 09 33 35.1 -0.9
baz=17
K52A Tillsonburg 100.24 348 Pdiff Pdif 09 33 34.4 -1.5
baz=14
L56A Greenwood 100.26 345 IAMs_20 IAMs_20 10 23 10.9
comp=Z,65µm,18.0s
L56A Greenwood 100.26 345 Pdiff Pdif 09 33 34.7 -1.4
baz=16
M59A Waymart 100.36 343 Pdiff Pdif 09 33 35.3 -1.2
baz=18
I40A Norwalk 100.37 355 IAMs_20 IAMs_20 10 24 18.5
comp=Z,99µm,19.0s
M60A Port Jervis 100.37 343 Pdiff Pdif 09 33 36.0 -0.5
baz=19
L55A Hinsdale 100.40 346 Pdiff Pdif 09 33 35.9 -0.7
baz=16
J46A Howard City 100.42 351 Pdiff Pdif 09 33 35.7 -1.0

baz=9.7
J47A Sunmer 100.43 351 Pdiff Pdif 09 33 35.2 -1.5
baz=10
K51A Iona Station 100.44 348 Pdiff Pdif 09 33 35.4 -1.3
baz=13
N62A Caumsett State 100.46 342 Pdiff Pdif 09 33 35.9 -0.9
baz=20
WDC Whiskeytown Da 100.49 19 IAMs_20 IAMs_20 10 19 12.4
comp=Z,61µm,22.0s
KMRM Mail Ridge 100.50 20 IAMs_20 IAMs_20 10 19 15.3
comp=Z,100µm,21.0s
PAL Palisades 100.50 342 IAMs_20 IAMs_20 10 25 29.4
comp=Z,87µm,20.0s
PAL Palisades 100.50 342 Pdiff Pdif 09 33 35.9 -1.1
baz=19
L54A Sinclairville 100.52 346 Pdiff Pdif 09 33 35.5 -1.7
baz=15
K50A Casco 100.56 349 IAMs_20 IAMs_20 10 23 15.9
comp=Z,80µm,21.0s
K50A Casco 100.56 349 Pdiff Pdif 09 33 36.7 -0.6
baz=12
ODNJ Ogdensburg 100.60 343 IAMs_20 IAMs_20 10 22 57.0
comp=Z,72µm,19.0s
K49A Clarkson 100.68 350 Pdiff Pdif 09 33 36.5 -1.3
baz=12
CPNY Central Park 100.72 342 IAMs_20 IAMs_20 10 25 45.1
comp=Z,71µm,19.0s
AHID Auburn Hatcher 100.74 10 IAMs_20 IAMs_20 10 22 55.7
comp=Z,85µm,19.0s
M58A Price's Panora 100.76 344 Pdiff Pdif 09 33 37.1 -1.2
baz=17
ERPA Erie 100.76 347 IAMs_20 IAMs_20 10 20 25.0
comp=Z,87µm,21.0s
ERPA Erie 100.76 347 Pdiff Pdif 09 33 37.0 -1.2
baz=14
K48A Perry 100.76 350 Pdiff Pdif 09 33 36.9 -1.3
baz=11
ECSD EROS Data Cent 100.76 359 Pdif 09 33 37.1 -1.1
ECSD EROS Data Cent 100.76 359 IAMs_20 IAMs_20 10 24 52.0
comp=Z,90µm,20.0s
ECSD EROS Data Cent 100.76 359 Pdiff Pdif 09 33 36.7 -1.5
baz=0.7
O02D Mt. Diablo Mer 100.80 20 Pdiff Pdif 09 33 37.3 -1.2
baz=339
N61A South Mountain 100.84 342 Pdiff Pdif 09 33 36.9 -1.6
baz=19
N60A Cedar Hill Far 100.92 343 Pdiff Pdif 09 33 37.3 -1.6
baz=18
M57A Sunshine Farm, 100.94 345 IAMs_20 IAMs_20 10 25 04.8
comp=Z,74µm,18.0s
M57A Sunshine Farm, 100.94 345 Pdiff Pdif 09 33 37.4 -1.7
baz=17
O03E Paynes Creek 100.95 19 Pdiff Pdif 09 33 38.1 -1.0
baz=340
PDAR Pinedale Array 100.95 9 P Pdif 09 33 39.6 +0.3
comp=Z,3.4nm,1.1s,baz=354,slow=3.0,SNR=12
PDAR PP PP 09 37 35.6 -10
comp=Z,6.9nm,1.0s,baz=17,slow=9.4,SNR=4.8
PDAR PKKP PKKPdf 09 49 55.9 +1.0
comp=Z,2.7nm,1.0s,baz=103,slow=3.9,SNR=6.7
PDAR Pinedale Array 100.95 9 Pdif 09 33 39.0 -0.3
L53A Girard 100.97 347 Pdiff Pdif 09 33 37.6 -1.5
baz=14
BRNJ Basking Ridge 100.97 342 IAMs_20 IAMs_20 10 22 26.8
comp=Z,76µm,20.0s
K47A Vermontville 101.01 351 Pdiff Pdif 09 33 37.5 -1.8
baz=10
M56A Emporium 101.02 345 IAMs_20 IAMs_20 10 22 14.9
comp=Z,108µm,21.0s
M56A Emporium 101.02 345 Pdiff Pdif 09 33 39.0 -0.4
baz=16
N59A State Game Lan 101.03 343 IAMs_20 IAMs_20 10 22 35.4
comp=Z,79µm,22.0s
N59A State Game Lan 101.03 343 Pdiff Pdif 09 33 39.1 -0.4
baz=18
K46A Dorr 101.09 351 Pdiff Pdif 09 33 39.5 -0.2
baz=9.6
M55A Ridgway 101.15 346 IAMs_20 IAMs_20 10 22 48.4
comp=Z,84µm,19.0s
M55A Ridgway 101.15 346 Pdiff Pdif 09 33 40.3 +0.3
baz=15
AAM Ann Arbor 101.18 350 IAMs_20 IAMs_20 10 22 37.2
comp=Z,94µm,20.0s
AAM Ann Arbor 101.18 350 Pdiff Pdif 09 33 39.7 -0.3
baz=11
ALLY Alegheny Colle 101.24 347 IAMs_20 IAMs_20 10 20 39.8
comp=Z,89µm,20.0s
M54A Oil Creek Stat 101.29 346 IAMs_20 IAMs_20 10 26 25.0
comp=Z,81µm,18.0s
M54A Oil Creek Stat 101.29 346 Pdiff Pdif 09 33 39.9 -0.7
baz=15
L50A Kingsville 101.31 349 Pdiff Pdif 09 33 39.0 -1.6
baz=12
JFWS Jewell Farm 101.31 355 IAMs_20 IAMs_20 10 23 48.5
comp=Z,92µm,20.0s
JFWS Jewell Farm 101.31 355 Pdiff Pdif 09 33 39.6 -1.0
baz=5.9
N58A Sunbury 101.32 344 IAMs_20 IAMs_20 10 22 15.0
comp=Z,66µm,20.0s
N58A Sunbury 101.32 344 Pdiff Pdif 09 33 39.6 -1.2
baz=17
L49A Milan 101.39 350 Pdiff Pdif 09 33 39.7 -1.3
baz=11
K22A Casper 101.41 7 Pdiff Pdif 09 33 39.9 -1.4
baz=352
O60A Telford 101.52 343 Pdiff Pdif 09 33 39.8 -1.8
baz=18
O61A Allentown 101.52 342 Pdiff Pdif 09 33 40.3 -1.3
baz=19
M53A WI Miller and 101.54 347 Pdiff Pdif 09 33 40.3 -1.4
baz=14
M52A Chesterland 101.56 348 IAMs_20 IAMs_20 10 24 10.3
comp=Z,83µm,20.0s
M52A Chesterland 101.56 348 Pdiff Pdif 09 33 39.5 -2.3
baz=13
N57A Milroy 101.58 345 Pdiff Pdif 09 33 40.6 -1.3
baz=16
N56A West Decatur 101.58 345 Pdiff Pdif 09 33 40.4 -1.5
baz=16
L48A N Adams 101.64 350 Pdiff Pdif 09 33 40.6 -1.5
baz=11
O59A Robesonia 101.70 344 Pdiff Pdif 09 33 40.6 -1.8
baz=17
L47A Sherwood 101.72 351 Pdiff Pdif 09 33 41.3 -1.2
baz=10
BEKR Beckworth 101.72 18 IAMs_20 IAMs_20 10 24 50.0
comp=Z,92µm,20.0s
ORV Oroville 101.72 19 IAMs_20 IAMs_20 10 23 20.1
comp=Z,52µm,20.0s
SSPA Standing Stone 101.77 345 IAMs_20 IAMs_20 10 29 07.9
comp=Z,60µm,20.0s
SSPA Standing Stone 101.77 345 Pdiff Pdif 09 33 41.1 -1.7
baz=16
HWUT Hardware Ranch 101.81 11 IAMs_20 IAMs_20 10 26 03.2
comp=Z,98µm,19.0s
L46A Eue Claire 101.82 352 Pdiff Pdif 09 33 41.9 -1.0
baz=9.2
HOPS Hopland Field 101.82 20 IAMs_20 IAMs_20 10 22 11.8
comp=Z,91µm,19.0s
L44A Lake County Fo 101.83 353 IAMs_20 IAMs_20 10 22 50.4
comp=Z,87µm,19.0s
L44A Lake County Fo 101.83 353 Pdiff Pdif 09 33 42.4 -0.5
baz=7.9
N55A Marion Center 101.86 346 Pdiff Pdif 09 33 42.2 -0.9
baz=15
N54A Moraine State 101.88 347 IAMs_20 IAMs_20 10 20 38.6
comp=Z,85µm,22.0s
N54A Moraine State 101.88 347 Pdiff Pdif 09 33 42.5 -0.7
baz=14
KHLU Kahalu`u 101.88 55 IAMs_20 IAMs_20 10 20 13.1
comp=Z,54µm,21.0s
PSUB Penn St. - Bra 101.90 343 IAMs_20 IAMs_20 10 23 53.4
comp=Z,79µm,19.0s
M51A Elyria 101.90 348 Pdiff Pdif 09 33 42.9 -0.4
baz=13
PAGS Pennsylvania G 101.91 344 IAMs_20 IAMs_20 10 25 38.5
comp=Z,66µm,19.0s
M50A Fremont 101.97 349 IAMs_20 IAMs_20 10 24 07.1
comp=Z,88µm,20.0s
M50A Fremont 101.97 349 Pdiff Pdif 09 33 42.7 -0.8
baz=12
P61A Hammonton 101.98 342 IAMs_20 IAMs_20 10 23 07.5
comp=Z,70µm,20.0s
P61A Hammonton 101.98 342 Pdiff Pdif 09 33 41.8 -1.8
baz=19
ELK Elko 102.01 14 IAMs_20 IAMs_20 10 23 12.5
comp=Z,88µm,20.0s
M49A Liberty Center 102.04 350 Pdiff Pdif 09 33 43.4 -0.5

baz=11
MVL Millersville 102.04 344 IAMs_20 IAMs_20 10 22 23.1
comp=Z,75µm,20.0s
O58A Lewisberry 102.05 344 Pdiff Pdif 09 33 43.3 -0.7
baz=17
P60A Greenville 102.05 343 IAMs_20 IAMs_20 10 23 48.4
comp=Z,71µm,20.0s
P60A Greenville 102.05 343 Pdiff Pdif 09 33 43.0 -1.0
baz=18
GDXM Geysers 102.07 20 IAMs_20 IAMs_20 10 22 31.4
comp=Z,93µm,19.0s
PAHR Pah Rah Range 102.11 17 IAMs_20 IAMs_20 10 21 53.1
comp=Z,87µm,21.0s
O57A Amberson 102.12 345 Pdiff Pdif 09 33 43.9 -0.4
baz=16
MLOA Mauna Loa Obse 102.13 55 IAMs_20 IAMs_20 10 20 29.7
comp=Z,49µm,20.0s
M48A Edgerton 102.14 350 Pdiff Pdif 09 33 43.5 -0.9
baz=10
N53A Lisbon 102.18 347 IAMs_20 IAMs_20 10 24 06.7
comp=Z,78µm,20.0s
N53A Lisbon 102.18 347 Pdiff Pdif 09 33 43.9 -0.7
baz=14
L40A Anamosa 102.23 355 IAMs_20 IAMs_20 10 20 53.8
comp=Z,94µm,21.0s
O56A Blue Knob Stat 102.27 345 IAMs_20 IAMs_20 10 23 24.0
comp=Z,85µm,21.0s
O56A Blue Knob Stat 102.27 345 Pdiff Pdif 09 33 44.1 -0.9
baz=16
RWWY Rawlins 102.29 7 IAMs_20 IAMs_20 10 26 13.5
comp=Z,88µm,18.0s
KHU Kahuku 102.31 55 IAMs_20 IAMs_20 10 20 34.5
comp=Z,62µm,20.0s
N52A McGinn's Farm, 102.33 348 Pdiff Pdif 09 33 44.0 -1.2
baz=13
N51A Ashland 102.34 348 IAMs_20 IAMs_20 10 23 36.8
comp=Z,82µm,21.0s
N51A Ashland 102.34 348 Pdiff Pdif 09 33 44.0 -1.2
baz=12
M47A Cromwell 102.38 351 Pdiff Pdif 09 33 43.7 -1.7
baz=9.8
AFDM Forest Hills D 102.43 19 IAMs_20 IAMs_20 10 23 39.9
comp=Z,71µm,21.0s
P59A Jarrettsville 102.43 344 Pdiff Pdif 09 33 44.5 -1.2
baz=17
VCNR Virginia City 102.43 17 IAMs_20 IAMs_20 10 24 46.9
comp=Z,86µm,20.0s
O55A Ligonier 102.47 346 Pdiff Pdif 09 33 44.7 -1.2
baz=15
SCIA State Center 102.49 357 IAMs_20 IAMs_20 10 22 50.8
comp=Z,97µm,20.0s
SCIA State Center 102.49 357 Pdiff Pdif 09 33 45.0 -0.9
baz=3.5
RUBR Rubicon Trail 102.54 18 IAMs_20 IAMs_20 10 25 13.7
comp=Z,77µm,20.0s
N50A Nevada 102.61 349 Pdiff Pdif 09 33 45.1 -1.4
baz=12
N49A Columbus Grove 102.61 350 Pdiff Pdif 09 33 44.9 -1.5
baz=11
M44A Midewin, Midew 102.63 353 IAMs_20 IAMs_20 10 23 24.4
comp=Z,78µm,18.0s
PNTR Pine Nut 102.64 18 IAMs_20 IAMs_20 10 24 42.4
comp=Z,98µm,20.0s
MCCM Marconi Confer 102.67 20 IAMs_20 IAMs_20 10 22 58.2
comp=Z,69µm,18.0s
O54A Avella 102.70 347 IAMs_20 IAMs_20 10 21 24.5
comp=Z,88µm,21.0s
O54A Avella 102.70 347 Pdiff Pdif 09 33 45.2 -1.7
baz=14
SDMD Soldier's Deli 102.71 344 IAMs_20 IAMs_20 10 26 13.9
comp=Z,45µm,19.0s
P58A Pank, Wackersv 102.74 344 Pdiff Pdif 09 33 45.2 -1.8
baz=17
O53A New Philadelph 102.79 347 Pdiff Pdif 09 33 45.9 -1.4
baz=13
N48A Decatur 102.79 350 Pdiff Pdif 09 33 45.7 -1.5
baz=10
YERR Yerington 102.83 17 IAMs_20 IAMs_20 10 24 59.3
comp=Z,86µm,20.0s
N47A Urbana 102.86 351 IAMs_20 IAMs_20 10 25 07.6
comp=Z,92µm,20.0s
N47A Urbana 102.86 351 Pdiff Pdif 09 33 46.7 -0.9
baz=9.7
Q61A Milford 102.86 342 Pdiff Pdif 09 33 46.4 -1.2
baz=18
Q60A Greensboro 102.87 343 IAMs_20 IAMs_20 10 23 22.1
comp=Z,83µm,21.0s
Q60A Greensboro 102.87 343 Pdiff Pdif 09 33 46.1 -1.5
baz=18
P57A Homestead Farm 102.90 345 IAMs_20 IAMs_20 10 23 03.9
comp=Z,92µm,21.0s
P57A Homestead Farm 102.90 345 Pdiff Pdif 09 33 46.1 -1.7
baz=16
DUG Dugway, Tooele 102.98 12 IAMs_20 IAMs_20 10 24 59.2
comp=Z,80µm,19.0s
DUG Dugway, Tooele 102.98 12 Pdiff Pdif 09 33 47.0 -1.4
baz=347
KVN Kaiserville 103.03 16 IAMs_20 IAMs_20 10 23 20.8
comp=Z,109µm,22.0s
P56A Dayton Farm, R 103.06 345 Pdiff Pdif 09 33 46.6 -1.9
baz=15
BGNE Belgrade 103.08 1 Pdiff Pdif 09 33 47.3 -1.3
baz=359
ACSO Alum Creek Sta 103.11 349 IAMs_20 IAMs_20 10 24 01.1
comp=Z,77µm,20.0s
ACSO Alum Creek Sta 103.11 349 Pdiff Pdif 09 33 47.3 -1.4
baz=12
MCWV Mont Chateau 103.11 346 Pdiff Pdif 09 33 46.8 -1.9
baz=14
O51A Pataskala 103.13 348 Pdiff Pdif 09 33 48.5 -0.3
baz=12
Q59A Harwood 103.19 343 Pdiff Pdif 09 33 48.9 -0.2
baz=17
N23A Red Feather La 103.20 7 Pdiff Pdif 09 33 49.2 -0.3
baz=353
WAKR Walker 103.24 18 IAMs_20 IAMs_20 10 25 32.1
comp=Z,86µm,21.0s
P55A Reedsville 103.25 346 Pdiff Pdif 09 33 49.1 -0.3
baz=15
P54A Burton 103.28 347 Pdiff Pdif 09 33 48.3 -1.3
baz=14
O50A Cable 103.29 349 Pdiff Pdif 09 33 48.4 -1.1
baz=11
RYN Ryan 103.34 17 IAMs_20 IAMs_20 10 23 45.8
comp=Z,112µm,22.0s
Q58A Fox Den Farm, 103.35 344 Pdiff Pdif 09 33 48.1 -1.7
baz=16
O49A Covington 103.35 350 Pdiff Pdif 09 33 48.6 -1.2
baz=11
R61A Willards 103.39 342 IAMs_20 IAMs_20 10 23 59.8
comp=Z,97µm,21.0s
O48A Farmland 103.40 350 Pdiff Pdif 09 33 48.9 -1.1
baz=10
Q57A Strasburg 103.42 345 Pdiff Pdif 09 33 49.0 -1.1
baz=16
OGNE Ogallala 103.43 4 IAMs_20 IAMs_20 10 21 42.8
comp=Z,107µm,21.0s
OGNE Ogallala 103.43 4 Pdiff Pdif 09 33 49.5 -0.7
baz=356
CMB Columbia Colle 103.44 18 IAMs_20 IAMs_20 10 23 34.6
comp=Z,68µm,20.0s
SFIN Lafayette 103.52 352 Pdiff Pdif 09 33 50.3 -0.2
baz=8.6
N41A Harden Midland 103.55 355 IAMs_20 IAMs_20 10 24 21.8
comp=Z,88µm,19.0s
P52A Corning 103.55 348 Pdiff Pdif 09 33 49.3 -1.4
baz=13
P53A Whipple 103.56 347 IAMs_20 IAMs_20 10 24 57.3
comp=Z,95µm,19.0s
P53A Whipple 103.56 347 Pdiff Pdif 09 33 50.3 -0.4
baz=13
HDIL Hopedale 103.57 354 Pdiff Pdif 09 33 49.3 -1.4
baz=6.8
Q56A Snyder Ridge, 103.57 345 IAMs_20 IAMs_20 10 23 40.6
comp=Z,89µm,21.0s
Q56A Snyder Ridge, 103.57 345 Pdiff Pdif 09 33 49.7 -1.1
baz=15
NVAR Mina Array Bea 103.58 17 Pdiff Pdif 09 33 52.7 +1.6
comp=Z,15nm,1.1s,baz=332,slow=3.1,SNR=20
NVAR PKKP PKKPdf 09 49 52.9 +2.7
comp=Z,1.7nm,0.9s,baz=163,slow=3.5,SNR=5.7
NVAR Mina Array Bea 103.58 17 Pdiff Pdif 09 33 49.8 -1.4
NV11 Mina Array Sit 103.61 17 IAMs_20 IAMs_20 10 24 03.0
comp=Z,96µm,21.0s
O20A White River Ci 103.71 9 Pdiff Pdif 09 33 50.0 -1.7
baz=351
R60A Leonardtown, M 103.74 343 Pdiff Pdif 09 33 49.7 -1.8
baz=17

Q55A Buckhannon 103.80 346 Pdiff Pdif 09 33 50.0 -1.8
baz=14
P50A Jamestown 103.84 349 Pdiff Pdif 09 33 49.7 -2.2
baz=11
P51A Williamsport 103.85 349 IAMs_20 IAMs_20 10 24 23.9
comp=Z,71µm,21.0s
P51A Williamsport 103.85 349 Pdiff Pdif 09 33 50.3 -1.7
baz=12
O44A Mansfield 103.89 353 IAMs_20 IAMs_20 10 27 22.9
comp=Z,83µm,20.0s
R59A King George, V 103.93 344 Pdiff Pdif 09 33 50.2 -2.2
baz=17
Q54A Coxs Mills 103.95 347 IAMs_20 IAMs_20 10 22 13.5
comp=Z,95µm,22.0s
Q54A Coxs Mills 103.95 347 Pdiff Pdif 09 33 50.1 -2.4
baz=14
CBN Corbin Frederi 103.99 344 IAMs_20 IAMs_20 10 25 28.6
comp=Z,66µm,19.0s
CBN Corbin Frederi 103.99 344 Pdiff Pdif 09 33 50.1 -2.5
baz=17
R58A Rapidan 104.04 344 Pdiff Pdif 09 33 50.2 -2.7
baz=16
P49A Miami Univ. Ec 104.05 350 Pdiff Pdif 09 33 51.0 -1.9
baz=11
R57A Stanardsville 104.15 345 Pdiff Pdif 09 33 52.3 -1.1
baz=16
Q53A Leroy 104.20 347 Pdiff Pdif 09 33 52.8 -0.8
baz=13
MLAC Mammoth, Mammo 104.21 17 Pdiff Pdif 09 33 52.6 -1.3
baz=342
P48A Milroy 104.22 350 Pdiff Pdif 09 33 52.1 -1.6
baz=10.0
Q52A Bidwell 104.23 348 Pdiff Pdif 09 33 52.6 -1.1
baz=13
R56A Bull Pasture M 104.23 345 Pdiff Pdif 09 33 52.5 -1.4
baz=15
R11A Troy Canyon, C 104.25 15 IAMs_20 IAMs_20 10 23 15.9
comp=Z,67µm,20.0s
R11A Troy Canyon, C 104.25 15 Pdiff Pdif 09 33 53.3 -0.8
baz=345
S60A Water View 104.30 343 Pdiff Pdif 09 33 53.3 -0.7
baz=17
ISCO Idaho Springs 104.32 7 Pdiff Pdif 09 33 53.5 -1.0
baz=353
R58B Mineral 104.33 344 IAMs_20 IAMs_20 10 30 57.7
comp=Z,65µm,20.0s
R58B Mineral 104.33 344 Pdiff Pdif 09 33 52.9 -1.2
baz=16
Q51A Peebles 104.34 349 IAMs_20 IAMs_20 10 24 37.8
comp=Z,96µm,20.0s
Q51A Peebles 104.34 349 Pdiff Pdif 09 33 53.4 -0.8
baz=12
S59A Mechanicsville 104.39 344 Pdiff Pdif 09 33 53.4 -1.0
baz=17
R55A Marlinton 104.49 346 IAMs_20 IAMs_20 10 30 17.9
comp=Z,72µm,22.0s
R55A Marlinton 104.49 346 Pdiff Pdif 09 33 53.6 -1.3
baz=14
Q49A Aurora 104.60 350 Pdiff Pdif 09 33 53.6 -1.8
baz=10
Q50A Georgetown 104.62 349 Pdiff Pdif 09 33 53.4 -2.1
baz=11
S58A Poland Farm, P 104.71 344 IAMs_20 IAMs_20 10 26 08.6
comp=Z,74µm,19.0s
S58A Poland Farm, P 104.71 344 Pdiff Pdif 09 33 54.6 -1.2
baz=16
R54A Victor 104.76 347 Pdiff Pdif 09 33 53.8 -2.3
baz=14
S57A Dark Hollow, R 104.76 345 IAMs_20 IAMs_20 10 24 19.0
comp=Z,113µm,22.0s
S57A Dark Hollow, R 104.76 345 Pdiff Pdif 09 33 54.0 -2.1
baz=15
Q48A North Vernon 104.78 351 Pdiff Pdif 09 33 55.4 -0.8
baz=9.8
R53A Hurricane 104.79 347 Pdiff Pdif 09 33 54.6 -1.6
baz=13
SMCO Snowmass 104.80 8 IAMs_20 IAMs_20 10 25 17.0
comp=Z,94µm,20.0s
T60A Surry 104.86 343 IAMs_20 IAMs_20 10 27 50.6
comp=Z,75µm,18.0s
T60A Surry 104.86 343 Pdiff Pdif 09 33 54.6 -1.9
baz=17
R52A Catlettsburg 104.90 348 Pdiff Pdif 09 33 55.8 -0.9
baz=12
TIN Tinemaha, Big 104.91 17 Pdiff Pdif 09 33 55.6 -1.4
baz=343
S56A Natural Bridge 104.97 345 Pdiff Pdif 09 33 56.2 -0.8
baz=15
PMPB Monarch Peak 105.05 19 IAMs_20 IAMs_20 10 23 59.2
comp=Z,77µm,19.0s
S55A Lewisburg 105.06 346 Pdiff Pdif 09 33 56.6 -0.8
baz=14
R51A Hillsboro 105.09 349 Pdiff Pdif 09 33 56.1 -1.4
baz=12
GRAC Grapevine Rang 105.17 16 Pdiff Pdif 09 33 56.9 -1.1
baz=343
S54A Dingess, Beckl 105.19 347 IAMs_20 IAMs_20 10 30 03.3
comp=Z,75µm,21.0s
S54A Dingess, Beckl 105.19 347 Pdiff Pdif 09 33 56.7 -1.3
baz=14
Q24A Divide 105.19 6 Pdiff Pdif 09 33 55.9 -2.5
baz=354
T59A Double "B" Far 105.21 344 IAMs_20 IAMs_20 10 24 17.9
comp=Z,53µm,21.0s
T59A Double "B" Far 105.21 344 Pdiff Pdif 09 33 56.5 -1.6
baz=17
R50A Paris 105.22 349 Pdiff Pdif 09 33 56.5 -1.6
baz=11
VOG Valley Oaks Go 105.32 18 Pdiff Pdif 09 33 56.6 -2.0
baz=342
KSCO Kaye Shedlock' 105.33 4 Pdiff Pdif 09 33 56.2 -2.6
baz=356
R49A Shelbyville 105.33 350 Pdiff Pdif 09 33 56.2 -2.4
baz=10
KSU1 Kansas State U 105.39 359 IAMs_20 IAMs_20 10 26 43.5
comp=Z,84µm,20.0s
KSU1 Kansas State U 105.39 359 Pdiff Pdif 09 33 56.4 -2.4
baz=0.7
S53A Williamson 105.45 347 Pdiff Pdif 09 33 57.3 -1.9
baz=13
S53A PKiKP PKiKP 09 38 11.9 -0.9
baz=13
T58A Grand View Acr 105.45 344 Pdiff Pdif 09 33 59.9 +0.7
baz=16
T58A PKiKP PKiKP 09 38 11.5 -1.2
baz=16
TPNV Topopah Spring 105.46 16 IAMs_20 IAMs_20 10 25 56.9
comp=Z,67µm,19.0s
TPNV Topopah Spring 105.46 16 Pdiff Pdif 09 34 01.8 +2.4
baz=344
TPNV PKiKP PKiKP 09 38 11.7 -1.3
baz=344
CWC Cottonwood Cre 105.53 17 Pdiff Pdif 09 33 59.4 -0.4
baz=343
CWC PKiKP PKiKP 09 38 11.7 -1.4
baz=343
WCI Wyandotte Cave 105.55 351 IAMs_20 IAMs_20 10 22 53.7
comp=Z,103µm,22.0s
WCI Wyandotte Cave 105.55 351 Pdiff Pdif 09 33 58.7 -0.8
baz=9.3
WCI PKiKP PKiKP 09 38 12.4 -0.5
baz=9.3
T57A Hurt 105.56 345 IAMs_20 IAMs_20 10 24 32.1
comp=Z,92µm,20.0s
T57A Hurt 105.56 345 Pdiff Pdif 09 34 01.4 +1.7
baz=15
T57A PKiKP PKiKP 09 38 10.9 -2.0
baz=15
U61A Possum Corner 105.56 343 Pdiff Pdif 09 34 02.0 +2.4
baz=18
U61A PKiKP PKiKP 09 38 10.3 -2.7
baz=18
BLA Blacksburg 105.59 346 IAMs_20 IAMs_20 10 23 27.9
comp=Z,75µm,21.0s
BLA Blacksburg 105.59 346 Pdiff Pdif 09 34 02.1 +2.2
baz=14
BLA PKiKP PKiKP 09 38 11.0 -2.1
baz=14
U60A Pendleton 105.59 343 Pdiff Pdif 09 33 59.5 -0.3
baz=17
U60A PKiKP PKiKP 09 38 11.6 -1.4
baz=17
S52A Salyersville 105.61 348 Pdiff Pdif 09 34 00.2 +0.2
baz=12
S52A PKiKP PKiKP 09 38 10.7 -2.4
baz=12
CBKS Cedar Bluff 105.65 2 Pdiff Pdif 09 34 00.9 +0.8
baz=358

CBKS PKiKP PKiKP 09 38 09.9 -3.2
baz=358
T56A Rocky Mt 105.69 346 Pdiff Pdif 09 34 02.2 +2.0
baz=15
T56A PKiKP PKiKP 09 38 11.2 -2.1
baz=15
S51A Beattyville 105.74 349 IAMs_20 IAMs_20 10 25 31.8
comp=Z,93µm,20.0s
S51A Beattyville 105.74 349 Pdiff Pdif 09 34 01.0 +0.6
baz=12
S51A PKiKP PKiKP 09 38 11.6 -1.7
baz=12
T55A Pulaski 105.75 346 Pdiff Pdif 09 34 01.1 +0.5
baz=14
T55A PKiKP PKiKP 09 38 10.5 -2.9
baz=14
FURC Furnace Creek, 105.79 16 Pdiff Pdif 09 34 00.5 -0.1
baz=344
FURC PKiKP PKiKP 09 38 12.2 -1.2
baz=344
DAC Darwin (Calif) 105.80 17 IAMs_20 IAMs_20 10 25 51.9
comp=Z,101µm,21.0s
S50A Richmond 105.82 349 Pdiff Pdif 09 33 59.9 -0.9
baz=11
S50A PKiKP PKiKP 09 38 13.5 +0.1
baz=11
S49A Springfield 105.85 350 Pdiff Pdif 09 34 01.2 +0.3
baz=10
S49A PKiKP PKiKP 09 38 13.2 -0.2
baz=10
VES Vestal, Richgr 105.85 18 Pdiff Pdif 09 34 02.6 +1.6
baz=342
VES PKiKP PKiKP 09 38 12.1 -1.4
baz=342
U59A Littleton 105.86 344 IAMs_20 IAMs_20 10 24 37.0
comp=Z,63µm,21.0s
U59A Littleton 105.86 344 Pdiff Pdif 09 34 00.6 -0.3
baz=16
U59A PKiKP PKiKP 09 38 12.6 -0.9
baz=16
T54A Tazewell 105.95 347 Pdiff Pdif 09 34 02.1 +0.6
baz=13
T54A PKiKP PKiKP 09 38 13.4 -0.3
baz=13
U58A Oxford 105.98 344 Pdiff Pdif 09 33 59.6 -2.0
baz=16
U58A PKiKP PKiKP 09 38 13.2 -0.6
baz=16
MPMC Manual Prospec 106.03 17 Pdiff Pdif 09 34 04.2 +2.1
baz=343
MPMC PKiKP PKiKP 09 38 13.5 -0.7
baz=343
V61A Roper 106.10 342 IAMs_20 IAMs_20 10 23 56.7
comp=Z,75µm,21.0s
V61A Roper 106.10 342 PKiKP PKiKP 09 38 13.4 -0.6
baz=17
SMMC Simmler 106.11 19 Pdiff Pdif 09 34 05.0 +2.8
baz=341
SMMC PKiKP PKiKP 09 38 12.8 -1.3
baz=341
U57A Blanch 106.12 345 Pdiff Pdif 09 34 03.7 +1.5
baz=15
U57A PKiKP PKiKP 09 38 12.6 -1.4
baz=15
SHPR Sheep Range 106.12 15 IAMs_20 IAMs_20 10 30 34.3
comp=Z,70µm,19.0s
T52A Hallie 106.16 348 IAMs_20 IAMs_20 10 25 44.9
comp=Z,85µm,19.0s
T52A Hallie 106.16 348 Pdiff Pdif 09 34 05.0 +2.7
baz=12
T52A PKiKP PKiKP 09 38 12.3 -1.8
baz=12
V62A Hyde County Ai 106.17 342 PKiKP PKiKP 09 38 13.0 -1.0
baz=18
ISA Isabella, Lake 106.17 18 PKiKP PKiKP 09 38 13.1 -1.1
baz=342
T53A Wise 106.20 348 Pdiff Pdif 09 34 03.2 +0.6
baz=12
T53A PKiKP PKiKP 09 38 13.1 -1.1
baz=12
CCM Cathedral Cave 106.22 355 IAMs_20 IAMs_20 10 27 31.3
comp=Z,84µm,21.0s
CCM Cathedral Cave 106.22 355 Pdiff Pdif 09 34 03.8 +1.3
baz=5.2
CCM PKiKP PKiKP 09 38 12.5 -1.6
baz=5.2
S22A 4UR Ranch, Cre 106.23 8 Pdiff Pdif 09 34 03.9 +0.9
baz=352
S22A PKiKP PKiKP 09 38 13.8 -0.8
baz=352
V60A Jim Taylor Roa 106.29 343 IAMs_20 IAMs_20 10 29 19.7
comp=Z,72µm,19.0s
V60A Jim Taylor Roa 106.29 343 Pdiff Pdif 09 34 02.1 -0.8
baz=17
V60A PKiKP PKiKP 09 38 14.6 +0.3
baz=17
SDCO Great Sand Dun 106.36 7 IAMs_20 IAMs_20 10 26 21.4
comp=Z,94µm,19.0s
SDCO Great Sand Dun 106.36 7 Pdiff Pdif 09 34 03.5 -0.1
baz=353
SDCO PKiKP PKiKP 09 38 14.1 -0.8
baz=353
U55A TA2, Sparta 106.40 346 Pdiff Pdif 09 34 06.1 +2.6
baz=14
U55A PKiKP PKiKP 09 38 15.4 +0.8
baz=14
U56A King 106.42 346 IAMs_20 IAMs_20 10 23 44.8
comp=Z,99µm,22.0s
U56A King 106.42 346 Pdiff Pdif 09 34 06.8 +3.3
baz=14
U56A PKiKP PKiKP 09 38 15.5 +0.9
baz=14
T51A Gray 106.45 349 Pdiff Pdif 09 34 04.9 +1.3
baz=11
T51A PKiKP PKiKP 09 38 14.9 +0.3
baz=11
SHOC Shoshone, Teco 106.46 16 Pdiff Pdif 09 34 05.0 +1.3
baz=344
SHOC PKiKP PKiKP 09 38 16.2 +1.5
baz=344
V59A Middlesex 106.52 344 Pdiff Pdif 09 34 04.4 +0.5
baz=16
V59A PKiKP PKiKP 09 38 14.4 -0.4
baz=16
U54A Nelsons Funny 106.52 347 IAMs_20 IAMs_20 10 27 46.6
comp=Z,85µm,20.0s
U54A Nelsons Funny 106.52 347 Pdiff Pdif 09 34 06.4 +2.3
baz=13
U54A PKiKP PKiKP 09 38 15.0 +0.2
baz=13
T50A Nancy 106.53 350 Pdiff Pdif 09 34 05.1 +1.1
baz=11
T50A PKiKP PKiKP 09 38 13.1 -1.7
baz=11
LRMC Laurel Mtn Rad 106.54 17 Pdiff Pdif 09 34 00.6 -3.6
baz=343
LRMC PKiKP PKiKP 09 38 13.1 -1.9
baz=343
T49A Edmonton 106.55 350 Pdiff Pdif 09 34 05.8 +1.7
baz=10.0
T49A PKiKP PKiKP 09 38 13.8 -1.0
baz=10.0
MVCO Mesa Verde 106.56 9 IAMs_20 IAMs_20 10 26 00.6
comp=Z,90µm,20.0s
MVCO Mesa Verde 106.56 9 Pdiff Pdif 09 34 05.8 +1.4
baz=351
MVCO PKiKP PKiKP 09 38 13.8 -1.3
baz=351
PKM Mcpherson Peak 106.56 19 Pdiff Pdif 09 34 04.5 +0.1
baz=341
PKM PKiKP PKiKP 09 38 13.8 -1.3
baz=341
ARVC Arvin 106.59 18 Pdiff Pdif 09 34 03.3 -1.0
baz=342
ARVC PKiKP PKiKP 09 38 15.8 +0.9
baz=342
V58A Windy Hill, Pi 106.69 345 IAMs_20 IAMs_20 10 25 17.0
comp=Z,70µm,20.0s
V58A Windy Hill, Pi 106.69 345 Pdiff Pdif 09 34 03.4 -1.2
baz=15
V58A PKiKP PKiKP 09 38 13.4 -1.7
baz=15
V57A Coltrane Farms 106.73 345 Pdiff Pdif 09 34 04.8 -0.1
baz=15
V57A PKiKP PKiKP 09 38 14.1 -1.0
baz=15
W61A Ground Anchor 106.79 343 Pdiff Pdif 09 34 05.6 +0.5
baz=17

W61A				PKiKP	PKiKP	09 38 13.6	-1.7
	baz=17						
TZTN	Tazewell	106.80	348	Pdiff	Pdif	09 34 06.9	+1.7
	baz=12						
TZTN				PKiKP	PKiKP	09 38 09.1	-6.2
	baz=12						
U53A	Fall Branch	106.81	348	Pdiff	Pdif	09 34 05.6	+0.3
	baz=12						
U53A				PKiKP	PKiKP	09 38 11.0	-4.3
	baz=12						
GSC	Goldstone, Bar	106.92	16	IAMs_20	IAMs_20	10 27 45.4	
	comp=Z,65µm,21.0s						
GSC	Goldstone, Bar	106.92	16	Pdiff	Pdif	09 34 05.2	-0.7
	baz=344						
GSC				PKiKP	PKiKP	09 38 14.5	-1.2
	baz=344						
U52A	Thorn Hill	106.92	348	Pdiff	Pdif	09 34 05.8	0.0
	baz=12						
U52A				PKiKP	PKiKP	09 38 10.6	-5.0
	baz=12						
CNNC	Cliffs of the	106.94	343	IAMs_20	IAMs_20	10 26 06.9	
	comp=Z,75µm,21.0s						
CNNC	Cliffs of the	106.94	343	Pdiff	Pdif	09 34 06.5	+0.7
	baz=16						
CNNC				PKiKP	PKiKP	09 38 11.9	-3.6
	baz=16						
V56A	Mocksville	106.96	346	Pdiff	Pdif	09 34 04.6	-1.3
	baz=14						
V56A				PKiKP	PKiKP	09 38 14.5	-1.0
	baz=14						
TUQ	Turquoise Moun	106.99	16	Pdiff	Pdif	09 34 05.3	-0.9
	baz=344						
TUQ				PKiKP	PKiKP	09 38 12.0	-3.8
	baz=344						
SBC	Santa Barbara	107.01	19	Pdiff	Pdif	09 34 04.7	-1.4
	baz=341						
SBC				PKiKP	PKiKP	09 38 10.8	-4.9
	baz=341						
EDW2	Edwards Air Fo	107.03	18	Pdiff	Pdif	09 34 08.0	+1.6
	baz=343						
EDW2				PKiKP	PKiKP	09 38 12.1	-3.7
	baz=343						
U51A	La Follette	107.04	349	Pdiff	Pdif	09 34 05.4	-0.9
	baz=11						
U51A				PKiKP	PKiKP	09 38 13.4	-2.4
	baz=11						
V55A	Taylorsville	107.06	346	IAMs_20	IAMs_20	10 31 20.8	
	comp=Z,67µm,20.0s						
V55A	Taylorsville	107.06	346	Pdiff	Pdif	09 34 05.4	-0.9
	baz=14						
V55A				PKiKP	PKiKP	09 38 11.5	-4.3
	baz=14						
T25A	Trinidad	107.06	6	Pdiff	Pdif	09 34 04.8	-1.9
	baz=354						
T25A				PKiKP	PKiKP	09 38 12.1	-3.9
	baz=354						
W60A	Pink Hill	107.08	343	PKiKP	PKiKP	09 38 10.9	-4.9
	baz=17						
OSI	Osito Audit: C	107.11	18	IAMs_20	IAMs_20	10 26 04.6	
	comp=Z,84µm,21.0s						
OSI	Osito Audit: C	107.11	18	Pdiff	Pdif	09 34 05.5	-1.1
	baz=342						
OSI				PKiKP	PKiKP	09 38 12.9	-3.1
	baz=342						
U50A	Jamestown	107.13	349	Pdiff	Pdif	09 34 04.3	-2.4
	baz=11						
U50A				PKiKP	PKiKP	09 38 11.0	-5.0
	baz=11						
W59A	Clinton	107.14	344	Pdiff	Pdif	09 34 04.3	-2.4
	baz=16						
W59A				PKiKP	PKiKP	09 38 11.7	-4.3
	baz=16						
U49A	Red Boiling Sp	107.17	350	Pdiff	Pdif	09 34 05.6	-1.2
	baz=9.8						
U49A				PKiKP	PKiKP	09 38 13.0	-3.0
	baz=9.8						
MGMO	Mountain Grove	107.18	356	IAMs_20	IAMs_20	10 26 43.9	
	comp=Z,94µm,19.0s						
V54A	Nebo	107.27	347	Pdiff	Pdif	09 34 07.8	+0.4
	baz=13						
V54A				PKiKP	PKiKP	09 38 12.5	-3.7
	baz=13						
RRX	Edison Barstow	107.28	17	Pdiff	Pdif	09 34 09.7	+2.4
	baz=344						
RRX				PKiKP	PKiKP	09 38 15.2	-1.1
	baz=344						
SCZ2	Santa Cruz Isl	107.45	19	Pdiff	Pdif	09 34 08.1	0.0
	baz=341						
SCZ2				PKiKP	PKiKP	09 38 13.6	-3.0
	baz=341						
W58A	Raeford	107.45	344	Pdiff	Pdif	09 34 09.4	+1.3
	baz=15						
W58A				PKiKP	PKiKP	09 38 12.9	-3.6
	baz=15						
HEC	Hector,Ludlow	107.48	16	Pdiff	Pdif	09 34 10.1	+1.8
	baz=344						
W57A	Gilead	107.49	345	IAMs_20	IAMs_20	10 26 02.3	
	comp=Z,91µm,21.0s						
W57A	Gilead	107.49	345	Pdiff	Pdif	09 34 10.8	+2.5
	baz=15						
V52A	Sevierville	107.50	348	IAMs_20	IAMs_20	10 26 02.3	
	comp=Z,91µm,20.0s						
V52A	Sevierville	107.50	348	Pdiff	Pdif	09 34 08.8	+0.5
	baz=12						
BLG	Laguna Peak, P	107.50	19	Pdiff	Pdif	09 34 08.9	+0.5
	baz=342						
V53A	Saluda	107.53	348	IAMs_20	IAMs_20	10 33 19.3	
	comp=Z,78µm,20.0s						
V53A	Saluda	107.53	348	Pdiff	Pdif	09 34 09.5	+1.0
	baz=12						
DECC	Green Verdugo	107.55	18	Pdiff	Pdif	09 34 09.0	+0.4
	baz=342						
HICK	Hickman	107.55	353	IAMs_20	IAMs_20	10 25 18.9	
	comp=Z,88µm,19.0s						
X60A	Albert Glenn T	107.60	343	Pdiff	Pdif	09 34 09.0	+0.3
	baz=16						
W56A	Indian Trail	107.63	346	Pdiff	Pdif	09 34 11.0	+2.1
	baz=14						
V51A	Loudon	107.65	349	Pdiff	Pdif	09 34 09.8	+0.8
	baz=11						
GMRC	Granite Mounta	107.67	16	Pdiff	Pdif	09 34 09.8	+0.5
	baz=345						
BFSC	Mount Baldy Ra	107.73	18	Pdiff	Pdif	09 34 12.5	+3.0
	baz=343						
W13A	Hualapai Mount	107.74	14	IAMs_20	IAMs_20	10 27 12.1	
	comp=Z,93µm,21.0s						
X59A	McDuffie Farm,	107.75	344	Pdiff	Pdif	09 34 09.9	+0.5
	baz=16						
KMSC	Kings Mountain	107.77	346	IAMs_20	IAMs_20	10 27 49.7	
	comp=Z,71µm,19.0s						
KMSC	Kings Mountain	107.77	346	Pdiff	Pdif	09 34 08.0	-1.5
	baz=14						
WUAZ	Wupatki	107.79	12	IAMs_20	IAMs_20	10 28 07.4	
	comp=Z,80µm,19.0s						
WUAZ	Wupatki	107.79	12	Pdiff	Pdif	09 34 12.0	+2.1
	baz=348						
WVT	Waverly	107.81	352	Pdiff	Pdif	09 34 12.6	+3.0
	baz=8.2						
GLAT	Glass	107.82	353	IAMs_20	IAMs_20	10 29 03.9	
	comp=Z,84µm,20.0s						
BBRC	Big Bear Solar	107.88	17	Pdiff	Pdif	09 34 12.8	+2.4
	baz=344						
V50A	Pikeville	107.90	349	Pdiff	Pdif	09 34 12.1	+2.0
	baz=10						
NEE2	Needles Airpor	107.91	15	Pdiff	Pdif	09 34 10.9	+0.7
	baz=346						
V49A	McMinnville	107.92	350	Pdiff	Pdif	09 34 10.9	+0.7
	baz=9.8						
X58A	Rowland	107.93	344	IAMs_20	IAMs_20	10 24 22.9	
	comp=Z,77µm,22.0s						
X58A	Rowland	107.93	344	Pdiff	Pdif	09 34 11.6	+1.4
	baz=15						
W54A	Cherokee Point	107.98	347	Pdiff	Pdif	09 34 11.0	+0.5
	baz=13						
U40A	Yellville	108.01	356	Pdiff	Pdif	09 34 10.4	-0.2
	baz=3.9						
V48A	Smith Brothers	108.07	351	IAMs_20	IAMs_20	10 24 45.4	
	comp=Z,101µm,22.0s						
FMP	Fort Macarthur	108.07	18	Pdiff	Pdif	09 34 10.6	-0.3
	baz=342						
BIRD	Birdtown, Kers	108.08	345	IAMs_20	IAMs_20	10 26 29.8	
	comp=Z,91µm,21.0s						
W53A	Cullowhee	108.08	348	Pdiff	Pdif	09 34 09.8	-1.8
	baz=12						
HHAR	Hobbs	108.14	357	IAMs_20	IAMs_20	10 25 26.1	
	comp=Z,87µm,20.0s						
PAULI	Pauline	108.17	347	IAMs_20	IAMs_20	10 28 00.3	
	comp=Z,79µm,19.0s						

X57A	Johnson Farm,	108.17	345	Pdiff	Pdif	09 34 12.0	+0.7
	baz=15						
SNCC	San Nicolas Is	108.19	19	IAMs_20	IAMs_20	10 24 10.4	
	comp=Z,60µm,22.0s						
SNCC	San Nicolas Is	108.19	19	Pdiff	Pdif	09 34 10.8	-0.6
	baz=341						
Y60A	Bolivia	108.20	343	IAMs_20	IAMs_20	10 26 08.2	
	comp=Z,93µm,20.0s						
Y60A	Bolivia	108.20	343	Pdiff	Pdif	09 34 12.1	+0.7
	baz=16						
BG3	Lake Jocassee	108.21	348	IAMs_20	IAMs_20	10 32 55.3	
	comp=Z,43µm,20.0s						
W52A	Murphy	108.28	348	IAMs_20	IAMs_20	10 26 35.1	
	comp=Z,88µm,19.0s						
W52A	Murphy	108.28	348	Pdiff	Pdif	09 34 12.9	+1.0
	baz=12						
CIS	Catalina Islan	108.33	18	Pdiff	Pdif	09 34 10.4	-1.7
	baz=342						
X56A	White Oak	108.34	346	Pdiff	Pdif	09 34 13.6	+1.6
	baz=14						
BELC	Belle Mtn. Jos	108.35	16	Pdiff	Pdif	09 34 13.0	+0.7
	baz=344						
W51A	Cleveland	108.35	349	Pdiff	Pdif	09 34 12.3	+0.2
	baz=11						
IRM	Iron Mountain	108.39	15	Pdiff	Pdif	09 34 15.0	+2.7
	baz=345						
W50A	Signal Mountai	108.39	350	Pdiff	Pdif	09 34 13.1	+0.7
	baz=10						
W18A	Petrified Fore	108.44	11	Pdiff	Pdif	09 34 11.9	-0.9
	baz=350						
MURC	Murrieta	108.45	17	Pdiff	Pdif	09 34 11.9	-0.7
	baz=343						
PDMCI	Parker Dam,Lak	108.45	15	Pdiff	Pdif	09 34 13.2	+0.6
	baz=346						
X55A	Gracelyn & Ava	108.48	346	Pdiff	Pdif	09 34 12.6	-0.1
	baz=13						
X54A	Belton	108.54	347	Pdiff	Pdif	09 34 06.9	-6.1
	baz=13						
TUL1	Leonard	108.56	359	IAMs_20	IAMs_20	10 27 03.5	
	comp=Z,56µm,20.0s						
TUL1	Leonard	108.56	359	Pdiff	Pdif	09 34 15.3	+2.3
	baz=1.4						
LPAR	Lepanto	108.58	354	IAMs_20	IAMs_20	10 26 00.9	
	comp=Z,94µm,22.0s						
W49A	Belvidere	108.61	350	Pdiff	Pdif	09 34 14.1	+0.9
	baz=9.5						
PFO	Pinyon Flats O	108.61	17	IAMs_20	IAMs_20	10 26 38.5	
	comp=Z,73µm,19.0s						
PFO	Pinyon Flats O	108.61	17	Pdiff	Pdif	09 34 14.8	+1.3
	baz=344						
XPFO	Pion Flat	108.62	17	IAMs_20	IAMs_20	10 26 38.5	
	comp=Z,73µm,19.0s						
Y58A	Scranton	108.62	344	IAMs_20	IAMs_20	10 32 16.3	
	comp=Z,79µm,21.0s						
Y58A	Scranton	108.62	344	Pdiff	Pdif	09 34 14.8	+1.5
	baz=15						
HBAR	Harrisburg	108.65	354	IAMs_20	IAMs_20	10 25 52.9	
	comp=Z,96µm,22.0s						
Y57A	Sumter	108.67	345	IAMs_20	IAMs_20	10 26 47.5	
	comp=Z,84µm,21.0s						
Y57A	Sumter	108.67	345	Pdiff	Pdif	09 34 15.5	+2.0
	baz=14						
SCI2	San Clemente I	108.70	19	Pdiff	Pdif	09 34 13.1	-0.7
	baz=342						
X53A	Estanollee	108.75	348	Pdiff	Pdif	09 34 12.5	-1.5
	baz=12						
X52A	Dahlonega	108.75	348	Pdiff	Pdif	09 34 13.1	-0.9
	baz=12						
BC3	Big Chuckawall	108.80	16	Pdiff	Pdif	09 34 13.9	-0.4
	baz=345						
HODGE	Hodges	108.83	347	IAMs_20	IAMs_20	10 32 07.7	
	comp=Z,69µm,19.0s						
X16A	Lo Mia Camp, P	108.85	12	IAMs_20	IAMs_20	10 24 31.5	
	comp=Z,77µm,22.0s						
Y12C	Blythe	108.91	15	IAMs_20	IAMs_20	10 32 01.2	
	comp=Z,56µm,19.0s						
Y12C	Blythe	108.91	15	Pdiff	Pdif	09 34 15.4	+0.7
	baz=346						
X51A	Calhoun	108.94	349	IAMs_20	IAMs_20	10 27 29.7	
	comp=Z,99µm,21.0s						
X51A	Calhoun	108.94	349	Pdiff	Pdif	09 34 15.4	+0.6
	baz=11						
PLAL	Pickwick Lake	108.97	352	IAMs_20	IAMs_20	10 28 01.2	
	comp=Z,76µm,19.0s						
Y14A	Wickenburg	109.03	14	IAMs_20	IAMs_20	10 29 10.4	
	comp=Z,71µm,19.0s						
ANMO	Albuquerque	109.04	8	Pdiff	Pdif	09 34 16.9	+1.4
	baz=352						
Y55A	Saluda	109.04	346	Pdiff	Pdif	09 34 14.9	-0.3
	baz=13						
OKCFA	Oklahoma City	109.07	0	IAMs_20	IAMs_20	10 27 34.0	
	comp=Z,87µm,20.0s						
Y56A	Pelion	109.07	346	Pdiff	Pdif	09 34 14.4	-1.0
	baz=14						
W41B	Gary Mavity, V	109.15	356	Pdiff	Pdif	09 34 15.8	+0.1
	baz=4.5						
109C	Camp Elliot, M	109.15	17	IAMs_20	IAMs_20	10 27 31.7	
	comp=Z,53µm,20.0s						
109C	Camp Elliot, M	109.15	17	Pdiff	Pdif	09 34 18.4	+2.7
	baz=343						
Z58A	St. Stephen	109.20	344	Pdiff	Pdif	09 34 17.8	+1.9
	baz=15						
W39A	Magazine	109.21	357	IAMs_20	IAMs_20	10 30 01.6	
	comp=Z,90µm,19.0s						
W39A	Magazine	109.21	357	Pdiff	Pdif	09 34 17.2	+1.3
	baz=3.1						
Y54A	Tignall	109.27	347	Pdiff	Pdif	09 34 12.8	-3.4
	baz=13						
SYO	Syowa Base	109.28	195⇑	ePdiff	Pdif	09 34 16.6	+1.5
SYO	Syowa Base	109.28	195⇑	iP	PKiKP	09 38 06.4	-12
MONP2	Monument Peak	109.31	17	Pdiff	Pdif	09 34 15.5	-1.2
	baz=344						
SWSC	Sam W. Stewart	109.41	16	Pdiff	Pdif	09 34 16.9	+0.1
	baz=344						
Z57A	Bowman	109.43	345	Pdiff	Pdif	09 34 17.6	+0.7
	baz=14						
Y53A	Monroe	109.43	348	Pdiff	Pdif	09 34 16.3	-0.6
	baz=12						
BAR	Barrett	109.45	17	IAMs_20	IAMs_20	10 26 07.7	
	comp=Z,64µm,22.0s						
AMTX	Amarillo	109.49	4	Pdiff	Pdif	09 34 14.5	-2.8
	baz=356						
NHSC	New Hope	109.50	345	Pdiff	Pdif	09 34 17.8	+0.5
	baz=15						
Y52A	Lilburn	109.50	348	IAMs_20	IAMs_20	10 25 55.5	
	comp=Z,86µm,20.0s						
Y52A	Lilburn	109.50	348	Pdiff	Pdif	09 34 15.2	-2.1
	baz=11						
GLA	Glamis	109.52	15	IAMs_20	IAMs_20	10 28 46.3	
	comp=Z,68µm,18.0s						
GLA	Glamis	109.52	15	Pdiff	Pdif	09 34 15.9	-1.6
	baz=345						
Z56A	Williston	109.54	346	IAMs_20	IAMs_20	10 26 40.7	
	comp=Z,78µm,22.0s						
Z56A	Williston	109.54	346	Pdiff	Pdif	09 34 17.8	+0.4
	baz=14						
OXF	Oxford	109.58	353	Pdiff	Pdif	09 34 16.6	-1.0
	baz=6.9						
IKP	In-Ko-Pah, Jac	109.62	17	Pdiff	Pdif	09 34 16.7	-1.2
	baz=344						
Y51A	Rockmart	109.63	349	Pdiff	Pdif	09 34 18.6	+0.8
	baz=11						
X43A	Marvell	109.70	354	IAMs_20	IAMs_20	10 26 35.6	
	comp=Z,102µm,22.0s						
X43A	Marvell	109.70	354	Pdiff	Pdif	09 34 19.4	+1.3
	baz=5.6						
WMOK	Wichita Mounta	109.74	1	IAMs_20	IAMs_20	10 24 34.6	
	comp=Z,81µm,22.0s						
WMOK	Wichita Mounta	109.74	1	Pdiff	Pdif	09 34 18.2	-0.2
	baz=359						
GOGA	Godfrey	109.85	348	IAMs_20	IAMs_20	10 29 30.6	
	comp=Z,71µm,21.0s						
GOGA	Godfrey	109.85	348	Pdiff	Pdif	09 34 19.7	+0.9
	baz=12						
Y22D	IRIS PASSCAL I	109.85	8	Pdiff	Pdif	09 34 20.3	+1.3
	baz=352						
MIAR	Mount Ida	109.85	357	IAMs_20	IAMs_20	10 27 11.5	
	comp=Z,86µm,20.0s						
MIAR	Mount Ida	109.85	357	Pdiff	Pdif	09 34 19.0	+0.2
	baz=3.3						
158A	Hollywood	109.86	345	Pdiff	Pdif	09 34 20.4	+1.5
	baz=15						
X40A	Basin Creek Fa	109.87	356	Pdiff	Pdif	09 34 18.4	-0.4
	baz=4.0						
113A	Mohawk Valley,	110.02	15	IAMs_20	IAMs_20	10 30 21.4	
	comp=Z,62µm,19.0s						
157A	Early Branch	110.09	345	Pdiff	Pdif	09 34 20.1	+0.3
	baz=14						

Z52A	Williamson	110.22	348	Pdiff	Pdif	09 34 21.0	+0.6
	baz=11						
MSTX	Muleshoe	110.33	5	Pdiff	Pdif	09 34 21.2	+0.1
	baz=355						
Z50A	Ashland	110.39	350	Pdiff	Pdif	09 34 18.1	-3.1
	baz=9.9						
LRAL	Lakeview Retre	110.76	351	IAMs_20	IAMs_20	10 32 23.6	
	comp=Z,78µm,22.0s						
LRAL	Lakeview Retre	110.76	351	Pdiff	Pdif	09 34 22.7	-0.2
	baz=9.0						
257A	Skidaway Islan	110.77	345	IAMs_20	IAMs_20	10 30 35.2	
	comp=Z,80µm,18.0s						
214A	Organ Pipe Nat	111.00	14	Pdiff	Pdif	09 34 22.5	-1.5
	baz=347						
TUC	Tucson	111.02	12	IAMs_20	IAMs_20	10 30 26.9	
	comp=Z,71µm,20.0s						
TUC	Tucson	111.02	12	Pdiff	Pdif	09 34 25.1	+1.0
	baz=348						
Z41A	Richland Creek	111.09	356	Pdiff	Pdif	09 34 23.3	-1.0
	baz=4.0						
121A	Cookes Peak, D	111.26	9	Pdiff	Pdif	09 34 25.6	+0.2
	baz=351						
250A	Grady	111.69	350	IAMs_20	IAMs_20	10 29 26.5	
	comp=Z,92µm,20.0s						
TIGA	Tifton	111.79	347	IAMs_20	IAMs_20	10 29 03.1	
	comp=Z,75µm,19.0s						
WHZ	Wether Hill Ro	111.82	131	IAMs_20	IAMs_20	10 26 56.4	
	comp=Z,49µm,22.0s						
ABTX	Abilene, Hawle	111.83	2	Pdiff	Pdif	09 34 29.9	+2.2
	baz=358						
FOZ	Fox Glacier	111.84	129	IAMs_20	IAMs_20	10 28 59.9	
	comp=Z,44µm,21.0s						
VBMS	Vicksburg	111.95	354	Pdiff	Pdif	09 34 28.8	+0.7
	baz=6.0						
319A	Douglas	112.18	11	IAMs_20	IAMs_20	10 28 16.6	
	comp=Z,82µm,20.0s						
456A	Hilliard	112.19	346	IAMs_20	IAMs_20	10 25 02.7	
	comp=Z,68µm,22.0s						
QRZ	Quartz Range	112.30	125	IAMs_20	IAMs_20	10 29 48.2	
	comp=Z,41µm,21.0s						
MNTX	Cornudas Mount	112.36	7	IAMs_20	IAMs_20	10 30 48.3	
	comp=Z,72µm,20.0s						
MNTX	Cornudas Mount	112.36	7	Pdiff	Pdif	09 34 30.3	+0.2
	baz=353						
WHTX	Lake Whitney,	112.49	0	Pdiff	Pdif	09 34 31.1	+0.6
	baz=360						
XMAS	Kiritimati	112.63	70	IAMs_20	IAMs_20	10 25 55.1	
	comp=Z,45µm,21.0s						
NATX	Nacogdoches	112.67	357	IAMs_20	IAMs_20	10 32 52.2	
	comp=Z,79µm,18.0s						
NATX	Nacogdoches	112.67	357	Pdiff	Pdif	09 34 30.2	-1.2
	baz=2.4						
346A	Big Creek Wild	112.67	353	IAMs_20	IAMs_20	10 27 59.3	
	comp=Z,92µm,22.0s						
RPZ	Rata Peaks	112.71	128	IAMs_20	IAMs_20	10 25 59.1	
	comp=Z,42µm,21.0s						
451A	Vernon	112.95	349	IAMs_20	IAMs_20	10 30 18.9	
	comp=Z,78µm,19.0s						
LTZ	Lake Taylor	113.06	127	IAMs_20	IAMs_20	10 28 36.2	
	comp=Z,75µm,21.0s						
ODZ	Otahua Downs	113.08	130	IAMs_20	IAMs_20	10 27 16.8	
	comp=Z,60µm,22.0s						
435B	Jarrell	113.69	0	Pdiff	Pdif	09 34 34.7	-1.2
	baz=360						
KHZ	Kahutara	113.71	126	IAMs_20	IAMs_20	10 28 14.6	
	comp=Z,52µm,21.0s						
JCT	Junction City	113.96	2	Pdiff	Pdif	09 34 37.8	+0.6
	baz=358						
HSIG		114.20	13	IAMs_20	IAMs_20	10 32 07.2	
	comp=Z,68µm,19.0s						
DWPF	Disney Wildern	114.59	344	IAMs_20	IAMs_20	10 35 17.4	
	comp=Z,80µm,19.0s						
TXAR	Lajitas Array	114.87	6	PKP	PKPdf	09 38 31.3	+0.4
	comp=Z,5.2nm,1.0s,baz=34,slow=2.2,SNR=9.0						
TXAR				PKKPbc	PKKPbc	09 49 06.5	-0.6
	comp=Z,0.7nm,0.8s,baz=206,slow=8.0,SNR=2.7						
833A	Chaparral WMA,	116.12	2	Pdiff	Pdif	09 34 48.4	+1.7
	baz=358						
ANWB	Willy Bob	116.96	321	eP	Pdif	09 34 55.0	+4.4
ANWB	Willy Bob	116.96	321	e	PP	09 39 36.1	-6.9
ANWB	Willy Bob	116.96	321	e	Sdif	09 47 38.5	+6.0
ANWB	Willy Bob	116.96	321		Pdif	09 34 55.0	+4.4
ANWB	Willy Bob	116.96	321	IAMs_20	IAMs_20	10 25 42.9	
	comp=Z,40µm,22.0s						
SMRT	St. Maarten	117.28	323	eP	PP	09 39 58.0	+13
NVL	N'lazarevskaya	117.50	201	ePKIKP	PKPdf	09 38 33.5	-0.8
NVL				e		09 39 46.5	
NVL				ePPP	PPP	09 42 24.7	
NVL				e		09 45 29.3	
NVL				eSP	SP	09 49 24.9	-4.6
NVL				eSS	SS	09 55 58.6	+0.3
NVL				MLR	MLR		
	comp=Z,23µm,22.0s						
SEUS	St. Eustatius	117.70	322	eP	PP	09 39 54.0	+5.9
SKI	Saint Kitts	117.72	322	eP	PP	09 39 54.0	+5.7
SABA	Saba	117.72	323	eP	PP	09 39 54.0	+5.7
SABA	Saba	117.72	323	IAMs_20	IAMs_20	10 36 36.9	
	comp=Z,42µm,20.0s						
MLYT	Lee's Yard	117.96	321	eP	PP	09 40 06.0	+16
DWS	Wesley	118.47	320	eP	PP	09 40 02.0	+8.4
FDF	Fort de France	119.08	319	eP	PP	09 39 40.3	-18
SC01	Santiago de lo	119.47	331	IAMs_20	IAMs_20	10 27 34.3	
	comp=Z,41µm,21.0s						
BBGH	Gun Hill	119.52	317	eP	PP	09 40 02.0	+1.1
MCLT	Moule a Chique	119.82	318	eP	PP	09 40 27.9	+25
SDDR	Presa de Saban	120.09	331	IAMs_20	IAMs_20	10 37 09.7	
	comp=Z,36µm,20.0s						
SVB	Belmont	120.35	318	eP	PP	09 40 10.9	+4.4
GRGR	Grenville	121.51	318	eP	PP	09 40 27.9	+13
TOSP	Speyside	121.57	316	eP	PP	09 40 18.1	+3.2
SNAA	Sanae	122.21	202	PKPdf	PKPdf	09 38 43.1	-0.4
SNAA	Sanae	122.21	202		PKPdf	09 38 42.8	-0.7
SNAA	Sanae	122.21	202	PKIKP	PKPdf	09 38 42.8	-0.7
SNAA				MLR	MLR		
	comp=Z,16µm,22.0s						
VNDA	Vanda	122.45	165	PKP	PKPdf	09 38 43.8	+0.1
	comp=Z,6.7nm,1.1s,baz=146,slow=3.6,SNR=3.4						
VNDA				PP	PP	09 40 17.5	-3.2
	comp=Z,15nm,1.2s,baz=311,slow=7.8,SNR=5.3						
MTDJ	Mount Denham	122.99	337	IAMs_20	IAMs_20	10 39 08.2	
	comp=Z,49µm,20.0s						
VNA2	Neumayer--Watz	123.43	203	PKPdf	PKPdf	09 38 45.6	-0.2
	baz=61,slow=3.0						
TEIG	Tepich	123.53	350		PKiKP	09 38 48.4	+0.5
TEIG	Tepich	123.53	350	IAMs_20	IAMs_20	10 39 42.1	
	comp=Z,70µm,20.0s						
VNA1	Neumayer--Stat	123.65	204	PKPdf	PKiKP	09 38 47.5	+1.2
VNA3	Neumayer Olymp	124.22	203	PKPdf	PKPdf	09 38 47.2	0.0
ORIV	Oritupano	125.00	318	eP	PP	09 40 39.9	+1.8
UNM	Universidad Na	125.07	2	IAMs_20	IAMs_20	10 39 05.7	
	comp=Z,66µm,21.0s						
QSPA	South Pole Qui	125.66	180	PKP	PKPdf	09 38 49.5	-0.7
	comp=Z,40nm,1.1s,baz=281,slow=1.4,SNR=32						
QSPA				PP	PP	09 40 44.6	+2.0
	comp=Z,38nm,1.0s,baz=297,slow=3.9,SNR=3.4						
QSPA	South Pole Qui	125.66	180		PKPdf	09 38 49.7	-0.5
TLIG	Tlapa	126.84	1		PKPdf	09 38 54.1	0.0
TLIG				IAMs_20	IAMs_20	10 38 52.7	
	comp=Z,69µm,21.0s						
BAUV	El Baul	127.53	322	eP	PKiKP	09 39 01.2	+5.4
BAUV	El Baul	127.53	322	e	PP	09 40 50.6	-4.2
CCIG	Comitan	127.89	354		PKPdf	09 38 53.2	-3.0
CCIG				IAMs_20	IAMs_20	10 44 54.3	
	comp=Z,53µm,20.0s						
SDV	Santo Domingo	128.82	325	eP	PKPdf	09 38 55.5	-2.6
SDV	Santo Domingo	128.82	325		PKPdf	09 38 56.1	-1.9
CODC	Agustn Codazz	129.13	329	eP	PKPdf	09 38 58.3	-0.1
TGUH	Tegucigalpa,Un	129.42	347		PKPdf	09 38 57.5	-1.6
TGUH				IAMs_20	IAMs_20	10 40 32.5	
	comp=Z,47µm,19.0s						
ARGC	Ariguani, Magd	129.53	330	eP	PKiKP	09 39 03.4	+3.5
SJCC	San Jacinto, C	129.87	331	eP	PKPdf	09 39 00.2	+0.3
SNET	Serv Nac Est T	130.10	350	IAMs_20	IAMs_20	10 40 42.1	
	comp=Z,71µm,20.0s						
ESTN	Estel	130.18	346	IAMs_20	IAMs_20	10 42 25.7	
	comp=Z,53µm,19.0s						
SMLC	San Martn de	130.41	329	eP	PKPdf	09 39 01.1	+0.2
PMOR	Pomariorio Ree	130.51	79	ePKIKP	PKPdf	09 38 56.2	-4.7
	comp=Z,187nm,1.3s						
PPT2	Papeete2	130.58	83	ePKIKP	PKPdf	09 38 56.8	-4.3
	comp=Z,158nm,1.4s						
PPT2	Papeete2	130.58	83	ePP	PP	09 41 12.8	-3.1
	comp=Z,4µm,26.5s						
PPT2	Papeete2	130.58	83	eSS	SS	09 58 41.8	-3.8
	comp=Z,42µm,31.0s						
PPT2	Papeete2	130.58	83	eLQ	LQ	10 14 45.7	

comp=Z,92μm,34.2s
PPT2 eLR LR 10 20 14.4
comp=Z,129μm,26.5s
PPTF Pamatai, Papee 130.59 83 IAMs_20 IAMs_20 10 30 40.0
comp=Z,38μm,21.0s
OCAC Ocana 130.60 328 eP **PKPdf 09 39 01.4 -0.1**
ESPN Las Esperanzas 130.61 343 **PKPdf 09 39 01.0 -0.2**
ESPN IAMs_20 IAMs_20 10 38 35.7
comp=Z,48μm,22.0s
ACON Acoyapa 131.03 344 **PKPdf 09 39 01.5 -0.5**
VAS01 Vassouras-RJ 131.48 271 eP **PKPdf 09 39 02.3 -0.3**
TAMC Tame, Arauca 131.51 325 eP **PKPdf 09 39 03.0 +0.1**
BDFB Brasilia 131.72 281 PKP **PKPdf 09 39 02.4 -0.9**
comp=Z,11nm,1.0s,baz=24,slow=9.3,SNR=7.5
BDFB PP **PP 09 41 23.8 +0.5**
comp=Z,29nm,1.2s,baz=56,slow=9.3,SNR=3.5
BDFB Brasilia 131.72 281 **PKPdf 09 39 02.4 -0.9**
ZARC Zaragoza, Cauc 131.92 329 eP **PKPdf 09 39 03.2 -0.5**
BSCB Bom Sucesso 131.94 273 eP **PKPdf 09 39 03.9 +0.3**
UREC San Jos de Ur 131.96 330 eP **PKPdf 09 39 01.9 -1.9**
BCIP Isla Barro Col 132.23 336 eP **PKPdf 09 38 59.1 -5.2**
UPA Univ. de Panam 132.30 336 eP **PKPdf 09 39 02.8 -1.6**
ZANG Zanguenga, Cho 132.44 336 eP **PKPdf 09 39 03.7 -1.0**
CHOR3 La Chorrera 132.46 336 eP **PKPdf 09 38 59.2 -5.5**
RUSC La Rusia 132.58 326 eP **PKPdf 09 39 02.2 -3.4**
JTS Las Juntas de 132.60 343 eP **PKPdf 09 39 02.5 -2.5**
JTS Las Juntas de 132.60 343 IAMs_20 IAMs_20 10 39 55.5
comp=Z,41μm,20.0s
PTBC PUERTO BERRIO, 132.61 328 eP **PKPdf 09 39 02.9 -2.2**
HDC Heredia 132.67 342 eP **PKPdf 09 39 04.0 -1.3**
HDC Heredia 132.67 342 IAMs_20 IAMs_20 10 36 42.5
comp=Z,46μm,22.0s
TAOE Nuku Hiva Isla 132.75 66 ePP PP 09 41 26.7 -3.0
comp=Z,5μm,25.3s
TAOE Nuku Hiva Isla 132.75 66 eSS SS 09 59 00.0 -12
comp=Z,28μm,31.1s
TAOE Nuku Hiva Isla 132.75 66 eLR LR 10 21 23.0
comp=Z,127μm,31.6s
TAOE Nuku Hiva Isla 132.75 66 IAMs_20 IAMs_20 10 40 28.9
comp=Z,32μm,19.0s
VTON El Valle, Cocl 132.84 336 eP **PKPdf 09 39 04.3 -1.2**
DBBC Dabeiba 132.90 331 eP **PKiKP 09 39 07.0 +0.1**
SPBC San Pablo de B 133.24 327 eP **PKPdf 09 39 06.3 0.0**
HELC Santa Helena 133.37 329 eP **PKPdf 09 39 06.1 -0.8**
HELC Santa Helena 133.37 329 eP **PKPdf 09 39 04.0 -2.9**
PTAC Punta Ardita, 133.40 333 eP **PKPdf 09 39 06.5 0.0**
BRU2 Volcan 133.45 340 eP **PKPdf 09 39 00.5 -6.3**
TBI Tubuai 133.56 89 ePP PP 09 41 32.6 -2.4
comp=Z,4μm,30.0s
TBI Tubuai 133.56 89 eSS SS 09 59 17.2 -4.6
comp=Z,30μm,30.0s
TBI Tubuai 133.56 89 eLR LR 10 21 37.5
comp=Z,88μm,26.2s
PTGC Puerto Gaitan, 133.63 324 eP **PKPdf 09 39 05.2 -1.7**
NORC Norcasia 133.66 328 eP **PKPdf 09 39 04.9 -2.1**
AZU Azuero 133.66 336 eP PKPdf 09 38 59.1 -7.9
DVD David 133.72 339 eP **PKPdf 09 39 01.1 -6.0**
PARB Paraibuna 133.75 271 eP **PKPdf 09 39 06.7 -0.2**
CBOC Ciudad Bolivar 133.87 330 eP **PKPdf 09 39 07.0 -0.6**
CHIC Chingaza 133.99 326 eP **PKPdf 09 39 01.8 -6.4**
GMAL Guarumal, Vera 134.00 337 eP **PKPdf 09 39 01.2 -6.4**
ROSC El Rosal 134.07 327 eP **PKPdf 09 39 08.8 +0.5**
ROSC El Rosal 134.07 327 **PKPdf 09 39 03.0 -5.2**
ROSC IAMs_20 IAMs_20 10 45 53.5
comp=Z,38μm,21.0s
GUY2C Guyana, Caldas 134.18 329 eP **PKPdf 09 39 05.3 -3.3**
CACAO El Cacao, Vera 134.27 337 eP **PKPdf 09 39 02.0 -6.1**
VAO Valinhos 134.68 272 eP **PKiKP 09 39 09.8 -0.3**
RCLB Rio Claro- Sao 134.86 273 eP **PKPdf 09 39 09.5 +0.5**
PIZC Pizarro, Choco 135.23 331 eP **PKiKP 09 39 13.2 +1.8**
ORTC Ortega, Tolima 135.30 328 eP **PKPdf 09 39 07.4 -2.7**
PRAC Prado 135.32 327 eP **PKPdf 09 39 09.3 -0.8**
SPB Sao Paulo 135.34 272 eP **PKiKP 09 39 10.6 -0.7**
YOTC Yotoco, Valle 135.71 329 eP **PKPdf 09 39 07.9 -3.1**
MACC Macarena, Meta 136.23 325 eP **PKPdf 09 39 08.7 -3.2**
FRTB Fartura 136.95 273 eP **PKPdf 09 39 13.6 +0.8**
FLOC Florencia 137.56 327 eP **PKPdf 09 39 10.9 -3.4**
FLOC Florencia 137.56 327 **PKPdf 09 39 09.8 -4.5**
BBAC Balboa, Cauca 137.85 329 eP **PKPdf 09 39 15.3 +0.2**
PTLC Puerto Leguiza 138.41 325 eP **PKPdf 09 39 11.0 -4.9**
GCUF Volcan Galeras 138.61 329 eP **PKPdf 09 39 17.2 +0.3**
SAML Samuel 138.90 302 eP **PKPdf 09 39 17.6 +1.0**
TRCB Terra Rica 139.17 276 eP **PKPdf 09 39 17.5 +0.5**
PTGB Pitanga 139.61 273 eP **PKPdf 09 39 16.9 -0.8**
OTAV Otavalo 139.96 330 **PKPdf 09 39 18.0 -1.3**
OTAV Otavalo 139.96 330 PKIKP **PKPdf 09 39 18.0 -1.3**
OTAV MLR MLR
comp=Z,26μm,22.0s
CNLB Canela 140.52 266 eP **PKPdf 09 39 19.5 +0.3**
ITAB Concordia 140.75 270 eP **PKiKP 09 39 21.0 -1.2**
SIV San Ignacio 142.08 292 PKP **PKPdf 09 39 19.3 -3.1**
comp=Z,9.0nm,1.0s,baz=106,slow=5.6,SNR=2.5
PLTB Pedras Altas 143.59 264 eP **PKPdf 09 39 26.2 +1.6**
CPUP Villa Florida 144.59 274 PKP **PKPab 09 39 23.7 -1.3**
comp=Z,137nm,1.1s,baz=71,slow=3.7,SNR=85
CPUP Villa Florida 144.59 274 **PKPab 09 39 23.5 -1.5**
CPUP Villa Florida 144.59 274 PKIKP **PKPab 09 39 23.5 -1.5**
PMSA Palmer Station 144.87 204 PKP **PKPbc 09 39 24.2 -0.6**
comp=Z,27nm,0.5s,baz=344,slow=10,SNR=7.1
PMSA Palmer Station 144.87 204 **PKPab 09 39 24.5 -0.2**
LPAZ La Paz 147.45 299 PKPbc **PKPdf 09 39 32.6 +0.2**
comp=Z,30nm,1.0s,baz=53,slow=3.1,SNR=46
LPAZ La Paz 147.45 299 eP **PKPdf 09 39 32.7 +0.4**
LPAZ La Paz 147.45 299 **PKPdf 09 39 32.1 -0.2**
LPAZ La Paz 147.45 299 PKP2 **PKPdf 09 39 32.2 -0.2**
LPAZ La Paz 147.45 299 i P **PKPdf 09 39 32.5 +0.2**
EFI East Falkland 147.95 228 **PKPbc 09 39 34.1 -0.3**
EFI East Falkland 147.95 228 PKP2 **PKPbc 09 39 34.1 -0.3**
YJA Yavi 149.09 287 i P **PKPdf 09 39 35.1 +0.4**
HJA Humahuaca 149.57 286 i P **PKPdf 09 39 37.2 +1.8**
NNA Nana 149.81 317 PKPbc **PKPbc 09 39 40.2 -0.2**
comp=Z,19nm,0.8s,baz=289,slow=1.8,SNR=1.5
NNA Nana 149.81 317 PKPbc **PKPbc 09 39 40.7 +0.4**
NNA Nana 149.81 317 PKP2 **PKPbc 09 39 40.7 +0.4**
AZAP Zapla 149.82 284 i P **PKPdf 09 39 36.0 +0.4**
PTCN Pitcairn Islan 149.98 78 IAMs_20 IAMs_20 10 46 17.5
comp=Z,28μm,21.0s
MNMC Minye Minye 150.36 297 IAMs_20 IAMs_20 10 51 01.4
comp=Z,31μm,22.0s
MNMCX Minye Minye 150.36 297 i P **PKPbc 09 39 41.3 -0.5**
GO01 Chusmiza 150.41 296 **PKPdf 09 39 38.2 +1.3**
GO01 PKPbc **PKPbc 09 39 43.0 +0.8**
SLA San Lorenzo 150.41 283 i P **PKPbc 09 39 40.7 -0.9**
PB08 IPOC Station P 150.67 295 i P **PKPbc 09 39 42.4 -0.3**
PB11 IPOC Station P 150.80 296 **PKPdf 09 39 37.1 0.0**
PB11 PKPbc **PKPbc 09 39 43.3 +0.6**
PB11 IAMs_20 IAMs_20 10 51 33.2
comp=Z,28μm,22.0s
PB11 IPOC Station P 150.80 296 i P **PKPbc 09 39 42.4 -0.3**
AHML Horco Molle 151.24 279 i P **PKiKP 09 39 43.8 -0.1**
PB01 IPOC Station P 151.47 294 **PKPdf 09 39 37.9 -0.1**
PB01 PKPbc **PKPbc 09 39 45.1 +1.0**
PB09 IPOC Station P 151.73 292 i P **PKiKP 09 39 45.3 +0.3**
PB02 IPOC Station P 151.94 294 i P **PKPbc 09 39 45.2 0.0**
LVC Limon Verde 151.94 290 PKPbc **PKiKP 09 39 46.1 +0.2**
comp=Z,79nm,1.0s,baz=175,slow=1.3,SNR=40
LVC Limon Verde 151.94 290 eP **PKPdf 09 39 40.4 +1.3**
LVC Limon Verde 151.94 290 PKPbc **PKiKP 09 39 46.8 +0.9**
LVC Limon Verde 151.94 290 i P **PKiKP 09 39 44.1 -1.4**
PB03 IPOC Station P 152.26 292 i P **PKPbc 09 39 45.8 -0.2**
CYA Choya 152.31 277 i P **PKPdf 09 39 39.3 +0.2**
USHA Ushuaia 152.49 217 PKPbc **PKPbc 09 39 44.8 -0.5**
comp=Z,14nm,0.9s,baz=156,slow=4.9,SNR=4.0
PB06 IPOC Station P 152.50 291 i P **PKPbc 09 39 46.1 -0.5**
PB15 IPOC Station P 152.71 290 i P **PKPbc 09 39 46.6 -0.4**
PB04 IPOC Station P 152.72 292 **PKPbc 09 39 45.0 -2.1**
PB04 IPOC Station P 152.72 292 i P **PKPbc 09 39 46.6 -0.4**
PB05 IPOC Station P 153.06 291 i P **PKPbc 09 39 47.2 -0.6**
PB10 IPOC Station P 153.70 291 **PKPbc 09 39 48.6 -0.4**
PB10 PKPab **PKPab 09 39 56.6 -5.1**
PB10 IAMs_20 IAMs_20 11 04 29.5
comp=Z,28μm,22.0s
GO02 Mina Guanaco 153.84 286 **PKPbc 09 39 49.2 -0.4**
GO02 PKPab **PKPab 09 39 57.1 -5.6**
GO10 Punta Arenas 154.69 219 PKPbc **PKPbc 09 39 50.1 -0.1**
GO10 IAMs_20 IAMs_20 11 04 25.8
comp=Z,41μm,22.0s
ACAN Cantantal 154.75 269 i P **PKPdf 09 39 43.4 +1.0**
AMOG MOGNA 155.40 273 i P **PKPdf 09 39 44.3 +0.9**
CFA Coronel Fontan 155.41 272 PKP **PKPdf 09 39 43.6 +0.2**
comp=Z,11nm,1.0s,baz=352,slow=4.9,SNR=11
GO03 Copiap 155.51 282 **PKPdf 09 39 49.9 +6.2**
GO03 PKPab **PKPab 09 40 05.9 -3.5**
GO03 IAMs_20 IAMs_20 10 57 17.9
comp=Z,26μm,20.0s
RTLL Cerro Villicun 155.51 272 i P **PKPdf 09 39 47.8 +4.2**
ACDV Cuesta del Vie 155.65 275 i P PKPdf 09 39 52.3 +8.5
RTCV Cerro Valdivia 155.73 271 i P **PKPdf 09 39 49.1 +5.4**
ZON Zonda 155.75 272 i P **PKPdf 09 39 50.5 +6.7**
ACCO Cerro Coronel 155.75 274 i P **PKPdf 09 39 45.2 +1.0**
AROD Rodeo 155.93 276 i P **PKPdf 09 39 45.5 +1.1**
ASAL Salagasta 156.18 270 i P **PKPdf 09 39 45.3 +0.9**
AAGR Agrelo 156.30 268 i P **PKPdf 09 39 46.0 +1.5**
GO04 Tololo Observa 157.00 277 IAMs_20 IAMs_20 11 02 08.8
comp=Z,28μm,22.0s
GO04 Tololo Observa 157.00 277 i P **PKPdf 09 39 45.8 0.0**
ROC1 El Roble 158.05 270 i P **PKPdf 09 39 54.8 +7.8**
PLCA Paso Flores 158.40 249 PKP **PKPdf 09 39 47.0 +0.1**
comp=Z,7.0nm,1.1s,baz=217,slow=0.7,SNR=7.2
PLCA Paso Flores 158.40 249 eP **PKPdf 09 39 48.5 +1.6**
PLCA Paso Flores 158.40 249 **PKPdf 09 39 45.3 -1.6**
PLCA PKPab **PKPab 09 40 17.5 -4.1**
PLCA Paso Flores 158.40 249 PKIKP **PKPdf 09 39 47.0 +0.1**
GO05 Huala 159.23 265 IAMs_20 IAMs_20 11 07 23.0
comp=Z,24μm,21.0s

IDC 12 09:24:41.6±0.4, 35.°86N×82.°35E, h0km, mb5.4/32, mb1 5.5/36, mb1mx5.4/52, mbtmp5.5/36, ML5.2/3, Error ellipse: s-maj=14.1km s-min=9.8km az=47.0
BJI 12 09:24:43.9±0.0, 36.°00N×82.°44E, h8km, mb5.3/10, ML6.0/3, Ms5.7/2, Ms7 5.5/2
NEIC 12 09:24:43.0±1.9, 35.°82N±0.°07×82.°47E±0.°09, h10km±1km, mb5.7/83, Error ellipse: s-maj=13.1km s-min=11.7km az=50.0
ISC 12 09:24:43.2±0.3, 35.°89N±0.°05×82.°49E±0.°05, h10km, n156, σ1.22/157, mb5.5/73, 1C, Xizang

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

WMQ Urumqi 8.87 25 eP **Pn 09 26 51.6 +0.1**
WMQ S **Sn 09 28 25.6 -5.9**
WMQ smax smax
comp=N,1μm,1.7s
WMQ smax smax
comp=E,2μm,1.5s
AAK Ala-Archa 9.15 320 Pn **Pn 09 26 56.5 +1.0**
4.3nm,0.3s,baz=30,slow=20,SNR=1.4
AAK Lg Lg 09 29 21.6
16nm,0.3s,baz=345,slow=20,SNR=2.5
BTK Batken 10.11 298 Pn **Pn 09 27 09.8 +1.3**
BTK Sn **Sn 09 29 09.1 +7.1**
MK31 Makanchi Array 10.89 359 Pn **Pn 09 27 19.6 +0.4**
MK31 Sn **Sn 09 29 19.7 -1.4**
MKAR Makanchi Array 10.89 359 Pn **Pn 09 27 19.0 -0.2**
38nm,0.3s,baz=182,slow=15,SNR=7.0
MKAR Makanchi Array 10.89 359 **Pn 09 27 19.1 0.0**
MAKZ Makanchi 10.91 358 Pn **Pn 09 27 19.4 -0.1**
ZALV Zalesovo Beam 18.13 4 P **Pn 09 28 53.7 -1.2**
baz=189,slow=12,SNR=2.8
ZALV Zalesovo Beam 18.13 4 P **Pn 09 28 55.1 -0.2**
BVAR Borovoye Array 19.14 337 P **Pn 09 29 07.5 +0.3**
18nm,0.3s,baz=142,slow=8.6,SNR=13
BRVK Borovoye 19.20 337 P **P 09 29 06.7 -0.4**
ABKAR Akbulak array 21.20 316 P **P 09 29 28.3 -0.6**
ABKAR Akbulak array 21.20 316 P **P 09 29 29.5 +0.6**
ABKAR IAmb IAmb 09 29 35.6
comp=Z,283nm,0.9s
SONM Songino Array 21.34 49 P **P 09 29 32.5 +2.0**
comp=Z,319nm,0.8s,baz=238,slow=9.5,SNR=12
SONM Songino Array 21.34 49 P **P 09 29 31.6 +1.1**
GOA Goa 21.74 203 eP **P 09 29 35.5 +0.7**
GOA IAmb IAmb 09 29 40.0
comp=Z,287nm,0.7s
ULN Ulaanbaatar 21.75 49 P **P 09 29 35.4 +0.4**
CHTO Chiang Mai 22.37 135 P **P 09 29 41.4 -0.2**
CMAR Chiang Mai Arr 22.65 136 P **P 09 29 46.7 +2.0**
comp=Z,73nm,0.9s,baz=307,slow=11,SNR=7.2
GYA Guiyang 22.67 108 eP P 09 29 52.7 +7.7
GYA pmax pmax
comp=Z,140nm,1.2s
GYA LR LR
comp=Z,10μm,11.2s
GYA LR LR
comp=Z,11μm,13.7s
GYA LR LR
comp=Z,13μm,12.9s
MDRS Chennai 22.82 186 IAmb IAmb 09 29 29.9
comp=Z,593nm,1.8s
AKTO Aktyubinsk 22.88 317 P **P 09 29 46.0 -0.8**
comp=Z,129nm,0.9s,baz=121,slow=13,SNR=4.3
WSAR Wadi Sarin 24.21 245 P **P 09 30 00.7 +0.5**
comp=Z,94nm,1.1s,baz=45,slow=9.9,SNR=3.9
DGPR DIGLIPUR 24.50 155 eP **P 09 30 03.4 +0.7**
DGPR IAmb IAmb 09 30 06.1
comp=Z,387nm,1.1s
PBA Port Blair 25.85 156 eP P 09 30 12.5 -2.5
PBA Port Blair 25.85 156 P P 09 30 13.1 -1.9
PBA IAmb IAmb 09 30 21.9
comp=Z,85nm,0.9s
ARU Arti 26.15 329 P **P 09 30 18.3 +0.9**
comp=Z,39nm,0.9s,baz=0.0,slow=20,SNR=3.2
TRD Trivandrum 27.72 192 eP **P 09 30 31.2 -0.7**
PALK Pallekele 28.53 184 P **P 09 30 38.5 -0.7**
comp=Z,30nm,0.8s,baz=9.7,slow=10.0,SNR=4.0
PALK Pallekele 28.53 184 P **P 09 30 39.2 0.0**
QIZ Qiongzhong 29.37 118 P **P 09 30 48.3 +1.7**
QIZ S **S 09 35 45.0 +4.7**
QIZ pmax pmax
comp=Z,30nm,1.5s
NJ2 Nanjing 30.29 87 eP **P 09 30 54.7 +0.1**
NJ2 pmax pmax
comp=Z,11nm,0.7s
KIRV Kirov 31.39 327 P **P 09 31 04.8 +0.8**
comp=Z,127nm,0.7s,baz=180,slow=3.0,SNR=4.6
KULM Kulim 34.74 147 P **P 09 31 35.3 +1.6**
YHNB Yeheng 35.18 98 P **P 09 31 38.9 +1.3**
YHNB IAmb IAmb 09 31 44.0
comp=Z,71nm,1.1s
KSRS Korea Array 36.21 74 P **P 09 31 47.1 +1.0**
comp=Z,9.8nm,1.0s,baz=287,slow=7.0,SNR=3.2
ILGA Ilgaz 38.13 293 P **P 09 32 04.0 +1.2**
ILGA IAmb IAmb 09 32 04.2
comp=Z,168nm,1.2s
BR131 Keskin Array S 38.41 291 P **P 09 32 05.4 +0.4**
BRTR Keskin Array B 38.41 291 P **P 09 32 05.0 0.0**
comp=Z,52nm,0.8s,baz=94,slow=4.3,SNR=9.7
BRTR Keskin Array B 38.41 291 P **P 09 32 05.7 +0.7**
YAK Yakutsk 39.21 33 P **P 09 32 12.1 +0.9**
comp=Z,70nm,0.7s,baz=265,slow=2.6,SNR=5.4
YAK Yakutsk 39.21 33 P **P 09 32 12.5 +1.3**
YAK IAmb IAmb 09 32 14.1
comp=Z,131nm,0.8s
JNU Nakatsue 39.65 79 P **P 09 32 15.8 +0.4**
MDUB Mudurnu 40.12 292 P **P 09 32 19.7 +0.5**
AKASG Malin Array Be 40.60 308 P **P 09 32 22.3 -0.6**
comp=Z,38nm,1.0s,baz=99,slow=12,SNR=7.0
AKASG Malin Array Be 40.60 308 P **P 09 32 22.1 -0.8**
AKBB Malin Array Si 40.60 308 P **P 09 32 23.0 0.0**
AKBB IAmb IAmb 09 32 26.5
comp=Z,100nm,1.0s
ISP Isparta 41.19 289 P **P 09 32 27.6 -0.5**
LVZ Lovozero 41.71 335 P **P 09 32 31.8 -0.1**
LVZ IAmb IAmb 09 32 36.5
comp=Z,212nm,1.1s
ELL Elmali 41.93 287 P **P 09 32 34.0 -0.2**
KSM Kuching 42.88 137 P **P 09 32 40.3 -1.7**
KSM IAmb IAmb 09 32 47.0
comp=Z,107nm,1.0s
KKM Kota Kinabalu 42.89 126 P **P 09 32 41.3 -0.9**
KKM IAmb IAmb 09 32 45.9
comp=Z,157nm,1.1s
MLR Muntele Rosu 43.14 301 P **P 09 32 44.0 +0.1**
SBUM Sibu 43.18 134 P **P 09 32 44.3 -0.1**
FINES FINESS Array B 43.30 324 P **P 09 32 44.4 -0.5**
comp=Z,54nm,0.7s,baz=98,slow=9.1,SNR=5.9
FINES FINESS Array B 43.30 324 P **P 09 32 44.0 -0.9**
KARP Karpathos 44.40 287 P **P 09 32 52.3 -0.9**
ARCES ARCESS Array B 45.41 336 P **P 09 33 01.4 -0.3**
comp=Z,54nm,0.8s,baz=90,slow=7.5,SNR=10
ARCES ARCESS Array B 45.41 336 P **P 09 33 01.9 +0.2**
ARE0 ARCESS Array S 45.41 336 P **P 09 33 01.6 -0.1**
YSS Yuzh-Sakhalins 45.48 57 P **P 09 33 01.5 -1.1**
YSS IAmb IAmb 09 33 07.5
comp=Z,50nm,1.0s
VTS Vitosha 45.56 297 P **P 09 33 02.2 -1.2**
OJC Ojcow 46.64 308 P **P 09 33 10.9 -0.7**
OJC IAmb IAmb 09 33 15.7
comp=Z,133nm,1.1s
MSEY Mahe Island 47.64 218 P **P 09 33 18.7 -1.1**
MA2 Magadan 49.05 39 P **P 09 33 30.2 0.0**
CISI Cisompet, Garu 49.35 146 P **P 09 33 31.0 -2.0**
CISI IAmb IAmb 09 33 36.8
comp=Z,33nm,0.5s
CISI **S 09 40 39.2 -0.6**
COCO West Island 49.71 161 P **P 09 33 35.2 -0.3**
SMRI Semarang 50.15 143 P **P 09 33 39.3 +0.3**
NC405 NORSAR Array S 50.20 323 P **P 09 33 38.5 -0.4**
NC303 NORSAR Array S 50.36 324 P **P 09 33 39.9 -0.3**
NB2 NORSAR Subarra 50.45 323 P **P 09 33 39.7 -1.2**
comp=Z,32nm,0.8s,baz=85,slow=7.4
NOA NORSAR Array B 50.45 323 P **P 09 33 39.7 -1.2**
comp=Z,70nm,0.8s,baz=86,slow=7.5,SNR=12
CLL Collm 50.73 311 eP **P 09 33 43.0 0.0**
GEC2 GERESS Array S 50.78 307 P **P 09 33 42.2 -1.4**
GEC2 IAmb IAmb 09 33 48.8
comp=Z,99nm,1.1s
GERES GERESS Array B 50.78 307 P **P 09 33 43.8 +0.2**
comp=Z,36nm,0.8s,baz=76,slow=5.6,SNR=6.1
GERES GERESS Array B 50.78 307 P **P 09 33 43.1 -0.5**
TIP Timpagrande 51.20 295 P **P 09 33 46.8 -0.1**
TIP IAmb IAmb 09 33 51.4
comp=Z,133nm,1.1s
NRCA Norcia 52.72 300 P **P 09 33 58.2 +0.1**
NRCA IAmb IAmb 09 34 01.8
comp=Z,92nm,1.0s
TEOL Teolo 52.99 303 P **P 09 33 59.0 -0.9**
TEOL IAmb IAmb 09 34 03.2
comp=Z,65nm,0.8s
MURB Monte Urbino 53.00 301 P **P 09 34 01.1 +0.9**
FUORN Ofenpass-Fuorn 53.58 305 P **P 09 34 04.5 -0.1**
FUORN IAmb IAmb 09 34 07.6
comp=Z,74nm,1.1s
STU Stuttgart 53.69 308 P **P 09 34 04.9 -0.2**
STU IAmb IAmb 09 34 10.3
comp=Z,92nm,1.1s
PEA0B Petropavlovsk- 53.80 46 P **P 09 34 06.1 +0.2**
PEA0B IAmb IAmb 09 34 13.5
comp=Z,52nm,1.1s
PETK Petropavlovsk- 53.80 46 P **P 09 34 06.6 +0.8**
comp=Z,18nm,0.9s,baz=240,slow=4.8,SNR=5.8
PETK Petropavlovsk- 53.80 46 P **P 09 34 06.9 +1.1**
MSSA Maissana 54.76 303 P **P 09 34 12.9 -0.1**
MSSA IAmb IAmb 09 34 13.0
comp=Z,78nm,1.1s
KMBO Kilima Mbogo 55.93 239 P **P 09 34 22.0 0.0**
comp=Z,47nm,1.1s,baz=45,slow=11,SNR=6.4
KMBO Kilima Mbogo 55.93 239 P **P 09 34 22.2 +0.2**
KEST Kesra 57.93 293 P **P 09 34 34.7 -1.1**
comp=Z,60nm,1.1s,baz=359,slow=4.1,SNR=3.5
KEST Kesra 57.93 293 P **P 09 34 35.8 0.0**
SIJI Sorong 58.25 118 P **P 09 34 38.9 +0.7**
comp=Z,38nm,1.1s,baz=334,slow=10,SNR=4.6
RER Riviere de l'E 62.14 208 P **P 09 35 03.2 -1.5**
RER IAmb IAmb 09 35 03.8
comp=Z,72nm,0.9s
ABPO Ambohimpanom 64.01 217 P **P 09 35 16.0 -1.3**
SUMG Summit 64.48 343 P **P 09 35 19.7 -0.3**
ESBB Sonseca Array 65.80 302 P **P 09 35 28.2 -0.5**
ESBB IAmb IAmb 09 35 31.5
comp=Z,42nm,1.1s
ESDC Sonseca Array 65.80 302 P **P 09 35 28.1 -0.6**
comp=Z,15nm,0.7s,baz=55,slow=6.1,SNR=9.9
ESDC Sonseca Array 65.80 302 P **P 09 35 28.0 -0.7**
PAB San Pablo 66.12 302 P **P 09 35 30.4 -0.5**
PAB IAmb IAmb 09 35 31.9
comp=Z,41nm,1.1s
TULEG Thule 66.39 353 P **P 09 35 34.5 +2.7**
TULEG IAmb IAmb 09 35 34.9
comp=Z,86nm,1.1s
ANM Nome 66.78 26 P **P 09 35 36.1 +1.7**
ANM IAmb IAmb 09 35 38.9
comp=Z,44nm,1.0s
PSA00 Pilbara Seismi 67.21 142 P **P 09 35 36.9 -0.8**
PSA00 IAmb IAmb 09 35 38.7
comp=Z,61nm,1.0s
FITZ Fitzroy Crossi 67.47 135 P **P 09 35 40.4 +1.0**
comp=Z,12nm,0.7s,baz=342,slow=13,SNR=3.1
FITZ Fitzroy Crossi 67.47 135 P **P 09 35 38.6 -0.8**
FITZ IAmb IAmb 09 35 45.8
comp=Z,49nm,1.1s
MTE Manteigas 67.89 304 P **P 09 35 42.1 +0.1**
MTE IAmb IAmb 09 35 45.9
comp=Z,83nm,1.1s
PVAQ Vaqueiros 69.47 302 P **P 09 35 51.7 -0.1**
PVAQ IAmb IAmb 09 35 53.1
comp=Z,71nm,1.1s
IMAR Indian Mountai 69.64 21 P **P 09 35 52.7 +0.2**
MLY Manley 71.21 21 P **P 09 36 02.7 +0.7**
MLY IAmb IAmb 09 36 08.7
comp=Z,80nm,1.0s
BPAW Bear Paw Mtn. 71.81 22 P **P 09 36 06.0 +0.3**
BPAW IAmb IAmb 09 36 10.5
comp=Z,118nm,1.2s
MORW Morawa 71.92 149 P **P 09 36 06.2 -0.5**
MDM Murphy Dome 71.98 20 P **P 09 36 07.7 +1.0**
NEA Nenana 72.02 21 P **P 09 36 07.2 +0.3**
KTH Kantishna Hill 72.23 22 P **P 09 36 09.5 +1.2**
LSZ Lusaka 72.28 235 P **P 09 36 08.1 -1.1**
LSZ IAmb IAmb 09 36 08.7
comp=Z,43nm,1.0s
PPLA Purkeypile 72.31 23 P **P 09 36 09.8 +1.0**
PPLA IAmb IAmb 09 36 18.2
comp=Z,80nm,1.2s
IL31 72.50 20 P **P 09 36 09.5 -0.2**
ILAR Eielson Array 72.50 20 P **P 09 36 09.6 -0.1**
comp=Z,24nm,0.9s,baz=316,slow=3.0,SNR=4.8
ILAR Eielson Array 72.50 20 P **P 09 36 09.8 0.0**
INK Inuvik 72.68 13 P **P 09 36 10.4 -0.3**
C36M Paulatuk 73.26 10 P **P 09 36 13.9 -0.2**
C36M IAmb IAmb 09 36 17.2
comp=Z,135nm,1.1s
WB0 Warramunga Arr 74.00 130 P **P 09 36 20.1 +0.8**
WRA Warramunga Arr 74.10 130 P **P 09 36 20.3 +0.5**
comp=Z,122nm,1.0s,baz=327,slow=6.0,SNR=12
WRAB Tennant Creek 74.10 130 P **P 09 36 20.2 +0.5**
WB2 Warramunga Arr 74.11 130 P **P 09 36 20.6 +0.8**
PMR Palmer 74.25 23 P **P 09 36 20.1 +0.1**
RC01 Rabbit Creek A 74.43 23 P **P 09 36 22.4 +1.2**
RC01 IAmb IAmb 09 36 28.2
comp=Z,119nm,1.2s
TOA0 Torodi Ar. Sit 75.02 275 P **P 09 36 24.3 -1.1**
TOA0 IAmb IAmb 09 36 31.6
comp=Z,52nm,1.1s
TORD Torodi Ar. Bea 75.02 275 P **P 09 36 23.7 -1.7**
comp=Z,7.1nm,0.8s,baz=51,slow=5.6,SNR=5.9
TORD Torodi Ar. Bea 75.02 275 P **P 09 36 24.0 -1.3**
DAWY Dawson 75.03 18 P **P 09 36 24.9 +0.2**
DAWY IAmb IAmb 09 36 30.3
comp=Z,71nm,1.1s
BCAR Beaver Creek A 75.23 19 P **P 09 36 27.2 +1.3**
PMG Port Moresby 75.64 113 P **P 09 36 30.3 +1.5**
comp=Z,43nm,1.1s,baz=243,slow=2.9,SNR=4.1
NWAO Narrogin (SRO) 75.80 150 P **P 09 36 28.3 -1.0**
comp=Z,106nm,0.9s,baz=336,slow=7.1,SNR=9.6
NWAO Narrogin (SRO) 75.80 150 P **P 09 36 28.5 -0.8**
NWAO Narrogin (SRO) 75.80 150 P **P 09 36 28.4 -0.8**
NWAO IAmb IAmb 09 36 29.6
comp=Z,120nm,1.1s
AS31 Alice Springs 76.62 133 P **P 09 36 34.5 +0.2**
ASAR Alice Springs 76.62 133 P **P 09 36 34.8 +0.5**
comp=Z,82nm,1.0s,baz=321,slow=5.6,SNR=12
FORT Forrest 78.93 141 P **P 09 36 47.7 +0.8**
LBTB Lobatse 80.97 230 P **P 09 36 57.6 -0.7**
LBTB IAmb IAmb 09 36 58.3
comp=Z,56nm,1.1s
YKA Yellowknife Ar 80.99 8 P **P 09 36 56.9 -0.8**
comp=Z,22nm,0.7s,baz=338,slow=5.4,SNR=11
CTA Charters Tower 82.06 122 P **P 09 37 04.7 +0.7**
comp=Z,53nm,1.1s,baz=339,slow=6.8,SNR=6.0
BOSA Boshof 83.78 228 P **P 09 37 11.7 -1.2**
comp=Z,23nm,0.7s,baz=28,slow=3.0,SNR=20
BOSA Boshof 83.78 228 P **P 09 37 11.9 -1.0**
BOSA IAmb IAmb 09 37 15.2
comp=Z,44nm,1.0s
BBOO Buckleboo 84.76 137 P **P 09 37 16.9 -0.7**
SCHQ Schefferville 85.87 343 P **P 09 37 22.5 -0.5**
comp=Z,23nm,1.1s,baz=24,slow=12,SNR=3.3
STKA Stephens Creek 87.25 133 P **P 09 37 29.9 -0.1**
comp=Z,38nm,1.1s,baz=318,slow=8.7,SNR=5.2
STKA Stephens Creek 87.25 133 P **P 09 37 30.1 +0.2**

EIDS Eidsvold 88.89 123 P P 09 37 36.7 -1.1
SYO Syowa Base 109.28 195⇑ePdiff Pdif 09 39 10.0 +1.1
QSPA South Pole Qui 125.68 180 PKP PKPdf 09 43 41.5 -2.6
comp=Z,16nm,1.0s,baz=344,slow=1.5,SNR=4.0
QSPA South Pole Qui 125.68 180 PKPdf 09 43 42.2 -1.8
CPUP Villa Florida 144.51 274 PKP PKPab 09 44 16.9 -1.6
comp=Z,28nm,1.0s,baz=87,slow=4.4,SNR=4.1
CPUP Villa Florida 144.51 274 PKPab 09 44 17.3 -1.2
LPAZ La Paz 147.37 299 PKPbc PKPbc 09 44 28.1 -0.4
comp=Z,19nm,0.9s,baz=186,slow=0.3,SNR=6.6
LPAZ La Paz 147.37 299 PKPbc 09 44 28.5 +0.1
LVC Limon Verde 151.87 290 PKPbc PKPbc 09 44 38.2 -0.9
comp=Z,25nm,1.0s,baz=93,slow=7.0,SNR=3.6
LVC Limon Verde 151.87 290 PKPbc 09 44 38.8 -0.4

ROM 12 09:26:10.9±0.1,37.330N±0.006×15.834E±0.006, h36km,ML2.5/1,2C,Error ellipse: s-maj=0.7km s-min=0.4km az=157.0,Sicily

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AGST Augusta-Monte 0.49 262 P Pn 09 26 21.6 +0.3
AGST S Sn 09 26 29.7 +1.1
HAGA Augusta 0.54 265 P Pn 09 26 22.4 +0.2
HAGA S Sn 09 26 30.9 +0.9
SSY Sortino 0.63 254 P Pn 09 26 23.8 +0.4
SSY S Sn 09 26 33.4 +1.1
SSY END
HAVL Avola 0.68 237 ⇑P Pn 09 26 24.6 +0.6
HAVL S Sn 09 26 34.7 +1.4
HAVL END
HLNI Lentini 0.77 272 ⇑P Pn 09 26 25.8 +0.7
HLNI S Sn 09 26 36.7 +1.2
HLNI AML AML
comp=E,362μm,0.3s
HLNI AML AML
comp=N,349μm,0.8s
HLNI AML AML
comp=E,362μm,0.3s
HLNI END
AIO Antillo 0.80 323 P Pn 09 26 26.4 +0.7

IDC 12 09:26:47.8±1.6,36.49N×83.65E, h0km, mb4.6/5, mb1 5.1/8, mb1mx4.5/53, mbtmp5.0/8, ML5.4/1, Error ellipse: s-maj=58.6km s-min=28.0km az=59.0
ISC 12 09:26:49.0±1.3,36.3N±0.1×83.3E±0.2,h10km,n9,σ1s41/9, mb4.6/5,Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WMQ Urumqi 8.26 23 ePn Pn 09 28 50.0 +1.1
WMQ Sn Sn 09 30 23.0 +0.7
MKAR Makanchi Array 10.54 356 Pn Pn 09 29 17.9 -2.1
32nm,0.3s,baz=177,slow=10,SNR=6.4
ZALV Zalesovo Beam 17.71 3 P Pn 09 30 52.5 -3.0
baz=176,slow=11,SNR=1.4
BVAR Borovoye Array 19.04 336 P P 09 31 10.9 -0.2
baz=139,slow=12,SNR=1.4
ARCES ARCESS Array B 45.33 335 P P 09 35 06.6 -0.1
17nm,0.9s,baz=91,slow=6.3,SNR=1.5
NOA NORSAR Array B 50.53 323 P P 09 35 47.8 +0.6
5.7nm,0.9s,baz=86,slow=7.6,SNR=1.8
GERES GERESS Array B 51.06 307 P P 09 35 52.3 +0.8
4.4nm,0.9s,baz=64,slow=9.1,SNR=1.6
WRA Warramunga Arr 73.86 130 P P 09 38 23.9 -0.2
6.0nm,1.0s,baz=324,slow=5.9,SNR=1.9
YKA Yellowknife Ar 80.52 8 P P 09 39 00.5 -0.4
5.2nm,0.8s,baz=336,slow=5.3,SNR=2.9

GEN 12 09:27:07.2,43.96N×10.50E, h9km±1km, Ml0.7, Central Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MAIM Mastiano 0.05 185 P Pg 09 27 09.1 +0.1
MAIM S Sg 09 27 10.4 +0.1
CARD Cardoso 0.06 350 P Pg 09 27 09.2 0.0
CARD S Sg 09 27 10.7 0.0
POPM Popiglio 0.20 66 P Pg 09 27 11.6 +0.1
POPM S Sg 09 27 14.4 +0.1

IDC 12 09:29:45.8±5.4,36.31N×83.20E, h0km, mb4.3/4, mb1 4.7/5, mb1mx4.1/46, mbtmp4.4/5, Error ellipse: s-maj=255.3km s-min=25.9km az=70.0
ISC 12 09:29:46.9±2.1,36.0N±0.1×82.8E±0.4,h10km,n6,σ1s34/6, mb4.3/4,Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WMQ Urumqi 8.68 24 ePn Pn 09 31 54.0 +1.5
WMQ Sn Sn 09 33 29.0 -1.3
MKAR Makanchi Array 10.78 358 Pn Pn 09 32 17.8 -3.4
baz=189,slow=12,SNR=1.8
CMAR Chiang Mai Arr 22.59 136 P P 09 34 47.1 -0.5
3.8nm,0.5s,baz=315,slow=10.0,SNR=4.5
WRA Warramunga Arr 74.01 130 P P 09 41 23.4 +0.4
4.7nm,0.9s,baz=326,slow=5.8,SNR=4.9
ASAR Alice Springs 76.55 133 P P 09 41 37.6 +0.1
3.1nm,0.8s,baz=318,slow=5.7,SNR=6.7
YKA Yellowknife Ar 80.84 8 P P 09 41 59.7 -0.9
1.3nm,0.8s,baz=340,slow=5.7,SNR=2.5

IDC 12 09:30:29.4±1.4,35.94N×82.48E, h0km, mb4.3/7, mb1 4.5/10, mb1mx4.1/52, mbtmp4.4/10, ML3.8/2, Error ellipse: s-maj=42.9km s-min=22.3km az=58.0
ISC 12 09:30:31.9±1.2,36.1N±0.1×82.7E±0.2,h10km,n11, σ1s49/12,mb4.3/7,Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WMQ Urumqi 8.60 25 ePn Pn 09 32 37.0 +0.6
WMQ Sn Sn 09 34 11.0 -2.4
MKAR Makanchi Array 10.67 358 Pn Pn 09 33 06.3 +1.5
baz=185,slow=14,SNR=1.4
ZALV Zalesovo Beam 17.89 4 P Pn 09 34 41.1 +0.4
0.5nm,0.3s,baz=191,slow=12,SNR=2.2
BVAR Borovoye Array 19.00 337 P P 09 34 53.3 -0.2
0.8nm,0.3s,baz=155,slow=11,SNR=1.2
SONM Songino Array 21.06 49 P P 09 35 19.1 +2.9
41nm,1.2s,baz=231,slow=11,SNR=1.9
FINES FINESS Array B 43.22 324 P P 09 38 32.9 +0.1
11nm,1.1s,baz=109,slow=12,SNR=1.8
ARCES ARCESS Array B 45.28 335 P P 09 38 49.6 +0.3
5.3nm,1.0s,baz=96,slow=8.3,SNR=1.3
NOA NORSAR Array B 50.37 323 P P 09 39 27.6 -1.3
0.7nm,0.6s,baz=87,slow=7.6,SNR=1.3
ILAR Eielson Array 72.23 20 P P 09 41 56.3 -0.5
1.3nm,0.9s,baz=307,slow=5.5,SNR=2.3
WRA Warramunga Arr 74.11 130 P P 09 42 07.8 -0.8
1.4nm,0.6s,baz=322,slow=6.0,SNR=1.7
ASAR Alice Springs 76.65 133 P P 09 42 22.6 -0.5
2.3nm,0.8s,baz=316,slow=5.8,SNR=3.0

IDC 12 09:36:10.6±0.7,36.01N×82.50E, h0km, mb4.0/15, mb1 4.3/20, mb1mx4.1/59, mbtmp4.1/20, ML3.8/5, Error ellipse: s-maj=21.3km s-min=14.8km az=42.0
NEIC 12 09:36:12.5±0.9,35.97N±0.04×82.5E±0.1, h10km±1km, mb4.6/5, Error ellipse: s-maj=15.4km s-min=5.7km az=250.0
ISC 12 09:36:12.6±0.6,36.07N±0.07×82.49E±0.08,h10km,n48, σ1s05/46,mb4.1/18,Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DANN Dangsing 7.77 172 eP Pn 09 38 06.5 +0.5
41nm,0.5s
NIL Nilore 7.97 255 Pn Pn 09 38 07.7 -0.8
GKN Gorkha 8.24 167 eP Pn 09 38 13.6 +1.2
39nm,0.4s
GUN Gumba 8.62 160 eP Pn 09 38 19.3 +1.5
WMQ Urumqi 8.71 26 ePn Pn 09 38 16.2 -2.5
WMQ Sn Sn 09 39 50.0 -7.0
WMQ Urumqi 8.71 26 Pn Pn 09 38 19.8 +1.1
DMN Daman 8.72 165 eP Pn 09 38 20.2 +1.2
PKIN Phulchoki 8.82 163 eP Pn 09 38 21.6 +1.3
PKI Pulchoki 8.83 163 eP Pn 09 38 21.8 +1.3
JIRN Jiri 8.95 158 eP Pn 09 38 23.6 +1.3
114nm,0.4s
AAK Ala-Archa 9.02 319 Lg Lg 09 40 51.6
3.3nm,0.3s,baz=306,slow=19,SNR=5.0
RAMN Ramite 9.74 158 eP Pn 09 38 32.0 -1.0
122nm,0.8s
ODAN Odare 10.08 154 eP Pn 09 38 36.6 -1.1
190nm,1.2s
MK31 Makanchi Array 10.72 359 Pn Pn 09 38 47.2 +1.1
MKAR Makanchi Array 10.72 359 Pn Pn 09 38 47.3 +1.2
3.6nm,0.3s,baz=193,slow=13,SNR=21
MAKZ Makanchi 10.74 358 Pn Pn 09 38 47.9 +1.6
KBL Kabul 11.10 266 Pn Pn 09 38 51.5 0.0
KURBB Kurchatov Arra 14.83 350 Pn Pn 09 39 40.8 -1.4
0.1nm,0.3s,baz=173,slow=12,SNR=4.4
KURK Kurchatov 14.91 350 Pn Pn 09 39 41.6 -1.7
ZALV Zalesovo Beam 17.95 4 Pn Pn 09 40 20.4 -1.8
0.6nm,0.3s,baz=191,slow=12,SNR=7.5
BVAR Borovoye Array 18.98 337 P P 09 40 34.7 +0.7
1.9nm,0.3s,baz=146,slow=8.4,SNR=24
GEYT Alibeck 19.55 283 P P 09 40 39.8 -0.6
0.2nm,0.3s,baz=92,slow=10,SNR=3.6
ABKAR Akbulak array 21.08 316 P P 09 40 56.8 -0.1
SONM Songino Array 21.22 49 P P 09 40 57.8 -0.8
6.9nm,1.1s,baz=235,slow=12,SNR=3.1
CMAR Chiang Mai Arr 22.78 136 P P 09 41 14.8 -0.5
1.1nm,0.4s,baz=309,slow=12,SNR=6.3
BRTR Keskin Array B 38.35 291 P P 09 43 34.1 +0.3
1.8nm,0.8s,baz=88,slow=7.6,SNR=6.3
AKASG Malin Array Be 40.49 308 P P 09 43 51.0 -0.3
0.2nm,0.3s,baz=76,slow=8.1,SNR=3.8
FINES FINESS Array B 43.16 324 P P 09 44 12.6 -0.4
4.4nm,0.7s,baz=97,slow=9.8,SNR=6.9
FINES FINESS Array B 43.16 324 P P 09 44 13.9 +0.9
ARCES ARCESS Array B 45.26 335 P P 09 44 29.8 +0.1
5.0nm,0.8s,baz=104,slow=7.6,SNR=8.7
NB2 NORSAR Subarra 50.31 323 P P 09 45 09.2 +0.1
comp=Z,3.4nm,0.8s,baz=86,slow=7.9
NOA NORSAR Array B 50.31 323 P P 09 45 08.6 -0.5
comp=Z,3.2nm,0.8s,baz=86,slow=7.4,SNR=3.7
GERES GERESS Array B 50.68 307 P P 09 45 12.8 +0.7
comp=Z,1.8nm,0.7s,baz=71,slow=8.9,SNR=3.6
GERES GERESS Array B 50.68 307 P P 09 45 13.7 +1.5
ESDC Sonseca Array 65.71 302 P P 09 46 57.7 +0.2
comp=Z,0.2nm,0.3s,baz=206,slow=26,SNR=2.6
IMAR Indian Mountai 69.48 21 P P 09 47 22.4 +1.6
ILAR Eielson Array 72.33 20 P P 09 47 38.5 +0.4
comp=Z,1.1nm,0.8s,baz=320,slow=4.1,SNR=8.5
ILAR Eielson Array 72.33 20 P P 09 47 39.1 +1.1
INK Inuvik 72.51 13 P P 09 47 39.8 +0.8
comp=Z,1.0nm,0.6s,baz=1.0,slow=3.0,SNR=2.9
DHY Denali Highway 73.49 21 P P 09 47 46.1 +1.0
DHY IAmb IAmb 09 48 02.4
comp=Z,6.3nm,1.2s
WRA Warramunga Arr 74.21 130 P P 09 47 49.3 -0.5
comp=Z,2.0nm,0.9s,baz=326,slow=5.8,SNR=5.7
WRAB Tennant Creek 74.21 130 P P 09 47 49.6 -0.1
WRAB IAmb IAmb 09 47 50.1
comp=Z,8.9nm,1.2s
WB2 Warramunga Arr 74.22 130 P P 09 47 49.6 -0.2
TOA0 Torodi Ar. Sit 75.01 275 P P 09 47 54.0 -0.6
TOA0 IAmb IAmb 09 47 55.9
comp=Z,9.1nm,1.4s
TORD Torodi Ar. Bea 75.01 275 P P 09 47 53.6 -1.0
comp=Z,0.9nm,0.8s,baz=45,slow=6.2,SNR=3.2
TORD Torodi Ar. Bea 75.01 275 IAmb IAmb 09 47 56.2
comp=Z,2.7nm,1.4s
ASAR Alice Springs 76.74 133 P P 09 48 03.6 -0.6
comp=Z,1.4nm,0.7s,baz=320,slow=6.2,SNR=7.3
YKA Yellowknife Ar 80.82 8 P P 09 48 25.3 -0.8
comp=Z,0.8nm,0.6s,baz=337,slow=5.2,SNR=7.9

IDC 12 09:39:26.1±5.5,18.02S×169.63E, h242km±50km, mb3.9/4, mb1 4.0/4, mb1mx3.4/46, mbtmp4.6/4, Error ellipse: s-maj=76.1km s-min=17.2km az=176.0
NEIC 12 09:39:30.0±1.0,18.77S±0.03×169.6E±0.1, h264km±10km, mb4.1/16, Error ellipse: s-maj=17.5km s-min=4.2km az=94.0
ISC 12 09:39:28.8±0.9,18.70S±0.09×169.7E±0.1,h250km,n24, σ1s49/25,mb4.2/9,Vanuatu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 4.04 323 Pn 09 40 35.1 +1.9
DZM Mont Dzumac 4.56 222 P Pn 09 40 40.0 +0.7
0.8nm,0.3s,baz=128,slow=22,SNR=9.4
DZM S S 09 41 44.2 +8.7
0.4nm,0.3s,baz=143,slow=20,SNR=1.7
DZM Mont Dzumac 4.56 222 Pn 09 40 39.4 0.0
DZM S 09 41 39.6 +4.0
NOUC Port Laguerre 4.67 223 Pn Pn 09 40 41.2 +0.6
EIDS Eidsvold 18.52 246 P P 09 43 27.9 +0.8
ARMA Armidale 20.15 231 P P 09 43 45.9 +1.2
ARMA IAmb IAmb 09 43 50.8
comp=Z,13nm,1.4s
STKA Stephens Creek 28.53 237 P P 09 45 01.3 -0.3
comp=Z,2.3nm,0.6s,baz=54,slow=11,SNR=7.3
STKA Stephens Creek 28.53 237 P P 09 45 01.9 +0.3
RAR Rarotonga 28.75 100 P P 09 45 03.8 +0.2
comp=Z,5.6nm,0.4s,baz=343,slow=20,SNR=4.9
RAR Rarotonga 28.75 100 P P 09 45 04.6 +1.1
RAR IAmb IAmb 09 45 16.1
comp=Z,7.3nm,1.2s
WR0 Warramunga Arr 33.20 262 P P 09 45 41.2 -1.4
WR0 IAmb IAmb 09 45 56.6
comp=Z,4.9nm,1.4s
BBOO Buckleboo 33.27 238 P P 09 45 42.8 -0.3
WB0 Warramunga Arr 33.35 262 P P 09 45 42.4 -1.6
WB2 Warramunga Arr 33.38 262 P P 09 45 42.3 -1.8
WRAB Tennant Creek 33.38 262 P P 09 45 42.4 -1.8
WRAB IAmb IAmb 09 45 55.5
comp=Z,8.5nm,1.5s
WRA Warramunga Arr 33.39 262 P P 09 45 42.3 -1.9
comp=Z,1.2nm,0.5s,baz=94,slow=9.1,SNR=14
AS31 Alice Springs 33.72 255 P P 09 45 46.1 -1.0
ASAR Alice Springs 33.72 255 P P 09 45 45.9 -1.1
comp=Z,9.3nm,0.4s,baz=82,slow=8.9,SNR=159
KNRA Kununurra 39.20 268 P P 09 46 32.3 -0.9
FORT Forrest 39.51 244 P P 09 46 34.4 -1.2
FITZ Fitzroy Crossi 41.77 264 P P 09 46 52.8 -1.4
FITZ IAmb IAmb 09 47 05.3
comp=Z,15nm,1.5s
PSA00 Pilbara Seismi 46.77 258 P P 09 47 32.9 -0.9
PSA00 IAmb IAmb 09 47 49.0
comp=Z,20nm,1.1s
NWAO Narrogin (SRO) 48.88 242 P P 09 47 48.2 -1.5
CCB Clear Creek Bu 89.23 17 P P 09 51 56.1 +0.2
CCB IAmb IAmb 09 51 58.2
comp=Z,2.3nm,1.2s

BJI 12 09:55:06.8±0.0,36.02N×82.50E, h5km, ML4.2/3
IDC 12 09:55:08.3±1.0,36.08N×82.94E, h0km, mb3.7/6, mb1 3.9/11, mb1mx3.7/52, mbtmp3.8/11, ML3.7/5, Error ellipse: s-maj=42.5km s-min=18.6km az=60.0
ISC 12 09:55:10.6±1.1,36.19N±0.10×83.0E±0.1,h10km,n12, σ1s57/14,mb3.6/6,Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WMQ Urumqi 8.43 24 eP Pn 09 57 14.6 +1.7
WMQ S Sn 09 58 48.4 +0.3
WMQ smax smax
comp=N,110nm,1.1s
WMQ smax smax
comp=E,120nm,1.1s
AAK Ala-Archa 9.19 317 Pn Pn 09 57 23.3 -0.1
1.1nm,0.3s,baz=300,slow=4.3,SNR=3.3
MKAR Makanchi Array 10.61 357 Pn Pn 09 57 42.3 -0.3
1.8nm,0.3s,baz=194,slow=13,SNR=20
MKAR Sn Sn 09 59 39.1 -2.3
0.9nm,0.3s,baz=178,slow=22,SNR=4.1
KURBB Kurchatov Arra 14.78 349 Pn Pn 09 58 36.7 -2.8
0.0nm,0.3s,baz=174,slow=12,SNR=8.7
ZALV Zalesovo Beam 17.80 4 P Pn 09 59 17.0 -1.3
0.4nm,0.3s,baz=190,slow=12,SNR=11
BVAR Borovoye Array 19.02 336 P Pn 09 59 33.7 +0.5
0.9nm,0.3s,baz=145,slow=10,SNR=15
FINES FINESS Array B 43.29 324 P P 10 03 12.6 +0.4
1.7nm,0.8s,baz=99,slow=8.6,SNR=4.5
ARCES ARCESS Array B 45.31 335 P P 10 03 28.9 +0.7
2.3nm,0.9s,baz=103,slow=7.5,SNR=3.8
WRA Warramunga Arr 73.99 130 P P 10 06 45.6 -0.8
0.3nm,0.6s,baz=325,slow=5.8,SNR=4.1
TORD Torodi Ar. Bea 75.39 276 P P 10 06 53.5 -1.3
0.5nm,0.8s,baz=35,slow=4.0,SNR=3.0
ASAR Alice Springs 76.53 133 P P 10 06 59.6 -1.5
0.3nm,0.6s,baz=321,slow=5.6,SNR=7.7
YKA Yellowknife Ar 80.64 8 P P 10 07 25.0 +1.8
0.3nm,0.7s,baz=338,slow=5.3,SNR=4.4

IDC 12 10:00:05.8±0.4,35.85N×82.42E, h0km, mb4.6/30, mb1 4.8/36, mb1mx4.6/46, mbtmp4.7/36, ML4.2/6, Error ellipse: s-maj=12.6km s-min=10.1km az=35.0
MOS 12 10:00:05.5±0.9,35.88N×82.40E, h10km, mb5.2/67, Error ellipse: s-maj=5.8km s-min=3.4km az=115.8
NEIC 12 10:00:07.4±1.3,35.86N±0.06×82.40E±0.08, h10km±1km, mb4.9/115, Error ellipse: s-maj=11.3km s-min=9.8km az=228.0
BJI 12 10:00:08.1±0.0,36.06N×82.43E, h8km, mb4.6/32, ML5.0/7
NNC 12 10:00:13.2±2.8,36.37N×82.48E, h6km±13km, mb5.4, mpv5.2, Error ellipse: s-maj=24.2km s-min=17.5km az=83.0
ISC 12 10:00:07.6±0.3,35.91N±0.04×82.41E±0.04,h10km,n409, σ1s33/420,mb4.9/135,28C-14D,Xizang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSH Kashi 6.25 307 Pn Pn 10 01 42.0 +2.0
PRZ Przheval'sk 7.27 336 Pn 10 01 54.8 +0.8
PRZ Sn Sn 10 03 15.6 -1.1
PRZ Przheval'sk 7.27 336 P Pn 10 01 55.5 +1.5
PRZ S Sn 10 03 15.6 -1.1
KDJ Kajisay 7.43 328 Pn 10 01 57.5 +1.3
KDJ Kajisay 7.43 328 P Pn 10 01 57.5 +1.3
NRN Naryn 7.46 320 Pn 10 01 58.5 +1.8
NRN Naryn 7.46 320 P Pn 10 01 58.5 +1.8
DANN Dangsing 7.62 171 eP Pn 10 02 01.5 +2.5
66nm,0.6s
PDGK Podgornoye 7.75 344 ⇑Pn Pn 10 02 01.0 +0.5
124nm,0.9s
PDGK ⇓Sn Sn 10 03 26.7 -1.7
561nm,0.8s
PDGK ⇑Lg Lg 10 04 10.5
606nm,0.9s
PDGK Podgornoye 7.75 344 i P Pn 10 02 01.0 +0.5
PDGK pmax pmax
comp=Z,124nm,0.8s
NIL Nilore 7.87 256 Pn 10 02 03.1 +1.0
NIL Nilore 7.87 256 P Pn 10 02 03.1 +1.0
ULHL Ulahol 7.94 325 P Pn 10 02 04.8 +1.5
SNR=7.7
GKN Gorkha 8.10 166 eP Pn 10 02 08.7 +3.2
comp=Z,88nm,0.7s
KOLN Koldanda 8.17 173 eP Pn 10 02 08.1 +1.6
comp=Z,80nm,0.7s
BOOM Boomskoye usch 8.27 325 Pn 10 02 08.8 +1.0
BOOM Boomskoye usch 8.27 325 P Pn 10 02 08.8 +1.0
KZA Kyzart 8.31 320 P Pn 10 02 11.6 +3.1
SNR=10
MDOK Medeo 8.35 332 ⇓Pn Pn 10 02 09.6 +0.8
comp=Z,79nm,0.8s
MDOK ⇑Pg Pb 10 02 36.9 +4.6
comp=Z,244nm,1.2s
MDOK ⇓Lg Lg 10 04 24.2
comp=Z,485nm,1.1s
MDOK Medeo 8.35 332 P Pn 10 02 09.6 +0.8
KNDC Almaty 8.42 332 ⇑Pn Pn 10 02 11.1 +1.4
comp=Z,163nm,1.1s
KNDC ⇑Lg Lg 10 04 28.1
comp=Z,711nm,1.1s
KNDC Almaty 8.42 332 P Pn 10 02 11.1 +1.4
KKN Kakani 8.45 162 eP Pn 10 02 12.5 +2.2
GUN Gumba 8.50 159 eP Pn 10 02 12.4 +1.3
comp=Z,331nm,1.0s
DMN Daman 8.58 164 eP Pn 10 02 13.8 +1.6
comp=Z,101nm,0.8s
PKIN Phulchoki 8.68 162 eP Pn 10 02 15.2 +1.7
comp=Z,58nm,0.6s
PKI Pulchoki 8.69 162 eP Pn 10 02 15.4 +1.7
comp=Z,226nm,1.1s
UCH Uchtor 8.80 318 P Pn 10 02 16.6 +1.3
SNR=28
JIRN Jiri 8.83 158 eP Pn 10 02 17.9 +2.3
KBK Karagaybulak 8.88 322 P Pn 10 02 18.1 +2.0
SNR=24
WMQ Urumqi 8.88 26 eP Pn 10 02 17.5 +1.4
WMQ S Sn 10 03 53.2 -3.1
WMQ Urumqi 8.88 26 Pn 10 02 16.6 +0.5
WMQ Urumqi 8.88 26 P Pn 10 02 16.6 +0.5
AAK Ala-Archa 9.10 320 Pn Pn 10 02 21.2 +2.1
comp=Z,1.6nm,0.3s,baz=156,slow=12,SNR=14
AAK Lg Lg 10 04 47.2
comp=Z,1.3nm,0.3s,baz=76,slow=9.8,SNR=3.9
AAK Ala-Archa 9.10 320 P Pn 10 02 21.1 +2.0
SNR=22
AAK Ala-Archa 9.10 320 ⇓Pn Pn 10 02 21.0 +1.8
comp=Z,66nm,0.9s
AAK ⇑Pg 10 02 55.2
comp=Z,99nm,0.8s
AAK ⇑Lg Lg 10 04 47.7
comp=Z,250nm,1.2s
AAK Ala-Archa 9.10 320 Pn 10 02 20.9 +1.8
AAK Ala-Archa 9.10 320 ceP Pn 10 02 18.8 -0.3
AAK pmax pmax
comp=Z,72nm,1.0s
FRU1 Bishkek 9.15 321 Pn 10 02 20.3 +0.5
FRU1 Bishkek 9.15 321 P Pn 10 02 20.3 +0.5
AML Almayashu 9.20 315 P Pn 10 02 22.0 +1.4
SNR=21
CHMS Chumysh 9.23 322 P Pn 10 02 22.2 +1.4
SNR=15
CHMS Chumysh 9.23 322 ⇑Pn Pn 10 02 21.8 +1.0
comp=Z,44nm,0.8s
CHMS ⇓Pg 10 02 56.0
comp=Z,164nm,1.4s
CHMS ⇓Lg Lg 10 04 54.9
comp=Z,137nm,1.4s
CHMS Chumysh 9.23 322 i P Pn 10 02 21.7 +1.0
CHMS pmax pmax
comp=Z,44nm,0.8s
EKS2 Erkin-Say 9.50 318 P Pn 10 02 25.9 +1.3
SNR=29
LSA Lhasa 9.61 128 P Pn 10 02 31.0 +4.6
LSA pP 10 02 34.3
LSA S Sn 10 04 26.2 +12
LSA pmax pmax
comp=Z,29nm,1.3s
LSA Lhasa 9.61 128 Pn 10 02 25.7 -0.7
LSA Lhasa 9.61 128 P Pn 10 02 25.7 -0.7
RAMN Ramite 9.62 157 eP Pn 10 02 26.3 0.0
comp=Z,416nm,1.3s
TAPN Taplejung 9.65 151 eP Pn 10 02 27.8 +1.0
ODAN Odare 9.97 153 eP Pn 10 02 31.2 +0.1
comp=Z,390nm,1.1s
BTK Batken 10.04 298 Pn 10 02 32.0 0.0
BTK Batken 10.04 298 P Pn 10 02 32.0 0.0
MK31 Makanchi Array 10.88 360 ⇑Pn Pn 10 02 43.1 -0.3
comp=Z,99nm,0.8s,baz=184,slow=14,SNR=250
MK31 ⇑Sn Sn 10 04 40.2 -4.8
comp=Z,110nm,0.9s,baz=178,slow=25
MK31 ⇓Lg Lg 10 05 48.2
comp=Z,145nm,1.1s
MK31 Makanchi Array 10.88 360 Pn 10 02 43.5 +0.1
MK31 Makanchi Array 10.88 360 eP Pn 10 02 43.0 -0.3
MK31 10 04 40.2
MKAR Makanchi Array 10.88 360 Pn Pn 10 02 43.4 +0.1
comp=Z,13nm,0.3s,baz=182,slow=13,SNR=86
MKAR Sn Sn 10 04 41.2 -3.9
comp=Z,1.8nm,0.3s,baz=183,slow=22,SNR=6.2
MKAR Makanchi Array 10.88 360 Pn 10 02 43.0 -0.4
MAKZ Makanchi 10.90 358 ⇓Pn Pn 10 02 43.3 -0.3
comp=Z,322nm,1.1s
MAKZ ⇑Sn Sn 10 04 39.5 -6.0
comp=Z,124nm,1.4s
MAKZ Makanchi 10.90 358 Pn 10 02 43.6 0.0
MAKZ Makanchi 10.90 358 P Pn 10 02 43.6 0.0
KBL Kabul 11.02 267 Pn 10 02 46.6 +1.1
KBL Kabul 11.02 267 P Pn 10 02 46.6 +1.1
KK31 Karatay Array 11.66 312 ⇑Pg Pn 10 03 38.9 +45
comp=Z,9.4nm,0.7s,baz=128,slow=16,SNR=4.0
KK31 ⇑Lg Lg 10 06 17.1
comp=Z,82nm,1.1s
KK31 Karatay Array 11.66 312 Pn Pn 10 02 54.2 +0.1
KK31 Karatay Array 11.66 312 P Pn 10 02 54.2 +0.1
KKAR Karatay Array 11.66 312 Pn 10 02 53.5 -0.6
KKAR Karatay Array 11.66 312 Pn Pn 10 02 54.2 +0.1
KKAR Karatay Array 11.66 312 P Pn 10 02 54.2 +0.1
CHM Chimkent 11.82 307 P Pn 10 02 56.0 -0.3

CHM pmax pmax
comp=Z,164nm,1.5s
SHL Shillong 13.13 139 Pn 10 03 11.8 -2.5
SHL Shillong 13.13 139 P Pn 10 03 13.4 -0.9
GTA Gaotai 14.22 71 eP Pn 10 03 31.5 +2.3
GTA pP P 10 03 35.8 -0.8
GTA sP 10 03 38.9
GTA pmax pmax
comp=Z,8.0nm,1.0s
KURBB Kurchatov Arra 14.98 350 Pn Pn 10 03 36.5 -2.7
comp=Z,0.2nm,0.3s,baz=172,slow=12,SNR=26
KURK Kurchatov 15.05 351 Pn 10 03 38.3 -2.0
KURK IAmb IAmb 10 03 50.2
comp=Z,102nm,1.2s
KURK Kurchatov 15.05 351 P Pn 10 03 38.3 -2.0
KURK pmax pmax
comp=Z,102nm,1.3s
HRA Herat 16.57 271 Pn 10 03 58.2 -2.0
SRSP Sriramsagar 17.29 193 eP Pn 10 04 08.7 -0.5
ZAA0 Zalesovo Array 18.12 5 Pn 10 04 16.4 -2.8
ZALV Zalesovo Beam 18.12 5 P Pn 10 04 17.4 -1.8
comp=Z,1.2nm,0.3s,baz=192,slow=12,SNR=38
ZALV Zalesovo Beam 18.12 5 P Pn 10 04 16.6 -2.6
ZALV Zalesovo Beam 18.12 5 i P Pn 10 04 16.6 -2.6
ZALV pmax pmax
comp=Z,24nm,0.7s
CD2 Chengdu 18.50 100 eP P 10 04 23.0 -0.9
KLRI Killari 18.50 198 eP P 10 04 23.3 -0.7
PVM Polavaram 18.60 182 eP Pn 10 04 24.8 -0.4
HYBB Hyderabad (bro 18.73 192 eP Pn 10 04 27.0 +0.1
BVAR Borovoye Array 19.10 337 P Pn 10 04 32.0 +0.8
comp=Z,4.0nm,0.3s,baz=138,slow=9.7,SNR=90
BVAR Borovoye Array 19.10 337 P Pn 10 04 32.0 +0.8
MYLAV Mylavaram 19.15 185 eP Pn 10 04 31.4 -0.5
BRVK Borovoye 19.16 337 P P 10 04 30.9 -0.1
BRVK IAmb IAmb 10 04 34.8
comp=Z,100nm,0.8s
BRVK Borovoye 19.16 337 P P 10 04 30.9 -0.1
BRVK pmax pmax
comp=Z,100nm,0.8s
NJS Nagarjunasagar 19.47 189 eP P 10 04 34.1 -0.5
GEYT Alibeck 19.52 283 P Pn 10 04 36.6 +0.2
comp=Z,0.4nm,0.3s,baz=102,slow=10,SNR=28
GEYT Alibeck 19.52 283 P P 10 04 33.7 -1.4
GYA0B ALIBECK ARRAY 19.52 283 P P 10 04 34.3 -0.9
GYA0B IAmb IAmb 10 04 39.7
comp=Z,57nm,1.1s
SRLM Srisailam 19.97 190 eP Pn 10 04 40.3 -1.5
ADKI Addanki 20.10 187 eP P 10 04 41.3 -0.2
KMI Kunming 20.51 116 P P 10 04 44.9 -1.3
KMI IAmb IAmb 10 04 48.1
comp=Z,37nm,0.7s
KMI Kunming 20.51 116 P P 10 04 44.9 -1.3
KMI pmax pmax
comp=Z,37nm,0.7s
MOY Mondy 20.60 34 eP Pn 10 04 48.6 -0.5
MOY pmax pmax
comp=Z,278nm,3.4s
ZAK Zakamensk 20.90 40 eP P 10 04 51.0 +0.9
ZAK pmax pmax
comp=Z,49nm,1.1s
ABKAR Akbulak array 21.15 316 P P 10 04 52.6 -0.1
ABKAR Akbulak array 21.15 316 P P 10 04 53.2 +0.5
ABKAR IAmb IAmb 10 04 59.8
comp=Z,78nm,1.0s
SONM Songino Array 21.38 49 P P 10 04 57.0 +1.8
comp=Z,49nm,1.0s,baz=241,slow=12,SNR=71
SONM Songino Array 21.38 49 P P 10 04 56.9 +1.6
SONM Songino Array 21.38 49 P P 10 04 56.9 +1.6
SONM pmax pmax
comp=Z,79nm,1.2s
URV Uravakonda 21.38 194 eP P 10 04 54.7 -0.7
XAN Xi'an 21.78 87 P P 10 05 02.0 +2.3
XAN pP sP 10 05 05.8 -0.2
XAN Xi'an 21.78 87 P P 10 04 58.9 -0.8
XAN Xi'an 21.78 87 P P 10 04 58.9 -0.8
XAN pmax pmax
comp=Z,23nm,1.3s
ULN Ulaanbaatar 21.79 49 P P 10 05 00.6 +0.8
ULN Ulaanbaatar 21.79 49 P P 10 05 00.6 +0.8
ULN pmax pmax
comp=Z,93nm,1.0s
TLY Talaya 21.87 37 P P 10 05 01.8 +1.4
comp=Z,4.4nm,0.7s,baz=235,slow=8.3,SNR=8.7
TLY Talaya 21.87 37 P P 10 05 01.0 +0.7
TLY Talaya 21.87 37 i P P 10 05 01.1 +0.7
TLY pmax pmax
comp=Z,15nm,1.1s
SKHT Srikalahasti 22.20 187 eP P 10 05 03.7 -0.5
CHTO Chiang Mai 22.43 135 P P 10 05 06.7 +0.1
CHTO Chiang Mai 22.43 135 P P 10 05 06.7 +0.1
CHTO pmax pmax
comp=Z,40nm,1.3s
IRK Irkutsk 22.52 37 eP P 10 05 08.5 +1.1
IRK pmax pmax
comp=Z,156nm,4.0s
CM31 Chiang Mai Arr 22.71 136 P P 10 05 10.8 +1.2
CM31 IAmb IAmb 10 05 12.0
comp=Z,35nm,0.9s
CMAR Chiang Mai Arr 22.71 136 P P 10 05 09.1 -0.5
comp=Z,21nm,0.9s,baz=319,slow=9.9,SNR=83
CMAR PcP PcP 10 09 01.6 -0.3
comp=Z,0.5nm,0.3s,baz=311,slow=3.1,SNR=4.4
CMAR Chiang Mai Arr 22.71 136ceP P 10 05 08.6 -1.0
CMAR pmax pmax
comp=Z,21nm,0.9s
GYA Guiyang 22.74 108 P P 10 05 10.6 +0.6
GYA PP PnPn 10 05 43.2 +9.3
GYA S S 10 09 20.2 +1.4
GYA pmax pmax
comp=Z,20nm,1.0s
AKTO Aktyubinsk 22.82 317 P P 10 05 10.7 +0.1
comp=Z,21nm,1.0s,baz=113,slow=9.8,SNR=25
HHC Hu-ho-hao-te 23.32 69 eP P 10 05 12.9 -3.0
HHC pmax pmax
comp=Z,10.0nm,0.6s
ENH Enshi 23.33 96 P P 10 05 15.4 -0.6
SLVN Son La 23.73 122 P P 10 05 19.8 -0.2
TIY Taiyuan 24.06 77 eP P 10 05 24.8 +1.7
WSAR Wadi Sarin 24.16 245 P P 10 05 24.9 +0.8
comp=Z,6.1nm,0.9s,baz=86,slow=7.5,SNR=4.8
PBKT Sadao Pong 25.37 135 P P 10 05 34.9 -0.1
PBKT IAmb IAmb 10 05 40.8
comp=Z,26nm,1.3s
SVE Sverdlovsk 25.55 332 eP P 10 05 37.4 +1.1
ARU Arti 26.11 329 P P 10 05 41.9 +0.5
comp=Z,3.4nm,0.5s,baz=130,slow=6.8,SNR=9.8
ARU Arti 26.11 329 P P 10 05 41.8 +0.5
ARU IAmb IAmb 10 05 49.4
comp=Z,21nm,1.1s
ARU Arti 26.11 329c iP P 10 05 40.5 -0.9
ARU 10 06 18.6
ARU S S 10 10 15.3 +2.7
ARU SS SnSn 10 11 42.0 +32
ARU pmax pmax
comp=Z,29nm,1.4s
BJT Baijiatuau 26.83 71 P P 10 05 48.3 +0.2
BJT Baijiatuau 26.83 71 P P 10 05 48.3 +0.2
BJT pmax pmax
comp=Z,15nm,1.2s
PALK Pallekele 28.54 184 P P 10 06 03.1 -0.5
comp=Z,7.0nm,0.8s,baz=356,slow=9.1,SNR=5.6
PALK Pallekele 28.54 184 P P 10 06 02.6 -1.0
QIZ Qiongzhong 29.44 118 P P 10 06 12.4 +0.9
QIZ S S 10 11 07.0 +1.3
QIZ pmax pmax
comp=Z,14nm,1.4s
GNI Garni 29.82 290 P P 10 06 15.4 +0.4
GNI IAmb IAmb 10 06 23.6
comp=Z,23nm,1.4s
GNI Garni 29.82 290 i P P 10 06 15.4 +0.4
GNI pmax pmax
comp=Z,38nm,1.3s
HIA Hailar 30.23 52 P P 10 06 19.0 +0.7
HIA Hailar 30.23 52 P P 10 06 19.0 +0.7
HIA pmax pmax
comp=Z,8.0nm,1.1s
BOD Bodaibo 30.31 34 eP P 10 06 19.3 +0.4
BOD pmax pmax
comp=Z,16nm,1.8s
NJ2 Nanjing 30.35 87 eP P 10 06 19.2 -0.3
NJ2 pmax pmax
comp=Z,12nm,0.5s
ONI Oni 30.70 295 P P 10 06 26.9 +4.3
NEY Neytrino 31.23 296 i P P 10 06 26.7 -0.7
NEY pmax pmax
comp=Z,1.0nm,0.8s
KIV Kislovodsk 31.26 297 eP P 10 06 25.0 -2.6
KIV pmax pmax
comp=Z,12nm,1.0s
KIRV Kirov 31.35 327 P P 10 06 28.9 +0.9
comp=Z,25nm,0.6s,baz=280,slow=3.0,SNR=7.2
VRH Novokhopyorsk 32.74 311 eP P 10 06 39.9 -0.4
VRH pmax pmax
comp=Z,40nm,1.9s
RAYN Ar Rayn 34.15 259 P P 10 06 51.7 -1.3
RAYN IAmb IAmb 10 06 54.4
comp=Z,14nm,1.2s
RAYN Ar Rayn 34.15 259 P P 10 06 51.7 -1.3
RAYN pmax pmax
comp=Z,14nm,1.2s
VSR Storozhevoye 34.32 310 eP P 10 06 53.9 -0.2
VSR pmax pmax
comp=Z,30nm,1.7s
PRGR Permogore 34.56 330 eP P 10 06 55.7 -0.4
PRGR pmax pmax
comp=Z,17nm,0.8s
INCN Inchon 35.25 74 P P 10 07 02.8 +0.5
INCN IAmb IAmb 10 07 06.1
comp=Z,24nm,1.0s
INCN Inchon 35.25 74 P P 10 07 02.8 +0.5
INCN pmax pmax
comp=Z,25nm,1.0s
ZEA Zeya 35.74 46 eP P 10 07 08.0 +1.7
MOS Moscow 36.16 318 eP P 10 07 09.0 -0.9
MOS pmax pmax
comp=Z,55nm,1.2s
KSAR Wonju Array Be 36.23 74 P P 10 07 10.8 0.0
KSAR Wonju Array Be 36.23 74 P P 10 07 10.8 0.0
KSRS Korea Array 36.26 74 P P 10 07 10.6 -0.4
comp=Z,3.6nm,0.9s,baz=276,slow=8.3,SNR=7.2
OBN Obninsk 36.60 316⇓eP P 10 07 13.3 -0.3
OBN e 10 07 15.6
OBN 10 08 38.0
OBN pmax pmax
comp=Z,52nm,1.3s
MDJ Mudanjiang 36.60 61 P P 10 07 14.4 +0.5
KLMR Klimovskoe 36.84 326 eP P 10 07 13.8 -1.8
KLMR pmax pmax
comp=Z,48nm,1.2s
KLMR Klimovskoe 36.84 326 eP P 10 07 13.8 -1.8
KLMR AMP 10 07 20.5
comp=Z,48nm,1.2s
KLR Kul'dur 38.03 54 i P P 10 07 26.3 +0.4
KLR pmax pmax
comp=Z,10.0nm,0.9s
ILGA Ilgaz 38.07 293 P P 10 07 27.3 +0.7
BR131 Keskin Array S 38.34 291 P P 10 07 29.2 +0.4
BR131 Keskin Array S 38.34 291 i P P 10 07 29.1 +0.3
BRTR Keskin Array B 38.34 291 P P 10 07 29.8 +0.9
comp=Z,7.4nm,0.9s,baz=92,slow=7.4,SNR=16
BRTR Keskin Array B 38.34 291 P P 10 07 28.5 -0.3
TMCR Tamitsa 38.82 331 eP P 10 07 32.4 +0.1
TMCR pmax pmax
comp=Z,38nm,0.8s
ANTO Ankara 38.96 291 P P 10 07 34.4 +0.5
ANTO Ankara 38.96 291 P P 10 07 34.4 +0.5
ANTO pmax pmax
comp=Z,15nm,0.8s
YAK Yakutsk 39.23 33 P P 10 07 35.7 -0.1
YAK Yakutsk 39.23 33 eP P 10 07 35.8 +0.1
YAK pmax pmax
comp=Z,34nm,1.0s
YAK pmax pmax
comp=E,24nm,1.1s
JNU Nakatsue 39.71 79 P P 10 07 40.7 +0.5
comp=E,12nm,1.0s,baz=139,slow=20,SNR=2.9
JNU Nakatsue 39.71 79 P P 10 07 39.8 -0.4
AKASG Malin Array Be 40.54 308 P P 10 07 46.8 0.0
comp=E,3.5nm,0.7s,baz=75,slow=7.1,SNR=9.7
AKASG Malin Array Be 40.54 308 P P 10 07 45.9 -0.9
AKASG Malin Array Be 40.54 308ceP P 10 07 46.7 -0.1
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKBB Malin Array Si 40.54 308 P P 10 07 46.7 -0.1
AKBB Malin Array Si 40.54 308 i P P 10 07 45.9 -0.9
AKBB pmax pmax
comp=Z,12nm,1.0s
GRNR Gornyy 41.06 51⇓iP P 10 07 51.7 +0.5
GRNR i 10 07 52.5
GRNR pmax pmax
comp=Z,10.0nm,1.2s
GRNR MLR MLR
comp=Z,7µm,14.0s
CFR Carcaliu 41.58 300 P P 10 07 55.8 +0.4
CFR pmax pmax
comp=Z,6.0nm,0.9s
LVZ Lovozero 41.67 335ceP P 10 07 54.5 -1.4
LVZ pmax pmax
comp=Z,29nm,1.1s
ELL Elmali 41.86 287 P P 10 07 57.6 -0.4
ELL Elmali 41.86 287 P P 10 07 57.6 -0.4
ELL pmax pmax
comp=Z,77nm,1.2s
VRI Vrincioaia 42.48 301 ⇑P P 10 08 05.5 +2.7
VRI Vrincioaia 42.48 301 P P 10 08 05.5 +2.7
VSU Vasula 42.50 320ceP P 10 08 01.9 -0.8
VSU pmax pmax
comp=Z,100nm,1.3s
PLOR Plostina 42.54 301 ⇓P P 10 08 05.5 +2.2
PLOR Plostina 42.54 301 P P 10 08 05.5 +2.2
KSM Kuching 42.93 137 P P 10 08 06.8 +0.1
KSM IAmb IAmb 10 08 08.4
comp=Z,28nm,0.9s
MSF Maaselka 43.01 331 P P 10 08 08.2 +1.4
TIXI Tiksi 43.03 20 P P 10 08 06.0 -0.9
TIXI Tiksi 43.03 20ceP P 10 08 05.2 -1.7
TIXI pmax pmax
comp=Z,30nm,1.7s
MLR Muntele Rosu 43.07 301 P P 10 08 08.8 +1.0
MLR IAmb IAmb 10 08 12.7
comp=Z,28nm,1.2s
MLR Muntele Rosu 43.07 301 P P 10 08 08.8 +1.0
MLR pmax pmax
comp=Z,28nm,1.2s
OZUR 43.10 302 ⇑P P 10 08 09.5 +1.5
SBUM Sibu 43.23 134 P P 10 08 09.1 -0.1
FIA1 FINESS Array S 43.26 324 P P 10 08 09.4 +0.5
FIA1 IAmb IAmb 10 08 12.1
comp=Z,30nm,1.1s
FINES FINESS Array B 43.26 324 P P 10 08 09.3 +0.5
comp=Z,12nm,0.8s,baz=100,slow=9.9,SNR=20
FINES FINESS Array B 43.26 324 P P 10 08 09.1 +0.2
BURAR Bucovina Array 43.32 304 ⇑P P 10 08 12.2 +2.4
BURAR Bucovina Array 43.32 304 P P 10 08 09.1 -0.6
BURAR Bucovina Array 43.32 304 P P 10 08 12.1 +2.4
BUR08 Bucovina Ar. S 43.33 304 P P 10 08 10.3 +0.5
SUF Sumiainen 43.45 326 P P 10 08 11.3 +0.9
SUF pmax pmax
comp=Z,33nm,1.0s
ARR Arges 44.01 301 ⇓P P 10 08 16.8 +1.6
MJAR Matsushiro Arr 44.47 72 P P 10 08 18.6 -0.3
comp=Z,2.7nm,0.8s,baz=290,slow=8.1,SNR=6.0
MJAR Matsushiro Arr 44.47 72 IAmb IAmb 10 08 23.7
comp=Z,2.9nm,1.1s
TRPA Tarpa 45.05 305 ⇑P P 10 08 25.6 +2.2
VAF Ylistaro 45.08 326 P P 10 08 24.1 +0.7
VAF pmax pmax
comp=Z,57nm,1.1s
UZH Uzhgorod 45.15 306 eP P 10 08 27.6 +3.4
UZH i 10 08 31.0
ARCES ARCESS Array B 45.37 336 P P 10 08 26.2 +0.4
comp=Z,15nm,0.9s,baz=96,slow=8.9,SNR=21
ARCES ARCESS Array B 45.37 336 P P 10 08 26.4 +0.7
ARCES ARCESS Array B 45.37 336 P P 10 08 26.4 +0.7
ARE0 ARCESS Array S 45.37 336 P P 10 08 25.9 +0.2
VTS Vitosha 45.50 297 ⇑P P 10 08 29.6 +2.3
YSS Yuzh-Sakhalins 45.53 57 P P 10 08 27.1 -0.2
YSS IAmb IAmb 10 08 28.3
comp=Z,16nm,1.1s
YSS Yuzh-Sakhalins 45.53 57 eP P 10 08 27.6 +0.4
KLNR Kaliningrad 45.96 314 i P P 10 08 29.9 -0.6
KLNR pmax pmax
comp=Z,70nm,1.2s
BZS Buzias 46.06 302 P P 10 08 34.2 +2.7
OJC Ojcow 46.58 308 P P 10 08 35.6 +0.1
OJC IAmb IAmb 10 08 39.0
comp=Z,18nm,1.3s
OJC Ojcow 46.58 308 P P 10 08 35.6 +0.1
OJC pmax pmax
comp=Z,18nm,1.3s
VYHS Vyhne 47.45 306 eP P 10 08 43.7 +1.4
VYHS Vyhne 47.45 306 eP P 10 08 43.7 +1.4
MORC Moravsky Berou 48.08 308 eP P 10 08 48.0 +0.7
MORC Moravsky Berou 48.08 308 P P 10 08 47.5 +0.2
MORC IAmb IAmb 10 08 50.5
comp=Z,21nm,1.4s
MORC Moravsky Berou 48.08 308 P P 10 08 47.5 +0.2
MORC pmax pmax
comp=Z,21nm,1.4s
JAVC Velka Javorina 48.15 307 eP P 10 08 49.6 +1.8
KRLC Kraliky 48.52 308 eP P 10 08 51.2 +0.6
KRLC Kraliky 48.52 308 eP P 10 08 51.2 +0.6
DPC Dobruska-Polom 48.77 309 eP P 10 08 54.1 +1.6
DPC Dobruska-Polom 48.77 309 eP P 10 08 54.1 +1.6
VRAC Vranov 48.77 307 eP P 10 08 53.7 +1.2
VRAC Vranov 48.77 307 ⇓P P 10 08 54.3 +1.7
VRAC Vranov 48.77 307 P P 10 08 54.2 +1.7
UPC Upice 48.94 309 eP P 10 08 54.9 +1.1
UPC Upice 48.94 309 eP P 10 08 54.9 +1.1
KRUC Moravsky 48.94 307 eP P 10 08 54.7 +0.9
MA2 Magadan 49.08 39ceP P 10 08 54.1 -0.6
MA2 pmax pmax
comp=Z,69nm,1.7s
CONA Conrad Observa 49.51 306 epP P 10 08 59.0 +0.8
comp=Z,18nm,1.4s
SEY Seymchan 49.73 34 i P P 10 08 58.9 -0.7
ARSA Arzberg 49.87 305 epP P 10 09 01.5 +0.5
comp=Z,6.1nm,1.1s
PRU Pruhonice 49.96 309 eP P 10 09 04.8 +3.2
PRU Pruhonice 49.96 309 eP P 10 09 04.8 +3.2
NC405 NORSAR Array S 50.15 323 P P 10 09 03.1 +0.2
BRG Berggiesshubel 50.17 310 eP P 10 09 03.3 +0.1
BRG pmax pmax
comp=Z,63nm,1.8s
BRG MLR MLR
comp=N,18µm,15.1s
BRG MLR MLR
comp=E,2µm,22.0s
BRG MLR MLR
comp=Z,11µm,24.6s
NORES NORESS Array B 50.26 323 P P 10 09 06.5 +2.8
NORES pmax pmax
comp=Z,16nm,0.9s
NC303 NORSAR Array S 50.31 324 P P 10 09 04.0 -0.1
SOKA Soboth 50.33 304 epP P 10 09 05.3 +0.7
comp=Z,27nm,1.4s
NB2 NORSAR Subarra 50.40 323 P P 10 09 04.4 -0.4
comp=Z,72nm,1.4s,baz=86,slow=7.9
NB2 NORSAR Subarra 50.40 323 P P 10 09 04.4 -0.4
baz=86,slow=7.9
NOA NORSAR Array B 50.40 323 P P 10 09 04.7 -0.1
comp=Z,16nm,1.0s,baz=86,slow=7.4,SNR=13
MOA Molln 50.57 306 epP P 10 09 06.9 +0.6
comp=Z,13nm,1.2s
NAO01 NORSAR Array S 50.58 323 P P 10 09 06.0 -0.1
NC204 NORSAR Array S 50.60 324 P P 10 09 06.5 +0.1
CLL Collm 50.67 311 eP P 10 09 07.0 0.0
CLL Collm 50.67 311 eP P 10 09 07.0 0.0
OBKA Obir 50.69 304 epP P 10 09 08.2 +0.9
comp=Z,14nm,1.1s
GEC2 GERESS Array S 50.72 307 P P 10 09 07.8 +0.2
GEC2 IAmb IAmb 10 09 11.6
comp=Z,33nm,1.3s
GERES GERESS Array B 50.72 307 P P 10 09 08.2 +0.7
comp=Z,5.8nm,1.0s,baz=81,slow=8.2,SNR=16
GERES GERESS Array B 50.72 307 P P 10 09 08.5 +1.0
GERES GERESS Array B 50.72 307 P P 10 09 08.5 +1.0
KHC Kasperske Hory 50.74 308 eP P 10 09 08.1 +0.5
KHC Kasperske Hory 50.74 308 eP P 10 09 08.1 +0.5
KONO Kongsberg 51.33 322ceP P 10 09 12.6 +0.8
KONO pmax pmax
comp=Z,65nm,2.5s
WTTA Wattenberg 52.44 306 pP P 10 09 21.6 +1.2
comp=Z,17nm,1.3s
MOTA Moosalm 52.77 306 eP P 10 09 22.4 -0.5
comp=Z,14nm,1.2s
TEOL Teolo 52.93 303 P P 10 09 24.0 +0.1
TEOL IAmb IAmb 10 09 30.4
comp=Z,17nm,0.8s
RETA Reutte 52.96 306 pP P 10 09 25.5 +1.3
comp=Z,15nm,1.1s
FETA Feichten 53.10 306 epP P 10 09 27.8 +2.4
comp=Z,13nm,1.2s
DAVA Damuels 53.59 306 eP P 10 09 28.1 -0.9
comp=Z,16nm,1.2s
PETK Petropavlovsk- 53.83 46 P P 10 09 30.0 -0.4
comp=Z,3.2nm,0.6s,baz=287,slow=3.8,SNR=7.8
PETK Petropavlovsk- 53.83 46 P P 10 09 30.4 0.0
PETK Petropavlovsk- 53.83 46 P P 10 09 30.5 0.0
CDF Champ du Feu 54.96 308 eP P 10 09 39.5 +0.7
CDF pmax pmax
comp=Z,30nm,1.3s
BILL Bilibino 54.99 27 P P 10 09 39.0 +0.3
BILL Bilibino 54.99 27⇓eP P 10 09 39.1 +0.5
BILL e 10 09 42.8
BILL pmax pmax
comp=Z,19nm,1.0s
BILL MLR MLR
comp=Z,13µm,18.0s
HAU Haudompre 55.67 308 eP P 10 09 46.8 +2.9
HAU pmax pmax
comp=Z,54nm,1.6s
KMBO Kilima Mbogo 55.88 239 P P 10 09 46.2 +0.2
comp=Z,2.9nm,0.6s,baz=40,slow=11,SNR=6.7
KMBO Kilima Mbogo 55.88 239 P P 10 09 45.2 -0.8
KMBO IAmb IAmb 10 09 47.3
comp=Z,9.3nm,1.1s
NOR Nord 56.04 350 i P P 10 09 46.2 +0.2
NOR Nord 56.04 350 i P P 10 09 46.2 +0.2
LPG La Plagne 56.19 305 eP P 10 09 48.3 +0.4
LPG pmax pmax
comp=Z,51nm,1.4s
LPL La Plagne 56.20 305 eP P 10 09 48.3 +0.4
LPL pmax pmax
comp=Z,41nm,1.2s
BNI Bardonecchia 56.38 304 P P 10 09 48.9 -0.3
BNI IAmb IAmb 10 09 50.3
comp=Z,26nm,1.3s
BNI Bardonecchia 56.38 304 P P 10 09 48.9 -0.3
BNI pmax pmax
comp=Z,26nm,1.3s
SMF Signal de Mont 57.72 307 eP P 10 10 01.1 +2.6
SMF pmax pmax
comp=Z,36nm,1.5s
SSF Saint Saulge 57.80 308 eP P 10 09 58.7 -0.3
SSF pmax pmax
comp=Z,32nm,1.4s
AVF Avril sur Loir 57.99 307 eP P 10 10 00.2 -0.1
AVF pmax pmax
comp=Z,72nm,1.7s
TCF Toulx Ste Croi 58.90 307 eP P 10 10 05.8 -0.9
TCF pmax pmax
comp=Z,49nm,1.6s
MBAR Mbarara 60.18 245 P P 10 10 14.2 -1.9
MBAR IAmb IAmb 10 10 17.6
comp=Z,8.3nm,1.1s
MBAR Mbarara 60.18 245 P P 10 10 14.2 -1.9
MBAR pmax pmax
comp=Z,8.0nm,1.1s
MFF Saint Martin d 60.30 308 eP P 10 10 15.5 -0.8
MFF pmax pmax
comp=Z,35nm,1.2s
EPF Esparros 61.37 304 eP P 10 10 24.7 +0.9
EPF pmax pmax
comp=Z,46nm,1.5s
SUMG Summit 64.45 343 i P P 10 10 45.0 +0.9
SUMG Summit 64.45 343 P P 10 10 45.1 +0.9
SUMG Summit 64.45 343 i P P 10 10 45.0 +0.9
GAMB Gambell 64.89 28 P P 10 10 47.5 +0.9
RDOG Red Dog Mine 65.57 22 P P 10 10 51.2 +0.2
RDOG IAmb IAmb 10 10 54.5
comp=Z,18nm,1.4s
ESDC Sonseca Array 65.74 302 P P 10 10 52.1 -0.6
comp=Z,2.8nm,0.7s,baz=55,slow=6.5,SNR=12
ESDC Sonseca Array 65.74 302 P P 10 10 52.1 -0.6
TULEG Thule 66.37 353 P P 10 10 55.9 -0.2
ANM Nome 66.79 26 P P 10 11 00.1 +1.2
ANM Nome 66.79 26 P P 10 11 00.1 +1.2
ANM pmax pmax
comp=Z,23nm,1.1s
IMAR Indian Mountai 69.65 21 P P 10 11 16.9 +0.1

RES Resolute Bay 69.67 359 P P 10 11 16.4 -0.4
RES Resolute Bay 69.67 359 P P 10 11 16.4 -0.4
RES pmax pmax
comp=Z,4.0nm,1.1s
COLD Coldfoot 69.76 19 P P 10 11 18.1 +0.6
COLD IAmb IAmb 10 11 20.5
comp=Z,12nm,1.0s
BMAR Burnt Mountain 71.04 17 P P 10 11 26.4 +1.0
MLY Manley 71.22 21 P P 10 11 26.7 +0.3
MLY IAmb IAmb 10 11 28.1
comp=Z,18nm,1.0s
FYU Fort Yukon 71.56 18 P P 10 11 29.6 +1.2
BPAW Bear Paw Mtn. 71.82 22 P P 10 11 30.2 +0.1
BPAW IAmb IAmb 10 11 34.0
comp=Z,17nm,1.1s
MORW Morawa 71.97 149 P P 10 11 30.4 -0.9
MDM Murphy Dome 71.99 20 P P 10 11 31.6 +0.6
MDM IAmb IAmb 10 11 34.0
comp=Z,8.5nm,0.9s
NEA Nenana 72.03 21 P P 10 11 31.3 0.0
POKR Poker Flat Res 72.09 20 P P 10 11 32.5 +0.9
baz=319
TCOL CIGO, UAF Yank 72.16 20 P P 10 11 32.1 0.0
baz=319
COLA College 72.16 20 P P 10 11 32.4 +0.4
COLA College 72.16 20 P P 10 11 32.4 +0.4
COLA pmax pmax
comp=Z,20nm,0.8s
LSZ Lusaka 72.23 235 P P 10 11 31.9 -1.4
LSZ IAmb IAmb 10 11 33.2
comp=Z,8.7nm,1.0s
LSZ Lusaka 72.23 235 P P 10 11 31.9 -1.4
LSZ pmax pmax
comp=Z,9.0nm,1.0s
KTH Kantishna Hill 72.24 22 P P 10 11 33.3 +0.6
PRP Porcupine Dome 72.30 19 P P 10 11 33.4 +0.3
PPLA Purkeypile 72.32 23 P P 10 11 32.6 -0.7
PPLA IAmb IAmb 10 11 34.2
comp=Z,16nm,1.0s
CCB Clear Creek Bu 72.34 20 P P 10 11 33.1 -0.1
CCB IAmb IAmb 10 11 34.1
comp=Z,10nm,1.0s
WRH Wood River Hil 72.39 21 P P 10 11 33.4 -0.1
WRH IAmb IAmb 10 11 34.2
comp=Z,8.8nm,1.0s
IL31 72.50 20 P P 10 11 33.8 -0.3
IL31 IAmb IAmb 10 11 34.8
comp=Z,13nm,0.9s
ILAR Eielson Array 72.50 20 P P 10 11 33.9 -0.3
comp=Z,9.0nm,0.9s,baz=310,slow=5.1,SNR=91
ILAR PP PP 10 14 17.5 +2.8
comp=Z,0.7nm,0.8s,baz=308,slow=8.1,SNR=6.6
ILAR Eielson Array 72.50 20 P P 10 11 34.1 -0.1
ILAR Eielson Array 72.50 20 P P 10 11 34.1 -0.1
INK Inuvik 72.68 13 P P 10 11 35.4 +0.3
INK Inuvik 72.68 13 P P 10 11 35.4 +0.3
INK pmax pmax
comp=Z,27nm,1.4s
HDA Harding Lake 72.77 20 P P 10 11 35.2 -0.5
HDA IAmb IAmb 10 11 36.5
comp=Z,11nm,1.0s
HDA Harding Lake 72.77 20 P P 10 11 35.1 -0.5
baz=320
C36M Paulatuk 73.26 10 P P 10 11 37.3 -1.1
C36M Paulatuk 73.26 10 P P 10 11 37.4 -1.1
baz=338
DHY Denali Highway 73.67 21 P P 10 11 41.1 -0.2
DHY IAmb IAmb 10 11 42.0
comp=Z,11nm,0.9s
EPYK Eagle Plains 73.71 15 P P 10 11 40.8 -0.5
EPYK IAmb IAmb 10 11 44.1
comp=Z,23nm,1.2s
EPYK Eagle Plains 73.71 15 P P 10 11 40.0 -1.3
baz=328
RIDG Independent Ri 73.87 20 P P 10 11 42.1 -0.2
SCRK Sand Creek 73.92 19 P P 10 11 42.4 -0.3
SCRK IAmb IAmb 10 11 43.7
comp=Z,18nm,1.0s
EGAK Eagle 74.01 18 P P 10 11 43.0 0.0
EGAK IAmb IAmb 10 11 46.7
comp=Z,18nm,1.1s
WB0 Warramunga Arr 74.06 130 P P 10 11 43.4 -0.5
WRA Warramunga Arr 74.16 130 P P 10 11 44.5 +0.1
comp=Z,33nm,0.9s,baz=316,slow=5.4,SNR=102
WRAB Tennant Creek 74.16 130 P P 10 11 44.5 +0.1
WRAB Tennant Creek 74.16 130 *e*P P 10 11 43.4 -1.1
WRAB pmax pmax
comp=Z,101nm,1.7s
DOT Dot Lake 74.16 20 P P 10 11 43.7 -0.3
DOT IAmb IAmb 10 11 46.8
comp=Z,14nm,1.1s
WB2 Warramunga Arr 74.16 130 P P 10 11 44.3 -0.3
GHO Glory Hole Cre 74.19 23 P P 10 11 43.4 -0.8
GHO IAmb IAmb 10 11 50.4
comp=Z,21nm,1.1s
PMR Palmer 74.26 23 P P 10 11 44.0 -0.5
PMR IAmb IAmb 10 11 48.0
comp=Z,16nm,1.1s
PMR Palmer 74.26 23 P P 10 11 44.0 -0.5
PMR pmax pmax
comp=Z,15nm,1.1s
WR0 Warramunga Arr 74.30 130 P P 10 11 44.5 -0.8
PAX Paxson 74.30 21 P P 10 11 44.9 0.0
PAX Paxson 74.30 21 P P 10 11 44.9 0.0
PAX pmax pmax
comp=Z,8.0nm,1.0s
SML Sawmill 74.34 22 P P 10 11 44.5 -0.6
SML Sawmill 74.34 22 P P 10 11 43.9 -1.2
SML pmax pmax
comp=Z,27nm,0.8s
RC01 Rabbit Creek A 74.44 23 P P 10 11 46.1 +0.5
KNK Knik Glacier 74.60 23 P P 10 11 46.3 -0.3
KNK IAmb IAmb 10 11 48.0
comp=Z,19nm,1.1s
SCM Sheep Creek Mo 74.63 22 P P 10 11 46.9 +0.1
SCM IAmb IAmb 10 11 50.4
comp=Z,22nm,1.0s
SCM Sheep Creek Mo 74.63 22 P P 10 11 46.9 +0.1
SCM pmax pmax
comp=Z,21nm,1.0s
TOA0 Torodi Ar. Sit 74.96 275 P P 10 11 48.2 -1.2
TORD Torodi Ar. Bea 74.96 275 P P 10 11 48.1 -1.3
comp=Z,3.4nm,1.0s,baz=22,slow=5.4,SNR=8.6
TORD Torodi Ar. Bea 74.96 275 P P 10 11 47.4 -2.0
DAWY Dawson 75.03 18 P P 10 11 49.0 0.0
DAWY IAmb IAmb 10 11 52.4
comp=Z,17nm,1.2s
BCAR Beaver Creek A 75.24 19 P P 10 11 50.1 -0.2
COEN Coen 75.82 119 P P 10 11 54.0 -0.2
COEN IAmb IAmb 10 11 55.2
comp=Z,11nm,0.9s
NWAO Narrogin (SRO) 75.84 150 P P 10 11 52.4 -1.5
NWAO Narrogin (SRO) 75.84 150 P P 10 11 52.4 -1.5
NWAO pmax pmax
comp=Z,23nm,1.0s
VRDI Verde Repeater 76.26 21 P P 10 11 55.9 -0.4
VRDI IAmb IAmb 10 11 57.7
comp=Z,7.0nm,0.8s
AS31 Alice Springs 76.68 132 P P 10 11 58.8 -0.1
AS31 IAmb IAmb 10 11 59.8
comp=Z,6.2nm,0.8s
ASAR Alice Springs 76.68 132 P P 10 11 59.0 0.0
comp=Z,21nm,0.8s,baz=321,slow=5.9,SNR=156
ASAR Alice Springs 76.68 132 P P 10 11 58.7 -0.2
ASAR Alice Springs 76.68 132 P P 10 11 59.0 0.0
BALM Baldy 76.74 21 P P 10 11 58.5 -0.4
BALM Baldy 76.74 21 P P 10 11 58.0 -0.9
BALM pmax pmax
comp=Z,25nm,1.2s
BARN Barnard Glacie 76.91 20 P P 10 12 00.7 +0.7
BARN IAmb IAmb 10 12 01.9
comp=Z,17nm,1.0s
CTGM Chitina Glacie 77.08 20 P P 10 12 00.9 0.0
HYT Haines Junctio 78.24 19 P P 10 12 08.4 +1.0
WHY Whitehorse 79.04 18 P P 10 12 12.1 +0.4
WHY IAmb IAmb 10 12 12.9
comp=Z,14nm,1.4s
LBTB Lobatse 80.93 230 P P 10 12 21.7 -0.7
LBTB IAmb IAmb 10 12 22.4
comp=Z,8.2nm,0.8s
LBTB Lobatse 80.93 230 P P 10 12 21.7 -0.7
LBTB pmax pmax
comp=Z,8.0nm,0.9s
YKA Yellowknife Ar 80.98 8 P P 10 12 21.4 -0.6
comp=Z,3.9nm,0.6s,baz=338,slow=5.3,SNR=64
YKA PP PP 10 15 26.1 +0.2
comp=Z,0.6nm,0.8s,baz=344,slow=7.9,SNR=4.9
CTAO Charters Tower 82.12 122 P P 10 12 29.5 +0.8
BOSA Boshof 83.75 228 P P 10 12 35.7 -1.4
comp=Z,6.2nm,0.8s,baz=26,slow=5.2,SNR=13
BOSA Boshof 83.75 228 P P 10 12 36.2 -0.9
BOSA IAmb IAmb 10 12 36.5
comp=Z,9.7nm,0.9s
BOSA Boshof 83.75 228 P P 10 12 36.2 -0.9
BOSA pmax pmax
comp=Z,10.0nm,0.9s
DBIC Dimbokro 83.93 274 P P 10 12 36.4 -1.8
comp=Z,1.4nm,0.7s,baz=24,slow=6.3,SNR=3.5
DBIC Dimbokro 83.93 274 P P 10 12 37.4 -0.8
DBIC IAmb IAmb 10 12 43.4
comp=Z,9.6nm,1.3s
DBIC Dimbokro 83.93 274 P P 10 12 37.4 -0.8
DBIC pmax pmax
comp=Z,10.0nm,1.3s
BBOO Buckleboo 84.81 137 P P 10 12 41.7 -0.6
SCHQ Schefferville 85.84 343 P P 10 12 45.9 -1.3
comp=Z,3.8nm,1.0s,baz=22,slow=6.7,SNR=3.8
SCHQ Schefferville 85.84 343 P P 10 12 46.4 -0.8
SCHQ IAmb IAmb 10 12 49.1
comp=Z,8.7nm,1.1s
STKA Stephens Creek 87.31 133 P P 10 12 53.7 -0.9
comp=Z,5.5nm,0.9s,baz=333,slow=5.7,SNR=7.3
STKA Stephens Creek 87.31 133 P P 10 12 52.8 -1.8
FFC Flin Flon 89.65 3 P P 10 13 05.6 +0.1
FFC IAmb IAmb 10 13 05.7
comp=Z,9.3nm,1.1s
FFC Flin Flon 89.65 3 P P 10 13 05.6 +0.1
FFC pmax pmax
comp=Z,9.0nm,1.1s
MATQ Matagami 92.89 347 P P 10 13 20.4 -0.3
baz=16
D63A Stockholm 93.29 340 P P 10 13 22.8 +0.3
baz=24
B05A Bryant 93.39 16 P P 10 13 23.7 +0.8
baz=340
LSQQ Lebel-sur-Quev 93.44 347 P P 10 13 22.7 -0.5
baz=17
ULM Lac du Bonnet 94.20 359 P P 10 13 25.3 -1.3
comp=Z,1.2nm,0.5s,baz=304,slow=7.0,SNR=3.3
ULM Lac du Bonnet 94.20 359 P P 10 13 26.3 -0.3
ULM IAmb IAmb 10 13 26.7
comp=Z,11nm,1.5s
ULM Lac du Bonnet 94.20 359 P P 10 13 26.3 -0.3
ULM pmax pmax
comp=Z,11nm,1.5s
CPUP Villa Florida 144.45 274 PKP PKPab 10 19 41.4 -1.2
comp=Z,5.0nm,1.0s,baz=89,slow=2.6,SNR=7.5
ATAH Atahualpa 146.40 324 PKPbc PKPab 10 19 50.8 +0.1
comp=Z,8.4nm,0.8s,baz=76,slow=4.4,SNR=5.3

IDC 12 10:01:08.3±5.0,36°.54N×82°.47E,h0km,mb4.1/2, mb1 4.5/4,mb1mx3.8/40,mbtmp4.4/4,ML4.0/2,Error ellipse: s-maj=89.7km s-min=42.9km az=171.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	17.49	5	P	Pn	10 05 12.1	-1.4
	0.7nm,0.3s,baz=192,slow=12,SNR=3.9						
BVAR	Borovoye Array	18.54	337	P	Pn	10 05 27.4	+1.0
	1.8nm,0.3s,baz=144,slow=9.5,SNR=4.0						
SONM	Songino Array	20.93	50	P	P	10 05 52.9	+0.3
	7.3nm,0.8s,baz=247,slow=9.9,SNR=1.5						
GERES	GERESS Array B	50.38	307	P	P	10 10 06.8	-0.4
	1.5nm,0.6s,baz=71,slow=6.3,SNR=2.5						

BJI 12 10:10:18.5±0.0,36°.04N×82°.51E,h10km,ML4.0/5
IDC 12 10:10:20.4±3.1,36°.30N×82°.50E,h0km,mb3.6/5, mb1 3.8/10,mb1mx3.6/49,mbtmp3.8/10,ML3.5/5,Error ellipse: s-maj=54.8km s-min=32.7km az=8.0
ISC 12 10:10:22.7±2.7,36°.4N±0°.3×82°.5E±0°.2,h10km,n10, σ1§23/10,mb3.6/4,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	8.81	318	Pn	Pn	10 12 31.2	+1.0
	0.2nm,0.3s,baz=51,slow=14,SNR=2.6						
AAK				Lg	Lg	10 14 58.3	
	1.0nm,0.3s,baz=305,slow=18,SNR=4.6						
MKAR	Makanchi Array	10.40	359	Pn	Pn	10 12 53.0	+1.1
	1.9nm,0.3s,baz=191,slow=13,SNR=45						
KURBB	Kurchatov Arra	14.52	350	Pn	Pn	10 13 46.6	-1.6
	0.0nm,0.3s,baz=174,slow=12,SNR=4.9						
ZALV	Zalesovo Beam	17.63	4	P	Pn	10 14 26.7	-1.6
	0.2nm,0.3s,baz=181,slow=13,SNR=7.3						
BVAR	Borovoye Array	18.70	337	P	P	10 14 42.1	+1.1
	1.2nm,0.3s,baz=143,slow=10.0,SNR=17						
SONM	Songino Array	20.98	50	P	P	10 15 06.9	+0.8
	1.1nm,0.8s,baz=215,slow=14,SNR=3.7						
AKTO	Aktyubinsk	22.55	316	P	P	10 15 21.8	-0.9
	0.8nm,0.5s,baz=119,slow=10,SNR=2.7						
FINES	FINESS Array B	42.93	324	P	P	10 18 21.4	+0.2
	1.4nm,0.7s,baz=89,slow=7.8,SNR=5.0						
ARCES	ARCESS Array B	44.98	335	P	P	10 18 37.8	+0.1
	1.8nm,0.8s,baz=94,slow=8.3,SNR=4.5						
YKA	Yellowknife Ar	80.50	8	P	P	10 22 33.8	-0.7
	0.2nm,0.5s,baz=333,slow=5.3,SNR=3.8						

IDC 12 10:19:14.0±0.6,22°.73S×68°.53W,h92km±5km,mb4.1/7, mb1 4.1/11,mb1mx3.9/30,mbtmp4.3/11,Error ellipse: s-maj=21.3km s-min=16.0km az=27.0
SJA 12 10:19:14.5±0.7,22°.78S×68°.77W,h104km±5km,ML4.3, MW4.2
NEIC 12 10:19:14.6±2.0,22°.82S±0°.05×68°.57W±0°.08,h99km±4km, Error ellipse: s-maj=10.1km s-min=7.0km az=89.0
VAO 12 10:19:14.7±0.4,22°.74S×68°.48W,h91km±4km,mb4.6
GUC 12 10:19:15.1±0.6,22°.79S×68°.74W,h107km±3km,ML4.5
ISC 12 10:19:14.1±0.6,22°.82S±0°.03×68°.61W±0°.05,h97km±5km, n143,σ1§27/166,mb4.6/23,8C,Northern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LVC Limon Verde 0.35 307 ⇑*i*P Pn 10 19 30.0 +1.0
LVC *i* S Sn 10 19 41.0 +0.8
LVC Limon Verde 0.35 307 P Pn 10 19 29.9 +0.8
678nm,0.3s,baz=120,slow=2.2,SNR=4766
LVC S Sn 10 19 41.0 +0.8
2µm,0.3s,baz=285,slow=20,SNR=234
LVC Limon Verde 0.35 307 *e*P Pn 10 19 30.1 +1.0
LVC Limon Verde 0.35 307 Pn 10 19 30.3 +1.2
LVC Sn Sn 10 19 41.1 +0.9
LVC Limon Verde 0.35 307 *i* P Pn 10 19 30.0 +1.0
LVC *i* S Sn 10 19 40.7 +0.5
PB09 IPOC Station P 1.18 330 ⇑*i*P Pn 10 19 37.5 +1.0
PB09 *i* S Sn 10 19 54.1 +0.7
PB09 IAML 10 19 55.5
comp=E,9µm,0.2s
PB09 IPOC Station P 1.18 330 *i* P Pn 10 19 37.6 +1.0
PB09 *i* S Sn 10 19 53.9 +0.5
PB09 IAML 10 19 54.5
comp=Z,11µm,0.2s
PB03 IPOC Station P 1.31 306 ⇑*i*P Pn 10 19 38.2 +0.1
PB03 *i* S Sn 10 19 55.5 -0.7
PB03 IAML 10 19 56.8
comp=N,7µm,0.4s
PB03 IPOC Station P 1.31 306 *i* P Pn 10 19 38.3 +0.1
PB03 *i* S Sn 10 19 55.5 -0.7
PB05 IPOC Station P 1.47 268 *i* P Pn 10 19 40.2 +0.2
PB05 *i* S Sn 10 19 59.4 -0.2
PB04 IPOC Station P 1.51 288 ⇑*i*P Pn 10 19 40.4 0.0
PB04 *e*S Sn 10 19 59.5 -0.9
PB04 IPOC Station P 1.51 288 Pn 10 19 40.8 +0.3
PB04 Sn Sn 10 19 59.9 -0.5
PB04 IPOC Station P 1.51 288 *i* P Pn 10 19 40.5 0.0
PB04 *i* S Sn 10 20 00.9 +0.4
PB04 IAML 10 20 14.0
comp=Z,4µm,0.8s
PB07 IPOC Station P 1.61 312 ⇑*i*P Pn 10 19 42.0 +0.2
PB07 *i* S Sn 10 20 02.0 -0.8
PB07 IAML 10 20 03.9
comp=E,13µm,0.5s
PB07 IPOC Station P 1.61 312 *i* P Pn 10 19 42.0 +0.2
PB07 *i* S Sn 10 20 01.8 -1.0
PB02 IPOC Station P 1.92 321 ⇑*i*P Pn 10 19 45.6 +0.1
PB02 *i* S Sn 10 20 08.6 -1.0
PB02 IAML 10 20 13.3
comp=E,8µm,0.4s
PB02 IPOC Station P 1.92 321 *i* P Pn 10 19 45.7 +0.1
PB02 *i* S Sn 10 20 08.6 -1.0
PB10 IPOC Station P 1.92 249 *i* P Pn 10 19 45.5 -0.1
PB10 *i* S Sn 10 20 08.9 -0.6
PB10 IPOC Station P 1.92 249 Pn 10 19 46.8 +1.2
PB10 Sn Sn 10 20 08.7 -0.8
PB01 IPOC Station P 1.95 335 ⇑*i*P Pn 10 19 46.3 +0.2
PB01 *i* S Sn 10 20 09.7 -0.6
PB01 IAML 10 20 11.0
comp=E,8µm,0.2s
PB01 IPOC Station P 1.95 335 Pn 10 19 47.0 +0.9
PB01 Sn Sn 10 20 09.7 -0.6
PB14 IPOC Station P 2.44 222 *e*P Pn 10 19 53.5 +0.8
PB14 *i* S Sn 10 20 18.6 -3.5
PB14 IPOC Station P 2.44 222 *i* P Pn 10 19 53.4 +0.7
PB14 *i* S Sn 10 20 19.6 -2.5
PB14 IAML 10 20 27.7
comp=Z,799nm,0.4s
PATCX Punta Patache 2.46 324 ⇑*i*P Pn 10 19 51.8 -0.9
PATCX Punta Patache 2.46 324 *i* P Pn 10 19 51.9 -0.9
PATCX *i* S Sn 10 20 16.7 -5.5
GO02 Mina Guanaco 2.50 201 Pn 10 19 55.1 +1.7
GO02 Sn Sn 10 20 22.2 -1.3
PB08 IPOC Station P 2.72 349 *i* P Pn 10 19 57.1 +0.7
YJA Yavi 2.93 78 *i* P Pn 10 20 03.7 +4.4
HJA Humahuaca 2.97 98 *i* P Pn 10 20 04.2 +4.5
GO01 Chusmiza 3.19 350 Pn Pn 10 20 04.1 +1.3
PB11 IPOC Station P 3.20 342 Pn 10 20 02.2 -0.5
PB11 IPOC Station P 3.20 342 *i* P Pn 10 20 01.7 -1.0
SLA San Lorenzo 3.41 124 *i* P Pn 10 20 10.7 +5.2
SLA IAML 10 20 11.6
comp=Z,231nm,0.5s
MNMC Minye Minye 3.79 346 Pn 10 20 09.6 -1.1
AHML Horco Molle 4.94 144 *i* P Pn 10 20 29.9 +3.8
GO03 Copiap 4.98 197 Pn 10 20 26.2 -0.4
GO03 Copiap 4.98 197 *i* P Pn 10 20 26.1 -0.5
LPAZ La Paz 6.51 4 P Pn 10 20 49.0 +1.0
comp=Z,1.4nm,0.3s,baz=204,slow=2.6,SNR=51
LPAZ La Paz 6.51 4 *e*P Pn 10 20 47.5 -0.5
LPAZ La Paz 6.51 4 Pn 10 20 49.8 +1.8
LPAZ La Paz 6.51 4 Pn 10 20 50.1 +2.1
LPAZ La Paz 6.51 4 *i* P Pn 10 20 49.5 +1.5
AROD Rodeo 7.36 186 *i* P Pn 10 21 02.1 +3.0
GO04 Tololo Observa 7.58 195 Pn Pn 10 21 00.3 -1.8
GO04 Tololo Observa 7.58 195 *i* P Pn 10 21 00.3 -1.8
CFA Coronel Fontan 8.76 178 P Pn 10 21 17.3 -0.7
comp=Z,1.3nm,0.3s,baz=308,slow=14,SNR=15
RTLS Leoncito 8.96 184 *i* P Pn 10 21 20.5 -0.5
RTLS IAML 10 21 51.3
comp=Z,13nm,0.5s
RTCV Cerro Valdivia 9.01 180 *i* P Pn 10 21 20.3 -1.0
ACAN Cantantal 9.50 173 *i* P Pn 10 21 27.1 -0.9
SIV San Ignacio 9.83 48 P Pn 10 21 30.3 -2.3
comp=Z,10.0nm,0.3s,baz=256,slow=11,SNR=125
SIV S Sn 10 23 15.0 -6.3
comp=Z,1.5nm,0.3s,baz=327,slow=19,SNR=6.1
CPUP Villa Florida 10.84 111 P Pn 10 21 46.0 -0.3
comp=Z,0.2nm,0.3s,baz=292,slow=15,SNR=12
CPUP Villa Florida 10.84 111 Pn 10 21 44.1 -2.2
LAMA Las Malvinas 12.08 182 *i* P Pn 10 22 03.9 +1.0
AQDB Aquidauana 12.23 81 *e*P Pn 10 22 02.9 -2.0
SALV Santo Antonio 13.99 63 *e*P Pn 10 22 25.5 -2.6
TRCB Terra Rica 14.73 93 *e*P Pn 10 22 38.8 +1.2
PTGB Pitanga 15.26 100 *e*P Pn 10 22 44.8 +0.4
CPSB Capacava Do Su 15.52 122 *e*P Pn 10 22 47.8 +0.3
ITAB Concordia 15.56 110 *e*P Pn 10 22 47.9 -0.2
PLTB Pedras Altas 16.02 127 *e*P Pn 10 22 53.7 -0.2
PCMB Pacaembu 16.11 89 *e*P Pn 10 22 54.6 -0.4
CLDB Colider 17.06 48 *e*P Pn 10 23 04.7 -2.0
CNLB Canela 17.20 116 *e*P P 10 23 08.7 +0.2
ITRB Iturama 17.29 83 *e*P P 10 23 10.4 +0.9
ARAG Araguaiana, MT 17.35 69 *e*P Pn 10 23 09.3 -1.1
FRTB Fartura 17.53 95 *e*P Pn 10 23 12.3 -0.2
PLCA Paso Flores 17.93 185 P Pn 10 23 18.2 +1.0
comp=Z,0.1nm,0.3s,baz=40,slow=13,SNR=2.9
PLCA Paso Flores 17.93 185 *e*P P 10 23 17.4 +0.9
PLCA Paso Flores 17.93 185 P P 10 23 17.0 +0.5
BB19B Bebedouro 18.71 88 *e*P P 10 23 25.6 +0.4
RCLB Rio Claro- Sao 19.46 93 *e*P P 10 23 33.7 +0.3
SPB Sao Paulo 19.48 96 *e*P P 10 23 33.1 -0.4
SPB Sao Paulo 19.48 96 P P 10 23 34.2 +0.7
SPB IAmb IAmb 10 23 34.9
comp=Z,22nm,0.9s
IPMB Ipameri, GO 19.71 80 *e*P P 10 23 35.3 -0.8
VAO Valinhos 19.93 95 *e*P P 10 23 37.9 -0.7
BDFB Brasilia 20.70 73 P P 10 23 45.8 -1.0
comp=Z,9.3nm,0.6s,baz=255,slow=13,SNR=14
BDFB Brasilia 20.70 73 P P 10 23 46.4 -0.4
BDFB IAmb IAmb 10 23 46.8
comp=Z,11nm,0.7s
PARB Paraibuna 21.15 96 *e*P P 10 23 51.0 -0.6
PEXB Peixe 22.08 65 *e*P P 10 23 59.8 -1.6
BSCB Bom Sucesso 22.18 90 *e*P P 10 24 02.0 -0.6
ESAR Angra dos Reis 22.25 95 *e*P P 10 24 03.4 +0.2
JANB Januaria 24.22 76 *e*P P 10 24 19.9 -2.2
SMTB Santa Maria do 24.48 59 *e*P P 10 24 24.2 -0.1
OTAV Otavalo 24.84 336 *e*P P 10 24 29.4 +1.2
SJMB Sao Joao De Ma 25.95 86 *e*P P 10 24 37.6 0.0
BSFB Barra de Sao F 26.23 86 *e*P P 10 24 40.5 +0.3
RUSC La Rusia 28.87 351 P P 10 25 05.1 +0.8
NBPB Pedra_Branca-C 32.85 63 *e*P P 10 25 38.5 -0.4
RCBR Riachuelo 35.77 67 P P 10 26 04.6 +0.4
NBPV Pedro Velho 35.99 68 *e*P P 10 26 05.9 -0.1
TEIG Tepich 46.90 334 P P 10 27 35.2 +0.3
TEIG IAmb IAmb 10 27 46.0
comp=Z,16nm,1.1s
Z50A Ashland 58.16 343 P P 10 28 57.4 -0.5
LRAL Lakeview Retre 58.25 342 P P 10 28 58.2 -0.3
342A Flagon Creek P 58.49 336 P P 10 29 01.3 +1.2
X48A Hartselle 59.59 342 P P 10 29 07.5 -0.3
TKL Tuckaleechee C 59.91 346 P P 10 29 10.0 +0.1
V48A Smith Brothers 60.74 343 P P 10 29 15.5 -0.1
SNAA Sanae 60.95 161 P P 10 29 18.4 +1.8
SNAA IAmb IAmb 10 29 19.6
comp=Z,9.0nm,1.4s
R61A Willards 61.16 354 P P 10 29 16.3 -2.0
WVT Waverly 61.39 342 P P 10 29 19.2 -0.7
WVT IAmb IAmb 10 29 19.6
comp=Z,7.0nm,0.7s
MIAR Mount Ida 61.79 337 P P 10 29 22.7 0.0
MIAR IAmb IAmb 10 29 23.1
comp=Z,9.6nm,1.2s
TXAR Lajitas Array 61.87 325 P P 10 29 23.5 0.0
comp=Z,0.2nm,0.5s,baz=158,slow=8.2,SNR=6.4
TXAR Lajitas Array 61.87 325 P P 10 29 24.0 +0.5
W41B Gary Mavity, V 61.88 338 P P 10 29 23.1 -0.2
WHAR Wooly Hollow 62.00 338 P P 10 29 24.5 +0.5
WHAR IAmb IAmb 10 29 30.3
comp=Z,12nm,1.5s
W39A Magazine 62.45 337 P P 10 29 27.9 +0.9
W39A IAmb IAmb 10 29 28.0
comp=Z,5.1nm,0.8s
PBMO Poplar Bluff 62.76 340 P P 10 29 28.9 -0.1
U40A Yellville 63.16 338 P P 10 29 31.6 -0.2
U40A IAmb IAmb 10 29 31.7
comp=Z,3.5nm,0.7s
HHAR Hobbs 63.48 337 P P 10 29 34.0 +0.2
HHAR IAmb IAmb 10 29 34.4
comp=Z,3.9nm,1.1s
CCM Cathedral Cave 64.18 340 P P 10 29 38.2 -0.2
CCM IAmb IAmb 10 29 38.5
comp=Z,4.1nm,0.7s
MNTX Cornudas Mount 64.64 326 P P 10 29 41.8 +0.1
QSPA South Pole Qui 67.38 180 P P 10 30 00.9 +2.0
QSPA IAmb IAmb 10 30 01.5
comp=Z,13nm,1.4s
G62A West of Eustis 67.73 359 P P 10 30 02.6 +1.5
CBKS Cedar Bluff 67.90 334 P P 10 30 02.8 +0.5
CBKS IAmb IAmb 10 30 03.4
comp=Z,9.3nm,0.8s
F64A Sherman 68.36 0 P P 10 30 05.8 +0.9
F64A IAmb IAmb 10 30 06.1
comp=Z,7.0nm,0.9s
DBIC Dimbokro 68.85 73 P P 10 30 08.6 -0.1
comp=Z,4.2nm,0.8s,baz=205,slow=9.0,SNR=7.1
DBIC Dimbokro 68.85 73 P P 10 30 09.7 +1.0
TRQ Mont Tremblant 68.93 356 P P 10 30 09.1 +0.6
D53A Lac Vacive, Po 70.06 353 P P 10 30 15.6 +0.2
D53A IAmb IAmb 10 30 16.1
comp=Z,6.7nm,0.7s
VLDQ Val d'Or 71.05 354 P P 10 30 21.8 +0.4

RDMU	Red Mountain	73.69	329	P	P	10 30 38.8	+1.2
PDAR	Pinedale Array	75.39	330	P	P	10 30 47.5	+0.1
	comp=Z,0.3nm,0.6s,baz=109,slow=6.8,SNR=4.9						
REDW	Red Top Meadow	76.45	330	P	P	10 30 54.5	+1.1
ULM	Lac du Bonnet	76.66	342	P	P	10 30 53.8	-0.3
	comp=Z,2.3nm,0.6s,baz=167,slow=4.8,SNR=6.9						
MOOW	Moose Ponds	76.70	330	P	P	10 30 55.6	+0.8
FLWY	Flagg Ranch	76.94	330	P	P	10 30 58.0	+1.9
FLWY				IAmb	IAmb	10 30 58.5	
	comp=Z,4.4nm,0.8s						
SCHQ	Schefferville	77.35	1	P	P	10 30 57.5	-0.4
	comp=Z,1.5nm,0.6s,baz=168,slow=4.6,SNR=4.5						
SCHQ	Schefferville	77.35	1	P	P	10 30 58.2	+0.3
SCHQ				IAmb	IAmb	10 31 05.3	
	comp=Z,8.9nm,1.4s						
TORD	Torodi Ar. Bea	77.54	70	P	P	10 30 59.7	-0.1
	comp=Z,5.8nm,0.5s,baz=258,slow=5.7,SNR=40						
YHH	Holmes Hill	77.55	331	P	P	10 31 02.0	+2.4
GCMT	Greycliff	77.81	332	P	P	10 31 02.6	+1.8
PAHR	Pah Rah Range	78.19	322	P	P	10 31 04.5	+1.4
PAHR				IAmb	IAmb	10 31 05.3	
	comp=Z,4.5nm,0.8s						
WDC	Whiskeytown Da	80.57	321	P	P	10 31 15.5	-0.3
WDC				IAmb	IAmb	10 31 16.0	
	comp=Z,16nm,1.5s						
JTMT	Jette	81.34	331	P	P	10 31 21.3	+1.3
YKA	Yellowknife Ar	92.52	340	P	P	10 32 14.1	+0.1
	comp=Z,3.4nm,0.8s,baz=137,slow=4.6,SNR=42						
ASAR	Alice Springs	128.87	207	PKP	PKPdf	10 38 11.7	+0.5
	comp=Z,1.0nm,0.8s,baz=135,slow=1.7,SNR=12						
WRA	Warramunga Arr	131.96	210	PKP	PKPdf	10 38 17.7	+0.6
	comp=Z,0.6nm,0.6s,baz=159,slow=1.6,SNR=7.9						
ZALV	Zalesovo Beam	143.02	26	PKP	PKPdf	10 38 35.0	-1.3
	comp=Z,1.3nm,0.5s,baz=298,slow=4.9,SNR=6.4						
MK31	Makanchi Array	146.52	37		PKPab	10 38 45.1	-0.3
MKAR	Makanchi Array	146.52	37	PKPbc	PKPbc	10 38 43.6	-0.6
	comp=Z,1.4nm,0.6s,baz=330,slow=3.0,SNR=14						
MKAR	Makanchi Array	146.52	37		PKPdf	10 38 43.4	+0.8
SONM	Songino Array	154.72	8	PKPbc	PKiKP	10 39 04.6	+0.6
	comp=Z,0.6nm,0.6s,baz=49,slow=1.2,SNR=3.0						
SONM				PKPab	PKPab	10 39 19.9	+0.7
	comp=Z,0.8nm,0.8s,baz=348,slow=3.2,SNR=3.8						
SHL	Shillong	161.99	77		PKPdf	10 39 02.6	-2.3

*PDG **12** 10:34:30.7±0.4, 38.°17N×20.°28E, h9km, MD4.7/1, ML4.7/13, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*BGR **12** 10:34:30.8±1.1, 38.°35N×21.°33E, h15km, Error ellipse: s-maj=34.5km s-min=13.3km az=52.0*
*THE **12** 10:34:31.2, 38.°20N×20.°32E, h8km±1km, ML4.6/18, Error ellipse: s-maj=1.5km s-min=0.5km az=92.0*
*ATH **12** 10:34:31.0, 38.°17N×20.°35E, h11km±1km, ML4.5/19, Error ellipse: s-maj=1.7km s-min=0.9km az=66.0*
*MOS **12** 10:34:31.1±1.8, 38.°25N×20.°29E, h9km, mb4.8/28, Error ellipse: s-maj=4.8km s-min=2.7km az=81.3*
*NEIC **12** 10:34:31.2±3.0, 38.°21N±0.°04×20.°28E±0.°05, h10km±1km, Error ellipse: s-maj=5.5km s-min=5.2km az=109.0*
*IDC **12** 10:34:31.2±0.6, 38.°22N×20.°46E, h0km, mb4.4/26, mb1 4.4/37, mb1mx4.3/51, mbtmp4.3/37, ML4.0/11, Error ellipse: s-maj=12.7km s-min=10.7km az=172.0*
*BEO **12** 10:34:31.9±0.8, 38.°04N×20.°17E, h30km±6km, ML4.5/9*
*SKO **12** 10:34:32.0, 38.°24N×20.°30E, h0km*
*GII **12** 10:34:39.7±0.0, 37.°75N×21.°35E, h1km*
ISC 12 10:34:32.1±0.5, **38.°19N**±0.°02×**20.°34E**±0.°02, **h10**km±2km, **n485**, σ1^s**79**/576, **mb4.6**/67, **22C-7D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.02	30	P	Pg	10 34 33.0	-0.9
CHV1	Chavriata, Kef	0.04	97	P	Pg	10 34 32.9	-1.0
CHV1				S	Sg	10 34 34.3	-0.9
LXRA	Lixouri, Kepha	0.08	81	P	Pg	10 34 33.4	-1.0
LXRA				S	Sg	10 34 35.2	-0.8
LXR1	Lixouri, Cepha	0.08	81	P	Pg	10 34 33.4	-1.0
LXR1				S	Sg	10 34 35.3	-0.7
KEF4	Livadi, Kephal	0.10	45	P	Pg	10 34 33.8	-0.9
ARGA	Argostoli. Kep	0.11	95	P	Pg	10 34 33.9	-0.9
ARGA				S	Sg	10 34 36.1	-0.6
ARG2	Argostoli	0.12	94	P	Pg	10 34 33.9	-1.0
ARG2				S	Sg	10 34 36.1	-0.8
KEF2	Argostoli. Kep	0.12	101	P	Pg	10 34 34.1	-0.9
KEF1	Kardakata, Kep	0.14	50	P	Pg	10 34 34.4	-0.9
VLS	Valsamata	0.20	93	P	Pg	10 34 35.1	-1.2
VLS				S	Sg	10 34 38.1	-1.0
	415µm,0.3s						
VLS	Valsamata	0.20	93	P	Pg	10 34 35.1	-1.2
VLS				S	Sg	10 34 38.3	-0.9
VLS				AML	AML	10 34 39.0	
VLS				AML	AML	10 34 39.1	
VLS	Valsamata	0.20	93	P	Pg	10 34 35.1	-1.2
VSK1	VASILIKIADES	0.28	39	P	Pg	10 34 37.1	-0.7
VSK1				S	Sg	10 34 41.2	-0.5
KONA	Konidatara, Ke	0.30	38	P	Pg	10 34 37.3	-0.8
KONA				S	Sg	10 34 41.6	-0.6
FSK	Fiskardo	0.32	33	P	Pg	10 34 37.7	-0.9
FSK				S	Sg	10 34 42.5	-0.4
	330µm,0.6s						
FSK	Fiskardo	0.32	33	P	Pg	10 34 37.6	-0.9
FSK				S	Sg	10 34 42.5	-0.4
FSK				AML	AML	10 34 43.6	
FSK				AML	AML	10 34 43.9	
VLMS	Volimes, Zakyn	0.40	140	P	Pg	10 34 38.9	-1.2
VLMS				S	Sg	10 34 44.5	-0.8
VLMS				AML	AML	10 34 48.3	
VLMS				AML	AML	10 34 54.5	
EVGI	Lefkada island	0.50	30	P	Pg	10 34 40.8	-1.1
EVGI				S	Sg	10 34 48.2	-0.3
EVGI	Lefkada island	0.50	30	P	Pg	10 34 40.9	-0.9
MGNA	Meganis	0.59	37	P	Pg	10 34 42.4	-1.2
MGNA				S	Sg	10 34 50.7	-0.5
ZAK2	Zakynthos	0.60	132	P	Pg	10 34 42.7	-1.0
ZAK2				S	Sb	10 34 53.5	+0.3
	192µm,0.6s						
KRI1	kERI	0.65	144	P	Pg	10 34 43.1	-1.5
KRI1				S	Sg	10 34 53.7	+0.6
	57µm,0.8s						
LKD2	Lefkada island	0.65	23	P	Pg	10 34 43.3	-1.4
LKD2				S	Sg	10 34 52.3	-1.0
	48µm,0.9s						
LKD2	Lefkada island	0.65	23	P	Pg	10 34 43.4	-1.4
LKD2				S	Sb	10 34 53.8	-0.9
LKD2				AML	AML	10 35 02.1	
LKD2				AML	AML	10 35 03.9	
	comp=E,73119µm,0.7s						
TSLK	Tsoukalades, L	0.68	21	P	Pg	10 34 44.1	-1.2
TSLK				S	Sb	10 34 55.4	-0.3
	comp=E,62µm,0.6s						
TSLK	Tsoukalades, L	0.68	21	P	Pg	10 34 44.4	-0.9
AST1	Astakos	0.69	59	P	Pg	10 34 44.1	-1.3
AST1				S	Sg	10 34 54.8	+0.4
	comp=E,92µm,0.4s						
PDO	Prodromos	0.78	58	P	Pg	10 34 45.7	-1.5
PDO				S	Sb	10 34 57.8	-0.7
	comp=E,68µm,0.6s						
PDO	Prodromos	0.78	58	P	Pg	10 34 45.9	-1.3
PDO				S	Sg	10 34 56.8	-0.6
PDO				AML	AML	10 35 04.6	
	comp=E,82524µm,0.5s						
PDO				AML	AML	10 35 05.0	
	comp=N,73895µm,0.4s						
RLS	Riolos of Patr	0.90	98	P	Pg	10 34 48.0	-1.5
RLS				S	Sg	10 35 00.7	-0.5
	comp=N,16µm,1.1s						
RLS	Riolos of Patr	0.90	98	P	Pg	10 34 47.9	-1.5
RLS				S	Sg	10 35 00.3	-0.9
RLS				AML	AML	10 35 05.5	
	comp=E,27364µm,0.5s						
RLS				AML	AML	10 35 10.4	
	comp=N,31136µm,1.1s						
PVO	Paravola	1.03	65	P	Pg	10 34 50.5	-1.4
PVO				S	Sn	10 35 06.7	-0.4
	comp=N,50µm,0.6s						
PVO	Paravola	1.03	65	P	Pg	10 34 50.5	-1.4
PVO				AML	AML	10 35 12.7	
	comp=N,76170µm,0.4s						
PVO				AML	AML	10 35 12.8	
DRO	Drossia	1.11	102	P	Pb	10 34 51.7	-1.7
DRO				S	Sn	10 35 09.4	+0.2
	comp=N,35µm,0.5s						
UPR	University Cam	1.15	85	P	Pb	10 34 53.1	-1.0
UPR	University Cam	1.15	85	P	Pb	10 34 53.0	-1.0
AMT	Artemida-Makis	1.27	121	P	Pn	10 34 55.3	-0.7
AMT	Artemida-Makis	1.27	121	P	Pn	10 34 54.9	-1.1
AMT				AML	AML	10 35 25.7	
	comp=N,27367µm,1.1s						
AMT				AML	AML	10 35 26.3	
	comp=E,38351µm,0.8s						
LAKA	Lakka	1.29	87	P	Pn	10 34 54.6	-1.7
LAKA				S	Sg	10 35 14.5	+0.7
	comp=E,16µm,0.6s						
LAKA	Lakka	1.29	87	P	Pn	10 34 55.1	-1.3
ANX	Ano Chora	1.31	71	P	Pn	10 34 54.8	-1.8
ANX	Ano Chora	1.31	71	P	Pn	10 34 55.0	-1.6
ANX				AML	AML	10 35 21.2	
	comp=N,76389µm,0.5s						
ANX				AML	AML	10 35 21.4	
	comp=E,77401µm,0.5s						
IGT	Igoumenitsa	1.34	360	P	Pn	10 34 56.8	-0.2
IGT				S	Sg	10 35 14.9	-0.4
IGT	Igoumenitsa	1.34	360	*e*Pg	Pg	10 34 59.1	+1.2
IGT				*e*Sn	Sg	10 35 15.2	-0.1
IGT	Igoumenitsa	1.34	360	P	Pn	10 34 56.8	-0.2
IGT				S	Sg	10 35 15.2	-0.1
IGT				AML	AML	10 35 18.4	
	comp=E,20307µm,0.5s						
IGT				AML	AML	10 35 21.2	
	comp=N,25869µm,0.4s						
IGT	Igoumenitsa	1.34	360	P	Pg	10 34 57.8	-0.1
EVR	Evrytania	1.36	57	P	Pn	10 34 56.0	-1.4
EVR				S	Sg	10 35 15.6	-0.4
	comp=N,11µm,0.8s						
EVR	Evrytania	1.36	57	P	Pn	10 34 56.1	-1.2
EVR				AML	AML	10 35 22.4	
	comp=E,17162µm,0.7s						
EVR				AML	AML	10 35 25.3	
	comp=N,23764µm,1.0s						
SERG	Sergoula	1.37	80	P	Pn	10 34 56.1	-1.3
SERG				S	Sg	10 35 17.3	+1.1
	comp=N,20µm,0.7s						
SERG	Sergoula	1.37	80	P	Pn	10 34 55.8	-1.6
SERG				AML	AML	10 35 24.5	
	comp=E,20020µm,0.7s						
SERG				AML	AML	10 35 24.8	
	comp=N,51667µm,0.4s						
ALIK	Aliki, Aigiali	1.40	86	P	Pn	10 34 56.6	-1.1
KALE	Kalithea	1.43	81	P	Pn	10 34 57.0	-1.3
KALE				S	Sg	10 35 18.0	-0.2
	comp=N,12µm,0.9s						
KALE	Kalithea	1.43	81	P	Pn	10 34 57.0	-1.3
KLV	Kalavryta, Ach	1.44	95	P	Pn	10 34 57.8	-0.5
KLV				S	Sn	10 35 16.9	-0.4
	comp=N,7µm,0.5s						
KLV	Kalavryta, Ach	1.44	95	P	Pn	10 34 57.5	-0.8
JAN	Janina	1.52	15	P	Pb	10 35 00.4	-0.1
JAN	Janina	1.52	15	P	Pg	10 35 01.0	-0.3
JAN				AML	AML	10 35 28.0	
	comp=N,19581µm,0.3s						
JAN				AML	AML	10 35 29.4	
	comp=E,32658µm,0.7s						
JAN	Janina	1.52	15	P	Pg	10 35 01.0	-0.3
KEK	Kerkira	1.58	345	P	Pn	10 35 00.1	-0.1
KEK	Kerkira	1.58	345	P	Pn	10 35 00.4	+0.2
KASA	Kassiopi	1.59	349	P	Pb	10 35 00.9	-0.6
ITM	Ithomi	1.61	128	P	Pn	10 35 00.6	-0.1
ITM	Ithomi	1.61	128	P	Pn	10 35 00.4	-0.3
ITM	Ithomi	1.61	128		Pn	10 35 00.8	+0.1
ITM				Sn	Sg	10 35 25.1	+1.1
MAKR	Makrakomi, Fth	1.63	59	P	Pn	10 35 01.4	+0.5
MAKR	Makrakomi, Fth	1.63	59	P	Pn	10 35 01.5	+0.5
PYL	PYLOS	1.71	139	P	Pn	10 35 01.3	-0.7
PYL	PYLOS	1.71	139	P	Pn	10 35 01.5	-0.5
PYL				AML	AML	10 35 38.1	
	comp=E,6005µm,0.6s						
PYL				AML	AML	10 35 45.6	
	comp=N,6114µm,0.7s						
SRN	Sarande	1.71	351	P	Pn	10 35 02.2	+0.2
SRN				S	Sn	10 35 23.7	-0.2
	comp=N,5µm,0.9s						
AGG	Agios Georgios	1.77	61	P	Pn	10 35 03.2	+0.3
AGG				S	Sn	10 35 25.8	+0.3
	comp=N,10µm,0.8s						
AGG	Agios Georgios	1.77	61	P	Pb	10 35 03.7	-1.0
AGG				AML	AML	10 35 40.6	
	comp=E,16114µm,0.7s						
AGG				AML	AML	10 35 40.6	
	comp=N,19771µm,0.7s						
AGG	Agios Georgios	1.77	61		Pb	10 35 04.2	-0.5
AGG					Sg	10 35 28.7	-0.3
VLX	Vlachokerasia	1.81	116	P	Pn	10 35 04.2	+0.7
VLX	Vlachokerasia	1.81	116	P	Pn	10 35 04.2	+0.7
THL	Klokotos Trika	1.90	43	P	Pb	10 35 05.8	-1.1
THL	Klokotos Trika	1.90	43	P	Pb	10 35 06.0	-0.9
THL				AML	AML	10 35 38.9	
	comp=N,16588µm,0.6s						
THL				AML	AML	10 35 42.0	
	comp=E,18315µm,0.7s						
AXAR	Agios Charalam	1.91	72	P	Pb	10 35 05.9	-1.2
KPRO	Kipourio	1.94	24	P	Pb	10 35 06.8	-0.8
KPRO	Kipourio	1.94	24	P	Pb	10 35 07.2	-0.4
PROD	Prodromos	2.02	87	P	Pb	10 35 07.7	-1.3
PROD	Prodromos	2.02	87	P	Pn	10 35 07.0	+0.8
LTK	Loutraki	2.08	94	P	Pn	10 35 07.7	+0.6
LTK	Loutraki	2.08	94	P	Pn	10 35 07.7	+0.6
LTK				AML	AML	10 35 53.4	
	comp=N,6822µm,0.8s						
LTK				AML	AML	10 35 54.9	
	comp=E,10895µm,0.6s						
LOUT	Loutraki	2.09	95	P	Pn	10 35 07.8	+0.5
PENT	Pentalofos	2.10	17	P	Pb	10 35 09.0	-1.4
PENT	Pentalofos	2.10	17	P	Pb	10 35 09.6	-0.8
PENT				AML	AML	10 35 46.9	
	comp=E,8091µm,0.7s						
PENT				AML	AML	10 35 55.2	
	comp=N,8156µm,0.7s						
TPE	Tepelena	2.12	353	P	Pn	10 35 08.2	+0.5
LKR	Lokris	2.14	77	P	Pn	10 35 08.7	+0.7
LKR	Lokris	2.14	77	P	Pn	10 35 08.6	+0.7
NEST	Nestorio	2.29	14	P	Pb	10 35 12.0	-1.6
NEST	Nestorio	2.29	14	P	Pb	10 35 12.3	-1.3
VIL2	Platees	2.31	89	P	Pn	10 35 11.5	+1.2
VILL	Villia	2.34	90	P	Pn	10 35 11.2	+0.4
KRND	KRANIDI	2.37	109	P	Pn	10 35 12.2	+1.1
SCTE	Santa Cesarea	2.38	323		Pn	10 35 11.0	-0.2
KZN	Kozani	2.39	27	P	Pn	10 35 12.8	+1.3
KZN	Kozani	2.39	27	P	Pn	10 35 12.2	+0.7
KZN				AML	AML	10 35 54.5	
	comp=E,8681µm,1.3s						
KZN				AML	AML	10 35 58.7	
	comp=N,5740µm,0.6s						
KZN	Kozani	2.39	27	P	Pb	10 35 13.5	-1.8
DID	Didima	2.39	106	P	Pn	10 35 11.1	-0.4
DID	Didima	2.39	106	P	Pn	10 35 12.3	+0.9
NEO	Neokhori	2.52	63	P	Pn	10 35 14.5	+1.3
NEO	Neokhori	2.52	63	P	Pn	10 35 14.4	+1.2
XOR	Xorichti	2.52	61	P	Pn	10 35 14.4	+1.1
XOR	Xorichti	2.52	61	P	Pn	10 35 14.3	+1.1
LIT	Litokhoron	2.54	41	P	Pn	10 35 14.3	+0.8
LIT	Litokhoron	2.54	41		Pn	10 35 15.1	+1.6
LIT				Sn	Sn	10 35 46.3	+1.9
LIT	Litokhoron	2.54	41	P	Pn	10 35 15.2	+1.7
MRKA	Markates	2.60	78	P	Pn	10 35 14.0	-0.3
MRKA	Markates	2.60	78	P	Pn	10 35 14.9	+0.6
SKIA	Skiathos	2.64	67	P	Pn	10 35 15.8	+1.0
ATHU	Athens Univers	2.73	94	P	Pn	10 35 16.8	+0.8
ATHU				S	Sn	10 35 50.6	+1.5
PTL	Penteli	2.79	92	P	Pn	10 35 17.1	+0.3
KTHA	Kythira Island	2.91	131	P	Pn	10 35 18.4	-0.1
OHR	Ohrid	2.94	7	*i* Pn	Pn	10 35 21.0	+2.0
OHR				*e*Lg	Lg	10 36 08.0	
	comp=E,1µm,0.6s						
OHR				*e*Lg	Lg	10 36 10.1	
	comp=N,4µm,1.5s						
OHR	Ohrid	2.94	7	P	Pn	10 35 21.4	+2.4
TIP	Timpagrande	2.97	291	P	Pn	10 35 19.1	-0.3
TIP	Timpagrande	2.97	291		Pn	10 35 19.6	+0.2
TIP				Sn	Sn	10 35 56.0	+0.9
PAIG	Paliouri	3.13	55	P	Pn	10 35 23.1	+1.6
TIR	Tirane	3.18	354	P	Pn	10 35 22.7	+0.5
TIR	Tirane	3.18	354	*e*Pn	Pn	10 35 22.3	+0.1
TIR				*e*Sn	Sn	10 35 59.4	-0.7
TIR	Tirane	3.18	354	⇓P	Pn	10 35 23.5	+1.4
TIR	Tirane	3.18	354		Pn	10 35 22.7	+0.5
TIR	Tirane	3.18	354	P	Pn	10 35 22.7	+0.5
THE	Thessaloniki	3.18	39	P	Pn	10 35 23.0	+0.8
GRG	Griva	3.19	29	P	Pn	10 35 23.4	+1.0
KARY	Karystos	3.24	91	P	Pn	10 35 23.1	+0.1
TAR1	Taranto	3.32	316	*e*Pn	Pn	10 35 24.6	+0.4
PHP	Peshkopia	3.49	1	P	Pn	10 35 27.1	+0.5
CEL	Celeste	3.50	273		Pn	10 35 26.0	-0.7
SOH	Sokhos	3.52	41	P	Pn	10 35 27.9	+1.0
SOH	Sokhos	3.52	41	P	Pn	10 35 28.3	+1.4
OUR	Ouranopolis	3.55	52	P	Pn	10 35 29.3	+2.0
VAY	Valandovo	3.57	28	*i* Pn	Pn	10 35 27.8	+0.2
VAY				*e*Sn	Sn	10 36 09.2	-0.7
VAY				*e*Lg	Lg	10 36 14.7	
	comp=N,2µm,1.5s						
VAY				*e*Lg	Lg	10 36 14.7	
	comp=E,774nm,0.9s						
VAY	Valandovo	3.57	28	P	Pn	10 35 30.3	+2.7
MATE	Matera	3.73	312	⇑P	Pn	10 35 30.5	+0.7
STIP	Stip	3.78	22	*i* Pn	Pn	10 35 32.8	+2.3
SRS	Serrai	3.86	40	*e*Pn	Pn	10 35 31.7	+0.2
SRS	Serrai	3.86	40	P	Pn	10 35 31.8	+0.2
ULC	Ulcinj	3.86	348	P	Pn	10 35 31.7	+0.1
ULC	Ulcinj	3.86	348	*e*Pn	Pn	10 35 30.7	-0.9
ULC				*e*Sn	Sn	10 36 17.7	+0.6
SKO	Skopje	3.87	12	*e*Pn	Pn	10 35 31.1	-0.7
SKO	Skopje	3.87	12	*i* Pn	Pn	10 35 30.6	-1.2
SKO				*i* Sg	Sn	10 36 17.3	0.0
SKO	Skopje	3.87	12	P	Pn	10 35 33.9	+2.1
SG1	Sgolgore (BA)	3.88	314	⇓*i*Pn	Pn	10 35 32.1	+0.3
BAI	Bari	3.95	319	*e*Pn	Pn	10 35 33.0	+0.2
DRME	Dracevica, Mon	4.09	348	*e*Pn	Pn	10 35 33.9	-0.8
DRME	Dracevica, Mon	4.09	348	*e*Pn	Pn	10 35 34.3	-0.4
DRME				*e*Sn	Sn	10 36 22.5	-0.2
KKB	Krupnik	4.24	29	*e*P	Pn	10 35 37.4	+0.6
BUM	Brajici-Budva	4.25	345	*e*Pn	Pn	10 35 36.3	-0.8
BUM				*e*Sn	Sn	10 36 27.4	+0.6
APE	Apeiranthos	4.27	104	*i* P	Pn	10 35 40.5	+3.2
ACER	Acerenza	4.28	309		Pn	10 35 38.2	+0.8
ACER				Sn	Sn	10 36 26.4	-0.9
MMB	Musomiste	4.28	36	*e*P	Pn	10 35 42.1	+4.7
PDG	Podgorica	4.32	349	*e*Pn	Pn	10 35 37.4	-0.4
PDG				*e*Sn	Sn	10 36 27.2	-1.0
PDG	Podgorica	4.32	349	⇑P	Pn	10 35 37.8	-0.1
PDG	Podgorica	4.32	349	*e*Pn	Pn	10 35 36.6	-1.2
PDG	Podgorica	4.32	349		Pn	10 35 37.4	-0.4
PDG				Sn	Sn	10 36 26.4	-1.9
TTG	Podgorica	4.32	349	*e*Pn	Pn	10 35 36.9	-0.9
TTG				*e*Sn	Sn	10 36 29.1	+0.9
PVY	Plav	4.41	356	*e*Pn	Pn	10 35 40.5	+1.2
PVY				*e*Sn	Sn	10 36 31.3	+0.5
SANT	Santorini	4.47	112	⇓P	Pn	10 35 44.2	+4.2
SANT	Santorini	4.47	112	Pn	Pn	10 35 42.5	+2.5
HCY	Herceg Novi	4.48	342	*e*Pn	Pn	10 35 38.1	-2.0
HCY	Herceg Novi	4.48	342	*e*Pn	Pn	10 35 38.4	-1.7
HCY				*e*Sn	Sn	10 36 33.2	+0.9
CEME	Cevo	4.49	346	*e*Pn	Pn	10 35 38.8	-1.4
CEME				*e*Sn	Sn	10 36 32.9	+0.4
BOSS	Bosilegrad	4.60	20	*e*Pn	Pn	10 35 42.5	+0.7
IDI	Anoyia	4.66	127	Pn	Pn	10 35 43.6	+0.9
	comp=E,3.4nm,0.3s,baz=356,slow=13,SNR=12						
IDI				Sn	Sn	10 36 38.3	+1.4
	comp=E,11nm,0.3s,baz=68,slow=23,SNR=8.3						
IVA	Berane	4.69	356	*e*Pn	Pn	10 35 43.1	0.0
IVA				*e*Sn	Sn	10 36 38.6	+1.0
NKME	Niksic	4.69	347	*e*Pn	Pn	10 35 42.2	-0.9
NKME				*e*Sn	Sn	10 36 38.6	+1.0
KOME	Kolasin	4.70	353	*e*Pn	Pn	10 35 43.1	-0.1
KOME				*e*Sn	Sn	10 36 38.0	+0.2
NKY	Niksic	4.73	348	*e*Pn	Pn	10 35 43.6	-0.1
NKY				*e*Sn	Sn	10 36 39.1	+0.4
VAE	Valguarnera	4.74	263	Pn	Pb	10 35 51.0	-4.4
	comp=E,4.4nm,0.3s,baz=210,slow=9.6,SNR=5.0						
VAE				Sn	Sn	10 36 41.1	+2.2
	comp=E,9.3nm,0.3s,baz=140,slow=11,SNR=6.3						
BARS	Barje	4.76	13	*e*Pn	Pn	10 35 44.1	+0.2
BARS	Barje	4.76	13	*e*Pn	Pg	10 36 01.5	-1.7
TREB	Trebinje	4.77	342	*e*Pn	Pn	10 35 42.7	-1.4
TREB				*e*Sn	Sn	10 36 36.2	-3.3
TREB	Trebinje	4.77	342	*e*Pn	Pn	10 35 42.6	-1.5
RZN	Rozhen	4.85	43	*e*P	Pn	10 35 46.5	+1.1
BRY	Bratogost	4.90	344	*e*Pn	Pn	10 35 44.7	-1.3
BRY	Bratogost	4.90	344	P	Pn	10 35 45.3	-0.7
BRY	Bratogost	4.90	344	*e*Pn	Pn	10 35 45.1	-0.9
BRY				*e*Sn	Sn	10 36 43.4	+0.5
EZN	Ezine	4.94	69	P	Pn	10 35 51.4	+5.0
VTS	Vitosha	4.95	26	⇑P	Pn	10 35 47.7	+1.0
VTS	Vitosha	4.95	26	*e*P	Pn	10 35 47.2	+0.5
VTS	Vitosha	4.95	26		Pn	10 35 46.9	+0.3
VTS				Sn	Sn	10 36 47.6	+3.6
VTS	Vitosha	4.95	26	P	Pn	10 35 47.6	+1.0
SGRT	San Giovanni R	5.01	317		Pn	10 35 46.5	-1.0
SGRT				Sn	Sn	10 36 42.5	-3.0
SELS	Selova	5.06	6	*e*Pn	Pn	10 35 47.5	-0.6
SJES	Sjenica	5.08	357	*e*Pn	Pn	10 35 47.8	-0.6
UPM	Unac-Piva	5.13	348	*e*Pn	Pn	10 35 48.9	-0.3
UPM	Unac-Piva	5.13	348	*e*Pn	Pn	10 35 49.3	+0.1
UPM				*e*Sn	Sn	10 36 48.9	+0.4
PLD	Plovdiv	5.15	39	P	Pn	10 35 53.2	+4.0
PLD				pmax	pmax		
	comp=Z,11nm,1.0s						
ALN	Alexandroupoli	5.18	57		Pn	10 35 49.6	0.0
ALN	Alexandroupoli	5.18	57	P	Pn	10 35 49.6	0.0
PLE	Pljevlja	5.19	352	P	Pn	10 35 53.0	+3.1
PLE	Pljevlja	5.19	352	*e*Pn	Pn	10 35 49.9	0.0
PLE				*e*Sn	Sn	10 36 50.4	+0.5
WDD	Wied Dalam	5.21	245		Pn	10 35 49.0	-1.1
WDD				Sn	Sn	10 36 48.3	-1.9
KDZ	Kurdzhali	5.22	47	*e*P	Pn	10 35 49.8	-0.4
PAOL	Paolisi	5.28	304		Pn	10 35 53.0	+1.8
ZAPS	Zavoj	5.37	18	*e*Pn	Pn	10 35 52.8	+0.4
IVAS	Ivanjica	5.38	359	*e*Pn	Pn	10 35 52.1	-0.5
IVAS				*e*Sn	Sn	10 36 53.1	-1.6
RUDO	Rudo	5.47	353	*e*Pn	Pn	10 35 53.2	-0.6
BOVS	Bovan	5.54	10	*e*Pn	Pn	10 35 54.0	-0.6
BOVS				*e*Sn	Sn	10 36 55.7	-2.7
CORL	Corleone	5.56	269	Pn	Pn	10 35 54.8	-0.2
GRUS	Gruza	5.70	3	*e*Pn	Pn	10 35 56.2	-0.7
GRUS				*e*Sn	Sn	10 37 00.1	-2.3
BBLS	Lazići	5.72	353	*e*Pn	Pn	10 35 56.5	-0.6
DIVS	Divibare	5.91	358	*e*Pn	Pn	10 35 58.1	-1.7
DIVS				*e*Sn	Sn	10 37 04.4	-3.3
DIVS	Divibare	5.91	358	*e*Pn	Pn	10 35 58.1	-1.7
HAPS	Han Pijesak,BI	5.99	350	*e*Pn	Pn	10 35 59.2	-1.7
KARP	Karpathos	6.07	114	Pn	Pn	10 36 03.5	+1.5
PLVB	Pleven	6.13	31	⇑P	Pn	10 36 04.2	+1.5
INTR	Introdacqua	6.24	310		Pn	10 36 05.6	+1.3
ELND	Elena	6.34	40	⇑P	Pn	10 36 06.8	+1.1
TEKS	Tekeris	6.38	355	*e*Pn	Pn	10 36 04.7	-1.6
TEKS				*e*Sn	Sn	10 37 15.6	-3.6
TEKS	Tekeris	6.38	355	*e*Pn	Pn	10 36 04.9	-1.4
MGRS	Mrkonjic Grad	6.69	340	*e*Pn	Pn	10 36 10.1	-0.3
AQU	L'Aquila	6.74	310	*e*Pn	Pn	10 36 14.6	+3.4
AQU	L'Aquila	6.74	310	P	Pn	10 36 15.1	+3.9
AQU				pmax	pmax		
	comp=Z,115nm,1.1s						
BLY	Banja Luka	6.97	341	⇑P	Pn	10 36 13.9	-0.4
BLY	Banja Luka	6.97	341	*e*Pn	Pn	10 36 13.6	-0.7
BLY	Banja Luka	6.97	341		Pn	10 36 13.3	-1.0
NRCA	Norcia	7.20	312		Pn	10 36 18.5	+1.1
GZR	Gura Zlata	7.43	13	⇓P	Pn	10 36 21.1	+0.4
GZR	Gura Zlata	7.43	13	P	Pn	10 36 21.0	+0.4
BZS	Buzias	7.48	7	⇑P	Pn	10 36 22.8	+1.4
BZS	Buzias	7.48	7	P	Pn	10 36 22.5	+1.2
BZS				pmax	pmax		
	comp=Z,42nm,1.3s						
ELL	Elmali	7.75	98	P	Pn	10 36 31.7	+6.6
MURB	Monte Urbino	7.80	313		Pn	10 36 28.3	+2.5
ARR	Arges	7.86	23	⇑P	Pn	10 36 27.4	+0.9
VOIR		8.05	24	P	Pn	10 36 30.1	+0.9
VOIR				pmax	pmax		
	comp=Z,22nm,0.9s						
MORH	Mrgy, Hungar	8.12	352	*e*Pn	Pn	10 36 27.6	-2.4
MLR	Muntele Rosu	8.41	28	Pn	Pn	10 36 35.1	+0.9
	comp=Z,1.2nm,0.3s,baz=249,slow=6.3,SNR=21						
MLR	Muntele Rosu	8.41	28	⇑P	Pn	10 36 35.8	+1.7
MLR	Muntele Rosu	8.41	28		Pn	10 36 33.8	-0.3
DOPR	Dopca	8.63	24	⇓P	Pn	10 36 38.0	+1.0
VISS	Visnje	8.64	333	*e*Pn	Pn	10 36 36.5	-0.7
MDUB	Mudurnu	8.72	71		Pn	10 36 41.1	+2.7
SKDS	Skadanscina	8.73	329	*i* Pn	Pn	10 36 37.1	-1.4
BISRR	Bisoca	8.75	31	⇓P	Pn	10 36 40.9	+2.1
LJU	Ljubljana	8.96	333	*e*Pn	Pn	10 36 40.7	-0.8

LJU eSn Sn 10 38 15.5 -6.9
LJU Ljubljana 8.96 333 ePn Pn 10 36 40.8 -0.8
PLOR Plostina 8.98 29 ⇑P Pn 10 36 44.1 +2.2
PLOR Plostina 8.98 29 P Pn 10 36 44.1 +2.2
CFR Carcaliu 9.10 37 ⇓P Pn 10 36 45.5 +2.1
CFR Carcaliu 9.10 37 P Pn 10 36 45.5 +2.1
KEST Kesra 9.13 258 Pn Pn 10 36 43.7 -0.3
comp=Z,0.7nm,0.3s,baz=143,slow=20,SNR=4.4
KEST Kesra 9.13 258 Pn Pn 10 36 42.3 -1.8
SOKA Soboth 9.34 337 iPn Pn 10 36 45.6 -1.4
comp=Z,53nm,0.5s,SNR=17
SOKA eSn Sn 10 38 28.4 -3.7
comp=Z,11nm,0.6s
OBKA Obir 9.35 335 ePn Pn 10 36 46.6 -0.4
comp=Z,11nm,0.2s
OBKA Sn Sn 10 38 26.7 -5.6
comp=Z,33nm,0.6s
TEOL Teolo 9.65 321 Pn 10 36 49.6 -1.4
PGF Pioggiola 9.69 300 P Pn 10 36 55.1 +3.5
PGF pmax pmax
comp=Z,43nm,2.3s
ARSA Arzberg 9.72 340 ePn Pn 10 36 49.6 -2.4
comp=Z,5.7nm,0.3s
PSZ Piszkesteto 9.73 358 ⇑P Pn 10 36 53.0 +0.8
PSZ Piszkesteto 9.73 358 Pn Pn 10 36 49.9 -2.3
PSZ Piszkesteto 9.73 358 P Pn 10 36 52.7 +0.5
PSZ pmax pmax
comp=Z,24nm,0.8s
MYKA Terra Mystica 9.78 332 ePn Pn 10 36 51.9 -1.0
comp=Z,8.6nm,0.3s,SNR=4.8
STAL STALIGIAL 9.85 327 Pn 10 36 52.5 -1.3
BURAR Bucovina Array 10.08 19 Pn Pn 10 36 56.0 -1.0
CTI Castel Tesino 10.16 323 Pn 10 36 56.7 -1.4
CTI Castel Tesino 10.16 323 P Pn 10 36 56.7 -1.4
KBA Koelnbreinsper 10.27 332 ePn Pn 10 36 58.7 -0.9
comp=Z,3.2nm,0.3s,SNR=5.6
KBA Sn Sn 10 38 47.8 -7.0
comp=Z,17nm,0.8s
KBA Koelnbreinsper 10.27 332 P Pn 10 36 59.2 -0.4
KBA pmax pmax
comp=Z,44nm,1.0s
CONA Conrad Observa 10.27 343 ePn Pn 10 36 59.5 -0.1
comp=Z,4.9nm,0.5s,SNR=4.1
ZST Bratislava 10.28 348 eSN Sn 10 38 47.6 -7.2
ABTA Abfaltersbach 10.32 328 ePn Pn 10 36 59.3 -1.0
comp=Z,19nm,0.5s
ABTA Sn Sn 10 38 49.9 -6.1
comp=Z,22nm,0.5s
VYHS Vyhne 10.36 354 eP Pn 10 37 00.3 -0.4
VYHS e 10 38 49.6
VYHS Vyhne 10.36 354 ePN Pn 10 37 00.3 -0.4
VYHS eSN Sn 10 38 49.6 -7.3
SALO Salr 10.41 319 Pn 10 37 00.4 -1.2
MODS Modra-Piesok 10.42 349 eP Pn 10 37 01.8 +0.2
MODS Modra-Piesok 10.42 349 ePN Pn 10 37 01.8 +0.2
MODS eSN Sn 10 38 49.9 -8.5
BR131 Keskin Array S 10.47 77 Pn Pn 10 37 01.2 -1.2
BR131 Keskin Array S 10.47 77 ⇑iP Pn 10 37 05.2 +2.7
BRTR Keskin Array B 10.47 77 Pn Pn 10 37 06.0 +3.5
comp=Z,0.5nm,0.3s,baz=258,slow=13,SNR=13
BRTR Keskin Array B 10.47 77 Pn 10 37 01.6 -0.8
BRTR Keskin Array B 10.47 77 iP Pn 10 37 06.0 +3.5
BRTR pmax pmax
comp=Z,3.0nm,0.6s
UZH Uzhgorod 10.54 7 eP Pn 10 37 07.1 +4.0
MOA Molln 10.63 337 iPn Pn 10 37 03.4 -1.0
comp=Z,11nm,0.3s,SNR=8.4
MOA eSn Sn 10 38 59.2 -4.3
comp=Z,8.4nm,0.5s
CSS Mathiatis 10.93 103 Pn Pn 10 37 07.3 -1.4
RJOB Jochberg 11.02 332 ePn Pn 10 37 09.6 -0.3
RJOB eSn Sn 10 39 09.7 -3.5
WTTA Wattenberg 11.09 328 ePn Pn 10 37 11.3 +0.4
comp=Z,15nm,0.5s,SNR=15
WTTA Sn Sn 10 39 13.0 -2.1
comp=Z,33nm,0.5s
WATA Walderalm 11.17 328 ePn Pn 10 37 12.1 +0.1
comp=Z,22nm,0.5s,SNR=12
WATA Sn Sn 10 39 11.0 -6.1
comp=Z,27nm,0.7s
FUORN Ofenpass-Fuorn 11.24 322 Pn 10 37 11.8 -1.2
KRUC Moravsky 11.24 347 P Pn 10 37 12.2 -0.5
SQTA Sankt Quirin 11.24 326 ePn Pn 10 37 13.8 +0.9
comp=Z,8.7nm,0.3s
SAOF Saorge 11.25 305 P Pn 10 37 16.5 +3.6
SAOF pmax pmax
comp=Z,27nm,1.1s
FETA Feichten 11.31 324 Pn Pn 10 37 14.3 +0.5
comp=Z,5.0nm,0.6s
FETA Sn Sn 10 39 17.7 -2.6
comp=Z,5.0nm,0.5s
MOTA Moosalm 11.38 326 ePn Pn 10 37 15.3 +0.4
comp=Z,13nm,0.5s,SNR=11
MOTA Sn Sn 10 39 20.4 -1.8
comp=Z,14nm,0.6s
VRAC Vranov 11.44 348 Pn Pn 10 37 15.2 -0.3
comp=Z,0.5nm,0.3s,baz=182,slow=12,SNR=5.6
VRAC Vranov 11.44 348 ⇑P Pn 10 37 15.0 -0.6
DAVOX Davos/Dischmat 11.54 321 Pn Pn 10 37 16.6 -0.4
comp=Z,0.9nm,0.3s,baz=141,slow=16,SNR=11
TUE Stuetta 11.60 319 Pn Pn 10 37 16.0 -1.9
ISO Isola 11.66 305 P Pn 10 37 20.4 +1.8
ISO pmax pmax
comp=Z,34nm,2.0s
GEC2 GERESS Array S 11.69 338 ePn Pn 10 37 17.2 -1.7
GEC2 eSn Sn 10 39 23.5 -5.9
GEC2 GERESS Array S 11.69 338 Pn 10 37 17.5 -1.4
GEC2 GERESS Array S 11.69 338 P Pn 10 37 17.6 -1.4
GERES GERESS Array B 11.69 338 Pn Pn 10 37 17.3 -1.6
comp=Z,1.5nm,0.3s,baz=159,slow=14,SNR=26
GERES Sn Sn 10 39 24.0 -5.5
comp=Z,1.2nm,0.3s,baz=164,slow=25,SNR=4.9
GERES GERESS Array B 11.69 338 Pn 10 37 16.4 -2.6
GERES GERESS Array B 11.69 338 P Pn 10 37 16.4 -2.6
GERES 10 39 24.0
MORC Moravsky Berou 11.76 351 Pn 10 37 17.4 -2.5
MORC Moravsky Berou 11.76 351 P Pn 10 37 17.4 -2.5
PLONS Plons/SG 11.97 321 ePn Pn 10 37 25.3 +2.5
PLONS eSn Sn 10 39 34.3 -2.1
KHC Kasperske Hory 11.98 338 ePn P 10 37 21.1 -1.8
KHC Kasperske Hory 11.98 338 ePN Pn 10 37 20.9 -2.0
KHC Kasperske Hory 11.98 338 Pn 10 37 21.5 -1.4
KHC Kasperske Hory 11.98 338 iP Pn 10 37 21.1 -1.8
KHC pmax pmax
comp=Z,23nm,0.9s
UBR Ueberruh 12.08 325 ePn Pn 10 37 24.6 +0.3
WET Wettzell 12.20 336 ePn Pn 10 37 24.1 -1.8
WET Wettzell 12.20 336 P Pn 10 37 25.1 -0.9
WET pmax pmax
comp=Z,22nm,1.0s
GOPC GO Pecny, Ondr 12.38 343 ePN Pn 10 37 27.3 -1.1
GOPC GO Pecny, Ondr 12.38 343 eP Pn 10 37 27.3 -1.1
PRU Pruhonice 12.51 342 P Pn 10 37 29.2 -0.9
PRU pmax pmax
comp=Z,8.0nm,1.9s
SENIN Lac Senin/Sane 12.63 314 Pn 10 37 31.0 -1.1
SENIN Sn 10 39 49.7 -3.2
GRB1 Grafenberg Arr 12.83 334 P Pn 10 37 38.0 +3.5
GRB1 pmax pmax
comp=Z,36nm,1.4s
MMAI Mount Meron Ar 13.30 108 Pn Pn 10 37 37.3 -3.8
comp=Z,5.3nm,0.3s,baz=316,slow=8.3,SNR=4.9
BFO Black Forest 13.37 323 Pn 10 37 40.0 -2.0
BFO Black Forest 13.37 323 P Pn 10 37 40.0 -2.0
GAZ Gaziantep 13.41 89 Pn Pn 10 37 40.7 -1.8
BRG Berggiesshubel 13.47 342 eP Pn 10 37 42.7 -0.5
BRG pmax pmax
comp=Z,18nm,1.3s
KZIT Kziot 13.67 118 Pn Pn 10 37 42.6 -3.4
HMDT Nahal Hemdat 13.75 111 Pn Pn 10 37 43.9 -3.2
MOX Moxa 13.91 336 ePn Pn 10 37 48.4 -0.8
MOX Moxa 13.91 336 P Pn 10 37 48.5 -0.8
MOX pmax pmax
comp=Z,26nm,0.9s
DSI Dead Sea 13.99 114 Pn Pn 10 37 46.7 -3.8
AKASG Malin Array Be 14.01 24 Pn Pn 10 37 49.3 -1.3
comp=Z,0.5nm,0.3s,baz=208,slow=12,SNR=2.6
AKASG Malin Array Be 14.01 24 Pn 10 37 48.7 -2.0
AKASG Malin Array Be 14.01 24 iP P 10 37 54.9 -3.7
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 14.01 24 iP Pn 10 37 48.2 -2.4
CLL Collm 14.10 341 ePP P 10 38 01.0 +1.4
comp=Z,21nm,1.2s
CLL Collm 14.10 341 eP P 10 38 01.0 +1.4
GHAJ Ghor Haditha 14.27 114 Pn Pn 10 37 50.9 -3.4
PRNI Paran 14.42 118 Pn Pn 10 37 53.2 -3.1
PRNI Sn Sn 10 40 23.9 -12
HRFI Mount Harif 14.63 119 Pn Pn 10 37 56.2 -3.0
MBRI Mt Berech 14.69 120 Pn Pn 10 37 56.2 -4.0
MBRI Sn Sn 10 40 31.4 -12
TNS Taunus Mts 14.72 329 ePn Pn 10 37 60.0 -0.4
EIL Elat 14.80 121 Pn Pn 10 38 03.2 +1.7
comp=Z,1.1nm,0.3s,baz=180,slow=12,SNR=5.5
EIL Elat 14.80 121 Pn Pn 10 37 58.4 -3.1
ASF Jabal al Asfar 14.81 109 Pn Pn 10 38 02.1 +0.4
comp=Z,0.3nm,0.3s,baz=230,slow=8.2,SNR=3.2
WLF Walferdange 15.33 323 pP pP 10 38 16.4 +0.7
WLF sP sP 10 38 17.9 +1.0
SOC Sochi 15.61 64 eP P 10 38 15.2 -1.2
SOC e 10 41 09.2
SOC pmax pmax
comp=Z,12nm,0.5s
SOC MLR MLR
comp=Z,12μm,18.0s
MEM Membach 16.06 325 pP pP 10 38 24.4 +0.6
BSTI Sart Tilman 16.24 324 pP pP 10 38 26.7 +0.9
BSTI sP sP 10 38 28.2 +1.3
DOU Dourbes 16.37 322 pP pP 10 38 28.1 +0.8
KLNR Kaliningrad 16.42 360 iP Pn 10 38 20.4 -2.1
NACGM Naroch 17.29 13 e Pn 10 38 32.0 -1.4
NEY Neytrino 17.69 66 iP P 10 38 41.2 +1.6
NEY pmax pmax
comp=Z,3.0nm,0.9s
SHA1 Shidzhatmaz 17.73 65 iP Pn 10 38 38.7 -0.5
KIV Kislovodsk 17.79 64 eP P 10 38 40.3 -0.3
KIV pmax pmax
comp=Z,55nm,1.1s
KBZ Khabaz 17.89 65 P P 10 38 42.2 +0.5
comp=Z,0.2nm,0.3s,baz=281,slow=7.9,SNR=14
KBZ Khabaz 17.89 65 iP Pn 10 38 41.0 0.0
KBZ pmax pmax
comp=Z,7.0nm,0.9s
AKH Akhalkalaki 18.07 72 P P 10 38 49.3 +5.4
ONI Oni 18.13 69 P P 10 38 46.4 +2.0
ZEI Tsey 18.48 68 eP P 10 38 38.7 -10
ZEI pmax pmax
comp=Z,11nm,0.8s
VSR Storozhevoye 18.61 40 eP P 10 38 48.7 -0.8
VSR pmax pmax
comp=Z,10.0nm,0.7s
ESDC Sonseca Array 18.95 282 P Pn 10 38 55.0 +0.9
comp=Z,0.5nm,0.3s,baz=78,slow=12,SNR=9.1
ESDC Sonseca Array 18.95 282 P P 10 38 51.5 -2.0
GNI Garni 19.01 76 P Pn 10 38 55.2 +0.3
comp=Z,2.9nm,0.3s,baz=206,slow=0.6,SNR=8.2
GNI Garni 19.01 76 P Pn 10 38 55.3 +0.3
GNI IAmb IAmb 10 39 00.7
comp=Z,32nm,0.8s
GNI Garni 19.01 76ceP Pn 10 38 56.0 +1.1
GNI pmax pmax
comp=Z,225nm,1.7s
TBLG Delisi 19.02 72 P Pn 10 38 55.6 +0.7
TBLG Delisi 19.02 72 P Pn 10 38 55.6 +0.7
TBLG pmax pmax
comp=Z,32nm,1.3s
VRH Novokhopyorsk 19.92 42 eP Pn 10 39 04.9 -0.6
VRH pmax pmax
comp=Z,20nm,0.6s
TAM Tamanrasset 19.92 224 P Pn 10 39 06.9 +1.0
TAM Tamanrasset 19.92 224 P Pn 10 39 06.9 +1.0
TAM pmax pmax
comp=Z,15nm,1.3s
OBN Obninsk 20.18 28⇑eP P 10 39 05.6 -1.0
OBN *PP pP 10 39 09.0 -0.3
OBN PPP PPP 10 39 30.0
OBN pmax pmax
comp=Z,22nm,1.2s
OBN MLR MLR
comp=Z,8μm,18.0s
VSU Vasula 20.71 10ceP P 10 39 12.4 0.0
VSU pmax pmax
comp=Z,245nm,0.8s
MDT Midelt 20.98 263 P P 10 39 16.5 +0.9
comp=Z,3.5nm,0.8s,baz=72,slow=6.4,SNR=2.7
MOS Moscow 21.05 28 eP P 10 39 14.5 -1.5
MOS e 10 39 44.7
MOS eS S 10 43 10.7 +0.5
MOS pmax pmax
comp=Z,42nm,0.8s
HFS Hagfors 22.37 351 P P 10 39 30.0 -0.2
comp=Z,12nm,0.5s,baz=164,slow=7.7,SNR=26
HFS Hagfors 22.37 351 P P 10 39 30.0 -0.2
PUL Pulkovo 22.52 13ceP P 10 39 31.2 -0.6
PUL pmax pmax
comp=Z,98nm,0.3s
KONO Kongsberg 22.55 346ceP P 10 39 32.1 0.0
KONO pmax pmax
comp=Z,79nm,2.5s
NC602 NORSAR Array S 23.24 349 P P 10 39 36.0 -3.3
NC602 IAmb IAmb 10 39 45.1
comp=Z,28nm,0.9s
NORES NORESS Array B 23.24 349 P P 10 39 41.4 +2.1
NORES pmax pmax
comp=Z,8.0nm,0.5s
EKA Eskdalemuir Ar 23.34 325 P P 10 39 40.1 -0.3
comp=Z,31nm,1.0s,baz=125,slow=9.6,SNR=14
ESK Eskdalemuir 23.35 325 P P 10 39 41.8 +1.4
ESK pmax pmax
comp=Z,78nm,3.0s
NAO01 NORSAR Array S 23.45 348 P P 10 39 40.2 -1.2
FINES FINESS Array B 23.55 7 P P 10 39 41.5 -1.0
comp=Z,10nm,0.6s,baz=168,slow=9.2,SNR=50
FINES FINESS Array B 23.55 7 P P 10 39 41.3 -1.1
FIA1 FINESS Array S 23.56 7 P P 10 39 40.9 -1.5
FIA1 IAmb IAmb 10 39 56.0
comp=Z,27nm,1.0s
NC405 NORSAR Array S 23.58 350 P P 10 39 41.2 -1.5
NB201 NORSAR Array S 23.58 349 P P 10 39 41.9 -0.8
NB2 NORSAR Subarra 23.58 349 P P 10 39 42.2 -0.6
comp=Z,23nm,1.2s,baz=159,slow=10
NOA NORSAR Array B 23.58 349 P P 10 39 42.1 -0.7
comp=Z,6.3nm,0.7s,baz=161,slow=8.4,SNR=19
NBO00 NORSAR Array S 23.64 348 P P 10 39 41.1 -2.2
NBO00 IAmb IAmb 10 39 45.5
comp=Z,42nm,0.9s
NC303 NORSAR Array S 23.73 349 P P 10 39 42.8 -1.4
NC303 IAmb IAmb 10 39 51.5
comp=Z,33nm,1.1s
NC204 NORSAR Array S 23.87 349 P P 10 39 44.1 -1.5
NC204 IAmb IAmb 10 39 50.9
comp=Z,39nm,1.1s
SUF Sumiainen 24.82 6 P P 10 39 54.3 +0.1
SUF pmax pmax
comp=Z,46nm,0.9s
VAF Ylistaro 24.93 3 P P 10 39 56.8 +1.7
VAF pmax pmax
comp=Z,31nm,1.0s
KLMR Klimovskoe 25.68 22 eP P 10 40 00.4 -1.6
KLMR pmax pmax
comp=Z,19nm,1.1s
KLMR Klimovskoe 25.68 22 eP P 10 40 00.4 -1.6
KLMR AMP 10 40 04.1
comp=Z,19nm,1.1s
OUL Oulu 27.14 5 P P 10 40 18.4 +3.3
KIRV Kirov 27.73 33 iP P 10 40 20.4 0.0
PRGR Permogore 28.22 26 eP P 10 40 23.5 -1.3
PRGR pmax pmax
comp=Z,21nm,0.9s
AKTO Aktyubinsk 29.29 53 P P 10 40 33.4 -1.2
comp=Z,1.1nm,0.4s,baz=283,slow=5.9,SNR=5.4
GEYT Alibeck 29.61 79 P P 10 40 37.2 -0.4
comp=Z,2.6nm,0.5s,baz=258,slow=10,SNR=4.3
GEYT Alibeck 29.61 79 P P 10 40 37.1 -0.4
TOA0 Torodi Ar. Sit 29.95 219 P P 10 40 38.4 -2.2
TOA0 IAmb IAmb 10 40 45.4
comp=Z,7.1nm,1.1s
TORD Torodi Ar. Bea 29.95 219 P P 10 40 40.2 -0.4
comp=Z,4.8nm,0.7s,baz=28,slow=9.4,SNR=14
TORD Torodi Ar. Bea 29.95 219 P P 10 40 38.3 -2.3
ABKAR Akbulak array 30.36 56 P P 10 40 41.7 -2.3
LVZ Lovozero 30.81 11 P P 10 40 45.9 -1.9
LVZ Lovozero 30.81 11 P P 10 40 45.9 -1.9
LVZ pmax pmax
comp=Z,41nm,1.4s
ARU Arti 31.15 42 P P 10 40 51.2 +0.3
comp=Z,2.0nm,0.2s,baz=231,slow=2.7,SNR=5.2
ARU Arti 31.15 42 P P 10 40 48.1 -2.7
ARU IAmb IAmb 10 40 53.4
comp=Z,15nm,1.3s
ARU Arti 31.15 42 P P 10 40 49.9 -0.9
ARU 10 41 47.4
ARU S S 10 45 53.6 -2.8
ARCES ARCESS Array B 31.53 3 P P 10 40 53.0 -1.1
comp=Z,2.6nm,0.7s,baz=187,slow=10,SNR=17
ARCES PcP PcP 10 43 48.4 +1.9
comp=Z,3.0nm,1.0s,baz=195,slow=2.4,SNR=10
ARCES ARCESS Array B 31.53 3 P P 10 40 52.8 -1.3
KEV Kevo 31.83 4 P P 10 40 56.9 +0.2
KEV Kevo 31.83 4 P P 10 40 56.9 +0.2
KEV pmax pmax
comp=Z,27nm,1.3s
UOSS Minazif 33.08 103 P P 10 41 06.2 -2.0
UOSS IAmb IAmb 10 41 23.0
comp=Z,18nm,1.2s
BRVK Borovoye 37.16 50 P P 10 41 40.5 -2.5
BRVK IAmb IAmb 10 41 55.9
comp=Z,7.4nm,1.0s
BRVK Borovoye 37.16 50 P P 10 41 40.5 -2.5
BRVK pmax pmax
comp=Z,7.0nm,1.0s
KK31 Karatay Array 37.92 66 P P 10 41 47.9 -1.7
KK31 IAmb IAmb 10 41 53.6
comp=Z,11nm,0.7s
KK31 Karatay Array 37.92 66 P P 10 41 47.9 -1.7
KK31 pmax pmax
comp=Z,11nm,0.7s
KKAR Karatay Array 37.92 66 P P 10 41 48.3 -1.3
KKAR Karatay Array 37.92 66 P P 10 41 47.5 -2.1
KKAR IAmb IAmb 10 41 53.6
comp=Z,11nm,0.7s
KKAR Karatay Array 37.92 66 P P 10 41 47.5 -2.1
KKAR pmax pmax
comp=Z,11nm,0.7s
BTK Batken 38.78 71 P P 10 41 55.8 -1.2
BTK Batken 38.78 71 P P 10 41 55.8 -1.2
BTK pmax pmax
comp=Z,5.0nm,0.7s
DBIC Dimbokro 38.80 222 P P 10 41 59.5 +2.3
comp=Z,3.0nm,0.7s,baz=31,slow=9.3,SNR=5.1
DBIC Dimbokro 38.80 222 P P 10 41 54.7 -2.5
TIC Toumodi 38.91 223 ePKP1 P 10 42 01.5 +3.4
KIC Kosan Boka 39.00 222 ePKP1 P 10 42 00.6 +1.7
comp=Z,14nm,0.9s
LIC Lamto 39.27 222 ePKP1 P 10 42 01.2 +0.1
comp=Z,27nm,1.0s
SPITS Spitsbergen Ar 40.13 359 P P 10 42 09.7 +2.0
comp=Z,17nm,1.1s,baz=154,slow=14,SNR=4.6
AAK Ala-Archa 40.89 66 P P 10 42 15.6 +1.0
comp=Z,3.8nm,0.8s,baz=238,slow=6.5,SNR=6.1
AAK Ala-Archa 40.89 66ceP P 10 42 17.1 +2.6
AAK pmax pmax
comp=Z,6.0nm,1.0s
KURK Kurchatov 42.39 53 P P 10 42 24.8 -1.7
KURK Kurchatov 42.39 53ceP P 10 42 26.9 +0.4
KURK pmax pmax
comp=Z,4.0nm,1.0s
NIL Nilore 42.61 79 P P 10 42 28.1 -0.6
NIL IAmb IAmb 10 42 31.7
comp=Z,8.7nm,0.6s
NIL Nilore 42.61 79 P P 10 42 28.1 -0.6
NIL pmax pmax
comp=Z,9.0nm,0.6s
KSH Kashi 42.76 70 P P 10 42 30.4 +0.6
KSH PP PP 10 44 12.3 +3.4
KSH S S 10 48 54.2 +0.4
SUMG Summit 44.76 339 iP P 10 42 48.0 +2.2
comp=Z,65nm,1.2s
SUMG Summit 44.76 339 iP P 10 42 48.0 +2.2
SUMG pmax pmax
comp=Z,65nm,1.2s
MAKZ Makanchi 45.21 58 P P 10 42 47.3 -2.0
MAKZ Makanchi 45.21 58 P P 10 42 47.3 -2.0
MAKZ pmax pmax
comp=Z,3.0nm,0.8s
MK31 Makanchi Array 45.42 58 P P 10 42 49.7 -1.3
MK31 IAmb IAmb 10 42 55.1
comp=Z,3.9nm,0.5s
MK31 Makanchi Array 45.42 58 P P 10 42 49.7 -1.3
MK31 pmax pmax
comp=Z,4.0nm,0.5s
MKAR Makanchi Array 45.42 58 P P 10 42 49.7 -1.3
comp=Z,4.8nm,0.5s,baz=275,slow=7.1,SNR=32
MKAR Makanchi Array 45.42 58 P P 10 42 49.2 -1.8
ZAA0 Zalesovo Array 45.79 48 P P 10 42 52.1 -1.6
ZALV Zalesovo Beam 45.79 48 P P 10 42 52.4 -1.4
comp=Z,12nm,0.4s,baz=276,slow=8.6,SNR=29
ZALV Zalesovo Beam 45.79 48 P P 10 42 51.9 -1.9
WMQ Urumqi 49.88 61 eP P 10 43 28.7 +3.0
TULEG Thule 53.04 343 P P 10 43 47.0 -1.8
TULEG IAmb IAmb 10 43 52.2
comp=Z,27nm,1.5s
TLY Talaya 57.39 47 P P 10 44 19.4 -1.2
TLY Talaya 57.39 47 iP P 10 44 22.6 +2.0
TLY pmax pmax
comp=Z,4.0nm,1.0s
ZAK Zakamensk 57.66 49 eP P 10 44 21.7 -0.9
ZAK pmax pmax
comp=Z,2.0nm,1.1s
SCHQ Schefferville 58.35 317 P P 10 44 29.2 +1.9
comp=Z,2.8nm,0.7s,baz=69,slow=5.3,SNR=12
SCHQ Schefferville 58.35 317 P P 10 44 25.1 -2.2
SCHQ IAmb IAmb 10 44 32.5
comp=Z,13nm,1.4s
TIXI Tiksi 59.69 20ceP P 10 44 38.6 +2.3
TIXI pmax pmax
comp=Z,7.0nm,2.5s
RES Resolute Bay 59.72 344 P P 10 44 39.2 +2.8
GTA Gaotai 59.95 62 eP P 10 44 38.2 -0.5
GTA pP sP 10 44 42.6 -0.4
GTA sP pP 10 44 45.7 +3.9
BOD Bodaibo 60.45 38 eP P 10 44 38.9 -2.8
BOD pmax pmax
comp=Z,5.0nm,1.8s
SONM Songino Array 60.56 51 P P 10 44 41.4 -1.4
comp=Z,2.2nm,0.9s,baz=286,slow=7.0,SNR=11
ULN Ulaanbaatar 60.95 50 P P 10 44 43.5 -2.0
ULN Ulaanbaatar 60.95 50 P P 10 44 43.5 -2.0
ULN pmax pmax
comp=Z,3.0nm,0.9s
LZH Lanzhou 64.33 63 eP P 10 45 10.2 +2.0
LZH pP sP 10 45 15.1 +2.6
LZH sP pP 10 45 18.0 +6.7
YAK Yakutsk 65.17 29 P P 10 45 11.6 -1.4
YAK Yakutsk 65.17 29 iP P 10 45 12.8 -0.2
YAK pmax pmax
comp=Z,12nm,0.7s
HHC Hu-ho-hao-te 67.15 55 eP P 10 45 27.4 +1.1
CMAR Chiang Mai Arr 70.03 82 P P 10 45 43.5 -1.0
comp=Z,1.6nm,0.3s,baz=299,slow=7.3,SNR=9.2
CMAR Chiang Mai Arr 70.03 82 iP P 10 45 46.2 +1.7
CMAR pmax pmax
comp=Z,2.0nm,0.3s
BILL Bilibino 71.04 13⇑eP P 10 45 51.7 +1.9
BILL *PP sP 10 45 54.5 +0.4
BILL *SP pP 10 45 56.5 +3.5
BILL 10 46 14.1
BILL pmax pmax
comp=Z,6.0nm,1.3s
BILL MLR MLR
comp=Z,4μm,19.0s
ENH Enshi 71.40 66 P P 10 45 50.7 -2.0
ENH IAmb IAmb 10 46 01.3
comp=Z,5.4nm,0.9s
H48A Harrisville 72.61 313 P P 10 45 56.5 -3.2
YKA Yellowknife Ar 73.33 340 P P 10 46 05.5 +1.9
comp=Z,0.8nm,0.5s,baz=40,slow=5.5,SNR=14
YKA Yellowknife Ar 73.33 340 iP P 10 46 05.9 +2.3
YKA pmax pmax
comp=Z,2.0nm,0.8s
KLR Kul'dur 73.96 39 iP P 10 46 07.5 0.0
KLR pmax pmax
comp=Z,5.0nm,0.6s
BMAR Burnt Mountain 74.08 354 P P 10 46 06.2 -1.9
COLD Coldfoot 74.66 356 P P 10 46 09.5 -1.8
COLD IAmb IAmb 10 46 14.9
comp=Z,4.4nm,1.1s
ULM Lac du Bonnet 75.61 324 P P 10 46 19.0 +2.0
comp=Z,5.4nm,0.8s,baz=60,slow=5.6,SNR=12
ULM Lac du Bonnet 75.61 324 P P 10 46 14.8 -2.2
ULM IAmb IAmb 10 46 20.2
comp=Z,7.3nm,0.9s
ULM Lac du Bonnet 75.61 324 P P 10 46 19.0 +2.0

IMAR	Indian Mountai	76.06	358	P	P	10 46 20.8	+1.5
ILAR	Eielson Array	76.89	354	P	P	10 46 25.9	+1.8
	comp=Z,1.2nm,0.8s,baz=0.3,slow=5.0,SNR=16						
NJ2	Nanjing	76.94	60	eP	P	10 46 27.2	+2.3
USRK	Ussuriysk Ar.	77.37	43	P	P	10 46 27.4	+0.3
	comp=Z,3.5nm,0.8s,baz=272,slow=9.0,SNR=8.3						
USRK	Ussuriysk Ar.	77.37	43	P	P	10 46 25.9	-1.3
KSRS	Korea Array	79.44	51	P	P	10 46 38.3	-0.4
	comp=Z,1.2nm,0.6s,baz=315,slow=4.6,SNR=5.4						
YSS	Yuzh-Sakhalins	80.84	36	eP	P	10 46 48.0	+1.9
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
MJAR	Matsushiro Arr	86.08	46	P	P	10 47 14.6	+1.3
	comp=Z,2.8nm,0.8s,baz=312,slow=4.7,SNR=6.1						
PDAR	Pinedale Array	87.46	326	P	P	10 47 21.7	+1.5
	comp=Z,0.2nm,0.7s,baz=350,slow=4.7,SNR=3.5						
WMOK	Wichita Mounta	88.08	314	P	P	10 47 27.3	+4.2
WMOK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
DUG	Dugway, Tooele	90.97	326	P	P	10 47 40.1	+3.4
TXAR	Lajitas Array	94.86	313	P	P	10 47 56.8	+2.1
	comp=Z,0.4nm,0.8s,baz=290,slow=4.9,SNR=5.9						
WRA	Warramunga Arr	120.68	92	PKP	PKPdf	10 53 23.1	-1.6
	comp=Z,0.4nm,0.7s,baz=310,slow=2.3,SNR=3.1						
ASAR	Alice Springs	122.32	96	PKP	PKPdf	10 53 26.6	-1.1
	comp=Z,0.4nm,0.7s,baz=302,slow=1.2,SNR=6.1						

*SJA **12** 10:46:22.4±0.9, 31°.30S×68°.70W, h112km±3km, ML4.3, MW4.0*
*IDC **12** 10:46:23.1±0.5, 31°.29S×68°.59W, h107km±4km, mb4.1/9, mb1 4.1/14, mb1mx3.9/34, mbtmp4.4/14, Error ellipse: s-maj=20.9km s-min=12.5km az=73.0*
*NEIC **12** 10:46:23.7±1.7, 31°.29S±0°.05×68°.65W±0°.08, h111km±4km, Error ellipse: s-maj=9.7km s-min=7.5km az=80.0*
ISC 12 10:46:22.9±0.5, **31°.22S**±0°.04×**68°.66W**±0°.05, **h107**km±4km, **n126**, σ**1.s35**/144, **mb4.6**/36, **1C**, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.19	124	iP	Pn	10 46 38.4	+0.5
RTLL				eS	Sn	10 46 50.4	+1.2
RTLL				IAML		10 46 51.9	
	comp=Z,11µm,0.3s						
AMOG	MOGNA	0.32	27	iP	Pn	10 46 39.8	+1.3
CFA	Coronel Fontan	0.53	137	iP	Pn	10 46 40.3	+0.7
	comp=Z,751nm,0.3s,baz=304,slow=7.0,SNR=6031						
CFA				S	Sn	10 46 52.9	+0.7
	comp=Z,2µm,0.3s,baz=277,slow=23,SNR=192						
CFA	Coronel Fontan	0.53	137	iP	Pn	10 46 40.0	+0.3
CFA				eS	Sn	10 46 53.2	+1.0
RTCV	Cerro Valdivia	0.65	171	iP	Pn	10 46 41.0	+0.4
ACCO	Cerro Coronel	0.72	331	iP	Pn	10 46 43.0	+1.4
RTLS	Leoncito	0.79	223	iP	Pn	10 46 42.4	+0.3
RTLS				IAML		10 46 43.1	
	comp=Z,3µm,0.3s						
RTLS				eS	Sn	10 46 57.5	+0.9
AROD	Rodeo	1.26	326	eP	Pn	10 46 49.3	+2.2
AROD				eS	Sn	10 47 08.3	+2.9
ASAL	Salagasta	1.37	186	eP	Pn	10 46 48.6	+0.5
ASAL				iP	Pn	10 46 48.6	+0.5
ASAL				eS	Sn	10 47 07.1	-0.1
ARCO	CERRO ARCO	1.63	188	IAML		10 47 15.3	
	comp=Z,4µm,0.6s						
AAGR	Agrelo	1.86	184	iP	Pn	10 46 54.5	+0.4
GO04	Tololo Observa	2.12	299		Pn	10 46 58.7	+1.2
GO04				Sn	Sn	10 47 26.8	+2.8
PEL	Peldehue	2.57	221		Pn	10 47 03.1	-0.1
PEL				Sn	Sn	10 47 34.5	+0.3
ROC1	El Roble	2.66	228		Pn	10 47 03.8	-0.7
ROC1				Sn	Sn	10 47 35.2	-1.2
ROC1	El Roble	2.66	228	iP	Pn	10 47 03.9	-0.6
LAMA	Las Malvinas	3.73	187	iP	Pn	10 47 17.8	-0.8
GO03	Copiap	3.87	339		Pn	10 47 21.7	+1.2
COIS	El Sosneado	3.96	191	iP	Pn	10 47 21.2	-0.4
PIL	Pilar	4.11	97	iP	Pn	10 47 24.8	+1.2
PUMA	Malargue	4.32	189	iP	Pn	10 47 25.9	-0.6
GO05	Huala	4.67	215		Pn	10 47 27.9	-3.3
GO05				Sn	Sn	10 48 20.0	-4.3
GO02	Mina Guanaco	6.09	352		Pn	10 47 51.1	+0.3
GO02				Sn	Sn	10 48 56.8	-2.5
PB10	IPOC Station P	7.86	347	Pn	Pn	10 48 13.0	-1.5
LVC	Limon Verde	8.58	358	P	Pn	10 48 23.8	-0.8
	comp=Z,3.1nm,0.3s,baz=191,slow=8.0,SNR=22						
LVC				S	Sn	10 49 54.3	-5.6
	comp=Z,2.0nm,0.3s,baz=192,slow=23,SNR=6.0						
LVC	Limon Verde	8.58	358		Pn	10 48 23.7	-1.0
LVC				Sn	Sn	10 49 56.4	-3.5
PB04	IPOC Station P	8.95	351	Pn	Pn	10 48 26.9	-2.6
PLCA	Paso Flores	9.61	189	P	Pn	10 48 37.2	-1.1
	comp=Z,0.2nm,0.3s,baz=18,slow=12,SNR=6.8						
PLCA	Paso Flores	9.61	189		Pn	10 48 36.3	-2.0
PB01	IPOC Station P	10.16	356	Pn	Pn	10 48 42.8	-3.1
CPUP	Villa Florida	11.07	67	P	Pn	10 48 56.1	-1.9
	comp=Z,0.7nm,0.3s,baz=241,slow=12,SNR=10						
CPUP	Villa Florida	11.07	67		Pn	10 48 56.8	-1.2
PB11	IPOC Station P	11.45	355	Pn	Pn	10 48 59.0	-4.3
MNMC	Minye Minye	12.07	356	Pn	Pn	10 49 11.3	-0.3
LPAZ	La Paz	14.87	2	P	Pn	10 49 50.2	+1.8
	comp=Z,0.8nm,0.3s,baz=176,slow=6.6,SNR=25						
LPAZ	La Paz	14.87	2		Pn	10 49 49.9	+1.5
SIV	San Ignacio	16.67	26	P	Pn	10 50 09.3	-0.9
	comp=Z,1.1nm,0.3s,baz=227,slow=12,SNR=48						
SAML	Samuel	22.74	14	P	P	10 51 16.7	+0.6
RUSC	La Rusia	37.15	353	P	P	10 53 25.1	+1.1
SDV	Santo Domingo	39.92	357	P	P	10 53 45.6	-1.4
	comp=Z,3.4nm,0.6s,baz=152,slow=7.1,SNR=4.8						
SDV	Santo Domingo	39.92	357	P	P	10 53 46.0	-1.0
SDV				IAmb	IAmb	10 53 47.3	
	comp=Z,6.2nm,1.1s						
SNAA	Sanae	53.11	159	P	P	10 55 27.5	-1.5
SNAA				IAmb	IAmb	10 55 34.7	
	comp=Z,6.5nm,1.5s						
TEIG	Tepich	54.51	337	P	P	10 55 40.8	+1.0
QSPA	South Pole Qui	59.01	180	P	P	10 56 11.6	+0.4
QSPA				IAmb	IAmb	10 56 12.3	
	comp=Z,3.7nm,0.8s						
833A	Chaparral WMA,	66.06	330	P	P	10 57 00.1	+1.7
W57A	Gilead	66.88	350	P	P	10 57 04.3	+0.9
SYO	Syowa Base	67.39	158	eP	P	10 57 04.2	-2.1
HPIG		67.77	325	P	P	10 57 10.2	+0.8
HPIG				IAmb	IAmb	10 57 11.8	
	comp=Z,4.8nm,1.0s						
V53A	Saluda	67.85	348	P	P	10 57 09.8	+0.2
V53A				IAmb	IAmb	10 57 10.4	
	comp=Z,6.3nm,1.0s						
W50A	Signal Mountai	67.90	345	P	P	10 57 09.5	-0.4
W50A				IAmb	IAmb	10 57 20.1	
	comp=Z,12nm,1.4s						
CPCT	Cooper Cave	67.97	346	P	P	10 57 10.9	+0.5
CPCT				IAmb	IAmb	10 57 11.2	
	comp=Z,7.6nm,1.0s						
TKL	Tuckaleechee C	68.03	347	P	P	10 57 10.2	-0.4
TKL				IAmb	IAmb	10 57 22.9	
	comp=Z,12nm,1.4s						
V52A	Sevierville	68.17	347	P	P	10 57 11.3	-0.2
V52A				IAmb	IAmb	10 57 30.6	
	comp=Z,14nm,1.2s						
TXAR	Lajitas Array	68.82	328	P	P	10 57 16.9	+1.1
	comp=Z,1.7nm,0.6s,baz=151,slow=8.3,SNR=30						
TX31	Lajitas Ar. Si	68.82	328	P	P	10 57 17.2	+1.4
TX32	Lajitas Array	68.82	328	P	P	10 57 17.2	+1.4
WVT	Waverly	69.37	343	P	P	10 57 19.2	+0.3
MIAR	Mount Ida	69.50	338	P	P	10 57 20.8	+1.0
MIAR				IAmb	IAmb	10 57 21.3	
	comp=Z,13nm,1.4s						
W41B	Gary Mavity, V	69.67	340	P	P	10 57 21.4	+0.6
W41B				IAmb	IAmb	10 57 22.5	
	comp=Z,4.9nm,0.8s						
WHAR	Wooly Hollow	69.79	340	P	P	10 57 22.3	+0.8
R55A	Marlinton	69.97	350	P	P	10 57 24.3	+1.6
R55A				IAmb	IAmb	10 57 24.5	
	comp=Z,7.9nm,0.9s						
W39A	Magazine	70.17	338	P	P	10 57 25.3	+1.4
W39A				IAmb	IAmb	10 57 25.5	
	comp=Z,8.4nm,0.7s						
LCAR	Lake Charles	70.19	341	P	P	10 57 24.6	+0.7
PBMO	Poplar Bluff	70.65	342	P	P	10 57 27.4	+0.6
U40A	Yellville	70.95	340	P	P	10 57 29.4	+0.7
U40A				IAmb	IAmb	10 57 29.8	
	comp=Z,7.3nm,0.6s						
HHAR	Hobbs	71.21	339	P	P	10 57 30.7	+0.4
HHAR				IAmb	IAmb	10 57 31.4	
	comp=Z,9.0nm,1.0s						
DBIC	Dimbokro	71.57	70	P	P	10 57 33.2	+0.3
	comp=Z,3.8nm,0.7s,baz=218,slow=3.8,SNR=6.9						
DBIC	Dimbokro	71.57	70	P	P	10 57 33.5	+0.6
DBIC				IAmb	IAmb	10 57 34.1	
	comp=Z,4.5nm,0.7s						
MNTX	Cornudas Mount	71.60	328	P	P	10 57 33.2	+0.5
CCM	Cathedral Cave	72.07	341	P	P	10 57 35.8	+0.5
CCM				IAmb	IAmb	10 57 36.5	
	comp=Z,8.9nm,0.9s						
MSTX	Muleshoe	72.39	331	P	P	10 57 38.5	+1.0
MSTX				IAmb	IAmb	10 57 38.9	
	comp=Z,13nm,0.9s						
M56A	Emporium	72.88	353	P	P	10 57 41.1	+1.0
M56A				IAmb	IAmb	10 57 50.3	
	comp=Z,15nm,1.3s						
N47A	Urbana	73.45	347	IAmb	IAmb	10 57 43.2	
	comp=Z,6.8nm,0.6s						
N47A				P	P	10 57 43.2	-0.2
L56A	Greenwood	73.45	353	P	P	10 57 44.8	+1.3
L56A				IAmb	IAmb	10 57 53.9	
	comp=Z,15nm,1.3s						
HDIL	Hopedale	73.93	344	P	P	10 57 46.0	-0.2
HDIL				IAmb	IAmb	10 57 46.7	
	comp=Z,8.8nm,0.7s						
ANMO	Albuquerque	74.81	329	P	P	10 57 53.6	+1.9
MAW	Mawson	75.00	163	P	P	10 57 52.2	0.0
	comp=Z,2.6nm,0.6s,baz=203,slow=7.1,SNR=4.7						
MAW	Mawson	75.00	163	P	P	10 57 52.4	+0.2
EMMW	East Machias	75.58	1	P	P	10 57 57.3	+1.7
FRNY	Flat Rock	75.83	356	P	P	10 57 58.0	+1.0
FRNY				IAmb	IAmb	10 57 59.9	
	comp=Z,9.1nm,1.2s						
L40A	Anamosa	75.83	343	P	P	10 57 57.2	+0.1
PLVO	Plevna	76.28	354	P	P	10 58 00.6	+1.0
PLVO				IAmb	IAmb	10 58 16.7	
	comp=Z,17nm,1.5s						
F64A	Sherman	76.72	0	P	P	10 58 03.5	+1.5
F64A				IAmb	IAmb	10 58 04.3	
	comp=Z,17nm,1.1s						
SDCO	Great Sand Dun	76.76	331	P	P	10 58 04.7	+1.8
E63A	Oxbow	77.28	0	P	P	10 58 06.4	+1.2
S22A	4UR Ranch, Cre	77.32	330	P	P	10 58 07.7	+1.6
Q24A	Divide	77.65	332	P	P	10 58 09.6	+1.8
Q24A				IAmb	IAmb	10 58 10.1	
	comp=Z,6.6nm,0.7s						
ECSD	EROS Data Cent	78.86	340	P	P	10 58 14.7	+0.7
ECSD				IAmb	IAmb	10 58 15.1	
	comp=Z,7.4nm,0.8s						
KNB	Kanab	79.47	325	P	P	10 58 19.9	+2.1
D41A	Chassel	79.96	346	P	P	10 58 20.9	+1.0
MTPU	Mount Pierson	79.98	326	P	P	10 58 22.0	+1.3
SRU	San Rafael Swe	80.08	328	P	P	10 58 22.3	+1.4
CCUT	Cedar City	80.16	325	P	P	10 58 23.4	+1.9
TOA0	Torodi Ar. Sit	80.56	68	P	P	10 58 24.7	+0.9
TOA0				IAmb	IAmb	10 58 24.9	
	comp=Z,8.3nm,0.7s						
TORD	Torodi Ar. Bea	80.56	68	P	P	10 58 24.3	+0.4
	comp=Z,6.9nm,0.7s,baz=268,slow=4.9,SNR=34						
TORD				pP	pP	10 58 51.8	+0.3
	comp=Z,1.1nm,0.8s,baz=254,slow=7.0,SNR=2.0						
TORD				sP	sP	10 59 03.3	+0.3
	comp=Z,1.2nm,0.8s,baz=272,slow=3.3,SNR=2.1						
TORD	Torodi Ar. Bea	80.56	68	P	P	10 58 23.8	-0.1
DRLN	Deer Lake	80.73	7	P	P	10 58 24.8	+0.9
RDMU	Red Mountain	80.85	330	P	P	10 58 26.7	+1.6
TPNV	Topopah Spring	81.13	323	P	P	10 58 28.8	+2.1
EYMN	Ely	81.43	345	P	P	10 58 28.1	+0.4
HWUT	Hardware Ranch	82.57	329	P	P	10 58 35.2	+1.1
PD31	Pinedale Array	82.65	331	P	P	10 58 35.0	+0.5
PDAR	Pinedale Array	82.65	331	P	P	10 58 35.0	+0.5
	comp=Z,1.2nm,0.7s,baz=138,slow=6.9,SNR=11						
PDAR	Pinedale Array	82.65	331	P	P	10 58 35.2	+0.7
NVAR	Mina Array Bea	83.31	323	P	P	10 58 39.2	+1.2
	comp=Z,1.8nm,0.9s,baz=159,slow=6.2,SNR=9.7						
FLWY	Flagg Ranch	84.21	331	P	P	10 58 43.6	+1.2
ULM	Lac du Bonnet	84.63	343	P	P	10 58 43.8	-0.3
	comp=Z,3.1nm,0.8s,baz=143,slow=3.5,SNR=8.4						
MCMT	McKenzie Canyo	85.71	330	P	P	10 58 52.0	+1.9
SCHQ	Schefferville	85.72	1	P	P	10 58 49.2	-0.3
	comp=Z,2.3nm,0.6s,baz=198,slow=3.8,SNR=8.6						
SCHQ	Schefferville	85.72	1	P	P	10 58 49.6	+0.2
SCHQ				IAmb	IAmb	10 58 49.7	
	comp=Z,4.5nm,0.9s						
WDC	Whiskeytown Da	87.11	322	P	P	10 58 57.0	+0.3
WDC				IAmb	IAmb	10 58 58.4	
	comp=Z,6.0nm,1.4s						
J08A	Circle Bar Ran	87.11	326	P	P	10 58 58.4	+1.6
YBH	Yreka Blue Hor	88.03	323	P	P	10 59 01.2	+0.1
HUMO	Hull Mountain	88.78	323	P	P	10 59 05.8	+1.3
YKA	Yellowknife Ar	100.38	340	P	Pdif	10 59 57.0	0.0
	comp=Z,0.5nm,0.9s,baz=144,slow=4.3,SNR=5.4						
ASAR	Alice Springs	121.30	204	PKP	PKPdf	11 05 02.5	-1.5
	comp=Z,0.5nm,0.6s,baz=140,slow=1.7,SNR=9.7						
WRA	Warramunga Arr	124.54	207	PKP	PKPdf	11 05 09.2	-1.2
	comp=Z,1.0nm,0.5s,baz=171,slow=1.8,SNR=15						
AAK	Ala-Archa	148.65	58	PKPbc	PKPbc	11 05 57.3	-0.3
	comp=Z,4.9nm,0.6s,baz=23,slow=4.4,SNR=4.3						
KURBB	Kurchatov Arra	148.90	42	PKPbc	PKPbc	11 05 58.1	+0.3
	comp=Z,2.5nm,0.7s,baz=297,slow=3.2,SNR=27						
KURBB				pPKPbc	pPKPbc	11 06 27.1	0.0
	comp=Z,1.3nm,0.7s,baz=298,slow=3.1,SNR=5.6						
KURK	Kurchatov	148.91	42	PKPbc	PKPbc	11 05 58.4	+0.6
ZALV	Zalesovo Beam	150.36	32	PKPbc	PKPbc	11 06 01.6	+0.4
	comp=Z,8.4nm,0.6s,baz=303,slow=3.5,SNR=25						
ZALV				pPKPbc	pPKPbc	11 06 30.9	+0.4
	comp=Z,3.3nm,0.5s,baz=281,slow=2.5,SNR=5.1						
MKAR	Makanchi Array	152.79	47	PKPbc	PKPbc	11 06 06.8	-0.3
	comp=Z,1.9nm,0.7s,baz=321,slow=1.7,SNR=6.1						
MKAR				PKPab	PKPab	11 06 18.8	+0.3
	comp=Z,2.3nm,0.6s,baz=297,slow=3.6,SNR=7.6						
MKAR	Makanchi Array	152.79	47		PKPbc	11 06 06.8	-0.3
MKAR					PKPab	11 06 19.1	+0.7
USRK	Ussuriysk Ar.	159.22	314	PKPab	PKPab	11 06 46.7	+0.6
	comp=Z,1.7nm,0.8s,baz=158,slow=1.6,SNR=3.7						
USRK	Ussuriysk Ar.	159.22	314		PKPab	11 06 47.1	+1.0
SONM	Songino Array	162.98	11	PKPab	PKPab	11 07 03.1	+0.6
	comp=Z,1.0nm,0.7s,baz=322,slow=5.7,SNR=7.7						
SONM	Songino Array	162.98	11		PKPab	11 07 03.3	+0.8

*ATH **12** 10:54:32.1, 38°.19N×20°.37E, h14km±1km, ML2.9/8, Error ellipse: s-maj=2.2km s-min=1.3km az=253.0*
*THE **12** 10:54:32.6, 38°.20N×20°.34E, h9km, ML3.0/8, Error ellipse: s-maj=0.8km s-min=0.4km az=260.0*
ISC 12 10:54:32.3±1.2, **38°.20N**±0°.02×**20°.36E**±0°.06, **h12**km±4km, **n37**, σ**0.s39**/64, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.01	320	P	Pg	10 54 34.3	-0.1
KEF3				S	Sg	10 54 35.6	-0.2
CHV1	Chavriata, Kef	0.02	121	P	Pg	10 54 34.4	+0.1
CHV1				S	Sg	10 54 35.5	-0.3
LXRA	Lixouri, Kepha	0.06	86	P	Pg	10 54 34.8	+0.2
LXRA				S	Sg	10 54 36.5	+0.1
LXR1	Lixouri, Cepha	0.07	86	P	Pg	10 54 34.9	+0.2
LXR1				S	Sg	10 54 36.5	+0.1
KEF4	Livadi, Kephal	0.08	41	P	Pg	10 54 35.0	+0.1
KEF4				S	Sg	10 54 36.8	0.0
ARGA	Argostoli. Kep	0.10	101	P	Pg	10 54 35.2	+0.1
ARGA				S	Sg	10 54 37.1	+0.1
ARG2	Argostoli	0.10	99	P	Pg	10 54 35.3	+0.2
ARG2				S	Sg	10 54 37.0	-0.2
KEF2	Argostoli. Kep	0.11	106	P	Pg	10 54 35.4	+0.2
KEF2				S	Sg	10 54 37.2	-0.1
KEF1	Kardakata, Kep	0.12	48	P	Pg	10 54 35.5	+0.2
KEF1				S	Sg	10 54 37.7	+0.1
VLS	Valsamata	0.18	96	P	Pg	10 54 36.5	+0.1
VLS				S	Sg	10 54 39.3	+0.1
VLS	Valsamata	0.18	96	P	Pg	10 54 36.4	+0.1
VLS				S	Sg	10 54 39.4	+0.2
VLS				AML	AML	10 54 39.6	
	comp=N,38627µm,0.3s						
VLS				AML	AML	10 54 39.7	
	comp=E,21097µm,0.2s						
VSK1	VASILIKIADES	0.27	38	P	Pg	10 54 38.1	+0.3
VSK1				S	Sg	10 54 42.0	+0.4
KONA	Konidatara, Ke	0.28	36	P	Pg	10 54 38.4	+0.3
KONA				S	Sg	10 54 43.0	+0.9
VLMS	Volimes, Zakyn	0.40	143	P	Pg	10 54 40.5	+0.3
VLMS				S	Sg	10 54 45.8	+0.2
VLMS				AML	AML	10 54 47.8	
	comp=E,16875µm,0.2s						
VLMS				AML	AML	10 54 47.9	
	comp=N,31615µm,0.4s						
EVGI	Lefkada island	0.49	29	P	Pg	10 54 41.9	+0.1
EVGI				S	Sb	10 54 49.8	-0.1
EVGI	Lefkada island	0.49	29	P	Pg	10 54 41.9	+0.1
MGNA	Meganis	0.57	37	P	Pg	10 54 43.3	-0.2
MGNA				S	Sg	10 54 50.6	-0.4
ZAK2	Zakynthos	0.59	133	P	Pg	10 54 44.1	+0.3
ZAK2				S	Sb	10 54 53.7	+0.8
LKD2	Lefkada island	0.64	22	P	Pg	10 54 44.8	+0.1
LKD2				S	Sb	10 54 54.4	+0.1
	comp=N,812nm,0.7s						
LKD2	Lefkada island	0.64	22	P	Pg	10 54 44.7	0.0
LKD2				AML	AML	10 55 04.0	
	comp=N,1704µm,0.9s						
LKD2				AML	AML	10 55 09.1	
	comp=E,1469µm,0.6s						
KRI1	kERI	0.65	145	P	Pg	10 54 44.5	-0.3
KRI1				S	Sb	10 54 54.5	0.0
TSLK	Tsoukalades, L	0.67	20	P	Pg	10 54 45.3	0.0
TSLK				S	Sg	10 54 54.6	+0.5
	comp=E,1µm,0.6s						
PDO	Prodromos	0.77	58	P	Pg	10 54 46.8	-0.3
PDO				S	Sb	10 54 58.4	+0.5
	comp=E,2µm,0.5s						
RLS	Riolos of Patr	0.89	99	P	Pg	10 54 49.0	-0.4
RLS				S	Sn	10 55 02.8	-0.6
	comp=E,605nm,0.6s						
RLS	Riolos of Patr	0.89	99	P	Pg	10 54 48.5	-0.9
RLS				S	Sg	10 55 00.6	-0.3
RLS				AML	AML	10 55 06.2	
	comp=E,1346µm,0.4s						
RLS				AML	AML	10 55 08.9	
	comp=N,960µm,0.3s						
PVO	Paravola	1.01	65	P	Pg	10 54 51.6	-0.1
PVO				S	Sn	10 55 06.5	0.0
	comp=N,900nm,0.5s						
DRO	Drossia	1.10	102	P	Pb	10 54 52.9	-0.3
DRO				S	Sn	10 55 09.8	+1.2
	comp=N,2µm,0.5s						
AMT	Artemida-Makis	1.26	121	P	Pn	10 54 55.6	-0.1
AMT				S	Sg	10 55 13.9	+1.1
	comp=N,1µm,0.5s						
LAKA	Lakka	1.28	88	P	Pn	10 54 55.2	-0.8
LAKA				AML	AML	10 55 16.6	
	comp=N,847µm,0.4s						
LAKA				AML	AML	10 55 26.7	
	comp=E,662µm,1.2s						
ANX	Ano Chora	1.29	72	P	Pn	10 54 55.9	-0.4
EVR	Evrytania	1.35	57	P	Pg	10 54 58.2	0.0
EVR				AML	AML	10 55 24.9	
	comp=N,525µm,1.0s						
EVR				AML	AML	10 55 28.9	
	comp=E,328µm,0.5s						
SERG	Sergoula	1.36	80	P	Pn	10 54 56.9	-0.2
SERG				S	Sg	10 55 16.0	+0.1
	comp=E,505nm,0.5s						
TRIZ	Trizonia	1.36	82	P	Pn	10 54 57.0	-0.1
ALIK	Aliki, Aigiali	1.38	87	P	Pn	10 54 56.5	-0.9
KALE	Kalithea	1.42	82	P	Pn	10 54 57.9	-0.1
KALE				AML	AML	10 55 28.3	
	comp=N,960µm,0.5s						
KALE				AML	AML	10 55 34.9	
	comp=E,575µm,0.6s						
KLV	Kalavryta, Ach	1.42	96	P	Pn	10 54 58.1	+0.1
KLV	Kalavryta, Ach	1.42	96	P	Pn	10 54 58.3	+0.2
KLV				AML	AML	10 55 23.3	
	comp=N,545µm,0.4s						
KLV				AML	AML	10 55 27.6	
	comp=E,547µm,0.7s						

*IDC **12** 10:57:43.8±1.4, 10°.30S×161°.39E, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.7/30, mbtmp3.7/5, Error ellipse: s-maj=32.9km s-min=26.2km az=162.0*
ISC 12 10:57:52.2±1.3, **10°.2S**±0°.2×**161°.2E**±0°.1, **h61**km, **n7**, σ**0.s98**/9, **mb3.6**/5, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.47	303	Pn	Pn	10 58 15.5	-1.0
	150nm,0.3s,baz=153,slow=3.6,SNR=51						
HNR				Sn	Sn	10 58 35.3	+0.5
	748nm,0.3s,baz=167,slow=19,SNR=30						
HNR	Honiara	1.47	303	eP	Pn	10 58 15.0	-1.5
HNR				iS	Sn	10 58 36.0	+1.2
WRA	Warramunga Arr	27.63	246	P	P	11 03 34.8	+0.4
	0.7nm,0.7s,baz=76,slow=9.0,SNR=8.4						
ASAR	Alice Springs	29.25	239	P	P	11 03 48.8	0.0
	0.1nm,0.4s,baz=64,slow=9.9,SNR=4.6						
SONM	Songino Array	75.42	325	P	P	11 09 30.5	+0.8
	0.9nm,0.6s,baz=137,slow=5.0,SNR=7.1						
ILAR	Eielson Array	84.22	20	P	P	11 10 16.8	0.0
	0.3nm,0.5s,baz=246,slow=4.9,SNR=4.4						
YKA	Yellowknife Ar	96.33	28	P	P	11 11 13.9	-0.1
	0.4nm,0.7s,baz=258,slow=5.0,SNR=5.5						

*IDC **12** 11:00:12.8±6.2, 36°.39N×82°.60E, h0km, mb3.0/1, mb1 3.4/5, mb1mx3.2/47, mbtmp3.4/5, ML3.1/4, Error ellipse: s-maj=80.6km s-min=41.0km az=26.0*
ISC 12 11:00:11.5±2.7, **36°.2N**±0°.2×**82°.6E**±0°.3, **h10**km, **n7**, σ**1.s86**/7, **Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	8.97	318	Pg	Pg	11 02 53.5	-10
	0.2nm,0.3s,baz=135,slow=17,SNR=2.6						
AAK				Lg	Lg	11 04 48.9	
	0.3nm,0.3s,baz=16,slow=7.4,SNR=3.1						
MKAR	Makanchi Array	10.55	359	Pn	Pn	11 02 44.0	+1.2
	0.5nm,0.3s,baz=182,slow=12,SNR=11						
MKAR				Sn	Sn	11 04 39.5	-1.4
	0.1nm,0.3s,baz=180,slow=22,SNR=2.6						
KURBB	Kurchatov Arra	14.68	350	Pn	Pn	11 03 38.4	-0.7
	0.0nm,0.3s,baz=167,slow=8.6,SNR=4.6						
ZALV	Zalesovo Beam	17.78	4	P	Pn	11 04 17.8	-1.1
	0.2nm,0.3s,baz=194,slow=11,SNR=3.7						
BVAR	Borovoye Array	18.86	337	P	P	11 04 32.5	+0.8
	0.2nm,0.3s,baz=150,slow=10.0,SNR=6.6						
SONM	Songino Array	21.03	49	P	P	11 04 57.8	+2.4
	0.5nm,0.6s,baz=236,slow=10,SNR=4.8						
NJ2	Nanjing	30.16	87	eP	P	11 06 20.2	-1.5

*THE **12** 11:12:10.8, 38°.18N×20°.34E, h10km, ML2.6/8, Error ellipse: s-maj=1.1km s-min=0.5km az=83.0*
*ATH **12** 11:12:11.2, 38°.20N×20°.35E, h9km±1km, ML2.6/6, Error ellipse: s-maj=1.7km s-min=0.9km az=249.0*
ISC 12 11:12:10.4±1.4, **38°.17N**±0°.03×**20°.32E**±0°.06, **h12**km±4km, **n33**, σ**0.s44**/60, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.04	28	P	Pg	11 12 12.8	+0.2
KEF3				S	Sg	11 12 14.0	-0.2
CHV1	Chavriata, Kef	0.05	71	P	Pg	11 12 12.8	+0.1
CHV1				S	Sg	11 12 14.1	-0.2
LXRA	Lixouri, Kepha	0.10	70	P	Pg	11 12 13.3	+0.2
LXRA				S	Sg	11 12 14.9	-0.2
LXR1	Lixouri, Cepha	0.10	70	P	Pg	11 12 13.3	+0.1
LXR1				S	Sg	11 12 14.9	-0.3
KEF4	Livadi, Kephal	0.12	41	P	Pg	11 12 13.5	+0.1
KEF4				S	Sg	11 12 15.2	-0.5
ARGA	Argostoli. Kep	0.12	86	P	Pg	11 12 13.8	+0.3
ARGA				S	Sg	11 12 15.6	-0.2
KEF2	Argostoli. Kep	0.13	91	P	Pg	11 12 13.9	+0.3
KEF2				S	Sg	11 12 16.0	0.0
ARG2	Argostoli	0.13	85	P	Pg	11 12 13.8	+0.2
ARG2				S	Sg	11 12 15.8	-0.1
KEF1	Kardakata, Kep	0.16	46	P	Pg	11 12 14.1	0.0
KEF1				S	Sg	11 12 16.0	-0.6
VLS	Valsamata	0.21	87	P	Pg	11 12 14.9	0.0
VLS				S	Sg	11 12 17.8	-0.2
	5µm,0.3s						
VLS	Valsamata	0.21	87	P	Pg	11 12 14.9	0.0
VLS				S	Sg	11 12 17.9	-0.1
VLS				AML	AML	11 12 18.1	
	comp=N,7992µm,0.2s						
VLS				AML	AML	11 12 18.2	
	comp=E,7728µm,0.2s						
VSK1	VASILIKIADES	0.31	38	P	Pg	11 12 16.6	-0.1
VSK1				S	Sg	11 12 21.2	+0.4
KONA	Konidatara, Ke	0.32	37	P	Pg	11 12 16.9	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KONA				S	Sg	11 12 21.6	+0.3
FSK	**Fiskardo**	**0.35**	**33**	P	**Pg**	**11 12 17.3**	**-0.1**
FSK				S	**Sg**	**11 12 21.9**	**-0.1**
FSK	**Fiskardo**	**0.35**	**33**	P	**Pg**	**11 12 17.2**	**-0.1**
FSK				S	**Sg**	**11 12 22.2**	**+0.2**
VLMS	**Volimes, Zakyn**	**0.40**	**137**	P	**Pg**	**11 12 19.1**	**+0.8**
VLMS				S	**Sb**	**11 12 25.4**	**0.0**
VLMS				AML	AML	11 12 26.4	
	comp=E,6881μm,0.2s						
VLMS				AML	AML	11 12 26.5	
	comp=N,10876μm,0.3s						
EVGI	**Lefkada island**	**0.52**	**30**	P	**Pg**	**11 12 20.4**	**-0.2**
EVGI				S	**Sg**	**11 12 28.2**	**+0.6**
EVGI	**Lefkada island**	**0.52**	**30**	P	**Pg**	**11 12 20.4**	**-0.2**
EVGI				S	**Sg**	**11 12 28.2**	**+0.6**
MGNA	**Meganis**	**0.61**	**37**	P	**Pg**	**11 12 21.9**	**-0.4**
MGNA				AML	AML	11 12 31.8	
	comp=E,1140μm,0.1s						
MGNA				AML	AML	11 12 32.4	
	comp=N,965μm,0.2s						
KRI1	**kERI**	**0.64**	**142**	P	**Pg**	**11 12 22.2**	**-0.6**
KRI1				S	**Sb**	**11 12 32.9**	**+0.6**
	comp=N,2μm,0.4s						
LKD2	**Lefkada island**	**0.67**	**23**	P	**Pg**	**11 12 23.3**	**-0.1**
LKD2				S	**Sg**	**11 12 32.6**	**+0.2**
	comp=N,338nm,0.6s						
LKD2	**Lefkada island**	**0.67**	**23**	P	**Pg**	**11 12 23.4**	**-0.1**
LKD2				S	**Sb**	**11 12 33.2**	**-0.3**
LKD2				AML	AML	11 12 39.4	
	comp=N,561μm,0.3s						
LKD2				AML	AML	11 12 42.8	
	comp=E,474μm,0.4s						
TSLK	**Tsoukalades, L**	**0.71**	**22**	P	**Pg**	**11 12 24.1**	**0.0**
TSLK				S	**Sb**	**11 12 34.5**	**+0.2**
	comp=E,535nm,0.7s						
TSLK	**Tsoukalades, L**	**0.71**	**22**	P	**Pb**	**11 12 24.8**	**+0.1**
RLS	**Riolos of Patr**	**0.91**	**97**	P	**Pg**	**11 12 26.8**	**-1.1**
RLS				S	**Sb**	**11 12 41.0**	**+0.9**
	comp=E,220nm,0.4s						
RLS	**Riolos of Patr**	**0.91**	**97**	P	**Pg**	**11 12 28.1**	**+0.2**
RLS				S	**Sb**	**11 12 41.2**	**+1.1**
RLS				AML	AML	11 12 45.4	
	comp=N,407μm,0.6s						
RLS				AML	AML	11 12 46.6	
	comp=E,465μm,0.4s						
PVO	**Paravola**	**1.04**	**64**	P	**Pg**	**11 12 30.3**	**-0.2**
PVO				S	**Sn**	**11 12 46.4**	**+1.0**
	comp=E,390nm,0.4s						
PVO	**Paravola**	**1.04**	**64**	P	**Pg**	**11 12 30.2**	**-0.4**
PVO				AML	AML	11 12 47.5	
	comp=E,665μm,0.4s						
PVO				AML	AML	11 12 51.2	
	comp=N,596μm,0.6s						
ANX	**Ano Chora**	**1.32**	**71**	P	**Pn**	**11 12 34.6**	**-0.2**
ANX				S	**Sb**	**11 12 52.7**	**+0.5**
	comp=N,388nm,0.6s						
ANX	**Ano Chora**	**1.32**	**71**	P	**Pn**	**11 12 35.1**	**+0.3**
SERG	**Sergoula**	**1.39**	**79**	P	**Pn**	**11 12 34.9**	**-0.7**
KALE	**Kalithea**	**1.45**	**81**	P	**Pn**	**11 12 36.1**	**-0.3**
KLV	**Kalavryta, Ach**	**1.45**	**94**	P	**Pn**	**11 12 35.9**	**-0.5**
KLV				S	**Sn**	**11 12 54.4**	**-1.0**
	comp=N,115nm,0.6s						

IDC ***12*** *11:14:18.4±0.6, 35.95N×82.52E, h0km, mb4.3/22, mb1 4.4/27, mb1mx4.3/49, mbtmp4.3/27, ML3.9/4, Error ellipse: s-maj=15.5km s-min=11.8km az=38.0*

MOS ***12*** *11:14:19.0±1.5, 36.07N×82.62E, h10km, mb4.7/26, Error ellipse: s-maj=7.6km s-min=4.0km az=117.9*

NEIC ***12*** *11:14:19.9±1.5, 36.00N±0.06×82.51E±0.07, h10km±1km, mb4.5/29, Error ellipse: s-maj=11.5km s-min=8.4km az=148.0*

BJI ***12*** *11:14:20.6±0.0, 36.18N×82.50E, h8km, mB4.9/6, mb4.4/32, ML4.9/7, Ms4.7/11, Ms7 4.5/9*

NNC ***12*** *11:14:23.1±3.9, 36.35N×82.74E, h7km±18km, mb5.0, mpv4.9, Error ellipse: s-maj=34.1km s-min=23.5km az=89.0*

ISC 12 11:14:20.7±0.4, 36.07N±0.05×82.53E±0.04, h10km, n241, σ1.78/245, mb4.5/55, 34C-15D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.23**	**305**	Pn	**Pn**	**11 15 56.4**	**+3.6**
KSH				Sn	**Sn**	**11 17 07.9**	**+3.8**
KSH				LR	LR		
	comp=N,2μm,7.1s						
KSH				LR	LR		
	comp=Z,7μm,17.0s						
PRZ	**Przheval'sk**	**7.16**	**335**		**Pn**	**11 16 05.7**	**+0.1**
PRZ	**Przheval'sk**	**7.16**	**335**	P	**Pn**	**11 16 05.7**	**+0.1**
KDJ	**Kajisay**	**7.34**	**327**		**Pn**	**11 16 08.2**	**+0.1**
KDJ	**Kajisay**	**7.34**	**327**	P	**Pn**	**11 16 08.2**	**+0.1**
NRN	**Naryn**	**7.39**	**318**		**Pn**	**11 16 12.1**	**+3.1**
NRN	**Naryn**	**7.39**	**318**	P	**Pn**	**11 16 12.1**	**+3.1**
SHLS	**Shalkode**	**7.46**	**342**	eP	**Pn**	**11 16 09.4**	**-0.3**
	12nm,0.5s						
SHLS				eS	**Sn**	**11 17 34.8**	**+0.4**
UZB	**Uzynbulak**	**7.57**	**340**	eP	**Pn**	**11 16 12.4**	**+1.2**
	21nm,0.6s						
UZB				eS	**Sn**	**11 17 37.9**	**+0.8**
PDGK	**Podgornoye**	**7.62**	**343**	⇓Pn	**Pn**	**11 16 12.6**	**+0.8**
	100nm,1.0s						
PDGK				⇑Sn	**Sn**	**11 17 38.1**	**-0.2**
	240nm,0.7s						
PDGK				⇓Lg	Lg	11 18 24.6	
	534nm,1.1s						
PDGK	**Podgornoye**	**7.62**	**343**	i P	**Pn**	**11 16 12.6**	**+0.8**
PDGK				pmax	pmax		
	comp=Z,100nm,1.0s						
DANN	**Dangsing**	**7.77**	**172**	eP	**Pn**	**11 16 14.1**	**0.0**
	comp=Z,68nm,0.6s						
KPKS	**Kokpek**	**7.96**	**339**	eP	**Pn**	**11 16 17.5**	**+1.0**
	comp=Z,85nm,1.3s						
KPKS				eS	**Sn**	**11 17 48.0**	**+1.4**
NIL	**Nilore**	**8.00**	**255**		**Pn**	**11 16 15.4**	**-1.7**
NIL	**Nilore**	**8.00**	**255**	P	**Pn**	**11 16 15.4**	**-1.7**
MDOK	**Medeo**	**8.25**	**331**	eP	**Pn**	**11 16 21.3**	**+0.8**
MDOK	**Medeo**	**8.25**	**331**	⇑Pn	**Pn**	**11 16 21.6**	**+1.1**
	comp=Z,48nm,0.8s						
MDOK				⇓Pg	Pb	11 16 50.9	+7.2
	comp=Z,88nm,1.0s						
MDOK				⇑Lg	Lg	11 18 37.5	
	comp=Z,219nm,0.8s						
KNDC	**Almaty**	**8.33**	**331**	⇑Pn	**Pn**	**11 16 22.6**	**+1.0**
	comp=Z,44nm,0.6s						
KNDC				⇑Pg	**Pg**	**11 16 56.6**	**-3.5**
	comp=Z,74nm,0.8s						
KNDC				⇑Lg	Lg	11 18 37.9	
	comp=Z,339nm,0.9s						
KNDC	**Almaty**	**8.33**	**331**	P	**Pn**	**11 16 22.5**	**+1.0**
KOLN	**Koldanda**	**8.33**	**173**	eP	**Pn**	**11 16 20.7**	**-1.0**
	comp=Z,64nm,0.7s						
AAA	**Alma-Ata**	**8.34**	**330**	eP	**Pn**	**11 16 22.6**	**+0.9**
AAA	**Alma-Ata**	**8.34**	**330**	eP	Pn	11 16 32.3	+11
AAA				eS	Sn	11 18 05.8	+10
AAA				pmax	pmax		
	comp=Z,100nm,0.5s						
AAA				smax	smax		
	comp=E,100nm,0.8s						
AAA				MLR	MLR		
	comp=Z,300nm,2.0s						
GUN	**Gumba**	**8.62**	**160**	eP	**Pn**	**11 16 26.5**	**+0.7**
	comp=Z,141nm,0.8s						
WMQ	**Urumqi**	**8.69**	**26**	eP	**Pn**	**11 16 26.5**	**0.0**
WMQ				S	**Sn**	**11 18 00.0**	**-4.6**
WMQ				smax	smax		
	comp=Z,220nm,1.3s						
WMQ				smax	smax		
	comp=Z,150nm,1.3s						
WMQ	**Urumqi**	**8.69**	**26**	Pn	**Pn**	**11 16 26.1**	**-0.4**
WMQ	**Urumqi**	**8.69**	**26**	P	**Pn**	**11 16 26.1**	**-0.4**
DMN	**Daman**	**8.72**	**165**	eP	**Pn**	**11 16 27.5**	**+0.4**
PKIN	**Phulchoki**	**8.81**	**163**	eP	**Pn**	**11 16 29.6**	**+1.2**
	comp=Z,67nm,0.6s						
PKI	**Pulchoki**	**8.82**	**163**	eP	**Pn**	**11 16 28.7**	**+0.1**
	comp=Z,59nm,0.5s						
CHKK	**Chushkaly**	**8.86**	**333**	eP	**Pn**	**11 16 28.8**	**0.0**
JIRN	**Jiri**	**8.94**	**159**	eP	**Pn**	**11 16 31.3**	**+1.0**
	comp=Z,93nm,0.5s						
AAK	**Ala-Archa**	**9.04**	**319**	Pn	**Pn**	**11 16 33.3**	**+2.0**
	comp=Z,0.9nm,0.3s,baz=139,slow=9.0,SNR=24						
AAK				Pg		11 17 03.0	
	comp=Z,2.4nm,0.3s,baz=131,slow=15,SNR=6.1						
AAK				Lg	Lg	11 19 02.3	
	comp=Z,1.8nm,0.3s,baz=127,slow=20,SNR=3.7						
AAK	**Ala-Archa**	**9.04**	**319**	⇑Pn	**Pn**	**11 16 34.6**	**+3.2**
	comp=Z,16nm,0.8s						
AAK				⇓Pg		11 17 06.7	
	comp=Z,47nm,0.8s						
AAK				Lg	Lg	11 19 03.2	
	comp=Z,230nm,1.1s						
AAK	**Ala-Archa**	**9.04**	**319**		**Pn**	**11 16 33.6**	**+2.2**
FRU1	**Bishkek**	**9.09**	**320**	Pn	**Pn**	**11 16 32.2**	**+0.3**
FRU1	**Bishkek**	**9.09**	**320**	P	**Pn**	**11 16 32.2**	**+0.3**
ARSB	**Arslanbob**	**9.12**	**308**		**Pn**	**11 16 33.1**	**+0.6**
ARSB	**Arslanbob**	**9.12**	**308**	P	**Pn**	**11 16 33.1**	**+0.6**
KUU	**Kurty**	**9.14**	**331**	eP	**Pn**	**11 16 32.8**	**+0.1**
TDK	**Taldyqorghan**	**9.46**	**342**	eP	**Pn**	**11 16 37.5**	**+0.5**
TDK				eS	**Sn**	**11 18 22.1**	**-1.2**
SGDS	**Sogindy**	**9.55**	**323**	eP	**Pn**	**11 16 36.9**	**-1.5**
LSA	**Lhasa**	**9.63**	**129**	P	Pn	11 16 46.1	+6.3
LSA				pmax	pmax		
	comp=Z,12nm,1.3s						
LSA	**Lhasa**	**9.63**	**129**	Pn	**Pn**	**11 16 39.3**	**-0.5**
LSA	**Lhasa**	**9.63**	**129**	P	**Pn**	**11 16 39.3**	**-0.5**
RAMN	**Ramite**	**9.73**	**158**	eP	**Pn**	**11 16 40.6**	**-0.4**
	comp=Z,144nm,0.9s						
TAPN	**Taplejung**	**9.75**	**152**	eP	**Pn**	**11 16 41.2**	**-0.1**
BTK	**Batken**	**10.06**	**297**		**Pn**	**11 16 44.9**	**-0.4**
BTK	**Batken**	**10.06**	**297**	P	**Pn**	**11 16 44.9**	**-0.4**
ODAN	**Odare**	**10.07**	**154**	eP	**Pn**	**11 16 44.9**	**-0.8**
	comp=Z,79nm,0.8s						
MK31	**Makanchi Array**	**10.71**	**359**	⇓Pn	**Pn**	**11 16 54.1**	**-0.1**
	comp=Z,19nm,0.6s,baz=181,slow=13,SNR=460						
MK31				⇓Sn	**Sn**	**11 18 50.3**	**-3.9**
	comp=Z,16nm,0.6s,baz=180,slow=23,SNR=5.0						
MK31				⇑Lg	Lg	11 19 50.2	
	comp=Z,61nm,0.8s						
MK31	**Makanchi Array**	**10.71**	**359**		**Pn**	**11 16 53.9**	**-0.3**
MK31	**Makanchi Array**	**10.71**	**359**	P	**Pn**	**11 16 53.9**	**-0.3**
MKAR	**Makanchi Array**	**10.71**	**359**	Pn	**Pn**	**11 16 53.9**	**-0.2**
	comp=Z,8.6nm,0.3s,baz=180,slow=12,SNR=298						
MKAR				Sn	**Sn**	**11 18 49.5**	**-4.6**
	comp=Z,1.2nm,0.3s,baz=183,slow=24,SNR=3.1						
MKAR	**Makanchi Array**	**10.71**	**359**		**Pn**	**11 16 53.4**	**-0.8**
MKAR	**Makanchi Array**	**10.71**	**359**	i P	**Pn**	**11 16 54.0**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,37nm,0.6s						
MAKZ	**Makanchi**	**10.73**	**358**	⇓Pn	**Pn**	**11 16 54.4**	**-0.1**
	comp=Z,51nm,0.6s						
MAKZ				⇓Sn	**Sn**	**11 18 52.9**	**-1.7**
	comp=Z,25nm,0.8s						
MAKZ	**Makanchi**	**10.73**	**358**		**Pn**	**11 16 54.1**	**-0.4**
MAKZ	**Makanchi**	**10.73**	**358**	P	**Pn**	**11 16 54.3**	**-0.1**
MAKZ						11 18 52.9	
KBL	**Kabul**	**11.13**	**266**		**Pn**	**11 16 57.8**	**-2.3**
KBL	**Kabul**	**11.13**	**266**	P	**Pn**	**11 16 57.8**	**-2.3**
IUG	**Iuzhnay**	**11.45**	**306**	eP	**Pn**	**11 17 04.1**	**-0.2**
	comp=Z,1.3nm,0.4s						
ZSN	**Zaisan**	**11.50**	**8**	eP	**Pn**	**11 17 04.4**	**-0.5**
KK31	**Karatay Array**	**11.63**	**311**	Pn	**Pn**	**11 17 06.5**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=123,slow=12,SNR=23						
KK31				⇑Pg		11 17 50.2	
	comp=Z,5.1nm,0.6s						
KK31				⇓Lg	Lg	11 20 32.0	
	comp=Z,73nm,1.2s						
KK31	**Karatay Array**	**11.63**	**311**		**Pn**	**11 17 05.9**	**-0.8**
KK31	**Karatay Array**	**11.63**	**311**	i P	**Pn**	**11 17 06.5**	**-0.2**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KKAR	**Karatay Array**	**11.63**	**311**		**Pn**	**11 17 06.3**	**-0.3**
KKAR	**Karatay Array**	**11.63**	**311**		**Pn**	**11 17 05.9**	**-0.8**
KKAR	**Karatay Array**	**11.63**	**311**	P	**Pn**	**11 17 06.3**	**-0.3**
SHL	**Shillong**	**13.19**	**140**	Pn	**Pn**	**11 17 25.8**	**-2.5**
SHL	**Shillong**	**13.19**	**140**	P	**Pn**	**11 17 25.8**	**-2.5**
GTA	**Gaotai**	**14.07**	**71**	eP	**Pn**	**11 17 42.0**	**+1.8**
GTA				pP	P	11 17 46.1	-2.0
GTA				sP		11 17 49.4	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**14.83**	**350**	Pn	**Pn**	**11 17 47.9**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=173,slow=12,SNR=37						
KURBB	**Kurchatov Arra**	**14.83**	**350**	⇓Pn	**Pn**	**11 17 46.5**	**-3.8**
	comp=Z,22nm,0.9s						
KURBB				⇑Lg	Lg	11 22 03.5	
	comp=Z,83nm,1.0s						
KURK	**Kurchatov**	**14.91**	**350**	⇓Pn	Pn	11 17 45.3	-6.1
	comp=Z,46nm,1.1s						
KURK				⇑Lg	Lg	11 22 08.1	
	comp=Z,118nm,1.5s						
KURK	**Kurchatov**	**14.91**	**350**		**Pn**	**11 17 48.8**	**-2.6**
KURK	**Kurchatov**	**14.91**	**350**	i P	**Pn**	**11 17 48.9**	**-2.5**
KURK				pmax	pmax		
	comp=Z,44nm,1.0s						
BRZS	**Berezniki**	**15.64**	**336**	eP	**Pn**	**11 17 58.5**	**-2.5**
HRA	**Herat**	**16.66**	**270**		**Pn**	**11 18 12.7**	**-1.8**
ZAA0	**Zalesovo Array**	**17.95**	**4**	P	**Pn**	**11 18 27.4**	**-2.8**
ZAA0				IAmb	IAmb	11 18 32.0	
	comp=Z,36nm,0.8s						
ZALV	**Zalesovo Beam**	**17.95**	**4**	P	**Pn**	**11 18 27.8**	**-2.3**
	comp=Z,1.7nm,0.3s,baz=191,slow=12,SNR=123						
ZALV	**Zalesovo Beam**	**17.95**	**4**		**Pn**	**11 18 27.6**	**-2.6**
ZALV	**Zalesovo Beam**	**17.95**	**4**	i P	**Pn**	**11 18 27.6**	**-2.6**
ZALV				pmax	pmax		
	comp=Z,48nm,0.9s						
CD2	**Chengdu**	**18.43**	**100**	eP	**Pn**	**11 18 36.0**	**-0.3**
BVAR	**Borovoye Array**	**18.98**	**337**	P	**Pn**	**11 18 42.6**	**-0.3**
	comp=Z,7.0nm,0.3s,baz=139,slow=10,SNR=101						
BRVK	**Borovoye**	**19.05**	**337**	P	**Pn**	**11 18 43.5**	**0.0**
BRVK	**Borovoye**	**19.05**	**337**	P	**Pn**	**11 18 43.6**	**0.0**
BRVK				pmax	pmax		
	comp=Z,89nm,0.7s						
GEYT	**Alibeck**	**19.58**	**283**	P	**P**	**11 18 48.3**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=110,slow=8.1,SNR=10						
GEYT	**Alibeck**	**19.58**	**283**	P	**P**	**11 18 47.1**	**-1.8**
GYA0B	**ALIBECK ARRAY**	**19.58**	**283**	P	**P**	**11 18 48.0**	**-0.8**
GYA0B				IAmb	IAmb	11 19 05.7	
	comp=Z,19nm,0.8s						
MOY	**Mondy**	**20.41**	**34**	eP	Pn	11 19 00.5	+0.6
MOY				pmax	pmax		
	comp=Z,35nm,1.6s						
ZAK	**Zakamensk**	**20.71**	**40**	eP	Pn	11 19 03.4	-0.1
ZAK				pmax	pmax		
	comp=Z,15nm,1.1s						
ABKAR	**Akbulak array**	**21.10**	**316**	P	**P**	**11 19 04.6**	**-0.6**
ABKAR	**Akbulak array**	**21.10**	**316**	P	**P**	**11 19 05.8**	**+0.5**
ABKAR				IAmb	IAmb	11 19 11.5	
	comp=Z,19nm,0.9s						
SONM	**Songino Array**	**21.19**	**49**	P	**P**	**11 19 06.9**	**+0.5**
	comp=Z,14nm,0.8s,baz=240,slow=11,SNR=49						
SONM	**Songino Array**	**21.19**	**49**	P	**P**	**11 19 07.9**	**+1.5**
SONM	**Songino Array**	**21.19**	**49**	P	**P**	**11 19 07.9**	**+1.5**
SONM				pmax	pmax		
	comp=Z,18nm,1.2s						
ULN	**Ulaanbaatar**	**21.61**	**49**	P	**P**	**11 19 10.5**	**-0.4**
ULN				IAmb	IAmb	11 19 17.9	
	comp=Z,23nm,1.0s						
ULN	**Ulaanbaatar**	**21.61**	**49**	P	**P**	**11 19 10.5**	**-0.4**
ULN				pmax	pmax		
	comp=Z,23nm,1.0s						
TLY	**Talaya**	**21.68**	**37**	P	**P**	**11 19 12.7**	**+1.3**
	comp=Z,2.6nm,0.5s,baz=247,slow=7.7,SNR=1.6						
TLY	**Talaya**	**21.68**	**37**	P	**P**	**11 19 11.8**	**+0.3**
TLY	**Talaya**	**21.68**	**37**	i P	**P**	**11 19 12.0**	**+0.6**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.4s						
XAN	**Xi'an**	**21.68**	**88**	P	**P**	**11 19 13.1**	**+1.5**
XAN				pP	sP	11 19 19.7	+1.8
XAN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
XAN	**Xi'an**	**21.68**	**88**	P	**P**	**11 19 10.4**	**-1.2**
XAN				IAmb	IAmb	11 19 16.3	
	comp=Z,29nm,1.5s						
XAN	**Xi'an**	**21.68**	**88**	P	**P**	**11 19 10.4**	**-1.2**
XAN				pmax	pmax		
	comp=Z,29nm,1.5s						
CHTO	**Chiang Mai**	**22.47**	**136**	P	**P**	**11 19 18.9**	**-1.3**
CHTO	**Chiang Mai**	**22.47**	**136**	P	**P**	**11 19 18.9**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GYA	**Guiyang**	**22.69**	**108**	⇑iP	P	11 19 29.3	+6.7
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,850nm,8.6s						
GYA				LR	LR		
	comp=Z,1μm,19.2s						
GYA				LR	LR		
	comp=Z,1μm,15.1s						
GYA				LR	LR		
	comp=Z,1μm,15.5s						
CMAR	**Chiang Mai Arr**	**22.76**	**136**	P	**P**	**11 19 21.9**	**-1.3**
	comp=Z,1.8nm,0.4s,baz=309,slow=12,SNR=13						
AKTO	**Aktyubinsk**	**22.77**	**317**	P	**P**	**11 19 22.6**	**-0.6**
	comp=Z,8.3nm,0.9s,baz=119,slow=9.7,SNR=14						
HHC	**Hu-ho-hao-te**	**23.17**	**69**	eP	**P**	**11 19 25.8**	**-1.7**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,840nm,7.1s						
WSAR	**Wadi Sarin**	**24.32**	**245**	P	**P**	**11 19 36.9**	**-1.7**
	comp=Z,4.6nm,0.8s,baz=54,slow=10,SNR=3.3						
SVE	**Sverdlovsk**	**25.45**	**332**	eP	**P**	**11 19 50.5**	**+2.0**
SVE				pmax	pmax		
	comp=Z,30nm,1.2s						
ARU	**Arti**	**26.01**	**329**	P	**P**	**11 19 54.7**	**+1.0**
	comp=Z,2.0nm,0.2s,baz=140,slow=5.2,SNR=9.9						
ARU	**Arti**	**26.01**	**329**	P	**P**	**11 19 54.0**	**+0.3**
ARU				IAmb	IAmb	11 20 13.1	
	comp=Z,13nm,1.0s						
ARU	**Arti**	**26.01**	**329c**	iP	**P**	**11 19 55.3**	**+1.7**
ARU						11 20 31.9	
ARU				S	**S**	**11 24 25.4**	**+1.2**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WHN	**Wuhan**	**27.08**	**93**	P	**P**	**11 20 08.3**	**+4.8**
MAK	**Makhachkala**	**27.74**	**295**	eP	**P**	**11 20 04.9**	**-4.4**
MAK				eS	**S**	**11 24 46.5**	**-5.2**
MAK				MLR	MLR		
	comp=Z,3μm,18.0s						
QIZ	**Qiongzhong**	**29.43**	**118**	P	**P**	**11 20 27.7**	**+3.2**
QIZ				S	**S**	**11 25 21.7**	**+3.1**
GNI	**Garni**	**29.86**	**289**	i P	**P**	**11 20 30.7**	**+2.3**
GNI				pmax	pmax		
	comp=Z,11nm,1.1s						
BOD	**Bodaibo**	**30.12**	**34**	eP	**P**	**11 20 34.3**	**+4.0**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NJ2	**Nanjing**	**30.24**	**87**	eP	**P**	**11 20 30.0**	**-1.7**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ONI	**Oni**	**30.72**	**294**	P	**P**	**11 20 38.5**	**+2.6**
KIRV	**Kirov**	**31.26**	**327**	i P	**P**	**11 20 42.2**	**+1.8**
KIV	**Kislovodsk**	**31.27**	**297**	eP	**P**	**11 20 43.1**	**+2.3**
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
VRH	**Novokhopyorsk**	**32.71**	**310**	eP	**P**	**11 20 56.0**	**+2.9**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VSR	**Storozhevoye**	**34.29**	**310**	eP	**P**	**11 21 10.3**	**+3.3**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA	**Zeya**	**35.55**	**46**	eP	**P**	**11 21 20.8**	**+3.0**
MOS	**Moscow**	**36.10**	**317**	eP	**P**	**11 21 21.8**	**-0.7**
KSRS	**Korea Array**	**36.12**	**74**	P	**P**	**11 21 23.9**	**+1.0**
	comp=Z,2.1nm,0.8s,baz=276,slow=8.5,SNR=5.7						
OBN	**Obninsk**	**36.55**	**316**	eP	**P**	**11 21 28.2**	**+1.9**
OBN				e		11 21 32.5	
OBN				e		11 21 36.0	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,2μm,17.0s						
KLMR	**Klimovskoe**	**36.76**	**326**	eP	**P**	**11 21 27.5**	**-0.5**
KLMR				pmax	pmax		
	comp=Z,33nm,1.4s						
KLMR	**Klimovskoe**	**36.76**	**326**	eP	**P**	**11 21 27.6**	**-0.5**
KLMR				AMP		11 21 34.6	
	comp=Z,33nm,1.4s						
KLR	**Kul'dur**	**37.85**	**54**	i P	**P**	**11 21 36.7**	**-0.8**
KLR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BR131	**Keskin Array S**	**38.38**	**291**	P	**P**	**11 21 42.0**	**-0.2**
BR131				IAmb	IAmb	11 21 43.9	
	comp=Z,5.5nm,0.9s						
BR131	**Keskin Array S**	**38.38**	**291**	i P	**P**	**11 21 42.5**	**+0.3**
BRTR	**Keskin Array B**	**38.38**	**291**	P	**P**	**11 21 42.3**	**+0.1**
	comp=Z,4.1nm,0.9s,baz=96,slow=7.6,SNR=15						
YAK	**Yakutsk**	**39.04**	**33**	i P	**P**	**11 21 46.2**	**-1.0**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AKASG	**Malin Array Be**	**40.52**	**308**	P	**P**	**11 21 59.1**	**-0.5**
	comp=Z,3.2nm,0.7s,baz=96,slow=7.1,SNR=13						
AKASG				PP	**PP**	**11 23 35.7**	**+2.9**
	comp=Z,1.3nm,0.6s,baz=86,slow=11,SNR=4.1						
AKASG	**Malin Array Be**	**40.52**	**308**	P	**P**	**11 21 59.3**	**-0.4**
AKASG	**Malin Array Be**	**40.52**	**308**	P	**P**	**11 21 59.3**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKBB	**Malin Array Si**	**40.52**	**308**	P	**P**	**11 21 59.6**	**-0.1**
AKBB	**Malin Array Si**	**40.52**	**308**	P	**P**	**11 21 59.6**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,13nm,0.8s						
KIEV	**Kiev**	**40.52**	**308**	P	**P**	**11 22 00.0**	**+0.2**
JOF	**Joensuu**	**41.11**	**327**	P	**P**	**11 22 07.1**	**+2.7**
JOF				pmax	pmax		
	comp=Z,10.0nm,1.5s						
SORM	**Soroca**	**41.16**	**304**	⇑P	**P**	**11 22 05.5**	**+0.4**
SORM	**Soroca**	**41.16**	**304**	⇑P	**P**	**11 22 05.5**	**+0.4**
CFR	**Carcaliu**	**41.58**	**300**	⇑P	**P**	**11 22 08.4**	**-0.1**
CFR	**Carcaliu**	**41.58**	**300**	⇑P	**P**	**11 22 08.4**	**-0.1**
TESR	**Tescani**	**42.46**	**302**	⇑P	**P**	**11 22 17.1**	**+1.3**
VRI	**Vrincioaia**	**42.48**	**301**	⇑P	**P**	**11 22 18.2**	**+2.2**
VRI	**Vrincioaia**	**42.48**	**301**	⇑P	**P**	**11 22 18.2**	**+2.2**
PLOR	**Plostina**	**42.54**	**301**	⇑P	**P**	**11 22 18.7**	**+2.3**
PLOR	**Plostina**	**42.54**	**301**	⇑P	**P**	**11 22 18.7**	**+2.3**
TIXI	**Tiksi**	**42.84**	**20**	P	**P**	**11 22 21.2**	**+2.8**
TIXI	**Tiksi**	**42.84**	**20**	i P	**P**	**11 22 19.7**	**+1.2**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MLR	**Muntele Rosu**	**43.07**	**301**	⇑P	**P**	**11 22 23.5**	**+2.6**
MLR	**Muntele Rosu**	**43.07**	**301**	P	**P**	**11 22 23.2**	**+2.3**
MLR	**Muntele Rosu**	**43.07**	**301**	⇑P	**P**	**11 22 23.5**	**+2.6**
FIA1	**FINESS Array S**	**43.18**	**324**	P	**P**	**11 22 23.5**	**+2.2**
FIA1				IAmb	IAmb	11 22 24.1	
	comp=Z,7.0nm,0.7s						
FINES	**FINESS Array B**	**43.18**	**324**	P	**P**	**11 22 20.7**	**-0.6**
	comp=Z,4.9nm,0.6s,baz=101,slow=8.1,SNR=16						
FINES	**FINESS Array B**	**43.18**	**324**	P	**P**	**11 22 22.3**	**+1.0**
FINES	**FINESS Array B**	**43.18**	**324**	P	**P**	**11 22 22.3**	**+1.0**
BURAR	**Bucovina Array**	**43.31**	**304**	⇓P	**P**	**11 22 25.4**	**+2.7**
BURAR	**Bucovina Array**	**43.31**	**304**	P	**P**	**11 22 22.6**	**-0.1**
BURAR	**Bucovina Array**	**43.31**	**304**	⇓P	**P**	**11 22 25.4**	**+2.7**
BUR08	**Bucovina Ar. S**	**43.32**	**304**	P	**P**	**11 22 22.7**	**-0.1**
SUF	**Sumiainen**	**43.37**	**326**	P	**P**	**11 22 25.4**	**+2.6**
SUF				pmax	pmax		
	comp=Z,19nm,1.1s						
DOPR	**Dopca**	**43.39**	**301**	⇑P	**P**	**11 22 24.6**	**+1.3**
VOIR		**43.70**	**301**	⇑P	**P**	**11 22 27.3**	**+1.4**
VOIR		**43.70**	**301**	⇑P	**P**	**11 22 27.3**	**+1.4**
ARR	**Arges**	**44.01**	**301**	⇓P	**P**	**11 22 29.7**	**+1.4**
KWP	**Kalwaria Pacla**	**44.75**	**307**	P	**P**	**11 22 36.1**	**+1.9**
KWP				pmax	pmax		
	comp=Z,12nm,0.8s						
VAF	**Ylistaro**	**44.99**	**326**	P	**P**	**11 22 36.1**	**+0.3**
TRPA	**Tarpa**	**45.04**	**305**	⇑P	**P**	**11 22 38.2**	**+1.8**
DRGR		**45.11**	**303**	⇑P	**P**	**11 22 38.4**	**+1.3**
DRGR		**45.11**	**303**	⇑P	**P**	**11 22 38.4**	**+1.3**
UZH	**Uzhgorod**	**45.14**	**306**	⇑iP	**P**	**11 22 38.6**	**+1.4**
UZH				e		11 22 42.0	
UZH				e		11 22 43.3	
ARCES	**ARCESS Array B**	**45.26**	**335**	P	**P**	**11 22 39.0**	**+1.0**
	comp=Z,4.4nm,0.6s,baz=104,slow=7.7,SNR=18						
GZR	**Gura Zlata**	**45.29**	**301**	⇑P	**P**	**11 22 40.1**	**+1.5**
BZS	**Buzias**	**46.05**	**302**	⇑P	**P**	**11 22 47.8**	**+3.3**
BZS	**Buzias**	**46.05**	**302**	⇑P	**P**	**11 22 47.8**	**+3.3**
NIE	**Niedzica**	**46.34**	**307**	P	**P**	**11 22 49.2**	**+2.5**
NIE				pmax	pmax		
	comp=Z,5.0nm,2.0s						
VYHS	**Vyhne**	**47.43**	**306**	eP	**P**	**11 22 57.0**	**+1.7**
VYHS	**Vyhne**	**47.43**	**306**	eP	**P**	**11 22 57.0**	**+1.7**
MORC	**Moravsky Berou**	**48.06**	**308**	P	**P**	**11 23 05.1**	**+4.9**
DPC	**Dobruska-Polom**	**48.74**	**309**	eP	**P**	**11 23 06.6**	**+1.2**
DPC				epP	**P**	**11 23 09.0**	**+3.6**
DPC	**Dobruska-Polom**	**48.74**	**309**	eP	**P**	**11 23 06.6**	**+1.2**
DPC				e		11 23 09.0	
CHVC	**Chvalec**	**48.87**	**309**	eP	**P**	**11 23 08.0**	**+1.6**
CHVC				ex	x	11 23 11.1	
UPC	**Upice**	**48.91**	**309**	eP	P	11 23 11.4	+4.7
UPC	**Upice**	**48.91**	**309**	eP	P	11 23 11.4	+4.7
CONA	**Conrad Observa**	**49.49**	**306**	esP	**P**	**11 23 13.0**	**+1.8**
	comp=Z,4.3nm,0.6s						

PVCC Panska Ves 49.81 309 eP P 11 23 18.9 +5.3
PVCC Panska Ves 49.81 309 eP P 11 23 18.9 +5.3
PRU Pruhonice 49.93 309 eP P 11 23 19.5 +5.0
PRU Pruhonice 49.93 309 eP P 11 23 19.5 +5.0
BRG Berggiesshubel 50.14 310 eP P 11 23 17.6 +1.6
BRG pmax pmax
comp=Z,6.0nm,1.0s
SOKA Soboth 50.31 304 esP P 11 23 18.9 +1.4
comp=Z,6.9nm,0.8s
NB2 NORSAR Subarra 50.33 323 P P 11 23 17.5 +0.1
comp=Z,13nm,1.0s,baz=86,slow=7.4
NOA NORSAR Array B 50.33 323 P P 11 23 17.7 +0.3
comp=Z,5.8nm,0.9s,baz=86,slow=7.5,SNR=11
MOA Molln 50.55 306 esP P 11 23 21.5 +2.3
comp=Z,3.2nm,0.6s
CLL Collm 50.64 310 e(P) P 11 23 23.0 +3.2
CLL Collm 50.64 310 eP P 11 23 23.0 +3.2
CLL pmax pmax
comp=Z,45nm,1.7s
GEC2 GERESS Array S 50.70 307 P P 11 23 19.4 -1.0
GERES GERESS Array B 50.70 307 P P 11 23 21.0 +0.6
comp=Z,7.4nm,0.8s,baz=78,slow=7.0,SNR=22
GERES GERESS Array B 50.70 307 P P 11 23 19.4 -1.0
KHC Kasperske Hory 50.72 308 eP P 11 23 24.8 +4.3
KHC Kasperske Hory 50.72 308 eP P 11 23 24.8 +4.3
WTTA Wattenberg 52.42 306 i sP P 11 23 36.7 +3.3
MOTA Moosalm 52.75 306 esP P 11 23 37.8 +1.9
comp=Z,13nm,1.9s
FETA Feichten 53.09 306 esP P 11 23 39.8 +1.4
comp=Z,7.4nm,0.9s
BILL Bilibino 54.80 27⇓eP P 11 23 50.8 +0.5
BILL *PP pP 11 23 54.0 -1.1
BILL *SP sP 11 23 56.0 -0.9
BILL S S 11 31 32.0 +1.2
BILL pmax pmax
comp=Z,2.0nm,1.0s
NOR Nord 55.89 350 i P P 11 24 00.2 +2.2
NOR Nord 55.89 350 i P P 11 24 00.2 +2.2
KMBO Kilima Mbogo 56.05 239 P P 11 24 00.1 -0.2
comp=Z,0.7nm,0.3s,baz=17,slow=7.7,SNR=5.3
KMBO Kilima Mbogo 56.05 239 P P 11 23 58.5 -1.8
KMBO IAmb IAmb 11 24 01.0
comp=Z,4.3nm,1.1s
SUMG Summit 64.32 343 i P P 11 25 00.1 +3.7
comp=Z,50nm,1.2s
SUMG Summit 64.32 343 i P P 11 25 00.1 +3.7
SUMG pmax pmax
comp=Z,50nm,1.2s
ESDC Sonseca Array 65.73 302 P P 11 25 05.4 -0.3
comp=Z,1.3nm,0.7s,baz=56,slow=6.3,SNR=6.6
ESDC Sonseca Array 65.73 302 P P 11 25 05.2 -0.5
IMAR Indian Mountai 69.46 21 P P 11 25 28.0 -0.8
COLD Coldfoot 69.57 19 P P 11 25 29.6 +0.2
COLD IAmb IAmb 11 25 36.8
comp=Z,5.5nm,1.2s
BMAR Burnt Mountain 70.86 17 P P 11 25 36.9 -0.4
IL31 72.31 20 P P 11 25 46.4 +0.3
ILAR Eielson Array 72.31 20 P P 11 25 45.9 -0.3
comp=Z,1.1nm,0.7s,baz=318,slow=6.0,SNR=16
ILAR Eielson Array 72.31 20 P P 11 25 45.8 -0.4
C36M Paulatuk 73.08 10 P P 11 25 50.2 -0.3
RIDG Independent Ri 73.68 20 P P 11 25 54.4 +0.1
WRA Warramunga Arr 74.19 130 P P 11 25 56.4 -1.3
comp=Z,2.4nm,0.7s,baz=323,slow=6.1,SNR=19
TORD Torodi Ar. Bea 75.04 275 P P 11 26 01.6 -1.3
comp=Z,3.1nm,0.8s,baz=47,slow=5.1,SNR=9.0
TORD Torodi Ar. Bea 75.04 275 P P 11 26 01.0 -2.0
BCAR Beaver Creek A 75.05 19 P P 11 26 00.9 -1.3
ASAR Alice Springs 76.72 133 P P 11 26 10.9 -1.4
comp=Z,2.2nm,0.8s,baz=319,slow=6.0,SNR=24
ASAR Alice Springs 76.72 133 P P 11 26 10.4 -1.9
YKA Yellowknife Ar 80.81 8 P P 11 26 33.3 -0.9
comp=Z,2.1nm,0.8s,baz=340,slow=5.3,SNR=20
BOSA Boshof 83.93 228 P P 11 26 49.4 -1.7
comp=Z,3.5nm,0.9s,baz=43,slow=5.0,SNR=4.3
BOSA Boshof 83.93 228 P P 11 26 49.8 -1.3
BOSA IAmb IAmb 11 27 00.4
comp=Z,3.9nm,0.9s
BOSA Boshof 83.93 228 P P 11 26 49.8 -1.3
BOSA pmax pmax
comp=Z,4.0nm,1.0s
ULM Lac du Bonnet 94.04 359 P P 11 27 37.2 -1.8
comp=Z,0.7nm,0.5s,baz=346,slow=4.2,SNR=1.8
ULM Lac du Bonnet 94.04 359 P P 11 27 37.3 -1.7
ULM IAmb IAmb 11 27 38.0
comp=Z,4.2nm,1.3s
ULM Lac du Bonnet 94.04 359 P P 11 27 37.3 -1.7
ULM pmax pmax
comp=Z,4.0nm,1.3s
CPUP Villa Florida 144.53 274 PKP PKPab 11 33 54.5 -1.5
comp=Z,3.6nm,0.9s,baz=59,slow=3.6,SNR=2.7

IDC 12 11:19:40.8±1.1, 35.82N×82.36E, h0km, mb3.6/8, mb1 3.9/11, mb1mx3.6/45, mbtmp3.7/11, ML3.6/3, Error ellipse: s-maj=39.1km s-min=17.3km az=60.0
ISC 12 11:19:43.3±1.1, 36.0N±0.1×82.7E±0.2, h10km, n12, σ1.65/12, mb3.6/8, Xizang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res
WMQ Urumqi 8.73 25 ePn Pn 11 21 46.8 -2.9
WMQ Sn Sn 11 23 19.6 -8.6
MKAR Makanchi Array 10.81 359 Pn Pn 11 22 18.7 +0.5
1.5nm,0.3s,baz=189,slow=13,SNR=11
ZALV Zalesovo Beam 18.04 4 P P 11 23 55.5 +1.3
0.1nm,0.3s,baz=189,slow=17,SNR=2.6
BVAR Borovoye Array 19.12 337 P Pn 11 24 07.6 +0.5
0.3nm,0.3s,baz=141,slow=8.2,SNR=5.4
SONM Songino Array 21.17 49 P P 11 24 32.0 +3.2
1.4nm,0.8s,baz=242,slow=11,SNR=5.0
CMAR Chiang Mai Arr 22.61 136 P P 11 24 45.1 +0.8
0.5nm,0.4s,baz=318,slow=12,SNR=4.2
FINES FINESS Array B 43.33 324 P P 11 27 44.3 -0.8
3.3nm,1.1s,baz=142,slow=14,SNR=3.2
NOA NORSAR Array B 50.47 323 P P 11 28 40.0 -1.0
1.2nm,0.9s,baz=86,slow=7.6,SNR=2.8
ILAR Eielson Array 72.37 20 P P 11 31 09.2 +0.2
0.5nm,0.9s,baz=263,slow=3.5,SNR=3.5
WRA Warramunga Arr 74.04 130 P P 11 31 19.2 -0.3
0.6nm,0.9s,baz=323,slow=5.2,SNR=2.7
ASAR Alice Springs 76.57 133 P P 11 31 33.3 -0.7
0.4nm,0.7s,baz=320,slow=6.5,SNR=5.6
YKA Yellowknife Ar 80.89 8 P P 11 31 56.4 -0.8
0.2nm,0.6s,baz=306,slow=8.0,SNR=3.8

BJI 12 11:31:01.8±0.0, 36.14N×83.03E, h4km, mb3.9/2, ML3.8/7
IDC 12 11:31:03.5±1.0, 36.16N×82.72E, h0km, mb3.4/8, mb1 3.7/12, mb1mx3.5/60, mbtmp3.5/12, ML3.4/4, Error ellipse: s-maj=28.0km s-min=18.9km az=44.0
ISC 12 11:31:05.5±0.9, 36.26N±0.09×82.7E±0.1, h10km, n13, σ1.75/15, mb3.5/7, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res
WMQ Urumqi 8.45 25 eP Pn 11 33 10.2 +2.2
WMQ S Sn 11 34 44.0 +0.5
WMQ smax smax
comp=N,18nm,0.9s
WMQ smax smax
comp=E,24nm,1.5s
AAK Ala-Archa 9.01 317 Pn Pn 11 33 17.2 +1.5
0.2nm,0.3s,baz=76,slow=8.3,SNR=2.3
AAK Lg Lg 11 35 47.1
0.4nm,0.3s,baz=180,slow=20,SNR=2.5
MKAR Makanchi Array 10.53 358 Pn Pn 11 33 35.7 -0.7
0.7nm,0.3s,baz=182,slow=12,SNR=15
MKAR Sn Sn 11 35 29.7 -4.7
0.3nm,0.3s,baz=178,slow=21,SNR=5.1
MKAR Lg Lg 11 36 37.6
0.3nm,0.3s,baz=163,slow=27,SNR=3.0
ZALV Zalesovo Beam 17.75 4 P P 11 35 12.7 -0.6
0.2nm,0.3s,baz=196,slow=9.9,SNR=3.2
BVAR Borovoye Array 18.88 336 P Pn 11 35 26.2 -0.1
0.4nm,0.3s,baz=148,slow=11,SNR=9.7
SONM Songino Array 20.94 49 P P 11 35 49.4 +0.8
1.0nm,0.9s,baz=232,slow=11,SNR=4.6
AKTO Aktyubinsk 22.75 316 P P 11 36 08.4 +0.8
1.0nm,0.8s,baz=88,slow=12,SNR=3.4
CMAR Chiang Mai Arr 22.78 137 P P 11 36 07.8 -0.4
0.5nm,0.3s,baz=308,slow=10,SNR=3.6
BRTR Keskin Array B 38.46 290 P P 11 38 28.0 +0.3
0.6nm,0.8s,baz=60,slow=7.4,SNR=4.1
GERES GERESS Array B 50.72 307 P P 11 40 05.7 +0.3
0.6nm,0.6s,baz=96,slow=12,SNR=4.8
ILAR Eielson Array 72.08 20 P P 11 42 30.5 +1.0
0.2nm,0.7s,baz=339,slow=4.0,SNR=3.0
WRA Warramunga Arr 74.18 130 P P 11 42 40.8 -1.7
0.2nm,0.4s,baz=330,slow=5.4,SNR=3.8
TORD Torodi Ar. Bea 75.18 276 P P 11 42 47.4 -1.2
0.3nm,0.5s,baz=75,slow=5.6,SNR=3.4

IDC 12 11:31:47.3±2.2, 24.77N×123.35E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.4/57, mbtmp3.6/5, Error ellipse: s-maj=169.1km s-min=20.2km az=64.0
JMA 12 11:31:58.6±0.1, 24.97N×124.00E, h100km±3km, M3.2
ISC 12 11:31:58.1±0.9, 25.0N±0.1×123.98E±0.05, h104km±9km, n17, σ0.53/29, mb3.6/5, Southwestern Ryukyu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res
JISG Ishigakijimahi 0.51 144 P Pn 11 32 14.2 -0.1
JISG S Sn 11 32 26.4 -0.1
JIJ Ishigaki jima 0.65 167 P Pn 11 32 15.1 -0.4
JIJ S Sn 11 32 27.5 -0.9
IRIF Iriomote-Funau 0.70 199 P Pn 11 32 15.7 -0.2
IRIF S Sn 11 32 29.0 -0.2
JTJ Tarama 0.75 118 P Pn 11 32 16.4 +0.1
JTJ S Sn 11 32 30.1 +0.2
JKRS Kuro-shima 0.76 178 P Pn 11 32 16.5 +0.1
JKRS S Sn 11 32 30.2 +0.1
HATJ Hateruma jima 0.95 190 P Pn 11 32 18.5 +0.2
HATJ S Sn 11 32 33.4 -0.1
YOJ Yonaguni jima 1.03 239 P Pn 11 32 19.6 +0.5
YOJ eS Sn 11 32 36.0 +1.0
JYNG Yonagunijimaku 1.09 240 P Pn 11 32 20.3 +0.5
JYNG S Sn 11 32 36.9 +0.8
JIRB Irabujima 1.09 99 P Pn 11 32 19.8 0.0
JIRB S Sn 11 32 36.1 -0.1
JIKM Ikemajima 1.15 93 P Pn 11 32 20.8 +0.3
JIKM S Sn 11 32 37.6 +0.3
JMJ2 Miyako jima3 1.25 102 P Pn 11 32 22.1 +0.5
JMJ2 S Sn 11 32 40.0 +0.7
JOGS Gusukube 1.32 100 P Pn 11 32 22.9 +0.5
JOGS S Sn 11 32 41.4 +0.7
SONM Songino Array 26.70 333 P P 11 37 27.9 +0.1
0.2nm,0.4s,baz=150,slow=7.7,SNR=2.2
MKAR Makanchi Array 39.56 314 P P 11 39 18.3 -0.8
0.2nm,0.3s,baz=99,slow=8.7,SNR=5.5
WRA Warramunga Arr 45.79 166 P P 11 40 09.7 +0.1
0.5nm,0.5s,baz=347,slow=8.8,SNR=8.4
BVAR Borovoye Array 48.68 320 P P 11 40 31.1 -0.7
0.4nm,0.4s,baz=94,slow=6.5,SNR=4.5
ASAR Alice Springs 49.32 168 P P 11 40 37.9 +1.0
0.5nm,0.4s,baz=352,slow=7.4,SNR=24

VAO 12 11:42:57.5±0.6, 22.13S×69.12W, h10km, mb5.9
MOS 12 11:43:08.5±1.0, 22.03S×68.58W, h80km, mb5.6/25, Error ellipse: s-maj=10.5km s-min=6.2km az=109.6
NEIC 12 11:43:10.8±2.6, 22.37S±0.04×68.72W±0.06, h102km±3km, Error ellipse: s-maj=8.7km s-min=6.4km az=101.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr-1.44; Mθθ-1.27; Mφφ2.71; Mrθ1.32; Mθφ-0.43; Mφr-1.33; Fault plane solution: M0 3.03000×10^{17} NP1: φs322.72000°, δ71.53000°, λ-126.52000°. NP2: φs209.56000°, δ40.34000°, λ-29.31000°. Principal axes: T 3.2430, Plg18.0000°, Azm79.0000°; N -0.4731, Plg34.0000°, Azm336.0000°; P -2.7699, Plg50.0000°, Azm192.0000°;
IDC 12 11:43:11.2±0.3, 22.28S×68.62W, h97km±2km, mb4.9/37, mb1 5.0/43, mb1mx4.9/51, mbtmp5.2/43 Error ellipse: s-maj=9.3km s-min=6.9km az=62.0
SJA 12 11:43:11.0±0.7, 22.30S×68.84W, h94km±4km, ML5.1, MW5.0
BJI 12 11:43:11.8±0.0, 22.39S×68.54W, h107km, mB5.5/20
GUC 12 11:43:11.1±0.7, 22.35S×68.72W, h99km±3km, ML5.7
NEIC 12 11:43:12, 22.27S×68.66W, h90km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr-2.75; Mθθ-0.77; Mφφ3.53; Mrθ1.27; Mθφ-0.39; Mφr-1.18; Fault plane solution: M0 3.67000×10^{17} NP1: φs198.00000°, δ39.00000°, λ-53.00000°. NP2: φs334.00000°, δ60.00000°, λ-115.00000°. Principal axes: T 3.8279, Plg12.0000°, Azm79.0000°; N -0.3365, Plg22.0000°, Azm347.0000°; P -3.4914, Plg65.0000°, Azm198.0000°;
GCMT 12 11:43:19.0±0.5, 22.20S±0.03×68.71W±0.04, h131km±5km, MW5.8/86, Moment Tensor Solution. s14,c14; s86,c118; Duration: 2.0 Moment tensor: Scale 10^{18}Nm; Mrr-0.56±.03; Mθθ-0.18±.03; Mφφ0.74±.03; Mrθ0.21±.02; Mθφ-0.20±.03; Mφr-0.17±.03; Best double couple: M0 0.73700×10^{18} NP1: φs190.00000°, δ41.00000°, λ-57.00000°. NP2: φs329.00000°, δ57.00000°, λ-115.00000°. Principal axes: T 0.8190, Plg9.0000°, Azm77.0000°; N -0.1640, Plg21.0000°, Azm344.0000°; P -0.6560, Plg67.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 12 11:43:10.3±0.2, 22.33S±0.03×68.73W±0.03, h96km±2km, h96km:pP-P, n1286, σ1.51/940, mb5.5/235, 16C-12D, Northern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res
LVC Limon Verde 0.33 211 i P Pn 11 43 26.1 +1.0
LVC i S Sn 11 43 37.3 +1.3
LVC Limon Verde 0.33 211 P Pn 11 43 25.9 +0.9
12μm,0.3s,baz=27,slow=4.4
LVC S Sn 11 43 37.0 +1.0
32μm,0.3s,baz=143,slow=20,SNR=110
LVC Limon Verde 0.33 211 Pn 11 43 26.1 +1.0
LVC Sn Sn 11 43 36.7 +0.8
LVC Limon Verde 0.33 211 P Pn 11 43 26.1 +1.0
LVC 11 43 36.7
LVC Limon Verde 0.33 211 i P Pn 11 43 26.1 +1.0
LVC i S Sn 11 43 37.1 +1.0
PB09 IPOC Station P 0.71 318⇓iP Pn 11 43 29.0 +1.3
PB09 i S Sn 11 43 42.3 +1.6
PB09 IAML 11 43 44.1
comp=E,230μm,0.6s
PB06 IPOC Station P 0.87 244⇑iP Pn 11 43 29.9 +0.7
PB06 i S Sn 11 43 44.4 +1.0
PB06 IAML 11 43 46.7
comp=N,174μm,0.6s
PB03 IPOC Station P 0.99 286⇑iP Pn 11 43 30.9 +0.5
PB03 i S Sn 11 43 46.5 +0.9
PB03 IAML 11 43 47.6
comp=N,462μm,0.5s
PB03 IPOC Station P 0.99 286 i P Pn 11 43 31.1 +0.6
PB03 i S Sn 11 43 46.3 +0.6
PB15 IPOC Station P 1.11 218⇑iP Pn 11 43 32.9 +0.9
PB15 i S Sn 11 43 50.2 +2.0
PB07 IPOC Station P 1.23 299⇑iP Pn 11 43 33.9 +0.7
PB07 i S Sn 11 43 51.3 +0.7
PB04 IPOC Station P 1.32 269⇑iP Pn 11 43 34.6 +0.3
PB04 i S Sn 11 43 52.8 +0.5
PB04 IAML 11 43 56.4
comp=E,151μm,0.7s
PB04 IPOC Station P 1.32 269 Pn 11 43 33.6 -0.6
PB05 IPOC Station P 1.46 249⇑iP Pn 11 43 36.1 +0.1
PB05 i S Sn 11 43 55.9 +0.5
PB05 IAML 11 44 01.1
comp=E,76μm,0.4s
PB05 IPOC Station P 1.46 249 i P Pn 11 43 36.4 +0.4
PB01 IPOC Station P 1.46 331⇓iP Pn 11 43 36.7 +0.7
PB01 i S Sn 11 43 56.7 +1.3
PB01 IAML 11 43 58.7
comp=E,99μm,0.5s
PB01 IPOC Station P 1.46 331 Pn 11 43 36.7 +0.7
PB02 IPOC Station P 1.48 313⇑iP Pn 11 43 36.9 +0.7
PB02 eS Sn 11 43 56.7 +0.9
PB02 IAML 11 44 01.0
comp=E,214μm,0.3s
PATCX Punta Patache 2.00 318⇑iP Pn 11 43 42.8 0.0
PATCX i S Sn 11 44 08.3 +0.6
PATCX IAML 11 44 15.1
comp=N,145μm,0.8s
PATCX Punta Patache 2.00 318 i P Pn 11 43 43.2 +0.3
PATCX i S Sn 11 44 10.6 +3.0
PB10 IPOC Station P 2.06 235⇑iP Pn 11 43 42.9 -0.6
PB10 i S Sn 11 44 08.8 0.0
PB10 IPOC Station P 2.06 235 Pn 11 43 43.5 0.0
PB10 Pn 11 43 43.6 +0.2
PB10 Sn Sn 11 44 05.8 -2.9
PB10 IPOC Station P 2.06 235 i P Pn 11 43 43.5 0.0
PB10 IAML 11 44 28.8
comp=Z,15μm,0.5s
PB08 IPOC Station P 2.21 350⇓iP Pn 11 43 47.0 +1.2
PB08 i S Sn 11 44 14.4 +1.4
PB08 IAML 11 44 21.6
comp=N,38μm,0.9s
TA01 Diego Aracena 2.21 322⇑iP Pn 11 43 45.2 -0.4
TA01 i S Sn 11 44 12.7 +0.2
TA01 IAML 11 44 17.2
comp=N,39μm,0.4s
GO01 Chusmiza 2.68 351⇓iP Pn 11 43 53.2 +1.0
GO01 IAML 11 44 54.9
comp=N,24μm,0.5s
GO01 Chusmiza 2.68 351 Pn Pn 11 43 53.2 +1.0
GO01 Sn Sn 11 44 25.5 +1.2
PB11 IPOC Station P 2.70 341 Pn 11 43 51.9 -0.2
PB14 IPOC Station P 2.76 214 eP Pn 11 43 52.2 -0.8
PB14 eS Sn 11 44 26.8 +1.0
PB14 IAML 11 44 37.3
comp=E,14μm,0.6s
PB14 IPOC Station P 2.76 214 i P Pn 11 43 55.0 +1.9
PB14 IAML 11 44 37.2
comp=Z,22μm,0.7s
GO02 Mina Guanaco 2.93 195⇓iP Pn 11 43 55.5 +0.1
GO02 IAML 11 45 01.3
comp=N,35μm,0.5s
GO02 Mina Guanaco 2.93 195 Pn 11 43 55.8 +0.4
YJA Yavi 2.98 88 i P Pn 11 44 00.1 +4.0
HJA Humahuaca 3.19 107 i P Pn 11 44 03.0 +4.2
MNMC Minye Minye 3.28 346⇓iP Pn 11 43 59.8 -0.2
MNMC eS Sn 11 44 28.6 -10
MNMC Minye Minye 3.28 346 Pn 11 44 00.0 0.0
SLA San Lorenzo 3.80 129 i P Pn 11 44 10.8 +4.0
SLA IAML 11 44 13.9
comp=Z,980nm,0.9s
SLA i S Sn 11 44 58.6 +7.9
AZAP Zapla 3.86 120 i P Pn 11 44 10.1 +2.4
AP01 Chacalluta 4.22 339 eP Pn 11 44 14.3 +1.9
AHML Horco Molle 5.41 146 i P Pn 11 44 30.8 +2.2
AHML IAML 11 44 32.4
comp=Z,458nm,0.7s
AHML i S Sn 11 45 33.2 +3.7
GO03 Copiap 5.42 194 Pn 11 44 27.5 -1.2
LPAZ La Paz 6.04 5 P Pn 11 44 37.4 -0.3
comp=Z,53nm,0.3s,baz=199,slow=4.5,SNR=223
LPAZ S Sn 11 45 31.5 -14
comp=Z,41nm,0.3s,baz=183,slow=6.2,SNR=5.7
LPAZ La Paz 6.04 5 Pn 11 44 40.0 +2.3
LPAZ La Paz 6.04 5 Pn 11 44 40.2 +2.6
LPAZ La Paz 6.04 5 P Pn 11 44 39.5 +1.8
LPAZ La Paz 6.04 5 i P Pn 11 44 39.7 +2.1
CYA Choya 6.64 157 i P Pn 11 44 45.3 +0.1
CYA Choya 6.64 157 i P Pn 11 44 45.4 +0.1
CYA IAML 11 46 05.4
comp=Z,366nm,2.7s
ACDV Cuesta del Vie 7.82 182 i P Pn 11 45 01.7 +0.2
ACDV IAML 11 47 37.1
comp=Z,2μm,1.6s
AROD Rodeo 7.84 185 i P Pn 11 45 00.8 -1.0
GO04 Tololo Observa 8.03 193 Pn 11 45 01.1 -3.3
GO04 Tololo Observa 8.03 193 i P Pn 11 45 00.5 -3.9
ACCO Cerro Coronel 8.23 182 i P Pn 11 45 05.6 -1.7
ACCO IAML 11 47 54.6
comp=Z,1μm,1.2s
AMOG MOGNA 8.58 179 i P Pn 11 45 09.1 -2.6
AMOG IAML 11 48 04.3
comp=Z,524nm,3.0s
RTLL Cerro Villicun 8.97 179 i P Pn 11 45 14.3 -2.7
RTLL IAML 11 48 15.7
comp=Z,612nm,2.3s
CFA Coronel Fontan 9.25 177 P Pn 11 45 18.2 -2.7
comp=Z,16nm,0.3s,baz=355,slow=13,SNR=181
CFA S Sn 11 46 55.8 -7.3
comp=Z,11nm,0.3s,baz=234,slow=17,SNR=1.7
CFA Coronel Fontan 9.25 177 i P Pn 11 45 17.9 -2.9
RTLS Leoncito 9.45 183 i P Pn 11 45 21.0 -2.8
RTLS IAML 11 48 20.7
comp=Z,996nm,1.3s
RTCV Cerro Valdivia 9.50 179 i P Pn 11 45 21.5 -2.7
RTCV IAML 11 48 18.3
comp=Z,863nm,3.7s
SIV San Ignacio 9.59 50 P Pn 11 45 23.4 -2.2
comp=Z,142nm,0.3s,baz=249,slow=12,SNR=1502
ACAN Cantantal 10.00 172 i P Pn 11 45 28.2 -2.9
ACAN IAML 11 48 26.0
comp=Z,113nm,1.0s
ASAL Salagasta 10.22 181 i P Pn 11 45 31.4 -2.8
ASAL IAML 11 48 42.8
comp=Z,997nm,1.3s
ARCO CERRO ARCO 10.47 181 i P Pn 11 45 35.2 -2.4
AAGR Agrelo 10.72 180 i P Pn 11 45 39.0 -1.8
ROC1 El Roble 10.80 190 Pn Pn 11 45 38.2 -3.9
ROC1 El Roble 10.80 190 i P Pn 11 45 36.3 -5.8
PEL Peldehue 10.91 189 Pn 11 45 41.5 -2.0
PEL Peldehue 10.91 189 P Pn 11 45 43.9 +0.4
PEL pmax pmax
comp=Z,152nm,0.7s
CPUP Villa Florida 11.13 113 P Pn 11 45 44.9 -1.5
comp=Z,1.9nm,0.3s,baz=292,slow=11,SNR=144
CPUP Villa Florida 11.13 113 eP Pn 11 45 42.2 -4.1
CPUP Villa Florida 11.13 113 Pn 11 45 44.5 -1.9
AQDB Aquidauana 12.28 84 eP Pn 11 45 59.1 -2.7
LAMA Las Malvinas 12.57 182 i P Pn 11 46 01.6 -4.0
COIS El Sosneado 12.76 183 i P Pn 11 46 05.6 -2.5
NNA Nana 12.87 322 P Pn 11 46 11.1 +1.4
comp=Z,2.1nm,0.3s,baz=144,slow=8.7,SNR=2.6
NNA Nana 12.87 322 Pn 11 46 06.8 -3.0
NNA Nana 12.87 322 P P 11 46 14.4 -2.4
NNA pmax pmax
comp=Z,249nm,0.7s
GO05 Huala 12.94 192 Pn 11 46 09.2 -1.4
ITQB Itaqui 13.11 126 eP Pn 11 46 10.3 -2.4
SALV Santo Antonio 13.87 65 eP Pn 11 46 18.9 -3.9
SAML Samuel 14.33 23 Pn 11 46 24.4 -4.3
SAML Samuel 14.33 23 P Pn 11 46 24.4 -4.3
TRCB Terra Rica 14.88 95 eP Pn 11 46 34.2 -1.6
C2SB Chapadao do Su 15.30 79 eP Pn 11 46 38.9 -2.1
PTGB Pitanga 15.47 102 eP Pn 11 46 40.4 -2.9
ITAB Concordia 15.84 111 eP Pn 11 46 45.8 -2.0
CPSB Capacava Do Su 15.88 124 eP Pn 11 46 46.7 -1.6
PCMB Pacaembu 16.22 91 eP Pn 11 46 51.1 -1.5
PLTB Pedras Altas 16.41 128 eP Pn 11 46 52.7 -2.2
CLDB Colider 16.82 49 eP Pn 11 46 56.3 -3.6
OGAUY Aigu 17.16 137 eP Pn 11 47 01.9 -2.1
ARAG Araguaiana, MT 17.29 71 eP Pn 11 47 03.6 -2.2
ITRB Iturama 17.35 85 eP P 11 47 04.9 -1.5
CNLB Canela 17.52 117 eP P 11 47 07.1 -1.2
FRTB Fartura 17.70 97 eP P 11 47 09.1 -1.1
ATAH Atahualpa 17.75 327 P P 11 47 11.4 +0.2
comp=Z,0.4nm,0.3s,baz=133,slow=18,SNR=3.6
PLCA Paso Flores 18.41 184 P P 11 47 18.1 0.0
comp=Z,3.2nm,0.3s,baz=27,slow=12,SNR=98
PLCA PcP PcP 11 51 45.8 +0.8
comp=Z,0.8nm,0.3s,baz=28,slow=5.0,SNR=4.8
PLCA Paso Flores 18.41 184 P P 11 47 18.0 0.0
PLCA IAmb IAmb 11 47 22.0
comp=Z,413nm,1.2s
BB19B Bebedouro 18.81 90 eP P 11 47 21.5 -1.0
RCLB Rio Claro- Sao 19.60 94 eP P 11 47 29.8 -1.3
SPB Sao Paulo 19.65 98 eP P 11 47 30.5 -1.0
SPB Sao Paulo 19.65 98 P P 11 47 31.0 -0.6
IPMB Ipameri, GO 19.73 81 eP P 11 47 31.2 -1.4
VAO Valinhos 20.09 96 eP P 11 47 35.0 -1.5
BDFB Brasilia 20.67 75 P P 11 47 41.3 -1.5
comp=Z,227nm,0.8s,baz=253,slow=13,SNR=166
BDFB Brasilia 20.67 75 P P 11 47 41.2 -1.5
BDFB IAmb IAmb 11 47 44.4
comp=Z,485nm,1.1s
PARB Paraibuna 21.32 97 eP P 11 47 47.7 -1.9
BSCB Bom Sucesso 22.30 91 eP P 11 47 58.4 -1.7
ESAR Angra dos Reis 22.42 96 eP P 11 47 59.1 -2.0
JANB Januaria 24.21 77 eP P 11 48 16.1 -2.2
SMTB Santa Maria do 24.32 60 eP P 11 48 17.8 -1.4
OTAV Otavalo 24.35 336 eP P 11 48 23.6 +3.7
OTAV Otavalo 24.35 336 P P 11 48 21.7 +1.8
OTAV Otavalo 24.35 336 P P 11 48 21.7 +1.8
OTAV pmax pmax
comp=Z,67nm,0.8s
FLOC Florencia 24.71 343 eP P 11 48 24.2 +1.5

FLOC				i		11 49 02.2	
	comp=Z,107nm,0.2s						
FLOC	Florencia	24.71	343	P	P	11 48 24.1	+1.5
GCUF	Volcan Galeras	24.88	339	eP	P	11 48 29.1	+4.4
PRAC	Prado	26.57	346	eP	P	11 48 40.2	+0.6
VILC	Villavicencio,	26.72	349	eP	P	11 48 41.3	+0.3
YOTC	Yotoco, Valle	27.19	343	eP	P	11 48 49.6	+4.4
CHIC	Chingaza	27.23	349	eP	P	11 48 46.4	+0.4
ROSC	El Rosal	27.55	348	P	P	11 48 49.0	+0.2
	comp=Z,7.9nm,0.4s,baz=172,slow=9.7,SNR=5.3						
ROSC	El Rosal	27.55	348	P	P	11 48 48.6	-0.1
ROSC				IAmb	IAmb	11 49 37.9	
	comp=Z,112nm,1.2s						
GUY2C	Guyana, Caldas	28.14	346	eP	P	11 48 54.7	+0.6
NORC	Norcasia	28.36	347	eP	P	11 48 54.6	-1.0
RUSC	La Rusia	28.37	351	P	P	11 48 56.9	+0.8
NBIT	Itapeh - BA	28.68	80	eP	P	11 48 57.2	-1.2
CBOC	Ciudad Bolivar	28.91	345	eP	P	11 49 00.2	-0.4
GO09	Cerro Castillo	29.03	185	P	P	11 49 01.7	+0.7
GO09				IAmb	IAmb	11 49 03.0	
	comp=Z,95nm,1.0s						
BARC	Barichara	29.07	351	eP	P	11 49 01.8	-0.3
HELC	Santa Helena	29.11	346	eP	P	11 49 01.2	-1.4
PTBC	PUERTO BERRIO,	29.23	348	eP	P	11 49 01.3	-1.9
NBPN	Ponto Novo - B	29.57	72	eP	P	11 49 04.6	-1.8
EFI	East Falkland	30.44	167	P	P	11 49 11.4	-2.1
EFI				IAmb	IAmb	11 49 14.6	
	comp=Z,152nm,0.9s						
EFI	East Falkland	30.44	167	i P	P	11 49 12.0	-1.5
EFI				pmax	pmax		
	comp=Z,132nm,0.9s						
GO10	Punta Arenas	30.83	183	P	P	11 49 15.5	-1.5
SDV	Santo Domingo	31.08	356	P	P	11 49 18.6	-1.1
MDP	Montagnes des	31.48	32	P	P	11 49 22.3	-0.8
	comp=Z,106nm,0.6s,baz=210,slow=9.2,SNR=68						
NBLA	Lagarto - SE	31.64	74	eP	P	11 49 22.5	-2.1
NBPS	Pedro II - PI	31.87	60	eP	P	11 49 24.9	-1.8
NBTA	Tacaratu-PE	32.22	71	eP	P	11 49 27.6	-2.1
USHA	Ushuaia	32.46	180	P	P	11 49 32.1	+0.9
	comp=Z,77nm,0.8s,baz=349,slow=9.1,SNR=26						
NBMA	Muriti-CE	32.46	67	eP	P	11 49 30.2	-1.6
NBPB	Pedra_Branca-C	32.73	64	eP	P	11 49 32.8	-1.3
BCIP	Isla Barro Col	33.14	340	P	P	11 49 36.0	-1.6
BCIP				IAmb	IAmb	11 50 49.1	
	comp=Z,130nm,1.5s						
BCIP	Isla Barro Col	33.14	340	P	P	11 49 36.0	-1.6
BCIP				pmax	pmax		
	comp=Z,130nm,1.5s						
NBAN	Anadia - AL	33.55	73	eP	P	11 49 38.8	-2.5
NBMO	Morrinhos-CE	33.63	60	eP	P	11 49 40.0	-2.0
NBLI	Livramento-PB	34.02	69	eP	P	11 49 44.1	-1.3
TOSP	Speyside	34.37	14	P	P	11 49 47.7	-0.5
NBCL	Cascavel-CE	34.53	63	eP	P	11 49 49.1	-0.6
NBPA	Parau_RN	34.70	66	eP	P	11 49 49.5	-1.6
GRGR	Grenville	34.94	12	P	P	11 49 52.5	-0.7
NBRF	Rio Formoso -	35.00	73	eP	P	11 49 52.0	-1.8
RCBR	Riachuelo	35.69	68	P	P	11 49 59.1	-0.6
	comp=Z,441nm,0.8s,baz=232,slow=10.0,SNR=194						
RCBR	Riachuelo	35.69	68	eP	P	11 49 59.3	-0.5
RCBR	Riachuelo	35.69	68	P	P	11 49 59.1	-0.6
NBPV	Pedro Velho	35.92	69	eP	P	11 50 00.9	-0.7
JTS	Las Juntas de	36.11	332	P	P	11 50 03.3	+0.1
	comp=Z,9.3nm,0.7s,baz=157,slow=6.8,SNR=6.7						
JTS	Las Juntas de	36.11	332	P	P	11 50 01.7	-1.5
SVB	Belmont	36.13	12	P	P	11 50 02.1	-1.2
MCLT	Moule a Chique	36.62	13	P	P	11 50 06.6	-0.9
RPN	Rapa Nui	37.08	254	P	P	11 50 13.3	+2.0
	comp=Z,49nm,0.8s,baz=82,slow=9.7,SNR=4.0						
RPN	Rapa Nui	37.08	254	P	P	11 50 09.1	-2.3
FDF	Fort de France	37.57	12	P	P	11 50 15.0	-0.6
FDF	Fort de France	37.57	12	P	P	11 50 15.0	-0.6
FDF				pmax	pmax		
	comp=Z,182nm,0.6s						
ICMP	Isla Caja de M	40.02	3	P	P	11 50 35.1	-0.9
HOPE	Hope Point	40.08	151	P	P	11 50 37.6	+1.5
HOPE	Hope Point	40.08	151	P	P	11 50 37.6	+1.5
HOPE				pmax	pmax		
	comp=Z,350nm,1.1s						
MLPR	Magueyes Islan	40.08	2	P	P	11 50 33.7	-2.8
MLPR				IAmb	IAmb	11 51 10.7	
	comp=Z,68nm,0.8s						
CRPR	Cabo Rojo, PR	40.12	2	P	P	11 50 35.2	-1.6
CRPR				IAmb	IAmb	11 51 11.9	
	comp=Z,73nm,0.8s						
OBIP	Obispado Ponce	40.18	3	P	P	11 50 34.4	-2.8
OBIP				IAmb	IAmb	11 51 13.8	
	comp=Z,84nm,0.7s						
PDPR	Patillas Dam,	40.19	4	P	P	11 50 34.4	-2.9
PDPR				IAmb	IAmb	11 51 12.1	
	comp=Z,88nm,0.8s						
SJG	San Juan	40.27	4	P	P	11 50 35.9	-2.1
	comp=Z,26nm,0.6s,baz=224,slow=2.0,SNR=8.6						
SJG				pP	pP	11 51 00.7	-0.7
	comp=Z,50nm,0.6s,baz=123,slow=11,SNR=4.2						
SJG	San Juan	40.27	4	P	P	11 50 35.2	-2.8
SJG				IAmb	IAmb	11 51 12.8	
	comp=Z,83nm,0.7s						
SJG	San Juan	40.27	4	P	P	11 50 35.2	-2.8
SJG				pmax	pmax		
	comp=Z,83nm,0.7s						
MTP	Monte Pirata	40.30	5	P	P	11 50 36.0	-2.2
MTP				IAmb	IAmb	11 51 14.3	
	comp=Z,50nm,0.8s						
HUMP	Col San Antoni	40.32	4	P	P	11 50 36.0	-2.4
MPR	Mayaguez	40.32	2	P	P	11 50 36.7	-1.7
MPR				IAmb	IAmb	11 51 15.3	
	comp=Z,82nm,0.8s						
GCPR	Guaynabo City	40.47	4	P	P	11 50 37.3	-2.4
GCPR				IAmb	IAmb	11 51 14.0	
	comp=Z,54nm,0.8s						
AOPR	Arecibo Observ	40.47	3	P	P	11 50 37.7	-2.0
AOPR				IAmb	IAmb	11 50 47.7	
	comp=Z,59nm,0.6s						
TGUH	Tegucigalpa,Un	40.47	332	P	P	11 50 40.9	+0.9
TGUH				IAmb	IAmb	11 51 17.6	
	comp=Z,76nm,0.8s						
SMRT	St. Maarten	40.51	8	P	P	11 50 36.8	-3.2
SMRT				IAmb	IAmb	11 51 15.1	
	comp=Z,72nm,0.8s						
PMSA	Palmer Station	42.55	177	P	P	11 50 56.5	+0.4
	comp=Z,100nm,0.8s,baz=1.1,slow=5.5,SNR=7.4						
PMSA	Palmer Station	42.55	177	eP	P	11 50 56.8	+0.7
PMSA	Palmer Station	42.55	177	P	P	11 50 55.2	-0.9
APG	El Apazote	42.78	328	P	P	11 51 00.1	+1.2
	comp=Z,36nm,1.0s,baz=174,slow=5.3,SNR=18						
CCIG	Comitan	44.70	327	P	P	11 51 12.6	-1.6
CCIG				IAmb	IAmb	11 51 41.1	
	comp=Z,98nm,1.5s						
TEIG	Tepich	46.40	334	P	P	11 51 27.5	+0.2
	comp=Z,29nm,0.9s,baz=168,slow=4.6,SNR=13						
TEIG				pP	pP	11 51 51.8	+0.5
	comp=Z,33nm,0.6s,baz=123,slow=1.6,SNR=8.8						
TEIG	Tepich	46.40	334	P	P	11 51 26.8	-0.6
TEIG				IAmb	IAmb	11 52 05.3	
	comp=Z,236nm,1.7s						
CMIG	Matias Romero	46.80	325	P	P	11 51 30.7	+0.2
	comp=Z,18nm,0.9s,baz=128,slow=4.8,SNR=30						
CMIG				pP	pP	11 51 54.7	+0.4
	comp=Z,8.3nm,0.7s,baz=96,slow=6.4,SNR=4.7						
TLIG	Tlapa	49.24	321	P	P	11 51 49.9	+0.4
TLIG				IAmb	IAmb	11 51 52.5	
	comp=Z,33nm,0.9s						
DWPF	Disney Wildern	51.62	346	pP	pP	11 52 32.4	+1.0
	baz=165						
ASCN	Ascension	54.12	84	P	P	11 52 25.1	-0.7
TIGA	Tifton	55.33	345	pP	pP	11 52 59.3	+0.5
	baz=163						
ZAIG	Zacatecas	55.63	321	P	P	11 52 38.2	+1.3
ZAIG				IAmb	IAmb	11 52 40.0	
	comp=Z,55nm,0.9s						
352A	Blakely	55.71	343	P	P	11 52 36.9	+0.1
158A	Hollywood	55.84	348	pP	pP	11 53 03.4	+1.0
	baz=167						
157A	Early Branch	55.94	348	pP	pP	11 53 04.0	+0.9
	baz=166						
BRAL	Brewton	56.02	341	pP	pP	11 53 04.4	+0.6
	baz=160						
Z59A	Georgetown, SC	56.17	349	pP	pP	11 53 05.4	+0.6
	baz=168						
NHSC	New Hope	56.20	348	P	P	11 52 38.8	-1.5
NHSC	New Hope	56.20	348	pP	pP	11 53 06.3	+1.3
	baz=167						
Z58A	St. Stephen	56.35	349	pP	pP	11 53 07.2	+1.1
	baz=168						
Z57A	Bowman	56.48	348	pP	pP	11 53 07.7	+0.6
	baz=167						
250A	Grady	56.55	342	P	P	11 52 42.7	-0.1
Z56A	Williston	56.64	347	pP	pP	11 53 08.8	+0.6
	baz=166						
Y60A	Bolivia	56.74	351	pP	pP	11 53 09.5	+0.6
	baz=170						
Y59A	Loris	56.83	350	pP	pP	11 53 09.9	+0.4
	baz=169						
Y58A	Scranton	56.88	349	pP	pP	11 53 10.7	+0.8
	baz=168						
Y56A	Pelion	57.08	348	pP	pP	11 53 12.0	+0.7
	baz=166						
Y57A	Sumter	57.12	348	P	P	11 52 45.5	-1.3
Y57A	Sumter	57.12	348	pP	pP	11 53 12.4	+0.8
	baz=167						
GOGA	Godfrey	57.18	345	pP	pP	11 53 12.0	-0.1
	baz=164						
Z52A	Williamson	57.20	344	pP	pP	11 53 12.3	0.0
	baz=163						
X60A	Albert Glenn T	57.27	351	pP	pP	11 53 12.9	+0.2
	baz=170						
Y55A	Saluda	57.33	347	pP	pP	11 53 13.8	+0.6
	baz=166						
X59A	McDuffie Farm,	57.36	350	pP	pP	11 53 13.6	+0.3
	baz=169						
Y54A	Tignall	57.44	346	pP	pP	11 53 14.1	+0.2
	baz=165						
X58A	Rowland	57.46	350	pP	pP	11 53 14.8	+0.8
	baz=168						
344A	Westbrook Farm	57.48	338	P	P	11 52 46.4	-3.0
344A				IAmb	IAmb	11 53 16.3	
	comp=Z,55nm,0.9s						
X57A	Johnson Farm,	57.50	349	pP	pP	11 53 15.0	+0.7
	baz=168						
JSC	Jenkinsville	57.55	348	P	P	11 52 48.6	-1.2
JSC				IAmb	IAmb	11 53 16.2	
	comp=Z,32nm,1.0s						
JSC	Jenkinsville	57.55	348	P	P	11 52 48.6	-1.2
JSC				pmax	pmax		
	comp=Z,32nm,1.0s						
Y53A	Monroe	57.63	345	pP	pP	11 53 15.3	0.0
	baz=164						
Z50A	Ashland	57.66	343	P	P	11 52 49.6	-1.0
Z50A	Ashland	57.66	343	pP	pP	11 53 15.4	-0.1
	baz=161						
W60A	Pink Hill	57.70	351	pP	pP	11 53 16.4	+0.7
	baz=170						
X56A	White Oak	57.70	348	pP	pP	11 53 16.5	+0.8
	baz=166						
W61A	Ground Anchor	57.72	352	pP	pP	11 53 16.5	+0.7
	baz=171						
BIRD	Birdtown, Kers	57.75	349	P	P	11 52 52.1	+0.9
LRAL	Lakeview Retre	57.75	342	pP	pP	11 53 16.1	-0.1
	baz=160						
Y52A	Lilburn	57.76	345	pP	pP	11 53 16.4	+0.2
	baz=163						
441A	DeRidder	57.76	335	P	P	11 52 51.1	-0.3
X55A	Gracelyn & Ava	57.80	347	pP	pP	11 53 17.4	+1.0
	baz=166						
W58A	Raeford	57.90	350	pP	pP	11 53 17.9	+0.8
	baz=168						
CNNC	Cliffs of the	57.91	351	pP	pP	11 53 17.8	+0.6
	baz=170						
W59A	Clinton	57.92	351	pP	pP	11 53 18.1	+0.9
	baz=169						
V62A	Hyde County Ai	57.98	353	pP	pP	11 53 18.9	+1.2
	baz=172						
342A	Flagon Creek P	57.99	336	P	P	11 52 54.4	+1.4
X54A	Belton	58.03	347	pP	pP	11 53 18.5	+0.5
	baz=165						
Y51A	Rockmart	58.04	344	pP	pP	11 53 18.0	-0.2
	baz=162						
H06E1	SOCORRO T-PHAS	58.06	311	T	T	12 55 22.4	
	SNR=28						
VBMS	Vicksburg	58.11	338	pP	pP	11 53 18.6	0.0
	baz=156						
HKT	Hockley	58.15	332	P	P	11 52 54.0	0.0
HKT				IAmb	IAmb	11 53 22.8	
	comp=Z,73nm,1.4s						
HKT	Hockley	58.15	332	i P	P	11 52 54.5	+0.5
HKT				pmax	pmax		
	comp=Z,19nm,1.0s						
W57A	Gilead	58.16	349	pP	pP	11 53 19.4	+0.5
	baz=168						
X53A	Estanollee	58.19	346	pP	pP	11 53 19.7	+0.4
	baz=164						
W56A	Indian Trail	58.24	349	pP	pP	11 53 20.3	+0.7
	baz=167						
V61A	Roper	58.28	352	pP	pP	11 53 20.1	+0.3
	baz=171						
V60A	Jim Taylor Roa	58.34	352	pP	pP	11 53 20.9	+0.7
	baz=171						
Y49A	Blount Mountai	58.36	343	P	P	11 52 54.1	-1.4
Y49A				IAmb	IAmb	11 53 21.4	
	comp=Z,35nm,0.7s						
KMSC	Kings Mountain	58.39	348	P	P	11 52 56.3	+0.6
KMSC	Kings Mountain	58.39	348	pP	pP	11 53 21.4	+0.8
	baz=166						
833A	Chaparral WMA,	58.41	328	P	P	11 52 56.2	+0.2
833A	Chaparral WMA,	58.41	328	pP	pP	11 53 22.0	+1.3
	baz=146						
X52A	Dahlonega	58.42	345	pP	pP	11 53 21.2	+0.3
	baz=164						
V59A	Middlesex	58.47	351	pP	pP	11 53 22.1	+1.0
	baz=170						
W54A	Cherokee Point	58.51	347	pP	pP	11 53 22.3	+0.9
	baz=165						
X51A	Calhoun	58.62	344	P	P	11 52 55.9	-1.4
X51A	Calhoun	58.62	344	pP	pP	11 53 22.5	+0.3
	baz=162						
V58A	Windy Hill, Pi	58.64	350	P	P	11 52 56.9	-0.5
V58A	Windy Hill, Pi	58.64	350	pP	pP	11 53 23.1	+0.8
	baz=169						
U61A	Possum Corner	58.80	353	pP	pP	11 53 23.8	+0.4
	baz=172						
W53A	Cullowhee	58.80	346	pP	pP	11 53 24.1	+0.5
	baz=164						
V57A	Coltrane Farms	58.84	350	pP	pP	11 53 24.4	+0.7
	baz=168						
143A	Socs Landing,	58.85	338	P	P	11 52 58.6	-0.4
V56A	Mocksville	58.88	349	pP	pP	11 53 25.2	+1.1
	baz=167						
W52A	Murphy	58.90	345	P	P	11 52 59.8	+0.5
W52A	Murphy	58.90	345	pP	pP	11 53 24.6	+0.4
	baz=164						
U59A	Littleton	58.99	351	P	P	11 52 59.6	-0.2
U59A				IAmb	IAmb	11 53 26.8	
	comp=Z,96nm,1.4s						
U59A	Littleton	58.99	351	pP	pP	11 53 25.4	+0.7
	baz=170						
U60A	Pendleton	59.02	352	pP	pP	11 53 25.3	+0.4
	baz=171						
V55A	Taylorsville	59.06	348	P	P	11 53 00.6	+0.3
V55A	Taylorsville	59.06	348	pP	pP	11 53 26.5	+1.2
	baz=166						
X48A	Hartselle	59.09	342	P	P	11 52 60.0	-0.6
V54A	Nebo	59.13	347	pP	pP	11 53 26.6	+0.8
	baz=166						
U58A	Oxford	59.14	351	pP	pP	11 53 26.6	+0.8
	baz=169						
W51A	Cleveland	59.16	345	pP	pP	11 53 26.6	+0.6
	baz=163						
V53A	Saluda	59.20	347	pP	pP	11 53 26.8	+0.4
	baz=165						
NATX	Nacogdoches	59.24	334	P	P	11 53 02.7	+1.0
NATX	Nacogdoches	59.24	334	pP	pP	11 53 27.7	+1.2
	baz=152						
VNA3	Neumayer Olymp	59.24	161	P	P	11 53 02.0	+0.8
U57A	Blanch	59.30	350	pP	pP	11 53 27.8	+0.9
	baz=169						
W50A	Signal Mountai	59.34	344	P	P	11 53 02.3	0.0
W50A	Signal Mountai	59.34	344	pP	pP	11 53 27.8	+0.5
	baz=162						
CPCT	Cooper Cave	59.38	345	P	P	11 53 01.7	-0.8
U56A	King	59.39	349	P	P	11 53 02.4	-0.2
U56A	King	59.39	349	pP	pP	11 53 28.8	+1.2
	baz=167						
TKL	Tuckaleechee C	59.41	346	P	P	11 53 02.3	-0.4
	comp=Z,13nm,0.9s,baz=170,slow=10,SNR=8.9						
TKL				pP	pP	11 53 28.0	+0.3
	comp=Z,81nm,0.8s,baz=160,slow=8.7,SNR=23						
TKL	Tuckaleechee C	59.41	346	P	P	11 53 02.0	-0.7
TKL	Tuckaleechee C	59.41	346	P	P	11 53 02.0	-0.7
TKL				pmax	pmax		
	comp=Z,99nm,0.8s						
VNA1	Neumayer--Stat	59.45	160	P	P	11 53 03.8	+1.2
SHEL	Horse Pasture	59.48	96	P	P	11 53 02.5	-1.3
SHEL	Horse Pasture	59.48	96	P	P	11 53 05.4	+1.6
W49A	Belvidere	59.51	343	pP	pP	11 53 28.5	+0.1
	baz=161						
V52A	Sevierville	59.54	346	pP	pP	11 53 28.9	+0.2
	baz=164						
T59A	Double "B" Far	59.56	352	P	P	11 53 03.0	-0.7
T59A				IAmb	IAmb	11 53 30.7	
	comp=Z,92nm,1.2s						
T59A	Double "B" Far	59.56	352	pP	pP	11 53 29.4	+0.7
	baz=170						
T60A	Surry	59.63	353	pP	pP	11 53 30.1	+0.9
	baz=171						
435B	Jarrell	59.63	331	P	P	11 53 03.7	-0.7
435B				IAmb	IAmb	11 53 05.9	
	comp=Z,35nm,0.8s						
435B	Jarrell	59.63	331	pP	pP	11 53 29.7	+0.5
	baz=149						
U55A	TA2, Sparta	59.66	349	pP	pP	11 53 30.5	+1.0
	baz=167						
T58A	Grand View Acr	59.68	351	pP	pP	11 53 30.3	+0.8
	baz=169						
V51A	Loudon	59.68	345	pP	pP	11 53 29.8	+0.2
	baz=163						
V50A	Pikevile	59.73	345	pP	pP	11 53 30.3	+0.3
	baz=162						
VNA2	Neumayer--Watz	59.82	161	P	P	11 53 05.9	+0.7
	baz=281,slow=7.4						
U54A	Nelsons Funny	59.82	348	P	P	11 53 06.3	+0.6
U54A	Nelsons Funny	59.82	348	pP	pP	11 53 31.4	+0.8
	baz=166						
U53A	Fall Branch	59.83	347	pP	pP	11 53 30.9	+0.3
	baz=165						
T57A	Hurt	59.84	350	P	P	11 53 06.5	+0.9
T57A	Hurt	59.84	350	pP	pP	11 53 31.4	+0.7
	baz=169						
OXF	Oxford	59.85	340	P	P	11 53 05.2	-0.5
OXF	Oxford	59.85	340	P	P	11 53 05.3	-0.5
OXF				pmax	pmax		
	comp=Z,134nm,1.0s						
OXF	Oxford	59.85	340	pP	pP	11 53 30.1	-0.7
	baz=158						
Z41A	Richland Creek	59.86	337	P	P	11 53 06.5	+0.7
Z41A	Richland Creek	59.86	337	pP	pP	11 53 31.7	+1.0
	baz=154						
PLAL	Pickwick Lake	59.88	342	P	P	11 53 05.2	-0.7
PLAL				IAmb	IAmb	11 53 31.8	
	comp=Z,80nm,1.0s						
T56A	Rocky Mt	59.99	350	pP	pP	11 53 33.1	+1.4
	baz=168						
U52A	Thorn Hill	60.02	346	pP	pP	11 53 32.0	+0.1
	baz=164						
V49A	McMinnville	60.02	344	pP	pP	11 53 31.9	-0.1
	baz=162						
S61A	Accomac	60.04	354	pP	pP	11 53 32.6	+0.5
	baz=172						
U51A	La Follette	60.15	346	pP	pP	11 53 33.2	+0.3
	baz=164						
S60A	Water View	60.18	353	pP	pP	11 53 33.3	+0.3
	baz=172						
TZTN	Tazewell	60.20	346	pP	pP	11 53 33.5	+0.3
	baz=164						
T55A	Pulaski	60.21	349	pP	pP	11 53 34.7	+1.4
	baz=167						
BLA	Blacksburg	60.24	349	P	P	11 53 08.2	-0.3
BLA	Blacksburg	60.24	349	P	P	11 53 08.2	-0.3
BLA				pmax	pmax		
	comp=Z,539nm,1.8s						
BLA	Blacksburg	60.24	349	pP	pP	11 53 34.7	+1.2
	baz=168						
V48A	Smith Brothers	60.24	343	P	P	11 53 08.3	-0.2
S58A	Poland Farm, P	60.26	351	pP	pP	11 53 34.3	+0.7
	baz=170						
T54A	Tazewell	60.30	348	pP	pP	11 53 34.6	+0.7
	baz=166						
S59A	Mechanicsville	60.31	352	pP	pP	11 53 34.4	+0.5
	baz=171						
X43A	Marvell	60.33	339	P	P	11 53 08.0	-1.0
X43A	Marvell	60.33	339	pP	pP	11 53 34.2	+0.1
	baz=156						
U50A	Jamestown	60.38	345	pP	pP	11 53 34.4	-0.1
	baz=163						
JCT	Junction City	60.40	329	P	P	11 53 09.5	-0.2
JCT				IAmb	IAmb	11 53 11.6	
	comp=Z,61nm,0.8s						
JCT	Junction City	60.40	329	P	P	11 53 09.5	-0.2
JCT				pmax	pmax		
	comp=Z,61nm,0.8s						
JCT	Junction City	60.40	329	pP	pP	11 53 34.9	+0.3
	baz=147						
T53A	Wise	60.41	347	pP	pP	11 53 35.1	+0.4
	baz=165						
CLTN	Cedars of Leba	60.44	344	P	P	11 53 09.5	-0.3
S57A	Dark Hollow, R	60.54	351	P	P	11 53 09.7	-0.7
S57A	Dark Hollow, R	60.54	351	pP	pP	11 53 36.5	+1.0
	baz=169						
S56A	Natural Bridge	60.55	350	pP	pP	11 53 36.4	+0.8
	baz=168						
R58B	Mineral	60.59	352	P	P	11 53 11.7	+1.0
R58B				IAmb	IAmb	11 53 38.1	
	comp=Z,129nm,1.4s						
R58B	Mineral	60.59	352	pP	pP	11 53 36.4	+0.6
	baz=170						
WHTX	Lake Whitney,	60.61	332	P	P	11 53 09.8	-1.2
WHTX				IAmb	IAmb	11 53 12.6	
	comp=Z,54nm,0.8s						
WHTX	Lake Whitney,	60.61	332	pP	pP	11 53 36.4	+0.5
	baz=149						
HPIG		60.63	322	P	P	11 53 11.4	-0.1
HPIG				IAmb	IAmb	11 53 13.9	
	comp=Z,52nm,1.3s						
T52A	Hallie	60.63	347	pP	pP	11 53 36.2	+0.1
	baz=165						
R61A	Willards	60.66	354	pP	pP	11 53 36.6	+0.4
	baz=173						
T51A	Gray	60.70	346	pP	pP	11 53 36.9	+0.3
	baz=164						
U49A	Red Boiling Sp	60.70	344	pP	pP	11 53 36.7	0.0
	baz=162						
R59A	King George, V	60.72	352	pP	pP	11 53 37.3	+0.6
	baz=171						
R60A	Leonardtown, M	60.72	353	pP	pP	11 53 37.3	+0.6
	baz=172						
CBN	Corbin Frederi	60.76	352	pP	pP	11 53 37.4	+0.5
	baz=171						
S55A	Lewisburg	60.80	349	pP	pP	11 53 38.4	+1.1
	baz=168						
WVT	Waverly	60.88	342	P	P	11 53 11.5	-1.3
WVT	Waverly	60.88	342	P	P	11 53 11.5	-1.3
WVT				pmax	pmax		
	comp=Z,141nm,0.8s						
WVT	Waverly	60.88	342	pP	pP	11 53 37.4	-0.5
	baz=160						
R58A	Rapidan	60.93	352	pP	pP	11 53 38.7	+0.6
	baz=170						
T50A	Nancy	60.95	345	pP	pP	11 53 38.3	-0.1
	baz=163						
S54A	Dingess, Beckl	60.97	349	P	P	11 53 12.8	-0.5
S54A	Dingess, Beckl	60.97	349	pP	pP	11 53 39.1	+0.6
	baz=167						
X40A	Basin Creek Fa	60.97	337	P	P	11 53 12.5	-0.9
X40A				IAmb	IAmb	11 53 40.6	
	comp=Z,66nm,1.9s						
X40A	Basin Creek Fa	60.97	337	pP	pP	11 53 38.5	0.0
	baz=154						
R57A	Stanardsville	61.00	351	pP	pP	11 53 39.6	+1.0
	baz=170						
S53A	Williamson	61.01	348	pP	pP	11 53 39.0	+0.3
	baz=166						
UALR	University of	61.06	338	P	P	11 53 13.0	-1.0
UALR				IAmb	IAmb	11 53 40.6	
	comp=Z,74nm,1.0s						
LPAR	Lepanto	61.13	340	P	P	11 53 13.2	-1.3
S52A	Salyersville	61.20	347	pP	pP	11 53 40.1	+0.2
	baz=165						
T49A	Edmonton	61.20	345	P	P	11 53 13.6	-1.4
T49A	Edmonton	61.20	345	pP	pP	11 53 40.0	0.0
	baz=162						
R55A	Marlinton	61.23	350	P	P	11 53 16.6	+1.5
R55A	Marlinton	61.23	350	pP	pP	11 53 41.5	+1.2
	baz=168						
R56A	Bull Pasture M	61.24	350	pP	pP	11 53 41.4	+1.0
	baz=169						
S51A	Beattyville	61.27	347		pP	11 53 37.5	-3.0
S51A	Beattyville	61.27	347	pP	pP	11 53 40.6	+0.2
	baz=164						
R54A	Victor	61.28	349	pP	pP	11 53 41.5	+0.9

baz=167
MIAR Mount Ida 61.29 337 P P 11 53 15.6 0.0
MIAR IAmb IAmb 11 53 42.5
comp=Z,72nm,0.8s
MIAR Mount Ida 61.29 337 P P 11 53 15.6 0.0
MIAR pmax pmax
comp=Z,72nm,0.8s
MIAR Mount Ida 61.29 337 pP pP 11 53 41.2 +0.8
baz=154
Q59A Harwood 61.32 353 pP pP 11 53 41.5 +0.7
baz=172
LPIG La Paz 61.34 316 P P 11 53 16.5 +0.4
comp=Z,16nm,0.5s,baz=141,slow=8.1,SNR=5.2
Q60A Greensboro 61.37 354 pP pP 11 53 41.4 +0.3
baz=172
UTMT University of 61.38 342 P P 11 53 15.9 -0.2
UTMT pP 11 53 41.4 +0.2
W41B Gary Mavity, V 61.39 338 P P 11 53 16.1 -0.1
W41B IAmb IAmb 11 53 42.8
comp=Z,95nm,1.2s
W41B Gary Mavity, V 61.39 338 pP pP 11 53 41.1 -0.2
baz=155
TX32 Lajitas Array 61.40 325 P P 11 53 16.9 +0.4
TXAR Lajitas Array 61.40 325 P P 11 53 17.1 +0.5
comp=Z,7.1nm,0.8s,baz=149,slow=8.2,SNR=80
TXAR pP pP 11 53 41.2 -0.2
comp=Z,2.5nm,0.5s,baz=156,slow=8.1,SNR=6.4
TXAR Lajitas Array 61.40 325 P P 11 53 16.5 -0.1
TX31 Lajitas Ar. Si 61.40 325 P P 11 53 17.2 +0.6
SNAA Sanae 61.45 161 P P 11 53 16.9 +0.6
SNAA Sanae 61.45 161 P P 11 53 16.6 +0.3
comp=Z,123nm,0.9s,baz=281,slow=6.2,SNR=221
SNAA Sanae 61.45 161 P P 11 53 16.6 +0.3
SNAA Sanae 61.45 161 d iP P 11 53 16.4 +0.1
S50A Richmond 61.48 346 pP pP 11 53 42.1 +0.1
baz=164
T47A Sharon Grove 61.49 343 P P 11 53 16.9 0.0
WHAR Wooly Hollow 61.51 338 P P 11 53 15.7 -1.3
WHAR IAmb IAmb 11 53 43.6
comp=Z,62nm,0.9s
Q58A Fox Den Farm, 61.52 352 pP pP 11 53 42.7 +0.5
baz=170
R53A Hurricane 61.60 348 pP pP 11 53 43.0 +0.3
baz=166
HICK Hickman 61.67 341 P P 11 53 17.4 -0.7
Q57A Strasburg 61.71 351 pP pP 11 53 44.8 +1.3
baz=170
R52A Catlettsburg 61.74 348 pP pP 11 53 43.6 -0.1
baz=165
S49A Springfield 61.79 345 pP pP 11 53 43.8 -0.2
baz=163
Q56A Snyder Ridge, 61.83 351 P P 11 53 20.6 +1.5
Q56A Snyder Ridge, 61.83 351 pP pP 11 53 45.5 +1.3
baz=169
LCAR Lake Charles 61.84 339 P P 11 53 18.9 -0.3
LCAR IAmb IAmb 11 53 45.4
comp=Z,69nm,0.8s
SDMD Soldier's Deli 61.88 353 P P 11 53 20.9 +1.5
R51A Hillsboro 61.90 347 pP pP 11 53 44.9 +0.1
baz=164
Q55A Buckhannon 61.92 350 pP pP 11 53 46.6 +1.7
baz=168
P61A Hammonton 61.94 355 pP pP 11 53 45.2 +0.3
baz=174
W39A Magazine 61.95 337 P P 11 53 19.8 -0.2
W39A Magazine 61.95 337 pP pP 11 53 46.1 +0.9
baz=154
P58A Pank, Wackersv 62.01 352 pP pP 11 53 46.1 +0.6
baz=171
P59A Jarrettsville 62.03 353 pP pP 11 53 46.5 +0.8
baz=172
Q53A Leroy 62.03 349 pP pP 11 53 46.2 +0.6
baz=167
Q54A Coxs Mills 62.03 349 P P 11 53 19.4 -1.1
Q54A IAmb IAmb 11 53 47.4
comp=Z,73nm,0.8s
Q54A Coxs Mills 62.03 349 pP pP 11 53 46.1 +0.5
baz=167
R50A Paris 62.04 346 pP pP 11 53 45.8 +0.1
baz=164
P57A Homestead Farm 62.10 352 P P 11 53 22.0 +1.1
P57A Homestead Farm 62.10 352 pP pP 11 53 47.0 +1.0
baz=170
ABTX Abilene, Hawle 62.12 331 P P 11 53 21.2 0.0
ABTX IAmb IAmb 11 53 22.7
comp=Z,79nm,1.1s
ABTX Abilene, Hawle 62.12 331 pP pP 11 53 46.7 +0.4
baz=148
P60A Greenville 62.15 354 pP pP 11 53 46.8 +0.4
baz=173
P56A Dayton Farm, R 62.23 351 pP pP 11 53 48.2 +1.3
baz=169
R49A Shelbyville 62.24 345 P P 11 53 21.1 -0.8
R49A IAmb IAmb 11 53 48.0
comp=Z,61nm,0.8s
R49A Shelbyville 62.24 345 pP pP 11 53 46.7 -0.4
baz=163
PBMO Poplar Bluff 62.26 340 P P 11 53 21.7 -0.3
Q52A Bidwell 62.27 348 pP pP 11 53 47.5 +0.3
baz=166
O61A Allentown 62.33 355 pP pP 11 53 48.0 +0.4
baz=174
P55A Reedsville 62.38 350 pP pP 11 53 49.0 +1.0
baz=168
MVL Millersville 62.41 353 P P 11 53 24.1 +1.1
MVL IAmb IAmb 11 54 04.5
comp=Z,34nm,0.8s
WCI Wyandotte Cave 62.45 344 P P 11 53 22.3 -1.0
WCI Wyandotte Cave 62.45 344 P P 11 53 22.3 -1.0
WCI pmax pmax
comp=Z,148nm,0.7s
WCI Wyandotte Cave 62.45 344 pP pP 11 53 48.2 -0.3
baz=162
Q50A Georgetown 62.51 347 pP pP 11 53 48.3 -0.5
baz=164
MCWV Mont Chateau 62.53 350 P P 11 53 22.3 -1.5
MCWV IAmb IAmb 11 53 51.4
comp=Z,45nm,0.8s
MCWV Mont Chateau 62.53 350 pP pP 11 53 50.0 +1.0
baz=168
Q51A Peebles 62.55 347 P P 11 53 22.6 -1.3
Q51A IAmb IAmb 11 53 50.4
comp=Z,99nm,1.1s
Q51A Peebles 62.55 347 pP pP 11 53 48.9 -0.2
baz=165
P54A Burton 62.58 350 pP pP 11 53 50.2 +0.9
baz=168
O58A Lewisberry 62.59 353 pP pP 11 53 50.0 +0.6
baz=171
P53A Whipple 62.62 349 P P 11 53 25.3 +0.9
P53A Whipple 62.62 349 pP pP 11 53 50.4 +0.8
baz=167
O60A Telford 62.63 354 pP pP 11 53 50.6 +0.9
baz=173
U40A Yellville 62.66 338 P P 11 53 24.1 -0.6
U40A IAmb IAmb 11 53 51.3
comp=Z,74nm,0.8s
U40A Yellville 62.66 338 pP pP 11 53 50.1 +0.1
baz=155
PAGS Pennsylvania G 62.68 353 P P 11 53 24.1 -0.6
O59A Robesonia 62.70 354 pP pP 11 53 50.8 +0.7
baz=172
O57A Amberson 62.77 352 pP pP 11 53 51.6 +1.0
baz=171
Q49A Aurora 62.86 346 pP pP 11 53 51.0 -0.2
baz=163
P52A Corning 62.90 348 pP pP 11 53 51.4 0.0
baz=166
P51A Williamsport 62.93 348 P P 11 53 26.4 0.0
P51A IAmb IAmb 11 53 52.8
comp=Z,63nm,0.8s
P51A Williamsport 62.93 348 pP pP 11 53 51.6 0.0
baz=165
O56A Blue Knob Stat 62.94 352 P P 11 53 24.7 -1.8
O56A IAmb IAmb 11 53 54.4
comp=Z,214nm,1.7s
O56A Blue Knob Stat 62.94 352 pP pP 11 53 53.0 +1.2
baz=170
N61A South Mountain 62.97 355 pP pP 11 53 52.7 +0.8
baz=174
HHAR Hobbs 62.98 337 P P 11 53 26.8 -0.1
HHAR IAmb IAmb 11 53 53.6
comp=Z,119nm,1.3s
Q48A North Vernon 62.98 345 pP pP 11 53 51.8 -0.2
baz=162
O55A Ligonier 62.99 351 pP pP 11 53 53.0 +1.0
baz=169

N62A Caumsett State 63.09 356 pP pP 11 53 53.0 +0.3
baz=175
W35A Tecumseh 63.10 334 P P 11 53 27.4 -0.3
O54A Avella 63.13 350 P P 11 53 27.4 -0.3
O54A Avella 63.13 350 pP pP 11 53 53.6 +0.7
baz=168
N60A Cedar Hill Far 63.15 355 pP pP 11 53 53.8 +0.7
baz=173
MGMO Mountain Grove 63.19 339 P P 11 53 26.9 -1.3
MGMO IAmb IAmb 11 53 54.9
comp=Z,70nm,0.7s
PAL Palisades 63.19 356 pP pP 11 53 53.9 +0.6
baz=175
P50A Jamestown 63.20 347 pP pP 11 53 53.3 -0.1
baz=164
SSPA Standing Stone 63.22 352 pP pP 11 53 54.4 +0.9
baz=170
N59A State Game Lan 63.26 354 P P 11 53 27.5 -1.1
N59A IAmb IAmb 11 53 56.5
comp=Z,76nm,1.6s
N59A State Game Lan 63.26 354 pP pP 11 53 54.6 +0.7
baz=173
N58A Sunbury 63.28 353 P P 11 53 28.4 -0.4
N58A IAmb IAmb 11 54 11.0
comp=Z,52nm,1.0s
N58A Sunbury 63.28 353 pP pP 11 53 54.7 +0.8
baz=172
N57A Milroy 63.29 353 pP pP 11 53 54.8 +0.8
baz=171
ODNJ Ogdensburg 63.32 355 P P 11 53 28.6 -0.4
ODNJ IAmb IAmb 11 53 56.4
comp=Z,75nm,1.6s
P49A Miami Univ. Ec 63.33 346 pP pP 11 53 53.9 -0.4
baz=163
O53A New Philadelph 63.33 349 pP pP 11 53 54.6 +0.3
baz=167
TUL1 Leonard 63.33 336 P P 11 53 28.1 -1.1
TUL1 IAmb IAmb 11 53 30.5
comp=Z,72nm,0.9s
TUL1 Leonard 63.33 336 pP pP 11 53 54.7 +0.5
baz=152
FNO Franklin 63.40 334 P P 11 53 29.2 -0.4
P48A Milroy 63.42 346 P P 11 53 28.5 -1.2
P48A IAmb IAmb 11 53 55.4
comp=Z,79nm,0.7s
P48A Milroy 63.42 346 pP pP 11 53 54.2 -0.7
baz=163
M63A Gales Ferry 63.48 357 pP pP 11 53 55.8 +0.5
baz=176
M61A Granite Spring 63.48 356 pP pP 11 53 55.6 +0.3
baz=175
O51A Pataskala 63.48 348 pP pP 11 53 55.5 +0.2
baz=166
N55A Marion Center 63.51 351 pP pP 11 53 56.7 +1.2
baz=169
WMOK Wichita Mounta 63.53 333 P P 11 53 29.5 -1.0
WMOK IAmb IAmb 11 53 58.3
comp=Z,64nm,1.8s
WMOK Wichita Mounta 63.53 333 P P 11 53 29.5 -1.0
WMOK pmax pmax
comp=Z,64nm,1.8s
WMOK Wichita Mounta 63.53 333 pP pP 11 53 55.5 -0.1
baz=149
OKCSW OKLAHOMA CITY 63.54 334 P P 11 53 29.3 -1.3
N56A West Decatur 63.55 352 pP pP 11 53 56.6 +0.8
baz=170
OKCFA Oklahoma City 63.56 334 P P 11 53 30.1 -0.6
OKCFA IAmb IAmb 11 53 31.5
comp=Z,35nm,0.8s
M62A Hamden 63.56 357 pP pP 11 53 56.7 +0.9
baz=176
M60A Port Jervis 63.56 355 pP pP 11 53 56.5 +0.6
baz=174
M64A Tiverton 63.59 358 pP pP 11 53 56.3 +0.4
baz=177
ACSO Alum Creek Sta 63.64 348 P P 11 53 31.2 +0.1
ACSO Alum Creek Sta 63.64 348 pP pP 11 53 56.2 -0.2
baz=165
CCM Cathedral Cave 63.68 340 P P 11 53 31.0 -0.4
CCM Cathedral Cave 63.68 340 P P 11 53 31.0 -0.4
CCM pmax pmax
comp=Z,121nm,0.8s
CCM Cathedral Cave 63.68 340 pP pP 11 53 57.0 +0.3
baz=157
O50A Cable 63.68 347 pP pP 11 53 56.5 -0.2
baz=165
M58A Price's Panora 63.78 354 pP pP 11 53 58.4 +1.0
baz=172
N53A Lisbon 63.81 350 P P 11 53 32.9 +0.6
N53A IAmb IAmb 11 53 59.5
comp=Z,152nm,1.4s
N53A Lisbon 63.81 350 pP pP 11 53 58.2 +0.7
baz=168
M57A Sunshine Farm, 63.82 353 P P 11 53 31.6 -0.7
M57A IAmb IAmb 11 54 00.2
comp=Z,97nm,1.4s
M57A Sunshine Farm, 63.82 353 pP pP 11 53 58.8 +1.3
baz=171
N54A Moraine State 63.83 351 P P 11 53 32.8 +0.4
N54A Moraine State 63.83 351 pP pP 11 53 58.7 +1.1
baz=168
M59A Waymart 63.85 354 pP pP 11 53 58.3 +0.6
baz=173
O49A Covington 63.87 347 P P 11 53 31.4 -1.3
O49A IAmb IAmb 11 53 58.9
comp=Z,91nm,0.9s
O49A Covington 63.87 347 pP pP 11 53 57.8 -0.1
baz=164
SLM Saint Louis 63.91 341 P P 11 53 32.4 -0.5
SLM IAmb IAmb 11 53 59.2
comp=Z,63nm,0.7s
SLM Saint Louis 63.91 341 P P 11 53 32.4 -0.5
SLM pmax pmax
comp=Z,63nm,0.7s
L63A North Scituate 63.92 358 pP pP 11 53 58.7 +0.6
baz=177
N52A McGinn's Farm, 63.96 349 pP pP 11 53 58.5 0.0
baz=167
M56A Emporium 64.09 352 P P 11 53 33.2 -0.8
M56A IAmb IAmb 11 54 01.5
comp=Z,179nm,1.6s
M56A Emporium 64.09 352 pP pP 11 54 00.3 +0.9
baz=170
O48A Farmland 64.12 346 pP pP 11 53 59.1 -0.5
baz=163
L62A Suffield 64.14 357 pP pP 11 54 00.3 +0.7
baz=176
M55A Ridgway 64.15 352 P P 11 53 34.7 +0.3
M55A IAmb IAmb 11 54 02.0
comp=Z,182nm,1.5s
M55A Ridgway 64.15 352 pP pP 11 54 00.4 +0.7
baz=170
MNTX Cornudas Mount 64.17 326 P P 11 53 34.2 -0.6
MNTX Cornudas Mount 64.17 326 pP pP 11 54 00.1 +0.1
baz=142
N51A Ashland 64.19 349 pP pP 11 54 00.1 +0.1
baz=166
L60A Shokan 64.19 355 pP pP 11 54 01.2 +1.1
baz=174
N50A Nevada 64.19 348 pP pP 11 54 00.0 0.0
baz=165
M54A Oil Creek Stat 64.32 351 P P 11 53 35.0 -0.6
M54A IAmb IAmb 11 54 02.8
comp=Z,96nm,1.1s
M54A Oil Creek Stat 64.32 351 pP pP 11 54 01.5 +0.7
baz=169
L61A Hillsdale 1, H 64.35 356 pP pP 11 54 01.4 +0.3
baz=175
L58A Harry Jones Me 64.39 354 pP pP 11 54 02.3 +1.0
baz=173
M53A WI Miller and 64.40 350 pP pP 11 54 01.9 +0.5
baz=168
L57A Andrews Acres 64.44 353 pP pP 11 54 02.6 +0.9
baz=172
L59A Walton 64.46 355 P P 11 53 36.4 -0.1
L59A IAmb IAmb 11 54 19.0
comp=Z,85nm,1.1s
L59A Walton 64.46 355 pP pP 11 54 02.8 +1.0
baz=174
ALLY Alegheny Colle 64.53 351 P P 11 53 36.5 -0.4
ALLY IAmb IAmb 11 54 04.1
comp=Z,95nm,0.9s
N49A Columbus Grove 64.55 347 P P 11 53 36.2 -0.8
N49A Columbus Grove 64.55 347 pP pP 11 54 02.4 +0.1
baz=164
BINY Binghamton 64.55 354 P P 11 53 36.4 -0.7
BINY IAmb IAmb 11 53 56.0

comp=Z,98nm,1.2s
BINY Binghamton 64.55 354 pP pP 11 54 03.3 +0.9
baz=172
L61B Northampton 64.56 357 pP pP 11 54 02.7 +0.3
baz=176
M51A Elyria 64.56 349 pP pP 11 54 02.4 0.0
baz=166
HRV Adam Dziewonsk 64.56 358 pP pP 11 54 03.3 +1.0
baz=177
M52A Chesterland 64.61 350 P P 11 53 36.9 -0.6
M52A IAmb IAmb 11 54 04.4
comp=Z,73nm,1.0s
M52A Chesterland 64.61 350 pP pP 11 54 03.2 +0.5
baz=167
P43A Skaggs, Pawnee 64.64 342 P P 11 53 36.7 -0.9
L56A Greenwood 64.66 353 P P 11 53 38.2 +0.4
L56A IAmb IAmb 11 54 05.2
comp=Z,138nm,1.6s
L56A Greenwood 64.66 353 pP pP 11 54 03.4 +0.3
baz=171
N48A Decatur 64.67 346 pP pP 11 54 02.6 -0.5
baz=163
MSTX Muleshoe 64.69 329 P P 11 53 37.9 -0.4
MSTX IAmb IAmb 11 53 40.2
comp=Z,74nm,0.9s
MSTX Muleshoe 64.69 329 pP pP 11 54 03.7 +0.2
baz=145
SFIN Lafayette 64.69 345 P P 11 53 36.8 -1.2
SFIN IAmb IAmb 11 54 03.6
comp=Z,79nm,0.8s
SFIN Lafayette 64.69 345 pP pP 11 54 02.5 -0.7
baz=161
K63A Dunstable 64.74 358 pP pP 11 54 03.8 +0.3
baz=177
K62A Royalston 64.75 357 pP pP 11 54 03.6 0.0
baz=176
M50A Fremont 64.78 348 pP pP 11 54 03.9 0.0
baz=165
K60A Five Rivers En 64.79 356 pP pP 11 54 04.7 +0.8
baz=175
K61A Williamstown 64.81 356 pP pP 11 54 04.7 +0.6
baz=175
L55A Hinsdale 64.81 352 pP pP 11 54 04.6 +0.5
baz=170
N47A Urbana 64.83 346 P P 11 53 37.9 -1.0
N47A Urbana 64.83 346 pP pP 11 54 03.8 -0.4
baz=163
L53A Girard 64.84 351 pP pP 11 54 04.5 +0.2
baz=168
TRY Troy 64.89 356 P P 11 53 38.2 -1.0
TRY IAmb IAmb 11 54 09.1
comp=Z,44nm,0.7s
AMTX Amarillo 64.93 330 P P 11 53 37.7 -2.1
AMTX Amarillo 64.93 330 pP pP 11 54 05.2 +0.2
baz=146
ERPA Erie 64.96 351 P P 11 53 39.2 -0.5
ERPA IAmb IAmb 11 54 06.8
comp=Z,94nm,0.8s
ERPA Erie 64.96 351 pP pP 11 54 05.7 +0.7
baz=168
L54A Sinclairville 64.98 351 pP pP 11 54 05.9 +0.8
baz=169
K59A Cooperstown 65.02 355 pP pP 11 54 06.5 +1.1
baz=174
U32A Winter Ranch, 65.02 333 P P 11 53 39.3 -1.0
U32A IAmb IAmb 11 53 43.1
comp=Z,57nm,0.9s
M49A Liberty Center 65.03 347 pP pP 11 54 05.4 -0.1
baz=164
WVNY West Valley, N 65.05 352 P P 11 53 40.6 +0.3
WVNY IAmb IAmb 11 54 08.0
comp=Z,203nm,1.6s
K58A Earlville 65.08 354 P P 11 53 40.4 -0.1
K58A IAmb IAmb 11 54 10.5
comp=Z,41nm,0.9s
K58A Earlville 65.08 354 pP pP 11 54 06.6 +0.7
baz=173
K57A Scipio Center 65.13 354 pP pP 11 54 06.6 +0.4
baz=172
K56A Middlesex 65.18 353 pP pP 11 54 06.9 +0.4
baz=171
M48A Edgerton 65.20 347 P P 11 53 41.2 0.0
M48A IAmb IAmb 11 54 07.5
comp=Z,62nm,0.9s
M48A Edgerton 65.20 347 pP pP 11 54 06.3 -0.3
baz=164
K54A Basiliko Farm, 65.26 352 pP pP 11 54 07.8 +0.7
baz=170
M47A Cromwell 65.27 346 pP pP 11 54 06.9 -0.1
baz=163
HSIG 65.28 320 P P 11 53 40.5 -1.5
HSIG IAmb IAmb 11 53 44.9
comp=Z,75nm,1.3s
J62A Henniker 65.29 358 pP pP 11 54 07.9 +0.8
baz=177
K55A Perry 65.30 352 pP pP 11 54 07.7 +0.4
baz=170
L50A Kingsville 65.36 348 pP pP 11 54 07.5 -0.1
baz=166
J60A Lant Hill Farm 65.39 356 pP pP 11 54 08.4 +0.6
baz=175
HDIL Hopedale 65.43 343 P P 11 53 41.8 -0.9
HDIL Hopedale 65.43 343 pP pP 11 54 07.3 -0.8
baz=159
ACCN Adirondack Com 65.54 356 P P 11 53 43.5 +0.1
ACCN IAmb IAmb 11 54 12.9
comp=Z,108nm,1.9s
L48A N Adams 65.58 347 pP pP 11 54 08.3 -0.8
baz=164
L49A Milan 65.60 348 pP pP 11 54 08.9 -0.3
baz=165
J58A Remsen 65.64 355 P P 11 53 44.3 +0.2
J58A IAmb IAmb 11 54 03.5
comp=Z,60nm,1.4s
J58A Remsen 65.64 355 pP pP 11 54 10.3 +0.8
baz=173
J59A Piesco 65.68 355 P P 11 53 45.0 +0.6
J59A IAmb IAmb 11 54 12.1
comp=Z,40nm,0.9s
J59A Piesco 65.68 355 pP pP 11 54 10.7 +0.9
baz=174
J56A Wolcott 65.70 353 P P 11 53 43.7 -0.7
J56A IAmb IAmb 11 54 25.9
comp=Z,33nm,0.7s
J56A Wolcott 65.70 353 pP pP 11 54 10.4 +0.5
baz=172
K52A Tillsonburg 65.72 350 pP pP 11 54 10.3 +0.4
baz=168
J57A Williamstown 65.75 354 P P 11 53 44.9 +0.1
J57A IAmb IAmb 11 54 12.1
comp=Z,73nm,1.4s
J57A Williamstown 65.75 354 pP pP 11 54 10.7 +0.5
baz=173
AAM Ann Arbor 65.77 348 pP pP 11 54 10.1 -0.2
baz=165
L47A Sherwood 65.77 347 pP pP 11 54 09.6 -0.7
baz=163
K51A Iona Station 65.79 350 pP pP 11 54 10.5 +0.1
baz=167
J55A Hilton 65.80 353 pP pP 11 54 11.0 +0.5
baz=171
J54A Appleton 65.91 352 pP pP 11 54 11.8 +0.6
baz=170
I62A Tamworth 65.92 358 pP pP 11 54 12.1 +0.9
baz=177
I64A Boothbay 65.93 359 pP pP 11 54 12.1 +0.9
baz=179
I60A Shoreham 65.98 356 pP pP 11 54 12.5 +0.8
baz=175
NVL N'lazarevskaya 66.00 159 ⇑ iP P 11 53 45.7 -0.4
NVL pmax pmax
comp=Z,256nm,1.2s
NVL MLR MLR
comp=Z,782nm,16.0s
N41A Harden Midland 66.01 342 P P 11 53 45.5 -0.9
N41A IAmb IAmb 11 54 12.6
comp=Z,85nm,0.8s
I61A Oroboro, Fairl 66.01 357 pP pP 11 54 12.8 +1.0
baz=176
K50A Casco 66.03 349 P P 11 53 45.6 -0.9
K50A IAmb IAmb 11 54 12.9
comp=Z,86nm,0.8s
K50A Casco 66.03 349 pP pP 11 54 11.7 -0.3
baz=166
319A Douglas 66.04 323 P P 11 53 47.9 +0.9
319A IAmb IAmb 11 53 49.9
comp=Z,57nm,1.0s

L46A Eue Claire 66.05 346 P P 11 53 45.5 -1.3
L46A IAmb IAmb 11 54 12.5
comp=Z,70nm,0.7s
L46A Eue Claire 66.05 346 pP pP 11 54 11.5 -0.5
baz=162
I63A Otisfield 66.07 359 pP pP 11 54 12.0 -0.1
baz=178
121A Cookes Peak, D 66.10 324 P P 11 53 48.7 +1.2
121A IAmb IAmb 11 53 50.6
comp=Z,128nm,1.6s
121A Cookes Peak, D 66.10 324 pP pP 11 54 14.2 +1.4
baz=140
J52A Paris 66.13 351 pP pP 11 54 12.9 +0.3
baz=168
NCB Newcomb 66.16 356 P P 11 53 48.5 +1.0
NCB IAmb IAmb 11 54 16.7
comp=Z,88nm,1.9s
K49A Clarkson 66.19 348 pP pP 11 54 12.5 -0.6
baz=165
I57A Carthage 66.25 355 pP pP 11 54 13.8 +0.5
baz=173
LBNH Lisbon 66.31 357 pP pP 11 54 14.3 +0.6
baz=177
K48A Perry 66.34 348 pP pP 11 54 13.9 -0.1
baz=164
K47A Vermontville 66.39 347 pP pP 11 54 13.7 -0.6
baz=164
KSU1 Kansas State U 66.45 337 pP pP 11 54 14.7 -0.2
baz=152
K46A Dorr 66.58 346 pP pP 11 54 14.5 -0.9
baz=163
I53A Kortright Cn E 66.58 351 pP pP 11 54 15.7 +0.2
baz=169
L44A Lake County Fo 66.59 345 P P 11 53 48.6 -1.5
L44A IAmb IAmb 11 54 16.3
comp=Z,74nm,1.0s
L44A Lake County Fo 66.59 345 pP pP 11 54 14.8 -0.7
baz=161
H61A Lyndonville 66.60 358 pP pP 11 54 16.5 +0.9
baz=177
H58A Gabriels 66.61 356 pP pP 11 54 16.6 +0.9
baz=174
H62A Milan 66.61 358 pP pP 11 54 16.8 +1.1
baz=178
H64A Troy 66.64 360 pP pP 11 54 16.4 +0.6
baz=179
H60A Morristown 66.66 357 pP pP 11 54 16.9 +0.9
baz=176
H63A New Sharon 66.67 359 pP pP 11 54 17.4 +1.4
baz=179
J49A Marlette 66.69 349 pP pP 11 54 15.6 -0.6
baz=166
H65A Eastbrook 66.70 0 pP pP 11 54 17.1 +1.0
baz=180
I55A Frankford 66.72 353 pP pP 11 54 16.6 +0.2
baz=171
H57A Richville 66.74 355 pP pP 11 54 17.3 +0.8
baz=173
J48A Bridge Port 66.75 348 P P 11 53 50.1 -1.1
J48A IAmb IAmb 11 54 17.6
comp=Z,78nm,0.8s
J48A Bridge Port 66.75 348 pP pP 11 54 16.4 -0.2
baz=165
I51A Listowel 66.77 350 pP pP 11 54 16.9 +0.2
baz=168
H66A Whiting 66.80 1 pP pP 11 54 17.6 +0.8
baz=181
H59A Cadyville 66.80 356 pP pP 11 54 17.7 +0.8
baz=175
LONY Lake Ozonia 66.83 355 P P 11 53 50.5 -1.1
LONY Lake Ozonia 66.83 355 pP pP 11 54 18.0 +0.9
baz=174
Y22D IRIS PASSCAL I 66.83 326 pP pP 11 54 19.0 +1.5
baz=142
L42A Oliver, Polo 66.88 343 P P 11 53 50.6 -1.4
L42A IAmb IAmb 11 54 18.2
comp=Z,34nm,0.7s
I52A Shelburne 66.90 351 pP pP 11 54 17.7 +0.2
baz=168
J47A Sunmer 66.90 347 pP pP 11 54 17.1 -0.5
baz=164
H56A Elgin 66.95 354 pP pP 11 54 18.3 +0.5
baz=172
FRNY Flat Rock 66.98 356 P P 11 53 53.3 +0.7
H55A Tweed 67.00 353 pP pP 11 54 18.8 +0.7
baz=172
G63A Kingsbury 67.12 359 pP pP 11 54 19.5 +0.5
baz=179
G60A Masonville 67.18 357 pP pP 11 54 19.8 +0.5
baz=176
J46A Howard City 67.18 347 pP pP 11 54 18.7 -0.6
baz=163
H53A Bobcaygeon 67.18 352 pP pP 11 54 19.5 +0.2
baz=170
K43A Burlington 67.19 344 P P 11 53 53.4 -0.6
I49A Point Hope 67.20 349 P P 11 53 53.6 -0.4
I49A IAmb IAmb 11 54 20.3
comp=Z,63nm,0.8s
I49A Point Hope 67.20 349 pP pP 11 54 19.2 -0.3
baz=166
G59A Clarenceville 67.20 357 pP pP 11 54 20.3 +0.9
baz=176
G65A Princeton 67.21 1 P P 11 53 55.0 +1.0
baz=181
G62A West of Eustis 67.24 359 pP pP 11 54 21.2 +1.6
baz=178
G64A Maxfield 67.25 360 pP pP 11 54 20.1 +0.3
baz=180
PKME Peaks-Kenny Pk 67.27 360 pP pP 11 54 20.6 +0.8
baz=179
ANMO Albuquerque 67.28 327 P P 11 53 56.3 +1.3
comp=Z,27nm,0.8s,baz=142,slow=8.3,SNR=127
ANMO pP pP 11 54 21.9 +1.5
comp=Z,5.5nm,0.7s,baz=140,slow=7.6,SNR=2.9
ANMO Albuquerque 67.28 327 P P 11 53 55.4 +0.5
ANMO IAmb IAmb 11 53 57.5
comp=Z,34nm,0.8s
ANMO Albuquerque 67.28 327 *d* iP P 11 53 56.1 +1.1
ANMO pmax pmax
comp=Z,32nm,0.9s
ANMO Albuquerque 67.28 327 pP pP 11 54 21.9 +1.5
baz=142
G58A Ormstown 67.33 356 pP pP 11 54 20.9 +0.6
baz=175
G61A St-Isidore-de- 67.33 358 pP pP 11 54 21.5 +1.4
baz=177
G57A Newington 67.35 355 pP pP 11 54 21.0 +0.6
baz=174
L40A Anamosa 67.36 342 P P 11 53 54.4 -0.6
CBKS Cedar Bluff 67.41 334 P P 11 53 56.1 +0.7
CBKS Cedar Bluff 67.41 334 P P 11 53 56.2 +0.7
CBKS pmax pmax
comp=Z,150nm,0.8s
CBKS Cedar Bluff 67.41 334 pP pP 11 54 21.7 +0.9
baz=149
H52A Wyevale 67.42 351 pP pP 11 54 20.9 +0.1
baz=169
SADO Sadowa 67.45 352 P P 11 53 54.9 -0.6
comp=Z,5.3nm,0.6s,baz=135,slow=2.9,SNR=5.9
SADO pP pP 11 54 21.3 +0.3
comp=Z,10nm,0.6s,baz=209,slow=1.6,SNR=4.7
SADO Sadowa 67.45 352 P P 11 53 54.6 -0.9
SADO IAmb IAmb 11 54 22.6
comp=Z,180nm,1.9s
I47A Gladwin 67.59 348 P P 11 53 55.6 -0.8
I47A IAmb IAmb 11 54 22.8
comp=Z,55nm,0.7s
I47A Gladwin 67.59 348 pP pP 11 54 21.3 -0.6
baz=164
TUC Tucson 67.59 322 P P 11 53 58.2 +1.3
TUC IAmb IAmb 11 53 59.7
comp=Z,78nm,1.4s
TUC Tucson 67.59 322 P P 11 53 58.2 +1.3
TUC pmax pmax
comp=Z,78nm,1.5s
TUC Tucson 67.59 322 pP pP 11 54 21.9 -0.2
baz=138
I48A Sherman Twp 67.60 348 pP pP 11 54 21.8 -0.2
baz=165
G55A Calabogie 67.65 354 pP pP 11 54 22.6 +0.3
baz=172
F63A Nahmakanta, Br 67.70 360 pP pP 11 54 21.8 -0.8
baz=180
I46A Reed City 67.70 347 pP pP 11 54 22.0 -0.7
baz=163
G53A Haliburton 67.73 352 pP pP 11 54 23.4 +0.6
baz=170

SCIA State Center 67.81 340 P P 11 53 58.3 +0.4
SCIA State Center 67.81 340 pP pP 11 54 23.8 +0.4
baz=156
F64A Sherman 67.86 0 P P 11 53 59.0 +0.9
F64A IAmb IAmb 11 54 00.0
comp=Z,58nm,1.1s
F64A Sherman 67.86 0 pP pP 11 54 24.1 +0.6
baz=180
QSPA South Pole Qui 67.87 180 P P 11 53 59.2 +1.0
JFWS Jewell Farm 67.88 343 P P 11 53 58.2 -0.1
JFWS Jewell Farm 67.88 343 P P 11 53 58.2 -0.1
JFWS pmax pmax
comp=Z,104nm,0.8s
JFWS Jewell Farm 67.88 343 pP pP 11 54 23.9 +0.1
baz=158
G54A Lake Saint Pet 67.94 353 pP pP 11 54 24.6 +0.4
baz=171
LMN Caledonia Moun 67.95 3 P P 11 53 59.1 +0.5
LMN IAmb IAmb 11 53 59.9
comp=Z,52nm,1.1s
I45A Fountain 67.96 346 pP pP 11 54 23.7 -0.6
baz=162
F61A St Evariste 68.01 358 pP pP 11 54 25.2 +0.9
baz=178
F58A St-Lin Laurent 68.02 356 pP pP 11 54 25.0 +0.4
baz=175
H48A Harrisville 68.02 349 pP pP 11 54 24.5 -0.2
baz=165
F60A Warwick 68.03 358 pP pP 11 54 25.0 +0.4
baz=177
T25A Trinidad 68.04 330 P P 11 54 01.1 +1.4
T25A Trinidad 68.04 330 pP pP 11 54 26.5 +1.4
baz=144
H47A Mio 68.09 348 pP pP 11 54 24.8 -0.4
baz=164
F55A Otter Lake 68.19 354 pP pP 11 54 26.1 +0.3
baz=172
H46A Fife Lake 68.23 347 pP pP 11 54 25.3 -0.7
baz=164
GLMI Grayling 68.39 348 pP pP 11 54 26.5 -0.5
baz=164
E60A Ste Agathe de 68.41 358 pP pP 11 54 27.4 +0.5
baz=177
E63A Oxbow 68.42 0 P P 11 54 01.9 +0.3
E63A IAmb IAmb 11 54 03.6
comp=Z,60nm,1.2s
E63A Oxbow 68.42 0 pP pP 11 54 27.6 +0.6
baz=180
E64A Bridgewater 68.42 1 pP pP 11 54 27.8 +0.8
baz=181
TRQ Mont Tremblant 68.43 356 P P 11 54 02.0 +0.3
I42A Draeger Farm, 68.45 344 P P 11 54 01.7 -0.1
I42A IAmb IAmb 11 54 28.7
comp=Z,76nm,0.7s
E61A Lac Etchemin 68.45 359 pP pP 11 54 28.7 +1.5
baz=178
LIC Lamto 68.46 73 *e*P P 11 54 02.2 -0.4
comp=Z,139nm,0.7s
F52A Sundridge 68.48 352 pP pP 11 54 27.7 +0.2
baz=169
ALGO Algonquin Park 68.48 353 pP pP 11 54 27.9 +0.3
baz=171
E58A La Victoria 68.50 357 pP pP 11 54 28.3 +0.6
baz=175
214A Organ Pipe Nat 68.50 321 P P 11 54 04.0 +1.5
214A IAmb IAmb 11 54 05.8
comp=Z,66nm,1.1s
214A Organ Pipe Nat 68.50 321 pP pP 11 54 29.4 +1.7
baz=136
G47A Hillman 68.58 349 pP pP 11 54 28.1 0.0
baz=165
E57A Chemin Saint G 68.59 356 pP pP 11 54 28.7 +0.4
baz=175
TIC Toumodi 68.65 73 *e*P P 11 54 03.6 -0.2
comp=Z,181nm,1.1s
PQI Presque Isle 68.67 1 P P 11 54 04.3 +1.2
PQI IAmb IAmb 11 54 05.0
comp=Z,53nm,1.2s
F51A Arnstein 68.69 352 pP pP 11 54 29.0 +0.2
baz=169
KIC Kosan Boka 68.77 73 *e*P P 11 54 04.3 -0.2
comp=Z,228nm,0.8s
E55A Montcerf-Lytto 68.78 355 pP pP 11 54 29.9 +0.5
baz=173
KSCO Kaye Shedlock' 68.78 332 P P 11 54 04.7 +0.5
KSCO IAmb IAmb 11 54 06.4
comp=Z,90nm,0.8s
KSCO Kaye Shedlock' 68.78 332 pP pP 11 54 30.9 +1.3
baz=146
E56A St. Veronique 68.79 355 pP pP 11 54 30.0 +0.5
baz=174
X18A Snowflake 68.79 324 P P 11 54 05.7 +1.2
G45A Suttons Bay 68.80 347 pP pP 11 54 29.2 -0.4
baz=163
DBIC Dimbokro 68.81 73 P P 11 54 04.5 -0.2
comp=Z,97nm,0.7s,baz=217,slow=6.6,SNR=184
DBIC pP pP 11 54 31.1 +0.9
comp=Z,20nm,0.6s,baz=226,slow=8.1,SNR=2.3
DBIC S S 12 02 58.4 -3.0
comp=Z,3.3nm,0.9s,baz=323,slow=19,SNR=11
DBIC Dimbokro 68.81 73 P P 11 54 03.9 -0.9
F49A Sandfield 68.84 350 pP pP 11 54 29.4 -0.4
baz=167
E53A Dumoine, Ponti 68.86 353 pP pP 11 54 30.2 +0.3
baz=171
E54A Lac Daplat, Po 68.86 354 pP pP 11 54 30.1 +0.2
baz=172
E52A Mattawa 68.88 353 pP pP 11 54 30.0 0.0
baz=170
I40A Norwalk 68.89 343 P P 11 54 04.0 -0.6
I40A IAmb IAmb 11 54 31.2
comp=Z,47nm,0.8s
G46A Petoskey 68.91 348 pP pP 11 54 29.9 -0.3
baz=164
D60A Saint Jean D'O 68.94 358 pP pP 11 54 31.3 +1.1
baz=178
F48A Evansville 69.00 350 pP pP 11 54 30.7 0.0
baz=166
BGNE Belgrade 69.04 337 P P 11 54 06.3 +0.8
BGNE Belgrade 69.04 337 pP pP 11 54 31.9 +0.7
baz=151
D63A Stockholm 69.04 0 pP pP 11 54 31.9 +1.0
baz=181
SDCO Great Sand Dun 69.04 329 P P 11 54 07.3 +1.3
SDCO IAmb IAmb 11 54 08.7
comp=Z,63nm,1.0s
SDCO Great Sand Dun 69.04 329 pP pP 11 54 32.8 +1.3
baz=144
D59A Saint-Raymond 69.06 358 pP pP 11 54 31.7 +0.7
baz=177
D62A Allapoint, All 69.08 360 P P 11 54 06.3 +0.6
D62A IAmb IAmb 11 54 48.5
comp=Z,68nm,0.9s
D62A Allapoint, All 69.08 360 pP pP 11 54 32.0 +0.9
baz=180
W18A Petrified Fore 69.12 325 P P 11 54 08.1 +1.7
W18A IAmb IAmb 11 54 09.3
comp=Z,67nm,1.2s
W18A Petrified Fore 69.12 325 pP pP 11 54 33.4 +1.5
baz=140
D57A Chemin Vers le 69.18 356 pP pP 11 54 32.7 +0.8
baz=175
D58A Chemin du LacG 69.20 357 pP pP 11 54 32.8 +0.7
baz=176
D61A St Aubert, Com 69.22 359 pP pP 11 54 33.1 +1.1
baz=178
E51A G1948 Merrick 69.22 352 pP pP 11 54 32.7 +0.5
baz=169
D56A ZEC Mazanza, M 69.26 356 pP pP 11 54 32.9 +0.5
baz=174
D55A Sainte-Anne-du 69.29 355 pP pP 11 54 32.9 +0.2
baz=173
BATG Bathurst New B 69.32 2 P P 11 54 07.5 +0.3
F45A CMU Biological 69.39 348 pP pP 11 54 33.1 -0.1
baz=163
LATQ La Tuque 69.48 357 P P 11 54 07.9 -0.2
LATQ La Tuque 69.48 357 pP pP 11 54 34.3 +0.7
baz=176
X16A Lo Mia Camp, P 69.52 323 P P 11 54 08.5 -0.4
D54A Lac Fusel, La 69.52 354 pP pP 11 54 34.1 0.0
baz=172
D53A Lac Vacive, Po 69.56 353 P P 11 54 08.6 0.0
D53A Lac Vacive, Po 69.56 353 pP pP 11 54 34.7 +0.5
baz=171
E48A Lockeyer 69.56 350 pP pP 11 54 34.5 +0.2
baz=167
113A Mohawk Valley, 69.65 321 P P 11 54 08.9 -0.6

S22A 4UR Ranch, Cre 69.68 329 P P 11 54 11.3 +1.4
S22A 4UR Ranch, Cre 69.68 329 pP pP 11 54 36.8 +1.4
baz=142
E47A Iron Bridge 69.72 349 pP pP 11 54 35.5 +0.2
baz=166
D51A Lot 18 Range I 69.76 352 pP pP 11 54 35.7 +0.2
baz=170
E46A Sault Ste Mari 69.81 349 P P 11 54 10.0 -0.2
Q24A Divide 69.86 330 P P 11 54 12.5 +1.4
Q24A IAmb IAmb 11 54 13.6
comp=Z,86nm,0.9s
Q24A Divide 69.86 330 pP pP 11 54 38.0 +1.4
baz=144
D50A G1974 Best Tow 69.89 352 pP pP 11 54 36.3 0.0
baz=169
Y14A Wickenburg 70.05 322 P P 11 54 13.4 +1.4
G40A Rib Lake 70.06 344 P P 11 54 11.6 -0.2
G40A IAmb IAmb 11 54 39.0
comp=Z,124nm,1.8s
MVCO Mesa Verde 70.08 327 P P 11 54 13.5 +1.1
MVCO IAmb IAmb 11 54 15.0
comp=Z,53nm,0.9s
MVCO Mesa Verde 70.08 327 pP pP 11 54 39.1 +1.2
baz=141
OGNE Ogallala 70.15 334 P P 11 54 13.2 +0.6
OGNE IAmb IAmb 11 54 14.6
comp=Z,64nm,0.8s
OGNE Ogallala 70.15 334 pP pP 11 54 39.1 +0.9
baz=147
D48A Paudash Townsh 70.18 351 pP pP 11 54 38.1 0.0
baz=167
D49A Beulah Townshi 70.20 351 pP pP 11 54 38.6 +0.3
baz=168
D47A Chapleau 70.27 350 pP pP 11 54 38.4 -0.3
baz=166
D46A Sault St. Mari 70.27 349 pP pP 11 54 38.3 -0.4
baz=165
WUAZ Wupatki 70.30 324 P P 11 54 14.7 +1.0
WUAZ IAmb IAmb 11 54 16.9
comp=Z,65nm,1.0s
WUAZ Wupatki 70.30 324 pP pP 11 54 40.5 +1.4
baz=138
E43A Lone Tree Farm 70.36 347 P P 11 54 12.3 -1.2
E44A Grand Marais A 70.36 348 pP pP 11 54 39.5 +0.3
baz=163
GLA Glamis 70.48 320 pP pP 11 54 42.0 +1.8
baz=135
ECSD EROS Data Cent 70.55 339 P P 11 54 14.7 -0.1
ECSD IAmb IAmb 11 54 42.0
comp=Z,103nm,1.4s
ECSD EROS Data Cent 70.55 339 pP pP 11 54 40.5 0.0
baz=153
VLDQ Val d'Or 70.55 354 P P 11 54 14.8 +0.2
COWI Conover 70.58 345 P P 11 54 15.1 +0.1
COWI IAmb IAmb 11 54 42.1
comp=Z,111nm,1.6s
SPMN Marine on St. 70.72 342 P P 11 54 15.3 -0.4
SPMN IAmb IAmb 11 54 42.5
comp=Z,41nm,0.8s
SPMN Marine on St. 70.72 342 pP pP 11 54 41.3 -0.1
baz=156
ISCO Idaho Springs 70.75 331 P P 11 54 17.2 +0.7
ISCO Idaho Springs 70.75 331 P P 11 54 17.2 +0.7
ISCO pmax pmax
comp=Z,33nm,0.9s
ISCO Idaho Springs 70.75 331 pP pP 11 54 43.8 +1.8
baz=144
Y12C Blythe 70.79 321 P P 11 54 18.1 +1.6
Y12C IAmb IAmb 11 54 19.7
comp=Z,65nm,1.1s
Y12C Blythe 70.79 321 pP pP 11 54 43.9 +1.9
baz=135
SMCO Snowmass 70.88 329 P P 11 54 18.0 +0.6
SMCO IAmb IAmb 11 54 20.2
comp=Z,41nm,0.9s
PDMCI Parker Dam,Lak 70.96 321 pP pP 11 54 44.9 +1.9
baz=136
IKP In-Ko-Pah, Jac 70.97 319 pP pP 11 54 45.5 +2.4
baz=134
SWSC Sam W. Stewart 70.98 319 pP pP 11 54 45.5 +2.5
baz=134
BC3 Big Chuckawall 71.27 320 pP pP 11 54 47.2 +2.1
baz=135
MONP2 Monument Peak 71.33 319 pP pP 11 54 47.3 +1.9
baz=134
BAR Barrett 71.33 319 P P 11 54 18.3 -1.5
D41A Chassel 71.35 346 P P 11 54 19.8 +0.3
D41A IAmb IAmb 11 54 47.0
comp=Z,75nm,0.8s
W13A Hualapai Mount 71.39 322 P P 11 54 21.1 +0.8
LSQQ Lebel-sur-Quev 71.44 354 pP pP 11 54 46.7 +0.9
baz=172
IRM Iron Mountain 71.44 321 pP pP 11 54 48.3 +2.2
baz=135
U15A North Rim 71.47 324 P P 11 54 21.2 +0.3
U15A IAmb IAmb 11 54 24.3
comp=Z,50nm,1.1s
E38A The Farm, Brul 71.65 344 P P 11 54 20.6 -0.8
E38A IAmb IAmb 11 54 48.4
comp=Z,79nm,1.4s
109C Camp Elliot, M 71.74 319 P P 11 54 20.8 -1.5
109C Camp Elliot, M 71.74 319 pP pP 11 54 23.8 +1.6
baz=133
N23A Red Feather La 71.78 331 P P 11 54 22.7 +0.1
N23A IAmb IAmb 11 54 25.1
comp=Z,50nm,0.8s
N23A Red Feather La 71.78 331 pP pP 11 54 50.0 +1.8
baz=144
BELC Belle Mtn. Jos 71.84 320 pP pP 11 54 50.3 +1.7
baz=134
XPFO Pion Flat 71.84 319 P P 11 54 24.2 +1.2
PFO Pinyon Flats O 71.84 319 P P 11 54 24.6 +1.6
comp=Z,16nm,1.0s,baz=128,slow=4.2,SNR=23
PFO pP pP 11 54 49.4 +0.8
comp=Z,8.5nm,0.9s,baz=172,slow=5.0,SNR=4.5
PFO Pinyon Flats O 71.84 319 P P 11 54 22.6 -0.4
PFO Pinyon Flats O 71.84 319 *d* iP P 11 54 23.9 +0.9
PFO pmax pmax
comp=Z,35nm,1.0s
PFO Pinyon Flats O 71.84 319 pP pP 11 54 50.5 +1.9
baz=134
DRLN Deer Lake 71.96 8 P P 11 54 22.1 -1.1
SUSD Miller 71.97 338 P P 11 54 23.1 -0.3
SUSD IAmb IAmb 11 54 50.6
comp=Z,86nm,1.1s
SUSD Miller 71.97 338 pP pP 11 54 49.4 +0.3
baz=151
GMRC Granite Mounta 72.19 321 pP pP 11 54 52.4 +1.7
baz=135
KNB Kanab 72.19 324 P P 11 54 27.2 +2.1
KNB Kanab 72.19 324 P P 11 54 27.2 +2.1
KNB pmax pmax
comp=Z,108nm,1.1s
MATQ Matagami 72.20 354 pP pP 11 54 50.4 +0.1
baz=171
PKCU Pink Cliffs 72.23 325 P P 11 54 25.6 +0.2
O20A White River Ci 72.23 329 P P 11 54 26.4 +1.1
O20A IAmb IAmb 11 54 28.0
comp=Z,85nm,0.9s
O20A White River Ci 72.23 329 pP pP 11 54 52.9 +2.0
baz=142
MURC Murrieta 72.28 319 pP pP 11 54 53.4 +2.3
baz=133
LCMT Little Creek M 72.42 324 P P 11 54 28.0 +1.6
SRU San Rafael Swe 72.56 327 P P 11 54 28.3 +1.1
SRU San Rafael Swe 72.56 327 P P 11 54 28.3 +1.1
SRU pmax pmax
comp=Z,55nm,0.8s
BBRC Big Bear Solar 72.57 320 pP pP 11 54 55.3 +2.2
baz=134
MTPU Mount Pierson 72.61 325 P P 11 54 29.3 +1.5
HEC Hector,Ludlow 72.61 320 pP pP 11 54 55.8 +2.7
baz=134
SCI2 San Clemente I 72.69 318 pP pP 11 54 55.7 +2.4
baz=132
Q16A Castle Valley 72.74 327 P P 11 54 29.5 +1.2
SZCU Shurtz Canyon 72.76 324 P P 11 54 28.8 +0.3
TUQ Turquoise Moun 72.80 321 pP pP 11 54 56.3 +2.1
baz=135
CCUT Cedar City 72.88 324 P P 11 54 30.4 +1.2
EYMN Ely 72.88 344 P P 11 54 28.0 -0.7
EYMN Ely 72.88 344 pP pP 11 54 54.6 +0.2
baz=158
CIS Catalina Islan 72.89 318 pP pP 11 54 56.6 +1.8
baz=132
P17A Butcher Ranch, 72.94 327 P P 11 54 30.0 +0.6

MSU Marysvale 72.96 326 P P 11 54 31.6 +2.0
MSU Marysvale 72.96 326 P P 11 54 31.6 +2.0
RWWY Rawlins 72.99 331 P P 11 54 30.7 +0.9
RWWY IAmb IAmb 11 54 32.3
comp=Z,57nm,0.9s
BFSC Mount Baldy Ra 73.00 319 pP pP 11 54 57.7 +2.2
baz=133
FMP Fort Macarthur 73.03 318 pP pP 11 54 57.6 +2.1
baz=133
TMUT Trail Mountain 73.05 327 P P 11 54 30.9 +0.7
SHPR Sheep Range 73.12 322 P P 11 54 31.8 +1.3
RDMU Red Mountain 73.21 329 P P 11 54 32.0 +0.9
GSC Goldstone, Bar 73.22 321 P P 11 54 32.1 +1.1
GSC Goldstone, Bar 73.22 321 P P 11 54 32.2 +1.1
GSC pmax pmax
comp=Z,56nm,1.4s
GSC Goldstone, Bar 73.22 321 pP pP 11 54 59.0 +2.3
baz=134
MWC Mount Wilson 73.23 319 P P 11 54 31.0 -0.3
MWC Mount Wilson 73.23 319 P P 11 54 31.0 -0.3
MWC pmax pmax
comp=Z,40nm,1.1s
PASC Pasadena Art C 73.27 319 P P 11 54 32.9 +1.5
PASC IAmb IAmb 11 54 34.4
comp=Z,57nm,1.2s
SHOC Shoshone, Teco 73.33 321 pP pP 11 54 59.1 +1.8
baz=135
TBI Tubuai 73.39 251 eP P 11 54 34.5 +2.2
comp=Z,648nm,1.6s
DECC Green Verdugo 73.42 319 pP pP 11 54 59.6 +1.7
baz=133
K22A Casper 73.45 332 P P 11 54 33.5 +1.1
K22A IAmb IAmb 11 55 01.0
comp=Z,191nm,1.8s
K22A Casper 73.45 332 pP pP 11 54 59.9 +1.9
baz=144
RSSD Black Hills 73.61 334 P P 11 54 33.6 +0.3
RSSD IAmb IAmb 11 54 35.6
comp=Z,46nm,0.8s
RSSD Black Hills 73.61 334 P P 11 54 33.6 +0.3
RSSD Black Hills 73.61 334 pP pP 11 55 00.4 +1.6
baz=146
EDW2 Edwards Air Fo 73.64 320 pP pP 11 55 00.9 +1.7
baz=133
D32A Dogwood Acres, 73.70 340 P P 11 54 33.0 -0.5
D32A IAmb IAmb 11 55 00.8
comp=Z,78nm,1.0s
BLG Laguna Peak, P 73.77 318 pP pP 11 55 01.6 +1.7
baz=132
MEH Mehetia 73.84 257 eP P 11 54 37.4 +2.3
comp=Z,44nm,1.2s
PSUT Pine Spring 73.86 325 P P 11 54 36.5 +1.6
LRMC Laurel Mtn Rad 73.86 320 pP pP 11 55 02.5 +1.9
baz=134
OSI Osito Audit: C 73.90 319 P P 11 54 36.7 +1.6
OSI Osito Audit: C 73.90 319 P P 11 54 37.1 +2.1
baz=132
NLU North Lily Min 73.98 327 P P 11 54 36.2 +0.6
SCZ2 Santa Cruz Isl 74.05 318 P P 11 54 37.6 +1.7
baz=132
TPNV Topopah Spring 74.05 322 P P 11 54 37.8 +1.8
TPNV Topopah Spring 74.05 322 P P 11 54 37.8 +1.8
TPNV pmax pmax
comp=Z,57nm,1.4s
TPNV Topopah Spring 74.05 322 pP pP 11 55 03.9 +2.2
baz=135
FURC Furnace Creek, 74.06 321 pP pP 11 55 03.9 +2.4
baz=134
MPMC Manual Prospec 74.14 321 pP pP 11 55 04.2 +1.9
baz=134
JLU Jordanelle 74.15 328 P P 11 54 37.5 +0.9
VAH Vaihoa 74.29 260 eP P 11 54 39.9 +2.2
comp=Z,109nm,1.1s
ARVC Arvin 74.31 319 pP pP 11 55 04.9 +1.8
baz=133
CTU Camp Tracy 74.37 327 P P 11 54 38.9 +1.1
SBC Santa Barbara 74.39 318 pP pP 11 55 04.5 +1.0
baz=132
AGMN Agassiz Nation 74.39 342 P P 11 54 37.1 -0.4
AGMN Agassiz Nation 74.39 342 pP pP 11 55 03.7 +0.3
baz=154
ISA Isabella, Lake 74.46 320 P P 11 54 40.2 +1.9
ISA Isabella, Lake 74.46 320 P P 11 54 40.2 +1.9
ISA pmax pmax
comp=Z,41nm,1.1s
ISA Isabella, Lake 74.46 320 pP pP 11 55 05.5 +1.5
baz=133
TCUT Toone Canyon 74.52 328 P P 11 54 39.4 +0.6
DUG Dugway, Tooele 74.54 326 P P 11 54 39.5 +0.8
DUG Dugway, Tooele 74.54 326 P P 11 54 39.5 +0.8
DUG pmax pmax
comp=Z,34nm,1.1s
DUG Dugway, Tooele 74.54 326 pP pP 11 55 06.1 +1.7
baz=138
R11A Troy Canyon, C 74.67 323 P P 11 54 40.6 +1.0
R11A Troy Canyon, C 74.67 323 P P 11 54 41.5 +2.0
baz=136
GRAC Grapevine Rang 74.72 321 P P 11 54 41.8 +2.1
baz=134
PKM Mcpherson Peak 74.75 318 P P 11 54 42.0 +1.9
baz=132
CWC Cottonwood Cre 74.75 321 pP pP 11 55 07.2 +1.4
baz=133
PD31 Pinedale Array 74.91 330 P P 11 54 41.4 +0.4
PDAR Pinedale Array 74.91 330 P P 11 54 41.8 +0.8
comp=Z,4.5nm,0.6s,baz=140,slow=7.4,SNR=51
PDAR pP pP 11 55 07.3 +0.8
comp=Z,7.2nm,0.6s,baz=118,slow=11,SNR=8.4
PDAR Pinedale Array 74.91 330 P P 11 54 41.0 0.0
VES Vestal, Richgr 74.94 320 P P 11 54 42.7 +1.7
baz=132
HWUT Hardware Ranch 74.97 328 P P 11 54 42.4 +1.1
HWUT IAmb IAmb 11 55 12.0
comp=Z,36nm,0.7s
SMMC Simmler 75.14 319 P P 11 54 44.4 +2.2
baz=132
MDND Maddock 75.16 339 P P 11 54 42.5 +0.5
MDND Maddock 75.16 339 pP pP 11 55 09.0 +1.0
baz=151
SPUT South Promonto 75.18 327 P P 11 54 43.5 +1.0
BGU Big Grassy Mou 75.19 327 P P 11 54 43.5 +1.0
TIN Tinemaha, Big 75.26 321 P P 11 54 45.5 +2.5
baz=133
PAE Paea 75.27 257 eP P 11 54 45.6 +2.3
comp=Z,19nm,1.1s
AHID Auburn Hatcher 75.63 329 P P 11 54 45.5 +0.5
AHID IAmb IAmb 11 54 47.2
comp=Z,78nm,0.9s
SYO Syowa Base 75.67 159⇑eP P 11 54 44.0 -0.7
SYO Syowa Base 75.67 159⇓iPcP PcP 11 54 58.0 +1.0
HVU Hansel Valley 75.70 328 P P 11 54 46.3 +0.9
HVU Hansel Valley 75.70 328 P P 11 54 46.3 +0.9
HVU pmax pmax
comp=Z,37nm,1.0s
REDW Red Top Meadow 75.97 330 P P 11 54 46.6 -0.4
REDW IAmb IAmb 11 54 49.5
comp=Z,39nm,0.8s
SNOW Snow King Moun 76.00 330 P P 11 54 48.3 +1.1
SNOW IAmb IAmb 11 54 49.7
comp=Z,48nm,0.8s
MLAC Mammoth, Mammo 76.01 321 P P 11 54 49.5 +2.1
baz=133
VNDA Vanda 76.07 190 P P 11 54 48.6 +1.8
comp=Z,26nm,1.0s,baz=134,slow=3.7,SNR=17
VNDA Vanda 76.07 190 P P 11 54 47.3 +0.5
OMMB Old Mammoth Mi 76.09 321 P P 11 54 49.0 +1.1
ULM Lac du Bonnet 76.15 342 P P 11 54 47.5 -0.1
comp=Z,13nm,0.6s,baz=155,slow=5.6,SNR=39
ULM Lac du Bonnet 76.15 342 P P 11 54 47.2 -0.3
ULM IAmb IAmb 11 55 15.8
comp=Z,169nm,1.6s
ULM Lac du Bonnet 76.15 342 iP P 11 54 46.9 -0.6
NV11 Mina Array Sit 76.16 322 P P 11 54 49.2 +1.1
ELK Elko 76.20 325 P P 11 54 49.8 +1.4
comp=Z,12nm,0.8s,baz=135,slow=3.7,SNR=38
ELK pP pP 11 55 15.2 +1.1
comp=Z,6.4nm,0.9s,baz=182,slow=5.6,SNR=3.8
ELK Elko 76.20 325 P P 11 54 48.7 +0.3
MOOW Moose Ponds 76.22 330 P P 11 54 48.4 +0.1
MOOW IAmb IAmb 11 55 17.5
comp=Z,169nm,2.0s
PMPB Monarch Peak 76.23 319 P P 11 54 47.7 -0.7
PMPB IAmb IAmb 11 54 51.6
comp=Z,49nm,1.1s
NVAR Mina Array Bea 76.25 322 P P 11 54 50.2 +1.6
comp=Z,8.1nm,0.9s,baz=152,slow=6.9,SNR=14
NVAR pP pP 11 55 15.1 +0.7
comp=Z,6.1nm,0.9s,baz=150,slow=6.2,SNR=5.0
NVAR Mina Array Bea 76.25 322 P P 11 54 49.8 +1.1
FXWY Fox Creek 76.26 330 P P 11 54 49.6 +1.0
FLWY Flagg Ranch 76.45 330 P P 11 54 51.3 +1.6
FLWY IAmb IAmb 11 54 52.7
comp=Z,87nm,0.9s
RYN Ryan 76.51 322 P P 11 54 51.0 +0.9
KVN Kaiserville 76.56 323 P P 11 54 51.4 +1.0
KVN Kaiserville 76.56 323 P P 11 54 51.4 +1.0
KVN pmax pmax
comp=Z,27nm,1.0s
LAO LASA Array 76.60 334 P P 11 54 50.6 +0.4
LAO IAmb IAmb 11 55 18.8
comp=Z,115nm,1.2s
LAO LASA Array 76.60 334 pP pP 11 55 17.5 +1.3
baz=145
RLMT Red Lodge 76.62 332 P P 11 54 50.9 +0.2
RLMT IAmb IAmb 11 55 20.5
comp=Z,228nm,1.8s
RLMT Red Lodge 76.62 332 pP pP 11 55 18.3 +1.7
baz=142
H17A Grant Village 76.64 331 P P 11 54 52.0 +1.3
H17A IAmb IAmb 11 55 23.3
comp=Z,114nm,1.9s
H17A Grant Village 76.64 331 pP pP 11 55 19.2 +2.5
baz=141
YPP Pitchstone Pla 76.65 330 P P 11 54 52.2 +1.3
LKWY Lake 76.69 331 P P 11 54 53.1 +2.1
LKWY IAmb IAmb 11 55 22.2
comp=Z,243nm,1.9s
LKWY Lake 76.69 331 P P 11 54 53.2 +2.1
LKWY pmax pmax
comp=Z,243nm,1.9s
YUF Upper Falls 76.86 331 P P 11 54 54.2 +2.2
YNE Yellowstone No 76.86 331 P P 11 54 53.4 +1.4
SCHQ Schefferville 76.86 1 P P 11 54 51.6 +0.2
comp=Z,7.0nm,0.9s,baz=169,slow=4.9,SNR=13
SCHQ pP pP 11 55 18.1 +0.7
comp=Z,8.6nm,0.7s,baz=206,slow=7.1,SNR=3.2
SCHQ Schefferville 76.86 1 P P 11 54 51.6 +0.2
YNR Norris Junctio 76.93 331 P P 11 54 53.4 +1.0
WAKR Walker 76.95 321 P P 11 54 54.1 +1.5
YMR Madison River 77.03 331 P P 11 54 54.6 +1.7
YHH Holmes Hill 77.07 331 P P 11 54 54.7 +1.5
YERR Yerington 77.16 322 P P 11 54 54.6 +0.9
CMB Columbia Colle 77.19 321 P P 11 54 54.4 +0.6
CMB Columbia Colle 77.19 321 P P 11 54 54.4 +0.6
CMB pmax pmax
comp=Z,17nm,1.4s
YHB Horse Butte 77.19 330 P P 11 54 55.0 +1.2
YHL Hebgen Lake 77.27 331 P P 11 54 56.1 +1.8
DGMT Dagmar 77.30 337 P P 11 54 55.6 +1.6
DGMT IAmb IAmb 11 55 22.9
comp=Z,143nm,1.1s
GCMT Greycliff 77.32 332 P P 11 54 55.7 +1.3
QLMT Earthquake Lak 77.36 330 P P 11 54 54.2 -0.6
PNTR Pine Nut 77.44 322 P P 11 54 54.2 -1.1
TOA0 Torodi Ar. Sit 77.47 70 P P 11 54 55.1 -0.7
TOA0 IAmb IAmb 11 54 56.6
comp=Z,162nm,1.1s
TORD Torodi Ar. Bea 77.47 70 P P 11 54 55.4 -0.4
comp=Z,73nm,0.5s,baz=254,slow=5.0,SNR=291
TORD pP pP 11 55 21.9 +0.3
comp=Z,41nm,0.6s,baz=251,slow=5.1,SNR=3.8
TORD S S 12 04 35.7 -3.7
comp=Z,7.3nm,1.0s,baz=244,slow=9.0,SNR=15
TORD Torodi Ar. Bea 77.47 70 P P 11 54 54.7 -1.1
VCNR Virginia City 77.61 322 P P 11 54 56.1 -0.1
PAHR Pah Rah Range 77.73 322 P P 11 54 58.4 +1.5
PAHR IAmb IAmb 11 54 59.9
comp=Z,58nm,0.9s
SUR Sutherland 78.02 120 P P 11 55 00.2 +1.4
comp=Z,26nm,0.8s,baz=237,slow=7.9,SNR=21
MCMT McKenzie Canyo 78.02 330 P P 11 55 00.3 +1.8
AFDM Forest Hills D 78.14 321 P P 11 54 58.4 -0.6
TTIG Tnine Tigouga, 78.18 50 P P 11 55 01.2 +1.7
SNR=9.7
DLMT Dillon 78.30 330 P P 11 55 00.5 +0.6
MFID Camas Ranch 78.43 327 P P 11 54 59.1 -1.5
MFID IAmb IAmb 11 55 03.6
comp=Z,64nm,1.4s
LRM Limekiln Ridge 78.58 330 P P 11 55 03.3 +1.7
ORV Oroville 78.84 321 P P 11 55 03.8 +1.0
ORV IAmb IAmb 11 55 05.7
comp=Z,73nm,1.2s
ORV Oroville 78.84 321 P P 11 55 03.8 +1.0
ORV pmax pmax
comp=Z,73nm,1.3s
EGMT Eagleton 79.11 333 P P 11 55 04.2 +0.1
EGMT IAmb IAmb 11 55 32.5
comp=Z,61nm,1.1s
EGMT Eagleton 79.11 333 pP pP 11 55 31.1 +0.8
baz=142
WVOR Wild Horse Val 79.19 325 P P 11 55 05.0 +0.3
WVOR Wild Horse Val 79.19 325 P P 11 55 05.1 +0.3
WVOR pmax pmax
comp=Z,15nm,1.2s
O03E Paynes Creek 79.50 322 pP pP 11 55 33.8 +1.4
baz=131
OUZM OUZ 79.58 50 P P 11 55 08.4 +1.2
SNR=14
TSUM Tsumeb 79.64 107 iP P 11 55 06.9 -0.9
TSUM Tsumeb 79.64 107 P P 11 55 08.5 +0.6
comp=Z,26nm,0.8s,baz=234,slow=5.7,SNR=66
TSUM pP pP 11 55 33.2 -0.7
comp=Z,15nm,0.9s,baz=242,slow=6.2,SNR=2.9
TSUM sP sP 11 55 45.3 +0.7
comp=Z,17nm,0.7s,baz=263,slow=3.7,SNR=2.5
TSUM Tsumeb 79.64 107 iP P 11 55 06.9 -0.9
TSUM Tsumeb 79.64 107 P P 11 55 07.6 -0.3
TSUM IAmb IAmb 11 55 16.6
comp=Z,45nm,0.9s
MOD Modoc Plateau 79.73 324 P P 11 55 08.4 +0.6
J08A Circle Bar Ran 79.75 326 P P 11 55 09.0 +1.2
J08A IAmb IAmb 11 55 10.6
comp=Z,88nm,1.6s
ZGR Zagora 79.96 52 P P 11 55 10.0 +0.8
SNR=15
O02D Mt. Diablo Mer 80.00 321 P P 11 55 10.3 +1.1
baz=130
MSO Missoula 80.02 330 P P 11 55 08.8 -0.4
MSO Missoula 80.02 330 pP pP 11 55 37.0 +1.6
baz=138
WDC Whiskeytown Da 80.12 321 P P 11 55 08.8 -0.9
WDC Whiskeytown Da 80.12 321 P P 11 55 08.8 -0.9
WDC pmax pmax
comp=Z,21nm,0.8s
KCPM Cahto Peak 80.15 320 P P 11 55 08.3 -1.8
BMO Blue Mountains 80.20 327 P P 11 55 10.0 -0.2
BMO Blue Mountains 80.20 327 P P 11 55 10.0 -0.2
BMO pmax pmax
comp=Z,45nm,1.0s
TISM Timmit 80.25 50 P P 11 55 13.0 +2.4
SNR=7.5
TZRR Tazzarine 80.36 51 P P 11 55 13.0 +1.6
SNR=13
N02D Trinity Center 80.47 322 P P 11 55 12.5 +0.8
baz=131
M04C Macdoel 80.51 323 P P 11 55 13.3 +1.3
baz=131
KMRM Mail Ridge 80.57 321 P P 11 55 10.6 -1.6
KMRM IAmb IAmb 11 55 15.2
comp=Z,87nm,1.3s
I07A Izee 80.79 326 P P 11 55 15.2 +1.8
M02C Callahan 80.83 322 P P 11 55 14.4 +0.8
baz=131
JTMT Jette 80.86 331 P P 11 55 15.1 +1.4
F10A Beach Ranch, E 80.96 328 P P 11 55 15.6 +1.4
YBH Yreka Blue Hor 80.97 322 P P 11 55 14.7 +0.4
YBH Yreka Blue Hor 80.97 322 P P 11 55 14.7 +0.4
YBH pmax pmax
comp=Z,10.0nm,0.8s
KHMM Horse Mountain 81.00 321 P P 11 55 16.6 +2.0
KHMM IAmb IAmb 11 57 54.7
comp=Z,96nm,1.6s
K04D Chiloquin, OR 81.02 323 P P 11 55 16.1 +1.5
baz=132
L04D Klamath Falls 81.05 323 P P 11 55 16.2 +1.3
baz=131
J05D Fort Rock, OR 81.17 324 P P 11 55 16.9 +1.5
baz=132
G08A Pilot Rock 81.34 327 P P 11 55 17.9 +1.7
PINE Pine Mountain 81.35 325 P P 11 55 18.4 +2.0
PINE IAmb IAmb 11 55 19.3
comp=Z,75nm,0.9s
KRMB Red Mountain 81.52 321 P P 11 55 18.8 +1.6
KRMB IAmb IAmb 11 57 36.3
comp=Z,263nm,2.0s
J04D Umpqua Nationa 81.62 324 P P 11 55 19.2 +1.4
baz=131
HUMO Hull Mountain 81.67 323 P P 11 55 18.4 +0.5
WALA Waterton Lakes 81.67 332 P P 11 55 19.4 +1.4
ARF Arif 81.69 51 P P 11 55 20.0 +1.6
SNR=5.9
L02E Cave Junction 81.75 322 P P 11 55 20.0 +1.7
baz=130
E09A Wood Farm, Sta 81.79 328 P P 11 55 19.5 +1.1
FFC Flin Flon 81.86 341 P P 11 55 19.1 +0.5
FFC Flin Flon 81.86 341 P P 11 55 19.1 +0.5
FFC pmax pmax
comp=Z,58nm,1.6s
I05D Terrebonne, OR 81.93 325 P P 11 55 21.4 +2.0
baz=132
MORF Marmelete 81.93 44 eP P 11 55 20.1 +0.6
MORF AMb AMB 11 55 22.7
comp=Z,92nm,1.0s
MORF Marmelete 81.93 44 eP P 11 55 21.0 +1.5
comp=Z,93nm,1.3s
MORF Marmelete 81.93 44 eP P 11 55 20.1 +0.6
PTEO Sao Teotonio 82.03 44 eP P 11 55 22.3 +2.4
comp=Z,156nm,1.2s
K02D Willamette Mer 82.13 322 P P 11 55 22.2 +1.8
baz=130
I04A Tendick Farm, 82.15 324 P P 11 55 21.4 +1.0
baz=131
MDT Midelt 82.15 50 P P 11 55 21.1 +0.3
comp=Z,31nm,0.9s,baz=241,slow=4.4,SNR=39
MDT Midelt 82.15 50 P P 11 55 22.1 +1.4
SNR=25
F07A Phinny Hill Vi 82.25 327 P P 11 55 22.9 +2.0
F07A IAmb IAmb 11 55 24.0
comp=Z,105nm,1.8s
PBDV Barranco-do-Ve 82.36 45 eP P 11 55 23.3 +1.6
comp=Z,77nm,1.4s
HAWA Hanford 82.39 327 P P 11 55 23.1 +1.5
PNCL Nicolau / Gran 82.48 44 eP P 11 55 23.6 +1.4
comp=Z,51nm,1.5s
PCVE Castro Verde 82.52 44 eP P 11 55 23.7 +1.3
G05D Wamic, OR 82.53 326 P P 11 55 23.8 +1.4
baz=132
NEW Newport 82.54 330 P P 11 55 23.0 +0.6
NEW Newport 82.54 330 P P 11 55 23.0 +0.6
NEW pmax pmax
comp=Z,30nm,1.4s
NEW Newport 82.54 330 P P 11 55 23.2 +0.8
baz=136
D08A Wollman Farm, 82.55 328 P P 11 55 24.0 +1.6
J01E Myrtle Point 82.58 323 P P 11 55 24.1 +1.5
baz=130
PVAQ Vaqueiros 82.59 45 eP P 11 55 24.3 +1.5
comp=Z,62nm,1.7s
I03D Drain, OR 82.60 323 P P 11 55 24.1 +1.4
baz=130
E07A Sunnyside 82.67 327 P P 11 55 25.3 +2.2
E07A IAmb IAmb 11 56 29.5
comp=Z,100nm,2.0s
C09A Chrisman Ranch 82.76 329 P P 11 55 24.8 +1.3
C09A IAmb IAmb 11 55 25.7
comp=Z,89nm,0.7s
PBEJ Beja 82.86 44 eP P 11 55 25.6 +1.4
comp=Z,43nm,1.0s
BOSA Boshof 82.91 118 iP P 11 55 22.5 -2.6
BOSA Boshof 82.91 118 P P 11 55 25.0 0.0
comp=Z,25nm,0.8s,baz=242,slow=4.2,SNR=35
BOSA pP pP 11 55 50.9 -0.1
comp=Z,9.5nm,0.7s,baz=223,slow=7.3,SNR=3.0
BOSA sP sP 11 56 02.3 +0.6
comp=Z,12nm,0.7s,baz=258,slow=3.6,SNR=3.0
BOSA Boshof 82.91 118 iP P 11 55 22.5 -2.6
BOSA Boshof 82.91 118 P P 11 55 24.6 -0.4
F05D White Salmon 83.03 326 P P 11 55 26.0 +1.1
baz=132
RAR Rarotonga 83.10 250 P P 11 55 27.3 +1.3
comp=Z,18nm,0.8s,baz=148,slow=9.5,SNR=6.2
RAR Rarotonga 83.10 250 P P 11 55 25.3 -0.6
I02D Swisshome 83.14 323 P P 11 55 27.3 +1.8
baz=130
PMTG Montargil 83.23 43 eP P 11 55 27.4 +1.3
comp=Z,83nm,1.7s
PTOM Tomar 83.44 42 eP P 11 55 28.1 +0.9
comp=Z,126nm,1.6s
FCC Fort Churchill 83.47 347 P P 11 55 25.9 -0.9
FCC Fort Churchill 83.47 347 P P 11 55 25.9 -0.9
FCC pmax pmax
comp=Z,19nm,0.7s
MAW Mawson 83.49 163 P P 11 55 28.1 +1.0
comp=Z,76nm,0.8s,baz=212,slow=6.1,SNR=75
MAW sP sP 11 56 05.0 +1.3
comp=Z,18nm,0.6s,baz=224,slow=4.6,SNR=2.7
MAW Mawson 83.49 163 P P 11 55 26.6 -0.4
PESTR Estremoz 83.52 43 eP P 11 55 28.8 +1.2
comp=Z,73nm,1.8s
PESTR Estremoz 83.52 43 P P 11 55 27.0 -0.6
PCAS Casmilo, Conde 83.64 42 eP P 11 55 29.3 +1.1
B08A Colville Reser 83.66 329 P P 11 55 28.1 0.0
COI Coimbra 83.78 42 P P 11 55 29.1 +0.2
COI IAmb IAmb 11 55 31.1
comp=Z,97nm,1.1s
COI Coimbra 83.78 42 P P 11 55 29.1 +0.2
COI pmax pmax
comp=Z,97nm,1.1s
PMRV Marv??o 83.97 43 eP P 11 55 30.9 +1.0
comp=Z,59nm,1.7s
FIGM Figuig 84.20 52 P P 11 55 33.0 +1.6
SNR=12
MTE Manteigas 84.44 42 eP P 11 55 33.5 +1.2
comp=Z,96nm,1.7s
HORN Hornachuelos 84.45 45 P P 11 55 33.4 +1.0
SNR=9.5
LBTB Lobatse 84.52 115 iP P 11 55 32.4 -0.9
LBTB Lobatse 84.52 115 iP P 11 55 32.4 -0.9
LBTB Lobatse 84.52 115 P P 11 55 33.1 -0.2
LBTB Lobatse 84.52 115 P P 11 55 33.1 -0.2
LBTB pmax pmax
comp=Z,28nm,0.9s
B05A Bryant 84.94 327 P P 11 55 34.9 +0.3
baz=132
D03D Eldon 84.96 326 P P 11 55 35.9 +1.2
baz=131
TAM Tamanrasset 85.04 63 P P 11 55 36.1 +0.3
TAM IAmb IAmb 11 55 37.6
comp=Z,41nm,1.0s
TAM Tamanrasset 85.04 63 P P 11 55 36.2 +0.3
TAM pmax pmax
comp=Z,41nm,1.0s
FRB Frobisher Bay 85.79 0 P P 11 55 38.7 +0.4
FRB pmax pmax
comp=Z,20nm,1.3s
PAB San Pablo 85.98 44 P P 11 55 40.1 0.0
PAB IAmb IAmb 11 55 42.0
comp=Z,64nm,1.1s
PAB San Pablo 85.98 44 P P 11 55 40.1 0.0
PAB pmax pmax
comp=Z,64nm,1.1s
ESDC Sonseca Array 86.30 44 P P 11 55 41.7 +0.1
comp=Z,15nm,1.0s,baz=235,slow=5.0,SNR=34
ESDC pP pP 11 56 06.0 -2.0
comp=Z,1.6nm,0.6s,baz=245,slow=4.6,SNR=2.5
ESDC Sonseca Array 86.30 44 P P 11 55 42.0 +0.4
ESBB Sonseca Array 86.31 44 P P 11 55 41.8 +0.2
ESBB IAmb IAmb 11 55 44.4
comp=Z,92nm,1.6s
LLLB Lillooet 86.41 329 P P 11 55 42.3 +0.4
LLLB IAmb IAmb 11 55 43.1
comp=Z,34nm,1.1s
MATP Matopo 88.75 111 iP P 11 55 55.0 +1.0
MATP Matopo 88.75 111 iP P 11 55 55.0 +1.0
CASY Casey 91.67 180 P P 11 56 08.7 +2.2
YKA Yellowknife Ar 92.02 341 P P 11 56 08.4 +0.5
comp=Z,23nm,0.8s,baz=138,slow=4.5,SNR=347
YKA pP pP 11 56 33.3 -1.3
comp=Z,13nm,0.6s,baz=132,slow=4.5,SNR=11
YKA PKKP PKKPdf 12 13 25.0 +0.3
comp=Z,0.1nm,0.3s,baz=312,slow=2.8,SNR=4.0
KEST Kesra 93.67 53 P P 11 56 17.1 +0.8
comp=Z,14nm,0.9s,baz=270,slow=12,SNR=6.8
KEST Kesra 93.67 53 IAmb IAmb 11 56 18.2
comp=Z,24nm,1.1s
URZ Urewera 93.75 226 P P 11 56 19.1 +2.4
comp=Z,12nm,1.0s,baz=144,slow=8.6,SNR=3.4

URZ Urewera 93.75 226 IAmb IAmb 11 56 20.5
comp=Z,62nm,1.4s
AFI Afiamalu 96.48 252 P P 11 56 32.7 +3.1
AFI pmax pmax
comp=Z,283nm,3.6s
SUMG Summit 96.85 9 i P P 11 56 35.8 +5.5
SUMG Summit 96.85 9 eP P 11 56 35.8 +5.5
RES Resolute Bay 98.24 353 P Pdif 11 56 36.5 +0.4
comp=Z,0.7nm,0.8s,baz=204,slow=8.1,SNR=4.1
DAVOX Davos/Dischmat 98.55 43 P P 11 56 38.3 0.0
comp=Z,3.6nm,0.7s,baz=227,slow=4.2,SNR=5.7
DAVA Damuels 98.75 42 ePP PP 12 00 38.8 -3.1
comp=Z,31nm,1.6s
RETA Reutte 99.38 43 ePP PP 12 00 43.2 -3.4
comp=Z,16nm,1.7s
MOTA Moosalm 99.54 43 ePP PP 12 00 42.7 -5.2
comp=Z,19nm,1.7s
WATA Walderalm 99.84 43 PP PP 12 00 45.9 -4.2
comp=Z,5.3nm,0.6s
ABTA Abfaltersbach 100.21 44 ePP PP 12 00 48.9 -4.1
comp=Z,22nm,1.7s
KBA Koelnbreinsper 100.86 44 ePP PP 12 00 54.4 -3.5
comp=Z,32nm,1.6s
MYKA Terra Mystica 100.89 44 ePP PP 12 00 54.9 -3.1
comp=Z,30nm,1.4s
GERES GERESS Array B 101.71 42 P Pdif 11 56 52.3 +0.1
comp=Z,0.2nm,0.3s,baz=254,slow=3.7,SNR=3.0
GERES PP PP 12 01 08.2 +4.0
comp=Z,0.2nm,0.3s,baz=256,slow=6.9,SNR=3.9
MOA Molln 101.72 43 ePP PP 12 00 59.2 -5.0
comp=Z,13nm,1.3s
INK Inuvik 101.78 340 P Pdif 11 56 51.5 -0.4
comp=Z,3.2nm,0.9s,baz=87,slow=7.0,SNR=12
INK pP pPdif 11 57 17.7 -0.9
comp=Z,2.9nm,0.9s,baz=113,slow=5.5,SNR=5.1
CLL Collm 102.15 39 ePP PP 12 01 01.0 -6.3
comp=Z,45nm,1.7s
CLL LmV 12 40 00.0
comp=Z,1μm,21.4s
VRAC Vranov 103.66 42 PP PP 12 01 14.1 -4.5
comp=Z,1.9nm,0.5s,baz=252,slow=9.1,SNR=5.0
ILAR Eielson Array 105.06 334 Pdiff Pdif 11 57 06.4 -0.2
comp=Z,0.5nm,0.8s,baz=94,slow=1.5,SNR=5.9
ILAR PKKPbc PKKPbc 12 12 47.7 -2.7
comp=Z,0.5nm,0.7s,baz=284,slow=2.3,SNR=5.8
POKR Poker Plat Res 105.40 335 PKiKP PKiKP 12 01 22.7 +1.3
baz=110
MLR Muntele Rosu 108.76 48 PP PP 12 01 46.6 -10
comp=Z,8.5nm,1.1s,baz=283,slow=8.6,SNR=3.9
FINES FINESS Array B 111.62 31 PKKPbc PKKPbc 12 12 26.9 -2.4
comp=Z,1.6nm,0.7s,baz=68,slow=5.1,SNR=7.1
FINES PKKPab PKKPab 12 12 35.9 +0.7
comp=Z,2.1nm,0.7s,baz=67,slow=5.0,SNR=4.4
AKASG Malin Array Be 111.90 43 PP PP 12 02 15.3 -3.4
comp=Z,8.5nm,1.1s,baz=260,slow=6.1,SNR=4.1
AKASG PKKPbc PKKPbc 12 12 27.7 -0.3
comp=Z,1.5nm,0.6s,baz=66,slow=3.8,SNR=6.7
EIL Elat 112.12 66 PP PP 12 02 24.0 +3.1
comp=Z,2.2nm,0.4s,baz=193,slow=5.6,SNR=6.2
ARCES ARCESS Array B 112.19 22 PKKPbc PKKPbc 12 12 26.2 -1.4
comp=Z,4.1nm,0.9s,baz=102,slow=5.1,SNR=7.7
ARCES PKKPab PKKPab 12 12 33.4 +0.9
comp=Z,6.1nm,0.8s,baz=65,slow=5.8,SNR=8.4
BRTR Keskin Array B 113.17 55 PKiKP PKiKP 12 01 37.7 +0.8
comp=Z,0.8nm,0.7s,baz=182,slow=3.7,SNR=5.1
BRTR PP PP 12 02 25.3 -3.0
comp=Z,2.1nm,0.9s,baz=243,slow=5.4,SNR=8.9
BRTR PKKPbc PKKPab 12 12 31.1 +1.6
comp=Z,0.7nm,0.7s,baz=97,slow=7.7,SNR=4.9
APA Apatity 115.06 24⇑i PKIKP PKPdf 12 01 47.1 +7.7
APA pmax pmax
comp=Z,5.0nm,1.2s
APA MLR MLR
comp=Z,300nm,13.0s
OBN Obninsk 116.71 38⇑i PKIKP PKPdf 12 01 42.5 -0.4
OBN i 12 02 10.0
OBN 12 02 50.0
OBN 12 08 53.0
OBN pmax pmax
comp=Z,14nm,0.4s
KLMR Klimovskoe 118.12 32 ePKIKP PKPdf 12 01 37.8 -7.7
KLMR pmax pmax
comp=Z,11nm,1.3s
KLMR Klimovskoe 118.12 32 ePKPdf PKPdf 12 01 37.9 -7.6
KLMR AMP 12 01 38.8
comp=Z,11nm,1.3s
SOC Sochi 118.19 51 i PKIKP PKPdf 12 01 45.9 -0.3
SOC e 12 02 58.9
SOC ePS SP 12 12 41.9 +3.3
SOC pmax pmax
comp=Z,13nm,0.8s
STKA Stephens Creek 118.78 209 PKP PKiKP 12 01 48.4 +0.5
comp=Z,4.1nm,0.8s,baz=104,slow=3.0,SNR=9.3
STKA Stephens Creek 118.78 209 PKiKP 12 01 48.8 +0.8
NEY Neytrino 120.35 52 i PKIKP PKPdf 12 01 50.0 -0.6
KIV Kislovodsk 120.36 51 ePKIKP PKPdf 12 01 51.0 +0.4
KIV pmax pmax
comp=Z,22nm,1.1s
KBZ Khabaz 120.50 51 PKP PKiKP 12 01 51.0 +0.3
comp=Z,5.6nm,0.9s,baz=229,slow=11,SNR=15
KBZ pPKP pPKPdf 12 02 19.5 +1.5
comp=Z,3.2nm,0.8s,baz=9.9,slow=6.3,SNR=3.2
KBZ Khabaz 120.50 51 i PKIKP PKPdf 12 01 49.5 -1.1
PRGR Permogore 120.94 30 ePKIKP PKPdf 12 01 50.6 -0.3
PRGR e 12 02 12.6
PRGR pmax pmax
comp=Z,14nm,0.9s
GNI Garni 121.68 56 i PKIKP PKPdf 12 01 51.2 -2.1
BILL Bilibino 123.35 338 PKiKP 12 01 56.3 +0.7
BILL Bilibino 123.35 338⇓i PKIKP PKPdf 12 01 55.8 +0.2
BILL i 12 02 24.5
BILL PS SP 12 13 22.0 -0.9
BILL pmax pmax
comp=Z,7.0nm,1.1s
KIRV Kirov 123.40 34 i PKIKP PKPdf 12 01 55.3 -0.4
NWAO Narrogin (SRO) 124.76 186 PKP PKiKP 12 01 59.9 +0.2
comp=Z,8.4nm,0.8s,baz=157,slow=3.8,SNR=6.0
CTA Charters Tower 125.74 222 PKP PKiKP 12 02 02.5 +0.6
comp=Z,11nm,0.8s,baz=143,slow=1.4,SNR=9.0
H11S2 WAKE ISLAND Hy128.14 276 T T 14 22 20.9
baz=103,slow=74,SNR=480
H11S1 WAKE ISLAND Hy128.15 276 T T 14 22 21.6
baz=103,slow=74,SNR=392
H11S3 WAKE ISLAND Hy128.16 276 T T 14 22 21.3
baz=103,slow=74,SNR=354
H11N3 WAKE ISLAND Hy128.25 278 T T 14 22 29.9
baz=104,slow=75,SNR=303
H11N2 WAKE ISLAND Hy128.26 278 T T 14 22 35.0
baz=104,slow=75,SNR=298
H11N1 WAKE ISLAND Hy128.26 278 T T 14 22 32.3
baz=104,slow=75,SNR=200
ARU Arti 128.73 35 PKP PKiKP 12 02 06.6 -0.1
comp=Z,1.8nm,0.5s,baz=263,slow=1.2,SNR=9.7
ARU Arti 128.73 35 i PKIKP PKiKP 12 02 07.3 +0.6
ARU 12 04 22.1
ASAR Alice Springs 129.26 207 PKP PKPdf 12 02 08.4 +0.2
comp=Z,27nm,0.9s,baz=147,slow=2.2,SNR=103
ASAR Alice Springs 129.26 207 PKiKP 12 02 08.7 -0.3
AS31 Alice Springs 129.26 207 PKiKP 12 02 08.7 -0.3
TIXI Tiksi 129.63 353 PKP PKPdf 12 02 07.2 -0.1
comp=Z,5.7nm,0.8s,baz=12,slow=3.2,SNR=12
TIXI Tiksi 129.63 353 PKPdf 12 02 06.9 -0.3
TIXI Tiksi 129.63 353 i PKIKP PKPdf 12 02 06.6 -0.7
AKTO Aktyubinsk 130.14 42 PKP PKPdf 12 02 09.1 +0.2
comp=Z,3.6nm,0.9s,baz=348,slow=0.8,SNR=13
AKTO SKPbc SKPbc 12 05 23.2 0.0
comp=Z,7.0nm,0.9s,baz=288,slow=3.8,SNR=12
SEY Seymchan 130.92 337 PKP PKiKP 12 02 10.8 0.0
comp=Z,19nm,1.0s,baz=95,slow=2.1,SNR=23
SEY pPKP pPKPdf 12 02 36.4 -1.0
comp=Z,5.1nm,0.9s,baz=17,slow=6.2,SNR=3.5
SEY Seymchan 130.92 337 i PKIKP PKPdf 12 02 10.4 +0.4
ABKAR Akbulak array 131.64 43 PKiKP 12 02 12.5 -0.3
WSAR Wadi Sarin 131.68 78 PKP PKiKP 12 02 13.2 -0.4
comp=Z,9.8nm,0.9s,baz=202,slow=1.9,SNR=6.3
WSAR PP PP 12 04 31.4 -2.4
comp=Z,5.1nm,0.9s,baz=265,slow=9.6,SNR=4.1
WSAR SKPbc SKPab 12 05 30.4 -0.1
comp=Z,12nm,0.9s,baz=280,slow=7.0,SNR=8.1
GEYT Alibeck 132.09 59 PKP PKiKP 12 02 14.9 +0.8
comp=Z,2.1nm,0.7s,baz=359,slow=6.5,SNR=3.1
GEYT PP PP 12 04 35.5 -0.5
comp=Z,2.6nm,0.7s,baz=297,slow=9.8,SNR=4.1
GEYT SKPbc SKPbc 12 05 31.2 +0.4
comp=Z,5.4nm,1.0s,baz=247,slow=7.6,SNR=6.4
GEYT Alibeck 132.09 59 PKPdf 12 02 13.2 +0.2

COEN Coen 132.27 224 PKPdf 12 02 13.1 -0.9
WRA Warramunga Arr 132.33 210 PKP PKiKP 12 02 14.7 -0.5
comp=Z,20nm,0.7s,baz=160,slow=1.7,SNR=16
WRA pPKP pPKPdf 12 02 40.7 -0.6
comp=Z,2.4nm,0.4s,baz=157,slow=1.8,SNR=2.0
WRA PP PP 12 04 35.0 -1.4
comp=Z,4.3nm,1.1s,baz=151,slow=5.5,SNR=5.6
WRA SKPbc SKPbc 12 05 32.4 +0.2
comp=Z,3.9nm,1.0s,baz=147,slow=3.6,SNR=6.7
WRAB Tennant Creek 132.33 210 PKPdf 12 02 13.4 -0.7
WRAB Tennant Creek 132.33 210 i PKIKP PKPdf 12 02 14.5 +0.4
PMG Port Moresby 132.76 232 PKP PKiKP 12 02 16.1 0.0
comp=Z,24nm,1.0s,baz=83,slow=3.2,SNR=5.4
PMG Port Moresby 132.76 232 PKPdf 12 02 12.4 -2.6
PETK Petropavlovsk- 133.32 323 PKP PKiKP 12 02 15.9 -0.2
comp=Z,12nm,1.0s,baz=112,slow=2.6,SNR=8.3
PETK pPKP pPKPdf 12 02 42.1 -0.2
comp=Z,5.0nm,0.8s,baz=113,slow=2.2,SNR=2.5
PETK Petropavlovsk- 133.32 323 PKiKP 12 02 15.5 -0.6
PETK Petropavlovsk- 133.32 323 PKIKP PKiKP 12 02 15.5 -0.6
PSA00 Pilbara Seismi 135.57 191 PKPdf 12 02 19.1 -1.0
BRVK Borovoye 136.30 35 PKPdf 12 02 16.8 -3.6
BRVK Borovoye 136.30 35 PKIKP PKPdf 12 02 16.8 -3.6
BVAR Borovoye Array 136.38 35 PKP PKiKP 12 02 22.1 -0.1
comp=Z,4.5nm,0.8s,baz=304,slow=2.9,SNR=20
BVAR SKPbc SKPbc 12 05 44.6 +0.4
comp=Z,2.1nm,0.9s,baz=289,slow=4.5,SNR=5.6
FITZ Fitzroy Crossi 137.43 200 PKP PKPdf 12 02 24.4 +0.8
comp=Z,17nm,0.7s,baz=194,slow=6.9,SNR=12
FITZ Fitzroy Crossi 137.43 200 PKPdf 12 02 23.6 0.0
YAK Yakutsk 138.36 347 i PKIKP PKPdf 12 02 24.1 +0.2
KKAR Karatay Array 140.43 49 PKPdf 12 02 28.5 +0.2
KKAR Karatay Array 140.43 49 PKIKP PKPdf 12 02 28.5 +0.2
KURK Kurchatov 141.92 34 PKPdf 12 02 28.6 -2.1
KURK Kurchatov 141.92 34 i PKIKP PKPdf 12 02 32.1 +1.4
KURBB Kurchatov Arra 141.93 34 PKhKP PKPpre 12 02 28.4
comp=Z,4.2nm,0.8s,baz=308,slow=2.8,SNR=22
KURBB PKP PKPdf 12 02 31.5 +0.8
comp=Z,5.0nm,0.9s,baz=307,slow=2.9,SNR=25
KURBB PP PP 12 05 39.4 +2.9
comp=Z,1.5nm,0.9s,baz=298,slow=6.4,SNR=4.7
KURBB SKP SKPdf 12 05 57.8 +1.1
comp=Z,2.0nm,0.9s,baz=299,slow=4.1,SNR=6.8
TYV Tymovskoe 142.48 327 ePKHKP PKPpre 12 02 27.8
ZAA0 Zalesovo Array 142.62 26 PKPdf 12 02 31.0 -0.8
ZALV Zalesovo Beam 142.62 26 PKhKP PKPpre 12 02 28.5
comp=Z,9.9nm,0.6s,baz=309,slow=4.2,SNR=25
ZALV PKP PKPdf 12 02 32.7 +0.8
comp=Z,18nm,0.8s,baz=286,slow=3.3,SNR=43
ZALV SKPbc SKiKP 12 06 02.4 -0.1
comp=Z,12nm,1.0s,baz=293,slow=4.5,SNR=5.2
ZALV Zalesovo Beam 142.62 26 PKPdf 12 02 32.3 +0.4
ZALV Zalesovo Beam 142.62 26 PKIKP PKPdf 12 02 32.3 +0.4
AAK Ala-Archa 143.34 48 PKP PKPdf 12 02 32.6 -1.2
comp=Z,4.3nm,0.7s,baz=238,slow=4.0,SNR=12
AAK Ala-Archa 143.34 48 PKPdf 12 02 32.5 -1.3
AAK Ala-Archa 143.34 48 i PKIKP PKPbc 12 02 31.8 +0.7
SAUI Saumlaki 144.05 215 PKP PKPdf 12 02 36.2 +0.6
SAUI Saumlaki 144.05 215 PKPdf 12 02 36.0 +0.4
BOD Bodaibo 144.49 357 ePKIKP PKPab 12 02 33.6 0.0
BOD pmax pmax
comp=Z,49nm,1.7s
YSS Yuzhn-Sakhalins 144.70 322 PKPdf 12 02 35.3 -0.4
YSS Yuzhn-Sakhalins 144.70 322⇑i PKIKP PKPdf 12 02 35.8 +0.1
YSS e 12 03 02.9
YSS pmax pmax
comp=Z,80nm,0.8s
NIL Nilore 144.76 63 PKPab 12 02 35.4 -0.1
NIL Nilore 144.76 63 PKIKP PKPab 12 02 35.4 -0.1
NRN Naryn 144.83 49 PKPdf 12 02 36.3 -0.3
NRN Naryn 144.83 49 PKIKP PKPdf 12 02 36.3 -0.3
KDJ Kajisay 145.37 47 PKPab 12 02 39.1 +1.5
KDJ Kajisay 145.37 47 PKIKP PKPab 12 02 39.1 +1.5
KSH Kashi 145.48 52 PKPbc PKPab 12 02 38.6 +0.5
KSH pPKP pPKPdf 12 03 06.0 +1.1
KSH sPKP 12 03 17.8
KSH PP PP 12 06 04.4 +5.7
KSH PKS PKSdf 12 06 15.7 +2.6
KSH SKKS 12 12 40.1
KSH AMB AMB
comp=Z,560nm,6.1s
KSH LR LR
comp=Z,430nm,14.4s
KSH LR LR
comp=Z,390nm,5.8s
KSH LR LR
comp=Z,1μm,16.3s
GRNR Gornyy 145.49 332⇓i PKIKP PKPab 12 02 38.9 +1.4
GRNR e 12 03 05.6
GRNR pmax pmax
comp=Z,110nm,1.1s
SOEI Soe 145.66 203 PKP PKPab 12 02 40.8 +1.5
SOEI Soe 145.66 203 PKPab 12 02 40.5 +1.2
MAKZ Makanchi 146.01 37 PKPbc 12 02 38.6 -0.4
MAKZ Makanchi 146.01 37 PKP2 PKPbc 12 02 38.6 -0.4
MK31 Makanchi Array 146.20 37 PKPbc 12 02 39.7 +0.2
MK31 Makanchi Array 146.20 37 PKP2 PKPbc 12 02 39.7 +0.2
MKAR Makanchi Array 146.20 37 PKPbc PKPbc 12 02 39.4 -0.1
comp=Z,23nm,0.8s,baz=315,slow=2.3,SNR=106
MKAR Makanchi Array 146.20 37 PKPbc 12 02 39.9 +0.3
ZEA Zeya 146.37 343 ePKP2 PKPbc 12 02 39.6 -0.2
ZEA pmax pmax
comp=Z,78nm,1.2s
ERM Erimo 146.91 314 i PKP2 PKPbc 12 02 42.4 +0.7
GUMO Guam 146.94 261 PKPbc PKPdf 12 02 41.2 +0.7
comp=Z,412nm,0.9s,baz=164,slow=4.7,SNR=18
PALK Pallekele 146.97 112 PKPbc PKPbc 12 02 42.0 -0.7
comp=Z,10.0nm,0.7s,baz=210,slow=3.3,SNR=11
PALK Pallekele 146.97 112 PKPdf 12 02 41.7 +1.0
PALK Pallekele 146.97 112 PKIKP PKPdf 12 02 41.7 +1.0
SARN Sarigan 147.05 266 PKPbc 12 02 42.1 -0.7
FAKI Fak Fak 147.60 222 PKPdf 12 02 39.4 -2.3
FAKI PKPbc PKPbc 12 02 42.5 -1.9
FAKI PKPab PKPab 12 02 46.3 -0.2
PLAI Plampang 148.39 192 PKP PKPbc 12 02 47.1 +0.6
KLR Kul'dur 148.63 334 i PKHKP PKPdf 12 02 41.4 -0.9
IGBI Denpasar 148.81 187 PKP PKPbc 12 02 47.7 +0.1
HYB Hyderabad 148.88 93 i PKP PKPdf 12 02 44.0 +0.3
HYB esPKP 12 03 23.0
JAGI Jajag, Banyuwa 149.26 186 PKP PKPdf 12 02 44.4 0.0
JAGI Jajag, Banyuwa 149.26 186 PKPdf 12 02 43.0 -1.4
JAGI PKPbc PKPbc 12 02 45.8 -2.9
JAGI PKPab PKiKP 12 02 49.7 -0.2
TEY Ternei 149.29 324⇑i PKP2 PKPbc 12 02 48.3 +0.5
TEY pmax pmax
comp=E,20nm,1.0s
TEY pmax pmax
comp=Z,70nm,0.8s
AAI Ambon 149.30 215 PKP PKPdf 12 02 45.1 +0.6
GMJI Gumukmas 149.51 184 PKP PKPdf 12 02 46.5 +1.7
SRBI Singaraja 149.53 188 PKP PKPdf 12 02 44.8 0.0
MOY Mondy 149.65 13 ePKHKP PKPdf 12 02 46.3 +2.3
IRK Irkutsk 149.65 9 ePKHKP PKPdf 12 02 45.2 +1.4
SIJI Sorong 149.81 223 PKP PKPdf 12 02 46.5 +1.2
comp=Z,44nm,1.0s,baz=82,slow=7.1,SNR=5.4
SIJI PKPbc PKiKP 12 02 51.3 +0.2
comp=Z,118nm,0.8s,baz=197,slow=19,SNR=36
TLY Talaya 150.11 10 ePKHKP PKPdf 12 02 45.8 +1.2
CISI Cisompet, Garu 150.11 173 PKPdf PKPdf 12 02 43.8 -2.0
WMQ Urumqi 151.03 37 ePKPbc PKPdf 12 02 46.3 0.0
WMQ AMB AMB
comp=Z,200nm,7.3s
WMQ LR LR
comp=Z,940nm,26.1s
WMQ LR LR
comp=Z,1μm,28.8s
WMQ LR LR
comp=Z,370nm,23.7s
WMQ Urumqi 151.03 37 PKiKP 12 02 53.4 +0.7
WMQ Urumqi 151.03 37 PKIKP PKiKP 12 02 53.4 +0.7
ZAK Zakamensk 151.31 11 ePKIKP PKPdf 12 02 47.6 +1.0
ZAK pmax pmax
comp=Z,12nm,1.0s
JCJ Chichijima 151.56 286 PKP PKPdf 12 02 48.0 +0.4
comp=Z,158nm,0.9s,baz=277,slow=8.9,SNR=2.1
JCJ PKPbc PKPbc 12 02 54.0 +0.2
comp=Z,244nm,0.8s,baz=80,slow=17,SNR=3.1
KAPI Kappang 151.59 198 PKPbc PKiKP 12 02 55.3 +0.6
comp=Z,93nm,0.8s,baz=234,slow=1.6,SNR=35
HIA Hailar 152.29 348 PKPdf PKPdf 12 02 47.8 -0.2
HIA PKiKP 12 02 55.2 +0.1
HIA PKPab PKPab 12 03 06.2 +1.2
HIA Hailar 152.29 348 PKIKP PKPdf 12 02 47.8 -0.2
HIA 12 03 06.2

USA0B Ussuriysk Arra 152.29 327 PKPdf 12 02 48.3 +0.2
USA0B PKiKP 12 02 56.0 +0.8
USA0B Ussuriysk Arra 152.29 327 PKIKP PKiKP 12 02 56.0 +0.8
USRK Ussuriysk Ar. 152.29 327 PKP PKPdf 12 02 48.5 +0.4
comp=Z,5.6nm,1.0s,baz=113,slow=2.2,SNR=11
USRK PKPbc PKiKP 12 02 55.6 +0.4
comp=Z,24nm,0.8s,baz=356,slow=1.4,SNR=44
USRK pPKPbc pPKPbc 12 03 23.2 +0.9
comp=Z,5.2nm,0.6s,baz=270,slow=0.8,SNR=3.6
USRK Ussuriysk Ar. 152.29 327 PKPdf 12 02 48.5 +0.4
USRK PKiKP 12 02 56.0 +0.8
MJAR Matsushiro Arr 152.71 307 PKP PKPdf 12 02 49.4 +0.4
comp=Z,2.0nm,0.8s,baz=42,slow=2.8,SNR=3.5
MJAR PKPbc PKiKP 12 02 56.6 +0.2
comp=Z,17nm,0.8s,baz=103,slow=0.9,SNR=26
MJAR PKPab PKPab 12 03 06.5 -0.7
comp=Z,13nm,0.9s,baz=122,slow=1.8,SNR=4.6
MJAR pPKPbc pPKPbc 12 03 24.6 +0.9
comp=Z,7.1nm,0.9s,baz=90,slow=1.3,SNR=2.7
MJAR pPKPab sPKPbc 12 03 36.3 +2.3
comp=Z,10nm,0.8s,baz=110,slow=1.3,SNR=3.7
MJAR Matsushiro Arr 152.71 307 PKPdf 12 02 48.2 -0.8
MJAR PKiKP 12 02 57.0 +0.6
MJAR PKPab 12 03 06.8 -0.4
MAJO Matsushiro 152.71 307 PKiKP 12 02 56.9 +0.5
MAJO PKPab PKPab 12 03 08.1 +0.8
MAT Matsushiro 152.71 307 PKP PKiKP 12 02 56.4 0.0
MJB9 Matsu-Tunnel 152.71 307 PKiKP 12 02 56.9 +0.5
MJB9 PKPab PKPab 12 03 08.1 +0.8
MDJ Mudanjiang 153.15 330 PKPbc PKPdf 12 02 50.0 +0.6
MDJ AMB AMB
comp=Z,680nm,11.1s
LUWI Luwuk 154.21 207 PKPdf PKPdf 12 02 53.2 +1.4
LUWI PKPbc PKiKP 12 03 02.1 +2.0
LUWI PKPab PKPab 12 03 15.7 +1.7
SONM Songino Array 154.25 8 PKP PKPdf 12 02 52.3 +1.3
comp=Z,5.8nm,0.8s,baz=292,slow=1.1,SNR=38
SONM PKPbc PKiKP 12 03 00.1 +0.7
comp=Z,4.2nm,0.7s,baz=306,slow=2.2,SNR=13
SONM pPKP pPKPdf 12 03 17.1 -1.5
comp=Z,3.6nm,0.8s,baz=315,slow=2.9,SNR=4.8
SONM Songino Array 154.25 8 PKPdf 12 02 52.1 +1.0
SONM PKPbc 12 02 59.0 -0.3
ULN Ulaanbaatar 154.29 7 PKPdf 12 02 50.6 -0.5
ULN PKiKP 12 03 00.1 +0.6
ULN Ulaanbaatar 154.29 7 PKIKP PKiKP 12 03 00.1 +0.6
KSRS Korea Array 159.18 320 PKP PKPdf 12 02 58.6 +1.1
comp=Z,12nm,1.0s,baz=46,slow=1.0,SNR=25
KSRS PKPab PKPab 12 03 36.0 +1.2
comp=Z,7.4nm,0.8s,baz=50,slow=4.3,SNR=12
KSRS pPKPab pPKPab 12 04 02.1 +0.6
comp=Z,2.1nm,0.7s,baz=65,slow=4.4,SNR=1.4
KSAR Wonju Array Be 159.21 320 PKPdf 12 02 57.9 +0.4
KSAR sPKPdf 12 03 36.2 +0.9
KSAR Wonju Array Be 159.21 320 PKIKP PKPdf 12 02 57.9 +0.4
KSAR 12 03 36.2
KSM Kuching 159.25 177 PKPab 12 03 37.2 +1.6
GTA Gaotai 160.37 27 ePKP PKPdf 12 03 00.1 +1.1
GTA AMB AMB
comp=Z,340nm,6.2s
GTA LR LR
comp=Z,1μm,24.4s
GTA LR LR
comp=Z,1μm,23.4s
GTA LR LR
comp=Z,2μm,23.4s
HHC Hu-ho-hao-te 161.53 359 ePKP PKPdf 12 03 00.3 +0.2
BJT Baijiatuau 161.88 348 PKPdf 12 02 59.7 -0.7
BJT Baijiatuau 161.88 348 PKIKP PKPdf 12 02 59.7 -0.7
LZH Lanzhou 164.84 24 ePKP PKPdf 12 03 05.5 +2.0
LZH pPKP pPKPdf 12 03 32.1 +1.0
LZH sPKP 12 03 43.0
LZH LR LR
comp=Z,1μm,14.6s
LZH LR LR
comp=Z,1μm,15.2s
LZH LR LR
comp=Z,1μm,16.3s
CMAR Chiang Mai Arr 167.81 106 PKP PKPdf 12 03 06.5 +0.4
comp=Z,4.9nm,1.0s,baz=272,slow=1.8,SNR=35
CMAR PKPab PKPab 12 04 12.9 -0.6
comp=Z,2.6nm,0.8s,baz=257,slow=5.5,SNR=9.1
CMAR pPKPab pPKPab 12 04 40.9 +1.0
comp=Z,2.2nm,0.6s,baz=253,slow=5.5,SNR=4.3
CMAR PP PP 12 08 01.7 -0.8
comp=Z,0.5nm,0.7s,baz=238,slow=5.2,SNR=3.9
XAN Xi'an 168.15 10 PKP PKPdf 12 03 07.2 +1.2
XAN Xi'an 168.15 10 PKPdf 12 03 04.9 -1.1
XAN Xi'an 168.15 10 PKIKP PKPdf 12 03 04.9 -1.1
NJ2 Nanjing 168.20 327 ePKP PKPdf 12 03 05.9 -0.1
PBKT Sadao Pong 168.72 119 PKPdf 12 03 07.3 +0.6
CD2 Chengdu 169.13 37 PKP PKPdf 12 03 06.0 -0.7
WHN Wuhan 171.37 342 PKP PKPdf 12 03 08.5 +0.6
GYA Guiyang 174.12 45 i PKP PKPdf 12 03 10.2 +0.9
GYA sPKP 12 03 48.0
GYA PKPab PKPab 12 04 41.7 +0.5
GYA PKS 12 06 41.8
GYA AMB AMB
comp=Z,1μm,15.0s
GYA LR LR
comp=Z,360nm,21.9s
GYA LR LR
comp=Z,290nm,20.5s
GYA LR LR
comp=Z,350nm,21.4s

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*THE **12** 11:44:24.0, 38°.33N×20°.39E, h12km, ML3.5/20, Error ellipse: s-maj=0.8km s-min=0.3km az=250.0*
*ATH **12** 11:44:24.0, 38°.32N×20°.46E, h14km, ML3.5/16, Error ellipse: s-maj=1.6km s-min=0.7km az=266.0*
*BEO **12** 11:44:25.3±0.8, 38°.22N×20°.24E, h27km±7km, ML3.7/8*
*IDC **12** 11:44:30.4±2.2, 38°.47N×20°.67E, h61km±22km, mb3.6/9, mb1 3.7/12, mb1mx3.4/66, mbtmp3.8/12, ML3.6/3, Error ellipse: s-maj=22.8km s-min=14.0km az=61.0*
*SKO **12** 11:44:37.0, 39°.10N×20°.78E, h0km*
ISC 12 11:44:24.1±0.7, **38°.32N**±0°.02×**20°.41E**±0°.03, **h14**km±4km, **n113**, σ1**§23**/163, **mb3.8**/9, **6C-3D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.06	171	P	Pg	11 44 26.5	-0.2
KEF4				S	Sg	11 44 28.1	-0.4
LXR1	Lixouri, Cepha	0.12	170	P	Pg	11 44 27.4	+0.1
LXR1				S	Sg	11 44 30.1	+0.5
LXRA	Lixouri, Kepha	0.12	170	P	Pg	11 44 27.5	+0.1
LXRA				S	Sg	11 44 30.1	+0.5
KEF3	Kipouria, Keph	0.12	204	S	Sg	11 44 30.0	+0.3
CHV1	Chavriata, Kef	0.14	190	P	Pg	11 44 27.6	0.0
CHV1				S	Sg	11 44 30.4	+0.4
ARGA	Argostoli. Kep	0.15	159	P	Pg	11 44 27.7	-0.1
ARGA				S	Sg	11 44 30.3	0.0
ARG2	Argostoli	0.15	157	P	Pg	11 44 27.7	-0.1
ARG2				S	Sg	11 44 30.6	+0.3
VSK1	VASILIKIADES	0.15	52	P	Pg	11 44 27.6	-0.3
VSK1				S	Sg	11 44 30.3	-0.1
KEF2	Argostoli. Kep	0.16	159	S	Sg	11 44 30.6	0.0
KONA	Konidatara, Ke	0.17	49	P	Pg	11 44 27.8	-0.2
KONA				S	Sg	11 44 30.0	-0.8
FSK	Fiskardo	0.18	40	P	Pg	11 44 28.1	-0.3
FSK				S	Sg	11 44 31.2	-0.1
	50μm,0.5s						
FSK	Fiskardo	0.18	40	P	Pg	11 44 28.0	-0.3
FSK				S	Sg	11 44 30.5	-0.8
FSK				AML	AML	11 44 31.9	
	comp=N,74310μm,0.5s						
FSK				AML	AML	11 44 32.2	
VLS	Valsamata	0.20	135	P	Pg	11 44 28.3	-0.3
VLS				S	Sg	11 44 31.6	0.0
	comp=N,45μm,0.2s						
VLS	Valsamata	0.20	135	P	Pg	11 44 28.3	-0.3
VLS				S	Sg	11 44 31.5	0.0
VLS				AML	AML	11 44 32.0	
	comp=E,73471μm,0.1s						
VLS				AML	AML	11 44 32.6	
	comp=N,86203μm,0.5s						
EVGI	Lefkada island	0.36	32	P	Pg	11 44 31.2	-0.2
EVGI				S	Sg	11 44 37.0	+0.7
EVGI	Lefkada island	0.36	32	P	Pg	11 44 31.1	-0.2
EVGI				S	Sg	11 44 36.6	+0.3
MGNA	Meganis	0.45	41	P	Pg	11 44 32.4	-0.6
MGNA				S	Sg	11 44 38.2	-0.9
VLMS	Volimes, Zakyn	0.48	156	P	Pg	11 44 33.0	-0.6

VLMS S Sg 11 44 40.4 +0.3
VLMS AML AML 11 44 42.3
comp=E,22287μm,0.2s
VLMS AML AML 11 44 48.2
comp=N,26657μm,0.5s
LKD2 Lefkada island 0.51 22 P Pg 11 44 33.6 -0.5
LKD2 S Sg 11 44 40.8 -0.2
comp=N,4μm,0.6s
LKD2 Lefkada island 0.51 22 P Pg 11 44 33.6 -0.5
LKD2 S Sg 11 44 41.1 +0.2
LKD2 AML AML 11 44 46.9
comp=N,7253μm,0.4s
LKD2 AML AML 11 44 48.4
comp=E,8603μm,0.3s
TSLK Tsoukalades, L 0.54 21 P Pg 11 44 34.2 -0.5
TSLK S Sg 11 44 42.2 +0.2
comp=E,5μm,0.3s
TSLK Tsoukalades, L 0.54 21 P Pg 11 44 34.0 -0.7
TSLK S Sg 11 44 42.3 +0.3
AST1 Astakos 0.58 67 P Pg 11 44 35.0 -0.4
AST1 S Sb 11 44 44.3 +0.3
comp=E,12μm,0.5s
ZAK2 Zakynthos 0.65 144 P Pg 11 44 36.5 -0.3
ZAK2 S Sb 11 44 47.1 +0.9
PDO Prodromos 0.67 65 P Pg 11 44 36.5 -0.6
PDO S Sb 11 44 46.8 +0.1
comp=E,8μm,0.4s
PDO Prodromos 0.67 65 P Pg 11 44 36.6 -0.5
PDO AML AML 11 44 52.5
comp=E,11528μm,0.4s
PDO AML AML 11 44 55.7
comp=N,9521μm,0.3s
KRI1 kERI 0.73 154 P Pg 11 44 37.3 -0.9
KRI1 S Sb 11 44 49.5 +1.1
comp=N,11μm,0.4s
RLS Riolos of Patr 0.87 107 P Pg 11 44 39.0 -1.9
PVO Paravola 0.92 71 P Pg 11 44 41.5 -0.4
PVO S Sn 11 44 55.7 0.0
comp=N,5μm,0.5s
PVO Paravola 0.92 71 P Pg 11 44 41.5 -0.4
PVO AML AML 11 45 01.5
comp=N,9187μm,0.6s
PVO AML AML 11 45 01.7
comp=E,12238μm,0.4s
DRO Drossia 1.09 109 P Pb 11 44 43.2 -1.5
DRO S Sn 11 45 01.3 +1.5
comp=E,4μm,0.5s
DRO Drossia 1.09 109 P Pb 11 44 43.1 -1.6
DRO AML AML 11 45 07.1
comp=N,8225μm,0.5s
DRO AML AML 11 45 13.1
comp=E,9187μm,0.5s
ANX Ano Chora 1.22 76 P Pn 11 44 45.3 -1.5
ANX Ano Chora 1.22 76 P Pn 11 44 45.0 -1.8
ANX AML AML 11 45 10.8
comp=E,9564μm,0.6s
ANX AML AML 11 45 11.2
comp=N,8585μm,0.6s
IGT Igoumenitsa 1.22 357 P Pn 11 44 46.5 -0.2
IGT S Sg 11 45 04.6 +1.2
comp=N,1μm,0.5s
IGT Igoumenitsa 1.22 357 ePg Pg 11 44 49.2 +1.7
IGT eSn Sg 11 45 04.5 +1.2
IGT Igoumenitsa 1.22 357 P Pn 11 44 46.7 0.0
IGT S Sn 11 45 04.0 +1.1
IGT AML AML 11 45 08.4
comp=E,2029μm,0.3s
IGT AML AML 11 45 17.1
comp=N,2019μm,0.6s
LAKA Lakka 1.23 93 P Pn 11 44 46.4 -0.6
LAKA S Sg 11 45 04.7 +0.8
comp=N,2μm,0.6s
LAKA Lakka 1.23 93 P Pn 11 44 46.7 -0.3
LAKA AML AML 11 45 06.3
comp=N,2910μm,0.4s
LAKA AML AML 11 45 14.4
comp=E,3583μm,0.8s
EVR Evrytania 1.25 61 P Pn 11 44 46.7 -0.5
EVR Evrytania 1.25 61 P Pn 11 44 47.3 +0.1
EVR AML AML 11 45 10.7
comp=E,3390μm,0.5s
EVR AML AML 11 45 14.4
comp=N,3753μm,0.9s
SERG Sergoula 1.30 85 P Pn 11 44 47.4 -0.4
SERG S Sn 11 45 05.3 +0.3
comp=N,2μm,0.8s
SERG Sergoula 1.30 85 P Pn 11 44 47.3 -0.5
TRIZ Trizonia 1.31 87 P Pn 11 44 47.4 -0.5
TRIZ S Sg 11 45 06.5 +0.3
comp=N,2μm,0.5s
TRIZ Trizonia 1.31 87 P Pn 11 44 47.3 -0.5
ALIK Aliki, Aigiali 1.34 92 P Pn 11 44 46.5 -1.8
ALIK S Sb 11 45 06.2 +0.3
KALE Kalithea 1.36 86 P Pn 11 44 48.6 -0.1
KALE S Sg 11 45 09.1 +1.2
comp=N,2μm,0.5s
KALE Kalithea 1.36 86 P Pn 11 44 48.6 -0.1
KALE AML AML 11 45 16.1
comp=E,3247μm,0.5s
KALE AML AML 11 45 17.9
comp=N,3513μm,0.4s
JAN Janina 1.38 14 P Pn 11 44 48.8 -0.2
JAN S Sn 11 45 07.2 +0.1
comp=N,1μm,0.5s
JAN Janina 1.38 14 P Pb 11 44 50.3 +0.6
JAN AML AML 11 45 18.5
comp=E,2370μm,0.4s
JAN AML AML 11 45 18.9
comp=N,1627μm,0.5s
KLV Kalavryta, Ach 1.40 101 P Pn 11 44 49.3 +0.1
KLV S Sb 11 45 08.1 +0.4
comp=N,905nm,0.7s
KLV Kalavryta, Ach 1.40 101 P Pn 11 44 49.3 +0.1
KLV AML AML 11 45 22.9
comp=N,1631μm,0.8s
KLV AML AML 11 45 26.5
comp=E,1981μm,0.9s
KEK Kerkira 1.47 341 P Pn 11 44 50.5 +0.3
KEK S Sn 11 45 10.0 +0.7
comp=E,900nm,0.5s
KEK Kerkira 1.47 341 P Pn 11 44 51.0 +0.8
MAKR Makrakomi, Fth 1.52 62 P Pn 11 44 51.7 +0.9
MAKR Makrakomi, Fth 1.52 62 P Pn 11 44 51.8 +0.9
MAKR AML AML 11 45 19.6
comp=E,4418μm,0.5s
MAKR AML AML 11 45 24.6
comp=N,2940μm,0.6s
MEV Metsovon 1.60 23 P Pb 11 44 54.6 +1.1
ITM Ithomi 1.65 133 P Pn 11 44 54.1 +1.4
AGG Agios Georgios 1.66 64 P Pb 11 44 54.6 +0.2
THL Klokotos Trika 1.77 45 P Pb 11 44 56.1 -0.1
THL S Sn 11 45 17.0 +0.5
comp=N,705nm,0.8s
THL Klokotos Trika 1.77 45 P Pb 11 44 56.2 0.0
THL AML AML 11 45 31.3
comp=N,1197μm,0.6s
THL AML AML 11 45 31.7
comp=E,1553μm,0.9s
KPRO Kipourio 1.79 24 P Pb 11 44 57.3 +0.5
KPRO Kipourio 1.79 24 P Pb 11 44 57.3 +0.5
PROD Prodromos 1.96 91 P Pb 11 44 59.4 -0.1
LTK Loutraki 2.04 97 P Pn 11 44 59.4 +1.4
LTK S Sn 11 45 24.2 +1.0
comp=E,448nm,0.5s
LTK Loutraki 2.04 97 P Pn 11 44 59.6 +1.7
LOUT Loutraki 2.05 98 P Pn 11 44 59.2 +1.1
LOUT Loutraki 2.05 98 P Pn 11 44 59.9 +1.8
VIL2 Platees 2.25 92 P Pn 11 45 03.3 +2.4
VILL Villia 2.29 93 P Pn 11 45 02.8 +1.3
DID Didima 2.38 109 P Pn 11 45 04.7 +2.0
DID S Sn 11 45 31.4 -0.2
comp=E,530nm,0.8s
VLI Veliai 2.56 128 P Pn 11 45 05.1 -0.1
OHR Ohrid 2.81 6 ePn Pn 11 45 11.4 +2.8
TIP Timpagrande 2.98 288 ⇑P Pn 11 45 11.8 +0.7
TIP ⇑S Sn 11 45 43.9 -2.7
TIR Tirane 3.06 352 ePn Pn 11 45 13.8 +1.8
TIR eSn Sn 11 45 48.8 +0.4
TIR Tirane 3.06 352 ⇑P Pn 11 45 09.2 -2.8
VAY Valandovo 3.43 28 ePn Pn 11 45 19.1 +2.0
VAY Valandovo 3.43 28 ePn Pb 11 45 23.4 -1.2
VAY iSg Sn 11 45 59.5 +1.9
STIP Stip 3.64 21 ePn Pn 11 45 24.2 +4.2
MATE Matera 3.69 310 ⇑P Pn 11 45 18.6 -2.1
SRS Serrai 3.72 40 ePn Pn 11 45 23.2 +2.1
SG1 Sgolgore (BA) 3.83 312 ePn Pn 11 45 23.5 +0.9
BAI Bari 3.90 317 ePn Pn 11 45 24.1 +0.6
PDG Podgorica 4.20 348 ePn Pn 11 45 29.3 +1.6
PDG eSn Sn 11 46 17.1 +0.5
PDG Podgorica 4.20 348 ⇑P Pn 11 45 24.8 -3.0
BARS Barje 4.62 13 ePn Pn 11 45 34.7 +1.2
TREB Trebinje 4.67 341 ePn Pn 11 45 34.2 +0.1
IDI Anoyia 4.70 129 P Pn 11 45 38.0 +3.4
comp=E,0.6nm,0.3s,baz=295,slow=14,SNR=4.2
IDI S Sn 11 46 30.9 +2.0
comp=E,3.0nm,0.3s,baz=300,slow=17,SNR=6.3
VTS Vitosha 4.81 26 ePn Pn 11 45 38.0 +1.8
VTS Vitosha 4.81 26 ⇑P Pn 11 45 37.4 +1.3
VTS ⇓S Sn 11 46 30.4 -1.3
SELS Selova 4.93 6 ePn Pn 11 45 39.4 +1.7
SJES Sjenica 4.95 356 ePn Pn 11 45 39.9 +1.8
SJES eSn Sn 11 46 35.3 +0.1
BOVS Bovan 5.40 10 ePn Pn 11 45 44.8 +0.6
BOVS eSn Sn 11 46 46.0 -0.2
ZAGS Zajecar 5.66 13 ePn Pn 11 45 48.6 +0.9
DIVS Divibare 5.79 357 ePn Pn 11 45 49.9 +0.3
DIVS eSn Sn 11 46 55.0 -0.7
HAPS Han Pijesak,BI 5.87 350 ePn Pn 11 45 50.3 -0.4
HAPS eSn Sn 11 46 54.7 -3.1
MLR Muntele Rosu 8.27 28 P Pn 11 46 25.7 +2.0
comp=E,0.3nm,0.3s,baz=172,slow=14,SNR=1.9
PLOR Plostina 8.84 30 ⇓P Pn 11 46 33.1 +1.7
VRI Vrincioaia 8.88 30 ⇓P Pn 11 46 34.2 +2.2
SOKA Soboth 9.25 336 ePn Pn 11 46 36.5 -0.6
comp=E,1.8nm,0.2s
OBKA Obir 9.26 334 ePn Pn 11 46 37.2 -0.1
comp=E,1.9nm,0.2s
ABTA Abfaltersbach 10.24 328 ePn Pn 11 46 50.3 -0.4
comp=E,0.2nm,0.1s
MOA Molln 10.53 337 ePn Pn 11 46 55.2 +0.6
comp=E,1.6nm,0.3s
GERES GERESS Array B 11.59 337 P Pn 11 47 13.2 +4.1
comp=E,0.3nm,0.3s,baz=163,slow=15,SNR=4.8
HFS Hagfors 22.25 351 P P 11 49 19.1 -1.2
comp=E,3.6nm,1.0s,baz=157,slow=12,SNR=3.4
FINES FINESS Array B 23.42 7 P P 11 49 31.7 -0.8
comp=E,2.2nm,0.8s,baz=181,slow=11,SNR=5.0
GEYT Alibeck 29.53 79 P P 11 50 27.8 -0.4
comp=E,1.1nm,0.4s,baz=262,slow=9.9,SNR=2.6
TORD Torodi Ar. Bea 30.08 219 P P 11 50 36.6 +3.5
comp=E,0.8nm,0.8s,baz=30,slow=10,SNR=5.4
ARCES ARCESS Array B 31.40 3 P P 11 50 43.9 -0.3
comp=E,2.3nm,0.9s,baz=194,slow=11,SNR=2.9
MKAR Makanchi Array 45.30 58 P P 11 52 38.9 -2.5
comp=E,0.3nm,0.4s,baz=280,slow=6.8,SNR=8.5
ZALV Zalesovo Beam 45.66 48 P P 11 52 43.2 -0.8
comp=E,1.0nm,0.4s,baz=276,slow=8.4,SNR=5.7
SONM Songino Array 60.44 51 P P 11 54 32.5 -0.7
comp=E,0.3nm,0.6s,baz=293,slow=6.4,SNR=2.8
CMAR Chiang Mai Arr 69.95 82 P P 11 55 34.1 -1.2
comp=E,0.7nm,0.3s,baz=312,slow=4.5,SNR=4.2

HEL 12 11:58:52.0,60.°24N×22.°25E,h0km,ML1.7,Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAF	Rauma baz=158	0.82	343	eP	Pg	11 59 06.3	-1.3
RAF				eS	Sg	11 59 16.5	-1.7
AAL	Aland	1.13	268	eP	Pn	11 59 15.7	+0.7
GRAU	Graesoe	1.85	274	eP	Pn	11 59 25.2	+0.3
GRAU				eS	Sb	11 59 50.5	+0.1
NRTU	Norrtaelje	1.91	254	eP	Pb	11 59 26.8	+0.8
NRTU				eS	Sb	11 59 52.5	+0.5
FLYU	Flymyra	2.19	269	eP	Pn	11 59 30.7	+1.2
FIA0	FINESS Array S baz=240	2.23	56	ePB	Pn	11 59 31.3	+1.2
FIA0				eSG	Sb	12 00 01.1	0.0
KEF	Keuruu comp=Z,1.5nm,0.2s	2.31	32	MSG		12 00 00.1	
KEF				eSB	Sn	12 00 01.8	+1.5
IGGU	Iggoen	2.52	287	eP	Pn	11 59 34.7	+0.6
VJF	Virojoki comp=Z,4.2nm,0.2s	2.65	81	MSG		12 00 10.0	
VJF				eSG	Sb	12 00 13.8	+0.5
KAF	Kangasniemi	2.71	45	eSB	Sb	12 00 13.9	-1.3

MEX 12 11:59:45.6±0.5,14.°78N×93.°09W,h71km±22km,MD3.7
GCG 12 11:59:46.6±0.4,15.°04N×92.°97W,h35km±999km,MD3.9
ISC 12 11:59:45.2±2.7,14.°9N±0.°1×93.°1W±0.°1,h28km±16km,n7, σ0§93/14,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.82	86	iP	Pb	12 00 00.4	-0.4
THIG				iS	Sn	12 00 12.2	+0.1
PCIG		0.85	353	iP	Pb	12 00 01.9	+0.6
PCIG				iS	Sn	12 00 14.4	+1.5
STG3	Santiaguito 3,	1.50	95	eP	Pn	12 00 10.2	-0.2
STG3				eS	Sn	12 00 28.6	-0.6
CCIG	Comitan	1.70	33	iP	Pb	12 00 15.4	-0.5
CCIG				eS	Sb	12 00 38.4	+1.4
TGIG		1.91	360	eP	Pn	12 00 14.6	-1.3
TGIG				eS	Sb	12 00 41.9	-1.0
PCG	Pacaya	2.47	100	eP	Pn	12 00 24.1	+0.3
PCG				eS	Sn	12 00 53.6	+0.4
IXG	Ixpaco	2.67	104	eP	Pn	12 00 27.0	+0.4
IXG				eS	Sn	12 00 58.3	+0.1

UPP 12 12:00:35.5±1.2,62.°90N×22.°65E,h0km,ML1.6, Suspected explosion,Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UMAU	Umeaa	1.33	319	P	Pg	12 01 00.1	-0.8
HUSU	Husum	1.62	287	P	Pn	12 01 04.9	-0.4
HUSU				S	Sg	12 01 28.0	+0.4
OUF	Merijarvi	1.74	31	eSG	Pn	12 01 05.5	-1.4
ODEU	Stanfors	1.74	331	P	Pn	12 01 07.0	0.0
ODEU				S	Sg	12 01 32.0	+0.6
OBF0	Syolatti, Pyha	1.75	23	eSG	Pn	12 01 06.8	-0.2
BURU	Burvik	1.78	342	P	Pn	12 01 07.6	+0.1
BURU				S	Sg	12 01 33.0	+0.3
BURU	Burvik	1.78	342	eSG	Pn	12 01 07.5	+0.1
BREU	Bredtraesk	2.09	300	P	Pb	12 01 12.9	-1.2
SVAU	Svanoeiden	2.11	321	P	Pn	12 01 12.6	+0.7

IDC 12 12:03:49.7±0.5,13.°52N×144.°70E,h123km±4km,mb3.5/15, mb1 3.6/15,mb1mx3.4/50,mbtmp3.8/15,Error ellipse: s-maj=20.6km s-min=12.9km az=79.0
NEIC 12 12:03:49.8±1.2,13.°38N±0.°09×144.°71E±0.°08, h125km±5km,mb4.1/13,Error ellipse: s-maj=15.7km s-min=5.6km az=219.0
ISC 12 12:03:50.2±0.5,13.°40N±0.°08×144.°6E±0.°1,h129km,n33, σ0§97/34,mb3.7/21,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam 784nm,0.3s,baz=245,slow=0.6,SNR=333	0.30	53	P	Pn	12 04 07.5	-0.8
GUMO 2μm,0.3s,baz=163,slow=20,SNR=70				S	Sn	12 04 20.4	-1.5
ANA2	Anatahan	3.10	20	Pn	Pn	12 04 40.5	+2.3
PATS	Pohnpei	14.97	115	P	Pn	12 07 15.6	+0.2
MJAR	Matsushiro Arr 4.6nm,1.0s,baz=166,slow=6.3,SNR=5.0	23.75	347	P	P	12 08 49.9	-0.9
KSRS	Korea Array 0.9nm,0.5s,baz=143,slow=9.7,SNR=4.2	28.21	331	P	P	12 09 30.7	-0.1
WB0	Warramunga Arr	34.47	197	P	P	12 10 25.7	-0.2
WR0	Warramunga Arr	34.61	197	P	P	12 10 27.1	+0.1
WR0 comp=Z,6.5nm,1.3s				IAmb	IAmb	12 10 36.3	
WRAB	Tennant Creek	34.64	197	P	P	12 10 27.8	+0.5
WB2	Warramunga Arr	34.65	197	P	P	12 10 27.8	+0.3
WB2 comp=Z,4.1nm,1.1s				IAmb	IAmb	12 10 34.1	
WRA	Warramunga Arr comp=Z,0.9nm,0.7s,baz=22,slow=9.3,SNR=5.9	34.65	197	P	P	12 10 27.7	+0.2
ASAR	Alice Springs comp=Z,0.3nm,0.6s,baz=22,slow=11,SNR=5.3	38.31	196	P	P	12 10 59.0	+0.6
DZM	Mont Dzumac comp=Z,6.1nm,0.9s,baz=338,slow=16,SNR=3.4	41.24	148	P	P	12 11 24.2	+1.4
CMAR	Chiang Mai Arr comp=Z,0.8nm,0.5s,baz=87,slow=5.9,SNR=8.3	44.12	283	P	P	12 11 47.2	+1.1
STKA	Stephens Creek comp=Z,1.1nm,0.7s,baz=336,slow=15,SNR=3.2	45.12	184	P	P	12 11 53.9	+0.2
STKA	Stephens Creek	45.12	184	P	P	12 11 54.3	+0.5
BBOO	Buckleboo	46.68	190	P	P	12 12 06.6	+0.6
SONM	Songino Array comp=Z,0.6nm,0.7s,baz=146,slow=7.6,SNR=3.7	46.74	325	P	P	12 12 06.6	0.0
SONM	Songino Array	46.74	325	P	P	12 12 07.5	+0.9
MKAR	Makanchi Array comp=Z,0.3nm,0.4s,baz=91,slow=8.1,SNR=6.9	61.46	316	P	P	12 13 53.2	0.0
KURK	Kurchatov	64.57	320	P	P	12 14 13.4	-0.2
KURK comp=Z,4.5nm,1.4s				IAmb	IAmb	12 14 13.5	
KURBB	Kurchatov Arra comp=Z,0.7nm,0.4s,baz=104,slow=6.9,SNR=7.6	64.61	320	P	P	12 14 13.3	-0.6
MLY	Manley	67.33	25	P	P	12 14 31.0	-0.1
MLY comp=Z,3.3nm,1.4s				IAmb	IAmb	12 14 37.1	
IL31		68.84	25	P	P	12 14 38.9	-1.4
IL31 comp=Z,2.3nm,1.1s				IAmb	IAmb	12 14 44.3	
ILAR	Eielson Array comp=Z,0.4nm,0.4s,baz=250,slow=5.7,SNR=16	68.84	25	P	P	12 14 38.5	-1.9
ILAR	Eielson Array	68.84	25	P	P	12 14 38.9	-1.5
SCRK	Sand Creek	69.90	26	P	P	12 14 46.8	-0.3
BVAR	Borovoye Array comp=Z,0.5nm,0.4s,baz=103,slow=9.1,SNR=3.0	69.92	322	P	P	12 14 46.7	-0.7
KRMB	Red Mountain	82.33	49	P	P	12 15 56.4	-1.6
YKA	Yellowknife Ar comp=Z,0.4nm,0.5s,baz=288,slow=5.4,SNR=5.7	83.13	27	P	P	12 16 01.4	-0.1
RES	Resolute Bay	84.78	13	P	P	12 16 10.3	+0.6
RES comp=Z,1.4nm,0.8s				IAmb	IAmb	12 16 10.9	
NVAR	Mina Array Bea comp=Z,0.2nm,0.4s,baz=270,slow=4.5,SNR=3.0	87.22	51	P	P	12 16 23.2	+0.5
FINES	FINESS Array B comp=Z,1.0nm,0.7s,baz=91,slow=6.0,SNR=2.7	91.23	335	P	P	12 16 39.1	-1.6
TORD	Torodi Ar. Bea comp=Z,0.3nm,0.4s,baz=69,slow=1.2,SNR=3.5	134.77	304	PKP	PKiKP	12 22 55.9	-0.3

IDC 12 12:12:46.2±0.9,36.°11N×82.°57E,h0km,mb3.5/7, mb1 3.7/13,mb1mx3.5/45,mbtmp3.6/13,ML3.2/6,Error ellipse: s-maj=27.3km s-min=15.8km az=57.0
BJI 12 12:12:46.5±0.0,35.°94N×82.°50E,h8km,ML3.7/6
ISC 12 12:12:47.7±0.9,36.°16N±0.°09×82.°6E±0.°1,h10km,n14, σ1§55/16,mb3.4/7,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	8.59	25	eP	Pn	12 14 53.2	+1.1
WMQ				S	Sn	12 16 28.4	-0.6
WMQ comp=N,7.0nm,1.1s				smax	smax		
WMQ comp=E,5.0nm,1.1s				smax	smax		
AAK	Ala-Archa 0.1nm,0.3s,baz=153,slow=17,SNR=3.9	9.02	318	Pn	Pn	12 15 00.5	+2.4
AAK 0.9nm,0.3s,baz=148,slow=17,SNR=7.3				Pg		12 15 30.0	
AAK 0.7nm,0.3s,baz=180,slow=20,SNR=4.4				Lg	Lg	12 17 25.6	
MKAR	Makanchi Array 1.3nm,0.3s,baz=184,slow=12,SNR=52	10.63	359	Pn	Pn	12 15 21.0	+1.0
MKAR 0.2nm,0.3s,baz=178,slow=23,SNR=3.9				Sn	Sn	12 17 18.9	-0.2
MKAR baz=164,slow=28,SNR=3.0				Lg	Lg	12 18 31.7	
KURBB	Kurchatov Arra 0.0nm,0.3s,baz=174,slow=12,SNR=6.2	14.76	350	Pn	Pn	12 16 14.3	-2.1
ZALV	Zalesovo Beam 0.2nm,0.3s,baz=194,slow=13,SNR=7.8	17.86	4	P	Pn	12 16 55.1	-1.0
BVAR	Borovoye Array 0.3nm,0.3s,baz=138,slow=9.0,SNR=6.0	18.93	337	P	P	12 17 08.8	+0.2
GEYT	Alibeck 0.1nm,0.3s,baz=98,slow=15,SNR=2.4	19.63	282	P	Pn	12 17 15.5	-2.3
SONM	Songino Array 0.6nm,0.6s,baz=242,slow=11,SNR=7.6	21.08	49	P	P	12 17 33.4	+1.2
CMAR	Chiang Mai Arr 0.3nm,0.3s,baz=320,slow=11,SNR=4.2	22.77	136	P	P	12 17 48.9	-1.5
FINES	FINESS Array B 2.2nm,1.1s,baz=98,slow=10.0,SNR=2.5	43.15	324	P	P	12 20 46.1	-2.0
WRA	Warramunga Arr 1.3nm,1.0s,baz=327,slow=5.8,SNR=5.8	74.19	130	P	P	12 24 24.6	-0.2
TORD	Torodi Ar. Bea 0.3nm,0.8s,baz=48,slow=4.3,SNR=2.1	75.10	276	P	P	12 24 31.4	+1.1
ASAR	Alice Springs 1.0nm,0.9s,baz=326,slow=5.4,SNR=5.5	76.72	133	P	P	12 24 40.0	+0.7
YKA	Yellowknife Ar 0.2nm,0.7s,baz=334,slow=5.6,SNR=3.6	80.71	8	P	P	12 25 02.4	+1.7

SOME 12 12:25:57.4,39.°93N×76.°70E,h10km
NNC 12 12:26:00.0±1.2,40.°05N×76.°68E,h0km,mb3.9,mpv3.6, Error ellipse: s-maj=8.1km s-min=6.4km az=173.0
KRNET 12 12:26:04.4±0.1,40.°18N×76.°61E,mb3.3
ISC 12 12:26:00.1±1.3,40.°06N±0.°05×76.°61E±0.°03,h3km±16km, n58,σ1§11/86,27C-10D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn baz=39	1.45	342	⇑iP	Pg	12 26 29.4	+1.5
NRN baz=39				⇑iS	Sg	12 26 47.9	+1.3
KDJ	Kajisay baz=13	2.11	12	⇑iP	Pg	12 26 41.4	+0.8
KDJ baz=13				⇑iS	Sg	12 27 08.5	+0.5
ULHL	Ulahol baz=53	2.20	353	⇑iP	Pg	12 26 42.6	+0.3
ULHL baz=53				⇑iS	Sg	12 27 10.7	-0.1
ULHL	Ulahol SNR=11	2.20	353	P	Pg	12 26 43.5	+1.2
KZA	Kyzart baz=32	2.26	333	⇓iP	Pg	12 26 43.8	+0.3
KZA baz=32				⇓iS	Sg	12 27 12.3	-0.5
KZA	Kyzart SNR=44	2.26	333	P	Pg	12 26 44.6	+1.1
BOOM	Boomskoye usch baz=48	2.48	349	⇑iP	Pb	12 26 46.7	+1.3
BOOM baz=48				⇑iS	Sb	12 27 17.3	+0.9
ARLS	Aral baz=15	2.50	317	⇑iP	Pg	12 26 47.4	-0.6
ARLS baz=15				⇑iS	Sb	12 27 18.4	+1.5
UCH	Uchtor baz=23	2.68	325	⇑iP	Pb	12 26 49.4	+0.3
UCH baz=23				⇑iS	Sb	12 27 22.6	+0.1
UCH	Uchtor SNR=17	2.68	325	P	Pg	12 26 50.6	-0.9
PRZ	Przheval'sk baz=30	2.77	29	⇑iP	Pb	12 26 50.5	+0.1
PRZ baz=30				⇑iS	Sb	12 27 24.4	-0.5
ANVS	Anan'yevo baz=17	2.83	16	⇑eP	Pb	12 26 51.7	+0.2
ANVS baz=17				⇑iS	Sb	12 27 25.8	-0.9
KBK	Karagaybulak baz=34	2.88	335	⇓iP	Pb	12 26 52.3	0.0
KBK baz=34				⇓iS	Sb	12 27 27.2	-0.7
KBK	Karagaybulak SNR=16	2.88	335	P	Pg	12 26 54.1	-1.2
IZV	Izvestkoviy 11nm,0.5s	2.97	0	eP	Pb	12 26 54.2	+0.3
IZV 39nm,0.4s				eS	Sg	12 27 35.4	-0.2
IZV	Izvestkoviy 11nm,0.5s	2.97	0	Pg	Pb	12 26 54.2	+0.3
IZV 39nm,0.4s				Lg	Lg	12 27 35.4	
TNSS	Tian-Shan 14nm,0.5s	2.98	5	eP	Pb	12 26 54.3	+0.1
TNSS 35nm,0.8s				eS	Sg	12 27 35.5	-0.5
TNSS	Tian-Shan 14nm,0.5s	2.98	5	Pg	Pb	12 26 54.3	+0.1
TNSS 35nm,0.8s				Lg	Lg	12 27 35.5	
KST	Kastek	3.02	351	eP	Pb	12 26 55.0	+0.4

7.9nm,0.4s
KST eS Sg 12 27 36.8 -0.3
18nm,0.7s
KST Kastek 3.02 351 Pg Pb 12 26 55.0 +0.4
7.9nm,0.4s
KST Lg Lg 12 27 36.8
18nm,0.7s
AML Almayashu 3.02 314 ⇓iP Pb 12 26 54.9 +0.1
baz=12
AML ⇓iS Sb 12 27 31.2 -1.1
baz=12
AML Almayashu 3.02 314 P Pb 12 26 55.6 +0.8
SNR=36
AAK Ala-Archa 3.02 329 ⇑iP Pb 12 26 54.5 -0.3
baz=28
AAK ⇑iS Sb 12 27 30.6 -1.6
baz=28
AAK Ala-Archa 3.02 329 P Pb 12 26 55.7 +0.9
SNR=11
AAK Ala-Archa 3.02 329 ⇑Pg Pg 12 26 58.3 +0.2
10nm,0.6s
AAK Lg Lg 12 27 37.3
39nm,0.8s
ARSB Arslanbob 3.03 296 ⇑eP Pb 12 26 54.9 0.0
baz=94
ARSB ⇑iS Sb 12 27 31.8 -0.5
baz=94
MTBS Maitube 3.07 358 eP Pb 12 26 56.4 +1.0
9.3nm,0.3s
MTBS eS Sg 12 27 39.1 +0.4
15nm,0.4s
MTBS Maitube 3.07 358 Pg Pb 12 26 56.4 +1.0
9.3nm,0.3s
MTBS Lg Lg 12 27 39.1
15nm,0.4s
MDOK Medeo 3.12 6 eP Pb 12 26 56.3 0.0
16nm,0.4s
MDOK eS Sg 12 27 38.9 -1.3
40nm,0.9s
MDOK Medeo 3.12 6 ⇑Pg Pg 12 26 58.8 -1.0
12nm,0.6s
MDOK ⇑Lg Lg 12 27 38.5
36nm,0.7s
MDOK Medeo 3.12 6 Pg Pb 12 26 56.3 0.0
16nm,0.4s
MDOK Lg Lg 12 27 38.9
40nm,0.9s
KNDC Almaty 3.16 5 ⇓Pg Pb 12 26 59.2 +2.1
17nm,0.4s
KNDC ⇑Lg Lg 12 27 41.4
89nm,0.7s
KOTS Kotyrbulak 3.19 7 eP Pb 12 26 57.8 +0.2
33nm,0.5s
KOTS eS Sg 12 27 41.5 -1.2
122nm,0.7s
KOTS Kotyrbulak 3.19 7 Pg Pb 12 26 57.8 +0.2
33nm,0.5s
KOTS Lg Lg 12 27 41.5
122nm,0.7s
DGS Degeres 3.24 349 eP Pb 12 26 59.7 +1.3
10.0nm,0.6s
DGS eS Sg 12 27 44.7 +0.5
32nm,0.5s
DGS Degeres 3.24 349 Pg Pb 12 26 59.7 +1.3
10.0nm,0.6s
DGS Lg Lg 12 27 44.7
32nm,0.5s
CHMS Chumysh 3.25 335 P Pb 12 26 58.9 +0.4
SNR=9.7
CHMS Chumysh 3.25 335 ⇑Pg Pb 12 26 57.6 -0.9
12nm,0.6s
CHMS ⇓Lg Lg 12 27 44.6
9.6nm,0.7s
SATY Saty 3.29 24 eP Pb 12 26 59.6 +0.4
1.6nm,0.2s
SATY eS Sg 12 27 44.6 -1.1
27nm,0.4s
SATY Saty 3.29 24 Pg Pb 12 26 59.4 +0.3
SATY Lg Lg 12 27 44.6
EKS2 Erkin-Say 3.36 322 ⇑iP Pb 12 26 58.7 -1.7
baz=20
EKS2 ⇑iS Sb 12 27 38.6 -3.1
baz=20
EKS2 Erkin-Say 3.36 322 P Pb 12 27 00.9 +0.5
SNR=5.4
USP Ospenovka 3.57 334 P Pb 12 27 02.5 -1.5
SNR=5.7
UZB Uzynbulak 3.58 30 eP Pb 12 27 04.9 +0.8
4.1nm,0.4s
UZB eS Sg 12 27 53.6 -1.4
17nm,1.0s
UZB Uzynbulak 3.58 30 Pg Pb 12 27 04.9 +0.8
4.1nm,0.4s
UZB Lg Lg 12 27 53.6
17nm,1.0s
KURS Kuram 3.62 18 eP Pb 12 27 05.4 +0.6
6.4nm,0.5s
KURS eS Sg 12 27 54.5 -1.8
16nm,1.0s
KURS Kuram 3.62 18 Pg Pb 12 27 05.4 +0.6
6.4nm,0.5s
KURS Lg Lg 12 27 54.5
16nm,1.0s
MRKS Merke 3.69 318 eP Pb 12 27 07.8 +1.6
4.0nm,0.4s
MRKS eS Sg 12 27 58.5 -0.3
15nm,0.4s
MRKS Merke 3.69 318 Pg Pb 12 27 07.8 +1.6
4.0nm,0.4s
MRKS Lg Lg 12 27 58.5
15nm,0.4s
SGDS Sogindy 3.70 337 Pg Pb 12 27 08.0 +1.9
5.5nm,0.4s
SGDS Lg Lg 12 27 59.2
8.5nm,0.4s
KPKS Kokpek 3.74 24 eP Pb 12 27 06.6 -0.3
7.6nm,0.6s
KPKS eS Sb 12 27 56.4 +3.8
44nm,0.6s
CHKK Chushkaly 3.80 4 eP Pb 12 27 08.8 +0.9
4.1nm,0.1s
CHKK eS Sg 12 28 00.4 -1.8
18nm,0.3s
CHKK Chushkaly 3.80 4 Pg Pb 12 27 08.8 +0.9
4.1nm,0.1s
CHKK Lg Lg 12 28 00.4
18nm,0.3s
KUU Kurty 3.83 357 eP Pb 12 27 09.5 +1.0
1.6nm,0.1s
KUU eS Sg 12 28 01.4 -1.9
11nm,0.5s
KUU Kurty 3.83 357 Pg Pb 12 27 09.5 +1.0
1.6nm,0.1s
KUU Lg Lg 12 28 01.4
11nm,0.5s
PDGK Podgornoye 3.91 33 Pg Pb 12 27 10.9 +1.0
4.4nm,0.5s
PDGK Lg Lg 12 28 03.7
7.4nm,0.8s
PDGK Podgornoye 3.91 33 ⇓Pg Pg 12 27 13.4 -1.8
6.3nm,0.5s
PDGK ⇓Lg Lg 12 28 04.1
35nm,0.8s
DHRM DHARAMSHALA 7.80 182 eP Pg 12 28 30.0 +0.5
DHRM IAmb IAmb 12 28 32.4
comp=Z,13nm,0.5s

IDC 12 12:26:41.3±0.7, 36.18N×82.93E, h0km, mb4.1/18, mb1 4.3/23, mb1mx4.1/53, mbtmp4.2/23, ML4.0/5, MS4.6/2, Ms1 4.6/2, ms1mx3.8/44, Error ellipse: s-maj=19.6km s-min=12.2km az=36.0
BJI 12 12:26:42.0±0.0, 36.19N×82.99E, h7km, mB4.9/7, mb4.3/26, ML4.8/7, Ms4.2/10, Ms7 4.2/8
MOS 12 12:26:42.1±1.4, 36.32N×82.97E, h10km, mb4.7/31, Error ellipse: s-maj=8.1km s-min=4.2km az=118.1
NEIC 12 12:26:43.7±1.4, 36.24N±0.08×82.93E±0.09, h10km±1km, mb4.5/38, Error ellipse: s-maj=13.5km s-min=11.0km az=211.0
NNC 12 12:26:50.4±2.8, 36.76N×82.95E, h13km±12km, mb4.9, mpv4.8, Error ellipse: s-maj=21.3km s-min=14.8km az=100.0
ISC 12 12:26:43.8±0.4, 36.29N±0.05×82.92E±0.05, h10km, n197, σ1.59/202, mb4.4/57, MS4.6/4, 14C-11D, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JOSI Joshimath 6.38 207 ex Pn 12 28 16.1 -1.9
JOSI IAmb IAmb 12 28 26.1
comp=Z,148nm,1.4s
SMLA Simla 7.04 225 ex Pn 12 28 30.4 +3.5
SMLA IAmb IAmb 12 28 36.8
comp=Z,37nm,0.2s
PRZ Przheval'sk 7.11 332 Pn 12 28 28.4 +0.5
PRZ Przheval'sk 7.11 332 P Pn 12 28 28.5 +0.5
KDJ Kajisay 7.34 324 Pn 12 28 30.6 -0.6
KDJ Kajisay 7.34 324 P Pn 12 28 30.6 -0.6
NRN Naryn 7.45 316 Pn Pn 12 28 34.2 +1.4
NRN Naryn 7.45 316 P Pn 12 28 34.2 +1.4
DANN Dangsing 7.95 175 eP Pn 12 28 41.3 +1.6
comp=Z,37nm,0.6s
MDOK Medeo 8.22 328 ⇓Pn Pn 12 28 44.2 +1.0
comp=Z,30nm,0.5s
MDOK ⇑Pg Pg 12 29 15.1 -6.0
comp=Z,48nm,0.6s
MDOK ⇑Lg Lg 12 31 01.4
comp=Z,245nm,1.1s
MDOK Medeo 8.22 328 P Pn 12 28 44.2 +1.0
KNDC Almaty 8.30 328 ⇑Pn Pn 12 28 45.2 +1.0
comp=Z,39nm,0.6s
KNDC ⇑Pg Pb 12 29 15.6 +8.0
comp=Z,40nm,0.6s
KNDC ⇓Lg Lg 12 30 59.2
comp=Z,340nm,1.2s
KNDC Almaty 8.30 328 P Pn 12 28 45.2 +1.0
WMQ Urumqi 8.36 24 eP Pn 12 28 45.6 +0.4
WMQ pP Pb 12 28 51.5 -17
WMQ smax smax
comp=Z,130nm,1.3s
WMQ smax smax
comp=Z,150nm,1.5s
WMQ Urumqi 8.36 24 Pn 12 28 45.5 +0.4
WMQ Urumqi 8.36 24 P Pn 12 28 45.5 +0.4
NIL Nilore 8.36 254 Pn 12 28 44.9 -0.3
NIL Nilore 8.36 254 P Pn 12 28 44.9 -0.3
KOLN Koldanda 8.52 176 eP Pn 12 28 47.8 +0.4
comp=Z,40nm,0.7s
KKN Kakani 8.71 166 eP Pn 12 28 50.8 +0.7
comp=Z,26nm,0.6s
GUN Gumba 8.72 162 eP Pn 12 28 50.5 +0.1
comp=Z,142nm,0.9s
DMN Daman 8.85 167 eP Pn 12 28 51.8 -0.3
PKIN Phulchoki 8.94 166 eP Pn 12 28 53.6 +0.3
comp=Z,37nm,0.6s
PKI Pulchoki 8.95 166 eP Pn 12 28 53.2 -0.2
comp=Z,54nm,0.7s
JIRN Jiri 9.04 161 eP Pn 12 28 55.3 +0.5
comp=Z,139nm,0.7s
AAK Ala-Archa 9.09 317 Pn Pn 12 28 55.9 +0.8
comp=Z,0.9nm,0.3s,baz=100,slow=8.0,SNR=3.5
AAK Lg Lg 12 31 26.2
comp=Z,1.2nm,0.3s,baz=356,slow=19,SNR=2.8
AAK Ala-Archa 9.09 317 ⇓Pn Pn 12 28 58.1 +2.9
comp=Z,13nm,0.6s
AAK ⇑Pg 12 29 27.9
comp=Z,24nm,0.7s
AAK ⇑Lg Lg 12 31 27.1
comp=Z,156nm,1.1s
AAK Ala-Archa 9.09 317 Pn Pn 12 28 56.1 +0.9
AAK Ala-Archa 9.09 317 ⇓eP Pn 12 28 57.2 +2.0
FRU1 Bishkek 9.13 318 Pn 12 28 56.8 +1.2
FRU1 Bishkek 9.13 318 P Pn 12 28 56.8 +1.2
CHMS Chumysh 9.19 319 ⇓Pg Pn 12 29 32.1 +36
comp=Z,11nm,0.7s
CHMS ⇓Lg Lg 12 31 30.4
comp=Z,83nm,1.4s
ARSB Arslanbob 9.24 306 Pn 12 28 57.9 +0.6
ARSB Arslanbob 9.24 306 P Pn 12 28 57.9 +0.6
LSA Lhasa 9.53 131 Pn Pn 12 29 01.2 -0.4
LSA Lhasa 9.53 131 P Pn 12 29 01.2 -0.4
TAPN Taplejung 9.80 154 eP Pn 12 29 04.3 -0.8
comp=Z,45nm,1.0s
RAMN Ramite 9.82 160 eP Pn 12 29 03.9 -1.5
comp=Z,162nm,0.9s
ODAN Odare 10.14 157 eP Pn 12 29 08.5 -1.2
comp=Z,79nm,0.9s
BTK Batken 10.24 295 Pn 12 29 11.4 +0.4
BTK Batken 10.24 295 P Pn 12 29 11.4 +0.4
MK31 Makanchi Array 10.50 358 Pn Pn 12 29 13.6 -0.9
comp=Z,5.9nm,0.4s,baz=180,slow=12,SNR=89
MK31 ⇑Sn Sn 12 31 07.9 -4.2
comp=Z,35nm,0.8s,baz=183,slow=22,SNR=6.0
MK31 Makanchi Array 10.50 358 Pn 12 29 14.4 0.0
MK31 Makanchi Array 10.50 358 P Pn 12 29 14.4 0.0
MKAR Makanchi Array 10.50 358 Pn Pn 12 29 13.6 -0.8
comp=Z,3.0nm,0.3s,baz=192,slow=11,SNR=54
MKAR Sn Sn 12 31 08.0 -4.1
comp=Z,1.7nm,0.3s,baz=168,slow=16,SNR=3.5
MKAR Lg Lg 12 32 15.9
comp=Z,0.4nm,0.3s,baz=171,slow=27,SNR=2.2
MKAR Makanchi Array 10.50 358 Pn 12 29 14.0 -0.4
MKAR Makanchi Array 10.50 358 P Pn 12 29 14.0 -0.4
MAKZ Makanchi 10.53 356 ⇑Pn Pn 12 29 14.5 -0.3
comp=Z,48nm,1.1s
MAKZ ⇑Sn Sn 12 31 08.9 -3.9
comp=Z,54nm,1.1s
MAKZ Makanchi 10.53 356 Pn 12 29 14.9 +0.1
MAKZ Makanchi 10.53 356 P Pn 12 29 14.9 +0.1
KBL Kabul 11.46 265 Pn 12 29 27.2 -0.6
KBL Kabul 11.46 265 P Pn 12 29 27.2 -0.6
KK31 Karatay Array 11.73 309 Pn Pn 12 29 32.9 +1.7
comp=Z,1.7nm,0.5s,baz=130,slow=13,SNR=5.8
KK31 ⇑Lg Lg 12 32 56.8
comp=Z,32nm,1.0s
KK31 Karatay Array 11.73 309 Pn Pn 12 29 30.1 -1.0
KK31 Karatay Array 11.73 309 P Pn 12 29 30.1 -1.0
KKAR Karatay Array 11.73 309 Pn 12 29 30.4 -0.8
KKAR Karatay Array 11.73 309 Pn Pn 12 29 30.0 -1.2
KKAR Karatay Array 11.73 309 P Pn 12 29 30.4 -0.8
CHM Chimkent 11.94 304 P Pn 12 29 32.1 -2.0
BOK Bokaro 12.72 168 eP Pn 12 29 41.8 -2.9
BOK IAmb IAmb 12 29 42.3
comp=Z,29nm,0.9s
GTA Gaotai 13.71 72 eP Pn 12 29 58.9 +0.6
GTA pP P 12 30 03.0 -4.1
GTA sP 12 30 06.2
GTA pmax pmax
comp=Z,2.0nm,0.8s
KURBB Kurchatov Arra 14.67 349 Pn Pn 12 30 08.7 -2.6
comp=Z,0.1nm,0.3s,baz=172,slow=12,SNR=15
KURK Kurchatov 14.75 349 Pn 12 30 10.3 -2.1
KURK Kurchatov 14.75 349 ⇓eP Pn 12 30 09.7 -2.6
HRA Herat 16.98 270 Pn Pn 12 30 40.2 -1.5
ZAA0 Zalesovo Array 17.70 4 Pn 12 30 47.0 -3.4
ZALV Zalesovo Beam 17.70 4 P Pn 12 30 47.1 -3.2
comp=Z,0.6nm,0.3s,baz=191,slow=12,SNR=27
ZALV Zalesovo Beam 17.70 4 iP Pn 12 30 47.5 -2.8
ZALV pmax pmax
comp=Z,6.0nm,0.6s
CD2 Chengdu 18.16 101 eP Pn 12 30 53.5 -2.6
BVAR Borovoye Array 18.91 336 P P 12 31 04.7 +0.2
comp=Z,2.3nm,0.3s,baz=142,slow=10,SNR=38
BRVK Borovoye 18.97 336 P P 12 31 05.6 +0.5
BRVK IAmb IAmb 12 31 09.5
comp=Z,36nm,0.8s
BRVK Borovoye 18.97 336 P P 12 31 05.6 +0.5
BRVK pmax pmax
comp=Z,36nm,0.9s
GEYT Alibeck 19.84 282 P P 12 31 13.9 -0.9
comp=Z,0.4nm,0.3s,baz=98,slow=11,SNR=8.1
GEYT Alibeck 19.84 282 P P 12 31 14.4 -0.4
GYA0B ALIBECK ARRAY 19.84 282 P P 12 31 14.4 -0.4
MOY Mondy 20.05 34 eP Pn 12 31 21.6 +2.8
MOY pmax pmax
comp=Z,24nm,1.4s
ZAK Zakamensk 20.34 40 eP Pn 12 31 21.6 -0.7
ZAK pmax pmax
comp=Z,8.0nm,1.0s
SONM Songino Array 20.81 49 P P 12 31 25.4 0.0
comp=Z,5.7nm,0.9s,baz=240,slow=12,SNR=31
SONM Songino Array 20.81 49 P P 12 31 26.4 +1.1
SONM Songino Array 20.81 49 P P 12 31 26.5 +1.1
SONM pmax pmax
comp=Z,5.0nm,1.0s
ABKAR Akbulak array 21.17 315 P P 12 31 29.2 +0.2
ULN Ulaanbaatar 21.23 49 P P 12 31 31.9 +2.0
ULN IAmb IAmb 12 31 36.9
comp=Z,12nm,0.9s
ULN Ulaanbaatar 21.23 49 P P 12 31 31.9 +2.0
ULN pmax pmax

comp=Z,12nm,0.9s
TLY Talaya 21.31 37 P P 12 31 31.0 +0.4
comp=Z,3.4nm,0.8s,baz=210,slow=8.1,SNR=2.8
TLY Talaya 21.31 37 P P 12 31 30.0 -0.6
TLY Talaya 21.31 37 iP P 12 31 28.3 -2.3
TLY pmax pmax
comp=Z,1.0nm,0.5s
XAN Xi'an 21.35 88 P P 12 31 32.2 +0.9
XAN pP pP 12 31 35.7 +0.1
XAN pmax pmax
comp=Z,5.0nm,0.8s
XAN Xi'an 21.35 88 P P 12 31 31.6 +0.3
XAN Xi'an 21.35 88 P P 12 31 31.6 +0.3
XAN pmax pmax
comp=Z,11nm,1.0s
CHTO Chiang Mai 22.41 137 P P 12 31 42.0 -0.7
CHTO Chiang Mai 22.41 137 P P 12 31 42.0 -0.7
CHTO pmax pmax
comp=Z,6.0nm,0.9s
CMAR Chiang Mai Arr 22.70 137 P P 12 31 43.0 -2.7
comp=Z,1.0nm,0.3s,baz=325,slow=8.9,SNR=14
HHC Hu-ho-hao-te 22.80 70 eP P 12 31 46.3 -0.5
HHC pmax pmax
comp=Z,2.0nm,0.7s
HHC pmax pmax
comp=Z,280nm,6.8s
AKTO Aktyubinsk 22.83 316 P P 12 31 46.2 -0.6
comp=Z,11nm,0.9s,baz=115,slow=9.5,SNR=26
PBKT Sadao Pong 25.35 136 P P 12 32 09.3 -1.7
PBKT IAmb IAmb 12 32 17.7
comp=Z,7.6nm,1.1s
SVE Sverdlovsk 25.41 331 ⇓eP P 12 32 12.5 +1.2
SVE pmax pmax
comp=Z,16nm,1.0s
ARU Arti 25.99 328 P P 12 32 16.7 +0.2
comp=Z,7.7nm,0.8s,baz=114,slow=8.5,SNR=15
ARU Arti 25.99 328 P P 12 32 17.1 +0.6
ARU Arti 25.99 328 c iP P 12 32 17.6 +1.1
ARU 12 32 52.9
ARU S S 12 36 49.8 +2.8
ARU SS SnSn 12 37 46.5 +2.7
ARU pmax pmax
comp=Z,20nm,0.8s
WHN Wuhan 26.78 93 P P 12 32 26.8 +2.9
BOD Bodaibo 29.76 34 eP P 12 32 54.1 +3.9
BOD pmax pmax
comp=Z,5.0nm,1.4s
GNI Garni 30.09 289 iP P 12 32 55.7 +2.1
GNI pmax pmax
comp=Z,11nm,1.0s
KIRV Kirov 31.26 326 iP P 12 33 04.1 +0.7
KVAR Kislovodsk Arr 31.45 297 LR LR 12 48 07.5
comp=Z,1μm,20.4s,baz=293,slow=41
KIV Kislovodsk 31.46 297 eP P 12 33 04.8 -0.7
KIV pmax pmax
comp=Z,14nm,1.0s
VRH Novokhopyorsk 32.81 310 eP P 12 33 17.5 +0.4
VRH pmax pmax
comp=Z,10.0nm,0.8s
VORD Divnogorie 34.28 309 eP P 12 33 30.6 +0.7
VORD pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 34.39 310 eP P 12 33 30.9 -0.1
VSR pmax pmax
comp=Z,10.0nm,0.6s
KSRS Korea Array 35.76 74 P P 12 33 42.0 -0.8
comp=Z,0.8nm,0.6s,baz=283,slow=11,SNR=3.7
KSRS LR LR 12 49 58.8
comp=Z,1μm,20.9s,baz=277,slow=39
OBN Obninsk 36.61 316 ⇓eP P 12 33 51.2 +1.3
OBN e 12 33 54.1
OBN S S 12 39 29.0 -3.5
OBN eSS SnSn 12 42 00.7 -1.2
OBN pmax pmax
comp=Z,10.0nm,1.0s
OBN MLR MLR
comp=Z,1μm,22.0s
KLMR Klimovskoe 36.75 326 eP P 12 33 49.8 -1.3
KLMR pmax pmax
comp=Z,22nm,1.3s
KLMR Klimovskoe 36.75 326 eP P 12 33 49.9 -1.2
KLMR AMP 12 33 57.7
comp=Z,22nm,1.3s
KLR Kul'dur 37.47 54 iP P 12 33 55.7 -1.6
KLR pmax pmax
comp=Z,2.0nm,1.1s
ILGA Ilgaz 38.30 293 P P 12 34 05.1 +0.3
ILGA IAmb IAmb 12 34 10.1
comp=Z,7.7nm,0.6s
BR131 Keskin Array S 38.59 290 P P 12 34 08.1 +0.9
BR131 IAmb IAmb 12 34 14.3
comp=Z,6.8nm,1.0s
BR131 Keskin Array S 38.59 290 ⇓eP P 12 34 08.1 +0.9
BRTR Keskin Array B 38.59 290 P P 12 34 07.2 0.0
comp=Z,4.4nm,0.8s,baz=90,slow=7.4,SNR=21
BRTR Keskin Array B 38.59 290 P P 12 34 08.1 +0.9
BRTR Keskin Array B 38.59 290 iP P 12 34 10.8 +3.6
BRTR pmax pmax
comp=Z,4.0nm,0.8s
YAK Yakutsk 38.68 33 P P 12 34 07.4 +0.1
YAK IAmb IAmb 12 34 11.5
comp=Z,13nm,0.9s
YAK Yakutsk 38.68 33 iP P 12 34 07.1 -0.2
YAK pmax pmax
comp=Z,10.0nm,0.9s
TMCR Tamitsa 38.69 330 eP P 12 34 05.8 -1.6
AKASG Malin Array Be 40.63 308 P P 12 34 22.1 -1.7
comp=Z,3.5nm,0.9s,baz=74,slow=7.3,SNR=11
AKASG Malin Array Be 40.63 308 P P 12 34 24.1 +0.4
AKASG Malin Array Be 40.63 308 iP P 12 34 24.5 +0.8
AKASG pmax pmax
comp=Z,5.0nm,0.8s
AKBB Malin Array Si 40.63 308 P P 12 34 24.2 +0.5
AKBB IAmb IAmb 12 34 28.5
comp=Z,17nm,1.1s
AKBB Malin Array Si 40.63 308 P P 12 34 24.3 +0.5
AKBB pmax pmax
comp=Z,17nm,1.1s
KIEV Kiev 40.64 308 P P 12 34 24.0 +0.2
JOF Joensuu 41.10 327 P P 12 34 28.2 +0.8
JOF pmax pmax
comp=Z,10.0nm,1.1s
CFR Carcaliu 41.75 300 ⇑P P 12 34 33.0 0.0
CFR Carcaliu 41.75 300 P P 12 34 34.3 +1.3
CFR pmax pmax
comp=Z,7.0nm,1.4s
IIGN Ignalina 42.52 315 eP P 12 34 41.3 +2.1
IIGN IAmb IAmb 12 34 45.1
comp=Z,10nm,1.2s
IZAR Zarasai 42.52 316 eP P 12 34 41.5 +2.3
TIXI Tiksi 42.53 20 P P 12 34 39.5 +0.4
TIXI Tiksi 42.53 20 iP P 12 34 39.3 +0.3
TIXI pmax pmax
comp=Z,6.0nm,1.3s
ISAL Salakas 42.58 315 eP P 12 34 42.1 +2.4
GIRR Girov 42.66 303 ⇑P P 12 34 41.3 +0.9
FINES FINESS Array B 43.19 324 P P 12 34 43.4 -1.1
comp=Z,1.9nm,0.6s,baz=114,slow=8.5,SNR=9.0
FINES FINESS Array B 43.19 324 P P 12 34 44.3 -0.2
FINES FINESS Array B 43.19 324 iP P 12 34 46.7 +2.2
FINES pmax pmax
comp=Z,2.0nm,0.6s
MLR Muntele Rosu 43.23 301 ⇓P P 12 34 47.7 +2.4
MLR Muntele Rosu 43.23 301 P P 12 34 47.7 +2.4
MLR pmax pmax
comp=Z,19nm,0.9s
SUF Sumiainen 43.36 326 P P 12 34 49.0 +3.1
SUF pmax pmax
comp=Z,23nm,1.4s
BURAR Bucovina Array 43.45 304 P P 12 34 48.8 +1.8
BURAR Bucovina Array 43.45 304 P P 12 34 48.8 +1.8
PABE Paberze 43.81 315 eP P 12 34 51.1 +1.5
PABE IAmb IAmb 12 34 55.1
comp=Z,45nm,1.0s
KWP Kalwaria Pacla 44.87 307 P P 12 35 01.8 +3.5
KWP Kalwaria Pacla 44.87 307 P P 12 34 59.7 +1.4
KWP pmax pmax
comp=Z,14nm,1.1s
ARCES ARCESS Array B 45.20 335 P P 12 35 00.3 -0.2
comp=Z,9.6nm,1.0s,baz=70,slow=8.8,SNR=8.2
ARCES ARCESS Array B 45.20 335 P P 12 35 00.2 -0.3
NIE Niedzica 46.46 307 P P 12 35 13.9 +3.1
NIE pmax pmax
comp=Z,4.0nm,1.0s
VYHS Vyhne 47.56 306 eP P 12 35 20.9 +1.5

VYHS	Vyhne	47.56	306	eP	P	12 35 20.9	+1.5
MORC	Moravsky Berou	48.17	308	P	P	12 35 26.3	+2.1
MORC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRG	Berggiesshubel	50.24	310	eP	P	12 35 41.3	+1.4
BRG				pmax	pmax		
	comp=Z,17nm,1.7s						
NOA	NORSAR Array B	50.34	323	P	P	12 35 40.2	-0.3
	comp=Z,4.7nm,0.9s,baz=85,slow=7.5,SNR=7.1						
CLL	Collm	50.74	310	eP	P	12 35 45.0	+1.3
CLL	Collm	50.74	310	eP	P	12 35 45.0	+1.3
GERES	GERESS Array B	50.82	307	P	P	12 35 45.5	+1.0
	comp=Z,5.4nm,0.8s,baz=79,slow=6.9,SNR=18						
GERES	GERESS Array B	50.82	307	P	P	12 35 44.6	+0.1
BILL	Bilibino	54.46	27	⇑eP	P	12 36 14.0	+3.0
BILL						12 37 16.0	
BILL						12 38 13.0	
BILL				S	S	12 43 56.0	+6.6
BILL				e		12 45 59.1	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.6s						
BILL				MLR	MLR		
	comp=Z,2μm,22.0s						
ESDC	Sonseca Array	65.88	302	P	P	12 37 30.3	+0.5
	comp=Z,0.1nm,0.3s,baz=113,slow=23,SNR=3.1						
ESDC	Sonseca Array	65.88	302	P	P	12 37 29.6	-0.2
TULEG	Thule	66.03	353	P	P	12 37 30.1	0.0
IMAR	Indian Mountai	69.14	21	P	P	12 37 50.3	+0.4
COLD	Coldfoot	69.26	19	P	P	12 37 50.6	0.0
COLD				IAmb	IAmb	12 37 56.3	
	comp=Z,2.7nm,1.0s						
BMAR	Burnt Mountain	70.55	18	P	P	12 38 00.4	+1.8
IL31		72.00	20	P	P	12 38 08.2	+1.0
IL31				IAmb	IAmb	12 38 10.5	
	comp=Z,3.1nm,1.1s						
ILAR	Eielson Array	72.00	20	P	P	12 38 07.7	+0.3
	comp=Z,1.2nm,0.6s,baz=317,slow=5.1,SNR=17						
ILAR				PP	PP	12 40 44.0	-2.6
	comp=Z,1.0nm,1.0s,baz=309,slow=7.4,SNR=4.8						
ILAR	Eielson Array	72.00	20	P	P	12 38 08.0	+0.6
ILAR	Eielson Array	72.00	20	P	P	12 38 08.0	+0.6
INK	Inuvik	72.21	13	P	P	12 38 09.6	+1.1
INK				IAmb	IAmb	12 38 15.4	
	comp=Z,2.2nm,0.8s						
INK	Inuvik	72.21	13	P	P	12 38 09.6	+1.1
INK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DHY	Denali Highway	73.16	21	P	P	12 38 14.8	+0.4
DHY				IAmb	IAmb	12 38 26.4	
	comp=Z,3.3nm,0.8s						
SUA	Susitna One	73.32	24	P	P	12 38 17.0	+1.6
SUA				IAmb	IAmb	12 38 20.6	
	comp=Z,5.8nm,1.0s						
RIDG	Independent Ri	73.37	20	P	P	12 38 17.5	+1.9
SCRK	Sand Creek	73.42	20	P	P	12 38 16.8	+0.9
SCRK				IAmb	IAmb	12 38 22.4	
	comp=Z,3.3nm,1.0s						
WB0	Warramunga Arr	73.99	130	P	P	12 38 18.9	-0.8
WB0				IAmb	IAmb	12 38 24.1	
	comp=Z,7.0nm,0.9s						
WRAB	Tennant Creek	74.08	130	P	P	12 38 19.7	-0.6
WRAB				IAmb	IAmb	12 38 26.7	
	comp=Z,4.2nm,0.9s						
WRAB	Tennant Creek	74.08	130	P	P	12 38 19.7	-0.6
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WRA	Warramunga Arr	74.09	130	P	P	12 38 19.4	-0.9
	comp=Z,2.1nm,0.8s,baz=325,slow=5.8,SNR=18						
KNK	Knik Glacier	74.09	23	P	P	12 38 22.4	+2.6
WB2	Warramunga Arr	74.09	130	P	P	12 38 19.7	-0.6
WB2				IAmb	IAmb	12 38 24.9	
	comp=Z,4.6nm,0.8s						
SCM	Sheep Creek Mo	74.12	22	P	P	12 38 21.0	+1.0
SCM	Sheep Creek Mo	74.12	22	P	P	12 38 21.0	+1.0
SCM				pmax	pmax		
	comp=Z,34nm,1.4s						
WR0	Warramunga Arr	74.22	130	P	P	12 38 20.5	-0.6
WR0				IAmb	IAmb	12 38 33.9	
	comp=Z,5.7nm,1.1s						
DAWY	Dawson	74.54	18	P	P	12 38 22.9	+0.5
DAWY				IAmb	IAmb	12 38 27.7	
	comp=Z,2.5nm,0.8s						
BCAR	Beaver Creek A	74.74	19	P	P	12 38 25.0	+1.4
TOA0	Torodi Ar. Sit	75.33	276	P	P	12 38 26.7	-1.0
TORD	Torodi Ar. Bea	75.33	276	P	P	12 38 26.6	-1.1
	comp=Z,1.8nm,0.7s,baz=52,slow=4.9,SNR=11						
MCARA	McCarthy VSAT	75.75	21	P	P	12 38 30.5	+1.1
CTGM	Chitina Glacie	76.58	20	P	P	12 38 37.0	+2.8
ASAR	Alice Springs	76.64	133	P	P	12 38 33.0	-2.0
	comp=Z,1.0nm,0.7s,baz=317,slow=6.0,SNR=12						
ASAR	Alice Springs	76.64	133	P	P	12 38 34.5	-0.4
ASAR	Alice Springs	76.64	133	P	P	12 38 34.5	-0.4
YKA	Yellowknife Ar	80.55	8	P	P	12 38 55.7	-0.2
	comp=Z,1.2nm,0.7s,baz=337,slow=5.2,SNR=15						
YKA	Yellowknife Ar	80.55	8	iP	P	12 38 56.8	+0.9
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						

ATH 12 12:32:15.6,37.23N×21.93E,h13km±3km,ML1.9/4,Error ellipse: s-maj=3.1km s-min=0.9km az=219.0,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	Ithomi	0.05	184	P	Pg	12 32 18.0	-0.1
ITM				S	Sg	12 32 19.6	-0.2
ITM				AML	AML	12 32 20.0	
	comp=E,7898μm,0.2s						
ITM				AML	AML	12 32 20.2	
	comp=N,5672μm,0.1s						
AMT	Artemida-Makis	0.35	330	P	Pg	12 32 22.1	-0.5
AMT				S	Sg	12 32 27.7	+0.3
AMT				AML	AML	12 32 27.9	
	comp=N,991μm,0.2s						
AMT				AML	AML	12 32 30.1	
	comp=E,630μm,0.3s						
PYL	PYLOS	0.37	204	P	Pg	12 32 23.2	+0.2
PYL				S	Sg	12 32 28.7	+0.7
PYL				AML	AML	12 32 31.0	
	comp=N,493μm,0.2s						
PYL				AML	AML	12 32 31.2	
	comp=E,287μm,0.3s						
VLX	Vlachokerasia	0.38	69	P	Pg	12 32 23.4	+0.1
VLX				S	Sg	12 32 28.9	+0.4
VLX				AML	AML	12 32 29.7	
	comp=N,176μm,0.5s						
VLX				AML	AML	12 32 30.3	
	comp=E,283μm,0.4s						
DRO	Drossia	0.74	346	P	Pg	12 32 29.6	-0.3
DRO				S	Sb	12 32 40.7	+0.2
KLV	Kalavryta, Ach	0.83	12	P	Pg	12 32 30.5	-1.1
KLV				S	Sb	12 32 42.8	-0.2
RLS	Riolos of Patr	0.90	336	P	Pg	12 32 32.4	-0.7
RLS				S	Sb	12 32 45.4	+0.3
VLI	Veliai	0.95	122	P	Pb	12 32 34.4	-0.3
VLI				S	Sb	12 32 46.7	+0.2
DID	Didima	1.08	75	P	Pb	12 32 36.2	+0.1
KALE	Kalithea	1.17	8	P	Pb	12 32 36.5	-1.2
KALE				S	Sn	12 32 54.3	+0.7
ANX	Ano Chora	1.36	360	P	Pn	12 32 40.0	-0.3
ANX				S	Sg	12 33 00.7	+1.3

BUC 12 12:33:52.5±0.2,46.32N×23.19E,h1km,ml1.8/3,24C-8D, Error ellipse: s-maj=1.3km s-min=1.2km az=101.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRGR		0.57	325	⇑P	Pg	12 34 03.5	0.0
DRGR				⇑S	Sg	12 34 11.2	+0.4
DRGR		0.57	325	⇑P	Pg	12 34 03.5	0.0
DRGR				⇑S	Sg	12 34 11.2	+0.4
LOT	Lotru	0.97	155	⇓S	Sb	12 34 24.7	-0.8
LOT	Lotru	0.97	155	⇓S	Sb	12 34 24.7	-0.8
GZR	Gura Zlata	0.97	197	⇓P	Pg	12 34 11.0	-0.1
GZR				⇑S	Sb	12 34 25.4	-0.2
GZR	Gura Zlata	0.97	197	⇓P	Pg	12 34 11.0	-0.1
GZR				⇑S	Sb	12 34 25.4	-0.2
ARCR	ARCALIA	1.11	46	⇓P	Pg	12 34 13.6	-0.1
ARCR				⇑S	Sb	12 34 29.6	+0.2
ARCR	ARCALIA	1.11	46	⇓P	Pg	12 34 13.6	-0.1
ARCR				⇑S	Sb	12 34 29.6	+0.2
BZS	Buzias	1.30	238	⇑P	Pg	12 34 17.0	-0.5
BZS				⇓S	Sb	12 34 35.2	+0.2
BZS	Buzias	1.30	238	⇑P	Pg	12 34 17.0	-0.5
BZS				⇓S	Sb	12 34 35.2	+0.2
ARR	Arges	1.39	133	⇑P	Pb	12 34 19.3	0.0
ARR				⇑S	Sn	12 34 38.3	+0.1
ARR	Arges	1.39	133	⇑P	Pb	12 34 19.3	0.0
ARR				⇑S	Sn	12 34 38.3	+0.1
VOIR		1.58	124	⇑P	Pn	12 34 22.1	+0.4
VOIR				⇑S	Sg	12 34 43.4	+0.3
VOIR		1.58	124	⇑P	Pn	12 34 22.1	+0.4
VOIR				⇑S	Sg	12 34 43.4	+0.3
BURAR	Bucovina Array	1.90	46	⇑P	Pn	12 34 27.0	+0.8
BURAR				⇑S	Sb	12 34 51.6	-0.7
BURAR	Bucovina Array	1.90	46	⇑P	Pn	12 34 27.0	+0.8
BURAR				⇑S	Sb	12 34 51.6	-0.7
PLOR	Plostina	2.46	100	⇑P	Pg	12 34 40.6	+1.0
VRI	Vrincioaia	2.51	99	⇑P	Pg	12 34 43.5	+2.9

IDC 12 12:39:33.6±1.8,6.27S×150.37E,h0km,mb2.9/2, mb1 3.3/4,mb1mx3.2/34,mbtmp3.1/4,ML1.2/1,Error ellipse: s-maj=124.3km s-min=19.5km az=131.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.56	40	Pn	Pn	12 40 17.1	+0.8
	7.7nm,0.3s,baz=205,slow=4.3,SNR=9.0						
KRVT				Sn	Sn	12 40 49.0	+0.9
	5.9nm,0.3s,baz=198,slow=20,SNR=2.8						
PMG	Port Moresby	4.45	225	Pn	Pn	12 40 43.3	+0.9
	1.0nm,0.3s,baz=23,slow=13,SNR=3.5						
PMG				Sn	Sn	12 41 37.0	+2.0
	0.8nm,0.3s,baz=18,slow=20,SNR=4.3						
WRA	Warramunga Arr	20.67	227	P	P	12 44 15.5	+0.3
	0.7nm,0.7s,baz=53,slow=11,SNR=5.5						
ASAR	Alice Springs	23.45	221	P	P	12 44 44.2	-0.7
	0.2nm,0.8s,baz=56,slow=8.7,SNR=4.0						
TORD	Torodi Ar. Bea	148.40	285	PKPbc	PKPbc	12 59 22.2	-1.0
	0.6nm,1.0s,baz=52,slow=3.6,SNR=3.6						

NEIC 12 12:41:37.0±1.9,36.98N±0.04×97.90W±0.06,h5km±7km, Error ellipse: s-maj=7.2km s-min=5.2km az=121.0
TUL 12 12:41:37±1.9,37.00N±0.04×97.93W±0.06,h10km±7km, ML3.4,Error ellipse: s-maj=7.7km s-min=5.1km az=116.0
ANF 12 12:41:37.9±0.2,36.93N×97.89W,h5km,ML4.1/18,Error ellipse: s-maj=3.0km s-min=2.8km az=34.0
ISC 12 12:41:37.1±0.7,37.01N±0.03×97.90W±0.03,h10km,n67, σ1§49/82,Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	Winter Ranch,	1.09	235		Pg	12 41 57.1	-0.9
U32A				Sg	Sg	12 42 11.5	-0.6
OKCFA	Oklahoma City	1.63	167		Pb	12 42 06.2	-1.1
OKCSW	OKLAHOMA CITY	1.64	167		Pb	12 42 06.5	-1.0
FNO	Franklin	1.79	167		Pb	12 42 09.3	-0.7
TUL1	Leonard	2.02	122		Pb	12 42 12.7	-1.2
TUL1	Leonard	2.02	122	P	Pb	12 42 12.5	-1.4
	baz=302						
TUL1				S	Sb	12 42 37.8	-1.3
	baz=302						
W35A	Tecumseh	2.03	156		Pb	12 42 12.3	-1.8
CBKS	Cedar Bluff	2.32	322		Pb	12 42 17.9	-1.2
CBKS	Cedar Bluff	2.32	322	P	Pb	12 42 17.6	-1.4
	baz=141						
CBKS				S	Sb	12 42 47.8	+0.1
	baz=141						
KSU1	Kansas State U	2.33	26	P	Pb	12 42 17.8	-1.3
	baz=205						
KSU1				S	Sb	12 42 48.4	+0.5
	baz=205						
WMOK	Wichita Mounta	2.38	198		Pn	12 42 15.8	-0.3
WMOK	Wichita Mounta	2.38	198	P	Pn	12 42 16.6	+0.5
	baz=18						
WMOK				S	Sb	12 42 46.7	-2.7
	baz=18						
HHAR	Hobbs	3.26	102		Pn	12 42 28.6	+0.3
AMTX	Amarillo	3.73	237		Pn	12 42 35.7	+0.9
AMTX	Amarillo	3.73	237	P	Pn	12 42 36.7	+1.9
	baz=55						
AMTX				S	Sn	12 43 21.8	+2.9
	baz=55						
W39A	Magazine	3.79	117		Pn	12 42 36.5	+1.0
W39A	Magazine	3.79	117	P	Pn	12 42 36.2	+0.6
	baz=299						
W39A				S	Sn	12 43 22.0	+1.8
	baz=299						
U40A	Yellville	4.11	98		Pn	12 42 40.0	+0.1
U40A	Yellville	4.11	98	P	Pn	12 42 40.9	+1.0
	baz=280						
U40A				S	Sn	12 43 29.1	+1.1
	baz=280						
KSCO	Kaye Shedlock'	4.24	300		Pn	12 42 41.7	-0.1
KSCO	Kaye Shedlock'	4.24	300	P	Pn	12 42 42.5	+0.7
	baz=118						
KSCO				Sb	Sg	12 43 49.9	-3.3
	baz=118						
MIAR	Mount Ida	4.29	124		Pn	12 42 42.5	+0.1
MIAR	Mount Ida	4.29	124	P	Pn	12 42 43.5	+1.2
	baz=306						
MIAR				S	Sn	12 43 32.5	+0.1
	baz=306						
BGNE	Belgrade	4.40	358	Pn	Pn	12 42 43.5	-0.5
BGNE					LR	12 43 56.8	
BGNE	Belgrade	4.40	358	P	Pn	12 42 46.5	+2.5
	baz=177						
BGNE				Sb	Sg	12 43 55.1	-3.3
	baz=177						
ABTX	Abilene, Hawle	4.60	199	Pn	Pn	12 42 46.0	-0.8
ABTX	Abilene, Hawle	4.60	199	P	Pn	12 42 47.3	+0.6
	baz=18						
ABTX				Sb	Sb	12 43 56.6	+3.1
	baz=18						
X40A	Basin Creek Fa	4.82	120		Pn	12 42 50.3	+0.6
X40A	Basin Creek Fa	4.82	120	P	Pn	12 42 51.0	+1.2
	baz=302						
X40A				Sb	Sb	12 44 02.9	+3.1
	baz=302						
WHAR	Wooly Hollow	4.85	109		Pn	12 42 50.6	+0.4
W41B	Gary Mavity, V	4.93	110		Pn	12 42 51.5	+0.3
W41B	Gary Mavity, V	4.93	110	P	Pn	12 42 52.0	+0.8
	baz=293						
W41B				S	Sn	12 43 48.2	0.0
	baz=293						
MSTX	Muleshoe	5.00	234		Pn	12 42 53.2	+0.9
MSTX	Muleshoe	5.00	234	P	Pn	12 42 53.2	+0.9
	baz=52						
MSTX				S	Sn	12 43 51.1	+0.9
	baz=52						
WHTX	Lake Whitney,	5.02	176		Pn	12 42 52.0	-0.5
WHTX	Lake Whitney,	5.02	176	P	Pn	12 42 52.7	+0.2
	baz=356						
WHTX				S	Sn	12 43 48.6	-1.9
	baz=356						
OGNE	Ogallala	5.08	322		Pn	12 42 54.8	+1.4
OGNE	Ogallala	5.08	322	P	Pn	12 42 56.5	+3.1
	baz=140						
OGNE				S	Sn	12 43 55.7	+3.5
	baz=140						
T25A	Trinidad	5.21	273		Pn	12 42 56.8	+1.5
T25A	Trinidad	5.21	273	P	Pn	12 42 56.4	+1.1
	baz=90						
237A	Washetta, Mont	5.28	160	Pn	Pn	12 42 55.9	-0.1
CCM	Cathedral Cave	5.39	77	Pn	Pn	12 43 00.1	+2.5
CCM	Cathedral Cave	5.39	77	P	Pn	12 42 59.6	+2.1
	baz=260						
LCAR	Lake Charles	5.51	98	Pn	Pn	12 43 00.5	+1.3
Z41A	Richland Creek	5.60	130	Pn	Pn	12 42 59.8	-0.6
Q24A	Divide	6.05	291	Pn	Pn	12 43 08.2	+1.2
Q24A	Divide	6.05	291	P	Pn	12 43 07.8	+0.8
	baz=107						
SDCO	Great Sand Dun	6.10	279	P	Pn	12 43 10.1	+2.6
	baz=95						
N41A	Harden Midland	6.62	54	Pn	Pn	12 43 13.6	-0.8
ISCO	Idaho Springs	6.67	297	Pn	Pn	12 43 13.6	-1.9
ISCO	Idaho Springs	6.67	297	P	Pn	12 43 17.0	+1.6
	baz=113						
JCT	Junction City	6.70	194	Pn	Pn	12 43 14.1	-1.5
JCT	Junction City	6.70	194	P	Pn	12 43 16.6	+1.0
	baz=14						
ECSD	EROS Data Cent	6.79	8	Pn	Pn	12 43 17.1	+0.3
ECSD	EROS Data Cent	6.79	8	P	Pn	12 43 18.1	+1.3
	baz=188						
S22A	4UR Ranch, Cre	7.15	279	P	Pn	12 43 24.6	+2.6
	baz=94						
OXF	Oxford	7.34	107	P	Pn	12 43 24.8	+0.5
	baz=292						
O44A	Mansfield	8.03	64		Lg	12 45 49.8	
L42A	Oliver, Polo	8.08	49	Pn	Pn	12 43 35.9	+1.3
L42A					LR	12 45 52.4	
MNTX	Cornudas Mount	8.14	232		Pn	12 43 36.2	+0.9
WVT	Waverly	8.15	93		Lg	12 45 51.6	
JFWS	Jewell Farm	8.32	43	Pn	Pn	12 43 37.7	-0.1
RSSD	Black Hills	8.50	329	Pn	Pn	12 43 41.3	+0.9
TX31	Lajitas Ar. Si	9.05	214		Pn	12 43 47.4	-0.5
TX32	Lajitas Array	9.05	214		Pn	12 43 47.4	-0.5
TXAR	Lajitas Array	9.05	214		Pn	12 43 47.8	-0.1
G40A	Rib Lake	10.09	33	Pn	Pn	12 44 03.0	+1.0

PRE 12 12:45:09.1±1.0,24.01S×28.82E,h5km,ML2.1,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
MSNA	Messina	1.99	34	eP	Pn	12 45 42.9	-0.6
MSNA				eS	Sn	12 46 07.0	-1.9
MSNA				AML	AML	12 46 11.2	
	comp=Z,53nm,0.1s						
KSR	Koster	2.54	223	eP	Pn	12 45 52.2	+1.1
KSR				eS	Sn	12 46 22.1	-0.4
KSR				AML	AML	12 46 28.9	
	comp=Z,9.7nm,0.4s						
LBTB	Lobatse	3.10	251	iP	Pn	12 46 01.6	+2.7
LBTB	Lobatse	3.10	251	iP	Pn	12 46 01.6	+2.7
PRYS	Parys	3.19	204	eP	Pn	12 46 01.3	+1.2
PRYS				eS	Sn	12 46 37.9	-0.8
PRYS				AML	AML	12 47 01.2	
	comp=Z,4.7nm,0.7s						

SKHL 12 12:55:39.6±0.8,43.05N×145.96E,h35km±4km,mb4.1/3
JMA 12 12:55:39.2±0.1,43.02N×145.81E,h43km±1km,M2.7
ISC 12 12:55:40.8±1.9,43.08N±0.08×145.72E±0.07,h33km±3km, n14,σ1§29/24,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.28	4	P	Pn	12 55 48.0	-0.5
NEM2				eS	Sb	12 55 54.3	+0.7
NMR	Nemuro--Hokkai	0.29	2	iP	Pn	12 55 48.0	-0.6
NMR				iS	Sb	12 55 54.0	+0.4
JKHN	Kushirohamanak	0.41	271	P	Pb	12 55 49.7	-0.3
JKHN				eS	Sn	12 55 57.6	+0.9
GLVR	Golovnino	0.67	348	AMB	AMB	12 55 55.0	
	111nm,0.3s						
GLVR				iS	Sb	12 56 04.0	+0.6
GLVR				A	A	12 56 05.0	
	569nm,0.3s						
GLVR				A	A	12 56 05.0	
	680nm,0.3s						
JAK	Akkeshi	0.75	264	P	Pn	12 55 54.2	-0.9
JAK				eS	Sn	12 56 05.6	+0.3
JNSB	Nemuroshibetsu	0.87	324	P	Pn	12 55 56.4	-0.3
JNSB				eS	Sb	12 56 09.2	+0.4
JNK	Nakash	0.89	305	P	Pn	12 55 56.4	-0.5
JNK				eS	Sn	12 56 08.8	+0.2
GRPR	Tuman	0.91	3	iP	Pn	12 55 56.0	-1.3
GRPR				AMB	AMB	12 55 59.0	
	121nm,0.4s						
GRPR				iS	Sn	12 56 08.0	-1.3
GRPR				A	A	12 56 08.0	
	680nm,0.3s						
GRPR				A	A	12 56 08.0	
	697nm,0.3s						
JRA	Rausu	0.96	333	P	Pn	12 55 57.6	-0.3
JRA				eS	Sn	12 56 11.1	+0.7
YUK	Yuzh-Kuril'sk	0.96	6	iP	Pn	12 55 56.0	-1.9
YUK				AMB	AMB	12 55 58.0	
	192nm,0.4s						
YUK				iS	Sn	12 56 09.0	-1.4
YUK				A	A	12 56 12.0	
	228nm,0.2s						
YUK				A	A	12 56 12.0	
	376nm,0.2s						
JOB	Onbets	1.39	263	P	Pn	12 56 03.1	-0.8
JOB				eS	Sn	12 56 21.2	+0.1
JAR	Ashorobuto	1.44	279	P	Pn	12 56 04.3	-0.3
JTKR	Abashiri--Toko	1.59	305	P	Pn	12 56 07.3	+0.7
KUR	Kuril'sk	2.65	35	eS	Sn	12 56 56.4	+4.3
KUR				A	A	12 56 57.6	
	14nm,0.2s						

NEIC 12 13:10:16.9±2.4,8.51S±0.09×109.18E±0.06,h72km±8km, mb4.6/12,Error ellipse: s-maj=13.5km s-min=7.8km az=201.0
DJA 12 13:10:17.2±1.5,8°S±5°×10°9E±°,h31km±26km,M4.4/13, MLv4.4/13,MLv4.3/1
IDC 12 13:10:17.6±2.1,8.70S×108.79E,h92km±17km,mb3.7/7, mb1 3.8/9,mb1mx3.5/42,mbtmp4.0/9,Error ellipse: s-maj=51.6km s-min=12.7km az=44.0
ISC 12 13:10:16.5±0.9,8.44S±0.07×109.21E±0.03,h72km±9km, n45,σ1§38/53,mb4.0/11,1C,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	Cimerak	0.99	311	P	Pn	13 10 34.2	-0.8
CMJI				S	Sn	13 10 47.7	-1.1
KPJI	Karang Pucung	1.13	346	P	Pn	13 10 36.5	-0.3
KPJI				S	Sn	13 10 50.5	-1.4
UGM	Wanagama	1.40	68	P	Pn	13 10 40.1	-0.2
UGM				S	Sn	13 10 57.0	-1.2
UGM	Wanagama	1.40	68	Pn	Pn	13 10 39.8	-0.5
CISI	Cisompet, Garu	1.63	302	P	Pn	13 10 43.4	0.0
CISI				S	Sn	13 11 03.5	-0.2
CISI	Cisompet, Garu	1.63	302		Pn	13 10 43.2	-0.2
SMRI	Semarang	1.84	42	P	Pn	13 10 46.3	+0.2
SMRI				S	Sn	13 11 08.3	-0.3
SMRI	Semarang	1.84	42	Pn	Pn	13 10 46.1	-0.1
PCJI	Pacitan	1.96	83	P	Pn	13 10 48.1	+0.4
PCJI				S	Sn	13 11 11.1	-0.4
LEM	Lembang	2.25	315	P	Pn	13 10 53.3	+1.6
	30nm,0.3s,baz=135,slow=14,SNR=10.0						
LEM				S	Sn	13 11 19.7	+1.2
	50nm,0.3s,baz=296,slow=20,SNR=7.6						
LEM	Lembang	2.25	315	P	Pn	13 10 52.7	+1.0
CNJI	Cibinong	2.34	298	P	Pn	13 10 52.6	-0.3
CNJI				S	Sn	13 11 19.6	-1.1
PWJI	Pagerwojo	2.60	81	P	Pn	13 10 56.3	-0.1
PWJI				S	Sn	13 11 26.4	-0.6
UWJI	Ujung Watu	2.65	41	P	Pn	13 10 56.2	-0.8
UWJI				S	Sn	13 11 25.7	-2.3
DBJI	Dramaga	3.07	307	P	Pn	13 11 03.6	+0.8
GRJI	Gresik	3.58	65	P	Pn	13 11 10.2	+0.6
JAGI	Jajag, Banyuwa	4.89	91	Pn	Pn	13 11 29.4	+1.8
MDSI	Maura Dua	6.35	308	P	Pn	13 11 49.1	+1.5
MNAI	Manna	7.42	303	Pn	Pn	13 12 02.7	+0.5
GIRL	Giralia	14.93	162	Pn	Pn	13 13 42.5	-1.1
PSA00	Pilbara Seismi	16.60	143	P	Pn	13 14 04.6	-0.3
PSA00				IAmb	IAmb	13 14 15.2	
	comp=Z,176nm,2.0s						
FITZ	Fitzroy Crossi	18.64	123	P	Pn	13 14 29.8	0.0
	comp=Z,0.3nm,0.3s,baz=310,slow=11,SNR=3.2						
FITZ	Fitzroy Crossi	18.64	123	P	Pn	13 14 29.7	0.0
KNRA	Kununurra	20.42	112	P	P	13 14 48.6	+0.5
KNRA				IAmb	IAmb	13 15 38.3	
	comp=Z,82nm,1.8s						
SIJI	Sorong	23.22	72	P	P	13 15 21.2	+3.5
	comp=Z,4.8nm,0.8s,baz=232,slow=7.2,SNR=3.7						
WB0	Warramunga Arr	26.85	117	P	P	13 15 51.2	+0.5
WB0				IAmb	IAmb	13 15 51.2	
	comp=Z,27nm,1.9s						
WRA	Warramunga Arr	26.87	118	P	P	13 15 51.0	+0.2
	comp=Z,0.6nm,0.3s,baz=288,slow=9.8,SNR=15						
WRAB	Tennant Creek	26.88	118	P	P	13 15 51.2	+0.3
WRAB				IAmb	IAmb	13 16 01.9	
	comp=Z,20nm,1.7s						
WB2	Warramunga Arr	26.88	118	P	P	13 15 51.1	+0.2
WB2				IAmb	IAmb	13 16 01.9	
	comp=Z,15nm,1.6s						
WR0	Warramunga Arr	27.05	118	P	P	13 15 53.1	+0.6
WR0				IAmb	IAmb	13 16 06.5	
	comp=Z,36nm,1.9s						

AS31 Alice Springs 28.08 126 P P 13 16 01.8 +0.2
ASAR Alice Springs 28.08 126 P P 13 16 02.3 +0.7
comp=Z,1.3nm,0.5s,baz=306,slow=9.3,SNR=48
ASAR PcP PcP 13 19 14.2 -0.6
comp=Z,0.2nm,0.3s,baz=307,slow=2.0,SNR=4.1
ASAR ScP ScP 13 22 46.6 -2.9
comp=Z,0.4nm,1.0s,baz=316,slow=2.6,SNR=5.1
CMAR Chiang Mai Arr 28.58 339 P P 13 16 07.7 +1.7
comp=Z,0.3nm,0.5s,baz=174,slow=10.0,SNR=3.1
YULB Yu-li 33.77 20 P P 13 16 54.5 +2.9
BBOO Buckleboo 34.72 138 P P 13 17 00.3 +0.5
H08S2 Diego Garcia H 36.35 269 T T 13 55 22.4
baz=92,slow=74
H08S3 Diego Garcia H 36.36 269 T T 13 55 27.5
baz=92,slow=74
H08S1 Diego Carcia H 36.37 269 T T 13 55 23.5
baz=92
STKA Stephens Creek 38.06 132 P P 13 17 29.7 +1.4
comp=Z,2.1nm,0.4s,baz=316,slow=8.1,SNR=15
STKA Stephens Creek 38.06 132 P P 13 17 29.3 +1.0
ABKAR Akbulak array 71.77 328 P P 13 21 27.3 -3.9
VNDA Vanda 74.17 170 P P 13 21 46.5 +1.5
SYO Syowa Base 74.92 200⇑esP sP 13 22 15.2 +0.3
KBZ Khabaz 79.18 317 P P 13 22 11.2 -2.6
comp=Z,0.4nm,0.3s,baz=90,slow=2.0,SNR=4.7
BRTR Keskin Array B 84.41 311 P P 13 22 39.1 -2.5
comp=Z,1.1nm,0.9s,baz=108,slow=4.7,SNR=5.7

IDC 12 13:14:53.5±0.8, 35.94N×82.48E, h0km, mb3.7/11, mb1 4.0/17, mb1mx3.8/46, mbtmp3.8/17, ML3.6/6, MS3.7/1, Ms1 3.7/1, ms1mx3.2/45, Error ellipse: s-maj=24.8km s-min=13.2km az=56.0
BJI 12 13:14:56.7±0.0, 36.08N×82.29E, h12km, ML3.7/6
ISC 12 13:14:55.4±0.7, 36.04N±0.07×82.5E±0.1, h10km, n28, σ1.30/29, mb3.8/11, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

DANN Dangsing 7.74 172 eP Pn 13 16 50.7 +2.3
8.3nm,0.4s
KOLN Koldanda 8.29 173 eP Pn 13 16 55.0 -1.0
11nm,0.6s
KKN Kakani 8.55 163 eP Pn 13 17 01.6 +2.1
GUN Gumba 8.59 160 eP Pn 13 17 01.2 +1.0
27nm,0.9s
DMN Daman 8.69 165 eP Pn 13 17 02.5 +1.1
PKIN Phulchoki 8.78 163 eP Pn 13 17 03.7 +0.9
PKI Pulchoki 8.79 163 eP Pn 13 17 03.9 +1.0
7.4nm,0.4s
JIRN Jiri 8.92 158 eP Pn 13 17 06.1 +1.4
25nm,0.4s
AAK Ala-Archa 9.05 319 Pn Pn 13 17 09.4 +3.1
0.3nm,0.3s,baz=117,slow=12,SNR=6.7
AAK Pg 13 17 36.7
0.6nm,0.3s,baz=132,slow=7.9,SNR=5.0
AAK Lg Lg 13 19 37.5
0.5nm,0.3s,baz=23,slow=23,SNR=2.6
RAMN Ramite 9.71 158 eP Pn 13 17 14.3 -1.1
12nm,0.6s
ODAN Odare 10.05 154 eP Pn 13 17 19.2 -0.9
MKAR Makanchi Array 10.75 359 Pn Pn 13 17 30.6 +1.2
1.7nm,0.3s,baz=183,slow=13,SNR=102
MKAR Sn Sn 13 19 28.7 -1.1
0.5nm,0.3s,baz=173,slow=24,SNR=4.2
MKAR Lg Lg 13 20 37.8
baz=180,slow=28,SNR=1.7
MKAR LR LR 13 22 49.9
comp=Z,379nm,20.1s,baz=30,slow=44
KURBB Kurchatov Arra 14.86 350 Pn Pn 13 18 23.8 -1.7
0.1nm,0.3s,baz=173,slow=12,SNR=13
ZALV Zalesovo Beam 17.98 4 P P 13 19 04.7 -0.7
0.4nm,0.3s,baz=191,slow=12,SNR=12
BVAR Borovoye Array 19.01 337 P Pn 13 19 18.7 +0.8
0.6nm,0.3s,baz=140,slow=9.6,SNR=14
GEYT Alibeck 19.57 283 P Pn 13 19 23.9 -0.8
0.2nm,0.3s,baz=91,slow=8.8,SNR=5.2
SONM Songino Array 21.23 49 P P 13 19 43.7 +2.2
1.2nm,0.7s,baz=238,slow=12,SNR=18
CMAR Chiang Mai Arr 22.75 136 P P 13 19 57.2 -0.6
1.3nm,0.7s,baz=316,slow=9.7,SNR=10
AKTO Aktyubinsk 22.78 317 P P 13 19 58.7 +0.7
2.4nm,0.8s,baz=118,slow=11,SNR=11
FINES FINESS Array B 43.20 324 P P 13 22 56.5 +0.3
1.0nm,0.6s,baz=97,slow=14,SNR=3.7
ARCES ARCESS Array B 45.29 335 P P 13 23 13.4 +0.5
3.0nm,1.0s,baz=98,slow=8.7,SNR=4.0
NB2 NORSAR Subarra 50.34 323 P P 13 23 51.6 -0.6
comp=Z,4.2nm,1.0s,baz=86,slow=7.9
NOA NORSAR Array B 50.34 323 P P 13 23 51.8 -0.4
comp=Z,0.8nm,0.7s,baz=86,slow=7.5,SNR=4.4
ESDC Sonseca Array 65.73 302 P P 13 25 39.7 -0.8
comp=Z,0.8nm,0.7s,baz=57,slow=4.7,SNR=2.6
ILAR Eielson Array 72.36 20 P P 13 26 21.0 -0.1
comp=Z,0.6nm,0.8s,baz=308,slow=5.8,SNR=6.9
WRA Warramunga Arr 74.18 130 P P 13 26 31.7 -0.7
comp=Z,1.9nm,0.9s,baz=324,slow=5.9,SNR=9.1
ASAR Alice Springs 76.71 133 P P 13 26 46.2 -0.7
comp=Z,1.5nm,0.8s,baz=322,slow=6.0,SNR=14
YKA Yellowknife Ar 80.85 8 P P 13 27 08.6 -0.6
comp=Z,0.3nm,0.6s,baz=338,slow=5.1,SNR=6.8

IDC 12 13:21:05.6±11.0, 36.20N×82.33E, h0km, mb3.1/1, mb1 3.6/3, mb1mx3.2/29, mbtmp3.6/3, ML3.6/1, Error ellipse: s-maj=152.6km s-min=53.6km az=51.0, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

MKAR Makanchi Array 10.58 360 Pn Pn 13 23 40.8 +2.3
0.4nm,0.3s,baz=182,slow=12,SNR=7.8
MKAR Sn Sn 13 25 35.1 -2.6
0.1nm,0.3s,baz=182,slow=22,SNR=3.8
ZALV Zalesovo Beam 17.83 5 P Pn 13 25 13.5 -1.4
baz=192,slow=12,SNR=3.3
SONM Songino Array 21.23 49 P P 13 25 53.0 -0.1
0.6nm,0.6s,baz=248,slow=10,SNR=4.9

JMA 12 13:26:09.6±0.1, 37.98N×144.56E, h40km, M3.9, Off east coast of Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

JIKH Ishinomakikobu 2.46 279 P Pn 13 26 48.5 +1.3
OFUJ Ofunato 2.52 297 P Pn 13 26 49.5 +1.5
OFUJ S Sn 13 27 19.4 +1.9
JKMT Kesennumamotoy 2.56 290 P Pn 13 26 50.0 +1.4
JKMT S Sn 13 27 20.3 +1.8
JIO Ouri 2.57 282 P Pn 13 26 50.2 +1.5
JIO S Sn 13 27 20.1 +1.2
JMK Ichinoseki 2.80 291 P Pn 13 26 53.7 +1.9
JOM Ohasama 2.96 301 P Pn 13 26 55.9 +1.9
JOM eS Sn 13 27 30.4 +2.1
JANG Nango 3.36 316 P Pn 13 27 00.8 +1.2
JANG eS Sn 13 27 39.6 +1.3
JFT Otama 3.38 263 P Pn 13 27 01.9 +2.1
JFT S Sn 13 27 40.6 +1.9
JYK Kaneyama 3.43 287 P Pn 13 27 03.2 +2.7
JYK eS Sn 13 27 42.9 +3.0
JOT Ohata 4.34 323 eS Sn 13 28 01.8 -0.6
JCH Churui 4.72 349 P Pn 13 27 18.4 +0.2
JCH eS Sn 13 28 09.7 -1.9
JRY Ryogami san 4.94 248 P Pn 13 27 22.3 +1.1
JRY eS Sn 13 28 15.8 -1.3
JOD2 Odawara 2 5.17 240 P Pn 13 27 25.4 +1.0
JOD2 eS Sn 13 28 20.6 -2.2
NEM2 Nemuro 2 5.45 9 P Pn 13 27 26.6 -1.7
NEM2 eS Sn 13 28 24.3 -5.4
JTKR Abashiri--Toko 6.00 355 P Pn 13 27 35.7 -0.2
JTKR eS Sn 13 28 39.7 -3.6

IDC 12 13:26:49.5±10.0, 36.00N×81.35E, h0km, mb3.2/1, mb1 3.4/3, mb1mx3.2/30, mbtmp3.4/3, ML3.0/2, Error ellipse: s-maj=142.7km s-min=55.0km az=53.0, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

MKAR Makanchi Array 10.81 3 Pn Pn 13 29 27.2 +1.7
0.2nm,0.3s,baz=187,slow=13,SNR=17
MKAR Sn Sn 13 31 25.5 -1.7
0.1nm,0.3s,baz=182,slow=26,SNR=2.4
ZALV Zalesovo Beam 18.11 7 P Pn 13 31 00.7 -1.7
0.1nm,0.3s,baz=184,slow=13,SNR=1.9
SONM Songino Array 21.97 50 P P 13 31 45.1 +0.2
0.8nm,0.7s,baz=246,slow=10,SNR=5.3

IDC 12 13:33:16.8±11.0, 36.10N×82.27E, h0km, mb2.9/1, mb1 3.4/3, mb1mx3.1/40, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=152.8km s-min=55.0km az=51.0, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

MKAR Makanchi Array 10.69 0 Pn Pn 13 35 53.1 +1.9
0.4nm,0.3s,baz=182,slow=12,SNR=19
MKAR Sn Sn 13 37 48.8 -2.8
0.1nm,0.3s,baz=184,slow=25,SNR=2.8
ZALV Zalesovo Beam 17.94 5 P Pn 13 37 26.6 -0.9
0.2nm,0.3s,baz=179,slow=10,SNR=3.8
SONM Songino Array 21.34 49 P P 13 38 05.4 -0.1
0.3nm,0.3s,baz=242,slow=12,SNR=3.5

VAO 12 13:35:20.0±0.4, 34.70S×71.54W, h10km, mb5.2
BJI 12 13:35:22.3±0.0, 34.92S×71.67W, h45km, mB5.2/11, Ms5.3/2, Ms7 5.0/2
IDC 12 13:35:23.6±0.4, 34.77S×71.70W, h43km±3km, mb4.7/22, mb1 4.8/27, mb1mx4.7/35, mbtmp4.9/27, ML5.0/5, MS4.3/16, Ms1 4.3/16, ms1mx4.1/28, Error ellipse: s-maj=13.3km s-min=9.3km az=94.0
GUC 12 13:35:23.3±0.7, 34.77S×71.66W, h28km±3km, ML5.2
NEIC 12 13:35:23.5±1.3, 34.75S±0.06×71.6W±0.1, h45km±3km, mb5.2/292, ML5.1(GUC), Error ellipse: s-maj=12.3km s-min=8.0km az=94.0
ISC 12 13:35:23.3±0.3, 34.78S±0.03×71.70W±0.05, h44km±2km, h44km:pP-P, n904, σ0.93/964, mb5.2/149, MS4.3/14, 9C-2D, Near coast of central Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

GO05 Huala 0.30 219⇑iP Pn 13 35 31.5 -0.5
GO05 iS Sn 13 35 37.5 -0.6
GO05 Huala 0.30 219 Pn 13 35 31.7 -0.2
BO02 Sierra Bellavi 0.76 91⇑eP Pn 13 35 38.1 +0.4
RCDM Rinconada Maip 1.49 30 eP Pn 13 35 50.2 +2.7
RCDM iS Sn 13 36 09.9 +4.1
RCDM IAML 13 36 13.2
comp=E,41µm,0.1s
ANTU Antumapu 1.50 37 iP Pn 13 35 51.0 +3.2
ANTU eS Sn 13 36 11.1 +5.0
ANTU IAML 13 36 15.9
comp=N,82µm,0.3s
LMEL Las Melosas 1.55 54 eP Pn 13 35 50.5 +1.9
LMEL eS Sn 13 36 11.6 +4.0
LMEL IAML 13 36 20.1
comp=E,49µm,0.4s
STL Santa Lucia 1.60 34⇑iP Pn 13 35 51.3 +2.1
STL iS Sn 13 36 12.4 +3.7
MT03 Universidad Ad 1.62 38⇓iP Pn 13 35 51.5 +2.1
MT03 iS Sn 13 36 13.5 +4.3
FSR Penalolen 1.62 37 eP Pn 13 35 52.7 +3.2
FSR iS Sn 13 36 14.6 +5.4
CLCH Cerro Calan 1.69 35⇑iP Pn 13 35 52.6 +2.3
CLCH iS Sn 13 36 14.9 +4.1
PEL Peldehue 1.84 28 Pn 13 35 54.4 +1.9
CCHI Chillan 1.85 189 eP Pn 13 35 54.0 +1.5
CCHI iS Sn 13 36 20.2 +5.6
CCHI IAML 13 36 30.9
comp=E,28µm,0.3s
FCH Farellones 1.86 39⇑iP Pn 13 35 55.3 +2.2
FCH iS Sn 13 36 19.8 +4.3
FCH IAML 13 36 28.2
comp=N,30µm,0.2s
ROC1 El Roble 1.89 18 Pn 13 35 55.5 +2.2
ROCH El Roble 1.89 18⇑iP Pn 13 35 55.1 +1.8
ROCH iS Sn 13 36 20.7 +4.6
CCSP San Pedro de C 2.36 209 eP Pn 13 36 03.0 +3.5
CFA Coronel Fontan 4.30 44 P Pn 13 36 27.9 +1.7
comp=N,48nm,0.3s,baz=239,slow=12,SNR=298
CFA S Sn 13 37 17.6 +2.5
comp=N,72nm,0.3s,baz=246,slow=14,SNR=2.0
CFA LR LR 13 38 23.0
comp=N,5µm,21.2s,baz=224,slow=42
GO04 Tololo Observa 4.66 10 Pn 13 36 31.6 +0.3
PLCA Paso Flores 6.01 172 P Pn 13 36 52.0 +2.2
comp=N,14nm,0.3s,baz=358,slow=11,SNR=304
PLCA S Sn 13 38 05.3 +7.9
comp=N,3.6nm,0.3s,baz=38,slow=11,SNR=2.2
PLCA LR LR 13 39 19.2
comp=N,2µm,19.8s,baz=14,slow=39
PLCA Paso Flores 6.01 172 eP Pn 13 36 50.8 +1.0
PLCA Paso Flores 6.01 172 Pn 13 36 51.6 +1.9
GO03 Copiap 7.27 10 Pn 13 37 06.1 -1.0
GO02 Mina Guanaco 9.76 11 Pn 13 37 37.9 -3.5
PB10 IPOC Station P 11.27 5 Pn 13 38 01.3 -0.5
LVC Limon Verde 12.37 12 P Pn 13 38 17.7 +0.6
comp=N,2.6nm,0.3s,baz=205,slow=6.2,SNR=15
LVC LR LR 13 43 27.8
comp=N,1µm,20.7s,baz=212,slow=39
LVC Limon Verde 12.37 12 eP Pn 13 38 15.3 -1.8
LVC Limon Verde 12.37 12 Pn 13 38 15.7 -1.4
PB04 IPOC Station P 12.47 7 Pn 13 38 18.0 -0.4
ITQB Itaqui 13.74 72 eP Pn 13 38 32.4 -3.1
PB01 IPOC Station P 13.82 9 Pn 13 38 35.6 -1.1
OGAUY Aigu 14.01 93 eP Pn 13 38 36.6 -2.6
CPUP Villa Florida 14.96 60 P Pn 13 38 51.8 -0.1
comp=N,1.1nm,0.3s,baz=235,slow=13,SNR=9.9
CPUP S Sn 13 41 35.1 -1.4
comp=N,0.4nm,0.3s,baz=154,slow=18,SNR=3.0
CPUP LR LR 13 45 14.4
comp=N,2µm,19.2s,baz=241,slow=40
CPUP Villa Florida 14.96 60 eP Pn 13 38 49.2 -2.6
CPUP Villa Florida 14.96 60 Pn 13 38 50.7 -1.2
PB11 IPOC Station P 15.07 7 Pn 13 38 52.3 -1.1
PB11 IAmb IAmb 13 39 00.8
comp=Z,115nm,0.9s
GO01 Chusmiza 15.21 9 Pn Pn 13 38 55.0 -0.7
PLTB Pedras Altas 15.44 84 eP Pn 13 38 56.1 -1.9
MNMC Minye Minye 15.70 7 Pn 13 39 02.0 +0.3
MNMC IAmb IAmb 13 39 08.4
comp=Z,243nm,0.8s
CPSB Capacapava Do Su 16.00 79 eP Pn 13 39 03.5 -1.8
ITAB Concordia 18.37 71 eP P 13 39 32.9 -1.5
GO10 Punta Arenas 18.38 179 P Pn 13 39 37.4 +2.8
CNLB Canela 18.49 79 eP P 13 39 34.8 -0.9
LPAZ La Paz 18.69 11 P Pn 13 39 40.1 +0.9
comp=Z,4.2nm,0.3s,baz=187,slow=7.6,SNR=105
LPAZ La Paz 18.69 11 Pn 13 39 39.7 +0.5
EFI East Falkland 19.54 154 P P 13 39 46.5 -0.5
PTGB Pitanga 19.75 65 eP P 13 39 49.3 -0.3
AQDB Aquidauana 20.06 49 eP P 13 39 53.0 +0.1
USHA Ushuaia 20.18 175 P P 13 39 53.8 -0.1
comp=Z,10nm,0.7s,baz=198,slow=8.3,SNR=6.8
USHA LR LR 13 48 21.3
comp=Z,1µm,18.1s,baz=12,slow=38
TRCB Terra Rica 20.50 59 eP P 13 39 56.9 -0.8
SIV San Ignacio 21.00 30 P P 13 40 03.0 -0.1
comp=Z,141nm,0.9s,baz=216,slow=9.0,SNR=472
SIV LR LR 13 49 35.3
comp=Z,826nm,20.0s,baz=252,slow=41
PCMB Pacaembu 22.23 59 eP P 13 40 14.9 -1.4
FRTB Fartura 22.41 65 eP P 13 40 17.3 -0.9
PP1B Ponte de Pedra 22.76 46 eP P 13 40 20.9 -1.1
C2SB Chapadao do Su 23.13 51 eP P 13 40 24.9 -0.8
NNA Nana 23.16 347 P P 13 40 26.4 +0.3
comp=Z,34nm,1.1s,baz=193,slow=13,SNR=7.4
NNA LR LR 13 47 42.0
comp=Z,371nm,21.5s,baz=144,slow=32
NNA Nana 23.16 347 P P 13 40 27.1 +1.0
SALV Santo Antonio 23.66 41 eP P 13 40 29.6 -1.2
SPB Sao Paulo 23.88 69 eP P 13 40 32.0 -0.8
SPB Sao Paulo 23.88 69 P P 13 40 31.6 -1.3
ITRB Iturama 24.12 57 eP P 13 40 34.6 -0.6
RCLB Rio Claro- Sao 24.47 66 eP P 13 40 37.3 -0.9
BB19B Bebedouro 24.54 62 eP P 13 40 38.1 -0.9
VAO Valinhos 24.56 68 eP P 13 40 38.8 -0.4
PARB Paraibuna 25.41 70 eP P 13 40 46.3 -0.6
ARAG Araguaiana, MT 26.07 48 eP P 13 40 52.2 -0.6
ESAR Angra dos Reis 26.50 71 eP P 13 40 56.3 -0.3
IPMB Ipameri, GO 26.78 57 eP P 13 40 58.3 -1.0
SAML Samuel 26.87 19 eP P 13 41 00.0 +0.1
SAML Samuel 26.87 19 P P 13 40 59.8 -0.2
BSCB Bom Sucesso 27.37 67 eP P 13 41 04.1 -0.5
VAS01 Vassouras-RJ 27.68 71 eP P 13 41 07.0 -0.2
ATAH Atahualpa 28.19 346 P P 13 41 12.7 +0.4
comp=Z,2.3nm,0.5s,baz=128,slow=19,SNR=2.1
BDFB Brasilia 28.55 54 P P 13 41 14.3 -0.9
comp=Z,24nm,0.7s,baz=218,slow=7.6,SNR=3.8
BDFB LR LR 13 53 46.3
comp=Z,1µm,21.3s,baz=260,slow=39
SJMB Sao Joao De Ma 31.45 67 eP P 13 41 40.0 -0.7
JANB Januaria 31.50 58 eP P 13 41 40.6 -0.6
BSFB Barra de Sao F 31.63 68 eP P 13 41 41.7 -0.5
RPN Rapa Nui 33.01 273 LR LR 13 51 48.2
comp=Z,514nm,18.5s,baz=68,slow=30
SMTB Santa Maria do 33.97 46 eP P 13 42 02.1 -0.6
NBIT Itapeh - BA 35.09 64 eP P 13 42 12.2 -0.2
OTAV Otavalo 35.40 348 eP P 13 42 16.5 +1.0
OTAV Otavalo 35.40 348 P P 13 42 17.2 +1.7
FLOC Florencia 36.36 353 P P 13 42 24.7 +1.4
NBPN Ponto Novo - B 37.29 58 eP P 13 42 30.8 -0.5
PRAC Prado 38.40 355 eP P 13 42 42.4 +1.8
ORTC Ortega, Tolima 38.62 354 eP P 13 42 44.7 +2.2
YOTC Yotoco, Valle 38.80 353 eP P 13 42 44.1 +0.1
NBLA Lagarto - SE 38.89 61 eP P 13 42 43.6 -1.1
CHIC Chingaza 39.24 357 eP P 13 42 48.8 +0.7
ROSC El Rosal 39.48 356 P P 13 42 50.3 +0.3
comp=Z,42nm,0.7s,baz=170,slow=7.4,SNR=8.5
ROSC LR LR 13 59 02.2
comp=Z,378nm,21.9s,baz=236,slow=36
ROSC El Rosal 39.48 356 P P 13 42 50.0 0.0
ROSC IAmb IAmb 13 42 54.9
comp=Z,36nm,0.8s
NBTA Tacaratu-PE 39.99 58 eP P 13 42 53.4 -0.5
NORC Norcasia 40.24 355 eP P 13 42 56.6 +0.7
RUSC La Rusia 40.47 358 eP P 13 42 59.2 +0.9
RUSC La Rusia 40.47 358 P P 13 42 59.6 +1.2
CBOC Ciudad Bolivar 40.63 353 eP P 13 42 59.6 +0.4
NBMA Muriti-CE 40.75 56 eP P 13 43 00.1 -0.1
NBAN Anadia - AL 40.88 61 eP P 13 43 00.1 -1.2
NBPS Pedro II - PI 41.22 50 eP P 13 43 03.8 -0.3
NBPB Pedra_Branca-C 41.55 53 eP P 13 43 06.7 0.0
NBLI Livramento-PB 42.00 58 eP P 13 43 10.2 -0.3
NBRF Rio Formoso - 42.38 61 eP P 13 43 12.6 -0.9
NBPA Parau_RN 43.05 56 eP P 13 43 19.0 +0.1
NBCL Cascavel-CE 43.38 53 eP P 13 43 21.4 -0.1
SMLC San Martn de 43.40 357 eP P 13 43 20.7 -1.0
SDV Santo Domingo 43.44 2 eP P 13 43 22.1 -0.1
SDV Santo Domingo 43.44 2 P P 13 43 21.9 -0.3
SDV IAmb IAmb 13 43 23.4
comp=Z,34nm,0.8s
MDP Montagnes des 43.55 28 LR LR 14 03 16.0
comp=Z,385nm,18.2s,baz=240,slow=38
RCBR Riachuelo 43.82 57 P P 13 43 24.7 -0.6
comp=Z,14nm,0.6s,baz=214,slow=7.9,SNR=12
RCBR Riachuelo 43.82 57 eP P 13 43 25.6 +0.3
RCBR Riachuelo 43.82 57 P P 13 43 24.9 -0.3
RCBR IAmb IAmb 13 43 43.6
comp=Z,70nm,1.3s
BCIP Isla Barro Col 44.38 348 P P 13 43 30.2 +0.7
JTS Las Juntas de 46.55 342 P P 13 43 46.8 0.0
comp=Z,5.9nm,0.3s,baz=246,slow=13,SNR=4.0
JTS Las Juntas de 46.55 342 IAmb IAmb 13 44 08.9
comp=Z,28nm,1.2s
TOSP Speyside 47.03 15 P P 13 43 50.7 +0.3
GRGR Grenville 47.62 13 P P 13 43 54.4 -0.6
VNA3 Neumayer Olymp 48.54 158 P P 13 44 02.6 +1.1
SVB Belmont 48.80 14 P P 13 44 03.8 -0.4
VNA2 Neumayer--Watz 49.19 157 P P 13 44 07.3 +0.7
baz=282,slow=8.5
FDF Fort de France 50.25 13 P P 13 44 15.2 0.0
SNAA Sanae 50.76 158 P P 13 44 19.2 +0.6
SNAA Sanae 50.76 158 P P 13 44 19.1 +0.6
comp=Z,17nm,0.8s,baz=287,slow=6.2,SNR=29
TGUH Tegucigalpa,Un 50.77 340 P P 13 44 19.8 +0.5
SKI Saint Kitts 52.52 11 P P 13 44 31.7 -0.4
ICMP Isla Caja de M 52.60 6 P P 13 44 32.0 -0.7
APG El Apazote 52.62 337 P P 13 44 34.1 +0.9
comp=Z,4.2nm,0.3s,baz=169,slow=7.3,SNR=4.3
MLPR Magueyes Islan 52.64 6 P P 13 44 31.2 -1.8
CRPR Cabo Rojo, PR 52.67 6 P P 13 44 32.2 -1.0
SABA Saba 52.73 10 P P 13 44 32.5 -1.1
OBIP Obispado Ponce 52.75 6 P P 13 44 32.8 -1.0
PDPR Patillas Dam, 52.78 7 P P 13 44 33.1 -0.9
PDPR IAmb IAmb 13 44 34.2
comp=Z,42nm,1.1s
SJG San Juan 52.86 7 P P 13 44 33.6 -1.0
SJG IAmb IAmb 13 44 34.3
comp=Z,31nm,0.8s
MPR Mayaguez 52.87 5 P P 13 44 34.2 -0.5
MPR IAmb IAmb 13 44 44.2
comp=Z,27nm,0.7s
BANI BANI 52.89 2 P P 13 44 35.0 0.0
HUMP Col San Antoni 52.92 7 P P 13 44 33.9 -1.2
HUMP IAmb IAmb 13 44 34.7
comp=Z,49nm,1.4s
ANWB Willy Bob 53.00 12 P P 13 44 33.9 -1.8
CBYP Canovanas 53.05 7 P P 13 44 34.9 -1.2
GCPR Guaynabo City 53.06 7 P P 13 44 34.6 -1.5
GCPR IAmb IAmb 13 44 35.4
comp=Z,24nm,0.8s
CUPR Culebra, Puert 53.14 8 P P 13 44 35.2 -1.5
CUPR IAmb IAmb 13 44 36.2
comp=Z,36nm,1.1s
SMRT St. Maarten 53.17 10 P P 13 44 35.1 -1.8
DR12 Loma Pena Alta 53.31 3 P P 13 44 36.8 -1.2
GTBY Guantanamo Bay 54.50 356 P P 13 44 45.4 -1.2
QSPA South Pole Qui 55.46 180 P P 13 44 54.5 +1.3
comp=Z,21nm,0.8s,baz=309,slow=1.0,SNR=99
QSPA South Pole Qui 55.46 180 P P 13 44 54.4 +1.1
QSPA IAmb IAmb 13 44 55.7
comp=Z,32nm,1.1s
GRTK Grand Turk 55.98 1 P P 13 44 57.6 +0.3
CMIG Matias Romero 56.09 333 LR LR 14 03 41.3
comp=Z,121nm,21.4s,baz=14,slow=30
TEIG Tepich 56.92 341 P P 13 45 04.0 0.0
VNDA Vanda 63.39 191 P P 13 45 48.9 +1.3
comp=Z,2.5nm,1.0s,baz=108,slow=9.6,SNR=1.9
SYO Syowa Base 65.04 158⇓iP P 13 45 57.2 -1.3
SYO Syowa Base 65.04 158⇑ipP pP 13 46 09.0 -2.4
SYO Syowa Base 65.04 158⇑ePcP PcP 13 46 27.4 -3.7
SYO Syowa Base 65.04 158⇑ePP PP 13 48 18.0 -3.4
TIGA Tifton 66.81 349 P P 13 46 10.3 +0.1
baz=169
TBI Tubuai 67.41 257 eLR LR 14 06 42.6
comp=Z,808nm,30.8s
158A Hollywood 67.63 352 P P 13 46 15.8 +0.4
baz=172
346A Big Creek Wild 67.91 344 P P 13 46 17.8 +0.7
NHSC New Hope 68.00 352 P P 13 46 18.3 +0.6
baz=172
833A Chaparral WMA, 68.00 334 P P 13 46 18.4 +0.5
833A pP 13 46 31.3 +0.5
833A IAmb IAmb 13 46 32.2
comp=Z,29nm,0.9s
833A Chaparral WMA, 68.00 334 P P 13 46 18.9 +1.1
baz=156
Z59A Georgetown, SC 68.04 353 P P 13 46 18.9 +1.0
baz=173
Z58A St. Stephen 68.18 353 P P 13 46 19.1 +0.2
baz=173
152A Waverly Hall 68.20 348 P P 13 46 18.5 -0.5
152A IAmb IAmb 13 47 01.3
comp=Z,46nm,1.6s
Z57A Bowman 68.24 352 P P 13 46 19.4 +0.1
baz=172
Z56A Williston 68.35 351 P P 13 46 19.6 -0.3
Z56A Williston 68.35 351 P P 13 46 19.9 0.0
baz=171
342A Flagon Creek P 68.61 341 P P 13 46 22.6 +1.0
Z52A Williamson 68.66 349 P P 13 46 21.7 -0.1
baz=169
Y60A Bolivia 68.70 354 P P 13 46 22.0 0.0
baz=174
GOGA Godfrey 68.72 349 P P 13 46 22.1 -0.1
GOGA IAmb IAmb 13 46 22.6
comp=Z,17nm,0.7s
GOGA Godfrey 68.72 349 P P 13 46 22.1 -0.1
baz=170
Y58A Scranton 68.73 353 P P 13 46 22.6 +0.3
baz=173
Y59A Loris 68.74 354 P P 13 46 22.0 -0.3
baz=174
Y56A Pelion 68.80 351 P P 13 46 22.7 0.0
baz=172
Y57A Sumter 68.92 352 P P 13 46 23.5 0.0

Y57A IAmb IAmb 13 46 24.4
comp=Z,26nm,0.7s
Y57A Sumter 68.92 352 P **P** 13 46 23.3 -0.1
baz=172
LRAL Lakeview Retre 68.97 346 P **P** 13 46 23.8 +0.1
LRAL Lakeview Retre 68.97 346 P **P** 13 46 23.9 +0.1
baz=167
Z50A Ashland 68.98 347 P **P** 13 46 23.7 -0.2
Z50A IAmb IAmb 13 46 24.7
comp=Z,27nm,0.9s
Z50A Ashland 68.98 347 P **P** 13 46 23.8 0.0
baz=168,SNR=7.7
Y55A Saluda 69.02 351 P **P** 13 46 24.0 -0.1
baz=171
MEH Mehetia 69.02 262 eT T 15 01 04.6
comp=Z,22nm,0.2s
Y54A Tignall 69.05 350 P **P** 13 46 24.1 -0.2
baz=170,SNR=5.6
Y53A Monroe 69.18 349 P **P** 13 46 25.1 0.0
baz=170,SNR=5.1
X60A Albert Glenn T 69.25 354 P **P** 13 46 25.7 +0.3
baz=174
Y52A Lilburn 69.26 349 P **P** 13 46 25.4 -0.2
Y52A IAmb IAmb 13 46 26.5
comp=Z,34nm,0.9s
Y52A Lilburn 69.26 349 P **P** 13 46 25.7 +0.1
baz=169,SNR=5.9
HPIG 69.29 328 P **P** 13 46 26.6 +0.4
X59A McDuffie Farm, 69.29 354 P **P** 13 46 25.9 +0.1
baz=174
X57A Johnson Farm, 69.33 353 P **P** 13 46 26.1 +0.1
baz=173
X58A Rowland 69.34 353 P **P** 13 46 26.2 +0.1
X58A Rowland 69.34 353 P **P** 13 46 26.3 +0.3
baz=173,SNR=6.8
HODGE Hodges 69.36 351 P **P** 13 46 25.9 -0.3
Y51A Rockmart 69.46 348 P **P** 13 46 26.7 -0.1
baz=168,SNR=5.5
X56A White Oak 69.46 352 P **P** 13 46 26.7 -0.1
baz=172
X55A Gracelyn & Ava 69.51 351 P **P** 13 46 27.1 0.0
baz=171
NATX Nacogdoches 69.62 339 P **P** 13 46 28.7 +0.9
NATX IAmb IAmb 13 46 30.4
comp=Z,29nm,0.7s
NATX pP **pP** 13 46 41.3 +0.5
NATX Nacogdoches 69.62 339 P **P** 13 46 28.8 +0.9
baz=160
143A Socs Landing, 69.63 342 P **P** 13 46 28.6 +0.7
143A **pP** 13 46 41.2 +0.4
X54A Belton 69.69 351 P **P** 13 46 28.3 +0.1
baz=171,SNR=7.1
W60A Pink Hill 69.70 355 P **P** 13 46 28.5 +0.3
baz=175
W61A Ground Anchor 69.77 355 P **P** 13 46 29.2 +0.5
baz=175
X53A Estanollee 69.77 350 P **P** 13 46 28.9 +0.1
baz=170,SNR=6.3
W58A Raeford 69.79 353 P **P** 13 46 29.0 +0.2
baz=173,SNR=7.3
W59A Clinton 69.87 354 P **P** 13 46 29.3 0.0
baz=174
PAULI Pauline 69.88 351 P **P** 13 46 29.3 -0.1
PAULI IAmb IAmb 13 46 30.6
comp=Z,23nm,0.9s
CNNC Cliffs of the 69.90 355 P **P** 13 46 29.5 0.0
baz=174
X52A Dahlonega 69.96 349 P **P** 13 46 29.9 0.0
baz=169,SNR=8.7
W57A Gilead 70.00 353 P **P** 13 46 29.8 -0.3
W57A IAmb IAmb 13 46 31.4
comp=Z,24nm,0.8s
W57A Gilead 70.00 353 P **P** 13 46 30.0 -0.1
baz=173
W56A Indian Trail 70.05 352 P **P** 13 46 30.2 -0.2
baz=172
X51A Calhoun 70.07 348 P **P** 13 46 30.7 +0.1
X51A Calhoun 70.07 348 P **P** 13 46 30.9 +0.4
baz=168,SNR=11
V62A Hyde County Ai 70.09 356 P **P** 13 46 31.0 +0.4
baz=176
JCT Junction City 70.11 334 P **P** 13 46 31.0 +0.1
JCT **pP** 13 46 44.0 +0.1
JCT IAmb IAmb 13 46 45.0
comp=Z,21nm,0.8s
JCT Junction City 70.11 334 P **P** 13 46 31.7 +0.7
baz=156,SNR=9.3
KMSC Kings Mountain 70.14 352 P **P** 13 46 30.6 -0.3
KMSC IAmb IAmb 13 46 31.9
comp=Z,24nm,0.9s
KMSC Kings Mountain 70.14 352 P **P** 13 46 31.1 +0.1
baz=172,SNR=5.4
W54A Cherokee Point 70.19 351 P **P** 13 46 31.3 0.0
baz=171,SNR=6.2
BG3 Lake Jocassee 70.20 350 P **P** 13 46 31.4 0.0
BG3 IAmb IAmb 13 46 32.6
comp=Z,22nm,0.9s
TIAR Tiarei 70.23 262 eT T 15 02 35.6
comp=Z,3.2nm,0.3s
X48A Hartselle 70.35 347 P **P** 13 46 32.4 +0.1
X48A IAmb IAmb 13 46 33.7
comp=Z,39nm,1.1s
V61A Roper 70.35 356 P **P** 13 46 32.2 0.0
baz=176
V60A Jim Taylor Roa 70.37 355 P **P** 13 46 32.8 +0.4
V60A Jim Taylor Roa 70.37 355 P **P** 13 46 32.6 +0.2
baz=175
PPT2 Papeete2 70.40 262 eLR LR 14 07 54.0
comp=Z,710nm,29.2s
W53A Cullowhee 70.41 350 P **P** 13 46 32.9 +0.2
baz=170,SNR=9.0
W52A Murphy 70.44 349 P **P** 13 46 32.9 0.0
W52A IAmb IAmb 13 46 34.1
comp=Z,19nm,0.8s
W52A Murphy 70.44 349 P **P** 13 46 33.0 +0.2
baz=169,SNR=5.3
V59A Middlesex 70.44 354 P **P** 13 46 33.0 +0.2
baz=174
Z41A Richland Creek 70.52 341 P **P** 13 46 33.4 +0.1
Z41A IAmb IAmb 13 46 35.3
comp=Z,32nm,1.0s
Z41A Richland Creek 70.52 341 P **P** 13 46 34.3 +1.0
baz=162,SNR=5.1
TX31 Lajitas Ar. Si 70.55 331 P **P** 13 46 34.2 +0.5
TX31 pP **pP** 13 46 46.6 -0.1
TX32 Lajitas Array 70.55 331 P **P** 13 46 34.2 +0.5
TX32 pP **pP** 13 46 46.8 +0.1
TXAR Lajitas Array 70.55 331 P **P** 13 46 34.4 +0.7
comp=Z,6.6nm,0.8s,baz=154,slow=8.6,SNR=61
TXAR pP **pP** 13 46 46.8 +0.1
comp=Z,6.2nm,0.6s,baz=153,slow=8.1,SNR=23
V58A Windy Hill, Pi 70.55 354 P **P** 13 46 33.3 -0.1
V58A IAmb IAmb 13 46 34.3
comp=Z,42nm,0.9s
V58A Windy Hill, Pi 70.55 354 P **P** 13 46 33.3 -0.1
baz=174,SNR=8.9
W51A Cleveland 70.64 349 P **P** 13 46 34.3 +0.3
baz=169,SNR=5.9
WHTX Lake Whitney, 70.69 337 P **P** 13 46 34.8 +0.4
WHTX IAmb IAmb 13 46 36.0
comp=Z,28nm,0.8s
WHTX **pP** 13 46 47.2 -0.2
WHTX Lake Whitney, 70.69 337 P **P** 13 46 35.1 +0.6
baz=158,SNR=6.4
V56A Mocksville 70.70 352 P **P** 13 46 34.6 +0.2
baz=172,SNR=9.3
V57A Coltrane Farms 70.70 353 P **P** 13 46 34.3 -0.1
baz=173
W50A Signal Mountai 70.77 348 P **P** 13 46 35.0 +0.1
W50A Signal Mountai 70.77 348 P **P** 13 46 35.2 +0.3
baz=168,SNR=17
V55A Taylorsville 70.83 352 P **P** 13 46 35.0 -0.1
V55A IAmb IAmb 13 46 36.2
comp=Z,40nm,0.9s
V55A Taylorsville 70.83 352 P **P** 13 46 35.2 +0.1
baz=172,SNR=6.9
V54A Nebo 70.84 351 P **P** 13 46 35.2 0.0
baz=171,SNR=8.1
V53A Saluda 70.85 350 P **P** 13 46 35.0 -0.4
V53A IAmb IAmb 13 46 36.3
comp=Z,30nm,0.9s
V53A Saluda 70.85 350 P **P** 13 46 35.4 0.0
baz=170,SNR=8.0
W49A Belvidere 70.86 347 P **P** 13 46 35.6 +0.2
baz=167
U61A Possum Corner 70.88 356 P **P** 13 46 36.1 +0.7
baz=176

CPCT Cooper Cave 70.89 349 P **P** 13 46 35.4 -0.1
CPCT IAmb IAmb 13 46 36.5
comp=Z,29nm,0.9s
OXF Oxford 70.89 345 P **P** 13 46 35.6 0.0
baz=165,SNR=7.1
TKL Tuckaleechee C 70.97 350 P **P** 13 46 35.6 -0.5
TKL IAmb IAmb 13 46 36.8
comp=Z,19nm,0.8s
U59A Littleton 70.99 355 P **P** 13 46 36.5 +0.3
U59A IAmb IAmb 13 47 01.8
comp=Z,41nm,1.4s
U59A Littleton 70.99 355 P **P** 13 46 36.5 +0.3
baz=175
PLAL Pickwick Lake 71.07 346 P **P** 13 46 36.5 -0.1
U58A Oxford 71.10 354 P **P** 13 46 37.1 +0.3
baz=174
V52A Sevierville 71.13 350 P **P** 13 46 36.5 -0.5
V52A IAmb IAmb 13 46 37.7
comp=Z,44nm,1.1s
V52A Sevierville 71.13 350 P **P** 13 46 36.6 -0.4
baz=170
V50A Pikeville 71.19 349 P **P** 13 46 37.6 +0.2
baz=168,SNR=11
U57A Blanch 71.20 354 P **P** 13 46 37.4 0.0
baz=173
V51A Loudon 71.20 349 P **P** 13 46 37.0 -0.4
V51A IAmb IAmb 13 46 39.1
comp=Z,23nm,0.8s
V51A Loudon 71.20 349 P **P** 13 46 37.3 -0.1
baz=169,SNR=6.3
U56A King 71.22 353 P **P** 13 46 37.8 +0.2
U56A IAmb IAmb 13 46 38.4
comp=Z,27nm,0.8s
U56A King 71.22 353 P **P** 13 46 38.0 +0.4
baz=172
X43A Marvell 71.23 343 P **P** 13 46 38.1 +0.5
baz=163
V49A McMinnville 71.42 348 P **P** 13 46 38.7 0.0
baz=168,SNR=14
U55A TA2, Sparta 71.45 352 P **P** 13 46 39.0 0.0
baz=172
U53A Fall Branch 71.50 351 P **P** 13 46 38.9 -0.4
baz=171
U54A Nelsons Funny 71.56 351 P **P** 13 46 39.7 0.0
U54A Nelsons Funny 71.56 351 P **P** 13 46 39.5 -0.2
baz=171,SNR=7.9
V48A Smith Brothers 71.56 347 P **P** 13 46 39.8 +0.2
T59A Double "B" Far 71.59 355 P **P** 13 46 40.1 +0.4
T59A Double "B" Far 71.59 355 P **P** 13 46 40.3 +0.6
baz=175,SNR=8.9
U52A Thorn Hill 71.64 350 P **P** 13 46 39.6 -0.5
baz=170
T58A Grand View Acr 71.64 354 P **P** 13 46 40.4 +0.4
baz=174,SNR=5.5
X40A Basin Creek Fa 71.69 342 P **P** 13 46 40.8 +0.4
X40A pP **pP** 13 46 53.5 +0.1
X40A Basin Creek Fa 71.69 342 P **P** 13 46 40.6 +0.3
baz=162
U51A La Follette 71.72 350 P **P** 13 46 40.3 -0.2
baz=169,SNR=5.2
T57A Hurt 71.76 354 P **P** 13 46 40.7 0.0
baz=173
TZTN Tazewell 71.81 350 P **P** 13 46 40.9 -0.2
baz=170
CLTN Cedars of Leba 71.81 348 P **P** 13 46 41.3 +0.2
CLTN IAmb IAmb 13 46 42.2
comp=Z,35nm,0.9s
T56A Rocky Mt 71.86 353 P **P** 13 46 41.8 +0.4
baz=173,SNR=6.4
U50A Jamestown 71.88 349 P **P** 13 46 41.3 -0.2
baz=169
MIAR Mount Ida 71.94 341 P **P** 13 46 41.7 -0.2
MIAR Mount Ida 71.94 341 P **P** 13 46 41.9 +0.1
baz=161
ABTX Abilene, Hawle 72.00 335 P **P** 13 46 43.0 +0.7
ABTX IAmb IAmb 13 46 43.9
comp=Z,28nm,0.9s
ABTX pP **pP** 13 46 55.3 -0.1
ABTX Abilene, Hawle 72.00 335 P **P** 13 46 42.8 +0.4
baz=156,SNR=15
T55A Pulaski 72.03 352 P **P** 13 46 42.6 +0.2
baz=172
T54A Tazewell 72.06 352 P **P** 13 46 42.4 -0.3
baz=171,SNR=6.1
BLA Blacksburg 72.08 353 P **P** 13 46 42.8 +0.1
baz=172
T53A Wise 72.10 351 P **P** 13 46 42.6 -0.3
baz=171
U49A Red Boiling Sp 72.13 348 P **P** 13 46 42.8 -0.2
baz=168,SNR=7.3
WVT Waverly 72.13 346 P **P** 13 46 43.0 0.0
WVT Waverly 72.13 346 P **P** 13 46 43.1 +0.1
baz=166
W41B Gary Mavity, V 72.19 342 P **P** 13 46 43.5 +0.1
W41B Gary Mavity, V 72.19 342 P **P** 13 46 43.5 +0.1
baz=162,SNR=6.8
S58A Poland Farm, P 72.27 355 P **P** 13 46 44.2 +0.4
S58A IAmb IAmb 13 46 44.9
comp=Z,23nm,0.8s
S58A Poland Farm, P 72.27 355 P **P** 13 46 44.2 +0.4
baz=174
T51A Gray 72.28 350 P **P** 13 46 43.8 -0.1
baz=169,SNR=8.5
T52A Hallie 72.29 351 P **P** 13 46 43.5 -0.4
baz=170
WHAR Wooly Hollow 72.31 342 P **P** 13 46 44.5 +0.4
MAW Mawson 72.36 163 P **P** 13 46 45.0 +1.0
comp=Z,21nm,0.8s,baz=222,slow=7.4,SNR=16
MAW LR LR 14 21 07.9
comp=Z,203nm,18.6s,baz=238,slow=38
MAW Mawson 72.36 163 P **P** 13 46 45.0 +1.0
S56A Natural Bridge 72.46 353 P **P** 13 46 45.1 +0.1
baz=173,SNR=6.2
T50A Nancy 72.47 349 P **P** 13 46 44.8 -0.2
baz=169
S57A Dark Hollow, R 72.49 354 P **P** 13 46 45.3 +0.2
S57A IAmb IAmb 13 46 46.4
comp=Z,32nm,0.9s
S57A Dark Hollow, R 72.49 354 P **P** 13 46 45.5 +0.5
baz=174,SNR=6.1
R58B Mineral 72.60 355 P **P** 13 46 46.3 +0.5
R58B IAmb IAmb 13 46 47.6
comp=Z,60nm,1.5s
R58B Mineral 72.60 355 P **P** 13 46 46.4 +0.7
baz=175
W39A Magazine 72.61 341 P **P** 13 46 46.5 +0.6
W39A Magazine 72.61 341 P **P** 13 46 46.8 +0.9
baz=161,SNR=30
S55A Lewisburg 72.65 353 P **P** 13 46 46.3 +0.2
baz=172
T49A Edmonton 72.67 348 P **P** 13 46 46.0 -0.2
T49A IAmb IAmb 13 46 46.9
comp=Z,30nm,0.9s
T49A Edmonton 72.67 348 P **P** 13 46 46.0 -0.2
baz=168,SNR=10
S53A Williamson 72.74 351 P **P** 13 46 46.2 -0.4
baz=171
S54A Dingess, Beckl 72.76 352 P **P** 13 46 46.4 -0.4
S54A IAmb IAmb 13 46 47.0
comp=Z,22nm,0.8s
S54A Dingess, Beckl 72.76 352 P **P** 13 46 46.6 -0.2
baz=172
LCAR Lake Charles 72.78 344 P **P** 13 46 46.7 -0.1
T47A Sharon Grove 72.83 347 P **P** 13 46 46.7 -0.4
T47A IAmb IAmb 13 46 47.9
comp=Z,30nm,0.8s
S52A Salyersville 72.86 351 P **P** 13 46 47.1 -0.2
baz=170
S51A Beattyville 72.89 350 P **P** 13 46 47.2 -0.3
S51A IAmb IAmb 13 46 49.1
comp=Z,38nm,0.8s
R58A Rapidan 72.94 355 P **P** 13 46 48.2 +0.4
baz=174
R57A Stanardsville 72.98 354 P **P** 13 46 48.5 +0.5
baz=174,SNR=8.0
HENM Henderson Moun 73.03 345 P **P** 13 46 48.0 -0.3
PARMO Parma 73.04 345 P **P** 13 46 48.3 -0.1
S50A Richmond 73.05 349 P **P** 13 46 48.4 -0.1
baz=169,SNR=10
R54A Victor 73.10 352 P **P** 13 46 48.7 -0.1
baz=172,SNR=5.4
R55A Marlinton 73.11 353 P **P** 13 46 49.3 +0.4
R55A IAmb IAmb 13 46 50.4
comp=Z,42nm,0.9s
R55A Marlinton 73.11 353 P **P** 13 46 49.6 +0.7
baz=173,SNR=8.9
R56A Bull Pasture M 73.17 354 P **P** 13 46 49.7 +0.5

baz=173
S49A Springfield 73.29 349 P **P** 13 46 49.4 -0.5
baz=168
PBMO Poplar Bluff 73.30 344 P **P** 13 46 49.2 -0.7
MNTX Cornudas Mount 73.32 330 P **P** 13 46 49.9 -0.4
MNTX Cornudas Mount 73.32 330 P **P** 13 46 50.0 -0.2
baz=152,SNR=21
R53A Hurricane 73.36 352 P **P** 13 46 49.9 -0.3
R53A IAmb IAmb 13 46 50.9
comp=Z,22nm,0.8s
R53A Hurricane 73.36 352 P **P** 13 46 50.2 -0.1
baz=171
W35A Tecumseh 73.44 339 P **P** 13 46 50.3 -0.5
R52A Catlettsburg 73.45 351 P **P** 13 46 50.5 -0.3
baz=171
U40A Yellville 73.47 342 P **P** 13 46 50.8 -0.2
U40A IAmb IAmb 13 46 51.9
comp=Z,25nm,0.7s
U40A Yellville 73.47 342 P **P** 13 46 51.0 0.0
baz=162,SNR=21
R51A Hillsboro 73.54 350 P **P** 13 46 51.2 -0.1
baz=170,SNR=5.8
Q58A Fox Den Farm, 73.56 355 P **P** 13 46 51.7 +0.3
baz=175
R50A Paris 73.63 350 P **P** 13 46 51.1 -0.8
R50A Paris 73.63 350 P **P** 13 46 51.6 -0.3
baz=169,SNR=5.3
WMOK Wichita Mounta 73.65 337 P **P** 13 46 51.6 -0.5
WMOK IAmb IAmb 13 47 05.3
comp=Z,44nm,1.9s
WMOK Wichita Mounta 73.65 337 P **P** 13 46 52.0 -0.1
baz=157,SNR=9.4
HHAR Hobbs 73.67 341 P **P** 13 46 51.6 -0.6
HHAR IAmb IAmb 13 46 53.1
comp=Z,20nm,0.8s
Q57A Strasburg 73.71 355 P **P** 13 46 53.2 +1.0
baz=174,SNR=5.1
R49A Shelbyville 73.77 349 P **P** 13 46 51.6 -1.0
R49A IAmb IAmb 13 46 53.2
comp=Z,24nm,0.9s
R49A Shelbyville 73.77 349 P **P** 13 46 52.3 -0.4
baz=168
Q56A Snyder Ridge, 73.78 354 P **P** 13 46 53.2 +0.5
Q56A IAmb IAmb 13 47 41.3
comp=Z,86nm,1.9s
Q56A Snyder Ridge, 73.78 354 P **P** 13 46 53.4 +0.7
baz=174
Q55A Buckhannon 73.81 353 P **P** 13 46 53.3 +0.3
baz=173
TUL1 Leonard 73.83 340 P **P** 13 46 52.9 -0.2
TUL1 IAmb IAmb 13 46 54.0
comp=Z,31nm,0.7s
TUL1 Leonard 73.83 340 P **P** 13 46 53.0 -0.1
baz=160,SNR=7.1
Q53A Leroy 73.83 352 P **P** 13 46 52.9 -0.1
baz=172
Q54A Coxs Mills 73.88 353 P **P** 13 46 52.8 -0.5
Q54A IAmb IAmb 13 46 56.3
comp=Z,24nm,1.1s
Q54A Coxs Mills 73.88 353 P **P** 13 46 52.8 -0.5
baz=172
WCI Wyandotte Cave 73.89 348 P **P** 13 46 52.9 -0.6
WCI Wyandotte Cave 73.89 348 P **P** 13 46 52.8 -0.6
baz=168
SDMD Soldier's Deli 73.97 356 P **P** 13 46 54.2 +0.4
Q52A Bidwell 74.02 351 P **P** 13 46 53.9 -0.2
baz=171,SNR=6.7
P58A Pank, Wackersv 74.08 355 P **P** 13 46 55.2 +0.8
baz=175,SNR=7.0
MGMO Mountain Grove 74.08 343 P **P** 13 46 54.6 0.0
P57A Homestead Farm 74.12 355 P **P** 13 46 55.5 +0.8
P57A IAmb IAmb 13 46 56.6
comp=Z,24nm,0.8s
P57A Homestead Farm 74.12 355 P **P** 13 46 55.4 +0.8
baz=175,SNR=6.9
Q50A Georgetown 74.13 350 P **P** 13 46 54.5 -0.2
baz=170
P59A Jarrettsville 74.15 356 P **P** 13 46 55.8 +0.9
baz=176,SNR=6.9
P56A Dayton Farm, R 74.21 354 P **P** 13 46 55.8 +0.6
baz=174
SUR Sutherland 74.21 119 P **P** 13 46 56.8 +0.9
SUR IAmb IAmb 13 46 58.0
comp=Z,24nm,0.8s
Q51A Peebles 74.22 351 P **P** 13 46 55.3 0.0
Q51A IAmb IAmb 13 46 56.2
comp=Z,30nm,0.8s
Q51A Peebles 74.22 351 P **P** 13 46 55.1 -0.2
baz=170,SNR=7.2
P55A Reedsville 74.30 353 P **P** 13 46 55.9 +0.1
baz=173
P60A Greenville 74.31 357 P **P** 13 46 56.5 +0.7
P60A IAmb IAmb 13 46 57.5
comp=Z,21nm,0.9s
P60A Greenville 74.31 357 P **P** 13 46 56.2 +0.5
baz=177
MSTX Muleshoe 74.33 334 P **P** 13 46 56.1 0.0
MSTX IAmb IAmb 13 47 09.8
comp=Z,23nm,0.8s
MSTX Muleshoe 74.33 334 P **P** 13 46 56.3 +0.1
baz=154,SNR=14
Q49A Aurora 74.42 349 P **P** 13 46 56.2 -0.3
baz=169,SNR=9.5
P53A Whipple 74.44 352 P **P** 13 46 56.4 -0.2
P53A IAmb IAmb 13 46 57.5
comp=Z,26nm,1.1s
P53A Whipple 74.44 352 P **P** 13 46 56.3 -0.2
baz=172
MCWV Mont Chateau 74.45 353 P **P** 13 46 57.0 +0.4
MCWV Mont Chateau 74.45 353 P **P** 13 46 56.6 0.0
baz=173
P54A Burton 74.45 353 P **P** 13 46 56.5 -0.1
baz=172,SNR=11
Q48A North Vernon 74.48 349 P **P** 13 46 56.3 -0.5
baz=168,SNR=8.4
O61A Allentown 74.55 358 P **P** 13 46 57.9 +0.7
baz=178
P51A Williamsport 74.63 351 P **P** 13 46 57.3 -0.3
P51A IAmb IAmb 13 46 58.4
comp=Z,45nm,0.9s
P51A Williamsport 74.63 351 P **P** 13 46 57.3 -0.3
baz=170,SNR=6.6
P52A Corning 74.67 352 P **P** 13 46 57.6 -0.3
baz=171
O58A Lewisberry 74.69 356 P **P** 13 46 58.5 +0.6
baz=176,SNR=6.2
CCM Cathedral Cave 74.70 344 P **P** 13 46 58.1 0.0
CCM Cathedral Cave 74.70 344 P **P** 13 46 58.5 +0.4
baz=163
319A Douglas 74.70 327 P **P** 13 46 59.0 +0.6
319A **PcP** 13 47 12.1 -0.4
319A IAmb IAmb 13 47 13.4
comp=Z,22nm,0.9s
AMTX Amarillo 74.76 335 P **P** 13 46 59.1 +0.5
baz=155
LIC Lamto 74.76 71 eP **P** 13 46 59.2 +0.2
comp=Z,97nm,0.7s
PAGS Pennsylvania G 74.78 356 P **P** 13 46 58.8 +0.3
PAGS IAmb IAmb 13 49 20.1
comp=Z,37nm,1.1s
O60A Telford 74.80 357 P **P** 13 46 59.2 +0.6
baz=177,SNR=6.3
O57A Amberson 74.82 355 P **P** 13 46 59.4 +0.6
baz=175
O59A Robesonia 74.83 356 P **P** 13 46 59.7 +0.8
baz=176,SNR=5.4
P50A Jamestown 74.86 350 P **P** 13 46 58.7 -0.2
baz=170,SNR=7.0
P49A Miami Univ. Ec 74.92 350 P **P** 13 46 58.7 -0.6
baz=169,SNR=6.1
O55A Ligonier 74.94 354 P **P** 13 46 59.8 +0.3
baz=174
O56A Blue Knob Stat 74.94 355 P **P** 13 46 59.8 +0.3
baz=174
P48A Milroy 74.95 349 P **P** 13 46 58.8 -0.7
P48A Milroy 74.95 349 P **P** 13 46 58.8 -0.7
baz=168,SNR=12
O54A Avella 75.02 353 P **P** 13 46 59.3 -0.6
baz=173
TIC Toumodi 75.03 71 eP **P** 13 47 00.8 +0.2
SLM Saint Louis 75.04 345 P **P** 13 46 59.8 -0.2
121A Cookes Peak, D 75.05 329 P **P** 13 47 01.6 +1.1
121A pP **PcP** 13 47 14.4 +0.4
121A IAmb IAmb 13 47 15.5
comp=Z,24nm,0.9s
121A Cookes Peak, D 75.05 329 P **P** 13 47 02.0 +1.5
baz=150,SNR=16

KIC Kosan Boka 75.07 71 eP P 13 47 01.2 +0.4
comp=Z,134nm,0.8s
LUPA Lehigh Univers 75.08 357 P P 13 47 01.1 +0.9
O52A Adamsville 75.11 352 P P 13 47 00.0 -0.4
O52A IAmb IAmb 13 47 01.1
comp=Z,28nm,0.8s
O52A Adamsville 75.11 352 P P 13 47 00.1 -0.4
baz=171,SNR=5.5
DBIC Dimbokro 75.17 71 P P 13 47 01.7 +0.3
comp=Z,41nm,0.7s,baz=206,slow=5.9,SNR=74
DBIC LR LR 14 18 08.1
comp=Z,188nm,18.8s,baz=262,slow=34
DBIC Dimbokro 75.17 71 P P 13 47 01.6 +0.3
O53A New Philadelph 75.17 352 P P 13 47 00.6 -0.2
baz=172
N61A South Mountain 75.20 358 P P 13 47 01.5 +0.7
baz=178
O51A Pataskala 75.23 351 P P 13 47 00.8 -0.3
baz=171,SNR=9.4
SSPA Standing Stone 75.26 355 P P 13 47 01.4 +0.1
SSPA Standing Stone 75.26 355 P P 13 47 01.5 +0.2
baz=175
N60A Cedar Hill Far 75.34 357 P P 13 47 02.3 +0.6
baz=177,SNR=7.0
N57A Milroy 75.36 355 P P 13 47 02.0 +0.2
baz=175,SNR=5.7
ACSO Alum Creek Sta 75.36 351 P P 13 47 00.7 -1.2
ACSO Alum Creek Sta 75.36 351 P P 13 47 01.7 -0.2
baz=170,SNR=11
O50A Cable 75.36 351 P P 13 47 01.5 -0.4
baz=170,SNR=6.3
N58A Sunbury 75.39 356 P P 13 47 02.4 +0.3
N58A Sunbury 75.39 356 P P 13 47 02.3 +0.3
baz=176
P46A Rosedale 75.40 348 P P 13 47 00.2 -1.9
P46A IAmb IAmb 13 47 02.8
comp=Z,30nm,0.8s
N59A State Game Lan 75.42 357 P P 13 47 02.4 +0.2
N59A State Game Lan 75.42 357 P P 13 47 03.1 +0.9
baz=176,SNR=5.6
N55A Marion Center 75.49 354 P P 13 47 02.9 +0.3
baz=174,SNR=12
O49A Covington 75.50 350 P P 13 47 01.5 -1.2
O49A Covington 75.50 350 P P 13 47 02.2 -0.4
baz=169,SNR=11
ODNJ Ogdensburg 75.54 358 P P 13 47 03.2 +0.4
M66A Nantucket 75.68 1 P P 13 47 03.2 -0.4
baz=181
N53A Lisbon 75.68 353 P P 13 47 04.1 +0.4
N53A Lisbon 75.68 353 P P 13 47 03.7 +0.1
baz=172
O48A Farmland 75.69 349 P P 13 47 03.1 -0.6
baz=169,SNR=9.9
M61A Granite Spring 75.74 358 P P 13 47 04.4 +0.4
baz=178
N54A Moraine State 75.75 354 P P 13 47 04.2 +0.1
N54A IAmb IAmb 13 47 05.2
comp=Z,32nm,0.8s
N54A Moraine State 75.75 354 P P 13 47 04.2 +0.1
baz=173,SNR=7.1
N52A McGinn's Farm, 75.78 352 P P 13 47 04.1 -0.1
baz=172
M60A Port Jervis 75.78 358 P P 13 47 04.8 +0.6
baz=178,SNR=6.0
M63A Gales Ferry 75.81 360 P P 13 47 05.0 +0.6
baz=180
M62A Hamden 75.86 359 P P 13 47 05.4 +0.8
baz=179
P43A Skaggs, Pawnee 75.86 346 P P 13 47 04.4 -0.3
M58A Price's Panora 75.91 356 P P 13 47 05.5 +0.5
baz=176
M57A Sunshine Farm, 75.91 356 P P 13 47 05.3 +0.4
M57A Sunshine Farm, 75.91 356 P P 13 47 05.4 +0.4
baz=175
N50A Nevada 75.91 351 P P 13 47 04.9 -0.1
baz=170,SNR=16
N51A Ashland 75.96 352 P P 13 47 05.1 -0.2
N51A IAmb IAmb 13 47 06.0
comp=Z,53nm,1.1s
N51A Ashland 75.96 352 P P 13 47 05.1 -0.2
baz=171
M59A Waymart 76.03 357 P P 13 47 06.1 +0.5
baz=177,SNR=5.6
SFIN Lafayette 76.12 348 P P 13 47 05.0 -1.1
SFIN Lafayette 76.12 348 P P 13 47 06.1 -0.1
baz=167
M56A Emporium 76.12 355 P P 13 47 06.4 +0.2
M56A IAmb IAmb 13 47 07.5
comp=Z,41nm,1.0s
M56A Emporium 76.12 355 P P 13 47 06.2 0.0
baz=174,SNR=7.9
O44A Mansfield 76.15 347 P P 13 47 05.6 -0.7
M55A Ridgway 76.15 355 P P 13 47 06.0 -0.4
M55A IAmb IAmb 13 47 07.5
comp=Z,35nm,0.9s
M55A Ridgway 76.15 355 P P 13 47 06.5 +0.1
baz=174,SNR=11
N49A Columbus Grove 76.20 350 P P 13 47 06.1 -0.5
N49A Columbus Grove 76.20 350 P P 13 47 06.3 -0.3
baz=169,SNR=14
N48A Decatur 76.26 350 P P 13 47 06.1 -0.9
baz=169,SNR=8.3
M54A Oil Creek Stat 76.27 354 P P 13 47 06.1 -0.9
M54A IAmb IAmb 13 47 07.4
comp=Z,19nm,0.8s
M54A Oil Creek Stat 76.27 354 P P 13 47 06.6 -0.4
baz=173,SNR=7.0
L63A North Scituate 76.27 0 P P 13 47 06.8 -0.1
baz=180
M53A WI Miller and 76.29 353 P P 13 47 06.8 -0.4
baz=172,SNR=7.6
M51A Elyria 76.35 352 P P 13 47 07.3 -0.2
baz=171
N47A Urbana 76.38 349 P P 13 47 06.5 -1.1
N47A Urbana 76.38 349 P P 13 47 06.7 -1.0
baz=168,SNR=16
M52A Chesterland 76.46 353 P P 13 47 07.6 -0.5
M52A IAmb IAmb 13 47 09.0
comp=Z,32nm,0.8s
M52A Chesterland 76.46 353 P P 13 47 07.8 -0.3
baz=172,SNR=5.1
M50A Fremont 76.52 351 P P 13 47 07.9 -0.5
M50A IAmb IAmb 13 47 09.1
comp=Z,40nm,0.9s
M50A Fremont 76.52 351 P P 13 47 08.1 -0.3
baz=170
L58A Harry Jones Me 76.55 357 P P 13 47 09.1 +0.5
baz=176,SNR=5.4
L57A Andrews Acres 76.55 356 P P 13 47 08.9 +0.3
baz=176
ANMO Albuquerque 76.60 331 P P 13 47 10.1 +0.8
ANMO pP pP 13 47 22.0 -0.3
ANMO Albuquerque 76.60 331 P P 13 47 10.3 +1.1
baz=151
L59A Walton 76.66 357 P P 13 47 09.8 +0.5
L59A IAmb IAmb 13 47 11.0
comp=Z,27nm,0.8s
L59A Walton 76.66 357 P P 13 47 09.9 +0.7
baz=177,SNR=5.4
QUA2 Belchertown 76.69 360 P P 13 47 09.8 +0.5
QUA2 IAmb IAmb 13 47 10.6
comp=Z,26nm,1.0s
HDIL Hopedale 76.70 346 P P 13 47 09.1 -0.4
HDIL Hopedale 76.70 346 P P 13 47 09.0 -0.4
baz=165,SNR=6.1
BINY Binghamton 76.71 357 P P 13 47 09.6 +0.1
BINY IAmb IAmb 13 47 34.2
comp=Z,38nm,1.4s
BINY Binghamton 76.71 357 P P 13 47 09.9 +0.4
baz=176
M49A Liberty Center 76.72 351 P P 13 47 09.1 -0.4
baz=170,SNR=14
L56A Greenwood 76.73 356 P P 13 47 09.8 +0.1
L56A Greenwood 76.73 356 P P 13 47 10.0 +0.3
baz=175,SNR=8.4
L53A Girard 76.76 353 P P 13 47 09.7 -0.1
baz=173,SNR=6.6
214A Organ Pipe Nat 76.81 325 P P 13 47 11.5 +1.1
214A pP 13 47 24.1 +0.6
214A Organ Pipe Nat 76.81 325 P P 13 47 11.9 +1.6
baz=146,SNR=7.4
M48A Edgerton 76.83 350 P P 13 47 09.4 -0.8
M48A Edgerton 76.83 350 P P 13 47 09.6 -0.6
baz=169
L55A Hinsdale 76.84 355 P P 13 47 10.7 +0.5
baz=174,SNR=10
M47A Cromwell 76.84 349 P P 13 47 09.7 -0.5
baz=168
L61B Northampton 76.86 359 P P 13 47 10.7 +0.4
baz=179
ERPA Erie 76.90 354 P P 13 47 10.4 -0.1
ERPA IAmb IAmb 13 47 11.4
comp=Z,33nm,0.8s
ERPA Erie 76.90 354 P P 13 47 10.5 -0.1
baz=173,SNR=5.0
HRV Adam Dziewonsk 76.91 0 P P 13 47 10.5 -0.1
baz=180
L54A Sinclairville 76.96 354 P P 13 47 11.0 +0.1
baz=174,SNR=8.5
KSU1 Kansas State U 77.04 340 P P 13 47 11.3 -0.1
baz=159
WVNY West Valley, N 77.07 355 P P 13 47 11.9 +0.3
L50A Kingsville 77.12 352 P P 13 47 11.0 -0.8
baz=171,SNR=5.7
TRY Troy 77.16 359 P P 13 47 12.9 +0.9
TRY IAmb IAmb 13 47 14.5
comp=Z,32nm,1.0s
K59A Cooperstown 77.23 358 P P 13 47 12.8 +0.4
baz=177,SNR=6.2
L48A N Adams 77.24 350 P P 13 47 11.8 -0.7
baz=169,SNR=8.3
K58A Earlville 77.25 357 P P 13 47 12.6 +0.1
K58A IAmb IAmb 13 47 13.9
comp=Z,31nm,0.8s
K58A Earlville 77.25 357 P P 13 47 12.9 +0.4
baz=177,SNR=8.5
K57A Scipio Center 77.26 356 P P 13 47 12.6 0.0
baz=176
M44A Midewin, Midew 77.27 347 P P 13 47 11.3 -1.4
K56A Middlesex 77.28 356 P P 13 47 12.8 +0.2
baz=175
K54A Basiliko Farm, 77.28 355 P P 13 47 12.9 +0.1
baz=174,SNR=6.4
L49A Milan 77.31 351 P P 13 47 12.0 -0.8
baz=170,SNR=5.8
K55A Perry 77.35 355 P P 13 47 13.1 0.0
baz=175
L47A Sherwood 77.38 350 P P 13 47 12.4 -0.9
baz=169,SNR=10
L46A Eue Claire 77.58 349 P P 13 47 13.3 -1.1
K52A Tillsonburg 77.63 353 P P 13 47 14.4 -0.2
baz=172,SNR=6.2
K51A Iona Station 77.65 353 P P 13 47 14.5 -0.2
baz=172
X18A Snowflake 77.68 328 P P 13 47 16.0 +0.6
X18A IAmb IAmb 13 47 31.7
comp=Z,30nm,1.6s
CBKS Cedar Bluff 77.69 338 P P 13 47 15.3 +0.2
CBKS IAmb IAmb 13 47 16.9
comp=Z,20nm,0.7s
CBKS Cedar Bluff 77.69 338 P P 13 47 15.8 +0.7
baz=157,SNR=6.9
T25A Trinidad 77.75 334 P P 13 47 16.8 +1.1
T25A IAmb IAmb 13 47 30.7
comp=Z,30nm,0.8s
T25A Trinidad 77.75 334 P P 13 47 17.2 +1.4
baz=153,SNR=29
ACCN Adirondack Com 77.81 359 P P 13 47 16.1 +0.4
ACCN IAmb IAmb 13 47 17.5
comp=Z,37nm,1.2s
J56A Wolcott 77.82 356 P P 13 47 14.8 -0.8
J56A IAmb IAmb 13 47 16.6
comp=Z,21nm,0.8s
J56A Wolcott 77.82 356 P P 13 47 15.6 -0.1
baz=176
K50A Casco 77.83 352 P P 13 47 14.9 -0.7
K50A Casco 77.83 352 P P 13 47 15.0 -0.7
baz=171,SNR=5.4
J58A Remsen 77.83 357 P P 13 47 15.7 0.0
baz=177
J55A Hilton 77.87 355 P P 13 47 15.9 0.0
baz=175
J59A Piesco 77.91 358 P P 13 47 16.2 0.0
J59A IAmb IAmb 13 47 17.2
comp=Z,20nm,0.9s
J59A Piesco 77.91 358 P P 13 47 16.4 +0.2
baz=178,SNR=5.9
J57A Williamstown 77.91 357 P P 13 47 16.1 -0.1
J57A IAmb IAmb 13 47 17.5
comp=Z,27nm,0.8s
J57A Williamstown 77.91 357 P P 13 47 16.3 +0.1
baz=176,SNR=6.2
J54A Appleton 77.94 355 P P 13 47 16.3 0.0
baz=174
L44A Lake County Fo 78.01 348 P P 13 47 16.3 -0.4
baz=166
K47A Vermontville 78.03 350 P P 13 47 15.8 -1.0
baz=169,SNR=6.9
K48A Perry 78.04 351 P P 13 47 16.3 -0.6
baz=170,SNR=7.1
J52A Paris 78.06 353 P P 13 47 16.6 -0.4
baz=173,SNR=8.8
W18A Petrified Fore 78.09 329 P P 13 47 18.2 +0.6
W18A pP 13 47 30.7 -0.1
W18A IAmb IAmb 13 47 32.6
comp=Z,28nm,1.2s
HNH Hanover 78.11 360 P P 13 47 17.4 +0.2
K46A Dorr 78.16 349 P P 13 47 16.8 -0.7
baz=168
L42A Oliver, Polo 78.17 346 P P 13 47 16.9 -0.7
L42A IAmb IAmb 13 47 18.3
comp=Z,34nm,0.8s
X16A Lo Mia Camp, P 78.24 327 P P 13 47 19.6 +1.1
X16A pP pP 13 47 32.0 +0.4
I60A Shoreham 78.26 359 P P 13 47 18.9 +0.8
baz=179,SNR=6.0
I62A Tamworth 78.28 0 P P 13 47 18.6 +0.4
baz=180
I61A Oroboro, Fairl 78.34 360 P P 13 47 19.4 +0.8
baz=180
I64A Boothbay 78.35 2 P P 13 47 19.6 +1.1
baz=182
NCB Newcomb 78.41 358 P P 13 47 18.8 -0.1
I57A Carthage 78.43 357 P P 13 47 19.3 +0.3
baz=177,SNR=8.8
I63A Otisfield 78.46 1 P P 13 47 20.6 +1.4
baz=181
J49A Marlette 78.46 352 P P 13 47 18.5 -0.8
baz=170,SNR=5.1
J48A Bridge Port 78.48 351 P P 13 47 18.9 -0.5
J48A Bridge Port 78.48 351 P P 13 47 18.8 -0.5
baz=170,SNR=7.1
PECO Prince Edward 78.49 356 P P 13 47 19.3 0.0
PECO IAmb IAmb 13 47 20.1
comp=Z,21nm,0.8s
L40A Anamosa 78.54 345 P P 13 47 19.0 -0.6
L40A IAmb IAmb 13 47 20.4
comp=Z,42nm,1.0s
Y14A Wickenburg 78.55 326 P P 13 47 20.7 +0.7
J47A Sunner 78.56 350 P P 13 47 19.2 -0.6
J47A IAmb IAmb 13 47 20.1
comp=Z,32nm,0.9s
J47A Sunner 78.56 350 P P 13 47 19.6 -0.2
baz=169
K43A Burlington 78.60 348 P P 13 47 19.7 -0.3
K43A IAmb IAmb 13 47 22.8
comp=Z,24nm,0.9s
LBNH Lisbon 78.65 360 P P 13 47 20.8 +0.6
LBNH IAmb IAmb 13 47 22.7
comp=Z,32nm,0.9s
LBNH Lisbon 78.65 360 P P 13 47 21.1 +0.9
baz=180
I51A Listowel 78.67 353 P P 13 47 20.2 -0.1
baz=172,SNR=13
GLA Glamis 78.67 324 P P 13 47 21.6 +0.9
SDCO Great Sand Dun 78.69 333 P P 13 47 21.8 +0.8
SDCO Great Sand Dun 78.69 333 P P 13 47 22.0 +1.0
baz=152,SNR=13
TSUM Tsumeb 78.74 106 P P 13 47 21.9 +0.3
TSUM IAmb IAmb 13 47 23.8
comp=Z,21nm,1.0s
J46A Howard City 78.79 350 P P 13 47 20.8 -0.3
baz=168
KSCO Kaye Shedlock' 78.80 336 P P 13 47 22.1 +0.7
baz=154
I55A Frankford 78.81 356 P P 13 47 21.4 +0.3
baz=175
SCIA State Center 78.83 344 P P 13 47 21.3 +0.1
baz=162
H58A Gabriels 78.86 358 P P 13 47 21.9 +0.4
baz=178,SNR=6.8
H57A Richville 78.94 357 P P 13 47 22.1 +0.3
baz=177,SNR=7.9
H61A Lyndonville 78.94 360 P P 13 47 23.0 +1.2
baz=180,SNR=8.7
H60A Morristown 78.97 359 P P 13 47 23.4 +1.4
baz=179
I49A Point Hope 79.00 352 P P 13 47 21.4 -0.8
I49A IAmb IAmb 13 47 22.5
comp=Z,22nm,0.9s
I49A Point Hope 79.00 352 P P 13 47 21.8 -0.4
baz=171
LONY Lake Ozonia 79.07 358 P P 13 47 22.8 +0.2
LONY Lake Ozonia 79.07 358 P P 13 47 23.0 +0.5
baz=178,SNR=6.3
H59A Cadyville 79.07 359 P P 13 47 23.1 +0.6
baz=178
Y12C Blythe 79.10 325 P P 13 47 24.1 +1.1
DELO Deloro Mine 79.11 356 P P 13 47 23.0 +0.3
H56A Elgin 79.11 357 P P 13 47 22.9 +0.2
baz=176,SNR=12
H55A Tweed 79.11 356 P P 13 47 23.0 +0.3
baz=175
WUAZ Wupatki 79.14 328 P P 13 47 23.9 +0.5
WUAZ Wupatki 79.14 328 P P 13 47 24.6 +1.2
baz=148
JFWS Jewell Farm 79.16 346 P P 13 47 22.8 -0.2
JFWS IAmb IAmb 13 47 24.1
comp=Z,32nm,0.9s
JFWS Jewell Farm 79.16 346 P P 13 47 22.8 -0.2
baz=164,SNR=8.0
H65A Eastbrook 79.16 3 P P 13 47 23.2 +0.2
baz=183
S22A 4UR Ranch, Cre 79.19 332 P P 13 47 24.6 +0.8
S22A 4UR Ranch, Cre 79.19 332 P P 13 47 24.9 +1.1
baz=151,SNR=8.6
H53A Bobcaygeon 79.23 355 P P 13 47 23.5 +0.1
baz=174,SNR=5.1
FRNY Flat Rock 79.26 359 P P 13 47 23.9 +0.3
FRNY IAmb IAmb 13 47 25.1
comp=Z,20nm,0.8s
I47A Gladwin 79.29 351 P P 13 47 23.1 -0.7
I47A IAmb IAmb 13 47 24.2
comp=Z,31nm,0.8s
I47A Gladwin 79.29 351 P P 13 47 23.6 -0.1
baz=169
I46A Reed City 79.34 350 P P 13 47 23.5 -0.5
baz=168
I48A Sherman Twp 79.35 351 P P 13 47 23.5 -0.6
baz=170,SNR=5.7
MVCO Mesa Verde 79.38 331 P P 13 47 24.8 +0.1
MVCO Mesa Verde 79.38 331 P P 13 47 25.5 +0.8
baz=150,SNR=5.4
H52A Wyevale 79.40 354 P P 13 47 24.3 0.0
baz=173
SADO Sadowa 79.46 355 P P 13 47 24.5 -0.1
SADO IAmb IAmb 13 47 25.6
comp=Z,23nm,0.9s
BOSA Boshof 79.47 117 P P 13 47 26.0 +0.5
comp=Z,46nm,0.8s,baz=233,slow=4.6,SNR=78
BOSA LR LR 14 17 41.7
comp=Z,80nm,21.9s,baz=280,slow=32
BOSA Boshof 79.47 117 P P 13 47 25.6 +0.1
BC3 Big Chuckawall 79.47 324 P P 13 47 26.4 +1.2
baz=145,SNR=5.5
G59A Clarenceville 79.50 359 P P 13 47 25.8 +1.0
baz=179
G63A Kingsbury 79.54 2 P P 13 47 25.9 +0.8
baz=182
G57A Newington 79.56 358 P P 13 47 25.5 +0.3
baz=177,SNR=6.6
G58A Ormstown 79.58 358 P P 13 47 25.8 +0.5
baz=178
PLVO Plevna 79.59 356 P P 13 47 25.7 +0.4
PLVO IAmb IAmb 13 47 26.8
comp=Z,20nm,0.8s
BGNE Belgrade 79.62 340 P P 13 47 25.8 +0.1
BGNE IAmb IAmb 13 47 27.6
comp=Z,38nm,0.8s
BGNE Belgrade 79.62 340 P P 13 47 26.2 +0.6
baz=158
G62A West of Eustis 79.63 1 P P 13 47 26.4 +0.8
G62A IAmb IAmb 13 47 27.2
comp=Z,21nm,0.8s
G62A West of Eustis 79.63 1 P P 13 47 26.5 +0.9
baz=181
Q24A Divide 79.64 334 P P 13 47 26.8 +0.6
Q24A Divide 79.64 334 P P 13 47 27.2 +1.1
baz=153,SNR=8.8
G61A St-Isidore-de- 79.69 0 P P 13 47 26.8 +0.9
baz=180
PKME Peaks-Kenny Pk 79.70 2 P P 13 47 26.3 +0.3
baz=182
G64A Maxfield 79.70 2 P P 13 47 26.8 +0.8
baz=182
IRM Iron Mountain 79.73 325 P P 13 47 27.8 +1.3
baz=145
G53A Haliburton 79.78 355 P P 13 47 26.5 +0.2
baz=174,SNR=10
G55A Calabogie 79.79 356 P P 13 47 26.5 +0.1
baz=176,SNR=7.7
H48A Harrisville 79.81 352 P P 13 47 26.2 -0.3
H48A IAmb IAmb 13 47 27.2
comp=Z,24nm,0.7s
H48A Harrisville 79.81 352 P P 13 47 26.4 -0.1
baz=170
I42A Draeger Farm, 79.85 347 P P 13 47 26.3 -0.5
I42A IAmb IAmb 13 47 28.1
comp=Z,24nm,0.8s
H46A Fife Lake 79.89 350 P P 13 47 26.9 -0.1
baz=169
W13A Hualapai Mount 79.91 326 P P 13 47 28.5 +0.8
XPFO Pion Flat 79.92 323 P P 13 47 29.1 +1.5
XPFO pP 13 47 41.4 +0.7
PFO Pinyon Flats O 79.92 323 P P 13 47 29.1 +1.4
PFO Pinyon Flats O 79.92 323 P P 13 47 29.3 +1.7
baz=144,SNR=5.3
G54A Lake Saint Pet 80.01 355 P P 13 47 27.8 +0.2
baz=175,SNR=11
BELC Belle Mtn. Jos 80.01 324 P P 13 47 29.4 +1.3
baz=144
F63A Nahmakanta, Br 80.14 2 P P 13 47 29.6 +1.2
baz=182
U15A North Rim 80.30 328 P P 13 47 31.2 +1.4
U15A IAmb IAmb 13 47 45.1
comp=Z,54nm,1.9s
F64A Sherman 80.33 2 P P 13 47 30.3 +1.0
baz=183
G47A Hillman 80.34 351 P P 13 47 29.4 0.0
baz=170,SNR=6.7
F55A Otter Lake 80.35 357 P P 13 47 29.4 -0.1
baz=176,SNR=6.3
F60A Warwick 80.38 360 P P 13 47 30.0 +0.4
baz=180
GMRC Granite Mounta 80.49 325 P P 13 47 32.2 +1.6
baz=145,SNR=6.6
F52A Sundridge 80.50 355 P P 13 47 30.2 -0.1
baz=174,SNR=9.6
ISCO Idaho Springs 80.55 334 P P 13 47 31.7 +0.7
ISCO Idaho Springs 80.55 334 P P 13 47 32.0 +0.9
baz=152,SNR=6.5
ALGO Algonquin Park 80.56 356 P P 13 47 30.4 -0.1
baz=175,SNR=15
TRQ Mont Tremblant 80.67 358 P P 13 47 31.2 -0.1
F51A Arnstein 80.68 354 P P 13 47 31.0 -0.2
baz=173,SNR=8.5
F49A Sandfield 80.71 353 P P 13 47 31.0 -0.4
baz=171,SNR=9.6
E60A Ste Agathe de 80.78 0 P P 13 47 32.2 +0.5
baz=180,SNR=5.2
E58A La Victoria 80.79 359 P P 13 47 31.6 -0.2
baz=179
F48A Evansville 80.84 352 P P 13 47 31.9 -0.2
baz=171,SNR=18
E57A Chemin Saint G 80.85 358 P P 13 47 32.1 0.0
baz=178,SNR=7.3
E63A Oxbow 80.88 2 P P 13 47 32.6 +0.3
baz=183
E52A Mattawa 80.94 355 P P 13 47 32.3 -0.2
baz=174
E55A Montcerf-Lytto 80.95 357 P P 13 47 32.7 +0.1
baz=176
E53A Dumoine, Ponti 80.96 356 P P 13 47 32.9 +0.2
baz=175,SNR=9.6
E54A Lac Daplat, Po 80.99 356 P P 13 47 32.9 +0.1
baz=175,SNR=12
E56A St. Veronique 81.00 358 P P 13 47 32.9 0.0
baz=177,SNR=10
BFSC Mount Baldy Ra 81.02 323 P P 13 47 34.6 +1.1
baz=143

KNB	**Kanab**	**81.03**	**328**	P	**P**	**13 47 35.0**	**+1.4**
TUQ	**Turquoise Moun**	**81.14**	**325**	P	**P**	**13 47 35.6**	**+1.5**
	baz=145,SNR=7.4						
LCMT	**Little Creek M**	**81.21**	**328**	P	**P**	**13 47 35.4**	**+1.0**
E51A	**G1948 Merrick**	**81.24**	**355**	P	**P**	**13 47 34.2**	**0.0**
	baz=174,SNR=18						
D60A	**Saint Jean D'O**	**81.32**	**1**	P	**P**	**13 47 35.3**	**+0.8**
	baz=181						
ECSD	**EROS Data Cent**	**81.37**	**342**	P	**P**	**13 47 35.1**	**+0.1**
ECSD				IAmb	IAmb	13 47 36.2	
	comp=Z,36nm,0.9s						
ECSD	**EROS Data Cent**	**81.37**	**342**	P	**P**	**13 47 35.1**	**+0.1**
	baz=160,SNR=38						
G40A	**Rib Lake**	**81.42**	**347**	P	**P**	**13 47 34.8**	**-0.4**
E48A	**Lockeyer**	**81.44**	**353**	P	**P**	**13 47 35.1**	**-0.2**
	baz=171,SNR=12						
D57A	**Chemin Vers le**	**81.45**	**358**	P	**P**	**13 47 35.6**	**+0.3**
	baz=178,SNR=9.9						
GSC	**Goldstone, Bar**	**81.45**	**324**	P	**P**	**13 47 36.9**	**+1.1**
D55A	**Sainte-Anne-du**	**81.50**	**357**	P	**P**	**13 47 35.5**	**0.0**
	baz=177,SNR=9.8						
D56A	**ZEC Mazanza, M**	**81.50**	**358**	P	**P**	**13 47 35.6**	**0.0**
	baz=177						
D63A	**Stockholm**	**81.51**	**2**	P	**P**	**13 47 36.2**	**+0.6**
	baz=183						
D58A	**Chemin du LacG**	**81.51**	**359**	P	**P**	**13 47 36.0**	**+0.4**
	baz=179,SNR=7.8						
D62A	**Allapoint, All**	**81.52**	**2**	P	**P**	**13 47 35.9**	**+0.3**
D62A				IAmb	IAmb	13 47 37.3	
	comp=Z,25nm,0.9s						
D62A	**Allapoint, All**	**81.52**	**2**	P	**P**	**13 47 36.1**	**+0.4**
	baz=182						
F42A	**Maple Grove Fa**	**81.53**	**348**	P	**P**	**13 47 35.8**	**0.0**
F42A				IAmb	IAmb	13 47 37.7	
	comp=Z,23nm,1.0s						
E47A	**Iron Bridge**	**81.53**	**352**	P	**P**	**13 47 35.5**	**-0.2**
	baz=170,SNR=17						
E46A	**Sault Ste Mari**	**81.57**	**351**	P	**P**	**13 47 35.5**	**-0.4**
MTPU	**Mount Pierson**	**81.61**	**329**	P	**P**	**13 47 37.6**	**+0.8**
MTPU					**pP**	**13 47 49.8**	**-0.2**
D61A	**St Aubert, Com**	**81.62**	**1**	P	**P**	**13 47 36.6**	**+0.4**
	baz=181						
SZCU	**Shurtz Canyon**	**81.63**	**328**	P	**P**	**13 47 37.5**	**+0.8**
N23A	**Red Feather La**	**81.63**	**334**	P	**P**	**13 47 37.2**	**+0.5**
N23A					**pP**	**13 47 50.0**	**+0.1**
N23A	**Red Feather La**	**81.63**	**334**	P	**P**	**13 47 37.8**	**+1.1**
	baz=152,SNR=5.5						
SHPR	**Sheep Range**	**81.66**	**326**	P	**P**	**13 47 38.0**	**+1.1**
D53A	**Lac Vacive, Po**	**81.66**	**356**	P	**P**	**13 47 36.4**	**-0.1**
D53A				IAmb	IAmb	13 47 37.5	
	comp=Z,28nm,0.8s						
D53A	**Lac Vacive, Po**	**81.66**	**356**	P	**P**	**13 47 36.5**	**+0.1**
	baz=175,SNR=19						
D54A	**Lac Fusel, La**	**81.68**	**357**	P	**P**	**13 47 36.0**	**-0.6**
	baz=176,SNR=6.8						
EDW2	**Edwards Air Fo**	**81.70**	**323**	P	**P**	**13 47 37.6**	**+0.6**
	baz=143						
CCUT	**Cedar City**	**81.71**	**328**	P	**P**	**13 47 38.5**	**+1.2**
CCUT				pP	**pP**	**13 47 51.4**	**+1.0**
LBTB	**Lobatse**	**81.73**	**115**	P	**P**	**13 47 37.8**	**+0.2**
LBTB				IAmb	IAmb	13 47 39.0	
	comp=Z,40nm,0.9s						
D51A	**Lot 18 Range I**	**81.79**	**355**	P	**P**	**13 47 37.2**	**+0.1**
	baz=174,SNR=6.2						
LATQ	**La Tuque**	**81.80**	**359**	P	**P**	**13 47 36.9**	**-0.2**
	baz=179						
O20A	**White River Ci**	**81.81**	**333**	P	**P**	**13 47 37.6**	**0.0**
O20A	**White River Ci**	**81.81**	**333**	P	**P**	**13 47 38.5**	**+0.9**
	baz=150,SNR=6.8						
SRU	**San Rafael Swe**	**81.82**	**330**	P	**P**	**13 47 38.1**	**+0.4**
BATG	**Bathurst New B**	**81.84**	**4**	P	**P**	**13 47 37.9**	**+0.6**
BATG				IAmb	IAmb	13 47 53.2	
	comp=Z,67nm,1.8s						
SPMN	**Marine on St.**	**81.89**	**345**	P	**P**	**13 47 36.9**	**-0.7**
SPMN				IAmb	IAmb	13 47 38.1	
	comp=Z,28nm,1.1s						
SPMN	**Marine on St.**	**81.89**	**345**	P	**P**	**13 47 37.0**	**-0.6**
	baz=163						
D50A	**G1974 Best Tow**	**81.90**	**354**	P	**P**	**13 47 37.8**	**+0.1**
	baz=173,SNR=20						
E43A	**Lone Tree Farm**	**81.95**	**349**	P	**P**	**13 47 37.9**	**-0.1**
E43A				IAmb	IAmb	13 47 39.1	
	comp=Z,30nm,1.0s						
MSU	**Marysvale**	**82.00**	**329**	P	**P**	**13 47 39.7**	**+1.0**
LRMC	**Laurel Mtn Rad**	**82.02**	**324**	P	**P**	**13 47 40.1**	**+1.3**
	baz=143						
COWI	**Conover**	**82.03**	**348**	P	**P**	**13 47 38.2**	**-0.2**
COWI					**pP**	**13 47 51.0**	**-0.6**
E44A	**Grand Marais A**	**82.03**	**350**	P	**P**	**13 47 38.2**	**-0.1**
	baz=168						
D46A	**Sault St. Mari**	**82.05**	**351**	P	**P**	**13 47 38.1**	**-0.3**
	baz=170,SNR=8.2						
D48A	**Paudash Townsh**	**82.08**	**353**	P	**P**	**13 47 38.2**	**-0.4**
	baz=172,SNR=12						
D47A	**Chapleau**	**82.11**	**352**	P	**P**	**13 47 38.3**	**-0.5**
	baz=170,SNR=9.4						
D49A	**Beulah Townshi**	**82.14**	**353**	P	**P**	**13 47 38.8**	**-0.1**
	baz=172,SNR=7.6						
TMUT	**Trail Mountain**	**82.26**	**330**	P	**P**	**13 47 40.8**	**+0.7**
MPMC	**Manual Prospec**	**82.39**	**324**	P	**P**	**13 47 42.2**	**+1.4**
	baz=144						
FURC	**Furnace Creek,**	**82.42**	**325**	P	**P**	**13 47 42.2**	**+1.6**
	baz=144						
TPNV	**Topopah Spring**	**82.52**	**325**	P	**P**	**13 47 42.7**	**+1.3**
TPNV	**Topopah Spring**	**82.52**	**325**	P	**P**	**13 47 43.0**	**+1.6**
	baz=144,SNR=6.7						
ISA	**Isabella, Lake**	**82.56**	**323**	P	**P**	**13 47 43.0**	**+1.5**
	baz=143,SNR=5.5						
PKM	**Mcpherson Peak**	**82.62**	**322**	P	**P**	**13 47 43.4**	**+1.4**
	baz=142						
SUSD	**Miller**	**82.65**	**341**	P	**P**	**13 47 41.5**	**-0.2**
SUSD	**Miller**	**82.65**	**341**	P	**P**	**13 47 42.1**	**+0.4**
	baz=158						
VLDQ	**Val d'Or**	**82.68**	**356**	P	**P**	**13 47 41.5**	**-0.1**
VLDQ				IAmb	IAmb	13 47 43.0	
	comp=Z,19nm,0.9s						
RDMU	**Red Mountain**	**82.69**	**332**	P	**P**	**13 47 42.5**	**+0.2**
PSUT	**Pine Spring**	**82.74**	**328**	P	**P**	**13 47 43.3**	**+0.7**
D41A	**Chassel**	**82.87**	**348**	P	**P**	**13 47 42.8**	**+0.1**
E38A	**The Farm, Brul**	**82.96**	**346**	P	**P**	**13 47 42.7**	**-0.6**
E38A					**pP**	**13 47 55.5**	**-0.9**
CWC	**Cottonwood Cre**	**82.98**	**324**	P	**P**	**13 47 44.9**	**+1.1**
	baz=143						
VES	**Vestal, Richgr**	**83.00**	**323**	P	**P**	**13 47 45.3**	**+1.6**
	baz=142						
SMMC	**Simmler**	**83.04**	**322**	P	**P**	**13 47 45.9**	**+1.9**
	baz=142						
NLU	**North Lily Min**	**83.17**	**330**	P	**P**	**13 47 45.2**	**+0.4**
R11A	**Troy Canyon, C**	**83.36**	**327**	P	**P**	**13 47 46.6**	**+0.8**
R11A	**Troy Canyon, C**	**83.36**	**327**	P	**P**	**13 47 47.3**	**+1.6**
	baz=145,SNR=19						
K22A	**Casper**	**83.38**	**335**	P	**P**	**13 47 46.2**	**+0.5**
K22A					**pP**	**13 47 59.1**	**+0.2**
K22A				IAmb	IAmb	13 48 00.2	
	comp=Z,19nm,1.1s						
K22A	**Casper**	**83.38**	**335**	P	**P**	**13 47 46.4**	**+0.7**
	baz=152,SNR=5.2						
JLU	**Jordanelle**	**83.47**	**331**	P	**P**	**13 47 46.6**	**+0.3**
JLU				pP	**pP**	**13 47 59.4**	**-0.1**
LSQQ	**Lebel-sur-Quev**	**83.60**	**357**	P	**P**	**13 47 46.6**	**+0.2**
	baz=176						
DUG	**Dugway, Tooele**	**83.68**	**330**	P	**P**	**13 47 47.9**	**+0.6**
DUG				IAmb	IAmb	13 48 02.2	
	comp=Z,39nm,1.6s						
DUG	**Dugway, Tooele**	**83.68**	**330**	P	**P**	**13 47 48.1**	**+0.8**
	baz=147,SNR=5.6						
RSSD	**Black Hills**	**83.86**	**337**	P	**P**	**13 47 48.4**	**+0.2**
RSSD	**Black Hills**	**83.86**	**337**	P	**P**	**13 47 48.6**	**+0.4**
	baz=154						
TCUT	**Toone Canyon**	**83.89**	**331**	P	**P**	**13 47 48.7**	**+0.3**
TOA0	**Torodi Ar. Sit**	**84.22**	**70**	P	**P**	**13 47 50.2**	**-0.2**
TOA0				pP	**pP**	**13 48 03.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**84.22**	**70**	P	**P**	**13 47 50.6**	**+0.2**
	comp=Z,28nm,0.8s,baz=254,slow=4.1,SNR=118						
TORD				pP	**pP**	**13 48 03.4**	**-0.3**
	comp=Z,24nm,0.9s,baz=270,slow=4.4,SNR=15						
TORD				sP	**sP**	**13 48 08.9**	**+0.2**
	comp=Z,32nm,1.1s,baz=242,slow=5.7,SNR=7.3						
TORD				LR	LR	14 25 55.3	
	comp=Z,152nm,18.1s,baz=265,slow=36						
TORD	**Torodi Ar. Bea**	**84.22**	**70**	P	**P**	**13 47 49.7**	**-0.7**
TORD				pP	**pP**	**13 48 03.0**	**-0.7**
EYMN	**Ely**	**84.24**	**347**	P	**P**	**13 47 49.1**	**-0.7**
EYMN	**Ely**	**84.24**	**347**	P	**P**	**13 47 49.4**	**-0.3**
	baz=164,SNR=6.1						
MLAC	**Mammoth, Mammo**	**84.30**	**324**	P	**P**	**13 47 52.1**	**+1.5**
	baz=143						
MATQ	**Matagami**	**84.33**	**356**	P	**P**	**13 47 50.0**	**-0.1**
	baz=175						
OMMB	**Old Mammoth Mi**	**84.36**	**324**	P	**P**	**13 47 51.7**	**+0.7**
OMMB					**pP**	**13 48 04.8**	**+0.5**
HWUT	**Hardware Ranch**	**84.36**	**331**	P	**P**	**13 47 51.0**	**+0.2**
HWUT				IAmb	IAmb	13 48 05.0	
	comp=Z,20nm,1.1s						
BGU	**Big Grassy Mou**	**84.38**	**330**	P	**P**	**13 47 51.0**	**+0.1**
SPUT	**South Promonto**	**84.47**	**330**	P	**P**	**13 47 51.8**	**+0.5**
PD31	**Pinedale Array**	**84.58**	**333**	P	**P**	**13 47 51.6**	**-0.3**
PDAR	**Pinedale Array**	**84.58**	**333**	P	**P**	**13 47 51.8**	**-0.1**
	comp=Z,3.4nm,0.8s,baz=153,slow=5.3,SNR=30						
PDAR				PKKPbc	**PKKPbc**	**14 06 02.0**	**-1.7**
	comp=Z,0.5nm,0.6s,baz=90,slow=1.5,SNR=5.5						
PDAR	**Pinedale Array**	**84.58**	**333**	P	**P**	**13 47 51.6**	**-0.3**
NV11	**Mina Array Sit**	**84.61**	**325**	P	**P**	**13 47 52.5**	**+0.5**
DRLN	**Deer Lake**	**84.61**	**9**	P	**P**	**13 47 51.7**	**+0.2**
DRLN				IAmb	IAmb	13 47 52.9	
	comp=Z,25nm,0.8s						
NVAR	**Mina Array Bea**	**84.68**	**325**	P	**P**	**13 47 53.8**	**+1.3**
	comp=Z,4.0nm,0.8s,baz=158,slow=5.8,SNR=31						
NVAR				pP	**pP**	**13 48 06.4**	**+0.6**
	comp=Z,2.9nm,0.8s,baz=155,slow=5.0,SNR=9.9						
NVAR				PKKPbc	**PKKPbc**	**14 06 00.6**	**-2.5**
	comp=Z,0.3nm,0.7s,baz=258,slow=2.7,SNR=3.6						
NVAR				PKPPKP	P'P'df	14 14 13.2	+8.7
	comp=Z,0.6nm,0.8s,baz=308,slow=2.1,SNR=2.8						
NVAR	**Mina Array Bea**	**84.68**	**325**	P	**P**	**13 47 53.0**	**+0.5**
HVU	**Hansel Valley**	**85.00**	**330**	P	**P**	**13 47 54.2**	**+0.3**
HVU				pP	**pP**	**13 48 07.0**	**-0.2**
KVN	**Kaiserville**	**85.08**	**326**	P	**P**	**13 47 54.4**	**-0.1**
KVN				pP	**pP**	**13 48 07.5**	**-0.2**
AHID	**Auburn Hatcher**	**85.17**	**332**	P	**P**	**13 47 54.9**	**+0.1**
ELK	**Elko**	**85.17**	**328**	P	**P**	**13 47 55.0**	**+0.1**
WAKR	**Walker**	**85.28**	**324**	P	**P**	**13 47 56.9**	**+1.4**
WAKR				IAmb	IAmb	13 48 11.1	
	comp=Z,26nm,1.7s						
CMB	**Columbia Colle**	**85.37**	**323**	P	**P**	**13 47 56.5**	**+0.8**
AGMN	**Agassiz Nation**	**85.48**	**344**	P	**P**	**13 47 55.7**	**-0.2**
AGMN				IAmb	IAmb	13 47 56.4	
	comp=Z,10nm,0.7s						
AGMN	**Agassiz Nation**	**85.48**	**344**	P	**P**	**13 47 56.0**	**0.0**
	baz=160						
REDW	**Red Top Meadow**	**85.58**	**332**	P	**P**	**13 47 56.8**	**-0.1**
REDW				IAmb	IAmb	13 48 23.8	
	comp=Z,25nm,1.7s						
SNOW	**Snow King Moun**	**85.63**	**333**	P	**P**	**13 47 57.5**	**+0.3**
MOOW	**Moose Ponds**	**85.87**	**333**	P	**P**	**13 47 58.2**	**-0.1**
FXWY	**Fox Creek**	**85.88**	**333**	P	**P**	**13 47 58.2**	**-0.2**
MDND	**Maddock**	**85.97**	**342**	P	**P**	**13 47 58.6**	**+0.2**
MDND					**pP**	**13 48 11.2**	**-0.5**
MDND	**Maddock**	**85.97**	**342**	P	**P**	**13 47 59.0**	**+0.6**
	baz=157						
FLWY	**Flagg Ranch**	**86.14**	**333**	P	**P**	**13 47 59.8**	**+0.2**
FLWY				IAmb	IAmb	13 48 02.3	
	comp=Z,17nm,0.7s						
PAHR	**Pah Rah Range**	**86.20**	**325**	P	**P**	**13 48 01.1**	**+1.1**
H17A	**Grant Village**	**86.36**	**333**	P	**P**	**13 48 01.9**	**+1.1**
H17A	**Grant Village**	**86.36**	**333**	P	**P**	**13 48 01.3**	**+0.6**
	baz=149						
AFDM	**Forest Hills D**	**86.37**	**324**	P	**P**	**13 48 01.5**	**+0.8**
RLMT	**Red Lodge**	**86.51**	**334**	P	**P**	**13 48 01.3**	**-0.1**
RLMT				IAmb	IAmb	13 48 02.8	
	comp=Z,11nm,0.6s						
RLMT	**Red Lodge**	**86.51**	**334**	P	**P**	**13 48 02.0**	**+0.6**
	baz=150,SNR=6.9						
YNE	**Yellowstone No**	**86.67**	**334**	P	**P**	**13 48 02.0**	**-0.3**
YMR	**Madison River**	**86.73**	**333**	P	**P**	**13 48 03.3**	**+0.8**
YHH	**Holmes Hill**	**86.80**	**333**	P	**P**	**13 48 03.5**	**+0.5**
LAO	**LASA Array**	**86.84**	**337**	P	**P**	**13 48 02.9**	**0.0**
LAO				IAmb	IAmb	13 48 04.9	
	comp=Z,18nm,0.8s						
LAO	**LASA Array**	**86.84**	**337**	P	**P**	**13 48 03.1**	**+0.3**
	baz=152,SNR=8.1						
YHL	**Hebgen Lake**	**86.97**	**333**	P	**P**	**13 48 03.8**	**0.0**
QLMT	**Earthquake Lak**	**87.05**	**333**	P	**P**	**13 48 05.0**	**+1.0**
ORV	**Oroville**	**87.10**	**324**	P	**P**	**13 48 05.2**	**+1.0**
ORV				IAmb	IAmb	13 48 19.4	
	comp=Z,22nm,1.2s						
ULM	**Lac du Bonnet**	**87.32**	**345**	P	**P**	**13 48 04.5**	**-0.5**
	comp=Z,10.0nm,0.8s,baz=154,slow=3.8,SNR=22						
ULM	**Lac du Bonnet**	**87.32**	**345**	P	**P**	**13 48 04.4**	**-0.5**
ULM				IAmb	IAmb	13 48 05.7	
	comp=Z,16nm,1.0s						
MCMT	**McKenzie Canyo**	**87.58**	**332**	P	**P**	**13 48 07.1**	**+0.5**
MCMT					**pP**	**13 48 19.3**	**-0.7**
MFID	**Camas Ranch**	**87.61**	**329**	P	**P**	**13 48 07.1**	**+0.4**
DGMT	**Dagmar**	**87.81**	**339**	P	**P**	**13 48 07.8**	**+0.4**
DGMT	**Dagmar**	**87.81**	**339**	P	**P**	**13 48 08.3**	**+0.9**
	baz=154						
O03E	**Paynes Creek**	**87.82**	**324**	P	**P**	**13 48 08.3**	**+0.6**
	baz=141						
DLMT	**Dillon**	**87.94**	**332**	P	**P**	**13 48 08.8**	**+0.6**
DLMT				IAmb	IAmb	13 48 23.0	
	comp=Z,17nm,1.4s						
O02D	**Mt. Diablo Mer**	**88.21**	**323**	P	**P**	**13 48 10.3**	**+0.8**
	baz=140						
MOD	**Modoc Plateau**	**88.36**	**326**	P	**P**	**13 48 11.3**	**+0.9**
MOD				IAmb	IAmb	13 48 12.4	
	comp=Z,9.1nm,0.7s						
WDC	**Whiskeytown Da**	**88.39**	**324**	P	**P**	**13 48 10.4**	**+0.1**
WDC				IAmb	IAmb	13 48 11.4	
	comp=Z,8.8nm,0.8s						
J08A	**Circle Bar Ran**	**88.69**	**328**	P	**P**	**13 48 12.7**	**+0.9**
J08A				IAmb	IAmb	13 48 26.9	
	comp=Z,21nm,1.1s						
N02D	**Trinity Center**	**88.78**	**324**	P	**P**	**13 48 13.2**	**+1.0**
	baz=140						
M04C	**Macdoel**	**88.99**	**325**	P	**P**	**13 48 14.5**	**+1.2**
	baz=141						
SCHQ	**Schefferville**	**89.35**	**3**	P	**P**	**13 48 14.1**	**-0.3**
	comp=Z,5.7nm,1.0s,baz=168,slow=4.7,SNR=5.3						
J05D	**Fort Rock, OR**	**89.87**	**326**	P	**P**	**13 48 18.5**	**+1.1**
	baz=141						
JTMT	**Jette**	**90.57**	**333**	P	**P**	**13 48 20.9**	**+0.4**
JTMT				IAmb	IAmb	13 49 01.1	
	comp=Z,28nm,1.9s						
C09A	**Chrisman Ranch**	**92.17**	**331**	P	**P**	**13 48 28.3**	**+0.5**
ESDC	**Sonseca Array**	**96.92**	**46**	P	**P**	**13 48 50.0**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=247,slow=5.1,SNR=4.0						
ESDC	**Sonseca Array**	**96.92**	**46**	IAmb	IAmb	13 48 59.4	
	comp=Z,5.4nm,1.8s						
YKA	**Yellowknife Ar**	**102.88**	**341**	P	**Pdif**	**13 49 15.2**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=142,slow=4.2,SNR=12						
DLBC	**Dease Lake**	**104.81**	**332**	PKKPbc	PKKPbc	14 05 07.7	-1.6
	comp=Z,11nm,0.8s,baz=355,slow=3.2,SNR=4.5						
RES	**Resolute Bay**	**110.26**	**354**	PKKPbc	PKKPbc	14 04 48.4	-3.9
	comp=Z,1.1nm,0.8s,baz=328,slow=14,SNR=5.5						
ILAR	**Eielson Array**	**115.01**	**333**	PP	PP	13 54 59.6	+0.7
	comp=Z,0.5nm,0.7s,baz=123,slow=7.6,SNR=4.9						
ASAR	**Alice Springs**	**117.00**	**206**	PKKPbc	PKKPbc	14 04 28.6	+0.3
	comp=Z,0.9nm,0.7s,baz=337,slow=3.3,SNR=19						
CRVS	**Cervenica-Dubn**	**117.17**	**48**	*e*PKP	**PKPdf**	**13 54 02.8**	**-0.3**
IMAR	**Indian Mountai**	**118.13**	**333**		**PKiKP**	**13 54 04.7**	**+0.2**
BURAR	**Bucovina Array**	**119.03**	**50**		**PKPdf**	**13 54 06.7**	**-0.2**
WRA	**Warramunga Arr**	**120.22**	**209**	PKP	**PKPdf**	**13 54 08.6**	**-1.4**
	comp=Z,1.1nm,0.5s,baz=156,slow=1.7,SNR=14						
WRA				PKKPbc	**PKKPbc**	**14 04 15.7**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=338,slow=4.4,SNR=4.0						
BRTR	**Keskin Array B**	**121.97**	**61**	PKP	**PKPdf**	**13 54 12.8**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=192,slow=2.9,SNR=16						
BRTR				pPKP	**pPKPdf**	**13 54 25.6**	**-1.1**
	comp=Z,1.1nm,0.7s,baz=184,slow=3.9,SNR=4.1						
BRTR	**Keskin Array B**	**121.97**	**61**		**PKPdf**	**13 54 12.4**	**-0.4**
BR131	**Keskin Array S**	**121.97**	**61**		**PKPdf**	**13 54 12.3**	**-0.4**
AKASG	**Malin Array Be**	**122.51**	**48**	PKP	**PKPdf**	**13 54 12.0**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=266,slow=2.6,SNR=5.2						
FINES	**FINESS Array B**	**123.47**	**35**	PKP	**PKPdf**	**13 54 14.5**	**-0.3**
	comp=Z,4.5nm,1.1s,baz=273,slow=2.6,SNR=3.1						
ARCES	**ARCESS Array B**	**124.60**	**25**	PKP	**PKPdf**	**13 54 16.9**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=275,slow=4.4,SNR=4.5						
RAYN	**Ar Rayn**	**124.81**	**84**		**PKPdf**	**13 54 18.6**	**0.0**
KIV	**Kislovodsk**	**129.66**	**59**		**PKPdf**	**13 54 27.3**	**-0.1**
KBZ	**Khabaz**	**129.76**	**59**	PKP	**PKPdf**	**13 54 26.9**	**-0.5**
	comp=Z,2.3nm,0.8s,baz=234,slow=4.2,SNR=6.4						
KLMR	**Klimovskoe**	**129.87**	**36**	*e*PKPdf	**PKPdf**	**13 54 26.6**	**-0.4**
KLMR				AMP		13 54 42.7	
	comp=Z,19nm,1.5s						
WSAR	**Wadi Sarin**	**135.47**	**91**	PKP	**PKPdf**	**13 54 38.8**	**0.0**
	comp=Z,8.7nm,0.8s,baz=212,slow=3.3,SNR=6.5						
GEYT	**Alibeck**	**139.85**	**70**	PKhKP	PKPpre	13 54 39.9	
	comp=Z,1.1nm,0.6s,baz=256,slow=5.8,SNR=3.1						
GEYT				PKP	**PKPdf**	**13 54 47.3**	**+0.8**
	comp=Z,2.7nm,0.6s,baz=289,slow=4.5,SNR=5.4						
GEYT	**Alibeck**	**139.85**	**70**	PKPdf	**PKPdf**	**13 54 46.6**	**0.0**
ARU	**Arti**	**140.15**	**41**	PKhKP	PKPpre	13 54 37.6	
	comp=Z,0.6nm,0.4s,baz=334,slow=8.9,SNR=3.5						
AKTO	**Aktyubinsk**	**140.62**	**51**	PKhKP	PKPpre	13 54 39.1	
	comp=Z,2.9nm,0.9s,baz=279,slow=4.6,SNR=8.3						
SEY	**Seymchan**	**140.84**	**330**	PKhKP	PKPpre	13 54 40.7	
	comp=Z,1.3nm,0.7s,baz=97,slow=2.2,SNR=5.6						
PETK	**Petropavlovsk-**	**140.89**	**313**	PKP	**PKPdf**	**13 54 48.2**	**+0.4**
	comp=Z,3.8nm,0.9s,baz=165,slow=3.9,SNR=4.5						
TIXI	**Tiksi**	**141.51**	**350**	PKhKP	PKPpre	13 54 41.2	
	comp=Z,1.7nm,0.7s,baz=17,slow=2.8,SNR=4.8						
TIXI				PKP	**PKiKP**	**13 54 49.9**	**-1.3**
	comp=Z,3.4nm,0.6s,baz=24,slow=1.9,SNR=7.6						
ABKAR	**Akbulak array**	**141.94**	**53**		PKPpre	13 54 43.2	
HRA	**Herat**	**142.34**	**77**		**PKPdf**	**13 54 51.3**	**0.0**
PALK	**Pallekele**	**142.67**	**131**	PKhKP	PKPpre	13 54 48.7	
	comp=Z,4.0nm,0.8s,baz=229,slow=1.0,SNR=5.1						
PCI	**Palu**	**142.89**	**199**	PKP	**PKPdf**	**13 54 50.5**	**-2.2**
PDSI	**Padang**	**143.75**	**167**	PKP	PKPbc	13 54 52.3	+0.5
PDSI				PKP	**PKPdf**	**13 54 52.7**	**-1.5**
SMKI	**Samarinda**	**143.98**	**195**	PKP	PKPbc	13 54 52.5	+0.1
SMKI				PKP	PKPab	13 54 52.6	+0.7
SMKI				PKP	PKPab	13 54 52.6	+0.7
MPSI	**Mapaga**	**144.06**	**200**	PKP	**PKPab**	**13 54 52.2**	**0.0**
MPSI				PKP	PKPbc	13 54 52.6	-0.1
BKNI	**Bangkinang**	**145.06**	**167**	PKP	**PKPdf**	**13 54 56.2**	**-0.3**
BKNI				PKP	pPKPab	13 55 09.1	-0.2
STKI	**Sintang**	**145.34**	**186**	PKP	**PKPdf**	**13 54 57.9**	**+0.9**
STKI				PKP	**PKPab**	**13 54 58.6**	**+1.7**
STKI				PKP	**pPKPdf**	**13 55 11.3**	**+0.6**
KSM	**Kuching**	**146.81**	**184**		**PKPbc**	**13 55 00.8**	**-0.5**
RPSI	**Rantau Prapat**	**146.91**	**163**		**PKPbc**	**13 55 01.2**	**-0.3**
RPSI	**Rantau Prapat**	**146.91**	**163**		**PKPbc**	**13 55 01.6**	**+0.1**
RPSI					pPKPbc	13 55 14.6	-0.6
PSI	**Prapat**	**147.01**	**163**	PKPbc	**PKPbc**	**13 55 01.6**	**-0.4**
	comp=Z,31nm,0.8s,baz=231,slow=4.0,SNR=15						
PSI				pPKPbc	**pPKPdf**	**13 55 14.6**	**+0.9**
	comp=Z,41nm,0.8s,baz=183,slow=3.9,SNR=9.2						
KCSI	**Kotacane, Aceh**	**147.40**	**160**	PKP	**PKPbc**	**13 55 02.8**	**-0.1**
KCSI				PKP	**PKPab**	**13 55 02.9**	**-1.9**
BRVK	**Borovoye**	**147.58**	**44**	PKPbc	**PKPbc**	**13 55 02.7**	**+0.5**
SBUM	**Sibu**	**147.63**	**187**		**PKPbc**	**13 55 02.7**	**-0.8**
BVAR	**Borovoye Array**	**147.65**	**44**	PKPbc	**PKPbc**	**13 55 03.2**	**+0.8**
	comp=Z,12nm,0.8s,baz=281,slow=3.9,SNR=55						
MLSI	**Meulaboh, Aceh**	**147.70**	**157**	PKP	**PKPbc**	**13 55 04.5**	**+0.8**
KBL	**Kabul**	**147.85**	**79**		**PKPbc**	**13 55 03.4**	**-0.4**
HYB	**Hyderabad**	**148.35**	**115**	*i* PKP	**PKPbc**	**13 55 04.0**	**-1.3**
HYB				*e*sPKP		13 55 19.0	
IPM	**Ipoh**	**149.11**	**166**		**PKPbc**	**13 55 06.8**	**-0.6**
YAK	**Yakutsk**	**149.56**	**340**	PKP	**PKPdf**	**13 55 02.0**	**-0.4**
	comp=Z,17nm,0.9s,baz=284,slow=0.4,SNR=4.8						
YAK				PKPbc	**PKPbc**	**13 55 06.9**	**0.0**
	comp=Z,49nm,0.8s,baz=116,slow=0.4,SNR=29						
YAK	**Yakutsk**	**149.56**	**340**		**PKPdf**	**13 55 02.4**	**0.0**
YAK				PKPbc	**PKPbc**	**13 55 06.8**	**-0.2**
YAK				PKPab	**PKPab**	**13 55 12.7**	**+0.6**
KK31	**Karatay Array**	**149.66**	**63**		**PKPbc**	**13 55 07.2**	**-0.7**
KKAR	**Karatay Array**	**149.66**	**63**		**PKPdf**	**13 55 02.7**	**-0.5**
KKAR				PKPbc	**PKPbc**	**13 55 07.8**	**-0.1**
KKAR	**Karatay Array**	**149.66**	**63**		**PKPbc**	**13 55 07.8**	**-0.1**
KULM	**Kulim**	**149.82**	**165**		**PKPbc**	**13 55 08.2**	**-0.9**
KULM					**pPKPbc**	**13 55 21.8**	**-1.1**
BTK	**Batken**	**149.92**	**69**		**PKPdf**	**13 55 03.7**	**-0.2**
BTK				PKPbc	**PKPbc**	**13 55 08.8**	**0.0**
NIL	**Nilore**	**151.08**	**82**		**PKPbc**	**13 55 11.6**	**0.0**
YSS	**Yuzh-Sakhalins**	**151.47**	**306**		**PKPbc**	**13 55 12.0**	**0.0**
ARSB	**Arslanbob**	**151.57**	**66**	PKPbc	**PKiKP**	**13 55 13.1**	**0.0**
AML	**Almayashu**	**152.07**	**64**	P	**PKiKP**	**13 55 14.8**	**+0.4**
	SNR=23						
JKA	**Kamikawa-asahi**	**152.09**	**300**		**PKPdf**	**13 55 07.1**	**+0.2**
JKA					**PKiKP**	**13 55 13.9**	**+0.1**
ASAJ	**Asahikawa**	**152.09**	**300**	PKP	**PKPdf**	**13 55 07.1**	**+0.2**
	comp=Z,6.6nm,1.1s,baz=264,slow=1.3,SNR=3.0						
ASAJ				PKPbc	**PKiKP**	**13 55 13.9**	**+0.1**
	comp=Z,9.7nm,0.8s,baz=7.7,slow=5.9,SNR=8.3						
EKS2	**Erkin-Say**	**152.09**	**63**	P	**PKiKP**	**13 55 14.7**	**+0.6**
	SNR=24						
USP	**Ospenovka**	**152.56**	**62**	P	**PKPbc**	**13 55 14.8**	**+0.1**
	SNR=18						
AAK	**Ala-Archa**	**152.62**	**63**	PKPbc	**PKiKP**	**13 55 15.6**	**+0.3**
	comp=Z,26nm,0.8s,baz=185,slow=2.2,SNR=82						
AAK	**Ala-Archa**	**152.62**	**63**	P	**PKiKP**	**13 55 16.1**	**+0.9**
	SNR=28						
UCH	**Uchtor**	**152.67**	**64**	P	**PKiKP**	**13 55 16.6**	**+0.9**
	SNR=21						
FRU1	**Bishkek**	**152.70**	**63**		**PKiKP**	**13 55 15.8**	**+0.5**
KBK	**Karagaybulak**	**152.95**	**63**	P	**PKiKP**	**13 55 16.7**	**+0.8**
	SNR=8.6						
KZA	**Kyzart**	**153.22**	**64**	P	**PKiKP**	**13 55 17.8**	**+1.0**
	SNR=8.9						
KURBB	**Kurchatov Arra**	**153.24**	**45**	PKP	**PKPdf**	**13 55 08.5**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=322,slow=2.2,SNR=5.5						
KURBB				PKPbc	**PKiKP**	**13 55 15.9**	**0.0**
	comp=Z,5.6nm,0.9s,baz=305,slow=3.0,SNR=40						
KURBB				PP	**PP**	**13 59 01.8**	**+0.1**
	comp=Z,1.5nm,0.9s,baz=285,slow=5.7,SNR=3.7						
KURK	**Kurchatov**	**153.25**	**44**		**PKPdf**	**13 55 07.9**	**-0.4**
KURK				PKPbc	**PKPbc**	**13 55 15.1**	**-0.8**
KURK	**Kurchatov**	**153.25**	**44**		PP	13 59 01.8	0.0
NRN	**Naryn**	**153.84**	**66**		**PKPdf**	**13 55 09.1**	**-0.9**
NRN				PKPbc	**PKiKP**	**13 55 18.0**	**0.0**
NRN				PKPab	**PKPab**	**13 55 30.9**	**-0.2**
KSH	**Kashi**	**153.89**	**70**	PKPbc	**PKPdf**	**13 55 11.1**	**+1.3**
KSH				pPKP	PKiKP	13 55 18.0	+0.1
KSH				sPKP		13 55 30.2	
KSH				PKS	**PKSdf**	**13 58 42.6**	**-1.6**
KSH				PP	**PP**	**13 59 08.1**	**+1.8**
KSH				AMB	AMB		
	comp=Z,320nm,4.3s						
KDJ	**Kajisay**	**154.65**	**64**		**PKPab**	**13 55 33.0**	**-1.4**
ZAA0	**Zalesovo Array**	**154.73**	**33**	PKPbc	**PKPbc**	**13 55 17.5**	**-1.5**
ZALV	**Zalesovo Beam**	**154.73**	**33**	PKP	**PKPdf**	**13 55 09.9**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=270,slow=1.5,SNR=8.2						
ZALV				PKPbc	**PKiKP**	**13 55 19.2**	**+0.2**
	comp=Z,4.1nm,0.7s,baz=282,slow=3.9,SNR=12						
ZALV				pPKPbc	**pPKPbc**	**13 55 32.5**	**-0.2**
	comp=Z,7.9nm,0.7s,baz=305,slow=4.6,SNR=9.9						
ZALV	**Zalesovo Beam**	**154.73**	**33**		**PKPdf**	**13 55 09.4**	**-0.9**
ZALV				PKPbc	**PKPbc**	**13 55 18.6**	**-0.4**
MK31	**Makanchi Array**	**157.05**	**51**		**PKPdf**	**13 55 12.4**	**-1.3**
MK31				PKPab	**PKPab**	**13 55 42.9**	**-1.5**
MKAR	**Makanchi Array**	**157.05**	**51**	PKP	**PKPdf**	**13 55 13.2**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=318,slow=1.6,SNR=11						
MKAR				pPKP	**pPKPdf**	**13 55 27.4**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=266,slow=2.2,SNR=5.9						
MKAR				PKPab	**PKPab**	**13 55 43.3**	**-1.1**
	comp=Z,7.1nm,0.8s,baz=294,slow=3.1,SNR=19						
MKAR				PP	**PP**	**13 59 22.2**	**-1.1**
	comp=Z,1.5nm,0.9s,baz=280,slow=4.2,SNR=3.7						
MKAR	**Makanchi Array**	**157.05**	**51**		**PKPdf**	**13 55 12.7**	**-1.0**
MKAR	**Makanchi Array**	**157.05**	**51**	PKPab	**PKPab**	**13 55 43.0**	**-1.4**
KLR	**Kul'dur**	**157.49**	**317**	PKP	**PKPdf**	**13 55 14.1**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=354,slow=5.6,SNR=5.8						
KLR				PKPab	**PKPab**	**13 55 45.5**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=317,slow=19,SNR=3.0						
KOLN	**Koldanda**	**157.80**	**102**	*e*P	**PKPdf**	**13 55 15.4**	**-0.1**
	comp=Z,3.9nm,0.5s						
DANN	**Dangsing**	**158.16**	**100**	*e*P	**PKPdf**	**13 55 16.2**	**+0.2**
	comp=Z,31nm,0.9s						
GKN	**Gorkha**	**158.73**	**102**	*e*P	**PKPdf**	**13 55 16.5**	**-0.1**
DMN	**Daman**	**158.94**	**103**	*e*P	**PKPdf**	**13 55 17.5**	**+0.5**
	comp=Z,7.7nm,0.3s						
RAMN	**Ramite**	**159.83**	**107**	*e*P	**PKPdf**	**13 55 18.3**	**+0.3**
PBKT	**Sadao Pong**	**160.72**	**158**		**PKPab**	**13 56 00.1**	**-0.6**
WMQ	**Urumqi**	**161.71**	**54**	*e*PKP	**PKPdf**	**13 55 18.6**	**-0.7**
WMQ				AMB	AMB		
	comp=Z,140nm,5.9s						
WMQ				LR	LR		
	comp=Z,210nm,28.9s						
CMAR	**Chiang Mai Arr**	**161.74**	**151**	PKP	**PKPdf**	**13 55 19.9**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=243,slow=2.4,SNR=4.5						
CMAR				PKPab	**PKPab**	**13 56 04.7**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=223,slow=5.1,SNR=8.6						
CMAR				pPKPab	**pPKPab**	**13 56 18.3**	**-0.4**
	comp=Z,2.1nm,0.9s,baz=223,slow=5.4,SNR=3.6						
CHTO	**Chiang Mai**	**162.06**	**150**		**PKPab**	**13 56 06.0**	**-0.6**
TLY	**Talaya**	**162.78**	**10**	PKPab	**PKPab**	**13 56 10.1**	**+1.1**
	comp=Z,2.6nm,0.7s,baz=324,slow=1.8,SNR=7.2						
TLY	**Talaya**	**162.78**	**10**		**PKPab**	**13 56 09.7**	**+0.8**
SHL	**Shillong**	**163.12**	**119**		**PKPab**	**13 56 11.2**	**-0.3**
SONM	**Songino Array**	**166.88**	**6**	PKPab	**PKPab**	**13 56 27.1**	**-0.1**
	comp=Z,2.7nm,0.9s,baz=359,slow=2.8,SNR=11						
SONM				PP	**PP**	**14 00 14.2**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=350,slow=4.9,SNR=3.8						

SONM Songino Array 166.88 6 PKPab 13 56 27.9 +0.7
ULN Ulaanbaatar 166.89 4 PKPab 13 56 28.7 +1.3
NJ2 Nanjing 170.77 256 ePKP PKPdf 13 55 26.7 +0.1
GTA Gaotai 171.80 53 ePKP PKPdf 13 55 27.5 +0.4
HHC Hu-ho-hao-te 173.41 338 ePKP PKPdf 13 55 29.6 +1.9
CD2 Chengdu 174.57 134 PKP PKPdf 13 55 28.1 -0.3

IDC 12 13:38:45.8±3.2, 3.42N×92.84E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/53, mbtmp3.4/5, MS3.6/1, Ms1 3.6/1, ms1mx2.9/42, Error ellipse: s-maj=109.1km s-min=26.4km az=64.0, Off west coast of northern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CMAR Chiang Mai Arr 16.09 21 Pn Pn 13 42 32.3 -1.3
baz=204,slow=11,SNR=3.0
KAPI Kappang 28.16 107 LR LR 13 55 34.3
comp=Z,114nm,19.0s,baz=20,slow=36
MKAR Makanchi Array 44.16 350 P P 13 46 55.5 -0.8
0.5nm,0.9s,baz=164,slow=7.0,SNR=3.6
SONM Songino Array 45.76 13 P P 13 47 10.5 +1.3
0.3nm,0.6s,baz=198,slow=9.1,SNR=3.3
WRA Warramunga Arr 46.90 121 P P 13 47 17.0 -1.5
0.2nm,0.4s,baz=282,slow=8.2,SNR=2.9
ASAR Alice Springs 48.21 126 P P 13 47 29.7 +1.0
0.6nm,0.6s,baz=303,slow=8.0,SNR=3.7

DJA 12 13:39:30.7±1.2, 5°N±3°×9°7E±°, h40km±17km, M2.5/4, MLv2.5/4, Northern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MLSI Meulaboh, Aceh 0.44 230 P Pn 13 39 42.1 +1.5
MLSI S Sn 13 39 50.5 +2.9
LHMI Lhok Sumawe 0.70 17 P Pn 13 39 45.4 +1.2
LHMI S Sn 13 39 55.6 +1.7
TPTI 1.35 161 P Pn 13 39 52.9 -0.2
TPTI S Sn 13 40 10.5 +0.6
KCSI Kotacane, Aceh 1.45 135 P Pn 13 39 54.3 -0.2
KCSI S Sn 13 40 12.9 +0.6

IDC 12 13:40:55.2±0.7, 16.81S×176.65E, h0km, mb4.2/16, mb1 4.4/18, mb1mx4.2/51, mbtmp4.2/18, ML3.2/2, MS4.1/15, Ms1 4.1/15, ms1mx3.9/33, Error ellipse: s-maj=23.7km s-min=15.1km az=160.0
NEIC 12 13:40:56.6±2.6, 16.68S±0.08×176.54E±0.07, h10km±1km, mb4.8/21, Error ellipse: s-maj=13.4km s-min=11.0km az=212.0
ISC 12 13:40:56.7±0.5, 16.72S±0.08×176.66E±0.07, h10km, n70, σ1.49/55, mb4.5/22, MS4.2/12, Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSVF Nonsavu 1.67 127 Pn 13 41 25.7 -0.4
FUNA Funafuti 8.51 17 Pn Pn 13 42 57.8 -2.3
SANVU Saraoutou 9.18 277 Pn Pn 13 43 03.7 -5.6
DZM Mont Dzumac 11.01 239 ePn Pn 13 43 37.2 +2.8
89nm,1.6s
DZM eLR LR 13 46 08.3
comp=Z,2μm,26.4s
DZM Mont Dzumac 11.01 239 Pn Pn 13 43 32.0 -2.5
0.1nm,0.3s,baz=36,slow=19,SNR=2.2
DZM LR LR 13 46 51.8
comp=Z,1μm,19.6s,baz=59,slow=33
DZM Mont Dzumac 11.01 239 Pn 13 43 32.1 -2.3
NOUC Port Laguerre 11.14 240 Pn Pn 13 43 32.8 -3.3
AFI Afiamalu 11.50 78 Pn Pn 13 43 40.2 -0.9
0.5nm,0.3s,baz=314,slow=18,SNR=2.7
AFI LR LR 13 47 05.2
comp=Z,619nm,21.0s,baz=254,slow=32
RAO Raoul Island 13.43 159 LR LR 13 47 45.1
comp=Z,848nm,19.2s,baz=340,slow=31
HNR Honiara 17.81 292 LR LR 13 51 15.1
comp=Z,992nm,18.4s,baz=128,slow=35
URZ Urewera 21.46 179 P P 13 45 43.8 -1.5
13nm,0.7s,baz=9.5,slow=12,SNR=5.4
URZ LR LR 13 52 07.0
comp=Z,372nm,20.9s,baz=358,slow=31
URZ Urewera 21.46 179 P P 13 45 44.3 -1.0
URZ IAmb IAmb 13 46 24.7
comp=Z,31nm,1.0s
BKZ Black Stump Fm 22.36 180 P P 13 45 53.7 -1.3
RAR Rarotonga 22.72 105 P P 13 45 58.9 0.0
comp=Z,8.4nm,0.8s,baz=333,slow=9.0,SNR=3.0
BHW Baring Head 24.65 183 P P 13 46 17.4 -0.1
MQZ McQueen's Vall 27.11 186 P P 13 46 40.4 +0.7
KRVT Keravat (AS076 27.14 294 P P 13 46 40.2 -0.1
comp=Z,33nm,1.0s,baz=42,slow=16,SNR=2.9
KRVT LR LR 13 56 27.9
comp=Z,504nm,20.3s,baz=109,slow=34
RPZ Rata Peaks 27.32 189 LR LR 13 57 06.4
comp=Z,228nm,19.6s,baz=7.0,slow=36
PMG Port Moresby 29.62 280 P P 13 47 01.8 -0.6
comp=Z,11nm,0.9s,baz=270,slow=16,SNR=2.7
PMG Port Moresby 29.62 280 P P 13 47 01.2 -1.3
TBI Tubuai 32.45 107 eLQ LQ 13 54 29.1
comp=Z,2μm,26.0s
TBI eLR LR 13 55 51.9
comp=Z,830nm,31.8s
TOO Toolangi 34.40 227 P P 13 47 45.8 +1.5
TOO IAmb IAmb 13 47 47.0
comp=Z,21nm,1.3s
STKA Stephens Creek 35.16 238 P P 13 47 52.2 +1.4
comp=Z,16nm,0.8s,baz=80,slow=9.4,SNR=31
STKA LR LR 14 00 59.5
comp=Z,413nm,20.3s,baz=53,slow=34
STKA Stephens Creek 35.16 238 P P 13 47 52.4 +1.5
TAU Tasmania Unive 36.13 218 P P 13 48 01.4 +2.0
TAU IAmb IAmb 13 48 01.4
comp=Z,22nm,1.2s
H11S2 WAKE ISLAND Hy 36.34 344 T T 14 26 04.9
baz=170,slow=76,SNR=9.7
H11S3 WAKE ISLAND Hy 36.35 344 T T 14 26 07.1
baz=170,slow=76,SNR=11
H11S1 WAKE ISLAND Hy 36.35 344 T T 14 26 06.2
baz=170,slow=76,SNR=10
H11N3 WAKE ISLAND Hy 37.46 345 T T 14 27 29.3
baz=164,slow=76,SNR=38
H11N1 WAKE ISLAND Hy 37.46 345 T T 14 27 28.8
baz=164,slow=76,SNR=28
H11N2 WAKE ISLAND Hy 37.47 345 T T 14 27 31.5
baz=164,slow=76,SNR=12
BBOO Buckleboo 39.93 239 P P 13 48 31.2 0.0
BBOO IAmb IAmb 13 49 10.5
comp=Z,29nm,1.4s
WR0 Warramunga Arr 40.04 259 P P 13 48 30.6 -1.7
WB0 Warramunga Arr 40.19 259 P P 13 48 31.8 -1.8
WB0 IAmb IAmb 13 48 32.8
comp=Z,50nm,1.8s
WB2 Warramunga Arr 40.22 259 P P 13 48 32.0 -1.8
WB2 IAmb IAmb 13 48 40.8
comp=Z,21nm,1.4s
WRAB Tennant Creek 40.22 259 P P 13 48 31.8 -2.0
WRAB IAmb IAmb 13 48 40.8
comp=Z,24nm,1.6s
WRA Warramunga Arr 40.23 259 P P 13 48 32.5 -1.5
comp=Z,4.4nm,0.6s,baz=92,slow=9.0,SNR=83
AS31 Alice Springs 40.60 253 P P 13 48 36.3 -0.8
ASAR Alice Springs 40.60 253 P P 13 48 36.5 -0.6
comp=Z,9.5nm,0.9s,baz=80,slow=9.4,SNR=110
ASAR LR LR 14 04 40.4
comp=Z,168nm,20.5s,baz=86,slow=35
ASAR Alice Springs 40.60 253 P P 13 48 35.9 -1.1
GUMO Guam 43.52 312 LR LR 14 06 17.5
comp=Z,149nm,19.7s,baz=70,slow=35
JCJ Chichijima 54.92 322 LR LR 14 08 37.3
comp=Z,312nm,21.3s,baz=70,slow=30
MJAR Matsushiro Arr 64.23 326 P P 13 51 33.9 +1.9
comp=Z,2.8nm,0.9s,baz=120,slow=7.2,SNR=3.2
MJB9 Matsu-Tunnel 64.23 326 P P 13 51 32.9 +0.9
NIKH Nikolski High 70.53 9 P P 13 52 12.2 +0.7
KSAR Wonju Array Be 70.76 321 P P 13 52 12.8 -0.5
QSPA South Pole Qui 81.42 180 P P 13 52 28.6 +0.2
SEY Seymchan 81.64 349 P P 13 53 15.2 +0.6
comp=Z,3.2nm,1.0s,baz=163,slow=19,SNR=2.3
NVAR Mina Array Bea 81.91 46 P P 13 53 17.9 +1.0
comp=Z,0.7nm,0.7s,baz=227,slow=10.0,SNR=6.7
NVAR Mina Array Bea 81.91 46 P P 13 53 17.3 +0.3
KNK Knik Glacier 82.68 16 P P 13 53 20.2 0.0
GHO Glory Hole Cre 82.86 16 P P 13 53 21.8 +0.6
CMAR Chiang Mai Arr 84.06 291 P P 13 53 28.3 +0.1
comp=Z,0.5nm,0.6s,baz=111,slow=3.4,SNR=3.0
PSUT Pine Spring 85.07 47 P P 13 53 33.4 +0.2
BCAR Beaver Creek A 85.87 18 P P 13 53 33.7 -2.6
ILAR Eielson Array 85.87 15 P P 13 53 35.5 -0.7
comp=Z,0.9nm,0.6s,baz=232,slow=5.1,SNR=8.9
ILAR Eielson Array 85.87 15 P P 13 53 35.4 -0.8
TXAR Lajitas Array 89.39 59 P P 13 53 54.4 +0.2
comp=Z,0.5nm,0.8s,baz=236,slow=4.2,SNR=5.4
TXAR LR LR 14 25 19.4
comp=Z,107nm,21.5s,baz=0.0,slow=30
SONM Songino Array 89.62 321 P P 13 53 55.4 +0.6
comp=Z,0.3nm,0.7s,baz=124,slow=4.7,SNR=3.2
SONM Songino Array 89.62 321 IAmb IAmb 13 56 29.2
comp=Z,3.8nm,1.1s
PDAR Pinedale Array 89.79 45 P P 13 53 56.1 +0.2
comp=Z,0.1nm,0.4s,baz=261,slow=3.6,SNR=2.2
PDAR LR LR 14 29 48.9
comp=Z,89nm,18.1s,baz=227,slow=33
YKA Yellowknife Ar 95.27 26 P P 13 54 20.6 +0.2
comp=Z,0.5nm,0.9s,baz=248,slow=4.7,SNR=3.9
YKA LR LR 14 31 32.8
comp=Z,71nm,20.4s,baz=0.0,slow=32
PLCA Paso Flores 95.52 135 LR LR 14 28 10.4
comp=Z,109nm,20.9s,baz=352,slow=30
GERES GERESS Array B 145.07 340 PKPbc PKPdf 14 00 35.8 +1.3
comp=Z,1.3nm,0.8s,baz=37,slow=2.5,SNR=7.1
CONA Conrad Observa 145.11 337 i PKiKP PKiKP 14 00 40.1 +1.6
comp=Z,6.8nm,1.1s
MOA Molln 145.75 339 i pPKiKP PKiKP 14 00 42.0 +2.3
comp=Z,13nm,1.0s
SOKA Soboth 146.46 337 i pPKiKP PKiKP 14 00 43.4 +2.1
comp=Z,11nm,1.7s
RETA Reutte 147.19 342 i pPKiKP PKiKP 14 00 45.1 +2.4
comp=Z,20nm,1.9s
ABTA Abfaltersbach 147.30 340 i sPKPab PKiKP 14 00 44.9 +1.9
comp=Z,13nm,1.6s
FETA Feichten 147.62 342 i pPKiKP PKiKP 14 00 46.0 +2.2
comp=Z,10nm,1.4s

IDC 12 13:48:57.3±2.2, 2.12S×133.71E, h0km, mb3.6/2, mb1 3.7/4, mb1mx3.4/57, mbtmp3.5/4, ML3.4/2, Error ellipse: s-maj=71.0km s-min=24.6km az=67.0
DJA 12 13:49:09.0±1.4, 3°S±4°×13°1E±°, h26km±13km, M3.0/8, MLv3.0/8
ISC 12 13:49:06.5±1.0, 3.03S±0.06×130.60E±0.05, h10km, n10, σ1.09/13, Seram

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BNDI Bandanaira 1.64 205 P Pn 13 49 35.7 +0.3
FAKI Fak Fak 1.65 86 P Pn 13 49 37.2 +1.7
FAKI S Sn 13 49 57.4 +0.6
MSAI Masohi 1.70 259 P Pn 13 49 37.4 +1.2
MSAI S Sn 13 49 58.8 +0.7
SIJI Sorong 2.24 17 Pn Pn 13 49 43.6 -0.1
3.0nm,0.3s,baz=124,slow=3.6,SNR=18
SIJI Sn Sn 13 50 12.8 +1.3
4.1nm,0.3s,baz=232,slow=22,SNR=10
SWI Sorong 2.25 17 P Pn 13 49 43.7 0.0
AAI Ambon 2.49 255 P Pn 13 49 48.0 +0.9
NLAI Namlea 3.50 266 P Pn 13 50 02.1 +1.1
WRA Warramunga Arr 17.20 168 P Pn 13 53 05.9 -1.2
0.2nm,0.3s,baz=356,slow=12,SNR=14
ASAR Alice Springs 20.77 171 P P 13 53 47.1 -0.7
1.6nm,0.5s,baz=350,slow=10,SNR=55
MKAR Makanchi Array 65.28 326 P P 13 59 47.6 -1.0
0.5nm,0.8s,baz=110,slow=7.6,SNR=3.0

IDC 12 13:52:27.3±1.6, 4.62N×72.79W, h0km, mb3.0/2, mb1 3.6/3, mb1mx3.2/37, mbtmp3.3/3, ML3.0/1, Error ellipse: s-maj=39.1km s-min=18.9km az=179.0
RSNC 12 13:52:31.4±1.1, 5.12N×73.02W, h0km±4km, ML3.1
ISC 12 13:52:29.2±1.2, 5.05N±0.02×73.00W±0.03, h1km±9km, n27, σ1.62/47, 1C-1D, Colombia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHIC Chingaza 0.84 240 ⇓iP Pg 13 52 44.9 -0.5
CHIC eS Sg 13 52 56.4 +0.2
CHIC i 13 53 07.5
comp=Z,238nm,0.5s
RUSC La Rusia 0.84 355 ⇑eP Pg 13 52 45.2 -0.1
RUSC eS Sg 13 52 55.7 -0.5
RUSC i 13 52 57.4
comp=Z,272nm,0.2s
VILC Villavicencio, 1.16 216 eP Pn 13 52 52.5 -0.2
VILC eS Sn 13 53 09.9 +0.5
VILC i 13 53 13.8
comp=Z,512nm,0.3s
CVER Cruz Verde, Cu 1.19 244 eP Pn 13 52 53.0 -0.4
PTGC Puerto Gaitan, 1.21 134 eP Pg 13 52 56.4 +1.1
PTGC eS Sn 13 53 11.6 +1.1
PTGC i 13 53 15.6
comp=Z,330nm,0.2s
SPBC San Pablo de B 1.22 299 eP Pn 13 52 51.9 -1.6
SPBC eS Sb 13 53 08.3 -1.2
SPBC i 13 53 09.3
comp=Z,202nm,0.3s
ROSC El Rosal 1.33 261 Pg Pg 13 52 56.0 +1.3
comp=Z,30nm,0.3s,baz=96,slow=19,SNR=20
ROSC Lg Lg 13 53 16.0
comp=Z,28nm,0.3s,baz=205,slow=22,SNR=11
ROSC El Rosal 1.33 261 eP Pg 13 52 55.8 +1.1
ROSC eS Sg 13 53 14.4 +2.4
BARC Barichara 1.54 353 eP Pn 13 52 57.5 -0.6
BARC eS Sg 13 53 18.8 0.0
BARC i 13 53 22.7
comp=Z,693nm,0.3s
TAMC Tame, Arauca 1.83 41 eP Pg 13 53 04.0 -0.3
TAMC eS Sg 13 53 30.8 +2.7
TAMC i 13 53 32.7
comp=Z,591nm,0.2s
NORC Norcasia 1.93 285 eP Pb 13 53 04.2 -1.1
NORC eS Sb 13 53 29.1 -0.7
NORC i 13 53 31.7
comp=Z,101nm,0.5s
PTBC PUERTO BERRIO, 2.07 316 eP Pn 13 53 05.9 +0.8
PTBC eS Sb 13 53 32.4 -1.5
PTBC i 13 53 33.4
comp=Z,164nm,0.5s
PAMC Pamplona, Colo 2.29 8 eP Pb 13 53 11.7 0.0
PAMC eS Sb 13 53 41.3 +0.5
PAMC e 13 53 41.3
PAMC i 13 53 46.6
comp=Z,118nm,0.3s
PRAC Prado 2.30 235 eP Pb 13 53 10.3 -1.3
PRAC eS Sg 13 53 42.2 -1.0
PRAC i 13 53 47.2
comp=Z,178nm,0.8s
ORTC Ortega, Tolima 2.51 243 eP Pn 13 53 12.8 +1.6
ORTC eS Sn 13 53 49.1 -0.8
ORTC i 13 53 53.3
comp=Z,90nm,0.3s
GUVC San Jose del G 2.52 171 eP Pb 13 53 13.1 -2.2
GUVC eS Sb 13 53 46.3 -0.5
HELC Santa Helena 2.76 294 eP Pn 13 53 16.1 +1.1
HELC eS Sn 13 53 49.4 +0.3
HELC i 13 53 54.4
comp=Z,19nm,0.4s
MACC Macarena, Meta 3.01 196 eP Pg 13 53 27.9 +0.9
ZARC Zaragoza, Cauc 3.05 323 eP Pb 13 53 22.2 -2.1
ZARC eS Sn 13 53 57.9 +2.1
ZARC i 13 54 06.5
comp=Z,71nm,0.3s
OCAC Ocana 3.18 354 eP Pn 13 53 17.9 -2.7
OCAC eS Sb 13 54 08.0 +1.9
UREC San Jos de Ur 3.68 317 eP Pn 13 53 27.5 +0.2
UREC eS Sn 13 54 12.4 +1.0
FLOC Florencia 4.34 218 eP Pb 13 53 42.8 -3.6
FLOC eS Sb 13 54 41.5 +2.0
SDV Santo Domingo 4.48 32 Pn Pn 13 53 38.7 +0.2
comp=Z,6.4nm,0.3s,baz=207,slow=6.8,SNR=22
SDV Sn Sn 13 54 28.5 -2.9
comp=Z,6.7nm,0.3s,baz=271,slow=23,SNR=12
SDV Lg Lg 13 54 50.9
comp=Z,3.3nm,0.3s,baz=62,slow=23,SNR=1.7
NVAR Mina Array Bea 52.81 316 P P 14 01 48.7 +1.9
comp=Z,0.1nm,0.4s,baz=128,slow=7.3,SNR=2.4
YKA Yellowknife Ar 64.95 340 P P 14 03 12.4 +2.0
comp=Z,0.1nm,0.5s,baz=139,slow=6.7,SNR=2.9
ASAR Alice Springs 148.15 232 PKPbc PKPbc 14 12 15.1 -2.7
comp=Z,0.2nm,0.8s,baz=112,slow=3.9,SNR=3.6
WRA Warramunga Arr 149.56 239 PKPbc PKPbc 14 12 18.6 -3.0
comp=Z,0.2nm,0.4s,baz=109,slow=2.8,SNR=5.0

IDC 12 14:01:40.8±3.7, 36.76N×82.82E, h0km, mb3.3/3, mb1 3.3/7, mb1mx3.2/65, mbtmp3.4/7, ML3.1/4, Error ellipse: s-maj=51.5km s-min=31.2km az=12.0
NNC 12 14:01:42.3±2.5, 36.71N×82.67E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=35.5km s-min=18.9km az=73.0
ISC 12 14:01:41.2±2.3, 36.6N±0.2×82.9E±0.1, h10km, n10, σ1.61/14, 1C-4D, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PDGK Podgornoye 7.19 340 ⇑Pn Pn 14 03 27.4 +0.9
1.9nm,0.5s
PDGK ⇓Sn Sn 14 04 48.6 +0.2
17nm,0.8s
AAK Ala-Archa 8.83 316 Pn Pn 14 03 49.8 +0.8
0.1nm,0.3s,baz=156,slow=10.0,SNR=2.4
AAK Lg Lg 14 06 18.7
0.1nm,0.3s,baz=321,slow=13,SNR=1.8
MK31 Makanchi Array 10.18 358 ⇓Pn Pn 14 04 08.2 +0.8
0.3nm,0.4s,baz=181,slow=13,SNR=18
MK31 Sn Sn 14 06 03.1 +1.5
2.0nm,0.5s,baz=183,slow=22,SNR=4.1
MKAR Makanchi Array 10.18 358 Pn Pn 14 04 07.1 -0.3
0.4nm,0.3s,baz=182,slow=11,SNR=14
MKAR Sn Sn 14 05 58.0 -3.6
0.0nm,0.3s,baz=159,slow=20,SNR=2.4
MAKZ Makanchi 10.21 357 ⇓Pn Pn 14 04 07.9 +0.2
1.1nm,0.5s
MAKZ ⇓Sn Sn 14 06 04.5 +2.3
1.8nm,0.6s
ZALV Zalesovo Beam 17.39 4 P Pn 14 05 42.3 -1.4
0.2nm,0.3s,baz=198,slow=13,SNR=4.0
BVAR Borovoye Array 18.60 336 P P 14 05 57.3 -1.1
0.1nm,0.3s,baz=139,slow=9.7,SNR=5.9
SONM Songino Array 20.63 50 P P 14 06 21.4 +0.6
0.1nm,0.4s,baz=243,slow=9.5,SNR=2.5
AKTO Aktyubinsk 22.57 316 P P 14 06 40.3 -1.2
0.7nm,0.6s,baz=65,slow=8.6,SNR=3.5
ARU Arti 25.70 328 P P 14 07 12.0 +0.7
0.4nm,0.3s,baz=149,slow=9.6,SNR=3.7

JMA 12 14:04:29.4±0.1, 29.36N×130.63E, h44km±4km, M3.4
IDC 12 14:04:31.2±1.4, 29.39N×130.39E, h48km±13km, mb3.5/14, mb1 3.5/20, mb1mx3.4/60, mbtmp3.6/20, ML2.9/6, Error ellipse: s-maj=20.4km s-min=9.3km az=110.0
ISC 12 14:04:30.7±1.3, 29.39N±0.06×130.54E±0.08, h47km±11km, n33, σ0.81/41, mb3.9/15, Ryukyu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JNN Nakanoshima 0.74 308 P Pn 14 04 44.4 -0.5
JNN eS Sn 14 04 55.6 +0.5
JYAK Yakushimahirau 0.85 358 P Pn 14 04 45.6 -0.7
JYAK S Sn 14 04 57.1 -0.6
JMTN Minamitane 1.05 17 P Pn 14 04 48.2 -0.9
JMTN eS Sn 14 05 02.1 -0.5
JKC Kuchinoerabu 1.11 344 P Pn 14 04 49.6 -0.3
JKC eS Sn 14 05 04.5 +0.4
JTAJ Takarajima 1.20 259 P Pn 14 04 51.6 +0.6
JTAJ eS Sn 14 05 07.4 +1.3
JAM Amami Oshima 1.27 220 P Pn 14 04 51.7 -0.4
JTN Tanegashima 3 1.32 17 P Pn 14 04 52.2 -0.5
JAMN Amaminishikomi 1.66 227 P Pn 14 04 57.0 -0.3
JTSR Tashiro 2 1.80 10 P Pn 14 04 59.3 -0.1
JTSR eS Sn 14 05 21.4 +0.4
JSU Suzuyama 2.11 358 P Pn 14 05 03.0 -0.6
JTK Tokunoshima 2.12 222 P Pn 14 05 03.7 -0.1
JNAR Kushima--Naru 2.22 16 P Pn 14 05 05.4 +0.3
JOW Kunigami 3.24 219 P Pn 14 05 18.3 -0.8
1.0nm,0.3s,baz=99,slow=17,SNR=6.7
JOW S Sn 14 05 55.6 -0.9
2.1nm,0.3s,baz=72,slow=25,SNR=2.2
JNU Nakatsue 3.73 4 P Pn 14 05 26.4 +0.6
3.9nm,0.3s,baz=210,slow=10,SNR=21
JNU S Sn 14 06 09.5 +1.0
1.5nm,0.3s,baz=218,slow=22,SNR=1.1
KSRS Korea Array 8.34 345 P Pn 14 06 29.1 +0.2
0.1nm,0.3s,baz=177,slow=16,SNR=2.6
MJAR Matsushiro Arr 9.61 40 P Pn 14 06 46.6 +0.2
0.1nm,0.3s,baz=234,slow=13,SNR=3.7
ASAJ Asahikawa 17.56 30 P P 14 08 33.1 +0.6
0.1nm,0.3s,baz=293,slow=15,SNR=2.5
KLR Kul'dur 19.84 2 P P 14 08 57.7 +0.3
0.1nm,0.3s,baz=175,slow=12,SNR=3.6
SONM Songino Array 26.19 321 P P 14 09 59.2 -1.8
1.9nm,0.6s,baz=139,slow=10,SNR=11
SEY Seymchan 36.41 17 P P 14 11 32.7 +2.2
4.1nm,0.3s,baz=7.7,slow=0.5,SNR=24
MKAR Makanchi Array 41.06 309 P P 14 12 10.3 +0.7
0.7nm,0.5s,baz=86,slow=9.9,SNR=10
ZALV Zalesovo Beam 41.07 320 P P 14 12 09.7 +0.2
1.4nm,0.3s,baz=285,slow=8.0,SNR=5.2
KURBB Kurchatov Arra 44.07 314 P P 14 12 34.2 +0.3
1.4nm,0.4s,baz=96,slow=9.2,SNR=23
WRA Warramunga Arr 49.18 175 P P 14 13 14.4 +0.1
0.8nm,1.1s,baz=351,slow=8.3,SNR=3.3
BVAR Borovoye Array 49.35 316 P P 14 13 15.0 -0.2
1.8nm,0.5s,baz=95,slow=9.8,SNR=19
ASAR Alice Springs 52.85 176 P P 14 13 42.2 +0.4
0.2nm,0.8s,baz=360,slow=6.9,SNR=3.8
ARU Arti 56.23 321 P P 14 14 04.7 -1.2
0.5nm,0.3s,baz=342,slow=10,SNR=4.4
AKTO Aktyubinsk 57.12 313 P P 14 14 11.9 -0.4
1.1nm,0.7s,baz=69,slow=8.6,SNR=3.2
ILAR Eielson Array 60.69 29 P P 14 14 37.3 +0.4
0.1nm,0.5s,baz=272,slow=6.2,SNR=3.0
FINES FINESS Array B 71.13 331 P P 14 15 43.2 -0.7
0.5nm,0.3s,baz=69,slow=8.1,SNR=5.8
AKASG Malin Array Be 74.46 320 P P 14 16 03.1 -0.9
0.7nm,0.5s,baz=57,slow=6.6,SNR=2.2
YKA Yellowknife Ar 74.80 26 P P 14 16 06.7 +1.0
0.1nm,0.5s,baz=300,slow=5.4,SNR=2.7
BRTR Keskin Array B 76.71 308 P P 14 16 15.8 -1.4
0.8nm,0.7s,baz=93,slow=5.9,SNR=4.4

NIED 12 14:05:00, 29.40N×130.60E, h5km, Mw4.8 Best double couple: M0 1.61000×10^16 NP1: φs27.00000°, δ88.00000°, λ91.00000°. NP2: φs172.00000°, δ2.00000°, λ55.00000°.
JMA 12 14:05:33.9±0.2, 29.36N×130.63E, h21km±2km, M4.2
NEIC 12 14:05:34.9±0.8, 29.38N±0.06×130.49E±0.09, h37km±3km, mb4.6/27, Error ellipse: s-maj=12.5km s-min=7.7km az=114.0
IDC 12 14:05:35.1±2.2, 29.38N×130.49E, h40km±19km, mb3.8/23, mb1 3.9/29, mb1mx3.8/60, mbtmp4.0/29, ML3.1/6, MS3.7/6, Ms1 3.7/6, ms1mx3.3/43, Error ellipse: s-maj=16.3km s-min=12.5km az=99.0
ISC 12 14:05:35.8±1.0, 29.40N±0.04×130.52E±0.06, h47km±9km, n90, σ1.08/96, mb4.2/32, MS4.0/3, Ryukyu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JNN Nakanoshima 0.71 308 P Pn 14 05 49.0 -0.6
JNN eS Sn 14 06 00.0 +0.4
JYAK Yakushimahirau 0.83 359 P Pn 14 05 50.4 -0.8
JYAK eS Sn 14 06 02.7 +0.3
JMTN Minamitane 1.04 18 P Pn 14 05 53.2 -0.8
JKC Kuchinoerabu 1.09 345 P Pn 14 05 54.9 +0.2
JKC eS Sn 14 06 09.6 +0.9
JTAJ Takarajima 1.18 258 P Pn 14 05 56.6 +0.7
JTAJ eS Sn 14 06 12.8 +2.0
JAM Amami Oshima 1.28 219 P Pn 14 05 57.2 0.0
JAM eS Sn 14 06 13.5 +0.4
JTN Tanegashima 3 1.31 17 P Pn 14 05 56.9 -0.7
JTN eS Sn 14 06 14.3 +0.3
JAMN Amaminishikomi 1.66 226 eS Sn 14 06 23.6 +1.2
JTSR Tashiro 2 1.79 11 P Pn 14 06 04.9 +0.6
JTSR eS Sn 14 06 27.8 +2.0
JTK Tokunoshima 2.12 221 P Pn 14 06 08.7 -0.1
JTK eS Sn 14 06 35.7 +1.7
JOW Kunigami 3.24 218 P Pn 14 06 22.9 -1.3
1.9nm,0.3s,baz=60,slow=30,SNR=3.9
JOW Sn Sn 14 07 00.2 -1.4
2.2nm,0.3s,baz=161,slow=12,SNR=1.4
JNU Nakatsue 3.72 5 Pn Pn 14 06 31.2 +0.5
4.4nm,0.3s,baz=1.8,slow=21,SNR=7.0
JNU Sn Sn 14 07 13.3 0.0
3.0nm,0.3s,baz=2.2,slow=14,SNR=0.9

JNU LR LR 14 08 05.7
comp=Z,269nm,21.8s,baz=182,slow=40
JNU Nakatsue 3.72 5 Pn Pn 14 06 31.5 +0.8
INU Inuyama 8.08 41 Pn 14 07 30.4 -0.1
KSRS Korea Array 8.32 346 Pn Pn 14 07 33.1 -0.6
0.2nm,0.3s,baz=168,slow=14,SNR=3.3
JHJ Hachijo jima 2 8.75 63 LR LR 14 10 30.8
comp=Z,296nm,18.6s,baz=70,slow=34
MAJO Matsushiro 9.61 40 Pn Pn 14 07 51.0 -0.4
MJAR Matsushiro Arr 9.61 40 Pn Pn 14 07 51.4 -0.1
0.1nm,0.3s,baz=233,slow=14,SNR=4.9
MJAR Matsushiro Arr 9.61 40 Pn Pn 14 07 50.7 -0.7
MJB9 Matsu-Tunnel 9.61 40 Pn Pn 14 07 51.0 -0.5
YULB Yu-li 10.21 236 Pn Pn 14 07 56.2 -3.6
NJ2 Nanjing 10.38 288 eP Pn 14 08 01.0 -0.9
TIA Tai'an 13.15 305 P Pn 14 08 41.4 +1.5
TIA S S 14 11 45.6 +18
USRK Ussuriysk Ar. 14.81 4 LR LR 14 14 35.2
comp=Z,328nm,21.2s,baz=161,slow=36
CN2 Changchun 14.93 346 eP P 14 09 10.6 +2.1
CN2 eS S 14 11 58.6 -5.3
ASAJ Asahikawa 17.55 30 P P 14 09 37.7 +0.1
0.1nm,0.3s,baz=246,slow=10.0,SNR=2.3
JKA Kamikawa-asahi 17.55 30 P P 14 09 37.7 +0.1
ENH Enshi 18.27 278 Pn Pn 14 09 47.6 +1.7
ENH IAmb IAmb 14 09 53.4
comp=Z,68nm,1.7s
XAN Xi'an 18.94 290 P P 14 09 53.0 0.0
XAN pP Pn 14 09 56.6 +2.6
XAN Xi'an 18.94 290 P P 14 09 51.8 -1.1
HHC Hu-ho-hao-te 19.21 312 eP Pn 14 09 57.8 +0.5
HHC S S 14 13 29.4 -1.8
KLR Kul'dur 19.82 2 P P 14 10 01.4 -0.9
comp=Z,0.3nm,0.3s,baz=175,slow=6.3,SNR=8.0
YSS Yuzh-Sakhalins 19.94 25 P Pn 14 10 04.9 -0.8
YSS IAmb IAmb 14 10 10.2
comp=Z,24nm,1.4s
GUMO Guam 20.60 137 LR LR 14 17 07.0
comp=Z,181nm,19.1s,baz=352,slow=34
GYA Guiyang 21.28 268 eP P 14 10 18.3 -0.2
LZH Lanzhou 23.37 294 eP P 14 10 42.9 +2.5
LZH pP pP 14 10 51.3 -0.5
LZH sP sP 14 10 56.1 -1.5
ULN Ulaanbaatar 25.83 322 P P 14 11 03.1 +0.3
SONM Songino Array 26.17 321 P P 14 11 05.8 0.0
comp=Z,3.3nm,0.9s,baz=135,slow=9.3,SNR=10.0
SONM Songino Array 26.17 321 P P 14 11 05.9 0.0
H11N2 WAKE ISLAND Hy 34.33 98 T T 14 49 02.4
baz=296
H11N1 WAKE ISLAND Hy 34.34 98 T T 14 49 11.1
baz=296
H11N3 WAKE ISLAND Hy 34.35 98 T T 14 49 06.8
baz=296
SEY Seymchan 36.41 17 P P 14 12 35.5 +0.1
comp=Z,2.1nm,0.8s,baz=203,slow=6.4,SNR=3.7
WMQ Urumqi 36.85 305 eP P 14 12 41.3 +1.7
MK31 Makanchi Array 41.04 309 P P 14 13 13.8 -0.8
MKAR Makanchi Array 41.04 309 P P 14 13 14.7 +0.2
comp=Z,0.2nm,0.3s,baz=238,slow=11,SNR=8.3
MKAR PcP PcP 14 15 12.9 -0.7
comp=Z,0.3nm,0.6s,baz=98,slow=2.9,SNR=2.5
ZALV Zalesovo Beam 41.05 320 P P 14 13 14.3 -0.1
comp=Z,0.6nm,0.4s,baz=97,slow=10,SNR=3.1
ZALV PcP PcP 14 15 14.3 +0.8
comp=Z,0.4nm,0.4s,baz=119,slow=5.6,SNR=2.8
MAKZ Makanchi 41.26 309 P P 14 13 16.1 -0.2
KURK Kurchatov 44.00 314 P P 14 13 38.6 +0.1
KURK IAmb IAmb 14 13 43.4
comp=Z,5.8nm,1.0s
BILL Bilibino 44.03 18 P P 14 13 39.2 +0.8
BILL IAmb IAmb 14 13 55.7
comp=Z,21nm,2.0s
KURBB Kurchatov Arra 44.05 314 P P 14 13 38.7 -0.1
comp=Z,2.8nm,0.6s,baz=96,slow=9.5,SNR=12
FITZ Fitzroy Crossi 47.46 186 P P 14 14 06.0 0.0
comp=Z,1.2nm,0.4s,baz=0.0,slow=5.1,SNR=2.1
WRA Warramunga Arr 49.20 175 P P 14 14 18.8 -0.7
comp=Z,2.1nm,1.0s,baz=354,slow=7.4,SNR=5.4
KK31 Karatay Array 49.31 303 P P 14 14 19.8 -0.4
KKAR Karatay Array 49.31 303 P P 14 14 19.4 -0.8
KKAR Karatay Array 49.31 303 P P 14 14 19.8 -0.4
KKAR IAmb IAmb 14 14 22.1
comp=Z,2.3nm,0.8s
BVAR Borovoye Array 49.33 316 P P 14 14 20.0 -0.1
comp=Z,2.9nm,0.5s,baz=93,slow=9.4,SNR=12
BRVK Borovoye 49.39 316 P P 14 14 20.6 0.0
BRVK IAmb IAmb 14 14 22.4
comp=Z,13nm,1.4s
ASAR Alice Springs 52.87 176 P P 14 14 46.5 -0.4
comp=Z,0.8nm,0.8s,baz=359,slow=7.5,SNR=5.2
ABKAR Akbulak array 56.01 312 P P 14 15 09.5 0.0
ABKAR Akbulak array 56.01 312 P P 14 15 09.6 0.0
ABKAR IAmb IAmb 14 15 10.6
comp=Z,4.1nm,0.7s
ARU Arti 56.20 321 P P 14 15 10.9 +0.1
comp=Z,1.0nm,0.3s,baz=113,slow=1.8,SNR=6.1
ARU Arti 56.20 321 P 14 15 11.1 +0.3
ARU IAmb IAmb 14 15 11.7
comp=Z,5.5nm,0.8s
AKTO Aktyubinsk 57.09 313 P P 14 15 17.1 -0.2
comp=Z,1.4nm,0.7s,baz=72,slow=10,SNR=4.4
IMAR Indian Mountai 57.74 28 P P 14 15 22.2 +0.6
PPLA Purkeypile 58.52 32 P P 14 15 28.6 +1.4
SKT Skwentna 58.89 33 P P 14 15 30.2 +0.5
SUA Susitna One 59.31 33 P P 14 15 33.1 +0.4
NEA Nenana 59.77 30 P P 14 15 36.4 +0.8
NEA IAmb IAmb 14 15 38.2
comp=Z,6.7nm,1.0s
ILAR Eielson Array 60.69 29 P P 14 15 42.0 0.0
comp=Z,1.1nm,0.9s,baz=290,slow=6.7,SNR=10.0
PRP Porcupine Dome 61.16 28 P P 14 15 45.9 +0.6
PRP IAmb IAmb 14 15 47.6
comp=Z,2.4nm,0.9s
BCAR Beaver Creek A 63.20 31 P P 14 15 59.6 +0.8
INK Inuvik 65.18 24 P P 14 16 12.2 +0.5
comp=Z,0.7nm,0.6s,baz=292,slow=10.0,SNR=4.0
INK Inuvik 65.18 24 IAmb IAmb 14 16 41.8
comp=Z,16nm,1.9s
KBZ Khabaz 68.74 309 P P 14 16 35.5 +0.8
comp=Z,2.3nm,0.9s,baz=74,slow=7.4,SNR=3.1
FINES FINESS Array B 71.11 331 P P 14 16 48.0 -0.9
comp=Z,0.5nm,0.3s,baz=73,slow=6.1,SNR=5.7
RES Resolute Bay 72.05 11 P P 14 16 54.9 +0.5
comp=Z,3.0nm,0.7s,baz=308,slow=7.2,SNR=14
RES Resolute Bay 72.05 11 P P 14 16 55.2 +0.8
AKASG Malin Array Be 74.44 320 P P 14 17 08.6 -0.2
comp=Z,0.9nm,0.5s,baz=57,slow=6.8,SNR=3.9
AKASG LR LR 14 52 36.4
comp=Z,113nm,20.0s,baz=255,slow=38
YKA Yellowknife Ar 74.80 26 P P 14 17 11.3 +0.6
comp=Z,1.0nm,0.8s,baz=301,slow=5.8,SNR=7.4
BRTR Keskin Array B 76.69 308 P P 14 17 22.4 +0.3
comp=Z,1.3nm,0.7s,baz=87,slow=4.4,SNR=6.9
BRTR Keskin Array B 76.69 308 P P 14 17 21.8 -0.4
NOA NORSAR Array B 77.36 334 P P 14 17 23.2 -2.3
comp=Z,0.3nm,0.5s,baz=50,slow=5.6,SNR=2.4
NOA LR LR 14 56 24.4
comp=Z,75nm,19.4s,baz=255,slow=39
NEW Newport 81.86 39 P P 14 17 50.4 +0.3
comp=Z,1.4nm,0.6s,baz=323,slow=4.4,SNR=3.9
PAHR Pah Rah Range 85.44 47 P P 14 18 09.1 +0.4
PAHR IAmb IAmb 14 18 10.4
comp=Z,5.6nm,1.0s
KVN Kaiserville 86.63 47 P P 14 18 15.4 +0.7
KVN IAmb IAmb 14 18 17.1
comp=Z,4.2nm,1.0s
NVAR Mina Array Bea 86.86 47 P P 14 18 16.6 +0.7
comp=Z,1.6nm,0.9s,baz=288,slow=4.4,SNR=6.0
PDAR Pinedale Array 89.43 40 P P 14 18 28.6 +0.6
comp=Z,0.6nm,0.8s,baz=8.5,slow=3.0,SNR=5.0
ULM Lac du Bonnet 90.68 28 P P 14 18 33.7 +0.3
comp=Z,1.0nm,0.4s,baz=352,slow=9.0,SNR=3.7
ULM Lac du Bonnet 90.68 28 IAmb IAmb 14 18 47.3
comp=Z,5.8nm,1.1s

DRS 12 14:21:13.8±0.0, 41.39N×48.67E, h20km
MOS 12 14:21:14.4±0.0, 41.54N×48.37E, h33km, MPVA3.8
ISC 12 14:21:13.6±2.6, 41.64N±0.07×48.6E±0.1, h13km±11km, n19, σ1.39/33, Eastern Caucasus

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSMR Kasumkent 0.34 264 ePg Pb 14 21 22.0 +0.5
KSMR eSg Sb 14 21 29.0 +2.2
DRN Derbent 0.43 335 i Pg Pn 14 21 25.3 -0.2
DRN eSg Sn 14 21 34.6 +1.4
AKT Akhty 0.65 256 i Pg Pg 14 21 25.6 -0.7
AKT eSg Sg 14 21 34.2 -0.7
URKR Urkarakh 0.88 307 ePg Pb 14 21 30.8 0.0
URKR eSg Sb 14 21 43.9 +1.5
KMKR Kumukh 1.21 295 i Pg Pn 14 21 35.0 -1.3
KMKR i Sg Sn 14 21 52.0 -0.7
GNBR Gunib 1.42 303 ePg Pb 14 21 39.3 -0.6
GNBR eSg Sb 14 21 59.4 +1.5
XNZR Khunzakh 1.66 304 ePg Pn 14 21 42.7 +0.1
XNZR eSg Sn 14 22 04.0 +0.2
KRNR Karanay 1.72 314 ePg Pb 14 21 44.5 -0.5
KRNR i Sg Sb 14 22 08.0 +1.5
LGD Lagodekhi 1.76 277 P Pb 14 21 45.5 -0.2
LGD S Sb 14 22 08.1 +0.5
LGD Lagodekhi 1.76 277 ePg Pb 14 21 44.1 -1.5
LGD eSg Sn 14 22 06.5 +0.6
DDFL Dedoflistskaro 1.85 265 P Pb 14 21 47.6 +0.3
DDFL S Sg 14 22 15.6 +2.4
DBC Dubki 1.89 317 ePg Pb 14 21 47.5 -0.5
DBC eSg Sb 14 22 12.6 +1.0
BTLR Botlikh 2.03 301 ePg Pb 14 21 49.6 -0.7
DLMR Dylym 2.03 315 ePg Pb 14 21 50.0 -0.3
GUDG Gudauri 3.16 287 ePn Pn 14 22 02.7 -0.5
GUDG eSn Sn 14 22 37.0 -3.8
GNI Garni 3.26 244 ePn Pn 14 22 05.1 +0.5
DIGR Digorskoe uzhe 3.92 290 ePn Pn 14 22 13.6 +0.1
DIGR eSn Sn 14 22 57.1 -2.4
NEY Neytrino 4.62 292 ePn Pn 14 22 21.3 -1.9
KBZ Khabaz 4.68 298 ePn Pn 14 22 25.5 +1.7

JMA 12 14:22:29.9, 35.77N×137.10E, h8km±1km, M3.4, 2C-1D, Eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JGF Kuroka 0.27 129 ⇓P Pg 14 22 35.2 -0.1
JGF eS Sg 14 22 39.0 +0.1
JYTA Yamagatataniai 0.34 239 ⇑P Pg 14 22 36.8 +0.1
JYTA eS Sg 14 22 41.2 0.0
JGN Niukaw 0.48 21 ⇑P Pg 14 22 39.2 -0.1
JGN eS Sg 14 22 45.7 0.0
JICN Ichinomiyachia 0.51 204 P Pg 14 22 40.2 +0.4
MAT Matsushiro 1.18 49 P Pb 14 22 52.1 -0.5
MAT S Sg 14 23 07.3 -0.7

NNC 12 14:31:13.0±10.0, 36.77N×70.63E, h0km, mb3.9, mpv3.7, 3C-1D, Error ellipse: s-maj=90.9km s-min=68.0km az=160.0, Hindu Kush region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KK31 Karatay Array 6.33 359 P Pn 14 32 49.1 +1.6
1.5nm,0.2s,baz=177,slow=12,SNR=72
KK31 ⇑S Sn 14 34 03.0 +2.5
3.0nm,0.5s,baz=183,slow=24,SNR=13
AAK Ala-Archa 6.57 26 ⇓P Pn 14 32 50.4 -0.6
2.5nm,0.4s
AAK ⇑S Sn 14 34 06.2 -0.5
0.8nm,0.5s
AB31 Akbulak array 14.70 331 ⇑P Pn 14 34 40.2 -2.0
0.3nm,0.3s,baz=185,slow=8.0,SNR=5.8

IDC 12 14:36:25.9±1.1, 36.00N×82.59E, h0km, mb3.8/12, mb1 4.0/18, mb1mx3.8/44, mbtmp3.9/18, ML3.5/5, Error ellipse: s-maj=23.0km s-min=18.9km az=38.0
BJI 12 14:36:28.5±0.0, 35.97N×82.43E, h6km, mB4.2/3, mb4.0/12, ML4.0/7, Ms3.6/6, Ms7 3.5/3
NEIC 12 14:36:29.4±2.8, 36.01N±0.09×82.4E±0.1, h17km±5km, mb4.1/10, Error ellipse: s-maj=14.7km s-min=11.4km az=142.0
ISC 12 14:36:28.5±0.6, 36.02N±0.07×82.39E±0.07, h10km, n58, σ1.40/58, mb3.9/15, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KDJ Kajisay 7.32 328 Pn 14 38 16.4 +0.8
NRN Naryn 7.35 319 Pn 14 38 17.1 +0.9
DANN Dangsing 7.74 171 eP Pn 14 38 21.7 +0.2
13nm,0.4s
NIL Nilore 7.87 255 Pn 14 38 25.3 +2.2
KOLN Koldanda 8.29 173 eP Pn 14 38 27.7 -1.3
9.7nm,0.4s
GUN Gumba 8.62 159 eP Pn 14 38 34.5 +0.9
44nm,1.0s
WMQ Urumqi 8.79 26 eP Pn 14 38 36.2 +0.5
WMQ smax smax
comp=N,19nm,1.1s
WMQ smax smax
comp=E,28nm,1.1s
WMQ Urumqi 8.79 26 Pn Pn 14 38 36.6 +0.9
PKIN Phulchoki 8.80 162 eP Pn 14 38 36.3 +0.2
8.9nm,0.6s
PKI Pulchoki 8.81 162 eP Pn 14 38 36.1 -0.1
12nm,0.5s
JIRN Jiri 8.94 158 eP Pn 14 38 38.4 +0.3
33nm,0.5s
AAK Ala-Archa 9.00 320 Pn Pn 14 38 39.9 +1.3
0.4nm,0.3s,baz=147,slow=9.5,SNR=8.4
AAK Pg Pg 14 39 10.1 -11
1.5nm,0.3s,baz=122,slow=7.8,SNR=6.1
AAK Lg Lg 14 41 02.1
0.4nm,0.3s,baz=17,slow=16,SNR=1.7
RAMN Ramite 9.73 157 eP Pn 14 38 46.9 -1.9
22nm,0.7s
BTK Batken 9.97 297 Pn 14 38 51.6 -0.3
ODAN Odare 10.08 154 eP Pn 14 38 51.3 -2.3
30nm,1.0s
MK31 Makanchi Array 10.76 360 Pn 14 39 02.2 -0.5
MKAR Makanchi Array 10.76 360 Pn Pn 14 39 02.5 -0.1
2.2nm,0.3s,baz=184,slow=12,SNR=93
MKAR Sn Sn 14 41 01.5 -1.6
0.6nm,0.3s,baz=187,slow=26,SNR=5.3
MKAR Makanchi Array 10.76 360 Pn 14 39 01.7 -1.0
MAKZ Makanchi 10.78 358 Pn 14 39 02.7 -0.2
KBL Kabul 11.01 266 Pn 14 39 07.1 +0.9
KK31 Karatay Array 11.57 311 Pn Pn 14 39 13.5 -0.2
KKAR Karatay Array 11.57 311 Pn Pn 14 39 13.0 -0.7
KKAR Karatay Array 11.57 311 Pn Pn 14 39 13.6 -0.1
KURBB Kurchatov Arra 14.86 350 Pn Pn 14 39 56.1 -2.4
0.0nm,0.3s,baz=173,slow=12,SNR=17
KURBB Lg Lg 14 44 26.8
0.0nm,0.3s,baz=177,slow=29,SNR=3.3
KURK Kurchatov 14.94 351 Pn 14 39 57.1 -2.4
LZH Lanzhou 17.35 83 eP P 14 40 35.6 +3.3
LZH pP sP 14 40 40.0 +1.6
LZH sP pP 14 40 43.0 +6.5
LZH pmax pmax
comp=Z,14nm,1.0s
ZAA0 Zalesovo Array 18.00 5 P P 14 40 40.6 +1.5
ZALV Zalesovo Beam 18.00 5 Pn Pn 14 40 36.3 -2.4
0.3nm,0.3s,baz=185,slow=14,SNR=24
ZALV Zalesovo Beam 18.00 5 P P 14 40 39.0 +0.3
BVAR Borovoye Array 18.98 337 P P 14 40 51.0 +1.0
0.9nm,0.3s,baz=139,slow=9.3,SNR=37
BRVK Borovoye 19.05 337 P P 14 40 51.6 +1.0
BRVK IAmb IAmb 14 40 53.9
comp=Z,11nm,0.7s
GEYT Alibeck 19.47 283 P P 14 40 56.0 +0.5
baz=107,slow=9.2,SNR=4.3
GEYT Alibeck 19.47 283 P P 14 40 55.4 -0.1
ABKAR Akbulak array 21.05 316 P P 14 41 11.9 -0.7
ABKAR Akbulak array 21.05 316 P P 14 41 12.4 -0.1
ABKAR IAmb IAmb 14 41 16.2
comp=Z,5.4nm,0.9s
SONM Songino Array 21.31 49 P P 14 41 14.1 -1.4
comp=Z,2.3nm,0.9s,baz=241,slow=12,SNR=3.9
SONM Songino Array 21.31 49 P P 14 41 17.4 +1.8
ULN Ulaanbaatar 21.73 49 P P 14 41 22.5 +2.5
ULN IAmb IAmb 14 41 25.7
comp=Z,10.0nm,0.9s
AKTO Aktyubinsk 22.73 317 P P 14 41 30.3 -0.2
comp=Z,2.5nm,0.8s,baz=114,slow=8.2,SNR=11
CMAR Chiang Mai Arr 22.81 136 P P 14 41 29.4 -2.2
comp=Z,0.6nm,0.7s,baz=313,slow=10,SNR=6.1
HHC Hu-ho-hao-te 23.30 69 eP P 14 41 39.2 +2.6
HHC pmax pmax
comp=Z,3.0nm,0.5s
HHC pmax pmax
comp=Z,48nm,7.2s

ARU Arti 25.99 329 P P 14 41 59.8 -1.4
comp=Z,0.3nm,0.3s,baz=23,slow=7.7,SNR=2.7
ARU Arti 25.99 329 IAmb IAmb 14 42 38.3
comp=Z,28nm,2.0s
BR131 Keskin Array S 38.28 291 P P 14 43 51.4 +2.2
BR131 IAmb IAmb 14 43 51.9
comp=Z,2.3nm,1.1s
BRTR Keskin Array B 38.28 291 P P 14 43 49.9 +0.7
comp=Z,1.1nm,0.8s,baz=99,slow=6.6,SNR=5.6
BRTR Keskin Array B 38.28 291 P P 14 43 49.6 +0.4
FINES FINESS Array B 43.15 324 P P 14 44 29.7 +0.8
comp=Z,2.0nm,0.7s,baz=93,slow=7.6,SNR=6.8
KEV Kevo 44.83 336 P P 14 44 44.0 +1.7
KOLS Kolonicke sedl 45.05 306 eP P 14 44 44.3 0.0
ARCES ARCESS Array B 45.26 336 P P 14 44 46.3 +0.5
comp=Z,6.5nm,1.1s,baz=97,slow=6.2,SNR=5.0
NB2 NORSAR Subarra 50.30 323 P P 14 45 26.4 +1.5
comp=Z,0.9nm,0.8s,baz=84,slow=7.4
NOA NORSAR Array B 50.30 323 P P 14 45 24.5 -0.4
comp=Z,1.8nm,0.9s,baz=86,slow=7.5,SNR=3.9
CLL Collm 50.58 310 eP P 14 45 26.0 -1.2
GERES GERESS Array B 50.64 307 P P 14 45 28.6 +0.9
comp=Z,0.4nm,0.5s,baz=52,slow=6.4,SNR=4.2
PETK Petropavlovsk- 53.77 46 P P 14 45 52.4 +1.5
ILAR Eielson Array 72.40 20 P P 14 47 53.0 -1.4
comp=Z,1.1nm,0.9s,baz=318,slow=3.8,SNR=9.4
TORD Torodi Ar. Bea 74.92 275 P P 14 48 09.0 -1.1
comp=Z,0.7nm,1.0s,baz=63,slow=4.3,SNR=3.3
YKA Yellowknife Ar 80.87 8 P P 14 48 40.2 -2.1
comp=Z,0.4nm,0.7s,baz=343,slow=5.1,SNR=5.3

IDC 12 14:39:43.5±2.9, 18.49S×175.74W, h177km±31km, mb3.5/4, mb1 3.7/5, mb1mx3.3/25, mbtmp4.0/5, Error ellipse: s-maj=38.7km s-min=19.7km az=144.0
NEIC 12 14:39:43.9±0.5, 18.55S±0.1×175.7W±0.1, h183km±9km, mb4.5/13, Error ellipse: s-maj=21.2km s-min=17.6km az=134.0
ISC 12 14:39:44.9±0.7, 18.45S±0.1×175.6W±0.1, h200km, n23, σ1.56/24, mb4.2/8, 1C, Tonga Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NIUE Niue 5.41 98 Pn 14 41 05.0 +0.4
AFI Afiamalu 5.76 40 P Pn 14 41 09.7 +0.5
0.9nm,0.3s,baz=225,slow=8.6,SNR=3.8
AFI S Sn 14 42 11.3 -4.5
3.8nm,0.3s,baz=12,slow=22,SNR=7.2
URZ Urewera 20.80 196 P P 14 44 09.5 -1.2
4.1nm,0.5s,baz=59,slow=2.2,SNR=6.0
URZ Urewera 20.80 196 IAmb IAmb 14 45 03.4
comp=Z,109nm,2.0s
BKZ Black Stump Fm 21.82 197 P P 14 44 20.7 -0.6
BKZ IAmb IAmb 14 45 03.4
comp=Z,88nm,1.9s
QRZ Quartz Range 24.59 202 P P 14 44 46.7 +0.2
BSWZ Blackbirch Sta 24.94 199 P P 14 44 49.0 -0.7
LTZ Lake Taylor 26.41 200 P P 14 45 03.0 -0.1
WR0 Warramunga Arr 46.99 260 P P 14 47 56.1 -0.2
WB0 Warramunga Arr 47.16 260 P P 14 47 57.2 -0.4
WB0 IAmb IAmb 14 47 57.3
comp=Z,23nm,1.9s
WB2 Warramunga Arr 47.17 260 P P 14 47 57.2 -0.5
WB2 IAmb IAmb 14 48 44.3
comp=Z,13nm,1.4s
WRAB Tennant Creek 47.18 260 P P 14 47 57.1 -0.6
WRA Warramunga Arr 47.19 260 P P 14 47 57.2 -0.6
comp=Z,0.7nm,0.4s,baz=98,slow=6.8,SNR=27
AS31 Alice Springs 47.25 254 P P 14 47 57.9 -0.4
ASAR Alice Springs 47.25 254 P P 14 47 58.1 -0.2
comp=Z,4.3nm,0.6s,baz=88,slow=8.6,SNR=122
ASAR PcP PcP 14 49 26.1 -0.2
comp=Z,0.4nm,0.6s,baz=105,slow=5.8,SNR=3.0
ASAR Alice Springs 47.25 254 P P 14 47 57.7 -0.6
KNRA Kununurra 53.11 264 P P 14 48 42.0 -0.2
QSPA South Pole Qui 71.68 180 P P 14 50 44.1 -0.6
PAHR Pah Rah Range 77.99 41 P P 14 51 25.0 +3.7
PAHR IAmb IAmb 14 51 26.8
comp=Z,5.6nm,0.7s
TPNV Topopah Spring 78.44 45 P P 14 51 26.1 +2.2
TPNV IAmb IAmb 14 53 35.4
comp=Z,16nm,1.8s
TXAR Lajitas Array 84.00 57 P P 14 51 55.6 +2.4
comp=Z,0.2nm,0.3s,baz=224,slow=6.3,SNR=2.6
TXAR Lajitas Array 84.00 57 P P 14 51 53.1 -0.1
SYO Syowa Base 89.27 192⇑eP P 14 52 16.4 -1.5

IDC 12 14:40:40.7±5.7, 17.59S×177.98W, h424km±59km, mb3.2/7, mb1 3.5/8, mb1mx3.2/26, mbtmp3.9/8, Error ellipse: s-maj=83.0km s-min=23.0km az=148.0
NEIC 12 14:40:43.1±0.9, 18.0S±0.1×177.9W±0.2, h463km±9km, mb4.5/20, Error ellipse: s-maj=24.6km s-min=16.2km az=131.0
ISC 12 14:40:42.1±0.7, 18.0S±0.1×177.8W±0.1, h450km, n34, σ0.71/33, mb4.3/16, 1C, Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSVF Nonsavu 3.96 273 P P 14 41 59.1 +2.0
DZM Mont Dzumac 15.34 252 P P 14 43 56.5 -0.6
0.3nm,0.3s,baz=112,slow=19,SNR=3.8
DZM Mont Dzumac 15.34 252 IAmb IAmb 14 44 33.4
comp=Z,23nm,1.5s
MLZ Mavora Lakes 29.69 200 P P 14 46 09.8 0.0
WHZ Wether Hill Ro 30.21 200 P P 14 46 14.2 -0.1
ARMA Armidale 30.39 240 P P 14 46 16.3 +0.2
ARMA IAmb IAmb 14 46 29.8
comp=Z,34nm,1.9s
CAN Canberra 34.10 233 P P 14 46 48.6 +0.8
CAN IAmb IAmb 14 48 16.4
comp=Z,40nm,1.6s
TOO Toolangi 37.55 231 P P 14 47 16.8 +0.2
TOO IAmb IAmb 14 47 19.7
comp=Z,19nm,1.6s
COEN Coen 37.68 270 P P 14 47 17.4 -0.4
COEN IAmb IAmb 14 47 35.4
comp=Z,12nm,1.1s
STKA Stephens Creek 39.08 241 P P 14 47 29.4 +0.3
comp=Z,0.8nm,0.4s,baz=81,slow=12,SNR=5.0
AIN Ainahou 43.15 32 P P 14 48 02.5 +0.5
POHA Pohakuloa 43.44 31 P P 14 48 04.3 0.0
KEKH Kekaha 43.52 25 P P 14 48 04.5 0.0
BBOO Buckleboo 43.86 241 P P 14 48 07.6 +0.4
BBOO IAmb IAmb 14 48 39.4
comp=Z,29nm,1.4s
WB0 Warramunga Arr 45.15 260 P P 14 48 17.1 -0.3
WB2 Warramunga Arr 45.17 260 P P 14 48 17.1 -0.4
WRAB Tennant Creek 45.17 260 P P 14 48 16.9 -0.7
WRA Warramunga Arr 45.18 260 P P 14 48 17.4 -0.3
comp=Z,0.5nm,0.3s,baz=98,slow=6.7,SNR=11
AS31 Alice Springs 45.32 254 P P 14 48 18.7 0.0
ASAR Alice Springs 45.32 254 P P 14 48 19.0 +0.3
comp=Z,5.8nm,0.4s,baz=89,slow=8.5,SNR=46
ASAR PcP PcP 14 49 49.5 +0.5
comp=Z,0.3nm,0.9s,baz=115,slow=3.3,SNR=2.2
ASAR Alice Springs 45.32 254 P P 14 48 18.2 -0.5
FORT Forrest 50.48 245 P P 14 48 57.1 -0.3
FORT IAmb IAmb 14 49 44.3
comp=Z,16nm,0.9s
KNRA Kununurra 51.05 264 P P 14 49 02.1 +0.3
KNRA IAmb IAmb 14 49 10.4
comp=Z,61nm,1.6s
MORW Morawa 60.97 246 P P 14 50 09.2 -1.6
MORW IAmb IAmb 14 50 21.2
comp=Z,51nm,1.6s
QSPA South Pole Qui 72.04 180 P P 14 51 19.2 +0.1
QSPA IAmb IAmb 14 52 15.2
comp=Z,16nm,1.8s
NVAR Mina Array Bea 79.10 44 P P 14 51 59.3 +0.1
comp=Z,0.6nm,0.7s,baz=218,slow=10,SNR=4.5
TXAR Lajitas Array 85.57 57 P P 14 52 33.2 +1.0
comp=Z,0.4nm,0.6s,baz=203,slow=6.6,SNR=3.4
BCAR Beaver Creek A 85.59 16 P P 14 52 32.1 +0.6
ILAR Eielson Array 85.86 13 P P 14 52 31.4 -1.3
comp=Z,0.3nm,0.4s,baz=223,slow=5.0,SNR=9.6
ILAR Eielson Array 85.86 13 P P 14 52 31.8 -0.9
SYO Syowa Base 89.18 193⇑eX P 14 52 42.2 -6.1
YKA Yellowknife Ar 94.19 25 P P 14 53 10.3 -1.1
comp=Z,0.2nm,0.6s,baz=243,slow=4.6,SNR=3.1
GERES GERESS Array B 147.86 346 PKPbc PKPbc 14 59 35.8 +0.1
comp=Z,0.3nm,0.4s,baz=35,slow=3.7,SNR=2.8
GERES GERESS Array B 147.86 346 PKPbc 14 59 35.3 -0.4

IDC 12 14:43:04.6±6.7,36.19N×82.23E,h0km,mb2.9/1, mb1 3.3/3,mb1mx3.0/41,mbtmp3.3/3,ML3.2/3,Error ellipse: s-maj=88.5km s-min=51.3km az=36.0,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**10.60**	**0**	Pn	Pn	14 45 39.2	+1.6
	0.3nm,0.3s,baz=185,slow=14,SNR=4.3						
MKAR				Sn	Sn	14 47 35.2	-1.8
	0.2nm,0.3s,baz=187,slow=23,SNR=1.6						
ZALV	**Zalesovo Beam**	**17.85**	**5**	P	Pn	14 47 12.3	-1.9
	0.1nm,0.3s,baz=186,slow=12,SNR=2.1						
BVAR	**Borovoye Array**	**18.78**	**337**	P	Pn	14 47 25.9	+0.2
	0.2nm,0.3s,baz=153,slow=9.7,SNR=1.4						
SONM	**Songino Array**	**21.30**	**49**	P	P	14 47 52.9	0.0
	0.7nm,1.0s,baz=241,slow=10,SNR=2.2						

ATH 12 14:44:28.4,38.13N×20.39E,h15km,ML3.0/15,Error ellipse: s-maj=1.6km s-min=0.8km az=71.0
THE 12 14:44:28.7,38.13N×20.38E,h12km,ML3.1/11,Error ellipse: s-maj=0.8km s-min=0.4km az=263.0
ISC 12 14:44:28.7±1.0,38.14N±0.02×20.39E±0.04,h13km±4km, n57,σ0s54/83,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.05**	**350**	P	**Pg**	**14 44 30.6**	**-0.6**
CHV1				S	**Sg**	**14 44 33.0**	**+0.1**
LXRA	**Lixouri, Kepha**	**0.07**	**28**	P	**Pg**	**14 44 31.5**	**+0.1**
LXRA				S	**Sg**	**14 44 33.5**	**+0.2**
LXR1	**Lixouri, Cepha**	**0.07**	**28**	P	**Pg**	**14 44 31.5**	**+0.1**
LXR1				S	**Sg**	**14 44 33.6**	**+0.3**
KEF3	**Kipouria, Keph**	**0.08**	**333**	P	**Pg**	**14 44 31.5**	**0.0**
KEF3				S	**Sg**	**14 44 33.5**	**+0.1**
ARGA	**Argostoli. Kep**	**0.08**	**58**	P	**Pg**	**14 44 31.5**	**0.0**
ARGA				S	**Sg**	**14 44 33.2**	**-0.3**
KEF2	**Argostoli. Kep**	**0.08**	**67**	P	**Pg**	**14 44 31.5**	**0.0**
KEF2				S	**Sg**	**14 44 33.2**	**-0.2**
ARG2	**Argostoli**	**0.09**	**60**	P	**Pg**	**14 44 31.5**	**0.0**
ARG2				S	**Sg**	**14 44 33.3**	**-0.2**
KEF4	**Livadi, Kephal**	**0.13**	**11**	P	**Pg**	**14 44 32.1**	**+0.1**
KEF4				S	**Sg**	**14 44 34.4**	**0.0**
KEF1	**Kardakata, Kep**	**0.16**	**23**	P	**Pg**	**14 44 32.4**	**0.0**
KEF1				S	**Sg**	**14 44 35.4**	**+0.3**
VLS	**Valsamata**	**0.16**	**75**	P	**Pg**	**14 44 32.4**	**-0.2**
VLS				S	**Sg**	**14 44 35.1**	**-0.1**
	35μm,0.2s						
VLS	**Valsamata**	**0.16**	**75**	P	**Pg**	**14 44 32.3**	**-0.2**
VLS				S	**Sg**	**14 44 35.0**	**-0.3**
VLS				AML	AML	14 44 35.3	
	comp=N,94024μm,0.3s						
VLS				AML	AML	14 44 35.4	
	comp=E,41736μm,0.1s						
VSK1	**VASILIKIADES**	**0.30**	**26**	P	**Pg**	**14 44 34.9**	**-0.1**
VSK1				S	**Sb**	**14 44 40.2**	**-0.8**
	comp=E,7μm,0.2s						
KONA	**Konidatara, Ke**	**0.32**	**26**	P	**Pg**	**14 44 35.2**	**-0.1**
KONA				S	**Sg**	**14 44 40.5**	**+0.8**
KONA				AML	AML	14 44 40.7	
	comp=E,6951μm,0.4s						
KONA				AML	AML	14 44 41.0	
	comp=N,6448μm,0.1s						
VLMS	**Volimes, Zakyn**	**0.33**	**140**	P	**Pg**	**14 44 35.6**	**+0.1**
VLMS				S	**Sb**	**14 44 40.8**	**-1.0**
VLMS				AML	AML	14 44 41.7	
	comp=N,25674μm,0.2s						
VLMS				AML	AML	14 44 43.0	
	comp=E,15346μm,0.4s						
FSK	**Fiskardo**	**0.35**	**22**	P	**Pg**	**14 44 35.5**	**-0.3**
FSK				S	**Sg**	**14 44 41.4**	**+0.8**
	comp=E,3μm,0.4s						
FSK	**Fiskardo**	**0.35**	**22**	P	**Pg**	**14 44 35.6**	**-0.3**
FSK				S	**Sg**	**14 44 41.0**	**+0.4**
FSK				AML	AML	14 44 41.8	
	comp=N,5028μm,0.4s						
FSK				AML	AML	14 44 42.2	
	comp=E,8687μm,0.4s						
EVGI	**Lefkada island**	**0.53**	**23**	P	**Pg**	**14 44 38.7**	**-0.3**
EVGI				S	**Sb**	**14 44 47.3**	**-0.1**
EVGI	**Lefkada island**	**0.53**	**23**	P	**Pg**	**14 44 38.8**	**-0.3**
EVGI				S	**Sb**	**14 44 47.2**	**-0.1**
ZAK2	**Zakynthos**	**0.53**	**131**	P	**Pg**	**14 44 39.3**	**+0.2**
KRI1	**kERI**	**0.58**	**144**	P	**Pg**	**14 44 39.8**	**-0.2**
KRI1				S	**Sb**	**14 44 48.8**	**0.0**
	comp=E,3μm,0.3s						
MGNA	**Meganis**	**0.61**	**31**	P	**Pg**	**14 44 39.9**	**-0.7**
MGNA				AML	AML	14 44 53.7	
	comp=N,1051μm,0.3s						
MGNA				AML	AML	14 44 53.9	
	comp=E,1576μm,0.3s						
AST1	**Astakos**	**0.68**	**53**	P	**Pg**	**14 44 41.7**	**-0.3**
AST1				S	**Sb**	**14 44 51.8**	**+0.1**
	comp=E,1μm,0.2s						
LKD2	**Lefkada island**	**0.69**	**18**	P	**Pg**	**14 44 41.5**	**-0.6**
LKD2				S	**Sb**	**14 44 51.6**	**-0.3**
	comp=E,665nm,0.4s						
LKD2	**Lefkada island**	**0.69**	**18**	P	**Pg**	**14 44 41.3**	**-0.7**
LKD2				AML	AML	14 44 58.9	
	comp=N,1500μm,0.3s						
LKD2				AML	AML	14 45 00.5	
	comp=E,1132μm,0.5s						
TSLK	**Tsoukalades, L**	**0.72**	**17**	P	**Pg**	**14 44 42.3**	**-0.4**
TSLK				S	**Sb**	**14 44 53.2**	**+0.3**
	comp=E,1μm,0.4s						
TSLK	**Tsoukalades, L**	**0.72**	**17**	P	**Pg**	**14 44 42.2**	**-0.4**
TSLK				AML	AML	14 44 59.5	
	comp=E,2222μm,0.3s						
TSLK				AML	AML	14 45 03.3	
	comp=N,2002μm,0.4s						
PDO	**Prodromos**	**0.78**	**53**	P	**Pg**	**14 44 43.2**	**-0.5**
PDO				S	**Sb**	**14 44 55.3**	**+0.9**
	comp=N,2μm,0.5s						
PDO	**Prodromos**	**0.78**	**53**	P	**Pg**	**14 44 43.2**	**-0.5**
PDO				AML	AML	14 45 04.0	
	comp=E,2612μm,0.5s						
PDO				AML	AML	14 45 05.0	
	comp=N,3128μm,0.5s						
RLS	**Riolos of Patr**	**0.85**	**95**	P	**Pg**	**14 44 44.5**	**-0.6**
RLS				S	**Sb**	**14 44 57.2**	**+0.6**
	comp=N,682nm,0.4s						
RLS	**Riolos of Patr**	**0.85**	**95**	P	**Pg**	**14 44 44.3**	**-0.8**
RLS				AML	AML	14 45 00.7	
	comp=N,1362μm,0.4s						
RLS				AML	AML	14 45 02.4	
	comp=E,1385μm,0.4s						
PVO	**Paravola**	**1.01**	**61**	P	**Pb**	**14 44 47.9**	**-0.2**
PVO				S	**Sn**	**14 45 02.9**	**+0.3**
	comp=E,1μm,0.3s						
PVO	**Paravola**	**1.01**	**61**	P	**Pb**	**14 44 47.9**	**-0.2**
PVO				AML	AML	14 45 04.7	
	comp=E,2836μm,0.3s						
PVO				AML	AML	14 45 05.0	
	comp=N,2058μm,0.4s						
DRO	**Drossia**	**1.06**	**100**	P	**Pb**	**14 44 48.4**	**-0.4**
DRO				S	**Sn**	**14 45 04.2**	**+0.4**
	comp=N,775nm,0.3s						
DRO	**Drossia**	**1.06**	**100**	P	**Pb**	**14 44 48.4**	**-0.4**
DRO				AML	AML	14 45 09.0	
	comp=N,1383μm,0.3s						
DRO				AML	AML	14 45 11.1	
	comp=E,1725μm,0.5s						
AMT	**Artemida-Makis**	**1.20**	**120**	P	**Pb**	**14 44 51.4**	**+0.1**
AMT				AML	AML	14 45 19.5	
	comp=N,1274μm,0.5s						
AMT				AML	AML	14 45 23.2	
	comp=E,1244μm,0.4s						
ANX	**Ano Chora**	**1.29**	**69**	P	**Pn**	**14 44 51.5**	**-0.9**
ANX	**Ano Chora**	**1.29**	**69**	P	**Pn**	**14 44 52.2**	**-0.2**
SERG	**Sergoula**	**1.34**	**77**	P	**Pn**	**14 44 52.5**	**-0.6**
EVR	**Evrytania**	**1.36**	**54**	P	**Pb**	**14 44 53.8**	**-0.2**
EVR				AML	AML	14 45 22.5	
	comp=E,252μm,0.7s						
EVR				AML	AML	14 45 23.9	
	comp=N,432μm,0.8s						
KLV	**Kalavryta, Ach**	**1.39**	**93**	P	**Pb**	**14 44 54.1**	**-0.4**
IGT	**Igoumenitsa**	**1.40**	**358**	P	**Pb**	**14 44 54.7**	**0.0**
KALE	**Kalithea**	**1.40**	**79**	P	**Pn**	**14 44 53.2**	**-0.7**
ITM	**Ithomi**	**1.55**	**128**	P	**Pn**	**14 44 56.9**	**-0.2**
JAN	**Janina**	**1.56**	**13**	P	**Pg**	**14 44 58.8**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.62**	**57**	P	**Pb**	**14 44 58.2**	**-0.3**
PYL	**PYLOS**	**1.64**	**139**	P	**Pb**	**14 44 58.1**	**-0.6**
KEK	**Kerkira**	**1.64**	**344**	P	**Pb**	**14 44 57.9**	**-0.9**
AGG	**Agios Georgios**	**1.76**	**59**	P	**Pb**	**14 45 00.8**	**0.0**
AGG				AML	AML	14 45 35.0	
	comp=N,325μm,0.5s						
AGG				AML	AML	14 45 36.5	
	comp=E,246μm,0.5s						
AXAR	**Agios Charalam**	**1.89**	**70**	P	**Pb**	**14 45 02.4**	**-0.6**
AXAR				AML	AML	14 45 41.0	
	comp=E,732μm,0.5s						
AXAR				AML	AML	14 45 45.6	
	comp=N,897μm,0.9s						
THL	**Klokotos Trika**	**1.91**	**41**	P	**Pb**	**14 45 03.3**	**-0.1**
KPRO	**Kipourio**	**1.97**	**22**	P	**Pb**	**14 45 04.3**	**-0.1**
LTK	**Loutraki**	**2.03**	**92**	P	**Pn**	**14 45 03.9**	**+1.3**
VIL2	**Platees**	**2.27**	**87**	P	**Pb**	**14 45 08.1**	**-1.4**
NEST	**Nestorio**	**2.33**	**12**	P	**Pb**	**14 45 09.5**	**-1.1**
DID	**Didima**	**2.34**	**105**	P	**Pn**	**14 45 07.6**	**+0.8**
XOR	**Xorichti**	**2.51**	**60**	P	**Pn**	**14 45 10.9**	**+1.7**
VLY	**Voula,Athens**	**2.70**	**95**	P	**Pn**	**14 45 13.0**	**+1.2**

NIED 12 14:55:00,45.10N×143.40E,h300km,Mw4.3 Best double couple: M0 2.74000×10^15 NP1:φs157.00000°, δ69.00000°,λ34.00000°. NP2:φs53.00000°,δ59.00000°, λ155.00000°.
MOS 12 14:55:45.8±0.9,45.22N×143.29E,h284km,mb4.5/21, Error ellipse: s-maj=6.9km s-min=4.7km az=93.3
JMA 12 14:55:46.6±0.2,45.13N×143.36E,h286km±2km,M4.2
SKHL 12 14:55:46.9±0.9,45.21N×143.27E,h299km±3km,mb5.0/4, msh5.1/6
IDC 12 14:55:46.8±0.6,45.33N×143.34E,h276km±6km,mb3.6/30, mb1 3.8/38,mb1mx3.7/58,mbtmp4.4/38,Error ellipse: s-maj=11.5km s-min=8.2km az=163.0
NEIC 12 14:55:46.9±1.3,45.20N±0.08×143.3E±0.1,h283km±6km, mb4.4/106,Error ellipse: s-maj=13.5km s-min=10.7km az=103.0
ISC 12 14:55:46.5±0.5,45.20N±0.04×143.33E±0.04,h280km±4km, n313,σ1s11/365,mb4.3/102,21C-11D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSE	**Soyaes**	**0.58**	**246**	⇑P	**Pn**	**14 56 23.7**	**+0.6**
JSE				eS	**S**	**14 56 52.0**	**0.0**
JWK2	**Keihoku**	**1.02**	**277**	P	**Pn**	**14 56 26.1**	**+1.3**
JWK2				eS	**S**	**14 56 55.8**	**+0.7**
JMP	**Maruseppu**	**1.19**	**179**	⇑P	**Pn**	**14 56 26.3**	**+0.4**
JMP				eS	**S**	**14 56 56.5**	**-0.6**
JKA	**Kamikawa-asahi**	**1.20**	**206**		**Pn**	**14 56 26.9**	**+1.0**
JKA					**S**	**14 56 57.7**	**+0.5**
ASAJ	**Asahikawa**	**1.20**	**206**	⇑P	**Pn**	**14 56 26.8**	**+0.9**
ASAJ				eS	**S**	**14 56 58.1**	**+1.0**
ASAJ	**Asahikawa**	**1.20**	**206**	P	**Pn**	**14 56 26.9**	**+1.0**
	188nm,0.3s,baz=16,slow=8.2,SNR=3909						
ASAJ				S	**S**	**14 56 57.7**	**+0.5**
	baz=36,slow=31,SNR=1.4						
JTKR	**Abashiri--Toko**	**1.29**	**161**	⇑P	**Pn**	**14 56 27.2**	**+0.8**
JTKR				eS	**S**	**14 56 58.4**	**+0.3**
JSS	**Shosan**	**1.32**	**233**	⇑P	**Pn**	**14 56 27.6**	**+1.0**
JSS				eS	**S**	**14 56 59.4**	**+1.1**
JKK2	**Kamakawa 2**	**1.39**	**198**	⇑P	**Pn**	**14 56 27.6**	**+0.5**
JYG	**Yagishiri**	**1.56**	**241**	⇑P	**Pn**	**14 56 28.6**	**+0.5**
JYG				eS	**S**	**14 57 01.3**	**+0.2**
JRBN	**Rebuntou**	**1.62**	**279**	⇓P	**Pn**	**14 56 28.5**	**0.0**
JRBN				eS	**S**	**14 57 00.4**	**-1.4**
JRA	**Rausu**	**1.79**	**134**	⇑P	**Pn**	**14 56 30.5**	**+0.6**
JRA				eS	**S**	**14 57 05.0**	**+0.7**
YSS	**Yuzh-Sakhalins**	**1.80**	**347**	*i* P	**Pn**	**14 56 30.7**	**+0.9**
YSS				AMB	AMB	14 56 30.9	
	500nm,0.4s						
YSS				eS	**S**	**14 57 04.5**	**+0.2**
YSS				A	A	14 57 04.8	
	750nm,0.6s						
YSS				A	A	14 57 04.8	
	480nm,0.6s						
YSS	**Yuzh-Sakhalins**	**1.80**	**347**		**Pn**	**14 56 30.7**	**+0.9**
YSS	**Yuzh-Sakhalins**	**1.80**	**347**κ	*i*PN	**Pn**	**14 56 30.7**	**+0.9**
YSS				eS	**S**	**14 57 04.1**	**-0.2**
YSS				pmax	pmax		
	comp=Z,450nm,0.3s						
YSS				smax	smax		
	comp=N,760nm,0.5s						
YSS				smax	smax		
	comp=E,540nm,0.6s						
JHR	**Hokuryu**	**1.85**	**219**	⇑P	**Pn**	**14 56 31.1**	**+0.7**
JHR				eS	**S**	**14 57 06.2**	**+1.0**
JAR	**Ashorobuto**	**1.93**	**170**	⇑P	**Pn**	**14 56 31.4**	**+0.4**
JAR				eS	**S**	**14 57 06.0**	**-0.3**
KHLM	**Kholmsk**	**2.06**	**335**	*i* P	**Pn**	**14 56 32.7**	**+0.8**
KHLM				AMB	AMB	14 56 33.3	
	comp=E,1μm,0.5s						
KHLM				eS	**S**	**14 57 08.3**	**+0.3**
KHLM				A	A	14 57 09.3	
	comp=E,1μm,0.7s						
KHLM				A	A	14 57 09.3	
	comp=E,620nm,0.7s						
JFR	**Furan**	**2.10**	**195**	P	**Pn**	**14 56 32.7**	**+0.2**
GRPR	**Tuman**	**2.12**	**124**d	*i*PN	**Pn**	**14 56 32.9**	**+0.4**
GRPR				*i* S	**S**	**14 57 09.3**	**+0.2**
GRPR				pmax	pmax		
	comp=Z,386nm,1.2s						
GRPR				pmax	pmax		
	comp=E,72nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,107nm,0.3s						
GRPR				pmax	pmax		
	comp=N,102nm,0.5s						
GRPR				smax	smax		
	comp=N,431nm,0.4s						
GRPR				smax	smax		
	comp=E,568nm,0.4s						
GRPR				smax	smax		
	comp=E,1μm,1.5s						
GRPR				smax	smax		
	comp=N,826nm,1.3s						
GLVR	**Golovnino**	**2.14**	**132**	*e*PN	**Pn**	**14 56 33.4**	**+0.7**
GLVR				*i* S	**S**	**14 57 10.6**	**+1.2**
GLVR				pmax	pmax		
	comp=N,179nm,0.8s						
GLVR				pmax	pmax		
	comp=Z,346nm,0.8s						
GLVR				pmax	pmax		
	comp=E,331nm,0.7s						
GLVR				smax	smax		
	comp=N,1μm,0.3s						
GLVR				smax	smax		
	comp=E,1μm,0.8s						
GLVR				smax	smax		
	comp=N,1μm,0.7s						
YUK	**Yuzh-Kuril'sk**	**2.15**	**122**	*e*P	**Pn**	**14 56 33.2**	**+0.4**
YUK				AMB	AMB	14 56 35.5	
	comp=N,200nm,0.4s						
YUK				*i* S	**S**	**14 57 10.2**	**+0.7**
YUK				A	A	14 57 10.6	
	comp=N,3μm,2.0s						
YUK				A	A	14 57 10.6	
	comp=N,3μm,2.0s						
YUK				A	A	14 57 12.3	
	comp=N,1μm,0.8s						
YUK				A	A	14 57 12.3	
	comp=N,1μm,0.8s						
YUK	**Yuzh-Kuril'sk**	**2.15**	**122**c	*i*PN	**Pn**	**14 56 33.4**	**+0.6**
YUK				*i* S	**S**	**14 57 09.8**	**+0.3**
YUK				pmax	pmax		
	comp=Z,137nm,0.3s						
YUK				pmax	pmax		
	comp=N,25nm,0.1s						
YUK				pmax	pmax		
	comp=E,66nm,0.3s						
YUK				smax	smax		
	comp=E,741nm,0.7s						
YUK				smax	smax		
	comp=N,2μm,1.4s						
YUK				smax	smax		
	comp=E,873nm,0.7s						
YUK				smax	smax		
	comp=N,459nm,0.4s						
JAK	**Akkeshi**	**2.41**	**155**	⇑P	**Pn**	**14 56 33.8**	**-1.4**
AKK	**Akkeshi**	**2.44**	**153**	*e*P	**Pn**	**14 56 34.3**	**-1.1**
AKK				AMB	AMB	14 56 35.0	
	comp=N,250nm,0.4s						
AKK				eS	**S**	**14 57 11.4**	**-2.9**
AKK				A	A	14 57 11.8	
	comp=N,1μm,0.4s						
AKK				A	A	14 57 11.8	
	comp=N,2μm,0.4s						
NMR	**Nemuro--Hokkai**	**2.51**	**136**	*e*P	**Pn**	**14 56 37.1**	**+1.0**
NMR				AMB	AMB	14 56 38.1	
	comp=N,50nm,0.2s						
NMR				*e*S	**S**	**14 57 16.3**	**+0.8**
NMR				A	A	14 57 16.5	
	comp=N,740nm,0.2s						
NMR				A	A	14 57 16.5	
	comp=N,940nm,0.2s						
NMR	**Nemuro--Hokkai**	**2.51**	**136**	⇑*i*PN	**Pn**	**14 56 34.6**	**-1.5**
NMR				*i* S	**S**	**14 57 11.4**	**-4.1**
NEM2	**Nemuro 2**	**2.52**	**136**	P	**Pn**	**14 56 35.3**	**-0.9**
NEM2				eS	**S**	**14 57 11.3**	**-4.4**
JCH	**Churui**	**2.58**	**180**	⇑P	**Pn**	**14 56 35.7**	**-1.1**
JCH				eS	**S**	**14 57 12.3**	**-4.5**
JEW	**Eniwo**	**2.72**	**211**	⇑P	**Pn**	**14 56 38.9**	**+0.7**
JSK	**Shakotan**	**2.76**	**229**	⇑P	**Pn**	**14 56 39.1**	**+0.6**
JSK				eS	**S**	**14 57 19.3**	**-0.6**
SHO	**Shikotan**	**2.83**	**117**	*e*P	**Pn**	**14 56 38.2**	**-1.0**
SHO				AMB	AMB	14 56 38.4	
	comp=N,100nm,0.2s						
SHO				*e*S	**S**	**14 57 17.6**	**-3.5**
SHO				A	A	14 57 20.2	
	comp=N,900nm,0.3s						
SHO				A	A	14 57 20.2	
	comp=N,2μm,0.3s						
SHO	**Shikotan**	**2.83**	**117**c	*i*PN	**Pn**	**14 56 38.1**	**-1.1**
SHO				*i* S	**S**	**14 57 16.8**	**-4.3**
SHO				pmax	pmax		
	comp=N,61nm,0.2s						
SHO				pmax	pmax		
	comp=Z,124nm,0.2s						
SHO				pmax	pmax		
	comp=E,18nm,0.1s						
SHO				smax	smax		
	comp=N,551nm,0.3s						
SHO				smax	smax		
	comp=E,2μm,0.4s						
JNBK	**Urakawa-nobuka**	**2.95**	**188**	⇑P	**Pn**	**14 56 39.4**	**-1.0**
JNBK				eS	**S**	**14 57 21.8**	**-1.5**
ERM	**Erimo**	**3.18**	**182**		**Pn**	**14 56 42.3**	**-0.6**
ERM	**Erimo**	**3.18**	**182**	*i* PN	**Pn**	**14 56 41.9**	**-1.0**
KUR	**Kuril'sk**	**3.20**	**88**	*i* P	**Pn**	**14 56 43.9**	**+1.0**
KUR				AMB	AMB	14 56 44.5	
	comp=E,170nm,0.9s						
KUR				*e*S	**S**	**14 57 28.8**	**+0.9**
KUR				A	A	14 57 31.0	
	comp=E,40nm,0.8s						
KUR				A	A	14 57 31.0	
	comp=E,60nm,0.8s						
KUR	**Kuril'sk**	**3.20**	**88**d	*i*PN	**Pn**	**14 56 43.8**	**+0.9**
KUR				*e*S	**S**	**14 57 28.8**	**+0.9**
KUR				pmax	pmax		
	comp=Z,166nm,1.0s						
KUR				pmax	pmax		
	comp=E,43nm,0.9s						
KUR				pmax	pmax		
	comp=N,57nm,0.4s						
KUR				smax	smax		
	comp=E,63nm,1.1s						
KUR				smax	smax		
	comp=N,44nm,0.6s						
JKB	**Kayabe**	**3.71**	**208**	⇑P	**Pn**	**14 56 47.6**	**-0.9**
JKB				eS	**S**	**14 57 33.2**	**-4.7**
UGL	**Uglegorsk**	**3.98**	**348**	*e*P	**Pn**	**14 56 52.7**	**+1.4**
UGL				AMB	AMB	14 56 53.4	
	comp=N,150nm,0.6s						
UGL				*e*S	**S**	**14 57 44.3**	**+1.2**
UGL				A	A	14 57 45.8	
	comp=N,990nm,2.0s						
UGL				A	A	14 57 45.8	
	comp=N,1μm,2.0s						
UGL	**Uglegorsk**	**3.98**	**348**	*e*PN	**Pn**	**14 56 52.7**	**+1.4**
UGL				*e*S	**S**	**14 57 44.3**	**+1.2**
UGL				pmax	pmax		
	comp=Z,155nm,0.6s						
UGL				smax	smax		
	comp=E,1μm,2.3s						
UGL				smax	smax		
	comp=E,244nm,1.2s						
TEY	**Ternei**	**4.77**	**270**	*e*P	**Pn**	**14 57 01.2**	**+0.7**
TEY				AMB	AMB	14 57 01.9	
	comp=E,60nm,0.5s						
TEY				*e*S	**S**	**14 57 58.4**	**-1.3**
TEY				A	A	14 57 59.3	
	comp=E,50nm,0.9s						
TEY				A	A	14 57 59.3	
	comp=E,40nm,0.9s						
TEY	**Ternei**	**4.77**	**270**⇓	*e*PN	**Pn**	**14 57 01.2**	**+0.7**
TEY				*e*		14 57 58.8	
TEY				pmax	pmax		
	comp=E,80nm,0.8s						
TEY				pmax	pmax		
	comp=Z,130nm,0.5s						
TEY				pmax	pmax		
	comp=E,30nm,1.1s						
TEY				pmax	pmax		
	comp=N,30nm,1.5s						
TEY				pmax	pmax		
	comp=Z,50nm,0.9s						
TYV	**Tymovskoe**	**5.69**	**356**	*e*P	**Pn**	**14 57 11.6**	**+0.3**
TYV				AMB	AMB	14 57 12.8	
	comp=Z,70nm,0.4s						
TYV				*e*S	**S**	**14 58 19.6**	**+0.1**
TYV				A	A	14 58 20.6	
	comp=Z,20nm,0.8s						
TYV				A	A	14 58 20.6	
	comp=Z,30nm,0.8s						
TYV	**Tymovskoe**	**5.69**	**356**	*e*PN	**Pn**	**14 57 11.6**	**+0.3**
TYV				*e*S	**S**	**14 58 19.9**	**+0.4**
TYV				pmax	pmax		
	comp=Z,66nm,0.4s						
TYV				smax	smax		
	comp=N,41nm,1.4s						
GRNR	**Gornyy**	**7.25**	**323**⇓	*i*PN	**Pn**	**14 57 30.5**	**0.0**
GRNR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
USA0B	**Ussuriysk Arra**	**8.14**	**267**		**Pn**	**14 57 41.7**	**+0.1**
USA0B	**Ussuriysk Arra**	**8.14**	**267**d	*i*PN	**Pn**	**14 57 42.0**	**+0.3**
USRK	**Ussuriysk Ar.**	**8.14**	**267**	P	**Pn**	**14 57 42.2**	**+0.6**
	baz=77,slow=13,SNR=73						
USRK				S	**S**	**14 59 11.3**	**-3.5**
	baz=70,slow=19,SNR=1.8						
USRK	**Ussuriysk Ar.**	**8.14**	**267**		**Pn**	**14 57 41.7**	**0.0**
NKL	**Nikolayevsk**	**8.15**	**349**	*e*P	**Pn**	**14 57 40.7**	**-0.8**
NKL				AMB	AMB	14 57 43.4	
	comp=Z,370nm,4.0s						
NKL				AMB	AMB	14 57 48.1	
	comp=Z,40nm,0.9s						
NKL				*e*S	**S**	**14 59 13.2**	**-1.4**
NKL				A	A	14 59 14.8	
	comp=Z,30nm,0.6s						
NKL				A	A	14 59 14.8	
	comp=Z,12nm,0.6s						
VLA	**Vladivostok**	**8.49**	**260**	*i* PN	**Pn**	**14 57 44.3**	**-1.6**
KLR	**Kul'dur**	**8.85**	**301**	P	**Pn**	**14 57 51.3**	**+0.9**
	comp=Z,5.9nm,0.3s,baz=116,slow=12,SNR=179						
KLR	**Kul'dur**	**8.85**	**301**d	*i*PN	**Pn**	**14 57 48.5**	**-1.9**
MJB9	**Matsu-Tunnel**	**9.47**	**206**		**Pn**	**14 57 56.9**	**-1.4**
MAJO	**Matsushiro**	**9.47**	**206**		**Pn**	**14 57 56.9**	**-1.4**
MAJO	**Matsushiro**	**9.47**	**206**	*i* PN	**Pn**	**14 57 57.7**	**-0.6**
MAT	**Matsushiro**	**9.47**	**206**	P	**Pn**	**14 57 57.1**	**-1.2**
MAT				S	**S**	**14 59 43.5**	**-2.0**
MJAR	**Matsushiro Arr**	**9.47**	**206**	P	**Pn**	**14 57 57.7**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=18,slow=11,SNR=64						
MJAR	**Matsushiro Arr**	**9.47**	**206**		**Pn**	**14 57 57.5**	**-0.8**
MJAR	**Matsushiro Arr**	**9.47**	**206**	PN	**Pn**	**14 57 57.5**	**-0.8**
MDJ	**Mudanjiang**	**9.77**	**271**	P	**Pn**	**14 58 02.8**	**+1.0**
MDJ	**Mudanjiang**	**9.77**	**271**		**Pn**	**14 58 02.1**	**+0.3**
SKR	**Severo-Kuril's**	**10.18**	**53**	*e*P	**Pn**	**14 58 08.7**	**+1.9**
SKR				AMB	AMB	14 58 10.8	
	comp=Z,31nm,0.5s						
SKR				AMB	AMB	14 58 12.2	
	comp=Z,570nm,5.0s						
SKR				*e*S	**S**	**15 00 00.4**	**-0.7**
SKR	**Severo-Kuril's**	**10.18**	**53**	*e*PN	**P**	**14 58 09.3**	**-1.7**
SKR				*e*S	**S**	**14 59 58.0**	**-3.1**
SKR				pmax	pmax		
	comp=Z,31nm,0.5s						
SKR				smax	smax		
	comp=E,57nm,0.7s						
SKR				smax	smax		
	comp=N,62nm,0.7s						
EKMR	**Ekimchan**	**10.40**	**323**	*e*P	**Pn**	**14 58 10.0**	**+0.5**

EKMR AMB AMB 14 58 11.5
comp=N,19nm,0.7s
INU Inuyama 10.95 208 Pn 14 58 15.9 -0.7
PEA0B Petropavlovsk- 12.28 45 P Pn 14 58 33.4 +0.8
PEA0B Petropavlovsk- 12.28 45 PN Pn 14 58 33.4 +0.8
PETK Petropavlovsk- 12.28 45 P Pn 14 58 33.5 +0.9
comp=N,1.4nm,0.3s,baz=219,slow=9.9,SNR=32
PETK Petropavlovsk- 12.28 45 P Pn 14 58 33.2 +0.6
PET Petropavlovsk 12.71 46 eP Pn 14 58 38.5 +0.7
PET AMB AMB 14 58 39.4
comp=N,10.0nm,0.6s
PET AMB AMB 14 58 46.2
comp=N,470nm,5.0s
PET Petropavlovsk 12.71 46 P Pn 14 58 38.3 +0.5
PET Petropavlovsk 12.71 46 PN Pn 14 58 38.3 +0.5
CN2 Changchun 12.85 270 eP Pn 14 58 39.6 -0.1
BMKR Bomnak 13.30 321 eP Pn 14 58 45.0 0.0
BMKR AMB AMB 14 58 46.8
comp=N,17nm,0.2s
ZEA Zeya 13.48 315 i P Pn 14 58 47.3 +0.1
ZEA AMB AMB 14 58 49.2
comp=N,29nm,1.0s
ZEA Zeya 13.48 315 ePN Pn 14 58 47.2 +0.1
ZEA pmax pmax
comp=Z,29nm,1.0s
KSRS Korea Array 13.91 242 P Pn 14 58 54.2 +1.7
comp=Z,0.3nm,0.3s,baz=51,slow=11,SNR=10
KS19 Wonju Array Si 13.92 242 P 14 58 52.9 +0.2
KROS Kirovskiy 14.00 317 eP Pn 14 58 54.2 +0.7
KROS AMB AMB 14 58 55.2
comp=Z,14nm,0.3s
MA2 Magadan 15.08 15 P P 14 59 05.7 +0.4
comp=Z,3.9nm,0.3s,baz=193,slow=10,SNR=25
MA2 Magadan 15.08 15 P P 14 59 05.8 +0.6
MA2 Magadan 15.08 15 i P P 14 59 05.4 +0.2
JNU Nakatsue 15.43 223 P Pn 14 59 11.1 +0.4
comp=Z,1.2nm,0.3s,baz=338,slow=4.2,SNR=10
JNU Nakatsue 15.43 223 IAmb IAmb 14 59 16.2
comp=Z,70nm,1.6s
HIA Hailar 16.51 293 P P 14 59 20.6 -0.4
HIA Hailar 16.51 293 P P 14 59 20.6 -0.4
HIA pmax pmax
comp=Z,48nm,0.5s
SEY Seymchan 18.51 13 P P 14 59 42.5 +0.1
comp=Z,4.7nm,0.3s,baz=187,slow=8.6,SNR=199
SEY Seymchan 18.51 13 i P P 14 59 41.8 -0.6
YAK Yakutsk 18.64 340 P P 14 59 41.9 -1.8
comp=Z,0.4nm,0.3s,baz=118,slow=3.2,SNR=33
YAK Yakutsk 18.64 340 eP P 14 59 40.8 -2.9
YAK eS S 15 02 59.7 -0.9
YAK pmax pmax
comp=Z,6.0nm,0.8s
YAK pmax pmax
comp=N,2.0nm,0.6s
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK smax smax
comp=N,119nm,1.0s
YAK smax smax
comp=E,78nm,1.0s
YAK MLR MLR
comp=Z,945nm,25.0s
YAK MLR MLR
comp=N,723nm,23.0s
YAK MLR MLR
comp=E,460nm,21.0s
BJI Beijing 20.59 265 P P 15 00 03.9 -0.7
BJI pP pP 15 00 45.0 -2.5
BJT Baijiatuau 20.61 265 P P 15 00 03.5 -1.3
BJT IAmb IAmb 15 00 07.3
comp=Z,12nm,1.0s
BJT Baijiatuau 20.61 265 P P 15 00 03.5 -1.3
BJT pmax pmax
comp=Z,13nm,1.0s
HHC Hu-ho-hao-te 23.54 271 eP P 15 00 31.8 -0.3
BTO Baotou 24.72 271 eP P 15 00 46.9 +4.2
ULN Ulaanbaatar 24.96 289 P P 15 00 44.3 -0.5
ULN Ulaanbaatar 24.96 289 P P 15 00 44.3 -0.5
ULN pmax pmax
comp=Z,3.0nm,0.6s
SONM Songino Array 25.40 289 P P 15 00 49.8 +1.0
comp=Z,2.8nm,0.3s,baz=74,slow=9.2,SNR=42
SONM Songino Array 25.40 289 P P 15 00 48.7 -0.1
SONM Songino Array 25.40 289 P P 15 00 48.7 -0.1
SONM pmax pmax
comp=Z,3.0nm,0.9s
BILL Bilibino 25.82 20 P P 15 00 51.6 -0.5
BILL IAmb IAmb 15 01 18.2
comp=Z,18nm,2.0s
BILL Bilibino 25.82 20 eP P 15 00 51.6 -0.5
BILL 15 04 15.0
BILL pmax pmax
comp=Z,2.0nm,1.1s
WHN Wuhan 26.98 247 P P 15 01 06.2 +3.4
TIXI Tiksi 27.43 350 P P 15 01 03.9 -2.4
comp=Z,0.8nm,0.3s,baz=138,slow=7.3,SNR=8.2
TIXI Tiksi 27.43 350 P P 15 01 04.0 -2.3
TIXI Tiksi 27.43 350 i P P 15 01 03.5 -2.8
TIXI pmax pmax
comp=Z,2.0nm,0.8s
GAMB Gambell 31.15 37 P P 15 01 38.7 -0.4
GAMB IAmb IAmb 15 02 08.1
comp=Z,17nm,2.0s
GTA Gaotai 32.40 275 eP P 15 01 51.9 +1.4
ANM Nome 34.03 37 P P 15 02 04.0 0.0
ANM IAmb IAmb 15 02 50.2
comp=Z,18nm,2.0s
ANM Nome 34.03 37 P P 15 02 04.1 0.0
ANM pmax pmax
comp=Z,19nm,2.0s
FALS False Pass 34.76 54 P P 15 02 10.5 +0.1
CNBA Chernabura Isl 36.96 56 P P 15 02 29.0 +0.1
ZALV Zalesovo Beam 37.94 305 P P 15 02 37.3 +0.2
comp=Z,0.6nm,0.4s,baz=86,slow=8.8,SNR=2.6
ZALV PcP PcP 15 04 46.5 0.0
comp=Z,1.3nm,0.7s,baz=63,slow=3.5,SNR=4.6
TTA Tatalina 38.06 40 P P 15 02 38.1 0.0
TTA Tatalina 38.06 40 P P 15 02 38.1 0.0
IMAR Indian Mountai 39.02 35 P P 15 02 45.0 -0.9
WMQ Urumqi 39.03 288 eP P 15 02 47.9 +1.5
RSO Redoubt South 39.80 44 P P 15 02 53.3 +0.7
PPLA Purkeypile 39.81 40 P P 15 02 53.1 +0.5
PPLA IAmb IAmb 15 03 15.4
comp=Z,33nm,1.7s
OHAK Old Harbor 40.03 49 P P 15 02 54.8 +0.5
SKT Skwentna 40.20 42 P P 15 02 55.4 -0.4
SKT IAmb IAmb 15 03 15.8
comp=Z,16nm,1.2s
BPAW Bear Paw Mtn. 40.25 38 P P 15 02 56.1 0.0
MLY Manley 40.30 37 P P 15 02 57.0 +0.5
KDAK Kodiak Island 40.30 48 P P 15 02 56.9 +0.4
comp=Z,8.8nm,0.4s,baz=205,slow=1.9,SNR=22
KDAK Kodiak Island 40.30 48 P P 15 02 56.9 +0.4
KTH Kantishna Hill 40.33 39 P P 15 02 57.0 +0.2
KTH IAmb IAmb 15 02 58.7
comp=Z,15nm,1.0s
COLD Coldfoot 40.42 33 P P 15 02 57.5 +0.1
TRF Thorofare Moun 40.62 39 P P 15 02 59.4 +0.1
SUA Susitna One 40.64 42 P P 15 02 59.2 -0.2
SUA IAmb IAmb 15 04 14.6
comp=Z,14nm,1.0s
CNPM China Poot 40.69 45 P P 15 02 59.2 -0.5
BRLK Bradley Lake 40.83 45 P P 15 03 00.7 -0.1
NEA Nenana 41.04 37 P P 15 03 02.3 -0.2
NEA IAmb IAmb 15 03 04.3
comp=Z,11nm,0.7s
RC01 Rabbit Creek A 41.18 43 P P 15 03 04.2 +0.6
RC01 IAmb IAmb 15 03 06.3
comp=Z,22nm,1.2s
MCK McKinley 41.19 39 P P 15 03 03.5 -0.2
MCK McKinley 41.19 39 P P 15 03 03.5 -0.2
MCK pmax pmax
comp=Z,50nm,0.4s
RND Reindeer 41.27 39 P P 15 03 03.6 -0.8
RND Reindeer 41.27 39 P P 15 03 03.6 -0.8
RND pmax pmax
comp=Z,10.0nm,0.9s
MDM Murphy Dome 41.36 37 P P 15 03 04.6 -0.5
PMR Palmer 41.39 42 P P 15 03 06.2 +0.9
PMR IAmb IAmb 15 03 07.9
comp=Z,50nm,1.6s
PMR Palmer 41.39 42 P P 15 03 06.2 +0.9
PMR pmax pmax
comp=Z,50nm,1.6s

GHO Glory Hole Cre 41.46 42 P P 15 03 05.8 -0.1
GHO IAmb IAmb 15 03 07.7
comp=Z,15nm,0.8s
WRH Wood River Hil 41.48 38 P P 15 03 05.5 -0.5
WRH IAmb IAmb 15 03 48.5
comp=Z,35nm,2.0s
SEW Seward 41.48 44 P P 15 03 06.3 +0.3
MK31 Makanchi Array 41.49 295 P P 15 03 06.7 +0.2
MK31 Makanchi Array 41.49 295 P P 15 03 06.7 +0.2
MK31 pmax pmax
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 41.49 295 P P 15 03 06.9 +0.5
comp=Z,2.0nm,0.6s,baz=77,slow=9.0,SNR=32
MKAR PcP PcP 15 04 58.5 +0.4
comp=Z,0.4nm,0.6s,baz=46,slow=1.7,SNR=3.6
MKAR Makanchi Array 41.49 295 P P 15 03 07.0 +0.5
COLA College 41.53 37 P P 15 03 06.0 -0.4
COLA IAmb IAmb 15 03 08.4
comp=Z,18nm,0.7s
COLA College 41.53 37 P P 15 03 06.0 -0.4
COLA pmax pmax
comp=Z,18nm,0.7s
CCB Clear Creek Bu 41.58 37 P P 15 03 06.1 -0.7
CCB IAmb IAmb 15 04 49.4
comp=Z,8.2nm,0.5s
MAKZ Makanchi 41.69 295 P P 15 03 08.4 +0.4
MAKZ Makanchi 41.69 295 P P 15 03 08.4 +0.4
MAKZ pmax pmax
comp=Z,3.0nm,0.9s
SML Sawmill 41.73 42 P P 15 03 08.3 +0.2
KNK Knik Glacier 41.73 42 P P 15 03 08.1 0.0
KNK IAmb IAmb 15 03 09.2
comp=Z,34nm,1.4s
IL31 41.96 37 P P 15 03 09.4 -0.4
ILAR Eielson Array 41.96 37 P P 15 03 08.9 -1.0
comp=Z,7.4nm,0.8s,baz=274,slow=7.5,SNR=79
ILAR Eielson Array 41.96 37 P P 15 03 09.1 -0.8
DHY Denali Highway 41.97 40 P P 15 03 09.7 -0.5
DHY IAmb IAmb 15 03 11.7
comp=Z,11nm,0.6s
HDA Harding Lake 41.98 38 P P 15 03 09.1 -0.9
SCM Sheep Creek Mo 42.20 41 P P 15 03 12.3 +0.4
SCM Sheep Creek Mo 42.20 41 P P 15 03 12.3 +0.4
SCM pmax pmax
comp=Z,59nm,1.5s
FYU Fort Yukon 42.42 34 P P 15 03 13.5 -0.1
FYU IAmb IAmb 15 03 15.4
comp=Z,15nm,0.7s
PRP Porcupine Dome 42.43 36 P P 15 03 13.7 -0.2
PRP IAmb IAmb 15 03 15.9
comp=Z,11nm,0.8s
KURK Kurchatov 42.45 302 P P 15 03 12.9 -1.1
KURK Kurchatov 42.45 302 PcP 15 05 01.8 +0.6
KURK Kurchatov 42.45 302 P P 15 03 12.4 -1.6
KURK pmax pmax
comp=Z,2.0nm,1.0s
KURBB Kurchatov Arra 42.53 302 P P 15 03 14.7 0.0
comp=Z,0.6nm,0.3s,baz=78,slow=8.7,SNR=5.9
KURBB PcP PcP 15 05 01.8 +0.3
comp=Z,0.3nm,0.3s,baz=81,slow=3.1,SNR=5.8
BMAR Burnt Mountain 42.58 33 P P 15 03 14.7 -0.2
FID Port Fidalgo 42.80 43 P P 15 03 16.8 +0.1
PAX Paxson 42.85 39 P P 15 03 17.4 +0.3
PAX Paxson 42.85 39 P P 15 03 17.4 +0.3
PAX pmax pmax
comp=Z,16nm,1.6s
HIN Hinchinbrook I 42.86 43 P P 15 03 17.2 0.0
RIDG Independent Ri 42.99 38 P P 15 03 17.2 -1.0
RIDG IAmb IAmb 15 03 19.3
comp=Z,23nm,1.5s
EYAK Cordova Ski Ar 43.20 43 P P 15 03 19.8 0.0
EYAK IAmb IAmb 15 04 23.6
comp=Z,58nm,1.6s
SCRK Sand Creek 43.32 38 P P 15 03 19.9 -1.1
SCRK IAmb IAmb 15 03 22.0
comp=Z,11nm,0.6s
DOT Dot Lake 43.35 38 P P 15 03 19.8 -1.2
MENT Mentasta 43.64 39 P P 15 03 24.3 +0.9
MENT IAmb IAmb 15 05 08.5
comp=Z,26nm,1.7s
RAGM Ragged Mountai 43.75 43 P P 15 03 25.1 +0.8
GLB Gilahina Butte 43.92 41 P P 15 03 26.4 +0.8
GLB IAmb IAmb 15 04 31.0
comp=Z,58nm,2.0s
VRDI Verde Repeater 44.14 42 P P 15 03 28.2 +0.7
VRDI IAmb IAmb 15 04 22.9
comp=Z,48nm,2.0s
MCARA McCarthy VSAT 44.30 41 P P 15 03 29.2 +0.6
MCARA IAmb IAmb 15 03 55.5
comp=Z,27nm,1.4s
EGAK Eagle 44.38 36 P P 15 03 28.6 -0.5
EGAK IAmb IAmb 15 03 30.5
comp=Z,13nm,0.8s
CRQM Cirque 44.40 42 P P 15 03 30.5 +1.0
CRQM IAmb IAmb 15 03 35.5
comp=Z,43nm,1.6s
BCAR Beaver Creek A 44.47 39 P P 15 03 30.2 +0.2
TGL Tana Glacier 44.55 42 P P 15 03 31.6 +0.9
TGL IAmb IAmb 15 03 43.0
comp=Z,30nm,1.6s
WAX Waxell Ridge 44.61 43 P P 15 03 32.4 +1.2
WAX IAmb IAmb 15 03 33.4
comp=Z,35nm,1.2s
BALM Baldy 44.70 42 P P 15 03 32.5 +0.6
BALM IAmb IAmb 15 03 33.7
comp=Z,16nm,1.2s
BARN Barnard Glacie 45.02 42 P P 15 03 35.1 +0.7
BARN IAmb IAmb 15 03 38.1
comp=Z,8.1nm,0.6s
CTGM Chitina Glacie 45.20 42 P P 15 03 36.3 +0.5
CTGM IAmb IAmb 15 03 39.0
comp=Z,12nm,0.5s
DAWY Dawson 45.28 37 P P 15 03 36.1 -0.2
CMAR Chiang Mai Arr 45.40 249 P P 15 03 39.4 +1.7
comp=Z,0.2nm,0.6s,baz=44,slow=6.7,SNR=2.4
EPYK Eagle Plains 45.82 34 P P 15 03 40.3 -0.2
EPYK IAmb IAmb 15 03 42.1
comp=Z,11nm,0.5s
BVAR Borovoye Array 46.46 307 P P 15 03 45.6 +0.1
comp=Z,0.7nm,0.3s,baz=78,slow=9.7,SNR=11
BVAR PcP PcP 15 05 15.2 +0.2
comp=Z,0.5nm,0.4s,baz=70,slow=1.7,SNR=5.9
INK Inuvik 46.54 31 P P 15 03 45.5 -0.4
comp=Z,7.4nm,0.3s,baz=274,slow=5.2,SNR=97
INK PcP PcP 15 05 14.5 -0.5
comp=Z,1.1nm,0.7s,baz=318,slow=3.1,SNR=3.5
INK Inuvik 46.54 31 P P 15 03 45.2 -0.6
INK IAmb IAmb 15 03 47.2
comp=Z,9.5nm,0.3s
HYT Haines Junctio 47.03 41 P P 15 03 51.6 +1.6
HYT IAmb IAmb 15 03 52.9
comp=Z,13nm,0.7s
DHAK Deception Hill 47.26 44 P P 15 03 53.2 +1.6
TAPN Taplejung 47.29 268 eP P 15 03 54.0 +1.4
comp=Z,4.1nm,0.4s
JIRN Jiri 48.18 269 eP P 15 04 00.7 +1.2
comp=Z,8.0nm,0.4s
GUN Gumba 48.25 269 eP P 15 04 01.2 +1.2
comp=Z,5.4nm,0.4s
AAK Ala-Archa 48.27 293 P P 15 04 01.0 +1.3
comp=Z,0.4nm,0.3s,baz=37,slow=10,SNR=3.2
AAK Ala-Archa 48.27 293 P P 15 04 01.1 +1.3
WHY Whitehorse 48.30 41 P P 15 04 01.2 +1.6
RAMN Ramite 48.32 268 eP P 15 04 01.3 +0.9
comp=Z,8.1nm,0.5s
SKAG Skagway 48.52 42 P P 15 04 03.0 +1.9
SKAG IAmb IAmb 15 04 07.5
comp=Z,24nm,1.4s
GKN Gorkha 49.07 270 eP P 15 04 06.9 +0.9
comp=Z,2.8nm,0.3s
JIS Juneau Island 49.42 44 P P 15 04 09.3 +1.4
JIS IAmb IAmb 15 04 10.9
comp=Z,27nm,1.3s
C36M Paulatuk 49.47 28 P P 15 04 07.8 -0.3
C36M IAmb IAmb 15 04 10.0
comp=Z,6.4nm,0.5s
DANN Dangsing 49.48 271 eP P 15 04 10.9 +1.6
comp=Z,6.5nm,0.4s
ARSB Arslanbob 49.89 292 P P 15 04 14.0 +2.0
ARSB Arslanbob 49.89 292 P P 15 04 14.0 +2.0
KK31 Karatay Array 50.62 295 P P 15 04 18.2 +0.9
KK31 Karatay Array 50.62 295 P P 15 04 18.2 +0.9
KK31 pmax pmax
comp=Z,3.0nm,1.3s
KKAR Karatay Array 50.62 295 P P 15 04 18.2 +1.0

KKAR Karatay Array 50.62 295 P P 15 04 18.2 +1.0
KKAR IAmb IAmb 15 04 53.0
comp=Z,3.0nm,1.3s
KKAR Karatay Array 50.62 295 P P 15 04 18.2 +1.0
KKAR pmax pmax
comp=Z,3.0nm,1.3s
ARU Arti 51.41 315 P P 15 04 22.5 -0.3
comp=Z,0.6nm,0.4s,baz=306,slow=22,SNR=4.3
ARU Arti 51.41 315 IAmb IAmb 15 04 31.9
comp=Z,2.7nm,0.8s
ARU Arti 51.41 315 c i P P 15 04 20.2 -2.6
ARU S S 15 11 18.0 -2.0
ARU SS SS 15 14 55.7 -3.4
ARU pmax pmax
comp=Z,3.0nm,0.9s
SPA0 Spitsbergen Ar 52.82 348 P P 15 04 31.8 -1.1
SPITS Spitsbergen Ar 52.82 348 P P 15 04 31.7 -1.1
comp=Z,31nm,1.1s,baz=99,slow=10,SNR=6.1
SPITS PcP PcP 15 05 38.7 +0.7
comp=Z,7.6nm,0.9s,baz=113,slow=3.7,SNR=4.4
ABKAR Akbulak array 54.02 306 P P 15 04 42.4 +0.5
ABKAR Akbulak array 54.02 306 P P 15 04 42.3 +0.4
ABKAR IAmb IAmb 15 06 22.5
comp=Z,29nm,0.3s
RES Resolute Bay 54.35 16 P P 15 04 43.4 -0.5
AKTO Aktyubinsk 54.51 308 P P 15 04 45.8 +0.3
comp=Z,0.6nm,0.3s,baz=73,slow=17,SNR=3.8
AKTO PcP PcP 15 05 45.4 +0.4
comp=Z,0.8nm,0.5s,baz=183,slow=1.0,SNR=4.3
KIRV Kirov 54.75 320 i P P 15 04 45.4 -1.6
LVZ Lovozero 55.33 334 P P 15 04 50.5 -0.6
LVZ Lovozero 55.33 334 P P 15 04 50.5 -0.6
LVZ pmax pmax
comp=Z,154nm,1.9s
YKA Yellowknife Ar 56.10 33 P P 15 04 56.6 +0.1
comp=Z,11nm,0.6s,baz=304,slow=6.8,SNR=145
YKA PcP PcP 15 05 51.6 +0.7
comp=Z,0.5nm,0.5s,baz=306,slow=3.4,SNR=2.5
KEV Kevo 56.37 338 P P 15 04 57.4 -0.9
KEV Kevo 56.37 338 P P 15 04 57.4 -0.9
KEV pmax pmax
comp=Z,113nm,2.0s
TULEG Thule 56.82 9 P P 15 05 00.4 -0.9
TULEG IAmb IAmb 15 05 30.6
comp=Z,22nm,1.7s
ARCES ARCESS Array B 56.91 338 P P 15 05 01.6 -0.5
comp=Z,2.5nm,0.8s,baz=39,slow=16,SNR=9.2
ARCES PcP PcP 15 05 54.1 +0.1
comp=Z,1.0nm,0.6s,baz=71,slow=5.9,SNR=2.4
ARCES ARCESS Array B 56.91 338 P P 15 05 02.1 0.0
ARE0 ARCESS Array S 56.91 338 P P 15 05 02.2 +0.1
SGF Sodankyl 58.03 336 P P 15 05 09.2 -0.7
MSF Maaselka 58.30 334 P P 15 05 11.5 -0.3
MSF pmax pmax
comp=Z,16nm,2.8s
JOF Joensuu 59.51 331 P P 15 05 19.3 -0.7
OUL Oulu 59.83 334 P P 15 05 21.7 -0.5
OUL pmax pmax
comp=Z,12nm,1.9s
GEYT Alibeck 61.35 296 P P 15 05 32.7 -0.2
comp=Z,1.2nm,0.6s,baz=99,slow=4.5,SNR=3.0
GEYT Alibeck 61.35 296 IAmb IAmb 15 05 34.0
comp=Z,0.9nm,0.6s
SUF Sumiainen 61.39 332 P P 15 05 32.4 -0.3
VAF Ylistaro 62.28 334 P P 15 05 38.5 -0.1
FINES FINESS Array B 62.32 331 P P 15 05 38.5 -0.4
comp=Z,6.6nm,0.5s,baz=44,slow=7.5,SNR=69
FINES PcP PcP 15 06 15.5 -0.2
comp=Z,0.8nm,0.4s,baz=49,slow=3.4,SNR=5.2
FINES FINESS Array B 62.32 331 P P 15 05 38.4 -0.5
SUMG Summit 62.52 1 P P 15 05 40.7 +0.1
SUMG IAmb IAmb 15 05 41.4
comp=Z,9.0nm,0.6s
SUMG Summit 62.52 1 P P 15 05 40.7 +0.1
SUMG pmax pmax
comp=Z,9.0nm,0.6s
WRA Warramunga Arr 65.34 189 P P 15 05 59.0 0.0
comp=Z,0.2nm,0.4s,baz=4.8,slow=6.7,SNR=2.0
FCC Fort Churchill 66.10 29 P P 15 06 03.5 +0.1
FCC Fort Churchill 66.10 29 P P 15 06 03.5 +0.1
FCC pmax pmax
comp=Z,12nm,0.6s
FFC Flin Flon 66.13 35 P P 15 06 03.8 +0.2
FFC IAmb IAmb 15 06 05.1
comp=Z,5.5nm,0.9s
FFC Flin Flon 66.13 35 P P 15 06 03.8 +0.2
FFC pmax pmax
comp=Z,6.0nm,0.9s
ORV Oroville 66.47 57 P P 15 06 06.2 +0.1
ORV IAmb IAmb 15 08 13.0
comp=Z,15nm,1.9s
ORV Oroville 66.47 57 P P 15 06 06.2 +0.1
KIV Kislovodsk 66.75 309 eP P 15 06 05.7 -2.2
KIV pmax pmax
comp=Z,28nm,1.1s
KBZ Khabaz 66.78 309 P P 15 06 08.6 +0.7
comp=Z,2.0nm,0.5s,baz=70,slow=1.8,SNR=9.8
NB2 NORSAR Subarra 67.23 337 P P 15 06 10.2 -0.3
comp=Z,0.7nm,0.4s,baz=33,slow=6.5
NOA NORSAR Array B 67.23 337 P P 15 06 10.6 0.0
comp=Z,1.7nm,0.6s,baz=52,slow=7.8,SNR=12
NORES NORESS Array B 67.39 337 P P 15 06 11.5 0.0
SFJD Kangerlussuaq 67.63 6 P P 15 06 12.7 -0.1
FRB Frobisher Bay 68.51 15 P P 15 06 17.8 -0.5
FRB pmax pmax
comp=Z,19nm,0.8s
AKASG Malin Array Be 68.77 321 P P 15 06 20.0 -0.1
comp=Z,4.8nm,0.6s,baz=41,slow=6.4,SNR=18
AKASG Malin Array Be 68.77 321 IAmb IAmb 15 06 21.6
comp=Z,1.1nm,0.9s
AKASG Malin Array Be 68.77 321 i P P 15 06 20.0 -0.1
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKBB Malin Array Si 68.77 321 P P 15 06 19.7 -0.5
AKBB IAmb IAmb 15 06 20.9
comp=Z,6.2nm,0.6s
AKBB Malin Array Si 68.77 321 P P 15 06 19.7 -0.5
AKBB pmax pmax
comp=Z,6.0nm,0.6s
KVN Kaiserville 68.80 56 P P 15 06 21.9 +1.2
KVN IAmb IAmb 15 06 23.1
comp=Z,6.2nm,0.7s
KVN Kaiserville 68.80 56 P P 15 06 22.0 +1.2
KVN pmax pmax
comp=Z,6.0nm,0.7s
ASAR Alice Springs 69.07 189 P P 15 06 23.8 +1.5
comp=Z,0.3nm,0.5s,baz=9.2,slow=6.2,SNR=6.8
NVAR Mina Array Bea 69.09 56 P P 15 06 23.1 +0.5
comp=Z,2.4nm,0.7s,baz=299,slow=5.7,SNR=17
NVAR Mina Array Bea 69.09 56 P P 15 06 23.0 +0.4
R11A Troy Canyon, C 70.72 55 P P 15 06 33.5 +1.0
BSD Bornholm Skovb 70.95 332 P P 15 06 33.6 +0.3
BSD pmax pmax
comp=Z,20nm,0.9s
PD31 Pinedale Array 71.02 48 P P 15 06 34.9 +0.6
PDAR Pinedale Array 71.02 48 P P 15 06 34.8 +0.6
comp=Z,2.4nm,0.6s,baz=295,slow=1.0,SNR=28
DUG Dugway, Tooele 71.04 52 P P 15 06 35.9 +1.6
DUG pmax pmax
comp=Z,6.0nm,2.5s
TPNV Topopah Spring 71.29 56 P P 15 06 36.4 +0.5
TPNV IAmb IAmb 15 06 38.1
comp=Z,4.4nm,0.8s
TPNV Topopah Spring 71.29 56 P P 15 06 36.4 +0.5
TPNV pmax pmax
comp=Z,4.0nm,0.9s
ULM Lac du Bonnet 71.95 35 P P 15 06 39.3 -0.1
comp=Z,4.2nm,0.6s,baz=324,slow=7.1,SNR=11
ULM Lac du Bonnet 71.95 35 P P 15 06 39.2 -0.1
ULM IAmb IAmb 15 06 39.7
comp=Z,4.4nm,0.7s
BUR08 Bucovina Ar. S 72.81 321 P P 15 06 45.1 +0.5
BUR08 IAmb IAmb 15 09 26.7
comp=Z,22nm,1.9s
BURAR Bucovina Array 72.82 321 P P 15 06 44.9 +0.2
BURAR Bucovina Array 72.82 321 P P 15 06 44.9 +0.2
MTPU Mount Pierson 72.88 53 P P 15 06 46.0 +0.5
SRU San Rafael Swe 73.06 51 P P 15 06 46.9 +0.6
SRU San Rafael Swe 73.06 51 P P 15 06 46.9 +0.6
SRU pmax pmax
comp=Z,7.0nm,0.7s
KOLS Kolonicke sedl 73.08 324 eP P 15 06 46.7 +0.7
KOLS Kolonicke sedl 73.08 324 eP P 15 06 46.7 +0.7
OJC Ojcow 73.08 326 P P 15 06 47.1 +1.1
OJC pmax pmax

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,12nm,0.8s						
NIE	Niedzica	73.51	325	P	P	15 06 50.0	+1.5
NIE				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MORC	Moravsky Berou	74.31	327	P	P	15 06 53.3	+0.1
MORC				IAmb	IAmb	15 06 55.2	
	comp=Z,6.7nm,0.8s						
MORC	Moravsky Berou	74.31	327	P	P	15 06 53.3	+0.1
MORC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRTR	Keskin Array B	74.55	311	P	P	15 06 55.5	+0.7
	comp=Z,0.7nm,0.6s,baz=96,slow=4.8,SNR=4.2						
VOIR		74.56	320	P	P	15 06 55.8	+1.1
VOIR				pmax	pmax		
	comp=Z,5.0nm,2.5s						
CLL	Collm	74.73	330	⇓iP	P	15 06 56.0	+0.5
	comp=Z,8.0nm,0.8s						
CLL				Lm	MLR	18 31 00.0	
	comp=Z,100nm,18.8s						
CLL	Collm	74.73	330	⇓iP	P	15 06 56.0	+0.5
CLL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BRG	Berggiesshubel	74.76	330	P	P	15 06 57.0	+1.4
VYHS	Vyhne	74.83	325	eP	P	15 06 57.5	+1.4
VYHS	Vyhne	74.83	325	eP	P	15 06 57.5	+1.4
EYMN	Ely	75.54	35	P	P	15 06 60.0	-0.2
EYMN				IAmb	IAmb	15 07 00.9	
	comp=Z,6.1nm,0.9s						
EKA	Eskdalemuir Ar	75.91	341	P	P	15 07 03.0	+1.0
GERES	GERESS Array B	76.53	328	P	P	15 07 06.4	+0.6
	comp=Z,0.4nm,0.3s,baz=41,slow=5.1,SNR=6.1						
ECSD	EROS Data Cent	76.67	40	P	P	15 07 06.7	0.0
SCHQ	Schefferville	77.11	17	P	P	15 07 08.8	0.0
	comp=Z,1.7nm,0.4s,baz=304,slow=5.9,SNR=7.7						
KBA	Koelnbreinsper	78.13	328	P	P	15 07 16.0	+1.2
VLDQ	Val d'Or	80.44	26	P	P	15 07 26.1	-0.8
VLDQ				IAmb	IAmb	15 07 26.9	
	comp=Z,8.7nm,0.8s						
WMOK	Wichita Mounta	82.60	47	P	P	15 07 39.1	+0.6
TXAR	Lajitas Array	84.06	54	P	P	15 07 47.1	+1.0
	comp=Z,3.0nm,0.6s,baz=290,slow=3.5,SNR=46						
U40A	Yellville	84.27	42	P	P	15 07 47.0	+0.1
ESDC	Sonseca Array	90.55	335	P	P	15 08 17.0	+0.1
	comp=Z,0.4nm,0.4s,baz=2.5,slow=4.6,SNR=3.4						
BDFB	Brasilia	149.02	22	PKPbc	PKPbc	15 15 01.8	0.0
	comp=Z,2.6nm,0.8s,baz=57,slow=5.4,SNR=3.5						

ASRS 12 15:27:53.4±0.2,52°N±2°×97°7E±0°9,h5km,MLh4.0/13, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed
IDC 12 15:28:02.5±2.4,53°60N×97°89E,h0km,mb1 3.2/5, mb1mx3.0/52,mbtmp3.2/5,ML2.8/5,Error ellipse: s-maj=61.2km s-min=9.9km az=10.0
ISC 12 15:28:06.0±0.7,52°18N±0°04×97°27E±0°03,h10km,n32, σ3§14/54,Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TDJR	Todzha	0.75	288	Pg	Pg	15 28 18.8	-1.7
TDJR				Sg	Sb	15 28 33.0	+1.4
ORL	Orlik	1.60	76	Pg	Pn	15 28 25.7	-8.8
ORL				Sg	Sn	15 28 44.1	-11
KZLR	Kyzyl	1.81	256	Pg	Pn	15 28 34.7	-2.5
KZLR				Sg	Sn	15 29 00.2	0.0
ORY	Orie	3.11	336	Pg	Pn	15 28 58.1	+3.0
ORY				Sg	Sg	15 29 42.8	-3.0
MINR	Mina	3.28	327	Pg	Pb	15 29 04.1	-0.2
MINR				Sg	Sg	15 29 52.5	+1.1
DJOS	Djoyskaya Sosn	3.64	282	Pg	Pb	15 29 09.1	-1.4
DJOS				Sg	Sg	15 29 59.2	-3.7
DJO	Djoy, Khakassi	3.75	282	Pg	Pb	15 29 11.9	-0.3
DJO				Sg	Sg	15 30 05.2	-1.1
ABNR	Abakan	3.85	296	Pg	Pb	15 29 13.1	-0.9
ABNR				Sg	Sg	15 30 08.7	-1.0
TLY	Talaya	3.98	95	Pn	Pn	15 29 05.4	-1.6
	0.1nm,0.3s,baz=307,slow=10,SNR=26						
TLY				Sn	Sn	15 29 52.6	-1.1
	0.1nm,0.3s,baz=46,slow=17,SNR=19						
TLY	Talaya	3.98	95	Pg	Pn	15 29 05.2	-1.8
TLY				Sg	Sn	15 29 54.6	+1.0
ZAK	Zakamensk	4.18	113	Pg	Pn	15 29 10.5	+0.6
ZAK				Sg	Sn	15 29 59.8	+1.0
IRK	Irkutsk	4.31	86	Sg	Sn	15 30 04.5	+2.7
VEH	Verkhnyaya Baz	4.36	287	Pg	Pb	15 29 21.6	-1.2
VEH				Sg	Sg	15 30 24.4	-1.6
GZL	Zheleznogorsk	4.64	333	Sg	Sb	15 30 28.5	+5.2
GZLN	Zheleznogorsk	4.68	335	Pg	Pb	15 29 27.5	-0.6
GZLN				Sg	Sg	15 30 34.0	-2.2
SHTK	Zheleznogorsk-	4.68	334	Pg	Pb	15 29 24.2	-3.9
SHTK				Sg	Sb	15 30 29.6	+5.1
LUZB	Luzhba, Kemero	5.28	290	Pg	Pb	15 29 38.9	+0.7
LUZB				Sg	Sg	15 30 49.8	-5.5
TRG	Tyrgan	5.58	80	Pg	Pn	15 29 35.2	+6.2
TRG				Sg	Sn	15 30 45.2	-5.1
TASR	Tashtagol	5.77	279	Pg	Pb	15 29 46.4	-0.3
TASR				Sg	Sg	15 31 07.4	-3.7
CUR	Chagan-Uzun	5.99	253	Pn	Pn	15 29 31.9	-2.9
CUR				Pg	Pb	15 29 53.2	+2.7
CUR				Sg	Sb	15 31 11.2	+9.0
ULGR	Ulagan, Altay	6.03	259	Pg	Pb	15 29 55.0	+3.9
ULGR				Sg	Sg	15 31 16.0	-3.5
ARTR	Artybash	6.18	270	Pn	Pn	15 29 35.0	-2.3
ARTR				Pg	Pb	15 29 55.1	+1.4
ARTR				Sg	Sg	15 31 22.5	-1.9
AKAR	Aktash	6.34	257	Pg	Pb	15 29 58.0	+1.5
AKAR				Sg	Sg	15 31 22.5	-6.9
CHBI	Chibit, Altay	6.41	257	Pg	Pb	15 30 00.2	+2.6
CHBI				Sg	Sg	15 31 29.3	-2.4
DGZ	Jazzator, Alta	6.70	252	Pg	Pb	15 30 06.3	+4.7
DGZ				Sg	Sg	15 31 34.0	-6.7
ELT	Eltsovka	6.79	284	Pg	Pb	15 30 09.0	+5.0
ELT				Sg	Sg	15 31 41.3	-2.5
SALR	Pechorkino, Sa	7.29	292	Sg	Sg	15 31 58.4	-1.3
SONM	Songino Array	7.31	123	Pn	Pn	15 30 00.8	+7.9
	0.4nm,0.3s,baz=338,slow=3.4,SNR=12						
SONM				Sn	Sb	15 31 37.1	-3.2
	1.9nm,0.3s,baz=304,slow=26,SNR=11						
ULN	Ulaanbaatar	7.64	121	Sg	Sb	15 31 50.8	+1.2
ZALV	Zalesovo Beam	7.71	288	Pn	Pn	15 29 56.7	-1.5
	0.1nm,0.3s,baz=80,slow=16,SNR=3.3						
ZALV				Pg	Pb	15 30 19.7	0.0
	0.4nm,0.3s,baz=102,slow=14,SNR=6.2						
ZALV				Lg	Lg	15 32 09.2	
	0.6nm,0.3s,baz=88,slow=26,SNR=12						
MKAR	Makanchi Array	11.13	247	Pn	Pn	15 30 56.0	+11
	0.1nm,0.3s,baz=53,slow=12,SNR=3.6						
KURBB	Kurchatov Arra	11.81	270	Pn	Pn	15 30 57.8	+3.5
	0.0nm,0.3s,baz=72,slow=15,SNR=3.9						
KURBB				Lg	Lg	15 34 28.0	
	0.0nm,0.3s,baz=69,slow=32,SNR=4.2						

IDC 12 15:42:01.0±1.4,35°94N×82°06E,h0km,mb3.4/3, mb1 3.6/8,mb1mx3.3/48,mbtmp3.5/8,ML3.2/4,MS3.1/1, Ms1 3.1/1,ms1mx2.5/30,Error ellipse: s-maj=37.8km s-min=15.7km az=65.0
ISC 12 15:42:03.6±1.4,36°1N±0°1×82°3E±0°2,h10km,n9,σ1§85/9, mb3.4/3,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	8.90	320	Pn	Pn	15 44 11.6	-0.8
	0.1nm,0.3s,baz=135,slow=4.3,SNR=2.2						
AAK				Pg	Pg	15 44 42.0	-12
	0.4nm,0.3s,baz=137,slow=9.2,SNR=5.4						
AAK				Lg	Lg	15 46 44.4	
	0.3nm,0.3s,baz=148,slow=19,SNR=3.6						
MKAR	Makanchi Array	10.71	0	Pn	Pn	15 44 36.1	-0.9
	0.5nm,0.3s,baz=187,slow=13,SNR=29						
MKAR				Sn	Sn	15 46 36.3	-0.5
	0.2nm,0.3s,baz=182,slow=23,SNR=6.6						
MKAR				Lg	Lg	15 47 44.6	
	0.1nm,0.3s,baz=176,slow=22,SNR=2.4						
KURBB	Kurchatov Arra	14.79	351	Pn	Pn	15 45 30.3	-2.3
	baz=173,slow=12,SNR=3.1						
ZALV	Zalesovo Beam	17.96	5	P	P	15 46 15.4	+1.6
	0.1nm,0.3s,baz=184,slow=13,SNR=8.8						
BVAR	Borovoye Array	18.90	337	P	Pn	15 46 25.4	+0.7
	0.2nm,0.3s,baz=144,slow=10,SNR=10						
SONM	Songino Array	21.35	49	P	P	15 46 52.2	+1.3
	0.7nm,0.7s,baz=234,slow=12,SNR=8.2						
WSAR	Wadi Sarin	24.13	244	LR	LR	15 57 45.4	
	comp=Z,48nm,18.7s,baz=206,slow=40						
WRA	Warramunga Arr	74.35	130	P	P	15 53 42.8	+1.2
	0.8nm,1.0s,baz=334,slow=5.9,SNR=2.6						
ASAR	Alice Springs	76.88	132	P	P	15 53 53.4	-2.7
	0.3nm,0.8s,baz=310,slow=5.8,SNR=3.3						

IDC 12 15:44:46.8±2.0,5°18S×128°94E,h0km,mb3.2/1, mb1 3.8/3,mb1mx3.4/36,mbtmp3.5/3,ML3.7/2,Error ellipse: s-maj=119.7km s-min=29.7km az=68.0
NEIC 12 15:45:11.0±2.1,5°73S±0°09×129°18E±0°10,h252km±14km, mb4.1/5,Error ellipse: s-maj=14.9km s-min=12.5km az=130.0
ISC 12 15:45:11.2±0.9,5°72S±0°08×129°2E±0°1,h250km,n19, σ0§78/20,Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.06	137	Pn	Pn	15 46 06.0	+1.7
FAKI	Fak Fak	4.11	48	Pn	Pn	15 46 15.9	-0.5
SOEI	Soe	6.33	230	Pn	Pn	15 46 43.8	+0.2
TNTI	Ternate	6.71	344	Pn	Pn	15 46 47.9	-0.4
KNRA	Kununurra	9.90	183	Pn	Pn	15 47 28.4	-0.2
FITZ	Fitzroy Crossi	12.79	196	P	P	15 48 07.3	+0.8
WB0	Warramunga Arr	14.84	161	P	P	15 48 28.4	-1.0
WRAB	Tennant Creek	14.98	161	P	P	15 48 30.2	-0.7
WRA	Warramunga Arr	14.99	161	Pn	P	15 48 30.1	-0.9
	0.3nm,0.3s,baz=340,slow=13,SNR=14						
WRA				Sn	S	15 51 15.8	-1.0
	0.1nm,0.3s,baz=338,slow=22,SNR=4.5						
WB2	Warramunga Arr	14.99	161	P	P	15 48 30.5	-0.6
WR0	Warramunga Arr	15.07	160	P	P	15 48 31.6	-0.3
WR0				IAmb	IAmb	15 49 24.9	
	comp=Z,18nm,1.6s						
COEN	Coen	16.00	122	P	P	15 48 41.9	-0.2
PSA00	Pilbara Seismi	18.18	209	P	P	15 49 05.8	0.0
AS31	Alice Springs	18.40	166	P	P	15 49 08.9	+0.7
ASAR	Alice Springs	18.40	166	P	P	15 49 09.3	+1.0
	comp=Z,0.3nm,0.3s,baz=346,slow=11,SNR=35						
ASAR	Alice Springs	18.40	166	P	P	15 49 09.2	+0.9
MKAR	Makanchi Array	66.73	327	P	P	15 55 36.1	+0.5
	comp=Z,0.1nm,0.4s,baz=119,slow=7.5,SNR=5.3						
MKAR	Makanchi Array	66.73	327	P	P	15 55 36.0	+0.3
MAKZ	Makanchi	66.92	327	P	P	15 55 37.0	+0.2
MAKZ				IAmb	IAmb	15 57 58.9	
	comp=Z,3.8nm,1.5s						

IDC 12 15:47:50.1±13.0,0°75N×93°72E,h0km,mb3.4/2, mb1 3.6/3,mb1mx3.2/39,mbtmp3.3/3,ML3.5/1,Error ellipse: s-maj=344.1km s-min=41.1km az=78.0,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	5.59	69	Pn	Pn	15 49 19.3	+4.6
	1.5nm,0.3s,baz=285,slow=12,SNR=6.2						
PSI				Sn	Sn	15 50 22.6	+2.8
	0.4nm,0.3s,baz=158,slow=23,SNR=2.9						
CMAR	Chiang Mai Arr	18.33	16	P	Pn	15 52 06.0	0.0
	0.1nm,0.3s,baz=213,slow=11,SNR=4.4						
WRA	Warramunga Arr	44.80	120	P	P	15 56 06.1	-0.1
	0.5nm,0.6s,baz=297,slow=8.7,SNR=7.6						
ASAR	Alice Springs	45.96	125	P	P	15 56 15.1	-0.3
	0.2nm,0.5s,baz=300,slow=7.6,SNR=5.0						

ATH 12 15:53:26.1,38°16N×20°39E,h8km±1km,ML2.6/4,Error ellipse: s-maj=1.7km s-min=1.1km az=243.0
THE 12 15:53:26.0,38°15N×20°40E,h8km,ML2.4/6,Error ellipse: s-maj=0.7km s-min=0.4km az=213.0
ISC 12 15:53:26.1±1.2,38°16N±0°03×20°41E±0°04,h8km±5km, n27,σ0§48/48,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	316	P	Pg	15 53 27.7	+0.1
CHV1				S	Sg	15 53 28.9	+0.2
LXRA	Lixouri, Kepha	0.04	29	P	Pg	15 53 27.9	+0.1
LXRA				S	Sg	15 53 29.2	+0.2
LXR1	Lixouri, Cepha	0.05	29	P	Pg	15 53 27.9	+0.1
LXR1				S	Sg	15 53 29.3	+0.3
ARGA	Argostoli. Kep	0.06	73	P	Pg	15 53 28.0	+0.1
ARGA				S	Sg	15 53 29.3	+0.2
KEF2	Argostoli. Kep	0.06	85	P	Pg	15 53 28.1	+0.2
KEF2				S	Sg	15 53 29.3	+0.1
ARG2	Argostoli	0.06	74	P	Pg	15 53 28.1	+0.1
ARG2				S	Sg	15 53 29.6	+0.3
KEF3	Kipouria, Keph	0.07	311	P	Pg	15 53 28.1	+0.1
KEF3				S	Sg	15 53 29.4	+0.1
KEF4	Livadi, Kephal	0.10	7	P	Pg	15 53 28.3	-0.1
KEF1	Kardakata, Kep	0.13	22	P	Pg	15 53 29.1	+0.2
KEF1				S	Sg	15 53 31.0	+0.2
VLS	Valsamata	0.14	83	P	Pg	15 53 29.2	0.0
VLS				S	Sg	15 53 31.7	+0.4
	9μm,0.1s						
VLS	Valsamata	0.14	83	P	Pg	15 53 29.2	0.0
VLS				S	Sg	15 53 31.6	+0.4
VLS				AML	AML	15 53 31.9	
	comp=E,22622μm,0.1s						
VLS				AML	AML	15 53 31.9	
	comp=N,13901μm,0.1s						
VSK1	VASILIKIADES	0.28	26	P	Pg	15 53 31.8	+0.2
VSK1				S	Sg	15 53 36.0	+0.7
	comp=N,2μm,0.2s						
KONA	Konidatara, Ke	0.29	26	P	Pg	15 53 32.0	+0.1
KONA				S	Sg	15 53 36.7	+0.9
FSK	Fiskardo	0.32	22	P	Pg	15 53 32.3	-0.1
FSK				S	Sg	15 53 37.7	+1.0
	comp=N,872nm,0.3s						
FSK	Fiskardo	0.32	22	P	Pg	15 53 32.4	-0.1
FSK				S	Sg	15 53 36.8	+0.1
FSK				AML	AML	15 53 39.0	
	comp=E,1881μm,0.2s						
FSK				AML	AML	15 53 42.1	
	comp=N,1860μm,0.5s						
VLMS	Volimes, Zakyn	0.35	145	P	Pg	15 53 33.3	+0.4
VLMS				S	Sg	15 53 38.0	+0.5
VLMS				AML	AML	15 53 42.4	
	comp=E,2480μm,0.3s						
VLMS				AML	AML	15 53 44.3	
	comp=N,2833μm,0.3s						
EVGI	Lefkada island	0.50	23	P	Pg	15 53 35.7	-0.1
EVGI				S	Sb	15 53 43.8	-0.8
EVGI	Lefkada island	0.50	23	P	Pg	15 53 35.7	-0.1
EVGI				S	Sg	15 53 43.7	+1.4
MGNA	Meganis	0.58	31	P	Pg	15 53 36.9	-0.3
MGNA				S	Sg	15 53 46.1	+1.2
LKD2	Lefkada island	0.66	17	P	Pg	15 53 38.5	-0.3
LKD2				S	Sg	15 53 48.4	+1.0
	comp=N,258nm,0.5s						
LKD2	Lefkada island	0.66	17	P	Pg	15 53 38.2	-0.6
TSLK	Tsoukalades, L	0.69	16	P	Pg	15 53 39.4	0.0
TSLK				S	Sb	15 53 49.8	-0.3
	comp=N,385nm,0.7s						
TSLK	Tsoukalades, L	0.69	16	P	Pg	15 53 39.5	0.0
PVO	Paravola	0.99	62	P	Pg	15 53 45.0	-0.1
PVO				AML	AML	15 54 03.9	
	comp=E,574μm,0.4s						
PVO				AML	AML	15 54 11.2	
	comp=N,608μm,0.6s						
SERG	Sergoula	1.32	78	P	Pn	15 53 49.8	-1.1
SERG				S	Sb	15 54 08.0	-0.2
	comp=N,100nm,0.4s						
IGT	Igoumenitsa	1.37	357	P	Pn	15 53 51.8	+0.2
KLV	Kalavryta, Ach	1.38	94	P	Pn	15 53 51.8	+0.1

IDC 12 16:08:52.5±6.6,36°64N×82°36E,h0km,mb3.2/1, mb1 3.4/4,mb1mx3.1/36,mbtmp3.4/4,ML3.2/3,Error ellipse: s-maj=87.5km s-min=46.7km az=35.0,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	8.53	317	Lg	Lg	16 13 27.5	
	0.1nm,0.3s,baz=348,slow=21,SNR=5.7						
MKAR	Makanchi Array	10.15	360	Pn	Pn	16 11 18.8	-0.7
	0.3nm,0.3s,baz=183,slow=11,SNR=15						
MKAR				Sn	Sn	16 13 13.9	-0.2
	0.0nm,0.3s,baz=186,slow=26,SNR=2.1						
ZALV	Zalesovo Beam	17.40	5	Pn	Pn	16 12 56.8	+0.3
	0.1nm,0.3s,baz=183,slow=12,SNR=2.9						
BVAR	Borovoye Array	18.41	337	P	P	16 13 09.9	+0.8
	0.2nm,0.3s,baz=145,slow=8.8,SNR=4.4						
SONM	Songino Array	20.93	50	P	P	16 13 36.9	0.0
	0.9nm,0.7s,baz=234,slow=11,SNR=8.8						

IDC 12 16:13:29.0±1.1,36°16N×82°59E,h0km,mb3.4/5, mb1 3.6/10,mb1mx3.4/36,mbtmp3.5/10,ML3.3/4,MS3.6/1, Ms1 3.6/1,ms1mx2.5/35,Error ellipse: s-maj=27.3km s-min=16.4km az=63.0
ISC 12 16:13:30.8±1.0,36°24N±0°09×82°7E±0°1,h10km,n12, σ1§53/13,mb3.4/4,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	8.47	25	ePn	Pn	16 15 34.0	+0.3
WMQ				Sn	Sn	16 17 08.0	-1.4
AAK	Ala-Archa	9.02	318	Pn	Pn	16 15 41.9	+0.6
	0.1nm,0.3s,baz=151,slow=13,SNR=4.1						
AAK				Pg		16 16 11.5	
	0.4nm,0.3s,baz=148,slow=13,SNR=4.5						
AAK				Lg	Lg	16 18 08.5	
	0.6nm,0.3s,baz=304,slow=16,SNR=5.5						
MKAR	Makanchi Array	10.55	358	Pn	Pn	16 16 03.7	+1.6
	0.6nm,0.3s,baz=184,slow=13,SNR=16						
MKAR				Sn	Sn	16 17 59.8	-0.5
	0.1nm,0.3s,baz=190,slow=23,SNR=3.0						
MKAR				Lg	Lg	16 19 03.9	
	0.1nm,0.3s,baz=182,slow=26,SNR=2.4						
KURBB	Kurchatov Arra	14.70	349	Pn	Pn	16 16 56.9	-1.8
	baz=173,slow=12,SNR=4.9						
ZALV	Zalesovo Beam	17.77	4	Pn	Pn	16 17 37.6	-0.5
	0.2nm,0.3s,baz=210,slow=14,SNR=3.9						
BVAR	Borovoye Array	18.90	337	P	Pn	16 17 51.6	-0.4
	0.4nm,0.3s,baz=133,slow=10,SNR=11						
SONM	Songino Array	20.96	49	P	P	16 18 16.8	+2.7
	2.3nm,0.8s,baz=236,slow=11,SNR=15						
AKTO	Aktyubinsk	22.76	316	P	P	16 18 30.9	-2.2
	0.8nm,0.8s,baz=106,slow=19,SNR=3.6						
CMAR	Chiang Mai Arr	22.77	137	P	P	16 18 32.0	-1.4
	0.3nm,0.4s,baz=310,slow=13,SNR=3.0						
DAV	Davao City (W)	48.68	116	LR	LR	16 42 46.0	
	comp=Z,63nm,20.4s,baz=182,slow=36						
TORD	Torodi Ar. Bea	75.18	276	P	P	16 25 14.2	+0.3
	0.4nm,0.8s,baz=46,slow=6.2,SNR=2.7						
ASAR	Alice Springs	76.71	133	P	P	16 25 22.1	-0.2
	0.3nm,0.7s,baz=314,slow=5.0,SNR=4.6						

IDC 12 16:25:40.6±6.8,36°80N×82°50E,h0km,mb2.9/1, mb1 3.3/4,mb1mx3.1/46,mbtmp3.3/4,ML3.1/3,Error ellipse: s-maj=89.8km s-min=48.2km az=37.0,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	9.99	359	Pn	Pn	16 28 06.6	+1.2
	0.2nm,0.3s,baz=179,slow=12,SNR=15						
MKAR				Sn	Sn	16 29 55.7	-2.5
	0.1nm,0.3s,baz=185,slow=14,SNR=3.1						
ZALV	Zalesovo Beam	17.23	5	P	P	16 29 43.4	-0.7
	0.2nm,0.3s,baz=187,slow=11,SNR=3.2						
BVAR	Borovoye Array	18.31	336	P	Pn	16 29 55.5	-0.4
	0.1nm,0.3s,baz=142,slow=9.8,SNR=5.3						
SONM	Songino Array	20.75	50	P	P	16 30 22.7	-0.2
	0.6nm,0.8s,baz=250,slow=11,SNR=4.8						

DJA 12 16:26:45.9±0.2,3°S±3°×10°2E±°,h44km±5km,M4.7/23, mB5.2/5,mb4.8/23,MLv4.9/4,MLv4.7/19,Mw(mB)4.5/5, Mwp5.3/1
NEIC 12 16:26:45.5±1.7,3°43S±0°07×101°60E±0°07,h56km±5km, mb4.7/35,Error ellipse: s-maj=12.3km s-min=8.0km az=51.0
KLM 12 16:26:45.0,3°47S×101°55E,h108km,mb4.6
IDC 12 16:26:48.0±1.5,3°34S×101°78E,h70km±11km,mb4.1/17, mb1 4.2/20,mb1mx4.0/42,mbtmp4.4/20,MS3.3/6, Ms1 3.3/6,ms1mx2.9/38,Error ellipse: s-maj=21.5km s-min=8.8km az=44.0
ISC 12 16:26:46.2±0.8,3°41S±0°05×101°61E±0°04,h57km±7km, n152,σ1§12/153,mb4.6/28,MS2.9/3,Southern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSI	Kapahiang	1.01	104	P	Pn	16 27 03.2	-1.1
KSI				S	Sn	16 27 16.0	-1.8
KRJI	Kerinci	1.32	354	P	Pn	16 27 07.2	-1.3
KRJI				S	Sn	16 27 23.4	-1.7
MNAI	Manna	1.64	125	P	Pn	16 27 12.1	-0.6
MNAI				S	Sn	16 27 32.6	-0.3
MNAI	Manna	1.64	125		Pn	16 27 12.2	-0.6
PPSI	Pulau Pagai	1.72	292	P	Pn	16 27 13.8	0.0
PPSI				S	Sn	16 27 34.2	-0.5
PDSI	Padang	2.73	335	P	Pn	16 27 26.1	-1.5
MDSI	Maura Dua	2.78	113	P	Pn	16 27 28.6	+0.4
MDSI				S	Sn	16 28 01.9	+1.3
LWLI	Liwa	2.92	123	P	Pn	16 27 30.7	+0.4
PMBI	Palembang	3.20	81	P	Pn	16 27 49.3	+15
PMBI	Palembang	3.20	81	Pn	Pn	16 27 32.3	-1.7
SISI	Saibi	3.26	309	P	Pn	16 27 34.3	-0.5
SISI				S	Sn	16 28 10.9	-1.5
KLSI		3.37	112	P	Pn	16 27 36.9	+0.6
KASI	Kota Agung	3.56	126	P	Pn	16 27 38.8	-0.2
BKNI	Bangkinang	3.75	351	P	Pn	16 27 41.5	-0.1
BKNI	Bangkinang	3.75	351		Pn	16 27 41.5	-0.1
TPRI	Tanjung Pinang	5.20	34	P	Pn	16 28 01.3	-0.1
	0.7nm3μm85nm,0.4s						
MYKOM	Kota Tinggi	5.63	23		Pn	16 28 07.0	-0.3
MYKOM	Kota Tinggi	5.63	23	P	Pn	16 28 08.0	+0.7
DBJI	Dramaga	6.00	122	P	Pn	16 28 13.5	+1.1
	0.3nm47nm,0.7s						
TPI	Tanjungpandan	6.07	84	P	Pn	16 28 12.5	-0.9
	0.2nm0.2nm11nm,1.5s						
SKJI	Sukabumi	6.09	126	P	Pn	16 28 14.3	+0.7
	0.8nm0.8nm2μm136nm,0.7s						
RPSI	Rantau Prapat	6.63	336	Pn	Pn	16 28 20.8	-0.3
RPSI	Rantau Prapat	6.63	336		Pn	16 28 22.8	+1.7
CNJI	Cibinong	6.72	125	P	Pn	16 28 21.3	-1.0
	0.3nm0.3nm2μm64nm,0.7s						
PSI	Prapat	6.73	336	P	Pn	16 28 22.8	+0.3
	4.2nm,0.3s,baz=358,slow=6.5,SNR=6.9						
PSI				LR	LR	16 31 14.3	
	comp=Z,334nm,19.3s,baz=110,slow=40						
LEM	Lembang	6.88	120	P	Pn	16 28 26.8	+2.2
	6.4nm,0.3s,baz=296,slow=6.6,SNR=7.3						
LEM				LR	LR	16 31 38.2	
	comp=Z,296nm,18.4s,baz=298,slow=43						
JRMM	Jerantut	7.30	7	P	Pn	16 28 31.0	+0.8
CISI	Cisompet, Garu	7.43	124	P	Pn	16 28 31.3	-0.7
	0.4nm0.4nm2μm72nm,0.5s						
CISI	Cisompet, Garu	7.43	124		Pn	16 28 31.1	-0.9
SNSI	Sinabang, Aceh	7.83	318	P	Pn	16 28 37.6	+0.1
	0.6nm182nm,1.2s						
IPM	Ipoh	7.86	356		Pn	16 28 39.4	+1.4
IPM	Ipoh	7.86	356	P	Pn	16 28 40.2	+2.1
TPTI		7.97	326	P	Pn	16 28 39.1	-0.3
	0.0nm7.2nm,0.5s						
CMJI	Cimerak	8.08	123	P	Pn	16 28 40.1	-0.8
	88nm,0.6s						
KPJI	Karang Pucung	8.27	118	P	Pn	16 28 45.0	+1.5
	52nm,0.5s						
KULM	Kulim	8.69	354		Pn	16 28 50.2	+0.8
KULM	Kulim	8.69	354	P	Pn	16 28 51.0	+1.7
MLSI	Meulaboh, Aceh	9.23	326	P	Pn	16 28 56.4	-0.3
	138nm,0.6s						
LHMI	Lhok Sumawe	9.76	331	Pn	Pn	16 29 03.4	-0.3
COCO	West Island	9.92	208	Pn	Pn	16 29 04.2	-2.0
UGM	Wanagama	9.94	117	P	Pn	16 29 06.9	+0.5
	136nm,1.1s						
UGM	Wanagama	9.94	117		Pn	16 29 06.8	+0.4
KSM	Kuching	9.96	61	Pn	Pn	16 29 06.5	-0.1
KSM	Kuching	9.96	61	P	Pn	16 29 07.0	+0.4
SBUM	Sibu	12.10	61	P	Pn	16 29 36.0	+0.1
JAGI	Jajag, Banyuwa	13.45	113	P	Pn	16 29 53.7	-0.6
	46nm,0.9s						
JAGI	Jajag, Banyuwa	13.45	113		Pn	16 29 52.2	-2.2
BKB	Balikpapan	15.42	82	P	P	16 30 23.2	-0.6
BKB				IAmb	IAmb	16 30 35.1	
	comp=Z,82nm,1.1s						
SPSI	Sidrap Palu	18.13	92	P	Pn	16 30 54.1	0.0
	comp=Z,13nm,0.8s						
KAPI	Kappang	18.16	96	P	P	16 30 53.3	-0.9
	comp=Z,0.6nm,0.3s,baz=264,slow=11,SNR=9.8						
KAPI				LR	LR	16 38 16.9	

	comp=Z,125nm,19.9s,baz=264,slow=38						
TTSI	Tana Toraja	18.19	89	P	Pn	16 30 56.4	+1.6
	comp=Z,3µmcomp=Z,16nm,0.8s						
BNSI	Bone	18.48	94	P	Pn	16 30 59.5	+1.1
	comp=Z,21nm,1.0s						
BKSI	Bulukumba	18.56	97	P	Pn	16 30 59.7	+0.4
	comp=Z,44nm,0.9s						
MPSI	Mapaga	18.66	79	P	Pn	16 31 00.6	+0.1
	comp=Z,16nm,0.8s						
UBPT	Khong Chiam	18.96	12	P	P	16 31 03.0	+0.1
UBPT				IAmb	IAmb	16 31 20.8	
	comp=Z,69nm,2.0s						
APSI	Ampana	20.18	83	P	Pn	16 31 17.6	-1.0
	comp=Z,27nm,0.8s						
MRSI	Marisa	20.69	80	P	P	16 31 22.4	+0.7
	comp=Z,18nm,0.6s						
CMAR	Chiang Mai Arr	21.89	353	P	P	16 31 34.3	-0.2
	comp=Z,1.4nm,0.8s,baz=185,slow=8.8,SNR=13						
CMAR				LR	LR	16 40 50.4	
	comp=Z,48nm,20.1s,baz=190,slow=39						
PSA00	Pilbara Seismi	25.30	137	P	P	16 32 07.2	-0.3
FITZ	Fitzroy Crossi	27.70	124	P	P	16 32 29.6	+0.3
	comp=Z,6.4nm,0.7s,baz=231,slow=1.6,SNR=6.5						
FITZ				LR	LR	16 45 15.2	
	comp=Z,24nm,18.9s,baz=348,slow=40						
H08S2	Diego Garcia H	29.27	260	T	T	17 02 29.0	
	baz=84,slow=76,SNR=20						
H08S3	Diego Garcia H	29.28	261	T	T	17 02 35.8	
	baz=84,slow=76,SNR=63						
H08S1	Diego Garcia H	29.29	260	T	T	17 02 21.0	
	baz=84,slow=76,SNR=8.1						
KNRA	Kununurra	29.37	116	P	P	16 32 42.7	-1.4
	baz=29,SNR=5.9						
KNRA	Kununurra	29.37	116	P	P	16 32 42.7	-1.4
KNRA				IAmb	IAmb	16 32 43.7	
	comp=Z,13nm,0.7s						
NWAO	Narrogin (SRO)	32.81	155	LR	LR	16 44 48.8	
	comp=Z,106nm,21.9s,baz=313,slow=33						
ODAN	Odare	33.08	336	eP	P	16 33 17.7	+0.8
	comp=Z,10nm,0.7s						
H01W3	Cape Leeuwin H	33.41	161	T	T	17 07 42.2	
	baz=339,slow=76,SNR=11						
H01W2	Cape Leeuwin H	33.42	161	T	T	17 07 32.6	
	baz=339,slow=76,SNR=12						
H01W1	Cape Leeuwin H	33.42	161	T	T	17 07 34.8	
	baz=339,slow=76,SNR=10						
RAMN	Ramite	33.48	335	eP	P	16 33 22.5	+2.1
WRKA	Warakurna	33.50	132	P	P	16 33 21.3	+0.9
	baz=34,SNR=12						
CD2	Chengdu	34.19	3	eP	P	16 33 26.1	-0.2
JIRN	Jiri	34.28	335	eP	P	16 33 27.9	+0.4
PKIN	Phulchoki	34.55	334	eP	P	16 33 30.3	+0.6
GUN	Gumba	34.63	335	eP	P	16 33 31.0	+0.5
	comp=Z,17nm,0.5s						
KKN	Kakani	34.78	334	eP	P	16 33 31.3	-0.3
KOLN	Koldanda	35.53	332	eP	P	16 33 38.8	+0.8
	comp=Z,26nm,0.8s						
WB0	Warramunga Arr	35.88	120	P	P	16 33 40.2	-0.8
WB0				IAmb	IAmb	16 33 41.7	
	comp=Z,16nm,0.9s						
WRA	Warramunga Arr	35.90	120	P	P	16 33 40.9	-0.3
	comp=Z,9.0nm,0.5s,baz=302,slow=8.9,SNR=180						
WRA				S	S	16 39 09.2	-6.4
	comp=Z,1.6nm,0.9s,baz=292,slow=16,SNR=6.4						
WRA	Warramunga Arr	35.90	120	P	P	16 33 40.3	-0.9
WRAB	Tennant Creek	35.91	120	P	P	16 33 40.3	-0.9
WB2	Warramunga Arr	35.91	120	P	P	16 33 40.3	-0.9
WB2				IAmb	IAmb	16 33 41.5	
	comp=Z,17nm,0.8s						
DANN	Dangsing	35.94	333	eP	P	16 33 41.5	-0.2
WR0	Warramunga Arr	36.08	120	P	P	16 33 42.2	-0.5
AS31	Alice Springs	37.13	126	P	P	16 33 50.5	-1.2
ASAR	Alice Springs	37.13	126	P	P	16 33 51.9	+0.2
	comp=Z,5.1nm,0.5s,baz=299,slow=7.4,SNR=141						
ASAR				S	S	16 39 32.2	-2.0
	comp=Z,1.6nm,0.9s,baz=293,slow=15,SNR=10						
ASAR				ScP	ScP	16 39 54.2	+0.7
	comp=Z,0.4nm,0.6s,baz=300,slow=3.1,SNR=4.2						
ASAR	Alice Springs	37.13	126	P	P	16 33 51.6	0.0
AS10	Alice Springs	37.15	126	P	P	16 33 52.1	+0.3
	baz=37						
XAN	Xi'an	37.88	10	P	P	16 33 56.9	-0.9
XAN				pP	pP	16 34 04.3	-8.1
XAN	Xi'an	37.88	10	P	P	16 33 56.8	-0.9
XAN				IAmb	IAmb	16 33 59.7	
	comp=Z,9.5nm,1.3s						
NJ2	Nanjing	38.89	24	eP	P	16 34 07.0	+0.8
LZH	Lanzhou	39.35	3	eP	P	16 34 13.9	+3.7
LZH				pP	sP	16 34 28.6	-2.9
LZH				sP	pP	16 34 34.7	+10
QIS	Mount Isa	40.73	118	P	P	16 34 21.5	-0.3
	baz=41,SNR=9.4						
BBOO	Buckleboo	43.53	136	P	P	16 34 45.2	+0.8
	baz=44,SNR=12						
BBOO	Buckleboo	43.53	136	P	P	16 34 44.9	+0.5
BBOO				IAmb	IAmb	16 36 18.0	
	comp=Z,49nm,1.8s						
MTSU	Mount Surprise	44.29	113	P	P	16 34 50.6	-0.1
	baz=44,SNR=4.4						
HHC	Hu-ho-hao-te	44.98	11	eP	P	16 34 57.9	+2.0
NIL	Nilore	45.56	326	P	P	16 34 59.8	-0.8
NIL				IAmb	IAmb	16 35 01.0	
	comp=Z,13nm,0.7s						
HTT	Hallett	45.87	135	P	P	16 35 04.5	+1.4
	baz=46,SNR=12						
QLP	Quilpie	46.84	124	P	P	16 35 11.7	+1.0
	baz=47,SNR=3.6						
STKA	Stephens Creek	47.02	132	P	P	16 35 13.2	+1.1
	baz=47,SNR=51						
STKA	Stephens Creek	47.02	132	P	P	16 35 13.1	+1.1
	comp=Z,17nm,0.6s,baz=308,slow=7.3,SNR=65						
STKA	Stephens Creek	47.02	132	P	P	16 35 12.9	+0.9
STKA				IAmb	IAmb	16 35 13.9	
	comp=Z,3.8nm,0.7s						
WMQ	Urumqi	48.65	347	eP	P	16 35 24.9	+0.4
WMQ				pP	pP	16 35 37.3	-2.3
WMQ				sP	sP	16 35 45.7	-0.5
WMQ	Urumqi	48.65	347	P	P	16 35 24.1	-0.5
WMQ				IAmb	IAmb	16 35 28.0	
	comp=Z,20nm,1.3s						
KSH	Kashi	48.80	334	P	P	16 35 24.6	-1.2
KSH				pP	pP	16 35 37.6	-3.2
CMSA	Cobar Meteorol	49.98	129	P	P	16 35 36.1	+1.2
	baz=50,SNR=43						
NRN	Naryn	50.36	335	P	P	16 35 36.7	-1.3
KDJ	Kajisay	50.46	336	P	P	16 35 38.7	+0.2
KDJ				IAmb	IAmb	16 35 51.5	
	comp=Z,7.3nm,0.8s						
SONM	Songino Array	51.20	4	P	P	16 35 44.5	+0.6
	comp=Z,1.8nm,0.7s,baz=182,slow=9.4,SNR=20						
SONM	Songino Array	51.20	4	P	P	16 35 44.1	+0.2
AAK	Ala-Archa	51.99	335	P	P	16 35 50.1	+0.2
EIDS	Eidsvold	52.27	120	P	P	16 35 52.9	+0.8
MK31	Makanchi Array	52.82	343	P	P	16 35 55.3	-0.5
MKAR	Makanchi Array	52.82	343	P	P	16 35 55.7	-0.1
	comp=Z,3.0nm,0.5s,baz=148,slow=8.1,SNR=36						
MKAR	Makanchi Array	52.82	343	P	P	16 35 55.1	-0.7
MAKZ	Makanchi	52.92	343	P	P	16 35 56.3	-0.3
YNG	Young	53.20	131	P	P	16 36 00.0	+1.1
	baz=53,SNR=5.4						
CAN	Canberra	54.08	132	P	P	16 36 06.6	+1.2
KKAR	Karatay Array	54.14	332	P	P	16 36 04.8	-0.8
ARMA	Armidale	54.28	125	P	P	16 36 09.1	+2.1
	baz=54,SNR=5.4						
ARMA	Armidale	54.28	125	P	P	16 36 06.1	-0.9
USA0B	Ussuriysk Arra	54.66	26	P	P	16 36 09.8	+0.5
USA0B				IAmb	IAmb	16 36 55.8	
	comp=Z,19nm,1.6s						
USRK	Ussuriysk Ar.	54.66	26	P	P	16 36 09.7	+0.4
	comp=Z,1.3nm,0.6s,baz=214,slow=4.9,SNR=9.0						
USRK	Ussuriysk Ar.	54.66	26	P	P	16 36 09.5	+0.2
KURK	Kurchatov	57.41	343	P	P	16 36 28.1	-0.6
KURK				IAmb	IAmb	16 36 29.0	
	comp=Z,2.9nm,0.7s						
GEYT	Alibeck	57.55	320	P	P	16 36 30.1	0.0
	comp=Z,1.3nm,0.5s,baz=205,slow=6.6,SNR=4.7						
GEYT	Alibeck	57.55	320	P	P	16 36 28.5	-1.6
ZAA0	Zalesovo Array	58.85	348	P	P	16 36 37.9	-0.9
ZAA0				IAmb	IAmb	16 36 41.7	
	comp=Z,3.9nm,0.7s						
ZALV	Zalesovo Beam	58.85	348	P	P	16 36 38.1	-0.7
	comp=Z,3.4nm,0.4s,baz=185,slow=5.8,SNR=20						
ZALV	Zalesovo Beam	58.85	348	P	P	16 36 37.8	-0.9
ABKAR	Akbulak array	63.64	331	P	P	16 37 10.3	-0.9
KMBO	Kilima Mbogo	64.33	270	P	P	16 37 18.9	+2.0
	comp=Z,0.9nm,0.6s,baz=40,slow=21,SNR=3.6						
KMBO	Kilima Mbogo	64.33	270	IAmb	IAmb	16 38 39.0	
	comp=Z,5.4nm,1.2s						
DZM	Mont Dzumac	65.43	113	P	P	16 37 22.9	-0.7
	comp=Z,3.0nm,0.5s,baz=190,slow=23,SNR=4.4						
DZM	Mont Dzumac	65.43	113	IAmb	IAmb	16 37 59.9	
	comp=Z,24nm,1.4s						
KBZ	Khabaz	70.42	319	P	P	16 37 54.8	+0.4
	comp=Z,4.0nm,0.7s,baz=110,slow=5.2,SNR=16						
BR131	Keskin Array S	75.45	312	P	P	16 38 23.8	-0.8
BR131				IAmb	IAmb	16 38 24.8	
	comp=Z,3.9nm,0.6s						
BRTR	Keskin Array B	75.45	312	P	P	16 38 24.0	-0.5
	comp=Z,3.2nm,0.6s,baz=135,slow=7.1,SNR=25						
BRTR	Keskin Array B	75.45	312	P	P	16 38 23.7	-0.8
BOSA	Boshof	76.39	242	P	P	16 38 31.5	+1.4
	comp=Z,2.6nm,0.7s,baz=127,slow=5.4,SNR=5.5						
BURAR	Bucovina Array	83.37	319	P	P	16 39 07.8	+0.4
KOLS	Kolonicke sedl	85.56	319	eP	P	16 39 19.6	+1.3
FINES	FINESS Array B	86.10	332	P	P	16 39 20.9	+0.3
	comp=Z,1.1nm,0.8s,baz=157,slow=12,SNR=2.9						
VYHS	Vyhne	87.74	319	eP	P	16 39 29.6	+0.6
ARCES	ARCESS Array B	88.34	340	P	P	16 39 31.8	+0.4
	comp=Z,3.0nm,0.9s,baz=54,slow=2.1,SNR=3.8						
PDAR	Pinedale Array	131.99	31	PKP	PKiKP	16 45 55.4	+0.4
	comp=Z,0.5nm,0.9s,baz=114,slow=2.3,SNR=3.4						
PDAR				SKPbc	SKPbc	16 49 14.0	-1.4
	comp=Z,0.7nm,0.7s,baz=180,slow=0.9,SNR=6.3						
BDFB	Brasilia	144.48	237	PKP	PKPdf	16 46 18.1	+0.8
	comp=Z,2.7nm,0.4s,baz=63,slow=3.4,SNR=3.7						
TX32	Lajitas Array	144.79	40		PKPab	16 46 15.6	-0.9
TXAR	Lajitas Array	144.79	40	PKP	PKPdf	16 46 17.6	+0.1
	comp=Z,1.1nm,0.7s,baz=254,slow=0.9,SNR=12						
TXAR				SKPbc	SKPbc	16 49 52.3	+0.1
	comp=Z,1.1nm,0.7s,baz=277,slow=1.0,SNR=10						
TXAR	Lajitas Array	144.79	40		PKPab	16 46 15.8	-0.7
TXAR					SKPbc	16 49 51.6	-0.7

ATH 12 16:38:20.8,38.32N×20.39E,h12km±1km,ML2.6/1,Error ellipse: s-maj=2.6km s-min=1.1km az=262.0
THE 12 16:38:21.1,38.20N×20.41E,h10km,ML2.1/5,Error ellipse: s-maj=0.9km s-min=0.4km az=243.0
ISC 12 16:38:20.9±1.2,38.21N±0.03×20.40E±0.05,h11km±5km, n27,σ0.35/49,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXRA	Lixouri, Kepha	0.03	102	P	Pg	16 38 23.0	0.0
LXRA				S	Sg	16 38 24.6	+0.2
CHV1	Chavriata, Kef	0.03	217	P	Pg	16 38 22.9	0.0
CHV1				S	Sg	16 38 24.4	0.0
LXR1	Lixouri, Cepha	0.03	100	P	Pg	16 38 23.0	+0.1
LXR1				S	Sg	16 38 24.6	+0.2
AGT1	Agia Thekli	0.05	341	P	Pg	16 38 23.0	-0.1
AGT1				S	Sg	16 38 24.2	-0.5
KEF4	Livadi, Kephal	0.06	18	P	Pg	16 38 23.1	0.0
KEF4				S	Sg	16 38 24.7	-0.1
ARGA	Argostoli. Kep	0.07	116	P	Pg	16 38 23.2	0.0
ARGA				S	Sg	16 38 25.2	+0.2
ARG2	Argostoli	0.07	112	P	Pg	16 38 23.5	+0.2
ARG2				S	Sg	16 38 25.1	0.0
KEF2	Argostoli. Kep	0.08	121	P	Pg	16 38 23.5	+0.2
KEF2				S	Sg	16 38 25.1	-0.1
KEF1	Kardakata, Kep	0.09	36	P	Pg	16 38 23.4	-0.1
KEF1				S	Sg	16 38 25.1	-0.3
VLS	Valsamata	0.15	101	P	Pg	16 38 24.4	0.0
VLS				S	Sg	16 38 27.0	+0.1
	3µm,0.1s						
VLS	Valsamata	0.15	101	P	Pg	16 38 24.4	0.0
VLS				S	Sg	16 38 26.8	-0.1
VLS				AML	AML	16 38 27.2	
	comp=N,4060µm,0.1s						
VLS				AML	AML	16 38 27.2	
	comp=E,7666µm,0.1s						
VSK1	VASILIKIADES	0.24	32	P	Pg	16 38 26.0	+0.1
VSK1				S	Sg	16 38 29.7	+0.4
	comp=E,1µm,0.0s						
KONA	Konidatara, Ke	0.26	31	P	Pg	16 38 26.2	0.0
KONA				S	Sg	16 38 29.9	+0.2
FSK	Fiskardo	0.28	26	P	Pg	16 38 26.6	-0.1
FSK				S	Sg	16 38 31.0	+0.4
FSK	Fiskardo	0.28	26	P	Pg	16 38 26.5	-0.1
FSK				S	Sg	16 38 31.1	+0.6
VLMS	Volimes, Zakyn	0.39	148	P	Pg	16 38 28.6	0.0
VLMS				S	Sg	16 38 34.6	+0.8
EVGI	Lefkada island	0.46	26	P	Pg	16 38 29.8	-0.2
EVGI				S	Sg	16 38 37.0	+0.9
EVGI	Lefkada island	0.46	26	P	Pg	16 38 29.5	-0.5
EVGI				S	Sg	16 38 36.6	+0.5
MGNA	Meganis	0.54	34	P	Pg	16 38 31.3	-0.2
LKD2	Lefkada island	0.62	19	P	Pg	16 38 33.0	+0.1
LKD2				S	Sb	16 38 41.8	-0.6
	comp=E,92nm,0.4s						
LKD2	Lefkada island	0.62	19	P	Pg	16 38 33.0	+0.1
RLS	Riolos of Patr	0.85	100	P	Pg	16 38 36.5	-0.8
RLS				S	Sb	16 38 49.0	-0.1
RLS	Riolos of Patr	0.85	100	P	Pg	16 38 36.5	-0.8
PVO	Paravola	0.97	65	P	Pg	16 38 39.6	-0.1
DRO	Drossia	1.06	103	P	Pb	16 38 41.3	0.0
DRO				S	Sn	16 38 56.4	-0.1
	comp=E,105nm,0.4s						
KLV	Kalavryta, Ach	1.39	96	P	Pn	16 38 46.0	-0.2
KLV				S	Sb	16 39 05.2	+0.6
	comp=E,22nm,1.3s						
KLV	Kalavryta, Ach	1.39	96	P	Pn	16 38 46.3	+0.1

NIED 12 16:39:00,28.10N×128.10E,h5km,Mw3.7 Best double couple: M_0 4.27000×10^{14} NP1:ϕ_s134.00000°,δ66.00000°, λ-45.00000°. NP2:ϕ_s245.00000°,δ50.00000°, λ-149.00000°.
JMA 12 16:39:32.3±0.2,28.10N×128.12E,h10km±3km,M3.6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	Tokunoshima	0.80	113	P	Pg	16 39 47.5	-0.2
JTK				eS	Sg	16 39 58.5	+0.4
JOKE	Okinoerabujima	0.84	151	P	Pg	16 39 48.5	0.0
JOKE				eS	Sg	16 39 59.5	+0.1
JAMN	Amaminishikomi	0.94	81	P	Pg	16 39 50.3	-0.1
JAMN				eS	Sg	16 40 02.5	-0.2
JIH	Iheya	1.07	187	P	Pg	16 39 52.3	-0.6
JIH				eS	Sg	16 40 06.5	-0.3
JYRO	Yoronjima	1.11	165	P	Pb	16 39 53.4	-0.2
JYRO				eS	Sb	16 40 08.5	+0.4
JOW	Kunigami	1.27	174	P	Pn	16 39 55.7	-0.4
JOW				eS	Sb	16 40 12.5	-0.2
JAM	Amami Oshima	1.35	76	P	Pn	16 39 57.2	+0.1
JAM				eS	Sb	16 40 14.4	-0.5
JTAJ	Takarajima	1.42	42	P	Pn	16 39 57.9	-0.2
JNTH	Nagotoyohara	1.58	183	P	Pn	16 40 00.3	0.0
JNTH				eS	Sn	16 40 20.5	-0.3
JZK	Kikaishima	1.65	82	P	Pb	16 40 03.1	+0.3
JJT3	Tamagusuku3	1.97	189	P	Pn	16 40 07.0	+1.2
JYAK	Yakushimahirau	2.98	44	eS	Sn	16 40 57.2	+1.7

IDC 12 16:41:15.9±1.3,24.89N×140.18E,h0km,mb3.6/3, mb1 3.8/4,mb1mx3.3/51,mbtmp3.8/4,ML4.6/1,Error ellipse: s-maj=62.8km s-min=24.6km az=102.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	2.84	39	Pn	Pn	16 42 02.7	+0.1
	90nm,0.3s,baz=230,slow=18,SNR=16						
JCJ				Sn	Sn	16 42 27.8	-10
	43nm,0.3s,baz=268,slow=22,SNR=5.8						
WRA	Warramunga Arr	44.92	188	P	P	16 49 32.9	+0.3
	0.4nm,0.3s,baz=7.2,slow=8.7,SNR=23						
ASAR	Alice Springs	48.65	188	P	P	16 50 01.1	-0.7
	0.2nm,0.7s,baz=8.1,slow=5.6,SNR=4.3						
FINES	FINESS Array B	79.12	333	P	P	16 53 22.1	0.0
	0.7nm,0.5s,baz=72,slow=4.5,SNR=6.1						

NEIC 12 17:18:22.7±1.4,30.42S±0.09×179.4W±0.2,h351km±8km, mb4.4/18,Error ellipse: s-maj=22.1km s-min=12.0km az=103.0
IDC 12 17:18:24.9±0.6,30.08S×179.48W,h360km±7km,mb4.0/6, mb1 4.0/7,mb1mx3.6/28,mbtmp4.7/7,Error ellipse: s-maj=18.5km s-min=15.9km az=20.0
ISC 12 17:18:23.1±0.5,30.46S±0.06×179.5W±0.1,h350km,n92, σ1.58/103,mb4.3/12,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.79	48	P	Pn	17 19 14.0	+1.0
GLKZ				S	S	17 19 50.4	-2.6
RIZ	Raoul Island	1.80	48	P	Pn	17 19 14.5	+1.4
RAO	Raoul Island	1.80	48	P	Pn	17 19 14.7	+1.7
	486nm,0.3s,baz=277,slow=23,SNR=23						
RAO				S	S	17 19 54.6	+1.5
	242nm,0.3s,baz=291,slow=23,SNR=3.6						
RAO	Raoul Island	1.80	48	Pn	Pn	17 19 12.5	-0.5
MXZ	Matakaoa Point	7.32	194	Pn	Pn	17 20 10.6	+1.5
MXZ	Matakaoa Point	7.32	194	P	Pn	17 20 11.8	+2.7
MXZ				S	S	17 21 33.1	-2.2
RUGZ	Raukumara Rang	7.85	197	P	Pn	17 20 16.9	+1.5
RUGZ				S	S	17 21 46.5	-0.5
URZ	Urewera	8.28	199	P	Pn	17 20 20.2	-0.2
	6.6nm,0.3s,baz=277,slow=4.1,SNR=68						
URZ				S	S	17 21 55.5	-0.6
	22nm,0.3s,baz=87,slow=22,SNR=25						
URZ	Urewera	8.28	199		Pn	17 20 21.4	+1.1
SNGZ	Shannon Statio	8.71	197	P	Pn	17 20 26.7	+1.2
SNGZ				S	S	17 22 05.5	0.0
RAHZ	Arahi	8.90	198	P	P	17 20 30.2	0.0
RAHZ				S	S	17 22 09.5	-0.3
WHHZ	Waihua	9.01	197	P	P	17 20 32.0	+0.6
ARHZ	Aropaoanui	9.25	197	P	P	17 20 34.2	+0.2
BKZ	Black Stump Fm	9.30	200	P	Pn	17 20 31.6	-0.9
BKZ	Black Stump Fm	9.30	200	P	Pn	17 20 32.0	-0.6
HIZ	Hauiti	9.30	209	P	P	17 20 35.8	+1.2
MCHZ	McNeill Hill	9.50	198	P	Pn	17 20 36.0	+1.1
KWHZ	Kaweka Forest	9.56	200	P	P	17 20 38.2	+0.7
CKHZ	Cape Kidnapper	9.60	196	P	Pn	17 20 36.6	+0.5
TUVZ	Tukino	9.66	203	P	Pn	17 20 36.9	0.0
TUVZ				S	S	17 22 23.7	-2.9
BHHZ	Black Hill Sta	9.72	201	P	Pn	17 20 37.7	+0.1
KAHZ	Kahuranaki	9.78	197	P	Pn	17 20 37.9	-0.4
KAHZ				S	S	17 22 25.7	-3.4
PXZ	Pawanui	10.01	196	P	Pn	17 20 37.1	-3.8
PXZ				S	S	17 22 28.6	-5.5
PNHZ	Pukenui	10.07	199	P	Pn	17 20 39.5	-2.3
PNHZ				P	S	17 22 32.5	-3.1
WPHZ	Waipukurau	10.15	198	P	Pn	17 20 41.0	-1.6
TSZ	Takapari Road	10.28	200	P	Pn	17 20 42.8	-1.5
PRHZ	Porangahau	10.29	197	P	Pn	17 20 43.2	-1.1
POWZ	Post Office Ro	10.64	200	P	Pn	17 20 49.2	+0.6
PRWZ	Pori Road	10.73	199	P	Pn	17 20 47.4	-2.2
BFZ	Birch Farm	10.78	198	P	Pn	17 20 49.0	-1.1
MSWZ	Moikau Station	11.74	200	P	Pn	17 21 00.1	-1.4
SNZO	South Karori	11.81	202	P	P	17 21 01.1	-1.3
BHW	Baring Head	11.85	201	P	P	17 21 01.8	-1.0
PLWZ	Palliser	11.88	200	P	P	17 21 02.6	-0.6
TUWZ	Tuamarina	12.18	204	P	P	17 21 05.0	-1.5
QRZ	Quartz Range	12.22	210	P	P	17 21 07.4	+0.5
CMWZ	Cape Campbell	12.37	203	P	Pn	17 21 09.3	+0.4
BSWZ	Blackbirch Sta	12.45	204	P	P	17 21 09.8	+0.3
THZ	Tophouse	12.85	207	P	P	17 21 13.0	-1.0
KHZ	Kahutara	13.19	203	P	P	17 21 17.4	-0.2
LTZ	Lake Taylor	13.96	206	P	P	17 21 26.8	+0.6
MQZ	McQueen's Vall	14.63	203	P	P	17 21 33.9	+0.5
DZM	Mont Dzumac	15.15	300	P	P	17 21 39.5	0.0
	0.1nm,0.3s,baz=77,slow=21,SNR=2.5						
DZM	Mont Dzumac	15.15	300	P	P	17 21 39.3	-0.2
DZM				IAmb	IAmb	17 22 37.6	
	comp=Z,20nm,1.3s						
RPZ	Rata Peaks	15.23	207	P	P	17 21 41.4	+1.4
	comp=Z,1.1nm,0.3s,baz=64,slow=4.0,SNR=5.1						
RPZ				S	S	17 24 21.8	-1.5
	comp=Z,1.4nm,0.3s,baz=284,slow=17,SNR=6.5						
RPZ	Rata Peaks	15.23	207	P	P	17 21 41.3	+1.3
RPZ				IAmb	IAmb	17 21 44.1	
	comp=Z,49nm,1.4s						
FOZ	Fox Glacier	15.59	210	P	P	17 21 44.6	+0.7
ODZ	Otahua Downs	16.51	205	P	P	17 21 54.6	+0.8
STKA	Stephens Creek	33.24	257	P	P	17 24 31.4	+2.8
	comp=Z,3.3nm,0.3s,baz=109,slow=14,SNR=18						
STKA	Stephens Creek	33.24	257	P	P	17 24 30.6	+2.0
RABL	Rabaul	37.41	309	P	P	17 25 04.4	+0.3
RABL				IAmb	IAmb	17 26 25.9	
	comp=Z,15nm,0.8s						
KRVT	Keravat (AS076	37.42	308	P	P	17 25 03.5	-0.6
	comp=Z,28nm,0.5s,baz=105,slow=0.5,SNR=12						
BBOO	Buckleboo	37.74	255	P	P	17 25 07.4	+0.8
BBOO				IAmb	IAmb	17 25 13.8	
	comp=Z,22nm,1.4s						
AS31	Alice Springs	41.85	268	P	P	17 25 40.0	-0.2
ASAR	Alice Springs	41.85	268	P	P	17 25 40.2	0.0
	comp=Z,1.8nm,0.5s,baz=104,slow=7.4,SNR=68						
ASAR	Alice Springs	41.85	268	P	P	17 25 40.0	-0.2
WR0	Warramunga Arr	42.66	273	P	P	17 25 46.5	-0.3
WB2	Warramunga Arr	42.83	273	P	P	17 25 47.2	-0.9
WB2				IAmb	IAmb	17 25 49.4	
	comp=Z,9.6nm,0.7s						
WRAB	Tennant Creek	42.84	273	P	P	17 25 47.9	-0.3
WRA	Warramunga Arr	42.84	273	P	P	17 25 47.9	-0.3
	comp=Z,3.3nm,0.3s,baz=111,slow=6.3,SNR=95						
WRA	Warramunga Arr	42.84	273	P	P	17 25 46.5	-1.7
WB0	Warramunga Arr	42.87	273	P	P	17 25 48.2	-0.2
WB0				IAmb	IAmb	17 25 49.6	
	comp=Z,9.3nm,0.6s						
FORT	Forrest	44.81	256	P	P	17 26 03.9	+0.3
KNRA	Kununurra	49.46	275	P	P	17 26 38.7	-0.5
KNRA				IAmb	IAmb	17 26 48.2	
	comp=Z,53nm,1.6s						
MORW	Morawa	55.31	254	P	P	17 27 21.7	+0.1
MORW				IAmb	IAmb	17 29 23.2	
	comp=Z,44nm,1.5s						
QSPA	South Pole Qui	59.65	180	P	P	17 27 54.9	+3.7
	comp=Z,11nm,0.6s,baz=313,slow=0.4,SNR=119						
QSPA	South Pole Qui	59.65	180	P	P	17 27 54.9	+3.7
QSPA				IAmb	IAmb	17 27 55.7	
	comp=Z,11nm,0.8s						
PMSA	Palmer Station	72.72	156	P	P	17 29 10.8	-2.4
SNAA	Sanae	78.12	179	P	P	17 29 45.8	+2.1
SNAA	Sanae	78.12	179	P	P	17 29 45.5	+1.8
VNA3	Neumayer Olymp	78.32	177	P	P	17 29 46.9	+2.2
VNA2	Neumayer--Watz	78.74	177	P	P	17 29 49.6	+2.6
VNA1	Neumayer--Stat	78.98	177	P	P	17 29 50.7	+2.4
PETK	Petropavlovsk-	85.57	346	P	P	17 30 21.4	-0.7
	comp=Z,5.7nm,0.9s,baz=279,slow=5.6,SNR=4.4						
MKAR	Makanchi Array	116.85	310		PKPdf	17 36 25.4	-0.7
	comp=Z,0.3nm,0.4s,baz=217,slow=0.9,SNR=11						
MKAR	Makanchi Array	116.85	310		PKPdf	17 36 25.1	-1.0
AAK	Ala-Archa	121.11	304	PKP	PKiKP	17 36 34.5	-0.2
	comp=Z,0.5nm,0.4s,baz=164,slow=7.4,SNR=4.3						
KKAR	Karatay Array	124.06	304		PKPdf	17 36 39.5	-0.6
ARCES	ARCESS Array B	138.38	347	PKhKP	PKPpre	17 36 58.9	
	comp=Z,3.7nm,0.9s,baz=35,slow=1.8,SNR=13						
ARCES				PKP	PKPdf	17 37 02.4	-3.8
	comp=Z,1.7nm,0.7s,baz=45,slow=1.7,SNR=7.4						
ARCES	ARCESS Array B	138.38	347		PKPpre	17 36 58.3	
KBZ	Khabaz	144.10	304	PKP	PKPdf	17 37 16.6	-0.6
	comp=Z,2.0nm,0.6s,baz=154,slow=3.7,SNR=8.1						
FIA1	FINESS Array S	144.76	339		PKPdf	17 37 17.5	-0.3
FINES	FINESS Array B	144.76	339	PKP	PKPbc	17 37 17.4	-0.3
	comp=Z,9.3nm,0.4s,baz=54,slow=4.1,SNR=116						
NB2	NORSAR Subarra	148.61	350	PKP	PKPbc	17 37 28.4	-0.1
	comp=Z,1.5nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.61	350	PKPbc	PKPbc	17 37 28.4	-0.1
	comp=Z,3.0nm,0.7s,baz=15,slow=4.2,SNR=9.5						
AKASG	Malin Array Be	150.58	322	PKPbc	PKiKP	17 37 33.5	-0.5
	comp=Z,2.0nm,0.4s,baz=47,slow=3.0,SNR=21						
AKBB	Malin Array Si	150.58	322		PKPdf	17 37 32.9	-0.6
BR131	Keskin Array S	151.52	298		PKiKP	17 37 36.3	-0.3
BRTR	Keskin Array B	151.52	298	PKPbc	PKPbc	17 37 36.0	-0.2
	comp=Z,1.1nm,0.4s,baz=139,slow=4.5,SNR=16						
BRTR				PKPab	PKPab	17 37 45.3	-0.9
	comp=Z,0.5nm,0.5s,baz=59,slow=3.9,SNR=3.4						
BRTR	Keskin Array B	151.52	298		PKPab	17 37 35.9	-0.3
TORD	Torodi Ar. Bea	162.74	184	PKPab	PKPab	17 38 36.6	+1.8
	comp=Z,2.2nm,0.7s,baz=173,slow=4.4,SNR=12						
TORD	Torodi Ar. Bea	162.74	184		PKPab	17 38 36.2	+1.4

TAP 12 17:27:03.6,25.41N×122.16E,h264km,ML3.7,C
JMA 12 17:27:05.2±0.3,25.32N×122.19E,h235km±4km,M3.6
ISC 12 17:27:04.1±2.4,25.30N±0.10×122.22E±0.05, h249km±13km,n80,σ0.75/144,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC

TWB1	**Santiao Chiao**	**0.36 217**	P	**Pn**	**17 27 37.2**	**+0.7**
	baz=189					
TIPB	**Shuangxi**	**0.48 228**	P	**Pn**	**17 27 37.1**	**+0.2**
	baz=213					
TIPB			S	**S**	**17 28 01.6**	**-0.9**
	baz=213					
YM11	**YM11**	**0.60 258**	*e*P	**Pn**	**17 27 37.4**	**+0.1**
	baz=244					
YM01	**YM01**	**0.61 256**	*e*P	**Pn**	**17 27 37.5**	**+0.2**
	baz=246					
YM01			S	**S**	**17 28 02.0**	**-1.2**
	baz=246					
YM10	**YM10**	**0.62 257**	*e*P	**Pn**	**17 27 37.5**	**+0.2**
	baz=239					
TWA	**Mucha**	**0.66 242**	*i* P	**Pn**	**17 27 37.9**	**+0.5**
	baz=230					
TWA			S	**S**	**17 28 03.0**	**-0.5**
	baz=230					
ILA	**Ilan**	**0.68 219**	*e*P	**Pn**	**17 27 38.5**	**+1.0**
	baz=207					
ILA			*e*S	**S**	**17 28 04.6**	**+0.9**
	baz=207					
NHDH	**Xindian Distri**	**0.71 243**	P	**Pn**	**17 27 38.2**	**+0.6**
	baz=230					
NHDH			S	**S**	**17 28 03.9**	**0.0**
	baz=230					
EOS1	**EOS1**	**0.75 187**	*e*P	**Pn**	**17 27 38.4**	**+0.7**
	baz=174					
EOS1			S	**S**	**17 28 04.3**	**+0.2**
	baz=174					
SLBB	**Yuanshan**	**0.76 225**	P	**Pn**	**17 27 38.5**	**+0.6**
	baz=214					
SLBB			S	**S**	**17 28 04.7**	**+0.3**
	baz=214					
TWC	**Suao**	**0.76 207**	P	**Pn**	**17 27 39.1**	**+1.3**
	baz=195					
TWC			*e*S	**S**	**17 28 04.2**	**-0.1**
	baz=195					
TWE	**Neicheng**	**0.76 222**	P	**Pn**	**17 27 38.5**	**+0.7**
	baz=210					
TWE			S	**S**	**17 28 05.0**	**+0.7**
	baz=210					
NWLT	**Wulai**	**0.83 232**	P	**Pn**	**17 27 38.3**	**+0.1**
	baz=213					
NWLT			*e*S	**S**	**17 28 04.7**	**-0.2**
	baz=213					
ENTT	**Nioudou**	**0.88 223**	*e*P	**Pn**	**17 27 39.0**	**+0.5**
	baz=213					
ENTT			*i* S	**S**	**17 28 05.2**	**-0.1**
	baz=213					
NDT	**Datong Townshi**	**0.94 223**	*e*P	**Pn**	**17 27 39.0**	**+0.2**
	baz=214					
NDT			S	**S**	**17 28 05.6**	**-0.3**
	baz=214					
ENA	**Nanau**	**0.97 207**	*e*P	**Pn**	**17 27 39.5**	**+0.7**
	baz=205					
ENA			*i* S	**S**	**17 28 06.9**	**+0.8**
	baz=205					
WLTB	**Daxi**	**0.98 244**	*e*P	**Pn**	**17 27 39.5**	**+0.7**
	baz=241					
WLTB			*e*S	**S**	**17 28 05.5**	**-0.7**
	baz=241					
YHNB	**Yeheng**	**0.99 231**	*e*P	**Pn**	**17 27 38.6**	**-0.5**
	baz=216					
YHNB			S	**S**	**17 28 05.0**	**-1.5**
	baz=216					
NCU	**National Centr**	**0.99 251**	*e*P	**Pn**	**17 27 39.2**	**+0.2**
	baz=237					
NSK	**Sanguang**	**1.00 232**	*e*P	**Pn**	**17 27 39.0**	**-0.1**
	baz=217					
NSK			S	**S**	**17 28 05.2**	**-1.3**
	baz=217					
NNS	**Nan Shan**	**1.15 222**	*e*P	**Pn**	**17 27 40.4**	**+0.3**
	baz=211					
NNS			S	**S**	**17 28 07.9**	**-0.4**
	baz=211					
NNSB	**Datong**	**1.15 222**	*e*P	**Pn**	**17 27 40.4**	**+0.3**
	baz=211					
NNSB			S	**S**	**17 28 07.7**	**-0.6**
	baz=211					
NNSH	**Datong**	**1.15 222**	*e*P	**Pn**	**17 27 40.4**	**+0.3**
	baz=210					
NNSH			S	**S**	**17 28 07.4**	**-0.9**
	baz=210					
HSN	**Hsinchu**	**1.24 247**	*e*P	**Pn**	**17 27 40.1**	**-0.4**
	baz=240					
NACB	**Ninganchiao**	**1.25 207**	*e*P	**Pn**	**17 27 40.3**	**-0.3**
	baz=201					
NACB			*e*S	**S**	**17 28 08.4**	**-0.8**
	baz=201					
LIOB	**Emei**	**1.27 240**	P	**Pn**	**17 27 41.0**	**+0.3**
	baz=230					
LIOB			S	**S**	**17 28 08.7**	**-0.7**
	baz=230					
ETLH	**Xiulin Townshi**	**1.28 212**	*e*P	**Pn**	**17 27 41.0**	**+0.2**
	baz=200					
ETLH			S	**S**	**17 28 09.2**	**-0.5**
	baz=200					
NSTT	**Nanjuang**	**1.29 239**	P	**Pn**	**17 27 41.1**	**+0.3**
	baz=231					
NSTT			S	**S**	**17 28 09.2**	**-0.4**
	baz=231					
TWD	**Chiawan**	**1.34 205**	*e*P	**Pn**	**17 27 40.6**	**-0.6**
	baz=205					
TWD			*e*S	**S**	**17 28 09.2**	**-1.0**
	baz=205					
TWT	**Tachien**	**1.41 223**	*e*P	**Pn**	**17 27 43.3**	**+1.4**
	baz=217					
TDCB	**Techi**	**1.42 223**	P	**Pn**	**17 27 42.5**	**+0.6**
	baz=216					
TDCB			S	**S**	**17 28 11.5**	**0.0**
	baz=216					
WHF	**Hehuan Shan**	**1.44 217**	*e*P	**Pn**	**17 27 43.2**	**+0.9**
	baz=211					
WHF			S	**S**	**17 28 13.2**	**+0.8**
	baz=211					
WHP	**Taichung City**	**1.54 229**	*e*P	**Pn**	**17 27 43.2**	**+0.4**
	baz=223					
WHP			*e*S	**S**	**17 28 12.2**	**-0.9**
	baz=223					
CHGB	**Renai**	**1.56 218**	*e*P	**Pn**	**17 27 43.9**	**+0.8**
	baz=212					
CHGB			*e*S	**S**	**17 28 14.2**	**+0.7**
	baz=212					
NSY	**Sanyi**	**1.59 237**	P	**Pn**	**17 27 43.8**	**+0.8**
	baz=233					
NSY			*e*S	**S**	**17 28 13.1**	**-0.5**
	baz=233					
TWQ1	**Liyutan**	**1.62 235**	P	**Pn**	**17 27 43.8**	**+0.5**
	baz=234					
TWQ1			*e*S	**S**	**17 28 13.1**	**-1.0**
	baz=234					
OWD	**Renai**	**1.64 216**	*e*P	**Pn**	**17 27 44.3**	**+0.7**
	baz=204					
OWD			S	**S**	**17 28 15.2**	**+0.5**
	baz=204					
ESL	**Shilin**	**1.64 206**	*e*P	**Pn**	**17 27 43.5**	**+0.1**
	baz=203					
IRIF	**Iriomote-Funau**	**1.67 125**	P	**Pn**	**17 27 43.9**	**+0.3**
IRIF			S	**S**	**17 28 13.9**	**-0.8**
WDJ	**Dajia District**	**1.72 237**	*e*P	**Pn**	**17 27 44.3**	**+0.3**
	baz=236					
DPDB	**Guoxing**	**1.72 223**	*e*P	**Pn**	**17 27 44.3**	**+0.2**
	baz=222					
DPDB			*e*S	**S**	**17 28 14.6**	**-1.0**
	baz=222					
VWDT	**VWDT**	**1.82 213**	*e*P	**Pn**	**17 27 46.2**	**+1.3**
	baz=204					
TYC	**Yuchr**	**1.86 222**	P	**Pn**	**17 27 45.9**	**+0.7**
	baz=220					
TYC			S	**S**	**17 28 17.5**	**-0.2**
	baz=220					
HATJ	**Hateruma jima**	**1.90 130**	P	**Pn**	**17 27 46.8**	**+1.3**
HATJ			*e*S	**S**	**17 28 18.1**	**0.0**
SSLB	**Suanglung**	**1.90 218**	*e*P	**Pn**	**17 27 46.0**	**+0.5**
	baz=218					
SSLB			*e*S	**S**	**17 28 17.6**	**-0.7**
	baz=218					
JKRS	**Kuro-shima**	**1.94 123**	P	**Pn**	**17 27 46.8**	**+0.9**
JKRS			S	**S**	**17 28 18.4**	**-0.3**
HGSD	**Ruisui**	**1.94 202**	*e*P	**Pn**	**17 27 46.9**	**+1.0**
	baz=201					
EHY	**Hungye**	**1.96 205**	*e*P	**Pn**	**17 27 46.1**	**0.0**
	baz=200					
JIJ	**Ishigaki jima**	**1.98 118**	P	**Pn**	**17 27 46.7**	**+0.5**
JIJ			S	**S**	**17 28 18.0**	**-1.4**
WNT	**Mingjian**	**1.99 225**	P	**Pn**	**17 27 47.5**	**+1.2**
	baz=225					
WJS	**Zhushan**	**2.00 223**	*e*P	**Pn**	**17 27 47.2**	**+0.7**
	baz=218					
WJS			*e*S	**S**	**17 28 19.9**	**0.0**
	baz=218					
JISG	**Ishigakijimahi**	**2.02 110**	P	**Pn**	**17 27 47.3**	**+0.7**
JISG			*e*S	**S**	**17 28 19.1**	**-1.0**
WHYT	**Xinyi Township**	**2.02 218**	*e*P	**Pn**	**17 27 47.3**	**+0.5**
	baz=217					
WHYT			S	**S**	**17 28 19.8**	**-0.6**
	baz=217					
YULB	**Yu-li**	**2.07 204**	*e*P	**Pn**	**17 27 46.9**	**-0.3**
	baz=200					
YULB			*e*S	**S**	**17 28 19.1**	**-2.0**
	baz=200					
TWF1	**Yuli**	**2.11 204**	*e*P	**Pn**	**17 27 47.9**	**+0.4**
	baz=202					
TWF1			*e*S	**S**	**17 28 19.5**	**-2.2**
	baz=202					
YUS	**Yu-Shan**	**2.14 213**	*e*P	**Pn**	**17 27 49.4**	**+1.0**
	baz=216					
YUS			*e*S	**S**	**17 28 22.9**	**-0.2**
	baz=216					
ALS	**Alishan**	**2.20 216**	*e*P	**Pn**	**17 27 49.5**	**+0.8**
	baz=216					
ALS			S	**S**	**17 28 23.7**	**-0.1**
	baz=216					
CHN5	**Tsauling**	**2.20 220**	*e*P	**Pn**	**17 27 49.1**	**+0.7**
	baz=215					
CHN5			S	**S**	**17 28 23.1**	**-0.3**
	baz=215					
WGK	**Gukeng**	**2.20 224**	*e*P	**Pn**	**17 27 49.1**	**+0.7**
	baz=224					
WGK			*e*S	**S**	**17 28 23.0**	**-0.2**
	baz=224					
WDLH	**Douliu**	**2.22 224**	*e*P	**Pn**	**17 27 48.6**	**+0.1**
	baz=224					
WDLH			*e*S	**S**	**17 28 22.6**	**-0.9**
	baz=224					
FULB	**Fuli**	**2.25 202**	P	**Pn**	**17 27 49.4**	**+0.4**
	baz=200					
FULB			*e*S	**S**	**17 28 23.9**	**-0.3**
	baz=200					
JTJ	**Tarama**	**2.34 106**	P	**Pn**	**17 27 50.7**	**+1.0**
JTJ			S	**S**	**17 28 24.2**	**-1.4**
ELDTW	**Lidau**	**2.37 208**	*e*P	**Pn**	**17 27 51.0**	**+0.9**
	baz=207					
ELDTW			*e*S	**S**	**17 28 26.0**	**-0.4**
	baz=207					
CHY	**Chiayi**	**2.43 223**	*e*P	**Pn**	**17 27 50.5**	**0.0**
	baz=223					
CHN4	**Tsaushan**	**2.44 218**	*e*P	**Pn**	**17 27 51.7**	**+1.0**
	baz=213					
CHN4			S	**S**	**17 28 27.3**	**-0.2**
	baz=213					
TPUB	**Ta-pu**	**2.46 217**	*e*P	**Pn**	**17 27 51.2**	**+0.2**
	baz=216					
TPUB			*e*S	**S**	**17 28 27.2**	**-0.7**
	baz=216					
STYT	**Tauyuan**	**2.51 213**	*e*P	**Pn**	**17 27 51.9**	**+0.5**
	baz=208					
WTP	**Ta-pu**	**2.51 216**	*e*P	**Pn**	**17 27 52.0**	**+0.5**
	baz=216					
WTP			*e*S	**S**	**17 28 28.3**	**-0.6**
	baz=216					
TWK	**Hsinying**	**2.57 218**	P	**Pn**	**17 27 52.3**	**+0.3**
	baz=213					
TWK			S	**S**	**17 28 29.6**	**-0.2**
	baz=213					
SNST	**Tainan City**	**2.60 218**	P	**Pn**	**17 27 52.6**	**+0.3**
	baz=216					
CHN1	**Nanshi**	**2.61 217**	P	**Pn**	**17 27 52.3**	**-0.1**
	baz=215					
CHN1			S	**S**	**17 28 30.0**	**-0.6**
	baz=215					
SGST	**Jiashian**	**2.66 215**	*e*P	**Pn**	**17 27 53.5**	**+0.5**
	baz=215					
SGST			S	**S**	**17 28 31.4**	**-0.2**
	baz=215					
SLGT	**Liugui**	**2.71 212**	*e*P	**Pn**	**17 27 54.4**	**+0.9**
	baz=213					
SLGT			*e*S	**S**	**17 28 33.2**	**+0.8**
	baz=213					
JIRB	**Irabujima**	**2.71 99**	P	**Pn**	**17 27 54.3**	**+0.9**
JIRB			S	**S**	**17 28 31.1**	**-1.3**
JIKM	**Ikemajima**	**2.77 97**	P	**Pn**	**17 27 54.0**	**0.0**
JIKM			S	**S**	**17 28 32.7**	**-0.7**
JMJ2	**Miyako jima3**	**2.87 100**	P	**Pn**	**17 27 56.2**	**+1.1**
JMJ2			*e*S	**S**	**17 28 34.7**	**-0.7**
SSD	**Sandimen**	**2.92 210**	P	**Pn**	**17 27 56.6**	**+0.8**
	baz=206					
SSD			*e*S	**S**	**17 28 35.2**	**-1.4**
	baz=206					
ECL	**Taimali**	**2.93 204**	*e*P	**Pn**	**17 27 56.5**	**+0.7**
	baz=205					
ECL			*e*S	**S**	**17 28 35.3**	**-1.3**
	baz=205					
JOGS	**Gusukube**	**2.94 100**	*e*S	**S**	**17 28 36.2**	**-0.4**
MASBT	**Mashibuluo**	**3.04 209**	*e*P	**Pn**	**17 27 57.6**	**+0.6**
	baz=205					
MASBT			*e*S	**S**	**17 28 37.7**	**-1.1**
	baz=205					

WEL 12 17:34:06.0±1.0,**36°S**±9°×**18°0E**±°,**h196**km±7km,**M4.0**/45, **mB4.3**/3,**MLv4.1**/45,**Mw(mB)3.4**/3,**Off east coast of North Island**

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.98 211**	P	Pn	17 34 42.6	-1.3
MXZ			S	Sn	17 35 10.2	-3.3
WMGZ	**Waiomatatini S**	**2.16 205**	P	Pn	17 34 46.0	+0.1
WMGZ			S	Sn	17 35 17.9	+0.8
PKGZ	**Pakihiroa**	**2.35 211**	P	Pn	17 34 47.7	-0.3
PKGZ			S	Sn	17 35 20.2	-0.7
HAZ	**Te Kaha**	**2.37 217**	P	Pn	17 34 48.2	+0.1
PUZ	**Puketiti**	**2.44 205**	P	Pn	17 34 48.9	-0.1
PUZ			S	Sn	17 35 22.8	+0.2
RUGZ	**Raukumara Rang**	**2.59 216**	P	Pn	17 34 51.2	+0.4
CNGZ	**Carnagh Statio**	**2.83 202**	P	Pn	17 34 54.1	+0.7
WHRZ	**Whale Island**	**2.88 226**	P	Pn	17 34 54.6	+0.5
TKGZ	**Te Karaka**	**2.92 208**	P	Pn	17 34 54.4	0.0
MWZ	**Matawai**	**2.96 213**	P	Pn	17 34 54.8	-0.1
URZ	**Urewera**	**3.10 219**	P	Pn	17 34 55.8	-0.8
OPRZ	**Ohinepanea**	**3.13 230**	P	Pn	17 34 56.2	-0.7
RAGZ	**Rawiri**	**3.14 213**	P	Pn	17 34 57.1	-0.1
MARZ	**Manawahe**	**3.15 227**	P	Pn	17 34 56.9	-0.3
RIGZ	**Rimuhau**	**3.18 207**	P	Pn	17 34 57.5	0.0
TGRZ	**Tauranga**	**3.25 234**	P	Pn	17 34 57.9	-0.4
PRGZ	**Paritu Road**	**3.33 203**	P	Pn	17 35 00.4	+1.0
TARZ	**Mount Tarawera**	**3.41 225**	P	Pn	17 35 01.1	+0.7
SNGZ	**Shannon Statio**	**3.41 211**	P	Pn	17 35 00.5	+0.2
MUGZ	**Murupara**	**3.44 220**	P	Pn	17 35 00.1	-0.6
RTZ	**Ruatahuna**	**3.44 216**	P	Pn	17 35 00.1	-0.6
RRRZ	**Republican Roa**	**3.48 224**	P	Pn	17 35 01.3	+0.2
KNZ	**Kokohu**	**3.49 205**	P	Pn	17 35 00.9	-0.4
MHGZ	**Mahia Peninsul**	**3.54 202**	P	Pn	17 35 02.3	+0.4
RAHZ	**Arahi**	**3.63 212**	P	Pn	17 35 03.4	+0.3
PRRZ	**Plateau Road**	**3.66 223**	P	Pn	17 35 03.5	+0.2
MTHZ	**Maungataniwha**	**3.69 215**	P	Pn	17 35 03.8	-0.1
WHHZ	**Waihua**	**3.71 210**	P	Pn	17 35 04.5	+0.6
ALRZ	**Allen Road**	**3.73 223**	P	Pn	17 35 04.4	+0.2
TOZ	**Tahuroa Road**	**3.77 239**	P	Pn	17 35 04.2	-0.5
MRHZ	**Matea Rd**	**3.89 220**	P	Pn	17 35 06.1	-0.2
NMHZ	**Naumai**	**3.91 214**	P	Pn	17 35 07.0	+0.5
ARHZ	**Aropaoanui**	**3.96 211**	P	Pn	17 35 07.5	+0.4
WHTZ	**Whakaora**	**4.02 225**	P	Pn	17 35 08.9	+0.9
TLZ	**Tolley Road**	**4.06 232**	P	Pn	17 35 08.6	+0.2
BKZ	**Black Stump Fm**	**4.11 216**	P	Pn	17 35 08.5	-0.5
WATZ	**Wairara**	**4.18 226**	P	Pn	17 35 10.3	+0.5
MCHZ	**McNeill Hill**	**4.24 212**	P	Pn	17 35 11.2	+0.6
RATZ	**Rangitukua**	**4.26 224**	P	Pn	17 35 11.5	+0.5
CKHZ	**Cape Kidnapper**	**4.27 207**	P	Pn	17 35 12.2	+1.2
RITZ	**Rihia Road**	**4.29 223**	P	Pn	17 35 11.6	+0.4
KAHZ	**Kahuranaki**	**4.47 208**	P	Pn	17 35 13.6	+0.1
WTVZ	**West Tongariro**	**4.54 223**	P	Pn	17 35 14.6	+0.1
KRHZ	**Kereru**	**4.55 213**	P	Pn	17 35 13.5	-1.0
BHHZ	**Black Hill Sta**	**4.57 217**	P	Pn	17 35 14.3	-0.5
NGZ	**Ngauruhoe**	**4.57 223**	P	Pn	17 35 15.4	+0.4
TWVZ	**Taurewa**	**4.59 225**	P	Pn	17 35 15.4	+0.2
HIZ	**Hauiti**	**4.61 234**	P	Pn	17 35 16.0	+0.8
MOVZ	**Moawhango**	**4.66 220**	P	Pn	17 35 15.5	-0.5
PXZ	**Pawanui**	**4.68 207**	P	Pn	17 35 15.6	-0.5
PNHZ	**Pukenui**	**4.84 213**	P	Pn	17 35 17.4	-0.9
WPHZ	**Waipukurau**	**4.87 210**	P	Pn	17 35 18.5	-0.1
VRZ	**Vera Road**	**5.03 228**	P	Pn	17 35 21.0	+0.4
TSZ	**Takapari Road**	**5.07 213**	P	Pn	17 35 19.7	-1.4
DVHZ	**Dannevirke**	**5.18 210**	P	Pn	17 35 21.9	-0.6
ANWZ	**Angora Road**	**5.20 207**	P	Pn	17 35 22.9	+0.2
WAZ	**Wanganui**	**5.32 222**	P	Pn	17 35 23.7	-0.6
PRWZ	**Pori Road**	**5.47 210**	P	Pn	17 35 27.0	+0.7
BFZ	**Birch Farm**	**5.47 208**	P	Pn	17 35 25.8	-0.5
TIWZ	**Tintock**	**5.70 210**	P	Pn	17 35 28.4	-0.8

IDC 12 17:41:00.3±3.2,**25.89N**×**95.33E**,**h133**km±32km,**mb3.0**/4, **mb1 3.1**/5,**mb1mx2.8**/61,**mbtmp3.3**/5,**Error ellipse: s-maj=58.0km s-min=16.4km az=66.0,Myanmar-India border region**

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.12 155**	P	Pn	17 42 54.4	-1.1
	0.2nm,0.3s,baz=330,slow=13,SNR=12					
CMAR			S	Sn	17 44 28.1	+2.3
	0.1nm,0.3s,baz=218,slow=34,SNR=3.1					
SONM	**Songino Array**	**23.57 19**	P	P	17 45 58.7	-0.2
	0.2nm,0.6s,baz=189,slow=7.3,SNR=3.1					
BVAR	**Borovoye Array**	**32.91 332**	P	P	17 47 22.0	+0.2
	0.8nm,0.4s,baz=101,slow=9.1,SNR=12					
WRA	**Warramunga Arr**	**59.26 136**	P	P	17 50 47.7	-0.3
	0.2nm,0.4s,baz=320,slow=7.6,SNR=7.5					
ASAR	**Alice Springs**	**61.81 140**	P	P	17 51 05.6	+0.2
	0.1nm,0.4s,baz=321,slow=6.6,SNR=11					

IDC 12 17:43:31.7±5.2,**36.52N**×**82.50E**,**h0**km,**mb3.1**/1, **mb1 3.3**/5,**mb1mx3.1**/50,**mbtmp3.3**/5,**ML3.0**/4,**Error ellipse: s-maj=67.8km s-min=29.8km az=21.0,Southern Xinjiang**

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**8.69 317**	Pn	Pn	17 45 41.6	+2.8
	0.1nm,0.3s,baz=180,slow=20,SNR=1.8					
AAK			Pg	Pg	17 46 09.2	-9.0
	0.2nm,0.3s,baz=160,slow=13,SNR=3.9					
AAK			Lg	Lg	17 48 06.0	
	0.2nm,0.3s,baz=315,slow=19,SNR=4.0					
MKAR	**Makanchi Array**	**10.27 359**	Pn	Pn	17 45 59.7	-0.6
	0.3nm,0.3s,baz=185,slow=12,SNR=14					
MKAR			Sn	Sn	17 47 56.8	+0.6
	0.1nm,0.3s,baz=184,slow=25,SNR=4.4					
ZALV	**Zalesovo Beam**	**17.51 5**	P	P	17 47 38.0	-0.3
	0.1nm,0.3s,baz=185,slow=13,SNR=4.3					
BVAR	**Borovoye Array**	**18.57 337**	P	P	17 47 49.9	-0.1
	0.1nm,0.3s,baz=137,slow=7.4,SNR=4.9					
SONM	**Songino Array**	**20.92 50**	P	P	17 48 15.6	-0.3
	0.8nm,0.9s,baz=243,slow=6.3,SNR=5.7					

*MOS **12** 18:00:05.9±1.3,35.86N×82.35E,h10km,mb4.5/17,Error ellipse: s-maj=8.0km s-min=4.3km az=115.7*

*IDC **12** 18:00:06.0±0.6,35.67N×82.17E,h0km,mb4.1/17, mb1 4.3/20,mb1mx4.1/48,mbtmp4.2/20,ML3.8/3,MS3.7/26, Ms1 3.7/26,ms1mx3.5/50,Error ellipse: s-maj=19.4km s-min=11.3km az=42.0*

*NEIC **12** 18:00:08.1±1.5,35.84N±0.08×82.36E±0.09,h18km±5km, mb4.5/20,Error ellipse: s-maj=11.9km s-min=10.2km az=214.0*

*BJI **12** 18:00:08.1±0.0,35.93N×82.39E,h4km,mB4.6/14, mb4.2/23,ML4.7/7,Ms4.3/22,Ms7 4.0/19*

*NNC **12** 18:00:12.3±3.0,36.42N×82.41E,h0km,mb4.8,mpv4.6, Error ellipse: s-maj=26.1km s-min=20.1km az=129.0*

ISC 12 18:00:08.1±0.4,**35.84N**±0.05×**82.36E**±0.05,**h10**km,**n193**, σ**1§99**/182,**mb4.3**/43,**MS3.7**/29,**26C-10D,Xizang**

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOSI	**Joshimath**	**5.77 205**	*e*P	**Pn**	**18 01 37.1**	**+3.1**
DHRM	**DHARAMSHALA**	**6.18 236**	*e*P	**Pn**	**18 01 43.9**	**+4.4**
KSH	**Kashi**	**6.25 308**	Pn	**Pn**	**18 01 41.0**	**+0.5**
KSH			Sn	**Sn**	**18 02 49.3**	**-2.8**
KSH			smax	smax		
	comp=N,940nm,1.0s					
KSH			smax	smax		
	comp=E,2μm,0.9s					
PRZ	**Przheval'sk**	**7.31 336**		**Pn**	**18 01 54.9**	**-0.1**
PRZ	**Przheval'sk**	**7.31 336**	P	**Pn**	**18 01 54.9**	**-0.1**
KDJ	**Kajisay**	**7.46 329**		**Pn**	**18 01 55.7**	**-1.4**
KDJ	**Kajisay**	**7.46 329**	P	**Pn**	**18 01 55.7**	**-1.4**
NRN	**Naryn**	**7.48 320**		**Pn**	**18 01 56.8**	**-0.7**
NRN	**Naryn**	**7.48 320**	P	**Pn**	**18 01 56.8**	**-0.7**
DANN	**Dangsing**	**7.56 171**	*e*P	**Pn**	**18 01 57.4**	**-1.3**
	53nm,0.9s					
NIL	**Nilore**	**7.81 256**		**Pn**	**18 02 00.2**	**-1.6**
NIL	**Nilore**	**7.81 256**	P	**Pn**	**18 02 00.2**	**-1.6**
GKN	**Gorkha**	**8.05 165**	*e*P	**Pn**	**18 02 04.8**	**-0.4**
KOLN	**Koldanda**	**8.12 172**	*e*P	**Pn**	**18 02 05.6**	**-0.6**
	72nm,1.0s					
KZA	**Kyzart**	**8.33 320**	P	**Pn**	**18 02 11.0**	**+1.8**
	SNR=10					
MDOK	**Medeo**	**8.38 332**	⇑Pn	**Pn**	**18 02 08.6**	**-1.1**
	35nm,1.1s					
MDOK			⇑Pg	Pb	18 02 37.3	+4.0
	44nm,0.8s					
MDOK			⇓Lg	Lg	18 04 24.1	
	281nm,1.0s					
MDOK	**Medeo**	**8.38 332**	P	**Pn**	**18 02 08.6**	**-1.1**
GUN	**Gumba**	**8.46 158**	*e*P	**Pn**	**18 02 11.3**	**+0.4**
	111nm,0.9s					
KNDC	**Almaty**	**8.46 332**	⇑Pg	**Pb**	**18 02 36.9**	**+2.3**
	42nm,0.8s					
KNDC			⇑Lg	Lg	18 04 28.2	
	709nm,1.4s					
DMN	**Daman**	**8.54 163**	*e*P	**Pn**	**18 02 11.2**	**-0.8**
	34nm,0.6s					
PKIN	**Phulchoki**	**8.64 162**	*e*P	**Pn**	**18 02 13.7**	**+0.3**
	21nm,0.5s					
PKI	**Pulchoki**	**8.64 162**	*e*P	**Pn**	**18 02 13.3**	**-0.2**
	53nm,0.9s					
JIRN	**Jiri**	**8.78 157**	*e*P	**Pn**	**18 02 16.9**	**+1.4**
	91nm,0.8s					
UCH	**Uchtor**	**8.82 319**	P	**Pn**	**18 02 16.1**	**0.0**
	SNR=17					
KBK	**Karagaybulak**	**8.90 322**	P	**Pn**	**18 02 17.5**	**+0.6**
	SNR=19					
WMQ	**Urumqi**	**8.96 26**	*e*P	**Pn**	**18 02 15.6**	**-2.0**
WMQ			smax	smax		
	comp=N,69nm,1.5s					
WMQ			smax	smax		
	comp=E,58nm,1.3s					
WMQ	**Urumqi**	**8.96 26**	P	**Pn**	**18 02 16.2**	**-1.4**
WMQ	**Urumqi**	**8.96 26**	P	**Pn**	**18 02 16.2**	**-1.4**
AAK	**Ala-Archa**	**9.12 320**	Pn	**Pn**	**18 02 20.0**	**+0.2**
	0.5nm,0.3s,baz=144,slow=11,SNR=37					
AAK			Pg		18 02 51.6	
	1.2nm,0.3s,baz=127,slow=11,SNR=5.2					
AAK			Lg	Lg	18 04 55.4	
	1.4nm,0.3s,baz=266,slow=16,SNR=5.3					
AAK			LR	LR	18 06 03.3	
	comp=Z,279nm,18.1s,baz=126,slow=39					
AAK	**Ala-Archa**	**9.12 320**	P	**Pn**	**18 02 22.0**	**+2.1**
	SNR=13					
AAK	**Ala-Archa**	**9.12 320**	⇑Pn	**Pn**	**18 02 20.8**	**+0.9**
	14nm,0.8s					
AAK			⇓Pg		18 02 53.7	
	43nm,0.9s					
AAK			Lg	Lg	18 04 49.6	
	243nm,1.1s					
AAK	**Ala-Archa**	**9.12 320**		**Pn**	**18 02 20.2**	**+0.4**
AAK	**Ala-Archa**	**9.12 320**	c*e*P	**Pn**	**18 02 20.1**	**+0.2**
AAK			pmax	pmax		
	comp=Z,17nm,1.0s					
ARSB	**Arslanbob**	**9.15 310**		**Pn**	**18 02 19.1**	**-1.1**
ARSB	**Arslanbob**	**9.15 310**	P	**Pn**	**18 02 19.2**	**-1.1**
FRU1	**Bishkek**	**9.18 322**	Pn	**Pn**	**18 02 21.3**	**+0.7**
FRU1	**Bishkek**	**9.18 322**	P	**Pn**	**18 02 21.3**	**+0.7**
AML	**Almayashu**	**9.21 316**	P	**Pn**	**18 02 20.7**	**-0.6**
	SNR=14					
CHMS	**Chumysh**	**9.26 323**	⇓Pn	**Pn**	**18 02 22.4**	**+0.8**
	comp=Z,5.3nm,0.8s					
CHMS			⇓Lg	Lg	18 04 52.8	
	comp=Z,91nm,1.2s					
CHMS	**Chumysh**	**9.26 323**	*i* P	**Pn**	**18 02 22.4**	**+0.8**
CHMS			pmax	pmax		
	comp=Z,5.0nm,0.8s					
EKS2	**Erkin-Say**	**9.52 318**	P	**Pn**	**18 02 27.7**	**+2.5**
	SNR=29					

RAMN Ramite 9.57 157 eP Pn 18 02 25.8 -0.4
comp=Z,92nm,0.9s
LSA Lhasa 9.60 127 P Pn 18 02 33.0 +6.2
LSA pP 18 02 36.0
LSA pmax pmax
comp=Z,10.0nm,1.1s
LSA LR LR
comp=Z,1µm,7.8s
LSA LR LR
comp=Z,1µm,9.3s
LSA LR LR
comp=Z,1µm,7.8s
LSA Lhasa 9.60 127 Pn 18 02 25.4 -1.4
LSA Lhasa 9.60 127 P Pn 18 02 25.4 -1.4
TAPN Taplejung 9.62 150 eP Pn 18 02 26.9 +0.1
comp=Z,36nm,1.0s
ODAN Odare 9.93 153 eP Pn 18 02 30.9 -0.2
comp=Z,140nm,1.0s
BTK Batken 10.04 298 Pn 18 02 30.7 -1.7
BTK Batken 10.04 298 P Pn 18 02 30.7 -1.7
MK31 Makanchi Array 10.94 360 Pn Pn 18 02 42.7 -1.9
comp=Z,27nm,0.7s,baz=178,slow=13,SNR=410
MK31 ⇑Sn Sn 18 04 41.8 -5.3
comp=Z,27nm,0.8s,baz=183,slow=23,SNR=5.8
MK31 ⇑Lg Lg 18 05 44.7
comp=Z,22nm,0.8s
MK31 Makanchi Array 10.94 360 Pn 18 02 42.7 -1.9
MK31 Makanchi Array 10.94 360 P Pn 18 02 42.7 -1.9
MKAR Makanchi Array 10.94 360 Pn Pn 18 02 43.5 -1.2
comp=Z,5.5nm,0.3s,baz=182,slow=13,SNR=345
MKAR Sn Sn 18 04 45.4 -1.7
comp=Z,2.7nm,0.3s,baz=188,slow=24,SNR=6.3
MKAR Lg Lg 18 05 59.8
comp=Z,0.5nm,0.3s,baz=173,slow=28,SNR=2.2
MKAR LR LR 18 07 45.4
comp=Z,350nm,18.9s,baz=174,slow=41
MKAR Makanchi Array 10.94 360 Pn 18 02 42.6 -2.1
MKAR Makanchi Array 10.94 360 P Pn 18 02 42.6 -2.1
MAKZ Makanchi 10.96 359 ⇑Pn Pn 18 02 42.9 -2.0
comp=Z,60nm,0.6s
MAKZ ⇑Sn Sn 18 04 37.3 -10
comp=Z,14nm,0.6s
MAKZ Makanchi 10.96 359 Pn 18 02 42.9 -2.0
MAKZ Makanchi 10.96 359 P Pn 18 02 42.9 -2.0
KBL Kabul 10.98 267 Pn Pn 18 02 45.6 +0.2
KBL Kabul 10.98 267 P Pn 18 02 45.6 +0.2
TAS Tashkent 11.59 302 Pn 18 02 53.0 -0.6
TAS Tashkent 11.59 302 P Pn 18 02 53.0 -0.6
KK31 Karatay Array 11.67 312 ⇑Pn Pn 18 02 51.7 -3.0
comp=Z,1.6nm,0.6s,baz=124,slow=13,SNR=12
KK31 ⇑Pg 18 03 38.7
comp=Z,5.4nm,0.8s,baz=126,slow=16,SNR=4.5
KK31 ⇑Lg Lg 18 06 09.3
comp=Z,62nm,1.2s
KK31 Karatay Array 11.67 312 Pn 18 02 53.7 -0.9
KK31 Karatay Array 11.67 312 P Pn 18 02 53.7 -0.9
KKAR Karatay Array 11.67 312 Pn 18 02 52.5 -2.1
KKAR Karatay Array 11.67 312 P Pn 18 02 53.3 -1.4
KKAR Karatay Array 11.67 312 P Pn 18 02 52.5 -2.1
SHL Shillong 13.11 139 Pn Pn 18 03 11.6 -2.9
SHL Shillong 13.11 139 P Pn 18 03 11.6 -2.9
GTA Gaotai 14.28 70 eP P 18 03 38.0 +0.2
GTA pP Pn 18 03 42.2 +12
GTA sP 18 03 45.4
GTA pmax pmax
comp=Z,3.0nm,0.8s
GTA pmax pmax
comp=Z,130nm,5.2s
GTA LR LR
comp=Z,280nm,10.0s
GTA LR LR
comp=Z,610nm,10.0s
GTA LR LR
comp=Z,590nm,11.0s
KURBB Kurchatov Arra 15.03 351 Pn Pn 18 03 36.6 -3.8
comp=Z,0.1nm,0.3s,baz=172,slow=12,SNR=18
KURBB Sn Sn 18 06 30.7 +3.9
comp=Z,0.1nm,0.3s,baz=223,slow=52,SNR=3.1
KURBB Lg Lg 18 08 11.7
baz=182,slow=28,SNR=4.9
KURK Kurchatov 15.11 351 Pn 18 03 37.0 -4.5
KURK IAmb IAmb 18 03 50.1
comp=Z,29nm,1.2s
KURK Kurchatov 15.11 351 i P Pn 18 03 37.3 -4.2
HRA Herat 16.53 271 Pn 18 03 57.9 -2.3
LZH Lanzhou 17.39 83 eP Pn 18 04 09.9 -1.1
LZH pP P 18 04 13.4 +1.1
LZH sP pP 18 04 16.4 -0.2
LZH pmax pmax
comp=Z,18nm,1.2s
ZAA0 Zalesovo Array 18.18 5 Pn 18 04 16.3 -4.2
ZAA0 IAmb IAmb 18 04 24.2
comp=Z,35nm,1.0s
ZALV Zalesovo Beam 18.18 5 P Pn 18 04 16.6 -3.8
comp=Z,1.0nm,0.3s,baz=191,slow=12,SNR=61
ZALV LR LR 18 12 08.1
comp=Z,179nm,18.7s,baz=183,slow=39
ZALV Zalesovo Beam 18.18 5 Pn 18 04 16.0 -4.5
ZALV Zalesovo Beam 18.18 5 P Pn 18 04 16.0 -4.5
BVAR Borovoye Array 19.14 338 P Pn 18 04 31.3 -0.9
comp=Z,0.8nm,0.3s,baz=139,slow=9.8,SNR=45
BVAR Lg Lg 18 10 24.5
comp=Z,0.1nm,0.3s,baz=138,slow=33,SNR=5.0
BRVK Borovoye 19.20 337 P Pn 18 04 31.6 -1.2
BRVK IAmb IAmb 18 04 36.8
comp=Z,25nm,0.8s
BRVK Borovoye 19.20 337 P Pn 18 04 31.6 -1.2
BRVK pmax pmax
comp=Z,25nm,0.9s
GEYT Alibeck 19.49 283 P P 18 04 33.1 -2.2
comp=Z,0.2nm,0.3s,baz=98,slow=11,SNR=18
GEYT LR LR 18 14 03.9
comp=Z,147nm,18.5s,baz=40,slow=43
GEYT Alibeck 19.49 283 P P 18 04 33.3 -2.0
GYA0B ALIBECK ARRAY 19.49 283 P P 18 04 34.1 -1.2
GYA0B IAmb IAmb 18 04 43.6
comp=Z,15nm,1.0s
KMI Kunming 20.52 116 P P 18 04 44.2 -2.4
KMI IAmb IAmb 18 05 04.2
comp=Z,13nm,1.0s
KMI Kunming 20.52 116 P P 18 04 44.3 -2.4
KMI pmax pmax
comp=Z,13nm,1.0s
MOY Mondy 20.67 34 eP Pn 18 04 50.8 +0.4
MOY pmax pmax
comp=Z,54nm,2.1s
ZAK Zakamensk 20.98 40 eP P 18 04 51.5 +0.1
ZAK pmax pmax
comp=Z,12nm,1.0s
ABKAR Akbulak array 21.17 316 P P 18 04 51.6 -1.7
SONM Songino Array 21.45 49 P P 18 04 57.2 +0.7
comp=Z,45nm,0.8s,baz=242,slow=8.9,SNR=82
SONM LR LR 18 13 47.8
comp=Z,328nm,18.4s,baz=225,slow=38
SONM Songino Array 21.45 49 P P 18 04 56.8 +0.3
SONM Songino Array 21.45 49 P P 18 04 56.8 +0.3
SONM pmax pmax
comp=Z,38nm,0.9s
XAN Xi'an 21.83 87 P P 18 05 08.0 +7.4
XAN pmax pmax
comp=Z,5.0nm,1.4s
XAN pmax pmax
comp=Z,67nm,6.7s
XAN LR LR
comp=Z,420nm,12.4s
XAN LR LR
comp=Z,240nm,12.4s
XAN LR LR
comp=Z,430nm,15.3s
ULN Ulaanbaatar 21.86 49 P P 18 05 01.4 +0.4
ULN Ulaanbaatar 21.86 49 P P 18 05 01.4 +0.4
ULN pmax pmax
comp=Z,80nm,1.0s
TLY Talaya 21.94 37 P P 18 05 04.4 +2.8
comp=Z,1.7nm,0.4s,baz=257,slow=11,SNR=6.8
TLY LR LR 18 14 24.0
comp=Z,258nm,18.8s,baz=230,slow=39
TLY Talaya 21.94 37 P P 18 05 00.2 -1.4
TLY Talaya 21.94 37 eP P 18 05 04.7 +3.1
TLY pmax pmax
comp=Z,16nm,1.4s
TLY MLR MLR
comp=Z,747nm,18.0s
CHTO Chiang Mai 22.41 135 P P 18 05 06.3 -0.6
CHTO Chiang Mai 22.41 135 P P 18 05 06.3 -0.6
CHTO pmax pmax
comp=Z,4.0nm,0.9s
IRK Irkutsk 22.59 37 eP P 18 05 11.6 +3.0
IRK e 18 10 09.8
IRK pmax pmax
comp=Z,36nm,2.5s
CM31 Chiang Mai Arr 22.69 135 P P 18 05 09.4 -0.5
CMAR Chiang Mai Arr 22.69 135 P P 18 05 10.0 +0.1
comp=Z,3.0nm,0.8s,baz=313,slow=10,SNR=27
GYA Guiyang 22.76 107 P P 18 05 16.8 +6.1
GYA pmax pmax
comp=Z,10.0nm,1.0s
AKTO Aktyubinsk 22.84 317 P P 18 05 10.6 -0.7
comp=Z,3.2nm,0.7s,baz=110,slow=10,SNR=13
AKTO LR LR 18 15 04.3
comp=Z,257nm,18.5s,baz=126,slow=39
HHC Hu-ho-hao-te 23.39 69 eP P 18 05 16.2 -0.8
HHC pmax pmax
comp=Z,6.0nm,1.0s
HHC pmax pmax
comp=Z,93nm,5.5s
WSAR Wadi Sarin 24.09 245 LR LR 18 17 04.1
comp=Z,111nm,18.6s,baz=68,slow=43
SVE Sverdlovsk 25.59 332 eP P 18 05 38.7 +1.6
SVE pmax pmax
comp=Z,15nm,1.4s
ARU Arti 26.14 329 P P 18 05 41.2 -0.9
comp=Z,1.3nm,0.6s,baz=152,slow=7.4,SNR=6.9
ARU LR LR 18 16 54.1
comp=Z,113nm,19.2s,baz=108,slow=38
ARU Arti 26.14 329 P P 18 05 41.4 -0.7
ARU IAmb IAmb 18 05 49.6
comp=Z,6.3nm,0.8s
ARU Arti 26.14 329 c iP P 18 05 44.2 +2.1
ARU S S 18 10 11.5 -2.0
ARU pmax pmax
comp=Z,13nm,1.4s
WHN Wuhan 27.21 92 P P 18 05 55.3 +3.2
PALK Pallekele 28.48 183 LR LR 18 17 59.5
comp=Z,80nm,19.6s,baz=352,slow=38
QIZ Qiongzhong 29.44 117 P P 18 06 10.8 -1.3
QIZ S S 18 11 06.1 -0.2
QIZ LR LR
comp=Z,290nm,11.0s
QIZ LR LR
comp=Z,290nm,11.8s
QIZ LR LR
comp=Z,220nm,11.2s
GNI Garni 29.81 290 LR LR 18 21 35.2
comp=Z,70nm,18.1s,baz=121,slow=43
KBZ Khabaz 31.10 297 LR LR 18 20 54.0
comp=Z,137nm,18.8s,baz=88,slow=40
KIV Kislovodsk 31.25 297 eP P 18 06 32.2 +4.2
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,246nm,15.0s
SOC Sochi 33.41 297 eP P 18 06 48.3 +1.6
SOC e 18 07 55.2
SOC eS S 18 12 04.3 -3.5
SOC eSS SnSn 18 14 12.5 +3.6
SOC MLR MLR
comp=Z,157nm,15.0s
PRGR Permogore 34.60 330 eP P 18 06 52.4 -4.4
PRGR pmax pmax
comp=Z,10.0nm,1.2s
PSI Prapat 36.28 151 P P 18 07 10.6 -1.3
comp=Z,1.7nm,0.4s,baz=141,slow=22,SNR=2.5
PSI LR LR 18 25 49.0
comp=Z,48nm,18.4s,baz=3.5,slow=42
KSRS Korea Array 36.32 74 LR LR 18 23 56.1
comp=Z,101nm,19.1s,baz=287,slow=39
OBN Obninsk 36.62 316⇓eP P 18 07 20.1 +5.9
OBN e 18 07 22.9
OBN pmax pmax
comp=Z,4.0nm,0.7s
OBN MLR MLR
comp=Z,127nm,21.0s
KLMR Klimovskoe 36.87 326 eP P 18 07 16.6 +0.3
KLMR pmax pmax
comp=Z,16nm,1.4s
KLMR Klimovskoe 36.87 326 eP P 18 07 16.6 +0.3
KLMR AMP 18 07 24.6
comp=Z,16nm,1.4s
KLR Kul'dur 38.10 54 P P 18 07 29.5 +2.5
comp=Z,2.4nm,0.8s,baz=272,slow=8.8,SNR=6.1
KLR Kul'dur 38.10 54 i P P 18 07 32.4 +5.5
KLR pmax pmax
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 38.33 291 P P 18 07 29.1 -0.1
comp=Z,1.2nm,0.8s,baz=70,slow=6.7,SNR=6.1
BRTR Keskin Array B 38.33 291 P P 18 07 28.8 -0.4
BRTR Keskin Array B 38.33 291 i P P 18 07 32.7 +3.6
BRTR pmax pmax
comp=Z,1.0nm,0.7s
USRK Ussuriysk Ar. 38.41 62 LR LR 18 24 46.1
comp=Z,176nm,18.5s,baz=271,slow=38
YAK Yakutsk 39.30 33 i P P 18 07 38.2 +1.4
YAK pmax pmax
comp=Z,5.0nm,0.5s
AKASG Malin Array Be 40.55 308 P P 18 07 46.1 -1.2
comp=Z,0.2nm,0.4s,baz=78,slow=6.6,SNR=5.9
AKASG LR LR 18 27 27.7
comp=Z,137nm,19.5s,baz=160,slow=40
GRNR Gornyy 41.13 51 eP P 18 07 48.8 -3.4
GRNR MLR MLR
comp=Z,90nm,15.0s
VRI Vrincioaia 42.48 301 ⇑P P 18 08 02.5 -0.8
VRI Vrincioaia 42.48 301 ⇑P P 18 08 02.5 -0.8
PLOR Plostina 42.53 301 ⇑P P 18 08 06.2 +2.4
PLOR Plostina 42.53 301 ⇑P P 18 08 06.2 +2.4
MLR Muntele Rosu 43.07 301 ⇑P P 18 08 08.3 +0.1
MLR Muntele Rosu 43.07 301 ⇑P P 18 08 08.3 +0.1
TIXI Tiksi 43.10 20 i P P 18 08 11.7 +3.7
TIXI pmax pmax
comp=Z,2.0nm,1.1s
FINES FINESS Array B 43.28 324 P P 18 08 08.9 -0.6
comp=Z,2.5nm,0.7s,baz=99,slow=12,SNR=5.0
FINES FINESS Array B 43.28 324 P P 18 08 08.2 -1.3
FINES FINESS Array B 43.28 324 P P 18 08 08.2 -1.3
BURAR Bucovina Array 43.32 304 ⇑P P 18 08 16.7 +6.5
BURAR Bucovina Array 43.32 304 P P 18 08 08.7 -1.5
BURAR Bucovina Array 43.32 304 ⇑P P 18 08 16.7 +6.5
VOIR 43.70 301 ⇑P P 18 08 13.7 +0.4
VOIR 43.70 301 ⇑P P 18 08 13.7 +0.4
MNAI Manna 44.41 150 P P 18 08 18.1 -1.0
comp=Z,162nm,2.3s
MJAR Matsushiro Arr 44.53 72 LR LR 18 30 30.7
comp=Z,46nm,18.5s,baz=270,slow=41
STKI Sintang 44.73 136 P P 18 08 21.6 0.0
comp=Z,12nm,1.0s
MDSI Maura Dua 45.03 148 P P 18 08 24.3 +0.3
comp=Z,2.8nm,1.1s
TRPA Tarpa 45.05 305 ⇑P P 18 08 32.1 +8.2
TPI Tanjungpandan 45.10 143 P P 18 08 24.9 +0.3
comp=Z,13nm,1.0s
DRGR 45.12 303 ⇓P P 18 08 24.9 +0.4
DRGR 45.12 303 ⇓P P 18 08 24.9 +0.4
GZR Gura Zlata 45.29 301 ⇓P P 18 08 23.1 -2.8
ARCES ARCESS Array B 45.41 336 P P 18 08 28.1 +1.6
comp=Z,4.4nm,0.9s,baz=98,slow=7.5,SNR=6.7
ARCES LR LR 18 29 19.2
comp=Z,85nm,18.4s,baz=173,slow=38
KLSI 45.45 148 P P 18 08 27.4 0.0
comp=Z,5.2nm,2.6s
BZS Buzias 46.06 302 ⇓P P 18 08 28.3 -3.6
BZS Buzias 46.06 302 ⇓P P 18 08 28.3 -3.6
NIE Niedzica 46.36 307 P P 18 08 37.7 +3.4
DBJI Dramaga 48.00 146 P P 18 08 46.2 -1.2
comp=Z,10nm,0.6s
SKJI Sukabumi 48.32 147 P P 18 08 48.1 -1.7
comp=Z,76nm,1.1s
LEM Lembang 48.64 146 LR LR 18 34 26.8
comp=Z,62nm,19.4s,baz=246,slow=42
BRG Berggiesshubel 50.18 310 eP P 18 09 07.3 +3.6
BRG pmax pmax
comp=Z,7.0nm,1.2s
NB2 NORSAR Subarra 50.43 323 P P 18 09 04.7 -0.8
comp=Z,1.1nm,0.6s,baz=86,slow=7.4
NOA NORSAR Array B 50.43 323 P P 18 09 04.9 -0.6
comp=Z,1.5nm,0.7s,baz=86,slow=7.5,SNR=6.9
NOA LR LR 18 32 40.3
comp=Z,66nm,18.7s,baz=230,slow=39
GERES GERESS Array B 50.73 307 P P 18 09 08.1 +0.1
comp=Z,2.0nm,0.9s,baz=70,slow=4.4,SNR=8.2
GERES LR LR 18 31 52.4
comp=Z,156nm,18.6s,baz=85,slow=38
GERES GERESS Array B 50.73 307 P P 18 09 06.6 -1.4
PETK Petropavlovsk- 53.91 46 LR LR 18 33 48.6
comp=Z,62nm,18.6s,baz=248,slow=37
BILL Bilibino 55.07 27⇑iP P 18 09 42.9 +3.3
BILL e 18 09 49.0
BILL 18 10 46.0
BILL 18 11 44.0
BILL pmax pmax
comp=Z,3.0nm,1.3s
BILL MLR MLR
comp=Z,127nm,17.0s
KMBO Kilima Mbogo 55.81 239 LR LR 18 33 07.5
comp=Z,36nm,20.4s,baz=98,slow=36
SUMG Summit 64.50 343 P P 18 10 46.0 +1.1
SUMG Summit 64.50 343 P P 18 10 46.1 +1.1
SUMG pmax pmax
comp=Z,23nm,1.6s
IMAR Indian Mountai 69.73 21 P P 18 11 17.1 -0.7
NEA Nenana 72.11 21 P P 18 11 34.3 +2.1
NEA IAmb IAmb 18 11 35.5
comp=Z,6.5nm,0.8s
ILAR Eielson Array 72.58 20 P P 18 11 36.8 +1.7
comp=Z,1.8nm,0.8s,baz=313,slow=5.0,SNR=15
ILAR LR LR 18 49 45.2
comp=Z,64nm,18.1s,baz=300,slow=41
RIDG Independent Ri 73.94 20 P P 18 11 42.4 -0.8
WB0 Warramunga Arr 74.05 129 P P 18 11 43.1 -1.2
WB0 IAmb IAmb 18 11 44.5
comp=Z,8.4nm,0.9s
WRA Warramunga Arr 74.15 130 P P 18 11 44.1 -0.8
comp=Z,5.2nm,0.9s,baz=325,slow=5.9,SNR=20
WRAB Tennant Creek 74.15 130 P P 18 11 44.0 -0.9
WRAB Tennant Creek 74.15 130 P P 18 11 44.0 -0.9
WB2 Warramunga Arr 74.16 130 P P 18 11 43.8 -1.1
WB2 IAmb IAmb 18 11 45.2
comp=Z,8.2nm,1.0s
WR0 Warramunga Arr 74.29 129 P P 18 11 44.9 -0.8
TORD Torodi Ar. Bea 74.92 275 P P 18 11 49.5 -0.1
comp=Z,1.1nm,0.8s,baz=49,slow=4.7,SNR=6.4
TORD LR LR 18 50 49.1
comp=Z,31nm,20.6s,baz=325,slow=41
ASAR Alice Springs 76.67 132 P P 18 11 58.6 -0.7
comp=Z,3.3nm,0.9s,baz=314,slow=5.5,SNR=29
ASAR Alice Springs 76.67 132 P P 18 11 58.4 -0.9
YKA Yellowknife Ar 81.05 8 P P 18 12 22.7 -0.1
comp=Z,1.6nm,0.7s,baz=339,slow=5.3,SNR=14
YKA Yellowknife Ar 81.05 8 i P P 18 12 26.1 +3.2
YKA pmax pmax
comp=Z,2.0nm,0.7s
STKA Stephens Creek 87.29 133 LR LR 19 01 25.3
comp=Z,34nm,18.7s,baz=211,slow=42

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*GCG **12** 18:00:29.7±0.5, 13°.40N×93°.26W, h50km±999km, MD4.5*
*UCR **12** 18:00:33.2±3.6, 15°.48N×92°.68W, h20km±999km, ML3.8, mb4.2(NEIC)*
*SNET **12** 18:00:33.2±3.6, 15°.43N×92°.66W, h15km±999km, ML4.2*
*IDC **12** 18:00:39.6±0.9, 13°.78N×92°.24W, h0km, mb4.2/8, mb1 4.5/13, mb1mx4.1/36, mbtmp4.2/13, ML4.0/5, MS3.6/13, Ms1 3.6/13, ms1mx3.4/31, Error ellipse: s-maj=19.0km s-min=14.9km az=8.0*
*MEX **12** 18:00:43.1±0.8, 13°.79N×92°.32W, h11km±114km, MD4.4*
*NEIC **12** 18:00:45.2±2.7, 13°.89N±0°.07×92°.23W±0°.06, h38km±4km, mb4.5/56, Md4.4/21(MEX), Error ellipse: s-maj=10.4km s-min=7.9km az=217.0*
ISC 12 18:00:40.8±0.6, 13°.79N±0°.05×92°.36W±0°.04, h10km, n138, σ1ş71/146, mb4.6/31, MS3.5/12, Off coast of Chiapas

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
THIG 1.11 5 Pb 18 01 01.3 -0.9
THIG Sb 18 01 15.2 -1.6
THIG 1.11 5 eP Pb 18 01 01.3 -0.9
THIG eS Sb 18 01 15.2 -1.6
STG3 Santiaguito 3, 1.19 40 eP Pb 18 01 03.1 -0.5
FUG Fuego 3 1.61 66 eP Pn 18 01 09.6 0.0
PCG Pacaya 1.80 70 eP Pn 18 01 12.9 +0.7
IXG Ixpaco 1.90 78 eP Pn 18 01 12.6 -0.9
IXG Ixpaco 1.90 78 eP Pn 18 01 13.4 -0.1
IXG Ixpaco 1.90 78 eP Pn 18 01 12.6 -0.9
PCIG 2.08 337 Pn 18 01 14.8 -0.9
PCIG 2.08 337 eP Pn 18 01 14.8 -0.9
NBG Las Nubes 2.11 68 eP Pn 18 01 18.2 +1.7
APG El Apazote 2.20 56 Pn Pn 18 01 18.6 +1.0
47nm,0.3s,baz=235,slow=6.6,SNR=287
APG Lg Lg 18 01 46.4
122nm,0.3s,baz=338,slow=19,SNR=8.8
CCIG Comitan 2.49 5 Pn 18 01 23.4 +1.9
CCIG Comitan 2.49 5 Pn 18 01 23.9 +2.4
CCIG Sn 18 01 55.2 +3.1
CCIG Comitan 2.49 5 eP Pn 18 01 23.9 +2.4
CCIG eS Sn 18 01 55.2 +3.1
RTR El Retiro 2.64 87 eP Pn 18 01 26.0 +2.4
RTR El Retiro 2.64 87 eP Pn 18 01 26.0 +2.4
SBLS San Blas 2.66 89 eP Pn 18 01 25.1 +1.1
SBLS San Blas 2.66 89 eP Pn 18 01 25.1 +1.1
SNJE San Jose 2.68 88 eP Pn 18 01 24.7 +0.5
SNJE San Jose 2.68 88 eP Pn 18 01 24.7 +0.5
MTO3 Montecristo 2.97 78 eP Pn 18 01 28.4 +0.1
MTO3 eS Sn 18 02 04.3 +0.2
MTO3 IAML 18 02 10.6
comp=Z,116nm,0.7s
MTO3 Montecristo 2.97 78 eP Pn 18 01 28.4 +0.1
MTO3 eS Sn 18 02 04.3 +0.2
MTO3 IAML 18 02 10.6
comp=Z,116nm,0.7s
BOQS Boqueron 2.99 91 eP Pn 18 01 29.0 +0.5
SNET Serv Nac Est T 3.04 92 Pn Pn 18 01 28.2 -0.9
TGIG 3.06 346 Pn 18 01 30.6 +1.3
TGIG 3.06 346 eP Pn 18 01 30.6 +1.3
LFU La Fuente 3.15 90 eP Pn 18 01 31.4 +0.7
LFU La Fuente 3.15 90 eP Pn 18 01 31.4 +0.7
LFRS El Faro 3.21 93 eP Pn 18 01 32.1 +0.6
TECA Tecapa 3.76 94 eP Pn 18 01 41.3 +2.2
TECA Tecapa 3.76 94 eP Pn 18 01 41.3 +2.2
CMIG Matias Romero 4.08 324 Pn Pn 18 01 44.5 +1.1
comp=Z,4.8nm,0.3s,baz=129,slow=10,SNR=35
CMIG Sn Sn 18 02 39.4 +8.1
comp=Z,9.0nm,0.3s,baz=67,slow=18,SNR=9.8
CMIG Matias Romero 4.08 324 Pn 18 01 43.6 +0.2
CMIG Matias Romero 4.08 324 eP Pn 18 01 43.6 +0.2
HUIG Huatulco 4.12 299 Pn 18 01 44.6 +0.6
HUIG Sn 18 02 26.4 -5.9
HUIG Huatulco 4.12 299 i P Pn 18 01 44.6 +0.6
HUIG i S Sn 18 02 26.4 -5.9
CNCH Conchagua 4.43 96 eP Pn 18 01 50.9 +2.6
CNCH eS Sb 18 02 53.4 +0.9
CNCH IAML 18 02 56.4
comp=Z,691nm,0.5s
CNCH Conchagua 4.43 96 eP Pn 18 01 50.9 +2.6
CNCH eS Sb 18 02 53.4 +0.9
CNCH IAML 18 02 56.4
comp=Z,691nm,0.5s
TGUH Tegucigalpa,Un 4.95 86 Pn 18 01 56.0 +0.6
PEIG Puerto Escondi 5.12 296 i P Pn 18 01 58.6 +0.9
VHO Vista Hermosa 5.33 308 eP Pn 18 02 03.1 +2.4
VHO i S Sn 18 02 57.2 -5.1
ESTN Estel 5.87 96 Pn 18 02 07.4 -0.6
PNIG Pinotepa 6.14 296 Pn 18 02 13.2 +1.5
PNIG Sn 18 03 20.6 -1.5
PNIG Pinotepa 6.14 296 eP Pn 18 02 13.2 +1.5
PNIG i S Sn 18 03 20.6 -1.5
TLIG Tlapa 7.06 303 Pn Pn 18 02 28.4 +4.0
TEIG Tepich 7.50 31 Pn Pn 18 02 30.8 +0.6
comp=Z,17nm,0.3s,baz=150,slow=0.5,SNR=50
TEIG Sn Sn 18 03 53.0 -2.4
comp=Z,3.0nm,0.3s,baz=320,slow=20,SNR=4.0
TEIG Tepich 7.50 31 Pn 18 02 30.3 +0.1
TEIG Tepich 7.50 31 eP Pn 18 02 30.4 +0.1
ESPN Las Esperanzas 8.02 100 Pn Pn 18 02 39.3 +1.9
JTS Las Juntas de 8.04 115 Pn Pn 18 02 36.3 -1.5
comp=Z,1.1nm,0.3s,baz=9.8,slow=20,SNR=2.3
JTS Sn Sn 18 04 09.3 +0.5
comp=Z,0.9nm,0.3s,baz=255,slow=22,SNR=1.7
JTS Lg Lg 18 04 41.8
comp=Z,1.0nm,0.3s,baz=114,slow=23,SNR=7.4
JTS Las Juntas de 8.04 115 Pn Pn 18 02 39.1 +1.3
TX32 Lajitas Array 18.68 328 P P 18 05 02.1 +2.7
TXAR Lajitas Array 18.68 328 P P 18 05 02.0 +2.7
comp=Z,0.1nm,0.3s,baz=156,slow=11,SNR=23
TXAR LR LR 18 12 53.1

comp=Z,46nm,18.1s,baz=0.0,slow=39
TXAR Lajitas Array 18.68 328 P P 18 05 01.9 +2.5
TX31 Lajitas Ar. Si 18.68 328 P P 18 05 02.1 +2.7
Z41A Richland Creek 19.38 359 P P 18 05 07.2 +0.3
Z41A IAmb IAmb 18 05 14.0
comp=Z,24nm,1.1s
ROSC El Rosal 19.89 115 P P 18 05 14.8 +1.8
comp=Z,0.8nm,0.3s,baz=33,slow=23,SNR=4.5
ROSC El Rosal 19.89 115 IAmb IAmb 18 05 17.7
comp=Z,12nm,1.1s
FLOC Florencia 20.50 125 P P 18 05 19.1 -0.2
RUSC La Rusia 20.54 111 P P 18 05 17.1 -3.1
MIAR Mount Ida 20.69 357 P P 18 05 20.6 -0.6
MIAR IAmb IAmb 18 05 28.8
comp=Z,12nm,0.9s
X37A Clayton 20.89 353 P P 18 05 23.6 +0.3
X37A IAmb IAmb 18 05 53.0
comp=Z,28nm,1.3s
X48A Hartselle 21.13 12 P P 18 05 24.6 -1.2
X48A IAmb IAmb 18 06 08.6
comp=Z,76nm,1.9s
MNTX Cornudas Mount 21.45 328 P P 18 05 30.8 +1.4
WMOK Wichita Mounta 21.65 346 P P 18 05 31.9 +0.4
W35A Tecumseh 21.66 350 P P 18 05 30.8 -0.8
FNO Franklin 21.85 349 P P 18 05 33.3 -0.4
OKCSW OKLAHOMA CITY 22.00 349 P P 18 05 34.6 -0.7
OKCFA Oklahoma City 22.02 349 P P 18 05 34.5 -0.9
V48A Smith Brothers 22.42 12 P P 18 05 37.8 -1.9
V48A IAmb IAmb 18 05 40.5
comp=Z,18nm,1.2s
AMTX Amarillo 22.63 340 P P 18 05 42.1 0.0
AMTX IAmb IAmb 18 05 49.6
comp=Z,17nm,0.6s
TKL Tuckaleechee C 23.11 18 P P 18 05 46.9 -0.1
comp=Z,5.9nm,0.8s,baz=211,slow=12,SNR=7.3
TKL LR LR 18 16 31.0
comp=Z,217nm,18.0s,baz=190,slow=41
121A Cookes Peak, D 23.38 326 P P 18 05 52.0 +2.0
319A Douglas 23.40 321 P P 18 05 52.6 +2.5
S44A Carbondale 23.97 6 P P 18 05 53.7 -1.7
S44A IAmb IAmb 18 05 55.6
comp=Z,26nm,0.9s
ANMO Albuquerque 24.61 331 P P 18 06 03.6 +2.0
comp=Z,2.4nm,0.7s,baz=139,slow=11,SNR=4.4
ANMO Albuquerque 24.61 331 P P 18 06 02.1 +0.5
WCI Wyandotte Cave 24.93 11 P P 18 06 01.8 -2.4
WCI IAmb IAmb 18 06 03.5
comp=Z,18nm,0.8s
ATAH Atahualpa 24.99 145 LR LR 18 13 52.6
comp=Z,125nm,21.8s,baz=316,slow=32
OLIL Olney 25.13 8 P P 18 06 04.3 -1.7
SJG San Juan 25.55 77 LR LR 18 17 31.6
comp=Z,95nm,18.3s,baz=269,slow=40
T25A Trinidad 25.62 337 P P 18 06 10.5 -0.2
T25A IAmb IAmb 18 06 13.7
comp=Z,7.7nm,0.9s
P46A Rosedale 26.12 9 P P 18 06 13.4 -1.6
P46A IAmb IAmb 18 06 13.7
comp=Z,11nm,0.8s
P48A Milroy 26.29 12 P P 18 06 14.1 -2.5
P48A IAmb IAmb 18 06 14.9
comp=Z,12nm,0.9s
Q51A Peebles 26.37 16 P P 18 06 14.7 -2.6
X16A Lo Mia Camp, P 26.83 323 P P 18 06 23.5 +1.7
S22A 4UR Ranch, Cre 27.11 334 P P 18 06 26.3 +1.9
MVCO Mesa Verde 27.41 331 P P 18 06 28.6 +1.6
MVCO IAmb IAmb 18 06 30.3
comp=Z,10nm,1.1s
WUAZ Wupatki 27.59 325 P P 18 06 29.1 +0.7
NNA Nana 29.88 148 LR LR 18 16 21.8
comp=Z,56nm,19.9s,baz=312,slow=32
SZCU Shurtz Canyon 30.04 326 P P 18 06 50.1 -0.3
Q16A Castle Valley 30.05 330 P P 18 06 52.1 +1.8
MSU Marysvale 30.24 328 P P 18 06 52.7 +0.6
J56A Wolcott 32.27 21 P P 18 07 07.8 -1.8
J56A IAmb IAmb 18 08 06.1
comp=Z,13nm,1.1s
K58A Earlville 32.27 23 P P 18 07 08.0 -1.7
KSCT Kent School, K 32.31 27 P P 18 07 08.0 -2.0
PDAR Pinedale Array 32.47 336 P P 18 07 12.2 +0.5
comp=Z,0.3nm,0.6s,baz=146,slow=8.2,SNR=4.6
PDAR PcP PcP 18 09 59.0 +0.2
comp=Z,0.4nm,0.6s,baz=122,slow=5.4,SNR=3.8
ELK Elko 33.48 328 P P 18 07 19.8 -0.8
ELK IAmb IAmb 18 08 19.4
comp=Z,15nm,1.9s
REDW Red Top Meadow 33.48 335 P P 18 07 20.9 +0.3
REDW IAmb IAmb 18 07 23.1
comp=Z,9.0nm,0.8s
NV11 Mina Array Sit 33.53 322 P P 18 07 23.9 +3.0
NV11 IAmb IAmb 18 07 24.7
comp=Z,4.3nm,0.9s
SNOW Snow King Moun 33.53 335 P P 18 07 20.2 -0.8
NVAR Mina Array Bea 33.62 322 P P 18 07 24.5 +2.7
comp=Z,2.9nm,0.7s,baz=136,slow=8.8,SNR=24
NVAR PcP PcP 18 10 02.4 +0.3
comp=Z,0.5nm,0.7s,baz=127,slow=3.9,SNR=3.6
NVAR LR LR 18 22 55.3
comp=Z,133nm,18.1s,baz=343,slow=40
NVAR Mina Array Bea 33.62 322 P P 18 07 24.1 +2.3
MOOW Moose Ponds 33.76 336 P P 18 07 23.6 +0.6
MOOW IAmb IAmb 18 08 19.4
comp=Z,13nm,1.8s
FXWY Fox Creek 33.78 335 P P 18 07 23.8 +0.6
KVN Kaiserville 33.90 323 P P 18 07 24.6 +0.4
KVN IAmb IAmb 18 07 31.3
comp=Z,4.3nm,1.1s
YHL Hebgen Lake 34.85 336 P P 18 07 32.6 +0.1
MCMT McKenzie Canyo 35.51 335 P P 18 07 40.2 +2.1
MFID Camas Ranch 35.75 330 P P 18 07 40.6 +0.6
MFID IAmb IAmb 18 07 45.1
comp=Z,5.3nm,1.1s
BEKR Beckworth 35.76 322 P P 18 07 41.3 +1.0
BEKR IAmb IAmb 18 07 45.1
comp=Z,6.5nm,1.2s
DLMT Dillon 35.84 335 P P 18 07 42.7 +1.9
DLMT IAmb IAmb 18 07 43.9
comp=Z,12nm,1.4s
ULM Lac du Bonnet 36.47 356 LR LR 18 25 20.1
comp=Z,62nm,18.7s,baz=182,slow=41
EGMT Eagleton 37.07 341 P P 18 07 51.8 +0.6
EGMT IAmb IAmb 18 08 25.9
comp=Z,23nm,1.9s
LPAZ La Paz 38.30 141 LR LR 18 23 01.6
comp=Z,66nm,19.0s,baz=336,slow=35
SIV San Ignacio 42.80 133 P P 18 08 38.9 -0.3
comp=Z,1.5nm,0.6s,baz=319,slow=10,SNR=8.3
SCHQ Schefferville 45.54 20 LR LR 18 28 50.2
comp=Z,217nm,19.8s,baz=2.0,slow=37
YKA Yellowknife Ar 51.15 347 P P 18 09 42.9 -0.9
comp=Z,5.4nm,0.7s,baz=152,slow=7.5,SNR=67
YKA PcP PcP 18 10 59.0 -0.2
comp=Z,1.1nm,0.8s,baz=150,slow=3.6,SNR=13
YKA LR LR 18 34 42.1
comp=Z,50nm,18.3s,baz=0.0,slow=40
CPUP Villa Florida 52.45 139 LR LR 18 30 36.5
comp=Z,40nm,19.1s,baz=38,slow=34
PLCA Paso Flores 57.89 161 LR LR 18 30 49.1
comp=Z,64nm,18.3s,baz=358,slow=31
BCAR Beaver Creek A 60.09 336 P P 18 10 48.1 0.0
INK Inuvik 60.54 344 P P 18 10 51.2 +0.2
IL31 62.89 337 P P 18 11 06.8 -0.1
IL31 IAmb IAmb 18 11 11.2
comp=Z,7.9nm,1.2s
ILAR Eielson Array 62.89 337 P P 18 11 07.0 +0.1
comp=Z,3.5nm,1.1s,baz=124,slow=4.5,SNR=12
RND Reindeer 63.07 335 P P 18 11 08.6 +0.4
BMAR Burnt Mountain 63.37 340 P P 18 11 10.2 +0.1
KTH Kantishna Hill 63.88 337 P P 18 11 13.5 -0.7
MLY Manley 64.49 336 P P 18 11 18.1 +0.6
MLY IAmb IAmb 18 11 19.0
comp=Z,4.5nm,0.7s
COLD Coldfoot 65.20 339 P P 18 11 20.8 -1.2
COLD IAmb IAmb 18 11 21.6
comp=Z,4.8nm,1.1s
COLD Coldfoot 65.20 339 P P 18 11 21.3 -0.7
COLD IAmb IAmb 18 11 21.6
comp=Z,4.8nm,1.1s
BILL Bilibino 81.52 338 P P 18 12 57.7 -0.6
BILL IAmb IAmb 18 13 00.7
comp=Z,5.7nm,0.7s
NOA NORSAR Array B 84.50 28 LR LR 18 52 10.8
comp=Z,37nm,18.1s,baz=235,slow=37
ARCES ARCESS Array B 86.44 18 P P 18 13 21.8 -1.6
comp=Z,2.2nm,0.8s,baz=291,slow=7.6,SNR=4.0
GERES GERESS Array B 89.98 39 P P 18 13 38.4 -2.4
TIXI Tiksi 90.39 348 P P 18 13 40.8 -1.2
MKAR Makanchi Array 119.50 4 PKP PKPdf 18 19 31.6 +0.6
comp=Z,0.2nm,0.6s,baz=28,slow=2.2,SNR=2.7
KSH Kashi 125.86 11 PKP PKiKP 18 19 46.2 +2.2
KSH PP PP 18 21 38.8 +4.0
CMAR Chiang Mai Arr 146.07 341 PKPbc PKPdf 18 20 22.6 +1.3
comp=Z,6.9nm,0.8s,baz=336,slow=3.4,SNR=45

GCG 12 18:03:14.9±0.5, 13°65N×92°70W, h50km±999km, MD4.0
MEX 12 18:03:20.5±0.3, 13°85N×92°37W, h5km±183km, MD3.6
ISC 12 18:03:16.5±3.3, 13°7N±0°2×92°4W±0°1, h10km, n7, σ1§61/9, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	1.28	40	eP	Pb	18 03 40.2	-0.5
FUG	Fuego 3	1.69	65	eP	Pn	18 03 46.4	+0.1
PCG	Pacaya	1.88	69	eP	Pn	18 03 49.7	+0.7
IXG	Ixpaco	1.98	77	eP	Pn	18 03 50.4	+0.2
PCIG		2.10	339	i P	Pn	18 03 52.2	+0.4
PCIG				i S	Sn	18 04 16.2	-1.8
NBG	Las Nubes	2.19	67	eP	Pn	18 03 55.0	+1.8
CCIG	Comitan	2.55	6	i P	Pn	18 04 00.9	+2.8
CCIG				i S	Sb	18 04 33.5	-0.5

ATH 12 18:06:01.0, 37°82N×21°13E, h10km±4km, ML2.8/9, Error ellipse: s-maj=4.5km s-min=1.2km az=322.0
THE 12 18:06:01.1, 37°82N×21°14E, h16km, ML2.7/15, Error ellipse: s-maj=0.9km s-min=0.4km az=283.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAK2	Zakynthos	0.20	259	P	Pg	18 06 05.2	-0.5
ZAK2				S	Sb	18 06 10.0	+0.3
	8μm,0.2s						
KRI1	kERI	0.30	238	P	Pg	18 06 06.9	-0.6
KRI1				S	Sb	18 06 12.5	-0.4
	6μm,0.2s						
RLS	Riolos of Patr	0.35	48	P	Pg	18 06 07.7	-0.6
RLS				S	Sb	18 06 13.9	-0.3
	2μm,0.3s						
RLS	Riolos of Patr	0.35	48	P	Pg	18 06 07.6	-0.7
RLS				S	Sg	18 06 13.7	+0.4
RLS				AML	AML	18 06 14.7	
	comp=E,4106μm,0.3s						
RLS				AML	AML	18 06 14.9	
	comp=N,4319μm,0.3s						
VLMS	Volimes, Zakyn	0.38	278	P	Pg	18 06 08.1	-0.8
VLMS				S	Sg	18 06 14.4	+0.1
VLMS				AML	AML	18 06 16.2	
	comp=E,7443μm,0.2s						
VLMS				AML	AML	18 06 18.4	
	comp=N,6918μm,0.3s						
DRO	Drossia	0.47	74	P	Pg	18 06 09.7	-0.8
DRO				S	Sb	18 06 17.6	-0.1
	comp=N,2μm,0.3s						
DRO	Drossia	0.47	74	P	Pg	18 06 09.7	-0.8
DRO				S	Sb	18 06 17.6	-0.1
DRO				AML	AML	18 06 21.3	
	comp=E,4201μm,0.2s						
DRO				AML	AML	18 06 22.0	
	comp=N,4642μm,0.4s						
AMT	Artemida-Makis	0.54	123	P	Pg	18 06 11.8	0.0
AMT				S	Sb	18 06 19.6	0.0
	comp=N,2μm,0.5s						
AMT	Artemida-Makis	0.54	123	P	Pg	18 06 11.8	0.0
AMT				S	Sg	18 06 19.3	+0.3
AMT				AML	AML	18 06 21.5	
	comp=N,3947μm,0.5s						
AMT				AML	AML	18 06 21.6	
	comp=E,3029μm,0.5s						
PDO	Prodromos	0.77	2	P	Pb	18 06 15.5	-0.7
PDO				S	Sb	18 06 27.4	+0.9
PDO				AML	AML	18 06 30.8	
	comp=N,1903μm,0.3s						
PDO				AML	AML	18 06 33.1	
	comp=E,1508μm,0.4s						
LAKA	Lakka	0.78	58	P	Pb	18 06 15.8	-0.5
LAKA				S	Sb	18 06 27.1	+0.4
	comp=E,362nm,0.6s						
LAKA	Lakka	0.78	58	P	Pb	18 06 16.0	-0.3
LAKA				S	Sb	18 06 26.9	+0.2
LAKA				AML	AML	18 06 30.6	
	comp=E,823μm,0.6s						
LAKA				AML	AML	18 06 35.5	
	comp=N,727μm,0.7s						
KLV	Kalavryta, Ach	0.83	74	P	Pb	18 06 16.1	-1.0
KLV				S	Sg	18 06 28.7	+0.5
	comp=N,275nm,0.5s						
KLV	Kalavryta, Ach	0.83	74	P	Pb	18 06 16.1	-1.0
PVO	Paravola	0.85	21	P	Pb	18 06 17.1	-0.3
PVO				S	Sg	18 06 28.9	+0.1
	comp=N,442nm,0.3s						
PVO	Paravola	0.85	21	P	Pb	18 06 17.2	-0.3
PVO				AML	AML	18 06 35.4	
	comp=E,1008μm,0.3s						
PVO				AML	AML	18 06 40.5	
	comp=N,725μm,0.5s						
ALIK	Aliki, Aigiali	0.88	60	P	Pb	18 06 17.6	-0.4
ALIK				S	Sg	18 06 29.9	+0.1
ITM	Ithomi	0.90	136	P	Pb	18 06 17.9	-0.4
ITM				S	Sg	18 06 30.8	+0.5
	comp=N,280nm,0.5s						
ITM	Ithomi	0.90	136	P	Pb	18 06 18.0	-0.3
TRIZ	Trizonia	0.91	53	P	Pb	18 06 17.9	-0.6
TRIZ				S	Sn	18 06 31.8	-0.2
	comp=N,498nm,0.4s						
TRIZ	Trizonia	0.91	53	P	Pb	18 06 17.9	-0.6
SERG	Sergoula	0.93	51	P	Pb	18 06 17.8	-1.1
SERG				S	Sn	18 06 32.2	-0.4
	comp=N,498nm,0.7s						
SERG	Sergoula	0.93	51	P	Pb	18 06 18.2	-0.7
SERG				AML	AML	18 06 36.0	
	comp=E,921μm,0.5s						
SERG				AML	AML	18 06 37.8	
	comp=N,948μm,0.6s						
KALE	Kalithea	0.97	54	P	Pb	18 06 18.9	-0.7
KALE				S	Sg	18 06 33.1	+0.4
	comp=N,345nm,0.6s						
KALE	Kalithea	0.97	54	P	Pb	18 06 18.9	-0.6
ANX	Ano Chora	0.98	38	P	Pb	18 06 19.6	-0.2
ANX				S	Sn	18 06 33.6	-0.4
	comp=N,768nm,0.5s						
ANX	Ano Chora	0.98	38	P	Pb	18 06 19.4	-0.4
ANX				AML	AML	18 06 37.8	
	comp=E,1434μm,0.4s						
ANX				AML	AML	18 06 38.4	
	comp=N,1621μm,0.5s						
PYL	PYLOS	1.04	153	P	Pb	18 06 20.0	-0.8
PYL				S	Sn	18 06 35.2	-0.1
	comp=N,142nm,0.6s						
PYL	PYLOS	1.04	153	P	Pb	18 06 19.9	-0.8
VLX	Vlachokerasia	1.08	114	P	Pb	18 06 20.9	-0.6
VLX				S	Sg	18 06 36.2	0.0
	comp=N,312nm,0.6s						
VLX	Vlachokerasia	1.08	114	P	Pg	18 06 22.3	+0.3
EVR	Evrytania	1.21	25	P	Pn	18 06 23.3	-0.2
MAKR	Makrakomi, Fth	1.42	33	P	Pg	18 06 28.2	-0.2
PROD	Prodromos	1.46	72	P	Pg	18 06 29.4	+0.3
LTK	Loutraki	1.46	82	P	Pb	18 06 28.2	+0.4
AGG	Agios Georgios	1.52	38	P	Pg	18 06 29.8	-0.5
AXAR	Agios Charalam	1.52	51	P	Pg	18 06 30.6	+0.2
DID	Didima	1.69	100	P	Pg	18 06 33.1	-0.5
VIL2	Platees	1.72	76	P	Pg	18 06 34.0	-0.2

GCG 12 18:06:21.4±0.3, 13°80N×92°44W, h35km±999km, MD3.9
MEX 12 18:06:23.8±1.2, 13°79N×92°34W, h16km±310km, MD3.9
ISC 12 18:06:20.1±2.5, 13°8N±0°1×92°39W±0°08, h10km, n9, σ1§53/13, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.12	6	i P	Pb	18 06 41.3	-0.3
THIG				i S	Sg	18 06 54.2	-2.0
STG3	Santiaguito 3,	1.22	41	eP	Pb	18 06 42.9	-0.5
FUG	Fuego 3	1.64	66	eP	Pn	18 06 49.1	-0.1
PCG	Pacaya	1.83	71	eP	Pn	18 06 52.0	+0.1
PCG				eS	Sn	18 07 18.5	+0.5
IXG	Ixpaco	1.93	78	eP	Pn	18 06 53.1	-0.1
PCIG		2.07	337	i P	Pn	18 06 54.8	-0.1
PCIG				i S	Sn	18 07 18.9	-1.9
NBG	Las Nubes	2.14	68	eP	Pn	18 06 57.7	+1.6
CCIG	Comitan	2.49	6	i P	Pn	18 07 03.7	+2.8
CCIG				eS	Sn	18 07 33.4	+1.9
CMIG	Matias Romero	4.07	324	eP	Pn	18 07 23.6	+1.1

IDC 12 18:07:27.3±1.7, 35°75N×81°53E, h0km, mb3.5/3, mb1 3.7/6, mb1mx3.3/49, mbtmp3.6/6, ML2.9/3, Error ellipse: s-maj=43.3km s-min=18.2km az=65.0
BJI 12 18:07:31.4±0.0, 35°91N×82°40E, h7km, ML3.6/4
ISC 12 18:07:31.6±1.1, 35°94N±0°07×82°2E±0°2, h10km, n15, σ1§86/16, mb3.7/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	Dangsing	7.68	169	eP	Pn	18 09 27.3	+3.5
	4.9nm,0.4s						
KOLN	Koldanda	8.23	171	eP	Pn	18 09 31.9	+0.6
	6.3nm,0.6s						
GUN	Gumba	8.60	158	eP	Pn	18 09 37.6	+1.1
	17nm,0.7s						
PKIN	Phulchoki	8.77	161	eP	Pn	18 09 39.6	+0.8
	6.1nm,0.5s						
PKI	Pulchoki	8.78	161	eP	Pn	18 09 39.1	+0.1
	12nm,0.8s						
JIRN	Jiri	8.93	156	eP	Pn	18 09 41.1	+0.1
	9.9nm,0.5s						
WMQ	Urumqi	8.94	27	eP	Pn	18 09 39.8	-1.1
WMQ				smax	smax		
	comp=N,11nm,1.1s						
WMQ				smax	smax		
	comp=E,10.0nm,0.9s						
AAK	Ala-Archa	8.95	321	Pn	Pn	18 09 39.5	-1.7
	0.0nm,0.3s,baz=180,slow=11,SNR=1.6						
AAK				Pg	Pg	18 10 12.1	-11
	0.2nm,0.3s,baz=120,slow=14,SNR=2.8						
AAK				Lg	Lg	18 12 07.7	
	0.3nm,0.3s,baz=75,slow=18,SNR=2.5						
RAMN	Ramite	9.72	156	eP	Pn	18 09 50.7	-1.1
	17nm,0.8s						
ODAN	Odare	10.08	152	eP	Pn	18 09 55.1	-1.6
MKAR	Makanchi Array	10.85	0	Pn	Pn	18 10 05.8	-1.1
	0.6nm,0.3s,baz=185,slow=13,SNR=12						
MKAR				Sn	Sn	18 12 10.7	+2.3
	0.3nm,0.3s,baz=185,slow=23,SNR=5.8						
ZALV	Zalesovo Beam	18.11	5	P	Pn	18 11 41.0	-2.0
	0.1nm,0.3s,baz=206,slow=13,SNR=2.6						
SONM	Songino Array	21.50	49	P	P	18 12 23.9	+3.3
	3.5nm,0.8s,baz=243,slow=11,SNR=13						
CMAR	Chiang Mai Arr	22.86	135	P	P	18 12 35.0	-0.3
	0.5nm,0.7s,baz=309,slow=9.1,SNR=6.1						
ASAR	Alice Springs	76.84	132	P	P	18 19 22.7	-1.2
	0.5nm,0.8s,baz=328,slow=6.0,SNR=8.7						

NEIC 12 18:08:49.4±1.3, 19°04N±0°03×66°78W±0°03, h21km±12km, Error ellipse: s-maj=4.5km s-min=3.5km az=177.0
RSPR 12 18:08:50.4, 19°08N×66°89W, h11km±4km, MD3.0/18
ISC 12 18:08:50.4±1.3, 19°00N±0°06×66°85W±0°03, h29km, n56, σ0§54/70, 17C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.58	205⇓	eP	Pb	18 09 01.6	-0.6
AGPR	Aguadilla, PR	0.58	205	eS	Sb	18 09 10.4	+0.1
AGPR	Aguadilla, PR	0.58	205		Pb	18 09 01.6	-0.6
AGPR					Sb	18 09 10.4	+0.1
EMPR	Esperanza - Ma	0.60	150⇑	eP	Pn	18 09 03.0	0.0
EMPR	Esperanza - Ma	0.60	150	eS	Sn	18 09 12.5	+0.7
EMPR	Esperanza - Ma	0.60	150		Pn	18 09 03.0	0.0
EMPR					Sn	18 09 12.5	+0.7
AOPR	Arecibo Observ	0.66	172⇑	eP	Pb	18 09 03.2	-0.2
AOPR	Arecibo Observ	0.66	172	eS	Sn	18 09 13.7	+0.5
AOPR	Arecibo Observ	0.66	172⇑	eP	Pb	18 09 03.2	-0.2
AOPR	Arecibo Observ	0.66	172		Pb	18 09 03.2	-0.2
AOPR					Sn	18 09 13.7	+0.5
MPR	Mayaguez	0.83	199⇑	eP	Pb	18 09 05.4	-0.8
MPR	Mayaguez	0.83	199		Pb	18 09 05.4	-0.8
LSP	Las Mesas	0.85	195⇓	eP	Pb	18 09 05.9	-0.6
LSP	Las Mesas	0.85	195		Pb	18 09 05.9	-0.6
CELP	Cerrillos	0.95	164⇑	eP	Pn	18 09 07.8	-0.1
CELP				eS	Sb	18 09 21.3	+0.6
CELP	Cerrillos	0.95	164		Pn	18 09 07.8	-0.1
CELP					Sb	18 09 21.3	+0.6
OBIP	Obispado Ponce	0.98	166⇑	eP	Pn	18 09 08.3	0.0
OBIP	Obispado Ponce	0.98	166	eS	Sb	18 09 21.9	+0.5
OBIP	Obispado Ponce	0.98	166		Pn	18 09 08.3	0.0
OBIP					Sb	18 09 21.9	+0.5
GCPR	Guaynabo City	1.00	133⇑	eP	Pn	18 09 08.1	-0.4
GCPR	Guaynabo City	1.00	133	eS	Sb	18 09 22.3	+0.3
GCPR	Guaynabo City	1.00	133		Pn	18 09 08.1	-0.4
GCPR					Sb	18 09 22.3	+0.3
CRPR	Cabo Rojo, PR	1.02	194⇓	eP	Pn	18 09 08.3	-0.5
CRPR	Cabo Rojo, PR	1.02	194	eS	Sb	18 09 22.5	0.0
CRPR	Cabo Rojo, PR	1.02	194		Pn	18 09 08.3	-0.5
CRPR					Sb	18 09 22.5	0.0
GBPR	Guanica, Bosqu	1.02	182⇑	eP	Pb	18 09 09.1	-0.4
GBPR	Guanica, Bosqu	1.02	182	eS	Sb	18 09 23.1	+0.5
GBPR	Guanica, Bosqu	1.02	182		Pb	18 09 09.1	-0.4
GBPR					Sb	18 09 23.1	+0.5
MLPR	Magueyes Islan	1.04	190⇑	eP	Pb	18 09 07.8	-1.3
MLPR	Magueyes Islan	1.04	190		Pb	18 09 07.8	-1.3
SJG	San Juan	1.10	143		Pn	18 09 09.4	-0.5
ICMP	Isla Caja de M	1.15	165⇑	eP	Pn	18 09 10.8	+0.2
ICMP	Isla Caja de M	1.15	165		Pn	18 09 10.8	+0.2
CBYP	Canovanas	1.19	127⇑	eP	Pn	18 09 10.8	-0.4
CBYP	Canovanas	1.19	127	eS	Sn	18 09 25.6	-0.8
CBYP	Canovanas	1.19	127		Pn	18 09 10.8	-0.4
CBYP					Sn	18 09 25.6	-0.8
IGPR	InterUniversit	1.25	146⇑	eP	Pn	18 09 11.9	0.0
IGPR	InterUniversit	1.25	146		Pn	18 09 12.1	+0.2
PDPR	Patillas Dam,	1.25	141⇑	eP	Pn	18 09 12.1	+0.1
PDPR	Patillas Dam,	1.25	141	eS	Sn	18 09 28.5	+0.6
PDPR	Patillas Dam,	1.25	141		Pn	18 09 12.1	+0.1
PDPR					Sn	18 09 28.5	+0.6
HUMP	Col San Antoni	1.27	132⇑	eP	Pn	18 09 12.3	0.0
HUMP	Col San Antoni	1.27	132	eS	Sn	18 09 29.1	+0.6
HUMP	Col San Antoni	1.27	132		Pn	18 09 12.3	0.0
HUMP					Sn	18 09 29.1	+0.6
MTP	Monte Pirata	1.52	126⇑	eP	Pn	18 09 15.6	-0.1
MTP	Monte Pirata	1.52	126	eS	Sn	18 09 35.3	+0.7
MTP	Monte Pirata	1.52	126		Pn	18 09 15.6	-0.1
MTP					Sn	18 09 35.3	+0.7
PCDR	Punta Cana, DR	1.53	252⇑	eP	Pn	18 09 16.1	+0.3
PCDR	Punta Cana, DR	1.53	252		Sb	18 09 37.0	-0.1
PCDR	Punta Cana, DR	1.53	252		Pn	18 09 16.1	+0.3
CUPR	Culebra, Puert	1.64	115⇑	eP	Pn	18 09 17.0	-0.2
CUPR	Culebra, Puert	1.64	115	eS	Sn	18 09 36.1	-1.2
CUPR	Culebra, Puert	1.64	115		Pn	18 09 17.0	-0.2
CUPR					Sn	18 09 36.1	-1.2
STVI	Saint Thomas	1.91	109		Pn	18 09 21.2	+0.2
DR12	Loma Pena Alta	2.41	265		Pn	18 09 28.1	+0.2
SDDR	Presa de Saban	4.20	270		Pn	18 09 53.1	+0.5

JMA 12 18:37:54.9±0.1, 24°10N×123°56E, h19km±1km, M2.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.23	101	P	Pb	18 38 00.1	+0.1
HATJ				S	Sg	18 38 04.2	+0.1
IRIF	Iriomote-Funau	0.28	34	P	Pg	18 38 01.0	-0.2
IRIF				S	Sb	18 38 05.4	-0.1
JKRS	Kuro-shima	0.43	71	P	Pg	18 38 03.7	-0.1
JKRS				S	Sb	18 38 10.4	+0.2
JIJ	Ishigaki jima	0.59	64	P	Pb	18 38 06.1	-0.5
JIJ				S	Sb	18 38 14.2	-0.4
YOJ	Yonaguni jima	0.62	306	P	Pb	18 38 06.7	-0.3
YOJ				S	Sb	18 38 15.1	-0.1
JYNG	Yonagunijimaku	0.66	302	P	Pb	18 38 07.8	0.0
JYNG				S	Sb	18 38 16.5	0.0
JISG	Ishigakijimahi	0.84	55	P	Pb	18 38 10.4	-0.5
JISG				S	Sb	18 38 22.0	+0.2
JTJ	Tarama	1.17	62	P	Pn	18 38 16.4	+0.1
JTJ				S	Sg	18 38 32.4	-0.6

TAP 12 18:38:07.4, 24°01N×121°44E, h7km, ML1.9, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	Hwalien	0.16	103	P	Pg	18 38 12.0	+1.3
	baz=102						
HWA				eS	Sg	18 38 15.3	+2.4
	baz=102						
TWD	Chiawan	0.16	65	iP	Pg	18 38 12.1	+1.3
	baz=66						
TWD				iS	Sg	18 38 14.8	+1.8
	baz=66						
ENLB	Shoufeng	0.19	125	eP	Pg	18 38 12.5	+1.3
	baz=125						
ENLB				eS	Sg	18 38 16.2	+2.4
	baz=125						
ESL	Shilin	0.20	181	P	Pg	18 38 12.7	+1.3
	baz=178						
ESL				iS	Sg	18 38 15.5	+1.5
	baz=178						
ETLH	Xiulin Townshi	0.20	12	P	Pg	18 38 12.3	+0.8
	baz=12						
ETLH				eS	Sg	18 38 15.8	+1.6
	baz=12						
WHF	Hehuan Shan	0.20	310	iP	Pg	18 38 12.3	+0.6
	baz=311						
WHF				S	Sg	18 38 15.8	+1.2
	baz=311						
NACB	Ninganchiao	0.22	42	P	Pg	18 38 12.7	+1.0
	baz=42						
NACB				S	Sg	18 38 16.4	+1.7
	baz=42						
CHGB	Renai	0.24	281	iP	Pg	18 38 13.4	+1.0
	baz=281						
CHGB				S	Sg	18 38 17.8	+2.2
	baz=281						
OWD	Renai	0.24	256	iP	Pg	18 38 13.2	+0.9
	baz=256						
TWT	Tachien	0.34	315	P	Pb	18 38 15.1	-0.8
	baz=313						
TWT				S	Sb	18 38 21.1	-0.5
	baz=313						
EGFH	Guangfu	0.34	181	iP	Pb	18 38 15.3	-0.5
	baz=181						
EGFH				S	Sb	18 38 20.3	-1.1
	baz=181						
TDCB	Techi	0.35	314	eP	Pb	18 38 15.4	-0.6
	baz=313						
TDCB				eS	Sb	18 38 20.6	-1.2
	baz=313						
VWDT	VWDT	0.37	226	eP	Pb	18 38 16.1	-0.2
	baz=226						
VWDT				eS	Sb	18 38 22.2	-0.1
	baz=226						
NNSB	Datong	0.42	353	P	Pb	18 38 16.7	-0.5
	baz=353						
NNSB				eS	Sb	18 38 22.8	-1.0
	baz=353						
NNSH	Datong	0.42	353	eP	Pb	18 38 16.7	-0.5
	baz=353						
NNSH				eS	Sb	18 38 22.6	-1.2
	baz=353						
NNS	Nan Shan	0.43	352	P	Pb	18 38 16.9	-0.5
	baz=353						
NNS				S	Sb	18 38 23.3	-0.9
	baz=353						
DPDB	Guoxing	0.47	273	eP	Pb	18 38 18.1	+0.1
	baz=272						
DPDB				S	Sb	18 38 24.9	-0.2
	baz=272						
SSLB	Suanglung	0.49	243	P	Pb	18 38 18.2	-0.3
	baz=243						
SSLB				eS	Sb	18 38 26.0	+0.1
	baz=243						
ENA	Nanau	0.50	34	iP	Pb	18 38 18.8	+0.3
	baz=34						
ENA				iS	Sb	18 38 26.2	+0.2
	baz=34						
SMLT	Sun Moon Lake	0.51	255	P	Pb	18 38 18.7	0.0
	baz=254						
SMLT				S	Sb	18 38 26.4	+0.1
	baz=254						
EHY	Hungye	0.51	192	P	Pb	18 38 18.1	-0.6
	baz=190						
EHY				S	Sb	18 38 26.2	-0.2
	baz=190						
HGSD	Ruisui	0.52	181	P	Pg	18 38 17.8	+0.4
	baz=181						
HGSD				eS	Sb	18 38 26.5	0.0
	baz=181						
WHP	Taichung City	0.52	301	P	Pb	18 38 19.3	+0.4
	baz=300						
WHP				S	Sb	18 38 27.2	+0.6
	baz=300						
NDT	Datong Townshi	0.59	7	P	Pb	18 38 19.7	-0.4
	baz=6.0						
NDT				eS	Sb	18 38 29.6	+0.9
	baz=6.0						
WHYT	Xinyi Township	0.62	240	P	Pb	18 38 20.6	+0.1
	baz=239						
WHYT				eS	Sb	18 38 30.3	+0.9
	baz=239						
YULB	Yu-li	0.63	192	eP	Pb	18 38 21.0	+0.2
	baz=191						
YULB				S	Sb	18 38 30.6	+0.8
	baz=191						
ENTT	Nioudou	0.64	11	eP	Pb	18 38 21.0	+0.1
	baz=11						
ENTT				S	Sb	18 38 30.7	+0.7
	baz=11						
YHNB	Yeheng	0.66	355	eP	Pb	18 38 21.4	+0.1
	baz=355						
YHNB				eS	Sb	18 38 30.4	-0.3
	baz=355						
NSK	Sanguang	0.67	354	eP	Pb	18 38 21.4	0.0
	baz=354						
NSK				S	Sb	18 38 31.5	+0.6
	baz=354						
TWF1	Yuli	0.67	191	P	Pb	18 38 21.3	-0.1
	baz=190						
TWF1				S	Sb	18 38 31.2	+0.3
	baz=190						
WJS	Zhushan	0.67	254	eP	Pb	18 38 21.3	-0.2
	baz=253						
WJS				eS	Sb	18 38 31.9	+0.8
	baz=253						
TWQ1	Liyutan	0.69	299	P	Pb	18 38 21.7	-0.1
	baz=298						
TWQ1				eS	Sb	18 38 32.2	+0.7
	baz=298						
TWC	Suao	0.70	32	S	Sb	18 38 32.5	+0.5
	baz=33						
NSTT	Nanjuang	0.73	327	P	Pb	18 38 23.3	+0.8
	baz=327						
NSTT				S	Sb	18 38 33.0	+0.3
	baz=327						
TWE	Neicheng	0.74	17	iP	Pb	18 38 23.0	+0.4
	baz=17						
TWE				eS	Sb	18 38 33.4	+0.5
	baz=17						
LIOB	Emei	0.74	329	eP	Pb	18 38 22.5	-0.1
	baz=328						
LIOB				S	Sb	18 38 33.6	+0.7
	baz=328						
SLBB	Yuanshan	0.76	14	eP	Pb	18 38 23.1	+0.1
	baz=13						
SLBB				eS	Sb	18 38 34.2	+0.6
	baz=13						
NWLT	Wulai	0.76	5	eP	Pb	18 38 23.4	+0.3
	baz=4.0						
NWLT				eS	Sb	18 38 34.0	+0.3
	baz=4.0						
FULB	Fuli	0.82	189	eS	Sb	18 38 36.4	+1.1
	baz=189						
EOS1	EOS1	0.83	50	eP	Pb	18 38 24.2	+0.1
	baz=49						
EOS1				S	Sb	18 38 36.6	+1.1
	baz=49						
ELDTW	Lidau	0.91	205	P	Pb	18 38 25.7	+0.2
	baz=204						
ELDTW				eS	Sb	18 38 38.6	+0.8
	baz=204						

BJI **12** *19:09:22.8±0.0, 36.°01N×82.°43E, h6km, mB4.6/18, mb4.2/25, ML4.8/6, Ms4.6/34, Ms7 4.4/31*

IDC **12** *19:09:22.4±0.7, 35.°84N×82.°28E, h0km, mb4.3/20, mb1 4.5/25, mb1mx4.2/61, mbtmp4.3/25, ML4.1/5, MS4.0/18, Ms1 4.0/18, ms1mx3.9/42, Error ellipse: s-maj=20.1km s-min=12.1km az=43.0*

NEIC **12** *19:09:24.4±2.2, 36.°02N±0.°08×82.°34E±0.°09, h10km±1km, mb4.6/32, Error ellipse: s-maj=13.3km s-min=11.3km az=205.0*

NNC **12** *19:09:27.4±3.7, 36.°28N×82.°36E, h5km±17km, mb4.9, mpv4.7, Error ellipse: s-maj=32.3km s-min=21.8km az=88.0*

ISC 12 19:09:23.9±0.4, 36.°06N±0.°04×82.°43E±0.°04, h10km, n144, σ2.05/151, mb4.4/31, MS4.0/18, 14C-17D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	6.16	306	Pn	Pn	19 10 57.4	+2.3
KSH				Sn	Sn	19 12 08.4	+2.7
KSH				LR	LR		
	comp=Z,2μm,6.1s						
DHRM	DHARAMSHALA	6.34	235	eP	Pn	19 10 59.6	+1.8
DHRM				IAmb	IAmb	19 11 24.4	
	comp=Z,69nm,1.2s						
SMLA	Simla	6.59	223	ex	Pn	19 11 01.1	+0.2
SMLA				IAmb	IAmb	19 11 10.3	
	comp=Z,17nm,0.4s						
DDI	Dehra Dun	6.80	214	ex	Pb	19 11 24.6	+2.4
DDI				IAmb	IAmb	19 11 26.9	
	comp=Z,41nm,0.3s						
PRZ	Przheval'sk	7.13	335		Pn	19 11 09.3	+0.9
KDJ	Kajisay	7.30	328		Pn	19 11 12.1	+1.3
NRN	Naryn	7.34	319		Pn	19 11 13.3	+1.8
PDGK	Podgornoye	7.60	344	⇓Pn	Pn	19 11 15.6	+0.7
	comp=Z,59nm,0.9s						
PDGK				⇓Sn	Sn	19 12 41.9	+0.8
	comp=Z,346nm,1.0s						
PDGK				⇓Lg	Lg	19 13 26.8	
	comp=Z,538nm,1.2s						
DANN	Dangsing	7.77	171	eP	Pn	19 11 15.3	-2.1
	comp=Z,50nm,0.5s						
CHCP	Chirah Chowk	7.90	255	P	Pn	19 11 17.6	-1.4
NIL	Nilore	7.92	255		Pn	19 11 18.9	-0.3
MDOK	Medeo	8.21	331	⇑Pn	Pn	19 11 24.5	+1.2
	comp=Z,39nm,1.3s						
MDOK				⇓Pg	Pg	19 11 57.9	-3.2
	comp=Z,93nm,1.3s						
MDOK				⇑Lg	Lg	19 13 37.0	
	comp=Z,332nm,1.1s						
GKN	Gorkha	8.25	166	eP	Pn	19 11 23.3	-0.6
	comp=Z,30nm,0.5s						
KNDC	Almaty	8.29	331	⇓Pn	Pn	19 11 26.1	+1.9
	comp=Z,41nm,0.9s						
KNDC				⇓Pg	Pg	19 11 57.3	-5.3
	comp=Z,100nm,0.8s						
KNDC				⇑Lg	Lg	19 13 46.0	
	comp=Z,869nm,1.2s						
KOLN	Koldanda	8.33	173	eP	Pn	19 11 23.7	-1.3
	comp=Z,44nm,0.6s						
GUN	Gumba	8.64	159	eP	Pn	19 11 28.6	-0.8
	comp=Z,204nm,1.1s						
DMN	Daman	8.73	164	eP	Pn	19 11 30.1	-0.4
WMQ	Urumqi	8.74	26	eP	Pn	19 11 31.0	+0.6
WMQ				S	Sn	19 13 05.8	-3.2
WMQ				smax	smax		
	comp=Z,140nm,1.3s						
WMQ				smax	smax		
	comp=Z,110nm,1.5s						
WMQ	Urumqi	8.74	26		Pn	19 11 31.4	+1.1
PKIN	Phulchoki	8.83	163	eP	Pn	19 11 30.7	-1.2
	comp=Z,28nm,0.5s						
PKI	Pulchoki	8.84	163	eP	Pn	19 11 30.9	-1.2
	comp=Z,34nm,0.5s						
CEP	Cherat	8.92	259	P	Pn	19 11 31.7	-1.3
CEP				S	Sn	19 13 17.0	+3.4
JIRN	Jiri	8.97	158	eP	Pn	19 11 33.8	-0.1
	comp=Z,76nm,0.6s						
AAK	Ala-Archa	8.99	319	Pn	Pn	19 11 35.9	+2.0
	comp=Z,0.9nm,0.3s,baz=136,slow=10,SNR=12						
AAK				Pg	Pg	19 12 06.6	-9.3
	comp=Z,2.1nm,0.3s,baz=151,slow=12,SNR=5.8						
AAK				Lg	Lg	19 14 02.8	
	comp=Z,2.2nm,0.3s,baz=323,slow=19,SNR=10						
AAK				LR	LR	19 15 30.7	
	comp=Z,874nm,20.6s,baz=124,slow=41						
AAK	Ala-Archa	8.99	319	⇓Pn	Pn	19 11 35.9	+2.0
	comp=Z,20nm,1.0s						
AAK				⇑Pg	Pg	19 12 05.6	-10
	comp=Z,36nm,0.8s						
AAK				Lg	Lg	19 14 04.1	
	comp=Z,477nm,1.2s						
AAK	Ala-Archa	8.99	319		Pn	19 11 36.4	+2.5
FRU1	Bishkek	9.04	321		Pn	19 11 35.7	+1.2
ARSB	Arslanbob	9.06	308		Pn	19 11 35.2	+0.3
CHMS	Chumysh	9.11	322	⇑Pn	Pn	19 11 38.8	+3.3
	comp=Z,4.1nm,0.8s						
CHMS				⇑Pg		19 12 05.9	
	comp=Z,10nm,0.8s						
CHMS				⇑Lg	Lg	19 14 04.0	
	comp=Z,177nm,1.3s						
THW	Thamme Wali	9.41	253	P	Pn	19 11 38.8	-0.8
LSA	Lhasa	9.70	128	pP	Pn	19 11 54.7	+11
LSA				S	Sn	19 13 08.2	-25
LSA				SS	SnSn	19 13 36.7	-8.1
LSA	Lhasa	9.70	128		Pn	19 11 46.0	+2.0
RAMN	Ramite	9.76	157	eP	Pn	19 11 42.8	-1.8
	comp=Z,82nm,0.9s						
TAPN	Taplejung	9.78	151	eP	Pn	19 11 44.4	-0.6
BTK	Batken	9.98	297		Pn	19 11 46.9	-0.6
ODAN	Odare	10.11	154	eP	Pn	19 11 47.8	-1.5
GTK	Tadong	10.18	147	eP	Pn	19 11 49.6	-0.6
GTK				IAmb	IAmb	19 11 53.8	
	comp=Z,6.2nm,0.7s						
MK31	Makanchi Array	10.72	360	Pn	Pn	19 11 58.0	+0.5
	comp=Z,68nm,0.9s,baz=178,slow=12,SNR=394						
MK31				⇓Sn	Sn	19 13 57.9	+0.4
	comp=Z,23nm,0.8s,baz=188,slow=26,SNR=3.7						
MKAR	Makanchi Array	10.72	360	Pn	Pn	19 11 58.7	+1.2
	comp=Z,6.1nm,0.3s,baz=183,slow=14,SNR=234						
MKAR				Sn	Sn	19 13 53.6	-4.0
	comp=Z,0.7nm,0.3s,baz=183,slow=23,SNR=3.2						
MKAR				LR	LR	19 17 04.0	
	comp=Z,1μm,18.9s,baz=183,slow=42						
MAKZ	Makanchi	10.74	358	⇑Pn	Pn	19 11 57.8	+0.1
	comp=Z,132nm,1.1s						
MAKZ				⇑Sn	Sn	19 13 56.9	-1.2
	comp=Z,69nm,1.1s						
MAKZ	Makanchi	10.74	358		Pn	19 11 58.2	+0.5
KBL	Kabul	11.04	266		Pn	19 12 02.3	+0.2
KK31	Karatay Array	11.56	311	⇑Pn	Pn	19 12 08.9	-0.2
	comp=Z,8.0nm,1.1s,baz=122,slow=12,SNR=26						
KK31				⇓Pg		19 12 52.1	
	comp=Z,4.2nm,0.6s,baz=130,slow=17,SNR=3.9						
KK31				⇓Lg	Lg	19 15 32.0	
	comp=Z,75nm,1.1s,baz=104,slow=33,SNR=3.6						
KK31	Karatay Array	11.56	311	Pn	Pn	19 12 09.8	+0.8
KKAR	Karatay Array	11.56	311		Pn	19 12 08.9	-0.1
BOK	Bokaro	12.59	165	ex	Pn	19 12 19.3	-3.8
BOK				IAmb	IAmb	19 12 24.3	
	comp=Z,25nm,0.8s						
GTA	Gaotai	14.16	71	eP	Pn	19 12 44.7	0.0
GTA				pP	P	19 12 49.0	-3.3
GTA				sP		19 12 52.3	
GTA				pmax	pmax		
	comp=Z,56nm,6.2s						
GTA				LR	LR		
	comp=Z,1μm,14.1s						
GTA				LR	LR		
	comp=Z,1μm,12.4s						
GTA				LR	LR		
	comp=Z,1μm,11.3s						
KURBB	Kurchatov Arra	14.82	350	Pn	Pn	19 12 52.1	-1.4
	comp=Z,0.2nm,0.3s,baz=172,slow=12,SNR=55						
KURBB				Lg	Lg	19 17 08.7	
	baz=166,slow=33,SNR=3.0						
KURK	Kurchatov	14.90	351		Pn	19 12 51.9	-2.6
HRA	Herat	16.58	270		Pn	19 13 14.4	-2.3
HRA				IAmb	IAmb	19 13 23.9	
	comp=Z,74nm,2.0s						
LZH	Lanzhou	17.32	84	eP	Pn	19 13 26.7	+0.8
LZH				pP	pP	19 13 30.3	-1.3
LZH				sP	sP	19 13 33.4	-0.1
LZH	Lanzhou	17.32	84	eP	P	19 13 26.9	-0.4
LZH				sP	sP	19 13 33.7	+0.2
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
LZH				pmax	pmax		
	comp=Z,170nm,4.9s						
LZH				LR	LR		
	comp=Z,2μm,10.3s						
LZH				LR	LR		
	comp=Z,1μm,11.0s						
LZH				LR	LR		
	comp=Z,2μm,11.8s						
ZAA0	Zalesovo Array	17.96	5	P	Pn	19 13 31.1	-2.4
ZAA0				IAmb	IAmb	19 13 36.5	
	comp=Z,66nm,1.1s						
ZALV	Zalesovo Beam	17.96	5	P	Pn	19 13 31.4	-2.2
	comp=Z,0.9nm,0.3s,baz=190,slow=12,SNR=81						
ZALV				Lg	Lg	19 18 51.6	
	comp=Z,0.1nm,0.3s,baz=190,slow=25,SNR=2.4						
ZALV				LR	LR	19 21 45.3	
	comp=Z,592nm,18.1s,baz=188,slow=41						
ZALV	Zalesovo Beam	17.96	5	P	Pn	19 13 31.0	-2.6
CD2	Chengdu	18.51	100	P	P	19 13 39.0	-1.4
CD2				S	Sn	19 17 06.9	-0.6
CD2				LR	LR		
	comp=Z,2μm,10.4s						
CD2				LR	LR		
	comp=Z,2μm,10.6s						
CD2				LR	LR		
	comp=Z,3μm,11.8s						
BVAR	Borovoye Array	18.96	337	P	Pn	19 13 46.6	+0.8
	comp=Z,2.6nm,0.3s,baz=141,slow=9.4,SNR=110						
BVAR				Lg	Lg	19 19 29.2	
	comp=Z,0.1nm,0.3s,baz=144,slow=20,SNR=3.4						
BRVK	Borovoye	19.02	337	P	Pn	19 13 47.4	+0.8
BRVK				IAmb	IAmb	19 13 49.5	
	comp=Z,52nm,0.8s						
GEYT	Alibeck	19.50	283	P	P	19 13 49.1	-2.1
	comp=Z,0.3nm,0.3s,baz=123,slow=9.7,SNR=18						
GEYT				S	Sn	19 17 14.9	-16
	comp=Z,0.2nm,0.3s,baz=65,slow=42,SNR=2.3						
GEYT				LR	LR	19 23 17.8	
	comp=Z,510nm,18.7s,baz=130,slow=43						
GEYT	Alibeck	19.50	283	P	P	19 13 49.7	-1.5
GYA0B	ALIBECK ARRAY	19.50	283	P	P	19 13 50.0	-1.2
ABKAR	Akbulak array	21.05	316	P	P	19 14 07.7	-0.2
SONM	Songino Array	21.26	49	P	P	19 14 12.8	+2.4
	comp=Z,36nm,1.0s,baz=242,slow=10,SNR=116						
SONM				Lg	Lg	19 20 33.8	
	comp=Z,2.0nm,1.3s,baz=251,slow=21,SNR=2.5						
SONM				LR	LR	19 23 01.3	
	comp=Z,587nm,19.3s,baz=247,slow=38						
SONM	Songino Array	21.26	49	P	P	19 14 12.7	+2.3
ULN	Ulaanbaatar	21.68	49	P	P	19 14 18.4	+3.5
TLY	Talaya	21.73	37	P	P	19 14 13.9	-1.4
	comp=Z,1.5nm,0.6s,baz=94,slow=9.6,SNR=7.1						
TLY	Talaya	21.73	37	P	P	19 14 14.7	-0.6
TLY				IAmb	IAmb	19 14 35.7	
	comp=Z,33nm,1.5s						
XAN	Xi'an	21.77	88	P	P	19 14 18.7	+2.9
XAN				pP	sP	19 14 27.9	+5.9
XAN				S	Sn	19 18 22.3	-3.6
XAN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
XAN				LR	LR		
	comp=Z,690nm,10.3s						
XAN				LR	LR		
	comp=Z,1μm,14.6s						
XAN				LR	LR		
	comp=Z,1μm,17.0s						
XAN	Xi'an	21.77	88	P	P	19 14 16.2	+0.4
CHTO	Chiang Mai	22.53	135	P	P	19 14 23.2	-0.8
AKTO	Aktyubinsk	22.72	317	P	P	19 14 25.5	-0.3
	comp=Z,5.6nm,0.7s,baz=109,slow=9.3,SNR=16						
AKTO				LR	LR	19 24 12.3	
	comp=Z,645nm,21.1s,baz=125,slow=39						
GYA	Guiyang	22.77	108	⇑iP	P	19 14 25.6	-1.1
GYA				PP	PnPn	19 14 56.1	+5.4
GYA				S	S	19 18 34.3	-1.5
GYA				SS	SnSn	19 19 19.0	+13
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.3s						
GYA				LR	LR		
	comp=Z,680nm,7.8s						
GYA				LR	LR		
	comp=Z,470nm,11.0s						
GYA				LR	LR		
	comp=Z,750nm,9.1s						
CMAR	Chiang Mai Arr	22.81	136	P	P	19 14 26.6	-0.4
	comp=Z,3.9nm,1.0s,baz=315,slow=11,SNR=24						
HHC	Hu-ho-hao-te	23.26	69	eP	P	19 14 31.2	-0.4
HHC				pmax	pmax		
	comp=Z,77nm,5.2s						
WSAR	Wadi Sarin	24.23	245	LR	LR	19 25 44.2	
	comp=Z,376nm,21.6s,baz=76,slow=41						
ARU	Arti	25.98	329	P	P	19 14 57.7	+1.1
	comp=Z,1.8nm,0.7s,baz=163,slow=3.1,SNR=12						
ARU	Arti	25.98	329	P	P	19 14 57.5	+1.0
ARU				IAmb	IAmb	19 15 31.3	
	comp=Z,8.8nm,0.8s						
WHN	Wuhan	27.17	92	P	P	19 15 05.3	-2.2
WHN				S	S	19 19 42.2	-4.0
WHN				LR	LR		
	comp=Z,2μm,5.3s						
WHN				LR	LR		
	comp=Z,690nm,9.5s						
WHN				LR	LR		
	comp=Z,2μm,7.5s						
PALK	Pallekele	28.70	184	LR	LR	19 27 25.1	
	comp=Z,355nm,20.1s,baz=350,slow=38						
QIZ	Qiongzhong	29.50	118	P	P	19 15 27.3	-1.1
QIZ				S	S	19 20 24.7	+1.7
QIZ				LR	LR		
	comp=Z,610nm,13.5s						
QIZ				LR	LR		
	comp=Z,570nm,13.9s						
QIZ				LR	LR		
	comp=Z,550nm,11.8s						
GNI	Garni	29.78	289	LR	LR	19 28 20.7	
	comp=Z,120nm,22.0s,baz=80,slow=38						
KBZ	Khabaz	31.05	297	LR	LR	19 30 17.5	
	comp=Z,305nm,18.5s,baz=90,slow=40						
KIRV	Kirov	31.22	327	P	P	19 15 44.0	+0.7
	comp=Z,12nm,0.7s,baz=28,slow=1.5,SNR=5.6						
KIRV				LR	LR	19 29 22.0	
	comp=Z,226nm,18.0s,baz=36,slow=38						
RAYN	Ar Rayn	34.19	259	P	P	19 16 09.1	-0.6
RAYN				IAmb	IAmb	19 16 15.0	
	comp=Z,7.6nm,1.2s						
KSRS	Korea Array	36.21	74	LR	LR	19 32 01.4	
	comp=Z,158nm,18.9s,baz=278,slow=37						
KLMR	Klimovskoe	36.72	326	e	P	19 16 31.6	+0.7
KLMR				AMP		19 16 34.6	
	comp=Z,23nm,1.2s						
USRK	Ussuriysk Ar.	38.26	62	LR	LR	19 33 60.0	
	comp=Z,364nm,18.1s,baz=263,slow=38						
BRTR	Keskin Array B	38.30	291	P	P	19 16 45.0	+0.2
	comp=Z,1.7nm,0.6s,baz=98,slow=7.6,SNR=5.5						
BRTR	Keskin Array B	38.30	291	P	P	19 16 45.0	+0.2
AKASG	Malin Array Be	40.45	308	P	P	19 17 02.4	0.0
	comp=Z,1.9nm,0.9s,baz=79,slow=7.0,SNR=7.7						
AKASG				LR	LR	19 36 43.7	
	comp=Z,352nm,18.6s,baz=80,slow=40						
AKBB	Malin Array Si	40.45	308	P	P	19 17 01.3	-1.1
SORM	Soroca	41.09	304	⇓P	P	19 17 08.3	+0.5
TESR	Tescani	42.39	302	⇓P	P	19 17 19.2	+0.8
VRI	Vrincioaia	42.41	301	⇓P	P	19 17 19.4	+0.8
GIRR	Girov	42.44	303	⇓P	P	19 17 19.8	+1.0
PLOR	Plostina	42.47	301	⇓P	P	19 17 20.5	+1.5
TIXI	Tiksi	42.88	20	P	P	19 17 24.9	+2.9
	comp=Z,2.2nm,0.4s,baz=221,slow=1.6,SNR=8.7						
TIXI	Tiksi	42.88	20	P	P	19 17 22.6	+0.6
MLR	Muntele Rosu	43.00	301	P	P	19 17 25.2	+1.6
	comp=Z,5.5nm,0.9s,baz=31,slow=2.9,SNR=7.4						
MLR	Muntele Rosu	43.00	301	⇑P	P	19 17 25.5	+1.9
MLR	Muntele Rosu	43.00	301	P	P	19 17 23.8	+0.3
FIA1	FINESS Array S	43.13	324	P	P	19 17 26.2	+2.1
FINES	FINESS Array B	43.13	324	P	P	19 17 25.1	+0.9
	comp=Z,5.3nm,0.7s,baz=101,slow=9.9,SNR=12						
FINES				LR	LR	19 36 41.6	
	comp=Z,196nm,18.6s,baz=104,slow=38						
BURAR	Bucovina Array	43.24	304	⇓P	P	19 17 29.4	+4.0
BURAR	Bucovina Array	43.24	304	P	P	19 17 25.8	+0.4
VOIR		43.63	301	⇓P	P	19 17 29.7	+1.1
ARR	Arges	43.93	301	⇑P	P	19 17 32.1	+1.1
DRGR		45.04	303	⇑P	P	19 17 40.8	+1.0
ARCES	ARCESS Array B	45.23	335	P	P	19 17 42.9	+1.9
	comp=Z,3.0nm,0.6s,baz=97,slow=6.7,SNR=21						
ARCES				LR	LR	19 36 28.9	
	comp=Z,43nm,18.3s,baz=166,slow=36						
ARCES	ARCESS Array B	45.23	335	P	P	19 17 41.7	+0.8

VYHS	Vyhne	47.36	306	eP	P	19 17 58.6	+0.6
HFS	Hagfors	49.12	322	P	P	19 18 11.9	+0.6
	comp=Z,6.4nm,0.8s,baz=89,slow=7.6,SNR=7.3						
NB2	NORSAR Subarra	50.28	323	P	P	19 18 20.3	0.0
	comp=Z,11nm,1.1s,baz=86,slow=7.9						
NOA	NORSAR Array B	50.28	323	P	P	19 18 20.3	0.0
	comp=Z,3.4nm,0.8s,baz=86,slow=7.5,SNR=12						
NOA				LR	LR	19 41 55.8	
	comp=Z,202nm,18.3s,baz=90,slow=39						
NC204	NORSAR Array S	50.48	324	P	P	19 18 20.3	-1.5
CLL	Collm	50.58	310	e(P)	P	19 18 28.0	+5.4
CLL				Lm	MLR	19 39 00.0	
	comp=Z,300nm,20.7s						
GERES	GERESS Array B	50.64	307	P	P	19 18 24.1	+0.9
	comp=Z,2.2nm,0.7s,baz=75,slow=7.1,SNR=9.3						
GERES				LR	LR	19 41 19.8	
	comp=Z,288nm,21.9s,baz=82,slow=38						
GERES	GERESS Array B	50.64	307	P	P	19 18 22.6	-0.6
ANM	Nome	66.64	26	P	P	19 20 15.6	+1.3
IMAR	Indian Mountai	69.50	21	P	P	19 20 33.1	+0.8
BMAR	Burnt Mountain	70.89	17	P	P	19 20 41.9	+1.1
MLY	Manley	71.06	21	P	P	19 20 43.9	+2.0
MLY				IAmb	IAmb	19 20 48.9	
	comp=Z,6.3nm,1.1s						
NEA	Nenana	71.88	21	P	P	19 20 47.8	+1.0
NEA				IAmb	IAmb	19 20 50.3	
	comp=Z,8.1nm,1.0s						
ILAR	Eielson Array	72.35	20	P	P	19 20 51.7	+2.1
	comp=Z,2.6nm,1.0s,baz=314,slow=5.0,SNR=16						
ILAR	Eielson Array	72.35	20	P	P	19 20 50.3	+0.7
INK	Inuvik	72.53	13	P	P	19 20 51.9	+1.4
	comp=Z,3.2nm,1.1s,baz=335,slow=4.3,SNR=2.9						
INK	Inuvik	72.53	13	P	P	19 20 51.3	+0.8
INK				IAmb	IAmb	19 20 56.9	
	comp=Z,15nm,1.6s						
C36M	Paulatuk	73.10	10	P	P	19 20 54.6	+0.7
RIDG	Independent Ri	73.72	20	P	P	19 20 59.5	+1.8
SCRK	Sand Creek	73.77	19	P	P	19 20 59.0	+0.8
WB0	Warramunga Arr	74.15	130	P	P	19 21 00.5	-0.3
WB0				IAmb	IAmb	19 21 18.7	
	comp=Z,7.4nm,0.9s						
WRA	Warramunga Arr	74.25	130	P	P	19 21 00.7	-0.6
	comp=Z,3.3nm,0.9s,baz=327,slow=5.9,SNR=15						
WRA	Warramunga Arr	74.25	130	P	P	19 21 02.2	+0.9
WRAB	Tennant Creek	74.25	130	P	P	19 21 01.2	-0.1
WRAB				IAmb	IAmb	19 21 17.1	
	comp=Z,7.5nm,1.0s						
WB2	Warramunga Arr	74.26	130	P	P	19 21 00.8	-0.6
WB2				IAmb	IAmb	19 21 17.1	
	comp=Z,6.5nm,0.9s						
DAWY	Dawson	74.88	18	P	P	19 21 03.1	-1.4
DAWY				IAmb	IAmb	19 21 07.8	
	comp=Z,12nm,1.4s						
TOA0	Torodi Ar. Sit	74.95	275	P	P	19 21 03.0	-2.7
TOA0				IAmb	IAmb	19 21 05.3	
	comp=Z,9.4nm,1.6s						
TORD	Torodi Ar. Bea	74.95	275	P	P	19 21 04.8	-0.9
	comp=Z,1.4nm,1.0s,baz=45,slow=3.5,SNR=5.1						
TORD	Torodi Ar. Bea	74.95	275	P	P	19 21 04.0	-1.6
BCAR	Beaver Creek A	75.09	19	P	P	19 21 06.2	+0.5
AS31	Alice Springs	76.78	133	P	P	19 21 14.5	-1.3
ASAR	Alice Springs	76.78	133	P	P	19 21 15.2	-0.6
	comp=Z,2.4nm,0.8s,baz=321,slow=5.9,SNR=15						
ASAR	Alice Springs	76.78	133	P	P	19 21 14.9	-0.9
YKA	Yellowknife Ar	80.83	8	P	P	19 21 38.8	+1.3
	comp=Z,2.9nm,0.8s,baz=340,slow=5.2,SNR=22						

IDC **12** *19:11:06.8±0.9, 38.°08N×20.°19E, h0km, mb3.8/8, mb1 3.7/15, mb1mx3.5/62, mbtmp3.7/15, ML3.5/6, Error ellipse: s-maj=16.9km s-min=14.1km az=79.0*
ATH **12** *19:11:09.7, 38.°12N×20.°38E, h15km, ML3.4/23, Error ellipse: s-maj=1.8km s-min=0.8km az=61.0*
SKO **12** *19:11:09.5, 38.°01N×20.°28E, h8km*
PDG **12** *19:11:09.1±0.5, 38.°17N×20.°29E, h6km±1km, ML4.0/13, Error ellipse: s-maj=0.9km s-min=0.9km az=0.0*
THE **12** *19:11:10.2, 38.°14N×20.°39E, h14km, ML3.7/12, Error ellipse: s-maj=1.0km s-min=0.4km az=263.0*
BEO **12** *19:11:10.7±0.7, 38.°04N×20.°16E, h26km±4km, ML3.7/9*
ISC 12 19:11:09.5±0.7, 38.°12N±0.°02×20.°32E±0.°02, h15km±4km, n175, σ1§74/246, mb3.8/8, 13C-10D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.08	36	P	Pg	19 11 12.8	+0.3
CHV1				S	Sg	19 11 14.5	0.0
KEF3	Kipouria, Keph	0.09	14	P	Pg	19 11 13.0	+0.4
KEF3				S	Sg	19 11 14.9	+0.3
LXRA	Lixouri, Kepha	0.12	48	P	Pg	19 11 13.0	0.0
LXRA				S	Sg	19 11 15.0	-0.3
LXR1	Lixouri, Cepha	0.12	48	P	Pg	19 11 13.1	+0.1
LXR1				S	Sg	19 11 15.1	-0.2
ARGA	Argostoli. Kep	0.14	64	P	Pg	19 11 13.0	-0.2
ARGA				S	Sg	19 11 14.4	-1.2
KEF2	Argostoli. Kep	0.14	70	P	Pg	19 11 12.9	-0.3
KEF2				S	Sg	19 11 14.8	-0.9
ARG2	Argostoli	0.14	65	P	Pg	19 11 13.1	-0.2
ARG2				S	Sg	19 11 14.8	-1.0
KEF4	Livadi, Kephal	0.16	30	P	Pg	19 11 13.6	+0.1
KEF4				S	Sg	19 11 16.2	-0.1
KEF1	Kardakata, Kep	0.20	36	P	Pg	19 11 13.9	-0.2
KEF1				S	Sg	19 11 16.6	-0.5
VLS	Valsamata	0.22	74	P	Pg	19 11 13.9	-0.5
VLS				S	Sg	19 11 16.8	-1.0
	120μm,0.3s						
VLS	Valsamata	0.22	74	P	Pg	19 11 14.0	-0.5
VLS				S	Sg	19 11 16.6	-1.2
VSK1	VASILIKIADES	0.35	33	P	Pg	19 11 16.4	-0.2
VSK1				S	Sg	19 11 21.7	+0.2
	32μm,0.3s						
VLMS	Volimes, Zakyn	0.36	132	P	Pg	19 11 17.1	+0.2
VLMS				S	Sg	19 11 21.6	-0.3
VLMS				AML	AML	19 11 23.3	
	comp=N,72983μm,0.3s						
VLMS				AML	AML	19 11 24.6	
	comp=E,61034μm,0.4s						
KONA	Konidatara, Ke	0.36	32	P	Pg	19 11 16.6	-0.3
KONA				S	Sg	19 11 22.0	0.0
FSK	Fiskardo	0.39	29	P	Pg	19 11 17.1	-0.3
FSK				S	Sg	19 11 22.7	-0.1
	comp=E,13μm,0.5s						
FSK	Fiskardo	0.39	29	P	Pg	19 11 17.1	-0.3
FSK				S	Sg	19 11 22.3	-0.4
FSK				AML	AML	19 11 23.3	
	comp=N,22029μm,0.5s						
FSK				AML	AML	19 11 23.6	
	comp=E,34219μm,0.5s						
ZAK2	Zakynthos	0.56	126	P	Pb	19 11 20.9	-0.2
ZAK2				S	Sb	19 11 28.6	-0.3
EVGI	Lefkada island	0.57	27	P	Pg	19 11 20.3	-0.4
EVGI				S	Sb	19 11 28.6	-0.5
EVGI	Lefkada island	0.57	27	P	Pg	19 11 20.2	-0.4
EVGI				S	Sb	19 11 28.5	-0.7
KRI1	kERI	0.60	139	P	Pg	19 11 21.1	-0.2
KRI1				S	Sb	19 11 29.8	-0.2
	comp=E,15μm,0.4s						
MGNA	Meganis	0.65	34	P	Pg	19 11 21.4	-0.9
MGNA				S	Sg	19 11 29.9	-1.0
MGNA				AML	AML	19 11 34.9	
	comp=E,5063μm,0.3s						
MGNA				AML	AML	19 11 37.0	
	comp=N,5190μm,0.4s						
LKD2	Lefkada island	0.72	21	P	Pg	19 11 22.9	-0.7
LKD2				S	Sg	19 11 32.8	-0.3
	comp=N,3μm,0.3s						
LKD2	Lefkada island	0.72	21	P	Pg	19 11 22.8	-0.8
LKD2				AML	AML	19 11 40.5	
	comp=N,6788μm,0.4s						
LKD2				AML	AML	19 11 42.0	
	comp=E,5504μm,0.3s						
AST1	Astakos	0.74	55	P	Pg	19 11 23.0	-0.9
AST1				S	Sb	19 11 33.9	-0.1
	comp=E,6μm,0.3s						
TSLK	Tsoukalades, L	0.75	20	P	Pg	19 11 23.7	-0.5
TSLK				S	Sg	19 11 33.7	-0.4
	comp=E,5μm,0.4s						
TSLK	Tsoukalades, L	0.75	20	P	Pg	19 11 23.5	-0.6
TSLK				S	Sb	19 11 34.6	+0.2
TSLK				AML	AML	19 11 41.6	
	comp=E,10965μm,0.4s						
TSLK				AML	AML	19 11 44.9	
	comp=N,10071μm,0.4s						
PDO	Prodromos	0.83	54	P	Pg	19 11 24.7	-0.9
PDO				S	Sg	19 11 35.7	-0.8
	comp=N,13μm,0.4s						
PDO	Prodromos	0.83	54	P	Pg	19 11 24.8	-0.8
PDO				AML	AML	19 11 45.6	
	comp=E,15396μm,0.5s						
PDO				AML	AML	19 11 46.5	
	comp=N,20728μm,0.4s						
RLS	Riolos of Patr	0.91	93	P	Pb	19 11 26.1	-0.9
RLS				S	Sb	19 11 38.3	-0.5
	comp=N,3μm,0.5s						
RLS	Riolos of Patr	0.91	93	P	Pb	19 11 26.0	-0.9
RLS				S	Sg	19 11 38.8	-0.1
RLS				AML	AML	19 11 45.0	
	comp=E,5092μm,0.5s						
RLS				AML	AML	19 11 45.6	
	comp=N,5104μm,0.4s						
PVO	Paravola	1.07	62	P	Pb	19 11 29.3	-0.4
PVO				S	Sn	19 11 44.1	-0.5
	comp=N,4μm,0.3s						
PVO	Paravola	1.07	62	P	Pb	19 11 29.4	-0.4
PVO				AML	AML	19 11 51.0	
	comp=E,9749μm,0.4s						
PVO				AML	AML	19 11 51.5	
	comp=N,5768μm,0.3s						
DRO	Drossia	1.11	98	P	Pb	19 11 29.8	-0.6
DRO				S	Sb	19 11 44.6	-0.1
	comp=N,3μm,0.4s						
DRO	Drossia	1.11	98	P	Pb	19 11 30.0	-0.5
DRO				AML	AML	19 11 51.5	
	comp=N,4974μm,0.4s						
DRO				AML	AML	19 11 52.7	
	comp=E,8733μm,0.5s						
UPR	University Cam	1.17	81	P	Pn	19 11 31.4	+0.1
AMT	Artemida-Makis	1.24	118	P	Pg	19 11 33.1	-0.4
AMT				AML	AML	19 12 01.1	
	comp=N,3946μm,0.5s						
AMT				AML	AML	19 12 04.8	
	comp=E,5088μm,0.8s						
LAKA	Lakka	1.31	84	P	Pn	19 11 33.1	-0.3
LAKA				AML	AML	19 11 55.9	
	comp=E,2721μm,0.5s						
LAKA				AML	AML	19 11 59.8	
	comp=N,2484μm,0.7s						
ANX	Ano Chora	1.34	69	P	Pn	19 11 33.2	-0.7
ANX	Ano Chora	1.34	69	P	Pn	19 11 33.6	-0.3
ANX				AML	AML	19 12 00.5	
	comp=N,7652μm,0.5s						
ANX				AML	AML	19 12 03.1	
	comp=E,4854μm,0.4s						
SERG	Sergoula	1.40	77	P	Pn	19 11 34.2	-0.3
SERG	Sergoula	1.40	77	P	Pn	19 11 34.2	-0.3
SERG				AML	AML	19 12 06.6	
	comp=E,2751μm,0.6s						
SERG				AML	AML	19 12 07.3	
	comp=N,3085μm,0.5s						
TRIZ	Trizonia	1.40	79	P	Pn	19 11 34.2	-0.3
TRIZ				S	Sn	19 11 52.1	-0.7
	comp=N,2μm,0.4s						
TRIZ	Trizonia	1.40	79	P	Pn	19 11 34.4	-0.1
EVR	Evrytania	1.41	55	P	Pb	19 11 35.4	-0.3
EVR				AML	AML	19 12 00.5	
	comp=E,1501μm,1.0s						
EVR				AML	AML	19 12 05.5	
	comp=N,2194μm,0.8s						
IGT	Igoumenitsa	1.41	0	ePg	Pg	19 11 38.7	+2.0
IGT				eSg	Sg	19 11 57.9	+2.8
IGT	Igoumenitsa	1.41	0	P	Pb	19 11 35.9	+0.3
IGT				AML	AML	19 11 59.1	
	comp=E,2186μm,0.5s						
IGT				AML	AML	19 12 03.8	
	comp=N,1551μm,0.4s						
KLV	Kalavryta, Ach	1.45	92	P	Pn	19 11 35.3	+0.1
KLV				AML	AML	19 12 02.5	
	comp=E,1370μm,0.8s						
KLV				AML	AML	19 12 03.2	
	comp=N,1358μm,0.4s						
KALE	Kalithea	1.46	79	P	Pn	19 11 35.3	-0.1
KALE				AML	AML	19 12 03.0	
	comp=N,2069μm,0.5s						
KALE				AML	AML	19 12 03.5	
	comp=E,1835μm,0.4s						
ITM	Ithomi	1.58	126	P	Pb	19 11 38.0	-0.5
ITM				AML	AML	19 12 12.7	
	comp=N,1150μm,0.5s						
ITM				AML	AML	19 12 14.9	
	comp=E,1128μm,0.5s						
JAN	Janina	1.59	15	P	Pg	19 11 39.7	-0.4
JAN				AML	AML	19 12 05.4	
	comp=E,3123μm,0.4s						
JAN				AML	AML	19 12 06.9	
	comp=N,1907μm,0.4s						
KEK	Kerkira	1.64	346	P	Pb	19 11 39.3	-0.3
KASA	Kassiopi	1.65	350	P	Pb	19 11 39.8	+0.1
PYL	PYLOS	1.66	137	P	Pb	19 11 39.8	0.0
MAKR	Makrakomi, Fth	1.68	57	P	Pb	19 11 39.7	-0.4
VLX	Vlachokerasia	1.79	114	P	Pg	19 11 43.4	-0.6
VLX				AML	AML	19 12 20.2	
	comp=E,1720μm,0.7s						
VLX				AML	AML	19 12 23.9	
	comp=N,1611μm,0.6s						
MEV	Metsovon	1.81	23	P	Pb	19 11 43.0	+0.6
AGG	Agios Georgios	1.81	60	P	Pb	19 11 42.4	-0.1
AGG				AML	AML	19 12 13.4	
	comp=N,1162μm,0.5s						
AGG				AML	AML	19 12 17.3	
	comp=E,1185μm,0.5s						
AXAR	Agios Charalam	1.95	70	P	Pb	19 11 44.4	-0.3
THL	Klokotos Trika	1.96	42	P	Pb	19 11 44.7	-0.2
THL				AML	AML	19 12 18.2	
	comp=E,1109μm,0.6s						
THL				AML	AML	19 12 20.6	
	comp=N,652μm,0.5s						
KPRO	Kipourio	2.01	24	P	Pb	19 11 46.0	+0.2
KPRO				AML	AML	19 12 22.6	
	comp=N,1237μm,1.2s						
KPRO				AML	AML	19 12 26.5	
	comp=E,1505μm,0.6s						
LTK	Loutraki	2.09	92	P	Pb	19 11 45.7	-1.4
LOUT	Loutraki	2.10	93	P	Pb	19 11 45.9	-1.4
LKR	Lokris	2.17	75	P	Pb	19 11 47.2	-1.3
VIL2	Platees	2.32	87	P	Pb	19 11 49.5	-1.6
KRND	KRANIDI	2.36	107	P	Pb	19 11 50.2	-1.5
NEST	Nestorio	2.36	14	P	Pb	19 11 50.7	-1.1
DID	Didima	2.39	104	P	Pb	19 11 50.3	-1.9
SCTE	Santa Cesarea	2.43	324	P	Pn	19 11 50.1	+1.4
KZN	Kozani	2.46	27	P	Pb	19 11 52.3	-1.1
VLI	Veliai	2.51	123	P	Pb	19 11 53.0	-1.2
NEO	Neokhori	2.56	61	P	Pb	19 11 52.8	-2.4
XOR	Xorichti	2.57	60	P	Pb	19 11 52.6	-1.9
LIT	Litokhoron	2.60	40	P	Pb	19 11 53.5	-2.4
MRKA	Markates	2.63	76	P	Pb	19 11 52.9	+1.4
SKIA	Skiathos	2.67	66	P	Pb	19 11 54.4	+2.3
VLY	Voula,Athens	2.76	94	P	Pb	19 11 54.7	+1.5
AOS	Alonnisos	2.98	68	P	Pn	19 11 58.4	+2.1
TIP	Timpagrande	2.98	292	P	Pn	19 11 58.5	+2.1
TIP	Timpagrande	2.98	292	⇓P	Pn	19 11 58.8	+2.4
TIP				⇑S	Sb	19 12 36.3	-2.4
OHR	Ohrid	3.01	7	i Pn	Pn	19 11 59.3	+2.5
OHR				eSn	Sb	19 12 36.4	-3.1
OHR				Lg	Lg	19 12 37.0	
	comp=E,108nm,0.5s						
OHR				eLg	Lg	19 12 37.1	
	comp=N,0.0nm,0.5s						
TIR	Tirane	3.25	354	ePn	Pn	19 12 02.1	+2.2
TIR				eSn	Sn	19 12 40.6	+2.3
TIR	Tirane	3.25	354	P	Pn	19 12 01.8	+1.9
TIR	Tirane	3.25	354	⇓P	Pn	19 12 03.1	+3.2
TIR				⇓S	Sn	19 12 36.4	-1.9
KARY	Karystos	3.25	90	P	Pn	19 12 01.2	+1.3
KNT	Kendrikon	3.63	32	P	Pn	19 12 06.8	+1.5
VAY	Valandovo	3.64	28	ePn	Pn	19 12 07.4	+2.1
VAY	Valandovo	3.64	28	i Pn	Pn	19 12 07.5	+2.1
MATE	Matera	3.77	313	⇓P	Pb	19 12 15.1	-0.7
MATE				⇑S	Sb	19 12 57.6	-3.8
STIP	Stip	3.85	21	i Pn	Pn	19 12 11.9	+3.7
SG1	Sgolgore (BA)	3.92	315	ePn	Pn	19 12 11.0	+1.8
SG1				Sn	Sn	19 12 54.4	-0.5
SRS	Serrai	3.92	39	ePn	Pn	19 12 10.9	+1.7
ULC	Ulcinj	3.93	348	ePn	Pn	19 12 09.9	+0.5
ULC				eSn	Sn	19 12 57.0	+1.8
BAI	Bari	4.00	319	ePn	Pn	19 12 11.7	+1.5
DRME	Dracevica, Mon	4.16	348	ePn	Pn	19 12 13.3	+0.8
DRME				i Sn	Sn	19 13 02.6	+1.8
BUM	Brajici-Budva	4.32	346	ePn	Pn	19 12 15.5	+0.8
BUM				eSn	Sn	19 13 06.6	+1.7
PDG	Podgorica	4.38	350	ePn	Pn	19 12 16.2	+0.6
PDG				eSn	Sn	19 13 06.7	+0.3
PDG	Podgorica	4.38	350	⇑P	Pn	19 12 20.3	+4.7
PDG				⇑S	Sn	19 13 05.0	-1.4
TTG	Podgorica	4.38	350	ePn	Pn	19 12 16.5	+0.9
TTG				eSn	Sn	19 13 08.2	+1.8
PVY	Plav	4.48	357	ePn	Pn	19 12 18.4	+1.4
PVY				eSn	Sn	19 13 10.5	+1.5
HCY	Herceg Novi	4.54	343	ePn	Pn	19 12 17.8	0.0
HCY	Herceg Novi	4.54	343	ePn	Pn	19 12 17.8	0.0
HCY				eSn	Sn	19 13 11.6	+1.2
CEME	Cevo	4.55	347	ePn	Pn	19 12 17.9	-0.1
CEME				eSn	Sn	19 13 11.2	+0.6
IDI	Anoyia	4.63	126	Pn	Pn	19 12 19.1	0.0
	comp=N,0.2nm,0.3s,baz=306,slow=10,SNR=4.4						
IDI				Sn	Sn	19 13 15.1	+2.5
	comp=N,2.2nm,0.3s,baz=308,slow=23,SNR=9.7						
BOSS	Bosilegrad	4.67	20	ePn	Pn	19 12 21.5	+1.9
VAE	Valguarnera	4.72	264	Pn	Pn	19 12 18.7	-1.6
	comp=N,0.3nm,0.3s,baz=159,slow=8.6,SNR=1.9						
VAE				Sn	Sn	19 13 15.0	+0.1
	comp=N,2.0nm,0.3s,baz=107,slow=14,SNR=3.5						
IVA	Berane	4.76	356	ePn	Pn	19 12 22.2	+1.4
IVA				i Sn	Sn	19 13 17.2	+1.4
NKME	Niksic	4.76	348	ePn	Pn	19 12 21.4	+0.6
NKME				eSn	Sn	19 13 17.5	+1.8
KOME	Kolasin	4.77	353	ePn	Pn	19 12 22.2	+1.3
KOME				eSn	Sn	19 13 17.8	+1.8
BARS	Barje	4.83	13	ePn	Pn	19 12 23.1	+1.4
TREB	Trebinje	4.83	342	ePn	Pn	19 12 21.6	-0.2
TREB				eSn	Sn	19 13 16.2	-1.3
TREB	Trebinje	4.83	342	ePn	Pn	19 12 21.4	-0.4
BRY	Bratogost	4.97	345	ePn	Pn	19 12 23.9	+0.2
BRY	Bratogost	4.97	345	ePn	Pn	19 12 23.8	+0.1
BRY				eSn	Sn	19 13 22.2	+1.2
VTS	Vitosha	5.01	25	ePn	Pn	19 12 26.1	+1.7
VTS				eSn	Sn	19 13 22.5	+0.3
VTS	Vitosha	5.01	25	⇑P	Pn	19 12 29.0	+4.6
VTS				⇑S	Sn	19 13 21.4	-0.8
SELS	Selova	5.13	7	eSn	Pn	19 12 26.0	+0.1
SELS	Selova	5.13	7	ePn	Sn	19 13 24.4	-0.5
SJES	Sjenica	5.14	357	ePn	Pn	19 12 27.7	+1.6
SJES				eSn	Sn	19 13 25.1	-0.2
UPM	Unac-Piva	5.19	348	ePn	Pn	19 12 28.2	+1.3
UPM				eSn	Sn	19 13 28.0	+1.4
PLE	Pljevlja	5.25	353	ePn	Pn	19 12 28.9	+1.2
PLE				i Sn	Sn	19 13 29.5	+1.5
ZAPS	Zavoj	5.44	18	ePn	Pn	19 12 32.3	+2.2
IVAS	Ivanjica	5.46	359	ePn	Pn	19 12 30.5	+0.2
RUDO	Rudo	5.54	353	ePn	Pn	19 12 32.6	+1.1
BOVS	Bovan	5.61	10	ePn	Pn	19 12 33.1	+0.7
BOVS				eSn	Sn	19 13 34.7	-1.9
GRUS	Gruza	5.77	3	ePn	Pn	19 12 35.1	+0.5
GRUS				eSn	Sn	19 13 39.7	-0.9
BLKB	Belogradchik	5.78	17	⇓S	Sn	19 13 39.6	-1.3
BBLS	Lazići	5.78	353	ePn	Pn	19 12 35.1	+0.2
BBLS				eSn	Sn	19 13 38.8	-2.2
BBLS	Lazići	5.78	353	ePn	Pn	19 12 36.1	+1.2
DIVS	Divibare	5.98	358	ePn	Pn	19 12 37.8	+0.2
DIVS				eSn	Sn	19 13 43.5	-2.4
DIVS	Divibare	5.98	358	ePn	Pn	19 12 37.8	+0.2
HAPS	Han Pijesak,Bl	6.05	351	ePn	Pn	19 12 38.1	-0.5
ELND	Elena	6.40	40	⇑P	Pn	19 12 47.8	+4.5
MDVR	Moldovita	6.74	8	⇑P	Pn	19 12 52.0	+4.0
MDVR				⇓S	Sn	19 14 02.0	-2.5
MGRS	Mrkonjic Grad	6.75	340	ePn	Pn	19 12 49.2	+1.1
BLY	Banja Luka	7.03	341	ePn	Pn	19 12 52.6	+0.7
GZR	Gura Zlata	7.50	13	⇑P	Pn	19 13 03.0	+4.6
GZR				⇑S	Sn	19 14 20.8	-2.4
BZS	Buzias	7.55	7	⇑P	Pn	19 13 03.5	+4.4
ARR	Arges	7.93	23	⇓P	Pn	19 13 08.7	+4.4
VOIR		8.12	24	⇓P	Pn	19 13 11.5	+4.6
MORH	Mrgy, Hungar	8.19	352	ePn	Pn	19 13 06.8	-0.9
RIY	Rijeka	8.42	331	ePn	Pn	19 13 11.9	+1.0
MLR	Muntele Rosu	8.48	28	Pn	Pn	19 13 14.5	+2.6
	comp=N,0.2nm,0.3s,baz=244,slow=7.6,SNR=7.0						
CRES	Cresnjev	8.51	336	ePn	Pn	19 13 12.3	+0.1
BISRR	Bisoca	8.82	31	⇑P	Pn	19 13 21.4	+4.9
DRGR		8.85	11	⇓P	Pn	19 13 21.2	+4.3
LJU	Ljubljana	9.01	333	ePn	Pn	19 13 20.0	+0.9
PLOR	Plostina	9.05	29	⇑P	Pn	19 13 23.7	+4.1
VRI	Vrincioaia	9.09	30	⇓P	Pn	19 13 24.5	+4.3
KEST	Kesra	9.11	258	Sn	Sn	19 15 01.8	-1.0
	comp=N,0.2nm,0.3s,baz=54,slow=14,SNR=2.7						
SOKA	Soboth	9.40	337	i Pn	Pn	19 13 24.8	+0.2
	comp=N,5.3nm,0.3s,SNR=14						
SOKA				i Sn	Sn	19 15 05.0	-5.0
	comp=N,5.0nm,0.9s						
OBKA	Obir	9.41	335	Pn	Pn	19 13 25.5	+0.9
	comp=N,8.8nm,0.7s,SNR=12						
OBKA				i Sn	Sn	19 15 06.3	-3.9
	comp=N,13nm,0.6s						
ARSA	Arzberg	9.79	340	i Pn	Pn	19 13 29.8	+0.1
	comp=N,3.4nm,0.3s						
MYKA	Terra Mystica	9.83	332	i Pn	Pn	19 13 32.8	+2.4
	comp=N,2.8nm,0.4s						
KBA	Koelnbreinsper	10.32	332	Pn	Pn	19 13 37.9	+0.7
	comp=N,3.6nm,0.4s,SNR=6.1						
KBA				i Sn	Sn	19 15 29.8	-2.9
	comp=N,2.7nm,0.5s						
ABTA	Abfaltersbach	10.37	329	i Pn	Pn	19 13 38.9	+1.1
	comp=N,2.4nm,0.4s						
ABTA				i Sn	Sn	19 15 31.6	-2.1
	comp=N,8.0nm,0.8s						
VYHS	Vyhne	10.43	355	eSN	Sn	19 15 28.9	-6.1
BRTR	Keskin Array B	10.50	77	Pn	Pn	19 13 43.4	+3.7
	comp=N,0.1nm,0.3s,baz=254,slow=12,SNR=4.9						
MOA	Molln	10.69	337	Pn	Pn	19 13 43.3	+1.3
	comp=N,3.0nm,0.3s,SNR=7.1						
MOA				i Sn	Sn	19 15 38.0	-3.4
	comp=N,2.7nm,0.6s						
WTTA	Wattenberg	11.15	328	Pn	Pn	19 13 50.8	+2.3
	comp=N,2.7nm,0.4s,SNR=4.3						
WATA	Walderalm	11.23	328	i Pn	Pn	19 13 51.8	+2.2
	comp=N,3.1nm,0.4s						
SQTA	Sankt Quirin	11.29	327	i Pn	Pn	19 13 53.9	+3.4
	comp=N,4.8nm,0.5s						
MOTA	Moosalm	11.44	327	i Pn	Pn	19 13 54.8	+2.4
DAVOX	Davos/Dischmat	11.59	322	Pn	Pn	19 13 54.6	+0.1
	comp=N,0.1nm,0.3s,baz=128,slow=18,SNR=2.2						
DAVOX				Sn	Sn	19 16 02.3	-1.4
	comp=N,0.1nm,0.3s,baz=330,slow=20,SNR=3.2						
GERES	GERESS Array B	11.74	338	Pn	Pn	19 13 56.6	+0.1
	comp=N,0.4nm,0.3s,baz=158,slow=14,SNR=10						
GERES				Sn	Sn	19 16 00.8	-6.7
	comp=N,0.2nm,0.3s,baz=161,slow=21,SNR=4.6						
AKASG	Malin Array Be	14.08	24	Pn	Pn	19 14 28.4	0.0
	comp=N,0.3nm,0.3s,baz=207,slow=12,SNR=3.4						
KBZ	Khabaz	17.93	65	P	P	19 15 22.0	+3.2
	comp=N,0.1nm,0.3s,baz=250,slow=13,SNR=4.3						
HFS	Hagfors	22.43	351	P	P	19 16 07.3	-0.3
	comp=N,7.3nm,0.7s,baz=156,slow=11,SNR=23						
FINES	FINESS Array B	23.62	7	P	P	19 16 18.8	-1.0
	comp=N,2.0nm,0.6s,baz=164,slow=11,SNR=12						
NB2	NORSAR Subarra	23.65	349	P	P	19 16 20.4	+0.3
	comp=Z,2.3nm,0.8s,baz=162,slow=9.3						
NOA	NORSAR Array B	23.65	349	P	P	19 16 19.8	-0.3
	comp=Z,0.6nm,0.6s,baz=153,slow=11,SNR=5.4						
TORD	Torodi Ar. Bea	29.89	219	P	P	19 17 15.5	-1.2
	comp=Z,0.4nm,0.7s,baz=24,slow=8.2,SNR=2.9						
ARCES	ARCESS Array B	31.60	3	P	P	19 17 31.2	-0.1
	comp=Z,0.8nm,0.7s,baz=191,slow=11,SNR=6.2						
KMBO	Kilima Mbogo	42.06	154	P	P	19 19 00.6	-0.5
	comp=Z,0.8nm,0.6s,baz=10,slow=4.3,SNR=3.0						
MKAR	Makanchi Array	45.47	58	P	P	19 19 28.5	+0.6
	comp=Z,1.1nm,0.6s,baz=277,slow=8.1,SNR=6.7						
ZALV	Zalesovo Beam	45.85	48	P	P	19 19 30.7	-0.2
	comp=Z,1.5nm,0.6s,baz=278,slow=8.4,SNR=4.2						

IDC **12** *19:22:51.4±0.4, 20.°70S×169.°96E, h0km, mb4.7/25, mb1 4.8/26, mb1mx4.8/32, mbtmp4.7/26, ML4.5/1, MS5.0/20, Ms1 5.0/20, ms1mx4.9/24, Error ellipse: s-maj=14.6km s-min=13.5km az=100.0*
NEIC **12** *19:22:52.3±1.6, 20.°67S±0.°06×169.°88E±0.°07, h10km±1km, Error ellipse: s-maj=11.5km s-min=10.2km az=113.0*
BJI **12** *19:22:53.2±0.0, 20.°50S×169.°41E, h7km, mB5.4/32, mb4.9/46, Ms5.3/41, Ms7 5.0/39*
NEIC **12** *19:22:53.4±1.4, 20.°63S±0.°06×169.°85E±0.°07, h12km±3km, mb5.5/150, Ms_20 5.4/537, Mww5.6, Mwc5.7(GCMT), Error ellipse: s-maj=10.0km s-min=8.8km az=112.0*

MOS **12** 19:22:55.5±1.1, 20.°72S×169.°92E, h33km, mb5.2/11, Error ellipse: s-maj=8.5km s-min=7.7km az=172.3

GCMT **12** 19:22:58.3±0.1, 20.°53S±0.°01×169.°98E±0.°01, h13km, MW5.6/155, Moment Tensor Solution. s134,c234; s155,c320; Duration: 1s6 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.49±.04; $M_{\theta\theta}$-1.08±.03; $M_{\phi\phi}$2.56±.04; $M_{r\theta}$0.88±.09; $M_{r\phi}$-2.53±.03; $M_{\theta\phi}$0.76±.08; Best double couple: $M_0$3.50900×10^{17} NP1:ϕ_s293.00000°, δ64.00000°, λ-156.00000°. NP2:ϕ_s192.00000°, δ69.00000°, λ-28.00000°. Principal axes: T 3.8710, Plg3.0000°, Azm243.0000°; N -0.7330, Plg55.0000°, Azm338.0000°; P -3.1480, Plg34.0000°, Azm151.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC **12** 19:22:58, 20.°53S×169.°99E, h14km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.58; $M_{\theta\theta}$-1.20; $M_{\phi\phi}$2.78; $M_{r\theta}$0.99; $M_{r\phi}$-2.70; $M_{\theta\phi}$0.41; Fault plane solution: $M_0$3.78000×10^{17} NP1:ϕ_s193.00000°, δ67.00000°, λ-24.00000°. NP2:ϕ_s293.00000°, δ68.00000°, λ-155.00000°. Principal axes: T 4.1452, Plg1.0000°, Azm63.0000°; N -0.8904, Plg57.0000°, Azm332.0000°; P -3.2548, Plg33.0000°, Azm154.0000°;

NEIC **12** 19:23:03, 20.°57S×169.°99E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.88; $M_{\theta\theta}$-1.44; $M_{\phi\phi}$2.32; $M_{r\theta}$0.28; $M_{r\phi}$-2.79; $M_{\theta\phi}$1.35; Fault plane solution: $M_0$3.71000×10^{17} NP1:ϕ_s288.00000°, δ66.00000°, λ-173.00000°. NP2:ϕ_s195.00000°, δ84.00000°, λ-24.00000°. Principal axes: T 4.0376, Plg13.0000°, Azm244.0000°; N -0.7670, Plg65.0000°, Azm2.0000°; P -3.2706, Plg21.0000°, Azm149.0000°;

ISC 12 19:22:54.5±0.5, **20.°65S**±0.°04×**169.°94E**±0.°04, **h19km**±1km, **h20km:pP-P, n752, σ1s28/549, mb5.4/130, MS5.4/309, 25C-5D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.56	246	eP	Pn	19 23 48.2	-0.6
DZM				eLR	LR	19 24 34.8	
	comp=Z,111µm,25.9s						
DZM	Mont Dzumac	3.56	246	Pn	Pn	19 23 48.2	-0.6
	42nm,0.3s,baz=124,slow=18,SNR=300						
DZM				Sn	Sn	19 24 31.1	+0.7
	102nm,0.3s,baz=323,slow=22,SNR=12						
DZM	Mont Dzumac	3.56	246		Pn	19 23 47.8	-1.0
NOUC	Port Laguerre	3.69	246		Pn	19 23 49.7	-0.8
SANVU	Saraoutou	5.79	333		Pn	19 24 19.0	-0.5
MSVF	Nonsavu	8.19	71		Pn	19 24 52.9	+0.4
MSVF	Nonsavu	8.19	71	⇓eP	Pn	19 24 52.9	+0.4
NFK	Norfolk Island	8.55	192	P	Pn	19 24 58.3	+0.9
	baz=8.6,SNR=8.7						
RAO	Raoul Island	13.94	130	Pn	Pn	19 26 13.9	+2.8
	34nm,0.3s,baz=270,slow=20,SNR=2.3						
RAO				LR	LR	19 30 23.8	
	comp=Z,7µm,19.9s,baz=302,slow=33						
HNR	Honiara	14.74	318	Pn	P	19 26 25.3	-2.8
	5.1nm,0.3s,baz=263,slow=10,SNR=14						
HNR				LR	LR	19 31 18.3	
	comp=Z,8µm,20.4s,baz=149,slow=34						
HNR	Honiara	14.74	318	P	P	19 26 26.0	-2.1
HNR	Honiara	14.74	318	P	P	19 26 26.0	-2.1
HNR	Honiara	14.74	318	P	P	19 26 26.0	-2.1
FUNA	Funafuti	15.00	38	P	P	19 26 31.8	+0.8
MBAZ	Motutapu North	16.63	166	P	P	19 27 12.2	+23
EIDS	Eidsvold	17.98	251	P	P	19 27 05.3	+1.3
	baz=18,SNR=7.8						
EIDS	Eidsvold	17.98	251	P	Pn	19 27 03.4	-0.2
HIZ	Hauiti	18.30	168	P	P	19 27 08.2	+0.8
HIZ				IAmb	IAmb	19 27 11.4	
	comp=Z,384nm,1.3s						
MXZ	Matakaoa Point	18.35	158	P	P	19 27 06.5	-1.5
HAZ	Te Kaha	18.36	160	P	Pn	19 27 10.7	+2.7
RUGZ	Raukumara Rang	18.51	160	P	Pn	19 27 12.6	+2.6
URZ	Urewera	18.61	162	P	Pn	19 27 12.5	+1.4
	comp=Z,1.3nm,0.3s,baz=343,slow=6.8,SNR=16						
URZ	Urewera	18.61	162	P	P	19 27 09.6	-1.2
WMGZ	Waiomatatini S	18.62	159	P	Pn	19 27 14.5	+3.3
AFI	Afiamalu	18.69	72	P	P	19 27 08.8	-3.1
	comp=Z,3.4nm,0.3s,baz=261,slow=4.6,SNR=8.9						
AFI	Afiamalu	18.69	72	P	P	19 27 08.7	-3.2
AFI	Afiamalu	18.69	72	P	P	19 27 08.7	-3.2
AFI				pmax	pmax		
	comp=Z,158nm,1.3s						
MWZ	Matawai	18.81	161	P	Pn	19 27 15.6	+2.1
RTZ	Ruatahuna	18.91	163	P	Pn	19 27 16.0	+1.2
NIUE	Niue	19.00	89	P	P	19 27 12.9	-2.3
NIUE				IAmb	IAmb	19 27 26.7	
	comp=Z,607nm,1.8s						
ARMA	Armidale	19.16	236	P	Pn	19 27 20.0	+2.1
	baz=19,SNR=19						
ARMA	Armidale	19.16	236	P	P	19 27 15.8	-1.2
ARMA				IAmb	IAmb	19 27 28.9	
	comp=Z,462nm,1.9s						
CNGZ	Carnagh Statio	19.16	160	P	Pn	19 27 18.0	+0.3
RAHZ	Arahi	19.22	163	P	Pn	19 27 19.3	+0.8
RIGZ	Rimuhau	19.22	161	P	Pn	19 27 21.8	+3.3
BKZ	Black Stump Fm	19.30	164	P	P	19 27 18.6	+0.2
BKZ				IAmb	IAmb	19 27 23.4	
	comp=Z,263nm,1.2s						
BKZ	Black Stump Fm	19.30	164	P	Pn	19 27 21.0	+1.5
KNZ	Kokohu	19.48	162	P	Pn	19 27 21.2	-0.4
KRHZ	Kereru	19.72	165	P	Pn	19 27 24.7	+0.2
KAHZ	Kahuranaki	19.99	164	P	Pn	19 27 28.3	+0.6
QRZ	Quartz Range	20.23	174		Pn	19 27 30.1	-0.5
RMQ	Roma	20.26	249	P	Pn	19 27 31.7	+0.7
	baz=20,SNR=51						
SNZO	South Karori	20.99	170	P	Pn	19 27 38.8	-0.5
SNZO				IAmb	IAmb	19 27 51.1	
	comp=Z,309nm,1.4s						
TUWZ	Tuamarina	20.99	172	P	P	19 27 37.1	+0.4
BHW	Baring Head	21.11	170	P	P	19 27 38.9	+0.8
MSWZ	Moikau Station	21.19	169	P	P	19 27 37.8	-1.0
THZ	Tophouse	21.20	174	P	P	19 27 39.1	0.0
BSWZ	Blackbirch Sta	21.26	172	P	P	19 27 38.6	-1.0
PLWZ	Palliser	21.34	169	P	P	19 27 39.2	-1.3
KHZ	Kahutara	21.91	173	P	P	19 27 46.6	0.0
LTZ	Lake Taylor	22.15	175	P	P	19 27 49.6	+0.3
LTZ				IAmb	IAmb	19 28 07.0	
	comp=Z,220nm,1.3s						
CTA	Charters Tower	22.21	267	P	P	19 27 51.8	+1.7
	comp=Z,16nm,1.1s,baz=92,slow=10,SNR=6.6						
CTAO	Charters Tower	22.21	267	P	P	19 27 52.8	+2.7
CTAO				pmax	pmax		
	comp=Z,97nm,1.4s						
FOZ	Fox Glacier	22.82	180	P	P	19 27 57.0	+0.7
FOZ				IAmb	IAmb	19 28 08.5	
	comp=Z,147nm,1.3s						
RPZ	Rata Peaks	23.02	178	P	P	19 27 58.3	-0.1
	comp=Z,28nm,0.8s,baz=308,slow=7.8,SNR=8.8						
RPZ	Rata Peaks	23.02	178	P	P	19 27 58.7	+0.3
MQZ	McQueen's Vall	23.10	175	P	P	19 27 58.8	-0.4
CNB	Canberra Magne	23.25	227	P	P	19 28 02.8	+1.9
	baz=23,SNR=12						
YNG	Young	23.40	230	P	P	19 28 05.3	+3.0
	baz=24,SNR=13						
CAN	Canberra	23.50	227	P	P	19 28 02.4	-1.0
CAN				IAmb	IAmb	19 28 14.7	
	comp=Z,162nm,1.5s						
CAN	Canberra	23.50	227	P	P	19 28 02.4	-1.0
CAN				pmax	pmax		
	comp=Z,162nm,1.5s						
CAN				MLR	MLR		
	comp=Z,7µm,21.0s						
KRVT	Keravat (AS076	23.83	311	P	P	19 28 06.7	+0.1
	comp=Z,43nm,0.7s,baz=302,slow=6.5,SNR=7.5						
QLP	Quilpie	24.26	251	P	P	19 28 12.4	+1.7
	baz=24,SNR=13						
CMSA	Cobar Meteorol	24.28	239	P	P	19 28 11.1	+0.4
	baz=24,SNR=45						
MTSU	Mount Surprise	24.30	272	P	P	19 28 11.8	+0.8
	baz=24,SNR=6.6						
ODZ	Otahua Downs	24.34	179	P	P	19 28 07.1	-4.0
ODZ				IAmb	IAmb	19 28 10.2	
	comp=Z,221nm,2.0s						
MILA	Mila	24.39	223	P	P	19 28 14.6	+2.9
	baz=24,SNR=5.1						
PMG	Port Moresby	24.64	294	P	P	19 28 14.2	+0.1
	comp=Z,7.1nm,0.6s,baz=96,slow=8.9,SNR=5.2						
PMG	Port Moresby	24.64	294	P	P	19 28 12.6	-1.5
PMG				IAmb	IAmb	19 28 36.3	
	comp=Z,118nm,1.2s						
PMG	Port Moresby	24.64	294	iP	P	19 28 13.0	-1.2
WHZ	Wether Hill Ro	25.23	183	P	P	19 28 18.7	-0.5
COEN	Coen	26.39	280	P	P	19 28 31.7	+1.7
	baz=26,SNR=15						
COEN	Coen	26.39	280	P	P	19 28 29.4	-0.6
COEN				IAmb	IAmb	19 28 39.6	
	comp=Z,123nm,1.4s						
TOO	Toolangi	27.10	226	P	P	19 28 38.6	+2.4
	baz=27,SNR=6.8						
TOO	Toolangi	27.10	226	P	P	19 28 36.4	+0.2
TOO				IAMs_20	IAMs_20	19 37 16.7	
	comp=Z,10µm,22.0s						
TOO	Toolangi	27.10	226	P	P	19 28 36.4	+0.2
TOO				pmax	pmax		
	comp=Z,48nm,1.3s						
TOO				MLR	MLR		
	comp=Z,10µm,22.0s						
STKA	Stephens Creek	27.69	240	P	P	19 28 42.1	+0.5
	baz=28,SNR=18						
STKA	Stephens Creek	27.69	240	P	P	19 28 41.8	+0.2
	comp=Z,9.9nm,0.8s,baz=90,slow=9.8,SNR=21						
STKA				PcP	PcP	19 31 58.1	-0.4
	comp=Z,2.5nm,0.7s,baz=347,slow=2.1,SNR=3.8						
STKA				LR	LR	19 39 44.2	
	comp=Z,13µm,18.2s,baz=67,slow=37						
STKA	Stephens Creek	27.69	240	P	P	19 28 40.5	-1.1
STKA	Stephens Creek	27.69	240	eP	P	19 28 42.3	+0.7
RAR	Rarotonga	28.27	97	P	P	19 28 47.0	+0.1
	comp=Z,16nm,0.9s,baz=268,slow=8.8,SNR=4.8						
RAR	Rarotonga	28.27	97	P	P	19 28 45.8	-1.0
RAR				IAmb	IAmb	19 28 56.0	
	comp=Z,176nm,1.8s						
RAR	Rarotonga	28.27	97	P	P	19 28 47.0	+0.1
QIS	Mount Isa	28.38	265	P	P	19 28 47.6	-0.3
	baz=28,SNR=3.6						
MANU	Manus Island	28.76	307	P	P	19 28 50.2	-1.1
MANU				IAmb	IAmb	19 28 58.0	
	comp=Z,85nm,1.4s						
MOO	Moorlands	28.95	216	P	P	19 28 53.9	+1.1
	baz=29,SNR=9.4						
TAU	Tasmania Unive	29.20	215	P	P	19 28 54.7	-0.1
TAU	Tasmania Unive	29.20	215	P	P	19 28 54.7	-0.1
TAU				pmax	pmax		
	comp=Z,26nm,1.1s						
TAU				MLR	MLR		
	comp=Z,6µm,20.0s						
HTT	Hallett	30.30	239	P	P	19 29 05.3	+0.5
	baz=30,SNR=8.2						
BBOO	Buckleboo	32.46	241	P	P	19 29 23.8	0.0
	baz=32,SNR=8.5						
BBOO	Buckleboo	32.46	241	P	P	19 29 22.6	-1.2
BBOO				IAmb	IAmb	19 29 32.6	
	comp=Z,32nm,0.8s						
WR0	Warramunga Arr	33.17	265	P	P	19 29 28.5	-1.7
WR0				IAMs_20	IAMs_20	19 42 12.1	
	comp=Z,9µm,22.0s						
WR8	Warramunga Arr	33.21	265	IAMs_20	IAMs_20	19 42 23.1	
	comp=Z,9µm,20.0s						
WR7	Warramunga Arr	33.23	265	IAMs_20	IAMs_20	19 42 00.7	
	comp=Z,8µm,22.0s						
WR6	Warramunga Arr	33.25	265	IAMs_20	IAMs_20	19 42 24.3	
	comp=Z,8µm,20.0s						
WR5	Warramunga Arr	33.28	265	IAMs_20	IAMs_20	19 42 25.8	
	comp=Z,8µm,21.0s						
WR4	Warramunga Arr	33.30	265	IAMs_20	IAMs_20	19 42 24.4	
	comp=Z,8µm,21.0s						
WB0	Warramunga Arr	33.34	265	P	P	19 29 29.1	-2.5
WB0				IAmb	IAmb	19 29 39.0	
	comp=Z,76nm,1.4s						
WB0				IAMs_20	IAMs_20	19 42 26.4	
	comp=Z,7µm,20.0s						
WB7	Warramunga Arr	33.34	265	IAMs_20	IAMs_20	19 42 26.7	
	comp=Z,7µm,20.0s						
WR2	Warramunga Arr	33.34	265	IAMs_20	IAMs_20	19 42 16.5	
	comp=Z,7µm,21.0s						
WB8	Warramunga Arr	33.34	265	IAMs_20	IAMs_20	19 42 23.5	
	comp=Z,6µm,18.0s						
WB5	Warramunga Arr	33.35	265	IAMs_20	IAMs_20	19 42 16.7	
	comp=Z,8µm,21.0s						
WB6	Warramunga Arr	33.35	265	IAMs_20	IAMs_20	19 42 26.7	
	comp=Z,7µm,20.0s						
WB3	Warramunga Arr	33.35	265	IAMs_20	IAMs_20	19 42 15.8	
	comp=Z,8µm,21.0s						
WB2	Warramunga Arr	33.35	265	P	P	19 29 29.9	-1.8
WB2				IAmb	IAmb	19 29 39.2	
	comp=Z,76nm,1.5s						
WB2				IAMs_20	IAMs_20	19 42 27.8	
	comp=Z,8µm,21.0s						
WB1	Warramunga Arr.	33.35	265	IAMs_20	IAMs_20	19 42 27.9	
	comp=Z,9µm,22.0s						
WRAB	Tennant Creek	33.35	265	P	P	19 29 30.9	-0.9
WRAB				IAmb	IAmb	19 29 39.8	
	comp=Z,121nm,1.8s						
WRAB	Tennant Creek	33.35	265	IAMs_20	IAMs_20	19 42 26.6	
	comp=Z,7µm,20.0s						
WRAB	Tennant Creek	33.35	265	⇑iP	P	19 29 31.5	-0.3
WRAB				pmax	pmax		
	comp=Z,62nm,1.6s						
WC4	Warramunga Arr	33.36	265	IAMs_20	IAMs_20	19 42 28.0	
	comp=Z,9µm,21.0s						
WR1	Warramunga Arr	33.36	265	IAMs_20	IAMs_20	19 42 18.1	
	comp=Z,7µm,21.0s						
WRA	Warramunga Arr	33.36	265	P	P	19 29 30.9	-1.0
	comp=Z,7.9nm,1.0s,baz=100,slow=7.7,SNR=19						
WRA				PcP	PcP	19 32 13.2	-0.3
	comp=Z,1.6nm,0.9s,baz=98,slow=2.5,SNR=2.9						
WRA				LR	LR	19 42 38.9	
	comp=Z,8µm,20.7s,baz=95,slow=36						
WRA	Warramunga Arr	33.36	265	P	P	19 29 29.0	-2.9
WC1	Warramunga Arr	33.37	265	IAMs_20	IAMs_20	19 42 17.1	
	comp=Z,8µm,21.0s						
AS31	Alice Springs	33.46	258	P	P	19 29 30.8	-1.9
ASAR	Alice Springs	33.46	258	P	P	19 29 32.1	-0.6
	comp=Z,27nm,1.0s,baz=82,slow=9.0,SNR=87						
ASAR				PcP	PcP	19 32 13.5	-0.3
	comp=Z,2.5nm,0.8s,baz=96,slow=2.5,SNR=4.7						
ASAR				LR	LR	19 42 36.4	
	comp=Z,9µm,20.1s,baz=92,slow=35						
ASAR	Alice Springs	33.46	258	P	P	19 29 30.0	-2.7
SMPI	Sarmi	35.67	297	P	P	19 29 52.2	+0.4
	comp=Z,44nm,1.7s						
KDU	Kakadu	36.69	276	P	P	19 29 58.4	-2.1
	baz=37,SNR=6.6						
TBI	Tubuai	37.65	102	eS	S	19 35 57.8	0.0
	comp=Z,668nm,24.5s						
TBI				eLQ	LQ	19 38 39.3	
	comp=Z,12µm,31.5s						
TBI				eLR	LR	19 40 18.2	
	comp=Z,4µm,26.5s,baz=262						
PPT2	Papeete2	38.30	92	eS	S	19 36 07.8	-0.1
	comp=Z,968nm,24.8s						
PPT2				eLQ	LQ	19 38 59.7	
	comp=Z,14µm,30.2s						
PPT2				eLR	LR	19 40 35.7	
	comp=Z,8µm,26.5s,baz=250						
PPT	Papeete	38.30	92	LR	LR	19 44 24.3	
	comp=Z,825nm,19.1s,baz=254,slow=34						
WRKA	Warakurna	38.52	255	P	P	19 30 15.5	-0.6
	baz=38,SNR=48						
FORT	Forrest	38.87	246	P	P	19 30 17.9	-1.0
FORT				IAmb	IAmb	19 30 27.0	
	comp=Z,54nm,0.8s						
XMAS	Kiritimati	39.11	59	IAMs_20	IAMs_20	19 42 48.5	
	comp=Z,4µm,18.0s						
KNRA	Kununurra	39.37	270	P	P	19 30 23.0	-0.1
	baz=39,SNR=4.4						
KNRA	Kununurra	39.37	270	P	P	19 30 20.9	-2.2
RKPI	Ransiki, Papua	39.75	294	P	P	19 30 28.2	+1.8
	comp=Z,89µmcomp=Z,2µmcomp=Z,61nm,0.9s						
WAKE	Wake Island	39.82	355	IAMs_20	IAMs_20	19 43 52.7	
	comp=Z,5µm,21.0s						
FITZ	Fitzroy Crossi	41.78	266	P	P	19 30 43.0	-0.1
	baz=42,SNR=9.4						
FITZ	Fitzroy Crossi	41.78	266	P	P	19 30 42.6	-0.5
FITZ				IAmb	IAmb	19 30 51.8	
	comp=Z,116nm,1.5s						
SWI	Sorong	42.59	293	P	P	19 30 50.6	+0.9
	comp=Z,785nmcomp=Z,83nm,1.0s						
SARN	Sarigan	44.05	326	P	P	19 30 59.4	-2.0
SARN				IAmb	IAmb	19 31 19.6	
	comp=Z,154nm,1.6s						
NLAI	Namlea	45.15	287	P	P	19 31 11.4	+1.1
	comp=Z,1µmcomp=Z,51nm,1.7s						
SOEI	Soe	45.25	277	P	P	19 31 13.5	+2.2
	comp=Z,2µmcomp=Z,59nm,1.1s						
SOEI	Soe	45.25	277	P	P	19 31 10.7	-0.5
SOEI				IAmb	IAmb	19 31 45.1	
	comp=Z,77nm,1.0s						
PSA00	Pilbara Seismi	46.58	259	P	P	19 31 19.9	-1.6
PSA00	Pilbara Seismi	46.58	259	P	P	19 31 19.5	-2.0
PSA00				IAmb	IAmb	19 31 29.9	
	comp=Z,52nm,1.2s						
PSA00				IAMs_20	IAMs_20	19 51 30.3	
	comp=Z,12µm,18.0s						
SANI	Sanana	46.67	288	P	P	19 31 22.7	+0.4
	comp=Z,2µmcomp=Z,56nm,1.2s						
KLBR	Kellerberrin	47.72	246	P	P	19 31 30.8	+0.4
	baz=48,SNR=7.2						
NWAO	Narrogin (SRO)	48.18	244	P	P	19 31 33.8	-0.1
NWAO				IAmb	IAmb	19 31 44.9	
	comp=Z,103nm,1.4s						
NWAO	Narrogin (SRO)	48.18	244	P	P	19 31 32.0	-1.9
NWAO				IAmb	IAmb	19 31 44.9	
	comp=Z,83nm,1.4s						
NWAO				IAMs_20	IAMs_20	19 51 34.7	
	comp=Z,8µm,20.0s						
NWAO	Narrogin (SRO)	48.18	244	P	P	19 31 33.8	-0.1
NWAO				pmax	pmax		
	comp=Z,103nm,1.4s						
MORW	Morawa	49.27	249	P	P	19 31 42.4	0.0
MORW				IAmb	IAmb	19 31 54.8	
	comp=Z,77nm,1.4s						
TAOE	Nuku Hiva Isla	49.48	84	eS	S	19 38 47.4	-3.8
TAOE				eLR	LR	19 45 46.4	
	comp=Z,6µm,27.1s,baz=246						
KMSI	Cibinong	49.65	289	P	P	19 31 46.9	+1.6
	comp=Z,50nm,1.1s						
MRSI	Marisa	51.41	288	P	P	19 31 57.3	-1.4
	comp=Z,12nm,0.6s						
HMH	Humu'ula Sheep	52.40	42	P	P	19 32 05.9	-0.4
MPSI	Mapaga	53.18	287	P	P	19 32 11.2	-0.6
	comp=Z,566nmcomp=Z,42nm,1.0s						
JAGI	Jajag, Banyuwa	55.10	274	P	P	19 32 24.8	-1.1
JAGI				IAmb	IAmb	19 33 12.5	
	comp=Z,72nm,1.3s						
VNDA	Vanda	57.05	182	P	P	19 32 38.8	-0.1
	comp=Z,2.9nm,0.9s,baz=16,slow=7.2,SNR=3.3						
VNDA				LR	LR	19 53 51.9	
	comp=Z,598nm,19.0s,baz=19,slow=33						
WOJI	Wonogiri, Jawa	58.33	273	P	P	19 32 50.3	+1.5
	comp=Z,34nm,1.0s						
CASY	Casey	59.11	204	IAMs_20	IAMs_20	19 52 32.3	
	comp=Z,3µm,22.0s						
KPJI	Karang Pucung	60.35	273	P	P	19 33 03.2	+0.4
	comp=Z,22nm,1.2s						
STKI	Sintang	60.70	282	P	P	19 33 06.7	+1.5
	comp=Z,23nm,1.2s						
SBUM	Sibu	61.00	285	P	P	19 33 05.4	-1.9
JOW	Kunigami	62.11	318	IAMs_20	IAMs_20	19 53 58.6	
	comp=Z,2µm,21.0s						
KSM	Kuching	62.34	283	P	P	19 33 15.5	-0.7
KSM				IAmb	IAmb	19 33 24.8	
	comp=Z,62nm,1.6s						
DBJI	Dramaga	62.65	273	P	P	19 33 18.3	-0.1
	comp=Z,2µmcomp=Z,54nm,1.6s						
MJAR	Matsushiro Arr	64.30	332	P	P	19 33 28.6	-0.2
	comp=Z,4.4nm,0.6s,baz=160,slow=6.6,SNR=6.9						
MJAR				LR	LR	20 04 46.4	
	comp=Z,255nm,18.0s,baz=145,slow=39						
MJAR	Matsushiro Arr	64.30	332	P	P	19 33 27.6	-1.2
MAJO	Matsushiro	64.30	332	iP	P	19 33 29.2	+0.4
MAJO				pmax	pmax		
	comp=Z,11nm,1.0s						
KASI	Kota Agung	65.11	274	P	P	19 33 33.1	-1.5
	comp=Z,42nm,0.9s						
LWLI	Liwa	65.69	274	P	P	19 33 38.4	-0.1
	comp=Z,20nm,0.6s						
MDSI	Maura Dua	65.76	274	P	P	19 33 37.3	-1.5
	comp=Z,923nmcomp=Z,13nm,1.2s						
ERM	Erimo	67.09	339	IAMs_20	IAMs_20	19 57 04.6	
	comp=Z,2µm,20.0s						
ERM	Erimo	67.09	339	iP	P	19 33 44.8	-1.8
ERM				pmax	pmax		
	comp=Z,70nm,1.3s						
KSI	Kapahiang	67.54	275	P	P	19 33 49.4	-0.8
	comp=Z,3µmcomp=Z,17nm,0.5s						
YUK	Yuzh-Kuril'sk	68.05	341	eP	P	19 33 50.5	-2.1
YUK				e		19 34 17.7	
YUK				e		19 36 21.0	
YUK				ePPP	PPP	19 37 58.5	
YUK				eS	S	19 42 52.4	+1.4
YUK				e		19 43 51.2	
YUK				eSS	SS	19 47 13.4	-0.7
MYKOM	Kota Tinggi	68.38	281	IAMs_20	IAMs_20	20 05 10.3	
	comp=Z,2µm,19.0s						
KRJI	Kerinci	69.15	276	P	P	19 34 01.5	+1.2
	comp=Z,2µmcomp=Z,130nm,0.6s						
QSPA	South Pole Qui	69.41	180	P	P	19 34 00.8	-0.4
	comp=Z,26nm,0.8s,baz=34,slow=1.8,SNR=72						
QSPA	South Pole Qui	69.41	180	P	P	19 34 00.2	-0.9
QSPA				IAmb	IAmb	19 34 11.5	
	comp=Z,40nm,1.0s						
KSRS	Korea Array	70.04	325	P	P	19 34 05.8	+0.7
	comp=Z,1.7nm,1.0s,baz=133,slow=8.4,SNR=3.5						
KSRS				LR	LR	20 03 33.8	
	comp=Z,479nm,19.3s,baz=126,slow=35						
BKNI	Bangkinang	70.42	278	IAMs_20	IAMs_20	20 07 08.5	
	comp=Z,2µm,21.0s						
QIZ	Qiongzhong	70.85	300	P	P	19 34 10.8	+0.3
QIZ				S	S	19 43 26.2	+1.0
QIZ				sS	pS	19 43 32.0	-0.3
QIZ				LR	LR		
	comp=Z,520nm,16.4s						
QIZ				LR	LR		
	comp=Z,500nm,17.9s						
QIZ				LR	LR		
	comp=Z,490nm,19.0s						
YSS	Yuzh-Sakhalins	71.62	341	eP	P	19 34 23.0	+8.4
YSS				e		19 34 37.0	
YSS				ePPP	PPP	19 38 40.0	
YSS				e		19 44 25.0	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
NJ2	Nanjing	71.68	316	eP	P	19 34 16.6	+1.4
NJ2				pP	pP	19 34 19.3	-1.6
NJ2				sP	sP	19 34 20.6	-2.3
NJ2				S	S	19 43 32.3	-1.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,160nm,3.8s						
NJ2				LR	LR		
	comp=Z,770nm,19.2s						
NJ2				LR	LR		
	comp=Z,840nm,20.8s						
NJ2				LR	LR		
	comp=Z,1µm,16.3s						
MSHR	Mys Shultsa	72.37	331	iP	P	19 34 18.4	-0.8
RPN	Rapa Nui	72.93	113	LR	LR	19 58 10.8	
	comp=Z,688nm,21.1s,baz=268,slow=29						
RPSI	Rantau Prapat	73.27	279	P	P	19 34 23.6	-1.5
RPSI				IAMs_20	IAMs_20	20 09 31.8	
	comp=Z,2µm,20.0s						
USRK	Ussuriysk Ar.	73.29	332	P	P	19 34 25.4	+0.8
	comp=Z,4.3nm,0.8s,baz=116,slow=4.4,SNR=8.2						
USRK				LR	LR	20 03 19.9	
	comp=Z,405nm,22.0s,baz=137,slow=33						
USRK	Ussuriysk Ar.	73.29	332	P	P	19 34 24.1	-0.4
USA0B	Ussuriysk Arra	73.29	332	P	P	19 34 22.7	-1.9
USA0B				IAmb	IAmb	19 34 33.9	
	comp=Z,48nm,1.5s						
USA0B	Ussuriysk Arra	73.29	332	iP	P	19 34 25.1	+0.5
PSI	Prapat	73.31	280	P	P	19 34 23.6	-2.0
PSI				pmax	pmax		
	comp=Z,17nm,1.2s						
PSI				MLR	MLR		
	comp=Z,2µm,20.0s						
WHN	Wuhan	73.78	312	P	P	19 34 27.4	-0.4
WHN				S	SKiKP	19 43 51.4	-5.2
WHN				LR	LR		
	comp=Z,2µm,18.0s						
ATKA	Atka Island	73.85	10	P	P	19 34 28.4	+0.7
PET	Petropavlovsk	74.02	353	IAMs_20	IAMs_20	20 02 47.0	
	comp=Z,2µm,20.0s						
PET	Petropavlovsk	74.02	353	eP	P	19 34 33.1	+4.5
PET				eS	S	19 44 04.1	+4.2
PET				ePS		19 44 36.9	
PET				ePPS	PPS	19 44 53.9	
PET				pmax	pmax		
	comp=Z,300nm,4.6s						
PEA0B	Petropavlovsk-	74.21	352	IAMs_20	IAMs_20	20 01 54.3	
	comp=Z,2µm,21.0s						
PETK	Petropavlovsk-	74.21	352	P	P	19 34 31.1	+1.3

comp=Z,3.5nm,0.8s,baz=167,slow=8.5,SNR=3.5
PETK LR LR 20 02 16.9
comp=Z,2µm,20.3s,baz=155,slow=32
PETK Petropavlovsk- 74.21 352 P P 19 34 30.1 +0.3
MDJ Mudanjiang 74.67 331 P P 19 34 33.2 +0.5
MDJ pmax pmax
comp=Z,190nm,4.4s
TIA Tai'an 75.43 318 P P 19 34 36.3 -1.0
TIA pmax pmax
comp=Z,15nm,1.2s
NIKH Nikolski High 75.59 13 P P 19 34 37.9 +0.1
CN2 Changchun 76.00 328 eP P 19 34 38.2 -2.1
GRNR Gornyy 77.00 339 eP P 19 34 48.0 +2.1
GRNR pmax pmax
comp=Z,5.0nm,1.3s
ENH Enshi 77.08 309 P P 19 34 46.2 -0.6
ENH IAmb IAmb 19 34 55.6
comp=Z,92nm,1.6s
PBKT Sadao Pong 77.12 293 P P 19 34 46.2 -1.0
GYA Guiyang 77.17 305⇑iP P 19 34 54.2 +6.7
GYA PP PP 19 37 50.3 +8.6
GYA S S 19 44 44.5 +8.2
GYA Guiyang 77.17 305 SS SS 19 49 49.9 +15
MAW Mawson 77.38 202 P P 19 34 48.1 +0.2
comp=Z,19nm,0.9s,baz=122,slow=9.1,SNR=8.3
MAW LR LR 20 04 56.5
comp=Z,2µm,19.9s,baz=96,slow=33
MAW Mawson 77.38 202 IAmb IAmb 19 34 57.1
comp=Z,6.2nm,1.1s
KLR Kul'dur 77.42 335 P P 19 34 48.8 +0.6
comp=Z,3.7nm,0.9s,baz=142,slow=1.4,SNR=9.5
KLR Kul'dur 77.42 335 i P P 19 34 49.4 +1.2
KLR pmax pmax
comp=Z,3.0nm,0.9s
BJI Beijing 78.44 321 P P 19 34 57.3 +3.2
BJI pP pP 19 35 00.0 +0.1
BJI S S 19 44 51.5 +2.3
BJI pmax pmax
comp=Z,9.0nm,0.9s
BJI LR LR
comp=Z,500nm,22.0s
BJI LR LR
comp=Z,570nm,20.0s
XAN Xi'an 79.55 312 P P 19 34 59.8 -0.6
XAN pP pP 19 35 02.6 -3.6
XAN PP PP 19 38 04.9 +3.5
XAN S S 19 45 05.8 +4.4
XAN pmax pmax
comp=Z,53nm,3.5s
XAN LR LR
comp=Z,360nm,16.0s
XAN LR LR
comp=Z,510nm,20.9s
XAN LR LR
comp=Z,660nm,21.8s
XAN Xi'an 79.55 312 P P 19 35 00.0 -0.4
XAN Xi'an 79.55 312 P P 19 35 00.0 -0.4
XAN pmax pmax
comp=Z,25nm,1.1s
CM31 Chiang Mai Arr 79.68 294 P P 19 35 01.6 +0.1
CM31 IAmb IAmb 19 35 11.9
comp=Z,32nm,1.0s
CMAR Chiang Mai Arr 79.68 294 P P 19 35 01.6 +0.2
comp=Z,6.7nm,0.8s,baz=138,slow=4.6,SNR=28
CMAR Chiang Mai Arr 79.68 294 i P P 19 35 02.0 +0.6
CMAR pmax pmax
comp=Z,7.0nm,0.8s
CHTO Chiang Mai 79.84 295 P P 19 35 01.5 -0.8
CHTO Chiang Mai 79.84 295 P P 19 35 01.5 -0.8
CHTO pmax pmax
comp=Z,25nm,0.9s
CD2 Chengdu 81.62 307 P P 19 35 12.9 +1.3
CD2 sP PcP 19 35 17.8 +0.4
CD2 S S 19 45 27.4 +4.2
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 LR LR
comp=Z,1µm,15.5s
CD2 LR LR
comp=Z,820nm,16.5s
CD2 LR LR
comp=Z,730nm,17.8s
HHC Hu-ho-hao-te 81.72 319 eP P 19 35 12.4 +0.4
HHC PP PP 19 38 22.2 +2.9
HHC S S 19 45 24.8 +0.8
HHC pmax pmax
comp=Z,4.0nm,0.7s
HHC pmax pmax
comp=Z,88nm,5.2s
HHC LR LR
comp=Z,350nm,19.1s
HHC LR LR
comp=Z,360nm,19.1s
HHC LR LR
comp=Z,500nm,19.1s
ZEA Zeya 82.71 336 eP P 19 35 19.4 +2.7
ZEA pmax pmax
comp=Z,37nm,1.4s
ZEA MLR MLR
comp=Z,500nm,16.0s
ZEA MLR MLR
comp=N,500nm,14.0s
SYO Syowa Base 83.77 196⇑iP P 19 35 20.8 -1.3
SYO Syowa Base 83.77 196⇑ipP P 19 35 23.6 +1.5
SYO Syowa Base 83.77 196⇑iX P 19 35 31.4 +9.3
KDAK Kodiak Island 84.14 19 P P 19 35 24.6 +0.7
KDAK Kodiak Island 84.14 19 P P 19 35 24.6 +0.7
KDAK pmax pmax
comp=Z,194nm,1.3s
LZH Lanzhou 84.16 312 eP P 19 35 26.1 +1.3
LZH pP sP 19 35 33.0 +0.4
LZH PP PP 19 38 39.4 -0.1
LZH S S 19 45 49.2 0.0
LZH sS sS 19 45 58.6 +0.1
LZH pmax pmax
comp=Z,18nm,1.2s
LZH pmax pmax
comp=Z,190nm,4.3s
LZH LR LR
comp=Z,880nm,13.2s
LZH LR LR
comp=Z,820nm,14.1s
LZH LR LR
comp=Z,980nm,13.6s
GAMB Gambell 85.36 8 P P 19 35 31.0 +1.0
MCCM Marconi Confer 85.94 47 IAMs_20 IAMs_20 20 04 28.7
comp=Z,1µm,20.0s
SNCC San Nicolas Is 85.97 52 IAMs_20 IAMs_20 20 08 31.9
comp=Z,1µm,18.0s
SNCC San Nicolas Is 85.97 52 P P 19 35 33.3 -0.5
baz=242
HOPS Hopland Field 86.23 46 IAMs_20 IAMs_20 20 04 03.5
comp=Z,1µm,21.0s
SCZ2 Santa Cruz Isl 86.24 52 P P 19 35 34.6 -0.5
baz=242
KCPM Cahto Peak 86.24 45 IAMs_20 IAMs_20 20 04 01.7
comp=Z,1µm,18.0s
SAO San Andreas Ge 86.25 49 IAMs_20 IAMs_20 20 08 34.1
comp=Z,1µm,19.0s
GDXM Geysers 86.33 46 IAMs_20 IAMs_20 20 06 55.0
comp=Z,2µm,20.0s
SBC Santa Barbara 86.39 51 P P 19 35 35.8 0.0
baz=242
PMPB Monarch Peak 86.44 49 IAMs_20 IAMs_20 20 04 10.2
comp=Z,1µm,22.0s
PKM Mcpherson Peak 86.52 51 P P 19 35 36.7 0.0
baz=242
JCC Jacoby Creek, 86.53 44 IAMs_20 IAMs_20 20 03 05.1
comp=Z,2µm,20.0s
SCI2 San Clemente I 86.58 53 P P 19 35 36.7 -0.1
baz=243
SMMC Simmler 86.59 50 P P 19 35 36.8 0.0
baz=242
BLG Laguna Peak, P 86.71 52 P P 19 35 37.1 -0.3
baz=242
CIS Catalina Islan 86.87 53 P P 19 35 38.2 0.0
baz=243
O02D Mt. Diablo Mer 87.02 45 P P 19 35 39.9 +1.0
baz=240
FMP Fort Macarthur 87.10 52 P P 19 35 39.2 -0.1
baz=243
OSI Osito Audit: C 87.19 51 P P 19 35 39.9 +0.1
baz=243
DECC Green Verdugo 87.31 52 P P 19 35 40.0 -0.3
baz=243
ARVC Arvin 87.35 51 P P 19 35 40.1 -0.4
baz=243
WDC Whiskeytown Da 87.38 45 P P 19 35 41.0 +0.5
WDC IAMs_20 IAMs_20 20 05 25.8
comp=Z,1µm,22.0s
WDC Whiskeytown Da 87.38 45 P P 19 35 41.0 +0.5
WDC pmax pmax
comp=Z,179nm,2.0s
WDC MLR MLR
comp=Z,1µm,22.0s
PASC Pasadena Art C 87.39 52 IAMs_20 IAMs_20 20 08 56.4
comp=Z,1µm,19.0s
N02D Trinity Center 87.47 44 P P 19 35 41.7 +0.7
baz=240
L02E Cave Junction 87.49 43 P P 19 35 41.0 0.0
baz=239
VES Vestal, Richgr 87.49 50 P P 19 35 41.4 +0.2
baz=242
VOG Valley Oaks Go 87.50 50 P P 19 35 40.8 -0.3
baz=242
MWC Mount Wilson 87.50 52 P P 19 35 41.3 -0.2
MWC IAMs_20 IAMs_20 20 09 20.5
comp=Z,1µm,18.0s
MWC Mount Wilson 87.50 52 P P 19 35 41.3 -0.2
MWC pmax pmax
comp=Z,79nm,1.7s
MWC MLR MLR
comp=Z,1µm,18.0s
NVL N'lazarevskaya 87.55 187 eP P 19 35 45.1 +4.2
NVL e*PP pwP 19 35 54.6 +5.6
NVL eS SKSac 19 46 04.8 -2.7
NVL e 19 46 12.9
NVL pmax pmax
comp=Z,10.0nm,0.7s
ORV Oroville 87.57 46 P P 19 35 41.4 -0.1
ORV Oroville 87.57 46 P P 19 35 41.4 -0.1
ORV pmax pmax
comp=Z,74nm,1.6s
ORV MLR MLR
comp=Z,1µm,21.0s
M02C Callahan 87.59 44 P P 19 35 42.4 +0.8
baz=240
CMB Columbia Colle 87.60 48 P P 19 35 41.2 -0.5
CMB IAmb IAmb 19 35 50.2
comp=Z,21nm,1.2s
CMB Columbia Colle 87.60 48 P P 19 35 41.2 -0.5
CMB pmax pmax
comp=Z,21nm,1.2s
CMB MLR MLR
comp=Z,1µm,20.0s
109C Camp Elliot, M 87.62 54 IAMs_20 IAMs_20 20 12 47.6
comp=Z,1µm,18.0s
109C Camp Elliot, M 87.62 54 P P 19 35 40.9 -0.9
baz=244
AFDM Forest Hills D 87.64 47 P P 19 35 41.8 0.0
AFDM IAmb IAmb 19 35 52.9
comp=Z,50nm,1.4s
RC01 Rabbit Creek A 87.67 18 IAMs_20 IAMs_20 20 09 52.1
comp=Z,2µm,20.0s
K02D Willamette Mer 87.73 43 P P 19 35 41.9 -0.3
baz=239
O03E Paynes Creek 87.73 45 P P 19 35 42.5 +0.2
baz=240
SNAA Sanae 87.79 182 P P 19 35 40.2 -2.0
SNAA Sanae 87.79 182 P P 19 35 40.3 -1.7
comp=Z,5.4nm,0.7s,baz=184,slow=3.2,SNR=21
SNAA Sanae 87.79 182 P P 19 35 40.4 -1.7
SNAA IAmb IAmb 19 35 50.8
comp=Z,78nm,1.9s
SNAA Sanae 87.79 182 P P 19 35 40.4 -1.7
SNAA pmax pmax
comp=Z,79nm,1.9s
SNAA MLR MLR
comp=Z,900nm,21.0s
J01E Myrtle Point 87.80 42 P P 19 35 42.5 +0.1
baz=239
BFSC Mount Baldy Ra 87.81 52 P P 19 35 42.7 -0.2
baz=243
EDW2 Edwards Air Fo 87.85 52 P P 19 35 42.8 -0.2
baz=243
YBH Yreka Blue Hor 87.85 44 P P 19 35 43.3 +0.5
YBH Yreka Blue Hor 87.85 44 P P 19 35 43.3 +0.5
YBH pmax pmax
comp=Z,77nm,1.7s
BAR Barrett 87.85 54 IAMs_20 IAMs_20 20 12 45.5
comp=Z,1µm,18.0s
ISA Isabella, Lake 87.85 51 P P 19 35 43.7 +0.7
ISA IAMs_20 IAMs_20 20 07 31.6
comp=Z,1µm,20.0s
ISA Isabella, Lake 87.85 51 P P 19 35 43.7 +0.7
ISA pmax pmax
comp=Z,162nm,2.0s
ISA MLR MLR
comp=Z,1µm,20.0s
ISA Isabella, Lake 87.85 51 P P 19 35 42.6 -0.4
baz=243,SNR=11
MURC Murrieta 87.86 53 P P 19 35 43.1 0.0
baz=244
HUMO Hull Mountain 88.13 43 P P 19 35 44.3 +0.2
MONP2 Monument Peak 88.13 54 P P 19 35 44.8 +0.2
baz=244,SNR=8.6
RUBR Rubicon Trail 88.25 47 IAMs_20 IAMs_20 20 05 04.8
comp=Z,1µm,22.0s
PMR Palmer 88.25 18 IAMs_20 IAMs_20 20 10 29.9
comp=Z,2µm,20.0s
IKP In-Ko-Pah, Jac 88.27 54 P P 19 35 45.2 +0.2
baz=244
I02D Swisshome 88.34 41 P P 19 35 46.6 +1.7
baz=239
LRMC Laurel Mtn Rad 88.34 51 P P 19 35 45.3 -0.1
baz=243,SNR=5.7
VNA3 Neumayer Olymp 88.35 180 P P 19 35 44.4 -0.4
L04D Klamath Falls 88.35 43 P P 19 35 45.4 +0.1
baz=240
OMMB Old Mammoth Mi 88.37 49 IAMs_20 IAMs_20 20 05 45.3
comp=Z,1µm,22.0s
ULN Ulaanbaatar 88.39 323 P P 19 35 45.5 +0.2
ULN IAmb IAmb 19 35 54.6
comp=Z,53nm,1.4s
ULN Ulaanbaatar 88.39 323 P P 19 35 45.5 +0.2
ULN pmax pmax
comp=Z,53nm,1.4s
ULN MLR MLR
comp=Z,600nm,19.0s
PFO Pinyon Flats O 88.42 53 LR LR 20 06 06.4
comp=Z,819nm,21.3s,baz=277,slow=29
PFO Pinyon Flats O 88.42 53 P P 19 35 46.0 +0.2
PFO IAmb IAmb 19 35 57.0
comp=Z,53nm,1.8s
PFO Pinyon Flats O 88.42 53 IAMs_20 IAMs_20 20 05 18.9
comp=Z,1µm,21.0s
PFO Pinyon Flats O 88.42 53 P P 19 35 46.0 +0.2
PFO pmax pmax
comp=Z,53nm,1.8s
PFO MLR MLR
comp=Z,1µm,21.0s
PFO Pinyon Flats O 88.42 53 P P 19 35 45.7 -0.1
baz=244
XPFO Pion Flat 88.42 53 P P 19 35 46.2 +0.4
XPFO IAmb IAmb 19 35 57.0
comp=Z,53nm,1.8s
XPFO Pion Flat 88.42 53 IAMs_20 IAMs_20 20 05 18.9
comp=Z,1µm,21.0s
I03D Drain, OR 88.44 42 P P 19 35 45.1 -0.3
baz=239
M04C Macdoel 88.44 44 P P 19 35 46.2 +0.5
baz=240
PPLA Purkeypile 88.45 16 IAMs_20 IAMs_20 20 11 39.5
comp=Z,1µm,20.0s
GHO Glory Hole Cre 88.45 18 IAMs_20 IAMs_20 20 10 37.7
comp=Z,2µm,20.0s
BILL Bilibino 88.47 359 P P 19 35 45.9 +0.9
BILL Bilibino 88.47 359⇓eP P 19 35 46.1 +1.1
BILL e*SP pwP 19 35 53.3 +0.1
BILL pmax pmax
comp=Z,8.0nm,1.0s
WAKR Walker 88.48 48 P P 19 35 46.5 +0.4
WAKR IAMs_20 IAMs_20 20 06 11.1
comp=Z,2µm,22.0s
EYAK Cordova Ski Ar 88.48 20 IAMs_20 IAMs_20 20 08 47.7
comp=Z,1µm,18.0s
CWC Cottonwood Cre 88.49 50 P P 19 35 46.1 0.0
baz=243
BEKR Beckworth 88.49 46 IAMs_20 IAMs_20 20 05 48.3
comp=Z,1µm,22.0s
GTA Gaotai 88.57 313 eP P 19 35 41.3 -5.1
GTA pP PcP 19 35 45.7 -2.3
GTA sP pP 19 35 49.0 -3.2
RRX Edison Barstow 88.58 52 P P 19 35 45.8 -0.6
baz=244
SWSC Sam W. Stewart 88.63 54 P P 19 35 46.3 -0.3
baz=244
PNTR Pine Nut 88.64 47 P P 19 35 46.8 -0.1
PNTR IAMs_20 IAMs_20 20 05 28.3
comp=Z,1µm,22.0s
VNA2 Neumayer--Watz 88.65 181 P P 19 35 45.9 -0.2
baz=183,slow=4.1
SML Sawmill 88.66 18 IAMs_20 IAMs_20 20 09 20.1
comp=Z,1µm,21.0s
TIN Tinemaha, Big 88.66 49 P P 19 35 47.1 +0.3
baz=243
SONM Songino Array 88.74 323 P P 19 35 45.8 -1.1
comp=Z,2.4nm,0.8s,baz=170,slow=5.1,SNR=7.3
SONM LR LR 20 16 44.9
comp=Z,248nm,18.1s,baz=126,slow=36
SONM Songino Array 88.74 323 P P 19 35 46.3 -0.6
SONM Songino Array 88.74 323 P P 19 35 46.3 -0.6
SONM pmax pmax
comp=Z,27nm,1.4s
MPMC Manual Prospec 88.74 51 P P 19 35 46.9 -0.4
baz=243,SNR=25
DAC Darwin (Calif) 88.77 50 IAMs_20 IAMs_20 20 06 02.8
comp=Z,1µm,22.0s
YERR Yerington 88.84 47 P P 19 35 47.9 +0.2
YERR IAMs_20 IAMs_20 20 09 29.6
comp=Z,1µm,19.0s
GSC Goldstone, Bar 88.91 52 P P 19 35 48.3 +0.3
GSC IAMs_20 IAMs_20 20 10 04.6
comp=Z,1µm,19.0s
GSC Goldstone, Bar 88.91 52 P P 19 35 48.3 +0.3
GSC pmax pmax
comp=Z,81nm,1.6s
GSC MLR MLR
comp=Z,1µm,19.0s
GSC Goldstone, Bar 88.91 52 P P 19 35 48.0 0.0
baz=244,SNR=5.3
K04D Chiloquin, OR 88.91 43 P P 19 35 48.5 +0.6
baz=240
BELC Belle Mtn. Jos 88.94 53 P P 19 35 48.2 0.0
baz=244,SNR=11
VNA1 Neumayer--Stat 88.94 181 P P 19 35 47.4 0.0
J04D Umpqua Nationa 88.99 43 P P 19 35 48.5 +0.2
baz=240
HEC Hector,Ludlow 89.05 52 P P 19 35 48.6 0.0
baz=244,SNR=8.4
I04A Tendick Farm, 89.07 42 P P 19 35 49.0 +0.5
baz=240
PAHR Pah Rah Range 89.08 47 P P 19 35 48.9 +0.1
RYN Ryan 89.17 48 P P 19 35 48.8 -0.4
RYN IAmb IAmb 19 36 00.4
comp=Z,48nm,1.4s
RYN IAMs_20 IAMs_20 20 06 44.4
comp=Z,1µm,21.0s
BC3 Big Chuckawall 89.20 54 P P 19 35 49.4 0.0
baz=244,SNR=7.4
H04D Lebanon 89.23 41 P P 19 35 50.1 +1.0
baz=240
NVAR Mina Array Bea 89.24 48 P P 19 35 50.0 +0.4
comp=Z,4.5nm,0.3s,baz=239,slow=5.1,SNR=4.8
NVAR LR LR 20 07 13.4
comp=Z,1µm,21.5s,baz=246,slow=30
NVAR Mina Array Bea 89.24 48 P P 19 35 49.6 -0.1
GRAC Grapevine Rang 89.25 50 P P 19 35 49.8 +0.2
baz=243
G03D McMinnville, O 89.26 41 P P 19 35 49.8 +0.5
baz=239
KTH Kantishna Hill 89.32 16 P P 19 35 49.2 0.0
KTH IAMs_20 IAMs_20 20 12 06.6
comp=Z,1µm,20.0s
NV11 Mina Array Sit 89.34 48 IAMs_20 IAMs_20 20 06 39.5
comp=Z,1µm,22.0s
FURC Furnace Creek, 89.38 51 P P 19 35 50.7 +0.7
baz=244
TRF Thorofare Moun 89.41 17 P P 19 35 49.8 +0.1
TRF IAmb IAmb 19 35 59.5
comp=Z,23nm,1.1s
TRF IAMs_20 IAMs_20 20 11 47.9
comp=Z,1µm,20.0s
GLA Glamis 89.41 54 P P 19 35 51.2 +0.9
GLA IAMs_20 IAMs_20 20 12 52.2
comp=Z,1µm,18.0s
GLA Glamis 89.41 54 P P 19 35 51.3 +0.9
GLA Glamis 89.41 54 P P 19 35 50.9 +0.5
baz=245
LPIG La Paz 89.43 64 LR LR 20 06 12.0
comp=Z,2µm,21.7s,baz=280,slow=29
MOD Modoc Plateau 89.50 44 P P 19 35 51.1 +0.4
MOD IAmb IAmb 19 36 01.9
comp=Z,45nm,1.3s
GMRC Granite Mounta 89.53 52 P P 19 35 51.3 +0.4
baz=244,SNR=6.0
SHOC Shoshone, Teco 89.56 51 P P 19 35 50.9 0.0
baz=244
J05D Fort Rock, OR 89.56 43 P P 19 35 50.4 -0.6
baz=241
TUQ Turquoise Moun 89.61 52 P P 19 35 51.1 -0.3
baz=244,SNR=21
IRM Iron Mountain 89.64 53 P P 19 35 51.6 +0.2
baz=245,SNR=14
H04A Detroit Lake 89.66 41 P P 19 35 51.8 +0.5
H04A IAMs_20 IAMs_20 20 07 05.3
comp=Z,1µm,19.0s
KVN Kaiserville 89.66 48 P P 19 35 52.5 +0.9
KVN IAmb IAmb 19 36 02.5
comp=Z,44nm,1.3s
KVN IAMs_20 IAMs_20 20 06 47.2
comp=Z,1µm,22.0s
KVN Kaiserville 89.66 48 P P 19 35 52.5 +0.9
KVN pmax pmax
comp=Z,44nm,1.3s
KVN MLR MLR
comp=Z,1µm,22.0s
BPAW Bear Paw Mtn. 89.75 16 IAMs_20 IAMs_20 20 12 27.8
comp=Z,1µm,20.0s
RND Reindeer 89.77 17 IAMs_20 IAMs_20 20 12 02.3
comp=Z,1µm,20.0s
F04D Rainier, OR 89.86 40 P P 19 35 52.8 +0.8
baz=240
SIT Sitka 89.89 26 IAMs_20 IAMs_20 20 07 42.4
comp=Z,1µm,21.0s
DHY Denali Highway 89.93 18 IAMs_20 IAMs_20 20 11 22.7
comp=Z,1µm,20.0s
Y12C Blythe 89.94 54 P P 19 35 53.7 +1.0
Y12C IAmb IAmb 19 36 04.2
comp=Z,50nm,1.2s
Y12C Blythe 89.94 54 P P 19 35 52.9 +0.2
baz=245
PINE Pine Mountain 90.00 43 P P 19 35 54.3 +1.2
PINE IAmb IAmb 19 36 05.1
comp=Z,44nm,1.0s
MCK McKinley 90.00 17 IAMs_20 IAMs_20 20 12 39.6
comp=Z,1µm,20.0s
I05D Terrebonne, OR 90.01 42 P P 19 35 53.4 +0.5
baz=241
PCA Pinnacle 90.03 23 IAMs_20 IAMs_20 20 08 52.1
comp=Z,1µm,20.0s
TPNV Topopah Spring 90.03 50 P P 19 35 54.4 +1.0
TPNV IAmb IAmb 19 36 04.5
comp=Z,68nm,1.4s
TPNV IAMs_20 IAMs_20 20 07 55.3
comp=Z,1µm,21.0s
TPNV Topopah Spring 90.03 50 P P 19 35 54.4 +1.0
TPNV pmax pmax
comp=Z,68nm,1.4s
TPNV MLR MLR
comp=Z,1µm,21.0s
TPNV Topopah Spring 90.03 50 P P 19 35 53.6 +0.3
baz=244,SNR=7.8
113A Mohawk Valley, 90.10 55 P P 19 35 54.9 +1.4
113A IAmb IAmb 19 36 04.9
comp=Z,61nm,1.4s
113A IAMs_20 IAMs_20 20 08 45.5
comp=Z,1µm,20.0s
F04A Amboy 90.14 40 P P 19 35 54.9 +1.6
NEE2 Needles Airpor 90.29 53 P P 19 35 54.6 +0.2
baz=245
E04D Cinebar 90.36 40 P P 19 35 55.4 +1.0
baz=240
PDMCI Parker Dam,Lak 90.46 53 P P 19 35 55.3 +0.2
baz=245,SNR=8.7
214A Organ Pipe Nat 90.51 56 P P 19 35 55.8 +0.3
214A IAmb IAmb 19 36 07.0
comp=Z,60nm,1.4s
214A IAMs_20 IAMs_20 20 08 18.3
comp=Z,1µm,21.0s

214A Organ Pipe Nat 90.51 56 P P 19 35 55.5 0.0
baz=246,SNR=7.9
D03D Eldon 90.55 39 P P 19 35 56.8 +1.6
baz=240
D04E Lakebay 90.55 39 P P 19 35 56.4 +1.2
baz=240
MLY Manley 90.57 16 P P 19 35 55.0 +0.1
IMAR Indian Mountai 90.63 14 P P 19 35 54.7 -0.5
SHPR Sheep Range 90.63 51 P P 19 35 57.3 +1.2
SHPR IAMs_20 IAMs_20 20 11 02.3
comp=Z,1µm,19.0s
F05D White Salmon 90.69 41 P P 19 35 57.3 +1.3
baz=241
WRAK Wrangell Islan 90.77 28 IAMs_20 IAMs_20 20 08 09.7
comp=Z,1µm,21.0s
HSIG 90.81 59 P P 19 35 57.5 +0.6
HSIG IAMs_20 IAMs_20 20 08 07.6
comp=Z,1µm,20.0s
WRH Wood River Hil 90.81 17 IAMs_20 IAMs_20 20 12 54.0
comp=Z,1µm,20.0s
LSA Lhasa 90.83 301 P P 19 35 57.6 0.0
LSA Lhasa 90.83 301 P P 19 35 57.1 -0.5
LSA Lhasa 90.83 301 P P 19 35 57.1 -0.5
LSA pmax pmax
comp=Z,9.0nm,1.1s
LSA MLR MLR
comp=Z,400nm,22.0s
WVOR Wild Horse Val 90.84 45 P P 19 35 57.3 +0.4
WVOR Wild Horse Val 90.84 45 P P 19 35 57.3 +0.4
WVOR pmax pmax
comp=Z,56nm,1.3s
WVOR MLR MLR
comp=Z,1µm,20.0s
BOD Bodaibo 90.89 334 eP P 19 35 57.9 +1.4
BOD pmax pmax
comp=Z,17nm,1.6s
W13A Hualapai Mount 90.98 53 P P 19 35 58.3 +0.4
W13A IAmb IAmb 19 36 09.2
comp=Z,60nm,1.5s
W13A IAMs_20 IAMs_20 20 15 28.6
comp=Z,1µm,18.0s
D05A Enumclaw 91.02 39 P P 19 35 57.7 +0.3
D05A IAMs_20 IAMs_20 20 06 34.6
comp=Z,1µm,19.0s
CCB Clear Creek Bu 91.03 17 P P 19 35 58.3 +1.2
CCB IAMs_20 IAMs_20 20 13 09.7
comp=Z,1µm,19.0s
I07A Izee 91.05 43 P P 19 35 57.8 0.0
I07A IAmb IAmb 19 36 09.0
comp=Z,50nm,1.3s
I07A IAMs_20 IAMs_20 20 07 43.3
comp=Z,2µm,21.0s
JIS Juneau Island 91.06 26 P P 19 35 58.6 +1.2
JIS IAMs_20 IAMs_20 20 08 18.3
comp=Z,1µm,20.0s
HDA Harding Lake 91.08 17 P P 19 35 58.2 +0.9
HDA IAmb IAmb 19 36 05.7
comp=Z,24nm,1.1s
HDA IAMs_20 IAMs_20 20 12 22.1
comp=Z,1µm,20.0s
HDA Harding Lake 91.08 17 P P 19 35 58.5 +1.2
baz=220
R11A Troy Canyon, C 91.11 49 P P 19 35 57.6 -0.7
R11A Troy Canyon, C 91.11 49 P P 19 35 58.9 +0.5
baz=244
Y14A Wickenburg 91.17 54 P P 19 35 58.4 -0.1
Y14A IAmb IAmb 19 36 08.8
comp=Z,54nm,1.6s
Y14A IAMs_20 IAMs_20 20 11 20.6
comp=Z,1µm,19.0s
RIDG Independent Ri 91.17 18 P P 19 35 58.5 +0.6
RIDG IAmb IAmb 19 36 05.7
comp=Z,21nm,0.9s
TCOL CIGO, UAF Yank 91.19 17 P P 19 35 58.9 +1.1
baz=219
A04D Lummi Island 91.36 38 P P 19 36 00.6 +1.6
baz=240
IL31 91.38 17 P P 19 35 59.5 +0.9
ILAR Eielson Array 91.38 17 P P 19 35 58.2 -0.5
comp=Z,2.0nm,0.7s,baz=237,slow=4.9,SNR=20
ILAR Eielson Array 91.38 17 P P 19 35 59.4 +0.7
ILAR Eielson Array 91.38 17 P P 19 35 59.4 +0.7
J08A Circle Bar Ran 91.38 44 P P 19 35 59.5 +0.1
J08A IAmb IAmb 19 36 08.7
comp=Z,22nm,1.0s
J08A IAMs_20 IAMs_20 20 10 25.4
comp=Z,2µm,21.0s
SKAG Skagway 91.44 25 P P 19 35 59.2 +0.1
B05A Bryant 91.49 38 P P 19 36 01.3 +1.7
baz=240
POKR Poker Plat Res 91.49 17 P P 19 36 00.1 +0.8
baz=219
SCRK Sand Creek 91.60 19 P P 19 36 00.3 +0.4
SCRK IAmb IAmb 19 36 08.0
comp=Z,21nm,1.0s
BCAR Beaver Creek A 91.62 20 P P 19 36 02.1 +2.2
F07A Phinny Hill Vi 91.64 41 IAMs_20 IAMs_20 20 16 22.7
comp=Z,1µm,18.0s
PALK Pallekele 91.82 277 IAMs_20 IAMs_20 20 17 57.5
comp=Z,1µm,20.0s
ZAK Zakamensk 91.82 324 eP P 19 36 01.7 +0.5
ZAK pmax pmax
comp=Z,14nm,1.6s
LTY Liberty 91.84 40 P P 19 36 01.8 +0.4
LTY IAMs_20 IAMs_20 20 09 10.9
comp=Z,985nm,20.0s
G08A Pilot Rock 91.96 42 P P 19 36 02.5 +0.5
G08A IAmb IAmb 19 36 12.9
comp=Z,32nm,1.3s
G08A IAMs_20 IAMs_20 20 08 30.2
comp=Z,2µm,20.0s
E07A Sunnyside 92.00 41 P P 19 36 01.8 -0.2
C06D Leavenworth 92.03 39 P P 19 36 02.5 +0.4
baz=241
HAWA Hanford 92.11 41 P P 19 36 02.8 +0.2
HAWA IAMs_20 IAMs_20 20 07 38.3
comp=Z,1µm,22.0s
TUC Tucson 92.23 56 P P 19 36 04.5 +1.0
TUC IAmb IAmb 19 36 15.0
comp=Z,38nm,1.3s
TUC Tucson 92.23 56 IAMs_20 IAMs_20 20 09 20.8
comp=Z,1µm,20.0s
TUC Tucson 92.23 56 P P 19 36 04.5 +1.0
TUC pmax pmax
comp=Z,38nm,1.3s
TUC MLR MLR
comp=Z,1µm,20.0s
TUC Tucson 92.23 56 P P 19 36 03.6 0.0
baz=247
LCMT Little Creek M 92.24 51 P P 19 36 04.1 +0.5
TLY Talaya 92.29 325 P P 19 36 05.1 +1.8
comp=Z,2.4nm,0.6s,baz=162,slow=6.3,SNR=2.5
TLY Talaya 92.29 325 P P 19 36 04.0 +0.7
TLY IAmb IAmb 19 36 11.9
comp=Z,42nm,1.7s
TLY Talaya 92.29 325 eP P 19 36 03.1 -0.2
TLY e 19 39 50.3
TLY eS SKSac 19 46 33.9 -1.6
TLY e 19 48 15.0
TLY pmax pmax
comp=Z,49nm,1.5s
TLY MLR MLR
comp=Z,671nm,16.0s
PRP Porcupine Dome 92.32 17 IAMs_20 IAMs_20 20 13 39.8
comp=Z,1µm,20.0s
CCUT Cedar City 92.37 51 P P 19 36 04.1 -0.2
ELK Elko 92.38 47 P P 19 36 04.1 -0.1
ELK IAmb IAmb 19 36 14.2
comp=Z,52nm,2.0s
ELK IAMs_20 IAMs_20 20 12 00.9
comp=Z,1µm,20.0s
ELK Elko 92.38 47 P P 19 36 04.1 -0.1
ELK pmax pmax
comp=Z,52nm,2.0s
ELK MLR MLR
comp=Z,1µm,20.0s
WHY Whitehorse 92.39 24 P P 19 36 04.1 +0.5
WHY IAmb IAmb 19 36 10.8
comp=Z,20nm,0.9s
PSUT Pine Spring 92.42 50 P P 19 36 04.9 +0.4
E08A Dider Farm, El 92.45 41 IAMs_20 IAMs_20 20 07 23.6
comp=Z,1µm,20.0s
X16A Lo Mia Camp, P 92.55 54 P P 19 36 05.8 +0.7
X16A IAMs_20 IAMs_20 20 12 13.1
comp=Z,1µm,18.0s
KNB Kanab 92.55 51 P P 19 36 05.5 +0.5
KNB Kanab 92.55 51 P P 19 36 05.6 +0.5
KNB pmax pmax
comp=Z,67nm,1.4s
SZCU Shurtz Canyon 92.59 51 P P 19 36 05.3 +0.1
U15A North Rim 92.70 52 P P 19 36 05.4 -0.5
U15A IAMs_20 IAMs_20 20 16 36.2
comp=Z,914nm,18.0s
LLLB Lillooet 92.77 36 P P 19 36 05.5 0.0
LLLB IAmb IAmb 19 36 16.4
comp=Z,27nm,1.1s
BMO Blue Mountains 92.80 43 P P 19 36 06.1 +0.2
BMO IAmb IAmb 19 36 15.6
comp=Z,47nm,2.0s
BMO IAMs_20 IAMs_20 20 09 11.7
comp=Z,1µm,21.0s
BMO Blue Mountains 92.80 43 P P 19 36 06.1 +0.2
BMO pmax pmax
comp=Z,47nm,2.0s
BMO MLR MLR
comp=Z,1µm,21.0s
E09A Wood Farm, Sta 93.02 41 IAMs_20 IAMs_20 20 18 31.4
comp=Z,1µm,19.0s
WUAZ Wupatki 93.03 53 P P 19 36 07.0 -0.3
WUAZ IAmb IAmb 19 36 19.1
comp=Z,33nm,1.1s
WUAZ Wupatki 93.03 53 P P 19 36 06.8 -0.4
baz=247
EGAK Eagle 93.03 19 P P 19 36 06.2 -0.1
319A Douglas 93.05 58 P P 19 36 07.6 +0.2
319A IAmb IAmb 19 36 18.9
comp=Z,42nm,1.3s
319A IAMs_20 IAMs_20 20 10 46.7
comp=Z,1µm,20.0s
DAWY Dawson 93.08 20 P P 19 36 07.3 +0.6
DAWY IAmb IAmb 19 36 16.8
comp=Z,41nm,1.5s
MFID Camas Ranch 93.13 45 P P 19 36 07.7 +0.3
MFID IAmb IAmb 19 36 16.5
comp=Z,24nm,1.5s
MFID IAMs_20 IAMs_20 20 09 24.8
comp=Z,1µm,22.0s
FYU Fort Yukon 93.19 16 IAMs_20 IAMs_20 20 12 44.8
comp=Z,1µm,22.0s
F10A Beach Ranch, E 93.35 42 IAMs_20 IAMs_20 20 08 41.1
comp=Z,1µm,21.0s
MTPU Mount Pierson 93.43 51 P P 19 36 10.1 +0.8
MSU Marysvale 93.62 50 P P 19 36 10.2 +0.2
MSU Marysvale 93.62 50 P P 19 36 10.2 +0.2
MOY Mondy 93.72 324 eP P 19 36 18.1 +8.1
X18A Snowflake 93.72 55 P P 19 36 11.0 +0.4
X18A IAMs_20 IAMs_20 20 09 49.3
comp=Z,969nm,20.0s
DUG Dugway, Tooele 93.84 48 IAMs_20 IAMs_20 20 09 33.9
comp=Z,1µm,22.0s
DUG Dugway, Tooele 93.84 48 P P 19 36 10.8 0.0
baz=246
BGU Big Grassy Mou 93.98 48 P P 19 36 10.7 -0.9
W18A Petrified Fore 94.11 54 P P 19 36 12.2 -0.1
W18A IAmb IAmb 19 36 23.2
comp=Z,31nm,1.3s
W18A Petrified Fore 94.11 54 P P 19 36 12.2 -0.1
baz=248
NEW Newport 94.42 40 P P 19 36 13.8 +0.6
baz=244
Q16A Castle Valley 94.50 50 P P 19 36 14.7 +0.7
121A Cookes Peak, D 94.66 57 P P 19 36 13.9 -1.0
121A IAMs_20 IAMs_20 20 12 05.3
comp=Z,931nm,19.0s
121A Cookes Peak, D 94.66 57 P P 19 36 14.9 0.0
baz=249
SRU San Rafael Swe 95.04 50 P P 19 36 15.9 -0.6
SRU San Rafael Swe 95.04 50 P P 19 36 15.9 -0.6
SRU pmax pmax
comp=Z,8.0nm,1.0s
EPT El Paso 95.40 58 IAMs_20 IAMs_20 20 11 51.9
comp=Z,1µm,20.0s
EPYK Eagle Plains 95.47 19 P P 19 36 19.1 +1.5
baz=229
ZAIG Zacatecas 95.57 68 IAMs_20 IAMs_20 20 10 10.0
comp=Z,2µm,20.0s
MCMT McKenzie Canyo 95.67 44 P P 19 36 19.1 -0.2
MSO Missoula 95.77 42 IAMs_20 IAMs_20 20 18 21.2
comp=Z,1µm,19.0s
MSO Missoula 95.77 42 P P 19 36 20.1 +0.6
baz=246
MVCO Mesa Verde 95.81 53 IAMs_20 IAMs_20 20 14 13.6
comp=Z,1µm,19.0s
MVCO Mesa Verde 95.81 53 P P 19 36 20.0 -0.1
baz=249
Y22D IRIS PASSCAL I 95.89 56 IAMs_20 IAMs_20 20 11 58.7
comp=Z,1µm,21.0s
JTMT Jette 95.93 41 IAMs_20 IAMs_20 20 09 53.7
comp=Z,1µm,21.0s
AHID Auburn Hatcher 96.03 47 IAMs_20 IAMs_20 20 19 39.8
comp=Z,954nm,18.0s
DLMT Dillon 96.04 44 IAMs_20 IAMs_20 20 10 47.9
comp=Z,1µm,21.0s
TIXI Tiksi 96.25 348 P P 19 36 20.9 0.0
comp=Z,1.4nm,0.3s,baz=352,slow=0.7,SNR=7.3
MNTX Cornudas Mount 96.27 59 P P 19 36 22.5 +0.5
MNTX IAmb IAmb 19 36 32.7
comp=Z,19nm,1.6s
MNTX IAMs_20 IAMs_20 20 12 19.0
comp=Z,1µm,20.0s
MNTX Cornudas Mount 96.27 59 P P 19 36 21.8 -0.2
baz=250
REDW Red Top Meadow 96.42 46 P P 19 36 22.3 -0.5
ANMO Albuquerque 96.55 55 IAMs_20 IAMs_20 20 12 22.3
comp=Z,1µm,20.0s
ANMO Albuquerque 96.55 55 P P 19 36 23.0 -0.4
baz=250
YHL Hebgen Lake 96.77 45 P P 19 36 24.5 +0.2
TX31 Lajitas Ar. Si 96.85 61 P P 19 36 24.6 -0.3
TX31 IAmb IAmb 19 36 35.2
comp=Z,29nm,1.9s
TX32 Lajitas Array 96.85 61 P P 19 36 24.4 -0.5
TX32 IAmb IAmb 19 36 35.2
comp=Z,30nm,1.9s
TXAR Lajitas Array 96.86 61 P P 19 36 25.4 +0.5
comp=Z,1.8nm,0.8s,baz=224,slow=5.0,SNR=16
TXAR LR LR 20 10 44.6
comp=Z,764nm,21.8s,baz=0.0,slow=30
TXAR Lajitas Array 96.86 61 P P 19 36 25.1 +0.2
PLCA Paso Flores 97.04 138 LR LR 20 10 07.5
comp=Z,341nm,21.8s,baz=258,slow=29
O20A White River Ci 97.06 50 IAMs_20 IAMs_20 20 10 59.2
comp=Z,1µm,22.0s
PDAR Pinedale Array 97.08 47 P P 19 36 25.4 -0.3
comp=Z,0.5nm,0.7s,baz=274,slow=4.4,SNR=4.1
PDAR PP PP 19 40 23.7 +1.6
comp=Z,0.7nm,0.9s,baz=208,slow=6.0,SNR=4.8
PDAR LR LR 20 15 40.7
comp=Z,422nm,18.4s,baz=262,slow=33
S22A 4UR Ranch, Cre 97.25 53 P P 19 36 26.1 -0.6
S22A IAMs_20 IAMs_20 20 15 47.5
comp=Z,1µm,19.0s
S22A 4UR Ranch, Cre 97.25 53 P P 19 36 26.6 -0.1
baz=250
TLIG Tlapa 97.38 74 IAMs_20 IAMs_20 20 09 48.7
comp=Z,2µm,22.0s
INK Inuvik 97.67 18 P Pdif 19 36 27.8 +0.3
INK IAMs_20 IAMs_20 20 16 17.3
comp=Z,1µm,20.0s
INK Inuvik 97.67 18 P Pdif 19 36 27.8 +0.4
INK pmax pmax
comp=Z,48nm,1.5s
INK MLR MLR
comp=Z,1µm,20.0s
RLMT Red Lodge 98.13 45 IAMs_20 IAMs_20 20 11 21.2
comp=Z,1µm,22.0s
RLMT Red Lodge 98.13 45 P P 19 36 29.8 -0.5
baz=249
SDCO Great Sand Dun 98.24 53 IAMs_20 IAMs_20 20 14 38.7
comp=Z,984nm,20.0s
WMQ Urumqi 98.65 313 eP P 19 36 32.5 -0.1
WMQ sP sP 19 36 39.6 -0.7
WMQ PP PP 19 40 35.7 +1.8
WMQ pmax pmax
comp=Z,7.0nm,0.7s
WMQ pmax pmax
comp=Z,54nm,5.7s
WMQ LR LR
comp=Z,400nm,14.7s
WMQ LR LR
comp=Z,440nm,18.9s
WMQ LR LR
comp=Z,830nm,21.9s
EGMT Eagleton 98.85 42 IAMs_20 IAMs_20 20 21 15.8
comp=Z,888nm,18.0s
Q24A Divide 98.90 52 IAMs_20 IAMs_20 20 18 56.2
comp=Z,1µm,18.0s
N23A Red Feather La 98.96 50 IAMs_20 IAMs_20 20 12 35.6
comp=Z,2µm,22.0s
MSTX Muleshoe 99.10 57 IAMs_20 IAMs_20 20 13 52.8
comp=Z,1µm,20.0s
MSTX Muleshoe 99.10 57 Pdiff Pdif 19 36 34.0 -0.9
baz=251
K22A Casper 99.14 48 IAMs_20 IAMs_20 20 16 21.1
comp=Z,903nm,20.0s
PHWY Pilot Hill 99.44 49 IAMs_20 IAMs_20 20 13 11.4
comp=Z,1µm,21.0s
833A Chaparral WMA, 100.08 64 IAMs_20 IAMs_20 20 13 16.2
comp=Z,1µm,20.0s
AMTX Amarillo 100.24 57 IAMs_20 IAMs_20 20 15 28.0
comp=Z,827nm,19.0s
JCT Junction City 100.40 61 IAMs_20 IAMs_20 20 13 08.6
comp=Z,1µm,21.0s
LAO LASA Array 100.66 44 IAMs_20 IAMs_20 20 13 44.8
comp=Z,1µm,21.0s
KSCO Kaye Shedlock' 100.78 52 IAMs_20 IAMs_20 20 16 60.0
comp=Z,1µm,19.0s
ABTX Abilene, Hawle 101.17 59 IAMs_20 IAMs_20 20 15 35.0
comp=Z,967nm,20.0s
YKA Yellowknife Ar 101.61 27 P Pdif 19 36 44.9 -0.3
comp=Z,1.4nm,0.7s,baz=253,slow=4.8,SNR=12
YKA PP PP 19 40 56.5 +0.8
comp=Z,0.1nm,0.4s,baz=253,slow=8.1,SNR=2.7
435B Jarrell 102.31 62 IAMs_20 IAMs_20 20 14 08.3
comp=Z,1µm,21.0s
WMOK Wichita Mounta 102.47 57 IAMs_20 IAMs_20 20 15 49.3
comp=Z,992nm,20.0s
WHTX Lake Whitney, 102.76 60 IAMs_20 IAMs_20 20 13 35.1
comp=Z,1µm,22.0s
MKAR Makanchi Array 103.20 315 Pdiff Pdif 19 36 52.8 +0.1
comp=Z,0.5nm,0.5s,baz=92,slow=6.5,SNR=8.5
MKAR PP PP 19 41 08.2 0.0
comp=Z,0.4nm,0.9s,baz=98,slow=10,SNR=2.7
MKAR PKKPbc PKKPbc 19 52 47.7 -1.7
comp=Z,0.3nm,0.9s,baz=269,slow=4.9,SNR=4.3
MKAR Makanchi Array 103.20 315 Pdif 19 36 52.1 -0.5
MKAR Makanchi Array 103.20 315 P Pdif 19 36 52.2 -0.5
ZALV Zalesovo Beam 103.64 323 Pdiff Pdif 19 36 52.4 -2.0
comp=Z,0.2nm,0.3s,baz=72,slow=4.7,SNR=2.4
OKCFA Oklahoma City 103.71 57 IAMs_20 IAMs_20 20 18 06.9
comp=Z,1µm,18.0s
BGNE Belgrade 104.74 51 IAMs_20 IAMs_20 20 23 24.6
comp=Z,1µm,18.0s
X37A Clayton 105.14 58 IAMs_20 IAMs_20 20 17 03.9
comp=Z,1µm,21.0s
TUL1 Leonard 105.14 57 IAMs_20 IAMs_20 20 18 13.9
comp=Z,1µm,19.0s
KSU1 Kansas State U 105.31 54 IAMs_20 IAMs_20 20 23 12.9
comp=Z,1µm,19.0s
MDND Maddock 105.31 44 IAMs_20 IAMs_20 20 16 29.2
comp=Z,1µm,21.0s
FFC Flin Flon 105.51 37 IAMs_20 IAMs_20 20 20 12.2
comp=Z,873nm,20.0s
ECSD EROS Data Cent 106.39 49 IAMs_20 IAMs_20 20 21 11.3
comp=Z,942nm,19.0s
W39A Magazine 106.56 58 IAMs_20 IAMs_20 20 18 58.3
comp=Z,1µm,21.0s
KURBB Kurchatov Arra 106.56 318 PP PP 19 41 35.2 +2.4
comp=Z,0.3nm,0.2s,baz=99,slow=5.8,SNR=3.5
MIAR Mount Ida 106.57 59 IAMs_20 IAMs_20 20 19 16.7
comp=Z,964nm,20.0s
HHAR Hobbs 106.69 57 IAMs_20 IAMs_20 20 18 52.8
comp=Z,1µm,20.0s
WLAR White Oak Lake 106.73 60 IAMs_20 IAMs_20 20 20 28.2
comp=Z,1µm,19.0s
342A Flagon Creek P 106.82 62 IAMs_20 IAMs_20 20 18 21.7
comp=Z,1µm,22.0s
D32A Dogwood Acres, 106.86 45 IAMs_20 IAMs_20 20 18 03.3
comp=Z,1µm,21.0s
Z41A Richland Creek 106.88 60 IAMs_20 IAMs_20 20 20 15.2
comp=Z,1µm,20.0s
TEIG Tepich 107.46 75 IAMs_20 IAMs_20 20 16 50.3
comp=Z,834nm,22.0s
U40A Yellville 107.56 57 IAMs_20 IAMs_20 20 19 37.8
comp=Z,1µm,20.0s
JTS Las Juntas de 107.60 85 IAMs_20 IAMs_20 20 16 04.2
comp=Z,993nm,19.0s
UALR University of 107.61 59 IAMs_20 IAMs_20 20 20 38.3
comp=Z,834nm,20.0s
CCAR Cane Creek 107.87 60 IAMs_20 IAMs_20 20 21 12.4
comp=Z,1µm,19.0s
143A Socs Landing, 107.90 61 IAMs_20 IAMs_20 20 20 02.1
comp=Z,1µm,20.0s
HDC Heredia 108.29 86 IAMs_20 IAMs_20 20 15 41.6
comp=Z,887nm,21.0s
SCIA State Center 108.45 51 IAMs_20 IAMs_20 20 22 37.0
comp=Z,1µm,19.0s
VBMS Vicksburg 108.52 62 IAMs_20 IAMs_20 20 19 23.5
comp=Z,1µm,20.0s
LCAR Lake Charles 108.84 58 IAMs_20 IAMs_20 20 18 39.4
comp=Z,1µm,22.0s
CCM Cathedral Cave 109.17 56 IAMs_20 IAMs_20 20 20 01.5
comp=Z,947nm,20.0s
LPAR Lepanto 109.42 58 IAMs_20 IAMs_20 20 22 09.2
comp=Z,1µm,20.0s
PBMO Poplar Bluff 109.56 57 IAMs_20 IAMs_20 20 24 55.7
comp=Z,820nm,19.0s
MET Memphis--Engin 109.61 59 IAMs_20 IAMs_20 20 22 07.5
comp=Z,1µm,19.0s
GNAR Gosnell 109.72 58 IAMs_20 IAMs_20 20 22 00.1
comp=Z,1µm,18.0s
N41A Harden Midland 109.97 53 IAMs_20 IAMs_20 20 21 55.4
comp=Z,1µm,19.0s
SLM Saint Louis 110.06 55 IAMs_20 IAMs_20 20 27 21.0
comp=Z,1µm,20.0s
PARMO Parma 110.07 57 IAMs_20 IAMs_20 20 20 48.2
comp=Z,1µm,20.0s
PENMO Penman 110.12 58 IAMs_20 IAMs_20 20 20 48.8
comp=Z,1µm,20.0s
HENM Henderson Moun 110.30 57 IAMs_20 IAMs_20 20 21 05.4
comp=Z,1µm,20.0s
GLAT Glass 110.36 58 IAMs_20 IAMs_20 20 20 37.0
comp=Z,1µm,20.0s
E38A The Farm, Brul 110.45 47 IAMs_20 IAMs_20 20 28 39.3
comp=Z,1µm,19.0s
HICK Hickman 110.46 58 IAMs_20 IAMs_20 20 20 59.6
comp=Z,1µm,20.0s
P43A Skaggs, Pawnee 110.79 54 IAMs_20 IAMs_20 20 25 58.1
comp=Z,838nm,18.0s
JFWS Jewell Farm 110.80 51 IAMs_20 IAMs_20 20 19 33.9
comp=Z,1µm,21.0s
PLAL Pickwick Lake 111.08 59 IAMs_20 IAMs_20 20 22 17.3
comp=Z,994nm,20.0s
HDIL Hopedale 111.12 53 IAMs_20 IAMs_20 20 22 28.7
comp=Z,964nm,20.0s
RES Resolute Bay 111.12 16 IAMs_20 IAMs_20 20 26 37.7
comp=Z,1µm,20.0s
G40A Rib Lake 111.19 48 IAMs_20 IAMs_20 20 28 18.0
comp=Z,902nm,18.0s
WVT Waverly 111.49 58 IAMs_20 IAMs_20 20 20 18.0
comp=Z,897nm,22.0s
LRAL Lakeview Retre 111.59 62 IAMs_20 IAMs_20 20 22 00.9
comp=Z,1µm,19.0s
O44A Mansfield 111.68 54 IAMs_20 IAMs_20 20 25 42.5
comp=Z,1µm,19.0s
X48A Hartselle 111.82 60 IAMs_20 IAMs_20 20 20 35.8
comp=Z,900nm,22.0s
BRVK Borovoye 111.99 320 IAMs_20 IAMs_20 20 25 52.3
comp=Z,893nm,22.0s
COWI Conover 112.04 47 IAMs_20 IAMs_20 20 22 22.4
comp=Z,708nm,20.0s
M44A Midewin, Midew 112.18 53 IAMs_20 IAMs_20 20 21 39.8
comp=Z,815nm,19.0s
Y49A Blount Mountai 112.22 61 IAMs_20 IAMs_20 20 20 50.7
comp=Z,1µm,20.0s
V48A Smith Brothers 112.23 59 IAMs_20 IAMs_20 20 22 39.6
comp=Z,1µm,20.0s
P46A Rosedale 112.55 55 IAMs_20 IAMs_20 20 25 45.8
comp=Z,888nm,19.0s
F42A Maple Grove Fa 112.69 48 IAMs_20 IAMs_20 20 31 00.8
comp=Z,797nm,18.0s
SFIN Lafayette 112.75 54 IAMs_20 IAMs_20 20 27 51.9
comp=Z,1µm,18.0s
H43A Windswept, Lux 112.79 49 IAMs_20 IAMs_20 20 25 28.3
comp=Z,1µm,19.0s
FPAL Fort Paine 113.00 60 IAMs_20 IAMs_20 20 23 20.1
comp=Z,914nm,20.0s
W50A Signal Mountai 113.35 60 IAMs_20 IAMs_20 20 22 47.4
comp=Z,856nm,20.0s
152A Waverly Hall 113.41 62 IAMs_20 IAMs_20 20 23 30.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,928nm,21.0s						
T49A	Edmonton	113.47	58	IAMs_20	IAMs_20	20 23 11.5	
	comp=Z,1μm,20.0s						
E43A	Lone Tree Farm	113.55	47	IAMs_20	IAMs_20	20 30 11.3	
	comp=Z,952nm,18.0s						
X51A	Calhoun	113.62	60	IAMs_20	IAMs_20	20 24 45.5	
	comp=Z,911nm,19.0s						
N47A	Urbana	113.87	53	IAMs_20	IAMs_20	20 30 23.6	
	comp=Z,890nm,18.0s						
R49A	Shelbyville	113.93	56	IAMs_20	IAMs_20	20 23 09.4	
	comp=Z,1μm,20.0s						
Y52A	Lilburn	114.15	61	IAMs_20	IAMs_20	20 22 22.7	
	comp=Z,1μm,21.0s						
W52A	Murphy	114.45	60	IAMs_20	IAMs_20	20 22 08.6	
	comp=Z,1μm,22.0s						
R50A	Paris	114.59	56	IAMs_20	IAMs_20	20 23 38.8	
	comp=Z,1μm,20.0s						
M48A	Edgerton	114.67	53	IAMs_20	IAMs_20	20 28 43.8	
	comp=Z,849nm,18.0s						
J47A	Sunmer	114.78	51	IAMs_20	IAMs_20	20 29 40.0	
	comp=Z,1μm,18.0s						
N49A	Columbus Grove	115.02	54	IAMs_20	IAMs_20	20 25 43.9	
	comp=Z,919nm,20.0s						
BG3	Lake Jocassee	115.25	60	IAMs_20	IAMs_20	20 24 58.7	
	comp=Z,964nm,19.0s						
Q51A	Peebles	115.44	56	IAMs_20	IAMs_20	20 25 57.4	
	comp=Z,906nm,19.0s						
J48A	Bridge Port	115.54	51	IAMs_20	IAMs_20	20 29 29.5	
	comp=Z,937nm,19.0s						
HODGE	Hodges	115.69	61	IAMs_20	IAMs_20	20 25 13.4	
	comp=Z,1μm,20.0s						
M50A	Fremont	115.92	53	IAMs_20	IAMs_20	20 29 48.8	
	comp=Z,948nm,18.0s						
H48A	Harrisville	115.98	49	IAMs_20	IAMs_20	20 24 55.9	
	comp=Z,1μm,20.0s						
U54A	Nelsons Funny	116.35	59	IAMs_20	IAMs_20	20 24 12.6	
	comp=Z,1μm,20.0s						
N51A	Ashland	116.38	54	IAMs_20	IAMs_20	20 31 52.9	
	comp=Z,1μm,18.0s						
M52A	Chesterland	117.19	53	IAMs_20	IAMs_20	20 27 24.5	
	comp=Z,812nm,21.0s						
N53A	Lisbon	117.53	54	IAMs_20	IAMs_20	20 31 47.5	
	comp=Z,990nm,18.0s						
MCWV	Mont Chateau	118.20	55	IAMs_20	IAMs_20	20 29 11.4	
	comp=Z,627nm,19.0s						
ERPA	Erie	118.25	52	IAMs_20	IAMs_20	20 26 32.4	
	comp=Z,804nm,20.0s						
M54A	Oil Creek Stat	118.46	53	IAMs_20	IAMs_20	20 26 25.0	
	comp=Z,825nm,20.0s						
Q56A	Snyder Ridge,	118.67	56	IAMs_20	IAMs_20	20 27 56.8	
	comp=Z,985nm,18.0s						
ARU	Arti	118.76	324	PKP	PKiKP	19 41 41.7	+0.5
	comp=Z,0.5nm,0.4s,baz=0.0,slow=0.0,SNR=3.2						
ARU	Arti	118.76	324	PKIKP	PKiKP	19 41 46.4	+5.2
M55A	Ridgway	119.13	53	IAMs_20	IAMs_20	20 27 24.8	
	comp=Z,1μm,20.0s						
J54A	Appleton	119.29	51	IAMs_20	IAMs_20	20 26 39.7	
	comp=Z,939nm,22.0s						
WVNY	West Valley, N	119.29	52	IAMs_20	IAMs_20	20 27 32.8	
	comp=Z,987nm,20.0s						
MEDO	Medina	119.42	51	IAMs_20	IAMs_20	20 26 42.2	
	comp=Z,958nm,20.0s						
AKTO	Aktyubinsk	119.55	317	PKP	PKPdf	19 41 41.8	-1.1
	comp=Z,1.1nm,0.7s,baz=32,slow=2.9,SNR=5.1						
P57A	Homestead Farm	119.61	56	IAMs_20	IAMs_20	20 26 06.6	
	comp=Z,1μm,20.0s						
T59A	Double "B" Far	119.80	59	IAMs_20	IAMs_20	20 28 03.0	
	comp=Z,846nm,19.0s						
J55A	Hilton	119.89	51	IAMs_20	IAMs_20	20 27 05.6	
	comp=Z,988nm,20.0s						
V60A	Jim Taylor Roa	119.94	60	IAMs_20	IAMs_20	20 23 35.8	
	comp=Z,1μm,22.0s						
D53A	Lac Vacive, Po	119.96	47	IAMs_20	IAMs_20	20 33 59.9	
	comp=Z,832nm,19.0s						
L56A	Greenwood	120.06	53	IAMs_20	IAMs_20	20 31 48.2	
	comp=Z,882nm,19.0s						
SAML	Samuel	120.07	114	IAMs_20	IAMs_20	20 23 54.2	
	comp=Z,717nm,21.0s						
PECO	Prince Edward	120.49	50	IAMs_20	IAMs_20	20 26 12.5	
	comp=Z,989nm,21.0s						
J57A	Williamstown	121.22	51	IAMs_20	IAMs_20	20 30 59.8	
	comp=Z,943nm,19.0s						
BINY	Binghamton	121.23	53	IAMs_20	IAMs_20	20 30 31.1	
	comp=Z,772nm,20.0s						
K58A	Earlville	121.48	52	IAMs_20	IAMs_20	20 29 19.7	
	comp=Z,1μm,20.0s						
J58A	Remsen	121.74	51	IAMs_20	IAMs_20	20 31 51.5	
	comp=Z,891nm,20.0s						
L59A	Walton	121.93	53	IAMs_20	IAMs_20	20 26 23.7	
	comp=Z,894nm,22.0s						
J59A	Piesco	122.30	51	IAMs_20	IAMs_20	20 32 18.5	
	comp=Z,933nm,20.0s						
SDDR	Presa de Saban	122.67	80	IAMs_20	IAMs_20	20 27 15.6	
	comp=Z,668nm,20.0s						
ACCN	Adirondack Com	122.92	51	IAMs_20	IAMs_20	20 32 01.7	
	comp=Z,680nm,19.0s						
TRY	Troy	122.94	52	IAMs_20	IAMs_20	20 35 01.3	
	comp=Z,775nm,21.0s						
QUA2	Belchertown	123.92	52	IAMs_20	IAMs_20	20 31 05.5	
	comp=Z,880nm,20.0s						
K62A	Royalston	124.00	52	IAMs_20	IAMs_20	20 28 07.3	
	comp=Z,667nm,21.0s						
HRV	Adam Dziewonsk	124.50	52	IAMs_20	IAMs_20	20 32 44.7	
	comp=Z,917nm,19.0s						
BRYW	Bryant College	124.54	53	IAMs_20	IAMs_20	20 32 21.0	
	comp=Z,998nm,20.0s						
WES	Weston	124.68	52	IAMs_20	IAMs_20	20 33 09.6	
	comp=Z,942nm,19.0s						
WVL	Waterville	125.72	49	IAMs_20	IAMs_20	20 29 35.8	
	comp=Z,951nm,21.0s						
APA	Apatity	125.78	341	⇓iPKHKP	PKPpre	19 41 41.3	
PKME	Peaks-Kenny Pk	125.91	49	IAMs_20	IAMs_20	20 31 19.2	
	comp=Z,845nm,21.0s						
ARCES	ARCESS Array B	126.59	345	PKP	PKPdf	19 41 56.0	+0.1
	comp=Z,1.8nm,0.8s,baz=336,slow=2.0,SNR=4.3						
ARCES	ARCESS Array B	126.59	345	PKIKP	PKPdf	19 41 56.0	+0.1
BDFB	Brasilia	128.13	131	PKP	PKPdf	19 42 00.2	-0.3
	comp=Z,1.5nm,0.4s,baz=108,slow=3.2,SNR=2.6						
RAYN	Ar Rayn	128.70	284	IAMs_20	IAMs_20	20 40 41.7	
	comp=Z,790nm,19.0s						
KMBO	Kilima Mbogo	128.91	251	PKP	PKPdf	19 42 02.4	+0.1
	comp=Z,1.5nm,0.9s,baz=115,slow=7.5,SNR=2.4						
LMN	Caledonia Moun	128.94	47	IAMs_20	IAMs_20	20 33 47.6	
	comp=Z,926nm,20.0s						
SKI	Saint Kitts	130.25	84	IAMs_20	IAMs_20	20 30 40.4	
	comp=Z,579nm,21.0s						
MBAR	Mbarara	134.86	247	IAMs_20	IAMs_20	20 52 00.2	
	comp=Z,836nm,21.0s						
GAZ	Gaziantep	135.94	302	IAMs_20	IAMs_20	20 51 39.2	
	comp=Z,811nm,19.0s						
AKBB	Malin Array Si	137.02	324	IAMs_20	IAMs_20	20 42 12.1	
	comp=Z,790nm,22.0s						
BRTR	Keskin Array B	138.19	307	PKP	PKPdf	19 42 18.3	-0.4
	comp=Z,0.4nm,0.6s,baz=135,slow=4.0,SNR=3.4						
BRTR				PP	PP	19 45 06.6	-1.3
	comp=Z,0.3nm,0.8s,baz=79,slow=3.1,SNR=2.7						
BRTR	Keskin Array B	138.19	307		PKPdf	19 42 18.1	-0.7
SORM	Soroca	138.75	321	⇑P	PKPdf	19 42 19.4	+0.1
SORM	Soroca	138.75	321	⇑PKIKP	PKPdf	19 42 19.4	+0.1
CSS	Mathiatis	139.38	300	IAMs_20	IAMs_20	20 47 12.4	
	comp=Z,861nm,21.0s						
BURAR	Bucovina Array	140.85	322	⇑P	PKiKP	19 42 24.8	-1.1
BURAR	Bucovina Array	140.85	322	⇑PKIKP	PKiKP	19 42 24.8	-1.1
ISP	Isparta	141.02	305	IAMs_20	IAMs_20	20 51 52.7	
	comp=Z,601nm,20.0s						
UZH	Uzhgorod	141.92	325	⇑iPKIKP	PKPdf	19 42 21.1	-3.9
ARR	Arges	142.33	319	⇑P	PKPdf	19 42 24.1	-1.8
DRGR		142.73	322	⇑P	PKPdf	19 42 26.6	-0.1
DRGR		142.73	322	⇑PKIKP	PKPdf	19 42 26.6	-0.1
PLVB	Pleven	143.27	316	⇑P	PKiKP	19 42 32.6	+1.7
GZR	Gura Zlata	143.44	320	⇑P	PKPab	19 42 24.4	+0.2
MORC	Moravsky Berou	143.61	330	ePKP	PKPbc	19 42 25.4	-0.1
MORC	Moravsky Berou	143.61	330	⇓P	PKPab	19 42 25.0	+0.4
MORC	Moravsky Berou	143.61	330	⇓PKIKP	PKPab	19 42 25.0	+0.4
SIRR	Siria	143.63	322	⇑P	PKPdf	19 42 27.6	-0.6
KRLC	Kraliky	143.76	331	ePKP	PKPbc	19 42 25.9	0.0
KRLC				epPKP	pPKPdf	19 42 34.6	+0.5
KRLC	Kraliky	143.76	331	ePKIKP	PKPbc	19 42 25.9	0.0
KRLC				e		19 42 34.6	
DPC	Dobruska-Polom	143.77	331	ePKP	PKPdf	19 42 27.9	-0.5
DPC	Dobruska-Polom	143.77	331	ePKIKP	PKPdf	19 42 27.9	-0.5
VYHS	Vyhne	143.82	327	ePKIKP	PKPdf	19 42 28.9	+0.4
VYHS	Vyhne	143.82	327	ePKP	PKPdf	19 42 28.9	+0.4
PGB	Panagyurishte	143.94	315	iP	PKPdf	19 42 29.0	+0.1
BZS	Buzias	144.01	321	⇑P	PKPdf	19 42 28.7	-0.2
BZS	Buzias	144.01	321	⇑PKIKP	PKPdf	19 42 28.7	-0.2
JAVC	Velka Javorina	144.17	328	ePKP	PKPdf	19 42 30.3	+1.2
KARP	Karpathos	144.20	303	IAMs_20	IAMs_20	20 52 11.1	
	comp=Z,482nm,20.0s						
VRAC	Vranov	144.38	330	ePKP	PKPdf	19 42 28.9	-0.5
VRAC	Vranov	144.38	330	PKP	PKPdf	19 42 29.1	-0.4
	comp=Z,4.7nm,0.8s,baz=55,slow=3.8						
VRAC	Vranov	144.38	330	⇑P	PKPdf	19 42 29.0	-0.4
MDVR	Moldovita	144.41	320	⇑P	PKPdf	19 42 30.3	+0.7
PVCC	Panska Ves	144.41	333	ePKP	PKPdf	19 42 28.7	-0.7
PVCC				epPKP	PKiKP	19 42 33.0	0.0
PVCC	Panska Ves	144.41	333	ePKIKP	PKPdf	19 42 28.7	-0.7
PVCC				e		19 42 33.0	
BRG	Berggiesshubel	144.42	334	ePKHKP	PKPab	19 42 25.1	-2.5
BRG				MLR	MLR		
	comp=N,626nm,21.3s						
BRG				MLR	MLR		
	comp=E,343nm,18.4s						
BRG				MLR	MLR		
	comp=Z,758nm,17.1s						
CLL	Collm	144.47	335	ePKPpre	PKPab	19 42 27.0	-0.7
CLL				iPKPdf	PKPdf	19 42 29.5	0.0
	comp=Z,24nm,1.1s						
CLL				iPKiKP	PKiKP	19 42 32.7	-0.4
	comp=Z,26nm,0.9s						
CLL				eSKPdf	SKPdf	19 46 04.0	+1.0
CLL				LmV		20 50 00.0	
	comp=Z,500nm,20.7s						
CLL	Collm	144.47	335	ePKIKP	PKPab	19 42 27.0	-0.7
CLL				i		19 42 32.7	
CLL				pmax	pmax		
	comp=Z,24nm,1.1s						
CLL				MLR	MLR		
	comp=Z,500nm,20.7s						
VTS	Vitosha	144.53	316	⇑P	PKPdf	19 42 30.7	+0.6
VTS	Vitosha	144.53	316	iP	PKPdf	19 42 31.3	+1.2
VTS	Vitosha	144.53	316		PKPbc	19 42 29.1	+0.4
VTS				IAMs_20	IAMs_20	20 54 13.4	
	comp=Z,530nm,20.0s						
VTS	Vitosha	144.53	316	⇑PKIKP	PKPdf	19 42 30.7	+0.6
KRUC	Moravsky	144.65	330	ePKP	PKPab	19 42 28.3	-0.2
MMB	Musomiste	144.66	314	iP	PKPdf	19 42 31.1	+0.9
MODS	Modra-Piesok	144.69	328	ePKIKP	PKPdf	19 42 31.3	+1.3
MODS	Modra-Piesok	144.69	328	ePKP	PKPdf	19 42 31.3	+1.3
GOPC	GO Pecny, Ondr	144.77	332	ePKP	PKPab	19 42 28.9	-0.1
GOPC				epPKP	PKiKP	19 42 34.5	+0.7
GOPC	GO Pecny, Ondr	144.77	332	ePKIKP	PKPab	19 42 28.9	-0.1
GOPC				e		19 42 34.5	
PRU	Pruhonice	144.83	332	ePKP	PKPdf	19 42 30.8	+0.7
PRU				epPKP	PKiKP	19 42 34.4	+0.5
PRU				AMS	AMS	20 42 30.0	
	comp=Z,800nm,22.1s						
PRU	Pruhonice	144.83	332	ePKIKP	PKPdf	19 42 30.8	+0.7
PRU				MLR	MLR		
	comp=Z,800nm,22.1s						
TREC	Trest	144.91	331	ePKP	PKPbc	19 42 29.5	0.0
TREC				AMS	AMS	20 42 00.0	
	comp=Z,900nm,21.8s						
TREC	Trest	144.91	331	ePKIKP	PKPbc	19 42 29.5	0.0
TREC				MLR	MLR		
	comp=Z,900nm,21.8s						
KKB	Krupnik	144.97	315	eP	PKPab	19 42 28.6	-1.3
VAY	Valandovo	145.56	314	iP	PKPab	19 42 33.0	+0.9
STIP	Stip	145.64	315	iP	PKPdf	19 42 35.2	-0.7
CONA	Conrad Observa	145.69	329	PKPab	PKPdf	19 42 31.4	-0.4
CONA				iPKiKP	PKiKP	19 42 35.0	-0.9
	comp=Z,13nm,0.8s						
KHC	Kasperske Hory	145.88	332	ePKP	PKPdf	19 42 32.0	0.0
KHC				AMS	AMS	20 42 10.0	
	comp=Z,800nm,19.3s						
KHC	Kasperske Hory	145.88	332		PKPdf	19 42 31.0	-1.0
KHC	Kasperske Hory	145.88	332	ePKP2	PKPdf	19 42 32.0	0.0
KHC				MLR	MLR		
	comp=Z,800nm,19.3s						
GEC2	GERESS Array S	146.04	332		PKPdf	19 42 31.7	-0.7
GERES	GERESS Array B	146.04	332	PKPbc	PKPdf	19 42 32.1	-0.3
	comp=Z,5.5nm,0.6s,baz=34,slow=3.0,SNR=27						
GERES	GERESS Array B	146.04	332		PKPdf	19 42 31.4	-1.0
IDI	Anoyia	146.06	303	PKPbc	PKPdf	19 42 33.5	-0.2
	comp=Z,6.7nm,0.9s,baz=91,slow=4.3,SNR=2.7						
LIT	Litokhoron	146.15	312		PKPdf	19 42 31.3	-1.4
LIT	Litokhoron	146.15	312	PKIKP	PKPdf	19 42 31.3	-1.4
ARSA	Arzberg	146.32	328	iPKiKP	PKiKP	19 42 36.1	-1.0
	comp=Z,2.7nm,1.0s						
MOA	Molln	146.51	330	ipPKPbc	PKiKP	19 42 37.0	-0.5
	comp=Z,7.0nm,0.7s						
SOKA	Soboth	146.95	328	iPKPab	PKPbc	19 42 36.1	+0.1
	comp=Z,4.2nm,0.7s						
BLY	Banja Luka	147.07	323	⇑P	PKPab	19 42 38.0	+0.3
PDG	Podgorica	147.17	318	⇑P	PKPab	19 42 35.4	+1.1
PDG	Podgorica	147.17	318	IAMs_20	IAMs_20	20 47 20.1	
	comp=Z,613nm,20.0s						
KBA	Koelnbreinsper	147.50	330	iPKPab	PKPbc	19 42 37.9	+0.3
	comp=Z,5.6nm,0.8s						
MYKA	Terra Mystica	147.67	329	iPKiKP	PKiKP	19 42 39.3	-0.7
	comp=Z,3.9nm,0.4s						
WATA	Walderalm	148.12	332	ipPKPab	PKPab	19 42 44.7	+2.7
	comp=Z,16nm,1.5s						
ABTA	Abfaltersbach	148.13	330	iPKPbc	PKPdf	19 42 37.4	+1.4
	comp=Z,1.9nm,0.7s						
ABTA				isPKPbc	sPKPdf	19 42 43.4	-0.3
	comp=Z,7.2nm,0.9s						
WTTA	Wattenberg	148.14	332	isPKPbc	PKPab	19 42 43.1	+1.0
	comp=Z,19nm,1.1s						
MOTA	Moosalm	148.32	332	iPKPab	PKiKP	19 42 41.1	-0.3
	comp=Z,9.6nm,0.8s						
RETA	Reutte	148.36	333	ipPKiKP	PKPab	19 42 45.0	+2.2
	comp=Z,19nm,1.4s						
SQTA	Sankt Quirin	148.37	332	ipPKPdf	PKPbc	19 42 39.1	-0.7
FETA	Feichten	148.73	332	isPKPdf	PKPbc	19 42 41.0	+0.2
	comp=Z,3.9nm,0.8s						
DAVA	Damuels	148.89	333	ipPKPbc	PKPab	19 42 43.9	-1.2
	comp=Z,24nm,1.1s,SNR=4.1						
FUORN	Ofenpass-Fuorn	149.24	332		PKPbc	19 42 41.7	-0.6
DAVOX	Davos/Dischmat	149.28	333	PKPbc	PKPbc	19 42 41.9	-0.4
	comp=Z,5.5nm,0.6s,baz=270,slow=2.0,SNR=2.1						
TIP	Timpagrande	150.49	315	⇑P	PKPbc	19 42 43.1	-2.2
NRCA	Norcia	150.56	324		PKPdf	19 42 41.0	+1.0
NRCA				IAMs_20	IAMs_20	20 42 17.3	
	comp=Z,498nm,22.0s						
MURB	Monte Urbino	150.59	325		PKPdf	19 42 39.1	-0.9
ZCCA	Zocca	150.62	328		PKPdf	19 42 40.7	+0.8
BNI	Bardonecchia	152.01	334		PKPbc	19 42 48.1	-0.6
BNI	Bardonecchia	152.01	334	PKIKP	PKPbc	19 42 48.1	-0.6
CORL	Corleone	153.46	315	IAMs_20	IAMs_20	20 34 27.9	
	comp=Z,630nm,21.0s						
LIC	Lamto	164.85	199	eP	PKPab	19 43 54.8	+0.8
	comp=Z,21nm,1.0s						
KIC	Kosan Boka	164.89	201	eP	PKPab	19 43 52.2	-2.0
	comp=Z,24nm,1.3s						
DBIC	Dimbokro	165.22	201	PKP	PKPdf	19 42 58.3	-0.3
	comp=Z,2.7nm,1.0s,baz=63,slow=2.3,SNR=2.0						
DBIC				PKPab	PKPab	19 43 55.2	-0.4
	comp=Z,7.0nm,0.9s,baz=159,slow=4.5,SNR=8.8						
TIC	Toumodi	165.25	200	eP	PKPab	19 43 55.2	-0.6
TORD	Torodi Ar. Bea	166.51	238	PKP	PKPdf	19 42 59.0	-0.6
	comp=Z,1.1nm,0.8s,baz=165,slow=2.2,SNR=3.3						
TORD				PKPab	PKPab	19 44 00.3	-1.3
	comp=Z,0.5nm,0.6s,baz=114,slow=3.6,SNR=3.2						
TORD	Torodi Ar. Bea	166.51	238		PKPdf	19 42 57.9	-1.7

DDA 12 19:40:08.4, 35°.50N×27°.34E, h7km±2km, ML2.1, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAT	Datca	1.24	9	iP	Pb	19 40 31.1	-1.2
DAT				iS	Sn	19 40 49.7	+0.3
DALY	Dalyan (Mula)	1.69	39	iP	Pg	19 40 40.9	0.0
DALY				IAML		19 41 02.0	
	comp=N,22nm,1.7s						
DALY				iS	Sg	19 41 03.6	+0.8
DALY				IAML		19 41 05.0	
	comp=E,28nm,1.8s						
TURN	Turunc	1.71	36	iP	Pn	19 40 36.3	-2.4
TURN				iS	Sn	19 40 55.4	-5.4
TURN				IAML		19 41 01.0	
	comp=E,27nm,0.3s						
FETY	Fethiye	1.81	51	iP	Pg	19 40 42.8	-0.4
FETY				iS	Sg	19 41 07.8	+1.1
TAVA	DENIZLI_Tavas	2.34	32	iP	Pb	19 40 49.7	-1.2
TAVA				iS	Sb	19 41 18.8	-1.3
TAVA				IAML		19 41 21.0	
	comp=N,8.3nm,0.2s						
TAVA				IAML		19 41 29.0	
	comp=E,13nm,0.7s						
GOLH	Golhisar	2.50	45	iP	Pb	19 40 52.2	-1.4

IDC 12 19:44:56.0±1.1, 38°.49N×21°.86E, h0km, mb3.6/9, mb1 3.7/11, mb1mx3.5/39, mbtmp3.6/11, ML3.0/2, MS3.1/1, Ms1 3.1/1, ms1mx2.5/61, Error ellipse: s-maj=23.0km s-min=20.5km az=71.0

ATH 12 19:44:56.9, 38°.41N×21°.93E, h16km±1km, ML3.4/14, Error ellipse: s-maj=1.2km s-min=0.7km az=167.0

THE 12 19:44:57.4, 38°.42N×21°.91E, h7km, ML3.3/22, Error ellipse: s-maj=0.8km s-min=0.3km az=226.0

SKO 12 19:44:58.3, 38°.44N×22°.05E, h0km

ISC 12 19:44:57.3±0.7, 38°.42N±0°.01×21°.92E±0°.02, h11km±4km, n106, σ0s.98/152, mb3.6/9, 11C-5D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SERG	Sergoula	0.11	95	P	Pg	19 45 00.0	-0.2
SERG				S	Sg	19 45 02.2	0.0
	27μm,0.3s						
SERG	Sergoula	0.11	95	P	Pg	19 44 60.0	-0.2
SERG				S	Sg	19 45 02.4	+0.2
SERG				AML	AML	19 45 03.6	
	comp=N,64202μm,0.4s						
SERG				AML	AML	19 45 04.5	
	comp=E,43525μm,0.2s						
TRIZ	Trizonia	0.13	116	P	Pg	19 45 00.3	-0.1
TRIZ				S	Sg	19 45 02.8	+0.1
	comp=E,29μm,0.3s						
TRIZ	Trizonia	0.13	116	P	Pg	19 45 00.3	-0.1
TRIZ				S	Sg	19 45 02.9	+0.3
ANX	Ano Chora	0.17	360	P	Pg	19 45 01.2	0.0
ANX				S	Sg	19 45 03.9	0.0
	comp=E,41μm,0.4s						
ANX	Ano Chora	0.17	360	P	Pg	19 45 01.2	0.0
ANX				S	Sg	19 45 04.1	+0.2
ANX				AML	AML	19 45 05.0	
ANX				AML	AML	19 45 05.3	
	comp=E,53481μm,0.2s						
KALE	Kalithea	0.17	100	P	Pg	19 45 01.0	-0.1
KALE				S	Sg	19 45 04.2	+0.3
	comp=E,17μm,0.4s						
KALE	Kalithea	0.17	100	P	Pg	19 45 01.1	-0.1
KALE				S	Sg	19 45 04.2	+0.3
KALE				AML	AML	19 45 04.8	
	comp=N,51725μm,0.4s						
KALE				AML	AML	19 45 05.4	
	comp=E,17069μm,0.4s						
UPR	University Cam	0.17	217	P	Pg	19 45 01.0	-0.1
UPR	University Cam	0.17	217	P	Pg	19 45 01.0	-0.1
UPR				S	Sg	19 45 03.8	+0.1
LAKA	Lakka	0.19	166	P	Pg	19 45 01.2	-0.2
LAKA				S	Sg	19 45 04.5	+0.3
	comp=E,4μm,0.3s						
LAKA	Lakka	0.19	166	P	Pg	19 45 01.2	-0.2
LAKA				S	Sg	19 45 03.8	-0.3
LAKA				AML	AML	19 45 04.3	
	comp=E,10167μm,0.5s						
LAKA				AML	AML	19 45 07.1	
	comp=N,9649μm,0.2s						
ALIK	Aliki, Aigiali	0.22	137	P	Pg	19 45 01.9	0.0
ALIK				S	Sg	19 45 05.6	+0.6
PVO	Paravola	0.37	302	P	Pg	19 45 04.4	-0.2
PVO				S	Sg	19 45 09.4	-0.1
	comp=N,6μm,0.3s						
PVO	Paravola	0.37	302	P	Pg	19 45 04.5	-0.2
PVO				S	Sg	19 45 10.6	+1.1
PVO				AML	AML	19 45 15.0	
	comp=N,12787μm,0.4s						
PVO				AML	AML	19 45 16.0	
	comp=E,11017μm,0.3s						
KLV	Kalavryta, Ach	0.42	154	P	Pg	19 45 04.8	-0.8
KLV				S	Sg	19 45 12.1	+0.9
	comp=E,2μm,0.2s						
KLV	Kalavryta, Ach	0.42	154	P	Pg	19 45 05.0	-0.6
KLV				S	Sg	19 45 11.7	+0.5
KLV				AML	AML	19 45 13.1	
	comp=E,3903μm,0.2s						
KLV				AML	AML	19 45 13.3	
	comp=N,3610μm,0.2s						
DLFA	Delphi	0.45	83	P	Pg	19 45 05.7	-0.5
DRO	Drossia	0.50	200	P	Pg	19 45 06.4	-0.6
DRO				S	Sg	19 45 14.7	+1.1
	comp=N,9μm,0.2s						
DRO	Drossia	0.50	200	P	Pg	19 45 06.5	-0.6
DRO				S	Sg	19 45 13.8	+0.2
DRO				AML	AML	19 45 15.4	
	comp=E,17529μm,0.2s						
DRO				AML	AML	19 45 16.4	
	comp=N,17071μm,0.3s						
EVR	Evrytania	0.50	350	P	Pg	19 45 06.9	-0.2
EVR				S	Sg	19 45 14.0	+0.2
	comp=N,9μm,0.2s						
EVR	Evrytania	0.50	350	P	Pg	19 45 07.0	-0.2
EVR				S	Sb	19 45 14.9	-0.7
EVR				AML	AML	19 45 16.8	
	comp=N,19012μm,0.2s						
EVR				AML	AML	19 45 17.2	
	comp=E,16297μm,0.3s						
RLS	Riolos of Patr	0.51	225	P	Pg	19 45 07.0	-0.3
RLS				S	Sg	19 45 14.8	+0.8
	comp=E,2μm,0.4s						
RLS	Riolos of Patr	0.51	225	P	Pg	19 45 07.0	-0.3
RLS				S	Sg	19 45 14.1	0.0
RLS				AML	AML	19 45 16.9	
	comp=N,5078μm,0.2s						
RLS				AML	AML	19 45 17.8	
	comp=E,4476μm,0.2s						
MAKR	Makrakomi, Fth	0.61	16	P	Pg	19 45 09.3	+0.1
MAKR				S	Sg	19 45 17.6	+0.3
	comp=E,9μm,0.4s						
MAKR	Makrakomi, Fth	0.61	16	P	Pg	19 45 09.4	+0.2
MAKR				S	Sb	19 45 19.0	+0.3
AXAR	Agios Charalam	0.67	59	P	Pg	19 45 10.0	-0.4
AXAR				AML	AML	19 45 26.7	
	comp=E,11461μm,0.7s						
AXAR				AML	AML	19 45 26.7	
	comp=N,15033μm,0.3s						
AGG	Agios Georgios	0.68	28	P	Pg	19 45 09.6	-0.9
AGG				S	Sb	19 45 20.8	+0.1
	comp=N,3μm,0.3s						
AGG	Agios Georgios	0.68	28	P	Pg	19 45 09.7	-0.9
AGG				S	Sb	19 45 20.7	+0.1
AGG				AML	AML	19 45 21.7	
	comp=E,7416μm,0.3s						
AGG				AML	AML	19 45 26.5	
	comp=N,6886μm,0.4s						
PROD	Prodromos	0.79	102	P	Pg	19 45 11.9	-0.6
PROD				S	Sg	19 45 23.4	+0.6
LKR	Lokris	0.88	75	P	Pg	19 45 13.3	-0.9
LKR				S	Sb	19 45 26.4	+0.1
	comp=N,2μm,0.2s						
LKR	Lokris	0.88	75	P	Pg	19 45 13.2	-1.1
AMT	Artemida-Makis	0.91	191	P	Pg	19 45 14.1	-0.7
AMT				S	Sb	19 45 27.7	+0.6
	comp=N,3μm,0.5s						
AMT	Artemida-Makis	0.91	191	P	Pg	19 45 14.0	-0.8
AMT				AML	AML	19 45 34.1	
	comp=N,5768μm,0.5s						
AMT				AML	AML	19 45 34.5	
	comp=E,4405μm,0.5s						
LTK	Loutraki	0.92	116	P	Pg	19 45 14.8	-0.2
LTK				S	Sb	19 45 28.6	+1.2
	comp=E,798nm,0.4s						
LTK	Loutraki	0.92	116	P	Pg	19 45 14.7	-0.3
MGNA	Meganis	0.92	285	P	Pg	19 45 14.8	-0.2
LOUT	Loutraki	0.94	117	P	Pg	19 45 14.9	-0.5
LOUT				S	Sb	19 45 28.8	+0.8
	comp=E,1μm,0.6s						
LOUT	Loutraki	0.94	117	P	Pg	19 45 15.3	-0.1
LKD2	Lefkada island	1.06	291	P	Pg	19 45 17.2	-0.4
LKD2	Lefkada island	1.06	291	P	Pg	19 45 17.2	-0.4
KONA	Konidatara, Ke	1.06	271	P	Pg	19 45 16.8	-0.9
FSK	Fiskardo	1.07	272	P	Pg	19 45 17.0	-0.8
TSLK	Tsoukalades, L	1.07	292	P	Pg	19 45 17.8	-0.1
VLS	Valsamata	1.08	257	P	Pg	19 45 17.0	-1.1
VIL2	Platees	1.08	101	P	Pn	19 45 18.9	+0.4
VLX	Vlachokerasia	1.11	161	P	Pg	19 45 17.5	-1.2
VLX				S	Sb	19 45 34.0	+0.9
	comp=E,2μm,0.7s						
VLX	Vlachokerasia	1.11	161	P	Pg	19 45 17.3	-1.4
VLX				S	Sg	19 45 33.5	+0.3
VLX				AML	AML	19 45 37.9	

	comp=E,4496μm,0.4s						
VLX				AML	AML	19 45 41.3	
	comp=N,3334μm,1.0s						
VILL	Villia	1.12	103	P	Pg	19 45 18.9	0.0
VLMS	Volimes, Zakyn	1.13	242	P	Pg	19 45 17.7	-1.4
THL	Klokotos Trika	1.14	4	P	Pg	19 45 18.3	-1.0
THL				S	Sn	19 45 36.1	+1.2
	comp=N,1μm,0.6s						
THL	Klokotos Trika	1.14	4	P	Pg	19 45 18.5	-0.8
ITM	Ithomi	1.24	180	P	Pn	19 45 19.7	-1.0
ITM	Ithomi	1.24	180	P	Pn	19 45 19.6	-1.0
MRKA	Markates	1.34	77	P	Pn	19 45 22.1	+0.1
MRKA	Markates	1.34	77	P	Pn	19 45 21.9	-0.1
NEO	Neokhori	1.35	49	P	Pn	19 45 22.2	+0.1
NEO				S	Sn	19 45 40.5	+0.5
	comp=N,698nm,0.4s						
NEO	Neokhori	1.35	49	P	Pn	19 45 22.3	+0.1
XOR	Xorichti	1.37	46	P	Pn	19 45 22.6	+0.2
XOR				S	Sg	19 45 42.0	+0.6
	comp=N,608nm,0.7s						
XOR	Xorichti	1.37	46	P	Pn	19 45 22.7	+0.2
DID	Didima	1.39	131	P	Pn	19 45 22.9	+0.3
DID				S	Sb	19 45 41.3	+0.3
	comp=N,1μm,0.5s						
DID	Didima	1.39	131	P	Pn	19 45 22.7	+0.1
KRND	KRANIDI	1.42	137	P	Pn	19 45 23.6	+0.5
JAN	Janina	1.49	326	P	Pg	19 45 26.1	+0.2
PYL	PYLOS	1.53	185	P	Pn	19 45 24.7	0.0
PYL	PYLOS	1.53	185	P	Pn	19 45 24.6	0.0
ATHU	Athens Univers	1.54	107	P	Pn	19 45 25.2	+0.5
PTL	Penteli	1.57	103	P	Pn	19 45 25.8	+0.5
PTL				AML	AML	19 45 52.8	
	comp=E,775μm,0.5s						
PTL				AML	AML	19 46 02.0	
	comp=N,806μm,0.7s						
VLY	Voula,Athens	1.58	111	P	Pn	19 45 25.8	+0.4
VLY				S	Sn	19 45 46.5	+0.7
	comp=N,408nm,0.5s						
VLY	Voula,Athens	1.58	111	P	Pn	19 45 25.8	+0.4
KPRO	Kipourio	1.59	344	P	Pb	19 45 27.1	+0.4
LIT	Litokhoron	1.73	15	P	Pn	19 45 28.1	+0.6
VLI	Veliai	1.88	154	P	Pn	19 45 30.0	+0.5
PAIG	Paliouri	2.03	42	P	Pn	19 45 31.2	-0.3
VAY	Valandovo	2.94	10	iPn	Pb	19 45 47.2	-2.5
VAY	Valandovo	2.94	10	iPn	Pb	19 45 47.0	-2.7
APE	Apeiranthos	3.16	114	⇓P	Pn	19 45 48.7	+1.6
APE				⇑S	Sn	19 46 26.1	+1.2
STIP	Stip	3.27	3	iPn	Pn	19 45 51.4	+2.8
STIP	Stip	3.27	3	iPn	Pn	19 45 51.4	+2.8
TIR	Tirane	3.32	332	⇑P	Pn	19 45 50.3	+1.1
MMB	Musomiste	3.45	23	eP	Pn	19 45 52.1	+1.0
MMB				S	Sn	19 46 31.4	-0.6
KKB	Krupnik	3.55	14	eP	Pb	19 45 56.5	-3.7
KKB				eS	Sn	19 46 33.4	-1.1
IDI	Anoyia	3.93	142	Pn	Pn	19 45 58.8	+1.1
	comp=N,0.8nm,0.3s,baz=315,slow=16,SNR=7.9						
IDI				Sn	Sn	19 46 43.9	+0.1
	comp=N,2.7nm,0.3s,baz=108,slow=22,SNR=5.7						
TIP	Timpagrande	4.10	282	⇓P	Pn	19 46 00.4	+0.4
TIP				⇑S	Sn	19 46 47.7	-0.4
VTS	Vitosha	4.31	13	⇑P	Pn	19 46 04.2	+1.2
VTS				⇑S	Sn	19 46 53.9	+0.6
VTS	Vitosha	4.31	13	iP	Pn	19 46 00.4	-2.6
VTS				S	Sn	19 46 50.9	-2.4
PDG	Podgorica	4.49	334	⇑P	Pn	19 46 05.5	+0.2
PDG				⇑S	Sn	19 46 59.4	+1.9
BLKB	Belogradchik	5.23	6	⇑S	Sn	19 47 16.7	+1.0
ELND	Elena	5.41	32	⇓P	Pn	19 46 19.7	+1.7
ELND				⇑S	Sn	19 47 22.2	+2.0
VOIR		7.39	17	⇓P	Pn	19 46 45.5	+1.3
MLR	Muntele Rosu	7.67	22	Pn	Pn	19 46 53.2	+4.1
	comp=N,0.2nm,0.3s,baz=185,slow=12,SNR=2.2						
MLR	Muntele Rosu	7.67	22	⇓P	Pn	19 46 50.4	+1.3
PLOR	Plostina	8.21	24	⇑P	Pn	19 46 57.8	+1.4
VRI	Vrincioaia	8.25	24	⇑P	Pn	19 46 58.5	+1.6
BRTR	Keskin Array B	9.21	78	Pn	Pn	19 47 12.2	+2.0
	comp=N,0.2nm,0.3s,baz=256,slow=12,SNR=5.5						
GNI	Garni	17.75	77	LR	LR	19 56 40.5	
	comp=N,66nm,19.6s,baz=262,slow=40						
HFS	Hagfors	22.35	349	P	P	19 49 54.5	-0.5
	comp=N,1.3nm,0.5s,baz=156,slow=11,SNR=9.3						
FINES	FINESS Array B	23.19	5	P	P	19 50 03.4	-0.4
	comp=N,0.7nm,0.6s,baz=193,slow=7.8,SNR=7.1						
NB2	NORSAR Subarra	23.61	347	P	P	19 50 08.2	+0.1
	comp=Z,1.3nm,0.7s,baz=159,slow=11						
NOA	NORSAR Array B	23.61	347	P	P	19 50 07.9	-0.2
	comp=Z,0.6nm,0.7s,baz=163,slow=9.8,SNR=6.4						
EKA	Eskdalemuir Ar	23.88	323	P	P	19 50 10.3	-0.4
	comp=Z,3.4nm,1.0s,baz=124,slow=12,SNR=2.8						
TORD	Torodi Ar. Bea	30.93	221	P	P	19 51 14.9	+0.6
	comp=Z,0.2nm,0.6s,baz=20,slow=8.8,SNR=2.5						
ARCES	ARCESS Array B	31.23	2	P	P	19 51 16.0	-0.5
	comp=Z,3.2nm,0.9s,baz=199,slow=6.4,SNR=4.8						
MKAR	Makanchi Array	44.23	59	P	P	19 53 07.1	+0.6
	comp=Z,0.5nm,0.4s,baz=276,slow=7.4,SNR=21						
ZALV	Zalesovo Beam	44.71	48	P	P	19 53 11.1	+0.9
	comp=Z,0.5nm,0.4s,baz=279,slow=7.7,SNR=4.0						
YKA	Yellowknife Ar	73.53	341	P	P	19 56 29.6	-0.2
	comp=Z,0.2nm,0.5s,baz=36,slow=5.4,SNR=3.8						

IDC 12 20:18:40.7±1.3, 2°46N×98°99E, h148km±3km, mb3.4/6, mb1 3.6/7, mb1mx3.2/46, mbtmp3.9/7, MS3.7/1, Ms1 3.7/1, ms1mx2.9/37, Error ellipse: s-maj=69.1km s-min=15.2km az=59.0
NEIC 12 20:18:40.6±1.0, 2°41N±0°09×99°1E±0°1, h154km±5km, mb4.1/13, Error ellipse: s-maj=17.7km s-min=10.4km az=58.0
DJA 12 20:18:41.1±0.4, 2°N±2°×9°9E±°, h145km±4km, M3.6/11, MLv3.6/11
ISC 12 20:18:40.3±0.6, 2°39N±0°04×99°06E±0°06, h150km, n40, σ0°84/46, mb4.0/12, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPSI	Rantau Prapat	0.33	335		Pn	20 19 01.7	+0.8
RPSI	Rantau Prapat	0.33	335		Pn	20 19 02.1	+1.2
RPSI					Sn	20 19 17.8	+1.1
PSI	Prapat	0.43	341	P	Pn	20 19 02.1	+0.6
	14nm,0.3s,baz=144,slow=4.3,SNR=58						
PSI				S	Sn	20 19 17.8	+0.2
	46nm,0.3s,baz=165,slow=1.6,SNR=77						
PBSI	Pulau Batu	2.55	198	P	Pn	20 19 23.6	+1.5
PBSI				S	Sn	20 19 55.0	+0.6
SNSI	Sinabang, Aceh	2.73	270	P	Pn	20 19 25.6	+1.3
SNSI				S	Sn	20 19 56.8	-1.5
BKNI	Bangkinang	2.85	136	P	Pn	20 19 26.8	+1.0
BKNI	Bangkinang	2.85	136	Pn	Pn	20 19 26.9	+1.0
IPM	Ipoh	2.85	43		Pn	20 19 26.8	+1.0
MLSI	Meulaboh, Aceh	3.24	305	P	Pn	20 19 31.2	+0.4
MLSI				S	Sn	20 20 08.5	-1.3
KULM	Kulim	3.29	29		Pn	20 19 31.3	0.0
LHMI	Lhok Sumawe	3.52	323	P	Pn	20 19 35.2	+0.9
LHMI				S	Sn	20 20 17.2	+0.9
LHMI	Lhok Sumawe	3.52	323		Pn	20 19 34.5	+0.2
PDSI	Padang	3.57	157	P	Pn	20 19 36.1	+1.1
SISI	Saibi	3.69	180	P	Pn	20 19 35.9	-0.7
SISI				S	Sn	20 20 20.2	-0.2
MNAI	Manna	7.75	150	P	Pn	20 20 29.3	-1.2
PBKT	Sadao Pong	14.21	7	P	P	20 21 56.7	-1.1
CMAR	Chiang Mai Arr	15.97	360	P	P	20 22 17.6	+0.3
	0.6nm,0.3s,baz=191,slow=11,SNR=16						
CHTO	Chiang Mai	16.32	360	P	P	20 22 21.4	+0.2
LSA	Lhasa	28.18	345	P	P	20 24 19.6	+0.2
LSA				IAmb	IAmb	20 24 20.4	
	comp=Z,2.5nm,0.4s						
WB0	Warramunga Arr	41.09	124	P	P	20 26 08.9	-0.7
WB0				IAmb	IAmb	20 27 20.1	
	comp=Z,7.8nm,1.4s						
WRA	Warramunga Arr	41.12	124	P	P	20 26 11.0	+1.0
	comp=Z,0.8nm,0.4s,baz=302,slow=9.2,SNR=10.0						
WRA	Warramunga Arr	41.12	124	P	P	20 26 10.2	+0.3
WRAB	Tennant Creek	41.13	124	P	P	20 26 09.5	-0.4
WRAB				IAmb	IAmb	20 26 28.4	
	comp=Z,5.3nm,1.1s						
WB2	Warramunga Arr	41.13	124	P	P	20 26 09.4	-0.6
WR0	Warramunga Arr	41.30	124	P	P	20 26 11.9	+0.5
ASAR	Alice Springs	42.67	129	P	P	20 26 23.7	+1.2
	comp=Z,0.3nm,0.3s,baz=303,slow=7.6,SNR=13						
ASAR	Alice Springs	42.67	129	P	P	20 26 20.5	-2.0
ARSB	Arslanbob	45.32	332	P	P	20 26 44.1	+0.7
ARSB				IAmb	IAmb	20 28 10.1	
	comp=Z,7.2nm,1.3s						
SONM	Songino Array	45.71	7	P	P	20 26 46.3	-0.1
	comp=Z,0.5nm,0.4s,baz=190,slow=8.8,SNR=5.1						
MK31	Makanchi Array	46.57	344	P	P	20 26 52.8	-0.2
MKAR	Makanchi Array	46.57	344	P	P	20 26 52.8	-0.3
	comp=Z,0.4nm,0.4s,baz=154,slow=6.9,SNR=7.8						
MKAR	Makanchi Array	46.57	344	P	P	20 26 52.6	-0.5
MAKZ	Makanchi	46.67	344	P	P	20 26 53.7	-0.2
KURK	Kurchatov	51.16	343	P	P	20 27 27.8	-0.1
ZALV	Zalesovo Beam	52.71	349	P	P	20 27 39.3	+0.1
	comp=Z,1.0nm,0.3s,baz=165,slow=6.1,SNR=9.0						
BRVK	Borovoye	55.83	339	P	P	20 28 02.3	+0.4
BRVK				IAmb	IAmb	20 28 28.1	
	comp=Z,2.6nm,1.2s						
ASAJ	Asahikawa	56.60	36	LR	LR	20 53 56.1	
	comp=Z,61nm,18.8s,baz=94,slow=37						
ABKAR	Akbulak array	57.37	331	P	P	20 28 12.8	0.0
TIXI	Tiksi	71.70	10	P	P	20 29 45.1	-0.4
TIXI				IAmb	IAmb	20 31 03.5	
	comp=Z,9.4nm,1.8s						
FINES	FINESS Array B	79.81	332	P	P	20 30 31.3	-0.4
	comp=Z,1.0nm,0.7s,baz=106,slow=6.2,SNR=3.8						

IDC 12 20:30:12.7±2.1, 1°46N×126°33E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/34, mbtmp3.4/3, Error ellipse: s-maj=190.0km s-min=24.0km az=65.0
DJA 12 20:30:16.4±0.5, 1°N±7°×12°6E±°, h10km, M3.6/6, mb3.7/1, MLv3.5/6
ISC 12 20:30:18.6±1.4, 1°5N±0°2×126°50E±0°07, h47km, n7, σ0°72/9, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.11	129	P	Pn	20 30 37.3	-0.5
TNTI				S	Sn	20 30 52.2	+0.2
KMSI	Cibinong	2.68	250	P	Pn	20 30 58.9	-0.3
KMSI				S	Sn	20 31 29.8	-0.6
MRSI	Marisa	4.67	258	P	Pn	20 31 25.9	-0.7
APSI	Ampana	5.40	244	P	Pn	20 31 37.5	+0.8
WRA	Warramunga Arr	22.64	161	P	P	20 35 15.3	-0.5
	0.6nm,0.3s,baz=338,slow=10,SNR=16						
ASAR	Alice Springs	26.01	164	P	P	20 35 48.3	+0.9
	0.4nm,0.3s,baz=348,slow=14,SNR=10						
MKAR	Makanchi Array	59.27	326	P	P	20 40 15.7	+0.3
	0.1nm,0.4s,baz=120,slow=6.9,SNR=9.5						

IDC 12 20:38:03.9±0.9, 9°78N×84°36W, h0km, mb4.0/14, mb1 4.2/15, mb1mx4.0/38, mbtmp4.0/15, ML3.5/1, MS3.7/6, Ms1 3.7/6, ms1mx3.3/43, Error ellipse: s-maj=31.0km s-min=9.3km az=36.0
INET 12 20:38:05.5, 9°25N×84°64W, h15km, ML4.2
UCR 12 20:38:06.2±1.8, 9°49N×84°91W, h14km±6km, MD4.1, mb4.7(NEIC), Fault plane solution: NP1:φs98.68000°, δ70.00000°, λ90.00000°.
NEIC 12 20:38:08.9±1.9, 9°68N±0°09×84°68W±0°09, h33km±5km, mb4.7/38, Error ellipse: s-maj=16.0km s-min=10.1km az=222.0
UPA 12 20:38:09.3±0.9, 9°75N×84°97W, h0km±4km, MW4.7
ISC 12 20:38:08.4±1.2, 9°65N±0°04×84°86W±0°04, h31km±8km, n113, σ1°77/125, mb4.5/30, 2C-6D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	Las Juntas de	0.65	352	Pg	Pb	20 38 20.3	-1.1
	693nm,0.3s,baz=133,slow=8.2,SNR=1041						
JTS				Lg	Lg	20 38 30.3	
	2μm,0.3s,baz=342,slow=20,SNR=52						
JTS	Las Juntas de	0.65	352	eP	Pb	20 38 20.8	-0.5
JTS				eS	Sb	20 38 30.9	+0.8
JTS	Las Juntas de	0.65	352	⇓iP	Pb	20 38 20.2	-1.1
HDC	Heredia	0.81	64	eP	Pb	20 38 27.3	+3.4
HDC				eS	Sn	20 38 41.4	+6.4
HDC	Heredia	0.81	64		Pb	20 38 22.8	-1.4
HDC	Heredia	0.81	64	⇓eP	Pb	20 38 22.9	-1.3
FORC	Fortuna	0.84	13	iP	Pb	20 38 24.1	-0.4
FORC				iS	Sn	20 38 37.3	+1.9
SJS	Escuela Geolog	0.84	70	⇓iP	Pb	20 38 23.1	-1.5
SJS				eS	Sn	20 38 37.4	+1.6
LCR2	La Lucha 2	0.85	83	⇓iP	Pb	20 38 22.7	-2.1
LCR2				eS	Sb	20 38 35.8	-0.1
GUAI	GUAI	0.90	314	iP	Pb	20 38 24.0	-1.4
AMAS	Alto Masis	0.97	352	iP	Pn	20 38 26.0	0.0
AMAS				iS	Sn	20 38 40.4	+1.5
ACAL	Aguas Claras	1.00	350	iP	Pn	20 38 26.6	+0.2
CUI	Cuipilapa	1.05	343	eP	Pn	20 38 27.3	+0.2
CUI				iS	Sn	20 38 42.9	+2.1
EDDO	Dominical	1.05	112	⇑iP	Pn	20 38 25.1	-2.0
EDDO				eS	Sb	20 38 39.2	-2.4
COLC	Colonia	1.07	341	iP	Pn	20 38 27.5	+0.1
PTEN	Parque Tenorio	1.07	353	iP	Pn	20 38 27.9	+0.5
HORNC	Hornillas	1.11	343	iP	Pn	20 38 28.0	0.0
LIM1	Limonal	1.12	340	iP	Pn	20 38 28.1	+0.1
LIM1				iS	Sn	20 38 45.1	+2.7
GUAB	Guayabo de Bag	1.12	341	iP	Pn	20 38 28.2	+0.1
MESS	Mesas	1.14	343	iP	Pn	20 38 28.8	+0.4
CVTR	Volcan Turrial	1.14	71	⇓eP	Pn	20 38 28.6	-0.2
NY14	Universidad de	1.20	326	iP	Pb	20 38 29.7	-0.9
GPS2	Hotel Rincn d	1.20	336	iP	Pn	20 38 29.5	+0.2
GPS3	Bodega del ICE	1.21	336	iP	Pn	20 38 29.8	+0.4
GPS1	Guardaparques	1.22	337	iP	Pn	20 38 29.9	+0.4
LAPC	Finca la Perla	1.25	333	iP	Pn	20 38 30.3	+0.5
BUEV	Buena Vista	1.27	335	iP	Pn	20 38 30.6	+0.5
BUEV				eS	Sb	20 38 49.9	+2.1
GBS3	Finca Las Img	1.27	332	iP	Pn	20 38 30.6	+0.4
GB1A	Borinquen Arri	1.28	335	iP	Pn	20 38 30.8	+0.5
GB1A				⇓iP	Pn	20 38 30.9	+0.5
EDLM	Las Mercedes	1.30	106	eP	Pn	20 38 29.6	-1.0
BUAI	Buenos Aires	1.31	339	iP	Pn	20 38 31.2	+0.5
EDPN	Palmar Norte	1.54	116	eP	Pn	20 38 32.0	-1.8
EDBA	Buenos Aires	1.63	107	eP	Pn	20 38 33.9	-1.2
PIRO	Carate, Puerto	1.94	129	eP	Pb	20 38 45.2	+2.0
PIRO				eS	Sb	20 39 12.8	+5.8
RGM0	Gandoca	2.22	91	eP	Pb	20 38 43.8	+0.4
RGM0				eS	Sb	20 39 18.7	+3.8
BRU2	Volcan	2.30	111	eP	Pb	20 38 51.0	+1.6
BRU2				eS	Sb	20 39 22.1	+4.6
BRU2	Volcan	2.30	111	eP	Pn	20 38 42.9	-1.5
SBAR3	San Bartolo, C	2.35	124	eP	Pb	20 38 51.2	+1.0
SBAR3				eS	Sb	20 39 23.2	+4.3
CNI2	El Empalme, Bo	2.36	95	eP	Pb	20 38 50.4	0.0
CNI2				eS	Sb	20 39 20.5	+1.4
BCO2	Palmira	2.48	112	eP	Pb	20 38 52.7	+0.3
BCO2				eS	Sb	20 39 27.0	+4.4
ESPN	Las Esperanzas	2.59	12		Pn	20 38 49.6	+1.4
ESPN	Las Esperanzas	2.59	12	⇑iP	Pn	20 38 49.8	+1.5
DVD	David	2.66	117	eP	Pb	20 38 55.9	+0.5
DVD				eS	Sb	20 39 30.4	+2.7
MATN	Matagalpa	3.43	342	eP	Pn	20 39 00.2	+0.3
ESTN	Estel	3.74	337		Pn	20 39 05.4	+1.2
VTON	El Valle, Cocl	4.79	102	eP	Pb	20 39 24.1	-7.7
VTON				eS	Sb	20 40 21.8	-7.4
AZU	Azuero	4.89	112	eP	Pb	20 39 25.8	-7.6
AZU				eS	Sn	20 40 14.0	-1.5
AZU	Azuero	4.89	112	eP	Pn	20 39 21.5	+1.6
BCIP	Isla Barro Col	4.97	95		Pn	20 39 21.0	-0.1
TGUH	Tegucigalpa,Un	4.98	332		Pn	20 39 23.4	+2.1
TEIG	Tepich	11.03	343	LR	LR	20 45 11.5	
	comp=Z,355nm,19.4s,baz=139,slow=39						
CMIG	Matias Romero	12.24	308	Pn	Pn	20 41 05.3	+4.5
	0.3nm,0.3s,baz=120,slow=16,SNR=4.0						
SDV	Santo Domingo	14.06	92	Pn	Pn	20 41 24.5	-1.3
	0.2nm,0.3s,baz=290,slow=15,SNR=2.9						
SDV				LR	LR	20 47 56.7	
	comp=Z,220nm,21.4s,baz=290,slow=44						
ATAH	Atahualpa	17.87	159	LR	LR	20 48 18.1	
	comp=Z,322nm,18.8s,baz=336,slow=34						
SJG	San Juan	20.00	63	LR	LR	20 49 57.6	
	comp=Z,124nm,19.4s,baz=269,slow=37						
152A	Waverly Hall	22.91	0	P	P	20 43 11.2	+1.4
152A				IAmb	IAmb	20 43 12.9	
	comp=Z,28nm,0.8s						
Z50A	Ashland	23.52	358	P	P	20 43 16.6	+0.7
Z50A				IAmb	IAmb	20 43 17.4	
	comp=Z,18nm,0.8s						
GOGA	Godfrey	23.69	3	P	P	20 43 18.3	+0.8
Y52A	Lilburn	24.11	2	P	P	20 43 22.4	+0.8
Y49A	Blount Mountai	24.14	357	P	P	20 43 22.5	+0.7
435B	Jarrell	24.14	332	P	P	20 43 22.6	+0.7
HODGE	Hodges	24.59	5	P	P	20 43 25.8	-0.1
HODGE				IAmb	IAmb	20 43 27.0	
	comp=Z,17nm,0.7s						
JSC	Jenkinsville	24.74	7	P	P	20 43 28.1	+0.9
JSC				IAmb	IAmb	20 43 30.0	
	comp=Z,31nm,1.1s						
JCT	Junction City	24.98	328	P	P	20 43 29.6	+0.1
JCT				IAmb	IAmb	20 43 30.7	
	comp=Z,13nm,1.1s						
OXF	Oxford	25.10	351	P	P	20 43 30.1	-0.3
OXF				IAmb	IAmb	20 43 37.0	
	comp=Z,35nm,1.1s						
WHTX	Lake Whitney,	25.12	334	P	P	20 43 31.4	+0.8
WHTX				IAmb	IAmb	20 43 32.7	
	comp=Z,14nm,0.8s						
BG3	Lake Jocassee	25.29	4	P	P	20 43 32.8	+0.6
BG3				IAmb	IAmb	20 43 33.9	
	comp=Z,8.4nm,0.8s						
W50A	Signal Mountai	25.44	359	P	P	20 43 35.3	+1.7
W50A				IAmb	IAmb	20 44 16.5	
	comp=Z,53nm,1.6s						
CPCT	Cooper Cave	25.69	1	P	P	20 43 38.7	+2.8
CPCT				IAmb	IAmb	20 43 40.4	
	comp=Z,19nm,0.9s						
MIAR	Mount Ida	26.04	343	P	P	20 43 39.8	+0.7
MIAR				IAmb	IAmb	20 43 41.5	
	comp=Z,55nm,1.8s						
TXAR	Lajitas Array	26.34	321	P	P	20 43 44.3	+2.3
	comp=Z,1.0nm,0.8s,baz=140,slow=12,SNR=9.7						
TXAR	Lajitas Array	26.34	321	P	P	20 43 42.5	+0.5
TX31	Lajitas Ar. Si	26.34	321	P	P	20 43 43.0	+1.0
TX32	Lajitas Array	26.34	321	P	P	20 43 43.0	+1.0
LCAR	Lake Charles	26.92	349	P	P	20 43 46.5	-0.5
Q51A	Peebles	29.29	2	P	P	20 44 07.8	-0.2
ACSO	Alum Creek Sta	30.50	3	P	P	20 44 18.4	-0.5
N49A	Columbus Grove	31.16	1	P	P	20 44 23.9	-0.7
N49A				IAmb	IAmb	20 44 24.4	
	comp=Z,27nm,1.4s						
ANMO	Albuquerque	32.00	325	P	P	20 44 32.6	+0.3
	comp=Z,1.2nm,0.5s,baz=153,slow=6.8,SNR=2.8						
214A	Organ Pipe Nat	34.10	315	P	P	20 44 52.6	+2.1
X16A	Lo Mia Camp, P	34.65	319	P	P	20 44 56.4	+1.0
SADO	Sadowa	35.34	7	P	P	20 44 59.3	-1.7
	comp=Z,5.0nm,0.5s,baz=238,slow=4.8,SNR=8.8						
SADO	Sadowa	35.34	7	P	P	20 44 59.7	-1.3
GLA	Glamis	36.12	315	P	P	20 45 10.2	+2.3
GLA				IAmb	IAmb	20 45 11.6	
	comp=Z,9.6nm,0.9s						
TRQ	Mont Tremblant	37.50	12	P	P	20 45 18.8	-0.7
XPFO	Pion Flat	37.57	314	P	P	20 45 21.2	+0.8
XPFO				IAmb	IAmb	20 45 22.9	
	comp=Z,12nm,1.6s						
PFO	Pinyon Flats O	37.58	314	P	P	20 45 22.7	+2.3
	comp=Z,3.1nm,0.8s,baz=83,slow=4.1,SNR=3.4						
PFO	Pinyon Flats O	37.58	314	P	P	20 45 20.8	+0.4
PFO				IAmb	IAmb	20 45 22.9	
	comp=Z,14nm,1.6s						
LATQ	La Tuque	38.98	13	P	P	20 45 31.0	-0.8
PDAR	Pinedale Array	39.44	331	P	P	20 45 35.5	-0.6
	comp=Z,0.2nm,0.6s,baz=135,slow=10,SNR=3.9						
PDAR				PcP	PcP	20 47 44.5	+0.8
	comp=Z,0.3nm,0.6s,baz=120,slow=5.3,SNR=3.8						
HWUT	Hardware Ranch	39.59	328	P	P	20 45 36.6	-0.6
NV11	Mina Array Sit	41.38	319	P	P	20 45 52.3	+0.2
NVAR	Mina Array Bea	41.48	319	P	P	20 45 54.1	+1.1
	comp=Z,1.7nm,0.6s,baz=136,slow=6.6,SNR=12						
NVAR				PcP	PcP	20 47 51.8	+1.4
	comp=Z,0.5nm,0.7s,baz=116,slow=4.1,SNR=3.1						
NVAR	Mina Array Bea	41.48	319	P	P	20 45 54.0	+1.0
ULM	Lac du Bonnet	41.50	349	P	P	20 45 50.7	-2.0
	comp=Z,1.3nm,0.6s,baz=120,slow=11,SNR=3.7						
ULM	Lac du Bonnet	41.50	349	IAmb	IAmb	20 46 03.1	
	comp=Z,21nm,1.7s						
NEW	Newport	47.08	331	LR	LR	21 10 07.8	
	comp=Z,79nm,18.8s,baz=68,slow=41						
SCHQ	Schefferville	47.29	14	P	P	20 46 36.5	-2.4
	comp=Z,2.0nm,0.5s,baz=217,slow=4.2,SNR=8.7						
SCHQ	Schefferville	47.29	14	IAmb	IAmb	20 46 37.7	
	comp=Z,24nm,1.6s						
PLCA	Paso Flores	51.84	166	P	P	20 47 13.4	-0.4
	comp=Z,2.0nm,0.9s,baz=121,slow=10.0,SNR=3.5						
PLCA	Paso Flores	51.84	166	IAmb	IAmb	20 47 15.8	
	comp=Z,24nm,1.9s						
YKA	Yellowknife Ar	56.98	344	P	P	20 47 50.0	-0.9
	comp=Z,0.6nm,0.7s,baz=143,slow=6.7,SNR=7.4						
YKA				PcP	PcP	20 48 46.3	+0.6
	comp=Z,0.6nm,0.7s,baz=138,slow=4.5,SNR=5.3						
ILAR	Eielson Array	69.60	336	P	P	20 49 14.0	-0.4
	comp=Z,0.3nm,0.6s,baz=137,slow=3.7,SNR=4.5						
ESDC	Sonseca Array	76.92	51	P	P	20 49 57.8	-0.5
	comp=Z,1.5nm,0.6s,baz=281,slow=5.9,SNR=8.9						
ESDC	Sonseca Array	76.92	51	P	P	20 49 57.5	-0.8
TIC	Toumodi	78.93	85	eP	P	20 50 09.6	-0.2
LIC	Lamto	78.99	86	eP	P	20 50 10.0	-0.1
	comp=Z,20nm,0.6s						
DBIC	Dimbokro	79.09	85	P	P	20 50 09.3	-1.3
	comp=Z,4.9nm,1.0s,baz=300,slow=6.0,SNR=4.9						
DBIC	Dimbokro	79.09	85	P	P	20 50 10.5	-0.1
DBIC				IAmb	IAmb	20 50 11.0	
	comp=Z,8.3nm,1.1s						
KIC	Kosan Boka	79.25	85	eP	P	20 50 11.6	+0.1
	comp=Z,4.6nm,0.9s						
TORD	Torodi Ar. Bea	84.52	78	P	P	20 50 38.1	-1.2
	comp=Z,0.4nm,0.6s,baz=291,slow=6.1,SNR=6.2						
GERES	GERESS Array B	88.39	41	LR	LR	21 25 10.3	
	comp=Z,118nm,20.0s,baz=252,slow=32						
CMAR	Chiang Mai Arr	151.82	352	PKPbc	PKPbc	20 58 01.2	0.0
	comp=Z,1.3nm,0.7s,baz=330,slow=2.8,SNR=9.5						

NEIC 12 20:48:48.0±1.4, 2°92S±0°07×128°18E±0°07, h34km±6km, mb4.3/12, Error ellipse: s-maj=9.8km s-min=9.6km az=160.0
DJA 12 20:48:47.1±0.2, 3°S±3°×12°8E±°, h10km, M4.5/14, mb4.8/13, mB5.0/6, MLv4.5/14, Mw(mB)4.4/6
IDC 12 20:48:50.4±2.1, 2°95S×128°29E, h56km±22km, mb3.9/5, mb1 4.2/8, mb1mx3.6/50, mbtmp4.3/8, ML4.5/3, MS3.4/3, Ms1 3.4/3, ms1mx3.0/34, Error ellipse: s-maj=16.8km s-min=9.8km az=81.0
ISC 12 20:48:49.2±0.5, 2°90S±0°05×128°14E±0°06, h38km, n64, σ1°42/65, mb4.2/6, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	0.78	176	P	Pn	20 49 03.6	-0.1
MSAI	Masohi	0.90	119	P	Pn	20 49 06.8	+1.4
NLAI	Namlea	1.09	252	P	Pn	20 49 07.3	-0.6
SANI	Sanana	2.31	291	P	Pn	20 49 21.6	-3.1
LBMI	Labuha	2.34	344	P	Pn	20 49 24.1	-1.0
BNDI	Bandanaira	2.39	132	P	Pn	20 49 29.0	+3.3
SWI	Sorong	3.72	57	P	Pn	20 49 43.8	-0.3
SIJI	Sorong	3.72	57	P	Pn	20 49 43.8	-0.3
	60nm,0.3s,baz=237,slow=9.8,SNR=81						
SIJI				S	Sn	20 50 26.1	-0.6
	14nm,0.3s,baz=30,slow=19,SNR=16						
TNTI	Ternate	3.73	348	P	Pn	20 49 43.4	-0.8
TNTI	Ternate	3.73	348		Pn	20 49 43.4	-0.8
FAKI	Fak Fak	4.11	90	P	Pn	20 49 50.1	+0.7
FAKI	Fak Fak	4.11	90		Pn	20 49 49.7	+0.3
KMSI	Cibinong	5.40	310	P	Pn	20 50 08.1	+0.8
	1.9nm2μm97nm,1.0s						
LUWI	Luwuk	5.67	289	P	Pn	20 50 10.1	-0.9
	0.9nm2μm104nm,0.6s						
LUWI	Luwuk	5.67	289		Pn	20 50 09.6	-1.4
SAUI	Saumlaki	5.95	148	P	Pn	20 50 18.2	+3.5
	0.4nm138nm,0.8s						
RKPI	Ransiki, Papua	6.19	77	P	Pn	20 50 18.2	+0.1
	1.2nm92nm,0.7s						
APSI	Ampana	6.78	287	P	Pn	20 50 26.1	-0.1
	1.1nm3μm287nm,0.5s						
MRSI	Marisa	7.05	298	P	Pn	20 50 28.8	-1.0
	0.7nm737nm47nm,0.6s						
SOEI	Soe	7.82	209		Pn	20 50 41.0	+0.4
TTSI	Tana Toraja	8.31	269	P	Pn	20 50 48.5	+1.3
	24nm,0.8s						
BKSI	Bulukumba	8.35	253	P	Pn	20 50 50.5	+2.8
	556nm29nm,0.9s						
SPSI	Sidrap Palu	8.42	263	P	Pn	20 50 51.0	+2.3
	646nm24nm,0.6s						
KAPI	Kappang	8.63	256	P	Pn	20 50 53.8	+2.2
	2.5nm,0.3s,baz=72,slow=3.6,SNR=11						
KAPI				LR	LR	20 54 39.1	
	comp=Z,299nm,18.4s,baz=62,slow=40						
MPSI	Mapaga	8.84	291	P	Pn	20 50 56.3	+1.8
DAV	Davao City (W)	10.23	346	LR	LR	20 55 25.6	
	comp=Z,150nm,19.4s,baz=302,slow=38						

PLAI Plampang 11.87 240 P Pn 20 51 38.5 +2.6
38nm,0.9s
GENI Genyem 12.02 89 P Pn 20 51 41.0 +3.0
KNRA Kununurra 12.71 177 Pn 20 51 49.9 +2.5
FITZ Fitzroy Crossi 15.30 189 P P 20 52 27.5 +0.7
0.9nm,0.3s,baz=30,slow=11,SNR=10
FITZ LR LR 20 58 34.9
comp=Z,126nm,19.6s,baz=6.0,slow=38
FITZ Fitzroy Crossi 15.30 189 P P 20 52 27.7 +0.9
FITZ IAmb IAmb 20 52 36.3
comp=Z,33nm,1.8s
WB0 Warramunga Arr 17.84 160 P Pn 20 52 53.5 -1.2
WB0 IAmb IAmb 20 52 55.0
comp=Z,11nm,0.7s
WRAB Tennant Creek 17.98 161 P Pn 20 52 55.0 -1.3
WRAB IAmb IAmb 20 52 56.4
comp=Z,13nm,0.5s
WRA Warramunga Arr 17.99 161 P Pn 20 52 55.1 -1.3
comp=Z,1.7nm,0.3s,baz=341,slow=12,SNR=48
WRA S Sn 20 56 14.6 -1.5
comp=Z,0.2nm,0.3s,baz=340,slow=17,SNR=4.2
WRA Warramunga Arr 17.99 161 P Pn 20 52 55.0 -1.3
WB2 Warramunga Arr 17.99 161 P Pn 20 52 55.3 -1.1
WB2 IAmb IAmb 20 52 56.5
comp=Z,12nm,0.5s
WR0 Warramunga Arr 18.07 160 P Pn 20 52 56.1 -1.3
COEN Coen 18.47 127 P P 20 53 01.4 -0.6
COEN IAmb IAmb 20 53 16.1
comp=Z,14nm,1.0s
KPJI Karang Pucung 19.63 256 P Pn 20 53 15.8 -0.4
comp=Z,67nm,0.5s
CISI Cisompet, Garu 20.75 256 P P 20 53 25.8 -1.2
comp=Z,39nm,0.6s
CISI Cisompet, Garu 20.75 256 P P 20 53 24.7 -2.3
CISI IAmb IAmb 20 53 29.2
comp=Z,32nm,0.7s
AS31 Alice Springs 21.38 165 P P 20 53 32.7 -0.9
AS31 IAmb IAmb 20 53 34.7
comp=Z,8.9nm,0.6s
ASAR Alice Springs 21.38 165 P P 20 53 33.4 -0.3
comp=Z,28nm,0.7s,baz=345,slow=11,SNR=188
ASAR S S 20 57 26.3 -2.8
comp=Z,2.9nm,0.8s,baz=346,slow=21,SNR=11
ASAR Alice Springs 21.38 165 P P 20 53 32.4 -1.3
MDSI Maura Dua 23.96 266 P P 20 54 01.1 +0.9
BBOO Buckleboo 30.66 167 P P 20 54 59.1 -1.1
STKA Stephens Creek 31.48 158 P P 20 55 06.9 -0.5
comp=Z,1.2nm,0.4s,baz=359,slow=7.7,SNR=6.8
CMAR Chiang Mai Arr 35.73 308 P P 20 55 45.7 +1.0
comp=Z,0.3nm,0.5s,baz=136,slow=7.7,SNR=5.2
HHC Hu-ho-hao-te 46.10 343 eP P 20 57 08.5 -1.3
HHC Hu-ho-hao-te 46.10 343 eP P 20 57 10.6 +0.8
ODAN Odare 49.21 310 eP P 20 57 34.6 +0.3
comp=Z,5.3nm,0.6s
TAPN Taplejung 49.21 310 eP P 20 57 34.5 +0.1
RAMN Ramite 49.86 309 eP P 20 57 40.0 +0.7
comp=Z,13nm,0.7s
JIRN Jiri 50.53 310 eP P 20 57 44.8 +0.3
GUN Gumba 50.90 310 eP P 20 57 47.4 +0.2
KKN Kakani 51.30 309 eP P 20 57 49.7 -0.4
GKN Gorkha 51.90 309 eP P 20 57 54.6 +0.1
KOLN Koldanda 52.59 309 eP P 20 57 59.9 +0.2
comp=Z,12nm,0.7s
DANN Dangsing 52.74 309 eP P 20 58 01.0 +0.1
comp=Z,15nm,0.6s
KURBB Kurchatov Arra 68.07 328 P P 20 59 44.3 -0.5
comp=Z,1.3nm,0.4s,baz=132,slow=5.6,SNR=5.8
KURK Kurchatov 68.08 329 P P 20 59 44.4 -0.6
KURK Kurchatov 68.08 329 IAmb IAmb 20 59 53.9
comp=Z,45nm,1.6s
BVAR Borovoye Array 73.63 328 P P 21 00 18.5 -0.2
comp=Z,1.6nm,0.9s,baz=138,slow=9.0,SNR=5.6
TORD Torodi Ar. Bea 126.11 284 PKP PKPdf 21 07 48.3 -0.3
comp=Z,0.4nm,0.7s,baz=96,slow=3.7,SNR=3.1

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*DDA **12** 20:51:18.3, 37.26N×43.90E, h3km±1km, ML2.6*
*ISK **12** 20:51:18.1, 37.26N×43.89E, h1km, ML2.6/10*
*ISN **12** 20:51:18.0±0.8, 37.25N×43.93E, h8km±6km, ML2.6*
ISC 12 20:51:17.7±1.4, 37.27N±0.03×43.95E±0.04, h0km±11km, n25, σ1.00/37, Turkey

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CUKT Cukurca 0.28 265 PG Pg 20 51 23.6 +0.5
CUKT SG Sg 20 51 27.9 +1.2
CUKT Cukurca 0.28 265 i P Pg 20 51 23.5 +0.5
CUKT i S Sg 20 51 27.4 +0.7
CUKT IAML 20 51 29.0
comp=N,1μm,0.6s
BASK Baskale_VAN 0.78 3 i P Pg 20 51 33.6 +0.8
MSL Mosul 1.10 218 ePg Pg 20 51 38.0 -0.9
baz=38
MSL eSg Sb 20 51 54.0 -0.5
MSL AML AML 20 51 59.6
comp=E,331nm,0.4s
MSL AML AML 20 51 59.7
comp=N,182nm,0.5s
SIRT Sirnak 1.23 281 PN Pb 20 51 41.4 -0.5
SIRT SN Sn 20 51 58.8 -0.8
SIRN Sırnak 1.25 281 i P Pg 20 51 41.1 -0.6
SIRN i S Sn 20 51 59.2 -0.8
SIRN IAML 20 52 02.0
comp=N,172nm,0.6s
SIRN IAML 20 52 03.0
comp=E,136nm,0.3s
GEVA Gevas 1.26 326 i P Pb 20 51 42.5 +0.1
GEVA i S Sb 20 51 59.5 +0.3
AKDM Akdamar-Van 1.31 324 PN Pn 20 51 43.8 +0.4
AKDM SN Sn 20 52 02.4 +0.8
TVAN Van 1.33 341 i P Pg 20 51 43.2 0.0
TVAN i S Sg 20 51 57.5 -2.9
VANB Van 1.40 342 PN Pn 20 51 44.1 -0.5
SRTM Siirt_Merkez 1.77 295 i P Pb 20 51 50.7 -0.4
SRTM i S Sg 20 52 15.8 +1.3
SRTM IAML 20 52 22.0
comp=N,78nm,0.5s
SRTM IAML 20 52 24.0
comp=E,35nm,0.4s
BLIS Bitlis-Merkez 1.85 309 i P Pg 20 51 52.7 -0.5
CLDR Caldiran 1.87 359 PN Pb 20 51 52.5 -0.4
CLDR Caldiran 1.87 359 i P Pg 20 51 54.0 +0.4
IKRK Kirkuk 1.89 170 ePn Pn 20 51 52.0 +0.7
IKRK eSn Sb 20 52 17.0 -0.3
IKRK AML AML 20 52 32.5
comp=E,52nm,0.6s
IKRK AML AML 20 52 34.8
comp=N,41nm,0.4s
GURO Guroymak-BITLI 1.98 311 PN Pb 20 51 53.6 -1.2
MLAZ Malazgirt-MUS 2.17 330 PN Pn 20 51 56.4 +1.1
SVAN Silvan-Diyarba 2.35 293 PN Pn 20 51 58.7 +1.0
SVAN Silvan-Diyarba 2.35 293 i P Pb 20 52 00.4 -0.7
SVAN i S Sb 20 52 29.7 -1.0
MUSM Mu-Merkez 2.41 308 i P Pb 20 52 01.4 -0.7
MUSM i S Sb 20 52 31.4 -1.1
AGRB Hanur-Agry 2.42 342 PN Pn 20 52 00.2 +1.5
MAZI Mazidag 2.80 275 PN Pn 20 52 04.9 +1.0
HANI Diyarbakir_Han 3.04 293 i P Pb 20 52 12.4 -0.2
BNGB Bingl 3.10 305 PN Pn 20 52 09.5 +1.5
SVRC Sivrice-ELAZID 3.84 288 PN Pn 20 52 19.8 +1.6

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*ATH **12** 20:51:22.7, 38.17N×20.40E, h17km, ML3.1/6, Error ellipse: s-maj=1.7km s-min=0.9km az=261.0*
*THE **12** 20:51:23.0, 38.17N×20.40E, h15km, ML3.1/12, Error ellipse: s-maj=0.9km s-min=0.4km az=262.0*
*BEO **12** 20:51:24.6±1.0, 38.17N×19.84E, h15km, ML3.3/7*
ISC 12 20:51:22.8±0.8, 38.16N±0.02×20.39E±0.04, h16km±4km, n66, σ0.83/98, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.02 336 P Pg 20 51 25.6 -0.1
CHV1 S Sg 20 51 27.7 +0.1
81μm,0.3s
LXRA Lixouri, Kepha 0.05 43 P Pg 20 51 25.9 0.0
LXRA S Sg 20 51 27.5 -0.2
LXR1 Lixouri, Cepha 0.05 43 P Pg 20 51 25.8 0.0
LXR1 S Sg 20 51 28.1 +0.3
KEF3 Kipouria, Keph 0.05 318 P Pg 20 51 25.8 0.0
ARGA Argostoli. Kep 0.07 78 P Pg 20 51 25.8 -0.2
ARGA S Sg 20 51 27.9 -0.1
KEF2 Argostoli. Kep 0.07 88 P Pg 20 51 25.9 -0.1
KEF2 S Sg 20 51 27.8 -0.3
ARG2 Argostoli 0.08 78 P Pg 20 51 25.9 -0.1
ARG2 S Sg 20 51 27.9 -0.2
44μm,0.3s
KEF1 Kardakata, Kep 0.13 28 P Pg 20 51 26.5 -0.1
KEF1 S Sg 20 51 29.2 +0.1
VLS Valsamata 0.15 85 P Pg 20 51 26.7 -0.2
VLS S Sg 20 51 29.6 -0.1
49μm,0.1s
VLS Valsamata 0.15 85 P Pg 20 51 26.8 -0.2
VLS S Sg 20 51 29.6 -0.1
VLS AML AML 20 51 29.7
VLS AML AML 20 51 30.0
comp=E,84044μm,0.1s
VSK1 VASILIKIADES 0.28 29 P Pg 20 51 28.7 -0.2
VSK1 S Sg 20 51 33.0 -0.1
comp=E,6μm,0.2s
KONA Konidatara, Ke 0.30 28 P Pg 20 51 28.8 -0.4
KONA S Sg 20 51 33.9 +0.3
KONA AML AML 20 51 38.3
comp=E,8958μm,0.7s
KONA AML AML 20 51 40.7
comp=N,8778μm,0.4s
FSK Fiskardo 0.32 24 P Pg 20 51 29.3 -0.3
FSK S Sg 20 51 34.2 -0.1
comp=N,5μm,0.2s
FSK Fiskardo 0.32 24 P Pg 20 51 29.4 -0.3
FSK S Sg 20 51 34.4 +0.1
FSK AML AML 20 51 34.8
comp=N,6114μm,0.2s
FSK AML AML 20 51 34.9
comp=E,11900μm,0.2s
VLMS Volimes, Zakyn 0.36 143 P Pg 20 51 30.1 -0.1
VLMS S Sg 20 51 35.8 +0.6
VLMS AML AML 20 51 36.4
comp=E,12982μm,0.2s
VLMS AML AML 20 51 36.6
comp=N,16395μm,0.2s
EVGI Lefkada island 0.50 24 P Pg 20 51 32.5 -0.3
EVGI S Sg 20 51 39.0 -0.6
MGNA Meganis 0.58 32 P Pg 20 51 33.8 -0.5
MGNA S Sg 20 51 41.7 -0.5
MGNA AML AML 20 51 45.5
comp=N,1560μm,0.3s
MGNA AML AML 20 51 46.5
comp=E,2245μm,0.5s
KRI1 kERI 0.60 146 P Pg 20 51 34.0 -0.7
KRI1 S Sb 20 51 43.6 +0.4
comp=E,3μm,0.2s
LKD2 Lefkada island 0.66 18 P Pg 20 51 35.0 -0.8
LKD2 S Sb 20 51 45.7 +0.8
comp=E,648nm,0.2s
LKD2 Lefkada island 0.66 18 P Pg 20 51 35.0 -0.8
TSLK Tsoukalades, L 0.69 17 P Pg 20 51 36.4 0.0
TSLK S Sb 20 51 46.4 +0.6
comp=E,1μm,0.3s
TSLK Tsoukalades, L 0.69 17 P Pg 20 51 36.4 0.0
TSLK S Sb 20 51 45.9 +0.1
TSLK AML AML 20 51 52.3
comp=E,2767μm,0.3s
TSLK AML AML 20 51 52.7
comp=N,2381μm,0.4s
PDO Prodromos 0.76 55 P Pg 20 51 37.0 -0.6
RLS Riolos of Patr 0.85 97 P Pb 20 51 38.9 -0.3
RLS S Sn 20 51 51.8 -0.5
comp=N,548nm,0.5s
RLS Riolos of Patr 0.85 97 P Pb 20 51 38.8 -0.5
PVO Paravola 1.00 63 P Pb 20 51 41.7 -0.1
DRO Drossia 1.06 101 P Pb 20 51 42.1 -0.7
DRO S Sn 20 51 58.3 +0.8
comp=N,745nm,0.4s
DRO Drossia 1.06 101 P Pb 20 51 42.4 -0.4
AMT Artemida-Makis 1.22 121 P Pn 20 51 45.4 +0.2
AMT S Sn 20 52 01.7 +0.4
comp=N,645nm,0.6s
AMT Artemida-Makis 1.22 121 P Pg 20 51 46.4 +0.1
LAKA Lakka 1.25 86 P Pg 20 51 47.0 +0.1
ANX Ano Chora 1.27 70 P Pn 20 51 45.8 -0.3
ANX Ano Chora 1.27 70 P Pg 20 51 47.4 -0.1
SERG Sergoula 1.33 79 P Pn 20 51 45.6 -1.2
SERG S Sn 20 52 04.0 -0.2
comp=N,402nm,0.5s
SERG Sergoula 1.33 79 P Pg 20 51 48.5 0.0
TRIZ Trizonia 1.34 81 P Pn 20 51 47.0 +0.2
TRIZ Trizonia 1.34 81 P Pg 20 51 46.8 0.0
EVR Evrytania 1.34 55 P Pb 20 51 47.9 +0.2
ALIK Aliki, Aigiali 1.36 85 P Pn 20 51 46.5 -0.6
IGT Igoumenitsa 1.37 358 ePg Pg 20 51 50.4 +1.2
IGT eSg Sg 20 52 09.0 +1.9
IGT Igoumenitsa 1.37 358 P Pb 20 51 48.1 +0.1
KLV Kalavryta, Ach 1.39 94 P Pb 20 51 48.5 0.0
KALE Kalithea 1.39 80 P Pn 20 51 47.0 -0.7
KALE Kalithea 1.39 80 P Pg 20 51 49.3 -0.4
JAN Janina 1.53 13 P Pg 20 51 52.4 +0.1
ITM Ithomi 1.56 128 P Pb 20 51 51.1 -0.3
KEK Kerkira 1.62 344 P Pn 20 51 51.5 +0.8
KASA Kassiopi 1.62 347 P Pb 20 51 51.8 -0.5
PYL PYLOS 1.66 139 P Pb 20 51 52.7 -0.3
AGG Agios Georgios 1.74 60 P Pb 20 51 55.4 +1.0
AXAR Agios Charalam 1.88 71 P Pb 20 51 56.2 -0.6
THL Klokotos Trika 1.89 42 P Pb 20 51 57.1 +0.2
KPRO Kipourio 1.94 23 P Pb 20 51 58.0 +0.1
PROD Prodromos 1.98 86 P Pn 20 51 56.8 +1.1
LTK Loutraki 2.04 93 P Pn 20 51 58.2 +1.7
TIR Tirane 3.21 353 ePn Pn 20 52 14.3 +1.8
TIR eSn Sn 20 52 51.7 +1.3
PDG Podgorica 4.35 349 ePn Pn 20 52 28.9 +0.7
PDG eSn Sn 20 53 17.2 -1.4
TREB Trebinje 4.81 342 ePn Pn 20 52 33.9 -0.6
SJES Sjenica 5.10 357 ePn Pn 20 52 40.5 +1.8
SJES eSn Sn 20 53 37.0 -0.3
IVAS Ivanjica 5.41 358 eSn Sn 20 53 44.5 -0.3
DIVS Divibare 5.94 357 ePn Pn 20 52 51.1 +1.0
DIVS eSn Sn 20 53 56.1 -1.7
HAPS Han Pijesak,Bl 6.02 350 ePn Pn 20 52 50.9 -0.3
HAPS eSn Sn 20 53 57.6 -2.2
SOKA Soboth 9.38 337 i Pn Pn 20 53 37.0 -0.4
comp=N,1.3nm,0.3s
SOKA i Sn Sn 20 55 18.2 -4.3
comp=N,0.9nm,0.4s
OBKA Obir 9.39 334 i Pn Pn 20 53 38.2 +0.7
comp=N,1.1nm,0.2s
OBKA i Sn Sn 20 55 21.5 -1.3
comp=N,2.3nm,0.4s
KBA Koelnbreinsper 10.31 332 i Pn Pn 20 53 50.8 +0.6
comp=N,1.0nm,0.4s
MOA Molln 10.67 337 i Pn Pn 20 53 55.9 +1.0
comp=N,2.1nm,0.4s

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*IDC **12** 20:51:24.7±0.7, 35.93N×82.42E, h0km, mb3.8/16, mb1 4.0/21, mb1mx3.8/60, mbtmp3.9/21, ML3.8/5, MS3.9/14, Ms1 3.9/14, ms1mx3.6/40, Error ellipse: s-maj=19.8km s-min=13.1km az=44.0*
*BJI **12** 20:51:25.4±0.0, 36.07N×82.41E, h7km, mB4.4/9, mb4.0/16, ML4.5/7, Ms4.1/16, Ms7 4.1/13*
*MOS **12** 20:51:26.3±1.1, 36.09N×82.40E, h18km, mb4.4/6, Error ellipse: s-maj=9.3km s-min=4.9km az=115.4*
*NEIC **12** 20:51:27.9±1.8, 36.02N±0.09×82.4E±0.1, h16km±4km, mb4.2/16, Error ellipse: s-maj=13.3km s-min=11.3km az=154.0*
*NNC **12** 20:51:31.2±3.5, 36.43N×82.53E, h6km±18km, mb4.5, mpv4.4, Error ellipse: s-maj=30.9km s-min=23.2km az=78.0*
ISC 12 20:51:26.7±0.5, 36.08N±0.05×82.57E±0.05, h10km, n143, σ1.83/138, mb3.9/22, MS3.9/10, 18C-6D, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JOSI Joshimath 6.06 205 eP Pn 20 52 56.6 0.0
KSH Kashi 6.24 305 Pn Pn 20 53 00.0 +1.0
KSH Sn Sn 20 54 10.4 0.0
KSH smax smax
comp=N,850nm,0.8s
KSH smax smax
comp=E,870nm,0.8s
KSH LR LR
comp=N,4μm,6.9s
KSH LR LR
comp=E,6μm,8.5s
KSH LR LR
comp=Z,2μm,4.5s
DHRM DHARAMSHALA 6.45 235 eP Pn 20 53 01.9 0.0
SMLA Simla 6.69 224 ex Pn 20 53 02.3 -2.6
PRZ Przheval'sk 7.16 334 Pn 20 53 12.1 +0.5
PRZ Przheval'sk 7.16 334 P Pn 20 53 12.1 +0.5
KDJ Kajisay 7.34 327 Pn 20 53 14.5 +0.4
KDJ Kajisay 7.34 327 P Pn 20 53 14.5 +0.4
NRN Naryn 7.40 318 Pn 20 53 16.6 +1.5
NRN Naryn 7.40 318 P Pn 20 53 16.6 +1.5
PDGK Podgornoye 7.61 343 ⇓Pn Pn 20 53 18.7 +0.9
29nm,0.9s
PDGK ⇓Sn Sn 20 54 44.1 -0.1
204nm,0.9s
PDGK Podgornoye 7.61 343 P Pn 20 53 18.7 +0.9
PDGK S Sn 20 54 44.7 +0.6
DANN Dangsing 7.78 172 eP Pn 20 53 18.3 -1.9
27nm,0.5s
CHCP Chirah Chowk 8.02 255 P Pn 20 53 18.8 -4.4
CHCP S Sn 20 54 58.0 +4.0
NIL Nilore 8.03 255 Pn 20 53 23.1 -0.3
NIL Nilore 8.03 255 P Pn 20 53 23.1 -0.3
GKN Gorkha 8.25 167 eP Pn 20 53 26.6 +0.1
17nm,0.3s
MDOK Medeo 8.25 331 ⇑Pn Pn 20 53 27.5 +1.0
16nm,0.9s
MDOK ⇑Lg Lg 20 55 38.9
227nm,1.3s
MDOK Medeo 8.25 331 P Pn 20 53 27.5 +1.0
KZA Kyzart 8.26 319 P Pn 20 53 28.7 +1.9
SNR=9.8
KNDC Almaty 8.33 331 ⇓Pg Pb 20 53 58.7 +7.7
27nm,0.7s
KNDC ⇓Lg Lg 20 55 49.8
301nm,1.0s
KOLN Koldanda 8.34 174 eP Pn 20 53 25.6 -2.2
22nm,0.5s
KKN Kakani 8.58 164 eP Pn 20 53 30.5 -0.7
17nm,0.7s
GUN Gumba 8.62 160 eP Pn 20 53 31.3 -0.5
50nm,0.8s
WMQ Urumqi 8.67 25 eP Pn 20 53 33.7 +1.5
WMQ S Sn 20 55 07.4 -2.7
WMQ smax smax
comp=N,30nm,0.9s
WMQ smax smax
comp=E,32nm,1.7s
WMQ Urumqi 8.67 25 Pn 20 53 34.0 +1.8
WMQ Urumqi 8.67 25 P Pn 20 53 34.0 +1.8
DMN Daman 8.72 165 eP Pn 20 53 32.6 -0.5
89nm,1.4s
UCH Uchtor 8.76 317 P Pn 20 53 34.7 +1.0
SNR=10
PKIN Phulchoki 8.82 163 eP Pn 20 53 33.4 -1.0
19nm,0.4s
KBK Karagaybulak 8.82 320 P Pn 20 53 37.1 +2.7
SNR=10
PKI Pulchoki 8.82 163 eP Pn 20 53 33.5 -1.1
21nm,0.5s
JIRN Jiri 8.95 159 eP Pn 20 53 36.1 -0.2
72nm,0.7s
CEP Cherat 9.03 259 P Pn 20 53 38.8 +1.5
AAK Ala-Archa 9.05 319 Pn Pn 20 53 38.6 +1.2
0.5nm,0.3s,baz=132,slow=5.7,SNR=16
AAK Pg 20 54 05.9
1.2nm,0.3s,baz=138,slow=19,SNR=5.8
AAK Lg Lg 20 56 07.7
1.9nm,0.3s,baz=259,slow=18,SNR=4.4
AAK LR LR 20 57 22.1
comp=Z,228nm,18.1s,baz=130,slow=39
AAK Ala-Archa 9.05 319 P Pn 20 53 42.7 +5.2
SNR=7.6
AAK Ala-Archa 9.05 319 ⇑Pn Pn 20 53 37.9 +0.5
10nm,1.1s
AAK ⇑Pg 20 54 13.2
19nm,1.0s
AAK ⇑Lg Lg 20 56 06.9
AAK Ala-Archa 9.05 319 Pn 20 53 38.1 +0.7
FRU1 Bishkek 9.10 320 Pn 20 53 38.9 +0.9
FRU1 Bishkek 9.10 320 P Pn 20 53 38.9 +0.9
ARSB Arslanbob 9.13 308 Pn 20 53 38.9 +0.3
ARSB Arslanbob 9.13 308 P Pn 20 53 38.9 +0.3
AML Almayashu 9.16 314 P Pn 20 53 39.4 +0.2
SNR=9.6
EKS2 Erkin-Say 9.45 317 P Pn 20 53 45.2 +2.2
SNR=11
THW Thamme Wali 9.52 253 P Pn 20 53 42.2 -1.7
RAMN Ramite 9.73 158 eP Pn 20 53 44.7 -2.3
20nm,0.5s
TAPN Taplejung 9.74 152 eP Pn 20 53 46.9 -0.3
BTK Batken 10.07 297 Pn 20 53 49.8 -1.6
BTK Batken 10.07 297 P Pn 20 53 49.8 -1.6
ODAN Odare 10.07 155 eP Pn 20 53 48.8 -2.8
90nm,1.3s
MK31 Makanchi Array 10.70 359 Pn Pn 20 54 00.3 +0.3
2.5nm,0.3s,baz=182,slow=12,SNR=450
MK31 ⇑Sn Sn 20 55 55.1 -4.7
10nm,0.7s,baz=187,slow=25,SNR=5.9
MK31 Makanchi Array 10.70 359 Pn 20 53 60.0 0.0
MK31 Makanchi Array 10.70 359 P Pn 20 54 00.0 0.0
MKAR Makanchi Array 10.70 359 Pn Pn 20 54 00.8 +0.8
4.3nm,0.3s,baz=195,slow=13,SNR=256
MKAR Sn Sn 20 55 54.5 -5.4
1.1nm,0.3s,baz=186,slow=24,SNR=3.7
MKAR Lg Lg 20 57 08.0
baz=181,slow=23,SNR=3.0
MKAR LR LR 20 59 01.4
comp=Z,368nm,18.7s,baz=180,slow=42
MKAR Makanchi Array 10.70 359 Pn 20 53 59.5 -0.5
MAKZ Makanchi 10.72 358 ⇓Pn Pn 20 54 00.5 +0.3
21nm,0.5s
MAKZ ⇓Sn Sn 20 55 57.6 -2.7
19nm,0.7s
MAKZ Makanchi 10.72 358 Pn 20 54 00.6 +0.3
MAKZ Makanchi 10.72 358 P Pn 20 54 00.6 +0.3
KBL Kabul 11.16 266 Pn 20 54 05.2 -1.2
KBL Kabul 11.16 266 P Pn 20 54 05.2 -1.2
KK31 Karatay Array 11.64 311 Pn Pn 20 54 13.8 +1.0
0.4nm,0.3s,baz=105,slow=16,SNR=11
KK31 Pg 20 54 55.9
2.5nm,0.5s,baz=129,slow=12,SNR=3.6
KK31 ⇑Lg Lg 20 57 27.6
36nm,1.1s,baz=115,slow=25,SNR=4.7
KK31 Karatay Array 11.64 311 P Pn 20 54 13.8 +1.0
KKAR Karatay Array 11.64 311 Pn 20 54 11.6 -1.2
KKAR Karatay Array 11.64 311 P Pn 20 54 11.6 -1.2
GTA Gaotai 14.05 71 eP Pn 20 54 55.1 +1.4
GTA pP Pn 20 54 59.5 +14
GTA sP 20 55 02.4
KURBB Kurchatov Arra 14.82 350 Pn Pn 20 54 53.9 -2.3
0.1nm,0.3s,baz=172,slow=12,SNR=10
KURBB Lg Lg 20 59 21.1
0.1nm,0.3s,baz=176,slow=28,SNR=3.0
KURK Kurchatov 14.90 350 Pn 20 54 55.5 -1.8
KURK Kurchatov 14.90 350 P Pn 20 54 55.5 -1.8
HRA Herat 16.69 270 Pn 20 55 18.1 -2.8
LZH Lanzhou 17.20 84 eP Pn 20 55 30.1 +2.9
LZH pP pP 20 55 35.1 +2.1
LZH sP sP 20 55 38.0 +3.1
LZH pmax pmax
comp=Z,17nm,1.0s
ZAA0 Zalesovo Array 17.93 4 Pn 20 55 33.5 -2.5
ZAA0 IAmb IAmb 20 55 41.8
comp=Z,13nm,0.9s
ZALV Zalesovo Beam 17.93 4 P Pn 20 55 34.2 -1.8
comp=Z,0.5nm,0.3s,baz=191,slow=12,SNR=30
ZALV LR LR 21 03 42.1
comp=Z,204nm,18.6s,baz=216,slow=41
ZALV Zalesovo Beam 17.93 4 Pn 20 55 33.0 -3.0
ZALV Zalesovo Beam 17.93 4 P Pn 20 55 33.0 -3.0
BVAR Borovoye Array 18.98 337 P P 20 55 49.4 +1.2
comp=Z,0.6nm,0.3s,baz=145,slow=9.9,SNR=39
BRVK Borovoye 19.05 337 P P 20 55 49.6 +0.9
BRVK IAmb IAmb 20 55 58.4
comp=Z,16nm,0.8s
BRVK Borovoye 19.05 337 P P 20 55 49.7 +0.9
BRVK pmax pmax
comp=Z,16nm,0.8s
GEYT Alibeck 19.60 283 P P 20 55 53.9 -1.2
comp=Z,0.2nm,0.3s,baz=99,slow=9.3,SNR=17
GEYT LR LR 21 04 21.5
comp=Z,207nm,21.1s,baz=15,slow=40
GEYT Alibeck 19.60 283 P P 20 55 52.3 -2.8
GYA0B ALIBECK ARRAY 19.60 283 P P 20 55 54.4 -0.7
GYA0B IAmb IAmb 20 56 11.8
comp=Z,11nm,0.9s

MOY Mondy 20.38 34 eP Pn 20 56 10.6 +5.0
MOY pmax pmax
comp=Z,44nm,2.8s
ZAK Zakamensk 20.69 40 eP Pn 20 56 10.7 +1.5
ZAK pmax pmax
comp=Z,6.0nm,1.2s
ABKAR Akbulak array 21.11 316 P P 20 56 10.2 -1.1
SONM Songino Array 21.16 49 P P 20 56 14.5 +2.4
comp=Z,4.6nm,0.7s,baz=242,slow=12,SNR=30
SONM LR LR 21 05 04.2
comp=Z,457nm,19.2s,baz=226,slow=38
SONM Songino Array 21.16 49 P P 20 56 14.2 +2.1
ULN Ulaanbaatar 21.58 49 P P 20 56 18.8 +2.2
ULN Ulaanbaatar 21.58 49 P P 20 56 18.8 +2.2
ULN pmax pmax
comp=Z,18nm,0.9s
TLY Talaya 21.65 37 LR LR 21 05 41.0
comp=Z,290nm,20.5s,baz=230,slow=39
IRK Irkutsk 22.30 37 eP P 20 56 29.4 +5.3
IRK pmax pmax
comp=Z,41nm,2.1s
CHTO Chiang Mai 22.46 136 P P 20 56 28.1 +2.0
CHTO Chiang Mai 22.46 136 P P 20 56 28.1 +2.0
CHTO pmax pmax
comp=Z,4.0nm,1.1s
GYA Guiyang 22.67 108 eP P 20 56 37.8 +9.4
CMAR Chiang Mai Arr 22.75 136 P P 20 56 29.2 +0.1
comp=Z,1.6nm,0.8s,baz=312,slow=10,SNR=12
AKTO Aktyubinsk 22.78 317 P P 20 56 29.3 +0.1
comp=Z,2.1nm,0.6s,baz=90,slow=1.0,SNR=4.0
AKTO LR LR 21 04 53.5
comp=Z,175nm,20.3s,baz=132,slow=36
HHC Hu-ho-hao-te 23.14 69 eP P 20 56 35.2 +2.0
HHC pmax pmax
comp=Z,3.0nm,1.0s
HHC pmax pmax
comp=Z,17nm,5.1s
WSAR Wadi Sarin 24.34 245 LR LR 21 08 34.2
comp=Z,182nm,19.2s,baz=56,slow=43
SVE Sverdlovsk 25.45 331 eP P 20 56 58.0 +3.5
ARU Arti 26.02 329 P P 20 57 00.9 +1.2
comp=Z,0.5nm,0.5s,baz=174,slow=16,SNR=3.5
ARU Arti 26.02 329 IAmb IAmb 20 57 41.3
comp=Z,4.3nm,0.9s
WHN Wuhan 27.06 93 P P 20 57 04.3 -5.0
WHN S S 21 01 41.9 -5.2
PALK Pallekele 28.73 184 LR LR 21 09 19.9
comp=Z,154nm,18.6s,baz=353,slow=38
RAYN Ar Rayn 34.31 259 P P 20 58 13.8 +0.4
RAYN IAmb IAmb 20 58 14.8
comp=Z,6.5nm,1.4s
RAYN Ar Rayn 34.31 259 P P 20 58 13.8 +0.4
RAYN pmax pmax
comp=Z,7.0nm,1.4s
KSRS Korea Array 36.09 74 LR LR 21 14 54.1
comp=Z,185nm,18.1s,baz=292,slow=39
KLR Kul'dur 37.83 54 P P 20 58 44.8 +1.6
comp=Z,1.6nm,0.7s,baz=276,slow=8.1,SNR=5.3
BR131 Keskin Array S 38.40 291 P P 20 58 48.1 -0.2
BR131 IAmb IAmb 20 58 56.1
comp=Z,2.9nm,0.9s
BR131 Keskin Array S 38.40 291 P P 20 58 48.1 -0.2
BR131 pmax pmax
comp=Z,3.0nm,1.0s
BRTR Keskin Array B 38.40 291 P P 20 58 47.9 -0.5
comp=Z,1.6nm,0.8s,baz=99,slow=7.6,SNR=8.7
BRTR Keskin Array B 38.40 291 P P 20 58 47.6 -0.7
AKASG Malin Array Be 40.53 308 P P 20 59 04.2 -1.6
comp=Z,0.4nm,0.5s,baz=78,slow=7.0,SNR=5.5
TGY Tagaytay City 40.70 113 LR LR 21 16 53.8
comp=Z,193nm,20.4s,baz=146,slow=38
PLOR Plostina 42.55 301 ⇑P P 20 59 23.6 +1.1
PLOR Plostina 42.55 301 ⇑P P 20 59 23.6 +1.1
TIXI Tiksi 42.82 20 P P 20 59 25.4 +1.1
TIXI IAmb IAmb 20 59 31.8
comp=Z,17nm,1.8s
TIXI Tiksi 42.82 20 P P 20 59 25.4 +1.1
TIXI pmax pmax
comp=Z,17nm,1.8s
MLR Muntele Rosu 43.09 301 ⇑P P 20 59 26.9 -0.1
MLR Muntele Rosu 43.09 301 ⇑P P 20 59 26.0 -1.0
MLR Muntele Rosu 43.09 301 ⇑P P 20 59 26.9 -0.1
FINES FINESS Array B 43.19 324 P P 20 59 26.6 -0.7
comp=Z,1.4nm,0.9s,baz=126,slow=9.7,SNR=3.5
BURAR Bucovina Array 43.32 304 ⇑P P 20 59 28.5 -0.3
BURAR Bucovina Array 43.32 304 ⇑P P 20 59 28.5 -0.3
VOIR 43.72 301 ⇑P P 20 59 29.7 -2.3
VOIR 43.72 301 ⇑P P 20 59 29.7 -2.3
DRGR 45.12 303 ⇑P P 20 59 43.5 +0.3
DRGR 45.12 303 ⇑P P 20 59 43.5 +0.3
ARCES ARCESS Array B 45.26 335 P P 20 59 44.4 +0.5
comp=Z,2.1nm,0.8s,baz=90,slow=7.3,SNR=5.8
ARCES LR LR 21 21 29.5
comp=Z,200nm,20.6s,baz=176,slow=40
VYHS Vyhne 47.44 306 eP P 21 00 01.1 -0.2
VYHS Vyhne 47.44 306 eP P 21 00 01.1 -0.2
NB2 NORSAR Subarra 50.33 323 P P 21 00 22.7 -0.7
comp=Z,7.9nm,1.2s,baz=86,slow=7.9
NOA NORSAR Array B 50.33 323 P P 21 00 23.2 -0.2
comp=Z,3.2nm,1.0s,baz=86,slow=7.6,SNR=4.5
CLL Collm 50.65 310 epP P 21 00 30.0 +4.1
CLL Collm 50.65 310 eP P 21 00 30.0 +4.1
GERES GERESS Array B 50.72 307 P P 21 00 26.4 -0.1
comp=Z,1.7nm,0.8s,baz=73,slow=4.5,SNR=9.1
GERES GERESS Array B 50.72 307 P P 21 00 25.8 -0.7
PETK Petropavlovsk- 53.62 46 LR LR 21 24 56.4
comp=Z,96nm,18.1s,baz=243,slow=37
ILAR Eielson Array 72.30 20 P P 21 02 52.8 +0.9
comp=Z,0.4nm,0.7s,baz=317,slow=5.1,SNR=6.6
WRA Warramunga Arr 74.17 130 P P 21 03 02.6 -1.0
comp=Z,0.7nm,0.6s,baz=322,slow=5.9,SNR=7.3
WRA Warramunga Arr 74.17 130 IAmb IAmb 21 03 10.5
comp=Z,0.2nm,0.9s
TORD Torodi Ar. Bea 75.06 275 P P 21 03 08.4 -0.6
comp=Z,0.9nm,0.8s,baz=41,slow=5.2,SNR=4.2
TORD Torodi Ar. Bea 75.06 275 P P 21 03 08.9 -0.1
KRVT Keravat (AS076 76.13 106 LR LR 21 34 17.4
comp=Z,532nm,21.6s,baz=120,slow=34
ASAR Alice Springs 76.71 133 P P 21 03 17.0 -1.1
comp=Z,0.7nm,0.9s,baz=315,slow=6.2,SNR=6.0
YKA Yellowknife Ar 80.79 8 P P 21 03 40.1 +0.1
comp=Z,0.5nm,0.6s,baz=338,slow=5.3,SNR=6.5

IDC 12 20:58:01.0±2.0, 58.43S×16.38W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/22, mbtmp3.8/3, MS3.8/2, Ms1 3.7/2, ms1mx3.4/18, Error ellipse: s-maj=85.6km s-min=34.7km az=173.0
ISC 12 20:58:02.0±1.0, 58.5S±0.1×16.3W±0.2, h10km, n10, σ1.05/9, mb3.7/3, East of South Sandwich Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VNA1 Neumayer--Stat 12.66 168 P Pn 21 01 02.1 +0.4
VNA2 Neumayer--Watz 13.02 167 P Pn 21 01 06.7 0.0
baz=342,slow=15
VNA3 Neumayer Olymp 13.09 171 P Pn 21 01 08.3 +0.6
SNAA Sanae 14.32 163 P Pn 21 01 23.8 -0.8
MAW Mawson 34.52 138 LR LR 21 17 29.5
comp=Z,119nm,18.9s,baz=242,slow=34
PLCA Paso Flores 38.17 273 P P 21 05 20.9 -0.5
0.6nm,0.4s,baz=146,slow=7.3,SNR=5.1
PLCA LR LR 21 21 30.2
comp=Z,126nm,18.4s,baz=138,slow=37
LPAZ La Paz 56.72 295 P P 21 07 46.1 -0.4
0.8nm,0.6s,baz=161,slow=7.5,SNR=3.0
TORD Torodi Ar. Bea 72.89 18 P P 21 09 31.1 +0.1
0.4nm,0.6s,baz=192,slow=6.7,SNR=3.5
SONM Songino Array 145.07 82 PKPbc PKPbc 21 17 37.1 -1.0
0.7nm,0.9s,baz=222,slow=1.9,SNR=6.3
INK Inuvik 151.57 316 PKPbc PKiKP 21 17 57.0 +2.0
0.8nm,0.5s,baz=336,slow=10,SNR=4.5

NEIC 12 21:04:04.9±2.2, 43.82N±0.04×105.28W±0.03, h0km±1km, ML3.4/67, Error ellipse: s-maj=7.1km s-min=3.8km az=16.0
IDC 12 21:04:05.1±1.8, 43.84N×105.53W, h0km, mb3.9/4, mb1 3.8/9, mb1mx3.5/44, mbtmp3.6/9, ML3.2/5, Error ellipse: s-maj=54.8km s-min=6.8km az=147.0
ISC 12 21:04:04.3±0.6, 43.80N±0.05×105.24W±0.04, h0km, n47, σ1.70/52, mb3.9/4, Wyoming

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RSSD Black Hills 0.92 69 Pb 21 04 23.6 +0.2
K22A Casper 1.48 220 Pn 21 04 31.3 -1.1
K22A Sg 21 04 52.4 +0.4
K22A IAML 21 04 58.3
comp=N,481nm,0.6s
K22A IAML 21 05 03.8
comp=E,325nm,0.3s
PHWY Pilot Hill 2.50 184 Pn 21 04 46.9 +0.3
RWWY Rawlins 2.56 215 Pn 21 04 48.3 +1.0
RWWY IAML 21 05 28.2
comp=E,172nm,0.8s
N23A Red Feather La 2.95 190 Pn 21 04 54.0 +1.3
N23A IAML 21 05 37.7
comp=N,108nm,0.7s
N23A IAML 21 05 38.6
comp=E,111nm,0.7s
LAO LASA Array 2.97 347 Pn 21 04 52.8 -0.1
RLMT Red Lodge 3.17 296 Pn 21 04 55.2 -0.5
RLMT IAML 21 05 53.1
comp=E,117nm,0.8s
RLMT IAML 21 05 53.3
comp=E,81nm,0.9s
PD31 Pinedale Array 3.32 253 Pn 21 04 58.1 +0.3
PDAR Pinedale Array 3.32 253 Pn Pn 21 04 58.6 +0.8
comp=E,2.9nm,0.3s,baz=75,slow=16,SNR=37
PDAR Pg Pb 21 05 04.7 +0.4
comp=E,7.6nm,0.3s,baz=67,slow=21,SNR=37
PDAR Lg Lg 21 05 43.5
comp=E,9.2nm,0.3s,baz=77,slow=26,SNR=16
PDAR Pinedale Array 3.32 253 Pn 21 04 58.5 +0.7
YNE Yellowstone No 3.63 291 Pn 21 05 02.5 +0.5
YMP Mirror Lake Pl 3.66 287 Pn Pn 21 05 01.7 -0.7
OGNE Ogallala 3.71 139 Pn 21 05 05.1 +2.1
GCMT Greycliff 3.73 304 Pn 21 05 03.6 +0.3
LKWY Lake 3.79 283 Pn 21 05 05.1 +0.8
LKWY Sn 21 05 44.8 -4.9
LKWY IAML 21 06 14.8
comp=E,39nm,1.2s
LKWY IAML 21 06 30.3
comp=E,47nm,1.2s
H17A Grant Village 3.89 281 Pn 21 05 08.1 +2.4
YUF Upper Falls 3.90 285 Pn 21 05 08.7 +2.9
FLWY Flagg Ranch 3.96 276 Pn 21 05 05.9 -0.6
FLWY Pg Pb 21 05 18.0 +2.9
FLWY IAML 21 06 17.3
comp=E,70nm,1.9s
FLWY IAML 21 06 22.9
comp=E,44nm,2.1s
MOOW Moose Ponds 3.99 271 Pn Pn 21 05 09.2 +2.2
MOOW Pg Pg 21 05 21.7 +0.9
ISCO Idaho Springs 4.01 184 IAML 21 06 19.0
comp=E,32nm,0.9s
YNR Norris Junctio 4.02 285 Pn 21 05 06.8 -0.6
YNR Pg Pb 21 05 17.4 +1.4
SNOW Snow King Moun 4.02 267 Pn Pn 21 05 08.2 +0.8
SNOW IAML 21 06 23.3
comp=E,56nm,1.1s
SNOW IAML 21 06 39.5
comp=E,53nm,1.1s
REDW Red Top Meadow 4.10 266 IAML 21 06 21.2
comp=E,73nm,1.0s
REDW IAML 21 06 27.4
comp=E,52nm,1.0s
O20A White River Ci 4.29 212 Pn 21 05 12.5 +1.4
O20A IAML 21 06 32.0
comp=E,52nm,0.8s
O20A IAML 21 06 35.6
comp=N,66nm,2.1s
AHID Auburn Hatcher 4.40 258 IAML 21 06 34.9
comp=N,52nm,0.8s
AHID IAML 21 06 41.8
comp=E,40nm,0.9s
DGMT Dagmar 4.73 8 Pn 21 05 16.5 -0.4
SMCO Snowmass 4.80 196 IAML 21 06 46.1
comp=E,32nm,0.9s
SMCO IAML 21 06 52.1
comp=E,28nm,0.9s
Q24A Divide 4.83 179 IAML 21 06 46.0
comp=E,31nm,1.0s
KSCO Kaye Shedlock' 5.17 157 Pn Pn 21 05 24.1 +1.0
KSCO Pg 21 05 41.3 -2.1
MDND Maddock 5.65 42 Pn Pn 21 05 33.5 +4.0
MDND Pb 21 05 48.1 +4.4
BGNE Belgrade 5.75 112 Pn Pn 21 05 31.6 +0.6
SRU San Rafael Swe 6.14 222 Pn 21 05 36.4 -0.1
SRU Pb 21 05 54.5 +2.3
S22A 4UR Ranch, Cre 6.17 192 Pn Pn 21 05 38.5 +1.6
ECSD EROS Data Cent 6.24 88 Pn 21 05 37.8 +0.1
BGU Big Grassy Mou 6.45 246 Pn Pn 21 05 39.9 -0.7
CBKS Cedar Bluff 6.48 138 Pn Pn 21 05 42.2 +1.2
CBKS Pg 21 06 06.6 -1.8
ELK Elko 8.02 251 Pn Pn 21 06 03.0 +0.7
comp=E,0.2nm,0.3s,baz=36,slow=19,SNR=2.5
ULM Lac du Bonnet 9.08 41 Pn Pn 21 06 17.6 +1.0
comp=E,0.8nm,0.3s,baz=232,slow=11,SNR=6.7
ULM Pg 21 06 47.5
comp=E,0.3nm,0.3s,baz=240,slow=18,SNR=3.4
ULM Sn Sn 21 07 56.8 -2.6
comp=E,0.3nm,0.3s,baz=123,slow=16,SNR=3.1
ULM Lg Lg 21 08 47.7
comp=E,0.5nm,0.3s,baz=319,slow=20,SNR=3.8
FFC Flin Flon 11.14 10 Pn 21 06 43.2 -1.5
NVAR Mina Array Bea 11.22 246 Pn Pn 21 06 48.2 +2.0
comp=E,0.1nm,0.3s,baz=56,slow=10,SNR=3.7
NVAR Mina Array Bea 11.22 246 Pn 21 06 47.3 +1.2
TXAR Lajitas Array 14.49 175 Lg Lg 21 11 41.8
comp=E,0.0nm,0.3s,baz=4.0,slow=27,SNR=3.9
YKA Yellowknife Ar 19.51 347 P P 21 08 32.7 -0.2
comp=E,0.1nm,0.3s,baz=155,slow=12,SNR=4.1
ARCES ARCESS Array B 61.35 18 P P 21 14 21.9 +0.5
comp=E,3.9nm,1.1s,baz=353,slow=5.3,SNR=4.0
ZALV Zalesovo Beam 82.25 354 P P 21 16 27.4 +0.3
comp=E,0.5nm,0.6s,baz=15,slow=6.3,SNR=2.6
SONM Songino Array 84.59 339 P P 21 16 39.2 -0.3
comp=E,0.1nm,0.4s,baz=357,slow=6.4,SNR=3.5
MKAR Makanchi Array 89.55 355 P P 21 17 03.1 -0.4
comp=E,0.6nm,0.8s,baz=17,slow=4.7,SNR=6.1

IDC 12 21:10:29.9±3.6, 9.17S×123.56E, h71km±42km, mb3.3/1, mb1 3.9/5, mb1mx3.4/31, mbtmp4.0/5, ML4.2/4, MS2.8/1, Ms1 2.8/1, ms1mx2.5/13, Error ellipse: s-maj=126.6km s-min=21.8km az=56.0, Timor region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KAPI Kappang 5.59 317 P Pn 21 11 52.1 +1.5
2.5nm,0.3s,baz=144,slow=7.6,SNR=13
FITZ Fitzroy Crossi 9.11 167 P Pn 21 12 39.2 +0.6
2.2nm,0.3s,baz=2.3,slow=11,SNR=26
FITZ S Sn 21 14 14.7 -4.9
4.7nm,0.3s,baz=307,slow=20,SNR=17
FITZ LR LR 21 17 12.4
comp=Z,54nm,20.5s,baz=40,slow=44
WRA Warramunga Arr 14.95 137 P Pn 21 13 57.7 +0.3
1.2nm,0.3s,baz=307,slow=14,SNR=23
WRA S Sn 21 16 35.0 -7.0
1.0nm,0.3s,baz=292,slow=20,SNR=7.0
ASAR Alice Springs 17.49 147 P P 21 14 30.6 +1.2
0.7nm,0.3s,baz=317,slow=12,SNR=36
ASAR S Sn 21 17 37.8 -5.7
0.3nm,0.3s,baz=315,slow=22,SNR=7.0
MKAR Makanchi Array 66.74 330 P P 21 21 12.8 -0.8
0.4nm,0.6s,baz=137,slow=7.4,SNR=9.0

NEIC 12 21:21:22.5±1.6, 17.06S±0.05×168.4E±0.1, h8km±5km, mb4.3/12, Error ellipse: s-maj=17.9km s-min=6.7km az=91.0
IDC 12 21:21:23.2±1.2, 17.10S×168.24E, h0km, mb4.3/9, mb1 4.4/10, mb1mx4.2/27, mbtmp4.3/10, ML4.8/1, MS3.8/21, Ms1 3.8/21, ms1mx3.7/30, Error ellipse: s-maj=40.3km s-min=19.7km az=125.0
GCMT 12 21:21:25.5±0.4, 17.06S±0.02×168.47E±0.02, h18km±2km, MW4.8/81, Moment Tensor Solution. s5,c6; s81,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.25±.14; $M_{\theta\theta}$1.18±.11; $M_{\phi\phi}$-0.93±.11; $M_{r\theta}$0.01±.23; $M_{r\phi}$-1.84±.10; $M_{\theta\phi}$1.06±.30; Best double couple: $M_0$2.38100×10^{16} NP1:ϕ_s257.00000°,δ64.00000°,λ-171.00000°. NP2: ϕ_s163.00000°,δ82.00000°,λ-26.00000°. Principal axes: T 2.3580, Plg12.0000°, Azm213.0000°; N 0.0440, Plg63.0000°, Azm328.0000°; P -2.4050, Plg24.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 12 21:21:23.5±0.8, 17.10S±0.06×168.3E±0.1, h10km, n53, σ1.71/42, mb4.3/13, MS3.9/18, Vanuatu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 1.96 326 Pn Pn 21 21 55.0 -1.9
DZM Mont Dzumac 5.26 199 ePn Pn 21 22 41.4 -0.9
169nm,1.0s
DZM eSn Sn 21 23 36.6 -6.5
173nm,1.2s
DZM eLR LR 21 23 50.8
comp=Z,3μm,26.4s
DZM Mont Dzumac 5.26 199 Pn Pn 21 22 42.6 +0.3
30nm,0.3s,baz=80,slow=8.2,SNR=79
DZM Sn Sn 21 23 45.7 +2.6
14nm,0.3s,baz=331,slow=24,SNR=6.1
DZM LR LR 21 24 12.4
comp=Z,657nm,20.2s,baz=50,slow=32
DZM Mont Dzumac 5.26 199 Pn 21 22 42.1 -0.2
DZM Sn 21 23 41.4 -1.6
NOUC Port Laguerre 5.33 201 Pn 21 22 43.2 0.0
NOUC Sn 21 23 45.7 +0.9
HNR Honiara 11.16 312 LR LR 21 28 37.7
comp=Z,403nm,18.2s,baz=141,slow=39
HNR Honiara 11.16 312 Pn Pn 21 24 04.9 +1.7
RAO Raoul Island 17.48 136 LR LR 21 30 13.6
comp=Z,399nm,19.7s,baz=334,slow=30
EIDS Eidsvold 18.05 240 P Pn 21 25 34.4 -0.1
EIDS IAmb IAmb 21 25 43.7
comp=Z,15nm,1.1s
AFI Afiamalu 19.43 83 LR LR 21 31 23.2
comp=Z,155nm,20.2s,baz=122,slow=31
CTA Charters Tower 21.13 258 P P 21 26 09.2 +0.4
comp=Z,9.1nm,0.9s,baz=85,slow=11,SNR=5.2
PMG Port Moresby 21.96 288 LR LR 21 33 51.3
comp=Z,483nm,19.0s,baz=103,slow=34
URZ Urewera 22.45 162 LR LR 21 33 56.8
comp=Z,310nm,18.4s,baz=342,slow=34
RPZ Rata Peaks 26.63 176 LR LR 21 35 16.9
comp=Z,203nm,21.8s,baz=336,slow=31
STKA Stephens Creek 28.33 234 P P 21 27 18.9 +1.2
comp=Z,3.2nm,0.7s,baz=46,slow=11,SNR=7.1
STKA LR LR 21 38 38.9
comp=Z,162nm,18.5s,baz=53,slow=37
STKA Stephens Creek 28.33 234 P P 21 27 19.1 +1.4
WR0 Warramunga Arr 32.13 260 P P 21 27 51.6 +0.1
WB0 Warramunga Arr 32.27 260 P P 21 27 52.7 0.0
WB0 IAmb IAmb 21 27 54.8
comp=Z,4.3nm,1.0s
WB2 Warramunga Arr 32.31 260 P P 21 27 52.2 -0.8
WB2 IAmb IAmb 21 27 55.2
comp=Z,3.1nm,1.0s
WRA Warramunga Arr 32.32 260 P P 21 27 52.9 -0.3
comp=Z,1.6nm,0.9s,baz=90,slow=9.1,SNR=6.2
WRA LR LR 21 39 39.6
comp=Z,136nm,21.3s,baz=55,slow=34
AS31 Alice Springs 32.87 253 P P 21 27 58.2 +0.3
AS31 IAmb IAmb 21 28 05.5
comp=Z,2.6nm,0.9s
ASAR Alice Springs 32.87 253 P P 21 27 58.1 +0.2
comp=Z,6.8nm,0.9s,baz=80,slow=8.9,SNR=47
ASAR LR LR 21 40 56.7
comp=Z,244nm,18.1s,baz=81,slow=36
ASAR Alice Springs 32.87 253 P P 21 27 57.7 -0.2
BBOO Buckleboo 33.01 236 P P 21 27 57.0 -2.0
KNRA Kununurra 37.94 266 P P 21 28 40.7 -0.9
KNRA IAmb IAmb 21 28 45.0
comp=Z,16nm,1.1s
FORT Forrest 39.03 242 P P 21 28 51.1 +0.6
TBI Tubuai 39.99 106 eLQ LQ 21 38 08.3
comp=Z,400nm,30.0s
TBI eLR LR 21 39 55.7
comp=Z,248nm,30.8s
MJAR Matsushiro Arr 60.46 332 P P 21 31 34.8 +1.2
comp=Z,2.0nm,0.8s,baz=170,slow=7.4,SNR=3.8
KSRS Korea Array 66.26 326 LR LR 22 00 46.2
comp=Z,46nm,18.2s,baz=165,slow=36
PETK Petropavlovsk- 70.51 353 LR LR 21 57 55.9
comp=Z,129nm,22.0s,baz=67,slow=31
QSPA South Pole Qui 72.94 180 P P 21 32 52.2 -0.9
QSPA IAmb IAmb 21 33 00.3
comp=Z,3.4nm,1.1s
CMAR Chiang Mai Arr 76.84 294 LR LR 22 07 37.7
comp=Z,20nm,18.8s,baz=88,slow=36
MA2 Magadan 77.73 351 LR LR 22 01 14.0
comp=Z,76nm,21.3s,baz=171,slow=31
MAW Mawson 80.08 202 LR LR 22 03 42.5
comp=Z,122nm,21.3s,baz=55,slow=32
KDAK Kodiak Island 81.32 20 LR LR 22 02 32.9
comp=Z,137nm,21.1s,baz=122,slow=30
ULN Ulaanbaatar 84.64 324 P P 21 33 55.4 -2.1
ULN IAmb IAmb 21 34 01.8
comp=Z,4.2nm,1.1s
SONM Songino Array 84.99 323 P P 21 34 00.8 +1.5
comp=Z,2.9nm,1.1s,baz=137,slow=4.7,SNR=10
SONM Songino Array 84.99 323 P P 21 33 59.2 -0.1
GTA Gaotai 85.03 314 eP P 21 33 58.7 -1.0
GTA pP sP 21 34 03.1 -1.0
GTA sP pP 21 34 06.5 +3.6
ILAR Eielson Array 88.46 18 P P 21 34 16.4 +0.8
comp=Z,0.8nm,0.7s,baz=234,slow=4.8,SNR=12
ILAR LR LR 22 10 51.9
comp=Z,56nm,18.6s,baz=236,slow=34
ILAR Eielson Array 88.46 18 P P 21 34 14.7 -0.9
PDAR Pinedale Array 95.80 47 LR LR 22 09 52.2
comp=Z,50nm,21.9s,baz=172,slow=30
TXAR Lajitas Array 96.51 61 LR LR 22 09 34.9
comp=Z,27nm,21.2s,baz=0.0,slow=30
YKA Yellowknife Ar 99.17 27 P Pdif 21 35 06.4 +1.5
comp=Z,0.3nm,0.4s,baz=257,slow=5.5,SNR=7.6
YKA LR LR 22 13 33.0
comp=Z,42nm,20.9s,baz=0.0,slow=32
MKAR Makanchi Array 99.61 316 P Pdif 21 35 08.2 +1.0
comp=Z,0.4nm,0.7s,baz=88,slow=6.7,SNR=5.7
MKAR LR LR 22 19 03.3
comp=Z,37nm,20.7s,baz=80,slow=35
MKAR Makanchi Array 99.61 316 P Pdif 21 35 06.3 -0.9
ARCES ARCESS Array B 122.79 345 PKP PKiKP 21 40 19.9 +0.5
comp=Z,4.0nm,1.1s,baz=338,slow=1.3,SNR=3.8
GERES GERESS Array B 142.20 332 PKP PKiKP 21 40 57.1 -2.2
comp=Z,0.1nm,0.3s,baz=349,slow=4.1,SNR=3.7
KBA Koelnbreinsper 143.67 331 epPKiKP PKiKP 21 41 07.0 +4.5
comp=Z,0.9nm,0.5s
ABTA Abfaltersbach 144.30 331 i PKPdf PKPab 21 40 57.0 -1.0
FETA Feichten 144.89 333 i pPKPbc PKPab 21 40 59.9 -1.3
TIP Timpagrande 146.88 317 PKPab 21 41 07.2 -0.7
TORD Torodi Ar. Bea 166.51 255 PKP PKPdf 21 41 31.7 +1.5
comp=Z,0.9nm,1.0s,baz=32,slow=2.2,SNR=3.5

IDC 12 21:39:15.7±0.8, 35.89N×82.58E, h0km, mb3.5/9, mb1 3.8/15, mb1mx3.6/38, mbtmp3.6/15, ML3.3/6, MS3.4/1, Ms1 3.4/1, ms1mx2.6/43, Error ellipse: s-maj=25.1km s-min=14.1km az=51.0
BJI 12 21:39:16.9±0.0, 35.86N×82.52E, h5km, mb3.9/2, ML3.7/5
NNC 12 21:39:20.4±6.1, 36.01N×83.19E, h79km±42km, mb3.7, mpv4.0, Error ellipse: s-maj=71.9km s-min=41.4km az=101.0
ISC 12 21:39:17.6±0.8, 35.98N±0.08×82.73E±0.09, h10km, n25, σ1.68/29, mb3.5/10, 3C-5D, Xizang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PDGK Podgornoye 7.75 342 ⇓P Pn 21 41 11.7 +1.1
8.1nm,0.8s
PDGK ⇑S Sn 21 42 40.8 +2.3
34nm,0.9s
MDOK Medeo 8.41 330 P Pn 21 41 20.6 +1.0
5.1nm,0.7s
WMQ Urumqi 8.71 24 eP Pn 21 41 24.7 +1.0
WMQ smax smax
comp=N,14nm,1.5s
WMQ smax smax
comp=E,10.0nm,1.5s
AAK Ala-Archa 9.21 319 Pn Pn 21 41 31.9 +1.2
0.2nm,0.3s,baz=166,slow=11,SNR=6.4
AAK Pg 21 42 02.1
0.6nm,0.3s,baz=137,slow=14,SNR=4.8
AAK Sn Sn 21 43 14.3 -0.1
0.2nm,0.3s,baz=330,slow=20,SNR=1.9
AAK Lg 21 44 02.6
0.3nm,0.3s,baz=301,slow=19,SNR=3.7
AAK Ala-Archa 9.21 319 ⇓P Pn 21 41 32.7 +2.0
4.0nm,0.9s

MK31 Makanchi Array 10.81 358 P Pn 21 41 52.6 +0.2
1.2nm,0.4s,baz=184,slow=11,SNR=80
MK31 ⇑S Sn 21 43 52.6 -0.8
5.2nm,1.1s,baz=174,slow=26,SNR=4.7
MKAR Makanchi Array 10.81 358 Pn Pn 21 41 53.1 +0.8
0.9nm,0.3s,baz=185,slow=12,SNR=54
MKAR Sn Sn 21 43 54.2 +0.8
0.3nm,0.3s,baz=180,slow=21,SNR=7.2
MAKZ Makanchi 10.84 357 ⇑P Pn 21 41 53.3 +0.6
5.0nm,0.6s
MAKZ ⇓S Sn 21 43 49.4 -4.6
5.1nm,1.0s
KURBB Kurchatov Arra 14.95 350 Pn Pn 21 42 46.4 -2.4
0.0nm,0.3s,baz=174,slow=12,SNR=10
ZALV Zalesovo Beam 18.03 4 P Pn 21 43 28.5 +0.5
0.1nm,0.3s,baz=187,slow=12,SNR=11
BVAR Borovoye Array 19.13 337 P P 21 43 40.8 +0.1
0.5nm,0.3s,baz=140,slow=9.9,SNR=20
BVB7 Borovoye Array 19.14 337 ⇓P P 21 43 39.7 -1.1
4.3nm,0.7s
GEYT Alibeck 19.76 283 P P 21 43 46.0 -1.6
0.2nm,0.3s,baz=95,slow=14,SNR=6.2
SONM Songino Array 21.13 49 P P 21 44 05.2 +2.6
1.1nm,1.0s,baz=246,slow=11,SNR=6.4
AB31 Akbulak array 21.28 316 P P 21 44 05.2 +1.1
1.2nm,0.6s,baz=114,slow=11,SNR=22
CMAR Chiang Mai Arr 22.58 136 P P 21 44 18.1 -0.1
0.3nm,0.4s,baz=312,slow=9.4,SNR=4.8
AKTO Aktyubinsk 22.95 317 P P 21 44 21.3 -0.6
3.0nm,0.6s,baz=113,slow=7.7,SNR=4.4
AKTO Aktyubinsk 22.95 317 ⇓P P 21 44 18.1 -3.7
3.8nm,0.8s
BRTR Keskin Array B 38.56 291 P P 21 46 39.3 -1.4
0.8nm,1.0s,baz=142,slow=6.2,SNR=4.3
AKASG Malin Array Be 40.70 308 LR LR 22 05 50.6
comp=Z,49nm,19.9s,baz=320,slow=39
NOA NORSAR Array B 50.50 323 P P 21 48 16.2 +0.7
0.8nm,0.8s,baz=87,slow=7.0,SNR=3.1
ILAR Eielson Array 72.35 20 P P 21 50 42.6 -0.6
0.4nm,0.9s,baz=283,slow=5.5,SNR=4.3
WRA Warramunga Arr 74.00 130 P P 21 50 53.7 +0.1
1.1nm,0.8s,baz=325,slow=6.0,SNR=4.1
ASAR Alice Springs 76.54 133 P P 21 51 08.0 -0.1
0.5nm,0.7s,baz=325,slow=6.3,SNR=6.2
YKA Yellowknife Ar 80.88 8 P P 21 51 31.7 +0.2
0.1nm,0.6s,baz=340,slow=5.4,SNR=2.7

IDC 12 21:56:50.1±12.0, 38.39N×20.43E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.3/40, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=240.0km s-min=33.1km az=35.0
ATH 12 21:56:51.5, 38.13N×20.42E, h14km, ML3.1/6, Error ellipse: s-maj=1.4km s-min=0.7km az=250.0
THE 12 21:56:51.2, 38.13N×20.35E, h13km, ML3.0/12, Error ellipse: s-maj=1.0km s-min=0.4km az=262.0
BEO 12 21:56:53.3±0.8, 38.16N×20.36E, h22km±5km, ML3.7/6
ISC 12 21:56:51.3±0.8, 38.16N±0.02×20.41E±0.03, h15km±3km, n105, σ0.93/145, mb3.8/3, 2C-1D, Greece

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CHV1 Chavriata, Kef 0.04 322 P Pg 21 56 54.0 0.0
CHV1 S Sg 21 56 55.8 -0.1
LXRA Lixouri, Kepha 0.05 25 P Pg 21 56 54.3 +0.2
LXRA S Sg 21 56 56.3 +0.3
LXR1 Lixouri, Cepha 0.05 26 P Pg 21 56 54.3 +0.2
LXR1 S Sg 21 56 56.3 +0.3
ARGA Argostoli. Kep 0.06 68 P Pg 21 56 54.3 +0.1
ARGA S Sg 21 56 55.7 -0.4
KEF2 Argostoli. Kep 0.06 80 P Pg 21 56 54.3 0.0
KEF2 S Sg 21 56 56.0 -0.1
ARG2 Argostoli 0.07 69 P Pg 21 56 54.3 +0.1
ARG2 S Sg 21 56 56.1 -0.1
KEF3 Kipouria, Keph 0.07 315 P Pg 21 56 54.3 0.0
KEF3 S Sg 21 56 56.3 +0.1
KEF4 Livadi, Kephal 0.10 6 P Pb 21 56 54.9 0.0
KEF4 S Sb 21 56 57.6 +0.1
KEF1 Kardakata, Kep 0.13 21 P Pb 21 56 55.3 -0.2
KEF1 S Sg 21 56 57.8 +0.4
VLS Valsamata 0.14 81 P Pg 21 56 55.2 +0.1
VLS Valsamata 0.14 81 P Pg 21 56 55.3 +0.1
VLS S Sg 21 56 58.0 +0.2
VLS AML AML 21 56 58.0
comp=E,57279μm,0.3s
VLS AML AML 21 56 58.0
comp=N,89801μm,0.3s
VSK1 VASILIKIADES 0.28 26 P Pb 21 56 57.7 -0.3
VSK1 S Sb 21 57 02.7 +0.1
comp=N,8μm,0.2s
KONA Konidatara, Ke 0.30 25 P Pb 21 56 58.0 -0.3
KONA S Sb 21 57 03.1 +0.1
KONA AML AML 21 57 03.4
comp=E,11419μm,0.4s
KONA AML AML 21 57 09.3
comp=N,8244μm,0.5s
FSK Fiskardo 0.33 21 P Pg 21 56 58.4 +0.3
FSK S Sb 21 57 04.0 +0.2
comp=N,4μm,0.2s
FSK Fiskardo 0.33 21 P Pg 21 56 58.4 +0.3
FSK S Sb 21 57 04.0 +0.2
FSK AML AML 21 57 04.1
comp=N,7327μm,0.2s
FSK AML AML 21 57 04.7
comp=E,9856μm,0.2s
VLMS Volimes, Zakyn 0.34 144 P Pg 21 56 58.5 +0.2
VLMS S Sg 21 57 02.9 -0.3
VLMS AML AML 21 57 04.3
comp=E,13882μm,0.3s
VLMS AML AML 21 57 09.8
comp=N,15915μm,0.3s
EVGI Lefkada island 0.50 22 P Pg 21 57 01.5 +0.2
EVGI S Sb 21 57 10.0 +1.0
EVGI Lefkada island 0.50 22 P Pg 21 57 01.6 +0.2
EVGI S Sb 21 57 09.7 +0.7
ZAK2 Zakynthos 0.53 133 P Pb 21 57 02.2 -0.1
ZAK2 S Sb 21 57 10.5 +0.8
comp=N,6μm,0.4s
MGNA Meganis 0.58 31 P Pg 21 57 02.8 0.0
MGNA S Sb 21 57 11.7 +0.5
MGNA AML AML 21 57 13.1
comp=E,2061μm,0.1s
MGNA AML AML 21 57 14.2
comp=N,1568μm,0.2s
KRI1 kERI 0.59 147 P Pg 21 57 02.0 -0.9
KRI1 S Sb 21 57 12.2 +0.9
comp=N,2μm,0.3s
AST1 Astakos 0.66 54 P Pg 21 57 04.2 0.0
LKD2 Lefkada island 0.66 17 P Pg 21 57 04.3 0.0
LKD2 S Sn 21 57 15.8 -0.5
comp=N,968nm,0.4s
LKD2 Lefkada island 0.66 17 P Pg 21 57 04.2 0.0
TSLK Tsoukalades, L 0.70 16 P Pb 21 57 05.1 0.0
TSLK Tsoukalades, L 0.70 16 P Pb 21 57 05.0 0.0
PDO Prodromos 0.75 54 P Pb 21 57 06.1 +0.1
PDO S Sn 21 57 18.5 +0.1
comp=N,2μm,0.4s
PDO Prodromos 0.75 54 P Pb 21 57 06.1 +0.1
RLS Riolos of Patr 0.84 96 P Pb 21 57 07.2 -0.3
RLS S Sn 21 57 21.2 +0.7
comp=N,558nm,0.4s
RLS Riolos of Patr 0.84 96 P Pb 21 57 07.3 -0.3
RLS S Sg 21 57 18.7 +0.1
RLS AML AML 21 57 26.2
comp=E,1281μm,0.5s
RLS AML AML 21 57 26.2
comp=N,950μm,0.4s
PVO Paravola 0.99 62 P Pn 21 57 10.6 0.0
PVO Paravola 0.99 62 P Pn 21 57 10.7 0.0
DRO Drossia 1.05 101 P Pb 21 57 11.1 0.0
DRO Drossia 1.05 101 P Pb 21 57 11.1 0.0
UPR University Cam 1.09 83 P Pb 21 57 11.8 0.0
UPR University Cam 1.09 83 P Pb 21 57 12.9 +0.5
AMT Artemida-Makis 1.20 121 P Pb 21 57 13.9 +0.2
AMT S Sg 21 57 30.6 +0.5
comp=N,732nm,0.9s
AMT Artemida-Makis 1.20 121 P Pb 21 57 15.0 +0.5
LAKA Lakka 1.24 86 P Pb 21 57 14.4 0.0
LAKA S Sg 21 57 31.6 +0.3
comp=N,250nm,0.6s
LAKA Lakka 1.24 86 P Pn 21 57 14.0 0.0
ANX Ano Chora 1.27 69 P Pn 21 57 14.3 -0.2
ANX S Sg 21 57 33.3 +1.1
comp=N,705nm,0.6s
ANX Ano Chora 1.27 69 P Pb 21 57 15.0 +0.2
SERG Sergoula 1.32 78 P Pn 21 57 15.4 +0.3
SERG Sergoula 1.32 78 P Pn 21 57 15.4 +0.3
TRIZ Trizonia 1.33 80 P Pb 21 57 15.7 -0.1
TRIZ Trizonia 1.33 80 P Pb 21 57 15.7 -0.1
EVR Evrytania 1.33 55 P Pb 21 57 15.9 -0.1
EVR S Sg 21 57 34.3 -0.1
comp=N,225nm,0.8s
EVR Evrytania 1.33 55 P Pb 21 57 16.0 -0.1
ALIK Aliki, Aigiali 1.34 85 P Pb 21 57 15.9 -0.2
IGT Igoumenitsa 1.38 358 ePg Pg 21 57 19.0 +1.2
IGT eSg Sg 21 57 36.5 +0.8
IGT Igoumenitsa 1.38 358 P Pg 21 57 17.4 -0.4
KLV Kalavryta, Ach 1.38 94 P Pb 21 57 16.5 -0.2
KLV S Sg 21 57 35.8 +0.1
comp=N,178nm,0.7s
KLV Kalavryta, Ach 1.38 94 P Pb 21 57 16.6 -0.2
KALE Kalithea 1.38 80 P Pb 21 57 16.5 -0.3
KALE Kalithea 1.38 80 P Pb 21 57 16.5 -0.3
JAN Janina 1.54 13 P Pg 21 57 21.1 +0.2
ITM Ithomi 1.55 129 P Pb 21 57 20.3 +0.7
MAKR Makrakomi, Fth 1.60 57 P Pb 21 57 21.1 +0.6
KEK Kerkira 1.63 343 P Pb 21 57 20.9 -0.1
KASA Kassiopi 1.63 347 P Pb 21 57 21.4 +0.4
PYL PYLOS 1.64 139 P Pb 21 57 21.6 +0.4
AGG Agios Georgios 1.74 59 P Pb 21 57 23.6 +0.7
MEV Metsovon 1.75 21 P Pg 21 57 25.1 +0.2
AXAR Agios Charalam 1.87 70 P Pb 21 57 25.9 +0.9
THL Klokotos Trika 1.88 41 P Pb 21 57 26.2 +0.9
KPRO Kipourio 1.94 22 P Pb 21 57 27.0 +0.6
PROD Prodromos 1.96 86 P Pn 21 57 25.0 +1.0
PROD S Sb 21 57 50.2 -0.8
PROD Prodromos 1.96 86 P Pb 21 57 26.7 -0.1
LTK Loutraki 2.02 93 P Pn 21 57 25.9 +1.1
LTK S Sb 21 57 51.3 -1.4
LTK Loutraki 2.02 93 P Pb 21 57 27.3 -0.4
LKR Lokris 2.09 76 P Pn 21 57 25.7 -0.1
LKR S Sb 21 57 53.8 -0.9
LKR Lokris 2.09 76 P Pb 21 57 28.7 -0.2
VIL2 Platees 2.25 88 P Pb 21 57 31.0 -0.6
KRND KRANIDI 2.30 109 P Pb 21 57 32.1 -0.4
NEST Nestorio 2.31 12 P Pb 21 57 32.7 0.0
DID Didima 2.33 105 P Pb 21 57 32.3 -0.7
XOR Xorichti 2.49 60 P Pb 21 57 33.8 -1.9
LIT Litokhoron 2.53 39 P Pb 21 57 34.9 -1.4
MRKA Markates 2.56 77 P Pb 21 57 34.6 -2.2
TIR Tirane 3.22 353 ePn Pn 21 57 42.3 +1.1
VAY Valandovo 3.57 27 ePn Pn 21 57 47.6 +1.5
SRS Serrai 3.84 39 ePn Pn 21 57 52.2 +2.3
PDG Podgorica 4.36 349 ePn Pn 21 57 57.6 +0.7
PDG eSn Sn 21 58 47.8 +0.4
PDG Podgorica 4.36 349 ⇑P Pn 21 58 49.5 +2.1
BOSS Bosilegrad 4.62 19 ePn Pn 21 58 02.1 +1.7
BARS Barje 4.78 13 ePn Pn 21 58 04.0 +1.3
TREB Trebinje 4.82 342 ePn Pn 21 58 03.3 +0.1
TREB eSn Sn 21 58 58.4 -0.4
VTS Vitosha 4.95 25 ⇓P Sn 21 59 02.9 +0.6
SELS Selova 5.09 6 ePn Pn 21 58 07.6 +0.7
SJES Sjenica 5.11 356 ePn Pn 21 58 08.5 +1.2
SJES eSn Sn 21 59 05.2 -0.9
IVAS Ivanjica 5.42 358 ePn Pn 21 58 12.2 +0.7
IVAS eSn Sn 21 59 12.2 -1.4
BOVS Bovan 5.56 10 ePn Pn 21 58 14.4 +1.0
BOVS eSn Sn 21 59 15.5 -1.5
BBLS Lazići 5.76 353 ePn Pn 21 58 17.7 +1.5
DIVS Divibare 5.95 357 ePn Pn 21 58 19.5 +0.7
DIVS eSn Sn 21 59 23.7 -2.9
MLR Muntele Rosu 8.41 28 ⇑P Pn 21 58 59.3 +6.7
SOKA Soboth 9.40 337 i Pn Pn 21 59 06.3 +0.2
comp=N,1.1nm,0.2s
SOKA i Sn Sn 22 00 46.3 -5.1
comp=N,1.1nm,0.5s
OBKA Obir 9.41 334 i Pn Pn 21 59 07.4 +1.1
comp=N,1.2nm,0.2s
OBKA i Sn Sn 22 00 48.8 -3.0
comp=N,1.5nm,0.5s
KBA Koelnbreinsper 10.32 332 i Pn Pn 21 59 19.5 +0.7
comp=N,1.1nm,0.4s
MOA Molln 10.68 337 i Pn Pn 21 59 24.9 +1.3
comp=N,0.7nm,0.2s
WATA Walderalm 11.23 328 i Pn Pn 21 59 33.1 +1.8
comp=N,0.8nm,0.2s
SQTA Sankt Quirin 11.30 326 i Pn Pn 21 59 34.9 +2.7
comp=N,2.8nm,0.6s
GERES GERESS Array B 11.74 338 Pn Pn 21 59 36.9 -1.2
comp=N,0.1nm,0.3s,baz=157,slow=14,SNR=4.3
FINES FINESS Array B 23.58 7 P P 22 02 00.3 -0.7
comp=N,2.9nm,0.9s,baz=184,slow=11,SNR=4.7
MKAR Makanchi Array 45.39 58 P P 22 05 08.9 -0.1
comp=N,0.2nm,0.3s,baz=274,slow=7.4,SNR=5.0
ZALV Zalesovo Beam 45.77 48 P P 22 05 11.7 -0.2
comp=N,0.6nm,0.4s,baz=277,slow=8.8,SNR=3.8

ISC 12 21:59:40.9±1.3, 50.14N±0.06×19.14E±0.05, h0km, n5, σ0.66/10, Poland

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

OJC Ojcow 0.43 79 ePg Pg 21 59 49.3 +0.1
OJC eSg Sg 21 59 55.5 +0.7
LANS Liptovska Anna 1.01 168 ePG Pg 22 00 00.9 +0.7
LANS eSG Sg 22 00 14.1 +0.8
LANS eLG Lg 22 00 19.1
NIE Niedzica 1.04 133 ePg Pg 22 00 00.8 0.0
NIE eSg Sb 22 00 15.3 -0.7
MORC Moravsky Berou 1.09 251 ePG Pb 22 00 02.9 +0.2
MORC eSG Sg 22 00 16.1 +0.2
VYHS Vyhne 1.66 187 ePN Pn 22 00 10.9 -0.3
VYHS eSN Sn 22 00 32.3 -0.9

IDC 12 22:07:33.9±2.9, 6.97S×129.56E, h128km±39km, mb2.8/1, mb1 3.2/5, mb1mx3.0/39, mbtmp3.6/5, Error ellipse: s-maj=68.8km s-min=20.9km az=90.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

SIJI Sorong 6.29 16 P Pn 22 09 04.6 +0.2
0.9nm,0.3s,baz=225,slow=19,SNR=15
SIJI S Sn 22 10 12.1 -3.0
1.7nm,0.3s,baz=225,slow=22,SNR=8.4
FITZ Fitzroy Crossi 11.71 199 P Pn 22 10 17.1 0.0
0.2nm,0.3s,baz=25,slow=13,SNR=3.4
FITZ S Sn 22 12 19.1 -6.9
0.7nm,0.3s,baz=272,slow=21,SNR=5.8
WRA Warramunga Arr 13.71 161 P Pn 22 10 41.3 -1.7
0.6nm,0.3s,baz=344,slow=13,SNR=12
WRA S Sn 22 13 07.6 -6.8
0.3nm,0.3s,baz=352,slow=18,SNR=4.6
ASAR Alice Springs 17.12 166 P Pn 22 11 26.6 +1.1
0.2nm,0.3s,baz=338,slow=9.1,SNR=14
MKAR Makanchi Array 67.96 327 P P 22 18 19.0 -0.1
0.1nm,0.5s,baz=120,slow=7.7,SNR=2.9

THE 12 22:13:52.6, 38.43N×20.46E, h9km, ML2.9/11, Error ellipse: s-maj=0.8km s-min=0.2km az=177.0
ATH 12 22:13:52.6, 38.43N×20.50E, h13km±1km, ML3.1/9, Error ellipse: s-maj=1.5km s-min=0.5km az=244.0
BEO 12 22:13:56.8±1.0, 38.55N×19.92E, h9km±5km, ML3.0/4
ISC 12 22:13:52.8±0.8, 38.43N±0.02×20.48E±0.02, h10km±5km, n75, σ0.98/110, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

VSK1 VASILIKIADES 0.07 104 P Pg 22 13 54.7 -0.3
VSK1 S Sg 22 13 56.5 -0.1
KONA Konidatara, Ke 0.07 90 P Pg 22 13 54.8 -0.3
KONA S Sg 22 13 56.4 -0.3
KONA AML AML 22 13 56.9
KONA AML AML 22 13 59.6
comp=E,43289μm,0.6s
FSK Fiskardo 0.07 61 P Pg 22 13 54.7 -0.3
KEF1 Kardakata, Kep 0.15 184 P Pg 22 13 56.0 -0.1
KEF1 S Sg 22 13 58.8 +0.4
KEF4 Livadi, Kephal 0.17 196 P Pg 22 13 56.5 0.0
KEF4 S Sg 22 13 60.0 +0.9
LXR1 Lixouri, Cepha 0.23 189 P Pg 22 13 57.5 0.0
LXRA Lixouri, Kepha 0.23 189 P Pg 22 13 57.5 0.0
LXRA S Sg 22 14 01.9 +1.3
EVGI Lefkada island 0.24 35 P Pg 22 13 57.7 0.0
EVGI S Sg 22 14 01.6 +0.6
EVGI Lefkada island 0.24 35 P Pg 22 13 57.8 0.0
EVGI S Sg 22 14 01.1 +0.1
ARG2 Argostoli 0.25 179 P Pg 22 13 57.7 -0.1
ARG2 S Sg 22 14 01.5 +0.3
KEF3 Kipouria, Keph 0.25 206 P Pg 22 13 57.7 -0.1
KEF3 S Sg 22 14 02.2 +1.0
ARGA Argostoli. Kep 0.25 181 P Pg 22 13 57.8 0.0
ARGA S Sg 22 14 02.2 +0.9
CHV1 Chavriata, Kef 0.25 198 P Pg 22 13 57.2 -0.8
CHV1 S Sg 22 14 01.0 -0.4
KEF2 Argostoli. Kep 0.26 179 P Pg 22 13 57.9 -0.2
KEF2 S Sg 22 14 02.2 +0.7
VLS Valsamata 0.26 161 P Pg 22 13 57.8 -0.3
VLS S Sg 22 14 02.2 +0.5
comp=E,7μm,0.1s
VLS Valsamata 0.26 161 P Pg 22 13 57.9 -0.3
VLS S Sg 22 14 02.2 +0.5
VLS AML AML 22 14 02.6
comp=N,9911μm,0.2s
VLS AML AML 22 14 03.0
comp=E,18021μm,0.1s
MGNA Meganis 0.33 46 P Pg 22 13 59.2 -0.2
MGNA S Sg 22 14 04.6 +0.6
MGNA AML AML 22 14 05.2
comp=N,9248μm,0.3s
MGNA AML AML 22 14 05.3
comp=E,8170μm,0.2s
LKD2 Lefkada island 0.39 20 P Pg 22 14 00.1 -0.4
LKD2 S Sg 22 14 05.9 +0.3
comp=E,2μm,0.6s
LKD2 Lefkada island 0.39 20 P Pg 22 14 00.2 -0.4
LKD2 S Sg 22 14 06.0 +0.3
LKD2 AML AML 22 14 13.4
comp=N,4120μm,0.5s
LKD2 AML AML 22 14 15.8
comp=E,3660μm,0.6s
TSLK Tsoukalades, L 0.42 19 P Pg 22 14 00.9 -0.2
TSLK S Sg 22 14 07.0 +0.3
comp=E,2μm,0.6s
TSLK Tsoukalades, L 0.42 19 P Pg 22 14 00.9 -0.2
TSLK S Sg 22 14 06.4 -0.3
TSLK AML AML 22 14 10.6
comp=E,4314μm,0.7s
TSLK AML AML 22 14 15.2
comp=N,5162μm,0.5s
AST1 Astakos 0.49 76 P Pg 22 14 02.4 0.0
VLMS Volimes, Zakyn 0.56 166 P Pg 22 14 03.4 -0.4
VLMS S Sg 22 14 11.9 +0.7
VLMS AML AML 22 14 12.9
comp=N,7632μm,0.7s
VLMS AML AML 22 14 13.9
comp=E,5564μm,0.2s
PDO Prodromos 0.57 72 P Pg 22 14 03.7 -0.3
PDO S Sg 22 14 12.3 +0.7
comp=E,2μm,0.4s
PDO Prodromos 0.57 72 P Pg 22 14 03.9 -0.1
PDO S Sg 22 14 11.4 -0.1
PDO AML AML 22 14 19.7
comp=N,3088μm,0.4s
PDO AML AML 22 14 21.7
comp=E,3051μm,0.6s
ZAK2 Zakynthos 0.72 153 P Pg 22 14 06.6 0.0
KRI1 kERI 0.81 161 P Pg 22 14 07.9 -0.4
KRI1 S Sb 22 14 20.0 +0.2
PVO Paravola 0.84 76 P Pg 22 14 08.8 -0.2
PVO S Sb 22 14 21.7 +0.9
comp=E,1μm,0.6s
PVO Paravola 0.84 76 P Pg 22 14 08.9 -0.2
PVO S Sg 22 14 20.4 +0.4
PVO AML AML 22 14 27.2
comp=N,2450μm,0.8s
PVO AML AML 22 14 28.8
comp=E,3122μm,0.5s
RLS Riolos of Patr 0.86 115 P Pg 22 14 08.7 -0.6
RLS S Sb 22 14 21.6 +0.3
comp=E,390nm,0.6s
RLS Riolos of Patr 0.86 115 P Pg 22 14 08.8 -0.6
UPR University Cam 1.03 97 P Pg 22 14 12.3 -0.4
UPR S Sn 22 14 27.9 0.0
DRO Drossia 1.07 116 P Pg 22 14 12.8 -0.7
DRO Drossia 1.07 116 P Pg 22 14 12.4 -1.1
DRO S Sb 22 14 28.2 +0.5
DRO AML AML 22 14 40.9
comp=E,1762μm,0.3s
DRO AML AML 22 14 43.0
comp=N,1624μm,0.5s
IGT Igoumenitsa 1.11 354 ePg Pn 22 14 15.7 +1.2
IGT eSg Sn 22 14 29.1 -0.8
IGT Igoumenitsa 1.11 354 P Pg 22 14 13.3 -0.9
ANX Ano Chora 1.14 81 P Pb 22 14 13.7 -1.0
ANX Ano Chora 1.14 81 P Pb 22 14 13.7 -1.0
EVR Evrytania 1.15 64 P Pb 22 14 13.7 -1.1
EVR S Sn 22 14 30.9 +0.1
comp=N,322nm,0.7s
EVR Evrytania 1.15 64 P Pb 22 14 13.9 -0.9
LAKA Lakka 1.19 98 P Pb 22 14 14.7 -0.8
LAKA Lakka 1.19 98 P Pn 22 14 14.6 -0.9
SERG Sergoula 1.23 90 P Pn 22 14 15.1 -1.1
SERG S Sn 22 14 32.9 +0.7
comp=N,528nm,0.7s
SERG Sergoula 1.23 90 P Pn 22 14 15.2 -0.9
TRIZ Trizonia 1.25 92 P Pn 22 14 15.3 -1.0
TRIZ Trizonia 1.25 92 P Pn 22 14 15.3 -1.0
JAN Janina 1.26 13 P Pg 22 14 17.0 -0.1
ALIK Aliki, Aigiali 1.29 97 P Pn 22 14 15.9 -1.0
KALE Kalithea 1.30 91 P Pn 22 14 15.9 -1.2
KALE S Sb 22 14 34.5 +0.3
comp=N,410nm,0.6s
KALE Kalithea 1.30 91 P Pn 22 14 16.1 -1.0
AMT Artemida-Makis 1.32 132 P Pg 22 14 18.2 +0.1
KLV Kalavryta, Ach 1.37 106 P Pn 22 14 17.2 -0.8
KLV S Sb 22 14 36.5 +0.5
comp=N,190nm,0.6s
KLV Kalavryta, Ach 1.37 106 P Pn 22 14 17.3 -0.8
KASA Kassiopi 1.39 342 P Pn 22 14 19.6 +0.2
KEK Kerkira 1.39 338 P Pb 22 14 18.6 -0.3
MAKR Makrakomi, Fth 1.42 65 P Pn 22 14 17.9 -0.8
MAKR S Sb 22 14 38.0 +0.5
comp=N,350nm,0.7s
MAKR Makrakomi, Fth 1.42 65 P Pn 22 14 18.5 -0.1
AGG Agios Georgios 1.56 67 P Pn 22 14 20.2 -0.5
AGG Agios Georgios 1.56 67 P Pb 22 14 21.9 +0.1
THL Klokotos Trika 1.65 46 P Pb 22 14 23.1 -0.1
KPRO Kipourio 1.67 24 P Pb 22 14 24.2 +0.4
ITM Ithomi 1.69 137 P Pb 22 14 23.9 -0.1
PYL PYLOS 1.82 146 P Pb 22 14 25.5 -0.8
PROD Prodromos 1.91 94 P Pb 22 14 24.6 -0.8
LTK Loutraki 2.00 101 P Pb 22 14 28.4 -0.8
TIR Tirane 2.96 351 ePn Pn 22 14 41.4 +1.6
SRS Serrai 3.60 41 ePn Pb 22 14 55.0 -1.6
PDG Podgorica 4.11 347 ePn Pn 22 14 56.2 +0.6
PDG eSn Sn 22 15 41.8 -1.9
BOSS Bosilegrad 4.34 20 ePn Pn 22 15 03.8 +4.9
BOSS eSn Sn 22 15 53.5 +4.0
TREB Trebinje 4.58 340 ePn Pn 22 15 01.2 -1.0
TREB eSn Sn 22 15 51.9 -3.6
VTS Vitosha 4.68 26 ePn Pn 22 15 08.6 +4.9
SJES Sjenica 4.85 356 ePn Pn 22 15 08.5 +2.6
BOVS Bovan 5.29 10 ePn Pn 22 15 15.7 +3.9
DIVS Divibare 5.68 356 ePn Pn 22 15 19.5 +2.2
SOKA Soboth 9.17 336 i Pn Pn 22 16 04.0 -1.3
comp=N,2.7nm,0.6s

THE 12 22:39:12.8, 38.23N×20.39E, h10km, ML2.4/10, Error ellipse: s-maj=0.8km s-min=0.3km az=245.0
ATH 12 22:39:13.0, 38.24N×20.41E, h10km, ML2.6/4, Error ellipse: s-maj=1.3km s-min=0.6km az=256.0
ISC 12 22:39:12.9±0.9, 38.23N±0.02×20.41E±0.04, h10km±4km, n53, σ0.43/86, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

AGT1 Agia Thekli 0.02 313 P Pg 22 39 14.5 -0.2
AGT1 S Sg 22 39 15.7 -0.3
KEF4 Livadi, Kephal 0.03 31 P Pg 22 39 14.6 -0.1
KEF4 S Sg 22 39 15.9 -0.1
LXR1 Lixouri, Cepha 0.04 143 P Pg 22 39 14.8 0.0
LXR1 S Sg 22 39 16.4 +0.3
LXRA Lixouri, Kepha 0.04 144 P Pg 22 39 14.9 +0.1
LXRA S Sg 22 39 16.4 +0.3
CHV1 Chavriata, Kef 0.05 201 P Pg 22 39 15.0 +0.1
CHV1 S Sg 22 39 16.5 +0.2

KEF3 Kipouria, Keph 0.06 236 P Pg 22 39 15.0 +0.1
KEF3 S Sg 22 39 16.6 +0.2
KEF1 Kardakata, Kep 0.07 49 P Pg 22 39 15.0 -0.1
KEF1 S Sg 22 39 16.4 -0.2
ARGA Argostoli. Kep 0.08 135 P Pg 22 39 15.3 +0.1
ARGA S Sg 22 39 17.0 +0.1
ARG2 Argostoli 0.09 131 P Pg 22 39 15.4 +0.2
ARG2 S Sg 22 39 17.1 +0.2
KEF2 Argostoli. Kep 0.09 137 P Pg 22 39 15.5 +0.1
KEF2 S Sg 22 39 17.5 +0.3
VLS Valsamata 0.15 111 P Pg 22 39 16.3 0.0
VLS S Sg 22 39 19.0 +0.3
4μm,0.1s
VLS Valsamata 0.15 111 P Pg 22 39 16.3 0.0
VLS S Sg 22 39 18.9 +0.3
VLS AML AML 22 39 19.0
comp=E,7756μm,0.1s
VLS AML AML 22 39 19.1
comp=N,6291μm,0.1s
VSK1 VASILIKIADES 0.21 35 P Pg 22 39 17.4 0.0
VSK1 S Sg 22 39 21.1 +0.7
comp=N,3μm,0.2s
KONA Konidatara, Ke 0.23 34 P Pg 22 39 17.7 +0.1
KONA S Sg 22 39 21.6 +0.7
KONA AML AML 22 39 22.0
comp=N,4871μm,0.2s
KONA AML AML 22 39 22.7
comp=E,3126μm,0.2s
FSK Fiskardo 0.26 29 P Pg 22 39 18.1 0.0
FSK S Sg 22 39 22.3 +0.7
comp=E,1μm,0.1s
FSK Fiskardo 0.26 29 P Pg 22 39 18.1 0.0
FSK S Sg 22 39 21.9 +0.2
FSK AML AML 22 39 22.6
comp=E,4671μm,0.1s
FSK AML AML 22 39 22.7
comp=N,1191μm,0.2s
VLMS Volimes, Zakyn 0.41 150 P Pg 22 39 21.1 +0.2
VLMS S Sg 22 39 27.3 +0.9
VLMS AML AML 22 39 28.6
comp=N,2212μm,0.4s
VLMS AML AML 22 39 29.6
comp=E,1631μm,0.3s
EVGI Lefkada island 0.43 27 P Pg 22 39 21.4 0.0
EVGI S Sb 22 39 28.5 -0.7
EVGI Lefkada island 0.43 27 P Pg 22 39 21.4 0.0
EVGI S Sg 22 39 28.4 +1.2
MGNA Meganis 0.52 36 P Pg 22 39 22.8 -0.2
MGNA S Sg 22 39 29.8 0.0
LKD2 Lefkada island 0.59 20 P Pg 22 39 24.1 -0.2
LKD2 S Sb 22 39 33.3 -0.4
LKD2 Lefkada island 0.59 20 P Pg 22 39 24.1 -0.2
LKD2 S Sg 22 39 32.7 +0.6
TSLK Tsoukalades, L 0.62 18 P Pg 22 39 25.1 +0.1
TSLK S Sg 22 39 33.5 +0.4
TSLK Tsoukalades, L 0.62 18 P Pg 22 39 25.1 +0.1
PDO Prodromos 0.71 59 P Pg 22 39 26.5 -0.1
PDO S Sb 22 39 37.9 +0.7
comp=E,448nm,0.3s
PDO Prodromos 0.71 59 P Pg 22 39 26.5 -0.1
PDO S Sb 22 39 37.1 -0.1
RLS Riolos of Patr 0.85 102 P Pg 22 39 29.1 -0.2
RLS S Sb 22 39 42.0 +0.7
comp=E,112nm,0.4s
RLS Riolos of Patr 0.85 102 P Pg 22 39 29.1 -0.2
PVO Paravola 0.96 66 P Pg 22 39 31.2 -0.1
PVO S Sb 22 39 45.3 +1.0
comp=E,208nm,0.2s
PVO Paravola 0.96 66 P Pg 22 39 31.2 -0.1
DRO Drossia 1.07 105 P Pg 22 39 32.4 -1.0
DRO S Sn 22 39 48.6 -0.2
comp=E,170nm,0.3s
DRO Drossia 1.07 105 P Pg 22 39 32.6 -0.7
DRO S Sn 22 39 48.4 -0.4
LAKA Lakka 1.24 89 P Pn 22 39 35.6 -0.7
ANX Ano Chora 1.24 73 P Pn 22 39 35.9 -0.5
ANX S Sg 22 39 53.1 +0.2
comp=E,138nm,0.7s
ANX Ano Chora 1.24 73 P Pn 22 39 36.3 -0.1
AMT Artemida-Makis 1.25 124 P Pg 22 39 37.2 +0.4
EVR Evrytania 1.29 58 P Pn 22 39 36.4 -0.7
IGT Igoumenitsa 1.30 357 P Pn 22 39 37.2 +0.2
SERG Sergoula 1.31 82 P Pn 22 39 36.8 -0.5
SERG S Sb 22 39 54.6 +0.1
comp=E,98nm,0.4s
SERG Sergoula 1.31 82 P Pn 22 39 36.7 -0.5
TRIZ Trizonia 1.32 84 P Pn 22 39 36.6 -0.7
ALIK Aliki, Aigiali 1.34 88 P Pn 22 39 37.5 -0.2
KALE Kalithea 1.37 83 P Pn 22 39 37.6 -0.6
KALE S Sb 22 39 56.3 0.0
comp=E,62nm,0.5s
KALE Kalithea 1.37 83 P Pn 22 39 37.5 -0.6
KLV Kalavryta, Ach 1.39 97 P Pn 22 39 38.2 -0.2
KLV S Sn 22 39 57.1 +0.3
KLV Kalavryta, Ach 1.39 97 P Pn 22 39 38.1 -0.1
KEK Kerkira 1.55 342 P Pg 22 39 42.2 -0.4
MAKR Makrakomi, Fth 1.56 60 P Pg 22 39 42.6 -0.2
AGG Agios Georgios 1.70 62 P Pb 22 39 44.9 +0.7
THL Klokotos Trika 1.83 43 P Pb 22 39 47.1 +0.7
KPRO Kipourio 1.87 23 P Pg 22 39 48.4 -0.4
PROD Prodromos 1.96 89 P Pb 22 39 48.4 -0.4
VIL2 Platees 2.25 90 P Pb 22 39 53.1 -0.6

IDC 12 22:49:11.2±2.8, 7°.18S×129°.58E, h133km±38km, mb3.3/1, mb1 3.1/5, mb1mx3.0/41, mbtmp3.5/5, Error ellipse: s-maj=67.9km s-min=20.9km az=90.0, Banda Sea

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
SIJI Sorong 6.49 15 P Pn 22 50 44.6 +0.3
1.2nm,0.3s,baz=156,slow=20,SNR=22
SIJI S Sn 22 51 54.5 -2.6
1.0nm,0.3s,baz=287,slow=23,SNR=6.1
FITZ Fitzroy Crossi 11.52 199 P Pn 22 51 51.2 -0.5
0.2nm,0.3s,baz=23,slow=15,SNR=4.4
FITZ S Sn 22 53 52.9 -5.9
0.5nm,0.3s,baz=110,slow=17,SNR=4.3
WRA Warramunga Arr 13.50 160 P Pn 22 52 16.6 -1.0
0.2nm,0.3s,baz=346,slow=14,SNR=12
WRA S Sn 22 54 38.6 -8.1
0.6nm,0.3s,baz=331,slow=22,SNR=14
ASAR Alice Springs 16.91 166 P Pn 22 53 01.6 +1.5
0.1nm,0.3s,baz=336,slow=7.8,SNR=5.6
ASAR S Sn 22 56 03.0 -5.8
0.2nm,0.3s,baz=323,slow=16,SNR=5.1
MKAR Makanchi Array 68.15 327 P P 22 59 57.0 -0.1
0.4nm,0.5s,baz=121,slow=7.9,SNR=11

IDC 12 22:52:55.3±2.6, 58°.82S×15°.70W, h0km, mb3.9/2, mb1 4.0/2, mb1mx3.7/21, mbtmp3.9/2, MS3.7/11, Ms1 3.6/11, ms1mx3.5/20, Error ellipse: s-maj=94.9km s-min=49.3km az=168.0

ISC 12 22:52:58.2±1.1, 58°.5S±0°.1×15°.8W±0°.3, h10km, n18, σ0§75/8, MS3.7/11, East of South Sandwich Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
VNA1 Neumayer--Stat 12.65 168 P Pn 22 55 58.4 +0.5
VNA2 Neumayer--Watz 13.01 168 P Pn 22 56 03.4 +0.6
baz=344,slow=15
VNA3 Neumayer Olymp 13.09 171 P Pn 22 56 04.0 0.0
SNAA Sanae 14.29 163 P Pn 22 56 20.0 -0.5
MAW Mawson 34.38 138 LR LR 23 11 57.2
comp=Z,128nm,18.7s,baz=241,slow=34
PLCA Paso Flores 38.42 273 LR LR 23 16 16.6
comp=Z,72nm,18.4s,baz=128,slow=36
BOSA Boshof 41.07 62 LR LR 23 13 43.0
comp=Z,86nm,18.3s,baz=200,slow=30
CPUP Villa Florida 43.24 300 LR LR 23 18 52.1
comp=Z,99nm,19.7s,baz=196,slow=36
VNDA Vanda 44.28 179 LR LR 23 19 35.4
comp=Z,56nm,18.0s,baz=216,slow=36
BDFB Brasilia 48.97 317 LR LR 23 18 48.2
comp=Z,105nm,20.8s,baz=129,slow=32
LPAZ La Paz 56.93 295 P P 23 02 44.2 +0.1
1.9nm,0.8s,baz=157,slow=5.3,SNR=6.4
LPAZ LR LR 23 28 08.0
comp=Z,38nm,20.0s,baz=143,slow=37
KMBO Kilima Mbogo 70.57 58 LR LR 23 32 55.9
comp=Z,60nm,18.3s,baz=98,slow=34
TORD Torodi Ar. Bea 72.77 18 P P 23 04 27.2 +0.7
0.6nm,0.8s,baz=182,slow=7.2,SNR=2.8
ROSC El Rosal 78.33 300 LR LR 23 41 18.2
comp=Z,38nm,19.5s,baz=166,slow=37
STKA Stephens Creek 88.05 161 LR LR 23 41 50.6
comp=Z,40nm,20.1s,baz=204,slow=34
ASAR Alice Springs 94.40 152 LR LR 23 46 49.8
comp=Z,27nm,18.9s,baz=180,slow=34
SONM Songino Array 144.81 82 PKP PKPab 23 12 32.8 -0.6
1.0nm,0.9s,baz=221,slow=1.3,SNR=7.7
INK Inuvik 151.72 316 PKPbc PKPbc 23 12 50.1 -1.0
1.3nm,0.7s,baz=90,slow=2.0,SNR=3.5

IDC 12 23:02:07.7±7.8, 9°.04S×128°.61E, h227km±83km, mb3.2/2, mb1 3.6/4, mb1mx3.2/20, mbtmp4.1/4, Error ellipse: s-maj=89.5km s-min=34.1km az=64.0, Timor Sea

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
WRA Warramunga Arr 12.17 154 P Pn 23 04 52.5 -1.5
1.1nm,0.3s,baz=340,slow=12,SNR=19
WRA S S 23 07 11.8 +3.0
0.8nm,0.3s,baz=322,slow=28,SNR=6.8
ASAR Alice Springs 15.40 161 P Pn 23 05 35.0 +1.3
2.4nm,0.3s,baz=341,slow=11,SNR=217
ASAR S S 23 08 25.2 +1.5
0.1nm,0.3s,baz=345,slow=25,SNR=3.0
STKA Stephens Creek 25.72 154 P P 23 07 16.7 -0.7
1.5nm,0.5s,baz=345,slow=12,SNR=3.4
MKAR Makanchi Array 69.19 328 P P 23 12 50.0 +0.2
0.2nm,0.5s,baz=116,slow=7.3,SNR=3.7

IDC 12 23:55:50.4±0.9, 33°.76N×89°.23E, h0km, mb3.6/9, mb1 3.8/13, mb1mx3.6/52, mbtmp3.6/13, ML2.8/2, MS3.0/1, Ms1 3.2/1, ms1mx2.5/37, Error ellipse: s-maj=30.9km s-min=17.1km az=51.0

ISC 12 23:55:53.3±0.7, 33°.89N±0°.08×89°.2E±0°.1, h17km, n22, σ1§00/22, mb3.6/8, Xizang

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
GUN Gumba 6.60 206 eP Pn 23 57 29.9 0.0
17nm,0.6s
TAPN Taplejung 6.64 191 eP Pn 23 57 32.0 +1.6
16nm,0.5s
JIRN Jiri 6.72 203 eP Pn 23 57 32.3 +0.7
PKIN Phulchoki 7.09 208 eP Pn 23 57 37.3 +0.8
11nm,0.6s
PKI Pulchoki 7.09 208 eP Pn 23 57 36.1 -0.4
14nm,0.6s
ODAN Odare 7.18 193 eP Pn 23 57 38.2 +0.5
32nm,0.5s
DANN Dangsing 7.22 222 eP Pn 23 57 37.3 -1.0
7.2nm,0.4s
RAMN Ramite 7.27 199 eP Pn 23 57 38.1 -0.9
18nm,0.4s
MKAR Makanchi Array 13.91 340 Pn Pn 23 59 08.0 -1.5
baz=152,slow=16,SNR=2.9
CMAR Chiang Mai Arr 17.68 148 P Pn 23 59 58.3 -0.4
0.6nm,0.3s,baz=325,slow=11,SNR=6.4
CMAR LR LR 00 07 19.8
comp=Z,41nm,18.3s,baz=264,slow=39
KURBB Kurchatov Arra 18.45 338 P P 00 00 07.6 -0.3
0.0nm,0.3s,baz=148,slow=12,SNR=8.9
SONM Songino Array 19.00 38 P P 00 00 15.9 +0.9
0.0nm,0.3s,baz=222,slow=14,SNR=6.8
ZALV Zalesovo Beam 20.29 353 P P 00 00 29.1 +1.1
3.2nm,0.9s,baz=174,slow=12,SNR=14
BVAR Borovoye Array 23.36 331 P P 00 01 02.2 +1.4
0.6nm,0.5s,baz=136,slow=9.6,SNR=8.7
GEYT Alibeck 25.42 288 P P 00 01 21.6 +1.6
1.5nm,0.8s,baz=72,slow=4.8,SNR=5.0
BRTR Keskin Array B 44.25 294 P P 00 04 02.1 +0.1
0.5nm,0.7s,baz=99,slow=8.9,SNR=3.7
NB2 NORSAR Subarra 55.30 325 P P 00 05 25.2 -0.4
comp=Z,4.2nm,1.1s,baz=82,slow=7.4
NOA NORSAR Array B 55.30 325 P P 00 05 25.4 -0.2
comp=Z,1.2nm,0.8s,baz=83,slow=7.1,SNR=5.3
GERES GERESS Array B 56.33 310 P P 00 05 33.6 +0.4
comp=Z,1.3nm,0.8s,baz=64,slow=6.1,SNR=8.6
WRA Warramunga Arr 68.68 134 P P 00 06 54.8 -1.2
comp=Z,0.3nm,0.5s,baz=325,slow=6.3,SNR=4.9
ASAR Alice Springs 71.32 137 P P 00 07 10.8 -1.3
comp=Z,0.4nm,0.8s,baz=325,slow=6.4,SNR=4.2
TORD Torodi Ar. Bea 80.74 280 P P 00 08 06.5 +0.4
comp=Z,0.6nm,1.1s,baz=24,slow=5.3,SNR=3.8

WEL 12 23:57:02.6, 45°S±3°×16°8E±°, h118km±4km, M3.6/19, MLv3.6/19, Error ellipse: s-maj=0.0km s-min=0.0km az=65.8, South Island

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
MSZ Milford Sound 0.48 34 P Pn 23 57 20.7 +0.5
MSZ S Sn 23 57 33.4 0.0
DCZ Deep Cove 0.48 215 P Pn 23 57 20.2 0.0
DCZ S Sn 23 57 32.9 -0.5
MLZ Mavora Lakes 0.50 126 P Pn 23 57 21.0 +0.7
MLZ S Sn 23 57 34.2 +0.5
WHZ Wether Hill Ro 0.87 161 P Pn 23 57 24.0 +0.8
WKZ Wanaka 1.07 77 P Pn 23 57 25.9 +0.8
PYZ Puysegur Point 1.25 209 P Pn 23 57 27.9 +0.9
EAZ Earnscleugh 1.26 98 P Pn 23 57 27.9 +0.8
JCZ Jackson Bay 1.33 42 P Pn 23 57 27.7 -0.3
JCZ S Sn 23 57 46.2 -1.2
TUZ Tuapeka 1.71 122 P Pn 23 57 33.3 +0.9
APZ The Paps 1.79 170 P Pn 23 57 33.8 +0.4
SYZ Scrubby Hill 1.84 143 P Pn 23 57 34.9 +1.0
LBZ Lake Benmore 2.00 71 P Pn 23 57 35.1 -0.9
ODZ Otahua Downs 2.20 90 P Pn 23 57 38.1 -0.2
FOZ Fox Glacier 2.24 47 P Pn 23 57 37.5 -1.5
HHSZ Highcliff Hill 2.30 112 P Pn 23 57 40.3 +0.6
RPZ Rata Peaks 2.86 63 P Pn 23 57 45.2 -1.7
WVZ Waitaha Valley 3.04 50 P Pn 23 57 47.3 -2.1
INZ Inchbonnie 3.67 52 P Pn 23 57 55.6 -2.0
OXZ Oxford 3.67 63 P Pn 23 57 57.1 -0.5
MQZ McQueen's Vall 3.91 71 P Pn 23 58 00.4 -0.3
AKCZ Akaroa Harbour 4.02 75 P Pn 23 58 01.8 -0.5
OKCZ Okains Bay 4.17 73 P Pn 23 58 04.4 0.0
GVZ Greta Valley S 4.48 64 P Pn 23 58 07.6 -0.9
DSZ Denniston Nort 4.55 45 P Pn 23 58 07.2 -2.2
QRZ Quartz Range 5.60 42 P Pn 23 58 22.1 -1.5

BJI 12 23:57:13.4±0.0, 35°.99N×82°.40E, h9km, mb3.9/2, ML3.7/4
IDC 12 23:57:14.4±1.2, 36°.30N×82°.72E, h0km, mb3.6/9, mb1 3.8/15, mb1mx3.6/53, mbtmp3.7/15, ML3.3/6, Error ellipse: s-maj=30.4km s-min=20.8km az=51.0

ISC 12 23:57:16.4±1.0, 36°.24N±0°.10×82°.6E±0°.1, h10km, n18, σ1§46/20, mb3.5/10, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
WMQ Urumqi 8.52 26 eP Pn 23 59 21.6 +1.7
WMQ S Sn 00 00 55.4 -0.7
AAK Ala-Archa 8.95 318 Pn Pn 23 59 27.1 +1.3
0.2nm,0.3s,baz=139,slow=11,SNR=7.2
AAK Pg Pg 23 59 56.7 -11
0.7nm,0.3s,baz=138,slow=12,SNR=6.4
AAK Lg Lg 00 01 52.6
0.4nm,0.3s,baz=331,slow=19,SNR=3.4
MKAR Makanchi Array 10.55 359 Pn Pn 23 59 48.8 +1.2
1.6nm,0.3s,baz=182,slow=13,SNR=75
MKAR Sn Sn 00 01 46.0 +0.2
0.2nm,0.3s,baz=187,slow=22,SNR=5.2
KURBB Kurchatov Arra 14.68 350 Pn Pn 00 00 42.0 -1.9
0.0nm,0.3s,baz=173,slow=12,SNR=17
ZALV Zalesovo Beam 17.78 4 P Pn 00 01 22.8 -1.0
0.1nm,0.3s,baz=191,slow=12,SNR=7.9
BVAR Borovoye Array 18.85 337 P Pn 00 01 35.7 -1.2
0.3nm,0.3s,baz=145,slow=9.2,SNR=11
GEYT Alibeck 19.59 282 P Pn 00 01 44.3 -1.6
0.1nm,0.3s,baz=108,slow=9.3,SNR=4.1
SONM Songino Array 21.05 49 P P 00 02 02.5 +2.0
1.1nm,0.7s,baz=242,slow=11,SNR=9.6
AKTO Aktyubinsk 22.68 316 P P 00 02 16.9 -1.0
2.1nm,0.7s,baz=105,slow=13,SNR=6.5
CMAR Chiang Mai Arr 22.84 137 P P 00 02 19.6 -0.2
0.6nm,0.3s,baz=314,slow=11,SNR=4.9
FINES FINESS Array B 43.07 324 P P 00 05 14.8 -1.3
1.4nm,0.7s,baz=94,slow=9.9,SNR=2.2
ARCES ARCESS Array B 45.13 335 P P 00 05 31.6 -1.0
1.8nm,0.7s,baz=84,slow=9.3,SNR=3.6
NB2 NORSAR Subarra 50.22 323 P P 00 06 14.2 +2.0
comp=Z,0.5nm,0.6s,baz=88,slow=7.9
NOA NORSAR Array B 50.22 323 P P 00 06 13.8 +1.5
comp=Z,0.6nm,0.6s,baz=86,slow=7.4,SNR=4.1
GERES GERESS Array B 50.64 307 P P 00 06 16.1 +0.4
comp=Z,0.2nm,0.6s,baz=90,slow=8.0,SNR=3.9
ILAR Eielson Array 72.14 20 P P 00 08 39.2 -1.5
comp=Z,0.4nm,0.9s,baz=316,slow=5.9,SNR=4.9
TORD Torodi Ar. Bea 75.07 275 P P 00 08 59.6 +0.8
comp=Z,0.3nm,0.7s,baz=50,slow=4.8,SNR=3.0
YKA Yellowknife Ar 80.64 8 P P 00 09 27.1 -1.8
comp=Z,0.3nm,0.6s,baz=336,slow=5.6,SNR=2.6

IDC 13 00:07:00.9±0.5, 35°.78N×82°.52E, h0km, mb4.2/21, mb1 4.4/27, mb1mx4.2/53, mbtmp4.3/27, ML3.6/6, MS3.7/4, Ms1 3.8/4, ms1mx3.3/16, Error ellipse: s-maj=16.4km s-min=11.1km az=46.0
NEIC 13 00:07:01.9±2.1, 35°.78N±0°.08×82°.60E±0°.10, h10km±1km, mb4.5/29, Error ellipse: s-maj=14.3km s-min=12.5km az=146.0
MOS 13 00:07:01.6±1.1, 35°.90N×82°.56E, h11km, mb4.6/28, Error ellipse: s-maj=8.2km s-min=4.1km az=118.8
BJI 13 00:07:03.5±0.0, 35°.95N×82°.56E, h5km, mB4.6/19, mb4.3/28, ML4.5/5, Ms4.3/24, Ms7 4.2/22

ISC 13 00:07:02.9±0.3, 35°.87N±0°.05×82°.47E±0°.04, h10km, n198, σ2§09/201, mb4.4/57, MS4.0/10, 19C-4D, Xizang

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
JOSI Joshimath 5.84 206 ex Pn 00 08 33.0 +3.3
JOSI ex x 00 10 35.4
KSH Kashi 6.30 307 Pn Pn 00 08 39.3 +3.3
KSH Sn Sn 00 09 54.8 +6.6
DDI Dehra Dun 6.66 215 ex Pg 00 09 09.8 -0.7
DDI ex x 00 10 47.5
PRZ Przheval'sk 7.32 336 Pn 00 08 51.4 +1.5
PRZ Przheval'sk 7.32 336 P Pn 00 08 51.4 +1.5
KDJ Kajisay 7.48 328 Pn 00 08 54.1 +1.9
KDJ Kajisay 7.48 328 P Pn 00 08 54.1 +1.9
NRN Naryn 7.51 320 Pn 00 08 56.3 +3.6
NRN Naryn 7.51 320 P Pn 00 08 56.3 +3.6
CHCP Chirah Chowk 7.89 256 P Pn 00 09 00.5 +2.8
NIL Nilore 7.91 256 Pn 00 09 00.8 +2.9
NIL Nilore 7.91 256 P Pn 00 09 00.8 +2.9
ULHL Ulahol 8.00 325 P Pn 00 09 02.3 +3.0
SNR=8.1
BOOM Boomskoye usch 8.33 324 Pn 00 09 06.4 +2.6
BOOM Boomskoye usch 8.33 324 P Pn 00 09 06.4 +2.6
KZA Kyzart 8.36 320 P Pn 00 09 08.0 +3.4
SNR=9.3
KNDC Almaty 8.47 332 P Pn 00 09 08.3 +2.6
UCH Uchtor 8.86 318 P Pn 00 09 14.1 +2.8
SNR=20
WMQ Urumqi 8.89 25 ePn Pn 00 09 11.5 +0.1
WMQ Sn Sn 00 10 44.2 -7.5
WMQ Urumqi 8.89 25 eP Pn 00 09 14.7 +3.3
WMQ smax smax
comp=N,180nm,0.9s
WMQ smax smax
comp=E,140nm,0.9s
WMQ Urumqi 8.89 25 Pn 00 09 13.1 +1.7
WMQ Urumqi 8.89 25 P Pn 00 09 13.1 +1.7
CEP Cherat 8.92 260 P Pn 00 09 16.1 +4.2
CEP S Sn 00 10 56.0 +3.5
KBK Karagaybulak 8.94 322 P Pn 00 09 15.8 +3.6
SNR=18
AAK Ala-Archa 9.15 320 Pn Pn 00 09 18.1 +3.0
0.5nm,0.3s,baz=129,slow=9.6,SNR=42
AAK Lg Lg 00 11 52.7
2.3nm,0.3s,baz=270,slow=17,SNR=2.2
AAK Ala-Archa 9.15 320 P Pn 00 09 18.6 +3.5
SNR=22
AAK Ala-Archa 9.15 320 Pn 00 09 18.5 +3.3
AAK Ala-Archa 9.15 320 i P Pn 00 09 16.8 +1.7
ARSB Arslanbob 9.21 309 Pn 00 09 18.9 +3.2
ARSB Arslanbob 9.21 309 P Pn 00 09 19.0 +3.2
FRU1 Bishkek 9.21 321 Pn 00 09 19.7 +3.9
FRU1 Bishkek 9.21 321 P Pn 00 09 19.7 +3.9
KUDL Kundal 9.23 215 ex Pn 00 09 07.0 -9.0
KUDL ex x 00 10 48.7
AML Almayashu 9.25 315 P Pn 00 09 19.3 +2.6
SNR=38
CHMS Chumysh 9.29 322 i P Pn 00 09 19.4 +2.6
CHMS pmax pmax
comp=Z,8.0nm,0.9s
THW Thamme Wali 9.39 254 P Pn 00 09 19.7 +1.5
LSA Lhasa 9.55 128 P Pn 00 09 23.3 +2.4
LSA pP 00 09 27.2
LSA S Sn 00 11 18.1 +10
LSA pmax pmax
comp=Z,17nm,1.0s
LSA LR LR
comp=Z,2μm,13.5s
LSA LR LR
comp=Z,3μm,12.8s
EKS2 Erkin-Say 9.55 318 P Pn 00 09 23.9 +3.4
SNR=16
BTK Batken 10.10 298 Pn 00 09 29.1 +1.1
BTK Batken 10.10 298 P Pn 00 09 29.1 +1.1
MK31 Makanchi Array 10.91 359 Pn 00 09 39.7 +0.7
MK31 Makanchi Array 10.91 359 P Pn 00 09 39.7 +0.7
MKAR Makanchi Array 10.91 359 Pn Pn 00 09 39.6 +0.6
comp=Z,3.4nm,0.3s,baz=185,slow=11,SNR=112
MKAR Makanchi Array 10.91 359 Pn 00 09 38.8 -0.3
MKAR Makanchi Array 10.91 359 i P Pn 00 09 39.5 +0.5
MKAR pmax pmax
comp=Z,16nm,0.7s
MAKZ Makanchi 10.93 358 Pn 00 09 39.1 -0.2
MAKZ Makanchi 10.93 358 P Pn 00 09 39.1 -0.2
KBL Kabul 11.07 267 Pn 00 09 42.2 +0.8
KBL Kabul 11.07 267 P Pn 00 09 42.2 +0.8
KK31 Karatay Array 11.72 312 Pn 00 09 51.3 +1.2
KK31 Karatay Array 11.72 312 i P Pn 00 09 50.6 +0.5
KK31 pmax pmax
comp=Z,8.0nm,1.0s
KKAR Karatay Array 11.72 312 Pn 00 09 51.3 +1.2
KKAR Karatay Array 11.72 312 Pn 00 09 50.5 +0.4
KKAR Karatay Array 11.72 312 P Pn 00 09 51.3 +1.2
CHM Chimkent 11.88 307 P Pn 00 09 54.1 +1.8
CHM pmax pmax
comp=Z,17nm,1.1s
BOK Bokaro 12.40 165 ex Pn 00 09 58.4 -1.1
BOK ex x 00 11 38.8
BOK IAML 00 11 44.6
comp=N,12nm,0.6s
BOK ex x 00 11 45.2
GTA Gaotai 14.19 70 eP Pn 00 10 24.4 +0.4
GTA pP P 00 10 28.0 -3.5
GTA sP 00 10 30.7
GTA pmax pmax
comp=N,73nm,5.5s
GTA LR LR
comp=N,800nm,14.8s
GTA LR LR
comp=N,610nm,11.3s
GTA LR LR
comp=N,670nm,11.0s
KURBB Kurchatov Arra 15.02 350 Pn Pn 00 10 32.5 -2.5
comp=N,0.0nm,0.3s,baz=174,slow=12,SNR=34
KURBB Lg Lg 00 15 02.5
comp=N,0.1nm,0.3s,baz=180,slow=26,SNR=2.8
KURK Kurchatov 15.09 351 Pn 00 10 33.8 -2.3
KURK IAmb IAmb 00 10 37.3
comp=Z,11nm,0.8s
KURK Kurchatov 15.09 351 ⇑i P Pn 00 10 34.4 -1.6
KURK pmax pmax
comp=Z,12nm,0.9s
HRA Herat 16.62 271 Pn 00 10 56.0 -0.1
ZAA0 Zalesovo Array 18.15 4 P Pn 00 11 13.5 -1.3
ZALV Zalesovo Beam 18.15 4 P Pn 00 11 13.4 -1.4
comp=Z,0.3nm,0.3s,baz=191,slow=11,SNR=27
ZALV Zalesovo Beam 18.15 4 P Pn 00 11 13.0 -1.8
ZALV Zalesovo Beam 18.15 4⇓eP Pn 00 11 12.6 -2.2
HYB Hyderabad 18.71 192 i P Pn 00 11 20.0 -1.6
BVAR Borovoye Array 19.15 337 P Pn 00 11 27.1 +0.1
comp=Z,0.6nm,0.3s,baz=134,slow=8.5,SNR=57
BRVK Borovoye 19.21 337 P Pn 00 11 27.5 -0.2
BRVK IAmb IAmb 00 11 34.5
comp=Z,25nm,0.7s
BRVK Borovoye 19.21 337 P Pn 00 11 27.5 -0.2
BRVK pmax pmax
comp=Z,25nm,0.7s
GEYT Alibeck 19.57 283 P Pn 00 11 32.7 +0.4
comp=Z,0.3nm,0.3s,baz=106,slow=9.7,SNR=34

GEYT Alibeck 19.57 283 P Pn 00 11 32.1 -0.1
GYA0B ALIBECK ARRAY 19.57 283 IAmb IAmb 00 11 37.2
comp=Z,32nm,1.1s
MOY Mondy 20.60 34 eP Pn 00 11 45.5 +1.2
MOY pmax pmax
comp=Z,22nm,1.8s
ZAK Zakamensk 20.90 40 eP P 00 11 45.4 +0.1
ZAK pmax pmax
comp=Z,7.0nm,1.1s
ABKAR Akbulak array 21.21 316 P P 00 11 48.8 +0.3
SONM Songino Array 21.36 49 P P 00 11 51.9 +1.5
comp=Z,10nm,1.1s,baz=239,slow=11,SNR=40
SONM Songino Array 21.36 49 P P 00 11 51.6 +1.2
SONM Songino Array 21.36 49 P P 00 11 51.6 +1.2
SONM pmax pmax
comp=Z,8.0nm,1.0s
XAN Xi'an 21.74 87 P P 00 11 55.9 +1.5
XAN pP sP 00 11 59.0 -1.7
XAN PP pP 00 12 21.1 +22
XAN S Sn 00 16 01.2 -2.9
XAN pmax pmax
comp=Z,6.0nm,1.7s
XAN pmax pmax
comp=Z,94nm,4.7s
XAN LR LR
comp=Z,470nm,12.8s
XAN LR LR
comp=Z,780nm,14.6s
ULN Ulaanbaatar 21.77 49 P P 00 11 55.9 +1.0
ULN IAmb IAmb 00 11 58.9
comp=Z,12nm,1.1s
ULN Ulaanbaatar 21.77 49 P P 00 11 55.9 +1.0
ULN pmax pmax
comp=Z,12nm,1.1s
TLY Talaya 21.86 37 i P P 00 11 56.1 +0.5
TLY pmax pmax
comp=Z,4.0nm,1.0s
CHTO Chiang Mai 22.37 135 P P 00 12 00.8 -0.5
CHTO Chiang Mai 22.37 135 P P 00 12 00.8 -0.5
CHTO pmax pmax
comp=Z,6.0nm,0.8s
CMAR Chiang Mai Arr 22.65 136 P P 00 12 03.9 -0.4
comp=Z,3.5nm,0.7s,baz=311,slow=12,SNR=18
CMAR LR LR 00 22 50.9
comp=Z,116nm,18.9s,baz=337,slow=42
GYA Guiyang 22.68 108 ⇑i P P 00 12 07.0 +2.3
GYA PP PnPn 00 12 36.6 +8.2
GYA S S 00 16 18.5 +5.4
GYA pmax pmax
comp=Z,10.0nm,0.9s
GYA pmax pmax
comp=Z,160nm,4.3s
GYA LR LR
comp=Z,390nm,11.0s
GYA LR LR
comp=Z,240nm,8.9s
AKTO Aktyubinsk 22.88 317 P P 00 12 05.9 -0.5
comp=Z,11nm,0.8s,baz=110,slow=7.4,SNR=32
AKTO LR LR 00 22 14.4
comp=Z,105nm,20.1s,baz=125,slow=40
HHC Hu-ho-hao-te 23.29 69 eP P 00 12 10.3 -0.6
HHC S S 00 16 20.2 -3.2
HHC sS pS 00 16 25.3 -2.7
HHC SS SnSn 00 17 06.4 +9.1
HHC pmax pmax
comp=Z,3.0nm,0.6s
HHC pmax pmax
comp=Z,63nm,6.1s
HHC LR LR
comp=Z,210nm,11.4s
HHC LR LR
comp=Z,180nm,11.6s
HHC LR LR
comp=Z,220nm,11.4s
SVE Sverdlovsk 25.60 332⇓eP P 00 12 33.6 +1.5
SVE pmax pmax
comp=Z,14nm,1.1s
ARU Arti 26.16 329 P P 00 12 37.8 +0.7
comp=Z,2.9nm,0.8s,baz=136,slow=5.2,SNR=11
ARU Arti 26.16 329 P P 00 12 37.7 +0.7
ARU IAmb IAmb 00 12 39.1
comp=Z,11nm,1.0s
ARU Arti 26.16 329d i P P 00 12 37.1 0.0
ARU 00 13 14.4
ARU S S 00 17 10.3 +1.6
ARU SS 00 18 08.9
ARU pmax pmax
comp=Z,13nm,1.1s
BJI Beijing 26.80 71 P P 00 12 41.9 -1.2
BJI LR LR
comp=Z,470nm,16.3s
GNI Garni 29.88 290 P P 00 13 11.4 +0.7
comp=Z,4.3nm,1.1s,baz=82,slow=15,SNR=3.8
GNI Garni 29.88 290 P P 00 13 09.2 -1.5
GNI Garni 29.88 290 eP P 00 13 11.2 +0.4
GNI pmax pmax
comp=Z,22nm,1.3s
NJ2 Nanjing 30.30 87 eP P 00 13 14.9 +0.5
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
KIV Kislovodsk 31.32 297 eP P 00 13 25.1 +1.7
KIV MLR MLR
comp=Z,431nm,15.0s
KIRV Kirov 31.40 327⇓eP P 00 13 24.3 +0.6
VRH Novokhopyorsk 32.80 311 eP P 00 13 35.9 -0.2
VRH pmax pmax
comp=Z,10.0nm,1.0s
SOC Sochi 33.47 297 eP P 00 13 40.0 -2.1
SOC e 00 14 48.9
SOC eS S 00 19 02.6 -1.0
SOC eSS SnSn 00 21 04.3 -1.0
SOC pmax pmax
comp=Z,11nm,0.9s
SOC MLR MLR
comp=Z,219nm,15.0s
RAYN Ar Rayn 34.19 259 P P 00 13 46.6 -2.0
RAYN IAmb IAmb 00 13 49.9
comp=Z,6.4nm,1.1s
RAYN Ar Rayn 34.19 259 P P 00 13 46.6 -2.0
RAYN pmax pmax
comp=Z,6.0nm,1.1s
VSR Storozhevoye 34.38 310 eP P 00 13 48.2 -1.7
VSR pmax pmax
comp=Z,8.0nm,1.1s
PRGR Permogore 34.62 330 eP P 00 13 49.3 -2.5
PRGR pmax pmax
comp=Z,9.0nm,0.9s
KULM Kulim 34.73 147 P P 00 13 50.7 -2.6
GAZ Gaziantep 36.13 286 P P 00 14 03.5 -1.7
GAZ IAmb IAmb 00 14 08.8
comp=Z,7.7nm,1.0s
OBN Obninsk 36.66 316 eP P 00 14 09.7 +0.3
OBN pmax pmax
comp=Z,7.0nm,1.0s
KLMR Klimovskoe 36.90 326 eP P 00 14 11.6 +0.3
KLMR pmax pmax
comp=Z,25nm,1.4s
KLMR Klimovskoe 36.90 326 eP P 00 14 11.7 +0.4
KLMR AMP 00 14 13.9
comp=Z,25nm,1.4s
KLR Kul'dur 38.01 54 P P 00 14 21.6 +0.7
comp=Z,1.9nm,0.9s,baz=272,slow=5.5,SNR=5.0
KLR Kul'dur 38.01 54 i P P 00 14 21.4 +0.4
KLR pmax pmax
comp=Z,2.0nm,1.0s
BR131 Keskin Array S 38.40 291 IAmb IAmb 00 14 27.1
comp=Z,7.5nm,1.0s
BR131 Keskin Array S 38.40 291 i P P 00 14 25.3 +0.7
BRTR Keskin Array B 38.40 291 P P 00 14 26.2 +1.7
comp=Z,4.7nm,0.9s,baz=94,slow=7.4,SNR=25
BRTR Keskin Array B 38.40 291 P P 00 14 24.5 -0.1
TMCR Tamitsa 38.87 331 eP P 00 14 27.7 -0.3
TMCR pmax pmax
comp=Z,21nm,1.2s
ANTO Ankara 39.02 291 P P 00 14 27.5 -2.2
ANTO IAmb IAmb 00 14 35.9
comp=Z,9.3nm,0.8s
ANTO Ankara 39.02 291 P P 00 14 30.7 +1.1
AKASG Malin Array Be 40.60 308 P P 00 14 42.9 +0.4
comp=Z,0.8nm,0.6s,baz=73,slow=7.2,SNR=12
AKASG Malin Array Be 40.60 308 IAmb IAmb 00 14 49.6
comp=Z,2.6nm,1.2s
VRI Vrincioaia 42.54 301 ⇑P P 00 15 00.2 +1.6
VRI Vrincioaia 42.54 301 ⇑P P 00 15 00.2 +1.6
PLOR Plostina 42.60 301 ⇑P P 00 15 00.9 +1.8
PLOR Plostina 42.60 301 ⇑P P 00 15 00.9 +1.8
TIXI Tiksi 43.05 20 P P 00 15 01.2 -1.1
TIXI Tiksi 43.05 20 i P P 00 15 02.0 -0.3
TIXI pmax pmax
comp=Z,5.0nm,1.1s
MLR Muntele Rosu 43.13 301 ⇑P P 00 15 06.1 +2.6
MLR Muntele Rosu 43.13 301 P P 00 15 06.2 +2.7
MLR pmax pmax
comp=Z,11nm,1.0s
FINES FINESS Array B 43.31 324 P P 00 15 06.0 +1.4
comp=Z,3.3nm,0.8s,baz=104,slow=7.2,SNR=10.0
FINES LR LR 00 32 33.7
comp=Z,147nm,19.9s,baz=100,slow=35
FINES FINESS Array B 43.31 324 P P 00 15 04.0 -0.6
FINES FINESS Array B 43.31 324 P P 00 15 06.0 +1.4
BURAR Bucovina Array 43.38 304 ⇑P P 00 15 05.3 -0.2
BURAR Bucovina Array 43.38 304 P P 00 15 05.2 -0.2
BURAR Bucovina Array 43.38 304 ⇑P P 00 15 05.3 -0.2
VOIR 43.76 301 ⇑P P 00 15 10.2 +1.7
VOIR 43.76 301 ⇑P P 00 15 10.3 +1.7
LOT Lotru 44.65 301 ⇑P P 00 15 17.6 +1.9
TRPA Tarpa 45.11 305 ⇑P P 00 15 21.1 +2.0
GZR Gura Zlata 45.35 301 ⇑P P 00 15 22.4 +1.2
ARCES ARCESS Array B 45.42 336 P P 00 15 23.6 +2.2
comp=Z,3.6nm,0.9s,baz=98,slow=7.5,SNR=4.6
BZS Buzias 46.12 302 ⇑P P 00 15 29.1 +1.9
BZS Buzias 46.12 302 ⇑P P 00 15 29.1 +1.9
MDVR Moldovita 46.20 301 ⇑P P 00 15 29.1 +1.1
NIE Niedzica 46.41 307 P P 00 15 32.0 +2.5
NIE pmax pmax
comp=Z,4.0nm,1.5s
LANS Liptovska Anna 46.99 307 eP P 00 15 34.8 +0.7
LANS pmax pmax
comp=Z,2.0nm,0.5s
LANS Liptovska Anna 46.99 307 eP P 00 15 34.8 +0.7
VYHS Vyhne 47.50 306 eP P 00 15 39.7 +1.7
VYHS pmax pmax
comp=Z,16nm,1.6s
VYHS Vyhne 47.50 306 eP P 00 15 39.7 +1.7
VRAC Vranov 48.83 307 ⇑P P 00 15 50.5 +2.2
VRAC Vranov 48.83 307 ⇑P P 00 15 50.5 +2.2
CONA Conrad Observa 49.56 306 i pP P 00 15 55.6 +1.7
comp=Z,4.6nm,0.9s
MPSI Mapaga 49.58 127 P P 00 15 55.0 +0.7
comp=Z,11nm,1.4s
BRG Berggiesshubel 50.23 310 eP P 00 16 00.9 +2.0
BRG pmax pmax
comp=Z,6.0nm,1.2s
SOKA Soboth 50.38 304 i pP P 00 16 01.5 +1.3
comp=Z,5.2nm,0.9s
NB2 NORSAR Subarra 50.46 323 P P 00 16 00.7 +0.2
comp=Z,14nm,1.4s,baz=86,slow=7.9
NOA NORSAR Array B 50.46 323 P P 00 16 00.9 +0.4
comp=Z,2.1nm,0.9s,baz=86,slow=7.3,SNR=5.9
OBKA Obir 50.75 304 i sP P 00 16 05.2 +2.2
comp=Z,2.1nm,0.7s
GERES GERESS Array B 50.78 307 P P 00 16 03.8 +0.6
comp=Z,3.3nm,0.8s,baz=76,slow=6.1,SNR=21
GERES GERESS Array B 50.78 307 P P 00 16 02.8 -0.5
WET Wettzell 51.25 308 P P 00 16 07.6 +1.0
TTSI Tana Toraja 52.12 130 P P 00 16 14.9 +1.4
comp=Z,4µmcomp=Z,14nm,1.2s
WTTA Wattenberg 52.50 306 i pP P 00 16 17.0 +0.9
comp=Z,2.8nm,0.7s
SQTA Sankt Quirin 52.79 306 i pP P 00 16 18.7 +0.4
comp=Z,1.5nm,0.5s
MOTA Moosalm 52.83 306 i pP P 00 16 19.2 +0.6
comp=Z,2.7nm,0.8s
FETA Feichten 53.16 306 i pP P 00 16 21.3 +0.2
comp=Z,1.6nm,0.7s
DAVA Damuels 53.65 306 i pP P 00 16 25.5 +0.9
comp=Z,3.7nm,0.7s
BILL Bilibino 55.00 27 P P 00 16 33.0 -0.9
BILL IAmb IAmb 00 16 38.3
comp=Z,4.5nm,0.9s
BILL Bilibino 55.00 27 eP P 00 16 34.4 +0.5
BILL e 00 18 36.1
BILL pmax pmax
comp=Z,4.0nm,1.0s
KMBO Kilima Mbogo 55.90 239 P P 00 16 41.7 +0.3
comp=Z,1.0nm,0.7s,baz=36,slow=12,SNR=5.6
KMBO Kilima Mbogo 55.90 239 P P 00 16 39.5 -2.0
KMBO IAmb IAmb 00 16 42.4
comp=Z,7.0nm,1.4s
KMBO Kilima Mbogo 55.90 239 i P P 00 16 42.7 +1.3
KMBO pmax pmax
comp=Z,1.0nm,0.6s
ESDC Sonseca Array 65.80 302 P P 00 17 47.4 -0.9
comp=Z,1.3nm,0.7s,baz=55,slow=7.3,SNR=8.7
ESDC LR LR 00 51 28.8
comp=Z,74nm,19.9s,baz=330,slow=40
ESDC Sonseca Array 65.80 302 IAmb IAmb 00 17 49.3
comp=Z,2.3nm,1.2s
IMAR Indian Mountai 69.67 21 P P 00 18 11.5 -0.6
BMAR Burnt Mountain 71.06 17 P P 00 18 21.8 +1.0
ILAR Eielson Array 72.52 20 P P 00 18 28.9 -0.5
comp=Z,5.2nm,1.2s,baz=304,slow=4.6,SNR=4.9
ILAR Eielson Array 72.52 20 P P 00 18 29.3 -0.2
ILAR Eielson Array 72.52 20 P P 00 18 29.3 -0.2
INK Inuvik 72.70 13 P P 00 18 29.4 -1.1
INK IAmb IAmb 00 18 44.1
comp=Z,6.7nm,1.3s
INK Inuvik 72.70 13 P P 00 18 29.4 -1.1
INK pmax pmax
comp=Z,7.0nm,1.3s
C36M Paulatuk 73.28 10 IAmb IAmb 00 18 33.8
comp=Z,3.9nm,0.9s
WB0 Warramunga Arr 74.00 130 P P 00 18 36.7 -2.2
WRA Warramunga Arr 74.10 130 P P 00 18 38.7 -0.7
comp=Z,7.5nm,0.8s,baz=326,slow=6.0,SNR=20
WRA Warramunga Arr 74.10 130 P P 00 18 37.5 -1.9
WRA Warramunga Arr 74.10 130 i P P 00 18 40.2 +0.8
WRA pmax pmax
comp=Z,8.0nm,0.8s
TORD Torodi Ar. Bea 75.01 275 P P 00 18 43.8 -1.1
comp=Z,1.1nm,1.0s,baz=52,slow=5.1,SNR=5.6
TORD Torodi Ar. Bea 75.01 275 P P 00 18 42.9 -2.0
ASAR Alice Springs 76.62 133 P P 00 18 53.5 -0.4
comp=Z,4.4nm,0.8s,baz=315,slow=4.7,SNR=27
ASAR Alice Springs 76.62 133 P P 00 18 52.0 -1.8
YKA Yellowknife Ar 81.01 8 P P 00 19 16.2 -1.3
comp=Z,1.3nm,0.8s,baz=336,slow=5.2,SNR=16
BOSA Boshof 83.76 228 P P 00 19 30.5 -1.9
comp=Z,2.4nm,0.7s,baz=4.5,slow=2.4,SNR=5.8
BOSA Boshof 83.76 228 P P 00 19 31.1 -1.3
BOSA Boshof 83.76 228 P P 00 19 31.1 -1.3
BOSA pmax pmax
comp=Z,10.0nm,1.4s
STKA Stephens Creek 87.25 133 P P 00 19 48.0 -1.5
comp=Z,3.9nm,0.8s,baz=328,slow=4.9,SNR=6.8
STKA Stephens Creek 87.25 133 P P 00 19 48.4 -1.1
STKA Stephens Creek 87.25 133 P P 00 19 48.4 -1.1
STKA pmax pmax
comp=Z,1.0nm,1.0s
CPUP Villa Florida 144.50 274 PKP PKPab 00 26 36.9 -1.2
comp=Z,1.0nm,0.3s,baz=81,slow=3.7,SNR=3.7

NNC 13 00:08:36.8±2.2,35.91N×82.04E,h8km±11km,mb5.2, mpv5.0,Error ellipse: s-maj=24.4km s-min=14.0km az=64.0
BJI 13 00:08:40.9±0.0,36.00N×82.47E,h5km,mB4.7/20, mb4.3/35,ML4.9/4,Ms4.5/31,Ms7 4.2/29
IDC 13 00:08:40.7±0.6,35.79N×82.27E,h0km,mb4.3/21, mb1 4.5/25,mb1mx4.3/51,mbtmp4.4/25,ML3.8/4,MS3.9/8, Ms1 3.9/8,ms1mx3.7/18,Error ellipse: s-maj=15.7km s-min=12.5km az=35.0
MOS 13 00:08:41.6±1.8,35.93N×82.39E,h10km,mb4.9/36,Error ellipse: s-maj=7.4km s-min=4.3km az=116.5
NEIC 13 00:08:42.5±2.3,35.93N±0.08×82.43E±0.10,h10km±1km, mb4.7/29,Error ellipse: s-maj=13.7km s-min=12.2km az=132.0
GCMT 13 00:08:45.5±0.4,36.09N±0.03×82.33E±0.03,h35km±1km, MW4.8/70,Moment Tensor Solution. s15,c17; s70,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.62±.21; $M_{\theta\theta}$-1.85±.14; $M_{\phi\phi}$2.47±.14; $M_{r\theta}$0.61±.15; $M_{r\phi}$0.58±.09; $M_{\theta\phi}$-0.14±.14; Best double couple: $M_0$2.36200×10^{16} NP1:ϕ_s230.00000°,δ74.00000°,λ-15.00000°. NP2: ϕ_s325.00000°,δ76.00000°,λ-163.00000°. Principal axes: T 2.5480, Plg1.0000°, Azm97.0000°; N -0.3770, Plg68.0000°, Azm5.0000°; P -2.1750, Plg22.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 13 00:08:43.0±0.3,35.93N±0.04×82.39E±0.04,h10km,n253, σ2§14/250,mb4.6/70,MS4.0/13,36C-9D,Xizang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSH Kashi 6.22 307 P Pn 00 10 22.0 +7.0
KSH pP Pb 00 10 25.2 -6.3
KSH S Sn 00 11 34.0 +7.8
PRZ Przheval'sk 7.24 336 Pn Pn 00 10 27.8 -1.2
PRZ Przheval'sk 7.24 336 P Pn 00 10 27.8 -1.2
KDJ Kajisay 7.40 328 Pn Pn 00 10 31.6 +0.4
KDJ Kajisay 7.40 328 P Pn 00 10 31.6 +0.4
NRN Naryn 7.43 320 Pn Pn 00 10 32.0 +0.3
NRN Naryn 7.43 320 P Pn 00 10 32.0 +0.3
DANN Dangsing 7.64 171 eP Pn 00 10 35.4 +0.7
71nm,0.6s
PDGK Podgornoye 7.72 344 ⇑Pn Pn 00 10 27.4 -8.2
56nm,0.7s
PDGK ⇓Sn Sn 00 11 58.1 -5.0
438nm,0.7s
PDGK ⇓Lg Lg 00 12 39.2
525nm,0.9s
PDGK Podgornoye 7.72 344 P Pn 00 10 27.4 -8.2
NIL Nilore 7.86 256 Pn Pn 00 10 35.4 -1.9
NIL Nilore 7.86 256 P Pn 00 10 35.4 -1.9
GKN Gorkha 8.13 166 eP Pn 00 10 42.2 +1.0
73nm,0.7s
KOLN Koldanda 8.20 172 eP Pn 00 10 41.0 -1.2
92nm,0.9s
BOOM Boomskoye usch 8.25 325 Pn Pn 00 10 41.6 -1.2
BOOM Boomskoye usch 8.25 325 P Pn 00 10 41.6 -1.2
MDOK Medeo 8.32 332 ⇑Lg Lg 00 12 59.3
352nm,1.1s
KNDC Almaty 8.40 332 ⇑Lg Lg 00 12 58.3
KKN Kakani 8.48 162 eP Pn 00 10 47.3 +1.3
125nm,1.1s
GUN Gumba 8.52 159 eP Pn 00 10 47.7 +0.9
200nm,1.0s
DMN Daman 8.61 164 eP Pn 00 10 47.7 -0.2
108nm,1.0s
PKIN Phulchoki 8.71 162 eP Pn 00 10 49.5 +0.2
40nm,0.4s
PKI Pulchoki 8.72 162 eP Pn 00 10 49.6 +0.2
83nm,0.8s
JIRN Jiri 8.85 158 eP Pn 00 10 52.5 +1.2
144nm,0.7s
WMQ Urumqi 8.87 26 ePn Pn 00 10 49.4 -1.9
WMQ Sn Sn 00 12 23.2 -8.1
WMQ Urumqi 8.87 26 eP Pn 00 10 54.7 +3.4
WMQ S Sn 00 12 29.5 -1.8
WMQ smax smax
comp=N,180nm,0.9s
WMQ smax smax
comp=E,140nm,1.1s
WMQ Urumqi 8.87 26 Pn Pn 00 10 50.9 -0.4
WMQ Urumqi 8.87 26 P Pn 00 10 50.9 -0.4
AAK Ala-Archa 9.07 320 Pn Pn 00 10 56.8 +2.7
0.8nm,0.3s,baz=128,slow=23,SNR=1.1
AAK Lg Lg 00 13 24.6
3.0nm,0.3s,baz=294,slow=22,SNR=3.8
AAK Ala-Archa 9.07 320 ⇑Pg Pn 00 11 19.3 +25
64nm,0.8s
AAK ⇑Lg Lg 00 13 20.8
292nm,0.9s
AAK Ala-Archa 9.07 320 Pn 00 10 55.8 +1.7
AAK Ala-Archa 9.07 320 ceP Pn 00 10 58.4 +4.3
AAK pmax pmax
comp=Z,24nm,1.0s
ARSB Arslanbob 9.12 309 Pn Pn 00 10 55.9 +1.1
ARSB Arslanbob 9.12 309 P Pn 00 10 55.9 +1.1
CHMS Chumysh 9.20 322 ⇑Pg Pn 00 11 22.7 +27
comp=Z,16nm,0.8s
CHMS ⇓Lg Lg 00 13 24.3
comp=Z,137nm,1.2s
LSA Lhasa 9.63 128 P Pn 00 11 06.5 +4.4
LSA pP 00 11 11.4
LSA pmax pmax
comp=Z,19nm,1.3s
LSA LR LR
comp=Z,3µm,10.0s
LSA LR LR
comp=Z,3µm,11.4s
LSA LR LR
comp=Z,4µm,10.0s
RAMN Ramite 9.64 157 eP Pn 00 11 02.1 +0.1
comp=Z,145nm,0.9s
TAPN Taplejung 9.68 151 eP Pn 00 11 02.9 +0.4
comp=Z,35nm,0.8s
ODAN Odare 9.99 153 eP Pn 00 11 06.7 -0.2
comp=Z,124nm,0.9s
BTK Batken 10.02 298 Pn Pn 00 11 07.9 +0.8
BTK Batken 10.02 298 P Pn 00 11 07.9 +0.8
GTK Tadong 10.08 147 ex Pn 00 11 07.8 -0.1
GTK ex x 00 12 27.9
MK31 Makanchi Array 10.86 360 ⇑Pn Pn 00 11 13.4 -5.0
comp=Z,44nm,0.8s,baz=186,slow=12,SNR=36
MK31 ⇓Sn Sn 00 13 15.0 -5.0
comp=Z,38nm,0.8s,baz=183,slow=25,SNR=6.3
MK31 ⇓Lg Lg 00 14 22.2
comp=Z,19nm,0.6s
MK31 Makanchi Array 10.86 360 Pn Pn 00 11 17.8 -0.7
MK31 Makanchi Array 10.86 360 P Pn 00 11 16.8 -1.6
MKAR Makanchi Array 10.86 360 Pn Pn 00 11 16.8 -1.7
comp=Z,5.3nm,0.3s,baz=193,slow=12,SNR=14
MKAR Sn Sn 00 13 14.8 -5.2
comp=Z,4.3nm,0.3s,baz=189,slow=24,SNR=5.0
MKAR Lg Lg 00 14 24.3
comp=Z,0.7nm,0.3s,baz=164,slow=26,SNR=2.4
MKAR LR LR 00 16 18.1
comp=Z,773nm,18.6s,baz=174,slow=42
MKAR Makanchi Array 10.86 360 Pn 00 11 17.4 -1.0
MKAR Makanchi Array 10.86 360 P Pn 00 11 17.4 -1.0
MAKZ Makanchi 10.88 358 ⇑Pn Pn 00 11 14.6 -4.1
comp=Z,134nm,1.1s
MAKZ ⇑Sn Sn 00 13 16.2 -4.2
comp=Z,54nm,1.0s
MAKZ ⇑Lg Lg 00 14 23.2
comp=Z,84nm,1.2s
MAKZ Makanchi 10.88 358 Pn Pn 00 11 18.1 -0.5
MAKZ Sn Sn 00 13 13.9 -6.5
MAKZ Makanchi 10.88 358 i P Pn 00 11 17.3 -1.4
MAKZ pmax pmax
comp=Z,134nm,1.1s
KBL Kabul 11.01 267 Pn Pn 00 11 21.7 +1.0
KBL Kabul 11.01 267 P Pn 00 11 21.7 +1.0
KK31 Karatay Array 11.63 312 ⇑Pg Pn 00 12 04.8 +36
comp=Z,15nm,0.8s,baz=124,slow=15,SNR=4.2
KK31 ⇑Lg Lg 00 14 40.4
comp=Z,49nm,1.0s,baz=125,slow=24,SNR=5.1
BHPL Bhopal 13.36 200 ex Pn 00 12 02.8 +10
GTA Gaotai 14.23 71 eP Pn 00 12 03.8 -0.8
GTA pP P 00 12 07.3 -4.8
GTA sP 00 12 10.2
GTA S Sn 00 14 43.2 +0.6
GTA SS S 00 14 53.2 -10
GTA pmax pmax
comp=Z,2.0nm,0.9s
GTA pmax pmax
comp=Z,52nm,4.5s
GTA LR LR
comp=Z,800nm,14.8s
GTA LR LR
comp=Z,1µm,11.7s
GTA LR LR
comp=Z,1µm,11.0s
KURBB Kurchatov Arra 14.95 350 Pn Pn 00 12 10.6 -3.7
comp=Z,0.1nm,0.3s,baz=174,slow=12,SNR=7.4
KURBB Lg Lg 00 16 38.7
comp=Z,0.3nm,0.3s,baz=0.9,slow=5.9,SNR=4.4
KURK Kurchatov 15.03 351 Pn 00 12 11.6 -3.8
KURK IAmb IAmb 00 12 17.8
comp=Z,24nm,0.9s
KURK Kurchatov 15.03 351⇓eP Pn 00 12 11.5 -3.8
KURK pmax pmax
comp=Z,4.0nm,0.7s
HRA Herat 16.55 271 Pn 00 12 34.4 -1.0
RPR Rampur 17.22 190 i P Pn 00 12 43.4 -0.3
SRSP Sriramsagar 17.31 193 eP Pn 00 12 44.3 -0.5
LZH Lanzhou 17.36 83 eP Pn 00 12 45.2 -0.3
LZH pP P 00 12 47.8 +0.9
LZH sP pP 00 12 50.1 -0.9
LZH PP PnPn 00 13 00.0 +4.5

LZH SS S 00 16 16.1 +8.6
LZH pmax pmax
comp=Z,18nm,1.2s
LZH pmax pmax
comp=Z,200nm,4.9s
LZH LR LR
comp=Z,1μm,12.0s
LZH LR LR
comp=Z,1μm,12.3s
LZH LR LR
comp=Z,1μm,14.5s
CHLP Challavanipeta 17.42 175 *e*P **Pn 00 12 45.8 -0.3**
ZAA0 Zalesovo Array 18.10 5 P **Pn 00 12 50.6 -3.7**
ZAA0 IAmb IAmb 00 12 57.5
comp=Z,56nm,0.8s
ZALV Zalesovo Beam 18.10 5 P **Pn 00 12 50.3 -4.0**
comp=Z,0.9nm,0.3s,baz=193,slow=11,SNR=15
ZALV LR LR 00 20 59.5
comp=Z,384nm,18.3s,baz=194,slow=40
ZALV Zalesovo Beam 18.10 5 P **Pn 00 12 50.1 -4.2**
ZALV Zalesovo Beam 18.10 5 P **Pn 00 12 50.1 -4.2**
GGR Gangavaram 18.14 187 *e*P **Pn 00 12 53.8 -1.2**
CD2 Chengdu 18.51 100 P **P 00 12 56.5 -3.0**
CD2 S **Sn 00 16 26.5 -0.1**
CD2 LR LR
comp=Z,2μm,10.6s
CD2 LR LR
comp=Z,950nm,8.8s
CD2 LR LR
comp=Z,1μm,10.4s
KLRI Killari 18.51 198 *e*P **Pn 00 12 59.4 -0.3**
PVM Polavaram 18.62 182 *e*P **P 00 13 00.2 -0.4**
HYBB Hyderabad (bro 18.75 191 *e*P **Pn 00 13 02.3 -0.2**
HYB Hyderabad 18.75 191 *i* P **Pn 00 13 02.0 -0.5**
BVAR Borovoye Array 19.07 337 P **Pn 00 13 05.7 -0.5**
comp=Z,2.5nm,0.3s,baz=142,slow=7.8,SNR=22
BRVK Borovoye 19.14 337 P **Pn 00 13 06.7 -0.2**
BRVK IAmb IAmb 00 13 08.5
comp=Z,52nm,0.8s
BRVK Borovoye 19.14 337 P **Pn 00 13 06.7 -0.2**
BRVK pmax pmax
comp=Z,52nm,0.8s
MYLAV Mylavaram 19.17 185 *e*P **P 00 13 06.0 -0.6**
NJS Nagarjunasagar 19.49 189 *e*P **P 00 13 09.4 -0.8**
GEYT Alibeck 19.50 283 P **P 00 13 09.7 -0.6**
comp=Z,0.2nm,0.3s,baz=116,slow=10,SNR=11
GEYT Alibeck 19.50 283 P **P 00 13 09.2 -1.1**
GYA0B ALIBECK ARRAY 19.50 283 P **P 00 13 10.2 -0.1**
GYA0B IAmb IAmb 00 13 12.3
comp=Z,32nm,1.1s
SRLM Srisailam 19.99 190 *e*P **P 00 13 15.8 +0.1**
ADKI Addanki 20.12 187 *e*P **P 00 13 16.2 -0.8**
MOY Mondy 20.59 34 *e*P **P 00 13 21.2 -0.9**
MOY pmax pmax
comp=Z,68nm,2.3s
ZAK Zakamensk 20.90 40 *e*P Pn 00 13 28.7 +0.8
ZAK pmax pmax
comp=Z,38nm,1.0s
ABKAR Akbulak array 21.12 316 P **P 00 13 26.0 -1.8**
SONM Songino Array 21.37 49 P **P 00 13 30.7 +0.1**
comp=Z,24nm,0.7s,baz=240,slow=11,SNR=32
SONM LR LR 00 22 20.0
comp=Z,745nm,18.4s,baz=228,slow=38
SONM Songino Array 21.37 49 P **P 00 13 31.1 +0.5**
SONM Songino Array 21.37 49 P **P 00 13 31.1 +0.5**
SONM pmax pmax
comp=Z,32nm,1.0s
URV Uravakonda 21.39 194 *e*P **P 00 13 29.5 -1.4**
ULN Ulaanbaatar 21.79 49 P **P 00 13 35.7 +0.6**
ULN Ulaanbaatar 21.79 49 P **P 00 13 35.7 +0.6**
ULN pmax pmax
comp=Z,56nm,0.9s
XAN Xi'an 21.80 87 P **P 00 13 40.0 +4.8**
XAN pP sP 00 13 45.4 +4.1
XAN pmax pmax
comp=Z,11nm,1.7s
TLY Talaya 21.86 37 P **P 00 13 37.2 +1.5**
comp=Z,2.9nm,0.5s,baz=228,slow=16,SNR=3.3
TLY LR LR 00 22 56.8
comp=Z,523nm,19.6s,baz=230,slow=39
TLY Talaya 21.86 37 P **P 00 13 35.8 +0.1**
TLY Talaya 21.86 37 *i* P **P 00 13 36.0 +0.3**
TLY pmax pmax
comp=Z,9.0nm,0.8s
BTO Baotou 22.15 69 *e*P **P 00 13 37.9 -1.1**
SKHT Srikalahasti 22.22 187 *e*P **P 00 13 38.7 -1.0**
CHTO Chiang Mai 22.45 135 P **P 00 13 41.5 -0.8**
CHTO Chiang Mai 22.45 135 P **P 00 13 41.5 -0.8**
CHTO pmax pmax
comp=Z,10.0nm,1.0s
IRK Irkutsk 22.51 37 *e*P **P 00 13 44.1 +1.5**
IRK *e* 00 17 49.6
IRK pmax pmax
comp=Z,70nm,2.0s
CMAR Chiang Mai Arr 22.73 136 P **P 00 13 45.1 -0.1**
comp=Z,1.6nm,0.4s,baz=310,slow=11,SNR=5.5
GYA Guiyang 22.76 108 P **P 00 13 46.1 +0.5**
GYA PP sP 00 14 13.6 +22
GYA S **S 00 17 55.1 +0.5**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,140nm,4.3s
GYA LR LR
comp=Z,420nm,10.2s
GYA LR LR
comp=Z,560nm,11.6s
GYA LR LR
comp=Z,610nm,10.9s
AKTO Aktyubinsk 22.80 317 P **P 00 13 45.4 -0.3**
comp=Z,9.1nm,0.9s,baz=131,slow=14,SNR=5.6
HHC Hu-ho-hao-te 23.33 69 *e*P **P 00 13 50.3 -1.1**
HHC sP sP 00 13 57.8 +0.2
HHC PP **PnPn 00 14 25.8 +8.6**
HHC S **S 00 18 02.7 -1.4**
HHC sS sS 00 18 10.0 -1.6
HHC pmax pmax
comp=Z,2.0nm,0.6s
HHC pmax pmax
comp=Z,63nm,4.8s
HHC LR LR
comp=Z,200nm,10.4s
HHC LR LR
comp=Z,180nm,11.8s
HHC LR LR
comp=Z,220nm,11.1s
SVE Sverdlovsk 25.53 332⇓*e*P **P 00 14 14.9 +3.4**
SVE pmax pmax
comp=Z,30nm,1.3s
ARU Arti 26.08 329 P **P 00 14 17.2 +0.7**
comp=Z,5.1nm,0.9s,baz=141,slow=4.6,SNR=7.0
ARU Arti 26.08 329 P **P 00 14 17.0 +0.5**
ARU IAmb IAmb 00 14 21.7
comp=Z,15nm,0.9s
ARU Arti 26.08 329*c i*P **P 00 14 15.3 -1.2**
ARU *e* 00 14 51.7
ARU S **S 00 18 46.2 -1.3**
ARU pmax pmax
comp=Z,8.0nm,0.6s
BJI Beijing 26.85 71 P **P 00 14 24.7 +1.1**
BJI pmax pmax
comp=Z,6.0nm,1.9s
MAK Makhachkala 27.70 295 *e*P **P 00 14 32.5 +1.3**
MAK *e*S **S 00 19 17.6 +4.3**
MAK pmax pmax
comp=Z,216nm,1.6s
MAK MLR MLR
comp=Z,455nm,13.0s
PALK Pallekele 28.56 184 LR LR 00 26 38.6
comp=Z,172nm,20.1s,baz=351,slow=38
QIZ Qiongzhong 29.46 118 P **P 00 14 46.1 -1.0**
QIZ S **S 00 19 41.6 +0.2**
QIZ LR LR
comp=Z,430nm,13.6s
QIZ LR LR
comp=Z,410nm,16.9s
QIZ LR LR
comp=Z,410nm,14.7s
BOD Bodaibo 30.30 34 *e*P **P 00 14 57.0 +2.8**
BOD pmax pmax
comp=Z,7.0nm,1.1s
NJ2 Nanjing 30.37 87 *e*P **P 00 14 54.3 -0.7**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
ONI Oni 30.67 295 P P 00 15 03.6 +5.9

KBZ Khabaz 31.08 297 LR LR 00 30 50.5
comp=Z,224nm,18.4s,baz=92,slow=43
KIV Kislovodsk 31.24 297 *e*P P 00 15 07.4 +4.7
KIV pmax pmax
comp=Z,10.0nm,1.1s
VRH Novokhopyorsk 32.72 311 *e*P **P 00 15 17.7 +2.2**
VRH pmax pmax
comp=Z,10.0nm,0.9s
RAYN Ar Rayn 34.14 259 P **P 00 15 27.8 -0.5**
RAYN IAmb IAmb 00 15 33.7
comp=Z,9.7nm,1.4s
RAYN Ar Rayn 34.14 259 P **P 00 15 27.8 -0.5**
RAYN pmax pmax
comp=Z,10.0nm,1.4s
VSR Storozhevoye 34.30 310 *e*P **P 00 15 30.3 +1.0**
VSR pmax pmax
comp=Z,10.0nm,0.9s
PRGR Permogore 34.54 330 *e*P P 00 15 23.9 -7.3
PRGR pmax pmax
comp=Z,11nm,0.8s
ZEA Zeya 35.74 46 *e*P **P 00 15 44.2 +2.5**
ZEA pmax pmax
comp=Z,17nm,1.0s
ZEA MLR MLR
comp=Z,600nm,11.0s
ZEA MLR MLR
comp=E,400nm,12.0s
MOS Moscow 36.13 318 *e*P **P 00 15 43.6 -1.4**
MOS pmax pmax
comp=Z,27nm,1.1s
OBN Obninsk 36.57 316 *e*P **P 00 15 50.7 +1.9**
OBN *e* 00 17 10.8
OBN *e* 00 18 12.2
OBN pmax pmax
comp=Z,17nm,1.3s
KLMR Klimovskoe 36.82 326 *e*P **P 00 15 48.6 -2.2**
KLMR pmax pmax
comp=Z,25nm,1.0s
KLMR Klimovskoe 36.82 326 *e*P **P 00 15 48.7 -2.1**
KLMR AMP 00 15 56.2
comp=Z,25nm,1.0s
KLR Kul'dur 38.03 54 P **P 00 16 02.8 +1.5**
comp=Z,15nm,0.8s,baz=274,slow=8.3,SNR=28
KLR Kul'dur 38.03 54 *i* P **P 00 16 00.1 -1.1**
KLR pmax pmax
comp=Z,15nm,0.9s
BR131 Keskin Array S 38.32 291 P **P 00 16 04.1 +0.1**
BR131 Keskin Array S 38.32 291 P **P 00 16 04.1 +0.1**
BR131 pmax pmax
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 38.32 291 P **P 00 16 04.0 +0.1**
comp=Z,3.3nm,1.0s,baz=90,slow=9.4,SNR=6.1
BRTR LR LR 00 35 16.8
comp=Z,46nm,19.8s,baz=50,slow=42
BRTR Keskin Array B 38.32 291 P **P 00 16 03.8 -0.2**
BRTR Keskin Array B 38.32 291*c e*P **P 00 16 04.5 +0.5**
BRTR pmax pmax
comp=Z,3.0nm,1.0s
TMCR Tamitsa 38.80 331 *e*P **P 00 16 06.9 -0.5**
TMCR pmax pmax
comp=Z,37nm,1.2s
YAK Yakutsk 39.22 33 P **P 00 16 12.3 +1.3**
comp=Z,12nm,0.5s,baz=80,slow=3.1,SNR=7.0
YAK Yakutsk 39.22 33 IAmb IAmb 00 16 16.9
comp=Z,35nm,0.8s
YAK Yakutsk 39.22 33 *e*P **P 00 16 08.5 -2.5**
YAK pmax pmax
comp=Z,54nm,1.3s
YAK pmax pmax
comp=N,6.0nm,1.0s
YAK pmax pmax
comp=E,12nm,1.4s
AKASG Malin Array Be 40.52 308 P **P 00 16 20.1 -1.9**
comp=E,1.4nm,0.6s,baz=75,slow=8.3,SNR=8.2
AKASG Malin Array Be 40.52 308 P **P 00 16 20.9 -1.1**
AKASG Malin Array Be 40.52 308 P **P 00 16 20.9 -1.1**
AKASG pmax pmax
comp=Z,2.0nm,1.1s
AKBB Malin Array Si 40.52 308 P **P 00 16 21.0 -0.9**
AKBB IAmb IAmb 00 16 28.0
comp=Z,8.7nm,0.9s
AKBB Malin Array Si 40.52 308 P **P 00 16 21.0 -0.9**
AKBB pmax pmax
comp=Z,9.0nm,1.0s
GRNR Gornyy 41.06 51 *e*P P 00 16 17.3 -9.2
GRNR MLR MLR
comp=Z,180nm,16.0s
SORM Soroca 41.15 305 ⇑P **P 00 16 25.9 -1.3**
SORM Soroca 41.15 305 ⇑P **P 00 16 25.9 -1.3**
JOF Joensuu 41.17 327 P **P 00 16 31.1 +3.9**
JOF pmax pmax
comp=Z,15nm,0.9s
LVZ Lovozero 41.65 335*c e*P **P 00 16 34.1 +3.0**
LVZ pmax pmax
comp=Z,74nm,2.5s
VRI Vrincioaia 42.46 301 ⇑P **P 00 16 39.1 +1.1**
VRI Vrincioaia 42.46 301 ⇑P **P 00 16 39.1 +1.1**
VSU Vasula 42.47 320*c e*P **P 00 16 40.5 +2.6**
VSU pmax pmax
comp=Z,50nm,1.1s
PLOR Plostina 42.51 301 ⇑P **P 00 16 39.9 +1.4**
PLOR Plostina 42.51 301 ⇑P **P 00 16 39.9 +1.4**
TIXI Tiksi 43.02 20 P **P 00 16 42.6 +0.5**
TIXI Tiksi 43.02 20*c e*P **P 00 16 41.9 -0.3**
TIXI pmax pmax
comp=Z,4.0nm,1.0s
MLR Muntele Rosu 43.05 301 ⇑P **P 00 16 44.7 +1.8**
MLR Muntele Rosu 43.05 301 IAmb IAmb 00 16 52.4
comp=Z,16nm,1.0s
MLR Muntele Rosu 43.05 301 P **P 00 16 44.2 +1.2**
MLR pmax pmax
comp=Z,17nm,1.0s
FIA1 FINESS Array S 43.23 324 P **P 00 16 44.4 +0.4**
FIA1 IAmb IAmb 00 16 48.6
comp=Z,15nm,0.9s
FINES FINESS Array B 43.23 324 P **P 00 16 42.5 -1.5**
comp=Z,2.5nm,0.8s,baz=92,slow=8.9,SNR=4.1
FINES FINESS Array B 43.23 324 P **P 00 16 44.1 +0.1**
FINES FINESS Array B 43.23 324 *i* P **P 00 16 47.2 +3.2**
FINES pmax pmax
comp=Z,11nm,0.9s
BURAR Bucovina Array 43.30 304 ⇓P P 00 16 39.6 -5.3
BURAR ⇓ 00 16 45.6
BURAR Bucovina Array 43.30 304 P **P 00 16 44.7 -0.2**
BURAR Bucovina Array 43.30 304 P **P 00 16 45.6 +0.7**
SUF Sumiainen 43.42 326 P **P 00 16 49.0 +3.4**
SUF pmax pmax
comp=Z,31nm,2.7s
VOIR 43.68 301 ⇑P **P 00 16 48.7 +0.7**
VOIR 43.68 301 ⇑P **P 00 16 48.7 +0.7**
SUW Suwalki 44.21 313 P **P 00 16 51.8 -0.2**
SUW pmax pmax
comp=Z,28nm,1.0s
TRPA Tarpa 45.03 305 ⇑P **P 00 16 58.5 -0.1**
VAF Ylistaro 45.05 326 P **P 00 16 57.1 -1.5**
KOLS Kolonicke sedl 45.11 306 *e*P **P 00 17 01.7 +2.4**
KOLS Kolonicke sedl 45.11 306 *e*P **P 00 17 01.7 +2.4**
UZH Uzhgorod 45.13 306 *e*P **P 00 17 02.6 +3.2**
UZH *e* 00 17 09.4
GZR Gura Zlata 45.27 301 ⇑P **P 00 17 01.9 +1.3**
ARCES ARCESS Array B 45.35 336 P **P 00 17 02.3 +1.4**
comp=Z,7.6nm,0.7s,baz=100,slow=7.9,SNR=12
BZS Buzias 46.03 302 ⇑P **P 00 17 09.9 +3.2**
BZS Buzias 46.03 302 ⇑P **P 00 17 09.9 +3.2**
MDVR Moldovita 46.12 301 ⇑P **P 00 17 07.2 -0.2**
VYHS Vyhne 47.42 306 *e*P **P 00 17 18.3 +0.8**
VYHS pmax pmax
comp=Z,15nm,1.6s
VYHS Vyhne 47.42 306 *e*P **P 00 17 18.3 +0.8**
OKC Ostrava-Krasne 47.66 308 *e*P **P 00 17 23.0 +3.7**
OKC Ostrava-Krasne 47.66 308 *e*P **P 00 17 23.0 +3.7**
MORC Moravsky Berou 48.06 308 *e*P **P 00 17 22.3 -0.1**
MORC Moravsky Berou 48.06 308 P **P 00 17 22.1 -0.3**
MORC Moravsky Berou 48.06 308 P **P 00 17 22.1 -0.3**
MORC pmax pmax
comp=Z,14nm,1.4s
JAVC Velka Javorina 48.12 307 *e*P P 00 17 28.2 +5.2
KRLC Kraliky 48.49 308 *e*P **P 00 17 25.7 -0.1**
KRLC *e*pP **pP 00 17 29.5 -1.0**
KRLC Kraliky 48.49 308 *e*P **P 00 17 25.7 -0.1**
KRLC *e* 00 17 29.5
DPC Dobruska-Polom 48.74 309 *e*P **P 00 17 28.1 +0.4**
DPC *e*pP **pP 00 17 31.9 -0.5**
DPC Dobruska-Polom 48.74 309 *e*P **P 00 17 28.1 +0.4**

DPC *e* 00 17 31.9
VRAC Vranov 48.74 307 *e*P **P 00 17 29.8 +2.1**
VRAC Vranov 48.74 307 ⇑P **P 00 17 28.8 +1.1**
VRAC Vranov 48.74 307 ⇑P **P 00 17 28.8 +1.1**
OSTC Ostas 48.78 309 *e*P **P 00 17 28.4 +0.5**
CHVC Chvalec 48.87 309 *e*P **P 00 17 28.2 -0.5**
CHVC *e*x x 00 17 30.9
UPC Upice 48.91 309 *e*P **P 00 17 29.5 +0.5**
UPC *e*pP **pP 00 17 33.8 +0.2**
UPC Upice 48.91 309 *e*P **P 00 17 29.5 +0.5**
UPC *e* 00 17 33.8
KRUC Moravsky 48.91 307 *e*P **P 00 17 28.8 -0.2**
MA2 Magadan 49.07 39*c e*P **P 00 17 31.3 +1.2**
MA2 pmax pmax
comp=Z,18nm,1.7s
CONA Conrad Observa 49.48 306 *i* pP **P 00 17 33.8 +0.3**
comp=Z,5.3nm,0.9s
SEY Seymchan 49.72 34 *i* P **P 00 17 36.9 +2.0**
PRU Pruhonice 49.93 309 *e*P **P 00 17 38.7 +1.9**
PRU *e*pP **pP 00 17 41.4 0.0**
PRU Pruhonice 49.93 309 *e*P **P 00 17 38.7 +1.9**
PRU *e* 00 17 41.4
BRG Berggiesshubel 50.15 310 *e*P **P 00 17 36.6 -1.8**
BRG pmax pmax
comp=Z,6.0nm,1.0s
SOKA Soboth 50.30 304 *i* pP **P 00 17 40.1 +0.4**
comp=Z,5.6nm,1.0s
NB2 NORSAR Subarra 50.38 323 P **P 00 17 38.9 -1.1**
comp=Z,7.6nm,0.8s,baz=86,slow=7.9
NOA NORSAR Array B 50.38 323 P **P 00 17 39.1 -0.9**
comp=Z,7.5nm,0.9s,baz=86,slow=7.5,SNR=7.7
MOA Molln 50.55 306 *i* sP **P 00 17 44.8 +3.3**
comp=Z,4.2nm,0.9s
NC204 NORSAR Array S 50.58 324 P **P 00 17 40.9 -0.7**
CLL Collm 50.65 311 *e*P **P 00 17 44.0 +1.9**
CLL *e*SS SKiKP 00 28 54.0 -22
CLL Lm MLR 00 39 00.0
comp=Z,200nm,20.0s
CLL Collm 50.65 311 *e*P **P 00 17 44.0 +1.9**
OBKA Obir 50.66 304 *i* sP **P 00 17 44.4 +1.9**
comp=Z,3.2nm,0.8s
GEC2 GERESS Array S 50.70 307 IAmb IAmb 00 17 49.1
comp=Z,11nm,1.0s
GERES GERESS Array B 50.70 307 P **P 00 17 42.6 -0.1**
comp=Z,7.2nm,0.9s,baz=78,slow=7.0,SNR=14
GERES LR LR 00 40 14.5
comp=Z,163nm,21.4s,baz=86,slow=37
GERES GERESS Array B 50.70 307 P **P 00 17 42.4 -0.3**
KHC Kasperske Hory 50.72 308 *e*P **P 00 17 39.9 -2.9**
KHC *e*pP **pP 00 17 45.7 -1.7**
KHC Kasperske Hory 50.72 308 *e*P **P 00 17 39.9 -2.9**
KHC *e* 00 17 45.7
KBA Koelnbreinsper 51.33 305 *i* pP **P 00 17 48.6 +1.0**
comp=Z,4.3nm,1.0s
ABTA Abfaltersbach 51.97 305 *i* pP **P 00 17 52.9 +0.7**
comp=Z,0.9nm,0.5s
WTTA Wattenberg 52.42 306 *i* sP **P 00 17 58.6 +2.9**
MOTA Moosalm 52.74 306 *i* sP **P 00 18 00.8 +2.7**
comp=Z,0.1nm,0.2s
RETA Reutte 52.93 306 *i* sP **P 00 18 02.7 +3.3**
comp=Z,9.5nm,1.1s
FETA Feichten 53.08 306 *i* sP **P 00 18 02.5 +1.9**
comp=Z,2.5nm,0.6s
DAVA Damuels 53.56 306 *i* pP **P 00 18 03.6 -0.5**
comp=Z,9.9nm,1.1s
BILL Bilibino 54.98 27 *e*P **P 00 18 16.6 +2.7**
BILL *e* 00 19 18.8
BILL *e* 00 20 20.0
BILL pmax pmax
comp=Z,8.0nm,1.0s
KMBO Kilima Mbogo 55.88 239 P **P 00 18 19.9 -1.5**
comp=Z,2.0nm,0.9s,baz=57,slow=8.6,SNR=4.7
KMBO Kilima Mbogo 55.88 239 IAmb IAmb 00 18 22.0
comp=Z,4.9nm,1.2s
NOR Nord 56.01 350 *i* P **P 00 18 24.7 +3.5**
comp=Z,7.3nm,1.0s
NOR Nord 56.01 350 *i* P **P 00 18 24.7 +3.5**
NOR pmax pmax
comp=Z,7.0nm,1.0s
SUMG Summit 64.43 343 *i* P **P 00 19 22.0 +2.6**
SUMG Summit 64.43 343 *i* P **P 00 19 22.4 +3.0**
comp=Z,41nm,1.1s
SUMG Summit 64.43 343 P **P 00 19 18.4 -1.0**
SUMG Summit 64.43 343 *i* P **P 00 19 22.0 +2.6**
ESDC Sonseca Array 65.72 302 P **P 00 19 27.1 -0.8**
comp=Z,1.3nm,0.9s,baz=68,slow=7.1,SNR=3.7
ESDC Sonseca Array 65.72 302 P **P 00 19 26.8 -1.1**
IMAR Indian Mountai 69.64 21 P **P 00 19 51.0 -1.1**
BMAR Burnt Mountain 71.03 17 P **P 00 20 00.2 -0.4**
C36M Paulatuk 73.24 10 IAmb IAmb 00 20 18.9
comp=Z,12nm,1.2s
WB0 Warramunga Arr 74.08 129 P **P 00 20 18.1 -1.3**
WB0 IAmb IAmb 00 20 26.1
comp=Z,10nm,1.1s
WRA Warramunga Arr 74.18 130 P **P 00 20 19.0 -1.0**
comp=Z,5.7nm,1.0s,baz=323,slow=5.9,SNR=8.8
WRA Warramunga Arr 74.18 130 P **P 00 20 17.0 -3.0**
TORD Torodi Ar. Bea 74.94 275 P **P 00 20 22.9 -1.7**
comp=Z,1.4nm,0.8s,baz=28,slow=4.9,SNR=3.2
TORD Torodi Ar. Bea 74.94 275 IAmb IAmb 00 20 27.8
comp=Z,1.6nm,0.9s
ASAR Alice Springs 76.70 132 P **P 00 20 33.5 -1.0**
comp=Z,2.6nm,0.7s,baz=316,slow=5.6,SNR=15
ASAR Alice Springs 76.70 132 P **P 00 20 33.1 -1.4**
YKA Yellowknife Ar 80.97 8 P **P 00 20 56.2 -1.1**
comp=Z,1.8nm,0.6s,baz=338,slow=5.5,SNR=15
YKA Yellowknife Ar 80.97 8⇑*e*P **P 00 20 59.0 +1.7**
YKA pmax pmax
comp=Z,2.0nm,0.6s
BOSA Boshof 83.75 228 P **P 00 21 11.3 -1.1**
comp=Z,2.7nm,0.8s,baz=0.7,slow=3.4,SNR=3.8
DBIC Dimbokro 83.91 274 P **P 00 21 11.4 -2.1**
comp=Z,3.5nm,1.1s,baz=47,slow=9.1,SNR=1.8
CPUP Villa Florida 144.43 274 PKP **PKPdf 00 28 19.7 0.0**
comp=Z,3.5nm,0.8s,baz=60,slow=3.6,SNR=4.1

SKO **13** *00:13:51.3, 41.59N × 24.32E, h2km*
ATH 13 00:13:50.0, 41.60N × 24.34E, h16km±5km, ML1.7/4, Error ellipse: s-maj=5.3km s-min=1.0km az=175.0, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAVA	**Kavala**	**0.61**	**168**	P	Pg	00 14 02.2	0.0
KAVA				S	Sb	00 14 10.6	-0.1
KAVA				AML	AML	00 14 11.2	
	comp=E,218μm,0.2s						
KAVA				AML	AML	00 14 11.2	
	comp=N,133μm,0.2s						
KVLA	**Kavala**	**0.66**	**177**	P	Pb	00 14 03.3	+0.2
KVLA				S	Sb	00 14 12.3	+0.3
SRS	**Serrai**	**0.74**	**230**	P	Pg	00 14 04.3	-0.2
SRS				S	Sb	00 14 15.2	+0.9
SRS				AML	AML	00 14 21.8	
	comp=N,76μm,0.1s						
SRS				AML	AML	00 14 23.2	
	comp=E,68μm,0.1s						
RDO	**Rodhopi**	**1.01**	**116**	P	Pn	00 14 09.3	-0.2
RDO				S	Sg	00 14 22.9	+0.1
RDO				AML	AML	00 14 25.9	
	comp=E,110μm,0.2s						
RDO				AML	AML	00 14 28.9	
	comp=N,109μm,0.2s						
THAS	**Thassos island**	**1.03**	**164**	P	Pg	00 14 10.0	0.0
SOH	**Sokhos**	**1.07**	**224**	P	Pg	00 14 10.6	-0.2
KNT	**Kendrikon**	**1.17**	**249**	P	Pb	00 14 12.1	+0.3
KNT				S	Sg	00 14 27.9	+0.1
KNT				AML	AML	00 14 31.7	
	comp=E,61μm,0.2s						
KNT				AML	AML	00 14 32.5	
	comp=N,63μm,0.3s						
OUR	**Ouranopolis**	**1.29**	**192**	P	Pb	00 14 14.0	+0.2
OUR				S	Sg	00 14 31.7	0.0
HORT	**Hortiatis**	**1.37**	**224**	P	Pb	00 14 15.8	+0.5
ALN	**Alexandroupoli**	**1.47**	**118**	P	Pb	00 14 17.2	+0.4
GRG	**Griva**	**1.59**	**247**	P	Pb	00 14 19.8	+0.7
STIP	**Stip**	**1.62**	**274**	*i* Pg	Pn	00 14 16.3	-1.5

TEH 13 00:14:00.4, 27.13N × 52.92E, h9km, ML3.5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.31**	**46**	*e*Sg	Sg	00 14 11.4	+0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LMD1				ePg	Pg	00 14 06.5	0.0
LAR1	LAR	1.40	67	ePg	Pg	00 14 28.5	+1.1
JHRM	Jahrom	1.49	23	ePg	Pb	00 14 28.1	-0.3
JHRM				e		00 14 55.7	
SHI	Shiraz	2.53	352	ePn	Pb	00 14 44.7	-1.5
SHME	Shamm	3.08	110	ePn	Pn	00 14 51.1	+1.8
MSFE	Esma-Masafi	3.40	120	ePn	Pn	00 14 55.4	+1.7
MDH	Madha	3.54	120	ePn	Pn	00 14 59.1	+3.5
UOSS	Minazif	3.67	126	ePn	Pn	00 14 59.3	+2.0
HATD	Hatta, Dubai	3.69	128	ePn	Pn	00 15 00.0	+2.4
NGRK	Negar Kerman	4.19	52	ePn	Pn	00 15 05.7	+0.8
NGRK				e		00 16 39.4	
SOHO	SOHO	4.42	132	ePn	Pn	00 15 10.0	+2.4
TVBK	TV Kerman	4.42	49	e		00 15 12.6	
TVBK				ePn	Pn	00 15 09.9	+1.9
IMEH	Mehriz	4.50	19	ePn	Pn	00 15 09.3	+0.3
CHMN	Cheshme madani	4.89	55	ePn	Pn	00 15 16.8	+2.3
CHMN				e		00 15 20.1	
IBAF	Bafgh	5.01	27	ePn	Pn	00 15 16.2	+0.2

IDC 13 00:20:26.8±1.5, 35.°79N×82.°51E, h0km, mb3.5/6, mb1 3.7/10, mb1mx3.5/35, mbtmp3.5/10, ML3.3/4, Error ellipse: s-maj=32.2km s-min=22.2km az=47.0
NNC 13 00:20:31.9±2.6, 36.°21N×82.°99E, h0km±21km, mb4.3, mpv4.0, Error ellipse: s-maj=37.4km s-min=23.8km az=61.0
ISC 13 00:20:28.0±1.1, 35.°84N±0.°09×82.°6E±0.°1, h10km, n15, σ1.°77/19, mb3.5/6, 4C-3D, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	7.85	343	⇓Pn	Pn	00 22 24.1	+1.8
	6.5nm,0.7s						
PDGK				⇑Sn	Sn	00 23 52.4	+1.2
	19nm,0.8s						
PDGK				⇑Lg	Lg	00 24 33.6	
	27nm,1.1s						
AAK	Ala-Archa	9.23	320	Pn	Pn	00 22 44.2	+2.9
	0.1nm,0.3s,baz=122,slow=16,SNR=2.5						
AAK				Lg	Lg	00 25 12.0	
	0.2nm,0.3s,baz=260,slow=23,SNR=2.3						
MK31	Makanchi Array	10.95	359	⇑Pn	Pn	00 23 05.6	+0.9
	2.4nm,0.7s,baz=184,slow=12,SNR=35						
MK31				⇓Sn	Sn	00 25 05.6	-1.6
	2.2nm,0.8s,baz=180,slow=24,SNR=4.4						
MKAR	Makanchi Array	10.95	359	Pn	Pn	00 23 04.7	0.0
	0.7nm,0.3s,baz=187,slow=11,SNR=23						
MKAR				Sn	Sn	00 25 05.7	-1.5
	0.1nm,0.3s,baz=182,slow=26,SNR=3.6						
MKAR				Lg	Lg	00 26 11.8	
	0.1nm,0.3s,baz=185,slow=29,SNR=0.9						
MAKZ	Makanchi	10.97	358	⇓Pn	Pn	00 23 04.5	-0.4
	6.9nm,0.7s						
MAKZ				⇑Sn	Sn	00 25 05.9	-1.7
	1.7nm,0.8s						
KURBB	Kurchatov Arra	15.06	350	Pn	Pn	00 23 59.5	-1.3
	0.0nm,0.3s,baz=174,slow=12,SNR=6.1						
ZALV	Zalesovo Beam	18.18	4	P	Pn	00 24 38.0	-2.3
	0.1nm,0.3s,baz=190,slow=7.3,SNR=3.1						
BVAR	Borovoye Array	19.21	337	P	Pn	00 24 53.4	+0.6
	0.4nm,0.3s,baz=140,slow=8.5,SNR=12						
GEYT	Alibeck	19.66	283	P	P	00 24 52.8	-4.2
	0.1nm,0.3s,baz=30,slow=19,SNR=1.1						
SONM	Songino Array	21.33	48	P	P	00 25 16.3	+1.2
	0.5nm,0.8s,baz=242,slow=8.8,SNR=4.8						
CMAR	Chiang Mai Arr	22.57	136	P	P	00 25 28.3	-0.3
	0.6nm,0.3s,baz=311,slow=10,SNR=1.0						
AKTO	Aktyubinsk	22.96	317	P	P	00 25 32.5	+0.1
	1.5nm,0.7s,baz=221,slow=20,SNR=2.4						
BRTR	Keskin Array B	38.48	291	P	P	00 27 50.4	0.0
	0.4nm,0.8s,baz=102,slow=6.1,SNR=2.1						
FINES	FINESS Array B	43.38	324	P	P	00 28 29.9	-0.3
	2.3nm,1.0s,baz=106,slow=13,SNR=2.2						
ILAR	Eielson Array	72.52	20	P	P	00 31 56.1	+1.4
	0.3nm,0.8s,baz=290,slow=3.7,SNR=2.3						

IDC 13 00:28:41.6±3.3, 36.°24N×82.°45E, h0km, mb3.3/2, mb1 3.7/7, mb1mx3.4/35, mbtmp3.8/7, ML3.3/5, Error ellipse: s-maj=41.0km s-min=37.6km az=9.0
NNC 13 00:28:45.7±3.8, 36.°42N×83.°41E, h19km±22km, mb4.3, mpv4.1, Error ellipse: s-maj=46.6km s-min=25.9km az=74.0
ISC 13 00:28:43.2±2.2, 36.°3N±0.°1×82.°7E±0.°2, h10km, n10, σ1.°95/14, 6C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	7.49	342	⇑Pn	Pn	00 30 33.4	+0.7
	6.0nm,0.6s						
PDGK				⇑Sn	Sn	00 32 01.5	+3.9
	13nm,0.7s						
PDGK				⇑Lg	Lg	00 32 44.6	
	27nm,1.1s						
AAK	Ala-Archa	8.99	318	Pn	Pn	00 30 53.5	+0.2
	0.1nm,0.3s,baz=149,slow=6.3,SNR=4.0						
MK31	Makanchi Array	10.54	358	Pn	Pn	00 31 14.7	+0.4
	4.0nm,0.8s,baz=181,slow=12,SNR=27						
MK31				⇑Sn	Sn	00 33 10.3	-2.1
	1.5nm,0.7s,baz=177,slow=13,SNR=6.4						
MK31				⇓Lg	Lg	00 34 17.1	
	5.1nm,1.1s,baz=190,slow=13,SNR=11						
MKAR	Makanchi Array	10.54	358	Pn	Pn	00 31 15.3	+0.9
	0.5nm,0.3s,baz=185,slow=13,SNR=25						
MKAR				Sn	Sn	00 33 13.1	+0.6
	0.1nm,0.3s,baz=180,slow=25,SNR=2.7						
MKAR				Lg	Lg	00 34 16.1	
	0.1nm,0.3s,baz=169,slow=23,SNR=2.0						
MAKZ	Makanchi	10.56	357	⇑Pn	Pn	00 31 15.1	+0.4
	5.2nm,0.5s						
MAKZ				⇑Sn	Sn	00 33 10.5	-2.5
	2.4nm,0.8s						
MAKZ				⇓Lg	Lg	00 34 18.0	
	4.7nm,1.2s						
KURBB	Kurchatov Arra	14.68	349	Pn	Pn	00 32 08.8	-2.1
	0.1nm,0.3s,baz=175,slow=12,SNR=5.4						
ZALV	Zalesovo Beam	17.76	4	P	Pn	00 32 48.5	-1.9
	0.1nm,0.3s,baz=190,slow=12,SNR=14						
BVAR	Borovoye Array	18.87	337	P	Pn	00 33 02.5	-1.6
	0.6nm,0.3s,baz=138,slow=8.8,SNR=21						
SONM	Songino Array	20.97	49	P	P	00 33 28.3	+1.7
	0.8nm,0.9s,baz=246,slow=11,SNR=5.9						
FINES	FINESS Array B	43.11	324	P	P	00 36 42.5	-0.9
	0.6nm,0.7s,baz=107,slow=6.6,SNR=3.4						

NEIC 13 00:35:39.7±1.2, 19.°04N±0.°06×66.°19W±0.°03, h35km±57km, Error ellipse: s-maj=8.8km s-min=4.7km az=177.0
RSPR 13 00:35:40.2, 19.°08N×66.°19W, h28km±9km, MD2.8/5
ISC 13 00:35:39.5±1.5, 19.°01N±0.°07×66.°16W±0.°04, h28km, n25, σ0.°69/35, 6C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.64	213		Pb	00 35 51.4	-0.7
CBYP	Canovanas	0.79	159	⇑eP	Pn	00 35 54.5	-0.3
CBYP	Canovanas	0.79	159	eS	Sn	00 36 05.7	0.0
CBYP	Canovanas	0.79	159		Pn	00 35 54.5	-0.3
CBYP					Sn	00 36 05.7	0.0
AOPR	Arecibo Observ	0.87	220	⇑eP	Pn	00 35 55.1	-0.8
AOPR	Arecibo Observ	0.87	220	eS	Sb	00 36 06.6	-0.7
AOPR	Arecibo Observ	0.87	220		Pn	00 35 55.1	-0.8
AOPR					Sb	00 36 06.6	-0.7
SJG	San Juan	0.90	179		Pb	00 35 58.4	+1.9
SJG					Sn	00 36 08.5	+0.2
HUMP	Col San Antoni	0.92	161	⇑eP	Pn	00 35 56.4	-0.1
HUMP	Col San Antoni	0.92	161	eS	Sb	00 36 08.4	-0.1
HUMP	Col San Antoni	0.92	161		Pn	00 35 56.4	-0.1
HUMP					Sb	00 36 08.4	-0.1
PDPR	Patillas Dam,	1.00	172	⇑eP	Pn	00 35 57.6	0.0
PDPR	Patillas Dam,	1.00	172	eS	Sb	00 36 11.0	+0.1
PDPR	Patillas Dam,	1.00	172		Pn	00 35 57.6	0.0
PDPR					Sb	00 36 11.0	+0.1
IGPR	InterUniversit	1.04	177	Pn	Pb	00 35 59.4	+0.5
IGPR					Sb	00 36 13.0	+0.8
AGPR	Aguadilla, PR	1.05	239	Pn	Pb	00 35 59.3	+0.2
OBIP	Obispado Ponce	1.05	204	⇑eP	Pn	00 35 57.9	-0.5
OBIP	Obispado Ponce	1.05	204	eS	Sn	00 36 11.8	-0.3
OBIP	Obispado Ponce	1.05	204		Pn	00 35 57.9	-0.5
OBIP					Sn	00 36 11.8	-0.3
MTP	Monte Pirata	1.08	148	⇑eP	Pn	00 35 58.5	-0.2
MTP	Monte Pirata	1.08	148	eS	Sn	00 36 12.7	-0.1
MTP	Monte Pirata	1.08	148		Pn	00 35 58.5	-0.2
MTP					Sn	00 36 12.7	-0.1
CUPR	Culebra, Puert	1.09	130	Pn	Pb	00 35 59.5	-0.1
STVI	Saint Thomas	1.32	120	Pn	Pb	00 36 03.8	+0.2
STVI					Sn	00 36 17.8	-0.9
SDDR	Presa de Saban	4.85	270	Pn	Pn	00 36 50.3	-0.4
SDDR					Sn	00 37 48.4	+2.4

HEL 13 00:49:38.8, 67.°93N×20.°08E, h0km, ML1.7, Explosion
UPP 13 00:49:39.1±0.0, 67.°83N×20.°20E, h0km, ML2.1, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	23	P	Pg	00 49 41.9	+0.2
KUA				S	Sg	00 49 43.6	+0.3
KUA	Kurravaara	0.13	23	iP	Pg	00 49 41.9	+0.2
KUA				iS	Sg	00 49 43.6	+0.3
RATU	Laukkuluspa	0.23	268	P	Pg	00 49 43.8	+0.3
RATU				S	Sg	00 49 47.0	+0.5
RATU	Laukkuluspa	0.23	268	iP	Pg	00 49 43.8	+0.3
RATU				iS	Sg	00 49 47.0	+0.5
KOVU	Salmi	0.39	358	P	Pg	00 49 46.7	+0.1
KOVU	Salmi	0.39	358	iP	Pg	00 49 46.7	+0.1
LANU	Lannavaara	0.71	71	P	Pg	00 49 52.5	-0.2
LANU	Lannavaara	0.71	71	eP	Pg	00 49 52.3	-0.3
	baz=262						
LANU				eS	Sg	00 50 02.0	+0.2
DUNU	Dundret	0.73	169	P	Pg	00 49 52.7	-0.3
DUNU	Dundret	0.73	169	iP	Pg	00 49 52.7	-0.3
MASU	Masugnsbyn	0.78	118	P	Pg	00 49 54.0	-0.1
MASU	Masugnsbyn	0.78	118	iP	Pg	00 49 54.0	-0.1
KIF	Kilpisjarvi	1.20	10	ePB	Pg	00 50 02.1	+0.1
	baz=196						
KIF				MSG		00 50 13.8	
	comp=Z,5.2nm,0.2s						
KIF				eSB	Sg	00 50 18.0	+0.4
KIF	Kilpisjarvi	1.20	10	eP	Pb	00 50 02.4	-0.3
PAJU	Pajala	1.39	124	P	Pg	00 50 04.5	-1.1
PAJU	Pajala	1.39	124	eP	Pg	00 50 04.5	-1.1
HEF	Hetta	1.42	64	eP	Pn	00 50 04.9	-1.2
	baz=254						
HEF				MSG		00 50 21.6	
	comp=Z,6.2nm,0.2s						
HEF				eSN	Sn	00 50 27.8	+2.3
HEF	Hetta	1.42	64	eP	Pn	00 50 06.0	-0.1
TOF	Tornio	2.39	135	ePB	Pn	00 50 20.9	+1.4
	baz=318						
TOF				eSB	Sb	00 50 51.9	-1.1
TOF				MSG		00 50 52.6	
	comp=Z,3.3nm,0.2s						
SGF	Sodankyl	2.45	96	ePB	Pb	00 50 22.3	-1.6
SGF				eSG	Sg	00 50 56.3	-1.4
RNF	Rovaniemi	2.57	116	ePB	Pb	00 50 24.0	-2.0
RNF				eSB	Sn	00 50 55.7	+1.8
ARE0	ARCESS Array S	2.58	46	eP	Pn	00 50 23.4	+1.3
ARE0				eSB	Sb	00 50 56.7	-1.8
KEV	Kevo	3.14	49	ePG	Pb	00 50 34.9	-0.8
KEV				MSG		00 51 10.3	
	comp=Z,1.4nm,0.2s						
KU6	Riekki	4.22	111	eSG	Sg	00 51 51.8	-2.8

UPP 13 00:50:10.5±0.1, 67.°86N×20.°20E, h0km, ML2.2, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.11	28	P	Pg	00 50 12.8	+0.2
RATU	Laukkuluspa	0.23	262	P	Pg	00 50 15.2	+0.2
RATU				S	Sg	00 50 18.2	+0.2
KOVU	Salmi	0.37	358	P	Pg	00 50 17.7	+0.1
LANU	Lannavaara	0.70	73	P	Pg	00 50 23.7	-0.2
MASU	Masugnsbyn	0.80	119	P	Pg	00 50 25.5	-0.2
PAJU	Pajala	1.40	125	P	Pn	00 50 36.0	-1.3
HEF	Hetta	1.41	65	eP	Pn	00 50 34.4	-3.0
KEV	Kevo	3.12	49	eP	Pn	00 51 01.7	+0.8

TEH 13 00:50:14.8, 34.°81N×51.°99E, h12km, ML3.6
THR 13 00:50:15.0±0.4, 34.°83N×51.°95E, h14km±4km, ML3.4
ISC 13 00:50:16.4±1.0, 34.°84N±0.°03×51.°96E±0.°03, h23km, n58, σ1.°62/59, Northern and central Iran

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IVRN	Varamin	0.25	309	ePg	Pb	00 50 21.6	-1.0
IVRN				eSg	Sb	00 50 26.2	-0.7
IQOM	Qom	0.73	270	ePg	Pb	00 50 29.6	-1.1
IQOM				e		00 50 42.3	
IDMV	Damavand	0.74	4	ePg	Pb	00 50 29.7	-1.1
IHSB	Hasanabad	0.82	317	ePg	Pb	00 50 31.1	-1.0
KRSH	Karshahi	0.88	171	ePg	Pb	00 50 31.4	-1.8
ILAS	Lasjerd	0.98	56	ePg	Pn	00 50 34.5	-0.5
ILAS				e		00 50 49.7	
TEH	Tehran	1.01	332	ePg	Pn	00 50 34.2	-1.2
TEH				e		00 50 49.1	
IFIR	Firoozkooh	1.03	39	ePg	Pn	00 50 34.7	-1.0
IFIR				e		00 50 36.2	
QAM	Ghamsar	1.16	202	ePg	Pn	00 50 36.4	-1.1
CHTH	Charan	1.27	328	ePg	Pn	00 50 38.5	-0.5
CHTH	Charan	1.27	328	ePg	Pn	00 50 38.5	-0.5
IMHD	Mahdasht	1.35	309	ePg	Pn	00 50 39.8	-0.3
IMHD				e		00 51 00.4	
THKV	Tehran--Karaj	1.39	321	IAML		00 51 01.0	
	comp=E,539nm,0.5s						
IALA	Alasht	1.42	29	ePg	Pb	00 50 41.6	-0.8
IPRN	Peran	1.43	12	ePg	Pb	00 50 41.8	-0.7
IPRN				e		00 51 02.8	
ISHM	Shahmirzad	1.45	48	ePg	Pb	00 50 42.0	-1.0
IKLH	Kolahrood	1.55	192	ePn	Pb	00 50 42.6	-0.3
ASAO	Ashtian	1.62	260	ePg	Pb	00 50 44.6	-1.3
ASAO	Ashtian	1.62	260	ePg	Pb	00 50 44.6	-1.3
IANJ	Anjilo	1.72	68	ePn	Pb	00 50 45.9	-1.6
IANJ				e		00 51 10.7	
IRAZ	Razeghan	1.76	289	ePn	Pn	00 50 46.4	+0.7
IRAZ				e		00 51 23.1	
QALM	Alamut, Qazvin	1.92	326	ePg	Pb	00 50 49.6	-1.3
QALM				e		00 51 17.0	
IZEF	Zefreh	1.96	171	ePn	Pn	00 50 49.0	+0.4
IZEF				e		00 51 17.5	
KHMZ	Khomeyn	1.99	237	ePn	Pb	00 50 50.1	-2.0
KHMZ	Khomeyn	1.99	237	ePn	Pb	00 50 50.1	-2.0
IGZV	Ghazvin	2.10	318	ePn	Pb	00 50 52.3	-1.6
IGZV				e		00 51 23.6	
QABG	Abgarm-Qazvin	2.13	295	ePn	Pn	00 50 51.5	+0.6
QABG				e		00 51 23.2	
ANAR	Anarak	2.21	138	ePn	Pn	00 50 52.8	+1.0
ANAR				e		00 51 31.2	
IGLO	Ghaloghah	2.25	42	ePn	Pb	00 50 54.5	-2.0
HAGD	Aghdareh	2.32	270	ePn	Pb	00 50 55.2	-2.6
IPIR	Pirpir	2.33	203	ePn	Pb	00 50 56.3	-1.6
IPIR				e		00 50 58.1	
ROKH	ROKH	2.61	198	ePn	Pb	00 51 00.0	-2.6
BDRS	Dareh Seyedi	2.70	252	ePn	Pb	00 51 01.6	-2.6
JHBN	Jahan bin	2.82	203	ePn	Pb	00 51 04.0	-2.3
HSAM	Samen	2.84	258	ePn	Pb	00 51 03.8	-2.9
BMDN	Meydan	2.85	247	ePn	Pb	00 51 05.9	-0.8
IBRJ	Brojen	2.98	192	ePn	Pb	00 51 06.8	-2.3
IRAM	Ramesheh	3.04	173	ePn	Pn	00 51 05.6	+2.2
HSRG	Sareghieh	3.05	279	ePn	Pn	00 51 05.7	+2.2
ZNJK	Zanjan	3.23	305	ePn	Pn	00 51 07.6	+1.6
ZNJK				eSg	Sb	00 51 55.7	+3.4
ZNJK	Zanjan	3.23	305	ePn	Pn	00 51 07.6	+1.6
IKMR	Kamar-syah	3.25	247	ePn	Pn	00 51 14.4	+1.0
ISAD	Sadrabad	3.25	153	ePn	Pn	00 51 07.4	+1.0
ISAD				e		00 52 05.9	
ICHK	Chekchek	3.30	141	e		00 51 59.2	
ICHK				ePn	Pn	00 51 07.8	+0.9
IDOB	Doab	3.31	253	ePn	Pb	00 51 11.9	-2.6
IKFM	Kafar-mosalman	3.66	250	ePn	Pn	00 51 15.0	+3.4
IKOM	Komasi	3.74	261	ePn	Pb	00 51 21.0	-0.8
KLNJ	Kolanjah	3.83	185	ePn	Pn	00 51 16.4	+2.0
IMEH	Mehriz	4.10	146	ePn	Pn	00 51 18.9	+1.0
TPRV	Parvadeh(Tabas	4.32	113	ePn	Pn	00 51 21.6	+0.7
IBAF	Bafgh	4.43	136	ePn	Pn	00 51 23.5	+1.1
TKDS	Koohdasht(Taba	4.45	105	ePn	Pn	00 51 23.5	+0.9
ISRB	Sarab	4.57	312	ePn	Pn	00 51 26.1	+1.7
ISFR	Sfrayin	5.37	64	ePn	Pn	00 51 36.6	+1.2
ITEG	Tejag	5.97	107	ePn	Pn	00 51 44.7	+1.1
AFRZ	Afriz	6.02	102	ePn	Pn	00 51 45.2	+1.0
IKOO	Kooshah	6.35	110	ePn	Pn	00 51 50.0	+1.2
JRKH	Jarkhoshk	6.93	79	ePn	Pn	00 51 58.0	+1.3

IDC 13 00:55:54.4±6.0, 35.°78N×81.°36E, h0km, mb3.4/1, mb1 3.4/4, mb1mx3.2/41, mbtmp3.4/4, ML2.9/3, Error ellipse: s-maj=78.3km s-min=32.4km az=31.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	8.68	324	Pn	Pn	00 58 03.1	+1.8
	0.1nm,0.3s,baz=19,slow=20,SNR=1.2						
AAK				Lg	Lg	01 00 31.5	
	0.1nm,0.3s,baz=172,slow=23,SNR=1.6						
MKAR	Makanchi Array	11.03	3	Pn	Pn	00 58 34.0	+0.6
	0.4nm,0.3s,baz=184,slow=12,SNR=22						
MKAR				Sn	Sn	01 00 33.0	-4.5
	0.1nm,0.3s,baz=189,slow=26,SNR=2.9						
ZALV	Zalesovo Beam	18.33	7	P	P	01 00 11.7	+1.7
	0.2nm,0.3s,baz=194,slow=12,SNR=5.4						
SONM	Songino Array	22.10	49	P	P	01 00 50.9	-0.4
	1.3nm,0.8s,baz=241,slow=11,SNR=11						

TAP 13 00:58:16.9, 23.°92N×121.°63E, h40km, ML2.9, C
JMA 13 00:58:16.0, 23.°87N×121.°65E, h38km±1km, M2.8
ISC 13 00:58:17.3±0.9, 23.°93N±0.°02×121.°64E±0.°02, h33km±2km, n92, σ0.°88/170, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.04	240	eP	Pb	00 58 23.0	+0.1
	baz=243						
ENLB				eS	Sb	00 58 28.8	+2.1
	baz=243						
HWA	Hwalien	0.06	327	eP	Pb	00 58 23.9	+0.9
	baz=339						
HWA				eS	Sb	00 58 29.2	+2.4
	baz=339						
TWD	Chiawan	0.16	345	P	Pb	00 58 23.8	+0.2
	baz=343						
TWD				S	Sb	00 58 29.1	+1.2
	baz=343						
ESL	Shilin	0.22	240	eP	Pn	00 58 24.1	+0.5
	baz=249						
ESL				eS	Sb	00 58 28.9	+0.1
	baz=249						
NACB	Ninganchiao	0.25	350	P	Pn	00 58 24.2	-0.1
	baz=342						
NACB				S	Sb	00 58 29.6	+0.1
	baz=342						
ETLH	Xiulin Townshi	0.32	332	P	Pb	00 58 25.0	-0.5
	baz=333						
ETLH				S	Sn	00 58 30.6	0.0
	baz=333						
EGFH	Guangfu	0.32	218	eP	Pb	00 58 25.0	-0.4
	baz=226						
EGFH				eS	Sn	00 58 30.4	-0.3
	baz=226						
WHF	Hehuan Shan	0.41	302	eP	Pb	00 58 26.5	-0.4
	baz=303						
WHF				eS	Sb	00 58 33.5	0.0
	baz=303						
OWD	Renai	0.43	274	P	Pb	00 58 26.7	-0.2
	baz=278						
OWD				S	Sb	00 58 33.2	-0.4
	baz=278						
CHGB	Renai	0.45	288	P	Pb	00 58 27.2	-0.2
	baz=288						
CHGB				S	Sb	00 58 34.3	+0.1
	baz=288						
HGSD	Ruisui	0.47	205	eP	Pb	00 58 27.7	+0.1
	baz=218						
HGSD				S	Sb	00 58 35.5	+0.9
	baz=218						
VWDT	VWDT	0.49	250	eP	Pb	00 58 27.9	+0.1
	baz=244						
VWDT				S	Sb	00 58 35.0	0.0
	baz=244						
ENA	Nanau	0.51	10	eP	Pb	00 58 27.7	-0.3
	baz=1.0						
ENA				eS	Sn	00 58 37.1	+1.3
	baz=1.0						
EHY	Hungye	0.51	215	eP	Pb	00 58 26.6	-1.5
	baz=214						
EHY				eS	Sb	00 58 34.1	-1.5
	baz=214						
TWT	Tachien	0.54	308	P	Pn	00 58 28.7	0.0
	baz=312						
TWT				S	Sb	00 58 36.5	+0.1
	baz=312						
TDCB	Techi	0.55	307	eP	Pn	00 58 28.7	-0.2
	baz=310						
TDCB				S	Sb	00 58 36.7	-0.1
	baz=310						
NNSB	Datong	0.55	335	eP	Pn	00 58 28.4	-0.5
	baz=335						
NNSB				eS	Sb	00 58 36.0	-0.8
	baz=335						
NNSH	Datong	0.55	335	eP	Pn	00 58 28.4	-0.6
	baz=337						
NNSH				S	Sb	00 58 36.1	-0.8
	baz=337						
NNS	Nan Shan	0.57	334	eP	Pn	00 58 28.6	-0.5
	baz=335						
NNS				eS	Sb	00 58 36.9	-0.3
	baz=335						
YULB	Yu-li	0.62	211	eP	Pn	00 58 27.9	-1.8
	baz=212						
YULB				eS	Sn	00 58 36.2	-2.3
	baz=212						
SSLB	Suanglung	0.65	258	eP	Pn	00 58 29.5	-0.6
	baz=261						
SSLB				S	Sn	00 58 39.2	0.0
	baz=261						
TWF1	Yuli	0.65	209	eP	Pn	00 58 28.4	-1.7
	baz=219						
TWF1				S	Sn	00 58 37.4	-2.0
	baz=219						
DPDB	Guoxing	0.66	279	eP	Pn	00 58 30.2	-0.1
	baz=278						
DPDB				eS	Sn	00 58 40.3	+0.6
	baz=278						
NDT	Datong Townshi	0.68	350	eP	Pn	00 58 29.8	-0.9
	baz=341						
NDT				eS	Sn	00 58 39.1	-1.0
	baz=341						
TWC	Suao	0.71	15	eP	Pn	00 58 31.0	0.0
	baz=22						
TWC				S	Sb	00 58 42.1	+1.3
	baz=22						
ENTT	Nioudou	0.71	354	eP	Pn	00 58 30.6	-0.5
	baz=354						
ENTT				eS	Sn	00 58 40.6	-0.3
	baz=354						
TYC	Yuchr	0.72	268	eP	Pn	00 58 30.8	-0.3
	baz=273						
TYC				eS	Sn	00 58 40.9	-0.1
	baz=273						
WHP	Taichung City	0.73	299	P	Pn	00 58 31.5	+0.2
	baz=304						
WHP				S	Sn	00 58 41.4	+0.1
	baz=304						
WHYT	Xinyi Township	0.76	253	eP	Pn	00 58 32.0	+0.3
	baz=252						
WHYT				eS	Sn	00 58 42.3	+0.3
	baz=252						
EOS1	EOS1	0.76	35	eP	Pn	00 58 32.0	+0.3
	baz=49						
EOS1				eS	Sb	00 58 43.9	+1.6
	baz=49						
YUS	Yu-Shan	0.77	236	eP	Pn	00 58 31.8	-0.4
	baz=230						
YUS				eS	Sn	00 58 41.8	-1.1
	baz=230						
YHNB	Yeheng	0.78	342	eP	Pn	00 58 31.7	-0.4
	baz=348						
YHNB				eS	Sn	00 58 41.9	-0.8
	baz=348						
FULB	Fuli	0.79	204	eP	Pn	00 58 31.5	-0.7
	baz=214						
FULB				eS	Sn	00 58 43.3	+0.5
	baz=214						
NSK	Sanguang	0.79	341	eP	Pn	00 58 32.0	-0.2
	baz=347						
NSK				eS	Sn	00 58 42.2	-0.7
	baz=347						

TWE	Neicheng	0.79	2	eP	Pn	00 58 31.2	-0.9
	baz=354						
TWE				eS	Sn	00 58 42.9	+0.1
	baz=354						
SLBB	Yuanshan	0.82	360	eP	Pn	00 58 32.1	-0.5
	baz=359						
WJS	Zhushan	0.84	263	eP	Pb	00 58 34.2	+0.7
	baz=264						
WJS				eS	Sb	00 58 46.0	+1.3
	baz=264						
NWLT	Wulai	0.86	351	eP	Pn	00 58 32.7	-0.3
	baz=345						
NWLT				S	Sn	00 58 43.7	-0.8
	baz=345						
CHKT	Chengkung	0.86	197	eP	Pn	00 58 33.3	+0.2
	baz=188						
CHKT				eS	Sb	00 58 45.7	+0.6
	baz=188						
ALS	Alishan	0.87	242	eP	Pn	00 58 33.6	+0.1
	baz=237						
ALS				eS	Sn	00 58 45.2	+0.1
	baz=237						
WNT	Mingjian	0.88	267	eP	Pb	00 58 34.6	+0.5
	baz=268						
WNT				eS	Sb	00 58 46.4	+0.8
	baz=268						
TWQ1	Liyutan	0.90	298	eP	Pn	00 58 34.2	+0.5
	baz=298						
TWQ1				eS	Sb	00 58 47.3	+1.0
	baz=298						
TCU	Taichung	0.91	284	eP	Pn	00 58 34.0	+0.2
	baz=284						
TCU				eS	Sb	00 58 47.7	+1.2
	baz=284						
NSTT	Nanjuang	0.91	320	eP	Pn	00 58 34.6	+0.8
	baz=306						
NSTT				eS	Sn	00 58 46.5	+0.6
	baz=306						
LIOB	Emei	0.92	322	eP	Pn	00 58 34.9	+1.0
	baz=307						
LIOB				eS	Sn	00 58 46.0	0.0
	baz=307						
ELDTW	Lidau	0.93	218	eP	Pn	00 58 33.3	-0.8
	baz=213						
ELDTW				eS	Sn	00 58 45.3	-1.1
	baz=213						
NSY	Sanyi	0.94	301	eP	Pn	00 58 34.9	+0.7
	baz=301						
NSY				eS	Sn	00 58 47.2	+0.7
	baz=301						
NTC	Toucheng	0.94	10	eS	Sb	00 58 47.7	+0.4
	baz=358						
CHN5	Tsauling	0.94	250	eP	Pn	00 58 34.9	+0.6
	baz=251						
CHN5				eS	Sb	00 58 47.9	+0.4
	baz=251						
WCHH	Zhanghua	1.00	279	eP	Pn	00 58 35.6	+0.6
	baz=291						
WCHH				eS	Sb	00 58 49.9	+0.7
	baz=291						
WDJ	Dajia District	1.01	295	eP	Pn	00 58 35.0	-0.1
	baz=295						
WDJ				eS	Sb	00 58 49.8	+0.5
	baz=295						
WGK	Gukeng	1.02	257	eP	Pn	00 58 35.9	+0.6
	baz=258						
WGK				eS	Sn	00 58 47.1	-1.3
	baz=258						
WDLH	Douliu	1.04	257	eP	Pn	00 58 35.7	+0.2
	baz=248						
WDLH				eS	Sb	00 58 50.3	+0.2
	baz=248						
TIPB	Shuangxi	1.05	9	P	Pn	00 58 36.4	+0.6
	baz=358						
TIPB				eS	Sn	00 58 49.6	+0.3
	baz=358						
STYT	Tauyuan	1.11	227	eP	Pn	00 58 36.6	0.0
	baz=229						
STYT				eS	Sn	00 58 51.3	+0.5
	baz=229						
TPUB	Ta-pu	1.12	236	eP	Pn	00 58 37.2	+0.5
	baz=238						
TPUB				eS	Sn	00 58 52.4	+1.5
	baz=238						
CHN4	Tsaushan	1.12	239	eP	Pn	00 58 37.5	+0.8
	baz=231						
CHN4				S	Sb	00 58 53.0	+0.5
	baz=231						
TWB1	Santiao Chiao	1.12	16	eP	Pn	00 58 37.8	+1.1
	baz=26						
TWB1				eS	Sb	00 58 53.7	+1.1
	baz=26						
NWF	Wu-fen Shan	1.15	6	eP	Pn	00 58 38.0	+0.9
	baz=353						
NWF				eS	Sn	00 58 53.1	+1.3
	baz=353						
WTP	Ta-pu	1.16	235	eP	Pn	00 58 37.8	+0.5
	baz=236						
WTP				S	Sn	00 58 53.4	+1.4
	baz=236						
RLNB	Erlin	1.17	269	eP	Pn	00 58 37.5	+0.1
	baz=280						
RLNB				eS	Sb	00 58 54.5	+0.4
	baz=280						
CHY	Chiayi	1.20	249	eS	Sn	00 58 54.0	+1.3
	baz=251						
YM01	YM01	1.22	357	eP	Pn	00 58 38.3	+0.3
	baz=355						
TWG	Pinlang	1.22	206	eP	Pn	00 58 37.5	-0.5
	baz=200						
TWG				eS	Sn	00 58 52.9	-0.4
	baz=200						
TWGBT	Beinan	1.22	205	eP	Pn	00 58 37.0	-1.1
	baz=200						
TWGBT				eS	Sn	00 58 52.8	-0.5
	baz=200						
YM04	YM04	1.23	356	eP	Pn	00 58 37.8	-0.4
	baz=355						
YM10	YM10	1.23	357	eP	Pn	00 58 38.7	+0.5
	baz=355						
YM11	YM11	1.24	357	eP	Pn	00 58 39.0	+0.6
	baz=355						
CHN1	Nanshi	1.26	234	eP	Pn	00 58 39.2	+0.6
	baz=237						
CHN1				eS	Sn	00 58 56.1	+1.7
	baz=237						
SNST	Tainan City	1.26	236	eP	Pn	00 58 38.9	+0.2
	baz=238						
SNST				eS	Sb	00 58 56.8	+0.2
	baz=238						
SLGT	Liugui	1.30	225	eP	Pn	00 58 40.3	+1.1
	baz=228						
SLGT				eS	Sn	00 58 57.2	+1.8
	baz=228						
YOJ	Yonaguni jima	1.36	67	P	Pn	00 58 39.8	-0.1
SSD	Sandimen	1.50	219	eP	Pn	00 58 43.3	+1.4
	baz=220						
MASBT	Mashibuluo	1.60	216	eP	Pn	00 58 44.4	+1.1
	baz=220						
MASBT				eS	Sn	00 59 04.7	+1.8
	baz=220						
EAST	Anshuo	1.70	206	eP	Pn	00 58 44.8	+0.2
	baz=199						
EAST				eS	Sn	00 59 04.7	-0.6
	baz=199						
SCZT	Fangliau	1.81	212	eP	Pn	00 58 47.4	+1.2
	baz=229						
SCZT				eS	Sn	00 59 09.4	+1.4
	baz=229						
PHUB	P'eng-hu	1.94	258	eP	Pn	00 58 47.2	-0.7
	baz=260						
PHUB				eS	Sn	00 59 11.5	+0.4
	baz=260						
IRIF	Iriomote-Funau	1.95	78	P	Pn	00 58 47.8	-0.3
IRIF				S	Sn	00 59 11.0	-0.4
HATJ	Hateruma jima	1.98	86	P	Pn	00 58 48.2	-0.3
HATJ				eS	Sn	00 59 11.3	-0.9
JKRS	Kuro-shima	2.19	81	P	Pn	00 58 51.8	+0.5
JKRS				S	Sn	00 59 17.6	+0.4
VWUC	VWUC	2.26	298	eP	Pn	00 58 51.6	-0.8
	baz=297						
VWUC				eS	Sn	00 59 17.3	-1.8
	baz=297						
PTTC	Pingtan	2.31	313	eS	Sn	00 59 19.7	-0.7
	baz=311						
JIJ	Ishigaki jima	2.33	79	P	Pn	00 58 53.0	-0.2
JIJ				eS	Sn	00 59 19.0	-1.7
JISG	Ishigakijimahi	2.52	74	P	Pn	00 58 55.4	-0.5
JISG				eS	Sn	00 59 24.0	-1.5
PTMZ	Houxiangcun	2.55	296	eP	Pn	00 58 56.5	+0.1
	baz=294						
PTMZ				eS	Sn	00 59 24.9	-1.4
	baz=294						
JTJ	Tarama	2.88	75	S	Sn	00 59 34.0	-0.4
KNMB	Chin-men Tao	3.02	281	eP	Pn	00 59 01.7	-1.1
	baz=280						
KNMB				eS	Sn	00 59 35.6	-2.2
	baz=280						
LYJJ	Jianjiangzhen	3.12	327	eP	Pn	00 59 03.5	-0.7
	baz=326						
MHZQ	Yeshan	3.21	313	eS	Sn	00 59 41.4	-1.1
	baz=310						
XPSS	Dashiqiu	3.27	337	eP	Pn	00 59 05.9	-0.2
	baz=344						
AXDP	Jialang	3.48	287	eP	Pn	00 59 09.5	+0.3
	baz=285						
AXDP				eS	Sn	00 59 47.0	-2.3
	baz=285						
ZPLA	Ao Xicun	3.56	271	eP	Pn	00 59 10.3	+0.1
	baz=271						
ZPLA				eS	Sn	00 59 49.7	-1.5
	baz=271						

*IDC **13** 01:05:08.3±1.9, 51.51N×179.80W, h0km, mb4.1/15, mb1 4.2/17, mb1mx4.0/49, mbtmp4.1/17, ML3.4/2, MS3.4/8, Ms1 3.4/8, ms1mx2.9/64, Error ellipse: s-maj=53.2km s-min=16.0km az=172.0*

*AEIC **13** 01:05:10.5±2.0, 51.1N±0.1×179.93W±0.07, h18km±5km, ML3.9/21, mb4.4/33(NEIC), Error ellipse: s-maj=18.8km s-min=6.3km az=173.0*

*NEIC **13** 01:05:13.1±1.4, 51.1N±0.1×179.78W±0.08, h51km±7km, Error ellipse: s-maj=15.7km s-min=7.0km az=170.0*

ISC 13 01:05:10.7±2.4, **51.0N**±0.1×**179.81W**±0.04, **h32**km±15km, **n99**, σ**1§20**/94, **mb4.3**/27, **MS3.3**/8, **2C, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAEA	Gareloi East	1.03	40		Pn	01 05 29.2	+0.3
TASE	Tanaga Southea	1.39	52		Pn	01 05 34.5	+0.6
TAFP	Tanaga Falls P	1.46	51		Pn	01 05 35.2	+0.4
TAFP					Sn	01 05 54.9	+2.1
TAPA	Tanaga Point A	1.50	56		Pn	01 05 36.0	+0.6
TAPA					Sb	01 05 56.2	-0.3
KIMD	Kanaga Island	1.79	64		Pn	01 05 40.1	+0.8
KIKV	Kanaga Island	1.87	61		Pn	01 05 41.7	+1.1
KIKV					Sb	01 06 06.6	-0.7
KIWB	Kanaga Island	1.87	62		Pn	01 05 41.0	+0.5
KIWB				Sn	Sn	01 06 02.2	-0.8
KIRH	Kanaga Island	1.93	61		Pn	01 05 42.6	+1.4
ADK	Adak	2.15	64		Pn	01 05 45.3	+1.1
ADK				Sn	Sn	01 06 11.2	+1.4
ADAG	Mount Adagdak	2.23	63		Pn	01 05 47.2	+1.7
GSTD	Great Sitkin T	2.52	64		Pn	01 05 51.9	+2.4
GSTD					Sb	01 06 23.8	-2.2
GSMY	Great Sitkin M	2.57	65		Pn	01 05 51.9	+1.8
GSMY					Sn	01 06 23.7	+3.5
GSTR	Great Sitkin T	2.59	63		Pn	01 05 51.5	+1.2
GSTR				Sn	Sn	01 06 21.2	+0.5
ATKA	Atka Island	3.70	69		Pn	01 06 06.8	+1.1
ATKA				Sn	Sn	01 06 48.8	+0.7
ATKA	Atka Island	3.70	69		Lg	01 06 51.1	
KOWE	Korovin West	3.72	66		Pn	01 06 07.9	+2.0
SMY	Shemya	4.15	297		Pn	01 06 13.4	+1.6
SMY				Sn	Sn	01 07 00.3	+1.1
GAMB	Gambell	13.52	16		Pn	01 08 20.4	+0.4
CHGN	Chignik	13.73	59		Pn	01 08 24.4	+1.5
PETK	Petropavlovsk-	13.99	287	Pn	Pn	01 08 26.2	-0.3
	0.1nm,0.3s,baz=93,slow=18,SNR=1.8						
KDAK	Kodiak Island	17.16	56	Pn	Pn	01 09 05.0	-2.8
	1.2nm,0.3s,baz=303,slow=4.9,SNR=17						
KDAK	Kodiak Island	17.16	56		Pn	01 09 05.4	-2.4
SKT	Skwentna	18.92	44	P	P	01 09 28.6	+0.1
SKT				IAmb	IAmb	01 09 36.2	
	comp=Z,25nm,1.2s						
RDOG	Red Dog Mine	19.01	20	P	P	01 09 29.3	-0.1
KTH	Kantishna Hill	19.82	40	P	P	01 09 39.1	+0.7
KTH				IAmb	IAmb	01 09 40.1	
	comp=Z,14nm,0.8s						
IMAR	Indian Mountai	20.03	32	P	P	01 09 39.9	-0.7
BPAW	Bear Paw Mtn.	20.04	38	P	P	01 09 41.2	+0.5
MLY	Manley	20.58	36	P	P	01 09 46.8	+0.2
NEA	Nenana	21.00	38	P	P	01 09 51.1	+0.1
DHY	Denali Highway	21.11	43	P	P	01 09 52.5	0.0
DHY				IAmb	IAmb	01 09 55.1	
	comp=Z,13nm,0.8s						
ILAR	Eielson Array	21.94	39	P	P	01 09 58.1	-3.0
	comp=Z,0.9nm,0.8s,baz=253,slow=11,SNR=12						
ILAR	Eielson Array	21.94	39	P	P	01 10 00.1	-1.0
BMAR	Burnt Mountain	23.90	33	P	P	01 10 20.5	-0.8
EGAK	Eagle	24.25	41	P	P	01 10 24.4	0.0
EGAK				IAmb	IAmb	01 10 25.6	
	comp=Z,7.4nm,0.9s						
ASAJ	Asahikawa	26.07	269	LR	LR	01 20 44.4	
	comp=Z,29nm,19.6s,baz=56,slow=36						
TIXI	Tiksi	30.66	331	LR	LR	01 24 49.9	
	comp=Z,65nm,18.2s,baz=143,slow=39						
KLR	Kul'dur	30.67	286	P	P	01 11 23.2	+1.2
	comp=Z,5.6nm,0.6s,baz=68,slow=8.0,SNR=24						
KLR				LR	LR	01 24 47.8	
	comp=Z,23nm,18.0s,baz=250,slow=39						
H11N2	WAKE ISLAND Hy	32.92	203	T	T	01 47 04.4	
	baz=17,slow=76,SNR=5.1						
H11N3	WAKE ISLAND Hy	32.93	203	T	T	01 47 11.3	
	baz=17,slow=76,SNR=5.2						
H11N1	WAKE ISLAND Hy	32.94	203	T	T	01 47 07.5	
	baz=17,slow=76,SNR=5.3						
H11S1	WAKE ISLAND Hy	34.14	203	T	T	01 48 45.2	
	baz=86,slow=74,SNR=2.4						
H11S2	WAKE ISLAND Hy	34.16	203	T	T	01 48 42.7	
	baz=244,slow=74,SNR=1.6						
H11S3	WAKE ISLAND Hy	34.16	203	T	T	01 48 35.7	
YKA	Yellowknife Ar	35.95	46	P	P	01 12 07.6	-0.3
	comp=Z,1.0nm,0.4s,baz=280,slow=9.4,SNR=23						
KSRS	Korea Array	39.01	270	LR	LR	01 28 23.5	
	comp=Z,22nm,18.8s,baz=62,slow=36						
PAHR	Pah Rah Range	42.80	81	P	P	01 13 07.2	+1.8
PAHR				IAmb	IAmb	01 13 09.2	
	comp=Z,6.0nm,0.7s						
YHL	Hebgen Lake	44.88	70	P	P	01 13 21.8	-0.4
YHH	Holmes Hill	45.11	70	P	P	01 13 23.8	-0.3
H17A	Grant Village	45.50	70	IAmb	IAmb	01 13 30.9	
	comp=Z,6.4nm,1.1s						
TLY	Talaya	45.73	302	LR	LR	01 33 47.6	
	comp=Z,66nm,19.0s,baz=34,slow=38						
SONM	Songino Array	46.25	296	P	P	01 13 33.3	+0.6
	comp=Z,1.0nm,0.6s,baz=65,slow=8.7,SNR=11						
SONM	Songino Array	46.25	296	P	P	01 13 32.9	+0.1
DUG	Dugway, Tooele	46.58	76	P	P	01 13 35.0	-0.5
DUG				IAmb	IAmb	01 13 39.8	
	comp=Z,4.1nm,1.1s						
PD31	Pinedale Array	47.03	71	P	P	01 13 39.2	+0.1
PD31				IAmb	IAmb	01 13 47.4	
	comp=Z,2.2nm,0.7s						
PDAR	Pinedale Array	47.03	71	P	P	01 13 40.2	+1.1
	comp=Z,2.0nm,0.7s,baz=311,slow=4.7,SNR=15						
Y12C	Blythe	49.56	84	P	P	01 13 58.1	-0.3
XAN	Xi'an	53.10	280	P	P	01 14 23.3	-1.7
XAN				IAmb	IAmb	01 14 36.7	
	comp=Z,4.0nm,1.1s						
FRB	Frobisher Bay	53.68	31	LR	LR	01 38 22.0	
	comp=Z,28nm,18.9s,baz=356,slow=38						
SUMG	Summit	53.82	13	P	P	01 14 28.8	-1.4
ARCES	ARCESS Array B	58.35	350	P	P	01 15 01.0	-1.1
	comp=Z,2.6nm,0.5s,baz=20,slow=7.5,SNR=5.2						
ARCES	ARCESS Array B	58.35	350	P	P	01 15 02.1	0.0
KURK	Kurchatov	58.82	313	P	P	01 15 05.8	+0.2
MK31	Makanchi Array	59.77	308	P	P	01 15 12.5	+0.2
MK31				IAmb	IAmb	01 15 13.2	
	comp=Z,2.9nm,0.8s						
MKAR	Makanchi Array	59.77	308	P	P	01 15 12.5	+0.2
	comp=Z,2.4nm,0.5s,baz=51,slow=6.3,SNR=48						
MAKZ	Makanchi	59.91	308	P	P	01 15 13.1	-0.2
SCHQ	Schefferville	60.70	38	P	P	01 15 17.4	-1.1
	comp=Z,2.2nm,0.9s,baz=270,slow=10,SNR=2.4						
SCHQ	Schefferville	60.70	38	P	P	01 15 18.3	-0.2
SCHQ				IAmb	IAmb	01 15 18.6	
	comp=Z,4.3nm,1.1s						
BRVK	Borovoye	60.78	319	P	P	01 15 19.5	+0.5
BRVK				IAmb	IAmb	01 15 21.0	
	comp=Z,2.6nm,0.8s						
DAV	Davao City (W)	62.74	246	LR	LR	01 40 35.8	
	comp=Z,88nm,20.4s,baz=293,slow=34						
FINES	FINESS Array B	66.01	347	P	P	01 15 52.4	-1.1
	comp=Z,3.1nm,0.8s,baz=15,slow=7.9,SNR=9.1						
AAK	Ala-Archa	66.61	309	P	P	01 15 59.3	+1.4
	comp=Z,3.2nm,0.7s,baz=100,slow=5.4,SNR=10.0						
AAK	Ala-Archa	66.61	309	P	P	01 15 58.6	+0.7
AAK				IAmb	IAmb	01 16 00.1	
	comp=Z,3.9nm,0.8s						
NB2	NORSAR Subarra	67.96	354	P	P	01 16 06.2	+0.2
	comp=Z,0.5nm,0.4s,baz=8.3,slow=6.9						
NOA	NORSAR Array B	67.96	354	P	P	01 16 05.6	-0.3
	comp=Z,0.7nm,0.8s,baz=18,slow=19,SNR=11						
KKAR	Karatay Array	68.17	312	P	P	01 16 08.3	+0.8
KKAR	Karatay Array	68.17	312	P	P	01 16 07.3	-0.2
KKAR				IAmb	IAmb	01 16 09.4	
	comp=Z,3.6nm,0.8s						
ARSB	Arslanbob	68.34	309	P	P	01 16 09.3	+0.5
KBL	Kabul	75.56	307	P	P	01 16 52.5	+0.2
AKASG	Malin Array Be	75.71	341	P	P	01 16 51.9	-0.6
	comp=Z,1.1nm,0.5s,baz=22,slow=6.5,SNR=4.9						
AKASG	Malin Array Be	75.71	341	P	P	01 16 52.0	-0.6
CLL	Collm	77.49	352	e(P)	P	01 17 07.0	+4.4
KWP	Kalwaria Pacla	77.92	345	P	P	01 17 05.3	+0.2
GEYT	Alibeck	77.93	317	P	P	01 17 06.6	+1.3
	comp=Z,0.9nm,0.6s,baz=17,slow=12,SNR=2.2						
GEYT				LR	LR	01 53 49.1	
	comp=Z,34nm,18.0s,baz=305,slow=38						
GEYT	Alibeck	77.93	317	IAmb	IAmb	01 17 07.7	
	comp=Z,0.8nm,0.8s						
KOLS	Kolonicke sedl	78.67	345	eP	P	01 17 09.7	+0.5
BUR08	Bucovina Ar. S	79.41	343	P	P	01 17 13.6	+0.2
BUR08				IAmb	IAmb	01 17 14.8	
	comp=Z,2.8nm,0.8s						
BURAR	Bucovina Array	79.44	343	⇑P	P	01 17 14.0	+0.5
BURAR	Bucovina Array	79.44	343	P	P	01 17 13.8	+0.2
VYHS	Vyhne	79.60	348	eP	P	01 17 15.0	+0.7
GERES	GERESS Array B	79.86	351	P	P	01 17 15.3	-0.5
	comp=Z,0.6nm,0.6s,baz=28,slow=6.0,SNR=5.8						
GERES	GERESS Array B	79.86	351	P	P	01 17 15.7	-0.1
WTTA	Wattenberg	81.62	352	i PcP	P	01 17 26.2	+0.8
	comp=Z,3.1nm,0.7s						
KBA	Koelnbreinsper	81.65	351	i PcP	P	01 17 26.5	+1.0
	comp=Z,5.2nm,0.7s						
GZR	Gura Zlata	82.02	344	⇑P	P	01 17 27.6	+0.3
BKNI	Bangkinang	82.92	262	P	P	01 17 31.0	-1.3
BRTR	Keskin Array B	85.02	335	P	P	01 17 42.8	-0.2
	comp=Z,0.8nm,0.9s,baz=26,slow=3.1,SNR=4.3						
BRTR	Keskin Array B	85.02	335	P	P	01 17 42.3	-0.7
ESDC	Sonseca Array	89.63	3	P	P	01 18 04.5	-0.6
BOSA	Boshof	150.75	310	PKPbc	PKiKP	01 25 00.2	0.0
	comp=Z,1.0nm,0.6s,baz=56,slow=3.5,SNR=4.9						

DJA 13 01:10:56.5±1.0, **5°N**±4°×**9°6E**±°, **h10**km, **M4.0**/7, **mb4.4**/1, **MLv3.8**/7, **MLv3.9**/3, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	0.86	139	P	Pg	01 11 13.2	0.0
MLSI				S	Sb	01 11 25.1	-0.2
LHMI	Lhok Sumawe	1.15	75	P	Pb	01 11 17.5	-1.1
LHMI				S	Sg	01 11 33.8	+0.1
SNSI	Sinabang, Aceh	2.54	169	P	Pn	01 11 37.2	-0.7

*IDC **13** 01:18:00.5±5.3, 36.46N×82.28E, h0km, mb3.3/1, mb1 3.4/5, mb1mx3.1/60, mbtmp3.4/5, ML3.0/4, MS3.8/1, Ms1 3.8/1, ms1mx2.5/31, Error ellipse: s-maj=70.1km s-min=31.1km az=24.0*

*NNC **13** 01:18:04.4±1.6, 36.77N×83.24E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=24.0km s-min=12.2km az=65.0*

ISC 13 01:18:02.9±2.5, **36.5N**±0.2×**82.6E**±0.2, **h10**km, **n9**, σ**1§55**/11, **2C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	7.25	342	⇓Pn	Pn	01 19 50.8	+1.8
	2.1nm,0.7s						
PDGK				⇑Sn	Sn	01 21 13.7	+2.2
	11nm,0.6s						
PDGK				⇓Lg	Lg	01 21 51.4	
	14nm,1.0s						
AAK	Ala-Archa	8.78	317	Pn	Pn	01 20 08.6	-1.5
	0.1nm,0.3s,baz=92,slow=2.3,SNR=2.5						
AAK				Lg	Lg	01 22 33.5	
	0.2nm,0.3s,baz=324,slow=20,SNR=2.1						
MK31	Makanchi Array	10.31	359	Pn	Pn	01 20 29.6	-1.3
	0.3nm,0.5s,baz=180,slow=12,SNR=9.9						
MK31				⇓Sn	Sn	01 22 25.1	-1.4
	0.6nm,0.6s,baz=186,slow=13,SNR=5.4						
MK31				⇑Lg	Lg	01 23 22.9	
	1.1nm,0.8s,baz=320,slow=14,SNR=2.7						
MKAR	Makanchi Array	10.31	359	Pn	Pn	01 20 29.9	-1.0
	0.2nm,0.3s,baz=187,slow=13,SNR=12						
MKAR				Sn	Sn	01 22 25.9	-0.6
	0.1nm,0.3s,baz=242,slow=20,SNR=1.9						
MAKZ	Makanchi	10.33	358	⇓Pn	Pn	01 20 30.1	-1.0
	1.3nm,0.5s						
ZALV	Zalesovo Beam	17.54	4	P	Pn	01 22 07.2	-0.2
	0.1nm,0.3s,baz=186,slow=12,SNR=5.5						
BVAR	Borovoye Array	18.64	336	P	P	01 22 19.3	-1.3
	0.1nm,0.3s,baz=140,slow=9.0,SNR=4.4						
SONM	Songino Array	20.88	50	P	P	01 22 46.4	+1.2
	1.1nm,0.7s,baz=244,slow=11,SNR=10						
KLR	Kul'dur	37.56	54	LR	LR	01 40 51.4	
	comp=Z,124nm,19.4s,baz=4.0,slow=36						

*RHSSO **13** 01:19:18.0±0.7, 43.19N×16.11E, h14km±3km, ML2.8/9*

*BEO **13** 01:19:19.4±0.8, 43.24N×16.24E, h0km, ML2.7/5*

ISC 13 01:19:17.4±1.3, **43.25N**±0.03×**16.09E**±0.03, **h3**km±10km, **n41**, σ**1§20**/73, **6C-4D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIRJ	Zirje	0.52	322	ePg	Pg	01 19 26.6	-0.8
ZIRJ				Sg	Sg	01 19 35.1	+0.9
MORI	Morici	0.68	336	ePg	Pg	01 19 30.7	+0.3
MORI				Sg	Sb	01 19 41.4	-0.2
MAKA	Makarska	0.68	86	ePg	Pg	01 19 29.9	-0.5
MAKA				Sg	Sg	01 19 40.5	+1.2
DUGI	Dugi Otok	1.06	315	ePg	Pg	01 19 36.1	-1.6
DUGI				Sg	Sb	01 19 52.9	+0.3
UDBI	Udbina	1.30	350	ePg	Pg	01 19 41.9	-0.5
UDBI				Sg	Sn	01 20 00.6	+0.1
MGRS	Mrkonjic Grad	1.38	31	ePn	Pn	01 19 43.5	0.0
MGRS				eSg	Sn	01 20 02.9	+0.7
NVLJ	Novalja	1.58	327	i Pn	Pn	01 19 45.8	-0.5
NVLJ				Sn	Sn	01 20 07.3	0.0
DBRK	Dubrovnik	1.62	110	ePn	Pn	01 19 45.5	-1.3
DBRK				Sn	Sn	01 20 06.4	-1.7
BLY	Banja Luka	1.70	27	ePg	Pn	01 19 48.7	+0.8
BLY				eSg	Sn	01 20 13.4	+1.4
BLY	Banja Luka	1.70	27	⇑P	Pn	01 19 48.6	+0.8
BLY				⇓S	Sg	01 20 12.0	0.0
BLY	Banja Luka	1.70	27	ePn	Pn	01 19 47.3	-0.6
BLY				eSn	Sn	01 20 09.2	-0.9
TREB	Trebinje	1.74	107	ePg	Pn	01 19 46.9	-1.6
TREB				eSg	Sn	01 20 10.7	-0.5
TREB	Trebinje	1.74	107	ePn	Pn	01 19 46.8	-1.7
TREB				eSn	Sn	01 20 08.9	-2.3
BRY	Bratogost	1.83	100	ePn	Pn	01 19 48.6	-1.2
BRY				eSn	Sn	01 20 11.4	-2.1
HCY	Herceg Novi	1.94	113	ePn	Pn	01 19 49.8	-1.4
UPM	Unac-Piva	2.06	90	ePn	Pn	01 19 52.6	-0.4
UPM				eSn	Sn	01 20 17.6	-1.7
HAPS	Han Pijesak,BI	2.24	67	ePg	Pn	01 19 56.8	+1.4
HAPS	Han Pijesak,BI	2.24	67	ePn	Pn	01 19 54.0	-1.4
HAPS				eSn	Sn	01 20 21.9	-1.7
RIY	Rijeka	2.38	332	eSn	Sn	01 20 27.5	+0.6
RUDO	Rudo	2.42	80	ePn	Pn	01 19 57.1	-0.7
RUDO				eSn	Sn	01 20 26.3	-1.6
PDG	Podgorica	2.47	108	ePg	Pb	01 20 01.6	-0.7
PDG				eSg	Sb	01 20 35.0	+1.9
PDG	Podgorica	2.47	108	⇑P	Pn	01 20 00.6	+2.1
PDG				⇑S	Sn	01 20 29.0	0.0
BBLS	Lazići	2.49	74	ePn	Pn	01 19 59.9	+1.1
BBLS				eSn	Sn	01 20 30.6	+0.9
BBLS	Lazići	2.49	74	ePn	Pn	01 19 59.0	+0.2
BBLS				eSn	Sn	01 20 28.9	-0.9
CRES	Cresnjev	2.62	350	ePn	Pn	01 20 00.8	+0.2
CRES				eSn	Sn	01 20 33.0	+0.1
MATE	Matera	2.63	170	⇓P	Pb	01 20 05.7	+0.5

MATE ⇓S Sb 01 20 39.8 +1.9
PTJ Puntijarka 2.66 358 iPn Pn 01 20 01.2 0.0
PTJ Sn Sn 01 20 35.0 +1.0
SJES Sjenica 2.84 88 ePn Pn 01 20 03.6 -0.1
DIVS Divibare 2.96 72 ePn Pn 01 20 06.2 +0.9
DIVS eSn Sn 01 20 40.5 -0.8
DIVS Divibare 2.96 72 ePn Pn 01 20 04.4 -0.9
DIVS eSn Sn 01 20 39.9 -1.4
IVAS Ivanjica 2.98 82 ePn Pn 01 20 06.8 +1.2
TRUS Trudelj 3.28 71 ePn Pn 01 20 10.4 +0.8
FRGS Fruska Gora 3.29 53 ePn Pn 01 20 11.7 +1.9
FRGS eSn Sn 01 20 49.2 -0.2
OBKA Obir 3.44 342 Pn Pn 01 20 12.4 +0.4
1.6nm,0.2s
OBKA Sn Sn 01 20 54.5 +1.2
4.3nm,0.5s
MORH Mrgy, Hungar 3.48 31 ePn Pn 01 20 12.2 -0.2
MORH eSn Sn 01 20 52.7 -1.4
SOKA Soboth 3.51 348 Pn Pb 01 20 18.1 -2.1
0.6nm,0.2s
SELS Selova 3.68 89 ePn Pn 01 20 17.1 +2.0
BARS Barje 4.22 94 ePn Pn 01 20 24.8 +2.2
BZS Buzias 4.61 57 ⇓P Pn 01 20 29.7 +1.8
BZS ⇑S Sn 01 21 20.6 -1.4
MOA Molln 4.78 345 Pn Pn 01 20 30.8 +0.6
0.6nm,0.3s
MOA Sn Sn 01 21 25.7 -0.4
0.5nm,0.3s
GZR Gura Zlata 5.26 64 ⇑P Pn 01 20 38.2 +1.4
GZR ⇑S Sn 01 21 38.8 +0.8

IDC **13** *01:19:50.0±3.3, 20.78N×143.44E, h0km, mb3.9/11, mb1 4.1/11, mb1mx3.7/57, mbtmp3.9/11, Error ellipse: s-maj=90.8km s-min=29.6km az=6.0*
NEIC **13** *01:19:57.3±1.3, 20.9N±0.1×143.5E±0.2, h55km±8km, mb4.1/7, Error ellipse: s-maj=28.5km s-min=13.9km az=60.0*
ISC 13 01:19:55.9±0.7, **21.0N**±0.1×**143.5E**±0.2, **h35**km, **n26**, σ0.89/26, **mb4.1**/14, **Mariana Islands region**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)

SARN Sarigan 4.77 153 Pn Pn 01 21 06.0 +0.6
KSAR Wonju Array Be 21.28 324 P P 01 24 38.6 -0.7
KLR Kul'dur 29.72 344 P P 01 25 58.9 +0.3
1.2nm,0.7s,baz=230,slow=2.6,SNR=5.6
SONM Songino Array 40.08 321 P P 01 27 28.7 +0.6
0.3nm,0.4s,baz=116,slow=6.4,SNR=5.8
SONM Songino Array 40.08 321 P P 01 27 27.9 -0.1
BILL Bilibino 49.17 11 P P 01 28 39.5 -0.6
ZALV Zalesovo Beam 54.96 322 P P 01 29 22.7 -0.6
0.7nm,0.4s,baz=127,slow=7.8,SNR=3.6
ZALV Zalesovo Beam 54.96 322 P P 01 29 22.3 -1.0
MK31 Makanchi Array 55.40 313 P P 01 29 25.9 -0.8
MKAR Makanchi Array 55.40 313 P P 01 29 27.5 +0.8
0.3nm,0.4s,baz=92,slow=8.8,SNR=6.6
MKAR Makanchi Array 55.40 313 P P 01 29 26.4 -0.4
CAN Canberra 56.22 175 P P 01 29 31.6 -1.1
CAN IAmb IAmb 01 29 42.7
comp=Z,3.9nm,1.1s
KURK Kurchatov 58.20 317 P P 01 29 46.1 -0.3
KURK IAmb IAmb 01 29 49.5
comp=Z,1.6nm,1.1s
KURBB Kurchatov Arra 58.25 317 P P 01 29 47.5 +0.7
comp=Z,1.0nm,0.5s,baz=92,slow=7.6,SNR=18
IMAR Indian Mountai 60.02 25 P P 01 29 58.5 -0.3
ILAR Eielson Array 62.55 27 P P 01 30 17.1 +1.1
comp=Z,0.2nm,0.3s,baz=268,slow=4.8,SNR=6.4
ILAR Eielson Array 62.55 27 P P 01 30 16.0 0.0
BVAR Borovoye Array 63.41 320 P P 01 30 22.3 +0.5
comp=Z,1.3nm,0.4s,baz=100,slow=7.6,SNR=19
BRVK Borovoye 63.47 320 P P 01 30 22.4 +0.1
BRVK IAmb IAmb 01 30 23.2
comp=Z,1.3nm,0.8s
KKAR Karatay Array 63.73 309 P P 01 30 25.6 +1.4
YKA Yellowknife Ar 76.96 28 P P 01 31 46.1 +1.5
comp=Z,0.2nm,0.4s,baz=292,slow=6.2,SNR=4.4
ARCES ARCESS Array B 79.70 342 P P 01 31 59.4 -0.3
comp=Z,4.2nm,0.9s,baz=90,slow=3.6,SNR=2.8
FINES FINESS Array B 83.96 335 P P 01 32 21.1 -1.1
comp=Z,1.3nm,0.8s,baz=82,slow=4.0,SNR=5.5
FINES FINESS Array B 83.96 335 P P 01 32 21.6 -0.6
ELK Elko 84.69 48 P P 01 32 27.0 +0.3
comp=Z,0.8nm,0.3s,baz=161,slow=22,SNR=6.0
ELK Elko 84.69 48 P P 01 32 24.6 -2.1
ELK IAmb IAmb 01 32 27.6
comp=Z,1.4nm,0.8s

ANF **13** *01:28:24.5±0.2, 33.86N×117.71W, h16km±1km, ML2.4/29, Error ellipse: s-maj=1.2km s-min=0.9km az=28.0*
PAS **13** *01:28:25.7±1.5, 33.869N±0.009×117.700W±0.004, h10km±2km, ML2.5/172, Error ellipse: s-maj=1.2km s-min=0.5km az=180.0*
SCEDC **13** *01:28:25.6, 33.86N×117.70W, h11km*
ISC 13 01:28:25.1±0.8, **33.85N**±0.01×**117.71W**±0.01, **h16**km±5km, **n122**, σ0.71/176, **Southern California**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)

CRNC Corona 0.12 77 Pg 01 28 28.4 -0.5
CRNC Sg 01 28 30.6 -0.7
CHNC Chino 0.15 8 Pg 01 28 28.8 -0.5
FULC Fullerton 0.18 278 Pg 01 28 30.1 +0.5
MLSC Mira Loma 0.20 38 Pg 01 28 29.4 -0.5
BREC Barre Substati 0.23 260 Pg 01 28 31.1 +0.7
PSRC Puddingstone R 0.26 341 Sg 01 28 34.0 -0.7
SME Santa Rosa Min 0.29 95 Pg 01 28 31.2 -0.3
RVR Riverside 0.31 62 Pg 01 28 31.3 -0.5
RSBC Riverside Bore 0.34 68 Pg 01 28 31.8 -0.4
RSBC Riverside Bore 0.34 68 Pg 01 28 32.0 -0.3
PEM Pine Mountain 0.35 337 Pg 01 28 32.1 -0.2
SSK Sunset Peak 0.36 2 Pg 01 28 32.5 -0.3
BFSC Mount Baldy Ra 0.39 6 Pg 01 28 32.7 -0.5
BFSC Sg 01 28 37.9 -0.8
BFSC Mount Baldy Ra 0.39 6 P Pg 01 28 32.7 -0.5
baz=186,SNR=48
BFSC S Sg 01 28 37.6 -1.1
baz=186
GVRC Garvey Reservo 0.40 301 Pg 01 28 33.4 +0.1
GVRC Garvey Reservo 0.40 301 Pg 01 28 39.6 +0.8
SS2 San Sevaine 0.40 26 Pg 01 28 32.9 -0.4
PEC Perris 0.46 84 Pg 01 28 33.9 -0.4
XTL Crystal Lake, 0.47 344 Pg 01 28 34.1 -0.5
MWC Mount Wilson 0.47 322 Pg 01 28 34.1 -0.6
MWC Mount Wilson 0.47 322 Sg Sg 01 28 40.6 -0.6
MURC Murrieta 0.49 120 Pg 01 28 35.1 +0.1
MURC Sg 01 28 41.8 +0.1
MURC Murrieta 0.49 120 P Pg 01 28 34.9 -0.1
baz=302,SNR=41
MURC S Sg 01 28 41.6 0.0
baz=302
FMP Fort Macarthur 0.51 255 Pg 01 28 34.9 -0.3
FMP Fort Macarthur 0.51 255 P Pg 01 28 34.9 -0.3
baz=73
FMP S Sg 01 28 41.4 -0.7
baz=73
PASC Pasadena Art C 0.51 309 Pg Pg 01 28 34.6 -0.8
PASC Sg Sg 01 28 41.7 -0.6
CFT Crafton Hills 0.53 69 Pg 01 28 35.5 -0.3
CFT Sg 01 28 42.8 -0.1
CSP Cedar Springs 0.54 33 Pg 01 28 35.3 -0.6
CHFC Chilao Flat St 0.55 331 Pg 01 28 35.4 -0.8
CHFC Sg 01 28 42.4 -1.3
GR2C Griffith Obs. 0.56 299 Pg 01 28 35.8 -0.5
SVD Seven Oaks Dam 0.57 63 Pg 01 28 36.1 -0.3
RPV Rancho Palos V 0.59 260 Pg 01 28 36.2 -0.6
HMTC Hemet 0.60 103 Pg 01 28 36.5 -0.5
BACC Bachelor Mtn. 0.60 113 Pg 01 28 36.4 -0.7
BBSC Beaumont Base 0.61 83 Pg 01 28 37.5 +0.3
DGR Domenigoni Val 0.61 109 Pg 01 28 36.8 -0.5
HOLC Holcomb Ridge 0.62 349 Pg 01 28 36.7 -0.7
DECC Green Verdugo 0.66 308 Pg 01 28 37.4 -0.8
DECC Green Verdugo 0.66 308 P Pg 01 28 37.3 -0.8
baz=127
DECC S Sg 01 28 46.1 -0.8
baz=127
DJJ Donna J Jenkin 0.67 293 Pg 01 28 37.5 -0.8
DJJ Sg 01 28 47.0 -0.3
POB Polly Butte 0.67 104 Pg 01 28 37.8 -0.6
POB Sg 01 28 46.7 -0.6
BTL Butler Peak 0.71 55 Pg 01 28 38.7 -0.5
LRRC Littlerock Res 0.73 339 Pg 01 28 38.6 -0.8
CIAC Catalina I. Ai 0.74 233 Pg 01 28 39.4 -0.1
CIS Catalina Islan 0.74 233 P Pg 01 28 39.4 -0.2
baz=52,SNR=12
CIS S Sg 01 28 49.1 -0.3
baz=52
BBRC Big Bear Solar 0.77 57 Pg 01 28 39.5 -0.9
BBRC Big Bear Solar 0.77 57 P Pg 01 28 39.4 -0.9
baz=239
BBRC S Sg 01 28 49.6 -1.0
baz=239
VTV Victorville 0.78 24 Pg 01 28 39.5 -0.8
VTV Sg 01 28 49.3 -1.3
IR2C Iron Canyon 0.79 313 Pg 01 28 39.6 -0.9
GORC Green Oak Ranc 0.80 150 Pg 01 28 40.2 -0.5
GORC Sg 01 28 50.7 -0.5
SBB Saddle Back Bu 0.84 353 Pg 01 28 40.8 -0.8
SBB Sg 01 28 51.7 -1.0
CRY Cary Ranch 0.86 109 Pg 01 28 41.0 -0.8
CRY Sg 01 28 52.4 -0.7
PLM Palomar 0.86 125 Pg 01 28 41.3 -0.6
PLM Sg 01 28 53.1 -0.2
GVDA Garner Valley 0.88 101 Sg 01 28 53.4 -0.4
SIL Silver Peak 0.89 55 Pg 01 28 41.8 -0.6
OAT Oat Mountain 0.90 304 Pg 01 28 41.8 -0.9
LEOC Leona Valley 0.93 328 Pg 01 28 43.2 0.0
BZNA Buzz No.'s Pla 0.94 112 Pg 01 28 42.7 -0.6
BZNA Sg 01 28 55.1 -0.6
DNR Dunn Ranch,Anz 0.94 107 Pg 01 28 42.8 -0.6
DNR Sg 01 28 55.9 +0.1
SNDA J Saunders Pla 0.96 108 Pg 01 28 43.2 -0.5
SNDA Sb 01 28 56.9 +1.0
FRD Ford Ranch, An 0.99 111 Pg 01 28 43.4 -0.9
FRD Sg 01 28 56.6 -0.7
FRD Ford Ranch, An 0.99 111 Pg 01 28 43.4 -0.9
FRD Sg 01 28 56.7 -0.7
HYS Haystack Butte 1.02 6 Pg 01 28 44.0 -0.9
HWB Hans Werner Br 1.03 142 Pb 01 28 44.0 -0.6
HWB Sg 01 28 58.1 -0.5
EDW2 Edwards Air Fo 1.06 347 Pg 01 28 44.6 -1.1
EDW2 Edwards Air Fo 1.06 347 P Pg 01 28 44.5 -1.1
baz=167,SNR=24
EDW2 S Sg 01 28 58.0 -1.5
baz=167
DPP Dos Picos Cty 1.06 143 Pb 01 28 44.4 -0.7
DPP Sb 01 28 57.9 -0.9
PFO Pinyon Flats O 1.07 102 Pb 01 28 44.8 -0.5
PFO Sg Sg 01 28 58.7 -1.1
PFO Pinyon Flats O 1.07 102 Pb 01 28 44.6 -0.6
PFO Sg 01 28 58.6 -1.1
PFO Pinyon Flats O 1.07 102 P Pb 01 28 44.7 -0.5
baz=284,SNR=17
PFO S Sg 01 28 58.7 -1.1
baz=284
XPFO Pion Flat 1.07 102 Pb 01 28 44.7 -0.6
XPFO Sg Sg 01 28 58.6 -1.3
XPFO Pion Flat 1.07 102 Pb 01 28 44.8 -0.6
XPFO Sg 01 28 58.9 -1.0
109C Camp Elliot, M 1.08 152 Pb 01 28 45.0 -0.4
109C Camp Elliot, M 1.08 152 P Pb 01 28 45.0 -0.4
baz=333
109C S Sb 01 28 59.1 -0.2
baz=333
EW2 E Wide Canyon 1.08 85 Pb 01 28 45.4 -0.2
EW2 Sb 01 28 59.8 +0.3
BTPC Burnt Peak 1.10 319 Sg 01 29 00.3 -0.6
SCI2 San Clemente I 1.11 219 P Pb 01 28 45.6 -0.4
baz=38
SCI2 S Sb 01 29 00.8 +0.6
baz=38
BLAC Blackrock camp 1.12 78 Pb 01 28 45.9 -0.3
OSI Osito Audit: C 1.14 313 Pn Pb 01 28 46.0 -0.5
OSI Sb 01 29 01.9 +0.8
OSI Osito Audit: C 1.14 313 S Sb 01 29 00.8 -0.2
baz=131
BLG Laguna Peak, P 1.16 283 P Pb 01 28 45.8 -0.9
baz=102
BLG S Sb 01 29 01.3 -0.3
baz=102
SBI Santa Barbara 1.16 252 Pb 01 28 45.8 -1.0
RRX Edison Barstow 1.18 30 Sb 01 29 02.6 +0.3
RRX Edison Barstow 1.18 30 S Sb 01 29 02.5 +0.3
baz=210
EML El Monte Cty P 1.20 143 Pn 01 28 46.7 -0.5
EML Sb 01 29 01.9 -0.7
BORC Borrego Spring 1.22 118 Pn 01 28 47.5 0.0
SDRC San Diego Road 1.28 150 Pn 01 28 48.1 -0.2
THC Tehachapi Micr 1.32 324 Pn 01 28 50.1 +1.0
OLP Otay Lakes Par 1.40 152 Pn 01 28 50.8 +0.9
OLP Sn 01 29 08.6 +0.5
DTP Desert Tortois 1.42 355 Pn 01 28 50.6 +0.2
BELC Belle Mtn. Jos 1.43 83 Pb Pn 01 28 51.1 +0.6
baz=265,SNR=22
BELC Sb Sn 01 29 09.9 +0.9
baz=265
MONP2 Monument Peak 1.44 131 Pn 01 28 51.7 +1.0
MONP2 Monument Peak 1.44 131 Pb Pn 01 28 50.9 +0.2
baz=313
MONP2 S Sn 01 29 09.2 -0.1
baz=313
BAR Barrett 1.45 143 Pn 01 28 51.0 +0.3
BAR Barrett 1.45 143 Sn 01 29 09.5 +0.1
HEC Hector,Ludlow 1.50 49 Sn 01 29 11.4 +0.7
HEC Hector,Ludlow 1.50 49 Pb Pn 01 28 51.7 +0.3
baz=230
HEC Sb Sn 01 29 11.4 +0.7
baz=230
CBKC Canebrake 1.54 127 Pb 01 28 53.9 +0.6
ARVC Arvin 1.58 324 Pg Pb 01 28 54.6 +0.7
baz=143
ARVC Sb Sn 01 29 14.0 +1.4
baz=143
SCZ2 Santa Cruz Isl 1.61 276 Sg Sg 01 29 17.3 +0.3
baz=94
LRMC Laurel Mtn Rad 1.63 1 Pb Pn 01 28 53.8 +0.5
baz=181
LRMC Sb Sn 01 29 15.2 +1.2
baz=181
GSC Goldstone, Bar 1.63 27 Sb 01 29 15.9 +0.7
GSC Goldstone, Bar 1.63 27 Pn 01 28 53.7 +0.5
GSC Sn Sn 01 29 14.7 +0.8
GSC Goldstone, Bar 1.63 27 Pb Pn 01 28 53.9 +0.7
baz=207,SNR=15
GSC S Sn 01 29 14.1 +0.2
baz=207
IKP In-Ko-Pah, Jac 1.79 131 Pb Pn 01 28 57.4 +1.9
baz=313
IKP Sb Sb 01 29 20.7 +0.8
baz=313
SWSC Sam W. Stewart 1.83 119 Pb Pb 01 28 58.3 +0.1
baz=300
SWSC Sb Sb 01 29 22.4 +1.5
baz=300
DSCC Desert Studies 1.85 45 Pb 01 28 59.3 +0.8
BC3 Big Chuckawall 1.89 95 P Pn 01 28 56.9 +0.1
baz=277
BC3 Sb Sb 01 29 24.2 +1.5
baz=277
ISA Isabella, Lake 1.92 341 Pn Pn 01 28 57.7 +0.5
ISA Isabella, Lake 1.92 341 P Pn 01 28 57.4 +0.2
baz=160
ISA S Sn 01 29 21.0 0.0
baz=160
GMRC Granite Mounta 1.94 61 P Pn 01 28 57.4 -0.1
baz=242
GMRC Sb Sb 01 29 25.4 +1.4
baz=242
CLC China Lake 1.97 3 Pn 01 28 58.3 +0.5
PKM Mcpherson Peak 2.03 301 P Pn 01 28 58.7 -0.1
baz=120
IRM Iron Mountain 2.15 81 P Pn 01 29 00.4 0.0
baz=263
IRM Sb Sb 01 29 31.6 +1.4
baz=263
TUQ Turquoise Moun 2.16 42 Sb Sb 01 29 31.8 +1.2
baz=224
MPMC Manual Prospec 2.21 5 P Pn 01 29 01.7 +0.3
baz=185
MPMC Pg Pb 01 29 06.3 +1.4
baz=185
Y12C Blythe 2.65 91 Pn Pn 01 29 07.2 -0.1
Y12C Sn Sn 01 29 39.1 +0.1
Y12C Blythe 2.65 91 P Pn 01 29 07.1 -0.1
baz=273
GRAC Grapevine Rang 3.15 5 Pg Pg 01 29 24.3 -1.2
baz=185
TPNV Topopah Spring 3.32 21 Pn Pn 01 29 16.7 +0.2
SHPR Sheep Range 3.37 37 Pn Pn 01 29 17.9 +0.6
CMB Columbia Colle 4.71 333 Pn Pn 01 29 35.3 -0.2

BJI **13** *01:41:00.8±0.0, 32.32S×178.18W, h9km, mB5.6/6, mb5.1/11, Ms5.2/5, Ms7 4.8/4*
IDC **13** *01:41:01.4±0.5, 32.64S×178.83W, h0km, mb4.6/16, mb1 4.8/18, mb1mx4.6/39, mbtmp4.7/18, ML4.7/2, MS4.0/20, Ms1 4.0/20, ms1mx3.9/26, Error ellipse: s-maj=19.3km s-min=15.5km az=161.0*
NEIC **13** *01:41:04.5±1.9, 32.82S±0.08×178.9W±0.2, h21km±4km, mb4.9/39, Error ellipse: s-maj=21.4km s-min=8.5km az=111.0*
WEL **13** *01:41:04.1±0.6, 33°S±5°×17°8W±1°3, h112km±25km, M5.0/5, mB5.0/5, MLv5.4/5, Mw(mB)4.3/5*
GCMT **13** *01:41:08.5±0.3, 32.71S±0.02×178.58W±0.02, h46km, MW5.0/85, Moment Tensor Solution. s67,c87; s85,c107; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr4.06±.19; Mθθ0.10±.15; Mφφ-4.16±.13; Mrθ0.14±.10; Mrφ-1.28±.12; Mθφ1.69±.10; Best double couple: M0 4.61200×10^16 NP1:φs200.00000°, δ35.00000°, λ98.00000°. NP2: φs11.00000°, δ56.00000°, λ85.00000°. Principal axes: T 4.3970, Plg78.0000°, Azm262.0000°; N 0.4360, Plg4.0000°, Azm14.0000°; P -4.8280, Plg11.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 13 01:41:06.0±0.4, **32.81S**±0.05×**178.73W**±0.08, **h33**km, **n178**, σ1.99/153, **mb5.0**/44, **MS4.1**/23, **13C-2D, South of Kermadec Islands**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)

GLKZ Green Lake 3.60 11 P Pn 01 41 59.4 0.0
GLKZ S Sn 01 42 40.0 -0.8
RAO Raoul Island 3.61 11 Pn Pn 01 41 58.3 -1.3
152nm,0.3s,baz=212,slow=10.0,SNR=9.2
RAO LR LR 01 42 32.7
comp=Z,518nm,20.3s,baz=150,slow=26
RAO Sn Sn 01 42 35.8 -5.3
298nm,0.3s,baz=91,slow=19,SNR=5.0
RAO Raoul Island 3.61 11 Pn 01 41 59.7 +0.1
RAO Sn Sn 01 42 43.5 +2.5
RIZ Raoul Island 3.61 11 S Sn 01 42 39.0 -2.2
MXZ Matakaoa Point 5.33 206 Pn 01 42 24.0 +0.8
MXZ Matakaoa Point 5.33 206 P Pn 01 42 24.8 +1.5
MXZ S Sn 01 43 27.7 +4.2
MWZ Matawai 6.30 208 P Pn 01 42 39.0 +2.3
MWZ S Sn 01 43 50.0 +2.5
URZ Urewera 6.41 211 Pn Pn 01 42 38.5 +0.5
7.2nm,0.3s,baz=272,slow=3.3,SNR=30
URZ Sn Sn 01 43 51.4 +1.3
41nm,0.3s,baz=163,slow=17,SNR=7.9
URZ Urewera 6.41 211 Pn 01 42 38.8 +0.7
OUZ Omahuta 6.81 247 P Pn 01 42 51.1 +7.6
BKZ Black Stump Fm 7.43 210 Pn 01 42 51.6 -0.6
WPHZ Waipukurau 8.22 207 P Pn 01 43 03.9 +0.9
WPHZ S Sn 01 44 30.2 -4.5
ANWZ Angora Road 8.56 205 P Pn 01 43 06.4 -1.1
PRWZ Pori Road 8.83 207 P Pn 01 43 12.9 +1.7
PRWZ S Sn 01 44 45.5 -4.0
BFZ Birch Farm 8.83 206 P Pn 01 43 09.9 -1.5
BFZ S Sn 01 44 46.9 -2.8
CPWZ Castlepoint 9.05 205 P Pn 01 43 15.4 +1.2
CPWZ S Sn 01 44 51.9 -3.1
MRZ Mangatainoka R 9.07 209 P Pn 01 43 13.1 -1.5
MRZ S Sn 01 44 51.9 -3.7
HOWZ Holdsworth Sta 9.30 208 P Pn 01 43 15.3 -2.4
TMWZ Te Maipa 9.34 206 P Pn 01 43 16.3 -1.9
KIW Kapiti Island 9.52 211 P Pn 01 43 18.5 -2.2
KIW S Sn 01 45 03.0 -3.5
MTW Mount Morrison 9.53 207 P Sn 01 45 01.3 -5.4
PLWZ Palliser 9.97 207 Pn Pn 01 43 24.5 -2.5
TUWZ Tuamarina 10.40 212 Pn 01 43 31.6 -1.2
THZ Tophouse 11.14 214 Pn Pn 01 43 41.3 -1.7
THZ Sn 01 45 43.6 -2.8
KHZ Kahutara 11.38 210 Pn Pn 01 43 42.8 -3.4
KHZ Sn 01 45 50.9 -1.2
MQZ McQueen's Vall 12.81 209 Pn Pn 01 44 04.2 -1.5
RPZ Rata Peaks 13.52 213 Pn Pn 01 44 11.6 -3.8
1.0nm,0.3s,baz=354,slow=10,SNR=1.7
RPZ Sn Sn 01 46 33.7 -11
3.2nm,0.3s,baz=124,slow=23,SNR=9.9
MSVF Nonsavu 15.29 348 Pn 01 44 40.0 +0.5
MSVF IAmb IAmb 01 44 42.0
comp=Z,63nm,1.0s
DZM Mont Dzumac 16.94 305 eP P 01 45 05.0 +2.7
comp=Z,234nm,1.3s
DZM eLR LR 01 49 03.8
comp=Z,3μm,24.8s
DZM Mont Dzumac 16.94 305 Pn P 01 45 03.8 +1.5
comp=Z,0.2nm,0.3s,baz=119,slow=14,SNR=8.1
DZM Mont Dzumac 16.94 305 P P 01 45 02.3 0.0
NOUC Port Laguerre 17.01 305 P P 01 45 02.2 -0.8
RAR Rarotonga 20.42 60 P Pn 01 45 41.2 -1.5
comp=Z,12nm,0.8s,baz=217,slow=5.1,SNR=2.8
RAR LR LR 01 51 26.3
comp=Z,598nm,20.7s,baz=258,slow=31
SANVU Saraoutou 21.49 320 P P 01 45 51.8 -0.1
SANVU IAmb IAmb 01 45 56.1
comp=Z,53nm,0.9s
ARMA Armidale 25.32 267 P P 01 46 27.8 -2.1
EIDS Eidsvold 27.34 278 P P 01 46 48.5 +0.5
TBI Tubuai 27.41 77 eS S 01 51 24.2 -2.7
comp=Z,204nm,33.5s
TBI eLR LR 01 53 42.4
comp=Z,1μm,27.5s,baz=246
TBI Tubuai 27.41 77 eT T 02 14 51.3
comp=Z,41nm,0.3s
PAE Paea 30.24 67 eT T 02 18 18.3
comp=Z,16nm,0.2s
PPT2 Papeete2 30.29 67 eS S 01 52 10.5 -1.8
comp=Z,214nm,26.0s
PPT2 eLR LR 01 55 03.9
comp=Z,1μm,26.5s,baz=241
PPT2 Papeete2 30.29 67 eT T 02 18 22.0
comp=Z,16nm,0.3s
PPT Papeete 30.30 67 LR LR 01 59 21.8
comp=Z,197nm,18.6s,baz=202,slow=36
HNR Honiara 30.48 315 LR LR 01 58 28.2
comp=Z,214nm,18.2s,baz=162,slow=34
TIAR Tiarei 30.49 67 eT T 02 18 36.2
comp=Z,3.2nm,0.3s
MEH Mehetia 31.31 69 eT T 02 19 38.6
comp=Z,10nm,0.3s
PMOR Pomariorio Ree 33.12 65 eT T 02 21 52.3
comp=Z,5.3nm,0.3s
VAH Vaihoa 33.18 66 eT T 02 21 57.2
comp=Z,29nm,0.2s
STKA Stephens Creek 33.40 261 P P 01 47 43.1 +1.6
comp=Z,0.9nm,0.3s,baz=98,slow=7.5,SNR=3.7
STKA LR LR 02 00 22.8
comp=Z,739nm,18.3s,baz=74,slow=35
PMG Port Moresby 39.14 299 P P 01 48 31.0 +0.3
comp=Z,24nm,0.6s,baz=127,slow=3.9,SNR=7.6
KRVT Keravat (AS076 39.38 310 P P 01 48 32.3 -0.3
comp=Z,408nm,1.0s,baz=22,slow=2.2,SNR=14
COEN Coen 39.41 289 P P 01 48 33.6 +0.7
COEN IAmb IAmb 01 48 35.5
comp=Z,27nm,1.1s
ASAR Alice Springs 42.42 270 P P 01 48 58.0 +0.3
comp=Z,26nm,0.9s,baz=113,slow=7.8,SNR=119
ASAR LR LR 02 06 03.0
comp=Z,199nm,18.9s,baz=118,slow=36
ASAR Alice Springs 42.42 270 P P 01 48 57.8 +0.1
TAOE Nuku Hiva Isla 42.85 65 eLR LR 02 00 41.3
comp=Z,637nm,29.0s
WR0 Warramunga Arr 43.45 275 IAmb IAmb 01 49 07.2
comp=Z,45nm,1.1s
WB2 Warramunga Arr 43.62 275 P P 01 49 06.7 -0.8
WRAB Tennant Creek 43.62 275 P P 01 49 05.5 -2.0
WRA Warramunga Arr 43.63 275 P P 01 49 07.5 -0.1
comp=Z,41nm,0.9s,baz=113,slow=8.0,SNR=131
WRA LR LR 02 05 45.6
comp=Z,311nm,21.4s,baz=95,slow=34
WRA Warramunga Arr 43.63 275 P P 01 49 06.6 -0.9
VNDA Vanda 45.65 186 LR LR 02 04 28.1
comp=Z,87nm,21.1s,baz=21,slow=31

GENI Genyem 48.84 299 P P 01 49 49.5 +1.0
comp=Z,67nm,0.5s
FITZ Fitzroy Crossi 51.78 272 P P 01 50 10.3 -0.5
comp=Z,14nm,1.0s,baz=135,slow=8.2,SNR=8.5
FITZ Fitzroy Crossi 51.78 272 IAmb IAmb 01 50 11.2
comp=Z,21nm,1.1s
SAUI Saumlaki 52.35 287 P P 01 50 16.2 +1.2
HMH Humu'ula Sheep 56.66 26 P P 01 50 45.8 -0.6
SIJI Sorong 56.68 294 P P 01 50 46.0 -0.5
comp=Z,5.6nm,0.5s,baz=95,slow=6.5,SNR=8.6
SWI Sorong 56.69 294 P P 01 50 47.0 +0.5
comp=Z,29nm,1.5s
SOEI Soe 57.12 280 P P 01 50 50.8 +1.0
comp=Z,60nm,0.9s
SOEI Soe 57.12 280 P P 01 50 49.2 -0.5
QSPA South Pole Qui 57.31 180 P P 01 50 53.9 +3.5
comp=Z,20nm,0.9s,baz=38,slow=2.7,SNR=37
GUMO Guam 57.78 317 LR LR 02 13 05.0
comp=Z,117nm,20.2s,baz=183,slow=33
SANI Sanana 60.10 289 P P 01 51 09.9 -0.4
comp=Z,40nm,1.3s
PLAI Plampang 63.02 277 P P 01 51 29.9 -0.2
comp=Z,56nm,1.2s
KAPI Kappang 63.46 282 P P 01 51 32.8 -0.2
comp=Z,5.0nm,0.3s,baz=239,slow=1.6,SNR=5.8
BNSI Bone 63.51 283 P P 01 51 33.2 -0.1
comp=Z,21nm,1.4s
SPSI Sidrap Palu 64.03 283 P P 01 51 36.0 -0.7
comp=Z,2µmcomp=Z,13nm,1.1s
MPSI Mapaga 66.40 287 P P 01 51 51.1 -1.0
comp=Z,9.9nm,1.6s
MAW Mawson 69.85 201 LR LR 02 22 03.1
comp=Z,185nm,19.8s,baz=64,slow=35
JCJ Chichijima 70.22 323 LR LR 02 15 42.7
comp=Z,123nm,21.9s,baz=66,slow=30
SYO Syowa Base 74.64 193⇑iP P 01 52 41.6 +0.1
SYO Syowa Base 74.64 193⇓epP pP 01 52 48.0 -2.8
SNAA Sanae 75.77 179 P P 01 52 50.1 +2.0
SNAA Sanae 75.77 179 P P 01 52 48.7 +0.6
SNAA IAmb IAmb 01 52 56.6
comp=Z,19nm,1.0s
VNA3 Neumayer Olymp 75.95 176 P P 01 52 51.2 +2.1
VNA2 Neumayer--Watz 76.38 177 P P 01 52 54.1 +2.7
baz=174,slow=5.2
VNA1 Neumayer--Stat 76.61 177 P P 01 52 55.8 +3.1
MJAR Matsushiro Arr 79.87 326 LR LR 02 23 38.1
comp=Z,43nm,21.8s,baz=120,slow=32
PLCA Paso Flores 81.32 133 P P 01 53 31.1 +12
comp=Z,1.5nm,0.8s,baz=284,slow=4.2,SNR=2.5
PLCA LR LR 02 20 49.2
comp=Z,88nm,20.8s,baz=252,slow=29
KSRS Korea Array 85.78 320 P P 01 53 41.5 -0.3
comp=Z,1.7nm,0.9s,baz=125,slow=6.1,SNR=3.0
KSRS LR LR 02 29 40.1
comp=Z,43nm,18.4s,baz=126,slow=34
NJ2 Nanjing 87.34 311 eP P 01 53 51.6 +2.0
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
PETK Petropavlovsk- 87.98 346 P P 01 53 51.4 -0.7
comp=Z,9.8nm,1.1s,baz=90,slow=4.4,SNR=4.0
PETK LR LR 02 26 44.9
comp=Z,132nm,21.2s,baz=212,slow=31
PFO Pinyon Flats O 88.28 48 P P 01 53 55.7 +1.4
comp=Z,1.0nm,0.6s,baz=258,slow=3.0,SNR=4.6
PFO Pinyon Flats O 88.28 48 P P 01 53 54.8 +0.5
PFO IAmb IAmb 01 54 13.2
comp=Z,4.6nm,0.9s
XPFO Pion Flat 88.29 48 P P 01 53 55.3 +1.0
XPFO IAmb IAmb 01 54 13.2
comp=Z,4.7nm,0.9s
ISA Isabella, Lake 88.44 45 IAmb IAmb 01 54 13.3
comp=Z,7.9nm,0.8s
USRK Ussuriysk Ar. 88.82 327 P P 01 53 56.4 0.0
comp=Z,2.9nm,0.9s,baz=125,slow=5.3,SNR=5.3
GLA Glamis 88.94 49 IAmb IAmb 01 54 17.1
comp=Z,7.4nm,0.8s
CMB Columbia Colle 88.96 42 IAmb IAmb 01 54 00.0
comp=Z,7.2nm,1.1s
GSC Goldstone, Bar 89.20 46 IAmb IAmb 01 54 18.9
comp=Z,7.8nm,0.9s
113A Mohawk Valley, 89.44 50 IAmb IAmb 01 54 02.7
comp=Z,6.7nm,1.1s
Y12C Blythe 89.59 49 IAmb IAmb 01 54 19.0
comp=Z,5.8nm,0.9s
WAKR Walker 89.82 42 IAmb IAmb 01 54 19.6
comp=Z,5.3nm,0.9s
NVAR Mina Array Bea 90.42 43 P P 01 54 05.9 +1.7
comp=Z,3.7nm,1.0s,baz=216,slow=7.6,SNR=14
NVAR LR LR 02 29 26.4
comp=Z,57nm,18.8s,baz=210,slow=32
Y14A Wickenburg 90.67 49 IAmb IAmb 01 54 09.2
comp=Z,4.9nm,0.9s
KVN Kaiserville 90.96 43 IAmb IAmb 01 54 24.3
comp=Z,4.9nm,1.0s
TUC Tucson 91.09 52 P P 01 54 10.8 +3.5
TUC IAmb IAmb 01 54 27.3
comp=Z,4.9nm,1.1s
CN2 Changchun 91.68 323 eP P 01 54 09.3 -0.4
CN2 pmax pmax
comp=Z,10.0nm,0.6s
X16A Lo Mia Camp, P 91.98 50 IAmb IAmb 01 54 30.6
comp=Z,4.9nm,0.9s
U15A North Rim 92.71 48 IAmb IAmb 01 54 34.1
comp=Z,4.3nm,0.8s
CMAR Chiang Mai Arr 93.61 290 PP PP 01 58 03.9 -0.7
comp=Z,0.7nm,0.3s,baz=136,slow=6.2,SNR=8.7
TXAR Lajitas Array 94.20 58 P P 01 54 24.1 +2.2
comp=Z,0.3nm,0.9s,baz=195,slow=7.8,SNR=4.0
TXAR LR LR 02 31 26.1
comp=Z,51nm,18.4s,baz=0.0,slow=32
HHC Hu-ho-hao-te 97.46 314 eP Pdif 01 54 38.3 +1.9
HHC pmax pmax
comp=Z,2.0nm,0.8s
HHC pmax pmax
comp=Z,57nm,5.5s
LPAZ La Paz 97.72 115 LR LR 02 29 18.0
comp=Z,52nm,21.9s,baz=284,slow=30
PDAR Pinedale Array 98.30 44 P Pdif 01 54 42.0 +1.7
comp=Z,0.1nm,0.6s,baz=249,slow=2.5,SNR=2.1
PDAR LR LR 02 30 35.7
comp=Z,82nm,21.8s,baz=227,slow=30
CPUP Villa Florida 98.97 129 LR LR 02 31 12.0
comp=Z,103nm,21.9s,baz=204,slow=30
MENT Mentasta 99.44 15 P Pdif 01 54 44.1 -0.5
LZH Lanzhou 99.66 307 eP Pdif 01 54 54.5 +8.1
LZH pP pwP 01 55 01.3 +1.1
LZH sP sP 01 55 04.1 +4.8
LZH ePP PP 01 59 01.7 +10
ILAR Eielson Array 100.40 13 P Pdif 01 54 50.2 +1.5
comp=Z,1.0nm,1.1s,baz=242,slow=6.5,SNR=4.2
YKA Yellowknife Ar 107.87 26 PKiKP PKiKP 01 59 28.6 -0.6
comp=Z,0.3nm,0.7s,baz=247,slow=1.4,SNR=3.3
YKA PKKPbc PKKPbc 02 10 43.1 -0.8
comp=Z,0.5nm,0.9s,baz=43,slow=3.1,SNR=7.4
WMQ Urumqi 114.21 308 ePKP PKiKP 01 59 41.8 0.0
WMQ LR LR
comp=Z,360nm,29.3s
WMQ LR LR
comp=Z,630nm,29.1s
MKAR Makanchi Array 118.82 309 PKP PKPdf 01 59 49.1 -1.5
comp=Z,2.1nm,1.0s,baz=82,slow=1.8,SNR=10
MAKZ Makanchi 119.03 309 PKPdf 01 59 49.9 -1.1
ZALV Zalesovo Beam 119.40 318 PKP PKPdf 01 59 49.5 -1.9
comp=Z,0.5nm,0.3s,baz=76,slow=0.6,SNR=3.7
RES Resolute Bay 119.72 18 PKiKP 01 59 51.4 -0.1
LONY Lake Ozonia 121.63 54 PKiKP 01 59 58.5 +2.3
KURK Kurchatov 122.24 313 PKPdf 01 59 56.3 -0.7
KKAR Karatay Array 125.86 302 PKPdf 02 00 03.7 -0.5
BRVK Borovoye 127.73 315 PKiKP 02 00 07.6 -0.4
KMBO Kilima Mbogo 132.13 232 PKP PKiKP 02 00 18.8 +0.4
comp=Z,0.7nm,0.7s,baz=48,slow=8.4,SNR=3.7
ABKAR Akbulak array 133.97 309 PKPdf 02 00 18.9 -0.4
GEYT Alibeck 133.97 293 PKP PKPdf 02 00 20.1 +0.3
comp=Z,0.4nm,0.4s,baz=298,slow=3.1,SNR=2.8
ARU Arti 134.52 319 PKPdf 02 00 20.0 -0.1
H10S2 ASCENSION HYDR135.78 157 T T 04 32 54.1
baz=204,slow=74,SNR=18
H10S3 ASCENSION HYDR135.78 157 T T 04 32 53.9
baz=16,slow=74,SNR=18
H10N3 ASCENSION HYDR136.88 157 T T 04 34 12.3
baz=203,slow=75,SNR=20
H10N1 ASCENSION HYDR136.88 157 T T 04 34 12.9
baz=203,slow=75,SNR=24
H10N2 ASCENSION HYDR136.90 157 T T 04 34 13.9
baz=203,slow=75,SNR=23
ARCES ARCESS Array B 140.79 347 PKhKP PKPpre 02 00 27.3
comp=Z,4.4nm,1.0s,baz=64,slow=2.8,SNR=8.5
AKH Akhalkalaki 145.53 297 ⇑P PKPab 02 00 41.1 -0.1
KBZ Khabaz 145.87 301 PKPbc PKPbc 02 00 41.6 -0.1
comp=Z,5.1nm,1.0s,baz=146,slow=5.5,SNR=7.4
BCA Borcka 146.94 297 ⇑P PKPbc 02 00 45.3 +0.3
FIA1 FINESS Array S 147.16 338 PKPbc 02 00 44.7 -0.2
FINES FINESS Array B 147.16 338 PKPbc PKPbc 02 00 44.5 -0.4
comp=Z,7.9nm,0.6s,baz=60,slow=2.9,SNR=39
FINES FINESS Array B 147.16 338 PKPdf 02 00 43.1 +0.5
VSU Vasula 149.13 334 eP PKPbc 02 00 50.3 +0.2
NC303 NORSAR Array S 150.82 350 PKiKP 02 00 54.5 -0.4
NB2 NORSAR Subarra151.02 350 PKP PKiKP 02 00 54.0 -0.7
comp=Z,6.1nm,0.9s,baz=17,slow=2.6
NOA NORSAR Array B 151.02 350 PKPbc PKPbc 02 00 54.4 -0.4
comp=Z,14nm,1.0s,baz=13,slow=4.1,SNR=19
IZAR Zarasai 151.21 330 eP PKiKP 02 00 56.1 +0.3
IZAR IAmb IAmb 02 00 57.3
comp=Z,11nm,0.9s
IDID Didziasalis 151.29 329 eP PKiKP 02 00 56.5 +0.6
ISAL Salakas 151.38 330 eP PKiKP 02 00 56.3 +0.1
ISAL IAmb IAmb 02 00 57.2
comp=Z,8.9nm,1.0s
IIGN Ignalina 151.49 330 eP PKiKP 02 00 56.7 +0.3
IIGN IAmb IAmb 02 00 58.0
comp=Z,15nm,0.9s
PABE Paberze 152.31 332 eP PKiKP 02 00 58.0 -0.1
PBUR Paburge 152.70 334 eP PKiKP 02 00 58.8 -0.1
AKASG Malin Array Be 152.77 319 PKPbc PKPbc 02 00 57.7 -1.3
comp=Z,5.7nm,0.9s,baz=60,slow=2.6,SNR=16
AKASG Malin Array Be 152.77 319 PKPbc 02 00 58.6 -0.4
AKBB Malin Array Si 152.77 319 PKiKP 02 00 59.1 0.0
LIC Lamto 152.91 166 ePKP1 PKPbc 02 00 59.2 -1.2
comp=Z,27nm,0.8s
KIC Kosan Boka 153.10 167 ePKP1 PKPbc 02 00 58.5 -2.4
comp=Z,23nm,1.4s
BRTR Keskin Array B 153.10 294 PKP PKPdf 02 00 51.9 -1.0
comp=Z,2.0nm,1.1s,baz=48,slow=1.8,SNR=5.8
BRTR PKPbc PKPbc 02 00 59.0 -1.3
comp=Z,1.2nm,0.5s,baz=146,slow=3.4,SNR=11
BRTR Keskin Array B 153.10 294 PKPdf 02 00 51.3 -1.6
BRTR PKPbc 02 00 59.0 -1.3
TIC Toumodi 153.32 166 ePKP1 PKPbc 02 00 58.9 -2.5
CFR Carcaliu 155.86 309 ⇑P PKPab 02 01 23.5 +0.2
TESR Tescani 156.27 313 ⇑P PKPab 02 01 21.4 -3.6
VRI Vrincioaia 156.50 311 ⇑P PKPab 02 01 24.3 -1.8
PLOR Plostina 156.56 311 ⇑P PKPab 02 01 27.5 +1.1
BURAR Bucovina Array 156.61 316 ⇑P PKPab 02 01 18.5 -8.1
BISRR Bisoca 156.64 310 ⇑P PKPab 02 01 32.0 +5.3
MLR Muntele Rosu 157.16 311 ⇑P PKPab 02 01 30.2 +1.1
DOPR Dopca 157.30 312 ⇑P PKPab 02 01 32.5 +3.0
KOLS Kolonicke sedl 157.49 322 ePKP PKPdf 02 00 59.1 +0.7
TRPA Tarpa 157.83 320 ⇑P PKPab 02 01 30.5 -1.1
VYHS Vyhne 159.50 325 ePKP PKPab 02 01 39.2 +0.3
CLL Collm 159.61 339 ePKPdiff PKPab 02 01 29.0 -10
CLL ePKPab PKPab 02 01 39.0 -0.2
CLL e 02 01 55.0
VRAC Vranov 159.93 330 ⇑P PKPab 02 01 33.4 -7.4
MDVR Moldovita 160.14 313 ⇓P PKPab 02 01 42.9 +1.0
TORD Torodi Ar. Bea 160.43 181 PKP PKPdf 02 01 01.6 -1.2
comp=Z,1.6nm,1.1s,baz=333,slow=1.1,SNR=4.5
TORD PKPab PKPab 02 01 43.7 +0.1
comp=Z,7.0nm,0.8s,baz=179,slow=3.5,SNR=22
GERES GERESS Array B 161.46 333 PKP PKPdf 02 01 01.8 -1.3
comp=Z,1.3nm,0.9s,baz=45,slow=2.1,SNR=6.4
GERES PKPab PKPab 02 01 44.6 -2.9
comp=Z,0.2nm,0.3s,baz=32,slow=5.8,SNR=2.1

SOME 13 01:52:18.4,40°.12N×77°.87E,h15km
KRNET 13 01:52:19.5±0.1,39°.89N×77°.85E,mb3.0
NNC 13 01:52:26.4±1.3,40°.56N×77°.84E,h0km,mb3.5,mpv3.2,
Error ellipse: s-maj=8.7km s-min=5.9km az=170.0
ISC 13 01:52:15.8±2.6,40°.1N±0°.1×77°.81E±0°.05,h8km±17km,n50,
σ1§23/76,20C-10D,Kyrgyzstan-Xinjiang border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NRN Naryn 1.92 315⇑iP Pg 01 52 54.2 +1.5
baz=17
NRN ⇑iS Sg 01 53 19.2 +1.5
baz=17
KDJ Kajisay 2.10 347⇑iP Pg 01 52 56.6 +0.6
baz=48
KDJ ⇑iS Sg 01 53 24.1 +0.9
baz=48
PRZ Przheval'sk 2.44 10⇓iP Pg 01 53 01.4 -1.1
baz=9.0
PRZ ⇓iS Sb 01 53 31.8 +1.6
baz=9.0
ULHL Ulahol 2.46 332⇑iP Pb 01 53 01.4 +1.0
baz=33
ULHL ⇑iS Sb 01 53 32.5 +1.6
baz=33
ANVS Anan'yevo 2.70 358⇑iP Pb 01 53 05.7 +1.3
baz=57
ANVS ⇑iS Sb 01 53 38.7 +1.0
baz=57
BOOM Boomskoye usch 2.78 330⇑iP Pb 01 53 06.1 +0.2
baz=32
BOOM ⇑iS Sb 01 53 40.4 +0.2
baz=32
TNSS Tian-Shan 3.02 348 eP Pg 01 53 13.6 0.0
33nm,0.7s
TNSS eS Sg 01 53 53.4 +0.6
35nm,0.7s
IZV Izvestkoviy 3.08 343 eP Pg 01 53 14.2 -0.6
12nm,0.5s
IZV eS Sg 01 53 54.4 -0.3
32nm,0.7s
IZV Izvestkoviy 3.08 343 Pg Pg 01 53 14.6 -0.2
12nm,0.5s
IZV Lg Lg 01 53 49.6
32nm,0.7s
MDOK Medeo 3.13 350⇓eP Pg 01 53 15.3 -0.4
12nm,0.7s
MDOK eS Sg 01 53 55.9 -0.4
27nm,0.6s
MDOK Medeo 3.13 350 ⇑Pg Pg 01 53 14.7 -1.1
13nm,0.7s
MDOK ⇑Lg Lg 01 53 52.9
22nm,0.6s
MDOK Medeo 3.13 350 Pg Pg 01 53 16.7 +1.0
12nm,0.7s
MDOK Lg Lg 01 53 52.8
27nm,0.6s
ARLS Aral 3.18 305⇑iP Pb 01 53 11.7 -0.9
baz=8.0
ARLS ⇑iS Sb 01 53 48.6 -3.0
baz=8.0
KOTS Kotyrbulak 3.19 351⇓eP Pg 01 53 16.8 -0.2
20nm,0.3s
KOTS eS Sg 01 53 58.2 0.0
44nm,0.4s
KOTS Kotyrbulak 3.19 351 Pg Pg 01 53 16.7 -0.2
20nm,0.3s
KOTS Lg Lg 01 53 53.2
44nm,0.4s
UZB Uzynbulak 3.19 16 eP Pg 01 53 16.4 -0.5
2.9nm,0.3s
UZB eS Sg 01 53 58.3 +0.1
13nm,0.6s
MTBS Maitube 3.21 342⇑eP Pg 01 53 17.6 +0.3
6.2nm,0.3s
MTBS eS Sg 01 54 00.6 +1.6
14nm,0.5s
MTBS Maitube 3.21 342 Pg Pg 01 53 17.6 +0.3
6.2nm,0.3s
MTBS Lg Lg 01 53 54.5
14nm,0.5s
KST Kastek 3.26 335 eP Pg 01 53 17.7 -0.6
5.4nm,0.7s
KST eS Sg 01 54 01.1 +0.5
23nm,0.5s
KST Kastek 3.26 335 Pg Pg 01 53 18.4 +0.1
5.4nm,0.7s
KST Lg Lg 01 53 55.9
23nm,0.5s
SHLS Shalkode 3.31 21 eP Pg 01 53 19.8 +0.6
3.2nm,0.2s
SHLS eS Sg 01 54 04.2 +2.1
46nm,0.6s
SHLS Shalkode 3.31 21 Pg Pg 01 53 20.5 +1.3
3.2nm,0.2s
SHLS Lg Lg 01 53 59.7
46nm,0.6s
KURS Kuram 3.41 4 eP Pg 01 53 20.8 -0.3
16nm,0.5s
KURS eS Sg 01 54 05.7 +0.4
12nm,0.7s
KPKS Kokpek 3.44 11⇑eP Pg 01 53 20.8 -0.9
13nm,0.4s
KPKS eS Sg 01 54 05.7 -0.5
29nm,0.4s
PDGK Podgornoye 3.48 21 Pg Pg 01 53 20.9 -1.4
1.8nm,0.5s
PDGK Lg Lg 01 54 00.6
13nm,1.0s
PDGK Podgornoye 3.48 21 ⇓Pg Pg 01 53 20.5 -1.8
3.8nm,0.6s
PDGK ⇓Lg Lg 01 54 02.3
28nm,0.7s
DGS Degeres 3.50 335 eP Pg 01 53 22.2 -0.7
2.2nm,0.5s
DGS eS Sg 01 54 08.6 +0.3
19nm,0.4s
DGS Degeres 3.50 335 Pg Pg 01 53 22.2 -0.7
2.2nm,0.5s
DGS Lg Lg 01 54 02.6
19nm,0.4s
AAK Ala-Archa 3.57 317 ⇑Pg Pg 01 53 23.9 -0.2
3.4nm,0.8s
AAK ⇑Lg Lg 01 54 10.1
42nm,0.8s
CHMS Chumysh 3.71 323 ⇓Lg Lg 01 54 13.2
9.5nm,0.8s
KTBS Karatobe 3.72 347⇑eP Pg 01 53 25.5 -1.5
4.4nm,0.6s
KTBS eS Sg 01 54 14.1 -1.1
36nm,0.7s
KTBS Karatobe 3.72 347 Pg Pg 01 53 25.7 -1.4
4.4nm,0.6s
KTBS Lg Lg 01 54 08.5
36nm,0.7s
CHKK Chushkaly 3.81 351⇓eP Pg 01 53 27.4 -1.5
3.5nm,0.4s
CHKK eS Sg 01 54 17.3 -0.9
14nm,0.5s
CHKK Chushkaly 3.81 351 Pg Pg 01 53 27.4 -1.5
3.5nm,0.4s
CHKK Lg Lg 01 54 11.4
14nm,0.5s
KRBS Karabastau 3.94 337⇓eP Pg 01 53 30.4 -0.9
3.2nm,0.4s
KRBS eS Sg 01 54 21.5 -0.9
10.0nm,0.9s
KRBS Karabastau 3.94 337 Pg Pg 01 53 30.3 -0.9
3.2nm,0.4s
KRBS Lg Lg 01 54 16.7
10.0nm,0.9s
KUU Kurty 3.96 344 eP Pg 01 53 29.4 -2.2
1.5nm,0.4s
KUU eS Sg 01 54 20.7 -2.2
20nm,0.7s
KUU Kurty 3.96 344 Pg Pg 01 53 32.9 +1.3
1.5nm,0.4s
KUU Lg Lg 01 54 20.7
20nm,0.7s
MNBS Baschi 4.01 6 eP Pg 01 53 31.4 -1.3
6.2nm,0.6s
MNBS eS Sg 01 54 24.1 -0.6
8.9nm,0.4s
MNBS Baschi 4.01 6 Pg Pg 01 53 31.7 -1.0
6.2nm,0.6s
MNBS Lg Lg 01 54 18.8
8.9nm,0.4s
SGDS Sogindy 4.12 326 Pg Pg 01 53 36.2 +1.5
SGDS Lg Lg 01 54 26.3
ARXS Arharly 4.12 0 eP Pg 01 53 32.6 -2.2
1.4nm,0.4s
ARXS eS Sg 01 54 26.4 -1.8
12nm,0.6s
ARXS Arharly 4.12 0 Pg Pg 01 53 32.7 -2.1
1.4nm,0.4s
ARXS Lg Lg 01 54 20.5
12nm,0.6s
MRKS Merke 4.35 309 eP Pg 01 53 37.7 -1.4
2.0nm,0.5s
MRKS eS Sg 01 54 35.0 -0.5
5.9nm,0.7s
MRKS Merke 4.35 309 Pg Pg 01 53 41.2 +2.1
2.0nm,0.5s
MRKS Lg Lg 01 54 34.9
5.9nm,0.7s
DJR Jarkent 4.49 18 eP Pg 01 53 41.7 -0.1
0.5nm,0.2s
DJR eS Sg 01 54 41.6 +1.7
4.8nm,0.5s
DJR Jarkent 4.49 18 Pg Pg 01 53 41.2 -0.6
0.4nm,0.2s
DJR Lg Lg 01 54 35.1
4.8nm,0.5s
KAPS Kapalarasan 5.32 12 eP Pg 01 53 55.8 -1.9
1.5nm,0.5s
KAPS eS Sg 01 55 05.7 -0.8
2.4nm,0.7s
KAPS Kapalarasan 5.32 12 Pg Pg 01 53 55.7 -1.9
1.5nm,0.5s
KAPS Lg Lg 01 54 59.9
2.4nm,0.7s
KK31 Karatay Array 6.25 301 ⇓Pg Pg 01 54 14.6 -0.8
1.5nm,1.0s,baz=129,slow=16,SNR=5.5
KK31 ⇑Lg Lg 01 55 36.6
0.8nm,0.5s,baz=122,slow=28,SNR=3.9

IDC 13 02:04:31.2±11.0,36°.19N×81°.87E,h0km,mb3.3/1,
mb1 3.6/3,mb1mx3.2/54,mbtmp3.6/3,ML3.2/2,Error
ellipse: s-maj=154.9km s-min=53.4km az=52.0,
Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MKAR Makanchi Array 10.60 2 Pn Pn 02 07 05.3 +1.0
0.4nm,0.3s,baz=181,slow=12,SNR=15
MKAR Sn Sn 02 09 01.4 -2.3
0.1nm,0.3s,baz=185,slow=26,SNR=1.6
ZALV Zalesovo Beam 17.87 6 P Pn 02 08 41.2 +0.1
0.2nm,0.3s,baz=195,slow=11,SNR=5.9
SONM Songino Array 21.52 50 P P 02 09 21.7 -0.1
1.3nm,0.8s,baz=243,slow=12,SNR=7.5

IDC 13 02:07:40.4±2.5,14°.80S×177°.28W,h326km±27km,mb3.2/4,
mb1 3.6/5,mb1mx3.2/32,mbtmp4.0/5,Error ellipse:
s-maj=47.5km s-min=19.5km az=151.0
ISC 13 02:07:42.3±0.9,14°.9S±0°.3×177°.1W±0°.2,h350km,n7,
σ1§64/7,mb3.6/5,Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AFI Afiamalu 5.24 79 P Pn 02 09 03.7 -0.9
13nm,0.3s,baz=334,slow=2.0,SNR=6.7
WRA Warramunga Arr 46.49 257 P P 02 15 35.2 -0.9
0.9nm,0.5s,baz=88,slow=6.8,SNR=5.4
ASAR Alice Springs 46.88 251 P P 02 15 37.7 -1.3
2.5nm,0.5s,baz=87,slow=7.9,SNR=41
ILAR Eielson Array 82.72 13 P P 02 19 28.8 +1.6
0.6nm,0.7s,baz=214,slow=5.1,SNR=5.1
TXAR Lajitas Array 83.33 57 P P 02 19 31.1 -0.1
0.5nm,0.9s,baz=216,slow=6.2,SNR=4.6
MAW Mawson 87.07 199 P P 02 19 50.4 +1.7
4.5nm,0.3s,baz=123,slow=10,SNR=16
ARCES ARCESS Array B 123.62 351 PKP PKiKP 02 25 56.9 -1.3
7.3nm,1.2s,baz=25,slow=2.4,SNR=4.6

IDC 13 02:13:12.6±1.2,53°.17N×6°.49E,h0km,mb3.0/2,mb1 3.5/9,
mb1mx3.3/41,mbtmp3.3/9,ML3.1/6,Error ellipse:
s-maj=20.9km s-min=14.3km az=54.0
BGR 13 02:13:13.9±0.3,53°.40N×6°.72E,h3km,ML3.2/9,Error
ellipse: s-maj=5.6km s-min=3.3km az=108.0
BGR Felt V EMS.
DNK 13 02:13:13.2±1.0,53°.04N×6°.46E,h80km±999km,ML2.5,
Hypocentre not reviewed by the ISC
LDG 13 02:13:14.9±0.1,53°.37N×6°.77E,h3km,Md3.3/1,Ml3.2/40,
Error ellipse: s-maj=1.6km s-min=1.3km az=112.0
BGS 13 02:13:14.2±1.1,53°.40N×6°.77E,h6km±11km,ML3.1,ML3.1
BNS 13 02:13:15.9±0.6,53°.28N×6°.70E,h3km,ML3.0
UPP 13 02:13:17.9±3.2,53°.58N×7°.19E,h0km,ML2.3,Suspected
explosion
PRU 13 02:13:20.2±0.0,53°.39N×7°.57E,h0km
ISC 13 02:13:11.1±0.6,53°.36N±0°.03×6°.67E±0°.03,h0km,n128,

σ2§18/218,**2C-2D,The Netherlands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HLG	**Helgoland**	**1.09**	**41**	*e*Pg	**Pn**	**02 13 35.3**	**+1.7**
HLG				*e*Sg	**Sn**	**02 13 50.4**	**+0.9**
IBBN	**Ibbenburen**	**1.24**	**148**	*e*Pg	**Pn**	**02 13 37.9**	**+2.2**
IBBN				*e*Sg	**Sn**	**02 13 55.6**	**+2.4**
WTSB	**Winterswijk**	**1.40**	**177**	*e*Pn	**Pn**	**02 13 39.3**	**+1.4**
RETH	**Rethem/Aller,**	**1.74**	**110**	*e*Pn	**Pn**	**02 13 44.1**	**+1.6**
BUG	**Bochum--Univer**	**1.96**	**169**	*e*Pn	**Pn**	**02 13 46.8**	**+1.3**
BUG				*e*Pg	**Pg**	**02 13 51.5**	**+2.9**
LAUG	**Laupendahl**	**2.02**	**175**	*e*Pn	**Pn**	**02 13 47.9**	**+1.5**
HKB	**Herkenbosch**	**2.20**	**188**	Pn	**Pn**	**02 13 50.6**	**+1.8**
HKB				Sn	**Sn**	**02 14 15.0**	**-1.7**
BSEG	**Bad Segeberg**	**2.25**	**74**	*e*Pn	**Pn**	**02 13 50.0**	**+0.6**
BSEG				*e*Pg	**Pb**	**02 13 54.5**	**+2.0**
NRDL	**Niedersach Rie**	**2.25**	**111**	*e*Pn	**Pn**	**02 13 51.2**	**+1.7**
BMOL	**Mol**	**2.36**	**205**	Pn	**Pb**	**02 13 54.6**	**+0.2**
HOBG	**Hohbusch**	**2.42**	**170**	*e*Pn	**Pn**	**02 13 53.8**	**+2.0**
BNS	**Bensberg**	**2.42**	**172**	*e*Pn	**Pn**	**02 13 53.6**	**+1.7**
BNS				*e*Sn	**Sn**	**02 14 22.7**	**+0.5**
	110nm,0.8s						
BEBN	**Eben Emael**	**2.64**	**194**	Pn	**Pn**	**02 13 56.4**	**+1.5**
BEBN				Pg	**Pg**	**02 14 04.6**	**+2.9**
BEBN				Sg	**Sg**	**02 14 36.7**	**+0.8**
HGN	**Heimansgroeve**	**2.64**	**190**	*e*Pn	**Pn**	**02 13 56.4**	**+1.5**
GTTG	**Gottingen**	**2.71**	**131**	*e*Pn	**Pn**	**02 13 57.5**	**+1.6**
GTTG				*e*Sn	**Sn**	**02 14 29.5**	**0.0**
CLZ	**Clausthal**	**2.72**	**123**	*e*Pn	**Pn**	**02 13 57.7**	**+1.6**
CLZ				*e*Sn	**Sn**	**02 14 28.9**	**-0.8**
ASSE	**Asse, Remlinge**	**2.73**	**115**	*e*Pn	**Pn**	**02 13 57.4**	**+1.4**
STB	**Steinbach**	**2.77**	**178**	*e*Pn	**Pn**	**02 13 58.1**	**+1.4**
MEM	**Membach**	**2.79**	**189**	Pn	**Pn**	**02 13 57.6**	**+0.6**
MEM				Pg	**Pg**	**02 14 05.3**	**+0.8**
MEM				Sn	**Sn**	**02 14 33.8**	**+2.6**
MEM				Sg	**Sg**	**02 14 42.0**	**+1.5**
	comp=E,50nm,0.5s						
MEM	**Membach**	**2.79**	**189**	*e*Pn	**Pn**	**02 13 58.3**	**+1.4**
BLCH	**La Chartreuse**	**2.81**	**194**	⇓Pn	**Pn**	**02 13 58.0**	**+0.9**
BLCH				Pg	**Pg**	**02 14 09.6**	**+4.8**
AHRW	**Bad Neuenahr-A**	**2.84**	**175**	*e*Pn	**Pn**	**02 13 59.2**	**+1.6**
BSTI	**Sart Tilman**	**2.87**	**194**	⇑Pn	**Pn**	**02 13 59.3**	**+1.3**
UCC	**Uccle**	**2.94**	**210**	Pn	**Pn**	**02 13 58.1**	**-0.9**
UCC				Sn	**Sn**	**02 14 34.2**	**-0.6**
UCC				Sg	**Sg**	**02 14 47.4**	**+2.0**
UCC	**Uccle**	**2.94**	**210**	*e*Pn	**Pn**	**02 14 02.0**	**+3.0**
KOE	**Koeppel**	**3.01**	**167**	*e*Pn	**Pn**	**02 14 02.1**	**+2.0**
BHOU	**Houvegnez**	**3.04**	**188**	⇓Pn	**Pn**	**02 14 01.9**	**+1.5**
BHOU				Pg	**Pg**	**02 14 09.6**	**+0.2**
BHOU				Sn	**Sn**	**02 14 36.9**	**-0.6**
BHOU				Sg	**Sg**	**02 14 49.3**	**+0.6**
	comp=Z,16nm,0.3s						
BCLA	**Clavier**	**3.07**	**197**	⇑Pn	**Pn**	**02 14 01.9**	**+1.1**
BCLA				Pg	**Pg**	**02 14 11.6**	**+1.8**
HILG	**Hillesheim**	**3.07**	**180**	*e*Pn	**Pn**	**02 14 03.3**	**+2.4**
BGES	**Gesves**	**3.14**	**199**	Pn	**Pn**	**02 14 03.0**	**+1.3**
BGES				Pg	**Pg**	**02 14 15.5**	**+4.3**
BGES				Sn	**Sn**	**02 14 39.3**	**-0.6**
BGES				Sg	**Sg**	**02 14 53.1**	**+1.3**
	comp=E,29nm,0.4s						
BSKQ	**Steenkerk**	**3.15**	**212**	Pn	**Pn**	**02 14 04.2**	**+2.2**
BSKQ				Pg	**Pg**	**02 14 14.5**	**+3.0**
BSKQ				Sn	**Sn**	**02 14 39.8**	**-0.5**
BMRD	**Maredsous**	**3.28**	**202**	Pn	**Pn**	**02 14 05.0**	**+1.3**
BMRD				Pg	**Pg**	**02 14 17.1**	**+3.1**
LKLB	**Kalborn**	**3.29**	**186**	Pn	**Pn**	**02 14 05.6**	**+1.8**
LKLB				Pg	**Pg**	**02 14 15.6**	**+1.6**
LKLB				Sn	**Sn**	**02 14 40.0**	**-3.5**
TNS	**Taunus Mts**	**3.33**	**160**	*e*Pn	**Pn**	**02 14 06.8**	**+2.3**
TNS				*e*Sn	**Sn**	**02 14 44.0**	**-0.8**
MUD	**Monsted U'grnd**	**3.42**	**24**	*e*P	**Pn**	**02 14 07.2**	**+1.7**
MUD				IAML		02 15 02.3	
	comp=N,21nm,0.5s						
MUD				IAML		02 15 10.8	
	comp=E,27nm,0.5s						
MUD	**Monsted U'grnd**	**3.42**	**24**	*e*Pn	**Pn**	**02 14 07.1**	**+1.5**
MUD				*e*Sg	**Sg**	**02 14 59.7**	**-1.2**
GIVF	**Givet**	**3.46**	**200**	*e*Pn	**Pn**	**02 14 08.3**	**+2.1**
GIVF	**Givet**	**3.46**	**200**	*e*Pg	**Pg**	**02 14 19.5**	**+2.1**
GIVF				*e*Sn	**Sn**	**02 14 47.5**	**-0.3**
	comp=E,22nm,0.3s						
GIVF				*e*Sg	**Sg**	**02 15 04.5**	**+2.3**
	comp=E,51nm,0.6s						
DOU	**Dourbes**	**3.52**	**202**	*e*P	**Pn**	**02 14 09.5**	**+2.5**
DOU	**Dourbes**	**3.52**	**202**	Pn	**Pn**	**02 14 08.9**	**+1.9**
DOU				Pg	**Pg**	**02 14 22.7**	**+4.3**
DOU				Sn	**Sn**	**02 14 46.3**	**-2.9**
BAIF	**Baives**	**3.65**	**206**	*e*Pn	**Pn**	**02 14 10.9**	**+2.2**
BAIF	**Baives**	**3.65**	**206**	*e*Pg	**Pg**	**02 14 23.3**	**+2.4**
BAIF				*e*Sn	**Sn**	**02 14 51.9**	**-0.5**
	comp=E,14nm,0.5s						
BAIF				*e*Sg	**Sg**	**02 15 10.0**	**+1.9**
	comp=E,20nm,0.5s						
WACR	**West Acre**	**3.70**	**263**	*e*P	**Pn**	**02 14 12.7**	**+3.2**
WACR				*e*S	**Sn**	**02 14 54.8**	**+1.0**
WACR				IAML		02 14 56.9	
	comp=N,26nm,0.4s						
WACR				IAML		02 14 57.2	
	comp=E,26nm,0.6s						
WLF	**Walferdange**	**3.72**	**185**	Pn	**Pn**	**02 14 10.2**	**+0.5**
ELSH	**Elham, Standar**	**4.06**	**239**	*e*P	**Pn**	**02 14 17.2**	**+2.8**
CLL	**Collm**	**4.39**	**115**	*e*(Pn)	**Pn**	**02 14 21.0**	**+2.0**
CLL				*e*Pg	**Pb**	**02 14 27.0**	**-2.1**
CLL				*e*Sg	**Sb**	**02 15 21.0**	**-1.6**
LUNU	**Lund**	**4.56**	**57**	P	**Pn**	**02 14 22.0**	**+0.7**
LUNU				S	**Sn**	**02 15 10.9**	**-3.9**
BJUU	**Bjuv**	**4.58**	**51**	P	**Pn**	**02 14 22.1**	**+0.7**
PAGF	**Fort de Pagny**	**4.85**	**187**	*e*Pn	**Pn**	**02 14 27.1**	**+1.8**
PAGF	**Fort de Pagny**	**4.85**	**187**	*e*Pg	**Pg**	**02 14 45.7**	**+1.7**
PAGF				*e*Sn	**Sn**	**02 15 20.7**	**-1.4**
PAGF				*e*Sg	**Sg**	**02 15 47.9**	**+1.1**
	comp=E,6.9nm,0.4s						
CWF	**Charnwood Fore**	**4.86**	**266**	*e*P	**Pn**	**02 14 28.7**	**+3.3**
CWF				*e*S	**Sn**	**02 15 21.9**	**-0.3**
CWF				IAML		02 15 24.1	
	comp=E,9.4nm,0.3s						
CWF				IAML		02 15 24.9	
	comp=N,6.8nm,0.3s						
CDF	**Champ du Feu**	**4.97**	**175**	*e*Pn	**Pn**	**02 14 28.2**	**+1.2**
CDF				*e*Sn	**Sn**	**02 15 23.3**	**-1.9**
	comp=N,5.9nm,0.4s						
MEZF	**Maizieres J'vi**	**4.97**	**193**	*e*Pn	**Pn**	**02 14 28.9**	**+1.9**
	baz=12						
MEZF				*e*Sn	**Sn**	**02 15 23.6**	**-1.5**
MEZF				*e*Sg	**Sg**	**02 15 51.2**	**+0.5**
	comp=N,11nm,0.4s						
SNART	**Snartemo**	**5.00**	**3**	*i* P		02 14 28.7	
LBWR	**Ladybower, Pea**	**5.03**	**274**	*e*P	**Pn**	**02 14 30.1**	**+2.4**
LBWR				*e*S	**Sn**	**02 15 26.0**	**-0.4**
LBWR				IAML		02 15 26.8	
	comp=E,16nm,0.4s						
LBWR				IAML		02 15 29.6	
	comp=N,15nm,0.5s						
ONAU	**Onsala**	**5.03**	**34**	P	**Pn**	**02 14 28.3**	**+0.6**
BSD	**Bornholm Skovb**	**5.14**	**67**	*e*P	**Pn**	**02 14 29.4**	**+0.1**
BSD	**Bornholm Skovb**	**5.14**	**67**	*i* P	**Pn**	**02 14 29.7**	**+0.4**
BSD				*e*S	**Sn**	**02 15 24.7**	**-4.6**
BSD	**Bornholm Skovb**	**5.14**	**67**	*e*Pn	**Pn**	**02 14 29.4**	**+0.1**
BSD				*e*Pg	**Pg**	**02 14 51.0**	**+1.5**
BSD	**Bornholm Skovb**	**5.14**	**67**	*i* P		02 14 29.7	
BSD				*e*S		02 15 24.7	
BSD				IAML		02 15 26.4	
	comp=Z,2.6nm,0.4s						
DEL	**Delary**	**5.19**	**50**	P	**Pn**	**02 14 30.9**	**+1.0**
SFTF	**Sexfontaines**	**5.27**	**192**	*e*Pn	**Pn**	**02 14 33.3**	**+2.3**
	baz=12						
SFTF				*e*Sn	**Sn**	**02 15 31.1**	**-1.3**
	comp=Z,6.9nm,0.3s						
HAU	**Haudompre**	**5.37**	**182**	*e*Pn	**Pn**	**02 14 34.4**	**+2.0**
HAU				*e*Sn	**Sn**	**02 15 33.6**	**-1.3**
HAU				*e*Sg	**Sg**	**02 16 03.5**	**+0.1**
	comp=Z,4.2nm,0.3s						
TJOU	**Tjoern**	**5.45**	**29**	P	**Pn**	**02 14 34.3**	**+0.8**
HINF	**Hinteralfeld**	**5.55**	**179**	*e*Pn	**Pn**	**02 14 36.9**	**+1.9**
HINF				*e*Sn	**Sn**	**02 15 37.8**	**-1.7**
HINF				*e*Sg	**Sg**	**02 16 10.0**	**+0.6**
	comp=Z,4.3nm,0.4s						
GNOU	**Gnosjoe**	**5.64**	**43**	P	**Pn**	**02 14 37.3**	**+1.2**
GNOU	**Gnosjoe**	**5.64**	**43**	P		02 14 37.3	
HLM1	**Long Mynd**	**5.84**	**266**	*e*P	**Pn**	**02 14 42.1**	**+3.3**
HLM1				*e*S	**Sn**	**02 15 45.4**	**-1.0**
HLM1				IAML		02 15 47.6	
	comp=E,12nm,0.4s						
HLM1				IAML		02 15 49.8	
	comp=N,13nm,0.4s						
VXJU	**Vaexsjoe**	**5.93**	**50**	P	**Pn**	**02 14 41.0**	**+0.9**
VXJU	**Vaexsjoe**	**5.93**	**50**	P		02 14 41.0	
ESY	**Stoneypath**	**5.97**	**299**	*e*P	**Pn**	**02 14 43.2**	**+2.5**
VANU	**Vaenersborg**	**5.97**	**28**	P	**Pn**	**02 14 41.6**	**+1.0**
VANU	**Vaenersborg**	**5.97**	**28**	P		02 14 41.6	
MCH1	**Michaelchurch**	**6.04**	**261**	*e*P	**Pn**	**02 14 43.3**	**+1.7**
MCH1				*e*S	**Sn**	**02 15 50.2**	**-1.1**
MCH1				IAML		02 15 52.3	
	comp=E,12nm,0.4s						
MCH1				IAML		02 15 53.6	
	comp=N,14nm,0.4s						
BLEU	**Blekinge**	**6.05**	**57**	P	**Pn**	**02 14 42.1**	**+0.4**
KHC	**Kasperske Hory**	**6.06**	**132**	*e*PN	**Pn**	**02 14 44.6**	**+2.7**
KHC				*e*SN	**Sn**	**02 15 49.0**	**-3.0**
EKA	**Eskdalemuir Ar**	**6.08**	**293**	Pn	**Pn**	**02 14 43.9**	**+1.8**
	baz=107,slow=14,SNR=24						
EKA				Sn	**Sn**	**02 15 52.2**	**-0.1**
	baz=107,slow=25,SNR=4.7						
ESK	**Eskdalemuir**	**6.10**	**293**	*e*P	**Pn**	**02 14 44.3**	**+1.9**
ESK				*e*S	**Sn**	**02 15 51.1**	**-1.7**
ESK				IAML		02 15 53.6	
	comp=N,5.1nm,0.3s						
ESK				IAML		02 15 56.9	
	comp=E,5.1nm,0.4s						
EBL	**Broad Law**	**6.15**	**297**	*e*P	**Pn**	**02 14 45.3**	**+2.3**
FKPU	**Falk**	**6.24**	**37**	P	**Pn**	**02 14 45.5**	**+1.2**
FKPU	**Falk**	**6.24**	**37**	P		02 14 45.5	
EDI	**Edinburgh**	**6.27**	**298**	*e*P	**Pn**	**02 14 47.6**	**+2.9**
GERES	**GERESS Array B**	**6.33**	**133**	Pn	**Pn**	**02 14 47.5**	**+1.9**
	comp=E,0.3nm,0.3s,baz=311,slow=13,SNR=9.8						
GERES				Sn	Sn	02 15 50.3	-8.3
	comp=E,0.1nm,0.3s,baz=314,slow=24,SNR=1.8						
LOR	**Lormes**	**6.36**	**198**	*e*Pn	**Pn**	**02 14 46.9**	**+0.9**
	baz=19						
LOR				*e*Sn	**Sn**	**02 15 55.2**	**-4.1**
	comp=E,5.7nm,0.4s						
LOR				*e*Sg	**Sg**	**02 16 34.5**	**-0.8**
	comp=E,4.5nm,0.4s,baz=20						
LDF	**La Druitiere**	**6.42**	**225**	*e*Pn	**Pn**	**02 14 47.4**	**+0.6**
LDF				*e*Sn	**Sn**	**02 15 58.2**	**-2.5**
	comp=E,3.2nm,0.3s						
LDF				*e*Sg	**Sg**	**02 16 36.3**	**-0.7**
	comp=E,3.2nm,0.4s						
DAVA	**Damuels**	**6.42**	**160**	*i* Pn	**Pn**	**02 14 49.7**	**+2.8**
	comp=E,3.8nm,0.6s						
CHVC	**Chvalec**	**6.43**	**112**	*e*PN	**Pn**	**02 14 48.5**	**+1.5**
FLN	**La Foliniere**	**6.44**	**227**	*e*Pn	**Pn**	**02 14 48.9**	**+1.8**
	baz=33						
FLN	**La Foliniere**	**6.44**	**227**	*e*Pg	**Pg**	**02 15 14.6**	**+0.1**
	baz=48						
FLN				*e*Sn	**Sn**	**02 15 58.9**	**-2.4**
	comp=E,13nm,0.4s						
FLN				*e*Sg	**Sg**	**02 16 37.2**	**-0.7**
	comp=E,1.4nm,0.2s						
OSTC	**Ostas**	**6.53**	**112**	*e*PN	**Pn**	**02 14 51.0**	**+2.6**
HYF	**Humbligny**	**6.62**	**205**	*e*Pn	**Pn**	**02 14 51.5**	**+1.9**
HYF				*e*Sn	**Sn**	**02 16 03.4**	**-2.4**
SSF	**Saint Saulge**	**6.62**	**199**	*e*Pn	**Pn**	**02 14 50.9**	**+1.2**
SSF				*e*Sn	**Sn**	**02 16 01.7**	**-4.1**
	comp=E,5.0nm,0.6s						
SSF				*e*Sg	**Sg**	**02 16 43.1**	**-0.7**
	comp=E,8.7nm,0.6s						
WLF1	**Llynfaes**	**6.63**	**274**	*e*P	**Pn**	**02 14 51.8**	**+2.1**
DPC	**Dobruska-Polom**	**6.69**	**113**	*e*PN	**Pn**	**02 14 52.0**	**+1.4**
CABF	**La Chapelle**	**6.77**	**183**	*e*Pn	**Pn**	**02 14 52.0**	**+0.3**
CABF	**La Chapelle**	**6.77**	**183**	*e*Pg	**Pg**	**02 15 20.2**	**-0.5**
CABF				*e*Sn	**Sn**	**02 16 06.8**	**-2.7**
	comp=E,0.9nm,0.2s						
WATA	**Walderalm**	**6.80**	**151**	*i* Pn	**Pn**	**02 14 54.0**	**+1.8**
	comp=E,1.7nm,0.2s						
FETA	**Feichten**	**6.86**	**156**	*i* Pn	**Pn**	**02 14 54.9**	**+1.9**
	comp=E,2.0nm,0.5s						
TREC	**Trest**	**6.86**	**123**	*e*PN	**Pn**	**02 14 55.2**	**+2.3**
WTTA	**Wattenberg**	**6.88**	**151**	*i* Pn	**Pn**	**02 14 57.1**	**+3.8**
	comp=E,0.9nm,0.2s						
GRR	**Gorron**	**6.89**	**227**	*e*Pn	**Pn**	**02 14 54.5**	**+1.2**
GRR	**Gorron**	**6.89**	**227**	*e*Pg	**Pg**	**02 15 23.4**	**+0.4**
GRR				*e*Sn	**Sn**	**02 16 08.8**	**-3.5**
	comp=E,7.6nm,0.4s						
INVG	**Invergeldie, C**	**6.90**	**301**	*e*P	**Pn**	**02 14 55.3**	**+1.9**
AVF	**Avril sur Loir**	**6.92**	**199**	*e*Pn	**Pn**	**02 14 54.3**	**+0.7**
AVF				*e*Sn	**Sn**	**02 16 09.8**	**-3.1**
	comp=E,1.2nm,0.4s						
AVF				*e*Sg	**Sg**	**02 16 51.8**	**-1.3**
	comp=E,1.0nm,0.4s						
SMF	**Signal de Mont**	**6.97**	**196**	*e*Pn	**Pn**	**02 14 55.3**	**+1.0**
SMF	**Signal de Mont**	**6.97**	**196**	*e*Pg	**Pg**	**02 15 24.5**	**0.0**
SMF				*e*Sn	**Sn**	**02 16 11.7**	**-2.5**
SMF				*e*Sg	**Sg**	**02 16 53.9**	**-0.8**
	comp=E,1.1nm,0.2s						
KRLC	**Kraliky**	**7.09**	**114**	*e*PN	**Pn**	**02 14 57.9**	**+1.8**
BGF	**Bois d'Agland**	**7.24**	**201**	*e*Pn	**Pn**	**02 14 59.2**	**+1.1**
BGF				*e*Sn	**Sn**	**02 16 18.9**	**-2.1**
	comp=E,14nm,0.5s						
BGF				*e*Sg	**Sg**	**02 17 02.3**	**-1.3**
	comp=E,12nm,0.5s						
VRAC	**Vranov**	**7.42**	**119**	Pn	**Pn**	**02 15 01.6**	**+1.1**
	comp=E,0.2nm,0.3s,baz=92,slow=6.9,SNR=3.1						
KBA	**Koelnbreinsper**	**7.61**	**143**	*i* Pn	**Pn**	**02 15 06.8**	**+3.6**
	comp=E,2.3nm,0.4s						
ABTA	**Abfaltersbach**	**7.61**	**148**	*i* Pn	**Pn**	**02 15 07.4**	**+4.2**
	comp=E,0.8nm,0.3s						
TCF	**Toulx Ste Croi**	**7.64**	**204**	*e*Pn	**Pn**	**02 15 04.1**	**+0.4**
TCF				*e*Sn	**Sn**	**02 16 26.8**	**-4.1**
	comp=E,0.8nm,0.2s						
SGMF	**Saint Gilles**	**7.76**	**233**	*e*Pn	**Pn**	**02 15 06.4**	**+1.1**
SGMF				*e*Sn	**Sn**	**02 16 30.4**	**-3.4**
	comp=E,2.6nm,0.2s						
HFS	**Hagfors**	**7.80**	**27**	Pn	**Pn**	**02 15 05.8**	**0.0**
	comp=E,0.5nm,0.3s,baz=206,slow=14,SNR=27						
HFS				Sn	**Sn**	**02 16 28.7**	**-6.1**
	comp=E,0.3nm,0.3s,baz=208,slow=25,SNR=2.8						
LPL	**La Plagne**	**7.85**	**180**	*e*Pn	**Pn**	**02 15 08.7**	**+2.0**
LPG	**La Plagne**	**7.87**	**180**	*e*Pn	**Pn**	**02 15 09.4**	**+2.4**
LPG				*e*Sn	**Sn**	**02 16 33.3**	**-3.6**
	comp=E,1.1nm,0.4s						
CONA	**Conrad Observa**	**7.98**	**129**	*e*Pn	**Pn**	**02 15 08.3**	**+0.1**
	comp=E,0.6nm,0.5s						
CONA				*e*Sg	**Sg**	**02 17 30.6**	**+3.5**
	comp=E,1.0nm,0.4s						
ROSF	**Rostrenen**	**8.05**	**235**	*e*Pn	**Pn**	**02 15 10.8**	**+1.6**
ROSF				*e*Sn	**Sn**	**02 16 36.7**	**-4.2**
	comp=E,4.3nm,0.3s						
MFF	**Saint Martin d**	**8.06**	**216**	*e*Pn	**Pn**	**02 15 10.7**	**+1.3**
MFF				*e*Sn	**Sn**	**02 16 37.9**	**-3.3**
	comp=E,1.4nm,0.3s						
NOA	**NORSAR Array B**	**8.08**	**16**	Pn	**Pn**	**02 15 08.9**	**-0.8**
	comp=E,0.1nm,0.3s,baz=194,slow=12,SNR=17						
NOA				Sn	**Sn**	**02 16 36.0**	**-5.6**
	comp=E,0.0nm,0.3s,baz=235,slow=20,SNR=4.4						
QUIF	**Quistinic**	**8.29**	**233**	*e*Pn	**Pn**	**02 15 14.0**	**+1.5**
QUIF				*e*Sn	**Sn**	**02 16 42.6**	**-4.1**
	comp=E,1.9nm,0.3s						
ORIF	**Oris-en-Rattie**	**8.47**	**184**	*e*Pn	**Pn**	**02 15 15.8**	**+0.8**
MBDF	**Montbardon**	**8.64**	**180**	*e*Pn	**Pn**	**02 15 19.0**	**+1.5**
RJF	**Les Rejaudoux**	**8.74**	**205**	*e*Pn	**Pn**	**02 15 20.4**	**+1.8**
RJF				*e*Sn	**Sn**	**02 16 53.7**	**-4.0**
	comp=E,1.5nm,0.3s						
CAF	**Calviac**	**8.96**	**201**	*e*Pn	**Pn**	**02 15 24.1**	**+2.3**
CAF				*e*Sn	**Sn**	**02 17 00.0**	**-3.4**
	comp=E,0.5nm,0.2s						
VYHS	**Vyhne**	**9.09**	**118**	*e*PN	**Pn**	**02 15 25.2**	**+1.7**
LFF	**La Frestale**	**9.28**	**207**	*e*Pn	**Pn**	**02 15 28.1**	**+2.1**
LASF	**Ste Croix**	**9.48**	**192**	*e*Pn	**Pn**	**02 15 30.2**	**+1.4**
LASF				*e*Sn	**Sn**	**02 17 11.7**	**-4.2**
	comp=E,0.3nm,0.2s						
EPF	**Esparros**	**11.16**	**205**	*e*Pn	**Pn**	**02 15 52.3**	**+0.4**
EPF				*e*Sn	**Sn**	**02 17 51.1**	**-6.2**
	comp=E,0.7nm,0.3s						
ETSF	**Etsaut**	**11.52**	**208**	*e*Pn	**Pn**	**02 15 57.7**	**+0.9**
ETSF				*e*Sn	**Sn**	**02 18 00.2**	**-6.0**
	comp=E,0.7nm,0.2s						
FINES	**FINESS Array B**	**13.18**	**44**	Pn	**Pn**	**02 16 18.2**	**-1.0**
	comp=E,0.2nm,0.3s,baz=242,slow=11,SNR=8.4						
ARCES	**ARCESS Array B**	**18.40**	**21**	Pn	**Pn**	**02 17 25.4**	**-1.9**
	comp=E,0.1nm,0.3s,baz=208,slow=13,SNR=8.5						
YKA	**Yellowknife Ar**	**55.63**	**331**	P	**P**	**02 22 50.1**	**+1.9**
	comp=E,0.1nm,0.6s,baz=42,slow=7.0,SNR=1.7						
TXAR	**Lajitas Array**	**77.98**	**303**	P	**P**	**02 25 12.8**	**+1.6**
	comp=E,0.1nm,0.6s,baz=44,slow=6.6,SNR=1.6						

MOS ***13*** *02:33:30.9±0.0, 41°.89N×46°.16E, h20km, MPVA2.9*
TIF ***13*** *02:33:30.7, 42°.04N×46°.21E, h19km±1km*
NORS ***13*** *02:33:33.1±0.0, 41°.91N×46°.28E, h21km, MPVA2.9*
ISC 13 02:33:32.6±0.9, 41°.92N±0°.03×46°.16E±0°.02, h13km±7km, n20, σ1§39/36, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LGD	**Lagodekhi**	**0.10**	**142**	P	Pg	02 33 36.1	+0.6
LGD				S	**Sg**	**02 33 38.6**	**+0.9**
LGD	**Lagodekhi**	**0.10**	**142**	*e*Pg	Pg	02 33 36.1	+0.6
LGD				*e*Sg	**Sg**	**02 33 38.4**	**+0.7**
DDFL	**Dedoflistskaro**	**0.47**	**183**	P	**Pn**	**02 33 43.0**	**-2.1**
DDFL				S	**Sb**	**02 33 54.4**	**+4.7**
KMKR	**Kumukh**	**0.73**	**73**	*e*Pg	**Pn**	**02 33 47.0**	**-1.9**
KMKR				*i* Sg	**Sn**	**02 33 58.0**	**-2.1**
XNZR	**Khunzakh**	**0.75**	**33**	*e*Pg	**Pb**	**02 33 47.3**	**-0.3**
XNZR				*e*Sg	**Sg**	**02 33 57.5**	**+0.6**
BTLR	**Botlikh**	**0.75**	**4**	*e*Pg	**Pg**	**02 33 47.2**	**+0.1**
BTLR				*e*Sg	**Sg**	**02 33 57.7**	**+0.8**
GNBR	**Gunib**	**0.76**	**52**	*i* Pg	**Pb**	**02 33 47.3**	**-0.5**
GNBR				*e*Sg	**Sb**	**02 33 58.3**	**+0.2**
BTNK	**Botanikuri**	**1.04**	**258**	P	**Pg**	**02 33 51.4**	**-1.3**
BTNK				S	**Sn**	**02 34 07.5**	**+0.1**
BTNK	**Botanikuri**	**1.04**	**258**	*e*Pg	**Pg**	**02 33 51.4**	**-1.3**
BTNK				*e*Sg	**Sn**	**02 34 07.5**	**+0.1**
TBLG	**Delisi**	**1.07**	**261**	P	**Pb**	**02 33 52.7**	**-0.4**
TBLG				S	**Sb**	**02 34 08.3**	**+1.2**
TBLG	**Delisi**	**1.07**	**261**	*e*Pg	**Pb**	**02 33 52.7**	**-0.4**
TBLG				*e*Sg	**Sb**	**02 34 08.3**	**+1.2**
BUJR	**Buynaksk**	**1.15**	**38**	*e*Pg	**Pn**	**02 33 54.9**	**+0.5**
BUJR				*e*Sg	**Sn**	**02 34 11.1**	**+1.0**
AKT	**Akhty**	**1.26**	**110**	*e*Pg	**Pn**	**02 33 55.5**	**-0.5**
AKT				*e*Sg	**Sn**	**02 34 13.3**	**+0.5**
GUDG	**Gudauri**	**1.36**	**294**	P	**Pn**	**02 33 56.0**	**-1.5**
GUDG				S	**Sg**	**02 34 14.6**	**-1.9**
GUDG	**Gudauri**	**1.36**	**294**	*e*Pg	**Pn**	**02 33 56.4**	**-1.2**
TRLG	**Trialeti**	**1.58**	**257**	P	**Pn**	**02 34 00.3**	**-0.2**
TRLG				S	**Sn**	**02 34 20.7**	**-0.3**
TRLG	**Trialeti**	**1.58**	**257**	*e*Pg	**Pn**	**02 34 00.3**	**-0.2**
ZEI	**Tsey**	**1.88**	**298**	*e*Pg	**Pb**	**02 34 06.7**	**-0.3**
ZEI				*e*Sg	**Sb**	**02 34 31.8**	**+1.3**
ONI	**Oni**	**2.12**	**289**	P	**Pn**	**02 34 07.8**	**+0.1**
ONI				S	**Sn**	**02 34 35.8**	**+1.8**
ONI	**Oni**	**2.12**	**289**	*e*Pg	**Pn**	**02 34 07.8**	**+0.1**
ONI				*e*Sg	**Sn**	**02 34 35.8**	**+1.8**

DJA ***13*** *02:49:11.6±0.4, 12°S±4°×11°7E±°, h10km, M4.9/11, mB5.4/3, mb5.0/7, MLv5.0/11, Mw(mB)4.8/3*
NEIC ***13*** *02:49:12.8±1.1, 11°.56S±0°.10×116°.86E±0°.09, h32km±6km, mb4.3/13, Error ellipse: s-maj=16.2km s-min=10.2km az=216.0*
IDC ***13*** *02:49:16.9±0.8, 11°.42S×116°.95E, h58km±6km, mb4.0/9, mb1 4.0/11, mb1mx3.8/27, mbtmp4.2/11, MS3.1/8, Ms1 3.1/8, ms1mx2.9/27, Error ellipse: s-maj=31.6km s-min=14.4km az=62.0*
ISC 13 02:49:16.1±0.5, 11°.49S±0°.07×116°.94E±0°.06, h58km, n64, σ1§80/70, mb4.4/10, MS3.1/5, South of Sumbawa

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**2.77**	**17**	P	**Pn**	**02 49 57.4**	**-0.7**
IGBI	**Denpasar**	**3.19**	**326**	P	**Pn**	**02 50 01.5**	**-2.3**
DNP	**Denpasar**	**3.27**	**328**	P	Pn	02 50 16.3	+11
SRBI	**Singaraja**	**3.79**	**333**	P	**Pn**	**02 50 10.5**	**-1.5**
JAGI	**Jajag, Banyuwa**	**4.07**	**317**	P	**Pn**	**02 50 12.8**	**-3.1**
JAGI	**Jajag, Banyuwa**	**4.07**	**317**		**Pn**	**02 50 13.1**	**-2.8**
JAGI				Sn	**Sn**	**02 50 57.2**	**-5.0**
GMJI	**Gumukmas**	**4.70**	**313**	P	**Pn**	**02 50 21.3**	**-3.2**
PCJI	**Pacitan**	**6.55**	**299**	P	**Pn**	**02 50 47.6**	**-2.4**
	0.7nm82nm,0.6s						
BKSI	**Bulukumba**	**6.89**	**27**	P	**Pn**	**02 50 55.5**	**+0.9**
	0.2nm795nm58nm,0.6s						
KAPI	**Kappang**	**7.01**	**24**	P	**Pn**	**02 50 57.0**	**+0.8**
	2.3nm,0.3s,baz=204,slow=16,SNR=8.2						
KAPI				S	**Sn**	**02 52 09.8**	**-4.8**
	4.2nm,0.3s,baz=94,slow=22,SNR=8.2						
KAPI				LR	LR	02 53 56.6	
	comp=Z,69nm,19.2s,baz=258,slow=40						
KAPI	**Kappang**	**7.01**	**24**		**Pn**	**02 50 55.6**	**-0.6**
KAPI					**Sn**	**02 52 11.5**	**-3.1**
UGM	**Wanagama**	**7.26**	**299**		**Pn**	**02 50 56.7**	**-2.9**
UGM				Sn	Sn	02 52 11.7	-9.0
SOEI	**Soe**	**7.41**	**77**	P	**Pn**	**02 51 03.1**	**+1.4**
	0.3nm48nm,0.7s						
SOEI	**Soe**	**7.41**	**77**		**Pn**	**02 51 00.1**	**-1.6**
SOEI					**Sn**	**02 52 23.3**	**-1.2**
BNSI	**Bone**	**7.71**	**24**	P	Pn	02 51 14.8	+9.0
KPJI	**Karang Pucung**	**8.92**	**297**	P	**Pn**	**02 51 20.1**	**-2.2**
	34nm,0.4s						
CISI	**Cisompet, Garu**	**9.81**	**293**	P	**Pn**	**02 51 31.7**	**-2.9**
	56nm,0.5s						
LEM	**Lembang**	**10.30**	**296**	LR	LR	02 55 53.5	
	comp=Z,102nm,18.5s,baz=62,slow=39						
PSA00	**Pilbara Seismi**	**10.40**	**165**		Pn	02 51 37.9	-4.8
FITZ	**Fitzroy Crossi**	**10.67**	**129**	P	**Pn**	**02 51 44.2**	**-2.1**
	1.5nm,0.3s,baz=292,slow=9.1,SNR=26						
FITZ				S	Sn	02 53 34.7	-10
	8.9nm,0.3s,baz=187,slow=19,SNR=13						
FITZ				LR	LR	02 56 03.4	
	comp=Z,78nm,19.7s,baz=308,slow=38						
FITZ	**Fitzroy Crossi**	**10.67**	**129**		**Pn**	**02 51 43.8**	**-2.5**
KNRA	**Kununurra**	**12.22**	**111**	Pn	**Pn**	**02 52 05.2**	**-2.3**
KLSI		**13.84**	**298**	P	**P**	**02 52 38.1**	**+1.9**
MDSI	**Maura Dua**	**14.42**	**298**	P	**P**	**02 52 44.5**	**+1.9**
WB0	**Warramunga Arr**	**18.70**	**118**	P	**P**	**02 53 29.7**	**-0.3**
WB0				IAmb	IAmb	02 53 43.5	
	comp=Z,5.6nm,0.8s						
WRA	**Warramunga Arr**	**18.73**	**119**	P	**P**	**02 53 31.1**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=293,slow=13,SNR=22						
WRA				S	Sn	02 56 44.0	-16
	comp=Z,1.9nm,0.3s,baz=290,slow=23,SNR=18						
WRA	**Warramunga Arr**	**18.73**	**119**	P	**P**	**02 53 30.6**	**+0.4**
WB2	**Warramunga Arr**	**18.73**	**119**	P	**P**	**02 53 29.4**	**-1.0**
WB2				IAmb	IAmb	02 53 42.3	
	comp=Z,7.9nm,0.6s						
WR0	**Warramunga Arr**	**18.91**	**119**	P	**P**	**02 53 31.0**	**-1.2**
WR0				IAmb	IAmb	02 53 43.5	
	comp=Z,5.1nm,0.9s						
ASAR	**Alice Springs**	**20.18**	**129**	P	**P**	**02 53 47.4**	**+1.4**
	comp=Z,3.4nm,0.7s,baz=301,slow=10.0,SNR=34						
ASAR				S	S	02 57 19.9	-10
	comp=Z,9.2nm,0.8s,baz=302,slow=22,SNR=24						
ASAR				LR	LR	03 02 53.1	
	comp=Z,43nm,18.0s,baz=317,slow=40						
ASAR	**Alice Springs**	**20.18**	**129**	P	**P**	**02 53 45.0**	**-1.0**
AS31	**Alice Springs**	**20.18**	**129**	P	**P**	**02 53 45.3**	**-0.8**
NWAO	**Narrogin (SRO)**	**21.34**	**179**	P	**P**	**02 53 59.7**	**+1.3**
	comp=Z,13nm,0.4s,baz=5.5,slow=11,SNR=16						
NWAO				S	S	02 57 41.1	-11
	comp=Z,19nm,0.4s,baz=255,slow=11,SNR=12						
NWAO				LR	LR	03 02 30.0	
	comp=Z,41nm,20.7s,baz=270,slow=37						
NWAO	**Narrogin (SRO)**	**21.34**	**179**	P	**P**	**02 53 57.0**	**-1.5**
NWAO				IAmb	IAmb	02 54 06.1	
	comp=Z,21nm,0.8s						
NWAO	**Narrogin (SRO)**	**21.34**	**179**	P	**P**	**02 53 57.0**	**-1.5**
NWAO				IAmb	IAmb	02 54 06.1	
	comp=Z,16nm,0.8s						
PSI	**Prapat**	**22.86**	**307**	LR	LR	03 03 08.2	
	comp=Z,106nm,19.6s,baz=95,slow=36						
STKA	**Stephens Creek**	**30.47**	**136**	P	**P**	**02 55 25.1**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=313,slow=11,SNR=6.1						
STKA				LR	LR	03 08 07.4	
	comp=Z,49nm,20.2s,baz=7.7,slow=37						
STKA	**Stephens Creek**	**30.47**	**136**	P	**P**	**02 55 22.6**	**-1.0**
CMAR	**Chiang Mai Arr**	**34.65**	**329**	P	**P**	**02 56 00.9**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=152,slow=6.0,SNR=4.3						
CMAR				LR	LR	03 09 54.5	
	comp=Z,39nm,19.2s,baz=180,slow=36						
SHL	**Shillong**	**44.19**	**327**	P	**P**	**02 57 18.1**	**-1.7**
ODAN	**Odare**	**47.72**	**323**	*e*P	**P**	**02 57 47.9**	**+0.3**
	comp=Z,22nm,0.7s						
TAPN	**Taplejung**	**47.90**	**324**	*e*P	**P**	**02 57 49.8**	**+0.7**
	comp=Z,29nm,0.9s						
RAMN	**Ramite**	**48.25**	**323**	*e*P	**P**	**02 57 52.1**	**+0.3**
	comp=Z,28nm,0.9s						
JIRN	**Jiri**	**49.02**	**323**	*e*P	**P**	**02 57 58.4**	**+0.6**
	comp=Z,51nm,0.7s						
GUN	**Gumba**	**49.39**	**323**	*e*P	**P**	**02 58 01.0**	**+0.4**
	comp=Z,29nm,0.7s						
PKI	**Pulchoki**	**49.42**	**322**	*e*P	**P**	**02 58 01.0**	**+0.2**

comp=Z,12nm,0.8s
DMN Daman 49.63 322 eP P 02 58 02.3 0.0
comp=Z,20nm,0.7s
KKN Kakani 49.66 322 eP P 02 58 02.9 +0.4
GKN Gorkha 50.20 322 eP P 02 58 06.7 +0.2
KOLN Koldanda 50.66 321 eP P 02 58 09.8 -0.3
comp=Z,20nm,0.9s
DANN Dangsing 50.98 322 eP P 02 58 12.7 +0.1
comp=Z,42nm,0.8s
USRK Ussuriysk Ar. 57.09 13 P P 02 58 56.5 +0.1
comp=Z,1.3nm,0.8s,baz=190,slow=5.8,SNR=3.3
USRK pP pP 02 59 11.7 +1.6
comp=Z,1.5nm,0.7s,baz=210,slow=5.3,SNR=2.8
SONM Songino Array 59.80 352 P P 02 59 15.6 +0.1
comp=Z,1.8nm,0.7s,baz=170,slow=9.0,SNR=18
SONM pP pP 02 59 30.9 +1.7
comp=Z,0.7nm,0.6s,baz=168,slow=8.5,SNR=4.3
SONM Songino Array 59.80 352 P P 02 59 15.5 0.0
KSH Kashi 63.44 325 P P 02 59 40.7 +0.5
KSH pP pP 02 59 46.9 -6.9
KSH sP sP 02 59 56.5 -3.0
KSH PP PP 03 02 05.1 +4.6
KSH S S 03 08 09.0 0.0
KSH ScS SKSac 03 09 28.2 -0.4
MK31 Makanchi Array 65.78 335 P P 02 59 54.6 -0.6
MK31 IAmb IAmb 03 00 12.7
comp=Z,4.1nm,0.8s
MKAR Makanchi Array 65.78 335 P P 02 59 55.8 +0.7
comp=Z,3.5nm,0.5s,baz=147,slow=7.5,SNR=86
MKAR pP pP 03 00 11.8 +3.0
comp=Z,5.2nm,0.6s,baz=150,slow=7.4,SNR=19
MKAR Makanchi Array 65.78 335 P P 02 59 55.6 +0.5
KURK Kurchatov 70.36 335 P P 03 00 23.8 +0.1
ZAA0 Zalesovo Array 70.67 341 P P 03 00 25.4 -0.1
ZAA0 IAmb IAmb 03 00 42.3
comp=Z,4.7nm,0.7s
ZALV Zalesovo Beam 70.67 341 P P 03 00 25.4 -0.1
comp=Z,2.7nm,0.6s,baz=148,slow=4.7,SNR=11
ZALV pP pP 03 00 41.7 +2.3
comp=Z,4.7nm,0.7s,baz=151,slow=5.1,SNR=8.9
ZALV Zalesovo Beam 70.67 341 P P 03 00 25.1 -0.4
ABKAR Akbulak array 78.45 326 P P 03 01 11.0 +0.2
BRTR Keskin Array B 92.17 310 P P 03 02 20.6 +0.8
comp=Z,0.7nm,0.8s,baz=126,slow=6.4,SNR=4.9

IDC 13 03:03:14.8±2.7, 32.25N×60.06E, h0km, mb3.2/3, mb1 3.4/4, mb1mx3.2/29, mbtmp3.2/4, ML3.0/1, Error ellipse: s-maj=73.7km s-min=34.1km az=143.0
TEH 13 03:03:15.5, 32.59N×59.98E, h8km, ML3.6
THR 13 03:03:16.3±0.3, 32.59N×59.96E, h14km±5km, ML3.6
ISC 13 03:03:16.8±1.3, 32.59N±0.03×59.95E±0.05, h5km±9km, n36, σ1.39/40, mb3.4/3, Northern and central Iran

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
IDAH Dahanechah 0.16 336 ePg Pg 03 03 19.9 -0.3
IDAH eSg Sg 03 03 23.0 +0.5
IDAH e 03 03 24.7
IMON Monand 0.65 339 ePg Pg 03 03 28.6 -0.7
IMON e 03 03 42.0
IKOO Kooshah 0.81 259 ePg Pg 03 03 31.9 -0.5
IKOO e 03 03 47.0
BSRN Basiran 0.93 228 ePg Pg 03 03 34.1 -0.6
BSRN eSg Sg 03 03 47.1 +0.3
BSRN Basiran 0.93 228 ePg Pg 03 03 34.1 -0.6
ITEG Tejag 1.05 287 ePg Pg 03 03 36.0 -1.1
ITEG e 03 03 43.5
SHRT Shahrakht 1.09 15 ePg Pg 03 03 36.7 -1.1
SHRT eSg Sb 03 03 51.6 -1.2
SHRT Shahrakht 1.09 15 ePg Pg 03 03 36.7 -1.1
AFRZ Afriz 1.14 317 ePg Pg 03 03 37.6 -1.2
AFRZ e 03 04 01.1
NHDN Nehbandan 1.20 176 ePg Pg 03 03 38.5 -1.2
NHDN e 03 04 02.6
TKDS Koohdasht(Taba 2.58 294 ePn Pn 03 04 00.0 +0.6
TKDS e 03 04 50.2
TABS Tabas 2.60 295 ePn Pn 03 04 00.2 +0.6
TABS Tabas 2.60 295 ePn Pn 03 04 00.2 +0.6
TPRV Parvadeh(Tabas 2.78 280 ePn Pn 03 04 02.5 +0.4
TNSJ Nastanj 3.11 297 ePn Pn 03 04 08.5 +1.8
JRKH Jarkhoshk 3.33 6 ePn Pn 03 04 10.5 +0.9
CHMN Cheshme madani 3.41 218 ePn Pn 03 04 11.8 +0.8
CHMN e 03 05 18.6
IMOG Moghan 3.55 352 ePn Pn 03 04 14.4 +1.6
KHGB Koh Gabri 3.69 234 ePn Pn 03 04 16.0 +1.2
KHGB e 03 05 27.6
TVBK TV Kerman 3.76 227 ePn Pn 03 04 17.3 +1.5
IBAF Bafgh 3.85 256 ePn Pn 03 04 18.2 +1.4
IBAF e 03 05 27.5
NGRK Negar Kerman 4.03 224 ePn Pn 03 04 21.2 +1.7
NGRK e 03 05 29.9
IAKL Akhelmad 4.12 347 ePn Pn 03 04 22.7 +2.0
IKRD Kardeh 4.34 345 ePn Pn 03 04 23.2 -0.5
YZKH Yazd 4.53 269 ePn Pn 03 04 27.0 +0.9
YZKH IAML 03 05 44.9
comp=N,39nm,0.6s
YZKH IAML 03 05 57.1
comp=E,38nm,0.6s
YZKH Yazd 4.53 269 ePn Pn 03 04 27.0 +0.9
ISFR Sfrayin 4.73 341 ePn Pn 03 04 31.1 +2.0
IEMG Emamgholi 4.93 348 ePn Pn 03 04 34.0 +2.2
ANAR Anarak 5.26 278 ePn Pn 03 04 36.4 +0.1
GEYT Alibeck 5.54 345 Pn Pn 03 04 43.5 +3.6
comp=E,0.4nm,0.3s,baz=152,slow=16,SNR=2.7
GEYT Sn Sn 03 05 41.8 -2.1
comp=E,0.4nm,0.3s,baz=181,slow=23,SNR=2.5
GEYT Lg Lg 03 06 11.9
comp=E,0.2nm,0.3s,baz=185,slow=32,SNR=2.3
ISHM Shahmirzad 6.38 302 ePn Pn 03 04 53.3 +1.6
IZEF Zefreh 6.43 275 ePn Pn 03 04 54.3 +2.0
KRSH Karshahi 6.69 284 ePn Pn 03 04 56.8 +1.0
MKAR Makanchi Array 22.19 44 P P 03 08 15.1 +1.3
comp=E,0.2nm,0.6s,baz=237,slow=14,SNR=2.1
TORD Torodi Ar. Bea 56.37 264 P P 03 12 58.8 -0.5
comp=E,0.4nm,0.7s,baz=60,slow=6.2,SNR=4.6
YKA Yellowknife Ar 85.15 357 P P 03 15 53.4 -0.2
comp=E,0.2nm,0.7s,baz=349,slow=4.2,SNR=2.3

JMA 13 03:14:48.5±0.1, 24.82N×122.12E, h47km±4km, M3.1
TAP 13 03:14:48.0, 24.85N×122.12E, h4km, ML3.4, C
ISC 13 03:14:48.4±0.9, 24.86N±0.02×122.19E±0.02, h10km±7km, n102, σ0.83/167, Taiwan region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TWB1 Santiao Chiao 0.23 310 P Pg 03 14 52.8 -0.5
baz=325
TWB1 iS Sg 03 14 55.9 -0.6
baz=325
EOS1 EOS1 0.31 190 iP Pg 03 14 54.9 +0.3
baz=178
EOS1 iS Sg 03 15 00.1 +1.3
baz=178
NTC Toucheng 0.32 270 eP Pg 03 14 54.5 -0.4
baz=272
TIPB Shuangxi 0.35 289 eP Pg 03 14 54.7 -0.7
baz=295
NWF Wu-fen Shan 0.42 300 eP Pg 03 14 57.2 +0.4
baz=306
WFSB Wu-fen Shan 0.42 300 eP Pg 03 14 57.2 +0.4
baz=306
TWE Neicheng 0.49 254 eP Pg 03 14 57.5 -0.5
baz=252
TWE eS Sg 03 15 04.3 -0.1
baz=252
SLBB Yuanshan 0.51 259 eP Pg 03 14 58.5 +0.1
baz=258
SLBB eS Sb 03 15 06.0 -1.0
baz=258
TWA Mucha 0.56 283 eP Pg 03 14 59.9 +0.5
baz=285
TWA S Sb 03 15 07.0 -1.4
baz=285
ENA Nanau 0.59 224 eP Pg 03 14 59.5 -0.4
baz=218
ENA eS Sg 03 15 07.8 +0.2
baz=218
ENTT Nioudou 0.60 249 eP Pg 03 14 59.8 -0.4
baz=247
ENTT eS Sb 03 15 09.1 -0.5
baz=247
NHDH Xindian Distri 0.61 280 eP Pb 03 15 01.0 -0.1
baz=282
NHDH eS Sb 03 15 09.6 -0.2
baz=282
NWLT Wulai 0.62 263 eP Pg 03 15 00.5 0.0
baz=263
YM01 YM01 0.63 297 P Pg 03 15 00.7 0.0
baz=301
YM08 YM08 0.63 302 eP Pg 03 15 00.6 -0.1
baz=305
YM11 YM11 0.63 299 eP Pg 03 15 00.8 +0.1
baz=302
YM10 YM10 0.64 298 eP Pg 03 15 01.0 +0.1
baz=301
TAP Taipei 0.64 287 eP Pg 03 15 01.0 +0.1
baz=289
TATO Taipei 0.64 281 eP Pg 03 15 01.1 +0.2
baz=282
TATO eS Sb 03 15 09.9 -0.9
baz=282
YM04 YM04 0.66 297 eP Pg 03 15 01.3 +0.1
baz=300
NDT Datong Townshi 0.66 248 eP Pg 03 15 00.8 -0.4
baz=246
NDT eS Sb 03 15 10.8 -0.5
baz=246
TWY Chenhua 0.68 308 eP Pg 03 15 01.7 +0.1
baz=312
TWY eS Sg 03 15 11.0 +0.6
baz=312
ANP Anpu 0.69 299 eP Pg 03 15 01.6 -0.2
baz=302
NTST Danshui 0.73 295 eP Pb 03 15 03.4 0.0
baz=297
TWS1 Kuangyinshan 0.74 289 eP Pb 03 15 03.4 0.0
baz=292
YHNB Yeheng 0.76 256 eP Pg 03 15 02.0 -1.1
baz=255
NSK Sanguang 0.77 257 eP Pg 03 15 02.6 -0.8
baz=255
NSK eS Sb 03 15 13.3 -1.3
baz=255
PCYT Pengchaiyu 0.78 352 eP Pg 03 15 04.0 +0.5
baz=357
PCYT eS Sg 03 15 15.4 +1.8
baz=357
JYNG Yonagunijimaku 0.80 120 P Pg 03 15 04.0 +0.1
JYNG S Sg 03 15 15.0 +0.6
NNSB Datong 0.84 240 eP Pg 03 15 04.2 -0.5
baz=238
NNSB eS Sg 03 15 15.2 -0.6
baz=238
NNSH Datong 0.84 240 eP Pg 03 15 04.6 -0.2
baz=238
NNSH S Sg 03 15 15.5 -0.3
baz=238
NNS Nan Shan 0.85 241 P Pg 03 15 04.6 -0.2
baz=238
NNS eS Sg 03 15 15.5 -0.4
baz=238
WLTB Daxi 0.85 270 eP Pg 03 15 04.9 +0.1
baz=270
YOJ Yonaguni jima 0.85 117 eP Pg 03 15 05.7 +0.9
baz=114
YOJ eS Sg 03 15 18.8 +2.9
baz=114
YOJ Yonaguni jima 0.85 117 P Pg 03 15 04.8 0.0
YOJ eS Sg 03 15 16.8 +0.9
NACB Ninganchiao 0.87 218 eP Pg 03 15 04.5 -0.7
baz=215
NACB eS Sg 03 15 16.1 -0.4
baz=215
ETLH Xiulin Townshi 0.91 225 P Pg 03 15 05.7 -0.4
baz=222
ETLH eS Sg 03 15 17.5 -0.3
baz=222
NCUH Zhongli 0.92 277 eP Pg 03 15 06.2 +0.1
baz=278
TWD Chiawan 0.94 215 P Pg 03 15 05.7 -0.8
baz=211
TWD eS Sg 03 15 18.8 0.0
baz=211
HWA Hwalien 1.02 211 eP Pg 03 15 08.0 -0.2
baz=208
LIOB Emei 1.08 259 eP Pg 03 15 08.8 -0.5
baz=258
LIOB eS Sn 03 15 24.0 -0.7
baz=258
ENLB Shoufeng 1.09 209 eP Pg 03 15 09.8 +0.5
baz=206
ENLB eS Sn 03 15 25.0 +0.2
baz=206
SBCB Hsinchu 1.09 267 eP Pg 03 15 09.2 -0.2
baz=267
WHF Hehuan Shan 1.10 230 P Pg 03 15 08.9 -0.7
baz=227
WHF eS Sg 03 15 23.3 -0.6
baz=227
TWT Tachien 1.10 237 P Pb 03 15 10.0 +0.4
baz=235
TWT eS Sb 03 15 23.8 -0.3
baz=235
NSTT Nanjuang 1.10 258 eP Pg 03 15 09.6 0.0
baz=258
NSTT eS Sn 03 15 24.1 -1.1
baz=258
TDCB Techi 1.11 237 P Pg 03 15 09.9 +0.1
baz=235
TDCB eS Sg 03 15 23.6 -0.7
baz=235
CHGB Renai 1.22 229 eP Pb 03 15 11.2 -0.5
baz=227
CHGB eS Sb 03 15 27.3 -0.2
baz=227
ESL Shilin 1.24 214 eP Pb 03 15 11.1 -0.9
baz=211
ESL eS Sb 03 15 28.1 0.0
baz=211
WHP Taichung City 1.27 243 eP Pb 03 15 12.4 0.0
baz=242
WHP eS Sg 03 15 28.7 -0.6
baz=242
OWD Renai 1.29 226 eP Pn 03 15 12.0 -0.6
baz=224
OWD eS Sb 03 15 29.1 -0.3
baz=224
NMLH Miaoli 1.31 256 eP Pn 03 15 13.1 +0.3
baz=255
NMLH eS Sn 03 15 30.8 +0.5
baz=255
NSY Sanyi 1.37 252 eP Pn 03 15 13.8 +0.2
baz=250
NSY eS Sg 03 15 32.3 -0.2
baz=250
EGFH Guangfu 1.37 210 eP Pn 03 15 13.6 0.0
baz=208
EGFH eS Sg 03 15 32.5 -0.1
baz=208
DPDB Guoxing 1.41 235 eP Pn 03 15 14.6 +0.4
baz=233
DPDB eS Sg 03 15 33.6 -0.3
baz=233
VWDT VWDT 1.45 221 eP Pn 03 15 15.3 +0.6
baz=219
VWDT S Sn 03 15 33.7 -0.1
baz=219
WDJ Dajia District 1.50 251 eP Pn 03 15 15.7 +0.3
baz=249
WDJ eS Sg 03 15 35.8 -0.8
baz=249
IRIF Iriomote-Funau 1.50 110 P Pn 03 15 13.5 -1.9
HGSD Ruisui 1.53 207 eP Pn 03 15 16.4 +0.6
baz=205
HGSD eS Sb 03 15 36.8 +0.6
baz=205
TCU Taichung 1.54 243 eP Pn 03 15 16.4 +0.4
baz=241
TCU eS Sb 03 15 36.5 -0.2
baz=241
SSLB Suanglung 1.55 227 eP Pn 03 15 16.6 +0.5
baz=225
SSLB S Sb 03 15 36.4 -0.4
baz=225
YULB Yu-li 1.67 209 eP Pn 03 15 17.7 0.0
baz=207
YULB eS Sn 03 15 39.6 +0.4
baz=207
HATJ Hateruma jima 1.68 118 P Pn 03 15 16.6 -1.2
HATJ eS Sn 03 15 37.3 -2.1
WHYT Xinyi Township 1.68 227 eP Pn 03 15 18.5 +0.6
baz=225
WHYT eS Sb 03 15 40.2 -0.4
baz=225
WNT Mingjian 1.68 235 eP Pn 03 15 18.6 +0.8
baz=233
WNT eS Sb 03 15 40.4 -0.2
baz=233
WJS Zhushan 1.68 233 eP Pn 03 15 18.7 +0.8
baz=231
WJS eS Sb 03 15 40.7 0.0
baz=231
TWF1 Yuli 1.70 209 eP Pn 03 15 18.9 +0.6
baz=206
TWF1 eS Sn 03 15 40.8 +0.8
baz=206
YUS Yu-Shan 1.77 220 eP Pn 03 15 20.1 +0.6
baz=218
YUS eS Sn 03 15 42.8 +0.5
baz=218
JKRS Kuro-shima 1.77 110 P Pn 03 15 17.7 -1.4
JKRS eS Sn 03 15 39.8 -1.9
ALS Alishan 1.84 224 eP Pn 03 15 21.6 +1.3
baz=221
ALS eS Sn 03 15 44.4 +0.6
baz=221
FULB Fuli 1.84 206 eP Pn 03 15 19.8 -0.3
baz=204
FULB eS Sn 03 15 44.2 +0.7
baz=204
JIJ Ishigaki jima 1.85 105 P Pn 03 15 19.4 -0.8
JIJ eS Sn 03 15 42.2 -1.4
CHN5 Tsauling 1.86 228 eP Pn 03 15 21.6 +1.2
baz=226
CHN5 eS Sb 03 15 45.4 -0.6
baz=226
WGK Gukeng 1.89 232 eP Pn 03 15 21.4 +0.7
baz=230
WDLH Douliu 1.90 233 eP Pn 03 15 21.8 +0.9
baz=231
WDLH eS Sb 03 15 46.8 -0.2
baz=231
CHKT Chengkung 1.90 203 eP Pn 03 15 21.2 +0.3
baz=201
JISG Ishigakijimahi 1.95 97 P Pn 03 15 22.2 +0.6
ELDTW Lidau 1.97 213 eP Pn 03 15 22.6 +0.6
baz=211
CHN4 Tsaushan 2.09 224 eP Pn 03 15 24.7 +1.2
baz=223
CHN4 eS Sb 03 15 51.3 -1.1
baz=223
CHY Chiayi 2.10 230 eP Pn 03 15 24.4 +0.8
baz=228
CHY eS Sn 03 15 50.9 +1.0
baz=228
TPUB Ta-pu 2.10 223 eP Pn 03 15 25.3 +1.6
baz=221
TPUB eS Sb 03 15 51.9 -1.0
baz=221
STYT Tauyuan 2.13 218 eP Pn 03 15 25.4 +1.3
baz=216
STYT eS Sn 03 15 51.4 +0.7
baz=216
WTP Ta-pu 2.15 222 eP Pn 03 15 26.1 +1.7
baz=220
WTP eS Sb 03 15 52.8 -1.5
baz=220
TWK Hsinying 2.22 225 eP Pn 03 15 26.5 +1.2
baz=223
TWK eS Sn 03 15 53.9 +1.2
baz=223
SNST Tainan City 2.24 224 eP Pn 03 15 27.0 +1.3
baz=222
SNST eS Sn 03 15 54.8 +1.4
baz=222
CHN1 Nanshi 2.25 223 eP Pn 03 15 26.5 +0.8
baz=221
CHN1 eS Sn 03 15 54.8 +1.2
baz=221
TWGBT Beinan 2.27 207 eP Pn 03 15 26.1 +0.2
baz=205
TWG Pinlang 2.27 207 eP Pn 03 15 26.7 +0.7
baz=205
PTTC Pingtan 2.28 287 eP Pn 03 15 25.9 -0.3
baz=287
SLGT Liugui 2.33 218 eP Pn 03 15 28.1 +1.3
baz=216
SLGT eS Sn 03 15 57.2 +1.7
baz=216
MATB Ma-tsu 2.40 303 eP Pn 03 15 27.9 +0.2
baz=303
VWUC VWUC 2.49 274 eP Pn 03 15 28.6 -0.3
baz=273
MASBT Mashibuluo 2.65 213 eP Pn 03 15 32.6 +1.3
baz=211
MASBT eS Sn 03 16 05.3 +1.9
baz=211
PHUB P'eng-hu 2.73 241 eS Sn 03 16 06.4 +0.9
baz=240
XPSS Dashiqiu 2.74 319 eP Pn 03 15 33.7 +1.3
baz=320
EAST Anshuo 2.75 207 eP Pn 03 15 34.2 +1.6
baz=205
EAST eS Sn 03 16 07.1 +1.1
baz=205
LYJJ Jianjiangzhen 2.76 308 eP Pn 03 15 32.8 +0.1
baz=308
PTMZ Houxiangcun 2.79 274 eP Pn 03 15 34.5 +1.4
baz=274
SCZT Fangliau 2.86 210 eP Pn 03 15 35.8 +1.7
baz=209
MHZQ Yeshan 3.11 294 eP Pn 03 15 37.6 +0.1
baz=294
KNMB Chin-men Tao 3.48 264 eP Pn 03 15 43.2 +0.6
baz=263
AXDP Jialang 3.83 272 eP Pn 03 15 48.4 +0.9
baz=270

CNRM 13 03:31:59.8±0.7, 36.40N×7.19W, h40km, Error ellipse: s-maj=10.7km s-min=4.6km az=72.0
SFS 13 03:32:01.0, 36.46N×7.08W, h30km, ML2.0, GOLFO DE CADIZ
MDD 13 03:32:02.5±0.9, 36.52N×7.12W, h41km±35km, mb4.3/3, Error ellipse: s-maj=10.6km s-min=5.1km az=14.0, PRXIMO
INMG 13 03:32:02.6±1.1, 36.51N×7.11W, h31km±6km, ML1.8, Error ellipse: s-maj=2.7km s-min=2.0km az=35.0
IGIL 13 03:32:03.4, 36.51N×7.12W, h31km, ML1.6
ISC 13 03:32:00.3±1.2, 36.47N±0.04×7.10W±0.03, h35km, n48, σ1.28/83, 1C-1D, Strait of Gibraltar

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PBDV Barranco-do-Ve 1.02 319 eP Pn 03 32 19.1 +0.9
PBDV eS Sn 03 32 31.3 -0.1
PBDV A A 03 32 32.8
6.0nm,0.3s
PBDV Barranco-do-Ve 1.02 319 P Pn 03 32 19.1 +0.9
PBDV S Sn 03 32 31.3 -0.1
6.0nm,0.3s
PVAQ Vaqueiros 1.06 332 ⇓eP Pn 03 32 19.6 +0.9
PVAQ eS Sn 03 32 31.9 -0.3
PVAQ A A 03 32 32.7
16nm,0.3s
PVAQ Vaqueiros 1.06 332 P Pn 03 32 19.6 +0.9
PVAQ S Sn 03 32 31.9 -0.3
16nm,0.3s
PVAQ Vaqueiros 1.06 332 P Pn 03 32 19.5 +0.9
PVAQ S Sn 03 32 32.1 -0.1
EMIN Mina Concepcio 1.34 15 ⇑P Pn 03 32 23.4 +0.8
0.5nm,0.3s,SNR=18
EMIN S Sn 03 32 38.3 -0.8
3.5nm,0.1s,SNR=12
PCVE Castro Verde 1.39 327 eP Pn 03 32 24.1 +0.9
PCVE eS Sn 03 32 40.0 -0.3
PCVE A A 03 32 40.5
4.3nm,0.3s
PCVE Castro Verde 1.39 327 P Pn 03 32 24.1 +0.9
PCVE S Sn 03 32 40.0 -0.3
4.3nm,0.3s
MORF Marmelete 1.50 304 eP Pn 03 32 25.5 +0.7
MORF eS Sn 03 32 42.0 -1.2
MORF AML AML 03 32 43.8
comp=E,7.2nm,0.1s
MORF Marmelete 1.50 304 eP Pn 03 32 25.5 +0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MORF				eS	Sn	03 32 42.7	-0.5
MORF				A	A	03 32 44.3	
	comp=E,5.9nm,0.6s						
MORF	Marmelete	1.50	304	P	Pn	03 32 25.5	+0.7
MORF				S	Sn	03 32 42.0	-1.2
	comp=E,7.2nm,0.1s						
PFVI	Vila Bisbo	1.54	296	eP	Pn	03 32 26.1	+0.8
PFVI				eS	Sn	03 32 43.6	-0.4
PFVI	Vila Bisbo	1.54	296	P	Pn	03 32 26.1	+0.8
	comp=E,0.3nm,0.3s,SNR=4.0						
PFVI				S	Sn	03 32 43.6	-0.4
	comp=E,8.4nm,0.1s,SNR=7.9						
PBEJ	Beja	1.67	339	eP	Pn	03 32 28.0	+0.9
PBEJ				eS	Sn	03 32 46.5	-0.9
PBEJ				A	A	03 32 48.2	
	comp=E,4.3nm,0.2s						
PBEJ	Beja	1.67	339	P	Pn	03 32 28.0	+0.9
PBEJ				S	Sn	03 32 46.5	-0.9
	comp=E,2.2nm,0.2s						
PTEO	Sao Teotonio	1.69	310	eP	Pn	03 32 28.5	+1.2
PTEO				eS	Sn	03 32 47.4	-0.3
PTEO				A	A	03 32 53.1	
	comp=E,11nm,0.7s						
PTEO	Sao Teotonio	1.69	310	P	Pn	03 32 28.5	+1.2
PTEO				S	Sn	03 32 47.4	-0.3
	comp=E,5.5nm,0.7s						
PBAR	Barrancos	1.71	2	eS	Sn	03 32 47.8	-0.3
PBAR	Barrancos	1.71	2	S	Sn	03 32 47.8	-0.3
EMIJ	Mijas	1.88	86	S	Sn	03 32 52.2	-0.2
	comp=E,1.1nm,0.2s,SNR=4.0						
PNCL	Nicolau / Gran	2.00	326	eP	Pn	03 32 32.5	+0.9
PNCL				eS	Sn	03 32 53.9	-1.5
PNCL				A	A	03 33 05.0	
	comp=E,2.9nm,0.5s						
PNCL	Nicolau / Gran	2.00	326	P	Pn	03 32 32.5	+0.9
PNCL				S	Sn	03 32 53.9	-1.5
	comp=E,2.9nm,0.5s						
HORN	Hornachuelos	2.01	46	P	Pn	03 32 30.9	-0.9
HORN				S	Sn	03 32 59.2	+3.4
ECAB	El Cabril	2.09	39	P	Pn	03 32 33.7	+0.8
	comp=E,0.6nm,0.1s,SNR=12						
ECAB				S	Sn	03 32 56.4	-1.3
	comp=E,0.2nm,0.0s,SNR=6.3						
EVO	Evora	2.19	341	eP	Pn	03 32 35.1	+0.9
EVO				eS	Sn	03 32 59.7	-0.3
EVO				A	A	03 33 00.3	
	comp=E,9.4nm,0.3s						
EVO	Evora	2.19	341	P	Pn	03 32 35.1	+0.9
EVO				S	Sn	03 32 58.6	-1.4
EVO	Evora	2.19	341	eP	Pn	03 32 29.0	-5.2
EVO				eS	Sn	03 32 58.6	-1.4
EBAD	Badajoz	2.29	2	P	Pn	03 32 37.3	+1.7
	comp=E,0.3nm,0.1s,SNR=7.5						
EBAD				S	Sn	03 33 00.8	-1.6
	comp=E,1.0nm,0.0s,SNR=7.9						
PESTR	Estremoz	2.43	351	eS	Sn	03 33 04.4	-1.6
PESTR				A	A	03 33 11.3	
	comp=E,2.5nm,0.7s						
EGOR	Sierra Gorda,	2.48	74	S	Sn	03 33 09.5	+1.9
	comp=E,0.7nm,0.0s,SNR=7.9						
EADA	Adamuz	2.63	49	P	Pn	03 32 41.7	+1.4
	comp=E,1.4nm,0.1s,SNR=7.9						
EADA				S	Sn	03 33 09.8	-1.3
	comp=E,2.3nm,0.1s,SNR=7.9						
PMTG	Montargil	2.75	341	eP	Pn	03 32 42.8	+0.9
PMTG				eS	Sn	03 33 12.4	-1.4
PMTG				A	A	03 33 16.3	
	comp=E,2.6nm,0.6s						
PMTG	Montargil	2.75	341	P	Pn	03 32 42.8	+0.9
PMTG				S	Sn	03 33 12.4	-1.4
	comp=E,2.6nm,0.6s						
ELGU	Los Guajares,	2.82	81	S	Sn	03 33 15.4	-0.4
	comp=E,0.4nm,0.1s,SNR=4.0						
PMRV	Marv??o	2.96	356	eS	Sn	03 33 17.4	-1.9
PMRV	Marv??o	2.96	356	S	Sn	03 33 17.4	-1.9
PMAFR	Mafra	3.03	326	P	Pn	03 32 47.7	+1.9
	comp=E,1.0nm,0.1s,SNR=4.0						
PCBR	Castelo Branco	3.38	355	eP	Pn	03 32 51.7	+1.1
PCBR				eS	Sn	03 33 27.0	-2.5
PCBR	Castelo Branco	3.38	355	P	Pn	03 32 51.7	+1.1
PCBR				S	Sn	03 33 27.0	-2.5
EQES	Quesada	3.48	66	P	Pn	03 32 53.4	+1.2
	comp=E,0.3nm,0.1s,SNR=7.9						
EQES				S	Sn	03 33 32.2	0.0
	comp=E,1.1nm,0.2s,SNR=7.9						
EPLA	Plasencia	3.68	12	P	Pn	03 32 56.3	+1.5
	comp=E,1.3nm,0.2s,SNR=7.7						
EPLA				S	Sn	03 33 35.3	-1.6
	comp=E,2.9nm,0.2s,SNR=7.9						
PAB	San Pablo	3.76	34	P	Pn	03 32 57.3	+1.3
	comp=E,0.2nm,0.1s,SNR=7.9						
PAB				S	Sn	03 33 35.0	-4.0
	comp=E,0.2nm,0.1s,SNR=7.9						
MD31	MD31	4.08	151	P	Pn	03 33 00.4	+0.1
MD31				S	Sn	03 33 46.1	-0.8
MDT	Midelt	4.18	150	P	Pn	03 33 02.1	+0.3
MDT				S	Sn	03 33 48.0	-1.5
TLOR	Lorca, Murcia	4.49	73	P	Pn	03 33 05.5	-0.3
	SNR=4.0						
GUD	Guadarrama	4.76	28	P	Pn	03 33 11.3	+1.5
	comp=E,0.6nm,0.1s,SNR=7.9						
ETOB	Tobarra	4.92	62	P	Pn	03 33 12.3	+0.5
	comp=E,0.3nm,0.1s,SNR=7.9						
ETOB				S	Sn	03 34 05.2	-2.3
	comp=E,0.1nm,0.1s,SNR=7.9						
EBEN2	Beniarda presa	5.91	66	P	Pn	03 33 27.2	+1.7
	comp=E,4.0nm,0.0s,SNR=4.0						

IDC 13 04:03:06.2±1.3, 35.64N×82.13E, h0km, mb3.7/7, mb1 3.9/9, mb1mx3.6/43, mbtmp3.7/9, ML3.3/2, MS2.8/3, Ms1 2.8/3, ms1mx2.5/39, Error ellipse: s-maj=42.1km s-min=20.7km az=49.0
BJI 13 04:03:07.3±0.0, 35.95N×82.39E, h7km, ML3.7/5
NNC 13 04:03:13.8±1.4, 36.44N×82.72E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=20.4km s-min=10.2km az=75.0
ISC 13 04:03:09.4±0.8, 36.03N±0.07×82.6E±0.1, h10km, n24, σ1§58/25, mb3.8/7, 4C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	7.66	343	⇓Pn	Pn	04 05 02.2	+1.1
	3.1nm,0.4s						
PDGK				⇓Sn	Sn	04 06 27.1	-0.9
	53nm,0.8s						
PDGK				⇑Lg	Lg	04 07 06.9	
	33nm,0.8s						
DANN	Dangsing	7.73	172	eP	Pn	04 05 04.5	+2.2
	8.2nm,0.4s						
KOLN	Koldanda	8.29	174	eP	Pn	04 05 10.6	+0.7
	7.0nm,0.3s						
GUN	Gumba	8.57	160	eP	Pn	04 05 14.5	+0.6
	7.9nm,0.3s						
DMN	Daman	8.67	165	eP	Pn	04 05 15.8	+0.6
WMQ	Urumqi	8.72	25	eP	Pn	04 05 15.6	0.0
WMQ				smax	smax		
	comp=N,13nm,0.9s						
WMQ				smax	smax		
	comp=E,16nm,1.3s						
PKIN	Phulchoki	8.77	163	eP	Pn	04 05 17.0	+0.5
	11nm,0.5s						
PKI	Pulchoki	8.78	163	eP	Pn	04 05 16.6	-0.1
	9.7nm,0.5s						
JIRN	Jiri	8.90	159	eP	Pn	04 05 17.8	-0.6
	16nm,0.4s						
AAK	Ala-Archa	9.08	319	Pn	Pn	04 05 20.5	-0.1
	0.2nm,0.3s,baz=123,slow=9.2,SNR=5.8						
AAK				Pg		04 05 51.2	
	0.6nm,0.3s,baz=120,slow=12,SNR=3.5						
AAK				Lg	Lg	04 07 45.3	
	0.4nm,0.3s,baz=89,slow=18,SNR=2.0						
AAK				LR	LR	04 09 04.0	
	comp=Z,44nm,18.6s,baz=168,slow=39						
RAMN	Ramite	9.69	158	eP	Pn	04 05 25.3	-3.8
	15nm,0.7s						
MK31	Makanchi Array	10.75	359	Pn	Pn	04 05 43.4	0.0
	3.2nm,0.7s,baz=178,slow=12,SNR=52						
MK31				⇑Sn	Sn	04 07 41.2	-2.6
	3.3nm,0.7s,baz=187,slow=24,SNR=6.4						
MK31				⇑Lg	Lg	04 08 42.1	
	2.7nm,0.9s,baz=182,slow=22,SNR=3.6						
MKAR	Makanchi Array	10.75	359	Pn	Pn	04 05 43.6	+0.2
	0.8nm,0.3s,baz=183,slow=13,SNR=37						
MKAR				LR	LR	04 10 46.7	
	comp=Z,41nm,20.7s,baz=243,slow=41						
MAKZ	Makanchi	10.77	358	⇓Pn	Pn	04 05 44.0	+0.3
	7.2nm,0.7s						
MAKZ				⇑Sn	Sn	04 07 42.8	-1.5
	2.1nm,0.5s						
ZALV	Zalesovo Beam	17.98	4	P	Pn	04 07 17.5	-1.8
	0.1nm,0.3s,baz=202,slow=11,SNR=4.2						
BVAR	Borovoye Array	19.03	337	P	Pn	04 07 31.7	-0.4
	0.1nm,0.3s,baz=147,slow=11,SNR=5.4						
GEYT	Alibeck	19.61	283	LR	LR	04 16 04.7	
	comp=Z,31nm,18.4s,baz=270,slow=40						
SONM	Songino Array	21.20	49	P	P	04 07 58.4	+3.2
	5.6nm,0.8s,baz=240,slow=10.0,SNR=32						
FINES	FINESS Array B	43.22	324	P	P	04 11 10.6	+0.2
	1.3nm,0.8s,baz=76,slow=12,SNR=3.4						
NOA	NORSAR Array B	50.37	323	P	P	04 12 04.8	-1.6
	1.4nm,1.0s,baz=78,slow=6.4,SNR=2.1						
ILAR	Eielson Array	72.34	20	P	P	04 14 37.0	+2.0
	0.1nm,0.4s,baz=315,slow=4.2,SNR=6.3						
WRA	Warramunga Arr	74.14	130	P	P	04 14 45.1	-1.1
	1.0nm,0.8s,baz=327,slow=6.0,SNR=2.2						
ASAR	Alice Springs	76.68	133	P	P	04 14 58.6	-2.1
	0.7nm,0.8s,baz=305,slow=5.8,SNR=6.2						
YKA	Yellowknife Ar	80.84	8	P	P	04 15 24.3	+1.2
	0.3nm,0.7s,baz=345,slow=5.1,SNR=6.0						

JMA 13 04:16:06.6±0.1, 24.35N×122.98E, h48km±1km, M2.9
TAP 13 04:16:06.7, 24.30N×122.93E, h41km, ML3.8, C
ISC 13 04:16:07.0±1.2, 24.27N±0.03×122.97E±0.02, h41km±7km, n108, σ1§12/192, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.19	352	P	Pn	04 16 14.1	-0.2
JYNG				S	Sn	04 16 19.5	+0.1
YOJ	Yonaguni jima	0.20	10	P	Pn	04 16 14.4	0.0
	baz=21						
YOJ				S	Sn	04 16 19.7	0.0
	baz=21						
YOJ	Yonaguni jima	0.20	10	P	Pn	04 16 14.3	-0.1
YOJ				S	Sn	04 16 19.6	0.0
IRIF	Iriomote-Funau	0.69	84	P	Pn	04 16 20.0	-0.4
IRIF				S	Sn	04 16 30.2	+0.2
HATJ	Hateruma jima	0.79	105	P	Pn	04 16 21.8	+0.1
HATJ				eS	Sn	04 16 32.8	+0.5
EOS1	EOS1	0.82	290	P	Pn	04 16 21.2	-0.8
	baz=292						
EOS1				S	Sn	04 16 32.6	-0.4
	baz=292						
JKRS	Kuro-shima	0.95	91	P	Pn	04 16 24.0	+0.2
JKRS				S	Sn	04 16 37.0	+0.9
JIJ	Ishigaki jima	1.07	85	P	Pn	04 16 25.1	-0.4
JIJ				S	Sn	04 16 38.5	-0.7
TWC	Suao	1.08	289	iP	Pn	04 16 24.5	-1.1
	baz=296						
TWC				iS	Sn	04 16 37.9	-1.6
	baz=296						
ENA	Nanau	1.14	278	P	Pn	04 16 26.0	-0.4
	baz=286						
ENA				S	Sn	04 16 41.3	+0.5
	baz=286						
TWB1	Santiao Chiao	1.16	310	eP	Pn	04 16 26.2	-0.6
	baz=320						
TWB1				S	Sn	04 16 39.6	-1.9
	baz=320						
NTC	Toucheng	1.20	300	P	Pn	04 16 26.6	-0.6
	baz=298						
NTC				S	Sn	04 16 40.8	-1.5
	baz=298						
TIPB	Shuangxi	1.26	304	iP	Pn	04 16 27.4	-0.8
	baz=313						
TIPB				S	Sn	04 16 42.3	-1.6
	baz=313						
JISG	Ishigakijimahi	1.26	75	P	Pn	04 16 27.7	-0.4
JISG				S	Sn	04 16 43.1	-0.8
NACB	Ninganchiao	1.26	266	P	Pn	04 16 27.8	-0.4
	baz=249						
NACB				S	Sn	04 16 44.0	0.0
	baz=249						
TWD	Chiawan	1.27	262	P	Pn	04 16 28.7	+0.4
	baz=245						
TWD				S	Sn	04 16 43.5	-0.7
	baz=245						
TWE	Neicheng	1.27	291	P	Pn	04 16 28.1	-0.3
	baz=299						
TWE				S	Sn	04 16 42.8	-1.4
	baz=299						
HWA	Hwalien	1.28	257	eP	Pn	04 16 28.1	-0.4
	baz=254						
HWA				eS	Sn	04 16 44.4	0.0
	baz=254						
ENLB	Shoufeng	1.30	254	eP	Pn	04 16 28.6	-0.1
	baz=239						
ENLB				S	Sn	04 16 44.3	-0.6
	baz=239						
SLBB	Yuanshan	1.31	292	P	Pn	04 16 28.4	-0.5
	baz=290						
SLBB				S	Sn	04 16 44.4	-0.8
	baz=290						
ENTT	Nioudou	1.34	286	P	Pn	04 16 29.5	+0.3
	baz=293						
ENTT				S	Sn	04 16 45.3	-0.5
	baz=293						
NWF	Wu-fen Shan	1.35	307	P	Pn	04 16 28.8	-0.6
	baz=306						
NWF				S	Sn	04 16 44.8	-1.4
	baz=306						
WFSB	Wu-fen Shan	1.35	307	P	Pn	04 16 28.8	-0.6
	baz=306						
WFSB				S	Sn	04 16 44.9	-1.2
	baz=306						
ETLH	Xiulin Townshi	1.36	268	P	Pn	04 16 29.4	-0.2
	baz=265						
ETLH				S	Sn	04 16 47.8	+1.3
	baz=265						
NDT	Datong Townshi	1.37	284	P	Pn	04 16 30.3	+0.6
	baz=290						
NDT				eS	Sn	04 16 46.3	-0.4
	baz=290						
NWLT	Wulai	1.43	291	P	Pn	04 16 30.6	+0.1
	baz=301						
NWLT				S	Sn	04 16 47.6	-0.6
	baz=301						
NNSB	Datong	1.46	277	eP	Pn	04 16 31.0	0.0
	baz=262						
NNSB				S	Sn	04 16 49.7	+0.7
	baz=262						
NNSH	Datong	1.46	277	P	Pn	04 16 30.9	-0.1
	baz=263						
NNSH				S	Sn	04 16 49.7	+0.7
	baz=263						
NNS	Nan Shan	1.47	277	P	Pn	04 16 31.3	+0.1
	baz=262						
NNS				eS	Sn	04 16 49.5	+0.3
	baz=262						
ESL	Shilin	1.48	253	P	Pn	04 16 30.4	-0.8
	baz=250						
ESL				eS	Sn	04 16 48.1	-1.2
	baz=250						
NHDH	Xindian Distri	1.49	298	eS	Sn	04 16 49.1	-0.5
	baz=297						
YHNB	Yeheng	1.51	286	P	Pn	04 16 31.8	+0.1
	baz=294						
YHNB				S	Sn	04 16 50.0	-0.2
	baz=294						
TATO	Taipei	1.52	298	eP	Pn	04 16 31.5	-0.2
	baz=296						
TATO				S	Sn	04 16 49.1	-1.3
	baz=296						
NSK	Sanguang	1.53	286	P	Pn	04 16 31.6	-0.2
	baz=293						
NSK				eS	Sn	04 16 50.5	-0.1
	baz=293						
EGFH	Guangfu	1.53	248	P	Pn	04 16 31.2	-0.7
	baz=245						
EGFH				S	Sn	04 16 49.3	-1.4
	baz=245						
YM01	YM01	1.55	305	eP	Pn	04 16 32.5	+0.3
	baz=304						
YM01				S	Sn	04 16 49.7	-1.3
	baz=304						
YM11	YM11	1.56	305	eP	Pn	04 16 32.1	-0.2
	baz=304						
YM11				eS	Sn	04 16 50.1	-1.2
	baz=304						
YM08	YM08	1.56	306	eS	Sn	04 16 50.9	-0.4
	baz=305						
YM10	YM10	1.56	305	P	Pn	04 16 32.0	-0.3
	baz=304						
YM10				eS	Sn	04 16 50.0	-1.4
	baz=304						
WHF	Hehuan Shan	1.56	266	P	Pn	04 16 32.8	+0.1
	baz=250						
WHF				S	Sn	04 16 52.3	+0.3
	baz=250						
ANP	Anpu	1.61	305	eS	Sn	04 16 51.0	-1.6
	baz=304						
HGSD	Ruisui	1.61	242	P	Pn	04 16 31.9	-1.1
	baz=239						
HGSD				S	Sn	04 16 51.4	-1.2
	baz=239						
JTJ	Tarama	1.62	76	P	Pn	04 16 32.5	-0.6
JTJ				eS	Sn	04 16 52.6	-0.1
CHGB	Renai	1.66	263	P	Pn	04 16 33.7	-0.1
	baz=249						
CHGB				S	Sn	04 16 53.5	-0.4
	baz=249						
TDCB	Techi	1.66	270	P	Pn	04 16 34.2	+0.5
	baz=268						
TDCB				eS	Sn	04 16 54.1	+0.2
	baz=268						
OWD	Renai	1.67	260	P	Pn	04 16 33.4	-0.5
	baz=257						
OWD				S	Sn	04 16 53.1	-1.1
	baz=257						
WLTB	Daxi	1.67	291	eS	Sn	04 16 54.4	+0.4
	baz=300						
EHY	Hungye	1.69	244	iP	Pn	04 16 33.4	-0.7
	baz=254						
EHY				eS	Sn	04 16 55.0	+0.5
	baz=254						
VWDT	VWDT	1.75	253	P	Pn	04 16 35.0	+0.2
	baz=251						
VWDT				S	Sn	04 16 54.6	-1.3
	baz=251						
YULB	Yu-li	1.76	241	P	Pn	04 16 34.3	-0.7
	baz=252						
YULB				eS	Sn	04 16 55.2	-1.2
	baz=252						
TWF1	Yuli	1.78	240	iP	Pn	04 16 34.8	-0.5
	baz=237						
TWF1				S	Sn	04 16 55.2	-1.6
	baz=237						
LIOB	Emei	1.82	282	eP	Pn	04 16 36.9	+0.9
	baz=281						
NSTT	Nanjuang	1.83	282	eP	Pn	04 16 36.9	+0.9
	baz=292						
NSTT				eS	Sn	04 16 59.2	+1.2
	baz=292						
WHP	Taichung City	1.85	271	P	Pn	04 16 37.8	+1.5
	baz=257						
WHP				S	Sn	04 16 59.4	+0.8
	baz=257						
FULB	Fuli	1.87	236	P	Pn	04 16 35.4	-1.2
	baz=223						
FULB				eS	Sn	04 16 58.2	-0.7
	baz=223						
CHKT	Chengkung	1.88	232	eP	Pn	04 16 35.8	-0.8
	baz=219						
CHKT				S	Sn	04 16 56.5	-2.5
	baz=219						
DPDB	Guoxing	1.88	263	eP	Pn	04 16 37.0	+0.2
	baz=251						
DPDB				eS	Sn	04 16 59.2	-0.2
	baz=251						
SSLB	Suanglung	1.91	256	P	Pn	04 16 37.3	+0.2
	baz=253						
SSLB				S	Sn	04 16 58.9	-1.0
	baz=253						
TYC	Yuchr	1.97	260	P	Pn	04 16 38.5	+0.6
	baz=247						
TYC				S	Sn	04 17 01.7	+0.4
	baz=247						
TWQ1	Liyutan	2.01	273	eS	Sn	04 17 03.7	+1.3
	baz=271						
WHYT	Xinyi Township	2.02	254	P	Pn	04 16 39.7	+1.0
	baz=241						
WHYT				S	Sn	04 17 02.8	+0.1
	baz=241						
TWH	Lutao	2.07	222	P	Pn	04 16 38.6	-0.7
	baz=218						
TWH				eS	Sn	04 17 01.4	-2.4
	baz=218						
JIRB	Irabujima	2.08	74	P	Pn	04 16 39.9	+0.5
JIRB				eS	Sn	04 17 04.2	+0.1
ELDTW	Lidau	2.09	240	iP	Pn	04 16 38.6	-1.0
	baz=237						
ELDTW				eS	Sn	04 17 02.3	-2.1
	baz=237						
WJS	Zhushan	2.10	258	P	Pn	04 16 41.9	+2.2
	baz=256						
WJS				S	Sn	04 17 07.0	+2.4
	baz=256						
TCU	Taichung	2.10	267	eS	Sn	04 17 07.2	+2.6
	baz=254						
ALS	Alishan	2.12	250	P	Pn	04 16 40.9	+0.6
	baz=247						
ALS				S	Sn	04 17 05.0	-0.6
	baz=247						
WNT	Mingjian	2.13	260	eP	Pn	04 16 42.0	+2.0
	baz=246						
WNT				S	Sn	04 17 07.5	+2.3
	baz=246						
WDJ	Dajia District	2.13	273	eS	Sn	04 17 06.6	+1.3
	baz=271						
JMJ	Miyako jima 2	2.18	75	eS	Sn	04 17 07.9	+1.3
	baz=76						
CHN5	Tsauling	2.20	253	P	Pn	04 16 42.6	+1.5
	baz=241						
CHN5				S	Sn	04 17 08.8	+1.6
	baz=241						
WCHH	Zhanghua	2.21	266	eS	Sn	04 17 08.9	+1.5
	baz=253						
TTN	Taitung	2.25	228	S	Sn	04 17 07.1	-1.2
	baz=217						
TWGBT	Beinan	2.26	231	P	Pn	04 16 41.5	-0.3
	baz=240						
TWGBT				eS	Sn	04 17 08.2	-0.3
	baz=240						
TWG	Pinlang	2.26	231	iP	Pn	04 16 41.4	-0.5
	baz=240						
TWG				eS	Sn	04 17 07.8	-0.8
	baz=240						
WGK	Gukeng	2.28	256	eS	Sn	04 17 10.6	+1.6
	baz=254						
WDLH	Douliu	2.30	256	P	Pn	04 16 44.2	+1.8
	baz=254						
WDLH				iS	Sn	04 17 11.3	+1.8
	baz=254						
TPUB	Ta-pu	2.35	246	eP	Pn	04 16 44.9	+1.7
	baz=244						
TPUB				S	Sn	04 17 11.6	+0.8
	baz=244						
CHN4	Tsaushan	2.36	248	iP	Pn	04 16 45.1	+1.8
	baz=245						
CHN4				S	Sn	04 17 12.4	+1.4
	baz=245						
WTP	Ta-pu	2.39	245	iP	Pn	04 16 45.3	+1.6
	baz=242						
WTP				S	Sn	04 17 13.6	+1.8
	baz=242						
CHN2	Minshiung	2.40	253	eS	Sn	04 17 13.9	+1.9
	baz=251						
RLNB	Erlin	2.42	262	eS	Sn	04 17 13.2	+0.8
	baz=260						
CHY	Chiayi	2.46	252	S	Sn	04 17 14.6	+1.2
	baz=250						
SLGT	Liugui	2.48	240	P	Pn	04 16 45.8	+0.9
	baz=229						
SLGT				S	Sn	04 17 14.3	+0.3
	baz=229						
TWK	Hsinying	2.48	247	P	Pn	04 16 46.9	+1.9
	baz=244						
TWK				S	Sn	04 17 15.8	+1.7
	baz=244						
CHN1	Nanshi	2.49	245	iP	Pn	04 16 46.9	+1.8
	baz=242						
CHN1				S	Sn	04 17 15.5	+1.3
	baz=242						
SGST	Jiashian	2.49	242	eP	Pn	04 16 46.9	+1.9
	baz=239						
SGST				iS	Sn	04 17 15.4	+1.3
	baz=239						
ECL	Taimali	2.49	229	eP	Pn	04 16 44.4	-0.7
	baz=236						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ECL				eS	Sn	04 17 12.2	-1.9
	baz=236						
SNST	Tainan City	2.50	246	P	Pn	04 16 46.6	+1.5
	baz=243						
SNST				S	Sn	04 17 16.1	+1.7
	baz=243						
LAY	Lan-yu	2.57	211	P	Pn	04 16 44.6	-1.6
	baz=208						
LAY				eS	Sn	04 17 14.2	-2.1
	baz=208						
WSF	Szhu	2.59	257	S	Sn	04 17 19.6	+2.9
	baz=268						
SSD	Sandimen	2.63	235	eP	Pn	04 16 48.1	+1.1
	baz=228						
SSD				eS	Sn	04 17 17.1	-0.5
	baz=228						
CHN8	Yiju	2.69	251	eS	Sn	04 17 21.6	+2.5
	baz=248						
EAST	Anshuo	2.71	227	P	Pn	04 16 47.4	-0.7
	baz=232						
EAST				eS	Sn	04 17 18.0	-1.6
	baz=232						
MASBT	Mashibuluo	2.71	233	P	Pn	04 16 48.4	+0.3
	baz=223						
MASBT				S	Sn	04 17 19.8	+0.2
	baz=223						
TWM1	Shoushan	2.75	239	eS	Sn	04 17 25.0	+4.4
	baz=227						
SCZT	Fangliau	2.87	229	P	Pn	04 16 50.4	+0.2
	baz=220						
SCZT				eS	Sn	04 17 22.9	-0.6
	baz=220						
TSEB	Hengchuen, Pin	3.03	219	eS	Sn	04 17 28.3	+0.7
	baz=217						
HEN	Hengchun	3.05	223	eS	Sn	04 17 28.0	0.0
	baz=220						
TWKBT	Hengchun	3.05	221	P	Pn	04 16 53.2	+0.5
	baz=218						
TWKBT				eS	Sn	04 17 27.7	-0.3
	baz=218						
TWK1	Hengchun	3.05	221	eP	Pn	04 16 53.3	+0.5
	baz=218						
TWK1				S	Sn	04 17 28.4	+0.3
	baz=218						
PTTC	Pingtan	3.16	294	eP	Pn	04 16 55.2	+0.9
	baz=293						
PTTC				eS	Sn	04 17 30.5	-0.2
	baz=293						
WDGT	Dungji	3.20	252	eS	Sn	04 17 32.4	+0.8
	baz=250						
PHUB	P'eng-hu	3.20	257	eP	Pn	04 16 54.7	-0.1
	baz=255						
PHUB				S	Sn	04 17 31.2	-0.6
	baz=255						
PNG	Penghu	3.21	258	eP	Pn	04 16 55.5	+0.6
	baz=256						
PNG				eS	Sn	04 17 31.6	-0.2
	baz=256						
VWUC	VWUC	3.29	283	eS	Sn	04 17 33.4	-0.5
	baz=282						
VCHM	Qimei	3.41	253	eS	Sn	04 17 36.0	-1.0
	baz=250						
PTMZ	Houxiangcun	3.59	283	eS	Sn	04 17 40.0	-1.3
	baz=282						

*IDC **13** 04:25:31.9±0.8, 36°.19N×82°.96E, h0km, mb3.7/8, mb1 3.8/12, mb1mx3.6/44, mbtmp3.7/12, ML3.3/3, MS3.1/6, Ms1 3.1/6, ms1mx2.7/46, Error ellipse: s-maj=30.2km s-min=14.1km az=56.0*

*NEIC **13** 04:25:34.6±1.5, 36°.23N±0°.07×83°.08E±0°.08, h19km±4km, mb4.1/10, Error ellipse: s-maj=12.9km s-min=6.3km az=220.0*

*NNC **13** 04:25:38.5±3.5, 36°.65N×83°.31E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=46.9km s-min=25.5km az=74.0*

ISC 13 04:25:33.0±0.6, **36°.25N**±0°.06×**83°.08E**±0°.07, **h10**km, **n48**, σ**1s.56**/50, **mb3.7**/11, **MS3.3**/4, **2C-7D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	7.59	340	⇓Pn	Pn	04 27 25.2	+1.3
	2.8nm,0.5s						
PDGK				⇑Sn	Sn	04 28 52.1	+2.1
	30nm,0.8s						
PDGK				⇓Lg	Lg	04 29 30.1	
	44nm,0.8s						
BOOM	Boomskoye usch	8.33	321	Pn	Pn	04 27 34.9	+0.9
WMQ	Urumqi	8.35	24	ePn	Pn	04 27 36.3	+2.1
WMQ				Sn	Sn	04 29 06.3	-2.2
WMQ	Urumqi	8.35	24	Pn	Pg	04 28 13.3	+0.5
WMQ				Sn	Sb	04 29 47.3	+10
NIL	Nilore	8.47	255	Pn	Pn	04 27 36.7	+0.9
AAK	Ala-Archa	9.20	316	Pn	Pn	04 27 49.6	+3.7
	0.1nm,0.3s,baz=203,slow=7.2,SNR=3.6						
AAK				Pg		04 28 23.5	
	0.4nm,0.3s,baz=182,slow=12,SNR=6.5						
AAK				Lg	Lg	04 30 22.2	
	0.5nm,0.3s,baz=40,slow=19,SNR=6.0						
AAK	Ala-Archa	9.20	316		Pn	04 27 47.2	+1.3
AAK					Sn	04 29 25.6	-4.1
ARSB	Arslanbob	9.37	306		Pn	04 27 48.3	+0.1
LSA	Lhasa	9.41	132		Pn	04 27 49.0	-0.1
BTK	Batken	10.38	295		Pn	04 28 02.6	+0.7
MK31	Makanchi Array	10.55	357	⇓Pn	Pn	04 28 06.4	+2.1
	0.8nm,0.4s,baz=185,slow=11,SNR=57						
MK31				⇑Sn	Sn	04 30 00.9	-1.7
	2.6nm,0.7s,baz=182,slow=23,SNR=4.7						
MK31				⇓Lg	Lg	04 31 02.8	
	3.6nm,0.8s,baz=184,slow=12,SNR=4.2						
MK31	Makanchi Array	10.55	357		Pn	04 28 05.3	+1.0
MKAR	Makanchi Array	10.55	357	Pn	Pn	04 28 05.6	+1.3
	0.4nm,0.3s,baz=188,slow=12,SNR=20						
MKAR				Sn	Sn	04 30 01.5	-1.0
	0.2nm,0.3s,baz=200,slow=17,SNR=3.1						
MKAR				Lg	Lg	04 31 05.8	
	0.1nm,0.3s,baz=183,slow=23,SNR=3.8						
MKAR	Makanchi Array	10.55	357	Pn	Pn	04 28 05.1	+0.8
MKAR					Sn	04 30 02.1	-0.5
MAKZ	Makanchi	10.58	356	⇓Pn	Pn	04 28 06.9	+2.1
	1.5nm,0.4s						
MAKZ				⇓Sn	Sn	04 30 01.1	-2.2
	6.7nm,0.8s						
MAKZ				⇓Lg	Lg	04 31 02.7	
	4.8nm,0.9s						
MAKZ	Makanchi	10.58	356		Pn	04 28 06.3	+1.6
MAKZ					Sn	04 30 01.7	-1.5
KK31	Karatay Array	11.85	309		Pn	04 28 21.0	-1.1
KKAR	Karatay Array	11.85	309		Pn	04 28 20.8	-1.3
TAS	Tashkent	11.89	299		Pn	04 28 24.6	+2.1
KURBB	Kurchatov Arra	14.74	349		Pn	04 29 00.8	-0.6
	baz=171,slow=11,SNR=4.6						
ZALV	Zalesovo Beam	17.74	3	P	Pn	04 29 38.1	-1.9
	0.1nm,0.3s,baz=192,slow=12,SNR=2.0						
ZALV				LR	LR	04 38 25.5	
	comp=Z,19nm,19.9s,baz=163,slow=44						
ZALV	Zalesovo Beam	17.74	3	P	P	04 29 41.4	+1.5
BVAR	Borovoye Array	19.00	336	P	P	04 29 56.4	+1.7
	0.2nm,0.3s,baz=151,slow=13,SNR=7.0						
BRVK	Borovoye	19.06	336	P	P	04 29 56.3	+1.0
BRVK				IAmb	IAmb	04 29 59.0	
	comp=Z,7.1nm,1.1s						
ASHT	Ashkhabad	19.76	282	P	P	04 30 03.8	+0.7
GEYT	Alibeck	19.97	282	LR	LR	04 39 51.8	
	comp=Z,20nm,20.7s,baz=210,slow=43						
SONM	Songino Array	20.75	49	P	Pn	04 30 18.1	+1.9
	comp=Z,0.6nm,0.7s,baz=242,slow=11,SNR=5.7						
ABKAR	Akbulak array	21.29	315	P	P	04 30 19.6	0.0
ABKAR	Akbulak array	21.29	315	P	P	04 30 20.1	+0.6
ABKAR				IAmb	IAmb	04 30 22.0	
	comp=Z,1.9nm,0.8s						
CMAR	Chiang Mai Arr	22.59	137	P	P	04 30 35.3	+1.6
	comp=Z,0.7nm,0.3s,baz=331,slow=8.6,SNR=5.2						
AKTO	Aktyubinsk	22.95	316	P	P	04 30 38.0	+0.7
	comp=Z,1.2nm,0.6s,baz=117,slow=11,SNR=4.3						
WSAR	Wadi Sarin	24.79	245	LR	LR	04 41 55.8	
	comp=Z,46nm,18.8s,baz=76,slow=40						
ARU	Arti	26.09	328	P	P	04 31 08.6	+1.9
	comp=Z,1.5nm,0.2s,baz=132,slow=12,SNR=3.4						
BJT	Baijiatuau	26.21	72	P	P	04 31 05.7	-2.3
BJT				IAmb	IAmb	04 31 21.5	
	comp=Z,2.9nm,0.9s						
KSRS	Korea Array	35.65	74	LR	LR	04 48 08.5	
	comp=Z,22nm,18.1s,baz=230,slow=38						
IPM	Ipoh	35.67	148	P	P	04 32 30.4	-1.1
IPM				IAmb	IAmb	04 32 32.2	
	comp=Z,4.5nm,0.9s						
BRTR	Keskin Array B	38.73	291	P	P	04 32 57.1	-0.4
	comp=Z,0.9nm,0.8s,baz=107,slow=8.3,SNR=5.6						
TIXI	Tiksi	42.53	20	P	P	04 33 28.6	+0.3
ASAJ	Asahikawa	45.28	61	LR	LR	04 52 23.8	
	comp=Z,109nm,19.2s,baz=338,slow=36						
SIJI	Sorong	58.00	118	LR	LR	05 01 15.0	
	comp=Z,36nm,18.3s,baz=214,slow=37						
WB0	Warramunga Arr	73.86	130	P	P	04 37 08.2	0.0
WB0				IAmb	IAmb	04 37 11.0	
	comp=Z,3.2nm,1.1s						
WRA	Warramunga Arr	73.96	130	P	P	04 37 09.2	+0.5
	comp=Z,1.0nm,0.7s,baz=324,slow=6.1,SNR=8.0						
WRA	Warramunga Arr	73.96	130	P	P	04 37 08.3	-0.5
WB2	Warramunga Arr	73.97	130	P	P	04 37 09.7	+0.9
TORD	Torodi Ar. Bea	75.46	276	P	P	04 37 16.4	-1.3
	comp=Z,0.4nm,0.6s,baz=30,slow=6.3,SNR=5.4						
TORD	Torodi Ar. Bea	75.46	276	P	P	04 37 16.1	-1.5
ASAR	Alice Springs	76.52	133	P	P	04 37 24.4	+1.0
	comp=Z,0.5nm,0.7s,baz=311,slow=6.5,SNR=4.7						
YKA	Yellowknife Ar	80.57	8	P	P	04 37 45.5	+0.2
	comp=Z,0.3nm,0.8s,baz=340,slow=5.1,SNR=3.3						

*THE **13** 04:28:49.8, 38°.28N×20°.43E, h11km±1km, ML3.2/7, Error ellipse: s-maj=1.4km s-min=0.3km az=227.0*

*ATH **13** 04:28:49.8, 38°.29N×20°.43E, h11km±1km, ML2.7/3, Error ellipse: s-maj=2.1km s-min=0.9km az=241.0*

ISC 13 04:28:49.7±1.3, **38°.28N**±0°.03×**20°.44E**±0°.05, **h12**km±6km, **n23**, σ**0s.28**/42, **Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF1	Kardakata, Kep	0.02	89	P	Pg	04 28 51.6	-0.2
KEF1				S	Sg	04 28 52.9	-0.5
KEF4	Livadi, Kephal	0.02	214	P	Pg	04 28 51.7	-0.1
KEF4				S	Sg	04 28 53.5	+0.1
AGT1	Agia Thekli	0.05	239	P	Pg	04 28 51.9	-0.1
AGT1				S	Sg	04 28 53.5	-0.2
	36μm,0.2s						
LXR1	Lixouri, Cepha	0.08	182	P	Pg	04 28 52.4	+0.2
LXR1				S	Sg	04 28 53.8	-0.3
	18μm,0.2s						
LXRA	Lixouri, Kepha	0.08	182	P	Pg	04 28 52.4	+0.2
LXRA				S	Sg	04 28 54.5	+0.3
KEF3	Kipouria, Keph	0.10	225	P	Pg	04 28 52.6	0.0
KEF3				S	Sg	04 28 55.0	+0.3
ARGA	Argostoli. Kep	0.10	163	P	Pg	04 28 52.6	0.0
ARGA				S	Sg	04 28 54.7	0.0
CHV1	Chavriata, Kef	0.10	206	P	Pg	04 28 52.7	+0.1
CHV1				S	Sg	04 28 55.0	+0.3
	33μm,0.1s						
ARG2	Argostoli	0.11	160	P	Pg	04 28 52.7	+0.1
ARG2				S	Sg	04 28 54.6	-0.1
	17μm,0.1s						
KEF2	Argostoli. Kep	0.12	162	P	Pg	04 28 52.8	+0.1
KEF2				S	Sg	04 28 54.9	-0.1
VLS	Valsamata	0.15	131	P	Pg	04 28 53.3	0.0
VLS				S	Sg	04 28 56.0	+0.3
	16μm,0.1s						
VLS	Valsamata	0.15	131	P	Pg	04 28 53.3	0.0
VLS				S	Sg	04 28 55.9	+0.1
VLS				AML	AML	04 28 56.1	
	comp=E,38504μm,0.1s						
VLS				AML	AML	04 28 56.1	
	comp=N,25349μm,0.1s						
VSK1	VASILIKIADES	0.16	36	P	Pg	04 28 53.5	0.0
VSK1				S	Sg	04 28 56.4	+0.2
	comp=N,5μm,0.2s						
KONA	Konidatara, Ke	0.18	35	P	Pg	04 28 53.7	0.0
KONA				S	Sg	04 28 56.4	-0.2
EVGI	Lefkada island	0.38	26	P	Pg	04 28 57.4	+0.1
EVGI				S	Sg	04 29 03.2	+0.7
EVGI	Lefkada island	0.38	26	P	Pg	04 28 57.4	+0.1
EVGI				S	Sg	04 29 03.1	+0.6
VLMS	Volimes, Zakyn	0.44	156	P	Pg	04 28 58.0	-0.3
VLMS				S	Sb	04 29 05.7	-0.1
VLMS				AML	AML	04 29 07.5	
	comp=E,4070μm,0.2s						
VLMS				AML	AML	04 29 07.6	
	comp=N,3876μm,0.1s						
LKD2	Lefkada island	0.54	18	P	Pg	04 28 59.8	-0.4
LKD2				S	Sg	04 29 07.7	+0.3
LKD2	Lefkada island	0.54	18	P	Pg	04 28 59.9	-0.4
LKD2				AML	AML	04 29 11.1	
	comp=E,415μm,0.3s						
LKD2				AML	AML	04 29 17.0	
	comp=N,360μm,0.3s						
TSLK	Tsoukalades, L	0.57	17	P	Pg	04 29 00.3	-0.5
TSLK	Tsoukalades, L	0.57	17	P	Pg	04 29 00.4	-0.5
AST1	Astakos	0.57	62	P	Pg	04 29 00.6	-0.3
AST1				S	Sb	04 29 09.9	+0.2
	comp=N,1μm,0.3s						
PVO	Paravola	0.92	68	P	Pg	04 29 07.5	+0.1

*ATH **13** 04:34:51.4, 38°.28N×20°.38E, h13km±1km, ML2.6/14, Error ellipse: s-maj=1.7km s-min=0.8km az=255.0*

*THE **13** 04:34:52.2, 38°.29N×20°.43E, h10km, ML3.1/14, Error ellipse: s-maj=1.0km s-min=0.3km az=260.0*

ISC 13 04:34:51.3±0.9, **38°.30N**±0°.02×**20°.39E**±0°.04, **h13**km±4km, **n45**, σ**0s.45**/73, **Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.05	149	P	Pg	04 34 53.9	+0.1
KEF4				S	Sg	04 34 55.4	-0.1
AGT1	Agia Thekli	0.05	187	P	Pg	04 34 54.0	+0.3
AGT1				S	Sg	04 34 55.4	-0.1
	58μm,0.1s						
KEF1	Kardakata, Kep	0.07	110	P	Pg	04 34 53.7	-0.2
KEF1				S	Sg	04 34 54.9	-0.8
LXR1	Lixouri, Cepha	0.11	160	P	Pb	04 34 54.6	-0.5
LXR1				S	Sg	04 34 56.5	+0.1
	60μm,0.2s						
LXRA	Lixouri, Kepha	0.11	160	P	Pb	04 34 54.7	-0.5
LXRA				S	Sg	04 34 56.8	+0.3
CHV1	Chavriata, Kef	0.12	184	P	Pb	04 34 54.9	-0.4
CHV1				S	Sg	04 34 57.1	+0.4
	30μm,0.4s						
ARGA	Argostoli. Kep	0.14	151	P	Pg	04 34 54.8	0.0
ARGA				S	Sg	04 34 57.0	-0.3
ARG2	Argostoli	0.14	148	P	Pg	04 34 54.9	+0.1
ARG2				S	Sg	04 34 57.0	-0.3
	39μm,0.2s						
KEF2	Argostoli. Kep	0.15	151	P	Pg	04 34 55.1	+0.1
KEF2				S	Sg	04 34 57.1	-0.5
VSK1	VASILIKIADES	0.17	51	P	Pb	04 34 55.7	-0.6
VSK1				S	Sg	04 34 58.7	+0.6
	7μm,0.4s						
KONA	Konidatara, Ke	0.19	48	P	Pb	04 34 56.0	-0.6
KONA				S	Sg	04 34 58.9	+0.4
VLS	Valsamata	0.20	128	P	Pg	04 34 55.5	-0.2
VLS				S	Sg	04 34 58.3	-0.4
	26μm,0.1s						
VLS	Valsamata	0.20	128	P	Pg	04 34 55.6	-0.2
VLS				S	Sg	04 34 58.3	-0.4
VLS				AML	AML	04 34 58.4	
	comp=E,60895μm,0.1s						
VLS				AML	AML	04 34 58.4	
	comp=N,40263μm,0.1s						
KFL	Anninata	0.36	121	P	Pg	04 34 58.5	-0.1
KFL				S	Sg	04 35 03.9	+0.3
EVGI	Lefkada island	0.38	33	P	Pb	04 34 59.6	-0.3
EVGI				S	Sb	04 35 05.5	-0.2
EVGI	Lefkada island	0.38	33	P	Pb	04 34 59.6	-0.3
EVGI				S	Sb	04 35 05.7	0.0
MGNA	Meganis	0.47	41	P	Pb	04 35 00.9	-0.5
MGNA				AML	AML	04 35 08.7	
	comp=E,2270μm,0.2s						
MGNA				AML	AML	04 35 09.1	
	comp=N,1373μm,0.1s						
VLMS	Volimes, Zakyn	0.47	153	P	Pg	04 35 00.6	0.0
VLMS				S	Sb	04 35 07.7	-0.6
VLMS				AML	AML	04 35 09.7	
	comp=E,4691μm,0.2s						
VLMS				AML	AML	04 35 10.4	
	comp=N,5126μm,0.3s						
LKD2	Lefkada island	0.53	23	P	Pb	04 35 02.0	-0.4
LKD2				S	Sb	04 35 09.9	-0.1
	comp=N,325nm,0.5s						
LKD2	Lefkada island	0.53	23	P	Pb	04 35 01.8	-0.7
LKD2				AML	AML	04 35 17.7	
	comp=E,569μm,0.3s						
LKD2				AML	AML	04 35 19.2	
	comp=N,720μm,0.6s						
TSLK	Tsoukalades, L	0.56	21	P	Pb	04 35 02.8	-0.2
TSLK				S	Sb	04 35 11.9	+1.0
	comp=N,402nm,0.5s						
TSLK	Tsoukalades, L	0.56	21	P	Pb	04 35 02.7	-0.2
AST1	Astakos	0.60	66	P	Pg	04 35 03.1	+0.1
AST1				S	Sb	04 35 11.8	-0.1
	comp=N,2μm,0.3s						
ZAK2	Zakynthos	0.65	142	P	Pb	04 35 04.1	-0.3
ZAK2				S	Sb	04 35 13.6	+0.2
	comp=N,5μm,0.4s						
PDO	Prodromos	0.69	64	P	Pg	04 35 04.6	-0.1
PDO				S	Sb	04 35 14.4	-0.1
	comp=N,1μm,0.5s						
PDO	Prodromos	0.69	64	P	Pb	04 35 04.8	-0.3
PDO				S	Sb	04 35 15.4	+0.9
PDO				AML	AML	04 35 16.4	
	comp=E,1709μm,0.5s						
PDO				AML	AML	04 35 17.3	
	comp=N,1744μm,0.3s						
KRI1	kERI	0.72	152	P	Pg	04 35 05.1	-0.1
KRI1				S	Sb	04 35 16.0	+0.6
	comp=N,2μm,0.3s						
RLS	Riolos of Patr	0.88	106	P	Pg	04 35 07.8	-0.4
RLS				S	Sb	04 35 21.0	+1.0
RLS				AML	AML	04 35 27.2	
	comp=N,517μm,0.4s						
RLS				AML	AML	04 35 30.9	
	comp=E,322μm,0.6s						
PVO	Paravola	0.94	70	P	Pb	04 35 09.5	0.0
PVO				S	Sb	04 35 22.7	+0.8
	comp=E,432nm,0.5s						
PVO	Paravola	0.94	70	P	Pb	04 35 09.5	0.0
PVO				AML	AML	04 35 29.3	
	comp=N,866μm,0.5s						
PVO				AML	AML	04 35 29.6	
	comp=E,847μm,0.3s						
DRO	Drossia	1.10	108	P	Pb	04 35 11.5	-0.5
DRO				S	Sn	04 35 28.2	+0.9
	comp=E,400nm,0.4s						
DRO	Drossia	1.10	108	P	Pb	04 35 11.6	-0.5
DRO				S	Sn	04 35 27.9	+0.6
DRO				AML	AML	04 35 38.2	
	comp=E,860μm,0.5s						
DRO				AML	AML	04 35 38.8	
	comp=N,737μm,0.4s						
IGT	Igoumenitsa	1.23	358	P	Pg	04 35 15.3	+0.3
ANX	Ano Chora	1.24	76	P	Pn	04 35 14.1	-0.2
ANX				AML	AML	04 35 38.7	
	comp=E,802μm,0.7s						
ANX				AML	AML	04 35 38.9	
	comp=N,1041μm,0.5s						
EVR	Evrytania	1.27	61	P	Pb	04 35 14.8	-0.2
AMT	Artemida-Makis	1.29	126	P	Pb	04 35 15.6	+0.1
SERG	Sergoula	1.31	85	P	Pn	04 35 15.3	0.0
SERG	Sergoula	1.31	85	P	Pn	04 35 15.3	0.0
SERG				AML	AML	04 35 40.3	
	comp=E,316μm,0.4s						
SERG				AML	AML	04 35 41.0	
	comp=N,355μm,0.3s						
KLV	Kalavryta, Ach	1.41	100	P	Pn	04 35 16.7	+0.1
KLV				AML	AML	04 35 40.5	
	comp=N,189μm,0.3s						
KLV				AML	AML	04 35 42.4	
	comp=E,176μm,0.5s						
KEK	Kerkira	1.48	342	P	Pg	04 35 19.4	-0.4
ITM	Ithomi	1.65	132	P	Pb	04 35 21.4	-0.1
AGG	Agios Georgios	1.68	64	P	Pb	04 35 22.3	+0.3
AGG				AML	AML	04 35 53.0	
	comp=N,172μm,0.4s						
AGG				AML	AML	04 35 58.3	
	comp=E,140μm,0.8s						
THL	Klokotos Trika	1.79	45	P	Pg	04 35 25.0	-0.6
THL				AML	AML	04 35 59.6	
	comp=N,150μm,0.6s						
THL				AML	AML	04 35 59.9	
	comp=E,157μm,0.6s						
KPRO	Kipourio	1.82	24	P	Pg	04 35 25.5	-0.6
KPRO				AML	AML	04 36 01.4	
	comp=N,162μm,1.0s						
KPRO				AML	AML	04 36 04.4	
	comp=E,137μm,0.8s						
LTK	Loutraki	2.05	97	P	Pb	04 35 27.2	-1.1

*ATH **13** 04:37:31.0, 38°.16N×20°.28E, h7km±2km, ML3.5/19, Error ellipse: s-maj=2.7km s-min=1.1km az=68.0*

*PDG **13** 04:37:30.9±0.5, 38°.20N×20°.20E, h0km±11km, ML4.0/13, Error ellipse: s-maj=1.1km s-min=1.0km az=90.0*

*SKO **13** 04:37:31.3, 38°.06N×19°.84E, h7km*

*THE **13** 04:37:31.6, 38°.17N×20°.30E, h5km±2km, ML3.8/13, Error ellipse: s-maj=2.5km s-min=0.5km az=80.0*

*BEO **13** 04:37:33.0±0.8, 38°.07N×20°.04E, h19km±5km, ML3.6/7*

*IDC **13** 04:37:36.9±1.6, 38°.07N×20°.13E, h62km±22km, mb3.6/6, mb1 3.7/12, mb1mx3.4/49, mbtmp3.8/12, ML3.2/6, MS3.0/5, Ms1 3.1/5, ms1mx2.6/44, Error ellipse: s-maj=18.4km s-min=11.0km az=11.0*

ISC 13 04:37:31.5±1.0, **38°.16N**±0°.02×**20°.29E**±0°.03, **h5**km±6km, **n133**, σ**1s.39**/187, **mb3.9**/6, **13C-7D, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.07	72	P	Pg	04 37 33.1	0.0
CHV1				S	Sg	04 37 34.2	-0.1
AGT1	Agia Thekli	0.11	38	P	Pg	04 37 34.1	+0.2
AGT1				S	Sg	04 37 35.5	0.0
	441μm,0.3s						
LXR1	Lixouri, Cepha	0.12	71	P	Pg	04 37 34.1	+0.1
LXR1				S	Sg	04 37 36.0	+0.4
	371μm,0.8s						
LXRA	Lixouri, Kepha	0.12	71	P	Pg	04 37 34.1	+0.2
LXRA				S	Sg	04 37 35.9	+0.3
KEF4	Livadi, Kephal	0.14	47	P	Pg	04 37 34.4	+0.1
KEF4				S	Sg	04 37 35.7	-0.5
ARGA	Argostoli. Kep	0.15	84	P	Pg	04 37 34.8	+0.4
ARGA				S	Sg	04 37 37.1	+0.6
KEF2	Argostoli. Kep	0.15	88	P	Pg	04 37 34.8	+0.3
KEF2				S	Sg	04 37 37.1	+0.5
ARG2	Argostoli	0.15	83	P	Pg	04 37 34.8	+0.2
ARG2				S	Sg	04 37 37.1	+0.5
	138μm,0.5s						
KEF1	Kardakata, Kep	0.18	50	P	Pg	04 37 35.0	-0.1
KEF1				S	Sg	04 37 37.6	+0.1
VLS	Valsamata	0.23	86	P	Pg	04 37 36.1	0.0
VLS				S	Sg	04 37 39.6	+0.4
	44μm,0.3s						
VLS	Valsamata	0.23	86	P	Pg	04 37 36.1	0.0
VLS				S	Sg	04 37 39.3	+0.2
VLS				AML	AML	04 37 39.7	
VLS				AML	AML	04 37 39.7	
	comp=E,58462μm,0.2s						
VSK1	VASILIKIADES	0.33	41	P	Pg	04 37 37.9	+0.1
VSK1				S	Sg	04 37 42.8	+0.6
	comp=E,35μm,0.5s						
KONA	Konidatara, Ke	0.34	40	P	Pg	04 37 38.2	+0.1
KONA				S	Sg	04 37 43.2	+0.5
VLMS	Volimes, Zakyn	0.41	134	P	Pg	04 37 39.5	+0.2
VLMS				S	Sg	04 37 43.7	-1.0
VLMS				AML	AML	04 37 47.5	
	comp=N,51332μm,0.3s						
VLMS				AML	AML	04 37 52.0	
	comp=E,31025μm,0.3s						
EVGI	Lefkada island	0.54	32	P	Pg	04 37 41.6	-0.3
EVGI				S	Sg	04 37 49.7	+0.8
EVGI	Lefkada island	0.54	32	P	Pg	04 37 41.7	-0.2
EVGI				S	Sg	04 37 49.4	+0.5
ZAK2	Zakynthos	0.61	128	P	Pg	04 37 43.6	+0.5
ZAK2				S	Sb	04 37 53.0	-0.4
	comp=E,30μm,0.7s						
MGNA	Meganis	0.63	38	P	Pg	04 37 43.2	-0.4
KRI1	kERI	0.65	140	P	Pg	04 37 43.9	0.0
KRI1				S	Sg	04 37 53.1	+0.8
	comp=E,12μm,0.5s						
LKD2	Lefkada island	0.69	24	P	Pg	04 37 44.1	-0.6
LKD2				S	Sb	04 37 54.7	-1.1
	comp=E,3μm,0.7s						
LKD2	Lefkada island	0.69	24	P	Pg	04 37 44.2	-0.5
LKD2				S	Sg	04 37 53.1	-0.6
LKD2				AML	AML	04 38 03.0	
	comp=N,8201μm,1.1s						
LKD2				AML	AML	04 38 03.2	
	comp=E,5581μm,0.8s						

Code	Station	Δ	Az	Phase	ISC	Time	Res
TSLK	Tsoukalades, L	0.72	23	P	Pg	04 37 44.8	-0.5
TSLK				S	Sb	04 37 56.1	-0.6
	comp=E,4µm,0.6s						
TSLK	Tsoukalades, L	0.72	23	P	Pg	04 37 45.1	-0.2
AST1	Astakos	0.73	58	P	Pg	04 37 45.1	-0.4
AST1				S	Sb	04 37 55.9	-1.1
	comp=E,7µm,0.4s						
PDO	Prodromos	0.82	58	P	Pg	04 37 46.2	-1.1
PDO				S	Sg	04 37 58.1	+0.1
	comp=E,6µm,0.6s						
PDO	Prodromos	0.82	58	P	Pg	04 37 46.4	-0.9
PDO				S	Sb	04 37 59.4	-0.3
PDO				AML	AML	04 38 05.9	
	comp=N,8469µm,0.6s						
PDO				AML	AML	04 38 07.0	
	comp=E,8142µm,0.6s						
RLS	Riolos of Patr	0.93	96	P	Pg	04 37 48.7	-0.6
RLS				S	Sb	04 38 02.7	0.0
	comp=E,2µm,0.5s						
RLS	Riolos of Patr	0.93	96	P	Pg	04 37 48.8	-0.5
RLS				S	Sb	04 38 02.7	0.0
RLS				AML	AML	04 38 12.3	
	comp=E,2446µm,0.4s						
RLS				AML	AML	04 38 12.4	
	comp=N,3680µm,0.6s						
PVO	Paravola	1.07	64	P	Pg	04 37 51.4	-0.6
PVO	Paravola	1.07	64	P	Pg	04 37 51.6	-0.4
PVO				S	Sn	04 38 06.9	-1.4
PVO				AML	AML	04 38 16.7	
	comp=N,6419µm,0.6s						
PVO				AML	AML	04 38 19.5	
	comp=E,6408µm,0.7s						
DRO	Drossia	1.14	100	P	Pb	04 37 52.7	-0.9
DRO				S	Sn	04 38 09.8	-0.3
	comp=E,4µm,0.5s						
DRO	Drossia	1.14	100	P	Pb	04 37 52.9	-0.8
DRO				S	Sn	04 38 09.9	-0.7
DRO				AML	AML	04 38 14.7	
	comp=E,8125µm,0.5s						
DRO				AML	AML	04 38 18.1	
	comp=N,8454µm,0.6s						
UPR	University Cam	1.18	84	P	Pb	04 37 54.1	-0.3
AMT	Artemida-Makis	1.28	119	P	Pn	04 37 55.4	-0.7
AMT				AML	AML	04 38 21.8	
	comp=N,4739µm,0.6s						
AMT				AML	AML	04 38 27.4	
	comp=E,5240µm,0.6s						
LAKA	Lakka	1.33	86	P	Pn	04 37 56.2	-0.5
LAKA				AML	AML	04 38 21.9	
	comp=N,1889µm,0.5s						
LAKA				AML	AML	04 38 24.3	
	comp=E,2342µm,0.8s						
ANX	Ano Chora	1.35	71	P	Pn	04 37 56.5	-0.6
ANX				AML	AML	04 38 21.2	
	comp=N,5992µm,0.5s						
ANX				AML	AML	04 38 27.7	
	comp=E,5199µm,0.8s						
IGT	Igoumenitsa	1.37	1	ePg	Pg	04 38 00.5	+2.7
IGT				eSg	Sg	04 38 19.4	+3.9
IGT	Igoumenitsa	1.37	1	P	Pb	04 37 57.4	-0.2
IGT				S	Sn	04 38 15.0	-0.8
IGT				AML	AML	04 38 31.8	
	comp=N,1593µm,1.0s						
IGT				AML	AML	04 38 32.4	
	comp=E,1726µm,0.6s						
EVR	Evrytania	1.41	57	P	Pn	04 37 56.7	-1.2
EVR				AML	AML	04 38 24.8	
	comp=E,1555µm,0.9s						
EVR				AML	AML	04 38 39.0	
	comp=N,1931µm,1.0s						
SERG	Sergoula	1.41	79	P	Pn	04 37 56.8	-1.0
SERG				AML	AML	04 38 24.1	
	comp=N,2922µm,0.4s						
SERG				AML	AML	04 38 26.9	
	comp=E,2352µm,0.9s						
TRIZ	Trizonia	1.42	81	P	Pn	04 37 56.8	-1.0
KLV	Kalavryta, Ach	1.47	94	P	Pn	04 37 58.3	-0.3
KALE	Kalithea	1.47	80	P	Pn	04 37 57.9	-0.8
KALE				AML	AML	04 38 28.7	
	comp=N,2767µm,0.4s						
KALE				AML	AML	04 38 35.9	
	comp=E,1786µm,0.9s						
JAN	Janina	1.56	16	P	Pg	04 38 01.3	0.0
JAN				AML	AML	04 38 29.3	
	comp=N,1068µm,0.4s						
JAN				AML	AML	04 38 30.7	
	comp=E,1667µm,0.6s						
ITM	Ithomi	1.62	127	P	Pb	04 38 01.2	-0.7
ITM				AML	AML	04 38 30.6	
	comp=E,1389µm,0.6s						
ITM				AML	AML	04 38 35.8	
	comp=N,1760µm,1.0s						
MAKR	Makrakomi, Fth	1.67	59	P	Pb	04 38 02.5	-0.3
MAKR				AML	AML	04 38 37.9	
	comp=N,2954µm,1.0s						
MAKR				AML	AML	04 38 38.4	
	comp=E,2936µm,0.5s						
AGG	Agios Georgios	1.81	61	P	Pb	04 38 04.5	-0.7
AGG				AML	AML	04 38 41.4	
	comp=N,1630µm,0.5s						
AGG				AML	AML	04 38 45.1	
	comp=E,1264µm,0.7s						
VLX	Vlachokerasia	1.83	115	P	Pb	04 38 05.9	+0.4
VLX				AML	AML	04 38 42.4	
	comp=E,2784µm,0.7s						
VLX				AML	AML	04 38 46.7	
	comp=N,2074µm,0.7s						
THL	Klokotos Trika	1.94	43	P	Pb	04 38 06.6	-0.7
AXAR	Agios Charalam	1.95	71	P	Pb	04 38 07.4	-0.1
KPRO	Kipourio	1.98	25	P	Pb	04 38 07.6	-0.4
LTK	Loutraki	2.11	93	P	Pb	04 38 08.9	-1.4
LOUT	Loutraki	2.12	94	P	Pb	04 38 08.9	-1.5
LKR	Lokris	2.18	76	P	Pb	04 38 10.2	-1.3
VIL2	Platees	2.34	88	P	Pb	04 38 12.6	-1.6
DID	Didima	2.42	105	P	Pn	04 38 13.1	+1.4
TIP	Timpagrande	2.95	291	⇓P	Pn	04 38 19.6	+0.6
TIP				⇑S	Sn	04 38 55.4	+0.6
OHR	Ohrid	2.97	7	*i* Pn	Pb	04 38 22.4	-2.5
OHR				*i* Sn	Sb	04 38 55.8	-3.1
OHR				*e*Lg	Lg	04 38 58.5	
	comp=E,64nm,0.5s						
OHR				*e*Lg	Lg	04 39 00.8	
	comp=N,126nm,1.1s						
TIR	Tirane	3.20	354	*e*Pn	Pn	04 38 23.6	+1.2
TIR				*e*Sn	Sn	04 39 02.1	+1.2
TIR	Tirane	3.20	354	⇑P	Pn	04 38 23.9	+1.5
TIR				⇑S	Sn	04 39 02.6	+1.7
VAY	Valandovo	3.61	28	*e*P	Pb	04 38 32.8	-3.0
VAY	Valandovo	3.61	28	*i* Pn	Pb	04 38 33.6	-2.2
MATE	Matera	3.73	313	P	Pn	04 38 30.6	+0.9
MATE				⇑S	Sn	04 39 14.8	+0.9
STIP	Stip	3.82	22	*i* Pn	Pn	04 38 34.1	+3.2
SG1	Sgolgore (BA)	3.87	315	*e*Pn	Pn	04 38 33.0	+1.3
ULC	Ulcinj	3.88	348	*e*Pn	Pn	04 38 31.4	-0.4
ULC				*i* Sn	Sn	04 39 19.3	+1.5
SRS	Serrai	3.90	40	*e*Pn	Pn	04 38 34.0	+2.0
SKO	Skopje	3.91	13	*e*Pn	Pn	04 38 32.9	+0.8
BAI	Bari	3.95	319	*e*Pn	Pn	04 38 33.9	+1.2
DRME	Dracevica, Mon	4.11	348	*e*Pn	Pn	04 38 34.7	-0.2
DRME				*e*Sn	Sn	04 39 25.0	+1.6
BUM	Brajici-Budva	4.27	346	*e*Pn	Pn	04 38 37.0	-0.2
BUM				*i* Sn	Sn	04 39 28.4	+0.9
APE	Apeiranthos	4.30	103	⇓P	Pn	04 38 40.6	+3.1
MMB	Musomiste	4.32	37	*e*P	Pb	04 38 43.5	-4.5
PDG	Podgorica	4.34	350	*e*Pn	Pn	04 38 38.0	0.0
PDG				*e*Sn	Sn	04 39 27.5	-1.4
PDG	Podgorica	4.34	350	⇓P	Pn	04 38 39.3	+1.3
PDG				⇓S	Sn	04 39 29.9	+1.0
TTG	Podgorica	4.34	350	*e*Pn	Pn	04 38 38.5	+0.5
TTG				*e*Sn	Sn	04 39 30.1	+1.2
PVY	Plav	4.44	357	*e*Pn	Pn	04 38 40.4	+0.9
PVY				*e*Sn	Sn	04 39 33.2	+1.6
HCY	Herceg Novi	4.50	343	*e*Pn	Pn	04 38 39.9	-0.3
HCY				*e*Sn	Sn	04 39 33.8	+0.9
CEME	Cevo	4.50	347	*e*Pn	Pn	04 38 39.6	-0.8
CEME				*e*Sn	Sn	04 39 34.1	+0.9
BOSS	Bosilegrad	4.64	20	*e*Pn	Pn	04 38 44.7	+2.5
IDI	Anoyia	4.67	126	P	Pn	04 38 46.7	+4.0
	comp=N,0.6nm,0.3s,baz=46,slow=19,SNR=2.2						
IDI				S	Sn	04 39 39.4	+2.0
	comp=N,4.3nm,0.3s,baz=144,slow=22,SNR=16						
IDI				LR	LR	04 41 10.2	
	comp=N,57nm,19.6s,baz=264,slow=45						
VAE	Valguarnera	4.71	263	P	Pn	04 38 46.1	+3.0

Code	Station	Δ	Az	Phase	ISC	Time	Res
	comp=N,1.0nm,0.3s,baz=316,slow=5.5,SNR=1.9						
VAE				S	Sn	04 39 35.7	-2.5
	comp=N,0.7nm,0.3s,baz=318,slow=23,SNR=1.7						
NKME	Niksic	4.71	348	*e*Pn	Pn	04 38 43.6	+0.3
NKME				*e*Sn	Sn	04 39 39.4	+1.1
IVA	Berane	4.72	356	*e*Pn	Pn	04 38 43.9	+0.6
IVA				*e*Sn	Sn	04 39 39.9	+1.5
KOME	Kolasin	4.72	353	*e*Pn	Pn	04 38 43.9	+0.5
KOME				*e*Sn	Sn	04 39 39.5	+0.9
NKY	Niksic	4.75	348	*e*Pn	Pn	04 38 44.0	+0.2
NKY				*e*Sn	Sn	04 39 40.4	+1.1
TREB	Trebinje	4.79	343	*e*Pn	Pn	04 38 43.5	-0.7
TREB				*e*Sn	Sn	04 39 38.4	-1.6
BARS	Barje	4.79	14	*e*Pn	Pn	04 38 45.2	+0.9
RZN	Rozhen	4.89	43	*e*P	Pn	04 38 48.5	+2.6
BRY	Bratogost	4.92	345	⇑*i* Pn	Pn	04 38 46.3	+0.1
BRY				*i* Sn	Sn	04 39 43.8	+0.2
VTS	Vitosha	4.99	26	*e*Pn	Pn	04 38 48.3	+1.1
VTS	Vitosha	4.99	26	⇓P	Pn	04 38 49.6	+2.5
VTS				⇑S	Sn	04 39 47.5	+2.3
VTS	Vitosha	4.99	26	*e*P	Pn	04 38 48.2	+1.1
SELS	Selova	5.09	7	*e*Pn	Pn	04 38 49.7	+1.3
SJES	Sjenica	5.10	357	*e*Pn	Pn	04 38 49.9	+1.3
UPM	Unac-Piva	5.15	349	*e*Pn	Pn	04 38 49.4	+0.1
UPM				*e*Sn	Sn	04 39 50.0	+0.8
PLE	Pljevlja	5.21	353	*e*Pn	Pn	04 38 51.3	+1.2
PLE				*e*Sn	Sn	04 39 51.3	+0.7
ZAPS	Zavoj	5.41	18	*e*Pn	Pn	04 38 54.7	+1.9
IVAS	Ivanjica	5.41	359	*e*Pn	Pn	04 38 53.3	+0.4
IVAS				*e*Sn	Sn	04 39 55.0	-0.5
BOVS	Bovan	5.57	11	*e*Pn	Pn	04 38 56.6	+1.6
GRUS	Gruza	5.73	3	*e*Pn	Pn	04 38 58.0	+0.8
GRUS				*e*Sn	Sn	04 40 02.4	-0.9
BBLS	Lazići	5.74	354	*e*Pn	Pn	04 38 58.4	+1.0
ZAGS	Zajecar	5.83	14	*e*Pn	Pn	04 39 00.5	+1.9
DIVS	Divibare	5.94	358	*e*Pn	Pn	04 38 59.9	-0.2
DIVS				*e*Sn	Sn	04 40 05.9	-2.6
TRUS	Trudelj	6.06	1	*e*Pn	Pn	04 39 02.4	+0.7
PLVB	Pleven	6.17	31	⇑P	Pn	04 39 06.1	+3.0
ELND	Elena	6.38	40	⇓P	Pn	04 39 09.0	+2.9
MDVR	Moldovita	6.70	9	⇑P	Pn	04 39 13.0	+2.4
BLY	Banja Luka	6.98	341	⇑P	Pn	04 39 16.2	+1.8
FRGS	Fruska Gora	7.00	357	*e*Pn	Pn	04 39 15.0	+0.4
GZR	Gura Zlata	7.46	14	⇑P	Pn	04 39 23.4	+2.4
BZS	Buzias	7.51	7	P	Pn	04 39 23.6	+1.9
VOIR		8.09	25	⇑P	Pn	04 39 31.8	+2.2
MLR	Muntele Rosu	8.45	28	P	Pn	04 39 37.9	+3.3
	comp=N,0.2nm,0.3s,baz=306,slow=21,SNR=4.6						
MLR	Muntele Rosu	8.45	28	⇑P	Pn	04 39 37.3	+2.7
DOPR	Dopca	8.67	24	P	Pn	04 39 40.0	+2.5
PLOR	Plostina	9.02	30	⇓P	Pn	04 39 45.2	+2.8
VRI	Vrincioaia	9.06	30	⇑P	Pn	04 39 45.2	+2.3
KEST	Kesra	9.09	258	P	Pn	04 39 44.0	+0.5
	comp=N,0.3nm,0.3s,baz=38,slow=8.7,SNR=5.2						
VYHS	Vyhne	10.38	355	*e*PN	Pn	04 40 02.4	+1.4
VYHS				*e*SN	Sn	04 41 43.6	-14
VRAC	Vranov	11.46	348	LR	LR	04 46 06.9	
	comp=N,97nm,18.5s,baz=178,slow=44						
GERES	GERESS Array B	11.70	338	LR	LR	04 46 13.1	
	comp=N,85nm,18.4s,baz=293,slow=44						
KBZ	Khabaz	17.94	65	P	P	04 41 43.9	+1.8
	comp=N,0.1nm,0.3s,baz=279,slow=9.3,SNR=5.2						
GNI	Garni	19.05	76	P	Pn	04 41 56.0	+0.7
	comp=N,1.2nm,0.3s,baz=205,slow=8.6,SNR=3.1						
MDT	Midelt	20.94	263	P	Pn	04 42 16.0	-1.7
	comp=N,1.8nm,0.8s,baz=51,slow=6.5,SNR=3.4						
HFS	Hagfors	22.39	351	P	P	04 42 31.5	+1.1
	comp=N,2.5nm,0.5s,baz=170,slow=9.0,SNR=9.1						
FINES	FINESS Array B	23.59	7	P	P	04 42 42.5	-0.2
	comp=N,1.4nm,0.8s,baz=186,slow=7.7,SNR=8.6						
NOA	NORSAR Array B	23.60	349	LR	LR	04 53 38.9	
	comp=N,34nm,18.8s,baz=350,slow=41						
TORD	Torodi Ar. Bea	29.91	219	P	P	04 43 38.0	-2.3
	comp=N,0.8nm,0.7s,baz=29,slow=9.5,SNR=5.3						
ARCES	ARCESS Array B	31.56	4	P	P	04 43 54.1	-0.3
	comp=N,4.1nm,0.9s,baz=44,slow=7.1,SNR=4.1						
MKAR	Makanchi Array	45.46	58	P	P	04 45 50.5	-1.0
	comp=N,0.8nm,0.5s,baz=281,slow=6.6,SNR=8.2						
ZALV	Zalesovo Beam	45.84	48	P	P	04 45 53.2	-1.0
	comp=N,1.5nm,0.6s,baz=269,slow=9.3,SNR=6.4						
CMAR	Chiang Mai Arr	70.07	82	LR	LR	05 27 21.6	
	comp=N,21nm,18.3s,baz=120,slow=42						

ROM **13** *04:38:16.1±0.1, 42.698N±0.004×13.123E±0.006, h8km, ML3.5/72, Error ellipse: s-maj=0.5km s-min=0.2km az=65.0*

PRU **13** *04:38:18.2±0.0, 42.73N×13.34E, h0km*

LDG **13** *04:38:19.0±0.3, 42.69N×13.13E, h10km, Ml2.9/28, Error ellipse: s-maj=5.0km s-min=4.7km az=80.0*

ISC 13 04:38:16.4±0.8, 42.69N±0.02×13.09E±0.02, h15km±5km, n123, σ1.81/173, 15C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	Leonessa	0.09	205	⇑*i*P	Pg	04 38 19.8	+0.1
LNSS				S	Sg	04 38 22.2	+0.3
LNSS				AML	AML		
	comp=N,89050µm,0.7s						
LNSS				AML	AML		
	comp=E,95300µm,0.2s						
LNSS				AML	AML		
	comp=N,89050µm,0.7s						
LNSS				AML	AML		
	comp=E,95300µm,0.2s						
NRCA	Norcia	0.15	6	⇓*i*P	Pg	04 38 19.6	-0.8
NRCA				S	Sg	04 38 21.8	-1.3
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
SMA1	SAN MARTINO	0.19	107	⇑*i*P	Pg	04 38 20.4	-0.5
SMA1				S	Sg	04 38 23.5	-0.5
SMA1				AML	AML		
	comp=E,45100µm,0.5s						
SMA1				AML	AML		
	comp=N,43100µm,0.3s						
SMA1				AML	AML		
	comp=N,43100µm,0.3s						
SMA1				AML	AML		
	comp=N,43100µm,0.3s						
SMA1				AML	AML		
	comp=E,45100µm,0.5s						
ARRO	Arrone	0.26	246	⇑*i*P	Pg	04 38 22.6	+0.5
ARRO				S	Sb	04 38 28.4	+1.2
ARRO				AML	AML		
	comp=N,8960µm,1.0s						
ARRO				AML	AML		
	comp=E,5955µm,0.9s						
ARRO				AML	AML		
	comp=N,8980µm,1.0s						
ARRO				AML	AML		
	comp=N,8955µm,1.0s						
ARRO				AML	AML		
	comp=E,5950µm,0.9s						
CAMP	Campotosto	0.28	123	⇑*i*P	Pg	04 38 22.0	-0.4
CAMP				S	Sg	04 38 26.0	-0.5
CAMP				AML	AML		
	comp=N,9535µm,0.5s						
CAMP				AML	AML		
	comp=E,7030µm,0.5s						
FEMA	Monte Fema	0.28	353	P	Pg	04 38 22.0	-0.5
FEMA				S	Sg	04 38 26.1	-0.5
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,63500µm,1.4s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,63550µm,1.4s						
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,63500µm,1.4s						
CESI	CESI - Serrava	0.35	337	⇑*i*P	Pg	04 38 23.4	-0.3
CESI				S	Sg	04 38 28.8	+0.2
CESI				AML	AML		
	comp=E,15300µm,0.3s						
CESI				AML	AML		
	comp=N,12400µm,0.4s						
CESI				AML	AML		
	comp=E,15300µm,0.3s						
FDMO	Fiordimonte	0.35	359	⇓*e*P	Pg	04 38 23.1	-0.6

Code	Station	Δ	Az	Phase	ISC	Time	Res
FDMO				S	Sg	04 38 28.2	-0.4
T0104	Madonna delle	0.37	151	P	Pg	04 38 24.0	0.0
T0104				S	Sg	04 38 29.7	+0.5
T0104				AML	AML		
	comp=N,11050µm,0.7s						
T0104				AML	AML		
	comp=N,11035µm,0.7s						
T0104				AML	AML		
	comp=N,11290µm,0.7s						
T0104				AML	AML		
	comp=E,11625µm,0.7s						
T0104				AML	AML		
	comp=E,11750µm,0.7s						
TERO	Teramo	0.38	99	⇑*i*P	Pg	04 38 23.4	-0.8
TERO				S	Sg	04 38 28.8	-0.7
TERO				AML	AML		
	comp=E,11750µm,0.7s						
TERO				AML	AML		
	comp=N,12200µm,0.5s						
TERO				AML	AML		
	comp=N,5045µm,0.6s						
TERO				AML	AML		
	comp=E,11800µm,0.7s						
TERO				AML	AML		
	comp=E,4775µm,0.7s						
TERO				AML	AML		
	comp=N,12250µm,0.5s						
CESX	Cesi	0.39	259	⇑*i*P	Pg	04 38 24.5	+0.3
CESX				S	Sg	04 38 31.4	+1.8
CESX				AML	AML		
	comp=E,6835µm,1.4s						
CESX				AML	AML		
	comp=N,5995µm,0.4s						
AQU	L'Aquila	0.40	145	⇑P	Pg	04 38 24.4	-0.2
AQU				S	Sb	04 38 31.5	+0.2
AQU				AML	AML		
	comp=N,3685µm,0.6s						
AQU				AML	AML		
	comp=E,4665µm,1.1s						
AQU				AML	AML		
	comp=E,4895µm,1.1s						
AQU				AML	AML		
	comp=N,3545µm,0.6s						
AQU				AML	AML		
	comp=N,3680µm,0.6s						
MOMA	Monte Martano	0.40	287	⇑*i*P	Pg	04 38 24.9	+0.2
MOMA				S	Sg	04 38 31.8	+1.6
MOMA				AML	AML		
	comp=N,7610µm,0.4s						
MOMA				AML	AML		
	comp=E,8260µm,0.4s						
MOMA				AML	AML		
	comp=N,7215µm,0.3s						
MOMA				AML	AML		
	comp=E,8195µm,0.2s						
ASSB	Assisi San Ben	0.48	318	⇑*e*P	Pg	04 38 25.7	-0.3
ASSB				S	Sg	04 38 33.3	+0.9
ASSB				AML	AML		
	comp=E,15350µm,0.4s						
ASSB				AML	AML		
	comp=E,17650µm,1.3s						
OFFI	Offida	0.50	60	P	Pg	04 38 26.3	-0.1
OFFI				S	Sb	04 38 34.7	+0.6
OFFI				AML	AML		
	comp=N,26200µm,0.5s						
OFFI				AML	AML		
	comp=N,26200µm,0.5s						
OFFI				AML	AML		
	comp=E,14200µm,0.7s						
SSM1	San Severino M	0.55	6	P	Pg	04 38 26.6	-0.6
SSM1				S	Sg	04 38 34.7	+0.2
GAG1	Gagliole	0.55	358	P	Pg	04 38 27.0	-0.3
GAG1				S	Sg	04 38 35.1	+0.3
GAG1				AML	AML		
	comp=E,15150µm,0.3s						
GAG1				AML	AML		
	comp=N,16000µm,0.4s						
GAG1				AML	AML		
	comp=N,16000µm,0.4s						
GAG1				AML	AML		
	comp=E,15200µm,0.3s						
FAGN	Fagnano	0.55	139	⇑*i*P	Pg	04 38 26.8	-0.6
FAGN				S	Sg	04 38 35.4	+0.6
FAGN				AML	AML		
	comp=N,7510µm,0.4s						
FAGN				AML	AML		
	comp=E,10470µm,0.5s						
MTL1	Matelica	0.57	354	P	Pg	04 38 27.4	-0.4
MTL1				AML	AML		
	comp=E,14050µm,0.6s						
MTL1				AML	AML		
	comp=N,15050µm,0.6s						
MTL1				AML	AML		
	comp=N,15050µm,0.6s						
MTL1				AML	AML		
	comp=E,14000µm,0.6s						
SNTG	Esanatoglia	0.58	349	P	Pg	04 38 27.4	-0.5
SNTG				S	Sg	04 38 36.1	+0.5
SNTG				AML	AML		
	comp=E,580µm,0.5s						
SNTG				AML	AML		
	comp=N,708µm,0.2s						
SNTG				AML	AML		
	comp=N,5380µm,0.2s						
SNTG				AML	AML		
	comp=E,4845µm,0.6s						
SNTG				AML	AML		
	comp=E,579µm,0.5s						
ATCC	AVT- Casa Cast	0.60	326	⇑*e*P	Pg	04 38 27.9	-0.4
ATCC				S	Sg	04 38 37.1	+0.9
ATCC				AML	AML		
	comp=N,10090µm,0.6s						
ATCC				AML	AML		
	comp=E,7650µm,1.4s						
ATCC				AML	AML		
	comp=N,10075µm,0.6s						
TRTR	Tortoreto Alta	0.62	78	P	Pb	04 38 28.7	-0.2
TRTR				AML	AML		
	comp=N,10575µm,0.3s						
TRTR				AML	AML		
	comp=E,10135µm,0.5s						
VCEL	Villa Celiera	0.62	117	P	Pg	04 38 28.1	-0.6
VCEL				S	Sb	04 38 38.5	+0.8
VCEL				AML	AML		
	comp=E,7400µm,1.5s						
VCEL				AML	AML		
	comp=N,7090µm,0.5s						
VCEL				AML	AML		
	comp=N,7085µm,0.5s						
VCEL				AML	AML		
	comp=E,7435µm,1.5s						
EL6	Elcito	0.64	1	P	Pg	04 38 28.4	-0.7
EL6				S	Sg	04 38 38.0	+0.3
EL6				AML	AML		
	comp=N,10200µm,0.2s						
EL6				AML	AML		
	comp=N,10205µm,0.2s						
EL6				AML	AML		
	comp=E,7980µm,0.2s						
FOSV	Fossato di Vic	0.66	338	P	Pg	04 38 28.5	-0.8
FOSV				S	Sg	04 38 38.4	+0.3
FOSV				AML	AML		
	comp=E,3575µm,0.7s						
FOSV				AML	AML		
	comp=N,4520µm,0.5s						
FOSV				AML	AML		
	comp=E,3570µm,0.7s						
FOSV				AML	AML		
	comp=N,4525µm,0.5s						
CING	Cingoli	0.69	6	P	Pg	04 38 29.1	-0.9
CING				S	Sb	04 38 39.7	0.0
CING				AML	AML		
	comp=N,3800µm,0.8s						
CING				AML	AML		
	comp=E,3715µm,0.5s						
PTQR	Pietraquaria	0.70	161	P	Pg	04 38 29.7	-0.4
PTQR				AML	AML		
	comp=E,1063µm,1.2s						
PTQR				AML	AML		
	comp=E,893µm,1.0s						
PTQR				AML	AML		
	comp=E,1068µm,1.2s						
CADA	Capodarco di F	0.71	44	P	Pb	04 38 30.6	+0.1
CADA				AML	AML		
	comp=E,13950µm,0.5s						
CADA				AML	AML		

comp=N,13500µm,0.5s
MTCE Montecelio 0.71 202 P Pg 04 38 30.0 -0.3
MTCE AML AML
comp=N,1385µm,1.2s
MTCE AML AML
comp=E,1615µm,0.4s
MURB Monte Urbino 0.71 324 P Pg 04 38 29.9 -0.5
MURB AML AML
comp=E,13750µm,0.3s
MURB AML AML
comp=N,14550µm,0.4s
MURB AML AML
comp=E,13800µm,0.3s
CERT Cerreto 0.74 186 P Pg 04 38 30.6 -0.3
CERT AML AML
comp=E,2275µm,0.5s
CERT AML AML
comp=N,2250µm,0.6s
ATTE AVT- Monte Tez 0.75 314 P Pg 04 38 30.6 -0.4
ATTE AML AML
comp=N,2030µm,0.8s
ATTE AML AML
comp=E,2285µm,0.8s
ATTE AML AML
comp=N,2035µm,0.8s
MGAB Montegabbione 0.76 288 P Pg 04 38 31.1 0.0
MGAB AML AML
comp=N,4920µm,1.0s
MGAB AML AML
comp=N,5520µm,0.5s
MGAB AML AML
comp=E,6635µm,0.8s
MGAB AML AML
comp=E,6545µm,0.8s
ATFO Monte Foce - G 0.78 331 P Pg 04 38 31.2 -0.4
ATFO AML AML
comp=N,2565µm,0.6s
ATFO AML AML
comp=E,3570µm,0.4s
SSFR Montelago di S 0.79 343 P Pg 04 38 30.9 -0.8
SSFR S Sb 04 38 43.1 +0.8
SSFR AML AML
comp=E,8030µm,0.2s
SSFR AML AML
comp=E,8190µm,0.8s
SSFR AML AML
comp=N,7015µm,0.2s
SSFR AML AML
comp=N,7305µm,0.2s
PP3 Marolino 0.79 28 P Pg 04 38 31.6 -0.1
PP3 S Sn 04 38 44.0 -0.5
PP3 AML AML
comp=E,10140µm,1.2s
PP3 AML AML
comp=N,10700µm,0.5s
PP3 AML AML
comp=E,10380µm,1.2s
PP3 AML AML
comp=N,10650µm,0.5s
PP3 AML AML
comp=N,9465µm,0.4s
PP3 AML AML
comp=E,10375µm,1.2s
PP3 AML AML
comp=E,10160µm,1.2s
ARVD Arcevia 0.82 352 P Pg 04 38 31.6 -0.8
ARVD S Sb 04 38 43.6 +0.4
ARVD AML AML
comp=N,1560µm,0.5s
ARVD AML AML
comp=E,2420µm,0.2s
ATVO AVT- Monte Val 0.86 324 P Pb 04 38 32.2 -0.9
ATVO S Sg 04 38 44.6 +0.1
ATVO AML AML
comp=E,2225µm,0.5s
ATVO AML AML
comp=N,2020µm,1.0s
ATVO AML AML
comp=E,2220µm,0.5s
FRON Frontone 0.88 342 P Pb 04 38 32.5 -0.9
FRON S Sg 04 38 45.4 +0.5
FRON AML AML
comp=E,1690µm,1.0s
FRON AML AML
comp=N,2755µm,0.6s
SACS San Casciano d 0.89 281 P Pb 04 38 33.7 +0.1
SACS AML AML
comp=E,1835µm,1.0s
SACS AML AML
comp=N,1170µm,1.6s
SACS AML AML
comp=N,1105µm,1.6s
SACS AML AML
comp=E,1765µm,1.0s
INTR Introdacqua 0.90 138 P Pb 04 38 32.4 -1.4
INTR AML AML
comp=N,4805µm,0.7s
INTR AML AML
comp=E,3230µm,0.6s
VVLD Villa Vallelon 0.90 154 P Pb 04 38 33.7 -0.1
VVLD AML AML
comp=N,1250µm,0.6s
VVLD AML AML
comp=E,1230µm,1.1s
ATPI Pietralunga - 0.92 327 P Pb 04 38 33.4 -0.7
ATPI AML AML
comp=E,2475µm,1.1s
ATPI AML AML
comp=N,1795µm,0.6s
ATPI AML AML
comp=E,2470µm,1.1s
ATPI AML AML
comp=N,1800µm,0.6s
RMP Rome, Mte Porz 0.92 199 P Pb 04 38 34.6 +0.5
RMP AML AML
comp=E,2205µm,0.8s
RMP AML AML
comp=N,2030µm,0.7s
AOI Ancona 0.94 23 P Pb 04 38 34.0 -0.5
AOI AML AML
comp=E,1900µm,0.2s
AOI AML AML
comp=N,2150µm,0.2s
COR1 Corinaldo 0.95 356 P Pb 04 38 34.7 +0.1
COR1 AML AML
comp=N,4520µm,1.0s
COR1 AML AML
comp=E,2116µm,0.4s
MPAG Monte Paganucc 0.97 346 P Pb 04 38 34.4 -0.7
MPAG S Sn 04 38 49.6 +0.3
MPAG AML AML
comp=E,2210µm,0.4s
MPAG AML AML
comp=N,1645µm,0.3s
MPAG AML AML
comp=E,2105µm,0.4s
MPAG AML AML
comp=N,1605µm,0.3s
MPAG AML AML
comp=N,1610µm,0.3s
NARO Abbazia di Nar 1.00 338 P Pb 04 38 34.8 -0.6
NARO AML AML
comp=E,1095µm,0.6s
NARO AML AML
comp=N,996µm,1.2s
LPEL Lama dei Pelig 1.03 128 P Pb 04 38 35.0 -1.0
LPEL AML AML
comp=N,1745µm,0.5s
LPEL AML AML
comp=E,1610µm,0.8s
BADI Badiali 1.03 323 P Pb 04 38 35.8 -0.2
BADI AML AML
comp=E,1350µm,0.4s
BADI AML AML
comp=N,1550µm,0.4s
FSSB Fossombrone 1.03 347 P Pb 04 38 35.5 -0.5
FSSB AML AML
comp=E,5045µm,0.4s
FSSB AML AML
comp=N,6850µm,0.3s
FSSB AML AML
comp=E,5050µm,0.4s
FSSB AML AML
comp=N,6855µm,0.3s
CAFR Castel Frentan 1.03 116 P Pb 04 38 35.4 -0.7
CAFR AML AML
comp=E,3745µm,0.5s
CAFR AML AML
comp=N,3730µm,1.2s
CAFI Castiglion Fio 1.05 308 P Pb 04 38 36.3 0.0
CAFI AML AML
comp=E,1780µm,0.6s
CAFI AML AML
comp=E,1500µm,0.6s
MCIV Monte Civitell 1.05 276 P Pb 04 38 36.8 +0.5
LAV9 Lanuvio 1.05 196 AML AML
comp=N,2910µm,0.5s
LAV9 AML AML
comp=E,2230µm,0.9s
LAV9 AML AML
comp=N,2810µm,0.5s
LAV9 AML AML
comp=E,2235µm,0.9s
PE3 Peglio 1.10 337 P Pb 04 38 37.0 -0.2
PE3 AML AML
comp=N,3810µm,0.5s
PE3 AML AML
comp=E,3785µm,0.7s
GIUL Giuliano Di Ro 1.13 174 P Pn 04 38 38.6 +0.9
GIUL AML AML
comp=E,548µm,0.8s
GIUL AML AML
comp=N,788µm,0.8s
SSP9 Sansepolcro 1.13 322 P Pb 04 38 38.0 +0.3
SSP9 AML AML
comp=N,1730µm,1.6s
SSP9 AML AML
comp=E,1006µm,1.2s
PARC Parchiule 1.15 327 P Pn 04 38 37.9 -0.1
PARC AML AML
comp=E,1225µm,0.9s
PARC AML AML
comp=N,1380µm,0.6s
CPGN Carpegna, Ital 1.25 333 P Pg 04 38 40.8 +0.2
CPGN AML AML
comp=N,1575µm,0.7s
CPGN AML AML
comp=E,1515µm,1.0s
CPGN AML AML
comp=E,1475µm,1.1s
CPGN AML AML
comp=N,1550µm,0.7s
CRE Caprese Michel 1.25 319 P Pn 04 38 39.9 +0.4
CRE AML AML
comp=E,713µm,0.6s
CRE AML AML
comp=N,1125µm,0.4s
PESA Pesaro 1.27 352 P Pg 04 38 40.9 0.0
PESA AML AML
comp=N,1810µm,0.4s
PESA AML AML
comp=E,2495µm,0.3s
CERA Filignano 1.29 147 AML AML
comp=E,870µm,0.6s
CERA AML AML
comp=N,1054µm,0.8s
CERA AML AML
comp=E,866µm,0.7s
CERA AML AML
comp=N,1032µm,0.8s
MIDA Miranda 1.35 140 P Pn 04 38 40.2 -0.7
MIDA AML AML
comp=N,784µm,1.6s
MIDA AML AML
comp=N,666µm,0.7s
MIDA AML AML
comp=E,870µm,1.3s
MIDA AML AML
comp=E,863µm,1.3s
TRIV Trivento 1.42 130 P Pb 04 38 43.2 +0.6
TRIV AML AML
comp=N,1040µm,0.8s
TRIV AML AML
comp=E,1115µm,1.2s
MAON Monte Argentar 1.47 261 ⇑P Pn 04 38 43.1 +0.7
MAON AML AML
comp=E,281µm,0.5s
MAON AML AML
comp=N,220µm,0.7s
FROS Frosini 1.52 291 P Pn 04 38 43.9 +0.9
CSNT Castellina Chi 1.54 301 P Pn 04 38 44.1 +0.8
CSNT AML AML
comp=E,320µm,1.0s
CSNT AML AML
comp=N,413µm,0.6s
CASP Castiglione de 1.65 274 ⇑P Pn 04 38 45.5 +0.7
CASP AML AML
comp=N,103µm,1.3s
CASP AML AML
comp=E,127µm,1.6s
TRIF Trifonti 1.67 286 ⇑P Pn 04 38 46.1 +1.0
MELA Melanico ??? S 1.80 122 AML AML
comp=N,1405µm,0.8s
MELA AML AML
comp=E,1036µm,0.7s
MELA AML AML
comp=E,1048µm,0.7s
MELA AML AML
comp=N,1405µm,0.8s
PGF Pioggiola 3.02 269 *e*Pn Pn 04 39 05.7 +1.8
PGF *e*Sn Sn 04 39 39.8 -0.1
comp=N,3.1nm,0.2s
LJU Ljubljana 3.51 17 AML AML
comp=N,336µm,0.6s
LJU AML AML
comp=E,229µm,0.6s
NOCI Noci 3.52 121 AML AML
comp=N,472µm,1.6s
NOCI AML AML
comp=E,365µm,1.2s
MAGA Magasa 3.56 331 AML AML
comp=N,294µm,1.6s
MAGA AML AML
comp=E,473µm,0.6s
STAL STALIGIAL 3.58 356 AML AML
comp=N,146µm,1.4s
STAL AML AML
comp=E,198µm,0.3s
PTCC Patocco-Chiusa 3.72 3 AML AML
comp=N,71µm,0.6s
PTCC AML AML
comp=E,73µm,0.4s
ACOM Acomizza, Ital 3.87 4 AML AML
comp=E,147µm,0.9s
ACOM AML AML
comp=N,137µm,0.5s
OBKA Obir 3.96 15 *i* Pn Pn 04 39 17.9 +1.2
comp=N,1.0nm,0.2s
OBKA *i* Sn Sn 04 40 07.0 +4.0
comp=N,14nm,0.3s
MYKA Terra Mystica 3.96 5 *i* Pn Pn 04 39 19.8 +3.0
comp=N,2.7nm,0.2s
MYKA *i* Sn Sn 04 40 05.5 +2.5
comp=N,7.5nm,0.3s
ABTA Abfaltersbach 4.08 354 Pn Pn 04 39 20.6 +2.3
comp=N,5.7nm,0.4s,SNR=7.0
SOKA Soboth 4.22 18 *i* Pn Pn 04 39 22.1 +1.8
comp=N,1.4nm,0.2s
SBF Sospel 4.30 288 *e*Pn Pn 04 39 22.9 +1.6
SBF *e*Sn Sn 04 40 10.5 -0.7
comp=N,21nm,0.6s
KBA Koelnbreinsper 4.40 2 Pn Pn 04 39 24.7 +2.0
comp=N,6.2nm,0.3s,SNR=19
FETA Feichten 4.65 340 *i* Pn Pn 04 39 29.1 +2.9
comp=N,2.8nm,0.5s
FETA *i* Sn Sn 04 40 23.0 +3.0
comp=N,7.4nm,0.6s
WTTA Wattenberg 4.69 348 *i* Pn Pn 04 39 30.3 +3.5
comp=N,5.9nm,0.4s
SQTA Sankt Quirin 4.73 344 *i* Pn Pn 04 39 31.0 +3.8
comp=N,3.0nm,0.2s,SNR=5.6
SQTA *i* Sn Sn 04 40 25.0 +3.2
comp=N,21nm,0.5s
WATA Walderalm 4.77 348 *i* Pn Pn 04 39 31.5 +3.6
comp=N,1.7nm,0.2s
FRF La Foret Royal 4.80 283 *e*Pn Pn 04 39 29.3 +1.2
FRF *e*Sn Sn 04 40 22.9 -0.6
comp=N,2.5nm,0.3s
MOTA Moosalm 4.87 344 *i* Pn Pn 04 39 33.4 +4.2
comp=N,1.4nm,0.3s
LMR La Mourre 4.87 280 *e*Pn Pn 04 39 30.1 +1.0
LMR *e*Sn Sn 04 40 24.4 -0.8
comp=N,1.7nm,0.3s
ARSA Arzberg 4.88 20 *i* Pn Pn 04 39 32.3 +3.0
comp=N,2.0nm,0.3s
MBDF Montbardon 5.02 296 *e*Pn Pn 04 39 33.3 +2.0
MBDF *e*Sn Sn 04 40 27.2 -1.8
comp=N,2.2nm,0.3s
RETA Reutte 5.08 342 *i* Pn Pn 04 39 35.6 +3.6
comp=N,1.4nm,0.2s
DAVA Damuels 5.13 335 *i* Pn Pn 04 39 37.0 +4.1
comp=N,1.5nm,0.3s
MOA Molln 5.23 9 *e*Pn Pn 04 39 35.9 +1.8
comp=N,5.3nm,0.4s
LPG La Plagne 5.36 304 *e*Pn Pn 04 39 37.9 +1.8
LPG *e*Sn Sn 04 40 35.8 -2.0
comp=N,2.4nm,0.3s
CONA Conrad Observa 5.59 19 *i* Pn Pn 04 39 40.5 +1.4
comp=N,3.1nm,0.4s,SNR=4.7
SMRF Simiane la Rot 5.63 286 *e*Pn Pn 04 39 41.3 +1.7
SMRF *e*Sn Sn 04 40 42.4 -1.7
comp=N,0.3nm,0.1s
ORIF Oris-en-Rattie 5.68 296 *e*Pn Pn 04 39 42.1 +1.8
ORIF Oris-en-Rattie 5.68 296 *e*P Pn 04 39 45.7 +5.4
ORIF *e*Sn Sn 04 40 43.7 -1.5
comp=N,4.5nm,0.5s
CABF La Chapelle 6.35 311 *e*Pn Pn 04 39 50.2 +0.6
CABF *e*Sn Sn 04 40 59.6 -2.3
comp=N,1.0nm,0.3s
KHC Kasperske Hory 6.46 3 *e*PN Pn 04 39 51.9 +1.0
KHC *e*SN Sn 04 41 04.1 -0.2
VIVF Saint-Julien-l 6.47 292 *e*Pn Pn 04 39 52.9 +1.8
VIVF *e*Sn Sn 04 41 01.3 -3.4
comp=N,0.5nm,0.2s
HINF Hinteralfeld 6.76 322 *e*Pn Pn 04 39 56.4 +1.3
HINF *e*Sn Sn 04 41 09.4 -2.4
comp=N,3.1nm,0.3s
LASF Ste Croix 6.87 285 *e*Pn Pn 04 39 57.7 +1.1
LASF *e*Sn Sn 04 41 11.4 -3.2
comp=N,0.3nm,0.3s
CDF Champ du Feu 7.03 327 *e*Pn Pn 04 39 59.5 +0.6
CDF *e*Sn Sn 04 41 15.4 -3.2
comp=N,5.8nm,0.4s
HAU Haudompre 7.13 321 *e*Pn Pn 04 40 00.7 +0.5
HAU *e*Sn Sn 04 41 17.5 -3.4
comp=N,8.8nm,0.4s
GOPC GO Pecny, Ondr 7.33 9 *e*SN Sn 04 41 24.3 -1.3
PRU Pruhonice 7.37 7 *e*SN Sn 04 41 25.9 -0.9
NKC Novy Kostel 7.56 357 *e*SN Sn 04 41 31.3 -0.2
SMF Signal de Mont 7.69 304 *e*Pn Pn 04 40 08.9 +1.1
SMF *e*Sn Sn 04 41 31.4 -3.3
comp=N,0.8nm,0.3s
PAGF Fort de Pagny 7.82 321 *e*Pn Pn 04 40 11.2 +1.7
PAGF *e*Sn Sn 04 41 33.4 -4.3
comp=N,2.0nm,0.3s
LOR Lormes 7.99 308 *e*Pn Pn 04 40 13.6 +1.7
baz=126
LOR *e*Sn Sn 04 41 38.4 -3.6
comp=N,1.6nm,0.3s
AVF Avril sur Loir 8.06 304 *e*Pn Pn 04 40 14.0 +1.2
AVF *e*Sn Sn 04 41 39.4 -4.2
comp=N,0.8nm,0.4s
SSF Saint Saulge 8.09 306 *e*Pn Pn 04 40 13.8 +0.5
SSF *e*Sn Sn 04 41 40.5 -4.0
comp=N,1.6nm,0.4s
MEZF Maizieres J'vi 8.10 319 *e*Pn Pn 04 40 14.1 +0.7
baz=146
MEZF *e*Sn Sn 04 41 40.5 -4.1
comp=N,4.3nm,0.4s
BGF Bois d'Agland 8.27 301 *e*P Pn 04 40 22.4 +6.6
BGF *e*Sn Sn 04 41 45.9 -3.0
comp=N,1.6nm,0.3s
CAF Calviac 8.29 289 *e*Pn Pn 04 40 17.8 +1.8
CAF *e*Sn Sn 04 41 46.1 -3.2
comp=N,0.3nm,0.2s
HYF Humbligny 8.71 305 *e*Pn Pn 04 40 23.3 +1.5
HYF *e*Sn Sn 04 41 55.2 -4.5
LDF La Druitiere 10.97 307 *e*Pn Pn 04 40 53.7 +0.9
LDF *e*Sn Sn 04 42 50.0 -5.1
comp=N,0.9nm,0.3s
FLN La Foliniere 11.26 307 *e*Pn Pn 04 40 58.2 +1.5
FLN *e*Sn Sn 04 42 56.9 -5.3
comp=N,0.3nm,0.1s
GRR Gorron 11.32 305 *e*Pn Pn 04 40 57.4 -0.1
GRR *e*Sn Sn 04 42 57.3 -6.3
comp=N,0.5nm,0.1s

IDC 13 04:51:02.7±1.4**, 31°.58N×104°.33E, h0^{km}, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.3**/50**, mbtmp3.5**/4**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.6**/31**, Error ellipse: s-maj=201.9km s-min=22.9km az=55.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNU	Nakatsue	22.47	79	LR	LR	05 04 59.7	
	comp=Z,53nm,18.2s,baz=58,slow=37						
MKAR	Makanchi Array	22.75	318	P	P	04 56 06.5	0.0
	0.8nm,1.0s,baz=127,slow=9.3,SNR=6.2						
TGY	Tagaytay City	23.12	135	LR	LR	05 04 23.3	
	comp=Z,113nm,18.9s,baz=54,slow=35						
ZALV	Zalesovo Beam	26.38	334	P	P	04 56 40.9	+0.4
	0.9nm,0.6s,baz=134,slow=11,SNR=5.0						
KURBB	Kurchatov Arra	26.98	322	P	P	04 56 45.6	-0.3
	0.5nm,0.9s,baz=130,slow=8.9,SNR=6.0						
WRA	Warramunga Arr	58.76	147	P	P	05 01 02.7	0.0
	0.2nm,0.3s,baz=335,slow=8.1,SNR=10.0						

MAN 13 04:52:51.1, 9°.85N×123°.04E, h5^{km}, mb4.6, ML3.4, MS3.3, 2C-4D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	Sibulan	0.54	159	⇓*i*P	Pg	04 53 01.7	+0.3
SNPH				*i* S	Sg	04 53 09.4	+0.9
TBP	Tagbilaran	0.83	101	⇑*i*P	Pg	04 53 05.9	-1.1
TBP				*i* S	Sg	04 53 17.6	-0.2
GUIM	Jordan	0.89	330	*e*P	Pb	04 53 08.9	-0.2
GUIM				*e*S	Sn	04 53 23.0	-0.7
LLP	Lapu-Lapu	1.03	63	⇓*e*P	Pg	04 53 09.6	-1.3
LLP				*e*S	Sg	04 53 22.9	-1.3
DCPH	Dipolog City	1.29	166	*e*P	Pn	04 53 13.9	-1.9
RCP	Roxas	1.73	350	⇓*e*P	Pb	04 53 23.0	-0.3
RCP				*e*S	Sg	04 53 48.3	+1.6
MSLP	Maasin	1.81	81	*e*P	Pn	04 53 23.2	+0.2
MSLP				*e*S	Sn	04 53 46.8	+0.3
OCLP	Ormoc	1.95	52	*e*P	Pn	04 53 24.9	0.0
OCLP				*e*S	Sb	04 53 51.3	-0.7
PAGZ	Pagadian	2.01	170	*e*P	Pn	04 53 26.5	+0.7
PAGZ				*e*S	Sb	04 53 52.8	-0.8
CGP	Cagayan de Oro	2.14	130	⇑*e*P	Pn	04 53 26.4	-1.2
CGP				*e*S	Sg	04 54 01.2	+1.2
CUYO	Cuyo Island	2.23	297	*e*P	Pn	04 53 29.0	+0.3
CUYO				*e*S	Sn	04 53 57.2	+0.6
BUKP	Musuan	2.80	134	*e*P	Pn	04 53 37.3	+0.7
BUKP				*e*S	Sn	04 54 12.8	+2.1
CTBH	Cotabato--PC H	2.87	155	⇓*i*P	Pn	04 53 38.6	+1.1

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*TEH **13** 05:12:55.9, 26°.63N×57°.87E, h14^{km}, ML3.3*
*OMAN **13** 05:13:01.6±2.9, 26°.43N×57°.49E, h14^{km}±90^{km}, ml2.6/6, Error ellipse: s-maj=107.6km s-min=5.7km az=350.0*
ISC 13 05:12:56.7±1.0**, 26°.65N**±0°.03×**57°.75E**±0°.06**, h10^{km}, n24, σ1.66**/31**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSK1	Jask	1.01	179	*e*Pg	Pg	05 13 14.7	-1.3
NIAN	Nian	1.22	318	*e*Pg	Pg	05 13 20.9	+0.8
NIAN				*e*		05 13 42.5	
KHNJ	Kahnooj	1.29	358	*e*Pg	Pn	05 13 20.2	-0.7
SHME	Shamm	1.56	248	*e*Pn	Pg	05 13 27.2	+0.6
GENO	Geno	1.59	298	*e*Pn	Pg	05 13 27.5	+0.3
GENO				*e*Sg	Sg	05 13 50.7	+2.8
GENO				*e*		05 13 55.5	
MDH	Madha	1.87	224	P	Pn	05 13 28.8	+0.1
MDH	Madha	1.87	224	*e*Pn	Pn	05 13 28.4	-0.4
MSFE	Esma-Masafi	1.92	228	*e*Pn	Pn	05 13 30.3	+0.8
UOSS	Minazif	2.19	220	P	Pn	05 13 33.5	+0.3
UOSS	Minazif	2.19	220	*e*Pn	Pn	05 13 33.8	+0.6
HATD	Hatta, Dubai	2.33	219	P	Pn	05 13 35.5	+0.5
HATD				S	Sn	05 14 02.4	-1.3
HATD	Hatta, Dubai	2.33	219	*e*Pn	Pn	05 13 35.3	+0.3
ASHO	Ashiyiah	2.48	218	P	Pn	05 13 36.1	-1.0
ASHO				S	Sn	05 14 05.0	-2.5
ASHO	Ashiyiah	2.48	218	*e*Pn	Pn	05 13 38.3	+1.1
SOHO	SOHO	2.73	204	P	Pn	05 13 40.2	-0.4

SOHO				S	Sn	05 14 12.1	-1.6
HOQ	**Hoqain**	**3.08**	**187**	P	**Pn**	**05 13 47.9**	**+2.5**
HOQ				S	Sn	05 14 23.6	+1.3
BIDO	**Bidbid**	**3.13**	**174**	P	**Pn**	**05 13 47.6**	**+1.5**
BIDO				S	Sn	05 14 25.9	+2.3
CHMN	**Cheshme madani**	**3.21**	**357**	eP	**Pb**	**05 13 52.1**	**-1.8**
CHMN				e		05 14 54.4	
TVBK	**TV Kerman**	**3.44**	**346**	eP	**Pb**	**05 13 54.7**	**-3.2**
TVBK				e		05 13 59.1	
WSAR	**Wadi Sarin**	**3.49**	**166**	P	**Pn**	**05 13 53.9**	**+2.9**
SMDO	**Samad**	**3.58**	**176**	P	**Pn**	**05 13 55.4**	**+3.0**
SMDO				S	Sn	05 14 35.4	+0.5
KHGB	**Koh Gabri**	**3.88**	**344**	ePn	**Pn**	**05 13 58.1**	**+1.5**
KHGB				e		05 15 09.0	
IKOO	**Kooshah**	**5.86**	**10**	ePn	**Pn**	**05 14 25.3**	**+1.4**
KLNJ	**Kolanjah**	**6.93**	**310**	ePn	**Pn**	**05 14 39.5**	**+0.9**

*NNC **13** 05:16:11.8±2.0, 53.76N×90.65E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=15.8km s-min=10.8km az=62.0, Suspected Mining explosion.*

ASRS 13 05:16:06.0, 53.76N×91.07E, M2.4, 5C-4D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.71**	**275**	⇓Pg	Pb	05 17 14.1	+1.8
	3.6nm,0.8s						
ZAA0				⇑Lg	Lg	05 18 02.8	
	15nm,0.8s						
KURBB	**Kurchatov Arra**	**8.32**	**253**	⇓Pn	Pn	05 18 11.6	+3.9
	4.8nm,0.6s						
KURBB				⇓Sn	Sn	05 19 43.1	+0.8
	41nm,0.7s						
KURBB				⇓Lg	Lg	05 20 28.8	
	78nm,0.8s						
MK31	**Makanchi Array**	**8.95**	**222**	Pn	Pn	05 18 19.3	+2.8
	1.5nm,0.7s,baz=33,slow=11,SNR=14						
MK31				⇑Sn	Sn	05 20 01.0	+3.1
	7.2nm,0.9s,baz=40,slow=23,SNR=4.5						
MK31				Lg	Lg	05 20 50.2	
	19nm,1.0s,baz=53,slow=35,SNR=5.8						
MAKZ	**Makanchi**	**9.06**	**224**	⇑Pn	Pn	05 18 21.8	+3.7
	2.1nm,0.8s						
MAKZ				⇑Sn	Sn	05 20 03.1	+2.4
	4.6nm,0.7s						
MAKZ				⇑Lg	Lg	05 20 54.5	
	15nm,0.9s						

IDC 13 05:19:23.5±1.8, 16.62S×178.24W, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.7/27, mbtmp3.7/5, Error ellipse: s-maj=111.0km s-min=26.5km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.40**	**240**	P	P	05 26 54.9	-0.3
	1.1nm,0.4s,baz=83,slow=9.4,SNR=5.3						
WRA	**Warramunga Arr**	**45.04**	**258**	P	P	05 27 41.5	+0.1
	0.1nm,0.3s,baz=92,slow=7.6,SNR=1.1						
ASAR	**Alice Springs**	**45.31**	**253**	P	P	05 27 43.5	-0.1
	1.7nm,0.6s,baz=88,slow=8.5,SNR=22						
ILAR	**Eielson Array**	**84.60**	**13**	P	P	05 31 58.1	-0.3
	0.2nm,0.4s,baz=224,slow=4.6,SNR=4.3						
TXAR	**Lajitas Array**	**85.17**	**58**	P	P	05 32 02.4	+0.2
	0.3nm,0.7s,baz=220,slow=6.6,SNR=4.8						

IDC 13 05:43:26.2±1.4, 1.57N×121.76E, h0km, mb4.0/4, mb1 4.0/4, mb1mx3.6/42, mbtmp4.0/4, Error ellipse: s-maj=77.0km s-min=24.3km az=68.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.69**	**151**	P	P	05 48 49.1	0.0
	0.5nm,0.5s,baz=332,slow=7.5,SNR=13						
USRK	**Ussuriysk Ar.**	**43.41**	**11**	P	P	05 51 29.9	-0.6
	1.9nm,0.5s,baz=196,slow=5.6,SNR=9.8						
SONM	**Songino Array**	**47.97**	**346**	P	P	05 52 07.2	+0.4
	1.4nm,0.6s,baz=164,slow=8.9,SNR=15						
MKAR	**Makanchi Array**	**56.63**	**328**	P	P	05 53 10.9	-0.2
	1.5nm,0.4s,baz=124,slow=8.8,SNR=37						

*IDC **13** 05:54:07.3±0.6, 60.52S×27.21W, h0km, mb4.6/9, mb1 4.5/10, mb1mx4.4/17, mbtmp4.6/10, ML4.7/1, MS3.7/13, Ms1 3.7/13, ms1mx3.6/22, Error ellipse: s-maj=27.7km s-min=17.9km az=38.0*

*NEIC **13** 05:54:15.5±1.8, 60.3S±0.1×26.8W±0.2, h56km±8km, mb4.7/24, Error ellipse: s-maj=19.9km s-min=8.8km az=210.0*

ISC 13 05:54:10.2±0.4, 60.44S±0.08×26.7W±0.1, h19km, n107, σ1.88/92, mb4.8/16, MS3.8/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**8.12**	**315**		Pn	05 55 54.5	-12
VNA1	**Neumayer--Stat**	**12.70**	**151**	P	**Pn**	**05 57 08.9**	**-0.6**
VNA1				S	**Sn**	**05 59 22.2**	**-8.0**
VNA3	**Neumayer Olymp**	**12.82**	**155**	P	**Pn**	**05 57 09.2**	**-1.9**
VNA3				S	Sn	05 59 20.0	-13
VNA2	**Neumayer--Watz**	**13.10**	**151**	P	**Pn**	**05 57 13.9**	**-1.1**
	baz=312,slow=16						
VNA2				S	Sn	05 59 28.0	-12
	baz=302,slow=23						
SNAA	**Sanae**	**14.70**	**150**	P	**Pn**	**05 57 35.4**	**-1.5**
SNAA	**Sanae**	**14.70**	**150**	Pn	**Pn**	**05 57 35.5**	**-1.4**
	3.6nm,0.3s,baz=309,slow=13,SNR=81						
SNAA				Sn	Sn	06 00 03.1	-16
	0.8nm,0.3s,baz=207,slow=16,SNR=4.7						
SNAA				LR	LR	06 02 16.8	
	comp=Z,352nm,18.4s,baz=306,slow=33						
SNAA	**Sanae**	**14.70**	**150**		**Pn**	**05 57 35.7**	**-1.2**
PMSA	**Palmer Station**	**17.53**	**240**	LR	LR	06 03 21.0	
	comp=Z,92nm,20.0s,baz=134,slow=32						
PMSA	**Palmer Station**	**17.53**	**240**		**P**	**05 58 19.1**	**+5.0**
USHA	**Ushuaia**	**22.71**	**266**	LR	LR	06 05 58.2	
	comp=Z,198nm,21.1s,baz=82,slow=32						
H09N1	**TRISTAN DA CUN**	**25.13**	**28**	T	T	06 26 41.0	
	SNR=17						
QSPA	**South Pole Qui**	**29.80**	**180**	LR	LR	06 11 54.9	
	comp=Z,241nm,19.3s,baz=198,slow=36						
QSPA	**South Pole Qui**	**29.80**	**180**	P	**P**	**06 00 18.5**	**+3.0**
QSPA				IAmb	IAmb	06 00 28.9	
	comp=Z,20nm,1.2s						
PLCA	**Paso Flores**	**33.25**	**286**	P	**P**	**06 00 44.9**	**-1.1**
	comp=Z,2.3nm,0.6s,baz=174,slow=7.3,SNR=16						
PLCA				PcP	**PcP**	**06 03 26.9**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=153,slow=6.7,SNR=3.5						
PLCA				LR	LR	06 14 04.6	
	comp=Z,129nm,18.7s,baz=182,slow=36						
PLCA	**Paso Flores**	**33.25**	**286**	P	**P**	**06 00 44.9**	**-1.1**
PLTB	**Pedras Altas**	**33.73**	**316**	eP	**P**	**06 00 50.3**	**+0.1**
MAW	**Mawson**	**36.54**	**140**	P	**P**	**06 01 15.1**	**+1.2**
	comp=Z,7.2nm,0.9s,baz=246,slow=10,SNR=5.0						
MAW				LR	LR	06 14 39.8	
	comp=Z,143nm,19.6s,baz=239,slow=34						
MAW	**Mawson**	**36.54**	**140**	P	**P**	**06 01 17.2**	**+3.3**
PTGB	**Pitanga**	**39.77**	**323**	eP	**P**	**06 01 41.4**	**-0.3**
CPUP	**Villa Florida**	**40.00**	**315**	P	**P**	**06 01 43.2**	**-0.2**
	comp=Z,16nm,0.5s,baz=152,slow=7.1,SNR=111						
CPUP				LR	LR	06 16 49.2	
	comp=Z,134nm,21.2s,baz=178,slow=34						
CPUP	**Villa Florida**	**40.00**	**315**	P	**P**	**06 01 43.4**	**0.0**
TRCB	**Terra Rica**	**41.75**	**323**	eP	**P**	**06 01 58.7**	**+0.8**
VNDA	**Vanda**	**42.19**	**183**	P	**P**	**06 02 03.5**	**+2.5**
	comp=Z,3.0nm,0.8s,baz=195,slow=8.9,SNR=6.9						
VNDA	**Vanda**	**42.19**	**183**	P	**P**	**06 02 03.8**	**+2.9**
VNDA				IAmb	IAmb	06 02 18.2	
	comp=Z,15nm,1.5s						
PCMB	**Pacaembu**	**42.47**	**325**	eP	**P**	**06 02 04.0**	**+0.2**
ITRB	**Iturama**	**44.03**	**327**	eP	**P**	**06 02 17.2**	**+0.8**
IPMB	**Ipameri, GO**	**45.12**	**331**	eP	**P**	**06 02 26.1**	**+0.9**
C2SB	**Chapadao do Su**	**45.61**	**324**	eP	**P**	**06 02 30.1**	**+1.1**
BOSA	**Boshof**	**46.98**	**71**	P	**P**	**06 02 43.4**	**+3.5**
	comp=Z,2.2nm,0.7s,baz=185,slow=9.0,SNR=4.2						
JANB	**Januaria**	**47.09**	**337**	eP	**P**	**06 02 40.2**	**-0.5**
PP1B	**Ponte de Pedra**	**47.32**	**322**	eP	**P**	**06 02 42.8**	**+0.3**
BDFB	**Brasilia**	**47.33**	**332**	P	**P**	**06 02 42.9**	**+0.2**
	comp=Z,3.0nm,0.6s,baz=164,slow=7.4,SNR=6.7						
BDFB				LR	LR	06 20 34.9	
	comp=Z,77nm,20.0s,baz=171,slow=34						
BDFB	**Brasilia**	**47.33**	**332**	P	**P**	**06 02 42.3**	**-0.3**
BDFB				IAmb	IAmb	06 02 46.2	
	comp=Z,13nm,1.5s						
PB10	**IPOC Station P**	**47.72**	**301**	P	**P**	**06 02 45.5**	**0.0**
LVC	**Limon Verde**	**47.82**	**303**	eP	**P**	**06 02 45.6**	**-1.2**
LVC	**Limon Verde**	**47.82**	**303**	P	**P**	**06 02 47.4**	**+0.6**
ARAG	**Araguaiana, MT**	**48.23**	**327**	eP	**P**	**06 02 49.9**	**+0.4**
PB04	**IPOC Station P**	**48.59**	**302**	P	**P**	**06 02 52.6**	**+0.1**
SALV	**Santo Antonio**	**49.17**	**322**	eP	**P**	**06 02 56.8**	**+0.1**
PB01	**IPOC Station P**	**49.46**	**303**	P	**P**	**06 02 59.0**	**0.0**
NBLA	**Lagarto - SE**	**50.03**	**346**	eP	**P**	**06 03 02.2**	**-1.1**
PB11	**IPOC Station P**	**50.67**	**304**	P	**P**	**06 03 08.4**	**0.0**
MNMC	**Minye Minye**	**51.21**	**304**	P	**P**	**06 03 13.1**	**+0.6**
NBTA	**Tacaratu-PE**	**51.91**	**346**	eP	**P**	**06 03 15.9**	**-1.6**
H10S2	**ASCENSION HYDR**	**52.16**	**15**	T	T	07 00 02.7	
	baz=33,slow=74,SNR=22						
H10S3	**ASCENSION HYDR**	**53.28**	**15**	T	T	06 59 59.1	
	baz=187,slow=74,SNR=14						
H10N1	**ASCENSION HYDR**	**53.28**	**15**	T	T	07 01 30.1	
	baz=180,slow=72,SNR=3.0						
H10N3	**ASCENSION HYDR**	**53.28**	**15**	T	T	07 01 30.3	
	baz=180,slow=72,SNR=12						
H10N2	**ASCENSION HYDR**	**53.30**	**15**	T	T	07 01 19.6	
	baz=180,slow=72,SNR=9.1						
NBMA	**Muriti-CE**	**53.73**	**345**	eP	**P**	**06 03 30.4**	**-0.5**
SMTB	**Santa Maria do**	**53.79**	**334**	eP	**P**	**06 03 31.2**	**-0.1**
CLDB	**Colider**	**53.95**	**324**	eP	**P**	**06 03 30.9**	**-1.7**
RCBR	**Riachuelo**	**54.93**	**349**	P	**P**	**06 03 38.9**	**-0.7**
RCBR				IAmb	IAmb	06 03 47.2	
	comp=Z,18nm,1.1s						
NBPA	**Parau_RN**	**55.13**	**347**	eP	**P**	**06 03 40.7**	**-0.3**
SAML	**Samuel**	**58.12**	**316**	eP	**P**	**06 04 01.3**	**-1.0**
SAML	**Samuel**	**58.12**	**316**	P	**P**	**06 04 01.4**	**-0.9**
LIC	**Lamto**	**68.62**	**23**	ePKP2	**P**	**06 05 12.1**	**+0.3**
	comp=Z,11nm,0.7s						
KIC	**Kosan Boka**	**68.81**	**24**	ePKP2	**P**	**06 05 13.1**	**+0.2**
	comp=Z,12nm,1.0s						
TIC	**Toumodi**	**69.03**	**23**	ePKP2	**P**	**06 05 13.7**	**-0.6**
DBIC	**Dimbokro**	**69.09**	**23**	P	**P**	**06 05 15.2**	**+0.5**
	comp=Z,2.6nm,0.7s,baz=187,slow=5.9,SNR=7.4						
DBIC	**Dimbokro**	**69.09**	**23**	P	**P**	**06 05 15.4**	**+0.7**
DBIC				IAmb	IAmb	06 05 23.4	
	comp=Z,15nm,1.4s						
PTLC	**Puerto Leguiza**	**70.81**	**308**	eP	**P**	**06 05 22.1**	**-3.3**
MACC	**Macarena, Meta**	**72.25**	**310**	eP	**P**	**06 05 31.8**	**-2.2**
OTAV	**Otavalo**	**72.33**	**305**	P	**P**	**06 05 34.3**	**-0.8**
OTAV				IAmb	IAmb	06 05 38.5	
	comp=Z,4.4nm,0.8s						
BBAC	**Balboa, Cauca**	**73.47**	**306**	eP	**P**	**06 05 39.1**	**-2.4**
PRAC	**Prado**	**74.09**	**309**	eP	**P**	**06 05 43.8**	**-1.1**
ORTC	**Ortega, Tolima**	**74.41**	**309**	eP	**P**	**06 05 45.9**	**-0.9**
CHIC	**Chingaza**	**74.49**	**311**	eP	**P**	**06 05 45.5**	**-2.2**
YOTC	**Yotoco, Valle**	**74.90**	**308**	eP	**P**	**06 05 45.4**	**-4.3**
ROSC	**El Rosal**	**74.91**	**310**	P	**P**	**06 05 49.4**	**-0.7**
	comp=Z,4.1nm,0.4s,baz=109,slow=8.6,SNR=4.9						
ROSC				LR	LR	06 39 23.1	
	comp=Z,81nm,21.0s,baz=59,slow=36						
ROSC	**El Rosal**	**74.91**	**310**	P	**P**	**06 05 49.8**	**-0.3**
ROSC				IAmb	IAmb	06 05 50.9	
	comp=Z,11nm,1.1s						
RUSC	**La Rusia**	**75.42**	**312**	eP	**P**	**06 05 51.3**	**-1.8**
RUSC	**La Rusia**	**75.42**	**312**	P	**P**	**06 05 51.7**	**-1.4**
SPBC	**San Pablo de B**	**75.56**	**311**	eP	**P**	**06 05 50.4**	**-3.0**
GUY2C	**Guyana, Caldas**	**75.66**	**309**	eP	**P**	**06 05 52.1**	**-2.4**
BARC	**Barichara**	**76.10**	**312**	eP	**P**	**06 05 52.4**	**-4.3**
CBOC	**Ciudad Bolivar**	**76.49**	**309**	eP	**P**	**06 05 56.2**	**-2.7**
PTBC	**PUERTO BERRIO,**	**76.52**	**311**	eP	**P**	**06 05 55.5**	**-3.4**
HELC	**Santa Helena**	**76.61**	**310**	eP	**P**	**06 05 56.5**	**-3.2**
PAYG	**Puerto Ayora**	**76.65**	**293**	P	**P**	**06 05 58.4**	**-1.3**
TORD	**Torodi Ar. Bea**	**76.79**	**28**	P	**P**	**06 06 01.4**	**+1.1**
	comp=Z,6.1nm,0.5s,baz=199,slow=6.3,SNR=97						
TORD				LR	LR	06 32 48.9	
	comp=Z,37nm,21.7s,baz=315,slow=30						
TORD	**Torodi Ar. Bea**	**76.79**	**28**	P	**P**	**06 06 00.7**	**+0.5**
SDV	**Santo Domingo**	**77.31**	**315**	eP	**P**	**06 06 02.5**	**-1.0**
SDV	**Santo Domingo**	**77.31**	**315**	P	**P**	**06 06 02.7**	**-0.8**
SDV				IAmb	IAmb	06 06 03.3	
	comp=Z,16nm,0.7s						
SMLC	**San Martn de**	**78.46**	**312**	eP	**P**	**06 06 06.7**	**-3.0**
H01W2	**Cape Leeuwin H**	**79.72**	**148**	T	T	07 35 22.2	
	baz=198,slow=74,SNR=6.4						
H01W1	**Cape Leeuwin H**	**79.73**	**148**	T	T	07 35 20.6	
H01W3	**Cape Leeuwin H**	**79.73**	**148**	T	T	07 35 27.2	
	baz=176,slow=74,SNR=4.0						
JTS	**Las Juntas de**	**84.10**	**303**	LR	LR	06 44 02.9	
	comp=Z,13nm,21.8s,baz=180,slow=36						
STKA	**Stephens Creek**	**87.52**	**170**	LR	LR	06 45 00.4	
	comp=Z,71nm,18.5s,baz=205,slow=35						
ASAR	**Alice Springs**	**94.72**	**162**	P	**P**	**06 07 30.1**	**0.0**
	comp=Z,0.7nm,0.6s,baz=178,slow=3.9,SNR=6.9						
WRA	**Warramunga Arr**	**98.44**	**162**	LR	LR	06 49 11.4	
	comp=Z,113nm,21.1s,baz=195,slow=34						
SCHQ	**Schefferville**	**119.27**	**335**	PKP	**PKPdf**	**06 12 55.3**	**-1.3**
	comp=Z,1.4nm,0.7s,baz=214,slow=1.8,SNR=6.1						
AKASG	**Malin Array Be**	**119.58**	**37**	PKP	**PKPdf**	**06 12 56.9**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=191,slow=0.9,SNR=4.2						
PDAR	**Pinedale Array**	**122.82**	**300**	PKP	**PKPdf**	**06 13 02.9**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=133,slow=4.5,SNR=6.2						
NVAR	**Mina Array Bea**	**123.25**	**290**	PKP	**PKiKP**	**06 13 05.4**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=136,slow=2.7,SNR=5.6						
ULM	**Lac du Bonnet**	**123.54**	**314**	PKP	**PKPdf**	**06 13 03.8**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=72,slow=7.3,SNR=3.5						
FINES	**FINESS Array B**	**128.13**	**29**	PKP	**PKiKP**	**06 13 13.9**	**0.0**
	comp=Z,1.9nm,0.5s,baz=143,slow=2.4,SNR=15						
AAK	**Ala-Archa**	**131.09**	**74**	PKP	**PKiKP**	**06 13 23.1**	**+2.4**
	comp=Z,1.7nm,0.6s,baz=302,slow=1.8,SNR=5.2						
ARCES	**ARCESS Array B**	**134.92**	**23**	PKP	**PKPdf**	**06 13 26.7**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=204,slow=1.0,SNR=11						
MKAR	**Makanchi Array**	**137.90**	**76**	PKhKP	**PKPdf**	**06 13 30.1**	**-2.2**
	comp=Z,0.5nm,0.7s,baz=175,slow=1.7,SNR=3.8						
YKA	**Yellowknife Ar**	**139.52**	**314**	PKhKP	PKPpre	06 13 28.8	
	comp=Z,1.7nm,0.7s,baz=126,slow=3.6,SNR=9.4						
YKA				PKP	**PKPdf**	**06 13 34.4**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=137,slow=2.1,SNR=25						
ZALV	**Zalesovo Beam**	**143.91**	**69**	PKP	PKPbc	06 13 41.8	+1.2
	comp=Z,1.1nm,0.4s,baz=225,slow=4.1,SNR=5.5						
SONM	**Songino Array**	**150.46**	**94**	PKPbc	**PKiKP**	**06 14 00.8**	**+0.6**
	comp=Z,3.5nm,0.6s,baz=219,slow=2.9,SNR=14						
TLY	**Talaya**	**151.58**	**85**	PKPbc	**PKiKP**	**06 14 02.8**	**+0.6**
ILAR	**Eielson Array**	**153.05**	**305**	PKPbc	**PKPbc**	**06 14 04.5**	**-0.2**
	comp=Z,4.8nm,0.8s,baz=315,slow=1.0,SNR=53						
MJAR	**Matsushiro Arr**	**154.21**	**151**	PKPbc	**PKiKP**	**06 14 09.6**	**+1.5**
	comp=Z,1.8nm,0.3s,baz=336,slow=18,SNR=1.7						

*IDC **13** 06:14:49.9±1.8, 33.94N×88.85E, h0km, mb3.5/5, mb1 3.7/9, mb1mx3.5/52, mbtmp3.5/9, ML2.8/3, MS2.7/3, Ms1 2.8/3, ms1mx2.6/31, Error ellipse: s-maj=42.3km s-min=30.0km az=57.0*

ISC 13 06:14:52.4±1.2, 34.0N±0.2×88.9E±0.2, h17km, n10, σ0.94/9, mb3.6/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**13.73**	**341**	Pn	**Pn**	**06 18 05.8**	**-0.4**
	0.0nm,0.3s,baz=172,slow=14,SNR=4.2						
AAK	**Ala-Archa**	**14.21**	**312**	LR	LR	06 24 30.0	
	comp=Z,43nm,19.8s,baz=119,slow=41						
CMAR	**Chiang Mai Arr**	**17.89**	**147**	P	**P**	**06 19 01.2**	**+0.2**
	baz=332,slow=13,SNR=4.2						
CMAR				LR	LR	06 25 40.7	
	comp=Z,20nm,18.2s,baz=180,slow=36						
KURBB	**Kurchatov Arra**	**18.27**	**339**	P	**Pn**	**06 19 04.8**	**-0.1**
	0.0nm,0.3s,baz=146,slow=12,SNR=9.7						
SONM	**Songino Array**	**19.06**	**38**	P	**P**	**06 19 13.6**	**-0.3**
	0.0nm,0.3s,baz=222,slow=12,SNR=5.4						
ZALV	**Zalesovo Beam**	**20.15**	**353**	P	**P**	**06 19 26.2**	**+0.6**
	2.2nm,0.8s,baz=171,slow=10,SNR=7.5						
ZALV				LR	LR	06 28 01.7	
	comp=Z,23nm,20.7s,baz=346,slow=39						
BVAR	**Borovoye Array**	**23.16**	**331**	P	**P**	**06 19 59.7**	**+1.9**
	0.5nm,0.7s,baz=130,slow=13,SNR=1.6						
AKASG	**Malin Array Be**	**45.87**	**310**	P	**P**	**06 23 12.7**	**-0.9**
	0.4nm,0.5s,baz=75,slow=7.7,SNR=3.1						
FINES	**FINESS Array B**	**47.90**	**325**	P	**P**	**06 23 29.6**	**+0.3**
	0.9nm,0.6s,baz=88,slow=8.5,SNR=1.4						
GERES	**GERESS Array B**	**56.08**	**310**	P	**P**	**06 24 30.3**	**-0.3**
	0.3nm,0.5s,baz=77,slow=7.0,SNR=4.7						

*NDI **13** 06:23:37.5±3.7, 11.57N×93.98E, h114km±36km, ML4.3, mb4.2(NEIC)*

*DJA **13** 06:23:37.3±0.3, 11°N±4°×9°3E±°, h147km±4km, M4.6/8, mB5.7/3, mb4.8/8, MLv4.5/2, Mw(mB)5.2/3*

*IDC **13** 06:23:38.7±3.0, 11.45N×93.66E, h142km±26km, mb3.8/12, mb1 3.9/13, mb1mx3.6/48, mbtmp4.2/13, MS2.7/1, Ms1 2.7/1, ms1mx2.4/38, Error ellipse: s-maj=30.5km s-min=12.0km az=54.0*

*NEIC **13** 06:23:38.1±1.8, 11.5N±0.1×93.5E±0.1, h139km±8km, mb4.2/18, Error ellipse: s-maj=19.4km s-min=13.5km az=220.0*

ISC 13 06:23:39.0±0.5, 11.42N±0.06×93.48E±0.08, h150km, n73, σ1.74/70, mb4.0/19, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**0.76**	**288**	eP	Pn	06 24 00.8	-1.1
PBA				eS	Sn	06 24 19.0	-0.3
PBA				IAML		06 24 20.9	
	comp=N,9µm,0.5s						
PBA				IAML		06 24 21.4	
	comp=E,3µm,0.3s						
PBA	**Port Blair**	**0.76**	**288**		Pn	06 24 00.8	-1.0
PBA				Sn	Sn	06 24 17.0	-2.3
DGPR	**DIGLIPUR**	**1.82**	**343**	eP	**Pn**	**06 24 10.1**	**-2.0**
DGPR				eS	**Sn**	**06 24 32.9**	**-4.7**
DGPR				IAML		06 24 35.2	
	comp=E,2µm,0.2s						
DGPR				IAML		06 24 35.2	
	comp=N,2µm,0.1s						
CMBY	**CAMPBELL BAY**	**4.41**	**174**	eP	**Pn**	**06 24 44.2**	**-0.4**
CMBY				eS	**Sn**	**06 25 31.7**	**-4.0**
MLSI	**Meulaboh, Aceh**	**7.68**	**158**	P	**Pn**	**06 25 26.6**	**-1.5**
CM31	**Chiang Mai Arr**	**8.76**	**36**	Pn	**Pn**	**06 25 41.2**	**-1.3**
CMAR	**Chiang Mai Arr**	**8.76**	**36**	P	**Pn**	**06 25 40.0**	**-2.6**
	comp=N,1.8nm,0.3s,baz=229,slow=15,SNR=29						
PBKT	**Sadao Pong**	**8.89**	**54**		**Pn**	**06 25 43.1**	**-1.2**
CHTO	**Chiang Mai**	**9.04**	**35**		**Pn**	**06 25 43.8**	**-2.5**
BWNR	**Bhubaneshwar**	**11.50**	**321**	eP	**Pn**	**06 26 22.1**	**+3.4**
BWNR				eS	Sn	06 28 15.3	-11
BWNR				IAML		06 28 22.9	
	comp=E,66nm,0.9s						
BWNR				IAML		06 28 22.9	
	comp=N,66nm,0.2s						
MYKOM	**Kota Tinggi**	**14.05**	**132**	P	**P**	**06 26 56.4**	**+1.6**
SHL	**Shillong**	**14.15**	**354**	P	**P**	**06 26 54.9**	**-1.1**
KRJI	**Kerinci**	**15.60**	**149**	P	**P**	**06 27 11.0**	**-1.0**
	comp=N,342nm,0.5s						
KMI	**Kunming**	**16.20**	**32**	P	**P**	**06 27 19.6**	**+0.8**
ODAN	**Odare**	**16.39**	**340**	eP	**P**	**06 27 25.2**	**+4.3**
	comp=N,44nm,0.4s						
TAPN	**Taplejung**	**16.75**	**342**	eP	**Pn**	**06 27 25.9**	**+0.8**
	comp=N,23nm,0.3s						
RAMN	**Ramite**	**16.75**	**338**	eP	**Pn**	**06 27 27.2**	**+2.1**
	comp=N,16nm,0.3s						
NGP	**Nagpur**	**16.88**	**307**	ex	x	06 27 49.9	
NGP				eS	**S**	**06 30 27.0**	**-7.3**
JIRN	**Jiri**	**17.54**	**338**	eP	**Pn**	**06 27 36.5**	**+1.7**
	comp=N,60nm,0.8s						
PKI	**Pulchoki**	**17.76**	**336**	eP	**Pn**	**06 27 39.5**	**+2.1**
	comp=N,20nm,0.7s						
PKIN	**Phulchoki**	**17.77**	**336**	eP	**Pn**	**06 27 39.5**	**+2.1**
	comp=N,10nm,0.4s						
GUN	**Gumba**	**17.89**	**338**	eP	**Pn**	**06 27 39.1**	**+0.3**
	comp=N,18nm,0.6s						
DMN	**Daman**	**17.92**	**335**	eP	**Pn**	**06 27 41.0**	**+1.9**
	comp=N,24nm,0.7s						
LSA	**Lhasa**	**18.32**	**354**	P	**P**	**06 27 41.4**	**-0.8**
LSA				IAmb	IAmb	06 27 52.9	
	comp=Z,7.9nm,0.5s						
GKN	**Gorkha**	**18.46**	**335**	eP	**Pn**	**06 27 45.4**	**0.0**
KOLN	**Koldanda**	**18.72**	**332**	eP	**Pn**	**06 27 48.4**	**-0.1**
DANN	**Dangsing**	**19.14**	**333**	eP	**Pn**	**06 27 53.0**	**-0.5**
	comp=Z,35nm,0.6s						
KSM	**Kuching**	**19.41**	**119**	P	**P**	**06 27 52.6**	**-1.1**
KSM				IAmb	IAmb	06 28 02.5	
	comp=Z,13nm,1.1s						
SMKI	**Samarinda**	**26.36**	**115**	P	**P**	**06 29 01.7**	**+0.3**
	comp=Z,751nm,0.8s						
H08S3	**Diego Garcia H**	**28.19**	**229**	T	T	06 55 58.8	
	baz=52,slow=76,SNR=37						
H08S2	**Diego Garcia H**	**28.19**	**229**	T	T	06 56 03.0	
	baz=52,slow=76,SNR=4.9						
H08S1	**Diego Garcia H**	**28.21**	**229**	T	T	06 55 57.7	
	baz=52,slow=76,SNR=4.7						
LUWI	**Luwuk**	**31.64**	**111**	P	**P**	**06 29 50.3**	**+2.1**
	comp=Z,4µmcomp=Z,80nm,0.5s						
MK31	**Makanchi Array**	**36.51**	**347**	P	**P**	**06 30 28.8**	**-1.0**
MKAR	**Makanchi Array**	**36.51**	**347**	P	**P**	**06 30 20.2**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=164,slow=8.2,SNR=15						
MKAR	**Makanchi Array**	**36.51**	**347**	P	**P**	**06 30 29.1**	**-0.7**
MAKZ	**Makanchi**	**36.59**	**347**	P	**P**	**06 30 28.9**	**-1.5**
SONM	**Songino Array**	**37.88**	**14**	P	**P**	**06 30 41.3**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=207,slow=9.3,SNR=3.9						
SONM				ScP	**ScP**	**06 36 29.0**	**+0.8**
	comp=Z,0.9nm,0.9s,baz=246,slow=2.1,SNR=4.8						
KSRS	**Korea Array**	**40.30**	**44**	LR	LR	06 49 27.0	
	comp=Z,11nm,20.6s,baz=175,slow=39						
KURK	**Kurchatov**	**41.03**	**346**	P	**P**	**06 31 06.2**	**-1.1**
KURK				IAmb	IAmb	06 31 08.9	
	comp=Z,3.6nm,1.0s						
GEYT	**Alibeck**	**41.17**	**316**	P	**P**	**06 31 11.4**	**+2.6**
	comp=Z,12nm,0.4s,baz=136,slow=7.5,SNR=23						
ZALV	**Zalesovo Beam**	**42.98**	**352**	P	**P**	**06 31 23.7**	**+0.6**
	comp=Z,5.9nm,0.3s,baz=178,slow=8.0,SNR=8.3						
ZALV	**Zalesovo Beam**	**42.98**	**352**	P	**P**	**06 31 23.1**	**0.0**
FITZ	**Fitzroy Crossi**	**43.22**	**132**	P	**P**	**06 31 25.6**	**0.0**
	comp=Z,1.3nm,0.4s,baz=338,slow=7.4,SNR=5.1						
FITZ	**Fitzroy Crossi**	**43.22**	**132**	P	**P**	**06 31 25.0**	**-0.5**
FITZ				IAmb	IAmb	06 31 27.6	
	comp=Z,7.2nm,1.2s						
BVAR	**Borovoye Array**	**45.44**	**341**	P	**P**	**06 31 43.3**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=138,slow=9.1,SNR=9.2						
BRVK	**Borovoye**	**45.51**	**341**	P	**P**	**06 31 42.6**	**-0.6**
ABKAR	**Akbulak array**	**46.84**	**330**	P	**P**	**06 31 53.1**	**-0.6**
ABKAR	**Akbulak array**	**46.84**	**330**	P	**P**	**06 31 53.7**	**0.0**
ABKAR				IAmb	IAmb	06 32 09.8	
	comp=Z,3.7nm,1.1s						
AKTO	**Aktyubinsk**	**48.55**	**330**	PcP	**PcP**	**06 33 31.1**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=20,slow=22,SNR=2.8						
WB0	**Warramunga Arr**	**50.83**	**127**	P	**P**	**06 32 24.0**	**-0.5**
WB0				IAmb	IAmb	06 32 24.7	
	comp=Z,4.1nm,0.6s						
WRA	**Warramunga Arr**	**50.88**	**128**	P	**P**	**06 32 24.4**	**-0.6**
	comp=Z,3.5nm,0.6s,baz=303,slow=8.7,SNR=7.6						
WRA	**Warramunga Arr**	**50.88**	**128**	P	**P**	**06 32 24.7**	**-0.3**
WRAB	**Tennant Creek**	**50.89**	**127**	P	**P**	**06 32 24.6**	**-0.5**
WR0	**Warramunga Arr**	**51.05**	**127**	P	**P**	**06 32 25.8**	**-0.4**
WR0				IAmb	IAmb	06 32 27.5	
	comp=Z,5.3nm,1.1s						
ASAR	**Alice Springs**	**52.71**	**132**	P	**P**	**06 32 38.0**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=308,slow=6.5,SNR=28						
ASAR	**Alice Springs**	**52.71**	**132**	P	**P**	**06 32 38.7**	**+0.2**
BR131	**Keskin Array S**	**59.66**	**309**	P	**P**	**06 33 27.0**	**-0.8**
BR131				IAmb	IAmb	06 33 28.4	
	comp=Z,1.3nm,0.7s						
BRTR	**Keskin Array B**	**59.66**	**309**	P	**P**	**06 33 27.6**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=141,slow=6.8,SNR=4.4						
BRTR	**Keskin Array B**	**59.66**	**309**	P	**P**	**06 33 28.4**	**+0.6**
TIXI	**Tiksi**	**63.91**	**12**	P	**P**	**06 33 55.0**	**-0.3**
BURAR	**Bucovina Array**	**67.01**	**317**	P	**P**	**06 34 16.7**	**+0.7**
KWP	**Kalwaria Pacla**	**68.93**	**319**	P	**P**	**06 34 28.9**	**+1.1**
KWP				IAmb	IAmb	06 34 35.2	
	comp=Z,6.5nm,1.3s						
FIA1	**FINESS Array S**	**69.29**	**332**	P	**P**	**06 34 30.1**	**+0.4**
FINES	**FINESS Array B**	**69.29**	**332**	P	**P**	**06 34 30.1**	**+0.4**
	comp=Z,1.4nm,0.3s,baz=105,slow=4.2,SNR=17						
FINES	**FINESS Array B**	**69.29**	**332**	P	**P**	**06 34 30.4**	**+0.7**
ARCES	**ARCESS Array B**	**71.73**	**340**	P	**P**	**06 34 45.4**	**+1.0**
	comp=Z,1.1nm,0.4s,baz=102,slow=7.1,SNR=21						
ARE0	**ARCESS Array S**	**71.73**	**340**	P	**P**	**06 34 45.4**	**+1.0**
GERES	**GERESS Array B**	**74.77**	**318**	P	**P**	**06 35 03.8**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=103,slow=5.9,SNR=5.9						
GERES	**GERESS Array B**	**74.77**	**318**	P	**P**	**06 35 03.6**	**+0.8**
SPA0	**Spitsbergen Ar**	**76.25**	**348**	P	**P**	**06 36 11.3**	**+0.8**
IMAR	**Indian Mountai**	**88.61**	**22**	P	**P**	**06 36 15.9**	**+1.2**
CPUP	**Villa Florida**	**148.75**	**238**	PKPbc	**PKPbc**	**06 43 09.7**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=98,slow=8.5,SNR=2.7						

*ANF **13** 06:31:03.9±0.2, 33.22N×116.63W, h15km, ML2.7/23, Error ellipse: s-maj=1.7km s-min=1.2km az=62.0*

*PAS **13** 06:31:05.2±0.9, 33.204N±0.007×116.64W±0.01, h15km±1km, ML2.8/170, Error ellipse: s-maj=1.4km s-min=1.1km az=84.0*

SCEDC 13 06:31:05.2, 33.20N×116.64W, h15km
ISC 13 06:31:04.6±0.8, 33.20N±0.01×116.64W±0.01, h18km±5km, n111, σ0.66/165, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORC	Borrego Spring	0.20	69		Pg	06 31 09.4	-0.1
BORC					Sg	06 31 12.2	-0.6
PLM	Palomar	0.24	310		Pg	06 31 14.2	0.0
BZNA	Buzz No.'s Pla	0.29	355		Sg	06 31 15.0	-0.6
FRD	Ford Ranch, An	0.30	6		Sg	06 31 15.0	-0.6
FRD	Ford Ranch, An	0.30	6		Pg	06 31 11.1	-0.1
FRD					Sg	06 31 14.9	-0.8
HWB	Hans Werner Br	0.32	238		Pg	06 31 11.6	+0.1
DPP	Dos Picos Cty	0.32	232		Pg	06 31 11.7	+0.1
DPP					Sg	06 31 16.4	+0.1
EML	El Monte Cty P	0.35	210		Pg	06 31 12.1	+0.1
EML					Sg	06 31 17.3	+0.2
SNDA	J Saunders Pla	0.35	3		Sg	06 31 16.9	-0.4
MONP2	Monument Peak	0.36	149		Pg	06 31 12.4	+0.2
MONP2					Sg	06 31 17.3	0.0
MONP2	Monument Peak	0.36	149	P	Pg	06 31 12.4	+0.2
	baz=329,SNR=326						
MONP2				S	Sg	06 31 17.4	+0.1
	baz=329						
DNR	Dunn Ranch,Anz	0.37	1		Pg	06 31 12.4	0.0
CRY	Cary Ranch	0.38	347		Pg	06 31 12.4	-0.1
CRY					Sg	06 31 17.4	-0.5
PFO	Pinyon Flats O	0.44	20		Pg	06 31 13.4	-0.3
PFO				Sg	Sg	06 31 19.2	-0.6
PFO	Pinyon Flats O	0.44	20		Pg	06 31 13.4	-0.3
PFO					Sg	06 31 19.3	-0.4
PFO	Pinyon Flats O	0.44	20	P	Pg	06 31 13.4	-0.3
	baz=201,SNR=189						
PFO				S	Sg	06 31 19.1	-0.6
	baz=201						
XPFO	Pion Flat	0.44	20		Pg	06 31 13.5	-0.2
XPFO				Sg	Sg	06 31 19.1	-0.6
XPFO	Pion Flat	0.44	20		Pg	06 31 13.4	-0.2
XPFO					Sg	06 31 18.9	-0.9
CBKC	Canebrake	0.44	132		Pg	06 31 13.9	+0.3
GVDA	Garner Valley	0.47	356		Pg	06 31 14.0	-0.3
GVDA					Sg	06 31 20.1	-0.6
GORC	Green Oak Ranc	0.50	265		Pg	06 31 14.5	-0.1
GORC					Sg	06 31 21.2	-0.2
109C	Camp Elliot, M	0.50	232		Pg	06 31 14.7	0.0
109C				Sg	Sg	06 31 21.5	+0.1
109C	Camp Elliot, M	0.50	232	P	Pg	06 31 14.6	-0.1
	baz=51,SNR=14						
109C				S	Sg	06 31 21.4	+0.1
	baz=51						
BAR	Barrett	0.52	183		Pg	06 31 14.9	-0.1
BAR	Barrett	0.52	183		Sg	06 31 21.9	-0.1
SDRC	San Diego Road	0.53	209		Pg	06 31 15.0	-0.2
SDRC					Sg	06 31 22.3	0.0
BACC	Bachelor Mtn.	0.53	321		Pg	06 31 14.9	-0.4
BACC					Sg	06 31 21.6	-0.9
POB	Polly Butte	0.54	334		Pg	06 31 15.1	-0.4
DGR	Domenigoni Val	0.55	326		Pg	06 31 15.2	-0.4
DGR					Sg	06 31 22.2	-0.8
SALN	Salton City	0.55	81		Pg	06 31 15.9	+0.3
HMTC	Hemet	0.59	329		Pg	06 31 16.0	-0.5
MURC	Murrieta	0.61	311		Pg	06 31 16.4	-0.4
MURC					Sg	06 31 24.6	-0.5
MURC	Murrieta	0.61	311	P	Pg	06 31 16.4	-0.4
	baz=130,SNR=54						
MURC				S	Sg	06 31 24.4	-0.6
	baz=130						
TKX	Tecate	0.63	178		Pg	06 31 16.8	-0.3
TKX					Sg	06 31 25.1	-0.4
OLP	Otay Lakes Par	0.64	203		Pg	06 31 16.9	-0.3
OLP					Sg	06 31 25.4	-0.3
CRR	Carrizo Plain	0.64	119		Pg	06 31 17.7	+0.4
ERRC	Elmore Ranch	0.69	97		Pb	06 31 18.9	+0.8
IKP	In-Ko-Pah, Jac	0.70	141		Pg	06 31 18.6	0.0
IKP					Sg	06 31 28.2	+0.3
IKP	In-Ko-Pah, Jac	0.70	141	P	Pg	06 31 18.5	0.0
	baz=321,SNR=18						
IKP				S	Sg	06 31 27.9	0.0
	baz=321						
CTCC	Cactus City	0.71	50		Pg	06 31 18.5	0.0
CTCC					Sg	06 31 27.9	-0.1
BATC	Bat Cave Butte	0.72	69		Pg	06 31 18.6	0.0
SUP	Superstition M	0.72	109		Pg	06 31 18.8	-0.1
DEVC	Devers	0.74	4		Pg	06 31 18.8	-0.3
DEVC					Sg	06 31 28.7	-0.2
SWSC	Sam W. Stewart	0.75	110		Pg	06 31 18.8	-0.5
SWSC					Sg	06 31 29.4	+0.2
SWSC	Sam W. Stewart	0.75	110	P	Pg	06 31 18.7	-0.5
	baz=290,SNR=36						
SWSC				S	Sg	06 31 28.8	-0.4
	baz=290						
RMX	La Rumorosa	0.76	141		Sn	06 31 31.9	+0.2
EW2	E Wide Canyon	0.77	14		Pg	06 31 19.3	-0.3
EW2					Sg	06 31 29.8	0.0
TJX	Tijuana	0.77	207		Pg	06 31 18.5	-1.2
BBSC	Beaumont Base	0.78	338		Pg	06 31 19.6	-0.2
BBSC					Sg	06 31 30.0	-0.1
PEC	Perris	0.82	328		Pg	06 31 19.9	-0.8
PEC					Sg	06 31 30.4	-1.1
COK2	Cook Ranch 2	0.84	114		Pb	06 31 20.8	+0.1
SME	Santa Rosa Min	0.86	316		Pb	06 31 20.4	-0.7
SME					Sb	06 31 31.2	-1.2
CBX	Cerro Bola	0.88	181		Pb	06 31 21.1	-0.4
CBX					Sb	06 31 33.2	+0.1
BLAC	Blackrock camp	0.89	13		Pb	06 31 21.6	-0.1
BLAC					Sb	06 31 33.0	-0.4
CFT	Crafton Hills	0.92	335		Pb	06 31 22.1	-0.1
CFT					Sb	06 31 34.3	+0.1
CLIC	Calipatria	0.93	93		Pb	06 31 21.7	-0.6
HAY	Hayfield	0.95	57		Pb	06 31 23.2	+0.7
BELC	Belle Mtn. Jos	0.96	34		Pb	06 31 22.7	-0.3
BELC					Sb	06 31 35.2	-0.2
BELC	Belle Mtn. Jos	0.96	34	P	Pb	06 31 22.6	-0.3
	baz=214,SNR=52						
BELC				Sn	Sb	06 31 35.3	-0.1
	baz=214						
RSBC	Riverside Bore	0.96	324		Pb	06 31 22.4	-0.4
RSBC					Sb	06 31 34.6	-0.6
SVD	Seven Oaks Dam	0.98	337		Pb	06 31 23.1	-0.1
SVD					Sb	06 31 36.0	+0.1
RVR	Riverside	1.00	322		Pb	06 31 22.9	-0.6
RVR					Sb	06 31 35.6	-0.8
CRNC	Corona	1.02	311		Sb	06 31 36.7	-0.3
TPC	Twentynine Pal	1.03	28		Pb	06 31 23.6	-0.4
DREC	Desert Rsrch C	1.07	111		Pb	06 31 24.1	-0.6
BBRC	Big Bear Solar	1.09	348		Pb	06 31 24.9	-0.2
BBRC					Sb	06 31 38.8	-0.2
BBRC	Big Bear Solar	1.09	348	P	Pb	06 31 24.9	-0.2
	baz=168,SNR=30						
BBRC				S	Sb	06 31 38.6	-0.5
	baz=168						
BC3	Big Chuckawall	1.09	65		Pb	06 31 24.0	-1.1
BC3					Sb	06 31 38.3	-0.7
BC3	Big Chuckawall	1.09	65	P	Pb	06 31 24.0	-1.1
	baz=246,SNR=46						
BC3				S	Sb	06 31 38.2	-0.8
	baz=246						
BTL	Butler Peak	1.10	344		Pb	06 31 25.2	-0.1
SIL	Silver Peak	1.16	352		Pb	06 31 26.4	+0.1
SANC	Santa Ana	1.16	296		Sn	06 31 42.1	+0.7
SS2	San Sevaine	1.24	325		Pn	06 31 27.2	+0.2
PSRC	Puddingstone R	1.32	313		Pn	06 31 28.7	+0.4
ESJX	Sierra Juarez	1.32	154		Pn	06 31 28.3	-0.1
SSK	Sunset Peak	1.34	319		Pn	06 31 29.0	+0.3
BFSC	Mount Baldy Ra	1.34	321		Pn	06 31 29.0	+0.4
BFSC	Mount Baldy Ra	1.34	321	P	Pn	06 31 28.8	+0.1
	baz=140,SNR=14						
BFSC				Sb	Sb	06 31 45.8	-0.5
	baz=140						
PEM	Pine Mountain	1.41	314		Pn	06 31 30.2	+0.8
FMP	Fort Macarthur	1.48	291	Sb	Sb	06 31 50.5	+0.5
	baz=110						
XTL	Crystal Lake,	1.50	317		Pn	06 31 31.6	+0.8
CIAC	Catalina I. Ai	1.50	278		Pn	06 31 30.3	-0.4
CIS	Catalina Islan	1.50	278	P	Pn	06 31 30.1	-0.6
	baz=97						
CIS				S	Sn	06 31 48.9	-1.1
	baz=97						
GLA	Glamis	1.53	95		Pn	06 31 30.1	-1.0
GLA	Glamis	1.53	95	P	Pn	06 31 30.1	-1.0
	baz=276						
GLA				S	Sn	06 31 48.7	-1.9
	baz=276						
MWC	Mount Wilson	1.56	311		Pn	06 31 32.6	+0.8
IRM	Iron Mountain	1.57	52		Pn	06 31 31.4	-0.3
IRM					Pb	06 31 34.3	+1.1
IRM	Iron Mountain	1.57	52	P	Pn	06 31 31.1	-0.6
	baz=233,SNR=13						
RPV	Rancho Palos V	1.57	291		Pn	06 31 31.6	-0.1
HOLC	Holcomb Ridge	1.61	322		Pn	06 31 33.5	+1.2
PASC	Pasadena Art C	1.61	307	Pn	Pn	06 31 32.7	+0.4
PASC					Sn	06 31 54.0	+1.3
SCI2	San Clemente I	1.62	263	P	Pn	06 31 32.1	-0.2
	baz=82						
SCI2				S	Sn	06 31 52.6	-0.1
	baz=82						
CHFC	Chilao Flat St	1.62	315		Pn	06 31 33.5	+1.0
HEC	Hector,Ludlow	1.65	9	P	Pn	06 31 32.5	-0.2
	baz=189,SNR=10						
HEC				Sb	Sb	06 31 56.0	+1.0
	baz=189						
RRX	Edison Barstow	1.70	350		Pb	06 31 36.4	+1.0
RRX	Edison Barstow	1.70	350	Pg	Pb	06 31 36.2	+0.9
	baz=170						
RRX				Sb	Sb	06 31 57.7	+1.2
	baz=170						
LRRC	Littlerock Res	1.76	319		Pb	06 31 37.5	+1.1
DECC	Green Verdugo	1.76	307	Sb	Sb	06 31 58.7	+0.4
	baz=126						
GMRC	Granite Mounta	1.78	27	P	Pn	06 31 34.4	-0.3
	baz=208,SNR=14						
GMRC				Sb	Sb	06 31 59.3	+0.5
	baz=208						
HYS	Haystack Butte	1.83	335		Pb	06 31 38.5	+0.8
Y12C	Blythe	1.85	72		Pn	06 31 35.0	-0.6
Y12C	Blythe	1.85	72	P	Pn	06 31 34.9	-0.6
	baz=253,SNR=10						
DSCC	Desert Studies	1.99	13		Pb	06 31 41.4	+1.1
EDW2	Edwards Air Fo	2.02	327	Sb	Sb	06 32 06.3	+0.5
	baz=146						
GSC	Goldstone, Bar	2.10	356		Pn	06 31 39.5	+0.5
GSC	Goldstone, Bar	2.10	356	Pg	Pb	06 31 43.6	+1.3
	baz=176						
TUQ	Turquoise Moun	2.31	15	P	Pn	06 31 41.7	-0.2
	baz=195,SNR=22						
W13A	Hualapai Mount	2.97	50		Sb	06 32 37.1	+3.9
TPNV	Topopah Spring	3.75	5	Pn	Pn	06 32 02.8	+0.9
X16A	Lo Mia Camp, P	4.49	73	Pn	Pn	06 32 12.9	+0.8
LCMT	Little Creek M	4.71	35	Pn	Pn	06 32 16.4	+1.4

ATH 13 06:42:49.1, 38.12N×20.43E, h7km±2km, ML3.2/15, Error ellipse: s-maj=2.1km s-min=0.9km az=322.0
THE 13 06:42:49.1, 38.11N×20.42E, h6km±1km, ML3.3/11, Error ellipse: s-maj=1.7km s-min=0.5km az=290.0
IDC 13 06:42:55.8±5.6, 38.20N×20.40E, h72km±58km, mb3.5/4, mb1 3.5/5, mb1mx3.1/44, mbtmp3.8/5, ML2.7/1, MS2.3/1, Ms1 2.3/1, ms1mx2.1/25, Error ellipse: s-maj=38.2km s-min=23.4km az=134.0
ISC 13 06:42:48.8±0.8, 38.13N±0.03×20.42E±0.03, h8km±4km, n51, σ0.90/73, mb3.8/4, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.06	332	P	Pg	06 42 50.9	+0.3
CHV1				S	Sg	06 42 52.2	+0.3
	195μm,0.5s						
KEF2	Argostoli. Kep	0.07	54	P	Pg	06 42 50.8	+0.2
KEF2				S	Sg	06 42 52.0	0.0
ARGA	Argostoli. Kep	0.07	43	P	Pg	06 42 50.9	+0.2
ARGA				S	Sg	06 42 52.1	+0.1
ARG2	Argostoli	0.07	46	P	Pg	06 42 51.0	+0.2
ARG2				S	Sg	06 42 52.5	+0.3
	173μm,0.2s						
LXR1	Lixouri, Cepha	0.07	11	P	Pg	06 42 51.1	+0.3
LXR1				S	Sg	06 42 52.8	+0.6
	89μm,0.6s						
LXRA	Lixouri, Kepha	0.07	11	P	Pg	06 42 51.1	+0.3
LXRA				S	Sg	06 42 52.7	+0.5
KEF3	Kipouria, Keph	0.10	324	P	Pg	06 42 51.5	+0.4
KEF3				S	Sg	06 42 52.8	+0.2
AGT1	Agia Thekli	0.13	347	P	Pg	06 42 52.0	+0.4
AGT1				S	Sg	06 42 54.2	+0.7
	21μm,0.2s						
KEF4	Livadi, Kephal	0.13	2	P	Pg	06 42 52.4	+0.7
KEF4				S	Sg	06 42 54.4	+0.8
VLS	Valsamata	0.14	69	P	Pg	06 42 52.1	+0.2
VLS				S	Sg	06 42 54.6	+0.6
	20μm,0.2s						
VLS	Valsamata	0.14	69	P	Pg	06 42 52.1	+0.2
VLS				S	Sg	06 42 54.2	+0.2
VLS				AML	AML	06 42 54.9	
	comp=E,36322μm,0.2s						
VLS				AML	AML	06 42 57.9	
	comp=N,42635μm,0.3s						
KEF1	Kardakata, Kep	0.16	15	P	Pg	06 42 52.6	+0.5
KEF1				S	Sg	06 42 55.1	+0.8
VSK1	VASILIKIADES	0.30	22	P	Pg	06 42 55.1	+0.3
VSK1				S	Sg	06 43 00.0	+1.1
	comp=N,6μm,0.4s						
VLMS	Volimes, Zakyn	0.32	142	P	Pg	06 42 55.6	+0.6
VLMS				AML	AML	06 43 11.4	
	comp=N,23438μm,0.5s						
VLMS				AML	AML	06 43 12.4	
	comp=E,18805μm,0.6s						
KONA	Konidatara, Ke	0.32	22	P	Pg	06 42 55.2	+0.1
KONA				S	Sg	06 43 00.5	+1.1
EVGI	Lefkada island	0.53	21	P	Pg	06 42 59.0	0.0
EVGI				S	Sb	06 43 07.5	-0.6
EVGI	Lefkada island	0.53	21	P	Pg	06 42 58.9	0.0
EVGI				S	Sg	06 43 06.9	+1.0
KRI1	kERI	0.56	146	P	Pg	06 42 59.9	+0.3
KRI1				S	Sg	06 43 07.7	+0.8
	comp=E,7μm,0.5s						
MGNA	Meganis	0.60	29	P	Pg	06 43 00.6	+0.2
AST1	Astakos	0.67	52	P	Pg	06 43 01.8	+0.1
AST1				S	Sg	06 43 11.4	+1.0
	comp=E,3μm,0.9s						
LKD2	Lefkada island	0.69	16	P	Pg	06 43 01.6	-0.4
LKD2				S	Sb	06 43 13.1	+0.3
	comp=E,868nm,0.9s						
LKD2	Lefkada island	0.69	16	P	Pg	06 43 01.8	-0.3
LKD2				AML	AML	06 43 24.4	
	comp=E,1506μm,0.5s						
LKD2				AML	AML	06 43 31.9	
	comp=N,1837μm,1.2s						
TSLK	Tsoukalades, L	0.72	15	P	Pg	06 43 02.4	-0.3
TSLK				S	Sb	06 43 14.0	+0.3
	comp=N,1μm,0.8s						
TSLK	Tsoukalades, L	0.72	15	P	Pg	06 43 02.4	-0.3
PDO	Prodromos	0.76	52	P	Pg	06 43 03.6	+0.1
PDO				AML	AML	06 43 25.0	
	comp=E,5020μm,0.5s						
PDO				AML	AML	06 43 25.6	
	comp=N,4977μm,0.6s						
RLS	Riolos of Patr	0.83	94	P	Pg	06 43 05.1	+0.4
RLS				S	Sg	06 43 15.8	+0.3
	comp=N,1μm,0.4s						
RLS	Riolos of Patr	0.83	94	P	Pg	06 43 05.1	+0.4
RLS				AML	AML	06 43 23.7	
	comp=N,2172μm,0.4s						
RLS				AML	AML	06 43 25.1	
	comp=E,2502μm,0.5s						
PVO	Paravola	1.00	60	P	Pg	06 43 08.1	+0.2
PVO	Paravola	1.00	60	P	Pg	06 43 08.2	+0.3
PVO				AML	AML	06 43 30.3	
	comp=E,3723μm,0.6s						
PVO				AML	AML	06 43 36.5	
	comp=N,4230μm,0.6s						
DRO	Drossia	1.03	99	P	Pg	06 43 08.8	+0.2
DRO	Drossia	1.03	99	P	Pg	06 43 08.8	+0.2
DRO				AML	AML	06 43 32.9	
	comp=E,3711μm,0.6s						
DRO				AML	AML	06 43 39.5	
	comp=N,4548μm,0.6s						
UPR	University Cam	1.09	81	P	Pg	06 43 09.8	+0.1
AMT	Artemida-Makis	1.18	120	P	Pb	06 43 11.8	+0.3
AMT				AML	AML	06 43 40.1	
	comp=E,6170μm,0.7s						
AMT				AML	AML	06 43 40.5	
	comp=N,5135μm,1.0s						
LAKA	Lakka	1.23	84	P	Pb	06 43 12.0	-0.3
LAKA				AML	AML	06 43 40.6	
	comp=N,984μm,1.0s						
LAKA				AML	AML	06 43 44.5	
	comp=E,1366μm,0.9s						
ANX	Ano Chora	1.27	68	P	Pn	06 43 13.2	+0.2
ANX				AML	AML	06 43 39.3	
	comp=N,3635μm,0.7s						
ANX				AML	AML	06 43 42.3	
	comp=E,1980μm,0.5s						
SERG	Sergoula	1.32	77	P	Pn	06 43 12.7	-0.9
SERG				AML	AML	06 43 40.7	
	comp=E,1372μm,1.0s						
SERG				AML	AML	06 43 46.6	
	comp=N,1650μm,0.5s						
TRIZ	Trizonia	1.32	79	P	Pn	06 43 13.0	-0.6
EVR	Evrytania	1.34	54	P	Pn	06 43 13.7	-0.3
EVR				AML	AML	06 43 40.4	
	comp=E,720μm,0.7s						
EVR				AML	AML	06 43 45.9	
	comp=N,1015μm,0.9s						
KLV	Kalavryta, Ach	1.37	93	P	Pn	06 43 14.4	+0.1
KLV				AML	AML	06 43 42.5	
	comp=N,947μm,0.9s						
KLV				AML	AML	06 43 47.6	
	comp=E,856μm,0.7s						
KALE	Kalithea	1.38	78	P	Pn	06 43 13.9	-0.5
KALE				AML	AML	06 43 43.6	
	comp=N,1392μm,0.6s						
KALE				AML	AML	06 43 45.5	
	comp=E,986μm,0.8s						
IGT	Igoumenitsa	1.41	357	P	Pb	06 43 15.6	+0.3
ITM	Ithomi	1.52	128	P	Pn	06 43 17.1	+0.7
ITM				AML	AML	06 43 50.4	
	comp=N,1117μm,0.6s						
ITM				AML	AML	06 43 50.7	
	comp=E,902μm,0.6s						
MAKR	Makrakomi, Fth	1.61	56	P	Pg	06 43 19.9	+0.3
VLX	Vlachokerasia	1.73	115	P	Pb	06 43 21.2	+0.4
AXAR	Agios Charalam	1.87	69	P	Pg	06 43 24.5	-0.2
VIL2	Platees	2.25	87	P	Pb	06 43 28.8	-0.9
IDI	Anoyia	4.57	127	P	Pb	06 44 05.0	-4.4
	comp=E,0.4nm,0.3s,baz=177,slow=5.1,SNR=1.0						
IDI				S	Sn	06 44 56.0	+4.2
	comp=E,2.2nm,0.3s,baz=148,slow=22,SNR=9.9						
IDI				LR	LR	06 46 37.7	
	comp=E,29nm,18.7s,baz=260,slow=48						
FINES	FINESS Array B	23.61	7	P	P	06 47 58.6	-1.3
	comp=E,2.5nm,0.8s,baz=156,slow=9.8,SNR=4.8						
TORD	Torodi Ar. Bea	29.94	219	P	P	06 48 57.6	+0.1
	comp=E,1.5nm,1.0s,baz=34,slow=8.2,SNR=6.6						
MKAR	Makanchi Array	45.40	58	P	P	06 51 06.8	-1.0
	comp=E,0.4nm,0.4s,baz=276,slow=7.5,SNR=12						
ZALV	Zalesovo Beam	45.78	48	P	P	06 51 10.3	-0.4
	comp=E,1.4nm,0.6s,baz=269,slow=9.0,SNR=4.0						

IDC 13 06:43:41.4±3.6, 20.71N×147.11E, h0km, mb3.6/8, mb1 3.7/8, mb1mx3.5/39, mbtmp3.6/8, Error ellipse: s-maj=144.5km s-min=21.4km az=81.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	18.57	93	T	T	07 07 24.5	
	baz=286,slow=74,SNR=1.2						
H11S1	WAKE ISLAND Hy	18.58	93	T	T	07 07 29.7	
	baz=286,slow=74						
H11N1	WAKE ISLAND Hy	18.59	90	T	T	07 07 26.5	
	baz=278						
H11S2	WAKE ISLAND Hy	18.59	93	T	T	07 07 26.8	
	baz=286						
H11N2	WAKE ISLAND Hy	18.59	90	T	T	07 07 26.6	
	baz=278						
H11N3	WAKE ISLAND Hy	18.61	90	T	T	07 07 30.7	
	baz=278						
WRA	Warramunga Arr	42.29	198	P	P	06 51 37.8	+0.8
	0.3nm,0.6s,baz=22,slow=8.9,SNR=4.9						
SONM	Songino Array	42.45	319	P	P	06 51 38.3	+0.1
	0.2nm,0.6s,baz=142,slow=7.2,SNR=1.5						
ASAR	Alice Springs	45.95	197	P	P	06 52 05.2	-1.1
	0.2nm,0.6s,baz=11,slow=5.2,SNR=4.2						
ZALV	Zalesovo Beam	57.26	322	P	P	06 53 30.2	-0.4
	1.2nm,0.4s,baz=124,slow=7.2,SNR=4.4						
MKAR	Makanchi Array	58.06	313	P	P	06 53 36.4	0.0
	0.2nm,0.5s,baz=94,slow=10,SNR=2.7						
KURBB	Kurchatov Arra	60.74	317	P	P	06 53 54.5	-0.4
	1.1nm,0.6s,baz=92,slow=7.4,SNR=7.2						
BVAR	Borovoye Array	65.79	320	P	P	06 54 28.7	+0.4
	0.8nm,0.5s,baz=74,slow=7.9,SNR=5.6						
FINES	FINESS Array B	85.62	336	P	P	06 56 21.7	+0.1
	0.9nm,0.6s,baz=26,slow=3.5,SNR=4.8						

DNK 13 06:46:57.1±1.7, 57.68N×6.93E, h38km±12km, ML2.1, Hypocentre not reviewed by the ISC
BER 13 06:46:59.2±1.8, 57.71N×7.25E, h10km±7km, ML1.6, 1C, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNART	Snartemo	0.63	358	⇑iP	Pg	06 47 10.4	-1.0
SNART				eS	Sg	06 47 19.5	-0.2
SNART				IAML		06 47 21.7	
	comp=Z,88nm,0.6s						
SNART	Snartemo	0.63	358	e		06 47 09.9	
	baz=195,slow=16						
SNART				iP		06 47 10.5	
SNART				iS		06 47 19.9	
SNART				IAML		06 47 21.9	
	comp=Z,31nm,0.3s						
BLS5	Blasjo	1.77	347	eP	Pn	06 47 29.2	-0.7
BLS5				eS	Sn	06 47 49.9	-2.6
BLS5				IAML		06 47 59.0	
	comp=Z,7.5nm,0.3s						
ODD1	Odda	2.23	352	eP	Pn	06 47 34.7	-1.6
ODD1				eS	Sn	06 47 59.6	-4.4
ODD1				IAML		06 48 06.6	
	comp=Z,7.9nm,0.4s						
KONO	Kongsberg	2.30	31	eP	Pn	06 47 35.9	-1.3
KONO				eS	Sn	06 48 03.1	-2.4
KONO				IAML		06 48 10.2	
	comp=Z,6.4nm,0.3s						
TJOU	Tjoern	2.36	80	iP	Pn	06 47 36.0	-2.0
TJOU				iS	Sn	06 48 04.9	-2.0
STRU	Stroemstad	2.46	56	eP	Pn	06 47 37.4	-2.0
STRU				eS	Sn	06 48 05.5	-3.9
ONAU	Onsala	2.53	95	iP	Pn	06 47 38.0	-2.3
ONAU				eS	Sn	06 48 07.8	-3.5
SKAR	Skarslia	3.03	10	eS	Sn	06 48 19.8	-3.8
SKAR				IAML		06 48 37.2	
	comp=Z,4.8nm,0.3s						
NAO01	NORSAR Array S	3.66	29	eS	Sn	06 48 34.5	-4.5
NAO01				IAML		06 48 54.3	
	comp=Z,3.3nm,0.5s						
NC602	NORSAR Array S	3.75	34	eP	Pn	06 47 54.6	-2.5
NC602				eS	Sn	06 48 35.8	-5.5
NBO00	NORSAR Array S	3.79	27	eS	Sn	06 48 38.9	-3.4
NBO00				IAML		06 49 06.3	
	comp=Z,3.2nm,0.5s						
NB201	NORSAR Array S	3.94	30	eS	Sn	06 48 41.8	-4.2
NB201				IAML		06 49 14.8	
	comp=Z,4.7nm,0.8s						
NC204	NORSAR Array S	4.00	25	eS	Sn	06 48 42.2	-5.3
NC204				IAML		06 49 09.6	
	comp=Z,2.8nm,0.6s						
NC303	NORSAR Array S	4.10	29	eS	Sn	06 48 45.5	-4.5
NC303				IAML		06 48 48.9	
	comp=Z,2.3nm,0.7s						

THE 13 06:47:11.4, 38.29N×20.43E, h11km±1km, ML3.6/12, Error ellipse: s-maj=1.2km s-min=0.3km az=261.0
ATH 13 06:47:11.1, 38.29N×20.45E, h12km±1km, ML2.8/13, Error ellipse: s-maj=2.1km s-min=0.8km az=240.0
ISC 13 06:47:11.2±0.9, 38.29N±0.02×20.46E±0.03, h12km±5km, n48, σ0.33/70, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF1	Kardakata, Kep	0.01	121	P	Pg	06 47 13.3	-0.1
KEF1				S	Sg	06 47 14.5	-0.3
KEF4	Livadi, Kephal	0.04	222	P	Pg	06 47 13.3	-0.1
KEF4				S	Sg	06 47 15.0	0.0
AGT1	Agia Thekli	0.07	239	P	Pg	06 47 13.6	-0.1
AGT1				S	Sg	06 47 15.2	-0.3
	132μm,0.2s						
LXR1	Lixouri, Cepha	0.09	189	P	Pg	06 47 14.0	+0.1
LXR1				S	Sg	06 47 16.0	+0.2

63µm,0.2s
LXRA Lixouri, Kepha 0.09 190 P Pg 06 47 14.0 +0.2
LXRA S Sg 06 47 15.5 -0.3
ARG2 Argostoli 0.11 167 P Pg 06 47 14.3 +0.1
ARG2 S Sg 06 47 16.6 +0.3
52µm,0.2s
ARGA Argostoli. Kep 0.11 170 P Pg 06 47 14.2 0.0
ARGA S Sg 06 47 16.1 -0.2
CHV1 Chavriata, Kef 0.12 210 P Pg 06 47 14.3 0.0
CHV1 S Sg 06 47 16.6 +0.1
87µm,0.1s
KEF3 Kipouria, Keph 0.12 226 P Pg 06 47 14.3 0.0
KEF3 S Sg 06 47 16.6 +0.1
KEF2 Argostoli. Kep 0.12 168 P Pg 06 47 14.3 0.0
KEF2 S Sg 06 47 15.7 -0.9
VSK1 VASILIKIADES 0.15 34 P Pg 06 47 15.1 +0.3
VSK1 S Sg 06 47 17.8 +0.5
32µm,0.4s
VLS Valsamata 0.15 136 P Pg 06 47 14.9 +0.1
VLS S Sg 06 47 17.5 +0.2
54µm,0.1s
VLS Valsamata 0.15 136 P Pg 06 47 14.8 +0.1
VLS S Sg 06 47 17.5 +0.2
VLS AML AML 06 47 17.7
comp=N,96368µm,0.2s
VLS AML AML 06 47 17.7
KONA Konidatara, Ke 0.17 33 P Pg 06 47 15.2 +0.2
KONA S Sg 06 47 17.4 -0.4
EVGI Lefkada island 0.37 25 P Pg 06 47 18.9 +0.2
EVGI S Sb 06 47 24.7 -0.8
EVGI Lefkada island 0.37 25 P Pg 06 47 18.8 +0.2
EVGI S Sg 06 47 24.1 +0.4
VLMS Volimes, Zakyn 0.44 158 P Pg 06 47 19.8 -0.1
VLMS AML AML 06 47 29.1
comp=E,11837µm,0.2s
VLMS AML AML 06 47 29.4
comp=N,11041µm,0.2s
MGNA Meganis 0.45 35 P Pg 06 47 20.1 -0.1
LKD2 Lefkada island 0.53 17 P Pg 06 47 21.3 -0.3
LKD2 S Sg 06 47 28.8 +0.2
comp=N,1µm,0.5s
LKD2 Lefkada island 0.53 17 P Pg 06 47 21.3 -0.3
LKD2 AML AML 06 47 32.6
comp=E,2176µm,0.3s
LKD2 AML AML 06 47 37.2
comp=N,1919µm,0.4s
AST1 Astakos 0.56 63 P Pg 06 47 22.3 +0.1
AST1 S Sb 06 47 30.8 -0.1
comp=N,4µm,0.3s
TSLK Tsoukalades, L 0.56 16 P Pg 06 47 22.0 -0.2
TSLK S Sb 06 47 30.6 -0.4
comp=N,1µm,0.4s
TSLK Tsoukalades, L 0.56 16 P Pg 06 47 22.1 -0.2
ZAK2 Zakynthos 0.61 145 P Pg 06 47 23.1 0.0
ZAK2 S Sb 06 47 33.2 +0.9
comp=N,10µm,0.4s
PDO Prodromos 0.65 61 P Pg 06 47 24.0 0.0
PDO S Sb 06 47 33.6 0.0
comp=N,3µm,0.4s
PDO Prodromos 0.65 61 P Pg 06 47 23.9 0.0
PDO AML AML 06 47 37.9
comp=E,4040µm,0.4s
PDO AML AML 06 47 38.6
comp=N,4212µm,0.5s
KRI1 kERI 0.68 155 P Pg 06 47 24.0 -0.5
KRI1 S Sb 06 47 35.0 +0.5
comp=N,3µm,0.2s
RLS Riolos of Patr 0.83 106 P Pg 06 47 27.2 0.0
RLS AML AML 06 47 45.1
comp=N,444µm,0.4s
RLS AML AML 06 47 48.6
comp=E,676µm,0.4s
PVO Paravola 0.90 68 P Pg 06 47 28.9 +0.2
PVO Paravola 0.90 68 P Pb 06 47 29.1 +0.2
PVO AML AML 06 47 48.3
comp=N,1600µm,0.4s
PVO AML AML 06 47 49.9
comp=E,1895µm,0.4s
DRO Drossia 1.04 108 P Pb 06 47 31.3 +0.1
DRO AML AML 06 47 53.3
comp=N,876µm,0.4s
DRO AML AML 06 48 03.1
comp=E,1299µm,0.4s
ANX Ano Chora 1.19 75 P Pn 06 47 33.4 -0.4
ANX AML AML 06 47 57.4
comp=N,1761µm,0.6s
ANX AML AML 06 47 57.7
comp=E,1507µm,0.6s
LAKA Lakka 1.20 92 P Pn 06 47 33.5 -0.4
LAKA AML AML 06 47 59.3
comp=E,388µm,0.6s
LAKA AML AML 06 47 59.9
comp=N,398µm,0.6s
EVR Evrytania 1.23 59 P Pn 06 47 34.0 -0.4
EVR AML AML 06 47 59.6
comp=E,394µm,0.3s
EVR AML AML 06 48 03.4
comp=N,379µm,0.5s
AMT Artemida-Makis 1.24 127 P Pg 06 47 35.2 +0.1
AMT AML AML 06 48 07.2
comp=N,756µm,0.4s
AMT AML AML 06 48 10.4
comp=E,658µm,0.5s
IGT Igoumenitsa 1.25 356 P Pn 06 47 34.5 -0.1
SERG Sergoula 1.27 84 P Pn 06 47 34.4 -0.4
SERG Sergoula 1.27 84 P Pn 06 47 34.2 -0.6
SERG AML AML 06 47 59.5
comp=N,757µm,0.5s
SERG AML AML 06 48 01.6
comp=E,513µm,0.3s
TRIZ Trizonia 1.27 86 P Pn 06 47 34.3 -0.5
TRIZ Trizonia 1.27 86 P Pn 06 47 34.1 -0.8
KALE Kalithea 1.33 85 P Pn 06 47 35.2 -0.5
KALE AML AML 06 48 03.0
comp=N,459µm,0.5s
KALE AML AML 06 48 03.5
comp=E,339µm,0.6s
KLV Kalavryta, Ach 1.36 100 P Pn 06 47 36.1 +0.1
JAN Janina 1.40 13 P Pg 06 47 38.0 -0.2
MAKR Makrakomi, Fth 1.50 60 P Pb 06 47 38.9 -0.1
KEK Kerkira 1.52 340 P Pn 06 47 38.7 +0.5
MEV Metsovon 1.61 22 P Pg 06 47 42.2 -0.1
AGG Agios Georgios 1.64 63 P Pb 06 47 41.9 +0.4
KPRO Kipourio 1.81 23 P Pb 06 47 44.8 +0.5

PRU 13 06:47:29.3±0.0, 50.39N×18.80E, h0km, Poland
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
OJC Ojcow 0.66 105 ePg Pg 06 47 41.4 -0.6
OJC eSg Sg 06 47 50.4 -0.2
OKC Ostrava-Krasne 0.69 217 ePG Pg 06 47 42.3 -0.3
OKC eSG Sg 06 47 51.2 -0.4
comp=Z,7.5nm,0.7s
MORC Moravsky Berou 1.02 233 ePG Pg 06 47 47.8 -1.0
MORC eSG Sg 06 48 01.7 -0.2
KRLC Kraliky 1.33 257 ePG Pg 06 47 53.6 -1.2
KRLC eSG Sb 06 48 12.5 -0.4
comp=Z,5.9nm,0.3s
NIE Niedzica 1.37 135 ePg Pg 06 47 55.0 -0.6
NIE eSg Sn 06 48 14.3 -0.3
DPC Dobruska-Polom 1.59 270 ePG Pn 06 47 58.6 -0.1
DPC eSG Sb 06 48 20.1 0.0
OSTC Ostas 1.66 277 eSG Sb 06 48 22.3 +0.1
CHVC Chvalec 1.77 278 ePG Pn 06 48 01.6 +0.5
CHVC eSG Sb 06 48 25.0 -0.2

IDC 13 06:54:12.0±1.5, 48.48N×148.79E, h396km±19km, mb2.6/3, mb1 2.9/7, mb1mx2.7/34, mbtmp3.6/7, Error ellipse: s-maj=28.2km s-min=15.9km az=138.0
ISC 13 06:54:12.0±0.8, 48.5N±0.1×148.8E±0.1, h400km, n8, σ1§01/9, Northwest of Kuril Islands
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ASAJ Asahikawa 6.13 227 P Pn 06 55 45.1 -1.0
1.5nm,0.3s,baz=62,slow=19.9,SNR=9.9
ASAJ S S 06 57 04.0 +1.2
0.4nm,0.3s,baz=19,slow=18,SNR=1.5
PETK Petropavlovsk- 7.29 47 P Pn 06 55 57.8 -0.8
0.4nm,0.3s,baz=226,slow=10,SNR=8.6
KLR Kul'dur 11.27 280 P Pn 06 56 45.2 +0.7
0.2nm,0.3s,baz=74,slow=8.7,SNR=5.4
KSRS Korea Array 18.78 242 P P 06 58 04.6 -0.1
0.3nm,0.3s,baz=43,slow=9.7,SNR=4.8
GUMO Guam 34.95 187 P P 07 00 28.0 -0.2
22nm,0.3s,baz=317,slow=4.6,SNR=3.7
MKAR Makanchi Array 43.56 294 P P 07 01 37.2 -0.9
0.2nm,0.5s,baz=64,slow=7.6,SNR=2.2
YKA Yellowknife Ar 51.26 36 P P 07 02 36.8 +0.6
0.2nm,0.3s,baz=302,slow=7.1,SNR=3.1
TXAR Lajitas Array 79.11 58 P P 07 05 34.7 +1.2
0.3nm,0.6s,baz=285,slow=4.4,SNR=7.1

IDC 13 06:55:57.2±270.0, 14.49N×112.30W, h0km, Error ellipse: s-maj=178.2km s-min=113.4km az=90.0, Off coast of Mexico
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
I57US PINON FLAT INF 19.40 350 i 08 54 30.0
baz=163,slow=321,SNR=2.0
I56US NEWPORT INFRAS33.91 354 i 10 37 40.0
baz=172,slow=316,SNR=1.5
I21FR MARQUESAS ISLA36.09 232 i 10 37 30.0
baz=54,slow=315,SNR=2.8
I10CA LAC DU BONNET 38.00 17 i 10 53 50.0
baz=197,slow=336,SNR=6.1
I13CL EASTER ISLAND 41.47 176 i 11 04 40.0
baz=353,slow=316,SNR=2.2
I08BO LAS PENAS INFR 52.98 124 i 12 27 20.0
baz=305,slow=328,SNR=2.1
I18DK QAANAAQ INFRAS66.60 9 i 14 13 15.0
baz=200,slow=326,SNR=2.3

IDC 13 06:56:58.1±1.5, 38.98N×141.88E, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.4/31, mbtmp3.5/3, MS2.7/1, Ms1 2.7/1, ms1mx2.2/32, Error ellipse: s-maj=49.8km s-min=34.8km az=104.0
JMA 13 06:57:05.4, 39.01N×142.19E, h48km±1km, M3.5
JMA Felt I J1.
ISC 13 06:57:04.6±1.4, 38.97N±0.05×142.2E±0.1, h51km±12km, n23, σ1§15/28, mb3.4/3, Near east coast of eastern Honshu
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
OFUJ Ofunato 0.45 284 P Pn 06 57 15.6 +0.3
OFUJ S Sn 06 57 22.9 -0.2
JKMT Kesennumamotoy 0.61 255 P Pn 06 57 17.6 +0.4
JKMT eS Sn 06 57 26.1 -0.3
MIYJ Miyakonagasawa 0.69 332 P Pn 06 57 18.1 -0.1
MIYJ eS Sn 06 57 27.2 -0.8
JMK Ichinoseki 0.79 269 P Pn 06 57 19.9 +0.4
JMK S Sn 06 57 30.4 0.0
JIO Ouri 0.86 234 P Pn 06 57 21.0 +0.6
JIO S Sn 06 57 31.8 -0.3
JOM Ohasama 0.89 305 P Pn 06 57 21.2 +0.4
JOM eS Sn 06 57 32.4 -0.3
JTH Tanohata 1.01 344 P Pn 06 57 22.8 +0.4
JTH eS Sn 06 57 35.3 -0.3
JRG Rokugo 1.31 289 P Pn 06 57 27.0 +0.5
JRG eS Sn 06 57 43.8 +0.9
JOU Okura 1.37 244 P Pn 06 57 28.1 +0.8
JOU eS Sn 06 57 45.2 +0.9
JYK Kaneyama 1.46 269 P Pn 06 57 29.8 +1.3
JANG Nango 1.51 339 P Pn 06 57 29.6 +0.4
JANG eS Sn 06 57 47.6 -0.1
JMM Marumori 1.58 226 P Pn 06 57 30.8 +0.7
JMM eS Sn 06 57 49.9 +0.5
MAT Matsushiro 4.00 234 P Pn 06 57 59.2 -4.2
MAT S Sn 06 58 04.3 +0.9
MA2 Magadan 21.33 12 LR LR 07 11 34.7
comp=Z,18nm,18.3s,baz=43,slow=41
H11N2 WAKE ISLAND Hy 28.65 125 T T 07 33 31.7
baz=318,slow=76,SNR=38
H11N1 WAKE ISLAND Hy 28.66 125 T T 07 33 25.0
baz=318,slow=76,SNR=36
H11N3 WAKE ISLAND Hy 28.67 125 T T 07 33 24.9
baz=318,slow=76,SNR=33
H11S1 WAKE ISLAND Hy 29.44 127 T T 07 34 21.0
baz=318,slow=76,SNR=9.9
H11S3 WAKE ISLAND Hy 29.44 127 T T 07 34 25.0
baz=318,slow=76,SNR=22
H11S2 WAKE ISLAND Hy 29.45 127 T T 07 34 22.4
baz=318,slow=76,SNR=12
MKAR Makanchi Array 43.66 301 P P 07 05 02.3 -1.9
0.2nm,0.5s,baz=81,slow=12,SNR=1.5
ILAR Eielson Array 47.52 33 P P 07 05 35.9 +1.6
0.3nm,0.7s,baz=267,slow=5.9,SNR=4.7
WRA Warramunga Arr 59.07 189 P P 07 06 59.6 +0.2
0.7nm,0.3s,baz=8.7,slow=5.1,SNR=4.6

DNK 13 07:05:33.6±1.8, 80.32N×0.63W, h40km±22km, ML2.6, Hypocentre not reviewed by the ISC
BER 13 07:05:31.1±2.1, 80.26N×1.03W, h10km, ML2.0, Confirmed Earthquake, North of Svalbard
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KBS Kingsbay 2.71 113 eP Pn 07 06 13.1 -1.4
KBS eS Sn 07 06 42.1 -5.2
KBS IAML 07 06 43.5
comp=Z,12nm,0.2s
KBS Kingsbay 2.71 113 iP 07 06 13.2
KBS iS 07 06 41.3
KBS IAML 07 06 48.0
comp=Z,21nm,0.4s
NOR Nord 2.81 306 iP Pn 07 06 15.1 -0.9
NOR iS Sn 07 06 45.2 -4.7
NOR Nord 2.81 306 iP Pn 07 06 15.2 -0.9
NOR iS Sn 07 06 45.2 -4.7
NOR IAML 07 06 49.0
comp=Z,2.8nm,0.3s
NOR Nord 2.81 306 iP 07 06 15.2
NOR iS 07 06 45.2
NOR IAML 07 06 49.0
comp=Z,2.8nm,0.3s
SPA0 Spitsbergen Ar 3.87 114 eP Pn 07 06 29.7 -0.8
SPA0 eS Sn 07 07 10.6 -5.2
SPA0 IAML 07 07 24.1
comp=Z,7.7nm,0.5s
HSPB Hornsund (broa 4.61 127 eP Pn 07 06 39.5 -1.1
HSPB eS Sn 07 07 29.6 -4.5
HSPB IAML 07 07 32.2
comp=Z,7.9nm,0.8s
DBG Daneborg 7.27 225 iP Pn 07 07 15.1 -2.0
DBG iS Sn 07 08 29.4 -10
DBG IAML 07 08 34.0
comp=Z,6.0nm,0.4s
DBG Daneborg 7.27 225 iP 07 07 15.1
DBG iS 07 08 29.4
DBG IAML 07 08 34.0
comp=Z,6.0nm,0.4s
SUMG Summit 11.38 248 iP Pn 07 08 11.3 -2.4
SUMG Summit 11.38 248 iP Pn 07 08 11.4 -2.3
SUMG eS Sn 07 10 06.7 -14
SUMG Summit 11.38 248 iP 07 08 11.4
SUMG eS 07 10 06.7

IDC 13 07:21:40.8±1.0, 24.29S×67.03W, h165km±11km, mb3.3/4, mb1 3.4/11, mb1mx3.7/11, Error ellipse: s-maj=17.3km s-min=11.7km az=80.0
SJA 13 07:21:41.6±0.7, 24.31S×67.16W, h176km±8km, ML3.4, MW3.2
GUC 13 07:21:43.8±0.6, 24.18S×67.47W, h210km±8km, ML4.1
ISC 13 07:21:41.7±0.8, 24.26S±0.05×67.19W±0.05, h181km±8km, n35, σ1§26/56, mb3.5/5, 6C-4D, Chile-Argentina border region
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HJA Humahuaca 1.93 58 iP Pn 07 22 19.8 +1.2
HJA eS Sn 07 22 47.0 0.0
LVC Limon Verde 2.28 316 eP Pn 07 22 23.7 +1.4
LVC eS Sn 07 22 53.9 +0.2
LVC Limon Verde 2.28 316 P Pn 07 22 23.5 +1.2
27nm,0.3s,baz=139,slow=7.0,SNR=175
LVC S Sn 07 22 53.5 -0.3
6.4nm,0.3s,baz=129,slow=9.1,SNR=6.5
LVC Limon Verde 2.28 316⇑iP Pn 07 22 23.5 +1.2
LVC eS Sn 07 22 54.0 +0.2
LVC IAML 07 22 57.5
comp=Z,130nm,0.5s
PB15 IPOC Station P 2.34 296⇑iP Pn 07 22 24.2 +1.4
PB15 iS Sn 07 22 54.8 +0.1
GO02 Mina Guanaco 2.37 247⇑iP Pn 07 22 24.6 +1.4
GO02 iS Sn 07 22 56.9 +1.5
GO02 IAML 07 22 59.0
comp=E,692nm,0.1s
YJA Yavi 2.58 37⇓iP Pn 07 22 26.7 +0.9
YJA eS Sn 07 23 00.8 +0.7
PB06 IPOC Station P 2.68 305⇓iP Pn 07 22 27.8 +1.0
PB06 iS Sn 07 23 01.0 -0.7
PB06 IAML 07 23 03.8
comp=N,742nm,0.3s
PB06 IPOC Station P 2.68 305 iP Pn 07 22 27.7 +1.0
PB06 eS Sn 07 23 01.5 -0.2
PB14 IPOC Station P 2.95 262 eP Pn 07 22 31.0 +0.8
PB14 eS Sn 07 23 07.3 -0.5
PB14 IAML 07 23 08.7
comp=E,214nm,0.5s
PB14 IPOC Station P 2.95 262 iP Pn 07 22 30.9 +0.8
PB14 eS Sn 07 23 07.1 -0.8
PB09 IPOC Station P 3.09 322⇓iP Pn 07 22 33.2 +1.5
PB09 iS Sn 07 23 10.1 -0.6
PB09 IAML 07 23 11.8
comp=N,318nm,0.5s
PB05 IPOC Station P 3.10 296 iP Pn 07 22 32.5 +0.8
PB05 iS Sn 07 23 08.8 -1.9
PB05 IAML 07 23 10.8
comp=E,252nm,0.2s
PB10 IPOC Station P 3.17 283⇑iP Pn 07 22 33.3 +0.8
PB10 iS Sn 07 23 10.2 -1.8
PB10 IAML 07 23 14.4
comp=E,194nm,0.2s
PB10 IPOC Station P 3.17 283 iP Pn 07 22 33.5 +1.0
PB10 eS Sn 07 23 11.4 -0.6
PB03 IPOC Station P 3.23 312⇓iP Pn 07 22 34.2 +0.9
PB03 iS Sn 07 23 11.9 -1.6
PB03 IAML 07 23 13.9
comp=E,343nm,0.3s
PB04 IPOC Station P 3.33 304 iP Pn 07 22 35.4 +0.8
PB04 iS Sn 07 23 14.0 -1.8
PB07 IPOC Station P 3.54 315⇑iP Pn 07 22 37.6 +0.4
PB01 IPOC Station P 3.84 326⇑iP Pn 07 22 40.8 -0.2
PB01 iS Sn 07 23 24.9 -2.3
GO03 Copiap 4.31 219 iP Pn 07 22 46.7 -0.1
PB08 IPOC Station P 4.48 336⇑iP Pn 07 22 49.8 +0.4
PB08 iS Sn 07 23 40.9 -1.5
CFA Coronel Fontan 7.38 187 P Pn 07 23 26.9 0.0
comp=E,0.3nm,0.3s,baz=344,slow=9.9,SNR=23
CFA S Sn 07 24 46.4 -3.7
comp=E,0.7nm,0.3s,baz=52,slow=17,SNR=6.0
LPAZ La Paz 7.98 353 P Pn 07 23 35.5 +0.2
comp=E,0.7nm,0.3s,baz=145,slow=6.5,SNR=17
LPAZ S Sn 07 25 02.8 -2.4
comp=E,0.2nm,0.3s,baz=341,slow=20,SNR=4.2
LPAZ La Paz 7.98 353⇑iP Pn 07 23 36.0 +0.7
CPUP Villa Florida 9.16 105 P Pn 07 23 48.2 -2.0
comp=E,0.1nm,0.3s,baz=317,slow=10,SNR=2.9
SIV San Ignacio 10.03 36 P Pn 07 23 59.4 -2.2
comp=E,0.4nm,0.3s,baz=226,slow=16,SNR=9.4
SIV S Sn 07 25 39.5 -14
comp=E,0.0nm,0.3s,baz=232,slow=18,SNR=2.5
PLCA Paso Flores 16.67 189 P Pn 07 25 25.6 +0.6
comp=E,0.1nm,0.3s,baz=353,slow=9.9,SNR=3.8
BDFB Brasilia 19.94 68 P P 07 25 59.1 -0.9
comp=E,0.4nm,0.3s,baz=230,slow=13,SNR=11
PMSA Palmer Station 40.57 178 P P 07 29 01.2 -1.8
comp=E,30nm,1.1s,baz=355,slow=11,SNR=2.5
TORD Torodi Ar. Bea 76.82 69 P P 07 33 14.1 +0.2
comp=E,0.3nm,0.4s,baz=273,slow=6.3,SNR=4.4
PDAR Pinedale Array 77.28 329 P P 07 33 17.4 +1.2
comp=E,0.2nm,0.5s,baz=128,slow=7.0,SNR=2.1
BOSA Boshof 80.77 117 P P 07 33 35.8 +0.3
comp=E,1.3nm,0.7s,baz=300,slow=8.1,SNR=1.9
YKA Yellowknife Ar 94.30 340 P P 07 34 40.9 +1.0
comp=E,0.2nm,0.6s,baz=133,slow=4.1,SNR=5.6
ASAR Alice Springs 128.15 205 PKP PKiKP 07 40 28.1 +0.5
comp=E,0.4nm,0.7s,baz=119,slow=2.1,SNR=4.9
WRA Warramunga Arr 131.32 207 PKP PKiKP 07 40 35.1 +1.0
comp=E,0.3nm,0.4s,baz=161,slow=1.6,SNR=6.2

NNC 13 07:33:16.7±0.4, 50.01N×78.64E, h0km, mb3.7, mpv3.2, 22C-5D, Error ellipse: s-maj=4.5km s-min=2.2km az=66.0, Suspected Mining explosion., Eastern Kazakhstan
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KUR07 Kurchatov Arra 0.58 352 ⇑P Pg 07 33 28.1 +0.3
KUR07 ⇑S Sg 07 33 36.8 +1.6
KUR06 Kurchatov Arra 0.60 353 ⇑P Pg 07 33 28.3 +0.3
KUR06 ⇓S Sg 07 33 37.1 +1.3
KUR14 Kurchatov Arra 0.60 357 ⇑P Pg 07 33 28.5 +0.2
KUR14 ⇑S Sg 07 33 36.9 +0.8
KUR15 Kurchatov Arra 0.61 355 ⇑P Pg 07 33 28.5 +0.2
KUR15 ⇑S Sg 07 33 37.4 +1.2
KURBB Kurchatov Arra 0.61 354 ⇑P Pg 07 33 28.7 +0.3
46nm,0.3s
KURBB ⇑S Sg 07 33 37.4 +1.0
412nm,0.7s
KUR16 Kurchatov Arra 0.62 352 ⇑P Pg 07 33 28.8 +0.2
KUR16 ⇑S Sg 07 33 37.7 +1.0
KUR17 Kurchatov Arra 0.63 350 ⇑P Pg 07 33 29.0 +0.3
KUR17 ⇓S Sg 07 33 37.9 +1.0
KUR05 Kurchatov Arra 0.63 354 ⇑P Pg 07 33 28.9 0.0
KUR05 ⇑S Sg 07 33 38.1 +1.0
KUR04 Kurchatov Arra 0.65 355 ⇑P Pg 07 33 29.4 +0.2
KUR04 ⇑S Sg 07 33 38.2 +0.5
SEM Semipalatinsk 1.11 68 P Pg 07 33 37.3 -0.5
11nm,0.2s
SEM S Sg 07 33 52.4 +0.2
79nm,0.2s
BRZS Berezniki 3.85 272 Pg Pb 07 34 27.0 +1.7
7.9nm,0.5s
BRZS Lg Lg 07 35 18.7
27nm,0.5s
MAKZ Makanchi 3.90 144 ⇓Pn Pn 07 34 18.8 +0.9
MAKZ ⇑Pg Pb 07 34 26.1 -0.2
5.6nm,0.9s
MAKZ ⇑Lg Lg 07 35 19.9
12nm,0.5s
MK31 Makanchi Array 4.04 142 Pn Pn 07 34 20.8 +1.1
0.2nm,0.1s,baz=327,slow=10,SNR=172
MK31 ⇑Pg Pb 07 34 28.4 -0.2
0.8nm,0.2s,baz=325,slow=14,SNR=7.1
MK31 Lg Lg 07 35 24.8
7.1nm,0.4s,baz=327,slow=26,SNR=9.5
KAPS Kapalarasan 4.75 174 Pg Pb 07 34 44.4 -3.4
1.8nm,0.3s
KAPS Lg Lg 07 35 47.1
12nm,0.3s
ZSN Zaisan 4.85 120 Pg Pb 07 34 44.5 +2.0
4.5nm,0.3s
ZSN Lg Lg 07 35 47.2
12nm,0.6s
ZAA0 Zalesovo Array 5.49 42 ⇑Pn Pn 07 34 41.4 +1.8
0.5nm,0.5s
ZAA0 ⇓Lg Lg 07 36 09.9
1.3nm,0.8s
BRVK Borovoye 6.04 304 ⇑Pn Pn 07 34 46.6 -0.6
BRVK ⇓Sn Sn 07 35 55.8 -1.2
BRVK ⇑Lg Lg 07 36 25.7

IDC 13 07:34:17.6±0.6, 35.94N×82.44E, h0km, mb4.0/18, mb1 4.2/23, mb1mx4.1/37, mbtmp4.1/23, ML4.1/4, MS3.5/18, Ms1 3.5/18, ms1mx3.3/40, Error ellipse: s-maj=17.6km s-min=12.5km az=44.0
BJI 13 07:34:19.8±0.0, 36.11N×82.46E, h6km, mB4.6/15, mb4.2/21, ML4.5/7, Ms4.1/14, Ms7 3.8/13
NEIC 13 07:34:20.5±1.3, 36.07N±0.06×82.47E±0.09, h17km±5km, mb4.3/18, Error ellipse: s-maj=11.1km s-min=9.3km az=88.0
MOS 13 07:34:20.9±1.5, 36.12N×82.41E, h28km, mb4.3/16, Error ellipse: s-maj=8.7km s-min=4.9km az=110.2
NNC 13 07:34:23.3±3.6, 36.31N×82.44E, h16km±27km, mb4.3, mpv4.6, Error ellipse: s-maj=30.7km s-min=20.2km az=117.0
ISC 13 07:34:19.5±0.4, 36.02N±0.04×82.45E±0.04, h10km, n156, σ1§91/163, mb4.1/32, MS3.4/16, 11C-9D, Southern

Xinjiang

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
JOSI Joshimath 5.96 205 ex Pn 07 35 53.6 +5.6
KSH Kashi 6.21 306 Pn Pn 07 35 52.8 +1.5
KSH Sn Sn 07 37 02.9 +0.6
KSH smax smax
comp=N,1μm,1.3s
KSH smax smax
comp=E,870nm,0.8s
KSH LR LR
comp=Z,2μm,7.2s
DHRM DHARAMSHALA 6.33 235 eP Pg 07 36 20.2 -0.6
DHRM eS Sg 07 37 40.1 -2.8
DHRM IAML 07 37 00.9
comp=E,20nm,0.4s
SMLA Simla 6.57 224 ex Pg 07 36 22.5 -2.9
SMLA ex Sg 07 37 52.5 +2.0
SMLA IAML 07 37 56.5
comp=E,5.9nm,0.4s
SMLA IAML 07 37 57.4
comp=N,7.8nm,0.6s
DDI Dehra Dun 6.77 214 ex Sg 07 37 53.3 -3.5
KDJ Kajisay 7.35 328 Pn 07 36 09.4 +2.4
KDJ Sn Sn 07 37 29.7 -0.9
KDJ Kajisay 7.35 328 P Pn 07 36 10.4 +3.3
NRN Naryn 7.39 319 Pn Pn 07 36 07.2 -0.5
NRN Naryn 7.39 319 P Pn 07 36 07.2 -0.5
PDGK Podgornoye 7.65 344 ⇓Pn Pn 07 36 12.2 +1.0
comp=N,23nm,0.6s
PDGK ⇑Sn Sn 07 37 35.4 -2.5
comp=N,149nm,0.8s
PDGK Podgornoye 7.65 344 P Pn 07 36 12.1 +1.0
PDGK S Sn 07 37 35.4 -2.5
DANN Dangsing 7.73 171 eP Pn 07 36 12.6 +0.2
comp=N,35nm,0.5s
BOOM Boomskoye usch 8.20 324 Pn 07 36 18.5 -0.2
BOOM Boomskoye usch 8.20 324 P Pn 07 36 18.5 -0.2
GKN Gorkha 8.20 166 eP Pn 07 36 20.0 +1.2
comp=N,26nm,0.4s
KZA Kyzart 8.24 319 P Pn 07 36 22.7 +3.2
SNR=9.2
KOLN Koldanda 8.28 173 eP Pn 07 36 20.5 +0.6
comp=N,87nm,1.1s
GUN Gumba 8.59 159 eP Pn 07 36 23.9 -0.4
comp=N,42nm,0.5s
DMN Daman 8.68 164 eP Pn 07 36 26.8 +1.3
comp=N,25nm,0.6s
UCH Uchtor 8.74 318 P Pn 07 36 28.5 +2.1
SNR=8.2
WMQ Urumqi 8.77 26 ePn Pn 07 36 26.0 -0.5
WMQ Sn Sn 07 37 58.6 -6.8
WMQ Urumqi 8.77 26 eP Pn 07 36 30.3 +3.8
WMQ S Sn 07 38 04.5 -0.9
WMQ smax smax
comp=N,250nm,0.8s
WMQ smax smax
comp=N,340nm,0.9s
WMQ Urumqi 8.77 26 Pn 07 36 25.3 -1.2
WMQ Urumqi 8.77 26 P Pn 07 36 25.3 -1.2
PKIN Phulchoki 8.78 163 eP Pn 07 36 27.5 +0.7
comp=N,28nm,0.6s
PKI Pulchoki 8.79 163 eP Pn 07 36 26.6 -0.4
comp=N,39nm,0.7s
JIRN Jiri 8.92 158 eP Pn 07 36 29.7 +0.9
comp=N,138nm,0.7s
AAK Ala-Archa 9.03 319 Pn Pn 07 36 32.1 +1.9
comp=N,0.5nm,0.3s,baz=131,slow=8.0,SNR=17
AAK Pg 07 37 03.3
comp=N,1.4nm,0.3s,baz=146,slow=13,SNR=4.4
AAK Lg Lg 07 39 01.6
comp=N,2.3nm,0.3s,baz=330,slow=16,SNR=5.3
AAK Ala-Archa 9.03 319 P Pn 07 36 32.9 +2.7
SNR=7.4
AAK Ala-Archa 9.03 319 Pn 07 36 29.7 -0.4
AAK Ala-Archa 9.03 319 d iP Pn 07 36 33.2 +3.1
ARSB Arslanbob 9.10 308 Pn 07 36 30.9 -0.1
ARSB Arslanbob 9.10 308 P Pn 07 36 30.9 -0.1
AML Almayashu 9.14 315 P Pn 07 36 33.5 +1.7
SNR=17
CHMS Chumysh 9.16 322 P Pn 07 36 34.0 +2.3
SNR=7.3
EKS2 Erkin-Say 9.44 317 P Pn 07 36 39.4 +3.7
SNR=9.7
RAMN Ramite 9.71 157 eP Pn 07 36 38.3 -1.2
comp=N,60nm,0.7s
TAPN Taplejung 9.73 151 eP Pn 07 36 39.6 -0.3
comp=N,9.5nm,0.4s
BTK Batken 10.02 297 Pn Pn 07 36 43.6 0.0
BTK Batken 10.02 297 P Pn 07 36 43.6 0.0
ODAN Odare 10.05 154 eP Pn 07 36 43.3 -1.0
comp=N,66nm,1.0s
MK31 Makanchi Array 10.77 359 Pn Pn 07 36 53.2 -0.5
comp=N,20nm,0.8s,baz=180,slow=14,SNR=31
MK31 ⇑Sn Sn 07 38 50.4 -3.9
comp=N,10nm,0.6s,baz=181,slow=24,SNR=6.5
MK31 Makanchi Array 10.77 359 Pn Pn 07 36 53.8 +0.1
MK31 Sn Sn 07 38 52.7 -1.6
MK31 Makanchi Array 10.77 359 P Pn 07 36 53.8 +0.1
MK31 07 38 52.7
MKAR Makanchi Array 10.77 359 Pn Pn 07 36 53.6 -0.1
comp=N,3.7nm,0.3s,baz=183,slow=12,SNR=15
MKAR Sn Sn 07 38 50.8 -3.5
comp=N,2.1nm,0.3s,baz=185,slow=24,SNR=6.7
MKAR LR LR 07 42 07.9
comp=N,214nm,18.5s,baz=180,slow=43
MKAR Makanchi Array 10.77 359 Pn Pn 07 36 53.6 -0.1
MKAR Sn Sn 07 38 52.4 -1.9
MAKZ Makanchi 10.79 358 ⇑Pn Pn 07 36 53.8 -0.2
comp=N,30nm,0.5s
MAKZ ⇓Sn Sn 07 38 49.5 -5.2
comp=N,19nm,0.7s
MAKZ Makanchi 10.79 358 Pn Pn 07 36 54.0 0.0
MAKZ Sn Sn 07 38 53.0 -1.7
MAKZ Makanchi 10.79 358 P Pn 07 36 54.0 0.0
MAKZ 07 38 53.0
KBL Kabul 11.06 266 Pn 07 36 58.1 +0.2
KBL Kabul 11.06 266 P Pn 07 36 58.1 +0.2
KK31 Karatay Array 11.61 311 ⇑Pn Pn 07 37 05.2 -0.1
comp=N,1.1nm,0.6s,baz=127,slow=12,SNR=8.8
KK31 ⇓Pg 07 37 49.4
comp=N,2.7nm,0.6s,baz=137,slow=14,SNR=4.0
KK31 ⇑Lg Lg 07 40 22.9
comp=N,21nm,1.1s,baz=128,slow=28,SNR=3.7
KK31 Karatay Array 11.61 311 Pn 07 37 05.6 +0.3
KK31 Karatay Array 11.61 311 P Pn 07 37 05.6 +0.3
KKAR Karatay Array 11.61 311 Pn 07 37 04.4 -0.9
KKAR Karatay Array 11.61 311 Pn 07 37 05.7 +0.4
KKAR Karatay Array 11.61 311 P Pn 07 37 05.7 +0.4
GTA Gaotai 14.16 71 eP P 07 37 43.9 -3.9
GTA pP Pn 07 37 48.5 +8.3
GTA sP 07 37 51.8
GTA pmax pmax
comp=N,3.0nm,0.7s
KURBB Kurchatov Arra 14.87 350 Pn Pn 07 37 47.7 -2.0
baz=171,slow=12,SNR=6.8
KURBB Lg Lg 07 42 15.9
baz=163,slow=29,SNR=2.0
KURK Kurchatov 14.95 351 Pn 07 37 48.6 -2.2
KURK Kurchatov 14.95 351 c eP Pn 07 37 48.4 -2.4
KURK pmax pmax
comp=Z,9.0nm,1.0s
HRA Herat 16.60 270 Pn Pn 07 38 11.1 -1.5
LZH Lanzhou 17.30 83 eP P 07 38 23.1 +0.3
LZH pP pP 07 38 25.5 -1.5
LZH sP sP 07 38 27.8 -1.1
LZH ePP PnPn 07 38 37.8 +6.5
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,52nm,4.6s
LZH LR LR
comp=Z,280nm,12.1s
LZH LR LR
comp=Z,290nm,12.0s
LZH LR LR
comp=Z,380nm,13.8s
ZAA0 Zalesovo Array 18.01 5 ⇑Pn Pn 07 38 26.6 -3.1
comp=Z,3.9nm,0.8s
ZAA0 Zalesovo Array 18.01 5 Pn Pn 07 38 27.0 -2.7
ZAA0 IAmb IAmb 07 38 32.7
comp=Z,24nm,0.8s
ZALV Zalesovo Beam 18.01 5 P Pn 07 38 27.2 -2.6
comp=Z,1.0nm,0.3s,baz=190,slow=12,SNR=38
ZALV LR LR 07 46 21.1
comp=Z,192nm,18.1s,baz=185,slow=40
ZALV Zalesovo Beam 18.01 5 Pn Pn 07 38 26.6 -3.1
ZALV Zalesovo Beam 18.01 5 P Pn 07 38 26.7 -3.1
BVAR Borovoye Array 19.01 337 P Pn 07 38 42.4 +0.5
comp=Z,1.4nm,0.3s,baz=139,slow=9.8,SNR=21
BRVK Borovoye 19.07 337 ⇑Pn Pn 07 38 43.7 +1.0
BRVK Borovoye 19.07 337 P Pn 07 38 43.0 +0.3
BRVK IAmb IAmb 07 38 45.8
comp=Z,14nm,0.8s
BRVK Borovoye 19.07 337 P Pn 07 38 43.0 +0.3
BRVK pmax pmax
comp=Z,14nm,0.8s
GEYT Alibeck 19.52 283 P P 07 38 47.6 +0.5
comp=Z,0.3nm,0.3s,baz=110,slow=8.5,SNR=12
GEYT LR LR 07 48 06.0
comp=Z,145nm,18.2s,baz=30,slow=42
GEYT Alibeck 19.52 283 P P 07 38 47.3 +0.2
GYA0B ALIBECK ARRAY 19.52 283 P P 07 38 47.0 -0.1
GYA0B IAmb IAmb 07 38 49.5
comp=Z,11nm,0.9s
MOY Mondy 20.49 34 eP Pn 07 38 59.5 -0.2
MOY pmax pmax
comp=Z,33nm,2.2s
KMI Kunming 20.53 116 P P 07 38 57.2 -1.1
KMI IAmb IAmb 07 38 58.0
comp=Z,18nm,1.0s
KMI Kunming 20.53 116 P P 07 38 57.2 -1.1
KMI pmax pmax
comp=Z,18nm,1.0s
ZAK Zakamensk 20.80 40 eP Pn 07 39 01.9 -1.4
ZAK pmax pmax
comp=Z,6.0nm,1.1s
AB31 Akbulak array 21.09 316 P P 07 39 03.7 -0.2
comp=Z,3.5nm,0.6s,baz=113,slow=9.6,SNR=61
AB31 Akbulak array 21.09 316 P P 07 39 03.7 -0.2
ABKAR Akbulak array 21.09 316 P P 07 39 04.1 +0.1
ABKAR Akbulak array 21.09 316 P P 07 39 04.7 +0.8
ABKAR IAmb IAmb 07 39 11.2
comp=Z,9.2nm,1.1s
SONM Songino Array 21.28 49 P P 07 39 07.3 +1.2
comp=Z,8.5nm,0.7s,baz=240,slow=11,SNR=44
SONM LR LR 07 47 56.4
comp=Z,109nm,19.4s,baz=218,slow=38
SONM Songino Array 21.28 49 P P 07 39 07.5 +1.3
SONM Songino Array 21.28 49 P P 07 39 07.5 +1.3
SONM pmax pmax
comp=Z,7.0nm,0.9s
ULN Ulaanbaatar 21.70 49 P P 07 39 11.2 +0.5
ULN IAmb IAmb 07 39 14.5
comp=Z,13nm,0.8s
ULN Ulaanbaatar 21.70 49 P P 07 39 11.2 +0.5
ULN pmax pmax
comp=Z,13nm,0.8s
TLY Talaya 21.76 37 P P 07 39 12.9 +1.8
comp=Z,2.4nm,0.7s,baz=191,slow=2.7,SNR=6.2
TLY LR LR 07 48 23.8
comp=Z,108nm,21.6s,baz=232,slow=39
TLY Talaya 21.76 37 P P 07 39 10.7 -0.5
TLY Talaya 21.76 37 ⇓eP P 07 39 10.5 -0.7
TLY pmax pmax
comp=Z,5.0nm,0.9s
CHTO Chiang Mai 22.48 135 P P 07 39 19.5 +0.4
CHTO Chiang Mai 22.48 135 P P 07 39 19.5 +0.4
CHTO pmax pmax
comp=Z,6.0nm,1.1s
GYA Guiyang 22.74 108 P P 07 39 27.3 +5.3
GYA pmax pmax
comp=Z,10.0nm,0.8s
AKTO Aktyubinsk 22.76 317 P P 07 39 21.9 0.0
comp=Z,2.9nm,0.7s,baz=112,slow=9.6,SNR=9.3
AKTO LR LR 07 49 18.2
comp=Z,126nm,19.1s,baz=123,slow=40
AKTO Aktyubinsk 22.76 317 ⇑P P 07 39 22.7 +0.8
comp=Z,5.0nm,0.7s
CMAR Chiang Mai Arr 22.77 136 P P 07 39 21.1 -1.1
comp=Z,2.8nm,0.7s,baz=313,slow=11,SNR=15
CMAR Chiang Mai Arr 22.77 136 i P P 07 39 22.7 +0.6
CMAR pmax pmax
comp=Z,3.0nm,0.7s
HHC Hu-ho-hao-te 23.26 69 eP P 07 39 27.3 +0.1
HHC pP sP 07 39 34.3 +0.9
HHC S S 07 43 34.8 -4.7
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,90nm,6.0s
WSAR Wadi Sarin 24.23 245 P P 07 39 36.6 0.0
comp=Z,11nm,1.0s,baz=351,slow=6.4,SNR=8.6
WSAR LR LR 07 50 43.1
comp=Z,91nm,21.4s,baz=60,slow=41
ARU Arti 26.02 329 P P 07 39 54.4 +1.8
comp=Z,2.6nm,0.2s,baz=162,slow=8.5,SNR=5.5
ARU LR LR 07 51 16.0
comp=Z,51nm,21.6s,baz=118,slow=39
ARU Arti 26.02 329 d iP P 07 39 55.3 +2.7
ARU 07 40 34.0
ARU S S 07 44 27.1 +3.9
ARU SS SnSn 07 45 28.4 +8.0
ARU pmax pmax
comp=Z,14nm,1.8s
PALK Pallekele 28.66 184 LR LR 07 52 10.8
comp=Z,82nm,20.1s,baz=26,slow=38
GNI Garni 29.82 289 LR LR 07 53 48.9
comp=Z,43nm,20.1s,baz=344,slow=39
KBZ Khabaz 31.08 297 LR LR 07 54 13.6
comp=Z,114nm,19.6s,baz=90,slow=38
KIV Kislovodsk 31.24 297 eP P 07 40 37.7 -1.6
KIV pmax pmax
comp=Z,12nm,0.8s
KIV MLR MLR
comp=Z,209nm,15.0s
KIRV Kirov 31.27 327 LR LR 07 54 27.6
comp=Z,73nm,19.7s,baz=206,slow=39
CN2 Changchun 33.58 63 eP P 07 41 01.0 +1.3
KSRS Korea Array 36.20 74 LR LR 07 57 44.9
comp=Z,68nm,18.2s,baz=280,slow=39
OBN Obninsk 36.54 316 eP P 07 41 27.7 +2.7
OBN pmax pmax
comp=Z,6.0nm,1.3s
KLR Kul'dur 37.94 54 ⇓eP P 07 41 38.5 +1.5
KLR pmax pmax
comp=Z,8.0nm,2.0s
USRK Ussuriysk Ar. 38.27 62 P P 07 41 41.0 +1.1
USRK Ussuriysk Ar. 38.27 62 P P 07 41 41.0 +1.1
BR131 Keskin Array S 38.33 291 P P 07 41 40.8 +0.2
BR131 IAmb IAmb 07 41 42.2
comp=Z,3.2nm,0.8s
BR131 Keskin Array S 38.33 291 d eP P 07 41 41.7 +1.1
BRTR Keskin Array B 38.33 291 P P 07 41 40.6 -0.1
comp=Z,2.6nm,0.8s,baz=96,slow=7.7,SNR=12
BRTR Keskin Array B 38.33 291 P P 07 41 40.1 -0.5
BRTR Keskin Array B 38.33 291 i P P 07 41 41.5 +0.8
BRTR pmax pmax
comp=Z,3.0nm,0.8s
ANTO Ankara 38.95 291 P P 07 41 47.0 +1.3
ANTO Ankara 38.95 291 P P 07 41 47.0 +1.3
ANTO pmax pmax
comp=Z,16nm,0.5s
AKASG Malin Array Be 40.49 308 P P 07 41 57.2 -1.1
comp=Z,0.9nm,0.7s,baz=101,slow=11,SNR=5.7
TIXI Tiksi 42.92 20 ⇑eP P 07 42 19.6 +1.7
TIXI pmax pmax
comp=Z,7.0nm,2.4s
MLR Muntele Rosu 43.04 301 P P 07 42 19.1 -0.4
MLR IAmb IAmb 07 42 22.3
comp=Z,6.0nm,0.9s
MLR Muntele Rosu 43.04 301 P P 07 42 19.1 -0.4
MLR pmax pmax
comp=Z,6.0nm,0.9s
FIA1 FINESS Array S 43.18 324 P P 07 42 19.3 -0.9
FINES FINESS Array B 43.18 324 P P 07 42 20.7 +0.5
comp=Z,2.4nm,0.6s,baz=107,slow=10,SNR=6.7
FINES FINESS Array B 43.18 324 P P 07 42 20.2 0.0
BURAR Bucovina Array 43.28 304 P P 07 42 21.4 +0.1
BUR08 Bucovina Ar. S 43.29 304 P P 07 42 20.8 -0.6
BUR08 IAmb IAmb 07 42 23.5
comp=Z,20nm,1.9s
MJAR Matsushiro Arr 44.41 72 LR LR 08 03 04.1
comp=Z,77nm,18.3s,baz=295,slow=39
ARCES ARCESS Array B 45.28 335 P P 07 42 37.0 +0.1
comp=Z,2.3nm,0.7s,baz=98,slow=7.5,SNR=6.8
ARCES ARCESS Array B 45.28 335 P P 07 42 36.4 -0.6
SEY Seymchan 49.62 34 ⇑eP P 07 43 13.0 +2.3
NB2 NORSAR Subarra 50.33 323 P P 07 43 16.0 -0.2
comp=Z,1.6nm,0.6s,baz=85,slow=7.4
NOA NORSAR Array B 50.33 323 P P 07 43 16.5 +0.3
comp=Z,0.4nm,0.5s,baz=77,slow=7.8,SNR=4.6
GERES GERESS Array B 50.68 307 P P 07 43 19.6 +0.5
comp=Z,1.5nm,0.6s,baz=84,slow=5.5,SNR=7.0
GERES LR LR 08 08 43.3
comp=Z,74nm,21.9s,baz=88,slow=41
GERES GERESS Array B 50.68 307 P P 07 43 19.2 +0.1
PEA0B Petropavlovsk- 53.73 46 ⇓eP P 07 43 43.3 +1.7
PETK Petropavlovsk- 53.73 46 LR LR 08 06 47.7
comp=Z,38nm,19.2s,baz=226,slow=36
BILL Bilibino 54.88 27 eP P 07 43 50.7 +0.9
BILL e 07 45 51.5
BILL pmax pmax
comp=Z,1.0nm,0.9s
NOR Nord 55.93 350 i P P 07 43 56.6 -0.6
NOR Nord 55.93 350 i P P 07 43 56.6 -0.6
ESDC Sonseca Array 65.70 302 P P 07 45 03.4 -1.0
comp=Z,0.1nm,0.3s,baz=284,slow=25,SNR=4.1
ESDC Sonseca Array 65.70 302 P P 07 45 04.6 +0.2
IMAR Indian Mountai 69.54 21 P P 07 45 27.4 -0.6
ILAR Eielson Array 72.39 20 P P 07 45 44.5 -0.8
comp=Z,1.4nm,1.0s,baz=313,slow=6.1,SNR=11
ILAR LR LR 08 20 48.6
comp=Z,40nm,19.4s,baz=322,slow=38
ILAR Eielson Array 72.39 20 P P 07 45 44.4 -1.0
WRA Warramunga Arr 74.20 130 P P 07 45 56.4 -0.3
comp=Z,2.9nm,0.9s,baz=326,slow=5.8,SNR=13
WRA Warramunga Arr 74.20 130 i P P 07 45 58.0 +1.3
WRA pmax pmax
comp=Z,3.0nm,0.9s
TORD Torodi Ar. Bea 74.98 275 P P 07 46 00.1 -1.2
comp=Z,0.5nm,0.6s,baz=46,slow=5.4,SNR=3.7
ASAR Alice Springs 76.73 133 P P 07 46 11.2 0.0
comp=Z,1.9nm,0.7s,baz=317,slow=5.9,SNR=19
ASAR Alice Springs 76.73 133 P P 07 46 11.7 +0.5
ASAR Alice Springs 76.73 133 P P 07 46 11.7 +0.5
YKA Yellowknife Ar 80.87 8 P P 07 46 32.2 -1.1
comp=Z,0.8nm,0.6s,baz=338,slow=5.5,SNR=16
BBOO Buckleboo 84.88 137 P P 07 46 54.8 +0.3
ULM Lac du Bonnet 94.09 359 LR LR 08 33 06.3
comp=Z,17nm,18.7s,baz=96,slow=38

IDC 13 07:42:18.4±2.0, 7°.20S×128°.60E, h0km, mb3.5/1, mb1 3.5/3, mb1mx3.3/31, mbtmp3.3/3, ML3.3/2, Error ellipse: s-maj=121.6km s-min=32.6km az=66.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
WRA Warramunga Arr 13.84 157 Pn Pn 07 45 35.0 -1.0
0.2nm,0.3s,baz=335,slow=13,SNR=6.6
WRA Sn Sn 07 47 55.9 -15
0.3nm,0.3s,baz=330,slow=22,SNR=7.4
ASAR Alice Springs 17.15 163 P P 07 46 20.6 -0.8
0.1nm,0.3s,baz=340,slow=8.4,SNR=2.0
MKAR Makanchi Array 67.64 328 P P 07 53 17.2 0.0
0.3nm,0.5s,baz=124,slow=8.0,SNR=6.2

ATH 13 07:43:56.6, 38°.16N×20°.42E, h14km±1km, ML2.8/2, Error ellipse: s-maj=2.2km s-min=1.5km az=255.0
THE 13 07:43:56.5, 38°.15N×20°.44E, h14km, ML2.9/6, Error ellipse: s-maj=1.1km s-min=0.6km az=206.0
ISC 13 07:43:56.5±1.2, 38°.15N±0°.04×20°.43E±0°.05, h14km±5km, n18, σ0°.35/32, Greece

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
ARGA Argostoli. Kep 0.05 58 P Pg 07 43 58.9 -0.1
ARGA S Sg 07 44 00.7 -0.2
CHV1 Chavriata, Kef 0.05 310 P Pg 07 43 59.1 0.0
CHV1 S Sg 07 44 01.0 +0.2
9μm,0.4s
LXRA Lixouri, Kepha 0.05 8 P Pg 07 43 58.9 -0.1
LXRA S Sg 07 44 01.2 +0.4
LXR1 Lixouri, Cepha 0.05 9 P Pg 07 43 59.2 +0.1
LXR1 S Sg 07 44 01.1 +0.3
15μm,0.2s
ARG2 Argostoli 0.05 61 P Pg 07 43 59.1 0.0
ARG2 S Sg 07 44 00.8 -0.1
15μm,0.2s
KEF3 Kipouria, Keph 0.08 309 P Pg 07 43 59.4 0.0
KEF3 S Sg 07 44 01.7 +0.3
AGT1 Agia Thekli 0.10 340 P Pg 07 43 59.6 0.0
AGT1 S Sg 07 44 01.9 +0.1
4μm,0.2s
VLS Valsamata 0.13 79 P Pg 07 43 59.8 -0.2
VLS S Sg 07 44 02.2 -0.2
9μm,0.1s
VLS Valsamata 0.13 79 P Pg 07 43 59.8 -0.2
VLS S Sg 07 44 02.2 -0.2
VLS AML AML 07 44 02.4
comp=N,22436μm,0.2s
VLS AML AML 07 44 02.5
comp=E,11059μm,0.1s
VSK1 VASILIKIADES 0.28 23 P Pg 07 44 02.2 -0.2
VSK1 S Sg 07 44 06.5 +0.2
comp=E,2μm,0.2s
KONA Konidatara, Ke 0.29 22 P Pg 07 44 02.4 -0.3
KONA S Sg 07 44 06.9 +0.1
VLMS Volimes, Zakyn 0.33 146 P Pg 07 44 03.3 0.0
VLMS S Sb 07 44 09.1 -0.3
VLMS AML AML 07 44 09.5
comp=E,3962μm,0.2s
VLMS AML AML 07 44 12.4
comp=N,3100μm,0.2s
EVGI Lefkada island 0.50 21 P Pg 07 44 06.0 -0.4
EVGI S Sg 07 44 13.5 +0.4
EVGI Lefkada island 0.50 21 P Pg 07 44 05.9 -0.4
LKD2 Lefkada island 0.66 16 P Pg 07 44 08.8 -0.6
LKD2 S Sb 07 44 19.4 +0.4
LKD2 Lefkada island 0.66 16 P Pb 07 44 09.9 0.0
ANX Ano Chora 1.25 69 P Pg 07 44 21.8 +1.2
KLV Kalavryta, Ach 1.36 94 P Pb 07 44 21.6 -0.3

IDC 13 08:05:54.0±0.7, 48°.83S×121°.19E, h0km, mb4.0/8, mb1 4.1/8, mb1mx4.0/22, mbtmp4.0/8, MS3.9/10, Ms1 3.9/10, ms1mx3.6/25, Error ellipse: s-maj=43.2km s-min=16.9km az=112.0
NEIC 13 08:05:56.2±1.2, 48°.9S±0°.1×121°.2E±0°.3, h10km±1km, mb4.4/7, Error ellipse: s-maj=32.4km s-min=19.3km az=291.0
ISC 13 08:05:55.9±0.6, 48°.8S±0°.1×121°.1E±0°.2, h10km, n36, σ0°.70/31, mb4.2/10, MS3.8/9, Western Indian-Antarctic Ridge

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
H01W1 Cape Leeuwin H 14.85 337 T T 08 24 51.8
baz=160,slow=74,SNR=34
H01W2 Cape Leeuwin H 14.85 337 T T 08 24 51.4
baz=160,slow=74,SNR=31
H01W3 Cape Leeuwin H 14.86 337 T T 08 24 51.5
baz=160,slow=74,SNR=34
NWAO Narrogin (SRO) 16.15 348 LR LR 08 14 24.7
comp=Z,411nm,21.1s,baz=172,slow=32
TOO Toolangi 20.94 67 P P 08 10 39.3 +0.6
TOO IAmb IAmb 08 10 46.5
comp=Z,7.3nm,1.0s
STKA Stephens Creek 22.91 50 P P 08 10 58.7 -1.1
comp=Z,0.6nm,0.4s,baz=236,slow=7.3,SNR=2.6
STKA LR LR 08 18 14.1
comp=Z,200nm,20.7s,baz=208,slow=32
ASAR Alice Springs 27.07 26 P P 08 11 38.5 0.0
comp=Z,1.0nm,0.8s,baz=211,slow=9.1,SNR=11
ASAR PcP PcP 08 14 58.9 -0.6
comp=Z,0.5nm,0.5s,baz=200,slow=2.5,SNR=8.5
AS31 Alice Springs 27.07 26 P P 08 11 38.6 0.0
WRA Warramunga Arr 30.72 25 P P 08 12 09.7 -1.3
comp=Z,0.2nm,0.6s,baz=197,slow=12,SNR=2.5
WRA PcP PcP 08 15 08.2 -0.5
comp=Z,0.5nm,0.7s,baz=211,slow=2.2,SNR=5.2
WRA LR LR 08 23 20.8
comp=Z,193nm,19.8s,baz=200,slow=34
FITZ Fitzroy Crossi 30.87 8 LR LR 08 23 32.5
comp=Z,125nm,19.6s,baz=186,slow=34
WB0 Warramunga Arr 30.90 25 P P 08 12 13.3 +0.7
WB0 IAmb IAmb 08 12 26.0
comp=Z,6.4nm,1.4s
VNDA Vanda 32.70 165 LR LR 08 24 50.2
comp=Z,172nm,18.0s,baz=326,slow=35
VNDA Vanda 32.70 165 P P 08 12 28.0 +0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNDA				IAmb	IAmb	08 12 34.0	
	comp=Z,6.5nm,1.2s						
LHI	Lord Howe Isla	33.34	73	P	P	08 12 33.6	-0.2
MAW	Mawson	34.26	215	P	P	08 12 41.3	-0.2
	comp=Z,2.7nm,0.8s,baz=86,slow=14,SNR=2.8						
MAW				LR	LR	08 23 36.9	
	comp=Z,82nm,18.7s,baz=57,slow=31						
QSPA	South Pole Qui	41.30	180	P	P	08 13 40.7	-0.5
	comp=Z,4.6nm,0.9s,baz=340,slow=4.4,SNR=15						
QSPA				LR	LR	08 29 56.3	
	comp=Z,192nm,20.2s,baz=328,slow=35						
QSPA	South Pole Qui	41.30	180	P	P	08 13 41.3	+0.1
QSPA				IAmb	IAmb	08 13 48.7	
	comp=Z,30nm,1.4s						
KAPI	Kappang	43.67	358	LR	LR	08 31 54.7	
	comp=Z,83nm,18.4s,baz=182,slow=36						
JAY	Jayapura	49.10	26	LR	LR	08 34 05.5	
	comp=Z,168nm,21.9s,baz=198,slow=34						
SNAA	Sanae	53.47	199	P	P	08 15 15.7	0.0
	comp=Z,2.4nm,0.9s,baz=157,slow=15,SNR=3.6						
CMAR	Chiang Mai Arr	69.84	338	P	P	08 17 07.1	+0.6
	comp=Z,1.0nm,0.4s,baz=185,slow=5.0,SNR=4.9						
SONM	Songino Array	97.12	350	P	P	08 19 26.5	-1.3
	comp=Z,0.2nm,0.3s,baz=187,slow=2.3,SNR=3.0						
SONM				LR	LR	09 02 59.6	
	comp=Z,295nm,20.7s,baz=272,slow=35						
SONM	Songino Array	97.12	350	P	P	08 19 28.2	+0.5
TORD	Torodi Ar. Bea	119.06	256	PKP	PKPdf	08 24 44.0	-1.0
	comp=Z,0.6nm,0.9s,baz=189,slow=5.7,SNR=2.4						
ILAR	Eielson Array	133.47	36	PKP	PKPdf	08 25 10.7	-0.3
	comp=Z,0.3nm,0.6s,baz=257,slow=3.9,SNR=6.0						
TXAR	Lajitas Array	140.84	103	PKP	PKPdf	08 25 25.9	0.0
	comp=Z,0.2nm,0.7s,baz=185,slow=6.6,SNR=3.6						
PDAR	Pinedale Array	144.71	80	PKP	PKPab	08 25 31.4	+0.1
	comp=Z,0.6nm,0.7s,baz=190,slow=5.9,SNR=6.6						
PDAR	Pinedale Array	144.71	80		PKPab	08 25 31.7	+0.4
YHH	Holmes Hill	144.78	76		PKPdf	08 25 33.3	+0.7
HKT	Hockley	146.22	110	PKPdf	PKPdf	08 25 35.5	+0.5
WHTX	Lake Whitney,	146.59	106	PKPdf	PKPdf	08 25 35.9	+0.2
K22A	Casper	146.63	82	PKPbc	PKPab	08 25 38.3	-0.1
YKA	Yellowknife Ar	146.88	45	PKPbc	PKPbc	08 25 37.0	-0.2
	comp=Z,3.7nm,0.9s,baz=270,slow=2.7,SNR=37						
WMOK	Wichita Mounta	147.49	101		PKPdf	08 25 38.6	+1.4
LAO	LASA Array	148.51	76	PKPbc	PKiKP	08 25 43.4	-0.2
RES	Resolute Bay	149.95	18	PKPbc	PKPbc	08 25 45.2	+0.4
RES				PKPab	PKPab	08 25 52.1	+1.5

IDC 13 08:12:25.1±2.8, 48.°75S×120.°23E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/31, mbtmp3.9/3, MS3.5/1, Ms1 3.5/1, ms1mx3.0/20, Error ellipse: s-maj=206.1km s-min=24.9km az=104.0

NEIC 13 08:12:27.8±2.2, 48.°7S±0.°2×121.°6E±0.°4, h10km±2km, mb4.2/4, Error ellipse: s-maj=50.6km s-min=10.3km az=306.0

ISC 13 08:12:28.7±1.4, 48.°9S±0.°2×122.°2E±0.°5, h10km, n17, σ1.22/14, mb4.2/5, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	15.19	334	T	T	08 31 24.1	
	baz=160,slow=74,SNR=61						
H01W2	Cape Leeuwin H	15.19	334	T	T	08 31 20.1	
	baz=160,slow=74,SNR=54						
H01W3	Cape Leeuwin H	15.21	334	T	T	08 31 25.1	
	baz=160,slow=74,SNR=48						
STKA	Stephens Creek	22.38	48	P	P	08 17 25.7	-1.3
ASAR	Alice Springs	26.79	24	P	P	08 18 10.8	+1.9
	1.2nm,1.1s,baz=202,slow=9.5,SNR=6.0						
ASAR				PcP	PcP	08 21 31.1	-0.5
	0.2nm,0.5s,baz=192,slow=2.1,SNR=5.1						
ASAR	Alice Springs	26.79	24	P	P	08 18 10.3	+1.4
WRA	Warramunga Arr	30.46	23	P	P	08 18 43.3	+1.7
	1.3nm,1.1s,baz=198,slow=8.0,SNR=3.6						
WRAB	Tennant Creek	30.47	23	P	P	08 18 41.8	+0.1
WRAB				IAmb	IAmb	08 18 55.9	
	comp=Z,3.3nm,0.8s						
VNDA	Vanda	32.47	165	P	P	08 19 00.1	+1.4
VNDA				IAmb	IAmb	08 19 06.7	
	comp=Z,2.6nm,0.8s						
RPZ	Rata Peaks	33.65	100	LR	LR	08 31 07.2	
	comp=Z,76nm,18.6s,baz=248,slow=32						
QSPA	South Pole Qui	41.25	180	P	P	08 20 12.3	-1.4
	comp=Z,5.4nm,0.9s,baz=324,slow=1.8,SNR=17						
QSPA	South Pole Qui	41.25	180	P	P	08 20 13.8	+0.1
PDAR	Pinedale Array	143.98	80	PKPbc	PKPdf	08 32 04.0	-0.1
	comp=Z,1.1nm,1.0s,baz=234,slow=5.0,SNR=5.1						
PDAR	Pinedale Array	143.98	80		PKPdf	08 32 03.4	-0.7
YHH	Holmes Hill	144.07	76		PKPdf	08 32 03.1	-1.1
YKA	Yellowknife Ar	146.39	45	PKPbc	PKPbc	08 32 08.2	-0.3
	comp=Z,1.3nm,0.7s,baz=270,slow=2.5,SNR=16						
RES	Resolute Bay	149.76	19		PKiKP	08 32 18.0	-0.2

IDC 13 08:16:55.4±1.9, 48.°45S×118.°75E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.8/31, mbtmp3.9/4, MS3.7/4, Ms1 3.7/4, ms1mx3.4/19, Error ellipse: s-maj=102.6km s-min=25.2km az=109.0

NEIC 13 08:17:00.4±1.1, 49.°0S±0.°2×121.°6E±0.°3, h10km±2km, mb4.3/5, Error ellipse: s-maj=46.7km s-min=11.4km az=317.0

ISC 13 08:16:56.7±1.9, 48.°5S±0.°3×118.°7E±0.°6, h10km, n17, σ0.80/12, mb4.1/6, MS3.7/3, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	13.99	344	T	T	08 35 50.5	
	baz=160,slow=74,SNR=46						
H01W1	Cape Leeuwin H	13.99	344	T	T	08 35 56.7	
	baz=160,slow=74,SNR=59						
H01W3	Cape Leeuwin H	14.00	344	T	T	08 35 56.7	
	baz=160,slow=74,SNR=44						
NWAO	Narrogin (SRO)	15.58	355	LR	LR	08 25 29.3	
	comp=Z,270nm,21.8s,baz=146,slow=33						
STKA	Stephens Creek	23.98	55	P	P	08 22 11.5	+0.2
	1.1nm,0.3s,baz=230,slow=7.2,SNR=3.3						
STKA				LR	LR	08 29 18.5	
	comp=Z,153nm,20.2s,baz=206,slow=31						
ASAR	Alice Springs	27.55	31	P	P	08 22 42.8	-0.9
	3.2nm,1.2s,baz=199,slow=9.2,SNR=6.9						
ASAR				PcP	PcP	08 26 02.2	+0.8
	0.2nm,0.4s,baz=207,slow=2.0,SNR=4.0						
ASAR				LR	LR	08 32 10.3	
	comp=Z,217nm,21.3s,baz=190,slow=33						
ASAR	Alice Springs	27.55	31	P	P	08 22 43.0	-0.7
WRA	Warramunga Arr	31.15	29	P	P	08 23 14.2	-1.5
	1.8nm,1.1s,baz=198,slow=8.2,SNR=4.6						
WB2	Warramunga Arr	31.16	29	P	P	08 23 15.2	-0.4
WR0	Warramunga Arr	31.20	30	P	P	08 23 15.8	-0.3
WR0				IAmb	IAmb	08 23 25.6	
	comp=Z,7.9nm,1.4s						
WB0	Warramunga Arr	31.33	29	P	P	08 23 18.1	+0.8
WB0				IAmb	IAmb	08 23 26.6	
	comp=Z,4.3nm,1.2s						
VNDA	Vanda	33.46	164	LR	LR	08 35 54.7	
	comp=Z,133nm,18.2s,baz=320,slow=34						
QSPA	South Pole Qui	41.64	180	P	P	08 24 44.4	-0.5
	comp=Z,3.9nm,1.1s,baz=284,slow=6.1,SNR=6.8						
QSPA	South Pole Qui	41.64	180	P	P	08 24 44.7	-0.1
QSPA				IAmb	IAmb	08 24 49.2	
	comp=Z,9.8nm,1.3s						
SANVU	Saraoutou	51.50	67	P	P	08 25 54.9	-7.6
PDAR	Pinedale Array	146.24	81	PKPbc	PKPab	08 36 38.4	+0.5
	comp=Z,0.7nm,1.0s,baz=209,slow=5.2,SNR=2.9						
YKA	Yellowknife Ar	147.77	44	PKPbc	PKPbc	08 36 40.5	+0.1
	comp=Z,0.8nm,0.8s,baz=272,slow=2.9,SNR=8.4						

PDG 13 08:19:05.7±0.5, 38.°32N×20.°30E, h3km±1km, ML3.8/11, Error ellipse: s-maj=0.9km s-min=1.0km az=0.0

ATH 13 08:19:06.3, 38.°33N×20.°39E, h16km±1km, ML3.4/19, Error ellipse: s-maj=1.5km s-min=0.7km az=269.0

THE 13 08:19:06.9, 38.°32N×20.°41E, h12km, ML3.8/13, Error ellipse: s-maj=1.1km s-min=0.3km az=264.0

BEO 13 08:19:10.2±0.9, 38.°34N×20.°37E, h34km±4km, ML3.4/6

SKO 13 08:19:10.9, 38.°42N×20.°58E, h0km

ISC 13 08:19:06.9±0.7, 38.°32N±0.°02×20.°44E±0.°03, h13km±4km, n92, σ1.18/137, 1C-1D, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF1	Kardakata, Kep	0.05	150	P	Pg	08 19 09.2	0.0
KEF1				S	Sg	08 19 10.8	-0.2
KEF4	Livadi, Kephal	0.06	191	P	Pg	08 19 09.4	0.0
KEF4				S	Sg	08 19 11.2	0.0
AGT1	Agia Thekli	0.08	213	P	Pg	08 19 09.5	-0.1
AGT1				S	Sg	08 19 11.3	-0.2
	362μm,0.2s						
LXR1	Lixouri, Cepha	0.12	181	P	Pg	08 19 10.2	+0.2
LXR1				S	Sb	08 19 13.0	-0.7
	248μm,0.4s						
LXRA	Lixouri, Kepha	0.12	181	P	Pg	08 19 10.3	+0.3
LXRA				S	Sb	08 19 13.0	-0.7
VSK1	VASILIKIADES	0.13	47	P	Pg	08 19 10.4	+0.1
VSK1				S	Sg	08 19 12.9	+0.2
	78μm,0.2s						
KEF3	Kipouria, Keph	0.14	212	P	Pg	08 19 10.3	0.0
KEF3				S	Sg	08 19 12.6	-0.1
CHV1	Chavriata, Kef	0.14	199	P	Pg	08 19 10.4	0.0
CHV1				S	Sg	08 19 13.2	+0.4
	343μm,0.3s						
ARGA	Argostoli. Kep	0.14	168	P	Pg	08 19 10.5	+0.1
ARGA				S	Sg	08 19 13.3	+0.4
ARG2	Argostoli	0.15	165	P	Pg	08 19 10.6	+0.2
ARG2				S	Sg	08 19 13.1	+0.2
	128μm,0.3s						
KONA	Konidatara, Ke	0.15	44	P	Pg	08 19 10.6	+0.2
KONA				S	Sg	08 19 13.4	+0.4
KEF2	Argostoli. Kep	0.16	166	P	Pg	08 19 10.7	+0.1
KEF2				S	Sg	08 19 13.7	+0.5
VLS	Valsamata	0.18	140	P	Pg	08 19 11.1	+0.1
VLS				S	Sg	08 19 14.5	+0.6
	67μm,0.2s						
VLS	Valsamata	0.18	140	P	Pg	08 19 11.2	+0.1
VLS				S	Sg	08 19 14.6	+0.6
VLS				AML	AML	08 19 14.7	
	comp=E,83191μm,0.1s						
VLS				AML	AML	08 19 14.7	
EVGI	Lefkada island	0.35	29	P	Pg	08 19 14.0	+0.1
EVGI				S	Sg	08 19 19.0	+0.5
EVGI	Lefkada island	0.35	29	P	Pg	08 19 14.0	+0.1
EVGI				S	Sg	08 19 19.1	+0.5
MGNA	Meganis	0.43	39	P	Pg	08 19 15.3	-0.2
MGNA				S	Sg	08 19 21.4	+0.1
MGNA				AML	AML	08 19 27.6	
	comp=E,8025μm,0.4s						
MGNA				AML	AML	08 19 27.7	
	comp=N,8776μm,0.3s						
VLMS	Volimes, Zakyn	0.48	158	P	Pg	08 19 16.1	-0.2
VLMS				S	Sb	08 19 23.8	-0.2
VLMS				AML	AML	08 19 25.0	
	comp=E,27877μm,0.2s						
VLMS				AML	AML	08 19 26.6	
	comp=N,33866μm,0.4s						
LKD2	Lefkada island	0.50	20	P	Pg	08 19 16.3	-0.4
LKD2				S	Sb	08 19 24.4	-0.4
	comp=N,3μm,0.4s						
LKD2	Lefkada island	0.50	20	P	Pg	08 19 16.4	-0.3
LKD2				S	Sb	08 19 24.3	-0.4
LKD2				AML	AML	08 19 31.2	
	comp=E,6146μm,0.3s						
LKD2				AML	AML	08 19 32.7	
	comp=N,5315μm,0.3s						
TSLK	Tsoukalades, L	0.53	18	P	Pg	08 19 17.1	-0.2
TSLK				S	Sg	08 19 24.9	+0.5
	comp=N,4μm,0.4s						
TSLK	Tsoukalades, L	0.53	18	P	Pg	08 19 17.1	-0.2
TSLK				S	Sb	08 19 25.3	-0.4
AST1	Astakos	0.56	66	P	Pg	08 19 17.9	+0.1
AST1				S	Sb	08 19 26.8	+0.4
	comp=N,12μm,0.5s						
ZAK2	Zakynthos	0.64	145	P	Pg	08 19 19.3	-0.1
PDO	Prodromos	0.65	64	P	Pg	08 19 19.5	+0.1
PDO				S	Sb	08 19 28.6	-0.4
	comp=N,7μm,0.3s						
PDO	Prodromos	0.65	64	P	Pg	08 19 19.6	+0.1
PDO				AML	AML	08 19 33.4	
	comp=N,9972μm,0.4s						
PDO				AML	AML	08 19 35.3	
	comp=E,9720μm,0.4s						
KRI1	kERI	0.72	155	P	Pg	08 19 20.4	-0.4
KRI1				S	Sb	08 19 31.1	0.0
	comp=E,12μm,0.5s						
RLS	Riolos of Patr	0.85	108	P	Pg	08 19 23.1	-0.2
RLS				S	Sn	08 19 36.9	0.0
	comp=E,2μm,0.6s						
RLS	Riolos of Patr	0.85	108	P	Pg	08 19 23.0	-0.2
RLS				AML	AML	08 19 42.9	
	comp=E,2856μm,0.5s						
RLS				AML	AML	08 19 43.6	
	comp=N,4101μm,0.6s						
PVO	Paravola	0.90	70	P	Pg	08 19 24.3	0.0
PVO				S	Sn	08 19 37.7	-0.5
	comp=N,4μm,0.6s						
PVO	Paravola	0.90	70	P	Pb	08 19 24.5	+0.1
PVO				AML	AML	08 19 45.9	
	comp=N,8165μm,0.4s						
PVO				AML	AML	08 19 49.0	
	comp=E,6338μm,0.6s						
DRO	Drossia	1.07	110	P	Pb	08 19 27.1	-0.1
DRO	Drossia	1.07	110	P	Pb	08 19 27.0	-0.2
DRO				AML	AML	08 19 54.8	
	comp=E,6577μm,0.5s						
DRO				AML	AML	08 19 56.3	
	comp=N,7103μm,0.5s						
ANX	Ano Chora	1.19	76	P	Pn	08 19 29.3	-0.1
ANX				AML	AML	08 19 53.6	
	comp=E,6171μm,0.6s						
ANX				AML	AML	08 19 56.1	
	comp=N,5606μm,0.4s						
IGT	Igoumenitsa	1.21	356	ePg	Pg	08 19 32.6	+2.4
IGT				eSg	Sg	08 19 48.1	+2.0
IGT	Igoumenitsa	1.21	356	P	Pn	08 19 28.9	-0.7
IGT				AML	AML	08 19 57.9	
	comp=E,1604μm,0.8s						
IGT				AML	AML	08 19 59.9	
	comp=N,1608μm,0.5s						
EVR	Evrytania	1.23	60	P	Pn	08 19 29.4	-0.5
EVR				AML	AML	08 19 53.5	
	comp=E,2173μm,0.5s						
EVR				AML	AML	08 19 57.2	
	comp=N,3193μm,0.9s						
AMT	Artemida-Makis	1.27	128	P	Pg	08 19 31.6	+0.3
AMT				AML	AML	08 20 03.1	
	comp=N,2651μm,0.8s						
AMT				AML	AML	08 20 05.9	
	comp=E,3175μm,0.6s						
SERG	Sergoula	1.27	85	P	Pn	08 19 30.0	-0.4
SERG				AML	AML	08 19 56.9	
	comp=E,3793μm,0.4s						
SERG				AML	AML	08 20 00.4	
	comp=N,1877μm,0.5s						
KALE	Kalithea	1.34	86	P	Pn	08 19 31.1	-0.2
KALE				AML	AML	08 19 59.2	
	comp=E,2308μm,0.6s						
KALE				AML	AML	08 20 00.6	
	comp=N,2492μm,0.4s						
JAN	Janina	1.37	13	P	Pg	08 19 33.6	+0.4
KLV	Kalavryta, Ach	1.38	101	P	Pn	08 19 31.9	+0.1
KLV				AML	AML	08 20 05.6	
	comp=N,1703μm,0.6s						
KLV				AML	AML	08 20 09.3	
	comp=E,1523μm,0.8s						
KEK	Kerkira	1.48	340	P	Pn	08 19 33.5	+0.2
MAKR	Makrakomi, Fth	1.50	62	P	Pb	08 19 34.7	+0.2
MAKR				AML	AML	08 20 03.6	
	comp=N,2226μm,0.6s						
MAKR				AML	AML	08 20 04.8	
	comp=E,3462μm,0.6s						
AGG	Agios Georgios	1.64	64	P	Pb	08 19 37.4	+0.4
AGG				AML	AML	08 20 07.1	
	comp=N,1735μm,0.8s						
AGG				AML	AML	08 20 12.1	
	comp=E,1482μm,0.6s						
ITM	Ithomi	1.64	134	P	Pb	08 19 37.0	+0.1
THL	Klokotos Trika	1.75	44	P	Pb	08 19 38.2	-0.5
PYL	PYLOS	1.76	144	P	Pn	08 19 37.6	+0.5
KPRO	Kipourio	1.78	23	P	Pb	08 19 40.0	+0.6
VLX	Vlachokerasia	1.80	121	P	Pb	08 19 40.1	+0.3
PROD	Prodromos	1.94	91	P	Pb	08 19 42.3	+0.3
LTK	Loutraki	2.01	98	P	Pb	08 19 42.6	-0.8
LTK				AML	AML	08 20 24.6	
	comp=N,711μm,0.7s						
LTK				AML	AML	08 20 26.2	
	comp=E,812μm,0.8s						
LOUT	Loutraki	2.02	99	P	Pb	08 19 42.9	-0.6
LKR	Lokris	2.04	80	P	Pb	08 19 43.4	-0.3
LKR				AML	AML	08 20 21.2	
	comp=E,423μm,0.3s						
LKR				AML	AML	08 20 22.5	
	comp=N,489μm,0.6s						
VIL2	Platees	2.23	92	P	Pb	08 19 46.2	-0.8
SCTE	Santa Cesarea	2.33	319	P	Pn	08 19 45.1	+0.2
DID	Didima	2.36	109	P	Pn	08 19 47.2	+1.9
XOR	Xorichti	2.39	63	P	Pb	08 19 48.0	-1.8
VLY	Voula,Athens	2.69	99	P	Pn	08 19 51.7	+1.9
OHR	Ohrid	2.80	6	iPn	Pb	08 19 54.9	-1.9
OHR				iSn	Sb	08 20 28.8	-2.3
OHR				eLg	Lg	08 20 30.5	
	comp=N,39nm,0.6s						
OHR				eLg	Lg	08 20 37.2	
	comp=E,96nm,0.6s						
TIR	Tirane	3.06	352	ePn	Pn	08 19 56.1	+1.2
VAY	Valandovo	3.42	28	eP	Pb	08 20 06.0	-1.3
VAY	Valandovo	3.42	28	iPn	Pb	08 20 06.3	-1.0
STIP	Stip	3.63	21	iPn	Pb	08 20 07.2	-3.7
SRS	Serrai	3.70	40	ePn	Pn	08 20 05.1	+1.3
ULC	Ulcinj	3.75	346	ePn	Pn	08 20 04.0	-0.5
ULC				iSn	Sn	08 20 50.9	+2.3
DRME	Dracevica, Mon	3.98	346	ePn	Pn	08 20 07.7	+0.1
DRME				eSn	Sn	08 20 56.9	+2.8
MMB	Musomiste	4.13	37	eP	Pn	08 20 14.0	+4.3
BUM	Brajici-Budva	4.15	344	⇓iPn	Pn	08 20 10.4	+0.4
BUM				eSn	Sn	08 21 00.8	+2.4
PDG	Podgorica	4.21	348	ePn	Pn	08 20 11.6	+0.9
PDG				eSn	Sn	08 20 57.9	-1.7
TTG	Podgorica	4.21	348	ePn	Pn	08 20 11.4	+0.7
TTG				eSn	Sn	08 21 01.9	+2.3
PVY	Plav	4.29	355	ePn	Pn	08 20 13.0	+1.1
PVY				iSn	Sn	08 21 04.2	+2.3
CEME	Cevo	4.38	345	ePn	Pn	08 20 12.5	-0.6
CEME				eSn	Sn	08 21 05.7	+1.6
HCY	Herceg Novi	4.38	341	ePn	Pn	08 20 13.9	+0.8
HCY				eSn	Sn	08 21 06.0	+1.9
BOSS	Bosilegrad	4.45	20	ePn	Pn	08 20 15.6	+1.5
KOME	Kolasin	4.58	351	ePn	Pn	08 20 17.1	+1.2
KOME				eSn	Sn	08 21 11.5	+2.4
NKME	Niksic	4.58	346	⇑iPn	Pn	08 20 17.4	+1.4
NKME				iSn	Sn	08 21 11.4	+2.3
TREB	Trebinje	4.67	341	ePn	Pn	08 20 17.0	-0.1
TREB				eSn	Sn	08 21 08.7	-2.5
VTS	Vitosha	4.79	26	ePn	Pn	08 20 19.6	+0.7
VTS	Vitosha	4.79	26	eP	Pb	08 20 30.0	-0.8
BRY	Bratogost	4.80	343	ePn	Pn	08 20 19.5	+0.5
BRY				eSn	Sn	08 21 16.1	+1.5
SJES	Sjenica	4.95	356	ePn	Pn	08 20 22.6	+1.6
SJES				eSn	Sn	08 21 16.4	-1.8
UPM	Unac-Piva	5.02	347	ePn	Pn	08 20 23.2	+1.2
UPM				eSn	Sn	08 21 21.4	+1.5
ZAPS	Zavoj	5.22	18	ePn	Pn	08 20 25.8	+1.1
IVAS	Ivanjica	5.26	358	ePn	Pn	08 20 25.7	+0.5
BOVS	Bovan	5.40	10	ePn	Pn	08 20 28.1	+1.1
BOVS				eSn	Sn	08 21 26.0	-3.0
BBLS	Lazići	5.60	352	ePn	Pn	08 20 30.4	+0.5
ZAGS	Zajecar	5.65	13	ePn	Pn	08 20 31.7	+1.1
DIVS	Divibare	5.78	357	ePn	Pn	08 20 32.2	-0.3
DIVS				eSn	Sn	08 21 35.6	-3.1
FINES	FINESS Array B	23.41	7	P	P	08 24 16.7	+1.4
	comp=E,0.2nm,0.3s,baz=162,slow=13,SNR=5.3						
MKAR	Makanchi Array	45.28	58	P	P	08 27 22.9	-1.3
	comp=E,0.3nm,0.4s,baz=273,slow=7.3,SNR=5.2						
ZALV	Zalesovo Beam	45.64	48	P	P	08 27 25.2	-1.7
	comp=E,1.1nm,0.3s,baz=281,slow=8.5,SNR=5.2						

NCEDC 13 08:24:51.9±1.2, 37.°361N±0.°009×121.°71W±0.°01, h8km±3km, Md2.6/99, Error ellipse: s-maj=1.7km s-min=1.2km az=64.0

NEIC 13 08:24:52.1±1.0, 37.°353N±0.°008×121.°75W±0.°01, h16km±1km, Error ellipse: s-maj=1.6km s-min=1.1km az=68.0, Central California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MHC	Mount Hamilton	0.08	98		Pg	08 24 55.6	+0.1
SCCB	Santa Clara Co	0.12	235		Pg	08 24 55.4	-0.2
CMLM	Mount Lewis	0.14	31		Pg	08 24 55.1	-1.0
JSTM	Santa Teresa H	0.15	196		Pg	08 24 55.9	-0.2
ARN	Arnold Ranch	0.17	91		Pg	08 24 55.3	-1.1
CMJM	Mission San Jo	0.20	329		Pg	08 24 56.4	-0.4
JLAB	Laurel Hill	0.20	178		Pg	08 24 56.6	-0.2
AMC	Almaden	0.21	203		Pg	08 24 57.0	0.0
CADM	Anderson Res.	0.21	153		Pg	08 24 56.9	-0.1
CMMM	Mount Mocho	0.23	63		Pg	08 24 56.5	-0.8
JUMM	Mount Umunhum	0.23	212		Pg	08 24 57.3	0.0
JHLM	Holstrom Ranch	0.25	196		Pg	08 24 57.7	0.0
WENL	Wente Vineyard	0.27	358		Pg	08 24 57.7	-0.2
WENL					Sg	08 25 02.3	+0.3
HSPM	Sheep	0.30	142		Pg	08 24 58.2	-0.3
CNIC	Niles Canyon	0.31	326		Pg	08 24 58.5	-0.1
CNIC					Sg	08 25 03.5	+0.4
HLPM	Lions Peak	0.32	164		Pg	08 24 58.9	0.0
JTGM	Trout Gulch Ro	0.34	198		Pb	08 24 59.7	-0.1
JSFB	Stanford Teles	0.35	279		Pg	08 24 59.4	+0.2
CYD1	Coyote D'meter	0.35	307		Pg	08 24 59.0	-0.3
GHS	Gilroy Hot Spr	0.35	137		Pg	08 24 59.0	-0.4
JFP	Foothills Park	0.35	271		Pg	08 24 59.5	+0.1
JRGM	Rodeo Gulch Ro	0.36	209		Pb	08 24 59.9	-0.1
JJRM	Joaquin Road	0.36	269		Pg	08 24 59.8	+0.2
CDC	Canada Road	0.39	147		Pb	08 25 00.0	0.0
JRSC	Jasper Ridge	0.40	277		Pg	08 25 00.0	-0.1
JBNB	Ben Lomond Mou	0.40	235		Pg	08 25 00.4	+0.1
C055	Cottonwood Ave	0.42	316		Pb	08 25 00.7	+0.1
JELB	Ellicott, Sant	0.43	189		Pb	08 25 01.4	+0.1
JHPM	Huddart Park	0.45	282		Pg	08 25 01.3	+0.1
CMOB	Morgan Territo	0.46	354		Pb	08 25 02.1	+0.2
HFEM	San Felipe	0.46	143		Pb	08 25 01.2	-0.2
CLCB	Lake Chabot	0.46	327		Pb	08 25 01.5	+0.2
HCOM	Corn Cob Canyo	0.47	176		Pb	08 25 01.8	-0.1
CBSNC	Byron Hot Spri	0.47	10		Pb	08 25 02.0	+0.1
HPCM	Pacheco Lake	0.47	128		Pb	08 25 01.2	-0.4
OCR	O'Connell Ranc	0.47	156		Pg	08 25 01.5	0.0
ANZ	Anzar Road	0.48	165		Pb	08 25 02.1	-0.1
SLD	San Luis Dam	0.50	123		Pb	08 25 01.5	-0.6
PACP	Pacheco Peak	0.50	133		Pb	08 25 01.8	-0.3
JCPM	Coyote Point	0.52	297		Pb	08 25 02.1	-0.2
HBTM	San Juan Bauti	0.53	163		Pb	08 25 02.9	0.0
BGC	Bolinger Road	0.53	332		Pb	08 25 03.1	+0.2
HTUM	Tustin Road	0.53	171		Pb	08 25 02.7	+0.1
CRHM	Round Hill Res	0.54	339		Pb	08 25 03.7	+0.6
SFJWR	San Luis Fatjo	0.55	123		Pb	08 25 02.4	-0.5
HERM	Elkhorn Road	0.55	177		Pb	08 25 03.3	-0.1
OXMT	Ox Mountain	0.56	285		Pg	08 25 02.8	-0.4
SMCB	Saint Mary's C	0.57	329		Pb	08 25 03.6	0.0
HJGM	San Juan Grade	0.57	166		Pb	08 25 03.5	-0.1
CRPB	Russellman Par	0.57	347		Pb	08 25 03.6	-0.1
SAC	San Andreas	0.58	293		Pg	08 25 03.2	-0.3
HLTM	Lone Tree Road	0.58	143		Pb	08 25 03.5	-0.1
BDM	Black Diamond	0.61	351		Pb	08 25 04.5	+0.2
FRP	Fremont Peak	0.63	161		Pb	08 25 04.7	-0.1
SAO	San Andreas Ge	0.63	158	Pg	Pb	08 25 04.9	+0.2
HJSM	John Smith Roa	0.64	146		Pb	08 25 04.8	+0.1
BRIB	Briones	0.65	330		Pb	08 25 05.2	+0.2
CVPM	Vollmer Peak	0.65	325		Pg	08 25 05.0	-0.1
BKS	Berkeley--Byer	0.65	323		Pg	08 25 04.9	0.0
BSLM	Silva Ranch	0.66	151		Pb	08 25 05.3	+0.2
BL67	Building 67, L	0.66	322		Pb	08 25 05.3	+0.1
BVYM	Vineyard	0.66	156		Pb	08 25 05.5	+0.3
VAK	Adit at Lawren	0.66	323		Pg	08 25 05.0	0.0
CYBM	Yerba Buena Is	0.67	313		Pb	08 25 04.9	-0.3
BSRM	Salinas Radio	0.71	165		Pb	08 25 05.7	-0.2
BCGM	Cienega Road	0.72	153		Pb	08 25 06.4	+0.2
JPRM	Presidio of Sa	0.73	308		Pb	08 25 06.0	-0.3
BHRM	Hodges Ranch	0.73	148		Pb	08 25 06.3	-0.1
CPIM	Pinole Ridge	0.74	330		Pb	08 25 06.8	+0.4
MOBB	Monterey Bay O	0.74	207		Pg	08 25 07.1	+0.6
CSPM	San Pablo Ridg	0.75	324		Pb	08 25 07.0	+0.3
HMOM	Monterey	0.76	190		Pb	08 25 06.8	-0.1
HERB	Hercules	0.78	328		Pb	08 25 07.5	+0.3
BLRM	Lewis Ranch	0.78	151		Pb	08 25 07.8	+0.5
BPCNC	Pine Canyon	0.78	173		Pb	08 25 07.3	0.0
CPMM	Point Molate	0.79	319		Pb	08 25 07.1	-0.4
BJOM	Mount Johnson	0.80	154		Pb	08 25 07.1	-0.5
SCZ	Santa Cruz	0.80	160		Pg	08 25 07.2	-0.4
BEHM	Elkhorn Ranch	0.82	146		Pb	08 25 08.2	+0.1
NLHM	Lake Herman	0.83	337		Pg	08 25 08.6	+0.4

BJCM	**Johnson Can.**	**0.85**	**161**		Pb	08 25 08.1	-0.4
BEMM	**Emmet**	**0.86**	**143**		Pb	08 25 08.5	-0.2
BRMM	**Rolling Bench**	**0.90**	**125**		Pg	08 25 09.5	-0.1
BAVM	**Antelope Valle**	**0.91**	**141**		Pb	08 25 09.2	-0.2
BBGB	**Big Mountain B**	**0.96**	**144**		Pb	08 25 10.2	-0.1
HAST	**Hastings Reser**	**0.97**	**171**		Pb	08 25 10.3	-0.3
BPIM	**Pinnacles**	**0.98**	**152**		Pb	08 25 09.9	-0.7
BBNM	**San Benito**	**1.00**	**147**		Pn	08 25 11.3	-0.1
SNT	**Sears Point**	**1.00**	**326**		Pb	08 25 11.1	+0.1
BSMM	**Soledad Missio**	**1.00**	**165**		Pb	08 25 10.8	-0.2
BSGM	**Shirttail Gulc**	**1.02**	**157**		Pb	08 25 10.5	-0.7
BMSM	**Mercy Hot Spri**	**1.03**	**132**		Pb	08 25 11.3	-0.2
FARB	**Farallon Islan**	**1.06**	**289**		Pb	08 25 10.8	-1.1
MYLM	**Yosemite Lake**	**1.06**	**88**		Pb	08 25 11.1	-0.8
NOLM	**Olema**	**1.08**	**310**		Pb	08 25 11.4	-0.9
MNHB	**New Hogan Dam**	**1.08**	**43**		Pb	08 25 11.3	-1.0
MCUB	**Copperopolis B**	**1.09**	**55**		Pb	08 25 11.7	-0.8
LRV	**Little Rabbit**	**1.09**	**148**		Pb	08 25 12.5	-0.1
NADM	**Allendale**	**1.12**	**351**		Pb	08 25 12.9	-0.1
BPOM	**Post Ranch**	**1.12**	**181**		Pb	08 25 12.2	-0.9
CVS	**Carmenet Viney**	**1.14**	**331**		Pn	08 25 12.7	-0.7
BAPM	**Anderson Peak**	**1.18**	**176**		Pn	08 25 14.0	0.0
AASM	**Arroyo Seco**	**1.19**	**25**		Pb	08 25 12.7	-1.3
MCCM	**Marconi Confer**	**1.20**	**312**		Pn	08 25 13.0	-1.1
MCCM				Sg	Sb	08 25 29.7	+0.2
LRC	**Lone Oak Road**	**1.24**	**153**		Pn	08 25 14.4	-0.3
NTYM	**Taylor**	**1.26**	**325**		Pn	08 25 14.7	-0.3
CMB	**Columbia Colle**	**1.27**	**57**	Pn	Pn	08 25 15.1	-0.1
CMB				Sn	Sb	08 25 31.8	-0.1
PCCM	**Crazy Canyon**	**1.34**	**159**		Pn	08 25 15.7	-0.5
NSHM	**Saint Helena R**	**1.35**	**330**		Pn	08 25 15.8	-0.4
NBPM	**Berryessa Peak**	**1.36**	**345**		Pn	08 25 16.2	-0.2
PMPB	**Monarch Peak**	**1.36**	**146**		Pn	08 25 16.6	+0.1
PMPB				Sn	Sb	08 25 35.2	+0.8
MAC	**Mark West Spri**	**1.42**	**327**		Pn	08 25 17.3	0.0
PAPM	**Alder Peak**	**1.47**	**168**		Pn	08 25 17.6	-0.4
MHDM	**Hidden Dam**	**1.50**	**99**		Pn	08 25 18.1	-0.1
NMCNC	**Mill Creek, So**	**1.54**	**324**		Pn	08 25 18.0	-0.8
MMIM	**Miami Mountain**	**1.60**	**87**		Pn	08 25 20.0	+0.3
FTR	**Fort Ross**	**1.62**	**317**		Pn	08 25 19.8	-0.1
PHSB	**Hesperia Broad**	**1.62**	**160**		Pn	08 25 19.9	-0.1
GHCM	**House Creek**	**1.70**	**318**		Pn	08 25 20.4	-0.7
AFDM	**Forest Hills D**	**1.71**	**21**		Pn	08 25 20.9	-0.3
AFDM				Sn	Sn	08 25 42.6	0.0
PKD	**Bear Valley Ra**	**1.71**	**145**		Pn	08 25 20.8	-0.3
PVCM	**Vineyard Canyo**	**1.73**	**145**		Pn	08 25 20.5	-1.0
PSTM	**Stockdale Moun**	**1.73**	**145**		Pn	08 25 21.2	-0.4
RAMR	**Ramage Ranch**	**1.85**	**157**		Pn	08 25 23.2	0.0
KCC	**Kaiser Creek**	**1.93**	**90**		Pb	08 25 25.7	-1.3
HOPS	**Hopland Field**	**1.94**	**328**	Pn	Pn	08 25 24.1	-0.3
PAGB	**Antelope Grade**	**2.02**	**143**	Pn	Pn	08 25 26.1	+0.7
EMB	**Emerald Bay**	**2.07**	**38**		Pb	08 25 28.2	-1.2
MRDM	**Red Cones**	**2.15**	**83**		Pb	08 25 29.5	-1.3
OMMB	**Old Mammoth Mi**	**2.20**	**82**		Pn	08 25 29.9	+1.7
ORV	**Oroville**	**2.21**	**5**		Pn	08 25 28.4	+0.4
HELL	**Mitchell Peak,**	**2.28**	**106**		Pn	08 25 29.7	+0.6
BFC	**Buffalo Canyon**	**2.28**	**47**		Pb	08 25 34.3	+1.4
DONR	**Donner Summit**	**2.29**	**29**		Pn	08 25 30.5	+1.2
MCMM	**Convict Lake**	**2.30**	**83**		Pn	08 25 30.9	+1.4
PNTR	**Pine Nut**	**2.42**	**44**	Pn	Pn	08 25 32.9	+1.7
VCNR	**Virginia City**	**2.54**	**40**		Pn	08 25 34.3	+1.5
YERR	**Yerington**	**2.56**	**50**	Pn	Pn	08 25 34.8	+1.8
BEKR	**Beckworth**	**2.73**	**23**	Pn	Pn	08 25 36.5	+1.1
POCCA	**Poleta Canyon**	**2.76**	**89**		Pb	08 25 39.4	-1.8
RYN	**Ryan**	**2.85**	**62**	Pn	Pn	08 25 37.6	+0.6
PAHR	**Pah Rah Range**	**2.99**	**38**	Pn	Pn	08 25 40.0	+1.0
ISA	**Isabella, Lake**	**3.13**	**122**	Pn	Pn	08 25 42.6	+1.8
TPNV	**Topopah Spring**	**4.41**	**94**	Pn	Pn	08 26 00.1	+1.7

*NNC **13** 08:35:48.3±1.0, 38°.71N×56°.24E, h0km, mb5.1, Error ellipse: s-maj=11.7km s-min=3.3km az=58.0*
*TEH **13** 08:35:49.3, 38°.61N×56°.29E, h14km, ML5.0*
*IDC **13** 08:35:49.9±0.4, 38°.47N×56°.11E, h0km, mb4.5/35, mb1 4.6/43, mb1mx4.6/56, mbtmp4.6/43, ML4.3/7, MS4.3/36, Ms1 4.3/36, ms1mx4.1/54, Error ellipse: s-maj=10.2km s-min=5.8km az=14.0*
*MOS **13** 08:35:49.7±1.5, 38°.59N×56°.28E, h10km, mb5.0/47, MS4.3/14, Error ellipse: s-maj=5.0km s-min=3.4km az=34.3*
*THR **13** 08:35:50.0±0.3, 38°.54N×56°.23E, h14km±4km, ML5.0*
*BJI **13** 08:35:50.0±0.0, 38°.60N×56°.40E, h5km, mB5.1/43, mb4.7/51, Ms5.1/43, Ms7 4.8/42*
*NEIC **13** 08:35:51.9±2.9, 38°.59N±0°.06×56°.23E±0°.04, h19km±4km, mb4.8/81, Error ellipse: s-maj=9.4km s-min=3.6km az=202.0*
*GCMT **13** 08:35:52.9±0.2, 38°.59N±0°.01×56°.34E±0°.01, h21km±1km, MW5.0/111, Moment Tensor Solution. s36,c41; s111,c179; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.58±.13; $M_{\theta\theta}$-4.49±.13; $M_{\phi\phi}$3.91±.10; $M_{r\theta}$0.14±.20; $M_{\theta\phi}$-0.23±.08; $M_{\phi r}$0.01±.17; Best double couple: $M_0$4.20800×10^{16} NP1:ϕ_s313.00000°, δ89.00000°, λ-179.00000°. NP2:ϕ_s223.00000°, δ89.00000°, λ-1.00000°. Principal axes: T 3.9160, Plg0.0000°, Azm268.0000°; N 0.5840, Plg88.0000°, Azm359.0000°; P -4.5000, Plg2.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 13 08:35:52.0±0.6**, 38°.57N**±0°.03×**56°.23E**±0°.03**, h13**km±3km**, n533,** σ1.94/565, **mb4.8**/123, **MS4.5**/53, **50C-24D, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJRD	**Bojnurd**	**1.27**	**133**	*e*Pg	**Pn**	**08 36 13.3**	**-2.2**
BJRD				*e*Sg	**Sb**	**08 36 30.3**	**-1.8**
BJRD	**Bojnurd**	**1.27**	**133**	*e*Pg	**Pn**	**08 36 13.3**	**-2.2**
IMND	**Minoodasht**	**1.46**	**207**	*e*Pn	**Pn**	**08 36 17.4**	**-0.6**
IMND				*e*		08 36 38.6	
GEYT	**Alibeck**	**1.61**	**113**	Pn	**Pn**	**08 36 18.5**	**-1.7**
	1μm,0.3s,baz=285,slow=20,SNR=1227						
GEYT				Pg	**Pb**	**08 36 20.1**	**-1.6**
	1μm,0.3s,baz=286,slow=18,SNR=414						
GEYT				Lg	Lg	08 36 42.7	
	2μm,0.3s,baz=266,slow=40,SNR=15						
GEYT	**Alibeck**	**1.61**	**113**		**Pn**	**08 36 18.5**	**-1.7**
GEYT				Sn	**Sn**	**08 36 39.7**	**-1.2**
GEYT	**Alibeck**	**1.61**	**113**	*e*Pn	**Pn**	**08 36 18.5**	**-1.7**
GYA0B	**ALIBECK ARRAY**	**1.61**	**113**	⇑P	**Pn**	**08 36 18.3**	**-1.9**
GYA0B				⇓S	**Sb**	**08 36 41.4**	**-0.6**
GYA0B	**ALIBECK ARRAY**	**1.61**	**113**		**Pn**	**08 36 18.4**	**-1.8**
GYA0B				Sn	**Sn**	**08 36 39.0**	**-1.9**
ASHT	**Ashkhabad**	**1.81**	**110**		**Pn**	**08 36 23.1**	**+0.3**
ASHT	**Ashkhabad**	**1.81**	**110**	P	**Pn**	**08 36 23.1**	**+0.3**
ASHT	**Ashkhabad**	**1.81**	**110**	*e*Pn	**Pn**	**08 36 23.1**	**+0.3**
ISFR	**Sfrayin**	**2.06**	**137**	*e*Pn	**Pn**	**08 36 25.5**	**-1.0**
IEMG	**Emamgholi**	**2.23**	**120**	*e*Pn	**Pn**	**08 36 27.1**	**-1.8**
IKRD	**Kardeh**	**2.54**	**134**	*e*Pn	**Pg**	**08 36 41.6**	**+0.8**
SHRO	**Shahrood**	**2.58**	**184**	*e*Pn	**Pn**	**08 36 32.8**	**-0.7**
SHRO				*e*Sg	**Sb**	**08 37 09.3**	**-0.5**
SHRO	**Shahrood**	**2.58**	**184**	*e*Pn	**Pn**	**08 36 32.8**	**-0.7**
IAKL	**Akhelmad**	**2.81**	**134**	*e*Pn	**Pn**	**08 36 36.5**	**-0.3**
IGLO	**Ghaloghah**	**2.81**	**224**	*e*Pn	**Pn**	**08 36 35.3**	**-1.5**
IMOG	**Moghan**	**3.49**	**134**	*e*Pn	**Pn**	**08 36 45.8**	**-0.4**
IANJ	**Anjilo**	**3.61**	**212**	*e*Pn	**Pn**	**08 36 47.9**	**+0.1**
IANJ				*e*		08 38 02.6	
ISHM	**Shahmirzad**	**3.62**	**221**	*e*Pn	**Pn**	**08 36 48.9**	**+0.9**
ISHM				*e*		08 37 57.8	
IALA	**Alasht**	**3.69**	**229**	*e*Pn	**Pn**	**08 36 48.6**	**-0.3**
IMYA	**Miami**	**3.80**	**125**	*e*Pn	**Pn**	**08 36 50.1**	**-0.2**
IPRN	**Peran**	**3.87**	**234**	*e*Pn	**Pn**	**08 36 50.4**	**-1.0**
IFIR	**Firoozkooh**	**4.03**	**225**	*e*Pn	**Pn**	**08 36 54.5**	**+0.8**
IFIR				*e*		08 37 11.1	
JRKH	**Jarkhoshk**	**4.22**	**128**	*e*Pn	**Pn**	**08 36 55.2**	**-0.9**
IDMV	**Damavand**	**4.49**	**230**	*e*Pn	**Pn**	**08 37 01.1**	**+1.1**
TNSJ	**Nastanj**	**4.61**	**176**	*e*Pn	**Pn**	**08 37 00.9**	**-0.5**
TEH	**Tehran**	**4.80**	**235**	*e*Pn	**Pn**	**08 37 05.9**	**+1.9**
QALM	**Alamut, Qazvin**	**4.93**	**246**	*e*Pn	**Pn**	**08 37 04.0**	**-1.9**
TKDS	**Koohdasht(Taba**	**5.00**	**171**	*e*Pn	**Pn**	**08 37 06.9**	**+0.1**
IHSB	**Hasanabad**	**5.05**	**233**	*e*Pn	**Pn**	**08 37 07.3**	**-0.2**
IVRN	**Varamin**	**5.08**	**227**	*e*Pn	**Pn**	**08 37 07.6**	**-0.3**
IGZV	**Ghazvin**	**5.26**	**247**	*e*Pn	**Pn**	**08 37 09.8**	**-0.6**
IMHD	**Mahdasht**	**5.30**	**239**	*e*Pn	**Pn**	**08 37 13.0**	**+2.1**
GOBA	**Gobu**	**5.35**	**292**	*e*Pn	**Pn**	**08 37 13.7**	**+2.2**
TPRV	**Parvadeh(Tabas**	**5.54**	**176**	*e*Pn	**Pn**	**08 37 13.9**	**-0.3**
IQOM	**Qom**	**5.57**	**230**	*e*Pn	**Pn**	**08 37 14.6**	**-0.2**
AFRZ	**Afriz**	**5.61**	**155**	*e*Pn	**Pn**	**08 37 14.8**	**-0.4**
KRSH	**Karshahi**	**5.66**	**217**	*e*Pn	**Pn**	**08 37 14.8**	**-1.1**
ANAR	**Anarak**	**5.74**	**202**	*e*Pn	**Pn**	**08 37 16.5**	**-0.5**
ALIB	**Äli-Bayra**	**5.78**	**286**	*e*Pn	**Pn**	**08 37 20.5**	**+3.1**
ASTR	**Astara**	**5.83**	**272**	*e*Pn	**Pn**	**08 37 17.1**	**-1.0**
LKRN	**Lenkeran, Azer**	**5.84**	**274**	P	**Pn**	**08 37 17.8**	**-0.4**
LKRN	**Lenkeran, Azer**	**5.84**	**274**	*e*Pn	**Pn**	**08 37 17.8**	**-0.4**
SHRT	**Shahrakht**	**5.91**	**145**	*e*Pn	**Pn**	**08 37 18.8**	**-0.5**
SHRT	**Shahrakht**	**5.91**	**145**	*e*Pn	**Pn**	**08 37 18.8**	**-0.5**
IRAZ	**Razeghan**	**5.95**	**240**	*e*Pn	**Pn**	**08 37 20.1**	**+0.1**
ITEG	**Tejag**	**6.02**	**159**	*e*Pn	**Pn**	**08 37 21.0**	**+0.1**
QABG	**Abgarm-Qazvin**	**6.03**	**244**	*e*Pn	**Pn**	**08 37 20.7**	**-0.4**
IMON	**Monand**	**6.04**	**152**	*e*Pn	**Pn**	**08 37 22.0**	**+0.7**
SIZA	**Siyzn**	**6.18**	**296**	*e*Pn	**Pn**	**08 37 24.0**	**+1.1**
ZNJK	**Zanjan**	**6.28**	**255**	*e*Pn	**Pn**	**08 37 24.5**	**-0.1**
ZNJK	**Zanjan**	**6.28**	**255**	*e*Pn	**Pn**	**08 37 24.5**	**-0.1**
HRA	**Herat**	**6.39**	**129**		**Pn**	**08 37 25.0**	**-1.0**
IKLH	**Kolahrood**	**6.46**	**217**	*e*Pn	**Pn**	**08 37 28.4**	**+1.5**
IZEF	**Zefreh**	**6.49**	**210**	*e*Pn	**Pn**	**08 37 27.9**	**+0.5**
IDAH	**Dahanechah**	**6.52**	**152**	*e*Pn	**Pn**	**08 37 29.3**	**+1.4**
GRMI	**Germi**	**6.53**	**275**	*e*P	**Pn**	**08 37 27.8**	**0.0**
GRMI				*e*S	**Sn**	**08 38 39.4**	**-2.8**
GRMI				IAML		08 38 49.6	
	comp=E,248nm,0.6s						
GRMI	**Germi**	**6.53**	**275**	*e*Pn	**Pn**	**08 37 27.8**	**0.0**
IKOO	**Kooshah**	**6.53**	**159**	*e*Pn	**Pn**	**08 37 29.6**	**+1.6**
QSAR	**Qusar**	**6.79**	**298**	*e*Pn	**Pn**	**08 37 32.0**	**+0.7**
ISRB	**Sarab**	**6.79**	**266**	*e*Pn	**Pn**	**08 37 30.9**	**-0.6**
ISAD	**Sadrabad**	**6.96**	**198**	*e*Pn	**Pn**	**08 37 33.7**	**-0.2**
IBAF	**Bafgh**	**6.98**	**185**	*e*Pn	**Pn**	**08 37 34.2**	**+0.1**
IHSH	**Hashtrud**	**7.05**	**271**	*e*Pn	**Pn**	**08 37 37.3**	**+2.2**
AKT	**Akhty**	**7.14**	**297**	*e*P	**Pn**	**08 37 36.5**	**+0.3**
AKT				*e*S	**Sn**	**08 38 58.0**	**+0.7**
AKT				pmax	pmax		
	comp=Z,87nm,0.4s						
AKT				smax	smax		
	comp=E,237nm,0.5s						
AKT				smax	smax		
	comp=N,311nm,0.6s						
AKT				smax	smax		
	comp=N,327nm,0.6s						
AKT				MLR	MLR		
	comp=Z,617nm,9.0s						
HSRG	**Sareghieh**	**7.18**	**245**	*e*Pn	**Pn**	**08 37 37.1**	**+0.1**
AHAR	**Ahar**	**7.20**	**272**	*e*Pn	**Pn**	**08 37 37.1**	**+0.1**
IHRS	**Heris**	**7.22**	**271**	*e*Pn	**Pn**	**08 37 37.3**	**-0.1**
IMEH	**Mehriz**	**7.28**	**191**	*e*Pn	**Pn**	**08 37 38.9**	**+0.6**
IPIR	**Pirpir**	**7.30**	**218**	*e*Pn	**Pn**	**08 37 40.9**	**+2.2**
MNGR	**Mingechevir, A**	**7.39**	**290**	P	**Pn**	**08 37 40.4**	**+0.9**
SEKA	**Sheki**	**7.43**	**294**	P	**Pn**	**08 37 40.5**	**+0.4**
IRAM	**Ramesheh**	**7.44**	**206**	*e*Pn	**Pn**	**08 37 40.8**	**+0.3**
JHBN	**Jahan bin**	**7.79**	**217**	*e*Pn	**Pn**	**08 37 46.7**	**+1.5**
NHDN	**Nehbandan**	**7.81**	**155**	*e*Pn	**Pn**	**08 37 45.9**	**+0.4**
GANJ	**Ganja**	**7.93**	**288**	P	**Pn**	**08 37 46.0**	**-0.9**
ITBZ	**Tabriz**	**7.93**	**271**	*e*Pn	**Pn**	**08 37 47.1**	**0.0**
MAK	**Makhachkala**	**7.94**	**306**	*e*P	**Pn**	**08 37 50.1**	**+3.0**
MAK				*e*S	**Sn**	**08 39 22.3**	**+5.5**
MAK				pmax	pmax		
	comp=Z,214nm,0.9s						
MAK				MLR	MLR		
	comp=Z,3μm,14.0s						
KHGB	**Koh Gabri**	**8.18**	**179**	*e*Pn	**Pn**	**08 37 52.4**	**+1.9**
IMRD	**Marand**	**8.24**	**274**	*e*Pn	**Pn**	**08 37 52.3**	**+0.9**
IKOM	**Komasi**	**8.29**	**241**	*e*Pn	**Pn**	**08 37 53.7**	**+1.7**
NAX	**Nakhchivan**	**8.40**	**277**	P	**Pn**	**08 37 54.0**	**+0.6**
KLNJ	**Kolanjah**	**8.45**	**208**	*e*Pn	**Pn**	**08 37 57.0**	**+2.6**
IKFM	**Kafar-mosalman**	**8.45**	**236**	*e*Pn	**Pn**	**08 37 54.5**	**+0.4**
NGRK	**Negar Kerman**	**8.91**	**177**	*e*Pn	**Pn**	**08 38 03.1**	**+2.3**
GNI	**Garni**	**9.04**	**284**	Pn	**Pn**	**08 38 02.9**	**+0.6**
	comp=Z,5.7nm,0.3s,baz=164,slow=1.3,SNR=24						
GNI				Sn	**Sn**	**08 39 46.0**	**+2.0**
	comp=Z,4.1nm,0.3s,baz=30,slow=18,SNR=1.8						
GNI	**Garni**	**9.04**	**284**	*e*P	**Pn**	**08 38 03.5**	**+1.2**
GNI	**Garni**	**9.04**	**284**		**Pn**	**08 38 03.2**	**+0.9**
GNI	**Garni**	**9.04**	**284**	*ce*P	**Pn**	**08 38 03.2**	**+0.9**
GNI				pmax	pmax		
	comp=Z,281nm,1.0s						
GROC	**Groznyy**	**9.16**	**304**	*e*P	**Pn**	**08 38 04.1**	**+0.4**
GROC				*e*S	**Sn**	**08 39 47.7**	**+1.1**
GROC				pmax	pmax		
	comp=Z,89nm,1.0s						
TBLG	**Delisi**	**9.35**	**293**		**Pn**	**08 38 04.9**	**-1.5**
TBLG	**Delisi**	**9.35**	**293**	P	**Pn**	**08 38 04.9**	**-1.5**
CLDR	**Caldiran**	**9.63**	**277**	*e*P	**Pn**	**08 38 12.1**	**+1.7**
GUDG	**Gudauri**	**9.76**	**297**	P	**Pn**	**08 38 14.1**	**+1.9**
VANB	**Van**	**10.06**	**274**	*e*P	**Pn**	**08 38 18.6**	**+2.4**
BGD	**Bogdanovka**	**10.07**	**289**	P	**Pn**	**08 38 17.9**	**+1.4**
AKH	**Akhalkalaki**	**10.18**	**290**		**Pn**	**08 38 17.4**	**-0.5**
AKH	**Akhalkalaki**	**10.18**	**290**	P	**Pn**	**08 38 17.4**	**-0.5**
ZEI	**Tsey**	**10.27**	**298**	*e*P	**Pn**	**08 38 18.9**	**-0.3**
ZEI				pmax	pmax		
	comp=Z,17nm,0.5s						
AGRB	**Hanur-Agry**	**10.35**	**280**	*e*P	**Pn**	**08 38 21.7**	**+1.5**
AKDM	**Akdamar-Van**	**10.40**	**273**	*e*P	**Pn**	**08 38 23.2**	**+2.2**
TAS	**Tashkent**	**10.40**	**71**		**Pn**	**08 38 19.7**	**-1.1**
TAS	**Tashkent**	**10.40**	**71**	P	**Pn**	**08 38 19.7**	**-1.1**
ONI	**Oni**	**10.52**	**296**	*e*P	**Pn**	**08 38 24.6**	**+2.2**
ONI	**Oni**	**10.52**	**296**	P	**Pn**	**08 38 24.0**	**+1.6**
NCK	**Nalchik**	**10.74**	**301**	⇑*e*P	**Pn**	**08 38 25.6**	**+0.2**
SIRT	**Sirnak**	**10.93**	**269**	*e*P	**Pn**	**08 38 29.4**	**+1.2**
AB31	**Akbulak array**	**11.01**	**13**	⇑Pn	**Pn**	**08 38 24.7**	**-4.4**
	comp=Z,43nm,0.7s,baz=209,slow=14,SNR=294						
AB31				⇓Sn	**Sn**	**08 40 28.5**	**-3.5**
	comp=Z,162nm,0.6s						
AB31				⇓Lg	Lg	08 41 34.3	
	comp=Z,321nm,0.9s						
AB31	**Akbulak array**	**11.01**	**13**	P	**Pn**	**08 38 27.8**	**-1.3**
AB31						08 40 28.2	
ABKAR	**Akbulak array**	**11.01**	**13**		**Pn**	**08 38 27.6**	**-1.6**
ABKAR	**Akbulak array**	**11.01**	**13**	Pn	**Pn**	**08 38 27.4**	**-1.7**
ABKAR	**Akbulak array**	**11.01**	**13**	*e*Pn	**Pn**	**08 38 27.5**	**-1.6**
KBL	**Kabul**	**11.06**	**107**		**Pn**	**08 38 28.6**	**-1.4**
KBL	**Kabul**	**11.06**	**107**	P	**Pn**	**08 38 31.0**	**+1.0**
	SNR=20						
KBL	**Kabul**	**11.06**	**107**	P	**Pn**	**08 38 28.6**	**-1.4**
NEY	**Neytrino**	**11.24**	**299**	⇓*e*P	**Pn**	**08 38 33.8**	**+1.4**
KBZ	**Khabaz**	**11.30**	**301**	Pn	**Pn**	**08 38 30.4**	**-2.6**
	comp=Z,3.5nm,0.3s,baz=134,slow=3.9,SNR=42						
KBZ				LR	LR	08 43 32.2	
	comp=Z,621nm,19.6s,baz=130,slow=41						
BTK	**Batken**	**11.40**	**78**	Pn	**Pn**	**08 38 31.7**	**-2.8**
BTK	**Batken**	**11.40**	**78**	P	**Pn**	**08 38 31.7**	**-2.8**
KVAR	**Kislovodsk Arr**	**11.52**	**302**	Pn	**Pn**	**08 38 34.5**	**-1.6**
	baz=90,slow=20,SNR=12						
KVAR				Sn	**Sn**	**08 40 40.5**	**-4.2**
	baz=259,slow=10,SNR=4.2						
KIV	**Kislovodsk**	**11.53**	**302**	*e*P	**Pn**	**08 38 34.6**	**-1.6**
KIV	**Kislovodsk**	**11.53**	**302**		**Pn**	**08 38 34.8**	**-1.5**
KIV	**Kislovodsk**	**11.53**	**302**	*e*P	**Pn**	**08 38 34.4**	**-1.8**
KIV				*e*S	**Sn**	**08 40 43.5**	**-1.3**
KIV				pmax	pmax		
	comp=Z,88nm,0.8s						
KIV				MLR	MLR		
	comp=Z,1μm,11.0s						
KK31	**Karatay Array**	**11.72**	**63**	⇑Pn	**Pn**	**08 38 35.7**	**-3.2**
	comp=Z,28nm,0.4s,baz=239,slow=15,SNR=444						
KK31				⇓Sn	**Sn**	**08 40 46.1**	**-3.4**
	comp=Z,113nm,0.8s,baz=240,slow=30,SNR=5.4						
KK31				⇑Lg	Lg	08 41 59.8	
	comp=Z,376nm,0.9s,baz=244,slow=19,SNR=6.2						
KK31	**Karatay Array**	**11.72**	**63**		**Pn**	**08 38 36.1**	**-2.8**
KK31	**Karatay Array**	**11.72**	**63**	*e*P	**Pn**	**08 38 35.9**	**-3.0**
KK31						08 40 47.0	
KKAR	**Karatay Array**	**11.72**	**63**		**Pn**	**08 38 36.3**	**-2.6**
KKAR	**Karatay Array**	**11.72**	**63**		**Pn**	**08 38 36.1**	**-2.8**
KKAR	**Karatay Array**	**11.72**	**63**	P	**Pn**	**08 38 36.3**	**-2.6**
KKAR	**Karatay Array**	**11.72**	**63**	*e*Pn	**Pn**	**08 38 37.1**	**-1.8**
GOF	**Gofitskoye**	**11.78**	**308**	⇑*e*P	Pn	08 38 45.1	+5.5
GOF				*e*S	**Sn**	**08 40 51.3**	**+0.4**
GOF				smax	smax		
	comp=E,400nm,0.7s						
GOF				smax	smax		
	comp=N,136nm,0.6s						
AKTO	**Aktyubinsk**	**11.93**	**6**	Pn	**Pn**	**08 38 40.1**	**-1.6**
	comp=N,34nm,0.3s,baz=177,slow=11,SNR=219						
AKTO				Sn	**Sn**	**08 40 49.5**	**-5.1**
	comp=N,13nm,0.3s,baz=39,slow=20,SNR=6.7						
AKTO				LR	LR	08 44 19.8	
	comp=N,2μm,18.7s,baz=172,slow=42						
AKTO	**Aktyubinsk**	**11.93**	**6**	⇑Pn	**Pn**	**08 38 37.8**	**-3.9**
	comp=N,248nm,1.1s						
AKTO				⇓Sn	**Sn**	**08 40 50.7**	**-3.9**
	comp=N,288nm,0.8s						
AKTO				⇑Lg	Lg	08 42 01.1	
	comp=N,396nm,1.1s						
BNGB	**Bingl**	**12.15**	**277**	P	**Pn**	**08 38 47.3**	**+2.5**
YEDI	**Yedisu-Bingol**	**12.24**	**279**	*e*P	**Pn**	**08 38 48.1**	**+2.0**
MAZI	**Mazidag**	**12.50**	**270**	*e*P	**Pn**	**08 38 50.2**	**+0.5**
ARSB	**Arslanbob**	**13.14**	**73**		**Pn**	**08 38 55.4**	**-3.1**
ARSB	**Arslanbob**	**13.14**	**73**	P	**Pn**	**08 38 55.4**	**-3.1**
SOC	**Sochi**	**13.43**	**297**	*e*P	**Pn**	**08 39 00.8**	**-1.3**
SOC				*e*		08 41 29.2	
SOC				pmax	pmax		
	comp=Z,32nm,0.8s						
SOC				MLR	MLR		
	comp=Z,1μm,19.0s						
UOSS	**Minazif**	**13.58**	**180**	Pn	**Pn**	**08 39 02.1**	**-2.2**
AML	**Almayashu**	**13.78**	**70**	P	**Pn**	**08 39 04.7**	**-2.7**
	SNR=16						
EKS2	**Erkin-Say**	**13.94**	**67**	P	**Pn**	**08 39 06.4**	**-2.8**
	SNR=73						
UCH	**Uchtor**	**14.40**	**70**	P	**Pn**	**08 39 12.6**	**-3.3**
	SNR=59						
AAK	**Ala-Archa**	**14.45**	**68**	Pn	**Pn**	**08 39 14.7**	**-1.6**
	comp=Z,7.7nm,0.3s,baz=238,slow=9.4,SNR=140						
AAK				Sn	**Sn**	**08 41 52.4**	**-4.0**
	comp=Z,2.6nm,0.3s,baz=225,slow=19,SNR=3.3						
AAK				Lg	Lg	08 43 36.1	
	comp=Z,0.5nm,0.3s,baz=316,slow=19,SNR=2.2						
AAK				LR	LR	08 44 52.2	
	comp=Z,1μm,18.1s,baz=258,slow=37						
AAK	**Ala-Archa**	**14.45**	**68**	P	**Pn**	**08 39 14.6**	**-1.8**
	SNR=12						
AAK	**Ala-Archa**	**14.45**	**68**	⇓P	**Pn**	**08 39 13.6**	**-2.7**
	comp=Z,51nm,0.7s						
AAK	**Ala-Archa**	**14.45**	**68**		**Pn**	**08 39 14.1**	**-2.2**
AAK	**Ala-Archa**	**14.45**	**68**	*de*P	**Pn**	**08 39 14.1**	**-2.2**
AAK				pmax	pmax		
	comp=Z,39nm,0.6s						
USP	**Ospenovka**	**14.58**	**65**	P	**Pn**	**08 39 14.4**	**-3.6**
	SNR=92						
FRU1	**Bishkek**	**14.58**	**67**	Pn	**Pn**	**08 39 14.7**	**-3.3**
FRU1	**Bishkek**	**14.58**	**67**	P	**Pn**	**08 39 14.7**	**-3.3**
NIL	**Nilore**	**14.60**	**104**		**Pn**	**08 39 16.1**	**-2.2**
NIL	**Nilore**	**14.60**	**104**	P	**Pn**	**08 39 16.1**	**-2.2**
CHMS	**Chumysh**	**14.71**	**67**	P	**Pn**	**08 39 16.0**	**-3.7**
	SNR=14						
CHMS	**Chumysh**	**14.71**	**67**	⇑Pn	**Pn**	**08 39 15.4**	**-4.3**
	comp=Z,73nm,1.1s						
KBK	**Karagaybulak**	**14.79**	**68**	P	**Pn**	**08 39 18.7**	**-2.2**
	SNR=39						
KZA	**Kyzart**	**14.92**	**70**	P	**Pn**	**08 39 20.7**	**-2.2**
	SNR=12						
GAZ	**Gaziantep**	**15.09**	**271**		**Pn**	**08 39 24.5**	**-0.4**
GAZ				IAmb	IAmb	08 39 32.9	
	comp=Z,37nm,0.9s						
KMRS	**Kahramanmaras**	**15.28**	**272**	*e*P	**P**	**08 39 34.0**	**+1.8**
ANN	**Anapa**	**15.35**	**300**	*e*P	**Pn**	**08 39 26.8**	**-1.4**
ANN				*e*S	**Sn**	**08 42 17.4**	**-0.6**
ANN				pmax	pmax		
	comp=Z,25nm,1.3s						
ANN				MLR	MLR		
	comp=N,607nm,17.0s						
ANN				MLR	MLR		
	comp=E,1μm,17.0s						
ANN				MLR	MLR		
	comp=Z,2μm,17.0s						
KSH	**Kashi**	**15.37**	**80**	P	Pn	08 39 20.0	-8.7
KSH				sP	P	08 39 26.5	-6.8
KSH				S	Sn	08 42 04.3	-14
KSH				pmax	pmax		
	comp=Z,42nm,0.7s						
KSH				pmax	pmax		
	comp=Z,110nm,3.5s						
KSH				LR	LR		
	comp=Z,2μm,7.3s						
KSH				LR	LR		
	comp=Z,1μm,5.2s						
KSH				LR	LR		
	comp=Z,5μm,11.0s						
NRN	**Naryn**	**15.42**	**73**		**Pn**	**08 39 26.1**	**-3.3**
NRN				IAmb	IAmb	08 39 30.8	
	comp=Z,73nm,1.1s						
NRN	**Naryn**	**15.42**	**73**	P	**Pn**	**08 39 26.1**	**-3.3**
NRN				pmax	pmax		
	comp=Z,73nm,1.1s						
WSAR	**Wadi Sarin**	**15.42**	**172**	Pn	**Pn**	**08 39 29.4**	**+0.2**
	comp=Z,1.5nm,0.3s,baz=8.9,slow=8.9,SNR=7.2						
WSAR				LR	LR	08 46 31.3	
	comp=Z,362nm,21.1s,baz=35,slow=42						
BOOM	**Boomskoye usch**	**15.48**	**69**		**Pn**	**08 39 25.8**	**-4.3**
BOOM				IAmb	IAmb	08 39 38.6	
	comp=Z,62nm,1.1s						
BOOM	**Boomskoye usch**	**15.48**	**69**	P	**Pn**	**08 39 25.8**	**-4.3**
BOOM				pmax	pmax		
	comp=Z,62nm,1.1s						
ULHL	**Ulahol**	**15.67**	**70**	P	**Pn**	**08 39 31.0**	**-1.7**
	SNR=24						
KVT	**Kavak**	**15.71**	**286**	*e*P	**Pn**	**08 39 33.5**	**+0.5**
BNN	**Bunyan**	**15.92**	**277**	*e*P	**P**	**08 39 41.8**	**+2.4**
KOZT	**Kozan**	**16.12**	**272**	*e*P	**Pn**	**08 39 39.1**	**+0.9**
VRH	**Novkhopyorsk**	**16.25**	**326**	*e*P	**Pn**	**08 39 37.9**	**-1.9**
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
YOZ	**Yozgat**	**16.27**	**280**	*e*P	**Pn**	**08 39 41.1**	**+0.8**
DIKM	**Dikmen**	**16.34**	**287**	⇑P	**Pn**	**08 39 42.0**	**+1.1**
KNDC	**Almaty**	**16.34**	**67**	⇑Lg	Lg	08 44 25.7	
KDJ	**Kajisay**	**16.36**	**71**		**Pn**	**08 39 39.5**	**-1.9**
KDJ	**Kajisay**	**16.36**	**71**	P	**Pn**	**08 39 39.5**	**-1.9**
KDJ				pmax	pmax		
	comp=Z,54nm,1.1s						
MDOK	**Medeo**	**16.39**	**67**	⇑Pn	**Pn**	**08 39 39.7**	**-2.2**
	comp=Z,51nm,0.7s						
MDOK				⇓Lg	Lg	08 44 25.7	
	comp=Z,301nm,1.1s						
MDOK	**Medeo**	**16.39**	**67**	P	**Pn**	**08 39 39.7**	**-2.2**
ASF	**Jabal al Asfar**	**17.00**	**254**	Pn	**Pn**	**08 39 49.8**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=27,slow=11,SNR=11						
PRZ	**Przheval'sk**	**17.29**	**70**	Pn	**Pn**	**08 39 48.0**	**-5.2**
PRZ	**Przheval'sk**	**17.29**	**70**	P	**Pn**	**08 39 48.0**	**-5.2**
PRZ				pmax	pmax		
	comp=Z,36nm,1.1s						
BZK	**Bozkurt**	**17.29**	**288**	⇑P	**Pn**	**08 39 56.1**	**+1.7**
BRVK	**Borovoye**	**17.44**	**29**	⇑Pn	**Pn**	**08 39 51.3**	**-3.5**
	comp=Z,64nm,0.8s						
BRVK				⇑Lg	Lg	08 45 00.3	
	comp=Z,294nm,1.2s						
BRVK	**Borovoye**	**17.44**	**29**	Pn	**Pn**	**08 39 52.5**	**-2.3**
BRVK				IAmb	IAmb	08 39 59.8	
	comp=Z,44nm,0.8s						
BRVK	**Borovoye**	**17.44**	**29**	P	**Pn**	**08 39 52.5**	**-2.3**
BRVK				pmax	pmax		
	comp=Z,44nm,0.8s						
VSR	**Storozhevoye**	**17.44**	**322**	*e*P	**Pn**	**08 39 53.3**	**-1.5**
VSR				pmax	pmax		
	comp=Z,80nm,0.6s						
BVAR	**Borovoye Array**	**17.46**	**30**	P	**Pn**	**08 39 53.5**	**-1.5**
	comp=Z,6.5nm,0.3s,baz=218,slow=8.4,SNR=58						
ILGA	**Ilgaz**	**17.47**	**285**	Pn	**Pn**	**08 39 54.4**	**-1.2**
DHRM	**DHARAMSHALA**	**17.52**	**105**	*e*P	**Pn**	**08 39 54.5**	**-1.6**
DHRM				IAmb	IAmb	08 40 00.9	
	comp=Z,45nm,0.7s						
BR131	**Keskin Array S**	**17.56**	**281**		**Pn**	**08 39 56.3**	**-0.3**
BR131	**Keskin Array S**	**17.56**	**281**	P	**Pn**	**08 39 56.3**	**-0.3**
BR131				pmax	pmax		
	comp=Z,39nm,1.5s						
BRTR	**Keskin Array B**	**17.56**	**281**	P	**Pn**	**08 39 56.6**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=97,slow=13,SNR=41						
BRTR	**Keskin Array B**	**17.56**	**281**		**Pn**	**08 39 56.1**	**-0.4**
BRTR	**Keskin Array B**	**17.56**	**281**	*i* P	**Pn**	**08 39 57.2**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
RAYN	**Ar Rayn**	**17.57**	**214**	P	**Pn**	**08 39 54.6**	**-2.0**
RAYN	**Ar Rayn**	**17.57**	**214**	P	**Pn**	**08 39 54.6**	**-2.0**
RAYN				pmax	pmax		
	comp=Z,27nm,0.9s						
SIM	**Simferopol'**	**17.66**	**298**	*d i*P	**P**	**08 39 58.5**	**0.0**
SIM				S	**Sn**	**08 43 08.5**	**-5.7**
SIM				pmax	pmax		
	comp=Z,41nm,0.8s						
MMAI	**Mount Meron Ar**	**17.77**	**258**	P	**P**	**08 39 59.9**	**0.0**
	comp=Z,0.9nm,0.3s,baz=71,slow=15,SNR=9.5						
MMAI				LR	LR	08 48 37.9	
	comp=Z,444nm,20.7s,baz=20,slow=44						
ARU	**Arti**	**17.94**	**4**	P	**Pn**	**08 39 59.8**	**-1.1**
	comp=Z,0.0nm,0.3s,baz=189,slow=7.6,SNR=25						
ARU				LR	LR	08 47 25.1	
	comp=Z,2μm,18.4s,baz=170,slow=38						
ARU	**Arti**	**17.94**	**4**		**Pn**	**08 39 58.7**	**-2.2**

ARU IAmb IAmb 08 40 06.8
comp=Z,98nm,1.0s
ARU Arti 17.94 4 eP Pn 08 39 59.6 -1.3
ARU S Sn 08 43 17.8 -2.8
ARU MLR MLR
comp=Z,1μm,17.0s
BHK Bhakra 17.99 107 ex Pn 08 40 04.6 +2.8
PDGK Podgornoye 18.18 67 ⇑Pn Pn 08 40 01.1 -3.1
comp=Z,20nm,1.0s
PDGK Podgornoye 18.18 67 P Pn 08 40 01.5 -2.7
ANTO Ankara 18.20 281 P P 08 40 05.3 +0.7
ANTO Ankara 18.20 281 P P 08 40 05.3 +0.7
ANTO pmax pmax
comp=Z,24nm,0.9s
SVE Sverdlovsk 18.50 8 eP Pn 08 40 11.6 +3.8
SVE pmax pmax
comp=Z,78nm,1.3s
SVE MLR MLR
comp=Z,2μm,13.0s
CSS Mathiatis 18.69 266 P Pn 08 40 10.3 0.0
SMLA Simla 18.69 107 eP Pn 08 40 11.0 +0.7
SMLA IAmb IAmb 08 40 13.3
comp=Z,69nm,0.8s
LADK Ladik-KONYA 18.71 276 eP Pn 08 40 12.1 +1.5
KONT Konya--Tatoy 18.75 276 eP Pn 08 40 12.8 +1.7
KIZT Kizilcal 19.00 279 eP Pn 08 40 14.4 +0.3
YUVA Yuva-Kibriscik 19.02 283 eP Pn 08 40 15.5 +1.1
SEYD Seydisehir-KON 19.25 274 eP Pn 08 40 18.5 +1.3
MDUB Mudurnu 19.39 284 P Pn 08 40 18.7 -0.1
EIL Elat 19.70 250 P P 08 40 21.5 +0.5
comp=Z,0.5nm,0.3s,baz=296,slow=3.0,SNR=6.9
EIL LR LR 08 49 52.4
comp=Z,994nm,18.9s,baz=52,slow=43
KURBB Kurchatov Arra 19.84 45 P P 08 40 22.1 -0.3
comp=Z,0.4nm,0.3s,baz=248,slow=12,SNR=11
KURK Kurchatov 19.94 45 ⇑Pn P 08 40 23.4 0.0
comp=Z,20nm,0.7s
KURK Kurchatov 19.94 45 P P 08 40 22.1 -1.3
KURK Kurchatov 19.94 45deP P 08 40 24.0 +0.6
KURK pmax pmax
comp=Z,18nm,1.1s
ISP Isparta 20.21 276 P P 08 40 27.2 +0.6
ISP IAmb IAmb 08 40 37.0
comp=Z,80nm,1.2s
ISP Isparta 20.21 276 P P 08 40 27.2 +0.6
ISP pmax pmax
comp=Z,80nm,1.2s
SHAO Shalim 20.48 182 P P 08 40 27.2 -2.3
SNR=12
KIRV Kirov 20.51 350 P Pn 08 40 31.1 -0.7
comp=Z,70nm,0.8s,baz=89,slow=1.1,SNR=11
KIRV LR LR 08 49 30.1
comp=Z,825nm,21.5s,baz=239,slow=40
MAKZ Makanchi 20.57 58 ⇑Pn P 08 40 29.2 -1.2
comp=Z,45nm,1.1s
MAKZ Makanchi 20.57 58 P P 08 40 29.4 -1.0
MAKZ IAmb IAmb 08 40 33.8
comp=Z,52nm,1.2s
MAKZ Makanchi 20.57 58 P P 08 40 29.4 -1.0
MAKZ pmax pmax
comp=Z,52nm,1.2s
WHFO Wadi Hawf 20.69 187 P P 08 40 30.2 -1.6
SNR=7.1
MK31 Makanchi Array 20.77 58 Pn P 08 40 32.6 0.0
comp=Z,16nm,0.6s,baz=247,slow=8.8,SNR=290
MK31 Makanchi Array 20.77 58 P P 08 40 32.2 -0.4
MK31 Makanchi Array 20.77 58 iP P 08 40 32.6 0.0
MKAR Makanchi Array 20.77 58 P P 08 40 33.1 +0.5
comp=Z,13nm,0.7s,baz=247,slow=12,SNR=51
MKAR LR LR 08 49 47.9
comp=Z,563nm,20.4s,baz=252,slow=40
MKAR Makanchi Array 20.77 58 P P 08 40 32.3 -0.3
DMTO DMTO 20.80 183 P P 08 40 32.0 -1.1
SNR=8.9
ELL Elmali 20.90 273 P P 08 40 32.8 -1.3
ELL Elmali 20.90 273 P P 08 40 32.8 -1.3
ELL pmax pmax
comp=Z,270nm,0.8s
RBK Rabkut 21.06 185 P P 08 40 34.1 -1.7
SNR=7.0
OBN Obninsk 21.20 328 P P 08 40 37.7 +0.6
comp=Z,30nm,0.4s,baz=89,slow=1.5,SNR=15
OBN LR LR 08 50 21.6
comp=Z,217nm,18.2s,baz=151,slow=41
OBN Obninsk 21.20 328 ⇑P P 08 40 38.0 +0.8
OBN Obninsk 21.20 328 P P 08 40 37.9 +0.8
OBN Obninsk 21.20 328c iP P 08 40 37.9 +0.8
OBN e 08 40 59.0
OBN ePPP PPP 08 41 04.8
OBN e 08 44 44.7
OBN pmax pmax
comp=Z,235nm,1.2s
OBN MLR MLR
comp=Z,927nm,17.0s
MOS Moscow 21.22 330 eP P 08 40 36.1 -1.1
MOS eS S 08 44 28.7 -3.9
MOS pmax pmax
comp=Z,62nm,0.9s
MOS MLR MLR
comp=Z,800nm,18.0s
ABTO Aybut 21.29 188 P P 08 40 36.3 -2.0
JURR Jurilovca 21.30 296 ⇑P P 08 40 38.9 +0.8
EFOR EFORIE 21.39 294 ⇑P P 08 40 39.3 +0.1
MFTR Murfatlar 21.55 294 ⇓P P 08 40 42.4 +1.5
TIRR Tirgusor 21.59 295 ⇑P P 08 40 40.9 -0.5
TIRR Tirgusor 21.59 295 P P 08 40 39.8 -1.5
TIRR Tirgusor 21.59 295 P P 08 40 39.8 -1.5
MANT Manisa 21.62 278 P P 08 40 42.8 +0.7
TOPG Topolog 21.66 296 ⇑P P 08 40 43.1 +0.9
PSN Preselentsi 21.69 293 eP P 08 40 43.7 +1.3
MILM Milestii Mici 21.71 301 ⇑P P 08 40 43.5 +0.9
KIS Kishinev 21.73 302 eP P 08 40 43.0 +0.2
comp=Z,300nm,2.5s
KIS eS S 08 44 42.0 -0.9
KIS eSS SnSn 08 45 32.0 +25
KIS iLQ LQ 08 48 32.0
KIS LRM MLR 08 50 06.0
comp=Z,1μm,16.0s
KIS Kishinev 21.73 302 eP P 08 40 43.0 +0.2
KIS i 08 41 03.0
KIS eS S 08 44 42.0 -0.9
KIS eSS SnSn 08 45 32.0 +25
KIS pmax pmax
comp=Z,300nm,2.5s
KIS MLR MLR
comp=N,1μm,16.0s
KIS MLR MLR
comp=Z,2μm,16.0s
CFR Carcaliu 21.87 297 ⇑P P 08 40 44.9 +0.6
CFR Carcaliu 21.87 297 P P 08 40 45.2 +0.9
CFR pmax pmax
comp=Z,56nm,0.8s
HARR Harsova 21.96 295 ⇑P P 08 40 46.9 +1.6
HARR Harsova 21.96 295 P P 08 40 46.8 +1.6
ICOR Ion Corvin 22.00 294 ⇑P P 08 40 47.1 +1.5
SORM Soroca 22.31 304 ⇓P P 08 40 48.6 -0.4
SORM Soroca 22.31 304 P P 08 40 48.6 -0.4
AKASG Malin Array Be 22.59 311 P P 08 40 51.8 -0.2
comp=Z,40nm,0.5s,baz=97,slow=8.7,SNR=138
AKASG LR LR 08 50 49.6
comp=Z,717nm,18.8s,baz=100,slow=40
AKASG Malin Array Be 22.59 311 P P 08 40 52.2 +0.2
AKBB Malin Array Si 22.59 311 P P 08 40 51.7 -0.3
AKBB Malin Array Si 22.59 311 P P 08 40 51.7 -0.3
AKBB pmax pmax
comp=Z,69nm,0.7s
KIEV Kiev 22.59 311 P P 08 40 52.0 0.0
IAS Iasi 22.61 302 P P 08 40 55.8 +3.6
IAS pmax pmax
comp=Z,36nm,0.6s
ODBI Odobesti 22.70 298 ⇑P P 08 40 54.9 +1.7
JMB Yambol 22.82 289 eP P 08 40 57.2 +2.7
RAZG Razgrad 22.89 292 ⇓P P 08 40 56.6 +1.3
BISRR Bisoca 22.92 297 ⇑P P 08 40 56.2 +0.7
VRI Vrincioaia 22.95 298 ⇑P P 08 40 57.9 +2.0
VRI Vrincioaia 22.95 298 P P 08 40 57.8 +2.0
PLOR Plostina 23.00 298 ⇑P P 08 40 57.8 +1.4
PLOR Plostina 23.00 298 P P 08 40 57.8 +1.4
ALN Alexandroupoli 23.28 285 P P 08 40 58.8 -0.5
ALN Alexandroupoli 23.28 285 P P 08 40 58.8 -0.5
ALN pmax pmax
comp=Z,18nm,1.1s
SZH Strazhica 23.30 291 eP P 08 41 01.4 +1.9
ELND Elena 23.34 290 ⇑P P 08 41 01.0 +1.1
KARP Karpathos 23.35 272 P P 08 40 59.4 -0.7
MLR Muntele Rosu 23.44 297 P P 08 41 01.5 +0.5
comp=Z,11nm,0.7s,baz=41,slow=3.9,SNR=16
MLR LR LR 08 52 45.8
comp=Z,1μm,18.4s,baz=69,slow=43
MLR Muntele Rosu 23.44 297 ⇑P P 08 41 03.2 +2.2
MLR Muntele Rosu 23.44 297 P P 08 41 01.5 +0.5
BHPL Bhopal 23.67 124 eP P 08 41 02.3 -1.0
BHPL IAmb IAmb 08 41 07.1
comp=Z,48nm,1.1s
PVL Pavlikeni 23.74 291 eP P 08 41 09.7 +5.9
DOPR Dopca 23.89 298 ⇑P P 08 41 06.6 +1.4
PRGR Permogore 24.01 348 eP P 08 41 09.6 +3.5
PRGR eS S 08 45 28.2 +5.6
PRGR pmax pmax
comp=Z,103nm,0.8s
VOIR 24.07 297 ⇑P P 08 41 08.7 +1.7
VOIR 24.07 297 P P 08 41 08.6 +1.7
WMQ Urumqi 24.16 67 eP P 08 41 10.6 +2.7
WMQ pmax pmax
comp=Z,22nm,0.9s
WMQ pmax pmax
comp=Z,250nm,3.7s
WMQ LR LR
comp=Z,2μm,12.1s
WMQ LR LR
comp=Z,700nm,10.1s
BURAR Bucovina Array 24.25 302 ⇑P P 08 41 09.4 +0.6
BURAR Bucovina Array 24.25 302 P P 08 41 08.4 -0.3
BURAR Bucovina Array 24.25 302 P P 08 41 09.3 +0.6
PLVB Pleven 24.26 292 ⇑P P 08 41 10.2 +1.5
BUR08 Bucovina Ar. S 24.27 302 P P 08 41 07.5 -1.4
ARR Arges 24.35 296 ⇓P P 08 41 11.1 +1.5
PGB Panagyurishte 24.60 290 eP P 08 41 13.4 +1.5
KLMR Klimovskoe 24.64 340 eP P 08 41 10.3 -1.6
KLMR eS S 08 45 30.9 -1.8
KLMR pmax pmax
comp=Z,46nm,0.9s
KLMR Klimovskoe 24.64 340 eP P 08 41 10.3 -1.6
KLMR AMP 08 41 25.8
comp=Z,46nm,0.9s
KLMR eS S 08 45 31.0 -1.8
KLMR eS S 08 45 31.0 -1.8
KLMR LQ LQ 08 48 46.1
KLMR LQ LQ 08 48 46.1
KLMR LR LR 08 50 34.2
ARCR ARCALIA 24.75 300 ⇑P P 08 41 15.6 +2.5
ZAA0 Zalesovo Array 24.81 42 P P 08 41 13.4 -0.2
ZAA0 IAmb IAmb 08 41 18.7
comp=Z,18nm,0.7s
ZALV Zalesovo Beam 24.81 42 P P 08 41 14.2 +0.7
comp=Z,11nm,0.4s,baz=252,slow=9.7,SNR=31
ZALV LR LR 08 51 31.7
comp=Z,599nm,20.1s,baz=234,slow=38
ZALV Zalesovo Beam 24.81 42 P P 08 41 13.4 -0.1
ZALV Zalesovo Beam 24.81 42 iP P 08 41 14.8 +1.2
ZALV pmax pmax
comp=Z,11nm,0.4s
MICGM Minsk 24.95 319 eP P 08 41 16.0 +1.3
MICGM eS S 08 45 40.0 +2.3
MNK Minsk 24.95 319 eP P 08 41 16.0 +1.3
MNK eS S 08 45 40.0 +2.3
LOT Lotru 24.96 296 ⇑P P 08 41 16.6 +1.4
MMB Musomiste 24.98 287 eP P 08 41 16.5 +1.3
DANN Dangsing 25.04 106 eP P 08 41 17.9 +1.7
comp=Z,148nm,0.9s
SRS Serrai 25.11 286 P P 08 41 17.6 +1.2
SRS pmax pmax
comp=Z,25nm,1.2s
POO Poona 25.17 138 ex P 08 41 18.0 +0.8
IDI Anoyia 25.21 272 P P 08 41 16.9 -0.5
comp=Z,18nm,0.5s,baz=77,slow=11,SNR=24
KOLN Koldanda 25.22 107 eP P 08 41 20.5 +2.7
comp=Z,104nm,1.2s
VTS Vitosha 25.29 290 ⇑P P 08 41 20.1 +1.9
VTS Vitosha 25.29 290 eP P 08 41 19.7 +1.5
VTS Vitosha 25.29 290 P P 08 41 17.6 -0.6
VTS Vitosha 25.29 290 P P 08 41 17.6 -0.6
VTS pmax pmax
comp=Z,10.0nm,0.7s
SOH Sokhos 25.32 286 P P 08 41 19.6 +1.2
SOH pmax pmax
comp=Z,16nm,0.9s
LVV L'vov 25.49 307 eP P 08 41 19.7 0.0
LVV e 08 41 58.2
LVV eS S 08 45 41.4 -5.1
LVV eSS SnSn 08 46 44.2 +5.0
LVV eSSS SSS 08 46 57.1
LVV pmax pmax
comp=Z,50nm,1.5s
LVV MLR MLR
comp=N,600nm,14.0s
LVV MLR MLR
comp=E,800nm,14.0s
LVV MLR MLR
comp=Z,1μm,14.0s
GZR Gura Zlata 25.66 296 ⇑P P 08 41 21.9 +0.5
NACGM Naroch 25.70 319 eP P 08 41 22.0 +0.4
NACGM eS S 08 45 50.0 +0.3
NACGM eLQ LQ 08 50 24.0
NACGM eLR LR 08 52 30.0
DRGR 25.82 299 ⇑P P 08 41 24.8 +1.9
DRGR 25.82 299 P P 08 41 24.5 +1.6
DRGR pmax pmax
comp=Z,19nm,0.9s
VAY Valandovo 25.86 287 eP P 08 41 24.6 +1.4
GKN Gorkha 25.88 106 eP P 08 41 26.4 +2.7
comp=Z,70nm,0.6s
TRPA Tarpa 26.12 302 ⇑P P 08 41 27.0 +1.6
STIP Stip 26.12 288 iP P 08 41 24.9 -0.6
NGP Nagpur 26.21 125 eP P 08 41 29.0 +2.5
NGP ex x 08 46 12.1
KWP Kalwaria Pacla 26.28 306 P P 08 41 27.9 +0.9
KWP IAmb IAmb 08 41 38.6
comp=Z,22nm,0.9s
KWP Kalwaria Pacla 26.28 306 P P 08 41 27.9 +0.9
KWP pmax pmax
comp=Z,22nm,0.9s
SOCY Socotra 26.35 185 P P 08 41 24.4 -3.4
SOCY IAmb IAmb 08 41 28.5
comp=Z,21nm,0.9s
UZH Uzhgorod 26.36 303⇓iP P 08 41 29.0 +1.4
UZH e 08 42 09.8
UZH e 08 42 20.6
UZH eS S 08 46 01.1 +0.8
UZH e 08 47 11.8
UZH e 08 47 31.8
UZH MLR MLR
comp=N,110nm,15.0s
UZH MLR MLR
comp=E,150nm,15.0s
UZH MLR MLR
comp=Z,130nm,15.0s
MDVR Moldovita 26.38 295 ⇑P P 08 41 29.2 +1.2
KOLS Kolonicke sedl 26.43 304 eP P 08 41 29.9 +1.6
KOLS pmax pmax
comp=Z,11nm,0.9s
KOLS Kolonicke sedl 26.43 304 eP P 08 41 29.9 +1.6
DMN Daman 26.44 106 eP P 08 41 31.6 +2.7
comp=Z,137nm,1.4s
KKN Kakani 26.48 105 eP P 08 41 32.5 +3.3
comp=Z,43nm,0.7s
BZS Buzias 26.48 297 ⇑P P 08 41 30.5 +1.6
BZS Buzias 26.48 297 P P 08 41 30.6 +1.8
BZS pmax pmax
comp=Z,23nm,0.9s
SIRR Siria 26.50 298 ⇑P P 08 41 30.6 +1.7
SKO Skopje 26.66 288 iP P 08 41 31.6 +1.2
PKIN Phulchoki 26.68 106 eP P 08 41 33.6 +2.6
comp=Z,96nm,0.8s
PKI Pulchoki 26.69 106 eP P 08 41 33.9 +2.7
comp=Z,96nm,0.8s
GUN Gumba 26.87 104 eP P 08 41 35.6 +2.7
comp=Z,241nm,1.0s
CRVS Cervenica-Dubn 26.95 304 eP P 08 41 34.5 +1.5
CRVS pmax pmax
comp=Z,40nm,1.4s
CRVS Cervenica-Dubn 26.95 304 eP P 08 41 34.5 +1.5
ITM Ithomi 27.03 278 P P 08 41 32.3 -1.5
ITM IAmb IAmb 08 41 37.3
comp=Z,17nm,0.7s
JIRN Jiri 27.23 105 eP P 08 41 39.0 +2.8
comp=Z,192nm,1.2s
SUW Suwalki 27.25 315 P P 08 41 32.1 -3.5
SUW Suwalki 27.25 315 P P 08 41 32.1 -3.5
SUW pmax pmax
comp=Z,61nm,1.0s
VSU Vasula 27.52 326⇓eP P 08 41 38.7 +0.7
TMCR Tamitsa 27.82 343 eP P 08 41 47.1 +6.5
TMCR pmax pmax
comp=Z,25nm,1.3s
RAMN Ramite 27.92 105 eP P 08 41 44.2 +2.1
comp=Z,46nm,0.7s
PDG Podgorica 28.24 290 ⇓P P 08 41 44.8 +0.2
OJC Ojcow 28.24 306 P P 08 41 42.9 -1.6
OJC Ojcow 28.24 306 P P 08 41 42.9 -1.6
OJC pmax pmax
comp=Z,13nm,1.1s
LANS Liptovska Anna 28.28 304 eP P 08 41 46.1 +1.1
LANS pmax pmax
comp=Z,4.0nm,0.8s
LANS Liptovska Anna 28.28 304 eP P 08 41 46.1 +1.1
TAPN Taplejung 28.55 104 eP P 08 41 50.5 +2.7
comp=Z,60nm,1.2s
ODAN Odare 28.56 105 eP P 08 41 50.4 +2.5
comp=Z,58nm,0.9s
VYHS Vyhne 28.62 302 eP P 08 41 49.6 +1.7
VYHS Vyhne 28.62 302 eP P 08 41 49.6 +1.7
BOK Bokaro 29.18 112 eP P 08 41 54.8 +1.7
BOK IAmb IAmb 08 42 03.5
comp=Z,19nm,1.4s
ATD Arta Tunnel 29.46 207 LR LR 08 54 18.4
comp=Z,439nm,19.6s,baz=28,slow=38
FIA1 FINESS Array S 29.52 331 P P 08 41 54.3 -1.4
FIA1 IAmb IAmb 08 42 01.2
comp=Z,12nm,1.0s
FINES FINESS Array B 29.52 331 P P 08 41 56.5 +0.8
comp=Z,3.5nm,0.7s,baz=130,slow=7.2,SNR=10
FINES LR LR 08 55 07.1
comp=Z,584nm,19.0s,baz=134,slow=39
FINES FINESS Array B 29.52 331 P P 08 41 53.6 -2.1
MORC Moravsky Berou 29.61 305 ⇑P P 08 41 58.3 +1.6
MORC Moravsky Berou 29.61 305 P P 08 41 58.3 +1.6
MODS Modra-Piesok 29.64 302 eP P 08 41 57.0 0.0
MODS Modra-Piesok 29.64 302 eP P 08 41 57.0 0.0
DPC Dobruska-Polom 30.46 306 eP P 08 42 05.8 +1.5
DPC AMS AMS 08 55 50.0
comp=Z,800nm,18.5s
DPC Dobruska-Polom 30.46 306 eP P 08 42 05.8 +1.5
DPC MLR MLR
comp=Z,800nm,18.5s
OSTC Ostas 30.56 306 AMS AMS 08 56 00.0
comp=Z,1μm,8.5s
CHVC Chvalec 30.66 306 eP P 08 42 07.7 +1.7
UPC Upice 30.68 306 eP P 08 42 08.0 +1.8
UPC AMS AMS 08 56 00.0
comp=Z,1μm,17.4s
UPC Upice 30.68 306 eP P 08 42 08.0 +1.8
UPC MLR MLR
comp=Z,1μm,17.4s
ARSA Arzberg 30.76 300 ipP P 08 42 08.4 +1.5
comp=Z,5.3nm,0.7s
SOKA Soboth 31.09 299 ipP P 08 42 11.3 +1.4
comp=Z,8.0nm,0.9s
PRU Pruhonice 31.56 305 AMS AMS 08 57 30.0
comp=Z,1μm,11.6s
PVCC Panska Ves 31.60 306 AMS AMS 08 56 30.0
comp=Z,900nm,18.9s
APA Apatity 31.72 344⇓iP P 08 42 28.0 +13
APA i 08 43 15.2
APA pmax pmax
comp=Z,14nm,0.6s
APA MLR MLR
comp=Z,2μm,13.0s
BRG Berggiesshubel 32.03 307 iP P 08 42 20.0 +2.0
BRG pmax pmax
comp=Z,11nm,0.6s
BRG MLR MLR
comp=N,818nm,21.0s
BRG MLR MLR
comp=E,10μm,15.3s
BRG MLR MLR
comp=Z,1μm,19.8s
GERES GERESS Array B 32.04 303 P P 08 42 18.5 +0.3
comp=Z,1.8nm,0.6s,baz=94,slow=8.7,SNR=11
GERES GERESS Array B 32.04 303 P P 08 42 18.1 -0.1
MYKA Terra Mystica 32.05 298 ipP P 08 42 20.3 +1.9
comp=Z,5.7nm,0.9s
KHC Kasperske Hory 32.13 303 eP P 08 42 19.4 +0.4
KHC epP sP 08 42 25.8 +1.0
KHC AMS AMS 08 57 40.0
comp=Z,800nm,11.1s
KHC Kasperske Hory 32.13 303⇑eP P 08 42 19.7 +0.7
KHC pmax pmax
comp=Z,8.0nm,0.9s
KBA Koelnbreinsper 32.24 299 ipP P 08 42 21.4 +1.3
comp=Z,4.7nm,0.7s
CLL Collm 32.66 307 eP P 08 42 24.0 +0.4
CLL e(PP) 08 43 36.0
CLL eS S 08 47 35.0 -4.2
CLL LmH 08 55 00.0
comp=N,1μm,20.7s
CLL LmH 08 55 00.0
comp=E,700nm,19.6s
CLL LmH 08 55 00.0
comp=Z,700nm,21.4s
CLL Collm 32.66 307 P P 08 42 22.1 -1.4
CLL Collm 32.66 307 eP P 08 42 24.0 +0.4
CLL eS S 08 47 35.0 -4.2
NRCA Norcia 32.70 291 P P 08 42 24.4 +0.3
NRCA IAmb IAmb 08 42 27.1
comp=Z,28nm,1.5s
ABTA Abfaltersbach 32.82 299 ipP P 08 42 26.0 +0.8
comp=Z,5.5nm,0.6s
TEZP TEZPUR 32.83 100 eP P 08 42 28.0 +2.7
TEZP IAmb IAmb 08 42 32.2
comp=Z,19nm,1.2s
MURB Monte Urbino 33.08 292 P P 08 42 26.9 -0.5
WTTA Wattenberg 33.41 300 ipP P 08 42 30.4 +0.1
comp=Z,8.1nm,0.6s
WATA Walderalm 33.45 300 ipP P 08 42 31.9 +1.3
comp=Z,4.7nm,0.5s
CTI Castel Tesino 33.45 298 P P 08 42 29.1 -1.4
CTI IAmb IAmb 08 42 32.5
comp=Z,16nm,1.4s
CTI Castel Tesino 33.45 298 P P 08 42 29.2 -1.4
CTI pmax pmax
comp=Z,16nm,1.4s
GTA Gaotai 33.64 75 eP P 08 42 35.8 +3.4
GTA pP sP 08 42 40.3 +1.9
GTA sP pP 08 42 43.3 +6.6
GTA S S 08 48 00.0 +5.1
GTA pmax pmax
comp=Z,7.0nm,1.1s
GTA pmax pmax
comp=Z,89nm,5.5s
GTA LR LR
comp=Z,900nm,18.6s
GTA LR LR
comp=Z,1μm,14.1s
GTA LR LR
comp=Z,870nm,14.4s
MOY Mondy 33.65 52 eP P 08 42 34.9 +2.6
MOY pmax pmax
comp=Z,29nm,1.6s
MOTA Moosalm 33.77 300 ipP P 08 42 34.1 +0.7
comp=Z,7.9nm,0.9s
FETA Feichten 34.03 299 ipP P 08 42 35.7 -0.1
comp=Z,5.0nm,0.8s
HFS Hagfors 34.25 323 P P 08 42 37.6 +0.4
comp=Z,3.4nm,0.7s,baz=125,slow=7.4,SNR=8.4
HFS LR LR 08 58 07.4
comp=Z,1μm,19.3s,baz=113,slow=39
FUORN Ofenpass-Fuorn 34.37 299 P P 08 42 36.4 -2.5
FUORN IAmb IAmb 08 42 40.0
comp=Z,15nm,1.4s
DAVA Damuels 34.60 300 ipP P 08 42 40.8 +0.1
comp=Z,6.1nm,0.6s
DAVOX Davos/Dischmat 34.63 299 LR LR 08 59 23.2
comp=Z,501nm,18.3s,slow=41
KEV Kevo 34.90 343 P P 08 42 43.4 +0.7
KEV IAmb IAmb 08 42 48.6
comp=Z,25nm,1.3s
KEV Kevo 34.90 343 P P 08 42 43.4 +0.7
KEV pmax pmax
comp=Z,25nm,1.3s
TUE Stuetta 35.02 298 P P 08 42 42.3 -2.0
TUE IAmb IAmb 08 42 46.6
comp=Z,12nm,0.6s
ZAK Zakamensk 35.02 55 eP P 08 42 45.9 +1.7

ZAK pmax pmax
comp=Z,9.0nm,0.9s
ARCES ARCESS Array B 35.09 342 P P 08 42 45.2 +0.7
comp=Z,2.4nm,0.8s,baz=144,slow=9.0,SNR=7.5
ARCES LR LR 08 58 16.0
comp=Z,474nm,20.6s,baz=144,slow=38
ARCES ARCESS Array B 35.09 342 P P 08 42 41.0 -3.5
MSSA Maissana 35.11 295 P P 08 42 45.2 +0.2
SAIH SAIHA 35.21 106 eP P 08 42 50.2 +4.0
SAIH IAmb IAmb 08 42 57.1
comp=Z,18nm,1.0s
TLY Talaya 35.30 52 P P 08 42 49.0 +2.5
comp=Z,1.9nm,0.6s,baz=257,slow=7.7,SNR=4.3
TLY Talaya 35.30 52 P P 08 42 43.2 -3.3
TLY Talaya 35.30 52 eP P 08 42 49.9 +3.4
TLY eSS SS 08 50 41.3 -12
TLY pmax pmax
comp=Z,16nm,1.2s
TLY MLR MLR
comp=Z,2μm,13.0s
NC602 NORSAR Array S 35.45 323 P P 08 42 44.1 -3.5
NORES NORESS Array B 35.45 323 P P 08 42 52.2 +4.5
NORES pmax pmax
comp=Z,1.0nm,0.4s
NC405 NORSAR Array S 35.49 324 P P 08 42 46.5 -1.5
NB201 NORSAR Array S 35.67 324 P 08 42 46.4 -3.2
NB201 IAmb IAmb 08 42 59.5
comp=Z,22nm,1.3s
NC303 NORSAR Array S 35.69 324 P P 08 42 48.6 -1.1
NB2 NORSAR Subarra 35.70 324 P P 08 42 50.5 +0.7
comp=Z,2.3nm,0.7s,baz=108,slow=8.6
NOA NORSAR Array B 35.70 324 P P 08 42 50.0 +0.2
comp=Z,4.0nm,0.8s,baz=110,slow=8.4,SNR=10.0
NOA LR LR 08 59 02.6
comp=Z,881nm,19.6s,baz=110,slow=39
IRK Irkutsk 35.72 52 eP P 08 42 52.6 +2.6
IRK pmax pmax
comp=Z,36nm,1.4s
SONM Songino Array 37.14 59 P P 08 43 04.3 +1.9
comp=Z,6.4nm,0.7s,baz=273,slow=9.0,SNR=46
KEST Kesra 37.17 281 LR LR 09 02 51.8
comp=Z,187nm,18.9s,baz=4.0,slow=44
LZH Lanzhou 37.61 79 eP P 08 43 04.4 -2.2
LZH pP pP 08 43 07.9 -2.9
LZH sP sP 08 43 10.8 -1.8
LZH PP PP 08 44 32.1 -0.2
LZH pmax pmax
comp=Z,24nm,1.1s
LZH pmax pmax
comp=Z,120nm,5.4s
LZH LR LR
comp=Z,2μm,14.6s
LZH LR LR
comp=Z,2μm,14.1s
LZH LR LR
comp=Z,1μm,15.2s
PALK Pallekele 38.19 138 P P 08 43 11.9 +0.4
comp=Z,8.1nm,0.7s,baz=344,slow=8.7,SNR=7.7
PALK Pallekele 38.19 138 P P 08 43 10.8 -0.7
PALK IAmb IAmb 08 43 15.0
comp=Z,9.1nm,0.7s
CD2 Chengdu 39.44 86 P P 08 43 19.5 -2.3
CD2 S S 08 49 21.3 -2.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,170nm,4.9s
CD2 LR LR
comp=Z,1μm,12.8s
CD2 LR LR
comp=Z,1μm,17.1s
CD2 LR LR
comp=Z,1μm,11.8s
BOD Bodaibo 41.56 43 eP P 08 43 39.9 +0.9
BOD pmax pmax
comp=Z,16nm,0.9s
HHC Hu-ho-hao-te 42.03 69 eP P 08 43 41.5 -1.7
HHC sP sP 08 43 49.3 +0.1
HHC S S 08 50 01.4 -0.5
HHC SS SS 08 53 04.0 -4.8
HHC pmax pmax
comp=Z,2.0nm,0.6s
HHC pmax pmax
comp=Z,51nm,5.6s
HHC LR LR
comp=Z,550nm,11.6s
HHC LR LR
comp=Z,490nm,14.7s
HHC LR LR
comp=Z,460nm,12.0s
CMAR Chiang Mai Arr 42.09 106 P P 08 43 43.4 -0.4
comp=Z,10nm,0.8s,baz=300,slow=8.8,SNR=30
CMAR LR LR 09 04 21.0
comp=Z,336nm,21.7s,baz=292,slow=41
CMAR Chiang Mai Arr 42.09 106 i P P 08 43 46.5 +2.7
CMAR pmax pmax
comp=Z,10.0nm,0.8s
XAN Xi'an 42.22 79 P P 08 43 46.3 +1.5
XAN pP pP 08 43 50.0 +0.9
XAN S S 08 50 12.9 +8.1
XAN pmax pmax
comp=Z,3.0nm,0.9s
XAN pmax pmax
comp=Z,140nm,3.6s
XAN LR LR
comp=Z,2μm,13.7s
XAN LR LR
comp=Z,1μm,15.3s
XAN LR LR
comp=Z,600nm,12.6s
EKA Eskdalemuir Ar 42.47 313 P P 08 43 45.4 -1.1
comp=Z,2.9nm,0.7s,baz=102,slow=8.2,SNR=6.6
SPITS Spitsbergen Ar 42.98 349 P P 08 43 50.2 -0.1
comp=Z,5.1nm,0.7s,baz=140,slow=17,SNR=6.5
KMBO Kilima Mbogo 43.20 208 LR LR 09 01 58.1
comp=Z,340nm,19.7s,baz=17,slow=36
BJI Beijing 45.63 68 P P 08 44 11.8 -0.2
BJI pmax pmax
comp=Z,4.0nm,1.1s
BJI LR LR
comp=Z,2μm,15.2s
BJI LR LR
comp=Z,680nm,17.7s
ESDC Sonseca Array 45.93 291 P P 08 44 14.3 -0.2
comp=Z,1.0nm,0.5s,baz=66,slow=8.0,SNR=6.6
ESDC LR LR 09 06 48.5
comp=Z,127nm,21.0s,baz=45,slow=40
ESDC Sonseca Array 45.93 291 P P 08 44 13.7 -0.8
PAB San Pablo 46.26 291 P P 08 44 16.0 -1.1
PAB IAmb IAmb 08 44 18.5
comp=Z,16nm,1.4s
PAB San Pablo 46.26 291 P P 08 44 16.0 -1.1
PAB pmax pmax
comp=Z,16nm,1.5s
TIXI Tiksi 48.47 24 P P 08 44 35.3 +1.6
comp=Z,1.4nm,0.4s,baz=251,slow=3.0,SNR=14
TIXI Tiksi 48.47 24 P P 08 44 35.1 +1.4
TIXI IAmb IAmb 08 44 42.8
comp=Z,10nm,1.2s
TIXI Tiksi 48.47 24⇓eP P 08 44 35.8 +2.1
TIXI pmax pmax
comp=Z,12nm,1.7s
YAK Yakutsk 49.24 37 eP P 08 44 41.4 +1.6
YAK e*PP sP 08 44 46.7 +0.9
YAK e 08 46 05.2
YAK e 08 46 34.9
YAK ePPP PPP 08 47 27.4
YAK eS S 08 51 46.8 +1.7
YAK eSS SS 08 55 13.7 -2.2
YAK pmax pmax
comp=Z,18nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=E,10.0nm,1.3s
YAK pmax pmax
comp=Z,79nm,4.8s
YAK pmax pmax
comp=N,129nm,5.7s
YAK pmax pmax
comp=E,174nm,4.6s
YAK smax smax
comp=N,162nm,4.4s
YAK smax smax
comp=E,138nm,4.8s
YAK MLR MLR
comp=N,696nm,21.0s
YAK MLR MLR
comp=E,301nm,19.0s
ZEA Zeya 49.39 48 eP P 08 44 50.9 +10
ZEA eS S 08 51 55.0 +7.7
ZEA pmax pmax
comp=Z,24nm,1.6s
ZEA smax smax
comp=E,500nm,14.0s
ZEA MLR MLR
comp=Z,1μm,15.0s
ZEA MLR MLR
comp=E,500nm,16.0s
ZEA MLR MLR
comp=N,800nm,13.0s
QIZ Qiongzhong 50.12 97 P P 08 44 43.8 -3.2
QIZ S S 08 51 56.8 -1.6
QIZ LR LR
comp=N,660nm,15.4s
QIZ LR LR
comp=N,630nm,18.9s
QIZ LR LR
comp=N,560nm,13.9s
NJ2 Nanjing 50.65 77 eP P 08 44 50.8 -0.1
NJ2 pmax pmax
comp=N,6.0nm,0.5s
CN2 Changchun 50.98 61 eP P 08 44 56.1 +2.9
CN2 pmax pmax
comp=N,10.0nm,0.9s
CN2 LR LR
comp=N,2μm,16.0s
CN2 LR LR
comp=N,2μm,16.0s
CN2 LR LR
comp=N,700nm,13.0s
PSI Prapat 52.72 122 P P 08 45 07.9 +1.2
comp=N,17nm,0.7s,baz=311,slow=6.9,SNR=8.2
RPSI Rantau Prapat 52.80 122 P P 08 45 04.6 -2.5
RPSI Rantau Prapat 52.80 122 P P 08 45 07.9 +0.7
KLR Kul'dur 53.32 52 LR LR 09 08 30.8
comp=N,353nm,19.6s,baz=290,slow=37
KLR Kul'dur 53.32 52⇓eP P 08 45 14.0 +3.4
KLR pmax pmax
comp=Z,8.0nm,1.0s
TOA0 Torodi Ar. Sit 54.31 258 P P 08 45 16.9 -1.4
TOA0 IAmb IAmb 08 45 18.5
comp=Z,8.1nm,0.9s
TORD Torodi Ar. Bea 54.31 258 P P 08 45 17.2 -1.1
comp=Z,3.7nm,0.6s,baz=47,slow=7.8,SNR=25
TORD LR LR 09 11 43.1
comp=Z,167nm,18.5s,baz=40,slow=40
KSAR Wonju Array Be 55.09 67 P P 08 45 23.9 +0.3
KSAR Wonju Array Be 55.09 67 P P 08 45 23.9 +0.3
KSRS Korea Array 55.11 67 P P 08 45 25.1 +1.3
comp=Z,3.6nm,0.7s,baz=283,slow=5.8,SNR=12
USRK Ussuriysk Ar. 55.24 58 P P 08 45 24.8 +0.1
comp=Z,9.2nm,0.8s,baz=279,slow=6.8,SNR=18
USRK Ussuriysk Ar. 55.24 58 P P 08 45 23.4 -1.2
BKNI Bangkinang 55.97 122 P P 08 45 30.5 +0.3
SEY Seymchan 59.09 32⇓eP P 08 45 54.2 +2.7
TYV Tymovskoe 59.25 47 eP P 08 45 57.3 +4.5
TYV pmax pmax
comp=Z,8.0nm,1.7s
TYV pmax pmax
comp=Z,200nm,4.2s
MA2 Magadan 59.81 36⇓eP P 08 46 00.3 +3.7
MA2 pmax pmax
comp=Z,64nm,3.4s
YSS Yuzh-Sakhalins 60.99 51⇓eP P 08 46 08.2 +3.3
YSS pmax pmax
comp=Z,10.0nm,0.8s
YSS MLR MLR
comp=Z,300nm,14.0s
YSS MLR MLR
comp=N,400nm,16.0s
YSS MLR MLR
comp=E,500nm,16.0s
BILL Bilibino 61.69 24 P P 08 46 09.3 0.0
BILL IAmb IAmb 08 46 16.9
comp=Z,9.2nm,0.9s
BILL Bilibino 61.69 24 eP P 08 46 09.7 +0.4
BILL e 08 46 51.8
BILL ePPP PPP 08 49 53.6
BILL pmax pmax
comp=Z,12nm,1.3s
ASAJ Asahikawa 62.19 54 LR LR 09 14 41.4
comp=Z,579nm,18.1s,baz=291,slow=37
MAT Matsushiro 62.86 64 P P 08 46 14.7 -2.9
MJAR Matsushiro Arr 62.86 64 P P 08 46 20.3 +2.7
comp=Z,3.5nm,0.8s,baz=314,slow=6.8,SNR=7.6
MJAR LR LR 09 13 22.9
comp=Z,194nm,20.9s,baz=325,slow=36
DBIC Dimbokro 63.38 257 P P 08 46 20.4 -0.8
comp=Z,5.0nm,0.7s,baz=18,slow=6.7,SNR=8.0
DBIC LR LR 09 17 44.5
comp=Z,164nm,18.1s,baz=36,slow=40
DBIC Dimbokro 63.38 257 P P 08 46 20.7 -0.6
DBIC IAmb IAmb 08 46 21.0
comp=Z,6.2nm,0.8s
DBIC Dimbokro 63.38 257 P P 08 46 20.7 -0.6
DBIC pmax pmax
comp=Z,6.0nm,0.8s
KIC Kosan Boka 63.49 256 eP P 08 46 21.2 -0.8
comp=Z,34nm,1.1s
TIC Toumodi 63.52 257 eP P 08 46 21.3 -1.0
comp=Z,13nm,0.5s
LIC Lamto 63.79 256 eP P 08 46 23.2 -0.8
comp=Z,37nm,0.7s
RES Resolute Bay 65.41 352 P P 08 46 35.2 +1.5
RES Resolute Bay 65.41 352 P P 08 46 35.2 +1.5
RES pmax pmax
comp=Z,6.0nm,1.5s
PETK Petropavlovsk- 66.33 40 LR LR 09 17 00.1
comp=Z,280nm,18.4s,baz=264,slow=37
FRB Frobisher Bay 69.07 337 P P 08 46 58.0 +1.0
comp=Z,16nm,0.8s,baz=36,slow=6.6,SNR=44
MPSI Mapaga 69.43 107 P P 08 47 00.8 +0.8
comp=Z,11nm,1.1s
LBTB Lobatse 69.46 210 P P 08 46 58.9 -1.1
LBTB IAmb IAmb 08 47 01.7
comp=Z,14nm,1.4s
LBTB Lobatse 69.46 210 P P 08 46 58.9 -1.1
LBTB pmax pmax
comp=Z,14nm,1.4s
COLD Coldfoot 72.62 10 P P 08 47 18.3 -0.3
COLD IAmb IAmb 08 47 21.8
comp=Z,7.4nm,0.8s
BOSA Boshof 72.83 208 P P 08 47 19.4 -1.1
comp=Z,2.8nm,0.6s,baz=21,slow=5.3,SNR=7.2
BOSA LR LR 09 20 32.6
comp=Z,280nm,19.1s,slow=37
BOSA Boshof 72.83 208 P P 08 47 19.4 -1.1
BOSA IAmb IAmb 08 47 19.6
comp=Z,6.7nm,1.0s
INK Inuvik 73.19 4 P P 08 47 22.5 +0.5
comp=Z,2.6nm,0.8s,baz=342,slow=4.6,SNR=11
INK Inuvik 73.19 4 P P 08 47 20.5 -1.4
INK IAmb IAmb 08 47 32.0
comp=Z,7.8nm,1.2s
IMAR Indian Mountai 73.23 12 P P 08 47 19.6 -2.7
MLY Manley 74.60 12 P P 08 47 32.1 +1.8
MLY IAmb IAmb 08 47 36.0
comp=Z,18nm,1.3s
SCHQ Schefferville 74.99 330 P P 08 47 33.3 +0.6
comp=Z,4.5nm,0.7s,baz=46,slow=5.9,SNR=13
SCHQ Schefferville 74.99 330 P P 08 47 32.2 -0.6
SCHQ IAmb IAmb 08 47 41.2
comp=Z,7.3nm,0.9s
CCB Clear Creek Bu 75.40 10 P P 08 47 31.9 -3.0
CCB IAmb IAmb 08 47 39.9
comp=Z,9.0nm,1.3s
IL31 75.41 10 P P 08 47 33.8 -1.0
IL31 IAmb IAmb 08 47 46.4
comp=Z,9.7nm,1.4s
ILAR Eielson Array 75.41 10 P P 08 47 35.6 +0.7
comp=Z,3.3nm,0.9s,baz=335,slow=4.4,SNR=25
ILAR LR LR 09 26 16.1
comp=Z,121nm,18.4s,baz=322,slow=40
ILAR Eielson Array 75.41 10 P P 08 47 34.6 -0.3
BPAW Bear Paw Mtn. 75.42 12 P P 08 47 35.1 0.0
BPAW IAmb IAmb 08 47 47.6
comp=Z,22nm,1.4s
WRH Wood River Hil 75.52 11 P P 08 47 34.8 -0.8
KTH Kantishna Hill 75.95 12 P P 08 47 36.9 -1.3
KTH IAmb IAmb 08 47 43.9
comp=Z,12nm,1.0s
PPLA Purkeypile 76.34 13 P P 08 47 40.5 0.0
PPLA IAmb IAmb 08 47 54.1
comp=Z,24nm,1.5s
RND Reindeer 76.41 11 P P 08 47 39.6 -1.2
RND IAmb IAmb 08 47 51.2
comp=Z,16nm,1.1s
RND Reindeer 76.41 11 P P 08 47 39.6 -1.2
RND pmax pmax
comp=Z,16nm,1.1s
RIDG Independent Ri 76.66 9 P P 08 47 43.2 +1.0
RIDG IAmb IAmb 08 47 54.6
comp=Z,17nm,1.2s
DAWY Dawson 76.96 7 P P 08 47 44.3 +0.4
DAWY IAmb IAmb 08 47 53.1
comp=Z,13nm,1.1s
BCAR Beaver Creek A 77.69 8 P P 08 47 47.6 -0.4
SUA Susitna One 77.93 13 P P 08 47 48.2 -1.2
SCM Sheep Creek Mo 78.14 11 P P 08 47 49.8 -0.7
SCM Sheep Creek Mo 78.14 11 P P 08 47 49.8 -0.7
SCM pmax pmax
comp=Z,19nm,0.9s
YKA Yellowknife Ar 79.01 356 P P 08 47 55.5 +0.3
comp=Z,4.3nm,0.9s,baz=3.0,slow=6.1,SNR=63
YKA LR LR 09 26 36.5
comp=Z,170nm,18.9s,baz=0.0,slow=38
GBN Guysborough 79.42 321 P P 08 47 56.6 -1.1
GBN IAmb IAmb 08 47 59.8
comp=Z,13nm,1.0s
BRLK Bradley Lake 79.49 14 P P 08 47 58.1 +0.1
CNPM China Poot 79.65 14 P P 08 47 58.7 -0.1
BARN Barnard Glacie 79.65 9 P P 08 47 56.9 -2.1
CTGM Chitina Glacie 79.78 9 P P 08 48 00.1 +0.4
FCC Fort Churchill 79.92 345 P P 08 47 59.0 -1.2
FCC Fort Churchill 79.92 345 P P 08 47 59.0 -1.2
FCC pmax pmax
comp=Z,8.0nm,1.2s
FFC Flin Flon 85.21 348 P P 08 48 29.0 +1.1
FFC IAmb IAmb 08 48 38.0
comp=Z,8.8nm,1.4s
FFC Flin Flon 85.21 348 P P 08 48 29.0 +1.1
FFC pmax pmax
comp=Z,9.0nm,1.4s
ULM Lac du Bonnet 88.21 343 P P 08 48 42.1 -0.5
comp=Z,3.6nm,0.9s,baz=33,slow=4.8,SNR=7.7
ULM LR LR 09 29 28.7
comp=Z,227nm,21.3s,baz=32,slow=36
ULM Lac du Bonnet 88.21 343 P P 08 48 42.7 +0.1
ULM IAmb IAmb 08 48 50.6
comp=Z,6.2nm,1.0s
ULM Lac du Bonnet 88.21 343 P P 08 48 42.7 +0.1
ULM pmax pmax
comp=Z,6.0nm,1.0s
WRA Warramunga Arr 93.35 113 P P 08 49 05.6 -1.3
comp=Z,1.7nm,0.8s,baz=318,slow=4.1,SNR=9.9
WRA LR LR 09 35 01.1
comp=Z,63nm,21.8s,baz=325,slow=38
ASAR Alice Springs 95.41 116 P P 08 49 16.9 +0.5
comp=Z,1.0nm,0.9s,baz=314,slow=4.6,SNR=7.4
ASAR LR LR 09 37 18.4
comp=Z,56nm,18.5s,baz=300,slow=39
PDAR Pinedale Array 98.02 349 LR LR 09 38 44.0
comp=Z,172nm,18.4s,baz=1.5,slow=38

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*KRNET **13** 08:50:59.9±0.1, 39.89N×73.06E, mb2.9*
*SOME **13** 08:51:01.3, 40.05N×73.03E, h5km*
*NNC **13** 08:51:03.8±2.5, 40.14N×73.08E, h0km, mb3.6, mpv3.2,*
Error ellipse: s-maj=18.5km s-min=9.1km az=171.0
ISC 13 08:51:02.2±2.3, 40.06N±0.08×73.05E±0.04, h0km±14km,
n24, σ1.72/40, 17C-9D, Kyrgyzstan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ARSB Arslanbob 1.27 358⇑iP Pg 08 51 27.0 +0.5
baz=58
ARSB ⇑iS Sn 08 51 46.4 +1.3
baz=58
BTK Batken 1.71 271⇓iP Pn 08 51 31.7 -1.6
baz=76
BTK ⇓iS Sn 08 51 55.8 -0.1
baz=76
ARK Arkit 1.92 335⇑iP Pb 08 51 37.6 -0.6
baz=37
ARK ⇑iS Sg 08 52 04.5 +0.5
baz=37
ARLS Aral 2.05 28⇑eP Pb 08 51 39.4 -0.9
baz=25
ARLS ⇑iS Sg 08 52 08.7 +0.8
baz=25
AML Almayashu 2.13 13⇓iP Pb 08 51 40.2 -1.7
baz=12
AML ⇓iS Sg 08 52 10.8 +0.2
baz=12
UCH Uchtor 2.44 27⇑iP Pb 08 51 45.2 -1.9
baz=25
UCH ⇑iS Sg 08 52 18.1 -2.3
baz=25
KZA Kyzart 2.62 39⇑iP Pn 08 51 47.4 +1.3
baz=36
KZA ⇑iS Sb 08 52 21.9 -1.2
baz=36
EKS2 Erkin-Say 2.66 12⇑iP Pb 08 51 47.8 +1.4
baz=11
EKS2 ⇑iS Sb 08 52 23.1 -0.9
baz=11
MRKS Merke 2.69 3 eP Pb 08 51 52.0 +0.8
13nm,0.3s
MRKS eS Sg 08 52 28.4 -0.1
17nm,0.5s
MRKS Merke 2.69 3 Pg Pb 08 51 51.5 +0.3
13nm,0.3s
MRKS Lg Lg 08 52 28.4
17nm,0.5s
AAK Ala-Archa 2.80 22⇑iP Pb 08 51 50.5 -2.6
baz=21
AAK ⇑iS Sb 08 52 26.7 -1.3
baz=21
AAK Ala-Archa 2.80 22 ⇓Pg Pb 08 51 53.0 -0.1
9.3nm,0.9s
AAK ⇑Lg Lg 08 52 30.2
10nm,0.6s
KBK Karagaybulak 2.97 28⇓eP Pn 08 51 52.6 +1.9
baz=27
KBK ⇓iS Sb 08 52 30.8 -2.0
baz=27
IUG Iuzhnay 3.09 313 eP Pb 08 51 59.4 +1.3
0.8nm,0.2s
IUG eS Sg 08 52 41.2 -0.2
12nm,0.3s
IUG Iuzhnay 3.09 313 Pg Pb 08 51 59.4 +1.3
0.8nm,0.2s
IUG Lg Lg 08 52 41.2
12nm,0.3s
BOOM Boomskoye usch 3.27 41⇓iP Pn 08 51 55.9 +1.1
baz=39
BOOM ⇓iS Sb 08 52 37.1 -4.4
baz=39
KK31 Karatay Array 3.59 329 ⇑Pg Pb 08 52 07.5 +0.9
0.5nm,0.2s,baz=135,slow=12,SNR=3.0
KK31 ⇑Lg Lg 08 52 55.3
1.4nm,0.3s,baz=138,slow=61,SNR=4.5
SGDS Sogindy 3.59 19 Pg Pb 08 52 07.9 +1.3
1.6nm,0.3s
SGDS Lg Lg 08 52 56.2
6.3nm,0.5s
KST Kastek 3.70 35 eP Pb 08 52 10.3 +1.8
18nm,1.0s
KST eS Sg 08 52 59.9 -1.1
8.1nm,0.7s
KST Kastek 3.70 35 Pg Pb 08 52 10.3 +1.8
18nm,1.0s
KST Lg Lg 08 52 59.9
8.1nm,0.7s
TNSS Tian-Shan 4.17 43 eP Pb 08 52 19.0 +2.2
4.2nm,0.3s
TNSS eS Sg 08 53 15.0 -1.3
8.9nm,0.7s
TNSS Tian-Shan 4.17 43 Pg Pb 08 52 19.0 +2.2
4.2nm,0.3s
TNSS Lg Lg 08 53 15.0
8.9nm,0.7s
KUU Kurty 4.55 32 eP Pb 08 52 25.3 +2.4
4.2nm,0.6s
KUU eS Sg 08 53 25.5 -2.8
5.7nm,0.6s
KUU Kurty 4.55 32 Pg Pb 08 52 25.3 +2.4
4.2nm,0.6s

KUU Lg Lg 08 53 25.5
5.7nm,0.6s

IDC 13 09:06:07.7±0.5,29.31N×142.05E,h0km,mb4.1/20, mb1 4.3/23,mb1mx4.2/37,mbtmp4.1/23,ML3.5/4,MS3.8/7, Ms1 3.8/7,ms1mx3.3/50,Error ellipse: s-maj=18.7km s-min=12.4km az=81.0
JMA 13 09:06:09.2±0.2,29.44N×142.31E,h42km,M4.6
NEIC 13 09:06:13.4±1.4,29.31N±0.06×142.1E±0.1,h39km±6km, mb4.6/30,Error ellipse: s-maj=13.8km s-min=8.0km az=78.0
ISC 13 09:06:11.6±0.5,29.37N±0.05×142.24E±0.08,h30km,n101, σ1.95/104,mb4.4/31,MS3.8/6,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.27	181	P	Pn	09 06 46.4	-0.6
JCJ	Chichijima	2.27	181	Pn	Pn	09 06 47.0	0.0
	18nm,0.3s,baz=150,slow=21,SNR=2.4						
JCJ				Sn	Sb	09 07 15.0	-4.5
	60nm,0.3s,baz=72,slow=22,SNR=6.1						
JHCJ	Hachijojimakas	4.24	331	eS	Sn	09 08 01.1	-1.5
JHJ2	Mitsune	4.27	332	Pn	Pn	09 07 15.8	+1.3
BSO1	Boso 1	5.38	349	P	Pn	09 07 28.9	-0.3
BSO1				eS	Sn	09 08 29.0	-0.8
JHU	Hanno	6.93	340	P	Pn	09 07 50.6	-0.4
JHU				eS	Sn	09 08 59.0	-0.8
JRY	Ryogami san	7.20	338	P	Pn	09 07 54.4	-0.4
JRY				eS	Sn	09 09 15.2	-0.4
JHO	Hitachi	7.36	349	P	Pn	09 07 56.1	-0.8
JAG	Ashikaga	7.41	342	P	Pn	09 07 57.2	-0.5
INU	Inuyama	7.42	325	Pn	Pn	09 07 58.9	+1.2
MJAR	Matsushiro Arr	7.91	336	Pn	Pn	09 08 05.4	+0.9
	1.1nm,0.3s,baz=148,slow=16,SNR=18						
MJAR				Sn	Sn	09 09 29.5	-3.6
	baz=129,slow=29,SNR=1.7						
MJAR	Matsushiro Arr	7.91	336		Pn	09 08 05.3	+0.7
MJAR				Sn	Sn	09 09 32.1	-1.0
MAJO	Matsushiro	7.91	336		Pn	09 08 05.5	+0.9
MAT	Matsushiro	7.91	336	P	Pn	09 08 05.3	+0.7
MAT				S	Sn	09 09 29.0	-4.1
MJB9	Matsu-Tunnel	7.92	336		Pn	09 08 05.9	+1.3
JFK	Kawauchi	8.06	352	P	Pn	09 08 05.0	-1.6
JFK				eS	Sn	09 09 28.7	-7.9
JMK	Ichinoseki	9.60	355	eS	Sn	09 10 05.8	-8.6
JNU	Nakatsue	10.42	294	LR	LR	09 12 12.0	
	comp=Z,334nm,18.3s,baz=286,slow=35						
KSRS	Korea Array	14.41	308	Pn	P	09 09 34.6	-5.3
	0.2nm,0.3s,baz=110,slow=11,SNR=4.1						
ASAJ	Asahikawa	14.72	1	Pn	Pn	09 09 36.7	-1.0
	0.6nm,0.3s,baz=47,slow=28,SNR=1.9						
ASAJ				Sn	Sn	09 12 08.9	-11
	0.2nm,0.3s,baz=23,slow=31,SNR=1.1						
JKA	Kamikawa-asahi	14.72	1		Pn	09 09 36.7	-0.9
JKA					Sn	09 12 08.9	-11
USRK	Ussuriysk Ar.	16.90	334	Pn	P	09 10 05.7	-1.9
	baz=147,slow=10,SNR=6.6						
USRK	Ussuriysk Ar.	16.90	334		P	09 10 07.6	0.0
USA0B	Ussuriysk Arra	16.90	334		P	09 10 09.5	+1.9
MDJ	Mudanjiang	18.23	330	P	P	09 10 23.8	+1.5
MDJ				pP	pwP	09 10 32.1	-3.2
MDJ				sP	sP	09 10 36.1	+4.0
MDJ	Mudanjiang	18.23	330	P	P	09 10 22.0	-0.2
NACB	Ninganchiao	19.14	259		Pn	09 10 31.9	-1.5
NACB				IAmb	IAmb	09 10 44.5	
	comp=Z,61nm,1.4s						
YHNB	Yeheng	19.16	261		Pn	09 10 32.4	-1.4
YHNB				IAmb	IAmb	09 10 46.1	
	comp=Z,53nm,1.1s						
YULB	Yu-li	19.67	257		Pn	09 10 39.4	-0.4
YULB				IAmb	IAmb	09 10 43.2	
	comp=Z,84nm,1.5s						
CN2	Changchun	19.67	322	eP	Pn	09 10 38.6	-1.1
SSLB	Suanglung	19.82	259		Pn	09 10 40.8	-0.8
SSLB				IAmb	IAmb	09 10 50.5	
	comp=Z,56nm,1.2s						
NJ2	Nanjing	20.28	283	eP	Pn	09 10 44.8	-2.1
KLR	Kul'dur	21.39	341	P	P	09 10 57.4	+0.7
	comp=Z,2.7nm,0.7s,baz=156,slow=10.0,SNR=5.9						
BJI	Beijing	23.84	303	P	P	09 11 17.3	-4.8
H11N2	WAKE ISLAND Hy	24.35	108	T	T	09 37 00.8	
	baz=297,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	24.36	108	T	T	09 37 05.0	
	baz=297,slow=75,SNR=9.1						
H11N3	WAKE ISLAND Hy	24.37	108	T	T	09 37 07.2	
	baz=297,slow=75,SNR=8.3						
HIA	Hailar	26.24	325	P	P	09 11 45.5	+1.6
HIA				IAmb	IAmb	09 11 45.9	
	comp=Z,14nm,0.9s						
HHC	Hu-ho-hao-te	27.45	303	eP	P	09 11 55.8	+0.8
HHC				sP	pwP	09 12 10.8	+2.3
HHC				S	S	09 16 33.6	-0.1
HHC				sS	sS	09 16 47.4	+1.4
XAN	Xi'an	28.65	288	P	P	09 12 06.1	+0.4
XAN				pP	pP	09 12 10.6	-2.9
ULN	Ulaanbaatar	32.74	314	P	P	09 12 42.5	+0.7
LZH	Lanzhou	32.83	292	eP	P	09 12 39.5	-3.2
LZH				pP	pP	09 12 49.1	-0.9
LZH				sP	pwP	09 12 53.3	-3.2
LZH				ePP	PnPn	09 13 48.6	-3.1
SONM	Songino Array	33.14	314	P	P	09 12 45.5	+0.3
	comp=Z,2.7nm,0.7s,baz=118,slow=6.7,SNR=18						
SONM	Songino Array	33.14	314	P	P	09 12 45.5	+0.3
CD2	Chengdu	33.21	282	eP	P	09 12 44.5	-1.4
SEY	Seymchan	34.21	8	P	P	09 12 55.2	+1.0
	comp=Z,2.0nm,0.6s,baz=162,slow=7.3,SNR=6.2						
TLY	Talaya	36.24	319	P	P	09 13 12.9	+1.1
TLY				IAmb	IAmb	09 13 15.7	
	comp=Z,5.9nm,0.9s						
PBKT	Sadao Pong	39.87	261	P	P	09 13 42.9	+0.1
PBKT				IAmb	IAmb	09 13 43.4	
	comp=Z,9.2nm,0.7s						
CHTO	Chiang Mai	40.70	265	P	P	09 13 48.7	-0.9
CHTO				IAmb	IAmb	09 13 49.8	
	comp=Z,9.6nm,0.8s						
CMAR	Chiang Mai Arr	40.84	265	P	P	09 13 49.9	-1.0
	comp=Z,2.6nm,0.7s,baz=50,slow=8.6,SNR=14						
CMAR				LR	LR	09 32 22.0	
	comp=Z,120nm,18.1s,baz=65,slow=39						
BILL	Bilibino	41.24	13	P	P	09 13 56.8	+3.4
WMQ	Urumqi	45.32	304	eP	P	09 14 26.9	+0.1
ZAA0	Zalesovo Array	47.82	318	P	P	09 14 46.0	-0.2
ZALV	Zalesovo Beam	47.82	318	P	P	09 14 46.3	+0.1
	comp=Z,7.3nm,0.9s,baz=98,slow=6.1,SNR=21						
ZALV	Zalesovo Beam	47.82	318	P	P	09 14 46.4	+0.2
MK31	Makanchi Array	49.09	308	P	P	09 14 56.0	-0.2
MK31				IAmb	IAmb	09 14 56.9	
	comp=Z,3.7nm,0.8s						
MKAR	Makanchi Array	49.09	308	P	P	09 14 56.0	-0.2
	comp=Z,3.6nm,0.6s,baz=92,slow=9.4,SNR=50						
MKAR				LR	LR	09 35 59.6	
	comp=Z,101nm,19.2s,baz=110,slow=37						
MKAR	Makanchi Array	49.09	308	P	P	09 14 55.9	-0.3
MAKZ	Makanchi	49.30	308	P	P	09 14 57.9	+0.1
WB0	Warramunga Arr	49.43	190	P	P	09 14 58.8	-0.1
WB0				IAmb	IAmb	09 15 05.8	
	comp=Z,4.7nm,0.6s						
WR0	Warramunga Arr	49.60	190	P	P	09 15 00.1	-0.1
WR0				IAmb	IAmb	09 15 08.2	
	comp=Z,6.0nm,1.1s						
WRAB	Tennant Creek	49.60	190	P	P	09 14 59.7	-0.5
WRAB				IAmb	IAmb	09 15 15.8	
	comp=Z,9.2nm,1.2s						
WB2	Warramunga Arr	49.61	190	P	P	09 14 59.7	-0.6
WB2				IAmb	IAmb	09 15 00.7	
	comp=Z,4.1nm,0.8s						
WRA	Warramunga Arr	49.61	190	P	P	09 14 59.5	-0.8
	comp=Z,3.5nm,0.7s,baz=10,slow=8.0,SNR=36						
WRA	Warramunga Arr	49.61	190	P	P	09 15 00.1	-0.2
KURK	Kurchatov	51.45	313	P	P	09 15 14.2	+0.4
IMAR	Indian Mountai	53.01	27	P	P	09 15 27.4	+2.2
ASAR	Alice Springs	53.34	190	P	P	09 15 27.3	-0.8
	comp=Z,0.5nm,0.5s,baz=0.2,slow=5.1,SNR=13						
ASAR	Alice Springs	53.34	190	P	P	09 15 27.7	-0.5
KSH	Kashi	54.48	300	P	P	09 15 40.1	+3.5
KSH				sP	pwP	09 15 53.8	+3.4
KSH				PcP	PcP	09 16 43.5	+3.6
KSH				PP	PP	09 17 43.8	+5.0
KSH				S	S	09 23 16.9	+3.2
AAK	Ala-Archa	55.02	304	LR	LR	09 40 33.7	
	comp=Z,69nm,18.7s,baz=139,slow=38						
ILAR	Eielson Array	55.71	29	P	P	09 15 45.5	+0.6
	comp=Z,0.7nm,0.8s,baz=263,slow=6.6,SNR=4.4						
ARSB	Arslanbob	56.37	302	P	P	09 15 50.7	+0.5
ARSB				IAmb	IAmb	09 15 52.2	
	comp=Z,8.1nm,1.1s						
BRVK	Borovoye	56.48	316	P	P	09 15 51.4	+0.6
BMAR	Burnt Mountain	56.80	26	P	P	09 15 53.3	+0.6
KK31	Karatay Array	57.81	305	P	P	09 16 00.5	+0.3
KKAR	Karatay Array	57.81	305	P	P	09 16 00.2	0.0
KKAR	Karatay Array	57.81	305	P	P	09 16 00.5	+0.3
KKAR				IAmb	IAmb	09 16 01.6	
	comp=Z,7.0nm,0.6s						
STKA	Stephens Creek	60.91	181	P	P	09 16 22.1	+0.6
	comp=Z,2.4nm,0.8s,baz=66,slow=6.1,SNR=4.5						
ABKAR	Akbulak array	63.56	314	P	P	09 16 39.6	+0.4
KIRV	Kirov	66.85	325	LR	LR	09 49 23.7	
	comp=Z,56nm,18.6s,baz=152,slow=39						
GEYT	Alibeck	68.32	302	P	P	09 17 10.8	+0.6
	comp=Z,2.9nm,0.8s,baz=28,slow=3.5,SNR=5.4						
YKA	Yellowknife Ar	70.13	29	P	P	09 17 21.4	+0.7
	comp=Z,0.6nm,0.7s,baz=293,slow=6.6,SNR=4.3						
ARCES	ARCESS Array B	71.42	341	P	P	09 17 29.6	+1.1
	comp=Z,3.8nm,1.0s,baz=51,slow=7.1,SNR=2.9						
ARCES				LR	LR	09 54 06.4	
	comp=Z,95nm,18.1s,baz=272,slow=40						
FINES	FINESS Array B	75.94	334	P	P	09 17 55.4	+0.3
	comp=Z,1.6nm,0.5s,baz=67,slow=5.4,SNR=10						
FINES	FINESS Array B	75.94	334	P	P	09 17 56.1	+0.9
KBZ	Khabaz	76.50	313	P	P	09 17 59.8	+1.1
	comp=Z,10nm,0.8s,baz=80,slow=3.9,SNR=24						
NVAR	Mina Array Bea	79.08	52	P	P	09 18 15.5	+2.0
	comp=Z,1.1nm,0.7s,baz=281,slow=5.0,SNR=7.7						
NVAR	Mina Array Bea	79.08	52	P	P	09 18 15.1	+1.6
AKASG	Malin Array Be	80.82	324	P	P	09 18 22.7	+0.4
	comp=Z,0.5nm,0.4s,baz=49,slow=5.9,SNR=4.8						
NOA	NORSAR Array B	81.52	338	P	P	09 18 25.8	-0.1
	comp=Z,0.5nm,0.5s,baz=62,slow=20,SNR=2.0						
NOA				LR	LR	09 59 39.1	
	comp=Z,42nm,18.7s,baz=20,slow=39						
PDAR	Pinedale Array	82.57	45	P	P	09 18 34.3	+2.2
	comp=Z,0.4nm,0.7s,baz=288,slow=0.9,SNR=4.7						
PDAR	Pinedale Array	82.57	45	P	P	09 18 33.9	+1.8
RDMU	Red Mountain	83.77	47	P	P	09 18 39.2	+0.9
RAYN	Ar Rayn	84.28	294	P	P	09 18 41.2	+0.2
BR131	Keskin Array S	84.50	313	P	P	09 18 43.0	+1.1
BR131				IAmb	IAmb	09 18 45.0	
	comp=Z,6.3nm,0.9s						
BRTR	Keskin Array B	84.50	313	P	P	09 18 41.8	-0.1
	comp=Z,3.8nm,0.8s,baz=99,slow=2.9,SNR=16						
BRTR	Keskin Array B	84.50	313	P	P	09 18 41.5	-0.4
TXAR	Lajitas Array	94.20	53	P	P	09 19 30.7	+2.5
	comp=Z,0.5nm,0.5s,baz=270,slow=1.8,SNR=6.0						
LPAZ	La Paz	149.23	72	PKPbc	PKiKP	09 26 00.0	+0.2
	comp=Z,1.7nm,0.9s,baz=5.7,slow=5.7,SNR=3.9						
PLCA	Paso Flores	151.02	122	PKPbc	PKPab	09 26 04.3	-5.0
	comp=Z,2.1nm,0.8s,baz=226,slow=12,SNR=4.3						

NNC 13 09:20:54.4±3.1,36.43N×82.61E,h0km,mb4.2,mpv4.0, Error ellipse: s-maj=29.1km s-min=22.7km az=58.0
IDC 13 09:20:55.1±5.2,36.58N×82.48E,h0km,mb3.4/1, mb1 3.5/6,mb1mx3.3/51,mbtmp3.5/6,ML3.1/5,MS3.4/1, Ms1 3.4/1,ms1mx2.4/51,Error ellipse: s-maj=67.9km s-min=30.6km az=23.0
ISC 13 09:20:56.1±2.6,36.4N±0.2×82.7E±0.1,h10km,n16, σ2.81/18,4C-2D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode	7.24	341	Pg	Pg	09 23 16.7	+2.0
	9.4nm,0.4s						
SHLS				Lg	Lg	09 25 05.4	
	54nm,0.9s						
PDGK	Podgornoye	7.40	341	⇓Pn	Pn	09 22 43.3	-0.9
	3.6nm,0.7s						
PDGK				⇑Sn	Sn	09 24 06.8	-1.5
	26nm,0.8s						
PDGK				⇑Lg	Lg	09 24 48.8	
	36nm,0.9s						
TNSS	Tian-Shan	8.03	328	Pg	Pb	09 23 20.2	+4.8
	3.8nm,0.9s						
TNSS				Lg	Lg	09 25 11.1	
	8.9nm,1.0s						
MDOK	Medeo	8.09	329	Pg	Pb	09 23 20.6	+4.3
	2.3nm,0.3s						
MDOK				Lg	Lg	09 25 11.8	
	8.1nm,0.7s						
WMQ	Urumqi	8.37	25	ePn	Pn	09 22 59.1	+1.7
WMQ				Sn	Sn	09 24 32.0	+0.1
KST	Kastek	8.47	324	Pg	Pb	09 23 23.9	+1.1
KST				Lg	Lg	09 25 17.3	
AAK	Ala-Archa	8.94	317	Pn	Pn	09 23 03.8	-1.6
	0.1nm,0.3s,baz=164,slow=18,SNR=2.6						
AAK				Pg	Pg	09 23 33.9	-13
	0.4nm,0.3s,baz=151,slow=13,SNR=4.8						
AAK				Lg	Lg	09 25 28.7	
	0.3nm,0.3s,baz=296,slow=15,SNR=5.3						
SGDS	Sogindy	9.43	321	Pg	Pn	09 23 40.7	+29
	2.0nm,0.5s						
MK31	Makanchi Array	10.43	358	Pn	Pn	09 23 24.2	-1.5
	1.1nm,0.6s,baz=182,slow=12,SNR=16						
MK31				⇑Sn	Sn	09 25 22.3	-0.3
	1.9nm,0.7s,baz=181,slow=24,SNR=3.9						
MKAR	Makanchi Array	10.43	358	Pn	Pn	09 23 24.2	-1.5
	0.3nm,0.3s,baz=185,slow=13,SNR=13						
MKAR				Sn	Sn	09 25 17.1	-5.5
	0.1nm,0.3s,baz=192,slow=22,SNR=2.8						
MAKZ	Makanchi	10.46	357	⇑Pn	Pn	09 23 24.7	-1.3
	4.9nm,1.1s						
MAKZ				⇓Sn	Sn	09 25 21.8	-1.4
	4.5nm,1.2s						
KURBB	Kurchatov Arra	14.58	349	Pn	Pn	09 24 18.1	-4.2
	0.1nm,0.3s,baz=174,slow=12,SNR=4.7						
ZALV	Zalesovo Beam	17.65	4	P	Pn	09 24 57.7	-4.2
	0.5nm,0.3s,baz=188,slow=9.0,SNR=3.6						
BVAR	Borovoye Array	18.79	336	P	P	09 25 12.7	-2.7
	0.1nm,0.3s,baz=157,slow=8.0,SNR=4.6						
SONM	Songino Array	20.88	49	P	P	09 25 39.0	+0.6
	1.8nm,0.9s,baz=238,slow=11,SNR=8.4						
JMIC	Jan Mayen	56.50	337	LR	LR	09 54 16.8	
	comp=Z,33nm,18.4s,baz=312,slow=36						

IDC 13 09:33:57.6±1.7,4.21N×126.91E,h0km,mb3.7/5, mb1 3.9/5,mb1mx3.5/70,mbtmp3.7/5,MS2.6/1,Ms1 2.6/1, ms1mx2.2/46,Error ellipse: s-maj=158.1km s-min=19.7km az=66.0
ISC 13 09:34:04.8±1.0,3.33N±0.08×125.2E±0.2,h35km,n9, σ1.17/10,mb3.8/5,1C,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	2.79	10	eP	Pn	09 34 46.5	-0.6
DDMP				eS	Sn	09 35 20.4	+0.8
SKMP	Bagumbayan, Su	3.24	348	eP	Pn	09 34 53.0	-0.3
SKMP				eS	Sn	09 35 31.4	+0.8
KCP	Kidapawan	3.66	358	⇑eP	Pn	09 34 58.9	-0.1
KCP				i S	Sn	09 35 53.1	+12
WRA	Warramunga Arr	24.80	159	P	P	09 39 24.3	+0.5
	3.0nm,0.8s,baz=343,slow=10,SNR=17						
ASAR	Alice Springs	28.14	163	P	P	09 39 56.0	+2.1
	0.3nm,0.7s,baz=344,slow=7.0,SNR=7.2						
KSRS	Korea Array	34.05	4	LR	LR	09 54 42.5	
	comp=Z,11nm,21.1s,baz=150,slow=38						
STKA	Stephens Creek	38.32	157	P	P	09 41 21.0	-1.3
	2.6nm,0.7s,baz=335,slow=7.3,SNR=6.1						
MKAR	Makanchi Array	57.04	326	P	P	09 43 47.5	+0.2
	0.3nm,0.6s,baz=114,slow=7.7,SNR=6.2						
KURBB	Kurchatov Arra	61.27	328	P	P	09 44 15.4	-1.2
	0.5nm,0.6s,baz=127,slow=5.2,SNR=5.5						

IDC 13 09:35:18.1±1.1,13.26N×144.50E,h58km±11km,mb3.7/10, mb1 3.9/10,mb1mx3.5/69,mbtmp4.0/10,MS3.2/5, Ms1 3.2/5,ms1mx2.9/40,Error ellipse: s-maj=25.5km s-min=14.3km az=87.0
NEIC 13 09:35:18.7±0.8,13.2N±0.1×144.50E±0.08,h62km±7km, mb4.3/7,Error ellipse: s-maj=16.9km s-min=8.4km az=145.0
ISC 13 09:35:17.9±0.7,13.17N±0.08×144.4E±0.1,h54km,n29, σ0.84/24,mb4.0/12,MS3.2/4,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.63	49	P	Pn	09 35 31.5	+0.6
	1μm,0.3s,baz=183,slow=4.8,SNR=632						
GUMO				S	Sn	09 35 40.2	-0.1
	2μm,0.3s,baz=345,slow=18,SNR=46						
GUMO	Guam	0.63	49	Sn	Sn	09 35 40.4	0.0
ANA2	Anatahan	3.40	22	Pn	Pn	09 36 10.6	+2.1
SARN	Sarigan	3.76	21	Pn	Pn	09 36 13.7	+0.3
RABL	Rabaul	18.90	155	P	P	09 39 34.4	+0.2
SIJI	Sorong	19.08	224	LR	LR	09 46 20.5	
	comp=Z,44nm,19.1s,baz=168,slow=34						
PMG	Port Moresby	22.60	173	LR	LR	09 49 24.4	
	comp=Z,81nm,18.7s,baz=278,slow=37						
MJAR	Matsushiro Arr	23.92	348	LR	LR	09 48 23.7	
	comp=Z,78nm,19.7s,baz=5.0,slow=33						
WR0	Warramunga Arr	34.32	197	P	P	09 41 59.8	+0.3
WR0				IAmb	IAmb	09 42 01.0	
	comp=Z,7.9nm,1.1s						
WRAB	Tennant Creek	34.35	197	P	P	09 42 00.0	+0.3
WB2	Warramunga Arr	34.36	197	P	P	09 42 00.5	+0.7
WRA	Warramunga Arr	34.36	197	P	P	09 42 00.2	+0.4
	comp=Z,6.2nm,1.0s,baz=13,slow=10,SNR=19						
WRA	Warramunga Arr	34.36	197	P	P	09 42 00.3	+0.4
KLR	Kul'dur	37.43	346	LR	LR	09 55 53.1	
	comp=Z,37nm,18.9s,baz=141,slow=33						
ASAR	Alice Springs	38.02	196	P	P	09 42 31.4	+0.3
	comp=Z,0.9nm,0.5s,baz=20,slow=12,SNR=14						
ASAR	Alice Springs	38.02	196	P	P	09 42 31.6	+0.5
DZM	Mont Dzumac	41.17	148	P	P	09 42 58.1	+0.7
	comp=Z,7.8nm,0.9s,baz=110,slow=21,SNR=3.9						
PETK	Petropavlovsk-	41.23	12	LR	LR	09 57 24.9	
	comp=Z,40nm,21.5s,baz=238,slow=32						
STKA	Stephens Creek	44.87	183	P	P	09 43 26.6	-0.4
	comp=Z,2.0nm,0.5s,baz=8.5,slow=7.3,SNR=6.7						
STKA	Stephens Creek	44.87	183	P	P	09 43 26.5	-0.5
SONM	Songino Array	46.80	325	P	P	09 43 43.1	+0.8
	comp=Z,0.2nm,0.4s,baz=145,slow=7.0,SNR=2.7						
MKAR	Makanchi Array	61.46	316	P	P	09 45 29.1	+0.2
	comp=Z,0.3nm,0.4s,baz=90,slow=8.7,SNR=9.3						
KURK	Kurchatov	64.60	320	P	P	09 45 49.4	-0.3
KURK	Kurchatov	64.60	320	IAmb	IAmb	09 46 07.5	
	comp=Z,1.8nm,0.9s						
KURBB	Kurchatov Arra	64.64	320	P	P	09 45 49.4	-0.5
	comp=Z,0.8nm,0.5s,baz=100,slow=6.9,SNR=7.3						
ILAR	Eielson Array	69.14	25	P	P	09 46 15.8	-2.5
	comp=Z,0.6nm,0.5s,baz=250,slow=5.6,SNR=11						
BVAR	Borovoye Array	69.96	322	P	P	09 46 22.9	-0.6
	comp=Z,0.7nm,0.4s,baz=115,slow=9.7,SNR=4.1						
NVAR	Mina Array Bea	87.55	51	P	P	09 48 00.6	0.0
	comp=Z,0.4nm,0.5s,baz=268,slow=5.3,SNR=5.7						
LPAZ	La Paz	148.42	100	PKPbc	PKPbc	09 55 00.2	+0.1
	comp=Z,1.0nm,0.6s,baz=273,slow=4.3,SNR=6.9						

IDC 13 09:38:46.2±26.0,52.68N×176.54W,h0km,mb3.4/3, mb1 3.7/4,mb1mx3.2/74,mbtmp3.3/4,ML3.3/1,Error ellipse: s-maj=485.7km s-min=71.1km az=78.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAR	Eielson Array	19.35	40	P	Pn	09 43 13.6	-0.4
	0.1nm,0.3s,baz=178,slow=15,SNR=4.2						
YKA	Yellowknife Ar	33.32	48	P	P	09 45 25.0	-0.3
	0.5nm,0.7s,baz=279,slow=8.0,SNR=4.8						
NVAR	Mina Array Bea	42.03	86	P	P	09 46 40.4	+1.0
	0.4nm,0.5s,baz=301,slow=7.3,SNR=2.6						
PDAR	Pinedale Array	44.60	75	P	P	09 46 59.0	-1.1
	0.1nm,0.4s,baz=330,slow=2.1,SNR=4.2						

IDC 13 09:51:38.1±0.8,35.92N×82.43E,h0km,mb3.9/12, mb1 4.2/17,mb1mx3.9/54,mbtmp4.0/17,ML3.7/5,MS3.4/14, Ms1 3.4/14,ms1mx2.3/38,Error ellipse: s-maj=21.8km s-min=13.2km az=48.0
NEIC 13 09:51:40.0±2.7,36.02N±0.09×82.5E±0.1,h10km±1km, mb4.2/8,Error ellipse: s-maj=15.9km s-min=14.2km az=211.0
BJI 13 09:51:42.4±0.0,36.11N×82.41E,h8km,mB4.0/1,mb3.8/5, ML4.4/6,Ms3.8/6,Ms7 3.7/4
NNC 13 09:51:42.3±1.2,36.36N×82.55E,h0km,mb4.4,mpv4.3, Error ellipse: s-maj=13.4km s-min=10.1km az=90.0
ISC 13 09:51:39.7±0.5,36.06N±0.05×82.49E±0.06,h10km,n79, σ1.92/75,mb4.0/16,MS3.5/10,11C-11D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHRM	DHARAMSHALA	6.38	235	eP	Pb	09 53 29.9	-1.1
DHRM				eS	Sg	09 54 59.4	-5.3
SMLA	Simla	6.63	224	eP	Pb	09 53 33.1	-1.8
SMLA				eS	Sg	09 55 13.8	+1.5
KDJ	Kajisay	7.33	327		Pn	09 53 30.1	+3.2
NRN	Naryn	7.38	319		Pn	09 53 31.2	+3.5
PDGK	Podgornoye	7.62	343	⇑Pn	Pn	09 53 31.3	+0.5
	15nm,0.9s						
PDGK				⇑Sn	Sn	09 54 56.0	-1.2
	185nm,0.8s						
PDGK				⇑Lg	Lg	09 55 36.8	
	237nm,1.0s						
DANN	Dangsing	7.76	172	eP	Pn	09 53 34.1	+1.1
	34nm,0.9s						
GKN	Gorkha	8.24	167	eP	Pn	09 53 41.9	+2.5
	15nm,0.4s						
MDOK	Medeo	8.24	331	Pn	Pn	09 53 39.8	+0.4
	8.4nm,0.6s						
MDOK				Pg	Pb	09 54 08.3	+5.8
	12nm,0.6s						
MDOK				Sn	Sn	09 55 12.6	0.0
	36nm,0.7s						
MDOK				⇑Lg	Lg	09 55 56.1	
	102nm,0.8s						
KNDC	Almaty	8.32	331	⇓Lg	Lg	09 55 59.8	
	265nm,0.8s						
KOLN	Koldanda	8.32	173	eP	Pn	09 53 41.3	+0.7
	35nm,0.9s						
GUN	Gumba	8.62	160	eP	Pn	09 53 46.0	+1.2
	52nm,1.0s						
DMN	Daman	8.71	164	eP	Pn	09 53 47.7	+1.7
	16nm,0.6s						
WMQ	Urumqi	8.72	26	ePn	Pn	09 53 46.6	+0.8
WMQ				Sn	Sn	09 55 20.8	-3.4
WMQ	Urumqi	8.72	26		Pn	09 53 48.1	+2.3
UCH	Uchtor	8.73	317	P	Pn	09 53 49.0	+2.6
	SNR=9.8						
PKIN	Phulchoki	8.81	163	eP	Pn	09 53 48.5	+1.1
	26nm,0.8s						
PKI	Pulchoki	8.82	163	eP	Pn	09 53 49.1	+1.6
	30nm,0.8s						
JIRN	Jiri	8.95	158	eP	Pn	09 53 51.0	+1.7
	57nm,0.7s						
AAK	Ala-Archa	9.02	319	Pn	Pn	09 53 53.9	+3.8
	0.4nm,0.3s,baz=140,slow=9.2,SNR=24						
AAK				Pg		09 54 23.2	
	1.2nm,0.3s,baz=171,slow=9.9,SNR=6.7						
AAK				Lg	Lg	09 56 16.7	
	1.1nm,0.3s,baz=7.8,slow=22,SNR=3.1						
AAK				LR	LR	09 57 43.0	
	comp=Z,149nm,18.2s,baz=146,slow=40						
AAK	Ala-Archa	9.02	319	P	Pn	09 53 54.1	+4.0
	SNR=7.7						
AAK	Ala-Archa	9.02	319	⇓Pn	Pn	09 53 52.5	+2.3
	9.0nm,0.8s						
AAK				⇓Pg		09 54 22.4	
	9.3nm,0.6s						
AAK				⇑Lg	Lg	09 56 22.4	
	95nm,1.0s						
AAK	Ala-Archa	9.02	319		Pn	09 53 52.7	+2.6
FRU1	Bishkek	9.07	320		Sn	09 55 22.9	-10
ARSB	Arslanbob	9.10	308	Pn	Pn	09 53 53.1	+2.0
AML	Almayashu	9.13	314	P	Pn	09 53 53.5	+1.7
	SNR=16						
CHMS	Chumysh	9.15	322	P	Pn	09 53 54.1	+2.4
	SNR=5.7						
CHMS	Chumysh	9.15	322	⇓Pg	Pn	09 54 25.1	+33
	11nm,0.8s						
CHMS				⇑Lg	Lg	09 56 26.9	
	52nm,0.8s						
EKS2	Erkin-Say	9.43	317	P	Pn	09 53 58.0	+2.4
	SNR=13						
RAMN	Ramite	9.74	158	eP	Pn	09 53 59.6	-0.4
	44nm,0.8s						
TAPN	Taplejung	9.75	151	eP	Pn	09 53 59.9	-0.4
	11nm,0.8s						
BTK	Batken	10.03	297		Pn	09 54 04.2	+0.4
ODAN	Odare	10.08	154	eP	Pn	09 54 04.2	-0.5
	63nm,1.1s						
MK31	Makanchi Array	10.72	359	Pn	Pn	09 54 13.4	+0.1

23nm,1.0s,baz=169,slow=8.0,SNR=169
MK31 ⇓Sn Sn 09 56 12.1 -1.3
9.6nm,0.5s,baz=184,slow=25,SNR=7.1
MK31 Makanchi Array 10.72 359 Pn 09 54 13.5 +0.2
MKAR Makanchi Array 10.72 359 Pn Pn 09 54 14.4 +1.2
2.0nm,0.3s,baz=181,slow=14,SNR=106
MKAR Sn Sn 09 56 09.3 -4.0
1.9nm,0.3s,baz=190,slow=24,SNR=7.0
MKAR Lg Lg 09 57 26.8
0.2nm,0.3s,baz=182,slow=26,SNR=2.2
MKAR LR LR 09 59 26.5
comp=Z,84nm,19.0s,baz=174,slow=43
MAKZ Makanchi 10.74 358 ⇓Pn Pn 09 54 13.9 +0.4
50nm,1.1s
MAKZ ⇓Sn Sn 09 56 12.7 -1.2
28nm,1.1s
MAKZ Makanchi 10.74 358 Pn 09 54 14.5 +0.9
KK31 Karatay Array 11.61 311 ⇑Pn Pn 09 54 26.2 +0.9
1.7nm,0.7s,baz=128,slow=11,SNR=9.5
KK31 ⇓Pg 09 55 10.2
2.8nm,0.7s,baz=134,slow=15,SNR=3.7
KK31 ⇑Lg Lg 09 57 46.4
29nm,1.2s,baz=124,slow=28,SNR=3.9
KKAR Karatay Array 11.61 311 Pn Pn 09 54 26.0 +0.7
GTA Gaotai 14.11 71 eP P 09 55 14.0 +6.5
GTA pP Pn 09 55 18.6 +19
GTA sP 09 55 21.5
KURBB Kurchatov Arra 14.83 350 Pn Pn 09 55 07.4 -1.9
0.0nm,0.3s,baz=172,slow=12,SNR=9.8
KURBB Lg Lg 09 59 36.0
0.1nm,0.3s,baz=183,slow=30,SNR=4.5
KURBB Kurchatov Arra 14.83 350 ⇓Pn Pn 09 55 10.8 +1.4
7.0nm,0.9s
KURK Kurchatov 14.91 350 ⇓Pn Pn 09 55 09.6 -0.8
7.2nm,1.0s
ZAA0 Zalesovo Array 17.96 4 ⇑Pn Pn 09 55 47.2 -2.1
2.3nm,0.9s
ZALV Zalesovo Beam 17.96 4 P Pn 09 55 47.9 -1.4
0.3nm,0.3s,baz=191,slow=12,SNR=30
ZALV LR LR 10 03 38.9
comp=Z,59nm,19.4s,baz=194,slow=40
BVAR Borovoye Array 18.98 337 P Pn 09 56 02.7 +1.0
0.6nm,0.3s,baz=141,slow=9.6,SNR=28
BVAR Lg Lg 10 01 45.9
0.1nm,0.3s,baz=243,slow=38,SNR=3.2
BRVK Borovoye 19.04 337 ⇑Pn Pn 09 56 04.2 +1.7
10nm,0.7s
BRVK Borovoye 19.04 337 P Pn 09 56 04.0 +1.5
BRVK IAmb IAmb 09 56 11.7
comp=Z,12nm,0.8s
GEYT Alibeck 19.55 283 P P 09 56 07.6 +0.2
comp=Z,0.3nm,0.3s,baz=98,slow=11,SNR=9.1
GEYT LR LR 10 05 34.3
comp=Z,68nm,18.0s,baz=160,slow=43
GEYT Alibeck 19.55 283 P P 09 56 06.8 -0.6
AB31 Akbulak array 21.08 316 ⇑P P 09 56 24.9 +0.9
comp=Z,9.8nm,0.9s,baz=116,slow=11,SNR=43
ABKAR Akbulak array 21.08 316 P P 09 56 23.4 -0.6
ABKAR Akbulak array 21.08 316 P P 09 56 21.9 -2.1
ABKAR IAmb IAmb 09 56 39.2
comp=Z,6.5nm,0.9s
SONM Songino Array 21.23 49 P P 09 56 27.7 +2.0
comp=Z,12nm,0.9s,baz=242,slow=12,SNR=50
SONM LR LR 10 05 18.5
comp=Z,113nm,19.4s,baz=161,slow=38
SONM Songino Array 21.23 49 P P 09 56 28.9 +3.2
ULN Ulaanbaatar 21.64 49 P P 09 56 32.3 +2.1
TLY Talaya 21.71 37 LR LR 10 05 21.4
comp=Z,90nm,21.2s,baz=236,slow=38
AKTO Aktyubinsk 22.75 317 P P 09 56 41.4 -0.5
comp=Z,3.2nm,0.7s,baz=111,slow=10,SNR=12
AKTO Aktyubinsk 22.75 317 ⇓P P 09 56 45.1 +3.1
comp=Z,3.4nm,0.7s
CMAR Chiang Mai Arr 22.77 136 P P 09 56 43.2 +0.8
comp=Z,1.3nm,0.3s,baz=311,slow=12,SNR=4.9
WSAR Wadi Sarin 24.28 245 LR LR 10 08 03.5
comp=Z,63nm,20.8s,baz=62,slow=41
KBZ Khabaz 31.09 297 LR LR 10 12 24.0
comp=Z,77nm,18.2s,baz=72,slow=40
KSRS Korea Array 36.16 74 LR LR 10 15 47.3
comp=Z,42nm,19.7s,baz=292,slow=40
KLR Kul'dur 37.89 54 P P 09 58 57.7 +0.9
comp=Z,1.5nm,0.8s,baz=301,slow=12,SNR=2.9
BRTR Keskin Array B 38.35 291 P P 09 59 01.2 +0.3
comp=Z,1.2nm,0.8s,baz=82,slow=9.1,SNR=6.5
MLR Muntele Rosu 43.05 301 P P 09 59 40.1 +0.5
comp=Z,3.2nm,0.8s,baz=92,slow=19,SNR=4.0
MLR Muntele Rosu 43.05 301 IAmb IAmb 09 59 42.6
comp=Z,5.5nm,1.0s
ARCES ARCESS Array B 45.26 335 P P 09 59 57.9 +1.0
comp=Z,2.6nm,0.8s,baz=106,slow=6.7,SNR=2.7
ASAJ Asahikawa 45.78 61 LR LR 10 20 00.3
comp=Z,209nm,19.6s,baz=198,slow=37
NB2 NORSAR Subarra 50.31 323 P P 10 00 35.6 -0.6
comp=Z,1.7nm,0.8s,baz=86,slow=7.4
NOA NORSAR Array B 50.31 323 P P 10 00 36.2 0.0
comp=Z,1.2nm,0.7s,baz=86,slow=7.2,SNR=3.8
NOA LR LR 10 24 11.7
comp=Z,51nm,18.2s,baz=230,slow=39
GERES GERESS Array B 50.68 307 P P 10 00 40.0 +0.7
comp=Z,1.0nm,0.8s,baz=72,slow=6.0,SNR=5.4
PETK Petropavlovsk- 53.68 46 LR LR 10 26 18.0
comp=Z,48nm,18.1s,baz=233,slow=39
ILAR Eielson Array 72.34 20 P P 10 03 01.5 -3.7
comp=Z,0.1nm,0.5s,baz=335,slow=4.1,SNR=3.4
ILAR LR LR 10 37 45.1
comp=Z,24nm,18.3s,baz=346,slow=38
INK Inuvik 72.52 13 P P 10 03 03.3 -2.9
comp=Z,0.6nm,0.6s,baz=232,slow=7.2,SNR=5.2
WRA Warramunga Arr 74.21 130 P P 10 03 16.4 -0.5
comp=Z,1.7nm,0.9s,baz=318,slow=5.3,SNR=6.2
TORD Torodi Ar. Bea 75.00 275 LR LR 10 38 49.0
comp=Z,39nm,18.1s,baz=205,slow=38
ASAR Alice Springs 76.74 133 P P 10 03 30.6 -0.7
comp=Z,0.9nm,0.7s,baz=313,slow=6.2,SNR=8.7
YKA Yellowknife Ar 80.82 8 P P 10 03 53.5 +0.3
comp=Z,0.8nm,0.9s,baz=342,slow=5.1,SNR=11

JMA 13 10:00:17.5±0.1, 22.11N×121.09E, h67km±2km
TAP 13 10:00:18.0, 22.01N×121.29E, h33km, ML3.9, C
ISC 13 10:00:18.8±1.0, 22.06N±0.04×121.30E±0.03, h27km±9km, n78, σ1.10/106, 9D, Taiwan region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

LAY Lan-yu 0.24 95 iP Pb 10 00 25.0 -0.2
baz=84
LAY eS Sb 10 00 30.1 +0.5
baz=84
TSEB Hengchuen, Pin 0.40 247 iP Pb 10 00 27.7 +0.1
baz=263
TSEB S Sb 10 00 34.2 +0.8
baz=263
TWKBT Hengchun 0.46 255 ⇓eP Pb 10 00 28.0 -0.6
baz=269
TWKBT eS Sb 10 00 34.9 -0.2
baz=269
TWK1 Hengchun 0.47 256 ⇓iP Pb 10 00 28.0 -0.7
baz=269
TWK1 eS Sb 10 00 35.0 -0.3
baz=269
TAW Tawu 0.47 309 iP Pb 10 00 28.5 -0.3
baz=322
TAW eS Sb 10 00 35.9 +0.5
baz=322
HEN Hengchun 0.52 264 P Pb 10 00 29.1 -0.4
baz=272
HEN eS Sb 10 00 36.9 +0.2
baz=272
EAST Anshuo 0.53 308 ⇓iP Pb 10 00 29.2 -0.4
baz=318
EAST S Sb 10 00 36.9 0.0
baz=318
ECL Taimali 0.62 330 ⇓P Pb 10 00 30.3 -0.9
baz=332
ECL eS Sb 10 00 39.2 -0.4
baz=332
TWH Lutao 0.67 15 P Pb 10 00 30.6 -1.4
baz=25
TWH eS Sb 10 00 41.0 0.0
baz=25
SCZT Fangliau 0.70 297 ⇓P Pb 10 00 32.1 -0.4
baz=308
SCZT eS Sb 10 00 41.8 +0.1
baz=308
TTN Taitung 0.71 349 eP Pb 10 00 33.4 +0.8
baz=350
TTN eS Sn 10 00 44.4 +1.4
baz=350
TWGBT Beinan 0.78 345 ⇓eP Pn 10 00 32.6 -1.5
baz=346
TWGBT eS Sb 10 00 43.5 -0.6
baz=346
TWG Pinlang 0.79 345 ⇓iP Pn 10 00 32.6 -1.5
baz=346
TWG eS Sb 10 00 43.8 -0.5
baz=346
SSPT Xinbi 0.80 302 ⇓P Pn 10 00 34.4 +0.1
baz=316
MASBT Mashibuluo 0.82 312 ⇓iP Pn 10 00 33.9 -0.8
baz=323
WLCH Liuqiu 0.90 289 eP Pb 10 00 37.7 +1.9
baz=293
SSD Sandimen 0.92 318 iP Pn 10 00 35.2 -0.7
baz=333
SGLT Jiouru 1.00 312 eP Pb 10 00 38.8 +1.3
baz=326
CHKT Chengkung 1.04 4 eP Pn 10 00 36.6 -1.0
baz=12
CHKT S Sn 10 00 50.5 -0.7
baz=12
SLGT Liugui 1.11 327 eP Pn 10 00 38.5 -0.1
baz=332
TWM1 Shoushan 1.11 313 eP Pb 10 00 40.6 +1.2
baz=316
FULB Fuli 1.14 360 P Pn 10 00 38.3 -0.7
baz=348
FULB eS Sn 10 00 53.6 -0.1
baz=348
ELDTW Lidau 1.15 347 eP Pn 10 00 38.1 -1.2
baz=357
STYT Tauyuan 1.21 336 eP Pn 10 00 39.9 -0.1
baz=347
SGST Jiashian 1.21 327 eP Pn 10 00 40.5 +0.5
baz=340
TWF1 Yuli 1.29 0 eP Pn 10 00 39.7 -1.4
baz=352
CHN1 Nanshi 1.33 328 eP Pn 10 00 43.0 +1.4
baz=330
YULB Yu-li 1.33 0 eP Pn 10 00 40.1 -1.5
baz=352
WTP Ta-pu 1.34 332 eP Pn 10 00 43.1 +1.3
baz=334
SNST Tainan City 1.37 328 eP Pn 10 00 43.5 +1.3
baz=330
TPUB Ta-pu 1.38 334 eP Pn 10 00 43.6 +1.2
baz=335
HGSD Ruisui 1.43 5 eP Pn 10 00 42.8 -0.2
baz=14
CHN4 Tsaushan 1.44 333 eP Pn 10 00 44.7 +1.5
baz=335
EHY Hungye 1.44 1 eP Pn 10 00 41.8 -1.4
baz=353
YUS Yu-Shan 1.46 348 eP Pn 10 00 43.3 -0.6
baz=355
ALS Alishan 1.51 343 eP Pn 10 00 44.9 +0.5
baz=352
CHN5 Tsauling 1.63 340 eP Pn 10 00 47.4 +1.5
baz=341
CHY Chiayi 1.64 331 eP Pn 10 00 46.8 +0.9
baz=333
WHYT Xinyi Township 1.68 346 eP Pn 10 00 47.9 +1.4
baz=354
VWDT VWDT 1.69 355 eP Pn 10 00 46.8 +0.1
baz=1.0
SSLB Suanglung 1.75 350 eP Pn 10 00 48.3 +0.8
baz=351
ESL Shilin 1.75 4 eP Pn 10 00 48.0 +0.5
baz=356
WDLH Douliu 1.77 337 eP Pn 10 00 48.8 +1.2
baz=339
TYC Yuchr 1.88 348 eP Pn 10 00 51.1 +1.9
baz=349
OWD Renai 1.89 357 eP Pn 10 00 49.5 0.0
baz=5.0
WDGT Dungji 1.93 309 eP Pn 10 00 49.5 -0.3
baz=310
WDGT eS Sn 10 01 12.1 -1.0
baz=310
DPDB Guoxing 2.00 350 eP Pn 10 00 52.7 +1.9
baz=351
CHGB Renai 2.00 357 eP Pn 10 00 51.4 +0.4
baz=6.0
CHGB eS Sn 10 01 14.7 -0.5
baz=6.0
TWD Chiawan 2.03 8 eP Pn 10 00 51.9 +0.6
baz=359
VCHM Qimei 2.07 304 eP Pn 10 00 51.6 -0.2
baz=305
VCHM eS Sn 10 01 15.1 -1.6
baz=305
WHF Hehuan Shan 2.08 359 eP Pn 10 00 52.3 0.0
baz=10.0
WHF eS Sn 10 01 16.4 -1.0
baz=10.0
NACB Ninganchiao 2.12 7 eP Pn 10 00 51.7 -0.9
baz=359
ETLH Xiulin Townshi 2.15 5 eP Pn 10 00 52.1 -0.8
baz=5.0
PHUB P'eng-hu 2.15 313 eP Pn 10 00 52.3 -0.6
baz=303
PHUB eS Sn 10 01 17.3 -1.4
baz=303
TDCB Techi 2.19 357 eP Pn 10 00 54.3 +0.7
baz=357
PNG Penghu 2.20 313 eP Pn 10 00 53.1 -0.5
baz=303
PNG eS Sn 10 01 18.9 -1.0
baz=303
WHP Taichung City 2.23 352 eP Pn 10 00 56.1 +2.0
baz=353
TWQ1 Liyutan 2.33 348 eP Pn 10 00 57.4 +2.0
baz=337
NNSB Datong 2.36 2 eP Pn 10 00 56.2 +0.3
baz=9.0
NNSH Datong 2.36 2 eP Pn 10 00 56.3 +0.3
baz=10.0
NSY Sanyi 2.40 348 eP Pn 10 00 58.6 +2.2
baz=338
NDT Datong Townshi 2.54 4 eP Pn 10 00 59.4 +1.1
baz=14
NSTT Nanjuang 2.58 354 eP Pn 10 01 01.0 +2.2
baz=343
ENTT Nioudou 2.58 5 eP Pn 10 00 59.5 +0.7
baz=6.0
LIOB Emei 2.59 354 eP Pn 10 01 00.9 +2.0
baz=343
EOS1 EOS1 2.59 17 eP Pn 10 01 00.8 +1.8
baz=17
YHNB Yeheng 2.60 2 eP Pn 10 01 00.3 +1.1
baz=11
NSK Sanguang 2.61 1 eP Pn 10 01 00.1 +0.9
baz=350
TWE Neicheng 2.67 7 eP Pn 10 01 02.7 +2.6
baz=8.0
NWLT Wulai 2.71 4 eP Pn 10 01 01.3 +0.6
baz=14
NWLT eS Sn 10 01 32.2 -0.4
baz=14
TATO Taipei 2.91 3 eP Pn 10 01 06.1 +2.7
baz=13
TIPB Shuangxi 2.94 9 eP Pn 10 01 05.1 +1.2
baz=1.0
HATJ Hateruma jima 3.05 49 P Pn 10 01 06.5 +1.2
HATJ eS Sn 10 01 41.5 +0.6
IRIF Iriomote-Funau 3.19 44 P Pn 10 01 08.0 +0.9
IRIF eS Sn 10 01 44.7 +0.5
JKRS Kuro-shima 3.31 49 P Pn 10 01 09.0 +0.2
JKRS S Sn 10 01 45.9 -1.4
JIJ Ishigaki jima 3.48 48 P Pn 10 01 11.8 +0.6
JIJ eS Sn 10 01 49.7 -1.9
JISG Ishigakijimahi 3.74 47 P Pn 10 01 15.6 +0.8
JISG eS Sn 10 01 56.8 -1.2
JTJ Tarama 4.05 50 P Pn 10 01 20.2 +1.2
JTJ eS Sn 10 02 05.0 -0.6

OSPL 13 10:04:07.9±0.8, 19.03N×66.79W, h9km±5km, ML1.9
RSPR 13 10:04:08.0, 19.02N×66.92W, h51km±3km, MD2.9/10
ISC 13 10:04:08.6±1.9, 18.94N±0.10×66.83W±0.04, h29km, n24, σ0.73/27, 11C-1D, Puerto Rico region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

AGPR Aguadilla, PR 0.54 209 ⇑eP Pb 10 04 19.3 -0.4
AGPR Aguadilla, PR 0.54 209 iP Pb 10 04 19.1 -0.6
AGPR eS Sb 10 04 28.3 +1.1
AGPR IAML 10 04 37.0
comp=Z,57nm,0.3s
EMPR Esperanza - Ma 0.55 148 ⇑eP Pb 10 04 19.9 +0.1
EMPR Esperanza - Ma 0.55 148 eS Sn 10 04 30.2 +1.7
AOPR Arecibo Observ 0.60 173 ⇑eP Pb 10 04 20.9 +0.3
AOPR Arecibo Observ 0.60 173 eS Sn 10 04 30.8 +0.9
MPR Mayaguez 0.78 202 iP Pb 10 04 24.0 +0.3
MPR eS Sn 10 04 35.0 +0.6
MPR IAML 10 04 50.5
comp=Z,50nm,0.1s
CELP Cerrillos 0.90 164 ⇑eP Pn 10 04 25.2 -0.1
CELP eS Sn 10 04 37.5 +0.2
OBIP Obispado Ponce 0.92 166 ⇑eP Pn 10 04 25.3 -0.3
OBIP Obispado Ponce 0.92 166 eS Sn 10 04 38.1 +0.2
CRPR Cabo Rojo, PR 0.97 196 ⇑eP Pn 10 04 25.7 -0.5
CRPR Cabo Rojo, PR 0.97 196 eS Sn 10 04 38.0 -1.0
MLPR Magueyes Islan 0.99 192 ⇓eP Pn 10 04 25.4 -1.1
MLPR Magueyes Islan 0.99 192 eS Sn 10 04 39.4 -0.1
IGPR InterUniversit 1.19 145 ⇑eP Pn 10 04 28.9 -0.5
IGPR InterUniversit 1.19 145 eS Sb 10 04 45.3 -0.4
PDPR Patillas Dam, 1.20 140 ⇑eP Pn 10 04 28.8 -0.7
PDPR Patillas Dam, 1.20 140 eS Sb 10 04 45.8 -0.1
HUMP Col San Antoni 1.23 130 ⇑eP Pn 10 04 29.0 -0.8
MTP Monte Pirata 1.48 124 ⇑eP Pn 10 04 33.1 -0.2
MTP Monte Pirata 1.48 124 eS Sn 10 04 52.0 +0.4
PCDR Punta Cana, DR 1.53 254 eS Sn 10 04 54.2 +1.4
CUPR Culebra, Puert 1.60 113 ⇑eP Pn 10 04 34.2 -0.7
CUPR Culebra, Puert 1.60 113 eS Sn 10 04 55.2 +0.6

IDC 13 10:27:02.2±2.0, 7.57S×128.33E, h0km, mb3.7/3, mb1 3.6/4, mb1mx3.5/20, mbtmp3.6/4, ML3.2/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/38, Error ellipse: s-maj=263.8km s-min=42.0km az=65.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

WRA Warramunga Arr 13.61 155 Pn Pn 10 30 16.4 -0.3
0.1nm,0.3s,baz=350,slow=16,SNR=1.4
WRA Sn Sn 10 32 39.4 -9.3
0.8nm,0.5s,baz=106,slow=28,SNR=6.1
ASAR Alice Springs 16.87 162 LR LR 10 38 37.7
comp=Z,55nm,20.0s,baz=200,slow=41
SONM Songino Array 58.48 343 P P 10 36 59.2 -1.0
0.5nm,0.5s,baz=170,slow=10,SNR=3.6
MKAR Makanchi Array 67.81 328 P P 10 38 01.5 -0.6
0.3nm,0.4s,baz=142,slow=7.3,SNR=8.9
ZALV Zalesovo Beam 71.37 335 P P 10 38 25.8 +1.9
0.4nm,0.2s,baz=117,slow=5.2,SNR=3.8

KRNET 13 10:36:14.1±0.1, 41.25N×70.61E, h13km, mb2.5
NNC 13 10:36:15.0±6.5, 40.85N×70.22E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=45.9km s-min=36.7km az=34.0
ISC 13 10:36:17.3±2.1, 41.00N±0.05×70.72E±0.07, h1km±17km, n8, σ1.76/12, 4C-4D, Kyrgyzstan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

BTK Batken 0.95 175 ⇓iP Pn 10 36 37.1 -0.6
baz=72
BTK ⇓iS Sn 10 36 53.6 +1.7
baz=72
ARK Arkit 1.23 49 ⇑iP Pn 10 36 36.1 -5.6
baz=63
ARK ⇑iS Sn 10 36 51.9 -7.0
baz=63
IUG Iuzhnay 1.25 336 P Pg 10 36 40.6 -0.7
4.3nm,0.2s
IUG S Sg 10 36 59.5 +2.0
41nm,0.2s
ARSB Arslanbob 1.74 79 ⇓iP Pn 10 36 47.3 -1.4
baz=87
ARSB ⇓iS Sn 10 37 11.9 +0.3
baz=87
KK31 Karatay Array 2.10 356 P Pn 10 36 53.8 +0.2
0.7nm,0.2s,baz=181,slow=16,SNR=13
KK31 S Sn 10 37 21.8 +1.4
2.0nm,0.3s,baz=188,slow=34,SNR=9.7
BRLS Borolday 2.13 342 Pg Pn 10 36 50.9 -3.1
0.4nm,0.2s
BRLS Lg Lg 10 37 17.0
3.8nm,0.2s
AML Almayashu 2.50 62 ⇑eP Pn 10 36 58.3 -1.1
baz=68
AML ⇑iS Sn 10 37 30.3 -0.5
baz=68
MRKS Merke 2.56 46 Pg Pn 10 37 01.3 +1.4
2.3nm,0.3s
MRKS Lg Lg 10 37 34.6
2.6nm,0.3s

MAN 13 10:36:25.3, 11.09N×125.53E, h65km, mb4.9, ML3.8, MS3.8
MAN INTENSITY III - BALANGIGA GIPORLOS AND MERCEDES EASTERN SAMAR; INTENSITY II - ALANALANG LEYTE.
IDC 13 10:36:29.4±2.5, 10.93N×125.40E, h103km±23km, mb3.8/15, mb1 4.0/17, mb1mx3.8/41, mbtmp4.2/17, MS3.4/9, Ms1 3.4/9, ms1mx2.9/55, Error ellipse: s-maj=27.4km s-min=11.3km az=69.0
NEIC 13 10:36:29.4±2.1, 10.97N±0.08×125.5E±0.1, h102km±6km, mb4.6/20, Error ellipse: s-maj=21.7km s-min=9.0km az=66.0
ISC 13 10:36:26.5±0.9, 11.05N±0.03×125.51E±0.06, h74km±9km, n97, σ1.61/102, mb4.4/23, 3C-8D, Samar

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

OCLP Ormoc 0.88 270 eP Pn 10 36 42.9 -0.8
OCLP eS Sn 10 36 57.2 +0.7
MSLP Maasin 1.11 215 eP Pn 10 36 46.1 -0.5
MSLP eS Sn 10 37 02.7 +1.2
CNP Catarman 1.67 330 eP Pn 10 36 53.8 +0.1
CNP eS Sn 10 37 17.4 +2.9
LLP Lapu-Lapu 1.68 244 ⇓iP Pn 10 36 53.8 -0.2
LLP eS Sn 10 37 13.9 -0.9
BUTP Butuan 2.07 177 eP Pn 10 37 00.0 +0.8
BUTP eS Sn 10 37 27.9 +3.7
TBP Tagbilaran 2.11 230 ⇑iP Pn 10 37 02.8 +3.1
TBP iS Sn 10 37 29.5 +4.5
MMPH Masbate 2.26 305 ⇑iP Pn 10 37 02.6 +1.0
MMPH iS Sn 10 37 30.2 +1.7
CGP Cagayan de Oro 2.70 197 ⇑iP Pn 10 37 08.3 +0.6
CGP iS Sn 10 37 40.5 +1.1
RCP Roxas 2.76 281 ⇓eP Pn 10 37 09.5 +1.1
RCP eS Sn 10 37 43.5 +2.8
SNPH Sibulan 2.81 233 ⇓eP Pn 10 37 10.4 +1.2
SNPH eS Sn 10 37 52.7 +11
PVCP Virac 2.85 333 eP Pn 10 37 10.9 +1.2
GUIM Jordan 2.90 262 eP Pn 10 37 10.9 +0.5
GUIM eS Sn 10 37 45.6 +1.5
BIPH Bislig 2.97 163 ⇓eP Pn 10 37 09.4 -2.0
BIPH eS Sn 10 37 47.9 +2.0
BUKP Musuan 3.18 188 eP Pn 10 37 14.9 +0.6
BUKP eS Sn 10 37 54.2 +3.0
DCPH Dipolog City 3.25 221 ⇓eP Pn 10 37 15.5 +0.4
OTRP Odiongan 3.65 291 eP Pn 10 37 20.6 0.0
PAGZ Pagadian 3.81 214 eP Pn 10 37 23.3 +0.4
DAV Davao City (W) 3.96 179 P Pn 10 37 26.2 +1.4
95nm,0.3s,baz=270,slow=2.2,SNR=2.5
DAV LR LR 10 39 29.1
comp=Z,573nm,18.3s,baz=322,slow=47
CTBH Cotabato--PC H 4.00 198 ⇓iP Pn 10 37 26.5 +1.1
KCP Kidapawan 4.04 186 ⇓eP Pn 10 37 27.7 +1.7
KCP iS Sn 10 38 28.3 +16
MATI Mati 4.15 170 eP Pn 10 37 27.6 +0.2
MATI eS Sn 10 38 10.5 -4.1
CUYO Cuyo Island 4.41 268 eP Pn 10 37 31.1 +0.1
DDMP Don Marcelino, 4.92 178 eP Pn 10 37 34.8 -3.2
DDMP eS Sn 10 38 36.0 +2.4
LQP Lukban 4.92 309 ⇓eP Pn 10 37 41.8 +3.6
POLP Polilio Island 5.04 317 eP Pn 10 37 40.2 +0.6
POLP eS Sn 10 38 37.6 +1.0
TGY Tagaytay City 5.39 305 P Pn 10 37 47.2 +2.8
16nm,0.3s,baz=59,slow=1.7,SNR=5.9
BALP Baler 6.03 321 eP Pn 10 37 51.7 -1.3
BALP eS Sn 10 38 55.9 -4.8
PALP Palanan 6.68 334 eP Pn 10 38 00.8 -1.2

PALP eS Sn 10 39 12.5 -4.2
SMPP San Manuel, Pa 6.91 318 eP Pn 10 38 05.5 +0.3
LUWI Luwuk 12.32 193 P 10 39 25.1 -3.3
TPUB Ta-pu 13.04 340 P P 10 39 37.5 +1.1
FAKI Fak Fak 15.42 154 Pn Pn 10 39 59.8 0.0
FAKI IAmb IAmb 10 40 03.3
comp=Z,16nm,0.6s
KAPI Kappang 16.96 200 P P 10 40 21.4 +1.5
comp=Z,0.2nm,0.3s,baz=32,slow=11,SNR=5.2
SOEI Soe 20.71 183 P Pn 10 41 02.8 -1.3
SOEI IAmb IAmb 10 41 13.1
comp=Z,18nm,0.6s
KSRS Korea Array 26.38 4 LR LR 10 51 03.5
comp=Z,18nm,21.6s,baz=165,slow=33
CMAR Chiang Mai Arr 26.70 289 P P 10 41 59.5 +0.4
comp=Z,1.6nm,0.7s,baz=92,slow=8.0,SNR=8.9
CMAR LR LR 10 51 34.6
comp=Z,34nm,19.6s,baz=122,slow=34
KNRA Kununurra 26.75 173 P P 10 41 58.5 -0.9
KNRA IAmb IAmb 10 42 16.7
comp=Z,14nm,0.9s
FITZ Fitzroy Crossi 28.96 180 P P 10 42 18.7 -0.4
COEN Coen 30.40 144 P P 10 42 31.3 -0.6
WRAB Tennant Creek 32.00 164 P P 10 42 44.0 -2.0
WRA Warramunga Arr 32.00 164 P P 10 42 44.5 -1.4
comp=Z,2.2nm,0.5s,baz=346,slow=9.1,SNR=12
WR0 Warramunga Arr 32.07 164 P P 10 42 44.8 -1.9
USRK Ussuriysk Ar. 33.50 8 P P 10 43 00.4 +1.6
comp=Z,1.9nm,0.6s,baz=187,slow=7.0,SNR=8.2
USRK Ussuriysk Ar. 33.50 8 P P 10 43 00.8 +2.0
AS31 Alice Springs 35.47 167 P P 10 43 14.9 -1.2
AS31 IAmb IAmb 10 43 17.9
comp=Z,2.5nm,0.5s
ASAR Alice Springs 35.47 167 P P 10 43 14.9 -1.1
comp=Z,4.1nm,0.5s,baz=350,slow=7.4,SNR=60
ASAR LR LR 10 57 42.1
comp=Z,31nm,18.7s,baz=40,slow=36
KLR Kul'dur 38.41 7 P P 10 43 41.3 +0.6
comp=Z,0.5nm,0.4s,baz=208,slow=6.0,SNR=4.5
TAPN Taplejung 39.01 300 eP P 10 43 45.4 -1.0
comp=Z,9.1nm,0.4s
ODAN Odare 39.15 299 eP P 10 43 47.1 -0.4
HNR Honiara 39.84 119 LR LR 10 58 27.9
comp=Z,19nm,21.0s,baz=3.5,slow=33
RAMN Ramite 39.85 299 eP P 10 43 53.6 +0.3
comp=Z,10.0nm,0.4s
SONM Songino Array 40.03 340 P P 10 43 55.4 +1.0
comp=Z,0.6nm,0.5s,baz=148,slow=9.4,SNR=5.9
SONM Songino Array 40.03 340 P P 10 43 55.5 +1.0
JIRN Jiri 40.39 300 eP P 10 43 57.3 -0.7
comp=Z,26nm,0.3s
H11S3 WAKE ISLAND Hy 40.43 74 T T 11 27 05.9
baz=252,slow=77,SNR=48
H11S1 WAKE ISLAND Hy 40.44 74 T T 11 27 06.8
baz=252,slow=77,SNR=23
H11S2 WAKE ISLAND Hy 40.44 74 T T 11 27 09.0
baz=252,slow=77,SNR=32
GUN Gumba 40.73 300 eP P 10 44 00.3 -0.4
comp=Z,11nm,0.4s
H11N1 WAKE ISLAND Hy 40.73 73 T T 11 27 28.1
baz=265,slow=75,SNR=106
H11N2 WAKE ISLAND Hy 40.74 73 T T 11 27 28.3
baz=265,slow=75,SNR=93
H11N3 WAKE ISLAND Hy 40.75 73 T T 11 27 29.5
baz=265,slow=75,SNR=88
PKI Pulchoki 41.03 299 eP P 10 44 02.9 -0.3
comp=Z,9.2nm,0.5s
PKIN Phulchoki 41.05 299 eP P 10 44 03.1 -0.2
comp=Z,9.0nm,0.5s
DMN Daman 41.30 299 eP P 10 44 05.1 -0.3
comp=Z,8.0nm,0.5s
FORT Forrest 41.66 177 P P 10 44 08.0 +0.2
GKN Gorkha 41.81 300 eP P 10 44 08.1 -1.3
comp=Z,14nm,0.5s
KOLN Koldanda 42.64 299 eP P 10 44 16.2 0.0
comp=Z,9.5nm,0.5s
DANN Dangsing 42.65 300 eP P 10 44 15.9 -0.4
comp=Z,28nm,0.5s
BBOO Buckleboo 44.76 167 P P 10 44 32.8 0.0
STKA Stephens Creek 45.38 161 P P 10 44 37.5 -0.2
comp=Z,8.0nm,0.5s,baz=337,slow=8.3,SNR=42
STKA Stephens Creek 45.38 161 P P 10 44 37.2 -0.5
MK31 Makanchi Array 50.95 323 P P 10 45 21.1 +0.5
MK31 IAmb IAmb 10 45 24.3
comp=Z,2.6nm,0.7s
MKAR Makanchi Array 50.95 323 P P 10 45 21.1 +0.5
comp=Z,2.7nm,0.5s,baz=127,slow=7.7,SNR=44
MKAR Makanchi Array 50.95 323 P P 10 45 20.4 -0.1
MKAZ Makanchi 51.15 323 P P 10 45 22.6 +0.6
MAKZ IAmb IAmb 10 45 23.7
comp=Z,3.3nm,0.5s
TOO Toolangi 51.87 160 P P 10 45 28.1 +0.6
TOO IAmb IAmb 10 45 29.6
comp=Z,3.7nm,0.6s
ZALV Zalesovo Beam 53.59 331 P P 10 45 39.8 -0.1
comp=Z,1.8nm,0.3s,baz=128,slow=7.0,SNR=9.3
ZALV LR LR 11 09 23.4
comp=Z,33nm,18.9s,baz=64,slow=37
ZALV Zalesovo Beam 53.59 331 P P 10 45 39.5 -0.3
KURK Kurchatov 55.00 325 P P 10 45 50.6 +0.4
KK31 Karatay Array 57.17 314 P P 10 46 06.2 +0.3
KKAR Karatay Array 57.17 314 P P 10 46 06.2 +0.3
KKAR IAmb IAmb 10 46 06.7
comp=Z,6.7nm,0.6s
KKAR Karatay Array 57.17 314 P P 10 46 05.9 0.0
ABKAR Akbulak array 65.80 319 P P 10 47 03.8 -0.1
BKZ Black Stump Fm 68.86 140 P P 10 47 23.3 -0.1
BKZ IAmb IAmb 10 47 24.7
comp=Z,22nm,1.3s
ILAR Eielson Array 79.07 26 P P 10 48 22.9 +0.3
comp=Z,0.3nm,0.6s,baz=224,slow=4.8,SNR=5.2
BMAR Burnt Mountain 79.85 23 P P 10 48 28.7 +2.0
ARCES ARCESS Array B 83.20 340 P P 10 48 44.1 -0.2
comp=Z,1.0nm,0.4s,baz=80,slow=6.4,SNR=15
BRTR Keskin Array B 84.46 309 P P 10 48 50.4 -1.2
comp=Z,1.2nm,0.8s,baz=100,slow=5.1,SNR=6.1
FINES FINESS Array B 84.85 332 P P 10 48 52.0 -0.8
comp=Z,0.9nm,0.4s,baz=77,slow=4.2,SNR=12
FINES LR LR 11 32 58.3
comp=Z,71nm,18.7s,baz=275,slow=40
AKASG Malin Array Be 85.49 321 P P 10 48 54.7 -1.6
comp=Z,1.6nm,0.5s,baz=59,slow=5.3,SNR=6.9
AKASG Malin Array Be 85.49 321 IAmb IAmb 10 48 59.4
comp=Z,1.0nm,1.1s
C36M Paulatuk 86.76 19 P P 10 49 02.9 +0.8
C36M IAmb IAmb 10 49 04.2
comp=Z,3.2nm,0.7s
NOA NORSAR Array B 91.73 334 LR LR 11 34 49.9
comp=Z,19nm,18.6s,baz=15,slow=38
IDI Anoyia 92.20 306 LR LR 11 38 24.1
comp=Z,124nm,19.8s,baz=53,slow=40
YKA Yellowknife Ar 93.35 24 P P 10 49 33.8 +0.6
comp=Z,0.3nm,0.4s,baz=302,slow=4.2,SNR=4.2
TORD Torodi Ar. Bea 119.28 292 PKP PKPdf 10 55 06.8 -1.5
comp=Z,0.2nm,0.3s,baz=38,slow=2.1,SNR=4.9
PLCA Paso Flores 147.22 157 PKPbc PKPbc 10 56 01.9 +0.1
comp=Z,1.4nm,0.6s,baz=260,slow=1.3,SNR=8.6

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*BEO **13** 10:53:54.2±0.7, 38°.11N×20°.09E, h22km±4km, ML3.5/12*
*THE **13** 10:53:55.8, 38°.25N×20°.33E, h16km, ML3.9/9, Error ellipse: s-maj=1.2km s-min=0.4km az=90.0*
*ATH **13** 10:53:55.3, 38°.25N×20°.34E, h19km±1km, ML3.4/10, Error ellipse: s-maj=1.9km s-min=0.9km az=85.0*
*PDG **13** 10:53:55.4±0.2, 38°.25N×20°.19E, h12km±1km, ML3.9/13, Error ellipse: s-maj=1.6km s-min=0.7km az=90.0*
*IDC **13** 10:53:58.2±1.3, 38°.25N×20°.17E, h48km±19km, mb3.5/8, mb1 3.6/14, mb1mx3.4/41, mbtmp3.6/14, ML3.4/5, Error ellipse: s-maj=17.4km s-min=11.6km az=13.0*
ISC 13 10:53:55.5±0.7, **38°.25N**±0°.02×**20°.31E**±0°.03, **h18**km±2km, **n123**, σ**1s.14**/175, **mb3.8**/9, **11C-2D**, **Greece**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF3 Kipouria, Keph 0.05 148 P Pg 10 53 58.7 -0.1
KEF3 S Sg 10 54 00.8 -0.3
AGT1 Agia Thekli 0.06 88 P Pg 10 53 58.6 -0.2
AGT1 S Sg 10 54 00.6 -0.5
256µm,0.3s
CHV1 Chavriata, Kef 0.09 140 P Pg 10 53 58.9 -0.1
CHV1 S Sg 10 54 01.3 -0.1
399µm,0.4s
KEF4 Livadi, Kephal 0.09 84 P Pg 10 53 58.9 -0.2
KEF4 S Sg 10 54 01.3 -0.2
LXR1 Lixouri, Cepha 0.11 116 P Pg 10 53 59.2 -0.1
LXR1 S Sg 10 54 01.9 +0.1
320µm,0.3s
LXRA Lixouri, Kepha 0.11 116 P Pg 10 53 59.2 -0.1
LXRA S Sg 10 54 01.9 +0.1
KEF1 Kardakata, Kep 0.13 77 P Pg 10 53 59.3 -0.2
KEF1 S Sg 10 54 01.9 -0.3
ARGA Argostoli. Kep 0.15 119 P Pg 10 53 59.5 -0.2
ARGA S Sg 10 54 02.0 -0.6
ARG2 Argostoli 0.15 117 P Pg 10 53 59.6 -0.2
ARG2 S Sg 10 54 02.3 -0.4
89µm,0.4s
KEF2 Argostoli. Kep 0.16 121 P Pg 10 53 59.7 -0.2
KEF2 S Sb 10 54 02.1 0.0
VLS Valsamata 0.23 108 P Pb 10 54 00.5 -0.5
VLS S Sb 10 54 04.1 -0.6
28µm,0.2s
VLS Valsamata 0.23 108 P Pb 10 54 00.5 -0.5
VLS S Sb 10 54 04.1 -0.6
VLS AML AML 10 54 04.4
comp=N,42022µm,0.2s
VLS AML AML 10 54 04.5
comp=E,48965µm,0.1s
VSK1 VASILIKIADES 0.26 51 P Pg 10 54 01.1 -0.3
VSK1 S Sg 10 54 05.1 -0.2
comp=E,32µm,0.3s
KONA Konidatara, Ke 0.27 49 P Pg 10 54 01.3 -0.3
KONA S Sg 10 54 05.1 -0.6
FSK Fiskardo 0.29 43 P Pg 10 54 01.5 -0.3
FSK S Sg 10 54 06.0 -0.2
comp=E,10µm,0.7s
FSK Fiskardo 0.29 43 P Pg 10 54 01.6 -0.3
FSK S Sg 10 54 04.9 -1.4
FSK AML AML 10 54 06.5
comp=N,18272µm,0.4s
FSK AML AML 10 54 06.5
comp=E,16291µm,0.2s
EVGI Lefkada island 0.46 36 P Pg 10 54 04.5 -0.4
EVGI S Sb 10 54 11.7 +0.1
EVGI Lefkada island 0.46 36 P Pg 10 54 04.5 -0.4
EVGI S Sg 10 54 10.3 -0.9
VLMS Volimes, Zakyn 0.46 143 P Pg 10 54 04.0 -1.0
VLMS S Sg 10 54 10.9 -0.4
VLMS AML AML 10 54 19.3
comp=N,14968µm,0.5s
VLMS AML AML 10 54 23.0
comp=E,11588µm,0.4s
MGNA Meganis 0.55 43 P Pb 10 54 05.3 -1.4
MGNA S Sb 10 54 13.8 -0.4
MGNA AML AML 10 54 16.1
comp=N,4390µm,0.3s
MGNA AML AML 10 54 21.4
comp=E,5029µm,0.3s
LKD2 Lefkada island 0.60 27 P Pb 10 54 06.9 -0.7
LKD2 Lefkada island 0.60 27 P Pb 10 54 06.9 -0.7
LKD2 S Sb 10 54 15.4 -0.4
LKD2 AML AML 10 54 26.7
comp=N,5548µm,0.4s
LKD2 AML AML 10 54 26.9
comp=E,6940µm,0.4s
TSLK Tsoukalades, L 0.64 25 P Pb 10 54 07.6 -0.5
TSLK S Sg 10 54 17.4 +0.8
comp=E,4µm,0.5s
TSLK Tsoukalades, L 0.64 25 P Pb 10 54 07.5 -0.5
KRI1 kERI 0.71 146 P Pb 10 54 08.7 -0.6
KRI1 S Sn 10 54 20.1 -1.0
comp=E,5µm,0.6s
PDO Prodromos 0.77 63 P Pb 10 54 10.2 -0.2
PDO AML AML 10 54 27.9
comp=N,5926µm,0.3s
PDO AML AML 10 54 31.4
comp=E,5572µm,0.7s
RLS Riolos of Patr 0.93 101 P Pb 10 54 12.3 -0.8
RLS Riolos of Patr 0.93 101 P Pb 10 54 12.4 -0.8
RLS AML AML 10 54 36.0
comp=N,1898µm,0.5s
RLS AML AML 10 54 37.0
comp=E,1558µm,0.6s
PVO Paravola 1.02 69 P Pb 10 54 14.6 -0.1
PVO Paravola 1.02 69 P Pb 10 54 14.8 +0.1
PVO AML AML 10 54 35.0
comp=E,6038µm,0.5s
PVO AML AML 10 54 40.2
comp=N,3918µm,0.5s
DRO Drossia 1.14 105 P Pn 10 54 15.9 -0.8
DRO AML AML 10 54 42.2
comp=E,4229µm,0.5s
DRO AML AML 10 54 46.3
comp=N,3685µm,0.6s
IGT Igoumenitsa 1.28 1 ePg Pg 10 54 20.8 +0.5
IGT eSg Sg 10 54 39.2 +2.1
IGT Igoumenitsa 1.28 1 P Pb 10 54 19.4 +0.3
ANX Ano Chora 1.31 74 P Pn 10 54 19.3 +0.2
ANX AML AML 10 54 44.0
comp=N,2848µm,0.6s
ANX AML AML 10 54 45.9
comp=E,3201µm,0.5s
EVR Evrytania 1.35 60 P Pb 10 54 20.2 -0.2
SERG Sergoula 1.38 83 P Pn 10 54 20.3 +0.4
KALE Kalithea 1.45 84 P Pn 10 54 21.0 +0.1
KLV Kalavryta, Ach 1.46 97 P Pn 10 54 21.4 +0.3
KEK Kerkira 1.52 345 P Pb 10 54 22.8 -0.3
MAKR Makrakomi, Fth 1.62 61 P Pg 10 54 25.9 -0.8
ITM Ithomi 1.67 129 P Pb 10 54 25.4 -0.3
AGG Agios Georgios 1.76 63 P Pb 10 54 27.9 +0.6
DID Didima 2.43 107 P Pb 10 54 36.5 -2.2
OHR Ohrid 2.88 7 i Pn Pn 10 54 41.9 +1.3
TIP Timpagrande 2.93 290 ⥣P Pn 10 54 42.6 +1.3
TIP ⥣S Sn 10 55 16.8 +0.7
TIR Tirane 3.11 354 ePn Pn 10 54 44.8 +1.1
TIR Tirane 3.11 354 ⥣P Pn 10 54 44.7 +0.9
VAY Valandovo 3.53 29 eP Pg 10 55 02.8 -0.3
MATE Matera 3.68 312 ⥥P Pn 10 54 52.6 +1.1
STIP Stip 3.73 22 i Pn Pn 10 54 55.6 +3.4
ULC Ulcinj 3.80 348 ePn Pn 10 54 53.0 -0.2
ULC eSn Sn 10 55 37.3 -0.1
SRS Serrai 3.82 40 ePn Pn 10 54 54.6 +1.1
DRME Dracevica, Mon 4.03 348 ePn Pn 10 54 56.3 0.0
DRME Dracevica, Mon 4.03 348 ePn Pn 10 54 56.6 +0.3
DRME eSn Sn 10 55 42.7 -0.3
BUM Brajici-Budva 4.19 345 ePn Pn 10 54 58.4 -0.2
BUM eSn Sn 10 55 46.1 -1.0
PDG Podgorica 4.25 349 ePn Pn 10 54 59.7 +0.3
PDG eSn Sn 10 55 49.0 +0.4
PDG Podgorica 4.25 349 ⥣P Pn 10 54 59.3 -0.1
PDG Podgorica 4.25 349 ePn Pn 10 54 59.6 +0.2
TTG Podgorica 4.25 349 ePn Pn 10 54 59.3 -0.1
TTG eSn Sn 10 55 48.2 -0.4
PVY Plav 4.35 357 ePn Pn 10 55 00.9 +0.1
PVY eSn Sn 10 55 50.2 -0.9
HCY Herceg Novi 4.42 342 ePn Pn 10 55 00.8 -0.9
HCY Herceg Novi 4.42 342 ePn Pn 10 55 01.0 -0.7
HCY i Sn Sn 10 55 51.7 -0.9
CEME Cevo 4.42 347 ePn Pn 10 55 01.0 -0.8
CEME eSn Sn 10 55 52.0 -0.9
BOSS Bosilegrad 4.55 21 ePn Pn 10 55 04.2 +0.6
NKME Niksic 4.63 348 ePn Pn 10 55 04.3 -0.3
NKME eSn Sn 10 55 57.0 -1.0
KOME Kolasin 4.64 353 ePn Pn 10 55 04.9 +0.1
KOME eSn Sn 10 55 57.6 -0.6
NKY Niksic 4.67 348 ePn Pn 10 55 04.9 -0.3
NKY i Sn Sn 10 55 57.8 -1.2
TREB Trebinje 4.71 342 ePn Pn 10 55 04.9 -0.7
TREB eSn Sn 10 55 57.9 -1.9
TREB Trebinje 4.71 342 ePn Pn 10 55 04.8 -0.8
IDI Anoyia 4.71 127 P Pn 10 55 09.8 +4.0
comp=E,0.3nm,0.3s,baz=324,slow=19,SNR=1.4
IDI S Sn 10 56 01.8 +1.7
comp=E,1.6nm,0.3s,baz=351,slow=20,SNR=7.2
VAE Valguarnera 4.73 262 P Pn 10 55 06.3 +0.3
baz=21,slow=21,SNR=1.0
VAE S Sn 10 55 59.1 -1.3
comp=E,2.0nm,0.3s,baz=172,slow=19,SNR=1.8
BRY Bratogost 4.84 344 ePn Pn 10 55 07.4 -0.2
BRY Bratogost 4.84 344 ePn Pn 10 55 07.1 -0.5
BRY i Sn Sn 10 56 02.1 -1.1
VTS Vitosha 4.90 26 ePn Pn 10 55 09.6 +1.2
VTS eSn Sn 10 56 06.1 +1.3
VTS Vitosha 4.90 26 ⥥P Pn 10 55 09.7 +1.3
VTS Vitosha 4.90 26 eP Pn 10 55 09.8 +1.3
SELS Selova 5.00 7 ePn Pn 10 55 09.7 0.0
SJES Sjenica 5.01 357 ePn Pn 10 55 10.8 +0.8
SJES eSn Sn 10 56 06.9 -0.6
UPM Unac-Piva 5.06 348 ePn Pn 10 55 11.5 +0.8
UPM Unac-Piva 5.06 348 ePn Pn 10 55 10.9 +0.2
UPM eSn Sn 10 56 07.3 -1.5
PLE Pljevlja 5.12 352 ePn Pn 10 55 12.3 +0.8
PLE eSn Sn 10 56 09.3 -0.9
ZAPS Zavoj 5.32 19 ePn Pn 10 55 14.9 +0.8
IVAS Ivanjica 5.32 359 ePn Pn 10 55 13.8 -0.4
IVAS eSn Sn 10 56 14.4 -0.7
RUDO Rudo 5.41 353 ePn Pn 10 55 14.8 -0.5
BOVS Bovan 5.48 11 ePn Pn 10 55 16.3 0.0
BOVS eSn Sn 10 56 17.5 -1.4
GRUS Gruza 5.64 3 ePn Pn 10 55 18.5 0.0
GRUS eSn Sn 10 56 22.0 -0.8
BBLS Lazići 5.65 353 ePn Pn 10 55 19.2 +0.5
BBLS eSn Sn 10 56 22.0 -1.2
BBLS Lazići 5.65 353 ePn Pn 10 55 18.1 -0.6
ZAGS Zajecar 5.75 14 ePn Pn 10 55 19.3 -0.6
DIVS Divibare 5.85 358 ePn Pn 10 55 21.2 -0.2
DIVS eSn Sn 10 56 25.9 -2.1
DIVS Divibare 5.85 358 ePn Pn 10 55 20.7 -0.7
HAPS Han Pijesak,Bl 5.92 350 ePn Pn 10 55 21.2 -1.2
TRUS Trudelj 5.97 1 ePn Pn 10 55 23.1 +0.1
TRUS eSn Sn 10 56 28.7 -2.2
KUBS Kucevo 6.24 9 ePn Pn 10 55 24.6 -2.1
MDVR Moldovita 6.61 9 ⥣P Pn 10 55 31.5 -0.4
MGRS Mrkonjic Grad 6.62 340 ePn Pn 10 55 32.6 +0.6
BLY Banja Luka 6.91 341 ⥣P Pn 10 55 36.2 +0.4
BLY Banja Luka 6.91 341 ePn Pn 10 55 35.6 -0.2
FRGS Fruska Gora 6.91 357 ePn Pn 10 55 32.7 -3.3
ARR Arges 7.81 23 ⥣P Pn 10 55 49.3 +1.0
VOIR 8.00 25 ⥣P Pn 10 55 52.5 +1.5
MORH Mrgy, Hungar 8.06 352 ePn Pn 10 55 50.6 -1.0
MLR Muntele Rosu 8.37 28 P Pn 10 55 59.4 +3.4
comp=E,0.3nm,0.3s,baz=280,slow=18,SNR=4.5
MLR Muntele Rosu 8.37 28 ⥣P Pn 10 55 57.8 +1.8
CRES Cresnjev 8.39 336 ePn Pn 10 55 55.4 -0.8
PLOR Plostina 8.94 30 ⥣P Pn 10 56 06.6 +2.8
VRI Vrincioaia 8.98 30 ⥣P Pn 10 56 05.9 +1.6
SOKA Soboth 9.28 337 i Pn Pn 10 56 08.3 -0.2
comp=E,2.5nm,0.2s
OBKA Obir 9.29 335 i Pn Pn 10 56 09.4 +0.8
comp=E,1.7nm,0.2s
OBKA i Sn Sn 10 57 49.9 -2.7
comp=E,4.1nm,0.4s
KBA Koelnbreinsper 10.20 332 i Pn Pn 10 56 22.0 +0.8
comp=E,0.9nm,0.2s
KBA i Sn Sn 10 58 11.4 -3.7
comp=E,0.8nm,0.2s
BRTR Keskin Array B 10.48 78 P Pn 10 56 29.1 +4.1
comp=E,0.1nm,0.3s,baz=295,slow=11,SNR=1.7
MOA Molln 10.56 337 i Pn Pn 10 56 27.1 +1.1
comp=E,2.6nm,0.2s
GERES GERESS Array B 11.62 338 P Pn 10 56 39.5 -1.0
comp=E,0.2nm,0.3s,baz=160,slow=14,SNR=2.5
KBZ Khabaz 17.89 65 P P 10 58 04.8 +1.0
comp=E,0.1nm,0.3s,baz=29,slow=5.9,SNR=3.8
HFS Hagfors 22.30 351 P P 10 58 51.1 -0.6
comp=E,3.4nm,0.6s,baz=173,slow=13,SNR=3.0
FINES FINESS Array B 23.50 7 P P 10 59 02.7 -1.3
comp=E,1.0nm,0.5s,baz=177,slow=9.4,SNR=9.1
NOA NORSAR Array B 23.52 349 P P 10 59 02.9 -1.4
comp=E,0.7nm,0.7s,baz=158,slow=9.7,SNR=2.1
GEYT Alibeck 29.62 79 P P 11 00 03.6 +3.8
comp=E,1.7nm,0.4s,baz=59,slow=37,SNR=3.1
TORD Torodi Ar. Bea 29.98 218 P P 11 00 02.5 -0.6
comp=E,0.5nm,0.6s,baz=29,slow=10,SNR=3.5
ARCES ARCESS Array B 31.47 3 P P 11 00 14.9 -0.8
comp=E,2.2nm,0.8s,baz=191,slow=9.9,SNR=4.5
MKAR Makanchi Array 45.40 58 P P 11 02 12.6 -0.4
comp=E,0.6nm,0.5s,baz=272,slow=7.4,SNR=7.9
ZALV Zalesovo Beam 45.77 48 P P 11 02 15.2 -0.5
comp=E,1.9nm,0.5s,baz=277,slow=9.5,SNR=8.8
SONM Songino Array 60.54 51 P P 11 04 03.7 -1.0
comp=E,0.2nm,0.4s,baz=296,slow=11,SNR=2.2

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*IDC **13** 10:56:08.3±2.5, 6°.27S×151°.51E, h46km±24km, mb3.4/4, mb1 3.7/6, mb1mx3.4/28, mbtmp3.7/6, ML1.3/1, MS2.3/1, Ms1 2.3/1, ms1mx2.0/30, Error ellipse: s-maj=52.8km s-min=9.7km az=123.0*
ISC 13 10:56:07.3±1.1, **6°.3S**±0°.1×**151°.6E**±0°.2, **h35**km, **n7**, σ**1s.45**/9, **mb3.5**/4, **New Britain region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRVT Keravat (AS076 2.02 11 P Pn 10 56 38.8 -0.1
28nm,0.3s,baz=179,slow=1.2,SNR=32
KRVT S Sn 10 57 04.5 +1.5
164nm,0.3s,baz=121,slow=18,SNR=30
KRVT LR LR 10 57 44.0
comp=Z,80nm,21.8s,baz=173,slow=48
PMG Port Moresby 5.40 235 P Pn 10 57 26.9 +1.6
0.6nm,0.3s,baz=330,slow=18,SNR=1.5
PMG S Sn 10 58 25.2 -1.1
2.1nm,0.3s,baz=181,slow=24,SNR=3.9
WRA Warramunga Arr 21.59 229 P P 11 00 54.5 +0.3
0.4nm,0.5s,baz=54,slow=10,SNR=3.1
ASAR Alice Springs 24.26 223 P P 11 01 19.6 -1.8
1.5nm,0.7s,baz=58,slow=9.1,SNR=17
VNDA Vanda 71.38 178 P P 11 07 24.4 +1.2
3.4nm,1.1s,baz=0.0,slow=3.0,SNR=1.8
ILAR Eielson Array 83.98 22 P P 11 08 32.8 -0.8
0.2nm,0.7s,baz=239,slow=5.5,SNR=2.5
TORD Torodi Ar. Bea 149.62 285 PKPbc PKPbc 11 15 53.0 -1.2
0.6nm,0.5s,baz=80,slow=3.2,SNR=4.6

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*UPA **13** 11:04:23.2±0.6, 8°.05N×82°.66W, h43km±4km, MW3.7*
*UCR **13** 11:04:23.0±1.8, 7°.99N×82°.63W, h20km±9km, MW3.5*
ISC 13 11:04:23.1±1.6, **8°.02N**±0°.07×**82°.65W**±0°.05, **h33**km±8km, **n16**, σ**0s.91**/26, **1C-2D**, **Panama-Costa Rica border region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DVD David 0.46 26 eP Pb 11 04 32.7 -0.4
DVD eS Sn 11 04 40.2 -0.4
BAGA3 Bagala, Chiriq 0.46 16⥥eP Pb 11 04 33.2 0.0
CHIR3 Chiriqui UPA, 0.49 40⥥eP Pb 11 04 33.1 -0.5
CHIR3 eS Sn 11 04 41.3 0.0
PTAR3 Potrerillos Ar 0.69 13 eP Pb 11 04 36.6 -0.3
PTAR3 eS Sb 11 04 45.6 -0.6
BCO2 Palmira 0.71 10 eP Pn 11 04 36.6 -0.4
BCO2 eS Sn 11 04 47.0 +0.1
BRU2 Volcan 0.77 357 eP Pn 11 04 37.7 -0.3
BRU2 eS Sn 11 04 48.9 +0.4
BRU2 Volcan 0.77 357⥣eP Pn 11 04 37.6 -0.3
BRU2 eS Sn 11 04 49.1 +0.6
PIRO Carate, Puerto 0.78 300 eP Pn 11 04 37.1 -0.7
PIRO eS Sn 11 04 48.9 +0.5
EDSV San Vito 0.86 338 eP Pn 11 04 39.3 +0.3
EDSV eS Sb 11 04 53.1 +2.1
EDPN Palmar Norte 1.23 320 eP Pn 11 04 44.6 +0.6
EDPN eS Sb 11 05 01.8 +0.3
GMAL Guarumal, Vera 1.43 100 eP Pn 11 04 46.3 -0.5
GMAL eS Sn 11 05 04.4 -0.1
GMAL Guarumal, Vera 1.43 100 eP Pn 11 04 46.2 -0.5
LCR2 La Lucha 2 2.17 322 eP Pn 11 04 58.9 +1.7
CVTR Volcan Turrial 2.27 331 eP Pb 11 05 01.9 -1.8
AZU Azuero 2.37 95 eP Pn 11 05 01.6 +1.9
ACON Acoyapa 4.64 328 eP Pn 11 05 30.7 -0.4

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*IDC **13** 11:05:44.9±4.6, 15°.93S×167°.97E, h260km±35km, mb4.0/7, mb1 4.1/8, mb1mx3.5/43, mbtmp4.6/8, Error ellipse: s-maj=51.6km s-min=32.0km az=71.0*
*NEIC **13** 11:05:47.1±1.6, 15°.8S±0°.1×165°.3E±0°.1, h57km±9km, mb4.3/11, Error ellipse: s-maj=20.2km s-min=13.3km az=118.0*
ISC 13 11:05:43.2±2.6, **15°.78S**±0°.09×**168°.0E**±0°.3, **h250**km, **n27**, σ**1s.19**/29, **mb4.4**/13, **Vanuatu Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 0.87 293 Pn 11 06 16.8 -0.8
DZM Mont Dzumac 6.43 193 P Pn 11 07 16.9 0.0
1.6nm,0.3s,baz=39,slow=19,SNR=18
DZM S S 11 08 30.8 -1.0
baz=314,slow=21,SNR=0.8
DZM Mont Dzumac 6.43 193 Pn 11 07 16.9 0.0
DZM S 11 08 30.8 -1.0
NOUC Port Laguerre 6.49 194 Pn 11 07 18.1 +0.6
ARMA Armidale 20.93 223 P P 11 10 07.9 +0.6
ARMA IAmb IAmb 11 10 08.2
comp=Z,15nm,1.3s

CTA Charters Tower 21.15 255 P P 11 10 09.7 +0.2
comp=Z,6.7nm,0.7s,baz=96,slow=11,SNR=6.6
CTA Charters Tower 21.15 255 P P 11 10 09.7 +0.2
PMG Port Moresby 21.32 285 P P 11 10 12.2 +1.1
comp=Z,23nm,0.8s,baz=75,slow=5.3,SNR=12
COEN Coen 24.09 271 P P 11 10 32.0 -4.4
STKA Stephens Creek 28.89 232 P P 11 11 19.8 +0.6
comp=Z,7.2nm,0.8s,baz=42,slow=7.2,SNR=12
STKA Stephens Creek 28.89 232 P P 11 11 20.3 +1.1
WR0 Warramunga Arr 32.11 258 P P 11 11 46.6 -0.9
WR0 IAmb IAmb 11 11 52.8
comp=Z,8.2nm,1.5s
WB0 Warramunga Arr 32.24 258 P P 11 11 47.7 -1.0
WB0 IAmb IAmb 11 11 49.1
comp=Z,7.6nm,0.3s
WB2 Warramunga Arr 32.29 258 P P 11 11 48.5 -0.6
WB2 IAmb IAmb 11 11 55.0
comp=Z,4.9nm,1.4s
WRAB Tennant Creek 32.29 258 P P 11 11 48.0 -1.2
WRAB IAmb IAmb 11 11 49.5
comp=Z,2.0nm,0.5s
WRA Warramunga Arr 32.30 258 P P 11 11 48.1 -1.1
comp=Z,1.5nm,0.3s,baz=87,slow=7.6,SNR=79
WRA Warramunga Arr 32.30 258 P P 11 11 48.1 -1.1
AS31 Alice Springs 33.00 251 P P 11 11 55.0 -0.3
AS31 IAmb IAmb 11 11 55.8
comp=Z,8.0nm,0.5s
ASAR Alice Springs 33.01 251 P P 11 11 54.7 -0.6
comp=Z,16nm,0.6s,baz=76,slow=9.3,SNR=283
ASAR Alice Springs 33.01 251 P P 11 11 54.5 -0.8
BBOO Buckleboo 33.53 234 P P 11 12 00.3 +0.6
BBOO IAmb IAmb 11 12 16.2
comp=Z,11nm,1.1s
KNRA Kununurra 37.76 265 P P 11 12 35.3 -0.4
FITZ Fitzroy Crossi 40.56 260 P P 11 12 59.1 +0.3
comp=Z,20nm,0.5s,baz=88,slow=8.2,SNR=37
FITZ Fitzroy Crossi 40.56 260 P P 11 12 58.9 +0.1
CMAR Chiang Mai Arr 76.05 294 P P 11 17 05.0 +1.2
comp=Z,0.4nm,0.3s,baz=136,slow=5.3,SNR=4.0
CMAR Chiang Mai Arr 76.05 294 P 11 17 05.0 +1.2
TORD Torodi Ar. Bea 166.51 261 PKPab PKPab 11 26 22.6 -0.6
comp=Z,0.8nm,0.7s,baz=84,slow=4.3,SNR=5.0

IDC 13 11:12:45.9±1.8,1.30N×126.46E,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.5/45,mbtmp3.6/4,Error ellipse: s-maj=172.3km s-min=22.3km az=65.0,Northern Molucca Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 22.48 160 P P 11 17 47.7 +0.7
0.7nm,0.4s,baz=338,slow=11,SNR=13
ASAR Alice Springs 25.85 164 P P 11 18 19.6 +0.3
0.5nm,0.5s,baz=344,slow=7.2,SNR=15
STKA Stephens Creek 35.98 158 P P 11 19 47.5 -1.2
0.9nm,0.5s,baz=321,slow=9.7,SNR=4.2
MKAR Makanchi Array 59.40 326 P P 11 22 50.4 +0.1
0.4nm,0.5s,baz=116,slow=8.4,SNR=12

NIED 13 11:15:00,35.80N×141.00E,h11km,Mw3.8 Best double couple: Mo5.55000×10^14 NP1:φs12.00000°,δ58.00000°, λ-108.00000°. NP2:φs223.00000°,δ36.00000°, λ-64.00000°.
IDC 13 11:15:17.1±1.0,35.78N×140.93E,h0km,mb3.7/9, mb1 3.9/11,mb1mx3.7/56,mbtmp3.7/11,ML3.4/2,Error ellipse: s-maj=22.8km s-min=21.3km az=97.0
JMA 13 11:15:19.7±0.2,35.81N×140.98E,h15km±2km,M4.1 JMA Felt II J1.
ISC 13 11:15:19.5±1.1,35.82N±0.04×140.97E±0.06,h15km±6km, n25,σ0.59/27,mb3.7/9,5C,Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHOJ Chosi 0.15 216 P Pg 11 15 23.5 +0.1
CHOJ S Sg 11 15 26.0 0.0
JIHU Itakohorinouch 0.38 292 ⇑P Pb 11 15 28.3 +0.3
JIHU S Sb 11 15 34.8 +1.0
JSMT Sammumatsuo 0.46 247 ⇑P Pb 11 15 29.4 +0.1
JSMT S Sb 11 15 36.1 +0.2
JHYU Hitachinakayam 0.60 329 ⇑P Pb 11 15 32.0 +0.3
JHYU S Sb 11 15 40.4 +0.4
JCN Nagara 0.74 237 P Pn 11 15 35.0 -0.4
JCN S Sn 11 15 46.4 0.0
JYT Yasato 0.74 303 ⇑P Pg 11 15 33.6 -0.4
JYT S Sg 11 15 43.8 0.0
JHO Hitachi 0.85 338 ⇑P Pb 11 15 35.4 -0.6
MJAR Matsushiro Arr 2.34 289 Pn Pn 11 15 57.2 -0.2
3.4nm,0.3s,baz=91,slow=10.0,SNR=92
MJAR Sn Sn 11 16 25.3 -0.7
2.1nm,0.3s,baz=312,slow=11,SNR=3.0
MAT Matsushiro 2.34 289 P Pn 11 15 57.3 -0.2
MAT S Sn 11 16 26.5 +0.5
ASAJ Asahikawa 8.38 8 Pn Pn 11 17 20.2 -0.1
0.8nm,0.3s,baz=249,slow=10.0,SNR=5.7
H11N2 WAKE ISLAND Hy 27.87 118 T T 11 50 10.8
baz=311,slow=75,SNR=91
H11N1 WAKE ISLAND Hy 27.88 118 T T 11 50 09.7
baz=311,slow=75,SNR=49
H11N3 WAKE ISLAND Hy 27.89 118 T T 11 50 10.5
baz=311,slow=75,SNR=64
SONM Songino Array 28.18 306 P P 11 21 11.8 +0.4
0.2nm,0.5s,baz=108,slow=7.8,SNR=2.1
H11S1 WAKE ISLAND Hy 28.53 120 T T 11 50 54.2
baz=312,slow=75,SNR=110
H11S3 WAKE ISLAND Hy 28.53 120 T T 11 50 54.3
baz=312,slow=75,SNR=84
H11S2 WAKE ISLAND Hy 28.55 120 T T 11 51 00.1
baz=312,slow=75,SNR=56
ZALV Zalesovo Beam 42.47 313 P P 11 23 12.6 -1.1
0.5nm,0.5s,baz=101,slow=7.5,SNR=1.7
ILAR Eielson Array 50.71 32 P P 11 24 17.6 -0.6
0.8nm,0.8s,baz=271,slow=6.2,SNR=7.2
INK Inuvik 55.63 27 P P 11 24 55.7 +1.5
1.3nm,0.9s,baz=229,slow=7.4,SNR=1.6
WRA Warramunga Arr 55.82 188 P P 11 24 55.7 -0.5
1.3nm,0.7s,baz=4.6,slow=7.0,SNR=4.5
ASAR Alice Springs 59.54 188 P P 11 25 21.9 -0.5
0.4nm,0.6s,baz=10,slow=5.7,SNR=3.2
YKA Yellowknife Ar 65.03 30 P P 11 25 59.4 +0.6
0.4nm,0.7s,baz=298,slow=6.4,SNR=6.6
FINES FINESS Array B 69.71 332 P P 11 26 28.8 +0.4
3.4nm,1.0s,baz=339,slow=7.4,SNR=3.8
AKASG Malin Array Be 75.03 322 P P 11 27 00.2 -0.1
0.3nm,0.4s,baz=46,slow=5.7,SNR=2.1

IDC 13 11:17:08.7±49.0,15.67S×173.44W,h0km,mb4.0/3, mb1 4.2/3,mb1mx3.6/46,mbtmp4.0/3,MS3.1/1,Ms1 3.1/1, ms1mx2.3/37,Error ellipse: s-maj=941.5km s-min=186.1km az=79.0,Tonga Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DZM Mont Dzumac 20.06 248 LR LR 11 28 57.2
comp=Z,49nm,18.4s,baz=3.5,slow=35
STKA Stephens Creek 43.87 240 P P 11 25 17.6 +0.6
0.8nm,0.4s,baz=108,slow=20,SNR=4.5
WRA Warramunga Arr 49.75 257 P P 11 26 02.5 -0.8
0.2nm,0.3s,baz=94,slow=8.1,SNR=5.5
ASAR Alice Springs 49.99 252 P P 11 26 05.1 -0.1
3.5nm,0.5s,baz=88,slow=8.1,SNR=36

IDC 13 11:17:09.7±1.4,6.27S×155.02E,h109km±14km,mb3.9/6, mb1 4.2/10,mb1mx3.7/46,mbtmp4.5/10,MS3.2/3, Ms1 3.3/3,ms1mx2.7/32,Error ellipse: s-maj=18.0km s-min=11.0km az=33.0
NEIC 13 11:17:10.4±1.2,6.35S±0.1×155.04E±0.02,h114km±9km, mb4.6/16,Error ellipse: s-maj=15.4km s-min=3.4km az=183.0
ISC 13 11:17:09.2±0.6,6.20S±0.08×155.05E±0.07,h100km,n36, σ1.34/37,mb4.5/12,1C,Bougainville-Solomon Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RABL Rabaul 3.50 305 Pn Pn 11 18 03.5 +1.8
KRVT Keravat (AS076 3.55 302 P Pn 11 18 01.4 -1.0
14nm,0.3s,baz=214,slow=1.7,SNR=18
KRVT S Sn 11 18 45.4 +2.0
25nm,0.3s,baz=18,slow=11,SNR=3.7
HNR Honiara 5.82 124 P Pn 11 18 32.4 -0.7
36nm,0.3s,baz=187,slow=4.0,SNR=12
HNR S Sn 11 19 39.8 +1.2
baz=223,slow=10,SNR=1.5
HNR Honiara 5.82 124 eP Pn 11 18 33.0 -0.1
HNR Honiara 5.82 124 Pn 11 18 33.4 +0.3
PMG Port Moresby 8.44 247 P Pn 11 19 10.3 +1.6
31nm,0.3s,baz=51,slow=7.4,SNR=79
PMG S Sn 11 20 43.5 +1.2
1.3nm,0.3s,baz=276,slow=23,SNR=5.8
PMG LR LR 11 22 45.2
comp=Z,90nm,18.2s,baz=348,slow=40
PMG Port Moresby 8.44 247 Pn 11 19 09.8 +1.0
COEN Coen 13.99 236 Pn Pn 11 20 22.5 -0.7
SANVU Saraoutou 15.06 129 Pn 11 20 38.3 +1.5
SANVU IAmb IAmb 11 20 41.1
comp=Z,23nm,1.0s
CTA Charters Tower 16.23 211 P P 11 20 52.9 +0.2
comp=Z,0.2nm,0.3s,baz=56,slow=12,SNR=5.6
NOUC Port Laguerre 19.19 147 P P 11 21 24.6 -0.6
DZM Mont Dzumac 19.24 146 P P 11 21 25.8 -0.1
comp=Z,2.4nm,0.3s,baz=304,slow=5.1,SNR=8.3
DZM Mont Dzumac 19.24 146 P P 11 21 25.6 -0.3
WR0 Warramunga Arr 24.16 234 P P 11 22 16.2 -0.2
WR0 IAmb IAmb 11 22 17.1
comp=Z,21nm,0.8s
WB0 Warramunga Arr 24.18 234 P P 11 22 15.8 -0.7
WB0 IAmb IAmb 11 22 17.2
comp=Z,16nm,0.7s
WRAB Tennant Creek 24.30 234 P P 11 22 17.2 -0.4
ARMA Armidale 24.30 187 P P 11 22 17.0 -0.6
WB2 Warramunga Arr 24.30 234 P P 11 22 17.1 -0.6
WRA Warramunga Arr 24.31 234 P P 11 22 16.2 -1.5
comp=Z,18nm,0.6s,baz=56,slow=9.7,SNR=159
ASAR Alice Springs 26.74 227 P P 11 22 38.2 -1.4
comp=Z,1.0nm,0.3s,baz=56,slow=9.1,SNR=22
KNRA Kununurra 27.44 248 P P 11 22 46.0 0.0
KNRA IAmb IAmb 11 22 59.2
comp=Z,17nm,1.1s
STKA Stephens Creek 28.47 205 P P 11 22 54.6 -0.3
comp=Z,1.7nm,0.6s,baz=20,slow=10,SNR=4.8
STKA Stephens Creek 28.47 205 P P 11 22 53.6 -1.3
FITZ Fitzroy Crossi 31.02 245 P P 11 23 15.8 -1.9
comp=Z,5.7nm,0.6s,baz=95,slow=6.4,SNR=11
FITZ Fitzroy Crossi 31.02 245 P P 11 23 15.7 -2.1
FITZ IAmb IAmb 11 23 16.9
comp=Z,6.1nm,0.7s
BKZ Black Stump Fm 38.10 153 P P 11 24 18.1 -0.4
LTZ Lake Taylor 39.49 160 P P 11 24 29.2 -0.8
PLWZ Palliser 39.55 156 P P 11 24 29.4 -1.2
KHZ Kahutara 39.62 158 P P 11 24 29.0 -2.0
KHZ IAmb IAmb 11 24 30.9
comp=Z,12nm,1.0s
CMAR Chiang Mai Arr 60.49 295 LR LR 11 54 04.4
comp=Z,12nm,18.1s,baz=175,slow=37
SONM Songino Array 68.70 327 P P 11 28 02.5 +0.2
comp=Z,0.2nm,0.5s,baz=122,slow=5.2,SNR=2.5
MKAR Makanchi Array 82.84 319 P P 11 29 22.6 -0.1
comp=Z,0.5nm,0.8s,baz=101,slow=5.2,SNR=4.9
QSPA South Pole Qui 83.77 180 P P 11 29 26.4 -0.8
QSPA IAmb IAmb 11 29 27.5
comp=Z,13nm,1.4s
NVAR Mina Array Bea 91.19 52 LR LR 12 05 28.2
comp=Z,20nm,18.3s,baz=333,slow=32
SYO Syowa Base 93.09 199⇓eX P 11 30 16.0 +4.5
YKA Yellowknife Ar 95.62 28 P P 11 30 22.8 -0.4
comp=Z,0.3nm,0.7s,baz=271,slow=5.3,SNR=4.5

ISN 13 11:19:45.7±0.9,34.45N×45.48E,h15km±6km,ML2.9
TEH 13 11:19:45.8,34.45N×45.51E,h14km,ML3.0
ISC 13 11:19:45.2±1.3,34.48N±0.03×45.55E±0.03,h2km±12km, n19,σ0.84/27,Iran-Iraq border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
IDHR Dehrash 0.73 72 ePg Pg 11 19 59.4 +0.3
IDHR eSg Sb 11 20 12.1 +1.0
IGHG Ghaleghazi 0.86 100 e 11 20 17.5
IGHG ePg Pg 11 20 02.4 +0.7
IVIS Veis 1.08 87 eSg Sn 11 20 22.9 0.0
IVIS ePg Pg 11 20 05.5 -0.3
IVIS e 11 20 25.2
ILIN Lien 1.25 69 eSg Sn 11 20 27.9 +0.6
ILIN ePg Pn 11 20 09.4 -0.4
IKRK Kirkuk 1.35 313 ePg Pb 11 20 10.4 -0.7
IKRK eSg Sg 11 20 29.0 +0.5
IKRK AML AML 11 20 32.9
comp=E,304nm,0.4s
IKRK AML AML 11 20 33.2
comp=N,669nm,0.4s
IKRK e 11 20 35.5
IBDR Badra 1.41 167 ePn Pg 11 20 12.0 -0.1
IBDR eSn Sg 11 20 32.0 +1.7
IBDR AML AML 11 20 34.5
comp=E,138nm,0.9s
IBDR AML AML 11 20 34.7
comp=N,137nm,0.4s
BHD Baghdad 1.55 219 ePn Pb 11 20 13.5 -1.0
BHD eSn Sg 11 20 34.0 -1.0
IKOM Komasi 1.66 100 ePg Pb 11 20 15.8 -0.7
IKOM e 11 20 43.6
IBZA Bozab 1.91 90 ePn Pn 11 20 19.6 +0.6
IBZA e 11 20 50.8
IKFM Kafar-mosalman 2.14 116 ePn Pn 11 20 22.3 +0.5
IKFM e 11 20 58.5
IALM Almabolaq 2.19 79 ePn Pb 11 20 24.2 -1.5
MAHB Mahabad 2.28 3 ePn Pn 11 20 24.7 +0.7
IDOB Doab 2.29 107 ePn Pn 11 20 24.3 +0.2
IDOB e 11 21 09.6
HSRG Sareghieh 2.37 71 ePn Pb 11 20 27.1 -1.7
HSAM Samen 2.54 95 ePn Pn 11 20 27.9 +0.2
IKMR Kamar-syah 2.54 111 ePn Pn 11 20 27.6 +0.2
MSL Mosul 2.76 315 ePn Pn 11 20 31.0 +0.6
MSL eSn Sn 11 21 04.0 -0.2
BDRS Dareh Seyedi 2.81 100 ePn Pn 11 20 31.2 -0.2
NSR Nassriya 3.50 172 ePn Pn 11 20 41.5 +1.0
NSR eSn Sn 11 21 22.0 -0.5

MOS 13 11:30:43.7±1.3,38.31N×15.24E,h151km,mb4.1/7,Error ellipse: s-maj=9.0km s-min=4.2km az=52.4
LDG 13 11:30:44.1±0.1,38.38N×15.31E,h144km,Ml3.1/8,Error ellipse: s-maj=2.2km s-min=2.0km az=75.0
BEO 13 11:30:44.1±0.7,38.43N×15.45E,h10km,ML4.1/13
NEIC 13 11:30:44.6±2.6,38.42N±0.03×15.34E±0.04,h148km±4km, mb4.2/11,ML4.0(ROM),Error ellipse: s-maj=6.3km s-min=1.8km az=50.0
ROM 13 11:30:44.9±0.2,38.40N±0.01×15.26E±0.01,h144km±1km, ML3.9/2,Error ellipse: s-maj=1.3km s-min=0.8km az=138.0
IDC 13 11:30:45.3±1.0,38.52N×15.19E,h156km±11km,mb3.6/13, mb1 3.6/19,mb1mx3.4/60,mbtmp4.0/19,MS2.8/1, Ms1 2.8/1,ms1mx2.3/37,Error ellipse: s-maj=15.6km s-min=11.0km az=159.0
PDG 13 11:30:47.5±1.9,38.81N×15.08E,h39km±12km,ML4.1/14, Error ellipse: s-maj=2.6km s-min=4.2km az=0.0
ISC 13 11:30:44.6±0.5,38.48N±0.03×15.31E±0.04,h144km±5km, n288,σ1.60/352,mb4.1/21,50C-30D,Sicily

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MILZ Milazzo 0.21 196 ⇑P Pn 11 31 03.7 -0.6
MILZ S Sn 11 31 17.9 -1.1
MILZ AML AML
comp=N,11130μm,0.5s
MILZ AML AML
comp=E,13950μm,0.5s
MSRU Castanea 0.26 143 ⇓P Pn 11 31 04.0 -0.4
MSRU S Sn 11 31 18.5 -0.8
VPL Vulcano Piano 0.27 250 ⇑P Pn 11 31 04.5 0.0
VPL S Sn 11 31 19.4 0.0
VPL AML AML
comp=E,25350μm,0.6s
VPL AML AML
comp=N,26050μm,0.5s
VPL AML AML
comp=N,26050μm,0.5s
VPL AML AML
comp=E,25350μm,0.6s
LLI Lipari 0.28 264 ⇑P Pn 11 31 04.6 +0.2
LLI AML AML
comp=E,30050μm,0.7s
LLI AML AML
comp=N,33250μm,1.4s
ISTR Stromboli Gino 0.32 344 P Pn 11 31 05.1 +0.6
MPNC Port Mandanici 0.33 174 P Pn 11 31 04.3 -0.3
MPNC S Sn 11 31 19.0 -0.8
MCSR Castroreale 0.41 186 ⇑P Pn 11 31 05.1 0.0
MCSR S Sn 11 31 21.2 +0.7
MCSR AML AML
comp=E,18400μm,0.5s
MCSR AML AML
comp=E,18400μm,0.5s
MCSR AML AML
comp=N,14000μm,0.4s
MSCL Scilla 0.45 122 ⇓P Pn 11 31 05.0 -0.2
MSCL S Sn 11 31 20.5 -0.2
NOV Novara 0.47 197 ⇑P Pn 11 31 05.4 +0.2
NOV S Sn 11 31 21.5 +0.6
NOV AML AML
comp=N,8630μm,0.4s
NOV AML AML
comp=E,16000μm,0.5s
JOPP Joppolo 0.47 74 ⇓P Pn 11 31 05.4 +0.2
JOPP S Sn 11 31 20.9 +0.1
JOPP AML AML
comp=E,4720μm,0.5s
JOPP AML AML
comp=N,5180μm,0.8s
AIO Antillo 0.51 187 ⇑P Pn 11 31 05.7 +0.2
AIO S Sn 11 31 21.7 +0.5
CEL Celeste 0.51 115 ⇓P Pn 11 31 05.4 -0.1
CEL S Sn 11 31 21.1 -0.1
CEL AML AML
comp=N,5355μm,0.6s
CEL AML AML
comp=E,8580μm,0.4s
CEL AML AML
comp=E,10285μm,0.4s
CEL AML AML
comp=E,8625μm,0.4s
CEL AML AML
comp=N,5350μm,0.6s
CEL AML AML
comp=N,6580μm,1.0s
CEL Celeste 0.51 115 Pn 11 31 05.3 -0.1
CEL Sn Sn 11 31 20.4 -0.8
GMB Gambarie 0.51 127 P Pn 11 31 05.5 -0.1
GMB S Sn 11 31 21.6 +0.2
GMB AML AML
comp=E,47100μm,0.5s
GMB AML AML
comp=N,47100μm,1.3s
GMB AML AML
comp=E,47100μm,0.5s
GMB AML AML
comp=N,47100μm,1.3s
GMB Gambarie 0.51 127 P Pn 11 31 05.5 -0.1
MUCR Ucria 0.55 218 ⇑P Pn 11 31 05.1 -0.7
MUCR AML AML
comp=N,5245μm,0.7s
MUCR AML AML
comp=E,2715μm,0.5s
MTTG Motta San Giov 0.56 147 ⇓P Pn 11 31 06.0 +0.2
MTTG S Sn 11 31 22.0 +0.3
MTTG AML AML
comp=E,11700μm,1.4s
MTTG AML AML
comp=N,11400μm,0.5s
MCPD Capo d'Orlando 0.58 232 ⇑P Pn 11 31 05.1 -0.6
MCPD S Sn 11 31 20.5 -1.2
MCPD AML AML
comp=N,1235μm,0.6s
MCPD AML AML
comp=E,1013μm,0.5s
IFIL Filicudi I Eol 0.59 279 ⇑P Pn 11 31 05.8 0.0
EMSG Monte Spagnolo 0.71 203 P Pn 11 31 06.9 +0.1
EMSG AML AML
comp=E,5975μm,1.6s
EMSG AML AML
comp=N,11900μm,0.6s
SOI Samo 0.71 124 ⇓P Pn 11 31 06.8 +0.2
SOI S Sn 11 31 23.0 -0.3
SOI AML AML
comp=N,4565μm,0.6s
SOI AML AML
comp=E,7650μm,1.0s
SOI Samo 0.71 124 ⇓P Pn 11 31 06.8 +0.2
SOI S Sn 11 31 23.6 +0.3
MSFR San Fratello 0.72 232 ⇑P Pn 11 31 06.4 -0.3
MSFR S Sn 11 31 22.9 -0.5
MSFR AML AML
comp=N,656μm,1.0s
MSFR AML AML
comp=N,656μm,1.0s
MSFR AML AML
comp=E,455μm,0.7s
MNO Monte Soro 0.72 222 ⇑P Pn 11 31 07.2 +0.2
MNO AML AML
comp=E,2310μm,1.0s
MNO AML AML
comp=N,4860μm,0.6s
MNO Monte Soro 0.72 222 P Pn 11 31 07.4 +0.5
EPZF Pizzo Felice 0.74 209 P Pn 11 31 07.4 +0.5
EPZF AML AML
comp=E,7270μm,1.1s
EPZF AML AML
comp=N,12950μm,0.7s
EPZF AML AML
comp=E,7265μm,1.1s
MPAZ Palizzi 0.76 133 ⇓P Pn 11 31 07.1 +0.1
MPAZ AML AML
comp=E,8565μm,0.4s
MPAZ AML AML
comp=N,17550μm,1.6s
MPAZ AML AML
comp=N,17550μm,1.6s
PLAC Placanica 0.89 91 ⇓P Pn 11 31 08.7 +0.8
PLAC S Sn 11 31 26.5 +0.8
PLAC AML AML
comp=E,6125μm,0.3s
PLAC AML AML
comp=N,5085μm,1.4s
PLAC AML AML
comp=N,5955μm,0.3s
PLAC AML AML
comp=E,4950μm,1.4s
ESML S. M. di Licod 0.92 202 ⇑P Pn 11 31 08.0 -0.2
ESML S Sn 11 31 26.8 +0.7
ESML AML AML
comp=N,4975μm,0.7s
ESML AML AML
comp=E,4965μm,1.2s
GRI Girifalco 0.94 68 P Pn 11 31 09.3 +1.0
GRI AML AML
comp=N,4275μm,1.4s
GRI AML AML
comp=E,5725μm,0.6s
GRI Girifalco 0.94 68 Pn 11 31 09.4 +1.0
GRI Girifalco 0.94 68 P Pn 11 31 09.4 +1.0
GALF Gagliano Caste 0.96 218 ⇑P Pn 11 31 08.9 +0.3
GALF AML AML
comp=N,1760μm,0.8s
GALF AML AML
comp=N,1765μm,0.8s
GALF AML AML
comp=E,1740μm,0.6s
ECNV Catenanuova 0.99 208 ⇑P Pn 11 31 09.5 +0.6
ECNV AML AML
comp=E,2785μm,0.6s
ECNV AML AML
comp=E,3425μm,0.7s
CAR1 CAROLEI 1.05 42 ⇓P Pn 11 31 10.2 +0.9
CAR1 AML AML
comp=E,3750μm,0.6s
CAR1 AML AML
comp=N,2665μm,0.6s
CAR1 AML AML
comp=E,3755μm,0.6s
CAR1 AML AML
comp=E,3985μm,0.4s
CAR1 AML AML
comp=N,2795μm,0.4s
GIB Gibilmanna 1.12 245 ⇑P Pn 11 31 09.2 -0.8
GIB AML AML
comp=N,966μm,0.5s
GIB AML AML

	comp=N,962µm,0.5s						
GIB				AML	AML		
	comp=E,1390µm,0.5s						
PETRA	**Petralia Sopra**	**1.14**	**236**	⇑P	**Pn**	**11 31 09.9**	**-0.4**
PETRA				AML	AML		
	comp=N,652µm,1.2s						
PETRA				AML	AML		
	comp=N,652µm,1.2s						
PETRA				AML	AML		
	comp=E,828µm,0.7s						
CET2	**Cetraro**	**1.17**	**25**	P	**Pn**	**11 31 11.8**	**+1.3**
CET2				AML	AML		
	comp=E,3360µm,0.5s						
CET2				AML	AML		
	comp=N,5010µm,0.4s						
HLNI	**Lentini**	**1.18**	**197**	⇑P	**Pn**	**11 31 09.6**	**-0.9**
HLNI				S	**Sn**	**11 31 29.2**	**-0.9**
HLNI				AML	AML		
	comp=E,2630µm,1.2s						
HLNI				AML	AML		
	comp=N,1650µm,1.1s						
HAGA	**Augusta**	**1.19**	**186**	⇑P	**Pn**	**11 31 09.7**	**-1.0**
HAGA				AML	AML		
	comp=N,3055µm,0.7s						
HAGA				AML	AML		
	comp=E,3860µm,1.2s						
SERS	**Sersale**	**1.22**	**62**	⇓P	**Pn**	**11 31 12.3**	**+1.3**
SERS				S	**Sn**	**11 31 32.5**	**+1.4**
SERS				AML	AML		
	comp=E,2025µm,0.4s						
SERS				AML	AML		
	comp=E,2605µm,0.5s						
SERS				AML	AML		
	comp=N,2380µm,1.5s						
SERS				AML	AML		
	comp=N,2285µm,0.4s						
AGST	**Augusta-Monte**	**1.22**	**183**	P	**Pn**	**11 31 09.8**	**-1.0**
AGST				S	**Sn**	**11 31 29.2**	**-1.6**
AGST				AML	AML		
	comp=E,3575µm,0.5s						
AGST				AML	AML		
	comp=N,3795µm,0.9s						
AGST				AML	AML		
	comp=N,3790µm,0.9s						
AGST				AML	AML		
	comp=E,3580µm,0.5s						
VAE	**Valguarnera**	**1.22**	**216**	P	**Pn**	**11 31 12.0**	**+1.0**
	comp=E,22nm,0.3s,baz=155,slow=0.4,SNR=40						
VAE				S	**Sn**	**11 31 37.5**	**+6.5**
	comp=E,31nm,0.3s,baz=218,slow=14,SNR=3.9						
RESU	**Resuttano**	**1.29**	**230**	⇑P	**Pn**	**11 31 12.8**	**+1.2**
RESU				AML	AML		
	comp=E,521µm,0.8s						
RESU				AML	AML		
	comp=N,792µm,0.7s						
CELI	**Celico**	**1.32**	**45**	⇓P	**Pn**	**11 31 13.5**	**+1.5**
CELI				AML	AML		
	comp=E,3335µm,1.4s						
CELI				AML	AML		
	comp=N,3535µm,1.4s						
SSY	**Sortino**	**1.33**	**188**	⇑P	**Pn**	**11 31 11.1**	**-0.9**
SSY				AML	AML		
	comp=E,2150µm,0.8s						
SSY				AML	AML		
	comp=N,4215µm,0.5s						
TIP	**Timpagrande**	**1.33**	**58**	P	**Pn**	**11 31 13.3**	**+1.3**
TIP	**Timpagrande**	**1.33**	**58**	⇓P	**Pn**	**11 31 13.5**	**+1.4**
TIP				⇑S	**Sn**	**11 31 31.1**	**-2.0**
TIP	**Timpagrande**	**1.33**	**58**	⇓P	**Pn**	**11 31 13.5**	**+1.4**
TIP				S	**Sn**	**11 31 34.7**	**+1.7**
TIP				AML	AML		
	comp=E,1595µm,0.9s						
TIP				AML	AML		
	comp=N,2090µm,0.5s						
TIP				AML	AML		
	comp=E,1355µm,0.9s						
TIP				AML	AML		
	comp=N,1655µm,0.5s						
TIP	**Timpagrande**	**1.33**	**58**		**Pn**	**11 31 13.4**	**+1.3**
HVZN	**Vizzini**	**1.38**	**200**	⇑P	**Pn**	**11 31 11.9**	**-0.6**
HVZN				AML	AML		
	comp=E,12450µm,0.6s						
HVZN				AML	AML		
	comp=N,9435µm,0.5s						
T0702	**Acquaformosa (**	**1.38**	**26**	P	**Pn**	**11 31 13.8**	**+1.2**
T0702				AML	AML		
	comp=N,835µm,0.5s						
T0702				AML	AML		
	comp=E,1700µm,0.4s						
MEU	**Monte Lauro**	**1.40**	**192**	P	**Pn**	**11 31 12.1**	**-0.8**
MEU				AML	AML		
	comp=E,2585µm,0.5s						
MEU				AML	AML		
	comp=N,2925µm,1.0s						
MEU				AML	AML		
	comp=E,2580µm,0.5s						
MEU				AML	AML		
	comp=N,2930µm,1.0s						
ALJA	**Alia**	**1.42**	**240**	⇑P	**Pn**	**11 31 13.3**	**+0.3**
ALJA				AML	AML		
	comp=E,685µm,0.6s						
ALJA				AML	AML		
	comp=N,749µm,0.6s						
SOLUN	**Solunto**	**1.45**	**255**	⇑P	**Pn**	**11 31 12.8**	**-0.4**
SOLUN				AML	AML		
	comp=N,502µm,1.2s						
SOLUN				AML	AML		
	comp=E,438µm,0.9s						
SOLUN				AML	AML		
	comp=N,502µm,1.2s						
HBSP	**Bosco Santo Pi**	**1.49**	**206**	⇑P	**Pn**	**11 31 13.3**	**-0.4**
HBSP				AML	AML		
	comp=N,2895µm,0.7s						
HBSP				AML	AML		
	comp=E,2575µm,0.5s						
MMN	**Mormanno**	**1.51**	**20**	P	**Pn**	**11 31 15.9**	**+2.1**
MMN				AML	AML		
	comp=E,224µm,0.3s						
MMN				AML	AML		
	comp=N,320µm,1.4s						
PIPA	**Pietrapaola**	**1.55**	**49**	⇓P	**Pn**	**11 31 15.9**	**+1.6**
PIPA				AML	AML		
	comp=N,1525µm,0.5s						
PIPA				AML	AML		
	comp=N,1685µm,0.5s						
PIPA				AML	AML		
	comp=E,1320µm,1.3s						
PIPA				AML	AML		
	comp=E,1265µm,1.3s						
CUC	**Castrocucco**	**1.57**	**14**	P	**Pn**	**11 31 17.3**	**+2.8**
SALB	**San Lorenzo Be**	**1.62**	**30**	P	**Pn**	**11 31 17.4**	**+2.2**
SALB				AML	AML		
	comp=E,890µm,0.9s						
SALB				AML	AML		
	comp=N,774µm,0.5s						
MGR	**Morigerati**	**1.67**	**6**	P	**Pn**	**11 31 17.3**	**+1.7**
MGR				AML	AML		
	comp=N,268µm,0.5s						
MGR				AML	AML		
	comp=E,288µm,0.6s						
CORL	**Corleone**	**1.68**	**250**		**Pn**	**11 31 15.7**	**-0.1**
CLTA	**Licata**	**1.69**	**219**	⇑P	**Pn**	**11 31 16.4**	**+0.5**
CLTA				AML	AML		
	comp=E,2250µm,0.5s						
CLTA				AML	AML		
	comp=N,2725µm,0.5s						
SIRI	**Monte Sirino -**	**1.76**	**14**	P	**Pn**	**11 31 18.4**	**+1.7**
SIRI				AML	AML		
	comp=N,397µm,0.4s						
SIRI				AML	AML		
	comp=E,426µm,0.4s						
FAVR	**Favara**	**1.77**	**228**	P	**Pn**	**11 31 17.6**	**+0.9**
FAVR				AML	AML		
	comp=E,2885µm,0.4s						
FAVR				AML	AML		
	comp=N,2575µm,0.4s						
HPAC	**Pachino**	**1.78**	**185**	P	**Pn**	**11 31 16.2**	**-0.7**
HPAC				S	**Sn**	**11 31 40.4**	**-1.1**
HPAC				AML	AML		
	comp=N,2015µm,0.6s						
HPAC				AML	AML		
	comp=E,2425µm,0.6s						
MTSN	**Montesano sull**	**1.82**	**11**	P	**Pn**	**11 31 18.9**	**+1.5**
MTSN				AML	AML		
	comp=E,258µm,0.9s						
MTSN				AML	AML		
	comp=N,246µm,0.5s						
CMPR	**Campora**	**1.84**	**360**	P	**Pn**	**11 31 19.4**	**+1.8**
CMPR				AML	AML		
	comp=E,144µm,1.6s						
CMPR				AML	AML		
	comp=N,126µm,1.6s						
CLTB	**Caltabellotta**	**1.88**	**242**		**Pn**	**11 31 17.3**	**-0.8**
CLTB				Sn	**Sn**	**11 31 42.0**	**-1.7**
MIGL	**Miglionico**	**2.30**	**22**	AML	AML		
	comp=N,936µm,0.7s						
MIGL				AML	AML		
	comp=E,1106µm,0.4s						
ACER	**Acerenza**	**2.36**	**12**	AML	AML		
	comp=N,330µm,0.9s						
ACER				AML	AML		
	comp=E,390µm,0.7s						
ACER	**Acerenza**	**2.36**	**12**		**Pn**	**11 31 25.9**	**+2.1**
ACER				Sn	**Sn**	**11 31 57.1**	**+3.1**
MATE	**Matera**	**2.43**	**26**	⇑P	**Pn**	**11 31 24.4**	**0.0**
MATE	**Matera**	**2.43**	**26**	AML	AML		
	comp=N,622µm,1.6s						
MATE				AML	AML		
	comp=E,396µm,0.3s						
VULT	**Monte Vulture**	**2.49**	**5**	AML	AML		
	comp=E,114µm,1.4s						
VULT				AML	AML		
	comp=N,154µm,1.3s						
TAR1	**Taranto**	**2.56**	**36**	⇑*i*Pn	**Pn**	**11 31 26.2**	**+0.1**
TAR1				Sn	**Sn**	**11 31 57.8**	**-0.3**
SG1	**Sgolgore (BA)**	**2.59**	**24**	⇓*i*Pn	**Pn**	**11 31 27.0**	**+0.4**
SG1				Sn	**Sn**	**11 31 59.2**	**+0.2**
AMUR	**Altamura**	**2.63**	**22**	AML	AML		
	comp=N,984µm,0.6s						
AMUR				AML	AML		
	comp=E,602µm,0.3s						
NOCI	**Noci**	**2.68**	**30**	AML	AML		
	comp=N,911µm,0.3s						
NOCI				AML	AML		
	comp=E,879µm,0.6s						
BAI	**Bari**	**2.90**	**24**	*e*Pn	**Pn**	**11 31 31.2**	**+0.8**
BAI				Sn	**Sn**	**11 32 05.3**	**-0.4**
SCTE	**Santa Cesarea**	**2.93**	**56**		**Pn**	**11 31 30.8**	**+0.1**
SGRT	**San Giovanni R**	**3.29**	**6**	Pn	**Pn**	**11 31 36.7**	**+1.2**
KEK	**Kerkira**	**3.71**	**69**	P	**Pn**	**11 31 41.3**	**+0.4**
KEK	**Kerkira**	**3.71**	**69**	AML	AML		
	comp=E,471µm,0.5s						
KEK				AML	AML		
	comp=N,342µm,0.4s						
SRN	**Sarande**	**3.91**	**67**	P	**Pn**	**11 31 43.9**	**+0.4**
IGT	**Igoumenitsa**	**4.05**	**73**	P	**Pn**	**11 31 45.9**	**+0.5**
IGT	**Igoumenitsa**	**4.05**	**73**	P	**Pn**	**11 31 46.2**	**+0.8**
FSK	**Fiskardo**	**4.12**	**89**	P	**Pn**	**11 31 46.8**	**+0.5**
VLS	**Valsamata**	**4.17**	**92**	AML	AML		
	comp=E,3025µm,0.1s						
VLS				AML	AML		
	comp=N,1450µm,0.1s						
VLS	**Valsamata**	**4.17**	**92**	⇑P	**Pn**	**11 31 47.3**	**+0.4**
TSLK	**Tsoukalades, L**	**4.20**	**84**	P	**Pn**	**11 31 48.1**	**+0.8**
JAN	**Janina**	**4.47**	**73**	P	**Pn**	**11 31 52.4**	**+1.4**
TIR	**Tirane**	**4.53**	**49**	*e*Pn	**Pn**	**11 31 52.7**	**+1.1**
TIR				*e*Sn	**Sn**	**11 32 42.9**	**-0.9**
TIR	**Tirane**	**4.53**	**49**	⇑P	**Pn**	**11 31 53.1**	**+1.4**
TIR				⇑S	**Sn**	**11 32 43.4**	**-0.4**
TIR	**Tirane**	**4.53**	**49**		**Pn**	**11 31 52.5**	**+0.8**
TIR					**Sn**	**11 32 42.4**	**-1.4**
TIR	**Tirane**	**4.53**	**49**	P	**Pn**	**11 31 53.0**	**+1.4**
TIR				S	**Sn**	**11 32 43.4**	**-0.4**
ULC	**Ulcinj**	**4.61**	**40**	P	**Pn**	**11 31 53.4**	**+0.7**
ULC	**Ulcinj**	**4.61**	**40**	*e*Pn	**Pn**	**11 31 52.3**	**-0.4**
ULC				*e*Sn	**Sn**	**11 32 45.1**	**-0.6**
HCY	**Herceg Novi**	**4.65**	**30**	*e*Pn	**Pn**	**11 31 53.3**	**0.0**
HCY	**Herceg Novi**	**4.65**	**30**	*e*Pn	**Pn**	**11 31 53.2**	**-0.1**
HCY				*e*Sn	**Sn**	**11 32 46.5**	**-0.3**
BUM	**Brajici-Budva**	**4.70**	**34**	*e*Pn	**Pn**	**11 31 53.9**	**-0.1**
BUM				*e*Sn	**Sn**	**11 32 47.7**	**-0.3**
DRME	**Dracevica, Mon**	**4.75**	**37**	*e*Pn	**Pn**	**11 31 54.7**	**+0.2**
DRME	**Dracevica, Mon**	**4.75**	**37**	*e*Pn	**Pn**	**11 31 54.7**	**+0.2**
DRME				*e*Sn	**Sn**	**11 32 48.6**	**-0.4**
TREB	**Trebinje**	**4.83**	**28**	*e*Pn	**Pn**	**11 31 55.7**	**+0.1**
TREB				*e*Sn	**Sn**	**11 32 51.0**	**+0.1**
TREB	**Trebinje**	**4.83**	**28**	*e*Pn	**Pn**	**11 31 56.0**	**+0.4**
PVO	**Paravola**	**4.88**	**86**	P	**Pn**	**11 31 57.7**	**+1.4**
CEME	**Cevo**	**4.91**	**33**	*e*Pn	**Pn**	**11 31 56.5**	**-0.3**
CEME				*e*Sn	**Sn**	**11 32 52.5**	**-0.5**
KPRO	**Kipourio**	**4.93**	**71**	P	**Pn**	**11 31 58.7**	**+1.7**
PDG	**Podgorica**	**4.97**	**36**	*e*Pn	**Pn**	**11 31 57.8**	**+0.4**
PDG				*e*Sn	**Sn**	**11 32 53.5**	**-0.7**
PDG	**Podgorica**	**4.97**	**36**	⇑P	**Pn**	**11 31 57.9**	**+0.5**
PDG				⇓S	**Sn**	**11 32 51.3**	**-2.9**
PDG	**Podgorica**	**4.97**	**36**	*e*Pn	**Pn**	**11 31 57.8**	**+0.4**
PDG	**Podgorica**	**4.97**	**36**		**Pn**	**11 31 57.9**	**+0.5**
PDG					**Sn**	**11 32 53.9**	**-0.3**
TTG	**Podgorica**	**4.97**	**36**	*e*Pn	**Pn**	**11 31 57.7**	**+0.3**
TTG				*e*Sn	**Sn**	**11 32 53.4**	**-0.8**
OHR	**Ohrid**	**4.98**	**56**	P	**Pn**	**11 32 01.7**	**+4.0**
BRY	**Bratogost**	**5.06**	**28**	*e*Pn	**Pn**	**11 31 59.2**	**+0.4**
BRY	**Bratogost**	**5.06**	**28**	P	**Pn**	**11 32 00.3**	**+1.5**
BRY	**Bratogost**	**5.06**	**28**	*e*Pn	**Pn**	**11 31 59.2**	**+0.4**
BRY				*e*Sn	**Sn**	**11 32 56.1**	**-0.5**
NKME	**Niksic**	**5.11**	**32**	⇑*i*Pn	**Pn**	**11 31 59.9**	**+0.6**
NKME				*e*Sn	**Sn**	**11 32 57.1**	**-0.5**
NKY	**Niksic**	**5.16**	**32**	*e*Pn	**Pn**	**11 32 00.2**	**+0.1**
NKY				*e*Sn	**Sn**	**11 32 58.4**	**-0.6**
ANX	**Ano Chora**	**5.19**	**87**	P	**Pn**	**11 32 02.4**	**+1.9**
SERG	**Sergoula**	**5.30**	**89**	P	**Pn**	**11 32 02.9**	**+1.0**
THL	**Klokotos Trika**	**5.34**	**76**	P	**Pn**	**11 32 04.2**	**+1.8**
MAKR	**Makrakomi, Fth**	**5.36**	**82**	P	**Pn**	**11 32 04.5**	**+1.7**
ITM	**Ithomi**	**5.40**	**102**		**Pn**	**11 32 03.4**	**+0.1**
ITM					**Sn**	**11 33 02.8**	**-1.7**
KOME	**Kolasin**	**5.42**	**35**	*e*Pn	**Pn**	**11 32 04.0**	**+0.5**
KOME				*e*Sn	**Sn**	**11 33 04.5**	**-0.6**
PVY	**Plav**	**5.43**	**39**	*e*Pn	**Pn**	**11 32 04.8**	**+1.1**
PVY				*e*Sn	**Sn**	**11 33 04.2**	**-1.3**
UPM	**Unac-Piva**	**5.46**	**29**	*e*Pn	**Pn**	**11 32 04.7**	**+0.6**
UPM	**Unac-Piva**	**5.46**	**29**	⇑*i*Pn	**Pn**	**11 32 04.9**	**+0.8**
UPM				*e*Sn	**Sn**	**11 33 04.8**	**-1.3**
KEST	**Kesra**	**5.49**	**242**	P	**Pn**	**11 32 04.0**	**-0.6**
	comp=N,1.0nm,0.3s,baz=348,slow=1.6,SNR=16						
KEST				S	**Sn**	**11 33 10.1**	**+3.1**
	comp=N,0.4nm,0.3s,baz=141,slow=21,SNR=1.2						
KEST	**Kesra**	**5.49**	**242**		**Pn**	**11 32 05.8**	**+1.2**
AGG	**Agios Georgios**	**5.52**	**82**	P	**Pn**	**11 32 06.0**	**+1.2**
AGG	**Agios Georgios**	**5.52**	**82**		**Pn**	**11 32 07.0**	**+2.1**
AGG	**Agios Georgios**	**5.52**	**82**	P	**Pn**	**11 32 07.0**	**+2.1**
IVA	**Berane**	**5.61**	**37**	⇑*i*Pn	**Pn**	**11 32 07.5**	**+1.4**
IVA				*e*Sn	**Sn**	**11 33 08.9**	**-0.7**
PLE	**Pljevlja**	**5.75**	**31**	⇑*i*Pn	**Pn**	**11 32 08.2**	**+0.2**
PLE				*e*Sn	**Sn**	**11 33 11.7**	**-1.4**
LIT	**Litokhoron**	**5.80**	**72**		**Pn**	**11 32 11.2**	**+2.5**
LIT	**Litokhoron**	**5.80**	**72**	P	**Pn**	**11 32 11.2**	**+2.5**
SJES	**Sjenica**	**5.95**	**35**	*e*Pn	**Pn**	**11 32 12.3**	**+1.7**
SJES				*e*Sn	**Sn**	**11 33 17.4**	**-0.4**
GRG	**Griva**	**6.00**	**63**	P	**Pn**	**11 32 12.4**	**+1.1**
GRG				pmax	pmax		
	comp=Z,15nm,0.9s						
MGRS	**Mrkonjic Grad**	**6.08**	**12**	*e*Pn	**Pn**	**11 32 14.6**	**+2.2**
STIP	**Stip**	**6.18**	**56**	*i* Pn	**Pn**	**11 32 17.0**	**+3.4**
BBLS	**Lazići**	**6.21**	**29**	*e*Pn	**Pn**	**11 32 15.5**	**+1.4**
BBLS				*e*Sn	**Sn**	**11 33 24.0**	**0.0**
BBLS	**Lazići**	**6.21**	**29**	*e*Pn	**Pn**	**11 32 15.4**	**+1.4**
HAPS	**Han Pijesak,Bl**	**6.24**	**25**	*e*Pn	**Pn**	**11 32 15.0**	**+0.5**
VAY	**Valandovo**	**6.27**	**61**	*e*P	**Pn**	**11 32 15.1**	**+0.3**
VAY				*e*S	**Sn**	**11 33 21.0**	**-4.3**
VAY	**Valandovo**	**6.27**	**61**	P	**Pn**	**11 32 16.2**	**+1.4**
VAY				pmax	pmax		
	comp=Z,20nm,1.2s						
IVAS	**Ivanjica**	**6.28**	**34**	*e*Pn	**Pn**	**11 32 15.8**	**+0.9**
PGF	**Pioggiola**	**6.30**	**312**	*e*Pn	**Pn**	**11 32 15.0**	**-0.3**
PGF				*e*Sn	**Sn**	**11 33 23.1**	**-3.1**
	comp=Z,1.8nm,0.4s						
BLY	**Banja Luka**	**6.42**	**12**	⇓P	**Pn**	**11 32 14.7**	**-2.1**
BLY	**Banja Luka**	**6.42**	**12**	*e*Pn	**Pn**	**11 32 20.5**	**+3.6**
BLY	**Banja Luka**	**6.42**	**12**		**Pn**	**11 32 19.6**	**+2.8**
KNT	**Kendrikon**	**6.43**	**63**	P	**Pn**	**11 32 18.5**	**+1.5**
KNT				pmax	pmax		
	comp=Z,14nm,0.7s						
SELS	**Selova**	**6.47**	**41**	*e*Pn	**Pn**	**11 32 18.0**	**+0.5**
SELS				*e*Sn	**Sn**	**11 33 27.7**	**-2.5**
DIVS	**Divibare**	**6.63**	**31**	*e*Pn	**Pn**	**11 32 20.3**	**+0.6**
DIVS				*e*Sn	**Sn**	**11 33 34.0**	**-0.2**
DIVS	**Divibare**	**6.63**	**31**	*e*Pn	**Pn**	**11 32 20.1**	**+0.4**
SOH	**Sokhos**	**6.64**	**67**	P	**Pn**	**11 32 21.2**	**+1.4**
SOH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PAIG	**Paliouri**	**6.66**	**75**	P	**Pn**	**11 32 20.9**	**+0.8**
PAIG				pmax	pmax		
	comp=Z,12nm,1.2s						
GRUS	**Gruza**	**6.77**	**35**	*e*Pn	**Pn**	**11 32 21.9**	**+0.4**
BOSS	**Bosilegrad**	**6.78**	**51**	*e*Pn	**Pn**	**11 32 22.3**	**+0.6**
BOSS				*e*Sn	**Sn**	**11 33 35.9**	**-1.8**
KKB	**Krupnik**	**6.85**	**58**	*e*P	**Pn**	**11 32 24.5**	**+1.9**
KKB				*e*S	**Sn**	**11 33 36.5**	**-2.8**
TRUS	**Trudelj**	**6.91**	**32**	*e*Pn	**Pn**	**11 32 23.5**	**+0.2**
BOVS	**Bovan**	**7.07**	**41**	*e*Pn	**Pn**	**11 32 26.2**	**+0.7**
BOVS				*e*Sn	**Sn**	**11 33 41.8**	**-2.7**
MMB	**Musomiste**	**7.17**	**62**	*i* P	**Pn**	**11 32 27.8**	**+0.9**
MMB				*e*S	**Sn**	**11 33 41.5**	**-5.6**
VTS	**Vitosha**	**7.32**	**53**	*e*Pn	**Pn**	**11 32 29.4**	**+0.4**
VTS				*e*Sn	**Sn**	**11 33 48.6**	**-2.2**
VTS	**Vitosha**	**7.32**	**53**	⇑P	**Pn**	**11 32 29.9**	**+0.9**
VTS				⇓S	**Sn**	**11 33 51.1**	**+0.3**
VTS	**Vitosha**	**7.32**	**53**	*i* P	**Pn**	**11 32 29.6**	**+0.6**
VTS				*e*S	**Sn**	**11 33 48.9**	**-1.9**
VTS	**Vitosha**	**7.32**	**53**	P	**Pn**	**11 32 29.9**	**+0.9**
VTS				S	**Sn**	**11 33 51.0**	**+0.3**
ZAPS	**Zavoj**	**7.33**	**47**	*e*Pn	**Pn**	**11 32 30.4**	**+1.3**
ZAPS				*e*Sn	**Sn**	**11 33 47.8**	**-3.2**
CRES	**Cresnjev**	**7.35**	**1**	*e*Pn	**Pn**	**11 32 32.2**	**+3.0**
ZAGS	**Zajecar**	**7.46**	**42**	*e*Pn	**Pn**	**11 32 30.8**	**0.0**
ZAGS				*e*Sn	**Sn**	**11 33 52.9**	**-1.1**
BLKB	**Belogradchik**	**7.58**	**45**	⇑S	**Sn**	**11 33 54.6**	**-2.2**
PGB	**Panagyurishte**	**7.88**	**56**	*e*P	**Pn**	**11 32 36.7**	**+0.3**
MDVR	**Moldovita**	**7.92**	**35**	⇓P	**Pn**	**11 32 37.4**	**+0.6**
MDVR				⇑S	**Sn**	**11 34 02.4**	**-2.6**
SBF	**Sospel**	**8.01**	**315**	*e*Pn	**Pn**	**11 32 38.3**	**+0.1**
SBF				*e*Sn	**Sn**	**11 34 04.8**	**-2.5**
	comp=Z,2.0nm,0.2s						
OBKA	**Obir**	**8.05**	**356**	Pn	Pn	11 32 44.5	+5.8
	comp=Z,8.7nm,0.6s						
MORH	**Mrgy, Hungar**	**8.12**	**17**	*e*Pn	**Pn**	**11 32 40.4**	**+0.9**
LMR	**La Mourre**	**8.24**	**309**	*e*P	**Pn**	**11 32 42.6**	**+1.4**
FRF	**La Foret Royal**	**8.29**	**311**	*e*P	**Pn**	**11 32 42.8**	**+1.0**
IDI	**Anoyia**	**8.31**	**110**	P	**Pn**	**11 32 44.4**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=166,slow=6.8,SNR=1.4						
IDI				S	**Sn**	**11 34 10.4**	**-4.3**
	comp=Z,1.0nm,0.3s,baz=268,slow=22,SNR=2.1						
BZS	**Buzias**	**8.54**	**31**	⇑P	**Pn**	**11 32 46.3**	**+1.2**
BZS	**Buzias**	**8.54**	**31**	P	**Pn**	**11 32 45.7**	**+0.6**
BZS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ALN	**Alexandroupoli**	**8.63**	**70**	P	**Pn**	**11 32 46.3**	**0.0**
ALN				pmax	pmax		
	comp=Z,8.0nm,1.5s						
GZR	**Gura Zlata**	**8.87**	**36**	⇑P	**Pn**	**11 32 50.0**	**+0.3**
MBDF	**Montbardon**	**8.94**	**317**	*e*Pn	**Pn**	**11 32 52.6**	**+2.0**
MBDF				*e*Sn	**Sn**	**11 34 26.5**	**-3.2**
	comp=Z,0.5nm,0.2s						
SMRF	**Simiane la Rot**	**9.16**	**310**	*e*Pn	**Pn**	**11 32 54.4**	**+0.9**
ELND	**Elena**	**9.18**	**58**	⇑P	**Pn**	**11 32 54.8**	**+1.1**
SQTA	**Sankt Quirin**	**9.24**	**342**	Pn	Pn	11 33 03.9	+9.3
	comp=Z,8.3nm,0.5s						
MOTA	**Moosalm**	**9.38**	**342**	Pn	Pn	11 33 04.4	+7.9
	comp=Z,4.9nm,0.6s						
LPG	**La Plagne**	**9.47**	**321**	*e*P	**Pn**	**11 32 59.6**	**+1.7**
LPG				*e*Sn	**Sn**	**11 34 39.4**	**-3.5**
	comp=Z,0.4nm,0.2s						
LPL	**La Plagne**	**9.49**	**321**	*e*Pn	**Pn**	**11 32 59.4**	**+1.3**
LPL				*e*Sn	**Sn**	**11 34 39.2**	**-4.1**
	comp=Z,1.3nm,0.3s						
ORIF	**Oris-en-Rattie**	**9.54**	**315**	*e*P	**Pn**	**11 33 00.0**	**+1.4**
ARR	**Arges**	**9.78**	**42**	⇓P	**Pn**	**11 33 03.6**	**+1.8**
DRGR		**9.94**	**31**	P	**Pn**	**11 33 05.2**	**+1.4**
DRGR				pmax	pmax		
	comp=Z,14nm,0.8s						
PSZ	**Piszkesteto**	**10.01**	**18**	P	**Pn**	**11 33 07.6**	**+2.8**
PSZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VOIR		**10.05**	**43**	⇑P	**Pn**	**11 33 07.6**	**+2.3**
VOIR		**10.05**	**43**	P	**Pn**	**11 33 06.7**	**+1.4**
VOIR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
VIVF	**Saint-Julien-l**	**10.19**	**312**	*e*Pn	**Pn**	**11 33 08.9**	**+1.7**
VIVF				*e*Sn	**Sn**	**11 34 56.4**	**-3.4**
	comp=Z,1.7nm,0.4s						
GEC2	**GERESS Array S**	**10.43**	**354**	P	**Pn**	**11 33 14.4**	**+4.0**
GEC2				pmax	pmax		
	comp=Z,8.0nm,0.4s						
GERES	**GERESS Array B**	**10.43**	**354**	P	**Pn**	**11 33 13.5**	**+3.0**
	comp=Z,0.4nm,0.3s,baz=166,slow=12,SNR=26						
GERES				LR	LR	11 38 37.2	
	comp=Z,50nm,18.4s,baz=304,slow=46						
GERES	**GERESS Array B**	**10.43**	**354**		**Pn**	**11 33 14.4**	**+4.0**
GERES	**GERESS Array B**	**10.43**	**354**	P	**Pn**	**11 33 14.5**	**+4.0**
MLR	**Muntele Rosu**	**10.57**	**45**	P	**Pn**	**11 33 15.5**	**+3.2**
	comp=Z,0.3nm,0.3s,baz=176,slow=15,SNR=4.2						
MLR	**Muntele Rosu**	**10.57**	**45**	⇑P	**Pn**	**11 33 13.5**	**+1.2**
MLR	**Muntele Rosu**	**10.57**	**45**	P	**Pn**	**11 33 13.5**	**+1.2**
DOPR	**Dopca**	**10.57**	**42**	⇑P	**Pn**	**11 33 15.1**	**+2.9**
CABF	**La Chapelle**	**10.59**	**323**	*e*P	**Pn**	**11 33 13.7**	**+1.1**
KHC	**Kasperske Hory**	**10.73**	**354**	⇓*e*P	**Pn**	**11 33 17.6**	**+3.4**
KHC				pmax	pmax		
	comp=Z,30nm,2.3s						
PLOR	**Plostina**	**11.18**	**45**	⇓P	**Pn**	**11 33 23.5**	**+3.2**
PLOR	**Plostina**	**11.18**	**45**	P	**Pn**	**11 33 23.4**	**+3.2**
HINF	**Hinteralfeld**	**11.19**	**329**	*e*P	**Pn**	**11 33 21.7**	**+1.4**
VRI	**Vrincioaia**	**11.23**	**45**	⇓P	**Pn**	**11 33 21.9**	**+1.0**
VRI	**Vrincioaia**	**11.23**	**45**	P	**Pn**	**11 33 21.9**	**+1.0**
BURAR	**Bucovina Array**	**11.65**	**35**	⇓P	**Pn**	**11 33 27.4**	**+0.9**
BURAR	**Bucovina Array**	**11.65**	**35**	P	**Pn**	**11 33 27.4**	**+0.9**
CFR	**Carcaliu**	**11.67**	**51**	⇑P	**Pn**	**11 33 30.1**	**+3.4**
CFR	**Carcaliu**	**11.67**	**51**	P	**Pn**	**11 33 30.0**	**+3.4**
LOR	**Lormes**	**12.14**	**320**	*e*P	**Pn**	**11 33 34.4**	**+1.6**
	baz=128						
LOR				*e*Sn	**Sn**	**11 35 42.2**	**-4.7**
	comp=Z,0.2nm,0.2s						
SSF	**Saint Saulge**	**12.19**	**319**	*e*P	**Pn**	**11 33 35.2**	**+1.8**
SFTF	**Sexfontaines**	**12.25**	**326**	*e*P	**Pn**	**11 33 35.6**	**+1.4**
	baz=142						
KWP	**Kalwaria Pacla**	**12.35**	**23**	P	**P**	**11 33 39.3**	**-2.4**
KWP				pmax	pmax		
	comp=Z,13nm,2.2s						
ETSF	**Etsaut**	**12.82**	**295**	*e*Pn	**Pn**	**11 33 43.3**	**+1.6**
CLL	**Collm**	**12.94**	**354**	*e*P	**P**	**11 33 51.0**	**+2.9**
MILM	**Milestii Mici**	**13.02**	**45**	⇑P	**Pn**	**11 33 46.4**	**+2.3**
SORM	**Soroca**	**13.53**	**40**	⇑P	**Pn**	**11 33 52.5**	**+1.9**
SORM	**Soroca**	**13.53**	**40**	P	**Pn**	**11 33 52.5**	**+1.9**
BRTR	**Keskin Array B**	**14.29**	**79**	P	**P**	**11 34 03.3**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=261,slow=11,SNR=10						
BRTR	**Keskin Array B**	**14.29**	**79**	P	**P**	**11 34 02.7**	**-0.8**
ESDC	**Sonseca Array**	**15.02**	**281**	P	**Pn**	**11 34 08.4**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=86,slow=11,SNR=7.1						
LDF	**La Druitiere**	**15.05**	**317**	*e*P	**P**	**11 34 12.0**	**+0.3**
PAB	**San Pablo**	**15.32**	**280**		**Pn**	**11 34 14.1**	**+0.8**
PAB				IAmb	IAmb	11 34 29.2	
	comp=Z,13nm,1.2s						
PAB	**San Pablo**	**15.32**	**280**	P	**Pn**	**11 34 14.1**	**+0.8**
PAB				pmax	pmax		
	comp=Z,13nm,1.2s						
FLN	**La Foliniere**	**15.35**	**317**	*e*P	**P**	**11 34 14.9**	**0.0**
	baz=134						
KIEV	**Kiev**	**15.69**	**34**	P	**P**	**11 34 20.0**	**+1.3**
AKASG	**Malin Array Be**	**15.71**	**34**	P	**Pn**	**11 34 18.4**	**+0.6**
	comp=Z,4.0nm,0.3s,baz=228,slow=10.0,SNR=29						
AKASG	**Malin Array Be**	**15.71**	**34**		**Pn**	**11 34 18.2**	**+0.4**
AKBB	**Malin Array Si**	**15.71**	**34**		**P**	**11 34 18.8**	**0.0**
AKBB				IAmb	IAmb	11 34 21.4	
	comp=Z,13nm,0.9s						
AKBB	**Malin Array Si**	**15.71**	**34**	⇑*e*P	**P**	**11 34 20.9**	**+2.1**
SGMF	**Saint Gilles**	**16.22**	**313**	*e*P	**P**	**11 34 25.7**	**+1.1**
QUIF	**Quistinic**	**16.41**	**311**	*e*P	**P**	**11 34 27.9**	**+1.2**
KLNR	**Kaliningrad**	**16.48**	**10**	⇓*e*P	**P**	**11 34 31.1**	**+3.8**
KLNR				pmax	pmax		
	comp=Z,48nm,0.7s						
MDT	**Midelt**	**17.13**	**257**	P	**P**	**11 34 34.5**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=86,slow=11,SNR=7.8						
PMRV	**Marv??o**	**17.68**	**280**	*e*P	**P**	**11 34 41.0**	**+0.3**
	comp=Z,42nm,1.4s						
MTE	**Manteigas**	**17.75**	**283**	*e*P	**Pn**	**11 34 42.9**	**+0.1**
	comp=Z,93nm,2.0s						
PVIS	**Viseu**	**18.01**	**284**	*e*P	**P**	**11 34 44.5**	**+0.1**
	comp=Z,53nm,1.6s						
PVAQ	**Vaqueiros**	**18.19**	**274**	*e*P	**P**	**11 34 45.4**	**-0.9**
	comp=Z,41nm,1.9s						
PBEJ	**Beja**	**18.20**	**276**	*e*P	**P**	**11 34 46.3**	**-0.1**
	comp=Z,32nm,1.2s						
PCVE	**Castro Verde**	**18.40**	**275**	*e*P	**P**	**11 34 48.0**	**-0.6**

comp=Z,47nm,2.3s
PCAS Casmilo, Conde 18.49 282 eP P 11 34 48.0 -1.6
comp=Z,64nm,1.7s
PNCL Nicolau / Gran 18.71 276 eP P 11 34 50.8 -1.1
comp=Z,45nm,1.2s
SOC Sochi 19.08 67 eP P 11 34 56.7 +0.8
SOC eS Sn 11 38 30.9 -2.4
SOC pmax pmax
comp=Z,31nm,0.7s
ARXR Arkhyz 20.20 67⇓eP Pn 11 35 11.0 -0.7
EKA Eskdalemuir Ar 20.95 330 P P 11 35 14.9 -1.0
comp=Z,1.9nm,0.3s,baz=128,slow=10,SNR=18
ESK Eskdalemuir 20.96 330 P P 11 35 15.4 -0.5
ESK IAmb IAmb 11 35 32.9
comp=Z,12nm,1.3s
ESK Eskdalemuir 20.96 330 P P 11 35 15.4 -0.5
ESK pmax pmax
comp=Z,12nm,1.3s
VSR Storozhevoye 21.06 45 eP P 11 35 17.5 +0.4
VSR pmax pmax
comp=Z,20nm,2.0s
SHA1 Shidzhatmaz 21.22 67d iP P 11 35 22.5 +3.3
NEY Neytrino 21.23 68⇑eP P 11 35 23.1 +3.8
NEY pmax pmax
comp=Z,2.0nm,0.8s
KIV Kislovodsk 21.26 66 eP P 11 35 21.2 +1.7
KIV pmax pmax
comp=Z,18nm,1.0s
KBZ Khabaz 21.39 67 P P 11 35 21.7 +0.9
comp=Z,1.8nm,0.5s,baz=284,slow=5.1,SNR=5.5
HFS Hagfors 21.70 358 P P 11 35 22.2 -1.7
comp=Z,1.2nm,0.4s,baz=178,slow=12,SNR=7.8
OBN Obninsk 21.97 34 eP P 11 35 30.6 +4.0
OBN pmax pmax
comp=Z,15nm,0.5s
FINES FINESS Array B 23.95 13 P P 11 35 44.5 -0.7
comp=Z,4.5nm,0.6s,baz=187,slow=8.3,SNR=15
FINES FINESS Array B 23.95 13 P P 11 35 44.1 -1.1
FIA1 FINESS Array S 23.95 13 P P 11 35 44.4 -0.8
FIA1 IAmb IAmb 11 35 48.4
comp=Z,12nm,1.1s
TORD Torodi Ar. Bea 27.97 209 P P 11 36 20.6 -1.2
comp=Z,0.5nm,0.6s,baz=16,slow=8.7,SNR=1.6
GEYT Alibeck 33.42 77 P P 11 37 09.9 +0.3
comp=Z,2.0nm,0.5s,baz=268,slow=4.0,SNR=4.2
ABKAR Akbulak array 33.48 57 P P 11 37 10.2 +0.3
ARU Arti 33.62 43⇓eP P 11 37 15.2 +4.2
ARU pmax pmax
comp=Z,4.0nm,1.1s
DBIC Dimbokro 36.55 215 P P 11 37 35.4 -1.1
comp=Z,1.0nm,0.5s,baz=15,slow=8.7,SNR=4.8
DBIC Dimbokro 36.55 215 IAmb IAmb 11 37 43.8
comp=Z,11nm,1.4s
BRVK Borovoye 40.01 50 P P 11 38 05.9 +0.8
BRVK Borovoye 40.01 50 P P 11 38 05.9 +0.8
BRVK pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 41.42 65 P P 11 38 17.0 +0.2
KKAR Karatay Array 41.42 65 P P 11 38 17.0 +0.2
AAK Ala-Archa 44.37 65⇓eP P 11 38 41.9 +1.2
AAK pmax pmax
comp=Z,4.0nm,1.4s
KURK Kurchatov 45.38 53 P P 11 38 49.4 +1.0
KURK Kurchatov 45.38 53 P P 11 38 49.4 +1.0
KURK pmax pmax
comp=Z,4.0nm,1.0s
ZALV Zalesovo Beam 48.53 48 P P 11 39 12.2 -0.5
comp=Z,1.9nm,0.5s,baz=285,slow=9.0,SNR=7.2
MKAR Makanchi Array 48.62 57 P P 11 39 13.7 0.0
comp=Z,3.5nm,0.7s,baz=283,slow=6.9,SNR=41
SCHQ Schefferville 55.43 316 P P 11 40 02.2 -1.5
comp=Z,1.3nm,0.4s,baz=66,slow=3.6,SNR=12
SCHQ Schefferville 55.43 316 IAmb IAmb 11 40 07.1
comp=Z,4.3nm,1.1s
LMN Caledonia Moun 57.50 305 pP 11 40 53.9 +2.3
SONM Songino Array 63.40 49 P P 11 40 58.3 -0.4
comp=Z,1.2nm,0.7s,baz=288,slow=7.7,SNR=11
SONM Songino Array 63.40 49 IAmb IAmb 11 40 59.3
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 71.64 338 P P 11 41 49.0 -1.0
comp=Z,0.3nm,0.6s,baz=40,slow=5.5,SNR=6.4
CMAR Chiang Mai Arr 73.89 79 P P 11 42 04.0 0.0
comp=Z,0.8nm,0.6s,baz=312,slow=7.4,SNR=5.3
CMAR Chiang Mai Arr 73.89 79 iP P 11 42 05.1 +1.1
CMAR pmax pmax
comp=Z,1.0nm,0.4s
WRA Warramunga Arr 124.64 89 PKP PKPdf 11 49 25.9 -1.4
comp=Z,0.3nm,0.9s,baz=283,slow=2.3,SNR=1.4

IDC 13 11:30:57.3±53.0,16°.13S×173°.06W,h0km,mb4.0/3, mb1 4.2/3,mb1mx3.6/44,mbtmp4.0/3,Error ellipse: s-maj=1029.0km s-min=211.7km az=79.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	43.96	241	P	P	11 39 06.7	+0.3
	1.4nm,0.7s,baz=107,slow=11,SNR=3.2						
WRA	**Warramunga Arr**	50.00	257	P	P	11 39 53.3	-0.5
	0.4nm,0.5s,baz=96,slow=7.1,SNR=2.2						
ASAR	**Alice Springs**	50.20	252	P	P	11 39 55.2	-0.1
	4.0nm,0.6s,baz=89,slow=8.2,SNR=45						

ROM 13 11:31:22.9±0.0,43°.405N±0°.003×12°.529E±0°.004, h8km,ML1.5/13,4C-1D,Error ellipse: s-maj=0.2km s-min=0.2km az=10.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	0.05	141⇓	iP	Pg	11 31 24.8	+0.1
ATFO				S	Sg	11 31 25.9	-0.1
ATVO	**AVT- Monte Val**	0.09	256	P	Pg	11 31 25.5	+0.3
ATVO				S	Sg	11 31 27.2	+0.4
ATVO				AML	AML		
	comp=E,404μm,0.6s						
ATVO				AML	AML		
	comp=N,400μm,0.2s						
ATPI	**Pietralunga -**	0.10	296⇑	iP	Pg	11 31 25.9	+0.5
ATPI				S	Sg	11 31 27.9	+0.7
ATPI				AML	AML		
	comp=N,406μm,0.6s						
ATPI				AML	AML		
	comp=E,341μm,0.4s						
ATPI				AML	AML		
	comp=N,406μm,0.6s						
MURB	**Monte Urbino**	0.14	181	P	Pg	11 31 26.6	+0.7
MURB				S	Sg	11 31 29.4	+1.2
MURB				AML	AML		
	comp=N,391μm,0.2s						
MURB				AML	AML		
	comp=E,538μm,0.3s						
FRON	**Frontone**	0.18	52⇑	eP	Pg	11 31 27.3	+0.6
FRON				S	Sg	11 31 30.6	+1.3
FRON				AML	AML		
	comp=E,249μm,0.1s						
FRON				AML	AML		
	comp=N,234μm,0.8s						
SSFR	**Montelago di S**	0.19	80⇑	iP	Pg	11 31 27.4	+0.6
SSFR				AML	AML		
	comp=E,378μm,0.6s						
SSFR				AML	AML		
	comp=N,252μm,0.2s						
FOSV	**Fossato di Vic**	0.20	123	P	Pg	11 31 27.6	+0.6
FOSV				S	Sg	11 31 31.3	+1.5
ATMI	**Monte Miggiano**	0.20	250	P	Pg	11 31 27.6	+0.6
ATMI				S	Sg	11 31 31.2	+1.3
ATMI				AML	AML		
	comp=E,128μm,0.3s						
ATMI				AML	AML		
	comp=N,126μm,0.2s						
ATMI				AML	AML		
	comp=E,128μm,0.3s						
ATMI				AML	AML		
	comp=N,126μm,0.2s						
NARO	**Abbazia di Nar**	0.21	10	P	Pg	11 31 27.8	+0.6
NARO				S	Sg	11 31 31.3	+1.3
NARO				AML	AML		
	comp=E,132μm,0.6s						
NARO				AML	AML		
	comp=N,160μm,0.1s						
BADI	**Badiali**	0.23	297	P	Pg	11 31 28.2	+0.7
BADI				S	Sg	11 31 32.4	+1.6
BADI				AML	AML		
	comp=E,530μm,0.3s						
BADI				AML	AML		
	comp=E,530μm,0.3s						
BADI				AML	AML		
	comp=N,461μm,0.3s						
ATCC	**AVT- Casa Cast**	0.23	160	P	Pg	11 31 28.4	+0.8
ATCC				S	Sg	11 31 32.7	+2.0
ATCC				AML	AML		
	comp=E,335μm,0.6s						
ATCC				AML	AML		
	comp=N,176μm,0.8s						
ATTE	**AVT- Monte Tez**	0.24	212	AML	AML		
	comp=E,51μm,0.8s						
ATTE				AML	AML		
	comp=N,50μm,0.8s						
PARC	**Parchiule**	0.32	319	P	Pb	11 31 30.1	-0.8
PARC				S	Sb	11 31 35.9	-0.4
PARC				AML	AML		
	comp=N,70μm,0.3s						
PARC				AML	AML		
	comp=E,63μm,0.1s						
SNTG	**Esanatoglia**	0.34	116⇑	iP	Pg	11 31 29.9	+0.4
SNTG				S	Sb	11 31 35.7	-0.9
SNTG				AML	AML		
	comp=E,80μm,1.5s						
SNTG				AML	AML		
	comp=N,84μm,0.8s						
FSSB	**Fossombrone**	0.34	32	P	Pg	11 31 30.3	+0.7
FSSB				S	Sb	11 31 36.2	-0.6
FSSB				AML	AML		
	comp=E,183μm,0.1s						
FSSB				AML	AML		
	comp=N,137μm,0.8s						
ASSB	**Assisi San Ben**	0.37	165	P	Pg	11 31 30.8	+0.6
ASSB				S	Sb	11 31 36.7	-1.0
ASSB				AML	AML		
	comp=N,58μm,0.9s						
ASSB				AML	AML		
	comp=E,51μm,1.1s						
CSP1	**Cessapalombo**	0.58	122	P	Pg	11 31 34.7	+0.5
CSP1				S	Sb	11 31 44.0	+0.1

IDC 13 11:47:33.5±0.8,31°.77N×50°.95E,h0km,mb3.9/15, mb1 4.0/23,mb1mx3.8/58,mbtmp3.9/23,ML3.7/7,MS3.0/3, Ms1 3.0/3,ms1mx2.6/36,Error ellipse: s-maj=16.5km s-min=14.2km az=17.0
TEH 13 11:47:33.7,31°.83N×51°.23E,h13km,ML4.3
NEIC 13 11:47:33.8±2.7,31°.70N±0°.07×50°.99E±0°.06,h1km±5km, Error ellipse: s-maj=10.1km s-min=6.2km az=205.0
THR 13 11:47:36.5±0.3,31°.82N×51°.18E,h14km±5km,ML4.0
DSN 13 11:47:41.2±1.3,31°.19N×51°.27E,h2km,ML4.3/5,Error ellipse: s-maj=19.4km s-min=6.9km az=19.0
ISC 13 11:47:34.6±0.4,31°.80N±0°.03×51°.21E±0°.03,h10km,n121, σ1°.98/121,mb4.0/21,10C-1D,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBRJ	**Brojen**	0.12	20	ePg	Pg	11 47 38.1	+0.3
ROKH	**ROKH**	0.57	345	Pg	Pg	11 47 44.8	-1.0
ROKH	**ROKH**	0.57	345	ePg	Pb	11 47 44.9	-2.0
JHBN	**Jahan bin**	0.64	313	Pg	Pg	11 47 45.4	-1.6
JHBN	**Jahan bin**	0.64	313	ePg	Pg	11 47 45.6	-1.4
KLNJ	**Kolanjah**	0.85	157	Pg	Pg	11 47 50.2	-0.8
KLNJ	**Kolanjah**	0.85	157	ePg	Pg	11 47 50.3	-0.8
IPIR	**Pirpir**	0.93	343	ePg	Pg	11 47 51.0	-1.6
IRAM	**Ramesheh**	1.00	89	ePg	Pn	11 47 53.5	-1.4
IZEF	**Zefreh**	1.45	40	ePg	Pg	11 48 01.1	-1.4
IKLH	**Kolahrood**	1.55	11	ePn	Pb	11 48 02.1	-1.5
IKLH				e		11 48 31.3	
QAM	**Ghamsar**	1.97	6	ePn	Pb	11 48 09.4	-1.3
SHGR	**Shooshtar-Gavs**	2.07	279	ePn	Pb	11 48 12.2	-0.1
SHGR				IAML		11 48 51.4	
	comp=N,957nm,0.6s						
SHGR	**Shooshtar-Gavs**	2.07	279	ePn	Pb	11 48 12.2	-0.1
IKAZ	**Kazeroun**	2.08	165	ePn	Pb	11 48 11.9	-0.8
IKAZ				e		11 48 48.5	
ISAD	**Sadrabad**	2.11	86	ePn	Pg	11 48 13.0	-2.1
ISAD				e		11 48 50.5	
KHMZ	**Khomeyn**	2.21	332	ePn	Pb	11 48 14.2	-0.6
KHMZ				eSg	Sg	11 48 44.8	-0.9
KHMZ	**Khomeyn**	2.21	332	ePn	Pb	11 48 14.2	-0.6
KRSH	**Karshahi**	2.30	19	ePn	Pb	11 48 15.2	-1.2
KRSH				e		11 48 52.6	
SHI	**Shiraz**	2.42	152	ePn	Pb	11 48 16.2	-2.2
ANAR	**Anarak**	2.54	56	ePn	Pb	11 48 19.3	-1.2
GHB	**Gharebagh**	2.67	154	ePn	Pb	11 48 20.4	-2.3
BMDN	**Meydan**	2.75	314	ePn	Pb	11 48 21.0	-3.0
ICHK	**Chekchek**	2.75	80	ePn	Pb	11 48 23.6	-0.5
ICHK				e		11 49 01.3	
BDRS	**Dareh Seyedi**	2.91	318	ePn	Pb	11 48 23.1	-3.7
ASAO	**Ashtian**	2.92	340	ePn	Pb	11 48 24.2	-2.8
ASAO				IAML		11 49 14.3	
	comp=N,461nm,0.6s						
ASAO	**Ashtian**	2.92	340	ePn	Pb	11 48 24.2	-2.8
YZKH	**Yazd**	2.93	77	ePn	Pb	11 48 25.3	-1.7
YZKH				eSg	Sg	11 49 08.8	0.0
YZKH	**Yazd**	2.93	77	ePn	Pb	11 48 25.3	-1.7
IMEH	**Mehriz**	2.93	97	ePn	Pb	11 48 25.4	-1.8
IKMR	**Kamar-syah**	2.94	306	ePn	Pn	11 48 22.8	+1.4
IKMR				e		11 49 16.8	
IQOM	**Qom**	3.04	358	ePn	Pb	11 48 25.1	-3.9
IQOM				e		11 49 21.8	
IVRN	**Varamin**	3.22	8	ePn	Pb	11 48 27.4	-4.6
IDOB	**Doab**	3.24	309	ePn	Pn	11 48 27.3	+1.6
HSAM	**Samen**	3.26	318	ePn	Pn	11 48 27.8	+1.8
IKFM	**Kafar-mosalman**	3.32	302	ePn	Pn	11 48 27.9	+1.3
IKFM				e		11 49 30.5	
HAGD	**Aghdareh**	3.48	331	ePn	Pn	11 48 30.9	+1.8
IHSB	**Hasanabad**	3.63	1	ePn	Pb	11 48 34.9	-4.1
IBAF	**Bafgh**	3.72	92	ePn	Pb	11 48 36.1	-4.4
IRAZ	**Razeghan**	3.76	344	ePn	Pn	11 48 35.1	+2.2
IBZA	**Bozab**	3.88	314	ePn	Pn	11 48 36.0	+1.5
IMHD	**Mahdasht**	3.91	353	ePn	Pn	11 48 35.3	+0.5
IKOM	**Komasi**	3.91	308	ePn	Pn	11 48 36.1	+1.2
IKOM				e		11 49 56.2	
IALM	**Almabolaq**	3.98	321	ePn	Pn	11 48 37.1	+1.1
QABG	**Abgarm-Qazvin**	4.13	341	ePn	Pn	11 48 39.8	+1.8
HSRG	**Sareghieh**	4.22	325	ePn	Pn	11 48 41.0	+1.7
IALA	**Alasht**	4.48	17	ePn	Pn	11 48 46.3	+3.4
IVIS	**Veis**	4.56	308	ePn	Pn	11 48 44.1	+0.3
IGHG	**Ghaleghazi**	4.64	304	ePn	Pn	11 48 45.5	+0.4
QALM	**Alamut, Qazvin**	4.65	354	ePn	Pn	11 48 48.4	+3.2
ILIN	**Lien**	4.73	312	ePn	Pn	11 48 47.0	+0.8
KHGB	**Koh Gabri**	4.73	106	ePn	Pn	11 48 49.8	+3.5
IDHR	**Dehrash**	4.97	307	ePn	Pn	11 48 49.3	-0.3
TNSJ	**Nastanj**	5.03	63	ePn	Pn	11 48 52.7	+2.4
NGRK	**Negar Kerman**	5.21	113	ePn	Pn	11 48 56.6	+3.6
TKDS	**Koohdasht(Taba**	5.30	68	ePn	Pn	11 48 57.1	+3.1
GENO	**Geno**	6.15	134	ePn	Pn	11 49 08.8	+3.0
NIAN	**Nian**	6.46	129	ePn	Pn	11 49 11.0	+1.2
BANOM	**Banah**	7.36	141	iP	Pn	11 49 23.0	+0.8
	SNR=15						
BANOM				S	Sn	11 50 43.1	-2.6
MSFE	**Esma-Masafi**	7.75	145	iP	Pn	11 49 28.3	+0.8
	SNR=7.9						
NAZ	**Nazwa, Dubai**	7.83	149	iP	Pn	11 49 30.1	+1.4
	SNR=5.7						
MDH	**Madha**	7.87	144	P	Pn	11 49 29.6	+0.5
IAKL	**Akhelmad**	7.88	50	ePn	Pn	11 49 31.8	+2.3
UOSS	**Minazif**	8.12	146	P	Pn	11 49 32.5	-0.1
UOSS	**Minazif**	8.12	146		Pn	11 49 33.1	+0.5
HATD	**Hatta, Dubai**	8.19	147	P	Pn	11 49 34.8	+1.2
GEYT	**Alibeck**	8.34	41	Pn	Pn	11 49 39.0	+3.3
	comp=N,0.7nm,0.3s,baz=228,slow=16,SNR=6.8						
GEYT				Lg	Lg	11 52 04.7	
	comp=N,0.2nm,0.3s,baz=284,slow=20,SNR=1.9						
GEYT	**Alibeck**	8.34	41		Pn	11 49 39.2	+3.5
GYA0B	**ALIBECK ARRAY**	8.34	41		Pn	11 49 40.8	+5.1
RAYN	**Ar Rayn**	9.67	213	iP	Pn	11 49 55.1	+1.2
	SNR=24						
RAYN	**Ar Rayn**	9.67	213		Pn	11 49 53.4	-0.5
GNI	**Garni**	9.84	330	Pn	Pn	11 49 57.3	+0.9
	comp=N,0.6nm,0.3s,baz=262,slow=23,SNR=1.6						
GNI				LR	LR	11 53 34.3	
	comp=N,36nm,20.7s,baz=144,slow=37						
WSAR	**Wadi Sarin**	10.77	141	Pn	Pn	11 50 09.8	+0.9
	comp=N,2.4nm,0.3s,baz=329,slow=12,SNR=20						
WSAR				Sn	Sn	11 52 01.1	-8.4
	comp=N,0.3nm,0.3s,baz=261,slow=5.6,SNR=1.7						
ASF	**Jabal al Asfar**	12.16	276	Pn	Pn	11 50 23.5	-4.5
	comp=N,0.9nm,0.3s,baz=36,slow=4.9,SNR=3.4						
KBZ	**Khabaz**	13.60	334	Pn	P	11 50 50.9	-5.6
	comp=N,0.1nm,0.3s,baz=125,slow=20,SNR=1.4						
KVAR	**Kislovodsk Arr**	13.87	334	Pn	Pn	11 50 52.1	+0.8
	baz=317,slow=15,SNR=2.3						
BR131	**Keskin Array S**	16.29	304		P	11 51 24.8	-1.9
BRTR	**Keskin Array B**	16.29	304	Pn	Pn	11 51 23.6	-0.1
	comp=N,0.1nm,0.3s,baz=114,slow=12,SNR=12						
BRTR	**Keskin Array B**	16.29	304	Pn	Pn	11 51 22.4	-1.2
AKTO	**Aktyubinsk**	19.30	13	P	Pn	11 52 02.5	+1.9
	comp=N,0.2nm,0.3s,baz=179,slow=13,SNR=2.3						
KSH	**Kashi**	21.50	62	P	P	11 52 24.4	+0.6
KSH				S	S	11 56 17.4	-4.9
KSH				PcP	PcP	11 56 29.4	+3.0
IDI	**Anoyia**	22.19	286	P	P	11 52 31.1	0.0
	comp=N,3.0nm,0.4s,baz=57,slow=11,SNR=6.0						
VRI	**Vrincioaia**	23.57	314	⇑P	P	11 52 46.1	+0.8
SORM	**Soroca**	23.81	320	⇑P	P	11 52 46.5	-1.0
MLR	**Muntele Rosu**	23.89	312	P	P	11 52 49.9	+1.3
	comp=N,5.4nm,0.7s,baz=207,slow=5.2,SNR=8.5						
MLR	**Muntele Rosu**	23.89	312	⇑P	P	11 52 49.8	+1.3
MLR	**Muntele Rosu**	23.89	312	P	P	11 52 49.1	+0.6
TESR	**Tescani**	23.93	315	⇑P	P	11 52 48.8	+0.1
VOIR		24.43	311	⇑P	P	11 52 54.7	+1.2
DOPR	**Dopca**	24.45	313	⇑P	P	11 52 54.3	+0.8
ARR	**Arges**	24.67	311	⇓P	P	11 52 56.3	+0.7
ITM	**Ithomi**	24.67	291	P	P	11 52 54.9	-0.8
AKASG	**Malin Array Be**	24.94	326	P	P	11 52 57.6	-0.3
	comp=N,1.9nm,0.4s,baz=119,slow=7.6,SNR=11						
AKBB	**Malin Array Si**	24.94	326	P	P	11 52 57.8	-0.1
AKBB				IAmb	IAmb	11 53 00.6	
	comp=Z,6.2nm,0.6s						
BURAR	**Bucovina Array**	25.32	316	⇑P	P	11 53 01.3	-0.2
BURAR	**Bucovina Array**	25.32	316	P	P	11 53 02.1	+0.6
BUR08	**Bucovina Ar. S**	25.34	316	P	P	11 53 02.3	+0.6
BUR08				IAmb	IAmb	11 53 10.4	
	comp=Z,12nm,1.1s						
BVAR	**Borovoye Array**	25.36	28	P	P	11 53 02.8	+1.1
	comp=Z,0.7nm,0.5s,baz=220,slow=8.1,SNR=6.7						
GZR	**Gura Zlata**	25.89	310	⇑P	P	11 53 08.3	+1.6
MDVR	**Moldovita**	26.38	308	⇑P	P	11 53 11.9	+0.8
DRGR		26.47	313	⇑P	P	11 53 11.6	-0.4
MKAR	**Makanchi Array**	28.11	49	P	P	11 53 28.6	+2.0
	comp=Z,0.5nm,0.4s,baz=248,slow=8.2,SNR=23						
ZALV	**Zalesovo Beam**	32.64	37	P	P	11 54 08.4	+1.9
	comp=Z,0.6nm,0.4s,baz=243,slow=6.5,SNR=4.0						
GERES	**GERESS Array B**	32.88	312	P	P	11 54 07.8	-0.9
	comp=Z,0.2nm,0.3s,baz=114,slow=12,SNR=2.3						
FINES	**FINESS Array B**	33.88	339	P	P	11 54 16.6	-0.5
	comp=Z,1.4nm,0.6s,baz=142,slow=9.6,SNR=5.7						
KMBO	**Kilima Mbogo**	35.32	205	LR	LR	12 09 34.1	
	comp=Z,52nm,20.8s,baz=12,slow=38						
BNI	**Bardonecchia**	36.86	304	P	P	11 54 41.9	-1.4
NC405	**NORSAR Array S**	38.97	331	P	P	11 54 59.8	-0.9
NC405				IAmb	IAmb	11 55 08.6	
	comp=Z,19nm,1.2s						
NOA	**NORSAR Array B**	39.15	330	P	P	11 55 01.4	-0.9
	comp=Z,0.6nm,0.5s,baz=121,slow=8.3,SNR=2.7						
GTA	**Gaotai**	39.85	65	eP	P	11 55 10.5	+2.0
GTA				pP	sP	11 55 15.3	+1.4
GTA				sP	pP	11 55 18.5	+6.2
ARCES	**ARCESS Array B**	40.48	346	P	P	11 55 13.3	+0.1
	comp=Z,1.1nm,0.8s,baz=155,slow=6.0,SNR=4.1						
CMAR	**Chiang Mai Arr**	44.88	95	P	P	11 55 51.7	+2.2
	comp=Z,0.4nm,0.4s,baz=300,slow=7.2,SNR=1.6						
TOA0	**Torodi Ar. Sit**	48.93	259	P	P	11 56 21.1	-0.1
TOA0				IAmb	IAmb	11 56 33.5	
	comp=Z,2.6nm,0.9s						
TORD	**Torodi Ar. Bea**	48.93	259	P	P	11 56 20.7	-0.5
	comp=Z,1.8nm,0.6s,baz=54,slow=8.6,SNR=9.7						
KSRS	**Korea Array**	61.75	62	LR	LR	12 30 15.7	
	comp=Z,10nm,18.4s,baz=355,slow=41						
BOSA	**Boshof**	64.95	205	P	P	11 58 14.2	-0.5
	comp=Z,1.3nm,0.5s,baz=24,slow=6.5,SNR=3.1						
DAV	**Davao City (W)**	73.03	92	P	P	11 59 08.4	+3.2
	comp=Z,314nm,0.5s,baz=261,slow=3.6,SNR=3.7						
IMAR	**Indian Mountai**	80.65	10	P	P	11 59 47.6	+0.2
YKA	**Yellowknife Ar**	85.35	353	P	P	12 00 11.5	-0.2
	comp=Z,0.2nm,0.7s,baz=13,slow=5.4,SNR=4.3						
WRA	**Warramunga Arr**	94.70	110	P	P	12 00 55.8	-0.7
	comp=Z,0.3nm,0.7s,baz=312,slow=4.2,SNR=1.6						
ASAR	**Alice Springs**	96.31	114	P	P	12 01 04.5	+0.7
	comp=Z,0.2nm,0.7s,baz=304,slow=4.8,SNR=1.7						

IDC 13 12:09:59.9±10.0,35°.58N×81°.27E,h0km,mb3.2/1, mb1 3.5/3,mb1mx3.2/31,mbtmp3.5/3,ML3.4/2,Error ellipse: s-maj=143.2km s-min=55.6km az=53.0
BJI 13 12:10:11.1±0.0,36°.02N×82°.46E,h6km,ML3.4/5
NNC 13 12:10:16.2±2.1,36°.56N×82°.81E,h0km,mb3.9,mpv3.6, Error ellipse: s-maj=30.2km s-min=15.4km az=71.0
ISC 13 12:10:13.0±3.2,36°.2N±0°.2×82°.4E±0°.2,h10km,n7, σ2°.00/12,2C-4D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	7.42	343	⇓Pn	Pn	12 12 02.9	+1.3
	3.7nm,1.0s						
PDGK				⇓Sn	Sn	12 13 27.4	+1.6
	12nm,0.6s						
PDGK				⇓Lg	Lg	12 14 07.3	
	22nm,1.1s						
WMQ	**Urumqi**	8.59	27	eP	Pn	12 12 19.9	+2.5
WMQ				S	Sn	12 13 53.8	-0.5
WMQ				smax	smax		
	comp=N,6.0nm,1.3s						
WMQ				smax	smax		
	comp=E,8.0nm,1.3s						
MK31	**Makanchi Array**	10.54	360	Pn	Pn	12 12 44.5	+0.3
	0.4nm,0.3s,baz=181,slow=12,SNR=20						
MK31				⇑Sn	Sn	12 14 40.6	-1.6
	1.5nm,0.8s,baz=183,slow=23,SNR=4.1						
MKAR	**Makanchi Array**	10.54	360	Pn	Pn	12 12 44.2	0.0
	0.5nm,0.3s,baz=189,slow=13,SNR=18						
MKAR				Sn	Sn	12 14 44.0	+1.7
	0.2nm,0.3s,baz=187,slow=23,SNR=4.3						
MAKZ	**Makanchi**	10.56	358	⇑Pn	Pn	12 12 45.1	+0.7
	2.7nm,0.5s						
MAKZ				⇓Sn	Sn	12 14 41.4	-1.4
	1.9nm,1.0s						
ZALV	**Zalesovo Beam**	17.79	5	P	Pn	12 14 16.4	-4.1
	0.3nm,0.3s,baz=187,slow=10,SNR=2.6						
SONM	**Songino Array**	21.16	49	P	P	12 14 58.7	+0.3
	0.9nm,0.8s,baz=242,slow=12,SNR=6.3						

NEIC 13 12:11:40.1±1.4,19°.89S±0°.09×175°.92W±0°.07, h222km±4km,mb4.7/110,Error ellipse: s-maj=13.0km s-min=8.8km az=163.0
IDC 13 12:11:42.1±2.1,19°.90S×175°.96W,h237km±19km, mb4.0/20,mb1 4.2/21,mb1mx4.1/38,mbtmp4.6/21,Error ellipse: s-maj=14.6km s-min=10.3km az=136.0
ISC 13 12:11:40.0±0.3,20°.03S±0°.06×175°.77W±0°.06,h222km, n285,σ1°.38/262,mb4.6/66,22C-1D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	5.59	81		Pn	12 13 03.8	+1.3
NIUE					S	12 14 06.7	-1.1
MSVF	**Nonsavu**	6.28	290	Pn	Pn	12 13 12.1	+0.8
AFI	**Afiamalu**	7.19	33	P	Pn	12 13 19.6	-3.3
	70nm,0.3s,baz=191,slow=1.6,SNR=131						
AFI				S	S	12 14 31.7	-13
	93nm,0.3s,baz=45,slow=20,SNR=16						
AFI	**Afiamalu**	7.19	33		Pn	12 13 19.3	-3.6
AFI					S	12 14 32.5	-13
FUNA	**Funafuti**	12.43	336	P	P	12 14 31.1	-2.1
DZM	**Mont Dzumac**	16.72	260	Pn	Pn	12 15 22.5	+0.4
DZM				IAmb	IAmb	12 15 31.0	
	comp=Z,22nm,0.8s						
KNTN	**Kanton**	17.60	14	P	P	12 15 29.2	-1.0
KUZ	**Kuaotunu**	18.24	202	P	Pn	12 15 41.0	+1.3
WMGZ	**Waiomatatini S**	18.43	195	P	Pn	12 15 43.6	+1.8
HAZ	**Te Kaha**	18.53	196	P	Pn	12 15 43.1	+0.1
PKGZ	**Pakihiroa**	18.58	195	P	Pn	12 15 45.1	+1.5
PKGZ				S	S	12 18 53.6	-6.9
PUZ	**Puketiti**	18.71	195	P	Pn	12 15 45.1	0.0
PUZ				S	S	12 18 58.7	-4.4
ETAZ	**East Tamaki Re**	18.72	204	P	Pn	12 15 46.7	+1.4
RUGZ	**Raukumara Rang**	18.75	196	P	Pn	12 15 45.4	-0.4
MKAZ	**Moumakai**	18.76	203	P	Pn	12 15 46.3	+0.5
OPRZ	**Ohinepanea**	18.96	199	P	Pn	12 15 48.3	+0.2
MWZ	**Matawai**	19.14	196	P	Pn	12 15 49.6	-0.7
URZ	**Urewera**	19.18	197	P	P	12 15 47.9	+0.9
	comp=Z,7.5nm,0.3s,baz=342,slow=3.7,SNR=36						
URZ				S	S	12 19 08.6	-3.8

comp=Z,1.0nm,0.3s,baz=83,slow=19,SNR=2.0
URZ Urewera 19.18 197 P P 12 15 48.8 +1.8
URZ Urewera 19.18 197 P P 12 15 48.0 +0.9
URZ S S 12 19 08.5 -3.8
TOZ Tahuroa Road 19.20 201 P Pn 12 15 51.0 +0.1
RAHZ Arahi 19.80 197 P P 12 15 56.3 +2.6
WHHZ Waihua 19.92 196 P Pn 12 15 58.2 -1.3
HIZ Hauiti 20.13 202 P P 12 15 59.5 +2.3
HIZ Hauiti 20.13 202 P Pn 12 16 00.6 -1.4
ARHZ Aropaoanui 20.16 196 P P 12 16 00.2 +2.8
BKZ Black Stump Fm 20.20 198 P P 12 15 59.2 +1.2
BKZ IAmb IAmb 12 16 14.5
comp=Z,20nm,1.1s
BKZ Black Stump Fm 20.20 198 P P 12 15 59.2 +1.2
MCHZ McNeill Hill 20.41 197 P P 12 16 02.4 +2.3
KWHZ Kaweka Forest 20.46 198 P P 12 16 02.4 +1.6
KAHZ Kahuranaki 20.68 196 P P 12 16 05.6 +2.5
VRZ Vera Road 20.71 201 P Pn 12 16 08.9 -0.3
PXZ Pawanui 20.91 196 P P 12 16 07.4 +2.0
BFZ Birch Farm 21.68 197 P P 12 16 15.1 +1.9
MSWZ Moikau Station 22.64 198 P P 12 16 22.7 +0.6
BHW Baring Head 22.75 198 P P 12 16 22.8 -0.2
PLWZ Palliser 22.78 198 P P 12 16 23.9 +0.4
QRZ Quartz Range 23.01 203 P P 12 16 26.1 +0.7
QRZ IAmb IAmb 12 16 30.4
comp=Z,33nm,0.9s
TUWZ Tuamarina 23.05 200 P P 12 16 26.4 +0.6
BSWZ Blackbirch Sta 23.33 200 P P 12 16 26.4 -2.0
THZ Tophouse 23.70 201 P P 12 16 32.5 +0.7
THZ IAmb IAmb 12 16 46.7
comp=Z,36nm,1.3s
KHZ Kahutara 24.07 200 P P 12 16 35.9 +0.9
KHZ IAmb IAmb 12 16 47.9
comp=Z,28nm,1.1s
LTZ Lake Taylor 24.82 201 P P 12 16 41.8 -0.1
RPZ Rata Peaks 26.06 202 P P 12 16 54.9 +1.9
comp=Z,13nm,0.5s,baz=64,slow=4.5,SNR=15
RPZ Rata Peaks 26.06 202 P P 12 16 53.5 +0.5
RPZ IAmb IAmb 12 16 59.9
comp=Z,17nm,0.7s
FOZ Fox Glacier 26.36 204 P P 12 16 55.3 -0.3
MLZ Mavora Lakes 28.56 204 P P 12 17 16.2 +1.0
MLZ IAmb IAmb 12 17 24.2
comp=Z,28nm,1.2s
WHZ Wether Hill Ro 29.07 204 P P 12 17 20.7 +1.0
ARMA Armidale 31.15 244 P P 12 17 39.7 +1.3
CTA Charters Tower 35.62 263 P P 12 18 16.8 -0.1
comp=Z,9.3nm,0.5s,baz=94,slow=10,SNR=9.7
PMG Port Moresby 37.29 281 P P 12 18 30.6 -0.5
comp=Z,14nm,0.8s,baz=99,slow=4.9,SNR=11
PMG Port Moresby 37.29 281 P P 12 18 31.1 0.0
PMG IAmb IAmb 12 18 32.4
comp=Z,20nm,0.9s
TOO Toolangi 37.86 234 P P 12 18 35.4 -0.3
COEN Coen 39.65 272 P P 12 18 50.9 +0.2
STKA Stephens Creek 39.87 244 P P 12 18 53.2 +0.8
comp=Z,1.0nm,0.3s,baz=94,slow=8.4,SNR=5.5
KHLU Kahalu`u 43.93 28 P P 12 19 25.2 -0.1
HUH Hualalai 44.04 28 P P 12 19 26.2 -0.1
HMH Humu'ula Sheep 44.12 28 P P 12 19 27.2 +0.1
HPAH Hawaii Prepara 44.41 27 P P 12 19 29.1 +0.1
BBOO Buckleboo 44.62 243 P P 12 19 29.9 -0.7
WR0 Warramunga Arr 46.55 261 P P 12 19 44.4 -1.4
AS31 Alice Springs 46.66 256 P P 12 19 46.2 -0.5
ASAR Alice Springs 46.66 256 P P 12 19 45.7 -1.0
comp=Z,7.8nm,0.9s,baz=94,slow=7.9,SNR=56
ASAR ScP ScP 12 24 48.2 -0.8
comp=Z,1.1nm,1.0s,baz=120,slow=3.7,SNR=5.6
ASAR S S 12 26 16.0 -3.2
comp=Z,1.5nm,1.1s,baz=208,slow=28,SNR=5.9
ASAR Alice Springs 46.66 256 P P 12 19 44.7 -2.0
ASAR ScP 12 24 48.4 -0.6
WB0 Warramunga Arr 46.71 261 P P 12 19 45.7 -1.5
WB2 Warramunga Arr 46.72 261 P P 12 19 46.2 -1.1
WRAB Tennant Creek 46.73 261 P P 12 19 45.8 -1.4
WRA Warramunga Arr 46.74 261 P P 12 19 46.0 -1.3
comp=Z,1.6nm,0.3s,baz=97,slow=7.3,SNR=83
WRA Warramunga Arr 46.74 261 P P 12 19 45.9 -1.5
VNDA Vanda 58.57 186 P P 12 21 15.2 +2.2
comp=Z,4.9nm,1.1s,baz=21,slow=4.9,SNR=5.2
VNDA Vanda 58.57 186 P P 12 21 13.5 +0.5
QSPA South Pole Qui 70.04 180 P P 12 22 29.6 +2.0
QSPA IAmb IAmb 12 22 30.6
comp=Z,13nm,0.9s
MJAR Matsushiro Arr 71.10 322 P P 12 22 32.9 -1.3
comp=Z,4.4nm,0.6s,baz=140,slow=6.2,SNR=14
MJAR Matsushiro Arr 71.10 322 IAmb IAmb 12 22 33.9
comp=Z,1.7nm,0.6s
MAT Matsushiro 71.10 322 P P 12 22 33.0 -1.3
MJB9 Matsu-Tunnel 71.10 322 P P 12 22 33.2 -1.1
MJB9 IAmb IAmb 12 22 34.0
comp=Z,5.8nm,0.6s
ADK Adak 71.61 359 P P 12 22 36.5 -0.4
UNV Unalaska Valle 74.00 6 P P 12 22 49.8 -1.1
ASAJ Asahikawa 74.34 330 P P 12 22 53.6 +0.5
comp=Z,5.9nm,0.9s,baz=202,slow=3.6,SNR=6.1
CIS Catalina Islan 76.25 46 P P 12 23 05.5 +1.2
baz=235
SMMC Simmler 76.32 44 P P 12 23 05.9 +1.2
baz=233
PETK Petropavlovsk- 76.38 344 P P 12 23 03.8 -0.8
comp=Z,7.1nm,0.7s,baz=126,slow=7.0,SNR=9.9
PETK Petropavlovsk- 76.38 344 P P 12 23 04.2 -0.3
ARVC Arvin 76.98 45 P P 12 23 09.2 +0.9
baz=234
MURC Murrieta 77.20 47 P P 12 23 10.3 +0.7
baz=235
VES Vestal, Richgr 77.23 44 P P 12 23 10.3 +0.6
baz=234,SNR=6.5
MONP2 Monument Peak 77.34 48 P P 12 23 11.5 +0.9
baz=236,SNR=8.1
EDW2 Edwards Air Fo 77.39 45 P P 12 23 11.5 +0.8
baz=235,SNR=8.3
IKP In-Ko-Pah, Jac 77.42 48 P P 12 23 12.0 +1.1
baz=236
ISA Isabella, Lake 77.53 45 P P 12 23 12.6 +1.2
baz=234,SNR=9.5
O02D Mt. Diablo Mer 77.59 39 P P 12 23 13.0 +1.3
baz=230
PFO Pinyon Flats O 77.71 47 P P 12 23 13.2 +0.6
baz=236
BBRC Big Bear Solar 77.76 46 P P 12 23 13.5 +0.6
baz=235
SWSC Sam W. Stewart 77.80 48 P P 12 23 13.7 +0.8
baz=236
LRMC Laurel Mtn Rad 77.94 45 P P 12 23 14.5 +0.7
baz=235,SNR=6.7
N02D Trinity Center 78.15 38 P P 12 23 15.9 +1.2
baz=230
CWC Cottonwood Cre 78.24 44 P P 12 23 16.3 +0.8
baz=234
BELC Belle Mtn. Jos 78.25 47 P P 12 23 16.4 +0.9
baz=236,SNR=7.9
O03E Paynes Creek 78.25 39 P P 12 23 15.9 +0.6
baz=231
M02C Callahan 78.33 38 P P 12 23 16.8 +1.1
baz=230
MPMC Manual Prospec 78.41 45 P P 12 23 17.4 +0.9
baz=235,SNR=13
GSC Goldstone, Bar 78.43 46 IAmb IAmb 12 23 18.2
comp=Z,7.2nm,0.8s
GSC Goldstone, Bar 78.43 46 P P 12 23 17.3 +0.9
baz=235,SNR=7.7
BC3 Big Chuckawall 78.43 48 P P 12 23 17.5 +1.0
baz=236
MLAC Mammoth, Mammo 78.45 43 P P 12 23 17.5 +0.9
baz=234
HEC Hector,Ludlow 78.48 46 P P 12 23 17.4 +0.7
baz=236,SNR=8.6
TIN Tinemaha, Big 78.50 44 P P 12 23 17.9 +1.1
baz=234
GLA Glamis 78.54 49 P P 12 23 18.3 +1.2
baz=237
WAKR Walker 78.59 42 IAmb IAmb 12 23 19.4
comp=Z,11nm,0.8s
YBH Yreka Blue Hor 78.63 38 P P 12 23 18.4 +1.0
YBH IAmb IAmb 12 23 19.9
comp=Z,7.6nm,1.0s
BEKR Beckworth 78.85 40 IAmb IAmb 12 23 20.3
comp=Z,11nm,1.1s
GMRC Granite Mounta 78.92 47 P P 12 23 20.1 +0.9
baz=236
IRM Iron Mountain 78.92 47 P P 12 23 20.1 +1.1
baz=237,SNR=7.9
YERR Yerington 79.00 41 IAmb IAmb 12 23 21.2
comp=Z,15nm,0.8s
GRAC Grapevine Rang 79.03 44 P P 12 23 20.8 +1.2
baz=235,SNR=8.0
FURC Furnace Creek, 79.06 45 P P 12 23 20.7 +1.1
baz=235
TUQ Turquoise Moun 79.10 46 P P 12 23 21.1 +0.9
baz=236,SNR=7.7
SHOC Shoshone, Teco 79.12 45 P P 12 23 20.8 +0.7
baz=236,SNR=6.2
Y12C Blythe 79.14 48 P P 12 23 21.4 +1.2
baz=237
M04C Macdoel 79.17 38 P P 12 23 21.3 +1.0
baz=231
L04D Klamath Falls 79.18 37 P P 12 23 21.1 +0.7
baz=230
NVAR Mina Array Bea 79.26 42 P P 12 23 21.9 +0.8
comp=Z,7.3nm,0.7s,baz=222,slow=8.6,SNR=84
NVAR Mina Array Bea 79.26 42 P P 12 23 21.6 +0.5
PAHR Pah Rah Range 79.35 41 IAmb IAmb 12 23 23.2
comp=Z,9.1nm,0.9s
NV11 Mina Array Sit 79.36 42 IAmb IAmb 12 23 23.2
comp=Z,13nm,1.1s
214A Organ Pipe Nat 79.40 50 P P 12 23 22.9 +1.2
baz=238,SNR=5.7
PDMCI Parker Dam,Lak 79.70 48 P P 12 23 24.6 +1.4
baz=237
TPNV Topopah Spring 79.73 45 IAmb IAmb 12 23 25.4
comp=Z,8.8nm,0.8s
TPNV Topopah Spring 79.73 45 P P 12 23 24.5 +0.9
baz=236,SNR=9.8
KVN Kaiserville 79.76 42 IAmb IAmb 12 23 25.2
comp=Z,8.8nm,1.0s
I04A Tendick Farm, 80.13 36 P P 12 23 26.2 +0.9
baz=230
MOD Modoc Plateau 80.14 39 IAmb IAmb 12 23 27.1
comp=Z,8.3nm,0.8s
J05D Fort Rock, OR 80.46 37 P P 12 23 28.3 +1.0
baz=231
PINE Pine Mountain 80.95 37 IAmb IAmb 12 23 32.0
comp=Z,19nm,0.9s
R11A Troy Canyon, C 80.96 44 P P 12 23 30.6 +0.6
baz=236
TUC Tucson 81.06 51 P P 12 23 31.4 +0.8
TUC IAmb IAmb 12 23 33.3
comp=Z,8.5nm,0.9s
TUC Tucson 81.06 51 P P 12 23 32.2 +1.6
baz=240
NJ2 Nanjing 81.21 309 eP P 12 23 32.8 +1.6
WVOR Wild Horse Val 81.44 39 P P 12 23 32.6 +0.2
WVOR IAmb IAmb 12 23 34.2
comp=Z,11nm,1.0s
G05D Wamic, OR 81.65 36 P P 12 23 34.8 +1.5
baz=231
X16A Lo Mia Camp, P 81.66 49 IAmb IAmb 12 23 36.5
comp=Z,11nm,0.9s
319A Douglas 81.70 52 IAmb IAmb 12 23 36.7
comp=Z,12nm,1.0s
F05D White Salmon 81.98 35 P P 12 23 35.9 +0.9
baz=230
BRLK Bradley Lake 82.07 12 P P 12 23 34.9 -0.2
BRLK IAmb IAmb 12 23 46.0
comp=Z,34nm,1.2s
U15A North Rim 82.11 47 P P 12 23 37.8 +1.5
U15A IAmb IAmb 12 23 38.9
comp=Z,14nm,1.0s
WUAZ Wupatki 82.27 48 P P 12 23 38.4 +1.4
baz=239
B05A Bryant 83.18 33 P P 12 23 42.0 +0.9
baz=230
KLR Kul'dur 83.21 328 P P 12 23 40.8 -0.4
comp=Z,2.1nm,0.7s,baz=104,slow=6.3,SNR=6.3
CN2 Changchun 83.22 321 eP P 12 23 41.8 +0.4
W18A Petrified Fore 83.22 49 P P 12 23 43.3 +1.4
baz=240
E07A Sunnyside 83.28 35 IAmb IAmb 12 23 43.5
comp=Z,23nm,0.9s
121A Cookes Peak, D 83.37 52 IAmb IAmb 12 23 45.6
comp=Z,9.7nm,0.8s
121A Cookes Peak, D 83.37 52 P P 12 23 44.4 +1.7
baz=241
SUA Susitna One 83.66 12 IAmb IAmb 12 23 43.5
comp=Z,20nm,0.8s
MFID Camas Ranch 83.69 39 IAmb IAmb 12 23 45.5
comp=Z,9.0nm,0.9s
DUG Dugway, Tooele 83.77 43 P P 12 23 45.0 +0.5
baz=237
GLI Glacier Island 83.89 14 P P 12 23 44.1 -0.3
EYAK Cordova Ski Ar 83.90 14 P P 12 23 44.3 -0.1
D08A Wollman Farm, 84.09 35 IAmb IAmb 12 23 47.4
comp=Z,16nm,0.9s
PMR Palmer 84.10 12 P P 12 23 45.0 -0.4
PMR IAmb IAmb 12 23 45.3
comp=Z,7.9nm,0.7s
MESA MESA 84.52 16 P P 12 23 48.4 +0.5
WAX Waxell Ridge 84.52 16 P P 12 23 48.2 +0.5
B08A Colville Reser 84.67 34 IAmb IAmb 12 23 49.5
comp=Z,9.5nm,0.8s
CRQM Cirque 84.71 15 P P 12 23 48.4 -0.4
PPLA Purkeypile 84.72 11 P P 12 23 47.1 -1.6
PPLA IAmb IAmb 12 23 51.3
comp=Z,18nm,1.4s
MNTX Cornudas Mount 84.78 54 IAmb IAmb 12 23 52.0
comp=Z,8.9nm,1.1s
MNTX Cornudas Mount 84.78 54 P P 12 23 50.9 +1.3
baz=243
C09A Chrisman Ranch 84.89 35 IAmb IAmb 12 23 51.0
comp=Z,8.1nm,0.8s
TXAR Lajitas Array 85.05 57 P P 12 23 52.5 +1.3
comp=Z,4.7nm,0.9s,baz=210,slow=7.2,SNR=50
TXAR Lajitas Array 85.05 57 P P 12 23 51.2 +0.1
MVCO Mesa Verde 85.13 48 P P 12 23 52.7 +1.2
baz=240
ANMO Albuquerque 85.49 50 P P 12 23 54.2 +0.9
baz=242
KTH Kantishna Hill 85.55 11 IAmb IAmb 12 23 52.4
comp=Z,12nm,0.9s
NEW Newport 85.78 35 P P 12 23 54.1 -0.1
baz=234
DHY Denali Highway 85.79 13 IAmb IAmb 12 23 53.9
comp=Z,7.7nm,0.8s
SEY Seymchan 86.41 346 P P 12 23 56.0 -0.8
comp=Z,9.8nm,0.7s,baz=142,slow=5.8,SNR=34
MENT Mentasta 86.46 14 IAmb IAmb 12 23 58.2
comp=Z,16nm,1.0s
S22A 4UR Ranch, Cre 86.55 48 P P 12 23 59.2 +0.7
baz=242
MSO Missoula 86.72 37 P P 12 23 59.0 +0.1
baz=236
O20A White River Ci 86.74 45 P P 12 23 59.3 0.0
baz=240
WRH Wood River Hil 86.91 12 IAmb IAmb 12 23 59.5
comp=Z,18nm,0.8s
MLY Manley 86.94 10 IAmb IAmb 12 23 59.1
comp=Z,12nm,1.2s
BCAR Beaver Creek A 87.03 15 P P 12 23 59.5 -0.4
HDA Harding Lake 87.08 12 IAmb IAmb 12 24 00.2
comp=Z,16nm,1.0s
HDA Harding Lake 87.08 12 P P 12 23 59.1 -0.9
baz=207
CCB Clear Creek Bu 87.12 12 IAmb IAmb 12 24 00.3
comp=Z,11nm,0.7s
PDAR Pinedale Array 87.20 42 P P 12 24 01.4 -0.1
comp=Z,1.0nm,0.7s,baz=207,slow=3.0,SNR=11
PDAR Pinedale Array 87.20 42 P P 12 24 00.8 -0.6
TCOL CIGO, UAF Yank 87.32 12 P P 12 24 00.2 -0.9
baz=206
COLA College 87.32 12 P P 12 23 59.6 -1.6
IMAR Indian Mountai 87.36 9 P P 12 24 00.9 -0.5
IL31 87.41 12 IAmb IAmb 12 24 02.0
comp=Z,18nm,1.4s
ILAR Eielson Array 87.41 12 P P 12 24 00.7 -0.9
comp=Z,3.1nm,0.6s,baz=212,slow=5.5,SNR=48
ILAR Eielson Array 87.41 12 P P 12 24 00.5 -1.1
SDCO Great Sand Dun 87.48 48 P P 12 24 03.3 +0.3
baz=242
POKR Poker Plat Res 87.62 12 P P 12 24 01.6 -1.0
baz=207
MSTX Muleshoe 87.76 53 P P 12 24 04.6 +0.4
baz=244
T25A Trinidad 87.97 49 P P 12 24 05.3 0.0
baz=243
WALA Waterton Lakes 87.98 35 IAmb IAmb 12 24 06.1
comp=Z,11nm,0.9s
833A Chaparral WMA, 88.02 59 P P 12 24 05.5 +0.2
baz=246
PLCA Paso Flores 88.07 133 P P 12 24 07.4 +1.8
comp=Z,1.7nm,0.8s,baz=244,slow=6.8,SNR=3.9
PLCA Paso Flores 88.07 133 IAmb IAmb 12 24 08.7
comp=Z,6.1nm,1.4s
ISCO Idaho Springs 88.35 46 P P 12 24 07.7 +0.6
baz=242
SNAA Sanae 88.41 178 P P 12 24 07.1 +0.6
DAWY Dawson 88.45 15 IAmb IAmb 12 24 07.8
comp=Z,17nm,1.0s
VNA3 Neumayer Olymp 88.46 176 P P 12 24 07.1 +0.4
EGAK Eagle 88.63 14 IAmb IAmb 12 24 08.8
comp=Z,10nm,1.0s
BILL Bilibino 88.80 353 P P 12 24 09.3 +1.2
VNA2 Neumayer--Watz 88.92 176 P P 12 24 09.9 +1.0
baz=177,slow=3.7
AMTX Amarillo 88.97 52 P P 12 24 10.2 +0.4
baz=245
K22A Casper 89.09 44 P P 12 24 11.0 +0.7
baz=242
ABTX Abilene, Hawle 89.57 55 P P 12 24 12.9 +0.3
baz=246
EGMT Eagleton 89.76 38 P P 12 24 14.1 +0.9
baz=239
BMAR Burnt Mountain 90.21 12 P P 12 24 14.5 -0.2
HHC Hu-ho-hao-te 90.53 314 eP P 12 24 17.0 0.0
EPYK Eagle Plains 90.99 15 P P 12 24 18.4 0.0
baz=216
LAO LASA Array 91.19 40 P P 12 24 20.9 +1.0
baz=242
OGNE Ogallala 91.31 47 P P 12 24 21.3 +0.8
baz=245
RSSD Black Hills 91.38 43 P P 12 24 21.3 +0.3
RSSD IAmb IAmb 12 24 22.5
comp=Z,9.1nm,1.0s
RSSD Black Hills 91.38 43 P P 12 24 21.0 +0.1
baz=243
CMAR Chiang Mai Arr 91.94 289 P P 12 24 24.8 +0.9
comp=Z,1.4nm,0.8s,baz=118,slow=3.2,SNR=9.7
CD2 Chengdu 92.31 302 P P 12 24 24.3 -1.0
DGMT Dagmar 93.23 39 P P 12 24 29.8 +0.7
baz=243
INK Inuvik 93.29 14 IAmb IAmb 12 24 29.2
comp=Z,9.9nm,0.9s
LZH Lanzhou 94.15 307 ⇑P P 12 24 33.8 -0.1
LZH pP pP 12 25 27.5 -0.1
LZH sP sP 12 25 48.6 -1.9
LZH PP PP 12 28 26.3 +2.4
BGNE Belgrade 94.17 47 P P 12 24 34.1 +0.5
baz=247
YKA Yellowknife Ar 95.22 24 P P 12 24 37.6 -0.3
comp=Z,2.0nm,0.8s,baz=239,slow=4.8,SNR=31
ECSD EROS Data Cent 96.11 46 P P 12 24 42.0 -0.4
baz=248
C36M Paulatuk 96.41 16 P P 12 24 42.8 -0.3
baz=228
SONM Songino Array 96.78 318 P P 12 24 45.7 +0.2
comp=Z,0.8nm,0.9s,baz=137,slow=2.7,SNR=5.8
SONM Songino Array 96.78 318 P P 12 24 45.6 +0.2
ZALV Zalesovo Beam 111.44 321 PKiKP PKiKP 12 29 45.3 -2.1
comp=Z,0.4nm,0.4s,baz=336,slow=44,SNR=2.1
MKAR Makanchi Array 112.40 313 PKiKP PKiKP 12 29 48.1 -1.3
comp=Z,0.3nm,0.4s,baz=14,slow=0.7,SNR=4.5
KURK Kurchatov 115.06 317 PKiKP 12 29 53.2 -1.2
KURBB Kurchatov Arra 115.12 317 PKP PKiKP 12 29 53.2 -1.3
comp=Z,0.7nm,0.8s,baz=141,slow=16,SNR=2.0
KSH Kashi 116.33 305 PKP PKPdf 12 29 55.6 -1.8
KSH sPKP 12 30 49.8
KSH PP sPKPdf 12 31 17.4 +1.5
KSH PKS 12 33 31.6
KSH SKS SKSdf 12 36 48.6 +0.2
KSH SKKS SKKSac 12 37 54.5 +9.3
KSH Kashi 116.33 305 SS SS 12 47 12.6 +19
ARCES ARCESS Array B 128.82 351 PKP PKPdf 12 30 19.5 -0.8
comp=Z,4.4nm,0.9s,baz=17,slow=1.3,SNR=10.0
FINES FINESS Array B 135.89 345 PKhKP PKPdf 12 30 31.3 -2.5
comp=Z,0.8nm,0.6s,baz=146,slow=10,SNR=2.4
AKASG Malin Array Be 143.58 333 PKhKP PKPab 12 30 44.5 -0.6
comp=Z,2.0nm,0.5s,baz=44,slow=4.2,SNR=12
SORM Soroca 145.86 331 ⇑P PKPdf 12 30 51.0 -1.1
BURAR Bucovina Array 147.64 333 ⇑P PKPbc 12 30 58.4 +0.1
KOLS Kolonicke sedl 147.73 338 ePKP PKiKP 12 31 00.3 +0.1
CLL Collm 148.03 350 ⇑ iPKPbc PKPbc 12 30 58.5 -0.5
comp=Z,10.0nm,0.8s
CLL iPKPab PKiKP 12 31 01.5 +0.8
comp=Z,13nm,0.7s
CLL epPKPab pPKPab 12 32 02.0 +5.2
CRVS Cervenica-Dubn 148.04 338 ePKP PKPdf 12 30 56.7 +0.9
CRVS e 12 31 03.1
BRTR Keskin Array B 148.04 314 PKPbc PKPbc 12 30 59.1 -0.6
comp=Z,3.1nm,0.9s,baz=127,slow=3.3,SNR=10
BRTR Keskin Array B 148.04 314 PKPbc 12 30 58.9 -0.7
CFR Carcaliu 148.07 327 ⇑P PKPbc 12 30 58.7 -0.6
DPC Dobruska-Polom 148.26 345 ⇑ ePKP PKPbc 12 31 00.0 +0.2
DPC ePKPAB PKPab 12 31 03.2 -0.2
VRI Vrincioaia 148.27 329 ⇑P PKPbc 12 30 59.5 -0.4
TRPA Tarpa 148.30 336 ⇑P PKPbc 12 30 59.4 -0.4
PLOR Plostina 148.32 329 ⇑P PKPbc 12 30 59.9 -0.2
MORC Moravsky Berou 148.48 343 ⇑P PKPbc 12 31 00.3 -0.1
LANS Liptovska Anna 148.48 341 ePKP PKiKP 12 31 01.2 -0.6
LANS e 12 31 05.3
HARR Harsova 148.51 327 ⇑P PKPbc 12 30 59.4 -1.1
DOPR Dopca 148.82 331 ⇑P PKPbc 12 31 01.3 0.0
MLR Muntele Rosu 148.92 330 ⇑P PKPbc 12 31 01.9 +0.2
PRU Pruhonice 149.00 347 ⇑ ePKP PKPbc 12 31 01.4 -0.2
VRAC Vranov 149.16 344 ⇑P PKPbc 12 31 02.2 +0.2
VYHS Vyhne 149.26 341 ePKP PKPbc 12 31 02.3 0.0
VYHS e 12 31 07.8
DRGR 149.33 335 ⇑P PKPbc 12 31 02.3 -0.3
VOIR 149.38 331 ⇑P PKPbc 12 31 01.2 -1.6
ARR Arges 149.62 331 ⇑P PKiKP 12 31 03.9 -0.4
MODS Modra-Piesok 149.82 343 ePKP PKPdf 12 31 00.0 +1.3
MODS e 12 31 03.1
KHC Kasperske Hory 150.01 348 ⇑ ePKP PKPbc 12 31 04.1 0.0
KHC ePKPAB PKPab 12 31 10.2 -0.4
SIRR Siria 150.18 335 ⇑P PKPbc 12 31 04.3 -0.2
GERES GERESS Array B 150.26 347 PKPbc PKPbc 12 31 04.7 -0.1
comp=Z,4.0nm,0.6s,baz=32,slow=2.6,SNR=27
GERES GERESS Array B 150.26 347 PKPbc 12 31 04.5 -0.4
GZR Gura Zlata 150.43 333 ⇑P PKPbc 12 31 04.3 -1.0
CONA Conrad Observa 150.62 344 iPKiKP PKPbc 12 31 05.8 +0.2
comp=Z,8.7nm,0.7s
BZS Buzias 150.73 335 ⇓P PKPbc 12 31 05.3 -0.6
MOA Molln 151.08 346 iPKPbc PKPbc 12 31 06.2 -0.4
comp=Z,3.0nm,0.6s
MDVR Moldovita 151.37 333 ⇑P PKPbc 12 31 06.8 -0.6
SOKA Soboth 151.99 344 iPKPbc PKPbc 12 31 08.0 -0.8
comp=Z,6.5nm,0.9s
KBA Koelnbreinsper 152.01 347 iPKiKP PKPbc 12 31 08.5 -0.5
SNR=5.5
RETA Reutte 152.10 351 iPKiKP PKPbc 12 31 09.1 +0.1
comp=Z,1.8nm,0.5s
WATA Walderalm 152.11 349 iPKiKP PKPbc 12 31 08.6 -0.6
comp=Z,5.4nm,0.5s
WTTA Wattenberg 152.17 349 iPKiKP PKPbc 12 31 09.1 -0.3
comp=Z,15nm,0.6s
MOTA Moosalm 152.19 350 iPKPbc PKPbc 12 31 08.7 -0.7
comp=Z,7.8nm,0.9s
SQTA Sankt Quirin 152.29 350 iPKiKP PKPbc 12 31 09.3 -0.3
comp=Z,8.7nm,0.6s
MYKA Terra Mystica 152.37 346 iPKPbc PKPbc 12 31 08.5 -1.2
comp=Z,4.4nm,0.5s
DAVA Damuels 152.43 352 iPKiKP PKiKP 12 31 10.4 +0.3
comp=Z,7.6nm,0.8s
ABTA Abfaltersbach 152.50 348 iPKPbc PKPbc 12 31 09.0 -1.0
comp=Z,8.7nm,0.6s
FETA Feichten 152.56 350 iPKiKP PKPbc 12 31 10.0 -0.2
comp=Z,5.1nm,0.7s
ESDC Sonseca Array 159.19 18 PKPab PKPab 12 31 50.1 +0.1
comp=Z,2.2nm,0.6s,baz=330,slow=3.8,SNR=8.5

NNC ***13*** *12:21:54.4±0.2, 43°.02N×75°.25E, h3km±2km, mb3.7, mpv3.6, Error ellipse: s-maj=2.2km s-min=1.0km az=159.0*
KNET ***13*** *12:21:55.2±0.5, 43°.00N×75°.20E, h20km±3km, ml2.7, Error ellipse: s-maj=3.7km s-min=2.6km az=48.0*
KRNET ***13*** *12:21:55.1±0.1, 43°.02N×75°.25E, h19km, mb3.4*
SOME ***13*** *12:21:55.2, 43°.03N×75°.22E, h10km*
ISC 13 12:21:54.1±1.1, **43°.05N**±0°.02×**75°.17E**±0°.01, **h0**km±10km, **n96, σ1§32**/176, **24C-35D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHMS	Chumysh baz=67	0.31	260	⇓iP	Pb	12 22 02.4	-0.2
CHMS	baz=67			⇓iS	Sb	12 22 07.7	-0.5

CHMS	**Chumysh**	**0.31**	**260**	⇑P	**Pb**	**12 22 02.4**	**-0.2**
	140nm,0.1s,SNR=317						
CHMS				⇓S	**Sb**	**12 22 07.8**	**-0.5**
	407nm,0.1s						
CHMS	**Chumysh**	**0.31**	**260**	⇑P	**Pb**	**12 22 02.2**	**-0.3**
	12nm,0.1s						
CHMS				⇓S	**Sb**	**12 22 07.6**	**-0.5**
	162nm,0.3s						
KBK	**Karagaybulak**	**0.43**	**202**	⇓iP	**Pb**	**12 22 03.9**	**-0.8**
	baz=11						
KBK				⇓iS	**Sb**	**12 22 10.4**	**-1.3**
	baz=11						
KBK	**Karagaybulak**	**0.43**	**202**	P	**Pb**	**12 22 03.9**	**-0.8**
	87nm,0.1s,SNR=55						
KBK				⇑S	**Sb**	**12 22 10.6**	**-1.1**
	600nm,0.2s						
FRU1	**Bishkek**	**0.47**	**239**	⇑iP	**Pb**	**12 22 05.0**	**-0.2**
	baz=45						
FRU1				⇑eS	**Sb**	**12 22 12.2**	**-0.4**
	baz=45						
DGS	**Degeres**	**0.48**	**67**	eP	**Pg**	**12 22 03.9**	**+0.6**
	baz=60						
DGS				eS	**Sg**	**12 22 09.9**	**+0.4**
	baz=60						
DGS	**Degeres**	**0.48**	**67**	eP	**Pg**	**12 22 03.9**	**+0.6**
	40nm,0.1s						
DGS				eS	**Sg**	**12 22 09.9**	**+0.4**
	613nm,0.2s						
DGS	**Degeres**	**0.48**	**67**	P	**Pg**	**12 22 03.9**	**+0.6**
	40nm,0.1s						
DGS				S	**Sg**	**12 22 09.9**	**+0.4**
	613nm,0.2s						
USP	**Ospenovka**	**0.53**	**294**	⇓iP	**Pb**	**12 22 06.3**	**0.0**
	baz=94						
USP				⇓iS	**Sb**	**12 22 14.7**	**+0.1**
	baz=94						
USP	**Ospenovka**	**0.53**	**294**	P	**Pb**	**12 22 06.4**	**0.0**
	50nm,0.1s,SNR=43						
USP				⇑S	**Sb**	**12 22 14.7**	**+0.1**
	237nm,0.1s						
SGDS	**Sogindy**	**0.56**	**315**	P	**Pb**	**12 22 06.7**	**-0.1**
	163nm,0.2s						
SGDS				S	**Sb**	**12 22 15.3**	**-0.1**
	433nm,0.1s						
KST	**Kastek**	**0.58**	**91**	eP	**Pg**	**12 22 05.3**	**0.0**
	baz=87						
KST				eS	**Sg**	**12 22 12.7**	**-0.1**
	baz=87						
KST	**Kastek**	**0.58**	**91**	eP	**Pg**	**12 22 05.3**	**0.0**
	198nm,0.1s						
KST				eS	**Sg**	**12 22 12.7**	**-0.1**
	894nm,0.2s						
KST	**Kastek**	**0.58**	**91**	P	**Pg**	**12 22 05.3**	**0.0**
	198nm,0.1s						
KST				S	**Sg**	**12 22 12.7**	**-0.1**
	894nm,0.2s						
AAK	**Ala-Archa**	**0.65**	**230**	⇑iP	**Pb**	**12 22 07.9**	**-0.4**
	baz=36						
AAK				⇑iS	**Sb**	**12 22 16.9**	**-1.1**
	baz=36						
AAK	**Ala-Archa**	**0.65**	**230**	⇓P	**Pb**	**12 22 08.0**	**-0.4**
	34nm,0.2s,SNR=40						
AAK				⇑S	**Sb**	**12 22 17.4**	**-0.6**
	356nm,0.5s						
AAK	**Ala-Archa**	**0.65**	**230**	⇓P	**Pb**	**12 22 07.9**	**-0.4**
	9.1nm,0.3s						
AAK				⇓S	**Sb**	**12 22 17.2**	**-0.8**
	203nm,0.5s						
KRBS	**Karabastau**	**0.74**	**30**	eP	**Pg**	**12 22 09.0**	**+0.7**
	69nm,0.1s						
KRBS				eS	**Sg**	**12 22 18.9**	**+1.0**
	146nm,0.3s						
KRBS	**Karabastau**	**0.74**	**30**	P	**Pg**	**12 22 09.0**	**+0.7**
	69nm,0.1s						
KRBS				S	**Sg**	**12 22 18.9**	**+1.0**
	73nm,0.1s						
BOOM	**Boomskoye usch**	**0.80**	**135**	⇑iP	**Pg**	**12 22 09.0**	**-0.4**
	baz=36						
BOOM				⇑iS	**Sg**	**12 22 19.2**	**-0.6**
	baz=36						
MTBS	**Maitube**	**0.93**	**85**	eP	**Pg**	**12 22 11.3**	**-0.5**
	baz=82						
MTBS				eS	**Sg**	**12 22 23.0**	**-0.9**
	baz=82						
MTBS	**Maitube**	**0.93**	**85**	eP	**Pg**	**12 22 11.3**	**-0.5**
	23nm,0.2s						
MTBS				eS	**Sg**	**12 22 23.0**	**-0.9**
	198nm,0.2s						
MTBS	**Maitube**	**0.93**	**85**	P	**Pg**	**12 22 11.3**	**-0.5**
	23nm,0.2s						
MTBS				S	**Sg**	**12 22 23.0**	**-0.9**
	198nm,0.2s						
UCH	**Uchtor**	**0.96**	**211**	⇓iP	**Pg**	**12 22 13.1**	**+0.7**
	baz=15						
UCH				⇓iS	**Sg**	**12 22 25.9**	**+1.1**
	baz=15						
UCH	**Uchtor**	**0.96**	**211**	⇓P	**Pg**	**12 22 13.2**	**+0.7**
	21nm,0.1s,SNR=48						
UCH				⇓S	**Sg**	**12 22 26.0**	**+1.2**
	73nm,0.2s						
KZA	**Kyzart**	**0.98**	**176**	⇓iP	**Pg**	**12 22 13.3**	**+0.5**
	baz=80						
KZA				⇓iS	**Sg**	**12 22 25.9**	**+0.4**
	baz=80						
KZA	**Kyzart**	**0.98**	**176**	⇓P	**Pg**	**12 22 13.3**	**+0.5**
	68nm,0.1s,SNR=272						
KZA				⇑S	**Sg**	**12 22 26.3**	**+0.8**
	160nm,0.2s						
IZV	**Izvestkoviy**	**1.06**	**90**	eP	**Pg**	**12 22 13.7**	**-0.7**
	baz=89						
IZV				eS	**Sg**	**12 22 27.2**	**-0.9**
	baz=89						
IZV	**Izvestkoviy**	**1.06**	**90**	eP	**Pg**	**12 22 13.7**	**-0.7**
	65nm,0.1s						
IZV				eS	**Sg**	**12 22 27.2**	**-0.9**
	269nm,0.1s						
IZV	**Izvestkoviy**	**1.06**	**90**	P	**Pg**	**12 22 13.7**	**-0.7**
	65nm,0.1s						
IZV				S	**Sg**	**12 22 27.2**	**-0.9**
	269nm,0.1s						
EKS2	**Erkin-Say**	**1.10**	**250**	⇓iP	**Pb**	**12 22 16.2**	**+0.2**
	baz=52						
EKS2				⇓iS	**Sb**	**12 22 31.0**	**+0.1**
	baz=52						
EKS2	**Erkin-Say**	**1.10**	**250**	P	**Pb**	**12 22 16.2**	**+0.2**
	19nm,0.1s,SNR=131						
EKS2				⇑S	**Sn**	**12 22 31.9**	**-0.8**
	54nm,0.2s						
ULHL	**Ulahol**	**1.13**	**135**	⇓P	**Pg**	**12 22 14.7**	**-1.0**
	19nm,0.1s,SNR=117						
KUU	**Kurty**	**1.20**	**45**	eP	**Pg**	**12 22 16.6**	**-0.4**
	baz=42						
KUU				eS	**Sg**	**12 22 32.2**	**-0.3**
	baz=42						
KUU	**Kurty**	**1.20**	**45**	eP	**Pg**	**12 22 16.6**	**-0.4**
	29nm,0.2s						
KUU				eS	**Sg**	**12 22 32.1**	**-0.3**
	142nm,0.1s						
KUU	**Kurty**	**1.20**	**45**	P	**Pg**	**12 22 16.6**	**-0.4**
	29nm,0.2s						
KUU				S	**Sg**	**12 22 32.1**	**-0.3**
	142nm,0.1s						
KTBS	**Karatobe**	**1.28**	**59**	eP	**Pg**	**12 22 18.1**	**-0.6**
	baz=52						
KTBS				eS	**Sg**	**12 22 34.7**	**-0.7**
	baz=52						
KTBS	**Karatobe**	**1.28**	**59**	eP	**Pg**	**12 22 18.1**	**-0.6**
	7.7nm,0.2s						
KTBS				eS	**Sg**	**12 22 34.6**	**-0.7**
	192nm,0.4s						
KTBS	**Karatobe**	**1.28**	**59**	P	**Pg**	**12 22 18.1**	**-0.6**
	7.7nm,0.2s						
KTBS				S	**Sg**	**12 22 34.6**	**-0.7**
	192nm,0.4s						
TNSS	**Tian-Shan**	**1.30**	**90**	eP	**Pg**	**12 22 18.1**	**-1.0**
	baz=89						
TNSS				eS	**Sg**	**12 22 35.0**	**-1.0**
	baz=89						
TNSS	**Tian-Shan**	**1.30**	**90**	eP	**Pg**	**12 22 18.1**	**-1.0**
	39nm,0.2s						
TNSS				eS	**Sg**	**12 22 35.0**	**-1.0**
	171nm,0.4s						
TNSS	**Tian-Shan**	**1.30**	**90**	P	**Pg**	**12 22 18.1**	**-1.0**
	39nm,0.2s						
TNSS				S	**Sg**	**12 22 35.0**	**-1.0**
	171nm,0.4s						
KNDC	**Almaty**	**1.32**	**82**	⇓P	**Pg**	**12 22 18.9**	**-0.6**
	18nm,0.3s						
KNDC				⇑S	**Sg**	**12 22 35.9**	**-0.8**
	36nm,0.3s						
ARLS	**Aral**	**1.35**	**208**	⇑iP	**Pg**	**12 22 20.0**	**+0.1**
	baz=11						
ARLS				⇑iS	**Sb**	**12 22 38.0**	**-0.1**
	baz=11						
MDOK	**Medeo**	**1.38**	**85**	eP	**Pn**	**12 22 19.3**	**-1.5**
	baz=83						
MDOK				eS	**Sg**	**12 22 37.0**	**-1.5**
	baz=83						
MDOK	**Medeo**	**1.38**	**85**	eP	**Pn**	**12 22 19.3**	**-1.5**
	20nm,0.3s						
MDOK				eS	**Sg**	**12 22 37.0**	**-1.5**
	118nm,0.2s						
MDOK	**Medeo**	**1.38**	**85**	⇑P	**Pn**	**12 22 18.9**	**-1.8**
	6.0nm,0.3s						
MDOK				⇓S	**Sg**	**12 22 36.5**	**-1.9**
	52nm,0.5s						
MDOK	**Medeo**	**1.38**	**85**	Pg	**Pn**	**12 22 19.3**	**-1.5**
	20nm,0.3s						
MDOK				Lg	Lg	12 22 37.0	
	118nm,0.2s						
AML	**Almayashu**	**1.43**	**230**	⇓iP	**Pb**	**12 22 21.9**	**+0.2**
	baz=33						
AML				⇓iS	**Sn**	**12 22 41.3**	**+0.1**
	baz=33						
AML	**Almayashu**	**1.43**	**230**	⇑P	**Pb**	**12 22 22.0**	**+0.2**
	18nm,0.2s,SNR=34						
KOTS	**Kotyrbulak**	**1.43**	**82**	eP	**Pn**	**12 22 20.4**	**-1.1**
	baz=81						
KOTS				eS	**Sg**	**12 22 39.0**	**-1.2**
	baz=81						
KOTS	**Kotyrbulak**	**1.43**	**82**	eP	**Pn**	**12 22 20.4**	**-1.1**
	39nm,0.2s						
KOTS				eS	**Sg**	**12 22 38.9**	**-1.2**
	52nm,0.2s						
KOTS	**Kotyrbulak**	**1.43**	**82**	P	**Pn**	**12 22 20.4**	**-1.1**
	39nm,0.2s						
KOTS				S	**Sg**	**12 22 38.9**	**-1.2**
	52nm,0.2s						
MRKS	**Merke**	**1.46**	**258**	eP	**Pg**	**12 22 22.4**	**+0.3**
	baz=60						
MRKS				eS	**Sn**	**12 22 42.5**	**+0.8**
	baz=60						
MRKS	**Merke**	**1.46**	**258**	eP	**Pg**	**12 22 22.4**	**+0.3**
	135nm,0.2s						
MRKS				eS	**Sn**	**12 22 42.5**	**+0.8**
	81nm,0.2s						
MRKS	**Merke**	**1.46**	**258**	P	**Pg**	**12 22 22.4**	**+0.3**
	135nm,0.2s						
MRKS				S	**Sn**	**12 22 42.8**	**+1.1**
	81nm,0.2s						
CHKK	**Chushkaly**	**1.55**	**58**	eP	**Pn**	**12 22 22.7**	**-0.2**
	baz=56						
CHKK				eS	**Sn**	**12 22 42.7**	**-1.0**
	baz=56						
CHKK	**Chushkaly**	**1.55**	**58**	eP	**Pn**	**12 22 22.7**	**-0.2**
	15nm,0.2s						
CHKK				eS	**Sn**	**12 22 42.7**	**-1.0**
	208nm,0.2s						
CHKK	**Chushkaly**	**1.55**	**58**	P	**Pn**	**12 22 22.7**	**-0.2**
	15nm,0.2s						
CHKK				S	**Sn**	**12 22 42.7**	**-1.0**
	208nm,0.2s						
NRN	**Naryn**	**1.73**	**159**	⇓iP	**Pn**	**12 22 26.1**	**+0.4**
	baz=61						
NRN				⇓iS	**Sn**	**12 22 48.7**	**0.0**
	baz=61						
KDJ	**Kajisay**	**1.75**	**121**	⇓iP	**Pn**	**12 22 25.8**	**0.0**
	baz=21						
KDJ				⇓iS	**Sn**	**12 22 48.1**	**-0.8**
	baz=21						
ANVS	**Anan'yevo**	**1.85**	**98**	⇓iP	**Pb**	**12 22 28.1**	**-0.9**
	baz=97						
ANVS				⇓iS	**Sn**	**12 22 51.7**	**+0.2**
	baz=97						
BTLS	**Baital**	**2.15**	**338**	eP	**Pb**	**12 22 34.3**	**+0.5**
	baz=37						
BTLS				eS	**Sg**	**12 23 02.2**	**-0.8**
	baz=37						
BTLS	**Baital**	**2.15**	**338**	eP	**Pb**	**12 22 34.3**	**+0.5**
	6.8nm,0.3s						
BTLS				eS	**Sg**	**12 23 02.2**	**-0.8**
	91nm,0.2s						
BTLS	**Baital**	**2.15**	**338**	Pg	**Pb**	**12 22 34.3**	**+0.5**
	6.8nm,0.3s						
BTLS				Lg	Lg	12 23 02.2	
	91nm,0.2s						
KURS	**Kuram**	**2.23**	**78**	eP	**Pb**	**12 22 34.8**	**-0.6**
	baz=77						
KURS				eS	**Sb**	**12 23 03.1**	**-0.5**
	baz=77						
KURS	**Kuram**	**2.23**	**78**	eP	**Pb**	**12 22 34.8**	**-0.6**
	2.4nm,0.2s						
KURS				eS	**Sb**	**12 23 03.0**	**-0.5**
	22nm,0.3s						
KURS	**Kuram**	**2.23**	**78**	Pg	**Pb**	**12 22 34.8**	**-0.6**
	2.4nm,0.2s						
KURS				Lg	Lg	12 23 03.1	
	22nm,0.3s						
ARXS	**Arharly**	**2.25**	**58**	eP	**Pb**	**12 22 35.0**	**-0.6**
	11nm,0.2s						
ARXS				eS	**Sb**	**12 23 03.5**	**-0.6**
	87nm,0.4s						
ARXS	**Arharly**	**2.25**	**58**	Pg	**Pb**	**12 22 35.0**	**-0.6**
	11nm,0.2s						
ARXS				Lg	Lg	12 23 03.5	
	87nm,0.4s						
SATY	**Saty**	**2.37**	**89**	eP	**Pb**	**12 22 38.3**	**+0.6**
	9.3nm,0.3s						
SATY				eS	**Sg**	**12 23 09.1**	**-1.2**
	93nm,0.2s						
SATY	**Saty**	**2.37**	**89**	Pg	**Pb**	**12 22 38.3**	**+0.6**
	9.3nm,0.3s						
SATY				Lg	Lg	12 23 09.1	
	93nm,0.2s						
ARSB	**Arslanbob**	**2.37**	**224**	⇓iP	**Pb**	**12 22 36.2**	**-1.6**
	baz=26						
ARSB				⇓iS	**Sn**	**12 23 05.6**	**+1.4**
	baz=26						
PRZ	**Przheval'sk**	**2.45**	**102**	⇑iP	**Pn**	**12 22 36.1**	**+0.7**
	baz=2.0						
PRZ				⇑iS	**Sn**	**12 23 05.2**	**-0.9**
	baz=2.0						
KPKS	**Kokpek**	**2.60**	**80**	eP	**Pb**	**12 22 41.3**	**-0.3**
	baz=79						
KPKS				eS	**Sb**	**12 23 14.3**	**+0.1**
	baz=79						
KPKS	**Kokpek**	**2.60**	**80**	eP	**Pg**	**12 22 41.2**	**-0.3**
	21nm,0.2s						
KPKS				eS	**Sb**	**12 23 14.2**	**+0.1**
	95nm,0.2s						
UZB	**Uzynbulak**	**2.82**	**87**	eP	**Pb**	**12 22 45.4**	**-0.1**
	baz=86						
UZB				eS	**Sb**	**12 23 21.2**	**+0.6**
	baz=86						
UZB	**Uzynbulak**	**2.82**	**87**	eP	**Pb**	**12 22 45.4**	**-0.1**
	4.7nm,0.3s						
UZB				eS	**Sb**	**12 23 21.1**	**+0.6**
	50nm,0.3s						
UZB	**Uzynbulak**	**2.82**	**87**	Pg	**Pb**	**12 22 45.4**	**-0.1**
	4.7nm,0.3s						
UZB				Lg	Lg	12 23 21.1	
	50nm,0.3s						
SHLS	**Shalkode**	**3.15**	**87**	eP	**Pg**	**12 22 58.4**	**+4.0**
	baz=86						
SHLS				eS	**Sg**	**12 23 43.5**	**+8.4**
	baz=86						
SHLS	**Shalkode**	**3.15**	**87**	eP	**Pg**	**12 22 58.4**	**+4.0**
	9.3nm,0.3s						
SHLS				eS	**Sg**	**12 23 43.5**	**+8.4**
	18nm,0.3s						
SHLS	**Shalkode**	**3.15**	**87**	Pg	**Pg**	**12 22 58.4**	**+4.0**
	9.3nm,0.3s						
SHLS				Lg	Lg	12 23 43.6	
	18nm,0.3s						
PDGK	**Podgornoye**	**3.17**	**84**	Pg	**Pb**	**12 22 51.1**	**-0.3**
	0.8nm,0.1s						
PDGK				Lg	Lg	12 23 31.0	
	9.3nm,0.2s						
PDGK	**Podgornoye**	**3.17**	**84**	⇓Pg	**Pb**	**12 22 51.7**	**+0.3**
	3.0nm,0.4s						
PDGK				⇑Lg	Lg	12 23 31.4	
	19nm,0.5s						
KK31	**Karatay Array**	**3.41**	**272**	Pg	**Pg**	**12 22 58.3**	**-1.2**
	3.1nm,0.4s,baz=88,slow=14,SNR=49						
KK31				Lg	Lg	12 23 45.4	
	11nm,0.4s,baz=81,slow=29,SNR=14						
DJR	**Jarkent**	**3.59**	**68**	eP	**Pb**	**12 22 59.1**	**+0.6**
DJR				eS	**Sb**	**12 23 44.6**	**+2.1**
KAPS	**Kapalarasan**	**3.75**	**52**	eP	**Pg**	**12 23 03.9**	**-2.1**
	1.1nm,0.2s						
KAPS				eS	**Sg**	**12 23 52.8**	**-1.7**
	24nm,0.5s						
KAPS	**Kapalarasan**	**3.75**	**52**	Pg	**Pb**	**12 23 00.5**	**-0.6**
KAPS				Lg	Lg	12 23 47.1	
IUG	**Iuzhnay**	**3.90**	**258**	eP	**Pg**	**12 23 07.9**	**-0.9**
	baz=59						
IUG				eS	**Sg**	**12 23 58.7**	**-0.6**
	baz=59						
IUG	**Iuzhnay**	**3.90**	**258**	eP	**Pg**	**12 23 07.9**	**-0.9**
	1.1nm,0.4s						
IUG				eS	**Sg**	**12 23 58.7**	**-0.6**
	23nm,0.6s						
IUG	**Iuzhnay**	**3.90**	**258**	Pg	**Pg**	**12 23 07.9**	**-0.9**
	1.1nm,0.4s						
IUG				Lg	Lg	12 23 58.7	
	23nm,0.6s						
BRLS	**Borolday**	**3.91**	**271**	eP	**Pg**	**12 23 08.6**	**-0.4**
	baz=72						
BRLS				eS	**Sg**	**12 24 01.0**	**+1.3**
	baz=72						
BRLS	**Borolday**	**3.91**	**271**	eP	**Pg**	**12 23 08.6**	**-0.4**
	1.0nm,0.3s						
BRLS				eS	**Sg**	**12 24 00.9**	**+1.3**
	5.8nm,0.4s						
MK31	**Makanchi Array**	**6.29**	**51**	⇑Pn	**Pn**	**12 23 28.0**	**0.0**
	0.2nm,0.2s,baz=231,slow=13,SNR=24						
MK31				⇑Sn	**Sn**	**12 24 43.2**	**+2.6**
	0.7nm,0.6s,baz=225,slow=24,SNR=3.8						
MK31				⇓Lg	Lg	12 25 13.4	
	1.6nm,0.5s						
KURBB	**Kurchatov Arra**	**7.91**	**16**	⇑Lg	Lg	12 26 07.4	
	12nm,0.7s						

CNRM 13 12:29:16.3±0.4, 32°.49N×6°.80W, h0km, Error ellipse: s-maj=5.3km s-min=3.3km az=136.0, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRHM	**Skhour des Reh**	**0.93**	**269**	P	Pn	12 29 36.2	-0.5
SRHM				S	Sn	12 29 50.1	-0.7
SRHM	**Skhour des Reh**	**0.93**	**269**	P	Pn	12 29 36.2	-0.5
SRHM				S	Sn	12 29 50.1	-0.7
ZHG	**ZHG**	**0.97**	**8**	P	Pg	12 29 33.1	-1.7
ZHG				S	Sg	12 29 44.6	-2.8
ZHG	**ZHG**	**0.97**	**8**	P	Pg	12 29 33.1	-1.7
ZHG				S	Sg	12 29 44.6	-2.8
OUK	**Oukaimeden**	**1.57**	**216**	P	Pb	12 29 47.0	+0.7
OUK				S	Sn	12 30 07.8	+1.0
OUK	**Oukaimeden**	**1.57**	**216**	P	Pb	12 29 47.0	+0.7
OUK				S	Sn	12 30 07.8	+1.0
OUZM	**OUZ**	**1.57**	**179**	P	Pg	12 29 47.6	+1.2
OUZM				S	Sg	12 30 10.1	+3.3
OUZM	**OUZ**	**1.57**	**179**	P	Pg	12 29 47.6	+1.2
OUZM				S	Sg	12 30 10.1	+3.3
MD31	**MD31**	**1.76**	**77**	P	Pn	12 29 47.4	-0.7
MD31				S	Sn	12 30 10.7	-0.6
MD31	**MD31**	**1.76**	**77**	P	Pn	12 29 47.4	-0.7
MD31				S	Sn	12 30 10.7	-0.6
MDT	**Midelt**	**1.88**	**79**	P	Pn	12 29 49.7	0.0
MDT				S	Sb	12 30 15.1	-0.5
MDT	**Midelt**	**1.88**	**79**	P	Pn	12 29 49.7	0.0
MDT				S	Sb	12 30 15.1	-0.5
TTIG	**Tnine Tigouga,**	**2.39**	**216**	P	Pb	12 29 58.9	-1.3
TTIG				S	Sb	12 30 28.7	-1.6
TTIG	**Tnine Tigouga,**	**2.39**	**216**	P	Pb	12 29 58.9	-1.3
TTIG				S	Sb	12 30 28.7	-1.6

IDC 13 12:51:43.9±3.2, 24°.06S×179°.95W, h461km±40km, mb3.1/6, mb1 3.4/8, mb1mx3.2/22, mbtmp4.1/8, Error ellipse: s-maj=28.6km s-min=18.9km az=152.0
NEIC 13 12:51:46.3±1.8, 24°.16S±0°.08×179°.7W±0°.2, h518km±13km, mb4.5/17, Error ellipse: s-maj=26.4km s-min=10.1km az=100.0
ISC 13 12:51:47.2±0.6, 24°.14S±0°.09×179°.9W±0°.1, h518km, n37, σ1°.36/36, mb3.7/8, 1C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
MSVF	**Nonsavu**	**6.66**	**343**	P	**P**	**12 53 30.7**	**-0.2**
NIUE	**Niue**	**10.56**	**63**		**P**	**12 54 10.8**	**+0.2**
AFI	**Afiamalu**	**12.75**	**38**	P	**P**	**12 54 30.1**	**-3.7**
	3.0nm,0.3s,baz=332,slow=10,SNR=4.8						
URZ	**Urewera**	**14.30**	**190**	P	**P**	**12 54 47.6**	**-2.1**
	2.3nm,0.3s,baz=289,slow=2.6,SNR=19						
URZ				S	**S**	**12 57 19.5**	**-0.6**
	0.4nm,0.3s,baz=92,slow=22,SNR=8.9						
HIZ	**Hauiti**	**15.01**	**196**	P	**P**	**12 54 55.3**	**-1.8**
BKZ	**Black Stump Fm**	**15.29**	**191**	P	**P**	**12 54 57.8**	**-2.2**
BKZ				IAmb	IAmb	12 55 04.7	
	comp=Z,11nm,1.1s						
MSWZ	**Moikau Station**	**17.70**	**192**	P	**P**	**12 55 20.8**	**-2.9**
SNZO	**South Karori**	**17.70**	**193**	P	**P**	**12 55 22.5**	**-1.3**
BHW	**Baring Head**	**17.76**	**193**	P	**P**	**12 55 23.7**	**-0.6**
QRZ	**Quartz Range**	**17.81**	**199**	P	**P**	**12 55 24.7**	**0.0**
PLWZ	**Palliser**	**17.84**	**192**	P	**P**	**12 55 22.8**	**-2.3**
TUWZ	**Tuamarina**	**17.99**	**195**	P	**P**	**12 55 25.5**	**-0.8**
BSWZ	**Blackbirch Sta**	**18.28**	**195**	P	**P**	**12 55 29.5**	**+0.5**
THZ	**Tophouse**	**18.57**	**197**	P	**P**	**12 55 31.8**	**+0.1**
THZ				IAmb	IAmb	12 55 36.8	
	comp=Z,19nm,1.2s						
KHZ	**Kahutara**	**19.02**	**195**	P	**P**	**12 55 35.4**	**-0.4**
KHZ				IAmb	IAmb	12 55 36.7	
	comp=Z,29nm,1.2s						
LTZ	**Lake Taylor**	**19.69**	**197**	P	**P**	**12 55 40.9**	**-1.0**
LTZ				IAmb	IAmb	12 55 44.5	
	comp=Z,18nm,0.8s						
MQZ	**McQueen's Vall**	**20.45**	**196**	P	**P**	**12 55 49.4**	**+0.6**
MQZ				IAmb	IAmb	12 56 08.8	
	comp=Z,42nm,1.4s						
RPZ	**Rata Peaks**	**20.89**	**199**	P	**P**	**12 55 53.2**	**+0.4**
	comp=Z,7.6nm,0.4s,baz=92,slow=1.2,SNR=7.2						
RPZ	**Rata Peaks**	**20.89**	**199**	IAmb	IAmb	12 55 59.1	
	comp=Z,38nm,1.2s						
MLZ	**Mavora Lakes**	**23.30**	**202**	P	**P**	**12 56 14.8**	**+0.4**
WHZ	**Wether Hill Ro**	**23.82**	**201**	P	**P**	**12 56 20.2**	**+1.2**
TOO	**Toolangi**	**32.39**	**237**	P	**P**	**12 57 35.0**	**+1.0**
STKA	**Stephens Creek**	**34.72**	**248**	P	**P**	**12 57 54.1**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=108,slow=11,SNR=5.8						
STKA	**Stephens Creek**	**34.72**	**248**	IAmb	IAmb	12 57 56.4	
	comp=Z,0.5nm,0.8s						
BBOO	**Buckleboo**	**39.43**	**247**	P	**P**	**12 58 32.5**	**+0.1**
BBOO				IAmb	IAmb	12 58 33.4	
	comp=Z,14nm,1.2s						
ASAR	**Alice Springs**	**42.09**	**261**	P	**P**	**12 58 54.1**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=97,slow=7.9,SNR=7.1						
WB2	**Warramunga Arr**	**42.47**	**266**	P	**P**	**12 58 56.4**	**-0.3**
WRAB	**Tennant Creek**	**42.47**	**266**	P	**P**	**12 58 56.8**	**0.0**
WRAB				IAmb	IAmb	12 59 01.3	
	comp=Z,10nm,1.5s						
WB0	**Warramunga Arr**	**42.48**	**267**	P	**P**	**12 58 56.9**	**+0.1**
WB0				IAmb	IAmb	12 59 09.7	
	comp=Z,8.4nm,1.4s						
WRA	**Warramunga Arr**	**42.48**	**266**	P	**P**	**12 58 57.1**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=103,slow=8.6,SNR=12						
SYO	**Syowa Base**	**82.80**	**193**	⇑ePcP	**PcP**	**13 03 19.5**	**-0.3**
NVAR	**Mina Array Bea**	**84.86**	**44**	P	**P**	**13 03 29.2**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=212,slow=6.4,SNR=2.3						
TXAR	**Lajitas Array**	**90.48**	**58**	P	**P**	**13 03 56.5**	**+2.6**
	comp=Z,0.6nm,0.7s,baz=220,slow=6.6,SNR=8.7						
ARCES	**ARCESS Array B**	**132.14**	**348**	PKP	**PKiKP**	**13 10 01.8**	**-0.5**
	comp=Z,3.7nm,0.9s,baz=72,slow=12,SNR=2.5						
AKASG	**Malin Array Be**	**145.22**	**327**	PKPbc	**PKPbc**	**13 10 26.8**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=54,slow=4.8,SNR=2.0						
GRA1	**Grafenberg Arr**	**153.05**	**344**		**PKPab**	**13 10 58.6**	**-1.1**
TORD	**Torodi Ar. Bea**	**168.96**	**188**		**PKPdf**	**13 10 54.5**	**-1.0**

SOME 13 13:12:08.7, 47°.53N×81°.78E, h0km
NNC 13 13:12:09.3±0.4, 47°.50N×82°.28E, h0km, mb3.4, mpv2.6, Error ellipse: s-maj=5.7km s-min=1.8km az=78.0
ISC 13 13:12:09.1±1.4, 47°.51N±0°.04×82°.07E±0°.07, h2km±14km, n16, σ0°.76/29, 16C-9D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKZ	**Makanchi**	**0.71**	**185**	⇓P	**Pb**	**13 12 23.6**	**-0.5**
	2.9nm,0.3s						

MAKZ ⇑S Sb 13 12 33.5 -0.9
16nm,0.3s
MK05 Makanchi Array 0.74 168 ⇑P Pg 13 12 23.2 0.0
MK05 ⇓S **Sg 13 12 33.2 +0.4**
MK31 Makanchi Array 0.74 168 ⇓P Pg 13 12 23.2 0.0
1.1nm,0.1s,baz=97,slow=34,SNR=1294
MK31 ⇑S **Sg 13 12 33.0 +0.3**
52nm,0.5s,baz=5.2,slow=24,SNR=31
MK09 Makanchi Array 0.75 169 ⇓P Pg 13 12 23.6 +0.1
MK09 ⇑S **Sg 13 12 33.7 +0.4**
MK06 Makanchi Array 0.76 167 ⇓P Pg 13 12 23.6 -0.1
MK06 ⇓S **Sg 13 12 33.5 +0.1**
MK04 Makanchi Array 0.76 168 ⇑P Pg 13 12 23.6 0.0
MK04 ⇑S **Sg 13 12 33.7 +0.2**
MK01 Makanchi Array 0.76 168 ⇑P Pg 13 12 23.7 0.0
MK01 ⇑S **Sg 13 12 33.8 +0.3**
MK02 Makanchi Array 0.76 167 ⇑P Pg 13 12 23.6 -0.1
MK02 ⇑S **Sg 13 12 34.0 +0.4**
MK03 Makanchi Array 0.77 168 ⇑P Pg 13 12 23.7 0.0
MK03 ⇑S **Sg 13 12 33.9 +0.2**
MK08 Makanchi Array 0.77 169 ⇑P Pg 13 12 23.9 0.0
MK08 ⇑S **Sg 13 12 34.2 +0.3**
MK07 Makanchi Array 0.78 167 ⇓P Pg 13 12 24.0 -0.1
MK07 ⇑S **Sg 13 12 34.1 0.0**
ZSN Zaisan 1.90 91 eP **Pn 13 12 42.2 -0.3**
2.6nm,0.2s
ZSN eS **Sn 13 13 07.2 +0.1**
79nm,0.3s
KAPS Kapalarasan 2.91 221 eP **Pb 13 13 01.2 -0.6**
2.4nm,0.4s
KAPS eS **Sb 13 13 38.9 +1.0**
11nm,0.3s
SEM Semipalatinsk 3.13 338 eP **Pb 13 13 06.3 +0.6**
4.1nm,0.1s
SEM eS **Sg 13 13 47.2 -2.6**
24nm,0.2s
KURBB Kurchatov Arra 3.88 325 ⇓Pg Pb 13 13 20.2 +1.9
1.3nm,0.3s
KURBB ⇓Lg Lg 13 14 12.5
34nm,0.7s
PDGK Podgornoye 4.56 204 ⇑Lg Lg 13 14 34.1
3.9nm,0.5s

IDC 13 13:18:02.4±1.0, 37.°86N×69.°24E, h0km, mb3.6/8, mb1 3.9/14, mb1mx3.7/56, mbtmp3.8/14, ML3.1/5, MS2.1/1, Ms1 2.1/1, ms1mx2.0/33, Error ellipse: s-maj=21.5km s-min=13.5km az=157.0

NNC 13 13:18:05.9±2.3, 37.°88N×69.°19E, h25km±9km, mb4.2, mpv3.9, Error ellipse: s-maj=15.8km s-min=13.0km az=177.0

ISC 13 13:18:03.1±0.6, 37.°84N±0.°05×69.°30E±0.°05, h10km, n53, σ2°61/60, mb3.6/7, 8C-9D, Afghanistan-Tajikistan border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
IUG Iuzhnay 4.34 7 Pg Pg 13 19 27.6 +1.5
3.1nm,0.5s
IUG Lg Lg 13 20 25.6
280nm,0.7s
BRLS Borolday 5.20 4 Pg Pg 13 19 38.3 -4.4
0.9nm,0.6s
BRLS Lg Lg 13 20 44.1
42nm,0.6s
KK31 Karatay Array 5.34 10 ⇓Pn Pn 13 19 24.4 +1.6
1.9nm,0.4s,baz=189,slow=28,SNR=4.8
KK31 ⇑Pg Pg 13 19 40.0 -5.3
4.5nm,0.4s,baz=198,slow=13,SNR=6.8
KK31 ⇓Sn **Sn 13 20 25.5 +1.1**
5.9nm,0.5s,baz=208,slow=26,SNR=4.5
KK31 ⇑Lg Lg 13 20 53.6
30nm,0.5s,baz=192,slow=27,SNR=7.2
AML Almayashu 5.45 37 P **Pn 13 19 27.1 +2.4**
SNR=14
MRKS Merke 5.75 30 Pg **Pg 13 19 51.4 -1.7**
16nm,0.6s
MRKS Lg Lg 13 21 05.6
42nm,0.6s
EKS2 Erkin-Say 5.91 34 P **Pn 13 19 34.9 +4.2**
SNR=6.7
UCH Uchtor 5.93 41 P **Pn 13 19 33.9 +2.5**
SNR=16
AAK Ala-Archa 6.22 38 Pn **Pn 13 19 37.2 +2.1**
6.9nm,0.3s,baz=191,slow=7.1,SNR=71
AAK Lg Lg 13 21 20.5
4.2nm,0.3s,baz=326,slow=20,SNR=6.1
AAK LR LR 13 21 35.5
comp=Z,20nm,22.0s,baz=209,slow=34
AAK Ala-Archa 6.22 38 P **Pn 13 19 37.5 +2.4**
SNR=31
AAK Ala-Archa 6.22 38 ⇓Pn Pn 13 19 36.6 +1.5
11nm,0.4s
AAK ⇓Sn **Sn 13 20 48.5 +2.1**
19nm,0.6s
AAK ⇑Lg Lg 13 21 22.1
72nm,0.9s
KZA Kyzart 6.23 45 P **Pn 13 19 38.2 +2.8**
SNR=11
KBK Karagaybulak 6.46 40 P **Pn 13 19 40.7 +2.2**
SNR=11
CHMS Chumysh 6.62 37 P **Pn 13 19 42.8 +2.3**
SNR=12
CHMS Chumysh 6.62 37 ⇑Pn Pn 13 19 42.0 +1.6
8.2nm,0.5s
CHMS ⇓Sn **Sn 13 20 58.7 +2.8**
14nm,0.7s
CHMS ⇓Lg Lg 13 21 34.2
25nm,0.8s
USP Ospenovka 6.71 34 P **Pn 13 19 44.4 +2.7**
SNR=7.2
SGDS Sogindy 6.92 34 Pg **Pg 13 20 12.3 -3.2**
8.0nm,0.7s
SGDS Lg Lg 13 21 41.4
26nm,0.8s
KST Kastek 7.27 42 Pg **Pg 13 20 20.4 -1.8**
8.4nm,0.6s
KST Lg Lg 13 21 57.2
24nm,0.7s
DGS Degeres 7.31 40 Pg **Pg 13 20 19.4 -3.5**
9.0nm,0.7s
DGS Lg Lg 13 21 53.8
29nm,0.8s
KRBS Karabastau 7.59 38 Pg **Pg 13 20 24.6 -3.8**
4.0nm,0.6s
KRBS Lg Lg 13 22 02.4
7.3nm,0.6s
MDOK Medeo 7.94 46 ⇓Pn Pn 13 20 00.1 +1.4
5.3nm,0.5s
MDOK Lg Lg 13 22 17.2
22nm,0.8s
DHRM DHARAMSHALA 8.00 132 eP **Pn 13 20 03.6 +4.0**
DHRM eS **Sn 13 21 26.5 -3.8**
GEYT Alibeck 8.84 274 Pn **Pn 13 20 11.6 +0.6**
1.0nm,0.3s,baz=94,slow=10,SNR=7.5
GEYT Sn **Sn 13 21 52.1 +1.4**
0.6nm,0.3s,baz=172,slow=12,SNR=1.8
SMLA Simla 9.32 134 eP **Pn 13 20 16.1 -1.4**
SMLA eS **Sn 13 22 00.1 -2.2**
MAKZ Makanchi 12.96 42 ⇑Pn Pn 13 21 07.7 +0.5
2.4nm,1.1s
MK31 Makanchi Array 13.12 43 Pn **Pn 13 21 08.9 -0.5**
2.2nm,0.7s,baz=229,slow=13,SNR=27
MK31 Sn **Sn 13 23 40.7 +5.4**
1.4nm,0.7s,baz=231,slow=9.3,SNR=5.7
MKAR Makanchi Array 13.12 43 Pn **Pn 13 21 09.3 -0.1**
0.2nm,0.3s,baz=230,slow=14,SNR=28
AB31 Akbulak array 13.26 332 Pn **Pn 13 21 11.1 -0.2**
1.0nm,0.3s,baz=158,slow=12,SNR=87
AB31 Sn **Sn 13 23 34.9 -3.9**
2.1nm,0.5s,baz=166,slow=20,SNR=6.5
KURBB Kurchatov Arra 14.37 24 Pn **P 13 21 31.5 -2.1**
0.1nm,0.3s,baz=214,slow=10,SNR=12
KURBB Lg Lg 13 25 42.6
0.0nm,0.3s,baz=208,slow=30,SNR=4.6
KURBB Kurchatov Arra 14.37 24 ⇑Pn Pn 13 21 27.0 +0.5
2.5nm,0.7s
AKTO Aktyubinsk 14.95 331 Pn **Pn 13 21 34.6 +0.2**
0.5nm,0.3s,baz=144,slow=14,SNR=8.4
AKTO Aktyubinsk 14.95 331 ⇓Pn Pn 13 21 34.2 -0.1
12nm,0.9s
AKTO ⇑Sn **Sn 13 24 13.9 -6.0**
9.1nm,0.8s
BVAR Borovoye Array 15.21 3 Pn **Pn 13 21 38.5 +0.8**
0.5nm,0.3s,baz=157,slow=11,SNR=11
BRVK Borovoye 15.23 2 ⇑Pn Pn 13 21 39.0 +0.9
3.1nm,1.0s
DANN Dangsing 15.36 124 eP **Pn 13 21 35.1 -5.1**
14nm,0.6s
KOLN Koldanda 15.65 126 eP Pn 13 21 36.1 -7.8
PKIN Phulchoki 16.95 122 eP **Pn 13 21 55.9 -4.8**
PKI Pulchoki 16.97 122 eP **Pn 13 21 56.1 -4.8**
GUN Gumba 17.06 121 eP **Pn 13 22 00.2 -1.9**
42nm,0.7s
JIRN Jiri 17.43 121 eP **Pn 13 22 04.5 -2.3**
24nm,0.4s
RAMN Ramite 18.17 122 eP **Pn 13 22 11.7 -4.1**
19nm,0.6s
TAPN Taplejung 18.68 119 eP **Pn 13 22 22.6 +0.6**
ODAN Odare 18.77 120 eP **P 13 22 20.5 -2.1**
15nm,0.6s
GNI Garni 19.21 285 P **Pn 13 22 28.8 +0.5**
0.6nm,0.3s,baz=138,slow=12,SNR=3.6
ZALV Zalesovo Beam 19.32 29 P **P 13 22 27.7 -0.5**
0.6nm,0.3s,baz=214,slow=11,SNR=14
ARU Arti 19.94 342 P **Pn 13 22 36.3 -0.2**
0.0nm,0.3s,baz=171,slow=11,SNR=4.3
KBZ Khabaz 20.79 295 P Pn 13 22 45.5 -1.2
1.6nm,0.7s,baz=139,slow=8.7,SNR=4.1
CMAR Chiang Mai Arr 32.29 118 P **P 13 24 34.2 +2.1**
0.9nm,0.8s,baz=308,slow=8.2,SNR=7.2
FINES FINESS Array B 35.62 326 P **P 13 25 01.5 +0.9**
1.3nm,0.8s,baz=151,slow=8.9,SNR=1.7
ARCES ARCESS Array B 39.39 337 P **P 13 25 33.5 +1.0**
4.3nm,1.1s,baz=113,slow=8.0,SNR=4.9
TORD Torodi Ar. Bea 64.41 267 P **P 13 28 38.5 -1.3**
0.2nm,0.4s,baz=56,slow=5.6,SNR=4.1
ILAR Eielson Array 73.85 15 P **P 13 29 38.6 +1.1**
0.3nm,0.8s,baz=342,slow=4.7,SNR=3.0
YKA Yellowknife Ar 79.96 2 P **P 13 30 12.0 0.0**
0.2nm,0.7s,baz=353,slow=5.6,SNR=2.7
WRA Warramunga Arr 83.85 121 P **P 13 30 34.8 +1.8**
0.4nm,0.9s,baz=329,slow=4.9,SNR=1.8

IDC 13 13:20:35.0±1.3, 37.°86N×69.°39E, h0km, mb3.6/5, mb1 3.9/10, mb1mx3.6/61, mbtmp3.8/10, ML3.5/5, Error ellipse: s-maj=22.1km s-min=18.0km az=166.0

ISC 13 13:20:35.7±0.8, 37.°81N±0.°10×69.°35E±0.°07, h12km, n13, σ1°66/14, mb3.7/4, Afghanistan-Tajikistan border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AAK Ala-Archa 6.22 38 Pn **Pn 13 22 08.6 +1.1**
2.5nm,0.3s,baz=124,slow=22,SNR=1.3
AAK Lg Lg 13 23 53.0
0.9nm,0.3s,baz=298,slow=20,SNR=3.2
THN Thein Dam 7.48 134 eP **Sn 13 23 46.0 -3.2**
GEYT Alibeck 8.89 274 Pn **Pn 13 22 43.2 -0.8**
2.2nm,0.3s,baz=109,slow=12,SNR=9.2
GEYT Sn **Sn 13 24 23.0 -1.0**
0.8nm,0.3s,baz=299,slow=44,SNR=1.5
MKAR Makanchi Array 13.11 43 Pn **Pn 13 23 40.5 -1.2**
0.1nm,0.3s,baz=232,slow=12,SNR=5.7
KURBB Kurchatov Arra 14.39 24 Pn **P 13 24 04.6 -1.4**
0.0nm,0.3s,baz=214,slow=9.6,SNR=4.4
KURBB Lg Lg 13 28 21.6
0.0nm,0.3s,baz=117,slow=23,SNR=2.7
AKTO Aktyubinsk 15.00 331 Pn **Pn 13 24 06.2 -1.2**
0.2nm,0.3s,baz=148,slow=16,SNR=2.6
BVAR Borovoye Array 15.24 2 Pn **Pn 13 24 09.7 -0.8**
0.1nm,0.3s,baz=226,slow=43,SNR=2.0
ZALV Zalesovo Beam 19.33 28 P **P 13 24 59.4 -1.2**
0.3nm,0.3s,baz=219,slow=11,SNR=3.6
KBZ Khabaz 20.85 295 P **P 13 25 17.9 +0.8**
1.8nm,0.7s,baz=237,slow=17,SNR=3.1
CMAR Chiang Mai Arr 32.23 119 P **P 13 27 06.4 +2.4**
0.4nm,0.3s,baz=302,slow=8.4,SNR=4.6
FINES FINESS Array B 35.66 326 P **P 13 27 34.9 +1.6**
1.4nm,0.9s,baz=333,slow=9.3,SNR=1.2
YKA Yellowknife Ar 79.99 2 P **P 13 32 45.0 +0.6**
0.2nm,0.6s,baz=354,slow=5.6,SNR=4.2
ASAR Alice Springs 86.08 124 P **P 13 33 17.5 +1.0**
0.5nm,1.0s,baz=323,slow=4.6,SNR=2.3

IDC 13 13:36:57.3±14.0, 14.°10N×52.°16E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/37, mbtmp3.5/4, Error ellipse: s-maj=484.5km s-min=48.8km az=86.0, Eastern Gulf of Aden

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
H08N2 Diego Garcia H 27.59 136 T T 14 10 39.9
baz=324,slow=76,SNR=5.2
H08N3 Diego Garcia H 27.60 136 T T 14 10 41.1
H08N1 Diego Garcia H 27.61 136 T T 14 10 40.7
baz=316,slow=76,SNR=4.9
MKAR Makanchi Array 41.20 32 P P 13 44 43.6 -0.2
0.4nm,0.6s,baz=218,slow=8.2,SNR=5.8
KURBB Kurchatov Arra 42.24 25 P P 13 44 52.9 +0.6
0.5nm,0.7s,baz=224,slow=8.0,SNR=5.3
ZALV Zalesovo Beam 47.31 26 P P 13 45 31.6 -1.0
0.5nm,0.4s,baz=218,slow=3.5,SNR=4.4
ASAR Alice Springs 88.22 115 P P 13 49 51.0 0.0
0.4nm,1.1s,baz=284,slow=4.7,SNR=2.1

IDC 13 14:00:04.9±1.6, 21.°00S×178.°38W, h511km±17km, mb3.6/15, mb1 3.8/19, mb1mx3.7/25, mbtmp4.4/19, Error ellipse: s-maj=16.9km s-min=11.8km az=140.0

NEIC 13 14:00:04.9±1.9, 21.°0S±0.°1×178.°3W±0.°1, h518km±7km, mb4.6/23, Error ellipse: s-maj=18.5km s-min=15.4km az=142.0

ISC 13 14:00:03.8±0.4, 21.°07S±0.°08×178.°23W±0.°08, h500km, n138, σ1°54/135, mb4.6/36, 18C-5D, Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSVF Nonsavu 4.83 313 P **P 14 01 33.6 +4.2**
AFI Afiamalu 9.41 42 P **P 14 02 16.4 +1.3**
3.1nm,0.3s,baz=115,slow=6.3,SNR=7.1
AFI S **S 14 03 58.3 -4.7**
baz=37,slow=20,SNR=3.2
DZM Mont Dzumac 14.29 263 P **P 14 03 07.3 +0.6**
1.0nm,0.3s,baz=86,slow=18,SNR=12
DZM Mont Dzumac 14.29 263 P **P 14 03 07.5 +0.8**
NOUC Port Laguerre 14.43 263 P **P 14 03 08.4 +0.4**
SANVU Saraoutou 14.92 290 P **P 14 03 14.1 +0.9**
KUZ Kuaotunu 16.48 197 P **P 14 03 32.7 +3.4**
WMGZ Waiomatatini S 16.94 189 P **P 14 03 37.7 +3.7**
MKAZ Moumakai 16.98 198 P **P 14 03 37.6 +3.3**
HAZ Te Kaha 16.98 191 P **P 14 03 37.1 +2.8**
RUGZ Raukumara Rang 17.20 191 P **P 14 03 38.4 +1.7**
RAR Rarotonga 17.22 94 P **P 14 03 38.2 +1.3**
0.9nm,0.3s,baz=86,slow=10,SNR=4.0
RAR Rarotonga 17.22 94 IAmb IAmb 14 03 43.7
comp=Z,1.8nm,0.5s
WHRZ Whale Island 17.23 193 P P 14 03 27.5 -9.4
TOZ Tahuroa Road 17.46 197 P **P 14 03 41.7 +2.7**
MWZ Matawai 17.59 191 P **P 14 03 42.5 +2.2**
URZ Urewera 17.59 192 P **P 14 03 41.1 +0.9**
comp=Z,1.4nm,0.3s,baz=297,slow=3.6,SNR=9.8
URZ S **S 14 06 31.9 -5.1**
comp=Z,0.5nm,0.3s,baz=225,slow=22,SNR=7.6
URZ Urewera 17.59 192 IAmb IAmb 14 03 54.8
comp=Z,9.3nm,1.0s
URZ Urewera 17.59 192 P **P 14 03 41.7 +1.4**
HIZ Hauiti 18.38 197 P **P 14 03 51.7 +4.3**
BKZ Black Stump Fm 18.59 193 P **P 14 03 50.6 +1.1**
TWVZ Taurewa 18.75 195 P P 14 03 44.7 -6.2
MCHZ McNeill Hill 18.82 192 P **P 14 03 53.9 +2.4**
BHHZ Black Hill Sta 19.00 194 P **P 14 03 53.5 +0.4**
RPZ Rata Peaks 24.28 199 P **P 14 04 42.7 +2.1**
comp=Z,5.7nm,0.5s,baz=4.0,slow=12,SNR=5.9
RPZ Rata Peaks 24.28 199 IAmb IAmb 14 04 45.4
comp=Z,27nm,1.1s
EIDS Eidsvold 28.49 255 P **P 14 05 17.6 -0.4**
EIDS IAmb IAmb 14 05 18.6
comp=Z,19nm,0.6s
ARMA Armidale 28.63 245 P **P 14 05 19.9 +0.6**
ARMA IAmb IAmb 14 05 20.6
comp=Z,5.7nm,0.5s
CAN Canberra 32.02 237 P **P 14 05 48.7 +0.3**
CAN IAmb IAmb 14 05 50.1
comp=Z,19nm,0.9s
PMG Port Moresby 35.27 284 P **P 14 06 14.8 -1.3**
TOO Toolangi 35.39 234 P **P 14 06 17.7 +0.8**
TAU Tasmania Unive 36.07 225 P **P 14 06 23.3 +0.9**
TAU IAmb IAmb 14 06 39.9
comp=Z,11nm,1.0s
STKA Stephens Creek 37.35 245 P **P 14 06 33.3 +0.1**
comp=Z,10nm,0.6s,baz=92,slow=10,SNR=41
STKA PcP **PcP 14 08 39.1 -0.2**
comp=Z,1.4nm,0.4s,baz=86,slow=2.8,SNR=3.6
STKA Stephens Creek 37.35 245 P **P 14 06 32.6 -0.6**
COEN Coen 37.41 274 P **P 14 06 33.2 -0.7**
COEN IAmb IAmb 14 06 34.1
comp=Z,15nm,0.8s
BBOO Buckleboo 42.10 244 P **P 14 07 11.1 -0.3**
WR0 Warramunga Arr 44.12 263 P **P 14 07 25.9 -1.6**
WR0 IAmb IAmb 14 07 27.4
comp=Z,12nm,0.7s
AS31 Alice Springs 44.18 257 P **P 14 07 27.0 -1.0**
ASAR Alice Springs 44.18 257 P **P 14 07 26.9 -1.0**
comp=Z,23nm,0.6s,baz=90,slow=8.3,SNR=614
ASAR PcP **pP 14 09 01.4 +2.1**
comp=Z,2.9nm,0.6s,baz=102,slow=3.8,SNR=9.0
ASAR ScP **ScP 14 12 04.8 -1.3**
comp=Z,1.8nm,0.8s,baz=106,slow=4.2,SNR=7.9
AS31 Alice Springs 44.18 257 P **P 14 07 26.5 -1.4**
WB0 Warramunga Arr 44.29 263 P **P 14 07 27.1 -1.6**
WB2 Warramunga Arr 44.30 263 P **P 14 07 27.2 -1.6**
WB2 IAmb IAmb 14 07 28.1
comp=Z,29nm,0.9s
WRAB Tennant Creek 44.30 263 P **P 14 07 27.4 -1.5**
WRAB IAmb IAmb 14 07 28.0
comp=Z,26nm,0.9s
WRA Warramunga Arr 44.31 263 P **P 14 07 27.2 -1.8**
comp=Z,17nm,0.5s,baz=98,slow=7.6,SNR=328
WRA Warramunga Arr 44.31 263 P **P 14 07 26.8 -2.2**
FORT Forrest 48.87 247 P **P 14 08 02.4 -1.0**
SAUI Saumlaki 50.35 277 P **P 14 08 13.2 -1.3**
comp=Z,218nm,0.8s
KNRA Kununurra 50.41 267 P **P 14 08 13.7 -1.2**
KNRA IAmb IAmb 14 08 14.4
comp=Z,32nm,0.7s
FAKI Fak Fak 51.42 284 P **P 14 08 20.8 -1.5**
comp=Z,24nm,1.5s
FITZ Fitzroy Crossi 52.74 263 P **P 14 08 30.6 -1.2**
SWI Sorong 53.19 285 P **P 14 08 33.9 -1.1**
comp=Z,793nmcomp=Z,115nm,0.8s
NLAI Namlea 55.99 281 P **P 14 08 53.4 -1.4**
comp=Z,57μmcomp=Z,28nm,0.5s
SOEI Soe 56.31 272 P **P 14 08 55.6 -1.5**
comp=Z,92nm,0.7s
LBMI Labuha 56.68 284 P **P 14 08 57.4 -2.1**
comp=Z,4μmcomp=Z,34nm,0.9s
TNTI Ternate 57.40 285 P **P 14 09 03.0 -1.5**
comp=Z,44nm,1.2s
SANI Sanana 57.48 281 P **P 14 09 03.6 -1.4**
comp=Z,738nmcomp=Z,29nm,1.1s
MPSI Mapaga 64.01 281 P **P 14 09 46.8 -1.4**
comp=Z,22nm,0.9s
PCJI Pacitan 69.03 269 P **P 14 10 17.9 -1.5**
comp=Z,82nm,1.4s
WOJI Wonogiri, Jawa 69.39 269 P **P 14 10 20.0 -1.5**
comp=Z,42nm,1.2s
MJAR Matsushiro Arr 70.54 324 P **P 14 10 26.7 -1.2**
comp=Z,4.0nm,0.6s,baz=141,slow=6.1,SNR=14
MJAR Matsushiro Arr 70.54 324 IAmb IAmb 14 10 27.3
comp=Z,1.6nm,0.6s
MAT Matsushiro 70.55 324 P **P 14 10 26.5 -1.4**
KPJI Karang Pucung 71.42 269 P **P 14 10 32.2 -1.3**
comp=Z,21nm,0.6s
PETK Petropavlovsk- 76.77 345 P **P 14 11 02.1 -0.9**
comp=Z,2.9nm,0.7s,baz=160,slow=8.9,SNR=3.8
MDSI Maura Dua 76.83 270 P **P 14 11 01.9 -2.4**
KSRS Korea Array 77.17 319 P **P 14 11 05.7 +0.2**
comp=Z,1.7nm,0.7s,baz=131,slow=5.5,SNR=6.6
USRK Ussuriysk Ar. 79.32 326 P **P 14 11 17.9 +1.0**
comp=Z,2.5nm,0.6s,baz=134,slow=3.8,SNR=4.6
NJ2 Nanjing 80.08 310 eP **P 14 11 21.9 +0.7**
MAW Mawson 80.95 200 P **P 14 11 25.2 0.0**
comp=Z,5.5nm,1.0s,baz=121,slow=5.9,SNR=3.2
MAW Mawson 80.95 200 IAmb IAmb 14 11 30.1
comp=Z,2.1nm,1.1s
NVAR Mina Array Bea 81.59 43 P **P 14 11 29.9 +0.7**
comp=Z,0.5nm,0.7s,baz=227,slow=9.7,SNR=4.8
CN2 Changchun 82.62 323 eP **P 14 11 33.9 -0.2**
TXAR Lajitas Array 87.55 57 P **P 14 11 60.0 +1.5**
comp=Z,0.4nm,0.8s,baz=235,slow=5.8,SNR=3.5
TXAR PKKPbc **PKKPbc 14 29 45.0 +0.4**
comp=Z,0.3nm,0.6s,baz=184,slow=1.9,SNR=3.8
ILAR Eielson Array 88.92 13 P **P 14 12 03.4 -0.6**
comp=Z,1.6nm,0.8s,baz=224,slow=6.0,SNR=20
PDAR Pinedale Array 89.53 43 P **P 14 12 08.9 +1.4**
comp=Z,0.6nm,0.7s,baz=211,slow=1.7,SNR=5.0
HHC Hu-ho-hao-te 89.60 314 eP **P 14 12 08.5 +0.7**
CMAR Chiang Mai Arr 90.10 290 P **P 14 12 11.3 +0.8**
comp=Z,2.8nm,0.8s,baz=121,slow=3.1,SNR=23
CD2 Chengdu 90.92 303 P **P 14 12 12.6 -1.4**
LZH Lanzhou 92.95 308 ⇓P P 14 12 24.0 +0.6
LZH pP pwP 14 14 25.6 +7.5
LZH sP sP 14 15 19.3 +15
LZH PP **PP 14 16 18.5 +3.5**
YKA Yellowknife Ar 97.12 25 P **P 14 12 41.8 +0.3**
comp=Z,0.1nm,0.6s,baz=244,slow=4.9,SNR=3.0
ZALV Zalesovo Beam 110.80 321 PKiKP **PKiKP 14 17 37.4 -1.7**
comp=Z,1.0nm,0.5s,baz=116,slow=0.3,SNR=6.4
MKAR Makanchi Array 111.43 313 PKiKP **PKiKP 14 17 39.0 -1.7**
comp=Z,0.5nm,0.4s,baz=148,slow=0.7,SNR=21
KKAR Karatay Array 119.43 308 PKPdf 14 17 55.1 -1.0
ARU Arti 125.55 325 PKPdf 14 18 07.0 -0.4
GEYT Alibeck 128.91 302 PKP **PKPdf 14 18 13.2 -1.2**
comp=Z,1.5nm,0.5s,baz=117,slow=0.7,SNR=4.2
ARCES ARCESS Array B 129.44 349 PKP **PKPdf 14 18 13.6 -0.9**
comp=Z,2.8nm,0.8s,baz=354,slow=2.4,SNR=12
FINES FINESS Array B 136.26 343 PKP **PKPdf 14 18 28.4 +0.9**
comp=Z,0.8nm,0.4s,baz=48,slow=2.8,SNR=6.4
HFS Hagfors 140.07 351 PKhKP PKPpre 14 18 26.1
comp=Z,1.7nm,0.4s,baz=82,slow=3.1,SNR=13
AKASG Malin Array Be 143.41 331 PKhKP PKPab 14 18 37.2 -1.6
comp=Z,7.7nm,0.5s,baz=43,slow=4.4,SNR=52
AKASG Malin Array Be 143.41 331 PKPab 14 18 37.5 -1.4
AKBB Malin Array Si 143.41 331 PKPab 14 18 37.5 -1.3
SORM Soroca 145.58 328 ⇑P PKPdf 14 18 44.5 -0.1
EKA Eskdalemuir Ar 145.59 5 PKPbc **PKPdf 14 18 44.5 +0.1**
comp=Z,1.8nm,0.7s,baz=30,slow=2.8,SNR=4.7
KWP Kalwaria Pacla 147.01 335 PKPbc 14 18 49.6 -0.2
BR131 Keskin Array S 147.06 312 PKPdf 14 18 49.0 +1.5
BRTR Keskin Array B 147.06 312 PKPbc **PKPdf 14 18 49.2 +1.7**
comp=Z,3.3nm,0.6s,baz=139,slow=4.8,SNR=15
BRTR Keskin Array B 147.06 312 PKPdf 14 18 49.7 +2.1
GHRR 147.44 326 ⇑P PKPbc 14 18 51.2 +0.2
BURAR Bucovina Array 147.45 330 ⇑P PKPbc 14 18 51.3 +0.1
TESR Tescani 147.53 327 ⇑P PKPbc 14 18 50.7 -0.6
ANTO Ankara 147.59 312 ⇓P PKPbc 14 18 51.3 -0.5
CFR Carcaliu 147.62 324 ⇑P PKPdf 14 18 50.1 +2.0
TOPG Topolog 147.68 323 ⇑P PKPbc 14 18 51.3 -0.4
KOLS Kolonicke sedl 147.74 334 eP**KP PKPbc 14 18 51.7 -0.1**
KOLS e 14 18 55.1
VRI Vrincioaia 147.93 326 ⇑P PKPbc 14 18 51.8 -0.6
HARR Harsova 148.04 324 ⇑P PKPbc 14 18 52.2 -0.4
CRVS Cervenica-Dubn 148.08 335 eP**KP PKPab 14 18 56.6 -0.7**
MANR Mangalia 148.21 322 ⇑P PKPbc 14 18 52.6 -0.4
DOPR Dopca 148.54 328 ⇑P PKPbc 14 18 53.2 -0.7
CLL Collm 148.57 346 i PKPbc **PKPbc 14 18 53.4 -0.3**
comp=Z,17nm,1.0s
MLR Muntele Rosu 148.59 326 PKPbc 14 18 53.6 -0.5
DPC Dobruska-Polom 148.60 342⇑eP**KP PKPbc 14 18 54.1 +0.2**
LANS Liptovska Anna 148.63 337 eP**KP PKPbc 14 18 54.7 +0.7**
KRLC Kraliky 148.72 341⇑eP**KP PKPbc 14 18 53.8 -0.4**
VOIR 149.08 327 ⇑P PKPbc 14 18 54.7 -0.6
ARR Arges 149.34 328 ⇑P PKPbc 14 18 56.3 +0.4
VYHS Vyhne 149.41 337 eP**KP PKPbc 14 18 55.8 -0.1**
VYHS e 14 19 02.5
PRU Pruhonice 149.42 344⇑eP**KP PKPbc 14 18 55.5 -0.4**
MODS Modra-Piesok 150.05 339 eP**KP PKPbc 14 18 57.2 -0.2**
MODS e 14 19 03.7
SIRR Siria 150.08 332 ⇑P PKPdf 14 18 55.4 +3.5
GZR Gura Zlata 150.23 329 ⇑P PKPbc 14 18 56.6 -1.4
KHC Kasperske Hory 150.46 344⇑eP**KP PKPbc 14 18 58.1 -0.3**
KHC Kasperske Hory 150.46 344 PKPbc 14 18 58.5 +0.1
BZS Buzias 150.60 331 ⇓P PKPbc 14 18 57.9 -0.8
GERES GERESS Array B 150.69 344 PKPbc **PKPbc 14 18 58.6 -0.4**
comp=Z,2.9nm,0.7s,baz=29,slow=3.0,SNR=17
CONA Conrad Observa 150.90 344 i PKiKP **PKPbc 14 18 59.3 -0.2**
comp=Z,1.9nm,0.4s
MDVR Moldovita 151.19 330 ⇓ PKPbc 14 18 60.0 -0.3
MOA Molln 151.45 342 i PKiKP **PKPbc 14 19 00.0 -0.7**
comp=Z,2.0nm,0.5s
VTS Vitosha 151.97 325 ⇓P PKPbc 14 19 01.7 -0.5
SOKA Soboth 152.27 340 i PKiKP **PKPbc 14 19 01.6 -1.0**
comp=Z,0.9nm,0.4s
KBA Koelnbreinsper 152.41 343 i PKiKP **PKPbc 14 19 01.8 -1.2**

comp=Z,1.8nm,0.5s
OBKA Obir 152.57 341 *i* PKiKP PKPbc 14 19 02.6 -0.7
comp=Z,1.7nm,0.5s
WTTA Wattenberg 152.68 345 *i* PKiKP PKPbc 14 19 03.0 -0.6
comp=Z,3.9nm,0.4s
MYKA Terra Mystica 152.73 342 *i* PKiKP PKPbc 14 19 02.3 -1.3
comp=Z,2.4nm,0.4s
ABTA Abfaltersbach 152.94 344 *i* PKiKP PKPbc 14 19 03.0 -1.1
comp=Z,3.2nm,0.5s
FETA Feichten 153.11 346 *i* PKiKP PKPbc 14 19 04.2 -0.3
comp=Z,1.6nm,0.6s
DAVOX Davos/Dischmat 153.52 347 PKPbc PKPbc 14 19 05.2 -0.2
TORD Torodi Ar. Bea 172.12 179 PKP PKPdf 14 19 14.7 -0.9
comp=Z,1.1nm,0.9s,baz=39,slow=0.8,SNR=4.5
TORD PKPab PKPab 14 20 41.0 -1.2
comp=Z,0.6nm,0.8s,baz=126,slow=2.5,SNR=2.8

ATH 13 14:23:06.9, 38°.30N×20°.38E, h12km±1km, ML2.8/2, Error ellipse: s-maj=2.0km s-min=0.8km az=139.0
THE 13 14:23:07.1, 38°.30N×20°.40E, h12km, ML2.7/5, Error ellipse: s-maj=0.8km s-min=0.2km az=252.0
ISC 13 14:23:06.9±1.0, 38°.29N±0°.02×20°.40E±0°.05, h13km±5km, n36, σ0°.30/57, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.04 148 P Pg 14 23 09.2 -0.1
KEF4 S Sg 14 23 10.9 -0.1
AGT1 Agia Thekli 0.04 197 P Pg 14 23 09.2 -0.1
AGT1 S Sg 14 23 10.7 -0.3
KEF1 Kardakata, Kep 0.06 101 P Pg 14 23 09.3 -0.2
KEF1 S Sg 14 23 10.9 -0.3
LXR1 Lixouri, Cepha 0.09 161 P Pg 14 23 09.9 +0.1
LXR1 S Sg 14 23 12.3 +0.4
LXRA Lixouri, Kepha 0.09 161 P Pg 14 23 09.9 +0.1
LXRA S Sg 14 23 12.4 +0.5
KEF3 Kipouria, Keph 0.10 205 P Pg 14 23 09.7 -0.2
KEF3 S Sg 14 23 12.0 +0.1
CHV1 Chavriata, Kef 0.11 187 P Pg 14 23 09.9 -0.1
CHV1 S Sg 14 23 12.3 +0.2
ARGA Argostoli. Kep 0.13 151 P Pg 14 23 10.3 0.0
ARGA S Sg 14 23 12.9 +0.3
ARG2 Argostoli 0.13 148 P Pg 14 23 10.4 +0.1
ARG2 S Sg 14 23 12.6 -0.1
KEF2 Argostoli. Kep 0.14 151 P Pg 14 23 10.5 +0.1
KEF2 S Sg 14 23 13.1 +0.2
VSK1 VASILIKIADES 0.18 47 P Pg 14 23 11.0 0.0
VSK1 S Sg 14 23 13.8 0.0
VLS Valsamata 0.19 127 P Pg 14 23 11.1 -0.1
VLS S Sg 14 23 14.4 +0.3
19μm,0.1s
VLS Valsamata 0.19 127 P Pg 14 23 11.1 -0.1
VLS S Sg 14 23 14.5 +0.3
VLS AML AML 14 23 14.6
comp=N,33944μm,0.2s
VLS AML AML 14 23 14.7
comp=E,38231μm,0.1s
KONA Konidatara, Ke 0.19 45 P Pg 14 23 11.1 -0.1
KONA S Sg 14 23 14.5 +0.3
FSK Fiskardo 0.21 37 P Pg 14 23 11.5 -0.1
FSK S Sg 14 23 14.8 0.0
comp=E,3μm,0.4s
FSK Fiskardo 0.21 37 P Pg 14 23 11.4 -0.1
FSK S Sg 14 23 15.0 +0.2
EVGI Lefkada island 0.39 31 P Pg 14 23 14.6 -0.1
EVGI S Sg 14 23 20.5 +0.5
EVGI Lefkada island 0.39 31 P Pg 14 23 14.5 -0.1
VLMS Volimes, Zakyn 0.46 153 P Pg 14 23 16.0 0.0
MGNA Meganis 0.48 40 P Pg 14 23 16.2 -0.1
MGNA S Sg 14 23 23.1 +0.4
MGNA AML AML 14 23 23.7
comp=N,586μm,0.2s
MGNA AML AML 14 23 24.1
comp=E,721μm,0.1s
LKD2 Lefkada island 0.54 22 P Pg 14 23 17.1 -0.4
LKD2 Lefkada island 0.54 22 P Pg 14 23 17.2 -0.4
TSLK Tsoukalades, L 0.57 21 P Pg 14 23 17.8 -0.3
TSLK Tsoukalades, L 0.57 21 P Pg 14 23 18.0 -0.1
RLS Riolos of Patr 0.87 105 P Pg 14 23 22.9 -0.9
RLS Riolos of Patr 0.87 105 P Pg 14 23 23.4 -0.3
PVO Paravola 0.94 69 P Pg 14 23 25.1 0.0
PVO S Sb 14 23 37.9 +0.4
comp=E,442nm,0.4s
PVO Paravola 0.94 69 P Pg 14 23 25.2 0.0
DRO Drossia 1.09 108 P Pb 14 23 27.1 -0.5
DRO S Sn 14 23 43.0 +0.3
comp=E,492nm,0.7s
DRO Drossia 1.09 108 P Pb 14 23 27.3 -0.2
ANX Ano Chora 1.23 75 P Pn 14 23 29.7 -0.2
ANX S Sn 14 23 47.2 +0.7
comp=E,272nm,0.5s
IGT Igoumenitsa 1.24 358 P Pb 14 23 30.3 +0.1
SERG Sergoula 1.31 84 P Pn 14 23 30.5 -0.4
TRIZ Trizonia 1.32 86 P Pn 14 23 30.5 -0.5
KALE Kalithea 1.37 85 P Pn 14 23 31.4 -0.4
KLV Kalavryta, Ach 1.40 100 P Pn 14 23 32.3 +0.1

IDC 13 14:28:14.0±4.8, 20°.18S×175°.62W, h0km, mb4.5/3, mb1 4.7/3, mb1mx3.8/44, mbtmp4.5/3, MS3.2/1, Ms1 3.3/1, ms1mx2.5/36, Error ellipse: s-maj=253.0km s-min=48.7km az=153.0, Tonga Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CTA Charters Tower 35.74 263 P P 14 35 16.4 +1.5
5.5nm,0.4s,baz=88,slow=10,SNR=9.0
ASAR Alice Springs 46.76 256 P P 14 36 44.9 -0.7
4.8nm,0.8s,baz=93,slow=8.1,SNR=8.2
WRA Warramunga Arr 46.85 261 P P 14 36 45.1 -1.2
2.7nm,0.4s,baz=97,slow=7.7,SNR=11
VNDA Vanda 58.44 186 LR LR 14 57 58.2
comp=Z,22nm,20.5s,baz=339,slow=30
GERES GERESS Array B 150.43 347 PKPbc PKPbc 14 48 07.4 -0.2
1.0nm,0.8s,baz=336,slow=2.2,SNR=4.5

IDC 13 14:29:16.8±0.7, 4°.04S×145°.02E, h0km, mb4.3/16, mb1 4.5/19, mb1mx4.4/37, mbtmp4.3/19, ML4.3/3, MS3.7/18, Ms1 3.7/18, ms1mx3.5/31, Error ellipse: s-maj=20.9km s-min=14.1km az=99.0
NEIC 13 14:29:22.8±2.1, 4°.06S±0°.07×144°.90E±0°.08, h40km±7km, mb4.6/28, Error ellipse: s-maj=11.6km s-min=9.9km az=69.0
DJA 13 14:29:23.7±0.4, 4°S±4°×14°5E±°, h74km±5km, M4.7/25, mb4.7/25, mB5.2/7, MLv4.8/5, Mw(mB)4.5/7, Mwp6.2/1
ISC 13 14:29:22.7±0.4, 4°.02S±0°.06×144°.89E±0°.07, h35km, n115, σ1°.78/105, mb4.6/32, MS3.7/12, 1C-1D, Near north coast of New Guinea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MANU Manus Island 3.16 52 Pn 14 30 10.0 +0.1
JAY Jayapura 4.43 290 Pn Pn 14 30 26.9 -0.7
6.9nm,0.3s,baz=152,slow=10,SNR=24
JAY LR LR 14 32 08.4
comp=Z,774nm,21.3s,baz=94,slow=38
GENI Genyem 4.92 287 P Pn 14 30 34.2 0.0
PMG Port Moresby 5.81 157 Pn Pn 14 30 47.1 +0.7
9.1nm,0.3s,baz=32,slow=3.4,SNR=48
PMG Sn Sn 14 31 52.8 +0.9
baz=300,slow=20,SNR=2.9
PMG LR LR 14 33 41.4
comp=Z,1μm,18.1s,baz=302,slow=46
PMG Port Moresby 5.81 157 Pn 14 30 46.5 +0.1
SMPI Sarmi 6.49 288 P Pn 14 30 56.7 +0.9
0.3nm42nm,1.2s
COEN Coen 10.02 190 Pn 14 31 47.4 +3.2
SIJI Sorong 13.96 283 Pn Pn 14 32 37.7 -0.5
0.8nm,0.3s,baz=106,slow=15,SNR=4.2
SIJI LR LR 14 39 01.3
comp=Z,220nm,20.8s,baz=100,slow=42
SWI Sorong 13.97 283 P Pn 14 32 38.3 0.0
31nm,0.8s
SAUI Saumlaki 14.07 253 P Pn 14 32 38.7 -1.0
212nm,0.8s
BNDI Bandanaira 14.95 268 P Pn 14 32 50.1 -1.5
323nm,0.9s
HNR Honiara 15.89 111 Pn P 14 33 05.9 -1.3
3.9nm,0.3s,baz=336,slow=20,SNR=5.8
HNR LR LR 14 38 59.6
comp=Z,125nm,21.6s,baz=258,slow=37
CTA Charters Tower 16.03 175 Pn P 14 33 11.9 +3.2
0.6nm,0.3s,baz=4.2,slow=13,SNR=8.6
GUMO Guam 17.49 360 LR LR 14 40 02.5
comp=Z,332nm,18.4s,baz=158,slow=37
WB0 Warramunga Arr 18.70 212 P P 14 33 37.7 -0.6
WB0 IAmb IAmb 14 33 52.3
comp=Z,36nm,1.1s
WR0 Warramunga Arr 18.79 212 P P 14 33 38.2 -1.0
WR0 IAmb IAmb 14 33 47.5
comp=Z,34nm,1.0s
WRAB Tennant Creek 18.86 212 P P 14 33 39.6 -0.4
WB2 Warramunga Arr 18.87 212 P P 14 33 39.3 -0.8
WB2 IAmb IAmb 14 33 52.0
comp=Z,35nm,1.1s
WRA Warramunga Arr 18.88 212 P P 14 33 40.4 +0.2
comp=Z,1.5nm,0.3s,baz=36,slow=14,SNR=39
WRA LR LR 14 41 57.0
comp=Z,518nm,19.9s,baz=25,slow=40
WRA Warramunga Arr 18.88 212 P P 14 33 39.4 -0.8
SANI Sanana 18.97 275 P P 14 33 37.7 -3.6
comp=Z,18nm,0.7s
KNRA Kununurra 19.64 233 P P 14 33 48.0 -0.6
SOEI Soe 21.24 253 P P 14 34 04.2 -1.9
comp=Z,2μmcomp=Z,175nm,0.9s
SOEI Soe 21.24 253 P P 14 34 07.2 +1.1
KMSI Cibinong 21.38 282 P P 14 34 03.5 -4.0
comp=Z,1μmcomp=Z,90nm,0.7s
EIDS Eidsvold 22.05 165 P P 14 34 15.0 +0.5
AS31 Alice Springs 22.23 208 P P 14 34 16.6 +0.1
ASAR Alice Springs 22.23 208 P P 14 34 15.3 -1.2
comp=Z,3.2nm,0.5s,baz=40,slow=7.4,SNR=70
ASAR LR LR 14 43 40.0
comp=Z,354nm,18.9s,baz=30,slow=39
ASAR Alice Springs 22.23 208 P P 14 34 15.5 -1.0
KCP Kidapawan 22.59 299⇑*e*P P 14 34 21.9 +1.4
MRSI Marisa 23.36 281 P P 14 34 26.6 -1.7
comp=Z,29nm,0.8s
FITZ Fitzroy Crossi 23.47 232 P P 14 34 28.9 -0.4
comp=Z,17nm,0.5s,baz=54,slow=7.4,SNR=31
FITZ Fitzroy Crossi 23.47 232 P P 14 34 29.0 -0.3
FITZ IAmb IAmb 14 34 30.9
comp=Z,15nm,0.6s
BKSI Bulukumba 24.72 266 P P 14 34 38.0 -3.0
comp=Z,39nm,0.8s
BNSI Bone 24.72 268 P P 14 34 37.2 -3.8
comp=Z,31nm,0.7s
TTSI Tana Toraja 25.04 271 P P 14 34 40.6 -3.3
comp=Z,675nmcomp=Z,16nm,0.9s
SPSI Sidrap Palu 25.06 269 P P 14 34 39.8 -4.3
comp=Z,14nm,0.7s
KAPI Kappang 25.08 267 P P 14 34 44.0 -0.2
comp=Z,2.2nm,0.3s,baz=232,slow=19,SNR=2.8
KAPI Kappang 25.08 267 IAmb IAmb 14 34 59.2
comp=Z,7.3nm,0.7s
PCI Palu 25.21 276 P P 14 34 37.2 -8.3
ARMA Armidale 27.02 167 P P 14 35 00.1 -1.7
ARMA IAmb IAmb 14 35 08.0
comp=Z,17nm,1.1s
DZM Mont Dzumac 27.55 133 LR LR 14 45 00.4
comp=Z,129nm,20.1s,baz=2.5,slow=34
STKA Stephens Creek 27.89 186 P P 14 35 08.4 -1.0
comp=Z,2.0nm,0.6s,baz=350,slow=6.8,SNR=7.2
STKA LR LR 14 47 20.3
comp=Z,311nm,18.1s,baz=7.7,slow=39
STKA Stephens Creek 27.89 186 P P 14 35 08.6 -0.7
H11S3 WAKE ISLAND Hy 31.01 43 T T 15 08 37.6
baz=221,slow=74,SNR=17
H11S2 WAKE ISLAND Hy 31.02 43 T T 15 09 01.0
baz=221,slow=74,SNR=9.3
H11S1 WAKE ISLAND Hy 31.03 43 T T 15 08 47.9
baz=221,slow=74,SNR=9.9
MJAR Matsushiro Arr 40.83 352 P P 14 37 00.6 -0.4
comp=Z,1.7nm,0.8s,baz=163,slow=8.9,SNR=3.7
MJAR LR LR 14 53 33.4
comp=Z,78nm,18.7s,baz=190,slow=36
NJ2 Nanjing 43.58 327 *e*P P 14 37 27.0 +3.5
KSRS Korea Array 44.18 341 P P 14 37 27.9 -0.3
comp=Z,1.0nm,0.7s,baz=153,slow=8.1,SNR=3.7
KSRS LR LR 14 53 02.1
comp=Z,110nm,19.1s,baz=158,slow=32
PSI Prapat 46.43 278 LR LR 15 01 54.0
comp=Z,72nm,18.0s,baz=116,slow=42
GYA Guiyang 47.80 312⇓*i*P P 14 37 59.5 +2.3
PBKT Sadao Pong 47.98 296 P P 14 37 59.8 +1.3
PBKT IAmb IAmb 14 38 05.4
comp=Z,5.7nm,0.8s
USRK Ussuriysk Ar. 49.38 348 P P 14 38 08.6 -0.2
comp=Z,1.3nm,0.7s,baz=170,slow=9.5,SNR=3.4
USRK LR LR 14 57 33.5
comp=Z,52nm,19.5s,baz=151,slow=34
CM31 Chiang Mai Arr 50.47 298 P P 14 38 18.5 +0.9
CMAR Chiang Mai Arr 50.47 298 P P 14 38 19.2 +1.7
comp=Z,22nm,0.8s,baz=120,slow=6.0,SNR=154
XAN Xi'an 50.83 321 P P 14 38 20.3 +0.2
XAN pP pP 14 38 25.8 -4.4
CD2 Chengdu 52.39 314 P P 14 38 32.3 +0.5
HHC Hu-ho-hao-te 54.05 329 *e*P P 14 38 46.4 +2.4
LZH Lanzhou 55.34 320 *e*P P 14 38 55.0 +1.5
LZH pP sP 14 39 10.0 +2.3
LZH sP pP 14 39 16.5 +13
LZH *e*PP PP 14 41 01.3 +3.8
RAR Rarotonga 56.33 113 LR LR 15 00 38.2
comp=Z,21nm,20.8s,baz=274,slow=34
PETK Petropavlovsk- 57.93 9 LR LR 14 59 44.0
comp=Z,54nm,21.7s,baz=242,slow=32
GTA Gaotai 59.88 321 *e*P P 14 39 26.4 +1.1
GTA pP pP 14 39 30.8 -4.8
GTA sP sP 14 39 33.6 -6.0
SONM Songino Array 61.66 332 P P 14 39 39.8 +2.5
comp=Z,0.9nm,0.7s,baz=152,slow=6.0,SNR=5.7
SONM LR LR 15 07 46.7
comp=Z,61nm,18.4s,baz=184,slow=37
TAPN Taplejung 63.31 303 *e*P P 14 39 49.7 +0.8
comp=Z,32nm,1.1s
ODAN Odare 63.41 303 *e*P P 14 39 50.4 +0.9
comp=Z,37nm,1.0s
RAMN Ramite 64.11 302 *e*P P 14 39 54.9 +0.8
comp=Z,26nm,1.0s
JIRN Jiri 64.69 303 *e*P P 14 39 58.8 +0.8
comp=Z,20nm,0.8s
GUN Gumba 65.03 303 *e*P P 14 40 01.1 +0.9
comp=Z,28nm,0.7s
PKI Pulchoki 65.31 303 *e*P P 14 40 02.4 +0.4
comp=Z,31nm,1.1s
PKIN Phulchoki 65.32 303 *e*P P 14 40 02.5 +0.5
comp=Z,37nm,1.4s
PPT Papeete 65.48 107 P P 14 40 02.2 -0.7
comp=Z,32nm,0.8s,baz=81,slow=13,SNR=3.3
KKN Kakani 65.49 303 *e*P P 14 40 03.7 +0.7
comp=Z,34nm,0.9s
DMN Daman 65.58 303 *e*P P 14 40 04.3 +0.6
comp=Z,66nm,1.0s
GKN Gorkha 66.10 303 *e*P P 14 40 07.5 +0.6
comp=Z,70nm,1.1s
KOLN Koldanda 66.89 302 *e*P P 14 40 12.5 +0.4
comp=Z,33nm,0.8s
DANN Dangsing 66.94 303 *e*P P 14 40 12.7 +0.3
comp=Z,28nm,0.7s
SEY Seymchan 67.01 4 P P 14 40 12.2 +0.5
comp=Z,1.6nm,0.8s,baz=192,slow=20
WMQ Urumqi 69.93 320 *e*P P 14 40 31.8 +1.3
WMQ pP sP 14 40 47.1 +1.7
WMQ sP PcP 14 40 53.1 +0.3
VNDA Vanda 74.01 176 P P 14 40 54.4 0.0
comp=Z,3.1nm,0.8s,baz=0.9,slow=6.1,SNR=3.7
MK31 Makanchi Array 74.64 321 P P 14 40 58.7 +0.1
MK31 IAmb IAmb 14 41 06.5
comp=Z,12nm,1.1s
MKAR Makanchi Array 74.64 321 P P 14 40 59.1 +0.6
comp=Z,5.9nm,0.8s,baz=109,slow=7.2,SNR=48
MAKZ Makanchi 74.84 321 P P 14 41 00.3 +0.6
ZAA0 Zalesovo Array 76.22 328 P P 14 41 08.2 +0.8
ZAA0 IAmb IAmb 14 41 15.5
comp=Z,4.0nm,0.8s
ZALV Zalesovo Beam 76.22 328 P P 14 41 06.1 -1.4
comp=Z,1.8nm,0.6s,baz=115,slow=6.0,SNR=7.1
ZALV Zalesovo Beam 76.22 328 P P 14 41 06.9 -0.5
TIXI Tiksi 76.25 355 P P 14 41 06.2 -1.0
comp=Z,1.3nm,0.3s,baz=316,slow=7.2,SNR=2.2
KSH Kashi 76.50 312 P P 14 41 07.8 -1.7
KSH pP pP 14 41 13.1 -7.2
KSH PP PP 14 44 00.9 -0.9
KSH S S 14 50 47.6 -5.5
KSH Kashi 76.50 312 SKS SKSac 14 51 10.6 -8.2
NIL Nilore 77.07 306 P P 14 41 12.9 +0.2
KZA Kyzart 77.76 314 P P 14 41 18.6 +1.7
SNR=17
KBK Karagaybulak 78.14 315 P P 14 41 19.8 +1.1
SNR=5.8
UCH Uchtor 78.33 314 P P 14 41 21.5 +1.4
SNR=11
CHMS Chumysh 78.38 315 P P 14 41 20.5 +0.6
SNR=6.4
USP Ospenovka 78.63 315 P P 14 41 21.8 +0.5
SNR=11
AML Almayashu 78.89 314 P P 14 41 24.4 +1.2
SNR=16
EKS2 Erkin-Say 78.97 315 P P 14 41 24.4 +1.1
SNR=9.0
KKAR Karatay Array 81.41 314 P P 14 41 37.1 +0.9
MAW Mawson 83.26 202 P P 14 41 43.9 -1.4
comp=Z,3.8nm,0.8s,baz=83,slow=11,SNR=3.8
MAW LR LR 15 14 54.3
comp=Z,51nm,20.6s,baz=62,slow=33
MAW Mawson 83.26 202 IAmb IAmb 14 41 49.6
comp=Z,3.8nm,1.4s
BRVK Borovoye 84.01 324 P P 14 41 49.0 -0.5
BRVK IAmb IAmb 14 41 52.3
comp=Z,6.3nm,1.0s
CCB Clear Creek Bu 84.09 24 P P 14 41 51.5 +1.8
CCB IAmb IAmb 14 41 58.6
comp=Z,4.7nm,0.9s
IL31 84.51 24 P P 14 41 53.5 +1.8
IL31 IAmb IAmb 14 42 00.5
comp=Z,4.5nm,0.8s
ILAR Eielson Array 84.51 24 P P 14 41 50.2 -1.5
comp=Z,0.9nm,0.6s,baz=257,slow=4.8,SNR=24
ILAR Eielson Array 84.51 24 P P 14 41 51.7 -0.1
QSPA South Pole Qui 85.94 180 P P 14 41 57.6 -1.5
ABKAR Akbulak array 89.71 319 P P 14 42 15.8 -1.5
INK Inuvik 90.59 22 P P 14 42 20.8 -0.2
comp=Z,1.2nm,0.8s,baz=257,slow=3.7,SNR=2.8
INK Inuvik 90.59 22 IAmb IAmb 14 42 25.8
comp=Z,6.2nm,1.4s
YKA Yellowknife Ar 98.40 27 LR LR 15 31 06.5
comp=Z,22nm,18.0s,baz=0.0,slow=38
TORD Torodi Ar. Bea 142.54 286 PKhKP PKPpre 14 48 47.7
comp=Z,1.4nm,0.8s,baz=69,slow=3.7,SNR=5.9
KIC Kosan Boka 149.67 276 *e*PKP1 PKPbc 14 49 09.4 -0.5
comp=Z,29nm,1.1s
DBIC Dimbokro 149.76 276 PKPbc PKPbc 14 49 09.9 -0.2
comp=Z,7.8nm,0.8s,baz=71,slow=4.4,SNR=9.6
TIC Toumodi 149.93 276 *e*PKP1 PKPbc 14 49 10.0 -0.5
LIC Lamto 149.96 275 *e*PKP1 PKPbc 14 49 10.3 -0.3
comp=Z,39nm,1.0s

IDC 13 14:36:37.6±1.6, 51°.76N×118°.30W, h0km, mb1 3.5/4, mb1mx3.2/49, mbtmp3.1/4, ML3.3/4, Error ellipse: s-maj=53.6km s-min=8.4km az=86.0
PGC 13 14:36:40.0±0.0, 51°.81N×116°.91W, h1km, ML3.1/8, 117km Wnw of Banff, Alberta Alberta, Canada
ISC 13 14:36:39.6±0.7, 51°.87N±0°.04×116°.98W±0°.04, h10km, n22, σ2°.07/37, Alberta

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MNB Mounoet Dainar 0.93 292 P Pb 14 36 57.4 -0.6
SLEB Sale Mountain 1.00 226 P Pg 14 36 57.6 -1.3
SLEB S Sg 14 37 10.9 -1.1
BLBC Blue River 1.41 278 Pn Pb 14 37 05.9 -0.2
BLBC Sg Sg 14 37 26.2 +1.3
EDM Edmonton 2.60 57 Pn Pn 14 37 22.2 +0.5
EDM Sn Sn 14 37 54.1 +0.7
EDM Sg Sb 14 38 00.1 +1.8
PNT Penticton 3.06 214 Pn Pn 14 37 28.2 +0.3
PNT Sn Sn 14 38 04.1 -0.4
PNT Sg Sb 14 38 14.0 +2.6
LLLB Lillooet 3.33 250 Pn Pn 14 37 32.8 +1.1
LLLB Sg Sg 14 38 23.9 -2.5
WALA Waterton Lakes 3.43 144 Pn Pn 14 37 34.2 +1.1
WALA Sn Sn 14 38 11.8 -2.1
ATHA Athabasca 3.60 36 Sn Sn 14 38 19.1 +1.0
NEW Newport 3.61 181 Pn Pn 14 37 35.8 +0.3
1.6nm,0.3s,baz=357,slow=11,SNR=16
NEW Pg Pb 14 37 43.8 +0.3
3.7nm,0.3s,baz=358,slow=13,SNR=11
NEW Sn Sn 14 38 17.1 -1.1
2.2nm,0.3s,baz=237,slow=20,SNR=3.9
NEW Lg Lg 14 38 30.2
4.6nm,0.3s,baz=72,slow=19,SNR=14
HOPB Hope 3.76 230 Pn Pn 14 37 38.9 +1.3
HOPB Sn Sn 14 38 21.6 -0.3
B08A Colville Reser 3.82 204 Pn Pn 14 37 38.4 -0.1
B08A Sn Sn 14 38 22.4 -1.1
WSLR Whistler 4.14 247 Pn Pn 14 37 44.4 +1.5
WSLR Sn Sn 14 38 30.9 -0.3
C09A Chrisman Ranch 4.16 192 Sn Sn 14 38 30.8 -0.9
BSMT Bassoo Peak 4.26 160 Pn Pn 14 37 46.2 +1.5
HNBB Haney 4.40 236 Sg Sb 14 38 55.7 +5.6
YBMT Yellow Bay 4.44 153 Pn Pn 14 37 47.8 +0.6
JTMT Jette 4.48 156 Pn Pn 14 37 48.0 +0.4
SWMT Swartz Lake 4.77 155 Pn Pn 14 37 51.9 +0.3
FNBB Fort Nelson 7.83 336 Pn Pn 14 38 37.8 +4.3
FNBB Sn Sn 14 40 00.5 -1.5
PDAR Pinedale Array 10.40 148 Pn Pn 14 39 12.9 +4.0
0.1nm,0.3s,baz=329,slow=10,SNR=4.7
YKA Yellowknife Ar 10.73 6 Pn Pn 14 39 13.1 0.0
0.2nm,0.3s,baz=188,slow=13,SNR=11
YKA Pg 14 39 59.6
0.2nm,0.3s,baz=186,slow=16,SNR=9.5
YKA Sn Sn 14 41 07.3 -5.9
0.3nm,0.3s,baz=187,slow=23,SNR=5.4
YKA Lg Lg 14 42 13.4
0.2nm,0.3s,baz=183,slow=31,SNR=6.3
NVAR Mina Array Bea 13.47 184 Pn Pn 14 39 50.0 -0.9
0.0nm,0.3s,baz=358,slow=18,SNR=2.7

IDC 13 14:52:08.4±1.6, 10°.74S×165°.90E, h0km, mb3.9/9, mb1 4.2/10, mb1mx3.9/44, mbtmp4.0/10, ML4.8/1, MS3.3/5, Ms1 3.3/5, ms1mx2.9/29, Error ellipse: s-maj=45.1km s-min=23.0km az=122.0
NEIC 13 14:52:14.7±0.7, 11°.0S±0°.1×165°.98E±0°.10, h49km±9km, mb4.5/11, Error ellipse: s-maj=17.3km s-min=10.1km az=221.0
ISC 13 14:52:16.0±0.9, 11°.01S±0°.09×165°.9E±0°.1, h61km, n36, σ0°.96/27, mb4.1/12, 1C, Santa Cruz Islands

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SANVU Saraoutou 4.58 165 Pn 14 53 22.4 -0.3
HNR Honiara 6.10 284 Pn Pn 14 53 42.7 -1.0
41nm,0.3s,baz=146,slow=3.9,SNR=40
HNR Sn Sn 14 54 51.8 -0.3
baz=180,slow=20,SNR=1.8
HNR LR LR 14 56 11.0
comp=Z,243nm,19.6s,baz=132,slow=40
HNR Honiara 6.10 284 *e*P Pn 14 53 42.0 -1.6
HNR Honiara 6.10 284 Pn 14 53 42.5 -1.1
DZM Mont Dzumac 11.01 178 Pn Pn 14 54 50.6 -0.2
6.5nm,0.3s,baz=139,slow=20,SNR=57
DZM Sn Sn 14 56 50.0 -2.4
0.3nm,0.3s,baz=9.5,slow=18,SNR=2.1
DZM LR LR 14 59 06.6
comp=Z,251nm,18.8s,baz=34,slow=37
NOUC Port Laguerre 11.03 178 Pn 14 54 50.7 -0.4
CTA Charters Tower 20.98 242 P P 14 56 56.0 +1.6
4.2nm,0.8s,baz=63,slow=9.0,SNR=5.4
AFI Afiamalu 21.95 100 LR LR 15 03 28.1
comp=Z,70nm,21.0s,baz=286,slow=31
URZ Urewera 28.92 162 LR LR 15 07 11.8
comp=Z,52nm,18.8s,baz=28,slow=31
H11S2 WAKE ISLAND Hy 29.33 1 T T 15 28 31.7
baz=181,slow=76,SNR=59
H11S3 WAKE ISLAND Hy 29.33 1 T T 15 28 32.1
baz=181,slow=76,SNR=40
H11S1 WAKE ISLAND Hy 29.34 1 T T 15 28 33.1
baz=181,slow=76,SNR=27
H11N1 WAKE ISLAND Hy 30.55 2 T T 15 30 03.2
baz=182,slow=76,SNR=26
H11N3 WAKE ISLAND Hy 30.55 2 T T 15 30 03.6
baz=182,slow=76,SNR=42
H11N2 WAKE ISLAND Hy 30.57 2 T T 15 30 04.6
baz=182,slow=76,SNR=40
STKA Stephens Creek 30.59 224 P P 14 58 26.1 +1.8
1.0nm,0.7s,baz=59,slow=12,SNR=2.8
STKA Stephens Creek 30.59 224 IAmb IAmb 14 58 26.4
comp=Z,0.5nm,0.9s
WB0 Warramunga Arr 31.59 250 P P 14 58 33.6 +0.4

WRAB Tennant Creek 31.66 250 P P 14 58 33.9 +0.1
WB2 Warramunga Arr 31.66 250 P P 14 58 34.2 +0.4
WB2 IAmb IAmb 14 58 34.8
comp=Z,6.8nm,0.8s
WRA Warramunga Arr 31.67 250 P P 14 58 34.3 +0.4
comp=Z,4.4nm,0.7s,baz=81,slow=9.0,SNR=36
WRA Warramunga Arr 31.67 250 P P 14 58 33.7 -0.2
KHZ Kahutara 31.98 169 P 14 58 36.4 +0.2
KHZ IAmb IAmb 14 58 53.0
comp=Z,8.7nm,0.9s
GUMO Guam 32.16 319 LR LR 15 11 56.2
comp=Z,36nm,19.5s,baz=108,slow=37
TOO Toolangi 32.20 211 P 14 58 39.3 +1.0
TOO IAmb IAmb 14 58 47.1
comp=Z,9.4nm,1.4s
ASAR Alice Springs 32.98 243 P P 14 58 45.2 -0.1
comp=Z,0.6nm,0.6s,baz=64,slow=10,SNR=20
BBOO Buckleboo 34.99 227 P 14 59 03.5 +0.9
BBOO IAmb IAmb 14 59 14.7
comp=Z,8.2nm,1.1s
KNRA Kununurra 36.43 259 P 14 59 15.2 0.0
FITZ Fitzroy Crossi 39.57 255 P P 14 59 42.1 +0.5
comp=Z,2.5nm,0.5s,baz=94,slow=6.5,SNR=8.8
FITZ Fitzroy Crossi 39.57 255 IAmb IAmb 14 59 42.7
comp=Z,6.4nm,0.8s
CMAR Chiang Mai Arr 72.27 293 P P 15 03 35.9 +0.4
comp=Z,0.5nm,0.3s,baz=117,slow=5.2,SNR=2.9
SONM Songino Array 78.75 324 P P 15 04 11.3 -0.9
comp=Z,0.2nm,0.8s,baz=115,slow=7.0,SNR=2.6
QSPA South Pole Qui 78.99 180 P 15 04 14.1 +0.9
ILAR Eielson Array 83.42 18 P P 15 04 36.6 +0.2
comp=Z,0.6nm,0.9s,baz=221,slow=6.7,SNR=4.0
SYO Syowa Base 91.87 197⇑eP P 15 05 16.7 -0.5
MKAR Makanchi Array 93.63 317 P P 15 05 25.1 -0.7
comp=Z,0.3nm,0.7s,baz=95,slow=7.2,SNR=3.8

*IDC **13** 15:02:50.9±0.8, 24.°12N×122.°85E, h0km, mb3.7/12, mb1 3.8/12, mb1mx3.7/39, mbtmp3.7/12, MS3.4/4, Ms1 3.4/4, ms1mx2.9/28, Error ellipse: s-maj=37.5km s-min=16.8km az=63.0*
*JMA **13** 15:02:50.9±0.3, 23.°70N×122.°50E, h11km±5km, M3.8*
*TAP **13** 15:02:50.7, 23.°74N×122.°42E, h1km±1km, ML4.1, D*
*NEIC **13** 15:02:52.8±2.6, 23.°85N±0.°03×122.°42E±0.°06, h12km±4km, mb4.2/18, Error ellipse: s-maj=8.6km s-min=4.3km az=83.0*
ISC 13 15:02:50.7±1.2, 23.°79N±0.°03×122.°50E±0.°02, h2km±8km, n128, σ1§20/158, mb3.9/17, MS3.5/3, 1C-1D, Taiwan region

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JYNG Yonagunijimaku 0.78 32 P Pn 15 03 06.9 -1.7
JYNG eS Sn 15 03 19.1 -1.8
YOJ Yonaguni jima 0.82 35 P Pn 15 03 07.8 -1.4
YOJ eS Sn 15 03 20.1 -1.8
YOJ Yonaguni jima 0.82 35 Pn 15 03 07.6 -1.6
ENLB Shoufeng 0.83 278 *i* P Pb 15 03 07.1 -0.7
baz=282
ENLB *i* S Sn 15 03 19.9 -2.3
baz=282
EOS1 EOS1 0.83 336 P Pn 15 03 09.0 -0.3
baz=341
EOS1 S Sn 15 03 22.0 -0.1
baz=341
TWD Chiawan 0.88 290 *i* P Pn 15 03 08.5 -1.5
baz=294
TWD S Sn 15 03 21.8 -1.5
baz=294
NACB Ninganchiao 0.91 295 P Pn 15 03 09.0 -1.5
baz=299
NACB S Sn 15 03 22.9 -1.3
baz=299
NACB Ninganchiao 0.91 295 Pb 15 03 08.8 -0.4
ENA Nanau 0.94 313 P Pn 15 03 10.9 0.0
baz=318
ENA eS Sn 15 03 24.1 -0.9
baz=318
ESL Shilin 0.98 272⇑*i*P Pg 15 03 09.6 +0.1
baz=274
ESL S Sn 15 03 23.9 -1.9
baz=274
EGFH Guangfu 0.99 263 eP Pb 15 03 10.5 0.0
baz=265
EGFH eS Sn 15 03 24.3 -1.9
baz=265
TWC Suao 1.01 324 *i* P Pn 15 03 11.4 -0.5
baz=329
TWC S Sn 15 03 26.4 -0.3
baz=329
ETLH Xiulin Townshi 1.02 294 P Pn 15 03 10.8 -1.3
baz=298
ETLH S Sn 15 03 25.7 -1.3
baz=298
HGSD Ruisui 1.03 254 P Pb 15 03 10.3 -0.9
baz=255
HGSD S Sg 15 03 23.7 -0.1
baz=255
EHY Hungye 1.11 256 *i* P Pb 15 03 12.2 -0.6
baz=256
EHY S Sb 15 03 27.3 -0.4
baz=256
YULB Yu-li 1.17 251 P Pn 15 03 13.1 -1.0
baz=251
YULB S Sb 15 03 28.4 -0.8
baz=251
YULB Yu-li 1.17 251 Pn 15 03 12.8 -1.3
WHF Hehuan Shan 1.18 288 *i* P Pn 15 03 13.6 -1.0
baz=291
WHF S Sn 15 03 30.3 -1.2
baz=291
TWF1 Yuli 1.19 249 P Pn 15 03 13.4 -0.9
baz=249
TWF1 *i* S Sb 15 03 29.4 -0.3
baz=249
TWE Neicheng 1.20 321 *i* P Pg 15 03 14.4 +0.7
baz=325
ENTT Nioudou 1.20 315 P Pg 15 03 14.8 +1.0
baz=319
NNSH Datong 1.20 302 P Pg 15 03 14.2 +0.4
baz=305
NNSB Datong 1.20 302 P Pg 15 03 14.0 +0.2
baz=305
NDT Datong Townshi 1.21 312 P Pg 15 03 14.9 +0.9
baz=316
NDT eS Sn 15 03 31.8 +0.1
baz=316
NNS Nan Shan 1.22 302⇓*i*P Pg 15 03 14.4 +0.4
baz=306
NNS S Sn 15 03 32.6 +0.7
baz=306
HATJ Hateruma jima 1.23 77 P Pg 15 03 14.5 +0.3
CHGB Renai 1.24 283 P Pb 15 03 14.4 -0.7
baz=285
CHGB S Sn 15 03 32.3 -0.4
baz=285
SLBB Yuanshan 1.24 321 P Pg 15 03 15.6 +1.1
baz=324
VWDT VWDT 1.24 269 P Pn 15 03 14.4 -0.7
baz=270
CHKT Chengkung 1.25 237 eP Pn 15 03 13.2 -1.9
baz=236
IRIF Iriomote-Funau 1.25 64 P Pg 15 03 14.6 -0.1
FULB Fuli 1.25 242 P Pn 15 03 12.7 -2.6
baz=242
TWT Tachien 1.29 291 P Pg 15 03 15.7 +0.1
baz=293
TWB1 Santiao Chiao 1.30 339 P Pg 15 03 17.5 +1.8
baz=342
TDCB Techi 1.31 291 P Pg 15 03 15.7 -0.1
baz=293
TIPB Shuangxi 1.33 333 P Pg 15 03 17.6 +1.4
baz=336
YHNB Yeheng 1.35 311 P Pg 15 03 16.6 -0.1
baz=314
YHNB eS Sg 15 03 34.6 +0.5
baz=314
YHNB Yeheng 1.35 311 Pg 15 03 16.5 -0.1
NSK Sanguang 1.37 311 P Pg 15 03 16.8 -0.1
baz=314
NSK eS Sg 15 03 35.2 +0.5
baz=314
SSLB Suanglung 1.42 270 P Pn 15 03 16.7 -0.8
baz=272
SSLB S Sg 15 03 36.9 +0.6
baz=272
SSLB Suanglung 1.42 270 Pn 15 03 16.6 -0.9
NWF Wu-fen Shan 1.44 333 P Pg 15 03 17.2 -1.0
baz=336
WFSB Wu-fen Shan 1.44 333 P Pg 15 03 17.5 -0.7
baz=336
YUS Yu-Shan 1.45 258 *i* P Pn 15 03 17.2 -1.1
baz=259
YUS S Sn 15 03 37.1 -1.0
baz=259
TWA Mucha 1.45 325 P Pg 15 03 19.1 +0.5
baz=328
TWA S Sg 15 03 40.6 +3.2
baz=328
JKRS Kuro-shima 1.45 72 P Pb 15 03 17.5 -0.9
NHDH Xindian Distri 1.47 323 P Pg 15 03 19.2 +0.3
baz=326
NHDH eS Sg 15 03 40.6 +2.6
baz=326
ELDTW Lidau 1.49 247 P Pn 15 03 16.7 -1.9
baz=246
TATO Taipei 1.50 322 Pg 15 03 19.1 -0.3
WHP Taichung City 1.50 289 P Pg 15 03 20.1 +0.6
baz=291
TYC Yuchr 1.51 275 P Pb 15 03 18.5 -0.9
baz=276
TYC S Sg 15 03 39.8 +0.6
baz=276
WHYT Xinyi Township 1.51 267 P Pb 15 03 18.9 -0.6
baz=268
WLTB Daxi 1.55 313 P Pg 15 03 20.4 -0.2
baz=316
ALS Alishan 1.58 260 P Pb 15 03 20.4 -0.4
baz=261
ALS eS Sb 15 03 40.6 -0.7
baz=261
YM01 YM01 1.59 328 P Pg 15 03 20.6 -0.7
baz=331
LIOB Emei 1.60 303 *i* P Pg 15 03 21.2 -0.2
baz=305
NSTT Nanjuang 1.60 302 *i* P Pg 15 03 21.2 -0.3
baz=304
YM10 YM10 1.61 328 eP Pg 15 03 20.4 -1.2
baz=330
JIJ Ishigaki jima 1.61 69 P Pb 15 03 20.1 -1.0
JIJ S Sg 15 03 41.5 -0.9
YM11 YM11 1.61 329 P Pg 15 03 21.2 -0.4
baz=331
YM08 YM08 1.62 329 P Pg 15 03 20.9 -1.0
baz=332
WJS Zhushan 1.62 272 eP Pb 15 03 21.0 -0.4
baz=273
TWGBT Beinan 1.62 234 eP Pn 15 03 18.9 -1.4
baz=233
TWG Pinlang 1.63 234 Pb 15 03 21.8 +0.3
TWS1 Kuangyinshan 1.64 323 P Pg 15 03 20.9 -1.2
baz=326
WNT Mingjian 1.66 273 P Pb 15 03 21.5 -0.6
baz=274
TWQ1 Liyutan 1.67 290 P Pg 15 03 22.1 -0.7
baz=291
TWQ1 eS Sg 15 03 44.3 -0.3
baz=291
CHN5 Tsauling 1.68 264 eP Pb 15 03 21.8 -0.6
baz=264
SBCB Hsinchu 1.71 306 eP Pg 15 03 22.4 -1.1
baz=308
NSY Sanyi 1.71 292 P Pg 15 03 22.9 -0.6
baz=294
NSY eS Sb 15 03 43.7 -1.0
baz=294
NMLH Miaoli 1.73 296 P Pb 15 03 22.9 -0.3
baz=298
WGK Gukeng 1.78 267 P Pb 15 03 23.5 -0.5
baz=268
TPUB Ta-pu 1.78 255 eP Pn 15 03 22.9 +0.4
baz=255
TPUB Ta-pu 1.78 255 Pb 15 03 23.1 -1.0
WDJ Dajia District 1.79 289 P Pb 15 03 24.1 -0.1
baz=290
WCHH Zhanghua 1.80 280 P Pb 15 03 24.1 -0.3
baz=281
WDLH Douliu 1.80 267 eP Pb 15 03 23.8 -0.6
baz=268
CHN4 Tsaushan 1.80 256 P Pb 15 03 24.1 -0.4
baz=257
WTP Ta-pu 1.81 253 eP Pn 15 03 23.2 +0.2
baz=253
JISG Ishigakijimahi 1.84 64 P Pn 15 03 22.4 -0.8
JISG S Sb 15 03 47.7 -0.7
SGST Jiashian 1.90 249 eP Pb 15 03 25.2 -0.8
baz=248
TWK Hsinying 1.92 255 eP Pb 15 03 25.3 -1.1
baz=255
SNST Tainan City 1.92 253 eP Pb 15 03 25.8 -0.7
baz=253
JTJ Tarama 2.18 67 P Pn 15 03 28.3 +0.3
KNMB Chin-men Tao 3.81 281 Pn Pn 15 03 50.1 -0.3
KNMB Sn 15 04 34.1 -1.7
JOW Kunigami 6.04 59 Pn Pn 15 04 20.8 -0.3
KSRS Korea Array 14.39 18 LR LR 15 12 49.8
comp=Z,159nm,18.0s,baz=186,slow=43
KS19 Wonju Array Si 14.42 17 P P 15 06 22.8 -0.2
MJAR Matsushiro Arr 18.57 43 P P 15 07 06.1 -2.8
CMAR Chiang Mai Arr 22.59 261 LR LR 15 17 15.6
comp=Z,30nm,20.3s,baz=85,slow=38
SONM Songino Array 27.21 336 P P 15 08 34.7 -1.2
0.9nm,0.5s,baz=146,slow=10,SNR=9.8
SONM LR LR 15 20 45.1
comp=Z,108nm,18.3s,baz=124,slow=40
SONM Songino Array 27.21 336 P P 15 08 34.1 -1.8
FAKI Fak Fak 28.19 159 P P 15 08 46.3 +1.5
MK31 Makanchi Array 39.46 316 P P 15 10 21.3 -1.1
MKAR Makanchi Array 39.46 316 P P 15 10 21.9 -0.5
1.3nm,0.4s,baz=100,slow=9.7,SNR=28
MKAR Makanchi Array 39.46 316 P P 15 10 21.3 -1.1
MAKZ Makanchi 39.66 316 P P 15 10 22.3 -1.7
MAKZ IAmb IAmb 15 10 27.4
comp=Z,4.0nm,1.1s
ZALV Zalesovo Beam 41.23 327 P P 15 10 37.0 +0.1
comp=Z,0.6nm,0.5s,baz=109,slow=12,SNR=4.0
ZALV LR LR 15 29 03.3
comp=Z,67nm,18.2s,baz=67,slow=38
ZALV Zalesovo Beam 41.23 327 P P 15 10 34.6 -2.2
KDJ Kajisay 41.65 307 P P 15 10 43.3 +2.6
KDJ IAmb IAmb 15 11 01.0
comp=Z,4.9nm,0.9s
KURK Kurchatov 43.17 320 P P 15 10 52.2 -0.5
KURK IAmb IAmb 15 11 07.8
comp=Z,3.5nm,1.1s
KURBB Kurchatov Arra 43.19 320 P P 15 10 54.1 +1.2
comp=Z,0.3nm,0.4s,baz=114,slow=8.0,SNR=4.3
COCO West Island 43.69 218 P P 15 10 57.6 +0.4
AAK Ala-Archa 43.70 307 P P 15 10 58.5 +1.1
comp=Z,1.4nm,0.6s,baz=116,slow=9.0,SNR=6.5
AAK Ala-Archa 43.70 307 P P 15 10 59.9 +2.5
WRA Warramunga Arr 44.97 164 P P 15 11 09.2 +1.7
comp=Z,0.5nm,0.8s,baz=344,slow=8.3,SNR=3.0
WB2 Warramunga Arr 44.98 164 P P 15 11 08.7 +1.2
KK31 Karatay Array 46.66 308 P P 15 11 21.7 +0.9
KK31 IAmb IAmb 15 11 44.1
comp=Z,6.2nm,1.6s
KKAR Karatay Array 46.66 308 P P 15 11 20.3 -0.4
KKAR Karatay Array 46.66 308 P P 15 11 21.1 +0.4
KKAR IAmb IAmb 15 11 44.1
comp=Z,6.2nm,1.6s
ASAR Alice Springs 48.45 166 P P 15 11 37.3 +2.5
comp=Z,0.3nm,0.5s,baz=348,slow=7.5,SNR=6.3
ASAR Alice Springs 48.45 166 P P 15 11 36.6 +1.9
KIWB Kanaga Island 53.44 42 P P 15 12 10.6 -1.4
ABKAR Akbulak array 54.58 314 P P 15 12 18.6 -1.8
STKA Stephens Creek 58.29 161 P P 15 12 49.1 +2.2
comp=Z,0.6nm,0.5s,baz=340,slow=7.1,SNR=3.8
STKA Stephens Creek 58.29 161 P P 15 12 48.8 +1.9
SUA Susitna One 67.87 31 P P 15 13 49.2 -1.2
ILAR Eielson Array 69.01 27 P P 15 13 55.9 -1.5
comp=Z,0.2nm,0.5s,baz=268,slow=5.9,SNR=4.5
BMAR Burnt Mountain 69.39 24 P P 15 14 01.8 +2.0
GLB Gilahina Butte 71.13 30 P P 15 14 11.9 +1.3
FINES FINESS Array B 72.39 330 P P 15 14 17.5 -0.5
comp=Z,0.4nm,0.5s,baz=77,slow=6.3,SNR=4.7
FINES FINESS Array B 72.39 330 P P 15 14 19.0 +1.0
BR131 Keskin Array S 74.37 307 P P 15 14 30.6 +0.2
BR131 IAmb IAmb 15 14 47.8
comp=Z,3.2nm,1.3s
BRTR Keskin Array B 74.37 307 P P 15 14 31.6 +1.2
comp=Z,0.5nm,0.5s,baz=94,slow=6.4,SNR=5.1
BRTR Keskin Array B 74.37 307 P P 15 14 31.0 +0.6
NIUE Niue 78.45 117 P P 15 14 57.2 +3.7
NC204 NORSAR Array S 79.20 333 P P 15 14 58.0 +0.9
YKA Yellowknife Ar 82.86 23 P P 15 15 14.3 -2.2
comp=Z,0.5nm,0.5s,baz=309,slow=5.1,SNR=9.8

TAP 13 15:02:56.0, 23.°78N×122.°50E, h27km±1km, ML4.2, 1C, D, Taiwan region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res
ENLB Shoufeng 0.83 279 *i* P Pb 15 03 10.2 -1.6
baz=277
ENLB *i* S Sb 15 03 22.1 -0.4
baz=277
EOS1 EOS1 0.84 336 P Pn 15 03 12.2 +0.2
baz=324
EOS1 S Sn 15 03 25.3 +1.9
baz=324
TWD Chiawan 0.88 290⇑*i*P Pn 15 03 11.4 -1.1
baz=276
TWD *i* S Sb 15 03 23.2 -0.7
baz=276
NACB Ninganchiao 0.91 296 P Pn 15 03 12.1 -0.9
baz=295
ENA Nanau 0.94 313 P Pn 15 03 13.5 0.0
baz=311
ENA S Sn 15 03 27.8 +1.7
baz=311
ESL Shilin 0.97 272 *i* P Pn 15 03 12.3 -1.6
baz=270
ESL S Sb 15 03 24.9 -1.7
baz=270
EGFH Guangfu 0.98 264 P Pn 15 03 13.0 -1.1
baz=263
TWC Suao 1.01 325 *i* P Pn 15 03 14.3 -0.2
baz=322
TWC *i* S Sn 15 03 27.3 -0.5
baz=322
ETLH Xiulin Townshi 1.02 295 P Pn 15 03 14.0 -0.6
baz=292
ETLH S Sn 15 03 28.4 +0.3
baz=292
HGSD Ruisui 1.02 254 P Pn 15 03 13.5 -1.1
baz=252
HGSD S Sn 15 03 26.6 -1.4
baz=252
EHY Hungye 1.11 256 *i* P Pn 15 03 15.3 -0.5
baz=253
EHY S Sn 15 03 29.2 -1.0
baz=253
YULB Yu-li 1.17 251 P Pn 15 03 16.2 -0.3
baz=249
YULB S Sn 15 03 29.9 -1.7
baz=249
TWF1 Yuli 1.18 249 *i* P Pn 15 03 16.6 -0.2
baz=247
TWF1 S Sn 15 03 29.9 -2.0
baz=247
WHF Hehuan Shan 1.18 288 *i* P Pn 15 03 16.6 -0.6
baz=273
WHF S Sn 15 03 31.5 -1.1
baz=273
ILA Ilan 1.20 325 P Pb 15 03 18.2 +0.3
baz=322
ILA S Sb 15 03 33.7 +0.7
baz=322
NNSB Datong 1.20 303 P Pn 15 03 17.2 0.0
baz=299
NNSB eS Sb 15 03 33.5 0.0
baz=299
NNSH Datong 1.20 303 P Pn 15 03 17.2 0.0
baz=299
NNSH eS Sb 15 03 33.1 -0.3
baz=299
TWE Neicheng 1.20 321 *i* P Pn 15 03 17.5 +0.4
baz=320
ENTT Nioudou 1.21 315 *i* P Pb 15 03 17.8 -0.4
baz=298
ENTT *i* S Sb 15 03 33.3 -0.1
baz=298
NDT Datong Townshi 1.21 313 P Pn 15 03 17.5 +0.2
baz=309
NDT eS Sb 15 03 34.6 +1.0
baz=309
NNS Nan Shan 1.22 303 *i* P Pn 15 03 17.1 -0.3
baz=300
OWD Renai 1.22 278 P Pn 15 03 16.7 -0.8
baz=277
NTC Toucheng 1.23 331 eP Pb 15 03 18.0 -0.5
baz=327
NTC eS Sb 15 03 35.2 +1.2
baz=327
CHKT Chengkung 1.24 237 eP Pn 15 03 16.1 -1.5
baz=235
CHKT S Sn 15 03 31.2 -2.2
baz=235
CHGB Renai 1.24 283 P Pn 15 03 17.8 0.0
baz=271
CHGB S Sn 15 03 33.7 0.0
baz=271
VWDT VWDT 1.24 269 P Pn 15 03 17.3 -0.3
baz=266
VWDT S Sn 15 03 33.1 -0.3
baz=266
FULB Fuli 1.25 243 P Pn 15 03 16.7 -1.0
baz=230
FULB S Sn 15 03 32.6 -1.0
baz=230
SLBB Yuanshan 1.25 321 *i* P Pb 15 03 18.4 -0.5
baz=318
SLBB eS Sb 15 03 34.5 -0.1
baz=318
TWT Tachien 1.29 292 *i* P Pn 15 03 18.9 +0.4
baz=288
TWT S Sn 15 03 34.7 -0.4
baz=288
TWB1 Santiao Chiao 1.31 339 P Pn 15 03 19.0 +0.5
baz=335
TWB1 eS Sn 15 03 35.4 +0.3
baz=335
TDCB Techi 1.31 291 eP Pn 15 03 18.8 +0.1
baz=290
TIPB Shuangxi 1.33 333 eP Pn 15 03 19.5 +0.6
baz=329
TIPB S Sb 15 03 36.9 -0.1
baz=329
NWLT Wulai 1.34 318 P Pb 15 03 19.9 -0.7
baz=302
NWLT eS Sb 15 03 37.5 +0.1
baz=302
YHNB Yeheng 1.35 311 P Pn 15 03 19.9 +0.7
baz=309
NSK Sanguang 1.37 311 P Pn 15 03 20.1 +0.7
baz=309
SSLB Suanglung 1.41 271 eP Pn 15 03 19.7 -0.3
baz=267
SSLB eS Sn 15 03 37.6 -0.1
baz=267
TWH Lutao 1.42 222 P Pn 15 03 18.6 -1.4
baz=220
TWH S Sn 15 03 35.6 -2.2
baz=220
NWF Wu-fen Shan 1.44 333 P Pn 15 03 20.7 +0.3
baz=328
NWF S Sb 15 03 40.4 +0.2
baz=328
WFSB Wu-fen Shan 1.44 333 eP Pn 15 03 20.8 +0.5
baz=328
WFSB eS Sb 15 03 39.6 -0.5
baz=328
YUS Yu-Shan 1.44 259 P Pn 15 03 20.6 -0.2
baz=255
YUS *i* S Sn 15 03 38.9 -0.3
baz=255
TWA Mucha 1.46 325 *i* P Pb 15 03 21.8 -0.6
baz=321
TWA S Sb 15 03 41.5 +0.9
baz=321
DPDB Guoxing 1.46 280 P Pn 15 03 20.9 +0.3
baz=279
NHDH Xindian Distri 1.47 323 P Pb 15 03 22.0 -0.7
baz=321
ELDTW Lidau 1.48 247 P Pn 15 03 19.8 -1.2
baz=244
ELDTW S Sn 15 03 36.9 -2.6
baz=244

TYC Yuchr 1.50 275 i P Pn 15 03 21.6 +0.4
baz=272
WHYT Xinyi Township 1.51 267 eP Pn 15 03 21.8 +0.6
baz=258
TAP1 Taipei 1.54 325 eP Pb 15 03 22.9 -0.8
baz=320
TAP1 eS Sn 15 03 41.6 +1.0
baz=320
WLTB Daxi 1.56 314 eP Pb 15 03 23.5 -0.7
baz=311
ALS Alishan 1.57 261 eP Pn 15 03 23.2 +0.8
baz=257
ALS eS Sn 15 03 42.0 -0.1
baz=257
YM01 YM01 1.60 328 eP Pn 15 03 22.9 +0.3
baz=344
LIOB Emei 1.60 303 P Pb 15 03 24.4 -0.6
baz=301
NSTT Nanjuang 1.61 302 i P Pb 15 03 24.6 -0.4
baz=300
YM10 YM10 1.61 328 eP Pb 15 03 24.4 -0.8
baz=343
YM11 YM11 1.61 329 eP Pb 15 03 24.1 -1.1
baz=343
TWGBT Beinan 1.62 234 eP Pn 15 03 22.1 -0.7
baz=224
WJS Zhushan 1.62 272 P Pb 15 03 25.2 0.0
baz=258
WJS eS Sn 15 03 43.6 +0.8
baz=258
TWG Pinlang 1.62 234 eP Pn 15 03 22.9 +0.1
baz=224
YM08 YM08 1.63 330 eP Pn 15 03 23.8 +0.9
baz=327
TWS1 Kuangyinshan 1.64 323 P Pn 15 03 24.1 +1.1
baz=319
TWS1 eS Sn 15 03 44.5 +1.2
baz=319
WNT Mingjian 1.66 274 P Pb 15 03 25.2 -0.7
baz=271
TWQ1 Liyutan 1.67 290 P Pb 15 03 25.1 -1.0
baz=286
TWQ1 S Sb 15 03 47.8 +1.0
baz=286
CHN5 Tsauling 1.68 264 P Pn 15 03 24.9 +1.3
baz=260
CHN5 S Sb 15 03 46.3 -0.7
baz=260
NCUH Zhongli 1.68 315 eP Pb 15 03 25.2 -1.1
baz=312
TCU Taichung 1.70 283 eP Pb 15 03 26.0 -0.6
baz=278
TCU eS Sb 15 03 48.2 +0.6
baz=278
NSY Sanyi 1.71 292 P Pb 15 03 25.9 -0.8
baz=286
NSY S Sb 15 03 48.2 +0.5
baz=286
SBCB Hsinchu 1.71 306 eP Pb 15 03 26.1 -0.6
baz=304
NMLH Miaoli 1.73 296 eP Pb 15 03 26.1 -1.0
baz=291
NMLH eS Sb 15 03 49.7 +1.3
baz=291
WGK Gukeng 1.77 267 eP Pb 15 03 27.2 -0.6
baz=263
WGK S Sb 15 03 48.5 -1.1
baz=263
TPUB Ta-pu 1.78 255 eP Pb 15 03 26.6 -1.3
baz=242
WDJ Dajia District 1.79 289 P Pb 15 03 26.6 -1.4
baz=286
WDLH Douliu 1.80 267 eP Pn 15 03 26.1 +0.9
baz=263
WDLH eS Sb 15 03 48.8 -1.5
baz=263
CHN4 Tsaushan 1.80 257 P Pb 15 03 26.9 -1.3
baz=255
WCHH Zhanghua 1.80 280 P Pb 15 03 27.5 -0.7
baz=277
WTP Ta-pu 1.81 253 eP Pn 15 03 26.9 +1.5
baz=252
ECL Taimali 1.84 231 eS Sn 15 03 46.8 -1.5
baz=240
SLGT Liugui 1.87 246 eP Pn 15 03 26.5 +0.3
baz=236
SLGT eS Sn 15 03 49.7 +0.7
baz=236
SGST Jiashian 1.89 249 P Pb 15 03 28.0 +1.5
baz=246
SGST eS Sn 15 03 50.5 +1.1
baz=246
SNST Tainan City 1.92 253 P Pb 15 03 29.2 -1.1
baz=250
SNST S Sb 15 03 53.7 -0.1
baz=250
RLNB Erlin 1.96 274 eP Pb 15 03 29.8 -1.2
baz=260
CHN8 Yiju 2.14 259 P Pn 15 03 31.5 +1.5
baz=254
CHN8 S Sb 15 03 58.5 -1.7
baz=254

*BJI **13** 15:41:00.5±0.0, 6.38S×133.59E, h10km, mB5.1/35, mb4.7/47, Ms4.9/7, Ms7 4.6/6*
*IDC **13** 15:41:03.1±0.7, 6.20S×133.28E, h0km, mb4.3/12, mb1 4.4/18, mb1mx4.3/37, mbtmp4.4/18, ML4.3/5, MS3.6/11, Ms1 3.6/11, ms1mx3.1/49, Error ellipse: s-maj=24.4km s-min=14.5km az=82.0*
*MOS **13** 15:41:05.8±1.1, 6.24S×133.27E, h33km, mb4.8/21, Error ellipse: s-maj=10.3km s-min=5.7km az=115.1*
*NEIC **13** 15:41:08.8±2.5, 6.13S±0.05×133.39E±0.06, h43km±6km, mb5.0/71, Error ellipse: s-maj=8.7km s-min=7.7km az=107.0*
*DJA **13** 15:41:18.0±0.3, 5°S±2°×13°3E±°, h10km, M4.9/12, mB5.3/5, mb5.0/9, MLv4.9/12, Mw(mB)4.7/5*
ISC 13 15:41:07.5±0.3, 6.24S±0.03×133.34E±0.04, h35km, n225, σ1.93/237, mb4.8/68, 4C-6D, Aru Islands region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res
KMPI Kaimana, Papua 2.59 8 P Pn 15 41 46.8 -0.1
KMPI S Sn 15 42 12.7 -4.4
SAUI Saumlaki 2.66 229 Pn 15 41 51.0 +3.1
SAUI Sn Sn 15 42 22.3 +3.3
FAKI Fak Fak 3.47 342 P Pn 15 41 57.7 -1.4
FAKI Fak Fak 3.47 342 Pn 15 41 58.0 -1.1
FAKI Sn Sn 15 42 31.9 -7.0
BNDI Bandanaira 3.82 296 P Pn 15 42 04.5 +0.7
BNDI S Sn 15 42 44.1 -3.4
RKPI Ransiki, Papua 4.77 10 P Pn 15 42 18.2 +1.2
MSAI Masohi 5.25 303 P Pn 15 42 24.6 +1.1
MSAI S Sn 15 43 16.1 -6.7
AAI Ambon 5.71 296 P Pn 15 42 30.1 +0.1
AAI S Sn 15 43 30.0 -4.3
AAI Ambon 5.71 296 P Pn 15 42 30.0 +0.1
AAI pmax pmax
comp=Z,301nm,0.9s
SIJI Sorong 5.72 339 Pn Pn 15 42 28.2 -1.8
comp=Z,24nm,0.3s,baz=50,slow=1.5,SNR=148
SIJI Sn Sn 15 43 25.5 -9.0
comp=Z,39nm,0.3s,baz=254,slow=23,SNR=17
SWI Sorong 5.73 339 P Pn 15 42 28.8 -1.3
SWI Sorong 5.73 339 P Pn 15 42 29.0 -1.1
SWI pmax pmax
comp=Z,156nm,0.8s
NLAI Namlea 6.89 295 P Pn 15 42 47.5 +1.4
comp=Z,0.8nmcomp=Z,2μmcomp=Z,85nm,0.6s
NLAI S Sn 15 43 59.0 -4.3
comp=Z,0.8nmcomp=Z,2μmcomp=Z,85nm,0.6s
GENI Genyem 7.71 62 P Pn 15 43 10.8 +13
comp=Z,0.4nmcomp=Z,44nm,0.7s
LBMI Labuha 8.05 313 P Pn 15 43 01.1 -1.0
comp=Z,0.6nmcomp=Z,126nm,0.8s
JAY Jayapura 8.23 64 Pn Pn 15 43 05.6 +1.1
comp=Z,2.4nm,0.3s,baz=197,slow=11,SNR=9.5
JAY Sn Sn 15 44 35.1 -1.2
comp=Z,1.1nm,0.3s,baz=118,slow=20,SNR=5.9
SANI Sanana 8.43 299 P Pn 15 43 06.7 -0.5
comp=Z,0.5nmcomp=Z,2μmcomp=Z,109nm,0.5s
TNTI Ternate 9.16 319 Pn Pn 15 43 17.4 +0.1
SOEI Soe 9.63 248 P Pn 15 43 37.2 +13
comp=Z,3μmcomp=Z,195nm,0.5s
SOEI Soe 9.63 248 Pn 15 43 25.3 +1.5
KNRA Kununurra 10.40 205 Pn 15 43 34.9 +0.7
MMRI Maumere 11.26 257 Pn Pn 15 43 47.6 +1.6
MNI Manado 11.41 312 P Pn 15 43 48.1 0.0
MNI pmax pmax
comp=Z,101nm,1.0s
KMSI Cibinong 11.53 306 P Pn 15 43 50.2 +0.4
comp=Z,1μmcomp=Z,100nm,0.5s
LUWI Luwuk 11.73 296 Pn Pn 15 43 52.3 -0.2
COEN Coen 12.35 129 Pn 15 43 59.4 -1.6
MRSI Marisa 13.19 300 P Pn 15 44 13.3 +0.9
comp=Z,32nm,0.8s
BNSI Bone 13.30 277 P P 15 44 18.5 -4.6
comp=Z,13nm,0.8s
WB0 Warramunga Arr 13.49 176 Pn 15 44 15.0 -1.5
KAPI Kappang 13.57 274 Pn P 15 44 23.2 -3.0
comp=Z,1.1nm,0.3s,baz=179,slow=7.3,SNR=3.9
KAPI Sn Sn 15 46 46.5 -0.8
comp=Z,1.1nm,0.3s,baz=187,slow=18,SNR=1.8
KAPI LR LR 15 50 05.6
comp=Z,187nm,19.7s,baz=80,slow=40
KAPI Kappang 13.57 274 Pn Pn 15 44 17.0 -0.7
KAPI Kappang 13.57 274 P Pn 15 44 17.0 -0.7
WRAB Tennant Creek 13.65 176 Pn 15 44 17.4 -1.3
WRAB Tennant Creek 13.65 176⇓eP Pn 15 44 17.4 -1.3
WRA Warramunga Arr 13.66 176 Pn Pn 15 44 17.4 -1.4
comp=Z,1.5nm,0.3s,baz=3.2,slow=12,SNR=48
WRA Sn Sn 15 46 38.4 -11
comp=Z,1.6nm,0.3s,baz=358,slow=22,SNR=2.9
WRA Lg Lg 15 48 14.9
baz=353,slow=22,SNR=2.7
WRA LR LR 15 50 02.6
comp=Z,543nm,18.4s,baz=0.0,slow=39
WRA Warramunga Arr 13.66 176 Sn 15 46 46.1 -3.3
WRA Warramunga Arr 13.66 176 i P Pn 15 44 17.3 -1.5
WRA pmax pmax
comp=Z,2.0nm,0.3s
WB2 Warramunga Arr 13.66 176 P Pn 15 44 17.6 -1.3
WR0 Warramunga Arr 13.69 175 P Pn 15 44 18.2 -1.1
TTSI Tana Toraja 13.84 283 P P 15 44 26.0 -3.2
FITZ Fitzroy Crossi 13.98 212 Pn Pn 15 44 21.8 -1.3
comp=Z,1.6nm,0.3s,baz=28,slow=11,SNR=18
FITZ Sn Sn 15 46 47.4 -10
comp=Z,4.8nm,0.3s,baz=182,slow=12,SNR=7.5
FITZ LR LR 15 50 55.1
comp=Z,151nm,19.1s,baz=27,slow=42
FITZ Fitzroy Crossi 13.98 212 Pn Pn 15 44 21.6 -1.6
FITZ Sn 15 46 48.3 -8.9
PMG Port Moresby 14.05 104 Pn Pn 15 44 24.8 +0.6
comp=Z,0.9nm,0.3s,baz=286,slow=5.3,SNR=12
PMG Sn Sn 15 46 49.9 -9.2
comp=Z,0.2nm,0.3s,baz=299,slow=16,SNR=2.4
PMG LR LR 15 50 52.1
comp=Z,191nm,19.1s,baz=280,slow=42
PMG Port Moresby 14.05 104 Pn 15 44 24.6 +0.4
PMG Sn 15 46 52.8 -6.2
PMG Port Moresby 14.05 104 ceP Pn 15 44 25.7 +1.5
PMG pmax pmax
comp=Z,60nm,0.8s
AS31 Alice Springs 17.34 178 P Pn 15 45 05.2 -1.7
ASAR Alice Springs 17.34 178 P Pn 15 45 06.0 -0.9
comp=Z,0.6nm,0.3s,baz=358,slow=12,SNR=82
ASAR S Sn 15 48 09.7 -9.2
comp=Z,0.5nm,0.3s,baz=354,slow=16,SNR=3.2
ASAR Lg Lg 15 50 20.6
comp=Z,0.3nm,0.3s,baz=352,slow=31,SNR=4.2
ASAR LR LR 15 52 08.4
comp=Z,409nm,19.3s,baz=353,slow=38
ASAR Alice Springs 17.34 178 P Pn 15 45 05.5 -1.4
ASAR Sn 15 48 11.8 -7.1
ASAR Alice Springs 17.34 178 P Pn 15 45 05.5 -1.4
ASAR S Sn 15 48 11.8 -7.1
CTA Charters Tower 18.63 139 P Pn 15 45 26.0 +3.2
comp=Z,0.5nm,0.3s,baz=320,slow=12,SNR=11
CTA Lg Lg 15 51 01.3
comp=Z,0.4nm,0.3s,baz=48,slow=22,SNR=4.4
CTA Charters Tower 18.63 139 P Pn 15 45 26.0 +3.2
CTAO Charters Tower 18.63 139 P Pn 15 45 24.3 +1.6
CTAO pmax pmax
comp=Z,16nm,1.0s
KRVT Keravat (AS076 18.71 85 LR LR 15 52 37.0
comp=Z,94nm,21.4s,baz=233,slow=37
JAGI Jajag, Banyuwa 19.15 262 P Pn 15 45 27.9 -1.2
PSA00 Pilbara Seismi 20.07 219 P Pn 15 45 38.6 -1.4
PSA00 Pilbara Seismi 20.07 219 P 15 45 39.3 -0.6
PSA00 IAmb IAmb 15 46 29.3
comp=Z,59nm,1.6s
KKM Kota Kinabalu 21.00 305 P P 15 45 48.1 -0.1
KKM IAmb IAmb 15 46 02.0
comp=Z,38nm,0.9s
UGM Wanagama 22.70 264 P P 15 46 06.5 +0.1
SBUM Sibu 22.78 292 P P 15 46 12.0 +4.7
GUMO Guam 22.79 30 LR LR 15 55 35.0
comp=Z,43nm,18.7s,baz=203,slow=38
KSM Kuching 24.23 288 P P 15 46 23.2 +1.9
GIRL Giralia 24.61 227 P P 15 46 26.9 +2.2
FORT Forrest 24.91 191 P P 15 46 28.7 +1.4
FORT IAmb IAmb 15 46 39.9
comp=Z,46nm,0.7s
EIDS Eidsvold 25.50 140 P P 15 46 32.9 +0.2
BBOO Buckleboo 26.56 175 P P 15 46 43.9 +1.6
BBOO IAmb IAmb 15 47 29.9
comp=Z,46nm,1.5s
STKA Stephens Creek 26.65 164 P P 15 46 44.9 +1.9
comp=Z,1.1nm,0.3s,baz=333,slow=9.6,SNR=9.2
STKA LR LR 15 58 25.6
comp=Z,219nm,18.2s,baz=19,slow=39
STKA Stephens Creek 26.65 164 P P 15 46 45.0 +1.9
STKA Stephens Creek 26.65 164 P P 15 46 45.0 +1.9
STKA pmax pmax
comp=Z,2.0nm,0.8s
MORW Morawa 27.98 214 P P 15 46 56.7 +1.6
MORW IAmb IAmb 15 46 59.8
comp=Z,23nm,1.2s
ARMA Armidale 29.57 147 P P 15 47 08.2 -1.1
NWAO Narrogin (SRO) 30.49 207 P P 15 47 19.6 +2.3
NWAO IAmb IAmb 15 48 12.7
comp=Z,22nm,1.2s
NWAO Narrogin (SRO) 30.49 207 P P 15 47 19.8 +2.5
NWAO IAmb IAmb 15 48 12.7
comp=Z,27nm,1.2s
NWAO Narrogin (SRO) 30.49 207 P P 15 47 19.8 +2.5
NWAO pmax pmax
comp=Z,27nm,1.2s
CAN Canberra 32.34 156 P P 15 47 33.5 -0.1
CAN IAmb IAmb 15 47 48.8
comp=Z,24nm,1.5s
CAN Canberra 32.34 156 P P 15 47 33.5 -0.1
CAN pmax pmax
comp=Z,25nm,1.5s
YHNB Yeheng 32.86 340 P P 15 47 38.1 -0.1
TOO Toolangi 33.10 162 P P 15 47 40.5 +0.3
TOO IAmb IAmb 15 47 41.4
comp=Z,20nm,1.7s
TOO Toolangi 33.10 162 P P 15 47 40.5 +0.3
TOO pmax pmax
comp=Z,20nm,1.7s
IPM Ipoh 33.97 288 P P 15 47 48.9 +0.8
IPM IAmb IAmb 15 48 28.3
comp=Z,18nm,1.5s
HKPS Hong Kong Po S 34.01 327 P P 15 47 48.0 -0.2
TAU Tasmania Unive 38.56 163 P P 15 48 25.9 -0.9
TAU IAmb IAmb 15 48 41.0
comp=Z,59nm,1.6s
TAU Tasmania Unive 38.56 163 P P 15 48 25.9 -0.9
TAU pmax pmax
comp=Z,59nm,1.6s
PBKT Sadao Pong 39.22 306 P P 15 48 30.6 -2.1
JHJ Hachijo jima 2 39.62 8 LR LR 16 03 03.7
comp=Z,54nm,21.1s,baz=272,slow=33
NJ2 Nanjing 40.50 341 eP P 15 48 46.3 +3.1
NJ2 pmax pmax
comp=Z,12nm,0.6s
INU Inuyama 41.51 5 P P 15 48 50.0 -1.4
INU IAmb IAmb 15 49 56.1
comp=Z,126nm,2.0s
CM31 Chiang Mai Arr 41.87 307 P P 15 48 54.7 +0.1
CMAR Chiang Mai Arr 41.87 307 P P 15 48 55.5 +0.8
comp=Z,2.7nm,0.7s,baz=137,slow=7.6,SNR=35
CMAR PcP PcP 15 50 52.1 +1.9
comp=Z,0.5nm,0.6s,baz=175,slow=2.6,SNR=4.4
CHTO Chiang Mai 42.06 307 P P 15 48 57.0 +0.8
CHTO Chiang Mai 42.06 307 P P 15 48 57.0 +0.8
CHTO pmax pmax
comp=Z,4.0nm,0.7s
MJAR Matsushiro Arr 42.80 6 P P 15 49 00.7 -1.2
comp=Z,2.0nm,0.8s,baz=192,slow=11,SNR=4.6
MJAR LR LR 16 03 40.4
comp=Z,43nm,21.8s,baz=165,slow=32
MJAR Matsushiro Arr 42.80 6 P P 15 49 01.0 -1.0
MJAR Matsushiro Arr 42.80 6 P P 15 49 01.0 -1.0
MJAR pmax pmax
comp=Z,10.0nm,2.0s
KSRS Korea Array 43.76 354 P P 15 49 10.7 +1.0
comp=Z,2.5nm,0.8s,baz=171,slow=10.0,SNR=7.8
XAN Xi'an 46.24 332 P P 15 49 38.3 +8.7
XAN pP sP 15 49 42.1 -0.5
CD2 Chengdu 46.53 324 P P 15 49 32.8 +0.9
CD2 pmax pmax
comp=Z,20nm,0.5s
BJI Beijing 48.69 342 P P 15 49 49.1 +0.7
BJI pmax pmax
comp=Z,7.0nm,0.6s
FOZ Fox Glacier 49.05 145 P P 15 49 50.7 -0.4
PYZ Puysegur Point 49.10 150 P P 15 49 50.7 -0.8
USA0B Ussuriysk Arra 50.22 359 P P 15 50 00.4 +0.5
USA0B IAmb IAmb 15 51 32.7
comp=Z,33nm,1.9s
USA0B Ussuriysk Arra 50.22 359 P P 15 50 00.4 +0.5
USA0B pmax pmax
comp=Z,33nm,2.0s
USRK Ussuriysk Ar. 50.22 359 P P 15 50 00.8 +0.8
comp=Z,1.9nm,0.7s,baz=156,slow=6.8,SNR=6.0
USRK Ussuriysk Ar. 50.22 359 P P 15 50 00.1 +0.1
USRK Ussuriysk Ar. 50.22 359 P P 15 50 00.1 +0.1
TUWZ Tuamarina 50.30 140 P P 15 50 00.4 -0.4
CN2 Changchun 50.31 353 eP P 15 50 01.8 +1.1
LZH Lanzhou 50.38 329 eP P 15 50 03.1 +1.5
LZH pP pP 15 50 08.4 -2.6
LZH sP sP 15 50 11.0 -3.7
LZH ePP PP 15 52 00.5 +3.0
LZH pmax pmax
comp=Z,23nm,1.5s
LZH pmax pmax
comp=Z,160nm,6.0s
LZH LR LR
comp=Z,410nm,14.7s
LZH LR LR
comp=Z,420nm,14.9s
LZH LR LR
comp=Z,660nm,17.2s
KHZ Kahutara 50.59 142 P P 15 50 04.5 +1.6
KHZ IAmb IAmb 15 50 36.1
comp=Z,119nm,1.8s
MDJ Mudanjiang 50.73 357 P P 15 50 04.8 +0.9
MDJ pP pP 15 50 10.0 -3.2
MDJ pmax pmax
comp=Z,8.0nm,0.7s
MDJ pmax pmax
comp=Z,280nm,5.5s
BKZ Black Stump Fm 50.83 137 P P 15 50 05.0 +0.1
BKZ IAmb IAmb 15 50 55.3
comp=Z,72nm,1.9s
HHC Hu-ho-hao-te 50.95 339 eP P 15 50 09.8 +4.1
HHC pmax pmax
comp=Z,4.0nm,0.7s
HHC pmax pmax
comp=Z,25nm,5.1s
YSS Yuzh-Sakhalins 53.62 8 eP P 15 50 26.0 +0.8
LSA Lhasa 54.01 314 P P 15 50 29.4 +0.4
LSA Lhasa 54.01 314 P P 15 50 29.4 +0.4
LSA pmax pmax
comp=Z,4.0nm,0.9s
KNTN Kanton 54.86 89 P P 15 50 32.3 -2.7
GTA Gaotai 54.98 329 eP P 15 50 36.8 +1.3
GTA pP pP 15 50 40.9 -4.1
GTA sP sP 15 50 43.8 -4.9
GTA pmax pmax
comp=Z,7.0nm,0.8s
KLR Kul'dur 55.25 359⇑eP P 15 50 37.3 +0.2
KLR pmax pmax
comp=Z,10.0nm,2.0s
TAPN Taplejung 55.31 309 eP P 15 50 38.7 +0.3
comp=Z,7.4nm,0.5s
ODAN Odare 55.32 309 eP P 15 50 38.7 +0.4
comp=Z,8.3nm,0.6s
RAMN Ramite 55.98 308 eP P 15 50 43.7 +0.6
comp=Z,16nm,0.5s
HIA Hailar 56.53 349⇑eP P 15 50 46.5 +0.2
HIA pmax pmax
comp=Z,12nm,0.9s
JIRN Jiri 56.64 309 eP P 15 50 48.2 +0.3
comp=Z,9.0nm,0.6s
GUN Gumba 57.00 309 eP P 15 50 50.9 +0.4
comp=Z,12nm,0.6s
PKI Pulchoki 57.20 308 eP P 15 50 52.3 +0.4
comp=Z,13nm,1.1s
PKIN Phulchoki 57.22 308 eP P 15 50 52.3 +0.4
KKN Kakani 57.41 309 eP P 15 50 53.6 +0.4
comp=Z,14nm,0.9s
DMN Daman 57.46 308 eP P 15 50 54.3 +0.7
GKN Gorkha 58.01 308 eP P 15 50 57.9 +0.6
ULN Ulaanbaatar 58.64 340 P P 15 51 02.2 +0.8
ULN Ulaanbaatar 58.64 340 P P 15 51 02.2 +0.8
ULN pmax pmax
comp=Z,4.0nm,1.1s
KOLN Koldanda 58.71 308 eP P 15 51 03.1 +0.8
comp=Z,13nm,0.7s
SONM Songino Array 58.84 339 P P 15 51 04.0 +1.3
comp=Z,1.1nm,0.7s,baz=150,slow=6.9,SNR=8.8
SONM Songino Array 58.84 339 P P 15 51 03.3 +0.6
SONM Songino Array 58.84 339 P P 15 51 03.3 +0.6
SONM pmax pmax
comp=Z,1.0nm,0.8s
DANN Dangsing 58.85 308 eP P 15 51 03.5 +0.1
comp=Z,5.8nm,0.6s
ZEA Zeya 59.97 356 eP P 15 51 10.8 +0.6
ZEA pmax pmax
comp=Z,14nm,1.2s
PEA0B Petropavlovsk- 62.62 16 P P 15 51 29.2 +1.0
PEA0B Petropavlovsk- 62.62 16 P P 15 51 29.2 +1.0
PEA0B pmax pmax
comp=Z,125nm,1.6s
PETK Petropavlovsk- 62.62 16 P P 15 51 29.5 +1.3
comp=Z,4.3nm,0.7s,baz=180,slow=7.3,SNR=12
PETK Petropavlovsk- 62.62 16 P P 15 51 29.2 +1.0
PETK Petropavlovsk- 62.62 16 P P 15 51 29.2 +1.0
WMQ Urumqi 64.62 325 eP P 15 51 43.4 +1.7
WMQ pP pP 15 51 48.9 -2.4
WMQ sP sP 15 51 52.4 -2.6
WMQ pmax pmax
comp=Z,11nm,0.9s
WMQ pmax pmax
comp=Z,85nm,4.9s
WMQ LR LR
comp=Z,280nm,28.8s
WMQ LR LR
comp=Z,1μm,28.8s
WMQ Urumqi 64.62 325 P P 15 51 43.0 +1.3
WMQ IAmb IAmb 15 51 44.0
comp=Z,10nm,0.7s
WMQ Urumqi 64.62 325 P P 15 51 43.0 +1.3
WMQ pmax pmax
comp=Z,10.0nm,0.7s
YAK Yakutsk 68.13 358 P P 15 52 03.3 -0.3
YAK IAmb IAmb 15 52 05.1
comp=Z,20nm,0.7s
YAK Yakutsk 68.13 358 eP P 15 52 03.5 -0.1
YAK pmax pmax
comp=Z,15nm,0.7s
YAK pmax pmax
comp=N,2.0nm,0.8s
YAK pmax pmax
comp=E,2.0nm,1.4s
NIL Nilore 69.26 309 P P 15 52 12.3 +1.0
NIL Nilore 69.26 309 P P 15 52 12.4 +1.0
NIL pmax pmax
comp=Z,5.0nm,0.8s
MK31 Makanchi Array 69.45 325 P P 15 52 13.1 +0.8
MK31 IAmb IAmb 15 52 14.3
comp=Z,6.3nm,0.8s
MK31 Makanchi Array 69.45 325 P P 15 52 13.1 +0.8
MK31 pmax pmax
comp=Z,6.0nm,0.9s
MKAR Makanchi Array 69.45 325 P P 15 52 13.4 +1.2
comp=Z,9.2nm,0.8s,baz=121,slow=7.8,SNR=103
MKAR Makanchi Array 69.45 325 P P 15 52 12.6 +0.3
MKAR Makanchi Array 69.45 325 P P 15 52 12.6 +0.3
MAKZ Makanchi 69.64 325 P P 15 52 14.0 +0.6
MAKZ IAmb IAmb 15 52 15.3
comp=Z,8.1nm,0.8s

MAKZ Makanchi 69.64 325 P P 15 52 14.0 +0.6
MAKZ pmax pmax
comp=Z,8.0nm,0.9s
KSH Kashi 69.74 316 P P 15 52 16.5 +2.2
KSH PcP PcP 15 52 34.4 -2.5
KSH S S 16 01 22.8 +1.7
KSH SKS SKSac 16 02 11.9 -0.8
KSH pmax pmax
comp=Z,46nm,1.6s
KSH pmax pmax
comp=Z,210nm,5.4s
KSH LR LR
comp=Z,170nm,6.7s
KSH LR LR
comp=Z,190nm,5.8s
KSH LR LR
comp=Z,540nm,5.9s
KDJ Kajisay 70.14 319 P P 15 52 17.5 +0.7
KDJ Kajisay 70.14 319 P P 15 52 17.5 +0.7
KDJ pmax pmax
comp=Z,6.0nm,0.9s
SEY Seymchan 70.49 9⇓eP P 15 52 18.4 +0.1
NRN Naryn 70.59 318 P P 15 52 20.5 +0.7
NRN Naryn 70.59 318 P P 15 52 20.5 +0.7
NRN pmax pmax
comp=Z,3.0nm,1.0s
AAK Ala-Archa 72.14 318⇓iP P 15 52 30.3 +1.4
AAK pmax pmax
comp=Z,4.0nm,1.1s
ZAA0 Zalesovo Array 72.41 332 P P 15 52 29.9 -0.1
ZAA0 IAmb IAmb 15 52 30.8
comp=Z,8.1nm,0.7s
ZALV Zalesovo Beam 72.41 332 P P 15 52 30.2 +0.2
comp=Z,10.0nm,0.7s,baz=113,slow=5.2,SNR=33
ZALV Zalesovo Beam 72.41 332 P P 15 52 29.4 -0.6
ZALV Zalesovo Beam 72.41 332 P P 15 52 29.4 -0.6
HON Honolulu 72.65 65 P P 15 52 30.3 -1.8
HON Honolulu 72.65 65 P P 15 52 30.3 -1.8
HON pmax pmax
comp=Z,302nm,1.3s
VNDA Vanda 72.82 174 LR LR 16 23 25.3
comp=Z,88nm,18.6s,baz=350,slow=35
KURK Kurchatov 73.64 327 P P 15 52 38.0 +0.6
KURK IAmb IAmb 15 52 38.9
comp=Z,9.7nm,1.2s
KURK Kurchatov 73.64 327 d iP P 15 52 37.8 +0.5
KURK pmax pmax
comp=Z,9.0nm,1.2s
KKAR Karatay Array 74.98 318 P P 15 52 45.8 +0.4
KKAR Karatay Array 74.98 318 P P 15 52 45.8 +0.4
MAW Mawson 76.87 202 P P 15 52 56.9 +1.3
comp=Z,2.4nm,0.6s,baz=54,slow=8,SNR=5.3
MAW Mawson 76.87 202 P P 15 52 57.2 +1.5
MAW IAmb IAmb 15 53 29.3
comp=Z,17nm,2.0s
MAW Mawson 76.87 202 P P 15 52 57.2 +1.5
MAW pmax pmax
comp=Z,17nm,2.0s
BILL Bilibino 77.65 12 eP P 15 53 00.7 +0.7
BILL e 15 53 08.0
BILL e 15 55 55.7
BILL pmax pmax
comp=Z,1.0nm,1.0s
TIXI Tiksi 77.79 359 P P 15 53 00.1 -0.5
TIXI IAmb IAmb 15 53 01.9
comp=Z,5.2nm,0.8s
TIXI Tiksi 77.79 359⇓eP P 15 53 00.1 -0.5
TIXI pmax pmax
comp=Z,4.0nm,0.6s
BRVK Borovoye 79.29 327 P P 15 53 09.2 -0.1
BRVK Borovoye 79.29 327 P P 15 53 09.2 -0.1
BRVK pmax pmax
comp=Z,4.0nm,0.7s
GEYT Alibeck 82.27 310 P P 15 53 25.2 -0.5
comp=Z,1.6nm,0.6s,baz=176,slow=6.5,SNR=4.1
GEYT Alibeck 82.27 310 P P 15 53 25.0 -0.6
CHGN Chignik 83.36 31 P P 15 53 30.4 -0.4
QSPA South Pole Qui 83.73 180 P P 15 53 33.2 +0.4
QSPA IAmb IAmb 15 53 49.7
comp=Z,7.7nm,0.9s
ANM Nome 83.75 22 P P 15 53 33.6 +0.9
ANM IAmb IAmb 15 54 57.4
comp=Z,18nm,1.9s
ANM Nome 83.75 22 P P 15 53 33.6 +0.9
ANM pmax pmax
comp=Z,18nm,1.9s
ABKAR Akbulak array 83.99 321 P P 15 53 34.1 -0.2
SYO Syowa Base 85.57 201⇑ePcP PcP 15 53 46.1 +1.4
KDAK Kodiak Island 86.85 31 P P 15 53 49.7 +1.4
KDAK Kodiak Island 86.85 31 P P 15 53 49.7 +1.4
KDAK pmax pmax
comp=Z,125nm,1.5s
TTA Tatalina 86.86 26 P P 15 53 49.8 +1.4
TTA Tatalina 86.86 26 P P 15 53 49.8 +1.4
BRLK Bradley Lake 88.25 29 P P 15 53 54.9 -0.1
PPLA Purkeypile 88.52 26 P P 15 53 57.3 +0.9
PPLA IAmb IAmb 15 54 56.2
comp=Z,39nm,1.6s
SUA Susitna One 88.77 28 P P 15 53 57.6 0.0
IMAR Indian Mountai 88.79 23 P P 15 53 58.9 +1.4
RC01 Rabbit Creek A 89.14 28 P P 15 53 59.9 +0.7
RC01 IAmb IAmb 15 55 21.6
comp=Z,41nm,1.5s
KTH Kantishna Hill 89.25 26 P P 15 54 00.0 +0.3
GHO Glory Hole Cre 89.69 28 P P 15 54 01.2 -0.6
GHO IAmb IAmb 15 54 55.5
comp=Z,50nm,1.7s
MLY Manley 89.72 24 P P 15 54 01.7 -0.2
MLY IAmb IAmb 15 57 26.9
comp=Z,18nm,1.8s
KNK Knik Glacier 89.82 28 P P 15 54 03.2 +0.9
KNK IAmb IAmb 15 54 58.8
comp=Z,39nm,1.4s
SML Sawmill 89.97 28 P P 15 54 04.1 +1.0
SML Sawmill 89.97 28 P P 15 54 04.1 +1.0
SML pmax pmax
comp=Z,78nm,1.7s
RND Reindeer 90.11 26 P P 15 54 04.5 +0.7
RND IAmb IAmb 15 54 22.7
comp=Z,49nm,1.9s
RND Reindeer 90.11 26 P P 15 54 04.5 +0.7
RND pmax pmax
comp=Z,49nm,1.9s
SCM Sheep Creek Mo 90.44 28 P P 15 54 06.8 +1.5
SCM Sheep Creek Mo 90.44 28 P P 15 54 06.8 +1.5
SCM pmax pmax
comp=Z,104nm,1.9s
RAYN Ar Rayn 90.48 293 P P 15 54 07.1 +0.8
RAYN IAmb IAmb 15 54 08.0
comp=Z,3.4nm,0.8s
RAYN Ar Rayn 90.48 293 P P 15 54 07.1 +0.8
RAYN pmax pmax
comp=Z,3.0nm,0.8s
WRH Wood River Hil 90.69 25 P P 15 54 07.8 +1.5
WRH IAmb IAmb 15 55 42.2
comp=Z,38nm,2.0s
DHY Denali Highway 90.69 27 P P 15 54 07.4 +0.9
DHY IAmb IAmb 15 56 38.4
comp=Z,42nm,2.0s
IL31 91.26 25 P P 15 54 07.5 -1.4
IL31 IAmb IAmb 15 56 38.8
comp=Z,30nm,1.9s
ILAR Eielson Array 91.26 25 P P 15 54 08.3 -0.7
comp=Z,0.6nm,0.7s,baz=265,slow=4.5,SNR=8.3
ILAR Eielson Array 91.26 25 P P 15 54 07.9 -1.1
ILAR Eielson Array 91.26 25 P P 15 54 07.9 -1.1
MENT Mentasta 92.30 27 P P 15 54 11.2 -2.7
BRM Burnt Mountain 92.68 23 P P 15 54 16.2 +0.6
KIV Kislovodsk 94.75 314 eP P 15 54 25.0 -0.7
KIV pmax pmax
comp=Z,11nm,1.0s
LVZ Lovozero 99.02 338⇓eP Pdif 15 54 42.5 -1.9
ARCES ARCESS Array B 102.01 340 P Pdif 15 54 57.5 -0.2
comp=Z,2.6nm,0.9s,baz=71,slow=6.9,SNR=4.7
ARCES ARCESS Array B 102.01 340 Pdif 15 54 57.7 +0.1
ARCES ARCESS Array B 102.01 340 P Pdif 15 54 57.7 +0.1
TORD Torodi Ar. Bea 131.90 282 PKP PKiKP 16 00 18.9 -0.3
comp=Z,1.1nm,0.6s,baz=80,slow=2.1,SNR=7.0
CPUP Villa Florida 146.01 163 PKPbc PKPab 16 00 46.0 +1.1
comp=Z,1.3nm,0.3s,baz=194,slow=3.8,SNR=2.8

IDC 13 15:52:30.4±9.7, 20°.64S×178°.84W, h601km±95km, mb2.9/4, mb1 3.2/4, mb1mx2.8/48, mbtmp3.8/4, Error ellipse: s-maj=153.5km s-min=39.7km az=146.0, Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ASAR Alice Springs 43.72 257 P P 15 59 44.1 -0.1
1.3nm,0.5s,baz=93,slow=7.7,SNR=26
ASAR PcP PcP 16 01 17.4 -0.1
0.4nm,0.6s,baz=105,slow=3.3,SNR=5.6
WRA Warramunga Arr 43.80 262 P P 15 59 44.6 -0.2
0.8nm,0.7s,baz=97,slow=7.4,SNR=22
ILAR Eielson Array 88.62 13 P P 16 04 19.4 -0.6
0.2nm,0.5s,baz=218,slow=5.3,SNR=2.9
PDAR Pinedale Array 89.60 44 P P 16 04 25.9 +0.6
0.3nm,0.6s,baz=258,slow=4.2,SNR=2.2
AKASG Malin Array Be 142.75 330 PKP PKPdf 16 10 53.5 -2.5
0.9nm,0.4s,baz=39,slow=4.1,SNR=8.6
BRTR Keskin Array B 146.35 312 PKPbc PKPbc 16 11 05.8 +0.5
0.4nm,0.5s,baz=163,slow=5.2,SNR=3.8

IDC 13 15:53:35.3±10.0, 36°.05N×81°.97E, h0km, mb3.3/1, mb1 3.4/3, mb1mx3.1/61, mbtmp3.4/3, ML3.0/2, Error ellipse: s-maj=151.7km s-min=53.8km az=52.0, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MKAR Makanchi Array 10.74 1 Pn Pn 15 56 12.2 +1.8
0.3nm,0.3s,baz=187,slow=12,SNR=11
MKAR Sn Sn 15 58 08.6 -2.7
1.7nm,0.3s,baz=185,slow=23,SNR=83
ZALV Zalesovo Beam 18.01 5 P Pn 15 57 46.2 -0.7
0.1nm,0.3s,baz=186,slow=13,SNR=3.2
SONM Songino Array 21.55 49 P P 15 58 26.1 -0.2
1.0nm,0.7s,baz=242,slow=12,SNR=6.4

IDC 13 15:54:56.5±2.1, 10°.87S×119°.66E, h0km, mb3.4/1, mb1 3.4/4, mb1mx3.3/36, mbtmp3.3/4, ML3.1/3, Error ellipse: s-maj=78.7km s-min=25.7km az=62.0
ISC 13 15:55:00.5±1.4, 11°.0S±0°.1×119°.7E±0°.2, h35km, n6, σ1s56/10, South of Sumba

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KAPI Kappang 5.98 1 Pn Pn 15 56 25.1 -1.4
1.1nm,0.3s,baz=158,slow=7.2,SNR=5.5
KAPI Sn Sn 15 57 35.0 +1.1
2.5nm,0.3s,baz=149,slow=19,SNR=3.9
FITZ Fitzroy Crossi 9.10 141 Pn Pn 15 57 08.6 -0.8
0.2nm,0.3s,baz=329,slow=12,SNR=1.3
FITZ Sn Sn 15 58 50.2 -0.4
0.6nm,0.3s,baz=164,slow=22,SNR=8.7
WRA Warramunga Arr 16.67 124 Pn P 15 58 53.6 -0.1
0.0nm,0.3s,baz=292,slow=13,SNR=1.9
WRA Sn Sn 16 01 57.3 +1.5
0.1nm,0.3s,baz=285,slow=24,SNR=2.0
ASAR Alice Springs 18.48 135 P Pn 15 59 15.8 +1.8
0.1nm,0.3s,baz=315,slow=13,SNR=4.8
ASAR S Sn 16 02 38.9 -0.8
0.1nm,0.3s,baz=314,slow=24,SNR=5.9
SONM Songino Array 59.78 350 P P 16 05 00.6 -1.6
0.2nm,0.5s,baz=157,slow=7.8,SNR=2.8
MKAR Makanchi Array 66.56 333 P P 16 05 49.1 +2.1
6.9nm,0.3s,baz=146,slow=4.7,SNR=1.9

IDC 13 16:00:57.0±296.0, 8°.11S×109°.55E, h0km, Error ellipse: s-maj=137.5km s-min=91.5km az=71.0, Jawa

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
I04AU SHANNON INFRAS 27.09 168 i 18 44 20.0
baz=346,slow=311,SNR=3.9
I39PW PALAU INFRASON 29.37 59 i 19 01 40.0
baz=238,slow=310,SNR=2.2
I52GB DIEGO GARCIA I 36.73 269 i 19 45 40.0
baz=99,slow=312,SNR=2.0
I33MG ANTANANARIVO I 61.21 253 i 22 20 40.0
baz=87,slow=294,SNR=1.2

SJA 13 16:07:34.4±0.7, 24°.04S×66°.95W, h198km±8km, ML3.5, MW3.4
IDC 13 16:07:34.3±1.6, 24°.01S×66°.72W, h175km±23km, mb3.3/1, mb1 3.2/6, mb1mx3.1/42, mbtmp3.7/6, MS2.7/1, Ms1 2.7/1, ms1mx2.2/9, Error ellipse: s-maj=28.3km s-min=19.3km az=95.0
GUC 13 16:07:35.6±0.5, 24°.04S×67°.33W, h238km±12km, ML4.0
ISC 13 16:07:35.0±0.8, 24°.06S±0°.05×66°.98W±0°.04, h193km±8km, n32, σ1s73/50, 3C-3D, Salta Province

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SLA San Lorenzo 1.50 116 i P Pn 16 08 08.6 +0.3
SLA i S Sn 16 08 33.8 -0.3
HJA Humahuaca 1.67 60 i P Pn 16 08 10.0 -0.1
LVC Limon Verde 2.28 309 eP Pn 16 08 17.4 +0.9
LVC Limon Verde 2.28 309 P Pn 16 08 17.3 +0.9
7.0nm,0.3s,baz=106,slow=8.5,SNR=124
LVC S Sn 16 08 49.5 +0.9
11nm,0.3s,baz=264,slow=22,SNR=30
LVC Limon Verde 2.28 309 i P Pn 16 08 17.3 +0.9
LVC i S Sn 16 08 49.6 +1.0
YJA Yavi 2.31 36 i P Pn 16 08 17.1 +0.4
YJA i S Sn 16 08 49.2 -0.1
PB15 IPOC Station P 2.43 290⇓eP Pn 16 08 18.8 +0.9
PB15 i S Sn 16 08 51.4 +0.1
GO02 Mina Guanaco 2.62 245⇓eP Pn 16 08 20.7 +0.6
GO02 eS Sn 16 08 55.6 +0.3
GO02 IAML 16 08 56.9
comp=N,368nm,0.2s
PB06 IPOC Station P 2.73 299⇑iP Pn 16 08 22.1 +0.8
PB06 i S Sn 16 08 56.9 -0.4
PB06 IAML 16 08 58.8
comp=N,424nm,0.1s
PB06 IPOC Station P 2.73 299 i P Pn 16 08 22.1 +0.8
PB06 i S Sn 16 08 56.9 -0.4
PB06 IAML 16 08 58.0
comp=Z,168nm,0.1s
PB09 IPOC Station P 3.06 317 eP Pn 16 08 26.3 +1.1
PB09 IPOC Station P 3.06 317 i P Pn 16 08 26.8 +1.6
PB09 i S Sn 16 09 05.2 +0.8
PB09 IAML 16 09 09.9
comp=Z,44nm,0.4s
PB14 IPOC Station P 3.17 259 eP Pn 16 08 26.9 +0.3
PB14 i S Sn 16 09 05.4 -1.5
PB14 IAML 16 09 08.8
comp=E,81nm,0.5s
PB14 IPOC Station P 3.17 259 i P Pn 16 08 27.2 +0.6
PB14 i S Sn 16 09 05.5 -1.5
PB14 IAML 16 09 08.5
comp=Z,101nm,0.3s
PB05 IPOC Station P 3.19 291 i P Pn 16 08 27.1 +0.5
PB05 i S Sn 16 09 04.8 -2.2
PB03 IPOC Station P 3.24 308⇓eP Pn 16 08 27.8 +0.5
PB03 i S Sn 16 09 06.8 -1.5
PB03 IAML 16 09 10.8
comp=E,151nm,0.1s
PB03 IPOC Station P 3.24 308 i P Pn 16 08 27.9 +0.5
PB03 i S Sn 16 09 06.8 -1.5
PB10 IPOC Station P 3.32 279⇑iP Pn 16 08 28.7 +0.7
PB10 i S Sn 16 09 07.7 -1.9
PB10 IPOC Station P 3.32 279 i P Pn 16 08 28.8 +0.7
PB10 IAML 16 09 12.3
comp=Z,66nm,0.6s
PB04 IPOC Station P 3.38 300 i P Pn 16 08 29.4 +0.4
PB04 i S Sn 16 09 09.4 -1.8
PB04 IAML 16 09 12.6
comp=Z,116nm,0.1s
PB07 IPOC Station P 3.54 310 eP Pn 16 08 31.1 +0.1
PB01 IPOC Station P 3.79 322⇑iP Pn 16 08 34.2 +0.2
PB01 i S Sn 16 09 18.8 -1.4
PB01 IAML 16 09 21.1
comp=E,69nm,0.1s
PB02 IPOC Station P 3.83 315 eP Pn 16 08 34.5 0.0
PATCX Punta Patache 4.35 317 eP Pn 16 08 40.5 -0.6
CFA Coronel Fontan 7.60 188 P Pn 16 09 21.7 -1.4
comp=E,0.4nm,0.3s,baz=155,slow=18,SNR=13
CFA S Sn 16 10 41.6 -7.2
comp=E,1.6nm,0.3s,baz=252,slow=15,SNR=14
LPAZ La Paz 7.80 352 P Pn 16 09 25.5 -0.8
comp=E,0.4nm,0.3s,baz=159,slow=5.7,SNR=7.2
LPAZ S Sn 16 10 50.5 -4.1
comp=E,0.1nm,0.3s,baz=270,slow=10,SNR=2.2
CPUP Villa Florida 9.03 107 LR LR 16 13 13.4
comp=E,46nm,18.5s,slow=38
SIV San Ignacio 9.76 36 P Pn 16 09 48.7 -2.6
comp=E,0.3nm,0.3s,baz=231,slow=14,SNR=11
PLCA Paso Flores 16.90 189 P Pn 16 11 24.2 +3.9
comp=E,0.1nm,0.3s,baz=39,slow=8.5,SNR=3.1
BDFB Brasilia 19.69 68 P P 16 11 49.2 -0.6
comp=E,0.6nm,0.3s,baz=222,slow=12,SNR=4.0
TORD Torodi Ar. Bea 76.57 69 P P 16 19 03.8 -0.7
comp=E,0.4nm,0.5s,baz=258,slow=5.5,SNR=4.4
MKAR Makanchi Array 146.56 40 PKPbc PKPdf 16 26 54.4 +2.7
comp=E,0.1nm,0.5s,baz=304,slow=3.3,SNR=3.5

IDC 13 16:08:21.6±4.6, 22°.45N×94°.45E, h94km±38km, mb3.5/6, mb1 3.6/7, mb1mx3.2/65, mbtmp3.7/7, MS3.9/2, Ms1 3.9/2, ms1mx2.8/36, Error ellipse: s-maj=104.7km s-min=15.1km az=57.0
NEIC 13 16:08:21.1±1.1, 22°.63N±0°.06×94°.55E±0°.06, h92km±9km, mb4.5/13, Error ellipse: s-maj=8.2km s-min=7.6km az=200.0
NDI 13 16:08:22.9±1.1, 22°.67N×94°.45E, h92km, ML3.5, mb4.5(NEIC)
ISC 13 16:08:21.9±0.6, 22°.58N±0°.06×94°.39E±0°.06, h106km, n48, σ2s11/57, mb4.1/11, Myanmar

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BRDH Bariadhala 2.54 273 S Sn 16 09 32.5 +0.3
0.3nm,0.3s,baz=180,slow=24,SNR=7.2
SIMRM Sittwe 2.81 210 Pn Pn 16 09 06.3 +1.1
SHL Shillong 3.75 323 eP Pn 16 09 17.9 -0.1
SHL eS Sn 16 09 59.3 -2.1
SHL IAML 16 10 01.0
comp=N,126nm,0.1s
SHL IAML 16 10 02.7
comp=E,133nm,0.1s
SHL Shillong 3.75 323 Pn 16 09 17.9 -0.1
SHL Sn 16 09 57.9 -3.5
TEZP TEZPUR 4.27 341 eP Pn 16 09 23.8 -1.0
TEZP eS Sn 16 10 09.5 -4.1
TEZP IAML 16 10 12.3
comp=E,82nm,0.2s
ZIRO ZIRO 4.95 354 eP Pn 16 09 34.3 +0.2
ZIRO eS Sn 16 10 25.5 -4.8
ZIRO IAML 16 10 35.2
comp=E,149nm,0.4s
ZIRO IAML 16 10 35.8
comp=N,100nm,0.6s
CHTO Chiang Mai 5.68 130 Pn Pn 16 09 41.8 -2.1
CM31 Chiang Mai Arr 5.92 133 Pn Pn 16 09 45.3 -1.9
CMAR Chiang Mai Arr 5.92 133 P Pn 16 09 45.6 -1.6
comp=N,0.2nm,0.3s,baz=311,slow=13,SNR=14
CMAR S Sn 16 10 50.0 -3.7
comp=N,0.1nm,0.3s,baz=300,slow=16,SNR=3.2
GTK Tadong 7.06 313 eP Pn 16 10 03.1 +0.4
GTK eS Sn 16 11 15.3 -6.2
GTK IAML 16 11 23.1
comp=N,61nm,0.1s
GTK IAML 16 11 23.2
comp=E,63nm,0.7s
ODAN Odare 7.66 305 ePn Pn 16 10 09.8 -1.1
ODAN eSn Sn 16 11 31.5 -4.7
comp=E,113nm,0.5s
LSA Lhasa 7.66 338 Pn 16 10 12.1 +0.8
LSA Sn 16 11 35.4 -1.3
TAPN Taplejung 7.70 309 ePn Pn 16 10 11.4 -0.1
TAPN eSn Sn 16 11 32.7 -4.6
comp=E,64nm,0.5s
BOK Bokaro 7.91 280 eS Sn 16 11 37.5 -4.7
RAMN Ramite 8.31 303 ePn Pn 16 10 18.7 -1.1
PBKT Sadao Pong 8.62 133 Pn Pn 16 10 23.0 -0.8
JIRN Jiri 8.98 306 ePn Pn 16 10 27.6 -1.5
GUN Gumba 9.35 306 ePn Pn 16 10 33.1 -0.9
PKI Pulchoki 9.53 303 ePn Pn 16 10 35.2 -1.3
PKIN Phulchoki 9.55 303 ePn Pn 16 10 35.1 -1.5
GKN Gorkha 10.34 303 ePn Pn 16 10 46.7 -0.6
MKAR Makanchi Array 26.06 341 P P 16 13 48.0 +2.7
comp=E,0.4nm,0.5s,baz=140,slow=9.1,SNR=5.2
MKAR pP pP 16 14 10.2 +1.6
comp=E,1.3nm,0.6s,baz=149,slow=9.9,SNR=9.0
MKAR Makanchi Array 26.06 341 P P 16 13 47.4 +2.0
MKAR pP 16 14 08.8 +0.2
MAKZ Makanchi 26.17 340 P P 16 13 48.8 +2.4
YOJ Yonaguni jima 26.30 80 P P 16 13 48.5 +0.8
KURK Kurchatov 30.67 340 P P 16 14 26.9 +0.7
KURK IAmb IAmb 16 14 42.2
comp=Z,5.4nm,1.5s
ZALV Zalesovo Beam 32.15 349 P P 16 14 41.1 +1.9
comp=Z,0.8nm,0.4s,baz=159,slow=8.1,SNR=4.3
ZALV Zalesovo Beam 32.15 349 P P 16 14 40.7 +1.5
JAGI Jajag, Banyuwa 36.43 146 P P 16 15 16.5 -0.1
ABKAR Akbulak array 38.02 323 P P 16 15 31.9 +2.2
ARU Arti 42.80 331 LR LR 16 38 29.2
comp=Z,75nm,18.5s,baz=75,slow=42
SAUI Saumlaki 47.22 126 P P 16 16 45.3 +0.9
FITZ Fitzroy Crossi 50.68 140 P P 16 17 10.9 +0.1
FITZ IAmb IAmb 16 17 42.1
comp=Z,8.9nm,1.4s
KNRA Kununurra 50.78 135 P P 16 17 11.6 +0.1
WB0 Warramunga Arr 57.42 134 P P 16 17 59.7 -0.1
WB0 IAmb IAmb 16 18 32.7
comp=Z,8.9nm,1.5s
WRA Warramunga Arr 57.51 134 P P 16 18 00.3 -0.1
comp=Z,0.9nm,0.5s,baz=322,slow=7.4,SNR=21
WRA Warramunga Arr 57.51 134 P P 16 17 59.7 -0.7
WRAB Tennant Creek 57.51 134 P P 16 18 00.5 +0.1
WB2 Warramunga Arr 57.52 134 P P 16 18 00.3 -0.2
WB2 IAmb IAmb 16 18 32.6
comp=Z,13nm,1.6s
WR0 Warramunga Arr 57.66 134 P P 16 18 01.5 +0.1
WR0 IAmb IAmb 16 18 12.5
comp=Z,9.9nm,1.5s
AS31 Alice Springs 59.91 138 P P 16 18 17.1 +0.1
ASAR Alice Springs 59.91 138 P P 16 18 17.4 +0.4
comp=Z,0.8nm,0.5s,baz=319,slow=6.7,SNR=27
ASAR Alice Springs 59.91 138 P P 16 18 17.2 +0.2
ARCES ARCESS Array B 61.67 338 P P 16 18 29.9 +1.6
comp=Z,1.6nm,0.8s,baz=105,slow=7.6,SNR=5.7
ARCES ARCESS Array B 61.67 338 P P 16 18 29.5 +1.2
GERES GERESS Array B 67.33 315 P P 16 19 07.2 +1.6
comp=Z,0.3nm,0.4s,baz=64,slow=12,SNR=3.0
GERES GERESS Array B 67.33 315 P P 16 19 06.8 +1.2
JMIC Jan Mayen 72.96 340 LR LR 16 57 07.8
comp=Z,168nm,20.7s,baz=267,slow=40

IDC 13 16:17:48.1±228.0, 8°.54S×109°.77E, h0km, Error ellipse: s-maj=115.8km s-min=63.1km az=73.0, Jawa

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
I07AU WARRAMUNGA IN 26.32 118 i 18 56 30.0
baz=293,slow=285,SNR=1.6
I04AU SHANNON INFRAS 26.64 168 i 18 57 40.0
baz=347,slow=308,SNR=25
I39PW PALAU INFRASON 29.41 58 i 19 18 07.7
baz=239,slow=314,SNR=2.6
I52GB DIEGO GARCIA I 36.93 269 i 20 03 20.0
baz=99,slow=320,SNR=2.4
I05AU HOBART INFRAS 47.44 142 i 21 29 10.0
baz=305,slow=316,SNR=0.5
I34MN SONGINO INFRAS 56.17 357 i 22 05 00.0
baz=171,slow=341,SNR=1.8
I45RU USSURIYSK INFR 56.21 19 i 22 08 30.0
baz=203,slow=342,SNR=2.2
I33MG ANTANANARIVO I 61.29 253 i 22 36 00.0
baz=87,slow=312,SNR=2.4
I32KE NAIROBI INFRAS 72.95 271 i 23 52 22.8
baz=103,slow=302,SNR=7.6

IDC 13 16:19:07.6±0.8, 34°.53N×87°.50E, h0km, mb3.7/10, mb1 3.8/16, mb1mx3.6/57, mbtmp3.6/16, ML3.0/6, MS3.1/10, Ms1 3.2/10, ms1mx2.9/40, Error ellipse: s-maj=26.4km s-min=15.7km az=54.0
BJI 13 16:19:13.2±0.4, 34°.64N×87°.62E, h6km, mb3.8/5, Ms3.7/2
ISC 13 16:19:10.1±0.6, 34°.63N±0°.06×87°.53E±0°.10, h10km, n34, σ1s85/30, mb3.6/10, MS3.1/6, Xizang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LSA Lhasa 5.79 147 Pg Pb 16 20 54.8 +3.3

LSA Sn Sn 16 21 39.6 -3.7
GUN Gumba 6.84 192 eP Pn 16 20 53.9 +3.1
7.8nm,0.4s
DANN Dangsing 7.03 208 eP Pn 16 20 54.5 +1.0
10nm,0.5s
JIRN Jiri 7.04 190 eP Pn 16 20 56.5 +2.9
8.0nm,0.4s
TAPN Taplejung 7.25 179 eP Pn 16 20 57.8 +1.3
9.7nm,0.7s
PKIN Phulchoki 7.26 195 eP Pn 16 20 59.3 +2.8
PKI Pulchoki 7.26 195 eP Pn 16 20 58.9 +2.3
6.5nm,0.5s
DMN Daman 7.29 197 eP Pn 16 20 59.2 +2.2
9.2nm,0.4s
KOLN Koldanda 7.62 207 eP Pn 16 21 02.2 +0.8
11nm,0.8s
RAMN Ramite 7.69 186 eP Pn 16 21 03.0 +0.6
7.0nm,0.4s
ODAN Odare 7.74 181 eP Pn 16 21 03.2 +0.1
15nm,0.6s
WMQ Urumqi 9.18 1 eP Pn 16 21 30.8 +8.1
WMQ S Sn 16 23 10.5 +4.4
WMQ smax smax
comp=N,6.0nm,0.7s
WMQ smax smax
comp=E,7.0nm,0.5s
MKAR Makanchi Array 12.78 344 Pn Pn 16 22 11.3 -0.6
0.1nm,0.3s,baz=154,slow=14,SNR=11
MKAR LR LR 16 28 09.1
comp=Z,45nm,21.4s,baz=154,slow=42
AAK Ala-Archa 12.94 312 Pn Pn 16 22 14.5 +0.3
0.1nm,0.3s,baz=142,slow=12,SNR=2.8
AAK LR LR 16 27 48.0
comp=Z,78nm,20.5s,baz=112,slow=40
KURBB Kurchatov Arra 17.28 340 P Pn 16 23 11.5 +0.1
0.0nm,0.3s,baz=151,slow=12,SNR=13
CMAR Chiang Mai Arr 19.04 145 P P 16 23 32.5 0.0
0.1nm,0.3s,baz=326,slow=11,SNR=15
CMAR LR LR 16 31 41.9
comp=Z,118nm,18.7s,baz=186,slow=40
SONM Songino Array 19.31 41 P P 16 23 36.0 +0.6
0.1nm,0.3s,baz=230,slow=12,SNR=4.3
ZALV Zalesovo Beam 19.41 355 P P 16 23 35.7 -0.5
0.1nm,0.3s,baz=184,slow=13,SNR=8.3
ZALV LR LR 16 32 14.0
comp=Z,21nm,20.7s,baz=94,slow=40
TLY Talaya 20.63 29 LR LR 16 32 16.2
comp=Z,58nm,18.1s,baz=192,slow=38
BVAR Borovoye Array 22.06 332 P P 16 24 05.1 +0.1
0.9nm,0.8s,baz=126,slow=10.0,SNR=6.1
GEYT Alibeck 23.89 287 LR LR 16 35 46.5
comp=Z,48nm,18.3s,baz=220,slow=42
AKTO Aktyubinsk 26.65 315 LR LR 16 36 11.8
comp=Z,53nm,18.7s,baz=108,slow=38
KSRS Korea Array 32.61 73 LR LR 16 38 48.3
comp=Z,32nm,20.4s,baz=236,slow=36
BRTR Keskin Array B 42.70 293 P P 16 27 06.7 -0.8
0.7nm,0.7s,baz=72,slow=7.4,SNR=5.5
TIXI Tiksi 42.89 18 P P 16 27 08.2 -0.1
1.0nm,0.7s,baz=99,slow=4.5,SNR=5.3
AKASG Malin Array Be 44.60 310 LR LR 16 49 29.6
comp=Z,40nm,19.1s,baz=325,slow=41
NB2 NORSAR Subarra 53.91 324 P P 16 28 32.8 -0.6
comp=Z,1.0nm,0.7s,baz=82,slow=7.4
NOA NORSAR Array B 53.91 324 P P 16 28 32.2 -1.2
comp=Z,1.9nm,0.8s,baz=83,slow=7.3,SNR=5.1
NOA LR LR 16 55 37.7
comp=Z,22nm,18.3s,baz=265,slow=41
GERES GERESS Array B 54.80 309 P P 16 28 40.3 0.0
comp=Z,0.7nm,0.8s,baz=65,slow=6.3,SNR=5.4
WRA Warramunga Arr 70.17 133 P P 16 30 21.7 -1.5
comp=Z,0.5nm,0.6s,baz=323,slow=6.2,SNR=8.0
ILAR Eielson Array 72.22 21 P P 16 30 34.4 -0.6
comp=Z,0.3nm,0.7s,baz=318,slow=4.9,SNR=3.5
ASAR Alice Springs 72.79 136 P P 16 30 37.8 -1.2
comp=Z,0.3nm,0.7s,baz=326,slow=5.9,SNR=6.4
TORD Torodi Ar. Bea 79.27 279 P P 16 31 14.7 -1.4
comp=Z,0.6nm,0.6s,baz=54,slow=4.2,SNR=3.6
YKA Yellowknife Ar 81.59 10 P P 16 31 27.1 -0.6
comp=Z,0.5nm,0.8s,baz=332,slow=5.3,SNR=6.3

NEIC 13 16:21:34.6±1.0,20.°5S±0.°2×178.°5W±0.°2,h550km±11km, mb4.3/16,Error ellipse: s-maj=28.6km s-min=16.9km az=147.0
IDC 13 16:21:35.0±2.8,20.°50S×178.°39W,h556km±25km,mb3.0/7, mb1 3.3/9,mb1mx3.1/34,mbtmp4.1/9,Error ellipse: s-maj=85.5km s-min=15.6km az=152.0
ISC 13 16:21:34.3±0.7,20.°5S±0.°2×178.°4W±0.°1,h550km,n35, σ0.°83/35,mb4.0/16,Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NIUE Niue 8.11 82 P P 16 23 33.3 +0.1
AFI Afiamalu 9.11 45 P P 16 23 43.2 -0.1
2.5nm,0.3s,baz=259,slow=17,SNR=4.3
AFI Afiamalu 9.11 45 P P 16 23 43.0 -0.2
DZM Mont Dzumac 14.20 261 P P 16 24 36.6 +0.9
0.6nm,0.3s,baz=86,slow=19,SNR=8.0
NOUC Port Laguerre 14.34 261 P P 16 24 37.7 +0.7
WHZ Wether Hill Ro 27.71 201 P P 16 26 38.7 0.0
WHZ IAmb IAmb 16 26 41.4
comp=Z,16nm,1.1s
ARMA Armidale 28.73 244 P P 16 26 48.8 +0.9
ARMA IAmb IAmb 16 26 52.3
comp=Z,8.1nm,1.4s
CTA Charters Tower 33.10 264 P P 16 27 26.4 +1.1
comp=Z,3.9nm,0.6s,baz=91,slow=9.7,SNR=7.4
TOO Toolangi 35.59 234 P P 16 27 46.3 +0.3
TOO IAmb IAmb 16 28 05.2
comp=Z,18nm,1.6s
STKA Stephens Creek 37.45 244 P P 16 28 01.6 +0.3
comp=Z,1.5nm,0.7s,baz=68,slow=4.2,SNR=4.2
STKA Stephens Creek 37.45 244 P P 16 28 01.4 +0.1
BBOO Buckleboo 42.21 243 P P 16 28 39.3 -0.1
WR0 Warramunga Arr 44.03 262 P P 16 28 54.2 +0.4
WR0 IAmb IAmb 16 29 16.8
comp=Z,6.7nm,1.4s
AS31 Alice Springs 44.14 257 P P 16 28 55.1 +0.5
ASAR Alice Springs 44.14 257 P P 16 28 55.0 +0.3
comp=Z,2.4nm,0.7s,baz=89,slow=8.6,SNR=52
ASAR Alice Springs 44.14 257 P P 16 28 54.5 -0.2
WB0 Warramunga Arr 44.19 262 P P 16 28 55.2 +0.1
WB0 IAmb IAmb 16 29 05.9
comp=Z,5.4nm,1.4s
WB2 Warramunga Arr 44.20 262 P P 16 28 55.3 +0.1
WB2 IAmb IAmb 16 29 04.6
comp=Z,8.4nm,1.4s
WRAB Tennant Creek 44.21 262 P P 16 28 54.9 -0.3
WRA Warramunga Arr 44.22 262 P P 16 28 55.1 -0.1
comp=Z,0.8nm,0.5s,baz=97,slow=7.6,SNR=44
WRA Warramunga Arr 44.22 262 P P 16 28 55.4 +0.1
FORT Forrest 48.94 247 P P 16 29 30.0 -0.8
KNRA Kununurra 50.27 266 P P 16 29 39.9 -0.8
KNRA IAmb IAmb 16 30 00.2
comp=Z,30nm,1.6s
PSA00 Pilbara Seismi 57.29 257 P P 16 30 28.5 -1.8
PSA00 IAmb IAmb 16 30 52.1
comp=Z,48nm,1.6s
MJB9 Matsu-Tunnel 69.97 324 P P 16 31 50.9 +0.1
MJB9 IAmb IAmb 16 32 18.9
comp=Z,22nm,1.7s
SII Sitkinak Islan 79.41 13 P P 16 32 43.1 -0.1
TXAR Lajitas Array 87.37 57 P P 16 33 24.6 +1.0
comp=Z,0.3nm,0.9s,baz=258,slow=3.3,SNR=3.1
ILAR Eielson Array 88.38 13 P P 16 33 27.6 +0.2
comp=Z,0.8nm,0.9s,baz=216,slow=5.3,SNR=6.1
PDAR Pinedale Array 89.22 43 P P 16 33 32.9 +0.8
comp=Z,0.4nm,0.6s,baz=190,slow=2.6,SNR=4.5
PDAR Pinedale Array 89.22 43 P P 16 33 32.4 +0.4
ARCES ARCESS Array B 128.83 349 PKP PKPdf 16 39 37.4 -1.4
comp=Z,2.0nm,0.9s,baz=77,slow=1.9,SNR=4.1
AKASG Malin Array Be 142.81 331 PKP PKPdf 16 40 02.3 -2.9
comp=Z,1.7nm,0.4s,baz=39,slow=4.2,SNR=4.5
BRTR Keskin Array B 146.54 312 PKPbc PKPbc 16 40 14.9 +0.3
comp=Z,0.5nm,0.6s,baz=144,slow=5.7,SNR=3.3
BRTR Keskin Array B 146.54 312 PKPdf 16 40 13.4 +1.3
GERES GERESS Array B 150.07 344 PKPbc PKPbc 16 40 23.1 0.0
comp=Z,0.2nm,0.4s,baz=7.1,slow=2.4,SNR=2.7

DRS 13 16:46:55.6±0.0,43.°46N×45.°75E,h12km
MOS 13 16:46:56.8±0.0,43.°41N×45.°80E,h17km,MPVA3.9
NORS 13 16:46:56.1±0.0,43.°48N×45.°88E,h14km,MPVA3.9
TIF 13 16:46:57.1,43.°40N×45.°82E,h28km±1km
ISC 13 16:46:57.7±1.0,43.°46N±0.°04×45.°81E±0.°02,h17km±8km, n39,σ1.°18/72,Eastern Caucasus

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GROC Groznyy 0.25 182 ePg Pg 16 47 02.5 -0.8
GROC eSg Sb 16 47 08.8 +0.8
KMGR Komgaron 0.80 240 ePg Pn 16 47 13.6 -0.6
KMGR eSg Sn 16 47 25.3 -0.5
TRKR Terskaya 0.83 289 ePg Pn 16 47 14.1 -0.5
TRKR eSg Sn 16 47 26.8 +0.3
BTLR Botlikh 0.85 159 ePg Pb 16 47 12.8 -1.2
BTLR eSg Sg 16 47 25.1 -0.3
DBC Dubki 0.86 120 ePg Pb 16 47 13.7 -0.7
VLKR Vladikavkaz 0.92 244 ePg Pn 16 47 16.4 +0.5
BTKR Batakoyurt 0.93 265 ePg Pn 16 47 16.1 +0.1
BTKR eSg Sn 16 47 30.2 +1.2
KRNR Karanay 1.02 128 ePg Pg 16 47 17.5 0.0
KRNR eSg Sn 16 47 31.5 +0.1
UNCR Uncukul 1.04 135 ePg Pn 16 47 17.0 -0.5
UNCR i Sg Sn 16 47 31.5 -0.2
XNZR Khunzakh 1.13 144 ePg Pg 16 47 19.2 -0.3
XNZR eSg Sg 16 47 35.4 +1.2
BUJR Buynaksk 1.14 123 ePg Pg 16 47 20.2 +0.5
BUJR eSg Sg 16 47 37.0 +2.3
PRTR Priterechnaya 1.15 285 ePg Pg 16 47 19.9 0.0
PRTR eSg Sg 16 47 37.9 +3.1
ARKR Arakani 1.22 134 ePg Pg 16 47 20.5 -0.7
ARKR eSg Sg 16 47 37.2 +0.1
LACR Lac 1.27 241 ePg Pn 16 47 19.6 -1.2
LACR eSg Sn 16 47 37.6 0.0
STDR Stavd-Durt 1.27 267 ePg Pg 16 47 21.8 -0.5
STDR eSg Sg 16 47 40.3 +1.4
KORR Kora 1.32 254 i Pg Pb 16 47 22.0 -0.1
KORR eSg Sg 16 47 42.6 +2.2
MAK Makhachkala 1.33 111 ePg Pg 16 47 21.8 -0.5
MAK eSg Sg 16 47 40.5 -0.3
GNBR Gunib 1.36 141 ePg Pg 16 47 23.2 -0.8
GNBR eSg Sg 16 47 41.6 -0.1
GUDG Gudauri 1.39 225 P Pn 16 47 21.5 -1.1
GUDG S Sn 16 47 40.5 -0.2
GUDG Gudauri 1.39 225 ePg Pn 16 47 21.4 -1.1
LSNR Lesken 1.46 264 ePg Pb 16 47 23.7 -0.7
LSNR eSg Sg 16 47 43.8 -0.9
ZEI Tsey 1.55 245 ePg Pn 16 47 24.9 +0.2
ZEI eSg Sb 16 47 45.8 +0.4
NCK Nalchik 1.61 272 ePg Pn 16 47 25.9 +0.5
NCK eSg Sb 16 47 47.5 +0.4
LGD Lagodekhi 1.65 169 P Pg 16 47 28.3 -1.2
LGD S Sb 16 47 49.1 +0.9
DIGR Digorskoe uzhe 1.72 252 ePg Pn 16 47 27.7 +0.6
DIGR eSg Sb 16 47 49.7 -0.8
KBTC Kuba-Taba 1.78 282 ePg Pb 16 47 29.0 -0.8
KBTC eSg Sb 16 47 53.2 +1.2
ONI Oni 1.93 244 P Pb 16 47 31.4 -1.1
ONI S Sb 16 47 55.8 -0.6
ONI Oni 1.93 244 ePg Pb 16 47 31.4 -1.1
ONI eSg Sb 16 47 55.8 -0.6
DDFL Dedoflistskaro 2.02 173 P Pg 16 47 35.1 -1.4
DDFL S Sg 16 48 06.2 +3.4
DDFL Dedoflistskaro 2.02 173 ePg Pg 16 47 35.1 -1.4
PYA1 Pyatigorsk 2.06 288 ePg Pn 16 47 31.9 +0.3
PYA1 eSg Sb 16 47 58.2 -1.7
KBZ Khabaz 2.13 278 ePg Pn 16 47 31.8 -0.7
NEY Neytrino 2.26 266 ePn Pn 16 47 35.5 +1.0
NEY eSn Sn 16 48 02.8 +0.7
SHA1 Shidzhatmaz 2.31 278 ePn Pn 16 47 34.5 -0.7
SHA1 eSn Sn 16 48 03.5 +0.2
AKT Akhty 2.43 144 ePn Pn 16 47 38.0 +1.2
AKT eSn Sn 16 48 07.5 +1.2
GOF Gofitskoye 2.55 310 ePn Pb 16 47 40.8 -2.3
GOF eSn Sb 16 48 12.0 -2.2
ARXR Arkhyz 3.30 273 ePn Pn 16 47 50.3 +1.6
ARXR eSn Sn 16 48 29.8 +2.1
GNI Garni 3.40 194 ePn Pn 16 47 50.7 +0.6
GUZR Guzeripl' 4.16 279 ePn Pn 16 48 03.2 +2.7
GUZR eSn Sn 16 48 47.7 -1.1

SNET 13 16:51:44.3±0.7,13.°00N×89.°02W,h45km±28km,ML3.5
UCR 13 16:51:44.4±0.7,13.°00N×89.°03W,h47km±24km,ML3.5
ISC 13 16:51:44.6±2.4,13.°0N±0.°1×89.°01W±0.°07,h55km,n31, σ0.°38/38,7C-10D,Off coast of central America

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LFRS El Faro 0.62 355 ⇓iP Pn 16 51 57.0 -0.8
COEG Centro de Oper 0.63 11 eP Pn 16 51 57.2 -0.7
COEG eS Sn 16 52 07.6 +0.2
COEG IAML 16 52 17.2
comp=Z,758nm,0.5s
COEG Centro de Oper 0.63 11 eP Pn 16 51 57.2 -0.7
COEG eS Sn 16 52 07.6 +0.2
COEG IAML 16 52 17.2
comp=Z,758nm,0.5s
COEB Comit de Eme 0.68 43 ⇑iP Pn 16 51 58.3 -0.1
COEB IAML 16 52 11.5
comp=Z,3μm,0.4s
COEB Comit de Eme 0.68 43 ⇑iP Pn 16 51 58.3 -0.1
COEB IAML 16 52 11.5
comp=Z,3μm,0.4s
TECA Tecapa 0.69 45 ⇓iP Pn 16 51 58.6 -0.2
TECA eS Sn 16 52 09.6 +0.6
TECA Tecapa 0.69 45 ⇓iP Pn 16 51 58.6 -0.2
TECA eS Sn 16 52 09.6 +0.6
PAVA Las Pavas 0.71 5 eP Pn 16 51 58.5 -0.4
PAVA eS Sn 16 52 09.5 +0.2
PAVA Las Pavas 0.71 5 eP Pn 16 51 58.5 -0.4
PAVA eS Sn 16 52 09.5 +0.2
LBRS Las Brisas 0.73 357 ⇓eP Pn 16 51 58.8 -0.3
LFU La Fuente 0.75 352 ⇓iP Pn 16 51 58.9 -0.5
LFU La Fuente 0.75 352 ⇓iP Pn 16 51 58.9 -0.5
BOQS Boqueron 0.78 340 ⇑eP Pn 16 51 59.3 -0.5
BOQS eS Sn 16 52 11.0 +0.1
JUCU Jucuar¡n 0.78 71 eP Pn 16 51 58.9 -0.8
JUCU IAML 16 52 11.8
comp=Z,1μm,0.2s
JUCU Jucuar¡n 0.78 71 eP Pn 16 51 58.9 -0.8
JUCU IAML 16 52 11.8
comp=Z,1μm,0.2s
LCY Lacayo 0.81 59 ⇑eP Pn 16 52 00.1 0.0
LCY Lacayo 0.81 59 ⇑eP Pn 16 52 00.1 0.0
PACA Pacayal 0.81 55 ⇓eP Pn 16 52 00.1 0.0
PACA Pacayal 0.81 55 ⇓eP Pn 16 52 00.1 0.0
CEVE Cerro Verde 1.02 324 eP Pn 16 52 03.2 +0.2
CEVE IAML 16 52 20.6
comp=Z,2μm,0.3s
CEVE Cerro Verde 1.02 324 eP Pn 16 52 03.2 +0.2
CEVE IAML 16 52 20.6
comp=Z,2μm,0.3s
SBLS San Blas 1.03 324 eP Pn 16 52 03.0 -0.2
SBLS San Blas 1.03 324 eP Pn 16 52 03.0 -0.2
RTR El Retiro 1.09 325 eP Pn 16 52 03.9 0.0
RTR El Retiro 1.09 325 eP Pn 16 52 03.9 0.0
LCND La Caada 1.13 74 ⇑eP Pn 16 52 04.2 0.0
LCND IAML 16 52 22.3
comp=Z,1μm,0.5s
LCND La Caada 1.13 74 ⇑eP Pn 16 52 04.2 0.0
LCND IAML 16 52 22.3
comp=Z,1μm,0.5s
CNCH Conchagua 1.17 76 eP Pn 16 52 04.6 -0.3
CNCH IAML 16 52 23.8
comp=Z,1μm,0.2s
CNCH Conchagua 1.17 76 eP Pn 16 52 04.6 -0.3
CNCH IAML 16 52 23.8
comp=Z,1μm,0.2s
MTO3 Montecristo 1.43 346 ⇓iP Pn 16 52 08.3 -0.2
MTO3 Montecristo 1.43 346 ⇓iP Pn 16 52 08.3 -0.2

NEIC 13 17:08:02.6±1.3,4.°7S±0.°1×155.°0E±0.°1,h490km±9km, mb4.6/31,Error ellipse: s-maj=17.7km s-min=16.8km az=148.0
IDC 13 17:08:03.4±0.7,4.°76S×154.°94E,h493km±7km,mb3.9/16, mb1 3.9/21,mb1mx3.6/44,mbtmp4.7/21,Error ellipse: s-maj=10.7km s-min=9.4km az=95.0
DJA 13 17:08:08.7±1.0,5.°S±7.°×15.°5E±.°,h598km±15km,M4.5/22, mb4.7/22,mB5.1/6,Mw(mB)4.5/6
ISC 13 17:08:03.8±0.5,4.°82S±0.°07×155.°02E±0.°07,h500km,n94, σ1.°04/104,mb4.7/35,1D,Bougainville-Solomon Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res
KRVT Keravat (AS076 3.02 279 P P 17 09 13.3 -1.7
140nm,0.3s,baz=81,slow=1.1,SNR=178
KRVT S S 17 10 10.8 -2.0
20nm,0.3s,baz=90,slow=20,SNR=3.6
HNR Honiara 6.71 133 P P 17 09 46.9 -0.2
20nm,0.3s,baz=220,slow=1.0,SNR=12
HNR S S 17 11 11.1 -0.5
6.6nm,0.3s,baz=300,slow=20,SNR=12
HNR Honiara 6.71 133 P S 17 11 12.0 +0.4
HNR Honiara 6.71 133 P P 17 09 46.6 -0.5
PMG Port Moresby 9.03 239 P P 17 10 10.1 -0.9
0.9nm,0.3s,baz=39,slow=13,SNR=5.2
PMG S S 17 11 56.4 +0.9
0.3nm,0.3s,baz=198,slow=20,SNR=3.0
PMG Port Moresby 9.03 239 P P 17 10 10.4 -0.6
JAY Jayapura 14.46 279 P P 17 11 06.6 -2.0
1.6nm,0.3s,baz=119,slow=5.3,SNR=6.5
JAY Jayapura 14.46 279 P P 17 11 12.3 +3.8
14nm,0.8s
COEN Coen 14.79 231 P P 17 11 11.9 0.0
GENI Genyem 14.98 278 P P 17 11 17.0 +3.1
53nm,0.6s
SANVU Saraoutou 15.97 132 P P 17 11 23.5 -0.8
SMPI Sarmi 16.52 279 P P 17 11 31.2 +1.2
2μm132nm,0.7s
CTA Charters Tower 17.41 209 P P 17 11 39.5 +0.7
1.3nm,0.3s,baz=35,slow=11,SNR=18
NOUC Port Laguerre 20.37 149 P P 17 12 06.3 +0.5
NOUC IAmb IAmb 17 12 09.2
comp=Z,22nm,0.7s
DZM Mont Dzumac 20.42 148 P P 17 12 07.6 +1.3
comp=Z,21nm,0.5s,baz=284,slow=6.5,SNR=42
DZM Mont Dzumac 20.42 148 P P 17 12 07.1 +0.7
EIDS Eidsvold 20.78 190 P P 17 12 10.0 +0.4
EIDS IAmb IAmb 17 12 14.3
comp=Z,11nm,1.1s
SIJI Sorong 24.04 279 P P 17 12 38.2 -0.7
comp=Z,11nm,0.6s,baz=313,slow=22,SNR=11
SWI Sorong 24.04 279 P P 17 12 38.3 -0.7
comp=Z,23nm,0.7s
WR0 Warramunga Arr 24.98 231 P P 17 12 47.3 0.0
WR0 IAmb IAmb 17 12 48.3
comp=Z,42nm,1.1s
WB0 Warramunga Arr 24.99 232 P P 17 12 47.5 +0.1
WRAB Tennant Creek 25.11 231 P P 17 12 48.4 -0.1
WB2 Warramunga Arr 25.12 231 P P 17 12 48.4 0.0
WRA Warramunga Arr 25.13 231 P P 17 12 48.7 +0.1
comp=Z,20nm,0.5s,baz=56,slow=8.4,SNR=456
WRA PcP PcP 17 16 06.8 +0.6
comp=Z,1.3nm,0.6s,baz=62,slow=2.5,SNR=4.6
WRA S S 17 16 36.8 -1.0
comp=Z,3.3nm,1.0s,baz=55,slow=15,SNR=7.2
WRA ScP ScP 17 19 00.0 +2.0
comp=Z,1.1nm,0.7s,baz=57,slow=3.1,SNR=4.9
WRA Warramunga Arr 25.13 231 P P 17 12 47.8 -0.8
AAI Ambon 26.77 271 P P 17 13 02.1 -1.1
comp=Z,31nm,0.9s
AS31 Alice Springs 27.67 225 P P 17 13 10.7 -0.3
AS31 IAmb IAmb 17 13 11.3
comp=Z,9.9nm,0.3s
ASAR Alice Springs 27.67 225 P P 17 13 10.7 -0.3
comp=Z,15nm,0.5s,baz=53,slow=8.8,SNR=613
ASAR PcP PcP 17 16 12.8 +0.5
comp=Z,1.1nm,0.6s,baz=56,slow=2.7,SNR=5.8
ASAR S S 17 17 16.4 -1.1
comp=Z,1.0nm,0.5s,baz=57,slow=14,SNR=8.1
ASAR ScP ScP 17 19 07.8 +2.2
comp=Z,0.7nm,0.7s,baz=57,slow=2.9,SNR=6.0
ASAR Alice Springs 27.67 225 P P 17 13 10.1 -0.9
LBMI Labuha 27.79 278 P P 17 13 12.1 0.0
comp=Z,2μmcomp=Z,39nm,0.9s
NLAI Namlea 27.89 272 P P 17 13 13.4 +0.4
comp=Z,33nm,0.8s
KNRA Kununurra 27.96 245 P P 17 13 12.8 -0.7
KNRA IAmb IAmb 17 13 13.7
comp=Z,22nm,1.1s
SANI Sanana 29.10 274 P P 17 13 23.1 -0.5
comp=Z,37nm,0.8s
STKA Stephens Creek 29.72 203 P P 17 13 29.2 +0.5
comp=Z,2.5nm,0.5s,baz=17,slow=8.0,SNR=19
SOEI Soe 30.88 259 P P 17 13 39.1 0.0
comp=Z,42nm,1.2s
KMSI Cibinong 31.46 279 P P 17 13 44.0 0.0
comp=Z,759nmcomp=Z,45nm,0.6s
FITZ Fitzroy Crossi 31.60 243 P P 17 13 44.2 -1.0
comp=Z,17nm,0.5s,baz=64,slow=7.1,SNR=44
FITZ Fitzroy Crossi 31.60 243 P P 17 13 44.1 -1.0
FITZ IAmb IAmb 17 13 45.1
comp=Z,36nm,1.1s
LUWI Luwuk 32.41 276 P P 17 13 52.2 +0.1
BBOO Buckleboo 33.00 210 P P 17 13 57.0 +0.1
BBOO IAmb IAmb 17 13 57.9
comp=Z,15nm,0.7s
BNSI Bone 34.80 269 P P 17 14 11.5 -0.8
comp=Z,36nm,0.9s
KAPI Kappang 35.13 268 P P 17 14 14.6 -0.5
comp=Z,22nm,0.5s,baz=105,slow=5.4,SNR=14
KAPI Kappang 35.13 268 P P 17 14 14.6 -0.5
KAPI IAmb IAmb 17 14 15.5
comp=Z,23nm,0.6s
SPSI Sidrap Palu 35.15 270 P P 17 14 14.5 -0.8
comp=Z,16nm,0.8s
TTSI Tana Toraja 35.15 272 P P 17 14 13.9 -1.4
MPSI Mapaga 35.45 277 P P 17 14 16.5 -1.3
comp=Z,592nmcomp=Z,30nm,0.8s
FORT Forrest 36.20 221 P P 17 14 23.5 -0.3
PLAI Plampang 37.17 262 P P 17 14 31.2 -0.9
PSA00 Pilbara Seismi 37.94 241 P P 17 14 37.5 -0.7
PSA00 IAmb IAmb 17 14 38.1
comp=Z,25nm,0.7s
LEM Lembang 47.18 265 P P 17 15 50.9 -0.4
comp=Z,21nm,0.7s,baz=85,slow=11,SNR=5.6
NJ2 Nanjing 50.27 319 eP P 17 16 14.6 +0.9
IPM Ipoh 54.71 279 P P 17 16 44.6 -1.4
IPM IAmb IAmb 17 16 45.9
comp=Z,8.3nm,0.7s
KULM Kulim 55.21 280 P P 17 16 48.5 -1.0
ENH Enshi 55.80 312 P P 17 16 52.3 -1.0
PBKT Sadao Pong 57.49 293 P P 17 17 05.5 +0.4
PBKT IAmb IAmb 17 17 06.1
comp=Z,6.1nm,0.6s
PETK Petropavlovsk- 57.75 2 P P 17 17 05.8 -0.5
comp=Z,9.8nm,1.1s,baz=149,slow=6.3,SNR=5.5
CM31 Chiang Mai Arr 59.89 294 P P 17 17 21.0 -0.3
CM31 IAmb IAmb 17 17 22.8
comp=Z,8.9nm,0.8s
CMAR Chiang Mai Arr 59.89 294 P P 17 17 21.9 +0.6
comp=Z,6.9nm,0.8s,baz=115,slow=5.1,SNR=67
CHTO Chiang Mai 59.99 295 P P 17 17 21.1 -1.0
HHC Hu-ho-hao-te 60.37 323 eP P 17 17 25.3 +1.1
CD2 Chengdu 60.44 310 P P 17 17 23.9 -0.9
LZH Lanzhou 62.79 315 ⇓P P 17 17 40.5 +0.2
LZH pP pwP 17 19 26.5 +2.7
LZH PP PP 17 20 08.6 +2.0
LZH sP sP 17 20 19.3 +4.2
GTA Gaotai 67.18 316 eP P 17 18 08.3 +0.4
SONM Songino Array 67.53 327 P P 17 18 09.8 -0.1
comp=Z,1.9nm,0.5s,baz=143,slow=6.6,SNR=20
SONM Songino Array 67.53 327 P P 17 18 09.6 -0.2
SHL Shillong 68.22 300 P P 17 18 13.7 -0.9
SHL IAmb IAmb 17 18 15.2
comp=Z,12nm,0.7s
TAPN Taplejung 72.31 301 eP P 17 18 39.1 +0.1
comp=Z,4.1nm,0.4s
ODAN Odare 72.46 300 eP P 17 18 40.0 +0.2
comp=Z,21nm,1.0s
VNDA Vanda 72.75 178 P P 17 18 41.7 +1.5
comp=Z,5.5nm,1.1s,baz=331,slow=7.0,SNR=3.0
RAMN Ramite 73.16 300 eP P 17 18 43.6 -0.3
JIRN Jiri 73.69 300 eP P 17 18 47.4 +0.3
GUN Gumba 74.02 301 eP P 17 18 49.0 +0.1
comp=Z,17nm,0.7s
PKI Pulchoki 74.34 300 eP P 17 18 50.3 -0.4
comp=Z,7.5nm,0.7s
PKIN Phulchoki 74.36 300 eP P 17 18 50.2 -0.5
comp=Z,5.6nm,0.6s
KKN Kakani 74.51 300 eP P 17 18 51.5 0.0
comp=Z,11nm,0.5s
DMN Daman 74.61 300 eP P 17 18 52.3 +0.2
comp=Z,14nm,0.6s
GKN Gorkha 75.11 300 eP P 17 18 54.5 -0.3
comp=Z,23nm,0.7s
PALK Pallekele 75.12 279 P P 17 18 55.5 +0.5

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	comp=Z,3.4nm,0.8s,baz=112,slow=2.6,SNR=3.3						
PALK	Pallekele	75.12	279	IAmb	IAmb	17 20 15.8	
	comp=Z,11nm,1.1s						
DANN	Dangsing	75.94	301	eP	P	17 18 58.9	-0.7
	comp=Z,19nm,0.6s						
KOLN	Koldanda	75.95	300	eP	P	17 18 59.1	-0.4
	comp=Z,14nm,0.6s						
WMQ	Urumqi	77.26	317	eP	P	17 19 06.0	-0.2
ILAR	Eielson Array	81.35	22	P	P	17 19 25.9	-1.5
	comp=Z,0.4nm,0.6s,baz=231,slow=5.4,SNR=6.0						
MK31	Makanchi Array	81.79	318	P	P	17 19 29.5	-0.6
MKAR	Makanchi Array	81.79	318	P	P	17 19 29.8	-0.3
	comp=Z,2.8nm,0.8s,baz=105,slow=5.8,SNR=32						
MKAR	Makanchi Array	81.79	318	P	P	17 19 29.3	-0.8
MAKZ	Makanchi	82.00	318	P	P	17 19 30.5	-0.6
ZAA0	Zalesovo Array	82.40	326	P	P	17 19 31.6	-1.4
ZALV	Zalesovo Beam	82.40	326	P	P	17 19 31.7	-1.2
	comp=Z,1.5nm,0.5s,baz=125,slow=5.7,SNR=10						
KSH	Kashi	84.62	310	P	P	17 19 46.3	+1.8
KSH				PP	PP	17 23 12.4	+3.1
KSH				S	S	17 29 34.3	+4.2
MAW	Mawson	86.40	203	P	P	17 19 52.7	+0.3
	comp=Z,3.0nm,0.6s,baz=90,slow=5.1,SNR=4.8						
MAW	Mawson	86.40	203	IAmb	IAmb	17 21 01.1	
	comp=Z,16nm,1.9s						
TORD	Torodi Ar. Bea	152.40	289	PKPbc	PKiKP	17 27 03.1	-1.1
	comp=Z,2.5nm,0.7s,baz=63,slow=2.7,SNR=11						
TORD				PKPab	PKPab	17 27 15.7	-0.9
	comp=Z,1.3nm,0.7s,baz=84,slow=4.3,SNR=4.9						
TORD	Torodi Ar. Bea	152.40	289		PKiKP	17 27 03.4	-0.8

IDC 13 17:14:26.1±1.9, 1°.79N×127°.12E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/39, mbtmp3.6/4, Error ellipse: s-maj=146.5km s-min=25.3km az=65.0
NEIC 13 17:14:36.1±1.4, 1°.8N±0°.1×127°.0E±0°.3, h102km±10km, mb4.4/11, Error ellipse: s-maj=43.5km s-min=14.0km az=76.0
ISC 13 17:14:37.5±0.9, 1°.9N±0°.1×127°.3E±0°.3, h100km, n17, σ1s20/16, mb4.1/10, Halmahera

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
TNTI	Ternate	1.07	177		Pn	17 15 00.2	+1.4
LUWI	Luwuk	5.37	238		Pn	17 15 57.2	+1.9
WB0	Warramunga Arr	22.58	162	P	P	17 19 28.4	-1.4
WB0				IAmb	IAmb	17 19 29.3	
	comp=Z,3.7nm,0.5s						
WRAB	Tennant Creek	22.73	163	P	P	17 19 30.2	-1.1
WRAB				IAmb	IAmb	17 20 04.3	
	comp=Z,17nm,1.8s						
WRA	Warramunga Arr	22.73	163	P	P	17 19 30.2	-1.2
	comp=Z,2.2nm,0.5s,baz=342,slow=11,SNR=12						
WRA	Warramunga Arr	22.73	163	P	P	17 19 29.7	-1.7
WB2	Warramunga Arr	22.74	163	P	P	17 19 30.2	-1.1
WB2				IAmb	IAmb	17 20 24.7	
	comp=Z,15nm,1.6s						
WR0	Warramunga Arr	22.81	162	P	P	17 19 31.0	-1.1
WR0				IAmb	IAmb	17 20 29.0	
	comp=Z,17nm,1.6s						
YOJ	Yonaguni jima	22.86	350	P	P	17 19 30.9	-1.6
SARN	Sarigan	23.41	50	P	P	17 19 39.0	+1.1
SARN				IAmb	IAmb	17 19 44.6	
	comp=Z,75nm,1.1s						
AS31	Alice Springs	26.16	166	P	P	17 20 01.5	-1.3
ASAR	Alice Springs	26.17	166	P	P	17 20 01.8	-1.0
	comp=Z,0.3nm,0.5s,baz=343,slow=7.8,SNR=9.2						
MAJO	Matsushiro	35.96	15	P	P	17 21 28.7	0.0
MJB9	Matsu-Tunnel	35.96	15	P	P	17 21 28.7	0.0
MJB9				IAmb	IAmb	17 22 40.5	
	comp=Z,36nm,1.6s						
STKA	Stephens Creek	36.18	159	P	P	17 21 30.5	-0.1
	comp=Z,1.8nm,0.6s,baz=324,slow=9.4,SNR=6.8						
STKA	Stephens Creek	36.18	159	P	P	17 21 30.5	-0.1
MKAR	Makanchi Array	59.42	326	P	P	17 24 30.4	+0.8
	comp=Z,0.1nm,0.5s,baz=138,slow=7.5,SNR=4.2						

IDC 13 17:19:24.7±1.1, 3°.25N×127°.42E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/52, mbtmp3.7/6, ML3.1/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/34, Error ellipse: s-maj=84.8km s-min=17.2km az=66.0
MAN 13 17:19:32.1, 3°.65N×127°.60E, h18km, mb4.7, ML3.5, MS3.4
NEIC 13 17:19:34.2±1.5, 3°.3N±0°.1×127°.9E±0°.1, h83km±7km, mb4.1/8, Error ellipse: s-maj=21.7km s-min=13.9km az=65.0
ISC 13 17:19:35.4±0.8, 3°.20N±0°.10×127°.9E±0°.1, h100km, n23, σ1s57/20, mb4.0/9, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
TNTI	Ternate	2.48	193	Pn	Pn	17 20 12.0	-2.3
DDMP	Don Marcelino,	3.64	323	eP	Pn	17 20 20.0	-10
DDMP				eS	Sn	17 20 58.2	-14
MATI	Mati	4.08	336	eP	Pn	17 20 27.4	-8.3
MATI				eS	Sn	17 21 09.2	-13
DAV	Davao City (W)	4.50	329	LR	LR	17 22 09.8	
	comp=Z,111nm,18.8s,baz=97,slow=39						
SKMP	Bagumbayan, Su	4.72	314	eP	Pn	17 20 36.2	-8.2
SKMP				eS	Sn	17 21 25.4	-13
KCP	Kidapawan	4.73	323⇓	iP	Pn	17 20 36.4	-8.2
KCP				iS	Sn	17 21 40.1	+1.8
SIJI	Sorong	5.24	140	Pn	Pn	17 20 50.5	-0.9
	1.0nm,0.3s,baz=104,slow=23,SNR=10.0						
SIJI				Sn	Sn	17 21 49.7	-0.9
	0.7nm,0.3s,baz=204,slow=22,SNR=6.7						
FAKI	Fak Fak	7.45	145	Pn	P	17 21 20.7	-0.9
WB0	Warramunga Arr	23.69	165	P	P	17 24 39.7	+1.4
WRAB	Tennant Creek	23.84	165	P	P	17 24 40.9	+1.3
WRAB				IAmb	IAmb	17 25 11.3	
	comp=Z,12nm,1.6s						
WRA	Warramunga Arr	23.84	165	P	P	17 24 41.2	+1.5
	comp=Z,1.9nm,0.6s,baz=343,slow=10,SNR=14						
WRA	Warramunga Arr	23.84	165	P	P	17 24 40.7	+1.1
WB2	Warramunga Arr	23.85	165	P	P	17 24 41.2	+1.5
WB2				IAmb	IAmb	17 24 43.9	
	comp=Z,6.2nm,1.0s						
WR0	Warramunga Arr	23.91	165	P	P	17 24 42.0	+1.8
WR0				IAmb	IAmb	17 25 05.2	
	comp=Z,22nm,1.9s						
AS31	Alice Springs	27.33	168	P	P	17 25 12.4	+1.3
ASAR	Alice Springs	27.33	168	P	P	17 25 13.4	+2.3
	comp=Z,0.3nm,0.5s,baz=353,slow=7.7,SNR=14						
ASAR	Alice Springs	27.33	168	P	P	17 25 12.4	+1.3
STKA	Stephens Creek	37.22	161	P	P	17 26 39.1	+1.8
	comp=Z,2.1nm,0.5s,baz=339,slow=11,SNR=12						
STKA	Stephens Creek	37.22	161	P	P	17 26 39.0	+1.7
STKA				IAmb	IAmb	17 27 05.3	
	comp=Z,4.9nm,1.7s						
SONM	Songino Array	48.19	341	P	P	17 28 04.7	-1.1
	comp=Z,0.2nm,0.7s,baz=149,slow=9.6,SNR=2.6						
MK31	Makanchi Array	58.68	325	P	P	17 29 22.4	-0.1
MK31				IAmb	IAmb	17 30 21.6	
	comp=Z,1.7nm,1.3s						
MKAR	Makanchi Array	58.68	325	P	P	17 29 22.1	-0.4
	comp=Z,0.7nm,0.5s,baz=119,slow=8.4,SNR=16						
KIWB	Kanaga Island	66.45	34	P	P	17 30 12.7	-1.4

IDC 13 17:20:08.3±255.0, 8°.01S×110°.47E, h0km, Error ellipse: s-maj=128.7km s-min=65.4km az=72.0, Jawa

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
I07AU	WARRAMUNGA INF	25.97	120	i		20 00 00.0	
	baz=292,slow=301,SNR=24						
I04AU	SHANNON INFRAS	27.01	169	i		20 08 50.0	
	baz=344,slow=312,SNR=6.7						
I39PW	PALAU INFRASON	28.54	58	i		20 11 20.0	
	baz=239,slow=312,SNR=2.5						
I52GB	DIEGO GARCIA I	37.64	268	i		21 11 30.0	
	baz=100,slow=301,SNR=4.0						
I45RU	USSURIYSK INFR	55.49	19	i		23 00 00.0	
	baz=202,slow=333,SNR=9.1						
I33MG	ANTANANARIVO I	62.11	253	i		23 56 00.0	
	baz=84,slow=311,SNR=0.9						

IDC 13 17:26:57.5±6.6, 6°.21S×147°.93E, h226km±29km, mb3.4/3, mb1 3.5/5, mb1mx3.0/28, mbtmp3.9/5, Error ellipse: s-maj=71.0km s-min=46.4km az=40.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
PMG	Port Moresby	3.27	194	P	Pn	17 27 52.3	+0.7
	2.5nm,0.3s,baz=57,slow=8.1,SNR=20						
PMG				S	S	17 28 34.5	+0.4
	5.3nm,0.3s,baz=243,slow=21,SNR=14						
WRA	Warramunga Arr	19.00	223	P	P	17 31 02.6	+0.1
	1.4nm,0.3s,baz=46,slow=12,SNR=84						
ASAR	Alice Springs	21.99	216	P	P	17 31 35.5	+2.0
	1.8nm,0.4s,baz=48,slow=8.8,SNR=96						
FITZ	Fitzroy Crossi	24.75	240	P	P	17 31 57.6	-1.2
	1.3nm,0.4s,baz=37,slow=11,SNR=4.3						
STKA	Stephens Creek	26.22	192	P	P	17 32 10.2	-1.6
	1.5nm,0.8s,baz=9.5,slow=12,SNR=4.0						

IDC 13 17:29:57.5±56.0, 23°.51S×177°.19W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/18, mbtmp3.9/3, Error ellipse: s-maj=1030.0km s-min=167.8km az=88.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
STKA	Stephens Creek	37.25	248	P	P	17 37 11.7	+0.6
	0.8nm,0.5s,baz=95,slow=11,SNR=4.4						
ASAR	Alice Springs	44.63	260	P	P	17 38 11.7	-0.4
	0.7nm,0.8s,baz=94,slow=8.1,SNR=26						
WRA	Warramunga Arr	45.00	265	P	P	17 38 14.6	-0.4
	1.8nm,0.5s,baz=106,slow=7.9,SNR=50						

TIF 13 17:32:52.3, 41°.32N×43°.89E, h15km±1km
ISK 13 17:32:52.7, 41°.35N×43°.87E, h12km, ML2.6/8
DDA 13 17:32:52.6, 41°.35N×43°.87E, h7km±3km, ML2.3
NORS 13 17:32:54.0±0.0, 41°.37N×44°.05E, h1km, MPVA3.7
ISC 13 17:32:52.8±0.9, 41°.33N±0°.02×43°.93E±0°.02, h12km±7km, n40, σ0s89/70, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
TRLG	Trialeti	0.24	33	P	Pg	17 32 58.9	+0.8
TRLG				S	Sg	17 33 03.0	+1.3
BGD	Bogdanovka	0.26	255	P	Pg	17 32 57.9	-0.4
BGD				S	Sg	17 33 01.4	-0.6
AKH	Akhalkalaki	0.34	283	P	Pg	17 32 59.4	-0.3
AKH				S	Sg	17 33 03.6	-0.7
AKH	Akhalkalaki	0.34	283	PG	Pg	17 32 59.4	-0.3
AKH				SG	Sg	17 33 03.3	-1.0
KZRT	Kazreti	0.36	81	P	Pb	17 33 01.0	-0.1
KZRT				S	Sb	17 33 06.3	-0.5
KZRT	Kazreti	0.36	81	i P	Pb	17 33 01.1	-0.1
KZRT				i S	Sb	17 33 05.9	-0.8
EAK	Akyaka	0.69	201	i P	Pg	17 33 05.7	-0.5
EAK				i S	Sg	17 33 14.5	-0.9
EAK				IAML		17 33 16.0	
	comp=N,173nm,0.2s						
EAK				IAML		17 33 20.0	
	comp=E,127nm,0.4s						
TBLG	Delisi	0.73	57	P	Pn	17 33 07.9	-1.0
TBLG				S	Sn	17 33 18.2	-1.8
TBLG	Delisi	0.73	57	PG	Pn	17 33 07.9	-1.0
TBLG				SG	Sn	17 33 18.4	-1.6
BTNK	Botanikuri	0.74	62	P	Pb	17 33 07.8	+0.1
BTNK				S	Sn	17 33 18.4	-1.9
BTNK	Botanikuri	0.74	62	i P	Pb	17 33 07.7	+0.1
BTNK				i S	Sb	17 33 17.9	+0.1
BTNK				IAML		17 33 18.0	
	comp=E,322nm,0.1s						
DIGO	Kars	1.01	205	i P	Pg	17 33 11.6	-0.7
DIGO				i S	Sg	17 33 24.3	-1.2
DIGO				IAML		17 33 26.0	
	comp=E,158nm,0.3s						
DIGO				IAML		17 33 29.0	
	comp=N,114nm,0.4s						
GUDG	Gudauri	1.20	20	ePg	Pn	17 33 15.2	-0.4
GUDG				eSg	Sn	17 33 31.6	-0.4
TKB	Tkibuli	1.23	326	P	Pg	17 33 16.2	-0.4
TKB				S	Sg	17 33 32.0	-0.6
ONI	Oni	1.30	344	P	Pb	17 33 16.9	-0.4
ONI				S	Sn	17 33 35.1	+0.9
ONI	Oni	1.30	344	PN	Pb	17 33 16.9	-0.4
GNI	Garni	1.33	152	PN	Pb	17 33 18.3	+0.5
TASB	TASBURUN-IGDIR	1.37	170	PN	Pn	17 33 18.3	+0.6
SENK	Senkaya-Erzuru	1.42	238	PN	Pn	17 33 18.8	+0.2
ZEI	Tsey	1.45	359	i Pg	Pg	17 33 20.8	0.0
ZEI				eSg	Sg	17 33 40.9	+1.2
IGDI	IGDIR	1.47	175	i P	Pn	17 33 18.9	-0.2
IGDI				i S	Sn	17 33 38.5	+0.3
IGDI				IAML		17 33 40.0	
	comp=N,28nm,0.3s						
IGDI				IAML		17 33 40.0	
	comp=E,29nm,0.4s						
LACR	Lac	1.52	10	ePg	Pg	17 33 20.8	-1.2
LACR				eSg	Sg	17 33 42.5	+0.8
DAGI	Agillar	1.54	261	i P	Pn	17 33 20.7	+0.5
DAGI				i S	Sn	17 33 39.9	-0.2
DAGI				IAML		17 33 42.0	
	comp=E,30nm,0.5s						
DAGI				IAML		17 33 42.0	
	comp=N,29nm,0.6s						
DIGR	Digorskoe uzhe	1.59	351	ePg	Pg	17 33 22.9	-0.4
DIGR				eSg	Sg	17 33 45.3	+1.4
DDFL	Dedoflistskaro	1.65	85	i P	Pg	17 33 25.4	+0.9
DDFL				i S	Sg	17 33 47.4	+1.4
BATM	Batumi	1.70	280	P	Pn	17 33 23.4	+1.2
BATM				S	Sn	17 33 45.2	+1.4
BATM	Batumi	1.70	280	PN	Pn	17 33 23.1	+0.9
BATM	Batumi	1.70	280	i P	Pn	17 33 23.4	+1.2
BATM				i S	Sn	17 33 45.0	+1.2
DBOC	Borcka	1.70	271	i P	Pn	17 33 23.4	+1.1
DBOC				i S	Sn	17 33 44.7	+0.7
DBOC				IAML		17 33 47.0	
	comp=E,52nm,0.3s						
DDEM	Demirkent	1.70	256	i P	Pn	17 33 23.3	+0.9
DDEM				i S	Sn	17 33 44.5	+0.5
DDEM				IAML		17 33 47.0	
	comp=E,86nm,0.3s						
DDEM				IAML		17 33 48.0	
	comp=N,86nm,0.5s						
DBAD	Bademkaya	1.71	260	i P	Pn	17 33 23.5	+1.0
DBAD				i S	Sn	17 33 45.0	+0.6
DBAD				IAML		17 33 46.0	
	comp=N,42nm,0.4s						
DBAD				IAML		17 33 47.0	
	comp=E,47nm,0.3s						
BCA	Borcka	1.74	274	PN	Pn	17 33 22.7	-0.1
KORR	Kora	1.75	3	ePg	Pg	17 33 26.5	0.0
KORR				eSg	Sg	17 33 51.1	+1.8
LGD	Lagodekhi	1.81	73	P	Pg	17 33 27.5	0.0
LGD				S	Sg	17 33 52.1	+1.2
EATA	Eleskirt	1.83	217	i P	Pg	17 33 28.2	+0.2
AGRB	Hanur-Agry	1.90	202	PN	Pn	17 33 25.9	+0.8
LSNR	Lesken	1.94	358	ePg	Pg	17 33 30.2	+0.1
LSNR				eSg	Sg	17 33 55.7	+0.3
HOMI	Horasan	2.00	231	i P	Pb	17 33 29.5	+0.2
HOMI				IAML		17 33 59.0	
	comp=E,16nm,0.7s						
HOMI				IAML		17 34 05.0	
	comp=N,16nm,1.1s						
KOPR	Koprukoy-ERZUR	2.07	230	PN	Pn	17 33 27.9	+0.4
NEY	Neytrino	2.11	335	ePg	Pg	17 33 31.9	-1.5
NEY				eSg	Sg	17 33 59.2	-1.6

MAN 13 17:40:29.4, 9°.91N×123°.61E, h0km, mb4.2, ML3.0, MS2.7, 1C-2D, Negros

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
TBP	Tagbilaran	0.33	131⇓	eP	Pg	17 40 35.1	-0.6
TBP				eS	Sb	17 40 44.8	+0.8
LLP	Lapu-Lapu	0.54	41	eP	Pg	17 40 40.3	+0.6
LLP				eS	Sb	17 40 51.5	+1.5
SNPH	Sibulan	0.67	213⇓	iP	Pg	17 40 42.5	+0.1
SNPH				i S	Sg	17 40 51.5	+0.4
GUIM	Jordan	1.23	305	eP	Pg	17 40 52.6	-0.4
GUIM				eS	Sn	17 41 11.8	+0.4
MSLP	Maasin	1.25	80	eP	Pg	17 40 53.2	-0.2
MSLP				eS	Sn	17 41 11.9	+0.2
DCPH	Dipolog City	1.34	191⇑	eP	Sb	17 41 08.3	-4.9
OCLP	Ormoc	1.50	41	eP	Pn	17 40 57.4	-0.2
OCLP				eS	Sg	17 41 17.3	-0.4

IDC 13 17:59:22.6±1.7, 2°.84S×127°.95E, h0km, mb3.6/2, mb1 4.0/4, mb1mx3.5/39, mbtmp3.8/4, ML3.8/2, Error ellipse: s-maj=35.1km s-min=26.2km az=89.0
DJA 13 17:59:26.1±0.4, 3°S±3°×12°8E±°, h81km±7km, M4.0/12, mB5.2/1, mb4.5/3, MLv3.7/12, Mw(mB)4.6/1, Mwp4.2/1
ISC 13 17:59:27.0±1.2, 2°.91S±0°.04×127°.99E±0°.04, h31km±12km, n15, σ1s26/23, Ceram Sea

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
AAI	Ambon	0.80	165	P	Pb	17 59 43.0	+0.5
AAI				S	Sn	17 59 55.2	+2.2
NLAI	Namlea	0.95	250	P	Pb	17 59 45.0	0.0
NLAI				S	Sb	17 59 58.7	+1.4
MSAI	Masohi	1.03	115	P	Pb	17 59 47.0	+0.7
SANI	Sanana	2.18	293	P	Pn	18 00 01.0	-0.1
SANI				S	Sn	18 00 26.6	-0.5
LBMI	Labuha	2.31	348	P	Pn	18 00 04.1	+1.1
LBMI				S	Sb	18 00 33.4	-2.8
BNDI	Bandanaira	2.49	130	P	Pn	18 00 03.9	-1.5
BNDI				S	Sn	18 00 33.3	-1.5
TNTI	Ternate	3.71	350	P	Pn	18 00 23.2	+1.0
SWI	Sorong	3.84	58	P	Pn	18 00 23.6	-0.5
SWI				S	Sn	18 01 09.9	+1.7
SIJI	Sorong	3.85	58	Pn	Pn	18 00 24.3	+0.1
	10nm,0.3s,baz=198,slow=23,SNR=56						
SIJI				Sn	Sn	18 01 09.2	+0.9
	3.3nm,0.3s,baz=66,slow=21,SNR=12						
FAKI	Fak Fak	4.25	90	P	Pn	18 00 29.3	-0.4
KMSI	Cibinong	5.30	311	P	Pn	18 00 43.8	-0.3
	0.2nm171nm29nm,0.7s						
KMSI				S	Sn	18 01 44.8	+0.7
	0.2nm171nm29nm,0.7s						
LUWI	Luwuk	5.54	289	P	Pn	18 00 45.8	-1.6
WRA	Warramunga Arr	18.03	160	P	Pn	18 03 34.8	-0.6
	0.2nm,0.3s,baz=340,slow=11,SNR=22						
ASAR	Alice Springs	21.41	165	P	P	18 04 12.7	+0.2
	3.6nm,0.7s,baz=347,slow=12,SNR=45						
MKAR	Makanchi Array	63.73	327	P	P	18 09 56.0	+0.2
	0.4nm,0.7s,baz=117,slow=8.3,SNR=3.4						

IDC 13 18:07:27.3±2.2, 1°.18N×126°.63E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/36, mbtmp3.2/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/18, Error ellipse: s-maj=197.6km s-min=25.1km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
WRA	Warramunga Arr	22.31	161	P	P	18 12 25.6	-0.9
	0.2nm,0.5s,baz=339,slow=11,SNR=5.1						
PMG	Port Moresby	22.99	118	LR	LR	18 25 03.5	
	comp=Z,32nm,19.0s,baz=242,slow=46						
ASAR	Alice Springs	25.68	164	P	P	18 12 60.0	+0.7
	0.4nm,0.9s,baz=348,slow=12,SNR=5.2						
MKAR	Makanchi Array	59.60	326	P	P	18 17 32.9	-0.1
	0.3nm,0.5s,baz=124,slow=7.0,SNR=9.7						

IDC 13 18:09:05.8±5.9, 15°.11S×167°.34E, h128km±56km, mb3.5/6, mb1 3.7/7, mb1mx3.4/42, mbtmp3.9/7, Error ellipse: s-maj=46.4km s-min=35.4km az=149.0
ISC 13 18:09:05.6±1.5, 15°.10S±0°.10×167°.4E±0°.3, h129km, n9, σ0s92/10, mb3.7/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
DZM	Mont Dzumac	6.99	187	P	Pn	18 10 45.6	0.0
	2.8nm,0.3s,baz=180,slow=13,SNR=29						
DZM				S	Sn	18 12 04.1	+0.2
	3.6nm,0.3s,baz=302,slow=24,SNR=13						
STKA	Stephens Creek	28.84	230	P	P	18 14 52.8	+0.8
	2.1nm,0.5s,baz=49,slow=9.4,SNR=13						
WRA	Warramunga Arr	31.85	256	P	P	18 15 17.4	-1.2
	0.8nm,0.8s,baz=85,slow=8.9,SNR=4.9						
ASAR	Alice Springs	32.65	250	P	P	18 15 24.6	-1.0
	1.8nm,0.6s,baz=81,slow=9.1,SNR=30						
CMAR	Chiang Mai Arr	75.20	294	P	P	18 20 35.6	+1.1
	0.3nm,0.6s,baz=126,slow=3.8,SNR=4.0						
SONM	Songino Array	82.86	324	P	P	18 21 16.2	+0.4
	0.2nm,0.5s,baz=135,slow=6.1,SNR=3.0						
MKAR	Makanchi Array	97.55	316	P	P	18 22 25.4	+0.2
	0.3nm,0.8s,baz=93,slow=6.7,SNR=4.1						
ARCES	ARCESS Array B	120.64	345	PKP	PKPdf	18 27 40.6	-1.0
	3.4nm,1.0s,baz=54,slow=1.6,SNR=4.6						
TORD	Torodi Ar. Bea	165.99	264	PKP	PKPdf	18 28 55.6	-0.6
	0.3nm,0.7s,baz=33,slow=0.2,SNR=3.0						

SJA 13 18:13:19.4±0.6, 34°.73S×73°.15W, h18km±4km, ML3.3, MW3.4
GUC 13 18:13:33.9±0.7, 34°.98S×72°.05W, h33km±2km, ML3.6
ISC 13 18:13:29.3±1.8, 34°.84S±0°.04×72°.38W±0°.09, h25km±13km, n16, σ1s52/26, 1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
GO05	Huala	0.41	115	eP	Pn	18 13 39.2	-0.4
GO05				eS	Sb	18 13 43.7	-0.3
GO05				IAML		18 13 44.5	
	comp=E,30μm,0.2s						
GO05	Huala	0.41	115	i P	Pn	18 13 39.5	-0.2
GO05				i S	Sb	18 13 43.8	-0.3
BO02	Sierra Bellavi	1.32	89⇓	eP	Pn	18 13 51.9	-0.2
BO02				eS	Sn	18 14 06.0	-3.0
MT01	Popeta	1.35	44	eP	Pb	18 13 55.3	+1.5
MT01				eS	Sb	18 14 12.2	+1.6
MT01				IAML		18 14 18.5	
	comp=E,1μm,0.3s						
CCHI	Chillan	1.78	172	i P	Pb	18 14 01.7	+0.5
CCHI				i S	Sb	18 14 22.2	-1.0
MT02	Curacav	1.88	34	eP	Pb	18 14 03.2	+0.3
MT02				eS	Sb	18 14 26.4	+0.4
ANTU	Antumapu	1.92	49	eP	Pb	18 14 03.7	0.0
ANTU				IAML		18 14 34.2	
	comp=E,865nm,0.4s						
MT03	Universidad Ad	2.05	50	eP	Pb	18 14 05.9	+0.1
MT03				IAML		18 14 36.8	
	comp=E,1μm,0.4s						
LMEL	Las Melosas	2.05	62	eP	Pb	18 14 04.9	-1.0
LMEL				eS	Sn	18 14 29.2	+1.9
LMEL				IAML		18 14 32.5	
	comp=N,530nm,0.2s						
CLCH	Cerro Calan	2.10	47	eP	Pb	18 14 06.5	-0.2
CLCH				eS	Sb	18 14 33.8	+1.5
CLCH				IAML		18 14 44.4	
	comp=E,524nm,0.7s						
ROC1	El Roble	2.17	32	i P	Pn	18 14 01.9	-2.2
ROC1				i S	Sb	18 14 33.4	-1.3
PEL	Peldehue	2.20	40	eP	Pb	18 14 08.9	+0.6
PEL				i S	Sb	18 14 34.8	-0.4
PUMA	Malargue	2.49	106	i P	Pn	18 14 10.8	+2.6
LAMA	Las Malvinas	2.61	93	eP	Pn	18 14 12.0	+2.1
AAGR	Agrelo	3.43	60	eP	Pb	18 14 26.5	-2.9
ARCO	CERRO ARCO	3.49	56	eP	Pn	18 14 23.4	+1.3
ARCO				IAML		18 14 44.6	
	comp=Z,39nm,0.6s						

SJA 13 18:19:29.5±1.2, 20°.99S×69°.03W, h125km±7km, ML3.9, MW3.9
NEIC 13 18:19:30.3±1.4, 21°.00S±0°.05×68°.9W±0°.1, h112km±6km, Error ellipse: s-maj=14.5km s-min=7.5km az=91.0
GUC 13 18:19:30.9±0.6, 20°.98S×68°.92W, h116km±2km, ML4.1
IDC 13 18:19:31.5±0.5, 21°.00S×68°.71W, h118km±5km, mb3.5/6, mb1 3.7/8, mb1mx3.5/33, mbtmp3.9/8, Error ellipse: s-maj=22.5km s-min=8.1km az=99.0
ISC 13 18:19:30.5±0.6, 21°.00S±0°.03×68°.97W±0°.05, h115km±4km, n79, σ1s24/112, mb3.9/6, 15C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
PB01	IPOC Station P	0.48	265⇑	iP	Pn	18 19 47.8	-0.1
PB01				i S	Sn	18 20 01.2	+0.2
PB01				IAML		18 20 02.0	
	comp=E,6μm,0.3s						
PB01	IPOC Station P	0.48	265		Pn	18 19 47.7	-0.1
PB09	IPOC Station P	0.83	198⇑	eP	Pn	18 19 51.4	+0.8
PB09				i S	Sn	18 20 07.2	+1.3
PB09	IPOC Station P	0.83	198	eP	Pn	18 19 51.6	+1.0
PB09				i S	Sn	18 20 07.5	+1.6

PB09 IAML 18 20 08.9
comp=Z,4µm,0.5s
PB08 IPOC Station P 0.87 349⇓ *i*P Pn 18 19 51.4 +0.2
PB08 *i* S **Sn 18 20 07.0 +0.1**
PB08 IAML 18 20 07.9
comp=E,7µm,0.7s
PB08 IPOC Station P 0.87 349 *e*P Pn 18 19 51.5 +0.2
PB08 *i* S **Sn 18 20 06.7 -0.2**
PB02 IPOC Station P 0.92 250⇑ *e*P Pn 18 19 51.9 +0.5
PB02 *i* S **Sn 18 20 07.8 +0.6**
PB02 IPOC Station P 0.92 250 *e*P Pn 18 19 52.1 +0.7
PB02 *i* S **Sn 18 20 07.8 +0.6**
PB07 IPOC Station P 1.12 230⇑ *i*P Pn 18 19 54.0 +0.5
PB07 *i* S **Sn 18 20 11.5 +0.6**
PB07 IAML 18 20 13.5
comp=N,5µm,0.2s
PB07 IPOC Station P 1.12 230 *e*P Pn 18 19 54.1 +0.7
PB07 *i* S **Sn 18 20 11.4 +0.6**
PATCX Punta Patache 1.12 279⇑ *i*P Pn 18 19 53.9 +0.5
PATCX *i* S **Sn 18 20 11.8 +1.0**
PATCX Punta Patache 1.12 279 *e*P Pn 18 19 54.0 +0.5
PATCX *i* S **Sn 18 20 12.0 +1.3**
TA01 Diego Aracena 1.21 291⇑ *i*P Pn 18 19 54.4 +0.1
TA01 *i* S **Sn 18 20 12.4 +0.1**
TA01 IAML 18 20 14.4
comp=E,5µm,0.4s
PB03 IPOC Station P 1.27 215⇑ *i*P Pn 18 19 55.6 +0.4
PB03 *i* S **Sn 18 20 14.2 +0.4**
PB03 IAML 18 20 16.3
comp=E,4µm,0.3s
PB03 IPOC Station P 1.27 215 *e*P Pn 18 19 55.7 +0.6
PB03 *i* S **Sn 18 20 14.7 +0.9**
GO01 Chusmiza 1.34 351⇑ *i*P Pn 18 19 56.3 0.0
GO01 *e*S **Sn 18 20 15.7 -0.1**
GO01 Chusmiza 1.34 351 Pn 18 19 56.2 -0.1
PB11 IPOC Station P 1.39 332⇑ *e*P Pn 18 19 56.4 -0.1
PB11 *i* S **Sn 18 20 16.1 -0.1**
PB11 IAML 18 20 17.1
comp=E,6µm,0.2s
PB11 IPOC Station P 1.39 332 Pn 18 19 56.4 -0.1
PB11 IPOC Station P 1.39 332 *e*P Pn 18 19 56.5 -0.1
PB11 *i* S **Sn 18 20 16.2 -0.1**
LVC Limon Verde 1.60 178 *e*P Pn 18 20 00.2 +1.0
LVC *i* S **Sn 18 20 22.2 +1.2**
LVC Limon Verde 1.60 178 P Pn 18 20 00.2 +1.0
comp=E,54nm,0.3s,baz=40,slow=11,SNR=181
LVC S **Sn 18 20 22.7 +1.7**
comp=E,182nm,0.3s,baz=169,slow=23,SNR=80
LVC Limon Verde 1.60 178 Pn 18 20 00.1 +1.0
LVC **Sn 18 20 20.3 -0.7**
LVC Limon Verde 1.60 178 *i* P Pn 18 20 00.2 +1.0
LVC *i* S **Sn 18 20 22.7 +1.7**
PB04 IPOC Station P 1.72 219⇑ *i*P Pn 18 20 00.9 +0.5
PB04 *i* S **Sn 18 20 23.4 +0.2**
PB04 IAML 18 20 30.9
comp=N,2µm,0.3s
PB04 IPOC Station P 1.72 219 Pn 18 20 00.7 +0.3
PB04 IPOC Station P 1.72 219 *i* P Pn 18 20 01.0 +0.6
PB04 *i* S **Sn 18 20 23.4 +0.2**
PB04 IAML 18 20 28.9
comp=Z,1µm,0.1s
PSGC Pisagua 1.77 322⇑ *e*P Pn 18 20 00.4 -0.6
PSGC *i* S **Sn 18 20 23.9 -0.2**
PSGCX Pisagua 1.77 322 *e*P Pn 18 20 00.5 -0.4
PSGCX *i* S **Sn 18 20 23.3 -0.8**
PB06 IPOC Station P 1.79 198⇑ *i*P Pn 18 20 01.6 +0.4
PB06 *i* S **Sn 18 20 25.6 +0.9**
PB06 IAML 18 20 30.4
comp=E,2µm,0.2s
PB06 IPOC Station P 1.79 198 *i* P Pn 18 20 02.0 +0.8
PB06 *i* S **Sn 18 20 25.5 +0.9**
PB06 IAML 18 20 30.9
comp=Z,1µm,0.4s
MNMC Minye Minye 1.95 342⇑ *i*P Pn 18 20 03.5 +0.1
MNMC *i* S **Sn 18 20 28.9 +0.5**
MNMC Minye Minye 1.95 342 Pn Pn 18 20 03.6 +0.2
MNMCX Minye Minye 1.95 342 *e*P Pn 18 20 03.8 +0.4
MNMCX *e*S **Sn 18 20 29.0 +0.6**
PB05 IPOC Station P 2.17 212⇑ *i*P Pn 18 20 06.2 +0.2
PB05 IPOC Station P 2.17 212 *i* P Pn 18 20 06.4 +0.5
PB05 *i* S **Sn 18 20 32.4 -0.7**
PB15 IPOC Station P 2.24 192⇑ *i*P Pn 18 20 07.6 +0.7
PB15 *i* S **Sn 18 20 36.1 +1.1**
PB15 IPOC Station P 2.24 192 *i* P Pn 18 20 07.7 +0.7
PB15 *i* S **Sn 18 20 36.4 +1.4**
PB16 IPOC Station P 2.70 349 *e*P Pn 18 20 13.8 +0.5
PB16 IPOC Station P 2.70 349 *e*P Pn 18 20 14.3 +1.0
PB10 IPOC Station P 2.90 210 Pn 18 20 15.1 -0.2
PB10 IPOC Station P 2.90 210 *i* P Pn 18 20 15.1 -0.2
PB10 IAML 18 21 09.6
comp=Z,162nm,0.6s
YJA Yavi 3.42 111 *i* P Pn 18 20 24.0 +1.4
PB14 IPOC Station P 3.84 200 *e*P Pn 18 20 27.4 -0.7
PB14 IAML 18 21 14.2
comp=Z,155nm,0.2s
GO02 Mina Guanaco 4.18 188⇓ *i*P Pn 18 20 32.2 -0.5
GO02 Mina Guanaco 4.18 188 Pn 18 20 32.2 -0.5
LPAZ La Paz 4.76 10 P Pn 18 20 42.1 +1.4
comp=Z,3.2nm,0.3s,baz=177,slow=6.5,SNR=34
AZAP Zapla 4.83 132 *i* P Pn 18 20 42.1 +0.9
AZAP *i* S **Sn 18 21 36.8 +0.5**
ASTB Santa Barbara 5.10 126 *i* P Pn 18 20 44.9 0.0
GO03 Copiap 6.66 190 Pn 18 21 03.2 -2.7
GO03 Copiap 6.66 190 *i* P Pn 18 21 03.2 -2.7
GO03 *i* S **Sn 18 22 15.8 -4.6**
VCA Vinchina 7.73 175 *i* P Pn 18 21 20.7 +0.2
SIV San Ignacio 9.00 58 P Pn 18 21 33.8 -3.8
comp=Z,2.5nm,0.3s,baz=252,slow=11,SNR=66
AROD Rodeo 9.14 183 *i* P Pn 18 21 38.1 -1.6
GO04 Tololo Observa 9.28 190 Pn Pn 18 21 37.2 -4.3
GO04 Tololo Observa 9.28 190 *i* P Pn 18 21 37.1 -4.4
ACCO Cerro Coronel 9.55 180 *i* P Pn 18 21 43.0 -2.2
RTLL Cerro Villicun 10.29 178 *i* P Pn 18 21 51.8 -3.3
CFA Coronel Fontan 10.58 177 P Pn 18 21 55.5 -3.4
comp=Z,1.1nm,0.3s,baz=354,slow=16,SNR=8.7
ASAL Salagasta 11.54 179 *i* P Pn 18 22 08.7 -3.2
DR12 Loma Pena Alta 35.59 359 P P 18 26 49.3 -1.1
TXAR Lajitas Array 60.19 325 P P 18 29 27.6 +1.1
comp=Z,0.2nm,0.7s,baz=161,slow=8.6,SNR=5.6
DBIC Dimbokro 68.65 74 P P 18 30 21.1 -0.7
comp=Z,3.0nm,0.7s,baz=216,slow=5.0,SNR=5.0
DBIC Dimbokro 68.65 74 P P 18 30 21.3 -0.6
DBIC IAmb IAmb 18 32 46.4
comp=Z,20nm,1.5s
PDAR Pinedale Array 73.65 330 P P 18 30 53.6 +1.9
comp=Z,0.3nm,0.8s,baz=140,slow=7.1,SNR=2.6
ULM Lac du Bonnet 74.83 342 P P 18 30 57.9 -0.1
comp=Z,1.8nm,0.5s,baz=174,slow=5.3,SNR=5.4
ULM Lac du Bonnet 74.83 342 P P 18 30 58.2 +0.2
ULM IAmb IAmb 18 31 55.9
comp=Z,6.1nm,1.4s
TORD Torodi Ar. Bea 77.24 70 P P 18 31 11.5 -1.0
comp=Z,0.7nm,0.4s,baz=252,slow=5.3,SNR=18
TORD pP **pP 18 31 41.0 -2.0**
comp=Z,0.7nm,0.5s,baz=245,slow=5.7,SNR=3.2
TORD Torodi Ar. Bea 77.24 70 P P 18 31 10.9 -1.7
YKA Yellowknife Ar 90.70 341 P P 18 32 20.3 +0.5
comp=Z,0.4nm,0.6s,baz=134,slow=4.8,SNR=7.7
YKA pP **pP 18 32 50.1 -0.2**
comp=Z,0.9nm,0.9s,baz=137,slow=4.6,SNR=6.8
H11S2 WAKE ISLAND HYI 127.76 278 T T 20 58 24.9
baz=102,slow=74,SNR=26
H11S1 WAKE ISLAND HYI 127.77 278 T T 20 58 25.6
baz=102,slow=74,SNR=12
H11S3 WAKE ISLAND HYI 127.78 278 T T 20 58 26.2
baz=102,slow=74,SNR=19
H11N3 WAKE ISLAND HYI 127.83 279 T T 20 58 31.4
baz=102,slow=74,SNR=3.6
H11N2 WAKE ISLAND HYI 127.84 279 T T 20 58 31.2
baz=172,slow=74,SNR=2.9
KSH Kashi 144.83 50 PKP PKPdf 18 38 54.8 +0.5
KSH pPKP pPKPdf 18 39 25.1 -1.7
KSH PP **PP 18 42 16.8 +3.9**
MKAR Makanchi Array 145.26 35 PKPbc PKPdf 18 38 55.5 +0.8
comp=Z,1.5nm,0.6s,baz=335,slow=3.0,SNR=26
MKAR pPKPbc **pPKPdf 18 39 26.7 -0.6**
comp=Z,1.7nm,0.8s,baz=324,slow=3.6,SNR=8.0
SONM Songino Array 152.97 7 PKPbc PKiKP 18 39 15.2 +0.6
comp=Z,0.2nm,0.4s,baz=306,slow=1.6,SNR=4.4
SONM PKPab **PKPab 18 39 26.6 +0.6**
comp=Z,0.5nm,0.9s,baz=303,slow=5.0,SNR=4.1
SONM pPKPbc **pPKPbc 18 39 46.8 +0.1**
comp=Z,0.6nm,0.7s,baz=295,slow=1.6,SNR=4.1
SONM Songino Array 152.97 7 PKPbc 18 39 14.7 +0.3

BJI 13 18:22:14.6±0.0, 35°.98N×82°.45E, h5km, ML3.5/6, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**8.80**	**26**	*e*P	Pn	18 24 23.8	+1.2
WMQ				S	Sn	18 25 57.5	-4.7
WMQ				smax	smax		
	comp=N,10.0nm,1.1s						
WMQ				smax	smax		
	comp=E,6.0nm,1.1s						

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*IDC **13** 18:33:02.5±2.2, 15°.23S×174°.00W, h86km±21km, mb3.5/7, mb1 3.9/8, mb1mx3.6/39, mbtmp3.9/8, Error ellipse: s-maj=107.1km s-min=16.3km az=150.0*
*NEIC **13** 18:33:02.8±0.8, 15°.55S±0°.1×174°.00W±0°.1, h97km±5km, mb4.2/5, Error ellipse: s-maj=21.7km s-min=14.1km az=136.0*
ISC 13 18:33:02.4±0.8, 15°.4S±0°.1×174°.0W±0°.1, h94km, n20, σ0s.92/21, mb3.9/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.59**	**55**	P	**Pn**	**18 33 43.6**	**+1.0**
	89nm,0.3s,baz=54,slow=0.5,SNR=147						
AFI				S	**Sn**	**18 34 11.8**	**-1.6**
	52nm,0.3s,baz=48,slow=22,SNR=7.5						
NIUE	**Niue**	**5.31**	**134**	Pn	**Pn**	**18 34 19.6**	**+0.3**
WB0	**Warramunga Arr**	**49.27**	**257**	P	**P**	**18 41 42.5**	**+0.5**
WB0				IAmb	IAmb	18 41 43.8	
	comp=Z,3.4nm,1.1s						
WB2	**Warramunga Arr**	**49.30**	**257**	P	**P**	**18 41 41.7**	**-0.6**
WB2				IAmb	IAmb	18 42 37.0	
	comp=Z,3.7nm,1.1s						
WRAB	**Tennant Creek**	**49.30**	**257**	P	**P**	**18 41 41.9**	**-0.4**
WRA	**Warramunga Arr**	**49.31**	**257**	P	**P**	**18 41 42.9**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=91,slow=6.8,SNR=20						
WRA	**Warramunga Arr**	**49.31**	**257**	P	**P**	**18 41 41.8**	**-0.5**
AS31	**Alice Springs**	**49.59**	**252**	P	**P**	**18 41 45.4**	**+0.9**
ASAR	**Alice Springs**	**49.59**	**252**	P	**P**	**18 41 45.2**	**+0.8**
	comp=Z,1.0nm,0.4s,baz=90,slow=7.7,SNR=26						
ASAR	**Alice Springs**	**49.59**	**252**	P	**P**	**18 41 45.0**	**+0.5**
NVAR	**Mina Array Bea**	**74.70**	**42**	P	**P**	**18 44 32.9**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=230,slow=9.6,SNR=11						
NVAR	**Mina Array Bea**	**74.70**	**42**	P	**P**	**18 44 32.6**	**+0.4**
TXAR	**Lajitas Array**	**81.07**	**56**	P	**P**	**18 45 08.4**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=215,slow=7.7,SNR=3.9						
ILAR	**Eielson Array**	**82.56**	**11**	P	**P**	**18 45 14.5**	**0.0**
	comp=Z,0.4nm,0.6s,baz=231,slow=6.2,SNR=7.2						
ILAR	**Eielson Array**	**82.56**	**11**	P	**P**	**18 45 14.7**	**+0.3**
PDAR	**Pinedale Array**	**82.63**	**42**	P	**P**	**18 45 15.9**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=211,slow=4.7,SNR=4.8						
PDAR	**Pinedale Array**	**82.63**	**42**	P	**P**	**18 45 15.8**	**+0.1**
YKA	**Yellowknife Ar**	**90.32**	**24**	P	**P**	**18 45 52.6**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=242,slow=4.0,SNR=6.0						
BRTR	**Keskin Array B**	**145.81**	**321**	PKPbc	**PKiKP**	**18 52 32.2**	**-2.5**
	comp=Z,0.8nm,0.9s,baz=108,slow=3.6,SNR=4.7						
BRTR	**Keskin Array B**	**145.81**	**321**		**PKPab**	**18 52 30.7**	**-1.1**

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*BJI **13** 18:57:32.0±0.0, 9°.10N×58°.20E, h5km, mB5.2/55, mb4.9/65, Ms5.2/65, Ms7 4.9/61*
*MOS **13** 18:57:34.0±1.2, 9°.27N×58°.17E, h10km, mb5.1/60, MS4.8/13, Error ellipse: s-maj=5.8km s-min=3.4km az=106.4*
*IDC **13** 18:57:34.2±0.4, 9°.18N×58°.29E, h0km, mb4.6/47, mb1 4.7/49, mb1mx4.6/58, mbtmp4.7/49, ML4.0/2, MS4.7/39, Ms1 4.7/39, ms1mx4.6/47, Error ellipse: s-maj=10.1km s-min=9.6km az=172.0*
*NEIC **13** 18:57:35.4±1.7, 9°.19N±0°.09×58°.16E±0°.08, h10km±1km, mb5.2/137, Error ellipse: s-maj=14.9km s-min=12.6km az=194.0*
*GCMT **13** 18:57:35.4±0.1, 9°.15N±0°.01×58°.06E±0°.01, h12km, MW5.4/151, Moment Tensor Solution. s91,c134; s151,c289; Duration: 1s.2 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.22±.01; $M_{\theta\theta}$1.06±.01; $M_{\phi\phi}$0.16±.01; $M_{r\theta}$0.88±.04; $M_{r\phi}$-0.44±.01; $M_{\theta\phi}$0.19±.04; Best double couple: $M_0$1.51900×10^{17} NP1:ϕ_s128.00000°, δ32.00000°, λ-60.00000°. NP2:ϕ_s274.00000°, δ63.00000°, λ-107.00000°. Principal axes: T 1.4590, Plg16.0000°, Azm16.0000°; N 0.1230, Plg15.0000°, Azm282.0000°; P -1.5800, Plg67.0000°, Azm151.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **13** 18:57:57.0±0.0, 9°.79N×57°.09E, h10km, mb5.3, Ms4.3*
ISC 13 18:57:37.8±0.5, 9°.26N±0°.04×58°.17E±0°.04, h21km±7km, n692, σ1s.50/734, mb5.1/254, MS4.9/70, 46C-22D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	**Socotra**	**5.03**	**306**	P	**Pn**	**18 58 54.3**	**+2.2**
SOCY	**Socotra**	**5.03**	**306**	P	**Pn**	**18 58 55.3**	**+3.1**
DMTO	**DMTO**	**8.97**	**340**	P	Pn	18 59 51.0	+4.8
SHAO	**Shalim**	**9.05**	**344**	P	**Pn**	**18 59 50.8**	**+3.5**
RBK	**Rabkut**	**9.05**	**335**	P	**Pn**	**18 59 52.0**	**+4.6**
ABTO	**Aybut**	**9.34**	**330**	P	**Pn**	**18 59 56.0**	**+4.7**
	SNR=14						
WHFO	**Wadi Hawf**	**9.61**	**334**	P	Pn	18 59 59.8	+4.8
	SNR=9.7						
DQM	**DQM**	**10.62**	**357**	P	**Pn**	**19 00 10.0**	**+1.2**
MHTO	**MHTO**	**11.66**	**359**	P	**Pn**	**19 00 24.5**	**+1.5**
JMDO	**Jabal Madar**	**13.04**	**360**	P	**Pn**	**19 00 44.6**	**+2.7**
	SNR=8.3						
WBK	**Wadi Bani Khal**	**13.30**	**3**	P	**Pn**	**19 00 47.9**	**+2.5**
BSY	**Bisya**	**13.44**	**356**	P	**Pn**	**19 00 51.0**	**+3.6**
	SNR=14						
SMDO	**Samad**	**13.72**	**360**	P	**Pn**	**19 00 54.0**	**+2.7**
	SNR=8.1						
WSAR	**Wadi Sarin**	**13.91**	**2**	Pn	**Pn**	**19 00 55.5**	**+1.8**
	0.2nm,0.3s,baz=206,slow=18,SNR=6.2						
WSAR				LR	LR	19 05 30.7	
	comp=Z,11µm,18.6s,baz=207,slow=34						
WSAR	**Wadi Sarin**	**13.91**	**2**	P	**Pn**	**19 00 55.7**	**+1.9**
ARQ	**Araqi**	**14.09**	**354**	P	**Pn**	**19 00 57.9**	**+1.7**
	SNR=8.8						
BIDO	**Bidbid**	**14.18**	**360**	P	**Pn**	**19 00 59.1**	**+1.6**
HOQ	**Hoqain**	**14.27**	**357**	P	**Pn**	**19 01 00.5**	**+1.8**
	SNR=13						
DAMY	**Dhamar**	**14.47**	**293**	Pn	**Pn**	**19 01 01.3**	**-0.6**
MNCI	**Minicoy**	**14.75**	**93**	Pn	**Pn**	**19 01 04.6**	**-0.7**
SOHO	**SOHO**	**14.87**	**354**	P	**Pn**	**19 01 08.9**	**+2.0**
	SNR=5.8						
ALNE	**Al Ain**	**14.89**	**351**	P	**Pn**	**19 01 07.0**	**-0.2**
ATD	**Arta Tunnel**	**15.24**	**280**	Pn	**Pn**	**19 01 13.6**	**+1.7**
	1.4nm,0.3s,baz=100,slow=8.1,SNR=7.4						
ATD				LR	LR	19 06 01.7	
	comp=Z,2µm,20.8s,baz=87,slow=33						
ATD	**Arta Tunnel**	**15.24**	**280**	P	**Pn**	**19 01 11.8**	**0.0**
ATD	**Arta Tunnel**	**15.24**	**280**	P	**P**	**19 01 15.4**	**-1.3**
	SNR=19						
ASHO	**Ashiyiah**	**15.47**	**353**	*i* P	**Pn**	**19 01 14.5**	**-0.4**
	SNR=7.1						
ASHO	**Ashiyiah**	**15.47**	**353**	P	**Pn**	**19 01 14.8**	**-0.1**
FAQ	**Al Faqa, Dubai**	**15.59**	**351**	P	**Pn**	**19 01 16.2**	**-0.3**
FAQ	**Al Faqa, Dubai**	**15.59**	**351**	P	**Pn**	**19 01 16.5**	**+0.1**
HATD	**Hatta, Dubai**	**15.60**	**353**	*i* P	**Pn**	**19 01 15.6**	**-0.9**
	SNR=7.2						
UOSS	**Minazif**	**15.71**	**353**	*i* P	**Pn**	**19 01 16.5**	**-1.4**
	SNR=5.9						
UOSS	**Minazif**	**15.71**	**353**		**Pn**	**19 01 17.4**	**-0.5**
UOSS	**Minazif**	**15.71**	**353**	P	**Pn**	**19 01 17.6**	**-0.3**
NAZ	**Nazwa, Dubai**	**15.82**	**352**	*i* P	**Pn**	**19 01 18.8**	**-0.6**
	SNR=6.7						
NAZ	**Nazwa, Dubai**	**15.82**	**352**	P	**Pn**	**19 01 19.4**	**0.0**
MDH	**Madha**	**16.05**	**354**	P	**Pn**	**19 01 20.5**	**-1.8**
MSFE	**Esma-Masafi**	**16.12**	**353**	*i* P	**Pn**	**19 01 22.6**	**-0.7**
	SNR=7.8						
GOA	**Goa**	**16.49**	**66⇑**	*i*P	**Pn**	**19 01 28.4**	**+0.3**
GOA				IAMs_20	IAMs_20	19 07 11.0	
	comp=Z,4µm,11.5s						
BANOM	**Banah**	**16.67**	**354**	P	**Pn**	**19 01 29.3**	**-0.9**
SHME	**Shamm**	**16.81**	**354**	*i* P	**Pn**	**19 01 30.9**	**-1.1**
	SNR=9.5						
BOM	**Bombay**	**17.12**	**54**	IAMs_20	IAMs_20	19 05 57.9	
	comp=Z,6µm,21.5s						
KAAM	**Kaadhehdhoo**	**17.14**	**120**	P	**Pn**	**19 01 34.1**	**-2.0**
KAAM	**Kaadhehdhoo**	**17.14**	**120**	P	**P**	**19 01 41.0**	**+3.3**
	SNR=14						
BHUJ	**Bhuj**	**17.74**	**37⇑**	*i*P	**P**	**19 01 45.0**	**+0.7**
BHUJ				IAmb	IAmb	19 01 50.4	
	comp=Z,189nm,1.5s						
POO	**Poona**	**17.78**	**57⇑**	*i*P	**P**	**19 01 45.2**	**+0.4**
POO	**Poona**	**17.78**	**57**	*e*x	**Pn**	**19 01 42.0**	**-2.2**
RAYN	**Ar Rayn**	**18.65**	**321**	*i* P	**P**	**19 01 52.8**	**-1.7**
	SNR=34						
RAYN	**Ar Rayn**	**18.65**	**321**	P	**P**	**19 01 52.6**	**-1.9**
RAYN	**Ar Rayn**	**18.65**	**321**	P	**P**	**19 01 52.6**	**-1.9**
RAYN				pmax	pmax		
	comp=Z,40nm,1.0s						
FURI	**Furi**	**19.25**	**270**	P	**Pn**	**19 02 05.2**	**+2.8**
FURI				IAmb	IAmb	19 02 13.8	
	comp=Z,198nm,0.8s						
LATR	**Latur**	**20.02**	**61**	IVMs_BB	IVMs_BB	19 08 28.8	
	comp=Z,2µm,16.9s						
H08N2	**Diego Garcia H**	**20.08**	**140**	T	T	19 22 32.1	
	baz=320,slow=76,SNR=343						
H08N3	**Diego Garcia H**	**20.09**	**140**	T	T	19 22 33.0	
	baz=320,slow=76,SNR=302						
H08N1	**Diego Carcia H**	**20.10**	**140**	T	T	19 22 33.8	
	baz=320,slow=76,SNR=258						
HYB	**Hyderabad**	**21.41**	**66**	*i* P	**P**	**19 02 24.0**	**-0.5**
HYB				*e*S	**S**	**19 06 24.0**	**+2.6**
HYB	**Hyderabad**	**21.41**	**66**	*e*P	**P**	**19 02 25.7**	**+1.1**
HYB				*i* x	x	19 07 28.8	
HYB				IAMs_20	IAMs_20	19 09 10.9	
	comp=Z,4µm,18.8s						
MDRS	**Chennai**	**21.98**	**78**	*e*P	**P**	**19 02 29.8**	**-0.8**
PALK	**Pallekele**	**22.39**	**93**	P	**P**	**19 02 36.2**	**+1.2**
	comp=Z,8.4nm,0.8s,baz=266,slow=14,SNR=4.6						
PALK				LR	LR	19 09 05.7	
	comp=Z,2µm,22.0s,baz=279,slow=31						
PALK	**Pallekele**	**22.39**	**93**	P	**P**	**19 02 36.4**	**+1.4**
PALK				IAmb	IAmb	19 02 44.9	
	comp=Z,84nm,1.4s						
PALK	**Pallekele**	**22.39**	**93*c***	*i*P	**P**	**19 02 36.8**	**+1.8**
PALK				pmax	pmax		
	comp=Z,32nm,1.0s						
BHPL	**Bhopal**	**23.09**	**51⇑**	*i*P	**P**	**19 02 42.7**	**+0.4**
BHPL				IAmb	IAmb	19 02 47.4	
	comp=Z,38nm,1.2s						
BHPL				IAMs_20	IAMs_20	19 11 18.4	
	comp=Z,2µm,15.0s						
KIBK	**Kibwezi**	**23.13**	**241**	P	**P**	**19 02 42.2**	**-0.6**
	SNR=22						
KMBO	**Kilima Mbogo**	**23.25**	**245**	P	**P**	**19 02 45.0**	**+0.7**
	comp=Z,18nm,1.1s,baz=42,slow=12,SNR=15						
KMBO				LR	LR	19 11 05.7	
	comp=Z,1µm,21.9s,baz=70,slow=35						
KMBO	**Kilima Mbogo**	**23.25**	**245**	*i* P	**P**	**19 02 44.2**	**-0.1**
	SNR=17						
KMBO	**Kilima Mbogo**	**23.25**	**245**	P	**P**	**19 02 43.8**	**-0.5**
KMBO				IAmb	IAmb	19 02 52.3	
	comp=Z,68nm,1.2s						
KMBO	**Kilima Mbogo**	**23.25**	**245**	P	**P**	**19 02 43.8**	**-0.5**
KMBO				pmax	pmax		
	comp=Z,68nm,1.2s						
LODK	**Lodwar**	**23.39**	**257**	P	**P**	**19 02 47.2**	**+1.7**
	SNR=67						
HRA	**Herat**	**25.29**	**8**	P	**P**	**19 03 03.9**	**+0.9**
KBL	**Kabul**	**27.07**	**20**	P	**P**	**19 03 21.3**	**+2.2**
KBL	**Kabul**	**27.07**	**20**	P	**P**	**19 03 21.3**	**+2.2**
KBL				pmax	pmax		
	comp=Z,28nm,1.3s						
NIL	**Nilore**	**27.97**	**28**	P	**P**	**19 03 29.1**	**+2.1**
NIL				IAmb	IAmb	19 03 52.1	
	comp=Z,86nm,1.6s						
NIL	**Nilore**	**27.97**	**28**	P	**P**	**19 03 29.1**	**+2.1**
NIL				pmax	pmax		
	comp=Z,86nm,1.6s						
DHRM	**DHARAMSHALA**	**28.38**	**34**	*e*P	**P**	**19 03 32.8**	**+1.9**
DHRM				IAmb	IAmb	19 03 38.8	
	comp=Z,40nm,1.1s						
GEYT	**Alibeck**	**28.54**	**360**	P	**P**	**19 03 33.0**	**+1.0**
	comp=Z,4.8nm,0.9s,baz=174,slow=7.4,SNR=8.9						
GEYT				LR	LR	19 15 35.9	
	comp=Z,1µm,19.4s,baz=190,slow=38						
GEYT	**Alibeck**	**28.54**	**360**	P	**P**	**19 03 33.1**	**+1.0**
GYA0B	**ALIBECK ARRAY**	**28.54**	**360**	P	**P**	**19 03 32.7**	**+0.6**
BWNR	**Bhubaneshwar**	**28.84**	**65**	IAMs_20	IAMs_20	19 13 17.8	
	comp=Z,4µm,19.5s						
MBAR	**Mbarara**	**29.02**	**252**	P	**P**	**19 03 38.2**	**+1.4**
	comp=Z,1.8nm,0.2s,baz=90,slow=9.6,SNR=6.1						
MBAR				LR	LR	19 15 40.2	
	comp=Z,3µm,19.6s,baz=70,slow=37						
MBAR	**Mbarara**	**29.02**	**252**	P	**P**	**19 03 37.7**	**+0.9**
MBAR	**Mbarara**	**29.02**	**252**	P	**P**	**19 03 37.7**	**+0.9**
MBAR				pmax	pmax		
	comp=Z,11nm,0.9s						
OPO	**Ambohidratompo**	**29.70**	**201**	LR	LR	19 13 03.6	
	comp=Z,3µm,19.0s,baz=183,slow=31						
EIL	**Elat**	**29.74**	**316**	P	**P**	**19 03 45.2**	**+2.4**
	comp=Z,6.5nm,0.8s,baz=45,slow=5.8,SNR=7.2						
EIL				LR	LR	19 15 27.3	
	comp=Z,1µm,18.1s,baz=134,slow=36						
ABPO	**Ambohimpanom**	**30.10**	**201**	P	**P**	**19 03 46.2**	**0.0**
ABPO				IAmb	IAmb	19 04 00.3	
	comp=Z,59nm,1.5s						
ABPO	**Ambohimpanom**	**30.10**	**201**	P	**P**	**19 03 46.2**	**0.0**
ABPO				pmax	pmax		
	comp=Z,59nm,1.5s						
ASF	**Jabal al Asfar**	**30.14**	**322**	P	**P**	**19 03 49.0**	**+2.6**
	comp=Z,4.4nm,0.8s,baz=101,slow=5.6,SNR=7.5						
ASF				LR	LR	19 16 07.6	
	comp=Z,2µm,19.0s,baz=92,slow=37						
ASF	**Jabal al Asfar**	**30.14**	**322**	P	**P**	**19 03 49.0**	**+2.6**
KOLN	**Koldanda**	**30.23**	**49**	*e*P	**P**	**19 03 48.6**	**+1.2**
	comp=Z,121nm,1.3s						
DANN	**Dangsing**	**30.66**	**48**	*e*P	**P**	**19 03 52.2**	**+0.9**
	comp=Z,89nm,0.8s						
GKN	**Gorkha**	**31.13**	**50**	*e*P	**P**	**19 03 56.1**	**+0.8**
	comp=Z,62nm,1.0s						
DMN	**Daman**	**31.28**	**51**	*e*P	**P**	**19 03 58.0**	**+1.2**
	comp=Z,78nm,0.9s						
PKIN	**Phulchoki**	**31.49**	**51**	*e*P	**P**	**19 03 59.4**	**+0.8**
	comp=Z,55nm,0.9s						
PKI	**Pulchoki**	**31.49**	**51**	*e*P	**P**	**19 03 59.6**	**+0.9**
	comp=Z,163nm,1.3s						
KKN	**Kakani**	**31.50**	**51**	*e*P	**P**	**19 03 59.7**	**+1.0**
	comp=Z,82nm,0.8s						
MMAI	**Mount Meron Ar**	**31.63**	**322**	P	**P**	**19 04 01.8**	**+2.2**
	comp=Z,2.2nm,0.7s,baz=267,slow=14,SNR=3.5						
MMAI				PcP	**PcP**	**19 06 53.0**	**+1.4**
	comp=Z,6.3nm,0.8s,baz=97,slow=4.9,SNR=6.9						
GUN	**Gumba**	**32.02**	**51**	*e*P	**P**	**19 04 04.6**	**+1.2**
	comp=Z,117nm,0.9s						
RAMN	**Ramite**	**32.12**	**53**	*e*P	**P**	**19 04 05.1**	**+1.0**
	comp=Z,69nm,0.9s						
JIRN	**Jiri**	**32.14**	**52**	*e*P	**P**	**19 04 05.8**	**+1.4**
	comp=Z,167nm,1.0s						
BTK	**Batken**	**32.68**	**18**	P	**P**	**19 04 09.1**	**+0.5**
BTK	**Batken**	**32.68**	**18**	P	**P**	**19 04 09.1**	**+0.5**
BTK				pmax	pmax		
	comp=Z,65nm,1.1s						
ODAN	**Odare**	**32.70**	**54**	*e*P	**P**	**19 04 10.2**	**+0.9**
	comp=Z,29nm,0.9s						
GNI	**Garni**	**33.00**	**341**	P	**P**	**19 04 13.5**	**+1.9**
	comp=Z,15nm,1.1s,baz=198,slow=0.9,SNR=8.6						
GNI				LR	LR	19 19 03.7	
	comp=Z,4µm,18.8s,baz=143,slow=39						
GNI	**Garni**	**33.00**	**341**	P	**P**	**19 04 13.0**	**+1.4**
GNI				IAmb	IAmb	19 04 48.7	
	comp=Z,80nm,1.6s						
GNI	**Garni**	**33.00**	**341⇓**	*e*P	**P**	**19 04 13.0**	**+1.4**
GNI				pmax	pmax		
	comp=Z,50nm,1.0s						
TAPN	**Taplejung**	**33.18**	**53**	*e*P	**P**	**19 04 14.2**	**+0.7**
	comp=Z,153nm,1.3s						
AKT	**Akhty**	**33.39**	**346**	*e*P	**P**	**19 04 15.5**	**+0.6**
AKT				*e*		19 05 25.9	
AKT				*e*		19 06 55.9	
AKT				pmax	pmax		
	comp=Z,44nm,1.0s						
GAZ	**Gaziantep**	**33.64**	**329**	P	**P**	**19 04 16.9**	**-0.3**
GAZ				IAmb	IAmb	19 04 53.0	
	comp=Z,74nm,1.8s						
GTK	**Tadong**	**33.88**	**54**	*e*P	**P**	**19 04 20.9**	**+1.5**
GTK				*i* x	x	19 13 31.2	
KSH	**Kashi**	**34.07**	**25**	P	**P**	**19 04 17.5**	**-3.4**
KSH				pP	pP	19 04 22.3	-4.2
KSH				sP	sP	19 04 25.3	-3.7

KSH PP PnPn 19 05 30.8 -3.8
KSH PcP PcP 19 06 59.0 +0.7
KSH S S 19 09 36.0 -10
KSH SS SnSn 19 11 42.4 -11
KSH pmax pmax
comp=Z,37nm,0.9s
KSH pmax pmax
comp=Z,470nm,5.8s
KSH LR LR
comp=Z,2µm,11.5s
KSH LR LR
comp=Z,1µm,10.1s
KSH LR LR
comp=Z,4µm,15.8s
TBLG Delisi 34.44 342 P **P 19 04 21.9 -2.0**
TBLG IAmb IAmb 19 04 32.5
comp=Z,42nm,1.7s
TBLG Delisi 34.44 342 P **P 19 04 22.0 -2.0**
TBLG pmax pmax
comp=Z,42nm,1.7s
AKH Akhalkalaki 34.55 340 P **P 19 04 23.9 -1.1**
AKH IAmb IAmb 19 04 34.2
comp=Z,37nm,1.7s
AKH Akhalkalaki 34.55 340 P **P 19 04 23.9 -1.1**
AKH pmax pmax
comp=Z,37nm,1.7s
MAK Makhachkala 34.84 346 eP **P 19 04 22.8 -4.5**
MAK eS **S 19 09 53.1 -4.1**
MAK pmax pmax
comp=Z,333nm,1.4s
MAK MLR MLR
comp=Z,2µm,17.0s
GUDG Gudauri 35.19 342 P **P 19 04 32.9 +2.3**
BCA Borcka 35.23 338 ⇑P **P 19 04 31.5 +0.7**
KK31 Karatay Array 35.40 16 P **P 19 04 31.6 -0.6**
KK31 IAmb IAmb 19 04 41.8
comp=Z,27nm,0.9s
KK31 Karatay Array 35.40 16 iP **P 19 04 33.4 +1.2**
KKAR Karatay Array 35.40 16 P **P 19 04 32.3 +0.1**
KKAR Karatay Array 35.40 16 P **P 19 04 32.0 -0.2**
KKAR IAmb IAmb 19 04 41.8
comp=Z,27nm,0.9s
KKAR Karatay Array 35.40 16 P **P 19 04 32.3 +0.1**
AML Almayashu 35.48 20 P **P 19 04 34.5 +1.1**
SNR=11
GROC Groznyy 35.50 344 eP **P 19 04 30.8 -2.2**
GROC e 19 07 00.5
GROC pmax pmax
comp=Z,46nm,1.0s
ONI Oni 35.62 341 P **P 19 04 36.4 +2.2**
ZEI Tsey 35.66 342 eP **P 19 04 35.1 +0.4**
ZEI pmax pmax
comp=Z,12nm,0.8s
NRN Naryn 35.71 23 P **P 19 04 34.3 -0.9**
NRN Naryn 35.71 23 P **P 19 04 34.3 -0.9**
NRN pmax pmax
comp=Z,10.0nm,1.0s
UCH Uchtor 35.85 21 P **P 19 04 38.2 +1.6**
SNR=8.2
SHL Shillong 35.88 59 P **P 19 04 35.6 -1.2**
SHL IAmb IAmb 19 04 45.0
comp=Z,53nm,1.3s
SHL Shillong 35.88 59 P **P 19 04 35.6 -1.2**
SHL pmax pmax
comp=Z,53nm,1.3s
EKS2 Erkin-Say 35.98 20 P **P 19 04 39.6 +2.3**
SNR=69
KZA Kyzart 35.98 22 P **P 19 04 39.5 +1.8**
SNR=41
AAK Ala-Archa 36.20 21 P **P 19 04 40.9 +1.6**
comp=Z,30nm,0.9s,baz=180,slow=5.4,SNR=38
AAK LR LR 19 19 52.8
comp=Z,3µm,21.8s,baz=186,slow=37
AAK Ala-Archa 36.20 21 P **P 19 04 41.2 +2.0**
SNR=34
AAK Ala-Archa 36.20 21 iP **P 19 04 41.1 +1.8**
SNR=49
AAK Ala-Archa 36.20 21 P **P 19 04 40.1 +0.9**
AAK IAmb IAmb 19 04 44.1
comp=Z,43nm,1.1s
AAK Ala-Archa 36.20 21 P **P 19 04 41.6 +2.4**
AAK Ala-Archa 36.20 21c iP **P 19 04 41.1 +1.8**
AAK pmax pmax
comp=Z,41nm,1.0s
KBK Karagaybulak 36.38 21 P **P 19 04 42.7 +2.0**
SNR=27
NCK Nalchik 36.40 342⇓eP **P 19 04 41.3 +0.6**
NCK pmax pmax
comp=Z,16nm,0.8s
FRU1 Bishkek 36.40 21 P **P 19 04 42.0 +1.2**
FRU1 IAmb IAmb 19 04 45.7
comp=Z,56nm,1.1s
FRU1 Bishkek 36.40 21 P **P 19 04 42.0 +1.2**
FRU1 pmax pmax
comp=Z,56nm,1.1s
NEY Neytrino 36.45 341⇓eP **P 19 04 43.7 +2.3**
ULHL Ulahol 36.50 23 P **P 19 04 43.2 +1.4**
SNR=5.3
CHMS Chumysh 36.61 21 P **P 19 04 44.4 +1.8**
SNR=17
KDJ Kajisay 36.77 24 P **P 19 04 43.0 -1.0**
KDJ IAmb IAmb 19 04 53.6
comp=Z,36nm,0.9s
KDJ Kajisay 36.77 24 P **P 19 04 43.1 -1.0**
KDJ pmax pmax
comp=Z,36nm,1.0s
KBZ Khabaz 36.83 341 P **P 19 04 45.3 +1.0**
comp=Z,9.4nm,0.8s,baz=160,slow=7.9,SNR=24
KBZ PP **PP 19 06 11.3 +3.0**
comp=Z,8.5nm,1.0s,baz=162,slow=9.2,SNR=4.1
KBZ LR LR 19 22 31.6
comp=Z,2µm,19.5s,baz=140,slow=40
KBZ Khabaz 36.83 341d iP **P 19 04 46.0 +1.7**
KBZ pmax pmax
comp=Z,13nm,0.9s
LSA Lhasa 36.94 52 iP **P 19 04 46.5 +0.4**
SNR=20
LSA Lhasa 36.94 52 P **P 19 04 44.6 -1.5**
LSA IAmb IAmb 19 04 54.5
comp=Z,106nm,1.9s
LSA Lhasa 36.94 52 P **P 19 04 47.1 +1.0**
LSA Lhasa 36.94 52 P **P 19 04 44.6 -1.5**
LSA pmax pmax
comp=Z,106nm,1.9s
TEZP TEZPUR 37.02 58 eP **P 19 04 46.6 +0.3**
KVAR Kislovodsk Arr 37.09 341 LR LR 19 22 36.0
comp=Z,2µm,18.8s,baz=70,slow=40
KIV Kislovodsk 37.09 341 ⇓P **P 19 04 47.1 +0.4**
KIV Kislovodsk 37.09 341 iP **P 19 04 47.5 +0.8**
SNR=9.0
KIV Kislovodsk 37.09 341 P **P 19 04 46.9 +0.1**
KIV Kislovodsk 37.09 341 P **P 19 04 47.9 +1.1**
KIV P **P 19 04 47.9 +1.1**
KIV Kislovodsk 37.09 341 eP **P 19 04 47.5 +0.8**
KIV e 19 06 11.6
KIV e 19 07 04.5
KIV eS **S 19 10 35.0 +3.1**
KIV pmax pmax
comp=Z,129nm,3.8s
KIV pmax pmax
comp=Z,69nm,1.1s
KIV MLR MLR
comp=Z,4µm,16.0s
KVT Kavak 37.25 332 P **P 19 04 50.9 +2.8**
BR131 Keskin Array S 37.40 328 P **P 19 04 49.0 -0.5**
BR131 Keskin Array S 37.40 328 P **P 19 04 51.0 +1.4**
SNR=8.3
BR131 Keskin Array S 37.40 328 P **P 19 04 49.0 -0.5**
BR131 pmax pmax
comp=Z,14nm,1.0s
BRTR Keskin Array B 37.40 328 P **P 19 04 50.3 +0.8**
comp=Z,10nm,1.0s,baz=145,slow=8.8,SNR=34
BRTR PcP **PcP 19 07 08.1 -0.1**
comp=Z,6.3nm,1.0s,baz=140,slow=5.6,SNR=5.9
BRTR LR LR 19 21 48.8
comp=Z,1µm,18.2s,baz=94,slow=39
BRTR Keskin Array B 37.40 328 P **P 19 04 49.0 -0.5**
BRTR Keskin Array B 37.40 328 iP **P 19 04 50.5 +1.0**
BRTR pmax pmax
comp=Z,11nm,1.0s
ELL Elmali 37.48 321 P **P 19 04 49.4 -0.7**
ELL Elmali 37.48 321 P **P 19 04 49.4 -0.7**
ELL pmax pmax
comp=Z,86nm,1.1s
PRZ Przheval'sk 37.56 25 P **P 19 04 50.5 -0.3**
PRZ IAmb IAmb 19 05 00.5
comp=Z,31nm,1.1s
PRZ Przheval'sk 37.56 25 P **P 19 04 50.5 -0.3**
PRZ pmax pmax
comp=Z,31nm,1.1s
KNDC Almaty 37.60 23 P **P 19 04 51.9 +0.8**
SOC Sochi 37.79 338 eP **P 19 04 48.5 -4.0**
SOC eS **S 19 10 40.1 -2.1**
SOC eSSS SSS 19 13 43.3
SOC pmax pmax
comp=Z,5.0nm,0.5s
SOC MLR MLR
comp=Z,1µm,17.0s
BR231 Keskin MP Arra 37.94 328 P **P 19 04 55.2 +1.2**
BR231 IAmb IAmb 19 05 08.1
comp=Z,38nm,1.1s
ANTO Ankara 37.95 328 ⇑P **P 19 04 55.5 +1.4**
ANTO Ankara 37.95 328 P **P 19 04 55.2 +1.1**
ANTO IAmb IAmb 19 04 58.3
comp=Z,47nm,1.1s
ANTO Ankara 37.95 328 P **P 19 04 55.2 +1.1**
ANTO pmax pmax
comp=Z,47nm,1.1s
DIKM Dikmen 38.07 332 ⇓P **P 19 04 55.8 +0.9**
MLSI Meulaboh, Aceh 38.27 95 P **P 19 04 57.7 +0.7**
comp=Z,79nm,1.1s
ILGA Ilgaz 38.35 330 P **P 19 04 58.6 +1.0**
ILGA IAmb IAmb 19 05 05.6
comp=Z,39nm,1.1s
LSZ Lusaka 38.43 231 P **P 19 04 58.5 +0.1**
comp=Z,6.9nm,0.8s,baz=56,slow=8.5,SNR=14
LSZ Lusaka 38.43 231 P **P 19 04 58.0 -0.4**
LSZ Lusaka 38.43 231 P **P 19 04 58.0 -0.4**
LSZ pmax pmax
comp=Z,13nm,0.9s
SNSI Sinabang, Aceh 38.54 98 P **P 19 04 59.6 +0.4**
comp=Z,72nm,1.1s
PDGK Podgornoye 38.71 25 iP **P 19 04 59.2 -1.2**
PDGK pmax pmax
comp=Z,31nm,1.0s
BZK Bozkurt 38.90 331 ⇑P **P 19 05 03.0 +1.1**
MDUB Mudurnu 39.24 327 P **P 19 05 04.9 0.0**
ANN Anapa 39.69 337 eP **P 19 05 03.8 -4.6**
ANN e*PP **pP 19 05 09.0 -4.7**
ANN eS **S 19 11 06.8 -4.0**
ANN eSS **SS 19 14 02.7 -3.9**
ANN pmax pmax
comp=Z,10.0nm,1.3s
ANN MLR MLR
comp=N,801nm,16.0s
ANN MLR MLR
comp=Z,702nm,16.0s
ANN MLR MLR
comp=E,766nm,16.0s
AB31 Akbulak array 39.89 2 iP **P 19 05 10.0 -0.1**
ABKAR Akbulak array 39.89 2 P **P 19 05 10.2 +0.1**
ABKAR IAmb IAmb 19 05 19.1
comp=Z,41nm,1.1s
IDI Anoyia 39.91 316 P **P 19 05 12.4 +1.9**
comp=Z,12nm,0.8s,baz=109,slow=10,SNR=7.0
SANT Santorini 40.11 317 P **P 19 05 11.9 -0.2**
SANT IAmb IAmb 19 05 40.5
comp=Z,51nm,1.1s
CM31 Chiang Mai Arr 40.55 72 P **P 19 05 15.9 -0.1**
CM31 IAmb IAmb 19 05 24.5
comp=Z,55nm,1.4s
CM31 Chiang Mai Arr 40.55 72 P **P 19 05 16.5 +0.6**
SNR=21
CMAR Chiang Mai Arr 40.55 72 P **P 19 05 16.4 +0.4**
comp=Z,14nm,1.1s,baz=266,slow=8.7,SNR=51
CMAR PcP **PcP 19 07 17.3 -1.0**
comp=Z,1.9nm,0.9s,baz=258,slow=3.6,SNR=4.0
CMAR LR LR 19 21 38.3
comp=Z,369nm,18.3s,baz=266,slow=36
CMAR Chiang Mai Arr 40.55 72 iP **P 19 05 16.3 +0.4**
CMAR pmax pmax
comp=Z,8.0nm,1.0s
CHTO Chiang Mai 40.59 72 P **P 19 05 16.1 -0.2**
CHTO Chiang Mai 40.59 72 P **P 19 05 16.1 -0.2**
CHTO pmax pmax
comp=Z,31nm,1.2s
ISK Istanbul-Kandi 40.82 326 P **P 19 05 20.7 +2.8**
PSI Prapat 41.01 96 P **P 19 05 21.0 +1.0**
comp=Z,4.3nm,0.4s,baz=253,slow=6.1,SNR=11
PSI LR LR 19 19 07.9
comp=Z,408nm,21.9s,baz=270,slow=32
PSI Prapat 41.01 96 P **P 19 05 21.3 +1.4**
PSI pmax pmax
comp=Z,83nm,1.5s
RPSI Rantau Prapat 41.03 97 P **P 19 05 21.3 +1.3**
RPSI IAmb IAmb 19 05 28.6
comp=Z,83nm,1.5s
RPSI Rantau Prapat 41.03 97 P **P 19 05 21.0 +1.0**
AKTO Aktyubinsk 41.05 360 P **P 19 05 20.0 +0.4**
comp=Z,12nm,0.9s,baz=179,slow=9.3,SNR=23
AKTO LR LR 19 24 22.3
comp=Z,609nm,19.3s,baz=170,slow=39
AKTO Aktyubinsk 41.05 360 iP **P 19 05 19.0 -0.6**
AKTO pmax pmax
comp=Z,27nm,1.2s
SIM Simferopol' 41.18 334 eP **P 19 05 22.4 +1.6**
SIM eS **S 19 11 37.1 +4.0**
SIM eSS **SS 19 14 34.8 -1.6**
SIM pmax pmax
comp=Z,21nm,0.8s
MATP Matopo 41.50 224 P **P 19 05 22.5 -1.3**
comp=Z,11nm,0.9s,baz=50,slow=7.6,SNR=15
SISI Saibi 42.10 102 P **P 19 05 28.9 +0.2**
comp=Z,719nmcomp=Z,47nm,1.6s
PBKT Sadao Pong 42.28 76 P **P 19 05 30.4 +0.3**
KULM Kulim 42.30 92 P **P 19 05 29.4 -1.0**
KULM IAmb IAmb 19 05 36.8
comp=Z,39nm,1.1s
KULM Kulim 42.30 92 P **P 19 05 30.0 -0.4**
ALN Alexandroupoli 42.44 323 P **P 19 05 30.9 -0.2**
ALN Alexandroupoli 42.44 323 P **P 19 05 30.9 -0.2**
ALN pmax pmax
comp=Z,38nm,0.6s
MAKZ Makanchi 42.56 24 P **P 19 05 32.4 +0.3**
MAKZ Makanchi 42.56 24 P **P 19 05 32.4 +0.3**
MAKZ pmax pmax
comp=Z,19nm,1.1s
MK31 Makanchi Array 42.68 24 P **P 19 05 33.0 0.0**
MK31 Makanchi Array 42.68 24 iP **P 19 05 32.9 -0.2**
MKAR Makanchi Array 42.68 24 P **P 19 05 33.0 -0.1**
comp=Z,8.5nm,1.0s,baz=213,slow=8.7,SNR=35
MKAR PcP **PcP 19 07 24.8 0.0**
comp=Z,7.0nm,0.8s,baz=234,slow=2.7,SNR=9.4
MKAR LR LR 19 24 17.8
comp=Z,1µm,20.4s,baz=208,slow=38
MKAR Makanchi Array 42.68 24 P **P 19 05 32.8 -0.2**
MKAR Makanchi Array 42.68 24 iP **P 19 05 33.2 +0.1**
MKAR pmax pmax
comp=Z,9.0nm,1.0s
IPM Ipoh 42.79 93 P **P 19 05 34.0 -0.4**
ITM Ithomi 42.94 316 P **P 19 05 35.4 +0.1**
ITM IAmb IAmb 19 06 01.2
comp=Z,146nm,1.8s
WMQ Urumqi 42.94 32 eP **P 19 05 35.8 +0.5**
WMQ pP pP 19 05 41.3 +0.3
WMQ sP sP 19 05 43.4 -0.1
WMQ pmax pmax
comp=Z,13nm,1.1s
WMQ pmax pmax
comp=Z,100nm,3.8s
WMQ LR LR
comp=Z,700nm,17.7s
WMQ LR LR
comp=Z,600nm,15.9s
WMQ LR LR
comp=Z,2µm,25.5s
WMQ Urumqi 42.94 32 P **P 19 05 34.6 -0.7**
WMQ Urumqi 42.94 32 P **P 19 05 34.6 -0.7**
WMQ pmax pmax
comp=Z,20nm,1.2s
PAIG Paliouri 43.29 321 P **P 19 05 40.4 +2.3**
MFTR Murfatlar 43.31 329 ⇑P **P 19 05 38.6 +0.4**
PDSI Padang 43.32 101 P **P 19 05 39.5 +0.8**
comp=Z,482nmcomp=Z,29nm,1.3s
PPSI Pulau Pagai 43.37 104 P **P 19 05 39.0 -0.1**
comp=Z,159nm,1.1s
TIRR Tirgusor 43.51 329 ⇑P **P 19 05 39.6 -0.1**
TIRR Tirgusor 43.51 329 P **P 19 05 38.6 -1.1**
TIRR Tirgusor 43.51 329 P **P 19 05 38.6 -1.1**
BKNI Bangkinang 43.59 99 P **P 19 05 41.4 +0.6**
comp=Z,2µmcomp=Z,165nm,1.2s
BKNI Bangkinang 43.59 99 P **P 19 05 41.5 +0.6**
ICOR Ion Corvin 43.59 328 ⇑P **P 19 05 40.6 +0.3**
AGG Agios Georgios 43.65 319 P **P 19 05 40.4 -0.6**
AGG IAmb IAmb 19 05 43.0
comp=Z,35nm,1.2s
AGG Agios Georgios 43.65 319 P **P 19 05 40.4 -0.6**
AGG pmax pmax
comp=Z,35nm,1.2s
TOPG Topolog 43.82 329 ⇑P **P 19 05 42.3 +0.1**
ELND Elena 43.83 325 ⇑P **P 19 05 42.9 +0.5**
HARR Harsova 43.91 329 ⇑P **P 19 05 43.5 +0.5**
HARR Harsova 43.91 329 ⇑P **P 19 05 43.5 +0.5**
VRH Novokhopyorsk 43.95 345 eP **P 19 05 40.7 -2.5**
VRH pmax pmax
comp=Z,10.0nm,0.7s
SRS Serrai 44.04 322 P **P 19 05 46.0 +1.9**
LIT Litokhoron 44.14 320 P **P 19 05 44.4 -0.5**
LIT Litokhoron 44.14 320 P **P 19 05 44.4 -0.5**
LIT pmax pmax
comp=Z,13nm,1.0s
CFR Carcaliu 44.15 329 ⇑P **P 19 05 45.0 0.0**
CFR Carcaliu 44.15 329 P **P 19 05 44.9 0.0**
JRMM Jerantut 44.31 94 P **P 19 05 47.0 +0.3**
KURBB Kurchatov Arra 44.54 18 P **P 19 05 48.3 +0.3**
comp=Z,12nm,0.9s,baz=216,slow=8.0,SNR=40
KRJI Kerinci 44.58 103 P **P 19 05 49.4 +0.4**
comp=Z,3µmcomp=Z,188nm,1.6s
KURK Kurchatov 44.65 18 P **P 19 05 48.6 -0.2**
KURK Kurchatov 44.65 18 P **P 19 05 48.6 -0.2**
KURK pmax pmax
comp=Z,18nm,1.0s
VSR Storozhevoye 44.66 343 eP **P 19 05 46.1 -2.8**
VSR pmax pmax
comp=Z,10.0nm,0.8s
GRG Griva 44.68 321 P **P 19 05 51.0 +1.7**
BVAR Borovoye Array 44.75 10 P **P 19 05 49.7 +0.1**
comp=Z,6.0nm,0.7s,baz=184,slow=6.8,SNR=35
BVAR PcP **PcP 19 07 30.6 -1.0**
comp=Z,5.2nm,0.8s,baz=202,slow=3.1,SNR=6.6
BRVK Borovoye 44.76 10 P **P 19 05 49.6 -0.1**
BRVK Borovoye 44.76 10⇓iP **P 19 05 50.1 +0.4**
BRVK pmax pmax
comp=Z,17nm,2.5s
VAY Valandovo 44.79 322 iP **P 19 05 50.9 +0.8**
COPA Copaceanca 44.98 326 ⇑P **P 19 05 52.5 +1.0**
ODBI Odobesti 45.11 329 ⇑P **P 19 05 53.9 +1.4**
KIS Kishinev 45.13 332 eP **P 19 05 52.0 -0.7**
KIS LRM MLR 19 28 56.0
comp=Z,800nm,16.0s
KIS Kishinev 45.13 332 eP **P 19 05 52.0 -0.7**
KIS e 19 07 35.0
KIS e 19 16 40.0
KIS MLR MLR
comp=Z,800nm,16.0s
BISRR Bisoca 45.13 329 ⇑P **P 19 05 53.8 +1.0**
GHRR 45.14 330 ⇓P **P 19 05 53.6 +0.9**
VTS Vitosha 45.15 323 ⇓P **P 19 05 53.8 +0.6**
VTS Vitosha 45.15 323 eP **P 19 05 53.7 +0.6**
VTS Vitosha 45.15 323 P **P 19 05 53.4 +0.3**
VTS Vitosha 45.15 323 P **P 19 05 53.4 +0.3**
VTS pmax pmax
comp=Z,19nm,1.0s
KMI Kunming 45.17 64 P **P 19 05 51.9 -1.8**
KMI IAmb IAmb 19 06 01.4
comp=Z,29nm,1.1s
KMI Kunming 45.17 64 P **P 19 05 51.9 -1.8**
KMI pmax pmax
comp=Z,29nm,1.1s
VRI Vrincioaia 45.34 329 ⇑P **P 19 05 55.1 +0.7**
VRI Vrincioaia 45.34 329 P **P 19 05 55.1 +0.7**
HUMR Humele 45.36 327 ⇑P **P 19 05 54.5 -0.1**
PLOR Plostina 45.37 329 ⇑P **P 19 05 55.7 +1.0**
PLOR Plostina 45.37 329 P **P 19 05 55.7 +1.0**
MLR Muntele Rosu 45.49 328 P **P 19 05 56.8 +1.1**
comp=Z,22nm,0.9s,baz=284,slow=1.8,SNR=24
MLR Muntele Rosu 45.49 328 ⇑P **P 19 05 56.7 +0.9**
MLR Muntele Rosu 45.49 328 P **P 19 05 56.2 +0.5**
MLR IAmb IAmb 19 06 00.0
comp=Z,34nm,1.0s
MLR Muntele Rosu 45.49 328 P **P 19 05 56.3 +0.5**
MLR pmax pmax
comp=Z,34nm,1.0s
SLVN Son La 45.56 69 P **P 19 05 55.4 -1.2**
MTUR Matau 45.77 327 ⇑P **P 19 05 59.1 +1.2**
TESR Tescani 45.83 330 ⇑P **P 19 05 58.5 +0.2**
SKO Skopje 45.85 322 iP **P 19 05 58.5 -0.1**
VOIR 45.92 328 ⇑P **P 19 05 59.5 +0.3**
VOIR 45.92 328 P **P 19 05 59.4 +0.3**
OZUR 45.98 329 ⇑P **P 19 05 59.6 +0.1**
MYKOM Kota Tinggi 46.03 96 P **P 19 06 00.1 -0.2**
MYKOM Kota Tinggi 46.03 96 P **P 19 06 02.0 +1.7**
KSI Kapahiang 46.10 104 P **P 19 06 01.4 +0.5**
comp=Z,65nm,1.8s
ARR Arges 46.10 327 ⇑P **P 19 06 01.5 +1.0**
DOPR Dopca 46.10 328 ⇑P **P 19 06 00.4 0.0**
SORM Soroca 46.18 333 ⇑P **P 19 06 00.0 -0.9**
SORM Soroca 46.18 333 P **P 19 06 00.0 -0.9**
LBTB Lobatse 46.57 222 P **P 19 06 04.2 -0.2**
LBTB Lobatse 46.57 222 P **P 19 06 04.2 -0.2**
PRAR RASCA 46.63 330 ⇑P **P 19 06 04.5 -0.1**
MNAI Manna 46.65 105 P **P 19 06 05.7 +0.5**
comp=Z,155nm,1.2s
TPRI Tanjung Pinang 46.86 97 P **P 19 06 07.1 +0.2**
comp=Z,2µmcomp=Z,57nm,1.0s
ARU Arti 47.05 0 P **P 19 06 07.6 -0.1**
comp=Z,3.1nm,0.9s,baz=162,slow=5.0,SNR=12
ARU PcP **PcP 19 07 38.6 -0.9**
comp=Z,0.3nm,0.3s,baz=203,slow=12,SNR=3.1
ARU LR LR 19 26 29.1
comp=Z,315nm,20.2s,baz=167,slow=37
ARU Arti 47.05 0 P **P 19 06 07.4 -0.2**
ARU IAmb IAmb 19 06 24.7
comp=Z,24nm,1.2s
ARU Arti 47.05 0c iP **P 19 06 07.7 0.0**
ARU S **S 19 13 03.4 +5.1**
ARU pmax pmax
comp=Z,19nm,1.2s
ARU MLR MLR
comp=Z,907nm,17.0s
GZR Gura Zlata 47.12 326 ⇑P **P 19 06 09.1 +0.6**
BURAR Bucovina Array 47.30 330 ⇑P **P 19 06 10.5 +0.5**
BURAR Bucovina Array 47.30 330 P **P 19 06 09.7 -0.3**
BURAR Bucovina Array 47.30 330 P **P 19 06 10.4 +0.5**
BUR08 Bucovina Ar. S 47.33 330 P **P 19 06 09.8 -0.3**
MDVR Moldovita 47.34 325 ⇓P **P 19 06 10.2 0.0**
ARCR ARCALIA 47.38 329 ⇑P **P 19 06 11.0 +0.6**
SVE Sverdlovsk 47.49 2⇓eP **P 19 06 11.0 -0.1**
SVE pmax pmax
comp=Z,22nm,1.3s
CD2 Chengdu 47.51 56⇓iP **P 19 06 10.8 -1.0**
CD2 PP **PP 19 08 03.5 +0.2**
CD2 S **S 19 13 05.8 0.0**
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,680nm,5.3s
CD2 LR LR
comp=Z,1µm,14.0s
CD2 LR LR
comp=Z,1µm,15.1s
CD2 LR LR
comp=Z,2µm,13.8s
AKASG Malin Array Be 47.72 335 P **P 19 06 12.3 -0.6**
comp=Z,7.2nm,0.8s,baz=134,slow=7.0,SNR=31
AKASG PcP **PcP 19 07 41.9 -0.2**
comp=Z,5.8nm,0.7s,baz=126,slow=2.2,SNR=12
AKASG PP **PP 19 08 05.3 +0.5**
comp=Z,3.8nm,1.0s,baz=140,slow=9.7,SNR=4.3
AKASG LR LR 19 29 01.6
comp=Z,572nm,18.9s,baz=135,slow=39
AKASG Malin Array Be 47.72 335 P **P 19 06 11.3 -1.7**
AKBB Malin Array Si 47.72 335 P **P 19 06 12.4 -0.6**
AKBB IAmb IAmb 19 06 14.7
comp=Z,17nm,0.9s
AKBB Malin Array Si 47.72 335 P **P 19 06 12.4 -0.6**
AKBB pmax pmax
comp=Z,17nm,1.0s
KIEV Kiev 47.73 335 P **P 19 06 12.0 -1.0**
GTA Gaotai 47.73 44 eP **P 19 06 13.0 -0.5**
GTA pP pP 19 06 16.8 -2.2
GTA sP sP 19 06 20.0 -1.5
GTA S **S 19 13 08.9 0.0**
GTA sS pS 19 13 16.1 +0.5

GTA pmax pmax
comp=Z,180nm,5.5s
GTA LR LR
comp=Z,870nm,19.9s
GTA LR LR
comp=Z,1µm,19.6s
GTA LR LR
comp=Z,1µm,21.0s
MDSI Maura Dua 47.85 105 P **P** 19 06 15.1 +0.6
comp=Z,42nm,1.3s
LWLI Liwa 47.89 105 P **P** 19 06 15.4 +0.4
BZS Buzias 47.90 326 ⇑P **P** 19 06 14.3 -0.1
BZS Buzias 47.90 326 P **P** 19 06 14.2 -0.3
BZS pmax pmax
comp=Z,23nm,1.3s
SIRR Siria 48.27 326 ⇑P **P** 19 06 18.5 +1.1
KLSI 48.43 105 P **P** 19 06 19.4 +0.3
comp=Z,24nm,1.8s
KASI Kota Agung 48.45 106 P **P** 19 06 19.6 +0.4
comp=Z,59nm,1.1s
ACER Acerenza 48.77 317 P **P** 19 06 21.9 +0.6
OBN Obninsk 48.84 344 P **P** 19 06 23.1 +1.6
comp=Z,1.7nm,0.4s,baz=161,slow=9.8,SNR=6.4
OBN Obninsk 48.84 344 P **P** 19 06 22.1 +0.6
OBN Obninsk 48.84 344 eP **P** 19 06 22.6 +1.1
OBN e 19 07 46.1
OBN e 19 08 13.9
OBN ePPP PPP 19 09 06.4
OBN pmax pmax
comp=Z,40nm,1.3s
OBN MLR MLR
comp=Z,681nm,18.0s
GYA Guiyang 48.91 63⇑iP **P** 19 06 22.4 -0.3
GYA PP **PP** 19 08 19.5 +3.3
GYA S **S** 19 13 27.5 +1.7
GYA SS **SS** 19 16 55.4 -1.4
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,130nm,4.5s
GYA LR LR
comp=Z,760nm,15.1s
GYA LR LR
comp=Z,500nm,17.8s
GYA LR LR
comp=Z,750nm,17.0s
TRPA Tarpa 48.99 329 ⇑P **P** 19 06 23.0 +0.2
TSUM Tsumeb 48.99 235 P **P** 19 06 23.1 -0.3
TSUM IAmb IAmb 19 06 31.5
comp=Z,44nm,1.4s
MOS Moscow 49.11 345 eP **P** 19 06 23.1 -0.5
MOS e 19 06 30.0
MOS pmax pmax
comp=Z,41nm,0.9s
MOS MLR MLR
comp=Z,1µm,20.0s
BOSA Boshof 49.27 219 P **P** 19 06 24.8 -0.6
comp=Z,8.4nm,0.9s,baz=42,slow=7.2,SNR=10
BOSA LR LR 19 24 48.0
comp=Z,3µm,20.8s,slow=33
BOSA Boshof 49.27 219 P **P** 19 06 24.3 -1.1
BOSA Boshof 49.27 219 P **P** 19 06 24.3 -1.1
BOSA pmax pmax
comp=Z,49nm,1.1s
LZH Lanzhou 49.27 50 eP **P** 19 06 26.4 +1.0
LZH sP pP 19 06 32.3 +1.4
LZH S **S** 19 13 31.0 +0.2
LZH sS pS 19 13 38.0 +0.5
LZH SS **SS** 19 16 59.3 -3.1
LZH pmax pmax
comp=Z,26nm,1.3s
LZH pmax pmax
comp=Z,240nm,5.7s
LZH LR LR
comp=Z,1µm,14.7s
LZH LR LR
comp=Z,1µm,14.3s
LZH LR LR
comp=Z,2µm,17.5s
CORL Corleone 49.36 313 P **P** 19 06 26.8 +0.9
SGRT San Giovanni R 49.36 318 P **P** 19 06 25.7 -0.2
LVV L'vov 49.38 331 eP **P** 19 06 25.2 -0.6
LVV e 19 07 48.4
LVV e 19 08 20.8
LVV ePPP PPP 19 09 11.7
LVV eS **S** 19 13 28.1 -3.4
LVV ePS **pS** 19 13 42.7 +4.8
LVV MLR MLR
comp=N,200nm,17.0s
LVV MLR MLR
comp=E,500nm,17.0s
LVV MLR MLR
comp=Z,500nm,17.0s
ZAA0 Zalesovo Array 49.42 20 P **P** 19 06 25.2 -0.8
ZAA0 IAmb IAmb 19 06 27.9
comp=Z,24nm,0.8s
ZALV Zalesovo Beam 49.42 20 P **P** 19 06 25.6 -0.5
comp=Z,28nm,0.9s,baz=221,slow=7.3,SNR=63
ZALV LR LR 19 28 11.2
comp=Z,2µm,21.5s,baz=220,slow=37
ZALV Zalesovo Beam 49.42 20 P **P** 19 06 24.8 -1.2
UZH Uzhgorod 49.44 329 eP **P** 19 06 25.7 -0.5
UZH i 19 07 44.3
KOLS Kolonicke sedl 49.64 330 eP **P** 19 06 28.6 +0.8
KOLS pmax pmax
comp=Z,24nm,1.2s
KOLS Kolonicke sedl 49.64 330 eP **P** 19 06 28.6 +0.8
KWP Kalwaria Pacla 49.89 330 eP **P** 19 06 29.6 -0.1
KWP Kalwaria Pacla 49.89 330 P **P** 19 06 29.9 +0.2
KWP Kalwaria Pacla 49.89 330 eP **P** 19 06 29.6 -0.1
BLY Banja Luka 49.97 322 P **P** 19 06 30.4 0.0
BLY IAmb IAmb 19 06 45.0
comp=Z,64nm,1.6s
CRVS Cervenica-Dubn 50.03 329 eP **P** 19 06 31.3 +0.5
CRVS pmax pmax
comp=Z,56nm,1.5s
CRVS Cervenica-Dubn 50.03 329 eP **P** 19 06 31.3 +0.5
PSZ Piszkesteto 50.24 327 P **P** 19 06 31.9 -0.6
PSZ Piszkesteto 50.24 327 P **P** 19 06 31.9 -0.6
PSZ pmax pmax
comp=Z,12nm,0.9s
INTR Introdacqua 50.70 318 P **P** 19 06 35.4 -0.6
INTR IAmb IAmb 19 06 51.0
comp=Z,57nm,1.3s
QIZ Qiongzhong 50.88 73 P **P** 19 06 36.5 -1.2
QIZ S **S** 19 13 51.3 -2.0
QIZ LR LR
comp=Z,470nm,17.5s
QIZ LR LR
comp=Z,490nm,15.5s
QIZ LR LR
comp=Z,400nm,17.1s
DBJI Dramaga 50.90 106 P **P** 19 06 38.2 +0.3
comp=Z,31nm,1.5s
NIE Niedzica 50.95 329 eP **P** 19 06 37.6 -0.2
NIE Niedzica 50.95 329 eP **P** 19 06 37.6 -0.2
VYHS Vyhne 51.15 327 eP **P** 19 06 39.1 -0.2
VYHS pmax pmax
comp=Z,15nm,1.0s
VYHS Vyhne 51.15 327 eP **P** 19 06 39.0 -0.2
LANS Liptovska Anna 51.21 328 eP **P** 19 06 40.1 +0.3
LANS pmax pmax
comp=Z,9.0nm,1.0s
LANS Liptovska Anna 51.21 328 eP **P** 19 06 40.0 +0.3
CNJI Cibinong 51.48 107 P **P** 19 06 42.6 +0.4
comp=Z,1µmcomp=Z,89nm,1.1s
BOJS Bojanci 51.53 322 iP **P** 19 06 42.2 +0.1
KEST Kesra 51.56 309 P **P** 19 06 44.3 +1.7
comp=Z,7.4nm,0.7s,baz=178,slow=4.9,SNR=8.4
KEST PcP **PcP** 19 07 58.4 +1.9
comp=Z,16nm,1.0s,baz=126,slow=4.1,SNR=3.7
KEST LR LR 19 29 31.2
comp=Z,489nm,18.5s,baz=56,slow=37
KEST Kesra 51.56 309 P **P** 19 06 41.8 -0.8
KEST IAmb IAmb 19 07 09.7
comp=Z,47nm,1.1s
NRCA Norcia 51.59 318 P **P** 19 06 41.5 -1.2
NRCA IAmb IAmb 19 06 57.5
comp=Z,48nm,1.4s
OJC Ojcow 51.71 329 P **P** 19 06 42.4 -1.0
OJC Ojcow 51.71 329 P **P** 19 06 42.4 -1.0
OJC pmax pmax
comp=Z,19nm,1.1s
DOBS Dobrina 51.74 323 iP **P** 19 06 43.8 +0.1
LEM Lembang 51.80 106 P **P** 19 06 45.3 +0.5

comp=Z,18nm,0.7s,baz=111,slow=2.4,SNR=8.0
LEM Lembang 51.80 106 P **P** 19 06 45.6 +0.8
comp=Z,39nm,1.6s
NACGM Naroch 51.89 338 e **P** 19 06 44.0 -0.6
NACGM eLR LR 19 30 26.0
SMOL Smolenice 51.92 327 eP **P** 19 06 44.6 -0.4
SMOL pmax pmax
comp=Z,7.0nm,1.0s
SMOL Smolenice 51.92 327 eP **P** 19 06 44.6 -0.4
MODS Modra-Piesok 51.92 326 eP **P** 19 06 43.7 -1.3
MODS pmax pmax
comp=Z,27nm,1.1s
MODS Modra-Piesok 51.92 326 eP **P** 19 06 43.7 -1.3
SOP Sopron 51.93 325 P **P** 19 06 45.1 0.0
SOP pmax pmax
comp=Z,46nm,1.2s
JAVC Velka Javorina 51.99 327 eP **P** 19 06 45.6 0.0
TAM Tamanrasset 52.10 292 P **P** 19 06 46.4 -0.5
TAM Tamanrasset 52.10 292 P **P** 19 06 46.4 -0.5
TAM pmax pmax
comp=Z,12nm,0.9s
ENH Enshi 52.13 59 P **P** 19 06 45.4 -1.5
ENH IAmb IAmb 19 07 18.9
comp=Z,59nm,1.2s
MURB Monte Urbino 52.17 319 P **P** 19 06 46.3 -0.7
CISI Cisompet, Garu 52.21 107 P **P** 19 06 47.8 +0.1
comp=Z,91nm,1.4s
CISI Cisompet, Garu 52.21 107 P **P** 19 06 46.9 -0.8
LJU Ljubljana 52.24 323 iP **P** 19 06 48.0 +0.5
SOKA Soboth 52.27 323 iP **P** 19 06 47.6 -0.1
comp=Z,13nm,1.0s
ARSA Arzberg 52.29 324 iP **P** 19 06 48.0 +0.2
comp=Z,19nm,0.9s,SNR=5.7
LATE Laterza 52.36 318 P **P** 19 06 48.3 -0.2
KSM Kuching 52.43 95 P **P** 19 06 50.0 +0.7
IIGN Ignalina 52.44 338 eP **P** 19 06 49.3 +0.6
IIGN IAmb IAmb 19 06 56.6
comp=Z,11nm,0.7s
CONA Conrad Observa 52.46 325 iP **P** 19 06 48.9 -0.2
comp=Z,36nm,1.3s,SNR=13
OBKA Obir 52.47 323 iP **P** 19 06 49.9 +0.7
comp=Z,20nm,0.9s,SNR=6.6
TRI Trieste 52.54 322 P **P** 19 06 49.3 -0.3
TRI IAmb IAmb 19 06 51.8
comp=Z,61nm,1.2s
TRI Trieste 52.54 322 P **P** 19 06 49.3 -0.3
TRI pmax pmax
comp=Z,61nm,1.2s
XAN Xi'an 52.58 54 P **P** 19 06 49.6 -0.6
XAN pP pP 19 06 54.8 -1.0
XAN PP **PP** 19 08 50.5 +1.2
XAN S **S** 19 14 22.3 +5.9
XAN pmax pmax
comp=Z,12nm,1.3s
XAN pmax pmax
comp=Z,330nm,4.3s
XAN LR LR
comp=Z,610nm,17.7s
XAN LR LR
comp=Z,1µm,19.6s
XAN LR LR
comp=Z,1µm,20.8s
XAN Xi'an 52.58 54 P **P** 19 06 49.2 -1.0
XAN IAmb IAmb 19 06 57.2
comp=Z,34nm,1.1s
XAN Xi'an 52.58 54 P **P** 19 06 49.2 -1.0
XAN pmax pmax
comp=Z,35nm,1.1s
MORC Moravsky Berou 52.59 328 eP **P** 19 06 49.4 -0.6
MORC Moravsky Berou 52.59 328 P **P** 19 06 49.5 -0.6
MORC IAmb IAmb 19 06 51.9
comp=Z,26nm,1.0s
MORC Moravsky Berou 52.59 328 P **P** 19 06 49.5 -0.6
MORC pmax pmax
comp=Z,26nm,1.0s
ISAL Salakas 52.64 338 eP **P** 19 06 50.3 +0.1
ISAL IAmb IAmb 19 06 51.1
comp=Z,6.3nm,0.8s
SUW Suwalki 52.67 335 eP **P** 19 06 50.3 -0.1
SUW Suwalki 52.67 335 P **P** 19 06 50.0 -0.4
SUW Suwalki 52.67 335 eP **P** 19 06 50.3 -0.1
IZAR Zarasai 52.73 338 eP **P** 19 06 51.4 +0.5
KRUC Moravsky 52.80 327 eP **P** 19 06 50.4 -1.1
VRAC Vranov 52.83 327 eP **P** 19 06 51.2 -0.5
VRAC Vranov 52.83 327 P **P** 19 06 51.3 -0.4
comp=Z,7.2nm,0.7s,baz=111,slow=7.4,SNR=10
CMJI Cimerak 52.87 107 P **P** 19 06 53.0 +0.4
comp=Z,72nm,1.3s
MYKA Terra Mystica 53.07 323 iP **P** 19 06 53.7 0.0
comp=Z,29nm,1.0s,SNR=11
PRGR Permogore 53.09 353 eP **P** 19 06 50.5 -2.8
PRGR pmax pmax
comp=Z,17nm,1.0s
KRLC Kraliky 53.17 328 eP **P** 19 06 53.6 -0.7
KRLC ex x 19 07 04.9
KRLC Kraliky 53.17 328 eP **P** 19 06 53.6 -0.7
KPJI Karang Pucung 53.20 106 P **P** 19 06 55.4 +0.4
comp=Z,37nm,1.6s
KLMR Klimovskoe 53.33 349 eP **P** 19 06 52.9 -2.2
KLMR eS **S** 19 14 24.9 -0.6
KLMR eSS **SS** 19 18 04.6 -0.9
KLMR pmax pmax
comp=Z,28nm,1.1s
KLMR Klimovskoe 53.33 349 eP **P** 19 06 53.0 -2.2
KLMR AMP 19 07 02.7
comp=Z,28nm,1.1s
KLMR eS **S** 19 14 25.0 -0.6
KLMR eS **S** 19 14 25.0 -0.6
KLMR eSS **SS** 19 18 04.7 -0.8
KLMR eSS **SS** 19 18 04.7 -0.8
KLMR LQ LQ 19 26 29.2
KLMR LQ LQ 19 26 29.2
KLMR LR LR 19 30 27.0
MOA Molln 53.33 324 iP **P** 19 06 55.3 -0.1
comp=Z,24nm,0.9s,SNR=7.0
PABE Paberze 53.42 337 eP **P** 19 06 55.6 -0.3
TREC Trest 53.42 326 eP **P** 19 06 55.1 -1.0
TREC ex x 19 07 06.0
TREC Trest 53.42 326 eP **P** 19 06 55.1 -1.0
STAL STALIGIAL 53.45 322 P **P** 19 06 55.7 -0.7
STAL IAmb IAmb 19 06 58.5
comp=Z,40nm,1.1s
KBA Koelnbreinsper 53.47 323 iP **P** 19 06 56.1 -0.6
comp=Z,29nm,1.4s,SNR=5.7
KBA Koelnbreinsper 53.47 323 P **P** 19 06 57.0 +0.3
DPC Dobruska-Polom 53.57 328 eP **P** 19 06 56.5 -0.7
DPC ex x 19 07 03.5
DPC ex x 19 07 08.2
DPC Dobruska-Polom 53.57 328 eP **P** 19 06 56.5 -0.7
DPC e 19 07 03.5
ZCCA Zocca 53.66 319 P **P** 19 06 58.5 +0.6
TEOL Teolo 53.67 321 P **P** 19 06 57.9 -0.1
TEOL IAmb IAmb 19 07 10.5
comp=Z,27nm,1.0s
OSTC Ostas 53.74 328 eP **P** 19 06 57.5 -1.0
OSTC ex x 19 07 09.5
ABTA Abfaltersbach 53.80 322 iP **P** 19 06 58.8 -0.3
comp=Z,19nm,1.0s
UPC Upice 53.82 328 eP **P** 19 06 58.6 -0.4
UPC Upice 53.82 328 eP **P** 19 06 58.6 -0.4
CHVC Chvalec 53.84 328 eP **P** 19 06 58.7 -0.5
CHVC ex x 19 07 05.4
CHVC ex x 19 07 09.7
KSP Ksiaz 53.87 328 eP **P** 19 06 59.1 -0.2
KSP Ksiaz 53.87 328 eP **P** 19 06 59.1 -0.2
CTI Castel Tesino 54.00 321 P **P** 19 07 00.1 -0.4
CTI IAmb IAmb 19 07 05.5
comp=Z,19nm,1.0s
CTI Castel Tesino 54.00 321 P **P** 19 07 00.1 -0.4
CTI pmax pmax
comp=Z,19nm,1.0s
RJOB Jochberg 54.12 324 eP **P** 19 07 00.4 -1.0
comp=Z,18nm,1.0s,baz=120,slow=7.2
GOPC GO Pecny, Ondr 54.14 327 eP **P** 19 07 00.6 -0.8
GOPC ex x 19 07 10.4
GOPC GO Pecny, Ondr 54.14 327 eP **P** 19 07 00.6 -0.8
SBUM Sibu 54.14 94 P **P** 19 07 01.8 -0.1
SBUM Sibu 54.14 94 P **P** 19 07 03.0 +1.1
GEC2 GERESS Array S 54.17 325 P **P** 19 06 59.9 -1.8
GERES GERESS Array B 54.17 325 P **P** 19 07 00.1 -1.6
comp=Z,2.4nm,0.7s,baz=120,slow=8.1,SNR=11
GERES LR LR 19 31 16.0
comp=Z,216nm,20.6s,baz=108,slow=37
GERES GERESS Array B 54.17 325 P **P** 19 06 59.9 -1.8

GERES GERESS Array B 54.17 325 P **P** 19 06 59.9 -1.8
PRU Pruhonice 54.31 327 eP **P** 19 07 02.4 -0.2
PRU ex x 19 07 13.3
PRU Pruhonice 54.31 327 eP **P** 19 07 02.4 -0.2
KLNR Kaliningrad 54.35 334⇓eP **P** 19 07 01.9 -0.8
KLNR pmax pmax
comp=Z,145nm,1.3s
KHC Kasperske Hory 54.39 325 eP **P** 19 07 01.2 -2.0
KHC ex x 19 07 13.5
KHC Kasperske Hory 54.39 325 P **P** 19 07 01.8 -1.4
KHC Kasperske Hory 54.39 325c iP **P** 19 07 01.5 -1.7
KHC pmax pmax
comp=Z,43nm,1.1s
SMRI Semarang 54.55 105 P **P** 19 07 05.1 +0.2
comp=Z,88nm,1.6s
WTTA Wattenberg 54.58 323 iP **P** 19 07 04.0 -0.8
comp=Z,40nm,1.2s,SNR=8.4
PVCC Panska Ves 54.60 327 eP **P** 19 07 04.2 -0.4
PVCC Panska Ves 54.60 327 eP **P** 19 07 04.2 -0.4
VSU Vasula 54.64 340⇑eP **P** 19 07 05.1 +0.3
WATA Walderalm 54.65 323 iP **P** 19 07 04.2 -1.1
comp=Z,38nm,1.3s,SNR=10
SQTA Sankt Quirin 54.81 322 iP **P** 19 07 05.6 -0.9
comp=Z,28nm,0.8s,SNR=9.6
UGM Wanagama 54.87 106 P **P** 19 07 07.7 +0.4
comp=Z,115nm,1.5s
MOTA Moosalm 54.94 323 iP **P** 19 07 06.1 -1.3
comp=Z,38nm,1.0s,SNR=9.7
FETA Feichten 55.01 322 iP **P** 19 07 07.2 -0.7
comp=Z,16nm,0.8s
FUORN Ofenpass-Fuorn 55.11 321 P **P** 19 07 08.0 -0.8
FUORN IAmb IAmb 19 07 20.6
comp=Z,75nm,1.8s
BRG Berggiesshubel 55.12 327 eP **P** 19 07 08.0 -0.4
comp=Z,18nm,1.0s,baz=120,slow=7.2
BRG Berggiesshubel 55.12 327 eP **P** 19 07 07.7 -0.7
BRG pmax pmax
comp=Z,19nm,1.1s
RETA Reutte 55.21 323 iP **P** 19 07 08.1 -1.2
comp=Z,10nm,0.6s
FUR Furstenfeldbru 55.22 323 eP **P** 19 07 08.6 -0.6
comp=Z,76nm,0.9s,baz=120,slow=7.2
WOJI Wonogiri, Jawa 55.23 106 P **P** 19 07 10.2 +0.4
comp=Z,46nm,2.2s
BTO Baotou 55.40 47 eP **P** 19 07 09.3 -1.5
TOA0 Torodi Ar. Sit 55.44 280 P **P** 19 07 10.7 -0.6
TOA0 IAmb IAmb 19 07 24.2
comp=Z,55nm,1.4s
TOA0 Torodi Ar. Sit 55.44 280 P **P** 19 07 12.0 +0.6
SNR=8.8
TORD Torodi Ar. Bea 55.44 280 P **P** 19 07 11.4 +0.1
comp=Z,8.1nm,1.0s,baz=94,slow=5.7,SNR=22
TORD PcP **PcP** 19 08 13.0 +1.5
comp=Z,7.4nm,1.2s,baz=119,slow=5.1,SNR=2.5
TORD LR LR 19 30 00.5
comp=Z,393nm,18.5s,baz=50,slow=35
TORD Torodi Ar. Bea 55.44 280 P **P** 19 07 11.6 +0.3
FBE Freiberg 55.46 327 eP **P** 19 07 10.8 -0.1
comp=Z,31nm,1.2s,baz=120,slow=7.2
ROTZ Rotzenmuhle 55.48 326 eP **P** 19 07 10.2 -0.9
comp=Z,20nm,1.3s,baz=120,slow=7.2
PCJI Pacitan 55.58 107 P **P** 19 07 12.7 +0.4
comp=Z,70nm,1.5s
NKC Novy Kostel 55.59 326 eP **P** 19 07 12.0 +0.1
NKC ex x 19 07 19.5
NKC Novy Kostel 55.59 326 eP **P** 19 07 12.0 +0.1
NKC e 19 07 19.5
DAVA Damuels 55.65 322 iP **P** 19 07 11.7 -0.8
comp=Z,31nm,1.2s,SNR=5.5
WERN Wernitzgruen 55.66 326 eP **P** 19 07 12.4 0.0
comp=Z,50nm,1.2s,baz=120,slow=7.2
TANN Tannenbergstha 55.67 326 eP **P** 19 07 12.2 -0.3
comp=Z,30nm,1.1s,baz=120,slow=7.2
UBR Ueberruh 55.69 323 eP **P** 19 07 12.1 -0.6
comp=Z,98nm,1.9s,baz=120,slow=7.2
GUNZ Gunzen 55.72 326 eP **P** 19 07 12.8 0.0
comp=Z,43nm,1.0s,baz=120,slow=7.2
CLL Collm 55.85 327 eP **P** 19 07 13.5 -0.2
comp=Z,76nm,1.9s,baz=120,slow=7.2
CLL Collm 55.85 327 eP **P** 19 07 13.0 -0.7
comp=Z,16nm,1.0s
CLL e(sP) **pP** 19 07 19.0 -0.2
CLL ePP **PP** 19 09 17.0 -1.4
CLL eS **S** 19 15 01.0 +1.1
CLL e(SS) 19 18 48.0
CLL eSSS SSS 19 21 00.0
CLL Collm 55.85 327 P **P** 19 07 12.6 -1.1
CLL Collm 55.85 327 eP **P** 19 07 13.0 -0.7
CLL e 19 07 19.0
CLL eS **S** 19 15 01.0 +1.1
CLL pmax pmax
comp=Z,16nm,1.0s
SONM Songino Array 55.86 37 P **P** 19 07 13.7 -0.3
comp=Z,5.0nm,0.8s,baz=235,slow=7.5,SNR=28
SONM Songino Array 55.86 37 P **P** 19 07 13.6 -0.4
SONM Songino Array 55.86 37 P **P** 19 07 13.6 -0.4
SONM pmax pmax
comp=Z,7.0nm,1.0s
PLN Plauen 55.88 326 eP **P** 19 07 13.4 -0.5
comp=Z,74nm,2.0s,baz=120,slow=7.2
GRA1 Grafenberg Arr 56.00 325 P **P** 19 07 13.7 -1.1
GRA1 IAmb IAmb 19 07 26.1
comp=Z,54nm,1.3s
GRF Grafenberg Arr 56.00 325 eP **P** 19 07 13.9 -0.9
comp=Z,38nm,1.0s,baz=120,slow=7.2
GRF eL L 19 35 32.5
comp=Z,317nm,19.9s
GRF Grafenberg Arr 56.00 325 P **P** 19 07 13.7 -1.1
GRF pmax pmax
comp=Z,54nm,1.3s
TLY Talaya 56.22 32 P **P** 19 07 16.8 +0.5
comp=Z,0.7nm,0.2s,baz=243,slow=9.2,SNR=6.9
TLY Talaya 56.22 32 P **P** 19 07 15.3 -1.1
TLY Talaya 56.22 32 eP **P** 19 07 15.9 -0.4
TLY eS **S** 19 15 00.3 -4.5
TLY eSS **SS** 19 18 54.2 +2.7
TLY pmax pmax
comp=Z,16nm,1.3s
TLY MLR MLR
comp=Z,1µm,17.0s
MOX Moxa 56.26 326 eL L 19 33 11.2
comp=Z,221nm,21.5s
WHN Wuhan 56.30 59 ⇓P **P** 19 07 18.1 +0.8
TIY Taiyuan 56.32 51 eP **P** 19 07 17.1 -0.3
TIY S **S** 19 15 09.4 +2.7
TIY pmax pmax
comp=Z,63nm,0.9s
TIY pmax pmax
comp=Z,300nm,5.2s
TIY LR LR
comp=Z,600nm,16.8s
TIY LR LR
comp=Z,1µm,16.7s
TIY LR LR
comp=Z,1µm,17.6s
NEUB Neuenburg 56.46 327 eP **P** 19 07 18.0 0.0
comp=Z,35nm,0.7s,baz=120,slow=7.2
HHC Hu-ho-hao-te 56.59 47 eP **P** 19 07 19.4 +0.1
HHC sP pwP 19 07 30.9 +1.4
HHC S **S** 19 15 05.1 -5.2
HHC SS **SS** 19 19 03.4 +5.5
HHC pmax pmax
comp=Z,12nm,1.0s
HHC pmax pmax
comp=Z,120nm,5.0s
HHC LR LR
comp=Z,320nm,14.5s
HHC LR LR
comp=Z,1µm,18.4s
HHC LR LR
comp=Z,2µm,18.4s
TMCR Tamitsa 56.65 350 eP **P** 19 07 18.1 -1.0
BNI Bardonecchia 56.74 318 P **P** 19 07 19.7 -0.6
BNI IAmb IAmb 19 07 35.5
comp=Z,21nm,1.1s
BNI Bardonecchia 56.74 318 P **P** 19 07 19.7 -0.6
BNI pmax pmax
comp=Z,21nm,1.1s
IRK Irkutsk 56.84 32 eP **P** 19 07 21.5 +0.7
IRK e 19 08 20.8
IRK pmax pmax
comp=Z,38nm,3.5s
SENIN Lac Senin/Sane 56.85 320 P **P** 19 07 20.9 -0.4
SENIN IAmb IAmb 19 07 32.1
comp=Z,27nm,0.9s

BFO Black Forest 57.05 323 eP P 19 07 22.2 -0.2
comp=Z,38nm,1.2s,baz=120,slow=7.2
BFO Black Forest 57.05 323 P P 19 07 21.2 -1.1
BFO IAmb IAmb 19 07 25.2
comp=Z,25nm,1.0s
BFO Black Forest 57.05 323 P P 19 07 21.2 -1.1
BFO pmax pmax
comp=Z,25nm,1.0s
FIA1 FINESS Array S 57.18 342 P P 19 07 23.1 +0.2
FIA1 IAmb IAmb 19 07 35.0
comp=Z,41nm,1.3s
FINES FINESS Array B 57.18 342 P P 19 07 21.9 -1.0
comp=Z,10.0nm,0.8s,baz=134,slow=8.0,SNR=16
FINES PcP PcP 19 08 17.1 -0.3
comp=Z,8.2nm,0.9s,baz=141,slow=5.1,SNR=7.0
FINES LR LR 19 34 04.7
comp=Z,1μm,21.8s,baz=136,slow=38
FINES FINESS Array B 57.18 342 P P 19 07 22.8 -0.1
FINES FINESS Array B 57.18 342 iP P 19 07 23.0 +0.1
FINES pmax pmax
comp=Z,10.0nm,0.8s
RGN Rugen 57.47 331 P P 19 07 25.1 0.0
ASSE Asse, Remlinge 57.52 327 eP P 19 07 25.4 0.0
comp=Z,32nm,1.2s,baz=120,slow=7.2
CLZ Clausthal 57.53 327 eP P 19 07 25.8 +0.1
comp=Z,31nm,1.0s,baz=120,slow=7.2
GTTG Gottingen 57.61 327 eP P 19 07 26.4 +0.2
comp=Z,47nm,1.1s,baz=120,slow=7.2
ECH Echery 57.71 322 P P 19 07 26.1 -0.9
ECH IAmb IAmb 19 07 29.3
comp=Z,27nm,1.1s
ECH Echery 57.71 322 P P 19 07 26.1 -0.9
ECH pmax pmax
comp=Z,27nm,1.1s
NRDL Niedersach Rie 58.00 328 eP P 19 07 29.2 +0.4
comp=Z,36nm,1.2s,baz=120,slow=7.2
RETH Rethem/Aller, 58.52 328 eP P 19 07 32.6 +0.1
comp=Z,37nm,1.2s,baz=120,slow=7.2
AHRW Bad Neuenahr-A 58.76 324 eP P 19 07 34.6 +0.4
comp=Z,31nm,1.1s,baz=120,slow=7.2
WLF Walferdange 58.92 323 eP P 19 07 35.7 +0.3
comp=Z,55nm,1.1s,baz=120,slow=7.2
WLF Walferdange 58.92 323 P P 19 07 35.1 -0.2
comp=Z,43nm,1.3s
WLF Walferdange 58.92 323 P P 19 07 35.0 -0.4
WLF Walferdange 58.92 323 P P 19 07 35.0 -0.4
WLF pmax pmax
comp=Z,58nm,1.1s
BUG Bochum--Univer 59.05 326 eP P 19 07 36.3 +0.2
comp=Z,28nm,1.0s,baz=120,slow=7.2
SRBI Singaraja 59.38 105 P P 19 07 39.9 +0.8
comp=Z,39nm,1.5s
MEM Membach 59.40 324 P P 19 07 38.1 -0.5
BKB Balikpapan 59.42 97 P P 19 07 39.5 +0.1
comp=Z,162nm,1.4s
IGBI Denpasar 59.51 106 P P 19 07 40.3 +0.3
comp=Z,65nm,1.2s
DNP Denpasar 59.54 106 P P 19 07 41.5 +1.3
comp=Z,175nm,1.0s
BJT Baijiatuau 59.73 49 P P 19 07 40.6 -0.5
BJT IAmb IAmb 19 07 48.9
comp=Z,24nm,1.0s
BJT Baijiatuau 59.73 49 P P 19 07 40.6 -0.5
BJT pmax pmax
comp=Z,24nm,1.0s
BJI Beijing 59.74 49 P P 19 07 41.0 -0.2
BJI S S 19 15 55.4 +4.2
BJI pmax pmax
comp=Z,19nm,0.9s
BJI LR LR
comp=Z,680nm,19.0s
BJI LR LR
comp=Z,510nm,27.5s
BJI LR LR
comp=Z,880nm,22.1s
DOU Dourbes 60.01 323 ⇓P P 19 07 43.2 +0.3
NJ2 Nanjing 60.34 58 eP P 19 07 45.8 +0.3
NJ2 pmax pmax
comp=Z,29nm,0.5s
NJ2 LR LR
comp=Z,920nm,15.6s
NJ2 LR LR
comp=Z,450nm,14.6s
NJ2 LR LR
comp=Z,600nm,13.2s
UCC Uccle 60.43 324 P P 19 07 45.4 -0.3
UCC Uccle 60.43 324 P P 19 07 45.4 -0.3
UCC pmax pmax
comp=Z,47nm,0.9s
APA Apatity 60.55 349⇑iP P 19 07 45.9 -0.4
APA pmax pmax
comp=Z,6.0nm,1.0s
HFS Hagfors 60.60 336 P P 19 07 46.3 -0.4
comp=Z,11nm,0.7s,baz=126,slow=7.5,SNR=18
LVZ Lovozero 60.62 350⇓eP P 19 07 46.8 0.0
CLF Chambon-Foret 60.66 320 P P 19 07 46.6 -0.7
NC602 NORSAR Array S 61.81 336 P P 19 07 54.0 -1.0
NORES NORESS Array B 61.81 336 P P 19 07 54.2 -0.8
NORES pmax pmax
comp=Z,10.0nm,0.6s
PLAI Plampang 62.02 105 P P 19 07 58.1 +1.0
comp=Z,66nm,1.4s
MPSI Mapaga 62.06 95 P P 19 07 58.4 +0.9
comp=Z,439nmcomp=Z,14nm,1.5s
NB2 NORSAR Subarra 62.12 336 P P 19 07 55.8 -1.3
comp=Z,1.8nm,0.6s,baz=116,slow=7.4
NOA NORSAR Array B 62.12 336 P P 19 07 56.1 -1.0
comp=Z,3.3nm,0.8s,baz=118,slow=7.4,SNR=12
MDT Midelt 62.19 302 P P 19 07 59.5 +1.3
comp=Z,5.3nm,0.9s,baz=95,slow=10,SNR=9.5
NBO00 NORSAR Array S 62.29 336 P P 19 07 57.2 -0.9
KIC Kosan Boka 62.33 272 eP P 19 07 58.9 -0.4
comp=Z,107nm,1.6s
DBIC Dimbokro 62.40 273 P P 19 08 00.7 +0.9
comp=Z,7.3nm,0.8s,baz=52,slow=7.2,SNR=10.0
DBIC LR LR 19 36 04.5
comp=Z,493nm,18.9s,baz=65,slow=37
DBIC Dimbokro 62.40 273 P P 19 07 59.4 -0.3
DBIC Dimbokro 62.40 273 P P 19 07 59.4 -0.3
DBIC pmax pmax
comp=Z,29nm,1.0s
TIC Toumodi 62.57 273 eP P 19 08 01.1 +0.2
comp=Z,79nm,1.1s
LIC Lamto 62.63 272 eP P 19 08 01.3 0.0
comp=Z,99nm,1.1s
ESBB Sonseca Array 62.75 310 P P 19 08 00.8 -1.0
ESBB IAmb IAmb 19 08 14.4
comp=Z,23nm,1.1s
ESDC Sonseca Array 62.76 310 P P 19 08 02.1 +0.3
comp=Z,7.2nm,0.8s,baz=88,slow=5.6,SNR=28
ESDC LR LR 19 36 55.8
comp=Z,112nm,18.1s,baz=70,slow=38
ESDC Sonseca Array 62.76 310 P P 19 08 01.6 -0.2
SPSI Sidrap Palu 62.78 99 P P 19 08 02.9 +0.7
comp=Z,11nm,1.6s
KAPI Kappang 62.99 100 P P 19 08 03.0 -0.7
comp=Z,11nm,0.8s,baz=277,slow=6.3,SNR=7.6
KAPI Kappang 62.99 100 P P 19 08 02.5 -1.2
KAPI IAmb IAmb 19 08 24.9
comp=Z,34nm,1.1s
KAPI Kappang 62.99 100 P P 19 08 02.5 -1.2
KAPI pmax pmax
comp=Z,34nm,1.2s
PAB San Pablo 63.02 310 P P 19 08 03.4 -0.2
PAB San Pablo 63.02 310 P P 19 08 03.4 -0.2
PAB pmax pmax
comp=Z,39nm,1.2s
BNSI Bone 63.20 100 P P 19 08 05.4 +0.3
comp=Z,1μmcomp=Z,84nm,1.0s
BKSI Bulukumba 63.42 101 P P 19 08 07.2 +0.7
comp=Z,596nmcomp=Z,22nm,1.4s
DL2 Dalian 63.63 51 P P 19 08 06.8 -0.7
DL2 S S 19 16 43.8 +3.2
DL2 pmax pmax
comp=Z,22nm,0.9s
DL2 LR LR
comp=Z,550nm,15.7s
DL2 LR LR
comp=Z,900nm,21.0s
DL2 LR LR
comp=Z,1μm,18.6s
ARCES ARCESS Array B 63.77 348 P P 19 08 07.5 -0.3
comp=Z,8.3nm,0.8s,baz=134,slow=5.2,SNR=14
ARCES LR LR 19 39 20.2
comp=Z,887nm,19.2s,baz=152,slow=39
APSI Ampana 64.01 96 P P 19 08 11.2 +0.8
comp=Z,535nmcomp=Z,18nm,1.4s
MRSI Marisa 64.05 94 P P 19 08 10.7 0.0
comp=Z,34nm,0.9s
BOD Bodaibo 64.42 29 eP P 19 08 11.9 -0.4
BOD pmax pmax
comp=Z,9.0nm,1.9s
HIA Hailar 64.62 40 P P 19 08 13.6 -0.2
HIA IAmb IAmb 19 08 16.4
comp=Z,15nm,1.0s
HIA Hailar 64.62 40 P P 19 08 13.6 -0.2
HIA pmax pmax
comp=Z,15nm,1.0s
WSI Waingapu 64.64 105 P P 19 08 15.3 +0.8
comp=Z,104nm,0.9s
PBDV Barranco-do-Ve 65.45 307 eP P 19 08 24.9 +5.4
comp=Z,83nm,1.9s
EVO Evora 65.68 308 eP P 19 08 22.2 +1.3
comp=Z,44nm,1.5s
PVIS Viseu 65.90 310 eP P 19 08 23.9 +1.6
EKA Eskdalemuir Ar 66.31 327 P P 19 08 23.8 -0.8
comp=Z,4.6nm,0.6s,baz=112,slow=6.8,SNR=21
KSAR Wonju Array Be 68.34 53 P P 19 08 36.0 -1.8
KSAR Wonju Array Be 68.34 53 P P 19 08 36.0 -1.8
KSRS Korea Array 68.37 53 P P 19 08 36.4 -1.5
comp=Z,10nm,0.8s,baz=262,slow=6.7,SNR=24
KSRS LR LR 19 40 34.6
comp=Z,700nm,18.7s,baz=275,slow=38
SOEI Soe 68.45 104 P P 19 08 39.0 0.0
comp=Z,67nm,1.4s
SANI Sanana 68.48 96 P P 19 08 39.5 +0.4
comp=Z,618nmcomp=Z,24nm,0.8s
H01W3 Cape Leeuwin H 68.71 133 T T 20 23 16.5
baz=300,slow=75,SNR=3.8
H01W2 Cape Leeuwin H 68.71 133 T T 20 23 17.9
baz=300,slow=75,SNR=4.4
H01W1 Cape Leeuwin H 68.72 133 T T 20 23 19.3
baz=300,slow=75,SNR=4.9
TNTI Ternate 69.35 93 P P 19 08 44.1 -0.4
comp=Z,776nmcomp=Z,56nm,1.4s
LBMI Labuha 69.72 94 P P 19 08 47.3 +0.5
comp=Z,2μmcomp=Z,62nm,0.9s
ZEA Zeya 70.25 36 eP P 19 08 49.2 -0.1
ZEA eS S 19 18 06.0 +6.0
ZEA pmax pmax
comp=Z,21nm,1.2s
ZEA pmax pmax
comp=Z,200nm,7.0s
ZEA smax smax
comp=E,500nm,11.0s
ZEA MLR MLR
comp=N,400nm,15.0s
MDJ Mudanjiang 70.34 46 P P 19 08 49.3 -0.7
MDJ pP pP 19 08 52.3 -3.5
MDJ sP sP 19 08 53.8 -4.6
MDJ S S 19 18 05.1 +3.7
MDJ sS pS 19 18 10.3 +1.4
MDJ pmax pmax
comp=N,11nm,0.9s
MDJ pmax pmax
comp=N,100nm,3.6s
MDJ LR LR
comp=N,610nm,14.6s
MDJ LR LR
comp=N,890nm,23.9s
MDJ LR LR
comp=N,2μm,27.8s
MDJ Mudanjiang 70.34 46 P P 19 08 50.2 +0.2
MDJ IAmb IAmb 19 08 57.1
comp=Z,30nm,1.3s
JNU Nakatsue 70.54 58 P P 19 08 51.1 -0.4
comp=Z,28nm,1.0s,baz=190,slow=2.6,SNR=5.4
JNU Nakatsue 70.54 58 P P 19 08 51.8 +0.3
MSHR Mys Shultsa 71.27 48⇑eP P 19 08 56.4 +0.6
FITZ Fitzroy Crossi 71.92 112 LR LR 19 38 44.8
comp=Z,174nm,18.3s,baz=303,slow=34
FITZ Fitzroy Crossi 71.92 112 P P 19 08 59.7 -0.4
FITZ IAmb IAmb 19 09 15.2
comp=Z,42nm,1.8s
USRK Ussuriysk Ar. 72.01 47 P P 19 08 58.8 -1.4
comp=Z,1.5nm,0.8s,baz=235,slow=5.1,SNR=4.1
USRK LR LR 19 42 42.6
comp=Z,774nm,18.5s,baz=259,slow=38
KLR Kul'dur 72.32 41⇓eP P 19 09 00.9 -1.1
KLR pmax pmax
comp=Z,16nm,1.4s
YAK Yakutsk 73.23 28 P P 19 09 06.2 -0.8
YAK IAmb IAmb 19 09 09.2
comp=Z,29nm,1.0s
YAK Yakutsk 73.23 28 eP P 19 09 04.2 -2.8
YAK e*PP PcP 19 09 30.8 +7.3
YAK e 19 11 55.5
YAK ePPP PPP 19 13 34.6
YAK eS S 19 18 33.3 -0.7
YAK e*SS SKSac 19 19 01.1 -11
YAK pmax pmax
comp=Z,34nm,1.1s
YAK pmax pmax
comp=N,3.0nm,1.1s
YAK pmax pmax
comp=E,11nm,1.3s
YAK pmax pmax
comp=Z,173nm,4.9s
YAK pmax pmax
comp=N,125nm,4.9s
YAK pmax pmax
comp=E,104nm,4.3s
YAK smax smax
comp=N,209nm,5.7s
YAK smax smax
comp=E,125nm,5.3s
YAK MLR MLR
comp=Z,978nm,21.0s
YAK MLR MLR
comp=N,113nm,19.0s
YAK MLR MLR
comp=E,476nm,19.0s
SAUI Saumlaki 74.83 101 P P 19 09 17.9 +0.5
comp=E,5μmcomp=E,206nm,1.4s
TIXI Tiksi 75.23 18 P P 19 09 16.6 -2.0
TIXI Tiksi 75.23 18⇓iP P 19 09 17.4 -1.1
TIXI pmax pmax
comp=Z,9.0nm,0.8s
GRNR Gornyy 75.46 40⇓iP P 19 09 19.6 -0.7
GRNR i 19 09 21.9
GRNR eS S 19 19 03.7 +4.2
GRNR pmax pmax
comp=Z,3.0nm,0.9s
GRNR smax smax
comp=E,2.0nm,1.4s
MJB9 Matsu-Tunnel 76.56 55 P P 19 09 25.7 -1.2
MJB9 IAmb IAmb 19 09 32.8
comp=Z,26nm,1.2s
MAJO Matsushiro 76.57 55 P P 19 09 25.9 -1.1
MAJO IAmb IAmb 19 09 32.8
comp=Z,25nm,1.2s
MAJO Matsushiro 76.57 55⇑eP P 19 09 28.5 +1.5
MAJO pmax pmax
comp=Z,30nm,1.3s
MAT Matsushiro 76.57 55 P P 19 09 26.2 -0.8
MJAR Matsushiro Arr 76.57 55 P P 19 09 26.8 -0.2
comp=Z,2.4nm,0.9s,baz=281,slow=6.8,SNR=6.8
MJAR LR LR 19 44 04.2
comp=Z,671nm,21.9s,baz=285,slow=36
MJAR Matsushiro Arr 76.57 55 P P 19 09 24.7 -2.3
MJAR Matsushiro Arr 76.57 55 P P 19 09 24.7 -2.3
MJAR pmax pmax
comp=Z,12nm,1.4s
MAW Mawson 76.74 178 P P 19 09 27.4 +0.3
comp=Z,10.0nm,1.1s,baz=305,slow=11,SNR=5.0
MAW LR LR 19 37 35.9
comp=Z,1μm,18.0s,baz=37,slow=31
MAW Mawson 76.74 178 IAmb IAmb 19 09 31.3
comp=Z,14nm,1.8s
MAW Mawson 76.74 178 P P 19 09 27.4 +0.3
MAW pmax pmax
comp=Z,14nm,1.8s
KDU Kakadu 76.95 105 P P 19 09 29.3 -0.1
baz=77,SNR=6.1
NOR Nord 78.69 352 iP P 19 09 36.9 -1.0
comp=Z,4.9nm,1.1s
NOR Nord 78.69 352 iP P 19 09 36.9 -1.0
NOR pmax pmax
comp=Z,5.0nm,1.1s
SYO Syowa Base 79.16 187⇑iP P 19 09 40.8 +0.3
SYO Syowa Base 79.16 187⇓iP pP 19 09 44.6 -1.8
TYV Tymovskoe 79.41 40 eP P 19 09 43.9 +1.5
TYV pmax pmax
comp=Z,15nm,1.1s
TYV pmax pmax
comp=Z,200nm,4.1s
YSS Yuzh-Sakhalins 79.61 44 P P 19 09 41.9 -1.7
YSS IAmb IAmb 19 09 45.1
comp=Z,34nm,1.2s
YSS Yuzh-Sakhalins 79.61 44 eP P 19 09 43.3 -0.3
YSS e 19 12 38.3
YSS e 19 20 22.5
YSS pmax pmax
comp=Z,10.0nm,0.9s
YSS MLR MLR
comp=N,400nm,16.0s
YSS MLR MLR
comp=Z,400nm,16.0s
YSS MLR MLR
comp=E,500nm,14.0s
WRA Warramunga Arr 80.34 112 P P 19 09 46.2 -1.9
comp=E,3.7nm,0.8s,baz=293,slow=4.5,SNR=20
WRA PKKPbc PKKPbc 19 28 30.4 -0.3
comp=E,0.5nm,0.8s,baz=120,slow=1.5,SNR=3.9
WRA LR LR 19 43 06.0
comp=E,121nm,18.9s,baz=240,slow=34
WRA Warramunga Arr 80.34 112 P P 19 09 45.2 -2.9
WRA Warramunga Arr 80.34 112 P P 19 09 45.2 -2.9
WRA pmax pmax
comp=Z,2.0nm,1.4s
WRAB Tennant Creek 80.35 112 P P 19 09 45.7 -2.4
WRAB IAmb IAmb 19 09 59.0
comp=Z,86nm,2.0s
WRAB Tennant Creek 80.35 112⇓eP P 19 09 46.2 -1.9
WRAB pmax pmax
comp=Z,19nm,1.2s
WB0 Warramunga Arr 80.35 112 P P 19 09 45.9 -2.2
WB2 Warramunga Arr 80.35 112 P P 19 09 44.8 -3.3
WR0 Warramunga Arr 80.53 112 P P 19 09 46.3 -2.7
WR0 IAmb IAmb 19 09 58.8
comp=Z,73nm,1.9s
ASAR Alice Springs 80.84 116 P P 19 09 48.9 -1.9
comp=Z,4.0nm,0.8s,baz=289,slow=5.3,SNR=35
ASAR LR LR 19 43 47.0
comp=Z,155nm,18.1s,baz=290,slow=34
ASAR Alice Springs 80.84 116 P P 19 09 48.0 -2.7
ASAR Alice Springs 80.84 116 P P 19 09 48.0 -2.7
AS31 Alice Springs 80.84 116 P P 19 09 48.4 -2.4
SUMG Summit 83.21 342 iP P 19 10 04.0 +1.3
comp=Z,35nm,1.0s
SUMG Summit 83.21 342 P P 19 10 01.4 -1.3
SUMG Summit 83.21 342 iP P 19 10 04.0 +1.3
SUMG pmax pmax
comp=Z,35nm,1.0s
MA2 Magadan 83.41 31⇓eP P 19 10 04.0 +0.6
MA2 pmax pmax
comp=Z,36nm,2.4s
SEY Seymchan 83.74 27⇑eP P 19 10 04.8 -0.3
NVL N'lazarevskaya 85.70 194 eP P 19 10 16.2 +1.6
NVL pmax pmax
comp=Z,18nm,0.8s
KULLO Kullorsuaq 87.66 346 iP P 19 10 23.7 -0.6
comp=Z,13nm,0.9s
KULLO Kullorsuaq 87.66 346 iP P 19 10 23.7 -0.6
KULLO pmax pmax
comp=Z,13nm,0.9s
BILL Bilibino 88.12 21 P P 19 10 26.1 -0.5
BILL IAmb IAmb 19 10 42.6
comp=Z,16nm,1.4s
BILL Bilibino 88.12 21 eP P 19 10 26.7 +0.1
BILL e 19 13 54.1
BILL ePPP PPP 19 15 48.2
BILL pmax pmax
comp=Z,8.0nm,0.9s
BILL MLR MLR
comp=Z,713nm,19.0s
PETK Petropavlovsk- 88.34 36 LR LR 19 52 48.5
comp=Z,643nm,19.9s,baz=243,slow=38
TULEG Thule 89.07 349 P P 19 10 30.1 -0.8
STKA Stephens Creek 89.31 122 P P 19 10 32.4 -0.5
baz=89,SNR=3.7
STKA Stephens Creek 89.31 122 P P 19 10 32.2 -0.7
comp=Z,5.3nm,1.1s,baz=0.1,slow=5.3,SNR=3.7
STKA LR LR 19 47 38.7
comp=Z,298nm,18.1s,baz=234,slow=34
STKA Stephens Creek 89.31 122 P P 19 10 31.7 -1.2
STKA Stephens Creek 89.31 122 P P 19 10 31.7 -1.2
STKA pmax pmax
comp=Z,7.0nm,1.6s
PMG Port Moresby 90.50 99 LR LR 19 51 16.1
comp=Z,43nm,18.9s,baz=262,slow=36
ILAR Eielson Array 103.82 11 PP PP 19 15 54.6 +0.2
comp=Z,0.7nm,0.9s,baz=334,slow=6.0,SNR=5.0
YKA Yellowknife Ar 108.25 356 PKiKP PKiKP 19 16 03.0 -1.1
comp=Z,0.6nm,0.8s,baz=359,slow=1.9,SNR=7.0
YKA PP PP 19 16 30.1 +3.2
comp=Z,0.2nm,0.5s,baz=8.2,slow=7.4,SNR=4.5
YKA PKKPbc PKKPbc 19 27 14.8 -2.9
comp=Z,0.6nm,0.8s,baz=185,slow=3.2,SNR=8.0
DZM Mont Dzumac 110.30 110 eLR LR 19 48 47.2
comp=Z,402nm,21.6s
MSO Missoula 123.72 353 PKPdf 19 16 34.2 -0.2
RSSD Black Hills 124.47 345 PKPdf 19 16 35.2 -0.8
RSSD Black Hills 124.47 345 PKIKP PKPdf 19 16 35.2 -0.8
PLCA Paso Flores 124.97 226 PKP PKiKP 19 16 38.0 +0.8
comp=Z,2.4nm,0.7s,baz=116,slow=4.6,SNR=6.1
PLCA Paso Flores 124.97 226 PKIKP PKiKP 19 16 38.0 +0.8
DLMT Dillon 125.00 352 PKPdf 19 16 33.9 -3.0
BMO Blue Mountains 125.98 356 PKPdf 19 16 38.5 -0.2
BMO Blue Mountains 125.98 356 PKIKP PKPdf 19 16 38.5 -0.2
MGMO Mountain Grove 126.15 331 PKPdf 19 16 38.9 -0.2
FXWY Fox Creek 126.44 350 PKiKP 19 16 41.6 +1.3
PD31 Pinedale Array 127.02 349 PKPdf 19 16 40.0 -1.0
PDAR Pinedale Array 127.02 349 PKP PKPdf 19 16 40.5 -0.5
comp=Z,5.1nm,0.8s,baz=68,slow=2.7,SNR=33
PDAR Pinedale Array 127.02 349 PKPdf 19 16 39.5 -1.5
U40A Yellville 127.07 331 PKiKP 19 16 41.4 -0.1
MFID Camas Ranch 127.29 355 PKiKP 19 16 41.7 -0.2
J08A Circle Bar Ran 127.55 357 PKPdf 19 16 41.2 -0.6
GO01 Chusmiza 128.17 252 PKPdf 19 16 43.0 -1.1
HWUT Hardware Ranch 128.51 350 PKPdf 19 16 43.0 -0.8
PB11 IPOC Station P 128.60 252 PKPdf 19 16 43.1 -1.4
TCUT Toone Canyon 128.96 350 PKPdf 19 16 43.9 -0.9
ELK Elko 129.87 353 PKPdf PKiKP 19 16 48.1 +0.8
ELK Elko 129.87 353 PKIKP PKiKP 19 16 48.1 +0.8
AFDM Forest Hills D 132.03 359 PKPdf 19 16 50.4 0.0
NV11 Mina Array Sit 132.43 356 PKPdf 19 16 51.7 +0.4
NVAR Mina Array Bea 132.44 356 PKP PKiKP 19 16 52.7 +0.2
comp=Z,5.5nm,0.7s,baz=7.4,slow=1.1,SNR=22
NVAR Mina Array Bea 132.44 356 PKPdf 19 16 51.9 +0.5
LCMT Little Creek M 133.27 351 PKPdf 19 16 53.1 +0.2
JCT Junction City 135.18 333 PKPdf 19 16 57.3 +0.8
JCT Junction City 135.18 333 PKIKP PKPdf 19 16 57.3 +0.8
X16A Lo Mia Camp, P 135.46 348 PKPdf 19 16 56.2 -0.9
MNTX Cornudas Mount 136.34 340 PKPdf 19 16 58.4 -0.2
TUC Tucson 137.34 346 PKPdf 19 17 01.0 +0.5
TUC Tucson 137.34 346 PKIKP PKPdf 19 17 01.0 +0.5
TXAR Lajitas Array 137.82 336 PKP PKPdf 19 17 01.6 +0.1
comp=Z,1.7nm,0.8s,baz=46,slow=2.6,SNR=8.8
TLIG Tlapa 144.80 319 PKPdf 19 17 13.9 -0.4
TBI Tubuai 150.09 121 eLR LR 20 07 12.7
comp=Z,269nm,25.8s
PPT2 Papeete2 151.80 110 eLR LR 20 08 07.4
comp=Z,282nm,24.2s

IDC 13 19:01:43.4±4.6, 3°.95N×97°.80E, h141km±16km, mb3.1/2, mb1 3.3/3, mb1mx2.8/59, mbtmp3.4/3, Error ellipse: s-maj=112.2km s-min=28.9km az=66.0

DJA 13 19:01:44.3±1.3, 4°N±3°×9°8E±°, h17km±11km, M3.6/7, mb3.9/2, MLv3.5/7

ISC 13 19:01:41.9±1.0, 3°97N±0°06×97°49E±0°09, h150km, n9, σ1°74/11, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	1.12	285	P	Pn	19 02 06.9	-0.9
MLSI				S	Sn	19 02 24.1	-3.3
LHMI	Lhok Sumawe	1.36	337	P	Pn	19 02 09.9	-0.2
LHMI				S	Sn	19 02 29.8	-1.8
PSI	Prapat	1.85	129	P	Pn	19 02 14.4	-1.0
	6.8nm,0.3s,baz=311,slow=18,SNR=21						
PSI				S	Sn	19 02 38.2	-2.9
	6.8nm,0.3s,baz=54,slow=23,SNR=27						
SNSI	Sinabang, Aceh	1.94	217	P	Pn	19 02 16.2	-0.1
SNSI				S	Sn	19 02 40.8	-2.0

SISI Saibi 5.50 163 P Pn 19 03 03.9 +1.9
0.2nm14nm,1.4s
PDSI Padang 5.69 148 P Pn 19 03 05.8 +1.2
CMAR Chiang Mai Arr 14.47 6 P Pn 19 05 01.3 +1.5
0.1nm,0.3s,baz=188,slow=14.9,SNR=4.7
WRA Warramunga Arr 43.31 125 P P 19 09 29.4 +0.2
0.5nm,0.8s,baz=300,slow=9.1,SNR=6.0
ASAR Alice Springs 44.88 130 P P 19 09 42.0 +0.2
0.3nm,0.3s,baz=304,slow=7.6,SNR=14

IDC 13 19:02:30.8±8.7, 16.°81N×85.°62W, h0km, mb3.5/4, mb1 4.0/5, mb1mx3.6/34, mbtmp3.6/5, ML3.4/1, MS3.0/3, Ms1 3.0/3, ms1mx2.7/21, Error ellipse: s-maj=166.0km s-min=50.7km az=160.0
NEIC 13 19:02:36.4±2.2, 16.°92N±0.°07×86.°1W±0.°1, h23km±7km, mb4.2/6, Error ellipse: s-maj=14.2km s-min=9.9km az=73.0
ISC 13 19:02:35.8±1.1, 16.°88N±0.°08×85.°9W±0.°1, h28km, n18, σ1°12/16, mb3.8/4, North of Honduras

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TGUH Tegucigalpa,Un 3.12 206 Pn 19 03 22.3 -1.0
TEIG Tepich 4.05 326 Pn 19 03 34.1 -1.8
ESPN Las Esperanzas 4.89 162 Pn Pn 19 03 47.6 +0.1
ACON Acoyapa 4.92 172 Pn Pb 19 03 52.5 -8.9
CCIG Comitan 6.05 265 Pn Pn 19 04 01.8 -1.9
CMIG Matias Romero 8.64 273 Pn Pn 19 04 40.1 +1.0
0.4nm,0.3s,baz=91,slow=9.6,SNR=5.6
CMIG LR LR 19 08 07.8
comp=Z,96nm,20.9s,baz=39,slow=38
833A Chaparral WMA, 16.90 315 P Pn 19 06 29.6 -0.8
833A IAmb IAmb 19 06 32.3
comp=Z,43nm,0.7s
JCT Junction City 18.59 319 Pn Pn 19 06 52.3 +0.9
JCT IAmb IAmb 19 07 01.7
comp=Z,6.8nm,0.7s
TX31 Lajitas Ar. Si 20.51 310 P P 19 07 12.7 +0.7
TX32 Lajitas Array 20.51 310 P P 19 07 12.6 +0.5
TX32 IAmb IAmb 19 07 14.2
comp=Z,2.4nm,0.8s
TXAR Lajitas Array 20.51 310 P P 19 07 13.2 +1.1
comp=Z,2.3nm,0.7s,baz=128,slow=11,SNR=30
TXAR LR LR 19 17 23.9
comp=Z,15nm,18.0s,baz=0.0,slow=43
WCI Wyandotte Cave 21.28 359 P P 19 07 20.9 +0.8
WCI IAmb IAmb 19 07 22.5
comp=Z,19nm,0.9s
NVAR Mina Array Bea 35.59 314 P P 19 09 32.2 +0.9
comp=Z,0.3nm,0.6s,baz=101,slow=9.5,SNR=2.8
WVOR Wild Horse Val 37.82 319 P P 19 09 48.8 -1.4
RPN Rapa Nui 49.32 208 LR LR 19 27 06.5
comp=Z,45nm,20.4s,baz=15,slow=30
YKA Yellowknife Ar 49.81 343 P P 19 11 25.9 0.0
comp=Z,0.3nm,0.4s,baz=139,slow=8.4,SNR=6.3
ILAR Eielson Array 62.65 335 P P 19 12 58.0 +0.4
comp=Z,0.6nm,0.8s,baz=117,slow=5.3,SNR=7.2
ILAR Eielson Array 62.65 335 P P 19 12 57.8 +0.2

BJI 13 19:04:59.9±0.0, 35.°77N×82.°49E, h4km, ML3.7/6
IDC 13 19:05:06.9±5.2, 36.°37N×82.°24E, h0km, mb3.5/1, mb1 3.6/5, mb1mx3.2/61, mbtmp3.6/5, ML3.3/4, Error ellipse: s-maj=68.4km s-min=30.3km az=22.0
ISC 13 19:05:09.5±2.7, 36.°5N±0.°2×82.°4E±0.°1, h10km, n6, σ0°60/8, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WMQ Urumqi 8.40 27 eP Pn 19 07 11.1 -0.2
WMQ S Sn 19 08 46.9 +0.7
WMQ smax smax
comp=N,15nm,0.9s
WMQ smax smax
comp=E,17nm,1.1s
AAK Ala-Archa 8.68 318 Pn Pn 19 07 15.9 +0.7
0.1nm,0.3s,baz=160,slow=12,SNR=2.4
AAK Pg Pg 19 07 42.0 -14
0.4nm,0.3s,baz=143,slow=12,SNR=3.9
AAK Lg Lg 19 09 40.8
0.4nm,0.3s,baz=292,slow=19,SNR=4.4
MKAR Makanchi Array 10.33 360 Pn Pn 19 07 38.1 +0.4
0.5nm,0.3s,baz=182,slow=13,SNR=18
MKAR Sn Sn 19 09 33.0 -0.4
0.2nm,0.3s,baz=185,slow=27,SNR=4.2
ZALV Zalesovo Beam 17.57 5 P P 19 09 15.2 -0.2
0.1nm,0.3s,baz=191,slow=11,SNR=4.8
BVAR Borovoye Array 18.59 337 P Pn 19 09 26.2 -0.6
0.3nm,0.3s,baz=142,slow=9.8,SNR=11
SONM Songino Array 21.02 50 P P 19 09 53.3 -0.1
2.5nm,0.9s,baz=239,slow=11,SNR=4.9

IDC 13 19:09:47.4±7.2, 36.°58N×82.°41E, h0km, mb3.4/1, mb1 3.5/5, mb1mx3.2/50, mbtmp3.5/5, ML3.2/4, Error ellipse: s-maj=102.2km s-min=30.6km az=20.0
ISC 13 19:09:48.6±3.4, 36.°5N±0.°3×82.°5E±0.°2, h10km, n6, σ1°41/7, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WMQ Urumqi 8.31 27 ePn Pn 19 11 49.8 +0.6
WMQ Sn Sn 19 13 23.5 +0.3
AAK Ala-Archa 8.66 317 Pn Pn 19 11 55.0 +0.9
0.2nm,0.3s,baz=145,slow=16,SNR=3.2
AAK Lg Lg 19 14 20.6
0.3nm,0.3s,baz=306,slow=16,SNR=4.8
MKAR Makanchi Array 10.26 359 Pn Pn 19 12 16.6 +0.7
0.5nm,0.3s,baz=186,slow=12,SNR=12
ZALV Zalesovo Beam 17.50 5 P Pn 19 13 50.1 -2.5
0.0nm,0.3s,baz=184,slow=11,SNR=3.7
BVAR Borovoye Array 18.54 337 P P 19 14 04.9 -0.4
0.3nm,0.3s,baz=140,slow=10.0,SNR=13
SONM Songino Array 20.94 50 P P 19 14 31.9 +0.3
1.7nm,0.8s,baz=242,slow=11,SNR=12

NEIC 13 19:10:28.5±1.1, 17.°31N±0.°07×101.°66W±0.°03, h21km±7km, Error ellipse: s-maj=11.0km s-min=4.3km az=192.0
MEX 13 19:10:29.3±0.4, 17.°31N×101.°68W, h3km±3km, MD4.1
ISC 13 19:10:27.7±1.8, 17.°27N±0.°08×101.°68W±0.°04, h18km±6km, n17, σ0°60/29, Near coast of Guerrero

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ZIIG Zihuatanejo 0.39 31 Pg 19 10 35.8 -0.1
ZIIG Sg 19 10 41.2 -0.1
ZIIG Zihuatanejo 0.39 31 i P Pg 19 10 35.8 -0.1
ZIIG i S Sg 19 10 41.2 -0.1
UON La Union 0.71 349 i P Pb 19 10 41.6 0.0
UON i S Sb 19 10 51.2 +0.2
CAIG El Cayaco 1.37 99 Pn 19 10 51.6 -0.2
CAIG Sn 19 11 09.1 -0.5
CAIG El Cayaco 1.37 99 i P Pn 19 10 51.6 -0.2
CAIG i S Sn 19 11 09.1 -0.5
ARIG Puente Sto Nin 1.62 51 Pn 19 10 55.4 0.0
ARIG Sn 19 11 15.2 -0.6
ARIG Puente Sto Nin 1.62 51 eP Pn 19 10 55.4 0.0
ARIG i S Sn 19 11 14.3 -1.5
MMIG Aquila 1.89 303 Pn 19 10 58.4 -0.6
MMIG Sn 19 11 22.5 +0.1
MMIG Aquila 1.89 303 i P Pn 19 10 58.4 -0.6
MMIG i S Sn 19 11 21.4 -0.9
MEIG Mezcala 2.07 71 Pn 19 11 01.6 0.0
MEIG Sn 19 11 27.2 +0.2
MEIG Mezcala 2.07 71 eP Pn 19 11 01.6 0.0
MEIG i S Sn 19 11 26.0 -1.1
MOIG Morelia 2.44 11 Pn Pn 19 11 07.2 +0.3
EZ5V 2.86 321 Pn 19 11 13.0 +0.4
EZ5V Sn 19 11 46.6 -0.2
EZ5V 2.86 321 i P Pn 19 11 13.0 +0.4
EZ5V i S Sn 19 11 46.6 -0.2
TLIG Tlapa 2.98 84 Pn Pn 19 11 15.6 +1.3
S22A 4UR Ranch, Cre 20.90 348 P Pn 19 15 11.5 -0.5
Q16A Castle Valley 23.11 341 P P 19 15 33.8 +0.9

WEL 13 19:23:12.7±0.8, 33°S±7°×17°8W±1°7, h220km±15km, M4.4/8, mB4.7/2, MLv4.4/8, Mw(mB)3.9/2, South of Kermadec Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GLKZ Green Lake 3.93 356 P Pn 19 24 14.2 -0.3
GLKZ S S 19 25 03.3 +0.4
MXZ Matakaoa Point 5.50 216 P Pn 19 24 37.9 +4.1
MXZ S S 19 25 38.9 +0.9
WMGZ Waiomatatini S 5.65 214 P Pn 19 24 38.9 +3.2
PKGZ Pakihiroa 5.86 216 P Pn 19 24 41.7 +3.2
PKGZ S S 19 25 46.1 -0.5
HAZ Te Kaha 5.91 218 P Pn 19 24 39.3 +0.3
HAZ S S 19 25 48.0 +0.4
PUZ Puketiti 5.92 214 P Pn 19 24 44.3 +5.1
PUZ S S 19 25 48.7 +0.8
RUGZ Raukumara Rang 6.12 218 P Pn 19 24 42.4 +0.5
RUGZ S S 19 25 51.9 -0.9
MWZ Matawai 6.48 216 P Pn 19 24 45.9 -0.5
URZ Urewera 6.64 219 P Pn 19 24 45.6 -2.7
RIGZ Rimuhau 6.66 213 P Pn 19 24 48.6 -0.1
MUGZ Murupara 6.98 219 P Pn 19 24 48.6 -4.2
WCZ Waipu Caves 7.19 245 P Pn 19 24 58.2 +2.7
MTHZ Maungataniwha 7.22 217 P Pn 19 24 53.0 -2.9

IDC 13 19:30:26.7±1.9, 7.°46S×126.°03E, h0km, mb3.6/2, mb1 3.9/5, mb1mx3.6/30, mbtmp3.7/5, ML3.5/3, Error ellipse: s-maj=69.8km s-min=26.1km az=63.0
ISC 13 19:30:31.0±1.2, 7.°8S±0.°1×125.°9E±0.°1, h35km, n6, σ2°60/8, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KAPI Kappang 6.69 294 Pn Pn 19 32 06.8 0.0
0.7nm,0.3s,baz=198,slow=16,SNR=7.8
KAPI Sn Sn 19 33 21.1 -0.7
0.9nm,0.3s,baz=246,slow=20,SNR=2.7
FITZ Fitzroy Crossi 10.25 181 Pn Pn 19 32 57.9 +2.2
0.3nm,0.3s,baz=5.6,slow=16,SNR=3.4
FITZ Sn Sn 19 34 45.8 -3.6
0.4nm,0.3s,baz=255,slow=5.7,SNR=4.8
WRA Warramunga Arr 14.60 147 Pn Pn 19 33 53.7 -1.5
0.2nm,0.3s,baz=323,slow=15,SNR=14
WRA Sn Sn 19 36 26.5 -9.4
0.1nm,0.3s,baz=322,slow=23,SNR=3.9
ASAR Alice Springs 17.56 155 P P 19 34 37.6 +3.6
0.2nm,0.3s,baz=336,slow=12,SNR=27
CMAR Chiang Mai Arr 37.24 315 P P 19 37 39.6 0.0
0.5nm,0.8s,baz=140,slow=7.1,SNR=6.1
MKAR Makanchi Array 66.72 329 P P 19 41 17.9 -0.7
0.9nm,0.7s,baz=135,slow=7.3,SNR=10

NEIC 13 20:45:41.8±1.7, 19.°29S±0.°06×168.°96E±0.°10, h113km±11km, mb4.7/17, Error ellipse: s-maj=15.5km s-min=3.0km az=122.0
IDC 13 20:45:44.4±3.9, 19.°44S×168.°78E, h115km±29km, mb3.7/6, mb1 3.9/8, mb1mx3.6/36, mbtmp4.3/8, MS3.4/1, Ms1 3.4/1, ms1mx2.6/28, Error ellipse: s-maj=33.1km s-min=26.2km az=64.0
ISC 13 20:45:40.9±0.8, 19.°30S±0.°07×169.°0E±0.°1, h100km, n38, σ1°15/38, mb4.6/11, Vanuatu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DZM Mont Dzumac 3.66 221 P Pn 20 46 35.7 +0.1
76nm,0.3s,baz=69,slow=10,SNR=618
DZM S Sn 20 47 16.2 -1.7
106nm,0.3s,baz=133,slow=23,SNR=15
NOUC Port Laguerre 3.77 222 Pn 20 46 37.7 +0.8
SANVU Saraoutou 4.20 335 Pn 20 46 42.3 -0.5
HNR Honiara 13.16 317 P Pn 20 48 47.1 +3.2
4.9nm,0.3s,baz=350,slow=2.8,SNR=5.0
HNR Honiara 13.16 317 P P 20 48 47.6 -2.6
AFI Afiamalu 19.17 77 P P 20 49 56.4 -0.4
AFI IAmb IAmb 20 50 21.2
comp=Z,28nm,1.0s
URZ Urewera 20.17 161 P P 20 50 09.5 +2.2
comp=Z,9.8nm,0.8s,baz=26,slow=13,SNR=4.3
URZ Urewera 20.17 161 P P 20 50 07.0 -0.4
URZ IAmb IAmb 20 50 19.3
comp=Z,29nm,1.3s
BKZ Black Stump Fm 20.83 163 P P 20 50 15.4 +0.9
CTA Charters Tower 21.44 264 P P 20 50 22.5 +1.3
comp=Z,2.6nm,0.6s,baz=85,slow=11,SNR=5.4
TUWZ Tuamarina 22.46 170 P P 20 50 32.9 +1.2
SNZO South Karori 22.48 169 P P 20 50 32.6 +0.8
BHW Baring Head 22.60 168 P P 20 50 33.6 +0.5
THZ Tophouse 22.64 172 P P 20 50 34.9 +1.3
THZ IAmb IAmb 20 51 09.9
comp=Z,60nm,1.3s
MSWZ Moikau Station 22.68 168 P P 20 50 34.3 +0.3
BSWZ Blackbirch Sta 22.73 171 P P 20 50 35.5 +1.1
PLWZ Palliser 22.83 168 P P 20 50 35.2 -0.3
KHZ Kahutara 23.36 172 P P 20 50 40.2 -0.2
LTZ Lake Taylor 23.57 174 P P 20 50 41.9 -0.6
LTZ IAmb IAmb 20 51 15.8
comp=Z,68nm,1.5s
STKA Stephens Creek 27.63 238 P P 20 51 19.8 +0.6
comp=Z,1.1nm,0.5s,baz=68,slow=8.0,SNR=5.9
STKA Stephens Creek 27.63 238 P P 20 51 18.4 -0.7
WR0 Warramunga Arr 32.44 263 P P 20 52 00.4 -1.4
WR0 IAmb IAmb 20 52 48.1
comp=Z,18nm,1.8s
WB0 Warramunga Arr 32.59 263 P P 20 52 02.3 -0.9
WB0 IAmb IAmb 20 52 02.5
comp=Z,30nm,2.0s
WB2 Warramunga Arr 32.62 263 P P 20 52 02.2 -1.2
WB2 IAmb IAmb 20 52 38.3
comp=Z,22nm,1.9s
WRAB Tennant Creek 32.62 263 P P 20 52 02.2 -1.2
WRA Warramunga Arr 32.63 263 P P 20 52 02.3 -1.2
comp=Z,0.4nm,0.4s,baz=89,slow=7.4,SNR=16
WRA Warramunga Arr 32.63 263 P P 20 52 02.7 -0.8
AS31 Alice Springs 32.90 256 P P 20 52 05.7 -0.2
AS31 IAmb IAmb 20 52 06.2
comp=Z,6.1nm,0.4s
ASAR Alice Springs 32.90 256 P P 20 52 05.7 -0.1
comp=Z,9.3nm,0.6s,baz=83,slow=8.8,SNR=148
ASAR Alice Springs 32.90 256 P P 20 52 05.3 -0.6
KNRA Kununurra 38.50 269 P P 20 52 53.1 -0.5
FORT Forrest 38.63 245 P P 20 52 54.7 +0.1
PPT Papeete 39.26 94 LR LR 21 05 54.3
comp=Z,57nm,20.8s,baz=210,slow=31
QSPA South Pole Qui 70.76 180 P P 20 56 45.8 -0.4
SONM Songino Array 87.14 323 P P 20 58 17.0 +1.3
comp=Z,0.3nm,0.8s,baz=102,slow=5.0,SNR=1.9
SNAA Sanae 89.09 183 P P 20 58 23.9 -0.7
VNA3 Neumayer Olymp 89.69 180 P P 20 58 26.6 -0.9
VNA2 Neumayer--Watz 89.98 181 P P 20 58 28.6 -0.2
baz=183,slow=4.5

NEIC 13 20:51:46.4±1.8, 19.°87S±0.°04×69.°15W±0.°09, h101km±5km, Error ellipse: s-maj=12.6km s-min=6.0km az=85.0
SJA 13 20:51:46.7±1.1, 19.°92S×69.°35W, h107km±7km, ML4.3, MW4.0
GUC 13 20:51:47.8±0.6, 19.°90S×69.°20W, h101km±2km, ML4.3
IDC 13 20:51:48.6±1.5, 19.°93S×68.°99W, h113km±14km, mb3.9/7, mb1 4.0/11, mb1mx3.7/38, mbtmp4.3/11, Error ellipse: s-maj=21.6km s-min=12.8km az=108.0
ISC 13 20:51:46.6±0.6, 19.°92S±0.°03×69.°31W±0.°05, h105km±4km, n70, σ1°48/100, mb4.5/7, 9C-6D, Northern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PB08 IPOC Station P 0.26 146 ⇓ i P Pn 20 52 02.8 +0.7
PB08 i S Sn 20 52 14.2 +0.7
PB08 IAML 20 52 15.2
comp=E,14µm,0.2s
PB08 IPOC Station P 0.26 146 eP Pn 20 52 02.8 +0.7
PB08 i S Sn 20 52 14.1 +0.5
GO01 Chusmiza 0.28 24 ⇓ i P Pn 20 52 02.6 +0.4
GO01 i S Sn 20 52 14.1 +0.3
GO01 IAML 20 52 15.8
comp=N,29µm,0.1s
GO01 Chusmiza 0.28 24 Pn 20 52 02.5 +0.3
PB11 IPOC Station P 0.36 296 ⇓ i P Pn 20 52 03.0 +0.8
PB11 i S Sn 20 52 14.7 +0.9
PB11 IAML 20 52 16.0
comp=N,23µm,0.2s
PB11 IPOC Station P 0.36 296 Pn Pn 20 52 02.1 -0.1
PB11 IPOC Station P 0.36 296 eP Pn 20 52 03.1 +0.8
PB11 i S Sn 20 52 14.8 +0.9
PSGC Pisagua 0.83 293 ⇓ i P Pn 20 52 06.9 +1.1
PSGC i S Sn 20 52 21.2 +1.1
PSGC IAML 20 52 22.3
comp=N,11µm,0.3s
PSGCX Pisagua 0.83 293 eP Pn 20 52 07.0 +1.2
PSGCX i S Sn 20 52 21.3 +1.2
MNMC Minye Minye 0.83 341 ⇓ i P Pn 20 52 07.2 +1.2
MNMC i S Sn 20 52 21.7 +1.2
MNMC IAML 20 52 22.8
comp=N,23µm,0.6s
MNMC Minye Minye 0.83 341 Pn 20 52 06.5 +0.5
MNMCX Minye Minye 0.83 341 eP Pn 20 52 07.2 +1.3
MNMCX i S Sn 20 52 21.7 +1.2
TA01 Diego Aracena 1.04 232 ⇑ i P Pn 20 52 08.9 +1.2
TA01 i S Sn 20 52 25.3 +1.6
PB01 IPOC Station P 1.13 188 ⇑ i P Pn 20 52 10.3 +1.4
PB01 i S Sn 20 52 27.0 +1.3
PB01 IAML 20 52 29.0
comp=N,10µm,0.3s
PB01 IPOC Station P 1.13 188 Pn Pn 20 52 09.8 +1.0
PATCX Punta Patache 1.19 221 ⇑ i P Pn 20 52 10.8 +1.3
PATCX eS Sn 20 52 28.8 +1.8
PATCX Punta Patache 1.19 221 eP Pn 20 52 10.9 +1.3
PATCX i S Sn 20 52 28.6 +1.7
PB02 IPOC Station P 1.49 201 ⇑ i P Pn 20 52 14.5 +1.4
PB02 i S Sn 20 52 35.5 +2.3
PB02 IAML 20 52 37.5
comp=E,4µm,0.3s
PB02 IPOC Station P 1.49 201 eP Pn 20 52 14.6 +1.4
PB02 i S Sn 20 52 35.5 +2.3
PB16 IPOC Station P 1.59 353 ⇑ i P Pn 20 52 16.1 +1.3
PB16 i S Sn 20 52 38.0 +1.9
PB16 IAML 20 52 39.7
comp=N,3µm,0.4s
PB16 IPOC Station P 1.59 353 eP Pn 20 52 16.4 +1.6
PB16 i S Sn 20 52 37.5 +1.4
AP01 Chacalluta 1.83 328 ⇑ eP Pn 20 52 18.1 +1.0
AP01 eS Sn 20 52 41.8 +1.4
AP01 IAML 20 52 50.3
comp=N,6µm,0.3s
PB09 IPOC Station P 1.87 178 ⇑ i P Pn 20 52 19.5 +1.7
PB09 i S Sn 20 52 43.6 +2.0
PB09 IAML 20 52 45.9
comp=E,1µm,0.5s
PB09 IPOC Station P 1.87 178 i P Pn 20 52 19.6 +1.7
PB09 i S Sn 20 52 43.5 +2.0
PB09 IAML 20 52 45.6
comp=Z,1µm,0.4s
PB07 IPOC Station P 1.87 197 ⇑ eP Pn 20 52 19.0 +1.1
PB07 eS Sn 20 52 43.6 +1.8
PB07 IAML 20 52 47.9
comp=E,2µm,0.3s
PB07 IPOC Station P 1.87 197 eP Pn 20 52 19.4 +1.5
PB07 i S Sn 20 52 42.8 +1.0
PB03 IPOC Station P 2.15 191 ⇑ eP Pn 20 52 22.6 +1.1
PB03 IPOC Station P 2.15 191 eP Pn 20 52 22.6 +1.1
PB03 i S Sn 20 52 48.5 +0.4
PB04 IPOC Station P 2.52 198 eP Pn 20 52 27.7 +1.4
PB04 IPOC Station P 2.52 198 Pn Pn 20 52 27.1 +0.8
PB04 IPOC Station P 2.52 198 i P Pn 20 52 27.4 +1.1
PB04 i S Sn 20 52 53.2 -3.6
LVC Limon Verde 2.70 172 P Pn 20 52 30.6 +1.8
comp=E,60nm,0.3s,baz=8.9,slow=7.1,SNR=129
LVC S Sn 20 53 03.2 +1.9
comp=E,149nm,0.3s,baz=313,slow=9.4,SNR=6.6
LVC Limon Verde 2.70 172 i P Pn 20 52 30.7 +1.8
LVC i S Sn 20 53 03.2 +1.9
PB06 IPOC Station P 2.78 185 eP Pn 20 52 30.5 +0.8
PB06 IPOC Station P 2.78 185 i P Pn 20 52 30.5 +0.8
PB06 i S Sn 20 53 02.6 -0.2
PB06 IAML 20 53 29.3
comp=Z,572nm,0.7s
PB05 IPOC Station P 3.03 196 i P Pn 20 52 33.6 +0.6
PB15 IPOC Station P 3.27 183 ⇓ i P Pn 20 52 37.7 +1.5
PB15 i S Sn 20 53 16.2 +1.6
PB15 IPOC Station P 3.27 183 i P Pn 20 52 37.8 +1.5
PB15 i S Sn 20 53 15.2 +0.6
PB15 IAML 20 53 26.0
comp=Z,1µm,0.3s
PB10 IPOC Station P 3.76 198 Pn Pn 20 52 42.6 0.0
PB10 IPOC Station P 3.76 198 i P Pn 20 52 42.5 0.0
LPAZ La Paz 3.79 17 P Pn 20 52 45.9 +2.4
comp=Z,15nm,0.3s,baz=203,slow=6.4,SNR=218
LPAZ La Paz 3.79 17 Pn 20 52 45.2 +1.7
YJA Yavi 4.20 123 ⇑ i P Pn 20 52 51.8 +3.0
YJA i S Sn 20 53 41.7 +4.5
PB14 IPOC Station P 4.79 192 i P Pn 20 52 56.4 -0.4
PB14 IAML 20 53 06.4
comp=Z,166nm,0.4s
GO02 Mina Guanaco 5.22 183 Pn Pn 20 53 02.6 -0.1
AZAP Zapla 5.81 138 i P Pn 20 53 11.7 +1.1
SIV San Ignacio 8.76 65 P Pn 20 53 47.6 -2.9
comp=Z,3.8nm,0.3s,baz=261,slow=12,SNR=134
CPUP Villa Florida 12.73 122 P Pn 20 54 42.1 -1.6
comp=Z,0.1nm,0.3s,baz=303,slow=9.9,SNR=3.3
BDFB Brasilia 20.72 82 P P 20 56 17.9 -1.0
comp=Z,4.1nm,0.6s,baz=281,slow=7.9,SNR=5.1
BDFB Brasilia 20.72 82 P P 20 56 16.8 -2.1
PLCA Paso Flores 20.77 183 P Pn 20 56 21.9 -0.6
comp=Z,2.4nm,0.8s,baz=21,slow=9.6,SNR=7.8
PLCA Paso Flores 20.77 183 P Pn 20 56 21.4 -1.1
PLCA IAmb IAmb 20 56 47.6
comp=Z,5.4nm,0.9s
PLCV Puerto La Cruz 30.26 9 P P 20 57 48.7 +0.9
PCRV Puerto La Cruz 30.26 9 P P 20 57 48.7 +0.8
comp=Z,5.2nm,0.4s,baz=342,slow=3.2,SNR=1.6
GO09 Cerro Castillo 31.37 184 P P 20 57 57.3 0.0
GO09 IAmb IAmb 20 58 21.2
comp=Z,12nm,0.7s
RCBR Riachuelo 35.36 71 P P 20 58 31.2 -1.2
comp=Z,3.5nm,0.5s,baz=248,slow=9.7,SNR=4.7
RCBR Riachuelo 35.36 71 P P 20 58 31.1 -1.2
PDPR Patillas Dam, 37.84 5 P P 20 58 49.7 -3.5
MTP Monte Pirata 37.96 6 P P 20 58 52.5 -1.7
CBYP Canovanas 38.11 5 P P 20 58 54.8 -0.8
CBYP IAmb IAmb 20 59 37.5
comp=Z,21nm,1.2s
AOPR Arecibo Observ 38.11 4 P P 20 58 54.8 -0.7
NVAR Mina Array Bea 74.03 322 P P 21 03 13.2 +2.0
comp=Z,0.4nm,0.3s,baz=70,slow=29,SNR=6.0
TORD Torodi Ar. Bea 77.19 71 P P 21 03 28.4 -1.1
comp=Z,1.0nm,0.4s,baz=251,slow=5.2,SNR=24
TORD pP pP 21 03 56.5 -1.1
comp=Z,2.9nm,0.7s,baz=254,slow=5.3,SNR=8.4
YKA Yellowknife Ar 89.58 341 P P 21 04 32.8 +0.9
comp=Z,2.2nm,0.7s,baz=134,slow=4.6,SNR=35
YKA pP pP 21 04 59.9 -0.1
comp=Z,1.0nm,0.7s,baz=136,slow=4.6,SNR=5.3
ASAR Alice Springs 131.12 209 PKP PKiKP 21 10 48.0 0.0
comp=Z,0.4nm,0.5s,baz=152,slow=1.7,SNR=9.6
WRA Warramunga Arr 134.10 212 PKP PKiKP 21 10 53.6 -0.3
comp=Z,0.6nm,0.5s,baz=153,slow=1.8,SNR=9.7
TLY Talaya 147.83 8 PKPbc PKPab 21 11 21.5 -0.4
comp=Z,2.3nm,0.5s,baz=97,slow=13,SNR=7.6
USRK Ussuriysk Ar. 149.98 329 PKPbc PKiKP 21 11 25.4 -0.3
comp=Z,1.3nm,0.6s,baz=57,slow=5.3,SNR=7.1
MJAR Matsushiro Arr 150.78 310 PKPbc PKiKP 21 11 27.8 +0.2
comp=Z,0.6nm,0.4s,baz=231,slow=52,SNR=3.1
MJAR Matsushiro Arr 150.78 310 PKiKP 21 11 27.7 0.0

IDC 13 20:56:05.9±0.9, 33.°86N×89.°23E, h0km, mb3.8/11, mb1 3.9/15, mb1mx3.7/38, mbtmp3.7/15, ML3.1/3, MS3.1/6, Ms1 3.2/6, ms1mx2.9/46, Error ellipse: s-maj=28.1km s-min=16.5km az=53.0
NEIC 13 20:56:08.8±0.8, 34.°0N±0.°1×89.°3E±0.°1, h11km±6km, mb4.2/12, Error ellipse: s-maj=19.1km s-min=11.9km az=55.0
BJI 13 20:56:11.0±0.0, 33.°89N×89.°30E, h9km, mb3.8/9, ML3.8/2
ISC 13 20:56:08.8±0.5, 34.°00N±0.°05×89.°33E±0.°06, h10km, n55, σ2°14/60, mb4.0/13, MS2.8/4, Xizang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LSA Lhasa 4.56 160 Pn Pn 20 57 20.8 +2.5
LSA Pg Pb 20 57 32.3 +3.1
LSA Sn Sn 20 58 18.4 +6.8
LSA Sg Sg 20 58 30.5 -4.8
LSA smax smax
comp=N,76nm,1.4s
LSA smax smax
comp=E,69nm,1.7s
LSA Lhasa 4.56 160 Pn 20 57 19.6 +1.3

GUN	Gumba	6.76	207	eP	Pn	20 57 48.3	-0.1
	18nm,0.6s						
TAPN	Taplejung	6.78	192	eP	Pn	20 57 47.5	-1.1
	14nm,0.7s						
JIRN	Jiri	6.88	204	eP	Pn	20 57 50.3	+0.2
	28nm,0.7s						
KKN	Kakani	7.10	210	eP	Pn	20 57 53.2	+0.1
	10.0nm,0.6s						
PKIN	Phulchoki	7.24	209	eP	Pn	20 57 55.0	0.0
	7.8nm,0.6s						
PKI	Pulchoki	7.24	209	eP	Pn	20 57 55.4	+0.3
	14nm,0.7s						
ODAN	Odare	7.31	194	eP	Pn	20 57 55.5	-0.5
	22nm,0.5s						
DMN	Daman	7.33	211	eP	Pn	20 57 56.2	-0.1
	11nm,0.7s						
DANN	Dangsing	7.38	222	eP	Pn	20 57 57.2	+0.2
RAMN	Ramite	7.41	199	eP	Pn	20 57 57.1	-0.2
	17nm,0.5s						
SHL	Shillong	8.69	165		Pn	20 58 12.1	-2.8
WMQ	Urumqi	9.89	353	eP	Pn	20 58 34.4	+3.4
KSH	Kashi	12.04	301	P	Pn	20 59 03.4	+2.8
KSH				PP	PnPn	20 59 16.8	+8.5
KSH				S	Sn	21 01 17.8	+2.8
LZH	Lanzhou	12.08	76	eP	Pn	20 59 01.3	+0.2
LZH				pP		20 59 03.8	
LZH				sP		20 59 06.1	
LZH				ePP	PnPn	20 59 11.4	+2.6
NIL	Nilore	13.38	273	Pn	Pn	20 59 17.7	-1.1
MK31	Makanchi Array	13.85	339	Pn	Pn	20 59 23.3	-1.8
MKAR	Makanchi Array	13.85	339	Pn	Pn	20 59 23.9	-1.2
	0.0nm,0.3s,baz=149,slow=15,SNR=6.6						
MKAR				LR	LR	21 05 46.4	
	comp=Z,88nm,18.2s,baz=162,slow=42						
MAKZ	Makanchi	13.96	339	Pn	Pn	20 59 25.6	-1.0
AAK	Ala-Archa	14.47	311	Pn	P	20 59 37.3	-3.4
	0.1nm,0.3s,baz=117,slow=6.4,SNR=9.1						
AAK	Ala-Archa	14.47	311	P	P	20 59 41.5	+0.8
FRU1	Bishkek	14.48	312	P	P	20 59 40.6	-0.3
BTK	Batken	15.96	298	P	P	20 59 55.4	-1.7
KKAR	Karatay Array	17.27	307		P	21 00 11.0	-0.5
CMAR	Chiang Mai Arr	17.70	149	P	Pn	21 00 11.9	-3.7
	0.1nm,0.3s,baz=323,slow=12,SNR=12						
CMAR				LR	LR	21 07 30.4	
	comp=Z,63nm,18.7s,baz=22,slow=39						
SLVN	Son La	18.02	131	P	P	21 00 20.5	+0.5
SLVN				IAmb	IAmb	21 00 22.2	
	comp=Z,9.5nm,0.9s						
KURBB	Kurchatov Arra	18.40	338	P	P	21 00 21.6	-2.3
	baz=149,slow=12,SNR=12						
SONM	Songino Array	18.84	38	P	Pn	21 00 30.0	+0.5
	comp=Z,0.0nm,0.3s,baz=234,slow=13,SNR=6.8						
HHC	Hu-ho-hao-te	18.91	62	eP	Pn	21 00 31.6	+1.3
HHC				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZAA0	Zalesovo Array	20.20	352	P	P	21 00 43.3	-0.2
ZAA0				IAmb	IAmb	21 00 45.6	
	comp=Z,6.0nm,0.9s						
ZALV	Zalesovo Beam	20.20	352	P	P	21 00 44.0	+0.5
	comp=Z,4.0nm,0.8s,baz=171,slow=12,SNR=22						
ZALV				LR	LR	21 09 30.3	
	comp=Z,70nm,18.5s,baz=158,slow=40						
ZALV	Zalesovo Beam	20.20	352	P	P	21 00 43.4	-0.1
TLY	Talaya	20.48	26	P	P	21 00 46.3	-0.4
	comp=Z,1.3nm,0.5s,baz=246,slow=23,SNR=6.2						
TLY				LR	LR	21 08 37.8	
	comp=Z,22nm,18.6s,baz=196,slow=36						
TLY	Talaya	20.48	26	P	P	21 00 45.9	-0.9
BVAR	Borovoye Array	23.33	330	P	P	21 01 16.9	-0.1
	comp=Z,1.5nm,0.9s,baz=140,slow=10,SNR=11						
BRVK	Borovoye	23.40	330	P	P	21 01 17.6	0.0
BRVK				IAmb	IAmb	21 01 42.9	
	comp=Z,8.5nm,1.6s						
GEYT	Alibeck	25.50	288	P	P	21 01 36.4	-1.0
	comp=Z,1.4nm,0.8s,baz=90,slow=10,SNR=3.7						
GEYT	Alibeck	25.50	288	P	P	21 01 36.7	-0.7
ABKAR	Akbulak array	26.52	314	P	P	21 01 45.8	-0.6
KSRS	Korea Array	31.37	72	LR	LR	21 15 43.5	
	comp=Z,13nm,18.6s,baz=70,slow=37						
MJB9	Matsu-Tunnel	39.64	72	P	P	21 03 41.3	+0.5
MAJO	Matsushiro	39.64	72	P	P	21 03 41.5	+0.6
MAJO				IAmb	IAmb	21 03 45.4	
	comp=Z,28nm,1.4s						
MJAR	Matsushiro Arr	39.65	72	P	P	21 03 40.8	0.0
TIXI	Tiksi	43.04	17	P	P	21 04 08.1	-0.1
TIXI				IAmb	IAmb	21 04 09.3	
	comp=Z,3.6nm,1.1s						
BRTR	Keskin Array B	44.32	294	P	P	21 04 17.8	-1.4
	comp=Z,0.6nm,0.9s,baz=114,slow=5.5,SNR=3.8						
BRTR				LR	LR	21 25 04.1	
	comp=Z,112nm,20.7s,baz=86,slow=39						
AKASG	Malin Array Be	46.14	310	P	P	21 04 31.5	-1.8
	comp=Z,0.6nm,0.5s,baz=79,slow=7.2,SNR=6.4						
FINES	FINESS Array B	48.10	325	P	P	21 04 47.1	-1.3
	comp=Z,2.7nm,0.9s,baz=111,slow=4.3,SNR=7.0						
MLR	Muntele Rosu	48.90	303	P	P	21 04 54.6	-0.3
MLR				IAmb	IAmb	21 04 55.9	
	comp=Z,8.3nm,1.2s						
ARCES	ARCESS Array B	49.46	335	P	P	21 04 58.8	0.0
	comp=Z,2.5nm,0.9s,baz=104,slow=7.5,SNR=1.6						
KWP	Kalwaria Pacla	50.41	309	P	P	21 05 06.1	-0.2
NB2	NORSAR Subarra	55.28	325	P	P	21 05 41.0	-1.2
	comp=Z,1.6nm,0.7s,baz=82,slow=7.4						
NOA	NORSAR Array B	55.28	325	P	P	21 05 40.9	-1.2
	comp=Z,3.5nm,0.9s,baz=82,slow=7.2,SNR=6.4						
WRA	Warramunga Arr	68.67	134	P	P	21 07 11.3	-1.3
	comp=Z,0.4nm,0.5s,baz=298,slow=4.3,SNR=6.3						
ASAR	Alice Springs	71.31	137	P	P	21 07 27.4	-1.4
	comp=Z,0.1nm,0.3s,baz=312,slow=38,SNR=2.1						

*NEIC **13** 21:02:60.0±0.2, 27.83N±0.04×105.7W±0.1, h10km±1km, Md4.0/4(MEX), Error ellipse: s-maj=15.9km s-min=5.3km az=84.0*
*MEX **13** 21:03:00.2±37.0, 27.94N×105.72W, h11km±999km, MD4.0*
ISC 13 21:02:60.0±1.3, **27.83N**±0.06×**105.73W**±0.10, **h10km, n8, σ0.23/10, Northern Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HPIG		0.90	177		Pg	21 03 17.3	0.0
HPIG				Sg	Sg	21 03 29.0	0.0
HPIG		0.90	177	eP	Pg	21 03 17.4	0.0
	baz=216,slow=5.9						
HPIG				eS	Sg	21 03 29.0	0.0
TX31	Lajitas Ar. Si	2.35	50	Pn	Pn	21 03 38.4	-0.3
TX32	Lajitas Array	2.35	50	Pn	Pn	21 03 39.0	+0.3
MNTX	Cornudas Mount	3.86	4		Pn	21 03 59.5	0.0
319A	Douglas	4.69	320	Pn	Pn	21 04 11.3	+0.3
121A	Cookes Peak, D	5.01	340	Pn	Pn	21 04 15.1	-0.3
833A	Chaparral WMA,	5.62	84	Pn	Pn	21 04 23.5	-0.1

*IDC **13** 21:06:37.8±0.8, 35.98N×82.48E, h0km, mb3.7/15, mb1 3.9/20, mb1mx3.8/20, mbtmp3.8/20, ML3.2/4, MS3.1/8, Ms1 3.1/8, ms1mx2.9/53, Error ellipse: s-maj=24.0km s-min=14.5km az=43.0*
*BJI **13** 21:06:39.1±0.0, 36.12N×82.48E, h6km, mB4.2/4, mb3.9/16, ML4.2/9, Ms3.8/11, Ms7 3.8/7*
*NEIC **13** 21:06:42.0±2.5, 36.20N±0.05×82.61E±0.09, h19km±4km, mb4.1/13, Error ellipse: s-maj=11.5km s-min=5.8km az=58.0*
*NNC **13** 21:06:41.4±1.5, 36.24N×82.47E, h15km±7km, mb4.2, mpv4.2, Error ellipse: s-maj=12.6km s-min=7.2km az=97.0*
ISC 13 21:06:39.7±0.5, **36.13N**±0.05×**82.57E**±0.05, **h10km, n89, σ1.82/89, mb3.8/20, MS3.0/5, 12C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOSI	Joshimath	6.10	205	eS	Pb	21 08 22.9	-3.3
KSH	Kashi	6.22	305	Pn	Pn	21 08 15.3	+3.6
KSH				Sn	Sn	21 09 26.5	+3.6
KSH				smax	smax		
	comp=N,330nm,0.7s						
KSH				smax	smax		
	comp=E,550nm,1.1s						
KSH				LR	LR		
	comp=Z,750nm,7.5s						
DHRM	DHARAMSHALA	6.48	235	eS	Pb	21 08 28.6	-4.0
SMLA	Simla	6.72	224	eS	Pb	21 08 22.4	+4.0
SMLA	Simla	6.72	224	ex	Pb	21 08 29.0	-7.6
PRZ	Przheval'sk	7.12	334	Pn	Pn	21 08 26.4	+2.3
KDJ	Kajisay	7.31	327	Pn	Pn	21 08 27.1	+0.5
NRN	Naryn	7.37	318		Pn	21 08 28.4	+0.7
PDGK	Podgornoye	7.57	343	⇑Pn	Pn	21 08 29.9	-0.4
	9.7nm,0.6s						
PDGK				⇑Sn	Sn	21 09 54.9	-1.3
	74nm,0.7s						
PDGK				⇓Lg	Lg	21 10 38.8	
	141nm,0.8s						
DANN	Dangsing	7.82	172	eP	Pn	21 08 32.6	-1.2
	8.2nm,0.5s						
NIL	Nilore	8.04	255		Pn	21 08 38.5	+1.8
MDOK	Medeo	8.21	330	Pn	Pn	21 08 38.0	-1.1
	7.4nm,0.7s						
MDOK				Pg	Pb	21 09 08.8	+6.7
	9.7nm,0.6s						
MDOK				Lg	Lg	21 10 56.7	
	61nm,0.8s						
GKN	Gorkha	8.29	167	eP	Pn	21 08 41.4	+1.3
KNDC	Almaty	8.29	330	⇑Lg	Lg	21 11 01.5	
KOLN	Koldanda	8.38	174	eP	Pn	21 08 40.8	-0.6
	14nm,0.7s						
KKN	Kakani	8.62	164	eP	Pn	21 08 46.4	+1.6
	4.9nm,0.5s						
WMQ	Urumqi	8.63	26	eP	Pn	21 08 47.6	+2.9
WMQ				S	Sn	21 10 18.4	-3.7
WMQ				smax	smax		
	comp=N,33nm,1.1s						
WMQ				smax	smax		
	comp=E,25nm,1.1s						
WMQ	Urumqi	8.63	26		Pn	21 08 44.0	-0.7
GUN	Gumba	8.66	160	eP	Pn	21 08 45.7	+0.3
	30nm,1.0s						
DMN	Daman	8.76	165	eP	Pn	21 08 47.0	+0.3
	9.6nm,0.5s						
PKIN	Phulchoki	8.86	163	eP	Pn	21 08 49.0	+1.0
	13nm,0.6s						
PKI	Pulchoki	8.87	163	eP	Pn	21 08 48.8	+0.6
	11nm,0.5s						
JIRN	Jiri	8.98	159	eP	Pn	21 08 50.6	+0.7
	22nm,0.5s						
AAK	Ala-Archa	9.02	319	Pn	Pn	21 08 50.7	+0.7
	0.2nm,0.3s,baz=145,slow=9.7,SNR=17						
AAK				Pg		21 09 22.5	
	0.6nm,0.3s,baz=144,slow=16,SNR=7.9						
AAK				Lg	Lg	21 11 17.3	
	0.2nm,0.3s,baz=228,slow=24,SNR=2.5						
AAK	Ala-Archa	9.02	319	⇑Pn	Pn	21 08 49.7	-0.4
	6.5nm,0.8s						
AAK				⇓Pg		21 09 22.6	
	13nm,1.1s						
AAK				⇓Lg	Lg	21 11 23.1	
	50nm,1.1s						
FRU1	Bishkek	9.06	320	Pn	Pn	21 08 51.2	+0.6
LSA	Lhasa	9.64	129	Pn	Pn	21 09 01.8	+2.8
RAMN	Ramite	9.77	158	eP	Pn	21 08 58.6	-2.0
	22nm,0.9s						
TAPN	Taplejung	9.78	152	eP	Pn	21 08 59.5	-1.2
	6.3nm,0.7s						
BTK	Batken	10.06	296		Pn	21 09 04.5	+0.3
ODAN	Odare	10.11	155	eP	Pn	21 09 03.5	-1.7
	9.4nm,0.6s						
MK31	Makanchi Array	10.66	359	Pn	Pn	21 09 12.2	-0.2
	2.6nm,0.5s,baz=181,slow=12,SNR=127						
MK31				⇑Sn	Sn	21 11 09.2	-2.6
	4.3nm,0.6s,baz=182,slow=24,SNR=6.1						
MK31	Makanchi Array	10.66	359		Pn	21 09 13.0	+0.6
MKAR	Makanchi Array	10.66	359	Pn	Pn	21 09 12.9	+0.5
	1.0nm,0.3s,baz=184,slow=12,SNR=73						
MKAR				Sn	Sn	21 11 05.5	-6.3
	0.9nm,0.3s,baz=181,slow=23,SNR=2.9						
MKAR				Lg	Lg	21 12 14.9	
	0.4nm,0.3s,baz=185,slow=28,SNR=1.3						
MKAR				LR	LR	21 14 13.9	
	comp=Z,48nm,18.2s,baz=170,slow=42						
MKAR	Makanchi Array	10.66	359		Pn	21 09 11.8	-0.6
MAKZ	Makanchi	10.68	358	⇑Pn	Pn	21 09 12.3	-0.4
	7.7nm,0.6s						
MAKZ				⇑Sn	Sn	21 11 12.5	+0.1
	10.0nm,0.8s						
MAKZ	Makanchi	10.68	358		Pn	21 09 13.0	+0.3
KBL	Kabul	11.16	266		Pn	21 09 20.4	+0.8
KK31	Karatay Array	11.61	311	⇓Pn	Pn	21 09 25.8	+0.4
	0.5nm,0.5s,baz=129,slow=13,SNR=5.8						
KK31				⇑Pg		21 10 09.8	
	3.7nm,0.8s,baz=151,slow=14,SNR=3.6						
KK31				⇑Lg	Lg	21 12 45.6	
	6.2nm,0.8s,baz=132,slow=28,SNR=3.9						
KK31	Karatay Array	11.61	311		Pn	21 09 25.3	-0.1
KKAR	Karatay Array	11.61	311	Pn	Pn	21 09 24.6	-0.9
KKAR	Karatay Array	11.61	311		Pn	21 09 24.8	-0.7
KURBB	Kurchatov Arra	14.78	350	Pn	Pn	21 10 06.6	-2.0
	0.0nm,0.3s,baz=173,slow=12,SNR=5.8						
KURBB				Lg	Lg	21 14 27.0	
	0.0nm,0.3s,baz=163,slow=26,SNR=4.2						
KURBB	Kurchatov Arra	14.78	350	⇑Pn	Pn	21 10 07.6	-1.0
	2.3nm,0.8s						
KURK	Kurchatov	14.86	350		Pn	21 10 08.2	-1.5
HRA	Herat	16.69	270		Pn	21 10 33.4	-0.5
LZH	Lanzhou	17.19	84	eP	P	21 10 42.1	+0.4
LZH				pP	pP	21 10 45.8	-0.1
LZH				sP	sP	21 10 49.3	+1.5
LZH				ePP	PnPn	21 10 55.8	+5.9
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,73nm,4.9s						
LZH				LR	LR		
	comp=N,330nm,12.1s						
LZH				LR	LR		
	comp=E,280nm,11.6s						
LZH				LR	LR		
	comp=Z,390nm,14.3s						
ZAA0	Zalesovo Array	17.89	4	P	Pn	21 10 46.2	-2.3
ZALV	Zalesovo Beam	17.89	4	P	Pn	21 10 46.1	-2.3
	0.4nm,0.3s,baz=191,slow=12,SNR=42						
ZALV				LR	LR	21 18 08.8	
	comp=Z,53nm,19.3s,baz=188,slow=38						
ZALV	Zalesovo Beam	17.89	4		Pn	21 10 45.3	-3.1
BVAR	Borovoye Array	18.95	337	P	Pn	21 11 01.5	+0.1
	1.4nm,0.3s,baz=138,slow=9.0,SNR=60						
BRVK	Borovoye	19.01	337	⇑Pn	P	21 11 01.6	+0.2
	7.3nm,0.6s						
BRVK	Borovoye	19.01	337	P	Pn	21 11 02.8	+0.7
BRVK				IAmb	IAmb	21 11 04.6	
	comp=Z,11nm,0.6s						
GEYT	Alibeck	19.59	283	P	P	21 11 07.5	-0.5
	comp=Z,0.1nm,0.3s,baz=91,slow=12,SNR=6.2						
GEYT				LR	LR	21 20 42.8	
	comp=Z,46nm,18.5s,baz=225,slow=43						
GEYT	Alibeck	19.59	283	P	Pn	21 11 09.3	0.0
GYA0B	ALIBECK ARRAY	19.59	283	P	Pn	21 11 09.3	0.0
GYA0B				IAmb	IAmb	21 11 12.9	
	comp=Z,5.4nm,0.8s						
AB31	Akbulak array	21.08	316	P	P	21 11 23.4	-0.7
	comp=Z,6.4nm,0.8s,baz=116,slow=10,SNR=24						
ABKAR	Akbulak array	21.08	316	P	P	21 11 23.9	-0.1
SONM	Songino Array	21.13	49	P	P	21 11 26.5	+1.7
	comp=Z,5.1nm,1.0s,baz=242,slow=9.3,SNR=31						
SONM				LR	LR	21 19 44.9	
	comp=Z,48nm,19.2s,baz=170,slow=37						
SONM	Songino Array	21.13	49	P	P	21 11 26.6	+1.9
TLY	Talaya	21.61	37	LR	LR	21 20 43.1	
	comp=Z,49nm,19.8s,baz=260,slow=39						
TLY	Talaya	21.61	37	P	P	21 11 24.8	-5.0
TLY				IAmb	IAmb	21 11 25.9	
	comp=Z,3.1nm,0.5s						
AKTO	Aktyubinsk	22.75	317	P	P	21 11 41.6	-0.3
	comp=Z,2.2nm,0.9s,baz=106,slow=11,SNR=3.7						
AKTO	Aktyubinsk	22.75	317	⇑P	P	21 11 41.0	-1.0
	comp=Z,6.2nm,1.1s						
CMAR	Chiang Mai Arr	22.78	136	P	P	21 11 42.3	-0.1
	comp=Z,0.8nm,0.9s,baz=303,slow=12,SNR=6.7						
HHC	Hu-ho-hao-te	23.13	69	eP	P	21 11 47.4	+1.4
HHC				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,37nm,5.1s						
WSAR	Wadi Sarin	24.37	245	LR	LR	21 22 53.8	
	comp=Z,50nm,20.1s,baz=18,slow=40						
ARU	Arti	25.98	329	P	P	21 12 13.1	+0.8
	comp=Z,0.7nm,0.5s,baz=310,slow=4.4,SNR=5.2						
ARU	Arti	25.98	329	P	P	21 12 13.0	+0.7
ARU				IAmb	IAmb	21 12 17.5	
	comp=Z,2.6nm,0.8s						
YULB	Yu-li	35.71	100	P	P	21 13 39.5	+1.0
OBN	Obninsk	36.53	316	P	P	21 13 44.8	-0.3
KLR	Kul'dur	37.80	54	LR	LR	21 30 38.6	
	comp=Z,66nm,20.0s,baz=50,slow=38						
BRTR	Keskin Array B	38.38	291	P	P	21 14 00.2	-1.1
	comp=Z,1.0nm,0.9s,baz=74,slow=5.5,SNR=5.5						
BRTR	Keskin Array B	38.38	291	P	P	21 14 00.6	-0.7
AKASG	Malin Array Be	40.50	308	P	P	21 14 19.0	+0.4
	comp=Z,0.3nm,0.4s,baz=75,slow=8.7,SNR=2.0						
AKASG				LR	LR	21 33 58.0	
	comp=Z,52nm,19.4s,baz=295,slow=40						
AKASG	Malin Array Be	40.50	308	IAmb	IAmb	21 14 21.6	
	comp=Z,0.9nm,1.1s						
MLR	Muntele Rosu	43.07	301	P	P	21 14 41.0	+1.1
MLR				IAmb	IAmb	21 14 45.5	
	comp=Z,5.9nm,1.1s						
FIA1	FINESS Array S	43.15	324	P	P	21 14 42.0	+1.9
FIA1				IAmb	IAmb	21 14 45.4	
	comp=Z,5.2nm,1.1s						
FINES	FINESS Array B	43.15	324	P	P	21 14 40.9	+0.8
	comp=Z,3.2nm,0.9s,baz=104,slow=8.0,SNR=5.9						
FINES	FINESS Array B	43.15	324	P	P	21 14 41.2	+1.1
BURAR	Bucovina Array	43.30	304	P	P	21 14 43.8	+2.1
ARCES	ARCESS Array B	45.23	335	P	P	21 14 57.6	+1.0
	comp=Z,2.0nm,1.0s,baz=96,slow=9.2,SNR=1.2						
NOA	NORSAR Array B	50.30	323	P	P	21 15 35.6	-0.5
	comp=Z,0.9nm,0.8s,baz=85,slow=7.5,SNR=2.6						
GERES	GERESS Array B	50.69	307	P	P	21 15 39.9	+0.5
	comp=Z,1.1nm,0.8s,baz=52,slow=5.3,SNR=2.6						
ILAR	Eielson Array	72.25	20	P	P	21 18 07.0	+2.2
	comp=Z,1.0nm,1.1s,baz=301,slow=3.4,SNR=4.9						
WRA	Warramunga Arr	74.20	130	P	P	21 18 15.7	-1.2
	comp=Z,0.6nm,0.9s,baz=327,slow=5.6,SNR=2.6						
TORD	Torodi Ar. Bea	75.06	275	P	P	21 18 21.5	-0.5
	comp=Z,0.8nm,0.8s,baz=36,slow=5.1,SNR=4.5						
ASAR	Alice Springs	76.73	133	P	P	21 18 29.9	-1.4
	comp=Z,0.5nm,0.8s,baz=313,slow=5.2,SNR=4.9						
YKA	Yellowknife Ar	80.75	8	P	P	21 18 52.5	-0.4
	comp=Z,0.4nm,0.7s,baz=336,slow=5.5,SNR=6.5						

*IDC **13** 21:08:47.5±2.7, 23.00S×68.35W, h0km, mb4.0/2, mb1 4.3/3, mb1mx3.9/20, mbtmp4.1/3, ML4.5/1, Error ellipse: s-maj=85.8km s-min=51.5km az=55.0*
*SJA **13** 21:09:13.4±1.2, 21.22S×67.85W, h156km±13km, ML3.2, MW3.3*
*GUC **13** 21:09:14.1±0.8, 21.18S×68.27W, h186km±5km, ML3.6*
ISC 13 21:09:13.8±0.9, **21.23S**±0.04×**68.05W**±0.10, **h180km**±9km, **n39, σ0.89**/63, **9C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.24	243	eP	Pn	21 09 44.1	+0.5
PB09				i S	Sn	21 10 07.2	+0.6
PB09	IPOC Station P	1.24	243	i P	Pn	21 09 44.5	+0.9
PB09				i S	Sn	21 10 07.1	+0.4
PB09				IAML		21 10 08.5	
	comp=Z,103nm,0.4s						
PB01	IPOC Station P	1.35	277	⇑eP	Pn	21 09 44.5	0.0
PB01				eS	Sn	21 10 07.1	-1.0
PB01				IAML		21 10 11.0	
	comp=E,508nm,0.2s						
PB08	IPOC Station P	1.49	316	⇑iP	Pn	21 09 46.6	+0.5
PB08				i S	Sn	21 10 11.0	-0.1
PB08				IAML		21 10 11.9	
	comp=N,560nm,0.3s						
PB02	IPOC Station P	1.72	267	⇑eP	Pn	21 09 48.5	+0.4
PB02				i S	Sn	21 10 13.4	-1.1
PB02				IAML		21 10 16.3	
	comp=E,712nm,0.1s						
PB02	IPOC Station P	1.72	267	eP	Pn	21 09 48.8	+0.7
PB02				i S	Sn	21 10 14.3	-0.1
PB07	IPOC Station P	1.78	253	eP	Pn	21 09 49.3	+0.6
PB07				i S	Sn	21 10 14.9	-0.7
PB07				IAML		21 10 17.3	
	comp=E,346nm,0.2s						
PB03	IPOC Station P	1.78	242	eP	Pn	21 09 49.4	+0.7
PB03				i S	Sn	21 10 15.6	-0.1
PB03				IAML		21 10 16.6	
	comp=N,226nm,0.2s						
PB03	IPOC Station P	1.78	242	eP	Pn	21 09 49.4	+0.7
PB03				i S	Sn	21 10 15.4	-0.3
GO01	Chusmiza	1.88	325	⇑iP	Pn	21 09 50.3	+0.2
GO01				i S	Sn	21 10 18.4	+0.2
GO01				IAML		21 10 23.4	
	comp=E,601nm,0.1s						
PATCX	Punta Patache	2.00	281	⇑eP	Pn	21 09 50.9	-0.1
PATCX				i S	Sn	21 10 18.4	-1.3
PATCX				IAML		21 10 21.6	
	comp=N,516nm,0.2s						
PATCX	Punta Patache	2.00	281	i P	Pn	21 09 51.6	+0.7
PATCX				i S	Sn	21 10 19.8	+0.1
PB06	IPOC Station P	2.04	223	eP	Pn	21 09 52.0	+0.6
PB06				i S	Sn	21 10 20.9	+0.2
PB06				IAML		21 10 21.8	
	comp=E,327nm,0.5s						
PB06	IPOC Station P	2.04	223	i P	Pn	21 09 52.4	+1.0
PB06				i S	Sn	21 10 20.5	-0.2
PB06				IAML		21 10 21.6	
	comp=Z,152nm,0.2s						
PB11	IPOC Station P	2.09	314	⇑eP	Pn	21 09 51.9	-0.2
PB11				i S	Sn	21 10 20.7	-1.0
TA01	Diego Aracena	2.10	288	eP	Pn	21 09 51.7	-0.2
TA01				eS	Sn	21 10 19.7	-1.7
TA01				IAML		21 10 22.6	
	comp=E,458nm,0.2s						
PB04	IPOC Station P	2.24	240	eP	Pn	21 09 53.6	0.0
PB04				i S	Sn	21 10 24.2	-0.4
PB04				IAML		21 10 28.3	
	comp=E,145nm,0.6s						
PB04	IPOC Station P	2.24	240	i P	Pn	21 09 54.7	+1.1
PB04				IAML		21 10 27.3	
	comp=Z,98nm,0.1s						
PB15	IPOC Station P	2.37	213	⇑iP	Pn	21 09 56.5	+1.3
PB15				i S	Sn	21 10 28.4	+1.0
PB15	IPOC Station P	2.37	213	i P	Pn	21 09 56.4	+1.3
PB15				i S	Sn	21 10 28.0	+0.5
PSGC	Pisagua	2.53	309	eP	Pn	21 09 56.5	-0.4
PSGC				i S	Sn	21 10 28.9	-1.6
PSGC				IAML		21 10 33.6	
	comp=N,164nm,0.5s						
MNMC	Minye Minye	2.54	325	⇑iP	Pn	21 09 57.9	+0.6
MNMC				i S	Sn	21 10 30.9	-0.1
MNMCX	Minye Minye	2.54	325	eP	Pn	21 09 57.8	+0.6
MNMCX				i S	Sn	21 10 31.0	0.0
YJA	Yavi	2.54	112	⇓iP	Pn	21 09 55.6	-1.8
YJA				i S	Sn	21 10 25.6	-5.7
PB05	IPOC Station P	2.57	231	eP	Pn	21 09 57.8	+0.4
PB05				i S	Sn	21 10 31.0	-0.4
PB05				IAML		21 10 35.4	
	comp=N,83nm,0.3s						
PB05	IPOC Station P	2.57	231	i P	Pn	21 09 58.3	+1.0
PB05				i S	Sn	21 10 30.5	-0.8
PB16	IPOC Station P	3.19	334	⇑iP	Pn	21 10 06.2	+0.9
PB16				i S	Sn	21 10 46.3	+1.0
PB16				IAML		21 10 48.1	
	comp=N,70nm,0.6s						
PB10	IPOC Station P	3.25	225	i P	Pn	21 10 05.8	+0.4
PB10				i S	Sn	21 10 45.1	-0.7
AZAP	Zapla	4.06	138	i P	Pn	21 10 14.0	-1.9
SLA	San Lorenzo	4.20	146	i P	Pn	21 10 17.2	-0.3
ASTB	Santa Barbara	4.29	130	i P	Pn	21 10 16.1	-2.7
ASTB				i S	Sn	21 11 02.2	-7.4
LPAZ	La Paz	4.91	359	Pn	Pn	21 10 27.9	+0.6
	comp=N,4.8nm,0.3s,baz=188,slow=2.8,SNR=80						
AHML	Horco Molle	6.07	156	i P	Pn	21 10 41.2	-0.5
ACCO	Cerro Coronel	9.37	185	i P	Pn	21 11 24.6	-0.7
RTLL	Cerro Villicun	10.07	182	i P	Pn	21 11 32.7	-1.5
ACAN	Cantantal	11.03	176	i P	Pn	21 11 45.9	-0.9
TORD	Torodi Ar. Bea	76.51	70	P	P	21 20 44.4	-0.1
	comp=N,0.8nm,0.6s,baz=232,slow=5.4,SNR=5.9						
YKA	Yellowknife Ar	91.20	340	P	P	21 22 00.4	+2.5
	comp=N,0.4nm,0.6s,baz=133,slow=4.4,SNR=8.0						
MKAR	Makanchi Array	144.94	36	PKPbc	PKiKP	21 28 31.4	-2.0
	comp=N,0.6nm,0.7s,baz=309,slow=3.0,SNR=7.4						

*ISK **13** 21:23:24.9, 41.11N×34.47E, h7km, ML3.5/16*
*IDC **13** 21:23:24.9±0.8, 41.09N×34.37E, h0km, mb3.6/6, mb1 3.7/10, mb1mx3.4/49, mbtmp3.6/10, ML3.5/4, Error ellipse: s-maj=13.5km s-min=8.3km az=94.0*
*IASPEI **13** 21:23:25.4±0.9, 41.09N±0.03×34.45E±0.02, h12km±6km, mb3.7/5, Error ellipse: s-maj=4.7km s-min=3.1km az=9.5, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and*

McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009

DDA 13 21:23:25.2, 41.°07N×34.°45E, h10km, MW3.6

ISC 13 21:23:25.8±0.8, 41.°12N±0.°02×34.°45E±0.°02, h13km±5km, n109, σ1.°74/144, mb3.7/5, 19C-2D, Turkey

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KAGI orum-Kargı 0.03 43 i P Pg 21 23 28.0 -0.3
KAGI i S Sg 21 23 29.2 -0.8
TOS Tosya 0.34 256 PG Pg 21 23 32.1 -0.5
TOS SG Sg 21 23 37.1 -0.2
CTAK Corum_Osmancik 0.54 151 i P Pg 21 23 35.7 -0.7
CTAK i S Sg 21 23 42.8 -0.7
CTAK IAML 21 23 46.0
comp=E,3μm,0.6s
CTAK IAML 21 23 46.0
comp=N,3μm,0.3s
KAST KASTAMONU 0.54 314 i P Pg 21 23 36.8 +0.3
KAST IAML 21 23 48.0
comp=E,2μm,0.3s
ILGA Ilgaz 0.56 264 i P Pg 21 23 36.5 -0.3
ILGA i S Sb 21 23 44.2 -1.3
ILGA IAML 21 23 46.0
comp=E,3μm,1.0s
ILGA IAML 21 23 47.0
comp=N,2μm,0.6s
KMON Kastamonu 0.57 297 PG Pb 21 23 37.2 -0.4
KMON SG Sb 21 23 45.2 -0.4
PELI Kastamonı-Ara 0.88 282 i P Pg 21 23 42.4 -0.5
PELI IAML 21 23 54.0
comp=N,2μm,0.3s
PELI i S Sb 21 23 54.1 -0.5
PELI IAML 21 23 55.0
comp=E,2μm,0.4s
CORM Corum 0.95 172 PG Pg 21 23 43.1 -1.0
CORM SG Sg 21 23 56.9 +0.4
COAL Corum-Alaca 0.95 155 i P Pg 21 23 42.7 -1.4
COAL i S Sg 21 23 55.8 -0.8
COAL IAML 21 23 58.0
comp=N,772nm,0.2s
COAL IAML 21 23 58.0
comp=E,796nm,0.2s
HAVZ Havza 0.96 92 i P Pg 21 23 43.3 -1.0
HAVZ i S Sg 21 23 57.1 +0.3
HAVZ IAML 21 23 59.0
comp=N,4μm,0.4s
HAVZ IAML 21 23 59.0
comp=E,3μm,0.4s
KAYA Kayacik-Havza(1.00 99 PG Pg 21 23 44.1 -0.9
KAYA SG Sg 21 23 58.2 +0.2
ELDT Eldivan 1.00 232 i P Pg 21 23 44.2 -0.8
ELDT IAML 21 24 02.0
comp=N,1μm,0.6s
YARM Yarimca-Ladik(1.06 100 PG Pg 21 23 45.2 -1.0
YARM SG Sg 21 24 00.1 +0.1
SINO SINOP_Merkez 1.06 32 i P Pg 21 23 46.3 +0.1
SINO IAML 21 24 04.0
comp=N,510nm,0.4s
AMSY Amasya-Merkez 1.15 114 i P Pg 21 23 46.6 -1.3
AMSY i S Sg 21 24 02.6 -0.4
HKOY Hamitkoy-Ladik 1.18 100 PN Pg 21 23 47.2 -1.4
DELI KIRIKKALE 1.19 200 i P Pg 21 23 46.8 -1.9
DELI i S Sg 21 24 01.8 -2.4
DELI IAML 21 24 02.0
comp=N,2μm,0.3s
DELI IAML 21 24 03.0
comp=E,1μm,0.6s
KUPE Kupecik-Ladik(1.23 101 PN Pg 21 23 48.2 -1.3
SAMS Samsun-Alacam 1.33 79 i P Pn 21 23 50.8 +0.8
SAMS i S Sb 21 24 08.7 +1.2
SAMS IAML 21 24 10.0
comp=N,850nm,0.2s
SAMS IAML 21 24 14.0
comp=E,964nm,0.4s
SAFT Safranbolu 1.34 276 PN Pn 21 23 50.5 +0.4
KBUK KARABUK-Merkez 1.38 276 i P Pn 21 23 51.1 +0.4
KBUK i S Sn 21 24 09.7 +0.8
KBUK IAML 21 24 14.0
comp=N,651nm,0.5s
CDAG Cicekdag 1.49 182 i P Pn 21 23 52.6 +0.3
CDAG i S Sn 21 24 12.3 +0.6
CDAG IAML 21 24 15.0
comp=N,830nm,0.6s
CDAG IAML 21 24 16.0
comp=E,1μm,0.5s
BRTR Keskin Array B 1.52 204 Pg Pn 21 23 52.8 0.0
comp=E,80nm,0.3s,baz=24,slow=14,SNR=54
BRTR Lg Lg 21 24 12.4
comp=E,79nm,0.3s,baz=37,slow=25,SNR=17
CMDR Camlidere-ANKA 1.62 248 i P Pn 21 23 54.7 +0.6
CMDR i S Sg 21 24 17.3 -0.8
CMDR IAML 21 24 20.0
comp=E,342nm,0.4s
CMDR IAML 21 24 21.0
comp=N,478nm,0.4s
GRDE Gerede-Bolu 1.73 260 PN Pn 21 23 56.4 +0.8
TOKA Tokat 1.73 117 i P Pn 21 23 57.2 +1.6
BTIN Bartın 1.74 288 i P Pb 21 23 57.9 +0.4
BTIN i S Sg 21 24 21.6 0.0
BTIN IAML 21 24 23.0
comp=E,990nm,0.6s
ANTO Ankara 1.78 226 PN Pn 21 23 56.6 +0.4
ERBA Erbaa 1.80 103 i P Pn 21 23 58.2 +1.7
ERBA i S Sn 21 24 22.1 +2.9
BCAM Yenicaga 1.83 261 i P Pn 21 23 57.6 +0.6
SIRC Yozgat 1.86 163 i P Pn 21 23 58.5 +1.1
SIRC i S Sn 21 24 21.8 +1.1
SIRC IAML 21 24 24.0
comp=N,341nm,0.4s
SIRC IAML 21 24 24.0
comp=E,325nm,0.5s
BBAL Bala 1.87 213 i P Pn 21 23 57.8 +0.3
BBAL i S Sb 21 24 24.1 +0.9
BBAL IAML 21 24 27.0
comp=E,484nm,0.8s
BBAL IAML 21 24 31.0
comp=N,406nm,0.6s
AFSR Afar-Bala (An 1.98 213 PN Pn 21 23 59.7 +0.7
KIRS Kırehir-Merke 2.02 192 i P Pn 21 24 00.2 +0.6
KIRS i S Sb 21 24 27.6 +0.1
KIRS IAML 21 24 28.0
comp=N,231nm,0.8s
KIRS IAML 21 24 30.0
comp=E,363nm,0.6s
KIBS BOLU 2.09 251 i P Pn 21 24 01.2 +0.6
KIBS i S Sg 21 24 33.9 +0.8
KIBS IAML 21 24 46.0
comp=E,278nm,1.0s
KIBS IAML 21 24 46.0
comp=N,189nm,0.6s
CUSAR Sarkisla-SIVAS 2.18 140 i P Pn 21 24 03.6 +1.7
CUSAR IAML 21 24 36.0
comp=E,382nm,0.5s
CUSAR IAML 21 24 37.0
comp=N,278nm,0.5s
YUVA Yuva-Kibriscik 2.22 252 PN Pn 21 24 03.3 +0.9
KKUL Konya-Kulu 2.27 212 i P Pn 21 24 03.7 +0.6
KKUL i S Sb 21 24 36.5 +1.8
KKUL IAML 21 24 39.0
comp=E,363nm,0.7s
KKUL IAML 21 24 41.0
comp=N,678nm,0.5s
YIGI Dzce 2.28 267 i P Pn 21 24 03.9 +0.9
KDZE Karadeniz Ereo 2.28 276 ⇑P Pb 21 24 07.3 +0.6
KDZE ⇑S Sg 21 24 39.4 +0.4
RSDY Resadiye-TOKAT 2.30 107 PN Pn 21 24 04.6 +1.2
AVNS Nevsehir-Avano 2.33 172 i P Pn 21 24 05.4 +1.5
AVNS i S Sn 21 24 34.1 +1.8
AVNS IAML 21 24 42.0
comp=N,698nm,0.5s
GUNE Kayseri 2.39 157 i P Pb 21 24 09.2 +0.5
GUNE i S Sb 21 24 40.5 +2.5
SCER sogukcermik 2.40 121 i P Pn 21 24 05.4 +0.6
SCER IAML 21 24 43.0
comp=N,323nm,0.5s
SCER IAML 21 24 46.0
comp=E,336nm,1.0s
AKSY AKSARAY - Alti 2.52 192 i P Pb 21 24 10.3 -0.6
AKSY i S Sn 21 24 39.2 +2.2
AKSY IAML 21 24 46.0
comp=N,273nm,0.7s
AKSY IAML 21 24 48.0
comp=E,150nm,0.9s
CUALT Altinyayla-SIV 2.55 136 i P Pn 21 24 09.5 +2.6
CUALT IAML 21 24 50.0
comp=E,356nm,0.7s
CUALT IAML 21 24 54.0
comp=N,226nm,0.9s
ORDU Ordu-Boztepe 2.58 92 i P Pn 21 24 08.5 +1.3
ORDU i S Sb 21 24 44.2 +0.8
ORDU IAML 21 24 48.0
comp=E,368nm,0.5s
ORDU IAML 21 24 51.0
comp=N,302nm,0.8s
BTAS Taskesti 2.67 259 i P Pn 21 24 08.8 +0.3
SAHE Sakarya_HENDEK 2.72 266 i P Pn 21 24 10.1 +0.7
AUSIV SIVRIHISAR 2.79 234 PN Pn 21 24 11.5 +1.4
SVRH Sivrihisar-ESK 2.79 234 PN Pn 21 24 11.6 +1.4
CUZAR Zara_SIVAS 2.81 115 i P Pn 21 24 12.3 +1.8
CUKAN kangal_SIVAS 2.93 127 i P Pn 21 24 13.9 +1.8
SUSE Susehri 2.99 106 i P Pn 21 24 16.8 +3.8
YAHY KAYSERI_Yahyal 3.10 167 i P Pb 21 24 19.3 -1.5
SRCK Saricakaya, Es 3.11 251 i P Pn 21 24 14.7 +0.3
CIFT Cifteler, Eski 3.13 237 i P Pn 21 24 12.8 -2.1
GEYV SAKARYA_Geyve 3.22 260 i P Pn 21 24 17.0 +1.0
KAND Kocaeli-Kandir 3.22 271 i P Pn 21 24 17.3 +1.4
CUGUR Gurin_SVAS 3.23 137 i P Pn 21 24 17.8 +1.6
BORA Eskisehir 3.29 249 i P Pn 21 24 17.0 -0.1
SAIM ADANA 3.38 158 i P Pn 21 24 20.2 +2.0
SEVA Sevastopol 3.46 351 ⇑P Pn 21 24 18.5 -0.8
ELBS KAHRAMANMARAS 3.47 143 i P Pn 21 24 21.5 +1.9
HEKM Malatya_Hekimh 3.50 129 i P Pn 21 24 21.2 +1.2
KONT Konya--Tatoy 3.56 208 i P Pb 21 24 29.5 +1.0
ARPR Arapgir-MALATY 3.60 123 PN Pn 21 24 22.6 +1.3
KEMA Kemaliye 3.60 120 i P Pb 21 24 26.7 -2.6
DOGA KONYA_Doganhis 3.70 216 i P Pn 21 24 22.5 -0.2
KERG Konya-Eregli 3.71 184 i P Pb 21 24 32.1 +0.9
REFA Refahiye_ERZN 3.72 116 i P Pn 21 24 20.9 -2.1
AKO Adana 3.73 168 i P Pb 21 24 30.9 -0.6
KELT Kelkit 3.78 103 i P Pb 21 24 32.5 +0.1
KELT i S Sb 21 25 21.3 +3.1
ANDN Andirin 3.83 157 i P Pb 21 24 34.5 +1.3
GULE Gulek 3.84 176 i P Pb 21 24 33.4 0.0
AYKD Aykdinkavak 4.12 153 i P Pb 21 24 36.6 -1.6
KAMA Osmaniye 4.29 156 i P Pb 21 24 41.9 +0.9
GDZ Gediz 4.32 244 i P Pb 21 24 44.1 +2.6
PSN Preselentsi 5.30 301 eP Pn 21 24 25.4 -19
PSN S Sn 21 25 43.4 -2.1
MFTR Murfatlar 5.40 307 ⇑P Pn 21 24 47.7 +1.8
BCA Borcka 5.41 84 ⇑P Pn 21 24 42.7 -3.4
BCA ⇑S Sn 21 25 44.8 -3.4
JURR Jurilovca 5.48 314 ⇑P Pn 21 24 47.4 +0.4
TIRR Tirgusor 5.56 309 ⇓P Pn 21 24 48.6 +0.6
TIRR Tirgusor 5.56 309 eP Pn 21 24 47.1 -1.0
TIRR S Sn 21 25 44.2 -7.5
NEF NEVSHA 5.75 294 eP Pn 21 24 52.7 +2.0
NEF S Sn 21 25 50.5 -6.0
TOPG Topolog 5.83 312 ⇑P Pn 21 24 52.6 +0.8
HARR Harsova 5.97 309 ⇑P Pn 21 24 55.3 +1.5
CFR Carcaliu 6.15 313 ⇑P Pn 21 24 56.1 -0.1
SZH Strazhica 6.68 292 i P Pn 21 25 03.3 -0.2
SZH S Sn 21 26 12.7 -6.8
KBZ Khabaz 6.77 65 Pn Pn 21 25 09.2 +4.4
comp=N,0.1nm,0.3s,baz=7.8,slow=20,SNR=2.9
AKH Akhalkalaki 6.82 85 ⇑P Pn 21 25 03.1 -2.5
MILM Milestii Mici 7.08 327 ⇑P Pn 21 25 08.9 -0.1
VRI Vrincioaia 7.35 313 ⇑P Pn 21 25 12.7 0.0
PLOR Plostina 7.39 312 ⇑P Pn 21 25 14.5 +1.3
MLR Muntele Rosu 7.59 308 Pn Pn 21 25 18.1 +2.0
comp=N,0.3nm,0.3s,baz=155,slow=12,SNR=6.0
MLR Sn Sn 21 26 42.0 +0.1
comp=N,0.2nm,0.3s,baz=149,slow=13,SNR=1.5
MLR Muntele Rosu 7.59 308 ⇑P Pn 21 25 17.8 +1.7
TESR Tescani 7.80 316 ⇑P Pn 21 25 19.1 +0.2
VOIR 8.10 305 ⇓P Pn 21 25 25.0 +1.9
MMAI Mount Meron Ar 8.12 174 Pn Pn 21 25 23.4 +0.1
comp=N,0.7nm,0.3s,baz=354,slow=13,SNR=5.8
DOPR Dopca 8.17 309 ⇑P Pn 21 25 25.3 +1.3
SORM Soroca 8.25 330 ⇑P Pn 21 25 24.0 -1.0
BURAR Bucovina Array 9.27 318 ⇑P Pn 21 25 39.1 0.0
AKASG Malin Array Be 10.25 341 Pn Pn 21 25 51.0 -1.4
comp=N,3.0nm,0.3s,baz=163,slow=12,SNR=11
AKASG Sn Sn 21 27 42.1 -5.0
comp=N,1.6nm,0.3s,baz=156,slow=24,SNR=7.6
FINES FINESS Array B 20.98 349 P P 21 28 10.6 +2.2
comp=N,5.6nm,1.1s,baz=165,slow=12,SNR=2.3
ARU Arti 21.90 37 P P 21 28 21.5 +3.2
comp=N,0.4nm,0.4s,baz=256,slow=4.8,SNR=4.7
HFS Hagfors 22.96 333 P P 21 28 31.2 +1.6
comp=N,2.9nm,1.0s,baz=148,slow=8.5,SNR=0.9
ARCES ARCESS Array B 28.87 353 P P 21 29 24.2 +0.6
comp=N,2.7nm,1.1s,baz=161,slow=5.7,SNR=1.4
MKAR Makanchi Array 34.47 64 P P 21 30 13.6 +0.5
comp=N,0.1nm,0.6s,baz=308,slow=7.1,SNR=1.3
TORD Torodi Ar. Bea 39.91 235 P P 21 30 59.6 0.0
comp=N,1.4nm,0.8s,baz=38,slow=8.1,SNR=7.3

IDC 13 21:34:30.8±6.3, 10.°07S×165.°12E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.5/31, mbtmp3.7/3, Error ellipse: s-maj=339.8km s-min=35.7km az=138.0, Santa Cruz Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 31.25 248 P P 21 40 52.8 +0.2
1.2nm,0.7s,baz=81,slow=8.8,SNR=8.9
ASAR Alice Springs 32.69 242 P P 21 41 04.8 -0.3
0.4nm,0.7s,baz=61,slow=10,SNR=5.6
ILAR Eielson Array 82.80 19 P P 21 46 56.5 0.0
0.7nm,1.1s,baz=216,slow=6.0,SNR=2.2

IDC 13 21:37:18.6±0.8, 35.°98N×82.°44E, h0km, mb3.8/13, mb1 3.9/18, mb1mx3.7/48, mbtmp3.8/18, ML3.5/5, MS3.4/17, Ms1 3.4/17, ms1mx3.2/41, Error ellipse: s-maj=20.6km s-min=15.0km az=38.0

BJI 13 21:37:21.1±0.0, 36.°02N×82.°42E, h5km, mB4.3/7, mb3.9/17, ML4.2/17, Ms4.0/9, Ms7 3.8/6

NEIC 13 21:37:24.1±1.8, 36.°30N±0.°08×82.°28E±0.°08, h16km±5km, mb4.2/15, Error ellipse: s-maj=12.6km s-min=8.0km az=145.0

ISC 13 21:37:20.5±0.5, 36.°06N±0.°06×82.°53E±0.°06, h10km, n83, σ1.°87/74, mb3.7/17, MS3.2/13, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JOSI Joshimath 6.03 205 eS Pn 21 38 52.8 +2.8
KSH Kashi 6.23 306 Pn Pn 21 38 56.4 +3.7
KSH Sn Sn 21 40 06.3 +2.3
KSH smax smax
comp=N,740nm,0.8s
KSH smax smax
comp=E,900nm,1.1s
KSH LR LR
comp=Z,840nm,4.1s
DHRM DHARAMSHALA 6.42 235 eS Pn 21 39 02.0 +6.8
KDJ Kajisay 7.35 327 Pn Pn 21 39 06.2 -1.8
NRN Naryn 7.40 318 Pn Pn 21 39 04.0 -4.9
DANN Dangsing 7.76 172 eP Pn 21 39 11.6 -2.2
15nm,0.7s
NIL Nilore 8.00 255 Pn Pn 21 39 18.8 +1.9
GKN Gorkha 8.23 167 eP Pn 21 39 18.4 -1.8
10nm,0.5s
KOLN Koldanda 8.32 173 eP Pn 21 39 19.7 -1.7
14nm,0.5s
KKN Kakani 8.57 163 eP Pn 21 39 24.0 -0.9
17nm,0.8s
GUN Gumba 8.61 160 eP Pn 21 39 24.8 -0.7
55nm,0.9s
WMQ Urumqi 8.70 26 eP Pn 21 39 30.9 +4.5
WMQ smax smax
comp=N,34nm,1.3s
WMQ smax smax
comp=E,20nm,1.5s
DMN Daman 8.71 165 eP Pn 21 39 26.6 -0.2
23nm,0.9s
PKIN Phulchoki 8.80 163 eP Pn 21 39 26.8 -1.3
19nm,0.6s
PKI Pulchoki 8.81 163 eP Pn 21 39 26.7 -1.6
12nm,0.5s
JIRN Jiri 8.94 159 eP Pn 21 39 29.2 -0.8
40nm,0.7s
AAK Ala-Archa 9.04 319 Pn Pn 21 39 33.4 +2.2
0.2nm,0.3s,baz=93,slow=8.9,SNR=9.8
AAK Pg 21 40 03.1
0.6nm,0.3s,baz=142,slow=9.6,SNR=8.1
AAK Lg Lg 21 41 57.2
0.5nm,0.3s,baz=26,slow=23,SNR=3.9
AAK LR LR 21 43 24.6
comp=Z,118nm,18.5s,baz=126,slow=40
AAK Ala-Archa 9.04 319 Pn Pn 21 39 30.7 -0.6
FRU1 Bishkek 9.09 320 Pn Pn 21 39 30.9 -1.0
LSA Lhasa 9.63 129 P Pn 21 39 47.8 +8.2
RAMN Ramite 9.72 158 eP Pn 21 39 39.3 -1.4
51nm,1.1s
TAPN Taplejung 9.74 152 eP Pn 21 39 40.2 -0.8
20nm,1.0s
BTK Batken 10.06 297 Pn 21 39 43.9 -1.2
ODAN Odare 10.07 154 eP Pn 21 39 44.2 -1.2
42nm,0.9s
MK31 Makanchi Array 10.72 359 Pn 21 39 54.1 0.0
MKAR Makanchi Array 10.72 359 Pn Pn 21 39 54.1 +0.1
1.2nm,0.3s,baz=182,slow=14,SNR=70
MKAR Sn Sn 21 41 49.8 -4.3
0.4nm,0.3s,baz=183,slow=22,SNR=1.7
MKAR Lg Lg 21 43 02.1
baz=172,slow=28,SNR=2.4
MKAR LR LR 21 45 00.4
comp=Z,220nm,19.3s,baz=135,slow=43
MKAR Makanchi Array 10.72 359 Pn 21 39 53.4 -0.7
MAKZ Makanchi 10.74 358 Pn 21 39 54.5 +0.2
KBL Kabul 11.13 266 Pn 21 40 00.8 +0.9
TAS Tashkent 11.60 301 Pn Pn 21 40 04.8 -1.2
KK31 Karatay Array 11.63 311 Pn Pn 21 40 05.3 -1.3
KKAR Karatay Array 11.63 311 Pn Pn 21 40 05.7 -0.8
SHL Shillong 13.18 140 Pn P 21 40 34.1 -3.9
GTA Gaotai 14.08 71 eP P 21 40 47.1 -0.8
GTA pP Pn 21 40 51.9 +12
GTA sP 21 40 55.0
GTA pmax pmax
comp=Z,1.0nm,1.5s
KURBB Kurchatov Arra 14.84 350 Pn Pn 21 40 48.0 -2.2
0.0nm,0.3s,baz=173,slow=12,SNR=16
KURBB Lg Lg 21 45 23.3
0.0nm,0.3s,baz=180,slow=29,SNR=5.0
HRA Herat 16.66 270 Pn 21 41 12.4 -1.9
LZH Lanzhou 17.23 84 eP P 21 41 26.9 +3.9
LZH pP sP 21 41 30.9 +1.7
LZH sP pP 21 41 34.3 +7.1
LZH pmax pmax
comp=Z,18nm,1.2s
LZH pmax pmax
comp=Z,72nm,5.7s
LZH LR LR
comp=N,520nm,12.1s
LZH LR LR
comp=E,390nm,11.6s
LZH LR LR
comp=Z,420nm,14.5s
ZAA0 Zalesovo Array 17.95 4 P Pn 21 41 27.8 -2.3
ZAA0 IAmb IAmb 21 41 33.5
comp=Z,22nm,1.2s
ZALV Zalesovo Beam 17.95 4 P Pn 21 41 27.8 -2.3
comp=Z,0.1nm,0.3s,baz=188,slow=11,SNR=22
ZALV LR LR 21 49 22.8
comp=Z,116nm,18.6s,baz=182,slow=40
ZALV Zalesovo Beam 17.95 4 P Pn 21 41 26.6 -3.5
BVAR Borovoye Array 18.99 337 P P 21 41 42.2 +0.2
comp=Z,0.6nm,0.3s,baz=144,slow=9.1,SNR=36
BVAR Lg Lg 21 47 18.3
comp=Z,0.0nm,0.3s,baz=134,slow=21,SNR=2.2
BRVK Borovoye 19.05 337 P P 21 41 41.0 -1.7
BRVK IAmb IAmb 21 41 51.4
comp=Z,13nm,0.8s
GEYT Alibeck 19.58 283 P P 21 41 47.8 -0.9
comp=Z,0.2nm,0.3s,baz=108,slow=9.5,SNR=10
GEYT LR LR 21 50 54.9
comp=Z,101nm,19.4s,baz=25,slow=42
GEYT Alibeck 19.58 283 P P 21 41 47.7 -0.9
GYA0B ALIBECK ARRAY 19.58 283 P 21 41 46.5 -2.2
GYA0B IAmb IAmb 21 42 00.7
comp=Z,6.2nm,0.8s
ABKAR Akbulak array 21.11 316 P P 21 42 05.1 0.0
SONM Songino Array 21.20 49 P P 21 42 08.3 +2.0
comp=Z,13nm,0.9s,baz=241,slow=8.8,SNR=36
SONM LR LR 21 51 43.7
comp=Z,43nm,18.3s,baz=259,slow=41
SONM Songino Array 21.20 49 P P 21 42 10.2 +3.9
TLY Talaya 21.68 37 LR LR 21 51 01.2
comp=Z,92nm,19.8s,baz=232,slow=38
TLY Talaya 21.68 37 P P 21 42 13.1 +1.8
CMAR Chiang Mai Arr 22.75 136 P P 21 42 23.2 +0.3
comp=Z,0.6nm,0.7s,baz=313,slow=11,SNR=6.5
AKTO Aktyubinsk 22.78 317 P P 21 42 23.1 +0.1
comp=Z,3.1nm,0.8s,baz=108,slow=10.0,SNR=8.4
AKTO LR LR 21 52 19.4
comp=Z,67nm,20.4s,baz=115,slow=40
HHC Hu-ho-hao-te 23.18 69 eP P 21 42 31.3 +4.0
HHC pmax pmax
comp=Z,2.0nm,0.8s
HHC pmax pmax
comp=Z,87nm,8.6s
WSAR Wadi Sarin 24.31 245 LR LR 21 53 29.6
comp=Z,70nm,21.8s,baz=70,slow=40
ARU Arti 26.02 329 P P 21 42 54.0 +0.5
comp=Z,0.5nm,0.4s,baz=219,slow=10,SNR=3.6
ARU LR LR 21 53 58.2
comp=Z,61nm,18.1s,baz=109,slow=38
PALK Pallekele 28.71 184 LR LR 21 55 22.1
comp=Z,46nm,19.9s,baz=321,slow=38
KBZ Khabaz 31.12 297 LR LR 21 58 05.2
comp=Z,85nm,20.4s,baz=40,slow=40
RAYN Ar Rayn 34.28 259 P P 21 44 08.6 +1.5
RAYN IAmb IAmb 21 44 10.6
comp=Z,4.5nm,1.4s
SOCY Socotra 35.03 234 P P 21 44 13.4 -0.2
KSRS Korea Array 36.12 74 LR LR 22 00 40.2
comp=Z,59nm,18.3s,baz=333,slow=39
KLR Kul'dur 37.86 54 P P 21 44 37.8 +0.5
comp=Z,1.3nm,0.8s,baz=202,slow=19,SNR=2.1
USRK Ussuriysk Ar. 38.19 62 LR LR 22 03 31.4
comp=Z,38nm,20.2s,baz=298,slow=41
BR131 Keskin Array S 38.38 291 P P 21 44 41.9 -0.2
BRTR Keskin Array B 38.38 291 P P 21 44 40.2 -1.8
comp=Z,1.0nm,1.0s,baz=101,slow=6.7,SNR=5.6
BRTR Keskin Array B 38.38 291 P P 21 44 42.0 -0.1
MLR Muntele Rosu 43.08 301 P P 21 45 21.6 +0.8
MLR IAmb IAmb 21 45 21.8
comp=Z,7.5nm,1.4s
FIA1 FINESS Array S 43.19 324 P P 21 45 21.6 +0.4
FIA1 IAmb IAmb 21 45 22.3
comp=Z,15nm,1.2s
FINES FINESS Array B 43.19 324 P P 21 45 20.9 -0.3
comp=Z,1.5nm,0.7s,baz=116,slow=8.7,SNR=7.2
FINES FINESS Array B 43.19 324 P P 21 45 21.6 +0.4
BURAR Bucovina Array 43.31 304 P P 21 45 23.3 +0.7
INU Inuyama 43.75 74 P P 21 45 30.1 +4.0
ARCES ARCESS Array B 45.27 335 P P 21 45 37.9 +0.1
comp=Z,4.9nm,1.0s,baz=18,slow=5.4,SNR=3.5
VYHS Vyhne 47.43 306 eP P 21 45 53.3 -1.8
LEM Lembang 48.74 146 LR LR 22 09 27.5
comp=Z,81nm,18.5s,baz=224,slow=40
NOA NORSAR Array B 50.33 323 P P 21 46 16.4 -0.8
comp=Z,1.1nm,0.8s,baz=89,slow=4.3,SNR=2.9
NOA LR LR 22 09 51.6
comp=Z,61nm,18.1s,baz=250,slow=39
CLL Collm 50.65 310 eP P 21 46 20.0 +0.4
BMAR Burnt Mountain 70.86 17 P P 21 48 37.7 +0.5
ILAR Eielson Array 72.32 20 P P 21 48 46.1 +0.2
comp=Z,0.5nm,0.8s,baz=316,slow=5.0,SNR=5.3
ILAR LR LR 22 25 35.8
comp=Z,26nm,21.4s,baz=324,slow=40
TORD Torodi Ar. Bea 75.04 275 P P 21 49 02.9 +0.1
comp=Z,0.5nm,0.7s,baz=59,slow=5.4,SNR=3.4
ASAR Alice Springs 76.71 133 P P 21 49 11.1 -1.0
comp=Z,0.6nm,0.8s,baz=326,slow=6.5,SNR=5.6
SUCK Suckling Hills 76.91 22 P P 21 49 14.0 +1.4
YKA Yellowknife Ar 80.81 8 P P 21 49 33.6 -0.4
comp=Z,0.5nm,0.7s,baz=340,slow=5.2,SNR=9.5
DBIC Dimbokro 84.01 274 LR LR 22 30 48.9
comp=Z,43nm,20.2s,slow=38

SKHL 13 22:09:16.6±0.5, 44.°80N×147.°38E, h145km±5km, mb4.3/4, msh4.7/4

NEIC 13 22:09:18.8±2.0, 44.°94N±0.°08×147.°1E±0.°1, h161km±2km, mb4.2/18, Error ellipse: s-maj=13.4km s-min=10.7km az=138.0

IDC 13 22:09:18.4±1.7, 45.°00N×147.°12E, h154km±15km,

mb3.3/13, mb1 3.6/17, mb1mx3.3/41, mbtmp3.8/17, Error ellipse: s-maj=18.9km s-min=12.4km az=144.0
JMA 13 22:09:19.0±0.5, 44.73N×147.26E, h133km, M3.6
ISC 13 22:09:17.3±0.7, 44.85N±0.06×147.19E±0.06, h152km±6km, n85, σ1.33/95, mb3.8/21, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.61	51	iP	Pn	22 09 38.0	-1.4
KUR				AMB	AMB	22 09 38.0	
	110nm,0.3s						
KUR				eS	Sn	22 09 54.4	-2.0
KUR				A	A	22 09 58.0	
	130nm,0.5s						
KUR				A	A	22 09 58.0	
	137nm,0.5s						
YUK	Yuzh-Kuril'sk	1.25	230	iP	Pn	22 09 44.5	0.0
YUK				AMB	AMB	22 09 45.0	
	116nm,0.2s						
YUK				iS	Sn	22 10 05.0	-0.3
YUK				A	A	22 10 10.0	
	200nm,0.4s						
YUK				A	A	22 10 10.0	
	170nm,0.4s						
GRPR	Tuman	1.33	230	iP	Pn	22 09 45.0	-0.3
GRPR				AMB	AMB	22 09 46.0	
	115nm,0.5s						
GRPR				iS	Sn	22 10 08.0	+1.4
GRPR				A	A	22 10 13.0	
	150nm,0.4s						
GRPR				A	A	22 10 13.0	
	90nm,0.4s						
GLVR	Golovnino	1.63	228	iP	Pn	22 09 49.0	+0.6
GLVR				AMB	AMB	22 09 49.0	
	39nm,0.5s						
GLVR				iS	Sn	22 10 14.0	+1.8
GLVR				A	A	22 10 15.0	
	200nm,0.6s						
GLVR				A	A	22 10 15.0	
	150nm,0.6s						
JRA	Rausu	1.74	239	P	Pn	22 09 50.1	+0.5
NEM2	Nemuro 2	1.81	216	P	Pn	22 09 50.1	-0.3
NEM2				eS	Sn	22 10 13.7	-2.1
NMR	Nemuro--Hokkai	1.82	216	iP	Pn	22 09 50.0	-0.4
NMR				iS	Sn	22 10 14.0	-1.8
JNSB	Nemuroshibetsu	1.90	236	P	Pn	22 09 52.1	+0.7
JNK	Nakash	2.18	235	P	Pn	22 09 55.5	+0.8
JKHN	Kushirohamanak	2.29	220	P	Pn	22 09 56.2	+0.2
JKHN				eS	Sn	22 10 25.3	-0.5
JTKR	Abashiri--Toko	2.51	251	P	Pn	22 09 59.3	+0.7
JAK	Akkeshi	2.58	225	P	Pn	22 09 59.9	+0.4
JAK				eS	Sn	22 10 31.5	-0.6
JAR	Ashorobuto	2.91	239	P	Pn	22 10 05.9	+2.3
JSE	Soyaes	3.27	274	P	Pn	22 10 08.9	+0.7
JKK2	Kamakawa 2	3.33	255	P	Pn	22 10 10.3	+1.3
JKA	Kamikawa-asahi	3.37	259		Pn	22 10 11.0	+1.6
JKA					Sn	22 10 50.8	+1.1
ASAJ	Asahikawa	3.37	259	P	Pn	22 10 11.0	+1.6
	5.4nm,0.3s,baz=81,slow=19,SNR=37						
ASAJ				S	Sn	22 10 50.8	+1.1
	0.6nm,0.3s,baz=323,slow=7.7,SNR=4.0						
JCH	Churui	3.56	232	P	Pn	22 10 12.8	+0.9
JCH				eS	Sn	22 10 53.7	-0.5
JFR	Furan	3.72	245	P	Pn	22 10 16.8	+2.8
YSS	Yuzh-Sakhalins	3.74	306	eP	Pn	22 10 14.6	+0.4
YSS	Yuzh-Sakhalins	3.74	306	Pn	Pn	22 10 14.2	0.0
ERM	Erimo	4.08	227		Pn	22 10 20.8	+2.2
ERM					Sn	22 11 04.3	-2.0
JNBK	Urakawa-nobuka	4.12	233	P	Pn	22 10 19.2	0.0
JNBK				eS	Sn	22 11 03.9	-3.4
JKB	Kayabe	5.38	239	P	Pn	22 10 35.6	-0.1
JKB				eS	Sn	22 11 33.8	-3.1
JOT	Ohata	5.67	235	P	Pn	22 10 39.0	-0.7
JOT				eS	Sn	22 11 39.4	-4.6
SKR	Severo-Kuril's	8.38	43	eP	Pn	22 11 15.4	-0.1
PEA0B	Petropavlovsk-	10.76	36	Pn	Pn	22 11 46.4	-0.7
PETK	Petropavlovsk-	10.76	36	P	Pn	22 11 46.1	-1.0
	2.2nm,0.3s,baz=180,slow=12,SNR=20						
USRK	Ussuriysk Ar.	10.88	272	P	Pn	22 11 49.4	+0.7
	baz=80,slow=13,SNR=6.0						
USA0B	Ussuriysk Arra	10.88	272	Pn	Pn	22 11 48.8	+0.1
KLR	Kul'dur	11.41	298	P	Pn	22 11 56.7	+1.1
	0.1nm,0.3s,baz=110,slow=16,SNR=7.3						
KLR	Kul'dur	11.41	298	eP	Pn	22 11 56.4	+0.8
BMKR	Bomnak	15.38	316	eP	Pn	22 12 46.0	0.0
JOW	Kunigami	23.53	227	P	P	22 14 11.2	-2.5
SONM	Songino Array	28.09	291	P	P	22 14 54.6	-0.1
	0.2nm,0.3s,baz=88,slow=8.5,SNR=5.1						
TIXI	Tiksi	28.29	348	P	P	22 14 53.8	-2.2
TIXI				S	S	22 19 28.1	-2.5
NIKH	Nikolski High	29.61	58	P	P	22 15 08.4	+0.6
H11N2	WAKE ISLAND Hy	29.92	140	T	T	22 46 22.5	
	baz=333,slow=76,SNR=34						
H11N1	WAKE ISLAND Hy	29.93	140	T	T	22 46 34.2	
	baz=333,slow=76,SNR=26						
H11N3	WAKE ISLAND Hy	29.94	140	T	T	22 46 23.3	
	baz=333,slow=76,SNR=30						
H11S1	WAKE ISLAND Hy	30.91	142	T	T	22 47 32.4	
	baz=332,slow=74,SNR=37						
H11S3	WAKE ISLAND Hy	30.91	142	T	T	22 47 39.9	
	baz=332,slow=74,SNR=38						
H11S2	WAKE ISLAND Hy	30.93	142	T	T	22 47 40.4	
	baz=332						
IMAR	Indian Mountai	37.72	35	P	P	22 16 17.5	-0.3
SII	Sitkinak Islan	37.78	50	P	P	22 16 20.8	+2.3
OHAK	Old Harbor	38.18	49	P	P	22 16 22.3	+0.6
OHAK				IAmb	IAmb	22 16 30.3	
	comp=Z,4.3nm,0.8s						
PPLA	Purkeypile	38.31	40	P	P	22 16 23.5	+0.5
KDAK	Kodiak Island	38.49	48	P	P	22 16 24.4	+0.2
KDAK				IAmb	IAmb	22 16 31.8	
	comp=Z,15nm,1.1s						
KTH	Kantishna Hill	38.87	39	P	P	22 16 27.6	+0.1
KTH				IAmb	IAmb	22 16 29.6	
	comp=Z,5.3nm,1.0s						
MLY	Manley	38.94	37	P	P	22 16 28.6	+0.6
CNPM	China Poot	38.99	45	P	P	22 16 28.1	-0.3
SUA	Susitna One	39.05	42	P	P	22 16 29.1	0.0
SUA				IAmb	IAmb	22 16 29.7	
	comp=Z,5.6nm,1.0s						
BRLK	Bradley Lake	39.14	45	P	P	22 16 30.0	+0.3
BRLK				IAmb	IAmb	22 16 34.8	
	comp=Z,12nm,1.0s						
TRF	Thorofare Moun	39.16	39	P	P	22 16 29.9	-0.1
TRF				IAmb	IAmb	22 16 33.7	
	comp=Z,3.0nm,1.1s						
TOLK	Toolik Lake Re	39.53	31	P	P	22 16 34.6	+1.8
TOLK				IAmb	IAmb	22 16 36.2	
	comp=Z,1.9nm,0.6s						
ZALV	Zalesovo Beam	40.37	306	PcP	PcP	22 18 38.9	-1.1
	comp=Z,0.6nm,0.5s,baz=90,slow=3.0,SNR=3.9						
ILAR	Eielson Array	40.59	37	P	P	22 16 41.2	-0.4
	comp=Z,1.0nm,0.7s,baz=262,slow=4.7,SNR=12						
BCAR	Beaver Creek A	43.02	39	P	P	22 17 02.2	+0.8
MKAR	Makanchi Array	44.11	297	P	P	22 17 10.1	-0.2
	comp=Z,0.2nm,0.5s,baz=68,slow=6.9,SNR=6.1						
MKAR	Makanchi Array	44.11	297	eP	P	22 17 10.5	+0.2
INK	Inuvik	45.44	31	P	P	22 17 19.5	-0.9
	comp=Z,1.1nm,0.5s,baz=302,slow=5.2,SNR=7.7						
INK	Inuvik	45.44	31	IAmb	IAmb	22 17 20.5	
	comp=Z,1.4nm,0.6s						
BVAR	Borovoye Array	48.89	30	P	P	22 17 47.7	+0.8
	comp=Z,0.2nm,0.4s,baz=86,slow=12,SNR=3.1						
BVAR				PcP	PcP	22 19 09.8	+0.7
	comp=Z,0.2nm,0.3s,baz=90,slow=3.3,SNR=3.6						
ODAN	Odare	50.54	270	eP	P	22 18 00.2	-0.3
	comp=Z,3.1nm,0.4s						
GUN	Gumba	50.99	272	eP	P	22 18 05.2	+1.3
	comp=Z,9.8nm,0.4s						
RAMN	Ramite	51.05	271	eP	P	22 18 05.0	+0.7
	comp=Z,5.2nm,0.3s						
KKN	Kakani	51.48	273	eP	P	22 18 08.5	+1.0
	comp=Z,3.2nm,0.3s						
PKI	Pulchoki	51.52	272	eP	P	22 18 09.0	+1.1
	comp=Z,3.3nm,0.4s						
PKIN	Phulchoki	51.53	272	eP	P	22 18 08.8	+0.9
	comp=Z,3.1nm,0.4s						
DMN	Daman	51.72	273	eP	P	22 18 10.5	+1.2
	comp=Z,3.9nm,0.4s						
GKN	Gorkha	51.81	273	eP	P	22 18 10.9	+1.0
	comp=Z,9.8nm,0.4s						
DANN	Dangsing	52.23	274	eP	P	22 18 14.8	+1.7
	comp=Z,5.6nm,0.3s						
KOLN	Koldanda	52.69	274	eP	P	22 18 17.6	+1.2
	comp=Z,2.2nm,0.3s						
YKA	Yellowknife Ar	54.87	34	P	P	22 18 32.0	+0.6
	comp=Z,1.8nm,0.7s,baz=298,slow=7.0,SNR=12						
ARCES	ARCESS Array B	58.23	339	P	P	22 18 53.4	-1.7
	comp=Z,5.8nm,1.0s,baz=55,slow=6.9,SNR=2.7						
FINES	FINESS Array B	63.91	333	P	P	22 19 32.1	-1.3
	comp=Z,0.9nm,0.8s,baz=38,slow=7.0,SNR=3.4						
WRA	Warramunga Arr	65.54	193	P	P	22 19 45.2	+0.8
	comp=Z,0.7nm,0.6s,baz=8.4,slow=6.7,SNR=8.4						
NVAR	Mina Array Bea	66.97	58	P	P	22 19 55.5	+1.7
	comp=Z,0.6nm,0.4s,baz=296,slow=7.3,SNR=6.5						
PDAR	Pinedale Array	69.18	50	P	P	22 20 08.4	+0.9
	comp=Z,0.1nm,0.3s,baz=40,slow=2.5,SNR=3.6						
ASAR	Alice Springs	69.25	193	P	P	22 20 10.1	+2.3
	comp=Z,0.2nm,0.5s,baz=4.1,slow=4.7,SNR=4.3						
BUR08	Bucovina Ar. S	74.75	324	P	P	22 20 40.4	0.0
BURAR	Bucovina Array	74.77	323	P	P	22 20 39.8	-0.7
T25A	Trinidad	75.93	51	P	P	22 20 48.1	+0.6
T25A				IAmb	IAmb	22 21 03.5	
	comp=Z,2.1nm,0.7s						
MLR	Muntele Rosu	76.11	322	P	P	22 20 48.3	0.0
TXAR	Lajitas Array	82.02	56	P	P	22 21 21.8	+1.1
	comp=Z,0.6nm,0.7s,baz=301,slow=3.1,SNR=3.4						

ISC 13 22:33:07.1±1.2, 49.78N±0.08×18.52E±0.04, h0km, n9, σ0.73/14, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.25	284	ePG	Pg	22 33 12.4	+0.5
OKC				eSG	Sg	22 33 16.1	+1.0
	comp=Z,31nm,0.6s						
LANS	Liptovska Anna	0.88	135	ePG	Pg	22 33 23.8	-0.1
LANS				eSG	Sg	22 33 36.4	+1.1
LANS				eLG	Lg	22 33 38.7	
JAVC	Velka Javorina	1.07	212	ePG	Pb	22 33 28.8	+0.3
NIE	Niedzica	1.21	107	ePg	Pg	22 33 29.6	-0.7
NIE				eSg	Sb	22 33 47.3	+0.2
VYHS	Vyhne	1.30	171	ePG	Pg	22 33 31.6	-0.4
VRAC	Vranov	1.34	250	ePG	Pg	22 33 32.3	-0.4
VRAC				eSG	Sg	22 33 50.5	+0.4
KRUC	Moravsky	1.56	244	ePG	Pn	22 33 35.7	-0.4
KRUC				eSG	Sn	22 33 57.3	+0.3
GOPC	GO Pecny, Ondr	2.42	275	eSG	Sg	22 34 24.5	-0.3
PRU	Pruhonice	2.58	276	eSG	Sg	22 34 28.6	-1.4

OMAN 13 22:40:35.7±0.8, 27.26N×58.01E, h0km±194km, ml2.6/4, Error ellipse: s-maj=31.8km s-min=10.6km az=253.0
TEH 13 22:40:45.0, 28.87N×57.26E, h18km, ML2.8
ISC 13 22:40:46.3±1.5, 26.57N±0.05×57.80E±0.09, h10km, n10, σ1.36/13, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIAN	Nian	1.30	319	ePn	Pn	22 41 10.0	-0.6
NIAN				eSg	Sg	22 41 30.1	+1.7
NIAN				e		22 41 31.3	
BANOM	Banah	1.49	245	P	Pn	22 41 13.3	+0.1
	SNR=56						
BANOM				S	Sg	22 41 36.6	+2.2
GENO	Geno	1.67	300	ePn	Pn	22 41 16.0	+0.2
GENO				e		22 41 44.6	
MDH	Madha	1.85	227	P	Pn	22 41 17.1	-1.1
	SNR=10						
UOSS	Minazif	2.17	222	P	Pn	22 41 20.9	-1.6
HATD	Hatta, Dubai	2.30	221	P	Pn	22 41 23.7	-0.6
NAZ	Nazwa, Dubai	2.49	231	P	Pn	22 41 27.5	+0.6
NAZ				S	Sg	22 42 06.2	-0.1
SOHO	SOHO	2.68	205	P	Pn	22 41 28.1	-1.5
	SNR=7.0						
NGRK	Negar Kerman	3.20	343	e	Pb	22 41 42.5	-1.1
WBK	Wadi Bani Khal	4.09	165	P	Pn	22 41 50.4	+1.5
	SNR=11						

SKHL 13 22:47:01.7±0.4, 44.34N×149.84E, h36km±6km, mb4.5/5
JMA 13 22:47:04.1±0.4, 44.66N×149.50E, h30km, M4.0
ISC 13 22:47:00.1±3.8, 44.17N±0.09×149.9E±0.2, h51km, n19, σ2.58/30, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.81	307	iP	Pn	22 47 28.0	-0.8
KUR				AMB	AMB	22 47 29.0	
	31nm,0.2s						
KUR				eS	Sn	22 47 48.0	-2.6
KUR				A	A	22 47 48.0	
	82nm,0.2s						
KUR				A	A	22 47 48.0	
	365nm,0.2s						
SHO	Shikotan	2.25	264	iP	Pn	22 47 36.0	+1.2
SHO				AMB	AMB	22 47 38.0	
	42nm,0.3s						
SHO				iS	Sn	22 48 01.4	+0.1
SHO				A	A	22 48 06.0	
	38nm,0.4s						
SHO				A	A	22 48 06.0	
	305nm,0.4s						
YUK	Yuzh-Kuril'sk	2.92	269	eP	Pn	22 47 45.0	+0.9
YUK				AMB	AMB	22 47 47.0	
	106nm,0.3s						
YUK				iS	Sn	22 48 17.0	-0.9
YUK				A	A	22 48 21.0	
	257nm,0.3s						
YUK				A	A	22 48 21.0	
	30nm,0.3s						
GRPR	Tuman	2.99	268	eP	Pn	22 47 47.0	+2.0
GRPR				AMB	AMB	22 47 56.0	
	122nm,0.4s						
GRPR				iS	Sn	22 48 19.0	-0.6
GRPR				A	A	22 48 24.0	
	228nm,0.3s						
GRPR				A	A	22 48 24.0	
	26nm,0.3s						
NEM2	Nemuro 2	3.13	257	P	Pn	22 47 48.6	+1.7
NEM2				eS	Sn	22 48 21.9	-1.0
NMR	Nemuro--Hokkai	3.14	257	iP	Pn	22 47 48.0	+1.0
NMR				eS	Sn	22 48 23.0	-0.2
GLVR	Golovnino	3.20	264	iP	Pn	22 47 50.0	+2.1
GLVR				AMB	AMB	22 47 51.0	
	103nm,0.6s						
GLVR				iS	Sn	22 48 26.0	+1.2
GLVR				A	A	22 48 32.0	
	246nm,0.3s						
GLVR				A	A	22 48 32.0	
	37nm,0.3s						
JRA	Rausu	3.46	268	P	Pn	22 47 54.2	+2.7
JNK	Nakash	3.80	263	P	Pn	22 47 58.2	+2.1
JAK	Akkeshi	3.97	255	P	Pn	22 48 00.5	+2.1
JAK				eS	Sn	22 48 41.9	-1.7
JTKR	Abashiri--Toko	4.33	270	P	Pn	22 48 06.5	+3.1
JAR	Ashorobuto	4.54	261	P	Pn	22 48 09.6	+3.4
JAR				eS	Sn	22 48 58.0	+0.3
JCH	Churui	5.02	254	eS	Sn	22 49 06.9	-2.6
JNBK	Urakawa-nobuka	5.56	253	P	Pn	22 48 22.7	+2.4
JBT2	Biratori 2	5.67	258	P	Pn	22 48 24.6	+2.9
JNB	Noboribetsu	6.69	258	P	Pn	22 48 38.7	+2.9
JKB	Kayabe	6.90	254	P	Pn	22 48 40.2	+1.7
JKB				eS	Sn	22 49 50.2	-5.4
JANG	Nango	7.29	242	P	Pn	22 48 45.5	+1.5
JANG				eS	Sn	22 49 59.4	-6.0
OFUJ	Ofunato	8.00	233	eS	Sn	22 50 18.9	-3.8

IDC 13 23:26:50.4±41.0, 35.81N×81.49E, h0km, mb3.1/1, mb1 3.3/3, mb1mx3.1/28, mbtmp3.3/3, ML2.9/2, Error ellipse: s-maj=575.2km s-min=68.2km az=39.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	10.99	3	Pn	Pn	23 29 29.0	+0.1
	0.2nm,0.3s,baz=188,slow=13,SNR=13						
ZALV	Zalesovo Beam	18.29	6	P	P	23 31 05.8	+0.3
	0.1nm,0.3s,baz=193,slow=5.9,SNR=4.8						
SONM	Songino Array	22.00	49	P	P	23 31 46.1	-0.1
	0.2nm,0.5s,baz=246,slow=12,SNR=4.5						

SOME 13 23:29:09.9, 41.78N×84.62E, h20km
NNC 13 23:29:12.3±2.3, 41.48N×84.20E, h7km±17km, mb3.5, mpv3.1, Error ellipse: s-maj=18.2km s-min=11.4km az=162.0
ISC 13 23:29:14.4±3.4, 41.7N±0.2×84.14E±0.10, h10km, n13, σ2.78/18, 2C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	3.78	295	eP	Pb	23 30 18.5	-2.7
	2.2nm,0.2s						
SHLS				eS	Sb	23 31 07.6	+0.5
	34nm,0.3s						
SHLS	Shalkode	3.78	295	Pg	Pb	23 30 18.3	-3.0
	4.8nm,0.3s						
SHLS				Lg	Lg	23 31 08.1	
	33nm,0.6s						
PDGK	Podgornoye	3.83	298	Pg	Pb	23 30 23.3	+1.3
	1.6nm,0.4s						
PDGK				Lg	Lg	23 31 16.7	
	7.7nm,0.5s						
PDGK	Podgornoye	3.83	298	⇑Pg	Pb	23 30 24.8	+2.7
	2.4nm,0.7s						
PDGK				⇓Lg	Lg	23 31 17.5	
	18nm,0.8s						
UZB	Uzynbulak	4.07	293	eP	Pb	23 30 28.5	+2.2
	2.1nm,0.4s						
UZB				eS	Sg	23 31 24.4	-0.9
	9.7nm,0.5s						
UZB	Uzynbulak	4.07	293	Pg	Pb	23 30 27.7	+1.3
	2.1nm,0.4s						
UZB				Lg	Lg	23 31 23.5	
	9.7nm,0.5s						
KPKS	Kokpek	4.42	296	eP	Pg	23 30 35.8	-3.2
	3.1nm,0.3s						
KPKS				eS	Sg	23 31 37.4	+1.1
	25nm,0.3s						
ZHN	Zhinishke	4.49	292	eP	Pb	23 30 36.3	+3.0
	1.3nm,0.3s						
ZHN				eS	Sg	23 31 38.2	-0.3
	4.2nm,0.2s						
ZHN	Zhinishke	4.49	292	Pg	Pb	23 30 36.3	+3.0
	1.3nm,0.3s						
ZHN				Lg	Lg	23 31 38.2	
	4.2nm,0.2s						
MNBS	Baschi	4.87	302	Pg	Pb	23 30 43.9	+4.1
	2.5nm,0.5s						
MNBS				Lg	Lg	23 31 52.1	
	7.5nm,0.5s						
MK31	Makanchi Array	5.31	346	Pn	Pn	23 30 34.4	+0.6
	0.1nm,0.2s,baz=250,slow=6.9,SNR=7.6						
MK31				⇓Pg	Pb	23 30 50.5	+3.2
	0.4nm,0.4s,baz=161,slow=16,SNR=5.5						
MK31				⇑Lg	Lg	23 32 05.0	
	2.0nm,0.6s,baz=154,slow=28,SNR=5.5						
MDOK	Medeo	5.46	288	Pg	Pb	23 30 53.8	+3.8
	2.8nm,1.1s						
MDOK				Lg	Lg	23 32 07.8	
	5.8nm,0.6s						
ZSN	Zaisan	5.82	5	Pg	Pg	23 31 02.4	-3.4
	1.3nm,0.5s						
ZSN				Lg	Lg	23 32 23.2	
	4.1nm,0.8s						

IDC 13 23:46:13.6±10.0, 36.01N×81.65E, h0km, mb3.2/1, mb1 3.3/3, mb1mx3.1/35, mbtmp3.3/3, ML2.9/2, Error ellipse: s-maj=152.4km s-min=54.0km az=52.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	10.79	2	Pn	Pn	23 48 50.3	+1.0
	0.2nm,0.3s,baz=184,slow=13,SNR=5.6						
MKAR				Sn	Sn	23 50 48.9	-1.9
	0.1nm,0.3s,baz=182,slow=24,SNR=4.3						
ZALV	Zalesovo Beam	18.08	6	P	Pn	23 50 25.5	-0.5
	0.1nm,0.3s,baz=212,slow=14,SNR=1.8						
SONM	Songino Array	21.78	49	P	P	23 51 07.0	0.0
	0.8nm,0.7s,baz=243,slow=11,SNR=9.0						

OSPL 13 23:52:19.2±1.2, 18.50N×66.43W, h16km±16km, ML3.7
RSPR 13 23:52:22.6, 18.70N×67.16W, h60km±1km, MD3.1/16
NEIC 13 23:52:23.3±2.0, 18.60N±0.05×67.10W±0.04, h58km±5km, Error ellipse: s-maj=7.8km s-min=5.4km az=176.0
ISC 13 23:52:23.7±1.3, 18.65N±0.06×67.11W±0.03, h53km±7km, n64, σ1.17/80, 13C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.18	181	iP	Pn	23 52 31.6	-0.7
AGPR				eS	Sn	23 52 38.9	+0.5
AGPR				IAML		23 52 39.4	
	comp=Z,4µm,0.2s						
AGPR	Aguadilla, PR	0.18	181	⇓eP	Pn	23 52 31.6	-0.7
AGPR	Aguadilla, PR	0.18	181	eS	Sn	23 52 39.0	+0.6
AGPR	Aguadilla, PR	0.18	181		Pn	23 52 31.6	-0.7
AGPR					Sn	23 52 39.0	+0.6
MPR	Mayaguez	0.44	184	⇑eP	Pn	23 52 33.8	-0.7
MPR	Mayaguez	0.44	184	eS	Sn	23 52 42.5	+0.3
MPR	Mayaguez	0.44	184		Pn	23 52 33.8	-0.7
MPR					Sn	23 52 42.5	+0.3
AOPR	Arecibo Observ	0.46	132	⇑eP	Pn	23 52 33.9	-0.8
AOPR	Arecibo Observ	0.46	132	eS	Sn	23 52 43.0	+0.4
AOPR	Arecibo Observ	0.46	132		Pn	23 52 33.9	-0.8
AOPR					Sn	23 52 43.0	+0.4
LSP	Las Mesas	0.47	177	⇑eP	Pn	23 52 34.4	-0.6
LSP	Las Mesas	0.47	177	eS	Sn	23 52 43.1	+0.1
LSP	Las Mesas	0.47	177		Pn	23 52 34.4	-0.6
LSP					Sn	23 52 43.1	+0.1
EMPR	Esperanza - Ma	0.58	108	⇑eP	Pn	23 52 35.6	-0.4
EMPR	Esperanza - Ma	0.58	108	eS	Sn	23 52 45.9	+0.9
EMPR	Esperanza - Ma	0.58	108		Pn	23 52 35.6	-0.4
EMPR					Sn	23 52 45.9	+0.9
CRPR	Cabo Rojo, PR	0.64	180	⇑eP	Pn	23 52 36.1	-0.7
CRPR	Cabo Rojo, PR	0.64	180	eS	Sn	23 52 46.7	+0.3
CRPR	Cabo Rojo, PR	0.64	180		Pn	23 52 36.1	-0.7
CRPR					Sn	23 52 46.7	+0.3
MLPR	Magueyes Islan	0.68	175	⇑eP	Pn	23 52 35.6	-1.7
MLPR	Magueyes Islan	0.68	175	eS	Sn	23 52 46.1	-1.2
MLPR	Magueyes Islan	0.68	175		Pn	23 52 35.6	-1.7
MLPR					Sn	23 52 46.1	-1.2
GBPR	Guanica, Bosqu	0.71	162	⇑eP	Pn	23 52 37.2	-0.5
GBPR	Guanica, Bosqu	0.71	162	eS	Sn	23 52 48.7	+0.9
GBPR	Guanica, Bosqu	0.71	162		Pn	23 52 37.2	-0.5
GBPR					Sn	23 52 48.7	+0.9
CELP	Cerrillos	0.76	139	⇑eP	Pn	23 52 37.9	-0.5
CELP	Cerrillos	0.76	139		Pn	23 52 37.9	-0.5
OBIP	Obispado Ponce	0.77	142	⇑eP	Pn	23 52 38.0	-0.6
OBIP	Obispado Ponce	0.77	142	eS	Sn	23 52 49.8	+0.4
OBIP	Obispado Ponce	0.77	142		Pn	23 52 38.0	-0.6
OBIP					Sn	23 52 49.8	+0.4
ICMP	Isla Caja de M	0.94	144		Pn	23 52 40.6	-0.1
GCPR	Guaynabo City	1.03	109	⇓eP	Pn	23 52 40.8	-1.1
GCPR	Guaynabo City	1.03	109	eS	Sn	23 52 56.0	+0.6
GCPR	Guaynabo City	1.03	109		Pn	23 52 40.8	-1.1
GCPR					Sn	23 52 56.0	+0.6
SJG	San Juan	1.06	120		Pn	23 52 41.4	-0.9
IGPR	InterUniversit	1.17	126	⇓eP	Pn	23 52 43.0	-0.8
IGPR	InterUniversit	1.17	126	eS	Sn	23 52 59.5	+0.7
IGPR	InterUniversit	1.17	126		Pn	23 52 44.7	+0.9
PDPR	Patillas Dam,	1.21	121	⇑eP	Pn	23 52 43.5	-0.8
PDPR	Patillas Dam,	1.21	121	eS	Sn	23 52 60.0	+0.3
PDPR	Patillas Dam,	1.21	121		Pn	23 52 43.5	-0.8
PDPR					Sn	23 52 60.0	+0.3
PCDR	Punta Cana, DR	1.21	264	⇑eP	Pn	23 52 42.6	-1.8
PCDR	Punta Cana, DR	1.21	264	eS	Sn	23 52 58.0	-1.8
PCDR	Punta Cana, DR	1.21	264		Pn	23 52 42.6	-1.8
PCDR					Sn	23 52 58.0	-1.8
CBYP	Canovanas	1.25	107	⇓eP	Pn	23 52 43.8	-1.1
CBYP	Canovanas	1.25	107	⇓eP	Pn	23 52 43.8	-1.1
CBYP	Canovanas	1.25	107	eS	Sn	23 53 01.3	+0.6
CBYP	Canovanas	1.25	107		Pn	23 52 43.8	-1.1
CBYP					Sn	23 53 01.3	+0.6
HUMP	Col San Antoni	1.30	113	⇑eP	Pn	23 52 44.5	-1.0
HUMP	Col San Antoni	1.30	113	eS	Sn	23 53 02.3	+0.5
HUMP	Col San Antoni	1.30	113		Pn	23 52 44.5	-1.0
HUMP					Sn	23 53 02.3	+0.5
MTP	Monte Pirata	1.58	110	⇑eP	Pn	23 52 48.5	-0.8
MTP	Monte Pirata	1.58	110	eS	Sn	23 53 09.4	+0.8
MTP	Monte Pirata	1.58	110		Pn	23 52 48.5	-0.8
MTP					Sn	23 53 09.4	+0.8
CUPR	Culebra, Puert	1.77	101		Pn	23 52 51.2	-0.7
STVI	Saint Thomas	2.07	98	⇓eP	Pn	23 52 55.0	-0.9
STVI	Saint Thomas	2.07	98	eS	Sn	23 53 18.0	-2.6
STVI	Saint Thomas	2.07	98		Pn	23 52 55.0	-0.9

STVI					Sn	23 53 18.0	-2.6
DR12	**Loma Pena Alta**	**2.16**	**274**		**Pn**	**23 52 54.9**	**-2.4**
CDVI	**St. Croix**	**2.40**	**112**		**Pn**	**23 53 02.0**	**+1.5**
BANI	**BANI**	**3.09**	**266**		**Pn**	**23 53 12.5**	**+2.4**
SC01	**Santiago de lo**	**3.51**	**283**	*i* P	**Pn**	23 53 20.1	+4.3
SC01				*e*S	Sn	23 54 06.2	+10
SC01				IAML		23 54 13.7	
	comp=Z,84nm,0.4s						
SDDR	**Presa de Saban**	**3.97**	**275**	*i* P	**Pn**	**23 53 26.4**	**+4.3**
SDDR				*e*S	Sn	23 54 16.9	+9.4
SDDR				IAML		23 54 23.2	
	comp=Z,36nm,0.5s						
SDDR	**Presa de Saban**	**3.97**	**275**		**Pn**	**23 53 24.5**	**+2.4**

IDC ***14*** *00:03:16.3±1.2, 2.°89S×130.°49E, h0km, mb4.3/2, mb1 4.5/5, mb1mx3.8/40, mbtmp4.2/5, ML4.1/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/39, Error ellipse: s-maj=46.0km s-min=19.3km az=92.0*

DJA ***14*** *00:03:19.8±1.0, 3°S±3°×13°0E±°, h13km±8km, M3.9/12, MLv3.9/12*

NEIC ***14*** *00:03:20.0±2.2, 2.°97S±0.°07×130.°47E±0.°07, h35km±6km, mb4.1/15, Error ellipse: s-maj=10.5km s-min=9.3km az=59.0*

ISC 14 00:03:18.9±0.6, **2.°94S**±0.°05×**130.°52E**±0.°04, **h24**km, **n37**, σ**1°34**/41, **mb4.2**/6, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.64**	**256**	P	**Pn**	**00 03 47.9**	**+1.6**
MSAI				S	**Sb**	**00 04 09.9**	**+1.1**
BNDI	**Bandanaira**	**1.69**	**201**	P	**Pb**	**00 03 49.9**	**+0.5**
FAKI	**Fak Fak**	**1.73**	**90**	P	**Pb**	**00 03 49.7**	**-0.3**
FAKI	**Fak Fak**	**1.73**	**90**		**Pb**	**00 03 49.4**	**-0.6**
SIJI	**Sorong**	**2.18**	**20**	Pn	**Pn**	**00 03 54.2**	**+0.4**
	13nm,0.3s,baz=198,slow=19,SNR=30						
SIJI				Sn	**Sn**	**00 04 20.5**	**+0.4**
	45nm,0.3s,baz=52,slow=19,SNR=12						
SWI	**Sorong**	**2.19**	**20**	P	**Pn**	**00 03 55.1**	**+1.3**
KMPI	**Kaimana, Papua**	**3.26**	**103**	P	**Pn**	**00 04 11.1**	**+2.5**
NLAI	**Namlea**	**3.43**	**265**	P	**Pn**	**00 04 12.7**	**+1.8**
NLAI				S	**Sn**	**00 04 53.4**	**+2.6**
LBMI	**Labuha**	**3.78**	**307**	P	**Pn**	**00 04 16.9**	**+1.1**
RKPI	**Ransiki, Papua**	**3.92**	**69**	P	**Pn**	**00 04 20.0**	**+2.4**
RKPI				S	**Sn**	**00 05 06.7**	**+3.8**
SANI	**Sanana**	**4.61**	**281**	P	**Pn**	**00 04 27.4**	**+0.2**
TNTI	**Ternate**	**4.85**	**319**	P	**Pn**	**00 04 31.0**	**+0.6**
LUWI	**Luwuk**	**7.97**	**283**	Pn	**Pn**	**00 05 12.8**	**-0.5**
KAPI	**Kappang**	**10.94**	**259**	LR	LR	00 10 53.0	
	comp=Z,69nm,19.4s,baz=57,slow=42						
KNRA	**Kununurra**	**12.78**	**188**	Pn	**Pn**	**00 06 16.3**	**-3.0**
FITZ	**Fitzroy Crossi**	**15.81**	**197**	Pn	**P**	**00 07 02.8**	**-1.0**
	0.9nm,0.3s,baz=24,slow=14,SNR=15						
FITZ	**Fitzroy Crossi**	**15.81**	**197**	P	**P**	**00 07 03.5**	**-0.2**
FITZ				IAmb	IAmb	00 07 04.0	
	comp=Z,5.7nm,0.6s						
COEN	**Coen**	**16.62**	**132**	Pn	**Pn**	**00 07 10.2**	**-0.3**
WB0	**Warramunga Arr**	**17.15**	**168**	P	**Pn**	**00 07 16.1**	**-1.0**
WRA	**Warramunga Arr**	**17.31**	**168**	P	**P**	**00 07 20.5**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=347,slow=11,SNR=25						
WRA	**Warramunga Arr**	**17.31**	**168**	P	**Pn**	**00 07 19.0**	**-0.2**
WB2	**Warramunga Arr**	**17.31**	**168**	P	**Pn**	**00 07 19.4**	**+0.3**
WB2				IAmb	IAmb	00 07 21.9	
	comp=Z,3.7nm,0.6s						
WR0	**Warramunga Arr**	**17.37**	**167**	P	**Pn**	**00 07 18.7**	**-1.2**
AS31	**Alice Springs**	**20.87**	**171**	P	**P**	**00 08 00.2**	**+0.8**
ASAR	**Alice Springs**	**20.87**	**171**	P	**P**	**00 07 59.9**	**+0.4**
	comp=Z,26nm,0.5s,baz=351,slow=10.0,SNR=268						
ASAR				PcP	**PcP**	**00 12 08.4**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=351,slow=1.6,SNR=5.0						
ASAR	**Alice Springs**	**20.87**	**171**	P	**P**	**00 07 59.6**	**+0.2**
PSA00	**Pilbara Seismi**	**21.24**	**208**	P	**P**	**00 08 02.8**	**-0.6**
PSA00				IAmb	IAmb	00 08 18.8	
	comp=Z,8.9nm,0.9s						
PSA00	**Pilbara Seismi**	**21.24**	**208**	P	**P**	**00 08 02.2**	**-1.1**
PSA00				IAmb	IAmb	00 08 02.7	
	comp=Z,13nm,0.7s						
NACB	**Ninganchiao**	**28.31**	**343**	P	**P**	**00 09 09.8**	**-1.1**
MORW	**Morawa**	**29.41**	**206**	P	**P**	**00 09 20.0**	**-0.6**
MORW				IAmb	IAmb	00 09 31.8	
	comp=Z,5.8nm,1.0s						
EIDS	**Eidsvold**	**29.82**	**140**		**PcP**	**00 12 28.6**	**+1.1**
BBOO	**Buckleboo**	**30.17**	**171**	P	**P**	**00 09 26.8**	**-0.5**
BBOO				IAmb	IAmb	00 09 46.2	
	comp=Z,7.2nm,0.9s						
NWAO	**Narrogin (SRO)**	**32.33**	**201**	P	**P**	**00 09 45.8**	**-0.6**
NWAO				IAmb	IAmb	00 09 47.0	
	comp=Z,5.5nm,1.1s						
TUWZ	**Tuamarina**	**54.62**	**141**	P	**P**	**00 12 44.6**	**-1.1**
MK31	**Makanchi Array**	**65.16**	**326**	P	**P**	**00 13 58.9**	**+0.8**
MK31				IAmb	IAmb	00 14 11.5	
	comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**65.16**	**326**	P	**P**	**00 13 59.0**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=113,slow=8.1,SNR=15						
CHGN	**Chignik**	**82.04**	**32**	P	**P**	**00 15 35.8**	**-1.2**

IDC 14 00:06:47.9±1.3, **2.°67N**×**126.°59E**, **h0**km, **mb3.6**/3, **mb1 3.8**/4, **mb1mx3.5**/38, **mbtmp3.7**/4, **ML3.8**/1, **Error ellipse: s-maj=86.6km s-min=22.4km az=60.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.86**	**127**	Pn	Pn	00 08 16.1	+0.1
	2.8nm,0.3s,baz=308,slow=19,SNR=7.5						
WRA	**Warramunga Arr**	**23.73**	**162**	P	P	00 12 01.9	0.0
	0.3nm,0.4s,baz=340,slow=10,SNR=3.9						
SONM	**Songino Array**	**48.25**	**342**	P	P	00 15 30.4	-0.3
	0.7nm,0.7s,baz=156,slow=9.1,SNR=6.7						
MKAR	**Makanchi Array**	**58.34**	**326**	P	P	00 16 45.0	+0.1
	0.6nm,0.4s,baz=118,slow=7.9,SNR=23						

NEIC ***14*** *00:22:46.2±1.0, 18.°69N±0.°07×145.°6E±0.°1, h189km±6km, mb4.6/89, Error ellipse: s-maj=17.6km s-min=10.2km az=83.0*

IDC ***14*** *00:22:48.2±2.9, 18.°73N×145.°59E, h211km±29km, mb3.7/14, mb1 3.9/15, mb1mx3.6/56, mbtmp4.3/15, Error ellipse: s-maj=19.1km s-min=15.0km az=75.0*

ISC 14 00:22:46.9±0.4, **18.°66N**±0.°05×**145.°6E**±0.°1, **h200**km, **n113**, σ**0°79**/116, **mb4.4**/57, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARN	**Sarigan**	**1.96**	**174**	P	**Pn**	**00 23 23.6**	**-1.5**
SARN				Sn	**Sn**	**00 23 52.7**	**-2.1**
ANA2	**Anatahan**	**2.31**	**177**	Pn	**Pn**	**00 23 27.6**	**-1.2**
ANA2				Sn	**Sn**	**00 23 59.4**	**-2.0**
GUMO	**Guam**	**5.08**	**188**	P	**Pn**	**00 24 05.3**	**+2.8**
	20nm,0.3s,baz=166,slow=18,SNR=5.3						
GUMO				S	**Sn**	**00 25 01.7**	**-0.4**
	43nm,0.3s,baz=141,slow=24,SNR=3.6						
GUMO	**Guam**	**5.08**	**188**		**Pn**	**00 24 02.9**	**+0.4**
GUMO					**Sn**	**00 25 00.1**	**-1.9**
JHJ2	**Mitsune**	**15.29**	**341**	Pn	**Pn**	**00 26 10.8**	**-1.9**
JOW	**Kunigami**	**17.90**	**300**	P	**Pn**	**00 26 41.1**	**-0.6**
JOW				IAmb	IAmb	00 26 55.7	
	comp=Z,31nm,1.1s						
MJAR	**Matsushiro Arr**	**18.96**	**341**	P	**P**	**00 26 51.9**	**-1.3**
NACB	**Ninganchiao**	**22.98**	**288**	P	**P**	**00 27 34.2**	**+0.1**
NACB				IAmb	IAmb	00 27 43.5	
	comp=Z,33nm,1.1s						
COEN	**Coen**	**32.49**	**184**	P	**P**	**00 28 59.1**	**+0.2**
COEN				IAmb	IAmb	00 29 00.5	
	comp=Z,5.2nm,0.8s						
WB0	**Warramunga Arr**	**39.73**	**197**	P	**P**	**00 30 00.8**	**+0.6**
WB0				IAmb	IAmb	00 30 01.7	
	comp=Z,4.4nm,0.5s						
WR0	**Warramunga Arr**	**39.87**	**196**	P	**P**	**00 30 01.9**	**+0.5**
WR0				IAmb	IAmb	00 30 02.3	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**39.90**	**197**	P	**P**	**00 30 02.1**	**+0.5**
WRAB				IAmb	IAmb	00 30 20.1	
	comp=Z,7.3nm,0.6s						
WB2	**Warramunga Arr**	**39.91**	**197**	P	**P**	**00 30 02.2**	**+0.5**
WB2				IAmb	IAmb	00 30 05.2	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**39.91**	**197**	P	**P**	**00 30 02.0**	**+0.3**
	comp=Z,2.8nm,0.3s,baz=10,slow=10,SNR=4.6						
FITZ	**Fitzroy Crossi**	**41.45**	**209**	P	**P**	**00 30 14.7**	**+0.5**
SONM	**Songino Array**	**43.10**	**321**	P	**P**	**00 30 27.7**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=135,slow=8.7,SNR=9.4						
SONM	**Songino Array**	**43.10**	**321**	IAmb	IAmb	00 30 29.2	
	comp=Z,0.6nm,0.6s						
AS31	**Alice Springs**	**43.58**	**196**	P	**P**	**00 30 31.8**	**+0.4**
ASAR	**Alice Springs**	**43.58**	**196**	P	**P**	**00 30 32.0**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=18,slow=12,SNR=12						
NOUC	**Port Laguerre**	**45.30**	**152**	P	**P**	**00 30 44.2**	**-0.8**
NOUC				IAmb	IAmb	00 31 02.6	
	comp=Z,15nm,1.3s						
DZM	**Mont Dzumac**	**45.34**	**152**	P	**P**	**00 30 45.5**	**+0.1**
FORT	**Forrest**	**51.96**	**199**	P	**P**	**00 31 35.1**	**-0.4**
FORT				IAmb	IAmb	00 31 37.2	
	comp=Z,29nm,1.1s						
BBOO	**Buckleboo**	**51.98**	**190**	P	**P**	**00 31 36.5**	**+0.8**
BBOO				IAmb	IAmb	00 31 46.3	
	comp=Z,26nm,1.5s						
TIXI	**Tiksi**	**53.90**	**354**	P	**P**	**00 31 50.4**	**+1.2**
SDPT	**Sand Point**	**54.57**	**35**	P	**P**	**00 31 54.5**	**+0.2**
MORW	**Morawa**	**55.36**	**212**	P	**P**	**00 32 00.8**	**+0.5**
MORW				IAmb	IAmb	00 32 01.2	
	comp=Z,4.9nm,0.8s						
ANM	**Nome**	**56.28**	**23**	P	**P**	**00 32 07.6**	**+1.2**
ANM				IAmb	IAmb	00 32 08.2	
	comp=Z,6.8nm,1.2s						
CHIR	**Chirikof Islan**	**57.34**	**35**	P	**P**	**00 32 14.2**	**+0.3**
ZAA0	**Zalesovo Array**	**57.98**	**323**	P	**P**	**00 32 18.5**	**+0.1**
ZALV	**Zalesovo Beam**	**57.98**	**323**	P	**P**	**00 32 18.1**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=106,slow=7.7,SNR=8.1						
NWAO	**Narrogin (SRO)**	**58.01**	**208**	P	**P**	**00 32 19.0**	**+0.1**
NWAO				IAmb	IAmb	00 32 27.4	
	comp=Z,27nm,1.5s						
XMAS	**Kiritimati**	**58.16**	**99**	P	**P**	**00 32 21.1**	**+0.7**
SII	**Sitkinak Islan**	**58.31**	**34**	P	**P**	**00 32 21.6**	**+0.9**
MK31	**Makanchi Array**	**58.41**	**314**	P	**P**	**00 32 21.7**	**+0.1**
MKAR	**Makanchi Array**	**58.41**	**314**	P	**P**	**00 32 21.6**	**0.0**
	comp=Z,0.9nm,0.5s,baz=90,slow=7.9,SNR=22						
MAKZ	**Makanchi**	**58.62**	**314**	P	**P**	**00 32 23.3**	**+0.3**
OHAK	**Old Harbor**	**58.95**	**34**	P	**P**	**00 32 25.8**	**+0.7**
KDAK	**Kodiak Island**	**59.46**	**33**	P	**P**	**00 32 28.5**	**0.0**
CNPM	**China Poot**	**60.56**	**31**	P	**P**	**00 32 35.9**	**-0.2**
BRLK	**Bradley Lake**	**60.79**	**31**	P	**P**	**00 32 36.8**	**-0.8**
PPLA	**Purkeypile**	**60.99**	**28**	P	**P**	**00 32 40.0**	**+1.0**
PPLA				IAmb	IAmb	00 32 49.3	
	comp=Z,25nm,1.5s						
SKT	**Skwentna**	**61.03**	**29**	P	**P**	**00 32 39.0**	**-0.3**
SKT				IAmb	IAmb	00 32 44.3	
	comp=Z,14nm,1.4s						
KURK	**Kurchatov**	**61.22**	**318**	P	**P**	**00 32 40.4**	**-0.2**
SUA	**Susitna One**	**61.26**	**29**	P	**P**	**00 32 40.9**	**0.0**
SUA				IAmb	IAmb	00 32 57.4	
	comp=Z,8.4nm,1.2s						
IMAR	**Indian Mountai**	**61.30**	**24**	P	**P**	**00 32 41.4**	**+0.5**
SEW	**Seward**	**61.57**	**31**	P	**P**	**00 32 42.9**	**+0.2**
RC01	**Rabbit Creek A**	**61.65**	**30**	P	**P**	**00 32 44.3**	**+1.0**
RC01				IAmb	IAmb	00 32 45.0	
	comp=Z,8.4nm,0.5s						
KTH	**Kantishna Hill**	**61.73**	**27**	P	**P**	**00 32 44.1**	**+0.2**
KTH				IAmb	IAmb	00 32 45.6	
	comp=Z,17nm,1.3s						
BPAW	**Bear Paw Mtn.**	**61.84**	**26**	P	**P**	**00 32 45.3**	**+0.6**
BPAW				IAmb	IAmb	00 32 46.1	
	comp=Z,13nm,1.2s						
TRF	**Thorofare Moun**	**61.97**	**27**	P	**P**	**00 32 45.5**	**-0.2**
TRF				IAmb	IAmb	00 32 45.8	
	comp=Z,15nm,1.4s						
GHO	**Glory Hole Cre**	**62.18**	**29**	P	**P**	**00 32 46.8**	**-0.2**
GHO				IAmb	IAmb	00 32 48.5	
	comp=Z,14nm,1.1s						
MLY	**Manley**	**62.21**	**25**	P	**P**	**00 32 47.7**	**+0.7**
MLY				IAmb	IAmb	00 32 48.4	
	comp=Z,4.7nm,0.8s						
KNK	**Knik Glacier**	**62.32**	**30**	P	**P**	**00 32 48.1**	**+0.3**
SML	**Sawmill**	**62.47**	**29**	P	**P**	**00 32 49.2**	**+0.4**
SML				IAmb	IAmb	00 32 50.3	
	comp=Z,15nm,1.0s						
RND	**Reindeer**	**62.59**	**27**	P	**P**	**00 32 49.4**	**-0.2**
GLI	**Glacier Island**	**62.87**	**30**	P	**P**	**00 32 51.6**	**+0.2**
SCM	**Sheep Creek Mo**	**62.94**	**29**	P	**P**	**00 32 52.2**	**+0.2**
HIN	**Hinchinbrook I**	**63.07**	**31**	P	**P**	**00 32 52.3**	**-0.4**
FID	**Port Fidalgo**	**63.14**	**31**	P	**P**	**00 32 53.2**	**0.0**
WRH	**Wood River Hil**	**63.16**	**26**	P	**P**	**00 32 52.8**	**-0.5**
WRH				IAmb	IAmb	00 32 53.6	
	comp=Z,2.6nm,0.4s						
DHY	**Denali Highway**	**63.17**	**28**	P	**P**	**00 32 53.7**	**+0.1**
DHY				IAmb	IAmb	00 32 56.2	
	comp=Z,3.0nm,0.7s						
MDM	**Murphy Dome**	**63.22**	**26**	P	**P**	**00 32 54.0**	**+0.3**
MDM				IAmb	IAmb	00 32 55.5	
	comp=Z,7.0nm,0.4s						
CCB	**Clear Creek Bu**	**63.32**	**26**	P	**P**	**00 32 53.9**	**-0.4**
HDA	**Harding Lake**	**63.63**	**27**	P	**P**	**00 32 55.8**	**-0.6**
HDA				IAmb	IAmb	00 33 06.9	
	comp=Z,9.4nm,1.5s						
TOLK	**Toolik Lake Re**	**63.68**	**22**	P	**P**	**00 32 57.8**	**+1.2**
TOLK				IAmb	IAmb	00 32 58.1	
	comp=Z,5.1nm,0.6s						
IL31		**63.73**	**26**	P	**P**	**00 32 56.1**	**-0.9**
IL31				IAmb	IAmb	00 32 56.8	
	comp=Z,4.6nm,1.1s						
ILAR	**Eielson Array**	**63.73**	**26**	P	**P**	**00 32 55.9**	**-1.1**
	comp=Z,1.8nm,0.4s,baz=251,slow=6.2,SNR=34						
ILAR	**Eielson Array**	**63.73**	**26**	P	**P**	**00 32 55.8**	**-1.2**
PAX	**Paxson**	**64.00**	**28**	P	**P**	**00 32 59.0**	**+0.1**
PAX				IAmb	IAmb	00 32 59.6	
	comp=Z,4.1nm,0.5s						
HMT	**Hamilton**	**64.16**	**31**	P	**P**	**00 33 00.6**	**+0.7**
QRZ	**Quartz Range**	**64.26**	**158**	P	**P**	**00 33 01.9**	**+1.2**
SUCK	**Suckling Hills**	**64.36**	**32**	P	**P**	**00 33 01.8**	**+0.6**
BKZ	**Black Stump Fm**	**64.39**	**154**	P	**P**	**00 33 01.6**	**0.0**
BKZ				IAmb	IAmb	00 33 19.9	
	comp=Z,19nm,1.3s						
RIDG	**Independent Ri**	**64.41**	**28**	P	**P**	**00 33 01.0**	**-0.5**
RIDG				IAmb	IAmb	00 33 14.5	
	comp=Z,11nm,1.4s						
GLB	**Gilahina Butte**	**64.53**	**30**	P	**P**	**00 33 02.8**	**+0.5**
VRDI	**Verde Repeater**	**64.67**	**30**	P	**P**	**00 33 03.8**	**+0.4**
VRDI				IAmb	IAmb	00 33 13.6	
	comp=Z,21nm,1.4s						
DOT	**Dot Lake**	**64.74**	**28**	P	**P**	**00 33 03.8**	**+0.2**
DOT				IAmb	IAmb	00 33 04.4	
	comp=Z,6.7nm,1.0s						
CRQM	**Cirque**	**64.76**	**31**	P	**P**	**00 33 05.1**	**+1.1**
SCRK	**Sand Creek**	**64.83**	**27**	P	**P**	**00 33 04.9**	**+0.6**
SCRK				IAmb	IAmb	00 33 05.2	
	comp=Z,10.0nm,1.2s						
WAX	**Waxell Ridge**	**64.87**	**31**	P	**P**	**00 33 05.6**	**+1.0**
MCARA	**McCarthy VSAT**	**64.90**	**30**	P	**P**	**00 33 05.2**	**+0.6**
MCARA				IAmb	IAmb	00 33 10.8	
	comp=Z,14nm,1.2s						
TGL	**Tana Glacier**	**64.91**	**31**	P	**P**	**00 33 05.2**	**+0.3**
TGL				IAmb	IAmb	00 33 06.5	
	comp=Z,23nm,1.3s						
BALM	**Baldy**	**65.18**	**31**	P	**P**	**00 33 06.9**	**+0.3**
BALM				IAmb	IAmb	00 33 20.9	
	comp=Z,13nm,1.3s						
BMAR	**Burnt Mountain**	**65.20**	**24**	P	**P**	**00 33 07.7**	**+1.2**
BARN	**Barnard Glacie**	**65.52**	**31**	P	**P**	**00 33 09.2**	**+0.3**
BARN				IAmb	IAmb	00 33 10.6	
	comp=Z,15nm,1.3s						
CTGM	**Chitina Glacie**	**65.67**	**31**	P	**P**	**00 33 10.2**	**+0.4**
CTGM				IAmb	IAmb	00 33 23.0	
	comp=Z,15nm,1.3s						
BCAR	**Beaver Creek A**	**65.68**	**28**	P	**P**	**00 33 10.1**	**+0.4**
BVAR	**Borovoye Array**	**66.43**	**320**	P	**P**	**00 33 14.3**	**-0.3**
	comp=Z,2.0nm,0.5s,baz=93,slow=8.0,SNR=24						
BRVK	**Borovoye**	**66.50**	**320**	P	**P**	**00 33 15.1**	**+0.1**
KKAR	**Karatay Array**	**66.70**	**310**	P	**P**	**00 33 17.0**	**+0.5**
DAWY	**Dawson**	**66.84**	**28**	P	**P**	**00 33 17.8**	**+0.7**
INK	**Inuvik**	**69.46**	**23**	P	**P**	**00 33 33.4**	**+0.3**
C36M	**Paulatuk**	**72.83**	**22**	P	**P**	**00 33 53.2**	**-0.1**
C36M				IAmb	IAmb	00 33 53.6	
	comp=Z,5.8nm,0.5s						
ABKAR	**Akbulak array**	**73.29**	**317**	P	**P**	**00 33 55.8**	**-0.7**
KIRV	**Kirov**	**77.43**	**328**	P	**P**	**00 34 21.0**	**+1.2**
	comp=Z,4.9nm,0.6s,baz=107,slow=3.1,SNR=3.9						
YKA	**Yellowknife Ar**	**78.08**	**28**	P	**P**	**00 34 23.1**	**-0.2**
	comp=Z,2.4nm,0.6s,baz=289,slow=5.6,SNR=28						
RES	**Resolute Bay**	**79.49**	**14**	P	**P**	**00 34 31.0**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=255,slow=9.3,SNR=14						
B08A	**Colville Reser**	**79.58**	**42**	P	**P**	**00 34 31.2**	**-0.7**
PINE	**Pine Mountain**	**79.77**	**47**	P	**P**	**00 34 34.3**	**+1.1**
PINE				IAmb	IAmb	00 34 35.0	
	comp=Z,5.1nm,0.7s						
PNTR	**Pine Nut**	**82.09**	**52**	P	**P**	**00 34 46.7**	**+1.1**
PNTR				IAmb	IAmb	00 34 47.4	
	comp=Z,6.5nm,0.7s						
WAKR	**Walker**	**82.39**	**52**	P	**P**	**00 34 47.7**	**+0.6**
ARCES	**ARCESS Array B**	**82.50**	**342**	P	**P**	**00 34 47.0**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=79,slow=6.5,SNR=7.3						
ARE0	**ARCESS Array S**	**82.50**	**342**	P	**P**	**00 34 46.8**	**0.0**
KVN	**Kaiserville**	**83.21**	**51**	P	**P**	**00 34 51.0**	**-0.3**
NVAR	**Mina Array Bea**	**83.26**	**52**	P	**P**	**00 34 52.1**	**+0.5**
	comp=Z,3.3nm,0.6s,baz=269,slow=5.7,SNR=19						
NVAR	**Mina Array Bea**	**83.26**	**52**	P	**P**	**00 34 52.6**	**+1.0**
ELK	**Elko**	**84.74**	**49**	P	**P**	**00 34 59.1**	**0.0**
TPNV	**Topopah Spring**	**85.28**	**53**	P	**P**	**00 35 01.8**	**+0.1**
TPNV				IAmb	IAmb	00 35 02.8	
	comp=Z,3.4nm,0.7s						
SHPR	**Sheep Range**	**86.25**	**53**	P	**P**	**00 35 07.2**	**+0.6**
DUG	**Dugway, Tooele**	**86.66**	**49**	P	**P**	**00 35 08.4**	**0.0**
FINES	**FINESS Array B**	**86.87**	**335**	P	**P**	**00 35 06.9**	**-1.9**
	comp=Z,1.1nm,0.4s,baz=61,slow=4.1,SNR=12						
PDAR	**Pinedale Array**	**87.94**	**45**	P	**P**	**00 35 14.2**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=188,slow=1.8,SNR=6.6						
LPAZ	**La Paz**	**147.79**	**91**	PKPbc	**PKiKP**	**00 42 10.1**	**-1.5**
	comp=Z,1.7nm,0.7s,baz=360,slow=4.6,SNR=4.5						

ATH ***14*** *00:25:20.0, 38.°22N×20.°39E, h9km±1km, ML2.4/1, Error ellipse: s-maj=1.6km s-min=0.9km az=259.0*

THE ***14*** *00:25:19.7, 38.°22N×20.°40E, h10km, ML2.7/3, Error ellipse: s-maj=1.1km s-min=0.4km az=229.0*

ISC 14 00:25:19.7±1.0, **38.°22N**±0.°03×**20.°40E**±0.°04, **h11**km±5km, **n33**, σ**0°33**/52, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LXR1	**Lixouri, Cepha**	**0.03**	**115**	P	**Pg**	**00 25 21.7**	**0.0**
LXR1				S	**Sg**	**00 25 23.2**	**+0.2**
LXRA	**Lixouri, Kepha**	**0.03**	**117**	P	**Pg**	**00 25 21.7**	**+0.1**
LXRA				S	**Sg**	**00 25 23.2**	**+0.2**
CHV1	**Chavriata, Kef**	**0.04**	**203**	P	**Pg**	**00 25 21.7**	**0.0**
CHV1				S	**Sg**	**00 25 23.1**	**+0.1**
	17μm,0.1s						
AGT1	**Agia Thekli**	**0.04**	**342**	P	**Pg**	**00 25 21.6**	**-0.1**
AGT1				S	**Sg**	**00 25 22.8**	**-0.4**
	4μm,0.1s						
KEF3	**Kipouria, Keph**	**0.04**	**253**	P	**Pg**	**00 25 21.8**	**+0.1**
KEF3				S	**Sg**	**00 25 23.3**	**+0.1**
KEF4	**Livadi, Kephal**	**0.05**	**25**	P	**Pg**	**00 25 21.7**	**-0.1**
KEF4				S	**Sg**	**00 25 23.2**	**-0.1**
ARGA	**Argostoli. Kep**	**0.07**	**121**	P	**Pg**	**00 25 22.1**	**0.0**
ARGA				S	**Sg**	**00 25 23.8**	**0.0**
ARG2	**Argostoli**	**0.08**	**118**	P	**Pg**	**00 25 22.1**	**0.0**
ARG2				S	**Sg**	**00 25 23.7**	**-0.1**
	10μm,0.1s						
KEF1	**Kardakata, Kep**	**0.08**	**42**	P	**Pg**	**00 25 22.1**	**-0.1**
KEF1				S	**Sg**	**00 25 23.7**	**-0.2**
KEF2	**Argostoli. Kep**	**0.09**	**126**	P	**Pg**	**00 25 22.2**	**+0.1**
KEF2				S	**Sg**	**00 25 24.1**	**+0.2**
VLS	**Valsamata**	**0.15**	**104**	P	**Pg**	**00 25 23.1**	**-0.1**
VLS				S	**Sg**	**00 25 25.6**	**-0.1**
VLS	**Valsamata**	**0.15**	**104**	P	**Pg**	**00 25 23.1**	**-0.1**
VLS				S	**Sg**	**00 25 25.7**	**0.0**
VLS				AML	AML	00 25 25.8	
	comp=E,6883μm,0.1s						
VLS				AML	AML	00 25 25.8	
	comp=N,2225μm,0.1s						
VSK1	**VASILIKIADES**	**0.23**	**34**	P	**Pg**	**00 25 24.5**	**-0.1**
VSK1				S	**Sg**	**00 25 28.2**	**+0.4**
KONA	**Konidatara, Ke**	**0.25**	**33**	P	**Pg**	**00 25 24.8**	**0.0**
KONA				S	**Sg**	**00 25 28.9**	**+0.6**
VLMS	**Volimes, Zakyn**	**0.40**	**148**	P	**Pg**	**00 25 27.6**	**0.0**
VLMS				S	**Sb**	**00 25 34.3**	**-0.6**
EVGI	**Lefkada island**	**0.45**	**26**	P	**Pg**	**00 25 28.3**	**-0.2**
EVGI				S	**Sg**	**00 25 35.1**	**+0.5**
EVGI	**Lefkada island**	**0.45**	**26**	P	**Pg**	**00 25 28.4**	**-0.2**
EVGI				S	**Sb**	**00 25 35.8**	**-0.7**
LKD2	**Lefkada island**	**0.61**	**19**	P	**Pg**	**00 25 30.6**	**-0.9**
LKD2	**Lefkada island**	**0.61**	**19**	P	**Pb**	**00 25 32.2**	**-0.3**
PDO	**Prodromos**	**0.73**	**58**	P	**Pg**	**00 25 33.4**	**-0.3**
PDO	**Prodromos**	**0.73**	**58**	P	**Pg**	**00 25 34.2**	**+0.5**
RLS	**Riolos of Patr**	**0.86**	**100**	P	**Pg**	**00 25 35.8**	**-0.4**
PVO	**Paravola**	**0.97**	**65**	P	**Pg**	**00 25 38.1**	**-0.3**
PVO				S	**Sb**	**00 25 52.3**	**+0.9**
PVO	**Paravola**	**0.97**	**65**	P	**Pg**	**00 25 38.3**	**-0.2**
PVO				S	**Sb**	**00 25 51.5**	**+0.1**
DRO	**Drossia**	**1.07**	**104**	P	**Pg**	**00 25 39.9**	**-0.3**
LAKA	**Lakka**	**1.24**	**88**	P	**Pn**	**00 25 43.0**	**-0.1**
ANX	**Ano Chora**	**1.25**	**72**	P	**Pg**	**00 25 43.9**	**+0.1**
IGT	**Igoumenitsa**	**1.32**	**358**	P	**Pg**	**00 25 45.7**	**+0.7**
SERG	**Sergoula**	**1.32**	**81**	P	**Pg**	**00 25 45.2**	**+0.2**
KALE	**Kalithea**	**1.38**	**82**	P	**Pb**	**00 25 45.7**	**+0.1**
KLV	**Kalavryta, Ach**	**1.39**	**97**	P	**Pn**	**00 25 45.4**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.57**	**59**	P	**Pg**	**00 25 50.0**	**0.0**
AGG	**Agios Georgios**	**1.71**	**61**	P	**Pg**	**00 25 52.4**	**-0.2**

ISK ***14*** *00:33:37.8, 36.°72N×36.°03E, h18km, ML4.5/46*

NIC ***14*** *00:33:37.6±0.0, 36.°78N×35.°99E, h2km±1km, Ml4.8/5*

BJI ***14*** *00:33:37.0±0.0, 36.°80N×36.°00E, h5km, mB5.0/31, mb4.6/42, Ms4.8/9, Ms7 4.4/7*

HLW ***14*** *00:33:37.7, 37.°01N×35.°67E, h12km±25km, Ml4.7*

MED_RC ***14*** *00:33:38.0±0.3, 36.°41N×36.°02E, h11km±1km, MW4.7/35, Moment Tensor Solution. Body waves: s1,c1;Mantle waves: s35,c50; Duration: 1°1 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.17±.10; $M_{\theta\theta}$0.01±.06; $M_{\phi\phi}$1.16±.07; $M_{r\theta}$-0.80±.25; $M_{\theta\phi}$0.27±.04; $M_{\phi r}$-0.67±.17; Best double couple: $M_0$1.58000×10^{16} NP1:ϕ_s174.00000°, δ30.00000°, λ-126.00000°. NP2:ϕ_s35.00000°, δ66.00000°, λ-71.00000°. Principal axes: T 1.5100, Plg19.0000°, Azm111.0000°; N 0.1600, Plg17.0000°, Azm207.0000°; P -1.6600, Plg64.0000°, Azm337.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

MOS ***14*** *00:33:38.1±1.1, 36.°69N×35.°99E, h14km, mb4.7/39 Error ellipse: s-maj=4.8km s-min=3.0km az=106.6*

DDA ***14*** *00:33:39.6, 36.°75N×36.°04E, h16km±6km, MW4.5*

GCMT ***14*** *00:33:39.5±0.3, 36.°23N±0.°03×36.°07E±0.°02, h18km±1km, MW4.9/101, Moment Tensor Solution. s20,c23; s101,c130; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.49±.12; $M_{\theta\theta}$-0.44±.07; $M_{\phi\phi}$1.93±.09; $M_{r\theta}$-1.58±.23; $M_{\theta\phi}$0.04±.05; $M_{\phi r}$-0.96±.18; Best double couple: $M_0$2.51500×10^{16} NP1:ϕ_s155.00000°, δ36.00000°, λ-144.00000°. NP2:ϕ_s35.00000°, δ70.00000°, λ-59.00000°. Principal axes: T 2.2740, Plg19.0000°, Azm102.0000°; N 0.4810, Plg29.0000°, Azm203.0000°; P -2.7550, Plg55.0000°, Azm344.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***14*** *00:33:39.4±1.6, 36.°72N±0.°05×36.°02E±0.°05, h10km±1km Error ellipse: s-maj=8.3km s-min=5.3km az=152.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.19; $M_{\theta\theta}$0.16; $M_{\phi\phi}$1.03; $M_{r\theta}$-0.19; $M_{\theta\phi}$0.16; $M_{\phi r}$-0.41; Fault plane solution: $M_0$1.21000×10^{16} NP1: ϕ_s185.98000°, δ34.46000°, λ-97.48000°. NP2:ϕ_s15.03000°, δ55.88000°, λ-84.90000°. Principal axes: T 1.1386, Plg11.0000°, Azm101.0000°; N 0.1399, Plg4.0000°, Azm192.0000°; P -1.2785, Plg78.0000°, Azm303.0000°;*

GII ***14*** *00:33:39.2±0.0, 36.°80N×35.°90E, h14km, mb4.6/4, MD4.5/4, Mm4.5/7*

IDC ***14*** *00:33:40.8±3.2, 36.°79N×35.°95E, h18km±21km, mb4.1/25, mb1 4.1/33, mb1mx4.1/50, mbtmp4.2/33, ML4.0/7, MS3.7/30, Ms1 3.7/30, ms1mx3.6/47, Error ellipse: s-maj=11.3km s-min=9.1km az=92.0*

GRAL ***14*** *00:33:44.1±0.3, 36.°46N×35.°52E, h12km±824km, MD4.6*

ISC 14 00:33:39.2±0.6, **36.°70N**±0.°02×**36.°01E**±0.°01, **h11**km±3km, **n577**, σ**1°61**/646, **mb4.6**/92, **MS3.6**/24, **49C-30D, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YURE	**YUREGIR**	**0.32**	**293**	PG	**Pg**	**00 33 45.6**	**-0.2**
YURE				SG	**Sg**	**00 33 50.3**	**+0.1**
YURE	**YUREGIR**	**0.32**	**293**	⇑*i*P	**Pg**	**00 33 45.8**	**+0.1**
YURE				*i* S	**Sb**	**00 33 52.9**	**+0.6**
TAHT	**Tahtakopru-Hat**	**0.36**	**156**	PG	**Pg**	**00 33 46.2**	**-0.2**
TAHT				SG	**Sg**	**00 33 51.4**	**+0.3**
CEYT	**Ceyhan**	**0.37**	**326**	PG	**Pg**	**00 33 45.7**	**-0.9**
CEYT				SG	**Sg**	**00 33 51.7**	**+0.1**
KRTD	**Karatas-Adana**	**0.49**	**257**	PG	**Pg**	**00 33 48.8**	**0.0**

KRTS Karatas 0.52 256 PG Pg 00 33 49.5 +0.1
YAYL Yayladag 0.67 173 i P Pg 00 33 52.5 +0.3
YAYL i S Sb 00 34 02.4 0.0
YAYL IAML 00 34 05.0
comp=N,14µm,0.7s
YAYL IAML 00 34 11.0
comp=E,13µm,0.5s
KAMA Osmaniye 0.72 47⇑i P Pg 00 33 51.2 -2.0
KAMA i S Sg 00 34 00.3 -2.2
KOZT Kozan 0.79 350 PG Pg 00 33 52.6 -1.9
KUZU Kuzuini 0.86 85⇑i P Pg 00 33 55.0 -0.9
KUZU i S Sg 00 34 06.1 -1.0
KUZU IAML 00 34 09.0
comp=E,90µm,0.4s
KUZU IAML 00 34 10.0
comp=N,91µm,0.6s
AKO Adana 0.88 330⇑i P Pg 00 33 53.6 -2.6
ANDN Andirin 0.92 17⇑i P Pg 00 33 54.1 -2.8
ANDN i S Sb 00 34 09.9 +0.5
ANDN IAML 00 34 11.0
comp=E,17µm,0.5s
ANDN IAML 00 34 12.0
comp=N,13µm,0.4s
KARA Karaisali 0.94 307 PG Pg 00 33 54.8 -2.6
AYKD Aykdinkavak 0.96 42⇑i P Pg 00 33 55.5 -2.2
AYKD i S Sg 00 34 06.4 -3.8
AYKD IAML 00 34 12.0
comp=E,52µm,0.5s
AYKD IAML 00 34 12.0
comp=N,21µm,0.6s
HCB Kahramanmara 0.97 48⇑i P Pg 00 33 55.7 -2.2
HCB i S Sg 00 34 08.7 -1.8
DED Mersin 1.00 285⇑i P Pg 00 33 56.0 -2.6
DED i S Sg 00 34 10.1 -1.5
DED IAML 00 34 15.0
comp=N,2µm,0.5s
DED IAML 00 34 18.0
comp=E,2µm,0.5s
GAZ Gaziantep 1.07 64 PG Pb 00 33 58.2 -1.7
GAZ SG Sg 00 34 13.3 -0.6
GAZ Gaziantep 1.07 64 Pb 00 33 58.5 -1.4
GAZ Sg 00 34 13.3 -0.6
GAZ Gaziantep 1.07 64 ⇑P Pb 00 33 58.0 -1.8
GAZ S Sb 00 34 14.2 +0.3
KMRS Kahramanmaras 1.07 41 PG Pb 00 33 57.9 -2.0
KMRS SG Sb 00 34 13.3 -0.6
GULE Gulek 1.14 301⇑i P Pb 00 33 58.7 -2.4
GULE i S Sn 00 34 17.9 +0.8
GULE IAML 00 34 34.0
comp=E,8µm,0.6s
GULE IAML 00 34 39.0
comp=N,6µm,1.1s
KHMN Narli-Kahraman 1.15 53 PN Pb 00 33 59.1 -2.1
KHMN SN Sb 00 34 14.5 -1.6
MERS Mersin 1.20 278 PN Pb 00 34 00.4 -1.6
MERS SN Sb 00 34 17.2 -0.4
CMRD Camardi-Nigde 1.25 320 PN Pn 00 34 01.3 -1.5
SAIM ADANA 1.27 3 i P Pn 00 34 02.0 -1.1
SAIM i S Sg 00 34 22.3 +1.9
SAIM IAML 00 34 23.0
comp=E,5µm,0.7s
SAIM IAML 00 34 27.0
comp=N,4µm,0.3s
GZT Gaziantep 1.41 62⇑i P Pn 00 34 03.2 -1.7
GZT IAML 00 34 24.0
comp=E,11µm,0.4s
GZT i S Sg 00 34 24.1 -0.4
GZT IAML 00 34 31.0
comp=N,11µm,0.4s
YAHY KAYSERI_Yahyal 1.48 340 i P Pn 00 34 04.8 -1.1
YAHY i S Sb 00 34 25.3 -0.4
YAHY IAML 00 34 39.0
comp=N,2µm,0.6s
YAHY IAML 00 34 42.0
comp=E,1µm,0.8s
KIZK Mersin 1.51 262 PN Pn 00 34 05.2 -1.1
KIZK Mersin 1.51 262⇑i P Pn 00 34 04.0 -2.2
KIZK i S Sg 00 34 27.2 -0.8
KIZK IAML 00 34 45.0
comp=E,1µm,0.6s
KIZK IAML 00 34 51.0
comp=N,1µm,0.6s
KERG Konya-Eregli 1.66 296⇑i P Pn 00 34 07.0 -1.5
KERG i S Sg 00 34 34.2 +1.4
KERG IAML 00 34 48.0
comp=N,1µm,0.9s
KERG IAML 00 34 50.0
comp=E,1µm,0.6s
SILI Silifke-Mersin 1.71 259 PN Pn 00 34 07.5 -1.4
SARI SarD1z-Kayseri 1.73 11 PN Pn 00 34 07.8 -1.7
NIG Nigde 1.79 322 PN Pn 00 34 08.5 -1.8
ELBS KAHRAMANMARAS1.85 29⇓i P Pn 00 34 10.3 -0.8
ELBS i S Sg 00 34 38.8 0.0
ELBS IAML 00 34 41.0
comp=E,4µm,0.5s
ELBS IAML 00 35 03.0
comp=N,4µm,0.9s
KEBE Keben-Mersin 1.86 263 PN Pn 00 34 09.6 -1.5
EREN Erenkoy 1.89 232 PN Pn 00 34 10.2 -1.2
EREN Erenkoy 1.89 232 i P Pn 00 34 11.6 +0.1
EREN i S Sb 00 34 38.6 +1.2
KARG Kargicak-Mersi 1.92 256 PN Pn 00 34 10.8 -1.0
IKL Isikli 1.93 257 PN Pn 00 34 10.8 -1.1
TISA Tisan-Mersin 1.95 255 PN Pn 00 34 11.4 -0.9
YESI Yesilovacik-Me 1.97 256 PN Pn 00 34 11.7 -0.8
ATAB Bozova 1.98 67 i P Pn 00 34 11.2 -1.5
ATAB i S Sg 00 34 42.5 -0.6
ATAB IAML 00 34 44.0
comp=E,8µm,0.7s
TEPK Tepekoy-MERSIN 2.04 257 PN Pn 00 34 12.7 -0.8
GULN MERSIN_Gulnar 2.05 256⇓i P Pn 00 34 12.6 -1.0
GULN i S Sn 00 34 40.0 +0.7
AKKU Akkuyu-Mersin 2.05 255 PN Pn 00 34 12.6 -1.1
AKK2 Akkuyu-Mersin 2.06 255 PN Pn 00 34 12.7 -1.0
AKK1 Akkuyu-Mersin 2.06 255 PN Pn 00 34 12.7 -1.1
TEVE Tevekalti-Mers 2.08 263 PN Pn 00 34 13.2 -0.9
YESY Yesilyurt 2.10 302 PN Pn 00 34 13.6 -0.9
OREN Orenkoy-Mersin 2.11 257 PN Pn 00 34 13.1 -1.4
BNN Bunyan 2.15 357 PN Pn 00 34 14.1 -1.1
GULA Gulagac 2.16 320 PN Pn 00 34 13.6 -1.7
YORU Yoruktepe-Mers 2.17 256 PN Pn 00 34 14.4 -0.9
AKCD Akcadag 2.20 43⇓i P Pn 00 34 15.4 -0.5
AKCD i S Sg 00 34 48.2 -1.8
AKCD IAML 00 34 56.0
comp=E,4µm,0.5s
AKCD IAML 00 35 01.0
comp=N,6µm,0.9s
DARE Darende-Malaty 2.20 32 PN Pn 00 34 14.6 -1.3
KRMN Karaman 2.25 283 PN Pn 00 34 15.6 -0.8
CUGUR Gurin_SVAS 2.25 26 i P Pn 00 34 16.9 +0.3
CUGUR i S Sg 00 34 51.6 -0.1
CUGUR IAML 00 34 57.0
comp=E,5µm,0.6s
CUGUR IAML 00 35 00.0
comp=N,6µm,0.5s
BERE Bereket-Mersin 2.27 262 PN Pn 00 34 15.9 -0.9
AVNS Nevsehir-Avano 2.29 337⇑i P Pn 00 34 16.0 -1.1
AVNS i S Sb 00 34 47.6 -1.5
AVNS IAML 00 35 10.0
comp=N,2µm,1.1s
AVNS IAML 00 35 12.0
comp=E,1µm,0.9s
PARAL Paralimni 2.33 224 P Pn 00 34 18.0 +0.5
PARAL S Sb 00 34 49.8 -0.3
PARAL AML AML 00 34 51.1
comp=E,18nm,0.9s
PARAL AML AML 00 34 51.1
comp=E,18nm,0.9s
PARAL AML AML 00 34 53.8
comp=E,14nm,0.9s
PARAL AML AML 00 34 53.8
comp=E,14nm,0.9s
URFA Urfa 2.37 71 PN Pn 00 34 16.3 -1.8
TEKE Tekeli-Mersin 2.40 257 PN Pn 00 34 17.2 -1.2
HWQ Hawqa 2.42 181 eP Pn 00 34 19.5 +0.6
HWQ eS Sn 00 34 45.7 -2.8
SANL SANLIURFA_Merk 2.44 78 i P Pn 00 34 17.8 -1.1
SANL i S Sb 00 34 54.5 +1.4
SANL IAML 00 34 58.0
comp=E,8µm,0.5s
SANL IAML 00 35 05.0
comp=N,9µm,0.5s
SULT Sultanhani-AKS 2.48 308 PN Pn 00 34 18.9 -0.8

ERMK Ermenek 2.49 270 i P Pn 00 34 19.5 -0.3
ERMK i S Sb 00 34 55.7 +0.9
ERMK IAML 00 35 03.0
comp=N,1µm,0.6s
ERMK IAML 00 35 14.0
comp=E,2µm,0.9s
MVOU Mavrovouni 2.56 230 P Pn 00 34 19.9 -0.7
MVOU AML AML 00 34 57.0
comp=E,6.9nm,1.3s
MVOU AML AML 00 35 01.6
comp=E,7.8nm,0.6s
ATHAL Athalassa 2.63 234 P Pn 00 34 20.7 -0.9
ATHAL S Sb 00 34 56.2 -2.4
ATHAL AML AML 00 34 56.7
comp=E,11nm,0.6s
ATHAL AML AML 00 34 56.7
comp=E,11nm,0.6s
ATHAL AML AML 00 35 10.4
comp=E,14nm,1.6s
ATHAL AML AML 00 35 10.4
comp=E,14nm,1.6s
CUALT Altinyayla-SIV 2.63 13 i P Pn 00 34 19.6 -2.3
CUALT i S Sg 00 35 03.2 -0.6
CUALT IAML 00 35 08.0
comp=E,820nm,0.8s
AKSY AKSARAY - Alti 2.64 318 i P Pn 00 34 20.8 -0.9
AKSY i S Sb 00 35 00.3 +1.4
AKIN Akıncılar- Kıb 2.66 232 PN Pn 00 34 21.6 -0.5
HEKM Malatya_Hekimh 2.67 35 i P Pn 00 34 23.1 +0.8
HEKM i S Sg 00 35 03.1 -1.9
HEKM IAML 00 35 12.0
comp=N,2µm,0.4s
HEKM IAML 00 35 16.0
comp=E,4µm,0.7s
SIRC Yozgat 2.72 346 i P Pn 00 34 22.8 -0.1
SIRC i S Sg 00 35 07.6 +1.1
CUSAR Sarkisla-SIVAS 2.72 4 i P Pn 00 34 22.6 -0.4
CUSAR i S Sg 00 35 09.8 +3.2
CUSAR IAML 00 35 24.0
comp=E,803nm,1.1s
CUSAR IAML 00 35 24.0
comp=N,589nm,1.0s
CSS Mathiatis 2.78 232 PN Pn 00 34 23.7 0.0
CSS Mathiatis 2.78 232 Pn 00 34 22.2 -1.5
CSS Pg Pg 00 34 38.7 +6.2
CSS Sn Sn 00 34 58.6 +1.3
CSS Mathiatis 2.78 232 P Pn 00 34 24.2 +0.5
CSS S Sn 00 35 00.1 +2.8
CSS Mathiatis 2.78 232 Pn Pn 00 34 21.7 -2.0
BHL Bhannes 2.81 186 eP Pn 00 34 24.2 +0.1
BHL eS Sn 00 34 54.0 -4.0
HDMB Hadim 2.83 276 PN Pn 00 34 24.1 -0.5
CUKAN kangal_SIVAS 2.85 23 i P Pn 00 34 25.2 +0.4
CUKAN i S Sg 00 35 12.4 +1.4
CUKAN IAML 00 35 26.0
comp=N,684nm,0.7s
CUKAN IAML 00 35 27.0
comp=E,760nm,0.8s
KIRS Kırehir-Merke 2.94 326 i P Pn 00 34 26.0 +0.1
KIRS i S Sg 00 35 11.4 -2.2
ASGA Asgata 2.95 230 P Pn 00 34 26.3 +0.3
ASGA AML AML 00 35 09.3
comp=E,7.2nm,1.0s
SERE Sereflikochisa 2.96 320 PN Pn 00 34 25.4 -0.9
ELZG Elazig 2.97 52 i P Pn 00 34 25.7 -0.7
ELZG i S Sg 00 35 14.5 -0.1
LEF Lefka 2.98 239 PN Pn 00 34 26.8 +0.4
LEF Lefka 2.98 239 i P Pn 00 34 24.6 -1.8
LEF i S Sn 00 35 02.9 +0.7
YOZ Yozgat 2.98 350 PN Pn 00 34 25.3 -1.3
GAZI Gazipasa 3.01 262 PN Pn 00 34 26.2 -0.7
GAZI Gazipasa 3.01 262 i P Pn 00 34 28.5 +1.7
GAZI i S Sn 00 35 03.4 +0.5
GAZI IAML 00 35 21.0
comp=E,639nm,0.5s
DQRL Deir Qamar 3.01 187 eP Pn 00 34 27.0 +0.1
DQRL eS Sn 00 34 58.7 -4.4
ARPR Arapgir-MALATY 3.02 37 PN Pn 00 34 25.7 -1.4
KMER Konya-Meram 3.09 291 i P Pn 00 34 29.4 +1.3
KMER i S Sb 00 35 12.9 +0.8
CHBY Cihanbeyli 3.10 308 PN Pn 00 34 27.5 -0.7
SVRC Sivrice-ELAZID 3.11 56 PN Pn 00 34 27.5 -0.9
QRWL Qaraoun 3.16 185 eP Pn 00 34 29.2 +0.3
KONT Konya--Tatoy 3.16 294 PN Pn 00 34 28.2 -0.7
KONT Konya--Tatoy 3.16 294 i P Pn 00 34 30.6 +1.7
KONT i S Sg 00 35 20.8 +0.1
ALFC Alefka 3.17 242 ⇑P Pn 00 34 27.5 -1.5
ALFC S Sn 00 35 08.5 +1.8
ALFC AML AML 00 35 09.7
comp=E,3.9nm,0.6s
ALFC AML AML 00 35 09.7
comp=E,3.9nm,0.6s
CDAG Cicekdag 3.19 337⇓i P Pn 00 34 29.4 0.0
CDAG i S Sb 00 35 17.7 +2.9
CDAG IAML 00 35 21.0
comp=E,318nm,0.8s
CDAG IAML 00 35 25.0
comp=N,401nm,2.0s
ALAN Alanya-ANTALYA 3.20 269 PN Pn 00 34 28.8 -0.6
RCY Rachaya 3.20 183 eP Pn 00 34 30.0 +0.4
KEMA Kemaliye 3.23 37⇓i P Pn 00 34 29.5 -0.5
KEMA i S Sg 00 35 21.9 -1.1
KEMA IAML 00 35 26.0
comp=N,649nm,0.9s
KEMA IAML 00 35 28.0
comp=E,621nm,0.9s
LADK Ladik-KONYA 3.26 298 PN Pn 00 34 29.8 -0.6
SCER sogukcermik 3.28 15 i P Pn 00 34 31.2 +0.6
SCER i S Sg 00 35 25.3 +0.8
SVSK Karacayir 3.30 13 PN Pn 00 34 30.3 -0.5
NATA Nata 3.39 237 P Pn 00 34 33.1 +1.1
SEYD Seydisehir-KON 3.41 283 PN Pn 00 34 32.3 -0.1
AKMS Akamas 3.42 242 P Pn 00 34 32.9 +0.3
AKMS S Sn 00 35 15.7 +2.6
NATI Neve Ativ 3.44 184 Pn Pn 00 34 33.7 +1.0
REFA Refahiye_ERZN 3.46 38⇓i P Pb 00 34 38.7 -1.9
REFA i S Sg 00 35 39.6 +9.2
KKUL Konya-Kulu 3.47 316 i P Pn 00 34 33.8 +0.5
KKUL i S Sg 00 35 28.6 -2.1
CUZAR Zara_SIVAS 3.47 23 i P Pn 00 34 34.3 +1.0
CUZAR i S Sg 00 35 29.4 -1.3
KSDI Kefar Szold 3.51 185 ⇓P Pn 00 34 34.4 +0.6
KSDI Kefar Szold 3.51 185 Pn Pn 00 34 34.3 +0.6
KSDI Sn Sn 00 35 16.8 +1.5
DYBB Diyarbakir 3.52 68 PN Pn 00 34 32.9 -1.1
KEPZ Antalya-Kepez 3.54 275 i P Pn 00 34 37.6 +3.4
KEPZ i S Sb 00 35 22.1 -2.7
BR131 Keskin Array S 3.55 329 Pn 00 34 34.6 +0.2
BR131 Keskin Array S 3.55 329 P Pn 00 34 34.6 +0.2
BRTR Keskin Array B 3.55 329 Pn Pn 00 34 34.7 +0.3
comp=E,6.3nm,0.3s,baz=156,slow=13,SNR=186
BRTR Lg Lg 00 35 31.8
comp=E,2.8nm,0.3s,baz=134,slow=22,SNR=3.1
BRTR Keskin Array B 3.55 329 Pn 00 34 34.3 0.0
BRTR Keskin Array B 3.55 329 i P Pn 00 34 34.7 +0.3
BRTR pmax pmax
comp=Z,27nm,0.5s
AFSR Afar-Bala (An 3.59 321 PN Pn 00 34 34.7 -0.2
MAZI Mazidag 3.63 77 PN Pn 00 34 33.8 -1.7
BBAL Bala 3.63 322 i P Pn 00 34 34.4 -1.2
BBAL i S Sg 00 35 31.9 -4.0
CORM Corum 3.63 343 PN Pn 00 34 34.6 -1.0
TOKA Tokat 3.63 6 i P Pn 00 34 35.3 -0.2
COAL Corum-Alaca 3.64 348⇓i P Pn 00 34 36.0 +0.4
TOKT Tokat 3.64 7 PN Pn 00 34 34.9 -0.6
HNTI Hanita 3.67 191 Pn Pn 00 34 36.4 +0.4
DELI KIRIKKALE 3.68 334 i P Pn 00 34 36.1 0.0
DELI i S Sg 00 35 35.3 -2.0
TNCL Tunceli-Merkez 3.69 48 i P Pn 00 34 37.7 +1.4
TNCL i S Sg 00 35 36.9 -0.9
MMA0B Mount Meron ar 3.71 188 Pn Pn 00 34 36.5 -0.1
MMAI Mount Meron Ar 3.71 188 Pn Pn 00 34 36.9 +0.3
comp=Z,29nm,0.3s,baz=351,slow=14,SNR=174
MMAI LR LR 00 36 27.1
comp=Z,972nm,19.6s,baz=355,slow=44
DOGA KONYA_Doganhis 3.73 293 i P Pn 00 34 37.4 +0.5
DOGA i S Sg 00 35 37.4 -1.6
MARD Mardin 3.87 79 i P Pn 00 34 36.6 -2.2
MARD IAML 00 35 21.0
comp=N,2µm,0.6s
MARD IAML 00 35 26.0
comp=E,860nm,0.5s

MARD i S Sb 00 35 38.5 +4.0
HANI Diyarbakir_Han 3.89 63 i P Pn 00 34 37.7 -1.2
HANI IAML 00 35 29.0
comp=E,340nm,0.6s
HANI IAML 00 35 29.0
comp=N,364nm,0.5s
HANI i S Sg 00 35 41.6 -2.5
SUSE Susehri 3.90 26 i P Pn 00 34 40.0 +0.7
SUSE i S Sg 00 35 41.7 -2.8
BLGI Bet Lehem HaGe 4.01 190 Pn Pn 00 34 41.0 +0.3
BLGI Sn Sn 00 35 29.1 +1.4
ERBA Erbaa 4.02 8 i P Pn 00 34 40.9 +0.2
ERBA i S Sg 00 35 50.5 +2.3
BR231 Keskin MP Arra 4.04 322 Pn 00 34 40.7 -0.3
ANTO Ankara 4.05 322 Pn 00 34 41.9 +0.7
ANTO Ankara 4.05 322 P Pn 00 34 41.9 +0.7
CTAK Corum_Osmancik 4.05 347 i P Pn 00 34 42.2 +0.8
OFRI `Ofer 4.16 192 Pn Pn 00 34 42.7 +0.1
OFRI Sn Sn 00 35 32.7 +1.5
EUZM Uzumlu 4.18 43 i P Pn 00 34 44.9 +1.9
MMLI Mount Malkishu 4.28 187 PN Pn 00 34 44.5 +0.1
MMLI Mount Malkishu 4.28 187 ⇑P Pn 00 34 45.5 +1.2
MMLI Mount Malkishu 4.28 187 Pn Pn 00 34 45.6 +1.2
KELT Kelkit 4.28 36 i P Pn 00 34 44.6 +0.1
KELT i S Sb 00 35 48.9 +2.4
BTMN Batman 4.36 73 i P Pn 00 34 44.8 -0.7
BTMN i S Sg 00 35 56.0 -3.3
QRNJ Al-Qirein 4.37 185 Pn Pn 00 34 46.4 +0.9
HAVZ Havza 4.37 357 i P Pn 00 34 46.1 +0.6
HAVZ i S Sg 00 35 56.6 -3.0
SVAN Silvan-Diyarba 4.38 69 i P Pn 00 34 44.0 -1.7
SVAN i S Sg 00 35 56.4 -3.5
HMDT Nahal Hemdat 4.46 185 Pn Pn 00 34 47.5 +0.8
ISP Isparta 4.51 286 Pn 00 34 48.7 +1.1
ISP Isparta 4.51 286 P Pn 00 34 48.7 +1.1
ISP Isparta 4.51 286 Pn Pn 00 34 46.5 -1.1
ORDU Ordu-Boztepe 4.52 18 i P Pn 00 34 47.9 +0.3
ORDU i S Sg 00 36 03.1 -1.3
SLTI Sal'it 4.52 190 Pn Pn 00 34 48.2 +0.6
ASF Jabal al Asfar 4.58 170 Pn Pn 00 34 50.0 +1.5
comp=N,2.4nm,0.3s,baz=320,slow=9.4,SNR=21
ASF Lg Lg 00 36 10.4
comp=N,36nm,0.3s,baz=146,slow=17,SNR=4.3
ASF LR LR 00 37 06.7
comp=N,1µm,19.2s,baz=316,slow=44
BNGL BINGOL 4.65 60 i P Pn 00 34 51.4 +1.8
BNGL i S Sg 00 36 11.0 +2.4
CMDR Camlidere-ANKA 4.69 325 i P Pn 00 34 53.4 +3.4
CMDR i S Sb 00 36 02.2 +4.2
ILGA Ilgaz 4.70 338 Pn 00 34 50.8 +0.6
OSC2 CSNet OBS 4 4.75 221 P Pn 00 34 52.4 +1.7
OSC2 S Sn 00 35 48.4 +2.7
MUSM Mu-Merkez 4.81 64 i P Pn 00 34 50.6 -1.1
MUSM i S Sg 00 36 09.5 -4.2
KOPT Kop Dagi 4.84 45 i P Pn 00 34 55.5 +3.2
KOPT i S Sg 00 36 16.6 +2.0
BAYB BAYBURT 4.87 42 i P Pn 00 34 53.3 +0.7
BAYB i S Sg 00 36 16.0 +0.3
ECAT Cat-ERZURUM 4.87 52 i P Pn 00 34 53.3 +0.7
SRTM Siirt_Merkez 4.89 73 i P Pn 00 34 51.7 -1.0
SRTM i S Sg 00 36 13.9 -2.2
ELL Elmali 4.90 272 Pn 00 34 53.8 +0.9
ELL Elmali 4.90 272 P Pn 00 34 53.8 +0.9
VRTB Varto-Mus 4.96 59 i P Pn 00 34 56.9 +3.1
VRTB i S Sg 00 36 22.1 +3.7
EMRE Erzurum,Aziziy 5.13 48 i P Pn 00 34 58.7 +2.6
EMRE i S Sg 00 36 27.9 +4.0
DSI Dead Sea 5.14 186 Pn Pn 00 34 57.0 +0.8
BLIS Bitlis-Merkez 5.15 69 i P Pn 00 35 03.3 -6.1
BLIS i S Sg 00 36 18.7 -5.8
SIRN Sırnak 5.18 79 i P Pn 00 34 55.9 -0.9
SIRN i S Sg 00 36 21.3 -4.3
AMAZ Amatzia 5.24 190 ⇑P Pn 00 34 58.5 +1.1
AMAZ S Sn 00 36 02.4 +4.6
AMAZ Amatzia 5.24 190 Pn Pn 00 34 58.4 +0.9
KRIK Erzurum-spir 5.30 45 i P Pn 00 35 04.3 +5.8
KRIK i S Sg 00 36 36.8 +7.5
MDUB Mudurnu 5.32 316 Pn 00 34 58.7 0.0
YTIR Yattir 5.38 188 Pn Pn 00 35 00.6 +1.1
YTIR Sn Sn 00 36 04.3 +2.9
GHAJ Ghor Haditha 5.40 184 Pn Pn 00 35 00.6 +1.0
DAMI2 DAM2 5.54 185 Pn Pn 00 35 03.1 +1.6
KARJ KARJ 5.58 183 Pn Pn 00 34 50.8 -11
KZIT Kziot 5.93 193 ⇑P Pn 00 35 07.8 +0.8
KZIT Kziot 5.93 193 Pn Pn 00 35 07.6 +0.6
MANT Manisa 6.18 289 Pn 00 35 10.2 -0.4
PRNI Paran 6.39 188 Pn Pn 00 35 14.2 +0.9
BCA Borcka 6.44 41 ⇓P Pn 00 35 16.8 +2.8
KRMI Paran Flat 6.65 190 Pn Pn 00 35 18.0 +1.0
HRFI Mount Harif 6.70 187 Pn Pn 00 35 19.0 +1.5
MBRI Mt Berech 6.95 188 Pn Pn 00 35 22.8 +1.7
EIL Elat 7.07 187 Pn Pn 00 35 25.0 +2.3
comp=N,1.7nm,0.3s,baz=350,slow=12,SNR=17
EIL LR LR 00 38 35.6
comp=N,626nm,18.9s,baz=8.0,slow=41
EIL Elat 7.07 187 Pn Pn 00 35 24.1 +1.5
KARP Karpathos 7.25 263 Pn 00 35 24.3 -0.8
SUZ Suez 7.34 202 P Pn 00 35 27.2 +0.9
baz=200
SOC Sochi 7.44 21 eP Pn 00 35 31.8 +4.2
SOC e 00 36 58.2
SOC MLR MLR
comp=Z,1µm,10.0s
HHAG Hagoal 7.48 207 P Pn 00 35 30.2 +1.9
baz=204
AKH Akhalkalaki 7.48 49 Pn Pn 00 35 28.5 0.0
AKH Akhalkalaki 7.48 49 P Pn 00 35 28.5 0.0
HBST Basata 7.54 189 P Pn 00 35 34.2 +5.0
baz=187
KOT Kottamia 7.61 209 S Sn 00 36 51.8 -4.4
baz=206
KOT AMP 00 37 00.0
baz=206
GNI Garni 7.67 61 Pn Pn 00 35 32.8 +1.8
comp=Z,0.3nm,0.3s,baz=218,slow=17,SNR=2.8
GNI LR LR 00 38 50.6
comp=Z,508nm,20.9s,baz=244,slow=40
GNI Garni 7.67 61 Pn 00 35 32.0 +1.0
GNI Garni 7.67 61⇓eP Pn 00 35 32.4 +1.4
ZNM Zenema 7.76 201 P Pn 00 35 33.2 +1.1
baz=198
YAL Yalta 7.90 350 eP Pn 00 35 33.9 -0.1
GLL Jalalah 7.96 208 P Pn 00 35 35.5 +0.5
baz=206
SEV Sevastopol' 8.03 348 eP Pn 00 35 36.9 +1.1
HDHB Dhahab 8.04 189 P Pn 00 35 38.8 +2.8
baz=187
ALU Alushta 8.06 352 eP Pn 00 35 36.6 +0.4
ANN Anapa 8.16 7 eP Pn 00 35 40.1 +2.6
ANN eS Sn 00 37 15.1 +5.4
ANN pmax pmax
comp=Z,17nm,0.8s
ANN MLR MLR
comp=Z,651nm,10.0s
SUDU Sudak 8.21 355 eP Pn 00 35 37.4 -0.9
NEY Neytrino 8.32 36⇑eP Pn 00 35 43.4 +3.4
SIM Simferopol' 8.36 351 eP Pn 00 35 40.6 +0.3
HNAT Natroun 8.37 214 P Pn 00 35 40.8 +0.3
baz=212
HNAT AMP 00 37 00.0
baz=212
HNAT S Sn 00 37 12.0 -3.0
baz=212
APE Apeiranthos 8.40 276 ⇑P Pn 00 35 41.6 +0.6
APE Apeiranthos 8.40 276 ⇑P Pn 00 35 41.6 +0.6
TBLG Delisi 8.43 51 Pn Pn 00 35 42.1 +0.8
TBLG Delisi 8.43 51 P Pn 00 35 42.2 +0.8
SANT Santorini 8.50 271 Pn 00 35 41.8 -0.4
ZEI Tsey 8.60 43 eP Pn 00 35 49.9 +6.2
ZEI pmax pmax
comp=Z,7.0nm,0.8s
KBZ Khabaz 8.78 35 LR LR 00 39 17.2
comp=Z,610nm,20.8s,baz=224,slow=39
ALN Alexandroupoli 8.83 301 Pn Pn 00 35 47.7 +1.0
ALN Alexandroupoli 8.83 301 P Pn 00 35 47.7 +1.0
KIV Kislovodsk 8.86 33 ⇓P Pn 00 35 49.9 +2.6
KIV Kislovodsk 8.86 33 Pn Pn 00 35 49.4 +2.2
KIV Kislovodsk 8.86 33 eP Pn 00 35 51.1 +3.9
KIV pmax pmax
comp=Z,60nm,1.1s
KIV MLR MLR
comp=Z,463nm,10.0s

KVAR Kislovodsk Arr 8.86 33 LR LR 00 39 41.3
comp=Z,422nm,18.1s,baz=94,slow=41
IDI Anoyia 9.12 264 Pn Pn 00 35 49.5 -1.3
comp=Z,3.8nm,0.3s,baz=87,slow=12,SNR=30
IDI Sn Sn 00 37 30.2 -3.2
comp=Z,1.6nm,0.3s,baz=305,slow=19,SNR=4.2
TIRR Tirgusor 9.66 326 ⇑P Pn 00 36 01.8 +3.7
TIRR Tirgusor 9.66 326 Pn Pn 00 35 58.9 +0.8
TIRR Tirgusor 9.66 326 P Pn 00 35 58.9 +0.8
ICOR Ion Corvin 9.69 322 ⇑P Pn 00 36 01.6 +3.1
ELND Elena 9.96 312 ⇓P Pn 00 36 04.8 +2.5
RAZG Razgrad 9.99 316 ⇓P Pn 00 36 04.6 +2.0
HARR Harsova 10.06 325 ⇓P Pn 00 36 05.9 +2.4
HARR Harsova 10.06 325 ⇓P Pn 00 36 05.9 +2.4
RZN Rozhen 10.07 303 eP Pn 00 36 11.0 +7.0
CFR Carcaliu 10.34 327 ⇑P Pn 00 36 09.5 +2.1
CFR Carcaliu 10.34 327 ⇑P Pn 00 36 09.5 +2.1
MMB Musomiste 10.71 301 eP Pn 00 36 16.6 +4.1
MAK Makhachkala 10.82 51 d iP Pn 00 36 13.1 -0.9
MAK eS Sn 00 38 17.3 +2.2
MAK pmax pmax
comp=Z,286nm,1.1s
MAK MLR MLR
comp=Z,1μm,10.0s
AGG Agios Georgios 11.06 286 Pn 00 36 15.4 -1.9
AGG Agios Georgios 11.06 286 P Pn 00 36 15.4 -1.9
LIT Litokhoron 11.13 292 Pn Pn 00 36 18.1 -0.3
LIT Litokhoron 11.13 292 P Pn 00 36 18.1 -0.3
KKB Krupnik 11.26 301 eP Pn 00 36 23.0 +2.9
BISRR Bisoca 11.27 325 ⇑P Pn 00 36 24.1 +3.9
ITM Ithomi 11.28 277 Pn 00 36 21.8 +1.5
HUMR Humele 11.45 316 ⇑P Pn 00 36 16.0 -6.6
VTS Vitosha 11.47 305 ⇑P Pn 00 36 25.7 +2.6
VTS Vitosha 11.47 305 eP Pn 00 36 26.5 +3.4
VTS Vitosha 11.47 305 Pn 00 36 23.4 +0.3
VTS Vitosha 11.47 305 ⇑P Pn 00 36 25.7 +2.6
VRI Vrincioaia 11.50 326 ⇓P Pn 00 36 26.6 +3.2
VRI Vrincioaia 11.50 326 ⇓P Pn 00 36 26.6 +3.2
MILM Milestii Mici 11.53 335 ⇑P Pn 00 36 23.2 -0.5
PLOR Plostina 11.53 325 ⇑P Pn 00 36 27.4 +3.7
PLOR Plostina 11.53 325 ⇑P Pn 00 36 27.4 +3.7
HFRF Wahat Farafira 11.55 217 P Pn 00 36 22.8 -1.2
baz=215
MLR Muntele Rosu 11.60 322 LR LR 00 41 33.2
comp=Z,636nm,20.9s,baz=137,slow=41
MLR Muntele Rosu 11.60 322 Pn Pn 00 36 24.8 +0.1
MLR Muntele Rosu 11.60 322 P Pn 00 36 24.8 +0.1
VOIR 12.01 320 ⇑P Pn 00 36 33.4 +3.1
VOIR 12.01 320 ⇑P Pn 00 36 33.4 +3.1
TESR Tescani 12.04 327 ⇓P Pn 00 36 33.1 +2.5
OZUR 12.11 324 ⇑P Pn 00 36 34.7 +3.0
ARR Arges 12.18 319 ⇑P Pn 00 36 34.9 +2.2
DOPR Dopca 12.21 323 ⇓P Pn 00 36 36.5 +3.5
JAN Janina 12.29 288 P Pn 00 36 33.5 -0.6
IGT Igoumenitsa 12.66 288 P Pn 00 36 36.6 -2.6
SORM Soroca 12.74 336 ⇑P Pn 00 36 44.2 +4.0
SORM Soroca 12.74 336 ⇑P Pn 00 36 44.2 +4.0
GZR Gura Zlata 13.22 315 ⇑P Pn 00 36 49.1 +2.3
TIR Tirane 13.38 295 Pn Pn 00 36 50.1 +1.2
TIR Tirane 13.38 295 P Pn 00 36 50.1 +1.2
BURAR Bucovina Array 13.51 327 ⇓P Pn 00 36 53.9 +3.1
BURAR Bucovina Array 13.51 327 Pn 00 36 50.6 -0.2
BURAR Bucovina Array 13.51 327 ⇓P Pn 00 36 53.9 +3.1
BUR08 Bucovina Ar. S 13.54 327 Pn 00 36 50.0 -1.3
BZS Buzias 14.01 314 P P 00 37 02.2 -3.4
PDG Podgorica 14.12 299 Pn Pn 00 36 57.3 -1.9
DRGR 14.13 320 ⇓P P 00 37 07.6 +0.7
DRGR 14.13 320 ⇓P P 00 37 07.6 +0.7
BMR Baia Mare 14.34 324 ⇑P P 00 37 09.7 +0.5
BMR Baia Mare 14.34 324 ⇑P P 00 37 09.7 +0.5
VSR Storozhevoye 14.69 8 eP Pn 00 37 08.5 +1.7
VSR pmax pmax
comp=Z,10.0nm,0.9s
KIEV Kiev 14.81 343 P P 00 37 14.0 -0.4
AKASG Malin Array Be 14.82 343 Pn Pn 00 37 08.6 0.0
comp=Z,2.0nm,0.3s,baz=155,slow=11,SNR=16
AKASG LR LR 00 44 17.7
comp=Z,135nm,19.8s,baz=175,slow=43
AKASG Malin Array Be 14.82 343 Pn 00 37 08.9 +0.3
AKASG Malin Array Be 14.82 343 ceP P 00 37 12.1 -2.4
AKASG pmax pmax
comp=Z,9.0nm,0.8s
AKBB Malin Array Si 14.82 343 Pn 00 37 08.8 +0.2
AKBB Malin Array Si 14.82 343 P Pn 00 37 08.8 +0.2
VRH Novokhopyorsk 15.06 14 eP P 00 37 14.7 -2.5
VRH pmax pmax
comp=Z,10.0nm,0.7s
TIP Timpagrande 15.39 285 Pn 00 37 16.9 +0.6
TIP IAmb IAmb 00 37 24.9
comp=Z,47nm,1.5s
RAYN Ar Rayn 15.48 145 Pn 00 37 19.5 +1.9
RAYN Ar Rayn 15.48 145 P Pn 00 37 19.5 +1.9
RAYN pmax pmax
comp=Z,11nm,0.9s
UZH Uzhgorod 15.59 324 eP Pn 00 37 19.0 +0.3
LVV L'vov 15.72 330 eP P 00 37 24.1 -0.4
KOLS Kolonicke sedl 15.81 325 eP Pn 00 37 22.2 +0.5
KOLS Kolonicke sedl 15.81 325 ePN Pn 00 37 22.2 +0.5
KOLS Kolonicke sedl 15.81 325 eP P 00 37 35.6 +10
CEL Celeste 16.04 282 Pn Pn 00 37 24.1 -0.7
KWP Kalwaria Pacla 16.12 327 Pn Pn 00 37 27.1 +1.4
KWP IAmb IAmb 00 37 41.0
comp=Z,43nm,1.1s
KWP Kalwaria Pacla 16.12 327 P Pn 00 37 27.1 +1.4
KWP pmax pmax
comp=Z,43nm,1.1s
CRVS Cervenica-Dubn 16.17 323 eP P 00 37 29.0 -0.5
CRVS Cervenica-Dubn 16.17 323 ePN P 00 37 29.0 -0.5
CRVS Cervenica-Dubn 16.17 323 eP P 00 37 42.5 +13
PSZ Piszkesteto 16.32 318 Pn 00 37 27.7 -0.7
PSZ Piszkesteto 16.32 318 P Pn 00 37 27.7 -0.7
PSZ pmax pmax
comp=Z,33nm,1.3s
BLY Banja Luka 16.35 305 Pn Pn 00 37 27.3 -1.4
SGRT San Giovanni R 16.48 294 Pn Pn 00 37 28.5 -1.9
SGRT IAmb IAmb 00 37 34.3
comp=Z,75nm,1.2s
NIE Niedzica 17.08 323 P P 00 37 39.9 +0.3
VYHS Vyhne 17.23 318 eP P 00 37 42.0 +0.6
VYHS Vyhne 17.23 318 eP P 00 37 41.9 +0.6
VAE Valguarnera 17.25 279 LR LR 00 44 58.8
comp=Z,187nm,20.5s,baz=96,slow=39
LANS Liptovska Anna 17.31 321 eP Pn 00 37 38.0 -2.8
LANS Liptovska Anna 17.31 321 ePN Pn 00 37 38.0 -2.8
LANS Liptovska Anna 17.31 321 eP P 00 37 51.6 +9.4
WDD Wied Dalam 17.34 274 Pn Pn 00 37 38.3 -2.9
GEYT Alibeck 17.63 79 P P 00 37 47.8 +2.0
comp=Z,0.1nm,0.3s,baz=286,slow=11,SNR=15
GEYT Alibeck 17.63 79 P Pn 00 37 43.5 -1.4
GYA0B ALIBECK ARRAY 17.63 79 Pn 00 37 44.8 0.0
OJC Ojcow 17.86 324 Pn Pn 00 37 47.7 +0.1
OJC Ojcow 17.86 324 P Pn 00 37 47.7 +0.1
OJC pmax pmax
comp=Z,13nm,1.2s
INTR Introdacqua 17.88 294 Pn 00 37 46.5 -1.4
INTR IAmb IAmb 00 38 00.1
comp=Z,36nm,0.9s
MODS Modra-Piesok 18.02 316 eP Pn 00 37 48.9 -0.6
MODS Modra-Piesok 18.02 316 ePN Pn 00 37 48.9 -0.6
MODS Modra-Piesok 18.02 316 eP P 00 37 58.7 +8.8
JAVC Velka Javorina 18.07 318 eP P 00 37 56.2 +5.6
AQU L'Aquila 18.31 295 P 00 37 54.2 +0.9
AQU IAmb IAmb 00 38 02.1
comp=Z,34nm,1.1s
AQU L'Aquila 18.31 295 P P 00 37 54.2 +0.9
AQU pmax pmax
comp=Z,34nm,1.1s
OKC Ostrava-Krasne 18.42 321 P P 00 37 54.8 +0.4
OKC pmax pmax
comp=Z,7.0nm,1.3s
OBN Obninsk 18.42 1 P Pn 00 37 54.3 0.0
OBN Obninsk 18.42 1⇑eP Pn 00 37 58.6 +4.3
OBN eS S 00 41 25.0 +0.6
OBN pmax pmax
comp=Z,17nm,0.9s
OBN MLR MLR
comp=Z,176nm,14.0s
ARSA Arzberg 18.47 311 i P Pn 00 38 05.2 +10
comp=Z,2.9nm,0.7s
MICGM Minsk 18.66 345 e Pn 00 37 59.0 +1.7
MNK Minsk 18.66 345 eP Pn 00 37 59.0 +1.7
MORC Moravsky Berou 18.69 320 eP Pn 00 38 03.0 +5.3

KRUC Moravsky 18.88 317 eP Pn 00 38 01.2 +1.2
VRAC Vranov 18.91 318 eP Pn 00 38 00.9 +0.5
VRAC Vranov 18.91 318 LR LR 00 46 58.1
comp=Z,154nm,20.1s,baz=128,slow=42
MOS Moscow 19.07 3 eP Pn 00 38 02.7 +0.5
MOS pmax pmax
comp=Z,33nm,1.0s
KRLC Kraliky 19.26 320 eP Pn 00 38 05.6 +1.0
KRLC epP sP 00 38 09.7 +1.5
KRLC ex x 00 38 14.0
KRLC Kraliky 19.26 320 eP Pn 00 38 05.6 +1.0
NACGM Naroch 19.27 344 e P 00 38 03.0 -0.7
MYKA Terra Mystica 19.37 308 i pP P 00 38 08.5 +3.6
comp=Z,9.0nm,0.8s
MOA Molln 19.50 312 i P Pn 00 38 06.9 -0.5
comp=Z,4.8nm,0.7s
TREC Trest 19.51 317 P Pn 00 38 08.9 +1.3
TREC pmax pmax
comp=Z,4.0nm,2.3s
KBA Koelnbreinsper 19.73 309 i P P 00 38 09.5 +0.5
comp=Z,2.1nm,0.6s
IIGN Ignalina 19.81 343 eP P 00 38 10.0 +0.4
CHVC Chvalec 19.94 320 eP P 00 38 11.2 +0.2
CHVC ex x 00 38 16.9
ISAL Salakas 20.04 343 eP P 00 38 11.5 -0.5
ABTA Abfaltersbach 20.14 307 i P Pn 00 38 19.9 +4.7
IZAR Zarasai 20.18 344 eP P 00 38 13.8 +0.3
IZAR IAmb IAmb 00 38 27.9
comp=Z,24nm,1.4s
GOPC GO Pecny, Ondr 20.23 317 eP P 00 38 14.3 +0.1
GOPC GO Pecny, Ondr 20.23 317 eP P 00 38 14.3 +0.1
TEOL Teolo 20.23 303 P P 00 38 13.1 -1.2
TEOL IAmb IAmb 00 38 24.3
comp=Z,52nm,1.0s
GEC2 GERESS Array S 20.29 314 ePn P 00 38 14.7 -0.2
GEC2 GERESS Array S 20.29 314 IAmb IAmb 00 38 25.2
comp=Z,36nm,1.1s
GERES GERESS Array B 20.29 314 P P 00 38 14.6 -0.4
comp=Z,4.7nm,0.6s,baz=114,slow=11,SNR=19
GERES LR LR 00 46 55.8
comp=Z,144nm,19.5s,baz=118,slow=39
PRU Pruhonice 20.40 317 eP P 00 38 15.9 -0.1
PRU epP sP 00 38 21.1 +0.5
PRU Pruhonice 20.40 317 eP P 00 38 15.9 -0.1
PRU e 00 38 21.1
ZCCA Zocca 20.45 300 P P 00 38 17.3 +0.6
ZCCA IAmb IAmb 00 38 31.3
comp=Z,79nm,1.5s
CTI Castel Tesino 20.46 305 P P 00 38 16.3 -0.5
CTI Castel Tesino 20.46 305 P P 00 38 16.3 -0.5
CTI pmax pmax
comp=Z,9.0nm,0.9s
KHC Kasperske Hory 20.50 314 eP P 00 38 16.6 -0.6
KHC epP sP 00 38 21.6 -0.2
KHC Kasperske Hory 20.50 314⇑iP P 00 38 16.9 -0.3
KHC pmax pmax
comp=Z,24nm,0.8s
PABE Paberze 20.52 340 eP P 00 38 16.8 -0.5
PABE IAmb IAmb 00 38 28.2
comp=Z,52nm,1.0s
PVCC Panska Ves 20.68 319 eP P 00 38 18.2 -0.9
PVCC Panska Ves 20.68 319 eP P 00 38 18.2 -0.9
WTTA Wattenberg 20.88 308 i Pn Pn 00 38 23.7 -0.2
comp=Z,12nm,0.8s
UOSS Minazif 20.89 118 P P 00 38 22.4 +0.9
UOSS IAmb IAmb 00 38 30.5
comp=Z,26nm,0.9s
WET Wettzell 20.91 314 ePn P 00 38 21.1 -0.6
WET Wettzell 20.91 314 P Pn 00 38 23.7 -0.4
WET pmax pmax
comp=Z,25nm,1.1s
AKTO Aktyubinsk 20.94 42 P P 00 38 21.6 -0.3
comp=Z,8.0nm,0.6s,baz=238,slow=14,SNR=15
AKTO LR LR 00 47 49.5
comp=Z,141nm,18.8s,baz=224,slow=41
KLNR Kaliningrad 20.95 334⇑eP Pn 00 38 24.2 -0.2
WATA Walderalm 20.95 308 i P Pn 00 38 28.2 +3.5
comp=Z,5.6nm,0.4s
BRG Berggiesshubel 21.20 319 eP P 00 38 25.0 +0.3
BRG i 00 38 33.3
BRG pmax pmax
comp=Z,5.0nm,1.1s
BRG pmax pmax
comp=Z,11nm,1.0s
MOTA Moosalm 21.25 308 i P P 00 38 26.5 +1.1
comp=Z,3.2nm,0.6s
AB31 Akbulak array 21.44 47 eP P 00 38 28.3 +1.1
HRA Herat 21.45 88 P P 00 38 29.6 +1.8
HRA IAmb IAmb 00 38 37.9
comp=Z,18nm,0.8s
KEST Kesra 21.51 275 LR LR 00 49 21.8
comp=Z,199nm,19.6s,baz=18,slow=44
KEST Kesra 21.51 275 P P 00 38 28.3 +0.1
KEST IAmb IAmb 00 38 43.3
comp=Z,25nm,0.9s
RETA Reutte 21.52 308 i P P 00 38 27.2 -1.0
comp=Z,2.1nm,0.5s
PBUR Paburge 21.55 338 eP P 00 38 28.3 -0.1
PBUR IAmb IAmb 00 38 39.3
comp=Z,153nm,0.8s
ROTZ Rotzenmuhle 21.59 315 ePn P 00 38 28.2 -0.7
CLL Collm 21.94 319 eP P 00 38 36.0 +3.4
CLL e 00 38 49.0
CLL eS Sn 00 42 46.0 +1.3
CLL eSSS SSS 00 43 18.0
CLL LmH 00 46 00.0
comp=N,400nm,18.6s
CLL LmH 00 46 00.0
comp=E,300nm,19.6s
CLL LmV 00 48 00.0
comp=Z,200nm,19.8s
CLL Collm 21.94 319 eP P 00 38 31.0 -1.6
CLL e 00 38 36.0
DAVA Damuels 22.01 307 i P P 00 38 33.3 -0.2
comp=Z,2.9nm,0.5s
VSU Vasula 22.61 347 eP P 00 38 42.4 +2.7
BFO Black Forest 23.34 309 ePn P 00 38 46.3 -1.2
BFO Black Forest 23.34 309 P P 00 38 47.3 -0.1
BFO IAmb IAmb 00 38 57.4
comp=Z,23nm,1.3s
BFO Black Forest 23.34 309 P P 00 38 47.3 -0.1
BFO pmax pmax
comp=Z,23nm,1.3s
SENIN Lac Senin/Sane 23.45 303 P P 00 38 47.9 -0.8
BNI Bardonecchia 23.59 300 P P 00 38 49.8 -0.3
BNI Bardonecchia 23.59 300 P P 00 38 49.8 -0.3
BNI pmax pmax
comp=Z,9.0nm,0.9s
KIRV Kirov 23.60 18 P P 00 38 48.7 -1.1
comp=Z,12nm,0.6s,baz=204,slow=10.0,SNR=5.6
RGN Rugen 23.70 326 P P 00 38 49.9 -0.9
ECH Echery 24.05 308 IAmb IAmb 00 39 05.7
comp=Z,23nm,1.2s
KLMR Klimovskoe 24.27 4 eP P 00 38 54.3 -1.9
KLMR pmax pmax
comp=Z,22nm,1.1s
KLMR Klimovskoe 24.27 4 eP P 00 38 54.3 -1.9
KLMR AMP 00 38 56.9
comp=Z,22nm,1.1s
ARU Arti 24.89 30 P P 00 39 01.2 -0.6
comp=Z,1.3nm,0.6s,baz=213,slow=11,SNR=5.3
ARU Arti 24.89 30 P P 00 39 02.3 +0.5
ARU IAmb IAmb 00 39 11.9
comp=Z,16nm,1.1s
ARU Arti 24.89 30 d iP P 00 39 00.7 -1.1
ARU 00 39 31.9
ARU S S 00 43 26.8 +2.2
ARU SS SnSn 00 44 14.5 +2.3
ARU pmax pmax
comp=Z,9.0nm,1.4s
WLF Walferdange 25.14 310 P P 00 39 02.2 -1.9
WLF IAmb IAmb 00 39 21.3
comp=Z,15nm,1.3s
WLF Walferdange 25.14 310 P P 00 39 02.3 -1.9
WLF pmax pmax
comp=Z,15nm,1.3s
FIA1 FINESS Array S 25.54 349 P P 00 39 07.4 -0.2
FIA1 IAmb IAmb 00 39 23.4
comp=Z,20nm,1.1s
FINES FINESS Array B 25.54 349 P P 00 39 07.4 -0.3
comp=Z,4.8nm,0.5s,baz=153,slow=10,SNR=36
FINES LR LR 00 49 47.9
comp=Z,90nm,18.8s,baz=180,slow=38
FINES FINESS Array B 25.54 349 i P P 00 39 07.5 -0.1

FINES pmax pmax
comp=Z,5.0nm,0.5s
PRGR Permogore 25.68 11 eP P 00 39 09.2 +0.3
PRGR e*PP pP 00 39 12.8 +0.5
PRGR pmax pmax
comp=Z,29nm,0.7s
UCC Uccle 26.61 312 P P 00 39 19.8 +2.4
UCC IAmb IAmb 00 39 36.0
comp=Z,38nm,1.5s
UCC Uccle 26.61 312 P P 00 39 19.8 +2.4
UCC pmax pmax
comp=Z,38nm,1.5s
KBL Kabul 26.87 85 P P 00 39 18.7 -1.5
KBL Kabul 26.87 85 P P 00 39 18.7 -1.5
KBL pmax pmax
comp=Z,7.0nm,1.0s
KK31 Karatay Array 27.10 66 P P 00 39 22.3 +0.3
KK31 IAmb IAmb 00 39 29.7
comp=Z,9.1nm,0.8s
KK31 Karatay Array 27.10 66 i P P 00 39 22.8 +0.8
KKAR Karatay Array 27.10 66 P P 00 39 22.3 +0.3
KKAR IAmb IAmb 00 39 29.7
comp=Z,9.1nm,0.8s
KKAR Karatay Array 27.10 66 P P 00 39 22.3 +0.3
KKAR pmax pmax
comp=Z,9.0nm,0.8s
BTK Batken 27.39 72 P P 00 39 25.0 +0.3
BTK Batken 27.39 72 P P 00 39 25.0 +0.3
BTK pmax pmax
comp=Z,10.0nm,1.2s
HFS Hagfors 27.46 336 P P 00 39 24.6 -0.5
comp=Z,4.0nm,0.8s,baz=129,slow=12,SNR=5.2
HFS LR LR 00 52 09.8
comp=Z,188nm,18.4s,baz=143,slow=40
TMCR Tamitsa 27.52 2 eP P 00 39 25.8 +0.3
TMCR eS S 00 44 06.4 +0.4
TMCR pmax pmax
comp=Z,9.0nm,0.8s
BRVK Borovoye 28.92 45 IAmb IAmb 00 39 48.6
comp=Z,6.8nm,0.7s
BRVK Borovoye 28.92 45⇓eP P 00 39 38.3 +0.2
BRVK pmax pmax
comp=Z,10.0nm,1.3s
NAO01 NORSAR Array S 28.93 335 P P 00 39 37.3 -0.9
NB201 NORSAR Array S 28.94 335 P P 00 39 37.3 -0.9
NB2 NORSAR Subarra 28.96 335 P P 00 39 36.6 -1.8
comp=Z,4.8nm,1.4s,baz=136,slow=9.3
NOA NORSAR Array B 28.96 335 P P 00 39 37.0 -1.4
comp=Z,1.3nm,0.8s,baz=133,slow=8.7,SNR=4.7
NOA LR LR 00 53 31.5
comp=Z,145nm,18.9s,baz=145,slow=41
BVAR Borovoye Array 28.97 45 P P 00 39 39.2 +0.6
comp=Z,2.9nm,0.7s,baz=242,slow=6.4,SNR=15
NC303 NORSAR Array S 29.05 335 P P 00 39 38.8 -0.3
NBO00 NORSAR Array S 29.11 335 P P 00 39 38.9 -0.8
NBO00 IAmb IAmb 00 39 54.5
comp=Z,20nm,1.1s
TAM Tamanrasset 29.73 251 P P 00 39 45.4 -0.3
TAM Tamanrasset 29.73 251 P P 00 39 45.4 -0.3
TAM pmax pmax
comp=Z,6.0nm,1.2s
AAK Ala-Archa 30.03 67 LR LR 00 52 25.3
comp=Z,123nm,18.7s,baz=218,slow=38
AAK Ala-Archa 30.03 67 P P 00 39 48.0 -0.2
AAK Ala-Archa 30.03 67 P P 00 39 48.0 -0.2
AAK pmax pmax
comp=Z,3.0nm,0.9s
FRU1 Bishkek 30.12 66 P P 00 39 49.2 +0.3
FRU1 Bishkek 30.12 66 P P 00 39 49.2 +0.3
FRU1 pmax pmax
comp=Z,13nm,0.4s
NIL Nilore 30.47 85 P P 00 39 52.4 +0.3
NIL IAmb IAmb 00 39 59.8
comp=Z,12nm,0.8s
NIL Nilore 30.47 85 P P 00 39 52.4 +0.3
NIL pmax pmax
comp=Z,12nm,0.8s
APA Apatity 30.95 358⇓iP P 00 39 56.0 +0.1
APA pmax pmax
comp=Z,8.0nm,1.5s
APA MLR MLR
comp=Z,900nm,12.0s
NRN Naryn 31.21 69 P P 00 39 59.3 +0.4
NRN IAmb IAmb 00 40 07.5
comp=Z,22nm,1.4s
NRN Naryn 31.21 69 P P 00 39 59.3 +0.4
NRN pmax pmax
comp=Z,22nm,1.5s
ESDC Sonseca Array 31.38 288 P P 00 40 00.7 +0.7
comp=Z,0.2nm,0.4s,baz=68,slow=8.9,SNR=2.9
ESDC LR LR 00 53 19.4
comp=Z,121nm,18.3s,baz=240,slow=38
KSH Kashi 31.40 73 P P 00 40 00.9 +0.6
KSH PP PnPn 00 41 01.6 -1.2
KSH PcP PcP 00 42 53.6 -0.2
KSH S S 00 45 04.8 -2.9
KSH sS pS 00 45 11.5 -0.2
KSH pmax pmax
comp=Z,30nm,2.0s
KSH pmax pmax
comp=Z,600nm,7.3s
KSH LR LR
comp=Z,250nm,5.8s
KSH LR LR
comp=Z,370nm,5.3s
KSH LR LR
comp=Z,730nm,6.9s
KURBB Kurchatov Arra 33.28 52 P P 00 40 16.5 0.0
KURK Kurchatov 33.35 52 P P 00 40 17.4 +0.3
KURK IAmb IAmb 00 40 23.3
comp=Z,17nm,1.2s
KURK Kurchatov 33.35 52 P P 00 40 17.4 +0.3
KURK pmax pmax
comp=Z,17nm,1.2s
ARCES ARCESS Array B 33.39 353 P P 00 40 17.2 0.0
comp=Z,3.0nm,0.5s,baz=166,slow=9.4,SNR=31
ARCES LR LR 00 56 21.9
comp=Z,140nm,20.8s,baz=176,slow=41
ARCES ARCESS Array B 33.39 353 P P 00 40 16.7 -0.6
ARE0 ARCESS Array S 33.39 353 P P 00 40 16.8 -0.4
PDGK Podgornoye 33.66 65 P P 00 40 16.3 -3.8
SFS San Fernando 33.70 283 P P 00 40 18.5 -1.8
SFS San Fernando 33.70 283 P P 00 40 18.5 -1.8
SFS pmax pmax
comp=Z,111nm,1.0s
MAKZ Makanchi 35.30 59 P P 00 40 35.1 +1.0
MAKZ IAmb IAmb 00 40 43.5
comp=Z,5.7nm,0.7s
MAKZ Makanchi 35.30 59 P P 00 40 35.1 +1.0
MAKZ pmax pmax
comp=Z,6.0nm,0.7s
MK31 Makanchi Array 35.52 59 IAmb IAmb 00 40 43.6
comp=Z,6.7nm,0.8s
MK31 Makanchi Array 35.52 59 i P P 00 40 36.4 +0.4
MKAR Makanchi Array 35.52 59 P P 00 40 36.8 +0.8
comp=Z,6.3nm,1.0s,baz=269,slow=7.4,SNR=23
MKAR LR LR 00 57 03.9
comp=Z,88nm,18.4s,baz=277,slow=40
MBAR Mbarara 37.44 189 P P 00 40 51.7 -1.1
MBAR Mbarara 37.44 189 P P 00 40 51.7 -1.1
MBAR pmax pmax
comp=Z,6.0nm,1.2s
ZAA0 Zalesovo Array 37.55 47 IAmb IAmb 00 41 02.3
comp=Z,6.8nm,0.6s
ZALV Zalesovo Beam 37.55 47 P P 00 40 53.1 -0.1
comp=Z,1.6nm,0.5s,baz=257,slow=9.3,SNR=9.1
ZALV LR LR 00 57 42.6
comp=Z,82nm,18.7s,baz=255,slow=38
ZALV Zalesovo Beam 37.55 47 P P 00 40 53.4 +0.2
ZALV Zalesovo Beam 37.55 47 i P P 00 40 53.4 +0.2
ZALV pmax pmax
comp=Z,2.0nm,0.5s
KMBO Kilima Mbogo 37.66 178 LR LR 00 56 53.6
comp=Z,88nm,18.8s,baz=94,slow=37
TOA0 Torodi Ar. Sit 38.63 242 P P 00 41 02.3 -0.5
TORD Torodi Ar. Bea 38.63 242 P P 00 41 02.0 -0.7
comp=Z,3.3nm,1.1s,baz=38,slow=8.5,SNR=12
TORD LR LR 00 59 16.7
comp=Z,80nm,20.9s,baz=345,slow=40
WMQ Urumqi 39.54 63 eP P 00 41 11.4 +1.3
WMQ pP sP 00 41 15.4 +0.4
WMQ pmax pmax
comp=Z,7.0nm,0.7s
WMQ pmax pmax
comp=Z,120nm,4.7s

WMQ LR LR
comp=Z,350nm,29.1s
WMQ LR LR
comp=Z,1µm,29.3s
WMQ Urumqi 39.54 63 P **P 00 41 10.7 +0.6**
WMQ IAmb IAmb 00 41 16.6
comp=Z,28nm,1.4s
WMQ Urumqi 39.54 63 P **P 00 41 10.7 +0.6**
WMQ pmax pmax
comp=Z,28nm,1.4s
DANN Dangsing 40.77 88 *e*P **P 00 41 21.2 +0.4**
comp=Z,75nm,0.9s
KOLN Koldanda 40.88 89 *e*P **P 00 41 21.8 +0.2**
comp=Z,50nm,1.3s
GKN Gorkha 41.62 88 *e*P **P 00 41 28.0 +0.4**
comp=Z,72nm,0.9s
DMN Daman 42.16 88 *e*P **P 00 41 32.6 +0.4**
comp=Z,62nm,1.1s
KKN Kakani 42.22 88 *e*P **P 00 41 33.2 +0.6**
comp=Z,50nm,1.1s
PKIN Phulchoki 42.41 88 *e*P **P 00 41 34.2 0.0**
comp=Z,24nm,0.9s
SPA0 Spitsbergen Ar 42.41 354 P **P 00 41 32.3 -0.9**
SPITS Spitsbergen Ar 42.41 354 P **P 00 41 33.8 +0.5**
comp=Z,7.5nm,0.7s,baz=157,slow=15,SNR=6.7
PKI Pulchoki 42.42 88 *e*P **P 00 41 34.4 0.0**
comp=Z,61nm,1.3s
GUN Gumba 42.65 87 *e*P **P 00 41 36.0 -0.3**
comp=Z,80nm,1.1s
RAMN Ramite 43.64 88 *e*P **P 00 41 43.8 -0.4**
comp=Z,36nm,0.8s
ODAN Odare 44.32 88 *e*P **P 00 41 49.6 0.0**
comp=Z,44nm,1.1s
TAPN Taplejung 44.36 87 *e*P **P 00 41 49.5 -0.5**
comp=Z,13nm,0.8s
LSA Lhasa 46.13 82 P **P 00 42 04.9 +0.6**
LSA IAmb IAmb 00 42 10.5
comp=Z,7.7nm,1.1s
LSA Lhasa 46.13 82 P **P 00 42 04.9 +0.6**
LSA pmax pmax
comp=Z,8.0nm,1.1s
DBIC Dimbokro 47.75 241 P **P 00 42 17.8 +1.4**
comp=Z,1.3nm,0.5s,baz=41,slow=8.4,SNR=6.4
DBIC LR LR 01 04 42.5
comp=Z,52nm,19.9s,baz=28,slow=39
TLY Talaya 49.00 50 P **P 00 42 26.6 +0.8**
TLY Talaya 49.00 50⇓*e*P **P 00 42 26.2 +0.5**
TLY pmax pmax
comp=Z,5.0nm,1.4s
ZAK Zakamensk 49.01 51 *e*P **P 00 42 27.9 +2.0**
ZAK pmax pmax
comp=Z,3.0nm,1.3s
GTA Gaotai 49.38 66 *e*P **P 00 42 27.3 -1.6**
GTA pP pP 00 42 31.3 -1.1
GTA sP sP 00 42 34.6 +0.8
KAAM Kaadhehdhoo 49.69 128 P **P 00 42 31.3 0.0**
SUMG Summit 50.78 338 P **P 00 42 39.7 +0.3**
SUMG IAmb IAmb 00 42 53.3
comp=Z,9.0nm,1.2s
SUMG Summit 50.78 338 P **P 00 42 39.7 +0.3**
SUMG pmax pmax
comp=Z,9.0nm,1.2s
SONM Songino Array 51.58 54 P **P 00 42 45.9 +0.4**
comp=Z,0.6nm,0.7s,baz=278,slow=7.3,SNR=4.3
SONM LR LR 01 07 23.9
comp=Z,294nm,18.9s,baz=280,slow=39
SONM Songino Array 51.58 54 P **P 00 42 46.4 +0.9**
SONM Songino Array 51.58 54 P **P 00 42 46.4 +0.9**
SONM pmax pmax
comp=Z,2.0nm,1.0s
LSZ Lusaka 52.22 190 P **P 00 42 51.2 +0.8**
comp=Z,4.0nm,0.9s,baz=4.1,slow=7.8,SNR=8.0
LSZ Lusaka 52.22 190 P **P 00 42 50.6 +0.1**
LSZ IAmb IAmb 00 42 52.5
comp=Z,6.8nm,1.1s
LZH Lanzhou 53.52 69 *e*P **P 00 43 00.3 +0.2**
LZH pP pP 00 43 03.5 -0.1
LZH sP sP 00 43 05.1 +0.1
LZH *e*PP **PP 00 45 02.6 +2.1**
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,88nm,4.7s
LZH LR LR
comp=Z,320nm,14.8s
LZH LR LR
comp=Z,340nm,14.5s
LZH LR LR
comp=Z,480nm,17.4s
BOD Bodaibo 53.69 41 *e*P **P 00 42 59.1 -1.7**
BOD pmax pmax
comp=Z,18nm,1.3s
ILULI Ilulissat 55.23 334 P **P 00 43 12.3 +0.6**
ILULI Ilulissat 55.23 334 P **P 00 43 12.3 +0.6**
ILULI pmax pmax
comp=Z,24nm,1.2s
CD2 Chengdu 55.55 75 P **P 00 43 12.9 -1.8**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
TIXI Tiksi 56.52 22 P **P 00 43 20.8 -0.1**
TIXI IAmb IAmb 00 43 33.3
comp=Z,14nm,1.5s
TIXI Tiksi 56.52 22⇓*e*P **P 00 43 21.0 +0.1**
TIXI pmax pmax
comp=Z,5.0nm,1.3s
HHC Hu-ho-hao-te 57.33 61 *e*P **P 00 43 27.9 +0.5**
HHC pP sP 00 43 31.9 -0.4
HHC pmax pmax
comp=Z,5.0nm,1.0s
HHC pmax pmax
comp=Z,80nm,6.0s
CHTO Chiang Mai 57.51 90 P **P 00 43 29.2 +0.4**
CHTO IAmb IAmb 00 43 34.5
comp=Z,4.8nm,1.1s
CHTO Chiang Mai 57.51 90 P **P 00 43 29.2 +0.4**
CHTO pmax pmax
comp=Z,5.0nm,1.1s
CMAR Chiang Mai Arr 57.70 90 P **P 00 43 31.8 +1.7**
comp=Z,2.2nm,0.5s,baz=298,slow=7.4,SNR=12
CMAR LR LR 01 10 58.5
comp=Z,39nm,19.0s,baz=270,slow=39
TULEG Thule 57.97 345 P **P 00 43 31.1 -0.1**
TULEG IAmb IAmb 00 43 42.9
comp=Z,8.7nm,1.1s
XAN Xi'an 58.16 69 P **P 00 43 33.0 -0.2**
XAN pP pP 00 43 37.1 +0.4
XAN pmax pmax
comp=Z,6.0nm,0.9s
XAN Xi'an 58.16 69 P **P 00 43 33.5 +0.3**
XAN IAmb IAmb 00 43 38.3
comp=Z,8.7nm,0.9s
XAN Xi'an 58.16 69 P **P 00 43 33.5 +0.3**
HIA Hailar 59.53 49 P **P 00 43 42.8 +0.3**
HIA IAmb IAmb 00 43 48.5
comp=Z,7.4nm,1.0s
HIA Hailar 59.53 49 P **P 00 43 42.8 +0.3**
HIA pmax pmax
comp=Z,7.0nm,1.0s
YAK Yakutsk 59.97 33⇓*e*P **P 00 43 47.8 +2.6**
YAK pmax pmax
comp=Z,11nm,0.5s
ENH Enshi 60.25 73 P **P 00 43 47.4 -0.3**
PBKT Sadao Pong 60.34 91 P **P 00 43 48.4 0.0**
PBKT IAmb IAmb 00 43 53.9
comp=Z,8.8nm,1.1s
BJT Baijiatuau 60.88 60 P **P 00 43 53.2 +1.4**
BJT IAmb IAmb 00 43 57.6
comp=Z,7.7nm,1.2s
BJT Baijiatuau 60.88 60 P **P 00 43 53.2 +1.4**
BJT pmax pmax
comp=Z,8.0nm,1.2s
LBTB Lobatse 62.16 191 P **P 00 44 02.3 +1.7**
comp=Z,8.0nm,0.9s,baz=19,slow=9.4,SNR=7.2
LBTB Lobatse 62.16 191 P **P 00 44 01.1 +0.6**
WHN Wuhan 63.83 70 P **P** 00 44 25.1 +13
RES Resolute Bay 64.29 347 P **P 00 44 14.0 0.0**
RES Resolute Bay 64.29 347 P **P 00 44 14.0 0.0**
BOSA Boshof 65.75 190 P **P 00 44 25.4 +1.2**
comp=Z,6.1nm,0.8s,baz=0.1,slow=9.2,SNR=6.9
BOSA LR LR 01 13 43.7
comp=Z,70nm,21.4s,baz=42,slow=36
BOSA Boshof 65.75 190 P **P 00 44 24.1 0.0**
NJ2 Nanjing 66.47 67 *e*P **P 00 44 29.4 +0.6**
NJ2 pmax pmax
comp=Z,14nm,0.5s
KLR Kul'dur 66.63 45⇑*e*P **P 00 44 29.2 -0.4**
KLR pmax pmax
comp=Z,12nm,2.2s
PSI Prapat 66.78 105 P **P 00 44 30.4 -0.7**
PSI pmax pmax
comp=Z,16nm,1.0s
RPSI Rantau Prapat 66.84 105 P **P 00 44 30.4 -1.0**
SCHQ Schefferville 67.54 322 P **P 00 44 35.9 +0.6**
comp=Z,3.0nm,1.0s,baz=68,slow=11,SNR=3.9
SEY Seymchan 68.54 26⇑*e*P **P 00 44 42.7 +1.3**
BILL Bilibino 69.15 18 P **P 00 44 44.9 -0.2**
BILL Bilibino 69.15 18⇑*e*P **P 00 44 45.9 +0.8**
BILL *e* 00 45 12.2
BILL *e* 00 47 16.4
BILL *e*S SKiKP 00 54 17.8 -17
BILL pmax pmax
comp=Z,7.0nm,1.2s
BILL MLR MLR
comp=Z,65nm,19.0s
MA2 Magadan 70.07 29 P **P 00 44 51.0 +0.1**
MA2 Magadan 70.07 29⇑*e*P **P 00 44 52.5 +1.6**
MA2 pmax pmax
comp=Z,30nm,1.5s
KSAR Wonju Array Be 70.17 58 P **P 00 44 51.5 -0.4**
KSAR Wonju Array Be 70.17 58 P **P 00 44 51.5 -0.4**
KSRS Korea Array 70.19 58 P **P 00 44 51.6 -0.4**
comp=Z,4.9nm,1.0s,baz=294,slow=3.9,SNR=3.6
GGN Saint George 72.92 314 P **P 00 45 07.6 -0.8**
D62A Allapoint, All 73.04 316 P **P 00 45 08.4 -0.6**
C36M Paulatuk 73.24 353 IAmb IAmb 00 45 19.6
comp=Z,5.3nm,0.8s
YSS Yuzh-Sakhalins 74.05 43 *e*P **P 00 45 15.2 +0.2**
TOLK Toolik Lake Re 74.89 2 P **P 00 45 19.9 +0.4**
TOLK IAmb IAmb 00 45 21.6
comp=Z,6.5nm,1.1s
BMAR Burnt Mountain 76.19 0 P **P 00 45 28.2 +1.1**
FCC Fort Churchill 76.22 336 IAmb IAmb 00 45 37.7
comp=Z,11nm,1.4s
COLD Coldfoot 76.28 2 P **P 00 45 27.5 0.0**
ERM Erimo 77.28 47 P **P 00 45 33.3 -0.3**
ERM Erimo 77.28 47 P **P 00 45 33.3 -0.3**
ERM pmax pmax
comp=Z,70nm,1.3s
IMAR Indian Mountai 77.36 4 P **P 00 45 33.9 +0.3**
ANM Nome 77.67 9 P **P 00 45 35.6 +0.2**
ANM IAmb IAmb 00 45 41.0
comp=Z,7.2nm,0.9s
ANM Nome 77.67 9 P **P 00 45 35.6 +0.2**
ANM pmax pmax
comp=Z,7.0nm,0.9s
YKA Yellowknife Ar 78.35 347 P **P 00 45 38.6 -0.6**
comp=Z,1.3nm,0.7s,baz=23,slow=5.8,SNR=22
YKA Yellowknife Ar 78.35 347 *i* P **P 00 45 38.8 -0.4**
YKA pmax pmax
comp=Z,1.0nm,0.7s
MLY Manley 78.46 3 P **P 00 45 40.1 +0.3**
ILAR Eielson Array 78.83 1 P **P 00 45 42.6 +0.8**
comp=Z,0.4nm,0.8s,baz=340,slow=5.0,SNR=4.3
CCB Clear Creek Bu 78.94 2 P **P 00 45 43.0 +0.6**
CCB IAmb IAmb 00 45 52.1
comp=Z,8.5nm,1.4s
NEA Nenana 78.97 2 P **P 00 45 43.2 +0.6**
WRH Wood River Hil 79.11 2 P **P 00 45 43.6 +0.2**
WRH IAmb IAmb 00 45 43.7
comp=Z,12nm,1.4s
HDA Harding Lake 79.20 1 P **P 00 45 44.3 +0.4**
DAWY Dawson 79.50 358 P **P 00 45 44.0 -1.6**
SCRK Sand Creek 79.66 360 P **P 00 45 46.4 -0.1**
SCRK IAmb IAmb 00 45 57.1
comp=Z,12nm,1.4s
KTH Kantishna Hill 79.93 3 P **P 00 45 48.0 +0.1**
KTH IAmb IAmb 00 45 55.7
comp=Z,17nm,1.4s
CISI Cisompet, Garu 80.15 107 P **P 00 45 47.2 -2.6**
DHY Denali Highway 80.53 2 P **P 00 45 51.5 +0.3**
DHY IAmb IAmb 00 45 56.4
comp=Z,9.9nm,1.4s
BCAR Beaver Creek A 80.56 359 P **P 00 45 50.8 -0.4**
J54A Appleton 80.69 318 P **P 00 45 51.3 -1.0**
ULM Lac du Bonnet 83.58 331 P **P 00 46 06.4 -0.9**
comp=Z,2.8nm,0.6s,baz=41,slow=5.9,SNR=10
ULM LR LR 01 24 22.2
comp=Z,61nm,18.5s,baz=343,slow=36
ULM Lac du Bonnet 83.58 331 IAmb IAmb 00 46 16.3
comp=Z,6.0nm,0.9s
EYMN Ely 83.59 328 P **P 00 46 05.6 -1.8**
EYMN IAmb IAmb 00 46 07.0
comp=Z,9.6nm,1.1s
BDFB Brasilia 94.52 254 LR LR 01 30 19.3
comp=Z,42nm,20.1s,baz=97,slow=36
PDAR Pinedale Array 94.91 335 LR LR 01 31 56.6
comp=Z,42nm,20.1s,baz=29,slow=37

IDC 14 00:33:59.9±2.2, 15°.04S×66°.56E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.6/48, mbtmp3.9/6, MS3.6/3, Ms1 3.6/3, ms1mx2.9/49, Error ellipse: s-maj=69.6km s-min=30.6km az=56.0, Mid-Indian Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
H08S1 Diego Carcia H 9.36 39 T T 00 45 35.6
baz=217,slow=76,SNR=119
H08S2 Diego Garcia H 9.37 39 T T 00 45 36.5
baz=217,slow=76,SNR=122
H08S3 Diego Garcia H 9.38 39 T T 00 45 37.0
baz=217,slow=76,SNR=98
H08N3 Diego Garcia H 9.67 27 T T 00 45 58.8
baz=205,slow=75,SNR=13
H08N1 Diego Carcia H 9.69 27 T T 00 45 58.2
baz=205,slow=75,SNR=86
H08N2 Diego Garcia H 9.69 27 T T 00 45 56.3
baz=205,slow=75,SNR=76
BOSA Boshof 40.45 243 LR LR 00 55 17.8
comp=Z,122nm,18.9s,baz=65,slow=32
CMAR Chiang Mai Arr 46.11 45 P P 00 42 26.4 +0.2
1.3nm,0.3s,baz=237,slow=8.5,SNR=6.7
CMAR LR LR 00 59 51.8
comp=Z,69nm,18.9s,baz=249,slow=34
H01W3 Cape Leeuwin H 46.95 124 T T 01 32 42.2
baz=283,slow=75,SNR=6.7
H01W2 Cape Leeuwin H 46.95 124 T T 01 32 38.1
baz=283,slow=75,SNR=6.2
H01W1 Cape Leeuwin H 46.97 124 T T 01 32 36.5
baz=283,slow=75,SNR=6.1
MAW Mawson 52.58 182 LR LR 01 00 47.2
comp=Z,29nm,18.9s,baz=56,slow=31
ASAR Alice Springs 63.63 109 P P 00 44 32.8 -0.5
1.7nm,1.1s,baz=234,slow=11,SNR=5.1
WRA Warramunga Arr 64.46 105 P P 00 44 39.0 +0.2
2.9nm,1.1s,baz=269,slow=5.9,SNR=6.8
BVAR Borovoye Array 67.86 2 P P 00 44 59.7 -0.2
0.9nm,0.8s,baz=147,slow=8.3,SNR=5.8
ZALV Zalesovo Beam 70.46 11 P P 00 45 15.4 -0.6
1.0nm,0.8s,baz=197,slow=4.6,SNR=3.7
SONM Songino Array 71.98 27 P P 00 45 25.7 +0.2
0.2nm,0.4s,baz=243,slow=6.3,SNR=2.7
PDAR Pinedale Array 152.16 354 PKPbc PKiKP 00 53 58.4 0.0
0.8nm,0.8s,baz=90,slow=1.5,SNR=6.2

ATH 14 00:42:28.8, 38°.12N×20°.39E, h14km, ML2.9/16, Error ellipse: s-maj=2.0km s-min=0.9km az=59.0
THE 14 00:42:29.4, 38°.15N×20°.40E, h12km, ML3.1/6, Error ellipse: s-maj=0.6km s-min=0.4km az=254.0
IDC 14 00:42:33.4±4.6, 38°.73N×21°.19E, h0km, mb3.6/4, mb1 3.5/5, mb1mx3.2/39, mbtmp3.6/5, ML2.4/1, Error ellipse: s-maj=97.8km s-min=29.7km az=60.0
ISC 14 00:42:29.4±0.8, 38°.15N±0°.02×20°.42E±0°.03, h13km±4km, n85, σ0§70/108, mb3.7/4, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.04 316 P **Pg 00 42 31.6 -0.1**
CHV1 S **Sg 00 42 33.0 -0.4**
LXR1 Lixouri, Cepha 0.05 18 P **Pg 00 42 31.9 +0.1**
LXR1 S **Sg 00 42 33.9 +0.4**
LXRA Lixouri, Kepha 0.05 18 P **Pg 00 42 31.8 0.0**
LXRA S **Sg 00 42 33.9 +0.3**
ARGA Argostoli. Kep 0.05 64 P **Pg 00 42 31.9 0.0**
ARGA S **Sg 00 42 33.1 -0.4**
KEF2 Argostoli. Kep 0.06 78 P **Pg 00 42 31.9 0.0**
KEF2 S **Sg 00 42 33.6 0.0**
ARG2 Argostoli 0.06 66 P **Pg 00 42 32.1 +0.2**
ARG2 S **Sg 00 42 33.7 0.0**
KEF3 Kipouria, Keph 0.07 312 P **Pg 00 42 31.8 -0.2**
KEF3 S **Sg 00 42 33.4 -0.6**
AGT1 Agia Thekli 0.10 344 P **Pg 00 42 32.3 0.0**
AGT1 S **Sg 00 42 34.5 0.0**
71µm,0.2s
KEF4 Livadi, Kephal 0.10 3 P **Pg 00 42 32.5 +0.1**
KEF4 S **Sg 00 42 34.9 +0.4**
KEF1 Kardakata, Kep 0.13 18 P **Pg 00 42 33.0 +0.2**
KEF1 S **Sg 00 42 35.1 0.0**
VLS Valsamata 0.14 80 P **Pg 00 42 32.9 +0.1**
VLS S **Sg 00 42 35.5 +0.2**
7µm,0.2s
VLS Valsamata 0.14 80 P **Pg 00 42 32.9 +0.1**
VLS S **Sg 00 42 35.1 -0.1**
VLS AML AML 00 42 35.9
comp=N,13044µm,0.2s
VLS AML AML 00 42 36.7
comp=E,24387µm,0.1s
VSK1 VASILIKIADES 0.28 24 P **Pg 00 42 35.3 +0.1**
VSK1 S **Sg 00 42 39.9 +0.8**
KONA Konidatara, Ke 0.30 24 P **Pg 00 42 35.6 0.0**
KONA S **Sb 00 42 40.8 -0.6**
VLMS Volimes, Zakyn 0.34 145 P **Pg 00 42 36.3 +0.1**
VLMS S **Sg 00 42 41.3 +0.4**
VLMS AML AML 00 42 43.0
comp=E,4084µm,0.3s
VLMS AML AML 00 42 46.7
comp=N,7254µm,0.6s
EVGI Lefkada island 0.50 22 P **Pg 00 42 39.1 -0.1**
EVGI S **Sb 00 42 47.0 -0.4**
EVGI Lefkada island 0.50 22 P **Pg 00 42 39.2 -0.1**
EVGI S **Sb 00 42 47.0 -0.4**
MGNA Meganis 0.58 30 P **Pg 00 42 40.4 -0.4**
MGNA S **Sg 00 42 49.3 +0.8**
MGNA AML AML 00 42 50.4
comp=N,3172µm,0.1s
MGNA AML AML 00 42 50.7
comp=E,4152µm,0.1s
KRI1 kERI 0.58 147 P **Pg 00 42 40.7 -0.1**
AST1 Astakos 0.65 54 P **Pg 00 42 41.9 -0.2**
AST1 S **Sb 00 42 51.7 -0.1**
comp=E,3µm,0.3s
LKD2 Lefkada island 0.66 16 P **Pg 00 42 42.0 -0.3**
LKD2 Lefkada island 0.66 16 P **Pg 00 42 42.0 -0.3**
LKD2 AML AML 00 42 59.9
comp=E,2196µm,0.2s
LKD2 AML AML 00 43 01.7
comp=N,1556µm,0.2s
TSLK Tsoukalades, L 0.69 15 P **Pg 00 42 42.5 -0.4**
TSLK S **Sg 00 42 52.3 +0.2**
comp=N,1µm,0.3s
TSLK Tsoukalades, L 0.69 15 P **Pg 00 42 42.7 -0.2**
TSLK AML AML 00 42 59.9
comp=E,2271µm,0.3s
TSLK AML AML 00 43 01.6
comp=N,1969µm,0.4s
PDO Prodromos 0.75 53 P **Pg 00 42 43.8 -0.1**
PDO S **Sb 00 42 55.4 +0.9**
comp=N,3µm,0.4s
PDO Prodromos 0.75 53 P **Pg 00 42 43.6 -0.3**
PDO AML AML 00 43 00.9
comp=E,2960µm,0.4s
PDO AML AML 00 43 02.6
comp=N,3972µm,0.4s
RLS Riolos of Patr 0.83 96 P **Pg 00 42 45.0 -0.5**
RLS S **Sb 00 42 57.9 +1.0**
comp=N,498nm,0.5s
RLS Riolos of Patr 0.83 96 P **Pg 00 42 45.0 -0.5**
RLS S **Sb 00 42 57.5 +0.7**
RLS AML AML 00 43 04.0
comp=E,1135µm,0.5s
RLS AML AML 00 43 05.8
comp=N,901µm,0.4s
PVO Paravola 0.98 62 P **Pb 00 42 48.3 -0.1**
PVO Paravola 0.98 62 P **Pb 00 42 48.3 -0.1**
PVO AML AML 00 43 05.4
comp=E,7557µm,0.3s
PVO AML AML 00 43 05.5
comp=N,3226µm,0.3s
DRO Drossia 1.04 101 P **Pb 00 42 49.0 -0.3**
DRO Drossia 1.04 101 P **Pb 00 42 49.0 -0.3**
DRO AML AML 00 43 11.9
comp=E,3269µm,0.6s
DRO AML AML 00 43 13.7
comp=N,2129µm,0.5s
AMT Artemida-Makis 1.20 121 P **Pn 00 42 50.9 -1.0**
AMT Artemida-Makis 1.20 121 P **Pn 00 42 51.7 -0.2**
AMT AML AML 00 43 20.1
comp=N,1848µm,0.7s
AMT AML AML 00 43 22.2
comp=E,1919µm,0.7s
LAKA Lakka 1.23 86 P **Pn 00 42 52.3 -0.1**
LAKA Lakka 1.23 86 P **Pn 00 42 52.3 -0.1**
LAKA AML AML 00 43 13.0
comp=E,666µm,0.4s
LAKA AML AML 00 43 18.5
comp=N,450µm,0.5s
ANX Ano Chora 1.26 69 P **Pn 00 42 52.3 -0.6**
ANX Ano Chora 1.26 69 P **Pn 00 42 52.9 0.0**
ANX AML AML 00 43 17.8
comp=N,3737µm,0.5s
ANX AML AML 00 43 19.6
comp=E,1834µm,0.7s
SERG Sergoula 1.31 78 P **Pn 00 42 52.7 -0.9**
SERG Sergoula 1.31 78 P **Pn 00 42 53.3 -0.2**
TRIZ Trizonia 1.32 80 P **Pn 00 42 53.3 -0.2**
TRIZ Trizonia 1.32 80 P **Pn 00 42 53.4 -0.2**
EVR Evrytania 1.33 55 P **Pn 00 42 53.5 -0.3**
EVR Evrytania 1.33 55 P **Pn 00 42 53.9 +0.1**
EVR AML AML 00 43 19.2
comp=E,486µm,0.6s
EVR AML AML 00 43 23.1
comp=N,428µm,0.7s
ALIK Aliki, Aigiali 1.34 85 P **Pn 00 42 53.5 -0.3**
KLV Kalavryta, Ach 1.37 94 P **Pn 00 42 54.4 0.0**
KLV Kalavryta, Ach 1.37 94 P **Pn 00 42 54.1 -0.3**
KLV AML AML 00 43 21.1
comp=N,310µm,0.5s
KLV AML AML 00 43 25.6
comp=E,442µm,1.1s
KALE Kalithea 1.38 80 P **Pn 00 42 54.0 -0.4**
KALE Kalithea 1.38 80 P **Pn 00 42 54.1 -0.3**
KALE AML AML 00 43 23.6
comp=E,487µm,0.6s
KALE AML AML 00 43 26.8
comp=N,741µm,0.6s
IGT Igoumenitsa 1.38 357 P **Pb 00 42 54.8 -0.3**
IGT Igoumenitsa 1.38 357 P **Pb 00 42 54.9 -0.2**
JAN Janina 1.54 13 P **Pg 00 42 59.4 +0.5**
JAN Janina 1.54 13 P **Pg 00 42 59.5 +0.5**
JAN AML AML 00 43 26.5
comp=N,386µm,0.3s
JAN AML AML 00 43 30.6
comp=E,474µm,0.6s
ITM Ithomi 1.54 129 P **Pb 00 42 57.5 -0.4**
ITM Ithomi 1.54 129 P **Pb 00 42 57.8 0.0**
MAKR Makrakomi, Fth 1.59 57 P **Pb 00 42 59.3 +0.5**
MAKR Makrakomi, Fth 1.59 57 P **Pb 00 42 58.9 +0.1**
KEK Kerkira 1.63 343 P **Pn 00 42 58.0 +0.1**
KEK Kerkira 1.63 343 P **Pn 00 42 58.3 +0.1**
PYL PYLOS 1.64 140 P **Pn 00 42 58.4 +0.4**
AGG Agios Georgios 1.73 59 P **Pb 00 43 01.3 +0.2**
AGG Agios Georgios 1.73 59 P **Pb 00 43 01.4 +0.2**
SRN Sarande 1.75 349 P **Pn 00 42 59.5 -0.1**
AXAR Agios Charalam 1.86 70 P **Pn 00 43 01.9 +0.8**
THL Klokotos Trika 1.88 41 P **Pb 00 43 03.4 -0.2**
THL Klokotos Trika 1.88 41 P **Pb 00 43 03.7 +0.1**
KPRO Kipourio 1.94 22 P **Pb 00 43 05.0 +0.2**
KPRO Kipourio 1.94 22 P **Pb 00 43 05.3 +0.6**
PROD Prodromos 1.96 86 P **Pb 00 43 04.4 -0.5**
LTK Loutraki 2.02 93 P **Pb 00 43 05.1 -0.8**
LKR Lokris 2.09 75 P **Pb 00 43 06.3 -0.8**
LKR Lokris 2.09 75 P **Pb 00 43 06.4 -0.8**
VIL2 Platees 2.25 88 P **Pb 00 43 08.8 -1.1**
KRND KRANIDI 2.30 109 P **Pb 00 43 09.4 -1.3**
NEST Nestorio 2.31 12 P **Pb 00 43 10.8 -0.3**
DID Didima 2.32 105 P **Pb 00 43 09.8 -1.4**
SCTE Santa Cesarea 2.44 322 P **Pn 00 43 09.4 +0.4**
XOR Xorichti 2.48 60 P **Pn 00 43 11.8 +2.2**
LIT Litokhoron 2.52 39 P **Pb 00 43 13.6 -1.0**
TIP Timpagrande 3.04 291 P **Pn 00 43 17.8 +0.4**
IDI Anoyia 4.59 127 Pn **Pn 00 43 43.4 +4.7**
comp=E,0.2nm,0.3s,baz=294,slow=12,SNR=2.4

HFS Hagfors 22.41 351 P P 00 47 28.2 +0.7
comp=E,3.7nm,1.0s,baz=157,slow=7.8,SNR=4.5
FINES FINESS Array B 23.58 7 P P 00 47 38.7 -0.8
comp=E,1.9nm,0.9s,baz=178,slow=9.6,SNR=4.4
MKAR Makanchi Array 45.38 58 P P 00 50 46.7 -0.9
comp=E,0.2nm,0.4s,baz=274,slow=6.3,SNR=10
ZALV Zalesovo Beam 45.77 48 P P 00 50 49.8 -0.6
comp=E,0.6nm,0.5s,baz=261,slow=6.5,SNR=4.4

NEIC 14 01:04:32.0±1.6, 11°.24S±0°.07×160°.99E±0°.09, h28km±5km, mb4.5/25, Error ellipse: s-maj=13.2km s-min=9.1km az=64.0
IDC 14 01:04:32.8±5.5, 11°.22S×160°.99E, h32km±40km, mb4.1/14, mb1 4.2/17, mb1mx4.0/47, mbtmp4.3/17, ML4.0/3, MS3.6/11, Ms1 3.6/11, ms1mx3.3/30, Error ellipse: s-maj=27.9km s-min=16.6km az=101.0
ISC 14 01:04:30.4±0.5, 11°.28S±0°.06×161°.00E±0°.08, h18km, n63, σ1°.26/54, mb4.3/18, MS3.5/7, Bougainville-Solomon Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HNR Honiara 2.11 331 Pn Pn 01 05 05.3 +0.4
90nm,0.3s,baz=185,slow=9.5,SNR=30
HNR Sn Sn 01 05 28.1 -2.6
566nm,0.3s,baz=196,slow=10,SNR=28
HNR LR LR 01 05 50.1
comp=Z,652nm,19.4s,baz=185,slow=38
SANVU Saraoutou 7.32 125 Pn 01 06 18.0 +1.5
KRVT Keravat (AS076 11.27 307 LR LR 01 11 23.3
comp=Z,124nm,18.4s,baz=100,slow=37
DZM Mont Dzumac 11.93 155 Pn Pn 01 07 22.0 +2.3
0.3nm,0.3s,baz=317,slow=19,SNR=9.0
DZM Sn Sn 01 09 27.7 -4.7
1.2nm,0.3s,baz=321,slow=23,SNR=7.5
DZM LR LR 01 11 38.8
comp=Z,421nm,19.5s,baz=28,slow=36
PMG Port Moresby 13.74 277 LR LR 01 12 52.0
comp=Z,412nm,18.9s,baz=140,slow=36
CTA Charters Tower 16.66 237 Pn P 01 08 25.8 +0.3
0.6nm,0.3s,baz=62,slow=14,SNR=4.1
CTA Sn Sn 01 11 24.7 -3.3
0.4nm,0.3s,baz=338,slow=21,SNR=4.1
EIDS Eidsvold 16.86 212 Pn Pn 01 08 26.0 +0.3
EIDS IAmb IAmb 01 08 31.3
comp=Z,17nm,0.9s
TARA Tarawa 17.27 44 Pn Pn 01 08 29.4 -1.4
COEN Coen 17.59 259 Pn 01 08 35.2 +0.3
ARMA Armidale 20.93 203 P Pn 01 09 13.4 +1.0
ARMA IAmb IAmb 01 09 15.4
comp=Z,16nm,0.9s
AFI Afiamalu 26.69 99 LR LR 01 19 56.8
comp=Z,67nm,18.2s,baz=292,slow=35
WR0 Warramunga Arr 26.87 248 P P 01 10 10.3 -0.1
WR0 IAmb IAmb 01 10 36.6
comp=Z,6.1nm,0.8s
WB0 Warramunga Arr 26.95 249 P P 01 10 11.6 +0.4
WB0 IAmb IAmb 01 10 12.2
comp=Z,15nm,0.8s
WRAB Tennant Creek 27.03 248 P P 01 10 12.2 +0.3
WB2 Warramunga Arr 27.04 248 P P 01 10 12.3 +0.4
WRA Warramunga Arr 27.05 248 P P 01 10 12.1 +0.1
comp=Z,7.2nm,0.8s,baz=77,slow=9.8,SNR=34
WRA LR LR 01 20 52.2
comp=Z,250nm,18.2s,baz=75,slow=36
WRA Warramunga Arr 27.05 248 IAmb IAmb 01 10 19.4
comp=Z,0.6nm,0.6s
STKA Stephens Creek 27.21 218 P P 01 10 15.1 +1.8
comp=Z,4.4nm,0.7s,baz=2.8,slow=9.7,SNR=12
STKA LR LR 01 20 52.1
comp=Z,315nm,18.6s,baz=33,slow=36
STKA Stephens Creek 27.21 218 P P 01 10 14.9 +1.5
ASAR Alice Springs 28.56 241 P P 01 10 24.7 -0.9
comp=Z,1.3nm,0.8s,baz=63,slow=10,SNR=12
ASAR LR LR 01 21 58.6
comp=Z,121nm,18.7s,baz=62,slow=37
H11S2 WAKE ISLAND Hy 30.12 11 T T 01 41 42.4
baz=188,slow=76,SNR=11
H11S3 WAKE ISLAND Hy 30.12 11 T T 01 42 00.0
baz=188,slow=76,SNR=7.8
H11S1 WAKE ISLAND Hy 30.13 11 T T 01 41 43.8
baz=188,slow=76,SNR=8.2
H11N1 WAKE ISLAND Hy 31.34 11 T T 01 43 31.1
baz=188
H11N3 WAKE ISLAND Hy 31.35 11 T T 01 43 32.3
baz=188
H11N2 WAKE ISLAND Hy 31.36 11 T T 01 43 32.4
baz=188
KNRA Kununurra 31.63 258 P P 01 10 53.0 +0.3
FITZ Fitzroy Crossi 34.82 255 LR LR 01 24 48.2
comp=Z,119nm,21.2s,baz=82,slow=35
MJAR Matsushiro Arr 52.19 337 P P 01 13 39.3 -1.0
comp=Z,1.9nm,0.6s,baz=159,slow=10,SNR=4.8
MJAR LR LR 01 34 20.3
comp=Z,22nm,21.7s,baz=300,slow=34
KSRS Korea Array 57.56 329 P P 01 14 19.5 +0.4
comp=Z,1.3nm,0.6s,baz=142,slow=6.1,SNR=4.0
NJ2 Nanjing 59.01 318 eP P 01 14 32.3 +3.0
USRK Ussuriysk Ar. 61.19 337 P P 01 14 44.3 +0.3
comp=Z,4.6nm,0.9s,baz=141,slow=5.6,SNR=11
USRK Ussuriysk Ar. 61.19 337 P P 01 14 44.1 +0.1
IPM Ipoh 61.69 281 P P 01 14 48.1 0.0
KULM Kulim 62.26 282 P P 01 14 51.8 -0.1
MDJ Mudanjiang 62.49 335 P P 01 14 52.6 -0.2
RPSI Rantau Prapat 63.27 279 P P 01 14 58.2 -0.4
RPSI IAmb IAmb 01 14 58.8
comp=Z,6.4nm,1.0s
RPSI Rantau Prapat 63.27 279 P P 01 14 58.2 -0.4
PSI Prapat 63.29 279 P P 01 14 58.2 -0.8
comp=Z,2.4nm,0.4s,baz=100,slow=8.9,SNR=4.1
PETK Petropavlovsk- 64.20 358 LR LR 01 40 53.7
comp=Z,28nm,19.9s,baz=239,slow=34
ENH Enshi 64.49 311 P P 01 15 06.3 -0.1
PBKT Sadao Pong 65.49 294 P P 01 15 13.8 +0.7
KLR Kul'dur 65.53 339 P P 01 15 12.6 -0.1
comp=Z,1.5nm,0.7s,baz=188,slow=3.2,SNR=4.4
XAN Xi'an 66.90 315 P P 01 15 21.8 -0.1
XAN pP sP 01 15 29.8 +1.9
XAN Xi'an 66.90 315 P P 01 15 21.1 -0.8
KMI Kunming 67.31 303 P P 01 15 26.0 +1.1
CM31 Chiang Mai Arr 67.97 295 P P 01 15 30.0 +1.1
CMAR Chiang Mai Arr 67.97 295 P P 01 15 30.1 +1.2
comp=Z,3.3nm,0.6s,baz=126,slow=4.8,SNR=18
CHTO Chiang Mai 68.09 296 P P 01 15 29.4 -0.3
HHC Hu-ho-hao-te 69.07 322 eP P 01 15 36.4 +0.9
CD2 Chengdu 69.09 309 eP P 01 15 35.5 -0.3
HIA Hailar 70.36 333 P P 01 15 43.5 +0.4
HIA IAmb IAmb 01 17 12.1
comp=Z,5.4nm,0.8s
LZH Lanzhou 71.52 314 eP P 01 15 50.6 -0.1
LZH pP pP 01 15 53.8 -1.4
LZH sP sP 01 15 55.4 -1.3
SONM Songino Array 76.16 326 P P 01 16 17.6 0.0
comp=Z,4.1nm,0.8s,baz=140,slow=5.7,SNR=18
SONM Songino Array 76.16 326 P P 01 16 17.7 0.0
SHL Shillong 76.56 300 P P 01 16 20.9 +0.5
TLY Talaya 79.79 328 P P 01 16 37.9 +0.4
comp=Z,2.1nm,0.6s,baz=178,slow=2.5,SNR=4.2
TLY Talaya 79.79 328 P P 01 16 37.3 -0.2
TLY IAmb IAmb 01 16 38.2
comp=Z,2.6nm,0.7s
ILAR Eielson Array 85.27 20 P P 01 17 04.8 -0.9
comp=Z,0.4nm,0.6s,baz=241,slow=5.2,SNR=10
WMQ Urumqi 85.99 316 eP P 01 17 11.5 +1.5
MKAR Makanchi Array 90.53 318 P P 01 17 31.2 -0.2
comp=Z,0.9nm,0.6s,baz=90,slow=6.9,SNR=3.2
YKA Yellowknife Ar 97.34 28 P P 01 18 01.6 -0.7
comp=Z,0.3nm,0.7s,baz=258,slow=4.9,SNR=5.2
U56A King 119.61 55 PKiKP 01 23 21.0 +1.2

MDD 14 01:07:27.7±1.5, 36°.16N×5°.99W, h16km±3km, mbLg1.2/4, Error ellipse: s-maj=10.1km s-min=4.7km az=9.0, PRXIMO SIN SOLUCIN
SFS 14 01:07:30.8, 36°.20N×5°.90W, ML2.5, GOLFO DE CADIZ
ISC 14 01:07:28.9±1.2, 36°.22N±0°.06×5°.98W±0°.04, h10km±7km, n15, σ1°.05/27, 2C, Strait of Gibraltar

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CNIL Conil 0.16 337 P Pg 01 07 32.0 -0.4
CNIL S Sg 01 07 35.8 +1.0
CNIL Conil 0.16 337⇑iP Pg 01 07 32.0 -0.4
CNIL eS Sg 01 07 35.8 +1.0
MOMI Momias 0.23 63 P Sg 01 07 32.9 -0.8
MOMI S Sg 01 07 37.3 +0.3
MOMI Momias 0.23 63⇑iP Pg 01 07 32.9 -0.8
MOMI eS Sg 01 07 37.3 +0.3
SFS San Fernando 0.30 323 P Pb 01 07 35.5 -0.9
SFS S Sb 01 07 43.2 +1.8
SFS San Fernando 0.30 323 eP Pb 01 07 35.5 -0.9
SFS eS Sb 01 07 43.2 +1.8
ECEU Ceuta 0.59 124 P Pn 01 07 43.9 +0.7
8.7nm,0.2s,SNR=15
CEU Ceuta 0.59 123 eP Pn 01 07 43.2 0.0
CEU eS Sn 01 07 53.0 +0.2
LIJA Lijar 0.82 34 P Pg 01 07 45.0 +0.3
LIJA S Sg 01 07 56.6 +1.1
LIJA Lijar 0.82 34 eP Pg 01 07 45.0 +0.3
LIJA eS Sg 01 07 56.6 +1.1
EMIJ Mijas 1.03 70 P Pb 01 07 47.9 -0.9
4.8nm,0.3s,SNR=7.4
EMIN Mina Concepcio 1.64 340 P Pn 01 07 56.0 -1.7
0.2nm,0.1s,SNR=7.9
EMIN S Sn 01 08 17.9 -0.9
0.5nm,0.2s,SNR=7.9
ECAB El Cabril 1.90 13 P Pn 01 08 01.8 +0.4
0.0nm,0.2s,SNR=4.0
ECAB S Sn 01 08 23.4 -2.0
0.5nm,0.2s,SNR=7.9
EBAD Badajoz 2.66 342 S Sn 01 08 45.2 +1.1
0.3nm,0.1s,SNR=7.9
EQES Quesada 2.81 55 P Pn 01 08 14.0 +0.1
0.1nm,0.1s,SNR=7.9
EQES S Sn 01 08 47.6 -0.3
0.1nm,0.1s,SNR=7.9

NNC 14 01:08:57.1±3.6, 36°.21N×82°.81E, h0km, mb4.5, mpv4.6, Error ellipse: s-maj=49.1km s-min=25.5km az=102.0
BJI 14 01:08:58.0±0.0, 36°.00N×82°.55E, h8km, mB4.5/13, mb4.2/21, ML4.5/7, Ms4.0/15, Ms7 3.7/11
NEIC 14 01:08:58.9±1.4, 36°.05N±0°.09×82°.6E±0°.1, h10km±2km, mb4.3/12, Error ellipse: s-maj=13.1km s-min=12.0km az=152.0
IDC 14 01:08:58.6±0.7, 36°.02N×82°.55E, h8km±4km, mb3.9/13, mb1 4.1/18, mb1mx3.9/49, mbtmp4.1/18, ML3.9/4, MS3.4/16, Ms1 3.4/16, ms1mx3.2/45, Error ellipse: s-maj=22.1km s-min=12.2km az=44.0
MOS 14 01:08:59.1±1.5, 36°.24N×82°.50E, h10km, mb4.6/12, Error ellipse: s-maj=9.7km s-min=4.6km az=116.6
ISC 14 01:08:59.0±0.5, 36°.09N±0°.05×82°.63E±0°.05, h10km, n148, σ1°.64/149, mb4.2/25, MS3.5/16, 14C-7D, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JOSI Joshimath 6.09 206 eS Pn 01 10 33.8 +4.5
KSH Kashi 6.28 305 Pn Pn 01 10 32.6 +0.8
KSH Sn Sn 01 11 45.3 +1.7
DHRM DHARAMSHALA 6.49 236 ex Pn 01 10 42.6 +7.7
SMLA Simla 6.73 224 eS Pn 01 10 38.0 +0.2
PRZ Przheval'sk 7.17 334 Pn Pn 01 10 44.6 +0.5
PRZ Przheval'sk 7.17 334 P Pn 01 10 44.6 +0.5
KDJ Kajisay 7.37 327 Pn 01 10 46.4 -0.3
KDJ Kajisay 7.37 327 P Pn 01 10 46.4 -0.3
NRN Naryn 7.43 318 Pn 01 10 47.0 -0.7
NRN Naryn 7.43 318 P Pn 01 10 47.0 -0.7
PDGK Podgornoye 7.62 342 ⇑Pn Pn 01 10 51.2 +1.0
25nm,0.4s
PDGK ⇓Sn Sn 01 12 17.0 +0.4
88nm,0.6s
PDGK ⇑Lg Lg 01 12 55.6
173nm,1.0s
PDGK Podgornoye 7.62 342 P Pn 01 10 51.2 +1.0
PDGK S Sn 01 12 17.2 +0.6
DANN Dangsing 7.78 173 eP Pn 01 10 51.8 -0.8
27nm,0.5s
ULHL Ulahol 7.89 323 P Pn 01 10 55.7 +1.7
SNR=8.3
CHCP Chirah Chowk 8.07 255 P Pn 01 10 56.5 +0.2
NIL Nilore 8.08 255 Pn 01 10 56.4 0.0
NIL Nilore 8.08 255 P Pn 01 10 56.4 0.0
BOOM Boomskoye usch 8.22 323 Pn 01 10 59.1 +0.6
BOOM Boomskoye usch 8.22 323 P Pn 01 10 59.1 +0.6
GKN Gorkha 8.24 168 eP Pn 01 10 58.4 -0.4
MDOK Medeo 8.27 330 ⇓Pn Pn 01 10 59.7 +0.6
10nm,0.5s
MDOK Lg Lg 01 13 19.1
120nm,1.2s
MDOK Medeo 8.27 330 P Pn 01 10 59.7 +0.6
KZA Kyzart 8.28 318 P Pn 01 11 01.6 +2.1
SNR=7.1
KOLN Koldanda 8.34 174 eP Pn 01 10 58.3 -1.9
58nm,0.9s
KKN Kakani 8.58 164 eP Pn 01 11 03.2 -0.3
28nm,0.6s
GUN Gumba 8.61 160 eP Pn 01 11 04.0 0.0
94nm,0.8s
WMQ Urumqi 8.64 25 eP Pn 01 11 07.6 +3.5
WMQ S Sn 01 12 42.3 +0.6
WMQ smax smax
comp=N,84nm,1.1s
WMQ smax smax
comp=E,88nm,1.1s
WMQ Urumqi 8.64 25 Pn 01 11 05.1 +1.0
WMQ Urumqi 8.64 25 P Pn 01 11 05.1 +1.0
UCH Uchtor 8.79 317 P Pn 01 11 07.4 +0.9
SNR=13
PKIN Phulchoki 8.81 164 eP Pn 01 11 06.1 -0.6
32nm,0.6s
PKI Pulchoki 8.82 164 eP Pn 01 11 06.6 -0.2
37nm,0.6s
KBK Karagaybulak 8.85 320 P Pn 01 11 09.8 +2.8
SNR=9.2
JIRN Jiri 8.94 159 eP Pn 01 11 08.7 +0.2
35nm,0.4s
AAK Ala-Archa 9.07 319 Pn Pn 01 11 11.8 +1.7
0.9nm,0.3s,baz=156,slow=10,SNR=17
AAK Lg Lg 01 13 41.0
1.5nm,0.3s,baz=336,slow=20,SNR=3.7
AAK LR LR 01 15 27.8
comp=Z,139nm,18.4s,baz=128,slow=43
AAK Ala-Archa 9.07 319 P Pn 01 11 13.2 +3.1
SNR=6.9
AAK Ala-Archa 9.07 319 ⇓P Pn 01 11 12.0 +1.9
9.6nm,0.9s
AAK Ala-Archa 9.07 319 Pn 01 11 10.8 +0.7
AAK Ala-Archa 9.07 319deP Pn 01 11 12.9 +2.8
AAK pmax pmax
comp=Z,5.0nm,0.6s
CEP Cherat 9.08 259 P Pn 01 11 09.9 -0.4
CEP S Sn 01 12 52.0 -0.7
FRU1 Bishkek 9.12 320 Pn Pn 01 11 12.4 +1.8
FRU1 Bishkek 9.12 320 P Pn 01 11 12.5 +1.8
AML Almayashu 9.19 314 P Pn 01 11 13.2 +1.3
SNR=6.9
EKS2 Erkin-Say 9.48 316 P Pn 01 11 17.8 +2.2
SNR=12
THW Thamme Wali 9.57 253 P Pn 01 11 16.6 -0.3
RAMN Ramite 9.72 159 eP Pn 01 11 18.2 -1.0
comp=Z,73nm,0.8s
ODAN Odare 10.06 155 eP Pn 01 11 22.4 -1.4
comp=Z,40nm,0.8s
BTK Batken 10.11 297 Pn 01 11 23.4 -0.9
BTK Batken 10.11 297 P Pn 01 11 23.4 -0.9
MK31 Makanchi Array 10.69 359 ⇑P Pn 01 11 31.9 -0.3
comp=Z,11nm,0.5s,baz=179,slow=11,SNR=506
MK31 ⇑S Sn 01 13 28.5 -3.5
comp=Z,25nm,0.9s,baz=183,slow=23,SNR=4.1
MK31 Makanchi Array 10.69 359 Pn 01 11 32.6 +0.4
MK31 Makanchi Array 10.69 359 P Pn 01 11 32.6 +0.4
MKAR Makanchi Array 10.69 359 Pn Pn 01 11 32.5 +0.3
comp=Z,5.9nm,0.3s,baz=183,slow=12,SNR=334
MKAR Sn Sn 01 13 28.9 -3.1
comp=Z,1.0nm,0.3s,baz=180,slow=24,SNR=3.9
MKAR LR LR 01 16 36.1
comp=Z,79nm,19.2s,baz=162,slow=42
MKAR Makanchi Array 10.69 359 Pn 01 11 32.2 0.0
MAKZ Makanchi 10.72 358 ⇑P Pn 01 11 33.2 +0.7
comp=Z,30nm,0.5s
MAKZ ⇑S Sn 01 13 28.4 -4.1
comp=Z,13nm,0.8s
MAKZ Makanchi 10.72 358 Pn 01 11 32.8 +0.3
MAKZ Makanchi 10.72 358 P Pn 01 11 32.8 +0.3
KBL Kabul 11.21 266 Pn 01 11 38.1 -1.3
KBL Kabul 11.21 266 P Pn 01 11 38.1 -1.3
TAS Tashkent 11.65 301 Pn Pn 01 11 45.5 +0.3
TAS Tashkent 11.65 301 P Pn 01 11 45.5 +0.3
KK31 Karatay Array 11.67 311 Pn Pn 01 11 45.4 -0.1
KK31 Karatay Array 11.67 311 P Pn 01 11 45.4 -0.1
KKAR Karatay Array 11.67 311 Pn 01 11 44.8 -0.8
KKAR Karatay Array 11.67 311 Pn Pn 01 11 45.0 -0.6
KKAR Karatay Array 11.67 311 P Pn 01 11 45.0 -0.6
GTA Gaotai 14.00 71 eP P 01 12 22.3 -3.2
GTA pP Pn 01 12 26.6 +9.1
GTA sP 01 12 29.8
GTA pmax pmax
comp=Z,2.0nm,1.1s
KURBB Kurchatov Arra 14.82 350 Pn Pn 01 12 26.0 -2.6
comp=Z,0.1nm,0.3s,baz=191,slow=12,SNR=26
KURBB Kurchatov Arra 14.82 350 ⇑P Pn 01 12 24.3 -4.2
comp=Z,10nm,1.3s
KURK Kurchatov 14.90 350 ⇓P Pn 01 12 25.2 -4.4
comp=Z,18nm,1.1s
KURK Kurchatov 14.90 350 Pn 01 12 27.3 -2.3
KURK Kurchatov 14.90 350 P Pn 01 12 27.3 -2.3
HRA Herat 16.74 270 Pn 01 12 51.2 -2.6
LZH Lanzhou 17.15 84 eP Pn 01 12 57.3 -1.6
LZH ePP PnPn 01 13 11.8 +3.2
LZH pmax pmax
comp=Z,20nm,1.0s
LZH pmax pmax
comp=Z,68nm,4.7s
LZH LR LR
comp=Z,330nm,12.0s
LZH LR LR
comp=Z,280nm,11.5s
LZH LR LR
comp=Z,390nm,14.2s
ZAA0 Zalesovo Array 17.92 4 ⇑P Pn 01 13 05.3 -2.8
comp=Z,3.0nm,0.9s
ZAA0 Zalesovo Array 17.92 4 Pn 01 13 06.2 -1.9
ZAA0 IAmb IAmb 01 13 10.3
comp=Z,15nm,0.8s
ZALV Zalesovo Beam 17.92 4 P Pn 01 13 05.9 -2.3
comp=Z,1.2nm,0.3s,baz=191,slow=12,SNR=86
ZALV LR LR 01 21 23.0
comp=Z,52nm,19.9s,baz=214,slow=41
BVAR Borovoye Array 19.00 337 P Pn 01 13 20.9 -0.4
comp=Z,9.2nm,0.3s,baz=138,slow=9.0,SNR=184
BRVK Borovoye 19.06 337 P Pn 01 13 21.6 -0.4
BRVK Borovoye 19.06 337deP Pn 01 13 22.1 +0.1
BRVK pmax pmax
comp=Z,59nm,0.6s
GEYT Alibeck 19.65 283 P P 01 13 27.1 -0.8
comp=Z,0.3nm,0.3s,baz=96,slow=13,SNR=5.4
GEYT Alibeck 19.65 283 P P 01 13 26.5 -1.4
ZAK Zakamensk 20.65 40 eP Pn 01 13 40.3 -0.7
ZAK pmax pmax
comp=Z,6.0nm,1.1s
SONM Songino Array 21.12 49 P P 01 13 46.3 +2.3
comp=Z,6.3nm,0.9s,baz=238,slow=12,SNR=31
SONM LR LR 01 22 32.6
comp=Z,154nm,18.6s,baz=236,slow=38
SONM Songino Array 21.12 49 P P 01 13 45.1 +1.2
AB31 Akbulak array 21.14 316 P P 01 13 43.4 -0.5
comp=Z,7.9nm,0.8s,baz=117,slow=12,SNR=78
AB31 Akbulak array 21.14 316 P P 01 13 43.4 -0.5
ABKAR Akbulak array 21.14 316 P P 01 13 43.7 -0.2
ABKAR Akbulak array 21.14 316 P P 01 13 43.3 -0.6
ABKAR IAmb IAmb 01 13 47.0
comp=Z,11nm,0.8s
ABKAR PcP 01 17 49.4 -0.2
TLY Talaya 21.61 37 LR LR 01 23 08.3
comp=Z,117nm,18.6s,baz=230,slow=39
GYA Guiyang 22.63 108 eP P 01 14 10.3 +10
CMAR Chiang Mai Arr 22.72 136 P P 01 14 02.3 +1.2
comp=Z,3.0nm,1.0s,baz=308,slow=12,SNR=10.0
CMAR Chiang Mai Arr 22.72 136ceP P 01 14 05.4 +4.3
CMAR pmax pmax
comp=Z,3.0nm,0.9s
AKTO Aktyubinsk 22.81 317 P P 01 14 01.4 -0.4
comp=Z,3.4nm,0.6s,baz=117,slow=8.1,SNR=11
AKTO LR LR 01 23 49.4
comp=Z,177nm,19.4s,baz=124,slow=39
AKTO Aktyubinsk 22.81 317 ⇑P P 01 13 59.9 -1.9
comp=Z,4.7nm,1.1s
HHC Hu-ho-hao-te 23.09 69 eP P 01 14 04.8 -0.2
HHC sP sP 01 14 12.0 +0.9
HHC pmax pmax
comp=Z,3.0nm,0.8s
HHC pmax pmax
comp=Z,79nm,5.0s
WSAR Wadi Sarin 24.39 245 LR LR 01 25 21.2
comp=Z,65nm,21.9s,baz=60,slow=40
SVE Sverdlovsk 25.47 331 eP P 01 14 28.6 +1.6
SVE pmax pmax
comp=Z,13nm,1.0s
ARU Arti 26.04 329 P P 01 14 33.4 +1.3
comp=Z,1.3nm,0.5s,baz=134,slow=7.1,SNR=11
ARU Arti 26.04 329 P P 01 14 32.4 +0.2
ARU IAmb IAmb 01 14 34.1
comp=Z,5.3nm,0.7s
ARU Arti 26.04 329c iP P 01 14 33.7 +1.6
ARU 01 15 07.1
ARU S S 01 19 05.5 +2.7
ARU SS SnSn 01 19 59.3 -0.8
ARU pmax pmax
comp=Z,6.0nm,0.8s
WHN Wuhan 27.01 93 ⇓P P 01 14 49.5 +8.4
PALK Pallekele 28.74 184 LR LR 01 25 21.8
comp=Z,76nm,18.5s,baz=5.2,slow=34
GNI Garni 29.93 289 LR LR 01 28 58.4
comp=Z,45nm,20.6s,baz=81,slow=40
KBZ Khabaz 31.18 296 LR LR 01 30 26.5
comp=Z,73nm,18.9s,baz=103,slow=41
KIRV Kirov 31.29 326 LR LR 01 29 01.0
comp=Z,96nm,18.6s,baz=221,slow=38
KIV Kislovodsk 31.33 297 eP P 01 15 23.3 +3.7
KIV pmax pmax
comp=Z,17nm,1.0s
KIV MLR MLR
comp=Z,107nm,15.0s
VRH Novokhopyorsk 32.75 310 eP P 01 15 35.1 +3.3
VRH pmax pmax
comp=Z,4.0nm,0.5s
VSR Storozhevoye 34.34 310 eP P 01 15 47.9 +2.3
VSR pmax pmax
comp=Z,8.0nm,1.0s
KSRS Korea Array 36.04 74 LR LR 01 32 41.7
comp=Z,54nm,20.1s,baz=150,slow=39
OBN Obninsk 36.59 316⇑eP P 01 16 07.6 +2.7
OBN e 01 17 29.3
OBN eS S 01 21 46.5 -0.8
OBN pmax pmax
comp=Z,24nm,2.5s
OBN MLR MLR
comp=Z,76nm,16.0s
USRK Ussuriysk Ar. 38.10 62 LR LR 01 33 31.6
comp=Z,89nm,19.7s,baz=237,slow=39
BR131 Keskin Array S 38.44 291 P P 01 16 20.6 -0.4
BR131 Keskin Array S 38.44 291 P P 01 16 20.6 -0.4
BR131 pmax pmax
comp=Z,2.0nm,1.0s
BRTR Keskin Array B 38.44 291 P P 01 16 21.8 +0.7
comp=Z,0.8nm,0.7s,baz=87,slow=6.3,SNR=6.3
BRTR Keskin Array B 38.44 291 P P 01 16 20.8 -0.2
BRTR Keskin Array B 38.44 291ceP P 01 16 22.2 +1.2
BRTR pmax pmax
comp=Z,1.0nm,0.7s
AKASG Malin Array Be 40.56 308 P P 01 16 39.4 +1.1
comp=Z,1.1nm,0.6s,baz=74,slow=7.1,SNR=8.0
AKASG LR LR 01 35 13.4
comp=Z,90nm,21.5s,baz=245,slow=39
AKASG Malin Array Be 40.56 308 P P 01 16 40.5 +2.1
AKASG Malin Array Be 40.56 308 P P 01 16 40.5 +2.1
AKASG pmax pmax
comp=Z,2.0nm,1.2s
AKBB Malin Array Si 40.56 308 P P 01 16 40.2 +1.8
AKBB IAmb IAmb 01 16 43.8
comp=Z,11nm,1.2s
AKBB Malin Array Si 40.56 308 P P 01 16 40.2 +1.8
AKBB pmax pmax
comp=Z,11nm,1.3s
MLR Muntele Rosu 43.13 301 P P 01 17 02.8 +3.2
MLR pmax pmax
comp=Z,4.0nm,0.7s
FINES FINESS Array B 43.21 324 P P 01 17 00.1 +0.2
comp=Z,3.5nm,0.6s,baz=102,slow=7.9,SNR=22
FINES pP pP 01 17 02.0 -2.4

comp=Z,3.3nm,0.6s,baz=81,slow=12,SNR=6.0
FINES LR LR 01 36 35.7
comp=Z,73nm,20.3s,baz=160,slow=38
FINES FINESS Array B 43.21 324 *i* P P 01 17 01.9 +2.1
FINES pmax pmax
comp=Z,4.0nm,0.6s
BURAR Bucovina Array 43.36 304 P P 01 17 01.5 0.0
BURAR Bucovina Array 43.36 304 P P 01 17 03.5 +2.1
ARCES ARCESS Array B 45.28 335 pP pP 01 17 19.0 -2.0
comp=Z,2.7nm,0.6s,baz=108,slow=6.9,SNR=3.1
VYHS Vyhne 47.48 306 *e*P P 01 17 34.0 +0.1
VYHS Vyhne 47.48 306 *e*P P 01 17 34.0 +0.1
NB2 NORSAR Subarra 50.36 323 P P 01 17 55.9 0.0
comp=Z,15nm,1.1s,baz=86,slow=7.4
NOA NORSAR Array B 50.36 323 P P 01 17 55.7 -0.1
comp=Z,3.4nm,0.8s,baz=86,slow=7.5,SNR=9.5
NOA pP **pP 01 17 58.0 -2.5**
comp=Z,3.3nm,0.8s,baz=86,slow=7.5,SNR=8.1
GERES GERESS Array B 50.75 307 pP pP 01 18 01.7 -2.1
comp=Z,1.9nm,0.7s,baz=64,slow=6.7,SNR=5.1
GERES GERESS Array B 50.75 307 P P 01 17 59.1 0.0
GERES GERESS Array B 50.75 307 P P 01 17 59.1 0.0
BILL Bilibino 54.75 27⇑*e*P P 01 18 30.3 +2.1
BILL *e* 01 19 34.9
BILL *e* 01 20 33.5
BILL *e*S S 01 26 27.6 +19
BILL pmax pmax
comp=Z,13nm,2.2s
BILL MLR MLR
comp=Z,53nm,16.0s
SUMG Summit 64.32 343 P P 01 19 36.5 +1.8
SUMG Summit 64.32 343 P P 01 19 36.5 +1.8
SUMG pmax pmax
comp=Z,7.0nm,1.0s
ILAR Eielson Array 72.27 20 P P 01 20 24.6 +0.5
comp=Z,0.8nm,1.0s,baz=316,slow=4.6,SNR=6.9
ILAR LR LR 01 55 57.7
comp=Z,52nm,19.8s,baz=324,slow=39
WRA Warramunga Arr 74.14 130 P P 01 20 35.2 -0.6
comp=Z,1.6nm,0.9s,baz=326,slow=5.9,SNR=8.8
WRA pP **pP 01 20 38.6 -2.2**
comp=Z,1.7nm,0.8s,baz=326,slow=5.8,SNR=9.9
WRA Warramunga Arr 74.14 130 *i* P P 01 20 39.5 +3.7
WRA pmax pmax
comp=Z,2.0nm,0.8s
TORD Torodi Ar. Bea 75.11 276 P P 01 20 40.1 -1.6
comp=Z,1.2nm,0.9s,baz=35,slow=5.3,SNR=3.0
TORD pP **pP 01 20 44.2 -2.3**
comp=Z,0.9nm,0.7s,baz=43,slow=5.1,SNR=5.2
TORD Torodi Ar. Bea 75.11 276 P P 01 20 40.9 -0.7
ASAR Alice Springs 76.68 133 P P 01 20 49.5 -0.8
comp=Z,0.7nm,0.7s,baz=314,slow=5.6,SNR=6.4
ASAR Alice Springs 76.68 133 P P 01 20 50.1 -0.2
ASAR Alice Springs 76.68 133 P P 01 20 50.1 -0.2
YKA Yellowknife Ar 80.78 8 P P 01 21 12.4 +0.1
comp=Z,1.0nm,0.7s,baz=339,slow=5.1,SNR=13
YKA Yellowknife Ar 80.78 8 *i* P P 01 21 13.0 +0.7
YKA pmax pmax
comp=Z,1.0nm,0.7s

IDC 14 01:11:28.2±0.8, 32°.03S×68°.43W, h112km±5km, mb3.7/4, mb1 3.6/8, mb1mx3.4/31, mbtmp3.8/8, Error ellipse: s-maj=30.6km s-min=18.8km az=96.0
NEIC 14 01:11:28.2±1.7, 32°.06S±0°.06×68°.50W±0°.09, h118km±4km, Error ellipse: s-maj=11.9km s-min=7.3km az=118.0
SJA 14 01:11:28.1±0.5, 32°.03S×68°.51W, h118km±2km, ML4.1, MW3.9
GUC 14 01:11:28.6±0.8, 32°.09S×68°.83W, h170km±13km, ML3.9
ISC 14 01:11:28.5±0.6, 32°.03S±0°.04×68°.48W±0°.05, h121km±5km, n45, σ0§96/70, mb4.0/4, 8C-1D, Mendoza Province

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

RTCV Cerro Valdivia 0.18 344 *e*P Pn 01 11 45.0 -0.3
RTCV *e*S **Sn 01 11 57.4 -0.5**
CFA Coronel Fontan 0.47 26 P Pn 01 11 46.2 -0.3
431nm,0.3s,baz=225,slow=5.5,SNR=8069
CFA S **Sn 01 11 59.2 -0.9**
681nm,0.3s,baz=261,slow=20,SNR=103
CFA Coronel Fontan 0.47 26 *e*P Pn 01 11 46.3 -0.3
CFA *e*S **Sn 01 12 00.1 +0.1**
ZON Zonda 0.51 341 *e*P Pn 01 11 46.4 -0.4
ZON IAML 01 11 46.5
comp=Z,2µm,0.5s
ZON *e*S **Sn 01 12 00.3 -0.2**
ASAL Salagasta 0.63 208 *e*P Pn 01 11 47.5 0.0
RTLL Cerro Villicun 0.70 1 *e*P Pn 01 11 47.9 -0.2
RTLL *e*S **Sn 01 12 03.0 +0.2**
RTLS Leoncito 0.73 288 *e*P Pn 01 11 48.8 +0.3
RTLS IAML 01 11 49.0
comp=Z,6µm,0.3s
RTLS *e*S **Sn 01 12 04.1 +0.4**
ARCO CERRO ARCO 0.89 205⇓*e*P Pn 01 11 49.8 0.0
ARCO IAML 01 12 06.0
comp=Z,5µm,0.2s
ARCO *e*S **Sn 01 12 06.0 +0.1**
AAGR Agrelo 1.09 195 *e*P Pn 01 11 51.7 0.0
AMOG MOGNA 1.09 360 *e*P Pn 01 11 52.0 +0.4
AMOG *e*S **Sn 01 12 09.0 -0.1**
ACAN Cantantal 1.12 103 *e*P Pn 01 11 52.3 +0.4
ACCO Cerro Coronel 1.52 341 *e*P Pn 01 11 57.4 +0.8
FCH Farellones 2.00 229⇑*i*P Pn 01 12 03.0 +0.7
FCH *i* S **Sn 01 12 29.5 +1.4**
FCH IAML 01 12 32.1
comp=E,508nm,0.3s
CO04 Los Peladeros 2.12 269⇑*i*P Pn 01 12 03.3 -0.4
CO04 *e*S **Sn 01 12 30.4 -0.2**
CO04 *i* S 01 12 30.6
PEL Peldehue 2.16 239⇑*i*P Pn 01 12 04.1 0.0
PEL *i* S **Sn 01 12 31.5 +0.1**
PEL IAML 01 12 33.0
comp=E,598nm,0.4s
PEL Peldehue 2.16 239 Pn 01 12 03.8 -0.4
PEL Sn **Sn 01 12 30.2 -1.2**
CLCH Cerro Calan 2.20 231 *e*P Pn 01 12 05.0 +0.4
CLCH IAML 01 12 36.8
comp=N,850nm,0.5s
CO03 El Pedregal 2.23 302⇑*i*P Pn 01 12 05.9 +0.9
CO03 *e*S **Sn 01 12 33.7 +0.8**
MT03 Universidad Ad 2.25 229⇑*i*P Pn 01 12 05.5 +0.3
MT03 *e*S **Sn 01 12 33.3 0.0**
MT03 IAML 01 12 43.6
comp=N,1µm,0.2s
STL Santa Lucia 2.29 232 *e*P Pn 01 12 05.9 +0.2
STL *e*S **Sn 01 12 34.2 -0.1**
STL IAML 01 12 36.9
comp=E,403nm,0.7s
CO02 Combarbal 2.30 290⇑*i*P Pn 01 12 06.2 +0.3
CO02 *e*S **Sn 01 12 34.8 +0.2**
LMEL Las Melosas 2.32 218 *e*P Pn 01 12 06.8 +0.7
ROCH El Roble 2.33 246⇑*i*P Pn 01 12 05.9 -0.6
ROCH *i* S **Sn 01 12 34.6 -0.9**
ROCH IAML 01 12 37.5
comp=N,2µm,0.3s
ROC1 El Roble 2.34 246 Pn 01 12 05.6 -0.9
ROC1 Sn **Sn 01 12 33.9 -1.7**
RCDM Rinconada Maip 2.44 233 *e*P Pn 01 12 08.6 +1.0
RCDM *e*S **Sn 01 12 39.4 +1.9**
MT02 Curacav 2.55 241⇑*i*P Pn 01 12 08.1 -0.9
MT02 *i* S **Sn 01 12 38.7 -1.4**
MT02 IAML 01 12 39.0
comp=N,536nm,0.3s
GO04 Tololo Observa 2.72 312 Pn 01 12 11.6 +0.2
GO04 Sn **Sn 01 12 44.0 -0.4**
MT01 Popeta 2.96 231 *e*P Pn 01 12 12.8 -1.5
MT01 *e*S **Sn 01 12 47.4 -2.2**
MT01 IAML 01 12 48.4
comp=E,349nm,0.2s
GO05 Huala 4.13 223 Pn 01 12 27.3 -2.6
GO03 Copiap 4.68 341 Pn 01 12 36.5 -0.8
GO02 Mina Guanaco 6.91 352 Pn 01 13 06.1 -1.5
PB10 IPOC Station P 8.68 347 Pn Pn 01 13 29.1 -2.1
PLCA Paso Flores 8.84 190 P Pn 01 13 32.4 -0.9
comp=E,0.1nm,0.3s,baz=25,slow=12,SNR=3.2
LVC Limon Verde 9.39 358 P Pn 01 13 39.3 -1.8
comp=E,1.2nm,0.3s,baz=189,slow=7.9,SNR=9.3
CPUP Villa Florida 11.28 63 P Pn 01 14 03.6 -2.5
comp=E,0.3nm,0.3s,baz=248,slow=9.0,SNR=5.4
SIV San Ignacio 17.33 25 P Pn 01 15 23.2 +0.1
comp=E,0.2nm,0.3s,baz=199,slow=16,SNR=4.2
SNAA Sanae 52.30 159 P P 01 20 27.8 +0.5
comp=E,1.2nm,0.6s,baz=302,slow=9.5,SNR=12

TXAR Lajitas Array 69.58 328 P P 01 22 25.7 +1.2
comp=E,0.4nm,0.8s,baz=143,slow=7.6,SNR=3.9
TXAR pP **pP 01 22 56.5 +1.6**
comp=E,0.4nm,0.7s,baz=143,slow=7.4,SNR=4.7
DBIC Dimbokro 71.71 70 P P 01 22 38.5 +0.8
comp=E,3.0nm,0.8s,baz=225,slow=9.4,SNR=3.5
TORD Torodi Ar. Bea 80.72 68 P P 01 23 29.2 +0.6
comp=E,2.5nm,0.9s,baz=272,slow=5.2,SNR=9.3
TORD pP **pP 01 24 00.4 +0.9**
comp=E,0.8nm,0.8s,baz=274,slow=6.8,SNR=2.5
TORD Torodi Ar. Bea 80.72 68 P P 01 23 29.5 +0.8
WRA Warramunga Arr 123.88 206 PKP PKPdf 01 30 12.5 -0.4
comp=E,0.5nm,0.4s,baz=165,slow=1.7,SNR=9.9
ZALV Zalesovo Beam 150.96 33 PKPbc PKiKP 01 31 07.2 +0.2
comp=E,4.3nm,0.5s,baz=312,slow=3.2,SNR=21
ZALV Zalesovo Beam 150.96 33 PKPbc 01 31 06.4 -0.1
MKAR Makanchi Array 153.23 48 PKPbc PKiKP 01 31 12.2 +0.2
comp=E,0.5nm,0.7s,baz=286,slow=1.3,SNR=5.6
MKAR PKPab **PKPab 01 31 24.8 +0.6**
comp=E,0.4nm,0.5s,baz=288,slow=3.3,SNR=8.8

LJU 14 01:16:29.3, 45°.39N×14°.34E, h7km, ML0.9, 1D, Northwestern Balkan Peninsula

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

KNDS Knezji Dol 0.14 13⇓*i*Pg Pg 01 16 32.0 -0.3
KNDS *e*Sg Sg 01 16 34.2 -0.1
comp=Z,28nm,0.2s
SKDS Skadanscina 0.27 304 *i* Pg Pg 01 16 34.5 -0.1
SKDS *e*Sg Sg 01 16 38.7 +0.4
comp=Z,10.0nm,0.1s
VISS Visnje 0.54 41 *e*Pg Pg 01 16 40.1 +0.4

IDC 14 01:23:12.8±1.1, 38°.49N×20°.27E, h0km, mb3.7/5, mb1 3.6/9, mb1mx3.4/39, mbtmp3.6/9, ML3.3/3, MS3.2/8, Ms1 3.2/8, ms1mx2.8/51, Error ellipse: s-maj=19.3km s-min=18.4km az=24.0
PDG 14 01:23:12.8±0.5, 38°.43N×20°.44E, h13km, ML3.8/13, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0
BEO 14 01:23:12.3±0.8, 38°.25N×20°.13E, h16km±5km, ML3.8/6
ATH 14 01:23:13.4, 38°.41N×20°.51E, h13km, ML3.5/15, Error ellipse: s-maj=1.5km s-min=0.6km az=280.0
THE 14 01:23:13.4, 38°.41N×20°.48E, h13km, ML3.5/5, Error ellipse: s-maj=1.0km s-min=0.3km az=256.0
SKO 14 01:23:16.7, 38°.70N×20°.10E, h0km
ISC 14 01:23:13.2±0.7, 38°.41N±0°.01×20°.51E±0°.02, h13km±4km, n171, σ1§49/210, mb3.6/5, MS3.2/4, 7C-8D, Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

VSK1 VASILIKIADES 0.04 95 P Pg 01 23 15.5 -0.1
KONA Konidatara, Ke 0.05 76 P Pg 01 23 15.7 0.0
KONA S **Sg 01 23 17.6 +0.2**
KEF1 Kardakata, Kep 0.14 192 P Pg 01 23 16.9 +0.2
KEF1 S **Sg 01 23 19.3 +0.2**
KEF4 Livadi, Kephal 0.17 203 P Pg 01 23 17.3 +0.2
KEF4 S **Sg 01 23 20.3 +0.4**
AGT1 Agia Thekli 0.19 211 P Pg 01 23 16.9 -0.5
AGT1 S **Sg 01 23 20.7 +0.3**
LXR1 Lixouri, Cepha 0.22 195 P Pg 01 23 18.1 +0.2
LXR1 S **Sb 01 23 22.1 -0.8**
LXRA Lixouri, Kepha 0.22 195 P Pb 01 23 18.3 -0.7
LXRA S **Sb 01 23 22.2 -0.8**
ARG2 Argostoli 0.23 184 P Pg 01 23 18.4 +0.2
ARG2 S **Sg 01 23 22.0 +0.4**
ARGA Argostoli. Kep 0.24 186 P Pg 01 23 18.4 +0.2
ARGA S **Sg 01 23 21.7 +0.1**
EVGI Lefkada island 0.24 29 P Pg 01 23 18.5 +0.2
EVGI Lefkada island 0.24 29 P Pg 01 23 18.5 +0.2
VLS Valsamata 0.24 165 P Pb 01 23 18.6 -0.9
VLS S **Sb 01 23 22.8 -0.9**
VLS Valsamata 0.24 165 P Pb 01 23 18.8 -0.7
VLS S **Sb 01 23 22.9 -0.8**
VLS AML AML 01 23 23.8
comp=E,40870µm,0.2s
VLS AML AML 01 23 25.5
comp=N,32203µm,0.4s
KEF3 Kipouria, Keph 0.24 211 P Pg 01 23 18.5 +0.1
KEF3 S **Sg 01 23 22.7 +0.8**
KEF2 Argostoli. Kep 0.25 184 P Pg 01 23 18.7 +0.2
KEF2 S **Sb 01 23 23.0 -0.8**
CHV1 Chavriata, Kef 0.25 204 P Pg 01 23 18.6 +0.1
CHV1 S **Sg 01 23 22.7 +0.7**
MGNA Meganis 0.33 42 P Pg 01 23 20.0 +0.1
MGNA S **Sb 01 23 25.6 -0.6**
LKD2 Lefkada island 0.39 17 P Pg 01 23 20.9 -0.2
LKD2 S **Sb 01 23 27.7 -0.3**
LKD2 Lefkada island 0.39 17 P Pg 01 23 20.9 -0.2
LKD2 S **Sb 01 23 28.0 -0.1**
LKD2 AML AML 01 23 36.5
comp=N,14134µm,0.6s
LKD2 AML AML 01 23 36.8
comp=E,14903µm,0.7s
TSLK Tsoukalades, L 0.43 16 P Pg 01 23 21.6 -0.1
TSLK S **Sb 01 23 28.8 -0.2**
comp=E,7µm,0.3s
TSLK Tsoukalades, L 0.43 16 P Pg 01 23 21.7 0.0
TSLK S **Sb 01 23 29.1 +0.1**
AST1 Astakos 0.47 74 P Pb 01 23 23.0 -0.4
AST1 S **Sb 01 23 30.7 +0.4**
comp=E,17µm,0.5s
VLMS Volimes, Zakyn 0.55 167 P Pb 01 23 24.2 -0.6
VLMS S **Sb 01 23 32.8 +0.3**
VLMS AML AML 01 23 37.9
comp=E,22568µm,0.6s
VLMS AML AML 01 23 37.9
comp=N,32754µm,0.7s
PDO Prodromos 0.56 71 P Pb 01 23 24.4 -0.5
PDO Prodromos 0.56 71 P Pb 01 23 24.5 -0.4
PDO AML AML 01 23 38.5
comp=E,10821µm,0.4s
PDO AML AML 01 23 39.8
comp=N,11239µm,0.5s
ZAK2 Zakynthos 0.70 154 P Pb 01 23 27.2 0.0
KRI1 kERI 0.79 162 P Pb 01 23 28.1 -0.7
KRI1 S **Sn 01 23 40.5 -1.2**
PVO Paravola 0.82 75 P Pn 01 23 29.6 -0.9
PVO S **Sn 01 23 42.0 -0.6**
comp=N,5µm,0.8s
PVO Paravola 0.82 75 P Pn 01 23 29.6 -0.9
PVO AML AML 01 23 49.8
comp=E,9614µm,0.6s
PVO AML AML 01 23 51.0
comp=N,9365µm,0.8s
RLS Riolos of Patr 0.83 115 P Pb 01 23 29.2 -0.3
RLS Riolos of Patr 0.83 115 P Pn 01 23 29.4 -1.3
RLS AML AML 01 23 58.0
comp=N,2599µm,0.8s
RLS AML AML 01 23 58.4
comp=E,2315µm,0.5s
DRO Drossia 1.05 116 P Pn 01 23 33.2 -0.5
DRO Drossia 1.05 116 P Pn 01 23 32.9 -0.7
DRO AML AML 01 24 02.2
comp=N,7962µm,0.4s
DRO AML AML 01 24 09.3
comp=E,7812µm,0.5s
ANX Ano Chora 1.12 80 P Pg 01 23 34.3 -0.5
ANX Ano Chora 1.12 80 P Pg 01 23 34.3 -0.5
ANX AML AML 01 24 01.7
comp=N,5686µm,0.9s
ANX AML AML 01 24 04.4
comp=E,4879µm,0.5s
IGT Igoumenitsa 1.13 353 P Pb 01 23 33.7 -0.9
IGT S **Sg 01 23 51.0 +1.4**
comp=E,1µm,0.5s
IGT Igoumenitsa 1.13 353 *e*Pg Pg 01 23 35.9 +1.0
IGT *e*Sg **Sg 01 23 53.0 +3.4**
IGT Igoumenitsa 1.13 353 P Pb 01 23 33.7 -0.9
IGT AML AML 01 24 00.2
comp=N,2965µm,0.3s
IGT AML AML 01 24 04.3
comp=E,3179µm,0.5s
EVR Evrytania 1.14 63 P Pb 01 23 34.1 -0.7
EVR S **Sn 01 23 51.0 +0.6**
comp=E,1µm,0.8s
EVR Evrytania 1.14 63 P Pg 01 23 34.6 -0.5
LAKA Lakka 1.17 98 P Pg 01 23 35.5 -0.2
LAKA AML AML 01 24 04.6
comp=N,1791µm,0.5s
LAKA AML AML 01 24 06.0

comp=E,2033µm,0.8s
SERG Sergoula 1.22 90 P Pb 01 23 35.6 -0.5
SERG Sergoula 1.22 90 P Pg 01 23 35.7 -0.9
SERG AML AML 01 24 00.5
comp=E,4003µm,0.6s
SERG AML AML 01 24 04.1
comp=N,4604µm,0.5s
TRIZ Trizonia 1.23 92 P Pb 01 23 35.8 -0.5
TRIZ Trizonia 1.23 92 P Pg 01 23 36.0 -0.9
ALIK Aliki, Aigiali 1.27 96 P Pg 01 23 36.7 -0.9
JAN Janina 1.27 12 P Pg 01 23 38.2 +0.6
KALE Kalithea 1.28 90 P Pb 01 23 36.8 -0.4
KALE Kalithea 1.28 90 P Pb 01 23 36.7 -0.5
KALE AML AML 01 24 09.3
comp=N,5080µm,0.6s
KALE AML AML 01 24 09.4
comp=E,2269µm,0.8s
AMT Artemida-Makis 1.29 132 P Pg 01 23 37.9 -0.2
AMT Artemida-Makis 1.29 132 P Pg 01 23 38.1 0.0
AMT AML AML 01 24 12.9
comp=N,5452µm,0.7s
AMT AML AML 01 24 13.3
comp=E,4061µm,0.5s
KLV Kalavryta, Ach 1.34 105 P Pb 01 23 37.9 -0.4
KLV Kalavryta, Ach 1.34 105 P Pb 01 23 37.9 -0.4
KLV AML AML 01 24 11.6
comp=N,1668µm,0.9s
KLV AML AML 01 24 13.4
comp=E,1051µm,0.7s
KASA Kassiopi 1.40 342 P Pb 01 23 39.3 0.0
MAKR Makrakomi, Fth 1.40 64 P Pg 01 23 39.3 -0.9
MAKR Makrakomi, Fth 1.40 64 P Pg 01 23 39.2 -0.9
KEK Kerkira 1.41 337 P Pn 01 23 38.9 +0.3
SRN Sarande 1.52 345 P Pn 01 23 40.3 +0.3
AGG Agios Georgios 1.55 66 P Pb 01 23 41.8 0.0
AGG Agios Georgios 1.55 66 P Pg 01 23 42.0 -0.9
THL Klokotos Trika 1.64 45 P Pb 01 23 43.4 +0.1
THL Klokotos Trika 1.64 45 P Pg 01 23 43.8 -1.0
THL AML AML 01 24 16.9
comp=N,2251µm,0.7s
THL AML AML 01 24 19.3
comp=E,2124µm,1.2s
ITM Ithomi 1.67 137 P Pb 01 23 43.6 -0.2
ITM Ithomi 1.67 137 P Pg 01 23 44.6 -0.5
KPRO Kipourio 1.68 23 P Pg 01 23 44.9 -0.5
KPRO Kipourio 1.68 23 P Pg 01 23 44.9 -0.5
AXAR Agios Charalam 1.72 78 P Pg 01 23 45.1 -1.1
PYL PYLOS 1.80 147 P Pb 01 23 45.6 -0.5
LKR Lokris 1.97 82 P Pb 01 23 49.2 +0.3
LTK Loutraki 1.98 101 P Pb 01 23 49.1 +0.1
KZN Kozani 2.13 27 P Pg 01 23 51.5 -0.2
VIL2 Platees 2.18 94 P Pb 01 23 53.0 +0.5
NEO Neokhori 2.30 66 P Pb 01 23 53.9 -0.7
DID Didima 2.34 112 P Pb 01 23 53.7 -1.5
VLY Voula,Athens 2.65 101 P Pb 01 23 58.1 -2.4
PTL Penteli 2.67 97 P Pb 01 23 58.8 -2.0
TIR Tirane 2.97 351 *e*Pn Pn 01 24 01.4 +1.3
TIP Timpagrande 3.03 286 ⇑P Pn 01 24 00.9 0.0
TAR1 Taranto 3.27 311 *e*Pn Pn 01 24 04.5 +0.4
VAY Valandovo 3.31 28 *e*P Pb 01 24 09.6 -2.1
VAY Valandovo 3.31 28 *i* Pn Pb 01 24 09.7 -2.1
STIP Stip 3.52 21 *i* Pn Pb 01 24 12.0 -3.4
SRS Serrai 3.60 40 *e*Pn Pn 01 24 11.2 +2.5
ULC Ulcinj 3.68 345 *e*Pn Pn 01 24 09.1 -0.7
ULC *e*Sn **Sn 01 24 54.2 +1.2**
MATE Matera 3.69 308 ⇑P Pn 01 24 10.2 +0.2
SG1 Sgolgore (BA) 3.82 311 *e*Pn Pn 01 24 12.2 +0.4
SG1 Sn **Sn 01 24 56.1 -0.5**
BAI Bari 3.88 315 *e*Pn Pn 01 24 12.6 +0.1
DRME Dracevica, Mon 3.90 345 *e*Pn Pn 01 24 12.8 -0.1
DRME Dracevica, Mon 3.90 345 *e*Pn Pn 01 24 13.2 +0.3
DRME *e*Sn **Sn 01 24 59.4 +0.9**
MMB Musomiste 4.02 37 *e*P Pb 01 24 20.5 -3.4
BUM Brajici-Budva 4.07 343 *e*Pn Pn 01 24 14.4 -0.9
BUM *e*Sn **Sn 01 25 03.4 +0.5**
PDG Podgorica 4.12 347 *e*Pn Pn 01 24 16.1 +0.2
PDG *e*Sn **Sn 01 25 03.2 -0.8**
PDG Podgorica 4.12 347 ⇓P Pn 01 24 17.2 +1.4
PDG Podgorica 4.12 347 *e*Pn Pn 01 24 16.1 +0.2
TTG Podgorica 4.12 347 *e*Pn Pn 01 24 16.0 +0.1
TTG *e*Sn **Sn 01 25 04.6 +0.6**
PVY Plav 4.20 354 *e*Pn Pn 01 24 17.9 +0.9
PVY *e*Sn **Sn 01 25 07.0 +1.0**
APE Apeiranthos 4.20 107 ⇓P Pb 01 24 26.9 -0.1
CEME Cevo 4.30 344 *e*Pn Pn 01 24 17.9 -0.5
CEME *e*Sn **Sn 01 25 08.7 +0.2**
HCY Herceg Novi 4.31 340 *e*Pn Pn 01 24 16.9 -1.6
HCY Herceg Novi 4.31 340 *e*Pn Pn 01 24 17.0 -1.5
HCY *e*Sn **Sn 01 25 07.6 -1.1**
BOSS Bosilegrad 4.35 20 *e*Pn Pn 01 24 21.8 +2.8
IVA Berane 4.48 354 *e*Pn Pn 01 24 21.5 +0.6
IVA *e*Sn **Sn 01 25 13.5 +0.6**
KOME Kolasin 4.50 351 *e*Pn Pn 01 24 21.6 +0.5
KOME *e*Sn **Sn 01 25 14.0 +0.7**
NKME Niksic 4.51 345 *e*Pn Pn 01 24 21.0 -0.2
NKME *e*Sn **Sn 01 25 14.5 +1.0**
BARS Barje 4.51 12 *e*Pn Pn 01 24 22.8 +1.6
RZN Rozhen 4.59 43 *e*P Pb 01 24 30.5 -3.3
TREB Trebinje 4.60 340 *e*Pn Pn 01 24 21.3 -1.2
TREB *e*Sn **Sn 01 25 13.0 -2.8**
TREB Trebinje 4.60 340 *e*Pn Pn 01 24 21.5 -1.0
VTS Vitosha 4.69 25 *e*Pn Pn 01 24 25.3 +1.5
VTS Vitosha 4.69 25 ⇓P Pb 01 24 30.9 -4.4
VTS Vitosha 4.69 25 *e*P Pb 01 24 31.5 -3.8
IDI Anoyia 4.70 130 Pn Pn 01 24 27.7 +3.8
comp=E,0.4nm,0.3s,baz=242,slow=6.3,SNR=9.3
IDI Sn **Sb 01 25 26.2 -5.7**
comp=E,3.1nm,0.3s,baz=7.8,slow=23,SNR=7.3
IDI LR LR 01 26 38.9
comp=E,117nm,19.1s,baz=352,slow=42
BRY Bratogost 4.73 342 *e*Pn Pn 01 24 23.0 -1.3
BRY Bratogost 4.73 342 *e*Pn Pn 01 24 23.4 -0.9
BRY *e*Sn **Sn 01 25 17.6 -1.5**
SELS Selova 4.82 5 *e*Pn Pn 01 24 25.4 -0.1
SJES Sjenica 4.86 355 *e*Pn Pn 01 24 26.9 +0.8
SJES *e*Sn **Sn 01 25 23.1 +0.8**
VAE Valguarnera 4.91 261 Pn Pn 01 24 28.1 +1.4
comp=E,0.3nm,0.3s,baz=161,slow=19,SNR=3.8
VAE Sn **Sn 01 25 23.4 -0.1**
comp=E,2.5nm,0.3s,baz=16,slow=17,SNR=3.1
UPM Unac-Piva 4.94 346 *e*Pn Pn 01 24 27.6 +0.4
UPM *e*Sn **Sn 01 25 24.8 +0.5**
STON Ston 4.94 335 *e*Pn Pn 01 24 26.2 -0.9
STON *e*Sn **Sn 01 25 21.9 -2.1**
STON Ston 4.94 335 *e*Pn Pn 01 24 25.2 -1.9
KDZ Kurdzhali 4.96 48 *e*P Pb 01 24 35.4 -4.6
PLE Pljevlja 4.99 351 *e*Pn Pn 01 24 28.9 +1.1
PLE *e*Sn **Sn 01 25 26.2 +0.8**
ZAPS Zavoj 5.12 18 *e*Pn Pn 01 24 32.1 +2.5
IVAS Ivanjica 5.17 357 *e*Pn Pn 01 24 29.9 -0.4
IVAS *e*Sn **Sn 01 25 30.5 +0.7**
RUDO Rudo 5.27 351 *e*Pn Pn 01 24 30.5 -1.2
BOVS Bovan 5.29 9 *e*Pn Pn 01 24 32.8 +0.8
GRUS Gruza 5.47 2 *e*Pn Pn 01 24 34.9 +0.5
BBLS Lazići 5.51 352 *e*Pn Pn 01 24 35.5 +0.5
BBLS Lazići 5.51 352 *e*Pn Pn 01 24 30.5 -4.5
DIVS Divibare 5.69 356 *e*Pn Pn 01 24 37.0 -0.5
DIVS *e*Sn **Sn 01 25 41.4 -1.4**
DIVS Divibare 5.69 356 *e*Pn Pn 01 24 35.7 -1.8
HAPS Han Pijesak,BI 5.79 349 *e*Pn Pn 01 24 39.4 +0.5
HAPS *e*Sn **Sn 01 25 44.4 -0.8**
HAPS Han Pijesak,BI 5.79 349 *e*Pn Pn 01 24 40.2 +1.3
ELND Elena 6.08 40 ⇓P Pb 01 24 50.6 -8.4
MDVR Moldovita 6.43 8 ⇑P Pn 01 24 51.3 +3.7
MGRS Mrkonjic Grad 6.53 338 *e*Pn Pn 01 24 48.4 -0.5
BLY Banja Luka 6.80 340 ⇓P Pn 01 24 54.3 +1.6
BLY Banja Luka 6.80 340 *e*Pn Pn 01 24 51.2 -1.5
GZR Gura Zlata 7.18 13 ⇑P Pn 01 25 03.6 +5.7
ARR Arges 7.60 23 ⇑P Pn 01 25 09.6 +6.0
VOIR 7.79 24 ⇓P Pn 01 25 13.1 +6.8
MORH Mrgy, Hungar 7.92 351 *e*Pn Pn 01 25 06.4 -1.6
MLR Muntele Rosu 8.15 28 LR LR 01 29 10.0
comp=E,140nm,18.2s,baz=24,slow=44
MLR Muntele Rosu 8.15 28 ⇓P Pn 01 25 18.1 +6.8
CRES Cresnjev 8.30 335 *e*Pn Pn 01 25 12.0 -1.3
BISRR Bisoca 8.49 31 ⇓P Pn 01 25 22.1 +6.2
PLOR Plostina 8.72 30 ⇑P Pn 01 25 25.2 +6.2
VRI Vrincioaia 8.76 30 ⇑P Pn 01 25 26.7 +7.2
LJU Ljubljana 8.82 332 *e*Pn Pn 01 25 19.7 -0.6
SOKA Soboth 9.19 336 *i* Pn Pn 01 25 24.5 -1.0
comp=E,4.4nm,0.4s

SOKA i Sn Sn 01 27 02.1 -6.7
comp=E,3.7nm,0.6s
OBKA Obir 9.21 333 i Pn **Pn 01 25 25.3 -0.4**
comp=E,1.3nm,0.2s
OBKA i Sn **Sn 01 27 05.6 -3.6**
comp=E,2.8nm,0.4s
ARSA Arzberg 9.56 339 i Pn **Pn 01 25 29.6 -0.9**
comp=E,2.1nm,0.7s
MYKA Terra Mystica 9.65 331 i Pn **Pn 01 25 34.3 +2.6**
comp=E,1.3nm,0.3s
ABTA Abfaltersbach 10.20 327 i Pn **Pn 01 25 39.6 +0.3**
comp=E,2.6nm,0.5s
BRTR Keskin Array B 10.29 79 Pn Pn 01 25 49.3 +8.6
comp=E,0.0nm,0.3s,baz=252,slow=14,SNR=2.9
MOA Molln 10.47 336 i Pn **Pn 01 25 42.6 -0.4**
comp=E,1.7nm,0.2s
MOA i Sn **Sn 01 27 36.3 -3.9**
comp=E,2.1nm,0.5s
WTTA Wattenberg 10.98 327 i Pn **Pn 01 25 50.5 +0.4**
comp=E,0.9nm,0.4s
WTTA i Sn **Sn 01 27 49.4 -3.3**
comp=E,3.0nm,0.4s
WATA Walderalm 11.06 327 i Pn **Pn 01 25 51.6 +0.4**
comp=E,1.7nm,0.4s
SQTA Sankt Quirin 11.13 325 i Pn **Pn 01 25 53.2 +1.1**
comp=E,2.0nm,0.4s
VRAC Vranov 11.25 347 LR LR 01 30 25.4
comp=E,110nm,18.2s,baz=166,slow=39
MOTA Moosalm 11.27 325 i Pn **Pn 01 25 54.7 +0.6**
comp=E,1.4nm,0.3s
GERES GERESS Array B 11.53 337 Pn **Pn 01 25 57.8 +0.2**
comp=E,0.3nm,0.3s,baz=170,slow=18,SNR=3.1
GERES LR LR 01 31 38.3
comp=E,90nm,18.5s,baz=160,slow=44
KHC Kasperske Hory 11.82 337 ePN **Pn 01 26 01.3 -0.1**
KHC eSN **Sn 01 28 08.6 -4.6**
HFS Hagfors 22.17 351 P **P 01 28 09.5 +0.9**
comp=E,3.1nm,0.7s,baz=157,slow=9.6,SNR=6.8
FINES FINESS Array B 23.32 7 P **P 01 28 21.0 +0.4**
comp=E,0.9nm,0.6s,baz=193,slow=7.8,SNR=4.1
KIRV Kirov 27.46 33 LR LR 01 40 38.2
comp=E,75nm,18.4s,baz=219,slow=38
TORD Torodi Ar. Bea 30.21 219 P **P 01 29 24.0 +0.5**
comp=E,0.6nm,0.8s,baz=38,slow=7.5,SNR=3.4
DBIC Dimbokro 39.06 222 LR LR 01 49 17.8
comp=E,34nm,18.4s,baz=44,slow=40
MKAR Makanchi Array 45.19 59 P **P 01 31 31.6 +1.9**
comp=E,0.3nm,0.4s,baz=275,slow=7.2,SNR=8.6
MKAR LR LR 01 54 30.5
comp=E,20nm,18.2s,baz=118,slow=41
ZALV Zalesovo Beam 45.54 48 P **P 01 31 34.9 +2.6**
comp=E,1.5nm,0.5s,baz=272,slow=8.8,SNR=6.1
CMIG Matias Romero 98.13 299 LR LR 02 18 39.4
comp=E,15nm,18.5s,baz=328,slow=34

JMA 14 01:53:29.0±0.1, 30.19N×131.68E, h49km±2km, M4.0
JMA Felt I J1.
IDC 14 01:53:31.0±3.9, 30.25N×131.48E, h33km±29km, mb3.9/18, mb1 4.1/22, mb1mx3.9/56, mbtmp4.1/22, ML3.2/5, MS3.7/12, Ms1 3.7/12, ms1mx3.4/37, Error ellipse: s-maj=18.2km s-min=12.3km az=92.0
NEIC 14 01:53:51.6±1.4, 32.42N±0.06×131.58E±0.09, h138km±7km, mb4.3/18, Error ellipse: s-maj=14.1km s-min=2.9km az=128.0
ISC 14 01:53:27.6±1.8, 30.20N±0.04×131.64E±0.05, h11km±10km, n88, σ1.68/93, mb4.3/25, MS3.7/12, 10C, Kyushu

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JMTN Minamitane 0.67 287 ⇑P **Pn 01 53 42.7 -0.4**
JMTN eS **Sn 01 53 53.4 -0.2**
JTN Tanegashima 3 0.73 309 ⇑P **Pn 01 53 43.5 -0.4**
JTN eS **Sn 01 53 54.9 -0.2**
JYAK Yakushimahirau 0.98 273 ⇑P **Pn 01 53 47.1 -0.2**
JYAK eS **Sb 01 54 00.4 +0.8**
JTSR Tashiro 2 1.15 327 ⇑P **Pg 01 53 49.3 -0.4**
JTSR eS **Sg 01 54 03.9 -0.8**
JKC Kuchinoerabu 1.28 282 P **Pb 01 53 51.5 -0.2**
JKC eS **Sb 01 54 07.9 -0.3**
JNAR Kushima--Naru 1.36 347 ⇑P **Pn 01 53 52.7 +0.1**
JNAR S **Sb 01 54 09.4 -1.2**
JNN Nakanoshima 1.57 257 P **Pn 01 53 55.9 +0.4**
JNN eS **Sn 01 54 15.2 -0.7**
JSU Suzuyama 1.66 322 P **Pn 01 53 56.5 -0.2**
JSU S **Sn 01 54 16.4 -1.6**
JTZ Takazaki 1.76 344 P **Pn 01 53 58.4 +0.3**
JTZ eS **Sn 01 54 19.0 -1.6**
JTSN Tsuno 2.04 357 P **Pn 01 54 01.9 -0.1**
JTSN S **Sn 01 54 25.5 -2.0**
JZO Okuchi 2.13 335 ⇑P **Pn 01 54 03.3 +0.1**
JZO eS **Sn 01 54 27.7 -2.0**
JSJ Shimokoshiki 2.22 312 ⇑P **Pn 01 54 03.2 -1.2**
JSJ S **Sn 01 54 29.7 -2.1**
JTAJ Takarajima 2.36 244 P **Pn 01 54 07.3 +0.9**
JIU3 Izumi3 2.45 343 ⇑P **Pn 01 54 07.8 +0.2**
JAM Amami Oshima 2.52 225 P **Pn 01 54 08.4 -0.1**
JAM S **Sn 01 54 37.6 -1.5**
JAMN Amaminishikomi 2.91 229 ⇑P **Pn 01 54 13.8 0.0**
JNU Nakatsue 2.99 348 P **Pn 01 54 15.6 +0.6**
15nm,0.3s,baz=181,slow=13,SNR=70
JNU Nakatsue 2.99 348 **Pn 01 54 15.5 +0.5**
JTK Tokunoshima 3.37 225 P **Pn 01 54 20.0 -0.2**
JYRO Yoronjima 4.23 222 P **Pn 01 54 32.0 0.0**
JYRO S **Sn 01 55 17.9 -3.4**
JOW Kunigami 4.47 222 Pn **Pn 01 54 37.4 +2.0**
0.7nm,0.3s,baz=98,slow=17,SNR=5.2
JOW Sn **Sn 01 55 25.5 -2.0**
2.8nm,0.3s,baz=241,slow=30,SNR=18
JOW Kunigami 4.47 222 **Sn 01 55 21.8 -5.7**
INU Inuyama 6.84 40 **Pn 01 55 09.3 +1.4**
KSRS Korea Array 7.87 338 Pn **Pn 01 55 21.6 -0.4**
0.3nm,0.3s,baz=155,slow=14,SNR=3.0
KSRS Korea Array 7.87 338 **Pn 01 55 21.6 -0.4**
MAJO Matsushiro 8.38 39 **Pn 01 55 29.1 +0.1**
MAT Matsushiro 8.38 39 P **Pn 01 55 30.4 +1.4**
MJAR Matsushiro Arr 8.38 39 Pn **Pn 01 55 30.4 +1.4**
0.6nm,0.3s,baz=242,slow=14,SNR=19
MJAR Matsushiro Arr 8.38 39 **Pn 01 55 30.4 +1.4**
KLR Kul'dur 19.01 0 P **Pn 01 57 49.7 -0.3**
0.1nm,0.3s,baz=174,slow=6.9,SNR=13
ENH Enshi 19.14 276 P Pn 01 58 02.8 +11
ENH IAmb IAmb 01 58 06.0
comp=Z,9.6nm,0.8s
HHC Hu-ho-hao-te 19.45 309 eP **P 01 57 54.3 0.0**
XAN Xi'an 19.61 287 P **Pn 01 58 03.2 +5.7**
HIA Hailar 21.08 338 P P 01 58 01.7 -10
HIA IAmb IAmb 01 58 50.4
comp=Z,21nm,1.7s
LZH Lanzhou 23.96 292 ⇑P **P 01 58 45.1 +2.9**
SONM Songino Array 26.18 319 P **P 01 59 00.8 -1.5**
comp=Z,0.5nm,0.3s,baz=139,slow=11,SNR=9.8
SONM LR LR 02 11 00.1
comp=Z,211nm,19.1s,baz=150,slow=40
SONM Songino Array 26.18 319 P **P 01 58 58.3 -3.9**
PETK Petropavlovsk- 29.75 32 LR LR 02 12 11.4
comp=Z,44nm,19.4s,baz=241,slow=38
CMAR Chiang Mai Arr 31.89 256 LR LR 02 15 11.3
comp=Z,104nm,18.6s,baz=80,slow=41
H11N2 WAKE ISLAND Hy 33.49 100 T T 02 35 45.7
baz=291
H11N1 WAKE ISLAND Hy 33.50 100 T T 02 36 13.4
baz=291
H11N3 WAKE ISLAND Hy 33.51 100 T T 02 36 17.7
baz=291
WMQ Urumqi 37.20 304 eP **P 02 00 40.8 +1.8**
ZAA0 Zalesovo Array 41.08 319 P **P 02 01 07.9 -3.2**
ZALV Zalesovo Beam 41.08 319 P **P 02 01 09.8 -1.3**
comp=Z,0.3nm,0.3s,baz=77,slow=6.4,SNR=3.6
ZALV PcP **PcP 02 03 10.3 -0.3**
comp=Z,1.6nm,0.7s,baz=78,slow=1.9,SNR=6.2
ZALV LR LR 02 20 11.6
comp=Z,120nm,19.1s,baz=84,slow=39
ZALV Zalesovo Beam 41.08 319 P **P 02 01 07.9 -3.2**
MK31 Makanchi Array 41.31 308 P **P 02 01 12.2 -1.0**
MKAR Makanchi Array 41.31 308 P **P 02 01 11.8 -1.4**
comp=Z,0.9nm,0.7s,baz=93,slow=10,SNR=10
MKAR PcP **PcP 02 03 11.5 -0.1**
comp=Z,1.0nm,0.7s,baz=73,slow=3.7,SNR=7.0
MKAR LR LR 02 21 10.7
comp=Z,64nm,18.1s,baz=96,slow=40
MKAR Makanchi Array 41.31 308 P **P 02 01 11.8 -1.4**
KURK Kurchatov 44.16 313 P **P 02 01 34.9 -1.3**
KURK IAmb IAmb 02 02 00.6
comp=Z,17nm,1.6s
BRVK Borovoye 49.50 316 P **P 02 02 15.6 -2.4**
BRVK IAmb IAmb 02 02 30.2
comp=Z,3.6nm,0.8s
KK31 Karatay Array 49.69 303 P **P 02 02 20.2 +0.5**
KK31 IAmb IAmb 02 02 44.7
comp=Z,5.2nm,1.1s
KKAR Karatay Array 49.69 303 P **P 02 02 19.5 -0.1**
WRA Warramunga Arr 49.92 177 P **P 02 02 21.4 0.0**
comp=Z,3.0nm,0.8s,baz=351,slow=8.2,SNR=5.1
KBL Kabul 52.31 292 P **P 02 02 43.0 +3.3**
ASAR Alice Springs 53.60 177 P **P 02 02 49.0 +0.1**
comp=Z,2.5nm,0.7s,baz=9.9,slow=13,SNR=32
ABKAR Akbulak array 56.21 312 P **P 02 03 06.5 -1.1**
KDAK Kodiak Island 57.55 38 P **P 02 03 16.2 -0.7**
comp=Z,4.5nm,0.5s,baz=257,slow=4.2,SNR=9.6
KDAK Kodiak Island 57.55 38 P **P 02 03 16.2 -0.7**
HRA Herat 57.77 294 P **P 02 03 20.9 +1.6**
RND Reindeer 58.81 31 P **P 02 03 21.9 -3.9**
ILAR Eielson Array 59.52 29 P **P 02 03 30.2 -0.4**
comp=Z,1.0nm,0.8s,baz=264,slow=5.9,SNR=14
ILAR Eielson Array 59.52 29 P **P 02 03 26.8 -3.8**
GEYT Alibeck 59.97 299 LR LR 02 33 43.7
comp=Z,56nm,18.8s,baz=45,slow=40
DZM Mont Dzumac 61.81 143 P **P 02 03 47.9 +1.1**
comp=Z,1.8nm,0.7s,baz=294,slow=10.0,SNR=5.0
STKA Stephens Creek 62.45 170 P **P 02 03 51.2 +0.3**
comp=Z,1.9nm,0.6s,baz=6.4,slow=7.1,SNR=6.3
INK Inuvik 64.06 24 P **P 02 04 01.6 +0.5**
comp=Z,1.3nm,0.6s,baz=299,slow=7.9,SNR=8.4
ARCES ARCESS Array B 67.43 339 LR LR 02 40 20.8
comp=Z,134nm,18.5s,baz=357,slow=42
TOO Toolangi 68.65 168 P **PcP 02 04 54.9 -0.8**
KBZ Khabaz 68.99 309 LR LR 02 38 49.2
comp=Z,50nm,18.7s,baz=76,slow=40
KIV Kislovodsk 69.05 309 P **P 02 04 34.3 +0.7**
FINES FINESS Array B 70.90 331 P **P 02 04 43.4 -1.0**
comp=Z,1.0nm,0.4s,baz=79,slow=4.9,SNR=14
FINES LR LR 02 39 43.6
comp=Z,108nm,18.3s,baz=62,slow=39
RES Resolute Bay 71.08 12 P **P 02 04 45.8 +0.4**
comp=Z,2.7nm,0.8s,baz=327,slow=6.9,SNR=14
YKA Yellowknife Ar 73.66 26 P **P 02 05 01.0 0.0**
comp=Z,1.2nm,0.9s,baz=299,slow=5.9,SNR=11
RAYN Ar Rayn 75.40 289 P **P 02 05 15.8 +3.9**
RAYN IAmb IAmb 02 05 25.8
comp=Z,6.7nm,1.1s
BR131 Keskin Array S 76.96 308 P **P 02 05 20.6 0.0**
BR131 IAmb IAmb 02 05 35.0
comp=Z,5.5nm,0.9s
BRTR Keskin Array B 76.96 308 P **P 02 05 20.0 -0.6**
comp=Z,2.1nm,0.8s,baz=104,slow=5.2,SNR=15
BRTR LR LR 02 42 08.0
comp=Z,20nm,20.0s,baz=40,slow=38
BRTR Keskin Array B 76.96 308 P **P 02 05 20.4 -0.2**
NOA NORSAR Array B 77.07 334 LR LR 02 43 09.5
comp=Z,34nm,18.1s,baz=45,slow=39
SUMG Summit 77.28 357 i P **P 02 05 22.0 -0.1**
comp=Z,8.1nm,0.8s
GERES GERESS Array B 83.81 324 LR LR 02 48 22.2
comp=Z,101nm,18.6s,baz=290,slow=39
FRB Frobisher Bay 85.02 9 P **P 02 06 02.4 -0.4**
comp=Z,1.5nm,0.4s,baz=2.3,slow=6.9,SNR=7.9
KVN Kaiserville 85.38 47 P **P 02 06 05.7 +0.3**
KVN IAmb IAmb 02 06 06.3
comp=Z,2.9nm,0.8s
NVAR Mina Array Bea 85.61 48 P **P 02 06 07.3 +0.7**
comp=Z,1.5nm,0.6s,baz=304,slow=5.5,SNR=13
NVAR Mina Array Bea 85.61 48 P **P 02 06 07.0 +0.4**
PDAR Pinedale Array 88.20 40 P **P 02 06 19.4 +0.3**
comp=Z,0.6nm,0.7s,baz=340,slow=1.7,SNR=5.2
ULM Lac du Bonnet 89.52 28 P **P 02 06 25.9 +1.0**
comp=Z,0.6nm,0.4s,baz=334,slow=3.8,SNR=3.2
QSPA South Pole Qui 119.96 180 PKP **PKPdf 02 12 17.2 -0.2**
comp=Z,1.4nm,0.7s,baz=290,slow=1.5,SNR=6.5

GCG 14 02:12:54.5±0.7, 16.33N×92.33W, h36km±114km, MD4.5
NEIC 14 02:12:56.8±1.6, 15.36N±0.04×92.41W±0.06, h147km±6km, Error ellipse: s-maj=8.0km s-min=5.9km az=71.0
MEX 14 02:12:57.7±1.0, 15.35N×92.42W, h151km±9km, MD4.6
ISC 14 02:12:57.1±1.1, 15.40N±0.06×92.49W±0.04, h148km±8km, n27, σ1.38/42, 1C, Mexico-Guatemala border region

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THIG 0.54 156 **Pn 02 13 18.2 -0.1**
THIG **Sn 02 13 33.0 -1.5**
THIG 0.54 156 i P **Pn 02 13 18.2 -0.1**
THIG eS **Sn 02 13 33.0 -1.5**
PCIG 0.76 294 **Pn 02 13 20.4 +0.6**
PCIG **Sn 02 13 37.2 +0.2**
PCIG 0.76 294 i P **Pn 02 13 20.4 +0.6**
PCIG eS **Sn 02 13 37.2 +0.2**
CCIG Comitan 0.94 21 **Pn 02 13 21.4 0.0**
CCIG Comitan 0.94 21 **Pn 02 13 21.7 +0.3**
CCIG **Sn 02 13 38.8 -1.1**
CCIG Comitan 0.94 21 eP **Pn 02 13 21.7 +0.3**
CCIG eS **Sn 02 13 38.8 -1.1**
STG3 Santiaguito 3, 1.12 127⇑eP **Pn 02 13 23.2 +0.2**
ERG Entre ros, C 1.31 137 eP **Pn 02 13 26.2 +1.7**
TGBT Tuxtla Gutierr 1.48 337 eP **Pn 02 13 25.4 -0.9**
TGBT eS **Sn 02 13 48.8 +0.1**
TGIG 1.50 336 **Pn 02 13 27.0 +0.4**
TGIG **Sn 02 13 49.4 +0.3**
TGIG 1.50 336 i P **Pn 02 13 27.0 +0.4**
TGIG i S **Sn 02 13 49.4 +0.3**
FUG Fuego 3 1.85 120 eP **Pn 02 13 31.4 +0.8**
FUG eS **Sn 02 14 00.5 +4.2**
NBG Las Nubes 2.23 111 eP **Pn 02 13 35.7 +0.6**
IXG Ixpaco 2.33 121 eP **Pn 02 13 36.6 +0.4**
MRL Marmol 2.73 96 eP **Pn 02 13 40.4 -0.8**
MRL eS **Sn 02 14 12.4 -2.8**
CMIG Matias Romero 2.85 307 **Pn 02 13 43.2 +0.8**
CMIG **Sn 02 14 17.5 0.0**
CMIG Matias Romero 2.85 307 eP **Pn 02 13 43.2 +0.8**
CMIG eS **Sn 02 14 17.5 0.0**
HUIG Huatulco 3.50 276 **Pn 02 13 50.7 -0.1**
HUIG Huatulco 3.50 276 i P **Pn 02 13 50.7 -0.1**
HUIG eS **Sn 02 14 27.9 -4.6**
PANG Puerto Angel 3.85 274 i P **Pn 02 13 55.1 -0.2**
PANG eS **Sn 02 14 39.8 -0.6**
TGUH Tegucigalpa,Un 5.22 104 **Pn 02 14 12.9 -0.6**
TLIG Tlapa 6.21 291 **Pn 02 14 29.0 +2.3**
TEIG Tepich 6.26 39 **Pn 02 14 25.8 -1.4**
JTS Las Juntas de 8.93 124 **Pn 02 15 01.8 -1.3**
KVTX Kingsville 13.09 338 Pn **Pn 02 15 58.0 +0.6**
833A Chaparral WMA, 14.36 335 Pn **Pn 02 16 14.1 +0.5**

IDC 14 02:49:14.1±0.7, 11.19N×125.65E, h0km, mb4.0/11, mb1 4.1/11, mb1mx3.8/48, mbtmp3.9/11, MS2.9/2, Ms1 3.0/2, ms1mx2.4/57, Error ellipse: s-maj=51.1km s-min=15.2km az=70.0
NEIC 14 02:49:19.9±1.0, 11.2N±0.1×125.6E±0.2, h41km±6km, mb4.3/6, Error ellipse: s-maj=32.8km s-min=15.6km az=85.0
MAN 14 02:49:23.9, 11.23N×125.48E, h46km, mb4.5, ML3.4, MS3.2
MAN INTENSITY III - GENERAL MCARTHUR & HERNANI EASTERN SAMAR; INTENSITY II - TACLOBAN CITY.
ISC 14 02:49:17.8±1.5, 11.26N±0.03×125.78E±0.06, h24km±11km, n41, σ1.71/43, mb4.1/13, 1C-3D, Samar

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OCLP Ormoc 1.17 260 eP **Pb 02 49 40.9 +1.5**
OCLP eS **Sn 02 49 53.0 -0.9**
MSLP Maasin 1.44 219 eP **Pb 02 49 45.8 +1.8**
MSLP eS **Sb 02 50 02.8 +0.9**
CNP Catarman 1.66 319 eP **Pb 02 49 48.7 +0.9**
CNP eS **Sb 02 50 08.7 +0.5**
LLP Lapu-Lapu 2.01 243 eP **Pb 02 49 52.5 -1.3**
LLP eS **Sn 02 50 13.3 -1.5**
BUTP Butuan 2.28 184 eP **Pb 02 49 59.3 +1.0**
BUTP eS **Sb 02 50 26.8 +0.7**
TBP Tagbilaran 2.45 231⇑eP **Pb 02 49 59.2 -2.0**
TBP eS **Sb 02 50 28.6 -2.3**
PVCP Virac 2.82 326 eP **Pb 02 50 06.0 -1.5**
PVCP eS **Sb 02 50 39.6 -1.9**
CGP Cagayan de Oro 2.98 201⇓eP **Pb 02 50 14.0 +3.7**
CGP eS **Sn 02 50 41.9 +3.2**
RCP Roxas 2.99 276⇓eP **Pn 02 50 06.5 +2.6**
RCP eS **Sn 02 50 40.5 +1.6**
GUIM Jordan 3.20 259 eP **Pn 02 50 08.4 +1.7**
GUIM eS **Sn 02 50 43.3 -0.8**
BUKP Musuan 3.43 192 eP **Pb 02 50 14.6 -3.4**
BUKP eS **Sb 02 50 54.8 -4.6**
OTRP Odiongan 3.84 287 eP **Pn 02 50 18.0 +2.5**
KCP Kidapawan 4.28 189⇓iP Pn 02 50 27.5 +5.9
KAPI Kappang 17.24 201 Pn **Pn 02 53 16.5 -0.8**
CMAR Chiang Mai Arr 26.89 289 LR LR 03 05 26.9
comp=Z,11nm,18.3s,baz=290,slow=36
WRA Warramunga Arr 32.13 165 P **P 02 55 42.1 -1.5**
0.5nm,0.6s,baz=342,slow=9.0,SNR=4.7
ASAR Alice Springs 35.61 167 P **P 02 56 13.3 -0.5**
1.5nm,0.6s,baz=345,slow=7.0,SNR=22
ASAR PcP **PcP 02 58 41.6 -0.8**
0.2nm,0.4s,baz=5.7,slow=3.8,SNR=4.3
SONM Songino Array 39.93 340 P **P 02 56 51.4 +1.1**
0.7nm,0.5s,baz=158,slow=10.0,SNR=7.8
H11S3 WAKE ISLAND Hy 40.11 75 T T 03 40 04.5
baz=272,slow=74,SNR=14
H11S1 WAKE ISLAND Hy 40.13 75 T T 03 40 26.2
baz=272,slow=74,SNR=7.6
H11S2 WAKE ISLAND Hy 40.13 75 T T 03 40 05.8
baz=272,slow=74,SNR=9.9
H11N1 WAKE ISLAND Hy 40.41 73 T T 03 40 21.5
baz=265,slow=75,SNR=62
H11N2 WAKE ISLAND Hy 40.42 73 T T 03 40 22.0
baz=265,slow=75,SNR=46
H11N3 WAKE ISLAND Hy 40.43 73 T T 03 40 22.8
baz=265,slow=75,SNR=44
STKA Stephens Creek 45.48 161 P **P 02 57 35.8 +0.5**
3.1nm,0.6s,baz=322,slow=6.4,SNR=7.3
STKA Stephens Creek 45.48 161 IAmb IAmb 02 57 42.6
comp=Z,7.3nm,2.0s
MK31 Makanchi Array 50.96 322 P **P 02 58 17.0 -0.5**
MK31 IAmb IAmb 02 58 38.5
comp=Z,6.3nm,1.6s
MKAR Makanchi Array 50.96 322 P **P 02 58 17.4 -0.1**
comp=Z,0.4nm,0.3s,baz=114,slow=7.1,SNR=18
ZALV Zalesovo Beam 53.53 331 P **P 02 58 36.4 -0.1**
comp=Z,1.4nm,0.3s,baz=106,slow=9.2,SNR=4.6
KURK Kurchatov 54.99 325 P **P 02 58 47.3 +0.1**
KURK IAmb IAmb 02 58 47.7
comp=Z,2.2nm,0.8s
KURBB Kurchatov Arra 54.99 325 P **P 02 58 47.0 -0.2**
comp=Z,0.8nm,0.6s,baz=127,slow=7.1,SNR=6.6
KK31 Karatay Array 57.22 314 P **P 02 59 02.7 -0.6**
KKAR Karatay Array 57.22 314 P **P 02 59 02.7 -0.6**
ABKAR Akbulak array 65.82 319 P **P 03 00 00.1 -1.1**
AFI Afiamalu 66.77 110 LR LR 03 21 59.3
comp=Z,16nm,21.1s,baz=263,slow=29
ILAR Eielson Array 78.77 26 P **P 03 01 18.9 +0.6**
comp=Z,0.2nm,0.6s,baz=251,slow=5.6,SNR=3.8
ARCES ARCESS Array B 83.11 340 P **P 03 01 41.0 -0.4**
comp=Z,5.1nm,1.1s,baz=63,slow=5.6,SNR=11
FINES FINESS Array B 84.80 332 P **P 03 01 49.2 -0.9**
comp=Z,0.7nm,0.4s,baz=72,slow=4.6,SNR=7.1
YKA Yellowknife Ar 93.05 24 P **P 03 02 30.1 +0.8**
comp=Z,0.2nm,0.5s,baz=292,slow=4.4,SNR=4.6
TXAR Lajitas Array 117.54 48 PKP **PKPdf 03 08 03.0 +0.4**
comp=Z,0.2nm,0.6s,baz=28,slow=1.4,SNR=5.0
PLCA Paso Flores 147.30 157 PKPbc **PKPbc 03 09 00.2 +0.4**
comp=Z,1.5nm,0.9s,baz=237,slow=5.0,SNR=4.2

IDC 14 03:20:48.3±1.5, 3.67S×136.12E, h0km, mb3.7/3, mb1 4.0/5, mb1mx3.7/32, mbtmp3.8/5, ML4.1/2, MS3.0/4, Ms1 3.0/4, ms1mx2.6/33, Error ellipse: s-maj=52.0km s-min=31.7km az=76.0
ISC 14 03:20:53.0±1.2, 3.9S±0.1×135.8E±0.2, h35km, n10, σ1.20/7, mb3.7/3, Irian Jaya region

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SIJI Sorong 5.49 303 Pn **Pn 03 22 12.6 +0.2**
6.4nm,0.3s,baz=115,slow=12,SNR=8.0
SIJI Sn **Sn 03 23 13.6 -0.7**
2.0nm,0.3s,baz=297,slow=22,SNR=4.7
PMG Port Moresby 12.49 116 LR LR 03 30 20.7
comp=Z,28nm,19.1s,baz=46,slow=46
WRA Warramunga Arr 15.99 185 Pn **Pn 03 24 34.1 -1.3**
0.1nm,0.3s,baz=2.9,slow=13,SNR=6.2
KAPI Kappang 16.08 266 LR LR 03 30 33.9
comp=Z,20nm,20.6s,baz=79,slow=36
ASAR Alice Springs 19.71 185 P **Pn 03 25 22.5 +1.2**
0.4nm,0.3s,baz=8.8,slow=10,SNR=20
LEM Lembang 28.24 263 LR LR 03 40 17.3
comp=Z,58nm,18.2s,baz=158,slow=41
KLR Kul'dur 53.06 357 LR LR 03 52 24.4
comp=Z,27nm,18.8s,baz=305,slow=36
MKAR Makanchi Array 69.03 324 P **P 03 31 56.4 +1.1**
0.4nm,0.5s,baz=126,slow=7.3,SNR=4.3
BVAR Borovoye Array 78.69 326 P **P 03 32 51.6 0.0**
0.5nm,0.6s,baz=113,slow=3.4,SNR=4.3
ILAR Eielson Array 88.12 25 P **P 03 33 39.0 -0.9**
0.4nm,0.7s,baz=275,slow=4.4,SNR=5.5

TIR 14 03:38:29.6, 38.05N×20.32E, h14km, Md4.9/7
THE 14 03:38:32.9, 38.16N×20.28E, h0km±1km, ML4.5/7, Error ellipse: s-maj=1.4km s-min=0.6km az=226.0
PDG 14 03:38:32.9±0.6, 38.21N×20.27E, h3km±1km, MD5.0/7, ML4.9/14, Error ellipse: s-maj=0.8km s-min=0.9km az=0.0
IDC 14 03:38:32.7±0.4, 38.19N×20.39E, h0km, mb4.4/35, mb1 4.5/46, mb1mx4.4/66, mbtmp4.4/46, ML4.1/10, MS4.1/36, Ms1 4.1/36, ms1mx4.0/49, Error ellipse: s-maj=10.4km s-min=9.3km az=147.0
MOS 14 03:38:33.3±1.3, 38.25N×20.25E, h12km, mb4.9/31, MS4.1/14, Error ellipse: s-maj=3.9km s-min=2.4km az=83.0
BEO 14 03:38:33.9±0.6, 38.12N×20.15E, h12km±3km, ML4.7/12
ATH 14 03:38:33.2, 38.17N×20.34E, h10km, ML4.6/22, Error ellipse: s-maj=1.2km s-min=0.6km az=58.0
NEIC 14 03:38:34.9±2.4, 38.19N±0.05×20.31E±0.01, h10km±2km, Error ellipse: s-maj=7.5km s-min=1.4km az=177.0
MED_RC 14 03:38:34.0±0.3, 38.17N×20.32E, h10km, MW4.8/26, Moment Tensor Solution. Mantle waves: s26,c46; Duration: 1.1 Moment tensor: Scale 10[16]Nm; Mrr0.39±.09; Mθθ1.37±.09; Mϕϕ-1.76±.07; Mrθ-0.07±.22; Mrϕ1.43±.06; Mθr-0.66±.23; Best double couple: M0 2.21000×10[16] NP1: ϕs293.00000°, δ74.00000°, λ0.00000°. NP2: ϕs23.00000°, δ90.00000°, λ-164.00000°. Principal axes: T 1.9800, Plg11.0000°, Azm157.0000°; N 0.4600, Plg74.0000°, Azm25.0000°; P -2.4400, Plg12.0000°, Azm250.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.
BGR 14 03:38:36.0±0.7, 38.37N×20.70E, h10km Error ellipse: s-maj=30.0km s-min=8.9km az=60.0
GCMT 14 03:38:35.1±0.3, 38.01N±0.02×20.33E±0.02, h21km±1km, MW4.8/96, Moment Tensor Solution. s21,c22; s96,c133; Duration: 0 Moment tensor: Scale 10[16]Nm; Mrr0.74±.11; Mθθ0.96±.09; Mϕϕ-1.70±.09; Mrθ-0.12±.15; Mrϕ1.68±.07; Mθr0.49±.14; Best double couple: M0 2.18500×10[16] NP1: ϕs109.00000°, δ79.00000°, λ-1.00000°. NP2: ϕs199.00000°, δ89.00000°, λ-169.00000°. Principal axes: T 1.7830, Plg6.0000°, Azm333.0000°; N 0.8050, Plg79.0000°, Azm207.0000°; P -2.5870, Plg8.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
HLW 14 03:38:39.2, 36.53N×19.50E, h2km±9km, MI5.0
GII 14 03:38:41.9±0.0, 37.31N×20.95E, h2km, mb4.7/2, MD4.6/2
SKO 14 03:38:47.1, 38.99N×20.69E, h19km
ISC 14 03:38:33.9±0.5, 38.17N±0.02×20.35E±0.02, h7km±3km, n664, σ2.16/769, mb4.7/85, MS4.1/35, 49C-40D, Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC

CHV1 Chavriata, Kef 0.03 61 P **Pg 03 38 34.8 -0.5**
CHV1 S **Sg 03 38 35.7 -0.6**
KEF3 Kipouria, Keph 0.04 2 P **Pg 03 38 34.8 -0.6**
LXRA Lixouri, Kepha 0.08 66 P **Pg 03 38 35.1 -0.8**
LXRA S **Sg 03 38 37.5 +0.2**
LXR1 Lixouri, Cepha 0.08 66 P **Pg 03 38 35.7 -0.2**
LXR1 S **Sg 03 38 37.7 +0.4**
AGT1 Agia Thekli 0.09 20 P **Pg 03 38 35.7 -0.3**
AGT1 S **Sg 03 38 37.5 0.0**
ARGA Argostoli. Kep 0.10 85 P **Pg 03 38 36.1 -0.2**

ARGA				S	Sg	03 38 38.3	+0.4
KEF4	Livadi, Kephal	0.11	34	P	Pg	03 38 36.1	-0.3
KEF2	Argostoli. Kep	0.11	91	P	Pg	03 38 36.3	-0.1
ARG2	Argostoli	0.11	85	P	Pg	03 38 36.4	0.0
ARG2				S	Sg	03 38 38.6	+0.5
KEF1	Kardakata, Kep	0.15	42	P	Pg	03 38 36.7	-0.3
KEF1				S	Sg	03 38 39.4	+0.3
VLS	Valsamata	0.19	87	P	Pg	03 38 37.6	-0.2
VLS				S	Sg	03 38 40.9	+0.5
	299µm,0.2s						
VLS	Valsamata	0.19	87	P	Pg	03 38 37.5	-0.3
VLS				S	Sg	03 38 40.6	+0.2
VLS				AML	AML	03 38 41.6	
VLS				AML	AML	03 38 42.1	
VLS	Valsamata	0.19	87	P	Pg	03 38 37.6	-0.2
VLS				S	Sg	03 38 40.9	+0.5
VSK1	VASILIKIADES	0.29	35	P	Pg	03 38 39.4	-0.4
VSK1				S	Sg	03 38 44.4	+0.7
KONA	Konidatara, Ke	0.31	34	P	Pg	03 38 39.6	-0.4
KONA				S	Sg	03 38 43.6	-0.6
VLMS	Volimes, Zakyn	0.38	139	P	Pg	03 38 41.3	-0.1
VLMS				S	Sg	03 38 46.7	+0.3
VLMS				AML	AML	03 38 49.8	
VLMS				AML	AML	03 38 53.3	
EVGI	Lefkada island	0.51	28	P	Pg	03 38 43.3	-0.6
EVGI				S	Sb	03 38 52.0	-0.9
EVGI	Lefkada island	0.51	28	P	Pg	03 38 43.3	-0.6
ZAK2	Zakynthos	0.58	131	P	Pg	03 38 45.2	+0.1
MGNA	Meganis	0.60	35	P	Pg	03 38 44.6	-0.9
MGNA				S	Sg	03 38 53.7	+0.3
MGNA				AML	AML	03 38 54.7	
MGNA				AML	AML	03 38 55.0	
KRI1	kERI	0.63	143	P	Pg	03 38 45.5	-0.5
LKD2	Lefkada island	0.67	21	P	Pg	03 38 45.7	-1.1
LKD2				S	Sg	03 38 56.1	+0.6
	49µm,0.6s						
LKD2	Lefkada island	0.67	21	P	Pg	03 38 45.9	-0.8
LKD2				S	Sg	03 38 54.7	-0.8
LKD2				AML	AML	03 39 05.9	
LKD2				AML	AML	03 39 06.0	
	comp=N,93351µm,0.5s						
TSLK	Tsoukalades, L	0.70	20	P	Pg	03 38 46.5	-0.9
TSLK				S	Sb	03 38 57.5	-0.8
	comp=N,58µm,0.8s						
TSLK	Tsoukalades, L	0.70	20	P	Pg	03 38 46.6	-0.8
PDO	Prodromos	0.79	57	P	Pg	03 38 48.4	-0.6
PDO				S	Sb	03 39 01.7	+0.9
	comp=N,94µm,0.5s						
PDO	Prodromos	0.79	57	P	Pg	03 38 48.3	-0.8
PDO				S	Sg	03 38 58.9	-0.3
PDO				AML	AML	03 39 02.4	
PDO				AML	AML	03 39 06.9	
RLS	Riolos of Patr	0.89	97	P	Pg	03 38 50.2	-0.8
RLS				S	Sn	03 39 05.0	-1.0
	comp=N,20µm,0.8s						
RLS	Riolos of Patr	0.89	97	P	Pg	03 38 50.2	-0.8
RLS				S	Sg	03 39 02.0	-0.6
RLS				AML	AML	03 39 12.6	
	comp=E,40105µm,0.8s						
RLS				AML	AML	03 39 12.7	
	comp=N,34849µm,0.9s						
PVO	Paravola	1.03	64	P	Pg	03 38 52.9	-0.7
PVO	Paravola	1.03	64	P	Pg	03 38 53.0	-0.7
PVO				S	Sg	03 39 06.8	-0.3
PVO				AML	AML	03 39 15.6	
	comp=E,77950µm,0.6s						
PVO				AML	AML	03 39 15.8	
DRO	Drossia	1.10	101	P	Pg	03 38 53.6	-1.4
DRO	Drossia	1.10	101	P	Pg	03 38 53.5	-1.4
DRO				S	Sg	03 39 08.7	-0.5
DRO				AML	AML	03 39 19.6	
DRO				AML	AML	03 39 25.2	
	comp=N,68629µm,1.1s						
UPR	University Cam	1.14	84	P	Pg	03 38 55.4	-0.3
AMT	Artemida-Makis	1.25	120	P	Pn	03 38 56.9	-0.9
AMT				S	Sb	03 39 13.6	-0.6
AMT				AML	AML	03 39 25.3	
	comp=N,53495µm,0.8s						
AMT				AML	AML	03 39 27.0	
	comp=E,29887µm,0.7s						
LAKA	Lakka	1.29	86	P	Pn	03 38 57.2	-1.1
LAKA				S	Sb	03 39 15.2	0.0
LAKA				AML	AML	03 39 25.6	
	comp=E,33573µm,1.2s						
LAKA				AML	AML	03 39 27.2	
	comp=N,40378µm,1.5s						
ANX	Ano Chora	1.31	71	P	Pn	03 38 57.9	-0.8
ANX				S	Sb	03 39 15.8	-0.1
ANX				AML	AML	03 39 24.6	
	comp=E,98678µm,0.9s						
ANX				AML	AML	03 39 26.9	
IGT	Igoumenitsa	1.36	360	P	Pn	03 38 58.6	-0.8
IGT				S	Sg	03 39 18.4	+0.6
	comp=E,15µm,0.7s						
IGT	Igoumenitsa	1.36	360	ePg	Pn	03 38 59.5	+0.1
IGT				eSg	Sg	03 39 18.8	+1.0
IGT	Igoumenitsa	1.36	360	P	Pn	03 38 58.9	-0.5
IGT				S	Sg	03 39 18.0	+0.3
IGT				AML	AML	03 39 26.2	
	comp=N,29414µm,0.9s						
IGT				AML	AML	03 39 28.5	
	comp=E,31373µm,0.6s						
IGT	Igoumenitsa	1.36	360	P	Pn	03 38 58.8	-0.5
IGT				S	Sb	03 39 16.2	-1.2
SERG	Sergoula	1.37	79	P	Pn	03 38 58.4	-1.0
SERG				S	Sg	03 39 18.1	+0.2
SERG				AML	AML	03 39 25.3	
	comp=E,47806µm,0.6s						
SERG				AML	AML	03 39 27.5	
	comp=N,41178µm,0.5s						
EVR	Evrytania	1.37	56	P	Pn	03 38 58.3	-1.2
EVR	Evrytania	1.37	56	P	Pn	03 38 58.6	-1.0
EVR				S	Sg	03 39 18.3	+0.4
EVR				AML	AML	03 39 28.6	
	comp=E,23003µm,0.6s						
EVR				AML	AML	03 39 37.0	
	comp=N,30796µm,1.2s						
KLV	Kalavryta, Ach	1.43	94	P	Pn	03 39 00.3	0.0
KLV				S	Sb	03 39 19.3	0.0
KLV				AML	AML	03 39 27.3	
	comp=N,21274µm,0.7s						
KLV				AML	AML	03 39 32.5	
	comp=E,19666µm,1.1s						
KALE	Kalithea	1.43	80	P	Pn	03 38 59.1	-1.2
KALE	Kalithea	1.43	80	P	Pn	03 38 59.4	-0.9
KALE				S	Sg	03 39 20.0	+0.1
KALE				AML	AML	03 39 28.1	
	comp=E,30698µm,1.5s						
KALE				AML	AML	03 39 30.6	
	comp=N,38742µm,0.5s						
JAN	Janina	1.54	15	P	Pn	03 39 02.2	+0.4
JAN	Janina	1.54	15	P	Pb	03 39 02.6	-0.1
JAN				S	Sb	03 39 22.9	+0.4
JAN				AML	AML	03 39 31.6	
	comp=E,28578µm,0.7s						
JAN				AML	AML	03 39 33.6	
	comp=N,29027µm,0.6s						
JAN	Janina	1.54	15	P	Pn	03 39 02.2	+0.4
ITM	Ithomi	1.59	128	P	Pn	03 39 02.8	+0.2
ITM	Ithomi	1.59	128	P	Pn	03 39 03.0	+0.5
ITM				S	Sg	03 39 25.0	-0.2
ITM				AML	AML	03 39 30.0	
	comp=N,16976µm,0.5s						
ITM				AML	AML	03 39 31.8	
	comp=E,11275µm,0.5s						
ITM	Ithomi	1.59	128		Pb	03 39 03.7	0.0
ITM				Sn	Sg	03 39 27.6	+2.4
KEK	Kerkira	1.60	345	P	Pn	03 39 02.5	-0.1
KEK	Kerkira	1.60	345	P	Pn	03 39 02.7	+0.1
KASA	Kassiopi	1.61	349	P	Pn	03 39 03.1	+0.4
KASA				S	Sg	03 39 25.8	+0.2
KASA				AML	AML	03 39 35.0	
	comp=E,30604µm,0.5s						
KASA				AML	AML	03 39 35.9	
	comp=N,20351µm,0.5s						
MAKR	Makrakomi, Fth	1.63	58	P	Pn	03 39 03.5	+0.4
MAKR				S	Sg	03 39 26.5	+0.1
MAKR				AML	AML	03 39 38.5	
	comp=N,32304µm,0.8s						
MAKR				AML	AML	03 39 38.8	
	comp=E,34924µm,1.0s						
PYL	PYLOS	1.69	138	P	Pn	03 39 03.4	-0.4
PYL				S	Sb	03 39 27.1	+0.4

	comp=E,5µm,0.8s						
PYL	PYLOS	1.69	138	P	Pn	03 39 04.2	+0.4
DLFA	Delphi	1.72	79	P	Pn	03 39 04.7	+0.4
SRN	Sarande	1.73	351	i PN	Pn	03 39 04.4	0.0
SRN				i SN	Sg	03 39 30.4	+0.8
AGG	Agios Georgios	1.77	61	P	Pb	03 39 06.7	-0.1
AGG				S	Sg	03 39 30.2	-0.7
AGG				AML	AML	03 39 39.4	
	comp=N,19510µm,0.7s						
AGG				AML	AML	03 39 43.5	
	comp=E,22155µm,0.9s						
AGG	Agios Georgios	1.77	61		Pb	03 39 07.1	+0.3
AGG	Agios Georgios	1.77	61	P	Pb	03 39 07.1	+0.3
VLX	Vlachokerasia	1.80	116	P	Pb	03 39 07.4	+0.2
THL	Klokotos Trika	1.91	43	P	Pb	03 39 09.0	-0.1
LTK	Loutraki	2.07	93	P	Pn	03 39 10.3	+1.1
LKR	Lokris	2.14	76	P	Pb	03 39 11.5	-1.4
TPE	Tepelena	2.14	353	i PN	Pn	03 39 10.2	+0.1
TPE				i SN	Sb	03 39 40.9	+1.2
VIL2	Platees	2.30	88	P	Pb	03 39 14.1	-1.7
DID	Didima	2.38	105	P	Pn	03 39 14.2	+0.9
VLO	Vlora	2.39	344	i PN	Pn	03 39 13.3	-0.1
VLO				i SN	Sb	03 39 46.3	-0.6
SCTE	Santa Cesarea	2.40	323		Pn	03 39 13.6	0.0
KZN	Kozani	2.41	27	P	Pn	03 39 15.6	+1.9
KZN	Kozani	2.41	27	P	Pb	03 39 15.8	-1.8
XOR	Xorichti	2.52	61	P	Pn	03 39 17.3	+2.0
LIT	Litokhoron	2.55	40		Pn	03 39 16.9	+1.3
LIT	Litokhoron	2.55	40	P	Pn	03 39 17.0	+1.3
ATH	Athens Observa	2.67	93	P	Pn	03 39 18.4	+1.2
ATH				S	Sn	03 39 52.1	+2.3
ATH				AML	AML	03 40 10.6	
	comp=N,7457µm,1.6s						
ATH				AML	AML	03 40 11.1	
	comp=E,6292µm,1.1s						
ATHU	Athens Univers	2.72	93	P	Pn	03 39 19.0	+1.0
PTL	Penteli	2.78	91	P	Pn	03 39 19.8	+1.0
OHR	Ohrid	2.96	7	i Pn	Pn	03 39 23.0	+1.6
OHR	Ohrid	2.96	7	P	Pn	03 39 23.2	+1.8
TIP	Timpagrande	2.98	291	⇓P	Pn	03 39 21.6	-0.2
TIP				⇑S	Sn	03 39 57.4	-0.4
TIP	Timpagrande	2.98	291		Pn	03 39 21.2	-0.5
PAIG	Paliouri	3.13	55	P	Pn	03 39 25.4	+1.7
THE	Thessaloniki	3.19	39	P	Pn	03 39 25.6	+1.2
TIR	Tirane	3.20	353	ePn	Pn	03 39 25.1	+0.5
TIR	Tirane	3.20	353	i PN	Pn	03 39 13.7	-11
TIR				i SN	Sn	03 39 47.1	-16
TIR	Tirane	3.20	353	⇑P	Pn	03 39 25.5	+0.9
TIR	Tirane	3.20	353		Pn	03 39 24.8	+0.2
TIR	Tirane	3.20	353	P	Pn	03 39 24.8	+0.2
GRG	Griva	3.21	29	P	Pn	03 39 25.6	+0.9
TAR1	Taranto	3.34	316	ePn	Pn	03 39 26.7	+0.1
CEL	Celeste	3.51	273		Pn	03 39 28.2	-0.7
PHP	Peshkopia	3.51	1	i PN	Pn	03 39 24.9	-4.0
PHP				i SN	Sn	03 40 08.0	-2.8
SOH	Sokhos	3.53	40	P	Pn	03 39 30.8	+1.7
OUR	Ouranopolis	3.56	51	P	Pn	03 39 31.3	+1.8
VAY	Valandovo	3.58	28	i Pn	Pn	03 39 30.5	+0.6
VAY				eSg	Sn	03 40 14.0	+1.5
VAY				eLg	Lg	03 40 17.9	
	comp=E,2µm,1.2s						
VAY				eLg	Lg	03 40 20.9	
	comp=N,2µm,1.1s						
VAY	Valandovo	3.58	28	P	Pn	03 39 30.5	+0.6
MATE	Matera	3.75	312	⇓P	Pn	03 39 32.4	+0.2
MATE				⇑S	Sn	03 40 16.9	+0.3
STIP	Stip	3.79	21	i Pn	Pn	03 39 34.9	+2.1
SRS	Serrai	3.87	39	ePn	Pn	03 39 34.4	+0.6
ULC	Ulcinj	3.88	348	ePn	Pn	03 39 32.8	-1.2
ULC				eSn	Sn	03 40 20.6	+0.7
PUK	Puka	3.89	355	i PN	Pn	03 39 29.5	-4.6
PUK				i SN	Sn	03 40 13.5	-6.6
SKO	Skopje	3.89	12	ePn	Pn	03 39 34.6	+0.5
SKO	Skopje	3.89	12	i Pn	Pn	03 39 34.7	+0.5
SKO	Skopje	3.89	12	P	Pn	03 39 35.9	+1.8
DRME	Dracevica, Mon	4.11	348	⇑i Pn	Pn	03 39 36.0	-1.1
DRME	Dracevica, Mon	4.11	348	ePn	Pn	03 39 36.3	-0.8
DRME				eSn	Sn	03 40 25.8	+0.3
BCI	Bajram Curri	4.20	357	i PN	Pn	03 39 38.7	+0.3
BCI				i SN	Sn	03 40 31.6	+3.9
KKB	Krupnik	4.25	29	eP	Pb	03 39 46.2	-2.8
APE	Apeiranthos	4.26	103	⇓P	Pb	03 39 45.7	-3.5
APE				⇓S	Sb	03 40 35.9	-4.9
APE	Apeiranthos	4.26	103c	i P	Pn	03 39 42.4	+3.2
BUM	Brajici-Budva	4.28	345	ePn	Pn	03 39 38.1	-1.4
BUM				i Sn	Sn	03 40 29.5	-0.1
MMB	Musomiste	4.29	36	eP	Pn	03 39 41.1	+1.4
ACER	Acerenza	4.29	309		Pn	03 39 40.2	+0.5
PDG	Podgorica	4.34	349	ePn	Pn	03 39 39.4	-0.8
PDG				eSn	Sn	03 40 30.5	-0.5
PDG	Podgorica	4.34	349	⇑P	Pn	03 39 39.5	-0.8
PDG	Podgorica	4.34	349	⇑i Pn	Pn	03 39 39.1	-1.1
PDG	Podgorica	4.34	349		Pn	03 39 39.3	-0.8
TTG	Podgorica	4.34	349	ePn	Pn	03 39 38.9	-1.3
TTG				eSn	Sn	03 40 32.0	+1.0
PVY	Plav	4.43	356	ePn	Pn	03 39 42.0	+0.3
PVY				i Sn	Sn	03 40 33.6	+0.1
SANT	Santorini	4.45	112	⇑P	Pb	03 39 48.0	-4.5
SANT	Santorini	4.45	112		Pn	03 39 43.9	+2.0
HCY	Herceg Novi	4.50	342	ePn	Pn	03 39 40.5	-2.0
HCY	Herceg Novi	4.50	342	ePn	Pn	03 39 40.5	-2.0
HCY				eSn	Sn	03 40 34.6	-0.5
CEME	Cevo	4.51	346	ePn	Pn	03 39 41.1	-1.5
CEME				eSn	Sn	03 40 35.4	+0.1
BOSS	Bosilegrad	4.62	20	ePn	Pn	03 39 45.3	+1.2
IDI	Anoyia	4.64	127	Pn	Pn	03 39 44.2	-0.4
	comp=N,2.1nm,0.3s,baz=261,slow=4.7,SNR=20						
IDI				Sn	Sn	03 40 41.5	+2.8
	comp=N,23nm,0.3s,baz=315,slow=23,SNR=6.4						
IVA	Berane	4.71	356	ePn	Pn	03 39 45.7	+0.2
IVA				eSn	Sn	03 40 41.2	+0.8
NKME	Niksic	4.71	347	ePn	Pn	03 39 44.1	-1.4
NKME				eSn	Sn	03 40 40.1	-0.3
KOME	Kolasin	4.72	353	ePn	Pn	03 39 45.3	-0.3
KOME				i Sn	Sn	03 40 40.7	+0.1
VAE	Valguarnera	4.75	263	Pn	Pn	03 39 45.8	-0.2
	comp=N,15nm,0.3s,baz=150,slow=9.9,SNR=18						
VAE				Sn	Sn	03 40 46.9	+5.6
	comp=N,44nm,0.3s,baz=57,slow=14,SNR=6.6						
NKY	Niksic	4.75	348	ePn	Pn	03 39 45.5	-0.6
NKY				eSn	Sn	03 40 40.7	-0.7
BARS	Barje	4.78	13	ePn	Pn	03 39 46.5	+0.2
BARS	Barje	4.78	13	ePn	Pg	03 40 03.4	-2.0
TREB	Trebinje	4.79	342	ePn	Pn	03 39 44.7	-1.8
TREB				eSn	Sn	03 40 39.6	-2.7
TREB	Trebinje	4.79	342	ePn	Pn	03 39 44.2	-2.3
RZN	Rozhen	4.86	42	eP	Pn	03 39 49.0	+1.4
RZN	Rozhen	4.86	42	P	Pn	03 39 47.8	+0.2
BRY	Bratogost	4.92	344	ePn	Pn	03 39 46.7	-1.7
BRY	Bratogost	4.92	344	P	Pn	03 39 47.3	-1.1
BRY	Bratogost	4.92	344	ePn	Pn	03 39 46.4	-2.0
BRY				eSn	Sn	03 40 45.8	+0.1
EZN	Ezine	4.94	69	P	Pn	03 39 52.5	+4.0
VTS	Vitosha	4.96	25	ePn	Pn	03 39 50.2	+1.2
VTS				eSn	Sn	03 40 44.6	-2.0
VTS	Vitosha	4.96	25	⇑P	Pn	03 39 50.0	+1.0
VTS	Vitosha	4.96	25	eP	Pn	03 39 50.8	+1.8
VTS	Vitosha	4.96	25		Pn	03 39 49.3	+0.3
VTS	Vitosha	4.96	25	P	Pn	03 39 49.3	+0.3
SGRT	San Giovanni R	5.03	317		Pn	03 39 49.3	-0.6
SELS	Selova	5.08	6	ePn	Pn	03 39 49.6	-0.9
SELS				eSn	Sn	03 40 47.0	-2.4
SJES	Sjenica	5.10	357	ePn	Pn	03 39 50.8	0.0
SJES				eSn	Sn	03 40 47.4	-2.5
STON	Ston	5.11	338	ePn	Pn	03 39 49.5	-1.4
STON				eSn	Sn	03 40 46.0	-4.1
STON	Ston	5.11	338	⇑i Pn	Pn	03 39 49.1	-1.8
UPM	Unac-Piva	5.15	348	ePn	Pn	03 39 49.9	-1.7
UPM	Unac-Piva	5.15	348	ePn	Pn	03 39 51.2	-0.4
UPM				eSn	Sn	03 40 51.0	-0.3
PLD	Plovdiv	5.16	39	eP	Pn	03 39 56.7	+5.2
PLD	Plovdiv	5.16	39	P	Pn	03 39 54.7	+3.2
PLD				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ALN	Alexandroupoli	5.18	56		Pn	03 39 53.3	+1.5
ALN	Alexandroupoli	5.18	56	P	Pn	03 39 53.3	+1.5
PLE	Pljevlja	5.21	352	P	Pn	03 39 52.7	+0.4
PLE	Pljevlja	5.21	352	ePn	Pn	03 39 52.0	-0.3
PLE				eSn	Sn	03 40 53.2	+0.5
WDD	Wied Dalam	5.21	245		Pn	03 39 50.8	-1.4

KDZ	Kurdzhali	5.22	47	eP	Pn	03 39 51.7	-0.7
KDZ	Kurdzhali	5.22	47	P	Pn	03 39 51.7	-0.7
PGB	Panagyurishte	5.26	32	eP	Pn	03 39 47.9	-5.1
PGB	Panagyurishte	5.26	32	P	Pn	03 39 55.0	+2.0
PAOL	Paolisi	5.30	304		Pn	03 39 55.2	+1.7
ZAPS	Zavoj	5.39	18	ePn	Pn	03 39 56.0	+1.3
IVAS	Ivanjica	5.41	358	ePn	Pn	03 39 54.1	-0.9
IVAS				eSn	Sn	03 40 55.8	-1.6
RUDO	Rudo	5.50	353	ePn	Pn	03 39 54.1	-2.1
DIM	Dimitrovgrad	5.55	44	P	Pn	03 39 59.5	+2.6
BOVS	Bovan	5.56	10	ePn	Pn	03 39 56.5	-0.5
BOVS				eSn	Sn	03 40 58.9	-2.2
CORL	Corleone	5.57	269	Pn	Pn	03 39 57.9	+0.7
CLTB	Caltabellotta	5.67	266		Pn	03 40 01.4	+2.7
GRUS	Gruza	5.72	3	ePn	Pn	03 39 58.3	-1.0
GRUS				eSn	Sn	03 41 03.2	-1.9
BBLS	Lazići	5.74	353	ePn	Pn	03 39 58.8	-0.7
BBLS				eSn	Sn	03 41 03.2	-2.4
BBLS	Lazići	5.74	353	⇑i Pn	Pn	03 39 58.0	-1.5
ZAGS	Zajecar	5.82	14	ePn	Pn	03 39 59.7	-0.8
DIVS	Divibare	5.93	358	ePn	Pn	03 40 01.0	-1.2
DIVS				eSn	Sn	03 41 07.5	-2.9
DIVS	Divibare	5.93	358	⇑i Pn	Pn	03 40 00.2	-2.0
HAPS	Han Pijesak,Bl	6.01	350	ePn	Pn	03 40 03.6	+0.3
HAPS				eSn	Sn	03 41 08.3	-4.0
HAPS	Han Pijesak,Bl	6.01	350	ePn	Pn	03 40 03.7	+0.4
TRUS	Trudelj	6.05	0	ePn	Pn	03 40 02.5	-1.3
KARP	Karpathos	6.06	114		Pn	03 40 06.3	+2.4
PLVB	Pleven	6.14	31	⇓P	Pn	03 40 06.9	+2.0
BAIL	Bailesti	6.27	20	⇓P	Pg	03 40 30.6	-3.4
ELND	Elena	6.35	40	⇓P	Pn	03 40 10.4	+2.5
TEKS	Tekeris	6.41	355	ePn	Pn	03 40 08.1	-0.6
TEKS	Tekeris	6.41	355	ePn	Pn	03 40 04.2	-4.5
PUNG	Punghina	6.41	17	⇓P	Pn	03 40 10.1	+1.4
JMB	Yambol	6.41	46	eP	Pn	03 40 12.1	+3.4
MANT	Manisa	6.46	85	Pn	Pn	03 40 12.0	+2.3
ARG	Arkhangelos	6.51	105	P	Pn	03 40 13.9	+3.8
ARG				pmax	pmax		
	comp=Z,139nm,1.6s						
VLAD	Vladila	6.58	26	⇑P	Pn	03 40 13.2	+2.2
SZH	Strazhica	6.63	38	eP	Pn	03 40 13.8	+2.1
MDVR	Moldovita	6.69	8	⇓P	Pn	03 40 11.1	-1.5
MGRS	Mrkonjic Grad	6.71	340	ePn	Pn	03 40 12.4	-0.4
AQU	L'Aquila	6.76	310	ePn	Pn	03 40 15.3	+1.8
AQU	L'Aquila	6.76	310	P	Pn	03 40 16.1	+2.6
AQU				pmax	pmax		
	comp=Z,268nm,0.8s						
DOB	Doboj	6.77	346	ePn	Pn	03 40 11.0	-2.7
BLY	Banja Luka	6.99	341	⇑P	Pn	03 40 16.0	-0.7
BLY	Banja Luka	6.99	341	⇑i Pn	Pn	03 40 15.1	-1.6
FRGS	Fruska Gora	7.00	357	ePn	Pn	03 40 14.5	-2.3
RAZG	Razgrad	7.13	39	⇑P	Pn	03 40 21.6	+3.0
HUMR	Humele	7.25	27	⇓P	Pn	03 40 22.7	+2.6
NEF	NEVSHA	7.32	44	eP	Pn	03 40 26.2	+5.0
ISK	Istanbul-Kandi	7.32	64	P	Pn	03 40 22.8	+1.6
PRD	Provadia	7.35	45	eP	Pn	03 40 26.8	+5.3
SGRR	Singureni	7.39	33	⇓P	Pn	03 40 24.5	+2.4
GZR	Gura Zlata	7.44	13	⇑P	Pn	03 40 22.7	-0.3
BZS	Buzias	7.50	7	⇑P	Pn	03 40 23.9	+0.2
BZS	Buzias	7.50	7	P	Pn	03 40 23.8	+0.1
BZS				pmax	pmax		
	comp=Z,27nm,0.9s						
LOT	Lotru	7.71	18	⇑P	Pn	03 40 28.5	+1.9
ELL	Elmali	7.74	98		Pn	03 40 29.4	+2.4
ELL	Elmali	7.74	98	P	Pn	03 40 29.5	+2.4
SLUM	Salum	7.77	148	P	Pn	03 40 26.3	-1.1
	baz=135						
SLUM				AMP		03 41 00.0	
	baz=135						
SLUM				S	Sn	03 41 48.1	-7.5
	baz=135						
ARR	Arges	7.87	23	⇓P	Pn	03 40 29.6	+0.8
MTUR	Matau	7.88	25	⇓P	Pn	03 40 31.9	+2.9
MTUR	Matau	7.88	25	P	Pn	03 40 31.9	+2.9
RASA	Rasa	7.92	38	⇑P	Pn	03 40 33.9	+4.5
ISP	Isparta	8.04	89	Pn	Pn	03 40 33.4	+2.2
ISP	Isparta	8.04	89	P	Pn	03 40 33.4	+2.2
VOIR		8.07	24	⇑P	Pn	03 40 34.2	+2.6
VOIR		8.07	24	P	Pn	03 40 34.1	+2.6
VOIR				pmax	pmax		
	comp=Z,28nm,0.7s						
SECR		8.09	30	⇑P	Pn	03 40 34.0	+2.3
PSN	Preselentsi	8.09	45	eP	Pn	03 40 35.5	+3.7
MORH	Mrgy, Hungar	8.14	352	ePn	Pn	03 40 29.3	-3.1
SIRR	Siria	8.15	6	⇓P	Pn	03 40 34.5	+1.9
ICOR	Ion Corvin	8.18	41	⇑P	Pn	03 40 36.5	+3.5
BOJS	Bojanci	8.26	334	i Pn	Pn	03 40 33.4	-0.7
BOJS				eSn	Sn	03 42 03.9	-3.6
ZAG	Zagreb	8.31	338	ePn	Pn	03 40 32.3	-2.5
ZAG	Zagreb	8.31	338	P	Pn	03 40 33.3	-1.5
ZAG				pmax	pmax		
	comp=Z,426nm,0.7s						
ISR	Istrita	8.35	32	⇓P	Pn	03 40 37.8	+2.4
ISR	Istrita	8.35	32	P	Pn	03 40 34.5	-0.9
ISR				pmax	pmax		
	comp=Z,138nm,1.1s						
PGOR	Pogoanele	8.37	34	⇑P	Pn	03 40 38.4	+2.9
RIY	Rijeka	8.38	330	ePn	Pn	03 40 34.3	-1.5
MANR	Mangalia	8.40	45	⇑P	Pn	03 40 38.7	+2.7
MLR	Muntele Rosu	8.42	28	Pn	Pn	03 40 39.0	+2.5
	comp=Z,0.8nm,0.3s,baz=233,slow=5.2,SNR=19						
MLR	Muntele Rosu	8.42	28	⇑P	Pn	03 40 39.2	+2.7
MLR	Muntele Rosu	8.42	28		Pn	03 40 37.9	+1.4
MLR	Muntele Rosu	8.42	28	P	Pn	03 40 39.0	+2.5
CRES	Cresnjev	8.47	336	ePn	Pn	03 40 35.8	-1.2
CRES	Cresnjev	8.47	336	⇑i Pn	Pn	03 40 35.3	-1.7
MFTR	Murfatlar	8.55	43	⇑P	Pn	03 40 41.0	+2.9
KNDS	Knezji Dol	8.59	331	i Pn	Pn	03 40 37.8	-1.0
DOPR	Dopca	8.65	24	⇓P	Pn	03 40 40.8	+1.4
HARR	Harsova	8.65	39	⇓P	Pn	03 40 39.8	+0.4
VISS	Visnje	8.66	334	ePn	Pn	03 40 38.4	-1.2
BEHE	Becsehely	8.71	343	ePn	Pn	03 40 38.2	-2.0
MDUB	Mudurnu	8.72	71		Pn	03 40 42.7	+2.2
TIRR	Tirgusor	8.73	41	⇓P	Pn	03 40 43.6	+3.1
TIRR	Tirgusor	8.73	41	⇓P	Pn	03 40 43.6	+3.1
TIRR	Tirgusor	8.73	41	Pn	Pn	03 40 39.7	-0.9
TIRR	Tirgusor	8.73	41	P	Pn	03 40 39.7	-0.9
GRER		8.74	32	⇓P	Pn	03 40 43.5	+2.8
BISRR	Bisoca	8.77	31	⇑P	Pn	03 40 43.9	+2.8
DRGR		8.79	11	⇑P	Pn	03 40 42.0	+0.5
DRGR		8.79	11	P	Pn	03 40 42.7	+1.2
DRGR				pmax	pmax		
	comp=Z,30nm,0.8s						
KOGS	Kog	8.81	341	i Pn	Pn	03 40 39.8	-1.9
MATC	Matruh	8.85	138	P	Pn	03 40 40.4	-1.9
	baz=126						
MATC				AMP		03 42 00.0	
	baz=126						
MATC				S	Sn	03 42 08.9	-13
	baz=126						
OZUR		8.89	25	⇑P	Pn	03 40 44.2	+1.4
LJU	Ljubljana	8.98	333	ePn	Pn	03 40 42.4	-1.5
TRI	Trieste	8.99	329	P	Pn	03 40 45.2	+1.2
TRI				pmax	pmax		
	comp=Z,123nm,0.7s						
PLOR	Plostina	8.99	29	⇑P	Pn	03 40 46.6	+2.3
PLOR	Plostina	8.99	29	P	Pn	03 40 46.5	+2.3
TOPG	Topolog	9.01	39	⇓P	Pn	03 40 45.4	+1.0
VRI	Vrincioaia	9.04	30	⇑P	Pn	03 40 47.3	+2.5
VRI	Vrincioaia	9.04	30	P	Pn	03 40 47.9	+3.1
VRI				pmax	pmax		
	comp=Z,61nm,1.0s						
ODBI	Odobesti	9.08	31	⇓P	Pn	03 40 46.9	+1.6
CFR	Carcaliu	9.11	37	P	Pn	03 40 46.8	+1.1
CFR				pmax	pmax		
	comp=Z,11nm,0.9s						
KEST	Kesra	9.14	258	Pn	Pn	03 40 45.5	-0.8
	comp=Z,1.8nm,0.3s,baz=47,slow=10,SNR=32						
KEST				Sn	Sn	03 42 27.7	-1.6
	comp=Z,1.4nm,0.3s,baz=90,slow=24,SNR=5.9						
KEST				LR	LR	03 45 05.7	
	comp=Z,823nm,19.6s,baz=15,slow=43						
KEST	Kesra	9.14	258		Pn	03 40 46.0	-0.3
JURR	Jurilovca	9.19	41	⇓P	Pn	03 40 47.7	+1.0
BUD	Budapest	9.36	354	P	Pn	03 40 47.6	-1.6
BUD				pmax	pmax		
	comp=Z,22nm,0.5s						
SOKA	Soboth	9.37	337	ePn	Pn	03 40 47.3	-2.0
	comp=Z,37nm,0.4s,SNR=26						
SOKA				i Sn	Sn	03 42 27.2	-7.7
	comp=Z,34nm,0.6s						
OBKA	Obir	9.37	335	ePn	Pn	03 40 48.8	-0.6

OBKA eSn Sn 03 42 27.3 -7.7
OBKA Obir 9.37 335 *i* Pn **Pn 03 40 48.8 -0.6**
comp=Z,58nm,0.5s,SNR=10.0
OBKA eSn **Sn 03 42 27.0 -8.1**
comp=Z,100nm,0.6s
ARCR ARCALIA 9.39 17 ⇑P **Pn 03 40 51.3 +1.8**
GORS Gorjuse 9.40 332 *i* Pn **Pn 03 40 48.4 -1.4**
GHRR 9.47 31 ⇑P Pn 03 40 40.1 -11
TESR Tescani 9.55 27 ⇓P **Pn 03 40 54.2 +2.5**
PGF Pioggiola 9.70 300 P **Pn 03 40 55.2 +1.2**
PGF pmax pmax
comp=Z,96nm,1.3s
ARSA Arzberg 9.74 340 *e*Pn **Pn 03 40 52.5 -1.9**
ARSA eSn Sn 03 42 36.6 -7.5
ARSA Arzberg 9.74 340 *i* Pn **Pn 03 40 52.5 -1.9**
comp=Z,26nm,0.4s,SNR=12
ARSA *i* Sn **Sn 03 42 38.5 -5.6**
comp=Z,9.5nm,0.4s
PSZ Piszkesteto 9.75 358 ⇓P **Pn 03 40 53.6 -1.0**
PSZ Piszkesteto 9.75 358 P **Pn 03 40 53.6 -1.0**
PSZ pmax pmax
comp=Z,40nm,1.2s
MYKA Terra Mystica 9.80 332 *i* Pn **Pn 03 40 54.2 -1.0**
comp=Z,23nm,0.4s
MYKA *i* Sn **Sn 03 42 40.7 -4.8**
comp=Z,24nm,0.4s
ANTO Ankara 9.84 76 Pn **Pn 03 40 56.9 +1.1**
ANTO Ankara 9.84 76 P **Pn 03 40 56.9 +1.1**
SWA2 9.86 153 P **Pn 03 40 53.4 -2.7**
baz=143
SWA2 S Sn 03 42 22.6 -24
baz=143
SWA2 AMP 03 43 00.0
baz=143
SOP Sopron 9.91 345 P **Pn 03 40 57.4 +0.8**
SOP pmax pmax
comp=Z,24nm,1.0s
TRPA Tarpa 10.09 8 ⇓P **Pn 03 40 58.6 -0.5**
BURAR Bucovina Array 10.09 19 ⇑P **Pn 03 41 01.5 +2.2**
BURAR Bucovina Array 10.09 19 Pn 03 40 59.8 +0.5
BURAR Bucovina Array 10.09 19 P **Pn 03 40 59.8 +0.5**
BUR08 Bucovina Ar. S 10.12 19 Pn 03 41 00.8 +1.2
PRAR RASCA 10.15 23 ⇓P Pn 03 41 08.0 +8.0
CTI Castel Tesino 10.18 323 Pn 03 40 59.1 -1.4
CTI Castel Tesino 10.18 323 P **Pn 03 40 59.1 -1.4**
KBA Koelnbreinsper 10.29 332 *e*Pn **Pn 03 41 00.8 -1.2**
KBA eSn Sn 03 42 50.6 -7.0
KBA Koelnbreinsper 10.29 332 *i* Pn **Pn 03 41 00.8 -1.2**
comp=Z,22nm,0.5s
KBA *i* Sn **Sn 03 42 50.7 -6.9**
comp=Z,30nm,0.6s
KBA Koelnbreinsper 10.29 332 P **Pn 03 41 00.8 -1.2**
KBA pmax pmax
comp=Z,47nm,0.8s
CONA Conrad Observa 10.29 343 *i* Pn **Pn 03 41 00.9 -1.1**
comp=Z,0.7nm,0.3s
CONA *i* Sn **Sn 03 42 50.2 -7.4**
comp=Z,21nm,0.6s
ZST Bratislava 10.30 348 *e*SN Sn 03 42 47.9 -10
KECS Kecovo 10.31 1 *e*SN **Sn 03 42 49.8 -8.2**
ABTA Abfaltersbach 10.34 329 *e*Pn **Pn 03 41 01.3 -1.4**
comp=Z,16nm,0.4s
ABTA *i* Sn **Sn 03 42 52.3 -6.5**
comp=Z,64nm,0.6s
VYHS Vyhne 10.38 354 *e*P **Pn 03 41 02.1 -1.0**
VYHS *e* 03 42 53.3
VYHS Vyhne 10.38 354 *e*PN **Pn 03 41 02.1 -1.0**
VYHS eSN **Sn 03 42 53.3 -6.4**
SALO Salr 10.44 319 Pn 03 41 03.0 -0.9
MODS Modra-Piesok 10.44 349 *e*P **Pn 03 41 01.6 -2.4**
MODS *e* 03 42 52.5
MODS Modra-Piesok 10.44 349 *e*PN **Pn 03 41 01.6 -2.4**
MODS eSN **Sn 03 42 52.5 -8.7**
BR131 Keskin Array S 10.47 77 Pn 03 41 06.8 +2.3
BR131 Keskin Array S 10.47 77 P **Pn 03 41 06.8 +2.3**
BRTR Keskin Array B 10.47 77 Pn **Pn 03 41 08.1 +3.6**
comp=Z,0.4nm,0.3s,baz=260,slow=12,SNR=18
BRTR LR LR 03 45 32.0
comp=Z,1μm,18.5s,baz=244,slow=40
BRTR Keskin Array B 10.47 77 Pn 03 41 06.3 +1.8
BRTR Keskin Array B 10.47 77 *i* P **Pn 03 41 08.3 +3.8**
BRTR pmax pmax
comp=Z,4.0nm,0.6s
UZH Uzhgorod 10.55 7 *e*P **Pn 03 41 10.0 +4.5**
UZH eS **Sn 03 43 10.1 +6.2**
UZH MLR MLR
comp=N,400nm,12.0s
UZH MLR MLR
comp=E,200nm,12.0s
UZH MLR MLR
comp=Z,200nm,12.0s
MOA Molln 10.65 337 *e*Pn **Pn 03 41 05.8 -1.0**
MOA eSn **Sn 03 43 00.7 -5.6**
MOA Molln 10.65 337 *i* Pn **Pn 03 41 05.6 -1.2**
comp=Z,65nm,0.6s,SNR=7.4
MOA eSn **Sn 03 43 00.7 -5.6**
comp=Z,30nm,0.5s
MILM Milestii Mici 10.74 33 ⇑P **Pn 03 41 11.4 +3.4**
KIS Kishinev 10.80 33 *e*P Pn 03 41 17.0 +8.1
KIS *i* LQ LQ 03 44 48.0
KIS LRM MLR 03 46 04.0
comp=Z,3μm,12.0s
KIS Kishinev 10.80 33 *e*P Pn 03 41 17.0 +8.1
KIS MLR MLR
comp=N,3μm,12.0s
KIS MLR MLR
comp=Z,1μm,12.0s
KOLS Kolonicke sedl 10.85 7 *e*P **Pn 03 41 08.7 -0.9**
KOLS Kolonicke sedl 10.85 7 *e*PN **Pn 03 41 08.7 -0.9**
JAVC Velka Javorina 10.86 351 *e*PN **Pn 03 41 09.6 -0.2**
CSS Mathiatis 10.92 103 Pn 03 41 13.3 +2.7
CSS Mathiatis 10.92 103 P **Pn 03 41 10.8 +0.2**
RJOB Jochberg 11.04 332 *e*Pn **Pn 03 41 11.3 -0.9**
RJOB eSn **Sn 03 43 09.8 -6.2**
WTTA Wattenberg 11.11 328 *e*Pn **Pn 03 41 13.9 +0.5**
WTTA eSn **Sn 03 43 13.0 -4.9**
WTTA Wattenberg 11.11 328 *i* Pn **Pn 03 41 13.5 +0.2**
comp=Z,24nm,0.5s,SNR=11
WTTA *i* Sn **Sn 03 43 14.5 -3.4**
comp=Z,40nm,0.5s
BZK Bozkurt 11.13 66 ⇓P **Pn 03 41 16.7 +3.4**
WATA Walderalm 11.20 328 *e*Pn **Pn 03 41 14.3 -0.1**
comp=Z,14nm,0.3s,SNR=12
WATA *i* Sn **Sn 03 43 15.9 -3.9**
comp=Z,37nm,0.4s
NIE Niedzica 11.25 360 *e*P **Pn 03 41 15.6 +0.6**
NIE Niedzica 11.25 360 P **Pn 03 41 15.5 +0.5**
NIE pmax pmax
comp=Z,10.0nm,0.9s
FUORN Ofenpass-Fuorn 11.26 322 Pn 03 41 16.0 +0.6
KRUC Moravsky 11.26 347 *e*PN **Pn 03 41 14.1 -1.0**
KRUC Moravsky 11.26 347 P **Pn 03 41 14.5 -0.6**
KRUC pmax pmax
comp=Z,8.0nm,0.7s
SQTA Sankt Quirin 11.26 326 *e*Pn **Pn 03 41 15.9 +0.6**
comp=Z,11nm,0.4s
SQTA *i* Sn **Sn 03 43 16.2 -5.3**
comp=Z,32nm,0.5s
SBF Sospel 11.29 304 P **Pn 03 41 17.6 +2.0**
FETA Feichten 11.33 324 *i* Pn **Pn 03 41 15.8 -0.4**
comp=Z,14nm,0.9s
FETA *i* Sn **Sn 03 43 19.2 -4.0**
comp=Z,22nm,0.6s
MOTA Moosalm 11.40 326 *e*Pn **Pn 03 41 17.9 +0.6**
comp=Z,11nm,0.3s,SNR=11
MOTA *i* Sn **Sn 03 43 22.4 -2.6**
comp=Z,20nm,0.4s
VRAC Vranov 11.46 348 *e*PN **Pn 03 41 17.1 -0.8**
VRAC Vranov 11.46 348 Pn **Pn 03 41 17.2 -0.6**
comp=Z,0.4nm,0.3s,baz=182,slow=15,SNR=5.5
VRAC LR LR 03 46 34.7
comp=Z,1μm,21.4s,baz=168,slow=42
VRAC Vranov 11.46 348 ⇑P **Pn 03 41 17.3 -0.6**
SORM Soroca 11.54 28 ⇑P **Pn 03 41 20.5 +1.4**
SORM Soroca 11.54 28 P **Pn 03 41 20.4 +1.4**
TREC Trest 11.66 344 AMS AMS 03 47 00.0
comp=Z,2μm,8.0s
TREC Trest 11.66 344 P **Pn 03 41 20.2 -0.5**
TREC pmax pmax
comp=Z,6.0nm,0.9s
RETA Reutte 11.66 326 *i* Pn **Pn 03 41 20.9 +0.1**
comp=Z,12nm,0.5s
RETA *i* Sn **Sn 03 43 27.5 -3.7**
comp=Z,20nm,0.5s

GEC2 GERESS Array S 11.71 338 *e*Pn **Pn 03 41 19.4 -1.9**
GEC2 eSn **Sn 03 43 25.2 -7.1**
GEC2 GERESS Array S 11.71 338 P **Pn 03 41 19.8 -1.6**
GEC2 pmax pmax
comp=Z,36nm,0.8s
GERES GERESS Array B 11.71 338 Pn **Pn 03 41 19.5 -1.9**
comp=Z,1.9nm,0.3s,baz=158,slow=14,SNR=31
GERES Sn **Sn 03 43 24.4 -7.9**
comp=Z,2.8nm,0.3s,baz=149,slow=23,SNR=6.4
GERES LR LR 03 47 21.8
comp=Z,1μm,19.4s,baz=161,slow=45
GERES GERESS Array B 11.71 338 Pn 03 41 19.3 -2.1
GERES GERESS Array B 11.71 338 P **Pn 03 41 19.3 -2.1**
OKC Ostrava-Krasne 11.77 353 *e*PN **Pn 03 41 21.2 -1.0**
OKC eSN **Sn 03 43 26.3 -7.4**
OKC AMS AMS 03 47 10.0
comp=Z,2μm,13.1s
OKC Ostrava-Krasne 11.77 353 *e*P **Pn 03 41 21.2 -1.0**
OKC *e* 03 43 26.3
OKC MLR MLR
comp=Z,2μm,13.1s
MORC Moravsky Berou 11.78 351 *e*PN **Pn 03 41 20.0 -2.3**
MORC Moravsky Berou 11.78 351 ⇓P **Pn 03 41 22.0 -0.3**
MORC Moravsky Berou 11.78 351 P **Pn 03 41 21.6 -0.7**
MORC pmax pmax
comp=Z,41nm,2.4s
SEVA Sevastopol 11.86 53 ⇓P **Pn 03 41 24.6 +1.3**
DAVA Damuels 11.92 323 *e*Pn **Pn 03 41 24.9 +0.5**
DAVA eSn Sn 03 43 28.0 -9.5
DAVA Damuels 11.92 323 *e*Pn **Pn 03 41 24.8 +0.5**
comp=Z,3.6nm,0.2s
DAVA *i* Sn **Sn 03 43 33.1 -4.5**
comp=Z,30nm,0.5s
DIKM Dikmen 11.97 68 ⇓P **Pn 03 41 28.0 +3.1**
FUR Furstenfeldbru 11.98 329 *e*Pn **Pn 03 41 24.1 -0.9**
FUR eSn **Sn 03 43 31.4 -7.4**
FUR Furstenfeldbru 11.98 329 P **Pn 03 41 23.7 -1.3**
FUR pmax pmax
comp=Z,59nm,1.0s
KHC Kasperske Hory 12.00 338 *e*PN **Pn 03 41 22.8 -2.5**
KHC eSN **Sn 03 43 31.3 -8.0**
KHC AMS AMS 03 46 50.0
comp=Z,4μm,11.5s
KHC Kasperske Hory 12.00 338⇑*i*P **Pn 03 41 23.7 -1.6**
HNAT Natroun 12.04 132 P **Pn 03 41 23.0 -3.0**
baz=123
HNAT AMP 03 44 13.7
baz=123
OJC Ojcow 12.05 358 Pn **Pn 03 41 26.7 +0.7**
OJC Ojcow 12.05 358 P **Pn 03 41 26.7 +0.7**
UBR Ueberruh 12.10 325 *e*Pn **Pn 03 41 27.4 +0.7**
UBR eSn **Sn 03 43 37.9 -4.0**
MBDF Montbardon 12.10 307 P **Pn 03 41 30.3 +3.4**
WET Wettzell 12.22 336 *e*Pn **Pn 03 41 27.3 -1.0**
WET eSn **Sn 03 43 37.2 -7.6**
WET Wettzell 12.22 336 P **Pn 03 41 26.4 -2.0**
WET pmax pmax
comp=Z,38nm,1.0s
SIM Simferopol' 12.33 52 *e*P **Pn 03 41 31.6 +1.8**
SIM S **Sn 03 43 56.0 +8.6**
SIM pmax pmax
comp=Z,3.0nm,0.9s
SIM MLR MLR
comp=Z,500nm,9.0s
GOPC GO Pecny, Ondr 12.40 343 *e*PN **Pn 03 41 29.1 -1.7**
GOPC AMS AMS 03 48 00.0
comp=Z,2μm,9.3s
GOPC GO Pecny, Ondr 12.40 343 *e*P **Pn 03 41 29.1 -1.7**
GOPC MLR MLR
comp=Z,2μm,9.3s
LPG La Plagne 12.50 310 P **Pn 03 41 33.8 +1.4**
DPC Dobruska-Polom 12.51 348 *e*PN **Pn 03 41 32.1 -0.2**
DPC AMS AMS 03 47 20.0
comp=Z,3μm,13.4s
DPC Dobruska-Polom 12.51 348 *e*P **Pn 03 41 32.1 -0.2**
DPC MLR MLR
comp=Z,3μm,13.4s
LPL La Plagne 12.52 310 P **Pn 03 41 33.7 +1.1**
PRU Pruhonice 12.53 342 *e*PN **Pn 03 41 30.8 -1.7**
PRU AMS AMS 03 47 30.0
comp=Z,3μm,8.5s
PRU Pruhonice 12.53 342 *e*P **Pn 03 41 30.8 -1.7**
PRU MLR MLR
comp=Z,3μm,8.5s
SENIN Lac Senin/Sane 12.65 314 Pn 03 41 33.9 -0.6
UPC Upice 12.72 347 AMS AMS 03 47 30.0
comp=Z,3μm,12.6s
OSTC Ostas 12.73 348 AMS AMS 03 47 30.0
comp=Z,2μm,10.5s
GLL Jalalah 12.74 129 P **Pn 03 41 31.8 -3.7**
baz=120
CHVC Chvalec 12.79 348 *e*PN **Pn 03 41 33.5 -2.6**
CHVC AMS AMS 03 47 30.0
comp=Z,3μm,12.6s
HFRF Wahat Farafira 12.87 146 P **Pn 03 41 33.7 -3.5**
baz=139
HFRF AMP 03 44 13.7
baz=139
SLE Schleitheim 12.92 322 P **Pn 03 41 40.6 +2.7**
SLE pmax pmax
comp=Z,16nm,0.6s
ROTZ Rotzenmuhle 12.98 336 *e*Pn **Pn 03 41 37.2 -1.5**
ROTZ eSn **Sn 03 43 55.4 -7.9**
MANZ Manzenberg 13.20 336 *e*Pn **Pn 03 41 40.4 -1.4**
GRF Grafenberg Arr 13.25 333 *e*Pn **Pn 03 41 42.3 0.0**
GRF Grafenberg Arr 13.25 333 P **Pn 03 41 45.8 +3.4**
GRF pmax pmax
comp=Z,33nm,0.7s
MMA0B Mount Meron ar 13.28 108 Pn **Pn 03 41 42.3 -0.7**
MMAI Mount Meron Ar 13.28 108 Pn **Pn 03 41 41.3 -1.7**
comp=Z,1.9nm,0.3s,baz=317,slow=12,SNR=13
NKC Novy Kostel 13.31 337 AMS AMS 03 47 50.0
comp=Z,4μm,12.4s
STU Stuttgart 13.32 326 P **Pn 03 41 44.2 +0.9**
STU pmax pmax
comp=Z,63nm,0.8s
WERN Wernitzgruen 13.38 337 *e*Pn **Pn 03 41 43.6 -0.6**
BFO Black Forest 13.39 323 Pn 03 41 45.2 +0.9
BFO Black Forest 13.39 323 P **Pn 03 41 45.2 +0.9**
GAZ Gaziantep 13.40 89 Pn **Pn 03 41 46.6 +2.1**
CABF La Chapelle 13.48 313 P **Pn 03 41 45.8 +0.2**
BRG Berggiesshubel 13.49 342 *e*P **Pn 03 41 43.2 -2.4**
BRG pmax pmax
comp=Z,11nm,1.4s
BRG MLR MLR
comp=N,1μm,9.6s
BRG MLR MLR
comp=E,1μm,15.6s
BRG MLR MLR
comp=Z,2μm,9.1s
KZIT Kziot 13.65 118 Pn **Pn 03 41 45.7 -2.2**
KZIT Sn Sn 03 44 10.2 -10
AMAZ Amatzia 13.66 115 Pn **Pn 03 41 46.2 -1.9**
HMDT Nahal Hemdat 13.74 111 Pn **Pn 03 41 47.9 -1.2**
YTIR Yattir 13.90 115 Pn **Pn 03 41 49.8 -1.6**
MOX Moxa 13.93 336 *e*Pn **Pn 03 41 50.2 -1.5**
MOX eSn Sn 03 44 17.5 -9.1
MOX Moxa 13.93 336 P **Pn 03 41 50.3 -1.4**
MOX pmax pmax
comp=Z,50nm,0.8s
CDF Champ du Feu 13.96 321 P **Pn 03 41 50.3 -1.8**
DSI Dead Sea 13.98 114 Pn **Pn 03 41 51.0 -1.4**
KIEV Kiev 14.02 24 P **Pn 03 41 53.0 +0.2**
AKASG Malin Array Be 14.03 24 Pn **Pn 03 41 51.4 -1.5**
comp=Z,1.2nm,0.3s,baz=210,slow=11,SNR=10
AKASG Malin Array Be 14.03 24 Pn 03 41 53.4 +0.4
AKASG Malin Array Be 14.03 24 *i* P **Pn 03 41 52.2 -0.8**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 14.03 24 Pn 03 41 53.4 +0.4
AKBB Malin Array Si 14.03 24 P **Pn 03 41 53.4 +0.4**
CLL Collm 14.12 341 *e*P **Pn 03 41 56.0 +1.7**
CLL esP P 03 42 00.0 -2.0
CLL *i* PP PnPn 03 42 03.2 +1.0
comp=Z,22nm,1.0s
CLL Collm 14.12 341 *e*P **Pn 03 41 53.0 -1.3**
HAU Haudompre 14.17 318 P **Pn 03 41 53.8 -1.1**
DAMI2 DAM2 14.24 115 Pn **Pn 03 41 54.0 -1.9**
GHAJ Ghor Haditha 14.26 114 Pn **Pn 03 41 54.7 -1.5**
KRMI Paran Flat 14.35 120 Pn **Pn 03 41 55.0 -2.5**
PRNI Paran 14.40 118 Pn **Pn 03 41 55.5 -2.7**
ANN Anapa 14.41 57 *e*P **P 03 42 06.5 +1.3**
ANN pmax pmax
comp=Z,37nm,0.9s

ANN MLR MLR
comp=Z,541nm,12.0s
HRFI Mount Harif 14.61 119 Pn **Pn 03 41 57.6 -3.5**
HRFI Sn Sn 03 44 32.7 -11
MBRI Mt Berech 14.68 120 Pn **Pn 03 41 58.9 -3.1**
TNS Taunus Mts 14.74 329 *e*Pn **Pn 03 42 01.9 -0.9**
TNS eSn **Sn 03 44 37.6 -8.7**
EIL Elat 14.78 121 Pn **Pn 03 42 00.2 -3.2**
comp=Z,0.6nm,0.3s,baz=320,slow=5.3,SNR=9.6
EIL Elat 14.78 121 Pn **Pn 03 42 00.6 -2.8**
AQBJ Aqaba 14.81 120 Pn **Pn 03 42 01.1 -2.7**
SMF Signal de Mont 14.82 310 P **Pn 03 42 04.9 +1.0**
LOR Lormes 15.13 312 P **Pn 03 42 07.7 -0.2**
AVF Avril sur Loir 15.19 310 P **Pn 03 42 09.7 +0.9**
GKP Gorka Klasztor 15.26 353 *e*P **P 03 42 15.7 +1.1**
WLF Walferdange 15.35 323 P **P 03 42 14.3 -1.4**
WLF pP **sP 03 42 18.2 +0.5**
WLF sP **pP 03 42 19.9 +2.6**
WLF Walferdange 15.35 323 P **P 03 42 14.3 -1.4**
WLF pmax pmax
comp=Z,402nm,1.0s
SOC Sochi 15.61 64 *e*P **P 03 42 18.4 -0.1**
SOC *e* 03 45 19.0
SOC pmax pmax
comp=Z,20nm,0.8s
SOC MLR MLR
comp=Z,238nm,10.0s
SUW Suwalki 15.97 6 *e*P **Pn 03 42 18.6 -0.2**
MEM Membach 16.08 325 pP **pP 03 42 25.6 +0.3**
MEM sP sP 03 42 26.7 0.0
BUG Bochum--Univer 16.16 329 P **P 03 42 23.1 -1.5**
BUG pmax pmax
comp=Z,30nm,0.8s
DOU Dourbes 16.39 322 pP **pP 03 42 28.8 0.0**
DOU sP sP 03 42 30.2 +1.0
DOU Dourbes 16.39 322 P **P 03 42 28.9 +1.7**
DOU pmax pmax
comp=Z,33nm,1.1s
BAIF Baives 16.56 321 P **P 03 42 28.9 -0.1**
BCA Borcka 16.67 72 ⇑P **P 03 42 30.4 0.0**
MICGM Minsk 17.13 15 *e*P **Pn 03 42 34.0 +0.4**
MICGM eS **Sn 03 45 43.0 -1.1**
MNK Minsk 17.13 15 *e*P **Pn 03 42 34.0 +0.4**
MNK eS **Sn 03 45 43.0 -1.1**
NACGM Naroch 17.30 13 *e*P **Pn 03 42 36.0 +0.2**
NACGM eS **Sn 03 45 50.0 +1.7**
NACGM eLQ LQ 03 47 52.0
NACGM eLR LR 03 49 18.0
NACGM LRM MLR 03 52 38.0
comp=Z,3.2nm,8.0s
BSD Bornholm Skovb 17.35 349 *i* P **Pn 03 42 35.7 -0.6**
comp=Z,1.3nm,0.4s
BSD Bornholm Skovb 17.35 349 *i* P **Pn 03 42 35.7 -0.6**
BSD pmax pmax
comp=Z,1.0nm,0.4s
PABE Paberze 17.52 7 *e*P **Pn 03 42 38.8 +0.4**
PABE IAmb IAmb 03 42 40.1
comp=Z,54nm,0.5s
IIGN Ignalina 17.64 11 *e*P **Pn 03 42 39.6 -0.4**
NEY Neytrino 17.69 66⇓*i*P **P 03 42 45.4 +3.6**
KIV Kislovodsk 17.79 64 ⇑P **P 03 42 45.8 +3.0**
KIV Kislovodsk 17.79 64 Pn **P 03 42 42.5 -0.3**
KIV Kislovodsk 17.79 64 *e*P **P 03 42 44.8 +2.0**
KIV eS **S 03 46 04.0 -3.6**
KIV pmax pmax
comp=Z,101nm,1.0s
KIV MLR MLR
comp=Z,484nm,14.0s
ISAL Salakas 17.84 11 *e*P **Pn 03 42 41.2 -1.2**
ISAL IAmb IAmb 03 42 46.4
comp=Z,16nm,0.8s
KBZ Khabaz 17.90 65 Pn **P 03 42 45.0 +1.1**
comp=Z,0.5nm,0.3s,baz=259,slow=9.6,SNR=25
KBZ LR LR 03 51 54.6
comp=Z,336nm,18.6s,baz=239,slow=45
KBZ Khabaz 17.90 65 P **P 03 42 45.0 +1.1**
IZAR Zarasai 18.03 11 *e*P **Pn 03 42 42.9 -1.9**
IZAR IAmb IAmb 03 42 48.6
comp=Z,15nm,0.7s
AKH Akhalkalaki 18.07 72 ⇑P **P 03 42 48.1 +2.1**
AKH Akhalkalaki 18.07 72 P **P 03 42 48.1 +2.1**
NCK Nalchik 18.36 66⇑*e*P **P 03 42 51.3 +2.3**
FLN La Foliniere 18.40 312 P **P 03 42 53.0 +3.6**
ZEI Tsey 18.48 68 *e*P **Pn 03 42 52.8 +2.1**
ZEI pmax pmax
comp=Z,21nm,0.8s
VSR Storozhevoye 18.61 39 *e*P **P 03 42 51.2 -0.5**
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR MLR MLR
comp=Z,2μm,12.0s
ESDC Sonseca Array 18.96 282 P **P 03 42 55.2 -0.6**
comp=Z,0.6nm,0.3s,baz=78,slow=11,SNR=20
ESDC Sonseca Array 18.96 282 P **P 03 42 55.0 -0.8**
GNI Garni 19.01 76 P **Pn 03 42 57.3 +0.3**
comp=Z,1.0nm,0.3s,baz=300,slow=0.6,SNR=27
GNI LR LR 03 51 09.0
comp=Z,761nm,19.8s,baz=272,slow=40
GNI Garni 19.01 76 P **P 03 42 57.3 +0.3**
GNI IAmb IAmb 03 43 03.3
comp=Z,62nm,0.8s
GNI Garni 19.01 76*e*P **Pn 03 42 57.2 +0.2**
GNI pmax pmax
comp=Z,318nm,1.7s
TBLG Delisi 19.02 72 IAmb IAmb 03 43 04.6
comp=Z,38nm,1.2s
GUD Guadarrama 19.08 285 P **P 03 42 58.1 +0.2**
GUD pmax pmax
comp=Z,66nm,1.4s
PAB San Pablo 19.27 282 P **P 03 42 58.2 -0.9**
PAB San Pablo 19.27 282 P **P 03 42 58.2 -0.9**
PAB pmax pmax
comp=Z,23nm,1.2s
SLIT Slitere, Latvi 19.52 3 *e*P **P 03 43 01.4 -0.1**
TAM Tamanrasset 19.91 224 P **P 03 43 01.2 -5.1**
TAM Tamanrasset 19.91 224 P **P 03 43 01.2 -5.1**
TAM pmax pmax
comp=Z,14nm,1.1s
GROC Groznyy 19.91 67 *e*P **P 03 43 06.3 +0.3**
GROC eS **Sn 03 46 52.2 +0.7**
GROC pmax pmax
comp=Z,37nm,0.9s
VRH Novokhopyorsk 19.93 42 *e*P **Pn 03 43 07.6 -0.1**
VRH pmax pmax
comp=Z,60nm,1.1s
VRH MLR MLR
comp=Z,630nm,14.0s
OBN Obninsk 20.20 28 LR LR 03 51 01.3
comp=Z,36nm,18.8s,baz=206,slow=37
OBN Obninsk 20.20 28 P **P 03 43 09.7 +0.7**
OBN IAmb IAmb 03 43 23.4
comp=Z,51nm,1.2s
OBN Obninsk 20.20 28*e*P Pn 03 43 09.9 -0.9
OBN pmax pmax
comp=Z,36nm,1.3s
OBN MLR MLR
comp=Z,199nm,12.0s
VSU Vasula 20.73 10 *e*P **P 03 43 14.1 -0.6**
VSU Vasula 20.73 10*i*P **P 03 43 14.2 -0.6**
MDT Midelt 20.98 263 P **P 03 43 17.7 -0.1**
comp=Z,14nm,0.9s,baz=85,slow=10,SNR=22
MOS Moscow 21.06 28 *e*P **P 03 43 19.2 +0.9**
MOS *e* 03 43 48.1
MOS eS Sn 03 47 16.4 -2.6
MOS pmax pmax
comp=Z,54nm,0.8s
MAK Makhachkala 21.14 68 *e*P **P 03 43 14.2 -5.1**
MAK eS **S 03 47 05.0 -10**
MAK pmax pmax
comp=Z,397nm,1.1s
MAK MLR MLR
comp=Z,286nm,14.0s
AKT Akhty 21.26 72 *e*P **P 03 43 21.0 +0.3**
AKT *e* 03 43 40.3
AKT ePPP PPP 03 43 51.5
AKT eS **S 03 47 18.6 +1.4**
AKT pmax pmax
comp=Z,40nm,0.8s
PMRV Marv??o 21.63 282 *e*P **P 03 43 23.7 -0.9**
comp=Z,61nm,1.5s
PCBR Castelo Branco 21.66 283 *e*P **P 03 43 24.1 -0.8**
comp=Z,57nm,1.4s
MTE Manteigas 21.67 285 *e*P **P 03 43 24.6 -0.5**
comp=Z,76nm,1.7s

PVRL Vila Real 21.77 287 eP P 03 43 29.5 +3.3
PVIS Viseu 21.92 286 eP P 03 43 29.0 +1.2
PVAQ Vaqueiros 22.16 277 eP P 03 43 33.1 +2.7
comp=Z,64nm,1.7s
PBEJ Beja 22.17 278 eP P 03 43 30.9 +0.4
comp=Z,53nm,1.6s
EVO Evora 22.21 280 eP P 03 43 30.4 -0.5
comp=Z,52nm,1.8s
PMTG Montargil 22.31 281 eP P 03 43 30.1 -1.8
comp=Z,48nm,1.9s
COI Coimbra 22.35 284 eP P 03 43 32.2 -0.1
comp=Z,112nm,1.4s
PBDV Barranco-do-Ve 22.36 276 eP P 03 43 34.8 +2.3
comp=Z,67nm,1.6s
PCVE Castro Verde 22.37 277 eP P 03 43 32.7 +0.1
comp=Z,60nm,1.6s
HFS Hagfors 22.39 351 P P 03 43 32.6 0.0
comp=Z,31nm,0.6s,baz=163,slow=12,SNR=59
HFS LR LR 03 52 38.6
comp=Z,537nm,21.2s,baz=163,slow=38
PTOM Tomar 22.39 283 eP P 03 43 31.6 -1.2
comp=Z,80nm,1.7s
KONO Kongsberg 22.57 346⇑eP P 03 43 34.7 +0.2
KONO pmax pmax
comp=Z,72nm,1.7s
NORES NORESS Array B 23.26 349 P P 03 43 43.7 +2.0
NORES pmax pmax
comp=Z,19nm,0.5s
EKA Eskdalemuir Ar 23.36 325 P P 03 43 42.7 0.0
comp=Z,21nm,0.9s,baz=122,slow=11,SNR=19
FINES FINESS Array B 23.57 7 P P 03 43 43.5 -1.3
comp=Z,9.9nm,0.5s,baz=175,slow=9.5,SNR=28
FINES LR LR 03 54 05.1
comp=Z,587nm,20.2s,baz=191,slow=40
FIA1 FINESS Array S 23.57 7 P P 03 43 44.4 -0.4
FIA1 IAmb IAmb 03 44 00.3
comp=Z,34nm,1.0s
NB201 NORSAR Array S 23.60 349 P P 03 43 44.5 -0.6
NB2 NORSAR Subarra 23.60 349 P P 03 43 44.3 -0.8
comp=Z,23nm,0.9s,baz=161,slow=10
NOA NORSAR Array B 23.60 349 P P 03 43 44.1 -1.1
comp=Z,17nm,0.8s,baz=160,slow=9.4,SNR=30
NOA LR LR 03 53 47.1
comp=Z,429nm,19.8s,baz=165,slow=39
NBO00 NORSAR Array S 23.66 348 P P 03 43 45.4 -0.3
NC303 NORSAR Array S 23.75 349 P P 03 43 45.6 -1.0
KLMR Klimovskoe 25.70 22 eP P 03 44 03.5 -0.8
KLMR pmax pmax
comp=Z,30nm,1.1s
KLMR Klimovskoe 25.70 22 eP P 03 44 03.6 -0.8
KLMR AMP 03 44 15.9
comp=Z,30nm,1.1s
KLMR LQ LQ 03 51 46.3
KLMR LQ LQ 03 51 46.3
KLMR LR LR 03 52 44.0
RAYN Ar Rayn 25.96 117 P P 03 44 07.7 +0.5
RAYN IAmb IAmb 03 44 18.2
comp=Z,15nm,1.1s
RAYN Ar Rayn 25.96 117 P P 03 44 07.7 +0.5
RAYN pmax pmax
comp=Z,15nm,1.2s
KIRV Kirov 27.74 33 LR LR 03 56 07.9
comp=Z,592nm,18.9s,baz=208,slow=38
TMCR Tamitsa 28.09 16 eP P 03 44 28.1 +2.3
TMCR pmax pmax
comp=Z,19nm,1.1s
PRGR Permogore 28.23 26 eP P 03 44 24.2 -2.9
PRGR e 03 55 18.3
PRGR pmax pmax
comp=Z,10.0nm,0.6s
AKTO Aktyubinsk 29.30 53 P P 03 44 36.4 -0.4
comp=Z,0.9nm,0.3s,baz=260,slow=4.8,SNR=8.0
AKTO LR LR 03 58 37.7
comp=Z,244nm,18.5s,baz=281,slow=41
AKTO Aktyubinsk 29.30 53 iP P 03 44 37.1 +0.3
AKTO pmax pmax
comp=Z,3.0nm,0.8s
GEYT Alibeck 29.61 79 P P 03 44 39.4 -0.3
comp=Z,1.8nm,0.5s,baz=272,slow=11,SNR=4.2
GEYT LR LR 03 59 18.1
comp=Z,177nm,21.6s,baz=280,slow=42
GEYT Alibeck 29.61 79 P P 03 44 39.8 0.0
GYA0B ALIBECK ARRAY 29.61 79 P P 03 44 40.0 +0.3
GYA0B IAmb IAmb 03 44 57.0
comp=Z,6.2nm,0.6s
TOA0 Torodi Ar. Sit 29.94 219 P P 03 44 42.6 -0.1
TOA0 IAmb IAmb 03 44 45.3
comp=Z,14nm,0.9s
TORD Torodi Ar. Bea 29.94 219 P P 03 44 42.1 -0.6
comp=Z,13nm,0.9s,baz=30,slow=7.3,SNR=49
TORD LR LR 03 57 22.7
comp=Z,268nm,21.1s,baz=10.0,slow=38
TORD Torodi Ar. Bea 29.94 219 P P 03 44 42.5 -0.2
AB31 Akbulak array 30.36 56 P P 03 44 45.7 -0.5
ABKAR Akbulak array 30.36 56 P P 03 44 46.7 +0.5
ABKAR Akbulak array 30.36 56 P P 03 44 47.2 +1.0
ABKAR IAmb IAmb 03 45 52.1
comp=Z,3.4nm,0.8s
ARU Arti 31.16 42d iP P 03 44 54.0 +0.9
ARU S S 03 50 02.3 +3.3
ARU SS SnSn 03 51 43.5 +3.2
ARU pmax pmax
comp=Z,14nm,1.9s
ARU MLR MLR
comp=Z,377nm,18.0s
ARCES ARCESS Array B 31.55 3 P P 03 44 55.1 -1.3
comp=Z,4.1nm,0.8s,baz=189,slow=9.8,SNR=18
ARCES LR LR 03 58 08.7
comp=Z,428nm,18.9s,baz=171,slow=37
FURI Furi 33.50 146 P P 03 45 16.0 +1.6
BRVK Borovoye 37.17 50 P P 03 45 44.8 -0.5
BRVK IAmb IAmb 03 46 16.6
comp=Z,7.9nm,0.9s
BRVK Borovoye 37.17 50⇑eP P 03 45 45.2 -0.1
BRVK pmax pmax
comp=Z,7.0nm,1.0s
BVAR Borovoye Array 37.23 50 P P 03 45 45.4 -0.4
comp=Z,2.2nm,0.6s,baz=271,slow=7.0,SNR=9.0
KK31 Karatay Array 37.92 66 IAmb IAmb 03 46 01.4
comp=Z,7.3nm,0.8s
KK31 Karatay Array 37.92 66 eP P 03 45 51.0 -0.8
KKAR Karatay Array 37.92 66 P P 03 45 51.0 -0.9
KKAR Karatay Array 37.92 66 P P 03 45 51.0 -0.9
DBIC Dimbokro 38.79 222 P P 03 45 58.9 -0.5
comp=Z,9.8nm,0.9s,baz=14,slow=9.2,SNR=9.4
DBIC LR LR 04 03 12.5
comp=Z,354nm,18.2s,baz=15,slow=38
DBIC Dimbokro 38.79 222 P P 03 45 59.4 +0.1
DBIC IAmb IAmb 03 46 20.2
comp=Z,49nm,1.6s
DBIC Dimbokro 38.79 222 P P 03 45 59.4 +0.1
DBIC pmax pmax
comp=Z,49nm,1.6s
TIC Toumodi 38.90 223 eP P 03 46 00.3 0.0
comp=Z,2.3nm,0.2s
KIC Kosan Boka 38.99 222 eP P 03 46 00.7 -0.3
comp=Z,16nm,0.9s
LIC Lamto 39.26 222 eP P 03 46 03.0 -0.2
comp=Z,73nm,1.4s
MBAR Mbarara 39.75 164 P P 03 46 09.0 +1.5
comp=Z,2.0nm,0.2s,baz=342,slow=16,SNR=3.6
MBAR Mbarara 39.75 164 P P 03 46 08.4 +0.9
MBAR Mbarara 39.75 164 P P 03 46 09.0 +1.5
SPITS Spitsbergen Ar 40.15 359 P P 03 46 10.1 0.0
comp=Z,2.3nm,0.5s,baz=154,slow=16,SNR=5.4
AAK Ala-Archa 40.89 66 P P 03 46 16.5 -0.2
comp=Z,5.8nm,0.9s,baz=192,slow=4.5,SNR=7.6
AAK Ala-Archa 40.89 66 P P 03 46 17.4 +0.7
AAK Ala-Archa 40.89 66⇓eP P 03 46 17.1 +0.3
AAK pmax pmax
comp=Z,6.0nm,1.1s
KMBO Kilima Mbogo 42.10 154 P P 03 46 28.3 +1.3
KMBO Kilima Mbogo 42.10 154 P P 03 46 28.3 +1.3
KMBO pmax pmax
comp=Z,5.0nm,1.1s
KURBB Kurchatov Arra 42.34 53 P P 03 46 27.3 -1.0
comp=Z,2.3nm,0.6s,baz=283,slow=8.9,SNR=11
KURK Kurchatov 42.39 53 P P 03 46 28.0 -0.7
KURK Kurchatov 42.39 53⇓eP P 03 46 27.5 -1.2
KURK pmax pmax
comp=Z,3.0nm,1.0s
NIL Nilore 42.61 79 P P 03 46 30.4 -0.4
NIL IAmb IAmb 03 46 33.7
comp=Z,14nm,1.1s
NIL Nilore 42.61 79 P P 03 46 30.4 -0.4
NIL pmax pmax

comp=Z,14nm,1.1s
KSH Kashi 42.76 70 P P 03 46 32.9 +0.9
KSH PP PP 03 48 11.1 +0.1
KSH PcP PcP 03 48 32.8 +9.3
KSH PcS PcS 03 52 18.6 +2.9
KSH S S 03 52 54.4 -1.8
SUMG Summit 44.78 339 iP P 03 46 50.0 +1.8
comp=Z,24nm,0.9s
SUMG Summit 44.78 339 P P 03 46 48.1 -0.1
SUMG Summit 44.78 339 iP P 03 46 50.0 +1.8
SUMG pmax pmax
comp=Z,24nm,0.9s
MAKZ Makanchi 45.21 58 P P 03 46 51.8 +0.3
MAKZ Makanchi 45.21 58 P P 03 46 51.8 +0.3
MAKZ pmax pmax
comp=Z,3.0nm,0.8s
MK31 Makanchi Array 45.42 58 IAmb IAmb 03 46 54.8
comp=Z,5.8nm,0.6s
MK31 Makanchi Array 45.42 58 eP P 03 46 51.9 -1.3
MKAR Makanchi Array 45.42 58 P P 03 46 51.9 -1.4
comp=Z,7.2nm,0.5s,baz=274,slow=7.2,SNR=88
MKAR LR LR 04 09 50.3
comp=Z,200nm,19.0s,baz=288,slow=41
MKAR Makanchi Array 45.42 58 P P 03 46 52.1 -1.1
MKAR Makanchi Array 45.42 58 P P 03 46 52.1 -1.1
NOR Nord 45.47 353 iP P 03 46 52.5 -0.6
NOR Nord 45.47 353 eP P 03 46 52.5 -0.6
ZALV Zalesovo Beam 45.80 48 P P 03 46 55.0 -1.0
comp=Z,18nm,0.5s,baz=275,slow=11,SNR=42
ZALV LR LR 04 08 28.1
comp=Z,390nm,18.4s,baz=280,slow=39
ZALV Zalesovo Beam 45.80 48 P P 03 46 51.8 -4.2
ZALV Zalesovo Beam 45.80 48 P P 03 46 55.0 -1.0
WMQ Urumqi 49.88 61 eP P 03 47 30.8 +2.9
TULEG Thule 53.06 343 P P 03 47 50.6 -0.5
LSZ Lusaka 53.67 171 P P 03 47 57.7 +1.2
comp=Z,4.0nm,0.8s,baz=20,slow=8.2,SNR=8.9
LSZ Lusaka 53.67 171 P P 03 47 57.6 +1.2
LSZ IAmb IAmb 03 47 58.9
comp=Z,8.4nm,1.1s
TLY Talaya 57.39 47 P P 03 48 23.2 +0.4
comp=Z,4.2nm,0.9s,baz=321,slow=6.5,SNR=3.6
TLY Talaya 57.39 47 P P 03 48 23.8 +1.0
TLY IAmb IAmb 03 48 30.3
comp=Z,4.6nm,0.9s
TLY Talaya 57.39 47 eP P 03 48 23.6 +0.8
TLY pmax pmax
comp=Z,12nm,1.0s
TLY MLR MLR
comp=Z,875nm,17.0s
SCHQ Schefferville 58.37 317 P P 03 48 29.6 -0.1
comp=Z,3.3nm,0.7s,baz=86,slow=6.1,SNR=9.0
SCHQ LR LR 04 11 32.9
comp=Z,136nm,21.9s,baz=16,slow=34
SCHQ Schefferville 58.37 317 P P 03 48 30.4 +0.7
SCHQ IAmb IAmb 03 48 43.3
comp=Z,13nm,1.1s
TIXI Tiksi 59.71 20 P P 03 48 40.0 +1.5
TIXI Tiksi 59.71 20⇓iP P 03 48 38.6 0.0
TIXI pmax pmax
comp=Z,5.0nm,1.7s
RES Resolute Bay 59.74 344 P P 03 48 40.5 +1.7
RES Resolute Bay 59.74 344 P P 03 48 40.5 +1.7
RES pmax pmax
comp=Z,22nm,1.8s
GTA Gaotai 59.95 62 eP P 03 48 39.6 -1.4
GTA pP pP 03 48 43.8 +0.5
GTA sP sP 03 48 46.8 +2.6
BOD Bodaibo 60.47 38 eP P 03 48 42.9 -1.1
BOD pmax pmax
comp=Z,7.0nm,1.5s
SONM Songino Array 60.57 51 P P 03 48 44.2 -0.8
comp=Z,2.3nm,0.6s,baz=280,slow=8.4,SNR=18
SONM LR LR 04 17 33.7
comp=Z,276nm,19.2s,baz=284,slow=39
SONM Songino Array 60.57 51 P P 03 48 44.8 -0.3
SONM Songino Array 60.57 51 P P 03 48 44.8 -0.3
SONM pmax pmax
comp=Z,3.0nm,0.9s
SHL Shillong 60.69 79 P P 03 48 47.5 +1.2
SHL IAmb IAmb 03 49 34.7
comp=Z,8.5nm,1.0s
SHL Shillong 60.69 79 P P 03 48 47.5 +1.2
SHL pmax pmax
comp=Z,9.0nm,1.0s
LZH Lanzhou 64.33 63 eP P 03 49 09.4 -1.0
LZH pP pP 03 49 12.8 0.0
LZH sP sP 03 49 14.3 +0.6
LZH ePP PP 03 51 32.5 +0.9
YAK Yakutsk 65.19 29⇓eP P 03 49 14.6 -0.7
YAK pmax pmax
comp=Z,14nm,0.7s
BOSA Boshof 66.59 175 P P 03 49 24.5 -0.4
comp=Z,3.6nm,0.9s,baz=352,slow=5.9,SNR=5.6
BOSA LR LR 04 20 13.9
comp=Z,295nm,19.4s,baz=356,slow=38
CD2 Chengdu 66.90 68 eP P 03 49 26.6 -0.4
HHC Hu-ho-hao-te 67.15 55 eP P 03 49 29.8 +1.3
HHC sP PcP 03 49 44.5 -12
CHTO Chiang Mai 69.83 82 P P 03 49 44.9 -0.5
CHTO IAmb IAmb 03 50 07.1
comp=Z,7.9nm,1.1s
CHTO Chiang Mai 69.83 82 P P 03 49 44.9 -0.5
CHTO pmax pmax
comp=Z,8.0nm,1.2s
CMAR Chiang Mai Arr 70.03 82 P P 03 49 45.2 -1.4
comp=Z,1.3nm,0.3s,baz=305,slow=8.0,SNR=11
CMAR LR LR 04 27 01.4
comp=Z,56nm,18.7s,baz=295,slow=42
CMAR Chiang Mai Arr 70.03 82 iP P 03 49 45.9 -0.8
CMAR pmax pmax
comp=Z,1.0nm,0.3s
BILL Bilibino 71.06 13ceP P 03 49 52.5 +0.4
BILL e 03 50 09.2
BILL e 03 52 34.4
BILL pmax pmax
comp=Z,10.0nm,1.4s
INK Inuvik 72.05 350 P P 03 49 59.3 +1.2
comp=Z,3.3nm,0.9s,baz=10.0,slow=5.0,SNR=6.5
INK Inuvik 72.05 350 IAmb IAmb 03 50 07.5
comp=Z,16nm,1.6s
YKA Yellowknife Ar 73.35 340 P P 03 50 06.2 +0.3
comp=Z,1.6nm,0.7s,baz=36,slow=5.2,SNR=19
YKA LR LR 04 23 34.2
comp=Z,120nm,19.2s,baz=0.0,slow=37
YKA Yellowknife Ar 73.35 340 iP P 03 50 07.9 +2.0
YKA pmax pmax
comp=Z,2.0nm,0.7s
KLR Kul'dur 73.97 39 P P 03 50 09.7 -0.1
comp=Z,4.6nm,0.8s,baz=313,slow=8.0,SNR=18
KLR Kul'dur 73.97 39⇓eP P 03 50 09.7 -0.1
KLR pmax pmax
comp=Z,7.0nm,0.9s
CN2 Changchun 73.99 47 eP P 03 50 09.1 -0.9
BMAR Burnt Mountain 74.10 354 P P 03 50 11.0 +0.7
EPYK Eagle Plains 74.30 351 IAmb IAmb 03 50 35.7
comp=Z,13nm,1.0s
MA2 Magadan 74.36 24⇓eP P 03 50 13.1 +1.2
MA2 pmax pmax
comp=Z,49nm,3.2s
WHN Wuhan 74.71 63 P P 03 50 19.0 +4.6
ULM Lac du Bonnet 75.62 324 P P 03 50 19.5 +0.2
comp=Z,5.5nm,0.8s,baz=55,slow=4.0,SNR=13
ULM LR LR 04 26 18.1
comp=Z,86nm,18.3s,baz=359,slow=38
IMAR Indian Mountai 76.08 358 P P 03 50 22.3 +0.6
DAWY Dawson 76.85 351 P P 03 50 27.8 +1.6
DAWY IAmb IAmb 03 51 05.5
comp=Z,10nm,1.1s
ILAR Eielson Array 76.91 354 P P 03 50 27.1 +0.7
comp=Z,2.3nm,1.0s,baz=2.4,slow=4.1,SNR=14
ILAR LR LR 04 26 21.8
comp=Z,83nm,19.4s,baz=354,slow=37
ILAR Eielson Array 76.91 354 P P 03 50 27.2 +0.8
NJ2 Nanjing 76.94 60 eP P 03 50 26.8 -0.3
HDA Harding Lake 77.27 354 IAmb IAmb 03 50 32.8
comp=Z,8.5nm,0.9s
WRH Wood River Hil 77.29 355 IAmb IAmb 03 50 33.3
comp=Z,6.8nm,1.0s
USRK Ussuriysk Ar. 77.38 43 P P 03 50 28.9 -0.5
comp=Z,2.9nm,0.7s,baz=282,slow=6.1,SNR=7.0
USRK LR LR 04 27 08.8
comp=Z,174nm,19.8s,baz=315,slow=38
USRK Ussuriysk Ar. 77.38 43 P P 03 50 28.8 -0.6
BCAR Beaver Creek A 78.10 352 P P 03 50 34.1 +1.0

PSI Prapat 79.29 95 P P 03 50 39.8 -0.8
comp=Z,6.6nm,0.7s,baz=283,slow=5.2,SNR=7.1
PSI LR LR 04 28 57.0
comp=Z,38nm,20.1s,baz=286,slow=38
PSI Prapat 79.29 95 P P 03 50 41.3 +0.7
PSI pmax pmax
comp=Z,9.0nm,0.9s
RPSI Rantau Prapat 79.36 95 P P 03 50 39.8 -1.0
RPSI Rantau Prapat 79.36 95 P P 03 50 41.3 +0.5
RPSI IAmb IAmb 03 50 43.3
comp=Z,9.4nm,0.9s
KSAR Wonju Array Be 79.43 51 P P 03 50 40.0 -0.8
KSAR Wonju Array Be 79.43 51 P P 03 50 40.0 -0.8
KSRS Korea Array 79.44 51 P P 03 50 40.3 -0.6
comp=Z,3.2nm,0.8s,baz=308,slow=5.3,SNR=7.7
KSRS LR LR 04 30 58.8
comp=Z,71nm,18.9s,baz=322,slow=40
T47A Sharon Grove 79.67 309 P P 03 50 42.2 0.0
ECSD EROS Data Cent 80.51 319 P P 03 50 47.1 +0.4
ECSD IAmb IAmb 03 51 03.2
comp=Z,11nm,1.4s
YSS Yuzh-Sakhalins 80.85 36 P P 03 50 49.1 +0.7
YSS Yuzh-Sakhalins 80.85 36 eP P 03 50 49.4 +1.0
YSS e*SP PcP 03 50 54.4 -0.6
YSS eS S 04 01 01.8 +4.9
YSS pmax pmax
comp=Z,30nm,0.8s
YSS MLR MLR
comp=Z,500nm,14.0s
PETK Petropavlovsk- 81.87 24 LR LR 04 32 05.7
comp=Z,264nm,18.2s,baz=22,slow=39
EGMT Eagleton 83.38 329 P P 03 51 02.7 +0.9
BDFB Brasilia 83.39 244 P P 03 51 04.1 +1.9
comp=Z,2.8nm,0.7s,baz=96,slow=15,SNR=3.5
BDFB LR LR 04 29 47.4
comp=Z,79nm,18.0s,baz=325,slow=37
BDFB Brasilia 83.39 244 IAmb IAmb 03 51 07.6
comp=Z,30nm,1.8s
SDV Santo Domingo 85.35 278 P P 03 51 12.9 +0.5
YNE Yellowstone No 85.89 327 P P 03 51 16.3 +1.6
MJAR Matsushiro Arr 86.09 46 P P 03 51 14.9 -0.7
comp=Z,1.5nm,0.4s,baz=298,slow=6.5,SNR=6.3
MJAR LR LR 04 32 14.3
comp=Z,125nm,19.6s,baz=215,slow=37
MJAR Matsushiro Arr 86.09 46 IAmb IAmb 03 51 21.8
comp=Z,3.9nm,1.0s
PDAR Pinedale Array 87.48 326 P P 03 51 22.1 -0.5
comp=Z,0.5nm,0.8s,baz=63,slow=3.6,SNR=4.0
PDAR LR LR 04 32 52.2
comp=Z,149nm,18.6s,baz=36,slow=37
HWUT Hardware Ranch 89.30 326 IAmb IAmb 03 51 54.5
comp=Z,11nm,1.4s
SRU San Rafael Swe 90.84 324 P P 03 51 38.4 +0.1
SRU San Rafael Swe 90.84 324 P P 03 51 38.4 +0.1
SRU pmax pmax
comp=Z,7.0nm,1.0s
DUG Dugway, Tooele 91.00 326 P P 03 51 39.4 +0.4
DUG IAmb IAmb 03 52 07.8
comp=Z,10nm,1.4s
DUG Dugway, Tooele 91.00 326 P P 03 51 39.4 +0.4
DUG pmax pmax
comp=Z,10.0nm,1.5s
LEM Lembang 92.03 97 LR LR 04 37 03.8
comp=Z,33nm,18.3s,baz=341,slow=38
NVAR Mina Array Bea 94.81 329 LR LR 04 38 06.4
comp=Z,112nm,20.3s,baz=347,slow=38
TXAR Lajitas Array 94.88 313 P P 03 51 58.7 +1.7
comp=Z,0.5nm,0.8s,baz=69,slow=4.9,SNR=5.8
TXAR LR LR 04 35 36.9
comp=Z,41nm,18.2s,baz=0.0,slow=36
CPUP Villa Florida 96.92 242 LR LR 04 39 11.7
comp=Z,166nm,18.0s,baz=46,slow=38
LPAZ La Paz 98.71 256 LR LR 04 37 05.8
comp=Z,34nm,21.8s,baz=46,slow=36
WRA Warramunga Arr 120.67 92 PKP PKPdf 03 57 25.8 -1.0
comp=Z,0.3nm,0.6s,baz=322,slow=1.9,SNR=7.7
ASAR Alice Springs 122.31 96 PKP PKPdf 03 57 29.1 -0.8
comp=Z,0.7nm,0.7s,baz=358,slow=2.8,SNR=4.9

IDC **14** *03:43:16.4±3.0, 1°.64N±126°.32E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/32, mbtmp3.3/3, Error ellipse: s-maj=323.3km s-min=26.8km az=65.0*
DJA **14** *03:43:32.0±0.5, 0°N±4°×12°4E±°, h48km±15km, M3.5/7, MLv3.5/7*
ISC 14 03:43:30.3±1.1, **0°.23N**±0°.09×**123°.89E**±0°.06, **h110km, n9, σ1985/13, mb3.2/3, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	0.35	15	P	Pn	03 43 43.8	-2.6
LUWI	Luwuk	1.69	222	P	Pn	03 43 58.2	-1.2
LUWI				S	Sn	03 44 18.8	-2.7
MRSI	Marisa	1.96	277	P	Pn	03 44 03.6	+0.8
MRSI				S	Sn	03 44 26.5	-1.2
APSI	Ampana	2.51	243	P	Pn	03 44 10.1	+0.2
APSI				S	Sn	03 44 38.1	-2.2
SANI	Sanana	3.09	137	P	Pn	03 44 18.4	+0.9
SANI				S	Sn	03 44 52.4	-1.5
MPSI	Mapaga	3.99	272	P	Pn	03 44 30.7	+1.1
WRA	Warramunga Arr	22.51	154	P	P	03 48 21.4	+0.3
	0.3nm,0.4s,baz=338,slow=9.8,SNR=8.8						
ASAR	Alice Springs	25.67	158	P	P	03 48 52.8	+2.6
	0.3nm,0.4s,baz=347,slow=12,SNR=6.9						
MKAR	Makanchi Array	58.89	328	P	P	03 53 18.6	+0.8
	0.2nm,0.7s,baz=121,slow=7.2,SNR=4.2						

WEL **14** *04:17:21.5, 38°S±4°×17°9E±°, h12km, ML4.1/41, MLv4.0/97, Error ellipse: s-maj=0.0km s-min=0.0km az=6.1*
NEIC **14** *04:17:21.1±1.6, 38°.34S±0°.04×178°.6E±0°.1, h14km±8km, Error ellipse: s-maj=15.8km s-min=2.8km az=73.0*
IDC **14** *04:17:23.9±7.3, 38°.59S×178°.46E, h33km±48km, mb4.0/4, mb1 4.2/5, mb1mx3.8/37, mbtmp4.2/5, ML3.7/1, Error ellipse: s-maj=39.7km s-min=36.4km az=54.0*
ISC 14 04:17:21.5±1.1, **38°.23S**±0°.04×**178°.67E**±0°.08, **h29km, n129, σ1927/133, mb4.1/5, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	0.36	296	P	Pb	04 17 27.8	-2.0
PUZ				S	Sb	04 17 30.8	-4.6
WMGZ	Waiomatatini S	0.46	334	P	Pb	04 17 32.4	+0.3
PKGZ	Pakihiroa	0.58	306	P	Pb	04 17 32.2	-1.0
PKGZ				S	Sb	04 17 39.4	-1.8
TKGZ	Te Karaka	0.68	252	P	Pb	04 17 34.6	-0.3
MXZ	Matakaoa Point	0.73	336		Pb	04 17 36.6	+0.8
MXZ	Matakaoa Point	0.73	336	P	Pb	04 17 37.1	+1.3
RUGZ	Raukumara Rang	0.83	288	P	Pb	04 17 35.9	-1.4
RUGZ				S	Sb	04 17 45.2	-3.0
HAZ	Te Kaha	0.85	304	P	Pn	04 17 36.6	-0.8
HAZ				S	Sb	04 17 46.9	-1.7
RIGZ	Rimuhau	0.86	236	P	Pb	04 17 38.4	+0.6
MWZ	Matawai	0.91	263	P	Pn	04 17 37.7	-0.6
PRGZ	Paritu Road	0.93	222	P	Pb	04 17 39.7	+0.7
RAGZ	Rawiri	1.02	255	P	Pn	04 17 40.1	+0.2
MHGZ	Mahia Peninsul	1.10	213	P	Pb	04 17 42.4	+0.5
KNZ	Kokohu	1.11	224	P	Pn	04 17 41.6	+0.5
SNGZ	Shannon Statio	1.18	242	P	Pn	04 17 42.5	+0.4
URZ	Urewera	1.23	268	Pn	Pn	04 17 42.9	+0.2
	260nm,0.3s,baz=107,slow=7.5,SNR=1324						
URZ				Sn	Sn	04 17 57.9	-0.4
	258nm,0.3s,baz=356,slow=24,SNR=27						
URZ				LR	LR	04 18 10.0	
	comp=Z,304nm,20.0s,baz=40,slow=41						
URZ	Urewera	1.23	268	P	Pn	04 17 42.9	+0.2
WIZ	White Island	1.37	300	P	Pb	04 17 45.1	-1.3
RTZ	Ruatahuna	1.38	253	P	Pn	04 17 45.2	+0.3
WHRZ	Whale Island	1.39	285	P	Pn	04 17 45.7	-1.1
WHHZ	Waihua	1.41	233	P	Pn	04 17 45.7	+0.6
RAHZ	Arahi	1.42	241	P	Pn	04 17 45.8	+0.4
MUGZ	Murupara	1.52	260	P	Pn	04 17 47.2	+0.6
EDRZ	Edgecumbe	1.53	274	P	Pn	04 17 47.7	+0.8
MTHZ	Maungataniwha	1.56	246	P	Pn	04 17 47.9	+0.5
MARZ	Manawahe	1.59	278	P	Pn	04 17 48.3	+0.5
ARHZ	Aropaoanui	1.67	231	P	Pn	04 17 49.7	+1.0
NMHZ	Naumai	1.70	239	P	Pn	04 17 49.8	+0.5
RRRZ	Republican Roa	1.70	266	P	Pn	04 17 50.3	+1.1
TARZ	Mount Tarawera	1.71	269	P	Pn	04 17 50.1	+0.8
OPRZ	Ohinepanea	1.72	282	P	Pn	04 17 49.3	0.0
MKRZ	Makatiti	1.74	272	P	Pb	04 17 54.0	+1.2
PRRZ	Plateau Road	1.81	261	P	Pn	04 17 51.9	+1.2
OMRZ	Omania	1.82	273	P	Pn	04 17 51.8	+1.0

LIRZ Lichensteins R 1.82 276 P Pn 04 17 51.5 +0.7
HLRZ Highlands Stat 1.83 269 P Pb 04 17 52.5 -1.7
ALRZ Allen Road 1.86 259 P Pb 04 17 53.7 -1.1
MRHZ Matea Rd 1.87 250 P Pn 04 17 52.3 +0.7
HRRZ Handcock Road 1.89 264 P Pn 04 17 53.1 +1.3
CKHZ Cape Kidnapper 1.89 221 P Pn 04 17 52.1 +1.3
HSRZ Hossack Road 1.91 267 P Pn 04 17 53.7 +1.6
KARZ Kaharoa 1.93 276 P Pn 04 17 52.8 +0.4
BKZ Black Stump Fm 1.94 241 Pn 04 17 53.1 +0.5
BKZ Black Stump Fm 1.94 241 P Pn 04 17 53.2 +0.6
UTU Utuhina 1.95 271 P Pb 04 17 56.1 -0.3
MCHZ McNeill Hill 1.96 231 P Pn 04 17 53.3 +0.5
NGRZ Ngongotaha 1.96 273 P Pn 04 17 54.2 +1.4
TGRZ Tauranga 1.97 284 P Pn 04 17 53.0 +0.1
WPRZ Whakapapatarin 1.99 261 P Pb 04 17 57.4 +0.3
GRRZ Galatos Road 2.02 266 P Pn 04 17 55.2 +1.6
KAHZ Kahuranaki 2.10 221 P Pn 04 17 54.7 0.0
KWHZ Kaweka Forest 2.12 235 P Pn 04 17 55.3 +0.3
HATZ Hinemaiaia 2.13 251 P Pb 04 17 59.0 +0.1
WHTZ Whakaora 2.17 258 P Pn 04 17 57.2 +1.4
KMRZ Kaimai 2.19 279 P Pn 04 17 55.8 -0.1
KUTZ Kaahu Road 2.25 263 P Pn 04 17 58.2 +1.3
KRHZ Kereru 2.28 231 P Pn 04 17 57.1 -0.1
PXZ Pawanui 2.28 217 P Pn 04 17 57.2 0.0
RITZ Rihia Road 2.33 250 P Pn 04 18 00.1 +2.2
WATZ Wairara 2.36 257 P Pn 04 17 59.0 +0.8
RATZ Rangitukua 2.36 253 P Pn 04 18 00.3 +2.0
BHHZ Black Hill Sta 2.39 238 P Pn 04 17 59.0 +0.2
KATZ Kakaramea 2.45 251 P Pb 04 18 06.5 +1.7
TLZ Tolley Road 2.47 267 P Pn 04 18 00.0 +0.2
WPHZ Waipukurau 2.52 223 P Pn 04 18 00.1 -0.4
KRVZ Karewarewa 2.52 249 P Pn 04 18 00.9 +0.3
TOZ Tahuroa Road 2.55 280 P Pn 04 18 01.1 +0.2
PNHZ Pukenui 2.56 228 P Pn 04 18 00.5 -0.5
MOVZ Moawhango 2.56 242 P Pn 04 18 01.4 +0.3
WTVZ West Tongariro 2.57 249 P Pn 04 18 02.0 +0.7
PRHZ Porangahau 2.58 217 P Pn 04 18 00.3 -0.9
TUVZ Tukino 2.58 245 P Pn 04 18 02.1 +0.7
NGZ Ngauruhoe 2.58 248 P Pn 04 18 01.7 +0.2
WHVZ Whangaehu Hut 2.63 245 P Pn 04 18 03.3 +1.1
FWVZ Far West T-bar 2.65 246 P Pn 04 18 03.0 +0.6
TRVZ Turoa 2.67 245 P Pn 04 18 03.6 +1.0
TWVZ Taurewa 2.67 251 P Pn 04 18 03.1 +0.5
KUZ Kuaotunu 2.78 301 P Pn 04 18 03.8 -0.2
TSZ Takapari Road 2.79 228 P Pn 04 18 03.6 -0.6
ANWZ Angora Road 2.80 217 P Pn 04 18 03.2 -1.2
DVHZ Dannevirke 2.84 222 P Pn 04 18 04.0 -0.9
MKAZ Moumakai 3.00 291 P Pn 04 18 07.2 +0.1
HIZ Hauiti 3.01 263 Pn Pn 04 18 08.1 +0.9
HIZ Hauiti 3.01 263 P Pn 04 18 08.3 +1.1
BFZ Birch Farm 3.08 217 P Pn 04 18 06.9 -1.3
POWZ Post Office Ro 3.12 225 P Pn 04 18 08.0 -0.7
PRWZ Pori Road 3.12 221 P Pn 04 18 08.6 -0.2
WIAZ Waiheke Island 3.16 296 P Pn 04 18 09.6 +0.4
VRZ Vera Road 3.19 253 P Pn 04 18 11.1 +1.4
KBAZ Karaka Road Bo 3.21 290 P Pn 04 18 11.2 +1.3
ETAZ East Tamaki Re 3.23 292 P Pn 04 18 11.1 +0.8
GRZ Great Barrier 3.24 307 P Pn 04 18 10.8 +0.5
WAZ Wanganui 3.25 241 P Pn 04 18 11.5 +0.9
CPWZ Castlepoint 3.29 215 P Pn 04 18 09.1 -1.1
MBAZ Motutapu North 3.34 295 P Pn 04 18 12.4 +0.7
EPAZ Eden Park BICE 3.40 292 P Pn 04 18 13.8 +1.2
AWAZ Awhitu Peninsu 3.40 289 P Pn 04 18 13.7 +1.1
MRZ Mangatainoka R 3.41 224 P Pn 04 18 11.3 -1.4
HBAZ Herne Bay Bore 3.42 293 P Pn 04 18 13.9 +1.0
ABAZ Army Bay 3.46 297 P Pn 04 18 14.5 +1.1
LREZ Lake Rotokare 3.55 248 P Pn 04 18 15.8 +1.2
HOWZ Holdsworth Sta 3.61 222 P Pn 04 18 13.9 -1.6
PREZ Palmer Road 3.70 251 P Pn 04 18 16.0 -0.7
PKE Pukeiti 3.79 254 P Pn 04 18 19.6 +1.7
KHEZ Kahui Hut 3.79 252 P Pn 04 18 19.8 +1.8
NBEZ Newall Road No 3.90 253 P Pn 04 18 21.9 +2.5
MSWZ Moikau Station 4.13 219 Pn Pn 04 18 20.6 -2.0
WCZ Waipu Caves 4.15 302 P Pn 04 18 23.7 +0.9
PLWZ Palliser 4.25 217 Pn Pn 04 18 22.0 -2.2
SNZO South Karori 4.34 224 Pn Pn 04 18 22.7 -2.7
TUWZ Tuamarina 4.84 227 Pn Pn 04 18 30.5 -1.9
OUZ Omahuta 5.06 305 P Pn 04 18 37.1 +1.7
BSWZ Blackbirch Sta 5.07 225 Pn Pn 04 18 33.6 -1.8
QRZ Quartz Range 5.41 239 Pn Pn 04 18 37.9 -2.2
THZ Tophouse 5.66 230 Pn Pn 04 18 41.1 -2.6
KHZ Kahutara 5.73 222 Pn Pn 04 18 43.8 -0.8
LTZ Lake Taylor 6.67 225 Pn Pn 04 18 55.9 -1.6
MQZ McQueen's Vall 7.12 218 Pn Pn 04 19 01.9 -1.6
RPZ Rata Peaks 7.95 224 Pn Pn 04 19 11.8 -3.3
1.1nm,0.3s,baz=28,slow=5.4,SNR=5.1
RPZ Sn Sn 04 20 35.2 -8.8
2.4nm,0.3s,baz=147,slow=22,SNR=13
RPZ Rata Peaks 7.95 224 Pn 04 19 13.5 -1.5
ODZ Otahua Downs 9.08 219 Pn Pn 04 19 28.6 -1.8
STKA Stephens Creek 30.86 270 P P 04 23 37.2 +2.0
2.7nm,0.6s,baz=96,slow=11,SNR=5.7
STKA Stephens Creek 30.86 270 IAmb IAmb 04 24 08.9
comp=Z,3.3nm,1.6s
CTA Charters Tower 33.36 294 P P 04 23 59.0 +1.8
comp=Z,1.4nm,0.4s,baz=116,slow=11,SNR=4.5
AS31 Alice Springs 40.66 278 P P 04 25 00.1 +0.9
AS31 IAmb IAmb 04 25 01.1
comp=Z,1.7nm,0.3s
ASAR Alice Springs 40.66 278 P P 04 24 59.7 +0.5
comp=Z,1.1nm,0.3s,baz=118,slow=6.3,SNR=30
WRA Warramunga Arr 42.36 283 P P 04 25 13.5 +0.3
comp=Z,1.5nm,0.4s,baz=125,slow=7.2,SNR=3.4
ARCES ARCESS Array B 145.49 344 PKPbc PKiKP 04 36 58.2 -1.4
comp=Z,2.0nm,0.8s,baz=20,slow=2.9,SNR=6.4
FINES FINESS Array B 151.21 333 PKPbc PKiKP 04 37 13.1 +1.5
comp=Z,0.8nm,0.6s,baz=42,slow=3.1,SNR=7.7

MEX 14 04:20:56.2±1.2, 14.°38N×92.°13W, h72km±13km, MD3.6
GCG 14 04:20:56.5±0.7, 14.°77N×92.°13W, h80km±9km, MD3.8
ISC 14 04:20:56.8±2.3, 14.°5N±0.°1×92.°3W±0.°1, h69km±14km, n8, σ0s78/15, 1D, Near coast of Chiapas

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

THIG 0.45 359 eP Pn 04 21 08.3 -0.8
THIG iS Sn 04 21 18.4 +0.4
ERG Entre ros, C 0.67 91 eP Pn 04 21 11.0 -0.2
ERG eS Sn 04 21 23.6 +1.7
STG3 Santiaguito 3, 0.71 69 eP Pn 04 21 11.4 -0.6
FUG Fuego 3 1.37 90 eP Pn 04 21 20.0 -0.3
FUG eS Sn 04 21 38.0 +0.2
PCIG 1.55 323 eP Pn 04 21 22.4 -0.1
PCIG iS Sn 04 21 42.2 +0.4
PCG Pacaya 1.60 92 eP Pn 04 21 23.5 +0.2
PCG eS Sn 04 21 43.7 +0.4
IXG Ixpaco 1.78 99 eP Pn 04 21 25.7 0.0
IXG eS Sn 04 21 46.1 -1.5
CCIG Comitan 1.82 4 eP Pn 04 21 26.6 +0.3
CCIG ⇓iS Sn 04 21 48.4 -0.2

IDC 14 04:28:47.2±1.5, 36.°82N×27.°43E, h0km, mb3.6/2, mb1 3.4/6, mb1mx3.2/41, mbtmp3.4/6, ML3.1/4, Error ellipse: s-maj=41.3km s-min=19.8km az=150.0
ATH 14 04:28:48.2, 36.°82N×27.°40E, h28km±1km, ML3.2/9, Error ellipse: s-maj=1.7km s-min=1.0km az=76.0
NIC 14 04:28:48.9±0.0, 36.°72N×27.°28E, h2km±3km, Ml2.9/1
DDA 14 04:28:48.7, 36.°83N×27.°44E, h3km±1km, ML2.8
THE 14 04:28:48.3, 36.°83N×27.°44E, h0km, ML3.2/5, Error ellipse: s-maj=0.8km s-min=0.5km az=198.0
ISK 14 04:28:48.1, 36.°83N×27.°45E, h16km, ML3.3/35
ISC 14 04:28:48.7±0.8, 36.°83N±0.°02×27.°44E±0.°02, h13km±5km, n122, σ1s08/154, Dodecanese Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

DAT Datca 0.15 132 PG Pg 04 28 52.4 -0.2
DAT SG Sg 04 28 54.9 -0.3
DAT Datca 0.15 132 iP Pg 04 28 52.3 -0.2
DAT iS Sg 04 28 54.7 -0.4
DAT IAML 04 28 57.0
comp=E,4µm,0.2s
DAT IAML 04 28 57.0
comp=N,5µm,0.2s
BDRM Kayabasi 0.23 1 iP Pg 04 28 53.7 -0.1
BDRM iS Sg 04 28 56.6 -0.6
BDRM IAML 04 28 57.0
comp=E,5µm,0.4s
BODT Bodrum 0.25 336 P Pg 04 28 54.1 0.0
BODT S Sg 04 28 58.5 +0.8
BODT Bodrum 0.25 336 PG Pg 04 28 54.2 +0.1
BODT SG Sg 04 28 58.5 +0.8
NISR Nisiros 0.33 229 P Pg 04 28 55.7 +0.3
NISR S Sg 04 29 00.8 +0.8
comp=E,12µm,0.2s
NISR Nisiros 0.33 229 P Pg 04 28 55.8 +0.3
NISR S Sg 04 29 00.7 +0.7
NISR AML AML 04 29 01.6
comp=N,14448µm,0.2s
NISR AML AML 04 29 02.4
comp=E,35064µm,0.2s
KOSK Kos Island 0.38 258 P Pg 04 28 56.5 +0.3
KOSK S Sb 04 29 02.8 -0.2
comp=E,2µm,0.4s
KOSK Kos Island 0.38 258 PG Pg 04 28 56.6 +0.3
DIDI Didim-Aydin 0.57 344 PG Pg 04 29 00.0 +0.1
MRSB Marmaris-Mugla 0.62 100 PG Pg 04 29 00.5 -0.4
MRSB SG Sg 04 29 09.6 +0.5
YER Yerkesik 0.74 66 P Pg 04 29 03.1 -0.1
YER S Sb 04 29 14.1 +0.4
YER Yerkesik 0.74 66 PG Pg 04 29 03.0 -0.1
ARG Arkhangelos 0.83 138 P Pg 04 29 04.2 -0.5
ARG S Sb 04 29 17.7 +1.7
comp=E,2µm,0.3s
ARG Arkhangelos 0.83 138 P Pg 04 29 04.6 -0.2
ARG S Sb 04 29 17.2 +1.1
ARG AML AML 04 29 19.9
comp=E,5236µm,0.4s
ARG AML AML 04 29 20.9
comp=N,3693µm,0.4s
ARG Arkhangelos 0.83 138 PG Pg 04 29 04.3 -0.5
ARG SG Sb 04 29 16.5 +0.5
ARG Arkhangelos 0.83 138 P Pg 04 29 04.8 +0.1
ARG S Sn 04 29 18.2 0.0
GCAM G?zelcaml? 0.88 349 PG Pg 04 29 05.5 -0.3
GCAM SG Sb 04 29 18.4 +0.8
GCAM G?zelcaml? 0.88 349 iP Pg 04 29 05.8 0.0
GCAM iS Sb 04 29 18.8 +1.2
TURN Turunc 0.94 87 PG Pg 04 29 00.9 -5.9
TURN SG Sg 04 29 10.6 -8.5
DALY Dalyan (Mula) 0.98 90 PG Pg 04 29 07.1 -0.5
DALY Dalyan (Mula) 0.98 90 iP Pg 04 29 07.6 0.0
DALY iS Sb 04 29 22.0 +1.7
DALY IAML 04 29 26.0
comp=N,610nm,0.4s
DALY IAML 04 29 26.0
comp=E,543nm,0.9s
SMG Samos 1.00 332 P Pg 04 29 07.3 -0.7
SMG S Sb 04 29 22.1 +1.1
comp=E,2µm,0.4s
SMG Samos 1.00 332 P Pg 04 29 07.5 -0.5
SMG S Sb 04 29 21.8 +0.8
SMG AML AML 04 29 26.7
comp=E,3482µm,0.3s
SMG AML AML 04 29 27.0
comp=N,5345µm,0.4s
AYDB Zeytinkoy-Aydi 1.17 18 PN Pg 04 29 10.4 -0.9
AMGA Amorgos Island 1.24 270 P Pb 04 29 10.8 -1.2
AMGA S Sn 04 29 30.0 +1.6
comp=N,670nm,0.3s
AMGA Amorgos Island 1.24 270 P Pb 04 29 10.9 -1.1
AMGA S Sb 04 29 28.4 +0.5
AMGA AML AML 04 29 33.2
comp=N,1217µm,0.3s
AMGA AML AML 04 29 34.2
comp=E,1400µm,0.3s
DGB zmir 1.30 340 iP Pn 04 29 12.0 -0.6
DGB IAML 04 29 34.0
comp=E,188nm,0.5s
DGB IAML 04 29 40.0
comp=N,152nm,0.8s
KARP Karpathos 1.30 190 P Pn 04 29 12.1 -0.6
KARP Karpathos 1.30 190 P Pn 04 29 12.0 -0.6
KARP AML AML 04 29 36.7
comp=E,1140µm,0.5s
KARP AML AML 04 29 38.5
comp=N,959µm,0.4s
KARP Karpathos 1.30 190 PN Pn 04 29 12.2 -0.5
KARP Karpathos 1.30 190 P Pn 04 29 12.0 -0.6
KARP S Sb 04 29 29.4 -0.3
KARP AML AML 04 29 32.1
comp=N,1.0nm,0.6s
KARP AML AML 04 29 32.1
comp=N,1.0nm,0.6s
KARP AML AML 04 29 34.5
comp=N,0.7nm,0.4s
KARP AML AML 04 29 34.5
comp=N,0.7nm,0.4s
GMLD Gumuldur 1.31 342 PN Pn 04 29 12.2 -0.6
FETY Fethiye 1.34 98 P Pn 04 29 13.5 +0.3
FETY S Sn 04 29 32.2 +1.4
FETY Fethiye 1.34 98 PN Pn 04 29 13.1 -0.1
FETY Fethiye 1.34 98 iP Pn 04 29 14.1 +1.0
FETY iS Sb 04 29 31.8 +1.1
FETY IAML 04 29 38.0
comp=E,162nm,0.4s
FETY IAML 04 29 38.0
comp=N,201nm,0.4s
TAVA DENIZLI_Tavas 1.34 61 iP Pn 04 29 13.7 +0.5
TAVA iS Sg 04 29 32.9 +0.9
TAVA IAML 04 29 40.0
comp=N,76nm,0.3s
TAVA IAML 04 29 41.0
comp=E,119nm,0.4s
ANAF Anafi Island 1.42 251 P Pn 04 29 13.3 -1.0
ANAF Anafi Island 1.42 251 P Pn 04 29 13.7 -0.6
ANAF AML AML 04 29 39.6
comp=E,1744µm,0.3s
ANAF AML AML 04 29 40.1
comp=N,2656µm,0.3s
APE Apeiranthos 1.54 279 P Pn 04 29 15.4 -0.6
APE Apeiranthos 1.54 279 P Pn 04 29 15.4 -0.6
APE AML AML 04 29 42.6
comp=N,726µm,0.3s
APE AML AML 04 29 43.9
comp=E,438µm,0.4s
APE Apeiranthos 1.54 279 PN Pn 04 29 15.6 -0.5
APE Apeiranthos 1.54 279 P Pn 04 29 15.5 -0.5
APE S Sn 04 29 36.6 +0.6
DENT Denizli 1.57 54 PN Pn 04 29 15.9 -0.5
BLCB Balcova 1.58 349 PN Pn 04 29 15.9 -0.6
ZEY zmir 1.59 332 iP Pn 04 29 16.0 -0.6
ZEY IAML 04 29 47.0
comp=E,170nm,0.3s
ZEY IAML 04 29 48.0
comp=N,312nm,0.5s
SANT Santorini 1.66 255 P Pn 04 29 17.5 0.0
SANT Santorini 1.66 255 PN Pn 04 29 17.7 +0.1
URLA Izmir 1.67 337 PN Pn 04 29 17.4 -0.3
URLA Izmir 1.67 337 iP Pn 04 29 17.3 -0.3
URLA IAML 04 29 49.0
comp=E,116nm,0.5s
URLA IAML 04 29 49.0
comp=N,117nm,0.6s
THT2 Imerovigli 1.67 257 PN Pn 04 29 17.8 +0.1
THR3 Thira Island, 1.69 256 P Pn 04 29 17.2 -0.8
THR6 Thira Island, 1.71 255 P Pn 04 29 17.8 -0.4
IOSP Ios island 1.73 267 P Pn 04 29 18.1 -0.4
IOSP Ios island 1.73 267 P Pn 04 29 18.1 -0.4
GOLH Golhisar 1.75 76 iP Pb 04 29 21.4 +0.6
GOLH iS Sg 04 29 46.0 +1.1
GOLH IAML 04 29 55.0
comp=N,124nm,0.6s
AKAS Kas 1.85 108 PN Pn 04 29 20.4 +0.2
AKAS Kas 1.85 108 iP Pb 04 29 22.5 0.0
AKAS iS Sg 04 29 50.9 +2.7
AKAS IAML 04 29 57.0
comp=E,129nm,0.5s
AKAS IAML 04 30 00.0
comp=N,130nm,0.6s
MANT Manisa 1.88 28 iP Pn 04 29 20.6 -0.2
MANT IAML 04 29 56.0
comp=E,92nm,0.6s
MANT IAML 04 29 57.0
comp=N,66nm,0.3s
CHOS Chios island 1.90 325 P Pn 04 29 20.7 -0.3
CHOS Chios island 1.90 325 P Pn 04 29 20.6 -0.3
CHOS AML AML 04 29 54.7
comp=E,681µm,0.8s
CHOS AML AML 04 30 00.2
comp=N,792µm,0.7s
CHOS Chios island 1.90 325 PN Pn 04 29 20.9 -0.1
GOMA Golmarmara-Man 1.91 11 PN Pn 04 29 20.8 -0.2
KULA Kula-Manisa 1.94 30 P Pn 04 29 21.4 -0.1
KULA Kula-Manisa 1.94 30 PN Pn 04 29 21.2 -0.3
STIA Sitia Lasithi 1.96 214 P Pn 04 29 21.3 -0.3
ZKR Zakros 1.98 210 P Pn 04 29 21.8 -0.1
ZKR Zakros 1.98 210 P Pn 04 29 21.9 0.0
ZKR Zakros 1.98 210 PN Pn 04 29 21.9 0.0
ZKR Zakros 1.98 210 P Pn 04 29 21.9 0.0
ELL Elmali 1.99 92 PN Pn 04 29 22.3 +0.1
ELL Elmali 1.99 92 P Pb 04 29 25.7 +0.8
ELL S Sg 04 29 54.4 +1.8
AKHS Akhisar 2.07 8 iP Pn 04 29 22.9 -0.3
AKHS IAML 04 30 03.0
comp=E,50nm,0.5s
AKS Akhisar 2.07 8 PN Pn 04 29 23.5 +0.3
ZEDA zmir-Bergama 2.15 353 iP Pn 04 29 23.8 -0.6
ZEDA IAML 04 30 04.0
comp=N,95nm,0.7s
ZEDA IAML 04 30 07.0
comp=E,81nm,0.6s
NPS Neapolis 2.15 224 P Pn 04 29 24.1 -0.2
NPS Neapolis 2.15 224 P Pn 04 29 24.2 -0.2
KHAL Karahalli 2.24 46 iP Pn 04 29 26.7 +1.0
USAK Uak-Merkez 2.26 33 iP Pn 04 29 25.5 -0.3
USAK IAML 04 30 12.0
comp=N,81nm,0.4s
USAK IAML 04 30 13.0
comp=E,40nm,1.0s
BRDR BURDUR-Merkez 2.27 67 iP Pb 04 29 29.3 -0.2
BRDR IAML 04 30 13.0
comp=N,38nm,0.8s
BRDR IAML 04 30 16.0
comp=E,42nm,0.5s
DKL Dikili 2.28 350 PN Pn 04 29 25.9 -0.1
LAST Lasithi 2.30 224 P Pn 04 29 26.3 -0.2
KORT Korkueli 2.34 85 PN Pn 04 29 27.2 +0.1
KORT Korkueli 2.34 85 iP Pn 04 29 29.5 +2.4
KORT IAML 04 30 10.0
comp=N,56nm,0.4s
KORT IAML 04 30 17.0
comp=E,68nm,0.6s
AKUM Antalya-Kumluc 2.39 101 iP Pb 04 29 30.5 -1.1
AKUM iS Sb 04 30 00.5 -0.6
AKUM IAML 04 30 13.0
comp=N,86nm,0.6s
AKUM IAML 04 30 14.0
comp=E,40nm,0.5s
DEMI Demirci 2.43 24 iP Pn 04 29 28.4 +0.1
STEP BALIKESIR_Sava 2.55 5 iP Pn 04 29 30.2 +0.3
STEP IAML 04 30 19.0
comp=E,89nm,0.6s
STEP IAML 04 30 23.0
comp=N,136nm,0.9s
SIMA Simav-Kutahya 2.56 28 PN Pn 04 29 30.3 +0.3
IDI Anoyia 2.57 234 Pn Pn 04 29 30.2 -0.1
comp=N,1.2nm,0.3s,baz=74,slow=5.0,SNR=15
IDI Anoyia 2.57 234 P Pn 04 29 30.1 -0.1
IDI Anoyia 2.57 234 PN Pn 04 29 30.1 -0.1
KZIL AFYON_Kizioren 2.58 56 iP Pn 04 29 31.5 +1.2
ANTB Antalya 2.58 88 PN Pn 04 29 30.3 +0.1
PRK Paraskevi 2.58 339 P Pn 04 29 30.9 +0.6
PRK Paraskevi 2.58 339 P Pn 04 29 30.8 +0.6
PRK AML AML 04 30 19.7
comp=N,460µm,0.8s
PRK AML AML 04 30 20.5
comp=E,449µm,0.6s
KARY Karystos 2.67 298 P Pn 04 29 31.9 +0.4
SIGR SIGRI 2.69 333 P Pn 04 29 31.7 +0.1
SIGR SIGRI 2.69 333 P Pn 04 29 31.5 -0.2
SIGR SIGRI 2.69 333 PN Pn 04 29 31.7 +0.1
GDZ Gediz 2.77 35 iP Pn 04 29 32.7 -0.3
BALB Balikesir 2.83 7 PN Pn 04 29 34.1 +0.5
DURS Dursunbey 2.88 16 iP Pn 04 29 34.2 -0.3
DURS IAML 04 30 28.0
comp=N,44nm,0.8s
DURS IAML 04 30 33.0
comp=E,53nm,1.2s
BALY Balya 2.91 3 iP Pn 04 29 34.8 0.0
BALY IAML 04 30 28.0
comp=E,39nm,0.7s
BALY IAML 04 30 32.0
comp=N,76nm,0.7s
BAGO Egridir - ISPA 2.91 66 iP Pb 04 29 38.6 -1.9
BAYC CANAKKALE_Bayr 2.99 347 iP Pn 04 29 35.9 0.0
SHUT Suhut-Afyon 3.01 54 PN Pn 04 29 35.9 -0.3
TVSB Tavsanli 3.06 31 PN Pn 04 29 37.3 +0.3
IMMV Iera Moni Meta 3.11 245 PN Pn 04 29 37.4 -0.2
EZN Ezine 3.12 344 PN Pn 04 29 37.8 +0.2
BOZC Bozcaada 3.20 341 PN Pn 04 29 38.9 +0.2
BOZC Bozcaada 3.20 341 iP Pn 04 29 38.5 -0.2
KEPZ Antalya-Kepez 3.34 88 iP Pn 04 29 44.0 +3.2
KEPZ iS Sb 04 30 26.1 -2.4
KEPZ IAML 04 30 29.0
comp=N,32nm,0.6s
KEPZ IAML 04 30 31.0
comp=E,21nm,0.9s
KNL Balıkesir 3.44 1 iP Pg 04 29 53.4 -1.2
KNL IAML 04 30 47.0
comp=E,34nm,0.6s
SEYD Seydisehir-KON 3.56 79 PN Pn 04 29 44.1 +0.2
VLI Veliai 3.61 270 P Pn 04 29 44.1 -0.3
XOR Xorichti 4.20 308 P Pn 04 29 52.9 +0.4
ALN Alexandroupoli 4.20 345 P Pn 04 29 53.1 +0.6
BRTR Keskin Array B 5.67 57 Pn Pn 04 30 14.8 +1.9
comp=E,0.3nm,0.3s,baz=238,slow=16,SNR=11
MMAI Mount Meron Ar 7.57 118 Pn Pn 04 30 39.1 +0.2
comp=E,1.0nm,0.3s,baz=304,slow=12,SNR=2.8
MMAI Sn Sn 04 32 00.7 -3.9
comp=E,2.5nm,0.3s,baz=303,slow=29,SNR=3.6
EIL Elat 9.51 136 Pn Pn 04 31 05.5 0.0
comp=E,0.2nm,0.3s,baz=346,slow=10,SNR=7.4
TORD Torodi Ar. Bea 32.98 231 P P 04 35 23.5 +0.1
comp=E,0.2nm,0.3s,baz=29,slow=9.9,SNR=5.3
MKAR Makanchi Array 41.32 58 P P 04 36 34.8 +0.8
comp=E,0.5nm,0.5s,baz=269,slow=9.5,SNR=12

ATH 14 04:42:18.8, 38.°18N×20.°35E, h13km, ML2.9/20, Error ellipse: s-maj=1.9km s-min=0.9km az=67.0
THE 14 04:42:19.0, 38.°18N×20.°32E, h8km, ML3.3/9, Error ellipse: s-maj=0.8km s-min=0.4km az=88.0
ISC 14 04:42:19.4±0.9, 38.°18N±0.°02×20.°36E±0.°03, h10km±4km, n80, σ0s75/105, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

CHV1 Chavriata, Kef 0.01 72 P Pg 04 42 21.0 -0.2
CHV1 S Sg 04 42 22.2 -0.2
LXRA Lixouri, Kepha 0.06 70 P Pg 04 42 21.6 +0.1
LXRA S Sg 04 42 23.2 +0.1
ARGA Argostoli. Kep 0.09 91 P Pg 04 42 21.9 0.0
ARGA S Sg 04 42 23.4 -0.3
KEF4 Livadi, Kephal 0.09 31 P Pg 04 42 21.9 0.0
KEF4 S Sg 04 42 23.8 +0.1
ARG2 Argostoli 0.10 90 P Pg 04 42 22.1 +0.1
ARG2 S Sg 04 42 23.9 +0.1
KEF2 Argostoli. Kep 0.10 98 P Pg 04 42 22.1 +0.1
KEF2 S Sg 04 42 24.0 +0.2
KEF1 Kardakata, Kep 0.13 40 P Pg 04 42 22.4 0.0
KEF1 S Sg 04 42 24.5 -0.1
VLS Valsamata 0.18 90 P Pg 04 42 23.2 0.0
VLS S Sg 04 42 26.2 +0.3
37µm,0.1s
VLS Valsamata 0.18 90 P Pg 04 42 23.2 0.0
VLS S Sg 04 42 26.0 +0.1
VLS AML AML 04 42 26.3
comp=N,79994µm,0.2s
VLS AML AML 04 42 26.3
comp=E,66071µm,0.1s
VSK1 VASILIKIADES 0.28 34 P Pg 04 42 25.1 0.0
VSK1 S Sg 04 42 29.1 +0.2
comp=E,10µm,0.3s
KONA Konidatara, Ke 0.29 33 P Pg 04 42 25.2 -0.2
KONA S Sg 04 42 29.9 +0.6
VLMS Volimes, Zakyn 0.38 142 P Pg 04 42 27.0 0.0
VLMS S Sg 04 42 32.7 +0.6
VLMS AML AML 04 42 34.4
comp=E,20507µm,0.2s
VLMS AML AML 04 42 34.5
comp=N,18984µm,0.2s
EVGI Lefkada island 0.50 27 P Pg 04 42 28.8 -0.3
EVGI S Sg 04 42 36.0 +0.3
EVGI Lefkada island 0.50 27 P Pg 04 42 28.8 -0.3

EVGI				S	Sg	04 42 35.8	+0.1
ZAK2	Zakynthos	0.58	133	P	Pb	04 42 30.9	-0.7
ZAK2				S	Sb	04 42 39.1	-0.7
	comp=N,11μm,0.3s						
MGNA	Meganis	0.58	35	P	Pg	04 42 30.3	-0.5
MGNA				S	Sg	04 42 38.8	+0.3
MGNA				AML	AML	04 42 39.6	
	comp=N,1961μm,0.3s						
MGNA				AML	AML	04 42 40.1	
	comp=E,1512μm,0.2s						
KRI1	kERI	0.63	145	P	Pg	04 42 31.1	-0.5
KRI1				S	Sb	04 42 40.8	-0.5
	comp=E,4μm,0.2s						
LKD2	Lefkada island	0.65	21	P	Pg	04 42 31.3	-0.7
LKD2	Lefkada island	0.65	21	P	Pg	04 42 31.4	-0.7
LKD2				AML	AML	04 42 50.7	
	comp=N,1444μm,0.3s						
LKD2				AML	AML	04 42 53.5	
	comp=E,962μm,0.6s						
AST1	Astakos	0.68	57	P	Pg	04 42 32.0	-0.5
AST1				S	Sb	04 42 42.9	+0.2
	comp=E,2μm,0.4s						
TSLK	Tsoukalades, L	0.68	19	P	Pg	04 42 32.0	-0.7
TSLK	Tsoukalades, L	0.68	19	P	Pg	04 42 32.0	-0.7
PDO	Prodromos	0.77	57	P	Pg	04 42 33.8	-0.5
PDO				S	Sb	04 42 46.2	+0.8
	comp=E,2μm,0.6s						
PDO	Prodromos	0.77	57	P	Pg	04 42 33.6	-0.6
PDO				AML	AML	04 42 53.1	
	comp=E,2270μm,0.3s						
PDO				AML	AML	04 42 54.5	
	comp=N,3290μm,0.5s						
RLS	Riolos of Patr	0.88	98	P	Pg	04 42 35.8	-0.6
RLS				S	Sb	04 42 49.5	+1.0
	comp=N,682nm,0.3s						
RLS	Riolos of Patr	0.88	98	P	Pg	04 42 35.7	-0.6
RLS				S	Sg	04 42 48.3	+0.5
RLS				AML	AML	04 42 52.9	
	comp=E,1600μm,0.3s						
RLS				AML	AML	04 42 54.7	
	comp=N,1128μm,0.3s						
PVO	Paravola	1.01	64	P	Pg	04 42 38.5	-0.4
PVO				S	Sn	04 42 54.2	+0.2
	comp=N,910nm,0.3s						
PVO	Paravola	1.01	64	P	Pg	04 42 38.5	-0.4
PVO				AML	AML	04 43 00.3	
	comp=E,2164μm,0.6s						
PVO				AML	AML	04 43 00.7	
	comp=N,1761μm,0.4s						
DRO	Drossia	1.09	102	P	Pb	04 42 39.6	-0.7
DRO				S	Sn	04 42 57.3	+1.5
	comp=N,2μm,0.4s						
DRO	Drossia	1.09	102	P	Pb	04 42 39.6	-0.7
DRO				S	Sn	04 42 55.5	-0.4
DRO				AML	AML	04 43 02.4	
	comp=E,3208μm,0.3s						
DRO				AML	AML	04 43 06.0	
	comp=N,3130μm,0.4s						
AMT	Artemida-Makis	1.25	121	P	Pn	04 42 42.2	-0.7
AMT	Artemida-Makis	1.25	121	P	Pn	04 42 42.6	-0.4
AMT				AML	AML	04 43 12.6	
	comp=E,1392μm,0.6s						
AMT				AML	AML	04 43 15.6	
	comp=N,1184μm,0.5s						
LAKA	Lakka	1.27	87	P	Pn	04 42 41.9	-1.4
LAKA				S	Sg	04 43 01.5	+1.1
LAKA	Lakka	1.27	87	P	Pn	04 42 42.4	-0.9
LAKA				AML	AML	04 43 03.3	
	comp=N,1095μm,0.4s						
LAKA				AML	AML	04 43 06.3	
	comp=E,674μm,0.4s						
ANX	Ano Chora	1.29	71	P	Pn	04 42 43.0	-0.6
ANX	Ano Chora	1.29	71	P	Pn	04 42 43.1	-0.5
ANX				AML	AML	04 43 07.5	
	comp=N,1851μm,0.5s						
ANX				AML	AML	04 43 10.0	
	comp=E,1833μm,0.6s						
EVR	Evrytania	1.35	57	P	Pn	04 42 43.8	-0.7
EVR	Evrytania	1.35	57	P	Pn	04 42 43.7	-0.8
EVR				AML	AML	04 43 14.1	
	comp=N,467μm,0.6s						
EVR				AML	AML	04 43 16.8	
	comp=E,451μm,0.6s						
IGT	Igoumenitsa	1.35	359	P	Pb	04 42 44.3	-0.6
IGT	Igoumenitsa	1.35	359	P	Pg	04 42 44.9	-0.5
IGT				AML	AML	04 43 11.4	
	comp=E,346μm,0.6s						
IGT				AML	AML	04 43 11.8	
	comp=N,332μm,0.3s						
SERG	Sergoula	1.35	80	P	Pn	04 42 43.5	-0.9
SERG	Sergoula	1.35	80	P	Pn	04 42 43.5	-0.9
SERG				AML	AML	04 43 09.8	
	comp=E,953μm,0.6s						
SERG				AML	AML	04 43 10.5	
	comp=N,1202μm,0.5s						
TRIZ	Trizonia	1.36	82	P	Pn	04 42 43.7	-0.7
TRIZ	Trizonia	1.36	82	P	Pn	04 42 43.9	-0.6
ALIK	Aliki, Aigiali	1.38	86	P	Pn	04 42 44.4	-0.3
KALE	Kalithea	1.41	81	P	Pn	04 42 44.5	-0.8
KALE	Kalithea	1.41	81	P	Pn	04 42 44.6	-0.6
KALE				AML	AML	04 43 13.0	
	comp=N,804μm,0.6s						
KALE				AML	AML	04 43 22.3	
	comp=E,550μm,0.8s						
KLV	Kalavryta, Ach	1.42	95	P	Pn	04 42 45.0	-0.3
KLV	Kalavryta, Ach	1.42	95	P	Pn	04 42 45.2	-0.1
KLV				AML	AML	04 43 15.4	
	comp=N,365μm,0.8s						
KLV				AML	AML	04 43 22.1	
	comp=E,451μm,0.7s						
ITM	Ithomi	1.59	128	P	Pb	04 42 48.4	-0.5
ITM	Ithomi	1.59	128	P	Pb	04 42 48.3	-0.7
KEK	Kerkira	1.59	344	P	Pb	04 42 48.0	-1.0
MAKR	Makrakomi, Fth	1.62	58	P	Pb	04 42 48.4	+0.4
MAKR	Makrakomi, Fth	1.62	58	P	Pb	04 42 49.1	-0.3
PYL	PYLOS	1.69	139	P	Pn	04 42 48.6	-0.3
PYL	PYLOS	1.69	139	P	Pb	04 42 49.4	-1.1
AGG	Agios Georgios	1.76	61	P	Pb	04 42 51.7	-0.7
AGG	Agios Georgios	1.76	61	P	Pb	04 42 51.8	0.0
AGG				AML	AML	04 43 23.0	
	comp=N,423μm,0.8s						
AGG				AML	AML	04 43 26.0	
	comp=E,368μm,1.0s						
THL	Klokotos Trika	1.89	42	P	Pb	04 42 52.7	-1.3
THL	Klokotos Trika	1.89	42	P	Pb	04 42 53.7	-0.3
THL				AML	AML	04 43 26.9	
	comp=N,235μm,0.6s						
THL				AML	AML	04 43 32.6	
	comp=E,226μm,0.8s						
AXAR	Agios Charalam	1.89	71	P	Pb	04 42 53.4	-0.7
KPRO	Kipourio	1.94	23	P	Pb	04 42 54.4	-0.5
KPRO	Kipourio	1.94	23	P	Pb	04 42 54.9	+0.1
KPRO				AML	AML	04 43 32.2	
	comp=E,308μm,0.8s						
KPRO				AML	AML	04 43 33.4	
	comp=N,405μm,1.1s						
PROD	Prodromos	2.00	87	P	Pb	04 42 55.0	-0.9
LTK	Loutraki	2.06	94	P	Pb	04 42 55.5	-1.4
DYR	Agios Nikonas	2.11	131	P	Pb	04 42 57.0	-0.8
LKR	Lokris	2.12	76	P	Pb	04 42 56.2	+1.2
LKR	Lokris	2.12	76	P	Pn	04 42 56.7	-1.3
VIL2	Platees	2.29	88	P	Pb	04 42 59.0	-1.8
VILL	Villia	2.32	89	P	Pn	04 42 59.0	+1.2
DID	Didima	2.37	106	P	Pn	04 42 59.8	+1.4
DID	Didima	2.37	106	P	Pn	04 43 00.1	+1.7
DID				AML	AML	04 43 42.1	
	comp=N,286μm,0.6s						
DID				AML	AML	04 43 42.3	
	comp=E,299μm,0.5s						
SCTE	Santa Cesarea	2.40	323	P	Pn	04 42 59.3	+0.6
XOR	Xorichti	2.51	61	P	Pn	04 43 01.0	+0.7
MRKA	Markates	2.58	77	P	Pn	04 43 02.1	+0.8
MRKA	Markates	2.58	77	P	Pn	04 43 02.3	+1.0
KTHA	Kythira Island	2.88	131	P	Pn	04 43 07.3	+1.9
AOS	Alonnisos	2.92	69	P	Pn	04 43 07.3	+1.3
TIP	Timpagrande	2.99	291	P	Pn	04 43 07.7	+0.7
KARY	Karystos	3.22	91	P	Pn	04 43 12.0	+2.0

THE 14 04:51:45.5,38.18N×20.41E,h10km,ML2.4/3,Error ellipse: s-maj=0.9km s-min=0.4km az=259.0
ATH 14 04:51:45.8,38.20N×20.41E,h8km±1km,ML2.5/5,Error ellipse: s-maj=2.0km s-min=1.1km az=250.0

ISC 14 04:51:45.3±1.0,38.18N±0.03×20.41E±0.04,h10km±4km,n37,σ0.55/53,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.02	268	P	Pg	04 51 47.2	+0.1
CHV1				S	Sg	04 51 48.7	+0.4
LXRA	Lixouri, Kepha	0.03	52	P	Pg	04 51 47.3	+0.2
LXRA				S	Sg	04 51 48.7	+0.3
KEF3	Kipouria, Keph	0.05	291	P	Pg	04 51 47.3	0.0
KEF3				S	Sg	04 51 48.9	+0.1
ARGA	Argostoli. Kep	0.05	98	P	Pg	04 51 47.2	-0.1
ARGA				S	Sg	04 51 48.7	0.0
ARG2	Argostoli	0.06	95	P	Pg	04 51 47.3	-0.1
ARG2				S	Sg	04 51 49.0	+0.1
KEF2	Argostoli. Kep	0.06	107	P	Pg	04 51 47.3	-0.1
KEF2				S	Sg	04 51 48.9	0.0
KEF4	Livadi, Kephal	0.07	8	P	Pg	04 51 47.6	0.0
KEF4				S	Sg	04 51 49.4	+0.2
KEF1	Kardakata, Kep	0.10	27	P	Pg	04 51 48.1	+0.1
KEF1				S	Sg	04 51 50.0	+0.1
VLS	Valsamata	0.14	93	P	Pg	04 51 48.4	-0.1
VLS				S	Sg	04 51 51.0	+0.2
	4μm,0.1s						
VLS	Valsamata	0.14	93	P	Pg	04 51 49.0	+0.5
VLS				S	Sg	04 51 50.9	+0.2
VLS				AML	AML	04 51 51.2	
	comp=N,6427μm,0.2s						
VLS				AML	AML	04 51 51.6	
	comp=E,8250μm,0.1s						
VSK1	VASILIKIADES	0.26	28	P	Pg	04 51 50.8	+0.3
VSK1				S	Sg	04 51 55.2	+1.2
KONA	Konidatara, Ke	0.27	28	P	Pg	04 51 51.0	+0.2
VLMS	Volimes, Zakyn	0.37	147	P	Pg	04 51 53.6	+1.0
VLMS				S	Sg	04 51 58.0	+0.6
VLMS				AML	AML	04 51 59.9	
	comp=E,1529μm,0.2s						
VLMS				AML	AML	04 52 01.2	
	comp=N,1779μm,0.2s						
EVGI	Lefkada island	0.48	24	P	Pg	04 51 54.7	+0.1
EVGI				S	Sb	04 52 02.4	-0.5
MGNA	Meganis	0.56	32	P	Pg	04 51 56.1	-0.1
KRI1	kERI	0.61	148	P	Pg	04 51 56.9	-0.3
KRI1				S	Sb	04 52 06.6	-0.2
	comp=N,528nm,0.3s						
LKD2	Lefkada island	0.63	18	P	Pg	04 51 57.6	0.0
LKD2				S	Sg	04 52 06.5	+0.5
	comp=N,158nm,0.3s						
LKD2	Lefkada island	0.63	18	P	Pg	04 51 57.5	-0.1
TSLK	Tsoukalades, L	0.67	17	P	Pg	04 51 57.8	-0.4
PDO	Prodromos	0.73	55	P	Pg	04 51 59.3	-0.2
PVO	Paravola	0.98	63	P	Pg	04 52 03.9	-0.2
PVO	Paravola	0.98	63	P	Pg	04 52 03.8	-0.3
PVO				AML	AML	04 52 20.8	
	comp=E,980μm,0.3s						
PVO				AML	AML	04 52 20.8	
	comp=N,543μm,0.3s						
DRO	Drossia	1.05	102	P	Pg	04 52 04.2	-1.3
AMT	Artemida-Makis	1.22	122	P	Pb	04 52 08.2	-0.2
AMT	Artemida-Makis	1.22	122	P	Pg	04 52 09.3	+0.6
AMT				AML	AML	04 52 35.5	
	comp=N,356μm,0.7s						
AMT				AML	AML	04 52 37.5	
	comp=E,314μm,0.7s						
LAKA	Lakka	1.24	87	P	Pn	04 52 08.0	-0.7
LAKA				S	Sn	04 52 26.0	+0.6
ANX	Ano Chora	1.25	71	P	Pn	04 52 08.3	-0.7
ANX	Ano Chora	1.25	71	P	Pn	04 52 08.6	-0.4
ANX				AML	AML	04 52 33.2	
	comp=N,527μm,0.5s						
ANX				AML	AML	04 52 35.0	
	comp=E,291μm,0.7s						
SERG	Sergoula	1.31	79	P	Pn	04 52 08.8	-1.0
TRIZ	Trizonia	1.32	82	P	Pn	04 52 08.5	-1.3
TRIZ	Trizonia	1.32	82	P	Pn	04 52 10.4	+0.6
KALE	Kalithea	1.38	81	P	Pn	04 52 09.5	-1.1
KALE	Kalithea	1.38	81	P	Pg	04 52 12.2	+0.5
KLV	Kalavryta, Ach	1.38	95	P	Pn	04 52 09.7	-1.0
KLV	Kalavryta, Ach	1.38	95	P	Pb	04 52 11.8	+0.6
MAKR	Makrakomi, Fth	1.58	58	P	Pg	04 52 15.9	+0.2
AGG	Agios Georgios	1.72	60	P	Pb	04 52 17.8	+0.8

IDC 14 04:57:15.8±0.5,29.04S×178.35W,h210km±6km,mb3.5/3,mb1 3.8/3,mb1mx3.4/26,mbtmp4.0/3,Error ellipse: s-maj=44.7km s-min=21.0km az=167.0
ISC 14 04:57:15.8±0.7,29.57S±0.09×178.7W±0.2,h204km,n48,σ1.98/50,mb3.6/3,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.71	64	P	Pn	04 57 44.3	+0.1
	1μm,0.3s,baz=96,slow=2.7,SNR=46						
RAO				S	S	04 58 06.5	+0.3
	606nm,0.3s,baz=283,slow=22,SNR=8.3						
URZ	Urewera	9.36	201	P	Pn	04 59 27.6	+1.1
	0.8nm,0.3s,baz=269,slow=4.2,SNR=8.0						
URZ				S	S	05 01 13.5	+2.1
	4.4nm,0.3s,baz=310,slow=23,SNR=17						
PRHZ	Porangahau	11.35	199	P	P	05 00 03.6	+5.8
ANWZ	Angora Road	11.58	199	P	S	05 02 05.6	+1.9
PRWZ	Pori Road	11.81	200	P	S	05 02 09.4	0.0
BFZ	Birch Farm	11.85	199	P	S	05 02 08.3	-1.9
MRZ	Mangatainoka R	12.03	202	P	Pn	05 00 01.1	+0.3
MRZ	Mangatainoka R	12.03	202	P	S	05 02 12.1	-2.4
CPWZ	Castlepoint	12.07	199	P	S	05 02 13.8	-1.7
HOWZ	Holdsworth Sta	12.27	201	P	Pn	05 00 04.5	+0.7
HOWZ	Holdsworth Sta	12.27	201	P	S	05 02 16.8	-3.3
OGWZ	Otaki Gorge	12.31	203	P	Pn	05 00 03.8	-0.5
TMWZ	Te Maipa	12.34	200	P	Pn	05 00 06.2	+1.5
TMWZ	Te Maipa	12.34	200	P	S	05 02 19.7	-2.3
KIW	Kapiti Island	12.44	203	P	Pn	05 00 07.1	+1.2
MTW	Mount Morrison	12.51	201	P	Pn	05 00 07.6	+0.8
MTW	Mount Morrison	12.51	201	P	S	05 02 21.3	-4.6
TRWZ	Traveller	12.67	200	P	Pn	05 00 10.6	+1.8
TRWZ	Traveller	12.67	200	P	S	05 02 25.7	-4.0
PAWZ	Paruwai Farm	12.74	201	P	S	05 02 28.0	-3.2
DUWZ	D'Urville Isla	12.74	206	P	Pn	05 00 11.8	+2.0
MSWZ	Moikau Station	12.82	201	P	Pn	05 00 11.5	+0.7
MSWZ	Moikau Station	12.82	201	P	S	05 02 29.9	-3.4
PLWZ	Palliser	12.96	201	P	Pn	05 00 12.9	+0.4
PLWZ	Palliser	12.96	201	P	S	05 02 31.3	-5.3
TCW	Tory Channel	12.97	204	P	Pn	05 00 13.6	+1.0
TUWZ	Tuamarina	13.28	205	P	Pn	05 00 17.2	+0.7
TUWZ	Tuamarina	13.28	205	P	S	05 02 40.7	-3.4
NNZ	Nelson	13.31	207	P	Pn	05 00 17.9	+1.0
BSWZ	Blackbirch Sta	13.55	205	P	Pn	05 00 21.6	+1.7
THZ	Tophouse	13.96	207	P	Pn	05 00 27.0	+1.9
KHZ	Kahutara	14.29	204	P	Pn	05 00 28.3	-0.6
MQZ	McQueen's Vall	15.73	204	P	P	05 00 46.4	+0.2
ASAR	Alice Springs	42.60	266	P	P	05 04 53.9	+1.9
	0.6nm,0.3s,baz=101,slow=6.7,SNR=17						
ASAR				PcP	PcP	05 06 40.2	-0.2
	0.5nm,0.8s,baz=126,slow=3.9,SNR=4.9						
WRA	Warramunga Arr	43.51	272	P	P	05 05 01.0	+1.7
	0.8nm,0.2s,baz=110,slow=7.8,SNR=34						
WRA				PcP	PcP	05 06 42.5	-1.0
	1.1nm,0.8s,baz=109,slow=7.3,SNR=5.4						
SNAA	Sanae	79.00	179	P	P	05 08 58.9	+2.3
VNA3	Neumayer Olymp	79.17	176	P	P	05 08 59.7	+2.2
VNA2	Neumayer--Watz	79.60	177	P	P	05 09 02.3	+2.5
	baz=188,slow=5.8						
VNA1	Neumayer--Stat	79.83	177	P	P	05 09 03.6	+2.7
NVAR	Mina Array Bea	88.01	43	P	P	05 09 40.6	-2.3
	0.8nm,0.7s,baz=221,slow=8.4,SNR=7.3						
MKAR	Makanchi Array	116.81	311	PKP	PKPdf	05 15 33.7	-1.9
	0.3nm,0.4s,baz=34,slow=0.1,SNR=8.9						
ARCES	ARCESS Array B	137.66	348	PKhKP	PKPpre	05 16 04.8	
	1.8nm,0.9s,baz=80,slow=2.0,SNR=7.2						
ARCES				PKP	PKPdf	05 16 14.6	0.0
	3.2nm,0.8s,baz=75,slow=1.0,SNR=8.1						
FINES	FINESS Array B	144.17	340	PKP	PKPab	05 16 22.6	-2.1
	5.2nm,0.5s,baz=60,slow=3.7,SNR=53						
NB2	NORSAR Subarra	147.84	351	PKP	PKPdf	05 16 33.7	+0.9
	comp=Z,1.3nm,0.5s,baz=13,slow=2.9						
NOA	NORSAR Array B	147.84	351	PKPbc	PKPdf	05 16 33.5	+0.7
	comp=Z,1.8nm,0.6s,baz=15,slow=4.5,SNR=6.7						
AKASG	Malin Array Be	150.30	323	PKPbc	PKPbc	05 16 40.6	-1.7
	comp=Z,2.2nm,0.4s,baz=46,slow=2.9,SNR=21						
BRTR	Keskin Array B	151.71	300	PKPbc	PKPbc	05 16 45.1	-1.1
	comp=Z,0.6nm,0.4s,baz=141,slow=4.7,SNR=7.4						
TORD	Torodi Ar. Bea	163.66	181	PKPab	PKPab	05 17 49.3	+1.8
	comp=Z,1.3nm,0.6s,baz=222,slow=2.2,SNR=8.3						

NNC 14 05:16:03.9±0.9,45.73N×82.89E,h0km,mb3.5,mpv3.4,Error ellipse: s-maj=6.8km s-min=3.3km az=106.0
SOME 14 05:16:06.0,45.62N×82.83E,h15km
ISC 14 05:16:01.0±1.7,45.62N±0.04×82.93E±0.07,h0km±26km,n36,σ1.06/51,8C-2D,Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	Makanchi Array	1.26	339	⇑P	Pg	05 16 25.2	+0.1
	5.8nm,0.4s,baz=152,slow=17,SNR=504						
MK31				⇑S	Sg	05 16 41.3	-0.2
	12nm,0.3s,baz=152,slow=29,SNR=15						
MAKZ	Makanchi	1.37	331	⇑P	Pg	05 16 27.5	+0.3
	6.1nm,0.3s						
MAKZ				⇑S	Sg	05 16 44.6	-0.3
	24nm,0.5s						
ZSN	Zaisan	2.27	35	eP	Pg	05 16 44.2	-0.3
	5.9nm,0.1s						
ZSN				eS	Sb	05 17 11.6	+0.2
	53nm,0.2s						
ZSN	Zaisan	2.27	35	Pg	Pb	05 16 43.3	+0.5
	8.1nm,0.3s						
ZSN				Lg	Lg	05 17 11.7	
	54nm,0.3s						
KAPS	Kapalarasan	2.54	264	eP	Pg	05 16 51.5	+1.8
	5.8nm,0.1s						
KAPS				eS	Sg	05 17 24.3	+1.7
	14nm,0.1s						
KAPS	Kapalarasan	2.54	264	Pg	Pg	05 16 49.7	+0.1
	8.5nm,0.3s						
KAPS				Lg	Lg	05 17 22.1	
	14nm,0.2s						
DJR	Jarkent	2.57	241	eP	Pg	05 16 52.3	+2.0
	1.7nm,0.1s						
DJR				eS	Sg	05 17 25.6	+1.9
	16nm,0.2s						
DJR	Jarkent	2.57	241	Pg	Pg	05 16 51.7	+1.4
	1.8nm,0.2s						
DJR				Lg	Lg	05 17 25.8	
	17nm,0.3s						
TDK	Taldyqorghan	3.25	261	Pg	Pg	05 17 04.4	+1.0
	50nm,0.3s						
TDK				Lg	Lg	05 17 47.1	
	43nm,0.2s						
PDGK	Podgornoye	3.36	228	Pg	Pg	05 17 07.3	+1.9
	1.6nm,0.3s						
PDGK				Lg	Lg	05 17 52.0	
	2.3nm,0.4s						
PDGK	Podgornoye	3.36	228	⇓Pg	Pg	05 17 05.5	+0.1
	1.4nm,0.4s						
PDGK				⇑Lg	Lg	05 17 51.8	
	9.7nm,0.7s						
SHLS	Shalkode	3.50	227	Pg	Pg	05 17 07.0	-1.0
	3.3nm,0.3s						
SHLS				Lg	Lg	05 17 52.2	
	20nm,0.5s						
MNBS	Baschi	3.57	246	eP	Pg	05 17 09.4	-0.1
	3.8nm,0.1s						
MNBS				eS	Sg	05 17 54.7	-1.0
	10.0nm,0.1s						
MNBS	Baschi	3.57	246	Pg	Pg	05 17 08.7	-0.7
	4.9nm,0.4s						
MNBS				Lg	Lg	05 17 54.5	
	15nm,0.2s						
KPKS	Kokpek	3.72	236	eP	Pg	05 17 12.5	+0.2
	5.2nm,0.1s						
KPKS				eS	Sg	05 18 00.5	0.0
	26nm,0.3s						
UZB	Uzynbulak	3.73	230	eP	Pg	05 17 12.6	0.0
	0.8nm,0.1s						
UZB				eS	Sg	05 18 00.7	-0.3
	7.1nm,0.2s						
UZB	Uzynbulak	3.73	230	Pg	Pg	05 17 13.4	+0.9
	2.7nm,0.4s						
UZB				Lg	Lg	05 18 02.2	
	7.4nm,0.3s						
ARXS	Arharly	3.89	251	eP	Pg	05 17 15.7	+0.2
	1.4nm,0.2s						
ARXS				eS	Sg	05 18 05.8	-0.1
	9.3nm,0.2s						
ARXS	Arharly	3.89	251	Pg	Pg	05 17 15.0	-0.5
	3.1nm,0.3s						
ARXS				Lg	Lg	05 18 05.8	
	8.4nm,0.3s						
KURS	Kuram	4.01	240	eP	Pg	05 17 17.8	-0.2
	1.4nm,0.1s						
KURS				eS	Sg	05 18 09.3	-0.6
	2.0nm,0.1s						
ZHN	Zhinishke	4.05	234	eP	Pg	05 17 19.2	+0.7
	2.6nm,0.0s						
ZHN				eS	Sg	05 18 11.5	+0.6
	4.1nm,0.2s						
ZHN	Zhinishke	4.05	234	Pg	Pg	05 17 17.9	-0.7
	6.2nm,0.1s						
ZHN				Lg	Lg	05 18 10.1	
	4.8nm,0.2s						
CHKK	Chushkaly	4.59	250	eP	Pg	05 17 28.0	-0.9
	0.3nm,0.0s						
CHKK				eS	Sg	05 18 27.2	-1.1
	7.0nm,0.1s						
CHKK	Chushkaly	4.59	250	Pg	Pg	05 17 28.8	-0.1
	1.0nm,0.1s						
CHKK				Lg	Lg	05 18 29.7	
	6.1nm,0.2s						
KOTS	Kotyrbulak	4.80	242	eP	Pg	05 17 32.3	-0.6
	1.6nm,0.1s						
KOTS				eS	Sg	05 18 34.6	-0.6
	11nm,0.2s						
KOTS	Kotyrbulak	4.80	242	Pg	Pg	05 17 32.4	-0.6
	4.2nm,0.3s						
KOTS				Lg	Lg	05 18 34.9	
	6.5nm,0.4s						
KTBS	Karatobe	4.85	249	eP	Pg	05 17 32.7	-1.2
	0.3nm,0.1s						
KTBS				eS	Sg	05 18 35.2	-1.5
	10nm,0.4s						
KTBS	Karatobe	4.85	249	Pg	Pg	05 17 34.1	+0.2
	1.4nm,0.5s						
KTBS				Lg	Lg	05 18 38.0	
	10nm,0.3s						
MDOK	Medeo	4.88	242	eP	Pg	05 17 32.9	-1.6
	1.0nm,0.1s						
MDOK				eS	Sg	05 18 35.3	-2.4
	3.2nm,0.2s						
MDOK	Medeo	4.88	242	Pg	Pg	05 17 32.5	-1.9
	1.4nm,0.4s						
MDOK				Lg	Lg	05 18 35.2	
	3.1nm,0.5s						
KUU	Kurty	5.00	252	eP	Pg	05 17 36.1	-0.8
	0.5nm,0.1s						
KUU				eS	Sg	05 18 40.4	-1.2
	3.6nm,0.1s						
KUU	Kurty	5.00	252	Pg	Pg	05 17 34.8	-2.0
	1.5nm,0.2s						
KUU				Lg	Lg	05 18 39.4	
	4.1nm,0.4s						
TNSS	Tian-Shan	5.01	241	eP	Pg	05 17 36.5	-0.4
	0.5nm,0.0s						
TNSS				eS	Sg	05 18 41.5	-0.3
	2.4nm,0.1s						
TNSS	Tian-Shan	5.01	241	Pg	Pg	05 17 36.1	-0.9
	2.8nm,0.4s						
TNSS				Lg	Lg	05 18 41.2	
	3.6nm,0.3s						
KURBB	Kurchatov Arra	5.81	331	⇑Pn	Pn	05 17 31.7	+3.3
	1.0nm,0.6s						
KURBB				⇓Lg	Lg	05 19 04.8	
	15nm,0.7s						
KURK	Kurchatov	5.86	332	⇑Pn	Pn	05 17 32.2	+3.2
	3.1nm,1.3s						
KURK				⇑Lg	Lg	05 19 04.8	
	8.3nm,0.6s						

GCG 14 05:16:16.6±0.8,12.97N×89.66W,h34km±999km,MD3.8
SNET 14 05:16:17.0±1.9,14.42N×89.15W,h13km±21km,ML3.2
ISC 14 05:16:17.9±2.0,13.2N±0.1×89.57W±0.05,h22km±13km,n8,σ0.62/14,1C,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.66	355	eP	Pb	05 16 31.1	+0.1
CEVE				eS	Sn	05 16 43.0	+0.8
CEVE				IAML		05 16 45.1	
	comp=Z,2μm,0.3s						
COEG	Centro de Oper	0.81	56	eP	Pb	05 16 33.3	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
COEG				eS	Sn	05 16 45.6	+0.2
COEG					IAML	05 16 53.1	
	comp=Z,414nm,0.4s						
COEB	**Comit de Eme**	**1.06**	**72**	⇑iP	**Pn**	**05 16 36.8**	**-0.7**
COEB				eS	Sb	05 16 50.8	-0.4
COEB					IAML	05 16 53.6	
	comp=Z,304nm,0.4s						
IXG	**Ixpaco**	**1.32**	**320**	eP	**Pn**	**05 16 40.2**	**-1.0**
PCG	**Pacaya**	**1.59**	**320**	eS	**Sb**	**05 17 06.7**	**+0.2**
CNCH	**Conchagua**	**1.69**	**86**	eP	**Pn**	**05 16 46.7**	**+0.4**
CNCH				eS	Sb	05 17 09.4	+0.1
CNCH					IAML	05 17 14.2	
	comp=Z,542nm,0.5s						
FUG	**Fuego 3**	**1.78**	**316**	eP	**Pb**	**05 16 50.4**	**+0.4**
FUG				eS	Sn	05 17 10.4	+0.8
STG3	**Santiaguito 3,**	**2.48**	**309**	eP	**Pn**	**05 16 56.7**	**-0.5**
STG3				eS	Sn	05 17 26.9	0.0

*IDC **14** 05:17:54.3±6.7, 16°.20N×99°.39W, h0km, mb3.7/4, mb1 4.2/4, mb1mx3.7/31, mbtmp3.7/4, ML2.8/1, Error ellipse: s-maj=146.8km s-min=36.9km az=15.0*
*MEX **14** 05:18:05.2±1.6, 16°.85N×100°.98W, h16km±125km, MD4.1*
*NEIC **14** 05:18:08.4±2.0, 16°.86N±0°.08×100°.57W±0°.06, h39km±10km, Error ellipse: s-maj=12.1km s-min=6.9km az=201.0*
ISC 14 05:18:06.8±1.9, 16°.92N±0°.07×100°.70W±0°.07, h25km±12km, n43, σ1§52/53, mb3.7/5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CAIG	**El Cayaco**	**0.44**	**72**		**Pb**	**05 18 16.1**	**+0.2**
CAIG	**El Cayaco**	**0.44**	**72**	i P	**Pb**	**05 18 16.1**	**+0.2**
CAIG				i S	Sb	05 18 24.4	+2.2
ACP2	**Acapulco**	**0.78**	**93**		**Pb**	**05 18 21.2**	**-0.6**
ACP2	**Acapulco**	**0.78**	**93**	i P	**Pb**	**05 18 21.2**	**-0.6**
ACP2				i S	Sn	05 18 33.5	+0.2
ZIIG	**Zihuatanejo**	**1.00**	**313**		Sn	05 18 29.3	-9.4
ZIIG	**Zihuatanejo**	**1.00**	**313**	i P	Pn	05 18 19.3	-6.0
ZIIG				i S	Sn	05 18 29.3	-9.4
ARIG	**Puente Sto Nin**	**1.40**	**14**		**Pn**	**05 18 30.0**	**-0.9**
ARIG	**Puente Sto Nin**	**1.40**	**14**	eP	**Pn**	**05 18 30.0**	**-0.9**
ARIG				i S	Sb	05 18 47.2	-2.6
MEIG	**Mezcala**	**1.44**	**46**		**Pb**	**05 18 31.6**	**-1.4**
MEIG	**Mezcala**	**1.44**	**46**	eP	**Pb**	**05 18 31.6**	**-1.4**
MEIG				i S	Sb	05 18 58.5	+7.4
PLIG	**Platanillo**	**1.86**	**38**		**Pn**	**05 18 37.6**	**+0.3**
PLIG					**Sb**	**05 19 03.2**	**0.0**
PLIG	**Platanillo**	**1.86**	**38**	i P	**Pn**	**05 18 37.6**	**+0.3**
PLIG				i S	Sb	05 19 03.2	0.0
TLIG	**Tlapa**	**2.14**	**72**		**Pn**	**05 18 41.8**	**+0.6**
TLIG	**Tlapa**	**2.14**	**72**		**Pn**	**05 18 41.8**	**+0.6**
TLIG	**Tlapa**	**2.14**	**72**	i P	**Pn**	**05 18 41.8**	**+0.6**
TLIG				i S	Sb	05 19 12.4	+1.2
MAVM	**Malinalco, Edo**	**2.33**	**29**		**Pn**	**05 18 43.5**	**-0.4**
MAVM	**Malinalco, Edo**	**2.33**	**29**	eP	**Pn**	**05 18 43.5**	**-0.4**
PNIG	**Pinotepa**	**2.52**	**102**		**Pn**	**05 18 45.0**	**-1.3**
PNIG	**Pinotepa**	**2.52**	**102**	eP	**Pn**	**05 18 45.0**	**-1.3**
PNIG				eS	Sb	05 19 20.2	-1.9
TOVM	**TOLUCA**	**2.55**	**22**		**Pn**	**05 18 46.5**	**-0.5**
TOVM	**TOLUCA**	**2.55**	**22**	eP	**Pn**	**05 18 46.5**	**-0.5**
FTIG	**Fresnillo de T**	**2.65**	**68**	i P	**Pn**	**05 18 48.8**	**+0.8**
FTIG				eS	Sb	05 19 24.1	-1.6
MOIG	**Morelia**	**2.79**	**351**		**Pn**	**05 18 50.0**	**-0.1**
UNM	**Universidad Na**	**2.80**	**31**		**Pn**	**05 18 56.3**	**-0.2**
HLIG	**Huajuapan de L**	**2.91**	**71**	i P	**Pn**	**05 18 52.5**	**+0.7**
HLIG				i S	Sb	05 19 35.8	+2.3
YOIG	**Yosondua**	**3.02**	**91**	eP	**Pn**	**05 18 53.6**	**+0.2**
YOIG				i S	Sb	05 19 34.2	-2.5
PEIG	**Puerto Escondi**	**3.53**	**104**	eP	**Pn**	**05 18 59.8**	**-0.4**
PEIG				eS	Sn	05 19 44.8	+3.6
TOIG	**Toxpalan**	**3.67**	**71**	i P	**Pn**	**05 19 02.5**	**+0.4**
TOIG				eS	Sb	05 19 50.2	-4.8
VHO	**Vista Hermosa**	**3.80**	**87**	i P	**Pn**	**05 19 04.0**	**-0.1**
VHO				i S	Sn	05 19 50.5	+2.3
CMIG	**Matias Romero**	**5.57**	**87**	Pn	Pn	05 19 02.3	-26
	0.5nm,0.3s,baz=262,slow=19,SNR=10						
ZAIG	**Zacatecas**	**6.08**	**344**	Pn	**Pn**	**05 19 37.9**	**+2.4**
X16A	**Lo Mia Camp, P**	**19.91**	**333**	P	**P**	**05 22 38.7**	**+1.8**
GLA	**Glamis**	**20.51**	**324**	P	**P**	**05 22 45.0**	**+1.8**
GLA				IAmb	IAmb	05 23 03.9	
	comp=Z,7.1nm,0.7s						
LPAR	**Lepanto**	**20.79**	**24**	P	**P**	**05 22 46.7**	**+0.5**
WUAZ	**Wupatki**	**20.82**	**335**	P	**P**	**05 22 47.3**	**+0.4**
WUAZ				IAmb	IAmb	05 22 49.0	
	comp=Z,5.6nm,0.9s						
W13A	**Hualapai Mount**	**21.60**	**329**		**P**	**05 22 56.3**	**+1.1**
W13A				IAmb	IAmb	05 23 06.0	
	comp=Z,4.8nm,1.5s						
KNB	**Kanab**	**22.71**	**334**	P	**P**	**05 23 08.6**	**+1.6**
NVAR	**Mina Array Bea**	**26.41**	**328**	P	**P**	**05 23 44.5**	**+2.7**
	comp=Z,1.0nm,0.7s,baz=150,slow=12,SNR=9.6						
NVAR	**Mina Array Bea**	**26.41**	**328**	P	**P**	**05 23 42.2**	**+0.4**
PDAR	**Pinedale Array**	**26.85**	**345**	P	**P**	**05 23 45.8**	**0.0**
	comp=Z,1.2nm,0.9s,baz=141,slow=9.6,SNR=7.1						
PDAR	**Pinedale Array**	**26.85**	**345**	P	**P**	**05 23 45.3**	**-0.4**
YKA	**Yellowknife Ar**	**46.56**	**351**	P	**P**	**05 26 30.9**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=162,slow=7.4,SNR=16						
ILAR	**Eielson Array**	**56.95**	**338**	P	**P**	**05 27 48.8**	**-1.1**
	comp=Z,0.7nm,0.9s,baz=167,slow=4.3,SNR=3.9						

ISC 14 05:20:21.6±0.9, 49°.83N±0°.04×18°.45E±0°.03, h0km, n13, σ0§71/25, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
OKC	**Ostrava-Krasne**	**0.19**	**274**	ePG	**Pg**	**05 20 26.3**	**+1.0**
OKC				eSG	**Sg**	**05 20 28.8**	**+1.0**
	comp=Z,39nm,0.3s						
MORC	**Moravsky Berou**	**0.59**	**266**	ePG	**Pg**	**05 20 33.2**	**+0.3**
MORC				eSG	**Sg**	**05 20 41.4**	**+0.9**
OJC	**Ojcow**	**0.96**	**65**	ePg	**Pg**	**05 20 39.3**	**-0.7**
OJC				eSg	**Sg**	**05 20 52.6**	**+0.3**
NIE	**Niedzica**	**1.27**	**108**	ePG	**Pg**	**05 20 46.7**	**+0.8**
NIE				eSg	**Sn**	**05 21 04.7**	**+0.3**
VRAC	**Vranov**	**1.31**	**247**	ePG	**Pg**	**05 20 46.7**	**0.0**
VRAC				eSG	**Sg**	**05 21 03.8**	**+0.1**
VYHS	**Vyhne**	**1.36**	**169**	ePG	**Pg**	**05 20 47.5**	**-0.1**
VYHS				eSG	**Sg**	**05 21 06.2**	**+0.4**
DPC	**Dobruska-Polom**	**1.47**	**292**	ePG	**Pn**	**05 20 48.6**	**-0.8**
DPC				eSG	**Sn**	**05 21 09.1**	**-0.2**
	comp=Z,5.8nm,0.2s						
KRUC	**Moravsky**	**1.54**	**241**	ePG	**Pn**	**05 20 50.3**	**0.0**
KRUC				eSG	**Sg**	**05 21 10.6**	**-0.5**
OSTC	**Ostas**	**1.61**	**298**	ePG	**Pn**	**05 20 51.7**	**+0.4**
OSTC				eSG	**Sg**	**05 21 13.7**	**+0.4**
UPC	**Upice**	**1.71**	**294**	ePG	**Pn**	**05 20 53.0**	**+0.4**
UPC				eSG	**Sg**	**05 21 16.2**	**-0.2**
CHVC	**Chvalec**	**1.72**	**297**	ePG	**Pb**	**05 20 53.4**	**-0.6**
CHVC				eSG	**Sg**	**05 21 16.4**	**-0.3**
PRU	**Pruhonice**	**2.53**	**275**	ePG	**Sb**	**05 21 40.8**	**+1.3**
KHC	**Kasperske Hory**	**3.25**	**259**	ePG	**Pg**	**05 21 22.5**	**-1.4**
KHC				eSG	**Sg**	**05 22 04.8**	**-1.2**

*IDC **14** 06:02:01.4±10.0, 35°.97N×81°.87E, h0km, mb3.3/1, mb1 3.7/3, mb1mx3.3/28, mbtmp3.7/3, ML3.3/2, MS2.6/2, Ms1 2.6/2, ms1mx2.4/31, Error ellipse: s-maj=144.9km s-min=53.0km az=51.0*
*BJI **14** 06:02:03.0±0.0, 35°.96N×82°.45E, h10km, ML3.7/6*
ISC 14 06:02:10.9±3.4, 36°.3N±0°.2×82°.4E±0°.2, h35km, n5, σ1§10/6, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WMQ	**Urumqi**	**8.54**	**27**	eP	**Pn**	**06 04 12.4**	**+0.3**
WMQ				S	**Sn**	**06 05 46.3**	**-1.0**
WMQ				smax	smax		
	comp=N,14nm,1.1s						
WMQ				smax	smax		
	comp=E,14nm,0.7s						
LSA	**Lhasa**	**9.84**	**129**	P	Pn	06 04 42.1	+12
MKAR	**Makanchi Array**	**10.50**	**360**	Pn	**Pn**	**06 04 38.2**	**-0.7**
	0.7nm,0.3s,baz=185,slow=12,SNR=13						
MKAR				Sn	**Sn**	**06 06 36.5**	**+1.3**
	0.4nm,0.3s,baz=187,slow=24,SNR=5.3						
MKAR				LR	LR	06 09 03.6	
	comp=Z,25nm,20.6s,baz=142,slow=39						
ZALV	**Zalesovo Beam**	**17.75**	**5**	P	**P**	**06 06 15.1**	**-0.4**
	0.1nm,0.3s,baz=193,slow=12,SNR=10						
ZALV				LR	LR	06 14 03.1	
	comp=Z,30nm,20.1s,baz=126,slow=40						
SONM	**Songino Array**	**21.12**	**49**	P	**P**	**06 06 53.2**	**+0.6**
	1.1nm,0.8s,baz=244,slow=11,SNR=8.5						

*BEO **14** 06:25:45.9±0.7, 38°.14N×20°.45E, h15km, ML3.5/12*
*IDC **14** 06:25:45.4±1.5, 38°.30N×20°.50E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.5/40, mbtmp3.8/7, ML3.7/1, MS2.8/1, Ms1 2.8/1, ms1mx2.2/36, Error ellipse: s-maj=30.4km s-min=24.7km az=93.0*
*ATH **14** 06:25:47.0, 38°.27N×20°.39E, h11km±1km, ML3.4/10, Error ellipse: s-maj=1.3km s-min=0.6km az=263.0*
*THE **14** 06:25:47.7, 38°.26N×20°.39E, h4km±1km, ML3.5/7, Error ellipse: s-maj=1.2km s-min=0.6km az=269.0*
ISC 14 06:25:47.0±0.7, 38°.27N±0°.02×20°.42E±0°.02, h11km±4km, n90, σ0§91/134, mb3.8/6, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KEF4	**Livadi, Kephal**	**0.02**	**174**	P	**Pg**	**06 25 48.9**	**+0.1**
KEF4				S	**Sg**	**06 25 50.0**	**0.0**
KEF1	**Kardakata, Kep**	**0.04**	**84**	P	**Pg**	**06 25 49.1**	**+0.2**
KEF1				S	**Sg**	**06 25 50.7**	**+0.3**
LXRA	**Lixouri, Kepha**	**0.07**	**171**	P	**Pg**	**06 25 49.5**	**+0.3**
LXRA				S	**Sg**	**06 25 51.3**	**+0.3**
KEF3	**Kipouria, Keph**	**0.09**	**220**	P	**Pg**	**06 25 49.7**	**+0.1**
KEF3				S	**Sg**	**06 25 51.3**	**0.0**
CHV1	**Chavriata, Kef**	**0.10**	**200**	P	**Pg**	**06 25 49.7**	**+0.2**
CHV1				S	**Sg**	**06 25 51.1**	**-0.3**
ARGA	**Argostoli. Kep**	**0.11**	**155**	P	**Pg**	**06 25 50.0**	**+0.3**
ARGA				S	**Sg**	**06 25 51.9**	**+0.3**
ARG2	**Argostoli**	**0.11**	**152**	P	**Pg**	**06 25 50.0**	**+0.3**
ARG2				S	**Sg**	**06 25 52.0**	**+0.3**
KEF2	**Argostoli. Kep**	**0.12**	**155**	P	**Pg**	**06 25 50.2**	**+0.3**
KEF2				S	**Sg**	**06 25 52.3**	**+0.4**
VLS	**Valsamata**	**0.16**	**126**	P	**Pg**	**06 25 51.0**	**+0.4**
VLS				S	**Sg**	**06 25 53.7**	**+0.6**
VLS	**Valsamata**	**0.16**	**126**	P	**Pg**	**06 25 50.9**	**+0.4**
VLS				S	**Sg**	**06 25 53.7**	**+0.6**
VLS				AML	AML	06 25 53.9	
VLS				AML	AML	06 25 54.3	
	comp=E,63636μm,0.1s						
VSK1	**VASILIKIADES**	**0.17**	**39**	P	**Pb**	**06 25 51.5**	**-0.8**
VSK1				S	**Sg**	**06 25 55.0**	**+1.5**
KONA	**Konidatara, Ke**	**0.19**	**38**	P	**Pg**	**06 25 51.7**	**+0.7**
KONA				S	**Sg**	**06 25 55.2**	**+1.3**
KONA				AML	AML	06 25 55.5	
	comp=E,27113μm,0.2s						
KONA				AML	AML	06 25 56.2	
	comp=N,36281μm,0.2s						
FSK	**Fiskardo**	**0.22**	**31**	P	**Pg**	**06 25 52.1**	**+0.6**
FSK				S	**Sg**	**06 25 55.8**	**+1.2**
FSK	**Fiskardo**	**0.22**	**31**	P	**Pg**	**06 25 52.1**	**+0.6**
FSK				S	**Sg**	**06 25 56.1**	**+1.5**
FSK				AML	AML	06 25 56.5	
	comp=N,20241μm,0.3s						
FSK				AML	AML	06 25 56.6	
	comp=E,40808μm,0.2s						
EVGI	**Lefkada island**	**0.39**	**28**	P	**Pb**	**06 25 55.4**	**-0.6**
EVGI				S	**Sb**	**06 26 01.7**	**-0.4**
EVGI	**Lefkada island**	**0.39**	**28**	P	**Pb**	**06 25 55.4**	**-0.6**
EVGI				S	**Sb**	**06 26 01.7**	**-0.4**
VLMS	**Volimes, Zakyn**	**0.44**	**154**	P	**Pg**	**06 25 55.6**	**0.0**
VLMS				S	**Sb**	**06 26 03.1**	**-0.3**
VLMS				AML	AML	06 26 03.4	
	comp=N,48476μm,0.5s						
VLMS				AML	AML	06 26 04.8	
	comp=E,27359μm,0.3s						
MGNA	**Meganis**	**0.48**	**37**	P	**Pg**	**06 25 55.9**	**-0.4**
MGNA				S	**Sb**	**06 26 03.6**	**-0.9**
MGNA				AML	AML	06 26 05.4	
	comp=E,13934μm,0.3s						
MGNA				AML	AML	06 26 05.4	
	comp=N,12320μm,0.1s						
LKD2	**Lefkada island**	**0.55**	**20**	P	**Pg**	**06 25 57.7**	**+0.1**
LKD2				S	**Sb**	**06 26 06.8**	**+0.3**
	comp=N,2μm,0.5s						
LKD2	**Lefkada island**	**0.55**	**20**	P	**Pg**	**06 25 57.2**	**-0.4**
LKD2				S	**Sg**	**06 26 05.7**	**+0.8**
LKD2				AML	AML	06 26 15.6	
	comp=N,4456μm,0.4s						
LKD2				AML	AML	06 26 15.9	
	comp=E,4271μm,0.7s						
TSLK	**Tsoukalades, L**	**0.58**	**18**	P	**Pg**	**06 25 58.5**	**+0.2**
TSLK				S	**Sb**	**06 26 08.1**	**+0.6**
TSLK	**Tsoukalades, L**	**0.58**	**18**	P	**Pg**	**06 25 58.7**	**+0.4**
TSLK				S	**Sb**	**06 26 07.7**	**+0.2**
TSLK				AML	AML	06 26 14.8	
	comp=E,6627μm,0.7s						
TSLK				AML	AML	06 26 16.1	
	comp=N,4285μm,0.5s						
AST1	**Astakos**	**0.59**	**63**	P	**Pb**	**06 25 59.0**	**-0.3**
AST1				S	**Sb**	**06 26 08.0**	**+0.3**
	comp=N,10μm,0.2s						
PDO	**Prodromos**	**0.68**	**61**	P	**Pb**	**06 26 00.6**	**-0.3**
PDO				S	**Sb**	**06 26 11.4**	**+1.1**
	comp=N,6μm,0.4s						
PDO	**Prodromos**	**0.68**	**61**	P	**Pb**	**06 26 00.5**	**-0.4**
PDO				S	**Sg**	**06 26 09.3**	**+0.2**
PDO				AML	AML	06 26 12.3	
	comp=N,7048μm,0.4s						
PDO				AML	AML	06 26 15.2	
	comp=E,9339μm,0.6s						
KRI1	**kERI**	**0.69**	**153**	P	**Pg**	**06 25 59.8**	**-0.4**
KRI1				S	**Sb**	**06 26 10.6**	**+0.1**
RLS	**Riolos of Patr**	**0.85**	**104**	P	**Pb**	**06 26 04.0**	**+0.2**
RLS				S	**Sn**	**06 26 16.8**	**-0.6**
	comp=E,2μm,0.5s						
RLS	**Riolos of Patr**	**0.85**	**104**	P	**Pg**	**06 26 03.2**	**-0.2**
RLS				S	**Sn**	**06 26 16.0**	**-1.4**
RLS				AML	AML	06 26 19.1	
	comp=E,3922μm,0.7s						
RLS				AML	AML	06 26 22.2	
	comp=N,3310μm,0.4s						
PVO	**Paravola**	**0.93**	**68**	P	**Pb**	**06 26 05.3**	**+0.1**
PVO				S	**Sn**	**06 26 20.1**	**+0.7**
	comp=N,3μm,0.6s						
PVO	**Paravola**	**0.93**	**68**	P	**Pn**	**06 26 05.5**	**-0.6**
PVO				AML	AML	06 26 25.2	
	comp=E,5245μm,0.5s						
PVO				AML	AML	06 26 25.5	
	comp=N,5742μm,0.8s						
DRO	**Drossia**	**1.06**	**107**	P	**Pb**	**06 26 07.3**	**-0.2**
DRO				S	**Sn**	**06 26 23.6**	**+0.8**
	comp=N,4μm,0.7s						
DRO	**Drossia**	**1.06**	**107**	P	**Pb**	**06 26 07.3**	**-0.2**
ANX	**Ano Chora**	**1.22**	**74**	P	**Pg**	**06 26 10.7**	**+0.3**
LAKA	**Lakka**	**1.23**	**91**	P	**Pg**	**06 26 10.1**	**-0.4**
LAKA				S	**Sn**	**06 26 29.4**	**+2.7**
LAKA	**Lakka**	**1.23**	**91**	P	**Pn**	**06 26 09.9**	**-0.2**
AMT	**Artemida-Makis**	**1.26**	**126**	P	**Pg**	**06 26 12.1**	**+1.0**
AMT	**Artemida-Makis**	**1.26**	**126**	P	**Pg**	**06 26 11.9**	**+0.7**
IGT	**Igoumenitsa**	**1.26**	**357**	ePg	**Pg**	**06 26 12.2**	**+1.0**
IGT				eSg	**Sg**	**06 26 31.0**	**+3.5**
IGT	**Igoumenitsa**	**1.26**	**357**	P	**Pb**	**06 26 11.0**	**+0.2**
EVR	**Evrytania**	**1.26**	**59**	P	**Pn**	**06 26 10.5**	**-0.2**
SERG	**Sergoula**	**1.29**	**83**	P	**Pg**	**06 26 11.6**	**-0.2**
TRIZ	**Trizonia**	**1.30**	**85**	P	**Pg**	**06 26 11.5**	**-0.5**
TRIZ				S	**Sg**	**06 26 30.5**	**+1.6**
	comp=N,1μm,0.5s						
TRIZ	**Trizonia**	**1.30**	**85**	P	**Pb**	**06 26 11.2**	**-0.3**
KALE	**Kalithea**	**1.36**	**85**	P	**Pg**	**06 26 13.9**	**+0.9**
KALE	**Kalithea**	**1.36**	**85**	P	**Pg**	**06 26 13.0**	**0.0**
KLV	**Kalavryta, Ach**	**1.38**	**99**	P	**Pg**	**06 26 13.2**	**-0.3**
KLV	**Kalavryta, Ach**	**1.38**	**99**	P	**Pb**	**06 26 12.8**	**-0.1**
KEK	**Kerkira**	**1.52**	**342**	P	**Pn**	**06 26 14.9**	**-0.3**
KASA	**Kassiopi**	**1.52**	**346**	P	**Pn**	**06 26 14.3**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.53**	**61**	P	**Pg**	**06 26 16.9**	**+0.6**
ITM	**Ithomi**	**1.62**	**132**	P	**Pb**	**06 26 16.8**	**-0.1**
DLFA	**Delphi**	**1.64**	**82**	P	**Pg**	**06 26 19.2**	**+0.7**
AGG	**Agios Georgios**	**1.67**	**63**	P	**Pg**	**06 26 19.0**	**0.0**
AGG	**Agios Georgios**	**1.67**	**63**	P	**Pg**	**06 26 19.1**	**0.0**
PYL	**PYLOS**	**1.73**	**142**	P	**Pb**	**06 26 19.0**	**+0.2**
THL	**Klokotos Trika**	**1.79**	**43**	P	**Pg**	**06 26 20.9**	**-0.5**
AXAR	**Agios Charalam**	**1.82**	**74**	P	**Pg**	**06 26 21.1**	**-0.8**
KPRO	**Kipourio**	**1.83**	**23**	P	**Pg**	**06 26 21.9**	**-0.2**
PENT	**Pentalofos**	**2.00**	**16**	P	**Pb**	**06 26 23.7**	**+0.2**
LTK	**Loutraki**	**2.02**	**96**	P	**Pb**	**06 26 23.5**	**-0.3**
LKR	**Lokris**	**2.06**	**79**	P	**Pb**	**06 26 24.2**	**-0.2**
LKR	**Lokris**	**2.06**	**79**	P	**Pb**	**06 26 24.2**	**-0.2**
NEST	**Nestorio**	**2.19**	**13**	P	**Pb**	**06 26 26.6**	**-0.2**
NEO	**Neokhori**	**2.42**	**64**	P	**Pb**	**06 26 28.7**	**-1.8**
TIR	**Tirane**	**3.10**	**352**	ePn	**Pn**	**06 26 36.8**	**+0.9**
TIR				eSn	**Sn**	**06 27 14.7**	**+1.7**
TAR1	**Taranto**	**3.31**	**314**	ePn	**Pn**	**06 26 40.6**	**+1.8**
STIP	**Stip**	**3.67**	**21**	i Pn	**Pb**	**06 26 48.2**	**-3.7**
SG1	**Sgolgore (BA)**	**3.87**	**313**	ePn	**Pn**	**06 26 47.2**	**+0.8**
SG1				Sn	**Sn**	**06 27 31.4**	**-0.5**
BAI	**Bari**	**3.93**	**317**	ePn	**Pn**	**06 26 48.8**	**+1.5**
PDG	**Podgorica**	**4.25**	**348**	ePn	**Pn**	**06 26 52.4**	**+0.8**
PDG				eSn	**Sn**	**06 27 41.0**	**-0.2**
BARS	**Barje**	**4.66**	**13**	ePn	**Pn**	**06 26 56.1**	**-1.2**
TREB	**Trebinje**	**4.71**	**341**	ePn	**Pn**	**06 26 57.4**	**-0.6**
TREB				eSn	**Sn**	**06 27 52.0**	**-0.7**
SELS	**Selova**	**4.97**	**6**	ePn	**Pn**	**06 27 01.7**	**+0.1**
SJES	**Sjenica**	**4.99**	**356**	ePn	**Pn**	**06 27 01.9**	**-0.1**
SJES				eSn	**Sn**	**06 27 58.7**	**-1.1**
STON	**Ston**	**5.04**	**337**	ePn	**Pn**	**06 27 02.1**	**-0.4**
STON				eSn	**Sn**	**06 27 58.4**	**-2.3**
IVAS	**Ivanjica**	**5.30**	**358**	ePn	**Pn**	**06 27 05.4**	**-0.8**
IVAS				eSn	**Sn**	**06 28 05.4**	**-1.9**
BOVS	**Bovan**	**5.44**	**10**	ePn	**Pn**	**06 27 08.2**	**+0.1**
BOVS				eSn	**Sn**	**06 28 08.6**	**-2.1**
GRUS	**Gruza**	**5.61**	**2**	ePn	**Pn**	**06 27 09.7**	**-0.7**
GRUS				eSn	**Sn**	**06 28 13.4**	**-1.5**
BBLS	**Lazići**	**5.64**	**352**	ePn	**Pn**	**06 27 11.1**	**+0.3**
BBLS				eSn	**Sn**	**06 28 14.8**	**-0.9**
DIVS	**Divibare**	**5.83**	**357**	ePn	**Pn**	**06 27 13.3**	**-0.2**
DIVS				eSn	**Sn**	**06 28 18.7**	**-1.6**
HAPS	**Han Pijesak,BI**	**5.91**	**350**	ePn	**Pn**	**06 27 14.7**	**+0.1**
HAPS				eSn	**Sn**	**06 28 21.6**	**-0.8**
TRUS	**Trudelj**	**5.95**	**360**	ePn	**Pn**	**06 27 14.3**	**-0.7**
GERES	**GERESS Array B**	**11.63**	**337**	Pn	**Pn**	**06 28 33.7**	**+0.7**
	comp=N,0.2nm,0.3s,baz=161,slow=12,SNR=3.9						
GNI	**Garni**	**18.93**	**77**	LR	LR	06 37 07.7	
	comp=N,28nm,18.5s,baz=253,slow=36						
HFS	**Hagfors**	**22.29**	**351**	P	**P**	**06 30 45.4**	**+1.3**
	comp=N,2.1nm,0.8s,baz=165,slow=6.0,SNR=3.4						
FINES	**FINESS Array B**	**23.46**	**7**	P	**P**	**06 30 55.0**	**-1.2**
	comp=N,3.7nm,1.1s,baz=188,slow=7.7,SNR=6.2						
TORD	**Torodi Ar. Bea**	**30.06**	**219**	P	**P**	**06 31 56.7**	**+0.4**
	comp=N,1.3nm,1.1s,baz=30,slow=8.3,SNR=3.9						
ARCES	**ARCESS Array B**	**31.44**	**3**	P	**P**	**06 32 07.5**	**-0.5**
	comp=N,2.1nm,0.9s,baz=189,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**45.32**	**58**	P	**P**	**06 34 04.3**	**-0.6**
	comp=N,0.3nm,0.4s,baz=279,slow=7.0,SNR=10						
ZALV	**Zalesovo Beam**	**45.69**	**48**	P	**P**	**06 34 07.4**	**-0.3**
	comp=N,1.5nm,0.4s,baz=272,slow=8.4,SNR=5.1						

IDC 14 06:33:40.4±10.0, 36°.23N×81°.98E, h0km, mb3.1/1, mb1 3.4/3, mb1mx3.1/45, mbtmp3.4/3, ML3.1/2, Error ellipse: s-maj=150.5km s-min=53.5km az=51.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MKAR	**Makanchi Array**	**10.56**	**1**	Pn	Pn	06 36 13.0	0.0
	0.3nm,0.3s,baz=186,slow=12,SNR=16						
MKAR				Sn	Sn	06 38 10.6	-1.4
	0.1nm,0.3s,baz=180,slow=26,SNR=3.6						
ZALV	**Zalesovo Beam**	**17.83**	**5**	P	P	06 37 50.6	0.0
	0.2nm,0.3s,baz=182,slow=14,SNR=4.0						
SONM	**Songino Array**	**21.43**	**50**	P	P	06 38 30.1	0.0
	0.6nm,0.6s,baz=241,slow=11,SNR=5.7						

*IDC **14** 06:46:06.9±1.9, 56°.55S×26°.66W, h0km, mb3.9/2, mb1 4.0/2, mb1mx3.7/19, mbtmp3.9/2, Error ellipse: s-maj=79.4km s-min=43.3km az=5.0*
*NEIC **14** 06:46:20.1±1.3, 56°.1S±0°.2×27°.0W±0°.2, h94km±7km, mb4.2/10, Error ellipse: s-maj=25.3km s-min=14.6km az=203.0*
ISC 14 06:46:21.2±0.7, 56°.1S±0°.1×27°.2W±0°.1, h100km, n32, σ1§10/33, mb4.1/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HOPE	**Hope Point**	**5.62**	**286**	Pn	**Pn**	**06 47 42.3**	**+0.1**
HOPE				Sn	**Sn**	**06 48 43.8**	**-1.7**
VNA1	**Neumayer--Stat**	**16.71**	**158**	P	**P**	**06 50 09.3**	**-0.1**
VNA3	**Neumayer Olymp**	**16.91**	**160**	P	**Pn**	**06 50 11.3**	**+0.1**
VNA2	**Neumayer--Watz**	**17.11**	**158**	P	**P**	**06 50 14.0**	**+0.2**
	baz=317,slow=13						
SNAA	**Sanae**	**18.66**	**156**	P	**Pn**	**06 50 35.2**	**+2.8**
SNAA	**Sanae**	**18.66**	**156**	P	**P**	**06 50 28.3**	**-2.6**
SNAA				IAmb	IAmb	06 50 36.8	
	comp=Z,5.3nm,0.5s						
GO10	**Punta Arenas**	**25.21**	**258**		**P**	**06 51 36.4**	**-0.9**
QSPA	**South Pole Qui**	**34.11**	**180**	P	**P**	**06 52 55.6**	**-0.3**
QSPA				IAmb	IAmb	06 53 08.6	
	comp=Z,2.6nm,1.1s						
PEL	**Peldehue**	**37.65**	**289**	P	**P**	**06 53 27.7**	**+1.3**
PEL				IAmb	IAmb	06 53 28.8	
	comp=Z,4.5nm,0.9s						
GO01	**Chusmiza**	**47.98**	**302**	P	**P**	**06 54 51.7**	**+1.4**
MNMC	**Minye Minye**	**48.63**	**302**	P	**P**	**06 54 57.0**	**+1.9**
MNMC				IAmb	IAmb	06 55 12.4	
	comp=Z,3.7nm,1.0s						
LPAZ	**La Paz**	**50.42**	**305**	P	**P**	**06 55 10.5**	**+1.4**
	comp=Z,0.7nm,0.4s,baz=170,slow=6.1,SNR=4.4						
LPAZ	**La Paz**	**50.42**	**305**	P	**P**	**06 55 10.2**	**+1.1**
LPAZ				IAmb	IAmb	06 55 10.7	
	comp=Z,1.3nm,0.6s						
TOSP	**Speyside**	**72.70**	**326**	P	**P**	**06 57 37.9**	**-0.1**
TOA0	**Torodi Ar. Sit**	**73.14**	**29**	P	**P**	**06 57 39.8**	**-0.9**
TORD	**Torodi Ar. Bea**	**73.14**	**29**	P	**P**	**06 57 40.2**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=203,slow=6.3,SNR=8.1						
TORD	**Torodi Ar. Bea**	**73.14**	**29**	P	**P**	**06 57 40.0**	**-0.7**
PCA	**Pinnacle**	**145.78**	**305**	PKPdf	**PKPab**	**07 05 49.0**	**+1.0**
INK	**Inuvik**	**145.87**	**321**	PKPbc	**PKPbc**	**07 05 46.9**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=75,slow=3.7,SNR=5.2						
INK	**Inuvik**	**145.87**	**321**		**PKPbc**	**07 05 47.1**	**-0.1**
DAWY	**Dawson**	**146.84**	**312**	PKPdf	**PKPbc**	**07 05 49.7**	**-0.6**
DOT	**Dot Lake**	**148.69**	**310**	PKPbc	**PKPbc**	**07 05 54.6**	**-0.6**
SCRK	**Sand Creek**	**148.75**	**311**	PKPbc	**PKPbc**	**07 05 55.6**	**+0.1**
ILAR	**Eielson Array**	**150.17**	**312**	PKPbc	**PKPbc**	**07 05 58.7**	**0.0**
	comp=Z,0.9nm,0.7s,baz=122,slow=3.0,SNR=9.6						
ILAR	**Eielson Array**	**150.17**	**312**		**PKPbc**	**07 05 58.5**	**-0.2**
COLA	**College**	**150.59**	**312**		**PKPab**	**07 06 05.8**	**-1.1**
RND	**Reindeer**	**150.71**	**308**	PKPbc	**PKPbc**	**07 05 60.0**	**-0.2**
SONM	**Songino Array**	**150.75**	**87**	PKPbc	**PKPbc**	**07 05 59.4**	**-1.5**
	comp=Z,1.0nm,0.6s,baz=220,slow=4.0,SNR=5.3						
TRF	**Thorofare Moun**	**151.35**	**308**	PKPbc	**PKPbc**	**07 06 01.5**	**-0.3**
TOLK	**Toolik Lake Re**	**151.74**	**319**		**PKPbc**	**07 06 02.5**	**+0.1**
BPAW	**Bear Paw Mtn.**	**151.78**	**309**	PKPbc	**PKPbc**	**07 06 02.3**	**-0.3**
IMAR	**Indian Mountai**	**153.19**	**313**	PKPbc	**PKPbc**	**07 06 05.7**	**+0.1**

*UCR **14** 07:13:36.8±1.1, 14°.63N×90°.76W, h164km±14km, ML3.4*
*SNET **14** 07:13:36.7±1.1, 14°.60N×90°.77W, h166km±14km, ML3.6*
*GCG **14** 07:13:46.2±0.6, 15°.11N×90°.90W, h62km±44km, MD4.1*
ISC 14 07:13:39.3±1.5, 14°.3N±0°.2×90°.79W±0°.09, h150km, n21, σ2§24/23, 4C-2D, Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FUG	**Fuego 3**	**0.15**	**341**	eP	**Pn**	**07 14 00.8**	**+1.0**
PCG	**Pacaya**	**0.20**	**65**	eP	**Pn**	**07 14 01.2**	**+1.3**
IXG	**Ixpaco**	**0.37**	**111**	eP	**Pn**	**07 14 01.4**	**+1.1**
NBG	**Las Nubes**	**0.52**	**57**	eP	**Pn**	**07 14 02.1**	**+1.1**
ERG	**Entre ros, C**	**0.76**	**280**	⇑eP	**Pn**	**07 14 03.6**	**+1.3**
STG3	**Santiaguito 3,**	**0.85**	**298**	eP	**Pn**	**07 14 01.9**	**-1.2**
FAME	**Alcaldia de Sa**	**0.89**	**121**	⇑eP	Pn	07 13 55.2	-8.0
FAME				eS	Sn	07 14 16.2	-5.1
FAME	**Alcaldia de Sa**	**0.89**	**121**	⇑eP	Pn	07 13 55.2	-8.0
FAME				eS	Sn	07 14 16.2	-5.1
RTR	**El Retiro**	**1.19**	**110**	eP	**Pn**	**07 14 06.5**	**+0.5**
RTR	**El Retiro**	**1.19**	**110**	eP	**Pn**	**07 14 06.5**	**+0.5**
CEVE	**Cerro Verde**	**1.23**	**113**	eP	**Pn**	**07 14 06.7**	**+0.2**
CEVE				eS	**Sn**	**07 14 31.5**	**+4.4**
CEVE					IAML	07 14 49.2	
	comp=Z,418nm,0.2s						
CEVE	**Cerro Verde**	**1.23**	**113**	eP	**Pn**	**07 14 06.7**	**+0.2**
CEVE				eS	**Sn**	**07 14 31.5**	**+4.4**
CEVE					IAML	07 14 49.2	
	comp=Z,418nm,0.2s						
SNJE	**San Jose**	**1.23**	**111**	eP	**Pn**	**07 14 06.6**	**+0.2**
SNJE	**San Jose**	**1.23**	**111**	eP	**Pn**	**07 14 06.6**	**+0.2**
UNIC	**Universidad Ca**	**1.25**	**105**	eP	**Pn**	**07 14 06.1**	**-0.3**
UNIC	**Universidad Ca**	**1.25**	**105**	eP	**Pn**	**07 14 06.1**	**-0.3**
MRL	**Marmol**	**1.32**	**54**	⇑iP	**Pn**	**07 14 07.3**	**0.0**

MTO3 Montecristo 1.39 86⇓eP Pn 07 14 07.4 -0.6
MTO3 Montecristo 1.39 86⇓eP Pn 07 14 07.4 -0.6
PAVA Las Pavas 1.90 108 eP Pn 07 14 13.4 0.0
PAVA Las Pavas 1.90 108 eP Pn 07 14 13.4 0.0

BJI 14 07:16:37.3±0.0, 36.06N×82.41E, h8km, ML3.8/4
IDC 14 07:16:53.6±10.0, 37.49N×82.99E, h0km, mb3.6/1, mb1 3.8/4, mb1mx3.3/45, mbtmp3.8/4, ML3.5/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/36, Error ellipse: s-maj=139.4km s-min=30.0km az=20.0
ISC 14 07:16:44.4±3.6, 36.6N±0.3×82.5E±0.2, h10km, n8, σ1.87/6, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	8.29	27	eP	Pn	07 18 45.6	+1.0
WMQ				S	Sn	07 20 18.5	+0.2
AAK	Ala-Archa	8.64	317	Pg	Pg	07 19 23.1	-6.6
	0.5nm,0.3s,baz=137,slow=18,SNR=7.8						
AAK				Lg	Lg	07 21 15.6	
	0.4nm,0.3s,baz=306,slow=12,SNR=8.6						
MKAR	Makanchi Array	10.23	359	Pn	Pn	07 19 11.3	+0.1
	0.7nm,0.3s,baz=183,slow=14,SNR=18						
ZALV	Zalesovo Beam	17.47	5	Pn	Pn	07 20 44.9	-3.0
	0.2nm,0.3s,baz=187,slow=11,SNR=6.3						
BVAR	Borovoye Array	18.52	337	Pn	Pn	07 21 00.7	-0.2
	0.3nm,0.3s,baz=140,slow=8.5,SNR=7.8						
SONM	Songino Array	20.92	50	P	P	07 21 27.5	+0.4
	3.2nm,0.9s,baz=243,slow=12,SNR=14						
AKTO	Aktyubinsk	22.38	316	LR	LR	07 31 34.5	
	comp=Z,42nm,20.1s,baz=68,slow=40						
WSAR	Wadi Sarin	24.48	244	LR	LR	07 34 37.6	
	comp=Z,33nm,20.8s,baz=98,slow=42						

IDC 14 07:27:49.0±2.6, 20.41S×177.64W, h478km±26km, mb3.5/10, mb1 3.7/11, mb1mx3.5/34, mbtmp4.3/11, Error ellipse: s-maj=41.3km s-min=13.4km az=150.0
NEIC 14 07:27:51.8±2.2, 20.3S±0.1×177.7W±0.1, h509km±5km, mb4.2/27, Error ellipse: s-maj=20.8km s-min=15.3km az=136.0
ISC 14 07:27:50.6±0.5, 20.19S±0.10×177.68W±0.09, h500km, n65, σ1.70/69, mb4.1/23, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.73	300	P	P	07 29 17.0	+1.7
NIUE	Niue	7.39	83	P	P	07 29 43.4	+2.7
AFI	Afiamalu	8.42	43	P	P	07 29 49.9	-1.6
	1.7nm,0.3s,baz=75,slow=5.8,SNR=3.4						
AFI				S	S	07 31 24.0	-6.7
	7.7nm,0.3s,baz=332,slow=23,SNR=10						
AFI	Afiamalu	8.42	43	P	P	07 29 49.7	-1.8
BKZ	Black Stump Fm	19.57	194	P	P	07 31 41.2	-3.9
BKZ				IAmb	IAmb	07 31 45.6	
	comp=Z,10nm,1.2s						
PLWZ	Palliser	22.14	194	P	P	07 32 07.3	-1.2
TUWZ	Tuamarina	22.34	197	P	P	07 32 09.8	-0.3
KHZ	Kahutara	23.36	197	P	P	07 32 21.0	+1.7
WHZ	Wether Hill Ro	28.23	202	P	P	07 33 01.9	-0.4
WHZ				IAmb	IAmb	07 33 18.6	
	comp=Z,26nm,1.3s						
CTA	Charters Tower	33.82	264	P	P	07 33 51.1	+0.3
	comp=Z,2.2nm,0.4s,baz=87,slow=10,SNR=9.8						
TOO	Toolangi	36.32	234	P	P	07 34 11.9	+0.4
TOO				IAmb	IAmb	07 34 23.9	
	comp=Z,8.6nm,1.4s						
COEN	Coen	37.87	273	P	P	07 34 25.5	+1.0
COEN				IAmb	IAmb	07 34 25.7	
	comp=Z,4.7nm,1.0s						
STKA	Stephens Creek	38.20	244	P	P	07 34 26.9	0.0
	comp=Z,3.8nm,0.9s,baz=72,slow=10,SNR=4.6						
STKA	Stephens Creek	38.20	244	P	P	07 34 27.0	0.0
BBOO	Buckleboo	42.96	243	P	P	07 35 04.0	-1.0
BBOO				IAmb	IAmb	07 35 23.0	
	comp=Z,13nm,1.1s						
WR0	Warramunga Arr	44.76	262	P	P	07 35 19.6	+0.4
AS31	Alice Springs	44.88	256	P	P	07 35 19.4	-0.8
ASAR	Alice Springs	44.89	256	P	P	07 35 19.9	-0.3
	comp=Z,7.9nm,0.8s,baz=88,slow=8.6,SNR=84						
ASAR				PcP	PcP	07 36 51.3	-0.1
	comp=Z,1.1nm,0.7s,baz=100,slow=3.8,SNR=6.7						
ASAR				S	S	07 41 20.0	-1.2
	comp=Z,1.1nm,0.8s,baz=92,slow=16,SNR=8.0						
ASAR	Alice Springs	44.89	256	P	P	07 35 19.3	-0.9
ASAR					PcP	07 36 51.4	+0.1
WB0	Warramunga Arr	44.92	262	P	P	07 35 19.8	-0.7
WB0				IAmb	IAmb	07 35 21.3	
	comp=Z,9.8nm,1.3s						
WB2	Warramunga Arr	44.93	262	P	P	07 35 20.2	-0.4
WB2				IAmb	IAmb	07 35 21.4	
	comp=Z,8.7nm,1.1s						
WRA	Warramunga Arr	44.95	262	P	P	07 35 19.8	-0.8
	comp=Z,1.9nm,0.4s,baz=98,slow=8.3,SNR=12						
WRA	Warramunga Arr	44.95	262	P	P	07 35 19.8	-0.8
FORT	Forrest	49.70	246	P	P	07 35 55.5	-0.8
KNRA	Kununurra	50.98	266	P	P	07 36 05.9	0.0
KNRA				IAmb	IAmb	07 36 16.0	
	comp=Z,11nm,1.1s						
FITZ	Fitzroy Crossi	53.37	262	P	P	07 36 23.8	+0.7
PSA00	Pilbara Seismi	58.03	257	P	P	07 36 55.1	-0.5
PSA00				IAmb	IAmb	07 36 56.1	
	comp=Z,15nm,1.1s						
MORW	Morawa	60.23	247	P	P	07 37 09.4	-0.8
MORW				IAmb	IAmb	07 37 18.0	
	comp=Z,26nm,1.4s						
QSPA	South Pole Qui	69.87	180	P	P	07 38 10.3	-0.2
ADK	Adak	71.77	1	P	P	07 38 21.9	+0.3
PEA0B	Petropavlovsk-	76.06	345	P	P	07 38 47.4	+1.5
PETK	Petropavlovsk-	76.06	345	P	P	07 38 47.3	+1.4
	comp=Z,9.6nm,0.9s,baz=123,slow=4.4,SNR=4.3						
PETK	Petropavlovsk-	76.06	345	P	P	07 38 47.4	+1.5
USRK	Ussuriysk Ar.	78.88	326	P	P	07 39 04.0	+2.5
	comp=Z,4.1nm,0.7s,baz=111,slow=3.5,SNR=12						
USRK	Ussuriysk Ar.	78.88	326	P	P	07 39 03.9	+2.4
KBO	Bosley Butte	79.29	37	P	P	07 39 04.4	+0.6
YBH	Yreka Blue Hor	79.86	39	P	P	07 39 09.4	+2.5
YERR	Yerington	80.32	42	P	P	07 39 11.7	+2.2
YERR				IAmb	IAmb	07 39 12.0	
	comp=Z,12nm,1.5s						
NVAR	Mina Array Bea	80.59	43	P	P	07 39 12.8	+1.9
	comp=Z,0.9nm,0.7s,baz=227,slow=8.9,SNR=7.4						
NVAR	Mina Array Bea	80.59	43	P	P	07 39 12.6	+1.6
WVOR	Wild Horse Val	82.70	40	P	P	07 39 23.7	+2.2
WVOR				IAmb	IAmb	07 39 24.3	
	comp=Z,6.2nm,1.2s						
I07A	Izee	83.16	38	P	P	07 39 26.0	+2.3
GAMB	Gambell	83.82	3	P	P	07 39 28.2	+1.8
GAMB				IAmb	IAmb	07 39 28.6	
	comp=Z,3.3nm,0.7s						
F10A	Beach Ranch, E	85.58	37	P	P	07 39 37.4	+1.8
F10A				IAmb	IAmb	07 39 38.1	
	comp=Z,4.1nm,0.8s						
TXAR	Lajitas Array	86.64	57	P	P	07 39 42.9	+1.9
	comp=Z,0.8nm,0.7s,baz=216,slow=5.9,SNR=12						
TXAR	Lajitas Array	86.64	57	P	P	07 39 43.3	+2.3
ILAR	Eielson Array	87.95	13	P	P	07 39 46.4	+0.2
	comp=Z,0.9nm,0.6s,baz=111,slow=6.2,SNR=12						
ILAR	Eielson Array	87.95	13	P	P	07 39 45.4	-0.8
PDAR	Pinedale Array	88.53	43	P	P	07 39 51.0	+1.2
	comp=Z,1.1nm,0.9s,baz=220,slow=3.2,SNR=6.2						
PDAR	Pinedale Array	88.53	43	P	P	07 39 51.2	+1.4
CHTO	Chiang Mai	90.43	290	P	P	07 39 56.8	-2.0
MKAR	Makanchi Array	111.21	313	PKiKP	PKiKP	07 45 26.4	-0.7
	comp=Z,0.4nm,0.6s,baz=70,slow=1.0,SNR=6.0						
MKAR	Makanchi Array	111.21	313		PKiKP	07 45 26.0	-1.1
ARCES	ARCESS Array B	128.68	350	PKP	PKiKP	07 46 00.5	-0.1
	comp=Z,3.5nm,1.1s,baz=341,slow=2.6,SNR=3.9						
ARCES	ARCESS Array B	128.68	350		PKPdf	07 46 00.2	+0.3
AKASG	Malin Array Be	142.89	332	PKhKP	PKPdf	07 46 23.9	-2.8
	comp=Z,5.6nm,0.6s,baz=42,slow=4.2,SNR=21						
AKASG	Malin Array Be	142.89	332		PKPdf	07 46 23.6	-3.0
AKBB	Malin Array Si	142.89	332		PKPdf	07 46 23.4	-3.3
BRTR	Keskin Array B	146.86	313	PKPbc	PKPbc	07 46 36.9	+0.1
	comp=Z,1.3nm,0.6s,baz=133,slow=5.3,SNR=8.8						
BRTR	Keskin Array B	146.86	313		PKPbc	07 46 36.4	-0.4
BUR08	Bucovina Ar. S	146.93	331		PKPdf	07 46 38.1	-0.6
CLL	Collm	147.83	347	i PKPbc	PKPbc	07 46 39.3	+0.6
	comp=Z,8.0nm,0.6s						
GERES	GERESS Array B	149.99	345	PKPbc	PKiKP	07 46 44.7	-0.1
	comp=Z,0.3nm,0.5s,baz=26,slow=3.4,SNR=6.9						
GERES	GERESS Array B	149.99	345		PKPdf	07 46 44.2	0.0
TORD	Torodi Ar. Bea	172.97	175	PKP	PKPdf	07 47 02.1	-0.7

comp=Z,0.5nm,0.7s,baz=0.0,slow=2.0,SNR=2.6

IASPEI 14 07:29:29.7±0.9, 45.76N±0.02×14.85E±0.02, h4km±7km, Error ellipse: s-maj=3.5km s-min=3.1km az=15.0, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009
VIE 14 07:29:29.4±0.5, 45.76N×14.87E, h8km, mb2.1/4, ml2.5/5, Error ellipse: s-maj=3.6km s-min=2.3km az=177.0 44 km SE of Ljubljana
LJU 14 07:29:29.3, 45.76N×14.85E, h4km, ML2.1
ISC 14 07:29:29.4±0.9, 45.76N±0.02×14.85E±0.02, h5km±6km, n35, σ0.79/59, 2C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VISS	Visnje	0.04	347⇓	iPg	Pg	07 29 30.6	0.0
VISS				i Sg	Sg	07 29 31.5	+0.1
	comp=Z,3µm,0.1s						
PDKS	Podkum	0.31	19⇓	iPg	Pg	07 29 35.8	+0.3
PDKS				i Sg	Sg	07 29 40.9	+1.3
	comp=Z,265nm,0.2s						
VNDS	Vrh nad Dolski	0.35	343	i Pg	Pg	07 29 36.8	+0.6
LJU	Ljubljana	0.36	321	i Pg	Pg	07 29 37.1	+0.7
LJU				i Sg	Sg	07 29 42.2	+1.1
	comp=Z,174nm,0.3s						
LEGS	Legarje	0.37	60	i Pg	Pg	07 29 36.8	+0.2
LEGS				i		07 29 37.2	
LEGS				eSg	Sg	07 29 42.3	+0.8
BOJS	Bojanci	0.38	133⇓	iPg	Pg	07 29 36.7	-0.1
BOJS				eSg	Sg	07 29 42.2	+0.4
	comp=Z,181nm,0.2s						
KNDS	Knezji Dol	0.41	235⇑	iPg	Pg	07 29 37.5	+0.3
	comp=Z,105nm,0.3s						
CRES	Cresnjev	0.43	82⇓	iPg	Pg	07 29 37.4	-0.3
CRES				i		07 29 38.2	
CRES				i Sg	Sg	07 29 44.2	+1.0
	comp=Z,239nm,0.3s						
OZLJ	Ozalj	0.46	109	ePg	Pg	07 29 38.7	+0.5
OZLJ				Sg	Sg	07 29 44.7	+0.6
RIY	Rijeka	0.51	211	ePg	Pg	07 29 39.5	+0.3
RIY				Sg	Sg	07 29 46.7	+0.9
CRNS	Crni Vrh	0.52	308	i Pg	Pg	07 29 39.9	+0.5
	comp=Z,180nm,0.4s						
GCIS	Gornji Cirnik	0.55	79	eSg	Sg	07 29 48.3	+1.1
JAVS	Javornik	0.57	283	i Pg	Pg	07 29 40.4	+0.2
DOBS	Dobrina	0.58	48	i Pg	Pg	07 29 40.9	+0.4
	comp=Z,50nm,0.1s						
GOLS	Golise	0.59	65⇑	iPg	Pg	07 29 41.6	+0.6
GOLS				eSg	Sg	07 29 49.3	+0.8
	comp=Z,60nm,0.2s						
SKDS	Skadanscina	0.63	250	i Pg	Pg	07 29 41.4	0.0
	comp=Z,22nm,0.1s						
OBKA	Obir	0.77	344	ePg	Pg	07 29 44.7	+0.4
	comp=Z,12nm,0.2s,SNR=22						
OBKA				eSg	Sb	07 29 57.0	+0.7
	comp=Z,73nm,0.3s						
PTJ	Puntijarka	0.79	79	ePg	Pg	07 29 45.0	+0.4
PTJ				Sg	Sb	07 29 55.8	-1.1
GORS	Gorjuse	0.81	313	i Pg	Pg	07 29 45.2	+0.2
GORS				i		07 29 46.2	
	comp=Z,43nm,0.3s						
PERS	Pernice	0.89	12	i Pg	Pg	07 29 46.7	+0.2
SOKA	Soboth	0.92	8	ePg	Pg	07 29 47.3	+0.3
	comp=Z,7.0nm,0.2s						
SOKA				eSg	Sb	07 30 00.1	-0.5
	comp=Z,9.8nm,0.3s						
KALN	Kalnik	1.18	71	i Pg	Pn	07 29 52.3	-0.3
KALN				Sg	Sn	07 30 08.8	-0.3
NVLJ	Novalja	1.20	179	ePg	Pn	07 29 53.4	+0.6
NVLJ				Sg	Sn	07 30 10.6	+1.0
MYKA	Terra Mystica	1.21	316	ePg	Pg	07 29 52.7	+0.2
	comp=Z,12nm,0.3s,SNR=16						
MYKA				i Sg	Sn	07 30 09.4	-0.4
	comp=Z,24nm,0.3s						
MOSL	Moslavina	1.34	96	ePg	Pg	07 29 55.9	+0.8
MOSL				Sg	Sb	07 30 12.2	-0.4
UDBI	Udbina	1.40	152	i Pg	Pg	07 29 57.1	+1.0
UDBI				Sg	Sn	07 30 15.2	+0.7
ARSA	Arzberg	1.56	17	ePg	Pb	07 29 58.5	-0.2
	comp=Z,4.2nm,0.2s,SNR=4.6						
ARSA				eSg	Sb	07 30 18.9	+0.1
	comp=Z,12nm,0.3s,SNR=4.6						
KBA	Koelnbreinsper	1.68	322	i Pg	Pg	07 30 01.5	-0.1
	comp=Z,12nm,0.3s						
KBA				eSg	Sg	07 30 24.1	+0.8
	comp=Z,11nm,0.4s						
DUGI	Dugi Otok	1.78	175	i Pn	Pb	07 30 02.8	+0.3
DUGI				Sn	Sg	07 30 27.1	+0.6
ABTA	Abfaltersbach	1.90	302	eSg	Sg	07 30 30.6	+0.2
	comp=Z,14nm,0.6s						
MORI	Morici	1.99	162	ePn	Pb	07 30 06.1	-0.1
MORI				Sn	Sg	07 30 33.2	-0.2
KIJV	Kijevo	2.08	147	ePn	Pb	07 30 07.5	-0.1
KIJV				Sn	Sg	07 30 35.3	-0.8
ZIRJ	Zirje	2.18	165	i Pn	Pb	07 30 08.4	-1.0
ZIRJ				Sn	Sb	07 30 36.9	+0.2
WTTA	Wattenberg	2.68	305	ePn	Pb	07 30 16.2	-1.7
	comp=Z,2.1nm,0.2s						
STON	Ston	3.54	144	ePn	Pb	07 30 29.1	-3.4
STON				Sn	Sn	07 31 07.4	+0.1

IDC 14 07:44:13.4±0.4, 22.95S×114.36W, h0km, mb5.0/18, mb1 5.1/18, mb1mx5.0/23, mbtmp5.0/18, MS4.9/27, Ms1 4.9/27, ms1mx4.9/28, Error ellipse: s-maj=18.5km s-min=13.1km az=28.0
MOS 14 07:44:13.9±1.1, 22.87S×114.31W, h10km, mb5.6/48, Error ellipse: s-maj=10.2km s-min=7.9km az=75.8
BJI 14 07:44:14.0±0.0, 22.90S×114.40W, h10km, mB5.7/24, Ms6.6/31, Ms7 5.3/31
NEIC 14 07:44:15.1±2.2, 23.0S±0.1×114.3W±0.1, h12km±1km, mb5.7/452, Ms_20 5.2/322, Mwb5.5/26, Mww5.6, Mwc5.6(GCMT), Error ellipse: s-maj=18.5km s-min=15.6km az=163.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.06; $M_{\theta\theta}$-1.89; $M_{\phi\phi}$1.82; $M_{r\theta}$-0.40; $M_{r\phi}$1.70; $M_{\theta\phi}$0.10; Fault plane solution: $M_0$2.55000×10^{17} NP1:ϕ_s156.61000°, δ83.02000°, λ-174.74000°. NP2:ϕ_s65.97000°, δ84.78000°, λ-7.01000°. Principal axes: T 2.4885, Plg1.0000°, Azm111.0000°; N 0.1222, Plg81.0000°, Azm209.0000°; P -2.6108, Plg9.0000°, Azm21.0000°;
GCMT 14 07:44:20.1±0.1, 23.08S±0.01×114.23W±0.01, h15km, MW5.5/150, Moment Tensor Solution. s124,c230; s150,c292; Duration: 1.4 Moment tensor: Scale 10^{17} Nm; M_{rr}0.80±.03; $M_{\theta\theta}$-1.58±.03; $M_{\phi\phi}$0.78±.03; $M_{r\theta}$0.06±.07; $M_{r\phi}$1.85±.02; $M_{\theta\phi}$0.65±.07; Best double couple: $M_0$2.34500×10^{17} NP1:ϕ_s76.00000°, δ69.00000°, λ15.00000°. NP2:ϕ_s341.00000°, δ76.00000°, λ158.00000°. Principal axes: T 2.0760, Plg25.0000°, Azm297.0000°; N 0.5370, Plg64.0000°, Azm129.0000°; P -2.6140, Plg4.0000°, Azm29.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC 14 07:44:20, 23.08S×114.27W, h16km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.93; $M_{\theta\theta}$-1.83; $M_{\phi\phi}$0.91; $M_{r\theta}$0.36; $M_{r\phi}$1.96; $M_{\theta\phi}$0.61; Fault plane solution: $M_0$2.62000×10^{17} NP1:ϕ_s339.00000°, δ71.00000°, λ160.00000°. NP2:ϕ_s76.00000°, δ72.00000°, λ20.00000°. Principal axes: T 2.2912, Plg27.0000°, Azm298.0000°; N 0.5623, Plg63.0000°, Azm116.0000°; P -2.8536, Plg1.0000°, Azm207.0000°;
NEIC 14 07:44:23, 23.34S×114.39W, h16km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.81; $M_{\theta\theta}$-1.85; $M_{\phi\phi}$1.04; $M_{r\theta}$1.36; $M_{r\phi}$2.46; $M_{\theta\phi}$0.78; Fault plane solution: $M_0$3.33000×10^{17} NP1:ϕ_s341.00000°, δ60.00000°, λ166.00000°. NP2:ϕ_s79.00000°, δ78.00000°, λ30.00000°. Principal axes: T 3.2293, Plg30.0000°, Azm304.0000°; N 0.1903, Plg57.0000°, Azm99.0000°; P -3.4196, Plg11.0000°, Azm207.0000°;
ISC 14 07:44:14.4±0.2, 23.06S±0.07×114.26W±0.05, h10km, n1102, σ1.31/826, mb5.7/243, MS5.2/194, 11C-27D, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	6.03	133	LR	LR	07 47 26.7	
	comp=Z,17µm,18.5s,baz=322,slow=31						
PTCN	Pitcairn Islan	14.61	259	P	P	07 47 48.5	+0.9
TAOE	Nuku Hiva Isla	28.55	295	eS	S	07 54 58.9	0.0
	604nm,37.2s						
TAOE				eLR	LR	07 57 29.0	
	comp=Z,8µm,24.3s						
TAOE	Nuku Hiva Isla	28.55	295	IAMs_20	IAMs_20	07 57 54.9	
	comp=Z,7µm,22.0s						
MEH	Mehetia	32.04	273	eT	T	08 24 11.0	
	comp=Z,6.6nm,0.2s						
PAYG	Puerto Ayora	32.21	50	IAMs_20	IAMs_20	07 59 47.7	
	comp=Z,5µm,22.0s						
TBI	Tubuai	32.31	262	eS	S	07 55 59.2	+1.6
	comp=Z,936nm,28.9s						
TBI				eLQ	LQ	07 57 52.7	
	comp=Z,3µm,31.8s						
TBI				eLR	LR	07 58 57.7	
	comp=Z,1µm,29.8s						
TBI	Tubuai	32.31	262	eT	T	08 24 34.5	
	comp=Z,13nm,0.3s						
PMOR	Pomariorio Ree	32.73	278	eP	P	07 50 48.2	+0.7
	comp=Z,194nm,1.3s						
TIAR	Tiarei	33.30	273	eT	T	08 25 45.5	
	comp=Z,3.3nm,0.2s						
PAE	Paea	33.49	273	eP	P	07 50 55.2	+1.0
	comp=Z,20nm,1.3s						
PPTF	Pamatai, Papee	33.50	273	P	P	07 50 55.9	+1.6
PPT2	Papeete2	33.51	273	eP	P	07 50 55.6	+1.2
	comp=Z,126nm,1.4s						
PPT2				eS	S	07 56 17.7	+1.2
	comp=Z,953nm,25.0s						
PPT2				eLQ	LQ	07 58 23.5	
	comp=Z,5µm,24.8s						
PPT2				eLR	LR	07 59 32.3	
	comp=Z,3µm,27.2s						
PPT	Papeete	33.51	273	P	P	07 50 54.8	+0.4
	comp=Z,47nm,1.1s,baz=116,slow=8.3,SNR=4.7						
PPT				LR	LR	08 00 40.8	
	comp=Z,756nm,19.7s,baz=102,slow=30						
NNA	Nana	37.24	79	P	P	07 51 28.0	+1.5
NNA	Nana	37.24	79c	iP	P	07 51 26.5	0.0
NNA				pmax	pmax		
	comp=Z,133nm,1.5s						
GO05	Huala	38.62	118	P	P	07 51 41.1	+3.1
GO05				IAMs_20	IAMs_20	08 02 56.8	
	comp=Z,5µm,21.0s						
CO02	Combarbal	39.15	112	eP	P	07 51 43.9	+1.3
CO04	Los Peladeros	39.19	113	eP	P	07 51 44.6	+1.4
ROC1	El Roble	39.20	114	P	P	07 51 45.3	+2.1
GO04	Tololo Observa	39.31	110	eP	P	07 51 45.4	+1.2
GO04	Tololo Observa	39.31	110	P	P	07 51 44.9	+0.8
GO04				IAmb	IAmb	07 51 51.8	
	comp=Z,282nm,2.0s						
GO04				IAMs_20	IAMs_20	08 03 16.3	
	comp=Z,7µm,22.0s						
PEL	Peldehue	39.49	115	P	P	07 51 48.0	+2.7
PEL				IAMs_20	IAMs_20	08 03 22.2	
	comp=Z,6µm,21.0s						
PEL	Peldehue	39.49	115	P	P	07 51 48.0	+2.7
PEL				pmax	pmax		
	comp=Z,99nm,1.5s						
GO03	Copiap	39.90	106	P	P	07 51 50.5	+1.7
GO03				IAMs_20	IAMs_20	08 03 32.7	
	comp=Z,3µm,22.0s						
PB10	IPOC Station P	40.03	100	P	P	07 51 50.9	+1.0
PB05	IPOC Station P	40.45	99	eP	P	07 51 53.9	+0.4
PB04	IPOC Station P	40.59	98	eP	P	07 51 56.1	+1.4
PB04	IPOC Station P	40.59	98	P	P	07 51 55.6	+0.9
PLCA	Paso Flores	40.62	126	P	P	07 51 57.6	+3.0
	comp=Z,17nm,1.1s,baz=323,slow=9.7,SNR=8.7						
PLCA				LR	LR	08 04 23.6	
	comp=Z,3µm,20.7s,baz=299,slow=30						
PLCA	Paso Flores	40.62	126	eP	P	07 51 57.5	+2.8
PLCA	Paso Flores	40.62	126	P	P	07 51 57.3	+2.7
PLCA	Paso Flores	40.62	126	P	P	07 51 57.3	+2.7
PLCA				pmax	pmax		
	comp=Z,75nm,1.4s						
GO02	Mina Guanaco	40.69	102	P	P	07 51 57.4	+1.8
PB07	IPOC Station P	40.93	97	eP	P	07 51 59.1	+1.5
PB01	IPOC Station P	41.43	96	P	P	07 52 03.4	+1.9
CFA	Coronel Fontan	41.52	112	P	P	07 52 03.2	+1.1
	comp=Z,7.7nm,0.9s,baz=262,slow=7.5,SNR=20						
PB11	IPOC Station P	41.54	94	eP	P	07 52 03.2	+0.7
PB11	IPOC Station P	41.54	94	P	P	07 52 03.5	+0.9
H06S1	SOCORRO T	41.66	5	T	T	08 36 21.7	
	SNR=16						
LVC	Limon Verde	41.67	99	P	P	07 52 06.0	+2.2
	comp=Z,20nm,0.9s,baz=272,slow=6.8,SNR=13						
LVC	Limon Verde	41.67	99	eP	P	07 52 04.0	+0.2
LVC	Limon Verde	41.67	99	P	P	07 52 05.7	+1.9
H06E1	SOCORRO T-PHAS	41.71	5	T	T	08 36 23.9	
	SNR=25						
MNMC	Minye Minye	41.74	93	P	P	07 52 05.2	+0.9
MNMC				IAMs_20	IAMs_20	08 05 29.3	
	comp=Z,2µm,18.0s						
OTAV	Otavalo	41.81	61	eP	P	07 52 02.2	-2.9
OTAV	Otavalo	41.81	61	P	P	07 52 07.2	+2.1
OTAV				IAmb	IAmb	07 52 10.4	
	comp=Z,194nm,1.8s						
OTAV	Otavalo	41.81	61	P	P	07 52 07.2	+2.1
OTAV				pmax	pmax		
	comp=Z,194nm,1.8s						
PB08	IPOC Station P	41.92	95	eP	P	07 52 05.5	-0.4
GO01	Chusmiza	41.98	94	P	P	07 52 07.9	+1.4
TLIG	Tlapa	43.19	22	IAmb	IAmb	07 52 21.9	
	comp=Z,168nm,1.7s						
CRUC	La Cruz	43.80	61	eP	P	07 52 20.9	-0.3
LPAZ	La Paz	43.82	90	P	P	07 52 23.6	+1.9
	comp=Z,48nm,1.1s,baz=267,slow=5.5,SNR=58						
LPAZ				LR	LR	08 06 49.5	
	comp=Z,1µm,19.2s,baz=252,slow=31						
LPAZ	La Paz	43.82	90	eP	P	07 52 21.3	-0.3
LPAZ	La Paz	43.82	90	IAmb	IAmb	07 52 29.3	
	comp=Z,146nm,1.2s						
BBAC	Balboa, Cauca	43.83	60	eP	P	07 52 20.9	-0.4
JTS	Las Juntas de	43.84	44	P	P	07 52 22.6	+1.6
JTS				IAmb	IAmb	07 52 26.2	
	comp=Z,146nm,1.6s						
JTS	Las Juntas de	43.84	44	IAMs_20	IAMs_20	08 05 36.5	
	comp=Z,2µm,20.0s						
JTS	Las Juntas de	43.84	44c	iP	P	07 52 21.6	+0.6
JTS				pmax	pmax		
	comp=Z,98nm,1.7s						
SNET	Serv Nac Est T	43.98	36	IAmb	IAmb	07 52 27.1	
	comp=Z,157nm,1.2s						
HDC	Heredia	44.16	45	IAMs_20	IAMs_20	08 05 51.3	
	comp=Z,2µm,18.0s						
MOIG	Morelia	44.35	18	IAmb	IAmb	07 52 36.8	
	comp=Z,289nm,1.8s						
UNM	Universidad Na	44.63	20	IAMs_20	IAMs_20	08 07 22.2	
	comp=Z,2µm,20.0s						
PTLC	Puerto Leguiza	44.77	64	eP	P	07 52 27.8	-0.8
FLOC	Florencia	44.86	62	eP	P	07 52 26.8	-2.5
ACON	Acoyapa	44.98	42	IAmb	IAmb	07 52 35.3	
	comp=Z,154nm,1.8s						
TGUH	Tegucigalpa,Un	45.37	38	P	P	07 52 33.7	+0.3
TGUH				IAmb	IAmb	07 52 38.7	
	comp=Z,82nm,1.3s						
TGUH				PcP	PcP	07 54 13.3	+0.4
YOTC	Yotoco, Valle	45.73	59	eP	P	07 52 37.0	+0.7
USHA	Ushuaia	46.45	145	P	P	07 52 43.4	+2.0
	comp=Z,14nm,1.1s,baz=332,slow=3.3,SNR=4.5						
BCIP	Isla Barro Col	46.48	50	IAMs_20	IAMs_20	08 07 01.0	
	comp=Z,3µm,22.0s						
ORTC	Ortega, Tolima	46.56	60	eP	P	07 52 45.0	+2.2
MACC	Macarena, Meta	46.66	63	eP	P	07 52 44.8	+1.2
PRAC	Prado	46.73	60	eP	P	07 52 45.8	+1.7
ANIL	Santa Ana	46.78	59	eP	P	07 52 45.5	+0.7
ZAIG	Zacatecas	46.95	15	P	P	07 52 46.6	+0.7
LPIG	La Paz	47.03	5	LR	LR	08 07 50.8	
	comp=Z,2µm,20.3s,baz=167,slow=30						
RREF	El Recreo	47.07	59	eP	P	07 52 48.8	+1.3
CBOC	Ciudad Bolivar	47.15	57	eP	P	07 52 48.1	+0.6
GUY2C	Guyana, Caldas	47.26	58	eP	P	07 52 49.9	+1.2
HELC	Santa Helena	47.73	57	eP	P	07 52 53.6	+1.4
ROSC	El Rosal	47.85	60	P	P	07 52 56.3	+3.1
	comp=Z,21nm,0.9s,baz=253,slow=6.8,SNR=19						
ROSC				LR	LR	08 08 24.5	
	comp=Z,2µm,21.0s,baz=223,slow=30						
ROSC	El Rosal	47.85	60	eP	P	07 52 53.7	+0.5
ROSC	El Rosal	47.85	60	IAmb	IAmb	07 52 59.3	

comp=Z,66nm,1.4s
NORC Norcasia 47.85 58 eP P 07 52 53.8 +1.0
CAPC Capurgana 47.92 53 eP P 07 52 54.8 +1.5
CHIC Chingaza 48.19 60 eP P 07 52 57.4 +1.5
SPBC San Pablo de B 48.53 59 eP P 07 52 58.7 +0.5
PTBC PUERTO BERRIO, 48.78 58 eP P 07 52 59.5 -0.4
ZARC Zaragoza, Cauc 49.06 56 eP P 07 53 03.3 +1.2
PTGC Puerto Gaitan, 49.23 62 eP P 07 53 04.4 +1.0
RUSC La Rusia 49.46 60 eP P 07 53 06.2 +0.4
RUSC La Rusia 49.46 60 P P 07 53 07.0 +1.2
BARC Barichara 49.81 59 eP P 07 53 08.0 0.0
TEIG Tepich 49.93 33 P P 07 53 08.2 -0.3
SRIG Santa Rosalia 50.12 2 IAmb IAmb 07 53 12.7
comp=Z,61nm,1.1s
SJCC San Jacinto, C 50.36 54 eP P 07 53 11.8 -0.2
HPIG 50.39 10 IAMs_20 IAMs_20 08 09 33.2
comp=Z,2µm,21.0s
SMLC San Martn de 50.49 56 eP P 07 53 12.6 -0.4
PAMC Pamplona, Colo 50.64 58 eP P 07 53 15.3 +0.7
SAML Samuel 50.81 83 eP P 07 53 15.2 -0.3
SAML Samuel 50.81 83 P P 07 53 15.2 -0.3
SAML IAmb IAmb 07 53 18.6
comp=Z,109nm,1.6s
SAML Samuel 50.81 83 P P 07 53 15.2 -0.3
SAML pmax pmax
comp=Z,109nm,1.7s
TAMC Tame, Arauca 50.81 60 eP P 07 53 13.5 -2.0
EFI East Falkland 51.41 139 IAMs_20 IAMs_20 08 11 05.9
comp=Z,3µm,19.0s
EFI East Falkland 51.41 139 iP P 07 53 21.4 +2.0
EFI pmax pmax
comp=Z,48nm,1.3s
CPUP Villa Florida 51.48 106 P P 07 53 21.3 +0.9
comp=Z,16nm,1.2s,baz=261,slow=8.8,SNR=12
CPUP LR LR 08 12 30.8
comp=Z,845nm,18.5s,baz=254,slow=33
CODC Agustn Codazz 51.68 55 eP P 07 53 19.3 -2.6
KVTX Kingsville 52.73 18 IAmb IAmb 07 53 33.4
comp=Z,110nm,1.0s
833A Chaparral WMA, 53.05 16 IAmb IAmb 07 53 34.3
comp=Z,143nm,1.5s
833A Chaparral WMA, 53.05 16 P P 07 53 32.7 +0.9
baz=197,SNR=8.9
TXAR Lajitas Array 53.08 12 P P 07 53 33.1 +1.0
comp=Z,10.0nm,1.0s,baz=188,slow=8.3,SNR=48
TXAR PcP PcP 07 54 41.6 +1.1
comp=Z,4.2nm,1.0s,baz=259,slow=1.4,SNR=4.0
TXAR LR LR 08 12 03.2
comp=Z,887nm,18.2s,baz=0.0,slow=32
TXAR Lajitas Array 53.08 12 P P 07 53 32.6 +0.5
TXAR PcP 07 54 41.0 +0.5
SDV Santo Domingo 53.20 58 eP P 07 53 29.8 -3.6
SDV Santo Domingo 53.20 58 P P 07 53 33.8 +0.4
SDV IAmb IAmb 07 53 36.8
comp=Z,160nm,1.7s
AQDB Aquidauana 54.14 99 eP P 07 53 41.1 +1.0
319A Douglas 54.33 5 IAmb IAmb 07 53 44.1
comp=Z,80nm,1.1s
214A Organ Pipe Nat 54.72 2 IAmb IAmb 07 53 46.8
comp=Z,72nm,1.2s
214A Organ Pipe Nat 54.72 2 P P 07 53 45.2 +1.2
baz=182,SNR=44
JCT Junction City 55.01 15 IAMs_20 IAMs_20 08 13 04.9
comp=Z,2µm,21.0s
JCT Junction City 55.01 15 P P 07 53 46.6 +0.4
baz=196,SNR=65
JCT S S 08 01 31.7 +3.3
baz=196
AFI Afiamalu 55.02 269 P P 07 53 48.0 +1.4
comp=Z,61nm,1.0s,baz=272,slow=3.6,SNR=11
AFI Afiamalu 55.02 269 P P 07 53 47.7 +1.1
AFI IAmb IAmb 07 53 49.2
comp=Z,128nm,1.2s
EPT El Paso 55.02 8 IAMs_20 IAMs_20 08 12 28.6
comp=Z,3µm,20.0s
MNTX Cornudas Mount 55.10 9 IAmb IAmb 07 53 48.7
comp=Z,59nm,1.2s
MNTX IAMs_20 IAMs_20 08 12 34.1
comp=Z,2µm,21.0s
MNTX Cornudas Mount 55.10 9 P P 07 53 47.2 +0.4
baz=190,SNR=57
TUC Tucson 55.15 4 P P 07 53 48.1 +1.0
TUC Tucson 55.15 4 P P 07 53 48.2 +1.0
TUC pmax pmax
comp=Z,34nm,1.3s
TUC Tucson 55.15 4 P P 07 53 48.4 +1.2
baz=184
SALV Santo Antonio 55.37 94 eP P 07 53 49.7 +0.6
IKP In-Ko-Pah, Jac 55.42 358 P P 07 53 50.5 +1.4
baz=178,SNR=24
BAR Barrett 55.47 358 IAmb IAmb 07 53 52.0
comp=Z,132nm,1.3s
113A Mohawk Valley, 55.51 1 IAmb IAmb 07 53 52.4
comp=Z,77nm,1.4s
HKT Hockley 55.60 19 P P 07 53 50.8 +0.6
HKT Hockley 55.60 19 iP P 07 53 50.0 -0.2
HKT pmax pmax
comp=Z,70nm,1.6s
121A Cookes Peak, D 55.62 7 IAmb IAmb 07 53 53.4
comp=Z,99nm,1.3s
121A IAMs_20 IAMs_20 08 12 42.5
comp=Z,1µm,21.0s
121A Cookes Peak, D 55.62 7 P P 07 53 52.1 +1.4
baz=187,SNR=36
MONP2 Monument Peak 55.67 358 P P 07 53 52.3 +1.2
baz=178,SNR=19
109C Camp Elliot, M 55.70 357 P P 07 53 51.9 +1.0
baz=177
SWSC Sam W. Stewart 55.71 358 P P 07 53 52.0 +1.0
baz=178,SNR=6.4
GLA Glamis 55.80 359 P P 07 53 52.8 +1.0
baz=179,SNR=5.3
435B Jarrell 55.87 17 IAmb IAmb 07 53 54.7
comp=Z,124nm,1.3s
435B Jarrell 55.87 17 P P 07 53 53.1 +0.8
baz=199,SNR=12
SCI2 San Clemente I 55.87 356 P P 07 53 53.1 +0.8
baz=175
SNCC San Nicolas Is 56.21 355 IAMs_20 IAMs_20 08 11 21.9
comp=Z,2µm,19.0s
SNCC San Nicolas Is 56.21 355 P P 07 53 55.7 +1.0
baz=174
CIS Catalina Islan 56.28 356 P P 07 53 55.9 +0.7
baz=176
TRCB Terra Rica 56.36 103 eP P 07 53 57.5 +1.4
XPFO Pion Flat 56.39 358 P P 07 53 57.1 +1.1
PFO Pinyon Flats O 56.39 358 LR LR 08 12 52.0
comp=Z,734nm,18.5s,baz=180,slow=30
PFO Pinyon Flats O 56.39 358 P P 07 53 56.9 +0.8
PFO Pinyon Flats O 56.39 358 c iP P 07 53 57.1 +1.0
PFO pmax pmax
comp=Z,23nm,1.1s
PFO Pinyon Flats O 56.39 358 P P 07 53 57.5 +1.4
baz=178,SNR=11
BC3 Big Chuckawall 56.41 359 P P 07 53 57.4 +1.2
baz=179,SNR=29
MURC Murrieta 56.41 357 P P 07 53 57.0 +0.9
baz=177,SNR=7.3
PTGB Pitanga 56.45 105 eP P 07 53 58.4 +1.5
Y12C Blythe 56.49 360 P P 07 53 57.8 +1.2
baz=180,SNR=21
FMP Fort Macarthur 56.58 356 P P 07 53 58.3 +1.0
baz=176
Y14A Wickenburg 56.69 1 IAmb IAmb 07 54 00.2
comp=Z,80nm,1.5s
BELC Belle Mtn. Jos 56.76 358 P P 07 54 00.2 +1.5
baz=178,SNR=32
IRM Iron Mountain 56.90 359 P P 07 54 00.8 +1.2
baz=179,SNR=25
SCZ2 Santa Cruz Isl 56.96 355 P P 07 54 00.7 +0.7
baz=174
BLG Laguna Peak, P 57.03 355 P P 07 54 01.3 +0.8
baz=175
PASC Pasadena Art C 57.03 356 IAmb IAmb 07 54 03.2
comp=Z,113nm,1.4s
PASC Pasadena Art C 57.03 356 IAMs_20 IAMs_20 08 11 58.6
comp=Z,1µm,19.0s
PDMCI Parker Dam,Lak 57.04 0 P P 07 54 01.7 +1.1
baz=180,SNR=18
WHTX Lake Whitney, 57.05 17 IAmb IAmb 07 54 02.2
comp=Z,89nm,1.4s
WHTX Lake Whitney, 57.05 17 P P 07 54 00.7 +0.1
baz=198,SNR=9.6
BBRC Big Bear Solar 57.06 357 P P 07 54 02.4 +1.5
baz=177,SNR=9.2
BFSC Mount Baldy Ra 57.07 357 P P 07 54 01.8 +0.9

baz=176,SNR=23
MWC Mount Wilson 57.08 356 IAmb IAmb 07 54 03.6
comp=Z,90nm,1.3s
MWC IAMs_20 IAMs_20 08 12 02.8
comp=Z,1µm,19.0s
ABTX Abilene, Hawle 57.10 15 P P 07 54 01.0 0.0
ABTX IAmb IAmb 07 54 03.5
comp=Z,47nm,0.9s
ABTX PcP PcP 07 54 55.5 -0.3
ABTX IAMs_20 IAMs_20 08 14 45.3
comp=Z,2µm,21.0s
ABTX Abilene, Hawle 57.10 15 P P 07 54 00.9 -0.2
baz=196,SNR=20
DECC Green Verdugo 57.12 356 P P 07 54 02.3 +1.2
baz=176
C2SB Chapadao do Su 57.18 98 eP P 07 54 03.7 +1.7
441A DeRidder 57.19 22 IAMs_20 IAMs_20 08 18 03.1
comp=Z,2µm,18.0s
Y22D IRIS PASSCAL I 57.24 7 IAMs_20 IAMs_20 08 14 06.4
comp=Z,2µm,19.0s
Y22D IRIS PASSCAL I 57.24 7 P P 07 54 03.2 +1.0
baz=188
GTBY Guantanamo Bay 57.31 45 IAMs_20 IAMs_20 08 14 41.5
comp=Z,2µm,18.0s
X18A Snowflake 57.41 4 IAmb IAmb 07 54 06.2
comp=Z,114nm,1.4s
X18A IAMs_20 IAMs_20 08 13 05.0
comp=Z,1µm,21.0s
SBC Santa Barbara 57.41 355 P P 07 54 04.0 +0.9
baz=174
NEE2 Needles Airpor 57.51 360 P P 07 54 05.1 +1.2
baz=180,SNR=5.8
OSI Osito Audit: C 57.51 356 IAmb IAmb 07 54 06.2
comp=Z,81nm,1.4s
OSI IAMs_20 IAMs_20 08 12 41.2
comp=Z,2µm,18.0s
OSI Osito Audit: C 57.51 356 P P 07 54 04.6 +0.7
baz=175
GMRC Granite Mounta 57.54 359 P P 07 54 05.8 +1.6
baz=179,SNR=21
HEC Hector,Ludlow 57.60 358 P P 07 54 05.7 +1.1
baz=178,SNR=12
NATX Nacogdoches 57.64 20 P P 07 54 05.7 +0.8
baz=202,SNR=13
RRX Edison Barstow 57.67 357 P P 07 54 06.1 +1.1
baz=177
EDW2 Edwards Air Fo 57.73 356 P P 07 54 06.3 +0.8
baz=176,SNR=18
MSTX Muleshoe 57.75 11 P P 07 54 05.8 0.0
baz=193,SNR=37
PKM Mcpherson Peak 57.87 355 P P 07 54 07.5 +0.9
baz=174,SNR=8.5
PCMB Pacaembu 57.88 102 eP P 07 54 07.9 +1.0
W18A Petrified Fore 58.01 4 P P 07 54 08.6 +1.0
baz=185,SNR=22
ARVC Arvin 58.02 356 P P 07 54 07.9 +0.4
baz=175
342A Flagon Creek P 58.06 22 IAmb IAmb 07 54 10.1
comp=Z,84nm,1.2s
GSC Goldstone, Bar 58.09 358 IAmb IAmb 07 54 10.7
comp=Z,69nm,1.3s
GSC Goldstone, Bar 58.09 358 P P 07 54 08.9 +0.9
baz=177,SNR=33
ANMO Albuquerque 58.16 8 LR LR 08 14 57.4
comp=Z,2µm,18.4s,baz=187,slow=32
ANMO Albuquerque 58.16 8 P P 07 54 09.3 +0.6
ANMO Albuquerque 58.16 8 IAMs_20 IAMs_20 08 14 36.6
comp=Z,2µm,19.0s
ANMO Albuquerque 58.16 8 c iP P 07 54 09.1 +0.5
ANMO pmax pmax
comp=Z,72nm,3.0s
ANMO Albuquerque 58.16 8 P P 07 54 09.2 +0.6
baz=188
TUQ Turquoise Moun 58.19 358 P P 07 54 10.3 +1.5
baz=178,SNR=6.7
AIN Ainahou 58.27 313 P P 07 54 10.6 +0.9
SMMC Simmler 58.30 354 P P 07 54 10.9 +1.4
baz=174,SNR=7.8
LRMC Laurel Mtn Rad 58.30 357 P P 07 54 10.5 +0.9
baz=176,SNR=25
MLH Mauna Loa 58.31 313 P P 07 54 10.9 +0.8
MLH Mauna Loa 58.31 313 P P 07 54 10.9 +0.8
MLH pmax pmax
comp=Z,504nm,1.2s
WUAZ Wupatki 58.32 3 IAmb IAmb 07 54 12.6
comp=Z,70nm,1.4s
WUAZ Wupatki 58.32 3 P P 07 54 11.2 +1.5
baz=183,SNR=23
HMH Humu'ula Sheep 58.45 313 P P 07 54 11.4 +0.3
ISA Isabella, Lake 58.53 356 IAMs_20 IAMs_20 08 13 16.4
comp=Z,2µm,20.0s
ISA Isabella, Lake 58.53 356 P P 07 54 12.0 +0.9
baz=176,SNR=21
POHA Pohakuloa 58.59 313 P P 07 54 12.1 +0.1
SHOC Shoshone, Teco 58.66 358 P P 07 54 13.2 +1.2
baz=178,SNR=18
344A Westbrook Farm 58.70 24 IAmb IAmb 07 54 14.8
comp=Z,87nm,1.4s
PAGB Antelope Grade 58.74 354 IAmb IAmb 07 54 15.2
comp=Z,102nm,1.4s
PAGB IAMs_20 IAMs_20 08 13 15.8
comp=Z,1µm,20.0s
VES Vestal, Richgr 58.75 355 P P 07 54 13.3 +0.8
baz=175,SNR=24
AMTX Amarillo 58.84 12 IAmb IAmb 07 54 15.6
comp=Z,43nm,0.9s
AMTX IAMs_20 IAMs_20 08 15 09.3
comp=Z,2µm,21.0s
AMTX Amarillo 58.84 12 P P 07 54 13.4 +0.1
baz=194
MXZ Matakaoa Point 58.85 239 IAMs_20 IAMs_20 08 14 02.8
comp=Z,2µm,20.0s
MPMC Manual Prospec 58.87 357 P P 07 54 14.8 +1.2
baz=177,SNR=33
FRTB Fartura 58.99 104 eP P 07 54 15.8 +1.1
ARAG Araguaiana, MT 59.00 95 eP P 07 54 15.4 +0.7
346A Big Creek Wild 59.12 25 IAmb IAmb 07 54 18.3
comp=Z,49nm,1.1s
U15A North Rim 59.19 2 IAmb IAmb 07 54 18.8
comp=Z,70nm,1.2s
FURC Furnace Creek, 59.25 358 P P 07 54 17.1 +1.2
baz=177,SNR=28
VOG Valley Oaks Go 59.25 355 P P 07 54 16.0 0.0
baz=175
PMPB Monarch Peak 59.27 354 IAmb IAmb 07 54 21.9
comp=Z,138nm,1.6s
PMPB IAMs_20 IAMs_20 08 13 16.9
comp=Z,1µm,19.0s
CWC Cottonwood Cre 59.28 356 P P 07 54 17.7 +1.3
baz=176
WMOK Wichita Mounta 59.33 15 IAMs_20 IAMs_20 08 16 22.2
comp=Z,1µm,19.0s
WMOK Wichita Mounta 59.33 15 P P 07 54 16.0 -0.6
WMOK pmax pmax
comp=Z,34nm,1.9s
WMOK Wichita Mounta 59.33 15 P P 07 54 17.4 +0.8
baz=197,SNR=20
VBMS Vicksburg 59.47 23 IAmb IAmb 07 54 21.7
comp=Z,97nm,1.4s
VBMS Vicksburg 59.47 23 P P 07 54 18.4 +0.8
baz=206
Z41A Richland Creek 59.62 21 IAmb IAmb 07 54 22.7
comp=Z,118nm,1.2s
Z41A IAMs_20 IAMs_20 08 17 54.3
comp=Z,3µm,20.0s
Z41A Richland Creek 59.62 21 P P 07 54 19.2 +0.7
baz=203,SNR=10
TPNV Topopah Spring 59.71 358 IAmb IAmb 07 54 24.5
comp=Z,75nm,1.4s
TPNV Topopah Spring 59.71 358 P P 07 54 21.1 +1.7
baz=178,SNR=24
URZ Urewera 59.71 238 IAMs_20 IAMs_20 08 14 27.6
comp=Z,2µm,19.0s
GRAC Grapevine Rang 59.80 357 P P 07 54 21.4 +1.5
baz=177,SNR=11
SDD Santo Domingo 59.82 50 IAMs_20 IAMs_20 08 14 20.5
comp=Z,3µm,19.0s
SAO San Andreas Ge 59.88 353 P P 07 54 21.6 +1.3
SAO IAMs_20 IAMs_20 08 13 44.0
comp=Z,1µm,20.0s
SAO San Andreas Ge 59.88 353 P P 07 54 21.6 +1.3
SAO pmax pmax
comp=Z,39nm,1.3s
BRAL Brewton 59.89 27 P P 07 54 21.3 +0.7
baz=209
TIN Tinemaha, Big 59.90 356 P P 07 54 21.5 +0.9
baz=176,SNR=7.7
WLAR White Oak Lake 59.92 20 IAMs_20 IAMs_20 08 17 39.1

comp=Z,2µm,21.0s
DWPF Disney Wildern 59.92 34 P P 07 54 20.2 -0.6
baz=215
BKZ Black Stump Fm 60.09 237 IAMs_20 IAMs_20 08 13 48.6
comp=Z,2µm,21.0s
MVCO Mesa Verde 60.19 5 IAmb IAmb 07 54 25.0
comp=Z,93nm,1.3s
MVCO Mesa Verde 60.19 5 P P 07 54 23.4 +0.6
baz=186,SNR=32
OKCFA Oklahoma City 60.29 16 IAMs_20 IAMs_20 08 16 42.9
comp=Z,2µm,21.0s
OMMB Old Mammoth Mi 60.51 356 IAMs_20 IAMs_20 08 14 18.6
comp=Z,2µm,21.0s
MLAC Mammoth, Mammo 60.52 356 P P 07 54 25.8 +0.9
baz=175
MIAR Mount Ida 60.56 20 IAmb IAmb 07 54 26.3
comp=Z,57nm,1.4s
MIAR Mount Ida 60.56 20 P P 07 54 25.2 +0.2
MIAR pmax pmax
comp=Z,36nm,1.4s
MIAR Mount Ida 60.56 20 P P 07 54 24.6 -0.5
baz=202,SNR=14
T25A Trinidad 60.59 9 IAMs_20 IAMs_20 08 16 09.3
comp=Z,2µm,19.0s
T25A Trinidad 60.59 9 P P 07 54 26.0 +0.5
baz=190,SNR=12
X40A Basin Creek Fa 60.74 20 IAMs_20 IAMs_20 08 17 52.0
comp=Z,3µm,21.0s
X40A Basin Creek Fa 60.74 20 P P 07 54 25.9 -0.3
baz=203
SPB Sao Paulo 60.83 105 IAMs_20 IAMs_20 08 16 15.1
comp=Z,1µm,22.0s
U32A Winter Ranch, 60.85 14 IAmb IAmb 07 54 28.7
comp=Z,134nm,1.5s
U32A IAMs_20 IAMs_20 08 17 39.4
comp=Z,2µm,19.0s
S22A 4UR Ranch, Cre 60.88 7 IAmb IAmb 07 54 31.8
comp=Z,102nm,1.7s
S22A 4UR Ranch, Cre 60.88 7 P P 07 54 28.4 +0.9
baz=188,SNR=23
RCLB Rio Claro- Sao 61.03 104 eP P 07 54 29.6 +0.9
SDCO Great Sand Dun 61.04 8 P P 07 54 29.0 +0.4
SDCO IAmb IAmb 07 54 30.6
comp=Z,69nm,1.3s
SDCO IAMs_20 IAMs_20 08 16 14.9
comp=Z,2µm,20.0s
SDCO Great Sand Dun 61.04 8 P P 07 54 29.2 +0.6
baz=189,SNR=38
CMB Columbia Colle 61.04 354 P P 07 54 29.1 +0.8
CMB IAmb IAmb 07 54 30.9
comp=Z,77nm,1.4s
CMB IAMs_20 IAMs_20 08 14 27.6
comp=Z,1µm,21.0s
CMB Columbia Colle 61.04 354 P P 07 54 29.1 +0.8
CMB pmax pmax
comp=Z,77nm,1.4s
R11A Troy Canyon, C 61.09 359 IAmb IAmb 07 54 32.0
comp=Z,59nm,1.3s
R11A Troy Canyon, C 61.09 359 P P 07 54 29.9 +1.1
baz=179,SNR=53
W39A Magazine 61.10 19 P P 07 54 28.5 -0.2
baz=202,SNR=13
UALR University of 61.16 21 IAmb IAmb 07 54 32.7
comp=Z,99nm,1.4s
TUL1 Leonard 61.20 17 IAmb IAmb 07 54 30.2
comp=Z,102nm,1.5s
TUL1 IAMs_20 IAMs_20 08 17 03.8
comp=Z,3µm,22.0s
TUL1 Leonard 61.20 17 P P 07 54 29.0 -0.3
baz=200,SNR=16
SNZO South Karori 61.21 234 IAMs_20 IAMs_20 08 16 13.4
comp=Z,1µm,19.0s
PSUT Pine Spring 61.26 0 P P 07 54 31.1 +1.1
NV11 Mina Array Sit 61.27 357 IAmb IAmb 07 54 32.8
comp=Z,83nm,1.4s
NV11 IAMs_20 IAMs_20 08 15 16.8
comp=Z,2µm,19.0s
NVAR Mina Array Bea 61.28 356 P P 07 54 31.4 +1.3
comp=Z,20nm,0.8s,baz=181,slow=8.2,SNR=118
NVAR LR LR 08 15 18.2
comp=Z,1µm,18.6s,baz=178,slow=30
NVAR Mina Array Bea 61.28 356 P P 07 54 30.5 +0.4
VAO Valinhos 61.39 104 eP P 07 54 32.2 +1.0
MCCM Marconi Confer 61.41 352 IAMs_20 IAMs_20 08 14 14.5
comp=Z,1µm,18.0s
X43A Marvell 61.42 22 P P 07 54 31.3 +0.4
baz=205
WAKR Walker 61.43 355 P P 07 54 31.9 +0.8
WAKR IAMs_20 IAMs_20 08 15 14.9
comp=Z,1µm,19.0s
RYN Ryan 61.49 356 IAMs_20 IAMs_20 08 15 22.6
comp=Z,2µm,18.0s
LRAL Lakeview Retre 61.54 26 IAmb IAmb 07 54 35.5
comp=Z,107nm,1.6s
LRAL Lakeview Retre 61.54 26 P P 07 54 31.9 +0.1
baz=209,SNR=6.6
CRPR Cabo Rojo, PR 61.55 53 P P 07 54 32.0 0.0
W41B Gary Mavity, V 61.56 20 IAmb IAmb 07 54 36.5
comp=Z,81nm,1.4s
W41B IAMs_20 IAMs_20 08 18 05.6
comp=Z,3µm,22.0s
W41B Gary Mavity, V 61.56 20 P P 07 54 32.0 +0.2
baz=203,SNR=14
MLPR Magueyes Islan 61.57 53 P P 07 54 31.3 -0.9
IPMB Ipameri, GO 61.62 99 eP P 07 54 32.9 +0.2
TIGA Tifton 61.64 30 P P 07 54 32.5 +0.1
baz=212
WHAR Wooly Hollow 61.65 20 IAmb IAmb 07 54 38.2
comp=Z,123nm,1.8s
WHAR IAMs_20 IAMs_20 08 18 29.1
comp=Z,2µm,20.0s
KVN Kaiserville 61.88 357 P P 07 54 34.7 +0.5
KVN IAMs_20 IAMs_20 08 15 37.0
comp=Z,1µm,19.0s
KVN Kaiserville 61.88 357 P P 07 54 34.7 +0.5
KVN pmax pmax
comp=Z,44nm,1.3s
YERR Yerington 61.89 356 IAMs_20 IAMs_20 08 15 01.2
comp=Z,1µm,20.0s
OXF Oxford 61.93 23 P P 07 54 33.6 -0.7
baz=206,SNR=7.1
AFDM Forest Hills D 62.00 354 IAmb IAmb 07 54 37.2
comp=Z,92nm,1.5s
PNTR Pine Nut 62.02 355 IAmb IAmb 07 54 37.9
comp=Z,105nm,1.3s
PNTR IAMs_20 IAMs_20 08 15 31.6
comp=Z,1µm,19.0s
RUBR Rubicon Trail 62.03 355 IAMs_20 IAMs_20 08 14 59.8
comp=Z,1µm,20.0s
GDXM Geysers 62.05 352 IAmb IAmb 07 54 39.7
comp=Z,68nm,1.6s
GDXM IAMs_20 IAMs_20 08 15 29.5
comp=Z,1µm,20.0s
Z50A Ashland 62.17 27 IAmb IAmb 07 54 39.4
comp=Z,65nm,1.3s
Z50A Ashland 62.17 27 P P 07 54 36.0 0.0
baz=210,SNR=7.6
VCNR Virginia City 62.23 355 IAMs_20 IAMs_20 08 15 40.2
comp=Z,1µm,19.0s
HOPS Hopland Field 62.27 352 IAmb IAmb 07 54 39.4
comp=Z,96nm,1.4s
HOPS IAMs_20 IAMs_20 08 14 40.3
comp=Z,1µm,20.0s
Q24A Divide 62.28 8 IAMs_20 IAMs_20 08 17 07.6
comp=Z,2µm,19.0s
Q24A Divide 62.28 8 P P 07 54 37.0 0.0
baz=190
SMCO Snowmass 62.28 6 IAMs_20 IAMs_20 08 16 02.4
comp=Z,1µm,22.0s
MET Memphis--Engin 62.29 22 IAMs_20 IAMs_20 08 20 06.2
comp=Z,2µm,19.0s
SJG San Juan 62.32 53 P P 07 54 35.5 -1.7
SJG IAmb IAmb 07 54 39.2
comp=Z,118nm,1.9s
SJG San Juan 62.32 53 P P 07 54 35.5 -1.7
SJG pmax pmax
comp=Z,118nm,1.9s
U40A Yellville 62.46 19 IAmb IAmb 07 54 39.1
comp=Z,75nm,1.4s
U40A Yellville 62.46 19 P P 07 54 37.6 -0.2
baz=202,SNR=19
BDFB Brasilia 62.50 96 P P 07 54 39.2 +0.5
comp=Z,24nm,1.0s,baz=262,slow=7.1,SNR=17
BDFB LR LR 08 20 16.4
comp=Z,962nm,18.0s,baz=267,slow=35
BDFB Brasilia 62.50 96 P P 07 54 39.4 +0.6
BDFB IAmb IAmb 07 54 45.0
comp=Z,67nm,1.3s

BDFB				IAMs_20	IAMs_20	08 20 15.1	
	comp=Z,1µm,18.0s						
BDFB	Brasilia	62.50	96	P	P	07 54 39.4	+0.6
BDFB				pmax	pmax		
	comp=Z,67nm,1.3s						
THZ	Tophouse	62.50	234	IAMs_20	IAMs_20	08 15 53.5	
	comp=Z,2µm,19.0s						
ORV	Oroville	62.65	354	IAmb	IAmb	07 54 41.8	
	comp=Z,60nm,1.4s						
KSCO	Kaye Shedlock'	62.70	10	IAmb	IAmb	07 54 43.4	
	comp=Z,98nm,1.4s						
KSCO	Kaye Shedlock'	62.70	10	P	P	07 54 39.5	0.0
	baz=192						
LCAR	Lake Charles	62.73	21	IAmb	IAmb	07 54 42.9	
	comp=Z,144nm,1.9s						
LCAR				IAMs_20	IAMs_20	08 19 24.8	
	comp=Z,2µm,20.0s						
Z52A	Williamson	62.76	28	P	P	07 54 40.3	+0.4
	baz=211,SNR=8.6						
BEKR	Beckworth	62.85	355	IAmb	IAmb	07 54 43.2	
	comp=Z,60nm,1.4s						
BEKR				IAMs_20	IAMs_20	08 15 44.7	
	comp=Z,1µm,19.0s						
QRZ	Quartz Range	62.90	235	IAMs_20	IAMs_20	08 15 04.9	
	comp=Z,1µm,21.0s						
DUG	Dugway, Tooele	62.94	1	P	P	07 54 42.0	+0.9
DUG				IAmb	IAmb	07 54 43.7	
	comp=Z,57nm,1.2s						
DUG	Dugway, Tooele	62.94	1	P	P	07 54 42.0	+0.9
DUG				pmax	pmax		
	comp=Z,57nm,1.3s						
DUG	Dugway, Tooele	62.94	1	P	P	07 54 42.1	+0.9
	baz=182,SNR=42						
KCPM	Cahto Peak	63.02	352	IAMs_20	IAMs_20	08 14 59.0	
	comp=Z,1µm,22.0s						
GNAR	Gosnell	63.02	22	IAMs_20	IAMs_20	08 20 10.5	
	comp=Z,2µm,19.0s						
CBKS	Cedar Bluff	63.03	13	IAMs_20	IAMs_20	08 18 39.2	
	comp=Z,2µm,19.0s						
CBKS	Cedar Bluff	63.03	13	P	P	07 54 41.6	0.0
	baz=195						
ISCO	Idaho Springs	63.05	7	IAMs_20	IAMs_20	08 17 22.1	
	comp=Z,2µm,21.0s						
ISCO	Idaho Springs	63.05	7	P	P	07 54 42.7	+0.6
ISCO				pmax	pmax		
	comp=Z,35nm,1.4s						
ISCO	Idaho Springs	63.05	7	P	P	07 54 42.5	+0.4
	baz=189,SNR=14						
Y51A	Rockmart	63.09	27	P	P	07 54 41.9	-0.3
	baz=210,SNR=7.9						
O20A	White River Ci	63.11	5	IAmb	IAmb	07 54 43.7	
	comp=Z,50nm,1.4s						
O20A	White River Ci	63.11	5	P	P	07 54 43.1	+0.7
	baz=186,SNR=12						
MSVF	Nonsavu	63.18	261	P	P	07 54 44.4	+1.1
MSVF				IAmb	IAmb	07 54 46.1	
	comp=Z,66nm,1.1s						
MSVF	Nonsavu	63.18	261 c	iP	P	07 54 44.6	+1.3
MSVF				pmax	pmax		
	comp=Z,77nm,1.2s						
STVI	Saint Thomas	63.35	54	IAmb	IAmb	07 54 45.0	
	comp=Z,38nm,1.1s						
GOGA	Godfrey	63.36	29	P	P	07 54 44.4	+0.5
GOGA				pmax	pmax		
	comp=Z,51nm,1.7s						
GOGA	Godfrey	63.36	29	P	P	07 54 43.9	0.0
	baz=212,SNR=7.6						
MGMO	Mountain Grove	63.37	20	IAmb	IAmb	07 54 45.3	
	comp=Z,66nm,1.2s						
O02D	Mt. Diablo Mer	63.41	353	P	P	07 54 45.6	+1.4
	baz=171,SNR=16						
O03E	Paynes Creek	63.41	354	P	P	07 54 44.3	+0.1
	baz=172,SNR=9.3						
ELK	Elko	63.48	359	LR	LR	08 17 13.5	
	comp=Z,876nm,19.1s,baz=186,slow=31						
ELK	Elko	63.48	359	IAMs_20	IAMs_20	08 17 46.3	
	comp=Z,1µm,18.0s						
Y52A	Lilburn	63.48	28	IAmb	IAmb	07 54 46.6	
	comp=Z,56nm,1.1s						
Y52A	Lilburn	63.48	28	P	P	07 54 44.5	-0.3
	baz=211,SNR=10						
PVMO	Portageville	63.54	22	IAMs_20	IAMs_20	08 20 17.1	
	comp=Z,2µm,19.0s						
GLAT	Glass	63.55	22	IAMs_20	IAMs_20	08 20 32.5	
	comp=Z,3µm,19.0s						
PENMO	Penman	63.59	22	IAMs_20	IAMs_20	08 20 09.6	
	comp=Z,2µm,19.0s						
RPZ	Rata Peaks	63.61	231	IAMs_20	IAMs_20	08 15 59.8	
	comp=Z,3µm,20.0s						
PBMO	Poplar Bluff	63.62	21	IAmb	IAmb	07 54 48.7	
	comp=Z,46nm,1.2s						
PBMO				IAMs_20	IAMs_20	08 19 54.2	
	comp=Z,2µm,20.0s						
W49A	Belvidere	63.66	25	P	P	07 54 45.7	-0.2
	baz=209,SNR=8.7						
Y53A	Monroe	63.69	28	P	P	07 54 44.5	-1.5
	baz=212,SNR=7.3						
PARMO	Parma	63.74	22	IAMs_20	IAMs_20	08 20 11.6	
	comp=Z,2µm,20.0s						
X51A	Calhoun	63.75	27	IAmb	IAmb	07 54 59.3	
	comp=Z,104nm,1.6s						
X51A	Calhoun	63.75	27	P	P	07 54 46.0	-0.4
	baz=210						
WDC	Whiskeytown Da	63.77	353	IAmb	IAmb	07 54 48.5	
	comp=Z,103nm,1.4s						
157A	Early Branch	63.88	31	P	P	07 54 46.1	-1.2
	baz=214						
HENM	Henderson Moun	63.89	22	IAMs_20	IAMs_20	08 20 28.0	
	comp=Z,2µm,19.0s						
WVT	Waverly	63.95	24	P	P	07 54 46.8	-1.0
WVT				IAmb	IAmb	07 54 48.5	
	comp=Z,50nm,1.3s						
WVT	Waverly	63.95	24	IAMs_20	IAMs_20	08 21 09.2	
	comp=Z,1µm,19.0s						
WVT	Waverly	63.95	24	P	P	07 54 46.8	-1.0
WVT				pmax	pmax		
	comp=Z,50nm,1.3s						
WVT	Waverly	63.95	24	P	P	07 54 47.2	-0.6
	baz=207						
V48A	Smith Brothers	63.99	25	IAmb	IAmb	07 54 49.4	
	comp=Z,44nm,1.1s						
KSU1	Kansas State U	64.00	15	P	P	07 54 47.9	-0.1
	baz=198,SNR=10						
Y54A	Tignall	64.09	29	P	P	07 54 48.3	-0.4
	baz=212,SNR=5.9						
N23A	Red Feather La	64.09	7	IAmb	IAmb	07 54 50.9	
	comp=Z,50nm,1.2s						
N23A	Red Feather La	64.09	7	P	P	07 54 49.3	+0.4
	baz=189,SNR=11						
W50A	Signal Mountai	64.11	26	P	P	07 54 48.5	-0.4
	baz=210,SNR=5.8						
FDF	Fort de France	64.12	59	P	P	07 54 49.4	+0.1
FDF				pmax	pmax		
	comp=Z,106nm,1.2s						
N02D	Trinity Center	64.18	353	P	P	07 54 50.1	+0.9
	baz=171,SNR=20						
X52A	Dahlonega	64.19	28	P	P	07 54 49.2	-0.2
	baz=211,SNR=7.2						
Z56A	Williston	64.24	30	IAmb	IAmb	07 54 51.7	
	comp=Z,57nm,1.1s						
Z56A	Williston	64.24	30	P	P	07 54 49.6	-0.1
	baz=214						
W51A	Cleveland	64.30	27	P	P	07 54 49.8	-0.3
	baz=210,SNR=7.7						
158A	Hollywood	64.31	32	P	P	07 54 50.0	-0.2
	baz=215						
X53A	Estanollee	64.36	28	P	P	07 54 50.0	-0.5
	baz=212						
V49A	McMinnville	64.37	25	P	P	07 54 49.9	-0.6
	baz=209,SNR=13						
CCM	Cathedral Cave	64.52	20	P	P	07 54 50.8	-0.7
CCM				IAmb	IAmb	07 54 52.4	
	comp=Z,68nm,1.4s						
CCM	Cathedral Cave	64.52	20	P	P	07 54 50.8	-0.7
CCM				pmax	pmax		
	comp=Z,68nm,1.4s						
CCM	Cathedral Cave	64.52	20	P	P	07 54 50.7	-0.7
	baz=204						
Y55A	Saluda	64.52	30	P	P	07 54 51.4	-0.2
	baz=213,SNR=8.1						
Z57A	Bowman	64.53	31	P	P	07 54 51.4	-0.2
	baz=214						
W52A	Murphy	64.59	27	IAmb	IAmb	07 54 54.4	
	comp=Z,62nm,1.2s						
W52A	Murphy	64.59	27	P	P	07 54 52.3	+0.3
	baz=211,SNR=7.6						
V50A	Pikevile	64.61	26	P	P	07 54 51.9	-0.2
	baz=210,SNR=14						
M02C	Callahan	64.61	353	P	P	07 54 53.2	+1.1
	baz=171,SNR=15						
NHSC	New Hope	64.62	31	P	P	07 54 51.5	-0.6
	baz=215						
Y56A	Pelion	64.66	30	P	P	07 54 52.6	+0.2
	baz=214						
OGNE	Ogallala	64.68	10	IAmb	IAmb	07 54 56.1	
	comp=Z,44nm,1.1s						
OGNE	Ogallala	64.68	10	P	P	07 54 52.7	+0.2
	baz=192,SNR=6.3						
VAS01	Vassouras-RJ	64.72	105	eP	P	07 54 55.1	+1.9
X54A	Belton	64.80	29	P	P	07 54 53.6	+0.2
	baz=212						
S44A	Carbondale	64.84	22	IAmb	IAmb	07 54 54.9	
	comp=Z,120nm,1.4s						
S44A				IAMs_20	IAMs_20	08 20 44.7	
	comp=Z,2µm,20.0s						
MOD	Modoc Plateau	64.87	355	IAmb	IAmb	07 54 56.4	
	comp=Z,79nm,1.2s						
MOD				IAMs_20	IAMs_20	08 17 09.0	
	comp=Z,1µm,19.0s						
M04C	Macdoel	64.89	354	P	P	07 54 54.5	+0.6
	baz=172,SNR=24						
YBH	Yreka Blue Hor	64.93	353	LR	LR	08 16 42.2	
	comp=Z,901nm,20.8s,baz=185,slow=30						
BG3	Lake Jocassee	64.93	28	IAMs_20	IAMs_20	08 23 48.5	
	comp=Z,1µm,18.0s						
T47A	Sharon Grove	64.98	24	IAmb	IAmb	07 54 55.5	
	comp=Z,74nm,1.2s						
T47A				IAMs_20	IAMs_20	08 21 56.4	
	comp=Z,2µm,18.0s						
Z58A	St. Stephen	64.98	32	P	P	07 54 54.7	+0.2
	baz=215						
W53A	Cullowhee	64.98	28	P	P	07 54 54.6	0.0
	baz=212						
V51A	Loudon	65.03	27	IAmb	IAmb	07 54 56.9	
	comp=Z,48nm,1.1s						
V51A	Loudon	65.03	27	P	P	07 54 54.3	-0.5
	baz=210,SNR=6.1						
U49A	Red Boiling Sp	65.07	25	P	P	07 54 54.8	-0.3
	baz=209,SNR=9.4						
X55A	Gracelyn & Ava	65.07	29	P	P	07 54 55.1	0.0
	baz=213						
JSC	Jenkinsville	65.08	30	IAmb	IAmb	07 54 58.6	
	comp=Z,79nm,1.7s						
TKL	Tuckaleechee C	65.14	27	LR	LR	08 20 26.0	
	comp=Z,924nm,19.9s,baz=200,slow=33						
TKL	Tuckaleechee C	65.14	27	IAmb	IAmb	07 54 56.3	
	comp=Z,52nm,1.4s						
Z59A	Georgetown, SC	65.17	32	P	P	07 54 55.2	-0.5
	baz=216						
Y57A	Sumter	65.27	31	P	P	07 54 56.2	-0.2
	baz=214						
PAULI	Pauline	65.28	29	IAmb	IAmb	07 54 59.6	
	comp=Z,87nm,1.6s						
WVOR	Wild Horse Val	65.28	356	IAmb	IAmb	07 54 59.3	
	comp=Z,78nm,1.2s						
WVOR				IAMs_20	IAMs_20	08 17 05.1	
	comp=Z,1µm,20.0s						
WVOR	Wild Horse Val	65.28	356	P	P	07 54 57.9	+1.4
WVOR				pmax	pmax		
	comp=Z,74nm,1.3s						
W54A	Cherokee Point	65.34	29	P	P	07 54 56.7	-0.1
	baz=213						
U50A	Jamestown	65.35	26	P	P	07 54 56.2	-0.8
	baz=210,SNR=5.7						
X56A	White Oak	65.36	30	P	P	07 54 56.8	-0.1
	baz=214						
L04D	Klamath Falls	65.37	353	P	P	07 54 57.5	+0.5
	baz=172,SNR=15						
V52A	Sevierville	65.37	27	IAMs_20	IAMs_20	08 19 19.0	
	comp=Z,1µm,21.0s						
V52A	Sevierville	65.37	27	P	P	07 54 56.3	-0.8
	baz=211						
L02E	Cave Junction	65.46	352	P	P	07 54 58.2	+0.7
	baz=171,SNR=5.7						
MLZ	Mavora Lakes	65.46	229	IAMs_20	IAMs_20	08 19 49.8	
	comp=Z,2µm,18.0s						
WHZ	Wether Hill Ro	65.50	229	IAMs_20	IAMs_20	08 18 10.9	
	comp=Z,2µm,20.0s						
Y58A	Scranton	65.52	31	P	P	07 54 58.4	+0.4
	baz=215						
AHID	Auburn Hatcher	65.56	3	IAMs_20	IAMs_20	08 18 56.4	
	comp=Z,1µm,18.0s						
V53A	Saluda	65.56	28	IAmb	IAmb	07 55 02.5	
	comp=Z,72nm,1.3s						
V53A				IAMs_20	IAMs_20	08 20 02.0	
	comp=Z,1µm,20.0s						
V53A	Saluda	65.56	28	P	P	07 54 58.1	-0.2
	baz=212,SNR=8.1						
PDAR	Pinedale Array	65.64	4	P	P	07 54 58.1	-0.7
	comp=Z,8.6nm,0.8s,baz=165,slow=6.2,SNR=50						
PDAR				LR	LR	08 19 04.5	
	comp=Z,188nm,20.2s,baz=183,slow=32						
PDAR	Pinedale Array	65.64	4	P	P	07 54 57.5	-1.4
USIN	University of	65.64	23	IAmb	IAmb	07 54 59.9	
	comp=Z,92nm,1.4s						
U51A	La Follette	65.66	26	P	P	07 54 58.7	-0.2
	baz=211,SNR=5.7						
T49A	Edmonton	65.68	25	IAMs_20	IAMs_20	08 22 41.0	
	comp=Z,2µm,18.0s						
T49A	Edmonton	65.68	25	P	P	07 54 58.4	-0.6
	baz=209,SNR=8.9						
K04D	Chiloquin, OR	65.72	354	P	P	07 54 59.6	+0.3
	baz=172						
BIRD	Birdtown, Kers	65.75	30	IAmb	IAmb	07 55 01.5	
	comp=Z,52nm,1.1s						
K22A	Casper	65.77	6	P	P	07 54 59.5	-0.2
	baz=188,SNR=23						
KMSC	Kings Mountain	65.77	29	IAMs_20	IAMs_20	08 19 29.6	
	comp=Z,1µm,20.0s						
KMSC	Kings Mountain	65.77	29	P	P	07 54 59.2	-0.4
	baz=213						
X57A	Johnson Farm,	65.77	31	P	P	07 54 59.7	+0.1
	baz=215						
HUMO	Hull Mountain	65.82	353	IAmb	IAmb	07 55 02.2	
	comp=Z,100nm,1.4s						
BGNE	Belgrade	65.86	13	P	P	07 55 00.3	+0.3
	baz=196,SNR=8.5						
T50A	Nancy	65.88	26	P	P	07 54 59.7	-0.6
	baz=210,SNR=5.8						
U52A	Thorn Hill	65.94	27	P	P	07 55 00.4	-0.3
	baz=211,SNR=8.4						
Y59A	Loris	65.97	32	P	P	07 55 00.6	-0.3
	baz=216						
TZTN	Tazewell	65.99	27	IAmb	IAmb	07 55 05.2	
	comp=Z,71nm,1.3s						
TZTN	Tazewell	65.99	27	P	P	07 55 01.0	-0.1
	baz=211,SNR=7.8						
K02D	Willamette Mer	65.99	352	P	P	07 55 01.9	+0.9
	baz=171,SNR=7.1						
V54A	Nebo	66.03	28	P	P	07 55 01.5	+0.2
	baz=213,SNR=9.4						
W56A	Indian Trail	66.10	30	P	P	07 55 01.6	-0.1
	baz=214,SNR=5.0						
MFID	Camas Ranch	66.16	359	IAmb	IAmb	07 55 04.2	
	comp=Z,57nm,1.2s						
REDW	Red Top Meadow	66.16	3	IAmb	IAmb	07 55 06.5	
	comp=Z,65nm,1.5s						
T51A	Gray	66.19	26	P	P	07 55 01.9	-0.4
	baz=210						
J08A	Circle Bar Ran	66.20	357	IAMs_20	IAMs_20	08 18 25.2	
	comp=Z,1µm,18.0s						
X58A	Rowland	66.20	31	P	P	07 55 02.0	-0.4
	baz=215						
U53A	Fall Branch	66.25	28	P	P	07 55 01.9	-0.8
	baz=212,SNR=5.2						
SNOW	Snow King Moun	66.27	3	IAMs_20	IAMs_20	08 18 01.2	
	comp=Z,1µm,20.0s						
Y60A	Bolivia	66.30	32	P	P	07 55 03.1	0.0
	baz=216						
J05D	Fort Rock, OR	66.32	354	P	P	07 55 04.5	+1.3
	baz=173,SNR=27						
PYZ	Puysegur Point	66.33	228	IAMs_20	IAMs_20	08 16 16.7	
	comp=Z,2µm,22.0s						
VNDA	Vanda	66.33	194	LR	LR	08 17 28.2	
	comp=Z,1µm,20.0s,baz=100,slow=30						
S49A	Springfield	66.37	25	P	P	07 55 02.0	-1.4
	baz=209,SNR=7.7						
WCI	Wyandotte Cave	66.38	24	P	P	07 55 02.5	-0.9
WCI	Wyandotte Cave	66.38	24	IAMs_20	IAMs_20	08 22 27.4	
	comp=Z,2µm,19.0s						
WCI	Wyandotte Cave	66.38	24	P	P	07 55 02.5	-0.9
WCI				pmax	pmax		
	comp=Z,19nm,1.0s						
WCI	Wyandotte Cave	66.38	24	P	P	07 55 02.6	-0.9
	baz=208						
W57A	Gilead	66.39	30	IAmb	IAmb	07 55 05.2	
	comp=Z,37nm,1.0s						
W57A	Gilead	66.39	30	P	P	07 55 02.1	-1.5
	baz=214,SNR=5.1						
V55A	Taylorsville	66.41	29	IAmb	IAmb	07 55 05.0	
	comp=Z,76nm,1.2s						
V55A	Taylorsville	66.41	29	P	P	07 55 03.4	-0.4
	baz=213,SNR=10						
FXWY	Fox Creek	66.43	3	IAmb	IAmb	07 55 05.6	
	comp=Z,51nm,1.4s						
J01E	Myrtle Point	66.49	352	P	P	07 55 04.3	+0.2
	baz=170						
P43A	Skaggs, Pawnee	66.52	21	IAmb	IAmb	07 56 22.1	
	comp=Z,66nm,1.9s						
X59A	McDuffie Farm,	66.57	32	P	P	07 55 04.8	+0.1
	baz=216						
S50A	Richmond	66.62	25	P	P	07 55 04.3	-0.7
	baz=210,SNR=12						
W58A	Raeford	66.64	31	P	P	07 55 05.1	0.0
	baz=215,SNR=7.1						
V56A	Mocksville	66.70	29	P	P	07 55 05.0	-0.6
	baz=214,SNR=12						
U54A	Nelsons Funny	66.71	28	IAmb	IAmb	07 55 07.3	
	comp=Z,51nm,1.1s						
U54A	Nelsons Funny	66.71	28	P	P	07 55 05.6	-0.1
	baz=212						
T52A	Hallie	66.71	27	IAmb	IAmb	07 55 11.6	
	comp=Z,107nm,1.5s						
T52A	Hallie	66.71	27	P	P	07 55 05.1	-0.5
	baz=211,SNR=5.5						
T53A	Wise	66.79	27	P	P	07 55 05.8	-0.4
	baz=212,SNR=5.0						
PINE	Pine Mountain	66.80	355	IAmb	IAmb	07 55 09.0	
	comp=Z,72nm,1.2s						
R49A	Shelbyville	66.86	25	P	P	07 55 05.4	-1.1
	baz=209,SNR=7.1						
X60A	Albert Glenn T	66.88	32	P	P	07 55 06.1	-0.6
	baz=216						
FLWY	Flagg Ranch	66.89	3	IAmb	IAmb	07 55 08.6	
	comp=Z,89nm,1.4s						
S51A	Beattyville	66.91	26	P	P	07 55 06.6	-0.3
	baz=211						
I04A	Tendick Farm,	66.94	354	P	P	07 55 06.8	-0.2
	baz=172,SNR=6.7						
I03D	Drain, OR	66.94	353	P	P	07 55 07.4	+0.5
	baz=171						
I07A	Izee	66.98	356	IAmb	IAmb	07 55 10.1	
	comp=Z,64nm,1.3s						
I07A				IAMs_20	IAMs_20	08 18 26.9	
	comp=Z,1µm,20.0s						
U55A	TA2, Sparta	67.03	29	P	P	07 55 07.4	-0.3
	baz=213						
N41A	Harden Midland	67.07	19	IAMs_20	IAMs_20	08 21 31.4	
	comp=Z,2µm,19.0s						
V57A	Coltrane Farms	67.09	30	P	P	07 55 07.6	-0.5
	baz=214,SNR=10						
QSPA	South Pole Qui	67.10	180	LR	LR	08 20 15.7	
	comp=Z,900nm,18.8s,baz=97,slow=32						
QSPA	South Pole Qui	67.10	180	P	P	07 55 09.6	+1.6
QSPA				IAMs_20	IAMs_20	08 19 55.1	
	comp=Z,1µm,19.0s						
BLO	Bloomington	67.12	23	IAMs_20	IAMs_20	08 22 51.7	
	comp=Z,1µm,18.0s						
W59A	Clinton	67.13	31	P	P	07 55 07.9	-0.4
	baz=216						
S52A	Salyersville	67.16	26	P	P	07 55 08.7	+0.3
	baz=211						
R50A	Paris	67.17	25	IAmb	IAmb	07 55 09.0	
	comp=Z,106nm,1.3s						
R50A				IAMs_20	IAMs_20	08 23 26.6	
	comp=Z,2µm,18.0s						
R50A	Paris	67.17	25	P	P	07 55 07.4	-1.2
	baz=210,SNR=14						
U56A	King	67.19	29	P	P	07 55 08.7	0.0
	baz=214,SNR=6.3						
Q48A	North Vernon	67.20	24	P	P	07 55 08.0	-0.7
	baz=208						
H17A	Grant Village	67.20	3	IAMs_20	IAMs_20	08 19 43.0	
	comp=Z,1µm,21.0s						
H17A	Grant Village	67.20	3	P	P	07 55 08.3	-0.6
	baz=184						
T54A	Tazewell	67.27	28	P	P	07 55 08.6	-0.6
	baz=213						
P46A	Rosedale	67.28	22	IAmb	IAmb	07 55 10.3	
	comp=Z,82nm,1.5s						
P46A				IAMs_20	IAMs_20	08 22 21.1	
	comp=Z,2µm,20.0s						
V58A	Windy Hill, Pi	67.32	30	P	P	07 55 09.4	-0.1
	baz=215						
O44A	Mansfield	67.32	21	IAmb	IAmb	07 55 12.4	
	comp=Z,111nm,1.7s						
I05D	Terrebonne, OR	67.38	355	P	P	07 55 10.5	+0.7
	baz=173,SNR=8.7						
LKWY	Lake	67.38	3	IAMs_20	IAMs_20	08 20 08.7	
	comp=Z,1µm,21.0s						
W60A	Pink Hill	67.39	32	P	P	07 55 09.6	-0.4
	baz=216						
HDIL	Hopedale	67.42	20	P	P	07 55 09.8	-0.2
	baz=205,SNR=8.8						
CNNC	Cliffs of the	67.45	32	P	P	07 55 09.8	-0.6
	baz=216						
R51A	Hillsboro	67.48	26	P	P	07 55 09.5	-1.0
	baz=211,SNR=10						
RSSD	Black Hills	67.50	8	P	P	07 55 10.3	-0.4
RSSD				IAmb	IAmb	07 55 11.9	
	comp=Z,43nm,1.1s						
RSSD	Black Hills	67.50	8	IAMs_20	IAMs_20	08 20 14.0	
	comp=Z,2µm,20.0s						
RSSD	Black Hills	67.50	8	P	P	07 55 10.3	-0.4
RSSD				pmax	pmax		
	comp=Z,43nm,1.2s						
RSSD	Black Hills	67.50	8	P	P	07 55 10.4	-0.4
	baz=190						
SCIA	State Center	67.51	17	IAMs_20	IAMs_20	08 20 48.9	
	comp=Z,2µm,21.0s						
SCIA	State Center	67.51	17	P	P	07 55 10.6	0.0
	baz=201						
S53A	Williamson	67.56	27	P	P	07 55 10.2	-0.8
	baz=212						
Q49A	Aurora	67.58	24	P	P	07 55 10.3	-0.8
	baz=209,SNR=11						
BMO	Blue Mountains	67.63	358	IAmb	IAmb	07 55 13.9	
	comp=Z,84nm,1.6s						
T55A	Pulaski	67.66	28	P	P	07 55 10.9	-0.8
	baz=213						
H04D	Lebanon	67.69	353	P	P	07 55 11.8	+0.1
	baz=172						
V59A	Middlesex	67.71	31	P	P	07 55 12.4	+0.4
	baz=216						
U57A	Blanch	67.74	30	P	P	07 55 11.9	-0.2
	baz=215,SNR=5.4						
P48A	Milroy	67.78	24	IAmb	IAmb	07 55 14.5	
	comp=Z,112nm,1.6s						
P48A	Milroy	67.78	24	P	P	07 55 11.7	-0.7
	baz=209						
Q50A	Georgetown	67.80	25	P	P	07 55 11.2	-1.3
	baz=210,SNR=5.9						
H04A	Detroit Lake	67.80	354	IAmb	IAmb	07 55 14.1	
	comp=Z,50nm,1.2s						
COR	Corvallis	67.82	353	P	P	07 55 12.5	+0.1
COR				pmax	pmax		
	comp=Z,107nm,1.5s						
YNE	Yellowstone No	67.84	3	P	P	07 55 12.3	-0.6
W61A	Ground Anchor	67.84	32	P	P	07 55 12.8	-0.1
	baz=217						
BLA	Blacksburg	67.90	29	IAmb	IAmb	07 55 15.0	
	comp=Z,40nm,1.1s						
BLA	Blacksburg	67.90	29	P	P	07 55 12.9	-0.3
	baz=214						
R52A	Catlettsburg	67.90	26	P	P	07 55 12.6	-0.5
	baz=211,SNR=13						
T56A	Rocky Mt	67.92	29	P	P	07 55 13.1	-0.2
	baz=214						
SFIN	Lafayette	67.99	22	IAmb	IAmb	07 55 14.6	
	comp=Z,49nm,1.2s						
SFIN	Lafayette	67.99	22	P	P	07 55 13.2	-0.5
	baz=207,SNR=6.2						
RLMT	Red Lodge	68.00	4	P	P	07 55 13.7	-0.2
	baz=185						
S54A	Dingess, Beckl	68.00	28	P	P	07 55 13.8	0.0
	baz=213						
U58A	Oxford	68.08	31	P	P	07 55 13.7	-0.6
	baz=215						
DLMT	Dillon	68.10	1	IAmb	IAmb	07 55 16.2	
	comp=Z,47nm,1.3s						
P49A	Miami Univ. Ec	68.11	24	P	P	07 55 13.1	-1.4
	baz=209,SNR=6.8						
G08A	Pilot Rock	68.15	356	IAmb	IAmb	07 55 17.4	
	comp=Z,104nm,1.4s						

G08A				IAMs_20	IAMs_20	08 19 35.9	
	comp=Z,1µm,20.0s						
R53A	Hurricane	68.18	27	P	P	07 55 15.3	+0.4
	baz=212						
V60A	Jim Taylor Roa	68.18	32	P	P	07 55 14.7	-0.3
	baz=217						
Q51A	Peebles	68.20	26	IAmb	IAmb	07 55 16.2	
	comp=Z,72nm,1.2s						
Q51A				IAMs_20	IAMs_20	08 23 23.8	
	comp=Z,1µm,20.0s						
Q51A	Peebles	68.20	26	P	P	07 55 14.1	-0.9
	baz=211,SNR=10						
G06A	Carlson Farm,	68.21	355	IAmb	IAmb	07 55 20.6	
	comp=Z,98nm,1.9s						
T57A	Hurt	68.24	30	IAmb	IAmb	07 55 32.8	
	comp=Z,126nm,1.9s						
T57A	Hurt	68.24	30	P	P	07 55 15.2	-0.1
	baz=215						
G05D	Wamic, OR	68.27	355	P	P	07 55 15.6	+0.2
	baz=173						
S55A	Lewisburg	68.33	28	P	P	07 55 15.8	-0.1
	baz=213						
U59A	Littleton	68.40	31	P	P	07 55 16.0	-0.2
	baz=216						
ECSD	EROS Data Cent	68.41	14	IAmb	IAmb	07 55 17.4	
	comp=Z,55nm,1.4s						
ECSD	EROS Data Cent	68.41	14	P	P	07 55 15.7	-0.5
	baz=198,SNR=13						
R54A	Victor	68.46	28	P	P	07 55 16.3	-0.4
	baz=213						
P50A	Jamestown	68.53	25	P	P	07 55 15.9	-1.1
	baz=210,SNR=11						
T58A	Grand View Acr	68.53	30	P	P	07 55 16.7	-0.5
	baz=215						
V61A	Roper	68.54	32	P	P	07 55 16.8	-0.4
	baz=217						
O48A	Farmland	68.58	24	P	P	07 55 16.0	-1.3
	baz=209,SNR=5.2						
Q52A	Bidwell	68.58	26	P	P	07 55 16.8	-0.6
	baz=212,SNR=7.8						
SUSD	Miller	68.61	12	IAMs_20	IAMs_20	08 22 27.9	
	comp=Z,2µm,18.0s						
L42A	Oliver, Polo	68.62	19	IAMs_20	IAMs_20	08 22 02.4	
	comp=Z,2µm,20.0s						
S56A	Natural Bridge	68.66	29	P	P	07 55 17.4	-0.6
	baz=214						
P51A	Williamsport	68.71	25	IAMs_20	IAMs_20	08 24 13.2	
	comp=Z,2µm,18.0s						
P51A	Williamsport	68.71	25	P	P	07 55 17.4	-0.8
	baz=211						
F10A	Beach Ranch, E	68.75	358	IAmb	IAmb	07 55 20.2	
	comp=Z,47nm,1.4s						
U60A	Pendleton	68.80	31	P	P	07 55 18.2	-0.6
	baz=217						
Q53A	Leroy	68.80	27	P	P	07 55 18.4	-0.4
	baz=212,SNR=5.5						
F07A	Phinny Hill Vi	68.81	356	IAmb	IAmb	07 55 21.4	
	comp=Z,50nm,1.3s						
O49A	Covington	68.82	24	P	P	07 55 18.2	-0.7
	baz=210						
F05D	White Salmon	68.92	355	P	P	07 55 19.3	-0.1
	baz=173						
N47A	Urbana	68.93	23	IAmb	IAmb	07 55 21.7	
	comp=Z,78nm,1.4s						
N47A	Urbana	68.93	23	P	P	07 55 18.1	-1.4
	baz=208,SNR=8.0						
S57A	Dark Hollow, R	69.00	29	P	P	07 55 19.6	-0.5
	baz=215						
U61A	Possum Corner	69.03	32	P	P	07 55 19.6	-0.6
	baz=217						
F04A	Amboy	69.06	354	IAmb	IAmb	07 55 21.9	
	comp=Z,71nm,1.3s						
O50A	Cable	69.06	25	P	P	07 55 19.1	-1.3
	baz=210,SNR=9.3						
N48A	Decatur	69.15	23	P	P	07 55 19.7	-1.2
	baz=209,SNR=7.4						
Q54A	Coxs Mills	69.20	27	IAmb	IAmb	07 55 22.7	
	comp=Z,92nm,1.3s						
Q54A	Coxs Mills	69.20	27	P	P	07 55 21.3	+0.1
	baz=213,SNR=6.8						
P52A	Corning	69.21	26	P	P	07 55 20.7	-0.6
	baz=212,SNR=11						
JFWS	Jewell Farm	69.27	19	IAmb	IAmb	07 55 22.9	
	comp=Z,77nm,1.5s						
JFWS	Jewell Farm	69.27	19	IAMs_20	IAMs_20	08 22 28.7	
	comp=Z,2µm,19.0s						
JFWS	Jewell Farm	69.27	19	P	P	07 55 21.0	-0.7
	baz=204,SNR=7.3						
S58A	Poland Farm, P	69.30	30	IAmb	IAmb	07 55 25.8	
	comp=Z,118nm,1.8s						
S58A	Poland Farm, P	69.30	30	P	P	07 55 21.3	-0.6
	baz=216						
E09A	Wood Farm, Sta	69.33	357	IAmb	IAmb	07 55 23.5	
	comp=Z,49nm,1.3s						
E09A				IAMs_20	IAMs_20	08 20 16.1	
	comp=Z,1µm,19.0s						
L44A	Lake County Fo	69.33	21	IAmb	IAmb	07 55 24.9	
	comp=Z,99nm,1.2s						
L44A	Lake County Fo	69.33	21	P	P	07 55 22.1	+0.1
	baz=206						
R56A	Bull Pasture M	69.34	29	P	P	07 55 21.7	-0.5
	baz=214,SNR=5.7						
E08A	Dider Farm, El	69.35	356	IAmb	IAmb	07 55 24.5	
	comp=Z,79nm,1.4s						
M47A	Cromwell	69.38	23	P	P	07 55 21.6	-0.7
	baz=208,SNR=7.3						
ACSO	Alum Creek Sta	69.38	25	P	P	07 55 21.9	-0.5
	baz=211						
P53A	Whipple	69.39	27	IAMs_20	IAMs_20	08 24 49.3	
	comp=Z,1µm,18.0s						
P53A	Whipple	69.39	27	P	P	07 55 22.5	+0.1
	baz=212,SNR=5.9						
O51A	Pataskala	69.46	25	P	P	07 55 22.0	-0.8
	baz=211						
E07A	Sunnyside	69.47	356	IAmb	IAmb	07 55 25.4	
	comp=Z,71nm,1.7s						
N49A	Columbus Grove	69.52	24	IAMs_20	IAMs_20	08 23 59.6	
	comp=Z,2µm,20.0s						
N49A	Columbus Grove	69.52	24	P	P	07 55 22.7	-0.5
	baz=210						
T60A	Surry	69.53	31	P	P	07 55 22.5	-0.8
	baz=217						
MSO	Missoula	69.56	0	IAMs_20	IAMs_20	08 20 39.1	
	comp=Z,879nm,18.0s						
MSO	Missoula	69.56	0	P	P	07 55 23.4	0.0
	baz=180,SNR=17						
R57A	Stanardsville	69.64	29	P	P	07 55 23.4	-0.6
	baz=215						
R58B	Mineral	69.66	30	IAmb	IAmb	07 55 27.3	
	comp=Z,89nm,1.6s						
R58B	Mineral	69.66	30	P	P	07 55 23.7	-0.4
	baz=216						
K43A	Burlington	69.67	20	IAmb	IAmb	07 55 25.7	
	comp=Z,83nm,1.1s						
E04D	Cinebar	69.69	354	P	P	07 55 23.7	-0.4
	baz=172,SNR=7.3						
L46A	Eue Claire	69.72	22	IAmb	IAmb	07 55 27.3	
	comp=Z,145nm,1.8s						
L46A	Eue Claire	69.72	22	P	P	07 55 24.0	-0.4
	baz=207						
S59A	Mechanicsville	69.77	31	P	P	07 55 24.3	-0.4
	baz=216						
N50A	Nevada	69.78	25	P	P	07 55 23.9	-0.9
	baz=210,SNR=6.4						
LAO	LASA Array	69.79	6	P	P	07 55 24.9	+0.1
	baz=188						
LON	Longmire	69.81	354	IAmb	IAmb	07 55 34.4	
	comp=Z,90nm,2.0s						
M48A	Edgerton	69.81	23	IAmb	IAmb	07 55 25.9	
	comp=Z,64nm,1.4s						
M48A	Edgerton	69.81	23	P	P	07 55 24.5	-0.5
	baz=209,SNR=5.3						
P54A	Burton	69.86	27	P	P	07 55 25.4	0.0
	baz=213,SNR=15						
R58A	Rapidan	69.88	30	P	P	07 55 25.1	-0.3
	baz=216						
D08A	Wollman Farm,	69.91	357	IAmb	IAmb	07 55 29.7	
	comp=Z,107nm,1.9s						
I40A	Norwalk	70.06	18	IAmb	IAmb	07 55 28.0	
	comp=Z,90nm,1.4s						
I40A				IAMs_20	IAMs_20	08 22 50.6	
	comp=Z,2µm,21.0s						
P55A	Reedsville	70.06	28	P	P	07 55 27.0	+0.4
	baz=214,SNR=9.3						
L47A	Sherwood	70.07	23	P	P	07 55 26.3	-0.3
	baz=208						
M49A	Liberty Center	70.08	24	P	P	07 55 26.0	-0.6
	baz=210						
O53A	New Philadelph	70.11	26	P	P	07 55 26.8	0.0
	baz=212,SNR=7.9						
MCWV	Mont Chateau	70.18	28	P	P	07 55 27.6	+0.3
	baz=214,SNR=8.5						
R59A	King George, V	70.20	30	P	P	07 55 27.2	-0.2
	baz=216						
N51A	Ashland	70.21	25	IAmb	IAmb	07 55 28.5	
	comp=Z,88nm,1.2s						
N51A	Ashland	70.21	25	P	P	07 55 27.2	-0.2
	baz=211,SNR=10.0						
D05A	Enumclaw	70.26	354	IAmb	IAmb	07 55 29.9	
	comp=Z,91nm,1.4s						
Q57A	Strasburg	70.29	29	P	P	07 55 28.2	+0.2
	baz=215,SNR=6.5						
L48A	N Adams	70.32	23	P	P	07 55 27.6	-0.5
	baz=209,SNR=11						
D04E	Lakebay	70.33	354	P	P	07 55 29.1	+1.1
	baz=172						
M50A	Fremont	70.37	24	IAmb	IAmb	07 55 32.3	
	comp=Z,77nm,1.4s						
M50A	Fremont	70.37	24	P	P	07 55 28.3	-0.1
	baz=210						
N52A	McGinn's Farm,	70.39	26	P	P	07 55 28.0	-0.6
	baz=212						
O54A	Avella	70.39	27	IAmb	IAmb	07 55 30.7	
	comp=Z,72nm,1.1s						
O54A	Avella	70.39	27	P	P	07 55 28.5	0.0
	baz=213,SNR=9.3						
JTMT	Jette	70.47	360	IAmb	IAmb	07 55 30.8	
	comp=Z,81nm,1.4s						
P56A	Dayton Farm, R	70.49	28	P	P	07 55 29.3	+0.2
	baz=214,SNR=8.2						
K46A	Dorr	70.49	22	P	P	07 55 28.8	-0.4
	baz=208						
Q58A	Fox Den Farm,	70.55	30	P	P	07 55 28.9	-0.7
	baz=216						
I42A	Draeger Farm,	70.56	19	IAMs_20	IAMs_20	08 23 38.8	
	comp=Z,2µm,20.0s						
C09A	Chrisman Ranch	70.62	357	IAMs_20	IAMs_20	08 20 32.2	
	comp=Z,1µm,19.0s						
M51A	Elyria	70.64	25	P	P	07 55 29.7	-0.3
	baz=211,SNR=8.0						
NLWA	Neilton Lookou	70.65	353	IAmb	IAmb	07 55 32.4	
	comp=Z,80nm,1.2s						
L49A	Milan	70.70	24	P	P	07 55 30.6	+0.2
	baz=210,SNR=8.1						
D03D	Eldon	70.71	354	P	P	07 55 31.1	+0.7
	baz=172,SNR=8.0						
SPMN	Marine on St.	70.71	16	IAmb	IAmb	07 55 31.8	
	comp=Z,77nm,1.7s						
SPMN				IAMs_20	IAMs_20	08 22 38.6	
	comp=Z,2µm,21.0s						
SPMN	Marine on St.	70.71	16	P	P	07 55 30.3	-0.1
	baz=201,SNR=5.4						
N53A	Lisbon	70.73	26	IAmb	IAmb	07 55 32.3	
	comp=Z,115nm,1.3s						
N53A	Lisbon	70.73	26	P	P	07 55 30.8	+0.2
	baz=212,SNR=9.1						
K47A	Vermontville	70.75	22	P	P	07 55 30.7	0.0
	baz=208,SNR=5.7						
P57A	Homestead Farm	70.84	29	IAmb	IAmb	07 55 33.7	
	comp=Z,45nm,1.1s						
P57A	Homestead Farm	70.84	29	P	P	07 55 31.1	-0.2
	baz=215						
EGMT	Eagleton	70.86	3	P	P	07 55 31.9	+0.5
	baz=184,SNR=26						
O55A	Ligonier	70.87	28	P	P	07 55 31.1	-0.4
	baz=214,SNR=5.7						
C06D	Leavenworth	70.90	355	P	P	07 55 31.8	+0.2
	baz=174						
AAM	Ann Arbor	70.91	24	IAmb	IAmb	07 55 33.6	
	comp=Z,58nm,1.1s						
AAM				IAMs_20	IAMs_20	08 24 39.4	
	comp=Z,2µm,19.0s						
AAM	Ann Arbor	70.91	24	P	P	07 55 31.9	+0.2
	baz=210						
L50A	Kingsville	71.00	24	P	P	07 55 31.8	-0.4
	baz=211,SNR=12						
NEW	Newport	71.04	358	LR	LR	08 21 31.9	
	comp=Z,1µm,18.6s,baz=186,slow=32						
NEW	Newport	71.04	358	IAmb	IAmb	07 55 34.5	
	comp=Z,88nm,1.5s						
NEW	Newport	71.04	358	IAMs_20	IAMs_20	08 20 53.3	
	comp=Z,2µm,21.0s						
NEW	Newport	71.04	358	P	P	07 55 33.1	+0.7
NEW				pmax	pmax		
	comp=Z,50nm,2.2s						
NEW	Newport	71.04	358	P	P	07 55 32.7	+0.3
	baz=177,SNR=16						
J46A	Howard City	71.12	22	P	P	07 55 33.1	+0.1
	baz=208,SNR=7.6						
M52A	Chesterland	71.14	26	IAmb	IAmb	07 55 34.6	
	comp=Z,119nm,1.2s						
M52A	Chesterland	71.14	26	P	P	07 55 32.9	-0.2
	baz=212,SNR=10						
P58A	Pank, Wackersv	71.16	29	P	P	07 55 33.2	-0.1
	baz=216						
K48A	Perry	71.18	23	P	P	07 55 33.3	0.0
	baz=209,SNR=7.4						
N54A	Moraine State	71.21	27	P	P	07 55 33.3	-0.3
	baz=213,SNR=10						
O56A	Blue Knob Stat	71.24	28	IAmb	IAmb	07 55 36.1	
	comp=Z,84nm,1.1s						
O56A	Blue Knob Stat	71.24	28	P	P	07 55 34.2	+0.4
	baz=215,SNR=7.3						
J47A	Sunmer	71.31	22	IAmb	IAmb	07 55 35.7	
	comp=Z,77nm,1.4s						
J47A	Sunmer	71.31	22	P	P	07 55 34.4	+0.3
	baz=209,SNR=6.0						
M53A	WI Miller and	71.33	26	P	P	07 55 34.6	+0.3
	baz=212,SNR=13						
B05A	Bryant	71.34	354	P	P	07 55 34.4	+0.3
	baz=172,SNR=7.9						
K49A	Clarkson	71.40	23	P	P	07 55 34.6	-0.1
	baz=210						
H43A	Windswept, Lux	71.44	20	IAMs_20	IAMs_20	08 23 40.0	
	comp=Z,2µm,21.0s						
G40A	Rib Lake	71.44	18	IAmb	IAmb	07 55 36.7	
	comp=Z,102nm,1.3s						
G40A				IAMs_20	IAMs_20	08 23 34.1	
	comp=Z,2µm,21.0s						
N55A	Marion Center	71.48	28	P	P	07 55 34.8	-0.4
	baz=214,SNR=8.1						
I45A	Fountain	71.54	21	P	P	07 55 35.2	-0.2
	baz=207						
O57A	Amberson	71.60	29	P	P	07 55 35.9	0.0
	baz=215,SNR=5.7						
P59A	Jarrettsville	71.66	30	P	P	07 55 36.4	+0.1
	baz=216						
K50A	Casco	71.70	24	IAmb	IAmb	07 55 37.5	
	comp=Z,93nm,1.3s						
K50A	Casco	71.70	24	P	P	07 55 36.6	+0.2
	baz=211						
I46A	Reed City	71.72	22	P	P	07 55 36.5	0.0
	baz=208						
J48A	Bridge Port	71.73	23	IAmb	IAmb	07 55 38.2	
	comp=Z,82nm,1.4s						
J48A	Bridge Port	71.73	23	P	P	07 55 36.9	+0.3
	baz=210,SNR=5.5						
DGMT	Dagmar	71.77	7	P	P	07 55 37.1	+0.4
	baz=190,SNR=19						
MDND	Maddock	71.80	10	IAmb	IAmb	07 55 38.0	
	comp=Z,74nm,1.2s						
MDND				IAMs_20	IAMs_20	08 24 11.0	
	comp=Z,2µm,18.0s						
MDND	Maddock	71.80	10	P	P	07 55 36.6	-0.3
	baz=194,SNR=5.7						
M54A	Oil Creek Stat	71.80	27	IAmb	IAmb	07 55 40.8	
	comp=Z,80nm,1.4s						
M54A	Oil Creek Stat	71.80	27	P	P	07 55 36.8	-0.3
	baz=213						
O58A	Lewisberry	71.84	29	P	P	07 55 37.3	-0.1
	baz=216						
N56A	West Decatur	71.89	28	P	P	07 55 37.7	0.0
	baz=215						
L53A	Girard	71.93	26	P	P	07 55 37.7	-0.1
	baz=213						
J49A	Marlette	72.02	23	P	P	07 55 38.4	+0.1
	baz=210						
N57A	Milroy	72.08	29	P	P	07 55 38.7	-0.1
	baz=215						
K51A	Iona Station	72.08	25	P	P	07 55 38.8	0.0
	baz=212						
I47A	Gladwin	72.11	22	P	P	07 55 38.4	-0.5
	baz=209						
H45A	Beulah	72.12	21	P	P	07 55 39.1	+0.1
	baz=207						
M55A	Ridgway	72.14	27	IAmb	IAmb	07 55 40.6	
	comp=Z,107nm,1.4s						
M55A	Ridgway	72.14	27	P	P	07 55 39.1	-0.1
	baz=214						
ERPA	Erie	72.17	26	IAmb	IAmb	07 55 40.6	
	comp=Z,66nm,1.2s						
ERPA	Erie	72.17	26	P	P	07 55 39.2	-0.1
	baz=213						
P60A	Greenville	72.19	30	P	P	07 55 39.1	-0.3
	baz=217						
DZM	Mont Dzumac	72.29	253	eS	S	08 05 03.7	-0.6
	comp=Z,803nm,26.9s						
DZM				eLQ	LQ	08 14 49.3	
	comp=Z,1µm,29.7s						
DZM				eLR	LR	08 17 42.4	
	comp=Z,814nm,28.6s						
DZM	Mont Dzumac	72.29	253	P	P	07 55 41.4	+0.7
E38A	The Farm, Brul	72.32	16	IAMs_20	IAMs_20	08 23 49.1	
	comp=Z,2µm,22.0s						
H46A	Fife Lake	72.33	21	P	P	07 55 40.0	-0.1
	baz=208,SNR=8.9						
O59A	Robesonia	72.33	30	P	P	07 55 39.7	-0.6
	baz=217						
M56A	Emporium	72.40	28	IAmb	IAmb	07 55 42.8	
	comp=Z,52nm,1.1s						
M56A	Emporium	72.40	28	P	P	07 55 40.3	-0.4
	baz=215						
K52A	Tillsonburg	72.44	25	P	P	07 55 40.6	-0.3
	baz=212,SNR=11						
F42A	Maple Grove Fa	72.49	19	IAmb	IAmb	07 55 42.7	
	comp=Z,107nm,1.4s						
F42A				IAMs_20	IAMs_20	08 24 08.8	
	comp=Z,2µm,20.0s						
COWI	Conover	72.51	18	IAmb	IAmb	07 55 43.1	
	comp=Z,121nm,1.4s						
N58A	Sunbury	72.52	29	IAmb	IAmb	07 55 43.4	
	comp=Z,92nm,1.2s						
N58A	Sunbury	72.52	29	P	P	07 55 41.2	-0.2
	baz=216,SNR=5.4						
I48A	Sherman Twp	72.53	23	P	P	07 55 41.7	+0.3
	baz=209,SNR=9.0						
L54A	Sinclairville	72.55	26	P	P	07 55 41.1	-0.5
	baz=214						
G45A	Suttons Bay	72.62	21	IAmb	IAmb	07 55 43.8	
	comp=Z,75nm,1.2s						
G45A	Suttons Bay	72.62	21	P	P	07 55 42.2	+0.3
	baz=208,SNR=7.1						
I49A	Point Hope	72.64	23	P	P	07 55 42.0	0.0
	baz=210						
O60A	Telford	72.69	30	P	P	07 55 42.6	+0.2
	baz=217						
M57A	Sunshine Farm,	72.74	28	P	P	07 55 42.9	+0.2
	baz=216						
GLMI	Grayling	72.78	22	P	P	07 55 43.1	+0.2
	baz=208						
L55A	Hinsdale	72.87	27	P	P	07 55 43.4	-0.1
	baz=214,SNR=7.0						
J52A	Paris	72.92	25	P	P	07 55 43.8	0.0
	baz=212,SNR=5.6						
VNA3	Neumayer Olymp	72.94	161	P	P	07 55 44.0	+0.3
N59A	State Game Lan	73.00	30	P	P	07 55 44.3	0.0
	baz=217						
M58A	Price's Panora	73.06	29	P	P	07 55 44.7	0.0
	baz=216						
H48A	Harrisville	73.11	23	IAmb	IAmb	07 55 46.7	
	comp=Z,83nm,1.3s						
H48A	Harrisville	73.11	23	P	P	07 55 45.0	+0.2
	baz=210,SNR=7.8						
K54A	Basiliko Farm,	73.12	27	P	P	07 55 45.2	+0.3
	baz=214						
G46A	Petoskey	73.13	21	P	P	07 55 45.4	+0.5
	baz=208,SNR=11						
I51A	Listowel	73.19	24	P	P	07 55 45.2	-0.1
	baz=212,SNR=11						
L56A	Greenwood	73.20	28	IAmb	IAmb	07 55 47.6	
	comp=Z,81nm,1.1s						
L56A	Greenwood	73.20	28	P	P	07 55 45.5	0.0
	baz=215,SNR=5.4						
F45A	CMU Biological	73.24	21	P	P	07 55 45.9	+0.4
	baz=208,SNR=8.3						
N60A	Cedar Hill Far	73.28	30	P	P	07 55 45.7	-0.2
	baz=217						
G47A	Hillman	73.34	22	P	P	07 55 46.6	+0.4
	baz=209,SNR=18						
E43A	Lone Tree Farm	73.39	19	IAmb	IAmb	07 55 48.3	
	comp=Z,74nm,1.2s						
E43A				IAMs_20	IAMs_20	08 24 46.7	
	comp=Z,2µm,21.0s						
L57A	Andrews Acres	73.40	28	P	P	07 55 46.7	0.0
	baz=216						
K55A	Perry	73.47	27	P	P	07 55 47.2	+0.2
	baz=215						
D41A	Chassel	73.55	18	IAmb	IAmb	07 55 49.0	
	comp=Z,62nm,1.3s						
D41A				IAMs_20	IAMs_20	08 24 57.7	
	comp=Z,2µm,20.0s						
EYMN	Ely	73.58	16	IAmb	IAmb	07 55 48.9	
	comp=Z,72nm,1.4s						
EYMN	Ely	73.58	16	IAMs_20	IAMs_20	08 26 41.4	
	comp=Z,1µm,18.0s						
EYMN	Ely	73.58	16	P	P	07 55 47.4	-0.2
	baz=202,SNR=16						
VNA1	Neumayer--Stat	73.59	160	P	P	07 55 47.8	+0.4
M59A	Waymart	73.66	29	P	P	07 55 48.6	+0.5
	baz=217						
MEDO	Medina	73.67	26	IAmb	IAmb	07 55 51.2	
	comp=Z,176nm,1.8s						
J54A	Appleton	73.69	26	P	P	07 55 48.6	+0.4
	baz=214						
I52A	Shelburne	73.74	25	P	P	07 55 49.0	+0.4
	baz=212						
VNA2	Neumayer--Watz	73.75	161	P	P	07 55 48.6	+0.3
	baz=256,slow=4.5						
K56A	Middlesex	73.76	27	P	P	07 55 48.9	+0.1
	baz=215						
I53A	Kortright Cn E	73.76	25	P	P	07 55 48.4	-0.3
	baz=213						
M60A	Port Jervis	73.86	30	P	P	07 55 48.7	-0.6
	baz=218						
L58A	Harry Jones Me	73.87	29	P	P	07 55 49.5	+0.1
	baz=217						
PAL	Palisades	73.94	31	P	P	07 55 50.1	+0.4
	baz=218						
BINY	Binghamton	73.94	29	IAmb	IAmb	07 55 51.0	
	comp=Z,106nm,1.3s						
BINY	Binghamton	73.94	29	P	P	07 55 50.1	+0.4
	baz=216						
E44A	Grand Marais A	73.94	20	IAmb	IAmb	07 55 52.2	
	comp=Z,163nm,1.4s						
E44A	Grand Marais A	73.94	20	P	P	07 55 50.7	+1.1
	baz=207,SNR=8.7						
K57A	Scipio Center	74.14	28	P	P	07 55 51.0	0.0
	baz=216						
E46A	Sault Ste Mari	74.23	21	IAmb	IAmb	07 55 53.4	
	comp=Z,86nm,1.3s						
H52A	Wyevale	74.33	25	P	P	07 55 52.2	+0.2
	baz=213						
F48A	Evansville	74.34	22	P	P	07 55 52.1	+0.1
	baz=210,SNR=11						
L59A	Walton	74.35	29	P	P	07 55 52.1	-0.1
	baz=217						
F49A	Sandfield	74.49	23	P	P	07 55 52.9	0.0
	baz=211,SNR=5.6						
K58A	Earlville	74.54	28	P	P	07 55 53.3	0.0
	baz=217						
L60A	Shokan	74.56	30	P	P	07 55 53.7	+0.2
	baz=218						
E47A	Iron Bridge	74.66	22	P	P	07 55 54.3	+0.5
	baz=210,SNR=16						
SADO	Sadowa	74.73	25	IAmb	IAmb	07 55 57.5	
	comp=Z,157nm,1.9s						
SADO				IAMs_20	IAMs_20	08 26 06.6	
	comp=Z,2µm,20.0s						
SNAA	Sanae	74.75	162	P	P	07 55 54.6	+0.3
SNAA	Sanae	74.75	162	P	P	07 55 55.6	+1.3
SNAA	Sanae	74.75	162	iP	P	07 55 55.4	+1.1
ULM	Lac du Bonnet	74.78	12	P	P	07 55 54.0	-0.4
	comp=Z,18nm,1.1s,baz=212,slow=5.5,SNR=17						
ULM				LR	LR	08 24 58.2	
	comp=Z,677nm,20.5s,baz=183,slow=33						
ULM	Lac du Bonnet	74.78	12	iP	P	07 55 53.9	-0.5
D46A	Sault St. Mari	74.78	21	P	P	07 55 54.9	+0.3
	baz=209,SNR=14						
H53A	Bobcaygeon	74.79	26	P	P	07 55 54.6	-0.1
	baz=214,SNR=5.2						
I55A	Frankford	74.86	26	P	P	07 55 54.8	-0.2
	baz=215						
K59A	Cooperstown	74.90	29	P	P	07 55 55.4	0.0
	baz=217,SNR=5.2						

J57A Williamstown 74.91 28 P P 07 55 55.2 -0.1
baz=216
E48A Lockeyer 75.06 22 P P 07 55 56.5 +0.3
baz=210,SNR=16
DELO Deloro Mine 75.13 26 IAmb IAmb 07 56 38.1
comp=Z,113nm,1.9s
DELO IAMs_20 IAMs_20 08 27 53.2
comp=Z,1µm,20.0s
J58A Remsen 75.18 28 IAmb IAmb 07 55 59.2
comp=Z,84nm,1.2s
J58A Remsen 75.18 28 P P 07 55 57.0 0.0
baz=217
K60A Five Rivers En 75.21 30 P P 07 55 57.5 +0.4
baz=218
G53A Haliburton 75.23 25 P P 07 55 57.5 +0.4
baz=214
D47A Chapleau 75.24 21 P P 07 55 57.4 +0.2
baz=210,SNR=17
H55A Tweed 75.33 26 P P 07 55 58.1 +0.4
baz=215
F51A Arnstein 75.41 24 P P 07 55 58.0 -0.2
baz=212,SNR=5.5
I57A Carthage 75.48 28 P P 07 55 58.3 -0.4
baz=216,SNR=7.1
F52A Sundridge 75.52 24 P P 07 55 58.9 0.0
baz=213
J59A Piesco 75.60 29 P P 07 55 59.4 0.0
baz=218
G54A Lake Saint Pet 75.67 25 P P 07 55 59.4 -0.3
baz=214,SNR=7.9
H56A Elgin 75.75 27 P P 07 56 00.3 +0.1
baz=216
PLVO Plevna 75.78 26 IAmb IAmb 07 56 01.8
comp=Z,72nm,1.5s
D48A Paudash Townsh 75.79 22 P P 07 56 00.3 0.0
baz=211,SNR=7.6
BBB Bella Bella 75.89 351 LR LR 08 22 01.2
comp=Z,259nm,20.6s,baz=170,slow=30
J60A Lant Hill Farm 75.91 30 P P 07 56 01.2 0.0
baz=218
K62A Royalston 76.01 31 P P 07 56 01.4 -0.3
baz=220
H57A Richville 76.01 28 P P 07 56 01.4 -0.2
baz=217
D49A Beulah Townshi 76.03 22 P P 07 56 01.8 +0.1
baz=211,SNR=8.2
E51A G1948 Merrick 76.08 24 P P 07 56 02.1 0.0
baz=213
G55A Calabogie 76.10 26 P P 07 56 02.1 -0.1
baz=215
NCB Newcomb 76.13 29 IAmb IAmb 07 56 06.0
comp=Z,161nm,1.8s
ALGO Algonquin Park 76.14 25 P P 07 56 02.3 -0.1
baz=214
I59A Olmsteadville 76.14 29 P P 07 56 02.5 0.0
baz=218
E52A Mattawa 76.18 25 P P 07 56 02.7 0.0
baz=214,SNR=6.3
J61A Chester 76.39 30 P P 07 56 04.5 +0.6
baz=219
I60A Shoreham 76.44 29 P P 07 56 04.5 +0.4
baz=218
D50A G1974 Best Tow 76.48 23 P P 07 56 04.5 +0.2
baz=212,SNR=13
LONY Lake Ozonia 76.49 28 P P 07 56 04.7 +0.3
baz=217
H58A Gabriels 76.50 28 P P 07 56 05.0 +0.5
baz=218
D51A Lot 18 Range I 76.59 24 P P 07 56 05.2 +0.3
baz=213,SNR=10
J62A Henniker 76.64 30 P P 07 56 06.1 +0.8
baz=220
E53A Dumoine, Ponti 76.65 25 P P 07 56 05.5 +0.2
baz=214,SNR=5.5
G57A Newington 76.70 27 P P 07 56 06.0 +0.5
baz=217
F55A Otter Lake 76.72 26 P P 07 56 06.1 +0.5
baz=216
D52A ZEK Kipawa Sen 76.85 24 P P 07 56 06.8 +0.4
baz=214,SNR=7.7
E54A Lac Daplat, Po 76.88 25 P P 07 56 06.9 +0.4
baz=215
H59A Cadyville 76.89 28 P P 07 56 07.2 +0.5
baz=218
I61A Oroboro, Fairl 77.00 30 P P 07 56 08.0 +0.7
baz=219
G58A Ormstown 77.14 28 P P 07 56 08.7 +0.7
baz=218
D53A Lac Vacive, Po 77.21 25 IAmb IAmb 07 56 10.2
comp=Z,101nm,1.5s
D53A Lac Vacive, Po 77.21 25 P P 07 56 09.0 +0.6
baz=214
H60A Morristown 77.27 29 P P 07 56 08.8 0.0
baz=219
E55A Montcerf-Lytto 77.35 26 P P 07 56 09.4 +0.2
baz=216
H61A Lyndonville 77.60 30 P P 07 56 10.9 +0.2
baz=219
D54A Lac Fusel, La 77.68 25 P P 07 56 11.5 +0.5
baz=215
E56A St. Veronique 77.83 27 P P 07 56 11.9 0.0
baz=217
D55A Sainte-Anne-du 78.04 26 P P 07 56 13.2 +0.1
baz=216
E57A Chemin Saint G 78.10 27 P P 07 56 13.5 0.0
baz=217
FFC Flin Flon 78.18 7 P P 07 56 13.0 -0.6
FFC IAmb IAmb 07 56 14.7
comp=Z,66nm,1.4s
FFC Flin Flon 78.18 7 IAMs_20 IAMs_20 08 28 16.4
comp=Z,2µm,19.0s
FFC Flin Flon 78.18 7 P P 07 56 13.0 -0.6
FFC pmax pmax
comp=Z,66nm,1.4s
I64A Boothbay 78.20 31 P P 07 56 14.1 +0.1
baz=221
D56A ZEC Mazanza, M 78.35 26 P P 07 56 14.5 -0.3
baz=217,SNR=7.0
G61A St-Isidore-de- 78.35 29 P P 07 56 15.2 +0.4
baz=220
E58A La Victoria 78.44 28 P P 07 56 15.1 -0.1
baz=218,SNR=8.6
D57A Chemin Vers le 78.69 27 P P 07 56 17.1 +0.4
baz=218
F60A Warwick 78.69 29 P P 07 56 16.5 -0.2
baz=219
H64A Troy 78.93 31 P P 07 56 17.8 -0.2
baz=222
LSQQ Lebel-sur-Quev 79.12 24 P P 07 56 19.1 +0.1
baz=215
D58A Chemin du LacG 79.17 27 P P 07 56 19.6 +0.3
baz=218,SNR=7.0
NVL N'lazarevskaya 79.19 164 eP P 07 56 19.2 0.0
NVL eS S 08 06 16.3 -2.4
NVL pmax pmax
comp=Z,13nm,1.0s
LATQ La Tuque 79.44 27 P P 07 56 20.7 0.0
baz=218
MATQ Matagami 79.45 23 P P 07 56 20.4 -0.4
baz=214
D59A Saint-Raymond 79.55 28 P P 07 56 21.1 -0.3
baz=219
F64A Sherman 80.25 31 P P 07 56 25.2 0.0
baz=222
ARMA Armidale 82.00 240 P P 07 56 35.6 +0.4
ARMA IAMs_20 IAMs_20 08 27 07.8
comp=Z,974nm,20.0s
CAN Canberra 82.20 235 P P 07 56 36.0 -0.1
CAN pmax pmax
comp=Z,19nm,2.7s
DLBC Dease Lake 82.24 352 IAmb IAmb 07 56 37.9
comp=Z,128nm,1.3s
JIS Juneau Island 82.74 349 IAmb IAmb 07 56 40.1
comp=Z,80nm,1.4s
BESE Bessie Mountai 83.11 349 IAmb IAmb 07 56 42.1
comp=Z,92nm,1.5s
TOO Toolangi 83.90 232 P P 07 56 45.3 +0.5
TOO IAmb IAmb 07 56 46.8
comp=Z,65nm,1.5s
TOO Toolangi 83.90 232 P P 07 56 45.3 +0.5
TOO pmax pmax
comp=Z,65nm,1.5s
SKAG Skagway 84.02 349 IAmb IAmb 07 56 50.8
comp=Z,116nm,1.6s
CASY Casey 84.74 197 P P 07 56 48.8 +0.3
CASY IAmb IAmb 07 56 52.1
comp=Z,40nm,1.1s
WHY Whitehorse 85.09 350 IAmb IAmb 07 56 51.7
comp=Z,85nm,1.4s
YKA Yellowknife Ar 85.25 360 P P 07 56 50.5 -0.2
comp=Z,40nm,1.1s,baz=177,slow=4.8,SNR=180
YKA PKKP PKKPbc 08 14 56.4 -3.0
comp=Z,0.7nm,0.9s,baz=350,slow=2.2,SNR=7.7
YKA LR LR 08 30 45.9
comp=Z,942nm,18.2s,baz=0.0,slow=33
HYT Haines Junctio 85.69 349 IAmb IAmb 07 56 55.1
comp=Z,106nm,1.4s
SYO Syowa Base 86.25 171 ⇑iP P 07 56 54.8 -1.1
CTGM Chitina Glacie 86.55 347 IAmb IAmb 07 56 59.1
comp=Z,100nm,1.3s
VRDI Verde Repeater 87.23 346 IAmb IAmb 07 57 02.1
comp=Z,44nm,1.4s
GLB Gilahina Butte 87.50 346 IAmb IAmb 07 57 03.1
comp=Z,52nm,1.4s
H11S2 WAKE ISLAND Hy 87.50 291 T T 09 33 40.6
baz=116,slow=75,SNR=344
H11S1 WAKE ISLAND Hy 87.52 291 T T 09 33 38.0
baz=116,slow=75,SNR=188
H11S3 WAKE ISLAND Hy 87.52 291 T T 09 33 35.1
baz=116,slow=75,SNR=171
SCHQ Schefferville 87.54 25 P P 07 57 02.3 0.0
comp=Z,10nm,1.1s,baz=15,slow=3.6,SNR=5.0
SCHQ LR LR 08 34 28.0
comp=Z,946nm,19.9s,baz=252,slow=34
H11N3 WAKE ISLAND Hy 87.85 292 T T 09 34 03.5
baz=116,slow=75,SNR=56
H11N1 WAKE ISLAND Hy 87.86 292 T T 09 34 07.7
baz=116,slow=75,SNR=28
H11N2 WAKE ISLAND Hy 87.87 292 T T 09 34 03.3
baz=116,slow=75,SNR=175
BCAR Beaver Creek A 88.55 348 P P 07 57 06.0 -0.9
DAWY Dawson 89.03 349 IAmb IAmb 07 57 10.2
comp=Z,41nm,1.4s
SUA Susitna One 89.19 343 IAmb IAmb 07 57 11.1
comp=Z,63nm,1.4s
PAX Paxson 89.22 346 IAmb IAmb 07 57 10.8
comp=Z,59nm,1.4s
STKA Stephens Creek 89.25 236 P P 07 57 11.2 +0.1
comp=Z,10nm,1.1s,baz=103,slow=4.3,SNR=8.5
STKA LR LR 08 33 16.3
comp=Z,1µm,18.2s,baz=129,slow=33
STKA Stephens Creek 89.25 236 P P 07 57 11.2 +0.1
DOT Dot Lake 89.53 347 IAmb IAmb 07 57 12.4
comp=Z,55nm,1.4s
MAW Mawson 89.59 179 LR LR 08 33 40.3
comp=Z,1µm,18.7s,baz=184,slow=33
DHY Denali Highway 89.74 346 IAmb IAmb 07 57 14.5
comp=Z,48nm,1.4s
CTA Charters Tower 90.56 248 P P 07 57 17.9 +0.5
CTA pmax pmax
comp=Z,25nm,1.4s
CTAO Charters Tower 90.56 248 P P 07 57 17.9 +0.5
CTAO pmax pmax
comp=Z,23nm,1.4s
MCK McKinley 90.67 345 IAmb IAmb 07 57 17.6
comp=Z,67nm,1.2s
EPYK Eagle Plains 90.76 351 P P 07 57 16.6 -0.5
baz=160
HDA Harding Lake 90.81 346 P P 07 57 17.1 -0.3
baz=150
ILAR Eielson Array 91.11 347 P P 07 57 18.8 0.0
comp=Z,6.6nm,1.2s,baz=189,slow=3.4,SNR=16
ILAR LR LR 08 29 53.4
comp=Z,136nm,20.4s,baz=168,slow=30
WRH Wood River Hil 91.11 346 IAmb IAmb 07 57 19.9
comp=Z,81nm,1.4s
CCB Clear Creek Bu 91.20 346 IAmb IAmb 07 57 20.0
comp=Z,44nm,1.4s
COLA College 91.41 346 P P 07 57 19.0 -1.1
COLA IAmb IAmb 07 57 21.1
comp=Z,60nm,1.4s
COLA College 91.41 346 P P 07 57 19.0 -1.1
COLA pmax pmax
comp=Z,60nm,1.5s
TCOL CIGO, UAF Yank 91.41 346 P P 07 57 19.8 -0.3
baz=149
PRP Porcupine Dome 91.48 348 IAmb IAmb 07 57 22.1
comp=Z,61nm,1.5s
POKR Poker Flat Res 91.53 347 P P 07 57 20.0 -0.7
baz=150
INK Inuvik 92.19 353 IAmb IAmb 07 57 24.1
comp=Z,46nm,1.3s
INK Inuvik 92.19 353 P P 07 57 22.9 -0.8
INK pmax pmax
comp=Z,27nm,1.3s
MLY Manley 92.19 345 IAmb IAmb 07 57 24.7
comp=Z,63nm,1.6s
C36M Paulatuk 92.41 357 IAmb IAmb 07 57 25.8
comp=Z,52nm,1.4s
C36M Paulatuk 92.41 357 P P 07 57 24.4 -0.3
baz=171
BMAR Burnt Mountain 93.00 349 P P 07 57 27.1 -0.4
IMAR Indian Mountai 93.69 345 P P 07 57 29.5 -1.2
TOLK Toolik Lake Re 94.99 348 P P 07 57 36.2 -0.5
baz=148
GAMB Gambell 97.39 338 IAmb IAmb 07 57 49.3
comp=Z,28nm,1.5s
RDOG Red Dog Mine 97.59 343 IAmb IAmb 07 57 51.0
comp=Z,34nm,1.2s
RES Resolute Bay 98.31 5 P P 07 57 50.8 -0.7
RES pmax pmax
comp=Z,10.0nm,1.7s
ASAR Alice Springs 99.13 240 P Pdif 07 57 55.8 -0.8
comp=Z,1.2nm,1.0s,baz=136,slow=3.2,SNR=6.1
ASAR LR LR 08 38 00.3
comp=Z,1µm,19.9s,baz=140,slow=33
ASAR Alice Springs 99.13 240 P Pdif 07 57 55.6 -0.9
WRAB Tennant Creek 100.61 243 iP Pdif 07 58 02.9 -0.3
WRAB pmax pmax
comp=Z,2.0nm,1.0s
WRA Warramunga Arr 100.61 243 P Pdif 07 58 03.1 -0.1
comp=Z,0.9nm,0.8s,baz=105,slow=4.3,SNR=6.1
WRA Warramunga Arr 100.61 243 Pdif 07 58 02.7 -0.5
KNRA Kununurra 107.33 244 IAMs_20 IAMs_20 08 44 23.3
comp=Z,864nm,19.0s
MA2 Magadan 112.08 327 iPKIKP PKiKP 08 02 50.6 +1.0
MA2 pmax pmax
comp=Z,8.0nm,1.0s
YSS Yuzh-Sakhalins 115.18 312 iPKIKP PKPdf 08 02 50.8 -5.1
YSS e 08 09 57.7
TORD Torodi Ar. Bea 118.73 87 PKP PKPdf 08 03 03.0 -0.7
comp=Z,8.5nm,1.3s,baz=228,slow=0.7,SNR=10
TORD PP PP 08 04 16.5 -5.4
comp=Z,2.4nm,1.1s,baz=266,slow=5.1,SNR=3.7
TORD Torodi Ar. Bea 118.73 87 PKPdf 08 03 01.2 -2.4
ESDC Sonseca Array 119.62 56 PKP PKiKP 08 03 05.4 +0.6
comp=Z,0.3nm,0.5s,baz=261,slow=2.1,SNR=4.9
ESDC Sonseca Array 119.62 56 PKPdf 08 03 04.4 -0.4
TIXI Tiksi 120.08 341 PKP PKPdf 08 03 05.3 -1.1
comp=Z,0.8nm,0.2s,baz=15,slow=2.0,SNR=3.9
TIXI Tiksi 120.08 341 PKPdf 08 03 03.3 -1.3
TIXI Tiksi 120.08 341 ePKIKP PKPdf 08 03 03.8 -0.8
TIXI pmax pmax
comp=Z,7.0nm,1.2s
YAK Yakutsk 122.29 330 iPKIKP PKiKP 08 03 09.2 -0.1
YAK pmax pmax
comp=Z,8.0nm,1.0s
USA0B Ussuriysk Arra 122.50 309 IAMs_20 IAMs_20 08 45 14.3
comp=Z,607nm,20.0s
USRK Ussuriysk Ar. 122.50 309 PKP PKPdf 08 03 09.8 -0.3
comp=Z,2.8nm,0.9s,baz=90,slow=1.9,SNR=6.0
USRK Ussuriysk Ar. 122.50 309 PKPdf 08 03 09.1 -1.0
KLR Kul'dur 122.65 315 PKP PKiKP 08 03 10.2 -0.2
comp=Z,4.6nm,1.0s,baz=75,slow=1.6,SNR=7.9
KLR Kul'dur 122.65 315 ePKIKP PKiKP 08 03 10.1 -0.3
KLR pmax pmax
comp=Z,18nm,1.5s
MDJ Mudanjiang 124.22 309 PKP PKiKP 08 03 13.3 -0.4
TAM Tamanrasset 124.90 78 IAMs_20 IAMs_20 08 55 29.5
comp=Z,489nm,20.0s
KSRS Korea Array 125.30 300 PKP PKiKP 08 03 15.8 -0.2
comp=Z,6.7nm,1.1s,baz=80,slow=1.9,SNR=12
KSAR Wonju Array Be 125.33 300 PKPdf 08 03 14.9 -0.8
KSAR Wonju Array Be 125.33 300 PKIKP PKPdf 08 03 14.9 -0.8
KEST Kesra 129.88 62 IAMs_20 IAMs_20 09 09 08.4
comp=Z,694nm,20.0s
CLL Collm 130.78 41 ePKPdf PKiKP 08 03 26.0 -0.6
CLL e 08 03 33.0
CLL ePS PS 08 16 00.0 +5.5
CLL eSS SS 08 23 13.0 +1.8
CLL eSSS SSS 08 28 00.0
CLL eSSSS 08 31 42.0
CLL LmV 09 04 00.0
comp=Z,300nm,18.2s
CLL Collm 130.78 41 ePKIKP PKiKP 08 03 26.0 -0.6
CLL e 08 03 33.0
CLL MLR MLR
comp=Z,300nm,18.2s
BOD Bodaibo 131.08 328 ePKIKP PKPdf 08 03 24.3 -1.7
BOD pmax pmax
comp=Z,22nm,1.4s
BRG Berggiesshubel 131.47 42 ePKIKP PKiKP 08 03 27.9 -0.1
BRG pmax pmax
comp=Z,16nm,1.3s
GERES GERESS Array B 131.81 44 PKP PKPdf 08 03 27.5 -0.4
comp=Z,0.8nm,0.8s,baz=336,slow=2.9,SNR=6.8
GERES GERESS Array B 131.81 44 PKPdf 08 03 25.8 -2.1
NJ2 Nanjing 132.46 293 ePKP PKiKP 08 03 29.3 -0.2
FINES FINESS Array B 133.02 25 PKP PKiKP 08 03 30.4 -0.4
comp=Z,9.9nm,1.2s,baz=116,slow=4.4,SNR=6.4
FINES FINESS Array B 133.02 25 PKiKP 08 03 30.6 -0.1
FINES FINESS Array B 133.02 25 PKIKP PKiKP 08 03 30.6 -0.1
MODS Modra-Piesok 134.22 44 ePKIKP PKiKP 08 03 33.0 -0.7
MODS Modra-Piesok 134.22 44 ePKP PKiKP 08 03 33.0 -0.7
VYHS Vyhne 135.18 44 ePKIKP PKiKP 08 03 36.1 +0.5
VYHS Vyhne 135.18 44 ePKP PKiKP 08 03 36.1 +0.5
TIP Timpagrande 135.63 57 IAMs_20 IAMs_20 09 04 33.3
comp=Z,655nm,21.0s
WHN Wuhan 136.24 291 PKP PKPdf 08 03 34.1 -2.5
WHN LR LR
comp=Z,1µm,18.7s
UZH Uzhgorod 137.31 42 ePKHKP PKPpre 08 03 28.9
UZH e 08 03 38.9
UZH e 08 03 43.3
TRPA Tarpa 137.64 43 ⇓P PKPdf 08 03 39.1 +0.5
HHC Hu-ho-hao-te 137.78 306 ePKP PKiKP 08 03 40.8 -0.5
HHC LR LR
comp=Z,220nm,21.1s
HHC LR LR
comp=Z,260nm,21.9s
HHC LR LR
comp=Z,390nm,23.7s
BZS Buzias 137.85 47 ⇓P PKPdf 08 03 36.4 -2.7
BZS Buzias 137.85 47 ⇓PKIKP PKPdf 08 03 36.4 -2.7
LVV L'vov 137.91 40 ePKIKP PKiKP 08 03 40.3 -0.8
KLMR Klimovskoe 138.08 19 ePKHKP PKPdf 08 03 31.7 -7.3
KLMR Klimovskoe 138.08 19 ePKPdf PKPdf 08 03 31.7 -7.3
KLMR AMP 08 03 46.5
comp=Z,16nm,1.4s
KLMR ePP PP 08 06 15.4 -12
MDVR Moldovita 138.16 48 ⇓P PKPdf 08 03 40.2 +0.4
DRGR 138.21 45 ⇓P PKPdf 08 03 35.5 -4.3
DRGR 138.21 45 ⇓PKIKP PKPdf 08 03 35.5 -4.3
MBAR Mbarara 138.62 120 IAMs_20 IAMs_20 08 54 34.3
comp=Z,452nm,18.0s
GZR Gura Zlata 138.70 47 ⇓P PKPdf 08 03 33.2 -7.6
GZR Gura Zlata 138.70 47 ⇓PKIKP PKPdf 08 03 33.2 -7.6
QIZ Qiongzhong 138.76 273 PKP PKPdf 08 03 39.8 -1.8
QIZ PP PP 08 06 31.8 -1.4
QIZ SS SS 08 24 48.3 -0.9
QIZ LR LR
comp=Z,370nm,16.2s
QIZ LR LR
comp=Z,320nm,20.4s
BKNI Bangkinang 138.93 242 IAMs_20 IAMs_20 08 58 54.6
comp=Z,736nm,20.0s
TLY Talaya 139.22 324 PKP PKPdf 08 03 42.2 +0.8
comp=Z,5.4nm,0.8s,baz=211,slow=0.7,SNR=11
TLY Talaya 139.22 324 PKPpre PKPpre 08 03 33.8
TLY PKPdf 08 03 42.0 +0.6
TLY IAMs_20 IAMs_20 09 06 59.1
comp=Z,320nm,19.0s
TLY Talaya 139.22 324 iPKIKP PKPdf 08 03 41.4 -0.1
TLY pmax pmax
comp=Z,24nm,1.3s
TLY MLR MLR
comp=Z,255nm,19.0s
SONM Songino Array 139.34 318 PKhKP PKPpre 08 03 33.1
comp=Z,1.8nm,1.1s,baz=74,slow=1.2,SNR=7.7
SONM PKP PKPdf 08 03 41.7 -0.2
comp=Z,11nm,1.1s,baz=137,slow=1.3,SNR=19
SONM PP PP 08 06 30.4 -5.5
comp=Z,3.7nm,1.2s,baz=79,slow=3.2,SNR=6.6
SONM Songino Array 139.34 318 PKPpre 08 03 32.1
SONM PKPdf 08 03 41.7 -0.2
BUR08 Bucovina Ar. S 139.48 43 PKPdf 08 03 39.9 -2.3
BURAR Bucovina Array 139.50 43 ⇓P PKPdf 08 03 41.3 -0.9
BURAR Bucovina Array 139.50 43 PKPpre 08 03 34.9
BURAR Bucovina Array 139.50 43 ⇓PKIKP PKPdf 08 03 41.3 -0.9
ARR Arges 139.94 46 ⇓P PKPdf 08 03 33.5 -10
ZAK Zakamensk 140.06 323 ePKHKP PKPdf 08 03 35.2 -8.0
VOIR 140.20 46 ⇓P PKPdf 08 03 36.2 -7.3
VOIR 140.20 46 ⇓PKHKP PKPdf 08 03 36.2 -7.3
DOPR Dopca 140.23 45 ⇓P PKPdf 08 03 41.7 -1.8
AKASG Malin Array Be 140.47 36 PKhKP PKPpre 08 03 37.1
comp=Z,0.4nm,0.3s,baz=302,slow=2.8,SNR=6.9
AKASG PKP PKPdf 08 03 43.2 -0.5
comp=Z,8.5nm,1.1s,baz=295,slow=2.2,SNR=9.8
AKASG Malin Array Be 140.47 36 PKPpre 08 03 37.5
MOY Mondy 140.63 325 ePKHKP PKPpre 08 03 38.2
MLR Muntele Rosu 140.77 45 PKhKP PKPpre 08 03 37.9
comp=Z,3.6nm,0.8s,baz=317,slow=13,SNR=4.5
MLR PKP PKPdf 08 03 44.5 -0.1
comp=Z,1.0nm,0.5s,baz=354,slow=4.4,SNR=5.9
MLR PP PP 08 06 43.3 -1.4
comp=Z,0.8nm,0.4s,baz=230,slow=7.3,SNR=3.8
MLR Muntele Rosu 140.77 45 ⇓P PKPdf 08 03 34.3 -10
MLR Muntele Rosu 140.77 45 PKPdf 08 03 38.3 -6.3
XAN Xi'an 140.78 296 PKP PKPdf 08 03 44.5 -0.4
IPM Ipoh 141.24 247 IAMs_20 IAMs_20 09 01 53.1
comp=Z,678nm,20.0s
OBN Obninsk 141.33 27⇑ePKIKP PKPdf 08 03 45.5 +0.4
OBN e 08 06 50.0
OBN ePPP PPP 08 09 54.1
OBN eSS SS 08 25 56.0 +40
OBN pmax pmax
comp=Z,38nm,1.4s
OBN MLR MLR
comp=Z,413nm,18.0s
UBPT Khong Chiam 141.78 266 IAMs_20 IAMs_20 08 58 48.6
comp=Z,507nm,19.0s
KULM Kulim 141.98 248 IAMs_20 IAMs_20 09 02 28.7
comp=Z,554nm,20.0s
CFR Carcaliu 142.32 45 ⇓P PKPdf 08 03 42.1 -5.1
CFR Carcaliu 142.32 45 ⇓PKHKP PKPdf 08 03 42.1 -5.1
TOPG Topolog 142.59 45 ⇓P PKPdf 08 03 43.6 -4.1
KIRV Kirov 142.63 14 PKP PKPdf 08 03 47.6 +0.3
comp=Z,8.6nm,0.5s,baz=330,slow=7.5,SNR=7.6
KIRV Kirov 142.63 14 iPKIKP PKPdf 08 03 47.3 0.0
TIRR Tirgusor 142.78 46 ⇓P PKPdf 08 03 44.5 -3.5
TIRR Tirgusor 142.78 46 ⇓PKIKP PKPdf 08 03 44.5 -3.5
GYA Guiyang 142.79 284 PKP PKPdf 08 03 48.4 -0.4
GYA PP PP 08 07 02.8 +4.9
GYA SS SS 08 25 35.6 -0.8
GYA AMB AMB
comp=Z,130nm,5.5s
GYA LR LR
comp=Z,260nm,20.1s
GYA LR LR
comp=Z,200nm,20.8s
GYA LR LR
comp=Z,250nm,21.0s
JURR Jurilovca 142.96 45 ⇓P PKPdf 08 03 40.1 -8.2
KMBO Kilima Mbogo 143.30 127 PKP PKPdf 08 03 48.9 -1.4
comp=Z,8.0nm,0.9s,baz=203,slow=1.1,SNR=12
KMBO Kilima Mbogo 143.30 127 PKPbc 08 03 48.0 +0.7
LZH Lanzhou 144.63 300 ⇑PKP PKPbc 08 03 50.8 +0.2
LZH sPKP 08 03 58.3
LZH SKKS 08 13 56.6
LZH LR LR
comp=Z,400nm,17.9s
LZH LR LR
comp=Z,610nm,18.4s
LZH LR LR
comp=Z,750nm,20.1s
SLVN Son La 144.69 275 IAMs_20 IAMs_20 09 15 19.1
comp=Z,377nm,19.0s
LHMI Lhok Sumawe 145.06 244 PKPbc 08 03 51.8 -0.6
VSR Storozhevoye 145.17 30 ePKIKP PKPbc 08 03 51.2 -0.4
VSR pmax pmax
comp=Z,110nm,1.2s
CD2 Chengdu 145.36 291 ⇑iPKPbc PKPab 08 03 52.9 -0.2
CD2 PP PP 08 07 12.6 -0.5
CD2 AMB AMB
comp=Z,300nm,3.9s
CD2 LR LR
comp=Z,670nm,15.2s
CD2 LR LR
comp=Z,830nm,18.1s

VORD Divnogorie 145.40 30 ePKIKP PKPbc 08 03 52.0 -0.3
VORD pmax pmax
comp=Z,110nm,1.2s
ZAA0 Zalesovo Array 145.96 340 IAMs_20 IAMs_20 09 13 42.3
comp=Z,380nm,20.0s
ZALV Zalesovo Beam 145.96 340 PKPbc PKPbc 08 03 53.4 -0.6
comp=Z,20nm,0.9s,baz=4.2,slow=2.8,SNR=45
ZALV Zalesovo Beam 145.96 340 PKPdf 08 03 52.5 -0.8
SEVA Sevastopol 146.15 43 ⇓P PKPbc 08 03 54.5 -0.4
ARU Arti 146.25 7 PKPbc PKPbc 08 03 54.2 -0.6
comp=Z,9.3nm,0.7s,baz=341,slow=2.3,SNR=62
ARU Arti 146.25 7 PKPdf 08 03 53.7 0.0
ARU Arti 146.25 7 i PKP2 PKPdf 08 03 53.7 0.0
ARU MLR MLR
comp=Z,650nm,22.0s
VRH Novokhopyorsk 146.30 27 ePKP2 PKPbc 08 03 54.6 -0.5
VRH pmax pmax
comp=Z,200nm,1.6s
GTA Gaotai 146.85 307 PKPbc PKPdf 08 03 55.6 +0.1
GTA LR LR
comp=Z,250nm,18.9s
GTA LR LR
comp=Z,370nm,17.9s
ANTO Ankara 147.51 51 PKPbc 08 03 59.4 +0.3
ANTO Ankara 147.51 51 PKP2 PKPbc 08 03 59.4 +0.3
BZK Bozkurt 147.53 47 ⇓P PKPbc 08 03 58.1 -0.8
BRTR Keskin Array B 148.17 51 PKP PKPdf 08 03 57.2 -0.5
comp=Z,22nm,1.1s,baz=220,slow=1.1,SNR=18
BRTR PKPbc PKPbc 08 04 00.8 -0.2
comp=Z,25nm,1.1s,baz=222,slow=1.7,SNR=53
BRTR Keskin Array B 148.17 51 PKPdf 08 03 56.9 -0.8
BRTR PKPbc PKPbc 08 04 00.9 -0.1
ANN Anapa 148.30 40 i PKP2 PKPbc 08 04 00.1 -0.8
ANN pmax pmax
comp=Z,103nm,1.3s
DIKM Dikmen 148.50 47 ⇓P PKPbc 08 04 01.6 +0.1
CM31 Chiang Mai Arr 148.66 268 PKPbc 08 04 03.0 +0.4
CMAR Chiang Mai Arr 148.66 268 PKPbc PKPbc 08 04 03.0 +0.4
comp=Z,30nm,1.0s,baz=90,slow=1.3,SNR=63
CHTO Chiang Mai 148.74 269 IAMs_20 IAMs_20 09 05 31.1
comp=Z,327nm,19.0s
CSS Mathiatis 149.41 60 PKiKP 08 04 04.4 -0.8
BRVK Borovoye 149.84 355 PKPdf 08 03 59.9 +0.1
BRVK PKPbc PKPbc 08 04 04.4 -0.1
BRVK IAMs_20 IAMs_20 09 10 27.9
comp=Z,430nm,21.0s
BRVK Borovoye 149.84 355 i PKHKP PKPdf 08 03 59.6 -0.1
BVAR Borovoye Array 149.87 354 PKP PKPdf 08 03 60.0 +0.2
comp=Z,45nm,1.0s,baz=326,slow=1.5,SNR=82
BVAR PKPbc PKPbc 08 04 04.5 -0.1
comp=Z,23nm,0.7s,baz=350,slow=1.6,SNR=84
BVAR PP PP 08 07 44.3 +6.6
comp=Z,2.4nm,1.1s,baz=15,slow=6.2,SNR=3.7
BVAR Borovoye Array 149.87 354 PKHKP PKPdf 08 04 00.0 +0.2
SOC Sochi 150.34 40 i PKIKP PKPbc 08 04 05.7 -0.3
SOC e 08 07 41.6
SOC ePPP PPP 08 11 02.5
SOC pmax pmax
comp=Z,80nm,1.4s
KURK Kurchatov 150.62 343 PKPdf 08 04 00.3 -0.7
KURK PKPbc PKPbc 08 04 05.6 -0.9
KURK IAMs_20 IAMs_20 09 15 38.4
comp=Z,543nm,20.0s
KURK Kurchatov 150.62 343c i PKIKP PKPdf 08 04 01.1 +0.1
KURK pmax pmax
comp=Z,459nm,1.3s
KURBB Kurchatov Arra 150.73 343 PKP PKPdf 08 04 00.8 -0.4
comp=Z,17nm,1.2s,baz=14,slow=1.7,SNR=26
KURBB PKPbc PKPbc 08 04 05.9 -0.8
comp=Z,67nm,1.1s,baz=21,slow=1.8,SNR=66
KURBB PP PP 08 07 40.9 -1.9
comp=Z,1.4nm,0.4s,baz=17,slow=5.1,SNR=5.5
MMAI Mount Meron Ar 151.53 63 PKPbc PKiKP 08 04 09.9 +0.1
comp=Z,16nm,0.8s,baz=222,slow=1.1,SNR=8.9
EIL Elat 151.69 70 PKP PKPdf 08 04 03.5 +0.1
comp=Z,14nm,1.2s,baz=122,slow=7.9,SNR=6.2
EIL PKPbc PKPbc 08 04 10.3 +0.7
comp=Z,24nm,1.2s,baz=148,slow=1.3,SNR=7.3
KIV Kislovodsk 151.81 37 ⇓P PKiKP 08 04 10.4 +0.4
KIV Kislovodsk 151.81 37 PKPdf PKPdf 08 04 03.6 +0.4
KIV PKiKP 08 04 10.1 +0.1
KIV PKPab 08 04 18.7 +0.2
KIV Kislovodsk 151.81 37 ePKIKP PKPdf 08 04 03.9 +0.7
KIV pmax pmax
comp=Z,63nm,1.1s
AKTO Aktyubinsk 152.01 11 PKP PKPdf 08 04 03.5 +0.4
comp=Z,3.8nm,1.1s,baz=171,slow=3.4,SNR=17
AKTO PKPbc PKPbc 08 04 09.4 -0.3
comp=Z,17nm,1.1s,baz=346,slow=4.3,SNR=21
AKTO Aktyubinsk 152.01 11 PKIKP PKPdf 08 04 03.7 +0.5
KBZ Khabaz 152.08 37 PKP PKPdf 08 04 03.9 +0.5
comp=Z,4.4nm,1.0s,baz=256,slow=1.4,SNR=4.7
KBZ PKPbc PKiKP 08 04 10.1 -0.3
comp=Z,18nm,1.1s,baz=281,slow=2.6,SNR=14
WMQ Urumqi 152.50 324 ePKPbc PKPdf 08 04 04.4 +0.2
WMQ LR LR
comp=Z,520nm,29.2s
WMQ LR LR
comp=Z,870nm,28.8s
WMQ LR LR
comp=Z,230nm,29.0s
NCK Nalchik 152.61 37c i PKIKP PKiKP 08 04 12.6 +1.0
BCA Borcka 152.72 42 ⇓P PKiKP 08 04 12.2 +0.3
MK31 Makanchi Array 152.82 335 i PKIKP PKPdf 08 04 04.2 -0.3
MKAR Makanchi Array 152.82 335 PKP PKPdf 08 04 03.8 -0.7
comp=Z,12nm,1.1s,baz=217,slow=1.7,SNR=29
MKAR PKPbc PKPbc 08 04 11.0 -0.7
comp=Z,27nm,0.9s,baz=39,slow=2.5,SNR=52
MAKZ Makanchi 152.93 335 PKPdf 08 04 04.4 -0.3
MAKZ PKPbc 08 04 10.8 -1.1
MAKZ IAMs_20 IAMs_20 09 05 35.7
comp=Z,556nm,22.0s
MAKZ Makanchi 152.93 335 PKIKP PKPbc 08 04 10.8 -1.1
ASF Jabal al Asfar 152.94 64 PKP PKPdf 08 04 06.4 +1.1
comp=Z,13nm,1.2s,baz=110,slow=2.7,SNR=7.8
ZEI Tsey 153.24 37 i PKIKP PKPdf 08 04 03.6 -1.9
ZEI pmax pmax
comp=Z,16nm,1.3s
AB31 Akbulak array 153.45 9 i PKIKP PKPdf 08 04 05.7 +0.4
ABKAR Akbulak array 153.45 9 PKPdf 08 04 05.5 +0.2
AKH Akhalkalaki 153.88 40 ⇓P PKPdf 08 04 08.2 +1.8
AKH Akhalkalaki 153.88 40 PKIKP PKPdf 08 04 08.2 +1.8
MAK Makhachkala 155.04 33 ePKIKP PKPdf 08 04 01.5 -6.2
MAK e 08 08 03.0
MAK pmax pmax
comp=Z,368nm,1.4s
GNI Garni 155.40 41 PKP PKPdf 08 04 09.4 +0.8
comp=Z,3.8nm,0.4s,baz=144,slow=13,SNR=4.5
GNI PKPab PKPab 08 04 34.9 +1.0
comp=Z,24nm,1.1s,baz=359,slow=5.4,SNR=5.6
GNI Garni 155.40 41 PKPdf PKPdf 08 04 09.2 +0.7
GNI PKPab 08 04 34.3 +0.4
GNI Garni 155.40 41 PKIKP PKPdf 08 04 09.2 +0.7
GNI 08 04 34.3
SHL Shillong 156.06 281 PKPdf PKPdf 08 04 09.0 -0.8
SHL PKPab 08 04 36.0 -1.3
SHL IAMs_20 IAMs_20 09 25 24.7
comp=Z,510nm,21.0s
SHL Shillong 156.06 281 PKP2 PKPab 08 04 36.0 -1.3
SHL 09 04 09.0
AKT Akhty 156.22 35 ePKIKP PKPdf 08 04 10.5 +1.0
AKT pmax pmax
comp=Z,20nm,1.0s
LSA Lhasa 156.32 292 PKP PKPdf 08 04 10.8 +0.3
USP Ospenovka 158.57 342 P PKPdf 08 04 12.8 +0.5
SNR=7.4
USP Ospenovka 158.57 342 P PKPab 08 04 46.9 -0.4
SNR=6.9
KDJ Kajisay 158.71 336 IAMs_20 IAMs_20 09 11 54.3
comp=Z,545nm,22.0s
CHMS Chumysh 158.75 342 P PKPdf 08 04 13.4 +0.8
SNR=5.3
CHMS Chumysh 158.75 342 P PKPab 08 04 47.7 -0.4
SNR=7.7
BOOM Boomskoye usch158.84 339 PKPdf PKPdf 08 04 12.8 -0.1
BOOM PKPab 08 04 47.9 -0.8
BOOM IAMs_20 IAMs_20 09 14 01.2
comp=Z,597nm,20.0s
BOOM Boomskoye usch158.84 339 PKIKP PKPdf 08 04 12.8 -0.1
BOOM 08 04 47.9
ULHL Ulahol 158.95 338 P PKPdf 08 04 14.3 +1.3
SNR=5.3
FRU1 Bishkek 158.96 342 IAMs_20 IAMs_20 09 20 10.2
comp=Z,538nm,18.0s
KBK Karagaybulak 159.00 341 P PKPdf 08 04 14.0 +1.0
SNR=6.8
KBK Karagaybulak 159.00 341 P PKPab 08 04 48.8 -0.5
SNR=6.1
AAK Ala-Archa 159.16 342 PKP PKPdf 08 04 13.3 +0.1
comp=Z,3.2nm,0.9s,baz=136,slow=1.2,SNR=9.2
AAK PKPab PKPab 08 04 49.7 -0.3
comp=Z,12nm,1.1s,baz=47,slow=3.6,SNR=9.2
AAK Ala-Archa 159.16 342 P PKPab 08 04 49.5 -0.5
SNR=7.5
AAK Ala-Archa 159.16 342 PKPdf 08 04 13.5 +0.2
AAK PKPab 08 04 49.1 -0.9
AAK Ala-Archa 159.16 342 IAMs_20 IAMs_20 09 27 50.5
comp=Z,524nm,19.0s
EKS2 Erkin-Say 159.34 343 P PKPdf 08 04 14.2 +0.8
SNR=5.6
KZA Kyzart 159.43 340 P PKPdf 08 04 14.9 +1.1
SNR=5.9
UCH Uchtor 159.53 341 P PKPdf 08 04 15.5 +1.4
SNR=5.9
KK31 Karatay Array 159.62 350 PKPab PKPab 08 04 51.0 -0.7
KK31 Karatay Array 159.62 350 i PKIKP PKPdf 08 04 12.8 -0.7
KKAR Karatay Array 159.62 350 PKPdf 08 04 12.9 -0.6
KKAR PKPab 08 04 50.4 -1.4
KKAR Karatay Array 159.62 350 PKP2 PKPab 08 04 50.4 -1.4
KKAR 09 04 13.0
AML Almayashu 159.85 343 P PKPdf 08 04 15.5 +1.2
SNR=5.2
AML Almayashu 159.85 343 P PKPab 08 04 53.3 0.0
SNR=5.4
RAYN Ar Rayn 161.40 85 PKPdf 08 04 16.0 -0.1
RAYN Ar Rayn 161.40 85 PKIKP PKPdf 08 04 16.0 -0.1
KSH Kashi 161.43 334 PKP PKPdf 08 04 17.0 +1.2
KSH PKS PKSdf 08 07 50.3 +1.2
KSH PP PP 08 08 47.4 +4.8
KSH SKS SKSdf 08 11 14.3 -6.8
KSH SKKS SKKSac 08 15 35.9 +3.9
KSH AMB AMB
comp=Z,480nm,7.5s
KSH LR LR
comp=Z,110nm,9.0s
KSH LR LR
comp=Z,210nm,8.1s
KSH LR LR
comp=Z,380nm,12.2s
GEYT Alibeck 163.79 22 PKP PKPdf 08 04 18.7 +0.6
comp=Z,16nm,1.2s,baz=260,slow=4.4,SNR=19
GEYT Alibeck 163.79 22 PKPdf 08 04 18.5 +0.5
NIL Nilore 167.55 330 PKPdf 08 04 21.0 -0.3
NIL PKPab 08 05 25.9 -1.0
NIL Nilore 167.55 330 PKIKP PKPdf 08 04 21.0 -0.3
NIL 08 05 25.9

IDC 14 08:00:08.9±3.3, 52°.27N×35°.56E, h0km, mb1 3.2/3, mb1mx3.0/52, mbtmp3.1/3, ML2.9/3, Error ellipse: s-maj=35.0km s-min=13.2km az=117.0
VLA 14 08:00:08.0, 52°.31N×35°.42E, M2.5, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)
ISC 14 08:00:10.5±1.2, 52°.59N±0°.09×35°.03E±0°.08, h0km, n6, σ1§16/7, Baltic States-Belarus-Northwestern Russia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VORR Voronezh 2.74 108 P Sb 08 01 34.0 -0.3
VORR pmax pmax
comp=Z,350nm,2.0s
AKASG Malin Array Be 4.08 245 Pn Pn 08 01 13.7 -0.3
comp=Z,0.9nm,0.3s,baz=56,slow=11,SNR=4.3
AKASG Pg Pb 08 01 22.8 -0.3
comp=Z,1.4nm,0.3s,baz=60,slow=16,SNR=5.1
AKASG Sn Sn 08 02 03.3 +0.8
comp=Z,1.4nm,0.3s,baz=60,slow=26,SNR=3.4
AKASG Lg Lg 08 02 24.7
comp=Z,2.8nm,0.3s,baz=70,slow=29,SNR=5.9
I43RU DUBNA INFRASON 4.33 16 i 08 30 40.0
baz=193,slow=308,SNR=0.9
FINES FINESS Array B 10.12 335 Pn Pn 08 02 36.9 +0.1
comp=Z,0.1nm,0.3s,baz=154,slow=13,SNR=3.4
FINES Sn Sn 08 04 29.8 -1.0
comp=Z,0.2nm,0.3s,baz=143,slow=21,SNR=3.7
I31KZ AKTYUBINSK INF 14.48 90 i 09 32 40.0
baz=285,slow=314,SNR=3.6
ARCES ARCESS Array B 17.57 349 P Pn 08 04 18.3 +1.8
comp=Z,0.2nm,0.3s,baz=157,slow=10,SNR=6.0

ROM 14 08:07:11.1±0.2, 39°.84N±0°.01×15°.99E±0°.03, h254km±1km, ML3.6/30, Error ellipse: s-maj=2.8km s-min=0.5km az=88.0
IDC 14 08:07:12.4±1.4, 39°.94N×15°.90E, h257km±16km, mb3.4/9, mb1 3.3/16, mb1mx3.0/64, mbtmp3.9/16, Error ellipse: s-maj=20.4km s-min=10.2km az=113.0
NEIC 14 08:07:12.1±1.8, 39°.87N±0°.07×16°.00E±0°.09, h246km±8km, mb4.1/12, Error ellipse: s-maj=10.8km s-min=9.3km az=132.0
ISC 14 08:07:11.7±0.6, 39°.81N±0°.06×16°.00E±0°.06, h246km±5km, n112, σ1§17/121, mb4.0/14, 8C-13D, Southern Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MMN Mormanno 0.08 355 P Pn 08 07 44.5 +1.2
T0702 Acquaformosa (0.11 145 P Pn 08 07 44.5 +0.9
T0702 S S 08 08 08.5 0.0
T0702 AML AML
comp=E,797μm,0.6s
T0702 AML AML
comp=N,778μm,1.1s
T0702 AML AML
comp=E,798μm,0.6s
T0702 AML AML
comp=N,778μm,1.1s
T0701 Viggianello (P 0.19 27 P Pn 08 07 45.0 +1.5
CUC Castrocucco 0.23 322 ⇑P Pn 08 07 44.4 +0.8
CUC S S 08 08 09.4 +0.8
SALB San Lorenzo Be 0.27 77 ⇓P Pn 08 07 44.5 +0.8
SALB S S 08 08 09.0 +0.1
SALB AML AML
comp=E,555μm,0.7s
SALB AML AML
comp=N,453μm,0.3s
SALB AML AML
comp=E,556μm,0.7s
CET2 Cetraro 0.29 187 ⇑P Pn 08 07 44.5 +0.8
CET2 S S 08 08 08.8 -0.1
CET2 AML AML
comp=E,2755μm,1.0s
CET2 AML AML
comp=N,4335μm,0.7s
CET2 AML AML
comp=E,2760μm,1.0s
CET2 AML AML
comp=N,4340μm,0.7s
SIRI Monte Sirino - 0.38 345 P Pn 08 07 44.6 +0.7
SIRI AML AML
comp=E,304μm,0.9s
SIRI AML AML
comp=N,314μm,1.0s
SIRI AML AML
comp=E,314μm,0.9s
SIRI AML AML
comp=N,320μm,1.0s
SIRI AML AML
comp=N,314μm,1.0s
SIRI AML AML
comp=N,320μm,1.0s
SIRI AML AML
comp=E,308μm,1.0s
SCHR S. Chirico Rap 0.39 9 P Pn 08 07 45.0 +1.1
ORI Oriolo Calabro 0.43 54 P Pn 08 07 45.4 +1.5
ORI S S 08 08 08.6 -0.6
MGR Morigerati 0.47 313 ⇓P Pn 08 07 44.8 +0.8
MGR AML AML
comp=E,283μm,0.8s
MGR AML AML
comp=N,195μm,0.6s
MGR AML AML
comp=E,284μm,0.8s
MTSN Montesano sull 0.49 337 P Pn 08 07 44.9 +0.7
MTSN AML AML
comp=E,184μm,0.5s
MTSN AML AML
comp=N,222μm,0.5s
MTSN AML AML
comp=E,185μm,0.5s
MCEL Monticello 0.53 343 P Pn 08 07 45.6 +1.4
MCEL AML AML
comp=E,462μm,1.0s
MCEL AML AML
comp=N,501μm,1.1s
MCEL AML AML
comp=N,508μm,1.1s
MCEL AML AML
comp=E,460μm,1.0s
MCEL AML AML
comp=N,502μm,1.1s
MCEL AML AML
comp=E,461μm,1.0s
CELI Celico 0.57 136 ⇑P Pn 08 07 46.5 +1.9
CELI S S 08 08 10.8 +0.5
CELI AML AML
comp=E,1035μm,0.5s
CELI AML AML
comp=N,1440μm,0.7s
CELI AML AML
comp=N,3545μm,0.7s
CELI AML AML
comp=E,2515μm,0.5s
CAR1 CAROLEI 0.58 164 P Pn 08 07 45.4 +0.8
CAR1 S S 08 08 09.8 -0.5
CAR1 AML AML
comp=N,1710μm,0.8s
CAR1 AML AML
comp=E,1645μm,1.0s
CAR1 AML AML
comp=N,1655μm,0.8s
CAR1 AML AML
comp=N,1705μm,0.8s
CAR1 AML AML
comp=E,1825μm,0.3s
PIPA Pietrapaola 0.71 117 P Pn 08 07 46.4 +1.5
PIPA AML AML
comp=E,1012μm,0.5s
PIPA AML AML
comp=N,900μm,1.6s
PIPA AML AML
comp=E,1006μm,0.5s
PIPA AML AML
comp=E,1013μm,0.5s
PIPA AML AML
comp=N,900μm,1.6s
PIPA AML AML
comp=N,931μm,0.3s
PIPA AML AML
comp=E,1014μm,0.5s
PIPA AML AML
comp=N,900μm,1.6s
PIPA AML AML
comp=E,1005μm,0.5s
CMPR Campora 0.73 314 ⇓P Pn 08 07 45.9 +0.9
CMPR AML AML
comp=N,198μm,0.7s
CMPR AML AML
comp=N,198μm,0.7s
CMPR AML AML
comp=E,230μm,0.8s
PZUN Potenza 0.84 350 AML AML
comp=N,211μm,1.6s
PZUN AML AML
comp=E,211μm,1.3s
MIGL Miglionico 0.86 23 P Pn 08 07 46.1 +0.5
CDRU Civita di Ruta 0.86 322 P Pn 08 07 46.6 +1.0
CDRU AML AML
comp=E,154μm,1.6s
CDRU AML AML
comp=N,104μm,1.5s
CDRU AML AML
comp=E,154μm,1.6s
TIP Timpagrande 0.86 137 ⇑P Pn 08 07 47.2 +1.4
TIP AML AML
comp=E,646μm,0.4s
TIP AML AML
comp=N,729μm,0.7s
TIP AML AML
comp=N,582μm,0.7s
TIP AML AML
comp=E,747μm,0.4s
TIP AML AML
comp=E,645μm,0.4s
TIP Timpagrande 0.86 137 Pn Pn 08 07 47.0 +1.3
TIP S S 08 08 07.2 -5.1
SERS Sersale 0.94 145 ⇑P Pn 08 07 47.6 +1.4
SERS AML AML
comp=E,1165μm,0.6s
SERS AML AML
comp=N,1130μm,0.9s
SERS AML AML
comp=N,1260μm,0.7s
SERS AML AML
comp=E,972μm,0.9s
ACER Acerenza 0.97 357 ⇓P Pn 08 07 46.4 +0.3
ACER AML AML
comp=E,237μm,1.3s
ACER AML AML
comp=N,438μm,0.8s
ACER AML AML
comp=E,250μm,1.3s
ACER AML AML
comp=N,445μm,0.9s
MATE Matera 0.99 33 ⇓P Pn 08 07 46.7 +0.6
MATE S S 08 08 12.8 -0.5
MATE AML AML
comp=E,316μm,1.0s
MATE AML AML
comp=N,568μm,0.6s
MRLC Muro Lucano 1.02 338 ⇓P Pn 08 07 47.1 +0.7
GRI Girifalco 1.04 162 ⇑P Pn 08 07 48.3 +1.7
GRI AML AML
comp=E,1875μm,1.4s
GRI AML AML
comp=N,1740μm,0.4s
GRI AML AML
comp=N,1745μm,0.4s
GRI AML AML
comp=E,1870μm,1.4s
PALZ Palazzo San Ge 1.13 358 ⇓P Pn 08 07 47.4 +0.4
MCRV Calabritti - M 1.16 327 ⇓P Pn 08 07 48.4 +1.1
AMUR Altamura 1.19 23 ⇓P Pn 08 07 48.0 +0.6
AMUR AML AML
comp=E,199μm,1.3s
AMUR AML AML
comp=N,239μm,1.4s
JOPP Joppolo 1.21 184 ⇑P Pn 08 07 48.3 +0.6
JOPP AML AML
comp=N,892μm,1.3s
JOPP AML AML
comp=E,1011μm,0.5s
MRVN Minervino Murg 1.25 7 ⇓P Pn 08 07 48.3 +0.5
MRVN AML AML
comp=N,172μm,0.4s
MRVN AML AML
comp=E,170μm,1.3s
SNAL S. Angelo Dei 1.26 332 P Pn 08 07 49.0 +1.0
NOCI Noci 1.27 40 ⇓P Pn 08 07 48.4 +0.5
NOCI AML AML
comp=E,240μm,1.6s
NOCI AML AML
comp=N,385μm,0.4s
CAFE Carife 1.34 335 ⇓P Pn 08 07 49.9 +1.4
PLAC Placanica 1.41 166 P Pn 08 07 50.1 +1.1
PLAC AML AML
comp=E,340μm,0.5s
PLAC AML AML
comp=N,321μm,1.6s
PLAC AML AML
comp=E,1540μm,1.5s
PLAC AML AML
comp=N,1420μm,1.6s
PLAC AML AML
comp=E,1505μm,1.6s
PLAC AML AML
comp=N,1535μm,1.5s
CEL Celeste 1.56 183 P Pn 08 07 50.6 +0.5
CEL AML AML
comp=E,414μm,1.2s
CEL AML AML
comp=N,663μm,1.0s
CEL AML AML
comp=E,500μm,1.2s
CEL AML AML
comp=N,836μm,1.0s

CEL				AML	AML		
	comp=E,414μm,1.2s						
CEL				AML	AML		
	comp=N,662μm,1.0s						
CEL	Celeste	1.56	183	Pn	Pn	08 07 49.9	-0.3
CEL				S	S	08 08 19.3	-1.1
MSRU	Castanea	1.59	194	P	Pn	08 07 50.8	+0.4
MSRU				AML	AML		
	comp=N,622μm,0.4s						
MSRU				AML	AML		
	comp=E,535μm,0.4s						
MPNC	Port Mandanici	1.74	197	P	Pn	08 07 52.2	+0.5
MPNC				AML	AML		
	comp=N,452μm,1.1s						
MPNC				AML	AML		
	comp=E,500μm,1.4s						
MTTG	Motta San Giov	1.82	188	P	Pn	08 07 53.3	+1.0
MTTG				AML	AML		
	comp=E,420μm,1.5s						
MTTG				AML	AML		
	comp=N,452μm,1.4s						
MCSR	Castroreale	1.84	199	P	Pn	08 07 53.3	+0.7
MPAZ	Palizzi	1.86	180	P	Pn	08 07 53.7	+1.0
MPAZ				AML	AML		
	comp=N,737μm,0.9s						
MPAZ				AML	AML		
	comp=E,557μm,0.9s						
NOV	Novara	1.91	201	P	Pn	08 07 54.3	+1.2
SCTE	Santa Cesarea	1.92	81	⇓P	Pn	08 07 53.9	+0.9
SCTE				AML	AML		
	comp=E,375μm,0.6s						
SCTE				AML	AML		
	comp=N,390μm,0.9s						
SCTE	Santa Cesarea	1.92	81	Pn	Pn	08 07 53.0	0.0
SCTE				S	S	08 08 27.0	+1.5
SGRT	San Giovanni R	1.95	354	Pn	Pn	08 07 53.0	-0.4
MUCR	Ucria	1.98	207	⇑P	Pn	08 07 55.1	+1.3
MUCR				AML	AML		
	comp=E,108μm,1.6s						
MUCR				AML	AML		
	comp=N,133μm,1.6s						
GALF	Gagliano Caste	2.38	209	AML	AML		
	comp=E,236μm,0.4s						
GALF				AML	AML		
	comp=N,262μm,0.4s						
HLNI	Lentini	2.62	200	P	Pn	08 08 00.8	+0.9
VAE	Valguarnera	2.64	209	P	Pn	08 08 01.8	+1.5
	comp=N,1.3nm,0.3s,baz=4.6,slow=5.9,SNR=6.5						
HVZN	Vizzini	2.82	201	P	Pn	08 08 03.9	+1.8
HVZN				AML	AML		
	comp=E,893μm,0.4s						
HVZN				AML	AML		
	comp=N,966μm,1.2s						
CORL	Corleone	2.85	229	Pn	Pn	08 08 04.6	+2.2
CLTB	Caltabellotta	3.12	225	Pn	Pn	08 08 07.5	+2.2
TIR	Tirane	3.32	61	Pn	Pn	08 08 08.2	+0.8
PDG	Podgorica	3.59	42	Pn	Pn	08 08 10.6	+0.2
OHR	Ohrid	3.88	69	iP	Pn	08 08 15.7	+1.7
MURB	Monte Urbino	4.32	324	Pn	Pn	08 08 20.1	+1.0
SKO	Skopje	4.65	61	iP	Pn	08 08 24.1	+1.1
AGG	Agios Georgios	4.97	97	Pn	Pn	08 08 28.7	+1.8
LIT	Litokhoron	5.00	85	Pn	Pn	08 08 27.9	+0.7
STIP	Stip	5.06	66	iP	Pn	08 08 30.9	+2.9
VAY	Valandovo	5.22	71	iP	Pn	08 08 30.7	+0.6
ITM	Ithomi	5.34	118	Pn	Pn	08 08 32.4	+0.8
VTS	Vitosha	6.13	60	Pn	Pn	08 08 41.7	+0.2
STAL	STALIGIAL	6.88	341	Pn	Pn	08 08 50.2	-0.5
SOKA	Soboth	6.90	354	ePn	Pn	08 08 50.9	0.0
	comp=N,0.7nm,0.3s						
CTI	Castel Tesino	7.00	334	Pn	Pn	08 08 51.4	-0.9
ABTA	Abfaltersbach	7.38	341	iPn	Pn	08 08 57.5	+0.4
	comp=N,12nm,0.5s						
KBA	Koelnbreinsper	7.51	346	Pn	Pn	08 08 57.7	-1.1
	comp=N,0.4nm,0.3s						
ALN	Alexandroupoli	7.75	79	Pn	Pn	08 09 02.2	+0.5
FUORN	Ofenpass-Fuorn	7.99	330	Pn	Pn	08 09 05.4	+0.5
MOA	Molln	8.13	352	iPn	Pn	08 09 07.3	+0.8
	comp=N,10nm,1.4s						
FETA	Feichten	8.16	334	iPn	Pn	08 09 05.5	-1.5
	comp=N,7.8nm,0.9s						
WATA	Walderalm	8.17	338	iPn	Pn	08 09 07.0	-0.1
	comp=N,3.1nm,0.3s						
DAVOX	Davos/Dischmat	8.27	329	P	Pn	08 09 08.8	+0.3
	comp=N,0.6nm,0.3s,baz=160,slow=18,SNR=4.3						
SENIN	Lac Senin/Sane	9.13	319	Pn	Pn	08 09 20.0	+0.7
GERES	GERESS Array B	9.18	350	P	Pn	08 09 19.2	-0.6
	comp=N,0.2nm,0.3s,baz=162,slow=14,SNR=9.8						
GERES	GERESS Array B	9.18	350	Pn	Pn	08 09 19.4	-0.5
VRAC	Vranov	9.50	2	Pn	Pn	08 09 24.2	+0.3
	comp=N,0.5nm,0.3s,baz=165,slow=11,SNR=3.7						
ECH	Echery	10.53	326	Pn	Pn	08 09 36.8	-0.1
CLL	Collm	11.68	351	e(P)	P	08 09 56.0	+1.2
AKASG	Malin Array Be	14.30	36	P	Pn	08 10 22.7	-0.7
	comp=N,1.5nm,0.3s,baz=228,slow=10.0,SNR=7.4						
AKBB	Malin Array Si	14.30	36	P	P	08 10 24.8	+1.0
ESDC	Sonseca Array	15.36	276	P	P	08 10 36.1	+0.4
	comp=N,0.3nm,0.3s,baz=79,slow=11,SNR=2.9						
MDT	Midelt	18.00	254	P	P	08 11 04.8	+0.2
	comp=N,0.1nm,0.3s,baz=70,slow=8.3,SNR=3.1						
HFS	Hagfors	20.39	357	P	P	08 11 28.2	-1.7
	comp=N,3.2nm,0.4s,baz=166,slow=10,SNR=23						
NC602	NORSAR Array S	21.13	354	P	P	08 11 35.1	-2.3
NC602				IAmb	IAmb	08 11 38.0	
	comp=Z,5.0nm,0.8s						
NB2	NORSAR Subarra	21.46	354	P	P	08 11 39.0	-1.7
	comp=Z,1.5nm,0.5s,baz=165,slow=10						
NOA	NORSAR Array B	21.46	354	P	P	08 11 38.3	-2.4
	comp=Z,0.5nm,0.6s,baz=165,slow=10,SNR=4.6						
NBO00	NORSAR Array S	21.49	353	P	P	08 11 40.3	-0.7
NC405	NORSAR Array S	21.49	354	P	P	08 11 39.3	-1.6
NC405				IAmb	IAmb	08 11 45.9	
	comp=Z,8.5nm,1.1s						
NC303	NORSAR Array S	21.63	354	P	P	08 11 40.6	-1.6
NC204	NORSAR Array S	21.73	353	P	P	08 11 43.3	+0.1
FINES	FINESS Array B	22.53	13	P	P	08 11 48.9	-1.5
	comp=Z,2.0nm,0.4s,baz=185,slow=8.1,SNR=16						
FINES	FINESS Array B	22.53	13	P	P	08 11 48.7	-1.7
FIA1	FINESS Array S	22.53	13	P	P	08 11 49.5	-0.9
FIA1				IAmb	IAmb	08 11 58.3	
	comp=Z,23nm,1.4s						
TOA0	Torodi Ar. Sit	29.40	209	P	P	08 12 52.7	+0.3
TOA0				IAmb	IAmb	08 12 53.6	
	comp=Z,7.1nm,1.4s						
TORD	Torodi Ar. Bea	29.40	209	P	P	08 12 53.1	+0.7
	comp=Z,2.1nm,0.5s,baz=18,slow=9.1,SNR=20						
TORD	Torodi Ar. Bea	29.40	209	P	P	08 12 52.5	0.0
ARCES	ARCESS Array B	30.21	7	P	P	08 12 57.2	-1.8
	comp=Z,0.5nm,0.4s,baz=188,slow=11,SNR=6.8						
DBIC	Dimbokro	37.95	215	P	P	08 14 05.7	-0.2
	comp=Z,1.8nm,0.3s,baz=15,slow=10,SNR=6.0						
DBIC	Dimbokro	37.95	215	P	P	08 14 06.3	+0.4
DBIC				IAmb	IAmb	08 14 22.9	
	comp=Z,3.6nm,1.0s						
ZALV	Zalesovo Beam	47.24	49	P	P	08 15 19.6	-0.3
	comp=Z,0.6nm,0.3s,baz=283,slow=8.4,SNR=2.4						
ZALV	Zalesovo Beam	47.24	49	P	P	08 15 19.8	-0.2
MK31	Makanchi Array	47.45	59	P	P	08 15 21.9	+0.1
MKAR	Makanchi Array	47.45	59	P	P	08 15 21.8	0.0
	comp=Z,0.7nm,0.4s,baz=283,slow=7.1,SNR=24						
MKAR	Makanchi Array	47.45	59	P	P	08 15 21.9	+0.2
SCHQ	Schefferville	54.85	315	P	P	08 16 14.8	-1.5
	comp=Z,1.9nm,1.0s,baz=65,slow=20,SNR=2.7						
SCHQ	Schefferville	54.85	315	P	P	08 16 15.9	-0.5
G65A	Princeton	59.20	305	P	P	08 16 46.6	-0.3
DAWY	Dawson	74.64	349	P	P	08 18 23.8	+0.1
DAWY				IAmb	IAmb	08 18 40.9	
	comp=Z,4.3nm,1.4s						
ANM	Nome	75.95	1	P	P	08 18 33.1	+2.1
ANM				IAmb	IAmb	08 18 41.3	
	comp=Z,3.0nm,1.2s						

IDC 14 08:09:16.2±0.7,57.°09S×6.°00W,h0km,mb4.5/7,mb1 4.6/8,mb1mx4.2/30,mbtmp4.5/8,ML4.5/1,MS4.2/10,Ms1 4.2/10,ms1mx3.8/28,Error ellipse: s-maj=31.4km s-min=19.9km az=68.0

NEIC 14 08:09:17.8±1.4,57.°1S±0.°1×6.°0W±0.°3,h10km±1km,mb4.8/9,Error ellipse: s-maj=24.5km s-min=21.0km az=241.0

GCMT 14 08:09:19.8±0.2,57.°33S±0.°02×6.°09W±0.°02,h13km,MW5.0/105,Moment Tensor Solution. s45,c53; s105,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-4.22±.20; Mθθ0.47±.14; Mφφ3.75±.14; Mrθ-0.21±.42; Mrφ1.32±.09; Mθφ-0.98±.31; Best double couple: Mo4.33500×10^{16} NP1:φs201.00000°,δ38.00000°,λ-87.00000°. NP2:φs18.00000°,δ52.00000°,λ-92.00000°. Principal axes: T 4.3310, Plg7.0000°, Azm109.0000°; N 0.0100, Plg2.0000°, Azm19.0000°; P -4.3400, Plg83.0000°, Azm275.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 14 08:09:17.7±0.6,57.°05S±0.°10×5.°9W±0.°1,h10km,n49,σ0.°72/44,mb4.7/10,MS4.3/10,2C,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.69	183	P	Pn	08 12 32.2	+0.7
VNA2	Neumayer--Watz	13.94	182	P	Pn	08 12 35.2	+0.1
	baz=356,slow=14						
VNA3	Neumayer Olymp	14.34	185	P	Pn	08 12 40.8	+0.3
SNAA	Sanae	14.73	176	P	Pn	08 12 44.9	-0.9
SNAA	Sanae	14.73	176	Pn	Pn	08 12 44.7	-1.1
	2.2nm,0.3s,baz=350,slow=15,SNR=68						
SNAA				Sn	Sn	08 15 12.0	-17
	0.2nm,0.3s,baz=37,slow=20,SNR=2.5						
SNAA	Sanae	14.73	176		Pn	08 12 45.2	-0.6
HOPE	Hope Point	17.42	266	P	P	08 13 23.0	+1.3
SYO	Syowa Base	23.17	139	⇑epP	pP	08 14 26.4	+0.6
SYO	Syowa Base	23.17	139	⇑ePnPn	P	08 14 43.0	+19
PMSA	Palmer Station	28.34	230	LR	LR	08 23 08.0	
	comp=Z,236nm,20.8s,baz=24,slow=29						
QSPA	South Pole Qui	33.19	180	P	P	08 15 54.4	+0.1
	8.7nm,0.7s,baz=229,slow=3.5,SNR=48						
QSPA				PcP	PcP	08 18 35.9	-0.6
	3.6nm,0.7s,baz=257,slow=1.9,SNR=7.5						
QSPA	South Pole Qui	33.19	180	P	P	08 15 54.3	+0.1
QSPA				IAmb	IAmb	08 15 55.7	
	comp=Z,13nm,0.8s						
QSPA					PcP	08 18 36.4	-0.1
USHA	Ushuaia	34.03	247	LR	LR	08 26 24.2	
	comp=Z,904nm,20.6s,baz=111,slow=30						
VNDA	Vanda	45.47	176	P	P	08 17 36.4	+0.2
	comp=Z,8.0nm,0.8s,baz=206,slow=7.0,SNR=6.9						
VNDA				LR	LR	08 35 33.4	
	comp=Z,164nm,21.9s,baz=180,slow=35						
VNDA	Vanda	45.47	176	P	P	08 17 37.6	+1.4
VNDA				IAmb	IAmb	08 17 42.2	
	comp=Z,17nm,1.1s						
CPUP	Villa Florida	47.55	288	LR	LR	08 35 05.5	
	comp=Z,124nm,21.8s,baz=160,slow=33						
CFA	Coronel Fontan	49.23	274	P	P	08 18 04.7	-1.5
	comp=Z,7.3nm,1.0s,baz=146,slow=9.1,SNR=7.0						
GO04	Tololo Observa	51.74	272	P	P	08 18 24.6	-0.7
GO04				IAmb	IAmb	08 18 32.4	
	comp=Z,14nm,0.9s						
BDFB	Brasilia	52.07	305	LR	LR	08 35 35.8	
	comp=Z,351nm,21.8s,baz=140,slow=30						
GO02	Mina Guanaco	55.02	277	P	P	08 18 48.5	-1.0
GO02				IAmb	IAmb	08 18 57.7	
	comp=Z,10nm,0.9s						
LPAZ	La Paz	61.47	285	P	P	08 19 35.3	+0.2
	comp=Z,3.2nm,0.7s,baz=177,slow=4.7,SNR=8.3						
LPAZ				LR	LR	08 43 36.6	
	comp=Z,187nm,21.7s,baz=104,slow=34						
LPAZ	La Paz	61.47	285	P	P	08 19 34.7	-0.4
TOA0	Torodi Ar. Sit	70.22	8	P	P	08 20 31.5	+0.9
TOA0				IAmb	IAmb	08 20 32.4	
	comp=Z,4.8nm,1.1s						
TORD	Torodi Ar. Bea	70.22	8	P	P	08 20 31.6	+1.0
	comp=Z,14nm,1.4s,baz=193,slow=3.5,SNR=8.8						
ROSC	El Rosal	82.55	291	LR	LR	08 57 52.6	
	comp=Z,168nm,20.1s,baz=119,slow=35						
BBOO	Buckleboo	84.87	149	P	P	08 21 52.7	+0.3
STKA	Stephens Creek	87.23	153	P	P	08 22 04.3	+0.1
	comp=Z,2.5nm,0.8s,baz=209,slow=10,SNR=4.3						
STKA				LR	LR	08 59 16.9	
	comp=Z,99nm,18.9s,baz=227,slow=34						
STKA	Stephens Creek	87.23	153	P	P	08 22 04.7	+0.6
ASAR	Alice Springs	92.76	144	P	P	08 22 29.7	-0.5
	comp=Z,0.6nm,0.6s,baz=194,slow=4.7,SNR=9.9						
ASAR				LR	LR	09 01 25.3	
	comp=Z,117nm,18.1s,baz=189,slow=34						
FITZ	Fitzroy Crossi	94.92	134	LR	LR	09 02 49.1	
	comp=Z,116nm,18.1s,baz=185,slow=34						
TXAR	Lajitas Array	118.23	281	PKP	PKPdf	08 28 04.3	-0.3
	comp=Z,0.6nm,0.9s,baz=164,slow=3.7,SNR=4.4						
ABKAR	Akbulak array	119.08	43	PKPdf	PKiKP	08 28 06.3	+0.8
FINES	FINESS Array B	120.78	17	PKP	PKPdf	08 28 08.5	+0.2
	comp=Z,1.1nm,0.8s,baz=218,slow=8.8,SNR=2.5						
FINES	FINESS Array B	120.78	17		PKiKP	08 28 08.7	+0.2
X16A	Lo Mia Camp, P	126.34	279		PKPdf	08 28 19.0	-1.2
MKAR	Makanchi Array	126.61	59	PKP	PKPdf	08 28 18.8	-1.3
	comp=Z,0.3nm,0.8s,baz=204,slow=3.2,SNR=3.3						
MKAR	Makanchi Array	126.61	59		PKPdf	08 28 20.0	-0.1
TPNV	Topopah Spring	130.82	277		PKPdf	08 28 29.1	+0.4
PDAR	Pinedale Array	131.44	287	PKP	PKPdf	08 28 28.9	-0.8
	comp=Z,0.7nm,1.0s,baz=106,slow=3.3,SNR=4.6						
PDAR	Pinedale Array	131.44	287		PKPdf	08 28 28.6	-1.1
FXWY	Fox Creek	132.82	287		PKiKP	08 28 33.2	-0.3
NVAR	Mina Array Bea	133.02	277	PKP	PKPdf	08 28 33.0	+0.2
	comp=Z,0.1nm,0.4s,baz=123,slow=3.3,SNR=3.6						
SONM	Songino Array	139.32	73	PKP	PKPdf	08 28 43.9	-0.2
	comp=Z,0.2nm,0.5s,baz=236,slow=1.6,SNR=2.6						
B08A	Colville Reser	140.28	287		PKPdf	08 28 45.8	0.0
YKA	Yellowknife Ar	145.41	309	PKPbc	PKPbc	08 28 53.5	-0.8
	comp=Z,9.9nm,0.9s,baz=106,slow=3.5,SNR=76						
MJAR	Matsushiro Arr	148.52	115	PKPbc	PKPbc	08 29 04.3	+0.3
	comp=Z,2.9nm,0.6s,baz=122,slow=1.6,SNR=5.6						
INK	Inuvik	154.37	317	PKPbc	PKPbc	08 29 16.0	-0.5
INK					PKPab	08 29 31.2	+0.4
ILAR	Eielson Array	159.84	309	PKPab	PKPab	08 29 54.4	-0.2
	comp=Z,0.8nm,0.6s,baz=102,slow=3.3,SNR=5.7						
ILAR	Eielson Array	159.84	309		PKPab	08 29 55.1	+0.5

ATH 14 08:16:41.4,38.°11N×20.°35E,h9km±2km,ML2.6/4,Error ellipse: s-maj=2.6km s-min=1.0km az=39.0

THE 14 08:16:41.0,38.°11N×20.°30E,h4km±3km,ML2.6/3,Error ellipse: s-maj=3.9km s-min=1.1km az=49.0

ISC 14 08:16:42.0±1.4,38.°13N±0.°04×20.°36E±0.°06,h7km±6km,n23,σ0.°44/39,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.06	16	P	Pg	08 16 43.4	-0.4
CHV1				S	Sg	08 16 44.6	-0.3
KEF3	Kipouria, Keph	0.08	353	P	Pg	08 16 43.7	-0.3
KEF3				S	Sg	08 16 45.4	+0.1
LXRA	Lixouri, Kepha	0.10	39	P	Pg	08 16 44.0	-0.2
LXRA				S	Sg	08 16 46.1	+0.4
ARGA	Argostoli. Kep	0.11	61	P	Pg	08 16 44.2	-0.2
ARGA				S	Sg	08 16 46.3	+0.3
KEF2	Argostoli. Kep	0.11	68	P	Pg	08 16 44.2	-0.2
KEF2				S	Sg	08 16 46.1	0.0
ARG2	Argostoli	0.11	62	P	Pg	08 16 44.3	-0.2
ARG2				S	Sg	08 16 46.5	+0.3
KEF4	Livadi, Kephal	0.14	21	P	Pg	08 16 45.3	+0.3
KEF4				S	Sg	08 16 47.4	+0.4
KEF1	Kardakata, Kep	0.17	30	P	Pg	08 16 45.4	-0.2
KEF1				S	Sg	08 16 48.4	+0.5
VLS	Valsamata	0.19	74	P	Pg	08 16 45.4	-0.4
VLS	Valsamata	0.19	74	P	Pg	08 16 45.4	-0.4
VLS				S	Sg	08 16 48.6	+0.2
VLS				AML	AML	08 16 48.8	
	comp=N,8623μm,0.3s						
VLS				AML	AML	08 16 48.9	
	comp=E,17758μm,0.1s						
KONA	Konidatara, Ke	0.34	29	P	Pg	08 16 48.3	-0.4
KONA				S	Sg	08 16 53.8	+0.5
VLMS	Volimes, Zakyn	0.34	136	P	Pg	08 16 48.1	-0.6
VLMS				S	Sg	08 16 53.9	+0.6
VLMS				AML	AML	08 16 57.3	
	comp=E,2433μm,0.2s						
VLMS				AML	AML	08 16 59.0	
	comp=N,3085μm,0.3s						
FSK	Fiskardo	0.37	25	P	Pg	08 16 48.7	-0.5
FSK				S	Sg	08 16 54.4	+0.3
	comp=N,1μm,0.2s						
FSK	Fiskardo	0.37	25	P	Pg	08 16 48.8	-0.5
FSK				S	Sg	08 16 54.3	+0.2
FSK				AML	AML	08 16 55.4	
	comp=E,3469μm,0.2s						
FSK				AML	AML	08 16 58.1	
	comp=N,2324μm,0.3s						
PDO	Prodromos	0.80	54	P	Pg	08 16 56.8	-0.6
PDO				S	Sb	08 17 09.8	+0.5
	comp=N,508nm,0.4s						
PDO	Prodromos	0.80	54	P	Pg	08 16 56.8	-0.6
PVO	Paravola	1.04	61	P	Pg	08 17 01.3	-0.6
PVO				S	Sn	08 17 17.5	-0.3
	comp=N,252nm,0.2s						
PVO	Paravola	1.04	61	P	Pg	08 17 01.3	-0.6
PVO				AML	AML	08 17 23.0	
	comp=E,424μm,0.3s						
PVO				AML	AML	08 17 26.5	
	comp=N,448μm,0.7s						
AMT	Artemida-Makis	1.22	119	P	Pn	08 17 06.3	+0.8
LAKA	Lakka	1.28	84	P	Pn	08 17 05.5	-0.8
KLV	Kalavryta, Ach	1.42	93	P	Pn	08 17 08.4	+0.2
KLV				S	Sg	08 17 28.0	+0.5
KLV	Kalavryta, Ach	1.42	93	P	Pn	08 17 08.2	0.0
ITM	Ithomi	1.56	127	P	Pn	08 17 10.3	+0.1

IDC 14 08:17:09.3±3.3,32.°02S×177.°93W,h0km,mb3.4/2,mb1 3.8/3,mb1mx3.6/23,mbtmp3.6/3,Error ellipse: s-maj=75.9km s-min=37.3km az=113.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.43	212	Pn	Pn	08 18 59.8	+0.8
	baz=162,slow=19,SNR=2.5						
URZ				Sn	Sn	08 20 23.0	-1.0
	1.4nm,0.3s,baz=295,slow=14,SNR=13						
ASAR	Alice Springs	43.11	269	P	P	08 25 11.8	+0.2
	0.2nm,0.5s,baz=109,slow=7.3,SNR=5.1						
WRA	Warramunga Arr	44.24	274	P	P	08 25 20.4	-0.3
	0.4nm,0.4s,baz=115,slow=7.7,SNR=9.5						
FINES	FINESS Array B	146.68	339	PKPbc	PKPdf	08 36 51.3	+0.6
	1.0nm,0.8s,baz=336,slow=3.0,SNR=3.6						

IDC 14 08:27:16.7±9.5,17.°69S×178.°73W,h540km±102km,mb3.0/3,mb1 3.4/3,mb1mx2.9/26,mbtmp3.9/3,Error ellipse: s-maj=130.0km s-min=43.8km az=156.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.38	259	P	P	08 34 39.3	-0.4
	0.5nm,0.5s,baz=95,slow=7.1,SNR=9.3						
ASAR	Alice Springs	44.56	254	P	P	08 34 41.0	-0.1
	5.4nm,0.4s,baz=90,slow=8.4,SNR=116						
ASAR				PcP	PcP	08 36 12.4	0.0
	0.4nm,0.9s,baz=96,slow=5.7,SNR=3.0						
TXAR	Lajitas Array	86.13	58	P	P	08 39 01.2	+0.1
	0.2nm,0.7s,baz=219,slow=6.2,SNR=3.4						
GERES	GERESS Array B	147.32	345	PKPbc	PKPbc	08 46 00.1	+0.3
	0.4nm,0.5s,baz=38,slow=3.2,SNR=3.6						
DAVOX	Davos/Dischmat	150.13	348	PKPbc	PKPbc	08 46 05.8	-1.1
	2.0nm,0.5s,baz=14,slow=6.9,SNR=3.2						

NORS 14 08:44:42.5±0.0,42.°62N×46.°43E,h15km,MPVA4.4

DRS 14 08:44:44.0±0.0,42.°63N×46.°42E,h12km

TIF 14 08:44:44.2,42.°60N×46.°32E,h9km±3km

ISC 14 08:44:43.7±0.8,42.°61N±0.°03×46.°44E±0.°02,h11km±5km,n33,σ1.°33/64,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	Botlikh	0.17	290	iPg	Pg	08 44 46.9	-0.7
	1μm,0.3s						
BTLR				eSg	Sg	08 44 49.4	-0.8
	6μm,0.4s						
XNZR	Khunzakh	0.21	108	iPg	Pg	08 44 48.5	+0.2
XNZR				eSg	Sb	08 44 52.5	+1.1
UNCR	Uncukul	0.28	68	ePg	Pg	08 44 49.5	-0.1
UNCR				eSg	Sg	08 44 54.0	+0.5
KRNR	Karanay	0.41	58	iPg	Pg	08 44 52.0	+0.1
	231nm,0.1s						
KRNR				eSg	Sg	08 44 57.5	+0.1
	730nm,0.2s						
ARKR	Arakani	0.41	91	iPg	Pg	08 44 52.0	+0.1
	233nm,0.1s						
ARKR				iSg	Sb	08 44 58.0	-1.3
	624nm,0.2s						
GNBR	Gunib	0.45	119	iPg	Pb	08 44 52.8	-0.8
	561nm,0.2s						
GNBR				eSg	Sb	08 44 59.8	-0.5
	4μm,0.5s						
DLMR	Dylym	0.48	17	iPg	Pg	08 44 52.0	-1.2
	345nm,0.1s						
DLMR				eSg	Sg	08 44 58.0	-1.7
	909nm,0.2s						
DBC	Dubki	0.50	35	iPg	Pg	08 44 52.9	-0.7
DBC				eSg	Sg	08 45 00.6	+0.2
BUJR	Buynaksk	0.54	66	iPg	Pg	08 44 54.5	+0.2
BUJR				eSg	Sb	08 45 02.6	-0.4
KMKR	Kumukh	0.68	134	ePg	Pb	08 44 57.0	-0.8
	309nm,0.1s						
KMKR				eSg	Sn	08 45 08.0	-2.2
	652nm,0.2s						
GROC	Groznyy	0.76	322	ePg	Pn	08 44 59.7	-0.6
GROC				eSg	Sg	08 45 10.3	+1.1
LGD	Lagodekhi	0.79	191	P	Pb	08 44 59.6	+0.2
LGD				S	Sn	08 45 10.6	-1.9
KANR	Karaman	0.97	52	ePg	Pn	08 45 03.0	-0.3
KANR				eSg	Sn	08 45 17.8	+0.8
URKR	Urkarakh	0.99	116	ePg	Pn	08 45 03.3	-0.4
URKR				eSg	Sn	08 45 18.8	+1.1
KMGR	Komgaron	1.24	292	iPg	Pg	08 45 08.1	+0.6
KMGR				eSg	Sg	08 45 26.3	+2.7
VLKR	Vladikavkaz	1.37	289	ePg	Pn	08 45 10.2	+0.3
VLKR				eSg	Sn	08 45 28.5	+0.7
GUDG	Gudauri	1.46	265	P	Pn	08 45 08.2	-2.0
GUDG				S	Sn	08 45 27.1	-2.2
AKT	Akhty	1.48	139	ePg	Pb	08 45 10.4	-1.0
	93nm,0.5s						
AKT				eSg	Sg	08 45 33.0	+1.5
	336nm,0.3s						
DRN	Derbent	1.52	112	ePg	Pb	08 45 11.3	-0.6
	125nm,0.8s						
DRN				eSg	Sg	08 45 38.7	+6.1
	183nm,0.4s						
BTNK	Botanikuri	1.53	233	P	Pb	08 45 11.8	-0.3
BTNK				S	Sg	08 45 32.2	-0.8
BTKR	Batakoyurt	1.59	299	ePg	Pb	08 45 13.8	+0.8
BTKR				eSg	Sb	08 45 36.2	+1.5
LACR	Lac	1.59	279	iPg	Pb	08 45 12.4	+0.4
TRKR	Terskaya	1.67	312	ePg	Pn	08 45 13.9	-0.6
TRKR				eSg	Sn	08 45 38.6	+1.1
KORR	Kora	1.81	286	ePg	Pb	08 45 16.7	-0.1
KORR				eSg	Sb	08 45 40.1	+0.6
ZEI	Tsey	1.88	276	ePg	Pn	08 45 16.8	+0.9
ZEI				eSg	Sb	08 45 42.3	+0.6
STDR	Stavd-Durt	1.90	294	ePg	Pb	08 45 18.9	+0.6
STDR				iSg	Sg	08 45 44.6	-0.3
PRTR	Priterechnaya	1.95	307	ePg	Pb	08 45 19.4	+0.3
PRTR				eSg	Sb	08 45 45.2	+1.8
KZRT	Kazreti	1.95	232	P	Pb	08 45 18.2	-1.0
KZRT				S	Sb	08 45 44.2	+0.6
TRLG	Trialeti	2.04	239	P	Pb	08 45 20.4	-0.5
TRLG				S	Sb	08 45 47.1	+0.8
DIGR	Digorskoe uzhe	2.12	279	ePg	Pb	08 45 20.9	-1.4
DIGR				eSg	Sb	08 45 47.9	-0.9
ONI	Oni	2.20	271	P	Pb	08 45 22.4	-1.2
NEY	Neytrino	2.80	284	ePn	Pb	08 45 32.6	-1.2
NEY				eSn	Sb	08 46 09.7	+1.5
SHA1	Shidzhatmaz	2.99	294	ePn	Pn	08 45 31.0	-0.2
SHA1				eSn	Sn	08 46 09.0	+2.0

ISK 14 08:46:20.9,39.°63N×29.°50E,h5km,ML1.8/6,Suspected Mining explosion.

DDA 14 08:46:21.2,39.°65N×29.°42E,h7km±4km,MD2.6

ISC 14 08:46:20.8±0.8,39.°71N±0.°04×29.°46E±0.°03,h0km,n13,σ0.°37/20,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVSB	Tavsanli	0.26	179	PG	Pg	08 46 25.3	-0.4
CAVI	Cavuskoy	0.58	31	PG	Pb	08 46 33.9	+0.1
GDZ	Gediz	0.62	178	iP	Pg	08 46 32.5	-0.1
GDZ				iS	Sg	08 46 40.6	0.0
DURS	Dursunbey	0.77	262	iP	Pg	08 46 35.1	-0.3
DURS				iS	Sb	08 46 48.5	+0.4
BORA	Eskisehir	0.79	77	PG	Pb	08 46 37.1	-0.3
BORA				SG	Sb	08 46 48.6	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BORA	Eskisehir	0.79	77	iP	Pg	08 46 35.9	0.0
BORA				iS	Sb	08 46 49.2	+0.6
MDNY	Mudanya-Bursa	0.80	327	PG	Pn	08 46 39.0	-0.3
MDNY				SG	Sn	08 46 52.2	+0.4
YLV	Yalova	0.86	356	PG	Pn	08 46 40.1	-0.2
SRCK	Saricakaya, Es	0.96	69	PG	Pb	08 46 40.6	+0.3
SRCK	Saricakaya, Es	0.96	69	iP	Pb	08 46 40.8	+0.5
SRCK				iS	Sn	08 46 55.1	-0.8
SRCK				IAML		08 46 58.0	
	comp=E,9.4nm,0.2s						
ARMT	Armutlu	0.97	332	PG	Pn	08 46 41.4	-0.3
USAK	Uak-Merkez	1.05	199	iP	Pg	08 46 40.8	0.0
USAK				iS	Sn	08 46 58.5	+0.4
GULT	Gulveren	1.09	48	PN	Pn	08 46 43.4	0.0

THE 14 08:53:59.9, 38.43N×20.45E, h5km±1km, ML3.3/9, Error ellipse: s-maj=1.6km s-min=0.3km az=94.0
ATH 14 08:53:60.0, 38.42N×20.52E, h11km±1km, ML3.4/14, Error ellipse: s-maj=1.5km s-min=0.6km az=287.0
BEO 14 08:54:00.1±0.9, 38.32N×20.31E, h27km±5km, ML3.7/6
ISC 14 08:53:59.8±0.8, **38.42N**±0.01×**20.48E**±0.02, **h9**km±5km, **n78**, σ1§**09**/112, **Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KONA	Konidatara, Ke	0.07	87	P	Pg	08 54 01.9	0.0
KONA				S	Sg	08 54 03.5	+0.1
FSK	Fiskardo	0.08	60	P	Pg	08 54 01.9	0.0
FSK				S	Sg	08 54 03.3	-0.1
FSK	Fiskardo	0.08	60	P	Pg	08 54 01.9	0.0
FSK				S	Sg	08 54 03.3	-0.1
FSK				AML	AML	08 54 03.7	
FSK				AML	AML	08 54 04.2	
KEF1	Kardakata, Kep	0.14	182	P	Pg	08 54 03.2	+0.3
KEF1				S	Sg	08 54 05.8	+0.8
KEF4	Livadi, Kephal	0.17	194	P	Pg	08 54 03.8	+0.5
KEF4				S	Sg	08 54 07.0	+1.2
LXRA	Lixouri, Kepha	0.22	188	P	Pg	08 54 04.8	+0.5
LXRA				S	Sg	08 54 08.9	+1.5
KEF3	Kipouria, Keph	0.24	205	P	Pg	08 54 04.9	+0.3
KEF3				S	Sg	08 54 09.2	+1.3
ARG2	Argostoli	0.24	178	P	Pg	08 54 04.9	+0.2
ARG2				S	Sg	08 54 08.9	+1.0
ARGA	Argostoli. Kep	0.24	180	P	Pg	08 54 04.9	+0.2
ARGA				S	Sg	08 54 08.9	+0.9
EVGI	Lefkada island	0.24	35	P	Pg	08 54 04.9	+0.2
EVGI				S	Sg	08 54 08.7	+0.6
EVGI	Lefkada island	0.24	35	P	Pg	08 54 04.9	+0.2
EVGI				S	Sg	08 54 08.6	+0.6
KEF2	Argostoli. Kep	0.26	178	P	Pg	08 54 05.1	+0.1
KEF2				S	Sg	08 54 09.4	+1.0
VLS	Valsamata	0.26	160	P	Pg	08 54 05.0	+0.1
VLS				S	Sg	08 54 08.9	+0.4
	12μm,0.3s						
VLS	Valsamata	0.26	160	P	Pg	08 54 05.1	+0.1
VLS				S	Sg	08 54 09.2	+0.7
VLS				AML	AML	08 54 10.1	
	comp=E,28281μm,0.3s						
VLS				AML	AML	08 54 13.5	
	comp=N,23139μm,0.5s						
LKD2	Lefkada island	0.39	21	P	Pg	08 54 07.4	-0.1
LKD2				S	Sg	08 54 13.0	+0.3
	comp=N,4μm,0.7s						
LKD2	Lefkada island	0.39	21	P	Pg	08 54 07.3	-0.3
LKD2				S	Sg	08 54 12.7	0.0
TSLK	Tsoukalades, L	0.43	19	P	Pg	08 54 08.1	0.0
TSLK				S	Sg	08 54 14.8	+1.1
	comp=N,5μm,0.7s						
TSLK	Tsoukalades, L	0.43	19	P	Pg	08 54 08.1	0.0
TSLK				S	Sg	08 54 14.9	+1.1
AST1	Astakos	0.49	76	P	Pg	08 54 09.5	+0.1
VLMS	Volimes, Zakyn	0.56	165	P	Pg	08 54 10.4	-0.3
VLMS				S	Sg	08 54 18.7	+0.7
VLMS				AML	AML	08 54 26.2	
	comp=E,13290μm,0.3s						
VLMS				AML	AML	08 54 27.0	
	comp=N,16050μm,0.6s						
PDO	Prodromos	0.58	72	P	Pg	08 54 10.9	-0.2
PDO				S	Sg	08 54 20.0	+1.3
	comp=N,6μm,0.6s						
PDO	Prodromos	0.58	72	P	Pg	08 54 10.9	-0.2
PDO				AML	AML	08 54 26.2	
	comp=N,8906μm,0.9s						
PDO				AML	AML	08 54 31.9	
	comp=E,9226μm,0.5s						
PVO	Paravola	0.84	76	P	Pg	08 54 16.0	-0.1
PVO				S	Sb	08 54 29.2	+1.1
	comp=E,3μm,0.5s						
PVO	Paravola	0.84	76	P	Pg	08 54 16.0	-0.1
PVO				AML	AML	08 54 35.8	
	comp=E,7242μm,0.7s						
PVO				AML	AML	08 54 37.2	
	comp=N,6556μm,0.5s						
RLS	Riolos of Patr	0.86	115	P	Pg	08 54 15.8	-0.5
RLS				S	Sb	08 54 29.5	+1.0
	comp=N,1μm,0.8s						
RLS	Riolos of Patr	0.86	115	P	Pg	08 54 15.8	-0.5
RLS				AML	AML	08 54 40.3	
	comp=E,2593μm,0.8s						
RLS				AML	AML	08 54 45.2	
	comp=N,2059μm,0.8s						
DRO	Drossia	1.08	115	P	Pb	08 54 19.5	-1.2
DRO				S	Sn	08 54 37.2	+0.9
DRO	Drossia	1.08	115	P	Pb	08 54 19.5	-1.2
DRO				AML	AML	08 54 48.5	
	comp=E,5615μm,0.6s						
DRO				AML	AML	08 54 50.1	
	comp=N,4222μm,0.5s						
IGT	Igoumenitsa	1.11	354	P	Pb	08 54 20.5	-0.8
IGT				S	Sn	08 54 36.8	-0.4
	comp=N,1μm,0.5s						
IGT	Igoumenitsa	1.11	354	ePg	Pn	08 54 23.2	+1.5
IGT				eSg	Sn	08 54 38.2	+1.0
IGT	Igoumenitsa	1.11	354	P	Pb	08 54 21.3	0.0
ANX	Ano Chora	1.15	81	P	Pb	08 54 21.0	-0.8
ANX	Ano Chora	1.15	81	P	Pb	08 54 21.1	-0.8
ANX				AML	AML	08 54 44.1	
	comp=N,3546μm,1.1s						
ANX				AML	AML	08 54 48.8	
	comp=E,4027μm,0.5s						
EVR	Evrytania	1.15	64	P	Pb	08 54 21.0	-1.0
EVR	Evrytania	1.15	64	P	Pb	08 54 21.1	-1.0
LAKA	Lakka	1.19	98	P	Pn	08 54 21.5	-1.3
LAKA				AML	AML	08 54 48.5	
	comp=N,1342μm,0.6s						
LAKA				AML	AML	08 54 48.5	
	comp=E,2215μm,0.7s						
SERG	Sergoula	1.24	90	P	Pn	08 54 22.4	-1.0
SERG				S	Sn	08 54 40.8	+0.5
SERG	Sergoula	1.24	90	P	Pn	08 54 22.4	-1.0
SERG				AML	AML	08 54 51.1	
	comp=E,3520μm,0.6s						
SERG				AML	AML	08 54 54.3	
	comp=N,3155μm,0.7s						
TRIZ	Trizonia	1.25	92	P	Pn	08 54 22.4	-1.1
TRIZ	Trizonia	1.25	92	P	Pn	08 54 22.5	-1.1
JAN	Janina	1.27	13	P	Pg	08 54 24.4	+0.3
JAN				S	Sg	08 54 43.3	+2.7
	comp=N,958nm,0.3s						
JAN	Janina	1.27	13	P	Pg	08 54 24.5	+0.4
ALIK	Aliki, Aigiali	1.29	97	P	Pn	08 54 23.0	-1.1
KALE	Kalithea	1.31	91	P	Pn	08 54 23.2	-1.1
KALE				AML	AML	08 54 52.9	
	comp=E,1637μm,0.5s						
KALE				AML	AML	08 54 54.2	
	comp=N,2880μm,0.7s						
AMT	Artemida-Makis	1.32	132	P	Pn	08 54 24.2	-0.2
AMT	Artemida-Makis	1.32	132	P	Pn	08 54 24.4	0.0
AMT				AML	AML	08 54 55.2	
	comp=N,4289μm,0.8s						
AMT				AML	AML	08 54 56.6	
	comp=E,3713μm,0.9s						
KLV	Kalavryta, Ach	1.37	105	P	Pn	08 54 24.4	-0.8
KLV				S	Sg	08 54 45.7	+1.8
KLV	Kalavryta, Ach	1.37	105	P	Pn	08 54 24.3	-0.8
KLV				AML	AML	08 54 54.7	
	comp=E,966μm,0.7s						
KLV				AML	AML	08 54 58.9	
	comp=N,922μm,0.6s						
KEK	Kerkira	1.39	338	P	Pn	08 54 25.5	0.0
KEK				S	Sg	08 54 46.2	+1.6
	comp=N,278nm,0.5s						
KEK	Kerkira	1.39	338	P	Pn	08 54 25.5	0.0
SRN	Sarande	1.50	346	P	Pn	08 54 27.3	+0.3
AGG	Agios Georgios	1.57	67	P	Pn	08 54 28.2	+0.3
AGG	Agios Georgios	1.57	67	P	Pn	08 54 28.3	+0.4
THL	Klokotos Trika	1.66	46	P	Pn	08 54 29.8	+0.8
KPRO	Kipourio	1.68	24	P	Pb	08 54 30.9	0.0
KPRO				S	Sg	08 54 55.2	+1.4
KPRO	Kipourio	1.68	24	P	Pg	08 54 31.7	-0.3
KPRO				AML	AML	08 55 04.5	
	comp=E,1759μm,0.9s						
KPRO				AML	AML	08 55 06.8	
	comp=N,1488μm,1.0s						
ITM	Ithomi	1.69	137	P	Pb	08 54 30.9	-0.2
VLX	Vlachokerasia	1.83	124	P	Pg	08 54 35.2	+0.2
LTK	Loutraki	2.00	101	P	Pb	08 54 36.3	-0.1
NEST	Nestorio	2.04	12	P	Pb	08 54 36.3	-0.8
XOR	Xorichti	2.32	65	P	Pn	08 54 39.9	+1.7
DID	Didima	2.36	112	P	Pn	08 54 40.3	+1.4
OHR	Ohrid	2.70	5	ePn	Pg	08 54 53.8	+2.3
TIR	Tirane	2.96	351	ePn	Pn	08 54 47.4	+0.4
VAY	Valandovo	3.31	28	ePn	Pg	08 55 04.4	+1.1
STIP	Stip	3.52	21	iPn	Pn	08 54 57.7	+3.0
SKO	Skopje	3.62	11	ePn	Pn	08 54 55.0	-1.1
BOSS	Bosilegrad	4.35	20	ePn	Pn	08 55 07.0	+0.9
BARS	Barje	4.51	13	ePn	Pn	08 55 08.7	+0.4
TREB	Trebinje	4.59	340	ePn	Pn	08 55 07.9	-1.5
TREB				eSn	Sn	08 55 59.8	-3.0
SELS	Selova	4.82	6	ePn	Pn	08 55 11.6	-1.0
SJES	Sjenica	4.85	356	ePn	Pn	08 55 13.1	0.0
SJES				eSn	Sn	08 56 07.8	-1.6
STON	Ston	4.92	335	ePn	Pn	08 55 12.2	-1.7
STON				eSn	Sn	08 56 07.5	-3.5
IVAS	Ivanjica	5.16	357	ePn	Pn	08 55 16.4	-0.8
BOVS	Bovan	5.29	10	ePn	Pn	08 55 18.4	-0.6
BBLS	Lazići	5.50	352	eSn	Sn	08 56 22.4	-3.0
DIVS	Divibare	5.68	356	ePn	Pn	08 55 23.6	-0.9
DIVS				eSn	Sn	08 56 27.2	-2.7
HAPS	Han Pijesak,Bl	5.78	349	ePn	Pn	08 55 26.2	+0.4

UPP 14 08:59:23.0±2.6, 64.54N×31.08E, h0km, ML1.5, Suspected explosion
MOS 14 08:59:24.7, 64.79N×30.46E, M2.1, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)
HEL 14 08:59:25.7±0.2, 64.76N×30.65E, h0km, ML2.1, Explosion
IDC 14 08:59:27.1±2.5, 64.76N×30.50E, h0km, mb1 3.0/4, mb1mx2.8/51, mbtmp2.9/4, ML2.2/4, Error ellipse: s-maj=37.7km s-min=9.4km az=102.0
ISC 14 08:59:26.5±1.1, **64.85N**±0.03×**30.42E**±0.05, **h0km**, **n34**, σ1§**83**/52, **Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KU6	Riekki	1.20	350	PG	Pg	08 59 48.9	-0.7
KU6				MSG		09 00 05.1	
	comp=Z,9.2nm,0.2s						
KU6				SG	Sb	09 00 06.1	-0.1
MSF	Maaselka	1.22	332	PG	Pg	08 59 49.6	-0.1
	baz=148						
MSF				SG	Sb	09 00 07.0	+0.5
OUL	Oulu	1.94	279	PG	Pb	09 00 02.3	-0.4
	baz=92						
OUL				SG	Sg	09 00 28.8	+0.1
JOF	Joensuu	1.98	168	PG	Pn	08 59 59.0	-2.1
JOF				SG	Sn	09 00 26.1	-0.5
OUF	Merijarvi	2.50	261	PB	Pn	09 00 10.0	+1.7
	baz=80						
OUF				MSG		09 00 41.9	
	comp=Z,16nm,0.2s						
OUF				SG	Sg	09 00 45.2	-1.5
RNF	Rovaniemi	2.54	316	PB	Pb	09 00 11.5	-1.3
	baz=128						
RNF				SG	Sb	09 00 46.2	+1.6
OBF0	Syolatti, Pyha	2.68	265	PG	Pb	09 00 13.9	-1.3
OBF0				SN	Sn	09 00 40.1	-3.8
TOF	Tornio	2.83	299	PG	Pb	09 00 18.6	+0.8
TOF				MSG		09 00 52.5	
	comp=Z,7.1nm,0.2s						
TOF				SB	Sb	09 00 53.1	+0.2
SUF	Sumiainen	2.86	224	PB	Pn	09 00 15.2	+2.0
	baz=46						
SUF				MSG		09 00 49.9	
	comp=Z,7.2nm,0.2s						
SUF				SG	Sb	09 00 53.5	-0.2
VRF	Varrio	2.93	354	PN	Pn	09 00 14.9	+0.6
	baz=174						
VRF				MSG		09 00 54.8	
	comp=Z,3.4nm,0.2s						
VRF				SG	Sb	09 00 57.5	+1.6
SGF	Sodankyl	3.05	330	PG	Pb	09 00 22.2	+0.7
SGF				SB	Sb	09 00 59.9	+0.6
KAF	Kangasniemi	3.31	216	SG	Sb	09 01 07.5	+0.8
KEF	Keuruu	3.66	225	PB	Pn	09 00 26.5	+2.2
KEF				SB	Sn	09 01 11.1	+3.0
PAJU	Pajala	3.71	309	P	Pn	09 00 26.2	+1.3
PAJU				S	Sb	09 01 15.5	-2.7
SJUU	Sjulsmark	3.78	284	P	Pn	09 00 26.5	+0.7
SJUU				S	Sn	09 01 15.0	+4.1
ERTU	Ertsjaerv	3.81	300	P	Pn	09 00 27.9	+1.5
ERTU	Ertsjaerv	3.81	300	PN	Pn	09 00 28.1	+1.7
ERTU				SG	Sg	09 01 28.7	0.0
VAF	Ylistaro	3.87	246	SG	Sg	09 01 29.5	-1.1
BURU	Burvik	3.89	270	P	Pn	09 00 27.6	+0.3
BURU				S	Sn	09 01 16.4	+2.7
BURU	Burvik	3.89	270	PN	Pn	09 00 28.0	+0.6
FIA0	FINESS Array S	3.94	212	PN	Pn	09 00 27.9	-0.2
	baz=28						
FIA0				SG	Sb	09 01 28.8	+3.9
FINES	FINESS Array B	3.94	212	Pn	Pn	09 00 28.1	-0.1
	comp=Z,0.2nm,0.3s,baz=28,slow=13,SNR=6.7						
FINES				Lg	Lg	09 01 29.1	
	comp=Z,1.4nm,0.3s,baz=32,slow=26,SNR=14						
HARU	Harads	4.15	293	P	Pn	09 00 32.5	+1.5
ODEU	Stanfors	4.20	268	P	Pn	09 00 31.3	-0.3
MASU	Masugnsbyn	4.31	311	P	Pn	09 00 35.2	+2.0
UMAU	Umeaa	4.34	262	P	Pn	09 00 33.0	-0.6
UMAU	Umeaa	4.34	262	PN	Pn	09 00 33.2	-0.4
UMAU				SG	Sg	09 01 45.4	-0.5
HEF	Hetta	4.47	326	SG	Sg	09 01 47.2	-2.8
LILU	Lilltraesk	4.50	280	P	Pn	09 00 36.5	+0.7
VJF	Virojoki	4.52	198	PN	Pn	09 00 33.4	-2.6
ARCES	ARCESS Array B	5.08	340	Pn	Pn	09 00 43.7	0.0
	comp=Z,0.5nm,0.3s,baz=157,slow=14,SNR=16						
ARCES				Sn	Sn	09 01 41.3	-1.7
	comp=Z,0.3nm,0.3s,baz=158,slow=24,SNR=3.8						
ARCES				Lg	Lg	09 02 04.2	
	comp=Z,1.6nm,0.3s,baz=157,slow=23,SNR=14						
I43RU	DUBNA INFRASON	8.80	155	i		09 49 50.0	
	baz=349,slow=333,SNR=1.8						
HFS	Hagfors	9.05	246	Pn	Pn	09 01 35.4	-2.8
	comp=Z,0.1nm,0.3s,baz=51,slow=14,SNR=2.6						
NOA	NORSAR Array B	9.53	255	Pn	Pn	09 01 40.3	-4.5
	comp=Z,0.0nm,0.3s,baz=56,slow=12,SNR=2.2						

IDC 14 09:01:19.9±0.7, 34.14S×58.23E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.8/48, mbtmp4.0/7, Error ellipse: s-maj=27.7km s-min=23.1km az=102.0
NEIC 14 09:01:22.3±1.8, 34.23S±0.05×58.4E±0.3, h10km±1km, mb4.4/10, Error ellipse: s-maj=37.2km s-min=5.3km az=280.0
ISC 14 09:01:21.9±0.6, **34.2S**±0.1×**58.3E**±0.2, **h10km**, **n35**, σ1§**22**/35, **mb4.2**/12, **South Indian Ocean**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CRZF	Crozet Islands	13.17	200	Pn	Pn	09 04 29.6	+0.6
H08N3	Diego Garcia H	30.09	26	T	T	09 38 45.0	
	baz=204						
H08N1	Diego Carcia H	30.10	26	T	T	09 38 47.7	
	baz=204						
H08N2	Diego Garcia H	30.11	26	T	T	09 38 46.5	
	baz=204						
SNAA	Sanae	48.92	202	P	P	09 10 07.5	-0.3
	4.5nm,0.8s,baz=99,slow=7.5,SNR=11						
SNAA	Sanae	48.92	202	P	P	09 10 07.7	-0.1
SNAA				IAmb	IAmb	09 10 08.5	
	comp=Z,5.4nm,0.9s						
QSPA	South Pole Qui	55.99	180	P	P	09 11 00.3	-0.1
	comp=Z,1.7nm,0.9s,baz=268,slow=2.1,SNR=8.4						
QSPA	South Pole Qui	55.99	180	P	P	09 11 00.5	+0.1
QSPA				IAmb	IAmb	09 11 08.3	
	comp=Z,5.2nm,1.2s						
CMAR	Chiang Mai Arr	65.10	43	P	P	09 12 02.5	-0.4
	comp=Z,0.9nm,0.2s,baz=225,slow=7.1,SNR=4.7						
ASAR	Alice Springs	65.65	103	P	P	09 12 07.1	+0.4
	comp=Z,1.3nm,0.7s,baz=236,slow=6.1,SNR=24						
ASAR	Alice Springs	65.65	103	P	P	09 12 06.4	-0.2
AS31	Alice Springs	65.65	103	P	P	09 12 06.8	+0.2
WRA	Warramunga Arr	67.79	100	P	P	09 12 20.6	+0.2
	comp=Z,1.7nm,0.9s,baz=238,slow=5.8,SNR=7.0						
WB2	Warramunga Arr	67.80	100	P	P	09 12 19.7	-0.7
WB2				IAmb	IAmb	09 12 24.2	
	comp=Z,7.5nm,1.3s						
WB0	Warramunga Arr	67.92	99	P	P	09 12 21.6	+0.4
WR0	Warramunga Arr	67.95	100	P	P	09 12 21.2	-0.1
WR0				IAmb	IAmb	09 12 22.7	
	comp=Z,3.2nm,1.1s						
TORD	Torodi Ar. Bea	71.46	301	P	P	09 12 43.2	+0.3
	comp=Z,1.0nm,0.8s,baz=138,slow=7.8,SNR=4.8						
KK31	Karatay Array	77.73	9	P	P	09 13 19.8	+1.1
KK31				IAmb	IAmb	09 13 22.8	
	comp=Z,1.9nm,1.1s						
KKAR	Karatay Array	77.73	9	P	P	09 13 19.8	+1.1
KKAR				IAmb	IAmb	09 13 22.8	
	comp=Z,1.9nm,1.1s						
ABKAR	Akbulak array	83.09	1	P	P	09 13 48.0	+0.7
MK31	Makanchi Array	83.46	16	P	P	09 13 51.0	+1.7
MKAR	Makanchi Array	83.46	16	P	P	09 13 50.6	+1.3
	comp=Z,0.4nm,0.8s,baz=210,slow=4.3,SNR=3.8						
MKAR	Makanchi Array	83.46	16	P	P	09 13 49.5	+0.2
MORC	Moravsky Berou	91.08	335	P	P	09 14 25.8	-0.5
SONM	Songino Array	92.31	30	P	P	09 14 33.1	+0.9
	comp=Z,0.3nm,0.6s,baz=202,slow=3.2,SNR=3.8						
INK	Inuvik	145.17	8	PKPbc	PKPbc	09 20 56.3	-2.0
	comp=Z,6.0nm,0.8s,baz=349,slow=4.1,SNR=5.0						
INK	Inuvik	145.17	8	PKPbc	PKPdf	09 20 60.0	+1.3
PRP	Porcupine Dome	145.53	17		PKPdf	09 20 58.2	-1.4
WRH	Wood River Hil	145.67	20		PKPdf	09 20 57.5	-2.1
WRH				PKPbc	PKPbc	09 21 01.6	+1.6
IL31		145.77	19		PKPdf	09 20 57.6	-2.2
IL31				PKPbc	PKPab	09 21 01.1	+0.4
ILAR	Eielson Array	145.77	19	PKPbc	PKPdf	09 20 57.5	-2.3
	comp=Z,3.8nm,0.8s,baz=324,slow=3.2,SNR=27						
ILAR	Eielson Array	145.77	19		PKPdf	09 20 57.8	-2.0
ILAR				PKPbc	PKPab	09 21 01.4	+0.6
BCAR	Beaver Creek A	148.48	17	PKPab	PKPab	09 21 10.7	-0.8
YKA	Yellowknife Ar	151.32	353	PKPbc	PKPbc	09 21 12.6	-2.3
	comp=Z,3.7nm,0.8s,baz=359,slow=2.2,SNR=28						
F03A	Seaside	168.19	6		PKPab	09 22 35.1	-1.4

ARE 14 09:34:38±8.6, 18.54S±0.05×69.41W±0.08, h54km±5km, Error ellipse: s-maj=0.0km s-min=0.0km az=198.0
NEIC 14 09:34:39.3±1.6, 18.26S±0.05×69.26W±0.08, h120km±3km, mb4.8/94, ML4.2(GUC), ML4.8(ARE), Error ellipse: s-maj=12.0km s-min=7.4km az=106.0
IDC 14 09:34:40.5±0.6, 18.30S×69.15W, h128km±5km, mb3.9/14, mb1 4.0/18, mb1mx3.8/41, mbtmp4.3/18, Error ellipse: s-maj=12.3km s-min=8.5km az=92.0
GUC 14 09:34:40.6±0.8, 18.22S×69.41W, h123km±4km, ML4.3
VAO 14 09:34:40.4±0.7, 18.16S×69.25W, h123km±8km, mb4.6
ISC 14 09:34:39.6±0.5, **18.28S**±0.04×**69.35W**±0.05, **h127**km±4km, **n192**, σ1§**60**/215, **mb4.7**/57, **4C-7D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.16	250	⇑iP	Pn	09 34 58.3	+0.6
PB16				eS	Sn	09 35 11.7	+0.5
PB16				IAML		09 35 12.8	
	comp=E,7μm,0.5s						
MNMC	Minye Minye	0.88	196	⇓iP	Pn	09 35 02.5	+1.0
MNMC				iS	Sn	09 35 19.1	+1.1
MNMC				IAML		09 35 20.3	
	comp=E,16μm,0.2s						
MNMC	Minye Minye	0.88	196		Pn	09 35 02.2	+0.8
AP01	Chacalluta	0.95	264	⇑iP	Pn	09 35 01.7	0.0
AP01				iS	Sn	09 35 17.9	-0.5
AP01				IAML		09 35 19.0	
	comp=N,16μm,0.3s						
GO01	Chusmiza	1.39	174	⇓iP	Pn	09 35 08.6	+1.8
GO01				eS	Sn	09 35 29.9	+2.5
GO01	Chusmiza	1.39	174		Pn	09 35 08.6	+1.8
PB11	IPOC Station P	1.50	191	⇓iP	Pn	09 35 08.5	+0.8
PB11				iS	Sn	09 35 29.9	+0.8
PB11				IAML		09 35 32.3	
	comp=E,2μm,0.1s						
PB11	IPOC Station P	1.50	191		Pn	09 35 08.4	+0.8
PB11				Sn	Sn	09 35 27.4	-1.7
PSGC	Pisagua	1.50	209	⇓iP	Pn	09 35 07.7	+0.1
PSGC				iS	Sn	09 35 28.4	-0.6
PSGC				IAML		09 35 29.9	
	comp=N,3μm,0.2s						
PB08	IPOC Station P	1.86	174	⇓iP	Pn	09 35 13.9	+1.8
PB08				eS	Sn	09 35 38.9	+1.9
PB08				IAML		09 35 41.2	
	comp=E,881nm,0.3s						
LPAZ	La Paz	2.29	31	⇓iP	Pn	09 35 19.6	+2.0
LPAZ	La Paz	2.29	31	P	Pn	09 35 19.7	+2.0
	comp=E,82nm,0.3s,baz=232,slow=6.7,SNR=1273						
LPAZ				S	Sn	09 35 46.3	-0.5
	comp=E,13nm,0.3s,baz=129,slow=23,SNR=4.2						
TA01	Diego Aracena	2.41	199	eP	Pn	09 35 18.1	-0.4
PATCX	Punta Patache	2.64	197	eP	Pn	09 35 21.7	+0.1
PATCX				iS	Sn	09 35 51.1	-2.7
PATCX				IAML		09 36 21.0	
	comp=E,939nm,0.5s						
PB01	IPOC Station P	2.75	183	⇓iP	Pn	09 35 23.7	+0.6
PB01				eS	Sn	09 35 55.1	-1.4
PB01	IPOC Station P	2.75	183		Pn	09 35 24.0	+1.0
PB01				Sn	Sn	09 35 54.8	-1.7
PB02	IPOC Station P	3.07	190	eP	Pn	09 35 27.4	+0.2
PB02				IAML		09 36 16.2	
	comp=E,874nm,0.4s						
PB07	IPOC Station P	3.47	188	⇑iP	Pn	09 35 32.6	+0.2
PB07				IAML		09 36 39.9	
	comp=E,444nm,0.5s						
PB03	IPOC Station P	3.77	186	⇑iP	Pn	09 35 37.1	+0.7
PB03				iS	Sn	09 36 21.0	+0.6
PB04	IPOC Station P	4.11	190		Pn	09 35 41.0	+0.2
PB04				Sn	Sn	09 36 28.5	+0.1
LVC	Limon Verde	4.33	175	eP	Pn	09 35 45.6	+1.6
LVC	Limon Verde	4.33	175	P	Pn	09 35 45.7	+1.8
	comp=E,51nm,0.3s,baz=345,slow=7.0,SNR=338						
LVC				S	Sn	09 36 33.4	-0.6
	comp=E,22nm,0.3s,baz=152,slow=17,SNR=6.3						
LVC	Limon Verde	4.33	175	eP	Pn	09 35 45.8	+1.8
PB10	IPOC Station P	5.33	192		Pn	09 35 56.0	-1.1
PB10				Sn	Sn	09 36 55.2	-2.3
GO02	Mina Guanaco	6.86	182		Pn	09 36 17.0	-0.9
GO02				Sn	Sn	09 37 32.9	-1.8
SIV	San Ignacio	8.23	75	P	Pn	09 36 34.9	-1.3
	comp=E,12nm,0.3s,baz=275,slow=10.0,SNR=141						
SIV				S	Sn	09 38 04.5	-3.2
	baz=178,slow=22,SNR=3.3						
GO03	Copiap	9.31	185		Pn	09 36 47.9	-2.9
GO03				Sn	Sn	09 38 30.3	-3.4
NNA	Nana	9.56	310	P	Pn	09 36 51.0	-3.2
	comp=E,3.5nm,0.3s,baz=125,slow=8.8,SNR=3.7						
NNA				S	Sn	09 38 30.4	-10
	comp=E,1.5nm,0.3s,baz=190,slow=17,SNR=1.9						
NNA	Nana	9.56	310		Pn	09 36 54.4	+0.2
SAML	Samuel	11.04	34		Pn	09 37 11.3	-2.7
GO04	Tololo Observa	11.92	186	Pn	Pn	09 37 22.2	-3.5
AQDB	Aquidauana	13.06	102	eP	Pn	09 37 40.0	-0.5
SALV	Santo Antonio	13.27	82	eP	Pn	09 37 42.0	-1.1
CFA	Coronel Fontan	13.31	176	P	Pn	09 37 41.3	-2.3
	comp=E,1.6nm,0.3s,baz=345,slow=14,SNR=2.6						
CFA				S	Sn	09 40 00.9	-10
	comp=E,0.0nm,0.3s,baz=313,slow=19,SNR=1.7						
CPUP	Villa Florida	13.70	128	P	Pn	09 37 47.9	-0.8
	comp=E,0.2nm,0.3s,baz=296,slow=12,SNR=4.0						
CPUP	Villa Florida	13.70	128	eP	Pn	09 37 49.7	+1.0
CPUP	Villa Florida	13.70	128	Pn	Pn	09 37 50.0	+1.4
CLDB	Colider	15.03	63	eP	Pn	09 38 06.1	+0.4
TRCB	Terra Rica	16.28	109	eP	P	09 38 22.8	+1.0
ARAG	Araguaiana, MT	16.96	84	eP	Pn	09 38 29.8	+0.4
PTGB	Pitanga	17.30	115	eP	Pn	09 38 34.7	+1.2
ITAB	Concordia	18.19	122	eP	Pn	09 38 44.0	0.0
FRTB	Fartura	19.16	109	eP	P	09 38 53.8	+0.5
BB19B	Bebedouro	19.80	101	eP	P	09 38 59.6	-0.6
IPMB	Ipameri, GO	20.09	92	eP	P	09 39 02.8	-0.7
CNLB	Canela	20.14	126	eP	P	09 39 04.5	+0.5

OTAV	Otavalo	20.46	333	eP	P	09 39 09.0	+1.2
OTAV	Otavalo	20.46	333	eP	P	09 39 08.3	+0.5
OTAV	Otavalo	20.46	333	P	P	09 39 09.7	+1.8
BDFB	Brasilia	20.57	86	P	P	09 39 07.7	-1.0
	comp=E,7.4nm,0.4s,baz=262,slow=13,SNR=12						
BDFB	Brasilia	20.57	86	P	P	09 39 08.9	+0.2
FLOC	Florencia	20.69	342	P	Pn	09 39 12.2	-1.3
RCLB	Rio Claro- Sao	20.86	105	eP	P	09 39 10.0	-1.7
GCUF	Volcan Galeras	20.92	337	eP	P	09 39 12.6	-0.2
BBAC	Balboa, Cauca	21.62	338	eP	P	09 39 19.5	-0.5
PLCA	Paso Flores	22.40	182	P	P	09 39 28.7	+1.0
	comp=E,2.4nm,0.9s,baz=25,slow=14,SNR=4.6						
PLCA				pP	pP	09 39 52.0	-0.2
	comp=E,2.5nm,0.9s,baz=12,slow=9.0,SNR=2.6						
PLCA	Paso Flores	22.40	182	P	P	09 39 30.3	+2.5
PARB	Paraibuna	22.73	107	eP	P	09 39 31.9	+0.7
ORTC	Ortega, Tolima	22.80	345	eP	P	09 39 28.6	-3.1
SMTB	Santa Maria do	23.10	69	eP	P	09 39 35.1	+0.5
CHIC	Chingaza	23.17	349	eP	P	09 39 31.9	-3.7
YOTC	Yotoco, Valle	23.17	342	eP	P	09 39 33.5	-1.9
GUY2C	Guyana, Caldas	24.09	345	eP	P	09 39 43.9	-0.2
RUSC	La Rusia	24.30	351	eP	P	09 39 45.3	-0.7
RUSC	La Rusia	24.30	351	P	P	09 39 45.6	-0.3
NORC	Norcasia	24.31	347	eP	P	09 39 43.4	-2.2
TAMC	Tame, Arauca	24.67	354	eP	P	09 39 48.1	-0.8
CBOC	Ciudad Bolivar	24.87	344	eP	P	09 39 49.8	-1.1
BARC	Barichara	25.00	351	eP	P	09 39 49.8	-2.3
HELC	Santa Helena	25.07	345	eP	P	09 39 50.0	-2.8
PTBC	PUERTO BERRIO,	25.17	348	eP	P	09 39 50.0	-3.4
ZARC	Zaragoza, Cauc	26.18	348	eP	P	09 39 59.6	-2.8
SDV	Santo Domingo	27.02	357	P	P	09 40 08.7	-1.5
	comp=E,5.4nm,0.8s,baz=167,slow=20,SNR=5.9						
SDV	Santo Domingo	27.02	357	eP	P	09 40 07.8	-2.4
SDV	Santo Domingo	27.02	357	eP	P	09 40 08.8	-1.5
SDV	Santo Domingo	27.02	357	P	P	09 40 09.0	-1.3
SMLC	San Martn de	27.31	350	eP	P	09 40 09.1	-3.5
MPR	Mayaguez	36.33	4		S	09 47 04.6	+1.5
APG	El Apazote	39.08	326	P	P	09 41 56.9	+2.1
	comp=E,8.7nm,0.7s,baz=319,slow=8.3,SNR=8.8						
TEIG	Tepich	42.53	333	P	P	09 42 24.0	+1.2
TEIG				IAmb	IAmb	09 42 25.2	
	comp=Z,13nm,0.7s						
CMIG	Matias Romero	43.21	323	P	P	09 42 30.5	+2.2
	comp=Z,3.2nm,0.7s,baz=99,slow=6.8,SNR=7.6						
352A	Blakely	51.68	343	P	P	09 43 34.2	+0.5
BRAL	Brewton	52.02	341	P	P	09 43 37.5	+1.4
250A	Grady	52.54	342	P	P	09 43 40.7	+0.8
Z50A	Ashland	53.63	343	P	P	09 43 48.0	0.0
HODGE	Hodges	53.65	347	P	P	09 43 48.2	+0.2
HODGE				IAmb	IAmb	09 43 48.6	
	comp=Z,22nm,1.4s						
LRAL	Lakeview Retre	53.74	342	P	P	09 43 48.7	-0.1
LRAL				IAmb	IAmb	09 43 49.2	
	comp=Z,8.4nm,0.7s						
KMSC	Kings Mountain	54.33	348	P	P	09 43 53.4	+0.3
KMSC				IAmb	IAmb	09 44 08.8	
	comp=Z,10nm,1.2s						
Y49A	Blount Mountai	54.34	343	P	P	09 43 52.8	-0.3
Y49A				IAmb	IAmb	09 44 10.9	
	comp=Z,13nm,1.4s						
FPAL	Fort Paine	54.76	344	P	P	09 43 56.1	-0.1
V55A	Taylorsville	54.99	348	P	P	09 43 58.5	+0.7
V55A				IAmb	IAmb	09 44 01.6	
	comp=Z,10nm,1.2s						
X48A	Hartselle	55.08	342	P	P	09 43 58.5	+0.1
CPCT	Cooper Cave	55.34	345	P	P	09 44 00.1	-0.2
CPCT				IAmb	IAmb	09 44 16.1	
	comp=Z,14nm,1.4s						
TKL	Tuckaleechee C	55.36	346	P	P	09 44 00.3	-0.1
TKL				IAmb	IAmb	09 44 18.3	
	comp=Z,13nm,1.2s						
U54A	Nelsons Funny	55.76	348	P	P	09 44 03.5	+0.1
U54A				IAmb	IAmb	09 44 05.0	
	comp=Z,16nm,1.0s						
OXF	Oxford	55.86	340	P	P	09 44 04.0	0.0
TZTN	Tazewell	56.15	346	P	P	09 44 06.0	-0.1
TZTN				IAmb	IAmb	09 44 22.7	
	comp=Z,27nm,1.4s						
V48A	Smith Brothers	56.22	343	P	P	09 44 06.6	0.0
CLTN	Cedars of Leba	56.41	343	P	P	09 44 07.9	0.0
CLTN				IAmb	IAmb	09 44 08.4	
	comp=Z,12nm,0.8s						
T52A	Hallie	56.57	347	P	P	09 44 09.1	0.0
T52A				IAmb	IAmb	09 44 15.8	
	comp=Z,14nm,1.3s						
WHTX	Lake Whitney,	56.78	331	P	P	09 44 12.2	+1.6
WHTX				IAmb	IAmb	09 44 13.3	
	comp=Z,4.2nm,0.6s						
WVT	Waverly	56.87	342	P	P	09 44 10.8	-0.4
S54A	Dingess, Beckl	56.90	349	P	P	09 44 11.7	+0.3
S54A				IAmb	IAmb	09 44 13.6	
	comp=Z,11nm,0.8s						
R55A	Marlinton	57.16	350	P	P	09 44 14.7	+1.5
T49A	Edmonton	57.16	345	P	P	09 44 13.2	0.0
MIAR	Mount Ida	57.37	336	P	P	09 44 15.4	+0.7
MIAR				IAmb	IAmb	09 44 17.4	
	comp=Z,4.0nm,0.6s						
W41B	Gary Mavity, V	57.43	338	P	P	09 44 15.4	+0.3
T47A	Sharon Grove	57.47	343	P	P	09 44 15.7	+0.4
R53A	Hurricane	57.54	348	P	P	09 44 16.4	+0.6
R53A				IAmb	IAmb	09 44 34.5	
	comp=Z,13nm,1.3s						
WHAR	Wooly Hollow	57.55	338	P	P	09 44 17.6	+1.6
WHAR				IAmb	IAmb	09 44 17.8	
	comp=Z,10.0nm,1.0s						
TXAR	Lajitas Array	57.77	324	P	P	09 44 18.7	+0.9
	comp=Z,0.3nm,0.5s,baz=158,slow=8.0,SNR=4.4						
TXAR				pP	pP	09 44 49.1	-0.1
	comp=Z,0.1nm,0.5s,baz=150,slow=9.3,SNR=1.5						
LCAR	Lake Charles	57.86	339	P	P	09 44 18.4	+0.3
Q54A	Coxs Mills	57.97	349	P	P	09 44 19.2	+0.4
W39A	Magazine	58.02	336	P	P	09 44 20.7	+1.5
PBMO	Poplar Bluff	58.27	340	P	P	09 44 21.0	+0.1
WCI	Wyandotte Cave	58.42	344	P	P	09 44 21.4	-0.6
P53A	Whipple	58.55	349	P	P	09 44 23.5	+0.6
U40A	Yellville	58.71	338	P	P	09 44 24.2	+0.2
U40A				IAmb	IAmb	09 44 26.9	
	comp=Z,6.0nm,0.9s						
S44A	Carbondale	58.74	342	P	P	09 44 24.8	+0.6
HHAR	Hobbs	59.04	337	P	P	09 44 27.7	+1.4
HHAR				IAmb	IAmb	09 44 28.2	
	comp=Z,9.2nm,1.2s						
MGMO	Mountain Grove	59.22	339	P	P	09 44 28.0	+0.5
MGMO				IAmb	IAmb	09 44 29.5	
	comp=Z,3.7nm,0.6s						
P48A	Milroy	59.37	346	P	P	09 44 27.3	-1.2
P48A				IAmb	IAmb	09 44 45.5	
	comp=Z,6.6nm,1.2s						
CCM	Cathedral Cave	59.70	340	P	P	09 44 30.3	-0.5
CCM				IAmb	IAmb	09 44 31.9	
	comp=Z,8.3nm,1.1s						
M57A	Sunshine Farm,	59.75	353	P	P	09 44 31.9	+0.9
M57A				IAmb	IAmb	09 44 35.0	
	comp=Z,16nm,1.4s						
M56A	Emporium	60.02	352	P	P	09 44 33.1	+0.2
M54A	Oil Creek Stat	60.24	351	P	P	09 44 34.9	+0.5
M54A				IAmb	IAmb	09 44 49.9	
	comp=Z,20nm,1.4s						
N49A	Columbus Grove	60.49	347	P	P	09 44 35.9	-0.2
L56A	Greenwood	60.59	353	P	P	09 44 36.8	0.0
P43A	Skaggs, Pawnee	60.62	342	P	P	09 44 37.2	+0.2
ERPA	Erie	60.89	351	P	P	09 44 39.5	+0.6
WVNY	West Valley, N	60.98	352	P	P	09 44 40.2	+0.7
J59A	Piesco	61.62	356	P	P	09 44 44.0	+0.3
J59A				IAmb	IAmb	09 44 44.2	
	comp=Z,22nm,1.2s						
NCB	Newcomb	62.10	356	P	P	09 44 47.5	+0.5
J47A	Sunmer	62.84	347	P	P	09 44 51.8	0.0
J47A				IAmb	IAmb	09 44 51.9	
	comp=Z,13nm,0.7s						
L42A	Oliver, Polo	62.85	343	P	P	09 44 52.1	+0.2
L42A				IAmb	IAmb	09 44 52.2	
	comp=Z,8.2nm,0.8s						
DELO	Deloro Mine	62.94	353	P	P	09 44 52.6	+0.1
I49A	Point Hope	63.13	349	P	P	09 44 53.6	-0.2
I49A				IAmb	IAmb	09 44 54.8	
	comp=Z,7.9nm,0.8s						
K43A	Burlington	63.15	344	P	P	09 44 53.8	-0.1
K43A				IAmb	IAmb	09 44 53.9	
	comp=Z,12nm,0.6s						
G62A	West of Eustis	63.20	359	P	P	09 44 55.7	+1.5
SADO	Sadowa	63.37	352	P	P	09 44 55.4	+0.1
PLVO	Plevna	63.40	354	P	P	09 44 55.9	+0.4
I47A	Gladwin	63.53	348	P	P	09 44 56.3	0.0
I47A				IAmb	IAmb	09 44 56.6	
	comp=Z,11nm,0.6s						
ANMO	Albuquerque	63.59	326	P	P	09 44 58.5	+1.2
	comp=Z,0.5nm,0.4s,baz=145,slow=16,SNR=2.9						
ANMO	Albuquerque	63.59	326	P	P	09 44 57.5	+0.3
F64A	Sherman	63.84	1	P	P	09 44 59.4	+1.1
JFWS	Jewell Farm	63.86	343	P	P	09 44 58.9	+0.3
JFWS				IAmb	IAmb	09 45 01.9	
	comp=Z,6.6nm,0.9s						
H48A	Harrisville	63.96	349	P	P	09 44 59.1	-0.1
T25A	Trinidad	64.27	329	P	P	09 45 03.7	+2.0
H43A	Windswept, Lux	64.67	346	P	P	09 45 04.0	+0.2
H43A				IAmb	IAmb	09 45 23.4	
	comp=Z,15nm,0.9s						
G45A	Suttons Bay	64.74	347	P	P	09 45 04.4	+0.2
G45A				IAmb	IAmb	09 45 04.5	
	comp=Z,14nm,0.7s						
D62A	Allapoint, All	65.05	0	P	P	09 45 07.0	+0.8
D62A				IAmb	IAmb	09 45 17.5	
	comp=Z,27nm,1.5s						
BGNE	Belgrade	65.11	336	P	P	09 45 08.2	+1.5
SNAA	Sanae	65.45	161	P	P	09 45 09.0	+0.4
	comp=Z,1.7nm,0.8s,baz=270,slow=4.0,SNR=2.8						
SNAA	Sanae	65.45	161	P	P	09 45 12.1	+3.4
D53A	Lac Vacive, Po	65.48	354	P	P	09 45 09.2	+0.2
D53A				IAmb	IAmb	09 45 09.8	
	comp=Z,12nm,0.9s						
E46A	Sault Ste Mari	65.75	349	P	P	09 45 10.8	+0.1
E46A				IAmb	IAmb	09 45 11.0	
	comp=Z,11nm,0.8s						
E43A	Lone Tree Farm	66.30	347	P	P	09 45 14.5	+0.3
E43A				IAmb	IAmb	09 45 14.9	
	comp=Z,7.1nm,0.7s						
ECSD	EROS Data Cent	66.58	339	P	P	09 45 17.9	+1.7
SPMN	Marine on St.	66.71	342	P	P	09 45 17.4	+0.5
SPMN				IAmb	IAmb	09 45 17.9	
	comp=Z,6.9nm,0.7s						
LIC	Lamto	67.92	75	eP	P	09 45 24.9	-0.3
	comp=Z,15nm,0.6s						
DRLN	Deer Lake	68.05	8	P	P	09 45 25.1	-0.1
DRLN				IAmb	IAmb	09 45 36.2	
	comp=Z,27nm,1.2s						
TIC	Toumodi	68.09	75	eP	P	09 45 26.1	-0.2
	comp=Z,2.7nm,0.2s						
KIC	Kosan Boka	68.24	75	eP	P	09 45 27.1	-0.1
	comp=Z,17nm,0.5s						
DBIC	Dimbokro	68.25	75	P	P	09 45 27.3	+0.1
	comp=Z,11nm,0.6s,baz=230,slow=6.4,SNR=18						
DBIC	Dimbokro	68.25	75	P	P	09 45 27.7	+0.4
DBIC				IAmb	IAmb	09 45 31.2	
	comp=Z,26nm,1.4s						
KNB	Kanab	68.59	324	P	P	09 45 32.4	+3.3
EYMN	Ely	68.84	344	P	P	09 45 30.3	+0.1
MSU	Marysvale	69.31	325	P	P	09 45 36.5	+2.9
TMUT	Trail Mountain	69.36	326	P	P	09 45 35.8	+1.8
TPNV	Topopah Spring	70.52	322	P	P	09 45 44.1	+3.1
PDAR	Pinedale Array	71.13	330	P	P	09 45 46.5	+1.8
	comp=Z,0.4nm,0.5s,baz=121,slow=7.3,SNR=6.6						
PDAR	Pinedale Array	71.13	330	P	P	09 45 46.7	+2.1
QSPA	South Pole Qui	71.90	180	P	P	09 45 51.5	+2.7
ULM	Lac du Bonnet	72.14	342	P	P	09 45 50.4	+0.3
	comp=Z,4.6nm,0.4s,baz=154,slow=7.0,SNR=20						
ULM	Lac du Bonnet	72.14	342	P	P	09 45 50.6	+0.4
NVAR	Mina Array Bea	72.72	322	P	P	09 45 56.7	+2.5
	comp=Z,1.0nm,0.9s,baz=155,slow=6.0,SNR=6.2						
SCHQ	Schefferville	72.84	2	P	P	09 45 54.0	-0.3
	comp=Z,1.7nm,0.7s,baz=240,slow=14,SNR=4.5						
SCHQ	Schefferville	72.84	2	P	P	09 45 54.6	+0.3
SCHQ				IAmb	IAmb	09 46 00.9	
	comp=Z,13nm,1.4s						
LKWY	Lake	72.89	331	P	P	09 45 54.5	-0.6
LKWY				IAmb	IAmb	09 45 55.0	
	comp=Z,8.8nm,0.3s						
YNE	Yellowstone No	73.05	331	P	P	09 45 58.1	+2.1
YHH	Holmes Hill	73.27	330	P	P	09 45 59.2	+1.8
YHL	Hebgen Lake	73.47	330	P	P	09 46 01.3	+2.7
PAHR	Pah Rah Range	74.19	322	P	P	09 46 05.3	+2.6
WDC	Whiskeytown Da	76.61	321	P	P	09 46 17.2	+0.9
TOA0	Torodi Ar. Sit	76.69	71	P	P	09 46 17.5	+0.2
TORD	Torodi Ar. Bea	76.69	71	P	P	09 46 17.0	-0.2
	comp=Z,6.6nm,0.7s,baz=251,slow=5.0,SNR=25						
TORD	Torodi Ar. Bea	76.69	71	P	P	09 46 16.8	-0.4
YKA	Yellowknife Ar	88.03	341	P	P	09 47 16.2	+1.1
	comp=Z,3.7nm,0.8s,baz=136,slow=4.7,SNR=58						
YKA				pP	pP	09 47 49.3	+0.2
	comp=Z,2.8nm,0.7s,baz=136,slow=4.8,SNR=13						
KSH	Kashi	143.32	47	PKP	PKPab	09 53 54.6	-1.0
KSH				pPKP	pPKPdf	09 54 38.3	+3.2
KSH				PP	PP	09 57 11.8	+0.3
KSH				PKS	PKSdf	09 57 29.0	-6.2
KSH				SKS	SKSdf	10 00 47.1	-10
KSH				SKKS	SKKSac	10 03 42.6	-10
KLR	Kul'dur	144.74	336	PKP	PKPbc	09 54 01.1	+0.5
	comp=Z,0.9nm,0.5s,baz=114,slow=3.2,SNR=4.1						
SONM	Songino Array	150.31	6	PKPbc	PKPbc	09 54 16.4	+0.3
	comp=Z,0.5nm,0.5s,baz=287,slow=2.4,SNR=3.7						
SONM				pPKPbc	pPKPbc	09 54 51.2	-0.4
	comp=Z,0.8nm,0.9s,baz=42,slow=2.3,SNR=3.6						
CD2	Chengdu	165.95	25	PKP	PKPdf	09 54 28.5	-1.6

WEL 14 09:38:08.0,37˚S±5˚×17˚7E±˚,h228km±7km,M3.2/67, MLv3.2/67,Error ellipse: s-maj=0.0km s-min=0.0km az=0.2,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGRZ	Tauranga	0.68	216	P	Pn	09 38 38.7	-0.2
OPRZ	Ohinepanea	0.69	194	P	Pn	09 38 39.4	+0.5
MARZ	Manawahe	0.81	185	P	Pn	09 38 40.0	+0.4
KUZ	Kuaotunu	0.94	297	P	Pn	09 38 40.2	-0.1
OMRZ	Omania	0.98	198	P	Pn	09 38 41.2	+0.6
HAZ	Te Kaha	1.00	126	P	Pn	09 38 40.2	-0.3
HAZ				S	S	09 39 04.0	-2.0
RUGZ	Raukumara Rang	1.07	138	P	Pn	09 38 40.3	-0.9
RUGZ				S	S	09 39 05.8	-1.5
TARZ	Mount Tarawera	1.08	191	P	Pn	09 38 41.9	+0.7
URZ	Urewera	1.12	166	P	Pn	09 38 40.8	-0.5
URZ				S	S	09 39 06.1	-1.4
TOZ	Tahuroa Road	1.15	241	P	Pn	09 38 41.9	+0.3
RRRZ	Republican Roa	1.18	190	P	Pn	09 38 42.0	+0.2
HSRZ	Hossack Road	1.21	200	P	Pn	09 38 42.7	+0.7
GRRZ	Galatos Road	1.28	204	P	Pn	09 38 43.2	+0.7
MKAZ	Moumakai	1.28	273	P	Pn	09 38 42.8	+0.3
MXZ	Matakaoa Point	1.29	108	P	Pn	09 38 42.6	+0.1
MUGZ	Murupara	1.30	180	P	Pn	09 38 42.3	-0.3
MWZ	Matawai	1.31	153	P	Pn	09 38 42.3	-0.4
WIAZ	Waiheke Island	1.36	286	P	Pn	09 38 43.2	+0.1
GRZ	Great Barrier	1.40	311	P	Pn	09 38 43.3	-0.1
RAGZ	Rawiri	1.42	159	P	Pn	09 38 43.6	+0.1
ALRZ	Allen Road	1.42	193	P	Pn	09 38 43.8	+0.2
WPRZ	Whakapapatarin	1.42	199	P	Pn	09 38 44.0	+0.5
RTZ	Ruatahuna	1.45	173	P	Pn	09 38 43.6	-0.3
WMGZ	Waiomatatini S	1.46	117	P	Pn	09 38 44.2	+0.4
ETAZ	East Tamaki Re	1.48	278	P	Pn	09 38 44.5	+0.4
PUZ	Puketiti	1.49	127	P	Pn	09 38 44.1	0.0
KBAZ	Karaka Road Bo	1.50	272	P	Pn	09 38 44.8	+0.7
TLZ	Tolley Road	1.51	220	P	Pn	09 38 44.9	+0.6
TKGZ	Te Karaka	1.53	146	P	Pn	09 38 44.5	+0.1
MBAZ	Motutapu North	1.55	285	P	Pn	09 38 45.0	+0.4
ABAZ	Army Bay	1.65	290	P	Pn	09 38 45.9	+0.5
SNGZ	Shannon Statio	1.67	164	P	Pn	09 38 45.7	+0.1
MTHZ	Maungataniwha	1.68	178	P	Pn	09 38 45.4	-0.3
MRHZ	Matea Rd	1.68	189	P	Pn	09 38 45.4	-0.3
AWAZ	Awhitu Peninsu	1.70	273	P	Pn	09 38 46.1	+0.2
RIGZ	Rimuhau	1.72	153	P	Pn	09 38 46.4	+0.3
WATZ	Wairara	1.73	208	P	Pn	09 38 46.6	+0.5
RAHZ	Arahi	1.76	172	P	Pn	09 38 46.6	+0.2
RAHZ				S	S	09 39 15.3	-1.2
WTAZ	Waiatarua	1.77	277	P	Pn	09 38 46.8	+0.3
NMHZ	Naumai	1.92	179	P	Pn	09 38 48.3	+0.4
WHHZ	Waihua	1.94	169	P	Pn	09 38 48.2	+0.3
RITZ	Rihia Road	1.94	201	P	Pn	09 38 48.4	+0.4
PRGZ	Paritu Road	1.96	153	P	Pn	09 38 48.3	+0.1
KNZ	Kokohu	1.98	159	P	Pn	09 38 48.0	-0.3
BKZ	Black Stump Fm	2.00	186	P	Pn	09 38 47.9	-0.7
HIZ	Hauiti	2.02	228	P	Pn	09 38 49.1	+0.4
ARHZ	Aropaoanui	2.09	175	P	Pn	09 38 49.6	+0.2
KRVZ	Karewarewa	2.11	204	P	Pn	09 38 49.6	-0.2
WTVZ	West Tongariro	2.15	205	P	Pn	09 38 50.0	-0.1
TWVZ	Taurewa	2.16	209	P	Pn	09 38 50.2	-0.1
MHGZ	Mahia Peninsul	2.17	156	P	Pn	09 38 50.1	-0.1
NGZ	Ngauruhoe	2.20	204	P	Pn	09 38 50.8	+0.1
KWHZ	Kaweka Forest	2.26	187	P	Pn	09 38 50.9	-0.3
TUVZ	Tukino	2.27	202	P	Pn	09 38 51.1	-0.3
MCHZ	McNeill Hill	2.27	181	P	Pn	09 38 51.3	+0.1
FWVZ	Far West T-bar	2.29	204	P	Pn	09 38 51.8	+0.2
WCZ	Waipu Caves	2.31	302	P	Pn	09 38 51.9	+0.2
TRVZ	Turoa	2.33	204	P	Pn	09 38 51.7	-0.3
MOVZ	Moawhango	2.37	199	P	Pn	09 38 51.6	-0.7
BHHZ	Black Hill Sta	2.38	193	P	Pn	09 38 51.5	-0.9
PKVZ	Pokaka	2.39	207	P	Pn	09 38 52.3	-0.2
MTVZ	Mangateitei	2.43	204	P	Pn	09 38 52.7	-0.3
KRHZ	Kereru	2.48	187	P	Pn	09 38 52.7	-0.7
CKHZ	Cape Kidnapper	2.49	174	P	Pn	09 38 53.2	-0.3
VRZ	Vera Road	2.51	218	P	Pn	09 38 54.3	+0.6
KAHZ	Kahuranaki	2.62	178	P	Pn	09 38 54.5	-0.4
PNHZ	Pukenui	2.77	189	P	Pn	09 38 55.5	-1.1
PXZ	Pawanui	2.85	178	P	Pn	09 38 56.3	-1.1
WPHZ	Waipukurau	2.90	185	P	Pn	09 38 56.9	-1.0
WPHZ	Waipukurau	2.90	185	P	S	09 39 35.0	-2.1
WAZ	Wanganui	2.93	208	P	Pn	09 38 57.8	-0.5
TSZ	Takapari Road	2.95	192	P	Pn	09 38 57.3	-1.2
PRHZ	Porangahau	3.09	182	P	Pn	09 38 59.2	-0.8
DVHZ	Dannevirke	3.15	188	P	Pn	09 38 59.2	-1.6
DVHZ	Dannevirke	3.15	188	P	S	09 39 36.5	-5.9
OUZ	Omahuta	3.22	306	P	Pn	09 39 01.8	+0.2
ANWZ	Angora Road	3.29	184	P	Pn	09 39 01.2	-1.1
ANWZ	Angora Road	3.29	184	P	S	09 39 39.4	-5.7
POWZ	Post Office Ro	3.31	193	P	Pn	09 39 01.4	-1.1
POWZ	Post Office Ro	3.31	193	P	S	09 39 42.0	-3.5
PRWZ	Pori Road	3.43	190	P	Pn	09 39 02.8	-1.2
PRWZ	Pori Road	3.43	190	P	S	09 39 45.1	-3.0
BFZ	Birch Farm	3.52	186	P	Pn	09 39 03.4	-1.7
BFZ	Birch Farm	3.52	186	P	S	09 39 45.1	-5.0
MRZ	Mangatainoka R	3.60	195	P	Pn	09 39 03.9	-2.1
TIWZ	Tintock	3.66	190	P	Pn	09 39 05.7	-1.0
TIWZ	Tintock	3.66	190	P	S	09 39 48.5	-4.5
CPWZ	Castlepoint	3.75	187	P	S	09 39 51.5	-3.4
HOWZ	Holdsworth Sta	3.84	194	P	Pn	09 39 06.4	-2.5
HOWZ	Holdsworth Sta	3.84	194	P	S	09 39 52.1	-4.9
OGWZ	Otaki Gorge	3.84	198	P	Pn	09 39 06.7	-2.1
KIW	Kapiti Island	3.95	201	P	Pn	09 39 07.9	-2.3
KIW	Kapiti Island	3.95	201	P	S	09 39 54.3	-5.0
TMWZ	Te Maipa	3.98	190	P	Pn	09 39 08.6	-2.0
MTW	Mount Morrison	4.10	193	P	Pn	09 39 09.3	-2.6
MTW	Mount Morrison	4.10	193	P	S	09 39 52.5	-10
CAW	Cannon Point	4.14	198	P	Pn	09 39 10.0	-2.5
DUWZ	D'Urville Isla	4.25	211	P	Pn	09 39 11.5	-2.3
TRWZ	Traveller	4.30	191	P	Pn	09 39 12.2	-2.2
PAWZ	Paruwai Farm	4.33	193	P	Pn	09 39 12.2	-2.6
MSWZ	Moikau Station	4.39	195	P	Pn	09 39 12.7	-2.9
TCW	Tory Channel	4.47	205	P	Pn	09 39 14.1	-2.3
BHW	Baring Head	4.47	199	P	Pn	09 39 13.5	-3.0
PLWZ	Palliser	4.54	194	P	Pn	09 39 14.6	-2.8
TUWZ	Tuamarina	4.78	206	P	Pn	09 39 17.4	-2.8
NNZ	Nelson	4.82	212	P	Pn	09 39 17.8	-3.0
QRZ	Quartz Range	4.92	221	P	Pn	09 39 19.4	-2.6
BSWZ	Blackbirch Sta	5.05	205	P	Pn	09 39 21.2	-2.5
THZ	Tophouse	5.47	212	P	Pn	09 39 26.0	-2.9
KHZ	Kahutara	5.79	204	P	Pn	09 39 30.1	-2.9
DSZ	Denniston Nort	5.96	219	P	Pn	09 39 31.3	-3.9
GVZ	Greta Valley S	6.45	205	P	Pn	09 39 38.2	-3.2
LTZ	Lake Taylor	6.58	210	P	Pn	09 39 39.6	-3.4
AMCZ	Amberley	6.77	206	P	Pn	09 39 42.3	-3.0
INZ	Inchbonnie	6.88	215	P	Pn	09 39 43.3	-3.5
OKCZ	Okains Bay	7.12	202	P	Pn	09 39 46.7	-3.3
OXZ	Oxford	7.13	209	P	Pn	09 39 45.9	-4.1
MQZ	McQueen's Vall	7.24	204	P	Pn	09 39 46.9	-4.4
AKCZ	Akaroa Harbour	7.30	202	P	Pn	09 39 49.3	-3.0
RPZ	Rata Peaks	7.85	212	P	Pn	09 39 55.6	-3.5
ODZ	Otahua Downs	9.11	208	P	Pn	09 40 12.5	-2.9

SOME 14 09:43:12.9,44.˚40N×74.˚30E
NNC 14 09:43:13.4±0.5,44.˚42N×74.˚34E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=4.3km s-min=3.3km az=76.0, Suspected Mining explosion.
KNET 14 09:43:15.0±0.5,44.˚28N×74.˚31E,h2km±2km,ml2.3,Error ellipse: s-maj=3.8km s-min=2.3km az=93.0
ISC 14 09:43:13.3±0.9,44.˚40N±0.˚03×74.˚34E±0.˚03,h0km,n30, σ0.62/46,17C-7D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLS	Baital	0.68	342	P	Pg	09 43 25.8	-0.5
	5.7nm,0.2s						
BTLS				S	Sg	09 43 34.6	-0.5
	17nm,0.2s						
SGDS	Sogindy	0.97	167	P	Pg	09 43 31.7	-0.2
	14nm,0.1s						
SGDS				S	Sg	09 43 45.0	+0.6
	16nm,0.2s						
USP	Ospenovka	1.14	174	⇑P	Pg	09 43 35.0	-0.1
	19nm,0.1s,SNR=73						
USP				⇓S	Sg	09 43 50.0	+0.2
	16nm,0.1s						
CHMS	Chumysh	1.43	168	⇑P	Pn	09 43 40.2	-0.4
	13nm,0.1s,SNR=25						
CHMS				⇑S	Sn	09 43 59.7	-0.4
	20nm,0.2s						
CHMS	Chumysh	1.43	168	⇑P	Pn	09 43 39.6	-0.9
	4.6nm,0.3s						
CHMS				⇑S	Sg	09 43 59.1	-0.1
	5.0nm,0.3s						
KUU	Kurty	1.52	109	P	Pb	09 43 42.0	-0.5
	24nm,0.2s						
KUU				S	Sb	09 44 03.0	+0.6
	42nm,0.2s						
DGS	Degeres	1.55	138	P	Pg	09 43 42.8	-0.3
	18nm,0.2s						
DGS				S	Sb	09 44 04.2	+0.9
	38nm,0.3s						
AAK	Ala-Archa	1.76	176	⇑P	Pg	09 43 46.6	-0.5
	19nm,0.2s,SNR=29						
AAK				⇑S	Sg	09 44 10.3	+0.4
	32nm,0.3s						
AAK	Ala-Archa	1.76	176	⇑P	Pb	09 43 46.3	-0.4
	9.8nm,0.3s						
AAK				⇑S	Sg	09 44 10.3	+0.4
	20nm,0.5s						
EKS2	Erkin-Say	1.78	193	⇑P	Pg	09 43 46.8	-0.7
	33nm,0.2s,SNR=24						
EKS2				⇑S	Sg	09 44 11.2	+0.6
	16nm,0.2s						
KST	Kastek	1.79	138	P	Pg	09 43 47.4	-0.3
	17nm,0.2s						
KST				S	Sg	09 44 11.2	+0.3
	9.9nm,0.7s						
KBK	Karagaybulak	1.80	166	⇓P	Pg	09 43 47.3	-0.4
	24nm,0.1s,SNR=18						
KBK				⇑S	Sg	09 44 12.6	+1.6
	35nm,0.2s						
KTBS	Karatobe	1.82	111	P	Pb	09 43 47.4	-0.2
	22nm,0.2s						
KTBS				S	Sg	09 44 11.9	+0.1
	24nm,0.3s						
MRKS	Merke	1.84	207	P	Pg	09 43 48.5	-0.1
	12nm,0.2s						
MRKS				S	Sg	09 44 13.5	+1.0
	28nm,0.2s						
MTBS	Maitube	1.97	129	Pg	Pb	09 43 50.0	-0.2
	25nm,0.3s						
MTBS				Lg	Lg	09 44 17.0	
	36nm,0.3s						
CHKK	Chushkaly	1.98	105	Pg	Pb	09 43 50.0	-0.3
	6.6nm,0.3s						
CHKK				Lg	Lg	09 44 18.3	
	35nm,0.2s						
IZV	Izvestkoviy	2.14	129	Pg	Pb	09 43 52.6	-0.4
	12nm,0.2s						
IZV				Lg	Lg	09 44 20.8	
	13nm,0.2s						
UCH	Uchtor	2.17	177	⇑P	Pb	09 43 53.6	-0.2
	7.2nm,0.2s,SNR=35						
AML	Almayashu	2.31	192	⇓P	Pb	09 43 55.4	-0.8
	14nm,0.2s,SNR=50						
MDOK	Medeo	2.32	121	Pg	Pb	09 43 56.4	+0.3
	4.6nm,0.2s						
MDOK				Lg	Lg	09 44 27.6	
	7.3nm,0.4s						
KOTS	Kotyrbulak	2.32	119	Pg	Pb	09 43 55.7	-0.4
	18nm,0.2s						
KOTS				Lg	Lg	09 44 26.4	
	26nm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
TNSS	**Tian-Shan**	**2.33**	**125**	Pg	**Pb**	**09 43 54.7**	**-1.7**
	3.6nm,0.3s						
TNSS				Lg	Lg	09 44 26.4	
	15nm,0.5s						
KZA	**Kyzart**	**2.41**	**164**	⇑P	**Pb**	**09 43 57.4**	**-0.5**
	8.9nm,0.2s,SNR=19						
ARXS	**Arharly**	**2.51**	**93**	Pg	**Pb**	**09 43 59.2**	**-0.1**
	1.9nm,0.3s						
ARXS				Lg	Lg	09 44 31.9	
	26nm,0.4s						
ULHL	**Ulahol**	**2.56**	**147**	P	**Pb**	**09 43 59.0**	**-1.3**
	SNR=7.4						
KURS	**Kuram**	**2.91**	**107**	Pg	**Pb**	**09 44 05.6**	**-0.6**
	2.9nm,0.5s						
KURS				Lg	Lg	09 44 45.4	
	4.8nm,0.8s						
KK31	**Karatay Array**	**3.06**	**246**	⇑Pg	**Pb**	**09 44 09.3**	**+0.6**
	1.4nm,0.5s,baz=60,slow=16,SNR=14						
KK31				⇓Lg	Lg	09 44 47.7	
	0.7nm,0.3s,baz=60,slow=30,SNR=6.2						
DJR	**Jarkent**	**3.91**	**89**	Pg	**Pb**	**09 44 23.0**	**-0.1**
	0.8nm,0.2s						
DJR				Lg	Lg	09 45 13.3	
	1.2nm,0.3s						
MAKZ	**Makanchi**	**5.87**	**63**	⇓Pn	**Pn**	**09 44 41.8**	**+0.2**
	0.3nm,0.5s						
MAKZ				⇑Sn	**Sn**	**09 45 49.7**	**0.0**
	0.4nm,0.3s						
MAKZ				⇑Lg	Lg	09 46 20.6	
	0.8nm,0.6s						
MK31	**Makanchi Array**	**6.07**	**64**	⇓Pn	**Pn**	**09 44 45.0**	**+0.6**
	0.5nm,0.4s,baz=234,slow=11,SNR=50						
MK31				Sn	**Sn**	**09 45 55.0**	**+0.5**
	0.3nm,0.4s,baz=241,slow=28,SNR=5.1						
MK31				⇓Lg	Lg	09 46 24.8	
	0.3nm,0.5s,baz=248,slow=26,SNR=3.6						

IDC 14 09:52:27.5±2.3, 0°.12N×126°.02E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/38, mbtmp3.3/3, Error ellipse: s-maj=241.4km s-min=27.4km az=65.0
DJA 14 09:52:34.9±1.2, 0°S±3°×12°5E±°, h11km±8km, M3.9/6, mB5.1/1, MLv3.9/6, Mw(mB)4.5/1
ISC 14 09:52:33.6±1.0, 0°.26S±0°.08×125°.36E±0°.05, h10km, n11, σ2s71/14, mb3.2/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
KMSI	**Cibinong**	**1.60**	**301**	P	**Pn**	**09 53 01.4**	**-0.6**
KMSI				S	**Sn**	**09 53 20.7**	**-2.0**
SANI	**Sanana**	**1.89**	**160**	P	**Pn**	**09 53 03.7**	**-2.3**
SANI				S	**Sn**	**09 53 29.2**	**-0.7**
LBMI	**Labuha**	**2.18**	**100**	P	**Pb**	**09 53 13.5**	**+0.4**
LBMI				S	**Sn**	**09 53 39.2**	**+2.2**
LUWI	**Luwuk**	**2.70**	**253**	P	**Pb**	**09 53 20.5**	**-1.5**
LUWI				S	**Sn**	**09 53 52.8**	**+3.0**
NLAI	**Namlea**	**3.44**	**150**	P	**Pg**	**09 53 42.7**	**+3.2**
MRSI	**Marisa**	**3.49**	**282**	P	**Pn**	**09 53 26.7**	**-1.3**
APSI	**Ampana**	**3.76**	**260**	P	**Pn**	**09 53 34.5**	**+2.8**
MPSI	**Mapaga**	**5.49**	**276**	P	**Pn**	**09 53 58.6**	**+3.1**
WRA	**Warramunga Arr**	**21.45**	**156**	P	**P**	**09 57 18.1**	**-4.2**
	0.6nm,0.6s,baz=336,slow=11,SNR=4.6						
ASAR	**Alice Springs**	**24.71**	**161**	P	**P**	**09 57 52.4**	**-2.8**
	0.5nm,0.8s,baz=347,slow=14,SNR=5.0						
MKAR	**Makanchi Array**	**60.08**	**327**	P	P	10 02 36.9	-4.2
	0.3nm,0.5s,baz=116,slow=8.2,SNR=5.0						

JMA 14 10:04:17.7, 36°.50N×140°.48E, h67km±1km, M3.8
Broadband fault plane solution: P waves. NP1: φs80.00000°, δ13.00000°, λ173.00000°. NP2: φs176.00000°, δ88.00000°, λ77.00000°. Principal axes: T Plg45.0000°, Azm73.0000°; N Plg13.0000°, Azm177.0000°; P Plg42.0000°, Azm279.0000°;
JMA Felt II J1.
IDC 14 10:04:19.2±2.2, 36°.42N×140°.34E, h87km±23km, mb3.3/6, mb1 3.4/8, mb1mx3.2/41, mbtmp3.6/8 Error ellipse: s-maj=27.8km s-min=15.2km az=67.0
ISC 14 10:04:17.3±0.8, 36°.56N±0°.05×140°.46E±0°.05, h74km±6km, n26, σ2s10/30, mb3.7/6, 6C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
JHO	**Hitachi**	**0.10**	**59**	⇑P	**Pn**	**10 04 27.6**	**-0.4**
JHO				S	**Sn**	**10 04 34.7**	**-1.2**
JHYU	**Hitachinakayam**	**0.24**	**155**	⇑P	**Pn**	**10 04 28.0**	**-0.5**
JHYU				S	**Sn**	**10 04 35.4**	**-1.3**
JYT	**Yasato**	**0.40**	**213**	⇑P	**Pn**	**10 04 29.1**	**-0.4**
JYT				S	**Sn**	**10 04 37.3**	**-1.2**
ONAJ	**Iwakimizuishiy**	**0.60**	**26**	⇓P	**Pn**	**10 04 31.7**	**+0.2**
ONAJ				S	**Sn**	**10 04 42.1**	**+0.1**
JAG	**Ashikaga**	**0.82**	**261**	⇑P	**Pn**	**10 04 34.1**	**+0.2**
JAG				S	**Sn**	**10 04 46.0**	**-0.2**
JFK	**Kawauchi**	**0.87**	**22**	⇓P	**Pn**	**10 04 34.8**	**+0.3**
JFK				S	**Sn**	**10 04 47.6**	**+0.4**
JFT	**Otama**	**0.96**	**354**	⇑P	**Pn**	**10 04 36.4**	**+0.9**
JKT	**Katashina**	**1.00**	**282**	⇑P	**Pn**	**10 04 36.8**	**+0.8**
JFY	**Yanaizu**	**1.04**	**325**	P	**Pn**	**10 04 37.6**	**+1.1**
MJAR	**Matsushiro Arr**	**1.81**	**270**	P	**Pn**	**10 04 47.7**	**+1.2**
	4.6nm,0.3s,baz=88,slow=16,SNR=121						
MJAR				S	**Sn**	**10 05 04.9**	**-3.9**
	4.4nm,0.3s,baz=87,slow=17,SNR=15						
MAT	**Matsushiro**	**1.82**	**270**	P	**Pn**	**10 04 48.1**	**+1.5**
MAT				S	**Sn**	**10 05 05.0**	**-3.8**
JHJ	**Hachijo jima 2**	**3.48**	**189**	P	**Pn**	**10 05 10.0**	**+1.0**
	11nm,0.3s,baz=94,slow=13,SNR=3.4						
JHJ				S	**Sn**	**10 05 47.4**	**-1.6**
	29nm,0.3s,baz=61,slow=19,SNR=2.6						
ASAJ	**Asahikawa**	**7.72**	**12**	P	**Pn**	**10 06 05.8**	**-1.1**
	1.1nm,0.3s,baz=232,slow=12,SNR=7.1						
ASAJ				S	**Sn**	**10 07 25.0**	**-7.8**
	0.5nm,0.3s,baz=184,slow=16,SNR=1.8						
KSRS	**Korea Array**	**10.07**	**279**	P	**Pn**	**10 06 39.4**	**+0.5**
	0.1nm,0.3s,baz=90,slow=14,SNR=3.8						
SONM	**Songino Array**	**27.42**	**305**	P	**P**	**10 09 55.7**	**-0.4**
	0.5nm,0.6s,baz=108,slow=12,SNR=3.4						
H11N2	**WAKE ISLAND Hy**	**28.57**	**119**	T	T	10 40 13.0	
	baz=312,slow=75,SNR=22						
H11N1	**WAKE ISLAND Hy**	**28.58**	**119**	T	T	10 40 13.5	
	baz=312,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**28.59**	**119**	T	T	10 40 14.3	
	baz=312,slow=75,SNR=17						
H11S1	**WAKE ISLAND Hy**	**29.26**	**121**	T	T	10 41 00.7	
	baz=314,slow=75,SNR=78						
H11S3	**WAKE ISLAND Hy**	**29.26**	**121**	T	T	10 41 03.8	
	baz=314,slow=75,SNR=45						
H11S2	**WAKE ISLAND Hy**	**29.27**	**121**	T	T	10 41 02.1	
	baz=314,slow=75,SNR=39						
ZALV	**Zalesovo Beam**	**41.67**	**313**	P	**P**	**10 11 58.7**	**+0.4**
	0.8nm,0.5s,baz=94,slow=6.2,SNR=3.8						
MKAR	**Makanchi Array**	**43.73**	**302**	P	**P**	**10 12 16.0**	**+0.9**
	0.4nm,0.5s,baz=82,slow=10.0,SNR=6.3						
ILAR	**Eielson Array**	**50.30**	**32**	P	**P**	**10 13 07.2**	**+1.3**
	0.9nm,0.8s,baz=261,slow=7.7,SNR=8.8						
INK	**Inuvik**	**55.15**	**27**	P	**P**	**10 13 43.7**	**+2.1**
	0.4nm,0.5s,baz=324,slow=6.6,SNR=3.9						
WRA	**Warramunga Arr**	**56.49**	**187**	P	**P**	**10 13 51.8**	**0.0**
	0.4nm,0.7s,baz=2.4,slow=4.8,SNR=3.2						

IDC 14 10:13:22.1±3.0, 29°.69N×141°.26E, h41km±28km, mb3.4/8, mb1 3.7/10, mb1mx3.4/45, mbtmp3.6/10, ML2.9/2, MS3.0/2, Ms1 3.0/2, ms1mx2.4/29, Error ellipse: s-maj=34.3km s-min=19.4km az=80.0
ISC 14 10:13:22.1±0.7, 29°.62N±0°.10×141°.3E±0°.2, h46km, n12, σ1s54/11, mb3.7/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
JCJ	**Chichijima**	**2.64**	**162**	P	**Pn**	**10 14 03.0**	**+0.8**
	10nm,0.3s,baz=9.9,slow=21,SNR=8.9						
JCJ				S	**Sn**	**10 14 30.5**	**-2.5**
	50nm,0.3s,baz=290,slow=22,SNR=11						
MJAR	**Matsushiro Arr**	**7.36**	**340**	P	**Pn**	**10 15 06.1**	**-0.9**
	0.1nm,0.3s,baz=149,slow=11,SNR=4.0						
ASAJ	**Asahikawa**	**14.51**	**4**	LR	LR	10 22 02.6	
	comp=Z,38nm,21.3s,baz=108,slow=36						
MKAR	**Makanchi Array**	**48.27**	**308**	P	**P**	**10 21 56.8**	**-1.8**
	0.2nm,0.5s,baz=89,slow=7.6,SNR=3.2						
WRA	**Warramunga Arr**	**49.73**	**189**	P	**P**	**10 22 10.9**	**+1.1**
	0.5nm,0.4s,baz=6.1,slow=7.7,SNR=4.7						
ASAR	**Alice Springs**	**53.45**	**188**	P	**P**	**10 22 38.7**	**+1.0**
	0.5nm,0.3s,baz=9.5,slow=7.5,SNR=4.2						
YKA	**Yellowknife Ar**	**70.31**	**29**	P	**P**	**10 24 30.6**	**+0.2**
	0.1nm,0.5s,baz=290,slow=6.4,SNR=2.8						
FINES	**FINESS Array B**	**75.34**	**333**	P	**P**	**10 25 01.4**	**+1.2**
	2.8nm,1.0s,baz=52,slow=3.4,SNR=7.0						
NVAR	**Mina Array Bea**	**79.59**	**52**	P	**P**	**10 25 25.9**	**+1.2**
	0.3nm,0.5s,baz=280,slow=5.7,SNR=3.7						
NOA	**NORSAR Array B**	**80.98**	**338**	LR	LR	11 03 38.7	
	comp=Z,11nm,18.4s,baz=225,slow=37						
BRTR	**Keskin Array B**	**83.71**	**312**	P	**P**	**10 25 47.2**	**+0.8**
	0.9nm,0.7s,baz=122,slow=4.9,SNR=6.0						
TXAR	**Lajitas Array**	**94.72**	**53**	P	**P**	**10 26 37.4**	**-1.6**
	0.6nm,0.9s,baz=252,slow=2.5,SNR=4.0						

IDC 14 10:29:21.5±5.1, 12°.92N×90°.93W, h0km, mb3.1/3, mb1 3.5/5, mb1mx3.4/33, mbtmp3.2/5, ML3.1/2, MS2.7/1, Ms1 2.7/1, ms1mx2.3/12, Error ellipse: s-maj=81.1km s-min=40.7km az=136.0
GCG 14 10:29:28.6±0.7, 13°.34N×91°.27W, h18km±54km, MD3.8
SNET 14 10:29:34.1±0.8, 13°.41N×90°.67W, h18km±7km, ML3.1
ISC 14 10:29:27.1±1.4, 13°.17N±0°.10×90°.96W±0°.07, h29km, n18, σ1s05/20, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
PCG	**Pacaya**	**1.26**	**16**	eP	**Pb**	**10 29 50.6**	**+0.2**
FUG	**Fuego 3**	**1.28**	**5**	eP	**Pb**	**10 29 50.2**	**-0.4**
CEVE	**Cerro Verde**	**1.46**	**63**	eP	**Pb**	**10 29 54.3**	**+0.5**
CEVE				eS	**Sb**	**10 30 10.7**	**-1.4**
CEVE					IAML	10 30 25.3	
	comp=Z,665nm,0.3s						
RTR	**El Retiro**	**1.47**	**60**	eP	**Pb**	**10 29 53.9**	**0.0**
SNJE	**San Jose**	**1.49**	**62**	eP	**Pb**	**10 29 54.8**	**+0.5**
NBG	**Las Nubes**	**1.53**	**23**	eP	**Pb**	**10 29 55.8**	**+0.8**
STG3	**Santiaguito 3,**	**1.64**	**339**	eP	**Pn**	**10 29 53.4**	**-0.8**
SNET	**Serv Nac Est T**	**1.76**	**73**	eP	**Pb**	**10 29 58.7**	**-0.1**
SNET					IAML	10 30 32.8	
	comp=Z,246nm,0.3s						
UEES	**Universidad Ev**	**1.76**	**72**	eP	**Pb**	**10 29 59.4**	**+0.5**
UEES					IAML	10 30 33.3	
	comp=Z,257nm,0.3s						
APG	**El Apazote**	**1.89**	**15**	Pn	**Pb**	**10 29 59.5**	**-1.5**
	comp=Z,13nm,0.3s,baz=207,slow=14,SNR=94						
APG				Sn	**Sb**	**10 30 26.0**	**+1.6**
	comp=Z,18nm,0.3s,baz=301,slow=21,SNR=11						
MTO3	**Montecristo**	**1.98**	**52**	eP	**Pb**	**10 30 02.2**	**-0.4**
PAVA	**Las Pavas**	**2.04**	**74**	eP	**Pb**	**10 30 03.6**	**-0.1**
TECA	**Tecapa**	**2.42**	**82**	eP	**Pb**	**10 30 09.2**	**-0.9**
CMIG	**Matias Romero**	**5.43**	**316**	Pn	**Pn**	**10 30 45.2**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=157,slow=8.9,SNR=5.7						
CMIG				Sn	**Sn**	**10 31 46.7**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=135,slow=16,SNR=2.5						
TXAR	**Lajitas Array**	**19.94**	**326**	P	**P**	**10 33 57.6**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=156,slow=14,SNR=4.1						
TKL	**Tuckaleechee C**	**23.31**	**15**	LR	LR	10 43 06.8	
	comp=Z,21nm,21.1s,baz=298,slow=35						
NVAR	**Mina Array Bea**	**34.95**	**321**	P	**P**	**10 36 19.2**	**+2.3**
	comp=Z,0.5nm,0.7s,baz=132,slow=8.7,SNR=5.6						
YKA	**Yellowknife Ar**	**52.06**	**346**	P	**P**	**10 38 33.3**	**-0.7**
	comp=Z,0.1nm,0.6s,baz=155,slow=6.6,SNR=2.9						

IDC 14 10:40:16.8±1.0, 6°.47S×153°.72E, h0km, mb4.0/9, mb1 4.2/12, mb1mx4.1/30, mbtmp4.1/12, ML3.4/3, MS3.1/6, Ms1 3.1/6, ms1mx2.7/35, Error ellipse: s-maj=31.4km s-min=17.6km az=121.0
NEIC 14 10:40:23.6±1.7, 6°.48S±0°.05×153°.5E±0°.1, h43km±8km, mb4.1/8, Error ellipse: s-maj=18.9km s-min=2.6km az=109.0
ISC 14 10:40:21.8±0.8, 6°.43S±0°.06×153°.6E±0°.1, h29km, n29, σ0s96/34, mb4.0/14, MS2.9/5, New Britain region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
KRVT	**Keravat (AS076**	**2.62**	**323**	Pn	**Pn**	**10 41 02.5**	**+0.2**
	27nm,0.3s,baz=174,slow=1.6,SNR=31						
KRVT				Sn	**Sn**	**10 41 31.7**	**-1.5**
	100nm,0.3s,baz=91,slow=19,SNR=20						
RABL	**Rabaul**	**2.64**	**327**	Pn	**Pn**	**10 41 03.6**	**+1.1**
RABL				Sn	**Sn**	**10 41 33.4**	**-0.2**
PMG	**Port Moresby**	**7.03**	**245**	Pn	**Pn**	**10 42 03.3**	**+0.5**
	4.9nm,0.3s,baz=40,slow=11,SNR=38						
PMG				Sn	**Sn**	**10 43 23.8**	**+1.8**
	0.9nm,0.3s,baz=71,slow=16,SNR=4.2						
PMG				LR	LR	10 44 45.0	
	comp=Z,99nm,20.1s,baz=338,slow=38						
PMG	**Port Moresby**	**7.03**	**245**		**Pn**	**10 42 03.2**	**+0.3**
PMG					**Sn**	**10 43 19.9**	**-2.0**
CTA	**Charters Tower**	**15.34**	**207**	Pn	**Pn**	**10 43 57.1**	**+0.7**
	0.2nm,0.3s,baz=31,slow=13,SNR=2.7						
WR0	**Warramunga Arr**	**22.88**	**232**	P	**P**	**10 45 21.9**	**-1.4**
WR0				IAmb	IAmb	10 45 34.1	
	comp=Z,10nm,1.1s						
WB0	**Warramunga Arr**	**22.89**	**233**	P	**P**	**10 45 22.2**	**-1.2**
WB0				IAmb	IAmb	10 45 33.0	
	comp=Z,8.7nm,1.2s						
WRAB	**Tennant Creek**	**23.02**	**232**	P	**P**	**10 45 24.5**	**-0.2**
WRAB				IAmb	IAmb	10 45 41.2	
	comp=Z,3.9nm,0.7s						
WRA	**Warramunga Arr**	**23.03**	**232**	P	**P**	**10 45 23.9**	**-0.9**
	comp=Z,3.1nm,0.6s,baz=56,slow=11,SNR=5.6						
WRA				PcP	**PcP**	**10 49 14.0**	**0.0**
	comp=Z,0.8nm,0.9s,baz=65,slow=2.0,SNR=3.6						
WRA				LR	LR	10 53 28.2	
	comp=Z,48nm,22.0s,baz=5.0,slow=34						
AS31	**Alice Springs**	**25.54**	**226**	P	**P**	**10 45 46.9**	**-1.3**
ASAR	**Alice Springs**	**25.54**	**226**	P	**P**	**10 45 47.7**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=59,slow=9.6,SNR=36						
ASAR				PcP	**PcP**	**10 49 18.9**	**-0.5**
	comp=Z,0.2nm,0.8s,baz=52,slow=1.6,SNR=3.3						
ASAR				LR	LR	10 55 29.1	
	comp=Z,40nm,19.9s,baz=98,slow=36						
ASAR	**Alice Springs**	**25.54**	**226**	P	**P**	**10 45 47.1**	**-1.2**
STKA	**Stephens Creek**	**27.69**	**202**	LR	LR	10 56 35.0	
	comp=Z,39nm,20.4s,baz=25,slow=35						
FITZ	**Fitzroy Crossi**	**29.63**	**244**	P	**P**	**10 46 25.2**	**+0.3**
	comp=Z,2.4nm,0.6s,baz=89,slow=8.8,SNR=3.3						
FITZ				LR	LR	10 58 12.0	
	comp=Z,24nm,18.9s,baz=88,slow=36						
FITZ	**Fitzroy Crossi**	**29.63**	**244**	P	**P**	**10 46 25.2**	**+0.3**
KSRS	**Korea Array**	**49.80**	**333**	P	**P**	**10 49 12.1**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=151,slow=7.2,SNR=3.1						
KSRS				LR	LR	11 08 23.5	
	comp=Z,38nm,20.1s,baz=156,slow=34						
SONM	**Songino Array**	**68.12**	**328**	P	**P**	**10 51 19.7**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=147,slow=4.1,SNR=8.0						
SONM	**Songino Array**	**68.12**	**328**	P	**P**	**10 51 20.1**	**+0.9**
IMAR	**Indian Mountai**	**81.64**	**19**	P	**P**	**10 52 37.4**	**+0.5**
MK31	**Makanchi Array**	**82.07**	**319**	P	**P**	**10 52 41.3**	**+1.7**
MK31				IAmb	IAmb	10 52 59.2	
	comp=Z,1.3nm,1.1s						
MKAR	**Makanchi Array**	**82.07**	**319**	P	**P**	**10 52 39.9**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=91,slow=6.4,SNR=6.5						
ZALV	**Zalesovo Beam**	**82.94**	**326**	P	**P**	**10 52 43.5**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=118,slow=4.9,SNR=4.1						
ILAR	**Eielson Array**	**83.36**	**22**	P	**P**	**10 52 44.8**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=247,slow=5.6,SNR=9.5						
ILAR	**Eielson Array**	**83.36**	**22**	P	**P**	**10 52 45.4**	**-0.5**
QSPA	**South Pole Qui**	**83.54**	**180**	P	**P**	**10 52 46.9**	**-0.1**
QSPA				IAmb	IAmb	10 52 58.4	
	comp=Z,2.5nm,0.8s						
NVAR	**Mina Array Bea**	**92.46**	**52**	P	**P**	**10 53 30.7**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=259,slow=5.4,SNR=5.2						
TOA0	**Torodi Ar. Sit**	**151.54**	**286**		**PKiKP**	**11 00 13.7**	**-1.0**
TORD	**Torodi Ar. Bea**	**151.54**	**286**	PKPbc	**PKiKP**	**11 00 13.7**	**-1.0**
	comp=Z,3.2nm,0.7s,baz=70,slow=2.4,SNR=16						
TORD	**Torodi Ar. Bea**	**151.54**	**286**		**PKiKP**	**11 00 14.0**	**-0.8**

IDC 14 11:10:54.7±1.8, 0°.72N×100°.07E, h131km±13km, mb3.6/9, mb1 3.6/11, mb1mx3.4/42, mbtmp3.9/11, MS3.3/2, Ms1 3.3/2, ms1mx2.6/29, Error ellipse: s-maj=50.8km s-min=14.5km az=54.0
DJA 14 11:10:56.6±0.4, 1°N±2°×10°0E±°, h138km±5km, M3.9/13, MLv3.9/13
ISC 14 11:10:55.8±0.7, 0°.71N±0°.05×99°.76E±0°.06, h150km, n26, σ1s30/33, mb3.8/9, Northern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
BKNI	**Bangkinang**	**1.34**	**107**	P	**Pn**	**11 11 23.8**	**+0.1**
BKNI				S	**Sn**	**11 11 45.4**	**+0.3**
PBSI	**Pulau Batu**	**1.66**	**243**	P	**Pn**	**11 11 27.6**	**+0.5**
PBSI				S	**Sn**	**11 11 49.3**	**-1.8**
PDSI	**Padang**	**1.76**	**156**	P	**Pn**	**11 11 28.9**	**+0.6**
PDSI				S	**Sn**	**11 11 53.0**	**-0.2**
SISI	**Saibi**	**2.13**	**198**	P	**Pn**	**11 11 32.4**	**-0.1**
PSI	**Prapat**	**2.24**	**338**	P	**Pn**	**11 11 32.2**	**-1.7**
	2.4nm,0.3s,baz=135,slow=15,SNR=6.4						
PSI				S	**Sn**	**11 12 01.8**	**-1.5**
	1.8nm,0.3s,baz=72,slow=20,SNR=5.9						
KRJI	**Kerinci**	**3.26**	**149**	P	**Pn**	**11 11 48.1**	**+1.4**
KRJI				S	**Sn**	**11 12 27.0**	**+0.9**
KCSI	**Kotacane, Aceh**	**3.42**	**325**	P	**Pn**	**11 11 49.1**	**+0.4**
KCSI				S	**Sn**	**11 12 28.7**	**-0.9**
PPSI	**Pulau Pagai**	**3.46**	**176**	P	**Pn**	**11 11 47.7**	**-1.4**
TPTI		**3.61**	**315**	P	**Pn**	**11 11 52.4**	**+1.3**
TPTI				S	**Sn**	**11 12 33.2**	**-0.7**
SNSI	**Sinabang, Aceh**	**3.82**	**296**	P	**Pn**	**11 11 55.4**	**+1.6**
MLSI	**Meulaboh, Aceh**	**4.87**	**317**	P	**Pn**	**11 12 08.9**	**+1.4**
MLSI				S	**Sn**	**11 13 01.9**	**-1.5**
MNAI	**Manna**	**5.97**	**148**	S	**Sn**	**11 13 27.8**	**-1.9**
CMAR	**Chiang Mai Arr**	**17.65**	**357**	P	**P**	**11 14 50.0**	**-1.4**
	0.2nm,0.3s,baz=184,slow=11,SNR=3.8						
DAV	**Davao City (W)**	**26.51**	**76**	LR	LR	11 27 04.4	
	comp=Z,100nm,19.4s,baz=338,slow=37						
XAN	**Xi'an**	**34.25**	**14**	P	**P**	**11 17 27.5**	**0.0**
WRA	**Warramunga Arr**	**39.62**	**123**	P	**P**	**11 18 12.0**	**-1.1**
	0.5nm,0.4s,baz=304,slow=8.7,SNR=18						
ASAR	**Alice Springs**	**41.08**	**128**	P	**P**	**11 18 22.9**	**-2.2**
	0.4nm,0.8s,baz=298,slow=7.9,SNR=4.9						
KSH	**Kashi**	**44.31**	**333**	P	**P**	**11 18 51.3**	**+0.3**
KSH				pP	pP	11 19 29.6	+5.0
KSRS	**Korea Array**	**44.85**	**32**	P	**P**	**11 18 53.5**	**-1.7**
	0.5nm,0.5s,baz=221,slow=8.2,SNR=3.0						
SONM	**Songino Array**	**47.29**	**6**	P	**P**	**11 19 15.3**	**+1.0**
	0.8nm,0.5s,baz=190,slow=9.7,SNR=6.8						
SONM				PcP	**PcP**	**11 20 44.4**	**+1.5**
	0.2nm,0.5s,baz=194,slow=3.0,SNR=2.6						
MKAR	**Makanchi Array**	**48.37**	**344**	P	**P**	**11 19 23.9**	**+1.4**
	1.4nm,0.3s,baz=156,slow=8.1,SNR=43						
MJAR	**Matsushiro Arr**	**50.36**	**41**	LR	LR	11 41 44.9	
	comp=Z,20nm,18.2s,baz=225,slow=37						
KURBB	**Kurchatov Arra**	**52.90**	**343**	P	**P**	**11 19 57.8**	**+1.5**
	0.7nm,0.2s,baz=141,slow=7.7,SNR=2.4						
ZALV	**Zalesovo Beam**	**54.48**	**349**	P	**P**	**11 20 08.8**	**+1.1**
	3.2nm,0.4s,baz=178,slow=6.8,SNR=14						
FINES	**FINESS Array B**	**81.61**	**332**	P	**P**	**11 22 58.1**	**+1.3**
	1.5nm,0.8s,baz=108,slow=6.2,SNR=7.5						
ARCES	**ARCESS Array B**	**83.86**	**340**	P	**P**	**11 23 09.6**	**+1.3**
	1.1nm,0.4s,baz=104,slow=4.3,SNR=18						

KRNET 14 11:18:05.0±0.1, 40°.04N×72°.11E, h18km, mb2.4
ISU 14 11:18:04.0, 40°.20N×72°.10E, h5km
SOME 14 11:18:06.9, 40°.25N×71°.98E, h5km
NNC 14 11:18:10.4±2.0, 40°.36N×72°.05E, h0km, mb2.9, mpv2.6, Error ellipse: s-maj=14.9km s-min=7.0km az=2.0
ISC 14 11:18:05.2±2.6, 40°.2N±0°.1×71°.98E±0°.04, h7km±17km, n19, σ2s34/28, 14C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
FRG	**Fergana**	**0.53**	**344**	eP	Pg	11 18 10.6	-4.9
FRG				eS	**Sg**	**11 18 15.6**	**-6.8**
BTK	**Batken**	**0.90**	**260**	⇑iP	**Pn**	**11 18 23.9**	**-0.4**
	baz=71						
BTK				⇑iS	**Sn**	**11 18 37.7**	**0.0**
	baz=71						
BTK	**Batken**	**0.90**	**260**	eP	**Pn**	**11 18 24.0**	**-0.4**
BTK				eS	**Sn**	**11 18 37.5**	**-0.2**
ARSB	**Arslanbob**	**1.34**	**34**	⇑iP	**Pg**	**11 18 31.9**	**+1.0**
	baz=27						
ARSB				⇑iS	**Sg**	**11 18 51.7**	**+3.5**
	baz=27						
ARK	**Arkit**	**1.57**	**360**	⇑iP	**Pg**	**11 18 36.8**	**+1.5**
	baz=57						
ARK				⇑iS	**Sg**	**11 19 00.6**	**+4.9**
	baz=57						
AML	**Almayashu**	**2.31**	**34**	⇑iP	**Pb**	**11 18 47.1**	**-0.2**
	baz=29						
AML				⇑iS	**Sg**	**11 19 17.9**	**-1.4**
	baz=29						
IUG	**Iuzhnay**	**2.42**	**323**	eP	**Pg**	**11 18 51.4**	**-0.1**
	0.4nm,0.1s						
IUG				eS	**Sg**	**11 19 24.7**	**+1.9**
	5.8nm,0.1s						
IUG	**Iuzhnay**	**2.42**	**323**	Pg	**Pg**	**11 18 53.0**	**+1.5**
	0.8nm,0.3s						
IUG				Lg	Lg	11 19 25.7	
	11nm,0.3s						
JBG	**Jabagly**	**2.45**	**334**	Pg	**Pg**	**11 18 53.3**	**+1.2**
	3.3nm,0.3s						
JBG				Lg	Lg	11 19 26.2	
	6.6nm,0.4s						
MRKS	**Merke**	**2.69**	**20**	eP	**Pg**	**11 18 56.4**	**-0.3**
	2.1nm,0.1s						
MRKS				eS	**Sg**	**11 19 33.4**	**+1.9**
	3.0nm,0.2s						
MRKS	**Merke**	**2.69**	**20**	Pg	**Pg**	**11 18 56.2**	**-0.5**
	3.5nm,0.3s						
MRKS				Lg	Lg	11 19 31.6	
	3.4nm,0.4s						
UCH	**Uchtor**	**2.77**	**43**	⇓iP	**Pb**	**11 18 53.1**	**-2.1**
	baz=39						
UCH				⇓iS	**Sb**	**11 19 28.2**	**-1.3**
	baz=39						
AAK	**Ala-Archa**	**3.07**	**37**	⇑iP	**Pb**	**11 18 57.3**	**-2.8**
	baz=34						
AAK				⇑iS	**Sb**	**11 19 35.6**	**-2.2**
	baz=34						
AAK	**Ala-Archa**	**3.07**	**37**	Pg	**Pg**	**11 19 04.1**	**+0.2**
	0.9nm,0.6s						
AAK				Lg	Lg	11 19 43.7	
	1.5nm,0.5s						
KK31	**Karatay Array**	**3.08**	**340**	⇑Pg	**Pg**	**11 19 04.1**	**0.0**
	0.3nm,0.3s,baz=149,slow=16,SNR=4.1						
KK31				⇓Lg	Lg	11 19 41.8	
	1.3nm,0.5s,baz=160,slow=28,SNR=7.8						
BRLS	**Boroldav**	**3.23**	**331**	eP	**Pb**	**11 19 04.3**	**+1.5**
	0.2nm,0.0s						
BRLS				eS	**Sg**	**11 19 46.8**	**-2.1**
	1.6nm,0.2s						
BRLS	**Boroldav**	**3.23**	**331**	Pg	**Pg**	**11 19 05.6**	**-1.4**
	0.9nm,0.4s						
BRLS				Lg	Lg	11 19 47.3	
	2.0nm,0.4s						
MAKZ	**Makanchi**	**9.80**	**45**	⇑Pn	Pn	11 20 33.7	+7.3
	0.3nm,0.5s						
MAKZ				⇑Lg	Lg	11 21 07.4	
	0.5nm,0.6s						
MK31	**Makanchi Array**	**9.96**	**45**	Pn	**Pn**	**11 20 30.9**	**+2.3**
	0.1nm,0.3s,baz=55,slow=17,SNR=8.7						
MK31				⇑Lg	Lg	11 21 04.5	
	0.4nm,0.3s,baz=59,slow=36,SNR=4.1						

IDC 14 11:21:46.3±0.8, 51°.26N×178°.62E, h0km, mb4.0/18, mb1 4.1/19, mb1mx3.9/61, mbtmp4.0/19, ML4.3/1, Error ellipse: s-maj=24.2km s-min=14.4km az=174.0
NEIC 14 11:21:51.5±1.9, 51°.2N±0°.1×178°.59E±0°.08, h35km±2km, mb4.2/23, ML3.6(AEIC), Error ellipse: s-maj=20.4km s-min=8.9km az=179.0
AEIC 14 11:21:51.2±2.5, 51°.6N±0°.1×178°.61E±0°.08, h12km±5km, Error ellipse: s-maj=20.0km s-min=7.0km az=184.0
ISC 14 11:21:52.7±1.5, 51°.3N±0°.1×178°.61E±0°.05, h46km±12km, n82, σ0s94/82, mb4.2/25, Rat Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
TASE	**Tanaga Southea**	**2.17**	**74**		**Pn**	**11 22 26.0**	**-0.4**
TAFP	**Tanaga Falls P**	**2.22**	**72**		**Pn**	**11 22 26.4**	**-0.7**
TAFP					**Sn**	**11 22 54.6**	**+1.3**
TAPA	**Tanaga Point A**	**2.30**	**75**		**Pn**	**11 22 27.9**	**-0.3**
TAPA					**Sn**	**11 22 56.1**	**+0.8**
KIMD	**Kanaga Island**	**2.65**	**78**		**Pn**	**11 22 33.0**	**+0.1**
KIKV	**Kanaga Island**	**2.71**	**75**		**Pn**	**11 22 33.7**	**0.0**
KIKV					**Sn**	**11 23 06.8**	**+1.6**
KIWB	**Kanaga Island**	**2.71**	**76**		**Pn**	**11 22 33.3**	**-0.5**
KIWB				Sn	**Sn**	**11 23 03.9**	**-1.4**
ADK	**Adak**	**3.00**	**76**		**Pn**	**11 22 36.8**	**-0.9**
ADK				Sn	**Sn**	**11 23 12.9**	**+0.4**
SMY	**Shemya**	**3.15**	**299**		**Pn**	**11 22 39.6**	**-0.1**
GSTD	**Great Sitkin T**	**3.36**	**74**		**Pn**	**11 22 42.9**	**+0.1**
GSTD					**Sn**	**11 23 22.4**	**+0.9**
GSMY	**Great Sitkin M**	**3.41**	**75**		**Pn**	**11 22 43.1**	**-0.4**
GSTR	**Great Sitkin T**	**3.42**	**74**	Pn	**Pn**	**11 22 41.1**	**-2.5**
KOWE	**Korovin West**	**4.57**	**73**		**Pn**	**11 22 59.9**	**+0.6**

ATKA	Atka Island	4.57	75		Pn	11 22 59.3	0.0
ATKA	Atka Island	4.57	75		Sn	11 23 53.7	+2.7
KOKL	Mount Kliuchef	4.59	74		Pn	11 22 59.6	+0.1
NIKH	Nikolski High	7.91	73	Pn	Pn	11 23 44.9	-0.1
UNV	Unalaska Valle	9.43	68	Pn	Pn	11 24 06.1	+0.2
PETK	Petropavlovsk-	12.95	286	Pn	Pn	11 24 55.8	+1.9
	0.1nm,0.3s,baz=100,slow=17,SNR=2.0						
PETK	Petropavlovsk-	12.95	286		Pn	11 24 52.2	-1.8
GAMB	Gambell	13.55	19	Pn	Pn	11 25 02.8	+0.8
ANM	Nome	15.74	26	Pn	Pn	11 25 30.9	0.0
OHAK	Old Harbor	17.39	59	Pn	Pn	11 25 49.7	-2.1
KDAK	Kodiak Island	17.85	57	P	Pn	11 25 55.1	-2.3
	1.0nm,0.3s,baz=212,slow=2.7,SNR=15						
KDAK	Kodiak Island	17.85	57	P	Pn	11 25 55.5	-1.9
BILL	Bilibino	17.87	345	P	P	11 25 58.2	+0.4
RSO	Redoubt South	18.38	49	P	Pn	11 26 03.6	-0.5
SKT	Skwentna	19.42	45	P	P	11 26 14.8	-0.1
SKT				IAmb	IAmb	11 26 21.0	
	comp=Z,21nm,1.5s						
SUA	Susitna One	19.61	47	P	P	11 26 15.3	-1.8
SUA				IAmb	IAmb	11 26 32.2	
	comp=Z,18nm,1.3s						
KTH	Kantishna Hill	20.26	41	P	P	11 26 24.2	+0.2
KTH				IAmb	IAmb	11 26 26.0	
	comp=Z,9.0nm,0.9s						
IMAR	Indian Mountai	20.34	33	P	Pn	11 26 25.8	-1.4
RND	Reindeer	21.07	42	P	P	11 26 32.9	+0.1
RND				IAmb	IAmb	11 26 38.8	
	comp=Z,7.5nm,0.8s						
DHY	Denali Highway	21.60	44	P	P	11 26 38.2	-0.3
DHY				IAmb	IAmb	11 26 43.4	
	comp=Z,14nm,1.2s						
WRH	Wood River Hil	21.77	40	P	P	11 26 38.9	-1.3
ILAR	Eielson Array	22.36	40	P	P	11 26 44.2	-2.3
	comp=Z,1.0nm,0.8s,baz=239,slow=7.9,SNR=14						
ILAR	Eielson Array	22.36	40	P	P	11 26 45.0	-1.5
SCRK	Sand Creek	23.31	43	P	P	11 26 55.4	-1.0
BCAR	Beaver Creek A	24.07	45	P	P	11 27 03.0	-0.4
BMAR	Burnt Mountain	24.23	34	P	P	11 27 04.8	-0.1
EGAK	Eagle	24.70	41	P	P	11 27 08.7	-0.5
EGAK				IAmb	IAmb	11 27 11.0	
	comp=Z,7.3nm,0.7s						
DAWY	Dawson	25.30	44	P	P	11 27 14.9	+0.3
DAWY				IAmb	IAmb	11 27 19.0	
	comp=Z,5.6nm,0.7s						
INK	Inuvik	28.48	35	P	P	11 27 43.0	0.0
	comp=Z,1.1nm,0.9s,baz=274,slow=10,SNR=6.3						
INK	Inuvik	28.48	35	P	P	11 27 42.9	-0.2
KLR	Kul'dur	29.64	285	P	P	11 27 54.2	+0.7
	comp=Z,2.8nm,0.6s,baz=73,slow=7.9,SNR=15						
H11N2	WAKE ISLAND Hy	32.80	201	T	T	12 03 59.5	
	baz=10,slow=74						
H11N3	WAKE ISLAND Hy	32.81	201	T	T	12 03 22.4	
	baz=10,slow=74						
H11N1	WAKE ISLAND Hy	32.82	201	T	T	12 03 51.3	
	baz=10						
H11S1	WAKE ISLAND Hy	34.02	200	T	T	12 04 57.0	
	baz=19						
H11S3	WAKE ISLAND Hy	34.04	200	T	T	12 05 00.4	
	baz=19						
H11S2	WAKE ISLAND Hy	34.04	200	T	T	12 05 00.6	
	baz=19						
YKA	Yellowknife Ar	36.48	46	P	P	11 28 52.6	-0.4
	comp=Z,1.3nm,0.5s,baz=281,slow=8.1,SNR=21						
YKA				PcP	PcP	11 31 15.2	-0.6
	comp=Z,0.1nm,0.4s,baz=292,slow=4.1,SNR=4.0						
NVAR	Mina Array Bea	45.18	81	P	P	11 30 05.8	+0.7
	comp=Z,0.3nm,0.6s,baz=294,slow=6.6,SNR=3.3						
NVAR	Mina Array Bea	45.18	81	P	P	11 30 05.2	+0.1
SONM	Songino Array	45.23	295	P	P	11 30 04.5	-0.9
RLMT	Red Lodge	46.69	68	P	P	11 30 16.7	-0.2
RLMT				IAmb	IAmb	11 30 20.6	
	comp=Z,4.0nm,1.1s						
PDAR	Pinedale Array	47.89	71	P	P	11 30 26.4	+0.1
	comp=Z,0.8nm,0.5s,baz=327,slow=3.4,SNR=11						
PDAR	Pinedale Array	47.89	71	P	P	11 30 25.8	-0.6
SPA0	Spitsbergen Ar	50.36	355	P	P	11 30 44.7	+0.3
SPITS	Spitsbergen Ar	50.36	355	P	P	11 30 44.0	-0.5
	comp=Z,3.5nm,0.5s,baz=68,slow=4.9,SNR=7.9						
ZALV	Zalesovo Beam	52.91	312	P	P	11 31 03.9	+0.1
KURK	Kurchatov	57.90	312	P	P	11 31 40.4	+0.7
KURBB	Kurchatov Arra	58.01	312	P	P	11 31 40.5	0.0
	comp=Z,2.5nm,0.5s,baz=41,slow=6.7,SNR=8.5						
MK31	Makanchi Array	58.81	307	P	P	11 31 46.3	+0.2
MK31				IAmb	IAmb	11 31 56.6	
	comp=Z,2.1nm,1.2s						
MKAR	Makanchi Array	58.81	307	P	P	11 31 46.4	+0.2
	comp=Z,0.7nm,0.4s,baz=55,slow=6.4,SNR=30						
MKAR	Makanchi Array	58.81	307	P	P	11 31 46.2	+0.1
BVAR	Borovoye Array	59.91	318	P	P	11 31 54.7	+1.2
	comp=Z,2.9nm,0.6s,baz=67,slow=5.9,SNR=11						
TXAR	Lajitas Array	60.28	79	P	P	11 31 57.2	+0.6
	comp=Z,0.4nm,0.6s,baz=304,slow=5.0,SNR=7.3						
TXAR	Lajitas Array	60.28	79	P	P	11 31 57.0	+0.4
ARU	Arti	61.82	327	P	P	11 32 06.5	0.0
	comp=Z,1.0nm,0.3s,baz=4.0,slow=8.8,SNR=5.0						
ARU	Arti	61.82	327	P	P	11 32 06.8	+0.3
FINES	FINESS Array B	65.51	346	P	P	11 32 30.2	-0.4
	comp=Z,2.5nm,0.9s,baz=18,slow=8.0,SNR=5.2						
FINES	FINESS Array B	65.51	346	P	P	11 32 31.0	+0.3
AAK	Ala-Archa	65.67	308	P	P	11 32 32.2	-0.1
	comp=Z,1.3nm,0.6s,baz=164,slow=3.1,SNR=5.0						
AAK	Ala-Archa	65.67	308	P	P	11 32 32.5	+0.2
AAK				IAmb	IAmb	11 32 34.3	
	comp=Z,1.8nm,0.8s						
AKTO	Aktyubinsk	66.81	323	P	P	11 32 40.0	+0.8
	comp=Z,0.9nm,0.3s,baz=68,slow=12,SNR=4.7						
ABKAR	Akbulak array	67.02	321	P	P	11 32 41.9	+1.3
KK31	Karatay Array	67.24	311	P	P	11 32 42.7	+0.6
KK31				IAmb	IAmb	11 32 43.9	
	comp=Z,1.6nm,0.7s						
KKAR	Karatay Array	67.24	311	P	P	11 32 42.9	+0.8
AKASG	Malin Array Be	75.13	340	P	P	11 33 29.2	-0.4
	comp=Z,0.8nm,0.4s,baz=19,slow=6.1,SNR=4.4						
AKASG	Malin Array Be	75.13	340	P	P	11 33 30.1	+0.5
WRA	Warramunga Arr	80.83	222	P	P	11 34 01.4	-0.1
	comp=Z,0.2nm,0.4s,baz=30,slow=5.7,SNR=5.2						
ASAR	Alice Springs	84.33	220	P	P	11 34 18.9	-0.8
	comp=Z,0.3nm,0.7s,baz=16,slow=4.9,SNR=4.3						
ASAR	Alice Springs	84.33	220	P	P	11 34 19.6	-0.1

ANF **14** *11:21:56.5±0.3, 32.84N×116.12W, h22km±3km, ML2.2/12, Error ellipse: s-maj=3.0km s-min=2.0km az=4.0*
SCEDC **14** *11:21:58.4, 32.84N×116.14W, h8km*
MEX **14** *11:21:59.4±0.3, 33.03N×116.73W, h36km±36km, MD3.6*
ISC 14 11:21:56.5±1.0, 32.85N±0.03×116.12W±0.03, h18km±4km, n15, σ0.72/28, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKP	In-Ko-Pah, Jac	0.20	178	P	Pg	11 22 02.4	+0.9
	baz=352,SNR=129						
IKP				S	Sg	11 22 05.4	+0.5
	baz=352						
MONP2	Monument Peak	0.26	279	P	Pg	11 22 03.3	+0.8
	baz=102,SNR=210						
MONP2				S	Sg	11 22 06.7	0.0
	baz=102						
SWSC	Sam W. Stewart	0.28	70	P	Pb	11 22 04.2	+1.1
	baz=250,SNR=98						
SWSC				S	Sb	11 22 08.6	+1.2
	baz=250						
TJIG	Tijuana	0.63	229	iP	Pn	11 22 09.6	-0.9
TJIG				eS	Sg	11 22 17.5	+0.2
CBX	Cerro Bola	0.71	221	eP	Pn	11 22 11.2	-0.5
CBX				iS	Sn	11 22 20.4	-1.8
PFO	Pinyon Flats O	0.81	339	P	Pn	11 22 13.2	0.0
	baz=161,SNR=22						
PFO				S	Sg	11 22 23.3	0.0
	baz=161						
109C	Camp Elliot, M	0.83	273	P	Pn	11 22 13.0	-0.3
	baz=93,SNR=14						
109C				S	Sg	11 22 23.6	-0.2
	baz=93						
BC3	Big Chuckawall	0.98	35	P	Pg	11 22 15.8	+0.2
	baz=215,SNR=20						
BC3				S	Sg	11 22 28.2	-0.2
	baz=215						
GLA	Glamis	1.10	79	P	Pg	11 22 17.4	-0.5
	baz=260						
GLA				S	Sb	11 22 30.9	-0.3
	baz=260						
BELC	Belle Mtn. Jos	1.15	5	P	Pg	11 22 18.4	-0.4
	baz=186,SNR=15						
BELC				S	Sb	11 22 32.9	+0.2
	baz=186						
MURC	Murrieta	1.17	310	Pb	Pg	11 22 19.6	+0.3
	baz=130,SNR=11						
MURC				Sb	Sg	11 22 34.1	-0.5
	baz=130						
BBRC	Big Bear Solar	1.56	335	Pb	Pb	11 22 25.2	+0.2
	baz=155,SNR=12						
BBRC				Sb	Sg	11 22 46.2	-0.7
	baz=155						
BFSC	Mount Baldy Ra	1.89	318	Sb	Sb	11 22 55.3	+1.4
	baz=137						
SPX	San Pedro Mart	1.89	163	eP	Pg	11 22 32.6	-0.3
SPX				iS	Sg	11 22 57.4	-0.2
CIS	Catalina Islan	2.00	287	Sb	Sb	11 22 57.4	+0.3
	baz=106						

BJI **14** *11:21:53.0±0.0, 36.03N×82.39E, h8km, ML3.7/6*
NNC **14** *11:21:53.4±7.9, 36.07N×80.00E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=92.6km s-min=56.6km az=81.0*
IDC **14** *11:21:56.4±2.2, 36.38N×82.34E, h0km, mb3.6/4, mb1 3.8/9, mb1mx3.5/63, mbtmp3.7/9, ML3.3/5, MS2.7/2, Ms1 2.7/2, ms1mx2.4/37, Error ellipse: s-maj=35.1km s-min=28.1km az=37.0*
ISC 14 11:21:57.5±1.7, 36.3N±0.1×82.4E±0.1, h10km, n16, σ2.55/18, mb3.7/4, 5C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	7.38	343	⇑Pn	Pn	11 23 43.3	-2.1
	3.3nm,0.5s						
PDGK				⇑Sn	Sn	11 25 07.2	-2.0
	20nm,0.7s						
PDGK				⇑Lg	Lg	11 25 45.0	
	38nm,1.0s						
MDOK	Medeo	8.01	331	Pg	Pb	11 24 10.1	-6.3
	8.1nm,1.1s						
MDOK				Lg	Lg	11 25 50.8	
	13nm,0.7s						
WMQ	Urumqi	8.55	27	eP	Pn	11 24 03.5	+2.1
WMQ				S	Sn	11 25 37.3	-0.7
WMQ				smax	smax		
	comp=N,12nm,0.7s						
WMQ				smax	smax		
	comp=E,10.0nm,1.1s						
AAK	Ala-Archa	8.80	319	Pn	Pn	11 24 06.2	+1.3
	0.1nm,0.3s,baz=148,slow=17,SNR=2.2						
AAK				Lg	Lg	11 26 30.5	
	0.3nm,0.3s,baz=198,slow=20,SNR=3.1						
LSA	Lhasa	9.86	129	P	Pn	11 24 45.0	+25
MK31	Makanchi Array	10.50	360	⇑Pn	Pn	11 24 27.9	-0.2
	1.9nm,0.5s,baz=194,slow=13,SNR=57						
MK31				⇓Sn	Sn	11 26 30.2	+4.5
	1.2nm,0.6s,baz=194,slow=24						
MKAR	Makanchi Array	10.50	360	Pn	Pn	11 24 28.1	+0.1
	0.9nm,0.3s,baz=194,slow=13,SNR=39						
MKAR				Sn	Sn	11 26 21.6	-4.1
	0.1nm,0.3s,baz=178,slow=26,SNR=2.7						
MKAR				Lg	Lg	11 27 30.1	
	baz=165,slow=24,SNR=2.2						
MKAR				LR	LR	11 28 48.8	
	comp=Z,25nm,19.9s,baz=175,slow=40						
MAKZ	Makanchi	10.52	358	⇓Pn	Pn	11 24 28.0	-0.3
	4.1nm,0.4s						
MAKZ				⇑Sn	Sn	11 26 31.3	+5.1
	1.7nm,0.6s						
KURBB	Kurchatov Arra	14.60	350	Pn	Pn	11 25 20.8	-3.2
	0.0nm,0.3s,baz=163,slow=9.7,SNR=3.7						
ZALV	Zalesovo Beam	17.75	5	Pn	Pn	11 26 01.6	-2.8
	0.2nm,0.3s,baz=186,slow=13,SNR=4.0						
BVAR	Borovoye Array	18.75	337	P	Pn	11 26 16.5	-0.3
	0.9nm,0.3s,baz=129,slow=12,SNR=11						
SONM	Songino Array	21.14	49	P	P	11 26 42.3	-0.3
	2.7nm,0.8s,baz=240,slow=11,SNR=16						
AKTO	Aktyubinsk	22.54	316	LR	LR	11 36 49.9	
	comp=Z,36nm,20.2s,baz=83,slow=40						
FINES	FINESS Array B	42.94	324	P	P	11 29 56.0	-0.2
	2.6nm,1.1s,baz=107,slow=9.3,SNR=4.0						
NOA	NORSAR Array B	50.09	323	P	P	11 30 51.6	-0.8
	0.5nm,0.6s,baz=86,slow=7.4,SNR=3.2						
YKA	Yellowknife Ar	80.61	8	P	P	11 34 10.1	+0.2
	0.2nm,0.7s,baz=343,slow=5.2,SNR=4.2						

IDC 14 12:03:24.6±1.6, 16.05S×175.98W, h331km±69km, mb3.3/3, mb1 3.6/4, mb1mx3.1/39, mbtmp4.0/4, Error ellipse: s-maj=294.2km s-min=22.3km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.58	63	P	Pn	12 04 40.1	+1.2
	8.4nm,0.3s,baz=249,slow=8.6,SNR=21						
AFI				S	S	12 05 38.4	-0.4
	6.1nm,0.3s,baz=181,slow=22,SNR=4.4						
WRA	Warramunga Arr	47.28	258	P	P	12 11 25.7	-0.4
	1.2nm,0.5s,baz=91,slow=7.2,SNR=36						
ASAR	Alice Springs	47.55	252	P	P	12 11 27.9	-0.3
	2.1nm,0.3s,baz=89,slow=7.7,SNR=100						
ILAR	Eielson Array	83.58	12	P	P	12 15 14.9	-0.9
	0.3nm,0.6s,baz=208,slow=5.9,SNR=6.5						
BRTR	Keskin Array B	145.04	318	PKPbc	PKPab	12 22 24.2	+0.3
	0.3nm,0.5s,baz=77,slow=5.2,SNR=4.4						

IDC **14** *12:06:11.9±1.0, 36.11N×83.03E, h0km, mb3.7/7, mb1 3.9/12, mb1mx3.6/53, mbtmp3.7/12, ML3.0/5, MS3.0/5, Ms1 3.0/5, ms1mx2.7/40, Error ellipse: s-maj=47.4km s-min=15.1km az=59.0*
BJI **14** *12:06:15.0±0.0, 36.11N×82.36E, h9km, mb4.0/3, ML3.8/7, Ms3.6/5, Ms7 3.6/3*
NNC **14** *12:06:18.2±2.4, 36.51N×83.06E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=28.5km s-min=17.5km az=67.0*
ISC 14 12:06:13.7±0.7, 36.12N±0.07×82.9E±0.1, h10km, n29, σ1.50/28, mb3.8/7, MS2.9/3, 3C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	7.67	341	⇑Pn	Pn	12 08 06.2	+0.6
	6.7nm,0.9s						
PDGK				⇑Sn	Sn	12 09 32.1	-0.4
	30nm,0.8s						
PDGK				⇓Lg	Lg	12 10 14.1	
	23nm,0.8s						
DANN	Dangsing	7.78	175	eP	Pn	12 08 08.5	+1.2
	9.2nm,0.5s						
KOLN	Koldanda	8.35	176	eP	Pn	12 08 14.9	0.0
	3.6nm,0.3s						
MDOK	Medeo	8.37	329	Pg	Pg	12 08 45.7	-8.1
	5.6nm,0.7s						
MDOK				Lg	Lg	12 10 36.1	
	29nm,1.0s						
WMQ	Urumqi	8.52	24	eP	Pn	12 08 24.1	+7.0
WMQ				smax	smax		
	comp=N,10.0nm,0.9s						
WMQ				smax	smax		
	comp=E,13nm,1.3s						
GUN	Gumba	8.56	162	eP	Pn	12 08 19.2	+1.2
	8.5nm,0.4s						
PKIN	Phulchoki	8.77	165	eP	Pn	12 08 21.8	+0.9
	8.1nm,0.5s						
PKI	Pulchoki	8.78	165	eP	Pn	12 08 21.7	+0.7
	9.6nm,0.5s						
JIRN	Jiri	8.88	161	eP	Pn	12 08 24.2	+1.8
	18nm,0.5s						
AAK	Ala-Archa	9.21	317	Pn	Pn	12 08 27.7	+1.0
	0.1nm,0.3s,baz=135,slow=8.6,SNR=3.3						
AAK				Lg	Lg	12 10 53.4	
	0.2nm,0.3s,baz=255,slow=8.1,SNR=2.5						
TAPN	Taplejung	9.64	154	eP	Pn	12 08 33.5	+0.7
RAMN	Ramite	9.66	160	eP	Pn	12 08 32.1	-1.0
	23nm,0.8s						
MK31	Makanchi Array	10.68	358	⇓Pn	Pn	12 08 47.6	+1.0
	2.7nm,0.6s,baz=184,slow=12,SNR=69						
MK31				⇓Sn	Sn	12 10 43.3	-2.9
	1.9nm,0.7s,baz=186,slow=22,SNR=4.5						
MKAR	Makanchi Array	10.68	358	Pn	Pn	12 08 47.6	+1.0
	0.5nm,0.3s,baz=184,slow=14,SNR=27						
MKAR				Sn	Sn	12 10 46.8	+0.6
	0.2nm,0.3s,baz=185,slow=22,SNR=3.7						
MKAR				LR	LR	12 13 51.6	
	comp=Z,44nm,18.3s,baz=168,slow=43						
MAKZ	Makanchi	10.70	356	⇓Pn	Pn	12 08 48.1	+1.2
	4.9nm,0.6s						
MAKZ				⇑Sn	Sn	12 10 45.3	-1.5
	1.7nm,0.6s						
KURBB	Kurchatov Arra	14.84	349	Pn	Pn	12 09 40.7	-2.7
	0.0nm,0.3s,baz=171,slow=13,SNR=2.7						
NGP	Nagpur	15.30	194	eP	Pn	12 09 46.0	-3.7
ZALV	Zalesovo Beam	17.88	4	P	Pn	12 10 22.1	-0.2
	0.1nm,0.3s,baz=187,slow=13,SNR=5.6						
BVAR	Borovoye Array	19.07	336	P	Pn	12 10 37.3	+0.5
	0.3nm,0.3s,baz=123,slow=10,SNR=7.3						
GEYT	Alibeck	19.88	283	LR	LR	12 19 42.5	
	comp=Z,34nm,18.2s,baz=35,slow=41						
CMAR	Chiang Mai Arr	22.57	137	P	P	12 11 14.7	+0.5
	0.8nm,0.3s,baz=316,slow=11,SNR=4.5						
AKTO	Aktyubinsk	22.95	316	P	P	12 11 19.9	+1.9
	1.0nm,0.5s,baz=101,slow=10,SNR=3.6						
AKTO				LR	LR	12 20 37.4	
	comp=Z,37nm,18.3s,baz=124,slow=38						
PALK	Pallekele	28.79	185	LR	LR	12 23 57.4	
	comp=Z,49nm,18.6s,baz=232,slow=37						
KSRS	Korea Array	35.80	74	LR	LR	12 29 57.8	
	comp=Z,18nm,18.0s,baz=65,slow=40						
FINES	FINESS Array B	43.33	324	P	P	12 14 16.9	+1.4
	2.5nm,1.0s,baz=125,slow=12,SNR=2.0						
NOA	NORSAR Array B	50.48	323	P	P	12 15 09.8	-1.7
	1.6nm,0.9s,baz=86,slow=7.6,SNR=3.1						
WRA	Warramunga Arr	73.97	130	P	P	12 17 48.6	-0.9
	1.0nm,0.8s,baz=324,slow=5.9,SNR=5.8						
ASAR	Alice Springs	76.52	133	P	P	12 18 03.3	-0.8
	0.6nm,0.7s,baz=318,slow=6.0,SNR=9.6						
YKA	Yellowknife Ar	80.72	8	P	P	12 18 26.0	-0.6
	0.3nm,0.7s,baz=342,slow=5.0,SNR=5.7						

VIE 14 12:07:32.6±0.1, 46.72N×14.59E, h0km, ml0.8/4, Error ellipse: s-maj=1.6km s-min=0.9km az=5.0 7 km NNW of Vlkermarkt Suspected Mining explosion., Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBKA	Obir	0.21	188	iPg	Pg	12 07 36.7	+0.1
	0.8nm,0.1s						
OBKA				eSg	Sg	12 07 39.7	+0.4
	1.5nm,0.1s						
SOKA	Soboth	0.31	97	iPg	Pg	12 07 38.6	+0.1
	0.4nm,0.1s						
SOKA				iSg	Sg	12 07 43.0	+0.5
	1.8nm,0.1s						
MYKA	Terra Mystica	0.66	263	ePg	Pg	12 07 45.5	+0.2
	0.1nm,0.1s						
MYKA				eSg	Sg	12 07 54.7	+0.9
	0.3nm,0.1s						
KBA	Koelnbreinsper	0.93	293	ePg	Pg	12 07 50.5	0.0
	0.1nm,0.1s						
KBA				eSg	Sg	12 08 03.1	+0.6
	0.7nm,0.2s						

BUC 14 12:08:45.4±0.3, 46.33N×23.13E, h2km, ml1.6/6, 22C-8D, Error ellipse: s-maj=2.2km s-min=2.1km az=163.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRGR		0.55	329	⇑P	Pg	12 08 55.4	-0.5
DRGR				⇑S	Sg	12 09 03.2	+0.1
DRGR		0.55	329	⇑P	Pg	12 08 55.4	-0.5
DRGR				⇑S	Sg	12 09 03.2	+0.1
GZR	Gura Zlata	0.96	195	⇓P	Pg	12 09 04.0	+0.1
GZR				⇓S	Sb	12 09 18.0	0.0
GZR	Gura Zlata	0.96	195	⇓P	Pg	12 09 04.0	+0.1
GZR				⇓S	Sb	12 09 18.0	0.0
SIRR	Siria	1.02	267	⇑P	Pn	12 09 04.1	-0.8
SIRR				⇓S	Sb	12 09 19.9	+0.3
SIRR	Siria	1.02	267	⇑P	Pn	12 09 04.1	-0.8
SIRR				⇓S	Sb	12 09 19.9	+0.3
BZS	Buzias	1.27	237	⇑P	Pb	12 09 08.9	-0.8
BZS				⇑S	Sb	12 09 27.0	+0.2
BZS	Buzias	1.27	237	⇑P	Pb	12 09 08.9	-0.8
BZS				⇑S	Sb	12 09 27.0	+0.2
ARR	Arges	1.42	132	⇑S	Sn	12 09 32.0	+0.3
ARR	Arges	1.42	132	⇑S	Sn	12 09 32.0	+0.3
VOIR		1.61	123	⇑P	Pn	12 09 14.3	-0.6
VOIR				⇑S	Sg	12 09 37.0	-0.1
VOIR		1.61	123	⇑P	Pn	12 09 14.3	-0.6
VOIR				⇑S	Sg	12 09 37.0	-0.1
MDVR	Moldovita	1.84	213	⇑P	Pn	12 09 18.6	+0.6
MDVR				⇑S	Sb	12 09 42.9	-0.3
MDVR	Moldovita	1.84	213	⇑P	Pn	12 09 18.6	+0.6
MDVR				⇑S	Sb	12 09 42.9	-0.3
BURAR	Bucovina Array	1.93	47	⇑P	Pn	12 09 20.3	+1.0
BURAR				⇓S	Sb	12 09 46.5	+0.7
BURAR	Bucovina Array	1.93	47	⇑P	Pn	12 09 20.3	+1.0
BURAR				⇓S	Sb	12 09 46.5	+0.7

IDC **14** *12:12:41.1±0.5, 13.39N×144.53E, h114km±4km, mb3.8/22, mb1 3.9/22, mb1mx3.8/49, mbtmp4.2/22, Error ellipse: s-maj=19.1km s-min=9.3km az=88.0*
NEIC **14** *12:12:41.4±1.4, 13.31N±0.07×144.4E±0.1, h116km±4km, mb4.5/38, Error ellipse: s-maj=14.6km s-min=10.3km az=85.0*
ISC 14 12:12:42.5±0.4, 13.31N±0.05×144.57E±0.08, h129km, n76, σ1.26/79, mb4.4/38, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.40	46	P	Pn	12 12 59.1	-1.9
	2µm,0.3s,baz=28,slow=2.2,SNR=693						
GUMO				S	Sn	12 13 11.8	-3.1
	2µm,0.3s,baz=280,slow=23,SNR=41						
GUMO	Guam	0.40	46		Pn	12 12 59.2	-1.8
GUMO				Sn	Sn	12 13 11.6	-3.4
ANA2	Anatahan	3.21	20	Pn	Pn	12 13 32.9	+1.0
ANA2				Sn	Sn	12 14 11.8	+1.7
SARN	Sarigan	3.57	19	Pn	Pn	12 13 34.9	-1.7
SARN				Sn	Sn	12 14 20.2	+1.7
PATS	Pohnpei	14.97	114	Pn	Pn	12 16 08.5	+0.8
PATS				Sn	Sn	12 18 48.0	-5.7
RABL	Rabaul	18.95	156	P	P	12 16 55.1	+1.3
FAKI	Fak Fak	20.24	218	P	P	12 17 08.5	+0.7
H11N1	WAKE ISLAND Hy	22.31	70	T	T	12 40 52.3	
	baz=256,slow=75,SNR=12						
H11N2	WAKE ISLAND Hy	22.32	70	T	T	12 40 55.3	
	baz=256,slow=75,SNR=6.6						
H11N3	WAKE ISLAND Hy	22.33	70	T	T	12 40 53.1	
	baz=256,slow=75,SNR=9.9						
PMG	Port Moresby	22.71	173	P	P	12 17 33.9	+0.3
	3.3nm,0.5s,baz=216,slow=1.4,SNR=3.8						
PMG	Port Moresby	22.71	173	P	P	12 17 34.2	+0.6
MJAR	Matsushiro Arr	23.83	347	P	P	12 17 43.6	-0.2
	2.8nm,0.7s,baz=145,slow=9.2,SNR=5.1						
MAJO	Matsushiro	23.83	347	P	P	12 17 44.1	+0.3
COEN	Coen	27.12	183	P	P	12 18 14.0	+0.3
COEN				IAmb	IAmb	12 18 14.5	
	comp=Z,9.4nm,1.2s						
KSRS	Korea Array	28.27	331	P	P	12 18 22.9	-0.7
	comp=Z,1.2nm,0.5s,baz=135,slow=9.9,SNR=4.5						
ASAJ	Asahikawa	30.75	357	P	P	12 18 44.8	-0.7
	comp=Z,2.7nm,0.7s,baz=11,slow=0.7,SNR=3.5						
JKA	Kamikawa-asahi	30.75	357	P	P	12 18 44.8	-0.7
USRK	Ussuriysk Ar.	32.62	343	P	P	12 19 01.6	-0.3
	comp=Z,0.8nm,0.6s,baz=139,slow=39,SNR=3.0						
KNRA	Kununurra	32.77	209	P	P	12 19 03.7	+0.2
KNRA				IAmb	IAmb	12 19 06.6	
	comp=Z,8.5nm,1.1s						
CTA	Charters Tower	33.23	177	P	P	12 19 08.3	+0.8
	comp=Z,1.0nm,0.4s,baz=12,slow=13,SNR=3.5						
WB0	Warramunga Arr	34.36	197	P	P	12 19 17.0	-0.2
WB0				IAmb	IAmb	12 19 17.6	
	comp=Z,4.9nm,0.6s						
WB2	Warramunga Arr	34.54	197	P	P	12 19 18.6	-0.2
WB2				IAmb	IAmb	12 19 19.7	
	comp=Z,9.8nm,0.9s						
WRA	Warramunga Arr	34.54	197	P	P	12 19 18.8	-0.1
	comp=Z,4.9nm,0.8s,baz=18,slow=9.4,SNR=31						
WRA				PcP	PcP	12 21 52.1	+1.1
	comp=Z,0.7nm,0.7s,baz=9.7,slow=2.9,SNR=3.7						
WRA				ScP	ScP	12 25 25.3	+0.9
	comp=Z,0.4nm,0.7s,baz=17,slow=4.2,SNR=3.0						
WRA	Warramunga Arr	34.54	197	P	P	12 19 18.4	-0.4
FITZ	Fitzroy Crossi	36.37	211	P	P	12 19 34.3	-0.1
FITZ				IAmb	IAmb	12 19 40.6	
	comp=Z,7.7nm,1.2s						
KLR	Kul'dur	37.35	346	P	P	12 19 41.8	-0.6
	comp=Z,1.2nm,0.5s,baz=129,slow=9.7,SNR=6.4						

AS31 Alice Springs 38.20 196 P P 12 19 49.9 0.0
ASAR Alice Springs 38.20 196 P P 12 19 49.8 -0.2
comp=Z,1.8nm,0.4s,baz=21,slow=13,SNR=63
EIDS Eidsvold 38.96 171 P P 12 19 56.5 +0.3
EIDS IAmb IAmb 12 20 05.9
comp=Z,11nm,1.5s
NOUC Port Laguerre 41.14 149 P P 12 20 15.8 +1.5
NOUC IAmb IAmb 12 20 17.7
comp=Z,22nm,1.5s
DZM Mont Dzumac 41.19 148 P P 12 20 16.8 +2.0
comp=Z,15nm,0.6s,baz=294,slow=5.2,SNR=29
DZM Mont Dzumac 41.19 148 P P 12 20 16.5 +1.8
DZM IAmb IAmb 12 20 17.4
comp=Z,12nm,0.6s
PSA00 Pilbara Seismi 42.32 215 P P 12 20 23.5 -0.3
PSA00 IAmb IAmb 12 20 25.3
comp=Z,12nm,0.9s
ARMA Armidale 44.00 171 P P 12 20 38.0 +0.7
ARMA IAmb IAmb 12 20 46.0
comp=Z,8.6nm,1.1s
CMAR Chiang Mai Arr 44.10 283 P P 12 20 37.9 -0.4
comp=Z,0.5nm,0.3s,baz=73,slow=6.4,SNR=4.0
STKA Stephens Creek 45.02 184 P P 12 20 45.3 0.0
comp=Z,6.1nm,0.4s,baz=16,slow=7.7,SNR=21
STKA Stephens Creek 45.02 184 P P 12 20 45.2 0.0
MSVF Nonsavu 45.20 132 P P 12 20 48.8 +1.8
MSVF IAmb IAmb 12 21 01.4
comp=Z,14nm,1.4s
MA2 Magadan 46.41 4 P P 12 20 56.0 0.0
comp=Z,5.7nm,0.7s,baz=180,slow=12,SNR=4.0
MA2 Magadan 46.41 4 P P 12 20 55.9 0.0
BBOO Buckleboo 46.57 190 P P 12 20 57.4 -0.1
SONM Songino Array 46.80 325 P P 12 20 59.1 -0.2
comp=Z,0.2nm,0.3s,baz=134,slow=6.2,SNR=5.9
SONM ScP ScP 12 26 11.1 -1.2
comp=Z,0.9nm,0.7s,baz=137,slow=3.5,SNR=8.1
SONM Songino Array 46.80 325 P P 12 20 59.1 -0.2
CAN Canberra 48.54 175 P P 12 21 13.3 +0.6
CAN IAmb IAmb 12 21 27.5
comp=Z,23nm,1.5s
ADK Adak 49.45 31 P P 12 21 20.4 +1.0
YAK Yakutsk 49.82 351 P P 12 21 21.7 -0.3
comp=Z,3.5nm,0.3s,baz=314,slow=2.0,SNR=3.0
YAK Yakutsk 49.82 351 P P 12 21 22.5 +0.5
SEY Seymchan 49.87 5 P P 12 21 22.5 +0.1
comp=Z,1.0nm,0.5s,baz=170,slow=8.8,SNR=10
MORW Morawa 50.34 213 P P 12 21 26.0 -0.4
TOO Toolangi 50.61 179 P P 12 21 30.0 +1.7
TOO IAmb IAmb 12 21 31.0
comp=Z,4.5nm,0.7s
URZ Urewera 59.67 151 P P 12 22 33.7 +0.4
MK31 Makanchi Array 61.49 316 P P 12 22 45.2 -0.5
MKAR Makanchi Array 61.49 316 P P 12 22 45.1 -0.6
comp=Z,0.5nm,0.5s,baz=91,slow=8.2,SNR=7.8
ANM Nome 61.56 22 P P 12 22 45.4 -0.4
KURK Kurchatov 64.61 320 P P 12 23 05.0 -1.2
KURK IAmb IAmb 12 23 05.5
comp=Z,2.4nm,0.4s
BRLK Bradley Lake 65.86 30 P P 12 23 12.9 -1.2
IMAR Indian Mountai 66.56 23 P P 12 23 19.7 +1.2
IL31 68.94 25 P P 12 23 31.5 -1.9
ILAR Eielson Array 68.94 25 P P 12 23 31.6 -1.8
comp=Z,0.7nm,0.5s,baz=250,slow=5.7,SNR=22
ILAR Eielson Array 68.94 25 P P 12 23 31.8 -1.6
VRDI Verde Repeater 69.76 29 P P 12 23 38.1 -0.6
EGAK Eagle 71.35 26 P P 12 23 48.3 +0.2
INK Inuvik 74.73 22 P P 12 24 06.8 -1.1
comp=Z,1.4nm,0.9s,baz=290,slow=2.3,SNR=4.8
INK Inuvik 74.73 22 P P 12 24 08.0 +0.1
INK IAmb IAmb 12 24 20.6
comp=Z,6.3nm,1.5s
ABKAR Akbulak array 76.56 318 P P 12 24 17.0 -1.6
YKA Yellowknife Ar 83.24 27 P P 12 24 53.8 -0.5
comp=Z,0.5nm,0.4s,baz=288,slow=5.5,SNR=13
PINE Pine Mountain 84.11 47 P P 12 25 00.7 +1.1
PINE IAmb IAmb 12 25 15.0
comp=Z,8.9nm,1.4s
B08A Colville Reser 84.18 42 P P 12 24 59.8 +0.3
NVAR Mina Array Bea 87.32 51 P P 12 25 16.6 +1.1
comp=Z,2.1nm,0.8s,baz=264,slow=5.9,SNR=13
NVAR Mina Array Bea 87.32 51 P P 12 25 16.3 +0.8
ELK Elko 88.98 48 IAmb IAmb 12 25 25.1
comp=Z,2.9nm,0.7s
TPNV Topopah Spring 89.28 52 IAmb IAmb 12 25 26.7
comp=Z,2.9nm,0.7s
PDAR Pinedale Array 92.37 45 P P 12 25 39.1 +0.1
comp=Z,0.4nm,0.6s,baz=224,slow=4.2,SNR=4.4
PDAR Pinedale Array 92.37 45 P P 12 25 39.0 0.0
LPAZ La Paz 148.26 99 PKPbc PKiKP 12 32 17.2 +0.3
comp=Z,1.6nm,0.6s,baz=317,slow=3.7,SNR=4.8

IDC 14 12:22:59.6±7.7, 12.84S×166.74E, h148km±79km, mb3.4/6, mb1 3.6/7, mb1mx3.4/28, mbtmp3.8/7, Error ellipse: s-maj=61.5km s-min=27.9km az=152.0
NEIC 14 12:22:59.2±0.9, 12.83S±0.07×166.7E±0.1, h145km±9km, mb4.0/10, Error ellipse: s-maj=19.6km s-min=13.5km az=98.0
ISC 14 12:22:59.8±0.7, 12.87S±0.07×166.71E±0.09, h150km, n25, σ0.82/28, mb3.8/9, Santa Cruz Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 2.60 169 Pn 12 23 42.0 -0.3
SANVU Sn Sn 12 24 15.1 +0.1
DZM Mont Dzumac 9.15 182 P Pn 12 25 10.1 +1.4
0.7nm,0.3s,baz=324,slow=22,SNR=19
DZM S Sn 12 26 49.1 -1.3
0.3nm,0.3s,baz=320,slow=23,SNR=5.0
DZM Mont Dzumac 9.15 182 Pn 12 25 09.8 +1.1
DZM Sn Sn 12 26 48.8 -1.5
NOUC Port Laguerre 9.19 182 Pn Pn 12 25 09.8 +0.7
NOUC Sn Sn 12 26 50.8 -0.2
MSVF Nonsavu 11.96 115 Pn Pn 12 25 45.6 -0.2
FUNA Funafuti 13.01 72 Pn Pn 12 25 59.4 +0.1
EIDS Eidsvold 19.27 228 P P 12 27 13.1 +0.1
EIDS IAmb IAmb 12 27 25.6
comp=Z,7.1nm,1.2s
STKA Stephens Creek 29.82 227 P P 12 28 54.6 +1.7
comp=Z,1.0nm,0.6s,baz=58,slow=13,SNR=4.0
STKA Stephens Creek 29.82 227 P P 12 28 52.8 -0.1
WB0 Warramunga Arr 31.72 253 P P 12 29 09.3 -0.4
WB0 IAmb IAmb 12 29 10.2
comp=Z,1.6nm,0.6s
WRA Warramunga Arr 31.79 253 P P 12 29 10.3 -0.1
comp=Z,0.6nm,0.5s,baz=85,slow=9.4,SNR=8.7
WRA Warramunga Arr 31.79 253 IAmb IAmb 12 29 12.9
comp=Z,0.1nm,0.8s
AS31 Alice Springs 32.87 246 P P 12 29 18.1 -1.7
ASAR Alice Springs 32.87 246 P P 12 29 19.7 -0.1
comp=Z,0.7nm,0.6s,baz=70,slow=10,SNR=19
ASAR Alice Springs 32.87 246 P P 12 29 18.6 -1.2
BBOO Buckleboo 34.32 230 P P 12 29 31.9 -0.3
FITZ Fitzroy Crossi 39.85 257 P P 12 30 19.0 -0.1
FITZ IAmb IAmb 12 30 37.8
comp=Z,3.3nm,1.1s
PSA00 Pilbara Seismi 45.44 252 P P 12 31 04.3 +0.2
QSPA South Pole Qui 77.14 180 P P 12 34 37.6 +0.8
QSPA IAmb IAmb 12 34 54.2
comp=Z,5.4nm,1.5s
SONM Songino Array 80.69 324 P P 12 34 56.5 +0.2
comp=Z,0.2nm,0.3s,baz=139,slow=6.4,SNR=5.3
SONM Songino Array 80.69 324 P P 12 34 55.9 -0.4
ILAR Eielson Array 84.94 18 P P 12 35 17.2 -0.5
comp=Z,0.3nm,0.6s,baz=242,slow=5.3,SNR=5.9
MKAR Makanchi Array 95.49 317 P P 12 36 08.2 +0.5
comp=Z,0.3nm,0.7s,baz=116,slow=6.6,SNR=3.5
MKAR Makanchi Array 95.49 317 P P 12 36 07.6 -0.1
ARCES ARCESS Array B 118.33 346 PKP PKiKP 12 41 28.5 -0.3
comp=Z,1.8nm,0.8s,baz=57,slow=3.3,SNR=5.1

ATH 14 12:23:58.6, 38.31N×20.45E, h15km±1km, ML3.5/5, Error ellipse: s-maj=2.3km s-min=0.8km az=263.0
THE 14 12:23:58.8, 38.32N×20.42E, h14km, ML3.5/18, Error ellipse: s-maj=0.6km s-min=0.2km az=273.0
ISC 14 12:23:58.6±0.8, 38.32N±0.02×20.44E±0.03, h15km±4km, n59, σ0.57/93, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF1 Kardakata, Kep 0.05 148 P Pg 12 24 01.3 0.0
KEF1 S Sg 12 24 02.6 -0.5
KEF4 Livadi, Kephal 0.06 190 P Pg 12 24 00.3 -1.1
KEF4 S Sg 12 24 03.5 +0.2
AGT1 Agia Thekli 0.08 212 P Pg 12 24 01.7 +0.1
AGT1 S Sg 12 24 03.8 +0.2
68μm,0.3s
LXR1 Lixouri, Cepha 0.12 180 P Pg 12 24 02.3 +0.3
LXR1 S Sb 12 24 05.1 0.0
75μm,0.1s
LXRA Lixouri, Kepha 0.12 180 P Pg 12 24 02.2 +0.2
LXRA S Sg 12 24 04.5 +0.2
VSK1 VASILIKIADES 0.13 47 P Pg 12 24 02.5 +0.2
VSK1 S Sg 12 24 05.2 +0.5
51μm,0.2s
KEF3 Kipouria, Keph 0.14 212 P Pg 12 24 02.2 0.0
KEF3 S Sg 12 24 04.9 +0.2
CHV1 Chavriata, Kef 0.14 198 P Pg 12 24 02.5 +0.2
CHV1 S Sg 12 24 05.3 +0.5
92μm,0.2s
ARG2 Argostoli 0.14 164 P Pg 12 24 02.4 0.0
ARG2 S Sg 12 24 05.3 +0.4
67μm,0.1s
ARGA Argostoli. Kep 0.14 167 P Pg 12 24 02.5 +0.1
ARGA S Sg 12 24 04.6 -0.3
KONA Konidatara, Ke 0.15 44 P Pg 12 24 02.6 +0.1
KONA S Sg 12 24 05.0 0.0
KEF2 Argostoli. Kep 0.16 166 P Pg 12 24 02.7 +0.1
KEF2 S Sg 12 24 05.0 -0.2
FSK Fiskardo 0.17 35 P Pg 12 24 03.0 +0.2
FSK S Sg 12 24 06.1 +0.5
24μm,0.3s
FSK Fiskardo 0.17 35 P Pg 12 24 03.0 +0.2
FSK S Sg 12 24 05.8 +0.2
FSK AML AML 12 24 06.5
comp=E,61763μm,0.2s
FSK AML AML 12 24 06.7
comp=N,40773μm,0.5s
VLS Valsamata 0.18 140 P Pg 12 24 03.1 +0.1
VLS S Sg 12 24 06.2 +0.3
comp=N,46μm,0.1s
VLS Valsamata 0.18 140 P Pg 12 24 03.0 +0.1
VLS S Sg 12 24 06.0 +0.1
VLS AML AML 12 24 06.4
comp=N,94712μm,0.2s
VLS AML AML 12 24 06.9
comp=E,91522μm,0.1s
EVGI Lefkada island 0.35 29 P Pg 12 24 05.9 +0.2
EVGI S Sb 12 24 11.7 -0.1
EVGI Lefkada island 0.35 29 P Pg 12 24 05.9 +0.2
EVGI S Sg 12 24 10.5 -0.1
MGNA Meganis 0.44 39 P Pg 12 24 07.3 0.0
MGNA S Sg 12 24 12.8 -0.5
VLMS Volimes, Zakyn 0.47 158 P Pg 12 24 07.8 -0.2
VLMS S Sb 12 24 15.0 -0.4
VLMS AML AML 12 24 17.6
comp=E,12783μm,0.2s
VLMS AML AML 12 24 18.8
comp=N,12263μm,0.2s
LKD2 Lefkada island 0.50 20 P Pg 12 24 08.5 0.0
LKD2 S Sb 12 24 16.3 +0.1
comp=N,3μm,0.3s
LKD2 Lefkada island 0.50 20 P Pg 12 24 08.5 0.0
TSLK Tsoukalades, L 0.53 19 P Pg 12 24 09.3 +0.2
TSLK S Sb 12 24 17.4 +0.2
comp=N,3μm,0.3s
TSLK Tsoukalades, L 0.53 19 P Pg 12 24 09.2 0.0
TSLK S Sb 12 24 17.1 -0.1
TSLK AML AML 12 24 21.6
comp=E,6052μm,0.3s
TSLK AML AML 12 24 22.9
comp=N,6646μm,0.3s
AST1 Astakos 0.56 66 P Pg 12 24 09.7 +0.1
AST1 S Sb 12 24 18.4 +0.6
comp=N,6μm,0.4s
ZAK2 Zakynthos 0.64 145 P Pg 12 24 10.6 -0.5
ZAK2 S Sb 12 24 21.4 +1.2
comp=N,8μm,0.3s
PDO Prodromos 0.65 64 P Pg 12 24 11.3 0.0
PDO S Sb 12 24 21.0 +0.6
comp=N,2μm,0.3s
PDO Prodromos 0.65 64 P Pg 12 24 11.0 -0.3
KRI1 kERI 0.72 155 P Pg 12 24 12.0 -0.6
KRI1 S Sb 12 24 23.4 +0.9
comp=N,5μm,0.2s
AXS Araxos 0.75 99 P Pg 12 24 12.8 -0.3
AXS S Sn 12 24 24.9 -0.7
comp=N,2μm,0.4s
AXS Araxos 0.75 99 P Pg 12 24 12.8 -0.3
RLS Riolos of Patr 0.85 107 P Pb 12 24 14.6 -0.4
RLS S Sn 12 24 27.4 -0.8
comp=N,1μm,0.4s
RLS Riolos of Patr 0.85 107 P Pb 12 24 14.5 -0.6
PVO Paravola 0.90 70 P Pg 12 24 16.2 +0.1
PVO S Sn 12 24 29.5 0.0
comp=N,2μm,0.3s
PVO Paravola 0.90 70 P Pg 12 24 16.3 +0.1
DRO Drossia 1.07 110 P Pb 12 24 18.6 -0.1
DRO S Sn 12 24 34.0 +0.4
comp=N,1μm,0.3s
DRO Drossia 1.07 110 P Pb 12 24 18.8 +0.1
DRO S Sg 12 24 33.1 -0.1
DRO AML AML 12 24 42.2
comp=N,3566μm,0.7s
DRO AML AML 12 24 44.2
comp=E,6367μm,0.5s
ANX Ano Chora 1.20 76 P Pn 12 24 20.9 +0.1
ANX Ano Chora 1.20 76 P Pb 12 24 21.1 +0.1
IGT Igoumenitsa 1.22 356 P Pg 12 24 22.1 +0.1
IGT S Sn 12 24 37.6 +0.4
comp=E,935nm,0.5s
LAKA Lakka 1.22 93 P Pn 12 24 20.9 -0.1
LAKA Lakka 1.22 93 P Pn 12 24 20.7 -0.3
EVR Evrytania 1.23 60 P Pn 12 24 21.2 -0.1
AMT Artemida-Makis 1.27 128 P Pg 12 24 23.2 +0.1
AMT Artemida-Makis 1.27 128 P Pg 12 24 23.2 +0.1
SERG Sergoula 1.28 85 P Pn 12 24 21.9 0.0
TRIZ Trizonia 1.29 87 P Pn 12 24 21.7 -0.3
TRIZ Trizonia 1.29 87 P Pn 12 24 21.9 -0.1
ALIK Aliki, Aigiali 1.32 92 P Pn 12 24 22.7 +0.3
KALE Kalithea 1.34 86 P Pn 12 24 22.6 -0.2
KLV Kalavryta, Ach 1.38 101 P Pb 12 24 23.8 -0.2
KLV S Sb 12 24 41.9 +0.4
KLV Kalavryta, Ach 1.38 101 P Pn 12 24 23.6 +0.3
KEK Kerkira 1.48 341 P Pn 12 24 25.3 +0.6
SRN Sarande 1.60 348 P Pb 12 24 27.4 -0.3
ITM Ithomi 1.64 133 P Pb 12 24 29.0 +0.5
THL Klokotos Trika 1.75 44 P Pb 12 24 31.1 +0.8
LTK Loutraki 2.02 98 P Pn 12 24 33.0 +1.0
OHR Ohrid 2.80 6 i Pn Pg 12 24 53.6 +1.4
STIP Stip 3.63 21 i Pn Pb 12 24 58.6 -3.8

MEX 14 12:30:18.8±1.1, 14.71N×93.67W, h16km±208km, MD3.9
GCG 14 12:30:23.5±1.1, 14.81N×93.50W, h50km±786km, MD4.4
ISC 14 12:30:18.3±1.6, 14.91N±0.07×93.86W±0.06, h33km, n9, σ1.55/14, Near coast of Chiapas

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PCIG 1.00 38 i P Pn 12 30 35.5 -0.6
PCIG eS Sn 12 30 48.4 -0.7
TGIG 1.99 21 eP Pn 12 30 51.6 +1.9
TGIG i S Sb 12 31 17.1 -1.3
CCIG Comitan 2.15 50 eP Pn 12 30 53.0 +1.0
CCIG i S Sn 12 31 18.0 +0.4
HUIG Huatulco 2.33 292 eP Pn 12 30 54.5 +0.1
CMIG Matias Romero 2.38 336 i P Pn 12 30 56.1 +1.0
FUG Fuego 3 2.95 99 eP Pn 12 31 04.3 +1.2
FUG eS Sn 12 31 35.4 -2.2
PCG Pacaya 3.19 99 eS Sn 12 31 40.8 -2.6
IXG Ixpaco 3.39 102 eP Pn 12 31 09.5 +0.4
IXG eS Sn 12 31 49.9 +1.6
MRL Marmol 4.04 87 eP Pn 12 31 19.7 +1.6

SJA 14 12:40:14.4±0.7, 28.86S×67.39W, h130km±3km, ML3.6, MW3.5
NEIC 14 12:40:14.3±1.1, 28.82S±0.07×67.4W±0.1, h116km±13km, Error ellipse: s-maj=13.7km s-min=9.2km az=101.0
IDC 14 12:40:15.3±1.3, 28.87S×67.45W, h123km±13km, mb3.3/2, mb1 3.4/7, mb1mx3.3/24, mbtmp3.7/7, MS2.6/2, Ms1 2.7/2, ms1mx2.5/8, Error ellipse: s-maj=31.8km s-min=13.6km az=105.0
GUC 14 12:40:15.1±0.6, 29.01S×67.45W, h122km±6km, ML4.2
ISC 14 12:40:15.0±0.7, 28.80S±0.04×67.44W±0.04, h130km±6km, n56, σ1.07/79, 5C-1D, La Rioja Province

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VCA Vinchina 0.67 275 ⇓i P Pn 12 40 36.0 +0.5
VCA i S Sn 12 40 51.3 +0.4
VCA Vinchina 0.67 275 i P Pn 12 40 36.0 +0.5
VCA i S Sn 12 40 51.3 +0.4
VCA IAML 12 40 54.5
comp=Z,2μm,0.3s
AGUA GUANDACOL 1.14 233 i P Pn 12 40 39.8 +0.4
AGUA i S Sn 12 40 57.9 -0.2
CYA Choya 1.48 76 ⇑i P Pn 12 40 43.9 +0.9
CYA i S Sn 12 41 04.0 -0.4
CYA Choya 1.48 76 i P Pn 12 40 43.9 +0.9
CYA i S Sn 12 41 03.9 -0.4
CYA IAML 12 41 05.2
comp=Z,401nm,0.4s
ACDV Cuesta del Vie 2.00 227 i P Pn 12 40 49.8 +0.6
ACDV IAML 12 40 50.2
comp=Z,576nm,0.3s
ACDV i S Sn 12 41 16.1 +0.7
AROD Rodeo 2.23 232 i P Pn 12 40 53.1 +0.9
AROD i S Sn 12 41 21.6 +0.9
ACCO Cerro Coronel 2.27 218 i P Pn 12 40 52.9 +0.2
ACCO i S Sn 12 41 21.9 +0.3
AMOG MOGNA 2.32 203 i P Pn 12 40 52.8 -0.2
AMOG i S Sn 12 41 21.8 -0.4
AC05 El Transito 2.49 269 ⇑i P Pn 12 40 56.1 +0.9
AC05 i S Sn 12 41 26.6 +0.6
AC05 IAML 12 41 28.5
comp=N,509nm,0.7s
RTLL Cerro Villicun 2.67 199 i P Pn 12 40 57.4 -0.1
RTLL IAML 12 40 57.6
comp=Z,304nm,0.3s
RTLL i S Sn 12 41 29.2 -1.0
AHML Horco Molle 2.74 43 i P Pn 12 40 59.0 +0.6
AHML IAML 12 40 59.4
comp=Z,179nm,0.3s
GO03 Copiap 2.74 295 Pn 12 40 58.7 +0.3
GO03 Sn Sn 12 41 30.6 -1.2
CFA Coronel Fontan 2.88 194 P Pn 12 40 59.8 -0.3
comp=Z,36nm,0.3s,baz=336,slow=8.0,SNR=982
CFA S Sn 12 41 33.6 -1.3
comp=Z,56nm,0.3s,baz=186,slow=15,SNR=22
CFA Coronel Fontan 2.88 194 i P Pn 12 40 59.8 -0.3
CFA i S Sn 12 41 33.4 -1.4
ZON Zonda 2.94 201 i P Pn 12 41 00.8 -0.1
ZON IAML 12 41 01.5
comp=Z,91nm,0.3s
ZON i S Sn 12 41 36.2 -0.1
RTCV Cerro Valdivia 3.19 197 i P Pn 12 41 04.0 -0.2
GO04 Tololo Observa 3.23 244 ⇑i P Pn 12 41 04.6 -0.2
GO04 i S Sn 12 41 42.8 -0.6
GO04 IAML 12 41 49.6
comp=N,691nm,0.3s
GO04 Tololo Observa 3.23 244 Pn 12 41 04.6 -0.2
GO04 Sn Sn 12 41 43.4 0.0
GO04 Tololo Observa 3.23 244 i P Pn 12 41 04.7 -0.2
GO04 i S Sn 12 41 43.7 +0.3
RTLS Leoncito 3.39 208 i P Pn 12 41 07.0 0.0
RTLS IAML 12 41 08.1
comp=Z,108nm,0.2s
ACAN Cantantal 3.47 176 i P Pn 12 41 07.9 +0.1
CO03 El Pedregal 3.48 233 ⇑eP Pn 12 41 07.3 -0.6
CO03 i S Sn 12 41 46.7 -2.2
CO03 IAML 12 41 50.8
comp=N,218nm,0.3s
CO02 Combarbal 3.91 231 ⇑i P Pn 12 41 12.4 -1.2
CO02 i S Sn 12 41 56.2 -2.9
CO02 IAML 12 42 02.0
comp=E,333nm,0.7s
GO02 Mina Guanaco 4.10 332 Pn 12 41 17.2 +0.8
GO02 Sn Sn 12 42 03.9 -0.1
SLA San Lorenzo 4.42 24 i P Pn 12 41 22.7 +2.1
SLA IAML 12 41 23.0
comp=Z,26nm,0.4s
CO04 Los Peladeros 4.44 222 eP Pn 12 41 19.6 -1.3
AZAP Zapla 5.03 26 i P Pn 12 41 30.0 +1.2
PEL Peldehue 5.15 212 Pn 12 41 29.5 -0.6
ROC1 El Roble 5.17 216 Pn 12 41 28.8 -1.8
HJA Humahuaca 5.86 19 i P Pn 12 41 42.7 +2.6
PB10 IPOC Station P 5.96 331 Pn Pn 12 41 41.1 0.0
LVC Limon Verde 6.31 348 P Pn 12 41 46.0 0.0
comp=Z,1.0nm,0.3s,baz=154,slow=10,SNR=4.8
LVC S Sn 12 42 53.6 -3.5
comp=Z,1.2nm,0.3s,baz=51,slow=23,SNR=4.8
LVC LR LR 12 44 32.1
comp=Z,45nm,18.3s,baz=188,slow=40
LVC Limon Verde 6.31 348 Pn Pn 12 41 45.6 -0.4
LVC Limon Verde 6.31 348 i P Pn 12 41 47.0 +1.0
PB04 IPOC Station P 6.89 339 Pn Pn 12 41 53.1 -0.6
PB01 IPOC Station P 7.95 346 Pn Pn 12 42 07.6 -0.2
PB11 IPOC Station P 9.22 347 Pn Pn 12 42 23.1 -2.1
GO01 Chusmiza 9.23 350 Pn Pn 12 42 24.9 -0.6
CPUP Villa Florida 9.30 77 P Pn 12 42 25.3 -0.7
comp=Z,0.3nm,0.3s,baz=236,slow=14,SNR=3.5
CPUP Villa Florida 9.30 77 Pn Pn 12 42 24.9 -1.1
MNMC Minye Minye 9.83 348 Pn Pn 12 42 33.7 +0.4
PLCA Paso Flores 12.17 191 Pn Pn 12 43 02.7 -1.4
LPAZ La Paz 12.47 357 P Pn 12 43 10.7 +2.0
comp=Z,0.1nm,0.3s,baz=208,slow=17,SNR=2.6
LPAZ LR LR 12 48 22.5
comp=Z,29nm,18.6s,baz=356,slow=39
LPAZ La Paz 12.47 357 Pn Pn 12 43 08.3 -0.3
SIV San Ignacio 14.04 26 P P 12 43 30.6 -1.4
comp=Z,0.2nm,0.3s,baz=232,slow=15,SNR=4.8
SAML Samuel 20.15 12 P P 12 44 39.5 +0.4
SAML IAmb IAmb 12 44 40.9
comp=Z,4.1nm,0.9s
BDFB Brasilia 22.20 58 P P 12 44 59.9 -1.2
SNAA Sanae 54.99 160 P P 12 49 32.9 +0.5
SNAA IAmb IAmb 12 49 34.6
comp=Z,6.5nm,1.4s
QSPA South Pole Qui 61.42 180 P P 12 50 18.4 +1.1
TORD Torodi Ar. Bea 78.69 68 P P 12 52 04.5 +1.3
comp=Z,1.0nm,0.5s,baz=272,slow=5.3,SNR=5.2
PDAR Pinedale Array 81.08 330 P P 12 52 17.0 +1.3
comp=Z,0.4nm,1.0s,baz=141,slow=3.3,SNR=2.3
ASAR Alice Springs 123.93 204 PKP PKPdf 12 58 58.4 0.0
comp=Z,0.3nm,0.4s,baz=139,slow=1.7,SNR=10
WRA Warramunga Arr 127.17 206 PKP PKPdf 12 59 04.8 +0.2
comp=Z,0.9nm,0.5s,baz=163,slow=1.8,SNR=21
ZALV Zalesovo Beam 147.75 31 PKPbc PKiKP 12 59 45.4 -0.5
comp=Z,0.7nm,0.4s,baz=266,slow=4.2,SNR=3.7
MKAR Makanchi Array 150.35 44 PKPbc PKiKP 12 59 52.2 +0.7
comp=Z,0.7nm,0.9s,baz=293,slow=0.9,SNR=5.3
MKAR PKPab PKPab 12 59 59.1 +1.5
comp=Z,0.2nm,0.6s,baz=306,slow=2.3,SNR=4.2

NEIC 14 12:41:41.5±0.9, 13.13N±0.10×143.8E±0.1, h128km±9km, mb4.4/15, Error ellipse: s-maj=17.0km s-min=13.9km az=108.0
IDC 14 12:41:42.7±0.8, 13.12N×143.84E, h138km±10km, mb3.4/13, mb1 3.6/14, mb1mx3.5/42, mbtmp3.9/14, MS3.3/1, Ms1 3.3/1, ms1mx2.4/19, Error ellipse: s-maj=22.5km s-min=13.7km az=97.0
ISC 14 12:41:42.6±0.6, 13.12N±0.08×143.80E±0.08, h138km, n36, σ0.79/37, mb3.9/20, South of Mariana Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GUMO Guam 1.14 66 P Pn 12 42 07.4 -0.1
206nm,0.3s,baz=321,slow=6.0,SNR=94
GUMO S Sn 12 42 26.2 -0.3
359nm,0.3s,baz=6.6,slow=20,SNR=34
GUMO LR LR 12 42 40.6
comp=Z,235nm,19.2s,baz=38,slow=52
GUMO Guam 1.14 66 Pn 12 42 07.3 -0.2
GUMO Sn 12 42 23.9 -2.6
ANA2 Anatahan 3.70 30 Pn Pn 12 42 39.6 +0.9
PATS Pohnpei 15.59 112 P 12 45 17.4 +1.2
SIJI Sorong 18.64 223 P Pn 12 45 52.0 +0.2
0.3nm,0.3s,baz=70,slow=11,SNR=2.4
FAKI Fak Fak 19.63 217 P P 12 45 59.8 -0.7
JNU Nakatsue 23.15 331 P P 12 46 37.1 +0.3
7.5nm,0.7s,baz=118,slow=7.2,SNR=3.9
JNU Nakatsue 23.15 331 P P 12 46 36.8 -0.1
MJAR Matsushiro Arr 23.86 349 P P 12 46 44.2 +0.9
1.8nm,0.6s,baz=157,slow=8.1,SNR=4.0
MJAR Matsushiro Arr 23.86 349 P P 12 46 43.1 -0.2

MAJO	Matsushiro	23.86	349	P	P	12 46 42.9	-0.4
MAJO				IAmb	IAmb	12 46 59.0	
	comp=Z,22nm,1.4s						
SSLB	Suanglung	24.09	299	P	P	12 46 45.2	-0.4
SSLB				IAmb	IAmb	12 46 52.2	
	comp=Z,34nm,1.4s						
KSRS	Korea Array	28.08	332	P	P	12 47 22.7	+1.5
	comp=Z,0.9nm,0.7s,baz=146,slow=9.6,SNR=4.2						
WB0	Warramunga Arr	33.96	196	P	P	12 48 13.1	+0.1
WB0				IAmb	IAmb	12 48 28.4	
	comp=Z,8.6nm,1.4s						
WB2	Warramunga Arr	34.14	196	P	P	12 48 14.1	-0.4
WB2				IAmb	IAmb	12 48 22.6	
	comp=Z,7.8nm,1.4s						
WRA	Warramunga Arr	34.14	196	P	P	12 48 14.4	-0.2
	comp=Z,0.8nm,0.8s,baz=13,slow=9.1,SNR=6.5						
ENH	Enshi	35.98	304	P	P	12 48 29.8	-0.5
ENH				IAmb	IAmb	12 48 32.7	
	comp=Z,11nm,1.3s						
KLR	Kul'dur	37.36	347	P	P	12 48 41.6	-0.1
	comp=Z,1.1nm,0.5s,baz=156,slow=6.9,SNR=6.4						
AS31	Alice Springs	37.81	195	P	P	12 48 45.5	-0.4
ASAR	Alice Springs	37.82	195	P	P	12 48 45.5	-0.3
	comp=Z,0.2nm,0.4s,baz=14,slow=9.9,SNR=8.8						
ASAR	Alice Springs	37.82	195	P	P	12 48 45.4	-0.5
DZM	Mont Dzumac	41.43	147	P	P	12 49 16.4	+0.6
DZM				IAmb	IAmb	12 49 33.6	
	comp=Z,10nm,1.2s						
CMAR	Chiang Mai Arr	43.41	283	P	P	12 49 32.2	+0.3
	comp=Z,0.8nm,0.4s,baz=81,slow=6.5,SNR=4.4						
SONM	Songino Array	46.52	326	P	P	12 49 56.4	+0.1
	comp=Z,1.1nm,0.5s,baz=145,slow=7.7,SNR=12						
SONM	Songino Array	46.52	326	P	P	12 49 56.1	-0.2
MK31	Makanchi Array	61.11	316	P	P	12 51 41.9	-0.3
MKAR	Makanchi Array	61.11	316	P	P	12 51 42.2	0.0
	comp=Z,0.8nm,0.5s,baz=92,slow=8.3,SNR=22						
MKAR	Makanchi Array	61.11	316	P	P	12 51 41.9	-0.3
MAKZ	Makanchi	61.32	316	P	P	12 51 43.4	-0.2
ZALV	Zalesovo Beam	61.40	325	P	P	12 51 43.4	-0.6
	comp=Z,0.7nm,0.5s,baz=108,slow=6.9,SNR=4.2						
ZALV	Zalesovo Beam	61.40	325	P	P	12 51 43.6	-0.4
KURK	Kurchatov	64.28	320	P	P	12 52 02.6	-0.4
KURK				IAmb	IAmb	12 52 03.3	
	comp=Z,3.0nm,1.1s						
ILAR	Eielson Array	69.44	25	P	P	12 52 34.1	-1.4
	comp=Z,0.3nm,0.6s,baz=247,slow=5.8,SNR=4.1						
YKA	Yellowknife Ar	83.75	27	P	P	12 53 56.0	+0.1
	comp=Z,0.4nm,0.5s,baz=285,slow=5.2,SNR=4.8						
NVAR	Mina Array Bea	88.03	51	P	P	12 54 19.7	+1.8
	comp=Z,0.6nm,0.6s,baz=267,slow=6.2,SNR=6.2						
AKASG	Malin Array Be	94.80	325	LR	LR	13 38 17.6	
	comp=Z,14nm,21.0s,baz=10.0,slow=36						

MAN 14 12:51:35.4, 9°.95N×124°.11E, h12km, mb3.8, ML2.6, MS2.1, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.39	339	⇓iP	Pg	12 51 43.5	+0.3
LLP				iS	Sb	12 51 49.8	-0.4
MSLP	Maasin	0.77	76	eP	Pg	12 51 50.4	+0.1
MSLP				eS	Sn	12 52 03.2	-0.3
OCLP	Ormoc	1.20	24	eP	Pn	12 51 57.4	-0.7
OCLP				eS	Sn	12 52 14.5	+0.2
GUIM	Jordan	1.64	294	eP	Pn	12 52 03.0	-1.0
GUIM				eS	Sb	12 52 26.1	0.0

DMN 14 13:10:38.3±0.6, 24°.00N×90°.16E, h10km, Ml5.0/1, Error ellipse: s-maj=14.3km s-min=8.3km az=95.0
NEIC 14 13:10:45.4±2.5, 24°.42N±0°.07×89°.5E±0°.1, h14km±4km, mb4.2/10, Error ellipse: s-maj=15.1km s-min=9.5km az=86.0
IDC 14 13:10:45.9±1.4, 24°.62N×89°.73E, h0km, mb3.4/6, mb1 3.8/7, mb1mx3.5/52, mbtmp3.6/7, ML4.4/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/38, Error ellipse: s-maj=60.4km s-min=19.1km az=59.0
NDI 14 13:10:46.4±2.2, 24°.71N×89°.64E, h13km±13km, ML4.0
ISC 14 13:10:45.2±0.6, 24°.60N±0°.05×89°.62E±0°.04, h10km, n45, σ2°.14/51, Bangladesh

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BELO	BELONIA	2.15	129	ex	Sn	13 11 35.2	-13
SHL	Shillong	2.27	65	eP	Pn	13 11 24.2	+1.4
SHL				eS	Sn	13 11 48.8	-2.2
SHL				IAML		13 11 55.6	
	comp=N,674nm,0.2s						
SHL				IAML		13 11 58.6	
	comp=E,776nm,0.1s						
SHL	Shillong	2.27	65		Pn	13 11 24.3	+1.4
SHL				Sn	Sn	13 11 53.1	+2.1
GTK	Tadong	2.85	342	eP	Pn	13 11 31.1	+0.1
GTK				eS	Sn	13 12 04.0	-1.5
GTK				IAML		13 12 14.6	
	comp=E,1μm,0.4s						
ODAN	Odare	3.01	319	ePn	Pn	13 11 35.1	+1.9
TAPN	Taplejung	3.23	328	ePn	Pn	13 11 37.9	+1.7
TAPN				eSn	Sb	13 12 22.1	-0.2
	comp=E,454nm,0.2s						
BOK	Bokaro	3.50	257	eP	Pn	13 11 41.1	+1.4
BOK				eS	Sn	13 12 21.8	+0.5
TEZP	TEZPUR	3.50	54	eP	Pn	13 11 40.9	+1.2
TEZP				eS	Sn	13 12 17.6	-3.6
TEZP				IAML		13 12 20.2	
	comp=N,334nm,0.2s						
TEZP				IAML		13 12 21.3	
	comp=E,443nm,0.3s						
RAMN	Ramite	3.59	311	ePn	Pn	13 11 42.9	+1.8
JIRN	Jiri	4.33	315	ePn	Pn	13 11 53.2	+1.7
GUN	Gumba	4.70	315	ePn	Pn	13 11 58.0	+1.5
PKI	Pulchoki	4.80	309	ePn	Pn	13 11 59.4	+1.5
PKIN	Phulchoki	4.81	309	ePn	Pn	13 11 59.3	+1.3
KKN	Kakani	5.03	310	ePn	Pn	13 12 02.7	+1.8
DMN	Daman	5.04	307	ePn	Pn	13 12 02.5	+1.4
LSA	Lhasa	5.26	15	Pn	Pn	13 12 07.3	+3.0
SIMRM	Sittwe	5.38	145	Pn	Pn	13 12 03.3	-2.2
GKN	Gorkha	5.61	308	ePn	Pn	13 12 10.2	+1.4
KOLN	Koldanda	6.26	302	ePn	Pn	13 12 18.4	+0.6
DANN	Dangsing	6.44	307	ePn	Pn	13 12 20.8	+0.4
CHTO	Chiang Mai	10.41	122	Pn	Pn	13 13 15.1	+0.5
CMAR	Chiang Mai Arr	10.61	123	Pn	Pn	13 13 19.1	+1.6
	comp=E,0.8nm,0.3s,baz=308,slow=13,SNR=6.0						
JOSI	Joshimath	10.71	306	eP	Pn	13 13 18.2	-0.6
JOSI				IAML		13 15 18.8	
	comp=E,56nm,0.2s						
JOSI				IAML		13 15 29.7	
	comp=N,54nm,0.2s						
BHPL	Bhopal	11.24	266	eP	Pn	13 13 25.0	-1.0
BHPL				eS	Sn	13 15 23.8	-7.9
BHPL				IAML		13 15 27.1	
	comp=N,25nm,0.1s						
HYB	Hyderabad	12.56	237	iP	Pn	13 13 43.0	-1.1
HYB				eS	Sn	13 16 06.0	+1.8
HYB	Hyderabad	12.56	237	eP	Pn	13 13 45.0	+0.9
HYB				ex	x	13 16 03.5	
HYB				IAML		13 17 21.1	
	comp=E,32nm,1.7s						
HYB				IAML		13 17 26.0	
	comp=N,52nm,0.8s						
SMLA	Simla	12.78	303	eP	Pn	13 13 45.2	-1.8
SMLA				eS	Sn	13 15 57.6	-12
SMLA				IAML		13 16 03.6	
	comp=N,24nm,0.2s						
SMLA				IAML		13 16 04.4	
	comp=E,26nm,0.3s						
PBKT	Sadao Pong	13.29	125	Pn	Pn	13 13 53.3	-0.8
DHRM	DHARAMSHALA	13.97	306	ex	Pn	13 14 00.8	-2.7
DHRM				ex	x	13 16 30.5	
NIL	Nilore	16.89	306		Pn	13 14 38.4	-3.3
NIL				IAmb	IAmb	13 14 38.9	
	comp=Z,10nm,0.7s						
KDJ	Kajisay	20.29	332	P	P	13 15 20.6	-0.7
KDJ				IAmb	IAmb	13 15 27.2	
	comp=Z,13nm,1.4s						
KBL	Kabul	20.42	304	P	P	13 15 20.5	-2.3
BTK	Batken	22.06	319	P	P	13 15 41.7	+1.4
BTK				IAmb	IAmb	13 15 50.6	
	comp=Z,20nm,1.3s						
MK31	Makanchi Array	22.91	347		P	13 15 51.7	+2.6
MKAR	Makanchi Array	22.91	347	P	P	13 15 51.7	+2.6
	comp=Z,0.7nm,0.8s,baz=169,slow=9.8,SNR=5.8						
SONM	Songino Array	26.73	26	P	P	13 16 26.7	+1.8
	comp=Z,0.7nm,0.9s,baz=198,slow=8.8,SNR=4.1						
KURBB	Kurchatov Arra	27.36	345	P	P	13 16 31.9	+1.6
	comp=Z,0.3nm,0.7s,baz=173,slow=7.9,SNR=3.4						
WSAR	Wadi Sarin	28.33	274	LR	LR	13 27 51.0	
	comp=Z,12nm,20.8s,baz=82,slow=36						
MORW	Morawa	59.10	153	P	P	13 20 43.0	-2.8
WB0	Warramunga Arr	62.01	131	P	P	13 21 06.9	+1.0
WB0				IAmb	IAmb	13 21 18.7	
	comp=Z,3.5nm,1.4s						
WRA	Warramunga Arr	62.09	131	P	P	13 21 08.7	+2.2
	comp=Z,0.4nm,0.5s,baz=324,slow=6.7,SNR=6.3						
WB2	Warramunga Arr	62.10	131	P	P	13 21 05.0	-1.5
WR0	Warramunga Arr	62.24	131	P	P	13 21 06.9	-0.5
WR0				IAmb	IAmb	13 21 13.2	
	comp=Z,5.0nm,1.2s						
NOA	NORSAR Array B	63.21	328	P	P	13 21 16.5	+3.0
	comp=Z,2.0nm,1.0s,baz=101,slow=7.0,SNR=2.6						
ASAR	Alice Springs	64.39	135	P	P	13 21 23.1	+1.4
	comp=Z,0.4nm,0.7s,baz=315,slow=6.6,SNR=6.4						

HLW 14 13:14:39.1, 34°.27N×25°.08E, h41km±26km, Ml3.9
THE 14 13:14:40.4, 34°.04N×25°.08E, h0km±1km, ML3.4/3, Error ellipse: s-maj=3.3km s-min=0.8km az=190.0
NIC 14 13:14:41.8±0.0, 33°.78N×25°.21E, h32km±30km, Ml3.4/1
IDC 14 13:14:41.6±2.4, 34°.13N×25°.11E, h33km±15km, mb3.7/15, mb1 3.8/22, mb1mx3.6/55, mbtmp3.8/22, ML3.9/6, Error ellipse: s-maj=19.2km s-min=15.0km az=26.0
ISK 14 13:14:42.4, 34°.34N×25°.15E, h12km, ML3.5/14
ATH 14 13:14:43.3, 34°.24N×25°.05E, h38km±2km, ML3.5/5, Error ellipse: s-maj=4.7km s-min=1.9km az=356.0
GII 14 13:14:49.0±0.0, 33°.61N×25°.88E, h10km, MD3.2/2
ISC 14 13:14:38.8±1.4, 34°.00N±0°.04×25°.11E±0°.04, h11km±9km, n111, σ1°.52/122, mb3.8/15, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	1.04	346	P	Pg	13 14 59.4	+0.5
SIVA				S	Sb	13 15 14.9	+2.3
	7μm,0.5s						
SIVA	Sivas	1.04	346	P	Pg	13 14 59.4	+0.5
SIVA				S	Sg	13 15 10.1	-2.4
SIVA				AML	AML	13 15 25.6	
	comp=E,22401μm,0.6s						
SIVA				AML	AML	13 15 25.9	
	comp=N,12278μm,0.4s						
TMBK	Timbaki Herakl	1.11	345	P	Pg	13 15 00.8	+0.7
TMBK				S	Sb	13 15 16.2	+1.8
	comp=N,2μm,0.5s						
GVD	Gavdhos	1.19	315	P	Pg	13 15 02.1	+0.4
GVD	Gavdhos	1.19	315	P	Pg	13 15 02.1	+0.4
GVD				S	Sg	13 15 15.8	-1.4
GVD				AML	AML	13 15 32.2	
	comp=N,6386μm,0.4s						
GVD				AML	AML	13 15 37.4	
	comp=E,8509μm,0.5s						
GVD	Gavdhos	1.19	315	PG	Pg	13 15 02.4	+0.7
GVDS	Gavdos	1.19	315	P	Pg	13 15 02.4	+0.7
GVDS	Gavdos	1.19	315	PG	Pg	13 15 02.4	+0.7
LAST	Lasithi	1.20	15	P	Pg	13 15 02.3	+0.5
LAST	Lasithi	1.20	15	P	Pg	13 15 02.3	+0.5
LAST				S	Sg	13 15 15.7	-1.7
LAST				AML	AML	13 15 32.2	
	comp=E,3070μm,0.7s						
LAST				AML	AML	13 15 36.5	
	comp=N,2108μm,0.6s						
IDI	Anoyia	1.30	352	Pg	Pg	13 15 03.4	-0.3
	comp=N,40nm,0.3s,baz=166,slow=18,SNR=180						
IDI				Lg	Lg	13 15 21.0	
	comp=N,85nm,0.3s,baz=150,slow=19,SNR=8.4						
IDI	Anoyia	1.30	352	P	Pg	13 15 03.4	-0.3
IDI				S	Sg	13 15 19.2	-1.4
IDI				AML	AML	13 15 30.4	
	comp=E,2933μm,0.5s						
IDI				AML	AML	13 15 32.1	
	comp=N,2497μm,0.5s						
IDI	Anoyia	1.30	352	PG	Pg	13 15 02.4	-1.3
KSTL	Kastelli Herak	1.30	359	P	Pg	13 15 02.3	-1.5
HRKL	Herakleio	1.31	360	PG	Pg	13 15 00.9	-3.0
NPS	Neapolis	1.32	18	P	Pg	13 15 04.3	+0.1
NPS	Neapolis	1.32	18	P	Pg	13 15 04.4	+0.1
ZKR	Zakros	1.44	39	P	Pn	13 15 06.5	+1.7
ZKR				S	Sb	13 15 26.6	+2.6
	comp=N,362nm,0.4s						
ZKR	Zakros	1.44	39	P	Pn	13 15 06.6	+1.7
ZKR	Zakros	1.44	39	PN	Pn	13 15 05.3	+0.4
ZKR	Zakros	1.44	39	P	Pn	13 15 06.8	+2.0
ZKR				S	Sn	13 15 27.4	+3.6
ZKR				AML	AML	13 15 41.4	
	comp=N,1.0nm,0.6s						
ZKR				AML	AML	13 15 41.4	
	comp=N,1.0nm,0.6s						
ZKR				AML	AML	13 15 43.4	
	comp=N,2.3nm,0.6s						
ZKR				AML	AML	13 15 43.4	
	comp=N,2.3nm,0.6s						
VAM	Vamos	1.59	332	P	Pn	13 15 07.7	+0.7
VAM	Vamos	1.59	332	P	Pn	13 15 07.7	+0.7
KNDR	Palaiochora Ch	1.70	317	PN	Pn	13 15 10.5	+2.0
KNDR				SN	Sn	13 15 30.6	+0.4
IMMV	Iera Moni Meta	1.73	328	P	Pn	13 15 09.7	+0.9
IMMV	Iera Moni Meta	1.73	328	P	Pn	13 15 09.8	+0.9
IMMV				S	Sn	13 15 28.7	-2.2
IMMV				AML	AML	13 15 49.6	
	comp=E,2835μm,0.6s						
IMMV				AML	AML	13 15 54.7	
	comp=N,2104μm,0.9s						
IMMV	Iera Moni Meta	1.73	328	PN	Pn	13 15 09.4	+0.6
RODP	Rodopos	1.91	325	PN	Pn	13 15 12.0	+0.6
KARP	Karpathos	2.29	47	P	Pn	13 15 18.5	+2.0
KARP	Karpathos	2.29	47	P	Pn	13 15 18.6	+2.1
KARP	Karpathos	2.29	47	PN	Pn	13 15 17.8	+1.3
KARP	Karpathos	2.29	47	P	Pn	13 15 18.9	+2.4
KARP				S	Sn	13 15 47.6	+2.8
SANT	Santorini	2.38	7	PN	Pn	13 15 17.4	-0.5
SANT				SN	Sn	13 15 43.5	-3.6
ANKY	Antikythira Is	2.38	322	P	Pn	13 15 18.1	+0.3
THR5	Thira Island,	2.42	5	P	Pn	13 15 18.6	+0.3
THT2	Imerovigli	2.44	6	PN	Pn	13 15 18.7	0.0
SLUM	Salum	2.50	178	P	Pn	13 15 22.2	+2.7
	baz=177						
SLUM				AMP		13 15 00.0	
	baz=177						
SLUM				S	Sn	13 15 50.9	+0.9
	baz=177						
IOSP	Ios island	2.72	3	P	Pn	13 15 22.2	-0.2
MHLO	Agia Marina, M	2.75	348	P	Pn	13 15 22.4	-0.4
KTHA	Kythira Island	2.81	324	P	Pn	13 15 24.6	+0.9
KTHA	Kythira Island	2.81	324	PN	Pn	13 15 24.9	+1.2
APE	Apeiranthos	3.08	6	P	Pn	13 15 27.2	-0.3
APE	Apeiranthos	3.08	6	PN	Pn	13 15 27.2	-0.3
ARG	Arkhangelos	3.31	47	PN	Pn	13 15 32.3	+1.6
ARG	Arkhangelos	3.31	47	P	Pn	13 15 32.9	+2.2
DAT	Datca	3.39	36	PN	Pn	13 15 32.8	+1.0
BODT	Bodrum	3.54	30	PN	Pn	13 15 34.8	+1.0
DALY	Dalyan (Mula)	4.03	45	PN	Pn	13 15 41.9	+1.4
TURN	Turunc	4.04	44	PN	Pn	13 15 38.2	-2.4
YER	Yerkesik	4.06	39	PN	Pn	13 15 42.2	+1.3
CHOS	Chios island	4.44	10	PN	Pn	13 15 46.6	+0.4
URLA	Izmir	4.51	15	PN	Pn	13 15 47.7	+0.5
AYDB	Zeytinkoy-Aydi	4.54	29	PN	Pn	13 15 48.8	+1.2
SWA2		4.75	176	P	Pn	13 15 52.8	+2.4
	baz=176						
SWA2				S	Sn	13 16 43.5	-2.0
	baz=176						
HBRG	Burj al `Arab	5.26	129	S	Sn	13 16 56.5	-1.6
	baz=131						
AGG	Agios Georgios	5.49	337	PN	Pn	13 16 01.3	+0.7
OSC2	CSNet OBS 4	6.05	97	P	Pn	13 16 09.0	+0.9
OSC2				S	Sn	13 17 16.1	-1.2
AKMS	Akamas	6.05	78	P	Pn	13 16 09.7	+1.4
ALFC	Alefka	6.28	77	P	Pn	13 16 13.7	+2.2
SZAC	Souni	6.47	81	P	Pn	13 16 15.9	+1.8
ASGA	Asgata	6.77	81	P	Pn	13 16 19.6	+1.5
CSS	Mathiatis	6.86	80	P	Pn	13 16 20.5	+1.2
CSS	Mathiatis	6.86	80	Pn	Pn	13 16 21.5	+2.2
KOT	Kottamia	7.00	124	AMP		13 17 00.0	
	baz=125						
HSAF	As Saff	7.01	127	P	Pn	13 16 22.6	+1.1
	baz=128						
MVOU	Mavrovouni	7.11	79	P	Pn	13 16 23.6	+0.8
GLL	Jalalah	7.14	126	P	Pn	13 16 24.0	+0.7
	baz=127						
HFRF	Wahat Farafira	7.37	157	P	Pn	13 16 27.8	+1.5
	baz=157						
HFRF				AMP		13 18 00.0	
	baz=157						
SUZ	Suez	7.76	120	P	Pn	13 16 32.6	+0.8
	baz=121						
KZIT	Kziot	8.43	109	P	Pn	13 16 41.2	+0.2
KZIT	Kziot	8.43	109	Pn	Pn	13 16 41.0	0.0
KZIT				Sn	Sn	13 18 08.9	-7.3
SLTI	Sal'it	8.51	99	Pn	Pn	13 16 42.8	+0.8
SLTI				Sn	Sn	13 18 11.0	-7.1
AMAZ	Amatzia	8.62	104	P	Pn	13 16 44.3	+0.8
AMAZ	Amatzia	8.62	104	Pn	Pn	13 16 44.9	+1.4
AMAZ				Sn	Sn	13 18 14.4	-6.3
MMAI	Mount Meron Ar	8.65	94	Pn	Pn	13 16 44.8	+0.8
	comp=N,1.1nm,0.3s,baz=278,slow=10.0,SNR=3.6						
MMAI				Sn	Sn	13 18 14.1	-7.6
	comp=N,2.2nm,0.3s,baz=263,slow=23,SNR=2.8						
MMLI	Mount Malkishu	8.78	97	P	Pn	13 16 47.7	+1.9
MMLI	Mount Malkishu	8.78	97	Pn	Pn	13 16 47.2	+1.5
YTIR	Yattir	8.83	105	Pn	Pn	13 16 47.2	+0.7
BRTR	Keskin Array B	8.90	48	Pn	Pn	13 16 48.3	+0.8
	comp=N,0.1nm,0.3s,baz=244,slow=16,SNR=2.7						
BRTR				Sn	Sn	13 18 18.6	-9.3
	comp=N,0.1nm,0.3s,baz=200,slow=24,SNR=2.1						
QRNJ	Al-Qirein	8.93	98	Pn	Pn	13 16 49.0	+1.3
DSI	Dead Sea	8.98	103	Pn	Pn	13 16 49.6	+1.2
DSI				Sn	Sn	13 18 23.3	-6.3
KRMI	Paran Flat	9.03	113	Pn	Pn	13 16 49.1	-0.1
PRNI	Paran	9.14	111	Pn	Pn	13 16 51.2	+0.5
PRNI				Sn	Sn	13 18 26.1	-7.5
GHAJ	Ghor Haditha	9.22	104	Pn	Pn	13 16 52.3	+0.6
HRFI	Mount Harif	9.31	112	Pn	Pn	13 16 53.8	+0.8
MBRI	Mt Berech	9.33	114	Pn	Pn	13 16 53.1	-0.2
MBRI				Sn	Sn	13 18 31.2	-7.1
EIL	Elat	9.42	115	Pn	Pn	13 16 54.3	-0.2
	comp=N,1.9nm,0.3s,baz=337,slow=2.4,SNR=58						
EIL				Sn	Sn	13 18 33.5	-6.9
	comp=N,1.4nm,0.3s,baz=16,slow=1.2,SNR=5.5						
EIL	Elat	9.42	115	Pn	Pn	13 16 54.3	-0.2
AQBJ	Aqaba	9.46	114	Pn	Pn	13 16 55.3	+0.2
ASF	Jabal al Asfar	10.05	97	Pn	Pn	13 17 02.5	-0.8
	comp=N,0.4nm,0.3s,baz=256,slow=12,SNR=3.5						
ASF				Sn	Sn	13 18 51.1	-5.1
	comp=N,0.4nm,0.3s,baz=336,slow=20,SNR=3.0						
KBA	Koelnbreinsper	15.81	329	eP	Pn	13 18 25.3	+3.8
	comp=N,1.0nm,0.2s						
ABTA	Abfaltersbach	15.92	327	iP	Pn	13 18 27.0	+4.2
	comp=N,1.4nm,0.3s						
MOA	Molln	16.06	333	iP	Pn	13 18 27.7	+3.2
	comp=N,0.6nm,0.2s						
KBZ	Khabaz	16.89	50	Pn	Pn	13 18 38.1	+3.1
	comp=N,0.1nm,0.3s,baz=225,slow=8.6,SNR=3.0						
AKASG	Malin Array Be	16.96	9	Pn	Pn	13 18 35.4	-0.6
	comp=N,1.8nm,0.3s,baz=13,slow=12,SNR=5.2						
GERES	GERESS Array B	17.09	334	Pn	Pn	13 18 36.4	-1.3
	comp=N,0.4nm,0.3s,baz=144,slow=12,SNR=11						
HFS	Hagfors	27.20	347	P	P	13 20 20.1	-2.2
	comp=N,3.0nm,0.8s,baz=160,slow=11,SNR=12						
FINES	FINESS Array B	27.47	1	P	P	13 20 22.2	-2.5
	comp=N,0.7nm,0.3s,baz=164,slow=10,SNR=11						
NOA	NORSAR Array B	28.51	346	P	P	13 20 32.4	-1.7
	comp=N,0.2nm,0.3s,baz=164,slow=9.3,SNR=3.8						
EKA	Eskdalemuir Ar	28.97	326	P	P	13 20 37.4	-0.8
	comp=N,0.3nm,0.3s,baz=119,slow=7.4,SNR=3.1						
AKTO	Aktyubinsk	29.08	46	P	P	13 20 38.2	-1.0
	comp=N,0.4nm,0.4s,baz=248,slow=9.4,SNR=2.8						
TORD	Torodi Ar. Bea	29.72	231	P	P	13 20 46.0	+0.8
	comp=N,1.0nm,0.3s,baz=33,slow=8.8,SNR=17						
ARCES	ARCESS Array B	35.59	0	P	P	13 21 33.4	-2.6
	comp=N,0.8nm,0.5s,baz=173,slow=8.8,SNR=7.2						
KURBB	Kurchatov Arra	41.89	50	P	P	13 22 28.6	-0.4
	comp=N,0.6nm,0.5s,baz=274,slow=8.6,SNR=7.5						
MKAR	Makanchi Array	44.45	56	P	P	13 22 49.8	-0.1
	comp=N,0.8nm,0.4s,baz=270,slow=7.5,SNR=20						
ZALV	Zalesovo Beam	45.84	45	P	P	13 22 59.8	-0.9
	comp=N,1.1nm,0.4s,baz=265,slow=8.8,SNR=5.9						
SONM	Songino Array	60.26	50	P	P	13 24 46.1	-1.2
	comp=N,0.3nm,0.5s,baz=309,slow=9.1,SNR=3.4						
SCHQ	Schefferville	64.04	320	P	P	13 25 11.7	-0.8
	comp=N,3.4nm,1.0s,baz=42,slow=7.8,SNR=2.7						
USRK	Ussuriysk Ar.	77.69	45	P	P	13 26 33.5	-2.0
	comp=N,0.4nm,0.5s,baz=291,slow=5.3,SNR=2.2						
YKA	Yellowknife Ar	78.54	342	P	P	13 26 38.9	-1.0
	comp=N,0.2nm,0.5s,baz=34,slow=5.5,SNR=4.1						
ILAR	Eielson Array	81.35	357	P	P	13 26 55.3	+0.2
	comp=N,0.3nm,0.8s,baz=9.5,slow=2.7,SNR=3.3						

NNC 14 13:18:10.3±3.6, 37°.53N×71°.34E, h113km±94km, mb3.3, mpv3.9, Error ellipse: s-maj=33.5km s-min=21.9km az=149.0
ISC 14 13:18:07.8±0.9, 37°.39N±0°.07×71°.52E±0°.07, h200km, n22, σ1°.99/27, 6C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	5.02	19	P	Pn	13 19 23.9	+1.1
	SNR=96						
UCH	Uchtor	5.35	25	P	Pn	13 19 28.5	+1.4
	SNR=14						
KZA	Kyzart	5.50	30	P	Pn	13 19 29.5	+0.7
	SNR=11						
EKS2	Erkin-Say	5.54	18	P	Pn	13 19 31.1	+2.0
	SNR=12						
AAK	Ala-Archa	5.72	23	P	Pn	13 19 33.2	+1.8
	SNR=16						
AAK	Ala-Archa	5.72	23	⇑P	Pn	13 19 32.9	+1.4
	5.3nm,0.5s						
AAK				⇑S	Sn	13 20 34.3	-3.4
	16nm,1.2s						
KK31	Karatay Array	5.76	353	⇓P	Pn	13 19 33.6	+1.7
	6.0nm,0.3s,baz=176,slow=12,SNR=136						
KK31				⇑S	Sn	13 20 36.3	-2.1
	6.4nm,0.4s,baz=168,slow=20,SNR=11						
CHMS	Chumysh	6.12	23	P	Pn	13 19 38.6	+2.0
	SNR=7.1						
CHMS	Chumysh	6.12	23	⇑P	Pn	13 19 37.9	+1.3
	5.2nm,0.5s						
CHMS				⇓S	Sn	13 20 44.2	-2.7
	4.7nm,0.5s						
USP	Ospenovka	6.30	20	P	Pn	13 19 41.1	+2.3
	SNR=5.6						
GYA0B	ALIBECK ARRAY	10.64	277	⇓P	Pn	13 20 35.7	+0.5
GYA0B				⇓S	Sn	13 22 30.4	-3.6
DANN	Dangsing	13.67	128	eP	P	13 21 13.0	-3.2
	7.1nm,0.3s						
KOLN	Koldanda	13.98	130	eP	P	13 21 18.3	-1.3
	5.4nm,0.3s						
GKN	Gorkha	14.46	127	eP	P	13 21 23.1	-1.8
	10.0nm,0.2s						
AB31	Akbulak array	14.53	328	⇓P	P	13 21 28.7	+3.5
	0.7nm,0.4s,baz=174,slow=10.0,SNR=4.9						
AB31				⇑S	S	13 24 03.9	-1.3
	2.9nm,0.4s,baz=161,slow=21,SNR=14						
DMN	Daman	15.04	127	eP	P	13 21 31.4	0.0
PKI	Pulchoki	15.26	126	eP	P	13 21 33.7	-0.2
GUN	Gumba	15.34	124	eP	P	13 21 33.8	-1.0
JIRN	Jiri	15.71	124	eP	P	13 21 39.5	+0.5
	22nm,0.4s						
AKTO	Aktyubinsk	16.23	328	⇑P	Pn	13 21 51.8	+7.1
	3.3nm,1.0s						
AKTO				⇓S	Sn	13 24 47.5	+0.5
	2.8nm,0.8s						
RAMN	Ramite	16.45	125	eP	Pn	13 21 48.8	+1.0
	10nm,0.5s						
TAPN	Taplejung	16.93	122	eP	Pn	13 21 54.2	+0.7
	3.4nm,0.3s						

IDC 14 13:19:31.3±9.3, 45°.18S×81°.62W, h0km, mb3.8/3, mb1 4.2/4, mb1mx3.9/22, mbtmp3.7/4, ML3.8/1, MS3.5/11, Ms1 3.5/11, ms1mx3.3/24, Error ellipse: s-maj=270.5km s-min=37.2km az=172.0
NEIC 14 13:19:33.3±0.9, 45°.20S±0°.07×81°.5W±0°.2, h16km±6km, mb4.2/3, Error ellipse: s-maj=19.5km s-min=10.0km az=99.0
ISC 14 13:19:31.7±1.0, 45°.25S±0°.1×81°.7W±0°.1, h10km, n19, σ2°.55/10, mb3.9/5, MS3.5/9, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO09	Cerro Castillo	8.72	138	Pn	Pn	13 21 37.1	-0.7

PLCA	Paso Flores	9.28	65	Pn	Pn	13 21 45.2	-0.4
	0.2nm,0.3s,baz=235,slow=15,SNR=7.5						
PLCA				Sn	Sn	13 23 34.1	+4.0
	0.0nm,0.3s,baz=243,slow=18,SNR=2.5						
PLCA				LR	LR	13 24 52.9	
	comp=Z,408nm,18.8s,baz=308,slow=35						
ROC1	El Roble	14.71	38	Pn	Pn	13 22 57.2	-2.8
EFI	East Falkland	16.93	121	Pn	Pn	13 23 28.0	-0.5
EFI				IAmb	IAmb	13 23 32.2	
	comp=Z,42nm,1.1s						
CFA	Coronel Fontan	17.12	42	LR	LR	13 28 57.5	
	comp=Z,207nm,20.6s,baz=244,slow=33						
LVC	Limon Verde	24.81	29	LR	LR	13 32 17.0	
	comp=Z,69nm,20.8s,baz=196,slow=31						
CPUP	Villa Florida	27.10	54	LR	LR	13 36 05.2	
	comp=Z,255nm,18.1s,baz=216,slow=37						
CPUP	Villa Florida	27.10	54	P	P	13 25 10.9	-3.7
CPUP				IAmb	IAmb	13 25 20.0	
	comp=Z,6.8nm,1.2s						
RPN	Rapa Nui	28.48	300	LR	LR	13 33 24.3	
	comp=Z,61nm,18.9s,baz=114,slow=29						
NNA	Nana	33.33	9	LR	LR	13 36 48.1	
	comp=Z,39nm,18.1s,baz=196,slow=31						
ATAH	Atahualpa	38.00	5	LR	LR	13 38 19.3	
	comp=Z,64nm,21.8s,baz=199,slow=30						
BDFB	Brasilia	40.83	55	LR	LR	13 44 33.2	
	comp=Z,92nm,19.0s,baz=255,slow=37						
QSPA	South Pole Qui	45.07	180	P	P	13 27 47.8	+0.2
QSPA				IAmb	IAmb	13 27 50.2	
	comp=Z,4.4nm,1.4s						
ROSC	El Rosal	50.22	10	LR	LR	13 47 44.4	
	comp=Z,62nm,18.2s,baz=158,slow=34						
RAR	Rarotonga	67.02	263	LR	LR	13 51 21.7	
	comp=Z,65nm,19.7s,baz=124,slow=28						
TXAR	Lajitas Array	76.81	340	P	P	13 31 24.7	+1.2
	comp=Z,0.7nm,0.8s,baz=169,slow=8.5,SNR=8.6						
NVAR	Mina Array Bea	89.52	332	P	P	13 32 31.3	+2.2
	comp=Z,0.5nm,0.7s,baz=177,slow=5.0,SNR=4.4						
PDAR	Pinedale Array	91.02	340	P	P	13 32 36.8	+0.8
	comp=Z,0.1nm,0.3s,baz=164,slow=7.0,SNR=2.7						
TORD	Torodi Ar. Bea	94.60	76	LR	LR	14 09 21.8	
	comp=Z,16nm,21.8s,baz=140,slow=32						

NEIC 14 13:25:40.2±1.9,20.85°N±0.06°×146.23°E±0.09°,h24km±4km, mb4.4/19,Error ellipse: s-maj=12.1km s-min=9.3km az=83.0
IDC 14 13:25:46.2±3.4,20.89°N×146.19°E,h75km±32km,mb3.8/23, mb1 4.0/26,mb1mx3.9/46,mbtmp4.2/26,MS3.4/7, Ms1 3.4/7,ms1mx3.0/39,Error ellipse: s-maj=18.7km s-min=9.9km az=90.0
ISC 14 13:25:41.6±0.5,20.86°N±0.06°×146.2°E±0.1°,h34km,n69, σ1s37/59,mb4.2/29,MS3.4/7,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	Sarigan	4.15	185	Pn	Pn	13 26 41.0	-1.7
ANA2	Anatahan	4.51	186	Pn	Pn	13 26 46.8	-0.8
JCJ	Chichijima	7.21	330	P	Pn	13 27 29.0	+4.3
	8.4nm,0.3s,baz=282,slow=19,SNR=2.7						
JCJ				S	Sn	13 28 39.4	-6.0
	31nm,0.3s,baz=114,slow=23,SNR=9.5						
MJAR	Matsushiro Arr	17.11	338	P	Pn	13 29 38.1	-0.1
	0.0nm,0.3s,baz=152,slow=9.9,SNR=3.7						
MAJO	Matsushiro	17.11	338	Pn	Pn	13 29 37.4	-0.9
MJB9	Matsu-Tunnel	17.12	338	Pn	Pn	13 29 37.5	-0.8
JOW	Kunigami	17.43	293		Pn	13 29 43.7	+1.5
JNU	Nakatsue	18.29	315	P	P	13 29 53.0	+0.3
	0.2nm,0.3s,baz=121,slow=13,SNR=2.2						
JNU	Nakatsue	18.29	315	P	P	13 29 51.8	-0.9
JNU				IAmb	IAmb	13 29 58.9	
	comp=Z,32nm,1.2s						
H11S3	WAKE ISLAND Hy	19.44	93	T	T	13 50 08.9	
	baz=287,slow=74,SNR=22						
H11N1	WAKE ISLAND Hy	19.45	90	T	T	13 50 11.2	
	baz=276,slow=74,SNR=5.0						
H11S1	WAKE ISLAND Hy	19.45	93	T	T	13 50 07.8	
	baz=287,slow=74						
H11N2	WAKE ISLAND Hy	19.45	90	T	T	13 50 06.1	
	baz=276,slow=74,SNR=5.6						
H11S2	WAKE ISLAND Hy	19.46	93	T	T	13 50 08.3	
	baz=287						
H11N3	WAKE ISLAND Hy	19.47	90	T	T	13 50 06.1	
	baz=276,slow=74,SNR=7.0						
KSRS	Korea Array	22.91	320	P	P	13 30 43.2	+0.6
	comp=Z,5.0nm,0.7s,baz=145,slow=9.5,SNR=15						
KSRS				LR	LR	13 39 56.5	
	comp=Z,59nm,18.8s,baz=125,slow=37						
KS19	Wonju Array Si	22.98	320	P	P	13 30 42.7	-0.6
JKA	Kamikawa-asahi	23.39	353	P	P	13 30 48.8	+1.5
ASAJ	Asahikawa	23.39	353	P	P	13 30 48.8	+1.5
	comp=Z,7.1nm,0.8s,baz=197,slow=14,SNR=3.5						
USRK	Ussuriysk Ar.	26.10	336	P	P	13 31 14.1	+1.8
	comp=Z,2.6nm,0.7s,baz=158,slow=12,SNR=4.9						
PMG	Port Moresby	30.09	178	P	P	13 31 50.4	+2.4
	comp=Z,6.9nm,0.9s,baz=27,slow=9.0,SNR=3.1						
PMG	Port Moresby	30.09	178	P	P	13 31 45.7	-2.4
PMG				IAmb	IAmb	13 31 50.8	
	comp=Z,9.1nm,1.1s						
HNR	Honiara	33.00	154	LR	LR	13 44 49.7	
	comp=Z,98nm,18.7s,baz=53,slow=35						
PETK	Petropavlovsk-	33.39	13	P	P	13 32 17.9	+1.1
	comp=Z,9.3nm,1.0s,baz=194,slow=9.6,SNR=3.1						
KNRA	Kununurra	40.14	207	P	P	13 33 15.5	+1.0
KNRA				IAmb	IAmb	13 33 25.7	
	comp=Z,14nm,1.1s						
CTA	Charters Tower	40.69	180	P	P	13 33 20.0	+0.9
	comp=Z,2.5nm,0.9s,baz=25,slow=14,SNR=2.3						
SONM	Songino Array	41.78	320	P	P	13 33 27.9	-0.1
	comp=Z,0.6nm,0.4s,baz=132,slow=8.0,SNR=6.3						
WB0	Warramunga Arr	41.99	197	P	P	13 33 29.7	-0.1
WR0	Warramunga Arr	42.14	196	P	P	13 33 32.4	+1.4
WRAB	Tennant Creek	42.16	197	P	P	13 33 28.6	-2.5
WRAB				IAmb	IAmb	13 33 36.4	
	comp=Z,5.5nm,0.8s						
WB2	Warramunga Arr	42.17	197	P	P	13 33 31.7	+0.5
WB2				IAmb	IAmb	13 33 36.4	
	comp=Z,4.9nm,0.8s						
WRA	Warramunga Arr	42.17	197	P	P	13 33 31.7	+0.4
	comp=Z,2.1nm,0.6s,baz=16,slow=8.8,SNR=16						
WRA				LR	LR	13 51 06.4	
	comp=Z,50nm,19.3s,baz=345,slow=36						
SEY	Seymchan	42.26	4	P	P	13 33 31.6	+0.1
	comp=Z,1.6nm,0.6s,baz=181,slow=7.4,SNR=9.2						
FITZ	Fitzroy Crossi	43.64	209	P	P	13 33 43.5	+0.3
	comp=Z,4.2nm,0.6s,baz=30,slow=11,SNR=3.9						
FITZ	Fitzroy Crossi	43.64	209	IAmb	IAmb	13 33 53.8	
	comp=Z,5.4nm,0.8s						
CMAR	Chiang Mai Arr	44.44	275	P	P	13 33 50.0	+0.3
	comp=Z,0.5nm,0.4s,baz=70,slow=6.8,SNR=5.7						
CMAR				LR	LR	13 50 17.1	
	comp=Z,24nm,21.6s,baz=235,slow=33						
ASAR	Alice Springs	45.84	196	P	P	13 34 00.5	-0.2
	comp=Z,0.3nm,0.4s,baz=16,slow=7.0,SNR=13						
DZM	Mont Dzumac	47.02	154	P	P	13 34 09.6	-0.4
	comp=Z,5.4nm,0.9s,baz=319,slow=11,SNR=2.6						
DZM	Mont Dzumac	47.02	154	IAmb	IAmb	13 34 12.6	
	comp=Z,7.2nm,1.0s						
TAPN	Taplejung	53.37	289	eP	P	13 34 58.4	-0.1
	comp=Z,12nm,0.7s						
ODAN	Odare	53.71	289	eP	P	13 35 00.5	-0.4
	comp=Z,6.2nm,0.3s						
RAMN	Ramite	54.40	289	eP	P	13 35 06.0	0.0
	comp=Z,6.8nm,0.5s						
JIRN	Jiri	54.68	290	eP	P	13 35 08.4	+0.3
	comp=Z,48nm,0.7s						
GUN	Gumba	54.92	290	eP	P	13 35 09.4	-0.4
	comp=Z,7.8nm,0.4s						
PKI	Pulchoki	55.38	290	eP	P	13 35 12.4	-0.7
	comp=Z,6.5nm,0.5s						
PKIN	Phulchoki	55.39	290	eP	P	13 35 13.4	+0.3
	comp=Z,4.1nm,0.4s						
DMN	Daman	55.64	290	eP	P	13 35 14.6	-0.3
	comp=Z,8.0nm,0.7s						
GKN	Gorkha	56.00	290	eP	P	13 35 17.1	-0.3
	comp=Z,7.0nm,0.3s						
ZALV	Zalesovo Beam	56.61	322	P	P	13 35 21.5	+0.5
	comp=Z,1.6nm,0.5s,baz=104,slow=6.1,SNR=2.9						
DANN	Dangsing	56.72	291	eP	P	13 35 22.4	-0.3
	comp=Z,69nm,0.6s						
KOLN	Koldanda	56.94	290	eP	P	13 35 23.8	-0.3
	comp=Z,11nm,0.7s						
MK31	Makanchi Array	57.33	313	P	P	13 35 25.4	-1.0
MKAR	Makanchi Array	57.33	313	P	P	13 35 25.8	-0.6
	comp=Z,1.0nm,0.6s,baz=96,slow=9.5,SNR=10.0						
MAKZ	Makanchi	57.54	313	P	P	13 35 28.1	+0.2
ILAR	Eielson Array	61.52	27	P	P	13 35 53.1	-1.8
	comp=Z,1.7nm,0.9s,baz=261,slow=5.4,SNR=14						
ILAR				LR	LR	14 01 16.2	
	comp=Z,28nm,20.0s,baz=258,slow=35						
INK	Inuvik	67.22	23	P	P	13 36 31.7	-0.4
	comp=Z,1.5nm,0.9s,baz=216,slow=4.5,SNR=4.4						
INK	Inuvik	67.22	23	IAmb	IAmb	13 36 47.0	
	comp=Z,4.7nm,1.1s						
YKA	Yellowknife Ar	75.88	28	P	P	13 37 23.6	-0.8
	comp=Z,1.6nm,0.8s,baz=288,slow=5.9,SNR=15						
ARCES	ARCESS Array B	80.59	342	P	P	13 37 50.4	0.0
	comp=Z,2.2nm,0.8s,baz=64,slow=8.1,SNR=2.8						
RYN	Ryan	81.22	52	P	P	13 37 54.4	-0.2
RYN				IAmb	IAmb	13 37 55.7	
	comp=Z,4.6nm,1.0s						
KVN	Kaiserville	81.39	52	P	P	13 37 55.5	0.0
KVN				IAmb	IAmb	13 37 56.6	
	comp=Z,3.2nm,0.8s						
NVAR	Mina Array Bea	81.45	52	P	P	13 37 56.5	+0.6
	comp=Z,4.1nm,0.8s,baz=266,slow=5.5,SNR=26						
NV11	Mina Array Sit	81.56	52	P	P	13 37 56.6	+0.2
NV11				IAmb	IAmb	13 37 57.6	
	comp=Z,3.3nm,0.8s						
TPNV	Topopah Spring	83.49	53	P	P	13 38 06.7	+0.2
FINES	FINESS Array B	85.13	335	P	P	13 38 12.7	-1.3
	comp=Z,1.8nm,0.5s,baz=68,slow=4.2,SNR=12						
PDAR	Pinedale Array	85.99	46	P	P	13 38 18.6	-0.4
	comp=Z,0.3nm,0.5s,baz=173,slow=0.7,SNR=5.0						
PDAR				LR	LR	14 14 02.3	
	comp=Z,32nm,18.6s,baz=13,slow=34						
SRU	San Rafael Swe	86.84	49	P	P	13 38 23.2	-0.1
AKASG	Malin Array Be	89.80	325	LR	LR	14 22 37.8	
	comp=Z,18nm,19.3s,baz=30,slow=38						
TXAR	Lajitas Array	96.24	56	P	P	13 39 07.2	+0.2
	comp=Z,0.4nm,0.8s,baz=302,slow=5.2,SNR=3.1						

IDC 14 13:30:44.4±1.0,41.55°S×85.35°E,h0km,mb3.9/7, mb1 4.0/7,mb1mx3.8/37,mbtmp3.9/7,MS3.5/9,Ms1 3.5/9, ms1mx3.2/23,Error ellipse: s-maj=37.2km s-min=23.2km az=172.0
NEIC 14 13:30:44.2±2.3,41.6°S±0.2°×85.4°E±0.1°,h10km±1km, mb4.5/10,Error ellipse: s-maj=31.4km s-min=5.2km az=334.0
ISC 14 13:30:44.9±0.8,41.7°S±0.2°×85.4°E±0.1°,h10km,n28, σ1s57/15,mb4.2/11,MS3.6/9,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	23.51	83	T	T	14 00 17.4	
	baz=245,slow=74,SNR=36						
H01W3	Cape Leeuwin H	23.52	83	T	T	14 00 18.0	
	baz=245,slow=74,SNR=34						
H01W1	Cape Leeuwin H	23.53	83	T	T	14 00 18.3	
	baz=245,slow=74,SNR=36						
CRZF	Crozet Islands	24.41	247	P	P	13 36 02.5	-0.8
MAW	Mawson	28.66	198	LR	LR	13 45 43.0	
	comp=Z,48nm,19.6s,baz=56,slow=31						
MAW	Mawson	28.66	198	P	P	13 36 38.8	-2.5
MAW				IAmb	IAmb	13 36 51.5	
	comp=Z,4.6nm,1.5s						
H08S2	Diego Garcia H	35.81	338	T	T	14 15 21.7	
	baz=164,slow=76,SNR=46						
H08S1	Diego Garcia H	35.81	338	T	T	14 15 01.3	
	baz=164,slow=76,SNR=60						
H08S3	Diego Garcia H	35.83	338	T	T	14 15 02.4	
	baz=164,slow=76,SNR=53						
ASAR	Alice Springs	44.02	81	P	P	13 38 54.0	+1.2
	comp=Z,0.6nm,0.7s,baz=225,slow=7.3,SNR=9.2						
ASAR				LR	LR	13 54 46.2	
	comp=Z,74nm,21.9s,baz=232,slow=33						
AS31	Alice Springs	44.02	81	P	P	13 38 51.9	-0.8
STKA	Stephens Creek	45.38	96	P	P	13 39 05.5	+2.1
	comp=Z,1.6nm,0.6s,baz=198,slow=3.2,SNR=2.9						
STKA				LR	LR	13 54 33.9	
	comp=Z,50nm,18.3s,baz=203,slow=32						
STKA	Stephens Creek	45.38	96	P	P	13 39 02.5	-0.9
KNRA	Kununurra	45.41	68	P	P	13 39 02.4	-1.5
KNRA				IAmb	IAmb	13 39 20.4	
	comp=Z,21nm,1.4s						
WRA	Warramunga Arr	46.60	78	P	P	13 39 13.9	+0.6
	comp=Z,3.3nm,1.3s,baz=234,slow=8.4,SNR=5.6						
WB2	Warramunga Arr	46.61	78	P	P	13 39 12.9	-0.4
WB2				IAmb	IAmb	13 39 15.5	
	comp=Z,8.0nm,1.3s						
WRAB	Tennant Creek	46.62	78	P	P	13 39 07.8	-5.6
VNDA	Vanda	46.75	163	LR	LR	13 56 40.0	
	comp=Z,61nm,20.6s,baz=262,slow=33						
QSPA	South Pole Qui	48.43	180	P	P	13 39 28.6	+1.6
	comp=Z,2.3nm,1.0s,baz=290,slow=1.9,SNR=9.8						
QSPA	South Pole Qui	48.43	180	P	P	13 39 28.4	+1.3
QSPA				IAmb	IAmb	13 39 42.8	
	comp=Z,1.8nm,0.9s						
BOSA	Boshof	49.92	265	P	P	13 39 40.9	+2.0
	comp=Z,1.8nm,0.4s,baz=121,slow=6.4,SNR=4.2						
BOSA				LR	LR	13 57 27.5	
	comp=Z,52nm,18.3s,baz=168,slow=32						
BOSA	Boshof	49.92	265	IAmb	IAmb	13 39 44.7	
	comp=Z,13nm,1.3s						
LBTB	Lobatse	51.63	269	P	P	13 39 51.6	-0.2
LBTB				IAmb	IAmb	13 40 03.3	
	comp=Z,9.9nm,1.4s						
CMAR	Chiang Mai Arr	61.18	15	LR	LR	14 03 35.4	
	comp=Z,16nm,20.5s,baz=210,slow=32						
MKAR	Makanchi Array	88.18	358	P	P	13 43 33.9	-1.6
	comp=Z,0.4nm,0.9s,baz=152,slow=3.9,SNR=3.1						
MKAR				LR	LR	14 20 32.0	
	comp=Z,30nm,21.3s,baz=165,slow=34						
TORD	Torodi Ar. Bea	93.98	284	P	P	13 44 04.6	+1.4
	comp=Z,0.3nm,0.7s,baz=113,slow=5.6,SNR=2.7						
PLCA	Paso Flores	95.07	198	LR	LR	14 27 23.7	
	comp=Z,40nm,18.5s,baz=176,slow=36						
ZALV	Zalesovo Beam	95.30	360	LR	LR	14 24 17.9	
	comp=Z,24nm,20.5s,baz=19,slow=34						

IDC 14 13:49:33.4±0.7,20.90°N×146.36°E,h0km,mb4.0/18, mb1 4.1/20,mb1mx4.1/39,mbtmp4.0/20,ML3.4/2,MS3.3/6, Ms1 3.3/6,ms1mx2.9/30,Error ellipse: s-maj=19.9km s-min=15.9km az=88.0
NEIC 14 13:49:35.7±2.6,20.86°N±0.01°×146.2°E±0.1°,h18km±5km, mb4.4/8,Error ellipse: s-maj=18.8km s-min=2.0km az=90.0
ISC 14 13:49:34.5±0.6,20.89°N±0.07°×146.2°E±0.1°,h10km,n41, σ1s45/34,mb4.0/22,MS3.4/5,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	Sarigan	4.19	186	Pn	Pn	13 50 37.6	-0.9
ANA2	Anatahan	4.55	186	Pn	Pn	13 50 43.2	-0.3
JCJ	Chichijima	7.20	330	Pn	Pn	13 51 20.5	+0.6
	5.0nm,0.3s,baz=12,slow=23,SNR=1.8						
JCJ				Sn	Sn	13 52 37.0	-4.7
	20nm,0.3s,baz=299,slow=23,SNR=5.7						
GUMO	Guam	7.38	190	LR	LR	13 53 45.9	
	comp=Z,126nm,20.1s,baz=16,slow=34						
MJAR	Matsushiro Arr	17.10	338	P	Pn	13 53 33.0	-0.7
	0.0nm,0.3s,baz=156,slow=12,SNR=3.4						
H11S3	WAKE ISLAND Hy	19.41	94	T	T	14 14 11.2	
	baz=281,slow=74						
H11N1	WAKE ISLAND Hy	19.42	90	T	T	14 13 59.5	
	baz=279						
H11N2	WAKE ISLAND Hy	19.42	90	T	T	14 14 07.1	
	baz=279						
H11S1	WAKE ISLAND Hy	19.42	93	T	T	14 14 10.7	
	baz=281,slow=74						
H11S2	WAKE ISLAND Hy	19.43	94	T	T	14 14 10.7	
	baz=281						
H11N3	WAKE ISLAND Hy	19.43	90	T	T	14 14 01.2	
	baz=279						
KSRS	Korea Array	22.91	320	P	P	13 54 40.0	+1.4
	4.1nm,0.9s,baz=147,slow=9.5,SNR=9.2						
YULB	Yu-li	23.22	281	P	P	13 54 40.8	-1.2
YULB				IAmb	IAmb	13 54 55.6	
	comp=Z,22nm,1.2s						
JKA	Kamikawa-asahi	23.36	353	P	P	13 54 44.7	+1.6
ASAJ	Asahikawa	23.36	353	P	P	13 54 44.7	+1.5
	comp=Z,6.6nm,1.0s,baz=126,slow=4.6,SNR=3.4						
USRK	Ussuriysk Ar.	26.08	336	P	P	13 55 10.8	+2.5
	comp=Z,2.3nm,0.8s,baz=178,slow=7.2,SNR=6.5						
PETK	Petropavlovsk-	33.35	13	P	P	13 56 12.7	-0.1
	comp=Z,11nm,1.1s,baz=182,slow=10,SNR=3.6						
SONM	Songino Array	41.78	320	P	P	13 57 26.8	+2.5
	comp=Z,0.6nm,0.5s,baz=96,slow=7.2,SNR=2.9						
WB0	Warramunga Arr	42.03	197	P	P	13 57 25.7	-0.7
WRAB	Tennant Creek	42.20	197	P	P	13 57 29.1	+1.3
WRAB				IAmb	IAmb	13 57 34.9	
	comp=Z,5.4nm,0.7s						
WB2	Warramunga Arr	42.21	197	P	P	13 57 27.9	0.0
WRA	Warramunga Arr	42.22	197	P	P	13 57 28.2	+0.3
	comp=Z,1.7nm,0.7s,baz=13,slow=8.7,SNR=13						
WRA				LR	LR	14 15 12.2	
	comp=Z,60nm,18.2s,baz=180,slow=36						
SEY	Seymchan	42.23	4	P	P	13 57 28.7	+1.2
	comp=Z,1.5nm,0.9s,baz=194,slow=9.4,SNR=4.7						
FITZ	Fitzroy Crossi	43.69	209	P	P	13 57 38.4	-1.4
CMAR	Chiang Mai Arr	44.47	275	P	P	13 57 48.0	+1.6
	comp=Z,0.3nm,0.3s,baz=78,slow=5.4,SNR=5.4						
CMAR				LR	LR	14 14 26.3	
	comp=Z,20nm,21.5s,baz=260,slow=34						
ASAR	Alice Springs	45.88	196	P	P	13 57 57.8	+0.4
	comp=Z,0.2nm,0.4s,baz=16,slow=8.6,SNR=6.7						
ZALV	Zalesovo Beam	56.60	322	P	P	13 59 18.1	+0.7
	comp=Z,0.6nm,0.5s,baz=128,slow=9.3,SNR=3.1						
MKAR	Makanchi Array	57.33	313	P	P	13 59 22.6	-0.2
	comp=Z,0.7nm,0.8s,baz=93,slow=9.9,SNR=7.6						
ILAR	Eielson Array	61.47	27	P	P	13 59 50.2	-0.9
	comp=Z,2.1nm,0.9s,baz=254,slow=5.7,SNR=13						
INK	Inuvik	67.17	23	P	P	14 00 26.8	-1.5
	comp=Z,1.2nm,0.8s,baz=332,slow=4.5,SNR=6.1						
PPT	Papeete	73.62	116	LR	LR	14 31 02.2	
	comp=Z,16nm,19.1s,baz=244,slow=34						
YKA	Yellowknife Ar	75.83	28	P	P	14 01 20.6	-0.1
	comp=Z,1.2nm,0.7s,baz=288,slow=5.9,SNR=12						
YKA				LR	LR	14 33 09.2	
	comp=Z,20nm,21.6s,baz=0.0,slow=34						
NVAR	Mina Array Bea	81.41	52	P	P	14 01 53.1	+0.9
	comp=Z,3.4nm,0.8s,baz=265,slow=5.7,SNR=29						
NVAR				LR	LR	14 32 13.5	
	comp=Z,28nm,19.2s,baz=270,slow=31						
NV11	Mina Array Sit	81.51	52	P	P	14 01 53.5	+0.8
NV11				IAmb	IAmb	14 01 55.8	
	comp=Z,6.3nm,1.2s						
ELK	Elko	82.81	49	P	P	14 02 00.5	+0.9
ELK				IAmb	IAmb	14 02 05.7	
	comp=Z,2.4nm,1.0s						
TPNV	Topopah Spring	83.45	53	P	P	14 02 02.7	-0.1
FINES	FINESS Array B	85.11	335	P	P	14 02 09.5	-1.1
	comp=Z,2.0nm,0.6s,baz=68,slow=4.4,SNR=12						
PDAR	Pinedale Array	85.94	46	P	P	14 02 15.2	-0.3
	comp=Z,0.2nm,0.6s,baz=177,slow=0.6,SNR=4.0						
TXAR	Lajitas Array	96.19	56	P	P	14 03 03.4	-0.1
	comp=Z,0.2nm,0.6s,baz=331,slow=3.4,SNR=2.2						
LPAZ	La Paz	147.15	88	PKPbc	PKiKP	14 09 21.2	-0.8
	comp=Z,2.0nm,0.7s,baz=323,slow=5.1,SNR=6.9						
CFA	Coronel Fontan	147.42	116	PKPbc	PKPab	14 09 19.0	-2.2
	comp=Z,0.9nm,0.5s,baz=202,slow=3.8,SNR=3.8						

JMA 14 14:23:48.0±0.1,22.85°N×121.01°E,h21km±2km,M3.4
TAP 14 14:23:50.3,22.91°N×121.08°E,h8km,ML3.6,C
ISC 14 14:23:50.4±0.8,22.89°N±0.02°×121.16°E±0.02°,h15km±5km, n120,σ1s01/186,15C-18D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWGBT	Beinan	0.10	226	⇑P	Pg	14 23 53.0	-0.8
	baz=182						
TWGBT				S	Sg	14 23 54.6	-1.3
	baz=182						
TWG	Pinlang	0.10	230	⇑iP	Pg	14 23 53.0	-0.8
	baz=182						
TWG				iS	Sg	14 23 54.7	-1.2
	baz=182						
TTN	Taitung	0.13	185	P	Pg	14 23 55.2	+1.1
	baz=157						
TTN				S	Sg	14 23 58.6	+2.1
	baz=157						
CHKT	Chengkung	0.28	42	⇑iP	Pg	14 23 57.9	+1.4
	baz=53						
CHKT				eS	Sg	14 24 03.6	+3.1
	baz=53						
ELDTW	Lidau	0.33	336	⇓iP	Pg	14 23 56.4	-0.8
	baz=349						
ELDTW				S	Sg	14 24 00.1	-1.9
	baz=349						
FULB	Fuli	0.33	22	⇑iP	Pb	14 23 58.2	+0.1
	baz=24						
FULB				S	Sb	14 24 04.6	+1.3
	baz=24						
TWH	Lutao	0.34	121	P	Pn	14 23 59.6	-1.3
	baz=123						
TWH				S	Sb	14 24 06.1	+2.6
	baz=123						
ECL	Taimali	0.35	213	⇑iP	Pg	14 23 56.9	-0.7
	baz=201						
ECL				S	Sg	14 24 00.9	-1.5
	baz=201						
STYT	Tauyuan	0.46	306	⇓iP	Pg	14 23 58.7	-1.0
	baz=311						
STYT				S	Sg	14 24 03.9	-2.0
	baz=311						
TWF1	Yuli	0.48	15	⇑P	Pb	14 23 59.5	-1.1
	baz=13						
TWF1				S	Sb	14 24 06.4	-1.1
	baz=13						
SLGT	Liugui	0.48	283	⇑iP	Pg	14 23 59.0	-1.1
	baz=276						
SLGT				S	Sg	14 24 04.2	-2.4
	baz=276						
SSD	Sandimen	0.51	254	⇑iP	Pg	14 23 59.1	-1.3
	baz=249						
SSD				eS	Sg	14 24 03.9	-3.4
	baz=249						
YULB	Yu-li	0.52	14	⇑P	Pb	14 24 00.0	-0.7
	baz=9.0						
YULB				S	Sb	14 24 07.4	-1.2
	baz=9.0						
MASBT	Mashibuluo	0.56	241	⇑P	Pg	14 24 00.3	-1.1
	baz=230						
MASBT				eS	Sg	14 24 06.5	-2.4
	baz=230						
SGST	Jiashian	0.56	290	⇓iP	Pg	14 24 00.1	-1.5
	baz=294						
SGST				eS	Sg	14 24 06.9	-2.2
	baz=294						
EAST	Anshuo	0.58	210	⇑iP	Pg	14 24 01.5	-0.4
	baz=211						
EAST				S	Sg	14 24 09.1	-0.4
	baz=211						
TAW	Tawu	0.58	205	P	Pg	14 24 01.5	-0.4
	baz=198						
TAW				S	Sg	14 24 09.1	-0.6
	baz=198						
WTP	Ta-pu	0.62	305	⇓iP	Pg	14 24 02.2	-0.4
	baz=308						
WTP				S	Sg	14 24 10.3	-0.4
	baz=308						
YUS	Yu-Shan	0.63	342	⇓iP	Pg	14 24 02.1	-0.8
	baz=358						
YUS				S	Sg	14 24 09.8	-1.5
	baz=358						
EHY	Hungye	0.63	14	⇓P	Pb	14 24 02.5	-0.7
	baz=10.0						
EHY				S	Sg	14 24 10.7	-0.6
	baz=10.0						
SGLT	Jiouru	0.64	255	eP	Pg	14 24 02.7	-0.3
	baz=251						
TPUB	Ta-pu	0.64	310	⇓P	Pg	14 24 02.6	-0.4
	baz=313						
TPUB				S	Sg	14 24 10.8	-0.6
	baz=313						
HGSD	Ruisui	0.65	22	eP	Pb	14 24 03.1	-0.4
	baz=13						
HGSD				S	Sn	14 24 14.2	-0.9
	baz=13						
CHN1	Nanshi	0.65	297	⇓iP	Pg	14 24 03.2	-0.1
	baz=304						
CHN1				eS	Sg	14 24 11.9	0.0
	baz=304						
SSPT	Xinbi	0.68	234	⇑iP	Pg	14 24 03.5	-0.2
	baz=222						
SSPT				S	Sg	14 24 12.2	-0.5
	baz=222						
TWM1	Shoushan	0.68	265	⇑iP	Pg	14 24 04.0	+0.2
	baz=257						
TWM1				eS	Sg	14 24 13.1	+0.3
	baz=257						
SNST	Tainan City	0.69	299	⇓iP	Pg	14 24 04.1	+0.1
	baz=305						
SNST				S	Sg	14 24 13.2	+0.1
	baz=305						
CHN4	Tsaushan	0.70	312	⇓iP	Pg	14 24 03.9	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=324						
CHN4				S	Sg	14 24 13.9	+0.6
	baz=324						
ALS	Alishan	0.70	332	⇓P	Pg	14 24 03.6	-0.6
	baz=344						
ALS				S	Sg	14 24 13.1	-0.4
	baz=344						
SCZT	Fangliau	0.72	224	⇑iP	Pg	14 24 03.6	-0.7
	baz=226						
SCZT				S	Sg	14 24 12.3	-1.6
	baz=226						
TWK	Hsinying	0.72	301	⇓iP	Pg	14 24 04.4	-0.2
	baz=303						
TWK				S	Sg	14 24 13.9	-0.2
	baz=303						
CHN3	Shinhua	0.76	284	eP	Pb	14 24 06.3	+1.0
	baz=285						
CHN3				eS	Sb	14 24 17.8	+2.4
	baz=285						
SNJT	Kaohsiung City	0.77	260	eP	Pb	14 24 06.5	+1.0
	baz=258						
EGFH	Guangfu	0.81	18	eP	Pb	14 24 06.1	-0.3
	baz=20						
EGFH				eS	Sb	14 24 17.5	+0.4
	baz=20						
CHN5	Tsauling	0.83	328	⇓iP	Pg	14 24 06.3	-0.4
	baz=331						
CHN5				S	Sg	14 24 18.3	+0.6
	baz=331						
KAU	Kaohsiung	0.85	248	eP	Pn	14 24 08.6	+0.8
	baz=244						
WHYT	Xinyi Township	0.85	341	⇓P	Pg	14 24 06.7	-0.4
	baz=351						
WHYT				eS	Sg	14 24 18.7	+0.5
	baz=351						
VWDT	VWDT	0.86	359	⇓P	Pg	14 24 06.3	-0.9
	baz=2.0						
VWDT				eS	Sg	14 24 18.2	-0.3
	baz=2.0						
WSSB	Gushan	0.86	254	eP	Pn	14 24 08.9	+0.8
	baz=251						
WLCH	Liuqiu	0.90	234	eP	Pn	14 24 09.4	+0.9
	baz=222						
CHN2	Minshiung	0.90	316	eP	Pb	14 24 08.2	+0.5
	baz=317						
CHN2				eS	Sg	14 24 20.2	+0.6
	baz=317						
CHY	Chiayi	0.91	312	eP	Pg	14 24 07.9	-0.2
	baz=314						
CHY				eS	Sg	14 24 20.9	+0.9
	baz=314						
TWP	Hsiaoliuchiu	0.91	234	eP	Pn	14 24 09.6	+0.9
	baz=223						
SSLB	Suanglung	0.92	348	⇓eP	Pg	14 24 07.0	-1.2
	baz=354						
SSLB				eS	Sg	14 24 19.8	-0.4
	baz=354						
LAY	Lan-yu	0.92	157	eP	Pn	14 24 07.9	-0.9
	baz=155						
LAY				eS	Sn	14 24 21.6	-0.2
	baz=155						
SCLT	Jiali	0.93	288	eP	Pg	14 24 08.9	+0.4
	baz=288						
SCLT				eS	Sb	14 24 22.7	+2.2
	baz=288						
ESL	Shilin	0.95	15	eP	Pb	14 24 08.1	-0.6
	baz=17						
ESL				eS	Sg	14 24 20.3	-1.2
	baz=17						
HEN	Hengchun	0.96	204	eP	Pn	14 24 09.4	0.0
	baz=188						
WGK	Gukeng	0.97	325	⇓P	Pb	14 24 09.5	+0.6
	baz=327						
WGK				eS	Sb	14 24 23.2	+1.7
	baz=327						
WDLH	Douliu	0.98	324	eP	Pb	14 24 09.8	+0.6
	baz=326						
WDLH				eS	Sb	14 24 23.6	+1.7
	baz=326						
CHN8	Yiju	0.98	298	eP	Pg	14 24 09.4	-0.1
	baz=299						
CHN8				eS	Sg	14 24 23.1	+0.7
	baz=299						
WLGB	Puzi	0.98	307	eP	Pg	14 24 09.4	-0.1
	baz=308						
WLGB				eS	Sg	14 24 23.6	+1.2
	baz=308						
TWK1	Hengchun	1.00	199	eP	Pb	14 24 09.6	+0.2
	baz=184						
TWKBT	Hengchun	1.00	199	eP	Pb	14 24 09.3	-0.1
	baz=184						
WJS	Zhushan	1.01	337	⇓eP	Pb	14 24 10.3	+0.7
	baz=338						
WJS				eS	Sn	14 24 25.2	+1.1
	baz=338						
TYC	Yuchr	1.05	345	eP	Pb	14 24 10.5	+0.2
	baz=1.0						
TYC				eS	Sb	14 24 25.4	+1.6
	baz=1.0						
OWD	Renai	1.06	1	eP	Pg	14 24 09.6	-1.4
	baz=4.0						
WNT	Mingjian	1.08	336	⇑eP	Pn	14 24 11.5	+0.4
	baz=339						
ENLB	Shoufeng	1.09	22	eP	Pb	14 24 10.6	-0.4
	baz=39						
WSF	Szhu	1.14	311	eP	Pg	14 24 11.9	-0.5
	baz=312						
WSF				eS	Sg	14 24 26.8	-0.6
	baz=312						
DPDB	Guoxing	1.16	349	eP	Pg	14 24 12.2	-0.7
	baz=2.0						
DPDB				eS	Sn	14 24 28.7	+0.9
	baz=2.0						
CHGB	Renai	1.17	1	eP	Pg	14 24 11.8	-1.2
	baz=1.0						
CHGB				eS	Sb	14 24 28.5	+1.0
	baz=1.0						
RLNB	Erlin	1.24	324	eP	Pn	14 24 13.5	+0.3
	baz=325						
RLNB				eS	Sb	14 24 29.9	+0.5
	baz=325						
TWD	Chiawan	1.25	19	eP	Pn	14 24 13.4	0.0
	baz=36						
WHF	Hehuan Shan	1.25	4	eP	Pg	14 24 13.3	-1.4
	baz=5.0						
WHF				eS	Sb	14 24 30.6	+0.4
	baz=5.0						
WTCT	Ta-ch'eng	1.26	320	eP	Pn	14 24 13.5	-0.1
	baz=322						
WTCT				eS	Sb	14 24 30.1	0.0
	baz=322						
WCHH	Zhanghua	1.31	335	eP	Pg	14 24 15.3	-0.4
	baz=318						
TCU	Taichung	1.33	341	eP	Pg	14 24 15.9	-0.2
	baz=343						
NACB	Ninganchiao	1.34	17	eP	Pn	14 24 12.9	-1.7
	baz=34						
ETLH	Xiulin Townshi	1.35	13	eP	Pn	14 24 14.9	+0.1
	baz=23						
ETLH				eS	Sn	14 24 33.7	+1.3
	baz=23						
TDCB	Techi	1.36	360	eP	Pb	14 24 15.4	-0.3
	baz=13						
TWT	Tachien	1.36	1	eP	Pb	14 24 16.2	-0.4
	baz=2.0						
WHP	Taichung City	1.40	352	eP	Pg	14 24 17.4	0.0
	baz=357						
WHP				eS	Sg	14 24 36.3	+0.7
	baz=357						
WDGT	Dungji	1.43	285	eP	Pn	14 24 15.3	-0.5
	baz=286						
WDGT				eS	Sn	14 24 33.5	-0.8
	baz=286						
TWQ1	Liyutan	1.50	346	eP	Pg	14 24 19.1	-0.1
	baz=346						
TWQ1				eS	Sg	14 24 38.8	+0.1
	baz=346						
WDJ	Dajia District	1.53	342	eP	Pg	14 24 19.4	-0.5
	baz=344						
NNSB	Datong	1.55	8	eP	Pn	14 24 17.6	0.0
	baz=9.0						
NNSH	Datong	1.55	8	eP	Pb	14 24 18.7	-0.2
	baz=9.0						
NNS	Nan Shan	1.56	7	eP	Pg	14 24 19.1	-1.3
	baz=9.0						
NSY	Sanyi	1.56	347	eP	Pg	14 24 20.2	-0.3
	baz=330						
NSY				eS	Sg	14 24 42.0	+1.1
	baz=330						
PHUB	P'eng-hu	1.59	293	eP	Pn	14 24 17.5	-0.5
	baz=294						
PHUB				eS	Sn	14 24 36.7	-1.6
	baz=294						
ENA	Nanau	1.62	19	eP	Pb	14 24 19.2	-0.8
	baz=21						
PNG	Penghu	1.62	295	eP	Pn	14 24 18.1	-0.4
	baz=295						
PNG				eS	Sn	14 24 38.1	-1.0
	baz=295						
VCHM	Qimei	1.62	282	eP	Pn	14 24 17.9	-0.6
	baz=294						
VCHM				eS	Sn	14 24 38.7	-0.5
	baz=294						
NMLH	Miaoli	1.68	348	eP	Pg	14 24 21.8	-0.9
	baz=347						
NMLH				eS	Sg	14 24 44.4	0.0
	baz=347						
NDT	Datong Townshi	1.74	11	eP	Pb	14 24 21.2	-0.8
	baz=25						
NSTT	Nanjuang	1.74	355	eP	Pn	14 24 21.2	+1.1
	baz=340						
NSTT				eS	Sg	14 24 45.9	-0.7
	baz=340						
LIOB	Emei	1.75	356	eP	Pb	14 24 22.1	-0.2
	baz=341						
ENTT	Nioudou	1.78	12	eP	Pb	14 24 21.8	-1.0
	baz=29						
YHNB	Yeheng	1.79	6	eP	Pn	14 24 21.0	+0.2
	baz=7.0						
NSK	Sanguang	1.79	6	eP	Pg	14 24 23.4	-1.4
	baz=7.0						
TWC	Suao	1.83	20	eP	Pb	14 24 23.3	-0.2
	baz=22						
EOS1	EOS1	1.88	28	eP	Pb	14 24 22.8	-1.6
	baz=47						
TWE	Neicheng	1.88	14	eP	Pb	14 24 24.0	-0.5
	baz=32						
SBCB	Hsinchu	1.90	355	eP	Pb	14 24 24.2	-0.6
	baz=357						
SLBB	Yuanshan	1.91	13	eP	Pn	14 24 23.4	+0.9
	baz=31						
NHDH	Xindian Distri	2.09	9	eP	Pb	14 24 26.7	-1.4
	baz=30						
TATO	Taipei	2.10	8	eP	Pb	14 24 28.6	+0.4
	baz=30						
TWA	Mucha	2.12	10	eP	Pb	14 24 28.7	+0.2
	baz=25						
TIPB	Shuangxi	2.16	16	eP	Pn	14 24 26.5	+0.5
	baz=30						
YM01	YM01	2.28	9	eP	Pb	14 24 29.3	-2.0
	baz=354						
YM10	YM10	2.29	9	eP	Pb	14 24 29.5	-2.0
	baz=354						
YM11	YM11	2.30	9	eP	Pn	14 24 29.6	+1.7
	baz=354						
VWUC	VWUC	2.61	324	eP	Pn	14 24 32.7	+0.5
	baz=326						
IRIF	Iriomote-Funau	2.76	58	P	Pn	14 24 35.1	+0.9
PTMZ	Houxiangcun	2.84	319	eP	Pn	14 24 36.2	+1.0
	baz=321						
PTTC	Pingtan	2.89	334	eP	Pn	14 24 36.8	+0.8
	baz=337						
KNM	Kinmen	2.93	302	eP	Pn	14 24 38.0	+1.6
	baz=300						
JKRS	Kuro-shima	2.94	62	P	Pn	14 24 37.4	+0.8
KNMB	Chin-men Tao	2.99	302	eP	Pn	14 24 37.5	+0.2
	baz=302						
JIJ	Ishigaki jima	3.10	61	P	Pn	14 24 39.2	+0.3
JIJ				S	Sn	14 25 15.8	0.0
JISG	Ishigakijimahi	3.35	59	P	Pn	14 24 42.2	0.0
JISG				eS	Sn	14 25 22.8	+1.1
AXDP	Jialang	3.54	305	eP	Pn	14 24 45.0	+0.2
	baz=305						
ZZJH	Jiuhuzhen	3.60	297	eP	Pn	14 24 46.2	+0.5
	baz=296						
JTJ	Tarama	3.68	61	P	Pn	14 24 46.5	-0.4
JTJ				S	Sn	14 25 30.1	+0.1
MHZQ	Yeshan	3.74	329	eP	Pn	14 24 48.1	+0.5
	baz=333						
LYJJ	Jianjiangzhen	3.86	341	eP	Pn	14 24 48.7	-0.5
	baz=344						
XPSS	Dashiqiu	4.12	348	eP	Pn	14 24 53.2	+0.3
	baz=351						
JMJ2	Miyako jima3	4.24	63	P	Pn	14 24 55.2	+0.7
JMJ	Miyako jima 2	4.24	62	eP	Pn	14 24 55.0	+0.5
	baz=65						

IDC 14 14:24:59.3±1.2,2°.31N×128°.64E,h0km,mb3.3/4, mb1 3.5/5,mb1mx3.3/46,mbtmp3.4/5,ML3.2/1,MS2.7/1, Ms1 2.7/1,ms1mx2.2/25,Error ellipse: s-maj=92.9km s-min=19.7km az=66.0,Halmahera

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res ISC
SIJI	Sorong	4.11	140	Pn	Pn	14 26 03.1	-0.4
	1.6nm,0.3s,baz=337,slow=18,SNR=16						
SIJI				Sn	Sn	14 26 48.4	-4.0
	0.6nm,0.3s,baz=180,slow=20,SNR=2.9						
SIJI				LR	LR	14 27 54.9	
	comp=Z,82nm,18.9s,baz=14,slow=43						
WRA	Warramunga Arr	22.82	166	P	P	14 30 04.0	-0.1
	0.5nm,0.8s,baz=344,slow=10,SNR=3.0						
ASAR	Alice Springs	26.33	169	P	P	14 30 37.0	-0.1
	0.3nm,0.5s,baz=349,slow=8.0,SNR=5.7						
SONM	Songino Array	49.25	340	P	P	14 33 49.5	-0.3
	0.3nm,0.7s,baz=149,slow=6.9,SNR=2.5						
MKAR	Makanchi Array	59.80	325	P	P	14 35 06.8	+0.3
	0.5nm,0.5s,baz=112,slow=8.8,SNR=13						

DDA 14 14:27:41.2,37°.59N×29°.28E,h7km±4km,ML1.4,Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res ISC
TAVA	DENIZLI_Tavas	0.32	247	iP	Pg	14 27 47.8	+0.4
TAVA				iS	Sb	14 27 53.6	-1.1
GOLH	Golhisar	0.42	148	iP	Pg	14 27 49.0	-0.3
GOLH				iS	Sb	14 27 56.7	-0.8
BRDR	BURDUR-Merkez	0.63	80	iP	Pg	14 27 52.4	-0.9
BRDR				iS	Sb	14 28 02.8	-0.8
BRDR				IAML		14 28 04.0	
	comp=E,19nm,0.5s						
BRDR				IAML		14 28 05.0	
	comp=N,18nm,0.6s						
KHAL	Karahalli	0.80	12	iP	Pg	14 27 54.5	-2.0
KHAL				iS	Sb	14 28 08.5	+0.1
KHAL				IAML		14 28 12.0	
	comp=E,15nm,0.6s						
KZIL	AFYON_Kizioren	0.95	45	iP	Pg	14 27 58.9	-0.5
KZIL				iS	Sb	14 28 13.1	+0.1
KZIL				IAML		14 28 17.0	
	comp=N,12nm,0.7s						
KZIL				IAML		14 28 19.0	
	comp=E,16nm,0.4s						

ISK 14 14:28:37.2,38°.13N×27°.30E,h4km,ML2.0/4,Suspected Mining explosion.,Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res ISC
BLCB	Balcova	0.32	321	PG	Pg	14 28 44.0	+0.5
BLCB				SG	Sg	14 28 49.2	+1.5
AYDB	Zeytinkoy-Aydi	0.50	112	PG	Pg	14 28 47.4	+0.5
AYDB				SG	Sb	14 28 55.1	-1.3
URLA	Izmir	0.60	292	PG	Pg	14 28 49.4	+0.7
URLA				SG	Sb	14 28 51.1	-0.9
CHOS	Chios island	1.01	285	PG	Pn	14 28 57.8	-0.4
CHOS				SG	Sn	14 29 12.9	0.0
KULA	Kula-Manisa	1.14	70	PN	Pb	14 28 59.4	0.0
KULA				SN	Sn	14 29 16.3	+0.3

*IDC **14** 14:30:31.9±1.3,3°.57S×145°.82E,h0km,mb3.9/8, mb1 4.2/10,mb1mx4.0/36,mbtmp4.0/10,ML4.0/1,MS3.5/21, Ms1 3.5/21,ms1mx3.4/32,Error ellipse: s-maj=42.2km s-min=19.2km az=94.0*

*NEIC **14** 14:30:31.2±2.7,3°.38S±0°.07×146°.1E±0°.1,h10km±2km, mb4.7/9,Error ellipse: s-maj=27.1km s-min=5.6km az=114.0*

ISC 14 14:30:34.4±0.7,3°.44S±0°.08×146°.1E±0°.2,h25km,n37, σ1.62/23,mb3.8/9,MS3.6/16,1C,Bismarck Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res ISC
MANU	Manus Island	1.86	41		Pn	14 31 03.0	-1.7
JAY	Jayapura	5.50	280	LR	LR	14 33 45.6	
	comp=Z,676nm,21.4s,baz=82,slow=37						
PMG	Port Moresby	6.01	170	Pn	Pn	14 32 01.3	-0.5
	1.0nm,0.3s,baz=248,slow=11,SNR=5.6						
PMG				LR	LR	14 34 11.8	
	comp=Z,231nm,21.9s,baz=350,slow=37						
PMG	Port Moresby	6.01	170		Pn	14 32 02.5	+0.6
COEN	Coen	10.85	195		Pn	14 33 08.8	+0.6
HNR	Honiara	14.95	114	LR	LR	14 38 58.9	
	comp=Z,210nm,21.8s,baz=262,slow=33						
SIJI	Sorong	15.08	279	LR	LR	14 40 13.6	
	comp=Z,135nm,19.1s,baz=294,slow=39						
CTA	Charters Tower	16.54	180	LR	LR	14 42 02.7	
	comp=Z,249nm,18.4s,baz=339,slow=42						
WB0	Warramunga Arr	19.86	214	P	P	14 35 01.4	-2.5
WB0				IAmb	IAmb	14 35 04.3	
	comp=Z,49nm,1.1s						
WR0	Warramunga Arr	19.94	214	P	P	14 35 03.3	-1.4
WR0				IAmb	IAmb	14 35 05.1	
	comp=Z,39nm,1.0s						
WRAB	Tennant Creek	20.02	214	P	P	14 35 04.8	-0.8
WRAB				IAmb	IAmb	14 35 06.1	
	comp=Z,47nm,1.0s						
WB2	Warramunga Arr	20.03	214	P	P	14 35 03.8	-2.0
WRA	Warramunga Arr	20.03	214	P	P	14 35 04.3	-1.5
	comp=Z,0.5nm,0.3s,baz=37,slow=12,SNR=28						
WRA				LR	LR	14 42 57.1	
	comp=Z,185nm,20.8s,baz=45,slow=38						
KNRA	Kununurra	20.98	233	P	P	14 35 14.5	-1.5
DAV	Davao City (W)	23.02	297	LR	LR	14 42 35.8	
	comp=Z,72nm,21.5s,baz=311,slow=32						
AS31	Alice Springs	23.32	209	P	P	14 35 40.5	-0.4
ASAR	Alice Springs	23.32	209	P	P	14 35 39.2	-1.6
	comp=Z,7.8nm,1.1s,baz=28,slow=12,SNR=6.8						
ASAR				LR	LR	14 45 58.7	
	comp=Z,184nm,18.1s,baz=36,slow=40						
FITZ	Fitzroy Crossi	24.80	233	P	P	14 35 51.3	-3.4
	comp=Z,20nm,1.0s,baz=76,slow=6.6,SNR=15						
FITZ				LR	LR	14 45 26.7	
	comp=Z,108nm,18.7s,baz=52,slow=37						
FITZ	Fitzroy Crossi	24.80	233	P	P	14 35 52.5	-2.3
FITZ				IAmb	IAmb	14 35 54.2	
	comp=Z,18nm,0.9s						
KAPI	Kappang	26.36	266	LR	LR	14 47 00.6	
	comp=Z,38nm,21.5s,baz=88,slow=38						
DZM	Mont Dzumac	27.04	135	LR	LR	14 45 35.7	
	comp=Z,259nm,19.0s,baz=10,slow=33						
STKA	Stephens Creek	28.60	188	P	P	14 36 29.7	+0.8
	comp=Z,2.5nm,0.9s,baz=0.0,slow=13,SNR=2.3						
STKA				LR	LR	14 48 10.9	
	comp=Z,112nm,19.8s,baz=12,slow=37						
STKA	Stephens Creek	28.60	188	IAmb	IAmb	14 36 33.7	
	comp=Z,0.8nm,1.1s						
TOO	Toolangi	33.97	181	P	P	14 37 15.4	-0.6
TOO				IAmb	IAmb	14 37 29.6	
	comp=Z,12nm,1.4s						
JNU	Nakatsue	39.13	340	LR	LR	14 51 05.4	
	comp=Z,64nm,19.2s,baz=172,slow=32						
KSRS	Korea Array	44.07	339	LR	LR	14 53 47.5	
	comp=Z,70nm,20.7s,baz=166,slow=32						
CMAR	Chiang Mai Arr	51.31	297	P	P	14 39 36.5	-0.5
	comp=Z,0.5nm,0.4s,baz=131,slow=5.2,SNR=4.1						
CMAR				LR	LR	15 00 39.0	
	comp=Z,18nm,20.7s,baz=104,slow=35						
SONM	Songino Array	61.77	331	P	P	14 40 53.0	+1.9
	comp=Z,0.5nm,0.9s,baz=145,slow=5.3,SNR=2.6						
SONM				LR	LR	15 06 50.4	
	comp=Z,68nm,19.6s,baz=142,slow=35						
MKAR	Makanchi Array	74.99	320	P	P	14 42 14.9	+1.1
	comp=Z,0.4nm,0.8s,baz=106,slow=5.1,SNR=3.4						
ZALV	Zalesovo Beam	76.40	328	P	P	14 42 23.5	+1.8
	comp=Z,0.6nm,0.6s,baz=73,slow=4.8,SNR=2.6						
ZALV				LR	LR	15 14 35.3	
	comp=Z,55nm,21.3s,baz=139,slow=35						
ILAR	Eielson Array	83.49	23	P	P	14 43 00.8	+1.0
	comp=Z,0.3nm,0.8s,baz=270,slow=5.0,SNR=3.0						
MAW	Mawson	84.26	202	LR	LR	15 16 17.6	
	comp=Z,34nm,21.5s,baz=224,slow=33						
GEYT	Alibeck	90.53	308	LR	LR	15 26 03.2	
	comp=Z,35nm,21.2s,baz=25,slow=37						
SYO	Syowa Base	92.68	200	⇑eP	P	14 43 44.8	+0.9
NVAR	Mina Array Bea	96.48	52	LR	LR	15 18 34.5	
	comp=Z,40nm,19.8s,baz=256,slow=30						
YKA	Yellowknife Ar	97.32	28	LR	LR	15 27 35.7	
	comp=Z,22nm,19.4s,baz=0.0,slow=35						
TORD	Torodi Ar. Bea	143.56	287	PKP	PKiKP	14 50 10.6	-1.0
	comp=Z,0.4nm,0.9s,baz=92,slow=2.5,SNR=2.9						

*NEIC **14** 14:40:03.5±2.4,3°.31S±0°.08×146°.1E±0°.1,h13km±3km, mb4.7/8,Error ellipse: s-maj=18.2km s-min=10.5km az=110.0*

*IDC **14** 14:40:04.3±1.0,3°.35S×145°.58E,h0km,mb4.0/9, mb1 4.3/12,mb1mx4.1/33,mbtmp4.1/12,ML4.1/3,MS3.4/7, Ms1 3.4/7,ms1mx3.1/27,Error ellipse: s-maj=31.1km s-min=17.3km az=98.0*

*DJA **14** 14:40:06.4±0.4,3°S±5°×14°6E±°,h52km±8km,M4.3/9, mb4.4/9,mB4.4/1,MLv4.3/3,Mw(mB)3.6/1*

ISC 14 14:40:04.5±0.7,3°.33S±0°.07×146°.08E±0°.09,h10km,n26, σ1.96/23,mb4.0/9,MS3.4/5,Bismarck Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res ISC
MANU	Manus Island	1.81	45	Pn	Pn	14 40 34.5	-1.3
JAY	Jayapura	5.42	278	LR	LR	14 43 18.3	
	comp=Z,274nm,19.0s,baz=330,slow=39						
GENI	Genyem	5.95	277	P	Pn	14 41 33.6	+0.9
	0.3nm44nm,1.2s						
PMG	Port Moresby	6.13	170	Pn	Pn	14 41 34.2	-1.1
	2.2nm,0.3s,baz=47,slow=4.5,SNR=15						
PMG				Sn	Sn	14 42 45.9	+0.3
	baz=162,slow=20,SNR=3.3						
COEN	Coen	10.95	195		Pn	14 42 42.0	+0.7
HNR	Honiara	15.06	114	Pn	P	14 43 43.1	+0.2
	2.6nm,0.3s,baz=266,slow=2.0,SNR=5.8						
HNR				LR	LR	14 48 30.1	
	comp=Z,121nm,21.4s,baz=274,slow=33						
CTA	Charters Tower	16.66	179	Pn	Pn	14 43 58.4	+0.1
	0.1nm,0.3s,baz=342,slow=16,SNR=2.2						
WB0	Warramunga Arr	19.93	214	P	P	14 44 35.3	-1.4
WB0				IAmb	IAmb	14 44 36.7	
	comp=Z,40nm,1.1s						
WR0	Warramunga Arr	20.00	213	P	P	14 44 35.3	-2.2
WR0				IAmb	IAmb	14 44 37.5	
	comp=Z,34nm,0.8s						
WRAB	Tennant Creek	20.08	214		P	14 44 37.5	-0.9
WB2	Warramunga Arr	20.09	214	P	P	14 44 37.4	-1.1
WRA	Warramunga Arr	20.10	214	P	P	14 44 36.8	-1.7
	comp=Z,1.0nm,0.3s,baz=37,slow=12,SNR=79						
WRA				LR	LR	14 52 29.8	
	comp=Z,89nm,19.3s,baz=60,slow=38						
KNRA	Kununurra	21.00	233	P	P	14 44 44.4	-3.9
KNRA				IAmb	IAmb	14 44 55.2	
	comp=Z,27nm,0.8s						
AS31	Alice Springs	23.39	209	P	P	14 45 12.3	-1.5
ASAR	Alice Springs	23.39	209	P	P	14 45 11.8	-2.0
	comp=Z,7.0nm,0.8s,baz=41,slow=8.7,SNR=59						
ASAR				LR	LR	14 55 31.3	
	comp=Z,103nm,18.7s,baz=34,slow=40						
FITZ	Fitzroy Crossi	24.82	232	P	P	14 45 24.4	-2.8
	comp=Z,16nm,0.9s,baz=57,slow=8.9,SNR=18						
FITZ				LR	LR	14 55 48.3	
	comp=Z,124nm,19.0s,baz=55,slow=39						
FITZ	Fitzroy Crossi	24.82	232	P	P	14 45 24.9	-2.3
DZM	Mont Dzumac	27.17	135	LR	LR	14 54 18.7	
	comp=Z,129nm,21.9s,baz=222,slow=31						
STKA	Stephens Creek	28.71	188	P	P	14 46 03.7	+1.7
	comp=Z,4.1nm,0.8s,baz=331,slow=12,SNR=5.9						
STKA	Stephens Creek	28.71	188	IAmb	IAmb	14 46 06.6	
	comp=Z,1.4nm,1.0s						
KSRS	Korea Array	43.94	339	P	P	14 48 11.0	-0.7
	comp=Z,2.4nm,1.0s,baz=160,slow=9.1,SNR=6.2						
KSRS				LR	LR	15 03 18.4	
	comp=Z,51nm,19.4s,baz=165,slow=32						
CMAR	Chiang Mai Arr	51.20	297	P	P	14 49 08.2	-0.4
	comp=Z,0.9nm,0.7s,baz=122,slow=6.9,SNR=6.2						
SONM	Songino Array	61.64	331	P	P	14 50 22.6	-0.1
	comp=Z,0.4nm,0.7s,baz=126,slow=7.3,SNR=3.0						
MKAR	Makanchi Array	74.86	320	P	P	14 51 43.6	-1.9
	comp=Z,0.7nm,1.0s,baz=86,slow=10,SNR=2.6						
ILAR	Eielson Array	83.41	23	P	P	14 52 36.2	+4.4
	comp=Z,0.7nm,0.8s,baz=251,slow=6.0,SNR=5.7						
YKA	Yellowknife Ar	97.25	28	P	Pdif	14 53 38.8	+1.3

comp=Z,0.1nm,0.5s,baz=269,slow=4.4,SNR=2.6

IASPEI **14** *15:07:23.2±0.9,35°93N±0°02×120°50W±0°02,h15km±5km, Error ellipse: s-maj=3.1km s-min=2.5km az=43.7,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

NCEDC **14** *15:07:23.4±1.5,35°94N±0°03×120°49W±0°07,h10km±6km, Mwr3.2/4,Error ellipse: s-maj=8.6km s-min=3.5km az=63.0*

ANF **14** *15:07:23.6±0.8,35°91N×120°47W,h15km±4km,ML3.2/15, Error ellipse: s-maj=5.2km s-min=2.4km az=106.0*

NEIC **14** *15:07:23.6±1.4,35°94N±0°03×120°50W±0°05,h12km±6km, Error ellipse: s-maj=7.0km s-min=2.6km az=48.0*

NEIC **14** *15:07:23.4,35°94N×120°49W,h11km,Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; Mrr0.19; Mθθ-7.75; Mφφ7.57; Mrθ0.57; Mrφ1.60; Mθφ-0.43; Fault plane solution: M0 7.86000×10^{13} NP1:φs230.86000°, δ84.99000°,λ-1.07000°. NP2:φs320.95000°,δ88.94000°, λ-174.99000°. Principal axes: T 7.7530, Plg3.0000°, Azm96.0000°; N 0.2140, Plg85.0000°, Azm333.0000°; P -7.9669, Plg4.0000°, Azm186.0000°;*

ISC 14 15:07:23.3±0.8,35°93N±0°02×120°51W±0°02,h14km±5km, n160,σ0§78/175,Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSTM	Stockdale Moun	0.01	208		Pg	15 07 25.5	-0.5
PVCM	Vineyard Canyo	0.03	244		Pg	15 07 25.6	-0.4
PKD	Bear Valley Ra	0.03	290		Pg	15 07 27.0	+1.0
PHFM	Heflinger Ranc	0.10	122		Pg	15 07 26.4	-0.2
PPO	Portuguese Can	0.11	233		Pg	15 07 27.1	+0.3
PHAM	Harlan Ranch	0.13	138		Pg	15 07 26.9	-0.1
CTM	Castle Mountai	0.14	91		Pb	15 07 27.4	-0.3
PCMM	Cholame Hills	0.15	149		Pg	15 07 27.4	+0.1
GHC	Gold Hill	0.16	130		Pg	15 07 27.1	-0.2
PSRM	Scobie Ranch	0.20	113		Pg	15 07 27.9	0.0
PKLM	Kerr Lake	0.21	140		Pg	15 07 28.3	+0.2
PSNM	Stone Corral	0.22	131		Pg	15 07 28.2	-0.1
PMCM	McMillan Canyo	0.23	152		Pg	15 07 28.9	+0.4
TCHL	Shandon	0.26	161		Pg	15 07 29.5	+0.6
PMRM	Maxey Ranch	0.26	124		Pg	15 07 29.0	0.0
PAGB	Antelope Grade	0.29	134		Pg	15 07 29.5	0.0
PAGB					Sb	15 07 35.0	0.0
THIS	South End of C	0.31	133		Pg	15 07 29.9	+0.2
THIS					Sb	15 07 35.5	+0.1
TRAM	Private Proper	0.32	143		Pg	15 07 30.2	+0.3
TRAM					Sb	15 07 35.4	-0.5
PSAM	San Ardo	0.32	286		Pg	15 07 30.3	+0.3
PARM	Anticline Ridg	0.34	23		Pb	15 07 31.8	+0.6
PKEM	Kettleman Hill	0.34	68		Pb	15 07 31.9	+0.7
PANM	San Antonio Re	0.36	245		Pg	15 07 31.0	+0.3
PTRM	Twissleman Ran	0.37	139		Pg	15 07 31.0	+0.2
PMPB	Monarch Peak	0.37	320		Pg	15 07 31.2	+0.4
TSCN	Private Proper	0.41	162		Pg	15 07 32.1	+0.5
RAMR	Ramage Ranch	0.42	225		Pg	15 07 32.1	+0.4
PHSB	Hesperia Broad	0.46	256		Pg	15 07 32.7	+0.2
PHSB					Sg	15 07 39.1	+0.4
BLDC	Black Mountain	0.52	219		Pg	15 07 33.8	+0.3
BLDC	Black Mountain	0.52	219		Pg	15 07 33.8	+0.3
BLDC					Sg	15 07 41.0	+0.5
LRC	Lone Oak Road	0.54	306		Pg	15 07 33.9	0.0
PWMM	Westland Maint	0.55	25		Pb	15 07 36.0	+1.2
PCCM	Crazy Canyon	0.56	286		Pg	15 07 34.5	+0.2
PTAM	Tassajara Cree	0.56	197		Pg	15 07 34.6	+0.2
PHCM	Hearst Castle	0.58	245		Pg	15 07 35.0	+0.2
ARDC	Alexander Ranc	0.61	220		Pg	15 07 35.5	+0.3
PCBM	Cambria	0.61	228		Pg	15 07 35.7	+0.3
EFD	Emergency Oper	0.64	196		Pg	15 07 35.9	+0.1
LRV	Little Rabbit	0.64	320		Pg	15 07 36.3	+0.4
LSDC	Los Osos Digit	0.69	204		Pg	15 07 37.4	+0.6
PAPM	Alder Peak	0.70	269		Pg	15 07 36.7	-0.2
DPD	Davis Peak	0.73	198		Pg	15 07 38.1	+0.5
BBNM	San Benito	0.74	321		Pg	15 07 38.1	+0.4
SMMC	Simmler	0.74	146		Pg	15 07 37.8	0.0
SMMC	Simmler	0.74	146	P	Pg	15 07 37.8	0.0
	baz=327,SNR=134						
SMMC				S	Sg	15 07 47.9	+0.3
	baz=327						
VPDC	Valencia Peak	0.75	203		Pb	15 07 38.7	+0.5
BMSM	Mercy Hot Spri	0.76	342		Pb	15 07 38.6	+0.3
BPIM	Pinnacles	0.77	316		Pg	15 07 37.9	-0.4
BSGM	Shirttail Gulc	0.77	309		Pg	15 07 37.8	-0.5
BBGB	Big Mountain B	0.78	326		Pb	15 07 39.0	+0.4
CARC	Carrizo Plain	0.82	139		Pb	15 07 39.3	0.0
BAVM	Antelope Valle	0.83	329		Pb	15 07 39.4	0.0
BEMM	Emmet	0.87	327		Pb	15 07 39.9	-0.3
BSMM	Soledad Missio	0.87	301		Pg	15 07 39.8	-0.4
BEHM	Elkhorn Ranch	0.91	324		Pb	15 07 41.3	+0.4
BRMM	Rolling Bench	0.94	344		Pb	15 07 41.9	+0.6
BJCM	Johnson Can.	0.94	311		Pg	15 07 40.7	-0.7
BJOM	Mount Johnson	0.95	317		Pg	15 07 40.9	-0.9
BAPM	Anderson Peak	0.95	285		Pg	15 07 41.0	-0.8
BLRM	Lewis Ranch	0.96	320		Pg	15 07 41.8	-0.1
HAST	Hastings Reser	0.96	298		Pg	15 07 41.1	-0.8
SCZ	Santa Cruz	0.98	313		Pb	15 07 41.4	-0.7
VOG	Valley Oaks Go	0.99	67	P	Pb	15 07 41.3	-0.8
	baz=247						
VOG				S	Sb	15 07 55.8	+0.8
	baz=247						
BHRM	Hodges Ranch	1.00	322		Pg	15 07 43.0	+0.4
BCGM	Cienega Road	1.03	319		Pb	15 07 42.4	-0.5
PMLM	Mount Lospe	1.04	185		Pb	15 07 43.0	-0.1
BSLM	Silva Ranch	1.08	321		Pg	15 07 44.2	+0.2
HJSM	John Smith Roa	1.09	324		Pg	15 07 44.6	+0.2
BVYM	Vineyard	1.09	318		Pb	15 07 43.2	-0.9
BSRM	Salinas Radio	1.10	312		Pb	15 07 43.2	-0.9
BPCNC	Pine Canyon	1.11	305		Pb	15 07 43.4	-0.9
SAO	San Andreas Ge	1.12	318		Pb	15 07 43.8	-0.7
FRP	Fremont Peak	1.14	316		Pb	15 07 44.0	-0.8
HLTM	Lone Tree Road	1.15	326		Pb	15 07 44.7	-0.2
VES	Vestal, Richgr	1.16	94		Pb	15 07 43.6	-1.5
VES	Vestal, Richgr	1.16	94	P	Pb	15 07 43.5	-1.6
	baz=275,SNR=9.7						
VES				S	Sb	15 08 00.0	+0.2
	baz=275						
PKM	Mcpherson Peak	1.19	151		Pb	15 07 45.4	-0.3
PKM	Mcpherson Peak	1.19	151	P	Pb	15 07 45.3	-0.3
	baz=332,SNR=52						
PKM				S	Sb	15 08 01.4	+0.4
	baz=332						
MRHM	Rocky Hill	1.20	73		Pn	15 07 44.0	-1.7
HJGM	San Juan Grade	1.22	315		Pn	15 07 45.1	-0.8
FRI	Friant	1.24	31		Pn	15 07 46.1	-0.1
SFJWR	San Luis Fatjo	1.24	334		Pn	15 07 46.5	+0.3
HBTM	San Juan Bauti	1.24	318		Pn	15 07 45.9	-0.3
PACP	Pacheco Peak	1.24	330		Pn	15 07 46.6	+0.3
HFEM	San Felipe	1.27	326		Pn	15 07 46.9	+0.2
OCR	O'Connell Ranc	1.27	321		Pn	15 07 46.8	+0.2
FIGC	Figueroa Mtn.	1.27	161		Pn	15 07 46.7	0.0
SLD	San Luis Dam	1.28	333		Pn	15 07 46.9	+0.2
HTUM	Tustin Road	1.28	314		Pn	15 07 46.0	-0.7
HPCM	Pacheco Lake	1.28	331		Pn	15 07 46.1	-0.7
HERM	Elkhorn Road	1.30	312		Pn	15 07 45.2	-1.8
HMOM	Monterey	1.32	301		Pn	15 07 46.5	-0.8
CDC	Canada Road	1.34	324		Pn	15 07 47.8	+0.2
HCOM	Corn Cob Canyo	1.36	315		Pn	15 07 47.4	-0.5
HELL	Mitchell Peak,	1.41	58		Pn	15 07 47.4	-1.2
HSPM	Sheep	1.43	326		Pn	15 07 48.7	-0.2
MYLM	Yosemite Lake	1.45	3		Pn	15 07 48.4	-0.7
JELB	Ellicott, Sant	1.46	313		Pn	15 07 49.1	0.0
SYP	Santa Ynez Pea	1.47	163		Pn	15 07 49.2	-0.3
WOFM	Oak Flat	1.51	105		Pn	15 07 48.7	-1.4
JLAB	Laurel Hill	1.57	321		Pn	15 07 50.3	-0.4
ARVC	Arvin	1.59	120		Pn	15 07 50.9	0.0
ARVC	Arvin	1.59	120	P	Pn	15 07 50.4	-0.5
	baz=302,SNR=5.4						
ARVC				S	Sn	15 08 10.9	-0.3
	baz=302						
WASM	Alta Sierra Ca	1.59	96		Pn	15 07 50.4	-0.8
CCOB	Coe Ranch Numb	1.62	325		Pn	15 07 51.7	+0.2
SBC	Santa Barbara	1.62	156	P	Pn	15 07 51.4	-0.1
	baz=337						
AMC	Almaden	1.63	319		Pn	15 07 51.3	-0.3
TEJ	El Tejon	1.64	115		Pn	15 07 50.0	-1.7
JSTM	Santa Teresa H	1.64	321		Pn	15 07 51.2	-0.5
JUMM	Mount Umunhum	1.66	318		Pn	15 07 51.5	-0.6
ISA	Isabella, Lake	1.67	99		Pn	15 07 51.5	-0.7
ISA	Isabella, Lake	1.67	99	P	Pn	15 07 51.4	-0.8
	baz=280,SNR=42						
ISA				S	Sn	15 08 13.0	-0.5
	baz=280						
MHC	Mount Hamilton	1.68	327		Pn	15 07 52.1	-0.2
KCC	Kaiser Creek	1.68	34		Pn	15 07 52.7	+0.4
JBNB	Ben Lomond Mou	1.78	312		Pn	15 07 52.7	-1.0
CMLM	Mount Lewis	1.79	329		Pn	15 07 54.0	+0.1
WORM	Onyx Ranch	1.85	97		Pn	15 07 54.7	0.0
CMJM	Mission San Jo	1.93	326		Pn	15 07 55.6	-0.1
OSI	Osito Audit: C	1.96	132		Pn	15 07 57.8	+1.6
OSI	Osito Audit: C	1.96	132	S	Sn	15 08 20.4	-0.3
	baz=313						
WCHM	Chimney Peak	1.97	91		Pn	15 07 57.0	+0.4
PYR	Pyramid	1.98	133		Pn	15 07 57.1	+0.5
JRSC	Jasper Ridge	2.02	317		Pn	15 07 57.2	+0.3
CWC	Cottonwood Cre	2.02	75		Pn	15 07 57.7	+0.6
CWC	Cottonwood Cre	2.02	75	P	Pn	15 07 57.6	+0.4
	baz=256						
CWC				S	Sn	15 08 22.1	-0.2
	baz=256						
MRDM	Red Cones	2.03	35		Pn	15 07 58.9	+1.6
SCHCA	Scheelite	2.04	45		Pb	15 07 59.1	-1.1
MCUB	Copperopolis B	2.04	357		Pn	15 07 57.9	+0.7
MDPB	Devils Postpil	2.04	34		Pn	15 07 58.9	+1.4
MMPM	Mammoth Pass	2.05	35		Pb	15 07 59.4	-1.1
OMMB	Old Mammoth Mi	2.07	35		Pb	15 07 59.6	-1.1
CMB	Columbia Colle	2.10	3		Pn	15 07 58.1	0.0
MLCM	Laurel Creek C	2.11	37		Pn	15 08 00.0	+1.6
MTUM	Tungsten Hills	2.11	47		Pn	15 07 59.6	+1.3
MGPM	Gravel Pit	2.12	37		Pn	15 08 00.4	+1.8
MCMM	Convict Lake	2.12	38		Pn	15 08 00.3	+1.7
MDCM	Deadman Creek	2.13	33		Pn	15 08 00.1	+1.4
MCVM	Convict Lake	2.13	39		Pn	15 08 00.3	+1.6
MEMM	East Mammoth H	2.14	36		Pn	15 08 00.6	+1.8
TIN	Tinemaha, Big	2.15	58		Pn	15 08 00.3	+1.5
TIN	Tinemaha, Big	2.15	58	P	Pn	15 08 00.1	+1.3
	baz=239,SNR=19						
TIN				S	Sn	15 08 25.9	+0.7
	baz=239						
MLAC	Mammoth, Mammo	2.16	38	Sb	Sg	15 08 31.5	-1.3
	baz=218						
MDRNC	Doe Ridge	2.17	38		Pb	15 08 01.5	-0.9
BLG	Laguna Peak, P	2.17	147	S	Sn	15 08 25.5	-0.2
	baz=328						
VPEM	Volcano Peak E	2.18	89		Pn	15 08 00.7	+1.4
OAT	Oat Mountain	2.22	135		Pn	15 08 01.0	+1.2
MNHB	New Hogan Dam	2.22	354		Pn	15 08 00.0	+0.3
TOW	Tower One	2.23	92		Pn	15 08 00.6	+0.7
ORC	Owens River	2.25	41		Pn	15 08 00.7	+0.3
POCCA	Poleta Canyon	2.29	51		Pn	15 08 02.3	+1.5
EDW2	Edwards Air Fo	2.30	116	P	Pn	15 08 01.1	+0.2
	baz=298,SNR=10.0						
EDW2				S	Sn	15 08 30.1	+1.0
	baz=298						
MCDM	Chidago Canyon	2.31	45		Pn	15 08 02.9	+1.9
LRMC	Laurel Mtn Rad	2.34	100	P	Pn	15 08 01.5	0.0
	baz=282,SNR=18						
LRMC				S	Sn	15 08 30.6	+0.5
	baz=282						
BENR	Benton	2.36	41		Pn	15 08 03.7	+1.8
MRCM	Red Rock Canyo	2.36	42		Pb	15 08 04.4	-1.4
MLNR	Milner Canyon	2.40	46		Pn	15 08 04.2	+1.9
MPMC	Manual Prospec	2.45	86	P	Pn	15 08 02.9	-0.1
	baz=268						
MWC	Mount Wilson	2.63	130		Pn	15 08 04.9	-0.6
GSC	Goldstone, Bar	3.08	101		Pn	15 08 11.2	-0.4
TPNV	Topopah Spring	3.58	72		Pn	15 08 19.7	+1.2
SHPR	Sheep Range	4.36	81		Pn	15 08 30.3	+1.1

IDC 14 15:13:48.8±2.7,3°80S×135°83E,h0km,mb3.0/1, mb1 3.5/4,mb1mx3.3/27,mbtmp3.3/4,ML3.3/3,MS3.1/1, Ms1 3.1/1,ms1mx2.3/16,Error ellipse: s-maj=71.9km s-min=26.6km az=65.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.40	302	Pn	Pn	15 15 11.2	+0.5
	2.9nm,0.3s,baz=126,slow=17,SNR=12						
SIJI				Sn	Sn	15 16 12.6	-1.2
	1.6nm,0.3s,baz=159,slow=21,SNR=5.8						
WRA	Warramunga Arr	16.11	185	Pn	Pn	15 17 35.3	-1.6
	0.1nm,0.3s,baz=8.0,slow=13,SNR=4.0						
WRA				Sn	Sn	15 20 28.8	-7.6
	0.1nm,0.3s,baz=9.0,slow=23,SNR=4.9						
ASAR	Alice Springs	19.84	185	P	P	15 18 22.0	+0.5
	0.2nm,0.3s,baz=6.2,slow=11,SNR=18						
HNR	Honiara	24.60	104	LR	LR	15 28 42.5	
	comp=Z,44nm,18.4s,baz=162,slow=36						
MKAR	Makanchi Array	68.92	324	P	P	15 24 55.8	+0.1
	0.1nm,0.5s,baz=123,slow=7.6,SNR=2.1						

NEIC **14** *15:21:45.8±2.5,13°09N±0°08×87°59W±0°06,h176km±7km, mb4.3/10,Error ellipse: s-maj=13.0km s-min=7.5km az=205.0*

IDC **14** *15:21:46.2±1.6,13°25N×87°54W,h171km±25km,mb3.4/5, mb1 3.5/8,mb1mx3.3/41,mbtmp3.8/8,Error ellipse: s-maj=47.1km s-min=20.1km az=36.0*

SNET **14** *15:21:46.4±1.0,13°06N×87°66W,h162km±6km,ML3.6*

INET **14** *15:21:47.7,13°08N×87°64W,h156km,ML3.5*

UCR **14** *15:21:48.4±2.6,12°66N×87°87W,h141km±17km,MD4.2, ML3.4,mb4.3(NEIC)*

ISC 14 15:21:45.0±0.7,13°07N±0°07×87°67W±0°06,h175km±5km, n63,σ1§61/73,mb4.1/8,Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	Conchagua	0.26	321	iP	Pn	15 22 08.7	+0.1
CNCH				IAML		15 22 36.0	
	comp=Z,901nm,0.2s						
CNCH	Conchagua	0.26	321	iP	Pn	15 22 08.7	+0.1
CNCH				IAML		15 22 36.0	
	comp=Z,901nm,0.2s						
LCND	La Caada	0.32	317	eP	Pn	15 22 08.8	+0.3
LCND				IAML		15 22 37.1	
	comp=Z,405nm,0.3s						
LCND	La Caada	0.32	317	eP	Pn	15 22 08.8	+0.3
LCND				IAML		15 22 37.1	
	comp=Z,405nm,0.3s						
JUCU	Jucuar¡n	0.60	288	eP	Pn	15 22 09.5	-0.2
JUCU				eS	Sn	15 22 29.2	+0.5
JUCU				eS		15 22 29.2	
JUCU	Jucuar¡n	0.60	288	eP	Pn	15 22 09.5	-0.2
JUCU				eS	Sn	15 22 29.2	+0.5
BLLM	Bellamira	0.67	304	eP	Pn	15 22 10.6	+0.5
BLLM	Bellamira	0.67	304	eP	Pn	15 22 10.6	+0.5
CRIN	San Cristobal	0.70	122	eP	Pn	15 22 11.5	+1.2
PACA	Pacayal	0.75	302	eP	Pn	15 22 11.2	+0.5
PACA				eS	Sn	15 22 30.6	+0.3
PACA	Pacayal	0.75	302	eP	Pn	15 22 11.2	+0.5
PACA				eS	Sn	15 22 30.6	+0.3
COEB	Comit de Eme	0.94	297	eS	Sn	15 22 32.8	+0.2
COEB	Comit de Eme	0.94	297	eS	Sn	15 22 32.8	+0.2
TGUH	Tegucigalpa,Un	1.05	21		Pn	15 22 13.5	+0.8
CNGN	Cerro Negro	1.10	121	eP	Pn	15 22 13.7	+0.7
ESTN	Estel	1.26	88		Pn	15 22 15.2	+0.8
ESTN					Sn	15 22 36.5	-0.6
ESTN	Estel	1.26	88	eP	Pn	15 22 15.4	+0.9
MOMN	Momotombo	1.28	121	eP	Pn	15 22 15.2	+0.7
MOMN	Momotombo	1.28	121	eP	Pn	15 22 15.2	+0.7
COPN	Copaltepe	1.37	130	eP	Pn	15 22 16.2	+0.9
COPN				eS	Sn	15 22 38.4	-0.3
COPN	Copaltepe	1.37	130	eP	Pn	15 22 16.2	+0.9
COPN				eS	Sn	15 22 38.4	-0.3
LFRS	El Faro	1.47	292	eP	Pn	15 22 17.0	+0.7
SNET	Serv Nac Est T	1.64	292	Pn	Pn	15 22 17.1	-0.9
SNET				Sn	Sn	15 22 45.8	+2.3
MATN	Matagalpa	1.70	95	eP	Pn	15 22 19.5	+0.9
BOQS	Boqueron	1.70	293	eP	Pn	15 22 21.0	+2.2
CEVE	Cerro Verde	2.05	292	eS	Sn	15 22 53.9	+2.3
CEVE				IAML		15 22 59.1	
	comp=Z,393nm,0.4s						
CEVE	Cerro Verde	2.05	292	eS	Sn	15 22 53.9	+2.3
CEVE				IAML		15 22 59.1	
	comp=Z,393nm,0.4s						
ACON	Acoyapa	2.67	114	Pn	Pn	15 22 30.8	+1.4
ACON	Acoyapa	2.67	114	eP	Pn	15 22 31.0	+1.6
GB1A	Borinquen Arri	3.15	135	eP	Pn	15 22 36.2	+0.9
GB1A				eS	Sn	15 23 12.7	-1.9
BUEV	Buena Vista	3.16	135	eP	Pn	15 22 37.8	+2.3
LAPC	Finca la Perla	3.17	136	iP	Pn	15 22 37.3	+1.8
NY14	Universidad de	3.19	139	iP	Pn	15 22 38.4	+2.7
APG	El Apazote	3.33	136	P	Pn	15 22 38.6	+0.9
	comp=Z,2.2nm,0.3s,baz=119,slow=4.2,SNR=7.6						
CUI	Cuipilapa	3.43	134	eP	Pn	15 22 40.9	+2.1
CUI				eS	Sn	15 23 19.9	-0.9
GUAI	GUAI	3.49	143	iP	Pn	15 22 41.7	+2.1
GUAI				iS	Sn	15 23 19.8	-2.4
JTS	Las Juntas de	3.83	136	P	Pn	15 22 45.7	+1.8
	comp=Z,8.7nm,0.3s,baz=19,slow=19,SNR=14						
JTS				S	Sn	15 23 27.3	-2.6
	comp=Z,5.5nm,0.3s,baz=41,slow=22,SNR=3.5						
JTS	Las Juntas de	3.83	136	eP	Pn	15 22 47.1	+3.2
ARE1	Arenal 1	3.88	132	eP	Pn	15 22 44.8	+0.3
LCR2	La Lucha 2	4.88	132	eP	Pn	15 22 56.0	-1.6
TEIG	Tepich	7.14	355	Pn	Pn	15 23 26.9	0.0
CMIG	Matias Romero	8.04	301	P	Pn	15 23 40.0	+1.2
	comp=Z,0.3nm,0.3s,baz=135,slow=14,SNR=4.7						
CMIG				S	Sn	15 25 01.5	-7.3
	comp=Z,0.3nm,0.3s,baz=354,slow=12,SNR=4.8						
BCIP	Isla Barro Col	8.61	116	Pn	Pn	15 23 44.1	-2.2
UNM	Universidad Na	12.68	301	Pn	Pn	15 24 38.2	-1.4
SDDR	Presa de Saban	16.80	67	P	P	15 25 28.8	-0.7
SDDR				IAmb	IAmb	15 25 44.5	
	comp=Z,20nm,1.4s						
ZAIG	Zacatecas	17.13	306	P	P	15 25 33.8	+0.4
DR12	Loma Pena Alta	18.47	70	P	P	15 25 46.1	-1.8
TXAR	Lajitas Array	21.96	320	P	P	15 26 26.1	+1.1
	comp=Z,0.8nm,0.6s,baz=141,slow=8.9,SNR=9.9						
TKL	Tuckaleechee C	22.76	8	P	P	15 26 33.9	+1.6
	comp=Z,1.8nm,0.4s,baz=197,slow=8.2,SNR=4.0						
TKL	Tuckaleechee C	22.76	8	IAmb	IAmb	15 26 37.9	
	comp=Z,25nm,1.4s						
TZTN	Tazewell	23.66	8	P	P	15 26 42.1	+1.6
TZTN				IAmb	IAmb	15 26 44.8	
	comp=Z,18nm,1.2s						
WMOK	Wichita Mounta	23.81	337	P	P	15 26 42.8	+0.9
V58A	Windy Hill, Pi	23.90	17	P	P	15 26 44.4	+1.7
PDAR	Pinedale Array	35.13	332	P	P	15 28 23.4	+1.4
	comp=Z,0.5nm,0.7s,baz=136,slow=11,SNR=4.7						
REDW	Red Top Meadow	36.19	331	P	P	15 28 32.0	+0.9
REDW				IAmb	IAmb	15 28 34.5	
	comp=Z,9.5nm,1.4s						
ULM	Lac du Bonnet	37.68	351	P	P	15 28 42.5	-0.7
	comp=Z,1.4nm,0.4s,baz=165,slow=7.9,SNR=5.2						
ULM	Lac du Bonnet	37.68	351	IAmb	IAmb	15 28 43.7	
	comp=Z,4.7nm,1.1s						
SCHQ	Schefferville	44.75	17	P	P	15 29 39.8	-1.0
	comp=Z,2.0nm,0.7s,baz=223,slow=12,SNR=4.4						
SCHQ	Schefferville	44.75	17	IAmb	IAmb	15 29 43.3	
	comp=Z,13nm,1.4s						
INK	Inuvik	62.55	343	P	P	15 31 49.1	-0.7
INK				IAmb	IAmb	15 31 51.1	
	comp=Z,2.4nm,0.6s						
WB2	Warramunga Arr	139.22	255	PKPdf	PKiKP	15 40 54.2	-0.2
WRA	Warramunga Arr	139.24	255	PKP	PKiKP	15 40 53.7	-0.7
	comp=Z,0.6nm,0.6s,baz=87,slow=2.4,SNR=10						
ASAR	Alice Springs	139.30	249	PKP	PKiKP	15 40 53.7	-0.7
	comp=Z,0.6nm,0.6s,baz=95,slow=1.8,SNR=12						

NEIC **14** *15:25:11±2.1,12°2S±0°1×167°4E±0°1,h293km±8km, mb4.1/17,Error ellipse: s-maj=20.7km s-min=13.6km az=134.0*

IDC **14** *15:25:15.5±4.6,12°16S×167°17E,h335km±49km,mb3.5/9, mb1 3.7/11,mb1mx3.4/39,mbtmp4.1/11,Error ellipse: s-maj=37.5km s-min=19.5km az=163.0*

ISC 14 15:25:11.8±0.7,12°3S±0°1×167°4E±0°1,h300km,n31, σ1§24/29,mb3.9/16,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.17	183		Pn	15 26 07.9	-1.4
DZM	Mont Dzumac	9.79	185	P	P	15 27 31.9	+0.6
	0.5nm,0.3s,baz=79,slow=12,SNR=20						
DZM	Mont Dzumac	9.79	185		Pn	15 27 26.5	-1.0
NOUC	Port Laguerre	9.84	186	Pn	Pn	15 27 26.9	-1.0
PMG	Port Moresby	20.03	276	P	P	15 29 23.1	-0.1
	0.4nm,0.3s,baz=79,slow=10,SNR=3.7						
PMG	Port Moresby	20.03	276	IAmb	IAmb	15 29 25.6	
	comp=Z,8.5nm,0.9s						
EIDS	Eidsvold	20.15	227	P	P	15 29 25.1	+0.8
AFI	Afiamalu	20.40	97	P	P	15 29 28.9	+1.9
AFI				IAmb	IAmb	15 29 30.4	
	comp=Z,13nm,0.9s						
CTA	Charters Tower	21.69	246	P	P	15 29 39.7	+0.6
	comp=Z,3.0nm,0.6s,baz=85,slow=10,SNR=5.9						
NIUE	Niue	22.89	110	P	P	15 29 48.4	-1.6
ARMA	Armidale	23.20	216	P	P	15 29 54.5	+1.6
ARMA				IAmb	IAmb	15 29 56.1	
	comp=Z,5.1nm,0.8s						
COEN	Coen	23.60	263	P	P	15 29 57.5	+1.0
COEN				IAmb	IAmb	15 29 59.5	
	comp=Z,3.1nm,0.8s						
STKA	Stephens Creek	30.70	226	P	P	15 31 00.2	+0.9
	comp=Z,1.8nm,0.4s,baz=47,slow=7.4,SNR=8.2						
STKA	Stephens Creek	30.70	226	IAmb	IAmb	15 31 01.1	
	comp=Z,0.8nm,0.7s						
WR0	Warramunga Arr	32.39	252	P	P	15 31 13.4	-1.0
WB0	Warramunga Arr	32.50	252	P	P	15 31 14.5	-0.7
WB0				IAmb	IAmb	15 31 15.0	
	comp=Z,3.3nm,0.6s						
WRAB	Tennant Creek	32.56	252	P	P	15 31 12.0	-3.8
WRAB				IAmb	IAmb	15 31 29.3	
	comp=Z,4.0nm,0.6s						
WB2	Warramunga Arr	32.56	252	P	P	15 31 14.8	-1.1
WB2				IAmb	IAmb	15 31 15.2	
	comp=Z,1.5nm,0.5s						
WRA	Warramunga Arr	32.58	252	P	P	15 31 14.8	-1.1
	comp=Z,0.9nm,0.4s,baz=84,slow=8.6,SNR=25						
AS31	Alice Springs	33.69	246	P	P	15 31 24.5	-1.0
ASAR	Alice Springs	33.69	246	P	P	15 31 24.5	-1.0
	comp=Z,1.8nm,0.7s,baz=74,slow=9.5,SNR=36						
BBOO	Buckleboo	35.19	229	P	P	15 31 38.8	+0.7
KNRA	Kununurra	37.56	260	P	P	15 31 58.3	0.0
KNRA				IAmb	IAmb	15 32 16.1	
	comp=Z,9.9nm,1.1s						
FITZ	Fitzroy Crossi	40.60	256	P	P	15 32 24.0	+0.7
FORT	Forrest	40.66	237	P	P	15 32 24.3	+0.7
PSA00	Pilbara Seismi	46.23	252	P	P	15 33 07.8	-0.1
PSA00				IAmb	IAmb	15 33 12.8	
	comp=Z,14nm,1.1s						
ILAR	Eielson Array	84.17	18	P	P	15 37 09.0	-0.2
	comp=Z,4.2nm,0.7s,baz=242,slow=5.2,SNR=50						
NVAR	Mina Array Bea	85.61	49	P	P	15 37 17.8	+0.6
	comp=Z,0.1nm,0.3s,baz=247,slow=6.7,SNR=4.3						
TXAR	Lajitas Array	95.03	61	P	P	15 38 01.9	+0.6
	comp=Z,0.2nm,0.6s,baz=306,slow=3.2,SNR=2.9						
YKA	Yellowknife Ar	95.33	27	P	P	15 38 00.3	-1.3
	comp=Z,0.7nm,0.7s,baz=254,slow=4.9,SNR=9.4						
MKAR	Makanchi Array	95.48	317	P	P	15 38 02.6	-0.2
	comp=Z,0.4nm,0.5s,baz=84,slow=6.7,SNR=8.1						

IDC **14** *15:51:46.0±3.0,32°33S×179°38W,h0km,mb4.1/2, mb1 4.3/3,mb1mx3.8/29,mbtmp4.1/3,ML3.8/1,MS3.4/5, Ms1 3.4/5,ms1mx3.0/27,Error ellipse: s-maj=64.1km s-min=45.4km az=108.0*

NEIC **14** *15:51:55.1±1.6,32°63S±0°09×179°5W±0°2,h72km±10km, mb4.6/7,Error ellipse: s-maj=24.4km s-min=11.4km az=105.0*

ISC 14 15:51:55.0±1.2,32°8S±0°1×179°1W±0°2,h100km,n21, σ1§13/17,mb4.6/7,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.63	16	Pn	Pn	15 52 48.9	-0.4
MXZ	Matakaoa Point	5.25	203	Pn	Pn	15 53 09.3	-1.8
URZ	Urewera	6.31	208	Pn	Sn	15 53 23.4	-2.0
	2.2nm,0.3s,baz=26,slow=1.1,SNR=18						
URZ				Sn	Sn	15 54 35.0	-1.0
	baz=107,slow=20,SNR=2.2						
URZ	Urewera	6.31	208		Pn	15 53 25.6	+0.1
BKZ	Black Stump Fm	7.33	208	Pn	Pn	15 53 39.2	-0.2
HIZ	Hauiti	7.57	219	Pn	Pn	15 53 44.2	+1.5
MSVF	Nonsavu	15.18	349	P	P	15 55 27.1	+0.2
DZM	Mont Dzumac	16.67	306	LR	LR	16 00 30.0	
	comp=Z,255nm,19.1s,baz=209,slow=32						
AS31	Alice Springs	42.12	270	P	P	15 59 37.4	-0.2
ASAR	Alice Springs	42.13	270	P	P	15 59 38.2	+0.6
	2.0nm,0.7s,baz=111,slow=7.5,SNR=40						
WR0	Warramunga Arr	43.15	275	P	P	15 59 45.3	-0.6
WR0				IAmb	IAmb	15 59 53.5	

comp=Z,6.2nm,1.1s
WB2 Warramunga Arr 43.32 275 P P 15 59 45.6 -1.6
WB2 IAmb IAmb 15 59 55.0
comp=Z,8.6nm,0.9s
WRAB Tennant Creek 43.33 275 P P 15 59 46.5 -0.6
WRAB IAmb IAmb 15 59 54.9
comp=Z,8.7nm,0.9s
WRA Warramunga Arr 43.33 275 P P 15 59 47.4 0.0
comp=Z,1.9nm,0.6s,baz=114,slow=7.6,SNR=18
WRA LR LR 16 16 33.4
comp=Z,22nm,19.8s,baz=125,slow=35
WB0 Warramunga Arr 43.36 275 P P 15 59 48.0 +0.3
WB0 IAmb IAmb 15 59 55.3
comp=Z,8.0nm,0.8s
VNDA Vanda 45.66 186 LR LR 16 16 41.8
comp=Z,53nm,18.2s,baz=336,slow=32
VNDA Vanda 45.66 186 P P 16 00 07.0 +1.8
QSPA South Pole Qui 57.36 180 P P 16 01 39.5 +6.9
QSPA IAmb IAmb 16 01 41.2
comp=Z,15nm,1.4s
MJAR Matsushiro Arr 79.67 326 LR LR 16 32 22.4
comp=Z,12nm,21.6s,baz=205,slow=31
CPUP Villa Florida 99.23 129 LR LR 16 42 17.4
comp=Z,28nm,20.5s,baz=214,slow=30
FINES FINESS Array B 147.01 338 PKPbc PKiKP 16 11 27.8 +0.1
comp=Z,1.9nm,0.8s,baz=18,slow=4.8,SNR=4.9

MDD 14 15:54:22.4±0.4, 42.50N×4.24E, h10km±1km, mbLg2.7/10, Error ellipse: s-maj=5.2km s-min=2.5km az=146.0, PRXIMO
LDG 14 15:54:24.0±0.1, 42.48N×4.20E, h20km, Md3.0/2, Ml2.9/40, Error ellipse: s-maj=1.6km s-min=1.0km az=160.0
STR 14 15:54:24.7±0.5, 42.N±4.×4.±, h33km, mb3.8/1, MLv2.8/6
ISC 14 15:54:21.2±0.8, 42.51N±0.02×4.21E±0.02, h10km, n127, σ2.03/246, Western Mediterranean Sea

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

EJON La Jonquera 0.98 267 Pn Pg 15 54 40.1 0.0
1.7nm,0.1s,SNR=7.9
EJON Pg Pb 15 54 41.8 +1.5
5.8nm,0.1s,SNR=22
EJON Lg Lg 15 54 54.2
63nm,0.1s,SNR=10
SJAF Saint Jean de 0.98 269 Pn Pg 15 54 40.2 +0.1
SJAF Sn Sg 15 54 54.0 +1.1
SJAF Saint Jean de 0.98 269 Pn Pg 15 54 40.2 +0.1
1.9nm,0.1s,SNR=7.9
SJAF Pg Pb 15 54 41.3 +0.9
20nm,0.0s,SNR=7.9
SJAF Lg Lg 15 54 54.0
62nm,0.1s,SNR=7.9
ASEAF Site Antares, 1.47 78 P Pn 15 54 46.9 -0.5
ASEAF Pn Pb 15 54 48.0 -0.3
ASEAF S Sn 15 55 03.3 -3.2
CFON Fontmartina 1.52 241 Pn Pn 15 54 47.9 -0.5
6.8nm,0.2s,SNR=22
CFON Pg Pb 15 54 50.7 +1.2
3.8nm,0.1s,SNR=22
CFON Sn Sn 15 55 06.2 -2.1
15nm,0.1s,SNR=6.5
CFON Lg Lg 15 55 11.5
69nm,0.2s,SNR=7.0
ARTF Artigues 1.59 47 Pn Pn 15 54 50.7 +1.3
LASF Ste Croix 1.59 351 ePn Pn 15 54 49.7 +0.3
LASF Ste Croix 1.59 351 ePg Pg 15 54 54.5 +2.8
LASF eSn Sn 15 55 08.4 -1.7
LASF eSg Sg 15 55 14.9 +2.6
49nm,0.3s
LASF Ste Croix 1.59 351 Pn Pn 15 54 49.7 +0.3
LASF Pg Pg 15 54 54.5 +2.8
LASF Sn Sn 15 55 08.4 -1.7
LASF Lg Lg 15 55 14.9
25nm,0.3s
FNEB Nbias 1.60 285 Pn Pn 15 54 49.7 +0.1
CLLI Llivia 1.66 270 Pn Pn 15 54 50.4 0.0
1.3nm,0.1s,SNR=12
CLLI Pg Pb 15 54 54.0 +2.1
1.5nm,0.1s,SNR=17
CLLI Sn Sn 15 55 11.8 0.0
12nm,0.2s,SNR=5.9
CLLI Lg Lg 15 55 16.1
16nm,0.2s,SNR=5.0
MTLF Montolieu 1.69 300 ePn Pn 15 54 50.8 +0.1
MTLF Montolieu 1.69 300 ePg Pg 15 54 55.7 +2.2
MTLF eSn Sn 15 55 10.4 -2.0
MTLF eSg Sg 15 55 17.6 +2.2
26nm,0.2s
MTLF Montolieu 1.69 300 Pn Pn 15 54 50.9 +0.2
MTLF S Sn 15 55 10.0 -2.4
MTLF Sn Sb 15 55 11.3 -2.3
MTLF Montolieu 1.69 300 Pn Pn 15 54 50.8 +0.1
MTLF Pg Pg 15 54 55.7 +2.2
MTLF Sn Sn 15 55 10.4 -2.0
MTLF Lg Lg 15 55 17.6
13nm,0.2s
BSTF la Bastide-des 1.73 37 Pn Pn 15 54 52.1 +0.8
SMRF Simiane la Rot 1.77 34 ePn Pn 15 54 52.6 +0.6
SMRF Simiane la Rot 1.77 34 eP Pb 15 54 54.5 +0.7
SMRF Simiane la Rot 1.77 34 ePg Pg 15 54 57.6 +2.4
SMRF eSn Sn 15 55 13.0 -1.6
4.7nm,0.2s
SMRF eSg Sg 15 55 21.5 +3.3
12nm,0.2s
SMRF Simiane la Rot 1.77 34 Pn Pn 15 54 52.6 +0.6
SMRF Pg Pg 15 54 57.6 +2.4
SMRF Sn Sn 15 55 13.0 -1.6
4.7nm,0.2s
SMRF Lg Lg 15 55 21.5
12nm,0.2s
MLYF Mely 1.87 37 Pn Pn 15 54 55.2 +2.0
LMR La Mourre 1.88 63 ePn Pn 15 54 53.6 +0.2
LMR La Mourre 1.88 63 ePg Pg 15 54 59.5 +2.3
LMR eSn Sn 15 55 15.7 -1.4
44nm,0.2s
LMR La Mourre 1.88 63 Pn Pn 15 54 53.6 +0.2
LMR Pg Pg 15 54 59.5 +2.3
LMR Sn Sn 15 55 15.7 -1.4
22nm,0.2s
BLAF les Blancs 1.97 42 Pn Pn 15 54 56.7 +2.0
FRF La Foret Royal 2.07 59 ePn Pn 15 54 56.4 +0.4
FRF La Foret Royal 2.07 59 ePg Pg 15 55 03.1 +2.2
FRF eSn Sn 15 55 20.3 -1.6
20nm,0.2s
FRF La Foret Royal 2.07 59 Pn Pn 15 54 56.4 +0.4
FRF Pg Pg 15 55 03.1 +2.2
FRF Sn Sn 15 55 20.3 -1.6
9.8nm,0.2s
EMIR Miracle 2.08 254 Pn Pn 15 54 56.8 +0.6
1.1nm,0.1s,SNR=6.7
EMIR Pg Pb 15 55 00.8 +1.7
0.9nm,0.1s,SNR=9.5
EMIR Sn Sn 15 55 21.0 -1.3
8.5nm,0.1s,SNR=5.9
EMIR Lg Lg 15 55 28.9
23nm,0.2s,SNR=5.9
OGDI Digne 2.21 43 Pn Pn 15 54 59.0 +1.0
CSOR Sort 2.28 268 Pn Pn 15 55 00.3 +1.3
1.7nm,0.1s,SNR=9.6
CSOR Pg Pg 15 55 05.6 +0.7
2.2nm,0.1s,SNR=7.9
CSOR Sn Sn 15 55 27.5 +0.2
4.4nm,0.1s,SNR=7.9
CSOR Lg Lg 15 55 36.1
13nm,0.2s
CALF Calern 2.34 57 Pn Pn 15 55 01.0 +1.2
VIVF Saint-Julien-l 2.37 8 ePn Pn 15 55 00.5 +0.3
VIVF Saint-Julien-l 2.37 8 ePg Pg 15 55 08.4 +1.7
VIVF eSn Sn 15 55 27.9 -1.5
6.7nm,0.2s
VIVF eSg Sg 15 55 39.5 +2.1
18nm,0.2s
VIVF Saint-Julien-l 2.37 8 Pn Pn 15 55 00.5 +0.3
VIVF Pg Pg 15 55 08.4 +1.7
VIVF Sn Sn 15 55 27.9 -1.5
3.3nm,0.2s
VIVF Lg Lg 15 55 39.5
9.1nm,0.2s
OGAG Argentiere 2.58 40 Pn Pb 15 55 08.0 +0.4
ISO Isola 2.66 50 Pn Pn 15 55 06.1 +1.9
ORIF Oris-en-Rattie 2.70 26 ePn Pn 15 55 04.8 +0.1
ORIF Oris-en-Rattie 2.70 26 eP Pn 15 55 07.7 +3.0
ORIF Oris-en-Rattie 2.70 26 ePg Pg 15 55 14.7 +1.8
ORIF eSn Sn 15 55 35.0 -2.5
3.4nm,0.2s
ORIF Oris-en-Rattie 2.70 26 Pn Pn 15 55 04.8 +0.1
ORIF Pg Pg 15 55 14.7 +1.8
ORIF Sn Sn 15 55 35.0 -2.5
1.7nm,0.2s
SBF Sospel 2.72 59 ePn Pn 15 55 05.2 +0.2
SBF Sospel 2.72 59 eP Pn 15 55 07.3 +2.3
SBF eSn Sn 15 55 35.9 -2.1
14nm,0.2s
SBF Sospel 2.72 59 Pn Pn 15 55 05.2 +0.2
SBF Pn Pn 15 55 07.3 +2.3
SBF Sn Sn 15 55 35.9 -2.1
7.2nm,0.2s
TURF col de Turini 2.75 57 Pn Pn 15 55 06.9 +1.4
SAOF Saorge 2.85 58 Pn Pn 15 55 08.4 +1.6
CAF Calviac 2.88 328 ePn Pn 15 55 07.3 +0.2
CAF Calviac 2.88 328 eP Pn 15 55 09.8 +2.7
CAF Calviac 2.88 328 ePg Pg 15 55 17.8 +1.5
CAF eSn Sn 15 55 39.1 -2.7
CAF eSg Sg 15 55 54.4 +0.8
11nm,0.2s
CAF Calviac 2.88 328 Pn Pn 15 55 07.3 +0.2
CAF Pg Pg 15 55 17.8 +1.5
CAF Sn Sn 15 55 39.1 -2.7
CAF Lg Lg 15 55 54.4
5.3nm,0.2s
MONQ Montcuq 2.88 311 Pn Pn 15 55 08.1 +1.0
MBDF Montbardon 2.90 39 ePn Pn 15 55 07.6 +0.1
MBDF Montbardon 2.90 39 eP Pn 15 55 10.8 +3.3
MBDF Montbardon 2.90 39 ePg Pg 15 55 18.6 +1.9
MBDF eSn Sn 15 55 40.0 -2.4
0.7nm,0.2s
MBDF eSg Sg 15 55 55.6 +1.4
5.7nm,0.6s
MBDF Montbardon 2.90 39 Pn Pn 15 55 07.6 +0.1
MBDF Pg Pg 15 55 18.6 +1.9
MBDF Sn Sn 15 55 40.0 -2.4
0.3nm,0.2s
MBDF Lg Lg 15 55 55.6
2.8nm,0.6s
EPF Esparros 2.90 282 ePn Pn 15 55 07.3 -0.1
EPF Esparros 2.90 282 ePg Pg 15 55 17.8 +1.1
EPF eSn Sn 15 55 39.2 -3.2
EPF eSg Sg 15 55 55.3 +1.0
6.9nm,0.2s
EPF Esparros 2.90 282 Pn Pn 15 55 07.3 -0.1
EPF Pg Pg 15 55 17.8 +1.1
EPF Sn Sn 15 55 39.2 -3.2
EPF Lg Lg 15 55 55.3
3.5nm,0.2s
ETOS Mallorca 2.93 202 Pn Pn 15 55 07.0 -0.8
1.6nm,0.1s,SNR=7.9
ETOS Pg Pb 15 55 13.8 +0.2
1.7nm,0.1s,SNR=7.9
ETOS Sn Sn 15 55 36.2 -6.9
7.8nm,0.2s,SNR=7.9
ECHI Chisagues Biel 2.97 274 Pn Pn 15 55 09.3 +0.8
0.3nm,0.2s,SNR=4.0
ECHI Pg Pb 15 55 17.1 +2.8
0.7nm,0.1s,SNR=7.9
ECHI Sn Sn 15 55 44.6 +0.3
2.2nm,0.1s,SNR=7.9
ECHI Lg Lg 15 55 57.8
2.8nm,0.2s,SNR=7.9
GDM Grand'Maison 3.03 26 Pn Pn 15 55 11.6 +2.3
OGSM Saint Maurice 3.28 19 Pn Pn 15 55 14.6 +1.9
OGSM Sn Sn 15 55 50.6 -1.2
ERTA Horta de San J 3.29 243 Pn Pn 15 55 13.2 +0.4
0.6nm,0.1s,SNR=7.9
ERTA Sn Sn 15 55 51.2 -0.8
0.8nm,0.1s,SNR=7.9
ERTA Lg Lg 15 56 07.9
2.5nm,0.2s,SNR=7.9
RJF Les Rejaudoux 3.41 326 ePn Pn 15 55 14.1 -0.3
RJF Les Rejaudoux 3.41 326 ePg Pg 15 55 27.3 +0.8
RJF eSn Sn 15 55 51.6 -3.3
4.1nm,0.2s
RJF eSg Sg 15 56 12.4 +1.8
8.0nm,0.2s
RJF Les Rejaudoux 3.41 326 Pn Pn 15 55 14.1 -0.3
RJF Pg Pg 15 55 27.3 +0.8
RJF Sn Sn 15 55 51.6 -3.3
2.0nm,0.2s
RJF Lg Lg 15 56 12.4
4.0nm,0.2s
LFF La Frestale 3.50 315 ePn Pn 15 55 15.4 -0.2
LFF La Frestale 3.50 315 ePg Pg 15 55 28.6 +0.4
LFF eSn Sn 15 55 53.8 -3.3
6.2nm,0.2s
LFF eSg Sg 15 56 14.2 +0.6
8.0nm,0.3s
LFF La Frestale 3.50 315 Pn Pn 15 55 15.4 -0.2
LFF Pg Pg 15 55 28.6 +0.4
LFF Sn Sn 15 55 53.8 -3.3
3.1nm,0.2s
LFF Lg Lg 15 56 14.2
4.0nm,0.3s
LPG La Plagne 3.51 31 ePn Pn 15 55 15.9 -0.1
LPG La Plagne 3.51 31 eP Pn 15 55 19.3 +3.3
LPG eSn Sn 15 55 55.0 -2.7
1.3nm,0.2s
LPG La Plagne 3.51 31 Pn Pn 15 55 15.9 -0.1
LPG Sn Sn 15 55 55.0 -2.7
0.6nm,0.2s
LPL La Plagne 3.52 30 ePn Pn 15 55 16.1 0.0
LPL La Plagne 3.52 30 eP Pn 15 55 19.4 +3.3
LPL eSn Sn 15 55 54.8 -3.0
1.1nm,0.2s
LPL La Plagne 3.52 30 Pn Pn 15 55 16.1 0.0
LPL Sn Sn 15 55 54.8 -3.0
0.6nm,0.2s
PGF Pioggiola 3.54 88 ePn Pn 15 55 15.7 -0.6
PGF Pioggiola 3.54 88 eP Pn 15 55 20.1 +3.8
PGF eSn Sn 15 55 53.8 -4.4
14nm,0.2s
PGF Pioggiola 3.54 88 P Pn 15 55 15.8 -0.5
PGF Pn Pb 15 55 16.4 -7.5
PGF Pioggiola 3.54 88 Pn Pn 15 55 15.7 -0.6
PGF Sn Sn 15 55 53.8 -4.4
6.8nm,0.2s
ETSF Etsaut 3.54 278 ePn Pn 15 55 16.1 -0.2
ETSF Etsaut 3.54 278 ePg Pg 15 55 29.5 +0.5
ETSF eSn Sn 15 55 54.9 -3.3
6.7nm,0.3s
ETSF eSg Sg 15 56 14.7 -0.1
7.2nm,0.3s
ETSF Etsaut 3.54 278 Pn Pn 15 55 16.1 -0.2
ETSF Pg Pg 15 55 29.5 +0.5
ETSF Sn Sn 15 55 54.9 -3.3
3.3nm,0.3s
ETSF Lg Lg 15 56 14.7
3.6nm,0.3s
ESAC San Caprasio 3.57 259 Pn Pn 15 55 17.8 +1.1
4.4nm,0.1s,SNR=7.9
ESAC Sn Sn 15 55 58.4 -0.6
3.3nm,0.1s,SNR=7.9
ESAC Lg Lg 15 56 16.6
24nm,0.3s,SNR=7.9
RSL Roselend 3.62 28 Pn Pn 15 55 18.9 +1.4
ATE Arette 3.66 281 Pn Pn 15 55 17.7 -0.2
ATE Arette 3.66 281 Pn Pn 15 55 19.6 +1.7
0.4nm,0.2s,SNR=7.9
ATE Sn Sn 15 56 01.6 +0.4
2.4nm,0.2s,SNR=7.9
ATE Lg Lg 15 56 21.5
5.9nm,0.4s,SNR=7.9
OG35 Corcelles 3.67 15 Pn Pn 15 55 19.3 +1.2
OG35 Sn Sn 15 55 59.7 -1.7
SMPL Sampolo 3.79 95 Pn Pn 15 55 19.2 -0.4
TCF Toulx Ste Croi 4.04 340 ePn Pn 15 55 23.2 0.0
TCF Toulx Ste Croi 4.04 340 ePg Pg 15 55 39.1 +0.5
TCF eSn Sn 15 56 07.1 -3.5
TCF eSg Sg 15 56 31.4 +0.4
2.4nm,0.2s
TCF Toulx Ste Croi 4.04 340 Pn Pn 15 55 23.2 0.0
TCF Pg Pg 15 55 39.1 +0.5
TCF Sn Sn 15 56 07.1 -3.5
TCF Lg Lg 15 56 31.4
1.2nm,0.2s
SJPF Ste Jean 4.05 280 eP Pn 15 55 26.7 +3.5
SJPF eSn Sn 15 56 06.9 -3.7
2.1nm,0.3s
SJPF eSg Sg 15 56 31.3 +0.2
3.9nm,0.3s
SJPF Ste Jean 4.05 280 Pn Pn 15 55 26.7 +3.5
SJPF Sn Sn 15 56 06.9 -3.7
1.1nm,0.3s
SJPF Lg Lg 15 56 31.3
1.9nm,0.3s
EIBI Ibiza 4.10 213 Sn Sn 15 56 06.4 -5.6
1.6nm,0.1s,SNR=7.8
EMOS Mosqueruela 4.12 240 Pn Pn 15 55 24.7 +0.4
0.1nm,0.1s,SNR=7.9
EMOS Sn Sn 15 56 10.6 -2.1
0.2nm,0.2s,SNR=7.9
SMF Signal de Mont 4.15 356 ePn Pn 15 55 24.9 +0.3
SMF Signal de Mont 4.15 356 ePg Pg 15 55 41.0 +0.4
SMF eSn Sn 15 56 09.7 -3.4
SMF eSg Sg 15 56 34.0 -0.3
7.9nm,0.4s
SMF Signal de Mont 4.15 356 Pn Pn 15 55 24.9 +0.3
SMF Pg Pg 15 55 41.0 +0.4
SMF Sn Sn 15 56 09.7 -3.4
SMF Lg Lg 15 56 34.0
4.0nm,0.4s
BGF Bois d'Agland 4.17 347 ePn Pn 15 55 25.4 +0.6
BGF Bois d'Agland 4.17 347 ePg Pg 15 55 41.7 +0.7
BGF eSn Sn 15 56 09.6 -4.0
BGF eSg Sg 15 56 35.0 +0.1
13nm,0.3s
BGF Bois d'Agland 4.17 347 Pn Pn 15 55 25.4 +0.6
BGF Pg Pg 15 55 41.7 +0.7
BGF Sn Sn 15 56 09.6 -4.0
BGF Lg Lg 15 56 35.0
6.6nm,0.3s
CABF La Chapelle 4.32 17 ePn Pn 15 55 26.7 -0.3
CABF eSn Sn 15 56 13.5 -3.9
CABF La Chapelle 4.32 17 Pn Pn 15 55 26.7 -0.3
CABF Sn Sn 15 56 13.5 -3.9
AVF Avril sur Loir 4.33 352 ePn Pn 15 55 27.2 +0.2
AVF Avril sur Loir 4.33 352 ePg Pg 15 55 44.1 0.0
AVF eSn Sn 15 56 14.1 -3.4
AVF eSg Sg 15 56 40.3 +0.2
2.7nm,0.3s
AVF Avril sur Loir 4.33 352 Pn Pn 15 55 27.2 +0.2
AVF Pg Pg 15 55 44.1 0.0
AVF Sn Sn 15 56 14.1 -3.4
AVF Lg Lg 15 56 40.3
1.4nm,0.3s
SSF Saint Saulge 4.58 354 ePn Pn 15 55 30.1 -0.4
SSF Saint Saulge 4.58 354 ePg Pg 15 55 49.6 +0.7
SSF eSn Sn 15 56 20.0 -3.8
SSF eSg Sg 15 56 47.9 -0.4
6.1nm,0.5s
SSF Saint Saulge 4.58 354 Pn Pn 15 55 30.1 -0.4
SSF Pg Pg 15 55 49.6 +0.7
SSF Sn Sn 15 56 20.0 -3.8
SSF Lg Lg 15 56 47.9
3.1nm,0.5s
LOR Lormes 4.77 357 ePn Pn 15 55 33.4 +0.3
baz=178
LOR Lormes 4.77 357 ePg Pg 15 55 52.7 +0.2
baz=178
LOR eSn Sn 15 56 25.1 -3.3
baz=174
LOR eSg Sg 15 56 54.1 -0.1
3.1nm,0.3s,baz=178
LOR Lormes 4.77 357 Pn Pn 15 55 33.4 +0.3
LOR Pg Pg 15 55 52.7 +0.2
LOR Sn Sn 15 56 25.1 -3.3
LOR Lg Lg 15 56 54.1
1.6nm,0.3s
CHMF Charmoille 5.05 19 Pn Pn 15 55 38.1 +1.1
HINF Hinteralfeld 5.63 18 ePn Pn 15 55 44.1 -0.8
HINF eSn Sn 15 56 45.1 -4.5
2.2nm,0.3s
HINF Hinteralfeld 5.63 18 Pn Pn 15 55 44.1 -0.8
HINF Sn Sn 15 56 45.1 -4.5
1.1nm,0.3s
HAU Haudompre 5.70 15 ePn Pn 15 55 46.1 +0.2
HAU eSn Sn 15 56 47.0 -4.4
2.9nm,0.3s
HAU Haudompre 5.70 15 Pn Pn 15 55 46.1 +0.2
HAU Sn Sn 15 56 47.0 -4.4
1.4nm,0.3s
SFTF Sexfontaines 5.73 6 ePn Pn 15 55 46.5 +0.2
SFTF eSg Sg 15 57 23.6 -1.4
2.6nm,0.4s
SFTF Sexfontaines 5.73 6 Pn Pn 15 55 46.5 +0.2
SFTF Lg Lg 15 57 23.6
2.6nm,0.4s
CDF Champ du Feu 6.29 19 ePn Pn 15 55 53.5 -0.5
CDF eSn Sn 15 57 01.0 -4.9
1.8nm,0.3s
CDF Champ du Feu 6.29 19 Pn Pn 15 55 53.5 -0.5
CDF Sn Sn 15 57 01.0 -4.9
0.9nm,0.3s
GRR Gorron 6.88 331 ePn Pn 15 56 01.4 -0.6
GRR Gorron 6.88 331 Pn Pn 15 56 01.4 -0.6
BAIF Baives 7.55 360 ePn Pn 15 56 11.5 +0.2
BAIF Baives 7.55 360 Pn Pn 15 56 11.5 +0.2
MAKA Makarska 9.43 81 ePg Pn 15 56 39.9 +2.8
MAKA Sg 15 56 47.3
STON Ston 9.94 83 ePg Pn 15 56 42.6 -1.4
STON Sg 15 56 52.4

IDC 14 16:12:32.1±1.4, 52.91N×167.57W, h0km, mb3.7/9, mb1 3.9/11, mb1mx3.7/49, mbtmp3.7/11, ML3.2/2, MS3.0/2, Ms1 3.0/2, ms1mx2.5/40, Error ellipse: s-maj=40.3km s-min=18.4km az=172.0
NEIC 14 16:12:37.3±0.5, 52.84N±0.08×167.36W±0.09, h36km±34km, Error ellipse: s-maj=12.9km s-min=5.2km az=149.0
AEIC 14 16:12:37.4±0.8, 52.9N±0.1×167.4W±0.1, h28km±9km, ML3.3/24, Error ellipse: s-maj=18.3km s-min=5.0km az=148.0
ISC 14 16:12:38.6±1.7, 53.0N±0.1×167.44W±0.07, h45km±13km, n37, σ1.23/37, mb3.8/8, Fox Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

OKFG Magazine Ridge 0.53 327 Pn 16 12 50.0 +0.2
OKFG Sn 16 12 59.4 +1.5
OKSP Okmok Steeple 0.59 299 Pn 16 12 50.4 -0.3
NIKH Nikolski High 0.86 271 Pn 16 12 53.3 -1.0
NIKH Sn 16 13 05.5 -0.2
MGOD Makushin Gods 0.90 22 Pn 16 12 54.8 0.0
MGOD Sn 16 13 07.7 +1.0
MREP Makushin Rep't 0.94 26 Pn 16 12 55.4 0.0
MNAT Makushin Natee 1.02 26 Pn 16 12 56.4 0.0
MNAT Sn 16 13 10.6 +0.9
MSW Makushin Switc 1.03 22 Pn 16 12 56.7 +0.2
MSW Sn 16 13 10.7 +1.0
MCIR Makushin Cirqu 1.04 18 Pn 16 12 57.7 +0.9
UNV Unalaska Valle 1.04 32 Pn 16 12 56.4 -0.3
UNV Sn 16 13 10.3 +0.2
AKMO Akutan Morgan 1.41 37 Pn 16 13 02.3 +0.5
AKRB Akutan Reef Bi 1.42 34 Pn 16 13 02.8 +0.9
AKBBA Akutan Broad B 1.45 38 Pn 16 13 03.1 +0.8
AKLV Akutan Long Va 1.49 36 Pn 16 13 03.4 +0.5
HSB Akutan Spr's B 1.52 36 Pn 16 13 03.8 +0.5
AKUT Akutan 1.53 40 Pn 16 13 04.3 +0.9
WESP Westdahl Peak 2.22 45 Pn 16 13 14.0 +1.0
ATKA Atka Island 4.19 262 Pn Pn 16 13 41.9 +2.0
ADK Adak 5.76 263 Pn Pn 16 14 03.5 +2.1
KDAK Kodiak Island 9.73 54 Pn Pn 16 14 56.5 +0.9
0.4nm,0.3s,baz=233,slow=10,SNR=2.6
KDAK Sn Sn 16 16 38.5 -4.9
0.1nm,0.3s,baz=153,slow=18,SNR=2.4
RAGM Ragged Mountai 14.49 50 P 16 16 18.9 +12
ILAR Eielson Array 15.80 34 Pn Pn 16 16 17.4 -0.1
0.1nm,0.3s,baz=228,slow=10,SNR=3.9
PETK Petropavlovsk- 20.84 284 P P 16 17 15.6 -0.7
11nm,1.2s,baz=83,slow=14,SNR=2.0
YKA Yellowknife Ar 28.96 50 P P 16 18 34.1 +0.9
0.5nm,0.6s,baz=276,slow=8.2,SNR=8.8
YKA PcP PcP 16 21 41.8 +1.0
0.2nm,0.8s,baz=296,slow=2.7,SNR=4.8
YKA LR LR 16 31 36.0
comp=Z,54nm,19.2s,baz=0.0,slow=39
H11N2 WAKE ISLAND Hy 38.67 221 T T 17 01 19.3
baz=24,slow=76
H11N3 WAKE ISLAND Hy 38.67 221 T T 17 01 19.7
baz=24,slow=76
H11N1 WAKE ISLAND Hy 38.68 221 T T 17 01 24.6
baz=24,slow=76

H11S1	WAKE ISLAND Hy	39.85	220	T	T	17 02 47.9	
	baz=24,slow=76						
H11S2	WAKE ISLAND Hy	39.86	220	T	T	17 02 48.2	
	baz=24,slow=76						
H11S3	WAKE ISLAND Hy	39.87	220	T	T	17 02 48.4	
	baz=24,slow=76						
KSRS	Korea Array	46.50	278	LR	LR	16 38 46.4	
	comp=Z,7.3nm,20.7s,baz=90,slow=34						
TXAR	Lajitas Array	51.57	91	P	P	16 21 40.3	+0.1
	0.5nm,0.6s,baz=302,slow=5.2,SNR=7.6						
SONM	Songino Array	52.00	301	P	P	16 21 42.8	-0.4
	0.2nm,0.5s,baz=86,slow=8.4,SNR=7.2						
MKAR	Makanchi Array	64.24	314	P	P	16 23 07.6	-1.0
	0.3nm,0.6s,baz=47,slow=6.7,SNR=5.0						
FINES	FINESS Array B	65.43	353	P	P	16 23 15.4	-0.6
	0.6nm,0.5s,baz=28,slow=5.2,SNR=4.2						
AKASG	Malin Array Be	75.75	349	P	P	16 24 18.3	-0.7
	0.5nm,0.4s,baz=12,slow=5.6,SNR=4.2						
CMAR	Chiang Mai Arr	77.62	284	P	P	16 24 30.2	+0.1
	1.0nm,1.0s,baz=12,slow=5.8,SNR=6.1						
BRTR	Keskin Array B	85.89	344	P	P	16 25 14.6	+1.1
	0.6nm,0.6s,baz=349,slow=4.3,SNR=3.9						

IDC 14 16:16:56.6±4.2,7°.10S×155°.91E,h0km,mb3.8/5, mb1 4.0/5,mb1mx3.7/26,mbtmp3.8/5,MS2.6/1,Ms1 2.6/1, ms1mx2.2/32,Error ellipse: s-maj=111.5km s-min=30.1km az=108.0,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.62	120	LR	LR	16 20 11.7	
	comp=Z,60nm,18.6s,baz=128,slow=42						
WRA	Warramunga Arr	24.51	236	P	P	16 22 18.5	+0.6
	2.1nm,0.7s,baz=63,slow=9.5,SNR=21						
ASAR	Alice Springs	26.79	230	P	P	16 22 38.0	-0.6
	0.6nm,0.8s,baz=58,slow=10.0,SNR=12						
CMAR	Chiang Mai Arr	61.65	295	P	P	16 27 17.6	+0.9
	1.2nm,0.8s,baz=119,slow=5.1,SNR=9.5						
SONM	Songino Array	69.92	327	P	P	16 28 10.3	+0.5
	0.5nm,0.8s,baz=134,slow=8.3,SNR=3.8						
MKAR	Makanchi Array	84.09	318	P	P	16 29 28.2	-1.2
	1.5nm,0.7s,baz=98,slow=6.7,SNR=15						

NEIC 14 16:32:51.7±2.9,59°.02N±0°.05×138°.15W±0°.08,h18km±3km, Error ellipse: s-maj=7.9km s-min=4.0km az=217.0
PGC 14 16:32:52.0±0.3,59°.02N×138°.11W,h10km,ML2.7/11, 84km east of Yakutat, Ak Southeastern Alaska
AEIC 14 16:32:52.8±2.2,59°.04N±0°.03×138°.11W±0°.05,h8km±4km, ML2.5/38,Error ellipse: s-maj=4.9km s-min=3.8km az=208.0
ISC 14 16:32:51.1±1.0,59°.03N±0°.04×138°.08W±0°.03,h10km±6km, n57,σ1.21/80,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHAK	Deception Hill	0.09	311		Pg	16 32 54.1	+0.5
DHAK					Sg	16 32 56.2	+0.7
PNL	Peninsula	0.93	314	P	Pg	16 33 08.1	-0.9
PNL				S	Sg	16 33 19.3	-1.8
PNL	Peninsula	0.93	314		Pg	16 33 08.1	-0.9
PLBC	Pleasant Camp	0.98	63	P	Pg	16 33 09.1	-0.9
PLBC				S	Sg	16 33 21.7	-1.0
PLBC	Pleasant Camp	0.98	63		Pg	16 33 09.0	-0.9
PLBC					Sg	16 33 21.9	-0.8
SKAG	Skagway	1.48	72		Pn	16 33 17.7	0.0
YUK7	Dusty Glacier	1.51	359	Pn	Pn	16 33 17.7	-0.6
YUK7				Sg	Sn	16 33 36.4	-1.8
YUK7	Dusty Glacier	1.51	359		Pn	16 33 18.0	-0.4
YUK7					Sn	16 33 37.3	-0.8
PCA	Pinnacle	1.54	315		Pn	16 33 17.7	-1.0
BESE	Bessie Mountai	1.74	104	Pn	Pn	16 33 21.9	+0.5
BESE				Sg	Sn	16 33 43.7	+0.1
BESE	Bessie Mountai	1.74	104		Pn	16 33 21.5	+0.1
BESE					Sn	16 33 44.8	+1.2
HYT	Haines Junctio	1.82	9	Pn	Pn	16 33 22.9	+0.2
HYT				Sg	Sn	16 33 45.8	-0.1
HYT	Haines Junctio	1.82	9		Pn	16 33 23.0	+0.3
HYT	Haines Junctio	1.82	9		Sn	16 33 46.9	+1.0
HYT	Haines Junctio	1.82	9		Pn	16 33 24.0	+1.3
YUK6	Outpost Mounta	1.93	356	Pn	Pn	16 33 24.7	+0.6
YUK6				Sg	Sn	16 33 48.5	-0.1
YUK6	Outpost Mounta	1.93	356		Pn	16 33 24.9	+0.8
JIS	Juneau Island	2.07	110		Pn	16 33 26.6	+0.7
JIS					Pb	16 33 27.6	-1.1
JIS	Juneau Island	2.07	110		Sn	16 33 52.7	+0.9
RKAV	Rock Avalanche	2.09	309	Pn	Pn	16 33 27.0	+0.7
RKAV				Sg	Sn	16 33 53.5	+1.0
RKAV	Rock Avalanche	2.09	309		Pn	16 33 27.0	+0.7
YUK5	Granite Creek	2.11	3	Pn	Pn	16 33 27.6	+1.0
YUK5				Sg	Sn	16 33 54.3	+1.3
YUK5	Granite Creek	2.11	3		Pn	16 33 27.4	+0.7
MESA	MESA	2.28	302	Pn	Pn	16 33 27.9	-1.1
MESA				Sg	Sn	16 33 59.0	+1.7
MESA	MESA	2.28	302		Pn	16 33 27.9	-1.1
WHY	Whitehorse	2.30	43	Pn	Pn	16 33 29.6	+0.5
WHY				Sg	Sn	16 33 59.3	+1.8
WHY	Whitehorse	2.30	43		Pn	16 33 29.7	+0.5
YUK4	Talbot Arm	2.34	353	Pn	Pn	16 33 32.4	+2.6
YUK4				Sg	Sb	16 34 02.0	-0.5
YUK4	Talbot Arm	2.34	353		Pn	16 33 32.1	+2.3
SIT	Sitka	2.46	142		Pn	16 33 32.5	+1.3
GRNC	Granite Creek	2.52	314	Pn	Pn	16 33 31.8	-0.5
GRNC				Sg	Sn	16 34 04.3	+1.2
GRNC	Granite Creek	2.52	314		Pn	16 33 31.6	-0.7
CTGM	Chitina Glacie	2.54	321	Pn	Pn	16 33 32.6	+0.2
CTGM				Sg	Sn	16 34 04.7	+1.2
CTGM	Chitina Glacie	2.54	321		Pn	16 33 32.4	-0.1
KULT	Kultieth River	2.66	299		Pn	16 33 33.3	-0.7
BARN	Barnard Glacie	2.71	320		Pn	16 33 35.2	+0.3
BARN	Barnard Glacie	2.71	320		Sn	16 34 08.8	+0.8
BARN	Barnard Glacie	2.71	320		Pn	16 33 35.4	+0.4
WAX	Waxell Ridge	2.81	303		Pn	16 33 34.9	-1.2
KIAG	Kiagna River	2.87	313	Pn	Pn	16 33 37.5	+0.4
KIAG				Sg	Sn	16 34 12.7	+1.0
KIAG	Kiagna River	2.87	313		Pn	16 33 36.9	-0.2
KIAG					Sn	16 34 11.2	-0.5
BALM	Baldy	2.94	315	Pn	Pn	16 33 37.5	-0.5
BALM				Sg	Sn	16 34 14.9	+1.6
BALM	Baldy	2.94	315		Pn	16 33 37.4	-0.5
BALM	Baldy	2.94	315		Pn	16 33 37.9	-0.1
TGL	Tana Glacier	2.95	308		Pn	16 33 38.5	+0.4
YUK3	Moose Creek	3.00	338	Pn	Pn	16 33 40.6	+1.7
CRQM	Cirque	3.08	306		Pn	16 33 39.9	-0.1
PTPK	Patty Peak	3.08	316	Pn	Pn	16 33 41.8	+1.8
PTPK				Sg	Sn	16 34 19.2	+2.2
YUK2	White River	3.09	335	Pn	Pn	16 33 41.8	+1.8
YUK2	White River	3.09	335		Pn	16 33 40.7	+0.7
YUK1	Sand Pete Hill	3.36	340	Pn	Pn	16 33 46.2	+2.5
VRDI	Verde Repeater	3.48	312	Pn	Pn	16 33 47.8	+2.4
GLB	Gilahina Butte	3.74	313	Pn	Pn	16 33 51.8	+2.9
DLBC	Dease Lake	4.24	95	Sn	Sn	16 34 46.4	+1.1
DLBC	Dease Lake	4.24	95		Pn	16 33 57.4	+1.7
DAWY	Dawson	5.09	353	Pn	Pn	16 34 09.7	+2.3
DAWY				Sn	Sn	16 35 07.8	+1.6
DAWY	Dawson	5.09	353		Pn	16 34 08.9	+1.5

JMA 14 16:54:37.3±0.6,44°.20N×148°.19E,h0km,M3.4
SKHL 14 16:54:38.8±0.2,44°.65N×148°.29E,h63km±8km,mb4.3/5
ISC 14 16:54:36.2±3.6,44°.54N±0°.09×148°.5E±0°.1,h27km±23km, n17,σ1.46/26,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.82	328	iP	Pn	16 54 52.0	0.0
KUR				AMB	AMB	16 54 52.0	
	220nm,0.2s						
KUR				eS	Sb	16 55 02.0	-0.6
KUR				A	A	16 55 03.0	
	1µm,0.5s						
KUR				A	A	16 55 03.0	
	506nm,0.5s						
SHO	Shikotan	1.36	241	eP	Pn	16 54 59.0	-0.4
SHO				AMB	AMB	16 55 00.0	
	70nm,0.2s						
SHO				iS	Sn	16 55 14.0	-2.6
SHO				A	A	16 55 19.0	
	88nm,0.3s						
SHO				A	A	16 55 19.0	
	138nm,0.3s						
YUK	Yuzh-Kuril'sk	1.95	256	iP	Pn	16 55 08.0	+0.5
YUK				AMB	AMB	16 55 09.0	
	105nm,0.3s						
YUK				iS	Sn	16 55 31.0	0.0
YUK				A	A	16 55 35.0	
	168nm,0.2s						
YUK				A	A	16 55 35.0	
	91nm,0.2s						
GRPR	Tuman	2.02	255	eP	Pn	16 55 09.0	+0.5
GRPR				AMB	AMB	16 55 10.0	
	47nm,0.3s						
GRPR				eS	Sn	16 55 33.0	+0.1
GRPR				A	A	16 55 34.0	
	143nm,0.4s						
GRPR				A	A	16 55 34.0	
	199nm,0.4s						
GLVR	Golovnino	2.28	251	eP	Pn	16 55 13.0	+1.0
GLVR				AMB	AMB	16 55 15.0	
	39nm,0.3s						
GLVR				eS	Sn	16 55 38.0	-1.1
GLVR				A	A	16 55 44.0	
	77nm,0.3s						
GLVR				A	A	16 55 44.0	
	126nm,0.3s						
NEM2	Nemuro 2	2.30	240	P	Pn	16 55 12.3	0.0
NEM2				eS	Sn	16 55 37.6	-2.1
NMR	Nemuro--Hokkai	2.31	241	iP	Pn	16 55 12.0	-0.4
NMR				iS	Sn	16 55 37.0	-2.9
JRA	Rausu	2.49	257	P	Pn	16 55 16.0	+1.1
JRA				eS	Sn	16 55 44.7	+0.4
JNSB	Nemuroshibetsu	2.62	254	P	Pn	16 55 18.2	+1.6
JNK	Nakash	2.88	252	P	Pn	16 55 21.6	+1.4
JAR	Ashorobuto	3.62	252	P	Pn	16 55 33.4	+2.9
JAR				eS	Sn	16 56 14.3	+1.9
YSS	Yuzh-Sakhalins	4.68	303	eP	Pn	16 55 44.9	-0.1
JNBK	Urakawa-nobuka	4.75	244	P	Pn	16 55 47.0	+1.1
JKB	Kayabe	6.05	247	P	Pn	16 56 04.9	+1.0
YAK	Yakutsk	20.68	335	eP	P	16 59 13.0	-0.7
BILL	Bilibino	25.34	16	eP	P	17 00 02.2	+1.8
BRVK	Borovoye	49.79	309	eP	P	17 03 25.5	-0.7

UCR 14 16:57:34.2±1.6,14°.36N×91°.93W,h100km±42km,ML3.5
SNET 14 16:57:34.3±1.5,14°.30N×91°.94W,h90km±50km,ML4.5
GCG 14 16:57:34.4±0.7,14°.00N×91°.98W,h57km±43km,MD4.1
MEX 14 16:57:36.5±1.4,14°.21N×91°.83W,h45km±49km,MD4.0
ISC 14 16:57:36.1±1.7,14°.2N±0°.1×91°.97W±0°.07,h50km,n29, σ0.99/35,Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.46	57	eP	Pn	16 57 47.2	+0.3
THIG		0.77	338	iP	Pn	16 57 50.6	-0.3
THIG				eS	Sn	16 58 01.3	-0.2
FUG	Fuego 3	1.12	77	eP	Pn	16 57 54.9	-0.9
PCG	Pacaya	1.34	81	eP	Pn	16 57 58.2	-0.5
IXG	Ixpaco	1.48	90	eP	Pn	16 57 59.9	-0.7
NBG	Las Nubes	1.62	76	eP	Pn	16 58 02.9	+0.3
NBG				eS	Sn	16 58 24.6	+2.1
PCIG		1.93	321	eP	Pn	16 58 06.3	-0.3
PCIG				eS	Sn	16 58 28.9	-0.8
CCIG	Comitan	2.09	356	eP	Pn	16 58 09.2	+0.3
RTR	El Retiro	2.27	97	eP	Pn	16 58 10.2	-1.3
RTR	El Retiro	2.27	97	eP	Pn	16 58 10.2	-1.3
SBLS	San Blas	2.30	98	eP	Pn	16 58 11.1	-0.8
SBLS	San Blas	2.30	98	eP	Pn	16 58 11.1	-0.8
CEVE	Cerro Verde	2.31	99	eP	Pn	16 58 11.7	-0.3
CEVE				IAML		16 58 46.2	
	comp=Z,2µm,0.4s						
CEVE	Cerro Verde	2.31	99	eP	Pn	16 58 11.7	-0.3
CEVE				IAML		16 58 46.2	
	comp=Z,2µm,0.4s						
SNJE	San Jose	2.32	98	eP	Pn	16 58 12.0	0.0
SNJE	San Jose	2.32	98	eP	Pn	16 58 12.0	0.0
MRL	Marmol	2.38	68	eP	Pn	16 58 11.4	-1.6
MRL	Marmol	2.38	68	eP	Pn	16 58 11.4	-1.6
MTO3	Montecristo	2.54	85	eP	Pn	16 58 13.2	-1.9
MTO3				IAML		16 58 53.9	
	comp=Z,49nm,0.4s						
MTO3	Montecristo	2.54	85	eP	Pn	16 58 13.2	-1.9
MTO3				IAML		16 58 53.9	
	comp=Z,49nm,0.4s						
BOQS	Boqueron	2.65	99	eP	Pn	16 58 15.3	-1.3
BOQS				eS	Sn	16 58 49.1	+1.4
TGIG		2.81	337	eP	Pn	16 58 18.4	-0.2
LBRS	Las Brisas	2.88	99	eP	Pn	16 58 19.8	+0.1
LFRS	El Faro	2.88	101	eP	Pn	16 58 19.6	-0.1
COEG	Centro de Oper	3.05	100	eS	Sn	16 58 58.7	+1.3
COEG	Centro de Oper	3.05	100	eS	Sn	16 58 58.7	+1.3
CMIG	Matias Romero	4.03	316	eP	Pn	16 58 35.7	+0.4
CNCH	Conchagua	4.12	102	eP	Pn	16 58 36.1	-0.6
CNCH				eS	Sn	16 59 23.5	-0.2
CNCH	Conchagua	4.12	102	eP	Pn	16 58 36.1	-0.6
CNCH				eS	Sn	16 59 23.5	-0.2

NNC 14 17:17:34.1±5.3,39°.55N×76°.66E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=38.9km s-min=30.4km az=165.0
SOME 14 17:17:39.0,40°.23N×77°.37E,h0km
KRNET 14 17:17:40.0±0.1,40°.22N×77°.37E,mb3.3
ISC 14 17:17:43.8±1.9,40°.24N±0°.08×77°.26E±0°.04,h10km,n46, σ1.95/81,28C-10D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn	1.53	322	⇑iP	Pn	17 18 10.2	-1.3
	baz=19						
NRN				⇑iS	Sb	17 18 32.3	+0.2
	baz=19						
KDJ	Kajisay	1.90	358	⇑iP	Pn	17 18 15.9	-0.5
	baz=56						
KDJ				⇑iS	Sb	17 18 41.7	-0.7
	baz=56						
ULHL	Ulahol	2.15	339	⇑iP	Pn	17 18 20.2	+0.2
	baz=38						
ULHL				⇑iS	Sb	17 18 49.3	-0.5
	baz=38						
ULHL	Ulahol	2.15	339	P	Pb	17 18 21.3	-1.7
	SNR=9.7						
KZA	Kyzart	2.39	321	⇑iP	Pn	17 18 23.9	+0.5
	baz=20						
KZA				⇑iS	Sb	17 18 55.7	-1.1
	baz=20						
KZA	Kyzart	2.39	321	P	Pb	17 18 24.9	-2.2
	SNR=12						
BOOM	Boomskoye usch	2.46	337	⇓eP	Pb	17 18 26.6	-1.7
	baz=35						
BOOM				⇓eS	Sb	17 19 00.4	+1.7
	baz=35						
ANVS	Anan'yevo	2.56	7	⇑iP	Pn	17 18 25.3	-0.3
	baz=5.0						
ANVS				⇑iS	Sn	17 18 58.1	+1.1
	baz=5.0						
TNSS	Tian-Shan	2.81	355	eP	Pb	17 18 32.9	-1.4
	37nm,0.3s						
TNSS				eS	Sg	17 19 11.6	-2.5
	33nm,0.3s						
IZV	Izvestkoviy	2.84	350	eP	Pb	17 18 33.6	-1.1
	11nm,0.3s						
IZV				eS	Sg	17 19 12.7	-2.3
	80nm,0.4s						
UCH	Uchtor	2.87	315	⇑iP	Pn	17 18 30.6	+0.5
	baz=14						
UCH				⇑iS	Sn	17 19 07.7	+2.7
	baz=14						
UCH	Uchtor	2.87	315	P	Pb	17 18 32.1	-3.3
	SNR=6.3						
MDOK	Medeo	2.93	357	eP	Pb	17 18 34.9	-1.3
	12nm,0.2s						
MDOK				eS	Sg	17 19 15.0	+2.8
	45nm,0.3s						
MDOK	Medeo	2.93	357	Pn	Pb	17 18 31.0	+0.4
	6.7nm,0.4s						
MDOK				Sn	Sg	17 19 17.3	-0.6
	33nm,0.4s						
MTBS	Maitube	2.96	348	eP	Pb	17 18 35.8	-0.9
	3.8nm,0.1s						
MTBS				eS	Sg	17 19 16.6	-2.2
	35nm,0.3s						
KST	Kastek	2.97	341	eP	Pb	17 18 36.1	-0.8
	5.1nm,0.1s						
KST				eS	Sg	17 19 17.1	-2.1
	26nm,0.4s						
KBK	Karagaybulak	2.98	325	⇑iP	Pn	17 18 32.0	+0.7
	baz=24						
KBK				⇑iS	Sn	17 19 09.3	+2.1
	baz=24						
KBK	Karagaybulak	2.98	325	P	Pb	17 18 36.6	-0.5
	SNR=8.0						
AAA	Alma-Ata	2.98	355	eP	Pb	17 18 36.7	-0.4
	31nm,0.1s						
AAA				eS	Sg	17 19 18.0	-1.7
	35nm,0.1s						
KNDC	Almaty	2.99	356	⇑Pn	Pb	17 18 34.5	-2.7
	14nm,0.6s						
KNDC				⇑Sn	Sg	17 19 18.3	-1.5
	117nm,0.5s						
KOTS	Kotyrbulak	3.00	358	eP	Pb	17 18 36.1	-1.3
	34nm,0.2s						
KOTS				eS	Sg	17 19 17.2	-2.9
	187nm,0.2s						
ZHN	Zhinishke	3.06	16	eP	Pb	17 18 36.5	-2.0
	8.2nm,0.1s						
ZHN				eS	Sb	17 19 17.5	+1.6
	10nm,0.2s						
AAK	Ala-Archa	3.18	320	⇓iP	Pn	17 18 34.5	+0.5
	baz=19						
AAK				⇓iS	Sn	17 19 14.4	+2.4
	baz=19						
AAK	Ala-Archa	3.18	320	P	Pn	17 18 36.2	+2.2
	SNR=5.3						
AAK	Ala-Archa	3.18	320	⇓Pg	Pb	17 18 35.8	+1.8
	5.1nm,0.8s						
AAK				⇑Lg	Lg	17 19 23.8	
	19nm,0.7s						
UZB	Uzynbulak	3.19	24	eP	Pb	17 18 38.7	-2.0
	1.3nm,0.1s						
UZB				eS	Sb	17 19 21.2	+1.4
	12nm,0.3s						
DGS	Degeres	3.21	340	eP	Pb	17 18 40.3	-0.6
	5.8nm,0.3s						
DGS				eS	Sg	17 19 24.2	-2.6
	32nm,0.3s						
AML	Almayashu	3.29	306	⇑iP	Pn	17 18 36.6	+0.8
	baz=6.0						
AML				⇑iS	Sn	17 19 17.8	+2.6
	baz=6.0						
AML	Almayashu	3.29	306	P	Pn	17 18 38.0	+2.2
	SNR=9.2						
KURS	Kuram	3.32	11	eP	Pb	17 18 41.0	-1.9
	5.5nm,0.3s						
KURS				eS	Sb	17 19 25.4	+2.1
	19nm,0.5s						
CHMS	Chumysh	3.34	327	⇑iP	Pn	17 18 36.6	+0.5
	baz=26						
CHMS				⇑iS	Sn	17 19 17.8	+1.9
	baz=26						
CHMS	Chumysh	3.34	327	P	Sg	17 19 28.4	-2.7
	SNR=6.1						
CHMS	Chumysh	3.34	327	⇓Pg	Pb	17 18 41.4	-1.8
	3.4nm,0.6s						
CHMS				⇑Lg	Lg	17 19 29.4	
	13nm,0.5s						
SHLS	Shalkode	3.35	29	eP	Pb	17 18 43.8	+0.3
	5.5nm,0.2s						
SHLS				eS	Sg	17 19 30.0	-1.5
	22nm,0.3s						
KPKS	Kokpek	3.40	18	eP	Pb	17 18 42.0	-2.2
	11nm,0.2s						
KPKS				eS	Sb	17 19 27.1	+1.5
	38nm,0.2s						
ARSB	Arslanbob	3.43	290	⇑eP	Pn	17 18 38.6	+1.2
	baz=90						
ARSB				⇑iS	Sn	17 19 21.1	+2.9
	baz=90						
KTBS	Karatobe	3.50	353	eP	Pb	17 18 44.4	-1.5
	1.2nm,0.1s						
KTBS				eS	Sb	17 19 31.2	+2.7
	58nm,0.4s						
PDGK	Podgornoye	3.51	28	⇓Pn	Pb	17 18 42.8	-3.3
	5.3nm,0.6s						
PDGK				⇓Sn	Sb	17 19 29.4	+0.5
	32nm,1.1s						
EKS2	Erkin-Say	3.57	314	⇑iP	Pn	17 18 40.3	+1.0
	baz=13						
EKS2				⇑iS	Sn	17 19 24.0	+2.4
	baz=13						
KRBS	Karabastau	3.66	342	eP	Pb	17 18 47.0	-1.5
	3.6nm,0.3s						
KRBS				eS	Sb	17 19 35.8	+2.9
	11nm,0.5s						
USP	Ospenovka	3.67	327	⇑eP	Pn	17 18 41.1	+0.5
	baz=26						
USP				⇑iS	Sn	17 19 26.0	+2.1
	baz=26						
USP	Ospenovka	3.67	327	P	Sg	17 19 38.4	-3.1
	SNR=10						
KUU	Kurty	3.72	350	eP	Pb	17 18 48.5	-1.1
	1.6nm,0.2s						
KUU				eS	Sb	17 19 38.5	+3.7
	28nm,0.4s						
MRKS	Merke	3.93	311	eP	Pb	17 18 54.2	+0.9
	0.5nm,0.1s						
MRKS				eS	Sg	17 19 48.0	-2.2
	3.4nm,0.1s						
ARXS	Arharly	4.00	6	eP	Pb	17 18 53.4	-0.9
	2.6nm,0.1s						
ARXS				eS	Sb	17 19 46.9	+4.1
	13nm,0.5s						
KK31	Karatay Array	5.81	302	⇓Pg	Pb	17 19 21.1	-4.1
	0.3nm,0.4s,baz=130,slow=15,SNR=2.5						
KK31				⇓Lg	Lg	17 20 38.2	
	2.0nm,0.7s,baz=130,slow=30,SNR=3.9						

IDC 14 17:54:00.6±5.5,16°.79S×176°.81W,h0km,mb4.4/3, mb1 4.6/3,mb1mx3.8/38,mbtmp4.4/3,Error ellipse: s-maj=192.4km s-min=59.9km az=133.0
NEIC 14 17:54:06.6±2.6,16°.6S±0°.1×176°.73W±0°.08,h59km±7km, mb4.7/24,Error ellipse: s-maj=19.5km s-min=6.1km az=207.0
ISC 14 17:54:04.4±0.6,16°.45S±0°.1×176°.72W±0°.06,h35km,n32, σ1.66/36,mb4.6/12,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.16	255		Sn	17 56 22.0	+4.2
NIUE	Niue	6.99	113	Pn	Pn	17 55 46.0	+1.7
NIUE				Sn	Sn	17 57 03.2	+0.5
EIDS	Eidsvold	31.30	248	P	P	18 00 21.7	+0.3
ARMA	Armidale	32.07	239	P	P	18 00 28.5	+0.1
ARMA				IAmb	IAmb	18 00 36.9	
	comp=Z,10nm,1.1s						
COEN	Coen	38.74	268	P	P	18 01 29.1	+3.4
COEN				IAmb	IAmb	18 01 29.4	
	comp=Z,3.7nm,0.7s						
TOO	Toolangi	39.34	230	P	P	18 01 31.2	+0.7
TOO				IAmb	IAmb	18 01 32.4	
	comp=Z,9.2nm,1.2s						
STKA	Stephens Creek	40.75	240	P	P	18 01 42.5	+0.2
	comp=Z,2.6nm,0.8s,baz=92,slow=11,SNR=6.7						
STKA	Stephens Creek	40.75	240	P	P	18 01 42.4	+0.1
SDHHI	Sand Hill	41.37	31	P	P	18 01 47.6	+0.1
RIM	Rim	41.38	31	P	P	18 01 48.4	+0.7
PTCN	Pitcairn Islan	44.26	109	P	P	18 02 10.4	-0.5
BBOO	Buckleboo	45.53	240	P	P	18 02 20.1	-0.8
BBOO				IAmb	IAmb	18 02 23.8	
	comp=Z,34nm,1.4s						
WR0	Warramunga Arr	46.31	258	P	P	18 02 26.9	-0.4
WB0	Warramunga Arr	46.46	258	P	P	18 02 27.6	-0.8
WB0				IAmb	IAmb	18 02 38.7	
	comp=Z,7.7nm,1.4s						
WB0				PcP	PcP	18 03 59.4	-3.4
WB2	Warramunga Arr	46.49	258	P	P	18 02 27.9	-0.7
WB2				IAmb	IAmb	18 02 28.2	
	comp=Z,17nm,1.6s						
WB2				PcP	PcP	18 04 02.8	0.0
WRA	Warramunga Arr	46.50	258	P	P	18 02 28.2	-0.5
	comp=Z,1.4nm,0.5s,baz=99,slow=7.0,SNR=32						
WRA	Warramunga Arr	46.50	258	P	P	18 02 26.9	-1.8
AS31	Alice Springs	46.75	253	P	P	18 02 30.0	-0.7
AS31				IAmb	IAmb	18 02 30.6	
	comp=Z,4.6nm,0.6s						
ASAR	Alice Springs	46.75	253	P	P	18 02 30.1	-0.6
	comp=Z,16nm,0.6s,baz=89,slow=7.9,SNR=390						
ASAR	Alice Springs	46.75	253	P	P	18 02 29.6	-1.1
ASAR					PcP	18 04 00.5	-3.3
FORT	Forrest	52.10	244	P	P	18 03 09.1	-2.2
KNRA	Kununurra	52.26	263	P	P	18 03 12.6	-0.1

KNRA comp=Z,30nm,1.5s IAmb IAmb 18 03 21.6
FITZ Fitzroy Crossi 54.87 259 P P 18 03 31.6 -0.2
FITZ IAmb IAmb 18 03 50.4
comp=Z,9.9nm,1.4s
SOEI Soe 57.70 269 P P 18 03 50.6 -1.7
PSA00 Pilbara Seismi 59.85 254 P P 18 04 04.2 -2.8
GIRL Giralia 64.87 252 P P 18 04 39.0 -1.5
ATKA Atka Island 68.38 2 P P 18 05 04.2 +2.0
JOW Kunigami 68.56 308 P P 18 05 02.8 -1.1
UGM Wanagama 71.32 267 P P 18 05 19.5 -1.7
YOJ Yonaguni jima 71.46 303 P P 18 05 22.1 +0.4
BRTR Keskin Array B 144.84 317 PKPbc PKPdf 18 13 39.0 +0.8
comp=Z,0.4nm,0.7s,baz=114,slow=3.5,SNR=3.9
BRTR Keskin Array B 144.84 317 PKPdf 18 13 38.5 +0.2

IDC 14 18:20:45.5±1.6, 12°.21S×166°.41E, h0km, mb4.0/9, mb1 4.2/10, mb1mx4.0/30, mbtmp4.1/10, ML4.8/1, MS3.5/12, Ms1 3.5/12, ms1mx3.2/36, Error ellipse: s-maj=46.6km s-min=24.4km az=136.0
NEIC 14 18:20:53.7±1.4, 12°.19S±0°.08×166°.04E±0°.08, h52km±3km, mb4.9/13, Error ellipse: s-maj=11.9km s-min=10.2km az=46.0
ISC 14 18:20:50.7±0.6, 12°.10S±0°.07×166°.17E±0°.08, h30km, n45, σ1s.50/39, mb4.3/15, MS3.4/11, 1D, Santa Cruz Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 3.48 163 Pn 18 21 44.4 +1.6
HNR Honiara 6.66 293 Pn Pn 18 22 28.3 +1.7
16nm,0.3s,baz=200,slow=2.6,SNR=16
HNR Sn **Sn 18 23 39.6 -2.0**
9.2nm,0.3s,baz=18,slow=23,SNR=1.8
HNR LR LR 18 25 36.0
comp=Z,358nm,19.2s,baz=138,slow=42
HNR Honiara 6.66 293 Pn 18 22 28.0 +1.4
HNR Sn 18 23 40.0 -1.6
DZM Mont Dzumac 9.92 179 *e*Pn **Pn 18 23 13.8 +2.4**
18nm,0.5s
DZM *e*Sn **Sn 18 25 00.9 -0.9**
30nm,0.8s
DZM *e*LR LR 18 25 30.2
comp=Z,135nm,22.5s
DZM Mont Dzumac 9.92 179 Pn 18 23 13.5 +2.1
NOUC Port Laguerre 9.95 179 Pn Pn 18 23 14.0 +2.4
TARA Tarawa 14.96 27 Pn P 18 24 23.4 -1.9
TARA IAmb IAmb 18 24 26.4
comp=Z,81nm,0.7s
KRVT Keravat (AS076 15.99 298 LR LR 18 30 37.9
comp=Z,105nm,20.5s,baz=108,slow=36
PMG Port Moresby 18.87 276 LR LR 18 33 07.6
comp=Z,139nm,18.1s,baz=99,slow=39
EIDS Eidsvold 19.42 225 P 18 25 13.6 -1.1
CTA Charters Tower 20.70 245 P P 18 25 30.6 +1.9
comp=Z,4.1nm,0.8s,baz=66,slow=12,SNR=5.5
AFI Afiamalu 21.56 97 LR LR 18 32 52.2
comp=Z,134nm,18.4s,baz=257,slow=34
COEN Coen 22.48 263 P 18 25 46.2 -1.6
ARMA Armidale 22.67 214 P P 18 25 49.6 -0.2
BKZ Black Stump Fm 28.47 163 P P 18 26 41.5 -1.7
BKZ IAmb IAmb 18 27 26.6
comp=Z,24nm,1.5s
STKA Stephens Creek 29.98 225 P P 18 27 02.4 +5.7
comp=Z,3.1nm,0.8s,baz=98,slow=4.1,SNR=5.2
STKA LR LR 18 38 34.0
comp=Z,93nm,19.8s,baz=29,slow=36
WB0 Warramunga Arr 31.45 252 P P 18 27 08.8 -1.0
WB0 IAmb IAmb 18 27 17.0
comp=Z,23nm,1.8s
WRA Warramunga Arr 31.53 252 P P 18 27 11.3 +0.8
comp=Z,0.9nm,0.8s,baz=85,slow=9.5,SNR=3.6
ASAR Alice Springs 32.71 245 P P 18 27 20.8 0.0
comp=Z,1.1nm,0.7s,baz=70,slow=9.3,SNR=14
ASAR PcP **PcP 18 30 06.4 +0.2**
comp=Z,2.0nm,0.8s,baz=76,slow=3.2,SNR=13
ASAR LR LR 18 40 23.0
comp=Z,56nm,18.5s,baz=84,slow=36
ASAR Alice Springs 32.71 245 P P 18 27 20.1 -0.7
ASAR PcP 18 30 06.0 -0.3
FITZ Fitzroy Crossi 39.52 256 LR LR 18 44 06.4
comp=Z,59nm,19.1s,baz=91,slow=35
PPT Papeete 43.05 103 LR LR 18 43 44.3
comp=Z,60nm,21.6s,baz=194,slow=32
PPT2 Papeete2 43.05 103 *e*LR LR 18 40 44.9
comp=Z,45nm,20.8s
DAV Davao City (W) 44.63 293 LR LR 18 48 42.2
comp=Z,22nm,18.3s,baz=348,slow=37
HMH Humu'ula Sheep 49.18 51 P P 18 29 36.2 -0.5
NWAO Narrogin (SRO) 49.23 237 LR LR 18 50 21.4
comp=Z,92nm,19.5s,baz=116,slow=36
MORW Morawa 49.49 242 P P 18 29 38.6 -0.1
TGY Tagaytay City 51.84 299 LR LR 18 48 16.8
comp=Z,90nm,20.5s,baz=209,slow=32
TAOE Nuku Hiva Isla 52.82 92 *e*LR LR 18 45 05.9
comp=Z,851nm,29.4s
KSRS Korea Array 60.98 326 P P 18 31 02.8 +1.5
comp=Z,2.0nm,0.7s,baz=132,slow=7.5,SNR=9.2
KSRS LR LR 18 56 24.1
comp=Z,15nm,18.7s,baz=115,slow=35
CMAR Chiang Mai Arr 72.91 294 P P 18 32 18.4 +0.8
comp=Z,0.7nm,0.7s,baz=127,slow=4.8,SNR=8.0
QSPA South Pole Qui 77.91 180 P P 18 32 45.6 0.0
QSPA IAmb IAmb 18 32 50.3
comp=Z,11nm,1.0s
BRLK Bradley Lake 79.47 21 P P 18 32 56.9 +2.8
SONM Songino Array 79.76 324 P P 18 32 56.7 +0.7
comp=Z,2.3nm,0.7s,baz=140,slow=5.3,SNR=19
SONM Songino Array 79.76 324 P P 18 32 57.2 +1.2
ILAR Eielson Array 84.38 18 P P 18 33 18.2 -1.5
comp=Z,0.9nm,0.9s,baz=223,slow=5.9,SNR=3.8
ILAR Eielson Array 84.38 18 P P 18 33 20.9 +1.2
SYO Syowa Base 90.90 197⇓eX **P 18 33 47.8 -3.4**
MK31 Makanchi Array 94.57 317 P P 18 34 07.6 -0.9
MK31 IAmb IAmb 18 34 10.4
comp=Z,5.7nm,0.8s
MKAR Makanchi Array 94.57 317 P P 18 34 09.6 +1.0
comp=Z,7.8nm,0.7s,baz=96,slow=6.1,SNR=44
MKAR Makanchi Array 94.57 317 P P 18 34 08.7 +0.2
ZALV Zalesovo Beam 94.65 324 P P 18 34 08.8 +0.1
comp=Z,2.6nm,0.9s,baz=106,slow=5.4,SNR=8.7
ZALV Zalesovo Beam 94.65 324 P P 18 34 06.9 -1.8
MAKZ Makanchi 94.78 317 P P 18 34 09.7 +0.2
MAKZ IAmb IAmb 18 34 11.9
comp=Z,6.4nm,0.9s
YKA Yellowknife Ar 95.72 27 P P 18 34 14.2 +0.9
comp=Z,0.1nm,0.5s,baz=256,slow=4.1,SNR=2.3

IDC 14 18:28:30.1±10.0, 35°.81N×81°.43E, h0km, mb3.1/1, mb1 3.4/3, mb1mx3.1/40, mbtmp3.4/3, ML3.0/2, Error ellipse: s-maj=144.6km s-min=57.0km az=53.0
NNC 14 18:28:47.0±5.9, 36°.68N×82°.99E, h16km±40km, mb3.9, mpv3.7, Error ellipse: s-maj=64.9km s-min=42.4km az=65.0
ISC 14 18:28:47.8±2.9, 36°.6N±0°.2×83°.0E±0°.2, h35km, n7, σ2s.29/11, 5C-2D, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PDGK Podgornoye 7.27 340 ⇑Pn **Pn 18 30 32.0 +0.4**
2.9nm,0.9s
PDGK ⇑Sn **Sn 18 31 52.1 -0.9**
6.2nm,0.5s
PDGK ⇑Lg Lg 18 32 33.4
14nm,1.2s
MDOK Medeo 8.01 327 Pn **Pn 18 30 42.5 +0.6**
5.4nm,0.9s
MDOK Lg Lg 18 33 00.8
7.7nm,1.0s
MK31 Makanchi Array 10.25 357 ⇓Pn **Pn 18 31 10.4 -1.9**
1.3nm,0.8s,baz=187,slow=13,SNR=40
MK31 ⇑Sn **Sn 18 33 07.6 +1.7**
1.8nm,0.8s,baz=187,slow=24,SNR=5.1
MKAR Makanchi Array 10.25 357 Pn Pn 18 31 10.9 -1.4
0.3nm,0.3s,baz=189,slow=12,SNR=34
MKAR Sn **Sn 18 33 08.9 +2.9**
0.2nm,0.3s,baz=189,slow=24,SNR=5.6
MAKZ Makanchi 10.28 356 ⇓Pn **Pn 18 31 10.2 -2.5**
1.9nm,0.6s
MAKZ ⇑Sn **Sn 18 33 06.4 -0.2**
1.2nm,0.8s
ZALV Zalesovo Beam 17.45 4 P Pn 18 32 44.5 -3.7
0.1nm,0.3s,baz=191,slow=12,SNR=5.9
SONM Songino Array 20.63 50 P P 18 33 26.0 +1.8
0.8nm,0.9s,baz=264,slow=10.0,SNR=3.1

DJA 14 18:40:50.1±0.4, 8°S±3°×11°0E±°, h10km, M3.6/10, MLv3.6/10
IDC 14 18:40:52.2±2.3, 8°.20S×110°.50E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/33, mbtmp3.5/4, ML3.4/1, MS3.0/1, Ms1 2.9/1, ms1mx2.4/34, Error ellipse: s-maj=174.9km s-min=28.1km az=29.0
ISC 14 18:40:50.1±1.4, 7°.94S±0°.07×110°.36E±0°.04, h5km±11km, n14, σ0s.86/18, mb3.1/3, Jawa

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
UGM Wanagama 0.16 80 P Pg 18 40 54.4 +1.0
WOJI Wonogiri, Jawa 0.57 79 P Pg 18 41 00.7 -0.3
WOJI S Sg 18 41 08.1 -0.3
PCJI Pacitan 0.84 107 P Pg 18 41 05.0 -1.3
PCJI S Sg 18 41 16.3 -1.0
SMRI Semarang 0.89 5 P Pn 18 41 09.3 +0.1
SMRI S Sn 18 41 22.1 -0.4
KPJI Karang Pucung 1.54 293 P Pn 18 41 18.6 +0.4
GRJI Gresik 2.33 64 P Pn 18 41 28.2 -0.9
CISI Cisompet, Garu 2.55 278 P Pn 18 41 32.0 -0.2
LEM Lembang 2.94 292 Pn Pb 18 41 43.5 +0.5
4.1nm,0.3s,baz=104,slow=8.5,SNR=8.5
LEM Sn **Sb 18 42 18.2 -1.1**
4.8nm,0.3s,baz=350,slow=22,SNR=6.4
LEM Lembang 2.94 292 P Pn 18 41 37.1 -0.5
CNJI Cibinong 3.27 281 P Pn 18 41 42.1 +0.2
JAGI Jajag, Banyuwa 3.79 98 P Pn 18 41 50.2 +1.1
WRA Warramunga Arr 26.11 120 P P 18 46 26.2 +1.1
0.2nm,0.6s,baz=294,slow=12,SNR=5.0
ASAR Alice Springs 27.45 127 P P 18 46 38.2 +1.0
0.2nm,0.5s,baz=302,slow=8.9,SNR=6.8
STKA Stephens Creek 37.56 134 P P 18 48 05.4 -0.1
1.5nm,0.6s,baz=316,slow=10,SNR=4.5
STKA LR LR 19 03 40.1
comp=Z,21nm,21.4s,baz=215,slow=37

KNET 14 18:43:03.7±0.4, 42°.31N×75°.95E, h7km±4km, ml3.2, Error ellipse: s-maj=4.0km s-min=2.4km az=7.0
NNC 14 18:43:03.7±0.5, 42°.30N×75°.97E, h0km, mb3.9, mpv3.9, Error ellipse: s-maj=4.3km s-min=1.5km az=167.0
KRNET 14 18:43:03.5±0.1, 42°.26N×75°.99E, h20km, mb3.9
SOME 14 18:43:04.0, 42°.28N×76°.00E, h10km
ISC 14 18:43:04.0±0.8, 42°.29N±0°.02×75°.99E±0°.01, h14km±6km, n88, σ1s.13/159, 39C-26D, Lake Issyk-Kul region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ULHL Ulahol 0.20 102 ⇓*i*P **Pg 18 43 08.2 -0.4**
baz=93
ULHL ⇓*i*S **Sg 18 43 11.0 -0.8**
baz=93
ULHL Ulahol 0.20 102 P Pg 18 43 08.2 -0.4
658nm,0.1s,SNR=1609
ULHL ⇑S **Sg 18 43 11.2 -0.5**
9μm,0.2s
BOOM Boomskoye usch 0.21 351 ⇓*i*P **Pg 18 43 08.5 -0.3**
baz=51
BOOM ⇓*i*S **Sg 18 43 12.5 +0.5**
baz=51
KZA Kyzart 0.58 249 ⇑*i*P **Pg 18 43 15.2 -0.4**
baz=52
KZA ⇑*i*S **Sg 18 43 23.5 +0.1**
baz=52
KZA Kyzart 0.58 249 P Pg 18 43 15.6 0.0
118nm,0.1s,SNR=522
KZA ⇑S **Sg 18 43 23.8 +0.3**
689nm,0.1s
KST Kastek 0.76 359 *e*P **Pb 18 43 18.6 -0.5**
baz=59
KST *e*S **Sb 18 43 29.4 +0.1**
baz=59
KST Kastek 0.76 359 *e*P **Pb 18 43 18.6 -0.5**
216nm,0.2s
KST *e*S **Sb 18 43 29.4 +0.1**
630nm,0.3s
KST Kastek 0.76 359 P Pb 18 43 18.6 -0.5
216nm,0.3s
KST S **Sb 18 43 29.5 +0.1**
630nm,0.3s
KBK Karagaybulak 0.85 296 ⇓*i*P **Pg 18 43 19.8 -0.7**
baz=98
KBK ⇓*i*S **Sg 18 43 31.7 -0.1**
baz=98
KBK Karagaybulak 0.85 296 ⇓P **Pb 18 43 20.5 -0.2**
380nm,0.2s,SNR=1193
KBK ⇓S **Sb 18 43 32.5 +0.4**
1μm,0.2s
NRN Naryn 0.85 179 ⇑*i*P **Pg 18 43 19.4 -1.2**
baz=81
NRN ⇑*i*S **Sg 18 43 30.9 -0.9**
baz=81
IZV Izvestkoviy 0.88 32 *e*P **Pb 18 43 20.9 -0.3**
baz=30
IZV *e*S **Sb 18 43 33.2 +0.3**
baz=30
IZV Izvestkoviy 0.88 32 *e*P **Pb 18 43 20.9 -0.3**
49nm,0.1s
IZV *e*S **Sb 18 43 33.1 +0.3**
495nm,0.2s
KDJ Kajisay 0.90 100 ⇑*i*P **Pg 18 43 19.9 -1.6**
baz=98
KDJ ⇑*i*S **Sg 18 43 31.8 -1.5**
baz=98
MTBS Maitube 0.91 21 *e*P **Pg 18 43 21.1 -0.4**
baz=20
MTBS *e*S **Sb 18 43 33.6 +0.1**
baz=20
MTBS Maitube 0.91 21 *e*P **Pg 18 43 21.1 -0.4**
113nm,0.1s
MTBS *e*S **Sb 18 43 33.6 +0.1**
807nm,0.2s
MTBS Maitube 0.91 21 P Pg 18 43 21.1 -0.4
73nm,0.1s
MTBS S **Sb 18 43 33.7 +0.2**
584nm,0.2s
DGS Degeres 0.97 351 *e*P **Pb 18 43 22.5 -0.2**
baz=51
DGS *e*S **Sb 18 43 35.9 +0.5**
baz=51
DGS Degeres 0.97 351 *e*P **Pb 18 43 22.5 -0.2**
98nm,0.1s
DGS *e*S **Sb 18 43 35.8 +0.5**
971nm,0.2s
DGS Degeres 0.97 351 P Pb 18 43 22.6 0.0
106nm,0.3s
DGS S **Sb 18 43 35.9 +0.5**
489nm,0.3s
TNSS Tian-Shan 1.03 43 *e*P **Pg 18 43 23.5 -0.6**
baz=42
TNSS *e*S **Sb 18 43 37.7 +0.1**
baz=42
TNSS Tian-Shan 1.03 43 *e*P **Pg 18 43 23.4 -0.6**
59nm,0.1s
TNSS *e*S **Sb 18 43 37.6 +0.1**
280nm,0.2s
TNSS Tian-Shan 1.03 43 P Pg 18 43 23.4 -0.6
59nm,0.2s
TNSS S **Sb 18 43 37.6 +0.1**
261nm,0.3s
UCH Uchtor 1.09 267 ⇓*e*P **Pg 18 43 24.0 -1.2**
baz=69
UCH ⇓*i*S **Sg 18 43 39.0 -0.5**
baz=69
UCH Uchtor 1.09 267 ⇓P **Pg 18 43 24.3 -0.8**
23nm,0.1s,SNR=83
UCH ⇓S **Sg 18 43 39.4 -0.1**
291nm,0.2s
FRU1 Bishkek 1.13 298 ⇑*i*P **Pb 18 43 24.7 -0.7**
baz=99
FRU1 ⇑*i*S **Sb 18 43 40.2 +0.2**
baz=99
AAA Alma-Ata 1.15 36 *e*P **Pn 18 43 26.0 +0.2**
59nm,0.1s
AAA *e*S **Sn 18 43 41.9 +0.5**
239nm,0.1s
AAA Alma-Ata 1.15 36 P Pb 18 43 25.5 -0.2
75nm,0.2s
AAA S **Sn 18 43 41.1 -0.3**
250nm,0.4s
CHMS Chumysh 1.16 308 ⇑*i*P **Pb 18 43 25.1 -0.7**
baz=9.0
CHMS ⇑*i*S **Sb 18 43 40.7 0.0**
baz=9.0
CHMS Chumysh 1.16 308 P Pb 18 43 25.5 -0.3
103nm,0.2s,SNR=238
CHMS ⇓S **Sn 18 43 41.3 -0.1**
376nm,0.2s
CHMS Chumysh 1.16 308 ⇑P **Pb 18 43 25.4 -0.4**
23nm,0.2s
CHMS ⇑S **Sg 18 43 41.2 -0.2**
153nm,0.3s
AAK Ala-Archa 1.16 288 ⇓*i*P **Pb 18 43 25.2 -0.7**
baz=89
AAK ⇓*i*S **Sg 18 43 40.9 -0.5**
baz=89
AAK Ala-Archa 1.16 288 P Pb 18 43 25.5 -0.4
64nm,0.2s,SNR=185
AAK ⇓S **Sb 18 43 41.2 +0.4**
315nm,0.2s
AAK Ala-Archa 1.16 288 ⇑P **Pb 18 43 25.3 -0.6**
18nm,0.3s
AAK ⇑S **Sg 18 43 40.7 -0.8**
79nm,0.3s
MDOK Medeo 1.18 41 *e*P **Pb 18 43 25.9 -0.3**
baz=40
MDOK *e*S **Sb 18 43 41.7 +0.3**
baz=40
MDOK Medeo 1.18 41 *e*P **Pb 18 43 25.9 -0.3**
14nm,0.1s
MDOK *e*S **Sb 18 43 41.6 +0.3**
156nm,0.2s
MDOK Medeo 1.18 41 ⇑P **Pb 18 43 25.6 -0.6**
30nm,0.4s
MDOK ⇑S **Sg 18 43 41.1 -0.9**
122nm,0.5s
MDOK Medeo 1.18 41 Pg Pb 18 43 25.7 -0.6
30nm,0.5s
MDOK Lg Lg 18 43 41.4
163nm,0.4s
KNDC Almaty 1.18 38 ⇓P **Pn 18 43 26.5 +0.3**
KNDC ⇑S **Sn 18 43 42.5 +0.5**
KOTS Kotyrbulak 1.26 41 *e*P **Pb 18 43 27.5 -0.1**
baz=40
KOTS *e*S **Sn 18 43 44.2 0.0**
baz=40
KOTS Kotyrbulak 1.26 41 *e*P **Pb 18 43 27.5 -0.1**
139nm,0.2s
KOTS *e*S **Sn 18 43 44.2 0.0**
990nm,0.2s
KOTS Kotyrbulak 1.26 41 P Pg 18 43 27.9 -0.4
126nm,0.3s
KOTS S **Sn 18 43 44.9 +0.6**
561nm,0.4s
ARLS Aral 1.31 252 ⇑*i*P **Pn 18 43 27.6 -0.4**
baz=53
ARLS ⇑*i*S **Sb 18 43 44.9 -0.3**
baz=53
ANVS Anan'yevo 1.34 68 ⇑*i*P **Pb 18 43 28.2 -0.3**
baz=66
ANVS ⇑*i*S **Sg 18 43 46.5 -0.7**
baz=66
KRBS Karabastau 1.43 351 *e*P **Pg 18 43 30.8 -0.6**
138nm,0.2s
KRBS *e*S **Sg 18 43 49.8 -0.2**
145nm,0.1s
USP Ospenovka 1.47 312 ⇑*i*P **Pn 18 43 30.5 +0.4**
baz=13
USP ⇑*i*S **Sb 18 43 50.2 +0.5**
baz=13
USP Ospenovka 1.47 312 ⇑P **Pb 18 43 31.0 -0.1**
211nm,0.2s,SNR=572
USP ⇑S **Sg 18 43 51.0 -0.4**
208nm,0.2s
KTBS Karatobe 1.51 20 *e*P **Pg 18 43 32.4 -0.7**
103nm,0.1s
KTBS *e*S **Sg 18 43 52.5 -0.3**
839nm,0.2s
KTBS Karatobe 1.51 20 P Pg 18 43 32.3 -0.8
103nm,0.2s
KTBS S **Sg 18 43 52.4 -0.4**
629nm,0.4s
KUU Kurty 1.63 9 *e*P **Pb 18 43 34.0 +0.2**
baz=9.0
KUU *e*S **Sg 18 43 55.6 -0.8**
baz=9.0
KUU Kurty 1.63 9 *e*P **Pb 18 43 34.0 +0.2**
75nm,0.1s
KUU *e*S **Sg 18 43 55.6 -0.8**
335nm,0.2s
KUU Kurty 1.63 9 P Pb 18 43 34.1 +0.3
75nm,0.3s
KUU S **Sg 18 43 55.9 -0.5**
313nm,0.6s
EKS2 Erkin-Say 1.68 284 ⇓*e*P **Pb 18 43 34.3 -0.4**
baz=85
EKS2 ⇓*i*S **Sb 18 43 56.4 +0.7**
baz=85
EKS2 Erkin-Say 1.68 284 ⇑P **Pb 18 43 35.2 +0.4**
74nm,0.2s,SNR=91
EKS2 ⇓S **Sg 18 43 58.6 +0.7**
121nm,0.2s
AML Almayashu 1.71 266 ⇓*i*P **Pb 18 43 34.9 -0.5**
baz=67
AML ⇓*i*S **Sb 18 43 57.4 +0.5**
baz=67
AML Almayashu 1.71 266 ⇓P **Pb 18 43 35.6 +0.2**
46nm,0.2s,SNR=49
CHKK Chushkaly 1.73 25 *e*P **Pb 18 43 35.8 +0.2**
baz=24
CHKK *e*S **Sg 18 43 58.8 -0.9**
baz=24
CHKK Chushkaly 1.73 25 *e*P **Pb 18 43 35.8 +0.2**
42nm,0.2s
CHKK *e*S **Sg 18 43 58.9 -0.9**
492nm,0.2s
CHKK Chushkaly 1.73 25 P Pb 18 43 35.9 +0.2
45nm,0.5s
CHKK S **Sg 18 43 58.7 -0.9**
282nm,0.3s
PRZ Przheval'sk 1.80 83 ⇑*i*P **Pb 18 43 36.0 -0.9**
baz=82
PRZ ⇑*i*S **Sb 18 43 59.9 +0.5**
baz=82
KURS Kuram 2.00 52 *e*P **Pg 18 43 41.8 -0.6**
33nm,0.2s
KURS *e*S **Sg 18 44 08.8 +0.3**
204nm,0.3s
KURS Kuram 2.00 52 P Pb 18 43 40.1 -0.2
51nm,0.6s
KURS S **Sb 18 44 06.0 +0.8**
199nm,0.7s
ZHN Zhinishke 2.01 63 *e*P **Pb 18 43 40.5 +0.1**
29nm,0.1s
ZHN *e*S **Sb 18 44 06.5 +1.2**
139nm,0.2s
MRKS Merke 2.09 284 *e*P **Pg 18 43 42.9 -1.2**
132nm,0.1s
MRKS *e*S **Sg 18 44 10.9 -0.3**
246nm,0.2s
MRKS Merke 2.09 284 Pg Pb 18 43 42.5 +0.7
151nm,0.5s
MRKS Lg Lg 18 44 10.0
250nm,0.3s
KPKS Kokpek 2.31 58 *e*P **Pb 18 43 46.0 +0.6**
47nm,0.1s
KPKS *e*S **Sg 18 44 16.0 -2.2**
311nm,0.3s
ARXS Arharly 2.35 34 *e*P **Pb 18 43 46.9 +0.7**
18nm,0.1s
ARXS *e*S **Sg 18 44 17.5 -2.0**
313nm,0.3s
ARXS Arharly 2.35 34 Pg Pb 18 43 46.0 -0.2
23nm,0.4s
ARXS Lg Lg 18 44 15.9
243nm,0.6s
UZB Uzynbulak 2.40 68 *e*P **Pb 18 43 46.9 -0.1**
16nm,0.2s
UZB *e*S **Sb 18 44 17.4 +0.9**
98nm,0.2s
ARSB Arslanbob 2.44 248 ⇑*i*P **Pn 18 43 44.5 +0.9**
baz=49
ARSB ⇑*i*S **Sn 18 44 14.9 +1.6**
baz=49
SHLS Shalkode 2.71 70 *e*P Pg 18 44 00.3 +4.5
15nm,0.1s
SHLS *e*S Sg 18 44 40.4 +9.5
136nm,0.4s
PDGK Podgornoye 2.78 67 ⇑Pn **Pn 18 43 50.3 +2.0**
8.2nm,0.4s

PDGK ⇑Lg Lg 18 44 30.7
94nm,0.9s
BTLS Baital 3.09 334 *e*P **Pg 18 44 01.0 -2.3**
14nm,0.1s
BTLS *e*S **Sg 18 44 41.5 -1.8**
50nm,0.3s
TDK Taldyqorghan 3.23 32 *e*P **Pg 18 44 03.6 -2.3**
53nm,0.2s
TDK *e*S **Sg 18 44 46.2 -1.7**
100nm,0.2s
TDK Taldyqorghan 3.23 32 Pg **Pb 18 43 57.7 -3.5**
25nm,0.7s
TDK Lg Lg 18 44 36.1
112nm,0.7s
DJR Jarkent 3.45 52 *e*P **Pg 18 44 08.6 -1.5**
4.7nm,0.1s
DJR *e*S **Sg 18 44 54.7 0.0**
34nm,0.3s
DJR Jarkent 3.45 52 Pg **Pb 18 44 04.8 -0.1**
2.6nm,0.5s
DJR Lg Lg 18 44 48.3
32nm,0.6s
DZA Taraz 3.49 282 *e*P **Pg 18 44 08.6 -2.3**
25nm,0.1s
DZA *e*S **Sg 18 44 54.8 -1.3**
56nm,0.1s
DZA Taraz 3.49 282 Pg **Pb 18 44 08.0 +2.5**
50nm,0.2s
DZA Lg Lg 18 44 53.9
60nm,0.6s
KAPS Kapalarasan 3.87 38 *e*P **Pb 18 44 13.7 +1.7**
6.7nm,0.2s
KAPS *e*S **Sg 18 45 03.3 -4.8**
38nm,0.2s
KK31 Karatay Array 4.12 283 ⇑Pg **Pb 18 44 18.5 +2.2**
2.7nm,0.3s,baz=96,slow=14,SNR=152
KK31 Lg Lg 18 45 11.1
11nm,0.3s,baz=95,slow=26,SNR=25
IUG Iuzhnay 4.42 270 *e*P **Pg 18 44 25.3 -3.4**
0.7nm,0.2s
IUG *e*S **Sg 18 45 23.3 -2.7**
51nm,0.4s
IUG Iuzhnay 4.42 270 Pg **Pg 18 44 25.3 -3.4**
1.3nm,0.5s
IUG Lg Lg 18 45 23.3
52nm,0.8s
BRLS Borolday 4.59 281 *e*P **Pg 18 44 30.0 -2.0**
0.3nm,0.1s
BRLS *e*S **Sg 18 45 31.2 -0.3**
20nm,0.3s
MAKZ Makanchi 6.22 41 ⇑Pn **Pn 18 44 39.0 +3.6**
2.1nm,0.5s
MAKZ ⇑Lg Lg 18 46 17.7
3.1nm,0.5s
MK31 Makanchi Array 6.37 43 ⇑Pn **Pn 18 44 40.5 +3.0**
1.1nm,0.5s,baz=223,slow=15,SNR=64
MK31 ⇓Sn **Sn 18 45 53.4 +3.4**
3.4nm,0.7s,baz=222,slow=24,SNR=6.0
MK31 ⇓Lg Lg 18 46 22.2
8.7nm,0.6s
KURBB Kurchatov Arra 8.52 11 ⇓Lg Lg 18 47 31.9
12nm,0.7s
KURK Kurchatov 8.62 11 ⇑Lg Lg 18 47 33.4
14nm,0.9s

IDC 14 18:51:52.1±7.3, 19.24S×179.11W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/27, mbtmp3.7/3, Error ellipse: s-maj=319.2km s-min=41.2km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**43.75**	**261**	P	P	18 59 59.0	-0.7
	0.3nm,0.5s,baz=97,slow=6.8,SNR=8.8						
ASAR	**Alice Springs**	**43.80**	**256**	P	P	19 00 00.3	+0.3
	1.8nm,0.6s,baz=89,slow=9.1,SNR=48						
ILAR	**Eielson Array**	**87.33**	**13**	P	P	19 04 40.4	0.0
	0.5nm,1.0s,baz=208,slow=7.2,SNR=2.1						

NIED 14 18:54:00, 36.70N×141.40E, h8km, Mw3.7 Best double couple: M0 3.62000×10^14 NP1: φs221.00000°, δ51.00000°, λ-56.00000°. NP2: φs353.00000°, δ50.00000°, λ-125.00000°.
IDC 14 18:54:20.1±0.8, 36.66N×141.27E, h0km, mb3.7/9, mb1 3.8/11, mb1mx3.7/38, mbtmp3.7/11, ML3.2/2, Error ellipse: s-maj=21.8km s-min=19.0km az=85.0
JMA 14 18:54:22.4±0.1, 36.71N×141.32E, h40km±1km, M3.8 JMA Felt I J1.
NEIC 14 18:54:24.6±1.6, 36.73N±0.07×141.37E±0.09, h34km±5km, mb4.6/17, Error ellipse: s-maj=12.0km s-min=8.3km az=128.0
ISC 14 18:54:21.6±1.5, 36.74N±0.04×141.39E±0.06, h14km±8km, n59, σ1.31/66, mb4.2/16, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.60**	**307**	P	**Pg**	**18 54 33.9**	**+0.5**
ONAJ				S	**Sg**	**18 54 42.2**	**+0.8**
JHO	**Hitachi**	**0.68**	**259**	P	**Pg**	**18 54 34.5**	**-0.3**
JHO				S	**Sg**	**18 54 43.6**	**-0.2**
JFK	**Kawauchi**	**0.75**	**327**	P	**Pg**	**18 54 36.4**	**+0.1**
JFK				S	**Sg**	**18 54 46.5**	**+0.3**
JFFD	**Fukushimafurud**	**0.75**	**298**	P	**Pg**	**18 54 35.9**	**-0.4**
JFFD				*e*S	**Sg**	**18 54 45.8**	**-0.5**
JHYU	**Hitachinakayam**	**0.76**	**239**	P	**Pg**	**18 54 35.9**	**-0.5**
JHYU				S	**Sg**	**18 54 45.6**	**-0.9**
JFT	**Otama**	**1.15**	**313**	P	**Pb**	**18 54 43.0**	**-0.3**
JFT				*e*S	**Sb**	**18 54 57.7**	**-0.3**
JMM	**Marumori**	**1.22**	**337**	P	**Pn**	**18 54 43.7**	**-0.6**
JMM				S	**Sb**	**18 54 59.4**	**-0.8**
JFY	**Yanaizu**	**1.51**	**297**	P	**Pn**	**18 54 48.4**	**+0.2**
JFY				S	**Sn**	**18 55 07.5**	**-0.1**
JAG	**Ashikaga**	**1.59**	**259**	P	**Pn**	**18 54 48.3**	**-1.1**
JAG				S	**Sn**	**18 55 07.2**	**-2.5**
MJAR	**Matsushiro Arr**	**2.57**	**267**	Pn	**Pn**	**18 55 03.2**	**+0.4**
	2.0nm,0.3s,baz=91,slow=13,SNR=140						
MJAR				Sn	**Sn**	**18 55 32.8**	**-1.0**
	3.4nm,0.3s,baz=190,slow=26,SNR=12						
MAJO	**Matsushiro**	**2.57**	**267**		**Pn**	**18 55 03.6**	**+0.8**
MAT	**Matsushiro**	**2.57**	**267**	P	**Pn**	**18 55 03.6**	**+0.8**
MAT				S	**Sn**	**18 55 34.8**	**+0.9**
MJB9	**Matsu-Tunnel**	**2.57**	**267**	Pn	**Pn**	**18 55 03.6**	**+0.7**
INU	**Inuyama**	**3.81**	**250**		**Pn**	**18 55 21.1**	**+1.3**
JHJ2	**Mitsune**	**3.84**	**200**	Pn	**Pn**	**18 55 21.1**	**+0.8**
ERM	**Erimo**	**5.44**	**14**	Pn	**Pn**	**18 55 46.5**	**+4.2**
ASAJ	**Asahikawa**	**7.43**	**7**	Pn	**Pn**	**18 56 10.1**	**+0.5**
	0.6nm,0.3s,baz=216,slow=17,SNR=5.7						
ASAJ				Sn	**Sn**	**18 57 29.2**	**-4.3**
	0.1nm,0.3s,baz=347,slow=34,SNR=1.8						
JKA	**Kamikawa-asahi**	**7.43**	**7**		**Pn**	**18 56 10.1**	**+0.5**
JKA					**Sn**	**18 57 29.2**	**-4.2**
NACB	**Ninganchiao**	**21.12**	**239**	P	**P**	**18 59 04.2**	**-1.8**
NACB				IAmb	IAmb	18 59 36.5	
	comp=Z,61nm,1.3s						
ENH	**Enshi**	**27.29**	**266**	P	**P**	**19 00 05.1**	**-0.7**
ENH				IAmb	IAmb	19 00 35.7	
	comp=Z,17nm,1.7s						
SONM	**Songino Array**	**27.94**	**304**	P	**P**	**19 00 11.6**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=91,slow=8.7,SNR=6.0						
SONM	**Songino Array**	**27.94**	**304**	P	**P**	**19 00 11.1**	**-0.4**
H11N2	**WAKE ISLAND Hy**	**28.01**	**120**	T	T	19 29 32.6	
	baz=313,slow=76,SNR=142						
H11N1	**WAKE ISLAND Hy**	**28.02**	**120**	T	T	19 29 33.2	
	baz=313,slow=76,SNR=147						
H11N3	**WAKE ISLAND Hy**	**28.03**	**120**	T	T	19 29 34.8	
	baz=313,slow=76,SNR=154						
H11S1	**WAKE ISLAND Hy**	**28.71**	**122**	T	T	19 30 32.3	
	baz=314,slow=76,SNR=69						
H11S3	**WAKE ISLAND Hy**	**28.71**	**122**	T	T	19 30 26.6	
	baz=314,slow=76,SNR=16						
H11S2	**WAKE ISLAND Hy**	**28.73**	**122**	T	T	19 30 31.5	
	baz=314,slow=76,SNR=52						
ZALV	**Zalesovo Beam**	**42.10**	**313**	P	**P**	**19 02 12.7**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=91,slow=6.9,SNR=4.2						
ZALV	**Zalesovo Beam**	**42.10**	**313**	P	**P**	**19 02 12.3**	**-0.7**
SDPT	**Sand Point**	**43.02**	**45**	P	**P**	**19 02 21.9**	**+1.5**
MK31	**Makanchi Array**	**44.26**	**302**	P	**P**	**19 02 31.2**	**+0.6**
MKAR	**Makanchi Array**	**44.26**	**302**	P	**P**	**19 02 31.1**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=88,slow=10,SNR=12						
MKAR	**Makanchi Array**	**44.26**	**302**	P	**P**	**19 02 30.8**	**+0.2**
MAKZ	**Makanchi**	**44.47**	**302**	P	**P**	**19 02 32.2**	**0.0**
KSM	**Kuching**	**45.34**	**227**	P	**P**	**19 02 40.4**	**+1.0**
KURK	**Kurchatov**	**46.10**	**308**	P	**P**	**19 02 45.3**	**+0.2**
KURK				IAmb	IAmb	19 02 46.5	
	comp=Z,2.3nm,0.8s						
SII	**Sitkinak Islan**	**46.53**	**43**	P	**P**	**19 02 48.7**	**+0.3**
OHAK	**Old Harbor**	**46.98**	**43**	P	**P**	**19 02 50.9**	**-0.9**
RSO	**Redoubt South**	**47.14**	**38**	P	**P**	**19 02 50.4**	**-2.9**
KDAK	**Kodiak Island**	**47.33**	**42**	P	**P**	**19 02 54.3**	**-0.3**
BRLK	**Bradley Lake**	**48.10**	**39**	P	**P**	**19 03 01.9**	**+1.3**
ILAR	**Eielson Array**	**49.75**	**32**	P	**P**	**19 03 14.4**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=272,slow=6.6,SNR=2.3						
COEN	**Coen**	**50.45**	**178**	P	**P**	**19 03 19.4**	**+0.5**
COEN				IAmb	IAmb	19 03 42.7	
	comp=Z,5.3nm,1.1s						
KKAR	**Karatay Array**	**53.26**	**300**	P	**P**	**19 03 39.5**	**-0.2**
WB0	**Warramunga Arr**	**56.59**	**188**	P	**P**	**19 04 03.9**	**0.0**
WB0				IAmb	IAmb	19 04 16.6	
	comp=Z,16nm,1.7s						
WR0	**Warramunga Arr**	**56.76**	**188**	P	**P**	**19 04 05.1**	**-0.1**
WR0				IAmb	IAmb	19 04 11.9	
	comp=Z,14nm,1.7s						
WB2	**Warramunga Arr**	**56.77**	**188**	P	**P**	**19 04 05.2**	**+0.1**
WB2				IAmb	IAmb	19 04 30.7	
	comp=Z,5.9nm,1.2s						
WRA	**Warramunga Arr**	**56.77**	**188**	P	**P**	**19 04 05.0**	**-0.1**
	comp=Z,1.0nm,0.4s,baz=5.3,slow=7.4,SNR=26						
WRA	**Warramunga Arr**	**56.77**	**188**	P	**P**	**19 04 04.9**	**-0.3**
ABKAR	**Akbulak array**	**58.12**	**310**	P	**P**	**19 04 14.5**	**0.0**
ASAR	**Alice Springs**	**60.49**	**188**	P	**P**	**19 04 30.9**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=17,slow=11,SNR=9.1						
ASAR	**Alice Springs**	**60.49**	**188**	P	**P**	**19 04 31.1**	**0.0**
YKA	**Yellowknife Ar**	**64.07**	**30**	P	**P**	**19 04 57.9**	**+3.3**
	comp=Z,0.1nm,0.3s,baz=300,slow=6.4,SNR=1.6						
FINES	**FINESS Array B**	**69.07**	**332**	P	**P**	**19 05 27.2**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=46,slow=9.9,SNR=2.0						
FINES	**FINESS Array B**	**69.07**	**332**	P	**P**	**19 05 27.1**	**+0.5**
AKASG	**Malin Array Be**	**74.52**	**322**	P	**P**	**19 05 59.0**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=46,slow=6.2,SNR=3.0						
LPAZ	**La Paz**	**146.85**	**60**	PKPbc	**PKPab**	**19 14 05.5**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=282,slow=4.3,SNR=4.7						
LPAZ	**La Paz**	**146.85**	**60**		**PKPbc**	**19 14 05.2**	**+0.6**

IDC 14 19:06:55.2±2.3, 6.48S×128.64E, h0km, mb3.2/1, mb1 3.3/3, mb1mx3.1/29, mbtmp3.1/3, ML3.0/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/12, Error ellipse: s-maj=126.8km s-min=33.4km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.49**	**158**	Pn	Pn	19 10 22.9	+1.1
	0.1nm,0.3s,baz=337,slow=12,SNR=4.7						
WRA				Sn	Sn	19 12 47.3	-16
	0.1nm,0.3s,baz=346,slow=24,SNR=2.1						
ASAR	**Alice Springs**	**17.83**	**164**	P	Pn	19 11 04.0	-0.9
	0.0nm,0.3s,baz=348,slow=11,SNR=4.7						
HNR	**Honiara**	**31.14**	**97**	LR	LR	19 27 37.3	
	comp=Z,22nm,18.0s,baz=75,slow=40						
MKAR	**Makanchi Array**	**67.05**	**327**	P	P	19 17 50.4	+0.1
	0.1nm,0.4s,baz=129,slow=6.7,SNR=1.6						

IDC 14 19:11:26.5±3.4, 33.32S×177.60W, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.6/40, mbtmp3.5/3, ML2.9/1, Error ellipse: s-maj=81.5km s-min=37.9km az=124.0
NEIC 14 19:11:33.6±1.3, 33.6S±0.2×177.6W±0.2, h57km±8km, mb4.3/4, Error ellipse: s-maj=32.5km s-min=19.8km az=126.0
ISC 14 19:11:29.4±1.7, 33.4S±0.2×177.3W±0.2, h35km, n23, σ1.02/24, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.49**	**220**	Pn	**Pn**	**19 12 49.6**	**+0.9**
URZ	**Urewera**	**6.65**	**222**	Pn	**Pn**	**19 13 03.1**	**-1.5**
	0.3nm,0.3s,baz=7.7,slow=18,SNR=1.5						
URZ				Sn	**Sn**	**19 14 19.5**	**+0.4**
	5.1nm,0.3s,baz=172,slow=22,SNR=18						
URZ	**Urewera**	**6.65**	**222**		**Pn**	**19 13 03.7**	**-0.9**
BKZ	**Black Stump Fm**	**7.63**	**220**	Pn	**Pn**	**19 13 17.1**	**-1.0**
MSWZ	**Moikau Station**	**9.95**	**215**	Pn	**Pn**	**19 13 49.7**	**-0.2**
PLWZ	**Palliser**	**10.07**	**214**	Pn	**Pn**	**19 13 50.9**	**-0.6**
BHW	**Baring Head**	**10.13**	**216**	Pn	**Pn**	**19 13 50.9**	**-1.4**
SNZO	**South Karori**	**10.14**	**217**	Pn	**Pn**	**19 13 53.9**	**+1.5**
CMWZ	**Cape Campbell**	**10.71**	**217**	Pn	**Pn**	**19 14 00.5**	**+0.2**
THZ	**Tophouse**	**11.40**	**220**	Pn	**Pn**	**19 14 09.1**	**-0.7**
KHZ	**Kahutara**	**11.54**	**216**	Pn	**Pn**	**19 14 12.8**	**+1.2**
LTZ	**Lake Taylor**	**12.45**	**218**	Pn	**Pn**	**19 14 23.8**	**-0.4**
MQZ	**McQueen's Vall**	**12.94**	**215**	Pn	**Pn**	**19 14 28.9**	**-1.8**
RPZ	**Rata Peaks**	**13.74**	**218**	Pn	**Pn**	**19 14 40.7**	**-1.0**
ODZ	**Otahua Downs**	**14.89**	**215**	Pn	**Pn**	**19 14 59.1**	**+1.8**
ASAR	**Alice Springs**	**43.66**	**270**	P	**P**	**19 19 31.2**	**+0.3**
	0.9nm,1.0s,baz=112,slow=7.5,SNR=8.6						
ASAR	**Alice Springs**	**43.66**	**270**	P	**P**	**19 19 32.4**	**+1.5**
WR0	**Warramunga Arr**	**44.74**	**275**	P	**P**	**19 19 39.5**	**-0.1**
WR0				IAmb	IAmb	19 19 42.5	
	comp=Z,9.5nm,1.5s						
WB2	**Warramunga Arr**	**44.91**	**275**	P	**P**	**19 19 40.9**	**0.0**
WB2				IAmb	IAmb	19 19 57.2	
	comp=Z,6.7nm,1.2s						
WRA	**Warramunga Arr**	**44.91**	**275**	P	**P**	**19 19 40.6**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=114,slow=8.0,SNR=9.0						
WB0	**Warramunga Arr**	**44.95**	**275**	P	**P**	**19 19 41.2**	**-0.1**
VNDA	**Vanda**	**45.16**	**186**	P	**P**	**19 19 42.4**	**+0.2**
FINES	**FINESS Array B**	**148.19**	**339**	PKPbc	**PKiKP**	**19 31 12.3**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=52,slow=3.1,SNR=4.4						

MAN 14 19:11:52.0, 9.79N×123.90E, h13km, mb3.9, ML2.7, MS2.3, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.10**	**201**	⇑*e*P	Pb	19 11 56.5	+0.6
TBP				*e*S	Sb	19 11 58.6	+0.2
LLP	**Lapu-Lapu**	**0.53**	**7**	*e*P	Pg	19 12 02.3	-0.1
LLP				*i* S	Sg	19 12 09.7	+0.2
MSLP	**Maasin**	**1.01**	**70**	*e*P	Pb	19 12 10.8	-0.5
MSLP				*e*S	Sg	19 12 25.1	+0.4
OCLP	**Ormoc**	**1.44**	**29**	*e*P	Pn	19 12 17.0	-0.8
OCLP				*e*S	Sb	19 12 37.5	+0.6

SJA 14 19:17:44.9±1.0, 31.72S×69.69W, h121km±5km, ML3.7, MW3.7
GUC 14 19:17:45.4±0.7, 31.75S×70.21W, h158km±3km, ML3.7
IDC 14 19:17:47.7±2.8, 31.19S×69.52W, h114km±20km, mb3.2/2, mb1 3.4/4, mb1mx3.3/33, mbtmp3.6/4, Error ellipse: s-maj=56.2km s-min=39.6km az=36.0
ISC 14 19:17:45.5±0.8, 31.73S±0.03×69.71W±0.03, h121km±6km, n44, σ1.24/75, 5C-3D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.35**	**101**	*i* P	**Pn**	**19 18 03.1**	**-0.1**
RTLS				*i* S	**Sn**	**19 18 16.1**	**-0.5**
RTLS				IAML		19 18 18.0	
	comp=Z,3μm,0.2s						
SJA	**San Juan**	**1.00**	**79**	*e*P	**Pn**	**19 18 08.1**	**+0.5**
SJA				*i* S	**Sn**	**19 18 25.3**	**+0.8**
SJA				IAML		19 18 28.4	
	comp=Z,1μm,0.7s						
RTCV	**Cerro Valdivia**	**1.00**	**98**	*i* P	**Pn**	**19 18 08.0**	**+0.3**
RTCV				*i* S	**Sn**	**19 18 24.1**	**-0.4**
CO04	**Los Peladeros**	**1.12**	**254**	*e*P	**Pn**	**19 18 08.8**	**-0.4**
CO04				*e*S	**Sn**	**19 18 26.5**	**-0.6**
RTLL	**Cerro Villicun**	**1.12**	**69**	⇓*e*P	**Pn**	**19 18 09.1**	**+0.2**
RTLL				*e*S	**Sn**	**19 18 26.5**	**-0.2**
RTLL	**Cerro Villicun**	**1.12**	**69**	*i* P	**Pn**	**19 18 09.3**	**+0.3**
RTLL				*i* S	**Sn**	**19 18 26.6**	**-0.2**
RTLL				IAML		19 18 29.8	
	comp=Z,1μm,0.3s						
ASAL	**Salagasta**	**1.13**	**140**	*i* P	**Pn**	**19 18 09.6**	**+0.5**
ASAL				*i* S	**Sn**	**19 18 27.5**	**+0.5**
CO02	**Combarbal**	**1.23**	**295**	⇑*i*P	**Pn**	**19 18 10.2**	**+0.1**
CO02				*i* S	**Sn**	**19 18 28.9**	**+0.2**
CO03	**El Pedregal**	**1.23**	**316**	⇑*i*P	**Pn**	**19 18 10.6**	**+0.5**
CO03				*e*S	**Sn**	**19 18 29.2**	**+0.6**
CFA	**Coronel Fontan**	**1.26**	**85**	P	**Pn**	**19 18 10.5**	**+0.2**
	comp=Z,107nm,0.3s,baz=270,slow=9.4,SNR=908						
CFA				S	**Sn**	**19 18 28.7**	**-0.4**
	comp=Z,216nm,0.3s,baz=129,slow=18,SNR=75						
CFA	**Coronel Fontan**	**1.26**	**85**	*i* P	**Pn**	**19 18 10.6**	**+0.2**
CFA				*i* S	**Sn**	**19 18 28.8**	**-0.4**
ACCO	**Cerro Coronel**	**1.27**	**26**	*i* P	**Pn**	**19 18 11.5**	**+0.8**
ACCO				*i* S	**Sn**	**19 18 31.0**	**+1.1**
ARCO	**CERRO ARCO**	**1.29**	**150**	*i* P	**Pn**	**19 18 11.4**	**+0.6**
ARCO				*i* S	**Sn**	**19 18 31.7**	**+1.6**
ARCO				IAML		19 18 33.6	
	comp=Z,947nm,0.3s						
AMOG	**MOGNA**	**1.30**	**53**	*i* P	**Pn**	**19 18 11.5**	**+0.6**
AMOG				*i* S	**Sn**	**19 18 30.1**	**0.0**
AAGR	**Agrelo**	**1.54**	**151**	*i* P	**Pn**	**19 18 14.2**	**+0.6**
AAGR				*i* S	**Sn**	**19 18 37.3**	**+2.3**
AROD	**Rodeo**	**1.57**	**7**	*i* P	**Pn**	**19 18 15.8**	**+1.6**
AROD				*i* S	**Sn**	**19 18 37.3**	**+1.3**
PEL	**Peldehue**	**1.64**	**210**	⇓*i*P	**Pn**	**19 18 14.7**	**0.0**
PEL				*i* S	**Sn**	**19 18 37.0**	**+0.2**
PEL				IAML		19 18 38.5	
	comp=N,534nm,0.2s						
PEL	**Peldehue**	**1.64**	**210**	*i* P	**Pn**	**19 18 14.7**	**0.0**
PEL				*i* S	**Sn**	**19 18 36.3**	**-0.6**
FCH	**Farellones**	**1.67**	**197**	⇑*i*P	**Pn**	**19 18 16.2**	**+0.9**
FCH				*i* S	**Sn**	**19 18 39.6**	**+1.5**
FCH				IAML		19 18 44.8	
	comp=E,706nm,0.1s						
CLCH	**Cerro Calan**	**1.80**	**203**	⇓*e*P	**Pn**	**19 18 17.2**	**+0.5**
GO04	**Tololo Observa**	**1.81**	**329**	⇑*i*P	**Pn**	**19 18 17.2**	**+0.2**
GO04				*e*S	**Sn**	**19 18 40.9**	**-0.2**
GO04	**Tololo Observa**	**1.81**	**329**	*i* P	**Pn**	**19 18 17.3**	**+0.2**
GO04				*i* S	**Sn**	**19 18 41.2**	**+0.1**
STL	**Santa Lucia**	**1.88**	**205**	*e*P	**Pn**	**19 18 17.5**	**-0.1**
STL				IAML		19 18 48.0	
	comp=N,390nm,0.6s						
MT03	**Universidad Ad**	**1.89**	**201**	*e*P	**Pn**	**19 18 18.2**	**+0.5**
MT03				*e*S	**Sn**	**19 18 43.0**	**+0.7**
MT03				IAML		19 18 47.9	
	comp=N,1μm,0.3s						
MT02	**Curacav**	**1.95**	**218**	*e*P	**Pn**	**19 18 17.5**	**-0.8**
MT02				IAML		19 18 45.8	
	comp=E,332nm,0.3s						
RCDM	**Rinconada Maip**	**1.98**	**208**	*e*P	**Pn**	**19 18 19.7**	**+0.9**
RCDM				*e*S	**Sn**	**19 18 45.3**	**+0.9**
ANTU	**Antumapu**	**1.99**	**203**	*e*P	**Pn**	**19 18 19.2**	**+0.2**
ANTU				IAML		19 18 46.8	
	comp=N,687nm,0.4s						
LMEL	**Las Melosas**	**2.15**	**191**	*e*P	**Pn**	**19 18 22.0**	**+1.0**
LMEL				*i* S	**Sn**	**19 18 50.0**	**+1.7**
LMEL				IAML		19 18 55.7	
	comp=N,434nm,0.3s						
ACAN	**Cantantal**	**2.21**	**105**	*i* P	**Pn**	**19 18 22.2**	**+0.5**
ACAN				*i* S	**Sn**	**19 18 48.2**	**-1.2**
AGUA	**GUANDACOL**	**2.47**	**25**	*e*P	**Pn**	**19 18 26.8**	**+1.7**
AGUA				*i* S	**Sn**	**19 18 58.7**	**+3.3**
MT01	**Popeta**	**2.49**	**211**	*e*P	**Pn**	**19 18 24.1**	**-1.2**
MT01				IAML		19 18 59.7	
	comp=E,304nm,0.2s						
APLL	**PUNTA DE LOS L**	**3.03**	**65**	⇑*i*P	**Pn**	**19 18 32.6**	**+0.2**
APLL				*i* S	**Sn**	**19 19 08.1**	**-0.3**
APLL				IAML		19 19 10.6	
	comp=Z,102nm,0.4s						
BO02	**Sierra Bellavi**	**3.18**	**196**	⇑*i*P	**Pn**	**19 18 34.1**	**-0.2**
LAMA	**Las Malvinas**	**3.22**	**173**	*i* P	**Pn**	**19 18 35.1**	**+0.3**
LAMA				*i* S	**Sn**	**19 19 09.2**	**-3.7**
VCA	**Vinchina**	**3.25**	**24**	*i* P	**Pn**	**19 18 36.7**	**+1.3**
VCA				IAML		19 19 25.1	
	comp=Z,148nm,0.3s						
ACLC	**CERRO LA CRUZ**	**3.30**	**47**	*e*P	**Pn**	**19 18 36.8**	**+0.7**
GO03	**Copiap**	**4.15**	**353**	*i* P	**Pn**	**19 18 47.5**	**+0.3**
GO03				*i* S	**Sn**	**19 19 32.8**	**-2.1**
CYA	**Choya**	**4.71**	**47**	*i* P	**Pn**	**19 18 54.0**	**-0.7**
CYA				*i* S	**Sn**	**19 19 45.1**	**-3.2**
CYA				IAML		19 20 21.5	
	comp=Z,33nm,0.5s						
CPUP	**Villa Florida**	**12.09**	**67**	P	**Pn**	**19 20 31.1**	**-2.8**
	comp=Z,0.2nm,0.3s,baz=255,slow=13,SNR=2.8						
LPAZ	**La Paz**	**15.44**	**6**	P	**Pn**	**19 21 13.5**	**-3.9**
	comp=Z,0.1nm,0.3s,baz=162,slow=6.4,SNR=1.6						
TORD	**Torodi Ar. Bea**	**81.58**	**69**	P	**P**	**19 29 51.1**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=249,slow=4.0,SNR=4.3						
PDAR	**Pinedale Array**	**82.67**	**332**	P	**P**	**19 29 56.4**	**+0.9**
	comp=Z,0.1nm,0.6s,baz=176,slow=5.4,SNR=1.3						
ZALV	**Zalesovo Beam**	**151.26**	**32**	PKPbc	**PKiKP**	**19 37 26.0**	**+1.4**
	comp=Z,3.5nm,0.5s,baz=310,slow=3.3,SNR=16						
MKAR	**Makanchi Array**	**153.79**	**47**	PKPbc	**PKiKP**	**19 37 31.9**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=4.0,slow=3.6,SNR=4.4						
MKAR				PKPab	**PKPab**	**19 37 45.0**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=312,slow=3.9,SNR=3.1						

IDC 14 19:30:44.9±2.7, 6.37S×130.38E, h92km±33km, mb3.5/3, mb1 3.9/7, mb1mx3.5/36, mbtmp4.0/7, Error ellipse: s-maj=54.1km s-min=21.0km az=88.0
NEIC 14 19:30:46.1±1.2, 6.26S±0.06×130.4E±0.1, h101km±9km, mb4.3/10, Error ellipse: s-maj=18.2km s-min=8.3km az=91.0
ISC 14 19:30:44.7±0.6, 6.28S±0.05×130.33E±0.09, h90km, n29, σ2.09/34, mb4.0/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.95**	**151**	Pn	**Pn**	**19 31 17.9**	**+1.6**
SAUI					**Sn**	**19 31 41.0**	**+0.7**
FAKI	**Fak Fak**	**3.84**	**30**	Pn	**Pn**	**19 31 42.9**	**+1.2**
FAKI					**Sn**	**19 32 23.4**	**-2.4**
SIJI	**Sorong**	**5.45**	**10**	P	**Pn**	**19 32 05.0**	**+1.4**
	24nm,0.3s,baz=83,slow=7.5,SNR=138						
SIJI				S	**Sn**	**19 33 01.3**	**-3.7**
	13nm,0.3s,baz=81,slow=22,SNR=13						
KNRA	**Kununurra**	**9.47**	**189**		**Pn**	**19 32 59.7**	**+1.4**
KNRA					**Sn**	**19 34 40.0**	**-3.0**
FITZ	**Fitzroy Crossi**	**12.61**	**201**	P	**Pn**	**19 33 40.1**	**-0.7**
	2.1nm,0.3s,baz=18,slow=11,SNR=23						
FITZ				S	**Sn**	**19 35 52.6**	**-6.9**
	0.9nm,0.3s,baz=88,slow=19,SNR=4.8						
FITZ	**Fitzroy Crossi**	**12.61**	**201**		**Pn**	**19 33 39.5**	**-1.3**
FITZ					Sn	19 35 50.4	-9.2
WB0	**Warramunga Arr**	**13.98**	**164**	Pn	**Pn**	**19 33 55.8**	**-3.1**
WRA	**Warramunga Arr**	**14.13**	**164**	P	**Pn**	**19 33 57.8**	**-3.1**
	0.6nm,0.3s,baz=347,slow=13,SNR=32						
WRA				S	Sn	19 36 25.1	-11
	1.4nm,0.3s,baz=344,slow=21,SNR=10						
WRA	**Warramunga Arr**	**14.13**	**164**		**Pn**	**19 33 59.6**	**-1.3**
WRA					Sn	19 36 25.2	-11
WB2	**Warramunga Arr**	**14.20**	**164**	Pn	**Pn**	**19 33 57.4**	**-3.5**
WR0	**Warramunga Arr**	**14.20**	**164**	Pn	**Pn**	**19 34 00.1**	**-1.7**
COEN	**Coen**	**14.76**	**122**	Pn	**Pn**	**19 34 08.9**	**0.0**
JAGI	**Jajag, Banyuwa**	**16.20**	**261**	P	**Pn**	**19 34 28.6**	**0.0**
JAGI				IAmb	IAmb	19 34 30.8	
	comp=Z,44nm,1.5s						
AS31	**Alice Springs**	**17.63**	**169**	P	**P**	**19 34 45.6**	**+1.0**
ASAR	**Alice Springs**	**17.63**	**169**	P	**P**	**19 34 44.5**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=347,slow=10,SNR=40						
ASAR	**Alice Springs**	**17.63**	**169**	P	**P**	**19 34 45.6**	**+1.1**
PSA00	**Pilbara Seismi**	**18.28**	**213**	P	**P**	**19 34 54.5**	**+2.0**
PSA00				IAmb	IAmb	19 35 07.8	
	comp=Z,27nm,1.3s						
KKM	**Kota Kinabalu**	**18.66**	**311**	P	**Pn**	**19 34 59.0**	**+1.7**
UBPT	**Khong Chiam**	**32.65**	**311**	P	**P**	**19 37 09.5**	**+1.1**
CMAR	**Chiang Mai Arr**	**39.53**	**309**	P	**P**	**19 38 08.0**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=135,slow=7.5,SNR=10.0						
SONM	**Songino Array**	**57.87**	**341**	P	**P**	**19 40 27.6**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=158,slow=5.3,SNR=5.2						
SONM	**Songino Array**	**57.87**	**341**	P	**P**	**19 40 28.5**	**+1.2**
MK31	**Makanchi Array**	**67.81**	**327**	P	**P**	**19 41 33.8**	**+0.7**
MK31				IAmb	IAmb	19 41 34.0	
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**67.81**	**327**	P	**P**	**19 41 33.6**	**+0.5**
	comp=Z,1.6nm,0.5s,baz=114,slow=8.8,SNR=56						
MKAR	**Makanchi Array**	**67.81**	**327**	P	**P**	**19 41 33.5**	**+0.4**
MAKZ	**Makanchi**	**67.99**	**326**	P	**P**	**19 41 34.6**	**+0.3**
MAKZ				IAmb	IAmb	19 41 35.3	
	comp=Z,5.0nm,1.4s						
KURK	**Kurchatov**	**72.08**	**328**	P	**P**	**19 41 59.2**	**+0.1**
KK31	**Karatay Array**	**73.02**	**319**	P	**P**	**19 42 05.0**	**+0.1**
KKAR	**Karatay Array**	**73.02**	**319**	P	**P**	**19 42 05.0**	**+0.1**

KRSC 14 19:33:26.6±1.4, 52.27N×160.35E, h60km±17km, ML4.5
MOS 14 19:33:29.3±0.8, 52.34N×160.16E, h59km, mb4.6/10, Error ellipse: s-maj=8.0km s-min=4.1km az=98.3
NEIC 14 19:33:31.2±1.8, 52.38N±0.09×160.1E±0.1, h57km±7km, mb4.5/13, Error ellipse: s-maj=12.9km s-min=9.1km az=191.0
IDC 14 19:33:33.8±2.1, 52.37N×160.00E, h79km±15km, mb3.6/21,

mb1 3.8/23, mb1mx3.6/56, mbtmp3.9/23, MS3.8/4, Ms1 3.8/4, ms1mx3.1/41, Error ellipse: s-maj=18.3km s-min=13.6km az=144.0

ISC 14 19:33:30.5±0.8, **52°.32N**±0°.04×**160°.23E**±0°.04, **h50**km±6km, **n150**, σ1^{s}.**38**/189, **mb4.2**/32, **MS4.2**/4, **8C-3D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.79	351	iP	Pn	19 33 42.8	-2.6
SPN				eS	Sn	19 33 54.2	-2.0
SPN	Mys Shipunski	0.79	351	PN	Pn	19 33 42.8	-2.6
SPN				S	Sn	19 33 54.2	-2.0
NLC	Nalytchevo	1.01	328	eP	Pn	19 33 46.8	-1.5
NLC				eS	Sn	19 34 01.5	+0.1
NLC	Nalytchevo	1.01	328	PN	Pn	19 33 46.8	-1.5
NLC				S	Sn	19 34 01.5	+0.1
RUS	Russkaya	1.06	277	iP	Pn	19 33 47.6	-1.4
RUS				eS	Sn	19 34 02.4	-0.3
RUS	Russkaya	1.06	277	PN	Pn	19 33 47.6	-1.4
RUS				S	Sn	19 34 02.4	-0.3
DALK	Dalny	1.15	309	eP	Pn	19 33 48.8	-1.4
DALK				eS	Sn	19 34 04.4	-0.4
DALK	Dalny	1.15	309	PN	Pn	19 33 48.8	-1.4
DALK				S	Sn	19 34 04.4	-0.4
PET	Petropavlovsk	1.19	307		Pn	19 33 49.5	-1.2
PET				Sn	Sn	19 34 07.0	+1.1
PET	Petropavlovsk	1.19	307⇓	iPN	Pn	19 33 49.6	-1.2
PET				eS	Sn	19 34 05.7	-0.2
PET				pmax	pmax		
	comp=Z,489nm,0.2s						
PET				smax	smax		
	comp=N,2µm,0.5s						
PET				smax	smax		
	comp=E,2µm,0.4s						
UGLR	Uglovaya	1.23	317	eP	Pn	19 33 50.9	-0.6
UGLR				eS	Sn	19 34 08.2	+1.1
UGLR	Uglovaya	1.23	317	PN	Pn	19 33 50.9	-0.6
UGLR				S	Sn	19 34 08.2	+1.1
SDLR	Sedlovina	1.26	320	eP	Pn	19 33 50.7	-1.2
SDLR				eS	Sn	19 34 08.4	+0.7
SDLR	Sedlovina	1.26	320	PN	Pn	19 33 50.7	-1.2
SDLR				S	Sn	19 34 08.4	+0.7
MTVR	Mutnovka	1.27	278	eP	Pn	19 33 51.2	-0.8
MTVR	Mutnovka	1.27	278	PN	Pn	19 33 51.2	-0.8
AVH	Avacha	1.31	317	eP	Pn	19 33 51.9	-0.6
AVH				eS	Sn	19 34 10.1	+1.2
AVH	Avacha	1.31	317	PN	Pn	19 33 51.9	-0.6
AVH				S	Sn	19 34 10.1	+1.2
KRER	Koryakskii	1.33	318	eP	Pn	19 33 51.8	-1.1
KRER	Koryakskii	1.33	318	PN	Pn	19 33 51.8	-1.1
GRL	Gorelyy	1.34	281	eP	Pn	19 33 52.8	-0.2
GRL				eS	Sn	19 34 11.5	+1.7
GRL	Gorelyy	1.34	281	PN	Pn	19 33 52.8	-0.2
GRL				S	Sn	19 34 11.5	+1.7
KOK	Koryaka	1.37	316	eP	Pn	19 33 52.6	-0.8
KOK	Koryaka	1.37	316	PN	Pn	19 33 52.6	-0.8
KRMR	Karymshinskiy	1.38	292	eP	Pn	19 33 52.2	-1.2
KRMR				eS	Sn	19 34 10.8	+0.3
KRMR	Karymshinskiy	1.38	292	PN	Pn	19 33 52.2	-1.2
KRMR				S	Sn	19 34 10.8	+0.3
KDTR	Khodutka, Kamc	1.43	250	eP	Pn	19 33 52.5	-1.5
KDTR				eS	Sn	19 34 11.7	+0.1
KDTR	Khodutka, Kamc	1.43	250	PN	Pn	19 33 52.5	-1.5
KDTR				S	Sn	19 34 11.7	+0.1
ASAK	Asacha	1.43	273	eP	Pn	19 33 53.7	-0.5
ASAK				eS	Sn	19 34 13.6	+1.7
ASAK	Asacha	1.43	273	PN	Pn	19 33 53.7	-0.5
ASAK				S	Sn	19 34 13.6	+1.7
PEA0B	Petropavlovsk-	1.73	298		Pn	19 33 58.1	-0.1
PEA0B				Sn	Sn	19 34 20.5	+1.4
PEA0B	Petropavlovsk-	1.73	298	iPN	Pn	19 33 57.9	-0.3
PETK	Petropavlovsk-	1.73	298	P	Pn	19 33 58.0	-0.2
	comp=E,52nm,0.3s,baz=104,slow=20,SNR=515						
PETK				S	Sn	19 34 20.6	+1.5
	comp=E,53nm,0.3s,baz=103,slow=25,SNR=26						
PETK				LR	LR	19 34 40.2	
	comp=E,459nm,18.9s,baz=54,slow=42						
PETK	Petropavlovsk-	1.73	298		Pn	19 33 57.9	-0.2
PETK					Sn	19 34 21.3	+2.2
KII	Karymskiy	1.78	345	eP	Pn	19 33 58.4	-0.5
KII				eS	Sn	19 34 21.4	+1.0
KII	Karymskiy	1.78	345	PN	Pn	19 33 58.4	-0.5
KII				S	Sn	19 34 21.4	+1.0
APC	Apacha	1.97	289	eP	Pn	19 34 01.9	+0.5
APC				eS	Sn	19 34 27.7	+2.8
APC	Apacha	1.97	289	PN	Pn	19 34 01.9	+0.5
APC				S	Sn	19 34 27.7	+2.8
PAU	Pauzhetka	2.29	249	eP	Pn	19 34 06.4	+0.6
PAU	Pauzhetka	2.29	249	PN	Pn	19 34 06.4	+0.6
KZV	Kizimen	2.79	1	eP	Pn	19 34 12.7	-0.2
KZV				eS	Sn	19 34 46.3	+0.9
KZV	Kizimen	2.79	1	PN	Pn	19 34 12.7	-0.2
KZV				S	Sn	19 34 46.3	+0.9
TUMD	Tumrok D	2.89	2	eP	Pn	19 34 13.1	-0.9
TUMD				eS	Sn	19 34 47.3	-0.2
TUMR	Tumrok	2.96	359	eP	Pn	19 34 15.1	-0.1
TUMR				eS	Sn	19 34 49.6	+0.1
TUMR	Tumrok	2.96	359	PN	Pn	19 34 15.1	-0.1
TUMR				S	Sn	19 34 49.6	+0.1
SKR	Severo-Kuril's	3.05	239	eP	Pn	19 34 15.4	-0.8
SKR				eS	Sn	19 34 51.1	-0.4
SKR	Severo-Kuril's	3.05	239	PN	Pn	19 34 15.4	-0.8
SKR				S	Sn	19 34 51.1	-0.4
KMNR	Kamenistaya	3.44	0	eP	Pn	19 34 22.0	+0.4
KMNR				eS	Sn	19 35 02.2	+1.1
KMNR	Kamenistaya	3.44	0	PN	Pn	19 34 22.0	+0.4
KMNR				S	Sn	19 35 02.2	+1.1
KIRR	Kirishev	3.64	1	eP	Pn	19 34 24.9	+0.5
KIRR	Kirishev	3.64	1	PN	Pn	19 34 24.9	+0.5
ZLN	Zelenaya	3.71	5	eP	Pn	19 34 25.6	+0.2
ZLN	Zelenaya	3.71	5	PN	Pn	19 34 25.6	+0.2
ESO	Esso	3.72	347	eP	Pn	19 34 25.4	0.0
ESO	Esso	3.72	347	PN	Pn	19 34 25.4	0.0
KOZ	Kozyrevsk	3.75	357	eP	Pn	19 34 24.8	-1.0
KOZ	Kozyrevsk	3.75	357	PN	Pn	19 34 24.8	-1.0
CIRR	Tsirk	3.81	4	eP	Pn	19 34 28.0	+1.2
CIRR	Tsirk	3.81	4	PN	Pn	19 34 28.0	+1.2
KLY	Klyuchi	4.00	3	eP	Pn	19 34 29.7	+0.4
KLY	Klyuchi	4.00	3	PN	Pn	19 34 29.7	+0.4
SRDR	Sredinnyy	4.01	356	eP	Pn	19 34 30.0	+0.5
SRDR	Sredinnyy	4.01	356	PN	Pn	19 34 30.0	+0.5
KBTR	Krutoberegovo	4.18	20	eP	Pn	19 34 30.7	-0.9
KBTR				S	Sn	19 35 17.9	-1.2
KBTR	Krutoberegovo	4.18	20	PN	Pn	19 34 30.7	-0.9
KBTR				S	Sn	19 35 17.9	-1.2
BDR	Baidarnaya	4.29	7	eP	Pn	19 34 35.2	+1.9
BDR	Baidarnaya	4.29	7	PN	Pn	19 34 35.2	+1.9
SMKR	Semkarok	4.33	9	eP	Pn	19 34 34.1	+0.3
SMKR				eS	Sn	19 35 23.7	+0.8
SMKR	Semkarok	4.33	9	PN	Pn	19 34 34.1	+0.3
SMKR				S	Sn	19 35 23.7	+0.8
SRKR	Sorokina	4.37	7	eP	Pn	19 34 35.4	+1.0
SRKR	Sorokina	4.37	7	PN	Pn	19 34 35.4	+1.0
SMY	Shemya	8.47	82	Pn	Pn	19 35 31.2	+0.8
SMY	Shemya	8.47	82	PN	Pn	19 35 31.2	+0.8
MA2	Magadan	8.99	328	LR	LR	19 39 41.3	
	comp=E,207nm,18.6s,baz=106,slow=41						
YUK	Yuzh-Kuril'sk	12.66	235	iPN	Pn	19 36 31.0	+3.3
JKA	Kamikawa-asahi	14.31	242		Pn	19 36 49.0	-1.1
ASAJ	Asahikawa	14.31	242	P	Pn	19 36 49.0	-1.1
	comp=E,0.2nm,0.3s,baz=80,slow=29,SNR=2.7						
ERM	Erimo	15.49	235	Pn	Pn	19 37 04.4	-1.1
ERM	Erimo	15.49	235	P	Pn	19 37 04.4	-1.1
ERM				pmax	pmax		
	comp=Z,69nm,1.2s						
ATKA	Atka Island	15.63	80	P	P	19 37 11.8	+1.1
BILL	Bilibino	16.04	8	P	Pn	19 37 13.4	+1.1
BILL	Bilibino	16.04	8⇓	iP	P	19 37 16.4	+1.4
BILL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,89nm,18.0s						
KLR	Kul'dur	18.23	272	P	P	19 37 38.6	-0.7
	comp=Z,0.1nm,0.3s,baz=41,slow=9.9,SNR=7.6						
YAK	Yakutsk	19.02	313	eP	Pn	19 37 50.6	+1.6
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.3s						
MAJO	Matsushiro	22.14	233	P	P	19 38 23.8	+1.9
MAJO				IAmb	IAmb	19 38 34.2	
	comp=Z,26nm,1.4s						
MAJO	Matsushiro	22.14	233	P	P	19 38 23.8	+1.9
MAJO				pmax	pmax		
	comp=Z,26nm,1.5s						
MJAR	Matsushiro Arr	22.14	233	P	P	19 38 22.4	+0.6
	comp=Z,1.9nm,0.7s,baz=18,slow=12,SNR=10.0						
TIXI	Tiksi	23.82	336	P	P	19 38 36.3	-2.0
	comp=Z,5.2nm,0.8s,baz=124,slow=9.3,SNR=18						
TIXI	Tiksi	23.82	336	P	P	19 38 36.5	-1.8
TIXI	Tiksi	23.82	336	ceP	P	19 38 36.2	-2.1
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
H11N2	WAKE ISLAND Hy	32.94	168	T	T	20 15 52.8	
	baz=352,slow=76,SNR=54						
H11N3	WAKE ISLAND Hy	32.96	168	T	T	20 15 53.9	
	baz=352,slow=76,SNR=35						
H11N1	WAKE ISLAND Hy	32.96	168	T	T	20 15 56.9	
	baz=352,slow=76,SNR=40						
H11S1	WAKE ISLAND Hy	34.13	169	T	T	20 17 25.1	
	baz=91,slow=74,SNR=8.6						
H11S3	WAKE ISLAND Hy	34.14	169	T	T	20 17 13.0	
	baz=354,slow=74,SNR=8.3						
H11S2	WAKE ISLAND Hy	34.14	169	T	T	20 17 23.1	
SONM	Songino Array	34.17	284	P	P	19 40 09.5	-1.3
	comp=Z,0.2nm,0.3s,baz=65,slow=8.2,SNR=5.5						
SONM				LR	LR	19 55 43.4	
	comp=Z,112nm,18.0s,baz=52,slow=39						
SONM	Songino Array	34.17	284	P	P	19 40 09.2	-1.6
INK	Inuvik	34.43	37	P	P	19 40 14.8	+2.3
	comp=Z,1.2nm,0.8s,baz=133,slow=26,SNR=3.5						
ZALV	Zalesovo Beam	43.27	303	iP	P	19 41 24.3	-2.4
YKA	Yellowknife Ar	43.67	42	P	P	19 41 30.3	+0.5
	comp=Z,0.2nm,0.4s,baz=298,slow=8.1,SNR=3.4						
RES	Resolute Bay	44.01	22	P	P	19 41 32.5	+0.2
	comp=Z,0.2nm,0.4s,baz=290,slow=7.7,SNR=3.6						
SPITS	Spitsbergen Ar	47.91	351	P	P	19 42 03.0	0.0
	comp=Z,6.5nm,0.6s,baz=92,slow=9.2,SNR=14						
KURK	Kurchatov	48.22	302	P	P	19 42 03.8	-1.9
KURK				IAmb	IAmb	19 42 04.6	
	comp=Z,7.0nm,1.1s						
KURK	Kurchatov	48.22	302	ceP	P	19 42 03.9	-1.9
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MK31	Makanchi Array	48.57	296	iP	P	19 42 06.7	-1.9
MKAR	Makanchi Array	48.57	296	P	P	19 42 06.6	-2.0
	comp=Z,0.7nm,0.7s,baz=55,slow=7.0,SNR=7.5						
MKAR	Makanchi Array	48.57	296	P	P	19 42 06.5	-2.1
BRVK	Borovoye	50.97	309	ceP	P	19 42 25.5	-1.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARU	Arti	54.02	318	d iP	P	19 42 48.1	-1.1
ARU				*PP	sP	19 43 08.1	+0.7
ARU				S	S	19 50 14.1	-7.0
ARU				pmax	pmax		
	comp=Z,5.0nm,1.6s						
ARCES	ARCESS Array B	54.05	342	P	P	19 42 47.7	-1.5
	comp=Z,4.1nm,0.9s,baz=44,slow=8.1,SNR=8.5						
ARCES	ARCESS Array B	54.05	342	P	P	19 42 48.0	-1.2
ARCES	ARCESS Array B	54.05	342	P	P	19 42 48.0	-1.2
KSH	Kashi	56.78	293	P	P	19 43 09.8	+0.4
KSH				pP	sP	19 43 29.4	+1.7
KLMR	Klimovskoe	57.66	330	eP	P	19 43 13.3	-1.8
KLMR				pmax	pmax		
	comp=Z,13nm,1.5s						
KLMR	Klimovskoe	57.66	330	eP	P	19 43 13.3	-1.8
KLMR				AMP		19 43 24.6	
	comp=Z,13nm,1.5s						
PDAR	Pinedale Array	57.83	60	P	P	19 43 17.8	+0.9
	comp=Z,0.3nm,0.6s,baz=353,slow=6.6,SNR=2.9						
PDAR	Pinedale Array	57.83	60	P	P	19 43 17.9	+1.1
CHTO	Chiang Mai	57.84	259	P	P	19 43 17.3	+0.4
CHTO				IAmb	IAmb	19 43 18.6	
	comp=Z,2.4nm,0.8s						
CHTO	Chiang Mai	57.84	259	P	P	19 43 17.3	+0.4
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR	Chiang Mai Arr	58.11	259	P	P	19 43 17.8	-1.0
	comp=Z,1.4nm,0.7s,baz=26,slow=6.8,SNR=16						
CMAR	Chiang Mai Arr	58.11	259	ceP	P	19 43 20.2	+1.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	60.86	337	P	P	19 43 37.2	0.0
	comp=Z,6.8nm,0.6s,baz=39,slow=8.4,SNR=44						
FINES				LR	LR	20 16 33.1	
	comp=Z,127nm,18.2s,baz=246,slow=42						
FINES	FINESS Array B	60.86	337	P	P	19 43 37.0	-0.1
OBN	Obninsk	63.21	328⇑	eP	P	19 43 51.2	-1.8
OBN				e		19 46 07.9	
OBN				eS	S	19 52 42.8	+22
OBN				eSS	SS	19 56 34.2	+8.0
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,134nm,16.0s						
VSU	Vasula	63.28	335	ceP	P	19 43 53.4	0.0
VSU				pmax	pmax		
	comp=Z,27nm,0.7s						
NB2	NORSAR Subarra	64.31	344	P	P	19 44 00.4	+0.2
	comp=Z,0.4nm,0.5s,baz=21,slow=6.9						
NOA	NORSAR Array B	64.31	344	P	P	19 43 59.8	-0.4
	comp=Z,0.7nm,0.8s,baz=31,slow=6.5,SNR=4.2						
HFS	Hagfors	64.71	342	P	P	19 44 02.0	-0.8
	comp=Z,1.5nm,0.7s,baz=62,slow=10,SNR=7.1						
ANMO	Albuquerque	65.10	65	ceP	P	19 44 15.9	+10
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AKASG	Malin Array Be	69.32	329	P	P	19 44 31.4	-0.7
	comp=Z,4.2nm,0.7s,baz=29,slow=6.4,SNR=13						
AKASG	Malin Array Be	69.32	329	P	P	19 44 31.2	-1.0
AKBB	Malin Array Si	69.32	329	P	P	19 44 31.5	-0.7
AKBB				IAmb	IAmb	19 44 32.4	
	comp=Z,5.8nm,0.9s						
AKBB	Malin Array Si	69.32	329	P	P	19 44 31.5	-0.7
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBZ	Khabaz	70.15	317	P	P	19 44 37.0	-0.4
	comp=Z,1.6nm,0.8s,baz=75,slow=12,SNR=3.8						
TXAR	Lajitas Array	70.86	67	P	P	19 44 42.5	+0.4
	comp=Z,0.2nm,0.5s,baz=308,slow=3.3,SNR=2.9						
TXAR	Lajitas Array	70.86	67	P	P	19 44 42.7	+0.5
CLL	Collm	73.10	339	eP	P	19 44 55.0	-0.1
CLL	Collm	73.10	339	eP	P	19 44 55.0	-0.1
BUR08	Bucovina Ar. S	73.26	330	P	P	19 44 56.2	-0.1
BUR08				IAmb	IAmb	19 45 16.6	
	comp=Z,6.6nm,1.6s						
WB0	Warramunga Arr	75.24	205	P	P	19 45 08.8	+1.1
WB0				IAmb	IAmb	19 45 25.4	
	comp=Z,12nm,1.5s						
GERES	GERESS Array B	75.26	338	P	P	19 45 07.8	0.0
	comp=Z,0.3nm,0.4s,baz=29,slow=7.0,SNR=3.1						
GERES				LR	LR	20 24 46.5	
	comp=Z,151nm,20.3s,baz=276,slow=41						
BRTR	Keskin Array B	77.27	321	P	P	19 45 19.1	-0.3
	comp=Z,0.5nm,0.7s,baz=0.0,slow=5.6,SNR=3.9						
BRTR	Keskin Array B	77.27	321	P	P	19 45 18.4	-1.0
BRTR	Keskin Array B	77.27	321	ceP	P	19 45 19.6	+0.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	Alice Springs	79.09	204	P	P	19 45 30.1	+0.7
	comp=Z,0.7nm,0.8s,baz=14,slow=5.8,SNR=6.3						
ASAR	Alice Springs	79.09	204	P	P	19 45 29.2	-0.1
ASAR	Alice Springs	79.09	204	P	P	19 45 29.3	-0.1
ESDC	Sonseca Array	87.35	348	P	P	19 46 12.4	+0.5
	comp=Z,0.7nm,0.6s,baz=7.9,slow=3.7,SNR=3.6						
ESDC	Sonseca Array	87.35	348	P	P	19 46 11.2	-0.7

TAP 14 19:41:04.3, 24°.39N×121°.96E, h18km, ML2.5, 3C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.20	280	P	Pg	19 41 09.2	0.0
	baz=286						
ENA				S	Sg	19 41 12.7	+0.1
	baz=286						
EOS1	EOS1	0.22	45⇑	eP	Pb	19 41 10.0	+0.3
	baz=39						
EOS1				eS	Sb	19 41 14.6	+1.2
	baz=39						
TWC	Suao	0.24	335	⇑P	Pg	19 41 09.8	+0.1
	baz=342						
TWC				S	Sg	19 41 13.4	-0.1
	baz=342						
NACB	Ninganchiao	0.40	237	eP	Pg	19 41 12.1	-0.5
	baz=238						
NACB				eS	Sb	19 41 18.7	+0.1
	baz=238						
ILA	Ilan	0.42	333	P	Pb	19 41 13.4	+0.2
	baz=326						
ILA				S	Sb	19 41 19.7	+0.5
	baz=326						
TWE	Neicheng	0.42	321	⇑P	Pg	19 41 13.1	+0.1
	baz=322						
TWE				S	Sg	19 41 18.9	+0.1
	baz=322						
ENTT	Nioudou	0.43	305	P	Pb	19 41 13.4	-0.1
	baz=305						
ENTT				S	Sg	19 41 19.1	-0.1
	baz=305						
TWD	Chiawan	0.46	227	eP	Pb	19 41 14.2	+0.4
	baz=230						
TWD				eS	Sn	19 41 22.1	-1.6
	baz=230						
NDT	Datong Townshi	0.46	297	P	Pb	19 41 13.9	0.0
	baz=298						
NDT				S	Sb	19 41 20.2	-0.1
	baz=298						
SLBB	Yuanshan	0.46	321	P	Pb	19 41 14.2	+0.1
	baz=320						
SLBB				S	Sb	19 41 20.8	+0.2
	baz=320						
ETLH	Xiulin Townshi	0.47	247	eP	Pb	19 41 14.3	+0.1
	baz=254						
ETLH				eS	Sn	19 41 23.2	-1.1
	baz=254						
NNSB	Datong	0.53	274	eP	Pg	19 41 15.0	+0.1
	baz=281						
NNSB				eS	Sb	19 41 22.8	+0.4
	baz=281						
NNS	Nan Shan	0.54	275	eP	Pb	19 41 15.2	-0.1
	baz=282						
NNS				eS	Sb	19 41 22.2	-0.1
	baz=282						
TIPB	Shuangxi	0.59	348	eP	Pb	19 41 16.2	+0.1
	baz=348						
TIPB				eS	Sg	19 41 24.0	0.0
	baz=348						
YHNB	Yeheng	0.60	298	eP	Pb	19 41 16.3	0.0
	baz=303						
YHNB				eS	Sb	19 41 24.4	-0.1
	baz=303						
YHNB	Yeheng	0.60	298		Pb	19 41 16.5	+0.1
NSK	Sanguang	0.62	297	eP	Pb	19 41 17.2	+0.6
	baz=298						
NSK				eS	Sg	19 41 24.8	0.0
	baz=298						
TWA	Mucha	0.68	330	eS	Sb	19 41 27.1	+0.4
	baz=319						
WHF	Hehuan Shan	0.68	249	eP	Pb	19 41 17.9	0.0
	baz=256						
WHF				eS	Sn	19 41 28.9	-0.9
	baz=256						
NWF	Wu-fen Shan	0.69	347	eP	Pn	19 41 19.5	+0.1
	baz=338						
NWF				eS	Sb	19 41 27.8	+0.6
	baz=338						
WFSB	Wu-fen Shan	0.69	347	eP	Pn	19 41 19.0	-0.3
	baz=338						
WFSB				eS	Sg	19 41 27.8	+0.5
	baz=338						
TATO	Taipei	0.72	324	eP	Pb	19 41 18.4	0.0
	baz=315						
TATO				eS	Sg	19 41 28.5	+0.4
	baz=315						
TDCB	Techi	0.74	259	eP	Pn	19 41 19.7	-0.4
	baz=260						
TDCB				eS	Sn	19 41 30.3	-0.8
	baz=260						
ESL	Shilin	0.75	220	eP	Pb	19 41 18.7	-0.1
	baz=224						
ESL				eS	Sn	19 41 30.8	-0.2
	baz=224						
WLTB	Daxi	0.79	306	eS	Sn	19 41 32.4	+0.4
	baz=300						
CHGB	Renai	0.79	245	eP	Pg	19 41 20.1	+0.3
	baz=254						
CHGB				eS	Sn	19 41 32.2	-0.1
	baz=254						
YM01	YM01	0.83	335	eP	Pn	19 41 21.3	+0.1
	baz=340						
YM01				eS	Sn	19 41 32.6	-0.4
	baz=340						
YM10	YM10	0.84	335	eP	Pn	19 41 21.3	-0.1
	baz=340						
YM10				eS	Sn	19 41 33.2	-0.1
	baz=340						
YM11	YM11	0.84	336	eP	Pn	19 41 21.7	+0.2
	baz=341						
YM11				eS	Sn	19 41 33.1	-0.4
	baz=341						
YM08	YM08	0.86	337	eP	Pn	19 41 21.6	0.0
	baz=327						
YM08				eS	Sg	19 41 33.0	+0.5
	baz=327						
EGFH	Guangfu	0.87	214	eP	Pn	19 41 22.9	+1.2
	baz=232						
ANP	Anpu	0.89	333	eP	Pb	19 41 21.3	+0.1
	baz=324						
LIOB	Emei	0.90	287	eP	Pn	19 41 22.7	+0.6
	baz=291						
LIOB				eS	Sn	19 41 36.0	+1.4
	baz=291						
NSTT	Nanjuang	0.90	285	P	Pn	19 41 22.8	+0.6
	baz=286						
NSTT				eS	Sn	19 41 35.2	+0.4
	baz=286						
WHP	Taichung City	0.93	263	eP	Pn	19 41 23.4	+0.8
	baz=271						
WHP				eS	Sn	19 41 36.6	+1.0
	baz=271						
VWDT	VWDT	0.98	230	eP	Pg	19 41 23.9	+0.5
	baz=230						
VWDT				eS	Sn	19 41 37.1	+0.4
	baz=230						
DPDB	Guoxing	1.01	249	eP	Pg	19 41 24.1	+0.2
	baz=255						
DPDB				eS	Sn	19 41 38.7	+1.2
	baz=255						
HGSD	Ruisui	1.02	209	eP	Pg	19 41 25.5	+1.4
	baz=208						
HGSD				eS	Sn	19 41 41.2	+3.5
	baz=208						
EHY	Hungye	1.06	214	eP	Pg	19 41 25.1	+0.3
	baz=211						
EHY				eS	Sg	19 41 41.0	+2.2
	baz=211						
TWQ1	Liyutan	1.08	268	eP	Pg	19 41 26.3	+1.0
	baz=276						
TWQ1				eS	Sg	19 41 42.9	+3.4
	baz=276						
NSY	Sanyi	1.09	271	eP	Pn	19 41 24.8	0.0
	baz=286						
SSLB	Suanglung	1.10	237	eP	Pn	19 41 24.7	-0.1
	baz=238						
SSLB				eS	Sg	19 41 40.3	+0.3
	baz=238						
TYC	Yuchr	1.12	244	eP	Pg	19 41 26.3	+0.3
	baz=251						
TYC				eS	Sg	19 41 41.8	+1.2
	baz=251						
YULB	Yu-li	1.17	211	eP	Pn	19 41 25.2	-0.6
	baz=209						
YULB				eS	Sb	19 41 40.3	-0.4
	baz=209						
TWF1	Yuli	1.20	210	eP	Pb	19 41 26.6	0.0
	baz=227						
TWF1				eS	Sg	19 41 43.5	+0.3
	baz=227						
WNT	Mingjian	1.27	247	eP	Pg	19 41 29.1	+0.3
	baz=249						
WNT				eS	Sg	19 41 48.2	+2.7
	baz=249						
ALS	Alishan	1.37	230	eP	Pb	19 41 30.2	+0.5
	baz=231						
CHN5	Tsauling	1.41	236	eP	Pg	19 41 31.0	-0.6
	baz=237						
CHN5				eS	Sg	19 41 53.8	+3.7
	baz=237						
WGK	Gukeng	1.46	241	eP	Pg	19 41 33.3	+0.8
	baz=244						

WGK eS Sg 19 41 53.1 +1.7
baz=244
ELDTW Lidau 1.48 216 eP Pn 19 41 30.6 +0.5
baz=214
ELDTW eS Sb 19 41 50.4 +0.5
baz=214
CHN4 Tsaushan 1.62 231 eP Pb 19 41 34.3 +0.5
baz=232
CHN4 eS Sg 19 41 58.0 +1.2
baz=232
TPUB Ta-pu 1.63 228 eP Pb 19 41 33.9 -0.1
baz=228
TPUB eS Sb 19 41 55.5 +1.3
baz=228
WTP Ta-pu 1.68 227 eP Pb 19 41 35.0 +0.2
baz=228
WTP eS Sg 19 41 58.0 -0.5
baz=228
TWK Hsinying 1.75 231 eP Pb 19 41 35.8 -0.2
baz=232
TWK eS Sg 19 42 00.0 -0.8
baz=232
CHN1 Nanshi 1.78 228 eP Pb 19 41 36.7 +0.3
baz=228
CHN1 eS Sb 19 41 59.5 +1.1
baz=228
MASBT Mashibuluo 2.15 215 eS Sb 19 42 10.2 +1.0
baz=211

IDC 14 19:41:11.7±2.1, 1.82N×128.11E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/33, mbtmp3.4/4, Error ellipse: s-maj=161.5km s-min=25.8km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.47**	**164**	P	P	19 46 11.8	-0.9
	0.5nm,0.5s,baz=344,slow=11,SNR=10						
ASAR	**Alice Springs**	**25.95**	**168**	P	P	19 46 46.2	+0.2
	0.5nm,0.6s,baz=348,slow=12,SNR=6.6						
STKA	**Stephens Creek**	**35.87**	**160**	P	P	19 48 14.1	+0.6
	1.3nm,0.8s,baz=297,slow=6.8,SNR=3.1						
MKAR	**Makanchi Array**	**59.90**	**325**	P	P	19 51 19.5	0.0
	0.2nm,0.8s,baz=122,slow=6.9,SNR=4.2						

NEIC 14 20:26:37.9±1.8, 34.°6S±0.°1×178.°8W±0.°3, h8km±8km, mb4.3/7, Error ellipse: s-maj=38.4km s-min=7.9km az=115.0
IDC 14 20:26:39.3±1.0, 34.°20S×179.°20W, h0km, mb4.1/3, mb1 4.3/4, mb1mx4.0/23, mbtmp4.1/4, ML4.3/1, MS3.4/2, Ms1 3.4/2, ms1mx2.8/41, Error ellipse: s-maj=34.3km s-min=29.1km az=109.0
WEL 14 20:26:40.6±0.5, 34.°S±4.°×17.°9W±.°, h33km, M4.3/18, mB5.0/6, ML4.6/18, MLv4.4/18, Mw(mB)4.3/6
ISC 14 20:26:38.1±0.9, 34.°57S±0.°07×178.°8W±0.°1, h10km, n63, σ2°06/73, mb4.2/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.82**	**218**	Pn	**Pn**	**20 27 38.6**	**+1.6**
MXZ	**Matakaoa Point**	**3.82**	**218**	P	**Pn**	**20 27 39.2**	**+2.2**
MXZ				S	**Sn**	**20 28 23.1**	**+1.1**
WMGZ	**Waiomatatini S**	**3.97**	**214**	P	**Pn**	**20 27 42.2**	**+3.1**
WMGZ				S	**Sn**	**20 28 28.9**	**+3.2**
PKGZ	**Pakihiroa**	**4.19**	**217**	P	**Pn**	**20 27 44.8**	**+2.7**
HAZ	**Te Kaha**	**4.24**	**220**	P	**Pn**	**20 27 45.3**	**+2.6**
HAZ				S	**Sb**	**20 28 36.8**	**-7.1**
PUZ	**Puketiti**	**4.25**	**214**	P	**Pn**	**20 27 44.8**	**+1.9**
PUZ				S	**Sn**	**20 28 33.1**	**+0.6**
RUGZ	**Raukumara Rang**	**4.45**	**219**	P	**Pn**	**20 27 47.9**	**+2.2**
WHRZ	**Whale Island**	**4.77**	**225**	P	Pn	20 27 54.2	+4.2
MWZ	**Matawai**	**4.81**	**218**	P	**Pn**	**20 27 52.9**	**+2.3**
URZ	**Urewera**	**4.97**	**221**	Pn	**Pn**	**20 27 54.2**	**+1.4**
	12nm,0.3s,baz=273,slow=3.8,SNR=74						
URZ				Sn	**Sn**	**20 28 50.3**	**0.0**
	8.5nm,0.3s,baz=134,slow=23,SNR=11						
URZ	**Urewera**	**4.97**	**221**		**Pn**	**20 27 54.7**	**+2.0**
URZ					**Sn**	**20 28 50.6**	**+0.4**
URZ	**Urewera**	**4.97**	**221**	P	**Pn**	**20 27 54.7**	**+2.0**
RAGZ	**Rawiri**	**4.99**	**217**	P	**Pn**	**20 27 55.0**	**+1.9**
RAGZ				S	**Sn**	**20 28 50.5**	**-0.4**
RIGZ	**Rimuhau**	**4.99**	**213**	P	**Pn**	**20 27 55.1**	**+2.0**
KUZ	**Kuaotunu**	**5.00**	**243**	P	**Pn**	**20 27 56.7**	**+3.5**
OPRZ	**Ohinepanea**	**5.01**	**228**	P	**Pn**	**20 27 56.5**	**+3.2**
MARZ	**Manawahe**	**5.03**	**226**	P	**Pn**	**20 27 56.8**	**+3.2**
PRGZ	**Paritu Road**	**5.12**	**211**	P	**Pn**	**20 27 57.0**	**+2.2**
SNGZ	**Shannon Statio**	**5.25**	**216**	P	**Pn**	**20 27 59.7**	**+3.1**
MHGZ	**Mahia Peninsul**	**5.30**	**209**	P	**Pn**	**20 27 59.4**	**+2.1**
MUGZ	**Murupara**	**5.31**	**222**	P	**Pn**	**20 27 59.5**	**+2.1**
GLKZ	**Green Lake**	**5.34**	**8**	P	**Pn**	**20 27 55.7**	**-2.2**
GLKZ				S	**Sn**	**20 28 54.8**	**-4.6**
RAO	**Raoul Island**	**5.35**	**8**	Pn	**Pn**	**20 27 58.8**	**+0.8**
RAHZ	**Arahi**	**5.48**	**216**	P	**Pn**	**20 28 02.6**	**+2.8**
MTHZ	**Maungataniwha**	**5.55**	**218**	P	**Pn**	**20 28 02.7**	**+1.9**
BKZ	**Black Stump Fm**	**5.96**	**218**		**Pn**	**20 28 08.0**	**+1.5**
BKZ				Sn	**Sn**	**20 29 13.9**	**-1.0**
OUZ	**Omahuta**	**6.33**	**262**	P	**Pn**	**20 28 14.2**	**+2.8**
HIZ	**Hauiti**	**6.48**	**231**	Pn	**Pn**	**20 28 15.6**	**+2.1**
MSWZ	**Moikau Station**	**8.31**	**213**	Pn	**Pn**	**20 28 36.8**	**-1.9**
PLWZ	**Palliser**	**8.44**	**212**	Pn	**Pn**	**20 28 39.4**	**-0.9**
BHW	**Baring Head**	**8.48**	**215**	Pn	**Pn**	**20 28 39.1**	**-1.9**
SNZO	**South Karori**	**8.48**	**216**	Pn	**Pn**	**20 28 40.4**	**-0.6**
TUWZ	**Tuamarina**	**8.95**	**218**	Pn	**Pn**	**20 28 46.6**	**-0.7**
CMWZ	**Cape Campbell**	**9.06**	**216**	Pn	**Pn**	**20 28 49.2**	**+0.3**
BSWZ	**Blackbirch Sta**	**9.20**	**217**	Pn	**Pn**	**20 28 50.6**	**+0.2**
QRZ	**Quartz Range**	**9.31**	**225**	Pn	**Pn**	**20 28 51.4**	**-1.0**
THZ	**Tophouse**	**9.73**	**220**	Pn	**Pn**	**20 28 55.0**	**-3.1**
KHZ	**Kahutara**	**9.89**	**215**	Pn	**Pn**	**20 29 00.2**	**0.0**
LTZ	**Lake Taylor**	**10.79**	**218**	Pn	**Pn**	**20 29 11.1**	**-1.5**
MQZ	**McQueen's Vall**	**11.30**	**214**	Pn	**Pn**	**20 29 16.8**	**-2.7**
RPZ	**Rata Peaks**	**12.08**	**218**	Pn	**Pn**	**20 29 30.8**	**+0.6**
	0.6nm,0.3s,baz=166,slow=19,SNR=1.7						
RPZ	**Rata Peaks**	**12.08**	**218**		**Pn**	**20 29 28.9**	**-1.2**
ODZ	**Otahua Downs**	**13.25**	**215**	Pn	**Pn**	**20 29 45.0**	**-1.2**
DZM	**Mont Dzumac**	**18.00**	**310**	LR	LR	20 36 03.2	
	comp=Z,132nm,19.1s,baz=209,slow=32						
STKA	**Stephens Creek**	**33.14**	**263**	LR	LR	20 45 02.5	
	comp=Z,70nm,20.9s,baz=26,slow=34						
COEN	**Coen**	**40.00**	**291**	P	**P**	**20 34 14.0**	**+0.7**
COEN				IAmb	IAmb	20 34 16.0	
	comp=Z,3.6nm,0.9s						
AS31	**Alice Springs**	**42.43**	**272**	P	**P**	**20 34 32.4**	**-0.8**
ASAR	**Alice Springs**	**42.43**	**272**	P	**P**	**20 34 33.5**	**+0.3**
	comp=Z,2.5nm,0.5s,baz=115,slow=7.8,SNR=71						
ASAR				PcP	**PcP**	**20 36 26.4**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=115,slow=3.8,SNR=5.1						
ASAR	**Alice Springs**	**42.43**	**272**	P	**P**	**20 34 33.0**	**-0.3**
ASAR					**PcP**	**20 36 26.5**	**+0.2**
WR0	**Warramunga Arr**	**43.62**	**277**	P	**P**	**20 34 42.9**	**0.0**
WR0				IAmb	IAmb	20 35 01.0	
	comp=Z,8.8nm,1.6s						
WB2	**Warramunga Arr**	**43.79**	**277**	P	**P**	**20 34 44.0**	**-0.2**
WB2				IAmb	IAmb	20 34 46.1	
	comp=Z,6.4nm,1.2s						
WRA	**Warramunga Arr**	**43.80**	**277**	P	**P**	**20 34 44.2**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=118,slow=7.6,SNR=36						
WRA				PcP	**PcP**	**20 36 30.2**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=123,slow=2.9,SNR=2.2						
WRA	**Warramunga Arr**	**43.80**	**277**	P	**P**	**20 34 43.8**	**-0.5**
WB0	**Warramunga Arr**	**43.84**	**277**	P	**P**	**20 34 44.4**	**-0.2**
WB0				IAmb	IAmb	20 35 05.0	
	comp=Z,11nm,1.6s						
FORT	**Forrest**	**44.51**	**259**	P	**P**	**20 34 50.0**	**+0.1**
FITZ	**Fitzroy Crossi**	**51.85**	**274**	P	**P**	**20 35 46.6**	**-0.2**
FITZ				IAmb	IAmb	20 36 13.2	
	comp=Z,11nm,1.5s						
QSPA	**South Pole Qui**	**55.55**	**180**	P	P	20 36 20.3	+7.0
	comp=Z,0.9nm,0.9s,baz=355,slow=11,SNR=1.9						
FINES	**FINESS Array B**	**148.79**	**337**	PKPbc	**PKiKP**	**20 46 26.3**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=49,slow=4.5,SNR=11						
FINES	**FINESS Array B**	**148.79**	**337**		**PKiKP**	**20 46 25.9**	**-0.4**
MMAI	**Mount Meron Ar**	**151.65**	**277**	PKPbc	**PKiKP**	**20 46 34.0**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=83,slow=6.5,SNR=6.5						
NOA	**NORSAR Array B**	**152.75**	**349**	PKPbc	**PKiKP**	**20 46 36.5**	**+1.9**
	comp=Z,0.6nm,0.8s,baz=9.6,slow=3.2,SNR=2.2						
NOA				PKPab	**PKPab**	**20 46 46.3**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=22,slow=2.5,SNR=3.2						
HFS	**Hagfors**	**153.17**	**346**	PKPbc	**PKiKP**	**20 46 37.0**	**+1.6**
	comp=Z,2.6nm,1.0s,baz=108,slow=3.2,SNR=1.5						
HFS				PKPab	**PKPab**	**20 46 47.7**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=93,slow=3.0,SNR=6.1						
TORD	**Torodi Ar. Bea**	**158.67**	**181**	PKPab	**PKPab**	**20 47 15.9**	**+4.2**
	comp=Z,0.3nm,0.7s,baz=161,slow=4.2,SNR=1.8						

IDC 14 20:43:47.1±1.6, 5.°79S×121.°98E, h0km, mb3.3/2, mb1 3.7/5, mb1mx3.3/44, mbtmp3.5/5, ML3.2/3, Error ellipse: s-maj=49.6km s-min=20.2km az=44.0, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.35**	**289**	Pn	Pn	20 44 26.7	-0.2
	3.9nm,0.3s,baz=140,slow=5.2,SNR=12						
KAPI				Sn	Sn	20 44 56.1	-0.3
	7.4nm,0.3s,baz=177,slow=22,SNR=7.1						
FITZ	**Fitzroy Crossi**	**12.75**	**164**	Pn	Pn	20 46 51.0	+1.3
	0.1nm,0.3s,baz=357,slow=8.2,SNR=1.3						
WRA	**Warramunga Arr**	**18.50**	**141**	P	P	20 48 03.0	-2.1
	0.1nm,0.3s,baz=316,slow=12,SNR=7.1						
ASAR	**Alice Springs**	**21.16**	**148**	P	P	20 48 34.6	+0.6
	1.3nm,0.7s,baz=328,slow=12,SNR=15						
SONM	**Songino Array**	**55.13**	**347**	P	P	20 53 21.7	+0.3
	0.4nm,0.8s,baz=153,slow=4.2,SNR=2.2						

ISK 14 20:45:44.5, 35.°27N×23.°23E, h81km, ML3.6/15
ATH 14 20:45:45.3, 35.°19N×23.°15E, h32km±1km, ML3.6/8, Error ellipse: s-maj=3.4km s-min=1.2km az=47.0
NEIC 14 20:45:46.4±1.7, 35.°35N±0.°09×23.°12E±0.°07, h59km±8km, mb4.2/16, ML3.5(THE), Error ellipse: s-maj=13.6km s-min=7.8km az=201.0
THE 14 20:45:46.0, 35.°16N×23.°09E, h18km±2km, ML3.5/7, Error ellipse: s-maj=2.4km s-min=0.7km az=207.0
HLW 14 20:46:46.1, 35.°19N×23.°89E, h10km±21km, Md4.0, Ml4.2
DDA 14 20:45:47.0, 35.°24N×23.°22E, h35km±347km, MW3.8
IDC 14 20:45:48.5±1.6, 35.°41N×23.°23E, h69km±13km, mb3.6/12, mb1 3.7/16, mb1mx3.5/55, mbtmp3.8/16, MS3.4/2, Ms1 3.4/2, ms1mx2.7/51, Error ellipse: s-maj=21.9km s-min=13.4km az=19.0
GII 14 20:45:55.6±0.0, 34.°79N×24.°21E, h30km, MD3.3/2
ISC 14 20:45:44.3±0.9, 35.°13N±0.°04×23.°15E±0.°05, h46km±8km, n155, σ1°85/180, mb4.0/19, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.45**	**76**	P	**Pn**	**20 45 55.8**	**+1.1**
KNDR				S	**Sn**	**20 46 02.1**	**0.0**
	8μm,0.6s						
KNDR	**Palaiochora Ch**	**0.45**	**76**	PG	**Pn**	**20 45 55.9**	**+1.2**
RODP	**Rodopos**	**0.66**	**49**	P	**Pn**	**20 45 58.3**	**+0.9**
RODP				S	**Sn**	**20 46 09.1**	**+2.3**
	2μm,0.5s						
RODP	**Rodopos**	**0.66**	**49**	PG	**Pn**	**20 45 58.9**	**+1.5**
RODP				SG	**Sn**	**20 46 09.6**	**+2.8**
ANKY	**Antikythira Is**	**0.75**	**9**	P	**Pn**	**20 45 59.4**	**+0.8**
ANKY				S	**Sn**	**20 46 10.0**	**+1.1**
	5μm,0.6s						
ANKY	**Antikythira Is**	**0.75**	**9**	P	**Pn**	**20 45 59.4**	**+0.8**
ANKY				S	**Sn**	**20 46 09.2**	**+0.4**
ANKY				AML	AML	20 46 11.3	
	comp=N,9986μm,0.7s						
ANKY				AML	AML	20 46 11.6	
	comp=E,9263μm,0.6s						
IMMV	**Iera Moni Meta**	**0.76**	**64**	P	**Pn**	**20 46 00.3**	**+1.6**
IMMV				S	**Sn**	**20 46 11.6**	**+2.5**
	comp=E,7μm,0.6s						
IMMV	**Iera Moni Meta**	**0.76**	**64**	P	**Pn**	**20 46 00.1**	**+1.4**
IMMV				S	**Sn**	**20 46 10.2**	**+1.1**
IMMV				AML	AML	20 46 13.3	
	comp=N,14041μm,0.4s						
IMMV				AML	AML	20 46 14.2	
	comp=E,15776μm,0.4s						
IMMV	**Iera Moni Meta**	**0.76**	**64**	PG	**Pn**	**20 46 00.2**	**+1.6**
IMMV				SG	**Sn**	**20 46 11.6**	**+2.5**
GVD	**Gavdhos**	**0.82**	**110**	P	**Pn**	**20 46 02.3**	**+2.8**
GVD	**Gavdhos**	**0.82**	**110**	P	**Pn**	**20 46 02.2**	**+2.6**
GVD				S	**Sn**	**20 46 14.3**	**+3.7**
GVD				AML	AML	20 46 18.8	
	comp=E,9127μm,0.5s						
GVD				AML	AML	20 46 19.0	
	comp=N,7170μm,0.4s						
GVD	**Gavdhos**	**0.82**	**110**	PG	**Pn**	**20 46 02.1**	**+2.6**
GVDS	**Gavdos**	**0.82**	**110**	P	**Pn**	**20 46 01.7**	**+2.2**
GVDS	**Gavdos**	**0.82**	**110**	PG	**Pn**	**20 46 01.8**	**+2.2**
CHAN	**Chania**	**0.83**	**61**	P	**Pn**	**20 46 01.5**	**+1.9**
CHAN				S	**Sn**	**20 46 14.1**	**+3.3**
	comp=N,2μm,0.7s						
VAM	**Vamos**	**0.90**	**72**	P	**Pn**	**20 46 02.6**	**+2.0**
VAM				S	**Sn**	**20 46 16.4**	**+3.8**
	comp=N,13μm,0.5s						
VAM	**Vamos**	**0.90**	**72**	P	**Pn**	**20 46 02.6**	**+2.0**
VAM				S	**Sn**	**20 46 15.4**	**+2.8**
VAM				AML	AML	20 46 16.9	
	comp=E,10160μm,0.5s						
VAM				AML	AML	20 46 19.3	
	comp=N,16215μm,0.5s						
KTHA	**Kythira Island**	**1.13**	**356**	P	**Pn**	**20 46 05.5**	**+1.8**
KTHA				S	**Sn**	**20 46 20.6**	**+2.5**
	comp=N,2μm,0.5s						
KTHA	**Kythira Island**	**1.13**	**356**	P	**Pn**	**20 46 05.3**	**+1.6**
KTHA				S	**Sn**	**20 46 20.5**	**+2.3**
KTHA				AML	AML	20 46 23.9	
	comp=N,1929μm,0.6s						
KTHA				AML	AML	20 46 24.2	
	comp=E,5288μm,0.5s						
KTHA	**Kythira Island**	**1.13**	**356**	PG	**Pn**	**20 46 04.6**	**+0.9**
PRNS	**Prines Rethymn**	**1.13**	**77**	P	**Pn**	**20 46 05.7**	**+2.0**
PRNS				S	**Sn**	**20 46 20.8**	**+2.7**
KTHR	**Kythira**	**1.14**	**354**	P	**Pn**	**20 46 05.4**	**+1.6**
SIVA	**Sivas**	**1.37**	**94**	P	**Pn**	**20 46 09.7**	**+2.8**
SIVA	**Sivas**	**1.37**	**94**	P	**Pn**	**20 46 09.7**	**+2.8**
SIVA				AML	AML	20 46 38.4	
	comp=N,3470μm,0.6s						
SIVA				AML	AML	20 46 42.1	
	comp=E,4308μm,0.8s						
IDI	**Anoyia**	**1.44**	**83**	P	**Pn**	**20 46 10.5**	**+2.6**
	comp=E,13nm,0.3s,baz=299,slow=18,SNR=61						
IDI				S	**Sn**	**20 46 29.3**	**+3.6**
	comp=E,31nm,0.3s,baz=332,slow=20,SNR=8.1						
IDI				LR	LR	20 46 51.1	
	comp=E,117nm,19.0s,baz=270,slow=46						
IDI	**Anoyia**	**1.44**	**83**	P	**Pn**	**20 46 10.3**	**+2.4**
IDI	**Anoyia**	**1.44**	**83**	PN	**Pn**	**20 46 09.6**	**+1.7**
VLI	**Veliai**	**1.60**	**354**	P	**Pn**	**20 46 11.8**	**+1.7**
VLI	**Veliai**	**1.60**	**354**	P	**Pn**	**20 46 12.0**	**+1.9**
VLI				AML	AML	20 46 42.5	
	comp=N,1808μm,0.7s						
VLI				AML	AML	20 46 43.4	
	comp=E,2064μm,1.1s						
HRKL	**Herakleio**	**1.61**	**83**	PN	**Pn**	**20 46 11.2**	**+1.0**
MHLO	**Agia Marina, M**	**1.86**	**33**	P	**Pn**	**20 46 16.0**	**+2.2**
MHLO				AML	AML	20 46 49.7	
	comp=N,4479μm,0.6s						
MHLO				AML	AML	20 46 49.8	
	comp=E,5588μm,0.6s						
LAST	**Lasithi**	**1.91**	**88**	P	**Pn**	**20 46 17.3**	**+2.9**
LAST	**Lasithi**	**1.91**	**88**	P	**Pn**	**20 46 17.5**	**+3.1**
NPS	**Neapolis**	**2.02**	**85**	P	**Pn**	**20 46 19.0**	**+3.1**
NPS	**Neapolis**	**2.02**	**85**	P	**Pn**	**20 46 19.1**	**+3.1**
KRND	**KRANIDI**	**2.25**	**0**	P	**Pn**	**20 46 21.6**	**+2.5**
SANT	**Santorini**	**2.25**	**56**	PN	**Pn**	**20 46 19.9**	**+0.8**
SANT	**Santorini**	**2.25**	**56**		**Pn**	**20 46 20.2**	**+1.1**
THT2	**Imerovigli**	**2.26**	**54**	PN	**Pn**	**20 46 19.8**	**+0.6**
ITM	**Ithomi**	**2.28**	**335**	PN	**Pn**	**20 46 19.8**	**+0.4**
ITM	**Ithomi**	**2.28**	**335**	Pn	**Pn**	**20 46 18.6**	**-0.8**
ZKR	**Zakros**	**2.52**	**89**	PN	**Pn**	**20 46 24.3**	**+1.6**
APE	**Apeiranthos**	**2.73**	**44**	PN	**Pn**	**20 46 26.0**	**+0.3**
DRO	**Drossia**	**3.05**	**338**	P	**Pn**	**20 46 32.0**	**+2.0**
KARP	**Karpathos**	**3.31**	**82**	PN	**Pn**	**20 46 34.9**	**+1.3**
KARP	**Karpathos**	**3.31**	**82**		**Pn**	**20 46 35.2**	**+1.6**
ANX	**Ano Chora**	**3.60**	**344**	P	**Pn**	**20 46 39.7**	**+2.1**
BODT	**Bodrum**	**3.88**	**59**	PN	**Pn**	**20 46 41.4**	**-0.1**
DAT	**Datca**	**3.93**	**65**	PN	**Pn**	**20 46 42.7**	**+0.5**
DAT	**Datca**	**3.93**	**65**	*i* P	**Pn**	**20 46 43.3**	**+1.1**
DAT				*i* S	**Sn**	**20 47 28.5**	**+1.3**
AGG	**Agios Georgios**	**3.94**	**351**	PN	**Pn**	**20 46 43.0**	**+0.7**
AGG	**Agios Georgios**	**3.94**	**351**		**Pn**	**20 46 44.0**	**+1.7**
MAKR	**Makrakomi, Fth**	**3.96**	**348**	P	**Pn**	**20 46 44.6**	**+2.0**
CHOS	**Chios island**	**4.00**	**35**	PN	**Pn**	**20 46 42.7**	**-0.5**
SLUM	**Salum**	**4.01**	**154**	P	**Pn**	**20 46 45.6**	**+2.4**
	baz=162						
SLUM				S	**Sn**	**20 47 27.8**	**-1.2**
	baz=162						
AOS	**Alonnisos**	**4.08**	**8**	PN	**Pn**	**20 46 44.1**	**0.0**
ZEY	**zmir**	**4.11**	**40**	*i* P	**Pn**	**20 46 44.6**	**0.0**
ZEY				IAML		20 48 02.0	
	comp=N,39nm,0.6s						
ZEY				IAML		20 48 05.0	
	comp=E,58nm,0.4s						
GCAM	**G?zelcaml?**	**4.18**	**51**	PN	**Pn**	**20 46 45.7**	**+0.2**
GCAM	**G?zelcaml?**	**4.18**	**51**	*i* P	**Pn**	**20 46 47.1**	**+1.6**
GCAM				IAML		20 48 13.0	
	comp=N,22nm,1.0s						
GCAM				IAML		20 48 21.0	
	comp=E,17nm,1.0s						
ARG	**Arkhangelos**	**4.20**	**74**	PN	**Pn**	**20 46 46.6**	**+0.9**
URLA	**Izmir**	**4.25**	**40**	PN	**Pn**	**20 46 46.8**	**+0.3**
URLA	**Izmir**	**4.25**	**40**	*i* P	**Pn**	**20 46 47.4**	**+0.9**
URLA				IAML		20 47 50.0	
	comp=N,19nm,0.9s						
URLA				IAML		20 48 31.0	
	comp=E,12nm,0.9s						
AYDN	**Tasoluk**	**4.58**	**55**	*i* P	**Pn**	**20 46 53.0**	**+1.9**
AYDN				IAML		20 48 29.0	
	comp=E,12nm,1.4s						
YER	**Yerkesik**	**4.61**	**63**	PN	**Pn**	**20 46 51.1**	**-0.4**
SIGR	**SIGRI**	**4.62**	**27**	PN	**Pn**	**20 46 51.4**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**4.74**	**52**	PN	**Pn**	**20 46 53.2**	**-0.2**
TURN	**Turunc**	**4.75**	**67**	PN	**Pn**	**20 46 49.5**	**-3.9**
TURN	**Turunc**	**4.75**	**67**	*i* P	**Pn**	**20 46 51.0**	**-2.3**
TURN				IAML		20 47 40.0	
	comp=E,17nm,0.6s						
TURN				*i* S	**Sn**	**20 47 40.7**	**-6.4**
TURN				IAML		20 48 02.0	
	comp=N,18nm,0.7s						
DALY	**Dalyan (Mula)**	**4.77**	**68**	PN	**Pn**	**20 46 54.1**	**+0.5**
DALY	**Dalyan (Mula)**	**4.77**	**68**	*i* P	**Pn**	**20 46 56.1**	**+2.5**
DALY				*i* S	**Sn**	**20 47 47.9**	**+0.2**
DALY				IAML		20 48 01.0	
	comp=N,19nm,0.6s						
DALY				IAML		20 49 21.0	
	comp=E,60nm,0.2s						
LIT	**Litokhoron**	**4.99**	**354**		**Pn**	**20 46 57.0**	**+0.3**
FETY	**Fethiye**	**5.05**	**71**	PN	**Pn**	**20 46 57.7**	**+0.2**
FETY	**Fethiye**	**5.05**	**71**	*i* P	**Pn**	**20 46 58.4**	**+0.9**
FETY				*i* S	**Sn**	**20 47 53.8**	**-0.7**
FETY				IAML		20 47 58.0	
	comp=E,11nm,1.1s						
TAVA	**DENIZLI_Tavas**	**5.21**	**62**	*i* P	**Pn**	**20 47 02.1**	**+2.4**
TAVA				IAML		20 49 49.0	
	comp=E,11nm,3.4s						
OUR	**Ouranopolis**	**5.24**	**7**	PN	**Pn**	**20 46 59.9**	**-0.2**
AKAS	**Kas**	**5.37**	**76**	PN	**Pn**	**20 47 02.5**	**+0.5**
AKAS	**Kas**	**5.37**	**76**	*i* P	**Pn**	**20 47 03.9**	**+1.9**
AKAS				IAML		20 48 27.0	
	comp=E,25nm,1.3s						
AKAS				IAML		20 48 43.0	
	comp=N,37nm,1.7s						
MANT	**Manisa**	**5.49**	**51**	*i* P	**Pn**	**20 47 05.7**	**+2.0**
MANT				IAML		20 48 05.0	
	comp=E,5.2nm,1.7s						
GOLH	**Golhisar**	**5.60**	**66**	*i* P	**Pn**	**20 47 07.1**	**+2.0**
GOLH				IAML		20 48 05.0	
	comp=E,10nm,1.4s						
GOLH				IAML		20 48 42.0	
	comp=N,19nm,1.2s						
ELL	**Elmali**	**5.72**	**72**	PN	**Pn**	**20 47 06.6**	**-0.1**
ELL	**Elmali**	**5.72**	**72**		**Pn**	**20 47 08.4**	**+1.7**
KHAL	**Karahalli**	**6.03**	**56**	*i* P	**Pn**	**20 47 13.8**	**+2.7**
KHAL				IAML		20 48 25.0	
	comp=N,6.2nm,2.1s						
KHAL				IAML		20 48 28.0	
	comp=E,4.7nm,1.4s						
KORT	**Korkueli**	**6.13**	**70**	PN	**Pn**	**20 47 11.9**	**-0.4**
KORT	**Korkueli**	**6.13**	**70**	*i* P	**Pn**	**20 47 14.0**	**+1.7**
KORT				*i* S	**Sn**	**20 48 21.0**	**-0.2**
KORT				IAML		20 48 34.0	
	comp=N,10nm,1.3s						
KORT				IAML		20 49 49.0	
	comp=E,32nm,2.0s						
SCTE	**Santa Cesarea**	**6.18**	**324**	Pn	**Pn**	**20 47 11.9**	**-1.1**
SWA2		**6.18**	**161**	P	**Pn**	**20 47 15.2**	**+2.1**
	baz=166						
SWA2				AMP		20 48 00.0	
	baz=166						
SWA2				S	**Sn**	**20 48 21.4**	**-1.0**
	baz=166						
ALN	**Alexandroupoli**	**6.20**	**21**	Pn	**Pn**	**20 47 13.3**	**+0.2**
TIP	**Timpagrande**	**6.51**	**310**	Pn	**Pn**	**20 47 17.2**	**-0.4**
ISP	**Isparta**	**6.52**	**63**	Pn	**Pn**	**20 47 16.7**	**-1.0**
TIR	**Tirane**	**6.73**	**338**	Pn	**Pn**	**20 47 17.1**	**-3.3**
VAE	**Valguarnera**	**7.43**	**291**	P	Pn	20 47 35.4	+5.1
	comp=E,0.1nm,0.3s,baz=243,slow=18,SNR=1.6						
VTS	**Vitosha**	**7.48**	**0**	Pn	**Pn**	**20 47 32.3**	**+1.3**
PDG	**Podgorica**	**7.90**	**339**	Pn	**Pn**	**20 47 35.7**	**-0.8**
ACER	**Acerenza**	**8.02**	**317**	Pn	**Pn**	**20 47 38.1**	**-0.1**
CSS	**Mathiatis**	**8.35**	**88**	Pn	**Pn**	**20 47 40.8**	**-2.0**
HNAT	**Natroun**	**8.36**	**129**	P	**Pn**	**20 47 41.9**	**-0.9**
	baz=132						
HNAT				S	Sn	20 49 06.7	-9.2
	baz=132						
SGRT	**San Giovanni R**	**8.80**	**321**	Pn	**Pn**	**20 47 47.4**	**-1.6**
HFRF	**Wahat Farafira**	**9.10**	**150**	P	**Pn**	**20 47 54.1**	**+1.2**
	baz=153						
HFRF				S	**Sn**	**20 49 28.8**	**-5.3**
	baz=153						
BR131	**Keskin Array S**	**9.52**	**58**		**Pn**	**20 47 59.5**	**+0.6**
BRTR	**Keskin Array B**	**9.52**	**58**	P	**Pn**	**20 47 59.8**	**+0.9**
	comp=E,0.2nm,0.3s,baz=231,slow=15,SNR=13						
HNTI	**Hanita**	**10.18**	**98**	Pn	**Pn**	**20 48 08.2**	**+0.4**
SLTI	**Sal'it**	**10.32**	**103**	Pn	**Pn**	**20 48 09.0**	**-0.7**
SLTI				Sn	Sn	20 49 53.1	-11
KZIT	**Kziot**	**10.34**	**111**	Pn	**Pn**	**20 48 09.3**	**-0.6**
KZIT				Sn	Sn	20 49 54.3	-10
MMAI	**Mount Meron Ar**	**10.38**	**98**	P	**Pn**	**20 48 09.1**	**-1.5**
	comp=E,1.4nm,0.3s,baz=278,slow=12,SNR=15						
MMAI				S	**Sn**	**20 49 58.3**	**-7.3**
	comp=E,1.6nm,0.3s,baz=269,slow=20,SNR=2.5						
AMAZ	**Amatzia**	**10.47**	**107**	Pn	**Pn**	**20 48 10.9**	**-0.9**
AMAZ				Sn	Sn	20 49 58.2	-10
KSDI	**Kefar Szold**	**10.54**	**97**	Pn	**Pn**	**20 48 12.5**	**-0.3**
MMLI	**Mount Malkishu**	**10.56**	**101**	Pn	**Pn**	**20 48 12.3**	**-0.7**
MMLI				Sn	Sn	20 49 58.6	-11
MLR	**Muntele Rosu**	**10.57**	**11**	P	**Pn**	**20 48 13.5**	**+0.3**
	comp=E,0.2nm,0.3s,baz=148,slow=5.5,SNR=4.1						
MLR	**Muntele Rosu**	**10.57**	**11**		**Pn**	**20 48 12.5**	**-0.7**
HMDT	**Nahal Hemdat**	**10.70**	**102**	Pn	**Pn**	**20 48 14.6**	**-0.3**
HMDT				Sn	Sn	20 50 04.2	-9.1
QRNJ	**Al-Qirnju**	**10.71**	**102**	Pn	**Pn**	**20 48 14.7**	**-0.4**
DSI	**Dead Sea**	**10.82**	**106**	Pn	**Pn**	**20 48 15.9**	**-0.7**
DSI				Sn	Sn	20 50 06.7	-10
PRNI	**Paran**	**11.06**	**112**	Pn	**Pn**	**20 48 19.5**	**-0.3**
PRNI				Sn	Sn	20 50 11.2	-11
GHAJ	**Ghor Haditha**	**11.08**	**107**	Pn	**Pn**	**20 48 19.2**	**-0.8**
HRFI	**Mount Harif**	**11.23**	**114**	Pn	**Pn**	**20 48 21.5**	**-0.8**
HRFI				Sn	Sn	20 50 17.7	-8.8
MBRI	**Mt Berech**	**11.27**	**115**	Pn	**Pn**	**20 48 21.9**	**-0.8**
EIL	**Elat**	**11.36**	**115**	P	**Pn**	**20 48 22.8**	**-1.2**
	comp=E,0.3nm,0.3s,baz=281,slow=3.6,SNR=13						
EIL				S	Sn	20 50 17.6	-12
	comp=E,0.9nm,0.3s,baz=122,slow=2.2,SNR=8.3						
EIL	**Elat**	**11.36**	**115**	Pn	**Pn**	**20 48 23.1**	**-0.8**
EIL				Sn	Sn	20 50 18.4	-11
VRAC	**Vranov**	**14.97**	**343**	P	**Pn**	**20 49 11.5**	**-1.3**
	comp=E,0.1nm,0.3s,baz=264,slow=22,SNR=1.4						
GERES	**GERESS Array B**	**15.38**	**336**	P	**Pn**	**20 49 16.1**	**-2.2**
	comp=E,0.2nm,0.3s,baz=262,slow=40,SNR=2.0						
KRLC	**Kraliky**	**15.65**	**345**	eP	**P**	**20 49 26.0**	**+1.0**
KHC	**Kasperske Hory**	**15.67**	**336**	eP	**P**	**20 49 26.5**	**+1.2**
DPC	**Dobruska-Polom**	**16.01**	**344**	eP	**P**	**20 49 29.6**	**+0.6**
AKASG	**Malin Array Be**	**16.18**	**14**	P	**Pn**	**20 49 24.0**	**-4.3**
	comp=E,0.4nm,0.3s,baz=206,slow=11,SNR=2.8						
KIV	**Kislovodsk**	**17.43**	**54**	P	**P**	**20 49 45.1**	**+0.3**
KVAR	**Kislovodsk Arr**	**17.43**	**54**	LR	LR	20 58 26.0	
	comp=E,58nm,18.1s,baz=202,slow=44						
HFS	**Hagfors**	**25.77**	**349**	P	**P**	**20 51 09.9**	**-0.6**
	comp=E,1.7nm,0.4s,baz=146,slow=11,SNR=23						
FINES	**FINESS Array B**	**26.40**	**3**	P	**P**	**20 51 14.7**	**-1.5**
	comp=E,0.8nm,0.4s,baz=158,slow=11,SNR=20						
FIA1	**FINESS Array S**	**26.40**	**3**	P	**P**	**20 51 15.0**	**-1.2**
FIA1				IAmb	IAmb	20 51 26.6	
	comp=Z,9.7nm,1.4s						
NC602	**NORSAR Array S**	**26.70**	**347**	P	**P**	**20 51 17.2**	**-1.6**
NAO01	**NORSAR Array S**	**26.92**	**347**	P	**P**	**20 51 20.5**	**-0.4**
NC405	**NORSAR Array S**	**27.02**	**348**	P	**P**	**20 51 20.6**	**-1.2**
NB201	**NORSAR Array S**	**27.03**	**347**	P	**P**	**20 51 20.8**	**-1.1**
NB201				IAmb	IAmb	20 51 39.3	
	comp=Z,10nm,1.1s						
NB2	**NORSAR Subarra**	**27.04**	**347**	P	**P**	**20 51 21.4**	**-0.6**
	comp=Z,1.1nm,0.9s,baz=158,slow=9.3						

NOA NORSAR Array B 27.04 347 P P 20 51 22.2 +0.2
comp=Z,0.6nm,0.6s,baz=155,slow=10,SNR=6.4
TOA0 Torodi Ar. Sit 29.23 227 P P 20 51 43.6 +1.7
TORD Torodi Ar. Bea 29.23 227 P P 20 51 44.8 +2.9
comp=Z,0.4nm,0.5s,baz=32,slow=8.5,SNR=2.8
UOSS Minazif 30.24 101 P P 20 51 52.0 +1.2
UOSS IAmb IAmb 20 52 15.0
comp=Z,9.0nm,1.2s
ARCES ARCESS Array B 34.49 1 P P 20 52 25.9 -1.6
comp=Z,1.5nm,0.6s,baz=183,slow=8.5,SNR=11
BRVK Borovoye 37.51 47 P P 20 52 54.4 +0.9
BRVK IAmb IAmb 20 53 13.9
comp=Z,3.0nm,1.4s
BORG Borgarnes 39.80 332 P P 20 53 10.1 -2.4
SPA0 Spitsbergen Ar 43.26 358 P P 20 53 38.9 -1.8
KBS Kingsbay 44.16 357 P P 20 53 48.9 +1.0
MAKZ Makanchi 44.95 56 P P 20 53 54.8 +0.1
MAKZ PcP PcP 20 55 36.2 +0.9
MK31 Makanchi Array 45.17 56 P P 20 53 56.6 +0.1
MK31 IAmb IAmb 20 54 21.1
comp=Z,2.7nm,1.5s
MKAR Makanchi Array 45.17 56 P P 20 53 56.4 0.0
comp=Z,0.6nm,0.3s,baz=269,slow=7.9,SNR=30
MKAR PcP PcP 20 55 37.0 +0.9
comp=Z,0.2nm,0.5s,baz=283,slow=3.7,SNR=1.8
ZAA0 Zalesovo Array 46.22 46 P P 20 54 03.6 -0.9
ZAA0 IAmb IAmb 20 54 04.0
comp=Z,1.4nm,0.5s
ZALV Zalesovo Beam 46.22 46 P P 20 54 03.8 -0.7
comp=Z,1.4nm,0.4s,baz=266,slow=9.5,SNR=14
SONM Songino Array 60.78 50 P P 20 55 52.1 +0.6
comp=Z,0.4nm,0.5s,baz=279,slow=6.9,SNR=5.9
ULN Ulaanbaatar 61.18 50 P P 20 55 55.1 +0.8
ULN IAmb IAmb 20 55 57.6
comp=Z,4.4nm,1.5s
SCHQ Schefferville 62.14 319 P P 20 56 02.2 +1.8
comp=Z,1.2nm,0.4s,baz=82,slow=4.0,SNR=6.6
SCHQ Schefferville 62.14 319 P P 20 56 01.9 +1.5
CMAR Chiang Mai Arr 68.21 82 P P 20 56 41.0 +0.6
comp=Z,0.3nm,0.7s,baz=289,slow=9.3,SNR=4.3
YKA Yellowknife Ar 76.96 341 P P 20 57 32.6 +1.0
comp=Z,0.1nm,0.4s,baz=36,slow=5.2,SNR=5.2
USRK Ussuriysk Ar. 78.02 44 P P 20 57 38.1 +0.3
comp=Z,2.1nm,0.7s,baz=149,slow=37,SNR=8.3
USRK LR LR 21 35 10.6
comp=Z,50nm,18.4s,baz=5.9,slow=38

IDC 14 21:03:50.5±3.0,6.74S×130.18E,h63km±34km,mb3.4/2, mb1 3.6/5,mb1mx3.1/47,mbtmp3.7/5,ML3.6/3,Error ellipse: s-maj=61.7km s-min=21.8km az=84.0,Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 5.94 11 P Pn 21 05 16.0 +0.1
0.9nm,0.3s,baz=178,slow=9.3,SNR=14
SIJI S Sn 21 06 15.7 -6.8
2.6nm,0.3s,baz=227,slow=23,SNR=8.5
FITZ Fitzroy Crossi 12.12 201 P Pn 21 06 40.6 +0.1
0.3nm,0.3s,baz=21,slow=11,SNR=8.8
FITZ S Sn 21 08 49.0 -5.1
0.8nm,0.3s,baz=175,slow=18,SNR=7.3
WRA Warramunga Arr 13.73 163 P Pn 21 06 59.4 -3.0
0.4nm,0.3s,baz=346,slow=13,SNR=27
WRA S Sn 21 09 22.6 -11
0.6nm,0.3s,baz=346,slow=24,SNR=7.0
ASAR Alice Springs 17.20 168 P Pn 21 07 45.9 -0.8
0.3nm,0.3s,baz=352,slow=13,SNR=16
ASAR S Sn 21 10 47.4 -10
0.1nm,0.3s,baz=349,slow=26,SNR=4.6
STKA Stephens Creek 27.18 158 P P 21 09 28.6 +0.3
1.2nm,0.4s,baz=326,slow=8.3,SNR=4.0
MKAR Makanchi Array 68.11 327 P P 21 14 43.7 -0.1
0.2nm,0.7s,baz=112,slow=6.6,SNR=4.1

IDC 14 21:04:12.0±0.7, 9.78N×124.22E, h0km, mb3.9/13, mb1 4.0/14, mb1mx3.8/58, mbtmp3.9/14, ML4.1/1, MS2.9/4, Ms1 3.0/4, ms1mx2.6/49, Error ellipse: s-maj=35.1km s-min=13.8km az=68.0
MAN 14 21:04:13.1, 9.99N×124.22E, h16km, mb4.7, ML3.5, MS3.4
MAN INTENSITY V - INABANGA BOHOL;INTENSITY IV - SAGBAYAN BOHOL; INTENSITY III - CEBU CITY; INTENSITY I - LAPU-LAPU CITY.
NEIC 14 21:04:13.6±1.1, 9.82N±0.04×124.32E±0.07, h10km±1km, mb4.5/14, Error ellipse: s-maj=12.9km s-min=6.2km az=286.0
ISC 14 21:04:12.1±1.3, 9.85N±0.03×124.24E±0.03, h1km±9km, n71, σ1°40/82, mb4.2/19, MS2.8/3, 6C-2D, Mindanao

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TBP Tagbilaran 0.41 247⇑eP Pb 21 04 21.9 -0.2
TBP eS Sb 21 04 28.6 -0.1
LLP Lapu-Lapu 0.54 330⇓iP Pg 21 04 21.8 -0.6
LLP iS Sg 21 04 28.6 -0.8
MSLP Maasin 0.67 65 eP Pg 21 04 25.6 +0.7
MSLP eS Sb 21 04 37.8 +1.5
SNPH Sibulan 1.11 243⇑eP Pn 21 04 34.4 -0.5
SNPH iS Sn 21 04 51.3 +0.4
OCLP Ormoc 1.25 17 eP Pn 21 04 33.6 -3.0
OCLP eS Sb 21 04 51.5 -1.4
CGP Cagayan de Oro 1.46 162⇑iP Pn 21 04 39.3 -0.2
CGP iS Sg 21 05 00.1 +1.1
DCPH Dipolog City 1.54 215⇑eP Pb 21 04 41.3 0.0
BUTP Butuan 1.62 123 eP Pn 21 04 42.0 +0.2
GUIM Jordan 1.80 295 eP Pn 21 04 42.4 -1.8
GUIM eS Sn 21 05 05.9 -1.8
BUKP Musuan 2.12 157 eP Pb 21 04 50.2 -1.1
BUKP eS Sb 21 05 18.8 +0.6
PAGZ Pagadian 2.17 203 eP Pn 21 04 50.8 -1.2
PAGZ eS Sb 21 05 18.5 -0.9
RCP Roxas 2.25 319⇑eP Pn 21 04 50.2 -0.2
RCP eS Sn 21 05 20.6 -1.2
CTBH Cotabato--PC H 2.61 180⇓iP Pb 21 04 57.3 -2.4
CNP Catarman 2.67 9 eP Pn 21 04 54.5 -1.7
KCP Kidapawan 2.95 163⇑eP Pn 21 05 01.4 +1.4
DAV Davao City (W) 3.06 154 Pn Pn 21 05 02.7 +1.0
24nm,0.3s,baz=27,slow=4.5,SNR=2.2
DAV Sn Sb 21 05 45.4 +0.1
57nm,0.3s,baz=288,slow=10,SNR=1.6
DAV Davao City (W) 3.06 154 Pn 21 05 02.0 +0.4
OTRP Odiongan 3.31 319 eP Pn 21 05 04.0 -1.1
OTRP eS Sn 21 05 41.9 -3.2
CUYO Cuyo Island 3.32 288 eP Pn 21 05 04.3 -1.0
CUYO eS Sn 21 05 43.0 -2.4
MATI Mati 3.51 145 eP Pn 21 05 10.3 +2.5
MATI eS Sb 21 05 55.0 -3.1
DDMP Don Marcelino, 4.00 159 eP Pn 21 05 16.7 +2.2
DDMP eS Sb 21 06 06.2 -6.0
BUSP Coron 4.51 299 eP Pn 21 05 21.1 -0.5
BUSP eS Sn 21 06 12.7 -2.0
ENPP El Nido 4.92 286 eP Pn 21 05 26.3 -0.9
TGY Tagaytay City 5.32 323 LR LR 21 07 29.5
comp=Z,148nm,19.4s,baz=60,slow=37
SZP Santa 8.49 335 Pn Pn 21 06 17.3 +1.1
KKM Kota Kinabalu 8.80 245 Pn Pn 21 06 21.8 +1.2
TNTI Ternate 9.54 161 Pn Pn 21 06 29.3 -1.4
YULB Yu-li 13.76 349 Pn Pn 21 07 29.7 +1.4
TPUB Ta-pu 13.81 346 Pn Pn 21 07 29.1 0.0
UBPT Khong Chiam 19.09 288 P Pn 21 08 39.0 +1.9
UBPT IAmb IAmb 21 08 41.0
comp=Z,16nm,0.7s
GUMO Guam 20.53 78 LR LR 21 16 58.9
comp=Z,36nm,18.9s,baz=244,slow=37
PBKT Sadao Pong 23.61 289 P P 21 09 25.1 +0.5
CMAR Chiang Mai Arr 25.95 292 P P 21 09 46.9 +0.5
comp=Z,0.6nm,0.6s,baz=109,slow=8.2,SNR=7.4
CMAR LR LR 21 20 44.9
comp=Z,48nm,18.2s,baz=114,slow=38
KSRS Korea Array 27.68 6 P P 21 10 02.1 +0.4
comp=Z,0.6nm,0.6s,baz=184,slow=11,SNR=3.5
KSRS LR LR 21 20 24.1
comp=Z,8.4nm,21.1s,baz=215,slow=35
WRAB Tennant Creek 31.23 161 P P 21 10 34.4 +1.1
WRAB IAmb IAmb 21 10 53.7
comp=Z,2.8nm,0.8s
WRA Warramunga Arr 31.23 161 P P 21 10 31.4 -2.0
comp=Z,0.5nm,0.4s,baz=343,slow=9.7,SNR=3.0
SHL Shillong 34.43 301 P P 21 11 02.4 +0.8
ASAR Alice Springs 34.63 164 P P 21 11 03.0 0.0
comp=Z,1.5nm,0.5s,baz=336,slow=6.5,SNR=20
ASAJ Asahikawa 37.67 22 P P 21 11 29.0 +0.2
comp=Z,7.4nm,0.9s,baz=196,slow=7.4,SNR=3.5
JKA Kamikawa-asahi 37.67 22 P P 21 11 29.0 +0.2
TAPN Taplejung 38.56 302 eP P 21 11 37.1 +0.1
comp=Z,14nm,0.8s
ODAN Odare 38.66 301 eP P 21 11 37.7 -0.1
comp=Z,25nm,1.1s
RAMN Ramite 39.36 301 eP P 21 11 43.8 +0.1
comp=Z,11nm,0.8s
JIRN Jiri 39.93 302 eP P 21 11 48.8 +0.2
comp=Z,34nm,0.8s
GUN Gumba 40.27 302 eP P 21 11 51.4 0.0
comp=Z,21nm,0.7s
PKI Pulchoki 40.56 301 eP P 21 11 53.0 -0.7
comp=Z,9.4nm,0.8s
FORT Forrest 40.56 175 P P 21 11 53.3 +0.2
FORT IAmb IAmb 21 11 55.3
comp=Z,23nm,1.0s
PKIN Phulchoki 40.57 301 eP P 21 11 53.4 -0.4
comp=Z,7.5nm,0.8s
KKN Kakani 40.74 301 eP P 21 11 54.9 -0.2
comp=Z,13nm,0.9s
SONM Songino Array 40.75 342 P P 21 11 55.5 +0.8
comp=Z,0.7nm,1.0s,baz=150,slow=6.7,SNR=3.3
DMN Daman 40.83 301 eP P 21 11 55.6 -0.3
comp=Z,13nm,1.0s
KOLN Koldanda 42.15 301 eP P 21 12 06.3 -0.4
comp=Z,13nm,0.9s
DANN Dangsing 42.19 302 eP P 21 12 05.8 -1.3
comp=Z,18nm,0.9s
BBOO Buckleboo 43.90 166 P P 21 12 19.3 -1.1
BBOO IAmb IAmb 21 12 21.1
comp=Z,10nm,0.9s
STKA Stephens Creek 44.69 159 P P 21 12 26.7 -0.1
comp=Z,1.3nm,0.6s,baz=346,slow=7.0,SNR=4.3
STKA Stephens Creek 44.69 159 IAmb IAmb 21 12 35.6
comp=Z,1.0nm,1.1s
MK31 Makanchi Array 51.17 324 P P 21 13 18.0 +1.1
MKAR Makanchi Array 51.17 324 P P 21 13 17.3 +0.4
comp=Z,2.7nm,0.9s,baz=128,slow=8.0,SNR=18
MAKZ Makanchi 51.36 324 P P 21 13 19.7 +1.5
MAKZ IAmb IAmb 21 13 21.1
comp=Z,5.1nm,1.1s
NIL Nilore 52.33 305 P P 21 13 26.8 +1.0
NIL IAmb IAmb 21 13 28.5
comp=Z,4.3nm,0.8s
ZALV Zalesovo Beam 54.05 332 P P 21 13 38.7 +0.6
comp=Z,0.7nm,0.4s,baz=109,slow=8.0,SNR=4.8
KURK Kurchatov 55.29 326 P P 21 13 47.8 +0.7
KURK Kurchatov 55.29 326 IAmb IAmb 21 13 49.7
comp=Z,15nm,1.1s
KURBB Kurchatov Arra 55.30 326 P P 21 13 47.8 +0.7
comp=Z,4.7nm,1.1s,baz=134,slow=6.1,SNR=7.5
BVAR Borovoye Array 60.88 326 P P 21 14 26.4 +0.1
comp=Z,1.5nm,0.9s,baz=104,slow=6.3,SNR=8.9
BRVK Borovoye 60.95 326 P P 21 14 27.1 +0.3
BRVK IAmb IAmb 21 14 29.1
comp=Z,6.3nm,1.1s
TIXI Tiksi 61.81 2 P P 21 14 33.8 +1.6
comp=Z,0.2nm,0.3s,baz=230,slow=7.0,SNR=2.4
ARU Arti 68.48 327 P P 21 15 15.2 -0.7
comp=Z,0.7nm,0.5s,baz=50,slow=7.9,SNR=4.6
ARU Arti 68.48 327 IAmb IAmb 21 15 17.3
comp=Z,2.4nm,0.7s
BKZ Black Stump Fm 68.77 139 P P 21 15 17.0 -1.0
TORD Torodi Ar. Bea 118.56 291 PKP PKPdf 21 23 02.1 -0.6
comp=Z,0.5nm,0.7s,baz=80,slow=1.3,SNR=3.6

IDC 14 21:14:13.9±5.5, 17.78N×147.49E, h189km±61km, mb3.0/3, mb1 3.4/4, mb1mx2.9/42, mbtmp3.7/4, Error ellipse: s-maj=294.0km s-min=23.2km az=111.0, Mariana Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GUMO Guam 4.87 212 P Pn 21 15 26.7 +0.2
5.2nm,0.3s,baz=149,slow=18,SNR=1.4
GUMO S Sn 21 16 23.7 +0.2
4.8nm,0.3s,baz=85,slow=18,SNR=1.0
WRA Warramunga Arr 39.65 200 P P 21 21 27.8 +0.2
0.6nm,0.4s,baz=22,slow=9.6,SNR=11
ASAR Alice Springs 43.27 198 P P 21 21 56.6 -0.4
0.4nm,0.4s,baz=24,slow=12,SNR=8.5
YKA Yellowknife Ar 78.00 28 P P 21 25 51.1 0.0
0.2nm,0.5s,baz=288,slow=5.7,SNR=2.8

RSNC 14 21:14:24.4±0.7, 11.56N×73.17W, h19km±10km, ML4.6, Mw4.3
NEIC 14 21:14:24.9±2.4, 11.55N±0.06×73.20W±0.06, h56km±5km, mb4.5/88, Error ellipse: s-maj=8.5km s-min=8.0km az=146.0
IDC 14 21:14:24.9±1.7, 11.56N×73.09W, h54km±16km, mb4.0/18, mb1 4.2/23, mb1mx4.1/37, mbtmp4.3/23, ML4.0/6, MS3.7/20, Ms1 3.7/20, ms1mx3.5/45, Error ellipse: s-maj=13.3km s-min=9.5km az=50.0
UPA 14 21:14:24.8±0.7, 11.74N×73.66W, h0km±35km, MW4.4
OSPL 14 21:14:31.1±2.6, 11.96N×73.45W, h0km±188km, ML4.1
VAO 14 21:14:58.8±0.4, 7.90N×71.79W, h10km, mb4.7
ISC 14 21:14:23.8±0.9, 11.67N±0.04×73.21W±0.03, h34km±2km, n219, σ1°98/247, mb4.5/52, MS3.8/14, 4C-5D, Near north coast of Colombia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
URIC Uribia, Colomb 1.19 88⇓iP Pb 21 14 45.2 -0.6
URIC eS Sb 21 15 00.2 -0.8
URIC i 21 15 02.1
comp=Z,9μm,0.6s
URIC Uribia, Colomb 1.19 88 Pn Pb 21 14 45.5 -0.3
URIC Sn Sb 21 15 01.3 +0.3
CODC Agustn Codazz 1.74 188⇑eP Pn 21 14 50.7 -0.9
CODC eS Sn 21 15 10.8 -1.8
CODC i 21 15 13.8
comp=Z,2μm,0.2s
ARGC Ariguani, Magd 2.07 210 eP Pn 21 14 56.1 0.0
ARGC eS Sn 21 15 20.6 -0.1
ARGC i 21 15 26.8
comp=Z,2μm,0.4s
SJCC San Jacinto, C 2.62 228⇓eP Pn 21 15 04.1 +0.4
SJCC eS Sb 21 15 39.8 -2.0
SJCC i 21 15 44.9
comp=Z,2μm,0.9s
SJCC San Jacinto, C 2.62 228⇓iP Pn 21 15 04.2 +0.4
SJCC eS Sn 21 15 35.1 +0.7
SMLC San Martn de 2.97 197 eP Pn 21 15 07.8 -0.8
SMLC eS Sn 21 15 42.7 -0.3
SMLC i 21 15 54.0
comp=Z,2μm,0.3s
OCAC Ocana 3.41 182 eP Pn 21 15 14.8 0.0
OCAC eS Sn 21 15 54.1 0.0
OCAC i 21 16 06.8
comp=Z,3μm,0.5s
SDV Santo Domingo 3.75 137 P Pn 21 15 19.5 +0.1
comp=Z,89nm,0.3s,baz=324,slow=6.4,SNR=493
SDV S Sn 21 16 01.4 -1.2
comp=Z,154nm,0.3s,baz=212,slow=17,SNR=17
SDV LR LR 21 17 15.8
comp=Z,2μm,21.0s,baz=286,slow=48
LCBC Los crdobas, 4.18 228 eP Pn 21 15 26.0 +0.8
LCBC eS Sn 21 16 12.7 -0.3
LCBC i 21 16 28.9
comp=Z,296nm,1.6s
PAMC Pamplona, Colo 4.33 173 eP Pn 21 15 27.0 -0.7
PAMC eS Sn 21 16 16.4 -0.8
PAMC i 21 16 25.9
comp=Z,1μm,0.4s
PAMC i 21 16 34.9
comp=Z,1μm,0.9s
ZARC Zaragoza, Cauc 4.46 202 eP Pn 21 15 29.8 +0.7
ZARC eS Sn 21 16 20.1 +0.4
ZARC i 21 16 37.7
comp=Z,1μm,0.5s
UREC San Jos de Ur 4.51 211 eP Pn 21 15 30.0 +0.1
UREC eS Sn 21 16 20.4 -0.8
UREC i 21 16 39.6
comp=Z,418nm,0.8s
BRRC Barranca, Sant 4.56 186 eP Pn 21 15 29.8 -0.6
BRRC eS Sn 21 16 21.3 -0.9
BRRC i 21 16 33.2
comp=Z,709nm,0.6s
BARC Barichara 5.04 180 eP Pn 21 15 37.5 +0.3
comp=Z,3μm,0.7s
BARC eS Sn 21 16 34.2 -0.3
CAP2 Capurgana 5.07 234 eP Pn 21 15 37.5 +0.1
CAP2 eS Sn 21 16 31.7 -3.2
PTBC PUERTO BERRIO, 5.24 194 eP Pn 21 15 40.3 +0.4
PTBC eS Sn 21 16 38.8 -0.4
PTBC i 21 16 54.2
comp=Z,927nm,1.0s
TAMC Tame, Arauca 5.38 165 eP Pn 21 15 42.5 +0.7
TAMC eS Sn 21 16 41.7 -0.9
TAMC i 21 16 49.2
comp=Z,800nm,0.5s
RUSC La Rusia 5.74 179 eP Pn 21 15 46.9 -0.2
RUSC eS Sn 21 16 50.9 -1.1
RUSC i 21 17 11.7
comp=Z,449nm,1.2s
RUSC La Rusia 5.74 179 Pn 21 15 45.5 -1.6
HELC Santa Helena 5.90 203 eP Pn 21 15 52.5 +3.2
HELC eS Sn 21 16 55.6 -0.3
HELC i 21 17 14.1
comp=Z,605nm,0.5s
HELC Santa Helena 5.90 203 eP Pn 21 15 53.0 +3.8
HELC eS Sn 21 16 56.5 +0.5
SPBC San Pablo de B 6.04 188 eP Pn 21 15 51.7 +0.9
SPBC eS Sn 21 17 01.1 +2.2
SPBC i 21 17 09.6
comp=Z,639nm,0.5s
NORC Norcasia 6.28 195 eP Pn 21 15 55.8 +1.6
NORC eS Sn 21 17 08.6 +3.8
CHPO Chepo, Panama 6.32 247 eP Pn 21 15 54.1 -0.5
CHPO eS Sn 21 16 59.4 -6.3
PTAC Punta Ardita, 6.38 226 eP Pn 21 15 56.2 +0.6
PTAC eS Sn 21 16 59.8 -7.5
PTAC i 21 17 22.8
comp=Z,214nm,0.3s
CBOC Ciudad Bolivar 6.40 206 eP Pn 21 15 57.2 +1.3
CBOC eS Sn 21 17 05.5 -2.4
CBOC i 21 17 38.9
comp=Z,350nm,1.2s
JAKH Jacmel 6.57 6 eS Sn 21 17 09.2 -2.5
UPA Univ. de Panam 6.77 247 eP Pn 21 16 07.4 +6.6
UPA eS Sn 21 17 08.6 -8.3
UPA i 21 17 21.4
comp=Z,23nm,0.3s
LGNH Logne 6.83 5 iP Pn 21 16 05.8 +4.1
LGNH eS Sn 21 17 16.8 -1.4
LGNH Logne 6.83 5 Pn Pn 21 16 03.0 +1.4
ROSC El Rosal 6.87 189 P Pn 21 16 05.3 +2.7
comp=Z,29nm,0.3s,baz=56,slow=6.3,SNR=29
ROSC S Sn 21 17 21.3 +1.5
comp=Z,24nm,0.3s,baz=31,slow=23,SNR=3.6
ROSC LR LR 21 19 02.8
comp=Z,290nm,20.7s,baz=26,slow=41
ROSC El Rosal 6.87 189 eP Pn 21 16 05.5 +3.0
ROSC El Rosal 6.87 189 Pn 21 16 02.2 -0.3
BCIP Isla Barro Col 6.98 250 Pn 21 16 02.8 -0.9
CHIC Chingaza 7.01 184 eP Pn 21 16 06.1 +1.6
CHIC eS Sn 21 17 26.1 +2.8
CHIC i 21 17 48.7
comp=Z,294nm,0.9s
CHOR3 La Chorrera 7.01 248 eS Sn 21 17 18.1 -4.7
PCJ Portland Cotta 7.15 328⇑iP Pn 21 16 07.8 +1.9
CVER Cruz Verde, Cu 7.15 187 eP Pn 21 16 10.2 +3.7
CVER eS Sn 21 17 30.0 +3.2
GWJ Greenwich 7.22 332⇓iP Pn 21 16 09.1 +1.9
BANI BANI 7.23 22 Pn Pn 21 16 08.6 +1.3
STH Stony Hill 7.26 332⇑iP Pn 21 16 09.2 +1.7
PTGC Puerto Gaitan, 7.50 172 eP Pn 21 16 08.9 -1.9
PTGC eS Sn 21 17 30.1 -4.5
SDDR Presa de Saban 7.50 14 iP Pn 21 16 17.0 +6.0
SDDR eS Sn 21 17 34.2 -0.7
SDDR IAML 21 17 42.9
comp=Z,25nm,0.5s
SDDR Presa de Saban 7.50 14 Pn 21 16 12.3 +1.4
BNJ Bonny Gate 7.54 332⇑iP Pn 21 16 13.2 +1.8
MCJ Malvern 7.58 326 iP Pn 21 16 12.1 0.0
MCJ iS Sn 21 17 33.3 -3.6
BBJ Bamboo Saint A 7.74 330⇓iP Pn 21 16 16.2 +2.0
BBJ iS Sn 21 17 36.2 -4.6
MTDJ Mount Denham 7.75 328 Pn 21 16 15.2 +0.8
AZU Azuero 7.96 242 eP Pn 21 16 17.2 +0.1
AZU eS Sn 21 17 40.2 -5.9
ORTC Ortega, Tolima 7.97 195 eP Pn 21 16 19.9 +2.6
ORTC eS Sn 21 17 50.5 +4.1
DR12 Loma Pena Alta 7.98 27 Pn 21 16 19.2 +1.7
PRAC Prado 8.07 192 eP Pn 21 16 20.8 +2.0
PRAC eS Sn 21 17 49.0 0.0
SC01 Santiago de lo 8.08 17 Pn Pn 21 16 18.5 -0.2
YOTC Yotoco, Valle 8.24 202 eP Pn 21 16 23.1 +1.9
YOTC eS Sn 21 17 50.9 -2.3
YOTC i 21 18 29.5
comp=Z,77nm,1.2s
PCDR Punta Cana, DR 8.25 34 Pn Pn 21 16 22.6 +1.5
GTBY Guantanamo Bay 8.41 348 iP Pn 21 16 25.4 +1.9
GTBY eS Sn 21 17 52.5 -4.7
GTBY IAML 21 17 59.2
comp=Z,18nm,0.4s
GTBY Guantanamo Bay 8.41 348 Pn Pn 21 16 25.3 +1.9
PCRV Puerto La Cruz 8.55 99 P Pn 21 16 23.2 -2.1
comp=Z,5.1nm,0.3s,baz=296,slow=3.5,SNR=13
PCRV S Sn 21 17 58.3 -2.3
comp=Z,0.9nm,0.3s,baz=244,slow=23,SNR=4.2
PLCV Puerto La Cruz 8.59 99 Pn 21 16 23.2 -2.7
CRPR Cabo Rojo, PR 8.63 42 Pn Pn 21 16 26.3 0.0
MLPR Magueyes Islan 8.65 43 Pn Pn 21 16 27.1 +0.6
MPR Mayaguez 8.76 41 Pn Pn 21 16 30.7 +2.6
ICMP Isla Caja de M 8.94 45 Pn Pn 21 16 31.9 +1.2
AGPR Aguadilla, PR 8.96 40 Pn Pn 21 16 31.9 +0.9
GUVC San Jose del G 9.08 176 eP Pn 21 16 32.2 -0.4
GUVC eS Sn 21 18 11.9 -1.8
AOPR Arecibo Observ 9.11 42 Pn Pn 21 16 34.4 +1.4
EMPR Esperanza - Ma 9.35 43 Pn Pn 21 16 39.6 +3.4
SJG San Juan 9.36 46 P Pn 21 16 36.0 -0.3
comp=Z,2.1nm,0.3s,baz=204,slow=18,SNR=4.0
SJG S Sn 21 18 12.2 -8.2
comp=Z,9.2nm,0.3s,baz=70,slow=23,SNR=11
SJG LR LR 21 20 44.9
comp=Z,122nm,18.5s,baz=250,slow=41
PDPR Patillas Dam, 9.39 47 Pn Pn 21 16 36.7 0.0
GCPR Guaynabo City 9.54 45 Pn Pn 21 16 39.0 +0.2
HUMP Col San Antoni 9.59 47 Pn Pn 21 16 40.7 +1.2
CBYP Canovanas 9.67 46 Pn Pn 21 16 40.8 +0.1
POPC Popayan, Colom 9.70 201 eP Pn 21 16 40.1 -1.1
POPC eS Sn 21 18 24.6 -4.6
POPC i 21 18 54.9
comp=Z,24nm,1.0s
MTP Monte Pirata 9.78 48 Pn Pn 21 16 40.8 -1.3
CUPR Culebra, Puert 10.11 48 Pn Pn 21 16 43.9 -2.7
CDVI St. Croix 10.16 52 Pn Pn 21 16 46.9 -0.4
CBCY The Bluff, Cay 10.21 323 Pn Pn 21 16 47.2 -0.7
FLOC Florencia 10.31 194 eP Pn 21 16 51.3 +1.9
FLOC eS Sn 21 18 43.3 -0.6
FLOC Florencia 10.31 194 Pn 21 16 47.2 -2.2
STVI Saint Thomas 10.38 49 Pn Pn 21 16 48.5 -1.8
BBAC Balboa, Cauca 10.39 203 eP Pn 21 16 52.1 +1.5
BBAC eS Sn 21 18 42.3 -3.8
BBAC i 21 18 55.8
comp=Z,22nm,0.4s
CRUC La Cruz 10.70 201 eP Pn 21 16 57.5 +2.5
CRUC i 21 18 59.4
comp=Z,30nm,0.7s
SABA Saba 11.31 57 Pn Pn 21 17 03.2 0.0
GRGR Grenville 11.32 86 Pn Pn 21 17 02.7 -0.5
SKI Saint Kitts 11.59 60 Pn Pn 21 17 07.8 +0.8
JTS Las Juntas de 11.61 264 P Pn 21 17 09.5 +2.2
comp=Z,0.5nm,0.3s,baz=120,slow=20,SNR=3.1
JTS S Sn 21 19 09.4 -6.5
comp=Z,0.6nm,0.3s,baz=47,slow=23,SNR=2.6
JTS LR LR 21 22 20.3
comp=Z,195nm,19.5s,baz=128,slow=41
JTS Las Juntas de 11.61 264 Pn Pn 21 17 06.7 -0.6
SMRT St. Maarten 11.67 56 Pn Pn 21 17 08.3 +0.3
ACON Acoyapa 11.72 273 Pn Pn 21 17 08.6 -0.2
SVB Belmont 11.78 81 Pn Pn 21 17 09.7 +0.1
FDF Fort de France 12.13 74 Pn Pn 21 17 10.7 -3.6
TOSP Speyside 12.43 90 Pn Pn 21 17 18.6 +0.2
OTAV Otavalo 12.49 205 eP Pn 21 17 24.1 +4.4
OTAV Otavalo 12.49 205 Pn Pn 21 17 18.3 -1.4
ANWB Willy Bob 12.55 60 Pn Pn 21 17 20.3 +0.2
TEIG Tepich 16.79 302 P P 21 18 18.1 -0.2
TEIG IAmb IAmb 21 18 22.6
comp=Z,24nm,0.9s
APG El Apazote 17.12 283 P Pn 21 18 21.3 +0.5

comp=Z,0.2nm,0.3s,baz=85,slow=17,SNR=2.9
APG LR LR 21 25 37.7
comp=Z,257nm,18.6s,baz=78,slow=39
CCIG Comitan 18.93 286 P P 21 18 41.6 -0.6
CCIG IAmb IAmb 21 18 50.4
comp=Z,31nm,0.8s
ATAH Atahualpa 19.38 196 P P 21 18 45.4 -2.0
comp=Z,0.4nm,0.3s,baz=293,slow=13,SNR=2.7
ATAH LR LR 21 26 26.0
comp=Z,117nm,21.5s,baz=15,slow=37
CMIG Matias Romero 21.67 287 P P 21 19 11.3 -0.4
comp=Z,4.4nm,0.7s,baz=93,slow=11,SNR=9.0
CMIG LR LR 21 27 49.4
comp=Z,300nm,21.7s,baz=94,slow=37
154A Montrose 22.75 338 P P 21 19 23.0 -0.1
SAML Samuel 22.78 154 eP P 21 19 19.2 -4.3
SAML Samuel 22.78 154 P P 21 19 19.3 -4.3
SAML IAmb IAmb 21 19 29.5
comp=Z,34nm,1.0s
Z56A Williston 22.82 342 P P 21 19 24.7 +0.8
JSC Jenkinsville 23.68 343 P P 21 19 33.4 +1.0
NNA Nana 23.77 189 P P 21 19 32.8 -0.7
comp=Z,43nm,0.7s,baz=348,slow=8.0,SNR=20
NNA LR LR 21 30 32.7
comp=Z,93nm,21.0s,baz=351,slow=41
NNA Nana 23.77 189 P P 21 19 33.6 +0.1
HODGE Hodges 23.93 341 P P 21 19 34.6 -0.2
HODGE IAmb IAmb 21 19 38.8
comp=Z,5.0nm,0.5s
V60A Jim Taylor Roa 24.27 352 P P 21 19 38.5 +0.6
Z50A Ashland 24.44 334 P P 21 19 39.7 +0.2
Z50A IAmb IAmb 21 19 42.7
comp=Z,11nm,1.0s
LRAL Lakeview Retre 24.75 331 P P 21 19 42.9 +0.6
TLIG Tlapa 25.21 286 P P 21 19 45.8 -1.0
TLIG IAmb IAmb 21 19 52.6
comp=Z,16nm,1.1s
TKL Tuckaleechee C 25.73 340 LR LR 21 30 08.5
comp=Z,236nm,20.1s,baz=150,slow=36
LPAZ La Paz 28.23 170 P P 21 20 12.9 -1.5
comp=Z,3.7nm,0.7s,baz=354,slow=7.6,SNR=13
LPAZ LR LR 21 32 59.8
comp=Z,143nm,21.4s,baz=350,slow=40
LPAZ La Paz 28.23 170 eP P 21 20 16.3 +1.9
LPAZ La Paz 28.23 170 P 21 20 13.1 -1.3
LPAZ La Paz 28.23 170 P P 21 20 12.5 -1.9
SIV San Ignacio 29.99 156 P P 21 20 25.7 -3.7
comp=Z,5.6nm,0.8s,baz=338,slow=8.8,SNR=28
SIV LR LR 21 33 37.3
comp=Z,456nm,18.5s,baz=342,slow=39
ZAIG Zacatecas 30.08 295 P P 21 20 32.6 +2.0
ZAIG IAmb IAmb 21 20 35.0
comp=Z,7.8nm,0.9s
TXAR Lajitas Array 33.36 306 P P 21 20 59.5 +0.4
comp=Z,1.7nm,0.9s,baz=128,slow=9.6,SNR=7.9
ARAG Araguaiana, MT 34.47 142 eP P 21 21 13.2 +4.4
MNTX Cornudas Mount 35.72 309 P P 21 21 20.8 +1.3
BDFB Brasilia 36.85 137 P P 21 21 26.2 -3.1
comp=Z,3.5nm,0.5s,baz=287,slow=10,SNR=6.0
BDFB LR LR 21 37 54.5
comp=Z,150nm,18.3s,baz=301,slow=38
BDFB Brasilia 36.85 137 IAmb IAmb 21 21 26.3
comp=Z,7.0nm,1.1s
ANMO Albuquerque 38.04 313 LR LR 21 39 11.8
comp=Z,34nm,20.5s,baz=104,slow=39
SDCO Great Sand Dun 38.84 318 P P 21 21 48.4 +2.2
TUC Tucson 40.16 307 P P 21 21 59.0 +2.1
X18A Snowflake 40.41 310 IAmb IAmb 21 22 02.6
comp=Z,8.5nm,1.0s
W18A Petrified Fore 40.50 311 IAmb IAmb 21 22 03.8
comp=Z,9.4nm,1.1s
CPUP Villa Florida 40.80 158 LR LR 21 40 37.2
comp=Z,247nm,18.2s,baz=14,slow=39
113A Mohawk Valley, 42.67 306 IAmb IAmb 21 22 20.6
comp=Z,6.1nm,1.1s
ULM Lac du Bonnet 42.75 339 P P 21 22 18.1 +0.3
comp=Z,5.2nm,0.9s,baz=150,slow=9.4,SNR=8.3
ULM LR LR 21 41 26.7
comp=Z,104nm,18.6s,baz=148,slow=38
ULM Lac du Bonnet 42.75 339 P P 21 22 18.1 +0.3
ULM IAmb IAmb 21 22 19.2
comp=Z,6.7nm,1.1s
SRU San Rafael Swe 42.92 316 P P 21 22 20.0 +0.4
U15A North Rim 42.94 312 IAmb IAmb 21 22 23.2
comp=Z,10.0nm,1.0s
P17A Butcher Ranch, 43.24 317 P P 21 22 23.7 +1.5
SCHQ Schefferville 43.35 5 P P 21 22 23.8 +1.2
comp=Z,1.1nm,0.4s,baz=192,slow=7.8,SNR=7.6
MPU Maple Canyon 44.10 317 P P 21 22 29.9 +0.8
PDAR Pinedale Array 44.20 321 P P 21 22 30.6 +0.7
comp=Z,0.9nm,0.6s,baz=114,slow=9.8,SNR=9.2
PDAR PcP PP 21 24 13.6 +0.3
comp=Z,0.5nm,0.8s,baz=117,slow=5.2,SNR=3.3
NLU North Lily Min 44.37 316 P P 21 22 32.1 +0.7
HWUT Hardware Ranch 44.85 319 P P 21 22 35.9 +0.8
HWUT IAmb IAmb 21 22 37.2
comp=Z,6.9nm,1.0s
PSUT Pine Spring 44.96 314 P P 21 22 38.1 +2.1
DUG Dugway, Tooele 44.99 316 P P 21 22 38.3 +2.2
DUG IAmb IAmb 21 22 39.3
comp=Z,5.4nm,0.8s
SHPR Sheep Range 45.09 310 P P 21 22 38.6 +1.5
SHPR IAmb IAmb 21 22 40.1
comp=Z,4.9nm,1.1s
SPUT South Promonto 45.28 318 P P 21 22 39.1 +0.7
REDW Red Top Meadow 45.32 321 P P 21 22 38.8 0.0
REDW IAmb IAmb 21 22 41.1
comp=Z,11nm,1.1s
MOOW Moose Ponds 45.46 322 P P 21 22 40.0 +0.1
BGU Big Grassy Mou 45.48 317 P P 21 22 41.9 +1.9
FXWY Fox Creek 45.57 321 P P 21 22 42.1 +1.3
R11A Troy Canyon, C 46.12 313 P P 21 22 44.8 -0.4
R11A IAmb IAmb 21 22 48.1
comp=Z,3.7nm,0.9s
YHB Horse Butte 46.28 323 P P 21 22 46.8 +0.4
YHL Hebgen Lake 46.33 323 P P 21 22 46.6 -0.3
QLMT Earthquake Lak 46.47 323 P P 21 22 48.2 +0.4
MCMT McKenzie Canyo 47.32 322 P P 21 22 55.3 +0.8
EGMT Eagleton 47.37 327 P P 21 22 54.5 -0.2
EGMT IAmb IAmb 21 22 57.4
comp=Z,4.8nm,0.8s
SNCC San Nicolas Is 47.42 305 P P 21 22 53.4 -1.8
DLMT Dillon 47.45 323 P P 21 22 56.2 +0.8
DLMT IAmb IAmb 21 22 57.6
comp=Z,5.1nm,1.0s
NV11 Mina Array Sit 48.02 312 P P 21 23 00.3 +0.4
NVAR Mina Array Bea 48.13 312 P P 21 23 01.9 +1.0
comp=Z,1.2nm,0.5s,baz=121,slow=7.0,SNR=7.3
KVN Kaiserville 48.21 313 P P 21 23 02.0 +0.5
KVN IAmb IAmb 21 23 03.7
comp=Z,6.1nm,0.9s
OMMB Old Mammoth Mi 48.35 310 P P 21 23 02.2 -0.6
RYN Ryan 48.36 312 P P 21 23 02.2 -0.4
RYN IAmb IAmb 21 23 04.3
comp=Z,2.5nm,0.8s
MDPB Devils Postpil 48.42 310 P P 21 23 03.7 +0.5
MDPB IAmb IAmb 21 23 12.2
comp=Z,3.8nm,0.7s
FFC Flin Flon 48.56 338 P P 21 23 03.8 +0.1
FFC IAmb IAmb 21 23 04.7
comp=Z,3.6nm,0.8s
PAGB Antelope Grade 48.70 308 P P 21 23 04.6 -0.6
WAKR Walker 48.98 311 P P 21 23 05.9 -1.6
YERR Yerington 49.01 312 P P 21 23 08.8 +1.2
YERR IAmb IAmb 21 23 11.1
comp=Z,6.2nm,0.8s
MSO Missoula 49.02 324 P P 21 23 06.9 -0.6
MSO IAmb IAmb 21 23 09.0
comp=Z,3.7nm,0.9s
PNTR Pine Nut 49.31 312 P P 21 23 09.8 -0.1
VCNR Virginia City 49.42 312 P P 21 23 09.8 -1.0
JTMT Jette 49.71 324 P P 21 23 13.4 +0.6
JTMT IAmb IAmb 21 23 15.2
comp=Z,5.2nm,0.8s
WVOR Wild Horse Val 49.91 316 P P 21 23 14.2 -0.2
J08A Circle Bar Ran 50.19 318 P P 21 23 16.6 +0.1
J08A IAmb IAmb 21 23 20.3
comp=Z,3.3nm,0.8s
AFDM Forest Hills D 50.27 311 P P 21 23 15.8 -1.2
F10A Beach Ranch, E 50.56 321 P P 21 23 18.7 -0.5
F10A IAmb IAmb 21 23 20.9
comp=Z,4.8nm,0.9s
MOD Modoc Plateau 50.84 315 P P 21 23 21.0 -0.4
MOD IAmb IAmb 21 23 24.5
comp=Z,2.8nm,0.9s
G08A Pilot Rock 51.33 320 IAmb IAmb 21 23 27.1
comp=Z,4.3nm,0.9s
E09A Wood Farm, Sta 51.38 321 P P 21 23 24.7 -0.5
E09A IAmb IAmb 21 23 34.9
comp=Z,7.2nm,1.0s
MCCM Marconi Confer 51.43 310 P P 21 23 25.9 +0.1
PLCA Paso Flores 52.19 177 P P 21 23 29.2 -2.2
comp=Z,12nm,0.8s,baz=20,slow=8.5,SNR=28
PLCA Paso Flores 52.19 177 P P 21 23 29.1 -2.2
B08A Colville Reser 52.95 323 IAmb IAmb 21 23 38.6
comp=Z,6.9nm,0.9s
PGC Sidney 55.54 322 P P 21 23 54.4 -1.3
YKA Yellowknife Ar 58.73 339 P P 21 24 17.9 -0.1
comp=Z,3.1nm,0.8s,baz=128,slow=7.4,SNR=32
YKA LR LR 21 50 06.4
comp=Z,76nm,18.2s,baz=0.0,slow=36
RES Resolute Bay 64.18 354 LR LR 21 54 15.8
comp=Z,64nm,18.2s,baz=216,slow=37
ESDC Sonseca Array 66.69 52 P P 21 25 10.4 -1.2
comp=Z,1.9nm,0.8s,baz=282,slow=6.5,SNR=5.4
ESDC Sonseca Array 66.69 52 IAmb IAmb 21 25 13.2
comp=Z,2.0nm,1.1s
TIC Toumodi 67.38 88 eP P 21 25 13.7 -2.6
LIC Lamto 67.44 88 eP P 21 25 15.7 -1.0
comp=Z,22nm,0.8s
DBIC Dimbokro 67.53 88 P P 21 25 15.7 -1.6
comp=Z,7.5nm,1.0s,baz=275,slow=6.3,SNR=6.0
DBIC LR LR 21 56 28.8
comp=Z,29nm,18.3s,baz=320,slow=37
DBIC Dimbokro 67.53 88 IAmb IAmb 21 25 16.8
comp=Z,13nm,1.1s
KIC Kosan Boka 67.70 88 eP P 21 25 17.4 -1.0
comp=Z,9.8nm,0.7s
BCAR Beaver Creek A 70.01 333 P P 21 25 32.5 +0.5
ILAR Eielson Array 72.57 334 P P 21 25 46.2 -1.1
comp=Z,0.2nm,0.5s,baz=89,slow=4.3,SNR=3.7
ILAR LR LR 21 59 05.7
comp=Z,87nm,19.1s,baz=116,slow=37
TORD Torodi Ar. Bea 72.90 80 P P 21 25 49.2 -1.0
comp=Z,3.7nm,0.9s,baz=287,slow=5.6,SNR=13
TORD Torodi Ar. Bea 72.90 80 IAmb IAmb 21 25 50.3
comp=Z,3.4nm,0.9s
RND Reindeer 73.22 333 P P 21 25 51.0 -0.3
RND IAmb IAmb 21 26 08.4
comp=Z,10nm,1.0s
RSO Redoubt South 74.78 330 P P 21 25 59.7 -0.9
IMAR Indian Mountai 75.57 335 P P 21 26 03.9 -0.9
PMSA Palmer Station 76.53 176 eP P 21 26 26.8 +17
DAVOX Davos/Dischmat 76.88 44 LR LR 21 55 36.1
comp=Z,88nm,21.5s,baz=274,slow=32
KEST Kesra 77.28 56 P P 21 26 15.4 +0.2
KEST IAmb IAmb 21 26 28.4
comp=Z,8.5nm,1.1s
TEOL Teolo 78.22 46 P P 21 26 18.9 -1.3
SDPT Sand Point 78.95 324 P P 21 26 23.3 -0.6
GERES GERESS Array B 79.30 42 P P 21 26 25.0 -1.1
comp=Z,1.3nm,0.7s,baz=256,slow=4.0,SNR=7.8
MLR Muntele Rosu 88.10 44 P P 21 27 10.2 -1.0
ALN Alexandroupoli 89.33 48 P P 21 27 16.6 -0.4
ALN IAmb IAmb 21 27 18.4
comp=Z,1.6nm,0.8s
BRTR Keskin Array B 95.22 48 P P 21 27 43.3 -1.2
comp=Z,1.3nm,0.8s,baz=260,slow=4.4,SNR=7.3
MKAR Makanchi Array 117.81 19 PKP PKPdf 21 33 04.4 -2.5
comp=Z,0.1nm,0.6s,baz=357,slow=0.9,SNR=2.7
WMQ Urumqi 122.10 16 eP PKiKP 21 33 17.3 +1.8
HHC Hu-ho-hao-te 127.56 355 eP PKiKP 21 33 26.6 +0.1
LZH Lanzhou 132.42 3 ePKP PKiKP 21 33 36.3 -0.2
LZH pPKP PKPdf 21 33 39.5 +4.1
LZH sPKP 21 33 41.8
NJ2 Nanjing 135.02 345 eP PKPdf 21 33 39.8 -0.3
CD2 Chengdu 137.57 4 PKP PKPdf 21 33 44.3 -0.7
CMAR Chiang Mai Arr 149.08 15 PKPbc PKPdf 21 34 06.4 +1.1
comp=Z,1.5nm,0.6s,baz=329,slow=3.7,SNR=11
ASAR Alice Springs 151.61 241 PKPbc PKPbc 21 34 14.2 -1.2
comp=Z,2.1nm,0.8s,baz=114,slow=2.3,SNR=17
ASAR Alice Springs 151.61 241 PKPab PKPab 21 34 25.9 +1.8
WRA Warramunga Arr 152.28 249 PKPbc PKPbc 21 34 16.2 -0.9
comp=Z,1.2nm,0.7s,baz=96,slow=2.8,SNR=11
WRA PKPab PKPab 21 34 26.9 0.0
comp=Z,1.2nm,0.5s,baz=96,slow=3.1,SNR=11

IDC 14 21:40:37.6±1.6, 34.52S×179.01W, h0km, mb4.6/4, mb1 4.7/5, mb1mx4.1/39, mbtmp4.6/5, ML4.5/1, MS3.8/5, Ms1 3.8/5, ms1mx3.3/26, Error ellipse: s-maj=54.7km s-min=27.0km az=138.0
NEIC 14 21:40:38.5±2.6, 34.7S±0.1×178.9W±0.1, h10km±1km, mb4.6/17, Error ellipse: s-maj=17.7km s-min=13.4km az=125.0
WEL 14 21:40:40.7±0.6, 34°S±4'×17°9W±1'0, h33km, M4.4/34, mB5.0/14, ML4.7/21, MLv4.5/29, MLv4.5/34, Mw(mB)4.3/14
ISC 14 21:40:41.5±0.7, 34.58S±0.07×178.8W±0.1, h35km, n86, σ1.98/88, mb4.5/10, MS3.7/6, 2C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.80**	**217**	Pn	**Pn**	**21 41 38.4**	**+1.0**
MXZ				Sn	**Sn**	**21 42 18.9**	**-2.0**
MXZ	**Matakaoa Point**	**3.80**	**217**	P	**Pn**	**21 41 38.5**	**+1.0**
MXZ				S	**Sn**	**21 42 21.5**	**+0.7**
WMGZ	**Waiomatatini S**	**3.95**	**214**	P	**Pn**	**21 41 41.8**	**+2.3**
PKGZ	**Pakihiroa**	**4.16**	**217**	P	**Pn**	**21 41 43.3**	**+0.8**
HAZ	**Te Kaha**	**4.21**	**220**	P	**Pn**	**21 41 44.7**	**+1.6**
PUZ	**Puketiti**	**4.22**	**214**	P	**Pn**	**21 41 44.0**	**+0.7**
PUZ				S	**Sn**	**21 42 34.0**	**+2.5**
RUGZ	**Raukumara Rang**	**4.42**	**219**	P	**Pn**	**21 41 47.6**	**+1.4**
TKGZ	**Te Karaka**	**4.71**	**214**	P	**Pn**	**21 41 52.3**	**+2.3**
TKGZ				S	**Sn**	**21 42 46.7**	**+3.3**
WHRZ	**Whale Island**	**4.74**	**225**	P	**Pn**	**21 41 53.7**	**+3.3**
MWZ	**Matawai**	**4.78**	**217**	P	**Pn**	**21 41 51.4**	**+0.3**
MWZ				S	**Sn**	**21 42 45.0**	**-0.3**
URZ	**Urewera**	**4.94**	**221**	Pn	**Pn**	**21 41 53.1**	**-0.1**
19nm,0.3s,baz=278,slow=4.2,SNR=84							
URZ				Sn	**Sn**	**21 42 49.8**	**+0.7**
15nm,0.3s,baz=177,slow=17,SNR=8.3							
URZ	**Urewera**	**4.94**	**221**		**Pn**	**21 41 53.9**	**+0.7**
URZ	**Urewera**	**4.94**	**221**	P	**Pn**	**21 41 54.1**	**+0.9**
RAGZ	**Rawiri**	**4.96**	**217**	P	**Pn**	**21 41 54.1**	**+0.5**
RAGZ				S	**Sn**	**21 42 50.5**	**+0.8**
RIGZ	**Rimuhau**	**4.97**	**213**	P	**Pn**	**21 41 54.8**	**+1.2**
OPRZ	**Ohinepanea**	**4.98**	**228**	P	**Pn**	**21 41 55.3**	**+1.6**
MARZ	**Manawahe**	**5.00**	**226**	P	**Pn**	**21 41 56.1**	**+2.1**
EDRZ	**Edgecumbe**	**5.04**	**224**	P	**Pn**	**21 41 56.2**	**+1.6**
SNGZ	**Shannon Statio**	**5.22**	**215**	P	**Pn**	**21 41 58.7**	**+1.6**
OMRZ	**Omania**	**5.26**	**227**	P	**Pn**	**21 41 59.7**	**+2.1**
KNZ	**Kokohu**	**5.27**	**212**	P	**Pn**	**21 41 57.3**	**-0.3**
TARZ	**Mount Tarawera**	**5.27**	**225**	P	**Pn**	**21 41 59.5**	**+1.8**
MHGZ	**Mahia Peninsul**	**5.28**	**209**	P	**Pn**	**21 41 59.2**	**+1.4**
KARZ	**Kaharoa**	**5.28**	**228**	P	**Pn**	**21 42 00.5**	**+2.7**
MUGZ	**Murupara**	**5.29**	**221**	P	**Pn**	**21 41 58.8**	**+0.9**
RRRZ	**Republican Roa**	**5.33**	**224**	P	**Pn**	**21 42 00.2**	**+1.6**
GLKZ	**Green Lake**	**5.35**	**8**	S	**Sn**	**21 42 53.0**	**-6.2**
HLRZ	**Highlands Stat**	**5.37**	**226**	P	**Pn**	**21 42 02.2**	**+3.1**
RAHZ	**Arahi**	**5.45**	**216**	P	**Pn**	**21 42 01.0**	**+1.8**
PRRZ	**Plateau Road**	**5.51**	**223**	P	**Pn**	**21 42 02.3**	**+1.3**
NMHZ	**Naumai**	**5.73**	**217**	P	**Pn**	**21 42 05.8**	**+1.7**
MRHZ	**Matea Rd**	**5.73**	**221**	P	**Pn**	**21 42 05.6**	**+1.5**
BKZ	**Black Stump Fm**	**5.94**	**218**		**Pn**	**21 42 07.3**	**+0.4**
OUZ	**Omahuta**	**6.29**	**262**	P	**Pn**	**21 42 14.0**	**+2.3**
HIZ	**Hauiti**	**6.45**	**231**	Pn	**Pn**	**21 42 15.5**	**+1.6**
MSWZ	**Moikau Station**	**8.29**	**213**	Pn	**Pn**	**21 42 38.2**	**-1.0**
MSWZ				Sn	**Sn**	**21 44 05.6**	**-5.9**
PLWZ	**Palliser**	**8.41**	**212**	Pn	**Pn**	**21 42 38.9**	**-1.9**
PLWZ				Sn	**Sn**	**21 44 08.3**	**-6.2**
BHW	**Baring Head**	**8.46**	**214**	Pn	**Pn**	**21 42 40.8**	**-0.6**
SNZO	**South Karori**	**8.46**	**215**	Pn	**Pn**	**21 42 40.4**	**-1.1**
TUWZ	**Tuamarina**	**8.92**	**218**	Pn	**Pn**	**21 42 45.6**	**-2.2**
CMWZ	**Cape Campbell**	**9.03**	**216**	Pn	**Pn**	**21 42 50.7**	**+1.4**
BSWZ	**Blackbirch Sta**	**9.17**	**217**	Pn	**Pn**	**21 42 52.5**	**+1.3**
QRZ	**Quartz Range**	**9.28**	**225**	Pn	**Pn**	**21 42 52.1**	**-0.7**
THZ	**Tophouse**	**9.70**	**220**	Pn	**Pn**	**21 42 58.5**	**-0.1**
THZ				Sn	**Sn**	**21 44 41.2**	**-5.1**
KHZ	**Kahutara**	**9.87**	**215**	Pn	**Pn**	**21 43 01.1**	**+0.4**
LTZ	**Lake Taylor**	**10.76**	**218**	Pn	**Pn**	**21 43 10.5**	**-2.6**
RPZ	**Rata Peaks**	**12.05**	**218**	Pn	**Pn**	**21 43 28.9**	**-1.7**
ODZ	**Otahua Downs**	**13.22**	**215**	Pn	**Pn**	**21 43 43.5**	**-3.1**
MLZ	**Mavora Lakes**	**14.71**	**219**	Pn	**Pn**	**21 44 06.2**	**-0.7**
WHZ	**Wether Hill Ro**	**15.15**	**218**	Pn	**Pn**	**21 44 12.3**	**-0.5**
PYZ	**Puysegur Point**	**15.99**	**219**	Pn	**Pn**	**21 44 19.9**	**-3.7**
PYZ				IAmb	IAmb	21 44 31.7	

comp=Z,101nm,1.2s
DZM Mont Dzumac 17.98 310 eLR LR 21 48 03.2
comp=Z,285nm,23.4s
DZM Mont Dzumac 17.98 310 LR LR 21 50 34.2
comp=Z,277nm,18.1s,baz=194,slow=34
EIDS Eidsvold 27.58 281 P P 21 46 26.1 +0.7
EIDS IAmb IAmb 21 46 27.0
comp=Z,7.5nm,1.0s
TBI Tubuai 27.89 74 eLR LR 21 53 12.4
comp=Z,80nm,25.8s
PPT2 Papeete2 31.06 64 eLR LR 21 54 35.0
comp=Z,40nm,20.8s
STKA Stephens Creek 33.11 263 LR LR 22 00 03.9
comp=Z,198nm,18.2s,baz=38,slow=35
COEN Coen 39.97 291 P P 21 48 12.9 +0.1
AS31 Alice Springs 42.40 272 P P 21 48 32.8 0.0
ASAR Alice Springs 42.40 272 P P 21 48 32.3 -0.4
comp=Z,6.4nm,0.7s,baz=115,slow=7.9,SNR=86
ASAR PcP PcP 21 50 25.9 +0.3
comp=Z,1.0nm,0.5s,baz=120,slow=3.8,SNR=6.0
ASAR LR LR 22 04 52.4
comp=Z,88nm,20.5s,baz=110,slow=34
WR0 Warramunga Arr 43.59 277 P P 21 48 41.8 -0.6
WB2 Warramunga Arr 43.75 277 P P 21 48 43.5 -0.2
WB2 IAmb IAmb 21 48 44.8
comp=Z,4.9nm,0.5s
WRAB Tennant Creek 43.76 277 P P 21 48 43.4 -0.4
WRAB IAmb IAmb 21 48 44.3
comp=Z,4.2nm,0.7s
WRA Warramunga Arr 43.76 277 P P 21 48 43.1 -0.7
comp=Z,3.3nm,0.5s,baz=118,slow=7.5,SNR=53
WRA Warramunga Arr 43.76 277 IAmb IAmb 21 48 44.3
comp=Z,0.2nm,0.7s
WB0 Warramunga Arr 43.80 277 P P 21 48 43.9 -0.3
WB0 IAmb IAmb 21 48 45.0
comp=Z,4.7nm,0.5s
FORT Forrest 44.48 259 P P 21 48 47.1 -2.2
KNRA Kununurra 50.50 278 P P 21 49 35.7 -0.6
KNRA IAmb IAmb 21 49 37.0
comp=Z,12nm,1.1s
FITZ Fitzroy Crossi 51.82 274 P P 21 49 46.3 +0.1
comp=Z,3.5nm,0.6s,baz=151,slow=10,SNR=6.8
FITZ LR LR 22 11 41.9
comp=Z,89nm,18.3s,baz=136,slow=36
FITZ Fitzroy Crossi 51.82 274 IAmb IAmb 21 49 46.7
comp=Z,4.0nm,0.7s
MORW Morawa 54.80 256 P P 21 50 07.0 -1.0
MORW IAmb IAmb 21 50 17.9
comp=Z,7.1nm,1.0s
SYO Syowa Base 72.91 194 eX P 21 52 15.1 +8.6
SYO Syowa Base 72.91 194 ePcP PcP 21 52 25.2 +1.8
EFI East Falkland 79.66 147 P P 21 52 45.1 0.0
YULB Yu-li 80.97 306 P P 21 52 53.4 +0.8
PSI Prapat 85.23 277 LR LR 22 33 58.0
comp=Z,44nm,18.4s,baz=68,slow=38
PETK Petropavlovsk- 89.69 346 P P 21 53 37.5 +2.2
comp=Z,3.3nm,0.6s,baz=140,slow=7.0,SNR=3.8
BEKR Beckworth 91.61 41 P P 21 53 47.0 +2.1
MKAR Makanchi Array 119.89 308 PKP PKiKP 21 59 28.4 +0.6
comp=Z,0.6nm,0.9s,baz=90,slow=2.9,SNR=4.4
ARCES ARCESS Array B 142.50 346 PKP PKPdf 22 00 08.2 -1.4
comp=Z,2.0nm,0.8s,baz=69,slow=3.0,SNR=2.5
FINES FINESS Array B 148.78 337 PKPbc PKiKP 22 00 25.6 -0.1
comp=Z,2.1nm,0.6s,baz=28,slow=4.1,SNR=11
NB2 NORSAR Subarra152.75 349 PKP PKPab 22 00 45.8 +1.1
comp=Z,0.6nm,0.6s,baz=17,slow=2.6
NOA NORSAR Array B 152.75 349 PKPab PKPab 22 00 45.2 +0.5
comp=Z,1.0nm,0.7s,baz=25,slow=4.4,SNR=3.3
BRTR Keskin Array B 153.74 291 PKPbc PKiKP 22 00 38.3 +1.4
comp=Z,0.5nm,0.6s,baz=106,slow=3.1,SNR=3.2
BRTR Keskin Array B 153.74 291 PKiKP 22 00 37.8 +0.9
AKASG Malin Array Be 154.06 317 PKPbc PKiKP 22 00 38.5 +1.5
comp=Z,0.3nm,0.3s,baz=53,slow=2.1,SNR=3.5

IDC 14 21:43:57.8±1.5, 15.96S×174.98W, h288km±15km, mb3.5/6, mb1 3.8/7, mb1mx3.3/44, mbtmp4.1/7, Error ellipse: s-maj=33.5km s-min=18.3km az=142.0
ISC 14 21:43:57.0±0.9, 16.0S±0.3×175.1W±0.2, h278km, n8, σ0.66/9, mb3.6/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.81**	**58**	P	**Pn**	**21 45 01.0**	**+0.9**
6.9nm,0.3s,baz=310,slow=5.0,SNR=9.6							
AFI				S	**S**	**21 45 50.3**	**-0.1**
22nm,0.3s,baz=296,slow=22,SNR=10							
WRA	**Warramunga Arr**	**48.12**	**257**	P	**P**	**21 52 10.2**	**+0.4**
1.0nm,0.4s,baz=93,slow=7.6,SNR=6.4							
ASAR	**Alice Springs**	**48.38**	**252**	P	**P**	**21 52 12.4**	**+0.7**
9.9nm,0.6s,baz=86,slow=7.7,SNR=5.6							
QSPA	**South Pole Qui**	**74.09**	**180**	P	**P**	**21 55 02.5**	**-0.3**
1.3nm,0.6s,baz=42,slow=1.3,SNR=8.6							
NVAR	**Mina Array Bea**	**75.84**	**43**	P	**P**	**21 55 13.0**	**-0.3**
0.7nm,0.6s,baz=222,slow=8.0,SNR=3.4							
ILAR	**Eielson Array**	**83.31**	**12**	P	**P**	**21 55 52.1**	**-0.3**
0.3nm,0.6s,baz=231,slow=5.5,SNR=6.2							
PDAR	**Pinedale Array**	**83.78**	**42**	P	**P**	**21 55 54.9**	**-0.8**
0.7nm,0.6s,baz=204,slow=3.6,SNR=6.9							
BRTR	**Keskin Array B**	**145.53**	**319**	PKPbc	**PKPdf**	**22 03 02.1**	**-0.5**
0.3nm,0.7s,baz=56,slow=5.4,SNR=3.8							

IDC 14 21:53:44.1±0.9, 15.59N×96.02W, h0km, mb4.3/19, mb1 4.5/21, mb1mx4.3/46, mbtmp4.3/21, ML4.0/2, MS3.6/8, Ms1 3.6/8, ms1mx3.3/32, Error ellipse: s-maj=24.3km s-min=13.9km az=44.0
MEX 14 21:53:45.1±0.4, 15.38N×96.15W, h3km±3km, MD4.6
NEIC 14 21:53:46.6±1.9, 15.51N±0.06×96.06W±0.07, h16km±4km, Error ellipse: s-maj=11.4km s-min=6.1km az=46.0
ISC 14 21:53:45.9±1.2, 15.45N±0.05×96.12W±0.04, h16km±6km, n459, σ1.21/443, mb4.5/90, MS3.4/7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.32**	**1**		**Pg**	**21 53 52.4**	**-0.2**
HUIG					**Sg**	**21 53 58.2**	**+1.0**
HUIG	**Huatulco**	**0.32**	**1**	eP	**Pg**	**21 53 52.4**	**-0.2**
HUIG				eS	**Sg**	**21 53 58.2**	**+1.0**
PANG	**Puerto Angel**	**0.41**	**303**		**Pg**	**21 53 53.1**	**-1.1**
PANG					**Sg**	**21 53 58.9**	**-0.9**
PANG	**Puerto Angel**	**0.41**	**303**	eP	**Pg**	**21 53 53.1**	**-1.1**
PANG				eS	**Sg**	**21 53 58.9**	**-0.9**
PEIG	**Puerto Escondi**	**1.14**	**299**	eP	**Pn**	**21 54 03.6**	**-3.5**
PEIG				eP	**Pn**	**21 54 03.7**	**-3.5**
VHO	**Vista Hermosa**	**1.72**	**340**	eP	**Pn**	**21 54 14.6**	**-0.7**
VHO				eP	**Pn**	**21 54 14.7**	**-0.7**
YOIG	**Yosondua**	**1.96**	**316**	eP	**Pn**	**21 54 16.7**	**-2.1**
CMIG	**Matias Romero**	**2.02**	**36**	Pn	**Pn**	**21 54 17.6**	**-1.7**
35nm,0.3s,baz=223,slow=9.6,SNR=107							
CMIG				Sn	**Sn**	**21 54 43.5**	**-0.8**
170nm,0.3s,baz=31,slow=23,SNR=11							
CMIG	**Matias Romero**	**2.02**	**36**	eP	**Pn**	**21 54 17.6**	**-1.7**
CMIG				i S	**Sn**	**21 54 43.2**	**-1.0**
PNIG	**Pinotepa**	**2.15**	**296**		**Pn**	**21 54 18.8**	**-2.4**
PNIG	**Pinotepa**	**2.15**	**296**	eP	**Pn**	**21 54 18.8**	**-2.4**
PNIG				i S	**Sn**	**21 54 44.5**	**-3.1**
TOIG	**Toxpalan**	**2.79**	**341**	eP	**Pn**	**21 54 30.5**	**+0.5**
TOIG				eS	**Sn**	**21 55 02.5**	**-0.9**
PCIG		**2.80**	**84**	eP	**Pn**	**21 54 27.6**	**-2.5**
PCIG				i S	**Sn**	**21 54 58.9**	**-4.7**
TLIG	**Tlapa**	**3.15**	**312**		**Pn**	**21 54 35.1**	**0.0**
TPIG	**Tehuac#an**	**3.19**	**338**	eP	**Pn**	**21 54 38.4**	**+2.9**
TPIG				eS	**Sn**	**21 55 12.0**	**-1.3**
CCIG	**Comitan**	**3.92**	**77**		**Pn**	**21 54 45.0**	**-0.6**
CCIG	**Comitan**	**3.92**	**77**	eP	**Pn**	**21 54 44.5**	**-1.1**
CCIG				eS	**Sn**	**21 55 29.2**	**-2.2**
UNM	**Universidad Na**	**4.84**	**323**	Pn	**Pn**	**21 54 59.8**	**+1.4**
APG	**El Apazote**	**5.47**	**94**	Pn	**Pn**	**21 55 07.6**	**+0.6**
2.5nm,0.3s,baz=337,slow=18,SNR=23							
APG				Sn	**Sn**	**21 56 07.5**	**-2.3**
7.1nm,0.3s,baz=6.8,slow=19,SNR=6.5							
TGUH	**Tegucigalpa,Un**	**8.66**	**98**	Pn	**Pn**	**21 55 51.1**	**+0.2**
TEIG	**Tepich**	**8.85**	**56**		**Pn**	**21 55 50.2**	**-3.0**
TEIG	**Tepich**	**8.85**	**56**	eP	**Pn**	**21 55 52.0**	**-1.2**
TEIG				i S	**Sn**	**21 57 27.1**	**-5.5**
ZAIG	**Zacatecas**	**9.50**	**321**	Pn	**Pn**	**21 56 03.6**	**+1.2**
ESTN	**Estel**	**9.73**	**103**	Pn	**Pn**	**21 56 07.3**	**+1.9**
ACON	**Acoyapa**	**11.18**	**107**	Pn	**Pn**	**21 56 26.0**	**+0.9**
JTS	**Las Juntas de**	**12.03**	**114**	Pn	**Pn**	**21 56 39.5**	**+2.7**
0.3nm,0.3s,baz=349,slow=16,SNR=3.1							
JTS	**Las Juntas de**	**12.03**	**114**		**Pn**	**21 56 37.4**	**+0.5**
KVTX	**Kingsville**	**12.15**	**352**	Pn	**Pn**	**21 56 37.6**	**-0.8**

HDC Heredia 12.90 113 Pn Pn 21 56 50.3 +1.5
833A Chaparral WMA, 13.17 347 Pn Pn 21 56 53.0 +0.7
HKT Hockley 14.44 1 Pn Pn 21 57 09.1 -0.6
HPIG 14.48 324 Pn Pn 21 57 11.8 +1.3
435B Jarrell 15.32 355 Pn Pn 21 57 21.8 +0.2
435B IAmb IAmb 21 57 30.1
comp=Z,20nm,0.5s
JCT Junction City 15.34 348 Pn 21 57 21.9 0.0
JCT Junction City 15.34 348 P Pn 21 57 22.1 +0.3
baz=165
545A Edgard 15.42 19 Pn Pn 21 57 20.2 -2.6
441A DeRidder 15.47 9 Pn Pn 21 57 21.9 -1.6
441A IAmb IAmb 21 57 30.5
comp=Z,52nm,0.8s
TXAR Lajitas Array 15.48 335 Pn Pn 21 57 25.4 +1.7
comp=Z,0.3nm,0.3s,baz=160,slow=12,SNR=22
TXAR LR LR 22 03 21.7
comp=Z,219nm,18.2s,baz=0.0,slow=38
TX31 Lajitas Ar. Si 15.48 335 Pn 21 57 24.9 +1.2
TX32 Lajitas Array 15.48 335 Pn 21 57 24.4 +0.7
342A Flagon Creek P 16.23 12 Pn Pn 21 57 33.3 0.0
342A IAmb IAmb 21 57 38.2
comp=Z,42nm,0.8s
NATX Nacogdoches 16.29 4 Pn Pn 21 57 33.1 -1.0
NATX IAmb IAmb 21 57 38.4
comp=Z,32nm,0.8s
237A Washetta, Mont 16.48 1 Pn Pn 21 57 35.1 -1.4
237A IAmb IAmb 21 57 40.5
comp=Z,43nm,0.9s
WHTX Lake Whitney, 16.52 356 Pn Pn 21 57 35.8 -1.2
WHTX IAmb IAmb 21 57 44.8
comp=Z,24nm,0.8s
WHTX Lake Whitney, 16.52 356 P Pn 21 57 37.4 +0.5
baz=175
344A Westbrook Farm 16.68 16 Pn Pn 21 57 38.3 -0.7
346A Big Creek Wild 16.99 20 Pn Pn 21 57 40.9 -2.0
346A IAmb IAmb 21 57 58.4
comp=Z,38nm,1.1s
ABTX Abilene, Hawle 17.40 350 Pn 21 57 46.8 -1.3
ABTX Abilene, Hawle 17.40 350 P Pn 21 57 48.0 -0.1
baz=168
VBMS Vicksburg 17.46 16 P Pn 21 57 47.4 -1.3
Z41A Richland Creek 17.99 9 P P 21 57 56.3 +0.6
Z41A IAmb IAmb 21 58 09.5
comp=Z,68nm,1.1s
Z41A Richland Creek 17.99 9 P Pn 21 57 53.6 -1.7
baz=190
553A Crawfordville 18.18 34 P 21 57 58.7 +0.8
553A IAmb IAmb 21 58 03.2
comp=Z,67nm,1.1s
MNTX Cornudas Mount 18.25 334 Pn 21 57 58.5 -0.2
MNTX Cornudas Mount 18.25 334 P P 21 57 59.0 +0.3
baz=149
WLAR White Oak Lake 18.36 8 P P 21 57 59.3 -0.6
WLAR IAmb IAmb 21 58 15.1
comp=Z,55nm,1.1s
X37A Clayton 19.07 2 P Pn 21 58 08.5 0.0
X37A IAmb IAmb 21 58 10.3
comp=Z,24nm,1.0s
SRIG Santa Rosalia 19.08 311 P Pn 21 58 09.1 +0.5
MIAR Mount Ida 19.16 6 IAmb IAmb 21 58 11.4
comp=Z,23nm,0.8s
MIAR Mount Ida 19.16 6 P P 21 58 08.0 -0.6
baz=187,SNR=8.2
X40A Basin Creek Fa 19.19 8 P P 21 58 08.4 -0.6
baz=189
HSIG 19.23 317 P Pn 21 58 11.2 +0.7
WMOK Wichita Mounta 19.36 353 P P 21 58 10.8 -0.1
baz=172,SNR=15
LRAL Lakeview Retre 19.37 24 P P 21 58 09.9 -1.0
baz=207
MSTX Muleshoe 19.40 343 IAmb IAmb 21 58 14.2
comp=Z,65nm,1.0s
MSTX Muleshoe 19.40 343 P P 21 58 11.9 +0.5
baz=159,SNR=25
UALR University of 19.54 9 IAmb IAmb 21 58 14.1
comp=Z,36nm,0.8s
X43A Marvell 19.57 13 P P 21 58 13.8 +0.7
TIGA Tifton 19.61 34 P Pn 21 58 15.4 +0.5
TIGA IAmb IAmb 21 58 22.0
comp=Z,22nm,0.8s
W35A Tecumseh 19.64 358 P P 21 58 14.1 +0.2
FNO Franklin 19.76 357 P P 21 58 16.1 +0.8
W39A Magazine 19.78 6 P P 21 58 14.9 -0.5
W39A IAmb IAmb 21 58 22.2
comp=Z,20nm,0.8s
W39A PcP 22 02 34.5 +1.1
W39A Magazine 19.78 6 P P 21 58 15.2 -0.2
baz=186
319A Douglas 19.90 325 P Pn 21 58 18.3 -0.3
OKCFA Oklahoma City 19.92 357 P P 21 58 16.8 -0.2
OKCFA IAmb IAmb 21 58 19.6
comp=Z,30nm,0.8s
OXF Oxford 19.92 16 P Pn 21 58 18.4 -0.3
W41B Gary Mavity, V 19.95 9 P P 21 58 16.8 -0.5
W41B Gary Mavity, V 19.95 9 P P 21 58 17.0 -0.2
baz=190
Z50A Ashland 19.99 26 P P 21 58 17.9 +0.1
Z50A IAmb IAmb 21 58 28.5
comp=Z,19nm,0.9s
Z50A Ashland 19.99 26 P P 21 58 17.4 -0.4
baz=210
AMTX Amarillo 19.99 347 P P 21 58 18.8 +0.9
AMTX IAmb IAmb 21 58 24.1
comp=Z,29nm,1.0s
AMTX Amarillo 19.99 347 P Pn 21 58 19.0 -0.6
baz=163
152A Waverly Hall 20.03 29 P P 21 58 18.0 -0.2
121A Cookes Peak, D 20.05 330 IAmb IAmb 21 58 22.8
comp=Z,48nm,1.0s
121A Cookes Peak, D 20.05 330 P Pn 21 58 21.3 +0.9
baz=144,SNR=27
WHAR Wooly Hollow 20.06 9 P P 21 58 16.7 -1.8
WHAR IAmb IAmb 21 58 26.6
comp=Z,17nm,0.9s
Y49A Blount Mountai 20.32 24 P P 21 58 21.4 +0.1
TUL1 Leonard 20.38 1 IAmb IAmb 21 58 25.3
comp=Z,39nm,0.9s
TUL1 Leonard 20.38 1 P P 21 58 21.6 -0.4
baz=180
GTBY Guantanamo Bay 20.50 74 P Pn 21 58 25.2 -0.4
GTBY IAmb IAmb 21 58 31.4
comp=Z,24nm,0.8s
Z52A Williamson 20.60 29 P P 21 58 23.0 -1.4
baz=214
X48A Hartselle 20.61 22 P P 21 58 24.0 -0.5
HBAR Harrisburg 20.61 13 P P 21 58 25.6 +1.1
LPAR Lepanto 20.74 13 P P 21 58 26.1 +0.3
LPAR IAmb IAmb 21 58 39.8
comp=Z,53nm,1.1s
PLAL Pickwick Lake 20.75 19 P P 21 58 24.6 -1.5
154A Montrose 20.78 32 P P 21 58 24.9 -1.4
154A IAmb IAmb 21 58 39.6
comp=Z,22nm,0.7s
HHAR Hobbs 20.84 5 IAmb IAmb 21 58 31.3
comp=Z,45nm,0.9s
Y51A Rockmart 20.91 27 P P 21 58 26.4 -1.4
baz=211
Y22D IRIS PASSCAL I 20.95 334 P P 21 58 29.4 +1.0
U32A Winter Ranch, 21.01 353 IAmb IAmb 21 58 32.3
comp=Z,44nm,1.0s
LCAR Lake Charles 21.01 11 IAmb IAmb 21 58 33.1
comp=Z,17nm,0.8s
U40A Yellville 21.03 7 P P 21 58 28.4 -0.6
baz=188,SNR=19
GNAR Gosnell 21.15 14 P P 21 58 31.6 +1.3
GNAR IAmb IAmb 21 58 47.2
comp=Z,50nm,1.0s
FPAL Fort Paine 21.23 25 P P 21 58 32.6 +1.4
GOGA Godfrey 21.24 30 P P 21 58 29.6 -1.6
baz=216
Y52A Lilburn 21.33 29 IAmb IAmb 21 58 42.5
comp=Z,15nm,0.8s
Y52A Lilburn 21.33 29 P P 21 58 30.8 -1.4
baz=214
LNXT Lenox 21.41 15 P P 21 58 32.6 -0.5
TUC Tucson 21.45 324 P P 21 58 35.6 +2.0
TUC IAmb IAmb 21 58 37.4
comp=Z,21nm,0.9s
TUC Tucson 21.45 324 P P 21 58 36.3 +2.7
baz=137
W49A Belvidere 21.49 23 P P 21 58 32.3 -1.7
baz=206
ANMO Albuquerque 21.53 336 P P 21 58 34.1 -0.5
comp=Z,4.1nm,0.8s,baz=144,slow=12,SNR=10

ANMO LR LR 22 06 11.4
comp=Z,139nm,21.4s,baz=160,slow=35
ANMO Albuquerque 21.53 336 P P 21 58 34.6 0.0
ANMO Albuquerque 21.53 336 P P 21 58 36.3 +1.7
baz=151
Y53A Monroe 21.54 29 P P 21 58 32.9 -1.6
baz=215
X51A Calhoun 21.57 26 P P 21 58 33.6 -1.2
baz=211
PBMO Poplar Bluff 21.84 12 P P 21 58 38.2 +0.5
V48A Smith Brothers 21.85 21 P P 21 58 38.7 +0.8
V48A IAmb IAmb 21 58 40.5
comp=Z,18nm,0.8s
PARMO Parma 21.88 14 P P 21 58 39.0 +0.9
HICK Hickman 21.89 15 P P 21 58 38.2 0.0
WVT Waverly 21.89 18 P P 21 58 38.1 -0.2
WVT IAmb IAmb 21 58 40.7
comp=Z,14nm,0.8s
WVT Waverly 21.89 18 P P 21 58 38.9 +0.7
baz=202
MGMO Mountain Grove 21.89 8 IAmb IAmb 21 58 41.2
comp=Z,31nm,0.8s
W50A Signal Mountai 21.93 24 P P 21 58 37.1 -1.7
W50A Signal Mountai 21.93 24 P P 21 58 36.3 -2.5
baz=209
157A Early Branch 21.97 36 P P 21 58 36.6 -2.6
baz=222
Y54A Tignall 21.98 31 P P 21 58 37.6 -1.6
baz=217
HENM Henderson Moun 22.00 14 P P 21 58 39.3 -0.1
X52A Dahlonega 22.02 28 P P 21 58 38.0 -1.7
baz=213
W51A Cleveland 22.12 25 P P 21 58 39.3 -1.4
baz=210
V49A McMinnville 22.20 22 P P 21 58 39.8 -1.8
baz=207
X53A Estanollee 22.21 29 P P 21 58 40.2 -1.5
baz=214
CLTN Cedars of Leba 22.34 21 P P 21 58 43.0 -0.1
214A Organ Pipe Nat 22.39 320 P P 21 58 44.7 +0.9
214A IAmb IAmb 21 58 53.4
comp=Z,14nm,1.0s
214A Organ Pipe Nat 22.39 320 P P 21 58 46.1 +2.4
baz=132,SNR=10
V50A Pikevile 22.43 24 P P 21 58 41.7 -2.3
baz=209
Y55A Saluda 22.46 32 P P 21 58 41.9 -2.6
baz=218
CPCT Cooper Cave 22.47 25 P P 21 58 43.8 -0.7
CPCT IAmb IAmb 21 58 47.1
comp=Z,16nm,0.9s
HODGE Hodges 22.49 31 P P 21 58 44.4 -0.3
HODGE IAmb IAmb 21 58 51.2
comp=Z,18nm,1.2s
Z57A Bowman 22.60 35 P P 21 58 44.8 -1.0
baz=222
X18A Snowflake 22.72 329 P P 21 58 48.7 +1.3
X18A IAmb IAmb 21 58 51.4
comp=Z,16nm,0.8s
W53A Cullowhee 22.82 28 P P 21 58 46.9 -1.5
baz=214
T25A Trinidad 22.83 343 P P 21 58 49.2 +0.7
T25A IAmb IAmb 21 58 52.6
comp=Z,35nm,1.0s
T25A Trinidad 22.83 343 P P 21 58 49.8 +1.3
baz=158,SNR=18
V51A Loudon 22.84 25 P P 21 58 47.5 -1.0
V51A IAmb IAmb 21 58 50.3
comp=Z,28nm,1.1s
V51A Loudon 22.84 25 P P 21 58 47.6 -0.8
baz=210
U49A Red Boiling Sp 22.91 22 P P 21 58 48.2 -1.0
baz=206
CCM Cathedral Cave 22.93 10 P P 21 58 48.4 -0.9
CCM IAmb IAmb 21 58 50.2
comp=Z,32nm,0.9s
CCM Cathedral Cave 22.93 10 P P 21 58 49.3 0.0
baz=192
TKL Tuckaleechee C 22.96 27 LR LR 22 08 37.8
comp=Z,74nm,19.3s,baz=152,slow=39
TKL Tuckaleechee C 22.96 27 P P 21 58 49.6 -0.1
TKL IAmb IAmb 21 58 59.7
comp=Z,15nm,1.1s
X55A Gracelyn & Ava 23.00 32 P P 21 58 49.2 -0.8
baz=218
JSC Jenkinsville 23.04 33 P P 21 58 49.5 -1.0
W18A Petrified Fore 23.09 331 P P 21 58 52.6 +1.3
W18A IAmb IAmb 21 58 56.1
comp=Z,11nm,0.9s
W18A Petrified Fore 23.09 331 P P 21 58 52.2 +0.9
baz=144
W54A Cherokee Point 23.21 30 P P 21 58 51.4 -0.8
baz=216
X16A Lo Mia Camp, P 23.39 327 P P 21 58 55.2 +0.9
U51A La Follette 23.47 25 P P 21 58 54.2 -0.7
baz=210
CBKS Cedar Bluff 23.50 353 P P 21 58 55.6 +0.5
CBKS Cedar Bluff 23.50 353 P P 21 58 55.8 +0.7
baz=171,SNR=8.8
T49A Edmonton 23.53 22 P P 21 58 54.7 -0.7
baz=206
113A Mohawk Valley, 23.54 320 P P 21 58 56.9 +1.4
KSU1 Kansas State U 23.57 359 P P 21 58 56.3 +0.6
baz=178,SNR=7.0
USIN University of 23.64 17 P P 21 58 55.8 -0.7
KMSC Kings Mountain 23.68 31 P P 21 58 56.1 -0.8
baz=218
T50A Nancy 23.71 23 P P 21 58 56.4 -0.8
baz=208
SDCO Great Sand Dun 23.71 341 P P 21 58 58.3 +0.8
SDCO IAmb IAmb 21 59 09.9
comp=Z,12nm,1.1s
SDCO Great Sand Dun 23.71 341 P P 21 58 58.8 +1.2
baz=156,SNR=13
V54A Nebo 23.89 29 P P 21 58 57.5 -1.4
baz=216
W56A Indian Trail 24.06 33 P P 21 58 59.2 -1.2
baz=219
S22A 4UR Ranch, Cre 24.15 339 IAmb IAmb 21 59 05.0
comp=Z,11nm,1.1s
S22A 4UR Ranch, Cre 24.15 339 P P 21 59 03.1 +1.4
baz=153,SNR=5.6
KSCO Kaye Shedlock' 24.16 348 P P 21 59 01.6 0.0
KSCO IAmb IAmb 21 59 12.7
comp=Z,14nm,0.9s
WUAZ Wupatki 24.21 328 P P 21 59 03.2 +1.1
WUAZ Wupatki 24.21 328 P P 21 59 05.0 +2.9
baz=141
S49A Springfield 24.23 21 P P 21 59 01.2 -0.8
baz=206,SNR=5.5
WCI Wyandotte Cave 24.29 19 P P 21 59 00.8 -1.8
V55A Taylorsville 24.30 31 P P 21 59 01.7 -1.0
V55A IAmb IAmb 21 59 08.7
comp=Z,15nm,1.1s
V55A Taylorsville 24.30 31 P P 21 59 01.4 -1.3
baz=217
MVCO Mesa Verde 24.30 335 P P 21 59 03.1 0.0
MVCO IAmb IAmb 21 59 11.8
comp=Z,10nm,0.8s
MVCO Mesa Verde 24.30 335 P P 21 59 05.3 +2.3
baz=149
W57A Gilead 24.38 33 IAmb IAmb 21 59 04.1
comp=Z,27nm,1.0s
W57A Gilead 24.38 33 P P 21 59 03.0 -0.4
baz=220
GLA Glamis 24.39 319 P P 21 59 06.6 +3.0
GLA IAmb IAmb 21 59 07.6
comp=Z,12nm,0.8s
GLA Glamis 24.39 319 P P 21 59 06.1 +2.5
baz=131
S50A Richmond 24.45 23 P P 21 59 04.6 +0.5
baz=208
RUSC La Rusia 24.52 110 P P 21 59 07.6 +2.1
Y60A Bolivia 24.54 38 P P 21 59 04.8 -0.1
U54A Nelsons Funny 24.55 29 P P 21 59 03.7 -1.4
U54A IAmb IAmb 21 59 06.8
comp=Z,13nm,0.8s
U54A Nelsons Funny 24.55 29 P P 21 59 04.4 -0.7
baz=215
W58A Raeford 24.69 35 P P 21 59 05.9 -0.3
baz=222
R49A Shelbyville 24.72 21 IAmb IAmb 21 59 08.4
comp=Z,22nm,1.0s
R49A Shelbyville 24.72 21 P P 21 59 05.6 -0.9
baz=206
S51A Beattyville 24.73 24 P P 21 59 06.7 +0.1

S51A IAmb IAmb 21 59 08.3
comp=Z,11nm,0.9s
S51A Beattyville 24.73 24 P P 21 59 07.0 +0.4
baz=210
PDMCI Parker Dam,Lak 24.82 322 P P 21 59 09.3 +1.8
baz=134
U55A TA2, Sparta 24.90 30 P P 21 59 07.4 -0.8
baz=216
V57A Coltrane Farms 25.05 33 P P 21 59 08.8 -0.7
baz=220
BLO Bloomington 25.09 18 IAmb IAmb 21 59 11.0
comp=Z,13nm,0.8s
U56A King 25.10 31 P P 21 59 09.5 -0.5
baz=218
Q48A North Vernon 25.11 19 P P 21 59 09.0 -1.0
baz=204,SNR=7.9
BC3 Big Chuckawall 25.18 320 P P 21 59 13.1 +2.3
baz=130,SNR=7.2
W13A Hualapai Mount 25.24 324 P P 21 59 12.9 +1.4
R51A Hillsboro 25.31 24 P P 21 59 11.2 -0.7
baz=209
IRM Iron Mountain 25.32 321 P P 21 59 14.1 +2.1
baz=132,SNR=13
V58A Windy Hill, Pi 25.33 34 P P 21 59 11.1 -0.9
baz=221
U15A North Rim 25.39 328 P P 21 59 14.2 +1.3
U15A IAmb IAmb 21 59 27.2
comp=Z,10nm,1.1s
Q49A Aurora 25.46 21 P P 21 59 12.7 -0.5
baz=206,SNR=6.1
O44A Mansfield 25.50 14 P P 21 59 14.0 +0.4
T55A Pulaski 25.52 29 P P 21 59 14.1 +0.3
baz=216
Q50A Georgetown 25.64 22 P P 21 59 14.4 -0.4
baz=208,SNR=5.9
ISCO Idaho Springs 25.65 343 P P 21 59 16.4 +1.1
ISCO IAmb IAmb 21 59 19.6
comp=Z,16nm,1.1s
ISCO Idaho Springs 25.65 343 P P 21 59 16.3 +1.1
baz=158,SNR=12
P48A Milroy 25.69 19 IAmb IAmb 21 59 15.0
comp=Z,22nm,0.9s
P48A Milroy 25.69 19 P P 21 59 14.5 -0.8
baz=204
U57A Blanch 25.70 32 P P 21 59 13.9 -1.5
baz=220
HDIL Hopedale 25.71 12 P P 21 59 15.6 +0.1
baz=195
SDV Santo Domingo 25.73 102 P P 21 59 17.3 +1.1
comp=Z,7.1nm,0.7s,baz=346,slow=3.9,SNR=11
SDV LR LR 22 08 26.2
comp=Z,65nm,20.4s,baz=46,slow=34
SDV Santo Domingo 25.73 102 P P 21 59 17.0 +0.9
SDV IAmb IAmb 21 59 19.5
comp=Z,8.4nm,0.8s
BELC Belle Mtn. Jos 25.75 319 P P 21 59 17.7 +1.7
baz=130
BLA Blacksburg 25.77 30 P P 21 59 14.3 -1.7
BLA IAmb IAmb 21 59 19.3
comp=Z,7.7nm,0.8s
XPFO Pion Flat 25.79 318 P P 21 59 16.4 0.0
PFO Pinyon Flats O 25.79 318 P P 21 59 16.1 -0.3
OGNE Ogallala 25.92 350 P P 21 59 18.6 +1.2
OGNE Ogallala 25.92 350 P P 21 59 17.6 +0.2
baz=166,SNR=8.3
BGNE Belgrade 25.93 356 P P 21 59 17.9 +0.4
P49A Miami Univ. Ec 25.99 20 P P 21 59 17.0 -1.0
baz=206,SNR=7.1
R53A Hurricane 26.00 26 P P 21 59 18.0 -0.1
R53A IAmb IAmb 21 59 19.9
comp=Z,9.5nm,0.8s
R53A Hurricane 26.00 26 P P 21 59 18.0 -0.1
baz=212
Q51A Peebles 26.03 23 P P 21 59 18.1 -0.3
baz=209,SNR=7.5
SFIN Lafayette 26.06 16 IAmb IAmb 21 59 18.3
comp=Z,18nm,0.8s
SFIN Lafayette 26.06 16 P P 21 59 17.6 -1.0
baz=200,SNR=5.9
KNB Kanab 26.11 328 P P 21 59 19.6 +0.2
T57A Hurt 26.18 32 P P 21 59 19.6 -0.1
T57A IAmb IAmb 21 59 21.5
comp=Z,8.2nm,0.9s
T57A Hurt 26.18 32 P P 21 59 19.0 -0.7
baz=219
LCMT Little Creek M 26.32 328 P P 21 59 19.3 -1.9
P50A Jamestown 26.38 22 P P 21 59 20.4 -1.1
baz=207,SNR=10.0
Q52A Bidwell 26.40 25 P P 21 59 20.2 -1.5
baz=211
U59A Littleton 26.46 35 P P 21 59 21.1 -1.2
baz=223
SCIA State Center 26.49 5 P P 21 59 22.5 0.0
SCIA State Center 26.49 5 P P 21 59 22.4 0.0
baz=186
HEC Hector,Ludlow 26.50 320 P P 21 59 24.5 +1.7
baz=131
O48A Farmland 26.50 19 P P 21 59 21.4 -1.2
baz=204,SNR=6.4
T58A Grand View Acr 26.51 33 P P 21 59 21.0 -1.7
baz=221
P51A Williamsport 26.54 23 P P 21 59 22.7 -0.3
baz=209
S56A Natural Bridge 26.55 30 P P 21 59 22.4 -0.7
baz=218
MTPU Mount Pierson 26.61 331 P P 21 59 24.1 0.0
Q53A Leroy 26.62 26 P P 21 59 22.9 -0.8
baz=213
TUQ Turquoise Moun 26.66 322 P P 21 59 26.5 +2.2
baz=132
SZCU Shurtz Canyon 26.69 329 P P 21 59 24.0 -0.7
O49A Covington 26.71 20 P P 21 59 23.6 -0.9
baz=206,SNR=8.2
SRU San Rafael Swe 26.75 335 P P 21 59 25.4 +0.3
N23A Red Feather La 26.76 343 P P 21 59 25.8 +0.6
R55A Marlinton 26.77 29 P P 21 59 25.3 +0.1
O20A White River Ci 26.78 339 IAmb IAmb 21 59 28.4
comp=Z,11nm,1.1s
O20A White River Ci 26.78 339 P P 21 59 26.7 +1.4
baz=153
SCI2 San Clemente I 26.80 315 P P 21 59 26.4 +1.0
baz=124
CCUT Cedar City 26.80 328 P P 21 59 25.8 +0.2
L40A Anamosa 26.86 8 IAmb IAmb 21 59 35.8
comp=Z,25nm,1.1s
Q16A Castle Valley 26.87 333 P P 21 59 26.4 +0.3
N47A Urbana 26.91 18 P P 21 59 24.9 -1.4
baz=202,SNR=8.6
S57A Dark Hollow, R 26.92 31 P P 21 59 26.8 +0.4
S57A IAmb IAmb 21 59 34.3
comp=Z,11nm,1.1s
O50A Cable 26.92 21 P P 21 59 25.4 -0.9
baz=207
V62A Hyde County Ai 26.96 38 P P 21 59 26.0 -0.7
baz=227
BFSC Mount Baldy Ra 26.96 318 P P 21 59 28.7 +1.7
baz=128
SHPR Sheep Range 26.97 325 P P 21 59 27.7 +0.6
MSU Marysvale 26.98 331 P P 21 59 28.2 +0.9
Q54A Coxs Mills 27.02 27 P P 21 59 26.1 -1.2
Q54A IAmb IAmb 21 59 27.8
comp=Z,8.7nm,0.9s
N48A Decatur 27.09 19 P P 21 59 26.6 -1.3
baz=204,SNR=6.2
P17A Butcher Ranch, 27.15 335 P P 21 59 28.3 -0.4
P53A Whipple 27.20 25 P P 21 59 28.6 -0.3
P53A IAmb IAmb 21 59 30.7
comp=Z,20nm,1.1s
ACSO Alum Creek Sta 27.22 22 P P 21 59 28.9 -0.2
ACSO IAmb IAmb 21 59 29.1
comp=Z,13nm,0.9s
S58A Poland Farm, P 27.26 33 P P 21 59 28.6 -0.9
baz=221
Q55A Buckhannon 27.36 28 P P 21 59 29.1 -1.3
baz=215
M47A Cromwell 27.38 17 P P 21 59 29.2 -1.3
baz=202
N49A Columbus Grove 27.42 20 P P 21 59 29.5 -1.3
N49A IAmb IAmb 21 59 30.6
comp=Z,13nm,0.9s
N49A Columbus Grove 27.42 20 P P 21 59 29.8 -1.1
baz=205
O52A Adamsville 27.56 24 P P 21 59 31.6 -0.5
baz=211
L44A Lake County Fo 27.56 13 P P 21 59 31.9 -0.2
baz=197
T60A Surry 27.62 35 P P 21 59 31.2 -1.5

Code	Station	Δ°	AZ°	Op	ISC	Time	Res
	baz=224						
N50A	Nevada	27.64	22	P	P	21 59 32.6	-0.2
	baz=208						
RDMU	Red Mountain	27.64	338	P	P	21 59 33.5	+0.4
P54A	Burton	27.69	27	P	P	21 59 32.9	-0.4
	baz=214						
S59A	Mechanicsville	27.77	33	P	P	21 59 34.3	+0.3
	baz=222						
PSUT	Pine Spring	27.80	329	P	P	21 59 35.4	+0.8
JFWS	Jewell Farm	27.83	9	P	P	21 59 34.2	-0.3
	baz=192						
RWWY	Rawlins	27.85	342	P	P	21 59 35.8	+0.7
RWWY				IAmb	IAmb	21 59 38.0	
	comp=Z,16nm,1.1s						
M49A	Liberty Center	27.98	20	P	P	21 59 35.1	-0.8
	baz=205						
MPMC	Manual Prospec	28.02	321	P	P	21 59 37.7	+1.2
	baz=131						
L47A	Sherwood	28.06	17	P	P	21 59 35.5	-1.1
	baz=203,SNR=8.5						
NLU	North Lily Min	28.12	333	P	P	21 59 38.2	+0.8
ECSD	EROS Data Cent	28.20	359	IAmb	IAmb	21 59 40.0	
	comp=Z,7.2nm,0.9s						
ECSD	EROS Data Cent	28.20	359	P	P	21 59 37.8	0.0
	baz=178						
DAC	Darwin (Calif)	28.23	321	P	P	21 59 39.4	+1.0
M50A	Fremont	28.23	21	P	P	21 59 36.9	-1.2
M50A				IAmb	IAmb	21 59 37.9	
	comp=Z,12nm,0.7s						
M50A	Fremont	28.23	21	P	P	21 59 37.6	-0.5
	baz=207						
L48A	N Adams	28.27	19	P	P	21 59 37.0	-1.4
	baz=204,SNR=6.7						
N53A	Lisbon	28.55	25	P	P	21 59 40.4	-0.5
	baz=212						
K22A	Casper	28.55	344	P	P	21 59 41.9	+0.7
K22A	Casper	28.55	344	P	P	21 59 42.5	+1.4
	baz=158						
R11A	Troy Canyon, C	28.55	327	P	P	21 59 43.3	+2.1
	baz=137						
L49A	Milan	28.62	19	P	P	21 59 40.8	-0.8
	baz=205						
O55A	Ligonier	28.70	27	P	P	21 59 41.1	-1.3
	baz=215						
P57A	Homestead Farm	28.72	30	P	P	21 59 41.4	-1.1
	baz=218						
K47A	Vermontville	28.76	17	P	P	21 59 41.4	-1.4
	baz=202,SNR=8.4						
SJG	San Juan	28.80	80	P	P	21 59 43.6	+0.2
AAM	Ann Arbor	28.83	19	P	P	21 59 43.3	-0.2
GCPR	Guaynabo City	28.86	80	P	P	21 59 43.9	-0.1
GCPR				IAmb	IAmb	21 59 46.2	
	comp=Z,18nm,1.1s						
L50A	Kingsville	28.88	21	P	P	21 59 43.2	-0.7
	baz=207						
PDPR	Patillas Dam,	28.92	81	P	P	21 59 44.4	-0.1
PDPR				IAmb	IAmb	21 59 51.2	
	comp=Z,13nm,0.9s						
M52A	Chesterland	28.97	23	P	P	21 59 43.0	-1.6
M52A				IAmb	IAmb	21 59 44.7	
	comp=Z,10.0nm,0.8s						
I42A	Draeger Farm,	29.01	11	P	P	21 59 44.8	-0.2
I42A				IAmb	IAmb	21 59 59.3	
	comp=Z,11nm,1.1s						
HUMP	Col San Antoni	29.08	80	P	P	21 59 47.5	+1.5
HUMP				IAmb	IAmb	21 59 49.2	
	comp=Z,16nm,1.1s						
SDMD	Soldier's Deli	29.24	32	P	P	21 59 47.4	+0.2
HWUT	Hardware Ranch	29.29	336	P	P	21 59 47.8	0.0
BGU	Big Grassy Mou	29.33	333	P	P	21 59 49.2	+1.2
J47A	Sunmer	29.34	17	P	P	21 59 48.5	+0.6
PD31	Pinedale Array	29.57	340	P	P	21 59 50.0	-0.3
PDAR	Pinedale Array	29.57	340	P	P	21 59 50.0	-0.3
	comp=Z,1.4nm,0.8s,baz=141,slow=9.6,SNR=7.7						
K50A	Casco	29.59	20	P	P	21 59 47.7	-2.5
K50A	Casco	29.59	20	P	P	21 59 49.0	-1.2
	baz=207						
J48A	Bridge Port	29.70	18	P	P	21 59 50.2	-0.9
	baz=204						
I45A	Fountain	29.71	14	P	P	21 59 48.9	-2.3
I45A	Fountain	29.71	14	P	P	21 59 50.3	-0.9
	baz=199						
L53A	Girard	29.75	24	P	P	21 59 50.5	-1.1
	baz=212,SNR=7.4						
H43A	Windswept, Lux	29.78	12	P	P	21 59 51.0	-0.9
SPMN	Marine on St.	29.82	5	IAmb	IAmb	21 59 52.9	
	comp=Z,10nm,0.7s						
SPMN	Marine on St.	29.82	5	P	P	21 59 51.8	-0.4
	baz=186						
I46A	Reed City	29.82	16	P	P	21 59 51.5	-0.7
	baz=201						
HVU	Hansel Valley	29.93	335	P	P	21 59 53.7	+0.3
STVI	Saint Thomas	29.94	80	P	P	21 59 53.4	-0.2
J49A	Marlette	29.95	19	P	P	21 59 51.7	-1.7
	baz=206						
OMMB	Old Mammoth Mi	29.96	322	P	P	21 59 54.9	+1.0
ERPA	Erie	29.99	24	P	P	21 59 52.9	-0.8
	baz=212						
MDPB	Devils Postpil	30.02	322	IAmb	IAmb	22 00 01.7	
	comp=Z,11nm,0.8s						
NV11	Mina Array Sit	30.02	324	IAmb	IAmb	21 59 58.3	
	comp=Z,7.8nm,0.9s						
NVAR	Mina Array Bea	30.10	324	P	P	21 59 57.0	+1.9
	comp=Z,5.9nm,1.0s,baz=146,slow=9.8,SNR=21						
NVAR				LR	LR	22 12 31.7	
	comp=Z,218nm,19.4s,baz=146,slow=38						
AHID	Auburn Hatcher	30.11	338	IAmb	IAmb	22 00 06.5	
	comp=Z,5.8nm,0.9s						
I47A	Gladwin	30.14	17	P	P	21 59 53.9	-1.2
	baz=202,SNR=5.7						
ELK	Elko	30.19	330	P	P	21 59 57.0	+1.1
	comp=Z,3.3nm,0.8s,baz=126,slow=6.4,SNR=12						
ELK	Elko	30.19	330	P	P	21 59 57.5	+1.6
K52A	Tillsonburg	30.28	23	P	P	21 59 55.5	-0.8
	baz=210						
L54A	Sinclairville	30.36	25	P	P	21 59 57.1	+0.1
	baz=213						
RYN	Ryan	30.36	324	P	P	21 59 57.9	+0.6
I48A	Sherman Twp	30.53	18	P	P	21 59 57.6	-0.9
	baz=204,SNR=6.2						
REDW	Red Top Meadow	30.54	339	P	P	21 59 59.2	+0.3
REDW				IAmb	IAmb	22 00 10.6	
	comp=Z,11nm,1.0s						
SNOW	Snow King Moun	30.59	339	P	P	21 59 59.5	+0.1
H47A	Mio	30.76	17	P	P	21 59 59.4	-1.2
	baz=203						
J52A	Paris	30.76	23	P	P	21 59 59.4	-1.1
	baz=210						
G45A	Suttons Bay	30.80	15	P	P	22 00 00.5	-0.3
MOOW	Moose Ponds	30.84	339	P	P	22 00 02.0	+0.5
FXWY	Fox Creek	30.84	339	P	P	22 00 02.1	+0.6
GLMI	Grayling	30.86	16	P	P	22 00 00.8	-0.6
	baz=202						
SAO	San Andreas Ge	30.95	318	P	P	22 00 02.5	+0.3
I51A	Listowel	31.05	21	P	P	22 00 02.0	-1.1
	baz=209						
CMB	Columbia Colle	31.07	321	P	P	22 00 03.4	0.0
COWI	Conover	31.12	9	P	P	22 00 04.5	+0.8
COWI				IAmb	IAmb	22 00 05.9	
	comp=Z,5.9nm,0.8s						
FLWY	Flagg Ranch	31.12	339	P	P	22 00 05.8	+1.8
FLWY				IAmb	IAmb	22 00 09.1	
	comp=Z,6.1nm,0.8s						
PNTR	Pine Nut	31.29	323	P	P	22 00 05.7	+0.1
PNTR				IAmb	IAmb	22 00 09.4	
	comp=Z,6.0nm,0.8s						
YPP	Pitchstone Pla	31.32	339	P	P	22 00 07.0	+1.1
H17A	Grant Village	31.36	340	P	P	22 00 05.7	-0.4
G47A	Hillman	31.39	17	P	P	22 00 05.3	-0.7
	baz=203						
F45A	CMU Biological	31.43	14	P	P	22 00 05.3	-1.1
	baz=200						
N61A	South Mountain	31.54	33	P	P	22 00 06.5	-1.0
	baz=223						
M59A	Waymart	31.56	30	P	P	22 00 06.3	-1.3
	baz=220						
K56A	Middlesex	31.59	27	P	P	22 00 06.8	-1.0
	baz=216						
SMRT	St. Maarten	31.72	81	P	P	22 00 08.6	-0.7
YMR	Madison River	31.73	340	P	P	22 00 10.2	+0.9
E43A	Lone Tree Farm	31.77	12	P	P	22 00 08.0	-1.3
E43A				IAmb	IAmb	22 00 13.7	
	comp=Z,8.9nm,1.1s						
YHH	Holmes Hill	31.80	340	P	P	22 00 10.8	+0.8
YHB	Horse Butte	31.88	339	P	P	22 00 11.0	+0.3
YHL	Hebgen Lake	31.96	340	P	P	22 00 12.2	+0.7
QLMT	Earthquake Lak	32.03	339	P	P	22 00 13.2	+1.2
D41A	Chassel	32.14	10	P	P	22 00 12.6	0.0
M61A	Granite Spring	32.23	32	P	P	22 00 11.7	-1.8
	baz=223						
GCMT	Greycliff	32.32	342	P	P	22 00 14.6	+0.2
F48A	Evansville	32.34	18	P	P	22 00 13.0	-1.4
	baz=205						
F49A	Sandfield	32.45	18	P	P	22 00 13.8	-1.6
	baz=206						
SADO	Sadowa	32.57	23	P	P	22 00 14.9	-1.5
	comp=Z,6.7nm,0.9s,baz=261,slow=7.0,SNR=5.4						
SADO	Sadowa	32.57	23	P	P	22 00 15.2	-1.2
SADO				IAmb	IAmb	22 00 22.0	
	comp=Z,9.8nm,1.0s						
H53A	Bobcaygeon	32.61	24	P	P	22 00 15.2	-1.6
	baz=212,SNR=5.7						
EYMN	Ely	32.63	6	P	P	22 00 16.8	-0.1
EYMN				IAmb	IAmb	22 00 17.3	
	comp=Z,3.5nm,0.7s						
EYMN	Ely	32.63	6	P	P	22 00 16.9	-0.1
	baz=188						
E47A	Iron Bridge	32.73	17	P	P	22 00 17.2	-0.6
	baz=203						
J57A	Williamstown	32.74	28	P	P	22 00 16.7	-1.2
	baz=218						
AGMN	Agassiz Nation	32.76	0	IAmb	IAmb	22 00 18.7	
	comp=Z,9.9nm,0.8s						
AGMN	Agassiz Nation	32.76	0	P	P	22 00 17.2	-0.8
	baz=180,SNR=5.4						
DLMT	Dillon	32.90	338	P	P	22 00 21.4	+1.9
DLMT				IAmb	IAmb	22 00 22.8	
	comp=Z,14nm,0.9s						
D46A	Sault St. Mari	32.93	15	P	P	22 00 18.9	-0.7
	baz=202						
G53A	Haliburton	33.06	23	P	P	22 00 19.4	-1.4
	baz=212						
E48A	Lockeyer	33.07	18	P	P	22 00 19.8	-1.0
	baz=205						
WVOR	Wild Horse Val	33.13	329	IAmb	IAmb	22 00 24.6	
	comp=Z,12nm,1.1s						
H55A	Tweed	33.15	25	P	P	22 00 20.3	-1.2
	baz=215						
F51A	Arnstein	33.29	21	P	P	22 00 21.2	-1.5
	baz=209						
D47A	Chapleau	33.33	16	P	P	22 00 21.7	-1.3
	baz=203						
F52A	Sundridge	33.38	22	P	P	22 00 22.4	-1.1
	baz=210						
G54A	Lake Saint Pet	33.50	23	P	P	22 00 23.2	-1.4
	baz=213						
MOD	Modoc Plateau	33.61	326	P	P	22 00 26.3	+0.5
J08A	Circle Bar Ran	33.74	330	P	P	22 00 28.5	+1.7
J08A				IAmb	IAmb	22 00 29.2	
	comp=Z,6.8nm,0.9s						
D48A	Paudash Townsh	33.80	18	P	P	22 00 25.6	-1.6
	baz=205,SNR=8.1						
J60A	Lant Hill Farm	33.82	30	P	P	22 00 25.9	-1.4
	baz=222						
H57A	Richville	33.84	27	P	P	22 00 26.6	-0.9
	baz=218						
E51A	G1948 Merrick	33.96	21	P	P	22 00 27.5	-1.1
	baz=209						
D49A	Beulah Townshi	34.02	18	P	P	22 00 27.7	-1.4
	baz=206						
EGMT	Eagleton	34.38	344	P	P	22 00 33.1	+0.8
EGMT				IAmb	IAmb	22 00 35.8	
	comp=Z,8.6nm,1.1s						
EGMT	Eagleton	34.38	344	P	P	22 00 32.0	-0.3
	baz=156						
D50A	G1974 Best Tow	34.40	20	P	P	22 00 31.4	-0.9
	baz=208						
D51A	Lot 18 Range I	34.49	20	P	P	22 00 31.9	-1.2
	baz=209						
G57A	Newington	34.52	27	P	P	22 00 31.9	-1.5
	baz=218						
MSO	Missoula	34.64	338	P	P	22 00 35.5	+0.9
	baz=148						
E54A	Lac Daplat, Po	34.71	23	P	P	22 00 34.0	-1.0
	baz=213						
ULM	Lac du Bonnet	34.71	0	P	P	22 00 33.2	-1.8
	comp=Z,3.9nm,0.8s,baz=190,slow=9.7,SNR=9.8						
ULM				LR	LR	22 18 09.2	
	comp=Z,66nm,18.6s,baz=165,slow=42						
YBH	Yreka Blue Hor	34.82	324	P	P	22 00 36.4	+0.2
	comp=Z,1.6nm,0.7s,baz=106,slow=8.1,SNR=3.8						
E55A	Montcerf-Lytto	35.16	24	P	P	22 00 38.1	-0.8
	baz=215						
JTMT	Jette	35.54	339	P	P	22 00 43.2	+0.8
JTMT				IAmb	IAmb	22 00 44.5	
	comp=Z,9.9nm,1.2s						
TRQ	Mont Tremblant	35.59	26	P	P	22 00 41.2	-1.6
E56A	St. Veronique	35.65	25	P	P	22 00 42.2	-1.0
	baz=216						
D55A	Sainte-Anne-du	35.86	24	P	P	22 00 43.8	-1.2
	baz=215						
F60A	Warwick	36.55	29	P	P	22 00 50.5	-0.3
	baz=221						
G62A	West of Eustis	36.68	31	P	P	22 00 50.9	-1.1
	baz=224						
LSQQ	Lebel-sur-Quev	37.00	21	P	P	22 00 53.4	-1.2
	baz=212						
NEW	Newport	37.02	337	P	P	22 00 55.5	+0.6
	baz=144						
MATQ	Matagami	37.38	20	P	P	22 00 56.8	-1.0
	baz=210						
E04D	Cinebar	38.06	330	P	P	22 01 04.6	+1.0
	baz=135						
F64A	Sherman	38.22	32	P	P	22 01 05.2	+0.2
	baz=226						
E63A	Oxbow	38.57	31	P	P	22 01 07.4	-0.6
	baz=226						
D03D	Eldon	39.01	331	P	P	22 01 12.6	+0.9
	baz=136						
SAML	Samuel	40.65	124	P	P	22 01 26.4	+0.8
LPAZ	La Paz	41.92	138	P	P	22 01 37.4	+0.6
	comp=Z,2.0nm,0.6s,baz=332,slow=6.7,SNR=5.7						
LPAZ	La Paz	41.92	138	P	P	22 01 36.6	-0.1
LPAZ	La Paz	41.92	138		P	22 01 37.6	+0.9
FCC	Fort Churchill	43.27	2	P	P	22 01 46.2	+0.2
FCC				IAmb	IAmb	22 01 47.6	
	comp=Z,8.9nm,0.9s						
PB11	IPOC Station P	43.60	143	P	P	22 01 50.2	+0.4
PB11				IAmb	IAmb	22 02 02.8	
	comp=Z,9.8nm,0.9s						
SCHQ	Schefferville	45.37	23	P	P	22 02 02.1	-1.3
	comp=Z,4.4nm,0.8s,baz=228,slow=8.3,SNR=7.5						
SCHQ	Schefferville	45.37	23	P	P	22 02 02.9	-0.5
YKA	Yellowknife Ar	48.77	349	P	P	22 02 29.6	-0.2
	comp=Z,3.2nm,0.8s,baz=155,slow=7.1,SNR=30						
YKA				PcP	PcP	22 03 54.2	-0.4
	comp=Z,0.5nm,0.6s,baz=157,slow=6.0,SNR=4.1						
FRB	Frobisher Bay	51.89	15	P	P	22 02 53.1	-0.2
	comp=Z,11nm,0.8s,baz=217,slow=8.2,SNR=15						
BDFB	Brasilia	56.66	121	P	P	22 03 29.6	+0.5
	comp=Z,3.7nm,0.8s,baz=320,slow=5.4,SNR=4.3						
BDFB	Brasilia	56.66	121	IAmb	IAmb	22 03 38.8	
	comp=Z,4.8nm,0.9s						
INK	Inuvik	57.96	345	P	P	22 03 37.6	+0.4
	comp=Z,8.3nm,0.8s,baz=128,slow=6.9,SNR=22						
RES	Resolute Bay	59.24	0	P	P	22 03 45.0	-1.1
	comp=Z,2.1nm,0.7s,baz=187,slow=8.9,SNR=9.0						
RES	Resolute Bay	59.24	0	IAmb	IAmb	22 03 46.4	
	comp=Z,3.4nm,0.9s						
SFJD	Kangerlussuaq	59.40	19	P	P	22 03 46.9	-0.3
	comp=Z,11nm,1.0s,baz=140,slow=7.4,SNR=3.7						
SFJD	Kangerlussuaq	59.40	19	IAmb	IAmb	22 04 02.2	
	comp=Z,8.4nm,1.1s						
HDA	Harding Lake	59.81	337	P	P	22 03 51.7	+1.6
HDA				IAmb	IAmb	22 03 54.1	
	comp=Z,6.1nm,1.2s						
HDA	Harding Lake	59.81	337	P	P	22 03 51.4	+1.2
	baz=120						
ILAR	Eielson Array	59.97	337	P	P	22 03 50.7	-0.6
	comp=Z,2.6nm,1.0s,baz=134,slow=5.1,SNR=16						
POKR	Poker Plat Res	60.34	338	P	P	22 03 54.6	+0.7
	baz=120						
MLY	Manley	61.53	337	P	P	22 04 03.2	+1.2
MLY				IAmb	IAmb	22 04 09.2	
	comp=Z,5.7nm,1.1s						
TOLK	Toolik Lake Re	62.83	341	P	P	22 04 11.4	+0.7
	baz=119						
ESDC	Sonseca Array	81.93	51	P	P	22 06 04.8	-0.4
	comp=Z,1.3nm,0.8s,baz=295,slow=7.4,SNR=4.8						
ESDC	Sonseca Array	81.93	51	IAmb	IAmb	22 06 12.5	
	comp=Z,2.7nm,0.9s						
NB2	NORSAR Subarra	84.76	28	P	P	22 06 20.7	+1.4
	comp=Z,1.1nm,0.8s,baz=295,slow=5.1						
NOA	NORSAR Array B	84.76	28	P	P	22 06 19.9	+0.7
	comp=Z,2.0nm,0.8s,baz=295,slow=4.8,SNR=7.1						
NOA				LR	LR	22 46 30.5	
	comp=Z,22nm,18.0s,baz=220,slow=37						
TIXI	Tiksi	88.00	347	P	P	22 06 35.2	+0.3
TIXI				IAmb	IAmb	22 06 35.4	
	comp=Z,4.9nm,1.1s						
TORD	Torodi Ar. Bea	93.89	75	LR	LR	22 45 31.6	
	comp=Z,61nm,20.2s,baz=0.0,slow=33						
MKAR	Makanchi Array	118.03	1	PKP	PKPdf	22 12 31.5	-0.8
	comp=Z,0.4nm,1.0s,baz=2.7,slow=3.0,SNR=2.7						
LZH	Lanzhou	125.38	340	ePKP	PKiKP	22 12 48.5	+1.3
LZH				pPKP	sPKPdf	22 12 59.3	+6.6
LZH				sPKP		22 13 03.1	
CD2	Chengdu	130.10	338	PKP	PKPdf	22 12 56.3	+0.4

NEIC 14 22:14:52.3±1.3, 23°.6S±0°.1×179°.6W±0°.1, h490km±8km, mb4.5/18, Error ellipse: s-maj=16.5km s-min=14.1km az=115.0

IDC 14 22:14:55.4±1.5, 23°.53S×179°.79W, h509km±14km, mb3.8/11, mb1 3.9/13, mb1mx3.6/39, mbtmp4.7/13, Error ellipse: s-maj=19.1km s-min=14.9km az=175.0

ISC 14 22:14:53.1±0.5, 23°.55S±0°.07×179°.70W±0°.08, h500km, n57, σ1§63/59, mb4.4/17, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	5.90	165	P	P	22 16 25.7	-2.6
MSVF	Nonsavu	6.16	340	P	P	22 16 29.7	-1.5
NIUE	Niue	10.13	66	P	P	22 17 10.4	-1.5
AFI	Afiamalu	12.17	39	P	P	22 17 34.6	+0.9
	5.5nm,0.3s,baz=132,slow=4.9,SNR=2.7						
AFI				S	S	22 19 42.0	-4.0
	2.3nm,0.3s,baz=222,slow=22,SNR=2.3						
AFI	Afiamalu	12.17	39	P	P	22 17 33.1	-0.6
DZM	Mont Dzumac	12.87	274	P	P	22 17 39.6	-1.3
MXZ	Matakaoa Point	14.07	187	P	P	22 17 52.9	-0.4
SANVU	Saraoutou	14.74	301	P	P	22 17 59.7	-1.0
URZ	Urewera	14.91	190	P	P	22 18 04.2	+2.1
	1.1nm,0.3s,baz=350,slow=3.6,SNR=7.1						
URZ				S	S	22 20 35.0	-3.1
	0.5nm,0.3s,baz=228,slow=21,SNR=6.4						
URZ	Urewera	14.91	190	P	P	22 18 02.7	+0.5
BKZ	Black Stump Fm	15.90	191	P	P	22 18 13.4	+0.9
BKZ				IAmb	IAmb	22 18 17.5	
	comp=Z,21nm,1.2s						
MSWZ	Moikau Station	18.31	192	P	P	22 18 36.1	0.0
BHW	Baring Head	18.38	193	P	P	22 18 37.3	+0.6
PLWZ	Palliser	18.46	192	P	P	22 18 33.2	-4.2
TUWZ	Tuamarina	18.61	195	P	P	22 18 38.6	-0.1
BSWZ	Blackbirch Sta	18.89	195	P	P	22 18 41.1	-0.3
KNTN	Kanton	22.05	22	P	P	22 19 10.2	-0.2
KNTN				IAmb	IAmb	22 19 21.0	
	comp=Z,24nm,1.1s						
ARMA	Armidale	26.41	249	P	P	22 19 50.4	+1.3
ARMA				IAmb	IAmb	22 19 51.9	
	comp=Z,6.9nm,0.8s						
EIDS	Eidsvold	26.64	260	P	P	22 19 52.9	+1.8
EIDS				IAmb	IAmb	22 19 53.4	
	comp=Z,12nm,0.6s						
CTA	Charters Tower	31.75	270	P	P	22 20 37.4	+1.7
	comp=Z,34nm,0.4s,baz=94,slow=11,SNR=86						
CTAO	Charters Tower	31.75	270	P	P	22 20 35.5	-0.2
CTAO				IAmb	IAmb	22 20 40.4	
	comp=Z,18nm,0.7s						
TOO	Toolangi	32.87	237	P	P	22 20 45.1	+0.1
PMG	Port Moresby	34.65	288	P	P	22 21 01.6	+1.4
	comp=Z,20nm,0.7s,baz=45,slow=2.9,SNR=5.1						
PMG	Port Moresby	34.65	288	P	P	22 21 00.3	+0.1
PMG				IAmb	IAmb	22 21 02.4	
	comp=Z,18nm,0.8s						
STKA	Stephens Creek	35.11	248	P	P	22 21 05.1	+1.1
	comp=Z,4.3nm,0.6s,baz=100,slow=11,SNR=10						
STKA	Stephens Creek	35.11	248	IAmb	IAmb	22 21 05.6	
	comp=Z,1.1nm,0.7s						
COEN	Coen	36.34	279	P	P	22 21 14.7	+0.3
BBOO	Buckleboo	39.84	247	P	P	22 21 43.1	+0.4
BBOO				IAmb	IAmb	22 21 44.0	
	comp=Z,12nm,1.0s						
JOHN	Johnston Islan	41.25	15	P	P	22 21 53.6	-0.5
AS31	Alice Springs	42.37	260	P	P	22 22 03.7	+0.7
ASAR	Alice Springs	42.37	260	P	P	22 22 03.7	+0.7
	comp=Z,13nm,0.7s,baz=96,slow=7.8,SNR=109						
ASAR				PcP	PcP	22 23 46.2	+1.1
	comp=Z,0.8nm,0.8s,baz=101,slow=4.8,SNR=3.5						
ASAR				ScP	ScP	22 26 48.6	+0.6
	comp=Z,2.0nm,0.8s,baz=116,slow=4.3,SNR=10						
WR0	Warramunga Arr	42.52	266	P	P	22 22 04.3	+0.1
WR0				IAmb	IAmb	22 22 05.0	
	comp=Z,9.6nm,0.9s						
WB2	Warramunga Arr	42.70	266	P	P	22 22 05.9	+0.2
WB0	Warramunga Arr	42.70	266	P	P	22 22 05.8	+0.1
WRAB	Tennant Creek	42.70	266	P	P	22 22 05.8	+0.1
WRAB				IAmb	IAmb	22 22 06.5	
	comp=Z,19nm,0.9s						
WRA	Warramunga Arr	42.71	266	P	P	22 22 05.8	+0.1
	comp=Z,19nm,0.5s,baz=103,slow=8.5,SNR=200						
WRA				ScP	ScP	22 26 50.2	+0.8
	comp=Z,0.7nm,1.0s,baz=102,slow=4.0,SNR=4.8						
WRA				S	S	22 27 46.6	-6.2
	comp=Z,0.8nm,0.9s,baz=93,slow=12,SNR=3.6						
WRA	Warramunga Arr	42.71	266	IAmb	IAmb	22 22 06.6	
	comp=Z,1.4nm,0.8s						
FORT	Forrest	46.69	249	P	P	22 22 35.7	-0.6
KKH	Kailua Kona	48.76	30	P	P	22 22 51.4	-0.5
SAUI	Saumlaki	49.38	280		pP	22 24 21.8	-8.9
SIJI	Sorong	52.59	288	P	P	22 23 20.9	+0.9
	comp=Z,30nm,0.7s,baz=67,slow=6.8						
QSPA	South Pole Qui	66.53	180	P	P	22 24 54.4	+1.9
	comp=Z,3.1nm,0.6s,baz=325,slow=0.9,SNR=24						
SRIG	Santa Rosalia	82.44	56		pP	22 28 06.3	-4.8
NVAR	Mina Array Bea	84.31	44	P	P	22 26 33.8	+1.7
	comp=Z,0.4nm,0.5s,baz=218,slow=6.9,SNR=3.3						
RAGM	Ragged Mountai	88.37	17		pP	22 28 43.5	+2.2
CMAR	Chiang Mai Arr	89.67	290	P	P	22 26 59.7	+2.0
	comp=Z,1.3nm,0.8s,baz=137,slow=3.1,SNR=10						
TXAR	Lajitas Array	90.01	58	P	P	22 27 02.1	+2.9
	comp=Z,0.8nm,0.7s,baz=222,slow=7.3,SNR=10						
PDAR	Pinedale Array	92.25	44	P	P	22 27 11.1	+1.7
	comp=Z,0.4nm,0.7s,baz=208,slow=2.9,SNR=3.9						
MKAR	Makanchi Array	112.12	313	PKiKP	PKiKP	22 32 30.7	-0.5
	comp=Z,0.2nm,0.6s,baz=88,slow=1.2,SNR=5.7						
KSH	Kashi	115.31	304	PKP	PKiKP	22 32 39.1	+1.4
KSH				PP	PP	22 33 57.1	+9.1
KSH				sPKP		22 35 33.4	
ARCES	ARCESS Array B	131.60	348	PKP	PKiKP	22 33 07.8	-1.1
	comp=Z,4.7nm,1.0s,baz=64,slow=5.5,SNR=6.0						
FINES	FINESS Array B	138.20	342	PKP	PKPdf	22 33 20.7	+0.4
	comp=Z,1.0nm,0.7s,baz=29,slow=4.4,SNR=4.1						
FINES				SKPbc	SKPbc	22 36 06.1	-1.2
	comp=Z,1.3nm,0.6s,baz=28,slow=3.3,SNR=6.7						
AKASG	Malin Array Be	144.83	328	PKP	PKPbc	22 33 32.3	-0.5
	comp=Z,1.0nm,0.5s,baz=44,slow=4.3,SNR=7.5						
AKASG				SKPbc	SKPbc	22 36 23.8	-0.6
	comp=Z,0.2nm,0.3s,baz=64,slow=1.8,SNR=3.3						
BR131	Keskin Array S	147.59	308		PKPab	22 33 46.2	+1.2
BRTR	Keskin Array B	147.59	308	PKPbc	PKiKP	22 33 41.5	-1.1
	comp=Z,1.6nm,0.6s,baz=137,slow=4.6,SNR=5.2						
CLL	Collm	150.60	344	ePKPbc	PKPbc	22 33 49.0	+0.7
TORD	Torodi Ar. Bea	169.57	188	PKPab	PKPab	22 35 20.3	+0.1
	comp=Z,0.6nm,0.8s,baz=178,slow=4.2,SNR=2.7						

ISC 14 23:13:40.1±0.9, 50°.25N±0°.05×18°.78E±0°.03, h0km, n14, σ0§63/26, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.58	225	ePG	Pg	23 13 51.2	-0.1
OKC				eSG	Sg	23 13 58.4	-0.4
	comp=Z,5.4nm,0.6s						
OJC	Ojcow	0.66	93	ePg	Pg	23 13 52.4	-0.3
OJC				eSg	Sg	23 14 01.0	-0.2
MORC	Moravsky Berou	0.93	240	ePG	Pg	23 13 58.2	+0.3
MORC				eSG	Sg	23 14 11.1	+1.1
NIE	Niedzica	1.29	130	ePg	Pg	23 14 04.7	-0.1
NIE				eSg	Sb	23 14 22.8	+0.4
KRLC	Kraliky	1.30	263	ePG	Pg	23 14 04.1	-0.9
KRLC				eSG	Sg	23 14 21.8	0.0
	comp=Z,6.9nm,0.7s						
DPC	Dobruska-Polom	1.58	274	ePG	Pn	23 14 09.0	-0.4
DPC				eSG	Sg	23 14 31.4	+0.6
	comp=Z,4.1nm,0.6s						
OSTC	Ostas	1.67	281	ePG	Pn	23 14 09.9	-0.7

OSTC eSG Sg 23 14 34.3 +0.6
KSP Ksiaz 1.69 291 ePg Pb 23 14 12.5 +0.4
KSP eSg Sb 23 14 34.3 +0.4
VRAC Vranov 1.70 237 ePN Pn 23 14 11.5 +0.4
VRAC eSG Sb 23 14 34.5 +0.2
VYHS Vyhne 1.76 179 ePN Pg 23 14 13.7 -0.2
VYHS eSN Sn 23 14 34.8 -0.2
CHVC Chvalec 1.77 282 ePG Pn 23 14 12.5 +0.4
CHVC eSG Sg 23 14 37.8 +0.7
KRUC Moravsky 1.96 233 ePN Pn 23 14 14.5 0.0
KRUC eSG Sb 23 14 41.3 -0.2
GOPC GO Pecny, Ondr 2.59 264 eSG Sg 23 15 02.1 -1.3
KHC Kasperske Hory 3.56 254 eSG Sg 23 15 32.9 -1.5

NEIC 14 23:25:52.8±1.6, 21.°46S±0.°08×173.°89W±0.°09, h23km±4km, mb4.5/20, Error ellipse: s-maj=13.9km s-min=9.1km az=128.0
IDC 14 23:25:54.8±1.0, 21.°46S×174.°26W, h0km, mb4.2/7, mb1 4.5/8, mb1mx4.0/47, mbtmp4.2/8, ML4.2/1, MS3.5/5, Ms1 3.5/5, ms1mx3.2/29, Error ellipse: s-maj=39.7km s-min=24.1km az=137.0
ISC 14 23:25:55.1±0.6, 21.°47S±0.°10×173.°88W±0.°08, h35km, n48, σ2s37/43, mb4.3/15, MS3.5/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	4.40	58	Pn	Pn	23 26 58.4	-1.1
MSVF	Nonsavu	8.47	295	Pn	Pn	23 27 53.8	-1.6
RAO	Raoul Island	8.57	204	Pn	Pn	23 27 55.4	-1.2
RAR	Rarotonga	13.14	91	Pn	Pn	23 28 57.9	-1.4
MXZ	Matakaoa Point	17.41	201	Pn	Pn	23 29 53.1	-2.1
MXZ				IAmb	IAmb	23 30 03.0	
	comp=Z,32nm,1.1s						
DZM	Mont Dzumac	18.29	264	eP	Pn	23 30 10.2	+3.9
	comp=Z,22nm,1.1s						
DZM				eLR	LR	23 34 24.5	
	comp=Z,95nm,20.4s						
DZM	Mont Dzumac	18.29	264	P	Pn	23 30 10.1	+3.9
	comp=Z,0.3nm,0.3s,baz=71,slow=18,SNR=5.4						
DZM	Mont Dzumac	18.29	264	P	P	23 30 03.6	-2.6
NOUC	Port Laguerre	18.42	264	P	P	23 30 04.9	-2.6
URZ	Urewera	18.45	203	P	Pn	23 30 12.3	+4.3
	comp=Z,0.8nm,0.3s,baz=2.4,slow=5.7,SNR=8.7						
URZ	Urewera	18.45	203	P	Pn	23 30 07.8	-0.1
URZ				IAmb	IAmb	23 30 16.6	
	comp=Z,7.7nm,0.6s						
MSWZ	Moikau Station	21.91	202	P	P	23 30 45.0	-0.2
SNZO	South Karori	22.02	203	P	P	23 30 46.2	-0.1
BHW	Baring Head	22.04	203	P	P	23 30 45.7	-0.9
PLWZ	Palliser	22.04	202	P	P	23 30 46.2	-0.5
QRZ	Quartz Range	22.48	208	P	P	23 30 48.4	-3.0
QRZ				IAmb	IAmb	23 30 56.9	
	comp=Z,28nm,1.1s						
BSWZ	Blackbirch Sta	22.68	204	P	P	23 30 52.0	-1.5
PPT	Papeete	23.22	85	LR	LR	23 38 53.6	
	comp=Z,91nm,18.4s,baz=124,slow=33						
KHZ	Kahutara	23.41	204	P	P	23 31 00.7	-0.1
KHZ				IAmb	IAmb	23 31 10.9	
	comp=Z,10.0nm,1.0s						
FOZ	Fox Glacier	25.86	208	P	P	23 31 21.3	-2.0
FOZ				IAmb	IAmb	23 31 33.8	
	comp=Z,23nm,0.9s						
HNR	Honiara	27.87	291	LR	LR	23 42 06.8	
	comp=Z,56nm,18.5s,baz=30,slow=35						
MLZ	Mavora Lakes	28.05	208	P	P	23 31 41.9	-1.2
MLZ				IAmb	IAmb	23 31 60.0	
	comp=Z,11nm,1.0s						
STKA	Stephens Creek	40.88	246	P	P	23 33 35.7	+1.8
	comp=Z,1.8nm,0.7s,baz=79,slow=10,SNR=4.0						
STKA				LR	LR	23 49 45.4	
	comp=Z,72nm,18.6s,baz=31,slow=35						
STKA	Stephens Creek	40.88	246	P	P	23 33 31.9	-2.0
COEN	Coen	41.49	273	P	P	23 33 37.9	-1.2
COEN				IAmb	IAmb	23 33 51.3	
	comp=Z,4.6nm,1.1s						
AS31	Alice Springs	48.05	257	P	P	23 34 30.7	-0.7
ASAR	Alice Springs	48.05	257	P	P	23 34 33.4	+1.9
	comp=Z,4.6nm,0.9s,baz=97,slow=7.8,SNR=27						
ASAR				PcP	PcP	23 36 02.5	+3.5
	comp=Z,0.5nm,0.7s,baz=110,slow=4.5,SNR=2.3						
ASAR				LR	LR	23 55 18.4	
	comp=Z,51nm,18.1s,baz=100,slow=37						
ASAR	Alice Springs	48.05	257	P	P	23 34 31.5	+0.1
WR0	Warramunga Arr	48.09	262	P	P	23 34 31.4	-0.3
WR0				IAmb	IAmb	23 34 31.9	
	comp=Z,3.8nm,1.1s						
WB0	Warramunga Arr	48.27	262	P	P	23 34 32.6	-0.5
WB0				IAmb	IAmb	23 34 41.8	
	comp=Z,3.6nm,0.7s						
WB2	Warramunga Arr	48.27	262	P	P	23 34 34.6	+1.5
WB2				IAmb	IAmb	23 34 34.9	
	comp=Z,6.8nm,1.1s						
WRA	Warramunga Arr	48.28	262	P	P	23 34 34.7	+1.5
	comp=Z,1.7nm,0.7s,baz=98,slow=7.5,SNR=6.8						
WRA				PcP	PcP	23 36 04.5	+4.6
	comp=Z,0.6nm,0.7s,baz=89,slow=3.0,SNR=2.7						
WRA	Warramunga Arr	48.28	262	P	P	23 34 34.0	+0.8
FORT	Forrest	52.46	247	P	P	23 35 04.0	-0.6
PSA00	Pilbara Seismi	61.20	257	P	P	23 36 02.4	-4.4
MJAR	Matsushiro Arr	73.32	321	P	P	23 37 26.2	+3.0
	comp=Z,5.0nm,0.9s,baz=142,slow=6.5,SNR=4.2						
YERR	Yerington	78.92	40	P	P	23 37 54.9	-0.3
NVAR	Mina Array Bea	79.14	41	P	P	23 38 02.9	+6.5
	comp=Z,0.8nm,0.7s,baz=219,slow=7.0,SNR=2.8						
PLCA	Paso Flores	85.79	132	LR	LR	00 13 01.5	
	comp=Z,41nm,18.1s,baz=177,slow=33						
ILAR	Eielson Array	88.45	11	P	P	23 38 48.8	+5.7
	comp=Z,0.9nm,0.9s,baz=208,slow=2.7,SNR=4.9						
ILAR	Eielson Array	88.45	11	P	P	23 38 42.2	-1.0
CMAR	Chiang Mai Arr	94.07	288	P	P	23 39 14.8	+4.5
	comp=Z,0.4nm,0.3s,baz=130,slow=3.6,SNR=4.1						
MKAR	Makanchi Array	114.67	313	PKiKP	PKiKP	23 44 36.1	+4.4
	comp=Z,0.3nm,0.8s,baz=101,slow=4.6,SNR=3.1						
BVAR	Borovoye Array	122.29	320	PKP	PKiKP	23 44 51.0	+4.7
	comp=Z,0.8nm,0.8s,baz=62,slow=3.5,SNR=5.2						
AKASG	Malin Array Be	145.65	334	PKPbc	PKiKP	23 45 34.6	+1.0
	comp=Z,1.2nm,0.5s,baz=37,slow=4.2,SNR=8.7						
CLL	Collm	149.73	351	ePKPbc	PKiKP	23 45 41.0	-1.0
BRTR	Keskin Array B	150.31	314	PKPbc	PKPab	23 45 48.1	-1.2
	comp=Z,1.2nm,0.7s,baz=134,slow=3.3,SNR=6.8						
TORD	Torodi Ar. Bea	170.71	152	PKPab	PKPab	23 47 22.0	+4.0
	comp=Z,0.9nm,1.0s,baz=197,slow=4.5,SNR=3.4						

TAP 14 23:31:41.6, 22.°65N×120.°85E, h8km, ML3.8, C
ASIES 14 23:31:41.6, 22.°62N×120.°87E, h23km, MW3.6
JMA 14 23:31:41.6, 22.°58N×121.°21E, h1km±2km, M3.6
IDC 14 23:31:41.4±0.9, 22.°48N×121.°14E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.6/47, mbtmp3.8/8, MS2.6/1, Ms1 2.8/1, ms1mx2.4/42, Error ellipse: s-maj=43.2km s-min=19.3km az=62.0
NEIC 14 23:31:42.2±2.4, 22.°58N±0.°02×120.°97E±0.°07, h10km±1km, mb4.5/12, Error ellipse: s-maj=9.7km s-min=2.7km az=77.0
ISC 14 23:31:42.4±0.8, 22.°62N±0.°02×120.°89E±0.°02, h9km±5km, n149, σ1s09/208, mb4.1/14, 17C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECL	Taimali	0.06	110	⇑iP	Pg	23 31 44.7	+0.4
	baz=118						
ECL				iS	Sg	23 31 46.6	+0.9
	baz=118						
EAST	Anshuo	0.24	190	⇓iP	Pg	23 31 47.5	+0.3
	baz=170						
EAST				S	Sg	23 31 50.9	+0.5
	baz=170						
MASBT	Mashibuluo	0.24	269	⇑P	Pg	23 31 46.0	-1.2
	baz=253						
MASBT				S	Sg	23 31 48.8	-1.8
	baz=253						
TAW	Tawu	0.26	179	⇓iP	Pg	23 31 48.0	+0.4
	baz=171						
TAW				S	Sg	23 31 51.9	+0.8
	baz=171						
TWG	Pinlang	0.26	39	⇑iP	Pg	23 31 47.7	+0.1
	baz=51						
TWG				S	Sg	23 31 51.2	0.0
	baz=51						
TWG	Pinlang	0.26	39		Pg	23 31 47.6	-0.1
TWGBT	Beinan	0.26	41	⇑P	Pg	23 31 47.7	0.0
	baz=51						
TWGBT				S	Sg	23 31 51.2	-0.1
	baz=51						
TTN	Taitung	0.27	60	P	Pb	23 31 49.2	-0.2
	baz=65						
TTN				S	Sb	23 31 54.0	-0.1
	baz=65						
SSD	Sandimen	0.27	298	⇑iP	Pg	23 31 46.4	-1.5
	baz=301						
SSD				S	Sg	23 31 49.2	-2.3
	baz=301						
SSPT	Xinbi	0.33	246	⇑iP	Pg	23 31 48.6	-0.2
	baz=233						
SSPT				eS	Sg	23 31 53.2	0.0
	baz=233						
SCZT	Fangliau	0.35	226	⇑iP	Pg	23 31 48.7	-0.6
	baz=221						
SCZT				S	Sg	23 31 53.3	-0.6
	baz=221						
SGLT	Jiouru	0.39	286	⇑iP	Pg	23 31 49.7	-0.3
	baz=282						
SGLT				S	Sg	23 31 55.5	+0.4
	baz=282						
SLGT	Liugui	0.44	329	P	Pg	23 31 49.9	-1.0
	baz=334						
SLGT				eS	Sg	23 31 54.6	-2.1
	baz=334						
TWM1	Shoushan	0.48	295	⇑iP	Pg	23 31 51.9	+0.2
	baz=293						
TWM1				S	Sg	23 31 59.1	+1.0
	baz=293						
SNJT	Kaohsiung City	0.53	285	⇑P	Pb	23 31 53.5	-0.4
	baz=282						
KAU	Kaohsiung	0.54	265	eP	Pb	23 31 54.8	+0.8
	baz=261						
SGST	Jiashian	0.54	328	P	Pg	23 31 51.6	-1.4
	baz=333						
SGST				eS	Sg	23 31 58.3	-1.8
	baz=333						
WLCH	Liuqiu	0.55	241	eP	Pb	23 31 55.1	+1.0
	baz=230						
TWH	Lutao	0.55	80	P	Pb	23 31 54.2	+0.1
	baz=104						
TWH				eS	Sb	23 32 02.1	0.0
	baz=104						
STYT	Tauyuan	0.56	347	P	Pg	23 31 52.5	-0.7
	baz=357						
STYT				eS	Sg	23 31 59.2	-1.4
	baz=357						
TWP	Hsiaoliuchiu	0.56	241	⇑eP	Pn	23 31 55.9	-0.7
	baz=230						
ELDTW	Lidau	0.58	11	iP	Pg	23 31 52.8	-0.8
	baz=27						
WSSB	Gushan	0.58	272	eP	Pb	23 31 55.1	+0.3
	baz=269						
HEN	Hengchun	0.63	193	eP	Pb	23 31 55.5	+0.1
	baz=201						
HEN				eS	Sb	23 32 05.0	+0.6
	baz=201						
CHKT	Chengkung	0.65	42	eP	Pg	23 31 55.3	+0.4
	baz=62						
CHKT				eS	Sb	23 32 04.8	-0.1
	baz=62						
CHN1	Nanshi	0.66	329	eP	Pg	23 31 55.3	+0.2
	baz=333						
CHN1				eS	Sb	23 32 04.8	-0.5
	baz=333						
CHN3	Shinhua	0.67	313	eP	Pg	23 31 56.6	+0.4
	baz=321						
TWK1	Hengchun	0.68	187	eP	Pb	23 31 56.1	-0.3
	baz=172						
WTP	Ta-pu	0.68	338	eP	Pg	23 31 55.2	-0.2
	baz=345						
WTP				eS	Sb	23 32 05.9	0.0
	baz=345						
TWKBT	Hengchun	0.68	186	eP	Pb	23 31 55.9	-0.4
	baz=172						
FULB	Fuli	0.69	32	⇑iP	Pg	23 31 55.9	+0.3
	baz=28						
FULB				S	Sg	23 32 05.2	+0.6
	baz=28						
SNST	Tainan City	0.70	329	⇑P	Pb	23 31 56.8	0.0
	baz=332						
SNST				S	Sb	23 32 06.7	+0.1
	baz=332						
TSEB	Hengchuen, Pin	0.71	180	eP	Pb	23 31 57.1	+0.1
	baz=181						
TPUB	Ta-pu	0.72	340	⇑eP	Pg	23 31 56.4	+0.1
	baz=342						
TPUB				eS	Sg	23 32 06.3	+0.5
	baz=342						
TPUB	Ta-pu	0.72	340		Pg	23 31 56.6	+0.2
TAI1	Yung-k'ang	0.74	305	eP	Pb	23 31 58.3	+0.8
	baz=293						
TWK	Hsinying	0.75	330	⇑P	Pg	23 31 57.2	+0.4
	baz=332						
TWK				S	Sb	23 32 07.8	-0.1
	baz=332						
CHN4	Tsaushan	0.78	339	eP	Pg	23 31 57.8	+0.4
	baz=341						
CHN4				eS	Sb	23 32 08.8	0.0
	baz=341						
TWF1	Yuli	0.82	27	⇑P	Pg	23 31 57.3	-0.9
	baz=25						
TWF1				eS	Sg	23 32 07.4	-1.5
	baz=25						
LAY	Lan-yu	0.84	133	eP	Pb	23 31 58.9	-0.2
	baz=132						
SCLT	Jiali	0.85	311	eP	Pb	23 31 59.8	+0.5
	baz=310						
SCLT				eS	Sn	23 32 12.6	-0.5
	baz=310						
YULB	Yu-li	0.86	26	P	Pg	23 31 57.7	-1.2
	baz=29						
YULB				eS	Sg	23 32 08.2	-1.8
	baz=29						
YULB	Yu-li	0.86	26		Pg	23 31 57.2	-1.6
YUS	Yu-Shan	0.87	4	eP	Pg	23 31 58.3	-0.9
	baz=14						
ALS	Alishan	0.89	355	eP	Pg	23 31 59.4	-0.2
	baz=10.0						
ALS				eS	Sb	23 32 12.4	+0.1
	baz=10.0						
CHN8	Yiju	0.96	319	eP	Pb	23 32 01.3	+0.2
	baz=319						
CHN8				eS	Sn	23 32 15.6	-0.2
	baz=319						
EHY	Hungye	0.97	24	eP	Pg	23 31 59.8	-1.2
	baz=27						
EHY				eS	Sg	23 32 11.7	-1.9
	baz=27						
CHY	Chiayi	0.98	334	eP	Pb	23 32 01.9	+0.4
	baz=335						
CHY				eS	Sn	23 32 16.2	0.0
	baz=335						
CHN5	Tsauling	0.99	349	⇑eP	Pg	23 32 01.6	+0.1
	baz=2.0						
CHN5				eS	Sn	23 32 17.8	+1.0
	baz=2.0						
HGSD	Ruisui	1.00	29	P	Pg	23 32 01.4	-0.1
	baz=26						
HGSD				eS	Sb	23 32 15.2	+0.2
	baz=26						
WLGB	Puzi	1.02	328	eP	Pg	23 32 02.1	+0.2
	baz=328						
WLGB				eS	Sn	23 32 17.2	0.0
	baz=328						
WHYT	Xinyi Township	1.07	358	eP	Pg	23 32 02.8	-0.2
	baz=9.0						
WHYT				eS	Sn	23 32 19.1	+0.4
	baz=9.0						
WGK	Gukeng	1.11	344	eP	Pn	23 32 04.1	+0.1
	baz=346						
WGK				eS	Sn	23 32 19.2	-0.2
	baz=346						
WDLH	Douliu	1.11	343	eP	Pb	23 32 03.9	+0.1
	baz=344						
WDLH				eS	Sn	23 32 20.6	+1.0
	baz=344						
VWDT	VWDT	1.15	11	eP	Pg	23 32 03.7	-0.8
	baz=16						
VWDT				eS	Sb	23 32 20.0	+0.4
	baz=16						
EGFH	Guangfu	1.16	25	eP	Pg	23 32 03.6	-1.0
	baz=27						
SSLB	Suanglung	1.17	3	eP	Pg	23 32 04.3	-0.5
	baz=8.0						
SSLB				eS	Sb	23 32 20.6	+0.6
	baz=8.0						
SSLB	Suanglung	1.17	3		Pg	23 32 04.5	-0.3
WSF	Szhu	1.19	329	P	Pb	23 32 04.3	-0.8
	baz=328						
WSF				S	Sb	23 32 21.1	+0.6
	baz=328						
WJS	Zhushan	1.21	353	eP	Pg	23 32 06.0	+0.4
	baz=338						
WJS				eS	Sn	23 32 24.1	+2.1
	baz=338						
WNT	Mingjian	1.27	351	eP	Pb	23 32 06.5	+0.1
	baz=353						
WNT				eS	Sn	23 32 25.4	+2.0
	baz=353						
ESL	Shilin	1.29	23	eP	Pn	23 32 06.5	-0.1
	baz=34						
WDGT	Dungji	1.30	300	P	Pn	23 32 05.4	-1.4
	baz=297						
WDGT				S	Sb	23 32 23.1	-0.8
	baz=297						
OWD	Renai	1.36	11	eP	Pn	23 32 06.9	-0.7
	baz=26						
RLNB	Erlin	1.36	339	eP	Pn	23 32 07.5	0.0
	baz=339						
RLNB				eS	Sn	23 32 26.0	+0.3
	baz=339						
DPDB	Guoxing	1.41	1	eP	Pg	23 32 09.7	+0.3
	baz=3.0						
ENLB	Shoufeng	1.44	27	eP	Pb	23 32 09.5	+0.2
	baz=29						
CHGB	Renai	1.46	10	eP	Pn	23 32 09.2	+0.1
	baz=22						
CHGB				eS	Sg	23 32 29.3	0.0
	baz=22						
VCHM	Qimei	1.47	294	P	Pn	23 32 07.6	-1.5
	baz=291						
VCHM				eS	Sn	23 32 26.1	-2.3
	baz=291						
WCHH	Zhanghua	1.49	348	eP	Pn	23 32 09.1	-0.1
	baz=349						
PHUB	P'eng-hu	1.51	306	P	Pn	23 32 08.3	-1.3
	baz=304						
PHUB				S	Sn	23 32 27.0	-2.4
	baz=304						
TCU	Taichung	1.54	353	eP	Pb	23 32 11.1	+0.1
	baz=335						
PNG	Penghu	1.55	308	eP	Pn	23 32 08.9	-1.2
	baz=305						
PNG				eS	Sn	23 32 28.4	-2.1
	baz=305						
WHF	Hehuan Shan	1.56	13	eP	Pn	23 32 10.4	-0.2
	baz=9.0						
TWD	Chiawan	1.59	24	eP	Pb	23 32 11.8	-0.1
	baz=32						
TWD				eS	Sb	23 32 32.3	+0.1
	baz=32						
TDCB	Techi	1.65	8	eP	Pb	23 32 13.3	+0.3
	baz=11						
TDCB				eS	Sb	23 32 34.1	+0.2
	baz=11						
WHP	Taichung City	1.65	2	eP	Pb	23 32 13.1	+0.1
	baz=14						
WHP				eS	Sg	23 32 36.2	+0.7
	baz=14						
ETLH	Xiulin Townshi	1.67	19	eP	Pn	23 32 12.9	-0.5
	baz=36						
ETLH				eS	Sg	23 32 36.7	+0.5
	baz=36						
NACB	Ninganchiao	1.68	22	eP	Pn	23 32 12.8	+0.9
	baz=37						
NACB	Ninganchiao	1.68	22		Pn	23 32 12.8	+0.9
TWQ1	Liyutan	1.73	356	eP	Pb	23 32 14.1	-0.2
	baz=358						
TWQ1				eS	Sg	23 32 37.9	0.0
	baz=358						
WDJ	Dajia District	1.74	352	eP	Pb	23 32 14.7	+0.2
	baz=337						
NSY	Sanyi	1.79	356	eP	Pb	23 32 15.5	+0.1
	baz=337						
NNSB	Datong	1.86	14	eP	Pb	23 32 16.0	-0.5
	baz=16						
NNSB				eS	Sg	23 32 41.6	-0.6
	baz=16						
NNSH	Datong	1.86	14	eP	Pb	23 32 16.4	-0.2
	baz=27						
NNS	Nan Shan	1.87	14	eP	Pb	23 32 16.7	0.0
	baz=28						
NMLH	Miaoli	1.91	357	eP	Pb	23 32 16.9	-0.6
	baz=338						
ENA	Nanau	1.96	23	eP	Pb	23 32 17.6	-0.6
	baz=26						
NSTT	Nanjuang	2.01	3	eP	Pb	23 32 18.9	-0.2
	baz=345						
LIOB	Emei	2.02	3	eP	Pn	23 32 17.9	+1.3
	baz=345						
NDT	Datong Townshi	2.06	16	eP	Pb	23 32 19.6	-0.3
	baz=30						
YHNB	Yeheng	2.09	12	eP	Pn	23 32 18.4	+0.7
	baz=14						
YHNB	Yeheng	2.09	12		Pb	23 32 19.9	-0.6
ENTT	Nioudou	2.10	17	eP	Pb	23 32 20.5	-0.2
	baz=33						
TWC	Suao	2.17	24	eP	Pb	23 32 21.3	-0.4
	baz=26						
TWE	Neicheng	2.21	19	eP	Pb	23 32 21.2	-1.3
	baz=34						
NWLT	Wulai	2.22	14	eP	Pb	23 32 22.4	-0.3
	baz=359						
EOS1	EOS1	2.23	30	eP	Pn	23 32 21.0	+1.5
	baz=43						
SLBB	Yuanshan	2.23	18	eP	Pb	23 32 22.6	-0.3
	baz=34						
TATO	Taipei	2.41	13		Pb	23 32 26.3	+0.4
TWA	Mucha	2.44	15	eP	Pb	23 32 25.4	-0.9
	baz=360						
TIPB	Shuangxi	2.49	20	eP	Pn	23 32 25.0	+1.9
	baz=33						
YM01	YM01	2.59	14	eP	Pb	23 32 27.8	-1.3
YOJ	Yonaguni jima	2.67	46	Pn	Pn	23 32 23.2	-2.4
KNM	Kinmen	2.88	309	eP	Pn	23 32 28.9	+0.5
	baz=306						
PTMZ	Houxiangcun	2.91	326	eP	Pn	23 32 28.3	-0.5
	baz=326						
KNMB	Chin-men Tao	2.94	309	eP	Pn	23 32 28.0	-1.3
	baz=308						
KNMB	Chin-men Tao	2.94	309	Pn	Pn	23 32 28.9	-0.3
HATJ	Hateruma jima	3.04	61	eS	Sn	23 33 04.1	-2.9
PTTC	Pingtan	3.05	341	eP	Pn	23 32 30.7	-0.1
	baz=341						
ZPLA	Ao Xicun	3.17	295	eP	Pn	23 32 31.5	-0.9
	baz=293						
JKRS	Kuro-shima	3.29	60	P	Pn	23 32 32.7	-1.3
JKRS				S	Sn	23 33 09.6	-3.6
JIJ	Ishigaki jima	3.45	59	P	Pn	23 32 35.9	-0.4
JIJ				eS	Sn	23 33 15.0	-2.3
AXDP	Jialang	3.51	311	eP	Pn	23 32 36.6	-0.6
	baz=309						
ZZJH	Jiuhuzhen	3.52	302	eP	Pn	23 32 36.8	-0.4
	baz=300						
MATB	Ma-tsu	3.62	346	eP	Pn	23 32 38.6	-0.1
	baz=346						
JISG	Ishigakijimahi	3.70	57	P	Pn	23 32 38.5	-1.2
MHZQ	Yeshan	3.86	334	eP	Pn	23 32 41.3	-0.6
	baz=335						
JTJ	Tarama	4.03	59	P	Pn	23 32 43.9	-0.4
JTJ				S	Sn	23 33 29.3	-2.3
LYJJ	Jianjiangzhen	4.05	345	eP	Pn	23 32 43.5	-1.0
	baz=345						
XPSS	Dashiqiu	4.34	352	eP	Pn	23 32 48.5	0.0
	baz=351						
SSE	Sheshan	8.45	2	Pn	Pn	23 33 44.9	0.0
CMAR	Chiang Mai Arr	20.96	263	P	Pn	23 36 28.2	-0.3
	0.3nm,0.3s,baz=72,slow=8.7,SNR=3.5						
CMAR				LR	LR	23 43 40.7	
	comp=Z,17nm,22.0s,baz=75,slow=34						
CMAR	Chiang Mai Arr	20.96	263	P	Pn	23 36 28.2	-0.3
HIA	Hailar	26.61	358	P	P	23 37 21.5	+0.5
HIA				IAmb	IAmb	23 37 22.2	
	comp=Z,3.9nm,0.8s						
ULN	Ulaanbaatar	27.52	340	P	P	23 37 28.0	-1.4
ULN				IAmb	IAmb	23 37 42.8	
	comp=Z,5.6nm,0.7s						
FAKI	Fak Fak	27.70	155	P	P	23 37 30.1	-1.0
SONM	Songino Array	27.71	339	P	P	23 37 22.7	-8.4
LHMI	Lhok Sumawe	28.88	237	P	P	23 37 38.7	-3.0
MK31	Makanchi Array	39.29	317	P	P	23 39 13.5	+2.0
MKAR	Makanchi Array	39.29	317	P	P	23 39 13.5	+2.0
	comp=Z,1.1nm,0.9s,baz=113,slow=10,SNR=8.6						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR				PcP	PcP	23 41 22.5	+2.2
	comp=Z,1.0nm,1.1s,baz=108,slow=4.7,SNR=3.6						
MKAR	Makanchi Array	39.29	317	P	P	23 39 13.5	+2.0
MKAR					PcP	23 41 22.4	+2.2
KDJ	Kajisay	41.20	309	P	P	23 39 27.6	-0.1
KDJ				IAmb	IAmb	23 39 46.3	
	comp=Z,23nm,1.2s						
KURK	Kurchatov	43.13	321	P	P	23 39 42.9	-0.1
KURBB	Kurchatov Arra	43.14	321	P	P	23 39 44.6	+1.5
	comp=Z,1.0nm,0.4s,baz=123,slow=6.8,SNR=4.9						
WB0	Warramunga Arr	44.14	162	P	P	23 39 51.1	-0.4
WB0				IAmb	IAmb	23 39 51.1	
	comp=Z,8.1nm,1.5s						
WRA	Warramunga Arr	44.29	162	P	P	23 39 50.9	-1.8
	comp=Z,0.8nm,0.6s,baz=342,slow=8.7,SNR=6.5						
WR0	Warramunga Arr	44.37	161	P	P	23 39 52.2	-1.1
WR0				IAmb	IAmb	23 40 06.8	
	comp=Z,3.5nm,1.1s						
ASAR	Alice Springs	47.72	164	P	P	23 40 18.9	-0.8
	comp=Z,0.4nm,0.3s,baz=336,slow=6.5,SNR=10						
ASAR	Alice Springs	47.72	164	P	P	23 40 18.9	-0.8
BVAR	Borovoye Array	48.72	322	P	P	23 40 29.5	+2.4
	comp=Z,0.5nm,0.6s,baz=98,slow=7.6,SNR=5.0						
BVAR				PcP	PcP	23 41 52.8	+0.6
	comp=Z,0.7nm,0.8s,baz=96,slow=2.9,SNR=3.7						
BVAR	Borovoye Array	48.72	322	P	P	23 40 29.5	+2.4
BVAR					PcP	23 41 52.8	+0.6
FORT	Forrest	53.53	172	P	P	23 41 01.3	-2.1
FORT				IAmb	IAmb	23 41 11.8	
	comp=Z,28nm,0.9s						
ABKAR	Akbulak array	54.35	315	P	P	23 41 10.3	+1.0
DZM	Mont Dzumac	62.78	132	P	P	23 42 07.5	-1.0
DZM				IAmb	IAmb	23 42 25.3	
	comp=Z,9.9nm,1.2s						
FINES	FINESS Array B	72.66	330	P	P	23 43 13.9	+3.7
	comp=Z,1.8nm,0.9s,baz=72,slow=4.5,SNR=4.0						
FINES	FINESS Array B	72.66	330	P	P	23 43 13.9	+3.7
YKA	Yellowknife Ar	84.51	23	P	P	23 44 15.3	-0.1
	comp=Z,0.2nm,0.7s,baz=314,slow=5.0,SNR=4.1						
YKA	Yellowknife Ar	84.51	23	P	P	23 44 15.3	-0.1

SKO 14 23:33:00.5, 41.25N×20.27E, h10km
TIR 14 23:33:00.1, 41.32N×20.35E, h10km, Md2.4/4
PDG 14 23:33:02.5±0.5, 41.41N×20.19E, h10km±1km, ML2.5/11, Error ellipse: s-maj=1.3km s-min=1.5km az=0.0
ISC 14 23:33:00.5±1.1, 41.32N±0.04×20.29E±0.02, h13km±9km, n26, σ1.07/48, 6C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.32	275	i PG	Pb	23 33 07.9	0.0
TIR				i SG	Sb	23 33 13.2	+0.2
TIR	Tirane	0.32	275	⇑P	Pg	23 33 07.1	+0.1
TIR				⇓S	Sb	23 33 13.8	+0.7
PHP	Peshkopia	0.38	18	i PG	Pg	23 33 07.4	-0.8
PHP				i SG	Sg	23 33 13.1	-0.4
OHR	Ohrid	0.44	118	i Pg	Pg	23 33 07.8	-1.4
OHR				i Sg	Sb	23 33 16.5	-0.1
OHR				eLg	Lg	23 33 19.0	
	comp=E,194nm,0.4s						
PUK	Puka	0.78	338	i PG	Pg	23 33 15.2	-0.4
PUK				i SG	Sb	23 33 27.7	+1.2
ULC	Ulcinj	1.01	310	ePg	Pb	23 33 19.2	-0.6
ULC				eSg	Sg	23 33 33.7	+0.5
BCI	Bajram Curri	1.06	351	i PG	Pg	23 33 21.3	+0.4
BCI				i SG	Sn	23 33 36.8	+1.1
SKO	Skopje	1.08	53	i Pg	Pb	23 33 21.0	0.0
SKO				i Sg	Sg	23 33 35.8	+0.3
SKO				eLg	Lg	23 33 37.3	
	comp=E,5.6nm,0.3s						
DRME	Dracevica, Mon	1.20	317	ePg	Pn	23 33 22.5	-0.4
DRME				eSg	Sg	23 33 39.7	+0.6
PVY	Plav	1.30	349	ePg	Pn	23 33 24.5	+0.1
PVY				eSg	Sg	23 33 43.6	+1.2
PDG	Podgorica	1.35	326	⇓P	Pn	23 33 25.3	+0.3
PDG				⇑S	Sg	23 33 46.4	+2.4
TTG	Podgorica	1.35	326	ePg	Pn	23 33 25.4	+0.4
TTG				eSg	Sg	23 33 44.9	+0.9
STIP	Stip	1.48	75	i Pn	Pg	23 33 29.8	+0.9
STIP				i Sn	Sg	23 33 52.3	+4.3
STIP				eLg	Lg	23 33 54.4	
	comp=E,7.1nm,0.4s						
IVA	Berane	1.58	349	ePg	Pb	23 33 29.7	+0.1
IVA				eSg	Sg	23 33 51.7	+0.4
CEME	Cevo	1.60	321	ePg	Pb	23 33 29.4	-0.4
CEME				eSg	Sg	23 33 52.0	+0.1
KOME	Kolasin	1.63	340	ePg	Pb	23 33 30.4	-0.1
KOME				eSg	Sg	23 33 52.7	-0.4
VAY	Valandovo	1.72	89	i Pn	Pn	23 33 30.4	+0.4
VAY				i Sn	Sb	23 33 53.8	+0.4
VAY				eLg	Lg	23 33 58.7	
	comp=E,10nm,0.5s						
HCY	Herceg Novi	1.75	311	ePn	Pb	23 33 32.0	-0.4
HCY				eSn	Sb	23 33 55.7	+1.4
NKME	Niksic	1.75	326	ePn	Pb	23 33 32.2	-0.3
NKME				eSn	Sb	23 33 56.1	-0.8
BRY	Bratogost	2.05	321	ePn	Pb	23 33 36.7	-0.9
BRY				eSn	Sb	23 34 02.9	-0.1
UPM	Unac-Piva	2.14	332	ePn	Pb	23 33 38.0	-1.2
UPM				eSn	Sb	23 34 05.1	-0.7
VTS	Vitosha	2.55	58	⇑P	Pn	23 33 39.3	-2.4
BLKB	Belogradchik	2.90	37	⇓S	Sn	23 34 20.2	-0.9
MDVR	Moldovita	3.62	16	⇑P	Pn	23 33 55.9	-0.2
BZS	Buzias	4.40	12	⇓P	Pn	23 34 06.0	-1.0
BZS				⇑S	Sn	23 34 57.5	-0.5
GZR	Gura Zlata	4.46	23	⇑P	Pn	23 34 07.0	-0.8

THE 15 00:14:44.9, 38.21N×20.42E, h13km, ML2.5/4, Error ellipse: s-maj=1.3km s-min=0.5km az=264.0
ATH 15 00:14:44.7, 38.22N×20.40E, h14km, ML2.6/6, Error ellipse: s-maj=1.6km s-min=1.0km az=261.0
ISC 15 00:14:44.9±1.0, 38.21N±0.02×20.42E±0.04, h14km±4km, n39, σ0.45/63, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.01	126	P	Pg	00 14 47.4	+0.1
LXR1				S	Sg	00 14 49.3	+0.3
LXRA	Lixouri, Kepha	0.01	130	P	Pg	00 14 47.2	-0.2
LXRA				S	Sg	00 14 49.0	0.0
CHV1	Chavriata, Kef	0.04	232	P	Pg	00 14 47.5	0.0
CHV1				S	Sg	00 14 49.4	+0.2
KEF4	Livadi, Kephal	0.05	1	P	Pg	00 14 47.4	-0.1
KEF4				S	Sg	00 14 49.3	0.0
AGT1	Agia Thekli	0.05	323	P	Pg	00 14 47.4	-0.2
AGT1				S	Sg	00 14 49.2	-0.2
ARGA	Argostoli. Kep	0.05	126	P	Pg	00 14 47.4	-0.1
ARGA				S	Sg	00 14 49.3	-0.1
ARG2	Argostoli	0.06	121	P	Pg	00 14 47.5	-0.1
ARG2				S	Sg	00 14 49.3	-0.1
KEF3	Kipouria, Keph	0.06	264	P	Pg	00 14 47.6	0.0
KEF3				S	Sg	00 14 49.6	+0.1
KEF2	Argostoli. Kep	0.07	131	P	Pg	00 14 47.6	-0.1
KEF2				S	Sg	00 14 49.3	-0.2
KEF1	Kardakata, Kep	0.08	28	P	Pg	00 14 47.5	-0.3
KEF1				S	Sg	00 14 49.4	-0.4
VLS	Valsamata	0.14	104	P	Pg	00 14 48.3	-0.2
VLS				S	Sg	00 14 50.9	0.0
	14µm,0.1s						
VLS	Valsamata	0.14	104	P	Pg	00 14 48.3	-0.2
VLS				S	Sg	00 14 50.8	0.0
VLS				AML	AML	00 14 50.9	
	comp=N,21682µm,0.1s						
VLS				AML	AML	00 14 51.0	
	comp=E,32346µm,0.1s						
FSK	Fiskardo	0.27	24	P	Pg	00 14 50.4	-0.3
FSK				S	Sg	00 14 54.6	+0.1
	comp=E,1µm,0.3s						
FSK	Fiskardo	0.27	24	P	Pg	00 14 50.4	-0.3
FSK				S	Sg	00 14 54.7	+0.1
FSK				AML	AML	00 14 55.0	
	comp=N,2183µm,0.3s						
FSK				AML	AML	00 14 55.5	
	comp=E,3600µm,0.3s						
VLMS	Volimes, Zakyn	0.38	150	P	Pg	00 14 52.7	+0.2
VLMS				S	Sb	00 14 59.2	0.0
VLMS				AML	AML	00 14 59.5	
	comp=E,3281µm,0.4s						
VLMS				AML	AML	00 15 02.5	
	comp=N,3704µm,0.2s						
EVGI	Lefkada island	0.45	24	P	Pg	00 14 53.5	-0.3
EVGI				S	Sg	00 15 00.4	+0.5
EVGI	Lefkada island	0.45	24	P	Pg	00 14 53.5	-0.3
EVGI				S	Sg	00 15 00.5	+0.5
MGNA	Meganis	0.53	33	P	Pg	00 14 55.0	-0.4
MGNA				S	Sg	00 15 02.7	+0.3
MGNA				AML	AML	00 15 03.2	
	comp=E,1407µm,0.1s						
MGNA				AML	AML	00 15 03.6	
	comp=N,807µm,0.3s						
LKD2	Lefkada island	0.61	18	P	Pg	00 14 56.8	0.0
KRI1	kERI	0.63	150	P	Pg	00 14 56.2	-1.0
KRI1				S	Sb	00 15 06.5	+0.3
TSLK	Tsoukalades, L	0.64	16	P	Pg	00 14 56.7	-0.7
PDO	Prodromos	0.71	57	P	Pg	00 14 57.8	-0.9
PDO				S	Sb	00 15 09.0	+0.3
	comp=N,318nm,0.3s						
PDO	Prodromos	0.71	57	P	Pg	00 14 57.9	-0.8
PDO				S	Sb	00 15 09.8	+1.1
PDO				AML	AML	00 15 09.8	
	comp=E,522µm,0.3s						
PDO				AML	AML	00 15 11.0	
	comp=N,390µm,0.4s						
AXS	Araxos	0.75	91	P	Pg	00 14 59.0	-0.4
AXS				S	Sb	00 15 10.7	+1.0
RLS	Riolos of Patr	0.84	100	P	Pg	00 15 00.1	-1.0
PVO	Paravola	0.96	64	P	Pb	00 15 02.9	-0.3
PVO				S	Sn	00 15 17.5	+0.2
	comp=N,228nm,0.3s						
PVO	Paravola	0.96	64	P	Pb	00 15 03.2	0.0
PVO				AML	AML	00 15 19.1	
	comp=E,512µm,0.3s						
PVO				AML	AML	00 15 23.0	
	comp=N,382µm,0.4s						
DRO	Drossia	1.05	104	P	Pb	00 15 04.4	-0.3
AMT	Artemida-Makis	1.22	123	P	Pg	00 15 08.5	+0.2
ANX	Ano Chora	1.24	71	P	Pn	00 15 07.8	0.0
EVR	Evrytania	1.29	57	P	Pg	00 15 09.5	-0.3
SERG	Sergoula	1.30	80	P	Pn	00 15 08.4	-0.2
TRIZ	Trizonia	1.31	83	P	Pn	00 15 08.1	-0.5
TRIZ				S	Sg	00 15 28.5	+1.4
IGT	Igoumenitsa	1.32	357	P	Pg	00 15 09.8	-0.5
KALE	Kalithea	1.36	82	P	Pn	00 15 09.5	0.0
KLV	Kalavryta, Ach	1.37	96	P	Pn	00 15 09.9	+0.3
MAKR	Makrakomi, Fth	1.56	59	P	Pg	00 15 14.5	-0.4
ITM	Ithomi	1.57	130	P	Pg	00 15 14.8	-0.3
AGG	Agios Georgios	1.70	61	P	Pg	00 15 17.1	-0.4

TUL 15 00:19:13.0±0.8, 35.78N±0.02×97.48W±0.03, h5km±7km, ML3.1, Error ellipse: s-maj=3.4km s-min=2.2km az=60.0
ANF 15 00:19:12.7±0.6, 35.78N×97.47W, h5km, ML3.9/13, Error ellipse: s-maj=6.9km s-min=5.0km az=167.0
NEIC 15 00:19:13.3±0.8, 35.78N±0.02×97.47W±0.03, h7km±7km, Error ellipse: s-maj=3.6km s-min=2.3km az=53.0
ISC 15 00:19:13.7±1.2, 35.78N±0.04×97.47W±0.03, h5km±9km, n33, σ1.01/47, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.14	148		Pg	00 19 16.4	-0.3
ADOK				Sg	Sg	00 19 18.9	+0.2
OK009	Oakdale Elemen	0.20	170		Pg	00 19 17.3	-0.3
OK009					Sg	00 19 20.6	+0.4
OK001	Jones High Sch	0.26	146		Pg	00 19 18.5	-0.2
OK001					Sg	00 19 22.7	+0.5
OKCFA	Oklahoma City	0.36	178		Pg	00 19 20.2	-0.5
OKCSW	OKLAHOMA CITY	0.37	177		Pg	00 19 20.4	-0.5
OKCSW					Sg	00 19 26.1	+0.3
FNO	Franklin	0.52	174	Pg	Pg	00 19 23.7	0.0
W35A	Tecumseh	0.79	142		Pg	00 19 27.8	-1.0
TUL1	Leonard	1.37	84	Pn	Pn	00 19 37.6	-1.7
TUL1	Leonard	1.37	84	P	Pn	00 19 37.7	-1.7
	baz=265						
TUL1				S	Sb	00 19 56.3	-1.2
	baz=265						
U32A	Winter Ranch,	1.38	296		Pn	00 19 38.1	-1.6
WMOK	Wichita Mounta	1.49	227		Pn	00 19 40.0	-1.2
WMOK	Wichita Mounta	1.49	227	P	Pn	00 19 40.1	-1.1
	baz=45						
WMOK				S	Sn	00 19 59.8	-1.2
	baz=45						
HHAR	Hobbs	2.90	79		Pn	00 20 00.4	-0.2
W39A	Magazine	3.06	100		Pn	00 20 02.6	-0.1
W39A	Magazine	3.06	100	P	Pn	00 20 02.4	-0.3
	baz=282						
W39A				S	Sn	00 20 40.0	+0.4
	baz=282						
KSU1	Kansas State U	3.39	11	P	Pn	00 20 06.0	-1.3
	baz=192						
KSU1				Sb	Sb	00 20 57.4	+1.7
	baz=192						
MIAR	Mount Ida	3.41	110		Pn	00 20 07.9	+0.3
MIAR	Mount Ida	3.41	110	P	Pn	00 20 07.5	-0.1
	baz=292						
MIAR				S	Sn	00 20 47.9	-0.5
	baz=292						
CBKS	Cedar Bluff	3.53	330		Pn	00 20 09.2	-0.1
CBKS	Cedar Bluff	3.53	330	P	Pn	00 20 08.9	-0.4
	baz=149						
CBKS				Sb	Sb	00 21 01.7	+1.8
	baz=149						
AMTX	Amarillo	3.56	257	P	Pn	00 20 10.6	+1.0
	baz=74						
ABTX	Abilene, Hawle	3.62	210		Pn	00 20 10.3	-0.3
ABTX	Abilene, Hawle	3.62	210	P	Pn	00 20 09.8	-0.8
	baz=29						
ABTX				S	Sn	00 20 53.8	+0.2
	baz=29						
WHTX	Lake Whitney,	3.77	180		Pn	00 20 11.8	-0.8
WHTX	Lake Whitney,	3.77	180	P	Pn	00 20 11.5	-1.0
	baz=360						
WHTX				S	Sn	00 20 57.8	+0.5
	baz=360						
U40A	Yellville	3.78	80		Pn	00 20 11.8	-0.8
U40A	Yellville	3.78	80	P	Pn	00 20 11.9	-0.7
	baz=263						
X40A	Basin Creek Fa	4.01	107	P	Pn	00 20 15.1	-0.7
	baz=290						
X40A				Sb	Sb	00 21 16.9	+3.4
	baz=290						
WHAR	Wooly Hollow	4.25	95		Pn	00 20 18.7	-0.3
W41B	Gary Mavity, V	4.30	97		Pn	00 20 19.4	-0.4
W41B	Gary Mavity, V	4.30	97	P	Pn	00 20 19.5	-0.2
	baz=280						
W41B				S	Sn	00 21 09.8	-0.4
	baz=280						
MSTX	Muleshoe	4.72	249	P	Pn	00 20 24.3	-1.3
	baz=66						
T25A	Trinidad	5.76	286	P	Pn	00 20 39.5	-0.5
	baz=102						

IDC 15 00:48:07.7±3.4, 40.70N×14.80E, h336km±39km, mb2.8/3, mb1 2.9/6, mb1mx2.7/36, mbtmp3.6/6, Error ellipse: s-maj=42.2km s-min=18.5km az=115.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	Muntele Rosu	9.45	56	P	Pn	00 50 19.1	+0.1
	0.2nm,0.3s,baz=189,slow=6.3,SNR=7.0						
IDI	Anoyia	9.62	121	P	Pn	00 50 20.9	-0.2
	0.3nm,0.3s,baz=308,slow=12,SNR=6.6						
AKASG	Malin Array Be	14.18	40	P	P	00 51 14.2	+0.5
	0.6nm,0.3s,baz=230,slow=11,SNR=5.1						
FINES	FINESS Array B	21.89	15	P	P	00 52 33.3	-0.2
	0.4nm,0.4s,baz=191,slow=9.8,SNR=9.4						
TORD	Torodi Ar. Bea	29.75	206	P	P	00 53 44.2	0.0
	0.4nm,0.5s,baz=26,slow=9.2,SNR=5.5						
MKAR	Makanchi Array	47.78	59	P	P	00 56 11.9	-0.1
	0.2nm,0.4s,baz=284,slow=6.9,SNR=9.5						

ISK 15 01:00:51.2, 36.72N×36.07E, h14km, ML2.5/20
DDA 15 01:00:52.1, 36.75N×36.01E, h7km±5km, ML2.0
ISC 15 01:00:52.0±1.1, 36.74N±0.03×36.04E±0.02, h9km±10km, n37, σ0.59/46, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YURE	YUREGIR	0.34	285	PG	Pg	01 00 58.9	+0.1
YURE	YUREGIR	0.34	285	i P	Pb	01 00 59.4	-0.9
TAHT	Tahtakopru-Hat	0.38	163	PG	Pg	01 00 59.1	-0.4
TAHT				SG	Sg	01 01 04.4	-0.1
KRTD	Karatas-Adana	0.53	254	PG	Pg	01 01 02.5	+0.3
KRTS	Karatas	0.56	253	PG	Pg	01 01 03.1	+0.2
KAMA	Osmaniye	0.67	48	i P	Pg	01 01 04.2	-0.8
KAMA				IAML		01 01 17.0	
	comp=E,55nm,0.1s						
KAMA				IAML		01 01 18.0	
	comp=N,60nm,0.3s						
YAYL	Yayladag	0.71	176	i P	Pb	01 01 06.6	+0.1
YAYL				i S	Sb	01 01 16.8	+0.4
YAYL				IAML		01 01 18.0	
	comp=N,81nm,0.6s						
YAYL				IAML		01 01 20.0	
	comp=E,125nm,0.8s						
KOZT	Kozan	0.76	347	PG	Pb	01 01 07.0	-0.4
KUZU	Kuzuini	0.83	87	i P	Pg	01 01 07.6	-0.3
KUZU				i S	Sn	01 01 21.7	-0.6
AKO	Adana	0.86	327	i P	Pb	01 01 08.9	-0.3
AKO				i S	Sn	01 01 23.9	+0.7
AKO				IAML		01 01 25.0	
	comp=N,46nm,0.4s						
AKO				IAML		01 01 27.0	
	comp=E,26nm,0.3s						
ANDN	Andirin	0.87	16	i P	Pn	01 01 10.6	0.0
ANDN				i S	Sn	01 01 23.5	+0.1
ANDN				IAML		01 01 24.0	
	comp=N,85nm,0.4s						
ANDN				IAML		01 01 25.0	
	comp=E,83nm,0.8s						
AYKD	Aykdinkavak	0.91	42	i P	Pg	01 01 09.0	-0.5
AYKD				IAML		01 01 51.0	
	comp=N,85nm,1.8s						
HCB	Kahramanmara	0.92	49	i P	Pg	01 01 09.8	+0.2
KARA	Karaisali	0.95	304	PG	Pg	01 01 10.2	0.0
DED	Mersin	1.02	283	i P	Pg	01 01 10.7	-0.9
DED				IAML		01 01 28.0	
	comp=E,26nm,0.4s						
DED				IAML		01 01 29.0	
	comp=N,19nm,0.8s						
KMRS	Kahramanmaras	1.03	42	PG	Pg	01 01 11.3	-0.4
KMRS				SG	Sb	01 01 26.1	+0.5
GAZ	Gaziantep	1.03	65	PG	Pg	01 01 11.4	-0.4
GULE	Gulek	1.15	299	i P	Pg	01 01 13.2	-1.0
GULE				IAML		01 01 34.0	
	comp=N,53nm,0.4s						
GULE				IAML		01 01 35.0	
	comp=E,45nm,0.5s						
MERS	Mersin	1.23	276	PN	Pn	01 01 15.2	-0.2
SAIM	ADANA	1.23	1	i P	Pb	01 01 15.5	-0.1
SAIM				i S	Sn	01 01 33.7	+1.3
SAIM				IAML		01 01 36.0	
	comp=N,42nm,0.6s						
CMRD	Camardi-Nigde	1.25	318	PN	Pn	01 01 15.1	-0.6
GZT	Gaziantep	1.36	63	i P	Pb	01 01 17.6	-0.2
GZT				IAML		01 01 37.0	
	comp=E,44nm,0.5s						
GZT				i S	Sg	01 01 37.6	+1.8
GZT				IAML		01 01 39.0	
	comp=N,45nm,0.3s						
YAHY	KAYSERI_Yahyal	1.46	338	i P	Pb	01 01 19.2	-0.1
YAHY				i S	Sg	01 01 39.4	+0.5
KIZK	Mersin	1.55	261	PN	Pn	01 01 19.6	-0.2
KERG	Konya-Eregli	1.68	294	i P	Pb	01 01 22.7	-0.4
KERG				IAML		01 01 57.0	
	comp=N,10.0nm,0.5s						
KERG				IAML		01 02 21.0	
	comp=E,9.8nm,2.0s						
SARI	SarD1z-Kayseri	1.69	10	PN	Pn	01 01 21.0	-0.9
KEBE	Keben-Mersin	1.90	262	PN	Pn	01 01 24.2	-0.4
IKL	Isikli	1.96	256	PN	Pn	01 01 25.3	-0.2
BNN	Bunyan	2.11	356	PN	Pn	01 01 27.2	-0.5
TEVE	Tevekalti-Mers	2.12	263	PN	Pn	01 01 27.6	0.0
AKCD	Akcadag	2.15	43	i P	Pn	01 01 29.0	+0.7
AKCD				IAML		01 02 06.0	
	comp=N,23nm,0.5s						
DARE	Darende-Malaty	2.16	32	PN	Pn	01 01 27.8	-0.4
BERE	Bereket-Mersin	2.31	261	PN	Pn	01 01 30.1	-0.2
URFA	Urfa	2.33	72	PN	Pn	01 01 29.9	-0.7
SANL	SANLIURFA_Merk	2.40	79	i P	Pg	01 01 37.3	-0.7
TEKE	Tekeli-Mersin	2.44	257	PN	Pn	01 01 32.2	+0.2
SVRC	Sivrice-ELAZID	3.06	57	PN	Pn	01 01 40.5	-0.3

THE 15 01:16:51.2, 38.26N×20.35E, h12km±1km, ML2.5/3, Error ellipse: s-maj=1.7km s-min=0.7km az=233.0
ATH 15 01:16:52.2, 38.27N×20.41E, h8km±1km, ML2.7/2, Error ellipse: s-maj=1.8km s-min=0.8km az=265.0
ISC 15 01:16:51.8±1.3, 38.26N±0.03×20.40E±0.05, h10km±6km, n25, σ0.38/42, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT1	Agia Thekli	0.02	228	P	Pg	01 16 53.6	0.0
AGT1				S	Sg	01 16 54.6	-0.3
KEF4	Livadi, Kephal	0.02	100	P	Pg	01 16 53.5	-0.1
KEF4				S	Sg	01 16 54.8	-0.1
KEF1	Kardakata, Kep	0.06	74	P	Pg	01 16 53.7	-0.2
KEF1				S	Sg	01 16 54.9	-0.5
LXR1	Lixouri, Cepha	0.07	153	P	Pg	01 16 53.6	-0.4
LXR1				S	Sg	01 16 56.0	+0.4
LXRA	Lixouri, Kepha	0.07	154	P	Pg	01 16 53.8	-0.2
LXRA				S	Sg	01 16 56.1	+0.5
KEF3	Kipouria, Keph	0.07	215	P	Pg	01 16 54.4	+0.3
KEF3				S	Sg	01 16 56.2	+0.5
CHV1	Chavriata, Kef	0.08	190	P	Pg	01 16 53.1	-1.0
CHV1				S	Sg	01 16 56.4	+0.6
ARGA	Argostoli. Kep	0.10	143	P	Pg	01 16 54.7	+0.2
ARGA				S	Sg	01 16 56.7	+0.3
ARG2	Argostoli	0.11	140	P	Pg	01 16 54.7	+0.2
ARG2				S	Sg	01 16 56.7	+0.3
	9µm,0.1s						
KEF2	Argostoli. Kep	0.12	144	P	Pg	01 16 55.0	+0.3
KEF2				S	Sg	01 16 57.1	+0.4
VLS	Valsamata	0.17	119	P	Pg	01 16 55.5	0.0
VLS				S	Sg	01 16 58.4	+0.3
VLS	Valsamata	0.17	119	P	Pg	01 16 55.5	0.0
VLS				S	Sg	01 16 58.4	+0.3
VLS				AML	AML	01 16 58.8	
	comp=N,7157µm,0.3s						
VLS				AML	AML	01 16 58.9	
	comp=E,8498µm,0.1s						
FSK	Fiskardo	0.24	33	P	Pg	01 16 56.6	0.0
FSK				S	Sg	01 17 00.4	+0.4
	comp=E,910nm,0.2s						
FSK	Fiskardo	0.24	33	P	Pg	01 16 56.7	0.0
FSK				S	Sg	01 17 00.4	+0.4
EVGI	Lefkada island	0.41	29	P	Pg	01 16 59.9	0.0
VLMS	Volimes, Zakyn	0.44	151	P	Pg	01 17 00.6	+0.2
VLMS				S	Sb	01 17 07.4	-0.7
VLMS				AML	AML	01 17 09.5	
	comp=E,2341µm,0.3s						
VLMS				AML	AML	01 17 10.2	
	comp=N,3861µm,0.3s						
MGNA	Meganis	0.50	38	P	Pg	01 17 01.5	-0.1
AST1	Astakos	0.61	63	P	Pg	01 17 03.2	-0.4
AST1				S	Sb	01 17 13.3	+0.1
PDO	Prodromos	0.70	61	P	Pg	01 17 05.1	-0.2
PDO				S	Sb	01 17 16.4	+0.6
	comp=N,388nm,0.4s						
PDO	Prodromos	0.70	61	P	Pg	01 17 05.2	-0.2
AXS	Araxos	0.77	95	P	Pg	01 17 06.9	+0.2
RLS	Riolos of Patr	0.87	103	P	Pg	01 17 07.9	-0.6
PVO	Paravola	0.95	68	P	Pg	01 17 10.0	-0.1
PVO	Paravola	0.95	68	P	Pg	01 17 10.0	-0.1
ANX	Ano Chora	1.24	74	P	Pn	01 17 15.1	-0.2

IDC 15 01:17:10.9±10.0, 35.93N×81.38E, h0km, mb3.5/1, mb1 3.7/3, mb1mx3.3/40, mbtmp3.0/2, ML3.0/2, Error ellipse: s-maj=146.9km s-min=53.5km az=53.0
NNC 15 01:17:22.0±8.0, 36.57N×82.15E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=93.6km s-min=58.1km az=74.0
ISC 15 01:17:23.6±3.4, 36.4N±0.2×82.4E±0.3, h35km, n6, σ1.80/10, 5C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	7.28	343	⇑Pn	Pn	01 19 07.3	-0.2
	5.3nm,1.0s						
PDGK				⇑Sn	Sn	01 20 31.1	+2.3
	24nm,0.9s						
PDGK				⇓Lg	Lg	01 21 09.0	
	26nm,0.9s						

MK31 Makanchi Array 10.39 360 Pn Pn 01 19 49.2 -0.8
2.4nm,0.8s,baz=181,slow=12,SNR=28
MK31 ⇓Sn Sn 01 21 44.1 -1.1
2.6nm,0.8s,baz=186,slow=24,SNR=5.2
MK31 ⇑Lg Lg 01 22 46.7
1.3nm,0.7s
MKAR Makanchi Array 10.39 360 Pn Pn 01 19 49.9 -0.2
0.3nm,0.3s,baz=189,slow=13,SNR=20
MKAR Sn Sn 01 21 47.0 +1.8
0.3nm,0.3s,baz=188,slow=22,SNR=5.0
MAKZ Makanchi 10.41 358 ⇑Pn Pn 01 19 49.0 -1.3
2.9nm,0.6s
MAKZ ⇑Sn Sn 01 21 44.5 -1.1
3.7nm,1.1s
ZALV Zalesovo Beam 17.63 5 P Pn 01 21 23.7 -2.5
0.1nm,0.3s,baz=195,slow=11,SNR=3.8
SONM Songino Array 21.07 50 P P 01 22 06.4 +1.8
1.9nm,0.9s,baz=243,slow=10.0,SNR=12

IDC 15 01:18:47.2±1.9, 35°.05S×178°.96E, h0km, mb4.1/3, mb1 4.2/4, mb1mx3.9/35, mbtmp4.1/4, ML3.8/1, MS3.4/6, Ms1 3.4/6, ms1mx3.1/25, Error ellipse: s-maj=48.3km s-min=29.1km az=60.0
WEL 15 01:18:54.0±0.7, 36°S±5°×17°9E±°, h12km, M4.0/18, ML4.3/18, MLv4.0/18
ISC 15 01:18:52.1±1.8, 35°.6S±0°.1×179°.3E±0°.1, h10km, n62, σ1§78/66, mb3.9/3, MS3.4/5, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.10	201	P	Pn	01 19 26.4	-0.9
MXZ				S	Sn	01 19 52.6	-0.8
WMGZ	Waiomatatini S	2.31	197	P	Pn	01 19 32.2	+2.0
HAZ	Te Kaha	2.45	208	P	Pn	01 19 31.2	-0.9
HAZ				S	Sn	01 20 04.0	+1.9
PKGZ	Pakihiroa	2.47	202	P	Pn	01 19 32.8	+0.4
PUZ	Puketiti	2.59	198	P	Pn	01 19 36.6	+2.6
PUZ				S	Sb	01 20 10.3	-0.1
RUGZ	Raukumara Rang	2.67	208	P	Pn	01 19 35.7	+0.4
RUGZ				S	Sn	01 20 08.0	+0.2
WHRZ	Whale Island	2.90	219	P	Pn	01 19 37.6	-0.7
WHRZ				S	Sn	01 20 16.4	+3.3
MWZ	Matawai	3.05	206	P	Pn	01 19 40.9	+0.5
MWZ				S	Sn	01 20 18.8	+1.8
MARZ	Manawahe	3.15	220	P	Pn	01 19 41.5	-0.2
URZ	Urewera	3.16	212	Pn	Pn	01 19 41.4	-0.4
	9.4nm,0.3s,baz=55,slow=11,SNR=87						
URZ				Sn	Sn	01 20 19.5	0.0
	18nm,0.3s,baz=326,slow=23,SNR=8.5						
URZ	Urewera	3.16	212	P	Pn	01 19 41.2	-0.6
URZ				S	Sn	01 20 17.8	-1.7
RAGZ	Rawiri	3.24	206	P	Pn	01 19 45.7	+2.7
RAGZ				S	Sn	01 20 23.6	+2.0
RIGZ	Rimuhau	3.31	201	P	Pn	01 19 46.5	+2.5
RIGZ				S	Sb	01 20 30.5	-0.9
TARZ	Mount Tarawera	3.43	219	P	Pn	01 19 46.5	+0.9
KMRZ	Kaimai	3.48	229	P	Pn	01 19 47.9	+1.7
PRGZ	Paritu Road	3.49	198	P	Pn	01 19 48.3	+1.9
RRRZ	Republican Roa	3.50	218	P	Pn	01 19 50.6	+4.1
RTZ	Ruatahuna	3.51	211	P	Pn	01 19 46.8	+0.1
SNGZ	Shannon Statio	3.52	205	P	Pn	01 19 49.3	+2.5
HSRZ	Hossack Road	3.62	221	P	Pn	01 19 50.8	+2.6
KNZ	Kokohu	3.63	200	P	Pn	01 19 49.8	+1.4
PRRZ	Plateau Road	3.68	218	P	Pb	01 19 54.8	-2.5
MHGZ	Mahia Peninsul	3.70	196	P	Pn	01 19 51.0	+1.7
RAHZ	Arahi	3.73	207	P	Pn	01 19 52.1	+2.4
ALRZ	Allen Road	3.76	217	P	Pn	01 19 50.3	+0.2
MTHZ	Maungataniwha	3.77	210	P	Pn	01 19 51.3	+1.0
WHHZ	Waihua	3.82	204	P	Pn	01 19 53.5	+2.6
MRHZ	Matea Rd	3.94	214	P	Pn	01 19 52.6	0.0
NMHZ	Naumai	3.99	209	P	Pn	01 19 55.6	+2.2
ARHZ	Aropaoanui	4.07	206	P	Pn	01 19 56.0	+1.7
BKZ	Black Stump Fm	4.18	211	P	Pn	01 19 56.4	+0.5
RITZ	Rihia Road	4.32	218	P	Pn	01 19 59.0	+1.2
MCHZ	McNeill Hill	4.34	207	P	Pn	01 19 59.6	+1.5
CKHZ	Cape Kidnapper	4.40	202	P	Pn	01 20 00.0	+1.2
KWHZ	Kaweka Forest	4.43	210	P	Pn	01 20 00.1	+0.8
KRVZ	Karewarewa	4.52	219	P	Pn	01 20 03.4	+2.7
HIZ	Hauiti	4.56	229	P	Pn	01 20 00.8	-0.3
KAHZ	Kahuranaki	4.59	204	P	Pn	01 20 02.1	+0.6
NGZ	Ngauruhoe	4.60	218	P	Pn	01 20 03.4	+1.7
TWVZ	Taurewa	4.61	220	P	Pn	01 20 04.4	+2.6
BHHZ	Black Hill Sta	4.63	212	P	Pn	01 20 02.7	+0.5
KRHZ	Kereru	4.63	209	P	Pn	01 20 02.3	+0.1
TUVZ	Tukino	4.64	217	P	Pn	01 20 04.7	+2.3
FWVZ	Far West T-bar	4.68	218	P	Pn	01 20 05.8	+2.8
MOVZ	Moawhango	4.71	215	P	Pn	01 20 03.9	+0.7
PXZ	Pawanui	4.80	202	P	Pn	01 20 04.5	0.0
PNHZ	Pukenui	4.93	208	P	Pn	01 20 06.3	+0.1
VRZ	Vera Road	5.01	224	P	Pn	01 20 12.1	+4.8
TSZ	Takapari Road	5.15	209	P	Pn	01 20 08.8	-0.5
WAZ	Wanganui	5.35	218	P	Pn	01 20 15.1	+3.1
BFZ	Birch Farm	5.59	204	P	Pn	01 20 14.3	-1.0
MRZ	Mangatainoka R	5.82	209	P	Pn	01 20 18.7	+0.3
KHZ	Kahutara	8.12	211	P	Pn	01 20 49.4	-0.6
JCZ	Jackson Bay	11.66	220	P	Pn	01 21 37.7	-0.9
DZM	Mont Dzumac	17.52	317	LR	LR	01 27 51.1	
	comp=Z,218nm,18.2s,baz=214,slow=32						
ASAR	Alice Springs	40.85	274	P	P	01 26 28.9	-5.4
	1.5nm,0.7s,baz=115,slow=7.8,SNR=14						
ASAR				LR	LR	01 43 30.5	
	comp=Z,44nm,18.4s,baz=110,slow=37						
WRA	Warramunga Arr	42.32	279	P	P	01 26 40.4	-5.9
	1.5nm,0.6s,baz=120,slow=7.6,SNR=17						
WRA				LR	LR	01 42 54.7	
	comp=Z,49nm,19.6s,baz=165,slow=34						
QSPA	South Pole Qui	54.52	180	P	P	01 28 21.2	+1.3
	1.7nm,0.5s,baz=342,slow=0.2,SNR=24						
GUMO	Guam	58.76	320	LR	LR	01 50 49.5	
	comp=Z,35nm,19.0s,baz=240,slow=33						
RPN	Rapa Nui	60.37	104	LR	LR	01 48 31.6	
	comp=Z,24nm,21.7s,baz=273,slow=29						
KAPI	Kappang	62.46	285	LR	LR	01 56 43.6	
	comp=Z,24nm,19.5s,baz=82,slow=37						
FINES	FINESS Array B	149.07	335	PKPbc	PKPdf	01 38 33.7	-1.8
	2.5nm,0.9s,baz=336,slow=13,SNR=3.3						

IDC 15 01:48:19.9±0.9, 3°.23S×140°.00E, h94km±10km, mb3.8/10, mb1 4.0/13, mb1mx3.9/31, mbtmp4.2/13, MS3.1/5, Ms1 3.1/5, ms1mx2.8/34, Error ellipse: s-maj=23.1km s-min=12.9km az=100.0
NEIC 15 01:48:19.8±2.0, 3°.26S±0°.08×139°.95E±0°.08, h93km±8km, mb4.3/14, Error ellipse: s-maj=15.3km s-min=6.0km az=134.0
DJA 15 01:48:20.3±0.3, 3°S±3°×14°0E±°, h86km±4km, M4.3/8, mb4.6/8, mB4.2/3, MLv4.3/4, Mw(mB)3.3/3
ISC 15 01:48:20.5±0.6, 3°.22S±0°.05×139°.94E±0°.06, h100km, n43, σ1§11/42, mb4.0/12, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
GENI	Genyem	0.66	20	P	Pn	01 48 36.9	-0.7
GENI				S	Sn	01 48 49.4	-1.0
JAY	Jayapura	1.04	48	P	Pn	01 48 40.4	-1.0
	292nm,0.3s,baz=227,slow=17,SNR=367						
JAY				S	Sn	01 48 55.2	-1.8
	207nm,0.3s,baz=281,slow=22,SNR=7.4						
JAY	Jayapura	1.04	48	P	Pn	01 48 40.3	-1.1
WAMI	Wamena	1.39	242	P	Pn	01 48 45.5	+0.1
WAMI				S	Sn	01 49 03.3	-1.0
SMPI	Sarmi	1.73	315	P	Pn	01 48 50.4	+0.8
MMPI	Merauke	5.23	175	P	Pn	01 49 37.7	+1.3
	0.0nm89nm3.7nm,0.8s						
MMPI				S	Sn	01 50 35.3	-0.2
	0.0nm89nm3.7nm,0.8s						
RKPI	Ransiki, Papua	6.00	286	S	Sn	01 50 51.3	-2.9
SIJI	Sorong	8.97	285	P	Pn	01 50 27.8	+0.5
	1.5nm,0.3s,baz=109,slow=18,SNR=4.1						
PMG	Port Moresby	9.45	131	LR	LR	01 51 51.4	
	comp=Z,37nm,19.8s,baz=342,slow=42						
COEN	Coen	11.14	164	P	Pn	01 50 55.8	-1.0
KRVT	Keravat (AS076	12.11	95	LR	LR	01 55 25.2	
	comp=Z,83nm,21.4s,baz=231,slow=35						
KNRA	Kununurra	16.56	221	P	Pn	01 52 05.0	-1.8
SOEI	Soe	16.86	247	P	P	01 52 11.9	+0.8
	74nm,1.1s						
SOEI	Soe	16.86	247	P	P	01 52 12.3	+1.2
WB0	Warramunga Arr	17.32	198	P	P	01 52 14.2	-1.8
WB0				IAmb	IAmb	01 52 17.9	
	comp=Z,15nm,0.7s						
WR0	Warramunga Arr	17.45	197		P	01 52 15.9	-1.5
WRAB	Tennant Creek	17.49	198		P	01 52 17.1	-0.7
WB2	Warramunga Arr	17.49	198		P	01 52 16.2	-1.7
WRA	Warramunga Arr	17.50	198	P	P	01 52 16.9	-1.1
	comp=Z,3.3nm,0.3s,baz=17,slow=12,SNR=13						
WRA				LR	LR	01 59 33.1	
	comp=Z,43nm,21.9s,baz=10.0,slow=38						
CTA	Charters Tower	17.86	160	P	Pn	01 52 22.4	-0.3
	comp=Z,0.4nm,0.3s,baz=340,slow=11,SNR=9.2						
BNSI	Bone	19.82	266	P	Pn	01 52 46.6	+0.7
	comp=Z,35nm,1.1s						
FITZ	Fitzroy Crossi	20.37	222	P	P	01 52 48.4	-0.9
	comp=Z,14nm,0.9s,baz=42,slow=9.5,SNR=17						
FITZ	Fitzroy Crossi	20.37	222	P	P	01 52 48.9	-0.4
FITZ				IAmb	IAmb	01 52 49.7	
	comp=Z,14nm,0.8s						
AS31	Alice Springs	21.15	195	P	P	01 52 57.1	-0.6
AS31				IAmb	IAmb	01 52 58.6	
	comp=Z,8.8nm,0.6s						
ASAR	Alice Springs	21.15	195	P	P	01 52 57.4	-0.2
	comp=Z,25nm,0.7s,baz=28,slow=9.8,SNR=230						
EIDS	Eidsvold	24.50	155	P	P	01 53 32.9	+2.4
STKA	Stephens Creek	28.55	177	P	P	01 54 07.7	+0.8
	comp=Z,1.3nm,0.5s,baz=355,slow=6.9,SNR=3.5						
STKA				LR	LR	02 06 31.9	
	comp=Z,73nm,19.9s,baz=26,slow=38						
STKA	Stephens Creek	28.55	177	IAmb	IAmb	01 54 13.5	
	comp=Z,0.5nm,0.8s						
RPSI	Rantau Prapat	41.41	278	P	P	01 55 56.7	-0.7
WHN	Wuhan	41.52	326	P	P	01 56 05.5	+7.4
KSRS	Korea Array	41.98	346	P	P	01 56 02.0	+0.4
	comp=Z,1.0nm,0.7s,baz=168,slow=8.2,SNR=3.6						
CMAR	Chiang Mai Arr	45.75	300	P	P	01 56 33.1	+0.9
	comp=Z,0.9nm,0.3s,baz=120,slow=6.6,SNR=9.0						
ASAJ	Asahikawa	47.18	3	LR	LR	02 15 43.0	
	comp=Z,40nm,18.3s,baz=358,slow=35						
USRK	Ussuriysk Ar.	47.74	352	P	P	01 56 48.3	+1.0
	comp=Z,1.4nm,0.8s,baz=176,slow=5.2,SNR=4.1						
GTA	Gaotai	56.21	323	eP	P	01 57 51.3	+0.9
SONM	Songino Array	58.70	334	P	P	01 58 08.2	+0.4
	comp=Z,0.3nm,0.5s,baz=145,slow=5.3,SNR=3.2						
MK31	Makanchi Array	70.94	322	P	P	01 59 27.2	+0.1
MK31				IAmb	IAmb	01 59 28.4	
	comp=Z,2.6nm,1.0s						
MKAR	Makanchi Array	70.94	322	P	P	01 59 27.3	+0.2
	comp=Z,3.9nm,0.8s,baz=94,slow=9.1,SNR=31						
MAKZ	Makanchi	71.14	322	P	P	01 59 28.0	-0.3
ZALV	Zalesovo Beam	72.99	330	P	P	01 59 38.5	-0.6
	comp=Z,1.0nm,0.5s,baz=120,slow=6.7,SNR=4.9						
KURK	Kurchatov	74.83	325	P	P	01 59 49.8	-0.2
KURK				IAmb	IAmb	01 59 50.6	
	comp=Z,4.4nm,0.9s						
ILAR	Eielson Array	85.79	24	P	P	02 00 47.8	-0.6
	comp=Z,2.2nm,0.7s,baz=262,slow=4.5,SNR=24						
DBIC	Dimbokro	144.76	277	PKP	PKPdf	02 07 46.0	-0.8
	comp=Z,2.4nm,0.6s,baz=70,slow=9.6,SNR=6.5						

THE 15 01:54:10.9, 38°.18N×20°.27E, h0km, ML3.4/5, Error ellipse: s-maj=1.0km s-min=0.4km az=248.0
ATH 15 01:54:10.8, 38°.28N×20°.29E, h7km±1km, ML3.3/8, Error ellipse: s-maj=2.3km s-min=1.0km az=80.0
PDG 15 01:54:10.9±0.5, 38°.28N×20°.23E, h0km±11km, ML3.4/11, Error ellipse: s-maj=1.8km s-min=1.2km az=90.0
IDC 15 01:54:11.8±1.4, 37°.93N×20°.82E, h0km, mb3.5/4, mb1 3.5/4, mb1mx3.3/36, mbtmp3.5/4, MS2.4/1, Ms1 2.5/1, ms1mx2.1/47, Error ellipse: s-maj=66.5km s-min=25.2km az=129.0
BEO 15 01:54:11.6±3.5, 37°.77N×20°.11E, h75km±5km, ML3.4/6
ISC 15 01:54:11.7±0.8, 38°.19N±0°.02×20°.33E±0°.03, h6km±4km, n102, σ1§25/151, mb3.5/4, 11C-8D, Greece

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.02	50	P	Pg	01 54 12.6	-0.3
KEF3				S	Sg	01 54 13.4	-0.4
CHV1	Chavriata, Kef	0.04	100	P	Pg	01 54 12.9	-0.2
CHV1				S	Sg	01 54 14.2	+0.1
AGT1	Agia Thekli	0.07	36	P	Pg	01 54 13.5	0.0
AGT1				S	Sg	01 54 15.2	+0.4
LXRA	Lixouri, Kepha	0.09	84	P	Pg	01 54 13.7	0.0
LXRA				S	Sg	01 54 15.5	+0.5
LXR1	Lixouri, Cepha	0.09	83	P	Pg	01 54 13.7	0.0
LXR1				S	Sg	01 54 15.7	+0.6
KEF4	Livadi, Kephal	0.10	48	P	Pg	01 54 13.9	-0.1
KEF4				S	Sg	01 54 16.0	+0.6
ARGA	Argostoli. Kep	0.12	97	P	Pg	01 54 14.3	0.0
ARGA				S	Sg	01 54 16.7	+0.7
ARG2	Argostoli	0.12	96	P	Pg	01 54 14.4	0.0
ARG2				S	Sg	01 54 16.8	+0.7
KEF2	Argostoli. Kep	0.13	101	P	Pg	01 54 14.5	+0.1
KEF2				S	Sg	01 54 16.5	+0.3
KEF1	Kardakata, Kep	0.14	52	P	Pg	01 54 14.5	-0.1
KEF1				S	Sg	01 54 17.1	+0.4
VLS	Valsamata	0.20	94	P	Pg	01 54 15.6	-0.2
VLS				S	Sg	01 54 19.0	+0.4
	35μm,0.2s						
VLS	Valsamata	0.20	94	P	Pg	01 54 15.6	-0.2
VLS				S	Sg	01 54 19.0	+0.4
VLS				AML	AML	01 54 19.2	
	comp=N,63764μm,0.2s						
VLS				AML	AML	01 54 19.2	
	comp=E,76561μm,0.2s						
FSK	Fiskardo	0.33	34	P	Pg	01 54 17.8	-0.3
FSK				S	Sg	01 54 23.6	+1.2
	comp=E,11μm,0.4s						
FSK	Fiskardo	0.33	34	P	Pg	01 54 17.8	-0.3
FSK				S	Sg	01 54 23.1	+0.7
VLMS	Volimes, Zakyn	0.41	140	P	Pg	01 54 19.3	-0.4
VLMS				S	Sg	01 54 25.9	+0.9
VLMS				AML	AML	01 54 26.8	
	comp=E,18406μm,0.3s						
VLMS				AML	AML	01 54 26.8	
	comp=N,18663μm,0.2s						
EVGI	Lefkada island	0.50	31	P	Pg	01 54 21.0	-0.4
EVGI				S	Sb	01 54 29.4	-1.1
EVGI	Lefkada island	0.50	31	P	Pg	01 54 21.0	-0.4
EVGI				S	Sg	01 54 28.7	+0.7
MGNA	Meganis	0.59	38	P	Pg	01 54 22.7	-0.3
MGNA				S	Sg	01 54 31.7	+1.0
MGNA				AML	AML	01 54 34.5	
	comp=E,3060μm,0.5s						
MGNA				AML	AML	01 54 35.2	
	comp=N,3853μm,0.6s						
ZAK2	Zakynthos	0.60	132	P	Pg	01 54 23.2	-0.1
ZAK2				S	Sb	01 54 32.3	-1.1
LKD2	Lefkada island	0.65	23	P	Pg	01 54 23.7	-0.6
LKD2				S	Sb	01 54 33.9	-0.9
	comp=N,1μm,0.6s						
LKD2	Lefkada island	0.65	23	P	Pg	01 54 23.7	-0.6
LKD2				S	Sg	01 54 33.1	+0.3
LKD2				AML	AML	01 54 41.4	
	comp=N,2847μm,0.4s						
LKD2				AML	AML	01 54 43.6	
	comp=E,2686μm,0.6s						
KRI1	kERI	0.65	144	P	Pg	01 54 23.5	-0.8
KRI1				S	Sb	01 54 34.2	-0.6
TSLK	Tsoukalades, L	0.68	22	P	Pg	01 54 24.5	-0.4
TSLK				S	Sb	01 54 34.8	-0.9
	comp=E,2μm,0.8s						
TSLK	Tsoukalades, L	0.68	22	P	Pg	01 54 24.5	-0.4
AST1	Astakos	0.69	59	P	Pg	01 54 24.6	-0.4
AST1				S	Sb	01 54 36.2	+0.3
VTN	Vitineika	0.73	112	P	Pg	01 54 25.3	-0.4
PDO	Prodromos	0.79	58	P	Pg	01 54 26.2	-0.6
PDO				S	Sb	01 54 39.0	+0.4
PDO	Prodromos	0.79	58	P	Pg	01 54 26.3	-0.5
PDO				S	Sb	01 54 38.3	-0.3
PDO				AML	AML	01 54 40.3	
	comp=E,4884μm,0.6s						
PDO				AML	AML	01 54 48.9	
	comp=N,5736μm,0.4s						
AXS	Araxos	0.82	89	P	Pg	01 54 26.6	-0.9
AXS	Araxos	0.82	89	P	Pg	01 54 26.6	-0.9
RLS	Riolos of Patr	0.91	98	P	Pg	01 54 28.0	-1.1
RLS	Riolos of Patr	0.91	98	P	Pg	01 54 28.2	-1.0
RLS				AML	AML	01 54 47.7	
	comp=N,1594μm,1.0s						
RLS				AML	AML	01 54 55.5	
	comp=E,1629μm,1.0s						
PVO	Paravola	1.03	65	P	Pg	01 54 31.0	-0.5
PVO				S	Sn	01 54 47.7	+0.3
	comp=E,2μm,0.6s						
PVO	Paravola	1.03	65	P	Pg	01 54 31.0	-0.5
PVO				AML	AML	01 54 53.3	
	comp=E,4104μm,0.6s						
PVO				AML	AML	01 54 53.8	
	comp=N,5468μm,0.6s						
DRO	Drossia	1.11	102	P	Pg	01 54 31.9	-1.2
DRO	Drossia	1.11	102	P	Pg	01 54 32.0	-1.2
DRO				AML	AML	01 54 57.5	
	comp=N,2995μm,0.6s						
DRO				AML	AML	01 54 58.6	
	comp=E,3564μm,0.7s						
AMT	Artemida-Makis	1.27	121	P	Pn	01 54 34.9	-1.1
AMT	Artemida-Makis	1.27	121	P	Pn	01 54 35.5	-0.5
LAKA	Lakka	1.30	87	P	Pn	01 54 35.2	-1.2
ANX	Ano Chora	1.31	72	P	Pn	01 54 35.8	-0.8
ANX	Ano Chora	1.31	72	P	Pn	01 54 35.8	-0.8
IGT	Igoumenitsa	1.34	0	P	Pn	01 54 36.6	-0.3
EVR	Evrytania	1.37	58	P	Pn	01 54 36.9	-0.5
SERG	Sergoula	1.38	80	P	Pn	01 54 36.4	-1.1
SERG	Sergoula	1.38	80	P	Pn	01 54 36.4	-1.1
TRIZ	Trizonia	1.38	82	P	Pn	01 54 36.3	-1.2
TRIZ	Trizonia	1.38	82	P	Pn	01 54 36.2	-1.2
ALIK	Aliki, Aigiali	1.41	87	P	Pn	01 54 36.8	-1.0
KALE	Kalithea	1.44	81	P	Pn	01 54 37.2	-1.1
KLV	Kalavryta, Ach	1.44	95	P	Pn	01 54 37.4	-1.0
KEK	Kerkira	1.57	345	P	Pn	01 54 40.0	-0.2
ITM	Ithomi	1.62	128	P	Pn	01 54 40.3	-0.5
ITM	Ithomi	1.62	128	P	Pn	01 54 40.6	-0.2
OHR	Ohrid	2.94	7	⇑iPn	Pb	01 55 03.6	-0.9
TIP	Timpagrande	2.96	291	⇑P	Pn	01 54 59.1	-0.2
TIP				⇑S	Sn	01 55 35.8	+0.6
TIR	Tirane	3.17	354	⇑P	Pn	01 55 03.2	+1.0
TIR				⇑S	Sn	01 55 41.8	+1.5
VAY	Valandovo	3.57	28	⇓iPn	Pg	01 55 19.6	-0.5
MATE	Matera	3.73	312	⇑P	Pn	01 55 09.9	+0.2
MATE				⇑S	Sn	01 55 54.6	+0.7
STIP	Stip	3.78	22	iPn	Pb	01 55 16.5	-2.3
ULC	Ulcinj	3.86	348	ePn	Pn	01 55 10.4	-1.2
ULC				eSn	Sn	01 55 57.6	+0.4
DRME	Dracevica, Mon	4.09	348	ePn	Pn	01 55 14.2	-0.5
DRME				eSn	Sn	01 56 03.1	+0.3
APE	Apeiranthos	4.28	104	⇓P	Pn	01 55 22.3	+4.9
APE				⇑S	Sg	01 56 42.8	+14
PDG	Podgorica	4.31	349	ePn	Pn	01 55 18.7	+0.9
PDG				eSn	Sn	01 56 05.4	-3.0
PDG	Podgorica	4.31	349	⇓P	Pn	01 55 18.2	+0.4
PDG				⇓S	Sn	01 56 08.0	-0.3
TTG	Podgorica	4.31	349	ePn	Pn	01 55 17.8	0.0
TTG				eSn	Sn	01 56 08.4	0.0
PVY	Plav	4.41	356	ePn	Pn	01 55 19.3	+0.1
PVY				eSn	Sn	01 56 11.4	+0.5
HCY	Herceg Novi	4.48	342	ePn	Pn	01 55 18.3	-1.8
HCY				eSn	Sn	01 56 11.7	-0.7
CEME	Cevo	4.48	347	ePn	Pn	01 55 19.1	-1.1
CEME				eSn	Sn	01 56 12.5	-0.2
IVA	Berane	4.69	356	ePn	Pn	01 55 22.9	-0.1
IVA				eSn	Sn	01 56 18.2	+0.5
NKME	Niksic	4.69	348	ePn	Pn	01 55 22.9	-0.1
NKME				eSn	Sn	01 56 18.0	+0.3
KOME	Kolasin	4.70	353	ePn	Pn	01 55 23.2	+0.1
KOME				eSn	Sn	01 56 18.0	0.0
BARS	Barje	4.76	13	ePn	Pn	01 55 25.7	+1.8
TREB	Trebinje	4.77	342	ePn	Pn	01 55 24.4	+0.4
TREB				eSn	Sn	01 56 15.5	-4.1
BRY	Bratogost	4.90	344	ePn	Pn	01 55 25.6	-0.4
BRY				eSn	Sn	01 56 22.7	-0.3
VTS	Vitosha	4.95	26	ePn	Pn	01 55 27.7	+1.1
VTS	Vitosha	4.95	26	⇓P	Pn	01 55 28.0	+1.3
VTS				⇓S	Sn	01 56 26.2	+2.0
SELS	Selova	5.06	7	ePn	Pn	01 55 28.9	+0.8
SJES	Sjenica	5.07	357	ePn	Pn	01 55 29.0	+0.7
SJES				eSn	Sn	01 56 23.9	-3.4
STON	Ston	5.09	338	ePn	Pn	01 55 28.2	-0.2
UPM	Unac-Piva	5.12	348	ePn	Pn	01 55 29.4	+0.3
UPM				eSn	Sn	01 56 28.3	-0.3
ZAPS	Zavoj	5.37	18	ePn	Pn	01 55 34.1	+1.7
IVAS	Ivanjica	5.38	359	ePn	Pn	01 55 34.0	+1.5
IVAS				eSn	Sn	01 56 32.4	-2.4
BOVS	Bovan	5.54	10	ePn	Pn	01 55 35.5	+0.9
GRUS	Gruza	5.70	3	ePn	Pn	01 55 37.4	+0.6
BBLS	Lazići	5.71	353	ePn	Pn	01 55 37.9	+0.8
BBLS				eSn	Sn	01 56 38.4	-4.6
ZAGS	Zajecar	5.80	14	ePn	Pn	01 55 39.8	+1.6
DIVS	Divibare	5.91	358	ePn	Pn	01 55 41.2	+1.4
DIVS				eSn	Sn	01 56 43.8	-4.0
HAPS	Han Pijesak,BI	5.98	350	ePn	Pn	01 55 41.8	+1.0
HAPS				eSn	Sn	01 56 45.9	-3.7
TRUS	Trudelj	6.03	1	ePn	Pn	01 55 42.7	+1.4
MDVR	Moldovita	6.67	9	⇓P	Pn	01 55 46.6	-3.6
BLY	Banja Luka	6.96	341	⇓P	Pn	01 55 55.2	+1.0
BLY				⇑S	Sn	01 57 14.5	+0.8
BZS	Buzias	7.48	7	⇑P	Pn	01 56 02.2	+0.9
VOIR		8.05	24	⇑P	Pn	01 56 11.0	+1.9
SOKA	Soboth	9.34	337	iPn	Pn	01 56 27.7	+0.8
	comp=E,2.4nm,0.5s						
OBKA	Obir	9.35	335	iPn	Pn	01 56 28.1	+1.1
	comp=E,0.9nm,0.2s						
ARSA	Arzberg	9.72	340	iPn	Pn	01 56 36.3	+4.3
	comp=E,1.1nm,0.3s						
MOA	Molln	10.62	337	iPn	Pn	01 56 46.4	+2.0
	comp=E,0.9nm,0.2s						
FINES	FINESS Array B	23.55	7	P	P	01 59 25.6	+3.1
	comp=E,0.8nm,0.7s,baz=185,slow=9.6,SNR=4.4						
NOA	NORSAR Array B	23.58	349	LR	LR	02 09 22.9	
	comp=E,8.9nm,20.0s,baz=230,slow=38						
TORD	Torodi Ar. Bea	29.95	219	P	P	02 00 22.1	+1.4
	comp=E,0.8nm,1.1s,baz=38,slow=9.7,SNR=2.9						
MKAR	Makanchi Array	45.42	58	P	P	02 02 30.8	-0.3
	comp=E,0.3nm,0.5s,baz=273,slow=8.0,SNR=7.6						
ZALV	Zalesovo Beam	45.80	48	P	P	02 02 33.4	-0.5
	comp=E,0.5nm,0.4s,baz=293,slow=7.9,SNR=3.5						

IDC 15 01:56:04.8±1.3, 34°.15N×25°.09E, h0km, mb3.4/2, mb1 3.4/7, mb1mx3.3/39, mbtmp3.3/7, ML3.6/4, Error ellipse: s-maj=23.6km s-min=13.1km az=78.0
THE 15 01:56:07.5, 34°.25N×24°.99E, h0km±4km, ML2.5/4, Error ellipse: s-maj=7.6km s-min=1.5km az=197.0
ATH 15 01:56:08.4, 34°.30N×25°.06E, h18km±7km, ML3.0/2, Error ellipse: s-maj=8.2km s-min=1.9km az=349.0
ISC 15 01:56:04.7±1.8, 34°.13N±0°.06×25°.08E±0°.04, h0km±12km, n28, σ1§34/39, Crete

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.92	346	P	Pg	01 56 22.4	+0.1
SIVA				S	Sb	01 56 35.0	-1.2
	2μm,0.6s						
SIVA	Sivas	0.92	346	P	Pg	01 56 22.3	+0.1
SIVA				S	Sg	01 56 33.6	-0.5
SIVA				AML	AML	01 56 40.6	
	comp=E,5376μm,0.4s						
SIVA				AML	AML	01 56 41.9	
	comp=N,3096μm,0.7s						
TMBK	Timbaki Herakl	0.98	345	P	Pg	01 56 23.5	+0.1
TMBK				S	Sb	01 56 37.2	-0.7
FRMA	Ierapetra Chan	1.04	31	P	Pn	01 56 28.5	+2.1
FRMA				S	Sb	01 56 44.3	+2.6
	comp=N,102nm,0.6s						
LAST	Lasithi	1.08	18	P	Pg	01 56 25.5	0.0
LAST				S	Sb	01 56 40.3	-0.8
	comp=N,250nm,0.7s						
LAST	Lasithi	1.08	18	P	Pg	01 56 25.7	+0.2
GVD	Gavdhos	1.08	311	P	Pg	01 56 25.9	+0.4
GVD	Gavdhos	1.08	311	P	Pb	01 56 27.1	+0.8
GVD				S	Sb	01 56 40.5	-0.5
GVD				AML	AML	01 56 46.4	
	comp=E,1130μm,0.6s						
GVD				AML	AML	01 56 49.5	
	comp=N,1256μm,0.4s						
IDI	Anoyia	1.17	352	Pg	Pg	01 56 26.7	-0.4
	comp=N,16nm,0.3s,baz=179,slow=16,SNR=38						
IDI				Lg	Lg	01 56 43.3	
	comp=N,26nm,0.3s,baz=76,slow=21,SNR=12						
IDI	Anoyia	1.17	352	P	Pg	01 56 27.5	+0.4
KSTL	Kastelli Herak	1.18	360	P	Pg	01 56 26.5	-0.7
KSTL				S	Sg	01 56 40.4	-2.0
HRKL	Herakleio	1.18	1	P	Pb	01 56 28.4	+0.4
NPS	Neapolis	1.22	21	P	Pg	01 56 28.0	0.0
NPS				S	Sn	01 56 45.8	-0.3
	comp=N,228nm,0.6s						

NPS Neapolis 1.22 21 P Pg 01 56 28.3 +0.3
STIA Sitia Lasithi 1.36 38 P Pn 01 56 32.8 +1.9
ZKR Zakros 1.36 43 P Pg 01 56 32.1 +1.3
ZKR Zakros 1.36 43 P Pn 01 56 32.8 +1.9
VAM Vamos 1.47 331 P Pg 01 56 32.8 0.0
VAM S Sg 01 56 50.2 -1.7
VAM Vamos 1.47 331 P Pg 01 56 32.9 0.0
KARP Karpathos 2.22 50 P Pn 01 56 45.4 +2.6
MMAI Mount Meron Ar 8.69 94 Pn Pn 01 58 13.0 +1.3
comp=N,0.5nm,0.3s,baz=259,slow=12,SNR=10
MMAI Sn Sn 01 59 47.8 -2.6
comp=N,1.3nm,0.3s,baz=274,slow=22,SNR=8.5
BRTR Keskin Array B 8.84 48 Pn Pn 01 58 15.2 +1.4
comp=N,0.0nm,0.3s,baz=296,slow=7.9,SNR=2.4
EIL Elat 9.49 115 Pn Pn 01 58 22.5 -0.2
comp=N,0.4nm,0.3s,baz=310,slow=7.9,SNR=9.7
EIL Sn Sn 02 00 06.8 -3.3
comp=N,0.5nm,0.3s,baz=323,slow=22,SNR=4.4
AKASG Malin Array Be 16.84 9 Pn Pn 02 00 00.4 -1.3
comp=N,0.4nm,0.3s,baz=201,slow=11,SNR=4.3
GERES GERESS Array B 16.97 333 Pn Pn 02 00 03.3 -0.1
comp=N,0.1nm,0.3s,baz=145,slow=14,SNR=4.2
TORD Torodi Ar. Bea 29.78 231 P P 02 02 13.9 +0.7
comp=N,0.2nm,0.5s,baz=26,slow=8.9,SNR=2.4
MKAR Makanchi Array 44.41 56 P P 02 04 16.6 -0.3
comp=N,0.3nm,0.4s,baz=267,slow=7.3,SNR=5.5
STKA Stephens Creek 127.49 106 PKP PKPdf 02 15 11.8 +0.2
comp=N,0.7nm,0.3s,baz=230,slow=5.5,SNR=2.9

DMN 15 02:10:25.6±3.9, 31.48N×83.50E, h33km, Mb5.3/3, Error ellipse: s-maj=90.9km s-min=10.8km az=159.0
IDC 15 02:10:26.4±1.3, 30.63N×83.08E, h0km, mb3.6/10, mb1 3.8/12, mb1mx3.6/51, mbtmp3.6/12, ML3.9/2, Error ellipse: s-maj=46.6km s-min=17.0km az=61.0
ISC 15 02:10:30.4±0.7, 30.95N±0.08×83.56E±0.09, h11km, n26, σ1.73/26, mb3.6/9, Xizang

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
DANN Dangsing 2.60 176 eP Pn 02 11 14.4 +1.8
392nm,0.4s
GKN Gorkha 3.08 162 eP Pn 02 11 20.6 +1.4
87nm,0.3s
KOLN Koldanda 3.17 179 eP Pn 02 11 22.1 +1.7
LGTI Lohaghat 3.24 243 eP Pb 02 11 27.2 -0.7
LGTI eS Sg 02 12 36.8 +22
KKN Kakani 3.49 154 eP Pn 02 11 26.9 +2.1
DMN Daman 3.59 158 eP Pn 02 11 27.7 +1.4
GUN Gumba 3.64 146 eP Pn 02 11 28.5 +1.5
PKIN Phulchoki 3.72 154 eP Pn 02 11 29.5 +1.4
65nm,0.5s
PKI Pulchoki 3.73 154 eP Pn 02 11 29.7 +1.4
54nm,0.5s
JIRN Jiri 4.00 144 eP Pn 02 11 33.3 +1.3
38nm,0.3s
RAMN Ramite 4.79 146 eP Pn 02 11 43.2 +0.4
94nm,0.6s
TAPN Taplejung 5.10 134 eP Pn 02 11 48.1 +1.1
20nm,0.3s
ODAN Odare 5.28 140 eP Pn 02 11 50.5 +1.1
88nm,0.4s
AAK Ala-Archa 13.73 331 Pn Pn 02 13 48.2 +3.1
0.1nm,0.3s,baz=165,slow=19,SNR=2.0
MKAR Makanchi Array 15.85 357 Pn P 02 14 14.7 -2.5
0.1nm,0.3s,baz=177,slow=10,SNR=11
CMAR Chiang Mai Arr 18.68 128 P P 02 14 48.2 -0.5
0.3nm,0.3s,baz=311,slow=12,SNR=5.2
KURBB Kurchatov Arra 20.01 351 P P 02 15 01.6 -1.4
1.5nm,0.6s,baz=169,slow=11,SNR=8.7
ZALV Zalesovo Beam 23.00 2 P P 02 15 35.0 0.0
0.5nm,0.4s,baz=186,slow=12,SNR=3.0
BVAR Borovoye Array 24.06 340 P P 02 15 46.4 +0.9
0.3nm,0.5s,baz=142,slow=7.3,SNR=4.4
SONM Songino Array 24.27 40 P P 02 15 50.9 +3.3
0.6nm,0.7s,baz=220,slow=8.7,SNR=3.4
FINES FINESS Array B 47.88 327 P P 02 19 05.7 -2.4
1.1nm,0.7s,baz=110,slow=8.3,SNR=6.6
ARCES ARCESS Array B 50.29 337 P P 02 19 26.5 0.0
4.5nm,0.9s,baz=96,slow=7.5,SNR=4.0
WRA Warramunga Arr 70.27 129 P P 02 21 42.3 -1.7
0.7nm,0.7s,baz=322,slow=6.2,SNR=6.5
ASAR Alice Springs 72.63 132 P P 02 21 56.8 -1.4
0.3nm,0.5s,baz=335,slow=6.3,SNR=3.2
ILAR Eielson Array 76.83 20 P P 02 22 21.8 -0.1
0.3nm,0.9s,baz=318,slow=2.4,SNR=2.8
YKA Yellowknife Ar 85.74 8 P P 02 23 07.5 -1.7
0.4nm,0.8s,baz=332,slow=5.0,SNR=4.4

IDC 15 02:10:33.8±2.9, 33.02S×178.57W, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.8/26, mbtmp3.9/3, ML3.8/1, Error ellipse: s-maj=69.7km s-min=35.6km az=118.0, South of Kermadec Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
URZ Urewera 6.30 213 Pn Pn 02 12 08.2 +0.2
2.0nm,0.3s,baz=272,slow=3.6,SNR=20
URZ Sn Sn 02 13 19.4 -1.3
3.3nm,0.3s,baz=269,slow=18,SNR=12
ASAR Alice Springs 42.56 270 P P 02 18 32.2 +0.7
1.0nm,0.7s,baz=103,slow=7.3,SNR=14
WRA Warramunga Arr 43.78 275 P P 02 18 40.5 -0.9
1.2nm,0.3s,baz=113,slow=7.9,SNR=5.1
FINES FINESS Array B 147.41 338 PKPbc PKPbc 02 30 17.9 -0.9
1.1nm,0.6s,baz=67,slow=3.9,SNR=9.2

IDC 15 02:39:50.3±9.0, 7.81S×129.51E, h240km±102km, mb3.0/1, mb1 2.8/4, mb1mx2.6/30, mbtmp3.3/4, Error ellipse: s-maj=66.5km s-min=41.7km az=40.0, Banda Sea

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
FITZ Fitzroy Crossi 10.90 200 P Pn 02 42 20.6 +0.2
0.2nm,0.3s,baz=9.6,slow=14,SNR=6.0
FITZ S S 02 44 22.3 -0.2
0.3nm,0.3s,baz=352,slow=13,SNR=4.3
WRA Warramunga Arr 12.94 159 P Pn 02 42 46.3 +0.4
0.2nm,0.3s,baz=345,slow=13,SNR=3.1
WRA S S 02 45 06.2 -3.4
0.4nm,0.3s,baz=334,slow=23,SNR=7.9
ASAR Alice Springs 16.32 166 P Pn 02 43 27.0 +0.2
0.1nm,0.3s,baz=344,slow=9.2,SNR=4.7
MKAR Makanchi Array 68.63 327 P P 02 50 27.5 -0.1
0.3nm,0.5s,baz=126,slow=7.3,SNR=6.3

IDC 15 02:54:04.5±2.8, 29.98S×175.91W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.5/34, mbtmp3.5/2, MS3.5/2, Ms1 3.5/2, ms1mx2.8/18, Error ellipse: s-maj=86.5km s-min=48.5km az=177.0, Kermadec Islands region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
RAO Raoul Island 1.89 292 Pn Pn 02 54 38.6 +0.6
92nm,0.3s,baz=127,slow=20,SNR=4.6
RAO Sn Sn 02 54 58.5 -4.1
180nm,0.3s,baz=290,slow=23,SNR=4.4
KRVT Keravat (AS076 39.62 304 LR LR 03 16 01.5
comp=Z,90nm,18.2s,baz=135,slow=33
ASAR Alice Springs 44.94 266 P P 03 02 21.9 +0.4
0.4nm,0.5s,baz=101,slow=7.6,SNR=8.9
WRA Warramunga Arr 45.90 271 P P 03 02 27.8 -1.2
0.3nm,0.3s,baz=111,slow=7.8,SNR=4.6
VNDA Vanda 48.70 186 LR LR 03 20 26.2
comp=Z,30nm,19.9s,baz=173,slow=32
FINES FINESS Array B 145.35 342 PKPbc PKPbc 03 13 42.7 -0.7
3.9nm,1.1s,baz=64,slow=6.3,SNR=2.7

KRSC 15 02:54:15.1±1.4, 51.37N×159.80E, h74km±23km, ML4.5
MOS 15 02:54:18.9±0.9, 51.53N×159.59E, h58km, mb4.5/13, Error ellipse: s-maj=9.4km s-min=4.1km az=98.4
IDC 15 02:54:21.2±2.8, 51.56N×159.47E, h54km±24km, mb3.7/19, mb1 3.9/23, mb1mx3.7/50, mbtmp4.0/23, ML3.5/3, MS3.6/10, Ms1 3.6/10, ms1mx3.3/51, Error ellipse: s-maj=18.1km s-min=13.6km az=130.0
NEIC 15 02:54:21.2±2.0, 51.55N±0.08×159.4E±0.2, h55km±7km, mb4.4/16, Error ellipse: s-maj=13.5km s-min=12.0km az=93.0
ISC 15 02:54:19.1±1.1, 51.45N±0.05×159.68E±0.05, h41km±10km, n136, σ1.22/150, mb4.2/28, MS3.6/7, 3C-2D, Off east coast of Kamchatka Peninsula

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
KDTR Khodutka, Kamc 1.06 291 iP Pn 02 54 36.5 -1.0
KDTR eS Sn 02 54 52.1 +1.0
KDTR Khodutka, Kamc 1.06 291 PN Pn 02 54 36.5 -1.0
KDTR S Sn 02 54 52.1 +1.0
RUS Russkaya 1.23 324 eP Pn 02 54 38.6 -1.1
RUS eS Sn 02 54 56.2 +1.2
RUS Russkaya 1.23 324 PN Pn 02 54 38.6 -1.1
RUS S Sn 02 54 56.2 +1.2
MTVR Mutnovka 1.39 319 eP Pn 02 54 41.4 -0.8
MTVR Mutnovka 1.39 319 PN Pn 02 54 41.4 -0.8
ASAK Asacha 1.45 311 eP Pn 02 54 42.6 -0.3
ASAK Asacha 1.45 311 PN Pn 02 54 42.6 -0.3
GRL Gorelyy 1.49 319 eP Pn 02 54 43.4 -0.1
GRL eS Sn 02 55 04.2 +2.5
GRL Gorelyy 1.49 319 PN Pn 02 54 43.4 -0.1
GRL S Sn 02 55 04.2 +2.5
SPN Mys Shipunski 1.67 7 eP Pn 02 54 45.7 -0.1
SPN eS Sn 02 55 08.0 +2.0
SPN Mys Shipunski 1.67 7 PN Pn 02 54 45.7 -0.1
SPN S Sn 02 55 08.0 +2.0
KRMR Karymshinskiy 1.68 326 eP Pn 02 54 45.4 -0.6
KRMR eS Sn 02 55 07.3 +1.0
KRMR Karymshinskiy 1.68 326 PN Pn 02 54 45.4 -0.6
KRMR S Sn 02 55 07.3 +1.0
DALK Dalny 1.69 341 eP Pn 02 54 44.9 -1.1
DALK eS Sn 02 55 06.7 +0.3
DALK Dalny 1.69 341 PN Pn 02 54 44.9 -1.1
DALK S Sn 02 55 06.7 +0.3
PET Petropavlovsk 1.70 339 Pn 02 54 45.5 -0.7
PET Petropavlovsk 1.70 339 ⇓iPN Pn 02 54 45.5 -0.7
NLC Nalytchevo 1.74 353 eP Pn 02 54 45.7 -1.1
NLC Nalytchevo 1.74 353 PN Pn 02 54 45.7 -1.1
PAU Pauzhetka 1.79 272 eP Pn 02 54 48.0 +0.5
PAU eS Sn 02 55 11.9 +2.8
PAU Pauzhetka 1.79 272 PN Pn 02 54 48.0 +0.5
PAU S Sn 02 55 11.9 +2.8
UGLR Uglovaya 1.84 344 eP Pn 02 54 47.9 -0.4
UGLR Uglovaya 1.84 344 PN Pn 02 54 47.9 -0.4
SDLR Sedlovina 1.90 345 iP Pn 02 54 48.8 -0.3
SDLR Sedlovina 1.90 345 PN Pn 02 54 48.8 -0.3
AVH Avacha 1.91 343 eP Pn 02 54 50.3 +1.1
AVH Avacha 1.91 343 PN Pn 02 54 50.3 +1.1
KRER Koryakskii 1.95 343 eP Pn 02 54 50.4 +0.6
KRER Koryakskii 1.95 343 PN Pn 02 54 50.4 +0.6
KOK Koryaka 1.96 341 P Pn 02 54 50.6 +0.7
KOK Koryaka 1.96 341 PN Pn 02 54 50.6 +0.7
PEA0B Petropavlovsk- 2.06 325 Pn 02 54 51.1 -0.1
PEA0B Petropavlovsk- 2.06 325 ePN Pn 02 54 52.0 +0.8
PETK Petropavlovsk- 2.06 325 P Pn 02 54 51.7 +0.4
176nm,0.3s,baz=125,slow=16,SNR=88
PETK S Sn 02 55 21.1 +5.4
37nm,0.3s,baz=128,slow=18,SNR=3.6
PETK LR LR 02 55 22.8
comp=Z,409nm,18.1s,baz=144,slow=32
APC Apacha 2.15 315 eP Pn 02 54 52.5 +0.2
APC eS Sn 02 55 20.3 +2.6
APC Apacha 2.15 315 PN Pn 02 54 52.5 +0.2
APC S Sn 02 55 20.3 +2.6
SKR Severo-Kuril's 2.37 253 eP Pn 02 54 54.4 -1.1
SKR eS Sn 02 55 23.3 0.0
SKR Severo-Kuril's 2.37 253 ePN Pn 02 54 55.8 +0.3
SKR eS Sn 02 55 21.2 -2.1
SKR pmax pmax
comp=Z,154nm,0.7s
SKR smax smax
comp=N,520nm,0.9s
SKR smax smax
comp=E,433nm,0.9s
SKR MLR MLR
comp=N,600nm,14.0s
SKR MLR MLR
comp=Z,1μm,14.0s
SKR MLR MLR
comp=E,2μm,13.0s
SKR MLR MLR
comp=Z,2μm,12.0s
SKR MLR MLR
comp=N,2μm,16.0s
SKR MLR MLR
comp=E,2μm,11.0s
KZV Kizimen 3.69 5 eP Pn 02 55 12.7 -1.0
KZV eS Sn 02 55 54.9 -1.1
KZV Kizimen 3.69 5 PN Pn 02 55 12.7 -1.0
KZV S Sn 02 55 54.9 -1.1
TUMD Tumrok D 3.79 6 eP Pn 02 55 14.3 -0.6
TUMD eS Sn 02 55 58.6 +0.4
TUMR Tumrok 3.85 4 eP Pn 02 55 15.9 0.0
TUMR Tumrok 3.85 4 PN Pn 02 55 14.3 -1.6
TUMR S Sn 02 55 58.6 -1.4
KMNR Kamenistaya 4.33 4 eP Pn 02 55 22.6 +0.1
KMNR Kamenistaya 4.33 4 PN Pn 02 55 22.6 +0.1
ESO Esso 4.53 353 eP Pn 02 55 27.4 +2.4
ESO Esso 4.53 353 PN Pn 02 55 27.4 +2.4
ZLN Zelenaya 4.63 8 eP Pn 02 55 26.4 -0.1
ZLN Zelenaya 4.63 8 PN Pn 02 55 26.4 -0.1
LGNR Loginova 4.69 7 eP Pn 02 55 27.9 +0.4
LGNR Loginova 4.69 7 PN Pn 02 55 27.9 +0.4
SRDR Sredninny 4.88 0 eP Pn 02 55 30.5 +0.5
SRDR Sredninny 4.88 0 PN Pn 02 55 30.5 +0.5
KBTR Krutoberegovo 5.12 20 eP Pn 02 55 31.7 -1.5
KBTR Krutoberegovo 5.12 20 PN Pn 02 55 31.7 -1.5
SRKR Sorokina 5.29 9 eP Pn 02 55 35.6 0.0
SRKR Sorokina 5.29 9 PN Pn 02 55 35.6 0.0
MA2 Magadan 9.58 332 LR LR 03 00 33.2
comp=E,95nm,22.0s,baz=156,slow=40
JKA Kamikawa-asahi 13.61 244 P Pn 02 57 28.9 -0.4
ASAJ Asahikawa 13.61 244 P Pn 02 57 28.9 -0.4
comp=E,0.5nm,0.3s,baz=103,slow=15,SNR=4.6
ASAJ LR LR 03 03 48.5
comp=E,170nm,18.4s,baz=155,slow=42
ERM Erimo 14.71 237 iP Pn 02 57 40.4 -3.8
BILL Bilibino 16.96 9 P P 02 58 15.0 +0.7
BILL Bilibino 16.96 9 eP P 02 58 13.2 -1.2
BILL pmax pmax
comp=Z,5.0nm,1.5s
KLR Kul'dur 17.92 274 P P 02 58 25.6 +0.4
comp=Z,0.5nm,0.3s,baz=64,slow=11,SNR=16
KLR LR LR 03 06 15.8
comp=Z,158nm,18.6s,baz=46,slow=40
KLR Kul'dur 17.92 274 iP P 02 58 24.4 -0.8
KLR pmax pmax
comp=Z,6.0nm,1.0s
NIKH Nikolski High 19.27 73 P P 02 58 41.3 +1.4
YAK Yakutsk 19.38 315 P P 02 58 39.1 -1.9
comp=Z,0.2nm,0.3s,baz=89,slow=2.6,SNR=6.6
YAK Yakutsk 19.38 315 P P 02 58 38.9 -2.1
YAK Yakutsk 19.38 315 iP P 02 58 38.9 -2.1
YAK pmax pmax
comp=Z,18nm,0.8s
USRK Ussuriysk Ar. 19.87 260 P P 02 58 45.8 -0.8
baz=77,slow=11,SNR=5.3
MAJO Matsushiro 21.35 234 iP P 02 59 01.7 -0.9
MAJO pmax pmax
comp=Z,12nm,1.0s
MJAR Matsushiro Arr 21.35 234 P P 02 59 03.7 +1.1
comp=Z,4.0nm,0.8s,baz=30,slow=9.6,SNR=6.5
TIXI Tiksi 24.49 337 P P 02 59 32.4 -1.4
comp=Z,7.6nm,0.4s,baz=133,slow=8.4,SNR=19
TIXI Tiksi 24.49 337 P P 02 59 32.5 -1.3
TIXI Tiksi 24.49 337 eP P 02 59 33.0 -0.9
TIXI pmax pmax
comp=Z,9.0nm,0.8s
HIA Hailar 25.36 281 P P 02 59 40.1 -1.9
HIA Hailar 25.36 281 P P 02 59 40.1 -1.9
HIA pmax pmax
comp=Z,8.0nm,0.9s
KSRS Korea Array 26.39 250 P P 02 59 52.9 +1.5
comp=Z,0.7nm,0.5s,baz=52,slow=9.0,SNR=3.0
KSRS LR LR 03 10 45.5
comp=Z,142nm,18.3s,baz=48,slow=37
BWN Browne 29.05 44 P P 03 00 16.8 +1.9
ILAR Eielson Array 30.18 43 P P 03 00 26.2 +1.3
comp=Z,0.7nm,1.1s,baz=265,slow=9.9,SNR=3.1
H11N2 WAKE ISLAND Hy 32.16 167 T T 03 34 37.7
baz=350,slow=76
H11N3 WAKE ISLAND Hy 32.17 167 T T 03 34 56.5
baz=350,slow=76,SNR=16
H11N1 WAKE ISLAND Hy 32.17 167 T T 03 34 49.4
baz=350,slow=76,SNR=18
H11S1 WAKE ISLAND Hy 33.33 168 T T 03 36 24.3
baz=351,slow=76,SNR=6.1
H11S3 WAKE ISLAND Hy 33.34 168 T T 03 36 29.0
baz=351,slow=76,SNR=6.6
H11S2 WAKE ISLAND Hy 33.35 168 T T 03 36 34.6
baz=351,slow=76
SONM Songino Array 34.06 285 P P 03 00 59.8 +0.5
comp=Z,0.4nm,0.3s,baz=53,slow=6.1,SNR=4.0
SONM LR LR 03 16 30.0
comp=Z,233nm,18.7s,baz=336,slow=39
TLY Talaya 34.10 293 eP P 03 00 58.9 -0.6
TLY pmax pmax
comp=Z,1.0nm,1.0s
WHN Wuhan 39.29 256 P P 03 01 48.8 +5.1
XAN Xi'an 40.24 265 P P 03 01 51.5 -0.3
XAN Xi'an 40.24 265 P P 03 01 51.5 -0.3
XAN pmax pmax
comp=Z,22nm,1.9s
ZALV Zalesovo Beam 43.47 304 P P 03 02 15.6 -2.2
comp=Z,0.6nm,0.3s,baz=56,slow=6.1,SNR=4.8
ZALV LR LR 03 22 26.5
comp=Z,130nm,18.9s,baz=42,slow=39
RES Resolute Bay 44.95 21 LR LR 03 24 12.8
comp=Z,63nm,18.0s,baz=246,slow=40
KURK Kurchatov 48.40 303 P P 03 02 55.1 -1.5
KURK IAmb IAmb 03 02 55.7
comp=Z,3.5nm,0.7s
KURK Kurchatov 48.40 303 iP P 03 02 54.7 -1.9
KURK pmax pmax
comp=Z,3.0nm,0.6s
MK31 Makanchi Array 48.66 297 P P 03 02 57.3 -1.4
MK31 IAmb IAmb 03 04 13.3
comp=Z,7.7nm,1.9s
MK31 Makanchi Array 48.66 297 P P 03 02 57.3 -1.4
MK31 pmax pmax
comp=Z,8.0nm,2.0s
MKAR Makanchi Array 48.66 297 P P 03 02 56.8 -1.9
comp=Z,0.5nm,0.4s,baz=55,slow=6.2,SNR=20
MKAR Makanchi Array 48.66 297 eP P 03 02 57.2 -1.5
MKAR pmax pmax
comp=Z,1.0nm,0.4s
SPITS Spitsbergen Ar 48.72 351 P P 03 02 58.9 +0.1
SPITS pmax pmax
comp=Z,3.0nm,0.3s
BRVK Borovoye 51.26 309 P P 03 03 16.4 -1.9
BRVK IAmb IAmb 03 03 17.2
comp=Z,3.0nm,0.7s
BRVK Borovoye 51.26 309 P P 03 03 16.4 -1.9
BRVK pmax pmax
comp=Z,3.0nm,0.7s
ARU Arti 54.45 318c iP P 03 03 41.0 -0.8
ARU 03 05 41.3
ARU S S 03 11 17.7 +0.6
ARU SS SS 03 14 57.3 -1.7
ARU pmax pmax
comp=Z,2.0nm,0.4s
ARCES ARCESS Array B 54.78 342 P P 03 03 43.6 -0.4
comp=Z,4.1nm,0.8s,baz=42,slow=7.5,SNR=17
NVAR Mina Array Bea 56.56 69 P P 03 03 59.1 +1.5
comp=Z,0.2nm,0.6s,baz=296,slow=6.9,SNR=2.1
CMAR Chiang Mai Arr 57.60 259 P P 03 04 06.0 +1.2
comp=Z,1.6nm,0.4s,baz=30,slow=5.6,SNR=4.4
CMAR LR LR 03 31 14.9
comp=Z,52nm,19.6s,baz=55,slow=38
CMAR Chiang Mai Arr 57.60 259 P P 03 04 06.0 +1.2
CMAR Chiang Mai Arr 57.60 259 P P 03 04 06.0 +1.2
ABKAR Akbulak array 58.68 311 P P 03 04 10.8 -1.2
TMUT Trail Mountain 60.03 64 PcP 03 05 07.8 +0.3
FIA1 FINESS Array S 61.53 337 P P 03 04 31.4 +0.2
FINES FINESS Array B 61.53 337 P P 03 04 31.1 -0.1
comp=Z,1.7nm,0.5s,baz=39,slow=6.9,SNR=28
OBN Obninsk 63.77 328 eP P 03 04 46.2 0.0
OBN pmax pmax
comp=Z,4.0nm,1.0s
NB2 NORSAR Subarra 65.06 344 P P 03 04 54.6 -0.1
comp=Z,0.3nm,0.3s,baz=29,slow=6.5
NOA NORSAR Array B 65.06 344 P P 03 04 55.0 +0.3
comp=Z,0.7nm,0.6s,baz=25,slow=6.6,SNR=5.8
NOA LR LR 03 37 14.9
comp=Z,27nm,18.0s,baz=230,slow=40
NORES NORESS Array B 65.28 343 P P 03 04 59.1 +3.0
GEYT Alibeck 67.78 303 P P 03 05 11.4 -1.0
comp=Z,1.6nm,0.7s,baz=22,slow=5.3,SNR=3.1
GEYT LR LR 03 37 31.6
comp=Z,72nm,21.4s,baz=90,slow=38
AKASG Malin Array Be 69.90 329 P P 03 05 24.6 -0.7
comp=Z,2.8nm,0.5s,baz=31,slow=6.5,SNR=12
AKBB Malin Array Si 69.90 329 P P 03 05 25.0 -0.3
AKBB IAmb IAmb 03 05 25.7
comp=Z,4.3nm,0.9s
AKBB Malin Array Si 69.90 329 P P 03 05 25.0 -0.3
AKBB pmax pmax
comp=Z,4.0nm,0.9s
KIEV Kiev 69.91 329 P P 03 05 25.0 -0.4
TXAR Lajitas Array 71.53 66 P P 03 05 36.2 +0.4
comp=Z,0.4nm,0.6s,baz=306,slow=5.0,SNR=5.5
SORM Soroca 72.41 328 ⇑P P 03 05 39.4 -1.2
CLL Collm 73.80 339 eP P 03 05 47.0 -1.8
CLL Collm 73.80 339 eP P 03 05 47.0 -1.8
BUR08 Bucovina Ar. S 73.85 330 P P 03 05 49.0 -0.2
BURAR Bucovina Array 73.87 330 ⇑P P 03 05 49.4 0.0
TRPA Tarpa 74.23 332 ⇓P P 03 05 52.2 +0.9
WRA Warramunga Arr 74.48 205 P P 03 05 52.9 -0.1
comp=Z,0.6nm,0.6s,baz=19,slow=6.0,SNR=4.5
VYHS Vyhne 74.95 334 eP P 03 05 57.0 +1.5
VYHS Vyhne 74.95 334 eP P 03 05 57.0 +1.5
PLAL Pickwick Lake 75.48 52 P P 03 05 59.8 +1.0
BRTR Keskin Array B 77.73 320 P P 03 06 11.8 +0.3
comp=Z,0.8nm,0.6s,baz=41,slow=2.8,SNR=5.6
ASAR Alice Springs 78.15 204 P P 03 06 14.6 +0.9
comp=Z,0.5nm,0.6s,baz=16,slow=5.0,SNR=7.4
KEST Kesra 89.37 336 P P 03 07 12.6 +1.4
comp=Z,2.1nm,0.8s,baz=21,slow=8.6,SNR=7.2

IDC 15 03:03:42.5±1.1, 17.23S×167.19E, h0km, mb4.0/9, mb1 4.1/10, mb1mx3.9/47, mbtmp4.0/10, ML4.8/2, MS3.4/6, Ms1 3.3/6, ms1mx3.1/27, Error ellipse: s-maj=26.5km s-min=20.3km az=80.0
NEIC 15 03:03:42.9±1.2, 17.12S±0.06×167.18E±0.08, h4km±3km, mb4.3/5, Error ellipse: s-maj=11.7km s-min=7.6km az=67.0
ISC 15 03:03:45.7±0.9, 17.17S±0.05×167.2E±0.1, h25km, n24, σ0.90/20, mb4.0/9, MS3.3/7, Vanuatu Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
SANVU Saraoutou 1.71 359 Pn Pn 03 04 12.7 -1.3
DZM Mont Dzumac 4.93 188 ePn Pn 03 04 57.6 -0.8
132nm,1.2s
DZM eSn Sn 03 05 52.8 -1.9
135nm,0.8s
DZM eLR LR 03 06 06.6
comp=Z,358nm,22.4s
DZM Mont Dzumac 4.93 188 Pn Pn 03 04 58.8 +0.5
10nm,0.3s,baz=152,slow=22,SNR=219
DZM Sn Sn 03 05 53.9 -0.9
12nm,0.3s,baz=117,slow=24,SNR=20
DZM LR LR 03 06 35.4
comp=Z,266nm,18.8s,baz=40,slow=36
DZM Mont Dzumac 4.93 188 Pn 03 04 58.2 -0.2
NOUC Port Laguerre 4.98 190 Pn 03 04 59.2 +0.2
HNR Honiara 10.45 316 Pn 03 06 14.2 +0.1
KRVT Keravat (AS076 19.63 309 P Pn 03 08 14.4 +0.3
11nm,0.3s,baz=348,slow=22,SNR=3.3
CTA Charters Tower 20.08 258 P Pn 03 08 19.1 -0.4
2.7nm,0.8s,baz=79,slow=12,SNR=5.9
AFI Afiamalu 20.49 84 LR LR 03 14 46.1
comp=Z,86nm,21.2s,baz=258,slow=32
URZ Urewera 22.73 160 P P 03 08 44.7 -1.2
7.5nm,1.0s,baz=218,slow=8.5,SNR=3.1
URZ LR LR 03 15 36.6
comp=Z,103nm,19.7s,baz=359,slow=32
URZ Urewera 22.73 160 IAmb IAmb 03 09 06.9
comp=Z,13nm,1.0s
STKA Stephens Creek 27.44 233 P P 03 09 29.3 -0.4
comp=Z,0.9nm,0.5s,baz=322,slow=23,SNR=2.2
STKA LR LR 03 19 00.2
comp=Z,56nm,20.6s,baz=28,slow=34
WRA Warramunga Arr 31.27 260 P P 03 10 02.5 -1.3
comp=Z,1.6nm,0.7s,baz=90,slow=8.7,SNR=8.1
AS31 Alice Springs 31.83 253 P P 03 10 08.6 -0.2
AS31 IAmb IAmb 03 10 13.9
comp=Z,1.9nm,0.7s
ASAR Alice Springs 31.84 253 P P 03 10 08.5 -0.4
comp=Z,4.2nm,0.9s,baz=80,slow=8.6,SNR=38

ASAR				LR	LR	03 21 55.5	
	comp=Z,109nm,20.6s,baz=78,slow=34						
FITZ	Fitzroy Crossi	39.58	262	P	P	03 11 15.4	+0.2
FITZ				IAmb	IAmb	03 11 16.4	
	comp=Z,10nm,1.1s						
TBI	Tubuai	40.99	106	eLR	LR	03 23 08.2	
	comp=Z,61nm,27.5s						
PPT2	Papeete2	41.17	97	eLR	LR	03 23 04.4	
	comp=Z,109nm,26.0s						
PPT	Papeete	41.17	97	LR	LR	03 27 00.4	
	comp=Z,43nm,19.0s,baz=246,slow=34						
QSPA	South Pole Qui	72.87	180	P	P	03 15 13.8	+1.3
	comp=Z,1.1nm,0.8s,baz=23,slow=5.5,SNR=3.8						
SONM	Songino Array	84.42	324	P	P	03 16 17.0	+0.8
	comp=Z,1.1nm,1.1s,baz=140,slow=3.5,SNR=5.1						
ILAR	Eielson Array	88.85	18	P	P	03 16 37.8	+0.5
	comp=Z,0.5nm,0.7s,baz=232,slow=5.4,SNR=4.3						
MKAR	Makanchi Array	98.92	316	P	Pdif	03 17 26.2	+2.2
	comp=Z,0.1nm,0.8s,baz=109,slow=7.5,SNR=2.6						
ARCES	ARCESS Array B	122.58	345	PKP	PKiKP	03 22 39.1	+0.4
	comp=Z,3.1nm,0.9s,baz=72,slow=2.9,SNR=4.2						

*JMA **15** 03:17:14.1±0.2,23.96N×122.49E,h23km±4km,M2.6*
*TAP **15** 03:17:14.8,24.04N×122.48E,h27km,ML3.2,C*
ISC 15 03:17:14.2±0.9,**23.97N**±0.03×**122.49E**±0.02,**h22**km±11km, **n60**,**σ0.52**/105,**2D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.64	41	P	Pb	03 17 26.4	-0.2
JYNG				eS	Sb	03 17 34.5	-0.6
EOS1	EOS1	0.66	330	⇓iP	Pb	03 17 27.0	-0.1
	baz=328						
EOS1				eS	Sb	03 17 36.5	+0.6
	baz=328						
YOJ	Yonaguni jima	0.68	44	P	Pb	03 17 27.5	+0.1
	baz=55						
YOJ				eS	Sb	03 17 36.0	-0.5
	baz=55						
YOJ	Yonaguni jima	0.68	44	P	Pb	03 17 27.2	-0.3
YOJ				S	Sb	03 17 35.7	-0.8
TWD	Chiawan	0.82	278	eP	Pb	03 17 29.8	0.0
	baz=273						
TWD				eS	Sb	03 17 40.8	+0.3
	baz=273						
NACB	Ninganchiao	0.84	284	P	Pb	03 17 29.8	-0.3
	baz=265						
TWC	Suao	0.86	318	⇓iP	Pb	03 17 29.7	-0.8
	baz=315						
TWC				eS	Sb	03 17 40.6	-1.0
	baz=315						
ETLH	Xiulin Townshi	0.95	285	P	Pb	03 17 31.6	-0.4
	baz=267						
ETLH				eS	Sb	03 17 44.4	+0.2
	baz=267						
ESL	Shilin	0.98	261	eP	Pb	03 17 31.4	-1.0
	baz=247						
ESL				eS	Sb	03 17 45.0	+0.1
	baz=247						
EGFH	Guangfu	1.02	253	eP	Pn	03 17 32.6	-0.5
	baz=248						
EGFH				eS	Sb	03 17 46.1	+0.1
	baz=248						
ILA	Ilan	1.04	320	eP	Pn	03 17 32.9	-0.5
	baz=317						
TWE	Neicheng	1.06	315	eP	Pn	03 17 33.4	-0.2
	baz=313						
TWE				eS	Sb	03 17 47.2	0.0
	baz=313						
NTC	Toucheng	1.06	326	P	Pb	03 17 33.9	0.0
	baz=324						
NTC				eS	Sn	03 17 47.9	0.0
	baz=324						
ENTT	Nioudou	1.07	309	P	Pn	03 17 33.9	0.0
	baz=306						
ENTT				eS	Sn	03 17 48.2	+0.1
	baz=306						
HGSD	Ruisui	1.08	244	eP	Pb	03 17 34.3	+0.1
	baz=240						
HGSD				eS	Sn	03 17 48.6	+0.2
	baz=240						
NDT	Datong Townshi	1.09	305	P	Pb	03 17 34.6	+0.2
	baz=302						
NDT				eS	Sn	03 17 49.5	+1.0
	baz=302						
NNSB	Datong	1.11	295	P	Pn	03 17 34.3	-0.1
	baz=291						
NNSB				eS	Sn	03 17 49.0	-0.2
	baz=291						
NNSH	Datong	1.11	295	iP	Pn	03 17 34.3	-0.2
	baz=291						
NNSH				S	Sn	03 17 48.9	-0.2
	baz=291						
NNS	Nan Shan	1.12	295	P	Pn	03 17 34.6	0.0
	baz=291						
NNS				eS	Sn	03 17 49.8	+0.4
	baz=291						
TWB1	Santiao Chiao	1.13	336	eP	Pn	03 17 34.5	-0.2
	baz=346						
TWB1				eS	Sb	03 17 48.9	-0.4
	baz=346						
WHF	Hehuan Shan	1.13	279	P	Pn	03 17 34.7	-0.4
	baz=275						
WHF				eS	Sb	03 17 49.2	-0.5
	baz=275						
TIPB	Shuangxi	1.17	329	P	Pn	03 17 35.2	+0.1
	baz=327						
TIPB				S	Sb	03 17 50.2	-0.1
	baz=327						
IRIF	Iriomote-Funau	1.19	72	P	Pn	03 17 35.1	-0.4
IRIF				S	Sb	03 17 52.0	+0.9
OWD	Renai	1.20	269	eP	Pn	03 17 35.5	-0.3
	baz=265						
OWD				eS	Sn	03 17 50.6	-0.8
	baz=265						
CHGB	Renai	1.20	275	P	Pn	03 17 35.8	-0.1
	baz=270						
CHGB				eS	Sn	03 17 50.7	-1.0
	baz=270						
NWLT	Wulai	1.21	312	eP	Pb	03 17 36.2	-0.2
	baz=309						
NWLT				eS	Sb	03 17 52.1	+0.6
	baz=309						
HATJ	Hateruma jima	1.21	86	P	Pn	03 17 36.0	+0.3
HATJ				eS	Sb	03 17 52.4	+0.9
YHNB	Yeheng	1.23	305	eP	Pn	03 17 36.3	+0.1
	baz=289						
YULB	Yu-li	1.23	242	iP	Pn	03 17 35.7	-0.4
	baz=238						
YULB				S	Sn	03 17 52.1	0.0
	baz=238						
NSK	Sanguang	1.25	305	P	Pn	03 17 36.5	+0.1
	baz=289						
NSK				eS	Sb	03 17 52.6	-0.1
	baz=289						
TDCB	Techi	1.25	283	eP	Pn	03 17 36.7	+0.3
	baz=268						
VWDT	VWDT	1.25	260	P	Pn	03 17 36.4	+0.1
	baz=256						
VWDT				eS	Sn	03 17 51.7	-0.6
	baz=256						
TWF1	Yuli	1.25	241	P	Pn	03 17 36.0	-0.4
	baz=237						
TWF1				eS	Sb	03 17 53.1	+0.2
	baz=237						
NWF	Wu-fen Shan	1.27	330	eP	Pn	03 17 36.6	-0.1
	baz=328						
NWF				eS	Sb	03 17 54.2	+0.7
	baz=328						
WFSB	Wu-fen Shan	1.27	330	eP	Pn	03 17 36.5	-0.1
	baz=328						
WFSB				eS	Sb	03 17 54.1	+0.8
	baz=328						
TWA	Mucha	1.30	321	eP	Pb	03 17 38.0	0.0
	baz=319						
TWA				eS	Sb	03 17 55.5	+1.3
	baz=319						
FULB	Fuli	1.34	235	eP	Pn	03 17 37.2	-0.4
	baz=220						
FULB				eS	Sn	03 17 55.2	+0.5
	baz=220						
CHKT	Chengkung	1.35	230	eP	Pn	03 17 38.3	+0.7
	baz=226						
CHKT				eS	Sn	03 17 53.6	-1.3
	baz=226						
TATO	Taipei	1.35	318	eP	Pb	03 17 38.5	-0.3
	baz=316						
TATO				eS	Sb	03 17 56.5	+0.8
	baz=316						
SSLB	Suanglung	1.42	263	eP	Pb	03 17 39.5	-0.4
	baz=259						
JKRS	Kuro-shima	1.42	79	P	Pn	03 17 39.3	+0.7
JKRS				eS	Sb	03 17 57.6	+0.1
YM01	YM01	1.44	325	eP	Pb	03 17 39.9	-0.4
	baz=323						
WHP	Taichung City	1.44	283	eP	Pb	03 17 40.8	+0.4
	baz=269						
YM10	YM10	1.45	325	eP	Pn	03 17 39.7	+0.6
	baz=323						
YM11	YM11	1.45	325	eP	Pb	03 17 40.0	-0.5
	baz=323						
YM08	YM08	1.46	326	eP	Pb	03 17 41.3	+0.6
	baz=324						
YUS	Yu-Shan	1.49	252	eP	Pn	03 17 40.0	0.0
	baz=248						
YUS				eS	Sn	03 17 58.6	-0.4
	baz=248						
TYC	Yuchr	1.49	268	eP	Pn	03 17 40.2	+0.6
	baz=264						
LIOB	Emei	1.50	297	eP	Pb	03 17 41.3	-0.1
	baz=294						
LIOB				eS	Sb	03 18 00.8	+0.8
	baz=294						
NSTT	Nanjuang	1.51	296	eP	Pb	03 17 41.3	-0.2
	baz=293						
NSTT				eS	Sb	03 18 00.3	+0.1
	baz=293						
WHYT	Xinyi Township	1.52	260	eP	Pb	03 17 41.1	-0.7
	baz=257						
JIJ	Ishigaki jima	1.56	75	P	Pn	03 17 40.5	-0.1
JIJ				eS	Sn	03 17 59.8	-0.4
ALS	Alishan	1.61	254	eP	Pn	03 17 42.5	+1.0
	baz=250						
WJS	Zhushan	1.62	265	eP	Pb	03 17 43.8	+0.4
	baz=262						
JISG	Ishigakijimahi	1.77	69	P	Pn	03 17 43.4	-0.1
JISG				eS	Sn	03 18 05.0	-0.4
TPUB	Ta-pu	1.83	249	eP	Pb	03 17 46.7	-0.3
	baz=246						
TPUB				eS	Sb	03 18 09.6	+0.1
	baz=246						
SLGT	Liugui	1.95	240	eP	Pb	03 17 49.1	0.0
	baz=229						
SLGT				eS	Sb	03 18 13.1	+0.2
	baz=229						
CHN1	Nanshi	1.96	247	eP	Pb	03 17 48.8	-0.4
	baz=243						
CHN1				eS	Sb	03 18 13.3	0.0
	baz=243						
TWK	Hsinying	1.96	249	eP	Pn	03 17 47.9	+1.7
	baz=247						
JTJ	Tarama	2.13	71	P	Pn	03 17 49.1	+0.7
JTJ				eS	Sn	03 18 13.7	-0.4

*IDC **15** 03:20:07.6±2.0,8.16N×120.32E,h0km,mb3.5/3, mb1 3.7/3,mb1mx3.3/32,mbtmp3.5/3,Error ellipse: s-maj=275.6km s-min=26.6km az=61.0*
*MAN **15** 03:20:07.5,9.30N×122.36E,h5km,mb4.6,ML3.4,MS3.3*
ISC 15 03:20:06.2±1.9,**9.27N**±0.05×**122.33E**±0.07,**h0**km±12km, **n16**,**σ1.36**/25,**mb3.5**/3,**5C-4D**,**Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	Sibulan	0.90	86	⇑iP	Pg	03 20 23.8	+0.3
SNPH				iS	Sb	03 20 37.1	-0.1
DCPH	Dipolog City	1.22	124	⇑eP	Pg	03 20 28.8	-0.9
GUIM	Jordan	1.37	11	eP	Pn	03 20 31.7	-0.9
GUIM				eS	Sn	03 20 51.8	+0.4
TBP	Tagbilaran	1.57	75	⇓eP	Pn	03 20 34.9	-0.5
TBP				eS	Sb	03 20 56.5	0.0
LLP	Lapu-Lapu	1.92	57	⇓eP	Pn	03 20 40.6	+0.5
LLP				iS	Sn	03 21 04.7	-0.3
RCP	Roxas	2.31	10	⇑eP	Pb	03 20 48.7	-0.1
RCP				eS	Sb	03 21 19.2	+1.4
RCP	Roxas	2.31	10	⇑eP	Pb	03 20 48.7	-0.1
RCP				eS	Sb	03 21 19.2	+1.4
CGP	Cagayan de Oro	2.48	109	⇓eP	Pn	03 20 47.6	-0.1
MSLP	Maasin	2.64	71	eP	Pn	03 20 51.0	+1.0
MSLP				eS	Sn	03 21 23.8	+1.1
CTBH	Cotabato--PC H	2.79	137	⇑iP	Pn	03 20 53.5	+1.5
OCLP	Ormoc	2.86	52	eP	Pn	03 20 53.3	+0.2
BUKP	Musuan	3.04	117	eP	Pn	03 20 57.6	+2.0
BUKP				eS	Sb	03 21 36.1	-2.8
KCP	Kidapawan	3.54	129	⇓eP	Pn	03 21 05.7	+3.2
KCP				iS	Sg	03 22 00.6	+0.5
WRA	Warramunga Arr	31.35	158	P	P	03 26 29.3	+0.6
	0.3nm,0.6s,baz=330,slow=11,SNR=3.2						
ASAR	Alice Springs	34.64	161	P	P	03 26 55.1	-2.4
	0.6nm,0.7s,baz=340,slow=7.3,SNR=11						
MKAR	Makanchi Array	50.54	325	P	P	03 29 06.2	-0.2
	0.6nm,0.8s,baz=131,slow=8.3,SNR=5.4						

*ANF **15** 03:23:37.0±0.2,33.83N×82.12W,h5km,ML5.5/113,Error ellipse: s-maj=1.9km s-min=1.2km az=5.0*
*IDC **15** 03:23:37.4±0.5,33.86N×82.12W,h0km,mb4.2/22, mb1 4.5/26,mb1mx4.3/45,mbtmp4.3/26,ML4.1/4,MS3.5/16, Ms1 3.5/16,ms1mx3.3/46,Error ellipse: s-maj=11.7km s-min=6.3km az=57.0*
*NEIC **15** 03:23:37.8±1.5,33.84N±0.01×82.12W±0.02,h5km±2km, Error ellipse: s-maj=3.2km s-min=1.4km az=59.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.44; $M_{\theta\theta}$0.26; $M_{\phi\phi}$-1.70; $M_{r\theta}$0.69; $M_{\theta\phi}$0.52; $M_{\phi r}$-0.10; Fault plane solution: $M_0$1.81000×10^{15} NP1: ϕ_s142.96000°,δ54.63000°,λ58.78000°. NP2:ϕ_s9.27000°, δ45.79000°,λ126.13000°. Principal axes: T 1.7596, Plg64.0000°, Azm355.0000°; N 0.0897, Plg25.0000°, Azm162.0000°; P -1.8493, Plg5.0000°, Azm255.0000°;*
*SLM **15** 03:23:38.2±1.1,33.82N±0.02×82.09W±0.03,h5km±6km, mb4.5/104(NEIC),Mwr4.1/59(NEIC) Error ellipse: s-maj=3.2km s-min=3.0km az=51.0*
ISC 15 03:23:38.1±0.9,**33.79N**±0.02×**82.12W**±0.01,**h8**km±6km, **n491**,**σ1.92**/614,**mb4.5**/42,**MS3.5**/14,**Georgia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
Y55A	Saluda	0.27	56	P	Pg	03 23 42.4	-1.1
	baz=238,SNR=1000						
Y55A				S	Sg	03 23 45.7	-1.3
	baz=238						
HODGE	Hodges	0.45	346		Pg	03 23 46.4	-0.6
HODGE					Sg	03 23 51.9	-1.0
Y54A	Tignall	0.47	279	P	Pg	03 23 46.9	-0.5
	baz=95,SNR=1000						
Y54A				S	Sg	03 23 53.3	-0.3
	baz=95						
Y56A	Pelion	0.68	90	P	Pg	03 23 50.6	-0.7
	baz=272,SNR=524						
Y56A				S	Sg	03 23 59.6	-0.6
	baz=272						
X54A	Belton	0.78	345	P	Pg	03 23 52.2	-1.0
	baz=162,SNR=604						
X54A				S	Sg	03 24 01.8	-1.7
	baz=162						
Z56A	Williston	0.78	126		Pg	03 23 53.1	-0.2
Z56A					Sg	03 24 03.3	0.0
Z56A	Williston	0.78	126	P	Pg	03 23 53.0	-0.2
	baz=309,SNR=560						
Z56A				S	Sg	03 24 03.4	0.0
	baz=309						
X55A	Gracelyn & Ava	0.79	31	P	Pg	03 23 51.9	-1.5
	baz=210,SNR=558						
X55A				S	Sg	03 24 01.7	-2.0
	baz=210						
JSC	Jenkinsville	0.87	55		Pg	03 23 53.1	-1.7
PAULI	Pauline	1.06	14		Pg	03 23 56.9	-1.6
PAULI				Sg	Sg	03 24 10.1	-2.2
PAULI					Sb	03 24 10.3	-2.4
X56A	White Oak	1.14	52	P	Pg	03 23 58.0	-2.1
	baz=233,SNR=1000						
X56A				S	Sg	03 24 13.3	-1.6
	baz=233						
GOGA	Godfrey	1.18	252		Pg	03 24 00.1	-0.7
GOGA					Sg	03 24 15.6	-0.6
GOGA	Godfrey	1.18	252	P	Pg	03 23 59.6	-1.2
	baz=70,SNR=1000						
GOGA				S	Sg	03 24 15.6	-0.6
	baz=70						
X53A	Estanollee	1.21	306	Pg	Pg	03 23 59.8	-1.5
	baz=124,SNR=1000						
X53A				S	Sg	03 24 14.8	-2.2
	baz=124						
Y53A	Monroe	1.22	273	Pg	Pg	03 24 00.3	-1.2
	baz=91,SNR=1000						
Y53A				S	Sg	03 24 16.3	-1.0
	baz=91						
Z57A	Bowman	1.28	112	Pg	Pn	03 24 01.7	-0.6
	baz=295,SNR=704						
Z57A				S	Sg	03 24 18.9	-0.5
	baz=295						
W54A	Cherokee Point	1.29	358	Pg	Pn	03 24 01.1	-1.4
	baz=176,SNR=1000						
W54A				S	Sg	03 24 17.0	-2.8
	baz=176						
BG3	Lake Jocassee	1.37	331		Pn	03 24 02.7	-0.9
BG3				Sn	Sb	03 24 19.9	-1.9
154A	Montrose	1.44	215		Pn	03 24 04.7	+0.3
157A	Early Branch	1.46	139	Pb	Pn	03 24 04.8	+0.1
	baz=322,SNR=314						
157A				Sb	Sn	03 24 24.2	+0.3
	baz=322						
Y57A	Sumter	1.46	81		Pn	03 24 04.4	-0.4
Y57A	Sumter	1.46	81	Pg	Pn	03 24 04.3	-0.4
	baz=262,SNR=293						
Y57A				Sb	Sn	03 24 22.9	-1.1
	baz=262						
KMSC	Kings Mountain	1.50	26		Pn	03 24 04.4	-0.9
KMSC	Kings Mountain	1.50	26	Pb	Pn	03 24 04.3	-0.9
	baz=206,SNR=693						
KMSC				Sb	Sn	03 24 23.9	-1.2
	baz=206						
Y52A	Lilburn	1.62	273		Pn	03 24 07.2	+0.2
Y52A	Lilburn	1.62	273	Pb	Pn	03 24 07.1	+0.2
	baz=91,SNR=1000						
Y52A				Sb	Sn	03 24 28.3	+0.3
	baz=91						
BIRD	Birdtown, Kers	1.62	58		Pn	03 24 06.3	-0.6
W53A	Cullowhee	1.62	328	Pg	Pn	03 24 07.1	-0.1
	baz=147,SNR=1000						
W53A				Sb	Sn	03 24 27.8	-0.4
	baz=147						
X52A	Dahlonega	1.68	299	Pb	Pn	03 24 08.1	+0.3
	baz=117,SNR=411						
X52A				Sb	Sn	03 24 29.2	-0.3
	baz=117						
NHSC	New Hope	1.76	112		Pn	03 24 08.9	-0.1
NHSC	New Hope	1.76	112	Pb	Pn	03 24 08.8	-0.1
	baz=294,SNR=202						
NHSC				Sb	Sg	03 24 34.2	-0.7
	baz=294						
X57A	Johnson Farm,	1.81	68	Pb	Pn	03 24 09.0	-0.6
	baz=249,SNR=773						
X57A				Sb	Sb	03 24 33.7	-0.7
	baz=249						
RGRS	Roger Stewart	1.84	118		Pn	03 24 09.7	-0.3
W56A	Indian Trail	1.85	43	Pb	Pn	03 24 09.6	-0.5
	baz=224,SNR=980						
W56A				Sb	Sn	03 24 34.1	+0.4
	baz=224						
255A	Hazlehurst	1.88	189		Pn	03 24 11.4	+0.8
CSU	Charleston Sou	1.90	114		Pn	03 24 10.5	-0.3
158A	Hollywood	1.93	122	P	Pn	03 24 11.0	-0.2
	baz=305,SNR=273						
158A				Sb	Sb	03 24 39.0	+1.3
	baz=305						
V53A	Saluda	1.96	343		Pn	03 24 12.5	+0.8
V53A	Saluda	1.96	343	Pb	Pn	03 24 12.4	+0.7
	baz=162,SNR=1000						
V53A				Sb	Sb	03 24 37.8	-0.8
	baz=162						
W52A	Murphy	1.98	312		Pn	03 24 12.3	+0.4
W52A	Murphy	1.98	312	Pb	Pn	03 24 12.4	+0.4
	baz=130,SNR=414						
W52A				Sb	Sb	03 24 39.5	+0.3
	baz=130						
Z58A	St. Stephen	1.98	103	P	Pn	03 24 11.3	-0.6
	baz=285,SNR=94						
Z58A				Sb	Sb	03 24 39.7	+0.5
	baz=285						
V54A	Nebo	1.99	4	Pb	Pn	03 24 12.5	+0.4
	baz=184,SNR=683						
V54A				Sb	Sb	03 24 38.5	-1.0
	baz=184						
Z52A	Williamson	2.01	253	Pb	Pn	03 24 13.5	+1.1
	baz=71						
257A	Skidaway Islan	2.03	153		Pn	03 24 12.8	+0.2
Y58A	Scranton	2.05	86		Pn	03 24 12.2	-0.6
Y58A	Scranton	2.05	86	P	Pn	03 24 12.2	-0.6
	baz=268,SNR=301						
Y58A				Sb	Sb	03 24 41.5	+0.3
	baz=268						
V55A	Taylorsville	2.19	20		Pn	03 24 14.8	-0.1
V55A	Taylorsville	2.19	20	Pb	Pn	03 24 14.7	-0.1
	baz=200,SNR=395						
V55A				Sb	Sb	03 24 44.3	-0.9
	baz=200						
W57A	Gilead	2.22	52		Pn	03 24 14.7	-0.6
W57A	Gilead	2.22	52	P	Pn	03 24 14.7	-0.6
	baz=233,SNR=547						
W57A				S	Sn	03 24 41.4	-1.5
	baz=233						
TKL	Tuckaleechee C	2.31	324	Pn	Pn	03 24 16.9	+0.5
	109nm,0.3s,baz=147,slow=10,SNR=276						
TKL				Pg	Pb	03 24 18.7	-1.3
	153nm,0.3s,baz=149,slow=11,SNR=274						
TKL				Lg	Lg	03 24 47.3	
	138nm,0.3s,baz=236,slow=21,SNR=7.6						
TKL				LR	LR	03 25 03.8	
	comp=Z,256nm,21.8s,baz=169,slow=38						
V52A	Sevierville	2.38	330		Pn	03 24 17.8	+0.3
V52A	Sevierville	2.38	330	Pb	Pn	03 24 18.0	+0.6
	baz=148,SNR=839						
V52A				Sb	Sb	03 24 50.5	-0.2
	baz=148						
X51A	Calhoun	2.40	290		Pn	03 24 18.5	+0.9
X51A	Calhoun	2.40	290	Pb	Pn	03 24 18.5	+0.9
	baz=107,SNR=466						
X51A				Sb	Sb	03 24 51.4	+0.2
	baz=107						
V56A	Mocksville	2.42	33	Pb	Pn	03 24 17.9	-0.1
	baz=214,SNR=937						
V56A				S	Sn	03 24 46.4	-1.4
	baz=214						
X58A	Rowland	2.43	71		Pn	03 24 17.8	-0.3
X58A	Rowland	2.43	71	P	Pn	03 24 17.6	-0.5
	baz=253,SNR=225						
X58A				Sn	Sn	03 24 46.2	-1.8
	baz=253						
X58A				Sb	Sb	03 24 52.3	+0.1
	baz=253						
Z59A	Georgetown, SC	2.44	102	P	Pn	03 24 17.6	-0.6
	baz=285,SNR=242						
Z59A				Sn	Sn	03 24 46.4	-1.8
	baz=285						
Z59A				Sb	Sb	03 24 53.8	+1.3
	baz=285						
152A	Waverly Hall	2.45	243		Pn	03 24 19.9	+1.6
Y51A	Rockmart	2.45	273	Pb	Pn	03 24 19.1	+0.7
	baz=91,SNR=585						
W51A	Cleveland	2.57	303	Pb	Pn	03 24 20.9	+0.9
	baz=121,SNR=309						
CPCT	Cooper Cave	2.58	311		Pn	03 24 20.8	+0.6
Z51A	Franklin	2.59	260		Pn	03 24 21.9	+1.6
U53A	Fall Branch	2.59	352	P	Pn	03 24 20.7	+0.2
	baz=171,SNR=708						
U53A				Sb	Sb	03 24 56.5	-0.5
	baz=171						
TIGA	Tifton	2.65	208		Pn	03 24 22.2	+1.0
TIGA	Tifton	2.65	208	P	Pn	03 24 21.6	+0.5
	baz=28,SNR=68						
TIGA				S	Sn	03 24 55.4	+1.9
	baz=28						
W58A	Raeford	2.69	62	P	Pn	03 24 20.9	-0.7
	baz=244,SNR=180						
W58A				S	Sn	03 24 52.3	-2.0
	baz=244						
Y59A	Loris	2.71	85		Pn	03 24 21.2	-0.7
Y59A	Loris	2.71	85	P	Pn	03 24 21.4	-0.5
	baz=267,SNR=11						
V51A	Loudon	2.72	318		Pn	03 24 22.6	+0.5
V51A	Loudon	2.72	318	P	Pn	03 24 22.6	+0.5
	baz=136,SNR=87						
V51A				Sb	Sb	03 25 00.8	+0.3
	baz=136						
U54A	Nelsons Funny	2.73	5	P	Pn	03 24 22.4	0.0
	baz=185,SNR=122						

U54A				Sb	Sb	03 25 01.3	+0.3
	baz=185						
U52A	Thorn Hill	2.79	339	P	Pn	03 24 23.9	+0.8
	baz=158,SNR=38						
U52A				Sb	Sb	03 25 03.3	+0.7
	baz=158						
U55A	TA2, Sparta	2.85	18	P	Pn	03 24 23.8	-0.1
	baz=198,SNR=107						
V57A	Coltrane Farms	2.85	42	P	Pn	03 24 23.0	-0.8
	baz=223,SNR=106						
V57A				S	Sn	03 24 56.1	-2.2
	baz=223						
U56A	King	2.92	29		Pn	03 24 25.2	+0.3
U56A	King	2.92	29	P	Pn	03 24 25.2	+0.3
	baz=209,SNR=665						
U56A				Sb	Sb	03 25 07.3	+0.9
	baz=209						
TZTN	Tazewell	2.98	337	P	Pn	03 24 26.3	+0.6
	baz=156,SNR=121						
TZTN				Sb	Sb	03 25 08.2	+0.1
	baz=156						
W50A	Signal Mountai	2.98	299		Pn	03 24 26.4	+0.6
W50A	Signal Mountai	2.98	299	P	Pn	03 24 26.6	+0.8
	baz=117,SNR=306						
W50A				Sb	Sb	03 25 09.6	+1.4
	baz=117						
FPAL	Fort Paine	2.99	285		Pn	03 24 26.6	+0.8
U51A	La Follette	3.01	330	P	Pn	03 24 26.5	+0.4
	baz=148,SNR=366						
U51A				Sb	Sb	03 25 10.3	+1.3
	baz=148						
X59A	McDuffie Farm,	3.02	74	P	Pn	03 24 25.6	-0.7
	baz=256,SNR=258						
X59A				Sb	Sb	03 25 09.7	+0.5
	baz=256						
456A	Hilliard	3.06	178		Pn	03 24 27.1	+0.3
V50A	Pikevile	3.09	308	P	Pn	03 24 27.9	+0.7
	baz=126,SNR=341						
V50A				Sb	Sb	03 25 12.4	+1.3
	baz=126						
V58A	Windy Hill, Pi	3.18	50		Pn	03 24 27.7	-0.7
V58A	Windy Hill, Pi	3.18	50	P	Pn	03 24 27.8	-0.6
	baz=232						
V58A				S	Sn	03 25 03.1	-3.4
	baz=232						
V58A				Sb	Sb	03 25 14.8	+1.0
	baz=232						
T53A	Wise	3.20	354	P	Pn	03 24 29.4	+0.6
	baz=173,SNR=328						
T53A				Sb	Sb	03 25 16.1	+1.6
	baz=173						
Z50A	Ashland	3.22	261		Pn	03 24 30.2	+1.3
Z50A	Ashland	3.22	261	P	Pn	03 24 30.2	+1.3
	baz=79						
Z50A				Sb	Sb	03 25 15.8	+0.9
	baz=79						
Y60A	Bolivia	3.26	85		Pn	03 24 29.1	-0.4
Y60A	Bolivia	3.26	85	P	Pn	03 24 29.0	-0.4
	baz=268,SNR=41						
T54A	Tazewell	3.29	8	P	Pn	03 24 30.4	+0.3
	baz=188,SNR=98						
T54A				Sb	Sb	03 25 18.4	+1.3
	baz=188						
352A	Blakely	3.30	227		Pn	03 24 30.6	+0.5
W59A	Clinton	3.34	65	P	Pn	03 24 30.3	-0.3
	baz=247,SNR=46						
W59A				S	Sn	03 25 09.3	-1.1
	baz=247						
W59A				Sb	Sb	03 25 19.5	+1.2
	baz=247						
T52A	Hallie	3.38	348		Pn	03 24 31.7	+0.4
T52A	Hallie	3.38	348	P	Pn	03 24 31.8	+0.5
	baz=167,SNR=228						
U50A	Jamestown	3.44	320	P	Pn	03 24 32.1	+0.1
	baz=138,SNR=53						
U50A				Sb	Sb	03 25 23.2	+1.9
	baz=138						
U57A	Blanch	3.49	40	P	Pn	03 24 32.2	-0.4
	baz=222,SNR=138						
T55A	Pulaski	3.49	18	P	Pn	03 24 32.7	-0.1
	baz=198,SNR=226						
T55A				Sb	Sb	03 25 25.4	+2.5
	baz=198						
T51A	Gray	3.50	335	P	Pn	03 24 33.4	+0.6
	baz=154,SNR=79						
T51A				Sb	Sb	03 25 24.4	+1.4
	baz=154						
X60A	Albert Glenn T	3.53	76	P	Pn	03 24 32.5	-0.6
	baz=259,SNR=21						
X60A				Sb	Sb	03 25 26.0	+2.3
	baz=259						
Y49A	Blount Mountai	3.57	272		Pn	03 24 34.5	+0.7
T56A	Rocky Mt	3.66	27	P	Pn	03 24 35.5	+0.5
	baz=208,SNR=152						
T56A				Sb	Sb	03 25 28.3	+0.8
	baz=208						
W49A	Belvidere	3.67	292	P	Pn	03 24 35.4	+0.3
	baz=110,SNR=187						
W49A				Sb	Sb	03 25 29.7	+1.8
	baz=110						
V49A	McMinnville	3.68	303	P	Pn	03 24 35.8	+0.4
	baz=121,SNR=127						
V49A				Sb	Sb	03 25 29.6	+1.4
	baz=121						
BLA	Blacksburg	3.69	22		Pn	03 24 35.7	+0.3
BLA	Blacksburg	3.69	22	P	Pn	03 24 36.0	+0.6
	baz=202,SNR=83						
BLA				Sb	Sb	03 25 29.7	+1.4
	baz=202						
V59A	Middlesex	3.75	57	P	Pn	03 24 35.6	-0.7
	baz=240,SNR=171						
CNNC	Cliffs of the	3.78	66	P	Pn	03 24 36.2	-0.5
	baz=249,SNR=28						
W60A	Pink Hill	3.86	70	P	Pn	03 24 37.1	-0.6
	baz=252,SNR=18						
S53A	Williamson	3.88	360	P	Pn	03 24 38.1	0.0
	baz=180,SNR=104						
T50A	Nancy	3.91	326	P	Pn	03 24 38.5	0.0
	baz=144,SNR=44						
T50A				Sb	Sb	03 25 37.7	+2.9
	baz=144						
U58A	Oxford	3.92	47	P	Pn	03 24 37.7	-0.8
	baz=229,SNR=52						
S52A	Salyersville	3.96	349	P	Pn	03 24 40.6	+1.4
	baz=168						
S52A				Sb	Sb	03 25 37.6	+1.5
	baz=168						
T57A	Hurt	3.97	35		Pn	03 24 39.1	0.0
T57A	Hurt	3.97	35	P	Pn	03 24 39.2	0.0
	baz=217,SNR=113						
S51A	Beattyville	4.02	343		Pn	03 24 39.8	-0.2
S51A	Beattyville	4.02	343	P	Pn	03 24 40.2	+0.2
	baz=162,SNR=83						
S51A				Sb	Sb	03 25 41.1	+3.1
	baz=162						
U49A	Red Boiling Sp	4.04	313	P	Pn	03 24 40.9	+0.6
	baz=131,SNR=32						
S54A	Dingess, Beckl	4.05	9		Pn	03 24 40.4	-0.1
S54A	Dingess, Beckl	4.05	9	P	Pn	03 24 40.4	-0.1
	baz=189,SNR=24						
S54A				Sb	Sb	03 25 41.1	+2.1
	baz=189						
553A	Crawfordville	4.09	209		Pn	03 24 41.9	+1.0
LRAL	Lakeview Retre	4.15	261		Pn	03 24 42.7	+1.0
LRAL	Lakeview Retre	4.15	261	P	Pn	03 24 42.8	+1.1
	baz=78						
CLTN	Cedars of Leba	4.15	305		Pn	03 24 41.9	+0.1
S55A	Lewisburg	4.19	18	P	Pn	03 24 42.6	+0.3
	baz=198,SNR=66						
S55A				S	Sn	03 25 30.8	-0.7
	baz=198						
S50A	Richmond	4.30	335	Pn	Pn	03 24 44.0	+0.2
	baz=153,SNR=98						
S50A				Pb	Pb	03 24 53.4	-0.5
	baz=153						
S50A				Sb	Sb	03 25 49.4	+3.4
	baz=153						
T58A	Grand View Acr	4.30	42	P	Pn	03 24 43.4	-0.5
	baz=224,SNR=75						
T49A	Edmonton	4.32	321	P	Pn	03 24 45.5	+1.4
	baz=138,SNR=5.8						
T49A				Sb	Sb	03 25 49.9	+3.3
	baz=138						
U59A	Littleton	4.38	53	P	Pn	03 24 44.0	-0.8
	baz=236,SNR=98						
S56A	Natural Bridge	4.40	27	P	Pn	03 24 45.3	+0.1
	baz=209,SNR=158						

S56A				Sn	Sn	03 25 36.8	+0.1
	baz=209						
S56A				Sb	Sb	03 25 50.7	+1.8
	baz=209						
451A	Vernon	4.41	225		Pn	03 24 46.3	+1.0
656A	Willston	4.42	185		Pn	03 24 45.9	+0.4
V60A	Jim Taylor Roa	4.46	62	P	Pn	03 24 45.3	-0.6
	baz=245,SNR=13						
V60A				Sb	Sb	03 25 54.5	+4.0
	baz=245						
W61A	Ground Anchor	4.46	70	P	Pn	03 24 45.7	-0.3
	baz=254,SNR=30						
R54A	Victor	4.48	12	P	Pn	03 24 45.8	-0.4
	baz=192,SNR=54						
R54A				Sb	Sb	03 25 52.7	+1.6
	baz=192						
R53A	Hurricane	4.53	2	P	Pn	03 24 46.7	-0.3
	baz=182,SNR=50						
R53A				S	Sn	03 25 40.1	+0.2
	baz=182						
R52A	Catlettsburg	4.56	355	P	Pn	03 24 48.4	+1.0
	baz=174,SNR=11						
R52A				Sb	Sb	03 25 55.4	+2.1
	baz=174						
R51A	Hillsboro	4.65	346	P	Pn	03 24 48.5	-0.2
	baz=164,SNR=92						
S57A	Dark Hollow, R	4.73	32	P	Pn	03 24 50.0	+0.3
	baz=214,SNR=56						
S57A				Sb	Sb	03 26 01.3	+3.1
	baz=214						
S49A	Springfield	4.74	328	Pn	Pn	03 24 51.1	+1.2
	baz=146,SNR=25						
S49A				Pb	Pb	03 25 01.6	+0.1
	baz=146						
S49A				Sb	Sb	03 26 02.9	+4.2
	baz=146						
R55A	Marlinton	4.77	19	Pn	Pn	03 24 50.3	0.0
	baz=200,SNR=158						
R55A				Pb	Pb	03 25 02.7	+0.7
	baz=200						
R55A				Sn	Sn	03 25 44.3	-1.5
	baz=200						
R55A				Sb	Sb	03 26 01.5	+2.0
	baz=200						
R50A	Paris	4.82	339	Pn	Pn	03 24 51.6	+0.6
	baz=157,SNR=9.8						
R50A				Pb	Pb	03 25 02.3	-0.5
	baz=157						
R50A				Sb	Sb	03 26 03.7	+2.7
	baz=157						
U60A	Pendleton	4.87	55	P	Pn	03 24 50.7	-0.9
	baz=238,SNR=39						
U60A				S	Sn	03 25 46.0	-2.1
	baz=238						
U60A				Sb	Sb	03 26 06.3	+4.0
	baz=238						
T59A	Double "B" Far	4.90	48		Pn	03 24 51.2	-0.8
T59A	Double "B" Far	4.90	48	P	Pn	03 24 51.2	-0.8
	baz=231,SNR=74						
BRAL	Brewton	4.92	239	P	Pn	03 24 54.3	+2.0
	baz=56						
BRAL				Sb	Sb	03 26 06.3	+2.6
	baz=56						
V61A	Roper	4.98	65	P	Pn	03 24 52.5	-0.6
	baz=248,SNR=64						
V61A				Sn	Sn	03 25 46.4	-4.5
	baz=248						
V61A				Sb	Sb	03 26 09.3	+3.7
	baz=248						
S58A	Poland Farm, P	5.05	40	P	Pn	03 24 53.0	-1.1
	baz=222,SNR=42						
Q53A	Leroy	5.08	5	P	Pn	03 24 54.4	-0.2
	baz=185,SNR=191						
Q53A				Sb	Sb	03 26 12.9	+4.4
	baz=185						
R56A	Bull Pasture M	5.11	25	P	Pn	03 24 54.6	-0.4
	baz=206,SNR=162						
R49A	Shelbyville	5.12	332	P	Pn	03 24 56.5	+1.4
	baz=150,SNR=11						
Q52A	Bidwell	5.16	359	P	Pn	03 24 55.2	-0.5
	baz=178,SNR=77						
Q52A				Sb	Sb	03 26 14.7	+3.9
	baz=178						
WVT	Waverly	5.23	298		Pn	03 24 56.1	-0.5
WVT	Waverly	5.23	298	P	Pn	03 24 56.6	-0.1
	baz=114						
WVT				Sb	Sb	03 26 13.6	+0.7
	baz=114						
Q50A	Georgetown	5.26	344	P	Pn	03 24 56.9	-0.1
	baz=163,SNR=103						
Q50A				S	Sn	03 25 56.6	-1.2
	baz=163						
Q54A	Coxs Mills	5.29	11	P	Pn	03 24 57.6	+0.3
	baz=192,SNR=15						
Q54A				S	Sn	03 25 58.1	-0.4
	baz=192						
Q54A				Sb	Sb	03 26 17.6	+3.2
	baz=192						
U61A	Possum Corner	5.30	60	P	Pn	03 24 57.3	-0.2
	baz=243,SNR=28						
U61A				Sb	Sb	03 26 18.9	+4.1
	baz=243						
Q51A	Peebles	5.32	350	P	Pn	03 24 58.0	+0.2
	baz=169,SNR=87						
R57A	Stanardsville	5.36	32	P	Pn	03 24 58.2	-0.1
	baz=214,SNR=90						
R57A				S	Sn	03 25 58.3	-1.9
	baz=214						
V62A	Hyde County Ai	5.38	69	P	Pn	03 24 58.6	-0.1
	baz=253						
R58B	Mineral	5.41	38	P	Pn	03 24 58.0	-1.0
	baz=221,SNR=54						
Q55A	Buckhannon	5.45	17	P	Pn	03 24 59.8	+0.2
	baz=198,SNR=33						
Q55A				Sn	Sn	03 26 00.7	-1.8
	baz=198						
Q55A				Sb	Sb	03 26 21.8	+2.7
	baz=198						
T60A	Surry	5.52	51	P	Pn	03 25 00.3	-0.3
	baz=234,SNR=18						
T60A				Sb	Sb	03 26 27.5	+6.4
	baz=234						
WCI	Wyandotte Cave	5.57	324		Pn	03 25 02.7	+1.5
WCI	Wyandotte Cave	5.57	324	P	Pn	03 25 03.4	+2.1
	baz=141						
WCI				Sb	Sb	03 26 28.9	+6.4
	baz=141						
S59A	Mechanicsville	5.58	43	P	Pn	03 25 00.4	-0.9
	baz=226,SNR=118						
R58A	Rapidan	5.60	35	P	Pn	03 25 01.1	-0.6
	baz=218,SNR=134						
R58A				S	Sn	03 26 03.8	-2.5
	baz=218						
Q49A	Aurora	5.66	338	P	Pn	03 25 03.2	+0.6
	baz=156,SNR=43						
Q49A				Sb	Sb	03 26 30.8	+5.6
	baz=156						
DWPF	Disney Wildern	5.69	174		Pn	03 25 02.5	-0.5
P53A	Whipple	5.72	6	P	Pn	03 25 03.0	-0.3
	baz=186,SNR=60						
P53A				S	Sn	03 26 06.6	-2.5
	baz=186						
P51A	Williamsport	5.73	353	P	Pn	03 25 03.9	+0.4
	baz=172,SNR=11						
P51A				Sb	Sb	03 26 30.6	+3.4
	baz=172						
P52A	Corning	5.83	360	P	Pn	03 25 04.3	-0.6
	baz=180,SNR=48						
CBN	Corbin Frederi	5.85	40	P	Pn	03 25 04.2	-0.9
	baz=222,SNR=25						
CBN				S	Sn	03 26 09.6	-2.7
	baz=222						
Q48A	North Vernon	5.90	331	P	Pn	03 25 07.0	+1.2
	baz=149						
Q48A				Sb	Sb	03 26 33.6	+1.7
	baz=149						
S60A	Water View	5.92	47	P	Pn	03 25 05.1	-0.9
	baz=230,SNR=29						
S60A				Sb	Sb	03 26 37.5	+4.9
	baz=230						
P54A	Burton	5.95	12	P	Pn	03 25 05.6	-0.9
	baz=193,SNR=33						
P54A				S	Sn	03 26 13.0	-1.8
	baz=193						
P50A	Jamestown	5.96	347	P	Pn	03 25 07.2	+0.5
	baz=166,SNR=42						
R59A	King George, V	5.99	41	P	Pn	03 25 06.3	-0.6
	baz=224,SNR=39						

R59A				S	Sn	03 26 12.8	-2.9
	baz=224						
P55A	Reedsville	6.00	17	P	Pn	03 25 08.2	+1.0
	baz=198,SNR=19						
Q57A	Strasburg	6.03	29	P	Pn	03 25 07.5	-0.1
	baz=211,SNR=133						
Q57A				Sn	Sn	03 26 15.7	-1.1
	baz=211						
Q57A				Sb	Sb	03 26 38.2	+2.5
	baz=211						
OXF	Oxford	6.08	279	P	Pn	03 25 07.8	-0.5
	baz=94						
OXF				S	Sn	03 26 19.0	+0.9
	baz=94						
P49A	Miami Univ. Ec	6.10	341	P	Pn	03 25 08.4	-0.1
	baz=159,SNR=26						
MCWV	Mont Chateau	6.13	17	P	Pn	03 25 09.2	+0.2
	baz=198						
P48A	Milroy	6.25	336	P	Pn	03 25 11.0	+0.4
	baz=154,SNR=7.6						
P48A				Sb	Sb	03 26 46.7	+4.7
	baz=154						
Q58A	Fox Den Farm,	6.26	34	P	Pn	03 25 10.2	-0.7
	baz=216,SNR=106						
Q58A				Sb	Sb	03 26 48.4	+5.9
	baz=216						
P56A	Dayton Farm, R	6.28	24	P	Pn	03 25 10.7	-0.3
	baz=206,SNR=25						
P56A				Sb	Sb	03 26 46.9	+3.9
	baz=206						
O52A	Adamsville	6.32	2	P	Pn	03 25 11.5	0.0
	baz=182						
R60A	Leonardtown, M	6.33	44	P	Pn	03 25 11.1	-0.6
	baz=227,SNR=9.1						
O51A	Pataskala	6.36	357	P	Pn	03 25 12.7	+0.6
	baz=176,SNR=8.2						
O50A	Cable	6.46	350	P	Pn	03 25 14.2	+0.8
	baz=169,SNR=22						
ACSO	Alum Creek Sta	6.47	354	Sb	Sb	03 26 53.4	+5.1
	baz=173						
O53A	New Philadelph	6.49	6	P	Pn	03 25 13.7	-0.1
	baz=186,SNR=38						
O53A				Sn	Sn	03 26 25.7	-2.3
	baz=186						
O53A				Sb	Sb	03 26 55.8	+6.9
	baz=186						
S61A	Accomac	6.53	52	P	Pn	03 25 14.2	-0.2
	baz=235,SNR=31						
S61A				Sn	Sn	03 26 26.0	-2.9
	baz=235						
S61A				Sb	Sb	03 26 55.2	+5.3
	baz=235						
O54A	Avella	6.53	12	P	Pn	03 25 15.1	+0.6
	baz=193,SNR=32						
P57A	Homestead Farm	6.57	29		Pn	03 25 15.2	+0.2
P57A	Homestead Farm	6.57	29	P	Pn	03 25 15.8	+0.8
	baz=211,SNR=5.8						
O49A	Covington	6.63	345	P	Pn	03 25 16.0	+0.2
	baz=164,SNR=16						
Q59A	Harwood	6.72	40	P	Pn	03 25 16.4	-0.6
	baz=223,SNR=18						
Q59A				Sb	Sb	03 27 03.4	+7.9
	baz=223						
O55A	Ligonier	6.79	19	P	Pn	03 25 17.8	-0.3
	baz=200,SNR=32						
O55A				Sb	Sb	03 27 02.4	+4.8
	baz=200						
P58A	Pank, Wackersv	6.88	33	Pn	Pn	03 25 18.6	-0.7
	baz=216,SNR=50						
P58A				Pb	Pb	03 25 40.1	+2.2
	baz=216						
P58A				Sb	Sb	03 27 05.4	+5.2
	baz=216						
O48A	Farmland	6.89	340	P	Pn	03 25 18.9	-0.6
	baz=158,SNR=18						
N50A	Nevada	7.02	354	P	Pn	03 25 21.4	+0.2
	baz=173,SNR=5.9						
N52A	McGinn's Farm,	7.02	3	P	Pn	03 25 21.5	+0.4
	baz=183						
N52A				Sb	Sb	03 27 10.6	+6.4
	baz=183						
O56A	Blue Knob Stat	7.06	23	P	Pn	03 25 21.5	-0.3
	baz=205,SNR=32						
O56A				Sb	Sb	03 27 10.2	+4.7
	baz=205						
N53A	Lisbon	7.08	8	P	Pn	03 25 22.8	+0.8
	baz=188,SNR=6.6						
N51A	Ashland	7.12	358		Pn	03 25 22.6	0.0
N51A	Ashland	7.12	358	P	Pn	03 25 23.0	+0.5
	baz=178						
N51A				Sb	Sb	03 27 15.5	+8.5
	baz=178						
R61A	Willards	7.12	49	P	Pn	03 25 23.6	+1.1
	baz=232,SNR=11						
R61A				S	Sn	03 26 40.0	-3.6
	baz=232						
VBMS	Vicksburg	7.22	260	P	Pn	03 25 24.7	+0.7
	baz=75						
Q60A	Greensboro	7.26	42	P	Pn	03 25 23.6	-0.8
	baz=226,SNR=8.2						
N49A	Columbus Grove	7.30	348	P	Pn	03 25 24.8	-0.3
	baz=166,SNR=8.7						
O57A	Amberson	7.34	28	P	Pn	03 25 25.6	0.0
	baz=210,SNR=44						
O57A				Sb	Sb	03 27 20.4	+6.9
	baz=210						
N54A	Moraine State	7.36	13	P	Pn	03 25 25.9	+0.1
	baz=194,SNR=23						
N54A				Sb	Sb	03 27 18.9	+5.0
	baz=194						
P59A	Jarrettsville	7.39	37	P	Pn	03 25 26.1	-0.1
	baz=220,SNR=7.5						
N55A	Marion Center	7.41	19	P	Pn	03 25 26.9	+0.3
	baz=200,SNR=18						
N55A				Sb	Sb	03 27 22.2	+6.7
	baz=200						
N48A	Decatur	7.42	343	P	Pn	03 25 26.2	-0.5
	baz=161						
Q61A	Milford	7.47	45	P	Pn	03 25 27.6	+0.2
	baz=229						
Q61A				S	Sn	03 26 50.0	-2.3
	baz=229						
M51A	Elyria	7.53	360	P	Pn	03 25 27.8	-0.4
	baz=179,SNR=10						
O58A	Lewisberry	7.57	32	P	Pn	03 25 28.7	0.0
	baz=215,SNR=47						
O58A				Sb	Sb	03 27 27.0	+7.0
	baz=215						
SSPA	Standing Stone	7.62	25	Pn	Pn	03 25 30.4	+0.9
SSPA	Standing Stone	7.62	25	Sb	Sb	03 27 24.7	+3.2
	baz=207						
N47A	Urbana	7.63	339	P	Pn	03 25 29.8	+0.3
	baz=157						
SFIN	Lafayette	7.68	330	P	Pn	03 25 31.0	+0.8
	baz=147,SNR=14						
SFIN				Sb	Sb	03 27 33.2	+10
	baz=147						
M53A	WI Miller and	7.72	8	P	Pn	03 25 31.0	+0.2
	baz=189,SNR=38						
M53A				Sn	Sn	03 26 57.2	-1.2
	baz=189						
M53A				Sb	Sb	03 27 31.8	+7.4
	baz=189						
N56A	West Decatur	7.74	22	P	Pn	03 25 31.7	+0.7
	baz=204						
N56A				Pb	Pb	03 25 54.8	+2.3
	baz=204						
N56A				Sb	Sb	03 27 30.2	+5.3
	baz=204						
M52A	Chesterland	7.76	4	P	Pn	03 25 31.3	-0.1
	baz=184,SNR=16						
N57A	Milroy	7.85	26	Pn	Pn	03 25 32.2	-0.3
	baz=209,SNR=15						
N57A				Pb	Pb	03 25 56.1	+1.8
	baz=209						
M54A	Oil Creek Stat	7.95	13	P	Pn	03 25 33.7	-0.2
	baz=195,SNR=137						
M54A				S	Sn	03 27 02.9	-1.1
	baz=195						
P60A	Greenville	7.95	39	P	Pn	03 25 33.4	-0.5
	baz=223,SNR=9.8						
ALLY	Alegheny Colle	8.00	11		Pn	03 25 34.4	-0.3
O59A	Robesonia	8.05	34	P	Pn	03 25 34.7	-0.7
	baz=218,SNR=42						
O59A				Sb	Sb	03 27 42.2	+8.3
	baz=218						
M55A	Ridgway	8.11	18	Pn	Pn	03 25 36.9	+0.7
	baz=200,SNR=23						

M55A Pb Pb 03 26 00.6 +1.7
baz=200
M55A Sb Sb 03 27 43.0 +7.3
baz=200
N58A Sunbury 8.25 30 P Pn 03 25 39.0 +0.9
baz=213,SNR=28
N58A Sb Sb 03 27 48.1 +8.6
baz=213
L50A Kingsville 8.26 356 P Pn 03 25 38.6 +0.5
baz=176,SNR=8.5
L50A S Sn 03 27 09.4 -2.1
baz=176
L53A Girard 8.28 10 P Pn 03 25 38.1 -0.4
baz=191,SNR=46
M56A Emporium 8.29 21 P Pn 03 25 37.7 -0.9
baz=203,SNR=15
M56A Sb Sb 03 27 48.0 +7.3
baz=203
P61A Hammonton 8.31 43 Pn 03 25 38.6 -0.2
L48A N Adams 8.34 348 P Pn 03 25 38.4 -0.9
baz=166,SNR=19
O60A Telford 8.44 38 P Pn 03 25 41.4 +0.7
baz=221,SNR=8.2
O60A Sb Sg 03 28 00.3 -8.7
baz=221
W41B Gary Mavity, V 8.47 282 P Pn 03 25 39.4 -1.7
baz=96,SNR=32
W41B S Sn 03 27 16.4 -0.5
baz=96
ERPA Erie 8.48 11 P Pn 03 25 42.2 +1.0
baz=192,SNR=8.6
M57A Sunshine Farm, 8.51 26 P Pn 03 25 42.9 +1.3
baz=209,SNR=6.2
L47A Sherwood 8.53 344 P Pn 03 25 40.6 -1.2
baz=162,SNR=6.9
CCM Cathedral Cave 8.53 303 Pn 03 25 42.0 +0.1
CCM Cathedral Cave 8.53 303 P Pn 03 25 41.8 -0.1
baz=117
AAM Ann Arbor 8.58 352 P Pn 03 25 44.0 +1.4
baz=171
L54A Sinclairville 8.71 14 P Pn 03 25 44.2 -0.3
baz=195,SNR=65
L54A S Sn 03 27 21.3 -1.6
baz=195
N59A State Game Lan 8.72 34 P Pn 03 25 45.0 +0.4
baz=217,SNR=15
O61A Allentown 8.73 42 P Pn 03 25 43.5 -1.1
baz=226
M58A Price's Panora 8.80 29 P Pn 03 25 46.6 +1.0
baz=212,SNR=13
L46A Eue Claire 8.84 339 P Pn 03 25 45.5 -0.7
baz=157
HDIL Hopedale 8.85 322 P Pn 03 25 46.3 +0.1
baz=137
HDIL S Sn 03 27 23.9 -2.3
baz=137
L55A Hinsdale 8.87 18 P Pn 03 25 47.3 +0.7
baz=200,SNR=54
X40A Basin Creek Fa 8.91 277 P Pn 03 25 46.1 -1.0
baz=91,SNR=46
MGMO Mountain Grove 8.93 295 Pn 03 25 47.9 +0.4
Z41A Richland Creek 8.93 270 P Pn 03 25 47.0 -0.4
baz=84,SNR=6.8
K50A Casco 8.98 358 P Pn 03 25 49.0 +0.9
baz=177,SNR=5.4
K50A S Sn 03 27 28.7 -0.6
baz=177
N60A Cedar Hill Far 9.01 36 P Pn 03 25 47.6 -0.9
baz=220,SNR=7.8
N60A S Sn 03 27 26.7 -3.4
baz=220
K49A Clarkson 9.04 354 P Pn 03 25 49.6 +0.8
baz=173,SNR=7.1
K52A Tillsonburg 9.04 7 P Pn 03 25 48.5 -0.5
baz=187,SNR=8.6
L56A Greenwood 9.08 22 P Pn 03 25 49.6 +0.2
baz=205,SNR=12
K47A Vermontville 9.15 347 P Pn 03 25 49.0 -1.4
baz=165
U40A Yellville 9.16 289 P Pn 03 25 52.3 +1.8
baz=103
L57A Andrews Acres 9.19 25 P Pn 03 25 51.8 +0.8
baz=208
K54A Basiliko Farm, 9.21 16 P Pn 03 25 52.5 +1.3
baz=198,SNR=9.3
N61A South Mountain 9.33 40 P Pn 03 25 53.7 +0.8
baz=224
K46A Dorr 9.34 343 P Pn 03 25 51.4 -1.6
baz=161
M59A Waymart 9.38 32 P Pn 03 25 54.4 +0.9
baz=216,SNR=8.3
K55A Perry 9.47 18 P Pn 03 25 55.0 +0.1
baz=201,SNR=25
MIAR Mount Ida 9.52 278 P Pn 03 25 53.9 -1.6
baz=91,SNR=11
J52A Paris 9.52 7 P Pn 03 25 54.6 -0.9
baz=188,SNR=12
CPNY Central Park 9.54 41 Pn 03 25 55.0 -0.8
J48A Bridge Port 9.58 353 P Pn 03 25 55.9 -0.4
baz=172,SNR=11
J49A Marlette 9.59 356 P Pn 03 25 56.6 +0.2
baz=175,SNR=18
M60A Port Jervis 9.59 36 P Pn 03 25 56.7 +0.3
baz=221,SNR=19
K56A Middlesex 9.66 22 P Pn 03 25 56.9 -0.5
baz=204,SNR=28
BINY Binghamton 9.69 28 P Pn 03 25 57.8 0.0
baz=212,SNR=23
PAL Palisades 9.72 40 Pn 03 25 57.1 -1.1
PAL Palisades 9.72 40 P Pn 03 25 56.7 -1.5
baz=225,SNR=30
W39A Magazine 9.73 282 P Pn 03 25 56.7 -1.6
baz=95,SNR=13
K57A Scipio Center 9.95 25 P Pn 03 26 00.7 -0.7
baz=208,SNR=22
M61A Granite Spring 10.01 39 P Pn 03 26 01.8 -0.4
baz=224,SNR=13
I51A Listowel 10.04 5 P Pn 03 26 00.6 -1.9
baz=185,SNR=24
L59A Walton 10.07 32 P Pn 03 26 02.9 -0.2
baz=216,SNR=15
I49A Point Hope 10.15 357 P Pn 03 26 03.2 -0.9
baz=176
L60A Shokan 10.29 35 P Pn 03 26 06.7 +0.7
baz=220,SNR=12
K58A Earlville 10.30 28 P Pn 03 26 06.4 +0.2
baz=212,SNR=9.5
J56A Wolcott 10.33 22 P Pn 03 26 07.2 +0.7
baz=205,SNR=12
I47A Gladwin 10.38 350 P Pn 03 26 06.8 -0.4
baz=169
I48A Sherman Twp 10.45 354 P Pn 03 26 07.5 -0.7
baz=173
KSCT Kent School, K 10.46 38 Pn 03 26 08.1 -0.2
K59A Cooperstown 10.63 30 P Pn 03 26 09.9 -0.8
baz=215,SNR=42
I45A Fountain 10.72 344 P Pn 03 26 10.0 -1.8
baz=161,SNR=6.5
J57A Williamstown 10.73 25 P Pn 03 26 11.1 -0.9
baz=208
L61A Hillsdale 1, H 10.77 36 P Pn 03 26 13.3 +0.7
baz=222
H47A Mio 10.91 352 P Pn 03 26 14.4 -0.1
baz=171
K60A Five Rivers En 10.93 34 P Pn 03 26 15.2 +0.4
baz=219
H48A Harrisville 10.94 355 P Pn 03 26 13.4 -1.4
baz=175
J58A Remsen 10.95 27 Pn 03 26 14.2 -0.8
J58A Remsen 10.95 27 P Pn 03 26 14.2 -0.8
baz=211
I55A Frankford 10.97 17 P Pn 03 26 14.0 -1.3
baz=200,SNR=28
H52A Wyevale 10.97 8 P Pn 03 26 13.6 -1.8
baz=190
H46A Fife Lake 11.00 348 P Pn 03 26 14.6 -1.1
baz=166
H53A Bobcaygeon 11.11 13 P Pn 03 26 15.2 -2.0
baz=195
JFWS Jewell Farm 11.11 327 P Pn 03 26 15.6 -1.7
baz=142,SNR=11
GLMI Grayling 11.19 351 Pn 03 26 17.5 -0.8
SADO Sadowa 11.20 11 Pn Pn 03 26 15.7 -2.8
2.6nm,0.3s,baz=243,slow=8.8,SNR=18
SADO Sn Sn 03 28 17.7 -6.2
6.1nm,0.3s,baz=266,slow=15,SNR=5.2
SADO Lg Lg 03 29 19.4
4.7nm,0.3s,baz=92,slow=21,SNR=5.8

H45A Beulah 11.23 345 P Pn 03 26 16.9 -2.0
baz=163
K61A Williamstown 11.27 36 P Pn 03 26 19.6 +0.2
baz=221
I57A Carthage 11.31 24 P Pn 03 26 21.5 +1.5
baz=208
J59A Piesco 11.34 29 P Pn 03 26 19.6 -0.8
baz=214,SNR=8.0
L61B Northampton 11.40 38 P Pn 03 26 20.6 -0.6
baz=224
H55A Tweed 11.40 18 P Pn 03 26 19.6 -1.6
baz=201,SNR=17
TUL1 Leonard 11.43 285 Pn 03 26 21.2 -0.4
TUL1 Leonard 11.43 285 P Pn 03 26 20.9 -0.7
baz=97
G47A Hillman 11.45 354 P Pn 03 26 20.3 -1.5
baz=173
G45A Suttons Bay 11.56 347 P Pn 03 26 21.8 -1.6
baz=165
G53A Haliburton 11.63 12 P Pn 03 26 22.6 -1.8
baz=194
J60A Lant Hill Farm 11.63 33 P Pn 03 26 24.1 -0.3
baz=218,SNR=16
G46A Petoskey 11.70 350 P Pn 03 26 24.0 -1.3
baz=169
H56A Elgin 11.70 21 P Pn 03 26 24.4 -0.9
baz=205
K62A Royalston 11.78 38 P Pn 03 26 25.1 -1.3
baz=224
H57A Richville 11.86 24 P Pn 03 26 27.5 0.0
baz=208,SNR=6.4
I59A Olmsteadville 11.88 30 P Pn 03 26 27.3 -0.4
baz=215
F49A Sandfield 11.96 0 P Pn 03 26 25.4 -3.4
baz=180
G54A Lake Saint Pet 12.00 14 P Pn 03 26 27.0 -2.4
baz=196
F48A Evansville 12.03 358 P Pn 03 26 26.3 -3.5
baz=178
J61A Chester 12.12 35 P Pn 03 26 30.4 -0.6
baz=221
F45A CMU Biological 12.16 349 P Pn 03 26 29.8 -1.8
baz=166
I60A Shoreham 12.16 32 P Pn 03 26 31.2 -0.4
baz=217
F52A Sundridge 12.18 9 P Pn 03 26 30.7 -1.2
baz=191
G55A Calabogie 12.18 18 P Pn 03 26 30.3 -1.6
baz=202
F51A Arnstein 12.24 7 P Pn 03 26 30.4 -2.2
baz=189
H58A Gabriels 12.27 28 P Pn 03 26 31.8 -1.3
baz=213,SNR=7.8
LONY Lake Ozonia 12.29 26 P Pn 03 26 33.4 +0.1
baz=211,SNR=5.9
J62A Henniker 12.40 38 P Pn 03 26 34.7 -0.2
baz=224
ALGO Algonquin Park 12.54 13 P Pn 03 26 34.6 -2.2
baz=196
G57A Newington 12.56 24 P Pn 03 26 36.5 -0.6
baz=208
H59A Cadyville 12.65 29 P Pn 03 26 37.9 -0.4
baz=214
E46A Sault Ste Mari 12.67 353 Pn 03 26 36.7 -1.9
E48A Lockeyer 12.68 360 P Pn 03 26 35.0 -3.6
baz=180
E47A Iron Bridge 12.68 356 P Pn 03 26 36.1 -2.6
baz=176
E52A Mattawa 12.76 11 P Pn 03 26 37.0 -2.7
baz=193
KSU1 Kansas State U 12.81 299 P Pn 03 26 38.8 -1.7
baz=110
F55A Otter Lake 12.81 18 P Pn 03 26 40.2 -0.3
baz=202
J63A Strafford 12.81 39 P Pn 03 26 39.5 -1.1
baz=226,SNR=8.1
E51A G1948 Merrick 12.88 8 P Pn 03 26 38.4 -3.1
baz=190
G58A Ormstown 12.93 26 P Pn 03 26 42.0 -0.1
baz=211
H60A Morristown 12.99 31 P Pn 03 26 42.9 -0.1
baz=217,SNR=5.9
WHTX Lake Whitney, 13.01 266 P Pn 03 26 40.4 -2.9
baz=78
E53A Dumoine, Ponti 13.03 14 P Pn 03 26 41.2 -2.1
baz=197
D46A Sault St. Mari 13.17 354 P Pn 03 26 43.3 -2.1
baz=173
E54A Lac Daplat, Po 13.18 15 P Pn 03 26 43.0 -2.5
baz=198
D47A Chapleau 13.27 357 P Pn 03 26 43.1 -3.6
baz=176
H61A Lyndonville 13.32 33 P Pn 03 26 47.6 +0.2
baz=220
D48A Paudash Townsh 13.37 1 P Pn 03 26 43.2 -4.9
baz=181
D51A Lot 18 Range I 13.45 8 P Pn 03 26 45.8 -3.4
baz=190
E55A Montcerf-Lytto 13.47 18 P Pn 03 26 47.6 -1.8
baz=202
D52A ZEK Kipawa Sen 13.47 11 P Pn 03 26 46.6 -2.8
baz=193
D50A G1974 Best Tow 13.47 7 P Pn 03 26 45.5 -4.0
baz=188
D53A Lac Vacive, Po 13.69 13 Pn 03 26 50.6 -1.9
D53A Lac Vacive, Po 13.69 13 P Pn 03 26 50.0 -2.5
baz=196
WMOK Wichita Mounta 13.81 279 P Pn 03 26 52.0 -2.2
baz=89
E56A St. Veronique 13.83 21 P Pn 03 26 51.9 -2.6
baz=205
D54A Lac Fusel, La 13.97 16 P Pn 03 26 52.6 -3.8
baz=199
E57A Chemin Saint G 13.99 23 P Pn 03 26 55.2 -1.5
baz=208
D55A Sainte-Anne-du 14.14 19 P Pn 03 26 56.2 -2.4
baz=203
D56A ZEC Mazanza, M 14.37 21 P Pn 03 26 58.8 -3.1
baz=205
TEIG Tepich 14.57 204 Pn 03 27 04.7 0.0
D57A Chemin Vers le 14.61 23 P Pn 03 27 03.5 -1.6
baz=208
ABTX Abilene, Hawle 14.72 270 P Pn 03 27 05.4 -1.2
baz=81
D58A Chemin du LacG 15.02 25 P Pn 03 27 09.4 -1.2
baz=211
ECSD EROS Data Cent 15.02 316 IAmb IAmb 03 27 25.5
comp=Z,12nm,0.7s
ECSD EROS Data Cent 15.02 316 P Pn 03 27 07.9 -2.8
baz=126
CBKS Cedar Bluff 15.06 294 P Pn 03 27 10.1 -1.0
baz=104
JCT Junction City 15.34 262 IAmb IAmb 03 27 14.2
comp=Z,29nm,1.1s
LSQQ Lebel-sur-Quev 15.73 13 P Pn 03 27 17.3 -2.6
baz=196
833A Chaparral WMA, 15.77 254 Pn 03 27 18.3 -2.2
833A IAmb IAmb 03 27 20.0
comp=Z,29nm,1.1s
833A Chaparral WMA, 15.77 254 P Pn 03 27 17.9 -2.6
baz=65
EYMN Ely 15.80 336 IAmb IAmb 03 27 25.7
comp=Z,15nm,0.6s
EYMN Ely 15.80 336 P Pn 03 27 16.9 -3.9
baz=150
AMTX Amarillo 16.20 279 P Pn 03 27 23.7 -2.4
baz=88
MSTX Muleshoe 17.15 276 P Pn 03 27 35.2 -3.0
baz=85
KSCO Kaye Shedlock' 17.30 293 IAmb IAmb 03 27 45.1
comp=Z,45nm,1.1s
OGNE Ogallala 17.34 300 IAmb IAmb 03 27 51.5
comp=Z,18nm,0.7s
AGMN Agassiz Nation 17.77 329 IAmb IAmb 03 27 49.1
comp=Z,35nm,0.9s
AGMN Agassiz Nation 17.77 329 P P 03 27 47.2 +0.7
baz=140
TX31 Lajitas Ar. Si 18.88 262 P Pn 03 27 59.8 +0.2
TX31 IAmb IAmb 03 28 02.5
comp=Z,15nm,0.8s
TX32 Lajitas Array 18.88 262 P P 03 27 59.2 +0.2
TX32 IAmb IAmb 03 28 02.5
comp=Z,16nm,0.8s
TXAR Lajitas Array 18.88 262 P Pn 03 28 00.1 +0.5
comp=Z,0.9nm,0.3s,baz=80,slow=10,SNR=96
TXAR Lg Lg 03 33 27.8
comp=Z,0.2nm,0.3s,baz=70,slow=21,SNR=2.7
TXAR LR LR 03 35 38.7

comp=Z,100nm,20.3s,baz=0.0,slow=38
MDND Maddock 19.23 322 P Pn 03 28 03.0 -0.5
ULM Lac du Bonnet 19.31 333 P Pn 03 28 04.2 -0.2
comp=Z,1.3nm,0.3s,baz=145,slow=12,SNR=27
ULM S Sn 03 31 40.2 -0.7
comp=Z,0.3nm,0.3s,baz=246,slow=12,SNR=2.7
ULM Lg Lg 03 33 35.0
comp=Z,0.8nm,0.3s,baz=57,slow=19,SNR=4.1
ULM Lac du Bonnet 19.31 333 P Pn 03 28 04.0 -0.5
ULM IAmb IAmb 03 28 06.5
comp=Z,13nm,0.7s
SDCO Great Sand Dun 19.36 288 P Pn 03 28 06.1 +0.6
SDCO Great Sand Dun 19.36 288 P Pn 03 28 07.7 +2.2
baz=95
MNTX Cornudas Mount 19.67 270 P Pn 03 28 08.4 -0.5
MNTX IAmb IAmb 03 28 13.3
comp=Z,19nm,0.9s
MNTX Cornudas Mount 19.67 270 P Pn 03 28 08.7 -0.2
baz=78
ISCO Idaho Springs 19.72 294 P Pn 03 28 09.8 0.0
baz=100
RSSD Black Hills 19.86 308 P Pn 03 28 13.0 +1.6
baz=114
PHWY Pilot Hill 19.93 299 P P 03 28 11.1 +0.5
ANMO Albuquerque 20.11 280 P Pn 03 28 14.9 +0.5
comp=Z,6.3nm,0.9s,baz=88,slow=11,SNR=17
ANMO Lg Lg 03 34 12.2
comp=Z,8.3nm,0.8s,baz=4.4,slow=7.5,SNR=4.8
ANMO LR LR 03 36 24.7
comp=Z,169nm,19.8s,baz=80,slow=38
ANMO Albuquerque 20.11 280 P Pn 03 28 14.5 +0.1
ANMO Albuquerque 20.11 280 P Pn 03 28 15.7 +1.3
baz=86
APG El Apazote 20.17 204 P P 03 28 09.9 -3.4
comp=Z,3.0nm,0.4s,baz=338,slow=18,SNR=4.5
APG S S 03 31 49.9 -10
comp=Z,12nm,0.9s,baz=346,slow=20,SNR=3.8
APG LR LR 03 35 38.7
comp=Z,68nm,21.1s,baz=50,slow=36
N23A Red Feather La 20.19 297 P P 03 28 14.1 +0.6
N23A IAmb IAmb 03 29 09.4
comp=Z,32nm,1.6s
CMIG Matias Romero 20.20 218 P Pn 03 28 14.8 -0.4
comp=Z,20nm,0.8s,baz=23,slow=8.3,SNR=14
CMIG S S 03 31 51.6 -8.7
comp=Z,4.5nm,0.8s,baz=284,slow=18,SNR=5.7
CMIG LR LR 03 37 07.6
comp=Z,67nm,18.4s,baz=350,slow=40
S22A 4UR Ranch, Cre 20.41 288 P Pn 03 28 17.4 -0.6
S22A IAmb IAmb 03 28 22.9
comp=Z,18nm,0.9s
S22A 4UR Ranch, Cre 20.41 288 P Pn 03 28 19.0 +1.0
baz=94
OBIP Obispado Ponce 20.95 135 P P 03 28 22.4 +0.9
ZAIG Zacatecas 21.05 244 P P 03 28 25.0 +2.1
SJG San Juan 21.17 134 P P 03 28 26.2 +2.4
comp=Z,9.3nm,0.5s,baz=239,slow=1.9,SNR=5.4
SJG S S 03 32 13.9 -5.6
comp=Z,10nm,0.5s,baz=281,slow=23,SNR=7.2
SJG San Juan 21.17 134 IAmb IAmb 03 28 29.1
comp=Z,62nm,1.5s
PDPR Patillas Dam, 21.32 133 P P 03 28 25.6 +0.1
PDPR IAmb IAmb 03 28 30.6
comp=Z,18nm,0.8s
HPIG 21.41 258 P P 03 28 27.5 +0.9
121A Cookes Peak, D 21.51 274 P P 03 28 28.5 +0.8
MVCO Mesa Verde 21.72 287 P P 03 28 31.3 +1.3
MVCO Mesa Verde 21.72 287 P P 03 28 31.8 +1.9
baz=91
DGMT Dagmar 22.06 318 P P 03 28 34.1 +0.9
W18A Petrified Fore 22.78 281 P P 03 28 42.2 +0.9
319A Douglas 22.99 271 IAmb IAmb 03 28 53.4
comp=Z,19nm,0.9s
PDAR Pinedale Array 23.25 301 P P 03 28 46.9 +0.8
comp=Z,2.3nm,0.6s,baz=102,slow=10,SNR=21
PDAR Lg Lg 03 35 50.2
comp=Z,6.6nm,0.9s,baz=81,slow=34,SNR=4.9
PDAR LR LR 03 38 25.8
comp=Z,140nm,18.5s,baz=128,slow=38
JTS Las Juntas de 23.53 187 LR LR 03 36 52.0
comp=Z,74nm,18.3s,baz=65,slow=34
P17A Butcher Ranch, 23.60 292 P P 03 28 51.1 +1.5
SCHQ Schefferville 23.61 22 P P 03 28 50.1 +0.8
comp=Z,2.7nm,0.6s,baz=216,slow=7.7,SNR=16
SCHQ Schefferville 23.61 22 IAmb IAmb 03 28 56.9
comp=Z,48nm,1.8s
RLMT Red Lodge 23.71 307 IAmb IAmb 03 29 14.2
comp=Z,32nm,1.8s
TUC Tucson 24.04 274 P P 03 28 55.5 +1.7
TUC Tucson 24.04 274 P P 03 28 56.5 +2.8
baz=78
WUAZ Wupatki 24.09 282 IAmb IAmb 03 29 01.6
comp=Z,9.1nm,1.0s
JLU Jordanelle 24.26 295 P P 03 28 57.0 +1.1
FLWY Flagg Ranch 24.38 303 IAmb IAmb 03 29 31.4
comp=Z,25nm,1.6s
HWUT Hardware Ranch 24.48 297 IAmb IAmb 03 29 09.5
comp=Z,12nm,0.9s
YHH Holmes Hill 24.67 305 P P 03 29 00.6 +0.9
U15A North Rim 24.77 285 IAmb IAmb 03 29 12.7
comp=Z,5.3nm,0.8s
FFC Flin Flon 25.14 332 P P 03 29 04.0 +0.6
FFC IAmb IAmb 03 29 05.7
comp=Z,5.0nm,0.7s
DUG Dugway, Tooele 25.25 294 IAmb IAmb 03 29 08.6
comp=Z,5.5nm,0.8s
DUG Dugway, Tooele 25.25 294 P P 03 29 07.0 +2.2
baz=95
DLMT Dillon 26.02 305 IAmb IAmb 03 29 15.2
comp=Z,8.1nm,1.3s
FCC Fort Churchill 26.23 346 P P 03 29 13.8 +0.6
FCC IAmb IAmb 03 29 17.9
comp=Z,13nm,1.0s
LPIG La Paz 26.41 256 LR LR 03 40 46.2
comp=Z,76nm,18.5s,baz=35,slow=39
SDV Santo Domingo 26.95 154 P P 03 29 21.9 +1.6
comp=Z,3.9nm,0.6s,baz=47,slow=6.3,SNR=6.4
SDV Santo Domingo 26.95 154 P P 03 29 20.3 -0.1
SDV IAmb IAmb 03 29 23.7
comp=Z,19nm,1.4s
ELK Elko 27.14 295 P P 03 29 22.6 +0.6
comp=Z,1.2nm,0.6s,baz=63,slow=7.2,SNR=7.8
ELK LR LR 03 40 52.7
comp=Z,196nm,18.6s,baz=88,slow=38
MFID Camas Ranch 27.88 300 IAmb IAmb 03 29 31.4
comp=Z,7.0nm,0.9s
PFO Pinyon Flats O 28.49 279 LR LR 03 41 25.6
comp=Z,127nm,18.4s,baz=78,slow=38
KVN Kaiserville 29.29 291 IAmb IAmb 03 29 44.1
comp=Z,18nm,1.6s
NVAR Mina Array Bea 29.47 290 P P 03 29 43.4 +0.6
comp=Z,2.1nm,0.7s,baz=91,slow=7.6,SNR=17
NVAR LR LR 03 40 58.3
comp=Z,96nm,20.1s,baz=290,slow=36
NEW Newport 29.81 310 P P 03 29 46.4 +1.0
comp=Z,1.7nm,0.6s,baz=123,slow=8.7,SNR=3.6
NEW Newport 29.81 310 IAmb IAmb 03 30 41.3
comp=Z,12nm,1.6s
FLOC Florencia 32.61 168 P P 03 30 11.7 +1.4
OTAV Otavalo 33.55 173 P P 03 30 20.4 +1.3
YKA Yellowknife Ar 35.27 334 P P 03 30 33.1 +0.2
comp=Z,1.1nm,0.8s,baz=129,slow=8.8,SNR=20
YKA PcP PcP 03 33 04.0 +0.6
comp=Z,0.5nm,0.7s,baz=130,slow=2.8,SNR=6.3
RES Resolute Bay 41.45 355 IAmb IAmb 03 31 27.9
comp=Z,12nm,1.1s
TULEG Thule 43.28 5 P P 03 31 41.5 +1.8
TULEG IAmb IAmb 03 31 43.8
comp=Z,7.4nm,0.9s
DAWY Dawson 45.96 329 IAmb IAmb 03 32 04.2
comp=Z,13nm,1.1s
EGAK Eagle 46.86 330 IAmb IAmb 03 32 11.4
comp=Z,9.9nm,1.1s
PRP Porcupine Dome 48.81 330 P P 03 32 23.9 +0.4
ILAR Eielson Array 49.28 329 P P 03 32 28.4 +1.4
comp=Z,7.9nm,0.8s,baz=98,slow=5.8,SNR=72
ILAR LR LR 03 53 38.8
comp=Z,96nm,19.1s,baz=102,slow=37
CCB Clear Creek Bu 49.66 329 IAmb IAmb 03 32 33.2
comp=Z,8.7nm,0.8s
WRH Wood River Hil 49.77 329 P P 03 32 31.9 +1.2
RND Reindeer 50.03 327 P P 03 32 33.5 +0.6
TOLK Toolik Lake Re 50.80 334 IAmb IAmb 03 32 42.1
comp=Z,15nm,1.1s
MLY Manley 50.94 329 IAmb IAmb 03 32 43.4
comp=Z,9.7nm,0.9s
LPAZ La Paz 51.55 163 P P 03 32 45.5 +0.1

comp=Z,17nm,0.8s,baz=4.2,slow=7.2,SNR=5.9
LPAZ La Paz 51.55 163 P P 03 32 44.8 -0.7
MNMC Minye Minye 53.97 165 P P 03 33 03.2 +0.4
PB11 IPOC Station P 54.56 166 P P 03 33 07.4 +0.4
GO01 Chusmiza 54.57 165 P P 03 33 07.6 +0.2
RDOG Red Dog Mine 55.73 333 IAmb IAmb 03 33 17.8
comp=Z,8.7nm,0.9s
BDFB Brasilia 58.94 141 P P 03 33 39.5 +1.3
comp=Z,4.2nm,0.9s,baz=62,slow=5.2,SNR=4.8
CPUP Villa Florida 64.26 155 P P 03 34 13.8 0.0
comp=Z,2.4nm,0.8s,baz=27,slow=2.3,SNR=3.3
ARCES ARCESS Array B 64.56 22 P P 03 34 15.8 +0.5
comp=Z,3.0nm,0.9s,baz=340,slow=6.8,SNR=3.9
CLL Collm 67.40 43 eP P 03 34 34.0 +0.1
CLL i 03 34 37.7
FINES FINESS Array B 68.87 29 P P 03 34 43.1 +0.2
comp=Z,1.9nm,0.6s,baz=289,slow=5.8,SNR=12
GERES GERESS Array B 68.92 45 P P 03 34 44.2 +0.7
comp=Z,0.9nm,0.7s,baz=324,slow=6.6,SNR=5.9
GERES LR LR 04 02 26.3
comp=Z,47nm,18.0s,baz=279,slow=34
VYHS Vyhne 72.06 43 eP P 03 35 03.7 +1.0
KEST Kesra 72.27 59 P P 03 35 06.0 +1.8
comp=Z,3.4nm,0.9s,baz=230,slow=2.1,SNR=7.3
KEST Kesra 72.27 59 IAmb IAmb 03 35 06.5
comp=Z,11nm,1.2s
TIXI Tiksi 72.61 350 P P 03 35 07.1 +1.7
TIXI IAmb IAmb 03 35 08.5
comp=Z,7.3nm,1.1s
PLCA Paso Flores 74.92 171 P P 03 35 18.9 -0.5
comp=Z,2.6nm,0.8s,baz=348,slow=6.7,SNR=5.6
DBIC Dimbokro 75.75 91 P P 03 35 24.9 +0.2
comp=Z,4.1nm,0.9s,baz=282,slow=9.2,SNR=5.1
DBIC LR LR 04 05 04.5
comp=Z,29nm,19.1s,baz=333,slow=33
TORD Torodi Ar. Bea 77.73 82 P P 03 35 35.9 -0.1
comp=Z,1.5nm,0.7s,baz=306,slow=5.3,SNR=7.2
TORD LR LR 04 05 10.4
comp=Z,52nm,20.5s,baz=45,slow=32
YAK Yakutsk 81.11 345 LR LR 04 13 30.6
comp=Z,31nm,19.9s,baz=20,slow=37
ARU Arti 84.13 21 P P 03 36 10.9 +1.5
BRTR Keskin Array B 85.80 44 P P 03 36 18.1 -0.3
comp=Z,0.8nm,0.7s,baz=316,slow=2.5,SNR=5.3
WRA Warramunga Arr 144.87 284 PKP PKPbc 03 43 15.8 +0.5
comp=Z,5.6nm,0.7s,baz=56,slow=3.8,SNR=24
ASAR Alice Springs 146.98 278 PKPbc PKPbc 03 43 21.1 -0.7
comp=Z,1.6nm,0.5s,baz=77,slow=2.8,SNR=24

DJA 15 03:53:15.8±0.5, 7°S±3°×10°6E±°, h26km±5km, M3.5/6, mb3.3/2, MLv3.6/6, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	Sukabumi	0.45	16	P	Pn	03 53 26.3	-0.3
SKJI				S	Sn	03 53 34.2	+0.4
CNJI	Cibinong	0.71	79	P	Pn	03 53 30.2	+0.1
CNJI				S	Sn	03 53 40.6	+0.4
DBJI	Dramaga	0.94	20	P	Pn	03 53 33.3	0.0
DBJI				S	Sn	03 53 46.4	+0.5
LEM	Lembang	1.33	63	P	Pn	03 53 38.6	-0.2
LEM				S	Sn	03 53 56.0	+0.3
CISI	Cisompet, Garu	1.38	95	P	Pn	03 53 39.6	+0.2
CISI				S	Sn	03 53 57.2	+0.3

YARS 15 03:57:54.2±0.0, 62°40N×124°15E, h15km, mb0.0/42, ML3.5/9, Ms0.0/42, Northern and central Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLSR	Buluus	2.53	112	eP g	Pb	03 58 40.2	+1.0
	987nm,0.4s						
BLSR				eSn	Sn	03 59 06.0	+0.7
BLSR				eSg	Sg	03 59 14.2	-1.3
	2μm,0.3s						
YAK	Yakutsk	2.62	96	ePg	Pb	03 58 41.6	+0.9
	17nm,0.3s						
YAK				eSg	Sg	03 59 16.5	-1.7
	676nm,0.3s						
TBGR	Tabaga	2.64	100	ePg	Pb	03 58 41.3	+0.2
	619nm,0.2s						
TBGR				eSg	Sg	03 59 16.8	-2.2
	1μm,0.2s						
OLMR	Olekminsk	2.69	223	ePg	Pb	03 58 43.4	+1.4
	56nm,0.2s						
OLMR				eSg	Sg	03 59 17.8	-2.8
	1μm,0.8s						
ALDR	Aldan	3.85	170	ePg	Pb	03 59 03.4	+1.7
	17nm,0.1s						
ALDR				eSg	Sg	03 59 54.7	-3.0
	402nm,0.3s						
CGD	Chagda	4.85	136	ePn	Pn	03 59 08.6	+2.1
CGD				ePg	Pb	03 59 21.1	+2.3
	1.0nm,0.7s						
CGD				eSn	Sn	04 00 02.2	-0.2
	548nm,0.4s						
CGD				eSg	Sg	04 00 25.5	-4.2
	548nm,0.4s						
YCRN	Chernyshevskiy	5.41	282	ePn	Pn	03 59 15.8	+1.6
YCRN				ePg	Pb	03 59 31.4	+3.2
	41nm,0.7s						
YCRN				eSn	Sn	04 00 15.9	-0.1
YCRN				eSg	Sg	04 00 42.7	-4.8
	78nm,0.6s						
CLNS	Chul'man	5.59	176	ePn	Pn	03 59 17.6	+0.8
CLNS				ePg	Pb	03 59 34.4	+3.1
	27nm,0.5s						
CLNS				eSn	Sn	04 00 20.3	-0.4
CLNS				eSg	Sg	04 00 49.4	-4.0
	210nm,0.8s						
KHN	Khani	5.92	204	ePn	Pn	03 59 21.8	+0.5
KHN				ePg	Pb	03 59 40.4	+3.4
	79nm,0.3s						
KHN				eSg	Sg	04 00 58.1	-5.8
	798nm,1.1s						
YKLR	Yuktali	5.96	193	ePn	Pn	03 59 23.8	+2.1
YKLR				ePg	Pb	03 59 41.8	+4.2
	26nm,0.4s						
YKLR				eSn	Sn	04 00 30.9	+1.2
YKLR				eSg	Sg	04 00 59.8	-5.4
	320nm,1.2s						
CRS	Chara	6.26	211	eSg	Sg	04 01 09.3	-5.7
	151nm,0.8s						
VTMR	Vitim	6.38	248	ePn	Pn	03 59 28.9	+1.4
VTMR				ePg	Pb	03 59 48.8	+3.9
	50nm,0.3s						
VTMR				eSn	Sn	04 00 40.9	+0.8
VTMR				eSg	Sg	04 01 13.4	-5.4
	263nm,0.4s						
TUP	Tupik	8.29	197	i Pn	Pn	03 59 56.0	+2.3
TUP				ePg	Pb	04 00 24.4	+7.1
	18nm,0.5s						
TUP				i Sn	Sn	04 01 27.4	+0.4
TUP				eSg	Sb	04 02 14.3	+19
	89nm,1.3s						
UNR	Ust'-Nera	8.80	67	eSg	Sn	04 02 30.0	+51
	4.2nm,1.4s						

GCG 15 04:04:19.8±0.4, 15°29N×89°10W, h15km±3km, MD3.6
SNET 15 04:04:20.7±1.5, 15°04N×89°39W, h2km±11km, ML2.4
ISC 15 04:04:15.8±3.5, 15°3N±0°1×89°1W±0°1, h2km±14km, n6, σ2§47/11, 2D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	Marmol	0.59	250	⇓iP	Pb	04 04 27.7	-1.4
MRL				eS	Sb	04 04 33.9	-4.1
MTO3	Montecristo	0.92	195	⇓eP	Pb	04 04 33.8	-0.8
MTO3				eS	Sb	04 04 44.4	-2.8
NBG	Las Nubes	1.38	240	eP	Pn	04 04 43.6	+1.2
NBG				eS	Sn	04 05 04.7	+3.2
SBLS	San Blas	1.52	199	eP	Pg	04 04 45.0	0.0
IXG	Ixpaco	1.70	229	eP	Pg	04 04 49.1	+0.7
IXG				eS	Sg	04 05 12.3	+1.8
FUG	Fuego 3	1.87	244	eP	Pg	04 04 51.7	0.0
FUG				eS	Sg	04 05 16.4	+0.4

IDC 15 04:12:06.2±21.0, 37°95N×20°18E, h0km, mb3.4/2, mb1 3.5/3, mb1mx3.2/46, mbtmp3.3/3, ML3.2/1, Error ellipse: s-maj=402.7km s-min=38.9km az=37.0
THE 15 04:12:07.4, 38°18N×20°26E, h0km±1km, ML3.1/5, Error ellipse: s-maj=2.3km s-min=0.6km az=258.0
ATH 15 04:12:07.4, 38°18N×20°29E, h10km, ML3.0/17, Error ellipse: s-maj=1.9km s-min=1.0km az=74.0
BEO 15 04:12:12.3±0.9, 38°91N×18°84E, h15km, ML2.8/5
ISC 15 04:12:08.1±0.9, 38°19N±0°02×20°32E±0°04, h6km±4km, n73, σ1§06/101, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.03	62	P	Pg	04 12 09.3	0.0
KEF3				S	Sg	04 12 10.1	-0.1
CHV1	Chavriata, Kef	0.05	97	P	Pg	04 12 09.5	0.0
CHV1				S	Sg	04 12 10.6	0.0
AGT1	Agia Thekli	0.08	41	P	Pg	04 12 10.2	+0.2
AGT1				S	Sg	04 12 11.7	+0.4
LXRA	Lixouri, Kepha	0.10	84	P	Pg	04 12 10.4	+0.2
LXRA				S	Sg	04 12 12.1	+0.5
LXR1	Lixouri, Cepha	0.10	84	P	Pg	04 12 10.4	+0.2
LXR1				S	Sg	04 12 12.3	+0.6
KEF4	Livadi, Kephal	0.11	51	P	Pg	04 12 10.7	+0.2
KEF4				S	Sg	04 12 12.5	+0.5
ARGA	Argostoli. Kep	0.13	96	P	Pg	04 12 11.0	+0.2
ARGA				S	Sg	04 12 13.2	+0.6
ARG2	Argostoli	0.14	95	P	Pg	04 12 11.1	+0.2
ARG2				S	Sg	04 12 13.4	+0.6
KEF2	Argostoli. Kep	0.14	100	P	Pg	04 12 11.2	+0.2
KEF2				S	Sg	04 12 13.5	+0.7
KEF1	Kardakata, Kep	0.15	54	P	Pg	04 12 11.3	+0.1
KEF1				S	Sg	04 12 13.6	+0.4
VLS	Valsamata	0.21	93	P	Pg	04 12 12.3	-0.1
VLS				S	Sg	04 12 15.8	+0.5
	26μm,0.1s						
VLS	Valsamata	0.21	93	P	Pg	04 12 12.3	-0.1
VLS				S	Sg	04 12 15.4	+0.2
VLS				AML	AML	04 12 15.8	
	comp=N,54499μm,0.2s						
VLS				AML	AML	04 12 15.8	
	comp=E,50030μm,0.1s						
FSK	Fiskardo	0.33	36	P	Pg	04 12 14.5	-0.1
FSK				S	Sg	04 12 19.9	+0.9
	comp=E,7μm,0.2s						
FSK	Fiskardo	0.33	36	P	Pg	04 12 14.5	-0.1
FSK				S	Sg	04 12 19.1	+0.1
FSK				AML	AML	04 12 20.5	
	comp=E,14251μm,0.2s						
FSK				AML	AML	04 12 20.7	
	comp=N,12420μm,0.3s						
VLMS	Volimes, Zakyn	0.41	139	P	Pg	04 12 16.0	-0.2
VLMS				S	Sg	04 12 21.9	+0.3
VLMS				AML	AML	04 12 23.3	
	comp=E,14070μm,0.2s						
VLMS				AML	AML	04 12 23.5	
	comp=N,22137μm,0.2s						
EVGI	Lefkada island	0.51	32	P	Pg	04 12 17.8	-0.1
EVGI				S	Sb	04 12 25.8	-1.3
EVGI	Lefkada island	0.51	32	P	Pg	04 12 17.7	-0.1
EVGI				S	Sg	04 12 24.9	+0.4
MGNA	Meganis	0.60	39	P	Pg	04 12 18.9	-0.7
MGNA				S	Sg	04 12 27.8	+0.4
MGNA				AML	AML	04 12 31.8	
	comp=N,1846μm,0.5s						
MGNA				AML	AML	04 12 32.1	
	comp=E,1870μm,0.4s						
ZAK2	Zakynthos	0.61	131	P	Pg	04 12 19.9	0.0
LKD2	Lefkada island	0.66	24	P	Pg	04 12 20.4	-0.4
LKD2				S	Sb	04 12 30.6	-0.8
	comp=E,765nm,0.5s						
LKD2	Lefkada island	0.66	24	P	Pg	04 12 20.3	-0.5
LKD2				AML	AML	04 12 37.6	
	comp=E,1202μm,0.4s						
LKD2				AML	AML	04 12 37.9	
	comp=N,1778μm,0.6s						
KRI1	kERI	0.66	143	P	Pg	04 12 20.3	-0.5
KRI1				S	Sb	04 12 30.9	-0.6
TSLK	Tsoukalades, L	0.69	23	P	Pg	04 12 21.1	-0.3
TSLK				S	Sb	04 12 31.3	-1.0
	comp=N,1μm,0.6s						
TSLK	Tsoukalades, L	0.69	23	P	Pg	04 12 20.9	-0.4
TSLK				AML	AML	04 12 39.2	
	comp=E,1507μm,0.6s						
TSLK				AML	AML	04 12 41.2	
	comp=N,3233μm,0.7s						
AST1	Astakos	0.70	60	P	Pg	04 12 21.2	-0.4
AST1				S	Sb	04 12 33.2	+0.5
VTN	Vitineika	0.74	111	P	Pg	04 12 21.8	-0.5
PDO	Prodromos	0.79	59	P	Pg	04 12 22.9	-0.5
PDO				AML	AML	04 12 44.4	
	comp=E,2400μm,0.4s						
PDO				AML	AML	04 12 48.3	
	comp=N,2477μm,0.5s						
AXS	Araxos	0.83	89	P	Pg	04 12 22.9	-1.2
RLS	Riolos of Patr	0.92	98	P	Pg	04 12 24.8	-0.9
RLS				AML	AML	04 12 48.0	
	comp=E,913μm,0.5s						
RLS				AML	AML	04 12 49.0	
	comp=N,774μm,0.4s						
PVO	Paravola	1.04	65	P	Pg	04 12 27.7	-0.4
PVO	Paravola	1.04	65	P	Pg	04 12 27.6	-0.4
PVO				AML	AML	04 12 49.8	
	comp=E,1660μm,0.7s						
PVO				AML	AML	04 12 50.3	
	comp=N,2216μm,0.6s						
DRO	Drossia	1.12	102	P	Pg	04 12 28.7	-1.0
DRO				S	Sn	04 12 46.2	-0.1
DRO	Drossia	1.12	102	P	Pg	04 12 28.7	-1.0
DRO				AML	AML	04 13 00.0	
	comp=N,1712μm,0.5s						
DRO				AML	AML	04 13 01.3	
	comp=E,1890μm,0.6s						
AMT	Artemida-Makis	1.28	120	P	Pb	04 12 32.5	-0.2
AMT	Artemida-Makis	1.28	120	P	Pn	04 12 30.9	-1.8
AMT				AML	AML	04 12 58.3	
	comp=N,1565μm,0.4s						
AMT				AML	AML	04 13 00.3	
	comp=E,1225μm,0.5s						
LAKA	Lakka	1.31	87	P	Pn	04 12 31.9	-1.1
LAKA				S	Sn	04 12 52.3	+1.4
	comp=E,325nm,0.6s						
LAKA	Lakka	1.31	87	P	Pn	04 12 31.9	-1.1
LAKA				AML	AML	04 12 52.9	
	comp=N,878μm,0.4s						
LAKA				AML	AML	04 12 58.8	
	comp=E,503μm,0.7s						
ANX	Ano Chora	1.32	72	P	Pn	04 12 32.6	-0.7
ANX				AML	AML	04 13 01.1	
	comp=E,1328μm,0.5s						
ANX				AML	AML	04 13 02.6	
	comp=N,1640μm,0.6s						
IGT	Igoumenitsa	1.34	1	eP g	Pg	04 12 36.4	+2.5
IGT				eSg	Sn	04 12 53.8	+2.2
IGT	Igoumenitsa	1.34	1	P	Pn	04 12 33.5	+0.1
EVR	Evrytania	1.38	58	P	Pn	04 12 32.7	-1.4
EVR				AML	AML	04 13 03.9	
	comp=E,536μm,0.7s						
EVR				AML	AML	04 13 05.8	
	comp=N,528μm,0.6s						
SERG	Sergoula	1.39	80	P	Pn	04 12 33.2	-0.9
SERG				S	Sn	04 12 55.2	+2.4
SERG	Sergoula	1.39	80	P	Pn	04 12 33.0	-1.0
SERG				AML	AML	04 12 59.8	
	comp=E,582μm,0.4s						
SERG				AML	AML	04 13 03.1	
	comp=N,918μm,0.4s						
TRIZ	Trizonia	1.39	82	P	Pn	04 12 33.0	-1.2
TRIZ	Trizonia	1.39	82	P	Pn	04 12 32.9	-1.2
ALIK	Aliki, Aigiali	1.42	87	P	Pn	04 12 33.6	-0.8
ALIK				S	Sg	04 12 55.6	+2.0
KALE	Kalithea	1.45	81	P	Pn	04 12 33.8	-1.1
KALE				AML	AML	04 13 03.0	
	comp=N,683μm,0.5s						
KALE				AML	AML	04 13 12.4	
	comp=E,579μm,0.7s						
KLV	Kalavryta, Ach	1.45	95	P	Pn	04 12 34.1	-0.9
KLV				AML	AML	04 13 07.1	
	comp=N,385μm,0.9s						
KLV				AML	AML	04 13 08.7	
	comp=E,408μm,0.5s						
KEK	Kerkira	1.57	345	P	Pn	04 12 36.7	0.0
ITM	Ithomi	1.63	128	P	Pn	04 12 37.4	0.0
MAKR	Makrakomi, Fth	1.64	59	P	Pg	04 12 39.2	-0.4
PYL	PYLOS	1.72	138	P	Pn	04 12 38.5	-0.1
AGG	Agios Georgios	1.78	62	P	Pb	04 12 40.5	-0.7
VLX	Vlachokerasia	1.83	116	P	Pb	04 12 41.2	-0.8
THL	Klokotos Trika	1.91	43	P	Pb	04 12 42.4	-1.0
AXAR	Agios Charalam	1.93	72	P	Pb	04 12 43.7	0.0
PROD	Prodromos	2.04	87	P	Pb	04 12 44.1	-1.4
LTK	Loutraki	2.10	94	P	Pn	04 12 44.3	+0.4
LKR	Lokris	2.16	77	P	Pn	04 12 45.7	+1.1
VIL2	Platees	2.33	89	P	Pn	04 12 48.2	+1.2
DID	Didima	2.41	106	P	Pn	04 12 49.4	+1.3
VLY	Voula,Athens	2.77	96	P	Pn	04 12 53.6	+0.5
OHR	Ohrid	2.94	7	i Pn	Pb	04 12 58.6	-2.5
TIR	Tirane	3.17	354	ePg	Pn	04 12 58.0	-0.6
TIR				eSg	Sn	04 13 34.7	-2.1
STIP	Stip	3.78	22	i Pn	Pb	04 13 11.7	-3.6
PDG	Podgorica	4.31	349	ePg	Pn	04 13 15.3	+1.0
PDG				eSg	Sn	04 14 04.1	-0.8
TREB	Trebinje	4.76	342	ePg	Pn	04 13 20.4	-0.1
TREB				eSg	Sn	04 14 14.0	-2.0
VTS	Vitosha	4.95	26	ePn	Pn	04 13 26.0	+2.8
SJES	Sjenica	5.07	357	ePn	Pn	04 13 19.4	-5.4
DIVS	Divibare	5.91	358	ePn	Pn	04 13 30.2	-6.1
DIVS				eSn	Sn	04 14 28.2	-16
GERES	GERESS Array B	11.68	338	Pn	Pn	04 14 58.0	+2.6
	comp=E,0.1nm,0.3s,baz=159,slow=17,SNR=2.3						
FINES	FINESS Array B	23.55	7	P	P	04 17 20.2	+1.2
	comp=E,1.4nm,0.9s,baz=185,slow=14,SNR=3.7						
MKAR	Makanchi Array	45.43	58	P	P	04 20 28.4	+0.7
	comp=E,0.2nm,0.4s,baz=274,slow=7.0,SNR=6.4						

IDC 15 04:22:15.8±1.1, 17°44S×69°24W, h169km±7km, mb3.5/5, mb1 3.5/8, mb1mx3.2/31, mbtmp4.0/8, Error ellipse: s-maj=21.5km s-min=11.0km az=103.0
GUC 15 04:22:15.8±0.7, 17°51S×69°65W, h176km±6km, ML3.7
NEIC 15 04:22:15.8±2.6, 17°40S±0°08×69°3W±0°2, h175km±8km, mb4.0/3, Error ellipse: s-maj=22.7km s-min=8.1km az=113.0
ISC 15 04:22:15.6±1.0, 17°39S±0°07×69°3W±0°1, h170km±8km, n25, σ1§35/35, mb3.9/4, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.96	190	eP	Pn	04 22 43.7	+1.0
PB16				i S	Sn	04 23 05.0	+1.4
LPAZ	La Paz	1.59	47	P	Pn	04 22 49.1	+0.8
	33nm,0.3s,baz=269,slow=3.2,SNR=667						
LPAZ				S	Sn	04 23 12.8	-0.6
	6.2nm,0.3s,baz=151,slow=24,SNR=8.6						
LPAZ	La Paz	1.59	47		Pn	04 22 49.2	+0.9
MNMC	Minye Minye	1.75	188	eP	Pn	04 22 50.2	+0.6
MNMC				i S	Sn	04 23 16.2	+0.3
MNMC				IAML		04 23 20.3	
	comp=E,586nm,0.3s						
MNMC	Minye Minye	1.75	188	Pn	Pn	04 22 50.5	+0.9
MNMC				Sn	Sn	04 23 16.3	+0.3
GO01	Chusmiza	2.27	177	eP	Pn	04 22 56.5	+0.9
GO01				i S	Sn	04 23 28.3	+1.7
GO01	Chusmiza	2.27	177		Pn	04 22 57.0	+1.4
PSGC	Pisagua	2.32	199	eP	Pn	04 22 55.6	-0.2
PSGC				i S	Sn	04 23 24.9	-2.2
PB11	IPOC Station P	2.38	187	eP	Pn	04 22 57.0	+0.5
PB11				i S	Sn	04 23 28.0	-0.3
PB11				IAML		04 23 29.5	
	comp=E,295nm,0.2s						
PB11	IPOC Station P	2.38	187		Pn	04 22 57.0	+0.5
PB11				Sn	Sn	04 23 27.2	-1.1
PB01	IPOC Station P	3.64	182		Pn	04 23 12.3	+0.3
PB01				Sn	Sn	04 23 53.5	-2.4
PB07	IPOC Station P	4.35	187	eP	Pn	04 23 21.7	+0.6
PB04	IPOC Station P	4.98	189	Pn	Pn	04 23 28.9	-0.4
LVC	Limon Verde	5.21	176	P	Pn	04 23 33.6	+1.2
	comp=E,3.4nm,0.3s,baz=17,slow=11,SNR=71						
LVC				S	Sn	04 24 30.2	-2.5
	comp=E,5.1nm,0.3s,baz=114,slow=21,SNR=13						
LVC	Limon Verde	5.21	176		Pn	04 23 33.5	+1.0
PB10	IPOC Station P	6.20	190	Pn	Pn	04 23 44.0	-1.2
GO02	Mina Guanaco	7.74	182		Pn	04 24 04.9	-1.0
SIV	San Ignacio	8.04	81	P	Pn	04 24 08.4	-1.1
	comp=E,1.6nm,0.3s,baz=264,slow=9.3,SNR=35						
SIV				S	Sn	04 25 35.2	-4.3
	comp=E,0.2nm,0.3s,baz=5.1,slow=24,SNR=2.5						
CFA	Coronel Fontan	14.19	176	P	Pn	04 25 29.1	0.0
	comp=E,0.3nm,0.3s,baz=7.1,slow=13,SNR=8.5						
BDFB	Brasilia	20.51	88	P	P	04 26 41.7	+0.8
	comp=E,1.4nm,0.4s,baz=269,slow=9.0,SNR=4.7						
BDFB	Brasilia	20.51	88	IAmb	IAmb	04 27 01.1	
	comp=Z,7.3nm,1.3s						
DBIC	Dimbokro	68.01	75	P	P	04 32 57.3	+0.2
	comp=Z,3.2nm,1.0s,baz=208,slow=8.5,SNR=5.8						
ULM	Lac du Bonnet	71.30	342	P	P	04 33 16.1	-0.4
	comp=Z,1.2nm,0.4s,baz=142,slow=5.6,SNR=5.7						
TORD	Torodi Ar. Bea	76.39	71	P	P	04 33 46.6	-0.2
	comp=Z,1.4nm,0.7s,baz=255,slow=5.4,SNR=10						
YKA	Yellowknife Ar	87.20	341	P	P	04 34 43.0	+0.8
	comp=Z,0.2nm,0.5s,baz=133,slow=4.6,SNR=5.6						

IDC 15 04:26:33.1±4.7, 36°28N×70°59E, h198km±36km, mb3.2/6, mb1 3.2/10, mb1mx2.9/53, mbtmp3.8/10, Error ellipse: s-maj=46.9km s-min=28.0km az=151.0
NNC 15 04:26:37.6±6.6, 37°23N×69°81E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=48.7km s-min=44.0km az=176.0
ISC 15 04:26:34.5±0.9, 36°54N±0°07×70°42E±0°10, h200km, n22, σ2§39/26, mb3.5/5, 2C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	6.13	23	P	Pn	04 28 05.5	+1.7
	SNR=134						
UCH	Uchtor	6.50	28	P	Pn	04 28 10.5	+1.8
	SNR=28						
KK31	Karatay Array	6.55	1	⇑Pn	Pn	04 28 06.7	-2.1
	0.3nm,0.2s,baz=175,slow=9.8,SNR=13						
KK31				⇓Sn	Sn	04 29 16.7	-7.0
	2.3nm,0.3s,baz=191,slow=26,SNR=5.8						
KK31				⇓Lg	Lg	04 29 46.8	
	5.0nm,0.5s						
EKS2	Erkin-Say	6.64	22	P	Pn	04 28 11.7	+1.6
	SNR=5.8						
KZA	Kyzart	6.68	33	P	Pn	04 28 12.3	+1.4
	SNR=9.5						
AAK	Ala-Archa	6.85	26	P	Pn	04 28 15.0	+2.2
	2.0nm,0.3s,baz=176,slow=4.1,SNR=26						
AAK				S	Sn	04 29 30.2	-0.8
	2.0nm,0.3s,baz=325,slow=21,SNR=27						
AAK	Ala-Archa	6.85	26	P	Pn	04 28 15.1	+2.2
	SNR=6.2						
AAK	Ala-Archa	6.85	26	Pn	Pn	04 28 14.8	+1.9
	5.0nm,0.5s						
AAK				Sn	Sn	04 29 29.9	-1.0
	29nm,0.7s						
KBK	Karagaybulak	7.04	28	P	Pn	04 28 18.1	+2.8
	SNR=6.7						
CHMS	Chumysh	7.26	26	⇓Pn	Pn	04 28 19.6	+1.5
	3.2nm,0.4s						
CHMS				⇑Sn	Sn	04 29 38.2	-2.2
	15nm,0.8s						
USP	Ospenovka	7.41	24	P	Pn	04 28 21.6	+1.6
	SNR=8.7						
SMLA	Simla	7.79	132	eP	Pn	04 28 25.6	+0.6
SMLA				eS	Sn	04 29 49.0	-3.9
GEYT	Alibeck	9.90	282	P	Pn	04 29 01.0	+8.5
	0.4nm,0.3s,baz=108,slow=13,SNR=3.9						
MKAR	Makanchi Array	13.54	37	P	P	04 29 40.6	-0.5
	0.3nm,0.3s,baz=225,slow=14,SNR=17						
KURBB	Kurchatov Arra	15.24	20	P	Pn	04 29 59.6	+0.2
	0.0nm,0.3s,baz=204,slow=11,SNR=2.6						
AKTO	Aktyubinsk	16.51	331	P	Pn	04 30 16.6	+1.9
	0.4nm,0.3s,baz=140,slow=9.6,SNR=8.5						
ZALV	Zalesovo Beam	20.07	25	P	P	04 30 54.3	+1.9
	1.2nm,0.4s,baz=220,slow=12,SNR=5.7						
FINES	FINESS Array B	37.19	326	P	P	04 33 28.2	+2.2
	0.8nm,0.7s,baz=108,slow=12,SNR=4.3						
ARCES	ARCESS Array B	40.93	338	P	P	04 33 59.0	+2.2
	3.4nm,1.0s,baz=104,slow=6.6,SNR=5.3						
NOA	NORSAR Array B	44.06	323	P	P	04 34 22.3	+0.1
	0.9nm,0.9s,baz=101,slow=8.1,SNR=2.7						
TORD	Torodi Ar. Bea	65.25	268	P	P	04 36 54.1	-0.9
	0.3nm,0.5s,baz=54,slow=6.7,SNR=6.4						
INK	Inuvik	73.94	9	P	P	04 37 46.7	-0.5
	0.5nm,0.4s,baz=304,slow=7.3,SNR=7.1						

IDC 15 04:26:36.3±8.6, 3°61S×139°19E, h245km±113km, mb2.9/2, mb1 3.1/3, mb1mx2.8/35, mbtmp3.6/3, MS3.3/1, Ms1 3.2/1, ms1mx2.6/7, Error ellipse: s-maj=197.6km

s-min=32.8km az=93.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.91	196	P	P	04 30 16.6	-0.9
	0.5nm,0.3s,baz=24,slow=13,SNR=5.5						
WRA				S	S	04 33 22.5	+1.2
	0.5nm,0.3s,baz=11,slow=21,SNR=6.6						
ASAR	Alice Springs	20.58	194	P	P	04 30 57.2	+0.2
	0.9nm,0.5s,baz=30,slow=11,SNR=17						
STKA	Stephens Creek	28.21	176	LR	LR	04 43 28.9	
	comp=Z,57nm,19.3s,baz=207,slow=36						
MKAR	Makanchi Array	70.79	322	P	P	04 37 26.2	-0.1
	0.3nm,0.4s,baz=101,slow=7.5,SNR=2.7						

*IDC **15** 04:27:31.3±0.7, 35°.85N×82°.47E, h0km, mb3.8/14, mb1 4.0/18, mb1mx3.8/53, mbtmp3.9/18, ML4.1/3, MS3.3/10, Ms1 3.3/10, ms1mx3.1/45, Error ellipse: s-maj=20.8km s-min=13.4km az=53.0*
*NEIC **15** 04:27:33.1±1.9, 35°.95N±0°.08×82°.5E±0°.1, h10km±1km, mb4.1/10, Error ellipse: s-maj=15.1km s-min=14.2km az=263.0*
*BJI **15** 04:27:34.0±0.0, 35°.94N×82°.41E, h9km, mB4.3/2, mb4.1/8, ML4.3/7, Ms3.8/6, Ms7 3.7/4*
*NNC **15** 04:27:38.6±1.7, 36°.40N×82°.33E, h0km, mb4.8, mpv4.4, Error ellipse: s-maj=15.1km s-min=12.4km az=77.0*
ISC 15 04:27:33.7±0.6**, 36°.01N**±0°.06×**82°.32E**±0°.06**, h10km, n59, σ1s.89**/55**, mb3.8**/15**, MS3.3**/6**, 7C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	6.12	307	P	Pb	04 29 19.1	-1.4
KSH				pP	Pg	04 29 21.6	-9.3
KSH				sP	Pn	04 29 24.9	+21
KSH				S	Sb	04 30 30.3	-3.6
NRN	Naryn	7.33	320		Pn	04 29 21.1	+0.1
PDGK	Podgornoye	7.63	344	⇓Pn	Pn	04 29 27.1	+2.1
	14nm,0.8s						
PDGK				⇓Sn	Sn	04 30 50.7	-0.8
	180nm,0.7s						
PDGK				⇓Lg	Lg	04 31 27.8	
	215nm,1.0s						
BOOM	Boomskoye usch	8.14	325		Pn	04 29 33.9	+1.8
MDOK	Medeo	8.22	332	Pn	Pn	04 29 34.4	+1.3
	22nm,1.5s						
MDOK				Pg	Pb	04 30 04.1	+7.9
	35nm,1.3s						
MDOK				Lg	Lg	04 31 49.9	
	123nm,1.0s						
GKN	Gorkha	8.22	165	eP	Pn	04 29 35.2	+2.0
	18nm,0.3s						
KNDC	Almaty	8.29	332	⇑Pg	Pb	04 30 01.1	+3.7
	26nm,0.7s						
KNDC				⇓Lg	Lg	04 31 50.8	
	193nm,0.9s						
GUN	Gumba	8.62	158	eP	Pn	04 29 37.9	-1.0
DMN	Daman	8.71	163	eP	Pn	04 29 39.9	0.0
PKIN	Phulchoki	8.81	162	eP	Pn	04 29 40.8	-0.5
	18nm,0.6s						
PKI	Pulchoki	8.81	162	eP	Pn	04 29 41.0	-0.5
WMQ	Urumqi	8.83	26	eP	Pn	04 29 42.5	+1.1
WMQ				smax	smax		
	comp=N,48nm,1.1s						
WMQ				smax	smax		
	comp=E,34nm,1.1s						
WMQ	Urumqi	8.83	26	Pn	Pn	04 29 41.7	+0.3
JIRN	Jiri	8.95	157	eP	Pn	04 29 43.1	-0.3
	36nm,0.6s						
AAK	Ala-Archa	8.97	320	LR	LR	04 33 57.4	
	comp=Z,56nm,21.7s,baz=158,slow=42						
AAK	Ala-Archa	8.97	320	Pg	Pn	04 30 16.7	+33
	9.6nm,0.6s						
AAK				⇑Lg	Lg	04 32 15.8	
	58nm,1.0s						
CHMS	Chumysh	9.10	322	⇓Pg	Pn	04 30 17.9	+33
	9.7nm,0.8s						
CHMS				⇑Lg	Lg	04 32 19.2	
	92nm,1.4s						
LSA	Lhasa	9.73	128	P	Pn	04 30 01.9	+7.7
LSA				pP		04 30 07.8	
LSA				S	Sn	04 32 08.5	+25
LSA				SS	SgSg	04 32 54.0	+7.6
RAMN	Ramite	9.74	157	eP	Pn	04 29 52.2	-2.0
ODAN	Odare	10.10	153	eP	Pn	04 29 56.9	-2.1
	99nm,1.2s						
MK31	Makanchi Array	10.78	360	Pn	Pn	04 30 08.3	+0.3
	20nm,1.0s,baz=179,slow=12,SNR=32						
MK31				⇑Sn	Sn	04 32 06.2	-2.5
	5.6nm,0.6s,baz=184,slow=23,SNR=5.6						
MK31				⇑Lg	Lg	04 33 09.9	
	8.1nm,0.8s,baz=173,slow=24,SNR=3.5						
MK31	Makanchi Array	10.78	360	Pn	Pn	04 30 08.7	+0.7
MKAR	Makanchi Array	10.78	360	Pn	Pn	04 30 08.6	+0.6
	1.4nm,0.3s,baz=180,slow=13,SNR=67						
MKAR				Sn	Sn	04 32 07.6	-1.1
	0.9nm,0.3s,baz=189,slow=22,SNR=6.2						
MKAR				Lg	Lg	04 33 22.2	
	0.1nm,0.3s,baz=160,slow=18,SNR=2.3						
MKAR				LR	LR	04 35 11.5	
	comp=Z,196nm,19.2s,baz=176,slow=42						
MAKZ	Makanchi	10.79	359	⇑Pn	Pn	04 30 08.9	+0.7
	40nm,0.9s						
MAKZ				⇓Sn	Sn	04 32 07.6	-1.4
	17nm,1.2s						
MAKZ				⇑Lg	Lg	04 33 11.5	
	28nm,1.4s						
MAKZ	Makanchi	10.79	359	Pn	Pn	04 30 08.7	+0.4
GTA	Gaotai	14.26	71	eP	Pn	04 30 48.4	-7.4
GTA				pP	P	04 30 53.0	-10
GTA				sP		04 30 56.0	
KURBB	Kurchatov Arra	14.86	351	Pn	Pn	04 31 01.8	-1.9
	0.0nm,0.3s,baz=172,slow=12,SNR=14						
KURBB				Lg	Lg	04 35 32.2	
	baz=55,slow=23,SNR=4.1						
KURK	Kurchatov	14.94	351		Pn	04 31 03.2	-1.6
HRA	Herat	16.49	270	Pn	Pn	04 31 26.9	+1.6
ZAA0	Zalesovo Array	18.02	5	Pn	Pn	04 31 41.7	-2.4
ZAA0				IAmb	IAmb	04 31 48.3	
	comp=Z,12nm,0.8s						
ZALV	Zalesovo Beam	18.02	5	P	Pn	04 31 42.3	-1.8
	comp=Z,0.3nm,0.3s,baz=193,slow=13,SNR=12						
ZALV				S	S	04 35 10.6	-0.5
	comp=Z,0.9nm,0.3s,baz=3.8,slow=25,SNR=6.2						
ZALV				LR	LR	04 39 44.2	
	comp=Z,128nm,19.7s,baz=196,slow=40						
BVAR	Borovoye Array	18.97	337	P	Pn	04 31 56.9	+1.2
	comp=Z,0.6nm,0.3s,baz=142,slow=10,SNR=20						
BVAR				Lg	Lg	04 37 39.2	
	comp=Z,0.1nm,0.3s,baz=270,slow=40,SNR=2.7						
BRVK	Borovoye	19.04	337	P	P	04 31 56.9	+1.1
BRVK				IAmb	IAmb	04 32 02.7	
	comp=Z,13nm,0.8s						
GEYT	Alibeck	19.42	283	P	P	04 32 00.5	+0.4
	comp=Z,0.4nm,0.3s,baz=132,slow=11,SNR=4.0						
GEYT				LR	LR	04 41 30.7	
	comp=Z,53nm,19.8s,baz=175,slow=43						
GYA0B	ALIBECK ARRAY	19.42	283	P	P	04 32 00.3	+0.2
ABKAR	Akbulak array	21.02	316	P	P	04 32 18.5	+1.1
ABKAR				IAmb	IAmb	04 32 25.0	
	comp=Z,12nm,1.2s						
SONM	Songino Array	21.37	49	P	P	04 32 22.0	+0.8
	comp=Z,24nm,0.8s,baz=241,slow=10,SNR=58						
TLY	Talaya	21.83	38	LR	LR	04 41 28.5	
	comp=Z,116nm,21.8s,baz=239,slow=38						
AKTO	Aktyubinsk	22.70	317	P	P	04 32 36.1	+0.8
	comp=Z,1.3nm,0.6s,baz=126,slow=9.7,SNR=3.9						
CMAR	Chiang Mai Arr	22.84	136	P	P	04 32 34.8	-2.3
	comp=Z,0.7nm,0.3s,baz=318,slow=7.9,SNR=1.6						
WSAR	Wadi Sarin	24.13	245	LR	LR	04 43 29.6	
	comp=Z,56nm,21.9s,baz=59,slow=40						
ARU	Arti	25.98	329	P	P	04 33 07.2	+0.9
	comp=Z,0.7nm,0.3s,baz=118,slow=15,SNR=1.4						
PALK	Pallekele	28.64	183	LR	LR	04 45 25.0	
	comp=Z,67nm,20.2s,baz=1.7,slow=38						
KSRS	Korea Array	36.31	74	LR	LR	04 51 13.3	
	comp=Z,59nm,18.8s,baz=326,slow=39						
KLR	Kul'dur	38.03	54	P	P	04 34 52.0	0.0
	comp=Z,0.5nm,0.2s,baz=288,slow=10,SNR=1.9						
BR131	Keskin Array S	38.23	291	P	P	04 34 55.0	+1.0
BR131				IAmb	IAmb	04 34 58.7	
	comp=Z,4.8nm,1.4s						
BRTR	Keskin Array B	38.23	291	P	P	04 34 55.5	+1.5
	comp=Z,1.1nm,1.0s,baz=114,slow=3.1,SNR=4.0						
USRK	Ussuriysk Ar.	38.37	62	LR	LR	04 52 12.6	
	comp=Z,132nm,18.6s,baz=291,slow=39						
FINES	FINESS Array B	43.13	324	P	P	04 35 34.7	+0.8
	comp=Z,0.9nm,0.6s,baz=101,slow=9.9,SNR=6.9						
ASAJ	Asahikawa	45.93	61	LR	LR	04 57 35.2	
	comp=Z,42nm,19.4s,baz=192,slow=39						
NOA	NORSAR Array B	50.27	323	P	P	04 36 31.0	+1.1
	comp=Z,0.5nm,0.7s,baz=81,slow=5.4,SNR=1.1						
GERES	GERESS Array B	50.60	307	P	P	04 36 34.2	+1.6
	comp=Z,0.1nm,0.2s,baz=48,slow=9.3,SNR=1.8						
ILAR	Eielson Array	72.43	20	P	P	04 38 58.3	-1.5
	comp=Z,0.6nm,1.0s,baz=325,slow=6.4,SNR=3.5						
WRA	Warramunga Arr	74.28	130	P	P	04 39 09.3	-2.0
	comp=Z,2.5nm,0.9s,baz=325,slow=5.7,SNR=11						
WRAB	Tennant Creek	74.28	130	P	P	04 39 07.5	-3.8
MENT	Mentasta	74.75	20	P	P	04 39 13.2	-0.3
TORD	Torodi Ar. Bea	74.87	275	P	P	04 39 14.9	0.0
	comp=Z,0.3nm,0.7s,baz=55,slow=4.3,SNR=2.2						
ASAR	Alice Springs	76.81	132	P	P	04 39 23.6	-2.1
	comp=Z,1.9nm,0.9s,baz=316,slow=5.7,SNR=11						
YKA	Yellowknife Ar	80.89	8	P	P	04 39 46.5	-1.1
	comp=Z,1.1nm,0.9s,baz=339,slow=5.2,SNR=4.8						

*IDC **15** 04:41:46.1±2.5, 0°.22N×126°.80E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/35, mbtmp3.7/4, Error ellipse: s-maj=280.2km s-min=25.4km az=65.0*
*DJA **15** 04:42:09.2±0.4, 1°S±4°×12°8E±°, h10km, M3.4/9, MLv3.4/9*
ISC 15 04:42:11.1±1.0**, 1°.37S**±0°.06×**128°.29E**±0°.06**, h35km, n13, σ2s.26**/12**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	1.07	312	P	Sn	04 42 43.1	-0.3
MSAI	Masohi	2.06	162	P	Pn	04 42 45.1	+1.8
NLAI	Namlea	2.21	213	P	Pn	04 42 46.3	+1.0
AAI	Ambon	2.31	182	P	Pn	04 42 47.1	+0.4
TNTI	Ternate	2.32	336	P	Pn	04 42 47.4	+0.6
SANI	Sanana	2.40	254	P	Pn	04 42 47.2	-0.8
SWI	Sorong	3.01	80	P	Pn	04 42 56.7	+0.4
FAKI	Fak Fak	4.24	111	P	Pn	04 43 14.3	+1.0
WSI	Waingapu	11.46	224	P	Pn	04 44 58.1	+5.7
WRA	Warramunga Arr	19.39	163	P	P	04 46 34.0	-0.2
	0.2nm,0.3s,baz=334,slow=9.2,SNR=1.2						
ASAR	Alice Springs	22.82	167	P	P	04 47 11.2	0.0
	1.7nm,0.6s,baz=347,slow=11,SNR=19						
PMBI	Palembang	23.56	266	P	P	04 47 23.4	+4.7
STKA	Stephens Creek	32.84	159	P	P	04 48 37.5	-4.1
	0.9nm,0.6s,baz=338,slow=16,SNR=3.3						

MAN 15 04:57:34.3, 13°.72N×120°.23E, h61km, mb4.2, ML3.0, MS2.7, Mindoro

*IDC **15** 04:57:58.0±7.4, 31°.92S×126°.09E, h0km, mb1 3.8/3, mb1mx3.5/25, mbtmp3.6/3, ML3.5/3, Error ellipse: s-maj=66.6km s-min=49.2km az=53.0*
*AUST **15** 04:58:06.6±0.1, 31°.64S×125°.98E, h0km, Error ellipse: s-maj=0.2km s-min=0.1km az=346.0*
ISC 15 04:58:01.4±0.8**, 31°.68S**±0°.07×**125°.88E**±0°.04**, h10km, n16, σ2s.19**/53**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FORT	Forrest	2.07	65	P	Pb	04 58 39.2	+0.2
	baz=2.0						
FORT				S	Sb	04 59 05.9	+1.2
	baz=2.0						
KMBL	Kambalda	3.43	274	P	Pb	04 58 59.9	-2.3
	baz=3.5						
KLBR	Kellerberrin	6.93	269	P	Pn	04 59 47.8	+4.8
	baz=7.0						
WRKA	Warakurna	6.95	18	P	Pn	04 59 47.6	+4.3
	baz=6.9,SNR=4.9						
MULG	Mulgathing	7.16	81	P	Pn	04 59 48.2	+2.2
	baz=7.1,SNR=5.9						
RKGY	Rocky Gully	8.02	246	P	Pn	05 00 02.4	+4.5
	baz=8.1						
RKGY				S	Sn	05 01 28.6	-0.2
	baz=8.1						
MEEK	Meekatharra	8.10	306	P	Pn	05 00 02.1	+3.0
	baz=8.1						
MEEK				S	Sn	05 01 30.9	+0.2
	baz=8.1						
MUN	Mundaring	8.24	265	P	Pn	05 00 05.6	+4.6
	baz=8.3						
BBOO	Buckleboo	8.69	100	P	Pn	05 00 08.7	+1.5
	baz=8.6						
MORW	Morawa	8.89	284	P	Pn	05 00 12.8	+2.9
	baz=8.9						
MORW				S	Sn	05 01 49.3	-0.9
	baz=8.9						
OOD	Oodnadatta	9.36	68	P	Pn	05 00 17.7	+1.4
	baz=9.3,SNR=6.9						
OOD				S	Sn	05 01 57.6	-4.0
	baz=9.3						
AS11	Alice Springs	10.67	44	P	Pn	05 00 36.4	+2.1
	baz=11						
ASAR	Alice Springs	10.68	44	Pn	Pn	05 00 35.0	+0.5
	0.4nm,0.3s,baz=213,slow=11,SNR=22						
ASAR				Sn	Sn	05 02 28.2	-6.0
	0.7nm,0.3s,baz=222,slow=22,SNR=12						
ASAR				Lg	Lg	05 03 36.9	
	0.4nm,0.3s,baz=222,slow=26,SNR=4.3						
AS01	Alice Springs	10.71	44	P	Pn	05 00 36.9	+2.0
	baz=11						
STKA	Stephens Creek	13.37	95	Pn	Pn	05 01 04.2	-7.0
	0.1nm,0.3s,baz=24,slow=18,SNR=2.1						
STKA				Sn	Sn	05 03 30.9	-9.1
	0.2nm,0.3s,baz=222,slow=2.9,SNR=2.8						
STKA				Lg	Lg	05 04 58.9	
	0.1nm,0.3s,baz=296,slow=23,SNR=2.0						
WRA	Warramunga Arr	13.94	35	Pn	Pn	05 01 18.2	-0.8
	0.4nm,0.3s,baz=211,slow=11,SNR=3.3						
WRA				Sn	Sn	05 03 45.2	-8.7
	baz=210,slow=25,SNR=0.7						

*KRSC **15** 05:05:29.2±0.6, 52°.73N×159°.56E, h56km±7km, ML4.2*
*IDC **15** 05:05:33.3±1.7, 53°.01N×159°.25E, h81km±13km, mb3.3/9, mb1 3.6/10, mb1mx3.3/34, mbtmp3.7/10, MS2.9/2, Ms1 2.9/2, ms1mx2.5/25, Error ellipse: s-maj=46.4km s-min=19.4km az=176.0*
ISC 15 05:05:30.3±0.9**, 52°.72N**±0°.05×**159°.52E**±0°.05**, h55km**±7km**, n48, σ1s.57**/57**, mb3.6**/9**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLC	Nalytchevo	0.46	347	eP	Pn	05 05 41.5	+0.1
NLC				eS	Sn	05 05 49.8	+0.4
SPN	Mys Shipunski	0.48	39	i P	Pn	05 05 41.2	-0.5
SPN				eS	Sn	05 05 49.0	-0.9
DALK	Dalny	0.56	304	i P	Pn	05 05 42.6	+0.1
DALK				eS	Sn	05 05 51.5	+0.2
UGLR	Uglovaya	0.64	320	eP	Pn	05 05 44.2	+0.6
UGLR				eS	Sn	05 05 54.2	+0.9
SDLR	Sedlovina	0.68	326	i P	Pn	05 05 44.4	+0.3
RUS	Russkaya	0.68	245	eP	Pn	05 05 43.9	0.0
RUS				eS	Sn	05 05 53.8	-0.1
AVH	Avacha	0.72	319	eP	Pn	05 05 45.3	+0.7
AVH				eS	Sn	05 05 56.6	+1.6
KRER	Koryakskii	0.74	322	eP	Pn	05 05 45.5	+0.5
KRER				eS	Sn	05 05 57.1	+1.4
KOK	Koryaka	0.78	317	eP	Pn	05 05 45.9	+0.5
MTVR	Mutnovka	0.85	254	eP	Pn	05 05 46.7	+0.4
KRMR	Karymshinskiy	0.85	278	i P	Pn	05 05 45.6	-0.5
KRMR				eS	Sn	05 05 57.4	-0.4
GRL	Gorelyy	0.90	260	eP	Pn	05 05 47.6	+0.7
GRL				eS	Sn	05 06 00.7	+1.6
ASAK	Asacha	1.04	252	eP	Pn	05 05 49.8	+1.0
ASAK				eS	Sn	05 06 04.5	+2.0
PETK	Petropavlovsk-	1.17	290	P	Pn	05 05 51.0	+0.7
	220nm,0.3s,baz=100,slow=19,SNR=1368						
PETK				S	Sn	05 06 06.2	+0.9
	90nm,0.3s,baz=93,slow=26,SNR=6.1						
KDTR	Khodutka, Kamc	1.27	225	eP	Pn	05 05 52.5	+0.8
KDTR				eS	Sn	05 06 08.3	+0.5
APC	Apacha	1.45	279	eP	Pn	05 05 55.2	+1.1
APC				eS	Sn	05 06 13.4	+1.4
PAU	Pauzhetka	2.09	234	eP	Pn	05 06 04.6	+1.8
PAU				eS	Sn	05 06 30.5	+2.8
KZV	Kizimen	2.44	11	eP	Pn	05 06 09.1	+1.3
KZV				eS	Sn	05 06 37.3	+0.8
TUMD	Tumrok D	2.54	11	eP	Pn	05 06 10.9	+1.9
TUMR	Tumrok	2.59	8	eP	Pn	05 06 11.5	+1.7
KMNR	Kamenistaya	3.07	8	eP	Pn	05 06 17.7	+1.4
ESO	Esso	3.25	352	eP	Pn	05 06 19.4	+0.7
KOZ	Kozyrevsk	3.35	3	eP	Pn	05 06 21.7	+1.6
ZLN	Zelenaya	3.39	12	eP	Pn	05 06 23.0	+2.3
KRSR	Krestovskiy	3.56	9	eP	Pn	05 06 23.9	+0.9
SRDR	Sredinnyy	3.60	2	eP	Pn	05 06 24.9	+1.3
BDR	Baidarnaya	3.98	14	eP	Pn	05 06 32.0	+3.3
BDR				eS	Sn	05 07 16.8	+2.7
KBTR	Krutoberegovo	3.99	28	eP	Pn	05 06 31.2	+2.4
SMKR	Semkarok	4.03	16	P	Pn	05 06 31.4	+1.9
SRKR	Sorokina	4.05	13	eP	Pn	05 06 32.8	+3.0
SRKR				eS	Sn	05 07 18.5	+2.5
MA2	Magadan	8.42	328	LR	LR	05 10 48.7	
	comp=Z,49nm,19.8s,baz=274,slow=39						
ASAJ	Asahikawa	14.13	239	P	Pn	05 08 50.6	+3.2
	0.4nm,0.3s,baz=56,slow=13,SNR=3.9						
TIXI	Tiksi	23.27	336	LR	LR	05 20 52.4	
	comp=Z,41nm,18.5s,baz=64,slow=40						
ILAR	Eielson Array	29.32	45	P	P	05 11 27.3	0.0
	0.7nm,0.9s,baz=263,slow=8.7,SNR=6.3						
H11N2	WAKE ISLAND Hy	33.42	167	T	T	05 47 54.0	
	baz=352,slow=76,SNR=20						
H11N3	WAKE ISLAND Hy	33.44	167	T	T	05 47 59.1	
	baz=352,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	33.44	167	T	T	05 47 48.9	
	baz=352,slow=76,SNR=20						
INK	Inuvik	34.38	37	P	P	05 12 11.4	-0.1
	0.6nm,0.4s,baz=264,slow=6.3,SNR=4.6						
H11S1	WAKE ISLAND Hy	34.60	168	T	T	05 49 17.3	
	baz=354,slow=74,SNR=2.3						
H11S3	WAKE ISLAND Hy	34.62	168	T	T	05 49 18.5	
	baz=92,slow=74,SNR=16						
H11S2	WAKE ISLAND Hy	34.62	168	T	T	05 49 19.1	
YKA	Yellowknife Ar	43.67	42	P	P	05 13 27.2	-1.9
	0.3nm,0.8s,baz=298,slow=7.9,SNR=4.0						
MKAR	Makanchi Array	48.00	296	P	P	05 14 00.7	-2.7
	0.3nm,0.5s,baz=58,slow=6.8,SNR=10						
PDAR	Pinedale Array	58.01	60	P	P	05 15 17.9	+0.5
	0.2nm,0.5s,baz=336,slow=3.3,SNR=3.7						
FINES	FINESS Array B	60.32	336	P	P	05 15 30.9	-1.9
	0.8nm,0.8s,baz=41,slow=13,SNR=4.3						
NOA	NORSAR Array B	63.80	343	P	P	05 15 53.9	-2.3
	0.4nm,0.6s,baz=14,slow=5.5,SNR=2.7						
TXAR	Lajitas Array	71.10	66	P	P	05 16 43.4	+0.6
	0.5nm,0.5s,baz=323,slow=5.7,SNR=4.5						
GERES	GERESS Array B	74.72	337	P	P	05 17 02.9	-1.1
	0.4nm,0.4s,baz=37,slow=6.7,SNR=3.6						

*JMA **15** 05:26:08.7±0.1, 24°.52N×121°.84E, h67km±2km, M2.2*
*TAP **15** 05:26:09.1, 24°.55N×121°.80E, h69km, ML3.1, B*
ISC 15 05:26:09.6±1.3**, 24°.54N**±0°.03×**121°.86E**±0°.02**, h66km**±6km**, n75, σ0s.85**/139**, 7C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.07	352	⇑iP	Pn	05 26 19.4	+0.1
	baz=45						
TWC				S	Sn	05 26 27.1	+0.7
	baz=45						
ENA	Nanau	0.15	224	P	Pn	05 26 19.4	-0.2
	baz=199						
ENA				eS	Sn	05 26 27.5	+0.7
	baz=199						
EOS1	EOS1	0.24	87	eP	Pn	05 26 20.8	+0.8
	baz=90						
EOS1				eS	Sn	05 26 30.1	+2.6
	baz=90						
ILA	Ilan	0.25	336	eS	Sn	05 26 29.2	+1.6
	baz=349						
TWE	Neicheng	0.25	316	P	Pn	05 26 20.3	+0.2
	baz=327						
TWE				eS	Sn	05 26 28.8	+1.2
	baz=327						
ENTT	Nioudou	0.29	291	⇑iP	Pn	05 26 20.2	-0.1
	baz=292						
ENTT				eS	Sn	05 26 28.3	+0.2
	baz=292						
SLBB	Yuanshan	0.30	316	P	Pn	05 26 20.5	+0.1
	baz=323						
SLBB				eS	Sn	05 26 28.4	+0.2
	baz=323						
NTC	Toucheng	0.32	355	P	Pn	05 26 20.9	+0.4
	baz=5.0						
NTC				eS	Sn	05 26 29.4	+1.0
	baz=5.0						
NDT	Datong Townshi	0.32	281	i P	Pn	05 26 20.4	-0.1
	baz=280						
NDT				eS	Sn	05 26 28.6	+0.1
	baz=280						
NWLT	Wulai	0.40	306	P	Pn	05 26 20.8	-0.4
	baz=309						
NWLT				eS	Sn	05 26 29.3	-0.4
	baz=309						
TIPB	Shuangxi	0.43	356	P	Pn	05 26 21.7	+0.2
	baz=3.0						
TIPB				eS	Sn	05 26 30.7	+0.5
	baz=3.0						
NACB	Ninganchiao	0.44	214	⇑iP	Pn	05 26 20.5	-1.0
	baz=206						
NACB				eS	Sn	05 26 29.1	-1.0
	baz=206						
NNSB	Datong	0.45	256	P	Pn	05 26 21.3	-0.4
	baz=251						
NNSB				eS	Sn	05 26 30.0	-0.6
	baz=251						
NNSH	Datong	0.45	256	P	Pn	05 26 21.4	-0.3
	baz=251						
NNSH				S	Sn	05 26 30.0	-0.6
	baz=251						
NNS	Nan Shan	0.45	258	⇑iP	Pn	05 26 21.4	-0.4
	baz=253						
NNS				eS	Sn	05 26 30.4	-0.2
	baz=253						
YHNB	Yeheng	0.46	287	⇑iP	Pn	05 26 21.2	-0.5
	baz=286						
YHNB				S	Sn	05 26 29.9	-0.8
	baz=286						
ETLH	Xiulin Townshi	0.48	226	eP	Pn	05 26 21.4	-0.6
	baz=219						
ETLH				eS	Sn	05 26 29.9	-1.1
	baz=219						
NSK	Sanguang	0.48	287	⇑iP	Pn	05 26 21.3	-0.6
	baz=286						
NSK				eS	Sn	05 26 30.0	-0.9
	baz=286						
TWB1	Santiao Chiao	0.48	14	P	Pn	05 26 21.7	-0.2
	baz=21						
TWB1				S	Sn	05 26 31.2	+0.3
	baz=21						
TWA	Mucha	0.51	330	⇑iP	Pn	05 26 21.9	-0.3
	baz=336						
TWA				S	Sn	05 26 31.4	0.0
	baz=336						
TWD	Chiawan	0.52	208	eP	Pn	05 26 21.3	-0.9
	baz=200						
TWD				eS	Sn	05 26 30.4	-1.0
	baz=200						
NHDH	Xindian Distri	0.52	324	P	Pn	05 26 22.0	-0.3
	baz=328						
NHDH				S	Sn	05 26 31.2	-0.4
	baz=328						
NWF	Wu-fen Shan	0.54	352	eP	Pn	05 26 22.7	+0.1
	baz=358						
NWF				eS	Sn	05 26 32.3	+0.3
	baz=358						
WFSB	Wu-fen Shan	0.54	352	eP	Pn	05 26 22.5	+0.1
	baz=358						
WFSB				eS	Sn	05 26 32.8	+1.0
	baz=358						
TATO	Taipei	0.55	322	eP	Pn	05 26 21.8	-0.8
	baz=326						
TATO				eS	Sn	05 26 31.6	-0.5
	baz=326						
WLTB	Daxi	0.64	300	eS	Sn	05 26 33.7	0.0
	baz=301						
YM01	YM01	0.66	337	eP	Pn	05 26 23.6	-0.3
	baz=340						
YM01				eS	Sn	05 26 34.1	-0.2
	baz=340						
WHF	Hehuan Shan	0.67	234	eP	Pn	05 26 24.1	-0.3
	baz=229						
WHF				eS	Sn	05 26 34.6	-0.5
	baz=229						
YM10	YM10	0.67	336	eP	Pn	05 26 23.7	-0.3

baz=340
YM10 eS Sn 05 26 34.4 -0.1
baz=340
YM11 YM11 0.68 338 P Pn 05 26 23.7 -0.4
baz=341
YM11 eS Sn 05 26 34.5 -0.2
baz=341
YM04 YM04 0.68 334 P Pn 05 26 23.6 -0.5
baz=338
YM04 eS Sn 05 26 34.1 -0.6
baz=338
TWS1 Kuangyinshan 0.69 324 P Pn 05 26 23.8 -0.3
baz=328
TWS1 eS Sn 05 26 35.1 +0.3
baz=328
YM08 YM08 0.69 339 eP Pn 05 26 23.7 -0.5
baz=343
YM08 eS Sn 05 26 34.2 -0.7
baz=343
TDCB Techi 0.70 246 P Pn 05 26 24.3 -0.1
baz=242
TDCB S Sn 05 26 35.1 -0.2
baz=242
YM03 YM03 0.70 336 eS Sn 05 26 34.9 -0.3
baz=339
NTST Danshui 0.73 329 eP Pn 05 26 24.4 -0.1
baz=332
NTST eS Sn 05 26 36.2 +0.6
baz=332
NCU National Centr 0.75 305 eS Sn 05 26 35.5 -0.4
baz=306
NCUH Zhongli 0.75 305 eS Sn 05 26 35.4 -0.6
baz=306
TWY Chenhua 0.77 342 eP Pn 05 26 25.3 +0.2
baz=346
TWY eS Sn 05 26 37.4 +1.0
baz=346
LIOB Emei 0.78 278 eP Pn 05 26 24.6 -0.5
baz=277
LIOB eS Sn 05 26 36.3 -0.4
baz=277
CHGB Renai 0.79 233 eP Pn 05 26 25.5 0.0
baz=229
CHGB eS Sn 05 26 37.5 +0.3
baz=229
NSTT Nanjuang 0.79 277 eP Pn 05 26 24.8 -0.5
baz=276
NSTT eS Sn 05 26 36.0 -0.9
baz=276
ESL Shilin 0.82 208 eS Sn 05 26 36.0 -1.5
baz=203
OWD Renai 0.85 227 eP Pn 05 26 25.5 -0.8
baz=223
OWD eS Sn 05 26 37.4 -1.1
baz=223
NHW Xinwu Township 0.87 302 eP Pn 05 26 25.7 -0.6
baz=303
NHW eS Sn 05 26 38.1 -0.5
baz=303
WHP Taichung City 0.87 253 eP Pn 05 26 26.5 +0.1
baz=250
WHP eS Sn 05 26 38.8 0.0
baz=250
NMLH Miaoli 0.97 270 P Pn 05 26 27.1 -0.5
baz=269
NMLH eS Sn 05 26 40.7 -0.2
baz=269
JYNG Yonagunijimaku 0.99 95 P Pn 05 26 27.5 -0.3
JYNG S Sn 05 26 40.6 -0.7
NSY Sanyi 1.01 263 eP Pn 05 26 27.9 -0.2
baz=261
NSY eS Sn 05 26 41.8 +0.1
baz=261
VWDT VWDT 1.02 220 P Pn 05 26 28.0 -0.2
baz=217
VWDT eS Sn 05 26 41.6 -0.4
baz=217
YOJ Yonaguni jima 1.05 94 P Pn 05 26 28.1 -0.5
YOJ S Sn 05 26 41.9 -0.8
TYC Yuchr 1.11 236 eP Pn 05 26 29.6 +0.2
baz=232
TYC eS Sn 05 26 44.4 +0.3
baz=232
HGSD Ruisui 1.11 201 eP Pn 05 26 30.6 +1.1
baz=197
SSLB Suanglung 1.11 228 eP Pn 05 26 29.6 +0.2
baz=225
SSLB eS Sn 05 26 45.8 +1.6
baz=225
WDJ Dajia District 1.13 261 eS Sn 05 26 43.8 -0.7
baz=259
EHY Hungye 1.14 206 eS Sn 05 26 42.5 -2.2
baz=202
WHYT Xinyi Township 1.25 228 eP Pn 05 26 31.3 +0.2
baz=225
WHYT eS Sn 05 26 49.1 +1.9
baz=225
YULB Yu-li 1.25 204 eP Pn 05 26 29.6 -1.6
baz=201
WJS Zhushan 1.26 236 eP Pn 05 26 31.6 +0.3
baz=233
WJS eS Sn 05 26 49.4 +2.0
baz=233
WNT Mingjian 1.26 239 eS Sn 05 26 48.0 +0.5
baz=236
TWF1 Yuli 1.29 204 eP Pn 05 26 30.9 -0.8
baz=200
TWF1 eS Sn 05 26 46.1 -2.1
baz=200
ALS Alishan 1.41 224 P Pn 05 26 34.1 +0.6
baz=220
ALS eS Sn 05 26 52.9 +1.5
baz=220
CHN5 Tsauling 1.43 229 eP Pn 05 26 33.9 +0.3
baz=227
CHN5 eS Sn 05 26 52.5 +0.8
baz=227
FULB Fuli 1.43 201 eP Pn 05 26 33.3 -0.3
baz=198
FULB eS Sn 05 26 51.1 -0.4
baz=198
CHN4 Tsaushan 1.66 225 eP Pn 05 26 36.5 -0.1
baz=222
CHN4 eS Sn 05 26 59.3 +2.4
baz=222
TPUB Ta-pu 1.67 223 eP Pn 05 26 36.8 0.0
baz=220
TPUB eS Sn 05 26 58.9 +1.6
baz=220
IRIF Iriomote-Funau 1.72 96 P Pn 05 26 36.7 -0.7
IRIF S Sn 05 26 57.6 -0.8
WTP Ta-pu 1.72 222 eP Pn 05 26 38.0 +0.5
baz=219
WTP eS Sn 05 27 01.2 +2.7
baz=219
TWK Hsinying 1.78 225 eP Pn 05 26 38.1 -0.2
baz=222
TWK eS Sn 05 27 02.5 +2.4
baz=222
CHN1 Nanshi 1.82 222 eP Pn 05 26 38.3 -0.5
baz=220
CHN1 eS Sn 05 27 02.9 +2.0
baz=220
HATJ Hateruma jima 1.84 105 P Pn 05 26 39.6 +0.6
HATJ S Sn 05 27 02.0 +0.7
JKRS Kuro-shima 1.98 98 P Pn 05 26 41.0 +0.1
JKRS eS Sn 05 27 04.7 -0.1
JIJ Ishigaki jima 2.09 94 P Pn 05 26 41.8 -0.6
JIJ eS Sn 05 27 05.8 -1.6
JISG Ishigakijimahi 2.23 88 P Pn 05 26 44.0 -0.3
JISG S Sn 05 27 11.1 +0.3
JTJ Tarama 2.59 87 P Pn 05 26 49.0 -0.2
JTJ S Sn 05 27 20.1 +0.6

KRNET 15 05:57:07.6±0.1, 40.37N×76.62E, h15km, mb3.6
NNC 15 05:57:12.2±2.1, 40.46N×76.58E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=15.6km s-min=11.3km az=152.0
SOME 15 05:57:14.5, 40.62N×76.70E, h5km
ISC 15 05:57:08.8±1.8, 40.44N±0.06×76.65E±0.03, h9km±12km, n71, σ1.67/109, 32C-10D, Kyrgyzstan-Xinjiang border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NRN Naryn 1.11 334⇑iP Pg 05 57 29.9 -0.3
baz=35
NRN ⇑iS Sn 05 57 46.1 -0.4
baz=35
KDJ Kajisay 1.74 13⇓iP Pb 05 57 41.3 +0.3
baz=14
KDJ ⇓iS Sg 05 58 06.2 +1.5
baz=14
ULHL Ulahol 1.83 350⇓iP Pb 05 57 43.0 +0.3
baz=52
ULHL ⇓iS Sg 05 58 09.1 +1.4
baz=52
ULHL Ulahol 1.83 350 P Pg 05 57 44.3 +0.3
SNR=12
KZA Kyzart 1.95 328⇑iP Pb 05 57 45.0 +0.2
baz=29
KZA ⇑iS Sg 05 58 12.4 +0.9
baz=29
KZA Kyzart 1.95 328 P Pg 05 57 45.3 -0.9
SNR=65
BOOM Boomskoye usch 2.12 346⇑iP Pb 05 57 47.4 -0.1
baz=47
BOOM ⇑iS Sb 05 58 16.0 +2.0
baz=47
UCH Uchtor 2.41 319⇑iP Pb 05 57 51.4 -1.2
baz=20
UCH ⇑iS Sb 05 58 23.3 +0.8
baz=20
UCH Uchtor 2.41 319 P Pb 05 57 52.1 -0.5
SNR=27
ANVS Anan'yevo 2.46 18⇓iP Pb 05 57 52.1 -1.3
baz=18
ANVS ⇓iS Sb 05 58 24.4 +0.5
baz=18
KBK Karagaybulak 2.56 331⇓iP Pb 05 57 53.5 -1.5
baz=32
KBK ⇓iS Sb 05 58 26.7 +0.1
baz=32
KBK Karagaybulak 2.56 331 P Pb 05 57 54.4 -0.6
SNR=19
IZV Izvestkoviy 2.59 359 eP Pg 05 57 59.2 +0.7
34nm,0.4s
IZV eS Sg 05 58 31.6 -0.6
69nm,0.4s
IZV Izvestkoviy 2.59 359 Pg Pg 05 57 59.3 +0.7
34nm,0.4s
IZV Lg Lg 05 58 31.6
69nm,0.4s
TNSS Tian-Shan 2.61 5 eP Pg 05 58 00.2 +1.4
49nm,0.6s
TNSS eS Sg 05 58 33.6 +1.0
44nm,0.4s
TNSS Tian-Shan 2.61 5 Pg Pg 05 58 00.5 +1.7
49nm,0.7s
TNSS Lg Lg 05 58 33.4
44nm,0.4s
KST Kastek 2.65 349 eP Pg 05 58 01.5 +1.9
14nm,0.3s
KST eS Sg 05 58 35.5 +1.4
71nm,0.5s
KST Kastek 2.65 349 Pg Pg 05 58 01.5 +1.9
14nm,0.3s
KST Lg Lg 05 58 35.4
71nm,0.5s
MTBS Maitube 2.69 357 eP Pg 05 58 01.4 +0.9
22nm,0.3s
MTBS eS Sg 05 58 35.2 -0.2
35nm,0.4s
MTBS Maitube 2.69 357 Pg Pg 05 58 01.3 +0.9
22nm,0.3s
MTBS Lg Lg 05 58 34.9
35nm,0.4s
AAK Ala-Archa 2.73 324⇑iP Pb 05 57 55.7 -2.2
baz=26
AAK ⇑iS Sb 05 58 30.8 -0.7
baz=26
AAK Ala-Archa 2.73 324 P Pb 05 57 57.8 -0.1
SNR=9.8
AAK Ala-Archa 2.73 324 ⇑Pn Pb 05 57 56.6 -1.3
34nm,0.5s
AAK ⇑Lg Lg 05 58 37.3
154nm,1.1s
MDOK Medeo 2.74 6 eP Pg 05 58 01.4 +0.1
27nm,0.5s
MDOK eS Sg 05 58 35.7 -1.1
126nm,0.7s
MDOK Medeo 2.74 6 Pg Pg 05 58 02.0 +0.6
20nm,0.5s
MDOK Lg Lg 05 58 42.5
111nm,0.6s
MDOK Medeo 2.74 6 Pg Pg 05 58 01.4 +0.1
27nm,0.5s
MDOK Lg Lg 05 58 35.7
71nm,0.4s
KNDC Almaty 2.79 5 ⇑Pg Pg 05 58 06.1 +3.9
19nm,0.4s
KNDC ⇑Lg Lg 05 58 41.7
218nm,0.8s
AML Almayashu 2.80 308⇑iP Pb 05 57 56.7 -2.5
baz=10.0
AML ⇑iS Sb 05 58 32.3 -1.4
baz=10.0
AML Almayashu 2.80 308 P Pb 05 57 57.4 -1.8
SNR=142
FRU1 Bishkek 2.81 328⇑iP Pb 05 57 56.8 -2.5
baz=29
FRU1 ⇑iS Sb 05 58 32.4 -1.4
baz=29
KOTS Kotyrbulak 2.81 7 eP Pg 05 58 04.5 +1.7
47nm,0.4s
KOTS eS Sg 05 58 41.1 +1.9
183nm,0.6s
KOTS Kotyrbulak 2.81 7 Pg Pg 05 58 04.4 +1.7
34nm,0.3s
KOTS Lg Lg 05 58 40.5
111nm,0.3s
DGS Degeres 2.88 347 eP Pg 05 58 06.4 +2.5
24nm,0.5s
DGS eS Sg 05 58 43.8 +2.5
71nm,0.5s
DGS Degeres 2.88 347 Pg Pg 05 58 06.2 +2.2
24nm,0.5s
DGS Lg Lg 05 58 43.4
71nm,0.5s
ARSB Arslanbob 2.92 289⇑iP Pb 05 57 57.6 -3.5
baz=90
ARSB ⇑iS Sb 05 58 33.9 -3.1
baz=90
CHMS Chumysh 2.93 332⇑iP Pb 05 57 58.4 -2.8
baz=33
CHMS ⇑iS Sb 05 58 35.3 -1.8
baz=33
CHMS Chumysh 2.93 332 P Pb 05 57 59.8 -1.4
SNR=9.3
CHMS Chumysh 2.93 332 ⇑Pn Pb 05 57 59.4 -1.8
30nm,0.8s
CHMS ⇑Lg Lg 05 58 45.0
29nm,0.5s
ZHN Zhinishke 3.04 25 eP Pg 05 58 08.2 +1.2
20nm,0.6s
ZHN eS Sg 05 58 46.5 +0.2
14nm,0.3s
ZHN Zhinishke 3.04 25 Pg Pg 05 58 08.0 +1.0
20nm,0.6s
ZHN Lg Lg 05 58 46.3
14nm,0.3s
EKS2 Erkin-Say 3.10 317⇑iP Pb 05 58 00.5 -3.6
baz=18
EKS2 ⇑iS Sb 05 58 39.3 -2.8
baz=18
EKS2 Erkin-Say 3.10 317 P Pb 05 58 02.3 -1.9
SNR=12
UZB Uzynbulak 3.23 32 eP Pg 05 58 11.0 +0.1
12nm,0.6s
UZB eS Sg 05 58 51.6 -1.2
22nm,0.7s
UZB Uzynbulak 3.23 32 Pg Pg 05 58 10.6 -0.2
12nm,0.6s
UZB Lg Lg 05 58 50.8
22nm,0.7s
KURS Kuram 3.25 20 eP Pg 05 58 11.1 0.0
8.6nm,0.6s
KURS eS Sg 05 58 52.1 -1.1
38nm,0.7s
KURS Kuram 3.25 20 Pg Pg 05 58 11.1 0.0
8.6nm,0.6s
KURS Lg Lg 05 58 52.2
38nm,0.7s
USP Ospenovka 3.25 331⇑iP Pb 05 58 02.9 -3.8
baz=32
USP ⇑iS Sb 05 58 43.1 -3.3
baz=32
USP Ospenovka 3.25 331 P Pb 05 58 04.0 -2.7
SNR=8.7
KTBS Karatobe 3.27 0 eP Pg 05 58 12.5 +1.0
15nm,0.5s
KTBS eS Sg 05 58 54.0 +0.2
74nm,0.4s
KTBS Karatobe 3.27 0 Pg Pg 05 58 12.2 +0.7
15nm,0.5s
KTBS Lg Lg 05 58 54.1
74nm,0.4s
KRBS Karabastau 3.33 348 eP Pg 05 58 13.2 +0.4
19nm,0.4s
KRBS eS Sg 05 58 56.1 +0.1
28nm,0.5s
KRBS Karabastau 3.33 348 Pg Pg 05 58 13.5 +0.8
18nm,0.4s
KRBS Lg Lg 05 58 56.1
11nm,0.4s
SGDS Sogindy 3.37 334 Pg Pg 05 58 13.7 +0.3
24nm,0.4s
SGDS Lg Lg 05 58 56.1
18nm,0.5s
KPKS Kokpek 3.38 26 eP Pg 05 58 13.0 -0.6
30nm,0.5s
KPKS eS Sg 05 58 55.3 -2.2
52nm,0.6s
CHKK Chushkaly 3.42 4 eP Pg 05 58 14.4 0.0
18nm,0.5s
CHKK eS Sg 05 58 57.5 -1.2
36nm,0.2s
CHKK Chushkaly 3.42 4 Pg Pg 05 58 14.4 0.0
18nm,0.5s
CHKK Lg Lg 05 58 57.5
36nm,0.2s
SHLS Shalkode 3.43 37 eP Pg 05 58 17.5 +2.9
21nm,0.3s
SHLS eS Sg 05 59 02.8 +3.6
32nm,0.6s
MRKS Merke 3.45 313 eP Pg 05 58 16.3 +1.4
25nm,0.3s
MRKS eS Sg 05 59 00.9 +1.2
25nm,0.3s
MRKS Merke 3.45 313 Pg Pg 05 58 15.6 +0.6
25nm,0.3s
MRKS Lg Lg 05 58 59.3
25nm,0.3s
KUU Kurty 3.46 356 eP Pg 05 58 14.9 -0.2
9.8nm,0.6s
KUU eS Sg 05 58 58.1 -1.8
40nm,0.4s
KUU Kurty 3.46 356 Pg Pg 05 58 14.9 -0.2
9.8nm,0.6s
KUU Lg Lg 05 58 58.1
40nm,0.4s
PDGK Podgornoye 3.58 35 ⇓Pg Pg 05 58 17.7 +0.2
12nm,0.6s
PDGK ⇑Lg Lg 05 59 08.1
47nm,1.0s
ARXS Arharly 3.87 13 eP Pg 05 58 22.0 -1.0
7.2nm,0.5s
ARXS eS Sg 05 59 10.5 -2.7
52nm,0.5s
ARXS Arharly 3.87 13 Pg Pg 05 58 22.0 -1.0
6.8nm,0.7s
ARXS Lg Lg 05 59 10.5
51nm,0.5s
BTK Batken 4.48 267⇑iP Pn 05 58 18.6 +1.6
baz=68
BTK ⇑iS Sn 05 59 10.9 +1.6
baz=68
DJR Jarkent 4.53 30 eP Pg 05 58 33.8 -1.9
0.7nm,0.1s
DJR eS Sg 05 59 31.1 -3.3
6.6nm,0.4s
DJR Jarkent 4.53 30 Pg Pg 05 58 33.8 -1.9
0.7nm,0.1s
DJR Lg Lg 05 59 30.8
6.6nm,0.4s
BTLS Baital 4.98 338 eP Pg 05 58 43.9 -0.3
1.3nm,0.5s
BTLS eS Sg 05 59 48.7 -0.1
6.5nm,0.3s
BTLS Baital 4.98 338 Pg Pg 05 58 42.9 -1.4
1.6nm,0.3s
BTLS Lg Lg 05 59 47.3
6.5nm,0.3s
KAPS Kapalarasan 5.24 21 eP Pg 05 58 47.9 -1.2
5.0nm,0.7s
KAPS eS Sg 05 59 55.4 -1.5
12nm,0.8s
KK31 Karatay Array 5.31 302 ⇑Pn Pn 05 58 30.9 +2.6
0.7nm,0.5s,baz=135,slow=13,SNR=8.2
KK31 Pg Pb 05 58 44.1 +2.4
2.6nm,0.5s,baz=83,slow=19,SNR=3.6
KK31 ⇓Lg Lg 05 59 56.7
4.9nm,0.7s,baz=131,slow=30,SNR=5.0

IDC 15 06:02:13.8±2.9, 2.94N×128.46E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/34, mbtmp3.6/3, Error ellipse: s-maj=221.5km s-min=25.6km az=68.0, Halmahera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 23.46 166 P P 06 07 25.8 +0.6
1.3nm,0.3s,baz=345,slow=10.0,SNR=7.5
ASAR Alice Springs 26.97 169 P P 06 07 56.6 -0.8
0.4nm,0.5s,baz=354,slow=7.9,SNR=12
MKAR Makanchi Array 59.19 325 P P 06 12 17.0 +0.2
0.2nm,0.4s,baz=108,slow=8.3,SNR=6.0

SNET 15 06:02:39.8±0.9, 13.68N×90.65W, h26km±5km, ML3.4
GCG 15 06:02:40.5±0.7, 13.57N×90.71W, h23km±13km, MD3.8
ISC 15 06:02:38.8±1.6, 13.58N±0.09×90.61W±0.06, h10km, n20, σ1.25/22, 1C-6D, Near coast of Guatemala

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
IXG Ixpaco 0.61 16 eP Pn 06 02 53.7 0.0
FAME Alcaldia de Sa 0.64 66⇓eP Pg 06 02 44.9 -6.2
FAME eS Sg 06 02 55.2 -4.2
PCG Pacaya 0.80 0 eP Pn 06 02 56.2 -0.2
FUG Fuego 3 0.89 345 eP Pn 06 02 57.2 -0.3
RTR El Retiro 0.99 72⇓iP Pg 06 02 58.9 +1.0
CEVE Cerro Verde 0.99 76 eP Pg 06 02 58.6 +0.7
CEVE IAML 06 03 17.7
comp=Z,2μm,0.2s
SBLS San Blas 0.99 75⇓iP Pg 06 02 58.6 +0.7
SBLS eS Sb 06 03 13.1 +1.6
SNJE San Jose 1.02 74⇓iP Pg 06 02 59.0 +0.6
NBG Las Nubes 1.03 14 eP Pn 06 03 00.4 +0.8
NBG eS Sn 06 03 16.3 +2.1
ERG Entre ros, C 1.26 313 eP Pb 06 03 02.2 -0.5
UEES Universidad Ev 1.34 84 eP Pn 06 03 03.6 -0.1
SNET Serv Nac Est T 1.35 85 eP Pn 06 03 03.7 -0.1
SNET IAML 06 03 29.9
comp=Z,503nm,0.2s
OPAM Oficina de Pla 1.38 85⇑eP Pn 06 03 04.5 +0.3
OPAM IAML 06 03 28.0
comp=Z,451nm,0.2s
STG3 Santiaguito 3, 1.46 320 eP Pn 06 03 04.8 -0.5
MTO3 Montecristo 1.46 56⇓iP Pn 06 03 04.4 -1.1
PAVA Las Pavas 1.63 85 eP Pn 06 03 07.4 -0.3
COEG Centro de Oper 1.68 89⇓eP Pn 06 03 08.7 +0.3
COEG IAML 06 03 36.1
comp=Z,362nm,0.3s
COEB Comit de Eme 2.03 92 eP Pn 06 03 13.1 0.0
COEB IAML 06 03 47.8
comp=Z,206nm,0.3s
LCND La Caada 2.66 96 eP Pn 06 03 21.6 -0.1
CNCH Conchagua 2.72 96 eP Pn 06 03 22.6 -0.1

IDC 15 06:16:12.3±2.1, 1.89N×126.62E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/44, mbtmp3.8/3, Error ellipse: s-maj=192.6km s-min=23.3km az=66.0
NEIC 15 06:16:22.8±1.3, 1.5N±0.1×126.1E±0.2, h80km±10km, mb4.1/6, Error ellipse: s-maj=28.2km s-min=13.1km az=60.0
ISC 15 06:16:20.5±1.1, 1.6N±0.1×126.0E±0.2, h54km, n12,

σ1§17/12,mb4.0/7,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.59	121	Pn	Pn	06 16 47.8	+1.4
SOEI	Soe	11.40	189	Pn	Pn	06 19 01.9	+1.1
WB0	Warramunga Arr	22.77	159	P	P	06 21 17.4	-1.1
WB0				IAmb	IAmb	06 21 20.1	
	comp=Z,14nm,1.5s						
WRA	Warramunga Arr	22.91	159	P	P	06 21 18.6	-1.5
	comp=Z,2.5nm,0.8s,baz=340,slow=11,SNR=7.3						
WR0	Warramunga Arr	23.00	159	P	P	06 21 19.4	-1.5
WR0				IAmb	IAmb	06 21 29.4	
	comp=Z,4.0nm,1.1s						
AS31	Alice Springs	26.25	163	P	P	06 21 50.9	0.0
ASAR	Alice Springs	26.26	163	P	P	06 21 50.5	-0.3
	comp=Z,0.6nm,0.4s,baz=344,slow=7.4,SNR=19						
BBOO	Buckleboo	35.51	165	P	P	06 23 12.3	0.0
MK31	Makanchi Array	58.90	326	P	P	06 26 14.6	+0.6
MK31				IAmb	IAmb	06 26 26.6	
	comp=Z,1.9nm,1.4s						
MKAR	Makanchi Array	58.90	326	P	P	06 26 13.8	-0.2
	comp=Z,0.5nm,0.3s,baz=120,slow=7.8,SNR=17						
PLWZ	Palliser	61.88	140	P	P	06 26 32.7	-1.8
KURK	Kurchatov	63.15	328	P	P	06 26 43.2	+0.5
KURK				IAmb	IAmb	06 26 44.6	
	comp=Z,1.8nm,0.5s						

MAN 15 06:28:44.3, 5°08N×126°45E, h13km, mb4.6, ML3.5, MS3.4, Mindanao

ATH 15 06:42:21.8, 38°17N×20°39E, h12km, ML2.9/3, Error ellipse: s-maj=1.7km s-min=1.0km az=257.0
THE 15 06:42:22.0, 38°17N×20°35E, h9km, ML2.7/8, Error ellipse: s-maj=1.4km s-min=1.0km az=247.0
ISC 15 06:42:22.0±1.2, 38°17N±0°03×20°38E±0°05, h11km±4km, n33, σ0§44/55, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.01	359	P	Pg	06 42 23.7	-0.1
CHV1				S	Sg	06 42 25.1	0.0
KEF3	Kipouria, Keph	0.04	320	P	Pg	06 42 24.0	0.0
KEF3				S	Sg	06 42 25.6	+0.1
LXRA	Lixouri, Kepha	0.05	57	P	Pg	06 42 24.0	-0.1
LXRA				S	Sg	06 42 25.6	0.0
LXR1	Lixouri, Cepha	0.05	57	P	Pg	06 42 24.1	0.0
LXR1				S	Sg	06 42 25.6	0.0
ARGA	Argostoli. Kep	0.08	86	P	Pg	06 42 24.3	-0.1
ARGA				S	Sg	06 42 26.1	0.0
AGT1	Agia Thekli	0.08	1	P	Pg	06 42 24.4	0.0
AGT1				S	Sg	06 42 26.2	+0.1
KEF2	Argostoli. Kep	0.08	94	P	Pg	06 42 24.3	-0.1
ARG2	Argostoli	0.08	85	P	Pg	06 42 24.4	0.0
ARG2				S	Sg	06 42 27.5	+1.3
KEF4	Livadi, Kephal	0.09	21	P	Pg	06 42 24.5	0.0
KEF4				S	Sg	06 42 26.6	+0.2
KEF1	Kardakata, Kep	0.13	33	P	Pg	06 42 25.0	0.0
KEF1				S	Sg	06 42 26.9	-0.2
VLS	Valsamata	0.16	88	P	Pg	06 42 25.5	-0.1
VLS				S	Sg	06 42 28.1	-0.1
	8μm,0.1s						
VLS	Valsamata	0.16	88	P	Pg	06 42 25.3	-0.3
VLS				S	Sg	06 42 28.1	-0.1
VLS				AML	AML	06 42 28.2	
	comp=E,17230μm,0.1s						
VLS				AML	AML	06 42 28.8	
	comp=N,12069μm,0.2s						
FSK	Fiskardo	0.32	26	P	Pg	06 42 28.5	+0.1
FSK				S	Sg	06 42 33.4	+0.7
	comp=N,900nm,0.1s						
FSK	Fiskardo	0.32	26	P	Pg	06 42 28.0	-0.4
FSK				S	Sg	06 42 32.8	0.0
FSK				AML	AML	06 42 34.8	
	comp=N,1314μm,0.2s						
FSK				AML	AML	06 42 35.8	
	comp=E,2506μm,0.1s						
VLMS	Volimes, Zakyn	0.37	143	P	Pg	06 42 29.4	+0.1
VLMS				S	Sg	06 42 35.0	+0.8
VLMS				AML	AML	06 42 36.4	
	comp=E,8192μm,0.3s						
VLMS				AML	AML	06 42 38.9	
	comp=N,7197μm,0.4s						
EVGI	Lefkada island	0.50	26	P	Pg	06 42 31.6	-0.1
EVGI				S	Sb	06 42 39.4	-0.7
	comp=N,732nm,0.1s						
EVGI	Lefkada island	0.50	26	P	Pg	06 42 31.6	-0.1
EVGI				S	Sg	06 42 38.7	+0.4
MGNA	Meganis	0.58	33	P	Pg	06 42 32.9	-0.4
LKD2	Lefkada island	0.65	19	P	Pg	06 42 34.8	+0.1
LKD2				S	Sg	06 42 43.7	+0.4
	comp=N,350nm,0.3s						
LKD2	Lefkada island	0.65	19	P	Pg	06 42 34.5	-0.2
AST1	Astakos	0.67	56	P	Pg	06 42 34.6	-0.3
AST1				S	Sb	06 42 45.0	0.0
TSLK	Tsoukalades, L	0.69	18	P	Pb	06 42 36.0	0.0
TSLK				S	Sb	06 42 45.2	-0.3
	comp=N,255nm,0.3s						
PDO	Prodromos	0.76	56	P	Pg	06 42 37.0	+0.3
PDO				S	Sb	06 42 48.5	+0.8
	comp=N,952nm,0.4s						
AXS	Araxos	0.78	88	P	Pg	06 42 36.7	-0.4
RLS	Riolos of Patr	0.86	97	P	Pg	06 42 38.1	-0.5
PVO	Paravola	1.00	63	P	Pg	06 42 41.2	-0.1
PVO				S	Sn	06 42 57.0	+0.8
	comp=N,868nm,0.3s						
PVO	Paravola	1.00	63	P	Pg	06 42 41.0	-0.3
DRO	Drossia	1.07	101	P	Pg	06 42 41.9	-0.7
DRO	Drossia	1.07	101	P	Pg	06 42 41.4	-1.2
AMT	Artemida-Makis	1.23	121	P	Pg	06 42 45.6	0.0
ANX	Ano Chora	1.28	70	P	Pn	06 42 45.3	-0.7
SERG	Sergoula	1.34	79	P	Pn	06 42 46.5	-0.2
SERG				S	Sg	06 43 06.1	+1.0
	comp=N,210nm,0.2s						
KLV	Kalavryta, Ach	1.40	95	P	Pn	06 42 47.5	-0.1

IDC 15 07:04:30.2±5.9, 17°23S×177°92W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/29, mbtmp4.0/3, Error ellipse: s-maj=281.4km s-min=37.2km az=137.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.36	241	P	P	07 12 02.4	+0.7
	1.4nm,0.8s,baz=86,slow=13,SNR=3.0						
ASAR	Alice Springs	45.42	254	P	P	07 12 50.5	-0.7
	2.3nm,0.5s,baz=89,slow=8.1,SNR=49						
ILAR	Eielson Array	85.13	13	P	P	07 17 07.8	+0.1
	0.3nm,0.5s,baz=214,slow=5.5,SNR=4.4						

NNC 15 07:10:32.7±0.6, 50°03N×78°74E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=11.9km s-min=2.9km az=81.0, Suspected Mining explosion.
ASRS 15 07:10:35.6±0.3, 50°N±3°×7°9E±°, h10km, M3.6/7, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed
ISC 15 07:10:34.8±0.8, 50°08N±0°04×78°78E±0°05, h0km, n29, σ1§45/39, 10C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	0.57	344	⇑P	Pg	07 10 44.9	-0.8
	32nm,0.3s,baz=164,slow=17						
KURBB				⇑S	Sg	07 10 53.9	+0.9
	270nm,0.6s						
KURK	Kurchatov	0.65	351	⇑P	Pg	07 10 46.3	-0.9
	23nm,0.5s						
KURK				⇑S	Sg	07 10 55.3	-0.3
	53nm,0.6s						
MAKZ	Makanchi	3.90	146	⇑Pn	Pn	07 11 36.0	0.0
	0.3nm,0.3s						
MAKZ				⇓Pg	Pb	07 11 42.3	-2.2
	3.1nm,0.8s						
MAKZ				⇑Lg	Lg	07 12 33.9	
	11nm,0.5s						
MK31	Makanchi Array	4.03	143	⇑Pn	Pn	07 11 37.1	-0.7
	0.3nm,0.2s,baz=322,slow=9.8,SNR=160						
MK31				⇑Pg	Pb	07 11 44.6	-2.1
	0.8nm,0.2s,baz=325,slow=15,SNR=31						
MK31				⇑Lg	Lg	07 12 39.1	
	12nm,0.4s,baz=318,slow=30,SNR=13						
BSTK	Bystrovka, Nov	5.09	26	S	Sn	07 12 50.3	-1.3
NVS	Novosibirsk	5.49	28	P	Pn	07 12 00.2	+2.4
NVS				S	Sn	07 13 03.6	+2.0
NVSII	Novosibirsk	5.50	28	S	Sn	07 13 03.9	+2.3
DGZ	Jazzator, Alta	5.61	91	P	Pn	07 12 00.7	+1.2
DGZ				S	Sn	07 13 05.9	+1.1
CHBI	Chibit, Altay	5.61	84	P	Pn	07 11 59.9	+0.3
CHBI				S	Sn	07 13 05.5	+0.6
ELT	Eltsovka	5.63	53	P	Pn	07 12 00.5	+0.8
ELT				S	Sn	07 13 05.4	+0.4
AKAR	Aktash	5.69	84	P	Pn	07 12 01.7	+1.1
AKAR				S	Sn	07 13 06.8	+0.2
DJR	Jarkent	5.79	173	Pg	Pb	07 12 17.0	+0.4
	1.3nm,0.1s						
DJR				Lg	Lg	07 13 32.9	
	4.1nm,0.4s						
ARXS	Arharly	5.90	187	Pg	Pb	07 12 18.1	-0.5
	2.3nm,0.4s						
ARXS				Lg	Lg	07 13 35.1	
	14nm,0.4s						
ULGR	Ulagan, Altay	5.91	81	P	Pn	07 12 04.9	+1.3
ULGR				S	Sn	07 13 13.1	+1.2
BTLS	Baital	5.97	214	Pg	Pb	07 12 20.0	+0.3
	0.8nm,0.3s						
BTLS				Lg	Lg	07 13 38.1	
	4.2nm,0.3s						
BRVK	Borovoye	6.08	303	P	Pn	07 12 04.7	-1.2
BRVK				S	Sn	07 13 13.1	-2.9
BRVK	Borovoye	6.08	303	⇓Pn	Pn	07 12 04.3	-1.5
	2.5nm,1.0s						
BRVK				⇑Sn	Sn	07 13 15.1	-0.9
	5.2nm,0.5s						
BRVK				⇓Lg	Lg	07 13 47.5	
	5.1nm,0.6s						
CHKK	Chushkaly	6.34	192	Pg	Pb	07 12 26.5	+0.4
	1.2nm,0.1s						
CHKK				Lg	Lg	07 13 49.3	
	13nm,0.5s						
KUU	Kurty	6.41	196	Pg	Pb	07 12 29.0	+1.9
	1.9nm,0.3s						
KUU				Lg	Lg	07 13 53.0	
	5.4nm,0.5s						
KTBS	Karatobe	6.53	193	Pg	Pb	07 12 30.5	+1.3
	1.0nm,0.4s						
KTBS				Lg	Lg	07 13 55.6	
	27nm,0.6s						
KURS	Kuram	6.61	184	Pg	Pb	07 12 34.2	+3.7
	2.6nm,0.5s						
KURS				Lg	Lg	07 14 02.0	
	9.4nm,0.7s						
KRBS	Karabastau	6.73	200	Pg	Pb	07 12 35.3	+2.7
	1.5nm,0.3s						
KRBS				Lg	Lg	07 14 04.2	
	3.6nm,0.5s						
UZB	Uzynbulak	6.94	179	Pg	Pb	07 12 39.2	+3.0
	2.2nm,0.6s						
UZB				Lg	Lg	07 14 10.6	
	3.4nm,0.6s						
DGS	Degeres	7.14	198	Pg	Pb	07 12 40.1	+0.4
	3.4nm,0.6s						
DGS				Lg	Lg	07 14 12.4	
	24nm,0.6s						
TNSS	Tian-Shan	7.16	191	Pg	Pb	07 12 41.4	+1.3
	1.7nm,0.4s						
TNSS				Lg	Lg	07 14 14.3	
	4.3nm,0.5s						
KST	Kastek	7.30	196	Pg	Pb	07 12 46.3	+4.0
	0.7nm,0.1s						
KST				Lg	Lg	07 14 22.9	
	4.8nm,0.6s						
TEL	Teeli	7.34	78	S	Sn	07 13 47.2	0.0
VEH	Verkhnyaya Baz	7.85	62	S	Sn	07 14 00.5	+0.7
AAK	Ala-Archa	8.01	203	S	Sn	07 14 02.8	-1.1

NNC 15 07:20:21.7±10.0, 36°48N×81°19E, h0km, mb4.3, mpv3.7, Error ellipse: s-maj=96.6km s-min=77.5km az=73.0
IDC 15 07:20:32.5±7.2, 37°66N×83°57E, h0km, mb1 3.7/5, mb1mx3.3/69, mbtmp3.7/5, ML3.1/5, Error ellipse: s-maj=96.8km s-min=39.0km az=12.0
ISC 15 07:20:18.4±2.8, 36°3N±0°2×82°5E±0°1, h10km, n11, σ1§84/13, 6C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	7.37	343	⇑Pn	Pn	07 22 07.2	+1.1
	3.8nm,0.7s						
PDGK				⇓Sn	Sn	07 23 27.6	-2.2
	15nm,0.5s						
PDGK				⇑Lg	Lg	07 24 06.5	
	24nm,0.9s						
WMQ	Urumqi	8.49	26	ePn	Pn	07 22 22.8	+1.3
WMQ				Sn	Sn	07 23 56.0	-1.4
AAK	Ala-Archa	8.82	318	Pn	Pn	07 22 39.5	+13
	0.3nm,0.3s,baz=161,slow=13,SNR=4.1						
AAK				Pg	Pg	07 22 59.3	-7.9
	0.5nm,0.3s,baz=166,slow=15,SNR=4.9						
AAK				Lg	Lg	07 24 55.8	
	0.5nm,0.3s,baz=317,slow=17,SNR=2.9						
AAK	Ala-Archa	8.82	318	⇑Pg	Pg	07 22 50.4	-17
	2.8nm,0.7s						
AAK				⇑Lg	Lg	07 24 40.2	
	13nm,1.3s						
MK31	Makanchi Array	10.46	359	⇑Pn	Pn	07 22 49.0	+0.6
	5.6nm,0.8s,baz=187,slow=12,SNR=71						
MK31				⇑Sn	Sn	07 24 48.5	+2.7
	0.8nm,0.5s,baz=194,slow=24						
MKAR	Makanchi Array	10.46	359	Pn	Pn	07 22 49.2	+0.8
	1.0nm,0.3s,baz=179,slow=14,SNR=75						
MAKZ	Makanchi	10.48	358	⇓Pn	Pn	07 22 49.5	+0.8
	14nm,0.6s						
MAKZ				⇓Sn	Sn	07 24 45.9	-0.3
	4.9nm,1.2s						
KURBB	Kurchatov Arra	14.58	350	Pn	Pn	07 23 42.6	-2.0
	0.0nm,0.3s,baz=173,slow=12,SNR=13						
ZALV	Zalesovo Beam	17.70	5	Pn	Pn	07 24 22.3	-2.6
	0.2nm,0.3s,baz=186,slow=12,SNR=8.9						
BVAR	Borovoye Array	18.74	337	P	P	07 24 39.1	+1.9
	0.2nm,0.3s,baz=141,slow=9.3,SNR=7.1						
SONM	Songino Array	21.07	49	P	P	07 25 01.8	-1.0
	0.1nm,0.3s,baz=237,slow=12,SNR=9.0						

GII 15 07:31:07.9±0.0, 38°31N×20°34E, h10km
BJI 15 07:31:13.5±0.0, 38°30N×20°30E, h10km, mB5.2/39, mb4.8/56, Ms5.0/19, Ms7 4.7/15
IDC 15 07:31:15.5±0.5, 38°37N×20°41E, h0km, mb4.6/31, mb1 4.7/44, mb1mx4.6/54, mbtmp4.5/44, ML4.2/11, MS4.1/34, Ms1 4.1/34, ms1mx4.0/54, Error ellipse: s-maj=10.7km s-min=9.9km az=147.0
TIR 15 07:31:15.4, 38°35N×21°26E, h15km, Md4.8/7
PDG 15 07:31:16.6±0.3, 38°22N×20°32E, h18km, MD5.0/6, ML4.8/12, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0
ATH 15 07:31:16.1, 38°20N×20°33E, h22km, ML4.7/11, Error ellipse: s-maj=1.9km s-min=1.0km az=241.0
SKO 15 07:31:16.1, 38°12N×20°25E, h11km
MOS 15 07:31:16.3±1.3, 38°30N×20°27E, h18km, mb5.1/41, MS4.5/16, Error ellipse: s-maj=4.1km s-min=2.2km az=80.1
THE 15 07:31:17.2, 38°22N×20°38E, h16km, ML4.6/6, Error ellipse: s-maj=1.0km s-min=0.4km az=261.0
BEO 15 07:31:17.3±0.6, 38°25N×20°10E, h12km±3km, ML4.7/16
HLW 15 07:31:18.3, 38°12N×20°74E, h30km±21km, Ml5.0
MED_RC 15 07:31:18.0±0.3, 38°15N×20°24E, h20km, MW4.9/29, Moment Tensor Solution. Body waves: s2,c2; Mantle waves: s29,c49; Duration: 1§1 Moment tensor: Scale 10^{16}Nm; M_{rr}2.86±.19; $M_{\theta\theta}$0.14±.10; $M_{\phi\phi}$-3.00±.12; $M_{r\theta}$1.12±.20; $M_{r\phi}$0.63±.07; $M_{\theta\phi}$-0.40±.16; Best double couple: $M_0$3.23000×10^{16} NP1:ϕ_s7.00000°,δ42.00000°, λ118.00000°. NP2:ϕ_s151.00000°,δ54.00000°,λ67.00000°. Principal axes: T 3.2700, Plg70.0000°, Azm4.0000°; N -0.0800, Plg18.0000°, Azm165.0000°; P -3.1900, Plg6.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.
GCMT 15 07:31:18.4±0.2, 38°08N±0°02×20°29E±0°02, h22km, MW4.9/104, Moment Tensor Solution. s36,c48; s104,c152; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.97±.14; $M_{\theta\theta}$0.01±.09; $M_{\phi\phi}$-2.98±.09; $M_{r\theta}$1.19±.18; $M_{r\phi}$0.47±.06; $M_{\theta\phi}$0.23±.12; Best double couple: $M_0$3.23200×10^{16} NP1:ϕ_s152.00000°,δ48.00000°, λ63.00000°. NP2:ϕ_s10.00000°,δ49.00000°,λ117.00000°. Principal axes: T 3.4110, Plg70.0000°, Azm350.0000°; N -0.3590, Plg20.0000°, Azm172.0000°; P -3.0530, Plg0.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s. Triangular moment-rate function
NEIC 15 07:31:19.4±2.9, 38°30N±0°05×20°39E±0°06, h25km±4km, mb5.0/159, ML4.7(ATH), ML4.6(THE) Error ellipse: s-maj=7.9km s-min=6.3km az=195.0
BGR 15 07:31:20.0±0.7, 38°42N×20°48E, h10km, Error ellipse: s-maj=34.5km s-min=11.1km az=62.0
ISC 15 07:31:17.4±0.4, 38°27N±0°02×20°39E±0°02, h14km±2km, n804, σ1§89/859, mb4.9/141, MS4.3/41, 48C-30D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT1	Agia Thekli	0.02	201	P	Pg	07 31 20.0	+0.2
AGT1				S	Sg	07 31 21.8	+0.3
KEF4	Livadi, Kephal	0.03	115	P	Pg	07 31 20.1	+0.2
KEF1	Kardakata, Kep	0.06	82	P	Pg	07 31 20.5	+0.4
KEF3	Kipouria, Keph	0.07	208	P	Pg	07 31 19.8	-0.4
LXR1	Lixouri, Cepha	0.08	153	P	Pg	07 31 20.3	+0.1
LXR1				S	Sg	07 31 22.5	+0.3
LXRA	Lixouri, Kepha	0.08	154	P	Pg	07 31 20.2	0.0
LXRA				S	Sg	07 31 22.5	+0.3
CHV1	Chavriata, Kef	0.09	186	P	Pg	07 31 20.0	-0.3
CHV1				S	Sg	07 31 22.0	-0.3
ARGA	Argostoli. Kep	0.11	144	P	Pg	07 31 20.6	-0.1
ARGA				S	Sg	07 31 23.0	+0.1
ARG2	Argostoli	0.12	141	P	Pg	07 31 20.6	-0.1
ARG2				S	Sg	07 31 22.9	0.0
KEF2	Argostoli. Kep	0.13	145	P	Pg	07 31 20.6	-0.2
VLS	Valsamata	0.18	121	P	Pg	07 31 21.5	-0.1
VLS				S	Sg	07 31 24.7	+0.2
VLS	Valsamata	0.18	121	P	Pg	07 31 21.5	-0.1
VLS	Valsamata	0.18	121	P	Pg	07 31 21.5	-0.1
VLS				S	Sg	07 31 24.7	+0.2
FSK	Fiskardo	0.23	35	P	Pb	07 31 23.2	-0.2
FSK				S	Sb	07 31 27.8	+0.4
	384μm,0.6s						
FSK	Fiskardo	0.23	35	P	Pb	07 31 23.2	-0.2
EVGI	Lefkada island	0.41	30	P	Pb	07 31 26.2	-0.2
EVGI	Lefkada island	0.41	30	P	Pb	07 31 26.2	-0.2
MGNA	Meganis	0.50	39	P	Pg	07 31 27.5	+0.3
MGNA				S	Sb	07 31 35.6	+0.6
MGNA				AML	AML	07 31 39.3	
MGNA				AML	AML	07 31 42.0	
LKD2	Lefkada island	0.56	22	P	Pb	07 31 28.6	-0.4
LKD2				S	Sb	07 31 37.9	+1.0
	71μm,0.6s						
LKD2	Lefkada island	0.56	22	P	Pb	07 31 28.5	-0.4
LKD2				S	Sb	07 31 37.6	+0.8
LKD2				AML	AML	07 31 38.7	
LKD2				AML	AML	07 31 45.7	
TSLK	Tsoukalades, L	0.59	20	P	Pb	07 31 29.4	-0.2
TSLK				S	Sn	07 31 39.9	-1.0
	99μm,0.7s						
TSLK	Tsoukalades, L	0.59	20	P	Pb	07 31 29.3	-0.2
TSLK				S	Sb	07 31 39.0	+1.3
AST1	Astakos	0.61	63	P	Pg	07 31 29.5	+0.2
ZAK2	Zakynthos	0.63	140	P	Pg	07 31 29.1	-0.5
KRI1	kERI	0.69	151	P	Pg	07 31 29.6	-1.3
PDO	Prodromos	0.70	62	P	Pg	07 31 31.1	+0.1
PDO	Prodromos	0.70	62	P	Pg	07 31 31.2	+0.1
PDO				S	Sb	07 31 41.8	+0.9
PDO				AML	AML	07 31 48.4	
PDO				AML	AML	07 31 51.6	
VTN	Vitineika	0.72	119	P	Pg	07 31 30.8	-0.5
AXS	Araxos	0.78	95	P	Pg	07 31 32.0	-0.5
AXS	Araxos	0.78	95	P	Pg	07 31 31.8	-0.7
AXS				S	Sb	07 31 43.8	+0.7
RLS	Riolos of Patr	0.87	104	P	Pg	07 31 33.3	-1.0
RLS				S	Sg	07 31 45.7	0.0
	20μm,0.8s						
RLS	Riolos of Patr	0.87	104	P	Pg	07 31 33.6	-0.7
RLS				S	Sb	07 31 46.4	+0.6
RLS				AML	AML	07 31 51.5	
	comp=N,42860μm,0.8s						
RLS				AML	AML	07 31 58.7	
	comp=E,32831μm,0.7s						
PVO	Paravola	0.95	68	P	Pg	07 31 36.0	+0.1
PVO	Paravola	0.95	68	P	Pg	07 31 36.0	+0.1
PVO				S	Sn	07 31 50.3	+0.5
PVO				AML	AML	07 31 55.8	
PVO				AML	AML	07 31 56.5	
DRO	Drossia	1.09	107	P	Pb	07 31 37.0	-1.0
DRO	Drossia	1.09	107	P	Pb	07 31 37.0	-1.0
DRO				AML	AML	07 32 01.1	
	comp=E,84610μm,0.5s						
DRO				AML	AML	07 32 02.1	
	comp=N,79546μm,0.6s						
ANX	Ano Chora	1.24	74	P	Pn	07 31 40.6	+0.1
ANX				S	Sg	07 31 59.3	+1.8
ANX				AML	AML	07 32 05.1	
ANX				AML	AML	07 32 06.1	
	comp=E,83646μm,0.8s						
LAKA	Lakka	1.25	91	P	Pn	07 31 40.3	-0.2
LAKA				AML	AML	07 32 05.8	
	comp=N,41226μm,0.9s						
LAKA				AML	AML	07 32 07.1	
	comp=E,31234μm,1.6s						
IGT	Igoumenitsa	1.26	358	P	Pg	07 31 41.5	-0.2
IGT				S	Sg	07 32 00.0	+1.9
	comp=E,28μm,0.6s						
IGT	Igoumenitsa	1.26	358	ePg	Pg	07 31 42.0	+0.3
IGT				eSg	Sg	07 31 58.2	+0.1
IGT	Igoumenitsa	1.26	358	P	Pg	07 31 41.4	-0.3
IGT	Igoumenitsa	1.26	358	P	Pg	07 31 41.5	-0.2
IGT				S	Sg	07 32 01.0	+2.9
EVR	Evrytania	1.28	59	P	Pn	07 31 40.8	-0.2
EVR	Evrytania	1.28	59	P	Pn	07 31 41.1	+0.1
EVR				S	Sg	07 32 01.4	+2.5
EVR				AML	AML	07 32 06.1	
	comp=E,44649μm,1.1s						
EVR				AML	AML	07 32 08.7	
	comp=N,39978μm,1.0s						
SERG	Sergoula	1.32	83	P	Pn	07 31 41.2	-0.2
TRIZ	Trizonia	1.32	85	P	Pn	07 31 41.4	-0.1
KALE	Kalithea	1.38	84	P	Pn	07 31 42.1	-0.2
KLV	Kalavryta, Ach	1.40	99	P	Pn	07 31 42.3	-0.3
KLV				AML	AML	07 32 14.2	
	comp=E,18912μm,1.3s						
KLV				AML	AML	07 32 19.5	
	comp=N,22894μm,1.4s						
JAN	Janina	1.43	14	P	Pg	07 31 44.7	-0.2
JAN				AML	AML	07 32 10.7	
	comp=E,61654μm,0.7s						
JAN				AML	AML	07 32 11.7	
	comp=N,48879μm,0.7s						
JAN	Janina	1.43	14	P	Pg	07 31 45.1	+0.2
ITM	Ithomi	1.63	131		Pb	07 31 47.4	+0.1
SRN	Sarande	1.64	349	iPN	Pb	07 31 47.2	-0.2
SRN				iSN	Sg	07 32 13.5	+3.4
AGG	Agios Georgios	1.69	63		Pg	07 31 49.4	-0.5
AGG	Agios Georgios	1.69	63	P	Pg	07 31 49.4	-0.5
PYL	PYLOS	1.74	142	P	Pn	07 31 47.4	+0.2
PYL				S	Sn	07 32 10.3	+1.1
	comp=N,4μm,0.8s						
TPE	Tepelena	2.04	352	iPN	Pb	07 31 53.1	-1.2
TPE				iSN	Sg	07 32 21.5	-1.7
KZN	Kozani	2.30	27	P	Pb	07 31 58.1	-0.6
VLO	Vlora	2.30	343	iPN	Pb	07 31 56.3	+1.4
VLO				iSN	Sg	07 32 30.4	-1.0
SCTE	Santa Cesarea	2.34	321		Pn	07 31 56.2	+0.8
LIT	Litokhoron	2.45	41		Pn	07 31 59.6	-1.6
LIT	Litokhoron	2.45	41	P	Pn	07 31 59.6	-1.6
OHR	Ohrid	2.85	6	iPn	Pn	07 32 04.9	+2.3
OHR				eSg	Sg	07 32 51.9	+2.8
OHR				eLg	Lg	07 32 53.4	
	comp=E,2μm,0.6s						
OHR				eLg	Lg	07 32 54.8	
	comp=N,3μm,0.9s						
OHR	Ohrid	2.85	6	P	Pn	07 32 04.9	+2.3
TIP	Timpagrande	2.98	289	⇓P	Pn	07 32 04.9	+0.5
TIP				⇓S	Sn	07 32 39.3	-0.7
TIP	Timpagrande	2.98	289	P	Pn	07 32 04.6	+0.2
PAIG	Paliouri	3.05	56	P	Pn	07 32 08.1	+3.0
THE	Thessaloniki	3.09	39	P	Pn	07 32 07.9	+2.2
GRG	Griva	3.10	29	P	Pn	07 32 08.0	+2.1
TIR	Tirane	3.10	353	ePn	Pn	07 32 07.6	+1.7

TIR eSg Sg 07 32 55.1 -1.9
TIR Tirane 3.10 353 i PN Pn 07 32 07.6 +1.7
TIR i SN Sb 07 32 46.0 -4.0
TIR Tirane 3.10 353 ⇑P Pn 07 32 07.5 +1.7
TIR ⇑S Sn 07 32 45.3 +2.5
TIR Tirane 3.10 353 Pn 07 32 07.3 +1.4
TIR Tirane 3.10 353 P Pn 07 32 07.3 +1.4
TAR1 Taranto 3.30 314 ePn Pn 07 32 09.3 +0.7
PHP Peshkopia 3.41 1 i PN Pn 07 32 12.0 +1.8
PHP i SN Sn 07 32 52.6 +2.1
PHP Peshkopia 3.41 1 P Pn 07 32 12.0 +1.8
PHP S Sn 07 32 52.6 +2.1
SOH Sokhos 3.42 41 P Pn 07 32 12.9 +2.5
OUR Ouranopolis 3.46 52 P Pn 07 32 14.5 +3.6
VAY Valandovo 3.48 28 i Pn Pn 07 32 12.8 +1.7
VAY Valandovo 3.48 28 P Pn 07 32 12.9 +1.8
CEL Celeste 3.54 271 Pn 07 32 11.7 -0.3
STIP Stip 3.69 21 i Pn Pn 07 32 17.1 +3.1
MATE Matera 3.71 311 ⇑P Pn 07 32 15.1 +0.7
MATE ⇑S Sn 07 32 57.4 -0.5
SRS Serrai 3.77 40 P Pn 07 32 16.9 +1.8
SKO Skopje 3.78 12 ePn Pn 07 32 16.8 +1.4
SKO eSn Sn 07 32 58.5 -1.1
SKO Skopje 3.78 12 P Pn 07 32 16.7 +1.4
PUK Puka 3.79 354 i PN Pn 07 32 16.5 +1.1
PUK i SN Sn 07 33 03.6 +3.7
ULC Ulcinj 3.79 347 ePn Pn 07 32 15.3 -0.2
ULC eSn Sn 07 33 01.4 +1.5
SG1 Sgolgore (BA) 3.85 313 ePn Pn 07 32 17.2 +1.0
BAI Bari 3.92 317 ePn Pn 07 32 17.9 +0.7
DRME Dracevica, Mon 4.02 347 ⇑iPn Pn 07 32 18.7 +0.2
DRME Dracevica, Mon 4.02 347 ePn Pn 07 32 18.8 +0.2
DRME eSn Sn 07 33 06.5 +1.0
BCI Bajram Curri 4.10 357 i PN Pn 07 32 21.4 +1.7
BCI i SN Sn 07 33 10.6 +3.1
KKB Krupnik 4.14 29 P Pn 07 32 21.6 +1.4
KKB S Sn 07 33 10.4 +1.9
MMB Musomiste 4.19 37 P Pn 07 32 21.8 +0.9
PDG Podgorica 4.25 349 ePn Pn 07 32 21.8 +0.1
PDG eSn Sn 07 33 10.2 -0.8
PDG Podgorica 4.25 349 ⇑P Pn 07 32 21.7 +0.1
PDG Podgorica 4.25 349 ⇑iPn Pn 07 32 21.7 +0.1
PDG Podgorica 4.25 349 Pn Pn 07 32 21.8 +0.1
TTG Podgorica 4.25 349 ePn Pn 07 32 21.8 +0.2
TTG i Sn Sn 07 33 11.8 +0.8
APE Apeiranthos 4.25 105 ⇓P Pn 07 32 24.6 +2.9
APE Apeiranthos 4.25 105 deP Pn 07 32 23.2 +1.5
ACER Acerenza 4.26 308 Pn 07 32 23.0 +1.1
PVY Plav 4.33 356 ePn Pn 07 32 24.0 +1.0
PVY eSn Sn 07 33 14.4 +1.1
CEME Cevo 4.42 346 ePn Pn 07 32 23.6 -0.5
CEME eSn Sn 07 33 16.4 +1.1
HCY Herceg Novi 4.42 341 ⇑iPn Pn 07 32 23.2 -0.8
HCY Herceg Novi 4.42 341 P Pn 07 32 23.6 -0.4
HCY Herceg Novi 4.42 341 ePn Pn 07 32 23.2 -0.8
HCY eSn Sn 07 33 16.0 +0.7
SANT Santorini 4.46 114 Pn 07 32 26.5 +1.9
BOSS Bosilegrad 4.51 20 ePn Pn 07 32 26.9 +1.6
IVA Berane 4.61 355 ⇓iPn Pn 07 32 27.9 +1.1
IVA eSn Sn 07 33 21.6 +1.4
KOME Kolasin 4.62 352 ePn Pn 07 32 27.4 +0.5
KOME eSn Sn 07 33 21.7 +1.2
NKME Niksic 4.62 347 ePn Pn 07 32 26.6 -0.3
NKME eSn Sn 07 33 21.0 +0.6
NKY Niksic 4.66 347 P Pn 07 32 28.5 +1.0
NKY Niksic 4.66 347 ePn Pn 07 32 27.4 -0.1
NKY eSn Sn 07 33 22.0 +0.6
BARS Barje 4.67 13 ePn Pn 07 32 28.4 +0.9
BARS Barje 4.67 13 ePn Pg 07 32 44.0 -2.8
IDI Anoyia 4.68 128 Pn Pn 07 32 29.3 +1.6
comp=N,2.0nm,0.3s,baz=266,slow=10,SNR=24
IDI Sn Sn 07 33 18.5 -3.3
comp=N,26nm,0.3s,baz=99,slow=20,SNR=9.5
IDI LR LR 07 34 38.7
comp=N,3µm,20.0s,baz=297,slow=43
TREB Trebinje 4.71 341 ePn Pn 07 32 27.2 -0.8
TREB eSn Sn 07 33 20.5 -1.9
TREB Trebinje 4.71 341 ePn Pn 07 32 26.9 -1.1
RZN Rozhen 4.76 43 P Pn 07 32 30.3 +1.4
VAE Valguarnera 4.80 262 Pn Pn 07 32 29.2 0.0
comp=N,3.7nm,0.3s,baz=168,slow=14,SNR=5.0
VAE Sn Sn 07 33 24.4 -0.3
comp=N,27nm,0.3s,baz=117,slow=16,SNR=4.0
BRY Bratogost 4.84 344 ePn Pn 07 32 29.0 -0.9
BRY Bratogost 4.84 344 P Pn 07 32 29.6 -0.3
BRY Bratogost 4.84 344 ePn Pn 07 32 29.2 -0.7
BRY eSn Sn 07 33 26.6 +0.8
VTS Vitosha 4.85 26 ePn Pn 07 32 31.8 +1.6
VTS eSn Sn 07 33 27.7 +1.5
VTS Vitosha 4.85 26 ⇑P Pn 07 32 31.8 +1.6
VTS Vitosha 4.85 26 Pn 07 32 31.7 +1.6
VTS Vitosha 4.85 26 P Pn 07 32 31.7 +1.6
EZN Ezine 4.87 70 P Pn 07 32 33.5 +3.3
SELS Selova 4.97 6 ePn Pn 07 32 31.6 -0.1
SGRT San Giovanni R 4.99 316 Pn 07 32 32.7 +0.8
SJES Sjenica 5.00 356 ePn Pn 07 32 32.8 +0.7
SJES eSn Sn 07 33 27.7 -2.0
STON Ston 5.03 337 ePn Pn 07 32 31.9 -0.5
STON eSn Sn 07 33 26.9 -3.5
STON eSn Sn 07 33 27.1 -3.3
STON Ston 5.03 337 ⇑iPn Pn 07 32 31.7 -0.7
PLD Plovdiv 5.06 39 P Pn 07 32 35.7 +2.9
PLD pmax pmax
comp=Z,15nm,1.0s
UPM Unac-Piva 5.06 348 ePn Pn 07 32 32.7 -0.3
UPM Unac-Piva 5.06 348 ePn Pn 07 32 33.3 +0.3
UPM eSn Sn 07 33 31.8 +0.6
ALN Alexandroupoli 5.09 57 Pn 07 32 35.1 +1.9
ALN Alexandroupoli 5.09 57 P Pn 07 32 35.2 +1.9
PLE Pljevlja 5.11 352 P Pn 07 32 36.5 +2.8
PLE Pljevlja 5.11 352 ePn Pn 07 32 34.0 +0.3
PLE eSn Sn 07 33 33.2 +0.7
KDZ Kurdzhali 5.13 47 P Pn 07 32 34.3 +0.5
PGB Panagyurishte 5.16 33 P Pn 07 32 36.4 +2.2
PAOL Paolisi 5.27 303 Pn 07 32 38.1 +2.3
ZAPS Zavoj 5.28 18 ePn Pn 07 32 37.7 +1.8
WDD Wied Dalam 5.28 244 Pn 07 32 34.4 -1.5
IVAS Ivanjica 5.30 358 ePn Pn 07 32 36.1 -0.1
IVAS eSn Sn 07 33 37.0 -0.2
RUDO Rudo 5.40 352 ePn Pn 07 32 36.8 -0.7
BOVS Bovan 5.45 10 ePn Pn 07 32 38.2 0.0
BOVS eSn Sn 07 33 40.0 -0.7
CORL Corleone 5.61 268 Pn 07 32 40.1 -0.3
GRUS Gruza 5.62 2 ePn Pn 07 32 40.5 0.0
GRUS eSn Sn 07 33 44.9 +0.1
BBLS Lazići 5.64 353 ePn Pn 07 32 41.8 +0.9
BBLS Lazići 5.64 353 ⇑iPn Pn 07 32 39.3 -1.6
ZAGS Zajecar 5.71 14 ePn Pn 07 32 42.0 +0.3
ZAGS eSn Sn 07 33 47.0 0.0
DIVS Divibare 5.83 357 ePn Pn 07 32 43.0 -0.5
DIVS eSn Sn 07 33 47.4 -2.8
DIVS Divibare 5.83 357 ⇑iPn Pn 07 32 43.0 -0.5
HAPS Han Pijesak,BI 5.91 350 ePn Pn 07 32 43.7 -0.9
HAPS eSn Sn 07 33 49.5 -2.7
HAPS Han Pijesak,BI 5.91 350 ⇑iPn Pn 07 32 43.7 -0.9
TRUS Trudelj 5.95 0 ePn Pn 07 32 44.8 -0.2
TRUS eSn Sn 07 33 51.8 -1.2
PLVB Pleven 6.03 31 ⇑P Pn 07 32 48.4 +2.3
KARP Karpathos 6.07 115 Pn 07 32 48.5 +1.9
PVL Pavlikeni 6.20 36 P Pn 07 32 47.5 -1.0
KUBS Kucevo 6.21 9 ePn Pn 07 32 47.4 -1.3
INTR Introdacqua 6.22 309 Pn 07 32 50.5 +1.7
ELND Elena 6.25 40 ⇓P Pn 07 32 50.5 +1.4
TEKS Tekeris 6.31 354 ePn Pn 07 32 49.3 -0.7
TEKS eSn Sn 07 33 58.2 -3.6
TEKS Tekeris 6.31 354 ePn Pn 07 32 49.3 -0.7
MANT Manisa 6.42 86 Pn 07 32 55.7 +4.0
ARG Arkhangelos 6.50 106 P Pn 07 32 56.2 +3.6
ARG pmax pmax
comp=Z,222nm,1.2s
MGRS Mrkonjic Grad 6.63 339 ePn Pn 07 32 55.0 +0.6
DOB Doboj 6.68 346 ePn Pn 07 32 53.5 -1.6
AQU L'Aquila 6.72 310 ePn Pn 07 32 58.3 +2.6
AQU L'Aquila 6.72 310 P Pn 07 32 59.2 +3.5
AQU pmax pmax
comp=Z,307nm,0.8s
FRGS Fruska Gora 6.90 357 ePn Pn 07 32 53.8 -4.3
FRGS eSn Sn 07 34 11.1 -5.2
BLY Banja Luka 6.91 341 ⇑P Pn 07 32 58.3 +0.1
BLY Banja Luka 6.91 341 ⇑iPn Pn 07 32 57.8 -0.4

BLY Banja Luka 6.91 341 Pn 07 32 57.5 -0.6
HUMR Humele 7.14 27 ⇓P Pn 07 33 03.2 +1.9
NRCA Norcia 7.17 312 Pn 07 33 03.7 +1.7
SGRR Singureni 7.28 33 ⇑P Pn 07 33 05.7 +2.4
GZR Gura Zlata 7.34 13 ⇑P Pn 07 33 04.9 +0.8
BZS Buzias 7.40 7 P Pn 07 33 05.3 +0.4
BZS pmax pmax
comp=Z,33nm,1.2s
ARR Arges 7.76 23 ⇑P Pn 07 33 11.8 +1.7
DEV Deva 7.83 13 P Pn 07 33 13.5 +2.6
DEV pmax pmax
comp=Z,40nm,0.8s
SLUM Salum 7.83 148 P Pn 07 33 07.9 -3.0
baz=149
SLUM AMP 07 34 00.0
baz=149
SLUM S Sn 07 34 28.3 -11
baz=149
VOIR 7.96 24 ⇑P Pn 07 33 14.8 +2.2
MORH Mrgy, Hungar 8.04 351 ⇑iPn Pn 07 33 12.1 -1.7
SIRR Siria 8.05 6 ⇑P Pn 07 33 14.9 +1.1
BOJS Bojanci 8.18 334 i Pn Pn 07 33 15.7 0.0
BOJS i Sn Sn 07 34 44.2 -3.6
ZAG Zagreb 8.23 338 ePn Pn 07 33 15.3 -1.0
ISR Istrita 8.24 32 ⇓P Pn 07 33 19.7 +3.1
ISR Istrita 8.24 32 P Pn 07 33 20.2 +3.6
ISR pmax pmax
comp=Z,170nm,1.1s
RIY Rijeka 8.31 330 ePn Pn 07 33 17.6 +0.1
MLR Muntele Rosu 8.32 28 Pn Pn 07 33 19.6 +1.9
comp=Z,0.8nm,0.3s,baz=254,slow=4.8,SNR=30
MLR LR LR 07 37 17.5
comp=Z,3µm,21.6s,baz=197,slow=44
MLR Muntele Rosu 8.32 28 ⇓P Pn 07 33 20.0 +2.3
CRES Cresnjev 8.39 336 ⇑iPn Pn 07 33 17.9 -0.7
DOPR Dopca 8.54 24 ⇓P Pn 07 33 22.6 +2.0
BEHE Becsehely 8.62 343 ePn Pn 07 33 20.3 -1.4
TIRR Tirgusor 8.63 42 Pn 07 33 21.4 -0.4
TIRR Tirgusor 8.63 42 P Pn 07 33 21.4 -0.4
BISRR Bisoca 8.66 31 ⇑P Pn 07 33 25.5 +3.2
DRGR 8.69 11 P Pn 07 33 24.3 +1.6
DRGR pmax pmax
comp=Z,37nm,1.0s
OZUR 8.78 25 ⇓P Pn 07 33 26.3 +2.4
PLOR Plostina 8.89 30 ⇑P Pn 07 33 27.8 +2.4
PLOR Plostina 8.89 30 P Pn 07 33 27.7 +2.4
LJU Ljubljana 8.90 333 ePn Pn 07 33 25.5 -0.1
TRI Trieste 8.92 329 P Pn 07 33 25.2 -0.6
VRI Vrincioaia 8.93 30 ⇑P Pn 07 33 28.7 +2.8
VRI Vrincioaia 8.93 30 P Pn 07 33 28.3 +2.3
VRI pmax pmax
comp=Z,184nm,1.1s
CFR Carcaliu 9.01 38 ⇑P Pn 07 33 28.6 +1.7
CFR Carcaliu 9.01 38 P Pn 07 33 28.3 +1.4
CFR pmax pmax
comp=Z,17nm,0.8s
KEST Kesra 9.19 257 Pn Pn 07 33 29.1 -0.6
comp=Z,1.0nm,0.3s,baz=26,slow=4.5,SNR=7.7
KEST LR LR 07 37 48.0
comp=Z,1µm,19.7s,baz=9.0,slow=42
BUD Budapest 9.26 354 P Pn 07 33 29.8 -0.7
BUD pmax pmax
comp=Z,39nm,0.7s
SOKA Soboth 9.29 337 i Pn Pn 07 33 30.0 -0.9
comp=Z,35nm,0.3s,SNR=59
SOKA Sn Sn 07 35 08.0 -7.1
comp=Z,51nm,0.7s
OBKA Obir 9.30 334 ePn Pn 07 33 30.2 -0.8
OBKA eSn Sn 07 35 07.6 -7.8
OBKA Obir 9.30 334 i Pn Pn 07 33 30.4 -0.7
comp=Z,28nm,0.4s,SNR=23
OBKA Sn Sn 07 35 11.3 -4.2
comp=Z,129nm,0.6s
PSZ Piszkesteto 9.65 358 ⇓P Pn 07 33 36.2 +0.3
PSZ Piszkesteto 9.65 358 P Pn 07 33 36.0 +0.1
PSZ pmax pmax
comp=Z,52nm,0.9s
ARSA Arzberg 9.66 340 ePn Pn 07 33 35.1 -0.9
ARSA eSn Sn 07 35 17.9 -6.3
ARSA Arzberg 9.66 340 ePn Pn 07 33 34.9 -1.1
comp=Z,15nm,0.4s,SNR=11
ARSA eSn Sn 07 35 20.2 -4.1
comp=Z,20nm,0.6s
PGF Pioggiola 9.68 300 P Pn 07 33 39.5 +3.1
PGF pmax pmax
comp=Z,59nm,1.1s
MYKA Terra Mystica 9.73 331 i Pn Pn 07 33 36.4 -0.6
comp=Z,17nm,0.4s,SNR=8.2
MYKA eSn Sn 07 35 21.2 -4.8
comp=Z,24nm,0.4s
SOP Sopron 9.82 345 P Pn 07 33 40.5 +2.4
SOP pmax pmax
comp=Z,32nm,1.7s
SWA2 9.94 153 P Pn 07 33 37.5 -2.3
baz=154
SWA2 AMP 07 35 00.0
baz=154
SWA2 S Sn 07 35 18.5 -13
baz=154
TRPA Tarpa 9.98 8 ⇓P Pn 07 33 41.0 +0.7
BURAR Bucovina Array 9.98 19 ⇑P Pn 07 33 42.7 +2.2
BURAR Bucovina Array 9.98 19 P Pn 07 33 42.7 +2.2
BUR08 Bucovina Ar. S 10.01 19 Pn 07 33 42.1 +1.4
CTI Castel Tesino 10.12 323 Pn 07 33 41.2 -1.2
CTI Castel Tesino 10.12 323 P Pn 07 33 41.2 -1.2
CONA Conrad Observa 10.20 343 Pn Pn 07 33 42.2 -1.2
comp=Z,6.0nm,0.4s
CONA Sn Sn 07 35 31.4 -6.3
comp=Z,12nm,0.5s
ZST Bratislava 10.21 347 P Pn 07 33 42.7 -0.7
ZST Bratislava 10.21 347 eSN Sn 07 35 30.2 -7.4
KECS Kecovo 10.21 0 eSN Sn 07 35 32.9 -4.8
KBA Koelnbreinsper 10.21 332 ePn Pn 07 33 43.2 -0.5
KBA eSn Sn 07 35 31.5 -6.5
KBA Koelnbreinsper 10.21 332 ePn Pn 07 33 42.9 -0.8
comp=Z,18nm,0.6s,SNR=16
KBA eSn Sn 07 35 33.8 -4.3
comp=Z,59nm,0.6s
KBA Koelnbreinsper 10.21 332 P Pn 07 33 43.5 -0.2
KBA pmax pmax
comp=Z,80nm,0.9s
ABTA Abfaltersbach 10.27 328 ePn Pn 07 33 43.8 -0.5
comp=Z,14nm,0.4s,SNR=13
ABTA eSn Sn 07 35 34.0 -5.4
comp=Z,133nm,0.6s
VYHS Vyhne 10.28 354 eP Pn 07 33 44.4 -0.1
VYHS e 07 35 34.3
VYHS Vyhne 10.28 354 ePN Pn 07 33 44.4 -0.1
VYHS eSN Sn 07 35 34.3 -5.2
MODS Modra-Piesok 10.35 348 eP Pn 07 33 44.7 -0.7
MODS e 07 35 33.5
MODS Modra-Piesok 10.35 348 ePN Pn 07 33 44.7 -0.7
MODS eSN Sn 07 35 33.5 -7.7
BR131 Keskin Array S 10.41 78 deP Pn 07 33 50.7 +4.3
BRTR Keskin Array B 10.41 78 Pn Pn 07 33 48.8 +2.4
comp=Z,0.3nm,0.3s,baz=257,slow=11,SNR=12
BRTR LR LR 07 39 01.1
comp=Z,547nm,19.4s,baz=238,slow=45
CMAH Djebel Manchou 10.45 265 P Pn 07 33 48.8 +2.0
UZH Uzhgorod 10.45 7 eP Pn 07 33 47.5 +0.8
UZH eS Sn 07 35 43.5 0.0
UZH MLR MLR
comp=N,420nm,10.0s
UZH MLR MLR
comp=E,340nm,10.0s
UZH MLR MLR
comp=Z,300nm,10.0s
SMOL Smolenice 10.46 349 eP Pn 07 33 47.1 +0.2
SMOL Smolenice 10.46 349 ePN Pn 07 33 47.1 +0.2
SMOL eSN Sn 07 35 34.7 -9.2
MOA Molln 10.57 337 ePn Pn 07 33 48.1 -0.3
MOA eSn Sn 07 35 40.3 -6.2
MOA Molln 10.57 337 ePn Pn 07 33 47.9 -0.5
comp=Z,21nm,0.3s,SNR=14
MOA eSn Sn 07 35 42.4 -4.1
comp=Z,31nm,0.6s
CRVS Cervenica-Dubn 10.66 4 eP Pn 07 33 50.6 +1.0
CRVS Cervenica-Dubn 10.66 4 ePN Pn 07 33 50.6 +1.0
KIS Kishinev 10.70 33 ⇓iP Pn 07 33 55.0 +4.9
comp=Z,150nm,1.8s
KIS Kishinev 10.70 33 ePP Pn 07 34 08.0 +18
KIS eS Sn 07 35 50.0 +0.4
KIS LRM MLR 07 39 04.0
comp=Z,4µm,12.0s

KOLS Kolonicke sedl 10.75 7 eP Pn 07 33 51.6 +0.8
KOLS Kolonicke sedl 10.75 7 ePN Pn 07 33 51.6 +0.8
JAVC Velka Javorina 10.77 350 ePN Pn 07 33 52.0 +0.9
CSS Mathiatis 10.91 104 Pn Pn 07 33 46.9 -6.2
CSS Sn Sn 07 35 50.6 -4.3
RJOB Jochberg 10.97 332 ePn Pn 07 33 54.0 +0.1
RJOB eSn Sn 07 35 50.8 -5.6
CKFL Kef-Lekhel 11.05 264 P Pn 07 33 57.5 +2.4
WTTA Wattenberg 11.05 327 ePn Pn 07 33 55.6 +0.5
WTTA eSn Sn 07 35 54.9 -3.6
WTTA Wattenberg 11.05 327 ePn Pn 07 33 55.7 +0.5
comp=Z,18nm,0.3s,SNR=16
WTTA eSn Sn 07 35 53.8 -4.7
comp=Z,107nm,0.8s
WATA Walderalm 11.13 327 i Pn Pn 07 33 57.0 +0.8
comp=Z,24nm,0.4s,SNR=24
WATA eSn Sn 07 35 57.0 -3.4
comp=Z,78nm,0.6s
NIE Niedzica 11.15 360 eP Pn 07 33 58.1 +1.8
NIE Niedzica 11.15 360 P Pn 07 33 58.0 +1.8
NIE pmax pmax
comp=Z,10.0nm,1.7s
KRUC Moravsky 11.17 346 ePN Pn 07 33 56.4 -0.2
KRUC Moravsky 11.17 346 P Pn 07 33 57.0 +0.4
KRUC pmax pmax
comp=Z,16nm,1.1s
FUORN Ofenpass-Fuorn 11.20 321 Pn 07 33 59.4 +2.1
SQTA Sankt Quirin 11.20 326 ePn Pn 07 33 58.5 +1.4
comp=Z,19nm,0.4s
SQTA eSn Sn 07 35 59.0 -3.2
comp=Z,94nm,0.6s
CASM Ain Smara 11.26 264 P Pn 07 34 00.4 +2.5
FETA Feichten 11.27 324 Pn Pn 07 33 59.0 +0.9
comp=Z,23nm,1.1s
FETA eSn Sn 07 36 00.7 -3.2
comp=Z,52nm,0.6s
MOTA Moosalm 11.34 326 ePn Pn 07 34 00.0 +0.9
comp=Z,22nm,0.5s,SNR=26
MOTA eSn Sn 07 36 02.9 -2.8
comp=Z,40nm,0.5s
VRAC Vranov 11.37 347 ePN Pn 07 33 59.7 +0.4
VRAC Vranov 11.37 347 Pn Pn 07 33 59.7 +0.4
comp=Z,0.4nm,0.3s,baz=175,slow=13,SNR=6.5
KWP Kalwaria Pacla 11.48 8 eP Pn 07 34 03.4 +2.6
KWP Kalwaria Pacla 11.48 8 Pn 07 34 02.8 +2.0
KWP Kalwaria Pacla 11.48 8 P Pn 07 34 02.8 +2.0
DAVOX Davos/Dischmat 11.50 321 Pn Pn 07 34 02.0 +0.7
comp=Z,1.8nm,0.3s,baz=138,slow=14,SNR=32
DAVOX Sn Sn 07 36 04.0 -5.7
comp=Z,5.3nm,0.3s,baz=130,slow=10,SNR=2.8
DAVOX Davos/Dischmat 11.50 321 P Pn 07 34 02.0 +0.7
TREC Trest 11.57 344 ePN Pn 07 34 01.9 -0.2
TREC Trest 11.57 344 eP Pn 07 34 01.9 -0.2
RETA Reutte 11.60 326 ePn Pn 07 34 03.1 +0.6
comp=Z,7.8nm,0.4s
RETA eSn Sn 07 36 06.5 -5.3
comp=Z,28nm,0.6s
GEC2 GERESS Array S 11.63 338 ePn Pn 07 34 02.1 -0.8
GEC2 eSn Sn 07 36 07.9 -4.7
GEC2 GERESS Array S 11.63 338 P Pn 07 34 02.0 -1.0
GEC2 pmax pmax
comp=Z,31nm,0.8s
GERES GERESS Array B 11.63 338 Pn Pn 07 34 01.9 -1.0
comp=Z,2.8nm,0.3s,baz=157,slow=13,SNR=57
GERES Sn Sn 07 36 06.5 -6.1
comp=Z,4.3nm,0.3s,baz=152,slow=23,SNR=7.3
DFRA Djebel Bou Aff 11.68 266 P Pn 07 34 05.8 +2.1
OKC Ostrava-Krasne 11.68 353 ePN Pn 07 34 03.3 -0.2
OKC AMS AMS 07 39 50.0
comp=Z,2µm,11.5s
OKC Ostrava-Krasne 11.68 353 eP Pn 07 34 03.3 -0.2
OKC MLR MLR
comp=Z,2µm,11.5s
MORC Moravsky Berou 11.68 351 ePN Pn 07 34 03.7 +0.1
MORC Moravsky Berou 11.68 351 P Pn 07 34 03.8 +0.1
MORC pmax pmax
comp=Z,73nm,2.1s
LVV L'vov 11.84 12 eP Pn 07 34 09.1 +3.4
LVV eS Sn 07 36 20.2 +2.7
LVV pmax pmax
comp=Z,110nm,1.5s
LVV MLR MLR
comp=N,1µm,7.0s
LVV MLR MLR
comp=E,1µm,7.0s
LVV MLR MLR
comp=Z,2µm,7.0s
DAVA Damuels 11.86 323 ePn Pn 07 34 07.4 +1.2
DAVA eSn Sn 07 36 11.5 -6.8
DAVA Damuels 11.86 323 i Pn Pn 07 34 07.3 +1.2
comp=Z,6.1nm,0.3s
DAVA eSn Sn 07 36 12.5 -5.8
comp=Z,132nm,0.9s
FUR Furstenfeldbru 11.91 329 P Pn 07 34 06.2 -0.5
FUR pmax pmax
comp=Z,75nm,1.1s
KHC Kasperske Hory 11.92 338 ePN Pn 07 34 05.4 -1.5
KHC ex x 07 34 20.0
KHC eSN Sn 07 36 13.9 -5.7
KHC AMS AMS 07 39 40.0
comp=Z,3µm,14.0s
KHC Kasperske Hory 11.92 338 Pn 07 34 05.5 -1.3
KHC Kasperske Hory 11.92 338 d iP Pn 07 34 05.6 -1.3
UBR Ueberruh 12.04 325 ePn Pn 07 34 09.3 +0.7
UBR eSn Sn 07 36 13.5 -9.1
HNAT Natroun 12.09 132 P Pn 07 34 07.1 -2.1
baz=133
WET Wettzell 12.15 336 ePn Pn 07 34 09.3 -0.7
WET Wettzell 12.15 336 P Pn 07 34 07.5 -2.5
WET pmax pmax
comp=Z,42nm,1.0s
SIM Simferopol' 12.24 53 eP P 07 34 18.1 -5.5
SIM eS Sn 07 36 34.0 +6.6
SIM pmax pmax
comp=Z,12nm,0.9s
SIM MLR MLR
comp=Z,600nm,11.5s
GOPC GO Pecny, Ondr 12.31 343 ePN Pn 07 34 11.7 -0.5
GOPC GO Pecny, Ondr 12.31 343 eP Pn 07 34 11.7 -0.5
DPC Dobruska-Polom 12.42 348 ePN Pn 07 34 13.5 -0.2
DPC AMS AMS 07 40 00.0
comp=Z,3µm,13.4s
DPC Dobruska-Polom 12.42 348 eP Pn 07 34 13.5 -0.2
DPC MLR MLR
comp=Z,3µm,13.4s
PRU Pruhonice 12.44 342 ePN Pn 07 34 13.0 -0.9
PRU AMS AMS 07 41 00.0
comp=Z,2µm,8.0s
PRU Pruhonice 12.44 342 eP Pn 07 34 13.0 -0.9
PRU MLR MLR
comp=Z,2µm,8.0s
PRA Prague 12.54 342 ePN Pn 07 34 14.9 -0.4
PRA AMS AMS 07 39 50.0
comp=Z,2µm,11.1s
PRA Prague 12.54 342 eP Pn 07 34 14.9 -0.4
PRA MLR MLR
comp=Z,2µm,11.1s
SENIN Lac Senin/Sane 12.61 314 Pn 07 34 18.0 +1.5
UPC Upice 12.63 347 ePN Pn 07 34 15.6 -0.9
UPC AMS AMS 07 40 10.0
comp=Z,4µm,10.6s
UPC Upice 12.63 347 eP Pn 07 34 15.6 -0.9
UPC MLR MLR
comp=Z,4µm,10.6s
OSTC Ostas 12.64 348 ePN Pn 07 34 17.9 +1.2
CHVC Chvalec 12.70 347 ePN Pn 07 34 18.1 +0.6
CHVC AMS AMS 07 40 10.0
comp=Z,3µm,10.9s
GLL Jalalah 12.78 129 P Pn 07 34 16.7 -2.0
baz=130
ROTZ Rotzenmuhle 12.90 336 ePn Pn 07 34 19.7 -0.6
ROTZ eSn Sn 07 36 36.4 -7.3
HFRF Wahat Farafira 12.93 147 P Pn 07 34 17.2 -3.6
baz=147
HNTI Hanita 13.08 109 Pn Pn 07 34 17.0 -5.8
HNTI Sn Sn 07 36 39.4 -8.7
MANZ Manzenberg 13.13 336 ePn Pn 07 34 23.2 -0.2
GRF Grafenberg Arr 13.18 333 ePn Pn 07 34 24.7 +0.6
GRF Grafenberg Arr 13.18 333 P Pn 07 34 23.4 -0.6
GRF pmax pmax
comp=Z,59nm,1.4s
NKC Novy Kostel 13.24 337 ePN Pn 07 34 23.6 -1.2
NKC Novy Kostel 13.24 337 eP Pn 07 34 23.6 -1.2
STU Stuttgart 13.26 326 P Pn 07 34 24.9 -0.2

STU pmax pmax
comp=Z,76nm,0.9s
MMA0B Mount Meron ar 13.28 109 Pn Pn 07 34 19.1 -6.5
MMA0B Sn Sn 07 36 43.4 -10
MMAI Mount Meron Ar 13.28 109 Pn Pn 07 34 23.1 -2.5
comp=Z,1.6nm,0.3s,baz=312,slow=10.0,SNR=6.6
MMAI Sn Sn 07 36 45.6 -7.5
comp=Z,3.5nm,0.3s,baz=306,slow=26,SNR=7.1
MMAI LR LR 07 41 09.1
comp=Z,370nm,20.5s,baz=280,slow=45
BFO Black Forest 13.34 323 Pn 07 34 26.5 +0.3
BFO Black Forest 13.34 323 P Pn 07 34 26.5 +0.3
SLTI Sal'it 13.39 112 Pn Pn 07 34 20.4 -6.6
KSDI Kefar Szold 13.39 108 Pn Pn 07 34 20.2 -6.8
KSDI Sn Sn 07 36 46.7 -9.0
NATI Neve Ativ 13.42 107 Pn Pn 07 34 21.4 -6.0
NATI Sn Sn 07 36 46.8 -10
BEL Belsk 13.57 1 eP P 07 34 41.0 +2.6
MMLI Mount Malkishu 13.57 111 Pn Pn 07 34 22.8 -6.7
KZIT Kziot 13.67 118 Pn Pn 07 34 25.3 -5.5
KZIT Sn Sn 07 36 50.3 -12
AMAZ Amatzia 13.68 115 Pn Pn 07 34 23.0 -7.9
AMAZ Sn Sn 07 36 51.6 -11
HMDT Nahal Hemdat 13.74 111 Pn Pn 07 34 27.3 -4.4
HMDT Sn Sn 07 36 57.2 -6.9
ECH Echery 13.83 320 P Pn 07 34 32.2 -0.8
ECH pmax pmax
comp=Z,36nm,1.1s
MOX Moxa 13.86 336 ePn Pn 07 34 32.8 -0.4
MOX eSn Sn 07 37 00.1 -6.8
MOX Moxa 13.86 336 P Pn 07 34 32.9 -0.4
MOX pmax pmax
comp=Z,51nm,1.0s
KIEV Kiev 13.91 24 P Pn 07 34 34.0 0.0
YTIR Yattir 13.91 115 Pn Pn 07 34 27.8 -6.4
AKASG Malin Array Be 13.92 24 Pn Pn 07 34 33.3 -0.9
comp=Z,1.0nm,0.3s,baz=212,slow=12,SNR=21
AKASG LR LR 07 41 43.1
comp=Z,422nm,21.9s,baz=205,slow=45
AKBB Malin Array Si 13.92 24⇓eP Pn 07 34 33.8 -0.3
DSI Dead Sea 13.99 114 Pn Pn 07 34 27.0 -8.2
DSI Sn Sn 07 37 00.4 -10
CLL Collm 14.04 341 eP Pn 07 34 36.0 +0.2
CLL i sP P 07 34 44.3 +0.7
comp=Z,72nm,1.3s
CLL esPP 07 34 54.0
CLL e 07 35 24.0
CLL Collm 14.04 341 eP Pn 07 34 34.0 -1.8
GHAJ Ghor Haditha 14.27 115 Pn Pn 07 34 32.6 -6.3
GHAJ Sn Sn 07 37 10.9 -6.1
ANN Anapa 14.32 57 eP P 07 34 41.7 +2.1
ANN eS Sn 07 37 23.7 +5.5
ANN pmax pmax
comp=Z,52nm,1.5s
ANN MLR MLR
comp=N,249nm,11.0s
ANN MLR MLR
comp=Z,482nm,11.0s
ANN MLR MLR
comp=E,197nm,11.0s
PRNI Paran 14.42 119 Pn Pn 07 34 35.9 -5.2
PRNI Sn Sn 07 37 07.2 -14
ZFRI Zfri 14.42 118 Pn Pn 07 34 34.7 -6.3
HRFI Mount Harif 14.63 120 Pn Pn 07 34 40.1 -3.9
HRFI Sn Sn 07 37 14.8 -11
TNS Taunus Mts 14.68 328 ePn Pn 07 34 44.2 -0.3
MBRI Mt Berech 14.70 121 Pn Pn 07 34 39.1 -5.9
MBRI Sn Sn 07 37 15.3 -12
ASF Jabal al Asfar 14.79 109 Pn P 07 34 50.9 -1.3
comp=E,0.4nm,0.3s,baz=224,slow=9.9,SNR=4.0
EIL Elat 14.80 121 Pn P 07 34 42.6 -3.7
comp=E,0.5nm,0.3s,baz=2.8,slow=16,SNR=2.3
EIL Elat 14.80 121 Pn Pn 07 34 37.9 -8.4
EIL Sn Sn 07 37 16.8 -13
HKAT Jabal Katrina 14.93 127 P Pn 07 34 45.8 -2.5
baz=127
GKP Gorka Klasztor 15.16 353 eP P 07 34 58.5 +2.5
WLF Walferdange 15.29 323 pPn P 07 34 55.6 -2.0
WLF PnPn pP 07 35 00.3 -0.3
SOC Sochi 15.53 64 eP P 07 35 00.3 +0.1
SOC e 07 37 58.6
SOC pmax pmax
comp=Z,42nm,0.6s
SOC MLR MLR
comp=Z,271nm,10.0s
SUW Suwalki 15.86 6 eP Pn 07 35 01.0 +0.9
SUW Suwalki 15.86 6 Pn Pn 07 34 59.4 -0.7
SUW IAmb IAmb 07 35 11.1
comp=Z,152nm,1.0s
SUW Suwalki 15.86 6 P Pn 07 34 59.4 -0.7
SUW pmax pmax
comp=Z,152nm,1.0s
BTNL Ternell 15.95 325 x P 07 35 07.7 +2.9
MEM Membach 16.02 325 Pn P 07 35 03.2 +1.1
MEM Membach 16.02 325 P Pn 07 35 05.2 -0.4
MEM x x 07 35 08.4
MEM PnPn sP 07 35 09.6 -1.7
MEM PbPb PbPb 07 36 00.6 +5.1
BSTI Sart Tilman 16.20 324 x x 07 35 10.4
DOU Dourbes 16.34 321 P P 07 35 10.5 +1.4
DOU pmax pmax
comp=Z,88nm,1.0s
KLNR Kaliningrad 16.34 360ceP P 07 35 08.3 -0.8
BMRD Maredsous 16.39 322 Pn Pn 07 35 07.1 +0.2
BMRD PbPb PbPb 07 36 02.8 +1.1
ARXR Arkhyz 16.63 65 eP P 07 35 15.0 +2.4
MICGM Minsk 17.02 15 eP Pn 07 35 11.0 -3.8
MICGM ePP pP 07 35 20.0 -0.5
MICGM eS Sn 07 38 19.0 -4.7
MICGM eSS S 07 38 33.0 -0.6
MNK Minsk 17.02 15 eP Pn 07 35 11.0 -3.8
MNK eS Sn 07 38 19.0 -4.7
NACGM Naroch 17.20 13 eP Pn 07 35 16.0 -1.0
NACGM PM 07 35 20.0
comp=Z,0.3nm,1.0s
NACGM eS Sn 07 38 23.0 -4.9
NACGM eQ 07 40 36.0
NACGM eLR LR 07 42 23.0
PABE Paberze 17.41 7 eP Pn 07 35 18.6 -1.1
PABE IAmb IAmb 07 35 22.1
comp=Z,122nm,0.9s
IIGN Ignalina 17.54 11 eP Pn 07 35 20.5 -0.7
IIGN IAmb IAmb 07 35 23.9
comp=Z,37nm,1.0s
NEY Neytrino 17.61 67⇑eP P 07 35 25.9 +2.4
SHAR Shatzhatmas 17.66 65deP P 07 35 24.7 +0.7
KIV Kislovodsk 17.71 64 P P 07 35 24.7 +0.3
KIV Kislovodsk 17.71 64 eP P 07 35 25.1 +0.6
KIV eS S 07 38 45.5 -2.5
KIV pmax pmax
comp=Z,172nm,1.0s
KIV MLR MLR
comp=Z,562nm,14.0s
ISAL Salakas 17.73 11 eP Pn 07 35 22.0 -1.7
ISAL IAmb IAmb 07 35 25.7
comp=Z,44nm,1.2s
PBUR Paburge 17.79 3 eP Pn 07 35 22.7 -1.7
KBZ Khabaz 17.82 65 P P 07 35 26.2 +0.7
comp=Z,0.3nm,0.3s,baz=298,slow=6.8,SNR=26
KBZ Khabaz 17.82 65ceP P 07 35 26.4 +0.9
IZAR Zarasai 17.93 11 eP Pn 07 35 24.2 -1.8
AKH Akhalkalaki 18.00 73 P P 07 35 28.7 +0.9
AKH Akhalkalaki 18.00 73 P P 07 35 28.7 +0.9
AKH pmax pmax
comp=Z,42nm,1.0s
PYA1 Pyatigorsk 18.02 64⇑eP P 07 35 28.7 +0.9
NCK Nalchik 18.28 66⇓eP P 07 35 33.3 +2.6
ZEI Tsey 18.41 68 eP P 07 35 32.2 -0.1
ZEI pmax pmax
comp=Z,24nm,0.8s
VORD Divnogorie 18.43 40 eP P 07 35 31.5 -0.7
VORD pmax pmax
comp=Z,30nm,0.9s
VSR Storozhevoye 18.51 40 eP P 07 35 31.8 -1.3
VSR pmax pmax
comp=Z,70nm,1.9s
VSR MLR MLR
comp=Z,2µm,12.0s
VORR Voronezh 18.81 39 P Pn 07 35 37.0 +0.1
VORR pmax pmax
comp=Z,250nm,1.2s
GNI Garni 18.95 77 P Pn 07 35 39.4 +0.5
comp=Z,1.3nm,0.3s,baz=176,slow=2.4,SNR=27
GNI LR LR 07 43 36.8
comp=Z,423nm,18.6s,baz=283,slow=39
GNI Garni 18.95 77 P Pn 07 35 39.5 +0.6
GNI IAmb IAmb 07 35 44.9
comp=Z,132nm,1.1s
GNI Garni 18.95 77c iP Pn 07 35 39.0 +0.1
GNI pmax pmax
comp=Z,383nm,1.0s
TBLG Delisi 18.95 72 IAmb IAmb 07 35 52.5
comp=Z,87nm,1.2s
ESBB Sonseca Array 18.98 282 P P 07 35 38.4 0.0
ESDC Sonseca Array 18.98 282 P Pn 07 35 39.2 0.0
comp=Z,0.4nm,0.3s,baz=81,slow=11,SNR=15
ESDC LR LR 07 43 02.2
comp=Z,376nm,19.5s,baz=110,slow=37
PAB San Pablo 19.29 282 P Pn 07 35 43.5 +0.7
PAB San Pablo 19.29 282 P Pn 07 35 43.5 +0.7
PAB pmax pmax
comp=Z,22nm,1.0s
SLIT Slitere, Latvi 19.41 3 eP P 07 35 43.1 +0.2
NAX Nakhchivan 19.59 80 P P 07 35 45.7 +0.5
VRH Novokhopyorsk 19.83 42 eP P 07 35 47.7 +0.2
VRH pmax pmax
comp=Z,100nm,1.3s
VRH MLR MLR
comp=Z,1µm,9.0s
GROC Groznyy 19.84 68deP Pn 07 35 49.6 +0.3
TAM Tamanrasset 20.01 224 P P 07 35 50.4 +0.5
TAM Tamanrasset 20.01 224 P P 07 35 50.4 +0.5
TAM pmax pmax
comp=Z,33nm,1.5s
OBN Obninsk 20.09 28 P P 07 35 49.5 -0.8
comp=Z,1.6nm,0.3s,baz=219,slow=7.5,SNR=13
OBN LR LR 07 45 05.2
comp=Z,154nm,21.6s,baz=216,slow=42
OBN Obninsk 20.09 28 P P 07 35 49.3 -1.0
OBN IAmb IAmb 07 35 55.2
comp=Z,83nm,1.1s
OBN Obninsk 20.09 28deP P 07 35 49.9 -0.4
OBN e 07 36 08.2
OBN eS Sn 07 39 39.6 +1.8
OBN pmax pmax
comp=Z,87nm,1.3s
OBN MLR MLR
comp=Z,1µm,16.0s
BTLR Botlikh 20.11 69⇑eP P 07 35 50.2 -0.5
GANJ Ganja 20.14 75 P P 07 35 51.5 +0.4
VSU Vasula 20.62 9 eP P 07 35 56.5 +0.4
VSU Vasula 20.62 9c iP P 07 35 55.9 -0.2
VSU pmax pmax
comp=Z,2µm,1.7s
GNBR Gunib 20.64 70deP Pn 07 35 58.1 -0.7
MNGR Mingechevir, A 20.72 75 P P 07 35 57.7 +0.4
SEKA Sheki 20.79 73 P P 07 35 59.3 +1.1
MOS Moscow 20.95 28 eP P 07 35 58.0 -1.7
MOS e 07 36 08.9
MOS e 07 36 20.7
MOS pmax pmax
comp=Z,167nm,1.5s
MOS pmax pmax
comp=Z,400nm,2.1s
MOS MLR MLR
comp=Z,700nm,14.0s
MDT Midelt 21.03 263 P P 07 36 02.0 +1.2
comp=Z,11nm,0.9s,baz=88,slow=12,SNR=14
PBRG Braganca 21.04 288 eP P 07 36 04.8 +4.0
MAK Makhachkala 21.07 69 eP P 07 36 03.9 +2.9
MAK eS S 07 39 56.9 +1.8
MAK pmax pmax
comp=Z,660nm,1.3s
MAK MLR MLR
comp=Z,214nm,12.0s
AKT Akhty 21.19 73deP P 07 36 03.4 +0.9
PMRV Marv??o 21.64 282 eP P 07 36 09.2 +1.9
PCBR Castelo Branco 21.67 283 eP P 07 36 09.9 +2.4
MTE Manteigas 21.68 284 eP P 07 36 08.3 +0.6
PVIS Viseu 21.93 285 eP P 07 36 12.1 +1.7
LKRN Lenkeran, Azer 22.19 80 P P 07 36 13.7 +0.6
EVO Evora 22.23 280 eP P 07 36 15.0 +1.4
HFS Hagfors 22.29 351 P P 07 36 13.4 -0.6
comp=Z,22nm,0.6s,baz=159,slow=9.5,SNR=51
HFS LR LR 07 47 27.2
comp=Z,527nm,19.6s,baz=172,slow=44
PMTG Montargil 22.32 281 eP P 07 36 12.8 -1.8
PTOM Tomar 22.41 282 eP P 07 36 17.5 +2.0
PUL Pulkovo 22.44 13deP P 07 36 14.9 -0.7
PUL pmax pmax
comp=Z,271nm,0.8s
KONO Kongsberg 22.48 346 P P 07 36 16.2 +0.2
KONO Kongsberg 22.48 346ceP P 07 36 15.4 -0.7
KONO pmax pmax
comp=Z,158nm,2.5s
NORES NORESS Array B 23.17 349 P P 07 36 24.8 +1.6
NORES pmax pmax
comp=Z,2.0nm,0.3s
EKA Eskdalemuir Ar 23.30 325 P P 07 36 24.1 -0.4
comp=Z,53nm,1.0s,baz=127,slow=10,SNR=24
ESK Eskdalemuir 23.31 325 P P 07 36 24.8 +0.1
ESK IAmb IAmb 07 36 26.3
comp=Z,58nm,1.1s
ESK Eskdalemuir 23.31 325 P P 07 36 24.8 +0.1
ESK pmax pmax
comp=Z,58nm,1.1s
FINES FINESS Array B 23.47 7 P P 07 36 24.8 -1.4
comp=Z,20nm,0.8s,baz=169,slow=9.7,SNR=42
FINES PcP PcP 07 40 14.1 +2.4
comp=Z,2.6nm,0.7s,baz=129,slow=0.7,SNR=4.5
FINES LR LR 07 46 37.2
comp=Z,982nm,19.8s,baz=196,slow=39
FIA1 FINESS Array S 23.47 7 P P 07 36 24.5 -1.8
NB2 NORSAR Subarra 23.51 349 P P 07 36 26.2 -0.5
comp=Z,244nm,1.7s,baz=156,slow=10
NB2 NORSAR Subarra 23.51 349 P P 07 36 26.2 -0.5
baz=156,slow=10
NOA NORSAR Array B 23.51 349 P P 07 36 25.5 -1.2
comp=Z,44nm,1.1s,baz=160,slow=9.5,SNR=31
NOA PcP PcP 07 40 13.7 +1.8
comp=Z,1.3nm,0.8s,baz=139,slow=2.3,SNR=3.4
NOA LR LR 07 46 47.2
comp=Z,353nm,20.1s,baz=170,slow=40
NC303 NORSAR Array S 23.66 349 P P 07 36 27.5 -0.7
KLMR Klimovskoe 25.59 22 eP P 07 36 42.7 -3.1
KLMR pmax pmax
comp=Z,116nm,1.3s
KLMR Klimovskoe 25.59 22 eP P 07 36 42.7 -3.1
KLMR AMP 07 36 47.8
comp=Z,116nm,1.3s
KLMR LQ LQ 07 44 19.5
KLMR LQ LQ 07 44 19.5
KLMR LR LR 07 46 43.6
RAYN Ar Rayn 25.98 117 P P 07 36 50.4 +0.6
RAYN Ar Rayn 25.98 117 P P 07 36 50.4 +0.6
RAYN pmax pmax
comp=Z,15nm,1.0s
KIRV Kirov 27.63 33 P P 07 37 03.2 -1.0
comp=Z,23nm,1.0s,baz=206,slow=6.6,SNR=10
TMCR Tamitsa 27.98 16 eP P 07 37 06.2 -1.1
TMCR eS S 07 41 49.0 -1.7
TMCR pmax pmax
comp=Z,37nm,1.3s
PRGR Permogore 28.12 26 eP P 07 37 06.1 -2.5
PRGR pmax pmax
comp=Z,52nm,1.2s
AKTO Aktyubinsk 29.21 53 P P 07 37 17.4 -1.0
comp=Z,1.9nm,0.6s,baz=260,slow=8.0,SNR=8.1
GEYT Alibeck 29.56 79 P P 07 37 21.1 -0.6
comp=Z,2.6nm,0.5s,baz=274,slow=8.8,SNR=11
GEYT LR LR 07 52 21.6
comp=Z,173nm,19.6s,baz=205,slow=43
GYA0B ALIBECK ARRAY 29.56 79 P P 07 37 21.7 0.0
GYA0B IAmb IAmb 07 37 28.6
comp=Z,14nm,0.6s
TOA0 Torodi Ar. Sit 30.04 219 P P 07 37 26.2 +0.1
TORD Torodi Ar. Bea 30.04 219 P P 07 37 25.8 -0.3
comp=Z,5.4nm,0.9s,baz=34,slow=8.4,SNR=27
APA Apatity 30.25 10⇑iP P 07 37 27.5 +0.1
APA i 07 38 20.5
APA i S S 07 42 22.0 -4.2
APA i SS SnSn 07 43 59.0 -1.1
APA pmax pmax
comp=Z,6.0nm,1.0s
ARU Arti 31.06 42 P P 07 37 33.8 -0.9
comp=Z,1.4nm,0.4s,baz=240,slow=7.2,SNR=12
ARU Arti 31.06 42 P P 07 37 33.2 -1.4
ARU IAmb IAmb 07 37 35.0
comp=Z,30nm,1.3s
ARU Arti 31.06 42d iP P 07 37 33.5 -1.2
ARU 07 38 31.2
ARU S S 07 42 41.0 +1.8
ARU pmax pmax
comp=Z,26nm,1.3s
ARU MLR MLR
comp=Z,640nm,15.0s
ARCES ARCESS Array B 31.45 3 P P 07 37 36.4 -1.6
comp=Z,6.6nm,0.8s,baz=190,slow=9.9,SNR=37
ARCES PcP PcP 07 40 31.1 +0.3
comp=Z,3.7nm,0.9s,baz=221,slow=1.5,SNR=5.8
ARCES LR LR 07 51 34.2
comp=Z,560nm,18.5s,baz=170,slow=39
SVE Sverdlovsk 32.27 42⇓eP P 07 37 44.8 -0.6
SVE pmax pmax
comp=Z,40nm,1.3s
SVE MLR MLR
comp=Z,651nm,12.0s
UOSS Minazif 33.05 103 P P 07 37 53.7 +1.1
UOSS IAmb IAmb 07 37 57.0
comp=Z,19nm,1.1s
FURI Furi 33.56 146 P 07 37 58.3 +0.9
BRVK Borovoye 37.07 50 P P 07 38 26.1 -0.8
BRVK Borovoye 37.07 50ceP P 07 38 26.6 -0.3
BRVK pmax pmax
comp=Z,28nm,1.7s
KK31 Karatay Array 37.85 66 IAmb IAmb 07 38 40.8
comp=Z,16nm,0.9s
KKAR Karatay Array 37.85 66 IAmb IAmb 07 38 40.8
comp=Z,16nm,0.9s
DBIC Dimbokro 38.89 222 P P 07 38 42.6 +0.1
comp=Z,6.4nm,0.6s,baz=12,slow=9.5,SNR=12
DBIC LR LR 07 55 36.2
comp=Z,342nm,18.7s,baz=9.0,slow=38
DBIC Dimbokro 38.89 222 P P 07 38 44.4 +1.8
DBIC Dimbokro 38.89 222 P P 07 38 44.4 +1.8
DBIC pmax pmax
comp=Z,12nm,0.9s
KBL Kabul 38.98 80 P P 07 38 42.1 -1.3
KBL Kabul 38.98 80 P P 07 38 42.1 -1.3
KBL pmax pmax
comp=Z,7.0nm,0.8s
TIC Toumodi 39.00 223 eP P 07 38 45.0 +1.5
SCO Scoresbysund 39.06 339 i P P 07 38 45.0 +1.6
comp=Z,86nm,1.3s
SCO Scoresbysund 39.06 339 i P P 07 38 45.0 +1.6
SCO pmax pmax
comp=Z,86nm,1.3s
KIC Kosan Boka 39.09 222 eP P 07 38 44.4 +0.1
comp=Z,16nm,0.7s
KIC Kosan Boka 39.09 222 P P 07 38 44.4 +0.1
LIC Lamto 39.36 222 eP P 07 38 46.6 +0.1
comp=Z,50nm,0.8s
MBAR Mbarara 39.84 164⇓eP P 07 38 51.2 +0.5
MBAR pmax pmax
comp=Z,2.0nm,0.6s
ARSB Arslanbob 40.01 69 IAmb IAmb 07 39 03.0
comp=Z,28nm,1.0s
SPITS Spitsbergen Ar 40.05 359 P P 07 38 51.3 -0.3
comp=Z,6.8nm,0.8s,baz=155,slow=16,SNR=6.9
AAK Ala-Archa 40.81 66 P P 07 38 58.2 -0.3
AAK Ala-Archa 40.81 66ceP P 07 38 58.1 -0.5
AAK pmax pmax
comp=Z,10.0nm,1.3s
KMBO Kilima Mbogo 42.17 154 P P 07 39 12.7 +2.6
comp=Z,0.8nm,0.4s,baz=330,slow=10,SNR=4.0
KMBO LR LR 07 59 42.9
comp=Z,224nm,18.3s,baz=76,slow=40
DAG Danmarks Havn 42.18 348 i P P 07 39 08.9 -0.2
comp=Z,8.5nm,1.2s
DAG Danmarks Havn 42.18 348 i P P 07 39 08.9 -0.2
DAG pmax pmax
comp=Z,9.0nm,1.2s
KURK Kurchatov 42.30 53 P P 07 39 09.4 -1.0
KURK Kurchatov 42.30 53 P P 07 39 09.4 -1.0
KURK pmax pmax
comp=Z,12nm,1.0s
NIL Nilore 42.56 79 P P 07 39 12.0 -0.8
NIL IAmb IAmb 07 39 18.3
comp=Z,32nm,1.0s
NIL Nilore 42.56 79 P P 07 39 12.0 -0.8
NIL pmax pmax
comp=Z,32nm,1.0s
KSH Kashi 42.69 70 P P 07 39 12.1 -1.8
KSH pmax pmax
comp=Z,16nm,0.8s
KSH pmax pmax
comp=Z,320nm,10.2s
KSH LR LR
comp=Z,320nm,5.8s
KSH LR LR
comp=Z,360nm,5.0s
KSH LR LR
comp=Z,520nm,6.5s
SUMG Summit 44.70 338 i P P 07 39 31.0 +1.1
comp=Z,87nm,1.1s
SUMG Summit 44.70 338 P P 07 39 31.2 +1.3
SUMG Summit 44.70 338 P P 07 39 31.2 +1.3
SUMG pmax pmax
comp=Z,43nm,1.2s
MAKZ Makanchi 45.13 58 P P 07 39 31.1 -2.1
MAKZ Makanchi 45.13 58 P P 07 39 31.2 -2.1
MAKZ pmax pmax
comp=Z,8.0nm,1.1s
MKAR Makanchi Array 45.34 58 P P 07 39 34.0 -1.0
comp=Z,6.1nm,0.6s,baz=275,slow=7.3,SNR=86
MKAR Makanchi Array 45.34 58 P P 07 39 34.0 -1.0
NOR Nord 45.38 353 i P P 07 39 34.7 -0.1
comp=Z,37nm,1.4s
NOR Nord 45.38 353 i P P 07 39 34.7 -0.1
NOR pmax pmax
comp=Z,37nm,1.4s
ZAA0 Zalesovo Array 45.70 48 IAmb IAmb 07 39 37.4
comp=Z,17nm,0.7s
ZALV Zalesovo Beam 45.70 48 P P 07 39 36.9 -0.8
comp=Z,13nm,0.4s,baz=275,slow=8.7,SNR=68
ZALV PP PP 07 41 20.8 -3.7
comp=Z,3.3nm,0.6s,baz=272,slow=7.4,SNR=1.7
ZALV LR LR 07 59 25.3
comp=Z,235nm,18.8s,baz=286,slow=37
SFJD Kangerlussuaq 48.10 330 i P P 07 39 57.6 +1.4
SFJD Kangerlussuaq 48.10 330 P P 07 39 57.4 +1.2
SFJD Kangerlussuaq 48.10 330 i P P 07 39 57.6 +1.4
WMQ Urumqi 49.80 61 eP P 07 40 09.1 -0.6
WMQ pP sP 07 40 15.1 -0.8
WMQ sP pP 07 40 19.3 +5.1
WMQ pmax pmax
comp=Z,12nm,1.5s
WMQ pmax pmax
comp=Z,140nm,6.1s
WMQ LR LR
comp=Z,510nm,29.0s
WMQ LR LR
comp=Z,700nm,29.0s
DANN Dangsing 52.96 81 eP P 07 40 32.4 -1.5
comp=Z,39nm,0.6s
DMN Daman 54.36 81 eP P 07 40 42.5 -1.6
comp=Z,27nm,0.7s
PKIN Phulchoki 54.60 81 eP P 07 40 44.6 -1.3
PKI Pulchoki 54.61 81 eP P 07 40 43.6 -2.4
comp=Z,8.2nm,0.5s
GUN Gumba 54.81 80 eP P 07 40 46.2 -1.3
JIRN Jiri 55.18 80 eP P 07 40 49.3 -0.9
MOY Mondy 55.76 48 eP P 07 40 53.9 +0.2
RAMN Ramite 55.84 81 eP P 07 40 52.8 -2.0
comp=Z,19nm,0.7s
TAPN Taplejung 56.51 80 eP P 07 40 58.8 -0.8
TLY Talaya 57.30 47 LR LR 08 06 17.4
comp=Z,199nm,18.3s,baz=298,slow=37
TLY Talaya 57.30 47 P P 07 41 04.8 +0.2
TLY IAmb IAmb 07 41 06.4
comp=Z,26nm,1.3s
TLY Talaya 57.30 47ceP P 07 41 05.0 +0.5
TLY pmax pmax
comp=Z,17nm,1.3s
ZAK Zakamensk 57.57 49 eP P 07 41 06.4 -0.2
ZAK pmax pmax
comp=Z,6.0nm,1.2s
SCHQ Schefferville 58.32 317 P P 07 41 12.1 +0.4
comp=Z,4.4nm,0.6s,baz=147,slow=3.6,SNR=6.8
SCHQ Schefferville 58.32 317 P P 07 41 12.0 +0.4
SCHQ IAmb IAmb 07 41 20.5
comp=Z,16nm,1.2s
TIXI Tiksi 59.60 20 P P 07 41 20.0 -0.2
TIXI IAmb IAmb 07 41 22.0

	comp=Z,19nm,1.4s					
TIXI	Tiksi	59.60	20⇑	eP	P	07 41 20.4 +0.2
TIXI				pmax	pmax	
	comp=Z,15nm,1.3s					
TIXI				MLR	MLR	
	comp=Z,1µm,18.0s					
RES	Resolute Bay	59.65	344	P	P	07 41 21.8 +1.3
RES				IAmb	IAmb	07 41 30.8
	comp=Z,13nm,1.5s					
RES	Resolute Bay	59.65	344	P	P	07 41 21.8 +1.3
RES				pmax	pmax	
	comp=Z,13nm,1.5s					
GTA	Gaotai	59.87	62	eP	P	07 41 21.8 -1.0
GTA				pP	pP	07 41 26.3 -1.0
GTA				sP	sP	07 41 29.6 +0.5
GTA				pmax	pmax	
	comp=Z,8.0nm,1.2s					
GTA				pmax	pmax	
	comp=Z,53nm,5.5s					
GTA				LR	LR	
	comp=Z,160nm,11.7s					
GTA				LR	LR	
	comp=Z,210nm,13.7s					
BOD	Bodaibo	60.36	38	eP	P	07 41 23.7 -2.0
BOD				pmax	pmax	
	comp=Z,16nm,1.5s					
SONM	Songino Array	60.48	51	P	P	07 41 26.2 -0.6
	comp=Z,6.9nm,1.1s,baz=286,slow=7.2,SNR=28					
SONM				LR	LR	08 10 11.8
	comp=Z,199nm,18.6s,baz=238,slow=39					
SHL	Shillong	60.63	79	P	P	07 41 26.3 -1.9
SHL				IAmb	IAmb	07 41 40.1
	comp=Z,14nm,1.2s					
SHL	Shillong	60.63	79	P	P	07 41 26.3 -1.9
SHL				pmax	pmax	
	comp=Z,14nm,1.2s					
PALK	Pallekele	62.33	103	P	P	07 41 42.1 +2.4
PALK				IAmb	IAmb	07 41 44.4
	comp=Z,14nm,1.1s					
PALK	Pallekele	62.33	103	P	P	07 41 42.1 +2.4
PALK				pmax	pmax	
	comp=Z,14nm,1.1s					
LZH	Lanzhou	64.25	63	eP	P	07 41 51.8 -0.5
LZH				pP	pP	07 41 56.3 -0.6
LZH				sP	sP	07 41 59.0 +0.4
LZH				ePP	PP	07 44 15.3 +2.0
LZH				pmax	pmax	
	comp=Z,24nm,1.3s					
LZH				pmax	pmax	
	comp=Z,100nm,6.0s					
LZH				LR	LR	
	comp=Z,370nm,15.2s					
LZH				LR	LR	
	comp=Z,380nm,15.5s					
LZH				LR	LR	
	comp=Z,510nm,18.3s					
LATQ	La Tuque	64.98	312	P	P	07 41 57.3 +0.6
	baz=60					
YAK	Yakutsk	65.08	29	P	P	07 41 56.1 -0.9
YAK	Yakutsk	65.08	29	eP	P	07 41 55.1 -1.9
YAK				e*PP	pP	07 42 02.0 +0.4
YAK				e		07 42 35.7
YAK				e		07 44 20.5
YAK				eS	S	07 50 39.1 +0.4
YAK				eSS	SS	07 54 48.8 -1.2
YAK				pmax	pmax	
	comp=Z,19nm,0.9s					
YAK				pmax	pmax	
	comp=N,10.0nm,1.4s					
YAK				pmax	pmax	
	comp=E,11nm,1.1s					
YAK				pmax	pmax	
	comp=Z,113nm,3.7s					
YAK				pmax	pmax	
	comp=N,211nm,3.5s					
YAK				pmax	pmax	
	comp=E,55nm,3.5s					
YAK				smax	smax	
	comp=N,116nm,3.3s					
YAK				smax	smax	
	comp=E,49nm,3.2s					
YAK				MLR	MLR	
	comp=Z,182nm,18.0s					
YAK				MLR	MLR	
	comp=N,233nm,19.0s					
YAK				MLR	MLR	
	comp=E,31nm,19.0s					
D58A	Chemin du LacG	65.19	311	P	P	07 41 58.3 +0.3
	baz=60					
E57A	Chemin Saint G	66.28	311	P	P	07 42 04.8 -0.4
	baz=59					
D56A	ZEC Mazanza, M	66.31	312	P	P	07 42 05.6 +0.2
	baz=59					
MATQ	Matagami	66.54	316	P	P	07 42 06.9 +0.3
	baz=58					
LSQQ	Lebel-sur-Quev	66.54	315	P	P	07 42 06.1 -0.6
	baz=58					
BOSA	Boshof	66.69	175	P	P	07 42 10.7 +2.8
	comp=E,3.5nm,0.7s,baz=9.5,slow=6.1,SNR=3.5					
BOSA	Boshof	66.69	175	IAmb	IAmb	07 42 14.8
	comp=Z,9.8nm,1.1s					
E56A	St. Veronique	66.74	312	P	P	07 42 09.2 +1.1
	baz=58					
D55A	Sainte-Anne-du	66.75	312	P	P	07 42 09.2 +1.1
	baz=58					
CD2	Chengdu	66.83	68⇓	iP	P	07 42 08.6 -0.3
CD2				pmax	pmax	
	comp=Z,20nm,0.9s					
G58A	Ormstown	66.88	310	P	P	07 42 07.4 -1.5
	baz=58					
H59A	Cadyville	66.92	309	P	P	07 42 11.3 +2.0
	baz=58					
HHC	Hu-ho-hao-te	67.06	55	eP	P	07 42 09.8 -0.5
HHC				pP	pP	07 42 14.0 -0.9
HHC				pmax	pmax	
	comp=Z,6.0nm,0.9s					
HHC				pmax	pmax	
	comp=Z,47nm,4.2s					
HHC				LR	LR	
	comp=Z,160nm,11.9s					
HHC				LR	LR	
	comp=Z,210nm,13.6s					
HHC				LR	LR	
	comp=Z,210nm,14.8s					
D54A	Lac Fusel, La	67.36	313	P	P	07 42 12.8 +0.8
	baz=58					
D53A	Lac Vacive, Po	68.00	313	P	P	07 42 17.2 +1.1
	baz=57					
E54A	Lac Daplat, Po	68.06	312	P	P	07 42 17.5 +1.1
	baz=57					
E53A	Dumoine, Ponti	68.36	312	P	P	07 42 18.8 +0.5
	baz=57					
G55A	Calabogie	68.42	311	P	P	07 42 20.1 +1.4
	baz=57					
D52A	ZEK Kipawa Sen	68.47	313	P	P	07 42 18.9 -0.1
	baz=57					
ALGO	Algonquin Park	68.82	312	P	P	07 42 20.2 -0.9
	baz=57					
ZEA	Zeya	68.86	38	eP	P	07 42 25.2 +3.9
ZEA				pmax	pmax	
	comp=Z,21nm,1.2s					
ZEA				MLR	MLR	
	comp=Z,500nm,14.0s					
XAN	Xi'an	68.87	63	P	P	07 42 21.5 -0.2
XAN				pP	pP	07 42 24.8 -1.5
XAN				pmax	pmax	
	comp=Z,11nm,1.3s					
D51A	Lot 18 Range I	68.95	314	P	P	07 42 21.3 -0.6
	baz=56					
E52A	Mattawa	68.99	313	P	P	07 42 24.2 +2.0
	baz=56					
H55A	Tweed	69.08	311	P	P	07 42 23.9 +1.2
	baz=57					
G54A	Lake Saint Pet	69.15	312	P	P	07 42 23.2 0.0
	baz=56					
D50A	G1974 Best Tow	69.18	314	P	P	07 42 23.0 -0.3
	baz=56					
M60A	Port Jervis	69.27	307	P	P	07 42 23.1 -0.9
	baz=57					
C36M	Paulatuk	69.55	347	IAmb	IAmb	07 42 27.9
	comp=Z,15nm,1.1s					
C36M	Paulatuk	69.55	347	P	P	07 42 24.7 -0.5
	baz=29					
F52A	Sundridge	69.65	313	P	P	07 42 25.9 -0.4
	baz=56					
CHTO	Chiang Mai	69.77	82	P	P	07 42 25.9 -1.6
CHTO				IAmb	IAmb	07 42 31.4

	comp=Z,7.9nm,0.9s					
CHTO	Chiang Mai	69.77	82	P	P	07 42 25.9 -1.6
CHTO				pmax	pmax	
	comp=Z,8.0nm,0.9s					
N60A	Cedar Hill Far	69.82	306	P	P	07 42 28.3 +0.9
	baz=56					
H53A	Bobcaygeon	69.90	311	P	P	07 42 28.1 +0.2
	baz=56					
F51A	Arnstein	69.92	313	P	P	07 42 28.2 +0.3
	baz=56					
CMAR	Chiang Mai Arr	69.97	82	P	P	07 42 27.7 -1.0
	comp=Z,6.0nm,0.8s,baz=305,slow=6.9,SNR=21					
CMAR				LR	LR	08 17 18.8
	comp=Z,56nm,18.7s,baz=314,slow=40					
N59A	State Game Lan	70.22	307	P	P	07 42 31.0 +1.1
	baz=56					
D48A	Paudash Townsh	70.28	315	P	P	07 42 30.4 +0.2
	baz=55					
O60A	Telford	70.32	306	P	P	07 42 32.2 +1.8
	baz=56					
M58A	Price's Panora	70.40	308	P	P	07 42 28.8 -2.2
	baz=56					
BJI	Beijing	70.47	54	P	P	07 42 30.9 -0.5
BJI				pmax	pmax	
	comp=Z,5.0nm,1.4s					
K55A	Perry	70.63	309	P	P	07 42 35.0 +2.6
	baz=56					
L56A	Greenwood	70.65	309	P	P	07 42 35.4 +2.9
	baz=56					
P60A	Greenville	70.75	306	P	P	07 42 35.8 +2.6
	baz=56					
E48A	Lockeyer	70.88	314	P	P	07 42 35.2 +1.4
	baz=54					
BILL	Bilibino	70.95	13	P	P	07 42 34.0 +0.1
BILL				IAmb	IAmb	07 42 36.1
	comp=Z,23nm,1.3s					
BILL	Bilibino	70.95	13	iP	P	07 42 33.7 -0.1
BILL				i		07 42 54.4
BILL				i		07 45 15.4
BILL				pmax	pmax	
	comp=Z,16nm,1.2s					
D47A	Chapleau	71.07	315	P	P	07 42 35.8 +0.8
	baz=54					
I52A	Shelburne	71.13	312	P	P	07 42 35.9 +0.5
	baz=55					
L55A	Hinsdale	71.17	309	P	P	07 42 36.1 +0.5
	baz=55					
F49A	Sandfield	71.23	314	P	P	07 42 37.4 +1.4
	baz=54					
GYA	Guiyang	71.38	71	eP	P	07 42 42.0 +4.7
GYA				pP	sP	07 42 48.0 +4.3
GYA				S	S	07 51 58.3 +3.0
GYA				pmax	pmax	
	comp=Z,20nm,0.8s					
GYA				pmax	pmax	
	comp=Z,130nm,5.2s					
GYA				LR	LR	
	comp=Z,460nm,18.1s					
GYA				LR	LR	
	comp=Z,400nm,18.8s					
GYA				LR	LR	
	comp=Z,450nm,18.0s					
M56A	Emporium	71.41	308	P	P	07 42 38.2 +1.1
	baz=55					
N57A	Milroy	71.43	307	P	P	07 42 34.8 -2.4
	baz=55					
F48A	Evansville	71.52	314	P	P	07 42 38.2 +0.5
	baz=54					
E47A	Iron Bridge	71.52	315	P	P	07 42 36.7 -0.9
	baz=54					
D46A	Sault St. Mari	71.68	316	P	P	07 42 39.2 +0.5
	baz=53					
M55A	Ridgway	71.78	309	P	P	07 42 39.5 +0.2
	baz=55					
I51A	Listowel	71.78	312	P	P	07 42 40.1 +0.8
	baz=54					
J52A	Paris	71.79	311	P	P	07 42 39.9 +0.5
	baz=54					
N56A	West Decatur	71.80	308	P	P	07 42 39.1 -0.4
	baz=55					
INK	Inuvik	71.96	350	IAmb	IAmb	07 42 41.4
	comp=Z,16nm,1.3s					
P58A	Pank, Wackersv	71.99	306	P	P	07 42 41.5 +0.9
	baz=55					
SEY	Seymchan	72.09	21⇓	eP	P	07 42 41.8 +1.0
ERPA	Erie	72.15	310	P	P	07 42 42.4 +0.8
	baz=54					
K52A	Tillsonburg	72.20	311	P	P	07 42 43.8 +2.0
	baz=54					
M54A	Oil Creek Stat	72.30	309	P	P	07 42 44.2 +1.7
	baz=54					
N55A	Marion Center	72.31	308	P	P	07 42 43.9 +1.4
	baz=54					
O56A	Blue Knob Stat	72.34	308	P	P	07 42 44.5 +1.7
	baz=55					
L53A	Girard	72.41	310	P	P	07 42 44.8 +1.7
	baz=54					
Q58A	Fox Den Farm,	72.55	306	P	P	07 42 46.9 +2.9
	baz=55					
G47A	Hillman	72.61	314	P	P	07 42 45.6 +1.4
	baz=53					
I49A	Point Hope	72.75	313	P	P	07 42 48.6 +3.5
	baz=53					
CBN	Corbin Frederi	72.78	305	P	P	07 42 46.8 +1.5
	baz=55					
N54A	Moraine State	72.82	309	P	P	07 42 47.0 +1.4
	baz=54					
O55A	Ligonier	72.84	308	P	P	07 42 49.5 +3.8
	baz=54					
E44A	Grand Marais A	72.87	316	P	P	07 42 46.6 +0.8
	baz=52					
P56A	Dayton Farm, R	72.96	307	P	P	07 42 49.3 +2.9
	baz=54					
M53A	WI Miller and	72.96	309	P	P	07 42 45.1 -1.3
	baz=54					
S59A	Mechanicsville	72.98	305	P	P	07 42 49.2 +2.7
	baz=55					
TOLK	Toolik Lake Re	73.14	356	P	P	07 42 47.4 +0.3
	baz=8.2					
H47A	Mio	73.15	314	P	P	07 42 50.1 +2.6
	baz=53					
F45A	CMU Biological	73.22	315	P	P	07 42 48.4 +0.5
	baz=52					
R58B	Mineral	73.24	305	P	P	07 42 47.2 -0.9
	baz=54					
YKA	Yellowknife Ar	73.27	340	P	P	07 42 48.2 +0.4
	comp=Z,5.3nm,1.1s,baz=33,slow=5.9,SNR=33					
YKA				LR	LR	08 19 23.7
	comp=Z,122nm,18.0s,baz=0.0,slow=40					
J49A	Marlette	73.28	312	P	P	07 42 49.4 +1.1
	baz=53					
M52A	Chesterland	73.31	310	P	P	07 42 49.0 +0.5
	baz=54					
N53A	Lisbon	73.43	309	P	P	07 42 50.3 +1.1
	baz=54					
R57A	Stanardsville	73.46	306	P	P	07 42 52.6 +3.2
	baz=54					
MCWV	Mont Chateau	73.50	308	P	P	07 42 49.2 -0.4
	baz=54					
S58A	Poland Farm, P	73.56	305	P	P	07 42 52.3 +2.4
	baz=54					
E43A	Lone Tree Farm	73.61	316	P	P	07 42 50.8 +0.6
E43A				IAmb	IAmb	07 42 51.8
	comp=Z,20nm,1.4s					
I47A	Gladwin	73.67	313	P	P	07 42 51.4 +0.8
	baz=52					
G45A	Suttons Bay	73.70	315	P	P	07 42 50.6 -0.1
	baz=52					
H46A	Fife Lake	73.75	314	P	P	07 42 50.9 -0.1
	baz=52					
KLR	Kul'dur	73.87	39	LR	LR	08 18 53.3
	comp=Z,111nm,20.8s,baz=354,slow=39					
KLR	Kul'dur	73.87	39	ceP	P	07 42 51.7 +0.1
KLR				pmax	pmax	
	comp=Z,25nm,1.3s					
L50A	Kingsville	73.88	311	P	P	07 42 52.3 +0.5
	baz=53					
CN2	Changchun	73.89	47	eP	P	07 42 51.3 -0.5
CN2				pmax	pmax	
	comp=Z,30nm,1.3s					
CN2				LR	LR	
	comp=Z,470nm,13.0s					
P54A	Burton	73.92	308	P	P	07 42 53.8 +1.7
	baz=54					
RDOG	Red Dog Mine	73.97	1	IAmb	IAmb	07 42 53.3
	comp=Z,14nm,1.0s					
O53A	New Philadelph	73.99	309	P	P	07 42 53.6 +1.1
	baz=53					

Q55A	Buckhannon	74.04	307	P	P	07 42 54.8 +2.0
	baz=54					
K48A	Perry	74.19	312	P	P	07 42 54.4 +0.8
	baz=52					
EPYK	Eagle Plains	74.21	351	IAmb	IAmb	07 42 54.3
	comp=Z,9.4nm,0.9s					
EPYK	Eagle Plains	74.21	351	P	P	07 42 52.7 -0.6
	baz=19					
MA2	Magadan	74.25	24	P	P	07 42 53.6 0.0
MA2				IAmb	IAmb	07 43 02.1
	comp=Z,20nm,1.1s					
MA2	Magadan	74.25	24⇑	eP	P	07 42 54.1 +0.5
MA2				pmax	pmax	
	comp=Z,29nm,1.3s					
N51A	Ashland	74.30	310	P	P	07 42 54.2 -0.1
	baz=53					
J47A	Sumner	74.33	313	P	P	07 42 55.2 +0.8
	baz=52					
Q54A	Coxs Mills	74.51	308	P	P	07 42 57.0 +1.4
	baz=53					
COLD	Coldfoot	74.58	356	IAmb	IAmb	07 42 57.8
	comp=Z,12nm,1.2s					
WHN	Wuhan	74.63	63	P	P	07 43 05.1 +8.8
K47A	Vermontville	74.78	313	P	P	07 42 57.3 +0.2
	baz=52					
O51A	Pataskala	74.91	309	P	P	07 42 58.6 +0.8
	baz=52					
P52A	Corning	74.93	309	P	P	07 42 58.8 +0.8
	baz=53					
COWI	Conover	74.94	317	IAmb	IAmb	07 43 03.0
	comp=Z,10nm,0.9s					
EYMN	Ely	74.97	320	P	P	07 42 58.3 +0.2
EYMN				IAmb	IAmb	07 43 01.5
	comp=Z,15nm,1.4s					
EYMN	Ely	74.97	320	P	P	07 42 58.0 -0.1
	baz=49					
Q53A	Leroy	75.02	308	P	P	07 43 00.5 +2.0
	baz=53					
FFC	Flin Flon	75.05	330	P	P	07 42 59.1 +0.7
FFC	Flin Flon	75.05	330	P	P	07 42 59.1 +0.7
FFC				pmax	pmax	
	comp=Z,14nm,1.4s					
GRNR	Gornyy	75.10	36	eP	P	07 42 57.0 -1.7
GRNR				pmax	pmax	
	comp=Z,20nm,1.4s					
GRNR				MLR	MLR	
	comp=Z,370nm,16.0s					
T56A	Rocky Mt	75.17	305	P	P	07 43 02.0 +2.6
	baz=53					
L47A	Sherwood	75.33	312	P	P	07 43 00.5 +0.2
	baz=52					
ULM	Lac du Bonnet	75.57	324	P	P	07 43 02.2 +0.8
	comp=Z,18nm,1.2s,baz=45,slow=6.1,SNR=12					
ULM				LR	LR	08 16 10.0
	comp=Z,213nm,19.2s,baz=13,slow=36					
ULM	Lac du Bonnet	75.57	324	IAmb	IAmb	07 43 03.7
	comp=Z,32nm,1.4s					
R53A	Hurricane	75.61	308	P	P	07 43 02.7 +0.8
	baz=52					
E38A	The Farm, Brul	75.88	319	IAmb	IAmb	07 43 06.0
	comp=Z,22nm,1.5s					
N48A	Decatur	75.92	311	P	P	07 43 04.5 +0.8
	baz=51					
O49A	Covington	75.93	310	P	P	07 43 03.9 +0.2
	baz=52					
G40A	Rib Lake	76.04	317	P	P	07 43 06.9 +2.7
G40A				IAmb	IAmb	07 43 07.3
	comp=Z,12nm,1.1s					
Q51A	Peebles	76.04	309	P	P	07 43 05.8 +1.4
	baz=52					
T54A	Tazewell	76.14	306	P	P	07 43 06.4 +1.3
	baz=52					
U55A	TA2, Sparta	76.14	306	P	P	07 43 05.8 +0.7
	baz=52					
N47A	Urbana	76.31	311	P	P	07 43 04.5 -1.3
	baz=51					
POKR	Poker Plat Res	76.51	355	P	P	07 43 07.1 +0.6
	baz=9.8					
U54A	Nelsons Funny	76.62	306	P	P	07 43 10.0 +2.2
	baz=52					
MLY	Manley	76.80	356	IAmb	IAmb	07 43 10.1
	comp=Z,11nm,1.1s					
ILAR	Eielson Array	76.81	354	P	P	07 43 09.0 +0.8
	comp=Z,2.5nm,0.9s,baz=359,slow=5.3,SNR=19					
ILAR				LR	LR	08 17 45.7
	comp=Z,109nm,20.8s,baz=0.0,slow=36					
NJ2	Nanjing	76.86	60	eP	P	07 43 09.3 +0.3
NJ2				pmax	pmax	
	comp=Z,10.0nm,0.6s					
AGMN	Agassiz Nation	76.90	322	P	P	07 43 09.3 +0.2
	baz=46					
V54A	Nebo	77.16	305	P	P	07 43 11.6 +0.8
	baz=52					
HDA	Harding Lake	77.17	354	IAmb	IAmb	07 43 11.8
	comp=Z,15nm,1.0s					
WRH	Wood River Hil	77.19	355	IAmb	IAmb	07 43 12.1
	comp=Z,20nm,1.1s					
USA0B	Ussuriysk Arra	77.28	43	P	P	07 43 10.4 -0.9
USA0B	Ussuriysk Arra	77.28	43	ceP	P	07 43 10.6 -0.6
USRK	Ussuriysk Ar.	77.28	43	P	P	07 43 10.7 -0.6
	comp=Z,4.9nm,0.8s,baz=302,slow=4.3,SNR=17					
USRK				LR	LR	08 19 40.2
	comp=Z,196nm,19.5s,baz=313,slow=38					
M44A	Midewin, Midew	77.35	313	IAmb	IAmb	07 43 26.7
	comp=Z,26nm,1.3s					
X56A	White Oak	77.36	304	P	P	07 43 12.7 +0.9
	baz=52					
SFIN	Lafayette	77.45	312	P	P	07 43 11.9 -0.4
	baz=50					
SPMN	Marine on St.	77.45	318	IAmb	IAmb	07 43 22.6
	comp=Z,14nm,1.2s					
SPMN	Marine on St.	77.45	318	P	P	07 43 11.5 -0.7
	baz=48					
RIDG	Independent Ri	77.65	353	IAmb	IAmb	07 43 16.2
	comp=Z,36nm,1.4s					
DOT	Dot Lake	77.67	353	IAmb	IAmb	07 43 15.7
	comp=Z,27nm,1.4s					
TYV	Tymovskoe	77.83	33	eP	P	07 43 14.1 0.0
TYV				pmax	pmax	
	comp=Z,10.0nm,1.4s					
TYV				pmax	pmax	
	comp=Z,600nm,7.1s					
GAMB	Gambell	77.84	5	IAmb	IAmb	07 43 15.7
	comp=Z,16nm,1.4s					
MCK	McKinley	77.98	355	IAmb	IAmb	07 43 16.4
	comp=Z,29nm,1.2s					
U51A	La Follette	78.10	307	P	P	07 43 16.8 +0.8
	baz=51					
V52A	Sevierville	78.17	306	P	P	07 43 18.1 +1.7
	baz=51					
WCI	Wyandotte Cave	78.34	310	P	P	07 43 17.8 +0.5
	baz=50					
DHY	Denali Highway	78.52	354	IAmb	IAmb	07 43 19.3
	comp=Z,14nm,0.9s					
T49A	Edmonton	78.59	308	P	P	07 43 18.6 -0.1
	baz=50					
U50A	Jamestown	78.60	307	P	P	07 43 19.8 +1.1
	baz=51					
U49A	Red Boiling Sp	79.12	308	P	P	07 43 21.5 -0.1
	baz=50					
TEY	Ternei	79.14	40⇑	eP	P	07 43 20.9 -0.6
TEY				pmax	pmax	
	comp=E,10.0nm,0.9s					
TEY				pmax	pmax	
	comp=N,10.0nm,1.1s					
TEY				pmax	pmax	
	comp=Z,10.0nm,1.3s					
X52A	Dahlonega	79.14	306	P	P	07 43 22.5 +0.8
	baz=51					
V50A	Pikevile	79.23	307	P	P	07 43 20.9 -1.3
	baz=50					
PSI	Prapat	79.27	95	LR	LR	08 23 22.0
	comp=Z,37nm,18.1s,baz=344,slow=39					
PSI	Prapat	79.27	95	P	P	07 43 22.6 -0.2
PSI				pmax	pmax	
	comp=Z,9.0nm,0.9s					
RPSI	Rantau Prapat	79.33	95	P	P	07 43 22.6 -0.4
KSRS	Korea Array	79.35	51	P	P	07 43 22.5 -0.3
	comp=Z,3.2nm,0.8s,baz=309,slow=5.2,SNR=13					
Y53A	Monroe	79.41	305	P	P	07 43 24.6 +1.4
	baz=51					
HYT	Haines Junctio	79.61	349	IAmb	IAmb	07 43 27.1
	comp=Z,16nm,1.2s					
GOGA	Godfrey	79.61	304	P	P	07 43 24.6 +0.3
	baz=51					
T47A	Sharon Grove	79.63	309	IAmb	IAmb	07 43 30.0
	comp=Z,25nm,1.2s					
W50A	Signal Mountai	79.66	307	P	P	07 43 25.4 +0.8

baz=50
V49A McMinnville 79.67 307 P P 07 43 25.7 +1.1
baz=50
Y52A Lilburn 79.71 305 P P 07 43 26.3 +1.4
baz=51
SKT Skwentna 79.88 356 IAmb IAmb 07 43 43.7
comp=Z,11nm,1.0s
V48A Smith Brothers 80.26 308 IAmb IAmb 07 43 30.1
comp=Z,18nm,1.4s
W49A Belvidere 80.31 307 P P 07 43 28.3 +0.2
baz=50
Z52A Williamson 80.37 305 P P 07 43 27.5 -1.0
baz=50
ECSD EROS Data Cent 80.46 319 P P 07 43 29.2 +0.4
ECSD IAmb IAmb 07 43 32.0
comp=Z,15nm,1.2s
ECSD EROS Data Cent 80.46 319 P P 07 43 29.2 +0.4
baz=45
DLBC Dease Lake 80.53 345 P P 07 43 27.3 -1.6
comp=Z,9.3nm,0.9s,baz=266,slow=0.9,SNR=5.1
DLBC Dease Lake 80.53 345 IAmb IAmb 07 43 29.9
comp=Z,18nm,1.2s
YSS Yuzh-Sakhalins 80.75 36 P P 07 43 30.3 +0.1
YSS Yuzh-Sakhalins 80.75 36⇑eP P 07 43 30.6 +0.4
YSS e 07 43 38.5
YSS pmax pmax
comp=Z,50nm,1.5s
YSS MLR MLR
comp=Z,600nm,16.0s
CCM Cathedral Cave 81.40 312 P P 07 43 34.0 +0.2
baz=48
PETK Petropavlovsk- 81.76 24 LR LR 08 24 40.7
comp=Z,318nm,18.6s,baz=356,slow=39
LRAL Lakeview Retre 82.12 306 IAmb IAmb 07 43 40.6
comp=Z,17nm,1.3s
LRAL Lakeview Retre 82.12 306 P P 07 43 37.1 -0.7
baz=49
MGMO Mountain Grove 82.61 312 IAmb IAmb 07 43 43.4
comp=Z,30nm,1.4s
LAO LASA Array 82.87 326 P P 07 43 42.4 +0.9
baz=40
BGNE Belgrade 82.91 318 P P 07 43 42.7 +1.0
baz=44
EGMT Eagleton 83.31 329 P P 07 43 44.4 +0.6
baz=37
BDFB Brasilia 83.47 244 LR LR 08 22 03.2
comp=Z,212nm,18.0s,baz=48,slow=36
U40A Yellville 83.50 312 IAmb IAmb 07 43 47.6
comp=Z,16nm,1.4s
U40A Yellville 83.50 312 P P 07 43 45.3 +0.5
baz=47
KSU1 Kansas State U 83.72 316 P P 07 43 46.7 +0.7
baz=45
RSSD Black Hills 83.83 323 P P 07 43 47.6 +0.9
RSSD IAmb IAmb 07 43 49.0
comp=Z,12nm,1.3s
RSSD Black Hills 83.83 323 P P 07 43 47.6 +0.9
RSSD pmax pmax
comp=Z,12nm,1.3s
RSSD Black Hills 83.83 323 P P 07 43 47.1 +0.4
baz=41
W41B Gary Mavity, V 83.94 311 P P 07 43 46.7 -0.4
baz=47
HHAR Hobbs 84.18 312 IAmb IAmb 07 43 50.1
comp=Z,20nm,1.4s
X40A Basin Creek Fa 84.77 310 IAmb IAmb 07 43 53.2
comp=Z,12nm,1.2s
X40A Basin Creek Fa 84.77 310 P P 07 43 52.4 +1.1
baz=46
W39A Magazine 84.84 311 P P 07 43 53.0 +1.4
baz=46
MIAR Mount Ida 85.17 311 IAmb IAmb 07 43 57.3
comp=Z,17nm,1.3s
SDV Santo Domingo 85.37 278 P P 07 43 55.3 +0.4
SDV IAmb IAmb 07 44 09.1
comp=Z,11nm,0.9s
RLMT Red Lodge 85.42 327 P P 07 43 56.0 +1.3
baz=37
TUL1 Leonard 85.52 313 P P 07 43 55.5 +0.4
baz=45
Z41A Richland Creek 85.59 309 P P 07 43 57.1 +1.7
baz=46
CBKS Cedar Bluff 85.62 317 P P 07 43 56.5 +1.0
baz=43
NEW Newport 85.93 333 P P 07 43 57.1 +0.2
comp=Z,6.3nm,1.0s,baz=35,slow=5.2,SNR=7.2
NEW Newport 85.93 333 IAmb IAmb 07 43 58.5
comp=Z,14nm,1.1s
NEW Newport 85.93 333 P P 07 43 57.9 +0.9
baz=32
MSO Missoula 85.94 331 IAmb IAmb 07 43 59.9
comp=Z,12nm,1.2s
MSO Missoula 85.94 331 P P 07 43 57.1 0.0
baz=34
MAJO Matsushiro 85.99 46⇓eP P 07 43 57.4 0.0
MAJO pmax pmax
comp=Z,17nm,1.3s
MJAR Matsushiro Arr 85.99 46 P P 07 43 56.2 -1.2
comp=Z,4.1nm,0.9s,baz=344,slow=5.0,SNR=5.6
MJAR LR LR 08 24 49.4
comp=Z,99nm,18.1s,baz=30,slow=37
H17A Grant Village 86.56 327 P P 07 44 03.7 +3.3
baz=36
DLMT Dillon 86.61 329 IAmb IAmb 07 44 03.1
comp=Z,17nm,1.3s
B08A Colville Reser 86.62 334 IAmb IAmb 07 44 07.6
comp=Z,9.8nm,1.4s
PDAR Pinedale Array 87.42 326 P P 07 44 04.0 -0.6
comp=Z,2.0nm,1.0s,baz=50,slow=4.6,SNR=7.1
PDAR LR LR 08 23 55.8
comp=Z,100nm,19.7s,baz=49,slow=36
D08A Wollman Farm, 87.59 334 P P 07 44 08.0 +3.0
D08A IAmb IAmb 07 44 08.1
comp=Z,12nm,1.3s
ISCO Idaho Springs 87.89 321 P P 07 44 05.8 -1.2
baz=40
F10A Beach Ranch, E 87.91 332 IAmb IAmb 07 44 08.4
comp=Z,17nm,1.4s
WMOK Wichita Mounta 88.06 314 IAmb IAmb 07 44 17.1
comp=Z,18nm,1.5s
WMOK Wichita Mounta 88.06 314 P P 07 44 09.1 +1.6
baz=43
AHID Auburn Hatcher 88.09 327 IAmb IAmb 07 44 12.8
comp=Z,8.4nm,1.2s
BMO Blue Mountains 88.89 331 IAmb IAmb 07 44 13.2
comp=Z,13nm,1.4s
O20A White River Ci 88.90 323 IAmb IAmb 07 44 20.9
comp=Z,8.0nm,1.1s
O20A White River Ci 88.90 323 P P 07 44 11.7 +0.1
baz=38
HWUT Hardware Ranch 89.23 326 IAmb IAmb 07 44 17.7
comp=Z,14nm,1.2s
SDCO Great Sand Dun 89.42 320 P P 07 44 15.1 +0.9
baz=40
MFID Camas Ranch 89.53 330 IAmb IAmb 07 44 16.7
comp=Z,16nm,1.3s
S22A 4UR Ranch, Cre 90.08 321 P P 07 44 16.7 -0.6
baz=39
ABTX Abilene, Hawle 90.09 313 IAmb IAmb 07 44 21.2
comp=Z,9.9nm,1.1s
ABTX Abilene, Hawle 90.09 313 P P 07 44 18.4 +1.3
baz=43
I07A Izee 90.36 332 IAmb IAmb 07 44 20.3
comp=Z,13nm,1.4s
BGU Big Grassy Mou 90.43 327 P P 07 44 19.4 +0.7
ROSC El Rosal 90.73 277 LR LR 08 19 44.0
comp=Z,77nm,20.2s,baz=63,slow=32
DUG Dugway, Tooele 90.93 326 IAmb IAmb 07 44 23.0
comp=Z,9.6nm,1.3s
DUG Dugway, Tooele 90.93 326 P P 07 44 22.1 +1.0
baz=35
PINE Pine Mountain 91.13 333 P P 07 44 25.6 +3.6
MVCO Mesa Verde 91.33 322 P P 07 44 22.2 -0.9
baz=38
J05D Fort Rock, OR 91.68 333 P P 07 44 26.3 +1.9
baz=29
ANMO Albuquerque 92.07 319⇑eP P 07 44 31.0 +4.5
ANMO pmax pmax
comp=Z,1.0nm,1.1s
R11A Troy Canyon, C 93.67 327 P P 07 44 34.1 +0.3
baz=33
MNTX Cornudas Mount 94.00 316 P P 07 44 34.6 -0.6
baz=40
WUAZ Wupatki 94.07 322 P P 07 44 36.3 +0.7
baz=36
NVAR Mina Array Bea 94.74 329 P P 07 44 37.1 -1.6
comp=Z,0.2nm,0.5s,baz=333,slow=1.7,SNR=3.7
NVAR LR LR 08 31 43.5
comp=Z,117nm,18.1s,baz=350,slow=38
TXAR Lajitas Array 94.84 313 P P 07 44 38.8 -0.4
comp=Z,0.7nm,0.8s,baz=45,slow=3.7,SNR=5.5
TXAR LR LR 08 27 29.1
comp=Z,52nm,18.7s,baz=0.0,slow=36
ORV Oroville 95.03 331 IAmb IAmb 07 44 52.2
comp=Z,7.8nm,1.4s
TUC Tucson 96.36 320 P P 07 44 46.5 +0.5
TUC Tucson 96.36 320 P P 07 44 46.5 +0.5
TUC pmax pmax
comp=Z,5.0nm,1.5s
TUC Tucson 96.36 320 P P 07 44 47.1 +1.0
baz=36
LPAZ La Paz 98.77 256 LR LR 08 32 12.3
comp=Z,41nm,18.9s,baz=50,slow=37
SYO Syowa Base 107.91 173⇑ePdiff Pdif 07 45 38.0 +1.7
ASAR Alice Springs 122.28 96 PKP PKPdf 07 50 11.6 -0.7
comp=Z,0.7nm,0.7s,baz=320,slow=1.6,SNR=7.6
STKA Stephens Creek 132.15 101 PKP PKiKP 07 50 31.3 -0.5
comp=Z,0.8nm,0.4s,baz=339,slow=12,SNR=3.5
DZM Mont Dzumac 146.73 71 PKPbc PKPab 07 51 01.0 +0.5
comp=Z,4.8nm,0.7s,baz=227,slow=9.9,SNR=3.4

IDC 15 07:34:06.9±1.2, 32°.23S×179°.46W, h0km, mb4.0/4, mb1 4.3/5, mb1mx4.0/31, mbtmp4.0/5, ML3.5/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/28, Error ellipse: s-maj=31.1km s-min=29.8km az=54.0
NEIC 15 07:34:12.8±1.7, 32°.3S±0°.1×179°.5W±0°.1, h36km±7km, mb4.4/9, Error ellipse: s-maj=18.3km s-min=12.7km az=189.0
ISC 15 07:34:12.8±0.9, 32°.4S±0°.1×179°.5W±0°.2, h35km, n23, σ1$43/22, mb4.3/7, 1C, South of Kermadec Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MXZ Matakaoa Point 5.42 198 Pn Pn 07 35 33.4 +2.4
URZ Urewera 6.43 204 Pn Pn 07 35 45.4 +0.4
1.1nm,0.3s,baz=277,slow=3.9,SNR=8.0
URZ Sn Sn 07 36 54.7 -2.3
baz=140,slow=14,SNR=1.0
BKZ Black Stump Fm 7.46 204 Pn Pn 07 35 59.7 +0.6
DZM Mont Dzumac 16.16 306 LR LR 07 42 42.1
comp=Z,130nm,18.1s,baz=136,slow=32
LHI Lord Howe Isla 18.18 267 P P 07 38 23.5 +1.1
LHI IAmb IAmb 07 38 35.3
comp=Z,36nm,0.9s
PMG Port Moresby 38.36 299 LR LR 07 55 27.2
comp=Z,41nm,18.9s,baz=78,slow=33
AS31 Alice Springs 41.73 270 P P 07 41 59.1 +0.5
ASAR Alice Springs 41.73 270 P P 07 41 58.9 +0.2
comp=Z,3.3nm,0.8s,baz=109,slow=7.6,SNR=45
WR0 Warramunga Arr 42.73 275 P P 07 42 06.6 -0.2
WB2 Warramunga Arr 42.90 275 P P 07 42 08.3 +0.1
WB2 IAmb IAmb 07 42 20.7
comp=Z,5.7nm,0.5s
WRAB Tennant Creek 42.90 275 P P 07 42 06.6 -1.6
WRA Warramunga Arr 42.91 275 P P 07 42 08.2 -0.1
comp=Z,2.4nm,0.6s,baz=115,slow=7.5,SNR=15
WB0 Warramunga Arr 42.94 275 P P 07 42 08.3 -0.2
WB0 IAmb IAmb 07 42 15.6
comp=Z,6.8nm,1.1s
FORT Forrest 44.29 258 P P 07 42 19.3 +0.1
QSPA South Pole Qui 57.69 180 P P 07 44 01.1 +1.5
comp=Z,1.8nm,0.6s,baz=31,slow=0.7,SNR=11
QSPA South Pole Qui 57.69 180 P P 07 44 01.1 +1.5
QSPA IAmb IAmb 07 44 12.2
comp=Z,4.4nm,1.1s
MAW Mawson 69.95 201 P P 07 45 21.3 +1.3
SYO Syowa Base 74.85 194⇑ePdiff P 07 45 46.0 -3.2
SNAA Sanae 76.17 179 P P 07 45 57.0 +0.2
SNAA IAmb IAmb 07 46 10.2
comp=Z,3.6nm,1.1s
NVAR Mina Array Bea 90.61 44 P P 07 47 11.5 -0.1
comp=Z,0.1nm,0.3s,baz=174,slow=4.4,SNR=3.2
FRNY Flat Rock 122.71 54 PKPdf PKiKP 07 53 05.8 +1.0
FINES FINESS Array B 146.55 338 PKPbc PKPdf 07 53 46.1 -2.0
comp=Z,1.7nm,0.8s,baz=79,slow=7.2,SNR=2.2
TORD Torodi Ar. Bea 160.78 184 PKPab PKPab 07 54 50.3 -1.4
comp=Z,0.6nm,0.6s,baz=162,slow=3.3,SNR=3.8

NEIC 15 07:39:13.9±2.0, 14°.2S±0°.1×167°.5E±0°.2, h157km±5km, mb4.4/9, Error ellipse: s-maj=25.4km s-min=15.0km az=120.0
IDC 15 07:39:14.3±8.4, 14°.23S×167°.30E, h146km±72km, mb3.5/4, mb1 3.6/5, mb1mx3.3/34, mbtmp3.9/5, Error ellipse: s-maj=63.5km s-min=41.4km az=2.0
ISC 15 07:39:16.5±0.9, 14°.37S±0°.10×167°.3E±0°.1, h170km, n19, σ1$31/22, mb4.3/7, Vanuatu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 1.08 187 Pn 07 39 42.2 -1.6
SANVU Sn Sn 07 40 01.8 -3.3
DZM Mont Dzumac 7.71 186 P Pn 07 41 07.1 +1.1
0.3nm,0.3s,baz=91,slow=18,SNR=1.7
DZM S Sn 07 42 31.3 -1.3
0.1nm,0.3s,baz=110,slow=17,SNR=1.6
DZM Mont Dzumac 7.71 186 Pn 07 41 07.5 +1.4
DZM Sn 07 42 32.5 -0.1
FUNA Funafuti 12.99 65 P P 07 42 20.2 +1.1
EIDS Eidsvold 18.78 232 P Pn 07 43 24.5 -0.9
EIDS IAmb IAmb 07 43 25.7
comp=Z,4.5nm,0.6s
CTA Charters Tower 20.92 251 P P 07 43 46.8 +0.8
comp=Z,2.7nm,0.7s,baz=76,slow=13,SNR=3.9
BKZ Black Stump Fm 25.99 164 P P 07 44 33.5 -0.1
BKZ IAmb IAmb 07 44 50.0
comp=Z,17nm,1.4s
STKA Stephens Creek 29.28 229 P P 07 45 04.3 +1.4
comp=Z,2.1nm,0.4s,baz=52,slow=8.9,SNR=10
STKA Stephens Creek 29.28 229 P P 07 45 04.4 +1.5
WB0 Warramunga Arr 31.92 256 P P 07 45 26.0 -0.2
WB0 IAmb IAmb 07 45 31.7
comp=Z,11nm,1.5s
WRA Warramunga Arr 31.98 255 P P 07 45 26.1 -0.7
comp=Z,0.4nm,0.4s,baz=85,slow=9.1,SNR=2.7
AS31 Alice Springs 32.87 249 P P 07 45 34.3 -0.2
ASAR Alice Springs 32.87 249 P P 07 45 33.9 -0.6
comp=Z,1.0nm,0.5s,baz=74,slow=9.4,SNR=30
BBOO Buckleboo 33.86 232 P P 07 45 43.9 +1.0
BBOO IAmb IAmb 07 45 55.5
comp=Z,19nm,1.4s
FORT Forrest 39.54 239 P P 07 46 31.9 +0.9
NWAO Narrogin (SRO) 48.99 239 P P 07 47 46.0 0.0
MORW Morawa 49.49 244 P P 07 47 50.4 +0.5
MORW IAmb IAmb 07 47 57.9
comp=Z,9.7nm,1.4s
ARCES ARCESS Array B 119.92 345 PKP PKiKP 07 57 46.3 +0.1
comp=Z,3.6nm,1.0s,baz=6.3,slow=2.5,SNR=5.0
SCHQ Schefferville 121.96 34 PKPdf PKPdf 07 57 48.3 -2.1

NEIC 15 07:47:55.8±1.6, 11°.3S±0°.2×166°.8W±0°.2, h17km±5km, mb4.5/12, Error ellipse: s-maj=37.5km s-min=9.0km az=128.0
IDC 15 07:49:04.0±49.0, 16°.79S×175°.37W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.7/30, mbtmp4.2/3, Error ellipse: s-maj=930.2km s-min=175.2km az=79.0
ISC 15 07:47:58.4±1.1, 11°.4S±0°.2×166°.7W±0°.2, h35km, n20, σ1$10/19, mb4.3/9, Samoa Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AFI Afiamalu 5.52 242 Pn Pn 07 49 17.4 -0.8
MSVF Nonsavu 16.02 245 P 07 51 44.0 -0.3
MWH Moku'aweowe 32.58 20 P P 07 54 26.7 -0.5
TUWZ Tuamarina 34.40 206 P P 07 54 42.6 +0.3
BSWZ Blackbirch Sta 34.66 206 P 07 54 44.7 +0.1
COEN Coen 48.87 261 P P 07 56 44.2 +3.1
COEN IAmb IAmb 07 56 44.7
comp=Z,2.1nm,0.7s
STKA Stephens Creek 51.65 238 P P 07 56 55.1 -6.8
comp=Z,2.8nm,0.8s,baz=106,slow=15,SNR=4.0
STKA Stephens Creek 51.65 238 P P 07 57 01.4 -0.6
WB0 Warramunga Arr 57.09 254 P P 07 57 41.9 +0.2
WB0 IAmb IAmb 07 57 46.0
comp=Z,4.8nm,1.2s
WB2 Warramunga Arr 57.13 254 P P 07 57 40.8 -1.2
WB2 IAmb IAmb 07 57 55.9
comp=Z,5.3nm,0.5s
WRA Warramunga Arr 57.14 254 P P 07 57 42.5 +0.4
comp=Z,0.8nm,0.5s,baz=96,slow=7.1,SNR=10
WRA Warramunga Arr 57.14 254 P P 07 57 42.5 +0.4
AS31 Alice Springs 57.55 249 P P 07 57 43.8 -1.3
AS31 IAmb IAmb 07 57 45.0
comp=Z,1.6nm,0.5s
ASAR Alice Springs 57.56 249 P P 07 57 44.0 -1.0
comp=Z,4.9nm,0.5s,baz=87,slow=8.5,SNR=105
ASAR Alice Springs 57.56 249 P P 07 57 44.0 -1.0
BEKR Beckworth 66.70 37 P P 07 58 46.6 +0.5
BEKR IAmb IAmb 07 58 54.8
comp=Z,2.6nm,1.2s
PEA0B Petropavlovsk- 71.07 338 P P 07 59 11.8 -1.0
BESE Bessie Mountai 74.39 17 P P 07 59 32.8 +0.3
ANM Nome 75.73 1 P P 07 59 40.8 +0.8
MENT Mentasta 76.21 11 P P 07 59 41.7 -1.1
MENT IAmb IAmb 07 59 59.5
comp=Z,7.1nm,0.7s

PGC 15 07:51:43.9±4.4, 49°.23N×129°.17W, h10km, MLSn2.9/18, Mw3.6/18, Mw3.6/18, 206km southwest of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PACB Port Alice, BC 1.62 41 Pn Pn 07 52 09.8 -2.7
PACB Sn Sn 07 52 28.8 -4.6
MAYB Maynard 1.75 47 Pn Pn 07 52 12.1 -2.2
PHC Port Hardy 1.85 37 Pn Pn 07 52 13.7 -2.0
PHC Sn Sn 07 52 35.6 -3.5
TLCB Telegraph Cove 2.00 48 Pn Pn 07 52 16.0 -1.7
TLCB Sn Sn 07 52 39.4 -3.4
GDR Gold River 2.12 74 Pn Pn 07 52 17.0 -2.3
SPLB Strathcona Par 2.38 73 Pn Pn 07 52 21.4 -1.5
BTB Buttle Lake 2.40 83 Pn Pn 07 52 21.2 -2.0
OZB Mount Ozzard 2.43 95 Sn Sn 07 52 48.1 -5.3
CBB Campbell River 2.60 71 Pn Pn 07 52 24.7 -1.2
MGB Mount Grey 2.95 93 Pn Pn 07 52 29.4 -1.4
MGB Sn Sn 07 53 01.6 -4.8
BBB Bella Bella 3.03 12 Pn Pn 07 52 30.8 -1.0
BBB Sn Sn 07 53 03.6 -4.6
TXB Texada 3.12 80 Pn Pn 07 52 32.1 -1.0
YOUB Youbou, Lake C 3.24 94 Pn Pn 07 52 33.6 -1.2
YOUB Sn Sn 07 53 09.3 -4.1
B926 Mesachie Lake 3.34 95 Pn Pn 07 52 35.0 -1.1
B926 Sn Sn 07 53 11.2 -4.6
SHB Sechelt 3.48 82 Pn Pn 07 52 37.9 -0.1
BCBC Bella Coola 3.50 25 Sn Sn 07 53 17.9 -1.7
LZB Mount Lazard 3.58 98 Sn Sn 07 53 16.6 -5.2
B009 North Saanich 3.81 97 Pn Pn 07 52 40.6 -1.9
B009 Sn Sn 07 53 23.7 -3.7
B010 North Saanich 3.81 97 Sn Sn 07 53 24.1 -3.3
BIB Bowen Island 3.84 85 Pn Pn 07 52 42.9 0.0
WPB Watts Point 3.91 81 Pn Pn 07 52 44.7 +0.8
WSLR Whistler 4.15 75 Pn Pn 07 52 47.3 0.0
HNBB Haney 4.32 87 Pn Pn 07 52 49.0 -0.6
VDB Vedder Mountai 4.64 90 Pn Pn 07 52 53.9 -0.1
MBW Mount Baker 4.80 93 Pn Pn 07 52 55.6 -0.8
LLLB Lillooet 4.91 71 Pn Pn 07 52 57.9 +0.2
FSB Fort Saint Jam 6.05 28 Pn Pn 07 53 13.2 -0.1

ROM 15 08:15:19.5±0.1, 43°.387N±0°.004×12°.510E±0°.005, h5km, ML0.6/1, Error ellipse: s-maj=0.5km s-min=0.2km az=224.0, Central Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ATFO Monte Foce - G 0.05 115 P Pg 08 15 21.0 +0.1
ATFO S Sg 08 15 22.1 +0.2
ATFO AML AML
comp=N,614μm,0.3s
ATFO AML AML
comp=E,693μm,0.6s
ATVO AVT- Monte Val 0.08 266 P Pg 08 15 21.3 +0.1
ATVO S Sg 08 15 22.8 +0.3
ATVO AML AML
comp=E,192μm,0.2s
ATVO AML AML
comp=N,264μm,0.1s
ATPI Pietralunga - 0.10 309 P Pg 08 15 22.0 +0.3
ATPI S Sg 08 15 24.0 +0.8
ATPI AML AML
comp=E,49μm,0.4s
ATPI AML AML
comp=N,65μm,1.0s
MURB Monte Urbino 0.12 175 P Pg 08 15 22.4 +0.3
MURB S Sg 08 15 24.8 +1.0
ATCC AVT- Casa Cast 0.22 155 P Pg 08 15 24.5 +0.6
ATCC S Sg 08 15 28.4 +1.6
BADI Badiali 0.23 302 P Pg 08 15 24.6 +0.6
BADI S Sg 08 15 28.6 +1.6

HLW 15 08:18:53.2, 38°.52N×21°.02E, h10km±9km, Ml4.8
MOS 15 08:18:54.4±1.3, 38°.15N×20°.11E, h10km, mb4.3/14, Error ellipse: s-maj=6.8km s-min=4.1km az=70.4
IDC 15 08:18:55.1±0.6, 38°.31N×20°.46E, h0km, mb4.0/17, mb1 4.1/24, mb1mx3.9/43, mbtmp3.9/24, ML3.6/7, MS3.3/2, Ms1 3.3/2, ms1mx2.7/44, Error ellipse: s-maj=14.5km s-min=13.4km az=115.0
ATH 15 08:18:56.9, 38°.24N×20°.36E, h19km±1km, ML3.7/6, Error ellipse: s-maj=2.5km s-min=1.1km az=236.0
THE 15 08:18:57.5, 38°.25N×20°.37E, h15km, ML3.9/3, Error ellipse: s-maj=1.3km s-min=0.5km az=264.0
BEO 15 08:18:57.0±0.7, 37°.99N×20°.15E, h49km±4km, ML3.9/9
PDG 15 08:18:57.1±0.7, 38°.29N×20°.32E, h12km±1km, ML3.8/11, Error ellipse: s-maj=1.1km s-min=1.2km az=0.0
NEIC 15 08:18:59.5±3.2, 38°.25N±0°.05×20°.37E±0°.03, h26km±4km, Error ellipse: s-maj=8.3km s-min=0.8km az=203.0
ISC 15 08:18:57.7±0.5, 38°.23N±0°.02×20°.40E±0°.03, h17km±2km, n261, σ1$73/310, mb4.2/35, 25C-14D, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AGT1 Agia Thekli 0.03 327 P Pg 08 19 00.0 -0.7
AGT1 S Sg 08 19 01.7 -1.0
KEF4 Livadi, Kephal 0.04 26 P Pg 08 19 00.1 -0.6
LXR1 Lixouri, Cepha 0.04 133 P Pg 08 19 00.6 -0.1
LXR1 S Sg 08 19 02.8 +0.2
LXRA Lixouri, Kepha 0.04 134 P Pg 08 19 00.6 -0.1
LXRA S Sg 08 19 02.8 +0.1
CHV1 Chavriata, Kef 0.05 203 P Pg 08 19 00.5 -0.2
CHV1 S Sg 08 19 02.6 -0.1
KEF3 Kipouria, Keph 0.05 243 P Pg 08 19 00.3 -0.5
KEF1 Kardakata, Kep 0.07 45 P Pg 08 19 00.4 -0.5
ARGA Argostoli. Kep 0.08 129 P Pg 08 19 01.0 0.0
ARGA S Sg 08 19 03.3 +0.2
ARG2 Argostoli 0.08 126 P Pg 08 19 01.1 +0.1
ARG2 S Sg 08 19 03.4 +0.3
KEF2 Argostoli. Kep 0.09 133 P Pb 08 19 01.1 +0.1
KEF2 S Sb 08 19 03.6 +0.3
VLS Valsamata 0.15 108 P Pg 08 19 01.9 0.0
VLS S Sg 08 19 05.2 +0.5
294μm,0.2s
VLS Valsamata 0.15 108 P Pg 08 19 01.8 0.0
VLS S Sg 08 19 05.1 +0.5
VLS Valsamata 0.15 108 P Pg 08 19 01.9 0.0
VLS S Sg 08 19 05.2 +0.5
EVGI Lefkada island 0.44 27 P Pg 08 19 06.0 -0.7
EVGI S Sg 08 19 12.5 -0.2
EVGI Lefkada island 0.44 27 P Pg 08 19 05.9 -0.7
EVGI S Sg 08 19 11.9 -0.9
MGNA Meganis 0.53 35 P Pg 08 19 07.5 -0.7
MGNA S Sg 08 19 14.8 -0.5
MGNA AML AML 08 19 19.7
comp=E,8087μm,0.5s
MGNA AML AML 08 19 22.1
comp=N,8970μm,0.5s
ZAK2 Zakynthos 0.59 138 P Pb 08 19 10.0 +0.4
ZAK2 S Sb 08 19 17.9 +0.3
LKD2 Lefkada island 0.60 19 P Pg 08 19 08.4 -1.1
LKD2 S Sg 08 19 17.5 0.0
comp=N,5μm,0.4s
LKD2 Lefkada island 0.60 19 P Pg 08 19 08.5 -1.1
LKD2 S Sg 08 19 17.5 0.0
LKD2 AML AML 08 19 27.5

comp=N,9633μm,0.4s
LKD2 AML AML 08 19 28.7
comp=E,9242μm,0.5s
AST1 Astakos 0.62 59 P **Pg** **08 19 09.5 -0.5**
AST1 S **Sb** **08 19 19.7 +1.0**
TSLK Tsoukalades, L 0.63 18 P **Pg** **08 19 09.1 -1.1**
TSLK S **Sg** **08 19 19.0 +0.4**
comp=E,5μm,0.7s
TSLK Tsoukalades, L 0.63 18 P **Pg** **08 19 09.0 -1.1**
KRI1 kERI 0.65 150 P **Pg** **08 19 10.3 -0.2**
KRI1 S **Sn** **08 19 21.4 -0.7**
VTN Vitineika 0.69 116 P **Pg** **08 19 11.6 +0.4**
PDO Prodromos 0.72 58 P **Pb** **08 19 11.3 -0.5**
PDO Prodromos 0.72 58 P **Pb** **08 19 11.1 -0.7**
PDO S **Sg** **08 19 22.3 +1.0**
PDO AML AML 08 19 28.6
comp=E,14012μm,0.5s
PDO AML AML 08 19 29.5
comp=N,22485μm,0.4s
AXS Araxos 0.77 92 P **Pb** **08 19 12.1 -0.5**
AXS S **Sg** **08 19 23.9 +1.1**
RLS Riolos of Patr 0.85 101 P **Pb** **08 19 13.8 -0.4**
RLS Riolos of Patr 0.85 101 P **Pb** **08 19 13.7 -0.4**
RLS S **Sg** **08 19 26.9 +1.2**
RLS AML AML 08 19 32.8
comp=E,10702μm,0.5s
RLS AML AML 08 19 34.0
comp=N,8013μm,0.5s
PVO Paravola 0.96 66 P **Pb** **08 19 16.0 0.0**
PVO AML AML 08 19 36.2
comp=E,18777μm,0.9s
PVO AML AML 08 19 38.7
comp=N,20008μm,0.6s
DRO Drossia 1.07 104 P **Pb** **08 19 17.4 -0.4**
LAKA Lakka 1.24 89 P **Pn** **08 19 20.5 +0.1**
ANX Ano Chora 1.25 72 P **Pn** **08 19 20.6 0.0**
IGT Igoumenitsa 1.31 358 P **Pn** **08 19 21.3 0.0**
IGT Igoumenitsa 1.31 358 *e*Pg Pg 08 19 28.0 +5.1
IGT *e*Sg **Sg** **08 19 45.4 +5.4**
IGT Igoumenitsa 1.31 358 P **Pn** **08 19 21.3 0.0**
TRIZ Trizonia 1.32 83 P **Pn** **08 19 21.4 0.0**
KLV Kalavryta, Ach 1.39 97 P **Pn** **08 19 22.8 +0.3**
KLV AML AML 08 19 51.9
comp=N,3888μm,0.6s
KLV AML AML 08 19 56.4
comp=E,5076μm,0.7s
JAN Janina 1.47 14 P **Pg** **08 19 27.0 +0.9**
ITM Ithomi 1.60 130 **Pb** **08 19 27.5 +0.7**
AGG Agios Georgios 1.71 62 Pn **Pb** **08 19 29.8 +1.1**
AGG Agios Georgios 1.71 62 P **Pb** **08 19 29.8 +1.1**
KZN Kozani 2.33 27 P **Pb** **08 19 39.3 -0.1**
SCTE Santa Cesarea 2.38 321 **Pn** **08 19 35.7 -0.3**
LIT Litokhoron 2.48 40 **Pb** **08 19 39.9 -1.9**
LIT Litokhoron 2.48 40 P **Pb** **08 19 39.9 -1.9**
ATH Athens Observa 2.62 95 P **Pb** **08 19 43.6 -0.7**
OHR Ohrid 2.90 6 *i* Pn **Pn** **08 19 45.3 +2.1**
TIP Timpagrande 3.01 290 ⇑P **Pn** **08 19 45.6 +0.9**
TIP Timpagrande 3.01 290 **Pn** **08 19 45.0 +0.3**
TIR Tirane 3.15 353 *e*Pn **Pn** **08 19 47.9 +1.4**
TIR Tirane 3.15 353 ⇑P **Pn** **08 19 47.8 +1.3**
TIR Tirane 3.15 353 **Pn** **08 19 46.7 +0.1**
TIR Tirane 3.15 353 P **Pn** **08 19 46.7 +0.1**
TAR1 Taranto 3.33 315 *e*Pn **Pn** **08 19 50.2 +1.1**
KNT Kendrikon 3.51 32 P **Pn** **08 19 53.0 +1.5**
VAY Valandovo 3.51 28 *i* Pn **Pn** **08 19 52.7 +1.1**
VAY *i* Sn **Sn** **08 20 34.4 +1.6**
VAY *e*Lg Lg 08 20 37.1
comp=N,149nm,1.4s
VAY *e*Lg Lg 08 20 38.7
comp=E,108nm,1.0s
CEL Celeste 3.55 272 **Pn** **08 19 51.7 -0.4**
STIP Stip 3.73 21 *i* Pn **Pn** **08 19 57.3 +2.8**
MATE Matera 3.75 311 ⇓P **Pn** **08 19 54.8 0.0**
SKO Skopje 3.83 12 P **Pn** **08 19 57.8 +1.9**
ULC Ulcinj 3.84 347 *e*Pn **Pn** **08 19 55.5 -0.6**
ULC *e*Sn **Sn** **08 20 41.3 +0.5**
SG1 Sgolgore (BA) 3.89 313 *e*Pn **Pn** **08 19 57.2 +0.4**
BAI Bari 3.96 318 *e*Pn **Pn** **08 19 58.4 +0.7**
DRME Dracevica, Mon 4.07 347 *e*Pn **Pn** **08 19 58.4 -0.8**
DRME Dracevica, Mon 4.07 347 *e*Pn **Pn** **08 19 58.8 -0.4**
DRME *e*Sn **Sn** **08 20 46.8 +0.4**
APE Apeiranthos 4.23 104 ⇑P **Pb** **08 20 08.9 -2.8**
APE Apeiranthos 4.23 104⇑*e*P Pn 08 20 06.5 +5.0
PDG Podgorica 4.29 349 *e*Pn **Pn** **08 20 02.7 +0.5**
PDG *e*Sn **Sn** **08 20 50.1 -1.8**
PDG Podgorica 4.29 349 ⇑P **Pn** **08 20 02.8 +0.5**
PDG Podgorica 4.29 349 *e*Pn **Pn** **08 20 02.0 -0.3**
PDG Podgorica 4.29 349 **Pn** **08 20 02.9 +0.6**
TTG Podgorica 4.29 349 *e*Pn **Pn** **08 20 02.0 -0.3**
TTG *e*Sn **Sn** **08 20 52.3 +0.4**
ACER Acerenza 4.29 308 **Pn** **08 20 03.4 +1.0**
PVY Plav 4.38 356 *e*Pn **Pn** **08 20 04.0 +0.4**
PVY *e*Sn **Sn** **08 20 54.8 +0.5**
HCY Herceg Novi 4.46 342 *e*Pn **Pn** **08 20 02.8 -1.8**
HCY Herceg Novi 4.46 342 P **Pn** **08 20 07.4 +2.8**
HCY Herceg Novi 4.46 342⇓*i*Pn **Pn** **08 20 04.5 -0.1**
HCY *i* Sn **Sn** **08 20 55.9 -0.3**
CEME Cevo 4.46 346 *e*Pn **Pn** **08 20 03.6 -1.1**
CEME *e*Sn **Sn** **08 20 55.8 -0.5**
BOSS Bosilegrad 4.55 20 *e*Pn **Pn** **08 20 06.3 +0.4**
IDI Anoyia 4.64 128 Pn **Pn** **08 20 07.9 +0.7**
comp=E,0.5nm,0.3s,baz=2.1,slow=14,SNR=1.0
IDI Sn **Sn** **08 20 59.8 -1.0**
comp=E,7.6nm,0.3s,baz=269,slow=23,SNR=13
IVA Berane 4.66 355 *e*Pn **Pn** **08 20 06.8 -0.6**
IVA *e*Sn **Sn** **08 21 01.0 -0.1**
KOME Kolasin 4.67 352 *e*Pn **Pn** **08 20 07.7 +0.1**
KOME *e*Sn **Sn** **08 21 01.8 +0.4**
NKME Niksic 4.67 347⇑*i*Pn **Pn** **08 20 07.8 +0.3**
NKME *e*Sn **Sn** **08 21 01.1 -0.3**
NKY Niksic 4.71 347⇑*i*Pn **Pn** **08 20 08.0 -0.1**
NKY *i* Sn **Sn** **08 21 02.2 -0.2**
BARS Barje 4.71 13 *e*Pn **Pn** **08 20 08.3 +0.2**
TREB Trebinje 4.75 341 *e*Pn **Pn** **08 20 07.6 -1.0**
TREB *e*Sn **Sn** **08 21 00.0 -3.3**
TREB Trebinje 4.75 341 *e*Pn **Pn** **08 20 06.9 -1.7**
VAE Valguarnera 4.80 263 Pn **Pn** **08 20 11.8 +2.5**
comp=E,6.8nm,0.3s,baz=350,slow=5.8,SNR=4.2
VAE Sn **Sn** **08 21 03.1 -1.5**
comp=E,12nm,0.3s,baz=66,slow=10.0,SNR=4.0
BRY Bratogost 4.88 344 *e*Pn **Pn** **08 20 08.8 -1.7**
BRY Bratogost 4.88 344 P **Pn** **08 20 10.8 +0.3**
BRY Bratogost 4.88 344 *e*Pn **Pn** **08 20 09.4 -1.1**
BRY *e*Sn **Sn** **08 21 06.3 -0.4**
VTS Vitosha 4.89 25 *e*Pn **Pn** **08 20 11.7 +1.0**
VTS Vitosha 4.89 25 ⇓P **Pn** **08 20 12.0 +1.3**
VTS Vitosha 4.89 25 **Pn** **08 20 11.1 +0.4**
VTS Vitosha 4.89 25 P **Pn** **08 20 11.1 +0.4**
SELS Selova 5.02 6 *e*Pn **Pn** **08 20 11.4 -0.9**
SGRT San Giovanni R 5.02 316 **Pn** **08 20 12.4 0.0**
SJES Sjenica 5.04 356 *e*Pn **Pn** **08 20 13.1 +0.4**
SJES *e*Sn **Sn** **08 21 09.3 -1.3**
STON Ston 5.08 337 *e*Pn **Pn** **08 20 12.0 -1.0**
STON *e*Sn **Sn** **08 21 06.9 -4.4**
STON Ston 5.08 337 *e*Pn **Pn** **08 20 12.0 -1.0**
UPM Unac-Piva 5.10 348 *e*Pn **Pn** **08 20 14.2 +0.6**
UPM Unac-Piva 5.10 348 *e*Pn **Pn** **08 20 13.2 -0.4**
UPM *e*Sn **Sn** **08 21 12.3 +0.1**
ALN Alexandroupoli 5.11 57 **Pn** **08 20 16.0 +2.5**
ALN Alexandroupoli 5.11 57 P **Pn** **08 20 16.0 +2.5**
WDD Wied Dalam 5.27 245 **Pn** **08 20 14.8 -1.0**
PAOL Paolisi 5.31 304 **Pn** **08 20 18.1 +1.8**
ZAPS Zavoj 5.32 18 *e*Pn **Pn** **08 20 17.7 +1.3**
IVAS Ivanjica 5.35 358 *e*Pn **Pn** **08 20 15.8 -1.1**
RUDO Rudo 5.44 352 *e*Pn **Pn** **08 20 17.8 -0.3**
BOVS Bovan 5.49 10 *e*Pn **Pn** **08 20 18.3 -0.5**
CORL Corleone 5.61 269 **Pn** **08 20 22.0 +1.5**
GRUS Gruza 5.66 2 *e*Pn **Pn** **08 20 21.0 -0.1**
BBLS Lazići 5.69 353 *e*Pn **Pn** **08 20 20.2 -1.3**
BBLS *e*Sn **Sn** **08 21 23.1 -3.3**
BBLS Lazići 5.69 353 *e*Pn **Pn** **08 20 23.5 +2.0**
CLTB Caltabellotta 5.72 266 **Pn** **08 20 23.2 +1.2**
ZAGS Zajecar 5.75 13 *e*Pn **Pn** **08 20 22.1 -0.2**
DIVS Divibare 5.88 357 *e*Pn **Pn** **08 20 22.9 -1.2**
DIVS *e*Sn **Sn** **08 21 27.5 -3.6**
DIVS Divibare 5.88 357 *e*Pn **Pn** **08 20 23.0 -1.2**
HAPS Han Pijesak,Bl 5.96 350 *e*Pn **Pn** **08 20 23.9 -1.4**
TRUS Trudelj 5.99 0 *e*Pn **Pn** **08 20 25.0 -0.7**
TRUS *e*Sn **Sn** **08 21 31.4 -2.5**
PLVB Pleven 6.07 30 ⇑P **Pn** **08 20 28.3 +1.7**
INTR Introdacqua 6.25 309 **Pn** **08 20 30.8 +1.4**
ELND Elena 6.28 40 ⇑P **Pn** **08 20 31.2 +1.6**
MDVR Moldovita 6.62 8 ⇓P **Pn** **08 20 34.0 -0.3**
MGRS Mrkonjic Grad 6.67 339 *e*Pn **Pn** **08 20 35.6 +0.6**
FRGS Fruska Gora 6.94 357 *e*Pn **Pn** **08 20 36.6 -2.1**
BLY Banja Luka 6.95 341 *e*Pn **Pn** **08 20 41.8 +3.0**
NRCA Norcia 7.21 312 **Pn** **08 20 43.8 +1.4**
GZR Gura Zlata 7.38 13 ⇑P **Pn** **08 20 44.8 +0.1**
BZS Buzias 7.44 7 ⇓P **Pn** **08 20 46.2 +0.7**
BZS Buzias 7.44 7 P **Pn** **08 20 46.2 +0.7**
SLUM Salum 7.79 148 P **Pn** **08 20 47.9 -2.5**
baz=152
SLUM AMP 08 22 00.0
baz=152
SLUM S **Sn** **08 22 11.6 -6.6**
baz=152
ARR Arges 7.80 23 ⇑P **Pn** **08 20 51.6 +1.1**
MURB Monte Urbino 7.81 313 **Pn** **08 20 54.2 +3.5**
VOIR 8.00 24 ⇑P **Pn** **08 20 54.9 +1.7**
VOIR 8.00 24 P **Pn** **08 20 54.9 +1.7**
VOIR pmax pmax
comp=Z,8.0nm,1.7s
MORH Mrgy, Hungar 8.09 351 *e*Pn **Pn** **08 20 52.4 -2.0**
MLR Muntele Rosu 8.35 28 Pn **Pn** **08 20 59.3 +1.2**
comp=Z,0.3nm,0.3s,baz=232,slow=7.5,SNR=6.2
MLR LR LR 08 25 20.8
comp=Z,152nm,21.5s,baz=123,slow=47
MLR Muntele Rosu 8.35 28 ⇓P **Pn** **08 21 00.5 +2.4**
MLR Muntele Rosu 8.35 28 **Pn** **08 21 00.7 +2.6**
MLR Muntele Rosu 8.35 28 P **Pn** **08 21 00.7 +2.6**
RIY Rijeka 8.36 330 *e*Pn **Pn** **08 20 57.0 -1.1**
CRES Cresnjev 8.44 336 *e*Pn **Pn** **08 20 57.6 -1.6**
BISRR Bisoca 8.70 31 ⇑P **Pn** **08 21 04.7 +1.9**
PLOR Plostina 8.92 29 ⇓P **Pn** **08 21 08.5 +2.6**
PLOR Plostina 8.92 29 P **Pn** **08 21 08.4 +2.6**
LJU Ljubljana 8.95 333 *e*Pn **Pn** **08 21 05.7 -0.5**
VRI Vrincioaia 8.96 30 ⇑P **Pn** **08 21 08.9 +2.5**
VRI Vrincioaia 8.96 30 P **Pn** **08 21 08.9 +2.5**
SOKA Soboth 9.33 337 *e*Pn **Pn** **08 21 10.1 -1.4**
comp=Z,6.6nm,0.4s
SOKA *e*Sn **Sn** **08 22 47.6 -8.5**
comp=Z,6.1nm,0.6s
OBKA Obir 9.34 334 *e*Pn **Pn** **08 21 11.8 +0.1**
comp=Z,6.1nm,0.5s
OBKA *e*Sn **Sn** **08 22 51.4 -5.0**
comp=Z,7.8nm,0.5s
ARSA Arzberg 9.71 340 *e*Pn **Pn** **08 21 19.4 +2.8**
comp=Z,3.0nm,0.3s
SWA2 9.89 153 P **Pn** **08 21 17.9 -1.3**
baz=157
SWA2 S **Sn** **08 23 03.5 -6.4**
baz=157
CTI Castel Tesino 10.16 323 **Pn** **08 21 20.9 -2.0**
CTI Castel Tesino 10.16 323 P **Pn** **08 21 20.9 -2.0**
KBA Koelnbreinsper 10.26 332 *e*Pn **Pn** **08 21 24.3 0.0**
comp=Z,1.5nm,0.3s
KBA *e*Sn **Sn** **08 23 13.1 -5.9**
comp=Z,2.6nm,0.6s
KBA Koelnbreinsper 10.26 332 P **Pn** **08 21 24.1 -0.2**
ABTA Abfaltersbach 10.31 328 *e*Pn **Pn** **08 21 25.0 0.0**
comp=Z,0.9nm,0.2s
ABTA *e*Sn **Sn** **08 23 13.8 -6.4**
comp=Z,5.3nm,0.4s
VYHS Vyhne 10.33 354 *e*Pn **Pn** **08 21 23.6 -1.5**
VYHS *e* 08 23 16.9
VYHS Vyhne 10.33 354 *e*PN **Pn** **08 21 23.6 -1.5**
VYHS *e*SN **Sn** **08 23 16.9 -3.5**
BR131 Keskin Array S 10.41 78⇓*e*P **Pn** **08 21 29.1 +2.7**
BRTR Keskin Array B 10.41 78 Pn **Pn** **08 21 29.6 +3.2**
comp=Z,0.1nm,0.3s,baz=256,slow=10,SNR=4.2
BRTR Keskin Array B 10.41 78*c*eP **Pn** **08 21 30.7 +4.3**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
MOA Molln 10.61 337 *e*Pn **Pn** **08 21 28.5 -0.5**
comp=Z,3.3nm,0.3s
MOA *e*Sn **Sn** **08 23 23.1 -4.3**
comp=Z,1.0nm,0.2s
WTTA Wattenberg 11.09 327 *e*Sn **Sn** **08 23 34.6 -4.8**
comp=Z,11nm,0.7s
WTTA Wattenberg 11.09 327 P **Pn** **08 21 35.9 +0.2**
WATA Walderalm 11.17 327 *e*Sn **Sn** **08 23 37.6 -3.7**
comp=Z,4.3nm,0.4s
FUORN Ofenpass-Fuorn 11.24 321 Pn **Pn** **08 21 41.0 +3.2**
MOTA Moosalm 11.38 326 *e*Pn **Pn** **08 21 39.8 +0.2**
comp=Z,1.3nm,0.3s
MOTA *e*Sn **Sn** **08 23 43.5 -3.0**
comp=Z,1.9nm,0.3s
GERES GERESS Array B 11.67 338 Pn **Pn** **08 21 42.0 -1.6**
comp=Z,0.3nm,0.3s,baz=158,slow=14,SNR=8.2
GERES GERESS Array B 11.67 338 P **Pn** **08 21 42.0 -1.6**
KHC Kasperske Hory 11.96 338 *e*PN **Pn** **08 21 47.7 +0.2**
KHC Kasperske Hory 11.96 338 Pn **Pn** **08 21 49.3 +1.8**
KHC Kasperske Hory 11.96 338 *e*P **Pn** **08 21 47.7 +0.2**
SENIN Lac Senin/Sane 12.65 314 Pn **Pn** **08 21 57.0 0.0**
GLL Jalalah 12.74 129 P **Pn** **08 21 56.7 -1.5**
baz=132
MMAI Mount Meron Ar 13.26 109 Pn **Pn** **08 22 04.2 -1.1**
comp=Z,1.3nm,0.3s,baz=316,slow=11,SNR=5.3
MMAI Sn Sn 08 24 23.6 -8.8
comp=Z,1.4nm,0.3s,baz=304,slow=19,SNR=4.1
AKASG Malin Array Be 13.96 24 Pn **Pn** **08 22 13.3 -1.3**
comp=Z,0.3nm,0.3s,baz=206,slow=11,SNR=2.2
EIL Elat 14.77 121 Pn **P** **08 22 29.4 -2.4**
comp=Z,0.4nm,0.3s,baz=15,slow=16,SNR=2.1
EIL Sn Sn 08 24 54.1 -15
comp=Z,0.4nm,0.3s,baz=319,slow=22,SNR=2.3
HKAT Jabal Katrina 14.90 126 P **Pn** **08 22 25.0 -2.8**
baz=129
SOC Sochi 15.54 64 *e*P **P** **08 22 40.4 +0.1**
SOC *e* 08 25 37.6
SOC pmax pmax
comp=Z,16nm,0.8s
NEY Neytrino 17.62 66⇓*e*P **P** **08 23 06.9 +3.3**
SHAR Shatzhatmas 17.67 65*c*eP **P** **08 23 06.3 +2.2**
KIV Kislovodsk 17.72 64 *e*P **P** **08 23 06.9 +2.3**
KIV pmax pmax
comp=Z,25nm,1.0s
KBZ Khabaz 17.83 65 P **P** **08 23 06.8 +1.2**
comp=Z,0.1nm,0.3s,baz=302,slow=8.2,SNR=6.9
KBZ Khabaz 17.83 65⇑*e*P **P** **08 23 07.6 +2.0**
AKH Akhalkalaki 18.01 73 P **P** **08 23 10.1 +2.3**
AKH Akhalkalaki 18.01 73 P **P** **08 23 10.1 +2.3**
AKH pmax pmax
comp=Z,7.0nm,0.9s
PYA1 Pyatigorsk 18.03 64⇑*e*P **P** **08 23 10.1 +2.2**
ZEI Tsey 18.42 68 *e*P **P** **08 23 10.4 -2.0**
ZEI pmax pmax
comp=Z,5.0nm,0.8s
GNI Garni 18.95 77 P **Pn** **08 23 19.6 +0.7**
comp=Z,0.3nm,0.3s,baz=109,slow=2.1,SNR=3.1
GNI Garni 18.95 77 P **Pn** **08 23 20.2 +1.3**
GNI IAmb IAmb 08 23 21.4
comp=Z,16nm,0.8s
GNI Garni 18.95 77*c*eP **P** **08 23 20.5 +1.6**
GNI pmax pmax
comp=Z,139nm,2.5s
ESDC Sonseca Array 19.00 282 P **Pn** **08 23 23.2 +3.8**
comp=Z,0.2nm,0.3s,baz=90,slow=18,SNR=2.3
VSU Vasula 20.66 9*de*P **P** **08 23 36.6 +0.1**
VSU pmax pmax
comp=Z,151nm,1.7s
HFS Hagfors 22.34 351 P **P** **08 23 53.9 -0.6**
comp=Z,5.3nm,0.7s,baz=156,slow=11,SNR=7.8
NC602 NORSAR Array S 23.21 349 P **P** **08 24 04.7 +1.0**
EKA Eskdalemuir Ar 23.34 325 P **P** **08 24 03.9 -1.0**
comp=Z,6.2nm,0.8s,baz=129,slow=10.0,SNR=6.5
FINES FINESS Array B 23.51 7 P **P** **08 24 05.0 -1.6**
comp=Z,3.6nm,0.7s,baz=163,slow=8.9,SNR=11
FINES LR LR 08 35 48.7
comp=Z,120nm,18.6s,baz=246,slow=43
NB2 NORSAR Subarra 23.55 349 P **P** **08 24 06.5 -0.6**
comp=Z,10nm,1.4s,baz=156,slow=9.3
NOA NORSAR Array B 23.55 349 P **P** **08 24 05.9 -1.2**
comp=Z,1.6nm,0.9s,baz=157,slow=8.9,SNR=5.8
KIRV Kirov 27.67 33 *e*P **P** **08 24 43.5 -1.0**
AKTO Aktyubinsk 29.23 53 P **P** **08 24 57.0 -1.5**
comp=Z,0.6nm,0.5s,baz=296,slow=7.6,SNR=3.5
TORD Torodi Ar. Bea 30.01 219 P **P** **08 25 05.8 +0.1**
comp=Z,1.0nm,0.7s,baz=30,slow=9.3,SNR=6.5
ARU Arti 31.09 42⇓*e*P **P** **08 25 15.4 +0.6**
ARU pmax pmax
comp=Z,2.0nm,0.9s
ARCES ARCESS Array B 31.49 3 P **P** **08 25 17.3 -1.0**
comp=Z,4.0nm,1.1s,baz=192,slow=11,SNR=6.7
BRVK Borovoye 37.10 50⇑*e*P **P** **08 26 07.5 +0.5**
BRVK pmax pmax
comp=Z,2.0nm,1.2s
KK31 Karatay Array 37.86 66 P **P** **08 26 13.4 -0.2**
KK31 IAmb IAmb 08 26 14.9
comp=Z,3.0nm,0.9s
KK31 Karatay Array 37.86 66 P **P** **08 26 13.4 -0.2**
KK31 pmax pmax
comp=Z,3.0nm,0.9s
KKAR Karatay Array 37.86 66 P **P** **08 26 13.7 0.0**
KKAR IAmb IAmb 08 26 14.9
comp=Z,3.0nm,0.9s
KKAR Karatay Array 37.86 66 P **P** **08 26 13.7 0.0**
KKAR pmax pmax
comp=Z,3.0nm,0.9s
DBIC Dimbokro 38.87 222 P **P** **08 26 24.5 +2.2**
comp=Z,2.5nm,0.9s,baz=355,slow=12,SNR=2.8
DBIC Dimbokro 38.87 222 IAmb IAmb 08 26 42.2
comp=Z,16nm,1.5s
KURK Kurchatov 42.32 53⇓*e*P **P** **08 26 49.4 -1.1**
KURK pmax pmax
comp=Z,6.0nm,2.5s
MK31 Makanchi Array 45.35 58 P **P** **08 27 14.1 -0.9**
MK31 Makanchi Array 45.35 58 P **P** **08 27 14.1 -0.9**
MK31 pmax pmax
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 45.35 58 P **P** **08 27 14.4 -0.6**
comp=Z,1.6nm,0.6s,baz=280,slow=7.0,SNR=24
MKAR Makanchi Array 45.35 58*c*eP **P** **08 27 14.3 -0.7**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
ZAA0 Zalesovo Array 45.73 48 P **P** **08 27 16.3 -1.4**
ZAA0 IAmb IAmb 08 27 17.9
comp=Z,5.2nm,0.7s
ZALV Zalesovo Beam 45.73 48 P **P** **08 27 17.1 -0.7**
comp=Z,5.3nm,0.6s,baz=274,slow=8.8,SNR=22
NRS Narsarsuaq 45.95 322 P **P** **08 27 19.3 -0.1**
NRS Narsarsuaq 45.95 322 P **P** **08 27 19.3 -0.1**
NRS pmax pmax
comp=Z,43nm,0.9s
WMQ Urumqi 49.82 61 *e*P **P** **08 27 53.6 +3.9**
TLY Talaya 57.32 47*j e*P **P** **08 28 45.7 +1.1**
TLY pmax pmax
comp=Z,2.0nm,1.0s
SCHQ Schefferville 58.36 317 P **P** **08 28 52.2 +0.4**
comp=Z,1.6nm,0.6s,baz=61,slow=5.0,SNR=5.6
SCHQ Schefferville 58.36 317 P **P** **08 28 52.5 +0.6**
SCHQ IAmb IAmb 08 29 11.2
comp=Z,5.1nm,1.3s
SONM Songino Array 60.50 51 P **P** **08 29 06.5 -0.4**
comp=Z,1.1nm,0.9s,baz=289,slow=9.5,SNR=6.1
LZH Lanzhou 64.26 63 *e*P **P** **08 29 32.1 -0.2**
LZH pP pP 08 29 38.3 +0.6
LZH sP sP 08 29 40.6 +0.9
LZH *e*PP **PP** **08 31 55.4 +2.0**
HHC Hu-ho-hao-te 67.08 55 *e*P **P** **08 29 52.3 +1.9**
CMAR Chiang Mai Arr 69.97 82 P **P** **08 30 07.9 -0.7**
comp=Z,2.2nm,0.3s,baz=301,slow=8.2,SNR=6.9
CMAR Chiang Mai Arr 69.97 82 *i* P **P** **08 30 09.0 +0.4**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
BILL Bilibino 70.99 13 *i* P P 08 30 08.1 -5.9
BILL *i* 08 30 36.2
BILL *i* 08 32 49.0
BILL pmax pmax
comp=Z,3.0nm,1.5s
INK Inuvik 72.00 350 P **P** **08 30 20.4 +0.3**
comp=Z,0.8nm,0.3s,baz=80,slow=20,SNR=2.1
INK Inuvik 72.00 350 IAmb IAmb 08 30 30.1
comp=Z,5.6nm,1.4s
E46A Sault Ste Mari 72.18 315 P **P** **08 30 23.4 +1.9**
YKA Yellowknife Ar 73.31 340 P **P** **08 30 27.7 -0.3**
comp=Z,0.4nm,0.6s,baz=34,slow=5.6,SNR=9.7
YKA Yellowknife Ar 73.31 340⇑*e*P **P** **08 30 28.6 +0.6**
YKA pmax pmax
comp=Z,1.0nm,0.6s
KLR Kul'dur 73.89 39⇓*e*P **P** **08 30 32.2 +0.6**
KLR pmax pmax
comp=Z,4.0nm,0.9s
RDOG Red Dog Mine 74.01 1 P **P** **08 30 31.1 -0.9**
EPYK Eagle Plains 74.25 351 P **P** **08 30 34.6 +1.1**
EPYK IAmb IAmb 08 30 34.8
comp=Z,2.0nm,0.8s
MA2 Magadan 74.29 24⇑*e*P **P** **08 30 34.9 +1.2**
MA2 pmax pmax
comp=Z,41nm,1.7s
WHN Wuhan 74.64 63 P **P** **08 30 37.0 +0.7**
COWI Conover 74.97 317 P **P** **08 30 38.2 +0.2**
COWI IAmb IAmb 08 30 40.9
comp=Z,5.3nm,1.1s
EYMN Ely 75.01 320 P **P** **08 30 39.2 +1.0**
ULM Lac du Bonnet 75.61 324 P **P** **08 30 41.4 -0.1**
comp=Z,1.5nm,0.7s,baz=68,slow=7.2,SNR=4.5
ULM Lac du Bonnet 75.61 324 IAmb IAmb 08 30 57.4
comp=Z,5.3nm,1.3s
DAWY Dawson 76.80 351 P **P** **08 30 49.4 +1.2**
DAWY IAmb IAmb 08 30 50.2
comp=Z,1.2nm,0.7s
ILAR Eielson Array 76.85 354 P **P** **08 30 48.3 -0.1**
comp=Z,0.6nm,0.8s,baz=0.7,slow=3.7,SNR=6.7
USA0B Ussuriysk Arra 77.31 43*c*eP **P** **08 30 51.6 +0.3**
ANM Nome 77.44 3 P **P** **08 30 52.6 +0.9**
ANM Nome 77.44 3 P **P** **08 30 52.6 +0.9**
ANM pmax pmax
comp=Z,1.0nm,0.8s
DHY Denali Highway 78.57 354 P **P** **08 30 59.2 +1.1**
ECSD EROS Data Cent 80.50 319 P **P** **08 31 10.0 +1.1**
YSS Yuzh-Sakhalins 80.78 36 *e*P **P** **08 31 10.4 +0.2**
YSS pmax pmax
comp=Z,10.0nm,1.1s
CCM Cathedral Cave 81.44 312 P **P** **08 31 15.2 +1.2**
CCM Cathedral Cave 81.44 312 P **P** **08 31 15.2 +1.2**
CCM pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 120.63 92 PKP **PKPdf** **08 37 46.8 -2.2**
comp=Z,0.3nm,0.5s,baz=157,slow=28,SNR=3.0
ASAR Alice Springs 122.27 96 PKP **PKPdf** **08 37 51.6 -0.5**
comp=Z,0.3nm,0.4s,baz=326,slow=1.6,SNR=6.9
QSPA South Pole Qui 128.08 180 PKP **PKPdf** **08 38 02.0 +0.1**
comp=Z,1.0nm,1.0s,baz=333,slow=2.3,SNR=4.0
QSPA South Pole Qui 128.08 180 PKPdf **PKiKP** **08 38 02.6 +0.1**

IDC ***15*** *08:30:49.7±0.9, 32°.13S×179°.36W, h0^km, mb4.4/8, mb1 4.6/9, mb1mx4.2/36, mbtmp4.4/9, ML3.8/1, MS3.4/7, Ms1 3.4/7, ms1mx3.1/27, Error ellipse: s-maj=28.6km s-min=21.6km az=23.0*

NEIC ***15*** *08:30:53.6±1.8, 32°.3S±0°.1×179°.4W±0°.2, h26^km±5^km, mb4.7/14, Error ellipse: s-maj=19.8km s-min=15.1km az=101.0*

ISC 15 08:30:55.7±0.7**, 32°.37S**±0°.08**×179°.5W**±0°.1**, h35^km, n45, σ1°.47/43, mb4.5/13, MS3.4/4, 1C, South of Kermadec Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RAO Raoul Island 3.38 24 LR LR 08 32 48.6
comp=Z,234nm,19.5s,baz=122,slow=38
MXZ Matakaoa Point 5.50 199 Pn **Pn** **08 32 14.2 -0.9**
MXZ Sn **Sn** **08 33 21.2 +4.2**
URZ Urewera 6.51 205 Pn **Pn** **08 32 29.1 +0.1**
2.0nm,0.3s,baz=284,slow=3.8,SNR=17
URZ Sn **Sn** **08 33 39.1 -2.9**
1.2nm,0.3s,baz=324,slow=19,SNR=1.4
URZ LR LR 08 34 52.9
comp=Z,218nm,19.9s,baz=14,slow=36
URZ Urewera 6.51 205 **Pn** **08 32 28.6 -0.3**
URZ **Sn** **08 33 38.7 -3.3**
BKZ Black Stump Fm 7.54 205 **Pn** **08 32 40.9 -2.3**
HIZ Hauiti 7.69 215 Pn **Pn** **08 32 46.8 +1.7**
KHZ Kahutara 11.47 207 Pn Pn 08 33 31.6 -5.2
DZM Mont Dzumac 16.18 306 Pn **P** **08 34 43.2 -0.2**
0.1nm,0.3s,baz=128,slow=18,SNR=2.0
DZM LR LR 08 39 32.7
comp=Z,295nm,19.4s,baz=172,slow=32
DZM Mont Dzumac 16.18 306 P **P** **08 34 44.5 +1.1**
STKA Stephens Creek 32.86 260 P **P** **08 37 27.3 +1.0**
2.9nm,0.8s,baz=84,slow=9.6,SNR=3.7
STKA LR LR 08 50 19.6
comp=Z,72nm,18.6s,baz=19,slow=36
STKA Stephens Creek 32.86 260 P **P** **08 37 27.5 +1.3**
CTA Charters Tower 32.95 283 P **P** **08 37 27.6 +0.5**
1.1nm,0.3s,baz=135,slow=12,SNR=1.8
BBOO Buckleboo 37.27 257 PKPdf **P** **08 38 04.5 +0.3**
BBOO Buckleboo 37.27 257 **P** **08 38 04.5 +0.3**
PMG Port Moresby 38.39 299 LR LR 08 51 10.9

comp=Z,68nm,20.5s,baz=110,slow=32
AS31 Alice Springs 41.80 270 P P 08 38 42.2 +0.1
ASAR Alice Springs 41.80 270 P P 08 38 42.0 -0.1
9.0nm,0.8s,baz=108,slow=7.5,SNR=100
WR0 Warramunga Arr 42.79 275 P P 08 38 49.7 -0.5
WR0 IAmb IAmb 08 38 57.3
comp=Z,13nm,1.2s
WRA Warramunga Arr 42.97 275 P P 08 38 50.8 -0.9
comp=Z,5.8nm,0.6s,baz=113,slow=7.9,SNR=8.0
WRA LR LR 08 55 03.0
comp=Z,39nm,19.7s,baz=280,slow=34
WB0 Warramunga Arr 43.00 275 P P 08 38 51.3 -0.6
WB0 IAmb IAmb 08 38 52.6
comp=Z,26nm,1.4s
FORT Forrest 44.37 257 P P 08 39 02.3 -0.5
KNRA Kununurra 49.65 277 P P 08 39 44.2 +0.1
KNRA IAmb IAmb 08 39 46.1
comp=Z,12nm,1.0s
FITZ Fitzroy Crossi 51.14 272 P P 08 39 55.4 0.0
comp=Z,5.3nm,0.8s,baz=139,slow=7.0,SNR=8.1
FITZ Fitzroy Crossi 51.14 272 P P 08 39 55.4 0.0
FITZ IAmb IAmb 08 39 57.0
comp=Z,6.2nm,0.9s
PSA00 Pilbara Seismi 54.52 265 P P 08 40 19.7 -0.7
PSA00 IAmb IAmb 08 40 33.6
comp=Z,14nm,1.3s
SIJI Sorong 55.93 294 LR LR 09 04 08.2
comp=Z,59nm,21.6s,baz=118,slow=36
QSPA South Pole Qui 57.75 180 P P 08 40 44.3 +1.4
comp=Z,7.3nm,0.9s,baz=309,slow=0.4,SNR=48
QSPA South Pole Qui 57.75 180 P P 08 40 44.2 +1.2
QSPA IAmb IAmb 08 40 47.1
comp=Z,14nm,1.2s
SYO Syowa Base 74.92 194⇑eP P 08 42 26.0 -6.5
SNAA Sanae 76.22 179 P P 08 42 40.0 -0.1
SNAA Sanae 76.22 179 P P 08 42 40.0 -0.1
SNAA IAmb IAmb 08 42 41.5
comp=Z,13nm,1.4s
VNA3 Neumayer Olymp 76.43 177 P P 08 42 39.7 -1.5
VNA2 Neumayer--Watz 76.84 177 P P 08 42 43.9 +0.4
baz=188,slow=5.1
VNA1 Neumayer--Stat 77.08 177 P P 08 42 44.7 -0.2
YOJ Yonaguni jima 78.77 308 P P 08 42 54.0 -0.8
PLCA Paso Flores 82.08 133 P P 08 43 14.7 +2.0
comp=Z,2.3nm,0.9s,baz=248,slow=6.9,SNR=5.7
PLCA Paso Flores 82.08 133 P P 08 43 14.8 +2.2
PLCA IAmb IAmb 08 43 15.8
comp=Z,4.3nm,1.2s
NVAR Mina Array Bea 90.53 43 P P 08 43 52.3 -1.9
comp=Z,1.1nm,1.0s,baz=221,slow=7.4,SNR=5.3
FIA1 FINESS Array S 146.52 338 PKPbc PKPdf 08 50 31.7 +0.7
FINES FINESS Array B 146.53 338 PKPbc PKPdf 08 50 31.4 +0.4
comp=Z,2.7nm,0.7s,baz=61,slow=4.2,SNR=18
NC303 NORSAR Array S 150.28 349 PKPbc PKPbc 08 50 42.3 0.0
NC204 NORSAR Array S 150.32 350 PKPbc PKPdf 08 50 39.3 +2.0
AKASG Malin Array Be 152.04 319 PKPbc PKPbc 08 50 44.0 -2.8
comp=Z,0.4nm,0.5s,baz=75,slow=3.9,SNR=1.7
TOA0 Torodi Ar. Sit 160.84 183 PKPab PKPab 08 51 34.9 0.0
TORD Torodi Ar. Bea 160.84 183 PKPab PKPab 08 51 32.8 -2.0
comp=Z,1.1nm,0.5s,baz=175,slow=3.1,SNR=8.3

IDC 15 08:33:47.1±42.0, 31.32S×179.19W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/35, mbtmp4.0/3, Error ellipse: s-maj=757.3km s-min=186.5km az=99.0, Kermadec Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STKA Stephens Creek 33.29 259 P P 08 40 26.0 -0.5
2.4nm,1.0s,baz=48,slow=14,SNR=2.8
ASAR Alice Springs 42.05 268 P P 08 41 40.9 +0.1
2.0nm,0.8s,baz=108,slow=7.4,SNR=8.3
WRA Warramunga Arr 43.13 274 P P 08 41 49.5 0.0
1.5nm,0.7s,baz=113,slow=8.2,SNR=6.9

ATH 15 08:38:43.1, 38.28N×20.38E, h15km, ML2.8/19, Error ellipse: s-maj=1.6km s-min=0.8km az=267.0
THE 15 08:38:43.2, 38.27N×20.36E, h13km, ML3.0/5, Error ellipse: s-maj=1.0km s-min=0.4km az=233.0
ISC 15 08:38:43.2±0.9, 38.27N±0.02×20.38E±0.04, h16km±5km, n51, σ0.54/72, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AGT1 Agia Thekli 0.02 178 P Pg 08 38 45.7 -0.3
AGT1 S Sg 08 38 47.3 -0.5
KEF4 Livadi, Kephal 0.03 105 P Pg 08 38 45.8 -0.2
KEF4 S Sg 08 38 47.6 -0.2
KEF3 Kipouria, Keph 0.07 203 P Pg 08 38 46.0 -0.2
KEF3 S Sg 08 38 48.0 -0.3
KEF1 Kardakata, Kep 0.07 81 P Pg 08 38 46.2 0.0
KEF1 S Sg 08 38 48.0 -0.3
LXR1 Lixouri, Cepha 0.08 147 P Pg 08 38 46.3 0.0
LXR1 S Sg 08 38 48.6 +0.2
LXRA Lixouri, Kepha 0.08 147 P Pg 08 38 46.3 0.0
LXRA S Sg 08 38 48.4 +0.1
CHV1 Chavriata, Kef 0.08 181 P Pg 08 38 46.2 -0.2
CHV1 S Sg 08 38 48.2 -0.2
ARGA Argostoli. Kep 0.12 140 P Pg 08 38 46.7 -0.1
ARGA S Sg 08 38 48.9 -0.1
ARG2 Argostoli 0.12 137 P Pg 08 38 46.3 -0.5
ARG2 S Sg 08 38 49.1 0.0
KEF2 Argostoli. Kep 0.13 141 P Pg 08 38 46.9 0.0
KEF2 S Sg 08 38 49.3 0.0
VLS Valsamata 0.19 119 P Pg 08 38 47.6 -0.1
VLS S Sg 08 38 50.9 +0.1
45μm,0.2s
VLS Valsamata 0.19 119 P Pg 08 38 47.7 -0.1
VLS S Sg 08 38 50.9 +0.1
VLS AML AML 08 38 51.2
comp=E,97924μm,0.1s
VLS AML AML 08 38 51.2
comp=N,76804μm,0.2s
FSK Fiskardo 0.24 36 P Pg 08 38 48.5 0.0
FSK S Sg 08 38 52.4 +0.2
comp=N,6μm,0.2s
FSK Fiskardo 0.24 36 P Pg 08 38 48.5 0.0
FSK S Sg 08 38 51.8 -0.3
FSK AML AML 08 38 52.9
comp=N,10101μm,0.4s
FSK AML AML 08 38 52.9
comp=E,15208μm,0.2s
EVGI Lefkada island 0.41 31 P Pg 08 38 51.6 0.0
EVGI S Sb 08 38 58.2 -0.1
EVGI Lefkada island 0.41 31 P Pg 08 38 51.6 0.0
EVGI S Sg 08 38 56.3 -1.0
VLMS Volimes, Zakyn 0.45 150 P Pg 08 38 52.2 0.0
VLMS S Sb 08 38 59.4 +0.2
VLMS AML AML 08 38 59.9
comp=E,3788μm,0.2s
VLMS AML AML 08 39 00.9
comp=N,4480μm,0.2s
MGNA Meganis 0.50 39 P Pg 08 38 52.9 -0.3
MGNA S Sg 08 38 59.7 -0.3
MGNA AML AML 08 39 02.4
comp=E,2539μm,0.1s
MGNA AML AML 08 39 05.5
comp=N,1855μm,0.2s
LKD2 Lefkada island 0.56 22 P Pg 08 38 54.0 -0.4
LKD2 S Sb 08 39 02.8 +0.2
comp=N,740nm,0.4s
LKD2 Lefkada island 0.56 22 P Pg 08 38 54.0 -0.4
LKD2 AML AML 08 39 09.2
comp=E,1371μm,0.4s
LKD2 AML AML 08 39 11.1
comp=N,1590μm,0.5s
TSLK Tsoukalades, L 0.60 21 P Pg 08 38 54.7 -0.3
TSLK S Sb 08 39 03.9 +0.3
comp=N,838nm,0.5s
TSLK Tsoukalades, L 0.60 21 P Pg 08 38 54.3 -0.7
TSLK AML AML 08 39 10.9
comp=N,1719μm,0.4s
TSLK AML AML 08 39 11.4
comp=E,1582μm,0.5s
PDO Prodromos 0.71 62 P Pg 08 38 56.8 -0.3
PDO S Sb 08 39 08.2 +1.4
comp=E,1μm,0.4s
PDO Prodromos 0.71 62 P Pg 08 38 56.5 -0.6
PDO AML AML 08 39 12.5
comp=E,2125μm,0.5s
PDO AML AML 08 39 14.2
comp=N,2284μm,0.4s
VTN Vitineika 0.72 119 P Pg 08 38 56.4 -1.0
AXS Araxos 0.79 95 P Pg 08 38 58.0 -0.5
RLS Riolos of Patr 0.88 103 P Pb 08 38 58.6 -1.5
RLS AML AML 08 39 17.3
comp=N,896μm,0.6s
RLS AML AML 08 39 21.1
comp=E,600μm,0.3s
PVO Paravola 0.96 68 P Pb 08 39 01.8 +0.2
PVO Paravola 0.96 68 P Pb 08 39 01.8 +0.2
PVO AML AML 08 39 22.4
comp=E,1980μm,0.5s
PVO AML AML 08 39 25.0
comp=N,1842μm,0.5s
DRO Drossia 1.09 106 P Pb 08 39 03.4 -0.4
DRO AML AML 08 39 32.1
comp=N,1313μm,0.5s
DRO AML AML 08 39 32.7
comp=E,1847μm,0.5s
ANX Ano Chora 1.25 74 P Pn 08 39 06.2 0.0
ANX AML AML 08 39 30.6
comp=N,1636μm,0.5s
ANX AML AML 08 39 31.2
comp=E,1262μm,0.6s
LAKA Lakka 1.26 91 P Pn 08 39 06.0 -0.2
LAKA AML AML 08 39 30.2
comp=N,542μm,0.5s
LAKA AML AML 08 39 32.3
comp=E,615μm,0.9s
IGT Igoumenitsa 1.26 358 P Pb 08 39 06.9 +0.2
AMT Artemida-Makis 1.28 125 P Pg 08 39 08.3 +0.5
AMT AML AML 08 39 39.3
comp=N,960μm,0.6s
AMT AML AML 08 39 43.1
comp=E,692μm,0.6s
EVR Evrytania 1.29 59 P Pn 08 39 06.7 -0.1
EVR AML AML 08 39 36.5
comp=N,504μm,0.7s
EVR AML AML 08 39 38.2
comp=E,479μm,0.9s
SERG Sergoula 1.32 83 P Pn 08 39 07.2 +0.1
SERG AML AML 08 39 35.5
comp=E,660μm,0.6s
SERG AML AML 08 39 35.6
comp=N,727μm,0.5s
TRIZ Trizonia 1.33 85 P Pn 08 39 07.4 +0.2
KALE Kalithea 1.39 84 P Pn 08 39 08.2 +0.1
KALE AML AML 08 39 36.4
comp=E,472μm,0.6s
KALE AML AML 08 39 37.7
comp=N,574μm,0.8s
KLV Kalavryta, Ach 1.41 99 P Pn 08 39 08.9 +0.6
KLV AML AML 08 39 37.7
comp=N,237μm,0.6s
KLV AML AML 08 39 42.0
comp=E,334μm,0.6s
JAN Janina 1.44 15 P Pg 08 39 10.5 -0.4
KEK Kerkira 1.51 343 P Pb 08 39 10.4 -0.6
MAKR Makrakomi, Fth 1.56 61 P Pg 08 39 12.8 -0.4
MAKR AML AML 08 39 43.6
comp=N,672μm,0.8s
MAKR AML AML 08 39 45.5
comp=E,917μm,0.5s
ITM Ithomi 1.64 131 P Pb 08 39 13.5 +0.5
AGG Agios Georgios 1.70 63 P Pb 08 39 15.0 +0.8
AGG AML AML 08 39 45.9
comp=N,433μm,0.4s
AGG AML AML 08 39 49.5
comp=E,396μm,0.6s
PYL PYLOS 1.74 141 P Pb 08 39 14.5 -0.4
PROD Prodromos 1.98 89 P Pb 08 39 19.1 +0.2
LKR Lokris 2.09 79 P Pb 08 39 20.1 -0.7
NEST Nestorio 2.21 13 P Pb 08 39 22.6 -0.3
VIL2 Platees 2.27 90 P Pb 08 39 22.5 -1.4
DID Didima 2.38 108 P Pb 08 39 24.7 -1.1
XOR Xorichti 2.45 63 P Pn 08 39 24.8 +2.1

WEL 15 09:00:28.7±0.7, 33°S±12'×17°8W±2°0, h33km, M4.6/18, mB5.1/18, ML5.0/18, MLv4.9/18, Mw(mB)4.5/18
IDC 15 09:00:30.2±4.0, 32.47S×179.60W, h50km±35km, mb4.4/10, mb1 4.5/12, mb1mx4.4/24, mbtmp4.6/12, ML3.7/2, MS3.9/16, Ms1 3.9/16, ms1mx3.8/21, Error ellipse: s-maj=26.8km s-min=17.4km az=49.0
NEIC 15 09:00:33.3±1.2, 32.63S±0.09×179.8W±0.1, h76km±6km, mb4.9/40, Error ellipse: s-maj=18.0km s-min=13.6km az=85.0
ISC 15 09:00:29.0±0.5, 32.53S±0.06×179.52W±0.09, h35km, n138, σ1.75/126, mb4.9/30, MS3.9/14, South of Kermadec Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RAO Raoul Island 3.54 23 LR LR 09 02 23.7
comp=Z,1μm,20.6s,baz=166,slow=32
MXZ Matakaoa Point 5.33 199 Pn 09 01 47.3 +1.2
MXZ Matakaoa Point 5.33 199 P Pn 09 01 47.0 +0.9
MXZ S Sn 09 02 51.6 +5.3
WMGZ Waiomatatini S 5.54 197 P Pn 09 01 49.6 +0.6
WMGZ S Sn 09 02 52.6 +1.1
HAZ Te Kaha 5.67 202 P Pn 09 01 51.0 +0.3
HAZ S Sn 09 02 57.6 +3.1
PKGZ Pakihiroa 5.70 200 P Pn 09 01 52.0 +0.8
PKGZ S Sn 09 02 55.7 +0.2
PUZ Puketiti 5.82 198 P Pn 09 01 52.6 -0.3
RUGZ Raukumara Rang 5.89 202 P Pn 09 01 54.8 +0.9
RUGZ S Sn 09 03 02.8 +2.5
OPRZ Ohinepanea 6.20 210 P Pn 09 02 02.7 +4.7
TGRZ Tauranga 6.24 213 P Pn 09 02 04.2 +5.6
MARZ Manawahe 6.27 209 P Pn 09 02 03.3 +4.2
MWZ Matawai 6.28 202 P Pn 09 01 59.0 -0.1
MWZ S Sn 09 03 12.9 +3.3
TKGZ Te Karaka 6.28 199 S Sn 09 03 10.9 +1.4
URZ Urewera 6.35 205 P Pn 09 02 01.1 +1.1
4.4nm,0.3s,baz=271,slow=5.0,SNR=42
URZ S Sn 09 03 10.0 -1.3
baz=291,slow=22,SNR=0.9
URZ Urewera 6.35 205 Pn Pn 09 02 00.0 0.0
URZ Urewera 6.35 205 P Pn 09 02 00.7 +0.6
RAGZ Rawiri 6.46 202 P Pn 09 02 03.1 +1.4
KARZ Kaharoa 6.48 211 P Pn 09 02 06.1 +4.1
OMRZ Omania 6.50 210 P Pn 09 02 06.6 +4.4
RIGZ Rimuhau 6.55 199 P Pn 09 02 03.5 +0.6
TOZ Tahuroa Road 6.60 217 P Pn 09 02 10.1 +6.5
RRRZ Republican Roa 6.64 208 P Pn 09 02 13.2 +9.1
MUGZ Murupara 6.66 206 P Pn 09 02 04.8 +0.4
RTZ Ruatahuna 6.71 204 P Pn 09 02 06.9 +1.7
PRGZ Paritu Road 6.72 198 P Pn 09 02 03.8 -1.4
SNGZ Shannon Statio 6.74 201 P Pn 09 02 07.6 +2.0
RAHZ Arahi 6.95 202 P Pn 09 02 10.4 +2.0
MTHZ Maungataniwha 6.97 204 P Pn 09 02 11.0 +2.3
NMHZ Naumai 7.20 203 P Pn 09 02 13.0 +1.1
ARHZ Aropaoanui 7.29 202 P Pn 09 02 15.1 +2.1
BKZ Black Stump Fm 7.37 205 Pn 09 02 14.1 -0.1
BKZ Black Stump Fm 7.37 205 P Pn 09 02 15.7 +1.5
HIZ Hauiti 7.53 216 Pn 09 02 20.4 +4.2
MCHZ McNeill Hill 7.55 203 P Pn 09 02 17.6 +1.0
KAHZ Kahuranaki 7.81 201 P Pn 09 02 18.9 -1.4
SNZO South Karori 9.91 206 Pn Pn 09 02 50.8 +2.0
PLWZ Palliser 9.94 203 Pn Pn 09 02 50.3 +0.9
KHZ Kahutara 11.30 207 Pn Pn 09 03 04.0 -3.9
MSVF Nonsavu 14.89 351 Pn 09 04 00.6 +3.5
DZM Mont Dzumac 16.24 306 eP P 09 04 16.8 -0.6
68nm,1.2s
DZM eLR LR 09 08 04.2
comp=Z,3μm,25.3s
DZM Mont Dzumac 16.24 306 P Pn 09 04 14.1 -0.5
0.1nm,0.3s,baz=149,slow=15,SNR=2.5
DZM LR LR 09 09 15.3
comp=Z,2μm,18.2s,baz=180,slow=32
DZM Mont Dzumac 16.24 306 P P 09 04 16.5 -0.8
NOUC Port Laguerre 16.31 306 Pn 09 04 15.7 +0.2
AFI Afiamalu 19.84 23 LR LR 09 11 22.1
comp=Z,126nm,21.4s,baz=198,slow=33
ARMA Armidale 24.67 267 P P 09 05 44.3 -2.5
EIDS Eidsvold 26.64 278 P P 09 06 03.4 -1.2
TBI Tubuai 28.01 79 eT T 09 35 02.4
39nm,0.4s
TOO Toolangi 28.98 250 P P 09 06 22.0 -3.4
PAE Paea 30.76 68 eT T 09 38 28.4
11nm,0.2s
PPT2 Papeete2 30.80 68 eLQ LQ 09 13 08.9
352nm,24.8s
PPT2 eLR LR 09 14 31.9
comp=Z,310nm,27.8s,baz=244
PPT2 Papeete2 30.80 68 eT T 09 38 32.8
9.4nm,0.3s
PPT Papeete 30.81 68 LR LR 09 15 39.4
comp=Z,57nm,21.1s,baz=242,slow=30
STKA Stephens Creek 32.79 260 P P 09 06 60.0 +1.0
8.2nm,0.9s,baz=76,slow=9.1,SNR=9.6
STKA LR LR 09 19 33.8
comp=Z,247nm,18.8s,baz=83,slow=35
STKA Stephens Creek 32.79 260 P P 09 06 57.5 -1.4
CTA Charters Tower 32.95 284 P P 09 07 00.7 +0.2
3.4nm,0.9s,baz=97,slow=6.7,SNR=5.5
PMOR Pomariorio Ree 33.61 66 eT T 09 42 02.5
6.0nm,0.2s
VAH Vaihoa 33.68 67 eT T 09 42 06.8
24nm,0.3s
BBOO Buckleboo 37.19 257 P P 09 07 36.1 -0.8
AS31 Alice Springs 41.76 270 P P 09 08 14.2 -0.9
ASAR Alice Springs 41.76 270 P P 09 08 14.7 -0.5
21nm,0.8s,baz=107,slow=7.5,SNR=196
ASAR LR LR 09 25 23.1
comp=Z,139nm,18.4s,baz=116,slow=36
WR0 Warramunga Arr 42.76 275 P P 09 08 22.2 -1.1
WR0 IAmb IAmb 09 08 23.7
comp=Z,26nm,1.2s
WB2 Warramunga Arr 42.93 275 P P 09 08 23.1 -1.6
WRAB Tennant Creek 42.94 275 P P 09 08 22.9 -1.8
WRAB IAmb IAmb 09 08 24.9
comp=Z,38nm,1.2s
WRA Warramunga Arr 42.94 275 P P 09 08 24.1 -0.7
comp=Z,16nm,0.9s,baz=115,slow=7.7,SNR=63
WRA LR LR 09 25 06.3
comp=Z,165nm,18.8s,baz=100,slow=34
WB0 Warramunga Arr 42.97 276 P P 09 08 23.1 -1.9
FORT Forrest 44.29 258 P P 09 08 32.7 -2.8
VNDA Vanda 45.86 186 LR LR 09 23 44.1
comp=Z,141nm,21.0s,baz=24,slow=30
KNRA Kununurra 49.62 277 P P 09 09 15.3 -2.0
FITZ Fitzroy Crossi 51.11 272 P P 09 09 27.1 -1.4
PSA00 Pilbara Seismi 54.47 265 P P 09 09 51.9 -1.4
PSA00 IAmb IAmb 09 09 56.5
comp=Z,16nm,1.2s
MORW Morawa 54.71 255 P P 09 09 53.4 -1.6
MORW IAmb IAmb 09 10 09.4
comp=Z,14nm,1.1s
QSPA South Pole Qui 57.59 180 P P 09 10 16.7 +1.6
comp=Z,18nm,0.9s,baz=23,slow=1.5,SNR=60
QSPA South Pole Qui 57.59 180 P P 09 10 16.8 +1.7
MAW Mawson 69.86 201 LR LR 09 40 58.0
comp=Z,124nm,18.3s,baz=148,slow=35
SNAA Sanae 76.06 179 P P 09 12 12.8 +0.3
SNAA Sanae 76.06 179 P P 09 12 12.3 -0.2
SNAA IAmb IAmb 09 12 13.6
comp=Z,15nm,1.0s
VNA3 Neumayer Olymp 76.27 177 P P 09 12 13.9 +0.2
VNA2 Neumayer--Watz 76.69 177 P P 09 12 16.6 +0.7
baz=168,slow=5.2
VNA1 Neumayer--Stat 76.92 177 P P 09 12 17.9 +0.6
MJAR Matsushiro Arr 79.27 327 LR LR 09 43 50.3
comp=Z,32nm,20.5s,baz=65,slow=33
PLCA Paso Flores 82.00 133 P P 09 12 46.3 +0.7
comp=Z,4.0nm,0.9s,baz=248,slow=7.1,SNR=6.7
PLCA Paso Flores 82.00 133 P P 09 12 45.3 -0.3
KSRS Korea Array 85.15 321 P P 09 13 00.0 -1.4
comp=Z,1.9nm,0.8s,baz=147,slow=5.6,SNR=7.8
KSRS LR LR 09 47 13.6
comp=Z,60nm,19.2s,baz=129,slow=33
NJ2 Nanjing 86.66 312 eP P 09 13 10.6 +1.6
PETK Petropavlovsk- 87.56 346 LR LR 09 48 55.1
comp=Z,64nm,19.1s,baz=71,slow=33
USRK Ussuriysk Ar. 88.23 327 P P 09 13 16.8 +0.5
comp=Z,2.9nm,0.7s,baz=68,slow=12,SNR=5.8
USRK LR LR 09 48 45.9
comp=Z,71nm,19.0s,baz=105,slow=33
WHN Wuhan 88.61 308 P P 09 13 20.3 +1.9
ISA Isabella, Lake 88.71 45 P P 09 13 19.6 +0.7
ISA IAmb IAmb 09 13 20.1
comp=Z,8.7nm,1.1s
CMB Columbia Colle 89.20 43 P P 09 13 20.4 -0.7
GLA Glamis 89.26 49 P P 09 13 22.4 +0.9
HSIG 89.31 55 P P 09 13 22.9 +1.1
HSIG IAmb IAmb 09 13 23.6
comp=Z,9.6nm,1.3s
GSC Goldstone, Bar 89.49 47 P P 09 13 23.1 +0.6
GSC IAmb IAmb 09 13 23.7
comp=Z,4.5nm,0.9s
MDPB Devils Postpil 89.68 44 P P 09 13 23.6 0.0
MDPB IAmb IAmb 09 13 30.8
comp=Z,3.8nm,0.9s
113A Mohawk Valley, 89.77 50 P P 09 13 24.5 +0.7
113A IAmb IAmb 09 13 26.1
comp=Z,10nm,1.2s
214A Organ Pipe Nat 89.88 51 P P 09 13 25.4 +1.0
214A IAmb IAmb 09 13 26.2
comp=Z,8.1nm,1.1s
NVAR Mina Array Bea 90.67 44 P P 09 13 28.5 +0.3
comp=Z,2.7nm,1.0s,baz=220,slow=7.8,SNR=14
HUMO Hull Mountain 90.99 38 P P 09 13 30.1 +0.8
Y14A Wickenburg 91.00 50 P P 09 13 29.8 +0.2
Y14A IAmb IAmb 09 13 31.8
comp=Z,11nm,1.5s
KVN Kaiserville 91.21 43 P P 09 13 30.3 -0.3
TUC Tucson 91.44 52 P P 09 13 32.1 +0.4
TUC IAmb IAmb 09 13 34.4
comp=Z,9.6nm,1.1s
MOD Modoc Plateau 91.91 40 P P 09 13 33.7 -0.1
MOD IAmb IAmb 09 13 34.6
comp=Z,5.0nm,0.9s
X16A Lo Mia Camp, P 92.31 50 P P 09 13 36.8 +0.9
X16A IAmb IAmb 09 13 39.2
comp=Z,5.4nm,1.2s
PINE Pine Mountain 92.87 38 P P 09 13 38.6 +0.4
PINE IAmb IAmb 09 13 39.6
comp=Z,7.5nm,0.9s
CMAR Chiang Mai Arr 92.89 290 LR LR 09 58 45.7
comp=Z,30nm,18.2s,baz=150,slow=38
U15A North Rim 93.02 48 P P 09 13 39.9 +0.7
U15A IAmb IAmb 09 13 43.0
comp=Z,4.7nm,1.1s
XAN Xi'an 94.38 308 P P 09 13 54.3 +9.1
XAN pP pwP 09 14 00.3 +1.2
TX31 Lajitas Ar. Si 94.62 58 P P 09 13 46.2 -0.3
TX31 IAmb IAmb 09 13 48.2
comp=Z,2.6nm,1.1s
TX32 Lajitas Array 94.62 58 P P 09 13 46.2 -0.3
TX32 IAmb IAmb 09 13 48.2
comp=Z,2.4nm,1.0s
TXAR Lajitas Array 94.62 58 P P 09 13 47.2 +0.7
comp=Z,1.9nm,1.0s,baz=202,slow=9.4,SNR=9.6
G08A Pilot Rock 94.93 38 P P 09 13 47.8 +0.3
G08A IAmb IAmb 09 13 49.3
comp=Z,6.6nm,1.3s
CD2 Chengdu 96.13 303 P P 09 13 53.0 -0.3
HHC Hu-ho-hao-te 96.79 315 eP P 09 13 58.3 +2.2
LLLB Lillooet 97.14 33 P P 09 13 57.5 +0.2
PDAR Pinedale Array 98.56 44 LR LR 09 59 42.6
comp=Z,51nm,18.1s,baz=68,slow=36
LZH Lanzhou 98.96 307 eP P 09 14 06.5 +0.4
LZH pP pwP 09 14 25.0 +5.1
LZH sP sP 09 14 32.3 +12
LZH ePP PP 09 18 11.6 +2.9
CPUP Villa Florida 99.66 130 LR LR 09 50 43.8
comp=Z,111nm,21.8s,baz=198,slow=30
MKAR Makanchi Array 118.14 310 PKP PKPdf 09 19 08.7 -3.3
comp=Z,0.4nm,0.8s,baz=73,slow=2.5,SNR=2.8
KURK Kurchatov 121.57 313 PKPdf 09 19 17.2 -1.2
KURBB Kurchatov Arra 121.60 313 PKP PKPdf 09 19 15.4 -3.1
comp=Z,0.6nm,0.6s,baz=96,slow=2.1,SNR=5.1
BVAR Borovoye Array 127.00 315 PKP PKPdf 09 19 26.2 -2.6
comp=Z,0.5nm,0.5s,baz=108,slow=0.5,SNR=3.8
FIA1 FINESS Array S 146.66 338 PKPdf 09 20 03.8 -0.8
FINES FINESS Array B 146.66 338 PKPbc PKPdf 09 20 03.9 -0.6
comp=Z,7.4nm,0.7s,baz=57,slow=4.2,SNR=22
NB2 NORSAR Subarra 150.63 349 PKP PKPdf 09 20 13.5 +2.4
comp=Z,0.8nm,0.8s,baz=17,slow=2.6
NOA NORSAR Array B 150.63 349 PKPbc PKPdf 09 20 14.6 +3.4
comp=Z,1.5nm,0.7s,baz=17,slow=4.2,SNR=3.0
AKASG Malin Array Be 152.13 319 PKPbc PKPdf 09 20 17.6 +3.9
comp=Z,0.7nm,0.5s,baz=57,slow=2.2,SNR=5.9
BRTR Keskin Array B 152.39 294 PKPbc PKPbc 09 20 18.9 -2.5
comp=Z,0.7nm,0.6s,baz=134,slow=3.6,SNR=3.7
LIC Lamto 153.33 168 ePKP1 PKPbc 09 20 23.6 -0.5
comp=Z,38nm,1.0s
LIC Lamto 153.33 168 PKPbc 09 20 23.6 -0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KIC	Kosan Boka	153.51	168	ePKP1	PKPbc	09 20 24.0	-0.5
	comp=Z,70nm,1.3s						
KIC	Kosan Boka	153.51	168		PKPbc	09 20 24.0	-0.5
TIC	Toumodi	153.74	168	ePKP1	PKPbc	09 20 24.5	-0.5
TIC	Toumodi	153.74	168		PKPbc	09 20 24.5	-0.5
DBIC	Dimbokro	153.79	168	PKPbc	PKPbc	09 20 24.6	-0.5
	comp=Z,2.0nm,0.5s,baz=164,slow=5.9,SNR=4.3						
DBIC	Dimbokro	153.79	168	PKPdf	PKPdf	09 20 15.3	-1.9
MODS	Modra-Piesok	153.73	326	ePKP	PKPdf	09 20 25.1	+1.3
TOA0	Torodi Ar. Sit	160.68	184		PKPab	09 21 06.6	-0.9
TORD	Torodi Ar. Bea	160.68	184	PKP	PKPdf	09 20 24.0	-1.9
	comp=Z,1.0nm,0.9s,baz=243,slow=3.0,SNR=4.3						
TORD				PKPab	PKPab	09 21 06.5	-0.9
	comp=Z,3.9nm,0.7s,baz=175,slow=3.7,SNR=15						
GERES	GERESS Array B	160.91	332	PKPab	PKPab	09 21 06.0	-1.9
	comp=Z,0.1nm,0.2s,baz=244,slow=24,SNR=3.4						

NCEDC 15 09:06:35.5±0.7, 37.729N±0.007×122.13W±0.01, h5km±2km, Md2.1/82, Error ellipse: s-maj=1.1km s-min=1.1km az=50.0, Central California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CLCB	Lake Chabot	0.05	80		Pg	09 06 37.1	+0.2
CMCM	Mills College	0.07	324		Pg	09 06 37.5	+0.4
C055	Cottonwood Ave	0.07	169		Pg	09 06 37.5	+0.3
BGC	Bolinger Road	0.10	31		Pg	09 06 38.0	+0.3
CRHM	Round Hill Res	0.17	39		Pg	09 06 39.8	+0.9
BKS	Berkeley--Byer	0.17	330		Pg	09 06 39.5	+0.6
CVPM	Vollmer Peak	0.17	334		Pg	09 06 39.6	+0.7
BL67	Building 67, L	0.18	326		Pg	09 06 39.5	+0.4
CNIC	Niles Canyon	0.18	133		Pg	09 06 39.5	+0.5
VAK	Adit at Lawren	0.18	327		Pg	09 06 39.6	+0.5
BRK	Berkeley--Havi	0.18	324		Pg	09 06 39.4	+0.4
BRIB	Briones	0.19	354		Pg	09 06 40.1	+0.8
CYBM	Yerba Buena Is	0.20	294		Pg	09 06 39.9	+0.4
JCPM	Coyote Point	0.21	228		Pg	09 06 40.3	+0.7
JSBM	San Bruno Moun	0.22	257		Pg	09 06 40.3	+0.5
RFSB	Richmond Field	0.25	319		Pg	09 06 40.8	+0.4
CRPB	Russellman Par	0.25	44		Pg	09 06 41.1	+0.6
CPIM	Pinole Ridge	0.27	345		Pb	09 06 41.8	-1.0
CMOB	Morgan Territo	0.27	72		Pb	09 06 42.0	-0.8
CSPM	San Pablo Ridg	0.27	328		Pg	09 06 41.5	+0.8
SAC	San Andreas	0.27	238		Pg	09 06 41.4	+0.7
JPRM	Presidio of Sa	0.28	284		Pg	09 06 41.5	+0.5
CMJM	Mission San Jo	0.29	136		Pg	09 06 41.7	+0.6
J061	Lakeshore Driv	0.29	270		Pg	09 06 41.8	+0.6
BDM	Black Diamond	0.31	43		Pb	09 06 42.5	-0.9
CPMM	Point Molate	0.31	315		Pg	09 06 41.9	+0.3
WENL	Wente Vineyard	0.31	110		Pb	09 06 42.7	-0.9
JHPM	Huddart Park	0.32	206		Pg	09 06 42.5	+0.9
JSFB	Stanford Teles	0.33	187		Pg	09 06 42.6	+0.8
OXMT	Ox Mountain	0.33	226		Pg	09 06 42.4	+0.5
JRSC	Jasper Ridge	0.34	195		Pg	09 06 42.5	+0.5
JFP	Foothills Park	0.37	188		Pg	09 06 43.4	+0.7
JJRM	Joaquin Road	0.39	189		Pg	09 06 43.7	+0.7
CBSNC	Byron Hot Spri	0.40	77		Pg	09 06 43.2	+0.1
JSGM	Saratoga Golf	0.45	172		Pb	09 06 45.1	-0.8
SNT	Sears Point	0.52	331		Pb	09 06 46.6	-0.5
MHC	Mount Hamilton	0.55	135		Pg	09 06 46.4	+0.4
CMMM	Mount Mocho	0.57	118		Pg	09 06 47.2	+0.7
JSTM	Santa Teresa H	0.58	153		Pg	09 06 47.0	+0.3
JUMM	Mount Umunhum	0.60	162		Pg	09 06 47.3	+0.4
JBNB	Ben Lomond Mou	0.60	182		Pg	09 06 47.6	+0.5
ARN	Arnold Ranch	0.61	128		Pg	09 06 47.7	+0.5
NOLM	Olema	0.61	301		Pg	09 06 47.4	+0.2
CVS	Carmenet Viney	0.67	337		Pg	09 06 48.6	+0.3
FARB	Farallon Islan	0.69	268		Pg	09 06 48.9	+0.1
JRGM	Rodeo Gulch Ro	0.70	169		Pg	09 06 49.4	+0.4
NAPC	Atlas Peak	0.72	352		Pg	09 06 49.8	+0.6
MCCM	Marconi Confer	0.72	305		Pb	09 06 49.3	-0.1
MCCM	Marconi Confer	0.72	305		Pn	09 06 53.4	+1.0
JTGM	Trout Gulch Ro	0.73	164		Pb	09 06 50.6	0.0
NADM	Allendale	0.74	10		Pb	09 06 50.7	-0.1
NPRM	Point Reyes	0.75	291		Pg	09 06 50.2	+0.3
HSPM	Sheep	0.78	141		Pb	09 06 51.1	-0.5
NTYM	Taylor	0.78	328		Pg	09 06 50.7	+0.2
NSHM	Saint Helena R	0.88	335		Pg	09 06 52.3	0.0
CSR	Chase Ranch	0.88	150		Pb	09 06 52.9	-0.4
HFEM	San Felipe	0.94	142		Pb	09 06 53.9	-0.3
HPCM	Pacheco Lake	0.95	134		Pg	09 06 53.8	+0.1
SLD	San Luis Dam	0.97	132		Pg	09 06 54.2	0.0
NHSM	Mount Saint He	1.00	338		Pg	09 06 55.0	+0.2
SFJWR	San Luis Fatjo	1.02	131		Pg	09 06 54.9	-0.2
HJGM	San Juan Grade	1.03	154		Pg	09 06 54.2	-1.0
NDHM	Dunnigan Hills	1.05	9		Pg	09 06 55.4	-0.2
NMCNC	Mill Creek, So	1.06	325		Pg	09 06 54.9	-0.9
FRP	Fremont Peak	1.10	152		Pg	09 06 55.8	-0.8
NMTM	Middletown	1.10	347		Pg	09 06 55.6	-1.1
SAO	San Andreas Ge	1.11	150	Pg	Pg	09 06 55.4	-1.3
GSSM	Skaggs Springs	1.20	325		Pg	09 06 57.3	-1.1
GSGM	Seigler Mounta	1.23	338		Pg	09 06 59.0	0.0
SCZ	Santa Cruz	1.27	153		Pg	09 06 58.0	-1.8
BJCM	Johnson Can.	1.32	153		Pn	09 06 58.7	-1.8
GDCM	Dry Creek	1.36	320		Pn	09 06 59.7	-1.4
CMB	Columbia Colle	1.41	77	Pn	Pn	09 07 01.9	+0.1
CMB					Sb	09 07 18.9	-1.7
HAST	Hastings Reser	1.42	161		Pn	09 06 59.7	-2.1
HOPS	Hopland Field	1.47	330	Pn	Pn	09 07 00.8	-1.8
AFD	Forest Hills D	1.52	36	Pn	Pn	09 07 02.3	-1.0
ORV	Oroville	1.89	15	Pn	Pn	09 07 06.8	-1.5
ORV					Sn	09 07 30.1	-2.4
WAKR	Walker	2.26	69	Pn	Pn	09 07 14.1	+0.5
KCPM	Cahto Peak	2.26	330	Pn	Pn	09 07 13.5	-0.1
LCMM	Colby Mountain	2.46	11		Pb	09 07 18.6	-1.7

SNET 15 09:08:14.4±0.9, 13.28N×89.65W, h52km±12km, ML3.3
GCG 15 09:08:16.0±0.7, 13.15N×89.86W, h29km±285km, MD3.7
ISC 15 09:08:16.1±1.9, 13.4N±0.1×89.53W±0.07, h66km, n23, σ1.24/27, 2C-8D, El Salvador

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNET	Serv Nac Est T	0.44	42	eP	Pn	09 08 26.8	-1.3
SNET				eS	Sn	09 08 36.9	+0.1
SNET				IAML		09 08 37.8	
	comp=Z,3μm,0.2s						
UEES	Universidad Ev	0.45	39	⇓eP	Pn	09 08 27.1	-1.2
UEES				IAML		09 08 39.9	
	comp=Z,3μm,0.2s						
UTEC	Universidad Te	0.47	44	eP	Pn	09 08 27.2	-1.1
CEVE	Cerro Verde	0.47	349	⇓eP	Pn	09 08 26.8	-1.8
OPAM	Oficina de Pla	0.48	43	⇓eP	Pn	09 08 27.5	-1.0
OPAM				IAML		09 08 41.2	
	comp=Z,3μm,0.2s						
SBLS	San Blas	0.48	350	eP	Pn	09 08 26.9	-1.9
SBLS				eS	Sn	09 08 37.2	-0.6
SNJE	San Jose	0.51	352	⇓eP	Pn	09 08 27.2	-1.8
AEIL	Aeropuerto Ilo	0.52	51	⇑eP	Pn	09 08 28.5	-0.5
AEIL				IAML		09 08 43.0	
	comp=Z,3μm,0.2s						
RTR	El Retiro	0.54	348	eP	Pn	09 08 27.6	-1.6
LFU	La Fuente	0.56	47	⇓eP	Pn	09 08 28.9	-0.5
UNIC	Universidad Ca	0.62	359	eP	Pn	09 08 28.8	-1.2
PAVA	Las Pavas	0.68	59	⇓eP	Pn	09 08 30.6	-0.1
PAVA				IAML		09 08 44.7	
	comp=Z,685nm,0.4s						
COEG	Centro de Oper	0.69	68	eP	Pn	09 08 30.1	-0.5
COEG				IAML		09 08 43.6	
	comp=Z,815nm,0.3s						
COEB	Comit de Eme	0.98	82	⇓eP	Pn	09 08 33.7	-0.6
COEB				eS	Sn	09 08 48.5	+0.6
COEB				IAML		09 08 51.0	
	comp=Z,257nm,0.3s						
TECA	Tecapa	1.01	82	eP	Pn	09 08 34.4	-0.4
MTO3	Montecristo	1.04	9	⇑eP	Pn	09 08 34.5	-0.7
PACA	Pacayal	1.18	85	eP	Pn	09 08 37.0	+0.1
NBG	Las Nubes	1.45	327	eP	Pn	09 08 42.2	+1.6
NBG				eS	Sn	09 09 02.0	+3.0
PCG	Pacaya	1.46	315	eS	Sn	09 09 00.5	+1.3
LCND	La Caada	1.60	92	⇓eP	Pn	09 08 42.1	-0.3
LCND				IAML		09 09 08.1	
	comp=Z,190nm,0.2s						
CNCH	Conchagua	1.66	93	eP	Pn	09 08 42.9	-0.3
FUG	Fuego 3	1.67	310	eP	Pn	09 08 42.3	-1.1
STG3	Santiaguito 3,	2.39	304	eP	Pn	09 08 52.5	-0.7

THE 15 09:26:21.5, 38.25N×20.38E, h5km±1km, ML2.2/4, Error ellipse: s-maj=1.6km s-min=0.5km az=246.0
ATH 15 09:26:21.5, 38.25N×20.41E, h4km, ML2.5/7, Error ellipse: s-maj=1.4km s-min=0.6km az=262.0
ISC 15 09:26:21.2±1.0, 38.25N±0.02×20.41E±0.04, h5km±5km, n35, σ0.68/57, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.01	58	P	Pg	09 26 22.1	-0.1
KEF4				S	Sg	09 26 22.7	-0.2
AGT1	Agia Thekli	0.02	271	P	Pg	09 26 22.2	0.0
AGT1				S	Sg	09 26 22.8	-0.1
LXR1	Lixouri, Cepha	0.06	155	P	Pg	09 26 23.0	+0.4
LXR1				S	Sg	09 26 24.3	+0.8
LXRA	Lixouri, Kepha	0.06	156	P	Pg	09 26 23.0	+0.4
LXRA				S	Sg	09 26 24.3	+0.8
KEF1	Kardakata, Kep	0.06	61	P	Pg	09 26 22.8	+0.2
KEF1				S	Sg	09 26 24.0	+0.4
KEF3	Kipouria, Keph	0.07	225	P	Pg	09 26 23.1	+0.3
KEF3				S	Sg	09 26 24.7	+0.8
CHV1	Chavriata, Kef	0.07	198	P	Pg	09 26 23.2	+0.4
CHV1				S	Sg	09 26 24.8	+0.9
ARGA	Argostoli. Kep	0.09	143	P	Pg	09 26 23.4	+0.2
ARGA				S	Sg	09 26 25.3	+0.8
ARG2	Argostoli	0.10	139	P	Pg	09 26 23.6	+0.4
ARG2				S	Sg	09 26 25.4	+0.8
KEF2	Argostoli. Kep	0.10	144	P	Pg	09 26 23.7	+0.3
KEF2				S	Sg	09 26 25.7	+0.9
VLS	Valsamata	0.16	117	P	Pg	09 26 24.6	+0.2
VLS				S	Sg	09 26 27.3	+0.7
VLS	Valsamata	0.16	117	P	Pg	09 26 24.6	+0.2
VLS				S	Sg	09 26 27.3	+0.7
VLS				AML	AML	09 26 28.0	
	comp=E,7057μm,0.1s						
VLS				AML	AML	09 26 28.3	
	comp=N,5236μm,0.1s						
FSK	Fiskardo	0.24	30	P	Pg	09 26 26.2	+0.3
FSK				S	Sg	09 26 30.1	+1.0
	comp=N,808nm,0.2s						
FSK	Fiskardo	0.24	30	P	Pg	09 26 26.2	+0.3
FSK				S	Sg	09 26 30.5	+1.4
FSK				AML	AML	09 26 32.3	
	comp=E,1829μm,0.2s						
FSK				AML	AML	09 26 35.4	
	comp=N,1675μm,0.5s						
EVGI	Lefkada island	0.42	28	P	Pg	09 26 29.6	+0.3
EVGI				S	Sg	09 26 36.5	+1.7
EVGI	Lefkada island	0.42	28	P	Pg	09 26 29.6	+0.3
EVGI				S	Sg	09 26 36.5	+1.7
VLMS	Volimes, Zakyn	0.42	152	P	Pg	09 26 29.8	+0.4
VLMS				AML	AML	09 26 38.9	
	comp=N,3236μm,0.3s						
VLMS				AML	AML	09 26 39.7	
	comp=E,2589μm,0.2s						
MGNA	Meganis	0.50	36	P	Pg	09 26 31.0	+0.1
MGNA				S	Sb	09 26 39.5	-0.7
LKD2	Lefkada island	0.57	20	P	Pg	09 26 32.1	-0.1
LKD2				S	Sg	09 26 40.9	+1.2
	comp=E,255nm,0.5s						
LKD2	Lefkada island	0.57	20	P	Pg	09 26 31.9	-0.4
LKD2				S	Sb	09 26 41.5	-0.7
LKD2				AML	AML	09 26 48.7	
	comp=N,612μm,0.7s						
LKD2				AML	AML	09 26 56.1	
	comp=E,469μm,0.6s						
TSLK	Tsoukalades, L	0.60	19	P	Pg	09 26 32.9	+0.1
TSLK				S	Sb	09 26 42.7	-0.4
	comp=E,295nm,0.5s						
TSLK	Tsoukalades, L	0.60	19	P	Pg	09 26 33.0	+0.1
TSLK				S	Sg	09 26 42.0	+1.3
VTN	Vitineika	0.70	118	P	Pg	09 26 35.1	+0.5
PDO	Prodromos	0.70	60	P	Pg	09 26 34.8	+0.2
PDO				S	Sb	09 26 46.2	+0.3
	comp=E,772nm,0.4s						
PDO	Prodromos	0.70	60	P	Pg	09 26 34.8	+0.2
AXS	Araxos	0.76	94	P	Pg	09 26 35.9	+0.1
RLS	Riolos of Patr	0.86	103	P	Pg	09 26 37.5	-0.1
PVO	Paravola	0.95	67	P	Pg	09 26 39.6	+0.2
PVO	Paravola	0.95	67	P	Pg	09 26 39.6	+0.2
PVO				AML	AML	09 26 56.9	
	comp=E,474μm,0.5s						
PVO				AML	AML	09 27 01.2	
	comp=N,619μm,0.5s						
DRO	Drossia	1.07	106	P	Pg	09 26 41.4	-0.3
DRO				AML	AML	09 27 08.0	
	comp=E,648μm,0.4s						
DRO				AML	AML	09 27 13.2	
	comp=N,510μm,0.6s						
ANX	Ano Chora	1.24	73	P	Pg	09 26 44.3	-0.6
ANX				AML	AML	09 27 10.0	
	comp=E,509μm,0.6s						
ANX				AML	AML	09 27 12.6	
	comp=N,731μm,0.6s						
LAKA	Lakka	1.24	90	P	Pg	09 26 44.0	-0.9
TRIZ	Trizonia	1.31	84	P	Pn	09 26 45.0	-1.2
MAKR	Makrakomi, Fth	1.55	60	P	Pg	09 26 51.4	+0.5
AGG	Agios Georgios	1.69	62	P	Pb	09 26 52.9	+0.1

IDC 15 09:54:08.9±1.8, 46.70S×14.12W, h0km, mb4.1/2, mb1 4.1/2, mb1mx3.7/27, mbtmp4.1/2, MS3.8/9, Ms1 3.8/9, ms1mx3.7/19, Error ellipse: s-maj=78.0km s-min=46.5km az=155.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOSA	Boshof	35.57	74	LR	LR	10 12 22.4	
	comp=Z,256nm,21.5s,baz=202,slow=31						
H10S2	ASCENSION HYDR	37.60	359	T	T	10 41 54.6	
	baz=178,slow=74,SNR=7.3						
H10S3	ASCENSION HYDR	37.61	359	T	T	10 41 55.2	
	baz=42,slow=74,SNR=12						
CPUP	Villa Florida	39.62	286	LR	LR	10 15 29.7	
	comp=Z,121nm,21.0s,baz=160,slow=32						
PLCA	Paso Flores	40.47	257	LR	LR	10 18 07.2	
	comp=Z,107nm,18.5s,baz=154,slow=36						
BDFB	Brasilia	41.85	306	LR	LR	10 16 16.7	
	comp=Z,168nm,20.0s,baz=118,slow=32						
MATP	Matopo	43.39	68	P	P	10 02 13.3	0.0
	1.9nm,0.7s,baz=218,slow=9.8,SNR=2.7						
CFA	Coronel Fontan	43.73	270	LR	LR	10 17 34.5	
	comp=Z,124nm,20.6s,baz=128,slow=32						
LPAZ	La Paz	53.79	286	LR	LR	10 25 25.0	
	comp=Z,84nm,21.9s,baz=139,slow=35						
TORD	Torodi Ar. Bea	61.24	18	P	P	10 04 25.5	-0.2
	0.9nm,0.4s,baz=194,slow=8.4,SNR=12						
KMBO	Kilima Mbogo	63.66	61	LR	LR	10 30 23.7	
	comp=Z,99nm,18.8s,baz=88,slow=34						
ROSC	El Rosal	73.73	296	LR	LR	10 37 06.6	
	comp=Z,89nm,19.0s,baz=134,slow=35						
BRTR	Keskin Array B	96.02	35	LR	LR	10 48 36.5	
	comp=Z,28nm,22.0s,baz=211,slow=34						
PDAR	Pinedale Array	122.60	300	PKP	PKPdf	10 13 05.1	-1.0
	0.3nm,0.7s,baz=127,slow=4.3,SNR=3.7						
MKAR	Makanchi Array	125.44	57	PKP	PKPdf	10 13 10.8	-0.4
	0.3nm,0.8s,baz=222,slow=1.9,SNR=2.1						
YKA	Yellowknife Ar	134.48	320	PKP	PKPdf	10 13 27.3	-0.4
	0.5nm,0.9s,baz=110,slow=2.1,SNR=5.2						
ILAR	Eielson Array	148.84	323	PKPbc	PKPbc	10 13 57.2	+0.1
	2.1nm,1.0s,baz=103,slow=2.9,SNR=11						

ATH 15 10:05:10.5, 38.24N×20.37E, h16km, ML2.8/16, Error ellipse: s-maj=1.5km s-min=0.9km az=255.0
THE 15 10:05:11.3, 38.24N×20.38E, h12km, ML2.9/3, Error ellipse: s-maj=0.8km s-min=0.4km az=266.0
ISC 15 10:05:11.2±0.9, 38.24N±0.02×20.39E±0.04, h14km±4km, n54, σ0.48/75, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGT1	Agia Thekli	0.01	322	P	Pg	10 05 13.4	-0.2
AGT1				S	Sg	10 05 15.4	+0.2
KEF4	Livadi, Kephal	0.03	53	P	Pg	10 05 13.5	-0.1
KEF4				S	Sg	10 05 15.5	+0.1
KEF3	Kipouria, Keph	0.05	225	P	Pg	10 05 13.4	-0.3
KEF3				S	Sg	10 05 15.2	-0.3
LXR1	Lixouri, Cepha	0.05	139	P	Pg	10 05 13.7	0.0
LXR1				S	Sg	10 05 15.9	+0.4
LXRA	Lixouri, Kepha	0.05	140	P	Pg	10 05 13.7	0.0
LXRA				S	Sg	10 05 15.9	+0.4
CHV1	Chavriata, Kef	0.06	190	P	Pg	10 05 13.5	-0.3
CHV1				S	Sg	10 05 15.4	-0.2
KEF1	Kardakata, Kep	0.07	58	P	Pg	10 05 13.9	-0.1
KEF1				S	Sg	10 05 16.1	+0.2
ARGA	Argostoli. Kep	0.09	133	P	Pg	10 05 14.0	-0.1
ARGA				S	Sg	10 05 15.8	-0.3
ARG2	Argostoli	0.10	130	P	Pg	10 05 14.1	-0.1
ARG2				S	Sg	10 05 16.4	+0.2
KEF2	Argostoli. Kep	0.10	136	P	Pg	10 05 14.2	-0.1
KEF2				S	Sg	10 05 16.2	-0.2
VLS	Valsamata	0.17	112	P	Pg	10 05 14.9	-0.2
VLS				S	Sg	10 05 18.1	+0.2
	18μm,0.1s						
VLS	Valsamata	0.17	112	P	Pg	10 05 14.9	-0.2
VLS				S	Sg	10 05 18.0	+0.2
VLS				AML	AML	10 05 18.3	
	comp=E,40533μm,0.1s						
VLS				AML	AML	10 05 18.8	
	comp=N,28052μm,0.2s						
FSK	Fiskardo	0.26	31	P	Pg	10 05 16.4	-0.2
FSK				S	Sg	10 05 20.8	+0.5
	comp=N,3μm,0.2s						
FSK	Fiskardo	0.26	31	P	Pg	10 05 16.4	-0.2
FSK				S	Sg	10 05 20.3	0.0
FSK				AML	AML	10 05 21.8	
	comp=E,8637μm,0.1s						
FSK				AML	AML	10 05 22.5	
	comp=N,4722μm,0.2s						
VLMS	Volimes, Zakyn	0.42	150	P	Pg	10 05 19.2	-0.4
VLMS				S	Sg	10 05 25.8	+0.6
VLMS				AML	AML	10 05 26.8	
	comp=E,6424μm,0.2s						
VLMS				AML	AML	10 05 27.2	
	comp=N,9266μm,0.3s						
EVGI	Lefkada island	0.43	28	P	Pg	10 05 19.6	-0.2
EVGI				S	Sg	10 05 26.2	+0.6
EVGI	Lefkada island	0.43	28	P	Pg	10 05 19.5	-0.3
MGNA	Meganis	0.52	37	P	Pg	10 05 21.0	-0.4
MGNA				AML	AML	10 05 31.6	
	comp=E,2149μm,0.1s						
MGNA				AML	AML	10 05 32.1	
	comp=N,1726μm,0.2s						
LKD2	Lefkada island	0.59	21	P	Pg	10 05 22.1	-0.6
LKD2	Lefkada island	0.59	21	P	Pg	10 05 21.9	-0.8
LKD2				AML	AML	10 05 38.9	
	comp=N,1173μm,0.3s						
LKD2				AML	AML	10 05 39.3	
	comp=E,1536μm,0.2s						
TSLK	Tsoukalades, L	0.62	19	P	Pg	10 05 23.0	-0.3
TSLK				S	Sb	10 05 32.8	+0.4
	comp=E,590nm,0.4s						
TSLK	Tsoukalades, L	0.62	19	P	Pg	10 05 22.9	-0.4
TSLK				AML	AML	10 05 38.8	
	comp=E,1173μm,0.6s						
TSLK				AML	AML	10 05 39.8	
	comp=N,1150μm,0.2s						
AST1	Astakos	0.62	61	P	Pg	10 05 22.9	-0.5
AST1				S	Sb	10 05 33.2	+0.7
KRI1	kERI	0.67	150	P	Pg	10 05 23.9	-0.3
KRI1				S	Sb	10 05 34.0	+0.3
VTN	Vitineika	0.70	117	P	Pb	10 05 25.2	0.0
PDO	Prodromos	0.72	60	P	Pg	10 05 24.9	-0.2
PDO				S	Sb	10 05 35.7	+0.5
PDO	Prodromos	0.72	60	P	Pg	10 05 24.8	-0.3
PDO				AML	AML	10 05 41.3	
	comp=E,2537μm,0.6s						
PDO				AML	AML	10 05 43.8	
	comp=N,2658μm,0.4s						
AXS	Araxos	0.78	93	P	Pg	10 05 25.3	-0.9
PVO	Paravola	0.96	67	P	Pb	10 05 29.5	-0.2
PVO	Paravola	0.96	67	P	Pb	10 05 29.4	-0.3
PVO				AML	AML	10 05 46.8	
	comp=N,1245μm,0.3s						
PVO				AML	AML	10 05 50.0	
	comp=E,1608μm,0.4s						
DRO	Drossia	1.08	105	P	Pb	10 05 31.2	-0.4
DRO				S	Sn	10 05 47.0	+0.3
DRO	Drossia	1.08	105	P	Pb	10 05 31.1	-0.5
DRO				AML	AML	10 06 00.6	
	comp=N,1410μm,0.4s						
DRO				AML	AML	10 06 00.6	
	comp=E,1568μm,0.6s						
LAKA	Lakka	1.25	90	P	Pn	10 05 33.6	-0.6
LAKA				AML	AML	10 06 03.8	
	comp=E,463μm,0.5s						
LAKA				AML	AML	10 06 06.6	
	comp=N,328μm,0.5s						
ANX	Ano Chora	1.25	73	P	Pn	10 05 34.2	-0.1
ANX	Ano Chora	1.25	73	P	Pn	10 05 33.8	-0.5
ANX				AML	AML	10 05 59.3	
	comp=N,2331μm,0.5s						
ANX				AML	AML	10 05 59.6	
	comp=E,1836μm,0.6s						
AMT	Artemida-Makis	1.26	124	P	Pg	10 05 35.7	+0.3
AMT				AML	AML	10 06 05.5	
	comp=E,689μm,0.5s						
AMT				AML	AML	10 06 08.7	
	comp=N,982μm,0.6s						
IGT	Igoumenitsa	1.29	358	P	Pb	10 05 35.2	-0.1
EVR	Evrytania	1.30	58	P	Pb	10 05 35.5	0.0
EVR				AML	AML	10 06 00.1	
	comp=N,405μm,0.6s						
EVR				AML	AML	10 06 09.6	
	comp=E,331μm,0.6s						
SERG	Sergoula	1.32	82	P	Pn	10 05 35.2	0.0
SERG	Sergoula	1.32	82	P	Pn	10 05 34.8	-0.4
SERG				AML	AML	10 06 01.9	
	comp=E,582μm,0.5s						
SERG				AML	AML	10 06 03.9	
	comp=N,615μm,0.6s						
KALE	Kalithea	1.38	83	P	Pn	10 05 35.8	-0.3
KALE	Kalithea	1.38	83	P	Pn	10 05 35.8	-0.3
KALE				AML	AML	10 06 06.8	
	comp=E,426μm,0.3s						
KALE				AML	AML	10 06 10.6	
	comp=N,502μm,0.5s						
KLV	Kalavryta, Ach	1.40	98	P	Pn	10 05 36.4	0.0
KLV	Kalavryta, Ach	1.40	98	P	Pn	10 05 36.3	0.0
KLV				AML	AML	10 06 03.9	
	comp=E,279μm,0.9s						
KLV				AML	AML	10 06 07.8	
	comp=N,252μm,0.8s						
KEK	Kerkira	1.54	343	P	Pn	10 05 38.3	0.0
KEK	Kerkira	1.54	343	P	Pn	10 05 38.6	+0.3
ITM	Ithomi	1.61	131	P	Pb	10 05 40.6	-0.1
AGG	Agios Georgios	1.71	62	P	Pb	10 05 42.8	+0.5
PYL	PYLOS	1.72	141	P	Pb	10 05 41.6	-0.9
THL	Klokotos Trika	1.83	43	P	Pb	10 05 43.9	-0.5
LTK	Loutraki	2.04	95	P	Pn	10 05 45.8	+0.7
LKR	Lokris	2.09	78	P	Pb	10 05 47.5	-1.3
VIL2	Platees	2.26	90	P	Pb	10 05 50.3	-1.6
DID	Didima	2.37	107	P	Pn	10 05 51.1	+1.5

VAO 15 10:12:51.9±0.5, 19.03S×68.53W, h341km±5km, mb4.2
IDC 15 10:12:54.8±0.8, 19.29S×67.22W, h217km±9km, mb3.5/2, mb1 3.6/7, mb1mx3.3/39, mbtmp4.1/7, Error ellipse: s-maj=17.8km s-min=9.9km az=104.0
SCB 15 10:12:55.6±1.7, 19.27S×67.40W, h257km±16km, ML3.7/4, Error ellipse: s-maj=6.4km s-min=4.0km az=1.0
GUC 15 10:12:56.0±0.6, 19.37S×67.55W, h255km±9km, ML4.1
ISC 15 10:12:55.7±0.7, 19.27S±0.04×67.34W±0.05, h227km±8km, n45, σ1.33/63, 7C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GO01	Chusmiza	1.79	257	⇑iP	Pn	10 13 35.5	+0.7
GO01				eS	S	10 14 06.3	+1.0
PB08	IPOC Station P	1.91	243	⇑iP	Pn	10 13 37.0	+1.1
PB08				iS	S	10 14 08.0	+0.9
MNMC	Minye Minye	2.13	273	⇑iP	Pn	10 13 38.3	+0.5
MNMC				iS	S	10 14 11.1	+0.5
MNMC				IAML		10 14 16.7	
	comp=E,551nm,0.3s						
MNMC	Minye Minye	2.13	273	P	Pn	10 13 38.2	+0.4
MNMC				S	S	10 14 10.1	-0.6
MNMC				AML	AML	10 14 12.1	
	comp=E,179nm,0.5s						
PB11	IPOC Station P	2.23	257	⇑iP	Pn	10 13 39.0	+0.3
PB11				iS	S	10 14 11.7	-0.6
PB11				IAML		10 14 12.9	
	comp=N,390nm,0.4s						
PB11	IPOC Station P	2.23	257	P	Pn	10 13 38.7	0.0
PB16	IPOC Station P	2.25	294	⇑iP	Pn	10 13 40.3	+1.0
PB16				eS	S	10 14 14.6	+1.3
BBOJ	La Paz, Jacaqu	2.42	340	P	Pn	10 13 42.1	+1.0

BBOE	La Paz, Chanca	2.52	346	P	Pn	10 13 43.6	+1.5
PSGC	Pisagua	2.64	262	P	Pn	10 13 42.7	-0.2
PB01	IPOC Station P	2.68	228	⇑iP	Pn	10 13 43.7	+0.4
PB01				eS	S	10 14 19.5	-1.1
PB01					IAML	10 14 22.3	
	comp=E,196nm,0.2s						
PB01	IPOC Station P	2.68	228	P	Pn	10 13 43.7	+0.4
PB01				S	S	10 14 19.0	-1.6
PB01				AML	AML	10 14 20.3	
	comp=E,146nm,0.5s						
BS03	Mojotorillo	2.80	91	P	Pn	10 13 45.7	+0.7
BBOD	La Paz, Gloria	2.88	335	P	Pn	10 13 47.4	+1.4
LPAZ	La Paz	3.06	346	⇑iP	Pn	10 13 48.9	+0.8
LPAZ				iS	S	10 14 28.1	-1.0
LPAZ	La Paz	3.06	346	P	Pn	10 13 48.9	+0.8
	comp=E,14nm,0.3s,baz=147,slow=5.1,SNR=354						
LPAZ				S	S	10 14 28.1	-1.0
	comp=E,1.2nm,0.3s,baz=334,slow=22,SNR=2.1						
LPAZ	La Paz	3.06	346	P	Pn	10 13 48.9	+0.8
LPAZ				S	S	10 14 28.2	-0.9
LPAZ				AML	AML	10 14 30.9	
	comp=E,142nm,0.8s						
LPAZ	La Paz	3.06	346	eP	Pn	10 13 49.0	+0.9
PATCX	Punta Patache	3.06	239	eP	Pn	10 13 47.7	+0.2
PATCX				eS	S	10 14 25.7	-2.5
PATCX					IAML	10 14 27.4	
	comp=E,377nm,0.5s						
PB02	IPOC Station P	3.15	229	eP	Pn	10 13 48.9	+0.3
PB02				eS	S	10 14 28.1	-1.9
PB02	IPOC Station P	3.15	229	P	Pn	10 13 49.8	+1.3
BS08	Valle Grande	3.15	76	P	Pn	10 13 49.4	+0.6
BS09	Huarina	3.29	338	P	Pn	10 13 52.1	+1.4
YJA	Yavi	3.36	150	P	Pn	10 13 53.1	+1.8
YJA				S	S	10 14 35.1	+0.1
YJA				AML	AML	10 14 37.6	
	comp=E,102nm,0.7s						
PB07	IPOC Station P	3.42	224	eP	Pn	10 13 51.8	+0.1
PB07				iS	S	10 14 32.9	-2.8
PB07					IAML	10 14 34.2	
	comp=E,165nm,0.4s						
PB03	IPOC Station P	3.57	219	eP	Pn	10 13 53.8	+0.3
PB03				iS	S	10 14 36.7	-2.2
LVC	Limon Verde	3.63	203	P	Pn	10 13 55.1	+0.7
	comp=E,3.5nm,0.3s,baz=31,slow=11,SNR=36						
LVC				S	S	10 14 38.9	-1.8
	comp=E,8.8nm,0.3s,baz=289,slow=23,SNR=26						
LVC	Limon Verde	3.63	203	eP	Pn	10 13 55.4	+1.0
BS06	Camiri	3.69	103	P	Pn	10 13 55.8	+1.0
PB06	IPOC Station P	4.00	211	P	Pn	10 13 59.9	+1.2
SIV	San Ignacio	6.81	62	P	Pn	10 14 32.6	-1.2
	comp=E,5.4nm,0.3s,baz=262,slow=11,SNR=206						
SIV				S	S	10 15 47.5	-4.5
	baz=332,slow=17,SNR=1.0						
CPUP	Villa Florida	11.60	129	P	Pn	10 15 34.5	-0.3
	comp=E,0.1nm,0.3s,baz=292,slow=13,SNR=1.7						
CFA	Coronel Fontan	12.31	184	P	Pn	10 15 43.5	-0.2
	comp=E,0.8nm,0.3s,baz=54,slow=19,SNR=6.3						
TRCB	Terra Rica	14.18	107	eP	P	10 16 10.5	+2.7
PTGB	Pitanga	15.17	114	eP	Pn	10 16 21.8	+2.9
ITAB	Concordia	16.06	122	eP	Pn	10 16 30.8	+1.2
FRTB	Fartura	17.06	107	eP	Pn	10 16 41.1	-0.2
PLTB	Pedras Altas	17.55	138	eP	P	10 16 45.1	+0.3
BB19B	Bebedouro	17.76	99	eP	Pn	10 16 48.2	-1.4
CNLB	Canela	18.04	127	eP	Pn	10 16 52.0	-0.8
IPMB	Ipameri, GO	18.18	89	eP	Pn	10 16 53.2	-1.4
RCLB	Rio Claro- Sao	18.78	103	eP	P	10 16 58.0	-0.3
TORD	Torodi Ar. Bea	75.22	70	P	P	10 24 13.1	-0.9
	comp=E,1.8nm,0.6s,baz=248,slow=5.3,SNR=20						
YKA	Yellowknife Ar	89.59	340	P	P	10 25 27.5	+0.5
	comp=E,0.3nm,0.6s,baz=133,slow=4.5,SNR=8.5						
SONM	Songino Array	151.05	9	PKPbc	PKiKP	10 32 22.1	-0.3
	comp=E,0.2nm,0.4s,baz=48,slow=2.1,SNR=3.2						

JMA 15 10:21:35.3±0.2,38.21N×144.49E,h47km,M3.6,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.37	292	P	Pn	10 22 13.0	+1.3
OFUJ				eS	Sn	10 22 40.9	+1.3
JIKH	Ishinomakikobu	2.38	273	eS	Sn	10 22 41.0	+1.2
JKMT	Kesennumamotoy	2.44	285	P	Pn	10 22 14.0	+1.4
JKMT				eS	Sn	10 22 42.7	+1.5
JIO	Ouri	2.48	277	P	Pn	10 22 14.6	+1.4
JIO				eS	Sn	10 22 43.4	+1.1
MIYJ	Miyakonagasawa	2.49	304	P	Pn	10 22 14.2	+0.9
MIYJ				eS	Sn	10 22 43.7	+1.2
JMK	Ichinoseki	2.67	287	P	Pn	10 22 17.3	+1.6
JMK				eS	Sn	10 22 48.7	+1.9
JOM	Ohasama	2.80	298	P	Pn	10 22 19.0	+1.5
JOM				eS	Sn	10 22 52.3	+2.3
JFT	Otama	3.36	259	P	Pn	10 22 27.3	+2.0
JFT				eS	Sn	10 23 06.4	+2.5
JOT	Ohata	4.13	321	P	Pn	10 22 38.1	+2.3
JCH	Churui	4.48	349	P	Pn	10 22 40.2	-0.4
JCH				eS	Sn	10 23 29.4	-2.1
BSO1	Boso 1	4.54	220	P	Pn	10 22 41.0	0.0
JRY	Ryogami san	4.97	246	P	Pn	10 22 48.5	+1.0
NEM2	Nemuro 2	5.24	10	P	Pn	10 22 47.6	-3.4
NEM2				eS	Sn	10 23 43.7	-6.3
JTKR	Abashiri--Toko	5.77	356	P	Pn	10 22 57.1	-1.2
JTKR				eS	Sn	10 23 58.6	-4.6
JHR	Hokuryu	5.91	340	P	Pn	10 23 02.1	+1.9

IDC 15 10:23:51.8±1.5,45.07N×110.43W,h0km,mb1 3.3/5, mb1mx3.2/48,mbtmp2.9/5,ML3.1/5,Error ellipse: s-maj=19.7km s-min=7.5km az=60.0
UUSS 15 10:23:53.3±1.6,44.77N±0.03×111.08W±0.04,h8km±4km, ML3.0/7,Error ellipse: s-maj=4.6km s-min=3.3km az=149.0
ISC 15 10:23:53.2±0.8,44.70N±0.03×111.15W±0.03,h11km±6km, n36,σ1.22/37,Hebgen Lake region, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YHB	Horse Butte	0.06	324		Pg	10 23 56.5	+0.7
YHB				Sg	Sg	10 23 57.9	+0.2
YMR	Madison River	0.14	105		Pg	10 23 57.5	+0.8
YHL	Hebgen Lake	0.15	350		Pb	10 23 57.4	-0.8
YHL				Sg	Sg	10 23 59.0	-0.6
YHH	Holmes Hill	0.23	68		Pg	10 23 58.3	+0.1
YHH				Sg	Sg	10 24 00.8	-0.8
QLMT	Earthquake Lak	0.24	302		Pb	10 23 59.9	+0.2
YNM	Yellowstone No	0.32	86		Pg	10 24 00.4	+0.7
YNR	Norris Junctio	0.33	88		Pg	10 24 00.8	+0.8
YUF	Upper Falls	0.45	89		Pg	10 24 03.3	+1.1
YPP	Pitchstone Pla	0.50	150		Pn	10 24 05.7	-0.8
H17A	Grant Village	0.51	127		Pn	10 24 05.3	-1.4
LKWY	Lake	0.55	104		Pb	10 24 05.6	+0.6
FLWY	Flagg Ranch	0.70	153		Pg	10 24 09.1	-0.1
YMP	Mirror Lake Pl	0.71	87		Pb	10 24 08.8	-0.6
YNE	Yellowstone No	0.86	69		Pb	10 24 10.0	-0.4
MOOW	Moose Ponds	1.00	163		Pg	10 24 14.1	+0.8
FXWY	Fox Creek	1.07	175		Pg	10 24 15.5	+1.6
MCMT	McKenzie Canyo	1.22	276		Pg	10 24 18.4	+1.8
DLMT	Dillon	1.22	303		Pg	10 24 17.9	+1.2
SNOW	Snow King Moun	1.27	167		Pg	10 24 19.4	+1.7
REDW	Red Top Meadow	1.36	171		Pg	10 24 20.9	+1.6
RLMT	Red Lodge	1.40	72		Pb	10 24 19.4	0.0
LRM	Limekiln Ridge	1.45	321		Pg	10 24 21.8	+0.8
GCMT	Greycliff	1.51	43		Pb	10 24 21.3	0.0
AHID	Auburn Hatcher	1.94	179		Pg	10 24 30.1	-0.3
PD31	Pinedale Array	2.25	149		Pg	10 24 34.6	+0.6
PDAR	Pinedale Array	2.25	149	Pn	Pb	10 24 34.6	+0.6
	3.0nm,0.3s,baz=331,slow=13,SNR=71						
PDAR				Lg	Lg	10 25 06.0	
	1.4nm,0.3s,baz=352,slow=30,SNR=9.1						
EGMT	Eagleton	3.46	16	Pn	Pb	10 24 49.7	+2.7
MFID	Camas Ranch	3.61	251	Pn	Pb	10 24 54.0	-3.1
JTMT	Jette	3.74	326	Pn	Pb	10 24 54.1	-5.3
K22A	Casper	3.93	120		Pn	10 24 53.5	-0.1
LAO	LASA Array	3.98	58		Lg	10 25 59.8	
BGU	Big Grassy Mou	4.02	201	Pn	Pn	10 24 56.1	+1.3
ELK	Elko	4.97	219	Pn	Pb	10 25 19.4	-1.0
	0.4nm,0.3s,baz=20,slow=14,SNR=8.6						
ELK				Sn	Sb	10 26 20.2	-0.1
	baz=1.1,slow=20,SNR=1.2						
NEW	Newport	5.45	313	Pn	Pn	10 25 17.5	+3.2
	0.4nm,0.3s,baz=121,slow=11,SNR=7.8						
NEW				Sn	Sn	10 26 17.9	+0.9
	0.5nm,0.3s,baz=69,slow=14,SNR=2.1						
NEW				Lg	Lg	10 26 42.9	
	0.7nm,0.3s,baz=159,slow=9.1,SNR=5.6						
NVAR	Mina Array Bea	8.25	223	Pn	Pb	10 26 04.7	-11
	0.0nm,0.3s,baz=38,slow=16,SNR=1.7						
YKA	Yellowknife Ar	17.94	355	P	Pn	10 27 59.9	-2.3
	0.0nm,0.3s,baz=172,slow=12,SNR=4.1						

IDC 15 10:40:24.7±3.0,2.56N×128.38E,h0km,mb3.2/3, mb1 3.4/3,mb1mx3.3/25,mbtmp3.3/3,Error ellipse: s-maj=234.3km s-min=27.8km az=68.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.12	166	P	P	10 45 31.9	-0.7
	0.3nm,0.5s,baz=344,slow=11,SNR=1.5						
ASAR	Alice Springs	26.62	169	P	P	10 46 05.5	+0.3
	0.2nm,0.7s,baz=356,slow=8.7,SNR=4.1						
MKAR	Makanchi Array	59.45	325	P	P	10 50 29.4	+0.1
	0.3nm,0.6s,baz=111,slow=7.9,SNR=4.9						

MEX 15 10:46:25.9±0.8,14.74N×93.35W,h16km±999km,MD3.8
GCG 15 10:46:26.9±0.7,15.22N×93.11W,h23km±999km,MD4.0
ISC 15 10:46:23.2±2.2,14.8N±0.1×93.4W±0.1,h10km,n9, σ0.76/11,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.91	9	eP	Pg	10 46 41.2	+0.5
PCIG				eS	Sg	10 46 52.2	-0.4
THIG		1.07	84	eP	Pg	10 46 43.0	-0.8
STG3	Santiaguito 3,	1.74	93	eP	Pn	10 46 53.6	-0.1
CCIG	Comitan	1.89	39	eP	Pn	10 46 56.6	+0.9
TGIG		1.98	7	eP	Pn	10 46 56.8	-0.1
FUG	Fuego 3	2.47	98	eP	Pn	10 47 04.7	+0.9
FUG				eS	Sn	10 47 33.3	-0.7
CMIG	Matias Romero	2.70	328	eP	Pn	10 47 06.7	-0.1
PCG	Pacaya	2.70	98	eS	Sn	10 47 40.1	+0.2
IXG	Ixpaco	2.90	102	eP	Pn	10 47 10.8	+1.1

ATH 15 11:19:35.6,38.22N×20.39E,h11km±1km,ML2.5/4,Error ellipse: s-maj=2.0km s-min=1.1km az=249.0
THE 15 11:19:35.6,38.23N×20.37E,h10km,ML2.5/5,Error ellipse: s-maj=1.2km s-min=0.5km az=261.0
ISC 15 11:19:34.0±1.2,38.20N±0.03×20.33E±0.06,h17km±3km, n28,σ0.64/50,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.02	86	P	Pg	11 19 37.7	+0.7
KEF3				S	Sg	11 19 39.1	+0.2
CHV1	Chavriata, Kef	0.05	113	P	Pg	11 19 37.6	+0.5
CHV1				S	Sg	11 19 39.3	+0.2
AGT1	Agia Thekli	0.07	43	P	Pg	11 19 37.6	+0.4
AGT1				S	Sg	11 19 39.1	-0.2
LXR1	Lixouri, Cepha	0.09	91	P	Pg	11 19 37.7	+0.3
LXR1				S	Sb	11 19 39.4	-0.2
LXRA	Lixouri, Kepha	0.09	91	P	Pg	11 19 37.8	+0.4
LXRA				S	Sb	11 19 39.4	-0.2
KEF4	Livadi, Kephal	0.10	54	P	Pg	11 19 37.7	+0.2
KEF4				S	Sb	11 19 39.2	-0.5
ARGA	Argostoli. Kep	0.12	102	P	Pg	11 19 38.0	+0.2
ARGA				S	Sb	11 19 39.6	-0.9
ARG2	Argostoli	0.13	100	P	Pg	11 19 38.1	+0.3
ARG2				S	Sb	11 19 39.9	-0.8
KEF2	Argostoli. Kep	0.13	106	P	Pg	11 19 38.3	+0.4
KEF2				S	Sb	11 19 40.0	-0.8
VLS	Valsamata	0.21	97	P	Pg	11 19 39.1	+0.1
VLS				S	Sg	11 19 41.8	-0.6
	4μm,0.1s						
VLS	Valsamata	0.21	97	P	Pg	11 19 39.0	0.0
VLS				S	Sg	11 19 41.7	-0.6
VLS				AML	AML	11 19 41.9	
	comp=N,7572μm,0.1s						
VLS				AML	AML	11 19 42.0	
	comp=E,6244μm,0.1s						
FSK	Fiskardo	0.32	36	P	Pg	11 19 41.1	+0.3
FSK				S	Sg	11 19 45.4	0.0
	comp=E,962nm,0.3s						
VLMS	Volimes, Zakyn	0.42	141	P	Pb	11 19 43.4	+0.4
VLMS				S	Sb	11 19 50.0	+0.9
VLMS				AML	AML	11 19 51.0	
	comp=N,2270μm,0.4s						
VLMS				AML	AML	11 19 53.8	
	comp=E,2610μm,0.2s						
EVGI	Lefkada island	0.49	32	P	Pb	11 19 44.5	+0.2
EVGI				S	Sg	11 19 51.1	+0.5
EVGI	Lefkada island	0.49	32	P	Pb	11 19 44.3	+0.1
EVGI				S	Sb	11 19 51.4	+0.2
MGNA	Meganis	0.58	39	P	Pb	11 19 45.8	0.0
MGNA				S	Sg	11 19 53.4	0.0
MGNA				AML	AML	11 19 54.6	
	comp=N,653μm,0.2s						
MGNA				AML	AML	11 19 54.6	
	comp=E,809μm,0.1s						
LKD2	Lefkada island	0.64	24	P	Pg	11 19 47.3	+0.6
LKD2				S	Sg	11 19 55.2	-0.1
	comp=E,150nm,0.3s						
LKD2	Lefkada island	0.64	24	P	Pg	11 19 47.4	+0.6
KRI1	kERI	0.66	144	P	Pn	11 19 48.1	-0.6
KRI1				S	Sn	11 19 58.0	-0.7
TSLK	Tsoukalades, L	0.67	22	P	Pn	11 19 48.0	-0.9
TSLK				S	Sg	11 19 57.0	+0.8
PDO	Prodromos	0.78	59	P	Pb	11 19 49.4	+0.2
PDO				S	Sg	11 20 01.1	+1.5
	comp=E,535nm,0.3s						
AXS	Araxos	0.83	90	P	Pb	11 19 50.0	0.0
RLS	Riolos of Patr	0.91	99	P	Pb	11 19 51.7	+0.3
PVO	Paravola	1.03	66	P	Pb	11 19 54.1	+0.1
PVO				S	Sg	11 20 09.1	+1.6
	comp=E,315nm,0.3s						
PVO	Paravola	1.03	66	P	Pg	11 19 54.0	+0.1
PVO				AML	AML	11 20 10.8	
	comp=N,506μm,0.3s						
PVO				AML	AML	11 20 11.1	
	comp=E,741μm,0.3s						
DRO	Drossia	1.12	102	P	Pb	11 19 55.3	+0.3
DRO				S	Sg	11 20 12.4	+2.0
DRO	Drossia	1.12	102	P	Pb	11 19 55.5	+0.5
KLV	Kalavryta, Ach	1.45	96	P	Pb	11 20 01.0	+0.4

NIED 15 11:24:00,42.20N×143.90E,h41km,Mw3.8 Best double couple: M_0 5.44000×10^14 NP1:φs63.00000°,δ75.00000°, λ126.00000°. NP2:φs173.00000°,δ39.00000°,λ24.00000°.
JMA 15 11:24:20.7±0.1,42.21N×143.94E,h56km±2km,M3.6
SKHL 15 11:24:21.5±0.1,42.18N×143.97E,h48km±1km,mb4.8/5
IDC 15 11:24:25.9±5.4,42.52N×143.88E,h68km±37km,mb3.3/11, mb1 3.6/12,mb1mx3.4/37,mbtmp3.7/12,ML2.6/1,Error ellipse: s-maj=46.9km s-min=18.1km az=180.0
ISC 15 11:24:20.3±1.5,42.19N±0.06×143.96E±0.04,h31km±10km, n41,σ0.93/51,mb3.7/11,2C-4D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTHR	Tokachihiroo	0.50	282	⇓P	Pn	11 24 32.1	+0.7
JTHR				eS	Sn	11 24 40.2	+1.2
JCH	Churui	0.61	314	⇓P	Pn	11 24 33.5	+0.6
JCH				eS	Sn	11 24 42.5	+0.8
JEM	Erimo	0.62	254	eS	Sn	11 24 42.3	+0.4
JOB	Onbets	0.72	352	P	Pn	11 24 34.9	+0.6
JOB				eS	Sn	11 24 46.0	+1.7
JNBK	Urakawa-nobuka	0.90	276	P	Pn	11 24 37.1	-0.3
JAK	Akkeshi	0.97	34	⇑P	Pn	11 24 37.9	+0.1
JAK				eS	Sb	11 24 51.0	0.0
JAR	Ashorobuto	1.11	353	⇑P	Pn	11 24 40.0	+0.2
JAR				eS	Sn	11 24 53.9	-0.2
JSHD	Hidakashinhida	1.13	282	P	Pb	11 24 40.7	-0.6
JKHN	Kushirohamanak	1.26	44	P	Pn	11 24 42.4	+0.7
JKHN				eS	Sn	11 24 58.5	+0.9
JBT2	Biratori 2	1.32	297	⇓P	Pn	11 24 42.3	-0.3
JFR	Furan	1.40	314	P	Pn	11 24 44.1	+0.3
JNK	Nakash	1.50	21	P	Pn	11 24 44.9	-0.2
JNK				eS	Sn	11 25 02.8	-0.8
JIAM	Iburiatsuma	1.57	287	P	Pb	11 24 49.3	+0.6
NMR	Nemuro--Hokkai	1.75	47	iP	Pn	11 24 48.0	-0.6
NMR				iS	Sn	11 25 09.0	-0.8
NEM2	Nemuro 2	1.76	48	P	Pn	11 24 48.5	-0.1
NEM2				eS	Sn	11 25 09.6	-0.4
JTKR	Abashiri--Toko	1.78	359	⇓iP	Pn	11 24 50.0	+1.1
JTKR				eS	Sn	11 25 11.0	+0.5
JAB	Ashibetsu	1.83	316	P	Pb	11 24 51.7	-1.5
GLVR	Golovnino	1.92	36	iP	Pn	11 24 52.0	+1.1
GLVR				AMB	AMB	11 24 53.0	
	362nm,0.4s						
GLVR				iS	Sn	11 25 14.0	0.0
GLVR				A	A	11 25 18.0	
	1μm,0.3s						
GLVR				A	A	11 25 18.0	
	247nm,0.3s						
ASAJ	Asahikawa	2.17	333	P	Pn	11 24 56.0	+1.7
	13nm,0.3s,baz=194,slow=10,SNR=141						
ASAJ				S	Sn	11 25 18.2	-1.9
	14nm,0.3s,baz=185,slow=20,SNR=8.0						
ASAJ				LR	LR	11 25 59.4	
	comp=Z,193nm,19.0s,baz=162,slow=50						
GRPR	Tuman	2.24	36	iP	Pn	11 24 56.0	+0.8
GRPR				AMB	AMB	11 24 57.0	
	250nm,0.3s						
GRPR				iS	Sn	11 25 22.0	+0.2
GRPR				A	A	11 25 28.0	
	91nm,0.3s						
GRPR				A	A	11 25 28.0	
	124nm,0.3s						
YUK	Yuzh-Kuril'sk	2.31	36	iP	Pn	11 24 57.0	+0.8
YUK				AMB	AMB	11 24 58.0	
	418nm,0.4s						
YUK				iS	Sn	11 25 23.0	-0.5
YUK				A	A	11 25 27.0	
	469nm,0.4s						
YUK				A	A	11 25 27.0	
	88nm,0.4s						
KUR	Kuril'sk	4.15	42	iP	Pn	11 25 23.0	+1.5
KUR				AMB	AMB	11 25 34.0	
	36nm,0.4s						
KUR				eS	Sn	11 26 12.0	+3.0
KUR				A	A	11 26 25.0	
	390nm,0.5s						
KUR				A	A	11 26 25.0	
	71nm,0.5s						
YSS	Yuzh-Sakhalins	4.84	350	eP	Pn	11 25 32.7	+1.7
YSS				AMB	AMB	11 25 33.5	
	10.0nm,0.3s						
YSS				eS	Sn	11 26 25.7	-0.2
PETK	Petropavlovsk-	14.29	35	P	Pn	11 27 41.0	+0.6
	0.1nm,0.3s,baz=220,slow=11,SNR=3.1						
SONM	Songino Array	26.96	295	P	P	11 29 58.7	-0.4
	0.8nm,0.9s,baz=76,slow=5.7,SNR=6.2						
H11N2	WAKE ISLAND Hy	29.63	132	T	T	12 01 57.0	
	baz=325,slow=75,SNR=101						
H11N1	WAKE ISLAND Hy	29.64	132	T	T	12 01 52.4	
	baz=325,slow=75,SNR=63						
H11N3	WAKE ISLAND Hy	29.64	132	T	T	12 01 50.7	
	baz=325,slow=75,SNR=70						
H11S1	WAKE ISLAND Hy	30.51	134	T	T	12 02 54.9	
	baz=326,slow=76,SNR=83						
H11S3	WAKE ISLAND Hy	30.52	134	T	T	12 02 59.5	
	baz=326,slow=76,SNR=85						
H11S2	WAKE ISLAND Hy	30.53	134	T	T	12 03 05.3	
	baz=326,slow=76,SNR=61						
ZALV	Zalesovo Beam	40.09	308	P	P	11 31 52.7	0.0
	0.6nm,0.3s,baz=67,slow=13,SNR=4.7						
MKAR	Makanchi Array	43.24	298	P	P	11 32 18.8	+0.1
	0.3nm,0.5s,baz=84,slow=9.9,SNR=10.0						
ILAR	Eielson Array	44.12	35	P	P	11 32 25.8	+0.4
	0.4nm,0.8s,baz=246,slow=5.5,SNR=5.6						
YKA	Yellowknife Ar	58.38	32	P	P	11 34 12.0	-0.3
	0.1nm,0.4s,baz=304,slow=7.0,SNR=4.5						
FINES	FINESS Array B	65.18	332	P	P	11 34 57.5	-0.5
	1.6nm,0.6s,baz=42,slow=7.0,SNR=16						
NOA	NORSAR Array B	70.18	338	P	P	11 35 29.1	-0.5
	0.6nm,0.7s,baz=27,slow=3.0,SNR=2.8						
NVAR	Mina Array Bea	70.39	56	P	P	11 35 31.9	+0.4
	0.5nm,0.8s,baz=282,slow=7.3,SNR=3.9						
AKASG	Malin Array Be	71.42	322	P	P	11 35 36.0	-1.2
	0.4nm,0.4s,baz=39,slow=6.2,SNR=4.2						
PDAR	Pinedale Array	72.69	48	P	P	11 35 45.4	0.0
	0.2nm,0.6s,baz=347,slow=3.7,SNR=3.5						
TXAR	Lajitas Array	85.46	54	P	P	11 36 55.2	0.0
	0.4nm,0.7s,baz=276,slow=2.1,SNR=5.6						

ATH 15 11:38:38.8,38.20N×20.44E,h7km±1km,ML2.5/8,Error ellipse: s-maj=1.5km s-min=0.8km az=244.0
THE 15 11:38:39.2,38.21N×20.43E,h5km±1km,ML2.5/5,Error ellipse: s-maj=1.4km s-min=0.5km az=240.0
ISC 15 11:38:38.9±0.8,38.21N±0.02×20.45E±0.03,h6km±4km, n48,σ0.57/73,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.01	218	P	Pg	11 38 39.8	-0.1
LXR1				S	Sg	11 38 40.7	+0.1
LXRA	Lixouri, Kepha	0.01	219	P	Pg	11 38 39.8	-0.1
LXRA				S	Sg	11 38 40.7	0.0
ARGA	Argostoli. Kep	0.04	142	P	Pg	11 38 40.2	+0.1
ARGA				S	Sg	11 38 41.5	+0.4
ARG2	Argostoli	0.04	134	P	Pg	11 38 40.4	+0.2
ARG2				S	Sg	11 38 41.5	+0.4
KEF4	Livadi, Kephal	0.05	340	P	Pg	11 38 40.3	0.0
KEF4				S	Sg	11 38 41.5	+0.1
KEF2	Argostoli. Kep	0.05	145	P	Pg	11 38 40.6	+0.3
KEF2				S	Sg	11 38 41.9	+0.5
CHV1	Chavriata, Kef	0.06	243	P	Pg	11 38 40.4	0.0
CHV1				S	Sg	11 38 42.0	+0.6
AGT1	Agia Thekli	0.06	309	P	Pg	11 38 40.5	0.0
AGT1				S	Sg	11 38 41.8	+0.2
KEF1	Kardakata, Kep	0.07	15	P	Pg	11 38 40.6	0.0
KEF1				S	Sg	11 38 42.1	+0.3
KEF3	Kipouria, Keph	0.08	265	P	Pg	11 38 40.9	+0.2
KEF3				S	Sg	11 38 42.3	+0.4
VLS	Valsamata	0.12	106	P	Pg	11 38 41.5	+0.1
VLS				S	Sg	11 38 43.8	+0.8
	5μm,0.1s						
VLS	Valsamata	0.12	106	P	Pg	11 38 41.4	0.0
VLS				S	Sg	11 38 43.8	+0.8
VLS				AML	AML	11 38 43.9	
	comp=N,10925μm,0.2s						
VLS				AML	AML	11 38 44.2	
	comp=E,8636μm,0.1s						
FSK	Fiskardo	0.27	20	P	Pg	11 38 44.1	0.0
FSK				S	Sg	11 38 48.8	+1.2
	comp=E,1μm,0.2s						
FSK	Fiskardo	0.27	20	P	Pg	11 38 44.1	0.0
FSK				S	Sg	11 38 48.8	+1.2
FSK				AML	AML	11 38 49.7	
	comp=N,2605μm,0.3s						
FSK				AML	AML	11 38 50.9	
	comp=E,3120μm,0.2s						
VLMS	Volimes, Zakyn	0.37	153	P	Pg	11 38 46.5	+0.4
VLMS				S	Sg	11 38 51.4	+0.4
VLMS				AML	AML	11 39 00.2	
	comp=N,1982μm,0.3s						
VLMS				AML	AML	11 39 01.5	
	comp=E,1386μm,0.3s						
EVGI	Lefkada island	0.44	22	P	Pg	11 38 47.4	0.0
EVGI				S	Sb	11 38 54.9	-1.1
EVGI	Lefkada island	0.44	22	P	Pg	11 38 47.5	0.0
EVGI				S	Sg	11 38 54.6	+1.4
MGNA	Meganis	0.52	31	P	Pg	11 38 48.9	-0.1
MGNA				S	Sg	11 38 56.9	+1.2
MGNA				AML	AML	11 38 57.7	
	comp=N,791μm,0.3s						
MGNA				AML	AML	11 38 57.7	
	comp=E,1349μm,0.3s						
LKD2	Lefkada island	0.60	16	P	Pg	11 38 49.9	-0.6
LKD2				S	Sg	11 38 58.8	+0.5
	comp=E,365nm,0.4s						
LKD2	Lefkada island	0.60	16	P	Pg	11 38 50.1	-0.4
LKD2				S	Sg	11 38 59.0	+0.7
LKD2				AML	AML	11 39 05.0	
	comp=E,637μm,0.4s						
LKD2				AML	AML	11 39 08.2	
	comp=N,852μm,0.4s						
KRI1	kERI	0.62	152	P	Pg	11 38 50.7	-0.1
KRI1				S	Sb	11 39 01.1	0.0
TSLK	Tsoukalades, L	0.64	15	P	Pg	11 38 50.6	-0.5
TSLK				S	Sb	11 39 00.8	-0.8
	comp=N,395nm,0.4s						
TSLK	Tsoukalades, L	0.64	15	P	Pg	11 38 50.9	-0.3
TSLK				S	Sg	11 38 59.9	+0.5
TSLK				AML	AML	11 39 06.9	
	comp=E,675μm,0.4s						
TSLK				AML	AML	11 39 11.0	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=N,875µm,0.5s						
PDO	**Prodromos**	**0.70**	**56**	P	**Pg**	**11 38 52.5**	**+0.2**
PDO				S	**Sg**	**11 39 02.5**	**+1.2**
PDO				AML	AML	11 39 06.9	
	comp=N,964µm,0.6s						
PDO				AML	AML	11 39 17.3	
	comp=E,1309µm,0.8s						
AXS	**Araxos**	**0.73**	**91**	P	**Pg**	**11 38 52.8**	**-0.1**
RLS	**Riolos of Patr**	**0.82**	**100**	P	**Pg**	**11 38 54.1**	**-0.5**
PVO	**Paravola**	**0.94**	**64**	P	**Pg**	**11 38 57.0**	**+0.1**
PVO				S	**Sb**	**11 39 10.6**	**+0.3**
	comp=E,480nm,0.7s						
PVO	**Paravola**	**0.94**	**64**	P	**Pg**	**11 38 57.0**	**+0.1**
PVO				AML	AML	11 39 17.9	
	comp=N,960µm,0.7s						
PVO				AML	AML	11 39 19.9	
	comp=E,948µm,0.6s						
DRO	**Drossia**	**1.03**	**104**	P	**Pg**	**11 38 58.4**	**-0.3**
DRO	**Drossia**	**1.03**	**104**	P	**Pg**	**11 38 58.3**	**-0.3**
AMT	**Artemida-Makis**	**1.21**	**124**	P	**Pn**	**11 39 02.5**	**+0.2**
LAKA	**Lakka**	**1.21**	**88**	P	**Pg**	**11 39 01.3**	**-0.7**
ANX	**Ano Chora**	**1.22**	**71**	P	**Pg**	**11 39 01.6**	**-0.7**
ANX	**Ano Chora**	**1.22**	**71**	P	**Pg**	**11 39 01.6**	**-0.7**
EVR	**Evrytania**	**1.28**	**56**	P	**Pg**	**11 39 03.8**	**+0.4**
SERG	**Sergoula**	**1.28**	**80**	P	**Pn**	**11 39 02.2**	**-1.2**
SERG	**Sergoula**	**1.28**	**80**	P	**Pn**	**11 39 02.1**	**-1.3**
TRIZ	**Trizonia**	**1.29**	**83**	P	**Pn**	**11 39 02.2**	**-1.2**
IGT	**Igoumenitsa**	**1.32**	**356**	P	**Pn**	**11 39 04.1**	**+0.2**
IGT	**Igoumenitsa**	**1.32**	**356**	P	**Pb**	**11 39 04.2**	**0.0**
KALE	**Kalithea**	**1.34**	**82**	P	**Pn**	**11 39 03.3**	**-1.0**
KLV	**Kalavryta, Ach**	**1.35**	**97**	P	**Pn**	**11 39 03.8**	**-0.6**
MAKR	**Makrakomi, Fth**	**1.54**	**58**	P	**Pb**	**11 39 08.4**	**+0.5**
KEK	**Kerkira**	**1.58**	**342**	P	**Pn**	**11 39 07.8**	**+0.3**
PYL	**PYLOS**	**1.67**	**141**	P	**Pb**	**11 39 10.3**	**+0.3**
AGG	**Agios Georgios**	**1.68**	**61**	P	**Pg**	**11 39 11.1**	**-0.1**
AXAR	**Agios Charalam**	**1.82**	**72**	P	**Pb**	**11 39 12.8**	**+0.1**
THL	**Klokotos Trika**	**1.82**	**42**	P	**Pg**	**11 39 13.6**	**-0.3**

*IDC **15** 12:00:25.8±1.0, 35°.89N×82°.48E, h0km, mb3.7/8, mb1 4.0/14, mb1mx3.7/38, mbtmp3.8/14, ML3.2/5, MS3.3/12, Ms1 3.3/12, ms1mx3.1/54, Error ellipse: s-maj=29.4km s-min=15.2km az=53.0*

*BJI **15** 12:00:27.8±0.0, 36°.00N×82°.30E, h9km, mB4.2/1, mb4.0/5, ML4.0/7, Ms3.6/6, Ms7 3.6/3*

*NNC **15** 12:00:33.6±1.9, 36°.47N×82°.60E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=16.9km s-min=13.1km az=110.0*

ISC 15 12:00:29.0±0.8, **36°.09N**±0°.08×**82°.27E**±0°.08, **h10km, n29,** σ**2°.73**/29, **mb3.8**/9, **MS3.3**/9, **7C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**7.54**	**344**	⇑Pn	**Pn**	**12 02 21.3**	**+2.3**
	8.7nm,0.8s						
PDGK				Sn	**Sn**	**12 03 46.6**	**+2.0**
	88nm,0.7s						
PDGK				⇑Lg	Lg	12 04 25.4	
	128nm,1.1s						
WMQ	**Urumqi**	**8.77**	**27**	eP	**Pn**	**12 02 38.4**	**+2.5**
WMQ				S	**Sn**	**12 04 12.3**	**-2.5**
WMQ				smax	smax		
	comp=N,28nm,1.3s						
WMQ				smax	smax		
	comp=E,29nm,0.9s						
AAK	**Ala-Archa**	**8.88**	**320**	Pn	**Pn**	**12 02 40.9**	**+3.4**
	0.1nm,0.3s,baz=146,slow=13,SNR=6.9						
AAK				Pg	Pg	12 03 10.5	-8.4
	0.3nm,0.3s,baz=112,slow=12,SNR=5.8						
AAK				Lg	Lg	12 05 05.9	
	0.3nm,0.3s,baz=0.0,slow=20,SNR=3.5						
AAK				LR	LR	12 06 13.0	
	comp=Z,36nm,20.8s,baz=251,slow=38						
AAK	**Ala-Archa**	**8.88**	**320**	⇓Pn	**Pn**	**12 02 42.0**	**+4.4**
	2.7nm,0.8s						
AAK				Pg	**Pg**	**12 03 15.3**	**-3.7**
	11nm,1.1s						
AAK				⇑Lg	Lg	12 05 10.3	
	39nm,0.9s						
CHMS	**Chumysh**	**9.01**	**322**	⇑Pn	**Pn**	**12 02 42.4**	**+3.2**
	5.6nm,0.8s						
CHMS				Pg		12 03 13.8	
	7.9nm,1.1s						
CHMS				⇓Lg	Lg	12 05 17.6	
	60nm,1.5s						
MK31	**Makanchi Array**	**10.70**	**0**	Pn	**Pn**	**12 03 03.1**	**+0.9**
	9.7nm,0.8s,baz=181,slow=16,SNR=73						
MK31				⇑Sn	**Sn**	**12 04 59.2**	**-2.8**
	6.0nm,0.8s,baz=188,slow=25,SNR=5.6						
MK31				⇓Lg	Lg	12 06 01.1	
	6.0nm,0.8s						
MKAR	**Makanchi Array**	**10.70**	**0**	Pn	**Pn**	**12 03 03.6**	**+1.5**
	0.8nm,0.3s,baz=180,slow=12,SNR=51						
MKAR				Sn	**Sn**	**12 05 00.1**	**-1.8**
	0.6nm,0.3s,baz=191,slow=25,SNR=5.9						
MKAR				LR	LR	12 08 06.2	
	comp=Z,90nm,19.8s,baz=182,slow=42						
MAKZ	**Makanchi**	**10.71**	**359**	⇑Pn	**Pn**	**12 03 03.7**	**+1.3**
	18nm,0.8s						
MAKZ				⇓Sn	**Sn**	**12 04 59.9**	**-2.4**
	7.6nm,0.9s						
MAKZ				⇑Lg	Lg	12 05 59.7	
	11nm,1.4s						
KK31	**Karatay Array**	**11.45**	**311**	⇓Pg	Pn	12 04 00.0	+48
	1.5nm,0.8s,baz=122,slow=16,SNR=3.6						
KK31				⇓Lg	Lg	12 06 35.1	
	10nm,1.1s,baz=137,slow=28,SNR=3.7						
GTA	**Gaotai**	**14.27**	**71**	eP	**P**	**12 04 01.3**	**+2.7**
GTA				pP	Pn	12 04 05.5	+14
GTA				sP		12 04 09.0	
KURBB	**Kurchatov Arra**	**14.78**	**351**	Pn	**Pn**	**12 03 56.1**	**-1.7**
	0.0nm,0.3s,baz=172,slow=12,SNR=9.2						
ZALV	**Zalesovo Beam**	**17.95**	**5**	P	**Pn**	**12 04 37.4**	**-1.0**
	0.1nm,0.3s,baz=183,slow=13,SNR=5.4						
ZALV				LR	LR	12 12 36.2	
	comp=Z,41nm,20.1s,baz=182,slow=40						
BVAR	**Borovoye Array**	**18.89**	**337**	P	**Pn**	**12 04 51.7**	**+1.7**
	0.4nm,0.3s,baz=134,slow=9.3,SNR=22						
GEYT	**Alibeck**	**19.36**	**283**	P	**Pn**	**12 04 55.8**	**0.0**
	baz=120,slow=7.3,SNR=2.8						
SONM	**Songino Array**	**21.34**	**49**	P	**P**	**12 05 16.4**	**+0.1**
	2.7nm,0.9s,baz=230,slow=10,SNR=18						
SONM				LR	LR	12 13 58.2	
	comp=Z,156nm,18.3s,baz=193,slow=38						
TLY	**Talaya**	**21.79**	**38**	LR	LR	12 14 45.6	
	comp=Z,85nm,21.1s,baz=234,slow=39						
XAN	**Xi'an**	**21.89**	**88**	P	**P**	**12 05 25.4**	**+3.2**
XAN				pP	sP	12 05 29.3	+0.8
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKTO	**Aktyubinsk**	**22.61**	**317**	P	**P**	**12 05 31.1**	**+1.4**
	1.1nm,0.7s,baz=129,slow=13,SNR=3.6						
AKTO				LR	LR	12 15 24.8	
	comp=Z,103nm,18.3s,baz=132,slow=39						
CMAR	**Chiang Mai Arr**	**22.92**	**136**	P	**P**	**12 05 29.5**	**-3.7**
	0.8nm,0.5s,baz=315,slow=10,SNR=8.1						
WSAR	**Wadi Sarin**	**24.13**	**244**	LR	LR	12 16 46.6	
	comp=Z,48nm,18.2s,baz=76,slow=40						
WHN	**Wuhan**	**27.30**	**92**	P	**P**	**12 06 19.3**	**+5.6**
PALK	**Pallekele**	**28.72**	**183**	LR	LR	12 19 14.5	
	comp=Z,46nm,19.2s,baz=355,slow=40						
KSRS	**Korea Array**	**36.32**	**74**	LR	LR	12 24 17.1	
	comp=Z,37nm,19.2s,baz=320,slow=40						
NOA	**NORSAR Array B**	**50.18**	**323**	P	**P**	**12 09 25.4**	**+0.8**
	1.1nm,0.8s,baz=86,slow=5.5,SNR=3.4						
NOA				LR	LR	12 31 55.4	
	comp=Z,29nm,18.6s,baz=255,slow=38						
JAY	**Jayapura**	**66.55**	**112**	LR	LR	12 40 48.9	
	comp=Z,100nm,21.1s,baz=250,slow=36						
ILAR	**Eielson Array**	**72.37**	**20**	P	**P**	**12 11 53.3**	**-1.4**
	0.8nm,0.9s,baz=320,slow=4.1,SNR=6.0						
WRA	**Warramunga Arr**	**74.36**	**130**	P	**P**	**12 12 04.3**	**-2.8**
	1.6nm,0.7s,baz=324,slow=5.8,SNR=3.8						
ASAR	**Alice Springs**	**76.89**	**132**	P	**P**	**12 12 17.8**	**-3.6**
	1.1nm,0.9s,baz=316,slow=5.8,SNR=8.3						
ASAR				LR	LR	12 50 03.8	
	comp=Z,72nm,19.1s,baz=336,slow=39						
YKA	**Yellowknife Ar**	**80.82**	**8**	P	**P**	**12 12 41.7**	**-0.8**
	0.3nm,0.8s,baz=339,slow=5.4,SNR=4.4						

*NEIC **15** 12:02:16.9±1.2, 24°.7S±0°.1×180°.0E±0°.1, h487km±12km, mb4.3/19, Error ellipse: s-maj=19.4km s-min=14.9km az=106.0*

*IDC **15** 12:02:19.8±4.0, 24°.90S×179°.95E, h516km±45km, mb3.7/7, mb1 3.6/9, mb1mx3.4/22, mbtmp4.2/9, Error ellipse: s-maj=31.1km s-min=22.5km az=16.0*

ISC 15 12:02:17.9±0.5, **24°.69S**±0°.06×**179°.96W**±0°.07, **h505km, n50,** σ**1°.88**/60, **mb4.3**/17, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.90**	**159**	P	**P**	**12 03 43.0**	**-1.1**
RAO				S	**S**	**12 04 48.7**	**-5.8**
GLKZ	**Green Lake**	**4.91**	**159**	P	**P**	**12 03 45.3**	**+1.2**
GLKZ				S	**S**	**12 04 53.9**	**-0.7**
MSVF	**Nonsavu**	**7.17**	**345**	P	**P**	**12 04 04.3**	**-1.8**
NIUE	**Niue**	**10.86**	**61**	P	**P**	**12 04 43.8**	**-0.6**
NIUE				S	**S**	**12 06 47.4**	**+2.4**
DZM	**Mont Dzumac**	**12.76**	**279**	P	**P**	**12 05 06.7**	**+2.1**
	0.2nm,0.3s,baz=102,slow=15,SNR=2.8						
DZM	**Mont Dzumac**	**12.76**	**279**	P	**P**	**12 05 04.8**	**+0.2**
NOUC	**Port Laguerre**	**12.88**	**279**	P	**P**	**12 05 04.0**	**-1.7**
HAZ	**Te Kaha**	**13.17**	**188**	P	**P**	**12 05 10.3**	**+1.8**
HAZ				S	**S**	**12 07 26.7**	**-2.6**
AFI	**Afiamalu**	**13.21**	**37**	P	**P**	**12 05 09.0**	**-0.4**
	3.1nm,0.3s,baz=267,slow=3.3,SNR=7.0						
AFI				S	S	12 07 20.7	-10
	0.4nm,0.3s,baz=323,slow=20,SNR=2.2						
AFI	**Afiamalu**	**13.21**	**37**	P	**P**	**12 05 08.3**	**-1.0**
AFI				S	**S**	**12 07 25.3**	**-5.4**
RUGZ	**Raukumara Rang**	**13.39**	**188**	P	**P**	**12 05 13.5**	**+2.5**
RUGZ				S	**S**	**12 07 32.5**	**-1.3**
PUZ	**Puketiti**	**13.43**	**186**	P	**P**	**12 05 14.4**	**+3.0**
PUZ				S	**S**	**12 07 35.5**	**+1.1**
URZ	**Urewera**	**13.76**	**190**	P	**P**	**12 05 13.3**	**-1.4**
	0.4nm,0.3s,baz=191,slow=16,SNR=5.2						
URZ				S	**S**	**12 07 39.2**	**-1.4**
	0.3nm,0.3s,baz=209,slow=19,SNR=4.2						
URZ	**Urewera**	**13.76**	**190**	P	**P**	**12 05 13.8**	**-0.9**
URZ				S	**S**	**12 07 40.1**	**-0.6**
URZ	**Urewera**	**13.76**	**190**	P	**P**	**12 05 14.2**	**-0.6**
URZ				S	**S**	**12 07 42.1**	**+1.5**
BKZ	**Black Stump Fm**	**14.74**	**191**	P	**P**	**12 05 26.0**	**+0.8**
BKZ				S	**S**	**12 07 54.8**	**-4.9**
MCHZ	**McNeill Hill**	**14.98**	**190**	P	**P**	**12 05 28.0**	**+0.4**
KWHZ	**Kaweka Forest**	**15.01**	**191**	P	**P**	**12 05 29.3**	**+1.4**
VRZ	**Vera Road**	**15.07**	**196**	P	**P**	**12 05 33.7**	**+5.2**
BHHZ	**Black Hill Sta**	**15.14**	**192**	P	**P**	**12 05 28.1**	**-1.2**
KRHZ	**Kereru**	**15.23**	**191**	P	**P**	**12 05 31.5**	**+1.2**
PXZ	**Pawanui**	**15.53**	**189**	P	**P**	**12 05 34.3**	**+1.0**
RPZ	**Rata Peaks**	**20.36**	**199**	P	**P**	**12 06 18.5**	**-0.8**
	3.3nm,0.4s,baz=53,slow=6.3,SNR=10						
RPZ	**Rata Peaks**	**20.36**	**199**	IAmb	IAmb	12 06 21.8	
	comp=Z,22nm,1.3s						
EIDS	**Eidsvold**	**26.23**	**262**	P	**P**	**12 07 12.1**	**+0.1**
CAN	**Canberra**	**28.79**	**241**	P	**P**	**12 07 34.5**	**+0.1**
CAN				IAmb	IAmb	12 07 52.7	
	comp=Z,5.8nm,0.9s						
TOO	**Toolangi**	**32.06**	**238**	P	**P**	**12 08 03.2**	**+0.7**
TOO				IAmb	IAmb	12 08 04.0	
	comp=Z,21nm,1.4s						
TAU	**Tasmania Unive**	**32.43**	**228**	P	**P**	**12 08 06.4**	**+0.8**
STKA	**Stephens Creek**	**34.47**	**249**	P	**P**	**12 08 23.5**	**+0.4**
	comp=Z,2.7nm,0.3s,baz=88,slow=8.9,SNR=25						
STKA	**Stephens Creek**	**34.47**	**249**	P	**P**	**12 08 22.8**	**-0.2**
COEN	**Coen**	**36.28**	**280**	P	**P**	**12 08 38.2**	**-0.2**
COEN				IAmb	IAmb	12 08 40.1	
	comp=Z,11nm,1.1s						
BBOO	**Buckleboo**	**39.18**	**248**	P	**P**	**12 09 01.2**	**-0.6**
BBOO				IAmb	IAmb	12 09 11.6	
	comp=Z,25nm,1.4s						
AS31	**Alice Springs**	**41.95**	**261**	P	**P**	**12 09 24.1**	**-0.1**
AS31				IAmb	IAmb	12 09 25.8	
	comp=Z,2.5nm,0.2s						
ASAR	**Alice Springs**	**41.95**	**261**	P	**P**	**12 09 24.2**	**0.0**
	comp=Z,1.9nm,0.3s,baz=88,slow=8.5,SNR=36						
WR0	**Warramunga Arr**	**42.21**	**267**	P	**P**	**12 09 25.6**	**-0.6**
WR0				IAmb	IAmb	12 09 26.2	
	comp=Z,4.8nm,0.5s						
WB2	**Warramunga Arr**	**42.39**	**267**	P	**P**	**12 09 27.2**	**-0.5**
WB0	**Warramunga Arr**	**42.39**	**267**	P	**P**	**12 09 27.3**	**-0.4**
WB0				IAmb	IAmb	12 09 28.1	
	comp=Z,7.5nm,0.5s						
WRA	**Warramunga Arr**	**42.40**	**267**	P	**P**	**12 09 27.1**	**-0.6**
	comp=Z,6.2nm,0.4s,baz=104,slow=8.0,SNR=14						
KNRA	**Kununurra**	**48.73**	**270**	P	**P**	**12 10 16.2**	**+0.1**
KNRA				IAmb	IAmb	12 10 17.2	
	comp=Z,14nm,0.8s						
FITZ	**Fitzroy Crossi**	**50.81**	**266**	P	**P**	**12 10 31.8**	**+0.2**
FITZ				IAmb	IAmb	12 10 32.8	
	comp=Z,11nm,1.2s						
PSA00	**Pilbara Seismi**	**55.06**	**260**	P	**P**	**12 11 00.9**	**-0.9**
PSA00				IAmb	IAmb	12 11 05.1	
	comp=Z,21nm,1.4s						
MORW	**Morawa**	**56.64**	**250**	P	**P**	**12 11 12.3**	**-0.4**
TNTI	**Ternate**	**56.91**	**288**	P	**P**	**12 11 13.5**	**-1.3**
QSPA	**South Pole Qui**	**65.40**	**180**	P	**P**	**12 12 11.2**	**+1.4**
MAJO	**Matsushiro**	**72.57**	**326**	P	**P**	**12 12 54.2**	**+0.8**
MAJO				IAmb	IAmb	12 13 03.4	
	comp=Z,18nm,1.4s						
NVAR	**Mina Array Bea**	**85.29**	**44**	P	**P**	**12 14 03.4**	**+2.1**
	comp=Z,0.4nm,0.7s,baz=241,slow=7.1,SNR=3.6						
CMAR	**Chiang Mai Arr**	**89.83**	**290**	P	**P**	**12 14 25.4**	**+2.5**
	comp=Z,0.3nm,0.3s,baz=164,slow=3.9,SNR=4.2						
TXAR	**Lajitas Array**	**90.81**	**58**	P	**P**	**12 14 29.2**	**+2.0**
	comp=Z,0.7nm,0.9s,baz=216,slow=4.0,SNR=5.7						
AKASG	**Malin Array Be**	**145.65**	**327**	PKPbc	**PKPbc**	**12 20 59.3**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=52,slow=3.7,SNR=3.1						
BRTR	**Keskin Array B**	**148.08**	**306**	PKPbc	**PKPbc**	**12 21 06.8**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=95,slow=5.5,SNR=3.5						

*UCR **15** 12:15:23.6±1.1, 12°.82N×87°.07W, h9km±678km, ML3.8*

*INET **15** 12:15:23.1, 12°.88N×87°.03W, h1km, ML4.7*

SNET 15 12:15:22.8±1.3, **12°.81N×87°.04W, h7km**±690km, **ML3.8, 4D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCND	**La Caada**	**0.97**	**301**	⇓eP	Pg	12 15 40.8	-0.7
LCND				eS	Sb	12 15 54.8	-0.3
LCND				IAML		12 15 55.8	
	comp=Z,5µm,0.5s						
LCND	**La Caada**	**0.97**	**301**	⇓eP	Pg	12 15 40.8	-0.7
LCND				eS	Sb	12 15 54.8	-0.3
LCND				IAML		12 15 55.8	
	comp=Z,5µm,0.5s						
JUCU	**Jucuar¡n**	**1.26**	**291**	eP	Pn	12 15 45.6	-1.4
JUCU				eS	Sg	12 16 02.7	-0.8
JUCU				IAML		12 16 06.1	
	comp=Z,1µm,0.2s						
JUCU	**Jucuar¡n**	**1.26**	**291**	eP	Pn	12 15 45.6	-1.4
JUCU				eS	Sg	12 16 02.7	-0.8
JUCU				IAML		12 16 06.1	
	comp=Z,1µm,0.2s						
FAGO	**Alcalda de S**	**1.37**	**310**	⇓eP	Pn	12 15 46.9	-1.4
FAGO	**Alcalda de S**	**1.37**	**310**	⇓eP	Pn	12 15 46.9	-1.4
ALJI	**Alcalda de J**	**1.58**	**289**	eP	Pn	12 15 51.5	+0.2
ALJI	**Alcalda de J**	**1.58**	**289**	eP	Pn	12 15 51.5	+0.2
COEB	**Comit de Eme**	**1.61**	**296**	eP	Pn	12 15 51.8	0.0
COEB				IAML		12 16 17.0	
	comp=Z,948nm,0.4s						
COEB	**Comit de Eme**	**1.61**	**296**	eP	Pn	12 15 51.8	0.0
COEB				IAML		12 16 17.0	
	comp=Z,948nm,0.4s						
COEG	**Centro de Oper**	**1.97**	**294**	IAML		12 16 28.5	
	comp=Z,871nm,0.4s						
COEG	**Centro de Oper**	**1.97**	**294**	IAML		12 16 28.5	
	comp=Z,871nm,0.4s						

*NEIC **15** 12:17:19.3±0.7, 34°.31N±0°.01×117°.51W±0°.01, h14km, Error ellipse: s-maj=2.1km s-min=1.5km az=163.0*

*PAS **15** 12:17:19.6±0.7, 34°.31N±0°.01×117°.51W±0°.02, h14km±1km, ML2.2/149, Error ellipse: s-maj=2.6km s-min=1.9km az=77.0*

*SCEDC **15** 12:17:19.8, 34°.31N×117°.52W, h13km*

ISC 15 12:17:19.3±0.8, **34°.31N**±0°.02×**117°.51W**±0°.02, **h15km**±5km, **n67,** σ**0°.53**/99, **Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SS2	**San Sevaine**	**0.10**	**174**		**Pg**	**12 17 22.6**	**0.0**
CSP	**Cedar Springs**	**0.13**	**94**		**Pg**	**12 17 22.8**	**-0.3**
BFSC	**Mount Baldy Ra**	**0.14**	**240**		**Pg**	**12 17 23.0**	**-0.3**
BFSC	**Mount Baldy Ra**	**0.14**	**240**	P	**Pg**	**12 17 23.0**	**-0.3**
	baz=59,SNR=218						
BFSC				S	**Sg**	**12 17 25.5**	**-0.2**
	baz=59						
SSK	**Sunset Peak**	**0.18**	**237**		**Pg**	**12 17 23.8**	**0.0**
FON	**Fontana**	**0.22**	**163**		**Pg**	**12 17 24.4**	**+0.1**
FON					**Sg**	**12 17 27.7**	**+0.1**
ADO	**Adelanto Recei**	**0.25**	**15**		**Pg**	**12 17 24.8**	**-0.1**
CFSC	**Central Fire S**	**0.28**	**137**		**Pg**	**12 17 25.8**	**+0.5**
XTL	**Crystal Lake,**	**0.29**	**268**		**Pg**	**12 17 25.5**	**-0.1**
VTV	**Victorville**	**0.29**	**31**		**Pg**	**12 17 25.2**	**-0.4**
MLSC	**Mira Loma**	**0.30**	**188**		**Pg**	**12 17 25.6**	**-0.1**
HOLC	**Holcomb Ridge**	**0.31**	**299**		**Pg**	**12 17 25.7**	**-0.3**
PSRC	**Puddingstone R**	**0.33**	**229**		**Pg**	**12 17 26.2**	**+0.1**
PEM	**Pine Mountain**	**0.33**	**245**		**Pg**	**12 17 26.2**	**+0.1**
RVR	**Riverside**	**0.33**	**160**		**Pg**	**12 17 26.0**	**-0.3**
RVR					**Sg**	**12 17 30.6**	**-0.4**
CHNC	**Chino**	**0.34**	**204**		**Pg**	**12 17 26.4**	**+0.1**
SVD	**Seven Oaks Dam**	**0.40**	**120**		**Pg**	**12 17 27.6**	**+0.1**
SVD					**Sg**	**12 17 33.2**	**+0.3**
CHFC	**Chilao Flat St**	**0.42**	**274**		**Pg**	**12 17 27.7**	**-0.2**
CHFC					**Sg**	**12 17 33.5**	**-0.3**
BTL	**Butler Peak**	**0.43**	**97**		**Pg**	**12 17 27.9**	**-0.1**
CFT	**Crafton Hills**	**0.43**	**129**		**Pg**	**12 17 28.2**	**+0.2**
CRNC	**Corona**	**0.43**	**185**		**Pg**	**12 17 27.6**	**-0.4**
MWC	**Mount Wilson**	**0.46**	**260**		**Pg**	**12 17 28.4**	**-0.2**
MWC				Sg	**Sg**	**12 17 34.8**	**0.0**
SBB	**Saddle Back Bu**	**0.46**	**326**		**Pg**	**12 17 28.1**	**-0.5**
SBB					**Sg**	**12 17 34.1**	**-0.7**
LRRC	**Littlerock Res**	**0.48**	**297**		**Pg**	**12 17 28.7**	**-0.2**
BBRC	**Big Bear Solar**	**0.49**	**95**		**Pg**	**12 17 29.0**	**-0.2**
BBRC					**Sg**	**12 17 35.9**	**+0.1**
BBRC	**Big Bear Solar**	**0.49**	**95**	P	**Pg**	**12 17 29.0**	**-0.2**
	baz=276,SNR=11						
BBRC				S	**Sg**	**12 17 36.0**	**+0.1**
	baz=276						
PEC	**Perris**	**0.51**	**145**		**Pg**	**12 17 29.0**	**-0.4**
PEC					**Sg**	**12 17 35.9**	**-0.4**
HYS	**Haystack Butte**	**0.56**	**355**		**Pg**	**12 17 29.9**	**-0.5**
GVRC	**Garvey Reservo**	**0.56**	**243**		**Pg**	**12 17 30.6**	**+0.1**
PASC	**Pasadena Art C**	**0.57**	**256**	Pg	**Pg**	**12 17 30.2**	**-0.5**
PASC				Sg	**Sg**	**12 17 38.0**	**-0.3**
BREC	**Barre Substati**	**0.63**	**218**		**Pb**	**12 17 32.5**	**+0.4**
GR2C	**Griffith Obs.**	**0.68**	**254**		**Pg**	**12 17 32.6**	**0.0**
DECC	**Green Verdugo**	**0.68**	**266**	P	**Pg**	**12 17 32.9**	**+0.2**
	baz=85						
DECC				S	**Sb**	**12 17 42.4**	**+0.2**
	baz=85						
EDW2	**Edwards Air Fo**	**0.70**	**325**	P	**Pg**	**12 17 32.3**	**-0.6**
	baz=145,SNR=8.3						
EDW2				S	**Sg**	**12 17 41.8**	**-0.4**
	baz=145						
RRX	**Edison Barstow**	**0.71**	**37**	P	**Pg**	**12 17 32.8**	**-0.4**
	baz=217,SNR=5.3						
RRX				S	**Sg**	**12 17 42.8**	**+0.3**
	baz=217						
MURC	**Murrieta**	**0.75**	**159**	P	**Pg**	**12 17 33.1**	**-0.9**
	baz=340,SNR=8.6						
MURC				S	**Sg**	**12 17 43.0**	**-1.0**
	baz=340						
FMP	**Fort Macarthur**	**0.88**	**228**	S	**Sb**	**12 17 48.8**	**+1.0**
	baz=47						
OSI	**Osito Audit: C**	**1.05**	**287**	S	**Sg**	**12 17 53.9**	**+0.6**
	baz=107						
HEC	**Hector,Ludlow**	**1.10**	**62**	P	**Pb**	**12 17 39.9**	**-0.2**
	baz=242,SNR=9.8						
HEC				S	**Sb**	**12 17 54.9**	**+0.5**
	baz=242						
PFO	**Pinyon Flats O**	**1.12**	**128**		**Pb**	**12 17 39.9**	**-0.6**
PFO				Sg	**Sb**	**12 17 54.5**	**-0.4**
PFO	**Pinyon Flats O**	**1.12**	**128**	P	**Pb**	**12 17 39.8**	**-0.6**
	baz=309,SNR=7.2						
PFO				S	**Sb**	**12 17 54.2**	**-0.6**
	baz=309						
XPFO	**Pion Flat**	**1.12**	**128**		**Pb**	**12 17 39.9**	**-0.6**
XPFO				Sg	**Sb**	**12 17 54.5**	**-0.4**
GSC	**Goldstone, Bar**	**1.15**	**30**		**Pb**	**12 17 40.6**	**-0.4**
GSC				Sg	**Sb**	**12 17 55.9**	**+0.1**
GSC	**Goldstone, Bar**	**1.15**	**30**	P	**Pb**	**12 17 40.6**	**-0.4**
	baz=211,SNR=30						
GSC				S	**Sb**	**12 17 55.9**	**+0.1**
	baz=211						
CIS	**Catalina Islan**	**1.17**	**220**	P	**Pn**	**12 17 40.5**	**-0.8**
	baz=39						
CIS				S	**Sb**	**12 17 57.0**	**+0.6**
	baz=39						
LRMC	**Laurel Mtn Rad**	**1.18**	**353**	Pg	**Pn**	**12 17 41.7**	**+0.2**
	baz=173,SNR=21						
LRMC				Sg	**Sg**	**12 17 58.1**	**+0.6**
	baz=173						
BELC	**Belle Mtn. Jos**	**1.29**	**103**	Pg	**Pb**	**12 17 43.6**	**+0.2**
	baz=284,SNR=8.1						
BELC				Sg	**Sb**	**12 18 01.2**	**0.0**
	baz=284						
BLG	**Laguna Peak, P**	**1.30**	**262**	S	**Sb**	**12 18 00.2**	**+0.1**
	baz=81						
ARVC	**Arvin**	**1.36**	**307**	Sb	**Sb**	**12 18 02.4**	**+0.8**
	baz=127						
109C	**Camp Elliot, M**	**1.46**	**166**		**Pn**	**12 17 44.7**	**-0.4**
109C				Sn	**Sn**	**12 18 03.2**	**-0.6**
109C	**Camp Elliot, M**	**1.46**	**166**	P	**Pn**	**12 17 44.7**	**-0.4**
	baz=346						
109C				S	**Sn**	**12 18 03.3**	**-0.6**
	baz=346						
CLC	**China Lake**	**1.51**	**357**		**Pn**	**12 17 45.5**	**-0.4**
ISA	**Isabella, Lake**	**1.56**	**330**		**Pn**	**12 17 46.9**	**+0.2**
ISA				Sn	**Sn**	**12 18 07.1**	**+0.3**
ISA	**Isabella, Lake**	**1.56**	**330**	Pb	**Pn**	**12 17 47.5**	**+0.8**
	baz=150,SNR=9.4						
ISA				Sb	**Sb**	**12 18 08.4**	**+0.7**
	baz=150						
GMRC	**Granite Mounta**	**1.60**	**72**	Pb	**Pb**	**12 17 48.6**	**-0.1**
	baz=253						
GMRC				Sb	**Sg**	**12 18 10.2**	**-0.8**
	baz=253						
MONP2	**Monument Peak**	**1.68**	**147**	Pb	**Pn**	**12 17 49.1**	**+0.7**
	baz=328						
MONP2				Sb	**Sn**	**12 18 10.8**	**+1.1**
	baz=328						
TUQ	**Turquoise Moun**	**1.73**	**49**	Pg	**Pb**	**12 17 51.8**	**+1.0**
	baz=230						
TUQ				Sb	**Sb**	**12 18 13.2**	**+0.9**
	baz=230						
MPMC	**Manual Prospec**	**1.75**	**1**	Pb	**Pb**	**12 17 51.1**	**-0.1**
	baz=181,SNR=9.9						
BAR	**Barrett**	**1.77**	**156**		**Pn**	**12 17 49.7**	**+0.3**
BAR				Sn	**Sn**	**12 18 12.2**	**+0.4**
SHOC	**Shoshone, Teco**	**1.89**	**32**	Pg	**Pb**	**12 17 54.4**	**+0.9**
	baz=213,SNR=6.2						
IKP	**In-Ko-Pah, Jac**	**2.03**	**144**	Sb	**Sb**	**12 18 21.4**	**+0.4**
	baz=325						
Y12C	**Blythe**	**2.54**	**102**	Pn	**Pn**	**12 18 01.1**	**+1.0**
PAGB	**Antelope Grade**	**2.66**	**303**	Pn	**Pn**	**12 18 02.0**	**+0.3**
GVN	**Grapevine**	**2.69**	**3**		**Pb**	**12 18 05.3**	**-1.9**
TPNV	**Topopah Spring**	**2.83**	**21**		**Pn**	**12 18 04.7**	**+0.6**
TPNV	**Topopah Spring**	**2.83**	**21**	Pg	**Pg**	**12 18 12.5**	**-1.1**
	baz=202						
113A	**Mohawk Valley,**	**3.48**	**115**	Pn	**Pn**	**12 18 13.9**	**+0.9**

*IDC **15** 12:30:29.3±0.8, 2°.89S×129°.66E, h0km, mb4.1/11, mb1 4.3/14, mb1mx4.0/54, mbtmp4.1/14, ML4.2/3, MS3.4/4, Ms1 3.4/4, ms1mx2.9/41, Error ellipse: s-maj=26.4km s-min=15.2km az=76.0*

*NEIC **15** 12:30:33.6±1.6, 2°.87S±0°.05×129°.57E±0°.05, h33km±5km, mb4.2/16, Error ellipse: s-maj=7.7km s-min=7.5km az=98.0*

*DJA **15** 12:30:33.0±1.0, 3°S±5°×13°0E±°, h14km±9km, M4.2/10, MLv4.2/10*

ISC 15 12:30:33.1±0.5, **2°.87S**±0°.04×**129°.61E**±0°.04, **h28km, n50,** σ**1°.62**/54, **mb4.1**/15, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.83**	**235**	P	**Pn**	**12 30 48.6**	**-0.4**
MSAI				S	**Sn**	**12 31 04.8**	**+4.5**
AAI	**Ambon**	**1.63**	**240**	P	**Pn**	**12 31 02.0**	**+2.0**
BNDI	**Bandanaira**	**1.67**	**170**	P	**Pb**	**12 31 04.3**	**+1.1**
NLAI	**Namlea**	**2.54**	**262**	P	**Pn**	**12 31 14.2**	**+1.8**
SIJI	**Sorong**	**2.58**	**40**	Pn	**Pn**	**12 31 13.2**	**+0.1**
	86nm,0.3s,baz=68,slow=23,SNR=313						
SIJI				Sn	**Sn**	**12 31 43.5**	**-0.1**
	90nm,0.3s,baz=60,slow=23,SNR=16						
SIJI				LR	LR	12 32 40.0	
	comp=Z,547nm,18.9s,baz=31,slow=51						
SWI	**Sorong**	**2.58**	**40**	P	**Pn**	**12 31 13.3**	**+0.2**
FAKI	**Fak Fak**	**2.63**	**91**	P	**Pn**	**12 31 15.0**	**+1.2**

FAKI Fak Fak 2.63 91 Pn 12 31 14.8 +1.0
FAKI Sn Sn 12 31 47.4 +2.5
LBMI Labuha 3.06 316 P Pn 12 31 21.1 +1.5
SANI Sanana 3.71 283 P Pn 12 31 26.7 -1.9
SANI S Sn 12 32 09.4 -2.0
TNTI Ternate 4.25 328 Pn Pn 12 31 36.7 +0.6
SAUI Saumlaki 5.35 162 Pn Pn 12 31 51.7 +0.5
LUWI Luwuk 7.07 285 Pn 12 32 14.3 -0.5
LUWI Sn Sn 12 33 30.9 -3.4
SOEI Soe 8.66 218 Pn Pn 12 32 38.2 +1.4
MMRI Maumere 9.31 232 Pn Pn 12 32 44.9 -0.7
KAPI Kappang 10.06 257 LR LR 12 37 44.1
comp=Z,145nm,21.0s,baz=78,slow=43
KNRA Kununurra 12.76 184 Pn 12 33 32.3 -0.5
KNRA Sn Sn 12 35 51.6 -2.3
FITZ Fitzroy Crossi 15.63 194 Pn Pn 12 34 09.6 -2.0
0.4nm,0.3s,baz=40,slow=9.5,SNR=9.7
FITZ Fitzroy Crossi 15.63 194 Pn 12 34 11.1 -0.5
COEN Coen 17.35 130 P Pn 12 34 33.1 -0.3
WB0 Warramunga Arr 17.43 165 P Pn 12 34 34.5 0.0
WB0 IAmb IAmb 12 34 37.4
comp=Z,13nm,0.8s
WRAB Tennant Creek 17.58 165 P Pn 12 34 36.6 +0.3
WRAB IAmb IAmb 12 34 41.0
comp=Z,12nm,0.8s
WRA Warramunga Arr 17.59 165 P Pn 12 34 34.1 -2.3
comp=Z,0.8nm,0.3s,baz=345,slow=12,SNR=8.9
WRA S Sn 12 37 48.0 -3.6
comp=Z,0.3nm,0.3s,baz=346,slow=23,SNR=3.4
WB2 Warramunga Arr 17.59 165 P Pn 12 34 36.7 +0.3
WB2 IAmb IAmb 12 34 40.0
comp=Z,40nm,1.4s
WR0 Warramunga Arr 17.66 165 P Pn 12 34 37.1 -0.1
PMG Port Moresby 18.61 111 LR LR 12 42 50.1
comp=Z,121nm,20.4s,baz=298,slow=40
PSA00 Pilbara Seismi 20.88 206 P P 12 35 13.7 +0.5
PSA00 IAmb IAmb 12 35 22.2
comp=Z,14nm,1.1s
AS31 Alice Springs 21.09 169 P P 12 35 15.8 +0.3
AS31 IAmb IAmb 12 35 20.9
comp=Z,8.5nm,0.6s
ASAR Alice Springs 21.09 169 P P 12 35 15.5 0.0
comp=Z,18nm,0.5s,baz=346,slow=9.5,SNR=251
ASAR S S 12 39 04.0 -5.0
comp=Z,1.1nm,0.7s,baz=353,slow=23,SNR=5.6
LEM Lembang 22.26 259 LR LR 12 45 24.7
comp=Z,177nm,19.4s,baz=77,slow=40
CTA Charters Tower 23.60 138 P P 12 35 42.6 +0.8
comp=Z,4.1nm,0.9s,baz=317,slow=12,SNR=5.5
BBOO Buckleboo 30.39 169 P P 12 36 43.0 +0.1
EIDS Eidsvold 30.45 139 P P 12 36 43.1 -0.5
STKA Stephens Creek 30.98 160 P P 12 36 47.9 -0.3
comp=Z,3.7nm,1.1s,baz=345,slow=12,SNR=2.6
STKA Stephens Creek 30.98 160 IAmb IAmb 12 36 49.4
comp=Z,1.7nm,1.3s
NWAO Narrogin (SRO) 32.08 200 P P 12 36 57.1 -0.6
WHN Wuhan 36.28 337 P P 12 37 36.0 +1.8
CM31 Chiang Mai Arr 36.89 306 P P 12 37 38.7 -1.0
CM31 IAmb IAmb 12 37 41.2
comp=Z,3.4nm,1.1s
CMAR Chiang Mai Arr 36.89 306 P P 12 37 41.0 +1.4
comp=Z,0.4nm,0.4s,baz=133,slow=6.5,SNR=3.4
CHTO Chiang Mai 37.08 307 P P 12 37 39.5 -1.8
CHTO IAmb IAmb 12 37 45.7
comp=Z,2.8nm,0.9s
MJAR Matsushiro Arr 40.02 11 P P 12 38 04.7 -1.0
comp=Z,2.6nm,0.9s,baz=195,slow=9.0,SNR=2.8
WHZ Wether Hill Ro 54.36 148 P P 12 39 57.8 +0.4
SONM Songino Array 54.43 341 P P 12 39 59.3 +1.3
comp=Z,0.2nm,0.4s,baz=134,slow=7.6,SNR=3.1
PETK Petropavlovsk- 60.56 19 P P 12 40 41.5 +0.6
comp=Z,3.8nm,0.9s,baz=214,slow=4.9,SNR=2.2
MK31 Makanchi Array 64.59 326 P P 12 41 08.3 +0.3
MKAR Makanchi Array 64.59 326 P P 12 41 08.7 +0.7
comp=Z,1.0nm,0.6s,baz=115,slow=8.0,SNR=6.5
ZAA0 Zalesovo Array 67.74 333 P P 12 41 27.8 -0.2
ZAA0 IAmb IAmb 12 41 35.0
comp=Z,4.6nm,1.1s
ZALV Zalesovo Beam 67.74 333 P P 12 41 28.1 +0.2
comp=Z,0.8nm,0.3s,baz=130,slow=5.0,SNR=5.6
KURBB Kurchatov Arra 68.82 328 P P 12 41 35.5 +0.7
comp=Z,1.8nm,0.6s,baz=130,slow=5.7,SNR=4.7
BVAR Borovoye Array 74.39 327 P P 12 42 10.2 +1.8
comp=Z,0.9nm,0.7s,baz=126,slow=7.3,SNR=3.2

IDC **15** *12:32:56.9±0.4, 35.84N×82.35E, h0km, mb4.4/27, mb1 4.5/32, mb1mx4.4/59, mbtmp4.5/32, ML3.8/5, MS3.6/22, Ms1 3.6/22, ms1mx3.5/53, Error ellipse: s-maj=12.9km s-min=10.2km az=47.0*

MOS **15** *12:32:57.6±1.0, 35.91N×82.37E, h15km, mb4.9/46, Error ellipse: s-maj=6.4km s-min=3.3km az=114.9*

NEIC **15** *12:32:58.5±1.1, 35.89N±0.05×82.34E±0.07, h10km±1km, mb4.7/66, Error ellipse: s-maj=9.9km s-min=8.2km az=106.0*

BJI **15** *12:32:59.3±0.0, 36.02N×82.29E, h7km, mB4.6/27, mb4.2/40, ML4.5/8, Ms4.3/33, Ms7 4.1/32*

NNC **15** *12:33:04.0±1.7, 36.39N×82.50E, h0km, mb5.0, mpv4.8, Error ellipse: s-maj=16.3km s-min=12.4km az=106.0*

ISC 15 12:32:59.0±0.3, 35.95N±0.04×82.31E±0.03, h10km, n320, σ1.78/344, mb4.7/99, MS3.7/24, 30C-28D, Xizang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

KSH Kashi 6.16 307 Pn Pn 12 34 32.8 +2.7
KSH Sn Sn 12 35 43.3 +2.7
KSH LR LR
comp=Z,3µm,3.9s
DHRM DHARAMSHALA 6.20 235 eP Pn 12 34 35.2 +4.5
DHRM eS Sg 12 36 22.8 +4.8
DHRM IAML 12 36 31.3
comp=E,29nm,0.5s
THN Thein Dam 6.49 239 eP Pb 12 34 45.0 -6.9
DDI Dehra Dun 6.64 214 ex Pg 12 35 05.7 -0.5
DDI ex x 12 36 35.1
PRZ Przheval'sk 7.20 336 Pn Pn 12 34 44.9 +0.5
PRZ Sn Sn 12 36 07.6 +1.3
PRZ Przheval'sk 7.20 336 P Pn 12 34 44.9 +0.5
PRZ 12 36 07.6
KDJ Kajisay 7.35 329 Pn Pn 12 34 47.1 +0.6
KDJ Sn Sn 12 36 12.4 +2.3
KDJ Kajisay 7.35 329 P Pn 12 34 47.1 +0.6
KDJ 12 36 12.4
NRN Naryn 7.37 320 Pn 12 34 49.2 +2.3
NRN Naryn 7.37 320 P Pn 12 34 49.2 +2.3
SHLS Shalkode 7.53 344 eP Pn 12 34 49.7 +0.8
comp=E,21nm,0.7s
SHLS eLR LR 12 37 56.7
SHLS Shalkode 7.53 344 eP Pn 12 34 49.7 +0.8
SHLS pmax pmax
comp=Z,21nm,0.7s
UZB Uzynbulak 7.63 342 eP Pn 12 34 52.0 +1.7
comp=Z,32nm,1.0s
UZB eS Sn 12 36 18.7 +1.9
UZB eLR LR 12 37 54.6
UZB Uzynbulak 7.63 342 eP Pn 12 34 52.0 +1.7
UZB eS Sn 12 36 18.6 +1.8
UZB pmax pmax
comp=Z,32nm,1.0s
DANN Dangsing 7.67 170 eP Pn 12 34 51.4 +0.3
comp=Z,31nm,0.4s
PDGK Podgornoye 7.69 344 ⇑Pn Pn 12 34 52.8 +1.7
comp=Z,34nm,0.8s
PDGK ⇓Sn Sn 12 36 18.5 +0.2
comp=Z,184nm,0.8s
PDGK ⇓Lg Lg 12 36 56.8
comp=Z,484nm,1.3s
PDGK Podgornoye 7.69 344 P Pn 12 34 52.8 +1.7
PDGK S Sn 12 36 18.5 +0.2
SATY Saty 7.72 338 eP Pn 12 34 53.1 +1.6
comp=Z,9.0nm,0.5s
SATY Saty 7.72 338 eP Pn 12 34 53.1 +1.6
SATY pmax pmax
comp=Z,9.0nm,0.5s
CHCP Chirah Chowk 7.78 256 P Pn 12 34 56.8 +4.5
NIL Nilore 7.79 256 Pn 12 34 53.0 +0.5
NIL Nilore 7.79 256 P Pn 12 34 53.0 +0.5
KPKS Kokpek 8.01 341 eP Pn 12 34 57.4 +1.8
comp=Z,25nm,0.8s
KPKS eS Sn 12 36 28.7 +2.4
KPKS eLR LR 12 38 08.4
KPKS Kokpek 8.01 341 eP Pn 12 34 57.3 +1.8
KPKS eS Sn 12 36 28.6 +2.4
KPKS pmax pmax
comp=Z,25nm,0.8s
GKN Gorkha 8.16 165 eP Pn 12 34 59.7 +2.0
comp=Z,29nm,0.3s
TNSS Tian-Shan 8.20 331 eP Pn 12 34 60.0 +1.5
TNSS eS Sn 12 36 31.3 -0.1
TNSS Tian-Shan 8.20 331 eP Pn 12 34 59.9 +1.5
TNSS eS Sn 12 36 31.2 -0.1
MDOK Medeo 8.27 332 eP Pn 12 35 00.8 +1.7
MDOK eLR LR 12 37 58.5
MDOK Medeo 8.27 332 ⇑Pn Pn 12 35 00.6 +1.5
comp=Z,20nm,0.5s
MDOK ⇑Pg Pg 12 35 30.1 -7.2
comp=Z,69nm,0.9s
MDOK ⇓Lg Lg 12 37 14.7
comp=Z,174nm,0.9s
MDOK Medeo 8.27 332 eP Pn 12 35 00.8 +1.7
KNDC Almaty 8.35 332 ⇓Pn Pn 12 35 03.6 +3.5
comp=Z,26nm,0.5s
KNDC ⇓Pg Pg 12 35 32.5 -6.3
comp=Z,105nm,1.1s
KNDC ⇑Lg Lg 12 37 19.4
comp=Z,533nm,1.4s
KNDC Almaty 8.35 332 P Pn 12 35 03.6 +3.5
AAA Alma-Ata 8.36 332 eP Pn 12 35 02.0 +1.7
AAA eLR LR 12 37 58.9
AAA Alma-Ata 8.36 332 eP Pn 12 35 02.0 +1.7
KKN Kakani 8.51 162 eP Pn 12 35 04.2 +1.7
GUN Gumba 8.56 158 eP Pn 12 35 03.9 +0.5
comp=Z,135nm,0.8s
DMN Daman 8.64 163 eP Pn 12 35 05.0 +0.6
UCH Uchtor 8.72 318 P Pn 12 35 07.1 +1.6
SNR=20
PKIN Phulchoki 8.75 162 eP Pn 12 35 06.2 +0.4
PKI Pulchoki 8.76 162 eP Pn 12 35 06.4 +0.4
KBK Karagaybulak 8.80 322 P Pn 12 35 09.3 +2.9
SNR=12
CEP Cherat 8.80 259 P Pn 12 35 09.7 +3.3
WMQ Urumqi 8.89 26 eP Pn 12 35 09.8 +2.3
WMQ S Sn 12 36 44.5 -3.2
WMQ smax smax
comp=Z,55nm,1.1s
WMQ smax smax
comp=Z,87nm,1.1s
WMQ Urumqi 8.89 26 Pn Pn 12 35 07.5 0.0
WMQ Sn Sn 12 36 49.4 +1.6
WMQ Urumqi 8.89 26 P Pn 12 35 07.5 0.0
WMQ 12 36 49.3
CHKK Chushkaly 8.89 334 eP Pn 12 35 08.4 +0.8
CHKK Chushkaly 8.89 334 eP Pn 12 35 08.3 +0.8
JIRN Jiri 8.89 157 eP Pn 12 35 09.2 +1.3
AAK Ala-Archa 9.02 320 Pn Pn 12 35 11.9 +2.6
comp=Z,0.7nm,0.3s,baz=173,slow=8.5,SNR=28
AAK Pg 12 35 42.9
comp=Z,3.5nm,0.3s,baz=144,slow=9.4,SNR=6.8
AAK Lg Lg 12 37 39.0
comp=Z,1.6nm,0.3s,baz=283,slow=20,SNR=3.5
AAK Ala-Archa 9.02 320 P Pn 12 35 12.2 +2.9
SNR=17
AAK Ala-Archa 9.02 320 ⇓Pn Pn 12 35 12.0 +2.6
comp=Z,12nm,0.6s
AAK ⇑Pg 12 35 41.8
comp=Z,54nm,0.8s
AAK ⇓Lg Lg 12 37 40.5
comp=Z,265nm,1.2s
AAK Ala-Archa 9.02 320 Pn 12 35 10.8 +1.5
AAK Ala-Archa 9.02 320 deP Pn 12 35 12.0 +2.7
ARSB Arslanbob 9.06 309 Pn 12 35 10.4 +0.5
ARSB Arslanbob 9.06 309 P Pn 12 35 10.4 +0.5
FRU1 Bishkek 9.07 321 Pn 12 35 10.6 +0.6
FRU1 Bishkek 9.07 321 P Pn 12 35 10.6 +0.6
AML Almayashu 9.11 315 P Pn 12 35 12.9 +2.1
SNR=30
CHMS Chumysh 9.15 323 P Pn 12 35 13.5 +2.4
SNR=9.7
CHMS Chumysh 9.15 323 ⇓Pn Pn 12 35 13.2 +2.2
comp=Z,19nm,0.8s
CHMS ⇑Pg 12 35 44.6
comp=Z,39nm,0.8s
CHMS ⇑Lg Lg 12 37 48.6
comp=Z,157nm,1.2s
KUU Kurty 9.16 332 eP Pn 12 35 12.8 +1.5
KUU eLR LR 12 38 42.9
KUU Kurty 9.16 332 eP Pn 12 35 12.7 +1.5
EKS2 Erkin-Say 9.41 318 P Pn 12 35 16.1 +1.3
SNR=11
RAMN Ramite 9.69 157 eP Pn 12 35 18.4 -0.2
comp=Z,81nm,0.7s
LSA Lhasa 9.70 127 P Pn 12 35 26.3 +7.3
LSA pmax pmax
comp=Z,14nm,1.4s
LSA pmax pmax
comp=Z,180nm,2.1s
LSA LR LR
comp=Z,3µm,10.0s
LSA LR LR
comp=Z,2µm,12.1s
LSA LR LR
comp=Z,3µm,11.4s
LSA Lhasa 9.70 127 Pn Pn 12 35 18.7 -0.3
LSA Lhasa 9.70 127 P Pn 12 35 18.7 -0.3
TAPN Taplejung 9.72 150 eP Pn 12 35 19.4 +0.2
comp=Z,40nm,0.9s
BTK Batken 9.95 298 Pn 12 35 22.8 +0.7
BTK Sn Sn 12 37 12.2 -1.6
BTK Batken 9.95 298 P Pn 12 35 22.8 +0.7
BTK 12 37 12.2
ODAN Odare 10.04 153 eP Pn 12 35 23.4 -0.1
comp=Z,163nm,1.1s
MK31 Makanchi Array 10.84 360 ⇓Pn Pn 12 35 34.5 +0.4
comp=Z,41nm,0.7s,baz=179,slow=14,SNR=418
MK31 ⇓Sn Sn 12 37 31.0 -4.5
comp=Z,16nm,0.8s,baz=182,slow=24,SNR=5.0
MK31 ⇑Lg Lg 12 38 34.4
comp=Z,39nm,1.2s
MK31 Makanchi Array 10.84 360 Pn 12 35 34.2 0.0
MK31 Makanchi Array 10.84 360 P Pn 12 35 34.2 0.0
MKAR Makanchi Array 10.84 360 Pn Pn 12 35 34.6 +0.4
comp=Z,5.3nm,0.3s,baz=182,slow=13,SNR=485
MKAR Sn Sn 12 37 35.1 -0.4
comp=Z,1.1nm,0.3s,baz=180,slow=22,SNR=4.9
MKAR Lg Lg 12 38 38.2
baz=198,slow=25,SNR=2.3
MKAR LR LR 12 40 39.0
comp=Z,198nm,20.3s,baz=176,slow=42
MKAR Makanchi Array 10.84 360 i P Pn 12 35 34.5 +0.4
MKAR pmax pmax
comp=Z,49nm,0.7s
MAKZ Makanchi 10.86 359 ⇑Pn Pn 12 35 34.5 0.0
comp=Z,94nm,0.7s
MAKZ ⇑Sn Sn 12 37 32.1 -3.9
comp=Z,44nm,1.5s
MAKZ Makanchi 10.86 359 Pn 12 35 34.4 0.0
MAKZ Makanchi 10.86 359 P Pn 12 35 34.4 0.0
KBL Kabul 10.94 267 Pn 12 35 36.8 +1.1
KBL Kabul 10.94 267 P Pn 12 35 36.8 +1.1
TAS Tashkent 11.50 302 Pn Pn 12 35 45.2 +1.9
TAS Tashkent 11.50 302 P Pn 12 35 45.2 +1.9
KK31 Karatay Array 11.57 312 ⇑Pn Pn 12 35 47.6 +3.4
comp=Z,1.9nm,0.5s,baz=123,slow=11,SNR=21
KK31 ⇑Pg 12 36 31.1
comp=Z,11nm,0.8s,baz=118,slow=17,SNR=4.7
KK31 ⇓Lg Lg 12 39 07.4
comp=Z,44nm,1.0s,baz=134,slow=26,SNR=4.0
KK31 Karatay Array 11.57 312 Pn 12 35 44.3 +0.1
KK31 Karatay Array 11.57 312 P Pn 12 35 44.3 +0.1
KKAR Karatay Array 11.57 312 Pn 12 35 44.2 +0.1
KKAR Karatay Array 11.57 312 P Pn 12 35 44.3 +0.1
ZSN Zaisan 11.65 9 eP Pn 12 35 45.2 -0.1
ZSN eS Sn 12 37 58.3 +2.9
ZSN eLR LR 12 40 46.6
ZSN Zaisan 11.65 9 eP Pn 12 35 45.1 -0.1
ZSN eS Sn 12 37 58.3 +2.9
BOK Bokaro 12.50 165 ex Pn 12 35 54.9 -2.1
BOK IAmb IAmb 12 35 59.3
comp=Z,19nm,0.8s
SHL Shillong 13.21 139 Pn Pn 12 36 04.2 -2.6
SHL Shillong 13.21 139 P Pn 12 36 04.2 -2.6
GTA Gaotai 14.29 71 eP P 12 36 29.6 +0.9
GTA pP Pn 12 36 34.1 +13
GTA sP 12 36 37.4
KURBB Kurchatov Arra 14.92 351 Pn Pn 12 36 27.2 -2.7
comp=Z,0.1nm,0.3s,baz=173,slow=12,SNR=67
KURBB Lg Lg 12 40 52.0
baz=223,slow=26,SNR=4.7
KURK Kurchatov 15.00 351 Pn 12 36 28.6 -2.4
KURK IAmb IAmb 12 36 30.0
comp=Z,19nm,0.9s
KURK Kurchatov 15.00 351 d iP Pn 12 36 28.2 -2.7
BRDH Bariadhala 15.51 146 LR LR 12 44 14.0
comp=Z,98nm,21.1s,baz=346,slow=44
HRA Herat 16.48 270 Pn 12 36 49.5 -1.0
LZH Lanzhou 17.43 83 eP Pn 12 37 02.0 -0.3
LZH pP P 12 37 04.3 +0.7
LZH PP PnPn 12 37 14.9 +2.5
LZH sS S 12 40 21.8 -3.0
LZH pmax pmax
comp=Z,25nm,1.2s
LZH pmax pmax
comp=Z,100nm,4.1s
LZH LR LR
comp=Z,840nm,14.1s
LZH LR LR
comp=Z,550nm,14.1s
LZH LR LR
comp=Z,570nm,16.3s
ZAA0 Zalesovo Array 18.09 5 Pn 12 37 08.1 -2.1
ZALV Zalesovo Beam 18.09 5 P Pn 12 37 08.0 -2.2
comp=Z,0.4nm,0.3s,baz=192,slow=12,SNR=38
ZALV LR LR 12 45 20.9
comp=Z,188nm,18.6s,baz=193,slow=41
ZALV Zalesovo Beam 18.09 5 P Pn 12 37 08.0 -2.2
GGR Gangavaram 18.15 186 eP Pn 12 37 10.0 -1.2
KLRI Killari 18.51 197 eP P 12 37 14.7 -0.8
CD2 Chengdu 18.59 100 P P 12 37 13.6 -2.7
PVM Polavaram 18.63 182 eP P 12 37 16.3 -0.5
HYBB Hyderabad (bro 18.75 191 eP P 12 37 17.8 -0.4
BVAR Borovoye Array 19.03 338 P Pn 12 37 21.0 -0.7
comp=Z,1.1nm,0.3s,baz=140,slow=9.4,SNR=30
BVAR Borovoye Array 19.03 338 P Pn 12 37 21.0 -0.7
BRVK Borovoye 19.09 337 P Pn 12 37 22.3 -0.1
BRVK IAmb IAmb 12 37 36.8
comp=Z,37nm,1.1s
BRVK Borovoye 19.09 337 c iP Pn 12 37 23.2 +0.8
BRVK pmax pmax
comp=Z,24nm,1.3s
MYLAV Mylavaram 19.18 185 eP P 12 37 22.5 -0.2
GEYT Alibeck 19.43 283 P P 12 37 24.9 -0.6
comp=Z,0.1nm,0.3s,baz=105,slow=11,SNR=15
GEYT LR LR 12 45 25.2
comp=Z,80nm,21.6s,baz=335,slow=38
GYA0B ALIBECK ARRAY 19.43 283 P P 12 37 25.3 -0.2
NJS Nagarjunasagar 19.50 189 eP P 12 37 25.5 -0.8
SRLM Srisailam 20.00 190 eP P 12 37 30.8 -1.0
ADKI Addanki 20.13 187 eP P 12 37 32.4 -0.8
MOY Mondy 20.61 35 eP Pn 12 37 40.2 -0.4
MOY pmax pmax
comp=Z,10.0nm,1.7s
ZAK Zakamensk 20.93 40 eP P 12 37 42.4 +0.6
ZAK pmax pmax
comp=Z,11nm,1.0s
ABKAR Akbulak array 21.07 316 P P 12 37 42.7 -0.4
ABKAR IAmb IAmb 12 37 50.9
comp=Z,43nm,1.2s
URV Uravakonda 21.39 193 eP P 12 37 45.7 -1.2
SONM Songino Array 21.41 49 P P 12 37 48.3 +1.3
comp=Z,13nm,0.9s,baz=239,slow=12,SNR=42
SONM PcP PcP 12 41 49.5 -0.8
comp=Z,0.7nm,0.8s,baz=232,slow=2.0,SNR=3.8
SONM LR LR 12 46 50.6
comp=Z,264nm,21.2s,baz=260,slow=39
GOA Goa 21.73 203 ex P 12 37 46.4 -4.1
GOA IAmb IAmb 12 37 48.0
comp=Z,54nm,0.2s
XAN Xi'an 21.87 87 P P 12 37 52.9 +1.0
XAN pP pP 12 37 55.8 -0.3
XAN S S 12 41 59.0 +5.4
XAN pmax pmax
comp=Z,3.0nm,0.9s
XAN pmax pmax
comp=Z,130nm,8.9s
XAN LR LR
comp=Z,200nm,16.1s
XAN LR LR
comp=Z,420nm,8.0s
XAN LR LR
comp=Z,380nm,12.8s
XAN Xi'an 21.87 87 P P 12 37 50.7 -1.2
XAN Xi'an 21.87 87 P P 12 37 50.7 -1.2
XAN pmax pmax
comp=Z,12nm,1.3s
TLY Talaya 21.89 37 LR LR 12 47 17.2
comp=Z,239nm,21.1s,baz=230,slow=39
TLY Talaya 21.89 37 P P 12 37 52.0 0.0
TLY Talaya 21.89 37 deP P 12 37 53.3 +1.3
TLY pmax pmax
comp=Z,12nm,2.0s
CHTO Chiang Mai 22.51 135 P P 12 37 57.0 -1.9
CHTO Chiang Mai 22.51 135 P P 12 37 57.0 -1.9
CHTO pmax pmax
comp=Z,8.0nm,1.1s
IRK Irkutsk 22.54 37 eP P 12 38 02.6 +3.7
IRK e 12 38 19.2
IRK pmax pmax
comp=Z,38nm,2.0s
AKTO Aktyubinsk 22.74 317 P P 12 38 02.2 +1.1
comp=Z,11nm,0.9s,baz=121,slow=7.3,SNR=18
AKTO LR LR 12 47 58.3
comp=Z,274nm,19.1s,baz=124,slow=40
CM31 Chiang Mai Arr 22.79 135 P P 12 38 00.3 -1.6
CMAR Chiang Mai Arr 22.79 135 P P 12 38 01.6 -0.2
comp=Z,7.3nm,0.9s,baz=314,slow=10,SNR=33
CMAR PcP PcP 12 41 53.1 -0.2
comp=Z,0.5nm,0.4s,baz=323,slow=3.6,SNR=4.5
GYA Guiyang 22.83 108 eP P 12 38 06.3 +4.0
GYA PP PnPn 12 38 36.5 +10
GYA S S 12 42 09.8 -2.0
GYA SS SnSn 12 42 51.6 +9.2
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,120nm,4.3s
GYA LR LR
comp=Z,420nm,10.2s
GYA LR LR
comp=Z,560nm,11.6s
GYA LR LR
comp=Z,610nm,10.9s
HHC Hu-ho-hao-te 23.39 69 eP P 12 38 06.3 -1.7
HHC pmax pmax
comp=Z,4.0nm,1.0s
HHC pmax pmax
comp=Z,45nm,5.2s
ENH Enshi 23.42 96 P P 12 38 07.2 -1.0
WSAR Wadi Sarin 24.10 245 P P 12 38 15.7 +0.9
comp=Z,10nm,0.9s,baz=86,slow=9.7,SNR=3.8
WSAR LR LR 12 49 18.8
comp=Z,150nm,21.1s,baz=75,slow=41
UOSS Minazif 24.96 251 P P 12 38 22.2 -0.5
UOSS IAmb IAmb 12 38 36.1
comp=Z,12nm,1.0s
PBKT Sadao Pong 25.46 134 P P 12 38 25.4 -1.7
SVE Sverdlovsk 25.48 332 ⇓eP P 12 38 28.4 +1.4
SVE pmax pmax
comp=Z,18nm,1.1s
ARU Arti 26.03 329 P P 12 38 32.8 +0.7
comp=Z,0.8nm,0.3s,baz=158,slow=7.8,SNR=8.6
ARU LR LR 12 49 49.1
comp=Z,144nm,18.6s,baz=138,slow=39
ARU Arti 26.03 329 P P 12 38 31.8 -0.2
ARU IAmb IAmb 12 38 33.7
comp=Z,12nm,1.0s
ARU Arti 26.03 329 d iP P 12 38 32.4 +0.3
ARU 12 39 07.8
ARU S S 12 43 06.1 +3.4
ARU pmax pmax
comp=Z,13nm,1.0s
BJT Baijiatuau 26.90 71 P P 12 38 39.0 -1.1
BJT Baijiatuau 26.90 71 P P 12 38 39.0 -1.1
BJT pmax pmax
comp=Z,9.0nm,1.4s
WHN Wuhan 27.26 92 P P 12 38 50.4 +7.0
MAK Makhachkala 27.63 295 eP P 12 38 43.5 -3.1
MAK eS S 12 43 23.6 -4.6
MAK pmax pmax
comp=Z,118nm,0.9s
MAK MLR MLR
comp=Z,167nm,14.0s
PALK Pallekele 28.57 183 P P 12 38 53.1 -2.2
comp=Z,6.5nm,0.9s,baz=357,slow=7.7,SNR=3.5

PALK LR LR 12 51 00.8
comp=Z,97nm,18.6s,baz=335,slow=38
UBPT Khong Chiam 29.18 129 P **P 12 38 59.1 -1.6**
UBPT IAmb IAmb 12 39 00.6
comp=Z,11nm,0.9s
QIZ Qiongzhong 29.53 117 P **P 12 39 00.5 -3.2**
QIZ S **S 12 43 58.3 -0.2**
NJ2 Nanjing 30.43 87 *e*P **P 12 39 10.4 -1.2**
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
ONI Oni 30.60 294 P **P 12 39 16.4 +3.3**
KIV Kislovodsk 31.17 297 *e*P **P 12 39 19.9 +1.8**
KIV pmax pmax
comp=Z,14nm,0.9s
KIV MLR MLR
comp=Z,269nm,15.0s
KIRV Kirov 31.27 327 *i* P **P 12 39 19.8 +1.1**
VRH Novokhopyorsk 32.65 311 *e*P **P 12 39 30.7 -0.2**
VRH pmax pmax
comp=Z,20nm,1.6s
RAYN Ar Rayn 34.08 259 P **P 12 39 43.2 -0.6**
RAYN IAmb IAmb 12 39 53.4
comp=Z,11nm,1.2s
RAYN Ar Rayn 34.08 259 P **P 12 39 43.2 -0.6**
RAYN pmax pmax
comp=Z,11nm,1.2s
VSR Storozhevoye 34.23 310 *e*P **P 12 39 44.3 -0.4**
VSR pmax pmax
comp=Z,10.0nm,0.8s
PRGR Permogore 34.49 330 *e*P **P 12 39 46.1 -0.7**
PRGR pmax pmax
comp=Z,9.0nm,0.4s
ZEA Zeya 35.77 46 *e*P **P 12 40 01.8 +3.8**
ZEA pmax pmax
comp=Z,17nm,1.0s
ZEA MLR MLR
comp=Z,400nm,12.0s
GAZ Gaziantep 35.99 286 P **P 12 40 00.4 +0.2**
GAZ IAmb IAmb 12 40 04.0
comp=Z,15nm,1.4s
MOS Moscow 36.07 318 *e*P **P 12 39 59.6 -0.9**
MOS pmax pmax
comp=Z,30nm,0.8s
KSRS Korea Array 36.33 74 P **P 12 40 03.4 +0.4**
comp=Z,1.8nm,1.1s,baz=277,slow=8.9,SNR=4.4
KSRS LR LR 12 55 50.4
comp=Z,92nm,20.4s,baz=288,slow=38
OBN Obninsk 36.51 316 P **P 12 40 04.7 +0.4**
OBN Obninsk 36.51 316 *ce*P **P 12 40 04.9 +0.6**
OBN *e* 12 41 30.0
OBN *e* 12 42 28.0
OBN pmax pmax
comp=Z,32nm,1.7s
OBN MLR MLR
comp=Z,219nm,18.0s
KLMR Klimovskoe 36.76 326 *e*P **P 12 40 05.5 -0.8**
KLMR pmax pmax
comp=Z,50nm,1.3s
KLMR Klimovskoe 36.76 326 *e*P **P 12 40 05.5 -0.8**
KLMR AMP 12 40 08.0
comp=Z,50nm,1.3s
KLR Kul'dur 38.08 54 P **P 12 40 17.9 +0.3**
comp=Z,2.0nm,0.7s,baz=275,slow=10.0,SNR=6.6
KLR LR LR 12 57 02.7
comp=Z,137nm,18.3s,baz=271,slow=38
KLR Kul'dur 38.08 54⇑*e*P **P 12 40 17.3 -0.3**
KLR pmax pmax
comp=Z,3.0nm,0.9s
BR131 Keskin Array S 38.25 291 P **P 12 40 19.5 +0.1**
BR131 IAmb IAmb 12 40 26.6
comp=Z,12nm,1.3s
BR131 Keskin Array S 38.25 291 *c i*P **P 12 40 20.6 +1.2**
BRTR Keskin Array B 38.25 291 P **P 12 40 20.6 +1.2**
comp=Z,4.7nm,1.0s,baz=91,slow=6.5,SNR=18
BRTR LR LR 12 58 09.6
comp=Z,46nm,18.4s,baz=20,slow=40
BRTR Keskin Array B 38.25 291 *ce*P **P 12 40 20.8 +1.4**
BRTR pmax pmax
comp=Z,5.0nm,1.0s
TMCR Tamitsa 38.75 331 *e*P **P 12 40 23.4 +0.4**
TMCR pmax pmax
comp=Z,31nm,0.6s
ANTO Ankara 38.87 291 P **P 12 40 24.2 -0.3**
ANTO IAmb IAmb 12 40 31.4
comp=Z,26nm,1.4s
ANTO Ankara 38.87 291 P **P 12 40 24.2 -0.3**
ANTO pmax pmax
comp=Z,26nm,1.4s
YAK Yakutsk 39.24 33 P **P 12 40 26.4 -0.8**
comp=Z,2.6nm,0.4s,baz=73,slow=8.8,SNR=5.9
YAK LR LR 12 57 16.4
comp=Z,75nm,21.2s,baz=256,slow=37
YAK Yakutsk 39.24 33 P **P 12 40 26.9 -0.3**
YAK IAmb IAmb 12 40 32.8
comp=Z,17nm,1.0s
YAK Yakutsk 39.24 33 *e*P **P 12 40 27.1 -0.1**
YAK *e* 12 42 01.2
YAK *e* 12 42 41.9
YAK *e*S **S 12 46 21.1 -6.3**
YAK *e*SSS SSS 12 49 42.9
YAK pmax pmax
comp=Z,18nm,1.2s
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK pmax pmax
comp=Z,168nm,3.6s
YAK pmax pmax
comp=N,157nm,3.7s
YAK pmax pmax
comp=E,110nm,3.5s
YAK smax smax
comp=N,88nm,3.3s
YAK smax smax
comp=E,71nm,3.5s
AKASG Malin Array Be 40.45 308 P **P 12 40 37.4 0.0**
comp=E,3.3nm,0.8s,baz=84,slow=6.8,SNR=15
AKASG LR LR 12 59 13.9
comp=E,140nm,19.9s,baz=95,slow=39
AKASG Malin Array Be 40.45 308 *ce*P **P 12 40 38.0 +0.6**
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKBB Malin Array Si 40.45 308 P **P 12 40 36.9 -0.6**
AKBB Malin Array Si 40.45 308⇑*e*P **P 12 40 37.7 +0.3**
KIEV Kiev 40.46 308 P **P 12 40 38.0 +0.5**
GRNR Gornyy 41.10 51⇓*i*P **P 12 40 43.1 +0.2**
GRNR pmax pmax
comp=Z,1.0nm,0.9s
JOF Joensuu 41.12 327 P **P 12 40 44.1 +1.3**
JOF pmax pmax
comp=Z,18nm,1.0s
LVZ Lovozero 41.60 335 P **P 12 40 46.7 0.0**
LVZ Lovozero 41.60 335 *de*P **P 12 40 47.7 +1.0**
LVZ pmax pmax
comp=Z,81nm,2.5s
HARR Harsova 41.69 299 ⇓P **P 12 40 49.5 +1.7**
ELL Elmali 41.77 287 P **P 12 40 48.9 +0.2**
ELL Elmali 41.77 287 P **P 12 40 48.9 +0.2**
ELL pmax pmax
comp=Z,74nm,1.1s
ICOR Ion Corvin 41.86 299 ⇑P **P 12 40 51.5 +2.4**
MANT Manisa 42.37 290 P **P 12 40 53.2 -0.5**
MANT IAmb IAmb 12 41 01.1
comp=Z,14nm,0.7s
VRI Vrincioaia 42.39 301 ⇓P **P 12 40 55.8 +2.3**
VRI Vrincioaia 42.39 301 P **P 12 40 55.1 +1.6**
VRI pmax pmax
comp=Z,13nm,1.3s
VSU Vasula 42.41 320⇑*e*P **P 12 40 53.4 0.0**
VSU pmax pmax
comp=Z,63nm,1.3s
PLOR Plostina 42.45 301 ⇑P **P 12 40 56.0 +2.0**
MLR Muntele Rosu 42.98 301 P **P 12 40 58.6 +0.2**
MLR IAmb IAmb 12 41 01.7
comp=Z,18nm,1.0s
MLR Muntele Rosu 42.98 301 P **P 12 40 58.6 +0.2**
MLR pmax pmax
comp=Z,18nm,1.0s
TIXI Tiksi 43.02 20 P **P 12 40 57.8 -0.4**
TIXI Tiksi 43.02 20⇑*e*P **P 12 40 58.2 0.0**
TIXI pmax pmax
comp=Z,15nm,2.5s
FIA1 FINESS Array S 43.17 324 P **P 12 40 59.4 -0.2**
FIA1 IAmb IAmb 12 41 18.8
comp=Z,10nm,1.1s
FINES FINESS Array B 43.18 324 P **P 12 41 00.1 +0.6**
comp=Z,6.2nm,0.6s,baz=104,slow=8.9,SNR=24
FINES LR LR 13 00 09.7
comp=Z,101nm,18.1s,baz=111,slow=38
FINES FINESS Array B 43.18 324 *i* P **P 12 41 00.4 +0.8**
FINES pmax pmax
comp=Z,6.0nm,0.6s
BURAR Bucovina Array 43.23 304 ⇓P **P 12 41 01.8 +1.4**
BUR08 Bucovina Ar. S 43.24 304 P **P 12 41 00.6 +0.2**
DOPR Dopca 43.30 302 ⇓P **P 12 41 02.6 +1.7**
SUF Sumiainen 43.37 326 P **P 12 40 58.3 -2.8**
SUF pmax pmax
comp=Z,28nm,1.1s
VOIR 43.61 301 ⇑P **P 12 41 04.9 +1.4**
VOIR 43.61 301 P **P 12 41 03.6 +0.1**
VOIR pmax pmax
comp=Z,5.0nm,0.9s
STKI Sintang 44.83 136 P **P 12 41 14.8 +1.4**
TRPA Tarpa 44.96 305 ⇓P **P 12 41 15.8 +1.8**
VAF Ylistaro 45.00 326 P **P 12 41 15.5 +1.4**
VAF pmax pmax
comp=Z,33nm,1.2s
DRGR 45.03 303 ⇑P **P 12 41 16.5 +1.8**
DRGR 45.03 303 P **P 12 41 16.6 +1.8**
DRGR pmax pmax
comp=Z,19nm,1.1s
KOLS Kolonicke sedl 45.04 306 *e*P **P 12 41 15.5 +0.7**
KOLS Kolonicke sedl 45.04 306 *e*P **P 12 41 15.5 +0.7**
GZR Gura Zlata 45.20 301 ⇓P **P 12 41 17.7 +1.6**
ARCES ARCESS Array B 45.30 336 P **P 12 41 17.2 +0.7**
comp=Z,9.4nm,0.8s,baz=98,slow=8.7,SNR=17
ARCES PcP **PcP 12 42 55.3 -0.8**
comp=Z,2.3nm,0.8s,baz=92,slow=2.7,SNR=3.7
YSS Yuzh-Sakhalins 45.58 57⇑*e*P **P 12 41 21.4 +2.4**
YSS pmax pmax
comp=Z,19nm,2.5s
BZS Buzias 45.97 302 ⇓P **P 12 41 24.2 +2.1**
BZS Buzias 45.97 302 P **P 12 41 23.8 +1.7**
BZS pmax pmax
comp=Z,7.0nm,1.4s
MDVR Moldovita 46.05 300 ⇑P **P 12 41 24.6 +1.8**
NIE Niedzica 46.27 307 P **P 12 41 26.7 +2.2**
NIE pmax pmax
comp=Z,4.0nm,1.3s
OJC Ojcow 46.49 308 P **P 12 41 26.3 +0.1**
OJC IAmb IAmb 12 41 28.1
comp=Z,7.0nm,0.9s
OJC Ojcow 46.49 308 P **P 12 41 26.3 +0.1**
OJC pmax pmax
comp=Z,7.0nm,0.9s
PSZ Piszkesteto 46.75 305 P **P 12 41 28.0 -0.3**
PSZ IAmb IAmb 12 41 30.6
comp=Z,3.8nm,0.9s
PSZ Piszkesteto 46.75 305 P **P 12 41 28.0 -0.3**
PSZ pmax pmax
comp=Z,4.0nm,0.9s
VYHS Vyhne 47.35 306 *e*P **P 12 41 34.6 +1.6**
VYHS pmax pmax
comp=Z,15nm,1.5s
VYHS Vyhne 47.35 306 *e*P **P 12 41 34.6 +1.6**
MORC Moravsky Berou 47.99 308 P **P 12 41 37.9 0.0**
MORC IAmb IAmb 12 41 40.9
comp=Z,13nm,1.3s
MORC Moravsky Berou 47.99 308 P **P 12 41 37.9 0.0**
MORC pmax pmax
comp=Z,13nm,1.3s
DPC Dobruska-Polom 48.68 309 *e*P **P 12 41 44.3 +1.1**
DPC Dobruska-Polom 48.68 309 *e*P **P 12 41 44.3 +1.1**
OSTC Ostas 48.71 309 *e*P **P 12 41 45.2 +1.7**
CHVC Chvalec 48.81 309 *e*P **P 12 41 45.7 +1.5**
UPC Upice 48.85 309 *e*P **P 12 41 45.9 +1.4**
UPC Upice 48.85 309 *e*P **P 12 41 45.9 +1.4**
KRUC Moravsky 48.85 307 P **P 12 41 44.8 +0.3**
KRUC pmax pmax
comp=Z,10.0nm,1.2s
MA2 Magadan 49.10 39 LR LR 13 05 52.3
comp=Z,36nm,21.3s,baz=276,slow=40
MA2 Magadan 49.10 39 P **P 12 41 45.5 -0.8**
MA2 Magadan 49.10 39 *ce*P **P 12 41 47.1 +0.8**
MA2 pmax pmax
comp=Z,16nm,1.7s
BLY Banja Luka 49.21 301 P **P 12 41 47.3 -0.1**
BLY IAmb IAmb 12 41 54.7
comp=Z,12nm,1.2s
CONA Conrad Observa 49.41 306 *e*pP **P 12 41 50.2 +1.2**
comp=Z,10nm,1.2s
SEY Seymchan 49.74 34⇑*i*P **P 12 41 51.7 +0.6**
PRU Pruhonice 49.87 309 *e*P **P 12 41 53.9 +1.6**
PRU *e*x x 12 41 59.2
PRU Pruhonice 49.87 309 *e*P **P 12 41 53.9 +1.6**
PRU *e* 12 41 59.2
NC405 NORSAR Array S 50.07 323 P **P 12 41 53.7 0.0**
NORES NORESS Array B 50.18 323 P **P 12 41 55.6 +1.1**
NORES pmax pmax
comp=Z,9.0nm,0.9s
SOKA Soboth 50.23 304 *e*pP **P 12 41 56.2 +0.9**
comp=Z,18nm,1.2s
NB2 NORSAR Subarra 50.32 323 P **P 12 41 55.7 +0.1**
comp=Z,25nm,1.1s,baz=86,slow=7.4
NB2 NORSAR Subarra 50.32 323 P **P 12 41 55.7 +0.1**
baz=86,slow=7.4
NOA NORSAR Array B 50.32 323 P **P 12 41 55.5 -0.1**
comp=Z,7.9nm,0.8s,baz=86,slow=7.4,SNR=15
NOA LR LR 13 03 27.6
comp=Z,56nm,19.4s,baz=100,slow=36
MOA Molln 50.48 306 *e*pP **P 12 41 57.6 +0.6**
comp=Z,9.6nm,1.4s
CLL Collm 50.58 311 *e*P **P 12 41 58.0 +0.3**
CLL Collm 50.58 311 *e*P **P 12 41 58.0 +0.3**
OBKA Obir 50.60 304 *e*pP **P 12 41 58.2 +0.3**
comp=Z,13nm,1.5s
GEC2 GERESS Array S 50.63 307 P **P 12 41 57.9 -0.3**
GEC2 IAmb IAmb 12 42 00.4
comp=Z,18nm,1.2s
GERES GERESS Array B 50.63 307 P **P 12 41 59.5 +1.3**
comp=Z,4.8nm,1.0s,baz=79,slow=6.9,SNR=23
GERES LR LR 13 07 17.5
comp=Z,135nm,20.6s,baz=83,slow=41
KHC Kasperske Hory 50.65 308 *e*P **P 12 41 59.4 +1.1**
KHC *e*pP **sP 12 42 04.5 -0.2**
KHC Kasperske Hory 50.65 308 P **P 12 41 57.8 -0.5**
KHC Kasperske Hory 50.65 308⇑*e*P **P 12 41 59.7 +1.4**
KHC pmax pmax
comp=Z,13nm,1.2s
GRA1 Grafenberg Arr 52.03 309 P **P 12 42 08.8 +0.2**
GRF Grafenberg Arr 52.03 309 P **P 12 42 08.8 +0.2**
GRF pmax pmax
comp=Z,43nm,1.4s
WTTA Wattenberg 52.35 306 *e*pP **P 12 42 11.4 +0.2**
comp=Z,4.9nm,0.8s
NRCA Norcia 52.56 300 P **P 12 42 12.7 0.0**
NRCA IAmb IAmb 12 42 16.0
comp=Z,7.8nm,1.0s
MURB Monte Urbino 52.85 301 P **P 12 42 14.9 +0.1**
RETA Reutte 52.87 306 *e*pP **P 12 42 15.2 +0.3**
comp=Z,7.3nm,1.2s
PETK Petropavlovsk- 53.87 46 P **P 12 42 21.7 -0.3**
comp=Z,2.1nm,0.7s,baz=269,slow=9.9,SNR=2.2
PETK LR LR 13 06 40.4
comp=Z,92nm,18.2s,baz=62,slow=38
BILL Bilibino 55.00 27 P **P 12 42 30.7 +0.6**
BILL IAmb IAmb 12 42 32.6
comp=Z,8.3nm,1.2s
BILL Bilibino 55.00 27⇓*e*P **P 12 42 30.7 +0.6**
BILL pmax pmax
comp=Z,10.0nm,1.5s
KMBO Kilima Mbogo 55.83 239 P **P 12 42 37.1 +0.2**
comp=Z,1.6nm,0.3s,baz=28,slow=12,SNR=7.1
KMBO Kilima Mbogo 55.83 239 P **P 12 42 36.3 -0.7**
KMBO IAmb IAmb 12 42 38.6
comp=Z,9.4nm,1.1s
DAG Danmarks Havn 57.78 344 P **P 12 42 51.3 +1.6**
MBAR Mbarara 60.12 245 P **P 12 43 06.5 -0.5**
MBAR IAmb IAmb 12 43 08.8
comp=Z,5.1nm,0.9s
MBAR Mbarara 60.12 245⇓*i*P **P 12 43 07.6 +0.6**
MBAR pmax pmax
comp=Z,8.0nm,1.1s
RDOG Red Dog Mine 65.56 22 P **P 12 43 42.8 +0.5**
RDOG IAmb IAmb 12 43 58.2
comp=Z,4.2nm,1.0s
ESDC Sonseca Array 65.65 302 P **P 12 43 43.6 +0.1**
comp=Z,2.6nm,0.7s,baz=52,slow=6.6,SNR=16
ANM Nome 66.79 26 P **P 12 43 50.6 +0.3**
ANM IAmb IAmb 12 43 52.2
comp=Z,5.8nm,0.8s
ANM Nome 66.79 26 P **P 12 43 50.6 +0.3**
ANM pmax pmax
comp=Z,6.0nm,0.8s
COLD Coldfoot 69.75 19 P **P 12 44 08.6 -0.2**
COLD IAmb IAmb 12 44 14.0
comp=Z,6.2nm,0.9s
MLY Manley 71.21 21 P **P 12 44 17.6 -0.2**
COLA College 72.15 20 P **P 12 44 22.9 -0.5**
COLA College 72.15 20 P **P 12 44 22.9 -0.5**
COLA pmax pmax
comp=Z,15nm,1.1s
LSZ Lusaka 72.18 235 P **P 12 44 23.6 -0.8**
LSZ IAmb IAmb 12 44 24.5
comp=Z,5.0nm,0.8s
LSZ Lusaka 72.18 235 P **P 12 44 23.6 -0.8**
LSZ pmax pmax
comp=Z,5.0nm,0.9s
CCB Clear Creek Bu 72.34 20 P **P 12 44 24.3 -0.2**
CCB IAmb IAmb 12 44 28.9
comp=Z,6.7nm,1.0s
IL31 72.50 20 P **P 12 44 24.8 -0.6**
IL31 IAmb IAmb 12 44 25.7
comp=Z,8.8nm,1.0s
ILAR Eielson Array 72.50 20 P **P 12 44 24.8 -0.7**
comp=Z,4.0nm,0.8s,baz=311,slow=5.1,SNR=36
INK Inuvik 72.67 13 P **P 12 44 26.1 -0.3**
comp=Z,2.6nm,0.8s,baz=351,slow=5.7,SNR=4.5
INK Inuvik 72.67 13 P **P 12 44 26.5 +0.1**
INK IAmb IAmb 12 44 27.0
comp=Z,5.7nm,1.1s
INK Inuvik 72.67 13 P **P 12 44 26.5 +0.1**
INK pmax pmax
comp=Z,6.0nm,1.1s
WRA Warramunga Arr 74.25 130 P **P 12 44 35.8 -0.6**
comp=Z,14nm,0.8s,baz=327,slow=5.9,SNR=41
WRAB Tennant Creek 74.25 130 P **P 12 44 35.5 -0.9**
WRAB Tennant Creek 74.25 130 *d i*P **P 12 44 35.8 -0.6**
WRAB pmax pmax
comp=Z,19nm,0.9s
WB2 Warramunga Arr 74.25 130 P **P 12 44 35.9 -0.5**
WR0 Warramunga Arr 74.39 129 P **P 12 44 36.2 -0.9**
TOA0 Torodi Ar. Sit 74.87 275 P **P 12 44 39.6 -0.6**
TORD Torodi Ar. Bea 74.87 275 P **P 12 44 39.1 -1.1**
comp=Z,2.0nm,0.8s,baz=43,slow=6.0,SNR=8.5
DAWY Dawson 75.02 18 IAmb IAmb 12 44 41.3
comp=Z,11nm,1.1s
NWAO Narrogin (SRO) 75.92 150 P **P 12 44 43.6 -2.1**
comp=Z,6.4nm,0.7s,baz=319,slow=8.7,SNR=4.7
AS31 Alice Springs 76.77 132 P **P 12 44 50.0 -0.9**
ASAR Alice Springs 76.77 132 P **P 12 44 50.1 -0.7**
comp=Z,10.0nm,0.8s,baz=320,slow=6.0,SNR=82
LBTB Lobatse 80.89 230 P **P 12 45 12.6 -0.9**
LBTB Lobatse 80.89 230 P **P 12 45 12.6 -0.9**
LBTB pmax pmax
comp=Z,19nm,1.5s
YKA Yellowknife Ar 80.96 8 P **P 12 45 12.3 -0.9**
comp=Z,2.9nm,0.7s,baz=339,slow=5.4,SNR=59
TSUM Tsumeb 82.16 240 LR LR 13 23 28.5
comp=Z,32nm,18.2s,baz=332,slow=37
CTA Charters Tower 82.22 122 P **P 12 45 19.1 -1.5**
comp=Z,6.0nm,0.8s,baz=313,slow=5.9,SNR=6.2
BOSA Boshof 83.71 228 P **P 12 45 26.1 -2.2**
comp=Z,5.2nm,0.8s,baz=38,slow=3.3,SNR=7.6
BOSA Boshof 83.71 228 P **P 12 45 26.9 -1.3**
BOSA IAmb IAmb 12 45 27.3
comp=Z,5.5nm,0.8s
BOSA Boshof 83.71 228 P **P 12 45 26.9 -1.3**
BOSA pmax pmax
comp=Z,6.0nm,0.8s
DBIC Dimbokro 83.84 274 LR LR 13 29 23.5
comp=Z,76nm,18.9s,baz=268,slow=40
BBOO Buckleboo 84.90 137 P **P 12 45 32.6 -1.4**
FFC Flin Flon 89.62 2 P **P 12 45 55.6 -1.1**
FFC IAmb IAmb 12 45 57.0
comp=Z,5.7nm,1.0s
FFC Flin Flon 89.62 2 P **P 12 45 55.6 -1.1**
FFC pmax pmax
comp=Z,6.0nm,1.0s
CPUP Villa Florida 144.36 274 PKP **PKPab 12 52 32.4 -1.3**
comp=Z,2.9nm,0.9s,baz=132,slow=4.4,SNR=4.0
LPAZ La Paz 147.22 299 PKPbc **PKPdf 12 52 42.1 +0.6**
comp=Z,2.2nm,1.0s,baz=9.5,slow=6.1,SNR=4.2

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*IDC **15** 12:40:15.9±1.6, 34°67S×179°33W, h0km, mb3.9/3, mb1 4.1/5, mb1mx3.9/42, mbtmp4.0/5, ML3.9/2, MS3.5/5, Ms1 3.5/5, ms1mx3.1/30, Error ellipse: s-maj=40.1km s-min=32.0km az=80.0*
*WEL **15** 12:40:21.8±0.7, 36°S±12°×17°9W±1°8, h299km±24km, M3.8/10, mB4.0/6, MLv4.4/10, Mw(mB)3.0/6*
*NEIC **15** 12:40:22.4±1.2, 34°85S±0°07×179°6W±0°1, h35km±2km, mb4.2/8, Error ellipse: s-maj=18.4km s-min=10.9km az=261.0*
ISC 15 12:40:22.2±1.0**, 35°06S**±0°09×**179°3W**±0°1**, h43km, n64, σ2s13**/72**, mb4.1**/6**, MS3.6**/4**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.16**	**217**		**Pn**	**12 41 10.4**	**+1.0**
MXZ				Sn	**Sn**	**12 41 48.5**	**+2.6**
URZ	**Urewera**	**4.30**	**221**	Pn	**Pn**	**12 41 26.6**	**+1.5**
	5.5nm,0.3s,baz=272,slow=4.9,SNR=35						
URZ				Sn	**Sn**	**12 42 19.0**	**+5.0**
	11nm,0.3s,baz=164,slow=19,SNR=17						
URZ	**Urewera**	**4.30**	**221**		**Pn**	**12 41 26.0**	**+0.9**
URZ				Sn	**Sn**	**12 42 18.1**	**+4.0**
BKZ	**Black Stump Fm**	**5.30**	**218**		**Pn**	**12 41 39.7**	**+0.8**
BKZ				Sn	**Sn**	**12 42 42.3**	**+3.5**
MCHZ	**McNeill Hill**	**5.42**	**215**	P	**Pn**	**12 41 42.2**	**+1.7**
MCHZ				S	**Sn**	**12 42 44.9**	**+3.4**
KWHZ	**Kaweka Forest**	**5.53**	**217**	P	**Pn**	**12 41 43.5**	**+1.4**
KWHZ				S	**Sn**	**12 42 47.6**	**+3.2**
KAHZ	**Kahuranaki**	**5.62**	**212**	P	**Pn**	**12 41 43.2**	**-0.1**
KRHZ	**Kereru**	**5.73**	**216**	P	**Pn**	**12 41 44.8**	**+0.1**
BHHZ	**Black Hill Sta**	**5.76**	**219**	P	**Pn**	**12 41 45.7**	**+0.4**
NGZ	**Ngauruhoe**	**5.79**	**223**	S	**Sn**	**12 42 54.1**	**+3.2**
PXZ	**Pawanui**	**5.83**	**210**	P	**Pn**	**12 41 45.2**	**-0.8**
PNHZ	**Pukenui**	**6.02**	**215**	P	**Pn**	**12 41 47.6**	**-1.2**
WPHZ	**Waipukurau**	**6.03**	**213**	P	**Pn**	**12 41 47.1**	**-1.8**
TSZ	**Takapari Road**	**6.25**	**216**	P	**Pn**	**12 41 51.0**	**-0.9**
ANWZ	**Angora Road**	**6.34**	**211**	S	**Sn**	**12 43 06.0**	**+1.8**
DVHZ	**Dannevirke**	**6.35**	**213**	P	**Pn**	**12 41 51.8**	**-1.4**
DVHZ				S	**Sn**	**12 43 04.0**	**-0.4**
WAZ	**Wanganui**	**6.53**	**222**	P	**Pn**	**12 41 57.2**	**+1.5**
WAZ				S	**Sn**	**12 43 11.3**	**+2.4**
POWZ	**Post Office Ro**	**6.60**	**215**	S	**Sn**	**12 43 10.3**	**-0.4**
BFZ	**Birch Farm**	**6.63**	**211**	P	**Pn**	**12 41 54.4**	**-2.6**
BFZ				S	**Sn**	**12 43 09.4**	**-1.8**
PRWZ	**Pori Road**	**6.64**	**213**	P	**Pn**	**12 41 58.1**	**+0.9**
CPWZ	**Castlepoint**	**6.84**	**210**	P	**Sn**	**12 43 17.8**	**+1.4**
TIWZ	**Tintock**	**6.86**	**212**	P	**Pn**	**12 42 00.8**	**+0.5**
TIWZ				S	**Sn**	**12 43 17.7**	**+0.6**
TIWZ	**Tintock**	**6.86**	**212**	P	**Sn**	**12 43 18.4**	**+1.4**
MRZ	**Mangatainoka R**	**6.91**	**214**	P	**Pn**	**12 41 59.3**	**-1.6**
MRZ				S	**Sn**	**12 43 18.5**	**+0.4**
HOWZ	**Holdsworth Sta**	**7.12**	**214**	P	**Sn**	**12 43 21.9**	**-1.6**
TMWZ	**Te Maipa**	**7.13**	**211**	P	**Sn**	**12 43 21.2**	**-2.4**
OGWZ	**Otaki Gorge**	**7.22**	**216**	P	**Sn**	**12 43 26.5**	**+0.7**
MTW	**Mount Morrison**	**7.34**	**212**	P	**Sn**	**12 43 25.7**	**-3.0**
KIW	**Kapiti Island**	**7.38**	**217**	P	**Sn**	**12 43 29.6**	**-0.2**
TRWZ	**Traveller**	**7.46**	**210**	P	**Sn**	**12 43 26.7**	**-4.9**
CAW	**Cannon Point**	**7.50**	**215**	P	**Sn**	**12 43 33.1**	**+0.5**
PAWZ	**Paruwai Farm**	**7.55**	**212**	P	**Sn**	**12 43 33.4**	**-0.7**
MSWZ	**Moikau Station**	**7.66**	**212**	P	**Sn**	**12 43 35.0**	**-1.6**
PLWZ	**Palliser**	**7.78**	**212**	P	**Sn**	**12 43 37.5**	**-2.1**
BHW	**Baring Head**	**7.82**	**214**	S	**Sn**	**12 43 36.7**	**-3.9**
BHW	**Baring Head**	**7.82**	**214**	P	**Sn**	**12 43 39.5**	**-1.1**
DUWZ	**D'Urville Isla**	**7.84**	**221**	P	**Sn**	**12 43 42.7**	**+1.5**
TCW	**Tory Channel**	**7.96**	**218**	P	**Sn**	**12 43 42.2**	**-1.7**
TUWZ	**Tuamarina**	**8.29**	**218**		**Sn**	**12 43 50.5**	**-1.6**
TUWZ	**Tuamarina**	**8.29**	**218**	P	**Sn**	**12 43 50.7**	**-1.3**
NNZ	**Nelson**	**8.43**	**221**	P	**Sn**	**12 43 54.7**	**-0.8**
QRZ	**Quartz Range**	**8.65**	**226**	P	**Sn**	**12 43 59.1**	**-1.8**
THZ	**Tophouse**	**9.06**	**220**		**Sn**	**12 44 09.4**	**-1.8**
KHZ	**Kahutara**	**9.23**	**215**		**Sn**	**12 44 11.2**	**-4.0**
RPZ	**Rata Peaks**	**11.41**	**218**	Pn	**Pn**	**12 43 02.8**	**+0.2**
	0.7nm,0.3s,baz=6.3,slow=9.2,SNR=4.2						
RPZ				Sn	**Sn**	**12 45 01.9**	**-6.7**
	1.1nm,0.3s,baz=356,slow=22,SNR=11						
RPZ	**Rata Peaks**	**11.41**	**218**		**Pn**	**12 43 03.0**	**+0.4**

DZM	Mont Dzumac	17.98	312	LR	LR	12 50 25.2	
	comp=Z,210nm,18.2s,baz=220,slow=34						
RAR	Rarotonga	22.01	56	P	P	12 45 14.8	+2.0
SANVU	Saraoutou	22.99	325	P	P	12 45 21.4	-1.8
ARMA	Armidale	24.85	273	P	P	12 45 39.3	-1.4
ARMA				IAmb	IAmb	12 45 41.2	
	comp=Z,6.4nm,1.1s						
PPT	Papeete	31.66	64	LR	LR	12 58 47.7	
	comp=Z,29nm,18.4s,baz=196,slow=35						
STKA	Stephens Creek	32.64	264	P	P	12 46 49.7	-0.4
AS31	Alice Springs	42.00	273	P	P	12 48 08.6	-0.9
ASAR	Alice Springs	42.00	273	P	P	12 48 08.8	-0.7
	comp=Z,1.7nm,0.7s,baz=114,slow=7.9,SNR=27						
ASAR				LR	LR	13 06 26.6	
	comp=Z,50nm,18.4s,baz=120,slow=37						
WB2	Warramunga Arr	43.40	278	P	P	12 48 20.1	-0.8
WB2				IAmb	IAmb	12 48 21.3	
	comp=Z,5.4nm,1.1s						
WRA	Warramunga Arr	43.41	278	P	P	12 48 20.0	-0.9
	comp=Z,1.7nm,0.6s,baz=122,slow=7.5,SNR=6.7						
WB0	Warramunga Arr	43.45	278	P	P	12 48 20.3	-1.0
WB0				IAmb	IAmb	12 48 35.6	
	comp=Z,3.3nm,0.8s						
FORT	Forrest	43.98	260	P	P	12 48 24.6	-0.7
QSPA	South Pole Qui	55.06	180	P	P	12 49 52.5	+3.0
	comp=Z,0.8nm,0.8s,baz=266,slow=3.2,SNR=6.3						
QSPA	South Pole Qui	55.06	180	P	P	12 49 52.0	+2.5
QSPA				IAmb	IAmb	12 50 00.6	
	comp=Z,3.8nm,1.2s						
LEM	Lembang	72.27	274	LR	LR	13 23 48.0	
	comp=Z,48nm,18.0s,baz=32,slow=36						
ASAJ	Asahikawa	86.09	334	LR	LR	13 26 49.8	
	comp=Z,30nm,19.9s,baz=338,slow=33						
FINES	FINESS Array B	149.06	336	PKPbc	PKPbc	13 00 03.4	-1.4
	comp=Z,2.4nm,0.9s,baz=43,slow=2.5,SNR=7.6						
BRTR	Keskin Array B	153.51	290	PKPbc	PKPbc	13 00 15.6	-0.4
	comp=Z,0.5nm,0.8s,baz=30,slow=3.5,SNR=3.2						

IDC ***15*** *12:44:01.9±0.8, 52°.63N×169°.66W, h0km, mb4.0/12, mb1 4.3/14, mb1mx3.9/54, mbtmp4.0/14, ML3.3/2, MS3.4/6, Ms1 3.4/6, ms1mx2.9/55, Error ellipse: s-maj=25.8km s-min=14.2km az=170.0*

AEIC ***15*** *12:44:03.9±1.9, 52°.74N±0°.10×169°.50W±0°.10, h12km±5km, ML3.8/28, mb4.3/38(NEIC), Error ellipse: s-maj=15.8km s-min=3.9km az=151.0*

NEIC ***15*** *12:44:04.6±1.5, 52°.9N±0°.1×169°.61W±0°.09, h10km±1km, Error ellipse: s-maj=20.8km s-min=4.8km az=158.0*

ISC 15 12:44:03.6±1.7**, 52°.8N**±0°.1×**169°.56W**±0°.05**, h5**km±10km**, n99, σ0.91**/99**, mb4.2**/21**, MS3.5**/5**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.46	68		Pg	12 44 13.1	+0.6
NIKH				Sg	Sb	12 44 20.6	-0.7
OKSP	Okmok Steeple	0.89	59		Pg	12 44 20.2	-0.6
OKSP					Sg	12 44 33.3	+1.0
OKER	Okmok East Rim	1.12	54		Pg	12 44 24.7	-0.4
OKFG	Magazine Ridge	1.17	58		Pb	12 44 24.9	-1.4
OKFG					Sb	12 44 41.6	-0.1
MGOD	Makushin Gods	1.90	57		Pn	12 44 35.5	-1.1
MGOD					Sn	12 45 01.5	+0.6
MREP	Makushin Rep't	1.97	58		Pn	12 44 36.8	-0.9
MCIR	Makushin Cirqu	1.97	53		Pn	12 44 37.9	+0.4
MSW	Makushin Switc	2.01	55		Pn	12 44 37.5	-0.6
MNAT	Makushin Natee	2.04	57		Pn	12 44 37.9	-0.7
MNAT					Sn	12 45 04.2	-0.2
MTBL	Makushin Table	2.09	55		Pn	12 44 38.9	-0.4
AKRB	Akutan Reef Bi	2.48	56		Pn	12 44 45.1	+0.5
AKMO	Akutan Morgan	2.49	57		Pn	12 44 44.9	+0.2
AKBBA	Akutan Broad B	2.53	58		Pn	12 44 45.4	+0.1
AKLV	Akutan Long Va	2.55	56		Pn	12 44 46.0	+0.4
AKGG	Akutan Green G	2.55	55		Pn	12 44 46.2	+0.5
AKGG					Sb	12 45 19.4	-2.1
AKUT	Akutan	2.63	58	Pn	Pn	12 44 47.2	+0.5
AKUT				Sn	Sn	12 45 19.9	+1.0
KOFP	Korovin Flat P	2.82	261		Pn	12 44 49.0	-0.3
ATKA	Atka Island	2.90	260		Pn	12 44 49.7	-0.6
WESP	Westdahl Peak	3.34	58		Pn	12 44 57.3	+0.7
GSTR	Great Sitkin T	4.04	263	Pn	Pn	12 45 06.2	+0.1
GSTR				Sn	Sn	12 45 52.5	-1.2
GSMY	Great Sitkin M	4.05	262		Pn	12 45 06.1	-0.1
FALS	False Pass	4.18	58	Pn	Pn	12 45 09.1	+1.1
ADK	Adak	4.46	261		Pn	12 45 12.2	+0.3
ADK				Sn	Sn	12 46 04.9	+0.8
SDPT	Sand Point	5.93	61	Pn	Pn	12 45 32.8	+0.9
CNBA	Chernabura Isl	6.25	67	Pn	Pn	12 45 37.1	+0.8
CHGN	Chignik	7.37	57	Pn	Pn	12 45 52.5	+0.8
KDAK	Kodiak Island	10.88	56	Pn	Pn	12 46 40.3	+0.5
GAMB	Gambell	11.07	355		Pn	12 46 43.1	+0.8
SVW2	Sparrevohn	11.27	37	Pn	Pn	12 46 45.3	+0.3
ANM	Nome	12.00	9	Pn	Pn	12 46 54.9	-0.1
SKT	Skwentna	13.34	39		Pn	12 47 14.6	+1.3
KTH	Kantishna Hill	14.52	35		Pn	12 47 30.6	+1.1
SCM	Sheep Creek Mo	14.96	44		Pn	12 47 36.1	+0.5
MLY	Manley	15.55	31	P	Pn	12 47 46.2	-1.6
MLY				IAmb	IAmb	12 47 53.1	
	comp=Z,30nm,1.2s						
RDOG	Red Dog Mine	15.64	9		Pn	12 47 44.8	+0.4
RDOG				IAmb	IAmb	12 47 56.9	
	comp=Z,16nm,1.1s						
WRH	Wood River Hil	16.07	35		Pn	12 47 50.8	+0.9
WRH				IAmb	IAmb	12 48 04.6	
	comp=Z,24nm,1.5s						
CCB	Clear Creek Bu	16.27	35		Pn	12 47 52.9	+0.3
TGL	Tana Glacier	16.57	51	P	Pn	12 47 57.8	+1.2
TGL				IAmb	IAmb	12 48 05.2	
	comp=Z,15nm,0.7s						
IL31		16.66	35		Pn	12 47 57.2	-0.3
ILAR	Eielson Array	16.66	35	Pn	Pn	12 47 57.0	-0.6
	comp=Z,0.3nm,0.3s,baz=226,slow=11,SNR=16						
ILAR				LR	LR	12 54 57.4	
	comp=Z,105nm,20.5s,baz=262,slow=39						
EGAK	Eagle	18.78	39	P	Pn	12 48 23.7	-0.1
HYT	Haines Junctio	19.13	53	P	Pn	12 48 28.1	0.0
HYT				IAmb	IAmb	12 48 30.4	
	comp=Z,33nm,1.4s						
PETK	Petropavlovsk-	19.64	284	P	P	12 48 32.3	-0.6
	comp=Z,0.2nm,0.3s,baz=82,slow=14,SNR=3.9						
SKAG	Skagway	20.03	57	P	P	12 48 37.8	+0.8
EPYK	Eagle Plains	21.13	37	P	P	12 48 47.8	-1.2
EPYK				IAmb	IAmb	12 48 52.9	
	comp=Z,22nm,0.8s						
SEY	Seymchan	22.29	312	P	P	12 49 00.8	-0.6
	comp=Z,0.9nm,0.5s,baz=93,slow=18,SNR=4.6						
DLBC	Dease Lake	22.77	60	P	P	12 49 06.7	+0.1
	comp=Z,7.6nm,0.8s,baz=332,slow=7.8,SNR=4.9						
DLBC	Dease Lake	22.77	60	P	P	12 49 06.6	+0.1
INK	Inuvik	23.05	34	P	P	12 49 09.6	+0.3
	comp=Z,4.3nm,1.0s,baz=221,slow=11,SNR=9.8						
INK				LR	LR	12 59 00.5	
	comp=Z,120nm,19.1s,baz=156,slow=39						
INK	Inuvik	23.05	34	P	P	12 49 09.2	-0.1
INK				IAmb	IAmb	12 49 11.8	
	comp=Z,12nm,1.3s						
YKA	Yellowknife Ar	30.05	49	P	P	12 50 12.5	-0.6
	comp=Z,0.7nm,0.4s,baz=272,slow=8.4,SNR=10						
YKA				LR	LR	13 03 24.9	
	comp=Z,108nm,21.0s,baz=0.0,slow=38						
B08A	Colville Reser	31.67	78	P	P	12 50 28.5	+0.9
B08A				IAmb	IAmb	12 50 33.0	
	comp=Z,2.1nm,0.7s						
WALA	Waterton Lakes	34.53	73	P	P	12 50 52.8	+0.1
WALA				IAmb	IAmb	12 50 57.5	
	comp=Z,9.5nm,1.3s						
JTMT	Jette	34.94	76	P	P	12 50 56.5	+0.2
JTMT				IAmb	IAmb	12 51 01.3	
	comp=Z,4.6nm,0.9s						
MSO	Missoula	35.60	77	P	P	12 51 01.9	0.0
BEKR	Beckworth	35.64	91	P	P	12 51 01.4	-1.0
BEKR				IAmb	IAmb	12 51 08.9	
	comp=Z,8.3nm,1.2s						
KLR	Kul'dur	36.21	289	P	P	12 51 06.9	-0.1
	comp=Z,0.7nm,0.6s,baz=90,slow=12,SNR=3.4						
EGMT	Eagleton	37.45	73	P	P	12 51 18.6	+1.0
H11N2	WAKE ISLAND Hy	37.72	218	T	T	13 31 22.0	
	baz=24,slow=76,SNR=115						
H11N3	WAKE ISLAND Hy	37.73	218	T	T	13 31 20.7	
	baz=24,slow=76,SNR=109						
H11N1	WAKE ISLAND Hy	37.74	218	T	T	13 31 23.4	
	baz=24,slow=76,SNR=67						
NVAR	Mina Array Bea	37.79	91	P	P	12 51 22.2	+1.4
	comp=Z,1.5nm,0.8s,baz=294,slow=8.8,SNR=5.9						
YHL	Hebgen Lake	38.29	78	P	P	12 51 25.8	+0.8
YHB	Horse Butte	38.33	78	P	P	12 51 26.2	+0.9
YMR	Madison River	38.52	78	P	P	12 51 27.0	+0.1
YHH	Holmes Hill	38.52	78	P	P	12 51 26.9	-0.1
YNE	Yellowstone No	38.90	77	P	P	12 51 30.9	+0.8
H11S1	WAKE ISLAND Hy	38.91	217	T	T	13 32 46.5	
	baz=23,slow=76,SNR=1194						
H11S2	WAKE ISLAND Hy	38.92	217	T	T	13 32 43.9	
	baz=23,slow=76,SNR=985						
H11S3	WAKE ISLAND Hy	38.93	217	T	T	13 32 45.6	
	baz=23,slow=76,SNR=672						
TPNV	Topopah Spring	39.99	92	P	P	12 51 39.1	-0.1
PD31	Pinedale Array	40.44	79	P	P	12 51 43.6	+0.6
PDAR	Pinedale Array	40.44	79	P	P	12 51 42.5	-0.4
	comp=Z,2.3nm,0.8s,baz=305,slow=5.4,SNR=13						
GSC	Goldstone, Bar	40.74	94	P	P	12 51 46.4	+1.1
GSC				IAmb	IAmb	12 51 51.7	
	comp=Z,5.3nm,1.0s						
Q16A	Castle Valley	41.81	85	P	P	12 51 54.3	+0.1
O20A	White River Ci	42.81	82	P	P	12 52 01.8	-0.6
O20A				IAmb	IAmb	12 52 08.1	
	comp=Z,7.8nm,0.8s						
Y14A	Wickenburg	43.97	92	P	P	12 52 12.6	+1.1
ULM	Lac du Bonnet	44.05	62	P	P	12 52 11.4	-0.6
	comp=Z,4.4nm,1.0s,baz=299,slow=10,SNR=7.9						
ULM	Lac du Bonnet	44.05	62	P	P	12 52 12.3	+0.3
ULM				IAmb	IAmb	12 52 15.2	
	comp=Z,5.4nm,0.9s						
AGMN	Agassiz Nation	45.15	65	P	P	12 52 21.9	+1.1
KSRS	Korea Array	45.24	276	LR	LR	13 09 16.3	
	comp=Z,9.7nm,21.7s,baz=320,slow=34						
214A	Organ Pipe Nat	45.45	94	P	P	12 52 22.8	-0.6
214A				IAmb	IAmb	12 52 29.4	
	comp=Z,5.8nm,1.2s						
EYMN	Ely	47.73	63	P	P	12 52 40.9	-0.2
FRB	Frobisher Bay	48.70	36	LR	LR	13 13 06.2	
	comp=Z,109nm,19.7s,baz=5.0,slow=36						
G40A	Rib Lake	50.08	65	P	P	12 52 59.0	-0.1
MNTX	Cornudas Mount	50.14	88	P	P	12 52 59.5	-0.3
SONM	Songino Array	50.98	300	PcP	PcP	12 54 20.4	-1.7
	comp=Z,0.6nm,0.6s,baz=51,slow=2.0,SNR=4.2						
E43A	Lone Tree Farm	51.12	62	P	P	12 53 07.6	+0.7
WMOK	Wichita Mounta	52.02	81	P	P	12 53 14.2	+0.3
WMOK				IAmb	IAmb	12 53 17.8	
	comp=Z,5.3nm,0.9s						
HHC	Hu-ho-hao-te	52.66	291	eP	P	12 53 19.9	+1.3
TXAR	Lajitas Array	52.86	89	P	P	12 53 20.2	-0.1
	comp=Z,1.9nm,0.7s,baz=304,slow=6.2,SNR=10						
WLAR	White Oak Lake	56.13	77	P	P	12 53 44.5	+0.7
H06N1	SOCORRO T-PHAS	56.28	104	T	T	13 54 37.6	
	SNR=8.4						
H06E1	SOCORRO T-PHAS	56.38	104	T	T	13 54 38.7	
	SNR=18						
LZH	Lanzhou	60.32	291	eP	P	12 54 13.6	+0.2
LZH				pP	pP	12 54 17.0	+2.0
LZH				sP	sP	12 54 18.5	+2.9
LZH				ePP	PP	12 56 27.8	+1.9
WMQ	Urumqi	63.17	308	eP	P	12 54 36.0	+3.6
MKAR	Makanchi Array	63.42	313	P	P	12 54 33.9	0.0
	comp=Z,0.3nm,0.7s,baz=44,slow=4.4,SNR=3.5						
MKAR				LR	LR	13 22 36.3	
	comp=Z,34nm,18.5s,baz=325,slow=36						
WRA	Warramunga Arr	87.18	231	P	P	12 56 47.9	-2.8
	comp=Z,1.0nm,0.7s,baz=45,slow=3.6,SNR=4.2						
ASAR	Alice Springs	90.58	230	P	P	12 57 04.9	-1.8
	comp=Z,2.4nm,0.8s,baz=36,slow=4.1,SNR=16						

VAO ***15*** *12:52:35.9±1.9, 21°.93S×68°.25W, h22km±16km, mb5.3*

NEIC ***15*** *12:52:37.3±1.3, 22°.51S±0°.05×68°.58W±0°.07, h96km±3km, Error ellipse: s-maj=9.5km s-min=6.7km az=86.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.62; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$1.88; $M_{r\theta}$-0.35; $M_{\theta\phi}$0.08; $M_{\phi r}$-1.82; Fault plane solution: $M_0$2.56000×10^{16} NP1:ϕ_s8.96000°, δ68.46000°, λ-84.29000°. NP2:ϕ_s173.73000°, δ22.25000°, λ-104.14000°. Principal axes: T 2.6686, Plg23.0000°, Azm95.0000°; N -0.2335, Plg5.0000°, Azm187.0000°; P -2.4351, Plg66.0000°, Azm289.0000°;*

IDC ***15*** *12:52:37.8±0.4, 22°.52S×68°.60W, h100km±3km, mb4.4/24, mb1 4.5/28, mb1mx4.4/41, mbtmp4.7/28, MS3.5/9, Ms1 3.5/9, ms1mx3.3/23 Error ellipse: s-maj=11.7km s-min=9.9km az=26.0*

MOS ***15*** *12:52:37.4±1.5, 22°.53S×68°.55W, h109km, mb5.0/16, Error ellipse: s-maj=12.9km s-min=7.4km az=102.7*

SJA ***15*** *12:52:37.3±0.8, 22°.50S×68°.75W, h115km±5km, ML4.5, MW4.4*

GUC ***15*** *12:52:38.4±0.6, 22°.48S×68°.71W, h110km±3km, mb4.7, ML5.1*

BJI ***15*** *12:52:40.0±0.0, 22°.50S×68°.60W, h100km, mB5.3/7*

GCMT ***15*** *12:52:44.0±0.3, 22°.53S±0°.02×68°.73W±0°.03, h114km±5km, MW4.9/79, Moment Tensor Solution. s16,c16; s79,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.02±.13; $M_{\theta\theta}$-0.24±.18; $M_{\phi\phi}$2.26±.24; $M_{r\theta}$-0.54±.07; $M_{\theta\phi}$-0.09±.17; $M_{\phi r}$-1.95±.12; Best double couple: $M_0$2.95100×10^{16} NP1:ϕ_s164.00000°, δ25.00000°, λ-114.00000°. NP2: ϕ_s10.00000°, δ67.00000°, λ-79.00000°. Principal axes: T 3.0190, Plg21.0000°, Azm92.0000°; N -0.1390, Plg10.0000°, Azm186.0000°; P -2.8830, Plg66.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 12:52:37.7±0.4**, 22°.55S**±0°.03×**68°.66W**±0°.04**, h104**km±3km**, h104km:pP-P, n608, σ1.13**/609**, mb5.0**/97**, 24C-6D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.24	255	eP	Pn	12 52 53.5	+0.6
LVC				iS	Sn	12 53 04.8	+0.5
LVC	Limon Verde	0.24	255	P	Pn	12 52 53.4	+0.6
	4µm,0.3s,baz=58,slow=4.9						
LVC				S	Sn	12 53 04.6	+0.3
	12µm,0.3s,baz=294,slow=20,SNR=296						
LVC	Limon Verde	0.24	255	eP	Pn	12 52 53.5	+0.6
LVC	Limon Verde	0.24	255		Pn	12 52 53.3	+0.4
LVC				Sn	Sn	12 53 04.3	0.0
LVC	Limon Verde	0.24	255	P	Pn	12 52 53.3	+0.4
LVC						12 53 04.3	
LVC	Limon Verde	0.24	255	iP	Pn	12 52 53.5	+0.6
LVC				iS	Sn	12 53 04.6	+0.3
PB06	IPOC Station P	0.85	259	⇑iP	Pn	12 52 57.7	+0.6
PB06				iS	Sn	12 53 12.3	+0.6
PB06	IPOC Station P	0.85	259	iP	Pn	12 52 57.7	+0.6
PB06				iS	Sn	12 53 12.5	+0.8
PB06				IAML		12 53 16.5	
	comp=Z,19µm,0.3s						
PB09	IPOC Station P	0.92	324	⇑iP	Pn	12 52 58.4	+0.6
PB09				iS	Sn	12 53 13.2	+0.4
PB09				IAML		12 53 14.5	
	comp=E,31µm,0.3s						
PB09	IPOC Station P	0.92	324	iP	Pn	12 52 58.5	+0.7
PB09				iS	Sn	12 53 13.2	+0.4
PB09				IAML		12 53 16.9	
	comp=Z,30µm,0.5s						
PB15	IPOC Station P	0.99	228	iP	Pn	12 52 59.8	+1.3
PB15				iS	Sn	12 53 16.1	+1.9
PB15	IPOC Station P	0.99	228	iP	Pn	12 52 59.9	+1.3
PB15				iS	Sn	12 53 16.2	+1.9
PB03	IPOC Station P	1.13	296	⇑iP	Pn	12 53 00.3	+0.3
PB03				iS	Sn	12 53 16.4	-0.3
PB03				IAML		12 53 17.7	
	comp=E,38µm,0.5s						
PB03	IPOC Station P	1.13	296	iP	Pn	12 53 00.3	+0.3
PB03				iS	Sn	12 53 17.2	+0.4
PB04	IPOC Station P	1.39	279	⇑iP	Pn	12 53 03.2	+0.2
PB04				iS	Sn	12 53 22.6	+0.4
PB04				IAML		12 53 25.3	
	comp=N,31µm,0.3s						
PB04	IPOC Station P	1.39	279		Pn	12 53 02.8	-0.2
PB04				Sn	Sn	12 53 21.8	-0.4
PB04	IPOC Station P	1.39	279	iP	Pn	12 53 03.3	+0.2
PB04				iS	Sn	12 53 22.8	+0.6
PB04				IAML		12 53 25.3	
	comp=Z,12µm,0.2s						
PB07	IPOC Station P	1.40	306	⇑iP	Pn	12 53 03.4	+0.3
PB07				iS	Sn	12 53 22.1	-0.2
PB07				IAML		12 53 23.4	
	comp=N,39µm,0.2s						
PB07	IPOC Station P	1.40	306	iP	Pn	12 53 03.4	+0.3
PB07				iS	Sn	12 53 22.4	0.0
PB05	IPOC Station P	1.45	258	⇑iP	Pn	12 53 04.1	+0.4
PB05				iS	Sn	12 53 24.0	+0.5
PB05	IPOC Station P	1.45	258	iP	Pn	12 53 04.2	+0.4
PB05				iS	Sn	12 53 23.9	+0.5
PB02	IPOC Station P	1.68	317	eP	Pn	12 53 06.2	-0.2
PB02				eS	Sn	12 53 27.6	-0.7
PB02	IPOC Station P	1.68	317	iP	Pn	12 53 06.7	+0.2
PB02				iS	Sn	12 53 27.6	-0.7
PB01	IPOC Station P	1.68	333	⇑iP	Pn	12 53 06.6	+0.1
PB01				eS	Sn	12 53 28.0	-0.5
PB01				IAML		12 53 28.8	
	comp=E,42µm,0.2s						
PB01	IPOC Station P	1.68	333		Pn	12 53 06.2	-0.4
PB01				Sn	Sn	12 53 27.9	-0.5
PB10	IPOC Station P	1.99	241	⇑iP	Pn	12 53 10.2	-0.1
PB10				iS	Sn	12 53 33.4	-1.8
PB10	IPOC Station P	1.99	241		Pn	12 53 10.4	+0.1
PB10				Sn	Sn	12 53 34.0	-1.3
PB10	IPOC Station P	1.99	241	iP	Pn	12 53 10.5	+0.1
PB10				iS	Sn	12 53 33.4	-1.8
PB10				IAML		12 53 34.1	
	comp=Z,5µm,0.4s						
PATCX	Punta Patache	2.21	321	⇑iP	Pn	12 53 12.5	-0.8
PATCX				eS	Sn	12 53 39.0	-1.3
PATCX				IAML		12 53 44.3	
	comp=N,27µm,0.7s						
PATCX	Punta Patache	2.21	321	iP	Pn	12 53 12.6	-0.6
PATCX				iS	Sn	12 53 39.2	-1.1
TA01	Diego Aracena	2.43	324	⇑iP	Pn	12 53 14.8	-1.2
TA01				iS	Sn	12 53 44.5	-0.8
TA01				IAML		12 53 49.8	
	comp=E,10µm,0.3s						
PB08	IPOC Station P	2.44	349	⇑iP	Pn	12 53 17.1	+0.6
PB08				iS	Sn	12 53 47.0	+0.8
PB08				IAML		12 53 50.5	
	comp=N,5µm,0.3s						
PB08	IPOC Station P	2.44	349	iP	Pn	12 53 17.2	+0.6
PB08				iS	Sn	12 53 47.0	+0.8
PB14	IPOC Station P	2.61	217	eP	Pn	12 53 21.0	+2.2
PB14	IPOC Station P	2.61	217	iP	Pn	12 53 21.2	+2.4
GO02	Mina Guanaco	2.74	198		Pn	12 53 21.2	+0.8
GO02				Sn	Sn	12 53 50.1	-3.0
GO01	Chusmiza	2.91	350		Pn	12 53 22.8	0.0
PB11	IPOC Station P	2.92	341	⇑iP	Pn	12 53 21.6	-1.1
PB11				eS	Sn	12 53 56.0	-1.3
PB11				IAML		12 54 18.1	
	comp=N,6µm,0.4s						
PB11	IPOC Station P	2.92	341		Pn	12 53 21.8	-1.0
PB11	IPOC Station P	2.92	341	iP	Pn	12 53 21.7	-1.1
YJA	Yavi	2.94	83	iP	Pn	12 53 25.9	+2.7
YJA				IAML		12 53 27.2	
	comp=Z,212nm,0.5s						
HJA	Humahuaca	3.07	103	iP	Pn	12 53 27.7	+2.9
HJA				IAML		12 53 29.1	
	comp=Z,864nm,0.4s						
MNMC	Minye Minye	3.51	345		Pn	12 53 29.7	-1.0
MNMCX	Minye Minye	3.51	345	iP	Pn	12 53 29.7	-1.0
SLA	San Lorenzo	3.62	127	⇑iP	Pn	12 53 35.2	+3.2
SLA	San Lorenzo	3.62	127	iP	Pn	12 53 35.4	+3.4
SLA				IAML		12 53 37.5	
	comp=Z,484nm,0.7s						
AHML	Horco Molle	5.19	145	iP	Pn	12 53 55.2	+2.1
AHML				IAML		12 53 56.2	
	comp=Z,152nm,0.5s						
GO03	Copiap	5.22	196		Pn	12 53 52.2	-1.3
GO03	Copiap	5.22	196	iP	Pn	12 53 52.1	-1.4
VCA	Vinchina	6.18	176	iP	Pn	12 54 07.3	+0.7
VCA				IAML		12 55 15.2	
	comp=Z,119nm,0.6s						
LPAZ	La Paz	6.25	5	P	Pn	12 54 09.4	+1.4
	comp=Z,5.2nm,0.3s,baz=184,slow=5.1,SNR=47						
LPAZ				S	Sn	12 54 60.0	-18
	comp=Z,8.4nm,0.3s,baz=186,slow=15,SNR=4.7						
LPAZ	La Paz	6.25	5		Pn	12 54 08.5	+0.5
LPAZ	La Paz	6.25	5	P	Pn	12 54 08.5	+0.5
LPAZ	La Paz	6.25	5	iP	Pn	12 54 08.2	+0.1
CYA	Choya	6.41	157	iP	Pn	12 54 10.2	+0.5
CYA				IAML		12 54 14.7	
	comp=Z,31nm,0.5s						
GO04	Tololo Observa	7.83	194		Pn	12 54 26.4	-2.8
GO04	Tololo Observa	7.83	194	iP	Pn	12 54 25.6	-3.5
CFA	Coronel Fontan	9.03	178	P	Pn	12 54 42.7	-2.5
	comp=Z,4.1nm,0.3s,baz=223,slow=17,SNR=51						
CFA				S	Sn	12 56 18.6	-6.5
	comp=Z,1.6nm,0.3s,baz=224,slow=18,SNR=2.9						
CFA				LR	LR	12 58 24.8	
	comp=Z,196nm,18.9s,baz=4.0,slow=38						
CFA	Coronel Fontan	9.03	178	iP	Pn	12 54 42.9	-2.3
RTCV	Cerro Valdivia	9.28	179	iP	Pn	12 54 46.6	-2.0
SIV	San Ignacio	9.69	49	P	Pn	12 54 50.6	-3.7
	comp=Z,15nm,0.3s,baz=238,slow=12,SNR=151						
SIV				S	Sn	12 56 30.4	-11
	comp=Z,1.2nm,0.3s,baz=323,slow=20,SNR=2.4						
ACAN	Cantantal	9.78	173	iP	Pn	12 54 53.0	-2.4
ASAL	Salagasta	10.01	181	iP	Pn	12 54 56.1	-2.4
ARCO	CERRO ARCO	10.26	181	iP	Pn	12 54 59.0	-3.0
ARCO				IAML		12 56 16.1	
	comp=Z,23nm,0.7s						
AAGR	Agrelo	10.50	181	iP	Pn	12 55 03.4	-1.8
PEL	Peldehue	10.71	189	Pn	Pn	12 55 07.4	-0.6
PEL	Peldehue	10.71	189	P	Pn	12 55 07.4	-0.6
CPUP	Villa Florida	10.99	112	P	Pn	12 55 09.6	-2.2
	comp=Z,0.4nm,0.3s,baz=290,slow=12,SNR=27						
CPUP				LR	LR	13 00 04.0	
	comp=Z,482nm,18.9s,baz=305,slow=41						
CPUP	Villa Florida	10.99	112		Pn	12 55 09.8	-1.9
CPUP	Villa Florida	10.99	112	P	Pn	12 55 09.9	-1.9
GO05	Huala	12.74	192	Pn	Pn	12 55 34.6	-0.5
NNA	Nana	13.08	322	P	P	12 55 45.8	-0.3
	comp=Z,1.4nm,0.3s,baz=165,slow=9.6,SNR=6.8						
NNA				S	Sn	12 57 55.1	-8.6
	comp=Z,1.5nm,0.3s,baz=234,slow=19,SNR=2.1						
NNA				LR	LR	13 00 08.5	
	comp=Z,112nm,21.8s,baz=150,slow=34						
NNA	Nana	13.08	322		Pn	12 55 39.2	-0.5
NNA	Nana	13.08	322	⇑eP	Pn	12 55 41.7	+2.0
CCHI	Chillan	14.32	191	eP	Pn	12 55 46.2	-9.3
SAML	Samuel	14.51	22		Pn	12 55 57.7	-0.4
SAML	Samuel	14.51	22	P	Pn	12 55 57.7	-0.4
C2SB	Chapadao do Su	15.28	79	eP	Pn	12 56 03.9	-4.0
PTGB	Pitanga	15.36	101	eP	Pn	12 56 07.6	-1.4
PCMB	Pacaembu	16.16	90	eP	Pn	12 56 16.9	-2.0
ARAG	Araguaiana, MT	17.31	70	eP	P	12 56 30.8	-2.0
FRTB	Fartura	17.61	96	eP	P	12 56 35.6	-0.6
ATAH	Atahualpa	17.96	327	P	Pn	12 56 43.0	+1.6
	comp=Z,0.3nm,0.3s,baz=134,slow=9.3,SNR=3.6						
PLCA	Paso Flores	18.20	185	P	Pn	12 56 43.4	-0.2
	comp=Z,0.2nm,0.3s,baz=29,slow=14,SNR=13						
PLCA				PcP	PcP	13 01 12.6	+1.6
	comp=Z,0.1nm,0.3s,baz=320,slow=3.3,SNR=4.0						
PLCA				LR	LR	13 04 56.8	
	comp=Z,111nm,19.0s,baz=24,slow=40						
PLCA				PKP2ab		13 35 15.1	
	comp=Z,0.0nm,0.3s,baz=264,slow=10,SNR=3.0						
PLCA	Paso Flores	18.20	185		Pn	12 56 43.1	-0.5
PLCA	Paso Flores	18.20	185	P	Pn	12 56 43.1	-0.5
PLCA				pmax	pmax		
	comp=Z,24nm,1.4s						
SPB	Sao Paulo	19.56	97	P	P	12 56 56.7	-0.7
SPB				IAmb	IAmb	12 56 57.6	
	comp=Z,92nm,0.9s						
LL01	San Ignacio de	20.02	188	eP	Pn	12 57 03.6	-1.3
LL01				IAmb	IAmb	12 57 06.5	
	comp=Z,32nm,0.9s						
BDFB	Brasilia	20.67	74	P	P	12 57 07.7	-2.0
	comp=Z,33nm,0.6s,baz=262,slow=12,SNR=39						
BDFB				LR	LR	13 07 15.8	
	comp=Z,125nm,19.2s,baz=309,slow=43						
BDFB	Brasilia	20.67	74	P	P	12 57 07.7	-2.0
BDFB				IAmb	IAmb	12 57 09.3	
	comp=Z,55nm,1.0s						
BDFB	Brasilia	20.67	74	P	P	12 57 07.7	-2.0
BDFB				pmax	pmax		
	comp=Z,55nm,1.0s						
OTAV	Otavalo	24.57	336	eP	P	12 57 50.4	+1.7
OTAV	Otavalo	24.57	336	eP	P	12 57 49.9	+1.2
OTAV	Otavalo	24.57	336	P	P	12 57 49.2	+0.5
OTAV	Otavalo	24.57	336	P	P	12 57 49.2	+0.5
OTAV				pmax	pmax		
	comp=Z,20nm,0.8s						
FLOC	Florencia	24.93	343	eP	P	12 57 52.1	+0.6
BBAC	Balboa, Cauca	25.82	340	eP	P	12 58 01.7	+2.0

POPC Popayan, Colom 26.13 342 eP P 12 58 03.9 +1.4
PRAC Prado 26.80 346 eP P 12 58 07.7 -0.7
ORTC Ortega, Tolima 27.07 345 eP P 12 58 11.5 +0.7
YOTC Yotoco, Valle 27.42 343 eP P 12 58 14.1 +0.1
ROSC El Rosal 27.78 348 LR LR 13 11 15.4
comp=Z,119nm,20.1s,baz=202,slow=40
GUY2C Guyana, Caldas 28.37 346 eP P 12 58 23.1 +0.3
RUSC La Rusia 28.59 351 eP P 12 58 23.9 -1.0
RUSC La Rusia 28.59 351 P P 12 58 24.6 -0.3
CBOC Ciudad Bolivar 29.14 345 eP P 12 58 28.4 -0.9
PTBC PUERTO BERRIO, 29.46 348 eP P 12 58 29.2 -2.8
EFI East Falkland 30.21 167 P P 12 58 38.4 +0.2
EFI East Falkland 30.21 167 P P 12 58 38.4 +0.2
EFI pmax pmax
comp=Z,119nm,1.5s
PAYG Puerto Ayora 30.25 313 P P 12 58 39.1 0.0
PAYG IAmb IAmb 12 59 42.7
comp=Z,35nm,1.1s
SDV Santo Domingo 31.30 356 P P 12 58 46.8 -1.6
comp=Z,2.4nm,0.4s,baz=169,slow=7.4,SNR=5.5
SDV LR LR 13 14 11.9
comp=Z,82nm,21.7s,baz=219,slow=41
SDV Santo Domingo 31.30 356 P P 12 58 46.8 -1.6
MDP Montagnes des 31.63 32 P P 12 58 49.9 -1.3
comp=Z,12nm,0.6s,baz=210,slow=9.5,SNR=6.5
TOSP Speyside 34.57 14 P P 12 59 16.0 -0.6
RCBR Riachuelo 35.72 67 P P 12 59 25.8 -0.8
comp=Z,45nm,0.8s,baz=244,slow=11,SNR=20
RCBR Riachuelo 35.72 67 P P 12 59 25.6 -1.1
RCBR Riachuelo 35.72 67 P P 12 59 25.6 -1.1
RCBR pmax pmax
comp=Z,46nm,0.9s
JTS Las Juntas de 36.33 332 P P 12 59 33.3 +1.5
comp=Z,12nm,0.8s,baz=204,slow=3.1,SNR=7.6
JTS Las Juntas de 36.33 332 dP P 12 59 33.8 +2.0
JTS pmax pmax
comp=Z,22nm,1.3s
FDF Fort de France 37.77 12 P P 12 59 44.2 +0.3
FDF Fort de France 37.77 12 P P 12 59 44.3 +0.3
FDF pmax pmax
comp=Z,99nm,1.2s
TGUH Tegucigalpa,Un 40.69 332 P P 13 00 08.1 -0.3
APG El Apazote 43.00 328 P P 13 00 28.9 +1.6
comp=Z,16nm,0.7s,baz=168,slow=5.2,SNR=17
TEIG Tepich 46.63 334 P P 13 00 55.7 -0.1
comp=Z,16nm,0.6s,baz=230,slow=24,SNR=32
TEIG Tepich 46.63 334 P P 13 00 55.1 -0.7
TEIG IAmb IAmb 13 00 56.7
comp=Z,36nm,1.1s
CMIG Matias Romero 47.02 325 P P 13 00 59.7 +0.9
comp=Z,7.6nm,0.8s,baz=112,slow=5.2,SNR=16
TLIG Tlapa 49.45 321 P P 13 01 18.3 +0.6
TLIG IAmb IAmb 13 01 20.5
comp=Z,16nm,0.9s
ZAIG Zacatecas 55.84 322 P P 13 02 05.7 +0.8
ZAIG IAmb IAmb 13 02 07.8
comp=Z,21nm,0.8s
Y55A Saluda 57.56 347 P P 13 02 15.3 -1.2
baz=166
X58A Rowland 57.69 350 P P 13 02 17.1 -0.3
X58A Rowland 57.69 350 P P 13 02 17.5 +0.1
baz=168
Z50A Ashland 57.88 343 P P 13 02 18.2 -0.6
baz=161,SNR=8.3
X56A White Oak 57.93 348 P P 13 02 19.2 +0.1
baz=166
LRAL Lakeview Retre 57.98 342 IAmb IAmb 13 02 19.2
comp=Z,12nm,0.8s
LRAL Lakeview Retre 57.98 342 P P 13 02 18.6 -0.9
baz=160
W58A Raeford 58.12 350 P P 13 02 20.9 +0.5
baz=168,SNR=5.6
342A Flagon Creek P 58.22 336 P P 13 02 21.7 +0.6
Y51A Rockmart 58.27 344 P P 13 02 21.0 -0.5
baz=162
HKT Hockley 58.37 332 P P 13 02 22.1 -0.1
HKT IAmb IAmb 13 02 25.2
comp=Z,19nm,1.2s
HKT Hockley 58.37 332 P P 13 02 22.1 -0.1
HKT pmax pmax
comp=Z,19nm,1.2s
W57A Gilead 58.38 349 P P 13 02 22.2 0.0
baz=168
W56A Indian Trail 58.47 349 P P 13 02 23.0 +0.1
baz=167
KMSC Kings Mountain 58.62 348 P P 13 02 24.1 +0.2
baz=166
833A Chaparral WMA, 58.63 328 P P 13 02 24.1 0.0
833A Chaparral WMA, 58.63 328 P P 13 02 25.0 +0.9
baz=146
X52A Dahlonega 58.65 345 P P 13 02 23.8 -0.3
baz=164
V59A Middlesex 58.70 351 P P 13 02 24.9 +0.5
baz=170
W54A Cherokee Point 58.74 347 P P 13 02 25.1 +0.4
baz=165
X51A Calhoun 58.85 344 P P 13 02 25.3 -0.2
baz=162
V58A Windy Hill, Pi 58.86 350 P P 13 02 25.6 +0.1
baz=169
VNA3 Neumayer Olymp 59.02 161 P P 13 02 27.8 +1.5
U61A Possum Corner 59.02 353 P P 13 02 26.8 +0.2
baz=172
W53A Cullowhee 59.03 346 P P 13 02 26.7 -0.2
baz=164
V57A Coltrane Farms 59.06 349 P P 13 02 27.0 0.0
baz=168,SNR=5.1
V56A Mocksville 59.11 349 P P 13 02 27.9 +0.6
baz=167,SNR=8.6
W52A Murphy 59.13 345 P P 13 02 27.8 +0.3
baz=164
U59A Littleton 59.21 351 P P 13 02 28.3 +0.4
baz=170
VNA1 Neumayer--Stat 59.23 160 P P 13 02 29.2 +1.5
U60A Pendleton 59.25 352 P P 13 02 28.4 +0.2
baz=171
V55A Taylorsville 59.28 348 P P 13 02 28.9 +0.3
baz=166
V54A Nebo 59.36 347 P P 13 02 29.2 +0.2
baz=166,SNR=6.1
U58A Oxford 59.36 351 P P 13 02 29.4 +0.4
baz=169
W51A Cleveland 59.39 345 P P 13 02 28.9 -0.3
baz=163
V53A Saluda 59.43 347 P P 13 02 29.6 0.0
baz=165
NATX Nacogdoches 59.46 334 P P 13 02 29.9 +0.1
NATX Nacogdoches 59.46 334 P P 13 02 30.8 +1.0
baz=152,SNR=7.2
U57A Blanch 59.52 350 P P 13 02 30.3 +0.2
baz=168,SNR=5.3
W50A Signal Mountai 59.56 344 IAmb IAmb 13 02 31.0
comp=Z,18nm,0.8s
W50A Signal Mountai 59.56 344 P P 13 02 29.9 -0.6
baz=162,SNR=5.9
VNA2 Neumayer--Watz 59.59 160 P P 13 02 31.3 +1.1
baz=279,slow=8.6
U56A King 59.62 349 P P 13 02 31.4 +0.6
baz=167
TKL Tuckaleechee C 59.63 346 P P 13 02 30.3 -0.6
comp=Z,16nm,0.9s,baz=160,slow=7.9,SNR=11
TKL pP pP 13 02 56.2 -1.3
comp=Z,12nm,0.9s,baz=168,slow=10,SNR=5.1
TKL Tuckaleechee C 59.63 346 IAmb IAmb 13 02 30.8
comp=Z,19nm,0.9s
W49A Belvidere 59.73 343 P P 13 02 30.8 -0.8
baz=161
V52A Sevierville 59.77 346 P P 13 02 31.1 -0.7
baz=164,SNR=6.5
T59A Double "B" Far 59.79 352 P P 13 02 31.7 -0.2
baz=170,SNR=6.3
T60A Surry 59.85 353 P P 13 02 32.7 +0.4
baz=171
T58A Grand View Acr 59.90 351 P P 13 02 33.2 +0.5
baz=169
V51A Loudon 59.91 345 P P 13 02 32.7 0.0
baz=163
V50A Pikevile 59.96 345 P P 13 02 32.8 -0.3
baz=162,SNR=9.1
U54A Nelsons Funny 60.05 348 P P 13 02 34.1 +0.2
baz=166
U53A Fall Branch 60.05 347 P P 13 02 33.4 -0.4
baz=165
T57A Hurt 60.06 350 IAmb IAmb 13 02 34.5
comp=Z,14nm,0.8s
T57A Hurt 60.06 350 P P 13 02 34.0 +0.2
baz=169
OXF Oxford 60.07 340 P P 13 02 33.4 -0.5
baz=158,SNR=7.2
Z41A Richland Creek 60.08 337 P P 13 02 33.7 -0.3
Z41A Richland Creek 60.08 337 P P 13 02 34.8 +0.8
baz=154
T56A Rocky Mt 60.22 350 P P 13 02 35.6 +0.7
baz=168,SNR=5.2
V49A McMinnville 60.25 344 P P 13 02 34.2 -0.9
baz=162,SNR=8.6
CCAR Cane Creek 60.31 338 P P 13 02 35.9 +0.3
T55A Pulaski 60.44 349 P P 13 02 36.7 +0.3
baz=167
S58A Poland Farm, P 60.49 351 P P 13 02 37.0 +0.3
baz=170
S59A Mechanicsville 60.53 352 P P 13 02 37.3 +0.4
baz=171
X43A Marvell 60.55 339 P P 13 02 36.6 -0.5
X43A Marvell 60.55 339 P P 13 02 37.4 +0.2
baz=156
U50A Jamestown 60.61 345 P P 13 02 37.1 -0.4
baz=163,SNR=5.1
JCT Junction City 60.62 329 P P 13 02 38.5 +0.7
baz=147,SNR=12
T53A Wise 60.64 347 P P 13 02 37.6 -0.2
baz=165
CLTN Cedars of Leba 60.67 344 IAmb IAmb 13 02 38.4
comp=Z,13nm,0.9s
S57A Dark Hollow, R 60.76 351 IAmb IAmb 13 02 39.4
comp=Z,16nm,0.8s
S57A Dark Hollow, R 60.76 351 P P 13 02 39.0 +0.4
baz=169
S56A Natural Bridge 60.78 350 P P 13 02 39.0 +0.3
baz=168
R58B Mineral 60.81 352 IAmb IAmb 13 02 40.1
comp=Z,20nm,0.9s
R58B Mineral 60.81 352 P P 13 02 39.3 +0.4
baz=170,SNR=6.0
WHTX Lake Whitney, 60.83 332 P P 13 02 39.4 +0.2
baz=149,SNR=7.6
T51A Gray 60.92 346 P P 13 02 39.3 -0.4
baz=164
U49A Red Boiling Sp 60.93 344 P P 13 02 38.9 -0.8
baz=162
R59A King George, V 60.95 352 P P 13 02 40.2 +0.5
baz=171
R60A Leonardtown, M 60.95 353 P P 13 02 41.1 +1.3
baz=172
CBN Corbin Frederi 60.98 352 P P 13 02 40.3 +0.3
baz=171
S55A Lewisburg 61.02 349 P P 13 02 41.1 +0.7
baz=168,SNR=6.6
WVT Waverly 61.11 342 P P 13 02 39.7 -1.3
WVT Waverly 61.11 342 P P 13 02 39.7 -1.3
WVT pmax pmax
comp=Z,29nm,0.8s
WVT Waverly 61.11 342 P P 13 02 40.2 -0.8
baz=160
R58A Rapidan 61.16 352 P P 13 02 41.5 +0.3
baz=170
T50A Nancy 61.18 345 P P 13 02 40.8 -0.6
baz=163
S54A Dingess, Beckl 61.19 349 P P 13 02 41.9 +0.4
baz=167
X40A Basin Creek Fa 61.20 337 P P 13 02 41.7 +0.1
baz=154
SNAA Sanae 61.22 161 P P 13 02 42.5 +1.1
SNAA Sanae 61.22 161 P P 13 02 42.2 +0.8
SNAA IAmb IAmb 13 03 09.8
comp=Z,36nm,1.5s
SNAA Sanae 61.22 161 ceP P 13 02 41.4 0.0
R57A Stanardsville 61.23 351 P P 13 02 42.3 +0.6
baz=170
UALR University of 61.28 338 IAmb IAmb 13 02 43.3
comp=Z,30nm,1.2s
T49A Edmonton 61.43 345 P P 13 02 42.1 -1.0
T49A IAmb IAmb 13 02 43.3
comp=Z,23nm,0.9s
T49A pP 13 03 09.0 -0.8
T49A Edmonton 61.43 345 P P 13 02 42.5 -0.5
baz=162,SNR=7.9
R55A Marlinton 61.46 350 P P 13 02 44.3 +1.0
baz=168
R56A Bull Pasture M 61.47 350 P P 13 02 44.5 +1.2
baz=169
R54A Victor 61.51 349 P P 13 02 43.8 +0.2
baz=167
MIAR Mount Ida 61.52 337 P P 13 02 43.8 +0.1
baz=154,SNR=14
W41B Gary Mavity, V 61.61 338 IAmb IAmb 13 02 45.0
comp=Z,15nm,0.9s
W41B Gary Mavity, V 61.61 338 P P 13 02 43.9 -0.4
baz=155,SNR=6.6
TXAR Lajitas Array 61.62 325 P P 13 02 45.0 +0.4
comp=Z,2.1nm,0.6s,baz=150,slow=8.5,SNR=35
TXAR pP pP 13 03 11.8 +0.7
comp=Z,1.3nm,0.6s,baz=150,slow=9.3,SNR=5.5
S50A Richmond 61.71 346 P P 13 02 44.4 -0.5
baz=164
Q58A Fox Den Farm, 61.75 352 P P 13 02 45.4 +0.2
baz=170
Q57A Strasburg 61.94 351 P P 13 02 47.4 +1.0
baz=170
S49A Springfield 62.02 345 P P 13 02 46.2 -0.8
baz=163
Q56A Snyder Ridge, 62.05 351 P P 13 02 48.0 +0.8
baz=169
LCAR Lake Charles 62.06 339 IAmb IAmb 13 02 47.6
comp=Z,16nm,0.9s
R51A Hillsboro 62.13 347 P P 13 02 47.3 -0.4
baz=164
Q55A Buckhannon 62.15 350 P P 13 02 48.7 +0.8
baz=168
W39A Magazine 62.18 337 P P 13 02 48.8 +0.7
baz=154,SNR=16
P59A Jarrettsville 62.26 353 P P 13 02 49.3 +0.8
baz=172,SNR=5.3
Q53A Leroy 62.26 349 P P 13 02 49.1 +0.5
baz=167
P57A Homestead Farm 62.32 352 P P 13 02 49.8 +0.8
baz=170
ABTX Abilene, Hawle 62.34 331 P P 13 02 49.9 +0.6
baz=148,SNR=7.4
PBMO Poplar Bluff 62.48 340 IAmb IAmb 13 02 50.5
comp=Z,35nm,1.1s
P55A Reedsville 62.61 350 P P 13 02 51.3 +0.4
baz=168
MVL Millersville 62.63 353 IAmb IAmb 13 02 51.9
comp=Z,13nm,0.7s
WCI Wyandotte Cave 62.68 344 P P 13 02 50.7 -0.7
WCI IAmb IAmb 13 02 51.2
comp=Z,22nm,0.9s
WCI Wyandotte Cave 62.68 344 P P 13 02 50.7 -0.7
WCI pmax pmax
comp=Z,22nm,1.0s
WCI Wyandotte Cave 62.68 344 P P 13 02 50.5 -1.0
baz=162
MCWV Mont Chateau 62.76 350 P P 13 02 52.3 +0.4
baz=168
P54A Burton 62.80 350 P P 13 02 52.7 +0.4
baz=168
O58A Lewisberry 62.82 353 P P 13 02 53.5 +1.2
baz=171
O60A Telford 62.85 354 P P 13 02 53.0 +0.5
baz=173
U40A Yellville 62.89 338 P P 13 02 52.2 -0.6
U40A IAmb IAmb 13 02 53.4
comp=Z,22nm,0.8s
U40A Yellville 62.89 338 P P 13 02 52.5 -0.3
baz=155,SNR=13
O59A Robesonia 62.93 354 P P 13 02 53.5 +0.5
baz=172
Q49A Aurora 63.09 346 P P 13 02 53.5 -0.6
baz=163
HHAR Hobbs 63.20 337 IAmb IAmb 13 02 55.8
comp=Z,30nm,1.1s
Q48A North Vernon 63.21 345 P P 13 02 53.8 -1.1
baz=162
O55A Ligonier 63.21 351 P P 13 02 55.2 +0.3
baz=169
MGMO Mountain Grove 63.41 339 IAmb IAmb 13 02 56.4
comp=Z,14nm,0.8s
N59A State Game Lan 63.48 354 P P 13 02 57.0 +0.3
baz=173
N58A Sunbury 63.51 353 P P 13 02 57.4 +0.6
baz=172
N57A Milroy 63.52 352 P P 13 02 56.9 0.0
baz=171
TUL1 Leonard 63.56 336 IAmb IAmb 13 02 58.1
comp=Z,26nm,0.8s
TUL1 Leonard 63.56 336 P P 13 02 57.3 +0.1
baz=152,SNR=9.0
O51A Pataskala 63.71 348 P P 13 02 57.7 -0.5
baz=166
N55A Marion Center 63.73 351 P P 13 02 58.7 +0.4
baz=169
WMOK Wichita Mounta 63.75 333 IAmb IAmb 13 02 59.4
comp=Z,44nm,1.9s
WMOK Wichita Mounta 63.75 333 P P 13 02 58.1 -0.5
baz=149,SNR=8.1
ACSO Alum Creek Sta 63.87 348 P P 13 02 58.7 -0.5
baz=165
CCM Cathedral Cave 63.91 340 P P 13 02 59.1 -0.4
CCM IAmb IAmb 13 02 59.8
comp=Z,24nm,0.8s
CCM Cathedral Cave 63.91 340 P P 13 02 59.1 -0.4
CCM pmax pmax
comp=Z,24nm,0.9s
CCM Cathedral Cave 63.91 340 P P 13 02 59.1 -0.4
baz=157
O50A Cable 63.91 347 P P 13 02 58.8 -0.7
baz=165
M58A Price's Panora 64.00 353 P P 13 03 01.0 +0.9
baz=172
M57A Sunshine Farm, 64.04 353 P P 13 03 00.9 +0.6
baz=171
N54A Moraine State 64.06 350 P P 13 03 01.0 +0.5
baz=168
M59A Waymart 64.07 354 P P 13 03 01.3 +0.7
baz=173
O49A Covington 64.10 347 P P 13 03 00.3 -0.4
baz=164
L63A North Scituate 64.14 358 P P 13 03 01.3 +0.3
baz=177
M56A Emporium 64.31 352 P P 13 03 02.5 +0.4
baz=170
O48A Farmland 64.34 346 P P 13 03 01.6 -0.8
baz=163
M55A Ridgway 64.38 352 P P 13 03 02.7 +0.2
baz=170
MNTX Cornudas Mount 64.39 326 P P 13 03 02.8 0.0
baz=142,SNR=14
L60A Shokan 64.42 355 P P 13 03 03.6 +0.9
baz=174
M54A Oil Creek Stat 64.54 351 P P 13 03 03.8 +0.2
baz=169
L58A Harry Jones Me 64.61 354 P P 13 03 04.4 +0.4
baz=173
M53A WI Miller and 64.63 350 P P 13 03 04.2 0.0
baz=168
L59A Walton 64.68 355 P P 13 03 05.3 +0.8
baz=173
N49A Columbus Grove 64.77 347 IAmb IAmb 13 03 35.0
comp=Z,23nm,0.9s
N49A Columbus Grove 64.77 347 P P 13 03 04.5 -0.6
baz=164
BINY Binghamton 64.78 354 P P 13 03 05.7 +0.6
baz=172
P43A Skaggs, Pawnee 64.86 342 IAmb IAmb 13 03 05.5
comp=Z,12nm,0.7s
L56A Greenwood 64.88 353 P P 13 03 06.2 +0.3
baz=171
N48A Decatur 64.89 346 P P 13 03 05.0 -0.9
baz=163
MSTX Muleshoe 64.91 329 P P 13 03 06.5 +0.2
baz=145,SNR=18
L55A Hinsdale 65.04 352 P P 13 03 07.3 +0.4
baz=170
N47A Urbana 65.06 346 P P 13 03 06.3 -0.7
baz=163
L53A Girard 65.07 350 P P 13 03 06.9 -0.1
baz=168
ERPA Erie 65.19 351 IAmb IAmb 13 03 36.7
comp=Z,33nm,0.9s
ERPA Erie 65.19 351 P P 13 03 07.9 +0.2
baz=168
L54A Sinclairville 65.20 351 P P 13 03 08.4 +0.5
baz=169
K59A Cooperstown 65.25 355 P P 13 03 09.0 +0.9
baz=174
M49A Liberty Center 65.26 347 P P 13 03 07.6 -0.7
baz=164
K58A Earlville 65.30 354 P P 13 03 09.0 +0.5
baz=173
K57A Scipio Center 65.36 354 P P 13 03 08.5 -0.3
baz=172
K56A Middlesex 65.41 353 P P 13 03 09.4 +0.2
baz=171
K54A Basiliko Farm, 65.49 352 P P 13 03 10.0 +0.3
baz=170
K55A Perry 65.53 352 P P 13 03 10.1 +0.1
baz=170
L48A N Adams 65.81 347 P P 13 03 10.8 -0.9
baz=164
J59A Piesco 65.90 355 P P 13 03 13.2 +0.8
baz=174
J56A Wolcott 65.93 353 P P 13 03 12.6 +0.1
baz=172
J57A Williamstown 65.98 354 P P 13 03 12.9 +0.1
baz=172
L47A Sherwood 66.00 347 P P 13 03 12.0 -1.0
baz=163
I59A Olmsteadville 66.19 356 P P 13 03 14.8 +0.6
baz=175
I60A Shoreham 66.20 356 P P 13 03 14.7 +0.5
baz=175
I61A Oroboro, Fairl 66.23 357 P P 13 03 15.6 +1.2
baz=176
121A Cookes Peak, D 66.31 324 P P 13 03 16.0 +0.6
121A IAmb IAmb 13 03 17.6
comp=Z,12nm,0.9s
121A Cookes Peak, D 66.31 324 P P 13 03 16.9 +1.5
baz=140,SNR=8.9
J52A Paris 66.36 351 P P 13 03 15.0 -0.3
baz=168,SNR=5.7
I57A Carthage 66.47 354 P P 13 03 16.4 +0.5
baz=173
K48A Perry 66.57 348 P P 13 03 15.9 -0.7
baz=164
K47A Vermontville 66.62 347 P P 13 03 15.9 -1.0
baz=164
KSU1 Kansas State U 66.67 337 P P 13 03 17.0 -0.4
baz=152,SNR=5.6
H58A Gabriels 66.83 356 P P 13 03 18.8 +0.5
baz=174
H57A Richville 66.97 355 P P 13 03 19.2 +0.2
baz=173
J48A Bridge Port 66.98 348 P P 13 03 18.5 -0.7
baz=165
I51A Listowel 66.99 350 P P 13 03 19.0 -0.3
baz=168
H66A Whiting 67.02 1 P P 13 03 20.4 +1.0
baz=181
H59A Cadyville 67.02 356 P P 13 03 19.9 +0.4
baz=175
LONY Lake Ozonia 67.06 355 P P 13 03 20.1 +0.5
baz=174
I52A Shelburne 67.12 351 P P 13 03 20.1 0.0
baz=168
J47A Sunmer 67.13 347 P P 13 03 19.7 -0.4
baz=164
H56A Elgin 67.17 354 P P 13 03 20.8 +0.4
baz=172
H53A Bobcaygeon 67.41 352 P P 13 03 21.7 -0.2
baz=170
K43A Burlington 67.42 344 IAmb IAmb 13 03 22.0
comp=Z,36nm,1.2s
I49A Point Hope 67.42 349 P P 13 03 20.9 -1.1
baz=166
G65A Princeton 67.43 1 P P 13 03 22.8 +0.9
baz=181
G62A West of Eustis 67.46 359 P P 13 03 23.4 +1.2
baz=178,SNR=6.0
G64A Maxfield 67.47 360 P P 13 03 23.0 +0.8
baz=180
PKME Peaks-Kenny Pk 67.49 360 P P 13 03 23.1 +0.8
baz=179
ANMO Albuquerque 67.50 327 P P 13 03 24.1 +1.2
comp=Z,13nm,0.7s,baz=135,slow=7.1,SNR=72
ANMO Albuquerque 67.50 327 P P 13 03 23.7 +0.7
ANMO IAmb IAmb 13 03 25.1
comp=Z,15nm,0.8s
ANMO Albuquerque 67.50 327 d iP P 13 03 23.9 +1.0
ANMO i *PP pP 13 03 50.6 +0.8
ANMO pmax pmax
comp=Z,14nm,0.9s
ANMO Albuquerque 67.50 327 P P 13 03 24.2 +1.3

baz=142
G58A Ormstown 67.55 356 P P 13 03 23.1 +0.4
baz=175
G61A St-Isidore-de- 67.55 358 P P 13 03 23.9 +1.1
baz=177
G57A Newington 67.57 355 P P 13 03 23.3 +0.4
baz=174
L40A Anamosa 67.59 342 IAmb IAmb 13 03 23.4
comp=Z,19nm,0.8s
CBKS Cedar Bluff 67.63 334 P P 13 03 24.3 +0.8
baz=149,SNR=5.8
H52A Wyevale 67.65 351 P P 13 03 23.3 -0.1
baz=169
QSPA South Pole Qui 67.65 180 P P 13 03 24.8 +1.4
QSPA IAmb IAmb 13 03 52.7
comp=Z,17nm,1.1s
SADO Sadowa 67.67 352 P P 13 03 23.1 -0.4
comp=Z,7.5nm,0.8s,baz=202,slow=1.4,SNR=8.5
SADO PcP pP 13 03 51.8 +1.4
comp=Z,3.0nm,0.7s,baz=223,slow=4.3,SNR=3.7
TUC Tucson 67.80 322 P P 13 03 25.6 +0.8
TUC IAmb IAmb 13 03 27.3
comp=Z,20nm,1.4s
TUC Tucson 67.80 322 P P 13 03 25.6 +0.8
TUC pmax pmax
comp=Z,20nm,1.4s
TUC Tucson 67.80 322 P P 13 03 26.3 +1.6
baz=138
I48A Sherman Twp 67.82 348 P P 13 03 23.9 -0.6
baz=165
G55A Calabogie 67.87 354 P P 13 03 24.6 -0.2
baz=172
G53A Haliburton 67.95 352 P P 13 03 25.4 +0.1
baz=170
SCIA State Center 68.04 340 P P 13 03 25.7 -0.2
baz=156
F64A Sherman 68.08 0 P P 13 03 26.7 +0.6
F64A Sherman 68.08 0 P P 13 03 26.8 +0.6
baz=180
JFWS Jewell Farm 68.11 343 P P 13 03 26.0 -0.4
baz=158,SNR=6.6
G54A Lake Saint Pet 68.16 353 P P 13 03 26.5 -0.1
baz=171
F61A St Evariste 68.23 358 P P 13 03 27.5 +0.5
baz=178
H48A Harrisville 68.25 349 P P 13 03 26.5 -0.6
baz=165
F60A Warwick 68.25 358 P P 13 03 27.6 +0.4
baz=177
T25A Trinidad 68.26 330 IAmb IAmb 13 03 29.8
comp=Z,16nm,1.1s
T25A Trinidad 68.26 330 P P 13 03 28.8 +1.1
baz=144,SNR=6.2
F55A Otter Lake 68.41 354 P P 13 03 29.3 +1.2
baz=172
H46A Fife Lake 68.45 347 P P 13 03 27.6 -0.9
baz=164
LIC Lamto 68.46 73 eP P 13 03 28.3 -0.9
comp=Z,23nm,1.0s
LIC Lamto 68.46 73 P P 13 03 28.3 -0.9
E60A Ste Agathe de 68.64 358 P P 13 03 30.2 +0.7
baz=177
E63A Oxbow 68.64 0 P P 13 03 30.3 +0.8
baz=180
E64A Bridgewater 68.64 1 P P 13 03 30.3 +0.8
baz=181
TIC Toumodi 68.66 73 eP P 13 03 29.8 -0.6
I42A Draeger Farm, 68.67 344 IAmb IAmb 13 03 29.8
comp=Z,15nm,0.9s
F52A Sundridge 68.70 352 P P 13 03 29.9 -0.1
baz=169
ALGO Algonquin Park 68.71 353 P P 13 03 29.8 -0.1
baz=171,SNR=5.8
214A Organ Pipe Nat 68.71 321 P P 13 03 32.1 +1.7
baz=136,SNR=18
E58A La Victoria 68.72 357 P P 13 03 30.3 +0.3
baz=175
KIC Kosan Boka 68.78 73 eP P 13 03 30.4 -0.8
comp=Z,49nm,1.0s
E57A Chemin Saint G 68.81 356 P P 13 03 30.8 +0.1
baz=174
DBIC Dimbokro 68.82 73 P P 13 03 30.9 -0.5
comp=Z,18nm,0.8s,baz=216,slow=6.0,SNR=19
DBIC PcP pP 13 03 58.4 -0.2
comp=Z,26nm,1.1s,baz=222,slow=7.3,SNR=9.4
DBIC Dimbokro 68.82 73 P P 13 03 30.9 -0.5
DBIC IAmb IAmb 13 03 59.5
comp=Z,32nm,1.1s
DBIC Dimbokro 68.82 73 P P 13 03 30.9 -0.5
DBIC pmax pmax
comp=Z,32nm,1.1s
F51A Arnstein 68.91 352 P P 13 03 31.0 -0.2
baz=169
X18A Snowflake 69.00 324 P P 13 03 32.8 +0.5
KSCO Kaye Shedlock' 69.00 332 P P 13 03 33.2 +1.0
baz=146,SNR=6.2
E56A St. Veronique 69.00 355 P P 13 03 32.0 +0.1
baz=174,SNR=6.9
F49A Sandfield 69.06 350 P P 13 03 31.3 -0.9
baz=167
E53A Dumoine, Ponti 69.08 353 P P 13 03 32.3 -0.1
baz=171
E54A Lac Daplat, Po 69.09 354 P P 13 03 32.3 0.0
baz=172
E52A Mattawa 69.10 353 P P 13 03 31.9 -0.5
baz=170
D60A Saint Jean D'O 69.16 358 P P 13 03 33.5 +0.7
baz=178
F48A Evansville 69.22 350 P P 13 03 32.7 -0.5
baz=166
D63A Stockholm 69.26 0 P P 13 03 34.2 +0.8
baz=180
BGNE Belgrade 69.26 337 P P 13 03 34.1 +0.5
baz=151,SNR=9.0
SDCO Great Sand Dun 69.26 329 IAmb IAmb 13 03 36.3
comp=Z,26nm,1.1s
SDCO Great Sand Dun 69.26 329 P P 13 03 35.2 +1.2
baz=144,SNR=23
D62A Allapoint, All 69.30 360 IAmb IAmb 13 03 35.0
comp=Z,38nm,1.0s
D62A Allapoint, All 69.30 360 P P 13 03 34.1 +0.5
baz=180,SNR=5.2
D57A Chemin Vers le 69.40 356 P P 13 03 34.7 +0.5
baz=175,SNR=7.2
D58A Chemin du LacG 69.42 357 P P 13 03 35.1 +0.7
baz=176,SNR=7.2
E51A G1948 Merrick 69.45 352 P P 13 03 34.7 +0.1
baz=169
D56A ZEC Mazanza, M 69.49 356 P P 13 03 34.9 +0.1
baz=174
D55A Sainte-Anne-du 69.51 355 P P 13 03 34.9 0.0
baz=173,SNR=6.9
F45A CMU Biological 69.61 347 P P 13 03 35.0 -0.6
baz=163
LATQ La Tuque 69.70 357 P P 13 03 36.5 +0.4
LATQ La Tuque 69.70 357 P P 13 03 36.3 +0.2
baz=176
D54A Lac Fusel, La 69.75 354 P P 13 03 35.9 -0.5
baz=172
D52A ZEK Kipawa Sen 69.76 353 P P 13 03 36.6 +0.2
baz=170
D53A Lac Vacive, Po 69.78 353 IAmb IAmb 13 03 37.3
comp=Z,24nm,0.8s
D53A Lac Vacive, Po 69.78 353 P P 13 03 36.7 +0.1
baz=171
E48A Lockeyer 69.78 350 P P 13 03 36.4 -0.3
baz=167,SNR=7.4
S22A 4UR Ranch, Cre 69.89 329 P P 13 03 39.0 +1.1
baz=143,SNR=7.8
E47A Iron Bridge 69.94 349 P P 13 03 37.5 0.0
baz=166
D51A Lot 18 Range I 69.98 352 P P 13 03 37.7 -0.2
baz=169
D50A G1974 Best Tow 70.12 352 P P 13 03 38.5 -0.1
baz=169,SNR=5.3
Y14A Wickenburg 70.26 322 P P 13 03 40.1 +0.2
MVCO Mesa Verde 70.30 327 P P 13 03 40.8 +0.5
MVCO IAmb IAmb 13 03 42.1
comp=Z,15nm,0.8s
MVCO Mesa Verde 70.30 327 P P 13 03 41.6 +1.3
baz=141,SNR=14
OGNE Ogallala 70.37 334 P P 13 03 41.1 +0.6
baz=147
D48A Paudash Townsh 70.40 351 P P 13 03 39.8 -0.6
baz=167
D47A Chapleau 70.49 350 P P 13 03 40.1 -0.8
baz=166
WUAZ Wupatki 70.51 324 P P 13 03 41.8 +0.3
WUAZ IAmb IAmb 13 03 44.4
comp=Z,22nm,0.9s
WUAZ Wupatki 70.51 324 P P 13 03 43.4 +1.9
baz=138,SNR=17
ECSD EROS Data Cent 70.77 339 P P 13 03 42.8 0.0
ECSD EROS Data Cent 70.77 339 P P 13 03 42.7 -0.1
baz=153
VLDQ Val d'Or 70.78 354 IAmb IAmb 13 03 43.8
comp=Z,21nm,1.0s
SPMN Marine on St. 70.95 342 IAmb IAmb 13 03 44.0
comp=Z,19nm,1.1s
SPMN Marine on St. 70.95 342 P P 13 03 43.2 -0.5
baz=156
ISCO Idaho Springs 70.97 331 P P 13 03 44.5 +0.1
ISCO Idaho Springs 70.97 331 P P 13 03 44.5 +0.1
ISCO pmax pmax
comp=Z,13nm,1.0s
ISCO Idaho Springs 70.97 331 P P 13 03 45.5 +1.1
baz=144,SNR=10
Y12C Blythe 71.00 321 P P 13 03 45.0 +0.6
Y12C Blythe 71.00 321 P P 13 03 46.0 +1.7
baz=136,SNR=7.4
IKP In-Ko-Pah, Jac 71.17 319 P P 13 03 47.5 +2.0
baz=134
BC3 Big Chuckawall 71.48 320 P P 13 03 49.1 +1.8
baz=135,SNR=11
MONP2 Monument Peak 71.53 319 P P 13 03 49.7 +1.9
baz=134
BAR Barrett 71.54 319 P P 13 03 48.1 +0.4
D41A Chassel 71.58 346 IAmb IAmb 13 03 48.5
comp=Z,31nm,0.9s
IRM Iron Mountain 71.65 321 P P 13 03 50.0 +1.7
baz=135,SNR=9.1
LSQQ Lebel-sur-Quev 71.67 354 P P 13 03 47.8 -0.2
baz=172
E38A The Farm, Brul 71.88 344 IAmb IAmb 13 03 49.9
comp=Z,21nm,1.2s
N23A Red Feather La 72.00 331 P P 13 03 50.9 +0.4
N23A IAmb IAmb 13 03 52.7
comp=Z,16nm,0.8s
N23A Red Feather La 72.00 331 P P 13 03 51.7 +1.1
baz=144,SNR=8.1
BELC Belle Mtn. Jos 72.05 320 P P 13 03 52.3 +1.5
baz=134
XPFO Pion Flat 72.05 319 P P 13 03 51.0 +0.2
PFO Pinyon Flats O 72.05 319 P P 13 03 52.0 +1.2
comp=Z,4.5nm,1.0s,baz=111,slow=5.3,SNR=5.8
PFO Pinyon Flats O 72.05 319 P P 13 03 51.0 +0.2
PFO Pinyon Flats O 72.05 319⇑eP P 13 03 51.3 +0.5
PFO pmax pmax
comp=Z,9.0nm,1.0s
PFO Pinyon Flats O 72.05 319 P P 13 03 52.3 +1.5
baz=134
GMRC Granite Mounta 72.39 321 P P 13 03 54.7 +1.8
baz=135,SNR=10
MATQ Matagami 72.42 354 P P 13 03 51.9 -0.5
baz=171
O20A White River Ci 72.45 329 IAmb IAmb 13 03 55.5
comp=Z,30nm,0.9s
O20A White River Ci 72.45 329 P P 13 03 54.6 +1.5
baz=142,SNR=19
MURC Murrieta 72.49 319 P P 13 03 55.1 +1.8
baz=134
BBRC Big Bear Solar 72.78 320 P P 13 03 57.5 +2.3
baz=134
HEC Hector,Ludlow 72.82 320 P P 13 03 57.3 +2.0
baz=134,SNR=8.7
TUQ Turquoise Moun 73.01 321 P P 13 03 58.1 +1.6
baz=135
EYMN Ely 73.11 344 P P 13 03 56.0 -0.5
baz=158,SNR=9.0
BFSC Mount Baldy Ra 73.20 319 P P 13 03 59.0 +1.3
baz=133
SHPR Sheep Range 73.33 322 P P 13 03 58.8 +0.4
GSC Goldstone, Bar 73.43 321 P P 13 04 00.7 +1.9
baz=134
K22A Casper 73.67 332 IAmb IAmb 13 04 02.4
comp=Z,14nm,0.9s
K22A Casper 73.67 332 P P 13 04 01.2 +1.0
baz=144,SNR=7.3
RSSD Black Hills 73.84 334 P P 13 04 01.8 +0.5
RSSD IAmb IAmb 13 04 03.1
comp=Z,17nm,0.8s
RSSD Black Hills 73.84 334 P P 13 04 01.8 +0.5
RSSD pmax pmax
comp=Z,17nm,0.8s
RSSD Black Hills 73.84 334 P P 13 04 02.4 +1.2
baz=146
EDW2 Edwards Air Fo 73.84 320 P P 13 04 02.4 +1.1
baz=133
LRMC Laurel Mtn Rad 74.07 320 P P 13 04 04.2 +1.5
baz=134,SNR=5.4
TPNV Topopah Spring 74.26 322 P P 13 04 05.8 +2.0
baz=135,SNR=9.1
FURC Furnace Creek, 74.27 321 P P 13 04 05.6 +2.0
baz=134,SNR=9.1
MPMC Manual Prospec 74.35 321 P P 13 04 05.7 +1.3
baz=134,SNR=6.0
AGMN Agassiz Nation 74.62 342 P P 13 04 05.3 0.0
baz=154,SNR=7.3
ISA Isabella, Lake 74.66 320 P P 13 04 06.7 +0.7
ISA Isabella, Lake 74.66 320 P P 13 04 06.7 +0.7
ISA pmax pmax
comp=Z,8.0nm,0.8s
ISA Isabella, Lake 74.66 320 P P 13 04 07.9 +1.9
baz=133,SNR=9.9
DUG Dugway, Tooele 74.75 326 P P 13 04 08.1 +1.6
baz=138,SNR=11
R11A Troy Canyon, C 74.88 323 P P 13 04 09.2 +1.8
baz=136,SNR=10
PKM Mcpherson Peak 74.95 318 P P 13 04 09.3 +1.5
baz=132,SNR=6.8
CWC Cottonwood Cre 74.96 321 P P 13 04 09.5 +1.7
baz=134
PD31 Pinedale Array 75.13 330 P P 13 04 08.4 -0.3
PDAR Pinedale Array 75.13 330 P P 13 04 09.4 +0.7
comp=Z,1.5nm,0.5s,baz=148,slow=6.9,SNR=13
PDAR LR LR 13 41 39.1
comp=Z,36nm,20.1s,baz=48,slow=39
VES Vestal, Richgr 75.15 320 P P 13 04 10.3 +1.6
baz=133,SNR=6.7
HWUT Hardware Ranch 75.19 328 IAmb IAmb 13 04 10.9
comp=Z,22nm,1.2s
SMMC Simmler 75.35 319 P P 13 04 12.0 +2.0
baz=132,SNR=6.1
MDND Maddock 75.39 339 P P 13 04 10.8 +0.9
baz=151,SNR=5.5
SYO Syowa Base 75.44 159⇑eP P 13 04 11.0 +1.1
SYO Syowa Base 75.44 159⇑epP pP 13 04 34.8 -2.6
AHID Auburn Hatcher 75.85 329 IAmb IAmb 13 04 14.7
comp=Z,32nm,1.0s
REDW Red Top Meadow 76.19 330 IAmb IAmb 13 04 16.9
comp=Z,13nm,0.8s
NV11 Mina Array Sit 76.37 322 P P 13 04 15.9 +0.1
ULM Lac du Bonnet 76.38 342 P P 13 04 14.8 -0.6
comp=Z,8.8nm,0.8s,baz=150,slow=5.4,SNR=21
ULM Lac du Bonnet 76.38 342⇓eP P 13 04 14.3 -1.1
NVAR Mina Array Bea 76.46 322 P P 13 04 17.3 +0.9
comp=Z,2.8nm,0.8s,baz=156,slow=6.9,SNR=25
NVAR pP pP 13 04 45.6 +1.8
comp=Z,1.4nm,0.7s,baz=146,slow=6.6,SNR=4.1
NVAR LR LR 13 36 02.3
comp=Z,51nm,20.1s,baz=321,slow=34
LAO LASA Array 76.82 334 IAmb IAmb 13 04 19.9
comp=Z,21nm,0.9s
LAO LASA Array 76.82 334 P P 13 04 19.1 +1.0
baz=145,SNR=6.0
RLMT Red Lodge 76.84 332 IAmb IAmb 13 04 20.1
comp=Z,15nm,0.8s
RLMT Red Lodge 76.84 332 P P 13 04 19.6 +1.2
baz=142,SNR=12
H17A Grant Village 76.86 331 P P 13 04 20.6 +2.0
baz=141,SNR=5.8
SCHQ Schefferville 77.08 1 P P 13 04 18.9 -0.3
comp=Z,6.1nm,0.7s,baz=207,slow=4.8,SNR=13
SCHQ Schefferville 77.08 1 P P 13 04 19.1 -0.1
SCHQ IAmb IAmb 13 07 12.3
comp=Z,62nm,2.0s
YHB Horse Butte 77.42 330 P P 13 04 21.9 +0.3
YHL Hebgen Lake 77.49 330 P P 13 04 23.1 +1.0
TOA0 Torodi Ar. Sit 77.49 70 P P 13 04 21.8 -0.6
TOA0 IAmb IAmb 13 04 24.9
comp=Z,23nm,0.6s
TORD Torodi Ar. Bea 77.49 70 P P 13 04 21.7 -0.7
comp=Z,18nm,0.6s,baz=253,slow=5.2,SNR=121
TORD pP pP 13 04 49.9 -0.1
comp=Z,19nm,0.9s,baz=259,slow=4.9,SNR=5.8
DGMT Dagmar 77.52 337 P P 13 04 23.0 +1.1
baz=147,SNR=8.2
VCNR Virginia City 77.81 322 P P 13 04 24.0 +0.1
DLMT Dillon 78.52 330 IAmb IAmb 13 04 30.0
comp=Z,23nm,1.3s
BEKR Beckworth 78.60 322 IAmb IAmb 13 05 42.6
comp=Z,11nm,0.6s
ORV Oroville 79.05 321 IAmb IAmb 13 04 33.1
comp=Z,18nm,1.1s
EGMT Eagleton 79.33 333 P P 13 04 32.5 +0.5
baz=142,SNR=5.5
TSUM Tsumeb 79.52 106 P P 13 04 34.5 +0.7
TSUM IAmb IAmb 13 04 35.6
comp=Z,21nm,1.0s
O03E Paynes Creek 79.71 322 P P 13 04 34.0 -0.2
baz=131
MOD Modoc Plateau 79.94 324 IAmb IAmb 13 04 37.7
comp=Z,15nm,1.0s
J08A Circle Bar Ran 79.96 326 IAmb IAmb 13 04 38.0
comp=Z,32nm,1.7s
O02D Mt. Diablo Mer 80.21 321 P P 13 04 37.6 +0.7
baz=131
MSO Missoula 80.24 330 P P 13 04 38.5 +1.6
baz=138,SNR=6.6
BMO Blue Mountains 80.42 327 IAmb IAmb 13 04 40.0
comp=Z,14nm,0.9s
N02D Trinity Center 80.68 322 P P 13 04 39.5 +0.2
baz=131
M04C Macdoel 80.72 323 P P 13 04 40.5 +0.9
baz=132,SNR=5.2
F10A Beach Ranch, E 81.17 328 IAmb IAmb 13 04 45.5
comp=Z,28nm,1.4s
YBH Yreka Blue Hor 81.17 322 P P 13 04 41.6 -0.4
comp=Z,3.9nm,0.9s,baz=116,slow=3.0,SNR=9.1
YBH Yreka Blue Hor 81.17 322 IAmb IAmb 13 05 24.5
comp=Z,62nm,2.0s
J05D Fort Rock, OR 81.38 324 P P 13 04 44.3 +1.2
baz=132,SNR=5.9
I05D Terrebonne, OR 82.15 325 P P 13 04 48.6 +1.6
baz=132,SNR=8.9
K02D Willamette Mer 82.34 322 P P 13 04 49.6 +1.5
baz=130
HAWA Hanford 82.61 327 IAmb IAmb 13 04 51.4
comp=Z,14nm,0.8s
BOSA Boshof 82.76 118 P P 13 04 51.0 +0.2
comp=Z,6.7nm,0.8s,baz=224,slow=6.9,SNR=8.0
BOSA Boshof 82.76 118 P P 13 04 50.9 +0.2
BOSA IAmb IAmb 13 04 51.9
comp=Z,34nm,1.2s
BOSA Boshof 82.76 118 P P 13 04 50.9 +0.2
BOSA pmax pmax
comp=Z,34nm,1.3s
NEW Newport 82.76 330 P P 13 04 50.2 +0.2
baz=136
C09A Chrisman Ranch 82.98 329 P P 13 04 51.2 0.0
FCC Fort Churchill 83.70 347 P P 13 04 54.7 +0.2
FCC IAmb IAmb 13 04 55.7
comp=Z,12nm,0.9s
FCC Fort Churchill 83.70 347 P P 13 04 54.7 +0.2
FCC pmax pmax
comp=Z,12nm,0.9s
LBTB Lobatse 84.37 115 P P 13 04 59.3 +0.2
LBTB IAmb IAmb 13 05 29.9
comp=Z,14nm,1.1s
LBTB Lobatse 84.37 115 P P 13 04 59.3 +0.2
LBTB pmax pmax
comp=Z,14nm,1.1s
B06A Marblemount 85.03 328 IAmb IAmb 13 05 02.4
comp=Z,19nm,0.9s
B05A Bryant 85.16 327 P P 13 05 02.2 0.0
baz=132
FRB Frobisher Bay 86.01 0 P P 13 05 05.2 -0.8
comp=Z,7.5nm,1.1s,baz=166,slow=3.9,SNR=7.0
ESDC Sonseca Array 86.42 44 P P 13 05 09.4 +0.6
comp=Z,0.4nm,0.5s,baz=236,slow=3.6,SNR=3.4
LLLB Lillooet 86.63 329 IAmb IAmb 13 05 10.4
comp=Z,20nm,1.1s
YKA Yellowknife Ar 92.25 340 P P 13 05 35.6 +0.1
comp=Z,11nm,0.8s,baz=137,slow=4.4,SNR=208
YKA pP pP 13 06 03.2 -0.3
comp=Z,2.2nm,0.8s,baz=140,slow=4.2,SNR=4.2
ILAR Eielson Array 105.28 334 PP PP 13 10 59.5 +2.6
comp=Z,1.4nm,1.1s,baz=107,slow=4.8,SNR=5.7
ARCES ARCESS Array B 112.37 22 PKKPbc PKKPbc 13 21 51.9 -1.7
comp=Z,3.1nm,0.9s,baz=69,slow=1.7,SNR=5.1
KBZ Khabaz 120.59 52 PKP PKiKP 13 11 17.8 +0.4
comp=Z,3.6nm,0.9s,baz=66,slow=3.5,SNR=5.5
BILL Bilibino 123.58 338⇓ePKIKP PKiKP 13 11 22.8 +0.2
ARU Arti 128.88 35 i PKIKP PKiKP 13 11 33.7 +0.2
ARU 13 13 43.6
ARU 13 18 34.8
ARU SS SS 13 30 55.6 +4.2
AS31 Alice Springs 129.09 207 PKPdf 13 11 34.7 +0.3
ASAR Alice Springs 129.09 207 PKP PKiKP 13 11 34.7 -0.4
comp=Z,4.4nm,0.9s,baz=130,slow=1.4,SNR=32
ASAR pPKP pPKPdf 13 12 02.9 -0.8
comp=Z,2.7nm,0.8s,baz=139,slow=2.2,SNR=7.3
TIXI Tiksi 129.86 353 PKP PKPdf 13 11 34.0 -0.2
comp=Z,2.3nm,0.8s,baz=41,slow=3.1,SNR=7.0
TIXI Tiksi 129.86 353 PKPdf 13 11 34.3 +0.1
SEY Seymchan 131.15 336 PKP PKiKP 13 11 37.5 -0.3
comp=Z,5.0nm,0.9s,baz=72,slow=2.6,SNR=8.3
SEY Seymchan 131.15 336⇓ePKIKP PKiKP 13 11 38.5 +0.7
WRA Warramunga Arr 132.17 210 PKP PKiKP 13 11 40.8 -0.5
comp=Z,3.5nm,0.7s,baz=158,slow=1.8,SNR=21
WRA pPKP pPKPdf 13 12 09.4 -0.1
comp=Z,2.4nm,1.0s,baz=153,slow=1.6,SNR=3.8
WRAB Tennant Creek 132.17 210⇑ePKIKP PKPdf 13 11 36.1 -4.1
PEA0B Petropavlovsk- 133.54 323⇑ePKIKP PKPdf 13 11 41.3 -0.4
FITZ Fitzroy Crossi 137.25 200 PKP PKiKP 13 11 50.8 -0.8
comp=Z,3.0nm,0.8s,baz=135,slow=2.9,SNR=3.4
FITZ Fitzroy Crossi 137.25 200 PKPdf 13 11 50.4 +0.6
KURK Kurchatov 142.07 34 PKPdf 13 11 57.9 +0.4
KURK Kurchatov 142.07 34⇑ePKIKP PKPdf 13 11 57.7 +0.2
ZAA0 Zalesovo Array 142.80 26 PKPdf 13 11 59.1 +0.5
ZALV Zalesovo Beam 142.80 26 PKhKP PKPpre 13 11 55.5
comp=Z,9.9nm,0.9s,baz=290,slow=2.6,SNR=16
ZALV SKPbc SKiKP 13 15 28.7 +0.1
comp=Z,1.6nm,0.6s,baz=288,slow=3.6,SNR=4.1
AAK Ala-Archa 143.44 48⇑ePKIKP PKPdf 13 11 58.3 +0.4
BOD Bodaibo 144.71 358 ePKIKP PKPab 13 11 59.2 -1.7
BOD pmax pmax
comp=Z,24nm,0.8s
YSS Yuzh-Sakhalins 144.91 322 PKPdf 13 12 02.4 -0.1
YSS Yuzh-Sakhalins 144.91 322 ePKIKP PKPdf 13 12 02.7 +0.2
YSS e 13 12 31.8
YSS pmax pmax
comp=Z,40nm,0.7s
NRN Naryn 144.93 49 PKPdf 13 12 03.6 +0.4
NRN Naryn 144.93 49 PKIKP PKPdf 13 12 03.6 +0.4
KSH Kashi 145.57 52 PKPbc PKPab 13 12 05.1 +0.2
KSH pPKP pPKPdf 13 12 32.8 -0.7
KSH PP PP 13 15 28.3 +2.5
KSH PKS PKSdf 13 15 37.3 -2.4
KSH SKS SKSdf 13 19 01.3 -2.7
KSH SKKS SKKSac 13 22 05.5 -2.8
KSH AMB AMB
comp=Z,310nm,8.0s
KSH LR LR
comp=Z,130nm,12.6s
KSH LR LR
comp=Z,43nm,7.7s
KSH LR LR
comp=Z,290nm,9.2s
MAKZ Makanchi 146.15 37 PKPdf 13 12 05.2 +0.4
MAKZ Makanchi 146.15 37 PKP2 PKPdf 13 12 05.2 +0.4
MK31 Makanchi Array 146.34 37 PKPbc 13 12 05.8 -0.6
MK31 Makanchi Array 146.34 37 PKP2 PKPbc 13 12 05.9 -0.6
MKAR Makanchi Array 146.34 37 PKPbc PKPbc 13 12 06.0 -0.5
comp=Z,11nm,0.8s,baz=309,slow=3.0,SNR=57
MKAR pPKPbc pPKPbc 13 12 35.0 -0.3
comp=Z,6.0nm,0.9s,baz=288,slow=2.3,SNR=3.5
MKAR Makanchi Array 146.34 37 PKP2 PKPbc 13 12 06.0 -0.5
ZEA Zeya 146.60 343 ePKP2 PKPbc 13 12 07.2 +0.3
ZEA pmax pmax
comp=Z,28nm,1.2s
FAKI Fak Fak 147.48 222 PKiKP 13 12 12.3 -0.4
KLR Kul'dur 148.86 334 PKPbc PKPbc 13 12 13.5 +0.3
baz=53,slow=2.7
KLR Kul'dur 148.86 334⇑ePKIKP PKPdf 13 12 10.3 +1.2
TEY Ternei 149.50 323⇓ePKP2 PKiKP 13 12 15.6 -0.3
TEY pmax pmax
comp=Z,20nm,0.8s
SIJI Sorong 149.69 222 PKPbc PKiKP 13 12 17.3 0.0
comp=Z,21nm,0.7s,baz=73,slow=16,SNR=5.8
MOY Mondy 149.85 13 ePKP2 PKiKP 13 12 17.2 +0.6

MOY pmax pmax
comp=Z,25nm,1.6s
CISI Cisompet, Garu 149.88 173 PKiKP 13 12 17.7 -0.1
TLY Talaya 150.31 10 PKiKP 13 12 17.9 +0.5
TLY PKPab PKPab 13 12 24.5 +1.2
TLY Talaya 150.31 10⇑ePKIKP PKPdf 13 12 12.7 +1.3
LEM Lembang 150.58 172 PKPbc PKiKP 13 12 20.1 +0.8
comp=Z,50nm,0.7s,baz=113,slow=1.2,SNR=9.9
WMQ Urumqi 151.17 37 ePKPbc PKPdf 13 12 12.0 -1.0
WMQ LR LR
comp=Z,340nm,29.2s
WMQ LR LR
comp=Z,1μm,29.2s
WMQ LR LR
comp=Z,97nm,28.8s
KAPI Kappang 151.40 198 PKPbc PKiKP 13 12 21.6 +0.8
comp=Z,9.7nm,0.8s,baz=56,slow=12,SNR=4.2
KAPI Kappang 151.40 198 PKiKP 13 12 21.8 +1.0
KAPI Kappang 151.40 198 PKIKP PKiKP 13 12 21.8 +1.0
USRK Ussuriysk Ar. 152.51 327 PKPbc PKiKP 13 12 22.5 +0.4
comp=Z,6.5nm,0.9s,baz=327,slow=1.4,SNR=9.6
MJAR Matsushiro Arr 152.89 307 PKPbc PKiKP 13 12 23.4 +0.2
comp=Z,5.7nm,0.8s,baz=74,slow=1.6,SNR=10.0
SONM Songino Array 154.46 8 PKP PKPdf 13 12 18.8 +1.0
comp=Z,2.4nm,0.8s,baz=288,slow=1.1,SNR=9.3
SONM PKPbc PKiKP 13 12 26.7 +0.4
comp=Z,1.6nm,0.5s,baz=321,slow=1.4,SNR=7.9
SONM PKPab PKPab 13 12 41.5 +0.6
comp=Z,2.4nm,0.8s,baz=321,slow=2.2,SNR=7.0
SONM Songino Array 154.46 8 PKP2 PKPab 13 12 41.5 +0.6
SONM 14 12 18.8
KSRS Korea Array 159.38 320 PKP PKPdf 13 12 25.1 +0.9
comp=Z,3.4nm,1.0s,baz=52,slow=1.4,SNR=9.0
KSRS PKPab PKPab 13 13 03.2 +1.0
comp=Z,2.5nm,0.8s,baz=50,slow=3.8,SNR=8.6
GTA Gaotai 160.53 28 ePKP PKPdf 13 12 26.4 +0.8
HHC Hu-ho-hao-te 161.75 359 ePKP PKPdf 13 12 34.6 +7.7
HHC LR LR
comp=Z,220nm,25.5s
HHC LR LR
comp=Z,130nm,25.5s
HHC LR LR
comp=Z,120nm,18.7s
LZH Lanzhou 165.02 24 ePKP PKPdf 13 12 28.8 -1.4
LZH pPKP pPKPdf 13 12 57.3 -2.3
LZH sPKP 13 13 08.0
LZH LR LR
comp=Z,140nm,18.0s
LZH LR LR
comp=Z,150nm,18.3s
LZH LR LR
comp=Z,170nm,20.1s
CMAR Chiang Mai Arr 167.69 107 PKP PKPdf 13 12 33.0 +0.4
comp=Z,0.8nm,0.8s,baz=272,slow=3.2,SNR=5.5
CMAR PKPab PKPab 13 13 40.3 +0.9
comp=Z,0.8nm,0.6s,baz=257,slow=5.6,SNR=5.2
NJ2 Nanjing 168.42 326 ePKP PKPdf 13 12 31.8 -0.8
WHN Wuhan 171.59 342 PKP PKPdf 13 12 41.4 +6.9

UCR 15 13:00:17.8±19.0, 9°.47N×83°.48W, h4km, MD3.9, MW4.2
UPA 15 13:00:19.9±2.2, 9°.50N×83°.64W, h3km±9km, MW4.4
ISC 15 13:00:20.1±1.0, **9°.51N**±0°.02×**83°.62W**±0°.02, **h7**km±9km, **n44, σ1.07**/71, **1C, Costa Rica**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
EDLM Las Mercedes 0.24 173 eP **Pg 13 00 25.4 +0.6**
EDLM eS **Sg 13 00 28.8 +0.8**
EDDO Dominical 0.35 223 eP **Pb 13 00 28.1 -0.6**
EDDO eS **Sb 13 00 34.0 -0.6**
LCR2 La Lucha 2 0.44 301 eP **Pg 13 00 28.9 +0.1**
LCR2 eS **Sg 13 00 35.3 +0.7**
CVTR Volcan Turrial 0.52 345 eP **Pb 13 00 31.3 -0.5**
CVTR eS **Sb 13 00 39.9 +0.1**
EDPN Palmar Norte 0.57 164 eP **Pb 13 00 32.6 +0.1**
EDPN eS **Sb 13 00 41.9 +1.1**
SJS Escuela Geolog 0.60 315 eP **Pg 13 00 32.1 +0.4**
SJS eS **Sg 13 00 40.7 -1.1**
HDC Heredia 0.69 315⇑iP **Pg 13 00 33.6 +0.3**
HDC eS **Sb 13 00 43.5 -0.8**
HDC Heredia 0.69 315 eP **Pg 13 00 33.6 +0.3**
HDC eS **Sb 13 00 43.5 -0.8**
EDSV San Vito 0.94 137 eP **Pb 13 00 39.3 +0.5**
EDSV eS **Sn 13 00 53.3 -0.3**
RGM0 Gandoca 1.00 86 eP **Pb 13 00 40.4 +0.6**
RGM0 eS **Sn 13 00 55.4 +0.4**
RGM0 Gandoca 1.00 86 eP **Pg 13 00 39.2 -0.1**
RGM0 eS **Sn 13 00 56.6 +1.6**
SRA1 San Ramn 1.02 304 eP **Pb 13 00 39.8 -0.4**
SRA1 eS **Sb 13 00 53.9 0.0**
PTJ1 Puerto Jimnez 1.02 162 eP **Pg 13 00 39.4 -0.3**
PTJ1 eS **Sb 13 00 54.8 +1.1**
PTJ1 Puerto Jimnez 1.02 162 eP **Pg 13 00 39.1 -0.6**
PTJ1 eS **Sb 13 00 54.6 +0.8**
CNI2 El Empalme, Bo 1.14 94 eP **Pg 13 00 41.4 -0.5**
CNI2 eS **Sg 13 00 56.8 +0.1**
PIRO Carate, Puerto 1.14 166 eP **Pg 13 00 41.2 -0.8**
PIRO eS **Sb 13 00 57.2 +0.1**
BRU2 Volcan 1.16 128 eP **Pg 13 00 41.9 -0.6**
BRU2 eS **Sg 13 00 57.8 +0.2**
BRU2 Volcan 1.16 128 eP **Pg 13 00 41.8 -0.7**
BCO2 Palmira 1.34 126 eS **Sg 13 01 01.6 -1.5**
FORC Fortuna 1.40 313 iP **Pn 13 00 46.0 -0.1**
CASO Castillo 1.43 310 iP **Pn 13 00 45.8 -0.8**
CASO iS **Sg 13 01 05.6 -0.5**
ARE1 Arenal 1 1.44 311 eP **Pn 13 00 46.8 +0.2**
CEDE Laguna Cedeo 1.44 312 iP **Pn 13 00 46.8 +0.1**
CEDE eP **Pb 13 00 46.9 -0.4**
CEDE iS **Sn 13 01 07.0 +1.1**
BAGA3 Bagala, Chiriq 1.50 134 eS **Sn 13 01 06.5 -0.8**
JTS Las Juntas de 1.52 301 eP **Pn 13 00 47.6 -0.2**
JTS eS **Sn 13 01 07.9 0.0**
JTS Las Juntas de 1.52 301 eP **Pn 13 00 47.2 -0.6**
DVD David 1.57 133 eP **Pn 13 00 49.1 +0.6**
DVD eS **Sn 13 01 08.9 -0.2**
CHIR3 Chiriqui UPA, 1.69 131 eP **Pn 13 00 50.1 0.0**
CHIR3 eS **Sn 13 01 12.0 0.0**
ACAL Aguas Claras 1.78 309 iP **Pb 13 00 52.5 -0.7**
ACAL iS **Sg 13 01 17.5 -0.1**
PTEN Parque Tenorio 1.80 312 iP **Pn 13 00 52.5 +0.8**
CUI Cuipilapa 1.90 307 iP **Pn 13 00 54.1 +1.1**
COLC Colonia 1.94 306 iP **Pn 13 00 54.8 -0.9**
HORNC Hornillas 1.94 308 iP **Pn 13 00 54.8 +1.1**
HORNC iS **Sb 13 01 21.2 +0.8**
MESS Mesas 1.97 308 iP **Pb 13 00 55.4 -1.0**
GUAB Guayabo de Bag 1.98 307 iP **Pb 13 00 55.5 -1.1**
LIM1 Limonal 1.99 306 iP **Pn 13 00 55.5 +1.2**
GUAI GUAI 2.01 292 iP **Pn 13 00 55.3 +0.8**
GPS1 Guardaparques 2.12 306 iP **Pn 13 00 57.1 +1.1**
GPS3 Bodega del ICE 2.12 306 iP **Pb 13 00 58.1 -0.8**
NY14 Universidad de 2.20 301 iP **Pn 13 00 58.6 +1.6**
GBS3 Finca Las Img 2.20 305 iP **Pn 13 00 58.2 +1.1**
GMAL Guarumal, Vera 2.93 126 eP **Pn 13 01 07.9 +0.8**
CALO3 Calobre, Verag 2.99 113 eP **Pn 13 01 10.2 +2.2**
CALO3 eS **Sn 13 01 47.8 +3.7**
AZU Azuero 3.72 117 eP **Pn 13 01 22.7 -3.6**
AZU eS **Sn 13 01 59.1 -3.1**

IDC 15 13:10:34.3±3.8, 10°.11N×126°.94E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.6/41, mbtmp3.9/5, MS2.8/1, Ms1 2.8/1, ms1mx2.3/44, Error ellipse: s-maj=91.4km s-min=65.5km az=156.0
NEIC 15 13:10:41.1±1.1, 10°.3N±0°.1×127°.1E±0°.2, h47km±8km, mb4.3/10, Error ellipse: s-maj=34.3km s-min=18.2km az=68.0
ISC 15 13:10:40.4±0.7, **10°.2N**±0°.1×**127°.00E**±0°.09, **h41**km, **n17, σ0.91**/17, **mb4.2**/11, **1C, Philippine Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TBP Tagbilaran 3.14 261⇑eP **Pn 13 11 27.7 +0.3**
TBP eS **Sn 13 12 03.0 -0.6**
KAPI Kappang 16.77 206 LR LR 13 21 53.1
comp=Z,33nm,19.2s,baz=51,slow=41
KSRS Korea Array 27.12 2 P **P 13 16 19.8 +0.2**
comp=Z,0.9nm,0.8s,baz=177,slow=7.3,SNR=4.0
MAJO Matsushiro 28.10 19 P **P 13 16 27.6 -0.8**
MAJO IAmb IAmb 13 16 43.7
comp=Z,19nm,1.4s
MJB9 Matsu-Tunnel 28.10 19 P **P 13 16 27.6 -0.8**
MJB9 IAmb IAmb 13 16 43.7
comp=Z,19nm,1.4s
WB0 Warramunga Arr 30.68 166 P **P 13 16 50.7 -0.7**
WB0 IAmb IAmb 13 16 53.0
comp=Z,6.0nm,1.1s
WR0 Warramunga Arr 30.90 166 P **P 13 16 54.2 +0.8**
WR0 IAmb IAmb 13 17 01.8
comp=Z,6.1nm,1.4s
EIDS Eidsvold 42.45 147 P **P 13 18 31.8 +0.2**
EIDS IAmb IAmb 13 18 31.9
comp=Z,4.7nm,1.0s
BBOO Buckleboo 43.66 169 P **P 13 18 42.6 +1.4**
TOO Toolangi 50.60 161 P **P 13 19 33.4 -2.0**
MK31 Makanchi Array 52.50 322 P **P 13 19 48.5 -0.9**
MKAR Makanchi Array 52.50 322 P **P 13 19 50.0 +0.5**
comp=Z,1.7nm,0.7s,baz=119,slow=8.6,SNR=17
MAKZ Makanchi 52.70 322 P **P 13 19 51.2 +0.3**
KURK Kurchatov 56.51 325 P **P 13 20 18.1 -0.3**
KURK IAmb IAmb 13 20 33.5
comp=Z,4.2nm,0.8s
BRTR Keskin Array B 86.11 309 P **P 13 23 17.6 0.0**
comp=Z,0.6nm,0.7s,baz=128,slow=3.9,SNR=4.2
FINES FINESS Array B 86.27 332 P **P 13 23 18.0 +0.3**
comp=Z,1.6nm,0.9s,baz=77,slow=6.0,SNR=3.7
YKA Yellowknife Ar 93.51 24 P **P 13 23 52.7 +1.0**
comp=Z,0.3nm,0.8s,baz=309,slow=5.0,SNR=3.4

IDC 15 13:17:21.7±1.1, 2°.83S×141°.35E, h0km, mb3.6/6, mb1 3.9/7, mb1mx3.7/31, mbtmp3.7/7, ML4.1/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/27, Error ellipse: s-maj=22.2km s-min=11.0km az=29.0
ISC 15 13:17:27.5±1.4, **2°.8S**±0°.1×**141°.0E**±0°.2, **h35**km, **n15, σ1.14**/8, **mb3.7**/6, **Near north coast of New Guinea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JAY Jayapura 0.42 311 Pg **Pn 13 17 36.2 -0.8**
88nm,0.3s,baz=132,slow=11,SNR=207
JAY Lg Lg 13 17 45.1
172nm,0.3s,baz=252,slow=20,SNR=22
GUMO Guam 16.72 13 LR LR 13 26 11.4
comp=Z,99nm,20.8s,baz=184,slow=32
WRA Warramunga Arr 18.25 200 P **P 13 21 38.5 +0.4**
0.7nm,0.3s,baz=21,slow=13,SNR=11
FITZ Fitzroy Crossi 21.42 224 P **P 13 22 12.0 -0.6**
1.5nm,0.5s,baz=50,slow=11,SNR=2.9
FITZ LR LR 13 30 52.4
comp=Z,56nm,20.1s,baz=36,slow=38
ASAR Alice Springs 21.86 198 P **P 13 22 17.5 +0.1**
0.8nm,0.6s,baz=28,slow=11,SNR=17
ASAR LR LR 13 31 19.0
comp=Z,64nm,19.0s,baz=8.5,slow=38
H11S3 WAKE ISLAND Hy 32.96 49 T T 13 58 24.0
baz=232,slow=75,SNR=493
H11S2 WAKE ISLAND Hy 32.97 49 T T 13 58 24.5
baz=232,slow=75,SNR=308
H11S1 WAKE ISLAND Hy 32.98 49 T T 13 58 25.0
baz=232,slow=75,SNR=136
H11N1 WAKE ISLAND Hy 33.85 48 T T 13 59 29.9
baz=229,slow=76,SNR=18
H11N2 WAKE ISLAND Hy 33.87 48 T T 13 59 38.2
baz=229,slow=76,SNR=25
H11N3 WAKE ISLAND Hy 33.87 48 T T 13 59 32.0
baz=229,slow=76,SNR=11
SONM Songino Array 58.80 333 P **P 13 27 23.7 +1.2**
0.2nm,0.5s,baz=161,slow=4.0,SNR=2.6
MKAR Makanchi Array 71.27 322 P **P 13 28 44.6 +1.1**
0.5nm,0.7s,baz=101,slow=7.5,SNR=6.5
ZALV Zalesovo Beam 73.18 329 P **P 13 28 55.4 +0.7**
0.6nm,0.6s,baz=94,slow=4.6,SNR=3.5
ILAR Eielson Array 84.96 24 P **P 13 29 57.5 -1.4**
0.7nm,0.7s,baz=261,slow=4.6,SNR=7.5

IDC 15 13:23:52.8±1.4, 4°.36S×151°.02E, h293km±13km, mb3.6/5, mb1 3.7/6, mb1mx3.1/37, mbtmp4.1/6, Error ellipse: s-maj=30.8km s-min=18.9km az=149.0
NEIC 15 13:23:53.0±0.8, 4°.4S±0°.1×151°.0E±0°.1, h293km±10km, mb4.3/12, Error ellipse: s-maj=23.8km s-min=13.7km az=134.0
ISC 15 13:23:51.9±0.8, **4°.3S**±0°.1×**151°.1E**±0°.1, **h300**km, **n20, σ1.74**/21, **mb4.3**/10, **New Britain region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRVT Keravat (AS076 0.90 89 P **Pn 13 24 32.3 +0.4**
9.7nm,0.3s,baz=309,slow=6.5,SNR=3.4
KRVT S **S 13 24 58.5 -5.1**
5.8nm,0.3s,baz=345,slow=20,SNR=2.3
RABL Rabaul 1.05 83 Pn **Pn 13 24 33.2 +0.7**
PMG Port Moresby 6.40 218 P **Pn 13 25 26.2 +0.1**
0.3nm,0.3s,baz=45,slow=17,SNR=2.3
COEN Coen 12.37 219 P **P 13 26 40.7 +0.7**
WB0 Warramunga Arr 22.39 225 P **P 13 28 26.8 +1.1**
WB0 IAmb IAmb 13 28 27.8
comp=Z,5.9nm,0.4s
WR0 Warramunga Arr 22.42 225 P **P 13 28 27.0 +1.2**
WR0 IAmb IAmb 13 28 27.5
comp=Z,9.4nm,0.6s
WRAB Tennant Creek 22.53 225 P **P 13 28 28.0 +1.1**
WB2 Warramunga Arr 22.54 225 P **P 13 28 28.2 +1.2**
WRA Warramunga Arr 22.55 225 P **P 13 28 28.0 +0.9**
comp=Z,16nm,0.6s,baz=50,slow=9.5,SNR=91
DZM Mont Dzumac 23.06 141 P **P 13 28 33.3 +1.5**
comp=Z,3.0nm,0.6s,baz=315,slow=10.0,SNR=6.3
DZM Mont Dzumac 23.06 141 P **P 13 28 33.6 +1.9**
DZM IAmb IAmb 13 28 37.1
comp=Z,9.9nm,1.1s
KNRA Kununurra 24.71 241 P **P 13 28 48.4 +1.7**
KNRA IAmb IAmb 13 29 00.6
comp=Z,20nm,1.1s
AS31 Alice Springs 25.41 219 P **P 13 28 53.8 +0.8**
ASAR Alice Springs 25.41 219 P **P 13 28 53.5 +0.6**
comp=Z,1.2nm,0.3s,baz=49,slow=8.6,SNR=42
FITZ Fitzroy Crossi 28.44 239 P **P 13 29 19.7 -0.1**
comp=Z,1.7nm,0.3s,baz=55,slow=11,SNR=8.6
TOO Toolangi 33.49 188 P **P 13 30 02.1 -1.5**
TOO IAmb IAmb 13 30 10.6
comp=Z,9.9nm,1.1s
FORT Forrest 34.13 217 P **P 13 30 09.5 +0.3**
TPUB Ta-pu 40.49 314 P **P 13 31 01.3 -1.1**
TPUB IAmb IAmb 13 31 10.5
comp=Z,20nm,1.1s
MORW Morawa 41.36 230 P **P 13 31 08.0 -1.4**
ILAR Eielson Array 82.36 22 P **P 13 35 42.5 +2.3**
comp=Z,0.2nm,0.4s,baz=245,slow=5.7,SNR=3.5

NNC 15 13:36:09.5±2.0, 36°.55N×82°.71E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=18.5km s-min=14.1km az=67.0
IDC 15 13:36:11.3±7.1, 36°.83N×82°.45E, h0km, mb3.4/1, mb1 3.6/5, mb1mx3.3/36, mbtmp3.6/5, ML3.1/4, MS3.4/2, Ms1 3.4/2, ms1mx2.7/32, Error ellipse: s-maj=100.4km s-min=28.6km az=18.0
ISC 15 13:36:08.2±2.6, **36°.4N**±0°.2×**82°.3E**±0°.1, **h10**km, **n12, σ2.67**/14, **8C-2D, Southern Xinjiang**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PDGK Podgornoye 7.23 344 ⇑Pn **Pn 13 37 56.4 +2.4**
2.1nm,0.5s
PDGK ⇑Sn **Sn 13 39 20.4 +4.2**
18nm,0.8s
PDGK ⇓Lg Lg 13 39 58.7
12nm,0.7s
MDOK Medeo 7.84 331 Pg **Pg 13 38 33.7 -4.6**
11nm,1.4s
MDOK ⇑Lg Lg 13 40 22.0
13nm,0.9s
AAK Ala-Archa 8.63 318 Pn **Pn 13 38 16.1 +2.8**
0.3nm,0.3s,baz=176,slow=14,SNR=3.1
AAK Pg Pg 13 38 44.7 -8.8
0.3nm,0.3s,baz=343,slow=19,SNR=3.4
AAK Lg Lg 13 40 38.1
0.2nm,0.3s,baz=345,slow=19,SNR=2.9
AAK Ala-Archa 8.63 318 ⇑Pg **Pg 13 38 50.5 -3.0**
2.6nm,0.6s
AAK ⇑Lg Lg 13 40 45.3
10nm,0.8s
MK31 Makanchi Array 10.38 0 Pn **Pn 13 38 37.4 +0.3**
0.4nm,0.3s,baz=181,slow=12,SNR=42
MK31 ⇑Sn **Sn 13 40 35.8 +2.4**
1.1nm,0.6s,baz=177,slow=26,SNR=5.5
MK31 ⇑Lg Lg 13 41 37.6
1.8nm,0.7s
MKAR Makanchi Array 10.38 0 Pn **Pn 13 38 37.6 +0.5**
0.6nm,0.3s,baz=181,slow=13,SNR=19
MKAR Sn **Sn 13 40 34.6 +1.3**
0.3nm,0.3s,baz=187,slow=24,SNR=4.3
MAKZ Makanchi 10.39 359 ⇑Pn **Pn 13 38 38.2 +0.9**
2.4nm,0.5s
MAKZ ⇓Sn **Sn 13 40 33.6 -0.2**
3.0nm,1.3s
ZALV Zalesovo Beam 17.63 5 P **Pn 13 40 11.1 -2.7**
0.1nm,0.3s,baz=186,slow=13,SNR=4.0
BVAR Borovoye Array 18.59 337 P **Pn 13 40 26.6 +1.0**
0.2nm,0.3s,baz=135,slow=9.5,SNR=7.9
SONM Songino Array 21.15 50 P **P 13 40 53.6 +0.1**
1.9nm,0.8s,baz=250,slow=9.9,SNR=13
TLY Talaya 21.55 38 LR LR 13 48 50.9
comp=Z,40nm,18.1s,baz=285,slow=36
TORD Torodi Ar. Bea 74.78 275 LR LR 14 25 59.4
comp=Z,63nm,18.5s,baz=355,slow=40

IDC 15 14:15:05.2±1.7, **2°.87S×129°.47E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.4/50, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=48.4km s-min=26.0km az=88.0, Seram**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 2.67 42 Pn Pn 14 15 49.3 -0.3
19nm,0.3s,baz=270,slow=20,SNR=88
SIJI Sn Sn 14 16 18.5 -4.2
9.6nm,0.3s,baz=143,slow=20,SNR=7.8
WRA Warramunga Arr 17.62 165 P Pn 14 19 11.3 -1.2
0.2nm,0.3s,baz=345,slow=12,SNR=9.9
ASAR Alice Springs 21.12 169 P P 14 19 52.3 +0.5
1.5nm,0.6s,baz=346,slow=11,SNR=32
MKAR Makanchi Array 64.51 326 P P 14 25 44.2 +0.1
0.2nm,0.7s,baz=121,slow=6.9,SNR=3.1

IDC 15 14:19:04.4±2.1, **0°.57N×126°.90E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/47, mbtmp3.3/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/19, Error ellipse: s-maj=186.9km s-min=25.2km az=66.0, Northern Molucca Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LEM Lembang 20.59 249 LR LR 14 33 43.4
comp=Z,63nm,18.5s,baz=340,slow=43
WRA Warramunga Arr 21.66 161 P P 14 23 56.9 +0.2
0.6nm,0.7s,baz=339,slow=12,SNR=3.4
ASAR Alice Springs 25.04 165 P P 14 24 30.3 -0.2
0.2nm,0.5s,baz=344,slow=7.8,SNR=4.8
MKAR Makanchi Array 60.24 326 P P 14 29 14.6 0.0
0.3nm,0.4s,baz=123,slow=7.8,SNR=9.8

IDC 15 14:28:57.5±1.6, 2°.91S×129°.42E, h0km, mb3.4/2, mb1 3.9/4, mb1mx3.5/45, mbtmp3.7/4, ML3.7/2, MS2.9/2, Ms1 3.0/2, ms1mx2.4/27, Error ellipse: s-maj=46.7km s-min=25.7km az=86.0
DJA 15 14:29:01.9±1.7, 3°S±5°×13°0E±°, h17km±15km, M3.5/9, MLv3.5/9
ISC 15 14:29:01.7±0.9, **2°.82S**±0°.08×**129°.58E**±0°.05, **h28**km, **n13, σ1.11**/12, **Seram**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSAI Masohi 0.83 231 P **Pb 14 29 18.7 +1.1**
AAI Ambon 1.63 238 P **Pb 14 29 30.7 -0.4**
BNDI Bandanaira 1.72 169 P **Pb 14 29 33.8 +1.1**
NLAI Namlea 2.51 260 P **Pn 14 29 41.6 +1.0**
SIJI Sorong 2.57 41 Pn **Pn 14 29 41.5 0.0**
19nm,0.3s,baz=248,slow=19,SNR=48
SIJI Sn **Sn 14 30 11.8 -0.1**
15nm,0.3s,baz=244,slow=22,SNR=4.9
SWI Sorong 2.57 41 P **Pn 14 29 42.1 +0.6**
FAKI Fak Fak 2.67 92 P **Pn 14 29 43.3 +0.4**
SANI Sanana 3.67 282 P **Pn 14 29 56.4 -0.2**
WRA Warramunga Arr 17.64 165 P **Pn 14 33 03.1 -2.5**
0.2nm,0.3s,baz=340,slow=12,SNR=9.0
ASAR Alice Springs 21.14 169 P **P 14 33 44.2 -0.5**
2.5nm,0.6s,baz=348,slow=10,SNR=48
LEM Lembang 22.24 259 LR LR 14 44 25.1
comp=Z,44nm,18.2s,baz=64,slow=42
CMAR Chiang Mai Arr 36.83 306 LR LR 14 52 51.3
comp=Z,9.6nm,18.3s,baz=90,slow=39
MKAR Makanchi Array 64.53 326 P **P 14 39 36.8 +0.6**
0.1nm,0.6s,baz=125,slow=8.0,SNR=4.4

IDC 15 14:43:23.6±9.6, **6°.30S×154°.74E, h95**km±67km, **mb3.2/4, mb1 3.5/5, mb1mx3.3/28, mbtmp3.7/5, ML2.1/1, Error ellipse: s-maj=77.0km s-min=40.0km az=96.0, Bougainville-Solomon Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 8.12 247 P Pn 14 45 18.6 -0.1
1.4nm,0.3s,baz=44,slow=7.4,SNR=5.9
PMG S Sn 14 46 50.1 +1.2
0.4nm,0.3s,baz=209,slow=19,SNR=2.0
WRA Warramunga Arr 24.01 234 P P 14 48 29.2 -0.6
1.1nm,0.9s,baz=61,slow=8.8,SNR=3.9
ASAR Alice Springs 26.45 227 P P 14 48 52.2 +0.3
0.2nm,0.5s,baz=56,slow=9.3,SNR=8.2
CMAR Chiang Mai Arr 60.26 295 P P 14 53 22.6 0.0
0.9nm,0.6s,baz=124,slow=5.2,SNR=6.9
MKAR Makanchi Array 82.72 319 P P 14 55 37.0 0.0
0.3nm,0.7s,baz=92,slow=7.0,SNR=2.9

IDC 15 14:55:18.5±1.4, 2°.90S×129°.47E, h0km, mb3.8/2, mb1 4.1/5, mb1mx3.7/29, mbtmp3.9/5, ML3.7/3, MS2.6/1, Ms1 2.6/1, ms1mx2.3/36, Error ellipse: s-maj=44.4km s-min=23.6km az=88.0
DJA 15 14:55:22.5±1.0, 3°S±5°×13°0E±°, h15km±10km, M3.6/8, MLv3.6/8
ISC 15 14:55:21.0±0.9, **2°.76S**±0°.06×**129°.81E**±0°.08, **h25**km, **n13, σ1.25**/14, **Seram**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSAI Masohi 1.06 237 P **Pn 14 55 38.7 -1.6**
MSAI S **Sn 14 55 54.5 +0.2**
BNDI Bandanaira 1.75 177 P **Pb 14 55 53.6 +1.1**
AAI Ambon 1.86 240 P **Pn 14 55 51.7 +0.4**
SIJI Sorong 2.37 38 Pn **Pb 14 56 02.8 -0.3**
24nm,0.3s,baz=234,slow=19,SNR=151
SIJI Sn **Sb 14 56 34.1 +2.1**
18nm,0.3s,baz=257,slow=18,SNR=17
SWI Sorong 2.37 38 P **Pb 14 56 02.8 -0.3**
FAKI Fak Fak 2.44 94 P **Pb 14 56 03.5 -0.7**
NLAI Namlea 2.75 260 P **Pn 14 56 03.4 -0.2**
SANI Sanana 3.89 280 P **Pn 14 56 18.1 -1.1**
FITZ Fitzroy Crossi 15.78 195 Pn **Pn 14 58 59.8 -1.9**
0.1nm,0.3s,baz=20,slow=12,SNR=2.8
WRA Warramunga Arr 17.64 166 P **Pn 14 59 24.0 -1.2**
0.4nm,0.3s,baz=345,slow=12,SNR=16
ASAR Alice Springs 21.16 170 P **P 15 00 05.2 +0.7**
4.7nm,0.6s,baz=347,slow=10,SNR=94
GUMO Guam 22.07 42 LR LR 15 09 21.9
comp=Z,15nm,18.9s,baz=82,slow=38
MKAR Makanchi Array 64.62 326 P **P 15 05 57.5 +1.0**
0.4nm,0.6s,baz=121,slow=8.4,SNR=6.4

ATH 15 14:58:37.8, 38°.22N×20°.37E, h16km, ML2.5/7, Error ellipse: s-maj=1.6km s-min=0.9km az=258.0
THE 15 14:58:38.9, 38°.24N×20°.40E, h12km, ML2.4/5, Error ellipse: s-maj=1.3km s-min=0.6km az=258.0
ISC 15 14:58:38.5±1.0, **38°.22N**±0°.03×**20°.40E**±0°.04, **h15**km±4km, **n39, σ0.44**/63, **Greece**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AGT1 Agia Thekli 0.03 338 P **Pg 14 58 40.7 -0.5**
AGT1 S **Sg 14 58 42.5 -0.4**
LXR1 Lixouri, Cepha 0.04 125 P **Pg 14 58 41.0 -0.2**
LXR1 S **Sg 14 58 43.2 +0.2**
LXRA Lixouri, Kepha 0.04 127 P **Pg 14 58 41.0 -0.2**
LXRA S **Sg 14 58 42.9 0.0**
KEF4 Livadi, Kephal 0.04 31 P **Pg 14 58 41.0 -0.2**
KEF4 S **Sg 14 58 42.9 -0.2**
CHV1 Chavriata, Kef 0.04 197 P **Pg 14 58 40.8 -0.4**

CHV1				S	Sg	14 58 42.9	-0.1
KEF3	Kipouria, Keph	0.04	243	P	Pg	14 58 40.7	-0.6
KEF3				S	Sg	14 58 42.4	-0.6
ARGA	Argostoli. Kep	0.08	126	P	Pg	14 58 41.3	-0.3
ARGA				S	Sg	14 58 43.3	-0.2
KEF1	Kardakata, Kep	0.08	47	P	Pg	14 58 41.2	-0.4
KEF1				S	Sg	14 58 43.4	-0.1
ARG2	Argostoli	0.08	122	P	Pg	14 58 41.3	-0.3
ARG2				S	Sg	14 58 43.7	+0.1
KEF2	Argostoli. Kep	0.09	129	P	Pg	14 58 41.4	-0.2
KEF2				S	Sg	14 58 43.6	-0.1
VLS	Valsamata	0.16	107	P	Pg	14 58 42.2	-0.3
VLS				S	Sg	14 58 45.4	+0.2
	10μm,0.1s						
VLS	Valsamata	0.16	107	P	Pg	14 58 42.2	-0.3
VLS				S	Sg	14 58 45.3	+0.1
VLS				AML	AML	14 58 45.5	
	comp=N,22988μm,0.2s						
VLS				AML	AML	14 58 45.8	
	comp=E,16020μm,0.1s						
FSK	Fiskardo	0.27	29	P	Pg	14 58 43.8	-0.5
FSK				S	Sg	14 58 48.3	+0.1
	comp=E,2μm,0.1s						
FSK	Fiskardo	0.27	29	P	Pg	14 58 43.7	-0.5
FSK				S	Sg	14 58 48.2	+0.1
FSK				AML	AML	14 58 48.6	
	comp=E,7049μm,0.1s						
FSK				AML	AML	14 58 48.7	
	comp=N,2484μm,0.2s						
VLMS	Volimes, Zakyn	0.41	149	P	Pg	14 58 46.0	-0.6
VLMS				S	Sb	14 58 53.2	-0.2
VLMS				AML	AML	14 58 57.6	
	comp=N,2261μm,0.2s						
VLMS				AML	AML	14 58 57.8	
	comp=E,2394μm,0.2s						
EVGI	Lefkada island	0.45	27	P	Pg	14 58 46.9	-0.6
EVGI				S	Sg	14 58 53.7	+0.2
EVGI	Lefkada island	0.45	27	P	Pg	14 58 46.8	-0.6
EVGI				S	Sg	14 58 53.7	+0.2
MGNA	Meganis	0.53	35	P	Pg	14 58 48.4	-0.6
MGNA				S	Sg	14 58 56.3	+0.2
MGNA				AML	AML	14 58 58.5	
	comp=N,608μm,0.1s						
MGNA				AML	AML	14 58 58.6	
	comp=E,863μm,0.1s						
LKD2	Lefkada island	0.60	20	P	Pg	14 58 49.2	-1.1
LKD2				S	Sg	14 58 58.0	-0.2
	comp=E,202nm,0.2s						
LKD2	Lefkada island	0.60	20	P	Pg	14 58 49.7	-0.7
TSLK	Tsoukalades, L	0.63	19	P	Pg	14 58 50.2	-0.7
TSLK				S	Sb	14 59 00.3	+0.3
	comp=E,248nm,0.3s						
TSLK	Tsoukalades, L	0.63	19	P	Pg	14 58 50.7	-0.2
PDO	Prodromos	0.72	58	P	Pg	14 58 52.0	-0.6
PDO	Prodromos	0.72	58	P	Pg	14 58 52.2	-0.4
PDO				S	Sb	14 59 02.3	-0.2
PDO				AML	AML	14 59 07.6	
	comp=E,412μm,0.4s						
PDO				AML	AML	14 59 11.2	
	comp=N,572μm,0.3s						
AXS	Araxos	0.77	92	P	Pg	14 58 52.8	-0.7
RLS	Riolos of Patr	0.86	101	P	Pg	14 58 54.5	-0.7
RLS				S	Sb	14 59 07.1	+0.6
RLS				AML	AML	14 59 12.7	
	comp=E,245μm,0.3s						
RLS				AML	AML	14 59 12.8	
	comp=N,192μm,0.6s						
PVO	Paravola	0.97	66	P	Pg	14 58 56.8	-0.5
PVO				S	Sn	14 59 11.2	+0.1
	comp=N,208nm,0.4s						
PVO	Paravola	0.97	66	P	Pg	14 58 56.8	-0.5
PVO				AML	AML	14 59 16.8	
	comp=E,439μm,0.4s						
PVO				AML	AML	14 59 17.7	
	comp=N,390μm,0.4s						
DRO	Drossia	1.07	104	P	Pb	14 58 59.1	+0.3
DRO	Drossia	1.07	104	P	Pb	14 58 59.3	+0.5
ANX	Ano Chora	1.25	72	P	Pg	14 59 01.7	-1.0
ANX				S	Sb	14 59 17.8	-0.1
IGT	Igoumenitsa	1.31	358	P	Pn	14 59 02.7	+0.4
IGT	Igoumenitsa	1.31	358	P	Pn	14 59 03.0	+0.8
SERG	Sergoula	1.32	81	P	Pn	14 59 02.4	-0.1
TRIZ	Trizonia	1.33	83	P	Pn	14 59 02.1	-0.4
KALE	Kalithea	1.38	82	P	Pn	14 59 03.3	0.0
KLV	Kalavryta, Ach	1.39	97	P	Pn	14 59 03.7	+0.2
KEK	Kerkira	1.56	343	P	Pn	14 59 06.0	+0.3
KEK	Kerkira	1.56	343	P	Pn	14 59 06.1	+0.3

*IDC **15** 15:06:51.4±2.1, 9.°19S×158.°89E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/31, mbtmp3.7/7, MS3.2/8, Ms1 3.2/8, ms1mx3.0/28, Error ellipse: s-maj=67.9km s-min=26.1km az=120.0*

*NEIC **15** 15:06:55.4±0.8, 9.°3S±0.°1×159.°08E±0.°05, h31km±4km, mb4.3/7, Error ellipse: s-maj=20.7km s-min=7.6km az=174.0*

ISC 15 15:06:52.5±0.8, 9.°3S±0.°2×159.°00E±0.°07, h10km, n22, σ1§05/17, mb3.9/11, MS3.0/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	0.95	101	iP	Pg	15 07 09.0	-1.8
HNR				iS	Sn	15 07 28.0	+2.5
HNR	Honiara	0.95	101		Pg	15 07 09.8	-1.0
HNR				Sn	Sg	15 07 23.1	-0.1
KRVT	Keravat (AS076	8.49	305	LR	LR	15 12 34.1	
	comp=Z,184nm,18.6s,baz=109,slow=41						
PMG	Port Moresby	11.69	268	LR	LR	15 14 06.2	
	comp=Z,220nm,18.2s,baz=207,slow=38						
DZM	Mont Dzumac	14.61	152	LR	LR	15 14 53.9	
	comp=Z,83nm,18.8s,baz=26,slow=33						
WR0	Warramunga Arr	25.91	243	P	P	15 12 25.6	+0.6
WR0				IAmb	IAmb	15 12 35.1	
	comp=Z,14nm,1.4s						
WB0	Warramunga Arr	25.98	244	P	P	15 12 26.2	+0.6
WB0				IAmb	IAmb	15 12 35.8	
	comp=Z,13nm,1.3s						
WRAB	Tennant Creek	26.07	243	P	P	15 12 26.9	+0.5
WRAB				IAmb	IAmb	15 12 32.7	
	comp=Z,8.0nm,1.1s						
WB2	Warramunga Arr	26.07	243	P	P	15 12 27.2	+0.7
WB2				IAmb	IAmb	15 12 43.7	
	comp=Z,10nm,1.2s						
WRA	Warramunga Arr	26.08	243	P	P	15 12 27.1	+0.6
	comp=Z,2.4nm,0.7s,baz=70,slow=9.6,SNR=9.6						
STKA	Stephens Creek	27.70	213	P	P	15 12 41.1	+0.1
	comp=Z,1.1nm,0.7s,baz=59,slow=12,SNR=2.5						
STKA				LR	LR	15 23 42.4	
	comp=Z,42nm,18.9s,baz=19,slow=36						
STKA	Stephens Creek	27.70	213	IAmb	IAmb	15 13 03.0	
	comp=Z,3.2nm,1.6s						
AS31	Alice Springs	27.94	236	P	P	15 12 43.1	-0.2
ASAR	Alice Springs	27.94	236	P	P	15 12 43.1	-0.2
	comp=Z,1.1nm,0.8s,baz=63,slow=9.4,SNR=8.7						
ASAR				LR	LR	15 23 37.7	
	comp=Z,33nm,18.5s,baz=88,slow=36						
AFI	Afiamalu	28.99	102	LR	LR	15 22 19.4	
	comp=Z,70nm,19.2s,baz=282,slow=32						
KNRA	Kununurra	30.18	255	P	P	15 13 01.7	-1.5
PPT	Papeete	50.57	105	LR	LR	15 33 56.5	
	comp=Z,24nm,19.1s,baz=187,slow=32						
KSRS	Korea Array	54.82	330	LR	LR	15 38 04.3	
	comp=Z,7.2nm,20.2s,baz=130,slow=34						
CMAR	Chiang Mai Arr	65.33	295	P	P	15 17 34.6	-0.8
	comp=Z,0.2nm,0.7s,baz=120,slow=4.9,SNR=2.5						
SONM	Songino Array	73.39	326	P	P	15 18 24.9	0.0
	comp=Z,0.5nm,0.8s,baz=131,slow=5.9,SNR=3.0						
ILAR	Eielson Array	84.05	20	P	P	15 19 23.7	+0.7
	comp=Z,0.2nm,0.5s,baz=253,slow=5.5,SNR=4.4						
MKAR	Makanchi Array	87.72	318	P	P	15 19 41.8	+0.2
	comp=Z,0.5nm,0.7s,baz=95,slow=6.8,SNR=3.4						

*ATH **15** 15:23:12.1, 38.°18N×20.°30E, h11km, ML3.3/19, Error ellipse: s-maj=1.9km s-min=0.9km az=76.0*

*THE **15** 15:23:12.5, 38.°18N×20.°30E, h3km, ML3.3/5, Error ellipse: s-maj=1.2km s-min=0.5km az=75.0*

*PDG **15** 15:23:13.0±0.4, 38.°22N×20.°37E, h18km±1km, ML3.5/10, Error ellipse: s-maj=1.0km s-min=1.1km az=0.0*

*BEO **15** 15:23:13.1±0.8, 38.°11N×20.°04E, h13km±4km, ML3.3/11*

*IDC **15** 15:23:15.7±3.6, 38.°65N×20.°72E, h0km, mb3.6/4, mb1 3.6/6, mb1mx3.3/45, mbtmp3.6/6, ML3.3/2, MS2.4/1, Ms1 2.4/1, ms1mx2.1/47, Error ellipse: s-maj=77.3km s-min=22.7km az=47.0*

ISC 15 15:23:12.4±1.0, 38.°18N±0.°02×20.°30E±0.°04, h7km±5km, n113, σ0§89/157, mb3.7/4, 1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.04	61	P	Pg	15 23 13.8	-0.1
CHV1	Chavriata, Kef	0.06	90	P	Pg	15 23 13.9	-0.2
CHV1				S	Sg	15 23 14.7	-0.6
AGT1	Agia Thekli	0.09	44	P	Pg	15 23 14.8	+0.2
AGT1				S	Sg	15 23 16.4	+0.4
LXR1	Lixouri, Cepha	0.11	81	P	Pg	15 23 14.9	+0.1
LXR1				S	Sg	15 23 16.7	+0.3
LXRA	Lixouri, Kepha	0.11	81	P	Pg	15 23 14.9	+0.1
LXRA				S	Sg	15 23 16.6	+0.2
KEF4	Livadi, Kephal	0.12	52	P	Pg	15 23 15.2	+0.1
KEF4				S	Sg	15 23 17.1	+0.3
ARGA	Argostoli. Kep	0.14	93	P	Pg	15 23 15.5	+0.2
ARGA				S	Sg	15 23 17.2	0.0
ARG2	Argostoli	0.14	92	P	Pg	15 23 15.6	+0.2
ARG2				S	Sg	15 23 17.9	+0.4
KEF2	Argostoli. Kep	0.15	97	P	Pg	15 23 15.6	+0.2
KEF2				S	Sg	15 23 17.7	+0.2
KEF1	Kardakata, Kep	0.16	55	P	Pg	15 23 15.8	0.0
KEF1				S	Sg	15 23 18.4	+0.4
VLS	Valsamata	0.23	92	P	Pg	15 23 16.8	-0.1
VLS				S	Sg	15 23 20.2	+0.3
	43μm,0.2s						
VLS	Valsamata	0.23	92	P	Pg	15 23 16.8	-0.1
VLS				S	Sg	15 23 19.9	0.0
VLS				AML	AML	15 23 20.3	
VLS				AML	AML	15 23 20.4	
	comp=E,69606μm,0.2s						
FSK	Fiskardo	0.34	36	P	Pg	15 23 19.1	0.0
FSK				S	Sg	15 23 24.5	+0.9
	comp=E,14μm,0.2s						
FSK	Fiskardo	0.34	36	P	Pg	15 23 19.1	0.0
FSK				S	Sg	15 23 24.6	+0.9
FSK				AML	AML	15 23 25.4	
	comp=N,24427μm,0.2s						
FSK				AML	AML	15 23 25.4	
	comp=E,29724μm,0.2s						
VLMS	Volimes, Zakyn	0.42	137	P	Pg	15 23 20.5	0.0
VLMS				S	Sg	15 23 26.8	+0.8
VLMS				AML	AML	15 23 28.0	
	comp=E,33482μm,0.2s						
VLMS				AML	AML	15 23 28.0	
	comp=N,38743μm,0.2s						
EVGI	Lefkada island	0.52	32	P	Pg	15 23 22.3	-0.1
EVGI	Lefkada island	0.52	32	P	Pg	15 23 22.4	-0.1
EVGI				S	Sg	15 23 29.9	+0.8
MGNA	Meganis	0.61	39	P	Pg	15 23 23.7	-0.4
MGNA				S	Sg	15 23 31.5	-0.6
MGNA				AML	AML	15 23 33.4	
	comp=N,4359μm,0.5s						
MGNA				AML	AML	15 23 33.6	
	comp=E,5093μm,0.3s						
ZAK2	Zakynthos	0.61	130	P	Pg	15 23 24.0	-0.3
ZAK2				S	Sg	15 23 32.7	+0.4
KRI1	kERI	0.66	142	P	Pg	15 23 24.6	-0.5
KRI1				S	Sb	15 23 35.0	-0.6
LKD2	Lefkada island	0.67	25	P	Pg	15 23 25.0	-0.2
LKD2				S	Sg	15 23 34.4	+0.5
	comp=E,1μm,0.8s						
LKD2	Lefkada island	0.67	25	P	Pg	15 23 24.8	-0.4
LKD2				AML	AML	15 23 42.7	
	comp=N,3579μm,0.6s						
LKD2				AML	AML	15 23 45.5	
	comp=E,3704μm,0.6s						
TSLK	Tsoukalades, L	0.70	23	P	Pg	15 23 25.6	-0.2
TSLK				S	Sb	15 23 36.5	-0.2
	comp=E,2μm,0.7s						
TSLK	Tsoukalades, L	0.70	23	P	Pg	15 23 25.7	-0.1
TSLK				S	Sg	15 23 34.7	-0.2
TSLK				AML	AML	15 23 44.0	
	comp=E,3991μm,0.8s						
TSLK				AML	AML	15 23 46.4	
	comp=N,5750μm,0.6s						
AST1	Astakos	0.71	60	P	Pg	15 23 25.6	-0.5
AST1				S	Sb	15 23 36.4	-0.8
VTN	Vitineika	0.75	111	P	Pg	15 23 26.4	-0.3
PDO	Prodromos	0.81	59	P	Pg	15 23 27.4	-0.5
PDO	Prodromos	0.81	59	P	Pg	15 23 26.7	-1.2
PDO				AML	AML	15 23 47.7	
	comp=E,5453μm,0.7s						
PDO				AML	AML	15 23 57.0	
	comp=N,5712μm,0.5s						
AXS	Araxos	0.84	89	P	Pg	15 23 28.3	-0.4
AXS	Araxos	0.84	89	P	Pg	15 23 28.3	-0.4
RLS	Riolos of Patr	0.93	97	P	Pg	15 23 29.6	-0.6
RLS	Riolos of Patr	0.93	97	P	Pg	15 23 29.4	-0.8
RLS				AML	AML	15 23 48.8	
	comp=N,1943μm,0.5s						
RLS				AML	AML	15 23 52.6	
	comp=E,1949μm,0.7s						
PVO	Paravola	1.05	65	P	Pg	15 23 32.1	-0.5
PVO	Paravola	1.05	65	P	Pg	15 23 32.1	-0.5
PVO				AML	AML	15 23 56.5	
	comp=N,3766μm,0.8s						
PVO				AML	AML	15 23 60.0	
	comp=E,4094μm,0.4s						
DRO	Drossia	1.13	101	P	Pg	15 23 33.5	-0.7
DRO	Drossia	1.13	101	P	Pg	15 23 33.5	-0.7
DRO				AML	AML	15 23 58.6	
	comp=E,5272μm,0.5s						
DRO				AML	AML	15 23 59.6	
	comp=N,4919μm,0.4s						
AMT	Artemida-Makis	1.29	120	P	Pn	15 23 36.6	-0.3
AMT	Artemida-Makis	1.29	120	P	Pn	15 23 35.3	-1.6
AMT				AML	AML	15 24 06.0	
	comp=N,3369μm,0.5s						
AMT				AML	AML	15 24 10.9	
	comp=E,2689μm,0.7s						
LAKA	Lakka	1.32	87	P	Pn	15 23 36.6	-0.7
LAKA				S	Sn	15 23 56.4	+1.2
	comp=E,570nm,0.4s						
LAKA	Lakka	1.32	87	P	Pn	15 23 36.5	-0.7
LAKA				AML	AML	15 23 57.5	
	comp=N,1490μm,0.4s						
LAKA				AML	AML	15 24 03.4	
	comp=E,1195μm,0.6s						
ANX	Ano Chora	1.33	72	P	Pn	15 23 37.2	-0.4
ANX	Ano Chora	1.33	72	P	Pn	15 23 37.4	-0.2
ANX				AML	AML	15 24 04.6	
	comp=N,4196μm,0.7s						
ANX				AML	AML	15 24 05.7	
	comp=E,3144μm,1.1s						
IGT	Igoumenitsa	1.35	1	ePg	Pg	15 23 39.0	+0.7
IGT				eSg	Sn	15 23 58.7	+2.9
IGT	Igoumenitsa	1.35	1	P	Pg	15 23 38.4	+0.1
EVR	Evrytania	1.39	58	P	Pn	15 23 37.9	-0.4
EVR	Evrytania	1.39	58	P	Pn	15 23 37.4	-0.9
EVR				AML	AML	15 24 08.4	
	comp=E,1194μm,0.9s						
EVR				AML	AML	15 24 19.6	
	comp=N,1104μm,0.9s						
SERG	Sergoula	1.40	80	P	Pn	15 23 37.5	-0.8
SERG	Sergoula	1.40	80	P	Pn	15 23 37.6	-0.8
SERG				AML	AML	15 24 04.6	
	comp=N,2047μm,0.6s						
SERG				AML	AML	15 24 07.6	
	comp=E,1232μm,0.4s						
TRIZ	Trizonia	1.40	82	P	Pn	15 23 37.5	-0.9
TRIZ	Trizonia	1.40	82	P	Pn	15 23 37.5	-0.9
ALIK	Aliki, Aigiali	1.43	86	P	Pn	15 23 38.8	+0.1
KALE	Kalithea	1.46	81	P	Pn	15 23 38.4	-0.9
KALE	Kalithea	1.46	81	P	Pn	15 23 38.7	-0.5
KALE				AML	AML	15 24 08.7	
	comp=N,2129μm,0.8s						
KALE				AML	AML	15 24 10.8	
	comp=E,1105μm,0.6s						
KLV	Kalavryta, Ach	1.46	95	P	Pn	15 23 38.9	-0.4
KLV				S	Sg	15 24 00.3	+0.9
KLV				AML	AML	15 24 06.1	
	comp=N,853μm,0.7s						
KLV				AML	AML	15 24 07.7	
	comp=E,1069μm,0.9s						
KEK	Kerkira	1.58	346	P	Pn	15 23 41.4	+0.6
KEK	Kerkira	1.58	346	P	Pn	15 23 41.1	+0.3
ITM	Ithomi	1.63	127	P	Pn	15 23 41.8	+0.2
ITM	Ithomi	1.63	127	P	Pn	15 23 41.7	+0.2
MAKR	Makrakomi, Fth	1.66	59	P	Pb	15 23 43.2	-0.1
MAKR				AML	AML	15 24 18.5	
	comp=N,2094μm,0.9s						
MAKR				AML	AML	15 24 19.5	
	comp=E,1986μm,0.4s						
PYL	PYLOS	1.72	138	P	Pn	15 23 43.1	+0.3
AGG	Agios Georgios	1.79	62	P	Pb	15 23 45.0	-0.7
AGG				AML	AML	15 24 19.7	
	comp=N,953μm,0.6s						
AGG				AML	AML	15 24 20.4	
	comp=E,682μm,0.4s						
VLX	Vlachokerasia	1.83	116	P	Pb	15 23 46.5	+0.1
THL	Klokotos Trika	1.92	44	P	Pb	15 23 47.1	-0.6
KPRO	Kipourio	1.95	25	P	Pb	15 23 47.9	-0.4
PROD	Prodromos	2.05	87	P	Pn	15 23 48.6	+1.3
LTK	Loutraki	2.11	94	P	Pn	15 23 49.1	+1.0
LOUT	Loutraki	2.12	94	P	Pn	15 23 49.4	+1.2
LKR	Lokris	2.17	77	P	Pb	15 23 50.7	-1.3
NEST	Nestorio	2.30	14	P	Pb	15 23 53.5	-0.8
VIL2	Platees	2.34	88	P	Pn	15 23 53.0	+1.7
DID	Didima	2.42	105	P	Pn	15 23 53.3	+0.9
NEO	Neokhori	2.54	63	P	Pn	15 23 55.6	+1.4
XOR	Xorichti	2.55	62	P	Pb	15 23 56.7	-1.8
MRKA	Markates	2.63	78	P	Pn	15 23 56.6	+1.3
VLY	Voula,Athens	2.78	96	P	Pn	15 23 58.2	+0.9
PTL	Penteli	2.81	92	P	Pn	15 23 58.8	+1.0
TIR	Tirane	3.18	354	eSn	Sn	15 24 41.2	+0.2
STIP	Stip	3.79	22	iPn	Pn	15 24 11.8	+0.6
ULC	Ulcinj	3.86	348	ePn	Pn	15 24 11.6	-0.6
ULC				eSn	Sn	15 24 58.0	+0.1
SRS	Serrai	3.88	40	ePn	Pn	15 24 14.2	+1.8
DRME	Dracevica, Mon	4.09	348	ePn	Pn	15 24 15.1	-0.2
DRME				eSn	Sn	15 25 03.1	-0.3
PDG	Podgorica	4.32	350	ePn	Pn	15 24 18.9	+0.5
PDG				eSn	Sn	15 25 07.7	-1.3
TTG	Podgorica	4.32	350	ePn	Pn	15 24 19.2	+0.8
TTG				eSn	Sn	15 25 09.0	0.0
PVY	Plav	4.41	357	ePn	Pn	15 24 20.3	+0.4
PVY				eSn	Sn	15 25 11.2	-0.4
HCY	Herceg Novi	4.48	343	ePn	Pn	15 24 21.5	+0.8
HCY				eSn	Sn	15 25 12.7	-0.3
CEME	Cevo	4.49	347	ePn	Pn	15 24 20.3	-0.5
CEME				eSn	Sn	15 25 13.0	-0.3
IDI	Anoyia	4.68	127	Pn	Pn	15 24 28.9	+5.3
	comp=E,0.6nm,0.3s,baz=321,slow=13,SNR=3.7						
IDI				Sn	Sn	15 25 20.9	+2.7
	comp=E,3.4nm,0.3s,baz=322,slow=22,SNR=15						
IDI				LR	LR	15 26 35.7	
	comp=E,49nm,21.8s,baz=251,slow=42						
NKME	Niksic	4.69	348	ePn	Pn	15 24 24.1	+0.4
NKME				eSn	Sn	15 25 18.1	-0.3
IVA	Berane	4.69	356	⇓iPn	Pn	15 24 24.1	+0.4
IVA				eSn	Sn	15 25 17.8	-0.7
KOME	Kolasin	4.70	353	ePn	Pn	15 24 24.1	+0.3
KOME				eSn	Sn	15 25 18.2	-0.4
TREB	Trebinje	4.77	342	ePn	Pn	15 24 24.1	-0.6
TREB				eSn	Sn	15 25 18.3	-1.9
BARS	Barje	4.77	14	ePn	Pn	15 24 25.4	+0.7
BARS				eSn	Sn	15 25 21.9	+1.7
BRY	Bratogost	4.90	345	ePn	Pn	15 24 27.5	+0.9
BRY				eSn	Sn	15 25 23.2	-0.5
SJES	Sjenica	5.08	357	ePn	Pn	15 24 29.4	+0.4
SJES				eSn	Sn	15 25 27.7	-0.3
STON	Ston	5.08	338	ePn	Pn	15 24 28.8	-0.2
UPM	Unac-Piva	5.12	348	ePn	Pn	15 24 30.4	+0.6
UPM				eSn	Sn	15 25 29.1	-0.2
IVAS	Ivanjica	5.39	359	ePn	Pn	15 24 33.4	+0.1
IVAS				eSn	Sn	15 25 34.2	-1.4
BOVS	Bovan	5.55	11	ePn	Pn	15 24 36.0	+0.6
BOVS				eSn	Sn	15 25 39.3	-0.1
GRUS	Gruza	5.71	3	eSn	Sn	15 25 41.4	-1.9
ZAGS	Zajecar	5.81	14	ePn	Pn	15 24 40.7	+1.7
DIVS	Divibare	5.91	358	ePn	Pn	15 24 41.7	+1.2
DIVS				eSn	Sn	15 25 46.5	-2.0
TRUS	Trudelj	6.04	1	ePn	Pn	15 24 43.2	+1.1
TRUS				eSn	Sn	15 25 50.6	-0.8
SOKA	Soboth	9.34	337	ePn	Pn	15 25 27.3	-0.1
	comp=E,2.5nm,0.5s						
OBKA	Obir	9.34	335	iPn	Pn	15 25 29.7	+2.2
	comp=E,1.8nm,0.4s						
ARSA	Arzberg	9.72	340	ePn	Pn	15 25 35.1	+2.5
	comp=E,1.0nm,0.3s						
MYKA	Terra Mystica	9.77	332	iPn	Pn	15 25 34.9	+1.6
	comp=E,1.4nm,0.4s						
KBA	Koelnbreinsper	10.26	332	ePn	Pn	15 25 42.6	+2.5
	comp=E,1.3nm,0.5s						
MOA	Molln	10.62	337	iPn	Pn	15 25 47.1	+2.1
	comp=E,0.8nm,0.2s						
GERES	GERESS Array B	11.68	338	Pn	Pn	15 26 00.4	+0.9
	comp=E,0.1nm,0.3s,baz=158,slow=14,SNR=3.4						
HFS	Hagfors	22.37	351	P	P	15 28 11.2	+0.3
	comp=E,2.2nm,0.7s,baz=153,slow=10.0,SNR=5.2						
FINES	FINESS Array B	23.56	7	P	P	15 28 23.6	+0.4
	comp=E,0.7nm,0.5s,baz=190,slow=9.7,SNR=5.3						
MKAR	Makanchi Array	45.44	58	P	P	15 31 31.7	-0.2
	comp=E,0.4nm,0.4s,baz=279,slow=7.9,SNR=4.8						
ZALV	Zalesovo Beam	45.81	48	P	P	15 31 34.2	-0.5
	comp=E,0.5nm,0.3s,baz=258,slow=7.2,SNR=3.1						

*IDC **15** 15:59:56.9±3.5, 32.°04N×140.°65E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.4/34, mbtmp3.4/5, ML2.1/1, Error ellipse: s-maj=135.0km s-min=17.4km az=69.0*

ISC 15 15:59:56.6±1.6, 32.°3N±0.°2×141.°1E±0.°3, h10km, n6, σ1§08/7, mb3.5/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.39	309	Pn	Pb	16 00 21.4	-1.4
	39nm,0.3s,baz=242,slow=17,SNR=3.0						
JHJ				Sn	Sg	16 00 42.2	+0.7
	48nm,0.3s,baz=270,slow=20,SNR=3.0						
MJAR	Matsushiro Arr	4.89	332	Pn	Pn	16 01 09.9	-0.4
	0.1nm,0.3s,baz=159,slow=12,SNR=5.7						
SONM	Songino Array	30.47	311	P	P	16 06 11.0	+1.4
	0.3nm,0.5s,baz=118,slow=8.0,SNR=2.4						
MKAR	Makanchi Array	46.56	306	P	P	16 08 24.9	+0.4
	0.3nm,0.4s,baz=87,slow=9.7,SNR=12						
WRA	Warramunga Arr	52.29	188	P	P	16 09 08.1	-0.4
	0.5nm,0.6s,baz=28,slow=7.8						
ASAR	Alice Springs	56.02	188	P	P	16 09 35.5	-0.1
	0.2nm,0.5s,baz=4.8,slow=8.1,SNR=5.3						

*IDC **15** 16:12:45.0±1.7, 60.°20N×151.°75W, h57km±34km, mb3.4/1, mb1 3.6/4, mb1mx3.0/54, mbtmp3.6/4, ML1.1/1, MS3.4/1, Ms1 3.4/1, ms1mx2.4/29, Error ellipse: s-maj=48.5km s-min=10.1km az=110.0*

*NEIC **15** 16:12:46.0±1.2, 60.°23N±0.°04×151.°87W±0.°08, h74km±7km, Error ellipse: s-maj=6.5km s-min=3.9km az=46.0*

*AEIC **15** 16:12:47.1±1.2, 60.°22N±0.°04×151.°80W±0.°07, h66km±6km, ML3.1/77, Error ellipse: s-maj=6.1km s-min=3.7km az=45.0*

ISC 15 16:12:46.2±1.0, 60.°21N±0.°03×151.°78W±0.°04, h74km±7km, n84, σ0§74/93, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RED	Redoubt Volcan	0.54	293		Pn	16 12 59.1	-0.7
RED					Sn	16 13 09.1	-0.7
RSO	Redoubt South	0.55	298		Pn	16 12 59.3	-0.7
HOM	Homer	0.56	173		Pn	16 13 00.3	+0.4
HOM					Sn	16 13 11.3	+1.4
DFR	Drift River	0.59	311		Pn	16 12 59.5	-0.9
DFR					Sn	16 13 09.8	-0.8
RDWB	Redoubt West	0.60	298		Pn	16 12 59.6	-0.9
RDWB					Sn	16 13 10.1	-0.8
BRLK	Bradley Lake	0.63	135		Pn	16 13 00.6	-0.1
BRLK					Sn	16 13 11.5	+0.1
RDJH	Redoubt Jeurge	0.64	307		Pn	16 13 00.2	-0.7
IVE	Iliamna Volcan	0.65	253		Pn	16 13 00.6	-0.4
ILS	Iliamna Low So	0.69	249		Pn	16 13 01.0	-0.5
BRSE	Bradley Lake S	0.70	132		Pn	16 13 01.4	0.0
BRSE					Sn	16 13 12.7	+0.1
CNPM	China Poot	0.74	158		Pn	16 13 01.9	0.0
CNPM					Sn	16 13 13.7	+0.3
SLKM	Skilak Lake	0.83	68		Pn	16 13 02.4	-0.5
SPCR	Spurr Chakacha	1.01	348		Pn	16 13 04.7	-0.4
CRP	Crater Peak	1.08	350		Pn	16 13 05.9	0.0
SPCG	Spurr Capps Gl	1.09	354		Pn	16 13 06.0	-0.2
SPBG	Spurr Blockage	1.09	345		Pn	16 13 06.0	-0.1
AU22	Augustine Moun	1.16	224		Pn	16 13 07.2	+0.3
AU22					Sn	16 13 22.9	+0.6

SEW Seward 1.17 94 Pn 16 13 06.7 -0.3
AUP Augustine Pinn 1.19 225 Pn 16 13 07.8 +0.4
AUH Augustine H 1.20 225 Pn 16 13 07.7 +0.3
AUW Augustine West 1.20 226 Pn 16 13 07.8 +0.4
STLK Strandline Lak 1.29 359 Pn 16 13 08.8 +0.1
RC01 Rabbit Creek A 1.34 48 Pn 16 13 09.9 +0.8
SUA Susitna One 1.35 21 Pn 16 13 09.8 +0.3
SKT Skwentna 1.78 4 Pn 16 13 15.1 +0.2
PWL Port Wells 1.82 68 Pn 16 13 15.0 -0.5
PMR Palmer 1.90 42 Pn 16 13 16.3 -0.1
KNK Knik Glacier 2.02 52 Pn 16 13 17.6 -0.7
SVW2 Sparrevohn 2.07 297 Pn 16 13 17.9 -1.0
GHO Glory Hole Cre 2.10 40 Pn 16 13 18.9 -0.3
KAHC Katmai Hardscr 2.28 228 Pn 16 13 21.3 -0.4
SML Sawmill 2.32 45 Pn 16 13 22.1 -0.1
GLI Glacier Island 2.41 72 Pn 16 13 21.6 -1.7
KDAK Kodiak Island 2.47 190 P Pn 16 13 23.2 -1.0
6.4nm,0.3s,baz=24,slow=12,SNR=442
KDAK S Sn 16 13 51.9 -1.4
7.7nm,0.3s,baz=140,slow=20,SNR=10
HIN Hinchinbrook I 2.63 84 Pn 16 13 24.9 -1.5
FID Port Fidalgo 2.68 76 Pn 16 13 25.0 -2.0
PPLA Purkeypile 2.70 356 Pn 16 13 27.6 +0.2
SCM Sheep Creek Mo 2.71 51 Pn 16 13 27.3 -0.2
HUR Hurricane 2.96 19 Pn 16 13 31.9 +1.0
WAT1 Susitna Watana 3.05 29 Pn 16 13 32.9 +0.8
WAT6 Susitna Watana 3.07 37 Pn 16 13 32.9 +0.5
OHAK Old Harbor 3.10 195 Pn 16 13 31.4 -1.3
WAT2 Susitna Watana 3.15 28 Pn 16 13 34.3 +0.7
TRF Thorofare Moun 3.33 12 Pn 16 13 35.5 -0.4
KTH Kantishna Hill 3.38 7 Pn 16 13 36.9 +0.3
TT01 Tatalina 3.38 325 Pn 16 13 36.1 -0.5
TTA Tatalina 3.40 325 Pn 16 13 36.3 -0.6
RND Reindeer 3.49 22 Pn 16 13 38.5 +0.3
GOAT Goat Mountain 3.52 81 Pn 16 13 37.0 -1.5
RAGM Ragged Mountai 3.54 84 Pn Pn 16 13 37.2 -1.6
DHY Denali Highway 3.56 34 Pn 16 13 39.6 +0.5
HMT Hamilton 3.75 85 Pn Pn 16 13 41.7 +0.1
MCK McKinley 3.78 20 Pn 16 13 42.5 +0.5
BPAW Bear Paw Mtn. 3.92 5 Pn 16 13 44.3 +0.4
GLB Gilahina Butte 4.09 69 Pn 16 13 45.2 -1.1
PAX Paxson 4.09 45 Pn 16 13 46.6 +0.3
BWN Browne 4.12 14 Pn 16 13 47.4 +0.8
VRDI Verde Repeater 4.21 72 Pn Pn 16 13 46.8 -1.3
TGL Tana Glacier 4.46 79 Pn Pn 16 13 51.3 -0.1
WRH Wood River Hil 4.61 20 Pn 16 13 52.9 -0.4
KIAG Kiagna River 4.70 77 Pn 16 13 53.5 -1.2
BALM Baldy 4.72 76 Pn 16 13 53.7 -1.2
MENT Mentasta 4.72 51 Pn Pn 16 13 55.5 +0.6
HDA Harding Lake 4.78 26 Pn 16 13 56.0 +0.4
RIDG Independent Ri 4.82 40 Pn 16 13 57.0 +0.9
CCB Clear Creek Bu 4.82 21 Pn 16 13 56.1 0.0
MLY Manley 4.86 5 Pn 16 13 56.9 +0.2
MESA MESA 4.91 86 Pn Pn 16 13 57.8 +0.3
PS08 TAPS Pump Stn8 4.92 26 Pn 16 13 57.4 -0.1
DOT Dot Lake 5.02 43 Pn 16 13 59.1 +0.3
COLA College 5.02 20 Pn 16 13 58.5 -0.3
COLA College 5.02 20 Pn 16 13 59.3 +0.4
MDM Murphy Dome 5.04 17 Pn 16 14 00.1 +0.9
BARN Barnard Glacie 5.05 76 Pn Pn 16 14 00.3 +0.8
IL31 5.11 24 Pn 16 14 00.2 +0.2
ILAR Eielson Array 5.11 24 P Pn 16 14 00.1 0.0
1.9nm,0.3s,baz=210,slow=13,SNR=50
ILAR S Sn 16 14 56.5 -1.1
2.3nm,0.3s,baz=198,slow=22,SNR=6.5
CTGM Chitina Glacie 5.21 77 Pn Pn 16 14 02.4 +0.9
IM03 5.86 352 Pn 16 14 10.4 +0.1
EGAK Eagle 6.72 42 Pn Pn 16 14 21.8 -0.2
DAWY Dawson 6.97 51 Pn Pn 16 14 25.3 -0.2
JIS Juneau Island 9.12 95 Pn Pn 16 14 56.2 +1.4
YKA Yellowknife Ar 17.81 67 P P 16 16 48.5 0.0
0.0nm,0.3s,baz=277,slow=13,SNR=3.9
YBH Yreka Blue Hor 25.68 123 LR LR 16 25 34.7
comp=Z,71nm,18.1s,baz=110,slow=30
SONM Songino Array 55.16 307 P P 16 22 11.3 +0.5
0.6nm,0.6s,baz=30,slow=6.6,SNR=5.0

NIED **15** *16:14:00, 23.10N×120.60E, h32km, Mw4.1 Best double couple: M₀1.61000×10^15 NP1:φₛ196.00000°, δ72.00000°, λ139.00000°. NP2:φₛ301.00000°, δ51.00000°, λ23.00000°.*
JMA **15** *16:14:15.6±0.1, 23.09N×120.56E, h0km, M4.3*
TAP **15** *16:14:17.6, 23.06N×120.66E, h16km, ML4.3, B*
IASPEI **15** *16:14:17.7±0.8, 23.06N±0.01×120.65E±0.02, h18km±2km, mb4.2/16, MS3.0/3, Error ellipse: s-maj=2.2km s-min=1.7km az=84.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
BJI **15** *16:14:17.6±0.0, 23.09N×120.66E, h13km, mB4.3/2, mb3.8/4, ML4.2/4*
NEIC **15** *16:14:17.1±2.4, 23.00N±0.03×120.64E±0.04, h19km±4km, mb4.5/9, Error ellipse: s-maj=6.3km s-min=3.5km az=49.0*
ASIES **15** *16:14:18.7, 23.07N×120.69E, h18km, MW3.6*
IDC **15** *16:14:21.8±4.9, 22.95N×120.83E, h54km±45km, mb3.6/13, mb1 3.7/14, mb1mx3.5/52, mbtmp3.8/14, ML3.3/1, MS3.2/4, Ms1 3.2/4, ms1mx2.9/29, Error ellipse: s-maj=23.3km s-min=15.0km az=73.0*
ISC 15 16:14:17.6±0.7, 23.06N±0.01×120.64E±0.01, h18km±2km, n180, σ1.02/268, mb4.2/16, MS3.0/3, 14C-44D, Taiwan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SGST Jiashian 0.06 296⇑eP Pg 16 14 20.4 -0.6
baz=289
SGST eS Sg 16 14 23.2 0.0
baz=289
SLGT Liugui 0.06 174 ⇑P Pg 16 14 21.3 +0.3
baz=194
SLGT S Sg 16 14 23.8 +0.5
baz=194
STYT Tauyuan 0.15 46⇓iP Pg 16 14 22.2 +0.2
baz=51
STYT iS Sg 16 14 25.4 +0.5
baz=51
CHN1 Nanshi 0.16 321⇑iP Pg 16 14 22.9 +0.8
baz=322
CHN1 S Sg 16 14 26.6 +1.5
baz=322
WTP Ta-pu 0.19 353⇑iP Pg 16 14 23.1 +0.6
baz=348
WTP S Sg 16 14 26.9 +1.1
baz=348
SNST Tainan City 0.21 321⇓iP Pg 16 14 23.6 +0.8
baz=326
SNST S Sg 16 14 27.8 +1.6
baz=326
TPUB Ta-pu 0.24 358 ⇑P Pb 16 14 23.8 +0.3
baz=353
TPUB S Sg 16 14 28.2 +1.0
baz=353
TPUB Ta-pu 0.24 358 Pb 16 14 23.1 -0.4
TPUB Sg Sg 16 14 28.1 +1.0
TWK Hsinying 0.25 326⇓iP Pb 16 14 24.1 +0.5
baz=324
TWK S Sg 16 14 28.9 +1.6
baz=324
CHN3 Shinhua 0.25 274⇓iP Pg 16 14 25.4 +2.0
baz=274
CHN3 S Sn 16 14 31.4 -0.5
baz=274
CHN4 Tsaushan 0.30 352⇓iP Pg 16 14 24.8 +0.6
baz=348
TWM1 Shoushan 0.31 221⇓iP Pb 16 14 25.9 +1.3
baz=223
SSD Sandimen 0.31 181⇓iP Pg 16 14 24.9 +0.6
baz=179
SSD S Sb 16 14 29.7 +0.3
baz=179
SGLT Jiouru 0.36 202⇓iP Pb 16 14 26.9 +1.4
baz=198
ELDTW Lidau 0.37 69⇓iP Pg 16 14 25.7 +0.2
baz=69
ELDTW eS Sg 16 14 31.4 +0.6
baz=69
TAI1 Yung-k'ang 0.38 268⇓iP Pb 16 14 27.4 +1.6
baz=267
SNJT Kaohsiung City 0.41 223 eP Pn 16 14 28.2 -0.5
baz=239
SNJT eS Sn 16 14 36.7 +0.8
baz=239
SCLT Jiali 0.43 286⇓iP Pb 16 14 27.6 +0.9
baz=294
SCLT eS Sn 16 14 35.4 -0.9
baz=294
MASBT Mashibuluo 0.44 181 ⇑P Pg 16 14 27.1 +0.4
baz=181
MASBT eS Sg 16 14 33.3 +0.5
baz=181
TWG Pinlang 0.46 120⇓iP Pg 16 14 27.5 +0.4
baz=112
TWG S Sb 16 14 34.3 +0.4
baz=112
TWG Pinlang 0.46 120 Pg 16 14 27.0 -0.1
TWGBT Beinan 0.47 120 ⇓P Pg 16 14 27.5 +0.3
baz=112
TWGBT S Sg 16 14 34.2 +0.6
baz=112
ALS Alishan 0.48 19⇓eP Pg 16 14 27.7 +0.3
baz=17
ALS S Sb 16 14 35.0 +0.5
baz=17
CHY Chiayi 0.48 336 ⇓P Pb 16 14 28.3 +0.7
baz=333
CHY S Sb 16 14 36.2 +1.9
baz=333
CHN8 Yiju 0.49 306 ⇓P Pb 16 14 28.4 +0.7
baz=315
CHN8 eS Sn 16 14 36.8 -0.9
baz=315
CHN2 Minshiung 0.50 342 ⇓P Pg 16 14 28.8 +1.1
baz=339
CHN2 eS Sb 16 14 36.7 +1.9
baz=339
YUS Yu-Shan 0.52 34⇓iP Pg 16 14 28.6 +0.3
baz=33
YUS S Sg 16 14 36.0 +0.6
baz=33
WLGB Puzi 0.52 323 ⇓P Pg 16 14 29.0 +0.9
baz=320
WLGB eS Sn 16 14 37.8 -0.8
baz=320
CHN5 Tsauling 0.54 4⇓iP Pb 16 14 28.9 +0.3
baz=11
CHN5 eS Sg 16 14 37.7 +1.9
baz=11
WSSB Gushan 0.54 220⇓iP Pn 16 14 30.4 -0.1
baz=234
WSSB eS Sn 16 14 40.3 +1.2
baz=234
ECL Taimali 0.54 148⇓iP Pb 16 14 28.7 +0.1
baz=150
ECL S Sg 16 14 36.4 +0.6
baz=150
TTN Taitung 0.56 123⇓iP Pg 16 14 29.9 +1.1
baz=115
TTN eS Sn 16 14 38.8 -0.7
baz=115
KAU Kaohsiung 0.57 212 eP Pn 16 14 31.2 +0.3
baz=228
SSPT Xinbi 0.57 187⇓eP Pg 16 14 30.1 +1.0
baz=180
FULB Fuli 0.62 77 ⇓P Pg 16 14 30.6 +0.6
baz=77
FULB S Sg 16 14 39.1 +0.8
baz=77
WGK Gukeng 0.63 354 P Pg 16 14 31.1 +1.0
baz=5.0
WGK eS Sn 16 14 40.9 -0.4
baz=5.0
WDLH Douliu 0.64 352 eP Pg 16 14 31.2 +0.9
baz=349
WDLH eS Sn 16 14 41.8 +0.3
baz=349
WHYT Xinyi Township 0.67 17⇓eP Pb 16 14 31.1 +0.3
baz=15
WHYT S Sg 16 14 40.8 +1.0
baz=15
CHKT Chengkung 0.67 86 ⇓P Pg 16 14 31.4 +0.5
baz=80
CHKT eS Sn 16 14 41.4 -0.8
baz=80
TWF1 Yuli 0.67 64⇓iP Pb 16 14 31.0 +0.1
baz=64
TWF1 S Sb 16 14 39.5 -0.3
baz=64
SCZT Fangliau 0.68 181⇑eP Pb 16 14 31.3 +0.3
baz=176
SCZT eS Sn 16 14 41.9 -0.7
baz=176
YULB Yu-li 0.69 61 ⇓P Pb 16 14 31.0 -0.2
baz=61
YULB S Sb 16 14 39.7 -0.7
baz=61
YULB Yu-li 0.69 61 Pb 16 14 30.7 -0.5
WSF Szhu 0.69 327⇓iP Pb 16 14 31.8 +0.6
baz=325
WSF eS Sn 16 14 43.0 +0.1
baz=325
EAST Anshuo 0.70 164 P Pb 16 14 31.7 +0.4
baz=166
EAST S Sg 16 14 41.6 +0.9
baz=166
TAW Tawu 0.74 161 ⇑P Pg 16 14 32.4 +0.3
baz=163
TAW S Sg 16 14 42.4 +0.6
baz=163
WLCH Liuqiu 0.74 199 eP Pn 16 14 34.5 +1.3
baz=201
WLCH eS Sn 16 14 47.6 +3.6
baz=201
TWP Hsiaoliuchiu 0.75 200 eP Pn 16 14 34.5 +1.1
baz=201
TWP eS Sn 16 14 47.7 +3.4
baz=201
WJS Zhushan 0.77 6 eP Pg 16 14 33.3 +0.6
baz=4.0
WJS eS Sn 16 14 44.7 +0.1
baz=4.0
EHY Hungye 0.77 54⇓iP Pb 16 14 32.6 0.0
baz=58
EHY S Sb 16 14 42.7 0.0
baz=58
SSLB Suanglung 0.78 22 ⇓P Pb 16 14 32.8 0.0
baz=20
SSLB eS Sb 16 14 43.7 +0.7
baz=20
SSLB Suanglung 0.78 22 Pb 16 14 32.5 -0.3
WNT Mingjian 0.82 3 P Pb 16 14 33.9 +0.5
baz=2.0
WNT S Sn 16 14 46.3 +0.3
baz=2.0
VWDT VWDT 0.83 34 ⇓P Pb 16 14 33.7 +0.1
baz=32
VWDT S Sg 16 14 45.6 +0.6
baz=32
WMLT Mailiao 0.84 333 eP Pg 16 14 34.6 +0.6
baz=331
WMLT eS Sn 16 14 46.5 +0.2
baz=331
HGSD Ruisui 0.84 59 ⇓P Pg 16 14 34.5 +0.4
baz=55
HGSD S Sg 16 14 46.3 +1.0
baz=55
TWH Lutao 0.85 114⇓iP Pb 16 14 34.0 +0.2
baz=109
TWH S Sg 16 14 46.1 +0.7
baz=109
TYC Yuchr 0.87 13 ⇑P Pb 16 14 34.6 +0.4
baz=13
TYC eS Sn 16 14 47.8 +0.7
baz=13
WTCT Ta-ch'eng 0.87 338 eP Pb 16 14 34.2 0.0
baz=336
WTCT S Sn 16 14 47.3 +0.1
baz=336
RLNB Erlin 0.87 343 eP Pb 16 14 34.5 +0.2
baz=341
RLNB S Sg 16 14 47.1 +0.9
baz=341
WDGT Dungji 0.92 283⇓iP Pb 16 14 35.0 -0.2
baz=281
WDGT S Sb 16 14 48.0 +0.9
baz=281
EGFH Guangfu 0.95 50 ⇓P Pb 16 14 35.7 +0.1
baz=50
EGFH eS Sb 16 14 48.4 +0.6
baz=50
DPDB Guoxing 1.01 15 eP Pb 16 14 36.7 +0.1
baz=14
DPDB eS Sn 16 14 51.2 +0.5
baz=14
OWD Renai 1.02 29 eP Pb 16 14 37.2 +0.3
baz=15
OWD eS Sb 16 14 51.0 +0.9
baz=15
WCHH Zhanghua 1.02 356 eP Pb 16 14 37.4 +0.6
baz=354
WCHH eS Sg 16 14 51.6 +0.7
baz=354
ESL Shilin 1.05 44⇓iP Pb 16 14 37.6 +0.3
baz=44
ESL S Sn 16 14 51.6 -0.1
baz=44
HEN Hengchun 1.05 175⇑eP Pn 16 14 38.1 +0.6
baz=166
HEN eS Sg 16 14 53.4 +1.5
baz=166
PHUB P'eng-hu 1.08 295 ⇓P Pn 16 14 37.1 -0.8
baz=293
PHUB eS Sb 16 14 51.2 -0.4
baz=293
TCU Taichung 1.09 2 eP Pn 16 14 38.4 +0.4
baz=348
TCU eS Sg 16 14 53.6 +0.6
baz=348
CHGB Renai 1.11 26 ⇓P Pn 16 14 38.6 +0.1
baz=14
CHGB S Sg 16 14 54.5 +0.5
baz=14
PNG Penghu 1.12 297⇓iP Pn 16 14 37.7 -0.7
baz=295
PNG eS Sb 16 14 52.6 0.0
baz=295
TWK1 Hengchun 1.12 172 ⇑P Pb 16 14 38.8 +0.3
baz=173
TWK1 eS Sg 16 14 54.0 0.0
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TWKBT Hengchun 1.12 172 ⇑P Pb 16 14 38.8 +0.3
baz=173
TWKBT eS Sg 16 14 55.1 +1.0
baz=173
VCHM Qimei 1.12 278⇓eP Pn 16 14 37.6 -0.8
baz=288
VCHM eS Sb 16 14 52.9 +0.1
baz=288
TSEB Hengchuen, Pin 1.18 168 eP Pg 16 14 40.7 +0.3
baz=190
TSEB eS Sg 16 14 56.8 +1.0
baz=190
ENLB Shoufeng 1.22 46 eP Pn 16 14 40.0 +0.1
baz=37
ENLB eS Sn 16 14 56.4 +0.5
baz=37
WHF Hehuan Shan 1.23 28⇓eP Pn 16 14 40.5 +0.2
baz=16
WHF eS Sn 16 14 57.6 +1.0
baz=16
WHP Taichung City 1.25 13 eP Pb 16 14 41.0 +0.3
baz=12
WHP eS Sg 16 14 58.2 0.0
baz=12
HWA Hwalien 1.27 44 eP Pb 16 14 42.0 +0.9
baz=36
HWA eS Sg 16 14 58.8 -0.2
baz=36
TDCB Techi 1.28 22 ⇑P Pn 16 14 41.5 +0.6
baz=21
TDCB eS Sn 16 14 57.9 +0.3
baz=21
WDJ Dajia District 1.28 0 eP Pb 16 14 41.6 +0.3
baz=348
WDJ eS Sg 16 15 00.2 +0.9
baz=348
TWT Tachien 1.29 22 eP Pn 16 14 41.5 +0.5
baz=21
TWT eS Sb 16 14 58.9 +1.1
baz=21
TWQ1 Liyutan 1.29 5 ⇓P Pb 16 14 41.8 +0.4
baz=5.0
TWQ1 eS Sb 16 14 58.7 +1.0
baz=5.0
LAY Lan-yu 1.32 140 eP Pn 16 14 41.1 -0.1
baz=142
LAY eS Sb 16 14 59.2 +0.7
baz=142
TWD Chiawan 1.34 41 eP Pb 16 14 42.4 0.0
baz=41
TWD eS Sb 16 14 59.6 +0.4
baz=41
NSY Sanyi 1.36 5 eP Pb 16 14 43.0 +0.4
baz=4.0
NSY eS Sb 16 15 01.2 +1.6
baz=4.0
ETLH Xiulin Townshi 1.38 34 eP Pn 16 14 42.8 +0.7
baz=33
ETLH eS Sg 16 15 02.6 +0.2
baz=33
PTSB Yuanli 1.39 2 eP Pn 16 14 42.8 +0.7
baz=1.0
PTSB eS Sb 16 15 02.0 +1.6
baz=1.0
NACB Ninganchiao 1.42 38 eP Pn 16 14 43.3 +0.7
baz=52
NACB eS Sb 16 15 01.5 +0.2
baz=52
NACB Ninganchiao 1.42 38 Pn 16 14 43.2 +0.7
NMLH Miaoli 1.48 5 eP Pb 16 14 44.7 +0.1
baz=4.0
NNSB Datong 1.53 26 eP Pn 16 14 45.0 +0.9
baz=12
NNSB eS Sb 16 15 05.7 +1.2
baz=12
NNSH Datong 1.53 26 eP Pb 16 14 45.6 +0.1
baz=12
NNSH eS Sb 16 15 05.4 +0.8
baz=12
NNS Nan Shan 1.53 26 eP Pb 16 14 45.9 +0.3
baz=10.0
NSTT Nanjuang 1.60 12 eP Pn 16 14 46.2 +1.1
baz=353
LIOB Emei 1.62 12 eP Pn 16 14 46.4 +1.1
baz=353
ENA Nanau 1.70 36 eP Pn 16 14 47.4 +1.0
baz=47
NDT Datong Townshi 1.73 27 eP Pb 16 14 49.1 +0.1
baz=10.0
NSK Sanguang 1.74 22 eP Pn 16 14 48.3 +1.2
baz=21
YHNB Yeheng 1.74 23 ⇑P Pn 16 14 48.2 +1.1
baz=11
YHNB Yeheng 1.74 23 Pn 16 14 48.1 +1.1
SBCB Hsinchu 1.76 10 eP Pb 16 14 49.5 +0.1
baz=352
HSN Hsinchu 1.76 10 eP Pb 16 14 49.7 +0.2
baz=353
ENTT Nioudou 1.79 28 eP Pb 16 14 49.9 0.0
baz=12
WLTB Daxi 1.87 17 eP Pn 16 14 50.3 +1.5
baz=16
NWLT Wulai 1.89 25 eP Pb 16 14 51.5 -0.1
baz=23
TWC Suao 1.90 35 eP Pb 16 14 51.3 -0.5
baz=46
TWE Neicheng 1.91 29 eP Pb 16 14 51.3 -0.6
baz=46
SLBB Yuanshan 1.92 28 eP Pb 16 14 51.5 -0.7
baz=7.0
ILA Ilan 1.98 31 eP Pb 16 14 53.1 0.0
baz=46
EOS1 EOS1 2.02 42 eP Pb 16 14 53.4 -0.3
baz=41
TATO Taipei 2.06 22 eP Pb 16 14 54.4 -0.2
baz=20
TATO Taipei 2.06 22 Pn 16 14 52.2 +0.8
NHDH Xindian Distri 2.06 23 eP Pb 16 14 54.4 -0.2
baz=21
NTC Toucheng 2.10 31 eP Pb 16 14 54.2 -0.9
baz=45
TWA Mucha 2.10 24 eP Pb 16 14 55.2 -0.1
baz=23
TAP Taipei 2.13 22 eP Pn 16 14 52.0 -0.3
baz=21
TWS1 Kuangyinshan 2.16 19 eP Pn 16 14 53.8 +1.1
baz=18
TIPB Shuangxi 2.19 29 eP Pn 16 14 54.9 +1.6

baz=9.0
VWUC VWUC 2.21 331 eP Pn 16 14 53.4 -0.1
baz=329
YM01 YM01 2.25 22 eP Pn 16 14 54.6 +0.6
baz=21
YM10 YM10 2.25 22 eP Pn 16 14 54.8 +0.7
baz=20
NWF Wu-fen Shan 2.26 27 eP Pb 16 14 56.9 -1.1
baz=9.0
WFSB Wu-fen Shan 2.26 27 eP Pb 16 14 56.9 -1.0
baz=9.0
YM11 YM11 2.27 22 eP Pn 16 14 55.0 +0.7
baz=21
TWB1 Santiao Chiao 2.30 32 eP Pn 16 14 56.8 +2.1
baz=32
PTMZ Houxiangcun 2.41 325 eP Pn 16 14 56.6 +0.4
baz=323
KNM Kinmen 2.43 304 eP Pn 16 14 57.7 +1.3
baz=300
KNMB Chin-men Tao 2.49 305 eP Pn 16 14 57.3 0.0
baz=302
KNMB Chin-men Tao 2.49 305 Pn Pn 16 14 56.8 -0.5
JYNG Yonagunijimaku 2.53 56 P Pn 16 14 59.0 +1.2
JYNG eS Sn 16 15 30.7 +2.5
PTTC Pingtan 2.56 342 eP Pn 16 14 58.1 -0.2
baz=325
YOJ Yonaguni jima 2.58 57 eP Pn 16 15 00.8 +2.1
baz=56
YOJ Yonaguni jima 2.58 57 P Pn 16 15 00.4 +1.8
YOJ S Sn 16 15 32.3 +2.8
YOJ Yonaguni jima 2.58 57 Pn 16 15 00.7 +2.1
QZH Quanzhou 2.65 315 Pn Pn 16 14 59.4 -0.1
QZH Sn Sn 16 15 29.3 -1.9
QZH smax smax
comp=N,240nm,0.7s
QZH smax smax
comp=E,260nm,0.5s
ZPLA Ao Xicun 2.79 289 eP Pn 16 15 01.0 -0.4
baz=286
AXDP Jialang 3.05 307 eP Pn 16 15 04.8 -0.2
baz=304
HATJ Hateruma jima 3.07 70 P Pn 16 15 06.5 +1.2
HATJ S Sn 16 15 42.6 +1.0
ZZJH Jiuhuzhen 3.10 298 eP Pn 16 15 05.1 -0.5
baz=295
IRIF Iriomote-Funau 3.11 65 P Pn 16 15 07.6 +1.9
IRIF eS Sn 16 15 44.6 +2.2
MATB Ma-tsu 3.15 349 eP Pn 16 15 05.5 -0.8
baz=348
JKRS Kuro-shima 3.31 69 P Pn 16 15 10.1 +1.6
JKRS S Sn 16 15 49.3 +1.9
MHZQ Yeshan 3.37 335 eP Pn 16 15 09.3 0.0
baz=332
JIJ Ishigaki jima 3.46 67 P Pn 16 15 11.7 +1.0
JIJ S Sn 16 15 51.4 +0.1
JISG Ishigakijimahi 3.69 65 P Pn 16 15 14.6 +0.8
JISG S Sn 16 15 57.4 +0.5
XPSS Dashiqiu 3.88 354 eP Pn 16 15 16.0 -0.3
baz=355
JTJ Tarama 4.04 66 P Pn 16 15 19.8 +1.2
JTJ S Sn 16 16 07.1 +1.6
JIRB Irabujima 4.51 66 P Pn 16 15 26.1 +1.1
JIRB eS Sn 16 16 17.2 +0.2
JIKM Ikemajima 4.61 65 P Pn 16 15 27.7 +1.3
JIKM eS Sn 16 16 23.1 +3.7
JMJ2 Miyako jima3 4.61 68 P Pn 16 15 28.0 +1.6
JMJ2 eS Sn 16 16 21.5 +2.0
SZP Santa 5.48 182 Pn Pn 16 15 39.3 +0.9
WHN Wuhan 9.33 324 P Pn 16 16 35.8 +4.5
WHN smax smax
comp=N,100nm,0.9s
WHN smax smax
comp=E,98nm,1.1s
KSRS Korea Array 15.66 22 P P 16 18 00.8 -0.6
0.1nm,0.3s,baz=195,slow=11,SNR=4.2
KSRS LR LR 16 24 41.4
comp=Z,80nm,19.3s,baz=218,slow=40
MJAR Matsushiro Arr 20.28 45 P P 16 18 53.4 +1.0
4.5nm,0.8s,baz=232,slow=7.2,SNR=11
CMAR Chiang Mai Arr 20.79 261 P Pn 16 19 00.9 +0.4
1.1nm,0.9s,baz=55,slow=8.5,SNR=5.0
CMAR LR LR 16 28 11.5
comp=Z,60nm,18.7s,baz=70,slow=40
USRK Ussuriysk Ar. 23.06 21 LR LR 16 29 02.7
comp=Z,50nm,19.6s,baz=150,slow=38
SONM Songino Array 27.22 339 P P 16 20 01.1 +0.5
0.7nm,0.8s,baz=141,slow=7.1,SNR=4.4
SONM LR LR 16 31 02.0
comp=Z,47nm,19.0s,baz=68,slow=36
MK31 Makanchi Array 38.81 317 P P 16 21 41.4 0.0
MKAR Makanchi Array 38.81 317 P P 16 21 42.6 +1.2
0.9nm,0.8s,baz=115,slow=9.9,SNR=12
MKAR PcP PcP 16 23 52.9 +0.4
0.4nm,0.8s,baz=103,slow=4.6,SNR=3.5
KNRA Kununurra 39.31 168 P P 16 21 42.8 -2.9
ZALV Zalesovo Beam 40.92 328 P P 16 21 59.8 +0.9
0.7nm,0.6s,baz=99,slow=8.9,SNR=3.0
COEN Coen 42.90 147 P P 16 22 13.7 -1.7
COEN IAmb IAmb 16 22 14.7
comp=Z,15nm,1.4s
H11S3 WAKE ISLAND Hy 43.16 87 T T 17 07 41.2
baz=284,slow=75,SNR=5.8
H11S1 WAKE ISLAND Hy 43.17 87 T T 17 07 40.2
baz=284,slow=75,SNR=4.6
H11S2 WAKE ISLAND Hy 43.18 87 T T 17 07 42.4
baz=284,slow=75,SNR=4.1
PSA00 Pilbara Seismi 44.37 181 P P 16 22 24.5 -2.6
PSA00 IAmb IAmb 16 22 40.9
comp=Z,13nm,1.1s
WB0 Warramunga Arr 44.63 161 P P 16 22 26.8 -2.4
WRAB Tennant Creek 44.77 162 P P 16 22 25.9 -4.5
WRAB IAmb IAmb 16 22 28.3
comp=Z,4.7nm,0.7s
WRA Warramunga Arr 44.78 162 P P 16 22 28.5 -2.0
comp=Z,1.9nm,0.6s,baz=344,slow=8.8,SNR=16
WB2 Warramunga Arr 44.78 162 P P 16 22 28.4 -2.1
WB2 IAmb IAmb 16 22 36.5
comp=Z,6.3nm,1.1s
WR0 Warramunga Arr 44.86 161 P P 16 22 29.1 -1.9
WR0 IAmb IAmb 16 22 39.4
comp=Z,12nm,1.4s
ASAR Alice Springs 48.20 164 P P 16 22 55.8 -1.5
comp=Z,0.7nm,0.5s,baz=346,slow=7.0,SNR=26
ASAR PcP PcP 16 24 23.2 -1.2
comp=Z,0.5nm,0.7s,baz=334,slow=2.5,SNR=5.5
BVAR Borovoye Array 48.23 321 P P 16 22 58.6 +1.3
comp=Z,0.5nm,0.6s,baz=116,slow=9.8,SNR=4.2
ARCES ARCESS Array B 70.39 338 P P 16 25 31.8 +1.5
comp=Z,2.2nm,0.8s,baz=73,slow=9.4,SNR=6.1
ILAR Eielson Array 70.44 27 P P 16 25 29.5 -1.1
comp=Z,0.3nm,0.8s,baz=298,slow=7.5,SNR=5.1
FINES FINESS Array B 72.16 330 P P 16 25 42.0 +1.0
comp=Z,2.4nm,0.8s,baz=50,slow=7.4,SNR=3.9
RES Resolute Bay 79.85 9 P P 16 26 24.4 -0.2
comp=Z,1.2nm,0.8s,baz=313,slow=5.2,SNR=5.8
RES Resolute Bay 79.85 9 IAmb IAmb 16 26 26.0
comp=Z,2.3nm,0.9s
YKA Yellowknife Ar 84.20 23 P P 16 26 47.3 -0.4
comp=Z,0.8nm,0.6s,baz=312,slow=5.0,SNR=16

IDC 15 16:23:55.9±3.0, 6.96S×129.42E, h124km±41km, mb3.2/1, mb1 3.4/5, mb1mx3.1/29, mbtmp3.7/5, Error ellipse: s-maj=74.2km s-min=21.4km az=90.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 6.33 17 P Pn 16 25 27.1 +0.3
0.6nm,0.3s,baz=81,slow=13,SNR=6.7
SIJI S Sn 16 26 32.4 -5.4
0.9nm,0.3s,baz=239,slow=22,SNR=7.5
FITZ Fitzroy Crossi 11.67 198 P Pn 16 26 38.1 -0.5
0.1nm,0.3s,baz=4.0,slow=12,SNR=2.3
FITZ S Sn 16 28 41.6 -5.6
0.3nm,0.3s,baz=44,slow=18,SNR=5.3
WRA Warramunga Arr 13.76 160 P Pn 16 27 04.7 -1.1
0.4nm,0.3s,baz=351,slow=13,SNR=11
WRA S Sn 16 29 27.3 -10
0.6nm,0.3s,baz=336,slow=23,SNR=9.3
ASAR Alice Springs 17.16 166 P Pn 16 27 49.4 +1.2
0.5nm,0.3s,baz=339,slow=9.3,SNR=62
ASAR S Sn 16 30 51.2 -8.4
0.1nm,0.3s,baz=358,slow=28,SNR=4.5
MKAR Makanchi Array 67.88 327 P P 16 34 40.9 -0.1
0.2nm,0.3s,baz=115,slow=8.2,SNR=11

ATH 15 16:28:38.0, 38.32N×20.39E, h8km±2km, ML2.5/9, Error ellipse: s-maj=2.2km s-min=0.6km az=222.0
THE 15 16:28:38.1, 38.31N×20.37E, h9km±2km, ML2.4/5, Error ellipse: s-maj=2.1km s-min=0.5km az=215.0
ISC 15 16:28:36.9±0.9, 38.31N±0.02×20.41E±0.04, h15km±5km, n41, σ0.62/69, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.06 165 P Pg 16 28 39.7 0.0
KEF4 S Sg 16 28 41.2 -0.3
KEF1 Kardakata, Kep 0.06 125 P Pg 16 28 39.7 0.0
KEF1 S Sg 16 28 41.4 -0.2
AGT1 Agia Thekli 0.07 195 P Pg 16 28 39.8 0.0
AGT1 S Sg 16 28 41.0 -0.6
LXR1 Lixouri, Cepha 0.12 167 P Pb 16 28 41.2 +0.4
LXR1 S Sb 16 28 43.4 0.0
LXRA Lixouri, Kepha 0.12 167 P Pb 16 28 40.9 +0.1
LXRA S Sb 16 28 43.1 +0.6
KEF3 Kipouria, Keph 0.12 202 P Pb 16 28 40.8 -0.1
KEF3 S Sg 16 28 42.7 0.0
CHV1 Chavriata, Kef 0.13 188 P Pb 16 28 41.8 +0.7
CHV1 S Sb 16 28 43.7 -0.2
ARGA Argostoli. Kep 0.15 157 P Pb 16 28 41.8 +0.4
ARGA S Sb 16 28 44.1 -0.3
ARG2 Argostoli 0.15 154 P Pb 16 28 41.4 0.0
ARG2 S Sb 16 28 44.6 +0.2
KEF2 Argostoli. Kep 0.16 156 P Pb 16 28 42.0 +0.4
KEF2 S Sb 16 28 44.5 -0.2
FSK Fiskardo 0.19 40 P Pb 16 28 42.1 0.0
FSK S Sb 16 28 45.4 -0.2
2μm,0.4s
FSK Fiskardo 0.19 40 P Pb 16 28 42.1 0.0
FSK S Sb 16 28 45.3 -0.4
FSK AML AML 16 28 45.8
comp=N,3446μm,0.5s
FSK AML AML 16 28 46.4
comp=E,4626μm,0.3s
VLS Valsamata 0.20 133 P Pb 16 28 42.0 -0.3
VLS S Sg 16 28 45.5 +0.9
comp=E,2μm,0.2s
VLS Valsamata 0.20 133 P Pb 16 28 42.0 -0.3
VLS S Sg 16 28 45.3 +0.7
VLS AML AML 16 28 47.4
comp=N,3368μm,0.1s
VLS AML AML 16 28 48.8
comp=E,3559μm,0.2s
EVGI Lefkada island 0.36 33 P Pb 16 28 45.4 +0.3
EVGI S Sb 16 28 51.6 +0.9
EVGI Lefkada island 0.36 33 P Pb 16 28 45.3 +0.2
EVGI S Sb 16 28 51.1 +0.4
MGNA Meganis 0.46 41 P Pb 16 28 46.7 +0.1
MGNA S Sb 16 28 54.0 +0.7
MGNA AML AML 16 28 54.7
comp=E,3632μm,0.2s
MGNA AML AML 16 28 54.8
comp=N,3281μm,0.3s
VLMS Volimes, Zakyn 0.48 155 P Pb 16 28 47.2 +0.1
VLMS S Sb 16 28 55.1 +1.1
VLMS AML AML 16 28 56.7
comp=E,5889μm,0.1s
VLMS AML AML 16 28 57.0
comp=N,7247μm,0.2s
LKD2 Lefkada island 0.51 23 P Pb 16 28 47.6 -0.1
LKD2 S Sn 16 28 56.6 -1.8
comp=N,408nm,0.4s
LKD2 Lefkada island 0.51 23 P Pb 16 28 47.8 +0.1
LKD2 S Sb 16 28 56.0 +1.0
LKD2 AML AML 16 28 59.1
comp=N,686μm,0.3s
LKD2 AML AML 16 29 03.6
comp=E,854μm,0.4s
TSLK Tsoukalades, L 0.55 21 P Pb 16 28 48.5 +0.3
TSLK S Sn 16 28 57.5 -1.6
comp=E,342nm,0.6s
TSLK Tsoukalades, L 0.55 21 P Pb 16 28 48.5 +0.3
TSLK S Sb 16 28 56.7 +0.8
TSLK AML AML 16 29 01.6
comp=E,634μm,0.2s
TSLK AML AML 16 29 02.3
comp=N,744μm,0.7s
AST1 Astakos 0.58 67 P Pb 16 28 49.4 +0.6
AST1 S Sn 16 28 59.3 -0.7
PDO Prodromos 0.67 65 P Pn 16 28 50.9 -1.0
PDO S Sn 16 29 01.7 -0.5
PDO Prodromos 0.67 65 P Pn 16 28 51.0 -0.9
PDO S Sn 16 29 01.2 -1.1
PDO AML AML 16 29 03.2
comp=N,1333μm,0.3s
PDO AML AML 16 29 04.0
comp=E,1249μm,0.3s
VTN Vitineika 0.73 123 P Pn 16 28 52.3 -0.4
AXS Araxos 0.77 98 P Pn 16 28 53.2 -0.1
AXS S Sn 16 29 03.7 -1.0
RLS Riolos of Patr 0.88 107 P Pn 16 28 54.4 -0.3
RLS S Sn 16 29 07.9 +0.7
RLS AML AML 16 29 13.1
comp=N,226μm,0.2s
RLS AML AML 16 29 14.6
comp=E,318μm,0.4s
PVO Paravola 0.93 71 P Pn 16 28 56.0 +0.5
PVO S Sn 16 29 10.3 +1.8
comp=E,415nm,0.3s
PVO Paravola 0.93 71 P Pn 16 28 55.9 +0.5
PVO AML AML 16 29 12.4
comp=E,993μm,0.3s
PVO AML AML 16 29 13.0
comp=N,660μm,0.2s
DRO Drossia 1.09 109 P Pg 16 28 58.6 +0.6
IGT Igoumenitsa 1.22 357 P Pg 16 29 01.2 +0.9
ANX Ano Chora 1.22 76 P Pg 16 29 00.5 +0.1
ANX Ano Chora 1.22 76 P Pg 16 29 00.6 +0.1
LAKA Lakka 1.24 93 P Pg 16 29 00.9 +0.1
SERG Sergoula 1.30 85 P Pg 16 29 01.5 -0.4
SERG Sergoula 1.30 85 P Pg 16 29 01.6 -0.4
TRIZ Trizonia 1.31 87 P Pg 16 29 01.7 -0.4
ALIK Aliki, Aigiali 1.34 92 P Pg 16 29 02.5 -0.2
KALE Kalithea 1.37 86 P Pb 16 29 02.2 0.0
KALE Kalithea 1.37 86 P Pg 16 29 02.7 -0.5

NCEDC 15 16:36:35.7±0.8, 37.62N±0.01×119.02W±0.02, h4km±1km, Md2.4/38, Error ellipse: s-maj=2.3km s-min=2.0km az=93.0
NEIC 15 16:36:35.8±0.6, 37.61N±0.01×119.03W±0.02, h2km, Error ellipse: s-maj=2.3km s-min=1.9km az=142.0, Central California

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MMPM Mammoth Pass 0.01 62 Pg 16 36 36.3 -0.4
MRDM Red Cones 0.02 244 Pg 16 36 36.8 +0.1
MMSM Mammoth Summit 0.02 6 Pg 16 36 36.8 0.0
OMMB Old Mammoth Mi 0.03 78 Pg 16 36 36.5 -0.2
OMMB Old Mammoth Mi 0.03 78 Sg Sg 16 36 37.0 -0.3
MLIM Lincoln Peak 0.03 24 Pg 16 36 37.0 +0.3
MDPB Devils Postpil 0.04 305 Pg 16 36 37.1 +0.2
MINS Minaret Summit 0.05 336 Pg 16 36 37.0 0.0
MDYM Dry Creek 0.05 19 Pg 16 36 37.1 0.0
MMLB Mammoth Lakes 0.07 40 Pg 16 36 37.3 -0.1
MEMM East Mammoth H 0.10 52 Pg 16 36 37.8 0.0
MLCM Laurel Creek C 0.10 87 Pg 16 36 37.7 -0.1
MDCM Deadman Creek 0.10 357 Pg 16 36 37.8 -0.1
MGPM Gravel Pit 0.11 80 Pg 16 36 38.1 +0.1
MCSM Casa Diablo Ho 0.11 65 Pg 16 36 38.1 0.0
MCBM Casa Benchmark 0.12 71 Pg 16 36 38.3 +0.1
MCMM Convict Lake 0.13 89 Pg 16 36 38.4 0.0
LMCR Lookout Mounta 0.14 30 Pg 16 36 38.9 +0.3
MLAC Mammoth, Mammo 0.16 82 Pg 16 36 39.1 +0.1
MDRNC Doe Ridge 0.16 79 Pg 16 36 39.2 +0.2
MCVM Convict Lake 0.16 96 Pg 16 36 39.0 -0.1
MLHM Little Hot Cre 0.19 68 Pg 16 36 39.8 +0.3
ORC Owens River 0.30 85 Pg 16 36 41.7 +0.1
MGNR McGee Canyon 0.34 52 Pg 16 36 42.6 +0.3
WMD 0.35 118 Pg 16 36 42.7 +0.1
KCC Kaiser Creek 0.36 219 Pg 16 36 43.1 +0.3
SCHCA Scheelite 0.37 132 Pg 16 36 43.0 +0.1
BENR Benton 0.38 73 Pg 16 36 43.1 -0.1
MRCM Red Rock Canyo 0.42 81 Pg 16 36 44.0 0.0
MTUM Tungsten Hills 0.45 124 Pg 16 36 44.5 0.0
MCDM Chidago Canyon 0.47 97 Pg 16 36 45.2 +0.3
MFBM Five Bridges 0.51 110 Pg 16 36 46.0 +0.3
MLNR Milner Canyon 0.55 91 Pg 16 36 46.5 +0.1
HCK Huntoon Valley 0.58 37 Pg 16 36 47.2 +0.1
MMIM Miami Mountain 0.59 252 Pg 16 36 47.5 +0.3
POCCA Poleta Canyon 0.65 112 Pg 16 36 48.2 0.0
LHV Little Huntoon 0.77 33 Pg 16 36 50.5 -0.1
MHDM Hidden Dam 0.84 235 Pg 16 36 52.1 +0.1
TIN Tinemaha, Big 0.85 130 Pg 16 36 52.0 0.0
HELL Mitchell Peak, 0.93 179 Pg 16 36 53.4 -0.2
WAKR Walker 0.95 341 Pg 16 36 53.9 -0.2
WAKR Walker 0.95 341 Sg Sg 16 37 06.5 +0.1
NV11 Mina Array Sit 1.08 40 Pg 16 36 56.2 -0.3
RYN Ryan 1.10 21 Pg 16 36 56.6 -0.3
CMB Columbia Colle 1.15 292 Pg 16 36 57.0 -1.0
CMB Sg Sg 16 37 12.5 -0.4
YERR Yerington 1.39 353 Pn Pg 16 37 01.1 -1.3
YERR Sn Sg 16 37 20.2 -0.2
EMB Emerald Bay 1.60 329 Pn 16 37 05.9 +0.4
KVN Kaiserville 1.62 27 Pn 16 37 05.5 -0.1
VPEM Volcano Peak E 1.92 149 Pb 16 37 11.7 0.0
AFDM Forest Hills D 2.03 312 Pn 16 37 11.4 +0.3
TPNV Topopah Spring 2.32 106 Pn 16 37 14.2 -1.0
BEKR Beckworth 2.48 336 Pn Pn 16 37 14.6 -2.9

IDC 15 16:51:48.9±1.1, 7.85N×137.53E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/33, mbtmp3.7/7, MS3.2/8, Ms1 3.2/8, ms1mx2.9/41, Error ellipse: s-maj=40.2km s-min=24.6km az=78.0
NEIC 15 16:51:56.9±2.8, 7.7N±0.1×137.5E±0.2, h70km±4km, mb4.3/8, Error ellipse: s-maj=27.7km s-min=17.9km az=105.0
ISC 15 16:51:53.6±0.8, 7.7N±0.1×137.4E±0.1, h35km, n27, σ1.14/19, mb4.1/11, MS3.2/5, Western Caroline Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GUMO Guam 9.33 51 Pn Pn 16 54 05.4 -0.3
JAY Jayapura 10.70 162 LR LR 16 58 00.0
comp=Z,99nm,19.0s,baz=115,slow=34
SARN Sarigan 12.06 42 Pn Pn 16 54 48.4 +5.1
KRVT Keravat (AS076 18.84 129 LR LR 17 01 47.0
comp=Z,116nm,21.9s,baz=259,slow=32
PMG Port Moresby 19.60 150 LR LR 17 02 43.1
comp=Z,89nm,18.6s,baz=344,slow=33
WRAB Tennant Creek 27.67 186 P P 16 57 35.9 -2.6
WRAB IAmb IAmb 16 57 37.8
comp=Z,13nm,1.4s
WB2 Warramunga Arr 27.68 186 P P 16 57 36.8 -1.7
WB2 IAmb IAmb 16 57 53.8
comp=Z,6.6nm,1.4s
MAJO Matsushiro 28.68 1 P P 16 57 47.9 +0.6
MAJO IAmb IAmb 16 57 54.2
comp=Z,20nm,1.5s
MJB9 Matsu-Tunnel 28.68 1 P P 16 57 47.8 +0.5
H11S3 WAKE ISLAND Hy 30.37 66 T T 17 29 53.1
baz=253,slow=75,SNR=109
H11S2 WAKE ISLAND Hy 30.39 67 T T 17 30 02.9
baz=253,slow=75,SNR=92
H11S1 WAKE ISLAND Hy 30.39 66 T T 17 29 54.9
baz=253,slow=75,SNR=54
KSRS Korea Array 30.81 345 LR LR 17 09 27.2
comp=Z,25nm,20.5s,baz=156,slow=34
KS19 Wonju Array Si 30.87 345 P P 16 58 06.3 -0.5
AS31 Alice Springs 31.41 186 P P 16 58 12.2 +0.6
ASAR Alice Springs 31.41 186 P P 16 58 12.9 +1.3
comp=Z,0.3nm,0.7s,baz=17,slow=12,SNR=9.1
ASAR PcP PcP 17 01 05.9 +1.1
comp=Z,0.5nm,1.0s,baz=11,slow=2.3,SNR=4.1
CMAR Chiang Mai Arr 38.89 290 P P 16 59 16.4 +0.2
comp=Z,0.4nm,0.3s,baz=93,slow=7.2,SNR=4.0
CMAR LR LR 17 17 09.3
comp=Z,16nm,18.1s,baz=121,slow=39
STKA Stephens Creek 39.60 174 LR LR 17 15 46.5
comp=Z,32nm,19.6s,baz=46,slow=36
SONM Songino Array 47.86 332 P P 17 00 28.8 +0.6
comp=Z,1.2nm,0.8s,baz=146,slow=8.5,SNR=9.4
SONM PcP PcP 17 01 57.0 +0.4
comp=Z,0.3nm,0.6s,baz=138,slow=5.0,SNR=2.8
URZ Urewera 58.80 144 LR LR 17 23 25.1
comp=Z,24nm,21.8s,baz=294,slow=32
MK31 Makanchi Array 60.90 320 P P 17 02 02.5 -0.5
MKAR Makanchi Array 60.90 320 P P 17 02 03.4 +0.4
comp=Z,1.2nm,0.7s,baz=108,slow=7.9,SNR=17
MAKZ Makanchi 61.11 320 P P 17 02 02.3 -2.1
MAKZ IAmb IAmb 17 02 05.4
comp=Z,1.7nm,0.9s
ZALV Zalesovo Beam 62.38 328 P P 17 02 12.9 +0.1
comp=Z,0.8nm,0.5s,baz=99,slow=7.4,SNR=4.4
ZALV LR LR 17 30 24.1
comp=Z,25nm,18.5s,baz=86,slow=37
KURK Kurchatov 64.56 323 P P 17 02 26.2 -1.1
ILAR Eielson Array 76.94 25 P P 17 03 41.6 -0.6
comp=Z,0.3nm,0.7s,baz=247,slow=5.7,SNR=3.3
YKA Yellowknife Ar 91.33 26 P P 17 04 56.0 +0.4
comp=Z,0.5nm,0.8s,baz=292,slow=5.0,SNR=5.3

MOS 15 17:03:29.8±1.2, 50.21N×156.12E, h84km, mb3.9/1, Error ellipse: s-maj=14.7km s-min=4.4km az=74.8
KRSC 15 17:03:29.5±1.7, 50.13N×156.81E, h45km±22km, ML4.6, FELT [II-III] at lighthouse Chibuiny.
IDC 15 17:03:32.7±2.5, 50.22N×156.12E, h95km±23km, mb3.3/10, mb1 3.5/15, mb1mx3.4/35, mbtmp3.7/15, MS2.6/1, Ms1 2.6/1, ms1mx2.3/24, Error ellipse: s-maj=24.1km s-min=15.1km az=135.0
ISC 15 17:03:30.0±0.9, 50.08N±0.08×156.41E±0.07, h73km±8km, n71, σ1.46/98, mb3.6/12, 6C-2D, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SKR Severo-Kuril's 0.63 343 iP Pn 17 03 43.5 -0.9
SKR eS Sn 17 03 53.2 -1.7
SKR Severo-Kuril's 0.63 343 c iPN Pn 17 03 43.4 -0.9
PAU Pauzhetka 1.41 10 eP Pn 17 03 53.9 +0.1
PAU eS Sn 17 04 11.7 -0.1
PAU Pauzhetka 1.41 10 PN Pn 17 03 53.9 +0.1
PAU S Sn 17 04 11.7 -0.1
KDTR Khodutka, Kamc 2.03 31 eP Pn 17 04 01.3 -0.7
KDTR eS Sn 17 04 24.4 -2.0
KDTR Khodutka, Kamc 2.03 31 PN Pn 17 04 01.3 -0.7
KDTR S Sn 17 04 24.4 -2.0
ASAK Asacha 2.49 22 eP Pn 17 04 09.1 +0.8
ASAK eS Sn 17 04 38.5 +0.8
ASAK Asacha 2.49 22 PN Pn 17 04 09.1 +0.8
ASAK S Sn 17 04 38.5 +0.8
MTVR Mutnovka 2.65 24 eP Pn 17 04 10.7 +0.1
MTVR Mutnovka 2.65 24 PN Pn 17 04 10.7 +0.1
GRL Gorelyy 2.69 22 eP Pn 17 04 11.7 +0.7
GRL eS Sn 17 04 42.7 +0.1
GRL Gorelyy 2.69 22 PN Pn 17 04 11.7 +0.7
GRL S Sn 17 04 42.7 +0.1
RUS Russkaya 2.70 28 eP Pn 17 04 10.5 -0.6
RUS eS Sn 17 04 40.6 -2.1
RUS Russkaya 2.70 28 PN Pn 17 04 10.5 -0.6
RUS S Sn 17 04 40.6 -2.1
APC Apacha 2.89 9 eP Pn 17 04 14.0 +0.4
APC eS Sn 17 04 46.7 -0.5
APC Apacha 2.89 9 PN Pn 17 04 14.0 +0.4
APC S Sn 17 04 46.7 -0.5
KRMR Karymshinskiy 2.96 21 eP Pn 17 04 15.0 +0.4
KRMR eS Sn 17 04 48.4 -0.5
KRMR Karymshinskiy 2.96 21 PN Pn 17 04 15.0 +0.4
KRMR S Sn 17 04 48.4 -0.5
PEA0B Petropavlovsk- 3.14 14 c iPN Pn 17 04 18.1 +1.0
PETK Petropavlovsk- 3.14 14 P Pn 17 04 18.6 +1.5
6.8nm,0.3s,baz=183,slow=13,SNR=129
PETK S Sn 17 04 58.5 +5.1
2.4nm,0.3s,baz=204,slow=24,SNR=3.2
PET Petropavlovsk 3.27 25 ePN Pn 17 04 19.2 +0.5
PET eS Sn 17 04 56.9 +0.5
PET smax smax
comp=E,421nm,0.6s
DALK Dalny 3.30 25 eP Pn 17 04 19.6 +0.4
DALK eS Sn 17 04 56.9 -0.3
DALK Dalny 3.30 25 PN Pn 17 04 19.6 +0.4
DALK S Sn 17 04 56.9 -0.3
UGLR Uglovaya 3.48 25 eP Pn 17 04 22.9 +1.2
UGLR eS Sn 17 05 02.2 +0.4
UGLR Uglovaya 3.48 25 PN Pn 17 04 22.9 +1.2
UGLR S Sn 17 05 02.2 +0.4
KOK Koryaka 3.50 22 eP Pn 17 04 23.9 +1.8

KOK	Koryaka	3.50	22	PN	Pn	17 04 23.9	+1.8
AVH	Avacha	3.50	24	eP	Pn	17 04 24.0	+1.9
AVH				eS	Sn	17 05 03.9	+1.5
AVH	Avacha	3.50	24	PN	Pn	17 04 24.0	+1.9
AVH				S	Sn	17 05 03.9	+1.5
KRER	Koryakskii	3.54	23	eP	Pn	17 04 24.5	+1.8
KRER				eS	Sn	17 05 05.1	+1.6
KRER	Koryakskii	3.54	23	PN	Pn	17 04 24.5	+1.8
KRER				S	Sn	17 05 05.1	+1.6
SDLR	Sedlovina	3.56	25	eP	Pn	17 04 23.4	+0.6
SDLR				eS	Sn	17 05 02.9	-0.8
SDLR	Sedlovina	3.56	25	PN	Pn	17 04 23.4	+0.6
SDLR				S	Sn	17 05 02.9	-0.8
NLC	Nalytchevo	3.60	29	eP	Pn	17 04 22.5	-0.7
NLC				eS	Sn	17 05 03.1	-1.4
NLC	Nalytchevo	3.60	29	PN	Pn	17 04 22.5	-0.7
NLC				S	Sn	17 05 03.1	-1.4
SPN	Mys Shipunski	3.77	35	eP	Pn	17 04 26.0	+0.4
SPN				eS	Sn	17 05 07.4	-1.4
SPN	Mys Shipunski	3.77	35	PN	Pn	17 04 26.0	+0.4
SPN				S	Sn	17 05 07.4	-1.4
TUMD	Tumrok D	5.68	24	eP	Pn	17 04 54.1	+2.4
TUMD				eS	Sn	17 05 55.4	0.0
TUMR	Tumrok	5.69	22	eP	Pn	17 04 55.8	+3.9
TUMR	Tumrok	5.69	22	PN	Pn	17 04 54.1	+2.2
TUMR				S	Sn	17 05 55.4	-0.4
KMNR	Kamenistaya	6.14	21	eP	Pn	17 05 01.1	+3.1
KMNR	Kamenistaya	6.14	21	PN	Pn	17 05 01.1	+3.1
YSS	Yuzh-Sakhalins	9.58	256	⇑ePN	Pn	17 05 43.9	-1.1
MA2	Magadan	10.05	343	P	Pn	17 05 50.9	-0.5
	comp=E,0.7nm,0.3s,baz=127,slow=12,SNR=4.2						
MA2				LR	LR	17 09 26.4	
	comp=E,39nm,21.1s,baz=142,slow=36						
ASAJ	Asahikawa	11.14	243	P	Pn	17 06 07.2	+1.0
	comp=E,1.0nm,0.3s,baz=92,slow=16,SNR=11						
ERM	Erimo	12.22	234	⇓ePN	Pn	17 06 21.7	+0.7
SEY	Seymchan	13.07	352	P	Pn	17 06 33.7	+1.4
	comp=E,0.2nm,0.3s,baz=159,slow=11,SNR=4.9						
KLR	Kul'dur	15.97	276	P	P	17 07 15.1	+2.8
	comp=E,0.1nm,0.3s,baz=83,slow=11,SNR=7.2						
BILL	Bilibino	18.67	12	⇑eP	P	17 07 41.6	-0.2
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
YAK	Yakutsk	18.96	319	P	P	17 07 43.8	-1.1
	comp=Z,0.0nm,0.3s,baz=114,slow=3.7,SNR=3.9						
YAK	Yakutsk	18.96	319	⇑eP	P	17 07 42.3	-2.7
YAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSRS	Korea Array	23.97	249	P	P	17 08 38.1	+0.7
	comp=Z,0.7nm,0.7s,baz=51,slow=9.1,SNR=3.6						
TIXI	Tiksi	24.99	340	P	P	17 08 45.4	-1.0
	comp=Z,1.8nm,0.3s,baz=122,slow=2.6,SNR=9.2						
TIXI	Tiksi	24.99	340	⇑eP	P	17 08 43.8	-2.6
H11N2	WAKE ISLAND Hy	31.41	161	T	T	17 43 29.5	
	baz=348,slow=76,SNR=50						
H11N1	WAKE ISLAND Hy	31.43	161	T	T	17 43 32.6	
	baz=348,slow=76,SNR=37						
H11N3	WAKE ISLAND Hy	31.43	161	T	T	17 43 25.8	
	baz=348,slow=76,SNR=114						
H11S1	WAKE ISLAND Hy	32.56	162	T	T	17 44 49.1	
	baz=348,slow=76,SNR=343						
H11S3	WAKE ISLAND Hy	32.57	162	T	T	17 44 53.9	
	baz=348,slow=76,SNR=264						
H11S2	WAKE ISLAND Hy	32.58	162	T	T	17 44 50.5	
	baz=348,slow=76,SNR=190						
ILAR	Eielson Array	32.59	42	P	P	17 09 54.8	+0.8
	comp=Z,0.3nm,0.6s,baz=260,slow=6.0,SNR=4.4						
ILAR	Eielson Array	32.59	42	eP	P	17 09 55.4	+1.4
YKA	Yellowknife Ar	46.95	39	P	P	17 11 53.8	+0.9
	comp=Z,0.5nm,0.8s,baz=296,slow=7.7,SNR=5.2						
KURK	Kurchatov	47.39	302	⇓eP	P	17 11 54.5	-2.0
KURK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MKAR	Makanchi Array	47.40	296	P	P	17 11 55.1	-1.6
	comp=Z,0.2nm,0.3s,baz=51,slow=6.0,SNR=12						
CMAR	Chiang Mai Arr	55.28	257	P	P	17 12 56.1	+0.3
	comp=Z,0.4nm,0.5s,baz=31,slow=7.0,SNR=6.2						
ARCES	ARCESS Array B	55.42	341	P	P	17 12 53.2	-3.0
	comp=Z,2.1nm,0.9s,baz=32,slow=8.6,SNR=3.6						
PDAR	Pinedale Array	61.05	57	pP	pP	17 13 55.4	+0.5
	comp=Z,0.5nm,0.8s,baz=324,slow=4.5,SNR=4.0						
WRA	Warramunga Arr	72.40	202	P	P	17 14 47.3	-0.8
	comp=Z,0.4nm,0.4s,baz=16,slow=6.2,SNR=3.9						
TXAR	Lajitas Array	73.99	63	P	P	17 14 59.1	+1.4
	comp=Z,0.3nm,0.7s,baz=291,slow=3.5,SNR=4.5						
TXAR				pP	pP	17 15 17.6	+0.8
	comp=Z,0.3nm,0.5s,baz=275,slow=3.9,SNR=4.0						
ASAR	Alice Springs	76.09	201	P	P	17 15 10.4	+0.9
	comp=Z,0.5nm,0.9s,baz=27,slow=6.3,SNR=3.0						

*TEH **15** 17:14:59.1, 31°.01N×59°.58E, h10km, ML3.7*
*THR **15** 17:15:01.2±0.5, 31°.09N×59°.58E, h17km±3km, ML4.0*
ISC 15 17:14:59.6±0.9, **31°.03N**±0°.03×**59°.54E**±0°.04, **h10**km, **n30**, σ**1.85**/31, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NHDN	Nehbandan	0.57	50	ePg	Pb	17 15 10.6	-1.1
NHDN				eSg	Sb	17 15 18.4	-1.5
NHDN				e		17 15 23.6	
BSRN	Basiran	0.99	339	ePg	Pb	17 15 19.1	+0.1
BSRN	Basiran	0.99	339	ePg	Pb	17 15 19.1	+0.1
IKOO	Kooshah	1.46	342	ePn	Pg	17 15 27.4	-0.2
IDAH	Dahanechah	1.73	9	ePn	Pg	17 15 32.1	-0.6
IDAH				e		17 15 37.1	
ZHSF	Zahedan	1.77	143	ePg	Pg	17 15 34.3	+0.7
ZHSF	Zahedan	1.77	143	ePg	Pg	17 15 34.3	+0.7
SZD1	Zahaedan-tmp	1.92	143	ePn	Pn	17 15 32.6	+0.1
ITEG	Tejag	1.98	340	ePn	Pb	17 15 35.4	-0.4
ITEG				e		17 16 08.8	
CHMN	Cheshme madani	2.08	236	ePn	Pn	17 15 35.7	+0.8
IMON	Monand	2.16	3	ePn	Pb	17 15 38.1	-0.8
IMON				e		17 16 18.4	
AFRZ	Afriz	2.43	350	ePn	Pb	17 15 41.7	-1.7
AFRZ				e		17 16 38.6	
TVBK	TV Kerman	2.61	247	ePn	Pb	17 15 44.5	-2.2
KRBR	Kerman	2.62	247	ePn	Pb	17 15 45.6	-1.2
KRBR				IAML		17 16 24.4	
	comp=N,823nm,0.3s						
KRBR				IAML		17 16 25.3	
	comp=E,341nm,0.3s						
KRBR	Kerman	2.62	247	ePn	Pb	17 15 45.6	-1.2
SHRT	Shahrakht	2.68	14	ePn	Pn	17 15 44.8	+1.9
SHRT	Shahrakht	2.68	14	ePn	Pn	17 15 44.8	+1.9
KHGB	Koh Gabri	2.72	257	ePn	Pn	17 15 45.8	+2.3
NGRK	Negar Kerman	2.79	241	ePn	Pn	17 15 46.5	+1.8
NGRK				e		17 16 29.4	
TPRV	Parvadeh(Tabas	3.14	310	ePn	Pn	17 15 50.7	+1.6
TKDS	Koohdasht(Taba	3.29	322	ePn	Pn	17 15 53.2	+1.9
TKDS				e		17 16 51.0	
TABS	Tabas	3.32	322	ePn	Pn	17 15 54.3	+2.7
TABS	Tabas	3.32	322	ePn	Pn	17 15 54.3	+2.7
IBAF	Bafgh	3.44	280	ePn	Pn	17 15 55.6	+2.1
IBAF				e		17 16 54.0	
KHNJ	Kahnooj	3.46	208	ePn	Pn	17 15 55.8	+2.2
TNSJ	Nastanj	3.83	321	ePn	Pn	17 16 00.6	+1.9
NIAN	Nian	4.19	215	e		17 16 21.2	
NIAN				ePn	Pn	17 16 05.8	+2.2
YZKH	Yazd	4.43	289	eSg	Sg	17 17 19.2	-2.6
GENO	Geno	4.66	220	ePn	Pn	17 16 12.9	+2.6
GENO				e		17 18 01.7	
JRKH	Jarkhoshk	4.91	8	ePn	Pn	17 16 16.9	+3.4

*IDC **15** 17:17:37.2±1.4, 19°.50N×67°.57W, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.6/40, mbtmp4.3/5, Error ellipse: s-maj=50.5km s-min=21.5km az=36.0*
*OSPL **15** 17:17:40.6±2.5, 17°.55N×67°.82W, h80km, ML4.2*
*NEIC **15** 17:17:42.7±1.9, 18°.86N±0°.08×67°.92W±0°.03, h61km±9km, Error ellipse: s-maj=12.1km s-min=2.3km az=199.0*
*RSPR **15** 17:17:43.0, 18°.83N×67°.89W, h82km±3km, MD3.6/21*
ISC 15 17:17:42.8±0.8, **18°.74N**±0°.07×**67°.90W**±0°.03, **h68**km±9km, **n102**, σ**1.83**/118, **13C-11D**, **Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.50	244		Pn	17 17 53.8	-1.6
AGPR	Aguadilla, PR	0.80	109	⇑eP	Pn	17 17 59.5	+0.8
AGPR	Aguadilla, PR	0.80	109	eS	Sn	17 18 12.5	+2.1
AGPR	Aguadilla, PR	0.80	109		Pn	17 17 59.6	+0.6
AGPR	Aguadilla, PR	0.80	109		Sn	17 18 12.5	+2.1
AGPR	Aguadilla, PR	0.80	109		Pn	17 17 59.3	+0.6
MPR	Mayaguez	0.89	126	⇑eP	Pn	17 18 00.4	+0.6
MPR	Mayaguez	0.89	126	eS	Sn	17 18 14.4	+2.0
MPR	Mayaguez	0.89	126		Pn	17 18 00.2	+0.4
MPR	Mayaguez	0.89	126		Sn	17 18 14.4	+2.0
LSP	Las Mesas	0.95	125	⇓eP	Pn	17 18 01.7	+1.1
LSP	Las Mesas	0.95	125	eS	Sn	17 18 16.1	+2.2
LSP	Las Mesas	0.95	125		Pn	17 18 01.7	+1.1
LSP					Sn	17 18 16.1	+2.2
CRPR	Cabo Rojo, PR	1.05	134	eS	Sn	17 18 17.9	+2.1
CRPR	Cabo Rojo, PR	1.05	134	⇓eP	Pn	17 18 02.2	+0.5
CRPR	Cabo Rojo, PR	1.05	134		Pn	17 18 02.3	+0.5
CRPR	Cabo Rojo, PR	1.05	134		Sn	17 18 17.9	+2.1
MLPR	Magueyes Islan	1.12	133	eS	Sn	17 18 18.6	+1.1
MLPR	Magueyes Islan	1.12	133	⇑eP	Pn	17 18 02.5	-0.1
MLPR	Magueyes Islan	1.12	133		Pn	17 18 02.2	-0.4
MLPR				Sn	Sn	17 18 18.2	+0.8
AOPR	Arecibo Observ	1.16	109	⇑eP	Pn	17 18 03.8	+0.6
AOPR				eS	Sn	17 18 20.7	+2.2
AOPR	Arecibo Observ	1.16	109	⇑eP	Pn	17 18 03.9	+0.7
AOPR	Arecibo Observ	1.16	109		Pn	17 18 03.8	+0.6
AOPR				Sn	Sn	17 18 20.6	+2.2
UUPR	Utuado, UPR, P	1.22	113		Pn	17 18 04.9	+0.9
GBPR	Guanica, Bosqu	1.23	128	eS	Sn	17 18 22.0	+1.9
GBPR	Guanica, Bosqu	1.23	128	⇑eP	Pn	17 18 05.1	+1.0
GBPR	Guanica, Bosqu	1.23	128		Pn	17 18 05.1	+1.0
GBPR					Sn	17 18 22.0	+1.9
EMPR	Esperanza - Ma	1.33	101	eS	Sn	17 18 24.0	+1.6
EMPR	Esperanza - Ma	1.33	101	⇑eP	Pn	17 18 06.0	+0.6
EMPR	Esperanza - Ma	1.33	101		Pn	17 18 06.4	+1.0
EMPR	Esperanza - Ma	1.33	101		Sn	17 18 24.0	+1.6
DR12	Loma Pena Alta	1.40	272		Pn	17 18 05.2	-1.2
OBIP	Obispado Ponce	1.41	119	eS	Sn	17 18 25.6	+1.2
OBIP	Obispado Ponce	1.41	119	⇑eP	Pn	17 18 06.6	+0.1
OBIP	Obispado Ponce	1.41	119		Pn	17 18 06.6	+0.1
OBIP				Sn	Sn	17 18 25.7	+1.4
CELP	Cerrillos	1.42	117	⇑eP	Pn	17 18 07.9	+1.3
CELP	Cerrillos	1.42	117		Pn	17 18 07.9	+1.3
ICMP	Isla Caja de M	1.56	123	eS	Sn	17 18 30.5	+2.7
ICMP	Isla Caja de M	1.56	123	⇑eP	Pn	17 18 09.2	+0.8
ICMP	Isla Caja de M	1.56	123		Pn	17 18 09.7	+1.2
ICMP	Isla Caja de M	1.56	123		Sn	17 18 30.5	+2.7
SJG	San Juan	1.78	110	Pn	Pn	17 18 12.0	+0.6
	42nm,0.3s,baz=314,slow=15,SNR=69						
SJG				Sn	Sn	17 18 34.2	+1.1
	233nm,0.3s,baz=313,slow=18,SNR=19						
SJG	San Juan	1.78	110		Pn	17 18 11.7	+0.4
GCPR	Guaynabo City	1.78	103	⇓eP	Pn	17 18 11.9	+0.5
GCPR	Guaynabo City	1.78	103	eS	Sn	17 18 33.5	+0.4
GCPR	Guaynabo City	1.78	103		Pn	17 18 11.6	+0.2
GCPR	Guaynabo City	1.78	103		Sn	17 18 33.5	+0.4
IGPR	InterUniversit	1.87	114	⇓eP	Pn	17 18 13.5	+0.9
IGPR	InterUniversit	1.87	114	eS	Sn	17 18 36.6	+1.3
IGPR	InterUniversit	1.87	114		Pn	17 18 14.7	+2.1
PDPR	Patillas Dam,	1.92	111	⇓eP	Pn	17 18 14.1	+0.8
PDPR	Patillas Dam,	1.92	111	eS	Sn	17 18 37.6	+1.0
PDPR	Patillas Dam,	1.92	111		Pn	17 18 14.1	+0.8
PDPR	Patillas Dam,	1.92	111		Sn	17 18 37.6	+1.0
SDD	Santo Domingo	1.93	262	iP	Pn	17 18 13.4	+0.1
SDD				eS	Sn	17 18 36.6	-0.1
SDD				IAML		17 18 44.1	
	comp=Z,206nm,0.3s						
SDD	Santo Domingo	1.93	262		Pn	17 18 13.2	-0.1
CBYP	Canovanas	2.00	103	⇑eP	Pn	17 18 14.4	+0.1
CBYP	Canovanas	2.00	103	⇑eP	Pn	17 18 14.7	+0.2
CBYP				eS	Sn	17 18 39.5	+1.1
CBYP	Canovanas	2.00	103		Pn	17 18 14.6	+0.2
CBYP	Canovanas	2.00	103		Sn	17 18 39.5	+1.1
HUMP	Col San Antoni	2.04	106	⇓eP	Pn	17 18 15.8	+1.0
HUMP	Col San Antoni	2.04	106	eS	Sn	17 18 40.1	+0.8
HUMP	Col San Antoni	2.04	106	⇓eP	Pn	17 18 15.5	+0.7
HUMP				eS	Sn	17 18 41.0	+1.7
HUMP	Col San Antoni	2.04	106		Sn	17 18 41.0	+1.7
HUMP	Col San Antoni	2.04	106	Pn	Pn	17 18 15.9	+1.0
MTP	Monte Pirata	2.32	105	⇓eP	Pn	17 18 19.7	+0.9
MTP	Monte Pirata	2.32	105	eS	Sn	17 18 47.8	+1.5
MTP	Monte Pirata	2.32	105		Pn	17 18 19.5	+0.8
MTP	Monte Pirata	2.32	105		Sn	17 18 47.8	+1.5
BANI	BANI	2.35	262		Pn	17 18 19.6	+0.3
BON1	Bonao	2.37	275	iP	Pn	17 18 22.4	+3.0
BON1				eS	Sn	17 18 51.6	+4.2
BON1				IAML		17 18 55.3	
	comp=Z,1μm,0.3s						
CUPR	Culebra, Puert	2.52	99	⇓eP	Pn	17 18 21.0	-0.5
CUPR	Culebra, Puert	2.52	99	eS	Sn	17 18 51.7	+0.6
CUPR	Culebra, Puert	2.52	99		Pn	17 18 22.3	+0.8
CUPR	Culebra, Puert	2.52	99		Sn	17 18 51.7	+0.6
SC01	Santiago de lo	2.76	285	iP	Pn	17 18 29.1	+4.4
SC01				eS	Sn	17 19 05.5	+8.6
SC01				IAML		17 19 15.1	
	comp=Z,756nm,0.6s						
SC01	Santiago de lo	2.76	285		Pn	17 18 26.0	+1.3
STVI	Saint Thomas	2.82	97	⇓eP	Pn	17 18 25.1	-0.4
STVI	Saint Thomas	2.82	97	⇑eP	Pn	17 18 25.8	+0.2
STVI				eS	Sn	17 18 58.7	+0.2
STVI	Saint Thomas	2.82	97	Pn	Pn	17 18 25.2	-0.4
STVI	Saint Thomas	2.82	97		Sn	17 18 58.7	+0.2
TBVI	Tortola	3.13	95	⇓eP	Pn	17 18 29.9	+0.2
TBVI	Tortola	3.13	95	eS	Sn	17 19 05.8	-0.2
TBVI	Tortola	3.13	95		Pn	17 18 29.9	+0.2
TBVI					Sn	17 19 05.8	-0.2
CDVI	St. Croix	3.14	108	Pn	Pn	17 18 31.9	+2.1
CDVI					Sn	17 19 08.5	+2.4
SJM1	San Juan de la	3.14	272	eS	Sn	17 19 10.3	+3.9
SDDR	Presa de Saban	3.21	275	iP	Pn	17 18 31.7	+0.8
SDDR				eS	Sn	17 19 09.6	+1.5
SDDR				IAML		17 19 19.1	
	comp=Z,359nm,0.7s						
SDDR	Presa de Saban	3.21	275		Pn	17 18 31.4	+0.5
GRTK	Grand Turk	4.10	313	Pn	Pn	17 18 40.4	-2.6
GTBY	Guantanamo Bay	6.91	281	eS	Sn	17 20 30.9	-7.7
GTBY	Guantanamo Bay	6.91	281	Pn	Pn	17 19 19.8	-1.6
URIC	Uribia, Colomb	8.03	210	Pn	Pn	17 19 34.0	-2.8
RUSC	La Rusia	13.73	202	Pn	Pn	17 20 53.7	-1.1
BCIP	Isla Barro Col	14.98	232	Pn	Pn	17 21 09.5	-1.2
ESPN	Las Esperanzas	17.08	250		Pn	17 21 36.9	-0.4
Y60A	Bolivia	17.78	331		P	17 21 43.4	-2.1
V61A	Roper	18.64	337	P	P	17 21 52.1	-2.9
TXAR	Lajitas Array	34.20	295	P	P	17 24 24.7	+2.6
	comp=Z,0.2nm,0.4s,baz=100,slow=9.2,SNR=5.4						
YKA	Yellowknife Ar	54.23	335	P	P	17 27 00.6	-0.8
	comp=Z,1.1nm,0.6s,baz=114,slow=7.4,SNR=13						
TORD	Torodi Ar. Bea	66.80	83	P	P	17 28 27.8	-0.1
	comp=Z,0.6nm,0.6s,baz=275,slow=7.4,SNR=3.6						
ILAR	Eielson Array	68.53	333	P	P	17 28 37.1	-0.7
	comp=Z,0.2nm,0.5s,baz=108,slow=5.8,SNR=4.1						
FINES	FINESS Array B	75.62	30	P	P	17 29 20.5	+0.3
	comp=Z,5.8nm,1.1s,baz=278,slow=11,SNR=3.4						

*IDC **15** 17:22:33.8±6.4, 31°.82S×179°.61W, h150km±49km, mb4.0/4, mb1 4.0/5, mb1mx3.6/37, mbtmp4.3/5, Error ellipse: s-maj=53.5km s-min=20.9km az=47.0*
*NEIC **15** 17:22:38.2±0.6, 32°.24S±0°.08×179°.9W±0°.2, h183km±8km, mb4.3/12, Error ellipse: s-maj=23.7km s-min=9.9km az=103.0*
*WEL **15** 17:22:47.8±0.9, 33°S±17°×18°0W±3°2, h237km±29km, M4.3/8, mB4.3/5, MLv4.8/8, Mw(mB)3.4/5*
ISC 15 17:22:41.0±1.0, **32°.32S**±0°.06×**179°.7E**±0°.1, **h200**km, **n74**, σ**2.33**/82, **mb4.3**/9, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.36	192	Pn	Pn	17 23 59.9	0.0
MXZ	Matakaoa Point	5.36	192	P	Pn	17 24 02.1	+2.2
MXZ				S	Sn	17 25 03.1	+0.9
PUZ	Puketiti	5.86	191	P	Pn	17 24 05.8	-0.7
PUZ				S	Sn	17 25 14.5	+0.4
TKGZ	Te Karaka	6.29	193	P	Pn	17 24 14.9	+3.0
TKGZ				S	Sn	17 25 24.4	+0.3
URZ	Urewera	6.29	199	P	Pn	17 24 12.9	+1.0
	1.1nm,0.3s,baz=272,slow=5.3,SNR=20						
URZ				S	Sn	17 25 25.5	+1.4
	22nm,0.3s,baz=29,slow=24,SNR=17						
URZ	Urewera	6.29	199		Pn	17 24 11.8	-0.2
URZ					Sn	17 25 24.8	+0.6
RAGZ	Rawiri	6.44	196	P	Pn	17 24 17.5	+3.5
RIGZ	Rimuhau	6.57	193	P	Pn	17 24 19.0	+3.4
RIGZ				S	Sn	17 25 30.0	-0.6
RTZ	Ruatahuna	6.66	199	P	Pn	17 24 19.8	+3.0
SNGZ	Shannon Statio	6.73	196	P	Pn	17 24 20.2	+2.6
SNGZ				S	Sn	17 25 34.5	+0.1
PRGZ	Paritu Road	6.75	192	P	Pn	17 24 20.9	+2.9
PRGZ				S	Sn	17 25 32.4	-2.6
RAHZ	Arahi	6.92	197	P	Pn	17 24 22.8	+2.6
RAHZ				S	Sn	17 25 38.4	-0.5
MTHZ	Maungataniwha	6.92	199	P	Pn	17 24 20.6	+0.4
MHGZ	Mahia Peninsul	6.97	192	P	Pn	17 24 23.3	+2.5
WHHZ	Waihua	7.04	196	S	Sn	17 25 42.6	+1.1
BKZ	Black Stump Fm	7.31	200	Pn	Pn	17 24 24.4	-0.9
HIZ	Hauiti	7.34	211	Pn	Pn	17 24 28.9	+3.4
WPHZ	Waipukurau	8.17	198	P	Sn	17 26 09.7	+1.4
DVHZ	Dannevirke	8.46	199	P	Sn	17 26 13.4	-1.9
ANWZ	Angora Road	8.53	197	P	Sn	17 26 13.8	-3.1
POWZ	Post Office Ro	8.66	200	P	Sn	17 26 20.1	+0.1
PRWZ	Pori Road	8.75	199	P	Sn	17 26 18.2	-4.0
BFZ	Birch Farm	8.80	197	P	Pn	17 24 44.5	0.0
BFZ	Birch Farm	8.80	197	P	Sn	17 26 18.9	-4.3
MRZ	Mangatainoka R	8.96	201	P	Pn	17 24 46.4	-0.3
MRZ	Mangatainoka R	8.96	201	P	Sn	17 26 19.3	-7.8
TIWZ	Tintock	8.98	199	P	Pn	17 24 46.1	-0.8
TIWZ	Tintock	8.98	199	P	Sn	17 26 24.3	-3.3
CPWZ	Castlepoint	9.02	197	P	Sn	17 26 26.1	-2.5
HOWZ	Holdsworth Sta	9.20	200	P	Pn	17 24 48.9	-0.8
HOWZ	Holdsworth Sta	9.20	200	P	Sn	17 26 27.8	-5.0
OGWZ	Otaki Gorge	9.23	202	P	Pn	17 24 50.0	-0.2
OGWZ	Otaki Gorge	9.23	202	P	Sn	17 26 32.0	-1.4
TMWZ	Te Maipa	9.29	198	P	Pn	17 24 50.9	0.0
TMWZ	Te Maipa	9.29	198	P	Sn	17 26 30.8	-4.2
KIW	Kapiti Island	9.35	203	P	Pn	17 24 51.7	-0.1
MTW	Mount Morrison	9.44	200	P	Pn	17 24 52.3	-0.6
MTW	Mount Morrison	9.44	200	P	Sn	17 26 34.7	-3.8
CAW	Cannon Point	9.53	202	P	Pn	17 24 53.3	-0.7
CAW	Cannon Point	9.53	202	P	Sn	17 26 36.6	-3.9
PAWZ	Paruwai Farm	9.67	199	P	Sn	17 26 39.3	-4.7
MSWZ	Moikau Station	9.75	200		Pn	17 24 56.1	-0.8
MSWZ	Moikau Station	9.75	200	P	Pn	17 24 56.6	-0.4
SNZO	South Karori	9.82	203	Pn	Pn	17 24 54.9	-3.0
BHW	Baring Head	9.86	202	Pn	Pn	17 24 56.8	-1.5
PLWZ	Palliser	9.89	200	Pn	Pn	17 24 54.2	-4.6
TUWZ	Tuamarina	10.19	205	Pn	Pn	17 25 00.9	-1.7
QRZ	Quartz Range	10.26	212	Pn	Pn	17 25 01.1	-2.3
CMWZ	Cape Campbell	10.38	203	Pn	Pn	17 25 00.4	-4.6
BSWZ	Blackbirch Sta	10.47	205	Pn	Pn	17 25 04.5	-1.7
THZ	Tophouse	10.87	208	Pn	Pn	17 25 09.0	-2.5
KHZ	Kahutara	11.20	204	Pn	Pn	17 25 14.1	-1.5
LTZ	Lake Taylor	11.99	207	Pn	Pn	17 25 23.7	-1.9
MQZ	McQueen's Vall	12.65	204	Pn	Pn	17 25 29.7	-4.2
ODZ	Otahua Downs	14.53	206	Pn	Pn	17 25 57.4	+0.1
MSVF	Nonsavu	14.60	354	Pn	P	17 25 55.9	-3.7
DZM	Mont Dzumac	15.58	308		Pn	17 26 11.3	+0.9
DZM				IAmb	IAmb	17 26 14.7	
	comp=Z,7.8nm,0.9s						
STKA	Stephens Creek	32.17	260	P	P	17 28 51.2	+1.2
CTA	Charters Tower	32.25	284	P	P	17 28 53.1	+2.2
	comp=Z,3.4nm,1.0s,baz=117,slow=11,SNR=4.6						
BBOO	Buckleboo	36.59	257	P	P	17 29 29.9	+2.0
COEN	Coen	37.99	290	P	P	17 29 41.5	+1.6
COEN				IAmb	IAmb	17 30 18.2	
	comp=Z,5.7nm,1.1s						
AS31	Alice Springs	41.09	270	P	P	17 30 07.6	+2.2
ASAR	Alice Springs	41.09	270	P	P	17 30 07.4	+1.9
	comp=Z,5.1nm,0.8s,baz=107,slow=7.4,SNR=81						
WR0	Warramunga Arr	42.08	276	P	P	17 30 15.2	+1.8
WR0				IAmb	IAmb	17 30 41.8	
	comp=Z,14nm,1.4s						
WB2	Warramunga Arr	42.25	276	P	P	17 30 16.4	+1.6
WRAB	Tennant Creek	42.25	276	P	P	17 30 16.5	+1.6
WRAB				IAmb	IAmb	17 30 17.1	
	comp=Z,8.4nm,0.8s						
WRA	Warramunga Arr	42.26	276	P	P	17 30 16.5	+1.6
	comp=Z,5.7nm,0.5s,baz=114,slow=7.6,SNR=44						
WB0	Warramunga Arr	42.29	276	P	P	17 30 16.8	+1.6
WB0				IAmb	IAmb	17 30 17.5	
	comp=Z,7.8nm,0.8s						
QSPA	South Pole Qui	57.80	180	P	P	17 32 12.8	+1.7
	comp=Z,2.5nm,0.6s,baz=0.0,slow=6.1,SNR=26						
QSPA	South Pole Qui	57.80	180	P	P	17 32 13.1	+1.9
SNAA	Sanae	76.29	179	P	P	17 34 06.9	-0.4
SNAA				IAmb	IAmb	17 34 36.3	
	comp=Z,11nm,1.6s						
FINES	FINESS Array B	146.21	337	PKPbc	PKPbc	17 41 54.7	-2.3
	comp=Z,3.2nm,0.7s,baz=54,slow=4.0,SNR=17						
AKASG	Malin Array Be	151.53	319	PKPbc	PKiKP	17 42 08.8	-2.5
	comp=Z,0.3nm,0.4s,baz=58,slow=2.2,SNR=3.1						
TORD	Torodi Ar. Bea	160.83	186	PKPab	PKPab	17 43 00.4	-0.5
	comp=Z,0.5nm,0.7s,baz=186,slow=2.7,SNR=3.2						

*NEIC **15** 17:28:46.8±2.0, 6°.36S±0°.07×129°.44E±0°.09, h245km±8km, mb4.3/14, Error ellipse: s-maj=13.2km s-min=9.5km az=83.0*
*IDC **15** 17:28:47.5±1.7, 6°.30S×129°.46E, h247km±17km, mb3.6/16, mb1 3.6/20, mb1mx3.5/42, mbtmp4.2/20, Error ellipse: s-maj=21.0km s-min=11.9km az=73.0*
ISC 15 17:28:46.9±0.4, **6°.37S**±0°.05×**129°.44E**±0°.07, **h250**km, **n54**, σ**1.14**/59, **mb4.0**/20, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.44	131	Pn	Pn	17 29 35.0	+1.3
FAKI	Fak Fak	4.43	39		Pn	17 29 55.1	-0.7
SIJI	Sorong	5.76	19	P	Pn	17 30 11.3	-0.9
	14nm,0.3s,baz=54,slow=12,SNR=113						
SIJI				S	S	17 31 14.5	-5.9
	16nm,0.3s,baz=77,slow=22,SNR=20						
SOEI	Soe	6.12	236	Pn	Pn	17 30 16.6	-0.1
TNTI	Ternate	7.39	344	Pn	Pn	17 30 33.0	+0.4
KNRA	Kununurra	9.27	184		Pn	17 30 56.6	+0.3
FITZ	Fitzroy Crossi	12.23	197	P	P	17 31 35.2	-0.9
	1.6nm,0.3s,baz=32,slow=8.1,SNR=21						
FITZ				S	S	17 33 46.6	-3.2
	0.9nm,0.3s,baz=86,slow=19,SNR=4.2						
FITZ	Fitzroy Crossi	12.23	197	P	P	17 31 36.2	0.0
DAV	Davao City (W)	13.89	344		Pn	17 31 53.6	-0.3
WB0	Warramunga Arr	14.16	161		Pn	17 31 56.7	-0.4
WRAB	Tennant Creek	14.30	161	Pn	Pn	17 31 57.5	-1.3
WRA	Warramunga Arr	14.31	161	P	Pn	17 31 58.3	-0.6
	1.1nm,0.3s,baz=340,slow=11,SNR=28						
WRA				S	S	17 34 35.3	-2.0
	0.5nm,0.3s,baz=342,slow=21,SNR=7.1						
WB2	Warramunga Arr	14.31	161		Pn	17 31 58.3	-0.6
WR0	Warramunga Arr	14.39	160		Pn	17 31 59.2	-0.6
JAGI	Jajag, Banyuwa	15.30	261		P	17 32 09.7	-0.5
JAGI				IAmb	IAmb	17 32 17.5	
	comp=Z,33nm,1.1s						
COEN	Coen	15.47	120	P	Pn	17 32 13.3	+0.4
COEN				IAmb	IAmb	17 32 16.6	
	comp=Z,11nm,0.8s						
AS31	Alice Springs	17.73	166	P	Pn	17 32 38.5	-0.9
ASAR	Alice Springs	17.73	166	P	Pn	17 32 38.4	-1.0
	comp=Z,1.3nm,0.3s,baz=347,slow=10,SNR=108						
ASAR				S	S	17 35 46.4	-1.2
	comp=Z,0.3nm,0.3s,baz=349,slow=19,SNR=16						
ASAR				ScP	ScP	17 40 13.1	-0.4
	comp=Z,0.1nm,0.3s,baz=343,slow=2.4,SNR=4.9						
CTA	Charters Tower	21.27	131	P	P	17 33 15.7	+1.4
	comp=Z,4.8nm,0.6s,baz=302,slow=12,SNR=12						
STKA	Stephens Creek	27.80	157	P	P	17 34 13.8	+0.6
YULB	Yu-li	30.63	345	P	P	17 34 38.5	+0.2
YULB				IAmb	IAmb	17 34 51.3	
	comp=Z,30nm,1.5s						
TPUB	Ta-pu	30.72	344	P	P	17 34 37.7	-1.3
UBPT	Khong Chiam	32.04	312	P	P	17 34 50.5	-0.1
CAN	Canberra	33.97	151	P	P	17 35 08.5	+1.4
CMAR	Chiang Mai Arr	38.90	310	P	P	17 35 49.5	+0.6
	comp=Z,1.0nm,0.8s,baz=139,slow=7.6,SNR=10						
MJAR	Matsushiro Arr	43.47	10	P	P	17 36 24.9	-0.8
	comp=Z,1.3nm,0.5s,baz=184,slow=9.4,SNR=1.7						
KSRS	Korea Array	43.62	358	P	P	17 36 27.3	+0.5
	comp=Z,0.7nm,0.7s,baz=172,slow=8.3,SNR=4.3						
USRK	Ussuriysk Ar.	50.39	2	P	P	17 37 19.1	+0.2
	comp=Z,1.7nm,0.6s,baz=187,slow=7.1,SNR=5.1						
ASAJ	Asahikawa	51.64	12	P	P	17 37 28.6	+0.4
	comp=Z,1.4nm,0.3s,baz=2.4,slow=32,SNR=4.7						
JKA	Kamikawa-asahi	51.64	12	P	P	17 37 28.6	+0.4
ODAN	Odare	52.42	311	eP	P	17 37 34.5	-0.1
	comp=Z,5.5nm,0.5s						
TAPN	Taplejung	52.45	312	eP	P	17 37 34.7	-0.2
	comp=Z,5.8nm,0.4s						
RAMN	Ramite	53.07	311	eP	P	17 37 39.7	+0.4
	comp=Z,13nm,0.6s						
BKZ	Black Stump Fm	53.44	135	P	P	17 37 42.1	+0.6

BKZ IAmb IAmb 17 37 44.8
comp=Z,9.1nm,1.3s
GUN Gumba 54.12 311 eP P 17 37 47.0 0.0
comp=Z,17nm,0.9s
PKI Pulchoki 54.29 311 eP P 17 37 47.7 -0.6
PKIN Phulchoki 54.31 311 eP P 17 37 47.9 -0.4
KKN Kakani 54.51 311 eP P 17 37 49.6 0.0
GKN Gorkha 55.10 311 eP P 17 37 53.8 0.0
comp=Z,4.9nm,0.3s
SONM Songino Array 57.67 342 P P 17 38 12.4 +0.9
comp=Z,0.6nm,0.4s,baz=161,slow=6.9,SNR=11
PETK Petropavlovsk- 63.91 19 P P 17 38 53.8 +0.7
comp=Z,11nm,1.1s,baz=253,slow=13,SNR=4.5
MK31 Makanchi Array 67.40 327 P P 17 39 16.2 +0.7
MKAR Makanchi Array 67.40 327 P P 17 39 16.4 +0.8
comp=Z,1.8nm,0.3s,baz=115,slow=8.2,SNR=71
MAKZ Makanchi 67.58 327 P P 17 39 17.0 +0.3
MAKZ IAmb IAmb 17 39 18.2
comp=Z,4.0nm,1.1s
YAK Yakutsk 68.20 0 P P 17 39 20.5 +0.3
comp=Z,4.2nm,0.5s,baz=347,slow=0.8,SNR=6.1
YAK Yakutsk 68.20 0 P P 17 39 20.3 +0.1
YAK IAmb IAmb 17 39 21.2
comp=Z,7.0nm,0.7s
ZALV Zalesovo Beam 70.78 334 P P 17 39 36.1 +0.1
comp=Z,1.5nm,0.6s,baz=135,slow=5.9,SNR=7.1
SEY Seymchan 71.30 11 P P 17 39 40.2 +1.3
comp=Z,2.4nm,0.6s,baz=178,slow=3.7,SNR=7.2
KURBB Kurchatov Arra 71.69 329 P P 17 39 42.2 +0.6
comp=Z,2.1nm,0.5s,baz=126,slow=5.0,SNR=25
KURK Kurchatov 71.69 329 P P 17 39 42.1 +0.5
KURK IAmb IAmb 17 39 43.0
comp=Z,5.5nm,1.3s
BVAR Borovoye Array 77.24 328 P P 17 40 14.1 +0.7
comp=Z,0.7nm,0.5s,baz=100,slow=5.0,SNR=9.0
TIXI Tiksi 77.86 360 P P 17 40 16.8 +0.3
comp=Z,0.6nm,0.4s,baz=172,slow=5.6,SNR=5.1
TIXI Tiksi 77.86 360 P P 17 40 16.4 -0.1
TIXI IAmb IAmb 17 40 17.1
comp=Z,4.6nm,1.4s
AKTO Aktyubinsk 83.24 322 P P 17 40 45.9 +0.5
comp=Z,0.9nm,0.5s,baz=134,slow=6.7,SNR=3.9

ATH 15 17:35:05.7, 38.39N×20.48E, h17km±1km, ML3.0/20, Error ellipse: s-maj=1.5km s-min=0.6km az=262.0
THE 15 17:35:06.2, 38.40N×20.47E, h11km, ML3.1/4, Error ellipse: s-maj=0.9km s-min=0.3km az=284.0
ISC 15 17:35:05.8±0.8, 38.39N±0.02×20.49E±0.03, h14km±5km, n61, σ0.46/86, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FSK Fiskardo 0.09 42 P Pg 17 35 08.3 -0.5
FSK S Sg 17 35 10.2 -0.6
19μm,0.2s
KEF1 Kardakata, Kep 0.12 185 P Pg 17 35 08.9 -0.1
KEF1 S Sg 17 35 11.3 +0.1
KEF4 Livadi, Kephal 0.14 200 P Pg 17 35 09.4 -0.1
KEF4 S Sg 17 35 12.2 +0.3
AGT1 Agia Thekli 0.16 209 P Pg 17 35 09.6 -0.1
AGT1 S Sg 17 35 12.7 +0.3
LXR1 Lixouri, Cepha 0.20 191 P Pg 17 35 10.5 +0.3
LXR1 S Sg 17 35 13.9 +0.7
LXRA Lixouri, Kepha 0.20 191 P Pg 17 35 10.5 +0.3
LXRA S Sg 17 35 13.7 +0.5
ARG2 Argostoli 0.21 179 P Pg 17 35 10.6 +0.1
ARG2 S Sg 17 35 14.3 +0.6
ARGA Argostoli. Kep 0.21 181 P Pg 17 35 10.6 +0.1
ARGA S Sg 17 35 14.2 +0.5
KEF3 Kipouria, Keph 0.22 210 P Pg 17 35 10.7 +0.1
KEF3 S Sg 17 35 14.6 +0.8
CHV1 Chavriata, Kef 0.22 201 P Pg 17 35 10.8 +0.1
CHV1 S Sb 17 35 15.0 -0.6
KEF2 Argostoli. Kep 0.23 180 P Pg 17 35 10.8 0.0
KEF2 S Sg 17 35 14.8 +0.7
VLS Valsamata 0.23 159 P Pg 17 35 10.8 0.0
VLS S Sg 17 35 15.0 +0.8
8μm,0.3s
VLS Valsamata 0.23 159 P Pg 17 35 10.8 0.0
VLS S Sg 17 35 14.6 +0.3
VLS AML AML 17 35 16.0
comp=E,14296μm,0.1s
VLS AML AML 17 35 18.4
comp=N,16622μm,0.5s
EVGI Lefkada island 0.27 30 P Pg 17 35 11.5 0.0
EVGI S Sb 17 35 16.1 -0.8
EVGI Lefkada island 0.27 30 P Pg 17 35 11.7 +0.3
EVGI S Sg 17 35 15.7 +0.5
MGNA Meganis 0.36 42 P Pg 17 35 12.5 -0.5
MGNA S Sg 17 35 18.3 +0.4
MGNA AML AML 17 35 20.3
comp=E,6322μm,0.3s
MGNA AML AML 17 35 21.8
comp=N,6033μm,0.3s
LKD2 Lefkada island 0.42 19 P Pg 17 35 14.1 -0.1
LKD2 S Sb 17 35 21.2 -0.1
comp=N,2μm,0.5s
LKD2 Lefkada island 0.42 19 P Pg 17 35 14.1 -0.1
LKD2 S Sb 17 35 20.9 -0.4
LKD2 AML AML 17 35 23.1
comp=E,3598μm,0.3s
LKD2 AML AML 17 35 27.6
comp=N,4797μm,0.4s
TSLK Tsoukalades, L 0.45 17 P Pg 17 35 14.7 -0.1
TSLK S Sb 17 35 22.2 -0.1
comp=N,3μm,0.3s
TSLK Tsoukalades, L 0.45 17 P Pg 17 35 14.9 +0.1
TSLK S Sb 17 35 22.1 -0.2
TSLK AML AML 17 35 23.5
comp=E,5091μm,0.3s
TSLK AML AML 17 35 26.7
comp=N,7679μm,0.4s
AST1 Astakos 0.50 72 P Pg 17 35 16.0 +0.4
AST1 S Sb 17 35 23.8 +0.3
VLMS Volimes, Zakyn 0.53 165 P Pg 17 35 16.2 -0.2
VLMS S Sb 17 35 24.4 -0.2
VLMS AML AML 17 35 25.6
comp=N,14494μm,0.6s
VLMS AML AML 17 35 28.9
comp=E,7341μm,0.4s
PDO Prodromos 0.58 69 P Pg 17 35 17.4 +0.1
PDO Prodromos 0.58 69 P Pg 17 35 17.4 +0.1
PDO AML AML 17 35 33.7
comp=E,3325μm,0.6s
PDO AML AML 17 35 34.6
comp=N,4068μm,0.4s
AXS Araxos 0.73 105 P Pg 17 35 20.0 0.0
AXS S Sb 17 35 31.1 +0.9
AXS Araxos 0.73 105 P Pg 17 35 20.0 0.0
AXS S Sg 17 35 29.8 +0.2
AXS AML AML 17 35 36.0
comp=E,1695μm,0.8s
AXS AML AML 17 35 36.1
comp=N,2514μm,0.6s
VTN Vitineika 0.73 130 P Pg 17 35 20.1 +0.2
KRI1 kERI 0.78 160 P Pg 17 35 20.6 -0.3
KRI1 S Sn 17 35 33.1 -0.7
RLS Riolos of Patr 0.84 113 P Pg 17 35 21.8 -0.4
RLS AML AML 17 35 43.8
comp=N,1188μm,0.5s
RLS AML AML 17 35 45.2
comp=E,844μm,0.5s
PVO Paravola 0.85 74 P Pg 17 35 22.3 +0.1
PVO Paravola 0.85 74 P Pb 17 35 22.5 +0.2
PVO AML AML 17 35 41.2
comp=E,2549μm,0.4s
PVO AML AML 17 35 41.6
comp=N,3583μm,0.6s
DRO Drossia 1.06 114 P Pb 17 35 25.7 -0.3
DRO Drossia 1.06 114 P Pb 17 35 25.5 -0.5
DRO AML AML 17 35 48.8
comp=N,2482μm,0.6s
DRO AML AML 17 35 49.9
comp=E,2072μm,0.5s
ANX Ano Chora 1.15 79 P Pb 17 35 27.3 -0.2
ANX Ano Chora 1.15 79 P Pb 17 35 27.1 -0.4
ANX AML AML 17 35 51.0
comp=E,2627μm,0.6s
ANX AML AML 17 35 53.9
comp=N,2365μm,0.6s
IGT Igoumenitsa 1.15 354 P Pb 17 35 26.9 -0.5
EVR Evrytania 1.16 63 P Pb 17 35 27.5 -0.3
EVR Evrytania 1.16 63 P Pb 17 35 27.4 -0.4
EVR AML AML 17 35 52.4
comp=N,777μm,0.5s
EVR AML AML 17 35 55.5
comp=E,878μm,0.5s
LAKA Lakka 1.19 97 P Pn 17 35 27.7 -0.4
LAKA Lakka 1.19 97 P Pn 17 35 27.7 -0.4
LAKA AML AML 17 35 54.5
comp=E,682μm,0.9s
LAKA AML AML 17 35 59.9
comp=N,718μm,0.7s
SERG Sergoula 1.23 89 P Pn 17 35 28.7 -0.1
SERG Sergoula 1.23 89 P Pn 17 35 28.4 -0.3
SERG AML AML 17 35 52.5
comp=E,1503μm,0.7s
SERG AML AML 17 35 52.8
comp=N,1587μm,0.6s
TRIZ Trizonia 1.25 91 P Pn 17 35 28.6 -0.3
TRIZ Trizonia 1.25 91 P Pn 17 35 28.7 -0.2
ALIK Aliki, Aigiali 1.29 95 P Pn 17 35 29.6 +0.2
AMT Artemida-Makis 1.29 131 P Pb 17 35 30.0 0.0
AMT AML AML 17 36 08.4
comp=N,1611μm,0.6s
AMT AML AML 17 36 12.7
comp=E,1558μm,0.7s
KALE Kalithea 1.30 90 P Pn 17 35 29.6 -0.1
KALE AML AML 17 35 55.7
comp=N,1378μm,0.7s
KALE AML AML 17 35 58.2
comp=E,680μm,0.6s
KLV Kalavryta, Ach 1.36 104 P Pn 17 35 30.5 0.0
KLV Kalavryta, Ach 1.36 104 P Pn 17 35 30.6 +0.1
KLV AML AML 17 35 57.2
comp=E,502μm,0.5s
KLV AML AML 17 36 02.5
comp=N,650μm,0.6s
KASA Kassiopi 1.42 343 P Pg 17 35 33.2 +0.1
KEK Kerkira 1.42 338 P Pb 17 35 32.0 -0.2
MAKR Makrakomi, Fth 1.43 64 P Pb 17 35 32.2 -0.1
MAKR AML AML 17 36 04.9
comp=E,1080μm,0.4s
MAKR AML AML 17 36 05.9
comp=N,924μm,0.6s
AGG Agios Georgios 1.57 66 P Pb 17 35 34.8 0.0
AGG AML AML 17 36 06.2
comp=N,522μm,0.5s
AGG AML AML 17 36 07.1
comp=E,527μm,0.7s
ITM Ithomi 1.67 136 P Pb 17 35 35.7 -0.6
THL Klokotos Trika 1.67 45 P Pb 17 35 36.7 +0.3
AXAR Agios Charalam 1.74 77 P Pb 17 35 38.3 +0.6
AXAR AML AML 17 36 21.5
comp=N,1462μm,0.6s
AXAR AML AML 17 36 21.9
comp=E,1330μm,1.1s
PYL PYLOS 1.80 146 P Pn 17 35 37.1 +0.7
LTK Loutraki 1.99 100 P Pb 17 35 41.4 -0.5
VIL2 Platees 2.20 94 P Pn 17 35 44.9 -0.5
XOR Xorichti 2.33 64 P Pn 17 35 45.7 +1.9
DID Didima 2.35 111 P Pb 17 35 46.6 -1.4

IDC 15 17:58:33.1±0.8, 4.13S×142.26E, h109km±6km, mb3.2/4, mb1 3.4/7, mb1mx3.2/36, mbtmp3.7/7, Error ellipse: s-maj=19.9km s-min=9.0km az=59.0
ISC 15 17:58:33.0±0.7, 4.26S±0.07×142.17E±0.10, h100km, n10, σ2.09/20, mb3.7/3, New Guinea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JAY Jayapura 2.27 320 P Pn 17 59 09.1 0.0
1.6nm,0.3s,baz=142,slow=8.8,SNR=8.0
JAY S Sn 17 59 36.5 -0.2
9.5nm,0.3s,baz=279,slow=15,SNR=7.6
PMG Port Moresby 7.12 136 P Pn 18 00 15.3 +0.8
0.5nm,0.3s,baz=34,slow=3.6,SNR=2.7
PMG S Sn 18 01 33.2 -0.7
0.5nm,0.3s,baz=168,slow=20,SNR=2.4
WRA Warramunga Arr 17.35 205 P Pn 18 02 29.0 0.0
0.7nm,0.3s,baz=27,slow=12,SNR=17
WRA pP pP 18 02 51.7 +3.6
0.5nm,0.3s,baz=11,slow=10,SNR=3.0
WRA sP sP 18 03 02.4 +1.3
0.3nm,0.3s,baz=21,slow=11,SNR=7.1
WRA S Sn 18 05 36.9 -5.3
0.1nm,0.3s,baz=47,slow=26,SNR=2.7
ASAR Alice Springs 20.88 202 P P 18 03 07.8 +0.5
1.0nm,0.7s,baz=37,slow=12,SNR=16
ASAR pP pP 18 03 29.6 +2.5
1.7nm,0.6s,baz=33,slow=10,SNR=7.4
ASAR sP sP 18 03 42.2 +2.2
2.0nm,0.6s,baz=29,slow=11,SNR=6.5
ASAR S S 18 06 52.0 -2.6
0.3nm,0.8s,baz=20,slow=25,SNR=2.9
FITZ Fitzroy Crossi 21.23 228 P P 18 03 12.0 +1.0
3.5nm,0.6s,baz=35,slow=8.6,SNR=11
MKAR Makanchi Array 73.13 322 P P 18 09 51.9 -0.8
0.4nm,0.7s,baz=105,slow=6.7,SNR=4.6
MKAR pP pP 18 10 19.9 +1.7
0.3nm,0.6s,baz=101,slow=7.3,SNR=3.1
ILAR Eielson Array 85.82 24 P P 18 10 58.4 -2.7
0.2nm,0.5s,baz=257,slow=3.8,SNR=3.3
ILAR pP pP 18 11 27.8 +0.5
0.7nm,0.9s,baz=266,slow=5.5,SNR=3.2
TORD Torodi Ar. Bea 140.00 285 PKP PKPdf 18 17 50.7 -0.1
0.4nm,0.7s,baz=101,slow=3.0,SNR=2.3
DBIC Dimbokro 147.09 276 PKPbc PKPbc 18 18 04.9 -0.6
2.3nm,0.6s,baz=103,slow=4.2,SNR=4.8
SIV San Ignacio 149.44 132 PKPbc PKPbc 18 18 11.0 -0.5
1.0nm,0.5s,baz=297,slow=2.3,SNR=5.1

IDC 15 18:10:55.4±2.2, 1.98S×134.00E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.4/31, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=55.9km s-min=23.9km az=59.0, Irian Jaya region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 2.95 292 Pn Pn 18 11 43.7 +0.2
4.5nm,0.3s,baz=58,slow=17,SNR=30
SIJI Sn Sn 18 12 20.5 +0.9
9.1nm,0.3s,baz=322,slow=23,SNR=12
WRA Warramunga Arr 17.86 179 P Pn 18 15 05.7 +0.2
0.2nm,0.3s,baz=358,slow=12,SNR=9.3
ASAR Alice Springs 21.56 180 P P 18 15 46.7 0.0
1.5nm,0.6s,baz=6.6,slow=12,SNR=27
MKAR Makanchi Array 66.38 324 P P 18 21 46.3 -0.1
0.2nm,0.6s,baz=113,slow=6.9,SNR=4.2

IDC 15 18:57:20.0±1.4, 30.27N×57.36E, h0km, mb3.5/11, mb1 3.6/13, mb1mx3.4/42, mbtmp3.5/13, ML3.1/2, MS3.1/7, Ms1 3.1/7, ms1mx2.8/34, Error ellipse: s-maj=32.6km s-min=19.7km az=157.0
TEH 15 18:57:20.6, 30.57N×57.44E, h10km, ML4.3
THR 15 18:57:22.6±0.5, 30.66N×57.40E, h14km±4km, ML4.3
OMAN 15 18:57:23.0±0.9, 30.59N×57.63E, h10km±125km, ml4.2/3, Error ellipse: s-maj=40.9km s-min=15.0km az=273.0
DSN 15 18:57:24.9±2.1, 29.60N×59.60E, h12km, ML4.4/7, Error ellipse: s-maj=93.9km s-min=16.7km az=133.0
ISC 15 18:57:23.4±0.6, 30.55N±0.04×57.43E±0.04, h15km, n84, σ1.61/88, mb3.5/10, 2C, Northern and central Iran

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHMN Cheshme madani 0.69 172 ePg Pg 18 57 34.6 -2.5
CHMN e 18 57 45.8
KRBR Kerman 0.81 226 ePg Pb 18 57 39.4 +0.1
KRBR Kerman 0.81 226 ePg Pb 18 57 39.4 +0.1
KHGB Koh Gabri 0.84 258 ePg Pg 18 57 37.1 -2.6
KHGB e 18 57 48.2
NGRK Negar Kerman 1.09 214 ePg Pb 18 57 42.3 -1.8
NGRK e 18 57 59.5
IBAF Bafgh 1.90 303 ePn Pn 18 57 55.5 +0.1
IBAF e 18 58 22.9
BSRN Basiran 2.03 45 ePg Pn 18 57 58.3 +1.2
BSRN eSg Sb 18 58 24.9 -0.2
BSRN Basiran 2.03 45 ePg Pn 18 57 58.3 +1.2
IKOO Kooshah 2.30 35 ePn Pn 18 58 00.8 -0.2
NHDN Nehbandan 2.41 69 ePn Pn 18 58 01.4 -0.9
TPRV Parvadeh(Tabas 2.55 346 ePn Pn 18 58 03.8 -0.5
IMEH Mehriz 2.56 290 ePn Pn 18 58 04.0 -0.5
IMEH e 18 58 40.8
ITEG Tejag 2.59 25 ePn Pn 18 58 04.5 -0.5
ITEG e 18 58 46.2
KHNJ Kahnooj 2.61 175 ePn Pn 18 58 07.2 +2.2
IDAH Dahanechah 3.02 43 ePn Pn 18 58 12.8 +2.0
IDAH e 18 58 23.7
NIAN Nian 3.03 190 ePn Pn 18 58 10.6 -0.1
NIAN e 18 59 12.1
YZKH Yazd 3.04 308 ePn Pn 18 58 11.3 +0.3
YZKH IAML 18 59 02.7
comp=E,709nm,0.5s
YZKH Yazd 3.04 308 ePn Pn 18 58 11.3 +0.3
ZHSF Zahedan 3.05 107 ePn Pn 18 58 13.4 +2.1
ZHSF Zahedan 3.05 107 ePn Pn 18 58 13.4 +2.1
TKDS Koohdasht(Taba 3.06 355 ePn Pn 18 58 11.4 0.0
ICHK Chekchek 3.08 304 ePn Pn 18 58 12.2 +0.4
ICHK e 18 59 05.5
TABS Tabas 3.10 355 ePn Pn 18 58 11.9 0.0
TABS IAML 18 59 05.7
comp=N,712nm,0.4s
TABS Tabas 3.10 355 ePn Pn 18 58 11.9 0.0
SZD1 Zahaedan-tmp 3.17 109 ePn Pn 18 58 13.1 +0.3
AFRZ Afriz 3.17 25 ePn Pn 18 58 12.2 -0.6
IMON Monand 3.25 35 ePn Pn 18 58 14.6 +0.5
IMON e 18 59 12.8
GENO Geno 3.33 200 ePn Pn 18 58 16.6 +1.5
GENO e 18 59 12.0
TNSJ Nastanj 3.47 349 ePn Pn 18 58 17.0 0.0
ISAD Sadrabad 3.48 294 ePn Pn 18 58 18.6 +1.3
ISAD e 18 59 16.4
ANAR Anarak 4.10 311 ePn Pn 18 58 25.9 +0.3
ANAR e 18 59 35.0
SHME Shamm 4.63 194 iP Pn 18 58 36.2 +3.4
SNR=6.4
BANOM Banah 4.72 192 iP Pn 18 58 35.8 +1.8
SNR=30
BANOM S Sn 18 59 31.0 +2.5
BANOM Banah 4.72 192 P Pn 18 58 36.0 +1.9
SNR=30
BANOM S Sn 18 59 31.9 +3.4
IKAZ Kazeroun 4.90 262 ePn Pn 18 58 36.9 +0.1
KLNJ Kolanjah 5.04 277 ePn Pn 18 58 39.0 +0.2
MSFE Esma-Masafi 5.29 193 iP Pn 18 58 43.9 +1.9
SNR=10.0
MDH Madha 5.33 191 P Pn 18 58 40.6 -1.8
MDH Madha 5.33 191 P Pn 18 58 43.1 +0.7
SHRO Shahrood 5.55 348 IAML 19 00 28.4
comp=E,106nm,0.6s
IKLH Kolahrood 5.69 301 ePn Pn 18 58 48.5 +1.0
UOSS Minazif 5.69 191 P Pn 18 58 47.2 -0.1
UOSS Minazif 5.69 191 P Pn 18 58 48.8 +1.4
IANJ Anjilo 5.72 330 ePn Pn 18 58 47.0 -1.0
NAZ Nazwa, Dubai 5.76 196 iP Pn 18 58 49.8 +1.5
SNR=7.1
NAZ Nazwa, Dubai 5.76 196 P Pn 18 58 50.2 +1.9
SNR=7.1
NAZ S Sn 18 59 59.6 +5.4
HATD Hatta, Dubai 5.82 192 P Pn 18 58 50.2 +1.0
HATD Hatta, Dubai 5.82 192 P Pn 18 58 51.3 +2.2
HATD S Sn 18 59 54.9 -0.7
ASHO Ashiyiah 5.97 192 iP Pn 18 58 52.4 +1.2
SNR=22
ASHO Ashiyiah 5.97 192 P Pn 18 58 52.8 +1.5
SNR=22
ASHO S Sn 19 00 00.7 +1.3
FAQ Al Faqa, Dubai 6.01 196 P Pn 18 58 53.4 +1.7
IPAY Payeh 6.03 12 ePn Pn 18 58 51.9 -0.3
IAKL Akhelmad 6.14 10 ePn Pn 18 58 54.3 +0.5
IKRD Kardeh 6.27 8 ePn Pn 18 58 58.4 +2.8
IFIR Firoozkooh 6.41 324 ePn Pn 18 58 57.5 0.0
SOHO SOHO 6.44 187 P Pn 18 58 57.0 -0.7
IGLO Ghaloghah 6.65 334 ePn Pn 18 59 02.3 +1.5
IDMV Damavand 6.75 319 ePn Pn 18 59 03.0 +0.8
HOQ Hoqain 6.94 181 P Pn 18 59 05.4 +0.8
HOQ S Sn 19 00 26.0 +2.6
ARQ Araqi 7.23 187 P Pn 18 59 10.8 +2.2
SNR=14
WSAR Wadi Sarin 7.36 171 Pn Pn 18 59 10.0 -0.3
comp=E,1.9nm,0.3s,baz=0.0,slow=9.7,SNR=23
WSAR Sn Sn 19 00 29.3 -4.4
comp=E,0.6nm,0.3s,baz=104,slow=19,SNR=2.4
WSAR Wadi Sarin 7.36 171 P Pn 18 59 10.3 -0.1
SNR=12
GEYT Alibeck 7.38 4 Pn Pn 18 59 11.7 +1.1
comp=E,0.4nm,0.3s,baz=194,slow=16,SNR=6.1
GEYT Sn Sn 19 00 32.8 -1.3
comp=E,1.1nm,0.3s,baz=185,slow=16,SNR=3.5
GEYT LR LR 19 02 48.5
comp=E,47nm,22.0s,baz=20,slow=43
SMDO Samad 7.48 176 P Pn 18 59 12.6 +0.4
BSY Bisya 7.78 182 P Pn 18 59 17.2 +1.1
IRAZ Razeghan 7.94 310 ePn Pn 18 59 19.8 +1.3
QALM Alamut, Qazvin 8.15 318 ePn Pn 18 59 22.1 +0.7
GNI Garni 14.09 316 LR LR 19 06 14.5
comp=E,40nm,19.3s,baz=84,slow=38
KK31 Karatay Array 16.30 36 ⇑Pg P 19 01 13.3 -1.4
comp=E,1.1nm,0.8s,baz=230,slow=14,SNR=6.1
KK31 ⇑Lg Lg 19 01 47.5
comp=E,0.3nm,0.5s,baz=41,slow=27,SNR=4.8
AAK Ala-Archa 18.22 44 P P 19 01 38.1 +2.1
comp=E,0.1nm,0.3s,baz=238,slow=13,SNR=3.2
MMAI Mount Meron Ar 18.88 283 LR LR 19 10 50.9
comp=E,43nm,18.7s,baz=175,slow=43
EIL Elat 19.46 273 LR LR 19 10 42.8
comp=E,60nm,19.2s,baz=109,slow=41
AKTO Aktyubinsk 19.87 1 P Pn 19 01 55.4 -0.1
comp=E,1.7nm,0.6s,baz=179,slow=12,SNR=3.8
AKTO LR LR 19 11 32.5
comp=E,27nm,19.8s,baz=158,slow=42
BRTR Keskin Array B 21.45 302 P P 19 02 10.8 -0.5
comp=E,0.5nm,0.7s,baz=122,slow=12,SNR=4.1
BVAR Borovoye Array 24.37 19 P P 19 02 41.2 +0.4
comp=E,1.9nm,0.6s,baz=193,slow=7.9,SNR=13
MKAR Makanchi Array 25.14 43 P P 19 02 48.1 +0.3
comp=E,0.2nm,0.5s,baz=227,slow=8.9,SNR=5.9
KURBB Kurchatov Arra 25.51 32 P P 19 02 52.4 +1.3
comp=E,0.7nm,0.8s,baz=231,slow=9.3,SNR=4.3
ZALV Zalesovo Beam 30.60 32 P P 19 03 38.4 +1.8
comp=E,0.7nm,0.5s,baz=236,slow=11,SNR=3.9
GERES GERESS Array B 37.67 312 P P 19 04 39.6 +1.6
comp=E,0.4nm,0.6s,baz=102,slow=8.2,SNR=3.2
SONM Songino Array 40.95 51 P P 19 05 08.0 +2.5
comp=E,0.6nm,1.0s,baz=262,slow=10,SNR=4.6
TORD Torodi Ar. Bea 54.02 264 P P 19 06 45.5 -1.9
comp=E,0.8nm,0.7s,baz=66,slow=6.2,SNR=10
TORD LR LR 19 32 13.5
comp=E,81nm,18.9s,baz=320,slow=39
KSRS Korea Array 57.62 63 LR LR 19 35 14.2
comp=E,35nm,18.2s,baz=84,slow=39
YKA Yellowknife Ar 87.06 356 P P 19 10 08.5 +0.5
comp=E,0.2nm,0.6s,baz=350,slow=4.5,SNR=3.0
ASAR Alice Springs 90.97 117 P P 19 10 25.0 -2.2
comp=E,1.0nm,1.1s,baz=303,slow=5.2,SNR=3.2

RSPR 15 19:18:42.9, 19.57N×66.28W, h31km±16km, MD3.2/14
NEIC 15 19:18:43.5±1.7, 19.43N±0.05×66.27W±0.04, h32km±13km, Error ellipse: s-maj=7.8km s-min=3.5km az=148.0
ISC 15 19:18:44.0±2.9, 19.43N±0.08×66.28W±0.04, h34km±5km, n49, σ0.73/65, 14C, Puerto Rico region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
EMPR Esperanza - Ma 0.97 194 ⇑eP Pn 19 19 00.4 -0.9
EMPR Esperanza - Ma 0.97 194 eS Sn 19 19 14.3 +0.4
EMPR Esperanza - Ma 0.97 194 Pn 19 19 00.3 -0.9
EMPR Sb 19 19 15.4 +0.4
GCPR Guaynabo City 1.13 171 Pn 19 19 02.0 -1.3
GCPR Sn Sn 19 19 16.2 -1.4
AOPR Arecibo Observ 1.17 203 eS Sn 19 19 19.0 +0.3
AOPR Arecibo Observ 1.17 203 ⇑eP Pn 19 19 03.0 -0.9
AOPR Arecibo Observ 1.17 203 Pn 19 19 02.7 -1.2
AOPR Sn 19 19 19.2 +0.6
CBYP Canovanas 1.22 161 Pn 19 19 03.9 -0.7
CBYP Sn Sn 19 19 21.1 +1.2
AGPR Aguadilla, PR 1.24 220 ⇑eP Pn 19 19 04.1 -0.7
AGPR Aguadilla, PR 1.24 220 Pn 19 19 03.6 -1.3
AGPR Sn Sn 19 19 21.0 +0.6
SJG San Juan 1.31 175 Pn 19 19 05.5 -0.4
SJG Sn Sn 19 19 22.6 +0.4
HUMP Col San Antoni 1.34 162 eS Sn 19 19 23.6 +0.7
HUMP Col San Antoni 1.34 162 ⇑eP Pn 19 19 05.5 -0.7
HUMP Col San Antoni 1.34 162 Pn 19 19 05.8 -0.5
HUMP Sn 19 19 23.3 +0.4
CELP Cerrillos 1.38 192 ⇑eP Pn 19 19 06.6 -0.2
CELP Cerrillos 1.38 192 Pn 19 19 06.6 -0.2

OBIP Obispado Ponce 1.41 193 eS Sn 19 19 25.9 +1.2
OBIP Obispado Ponce 1.41 193⇑eP Pn 19 19 06.6 -0.7
OBIP Obispado Ponce 1.41 193 Pn 19 19 06.1 -1.1
OBIP Sn 19 19 24.9 +0.3
PDPR Patillas Dam, 1.42 170 eS Sn 19 19 25.9 +0.9
PDPR Patillas Dam, 1.42 170⇑eP Pn 19 19 07.2 -0.1
PDPR Patillas Dam, 1.42 170 Pn 19 19 07.0 -0.4
PDPR Sn 19 19 25.6 +0.7
CUPR Culebra, Puert 1.46 140 eS Sn 19 19 26.1 +0.3
CUPR Culebra, Puert 1.46 140⇑eP Pn 19 19 06.7 -1.1
CUPR Culebra, Puert 1.46 140 Pn 19 19 06.6 -1.3
CUPR Sn 19 19 25.7 -0.1
MPR Mayaguez 1.46 214 Pn Pn 19 19 07.2 -0.7
IGPR InterUniversit 1.46 174 eS Sn 19 19 26.8 +0.9
IGPR InterUniversit 1.46 174⇑eP Pn 19 19 07.8 -0.2
IGPR InterUniversit 1.46 174 Pn 19 19 08.3 +0.3
IGPR Sn Sn 19 19 26.2 +0.3
MTP Monte Pirata 1.49 152 eS Sn 19 19 27.5 +0.9
MTP Monte Pirata 1.49 152⇑eP Pn 19 19 07.7 -0.6
MTP Monte Pirata 1.49 152 Pn 19 19 07.9 -0.5
MTP Sn Sn 19 19 26.5 -0.1
IDE Isla Desecheo 1.54 228 eS Sn 19 19 27.9 +0.2
IDE Isla Desecheo 1.54 228⇑eP Pn 19 19 08.5 -0.5
IDE Isla Desecheo 1.54 228 Pn 19 19 08.5 -0.5
IDE Sn 19 19 27.9 +0.2
ICMP Isla Caja de M 1.55 189 Pn Pn 19 19 09.4 +0.2
CRPR Cabo Rojo, PR 1.62 209⇑eP Pn 19 19 09.4 -0.7
CRPR Cabo Rojo, PR 1.62 209 Pn 19 19 09.1 -1.0
CRPR Sn Sn 19 19 30.8 +1.0
MLPR Magueyes Islan 1.62 207 eS Sn 19 19 30.6 +0.8
MLPR Magueyes Islan 1.62 207⇑eP Pn 19 19 09.5 -0.6
MLPR Magueyes Islan 1.62 207 Pn 19 19 09.1 -1.1
MLPR Sn 19 19 29.9 +0.1
STVI Saint Thomas 1.65 130⇑eP Pn 19 19 10.0 -0.5
STVI Saint Thomas 1.65 130 eS Sn 19 19 30.6 +0.2
STVI Saint Thomas 1.65 130 Pn 19 19 10.0 -0.5
STVI Sn 19 19 31.0 +0.5
DR12 Loma Pena Alta 3.00 258 Pn Pn 19 19 28.3 -0.9
SMRT St. Maarten 3.33 114 Pn Pn 19 19 33.9 +0.2
SDD Santo Domingo 3.58 255 Pn Pn 19 19 36.5 -0.4
BANI BANI 4.00 256 Pn Pn 19 19 42.5 -0.5
SDDR Presa de Saban 4.76 265 Pn Pn 19 19 53.8 +0.5

IDC 15 19:23:32.8±2.3, 56.36S×27.66W, h0km, mb3.6/1, mb1 3.6/1, mb1mx3.4/20, mbtmp3.6/1, Error ellipse: s-maj=124.9km s-min=89.5km az=136.0, South Sandwich Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TORD Torodi Ar. Bea 73.45 30 P P 19 35 06.8 +0.1
0.3nm,0.5s,baz=198,slow=7.7,SNR=2.2
ILAR Eielson Array 150.12 311 PKPbc PKPbc 19 43 23.5 -0.4
0.4nm,0.7s,baz=134,slow=3.9,SNR=3.0
SONM Songino Array 151.00 87 PKPbc PKPbc 19 43 26.4 -0.3
0.2nm,0.4s,baz=240,slow=4.4,SNR=2.3

IDC 15 19:24:46.5±5.0, 36.05N×81.69E, h0km, mb3.2/2, mb1 3.6/4, mb1mx3.3/37, mbtmp3.3/6, ML3.3/2, Error ellipse: s-maj=103.4km s-min=29.6km az=74.0
BJI 15 19:24:48.0±0.0, 35.94N×82.45E, h10km, ML3.6/7, Ms3.4/2
NNC 15 19:24:54.0±3.1, 36.48N×82.60E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=29.2km s-min=22.1km az=68.0
ISC 15 19:24:52.2±1.9, 36.3N±0.1×82.4E±0.1, h10km, n10, σ2§40/13, 6C-5D, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PDGK Podgornoye 7.39 343 ⇓Pn Pn 19 26 41.4 +1.1
3.1nm,0.6s
PDGK ⇓Sn Sn 19 28 06.7 +2.5
16nm,0.5s
PDGK ⇑Lg Lg 19 28 46.8
17nm,0.8s
MDOK Medeo 8.02 331 ⇑Pg Pg 19 27 20.1 -5.6
5.8nm,0.8s
MDOK Lg Lg 19 29 05.5
13nm,0.8s
WMQ Urumqi 8.54 27 eP Pn 19 26 57.8 +1.8
WMQ S Sn 19 28 32.6 +0.2
WMQ smax smax
comp=N,9.0nm,1.3s
WMQ smax smax
comp=E,11nm,1.3s
AAK Ala-Archa 8.82 318 ⇑Pg Pg 19 27 30.3 -11
2.3nm,0.7s
AAK ⇓Lg Lg 19 29 32.1
14nm,0.9s
MK31 Makanchi Array 10.50 359 ⇑Pn Pn 19 27 23.5 +0.7
1.1nm,0.5s,baz=182,slow=12,SNR=96
MK31 ⇑Sn Sn 19 29 19.3 -1.2
0.6nm,0.5s,baz=188,slow=26,SNR=4.3
MK31 ⇓Lg Lg 19 30 19.6
1.8nm,0.7s
MKAR Makanchi Array 10.50 359 Pn Pn 19 27 23.6 +0.8
1.2nm,0.3s,baz=191,slow=13,SNR=83
MKAR Sn Sn 19 29 14.8 -5.7
0.1nm,0.3s,baz=183,slow=26,SNR=1.6
MAKZ Makanchi 10.52 358 ⇓Pn Pn 19 27 23.9 +0.8
7.3nm,0.5s
MAKZ ⇑Sn Sn 19 29 20.4 -0.5
2.2nm,0.7s
ZALV Zalesovo Beam 17.74 5 P Pn 19 28 57.0 -2.2
0.1nm,0.3s,baz=190,slow=12,SNR=8.1
SONM Songino Array 21.12 49 P P 19 29 39.2 +2.1
1.8nm,0.9s,baz=240,slow=11,SNR=10
CMAR Chiang Mai Arr 22.97 136 P P 19 29 55.5 -1.5
0.4nm,0.9s,baz=304,slow=12,SNR=2.6

VIE 15 20:31:37.0±1.1, 50.31N×18.89E, h0km, mb2.1/3, ml2.5/4, Error ellipse: s-maj=12.5km s-min=7.6km az=123.0 9 km NW of Katowice Suspected Mining induced.
IPEC 15 20:31:38.1±2.0, 50.28N×18.86E, h3km±14km, ML2.2/3, Error ellipse: s-maj=24.8km s-min=11.2km az=169.0
PRU 15 20:31:38.8±0.0, 50.26N×18.78E, h0km
ISC 15 20:31:37.8±0.9, 50.25N±0.05×18.81E±0.02, h0km, n22, σ0§77/37, Poland

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
OKC Ostrava-Krasne 0.59 227 ePG Pb 20 31 50.7 -0.3
OKC eSG Sg 20 31 58.2 +1.4
comp=Z,21nm,0.4s
OJC Ojcow 0.64 92 ePg Pg 20 31 49.9 0.0
OJC eSg Sg 20 31 58.4 +0.3
MORC Moravsky Berou 0.94 241 ePG Pb 20 31 56.8 -0.2
MORC eSG Sg 20 32 09.2 +1.1
MORC Moravsky Berou 0.94 241 ePg Pb 20 31 56.8 -0.2
baz=59
MORC eSg Sg 20 32 09.1 +1.0
39nm,0.2s,baz=59
NIE Niedzica 1.27 130 eP Pb 20 32 02.2 -0.4
NIE eSg Sb 20 32 19.1 -0.4
KRLC Kraliky 1.32 263 eSG Sg 20 32 20.6 +0.6
comp=Z,28nm,0.3s
DPC Dobruska-Polom 1.60 275 ePG Pn 20 32 07.5 +0.1
DPC eSG Sn 20 32 28.8 +0.1
comp=Z,19nm,0.4s
KSP Ksiaz 1.71 291 ePg Pg 20 32 11.2 +0.6
KSP eSg Sg 20 32 34.5 +1.7
VRAC Vranov 1.72 238 ePN Pn 20 32 09.3 +0.4
VRAC eSG Sg 20 32 33.1 +0.2
VRAC Vranov 1.72 238 ePn Pn 20 32 09.3 +0.4
baz=56
VRAC eSg Sg 20 32 33.1 +0.2
20nm,0.3s,baz=56
VYHS Vyhne 1.75 179 ePN Pn 20 32 09.0 -0.5
VYHS eSN Sb 20 32 32.7 -0.7
STHS Stebnicka Huta 1.78 117 ePN Pb 20 32 10.8 -0.5
STHS eSN Sg 20 32 35.0 0.0
STHS eLG Lg 20 32 41.5
KRUC Moravsky 1.97 234 ePN Pn 20 32 12.8 +0.4
KRUC eSN Sb 20 32 39.7 +0.2
KRUC Moravsky 1.97 234 ePn Pn 20 32 12.8 +0.4
baz=52
KRUC eSn Sb 20 32 39.6 +0.1
12nm,0.4s,baz=52
KECS Kecovo 2.08 148 ePN Pn 20 32 14.7 +0.8
MODS Modra-Piesok 2.13 209 ePN Pn 20 32 14.8 +0.2
CRVS Cervenica-Dubn 2.19 127 ePN Pb 20 32 18.5 +0.3
PRU Pruhonice 2.76 266 eSG Sg 20 33 05.3 -1.1
comp=Z,10nm,0.6s
CONA Conrad Observa 3.02 221 i Pn Pn 20 32 26.8 -0.2
0.2nm,0.1s
KHC Kasperske Hory 3.58 254 ePN Pn 20 32 34.8 +0.3
KHC ePG Pb 20 32 40.8 -1.1
KHC eSG Sg 20 33 30.2 -2.4
comp=Z,10nm,0.5s
MOA Molln 3.83 233 ePn Pn 20 32 38.1 +0.1
0.6nm,0.4s
CLL Collm 3.84 288 eSg Sg 20 33 40.0 -1.0
comp=Z,14nm,1.3s

IDC 15 20:39:06.0±0.8, 50.19N×115.09W, h0km, mb2.8/3, mb1 3.5/7, mb1mx3.3/51, mbtmp3.2/7, ML3.6/3, Error ellipse: s-maj=12.5km s-min=7.1km az=118.0
ISC 15 20:39:06.0±1.0, 50.43N±0.08×114.74W±0.09, h10km, n7, σ1§78/8, Alberta

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NEW Newport 2.67 217 Pn Pn 20 39 48.0 -1.0
3.0nm,0.3s,baz=39,slow=12,SNR=37
NEW Lg Lg 20 40 18.4
6.7nm,0.3s,baz=318,slow=21,SNR=5.1
PDAR Pinedale Array 8.45 153 Pn Pn 20 41 10.6 +2.0
0.1nm,0.3s,baz=355,slow=15,SNR=5.0
PDAR Lg Lg 20 43 25.9
0.1nm,0.3s,baz=338,slow=36,SNR=2.7
ULM Lac du Bonnet 12.06 84 Pn Pn 20 41 56.9 -0.8
0.1nm,0.3s,baz=278,slow=14,SNR=1.7
ULM Sn Sn 20 44 10.7 -1.5
0.1nm,0.3s,baz=190,slow=11,SNR=1.8
ULM Lg Lg 20 45 18.6
0.1nm,0.3s,baz=27,slow=11,SNR=1.9
YKA Yellowknife Ar 12.10 0 Pn Pn 20 41 59.7 +1.5
0.1nm,0.3s,baz=182,slow=13,SNR=39
YKA Sn Sn 20 44 11.3 -1.6
0.1nm,0.3s,baz=178,slow=22,SNR=5.3
YKA Lg Lg 20 45 28.8
0.1nm,0.3s,baz=182,slow=29,SNR=3.9
INK Inuvik 20.16 340 P Pn 20 43 41.6 -0.3
0.9nm,1.1s,baz=126,slow=17,SNR=1.4
ILAR Eielson Array 22.08 323 P P 20 44 02.2 +1.4
0.2nm,0.7s,baz=136,slow=12,SNR=1.5
TXAR Lajitas Array 22.67 154 P P 20 44 06.5 -1.0
0.3nm,0.7s,baz=343,slow=8.5,SNR=2.3

IDC 15 20:44:54.7±1.7, 22.86N×94.48E, h99km±22km, mb3.4/5, mb1 3.5/7, mb1mx3.1/62, mbtmp3.7/7, Error ellipse: s-maj=24.8km s-min=11.0km az=39.0
ISC 15 20:44:53.9±0.9, 23.0N±0.1×94.44E±0.09, h100km, n17, σ2§02/21, mb3.5/5, Myanmar-India border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BRDH Bariadhala 2.60 263 P Pn 20 45 35.6 +1.3
13nm,0.3s,baz=246,slow=20,SNR=2.0
BRDH S Sn 20 46 07.5 +2.1
65nm,0.3s,baz=295,slow=23,SNR=10.0
CMAR Chiang Mai Arr 6.19 136 P Pn 20 46 21.6 -1.2
0.5nm,0.3s,baz=310,slow=13,SNR=21
CMAR S Sn 20 47 29.9 -2.4
0.0nm,0.3s,baz=336,slow=29,SNR=3.0
ODAN Odare 7.46 302 ePn Pn 20 46 40.3 +0.1
ODAN eSn Sn 20 47 58.9 -4.4
132nm,0.4s
TAPN Taplejung 7.47 307 ePn Pn 20 46 40.4 0.0
TAPN eSn Sn 20 47 59.2 -4.5
49nm,0.3s
RAMN Ramite 8.12 300 ePn Pn 20 46 49.4 +0.2
JIRN Jiri 8.78 304 ePn Pn 20 46 58.1 -0.2
GUN Gumba 9.14 304 ePn Pn 20 47 03.6 +0.4
PKI Pulchoki 9.34 301 ePn Pn 20 47 05.0 -1.0
PKIN Phulchoki 9.36 301 ePn Pn 20 47 05.6 -0.5
KKN Kakani 9.55 302 ePn Pn 20 47 08.9 +0.3
DMN Daman 9.60 300 ePn Pn 20 47 08.4 -1.0
GKN Gorkha 10.15 301 ePn Pn 20 47 15.6 -1.2
MKAR Makanchi Array 25.67 341 P P 20 50 16.6 +2.2
1.3nm,0.7s,baz=146,slow=10,SNR=20
SONM Songino Array 26.55 18 P P 20 50 25.7 +3.2
0.2nm,0.7s,baz=147,slow=2.9,SNR=2.6
ZALV Zalesovo Beam 31.73 349 P P 20 51 09.4 +1.3
0.4nm,0.4s,baz=171,slow=10,SNR=2.8
WRA Warramunga Arr 57.78 134 P P 20 54 34.8 -0.2
0.6nm,0.4s,baz=321,slow=7.4,SNR=8.9
ASAR Alice Springs 60.20 138 P P 20 54 51.8 +0.2
0.7nm,0.5s,baz=321,slow=6.7,SNR=9.8

IDC 15 20:49:14.9±2.8, 6.66S×129.71E, h133km±37km, mb3.4/1, mb1 3.4/5, mb1mx3.0/45, mbtmp3.7/5, Error ellipse: s-maj=67.6km s-min=20.4km az=89.0
ISC 15 20:49:13.9±1.0, 6.73S±0.06×130.0E±0.2, h146km, n5, σ4§29/8, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 5.97 13 P Pn 20 50 41.1 +1.0
2.9nm,0.3s,baz=224,slow=22,SNR=48
SIJI S Sn 20 51 43.0 -4.7
1.0nm,0.3s,baz=253,slow=19,SNR=3.2
FITZ Fitzroy Crossi 12.06 200 P Pn 20 52 01.9 +0.9
0.4nm,0.3s,baz=17,slow=15,SNR=12
FITZ S Sn 20 54 09.1 -5.2
0.1nm,0.3s,baz=108,slow=20,SNR=2.9
WRA Warramunga Arr 13.80 162 P Pn 20 52 25.8 +2.3
0.3nm,0.3s,baz=346,slow=13,SNR=13
WRA S Sn 20 54 52.1 -4.2
0.2nm,0.3s,baz=353,slow=22,SNR=3.8
ASAR Alice Springs 17.26 168 P Pn 20 53 10.3 +4.1
0.2nm,0.3s,baz=350,slow=10,SNR=8.1
MKAR Makanchi Array 67.98 327 P P 20 59 58.4 +1.1
0.5nm,0.5s,baz=116,slow=7.6,SNR=14

NIED 15 20:53:00, 36.70N×140.60E, h5km, Mw3.7 Best double couple: M0 4.49000×10¹⁴ NP1:φs141.00000°, δ61.00000°, λ-96.00000°. NP2:φs333.00000°, δ30.00000°, λ-79.00000°.
JMA 15 20:53:17.3, 36.75N×140.62E, h4km±1km, M3.4
JMA Felt II J1.
IDC 15 20:53:24.1±2.5, 36.76N×140.51E, h62km±22km, mb3.4/12, mb1 3.5/14, mb1mx3.4/55, mbtmp3.6/14, ML3.1/2, MS3.0/4, Ms1 3.0/4, ms1mx2.6/30, Error ellipse: s-maj=23.3km s-min=14.0km az=135.0
ISC 15 20:53:17.3±1.1, 36.77N±0.04×140.52E±0.05, h6km±8km, n30, σ0§86/27, mb3.6/11, MS3.0/3, 4C-1D, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JHO Hitachi 0.16 165 ⇑P Pg 20 53 20.3 -0.2
ONAJ Iwakimizuishiy 0.40 34 P Pg 20 53 24.9 -0.2
ONAJ S Sg 20 53 30.0 -0.4
JSB Shiboa 0.52 293 ⇑P Pb 20 53 29.7 +0.9
JYT Yasato 0.60 206 ⇑P Pg 20 53 29.2 +0.4
JFK Kawauchi 0.66 25 ⇑P Pg 20 53 29.6 -0.5
JFK S Sg 20 53 38.5 -0.2
JFT Otama 0.76 349 ⇓P Pb 20 53 32.7 -0.3
JFT S Sb 20 53 43.4 -0.3
MJAR Matsushiro Arr 1.87 264 P Pb 20 53 51.7 -0.2
3.5nm,0.3s,baz=86,slow=13,SNR=178
MJAR S Sg 20 54 16.4 -1.0
3.2nm,0.3s,baz=141,slow=11,SNR=16
MJAR LR LR 20 54 49.9
comp=Z,213nm,18.2s,baz=90,slow=47
MAT Matsushiro 1.87 264 P Pb 20 53 51.8 -0.1
MAT S Sg 20 54 17.7 +0.3
ASAJ Asahikawa 7.51 12 P Pn 20 55 09.3 +2.0
0.6nm,0.3s,baz=212,slow=15,SNR=9.6
ASAJ S Sn 20 56 32.4 -0.3
0.1nm,0.3s,baz=302,slow=15,SNR=1.8
KSRS Korea Array 10.08 278 P Pn 20 55 48.2 +5.7
0.0nm,0.3s,baz=97,slow=14,SNR=2.5
KSRS LR LR 20 59 38.9
comp=Z,32nm,18.2s,baz=90,slow=37
PETK Petropavlovsk- 20.28 31 P P 20 57 55.3 +1.8
6.3nm,0.9s,baz=252,slow=16,SNR=2.8
PETK LR LR 21 04 41.8
comp=Z,40nm,21.4s,baz=254,slow=33
MA2 Magadan 23.77 13 P P 20 58 31.2 +0.9
2.4nm,0.4s,baz=194,slow=10,SNR=5.8
SEY Seymchan 27.20 12 P P 20 59 01.1 -0.3
1.4nm,0.7s,baz=219,slow=13,SNR=4.9
SONM Songino Array 27.34 305 P P 20 59 02.5 -0.6
0.7nm,0.7s,baz=107,slow=8.6,SNR=5.2
H11N2 WAKE ISLAND Hy 28.64 119 T T 21 28 57.5
baz=312,slow=75,SNR=160
H11N1 WAKE ISLAND Hy 28.64 119 T T 21 28 58.0
baz=312,slow=75,SNR=123
H11N3 WAKE ISLAND Hy 28.66 119 T T 21 28 58.9
baz=312,slow=75,SNR=92
H11S1 WAKE ISLAND Hy 29.33 121 T T 21 29 49.0
baz=314,slow=76,SNR=250
H11S3 WAKE ISLAND Hy 29.33 121 T T 21 29 46.7
baz=314,slow=76,SNR=188
H11S2 WAKE ISLAND Hy 29.34 121 T T 21 29 50.3
baz=314,slow=76,SNR=108
CMAR Chiang Mai Arr 40.73 255 LR LR 21 18 48.5
comp=Z,19nm,19.1s,baz=93,slow=37
ZALV Zalesovo Beam 41.56 313 P P 21 01 05.2 -0.3
1.1nm,0.5s,baz=97,slow=6.5,SNR=6.0
MKAR Makanchi Array 43.65 302 P P 21 01 20.9 -1.7
0.3nm,0.7s,baz=95,slow=8.6,SNR=4.4
ILAR Eielson Array 50.10 32 P P 21 02 13.5 +0.7
0.3nm,0.6s,baz=271,slow=5.6,SNR=4.0
PSI Prapat 51.04 239 LR LR 21 26 06.0
comp=Z,26nm,18.3s,baz=208,slow=38
WRA Warramunga Arr 56.70 187 P P 21 03 01.2 -0.5
0.8nm,0.9s,baz=4.7,slow=7.4,SNR=4.7
ASAR Alice Springs 60.43 187 P P 21 03 26.4 -1.3
0.3nm,0.6s,baz=16,slow=6.9,SNR=3.1
YKA Yellowknife Ar 64.40 30 P P 21 03 53.8 0.0
0.2nm,0.6s,baz=306,slow=6.6,SNR=3.7
GERES GERESS Array B 82.56 328 P P 21 05 41.0 -0.1
0.2nm,0.3s,baz=30,slow=6.1,SNR=2.6
TXAR Lajitas Array 90.85 52 P P 21 06 22.0 -0.1
0.1nm,0.6s,baz=300,slow=1.8,SNR=3.5

PPT 15 20:57:44.4±0.2, 14.41S×147.38W, h10km, Ml3.0/18, Ms2.4/2, Error ellipse: s-maj=13.0km s-min=2.2km az=129.0
IDC 15 20:57:45.0±2.3, 14.56S×148.27W, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.6/51, mbtmp3.7/4, ML4.5/1, Error ellipse: s-maj=92.9km s-min=28.9km az=114.0
ISC 15 20:57:46.4±1.3, 14.70S±0.09×147.99W±0.09, h10km, n18, σ1§87/17, mb3.5/3, Tuamotu Archipelago region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMOR Pomariorio Ree 0.31 163 ePn Pn 20 57 57.1 +0.1
930nm,0.2s
PMOR eSn Sb 20 58 11.0 +12
823nm,0.2s
VAH Vaihoa 0.64 147 ePn Pb 20 58 00.8 +1.2
231nm,0.2s
VAH eSn Sn 20 58 13.1 +1.5
300nm,0.2s
TIAR Tiarei 3.13 204 ePn Pn 20 58 35.9 +0.1
20nm,0.1s
TIAR eSn Sn 20 59 12.8 -0.4
12nm,0.1s
TIAR eT T 21 01 12.2
5.3nm,0.2s
MEH Mehetia 3.16 181 ePn Pn 20 58 34.0 -2.2
5.9nm,0.2s
MEH eSn Sn 20 59 09.0 -5.0
39nm,0.3s
MEH eT T 21 01 11.9
15nm,0.2s
PPT Papeete 3.23 208 Pn Pn 20 58 37.9 +0.7
47nm,0.3s,baz=29,slow=13,SNR=30
PPT Sn Sn 20 59 18.3 +2.5
62nm,0.3s,baz=173,slow=22,SNR=16
PPT2 Papeete2 3.25 208 ePn Pn 20 58 37.9 +0.3
12nm,0.1s
PPT2 eSn Sn 20 59 16.2 -0.2
31nm,0.1s
PPT2 eLR LR 20 59 23.9
comp=Z,270nm,25.5s
PAE Paea 3.32 207 ePn Pn 20 58 38.5 +0.1
4.9nm,0.1s
PAE eSn Sn 20 59 17.7 -0.2
5.2nm,0.1s
TBI Tubuai 8.71 189 ePn Pn 20 59 55.0 +2.5
5.4nm,0.2s
TBI eSn Sn 21 01 20.7 -10
2.5nm,0.2s
TBI eLR LR 21 01 53.7
comp=Z,76nm,26.8s
TBI eT T 21 08 01.3
4.2nm,0.2s
TAOE Nuku Hiva Isla 9.62 54 ePn Pn 20 59 48.6 -17
174nm,0.2s
TAOE eSn Sn 21 01 17.1 -36
147nm,0.2s
TAOE eT T 21 08 56.5
35nm,0.2s
H11S2 WAKE ISLAND Hy 55.50 305 T T 22 06 53.2
baz=124,slow=76,SNR=5.4
H11S1 WAKE ISLAND Hy 55.52 305 T T 22 06 55.8
baz=124,slow=76,SNR=5.7
H11S3 WAKE ISLAND Hy 55.52 305 T T 22 06 54.6
baz=124,slow=76,SNR=5.4
H11N3 WAKE ISLAND Hy 56.02 306 T T 22 07 36.2
baz=126,slow=74
H11N1 WAKE ISLAND Hy 56.03 306 T T 22 07 30.0
baz=126,slow=74
H11N2 WAKE ISLAND Hy 56.04 306 T T 22 07 37.9
baz=126
ASAR Alice Springs 73.53 249 P P 21 09 19.9 -0.2
0.2nm,0.7s,baz=103,slow=6.1,SNR=4.8
WRA Warramunga Arr 73.75 253 P P 21 09 19.7 -1.7
0.7nm,1.0s,baz=105,slow=8.1,SNR=1.6
YKA Yellowknife Ar 81.27 15 P P 21 10 02.3 -0.1
0.3nm,0.6s,baz=207,slow=5.3,SNR=3.2

IDC 15 21:01:32.3±10.0, 36.05N×81.93E, h0km, mb2.8/1, mb1 3.1/3, mb1mx2.9/49, mbtmp3.1/3, ML2.7/2, Error ellipse: s-maj=152.5km s-min=55.8km az=52.0, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MKAR Makanchi Array 10.73 1 Pn Pn 21 04 07.1 -0.1
0.1nm,0.3s,baz=183,slow=13,SNR=7.2
MKAR Sn Sn 21 06 05.8 -2.3
0.1nm,0.3s,baz=185,slow=26,SNR=3.9
ZALV Zalesovo Beam 18.01 6 P P 21 05 45.8 +1.4
0.1nm,0.3s,baz=207,slow=15,SNR=2.3
SONM Songino Array 21.57 49 P P 21 06 23.0 -0.5
0.4nm,0.8s,baz=246,slow=11,SNR=3.6

PGC 15 21:08:57.7±1.1, 50.46N×130.15W, h10km, mb4.1, MLSn3.5/33, Mw4.1/33, 194km west of Pt. Hardy, Bc Vancouver Island, Canada Region
NEIC 15 21:08:57.0±2.2, 50.51N±0.07×130.19W±0.05, h10km±1km, Error ellipse: s-maj=11.0km s-min=3.3km az=194.0
IDC 15 21:08:58.3±1.5, 50.59N×129.88W, h0km, mb3.9/3, mb1 4.1/7, mb1mx3.6/46, mbtmp3.9/7, ML3.6/3, MS3.4/7, Ms1 3.3/7, ms1mx3.0/44, Error ellipse: s-maj=20.6km s-min=12.1km az=66.0
ISC 15 21:08:57.8±2.9, 50.52N±0.05×130.03W±0.04, h12km±19km, n145, σ1§62/152, mb4.2/9, Vancouver Island region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HOLB Holberg 1.22 84 P Pn 21 09 19.8 -0.9
HOLB S Sb 21 09 35.6 -0.9
BPBC Brooks Peninsu 1.49 103 P Pn 21 09 22.9 -1.6
PACB Port Alice, BC 1.62 92 P Pn 21 09 25.2 -1.0
PACB S Sn 21 09 45.4 -1.7
PHC Port Hardy 1.67 83 Pn Pn 21 09 26.4 -0.5
PHC Sn Sn 21 09 46.8 -1.3
MAYB Maynard 1.83 93 Pn Pn 21 09 28.3 -0.9
EDB Eliza Dome 1.98 108 Pn Pn 21 09 29.8 -1.4
EDB Sn Sn 21 09 53.2 -2.7
TLCB Telegraph Cove 2.04 88 Pn Pn 21 09 31.7 -0.3
BBB Bella Bella 2.05 35 Pn Pn 21 09 32.2 0.0
8.5nm,0.3s,baz=224,slow=11,SNR=37
BBB Sn Sn 21 09 55.5 -2.1
60nm,0.3s,baz=201,slow=8.2,SNR=18

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BBB				LR	LR	21 10 23.8	
	comp=Z,287nm,18.5s,baz=127,slow=44						
BBB	Bella Bella	2.05	35	Pn	Pn	21 09 32.0	-0.1
BBB				Sn	Sn	21 09 55.9	-1.7
BBB	Bella Bella	2.05	35		Pn	21 09 32.5	+0.4
BNB	Barry Inlet	2.32	333	Pn	Pn	21 09 34.2	-1.6
ETB	Estevan Point	2.53	116	Pn	Pn	21 09 38.3	-0.4
GDR	Gold River	2.68	105	Pn	Pn	21 09 40.0	-0.8
BCBC	Bella Coola	2.76	47	Sn	Sn	21 10 13.4	-1.7
SPLB	Strathcona Par	2.88	101	Pn	Pn	21 09 43.6	+0.1
MOBC	Moresby Island	2.89	336	Pn	Pb	21 09 46.3	-2.9
MOBC	Moresby Island	2.89	336	Pn	Pn	21 09 43.0	-0.6
CBB	Campbell River	3.03	98	Pn	Pn	21 09 45.7	+0.1
DIB	Dawson Inlet,	3.08	331	Pn	Pn	21 09 46.1	-0.2
DIB	Dawson Inlet,	3.08	331	Pn	Pn	21 09 45.7	-0.6
H02S1	DAWSON INLET T	3.08	331	Pn	Pn	21 09 44.9	-1.3
H02S1				Sn	Sn	21 10 20.2	-2.8
BTB	Buttle Lake	3.10	108	Pn	Pn	21 09 45.9	-0.8
H02N1	VAN INLET T-PH	3.14	331	Pn	Pn	21 09 46.0	-1.2
H02N1				Sn	Sn	21 10 21.4	-3.3
VIB	Van Inlet	3.14	331	Pn	Pn	21 09 46.4	-0.8
OZB	Mount Ozzard	3.33	116	Pn	Pn	21 09 49.0	-0.8
B927	Port Alberni	3.62	109	Pn	Pn	21 09 53.1	-0.5
TXB	Texada	3.69	101	Pn	Pn	21 09 54.8	0.0
MGB	Mount Grey	3.78	112	Pn	Pn	21 09 56.2	+0.2
RUBB	Prince Rupert	3.81	358	Pn	Pn	21 09 56.0	-0.3
RUBB				Sn	Sn	21 10 39.5	-1.4
SHB	Sechelt	4.07	101	Pn	Pn	21 10 00.2	+0.2
YOUB	Youbou, Lake C	4.08	111	Pn	Pn	21 10 00.0	-0.1
NLLB	Nanaimo Lost L	4.12	106	Pn	Pn	21 10 00.1	-0.4
OCP	Olym-Cheeka Pk	4.17	120	Pn	Pn	21 10 01.5	+0.1
B926	Mesachie Lake	4.19	112	Pn	Pn	21 10 02.0	+0.4
UBRB	Upper Baezaeko	4.39	55	Pn	Pn	21 10 06.4	+2.0
BPCB	Bare Point	4.41	109	Pn	Pn	21 10 04.7	+0.2
LZB	Mount Lazard	4.47	113	Pn	Pn	21 10 06.6	+1.1
WPB	Watts Point	4.48	99	Pn	Pn	21 10 06.3	+0.9
BIB	Bowen Island	4.48	102	Pn	Pn	21 10 06.5	+1.0
WSLR	Whistler	4.57	92	Pn	Pn	21 10 07.8	+0.9
OBC	Olympics--Boni	4.62	120	Pn	Pn	21 10 08.8	+1.2
B010	North Saanich	4.67	111	Pn	Pn	21 10 08.6	+0.5
B010				Sn	Sn	21 11 00.3	-1.9
PGC	Sidney	4.67	111	Pn	Pn	21 10 08.8	+0.7
PGC	Sidney	4.67	111	Pn	Pn	21 10 08.7	+0.5
B009	North Saanich	4.67	111	Pn	Pn	21 10 08.3	+0.2
B009				Sn	Sn	21 11 00.5	-1.7
HNBB	Haney	4.98	102	Pn	Pn	21 10 13.7	+1.4
MCW	Mount Constitu	5.03	109	Pn	Pn	21 10 14.9	+1.8
NLWA	Neilton Lookou	5.13	125	Pn	Pn	21 10 15.7	+1.3
LLLB	Lillooet	5.20	86	Pn	Pn	21 10 16.4	+1.0
LLLB	Lillooet	5.20	86		Pn	21 10 16.4	+1.0
FSB	Fort Saint Jam	5.27	39	Pn	Pn	21 10 18.5	+2.1
VDB	Vedder Mountai	5.35	103	Pn	Pn	21 10 19.3	+1.8
MBW	Mount Baker	5.56	105	Pn	Pn	21 10 22.4	+1.9
CMW	Cultus Mountai	5.57	109	Pn	Pn	21 10 22.3	+1.7
JCW	Jim Creek	5.78	111	Pn	Pn	21 10 24.9	+1.4
E03A	Lebam	5.86	130	Pn	Pn	21 10 22.9	-1.4
B06A	Marblemount	5.92	107	Pn	Pn	21 10 26.8	+1.6
B06A	Marblemount	5.92	107		Pn	21 10 27.1	+1.9
WRAK	Wrangell Islan	6.07	348	Pn	Pn	21 10 27.2	0.0
D05A	Enumclaw	6.27	119	Pn	Pn	21 10 29.4	-0.6
FMW	Mount Fremont	6.59	120	Pn	Pn	21 10 37.0	+2.3
LON	Longmire	6.63	122	Pn	Pn	21 10 37.5	+2.4
LON	Longmire	6.63	122		Pn	21 10 35.8	+0.8
PNT	Penticton	6.83	96	Pn	Pn	21 10 39.4	+1.6
F04A	Amboy	6.85	129	Pn	Pn	21 10 38.7	+0.7
LTY	Liberty	6.98	114	Pn	Pn	21 10 42.4	+2.4
SIT	Sitka	7.25	336	Pn	Pn	21 10 39.9	-3.7
BMBC	Bull Mountain	7.28	38	Pn	Pn	21 10 46.5	+2.5
BMBC				Sn	Sn	21 12 06.3	-0.2
B08A	Colville Reser	7.30	103	Pn	Pn	21 10 45.5	+1.1
B08A	Colville Reser	7.30	103		Pn	21 10 46.3	+1.9
SLEB	Sale Mountain	7.56	81	Pn	Pn	21 10 48.3	+0.3
NBC4	NorthernBC 4	7.65	44	Pn	Pn	21 10 50.6	+1.6
NBC4				Sn	Sn	21 12 15.7	+0.1
E07A	Sunnyside	7.83	117	Pn	Pn	21 10 52.2	+0.6
H04A	Detroit Lake	7.89	135	Pn	Pn	21 10 56.8	+4.4
DLBC	Dease Lake	7.93	0	Pn	Pn	21 10 53.6	+0.7
	0.6nm,0.3s,baz=170,slow=5.0,SNR=9.1						
DLBC				Sn	Sn	21 12 22.4	-0.2
	0.3nm,0.3s,baz=191,slow=16,SNR=2.4						
DLBC	Dease Lake	7.93	0	Pn	Pn	21 10 54.8	+1.9
DLBC				Sn	Sn	21 12 22.3	-0.2
DLBC	Dease Lake	7.93	0	Pn	Pn	21 10 54.5	+1.6
HAWA	Hanford	8.11	117	Pn	Pn	21 10 56.9	+1.6
D08A	Wollman Farm,	8.12	111	Pn	Pn	21 10 56.6	+1.2
C09A	Chrisman Ranch	8.17	105	Pn	Pn	21 10 57.6	+1.3
C09A	Chrisman Ranch	8.17	105		Pn	21 10 57.0	+0.7
NBC5	NorthernBC 5	8.24	29	Pn	Pn	21 10 59.5	+2.3
NBC5				Sn	Sn	21 12 29.6	-0.5
NEW	Newport	8.72	100	Pn	Pn	21 11 03.3	-0.4
	0.3nm,0.3s,baz=291,slow=12,SNR=5.1						
NEW				LR	LR	21 14 25.0	
	comp=Z,411nm,18.1s,baz=280,slow=38						
NEW	Newport	8.72	100	Pn	Pn	21 11 05.0	+1.3
NBC6	NorthernBC 6	9.52	29	Sn	Sn	21 13 01.6	+0.2
F10A	Beach Ranch, E	9.68	113	Pn	Pn	21 11 18.4	+1.5
JTMT	Jette	10.69	99	Pn	Pn	21 11 31.2	+0.4
CTGM	Chitina Glacie	12.22	333	Pn	Pn	21 11 52.8	+1.0
BARN	Barnard Glacie	12.40	333	Pn	Pn	21 11 54.7	+0.6
MCMT	McKenzie Canyo	12.89	110	Pn	Pn	21 12 02.2	+1.2
PAHR	Pah Rah Range	13.16	141	Pn	Pn	21 12 06.6	+2.0
VCNR	Virginia City	13.40	143	Pn	Pn	21 12 07.3	-0.7
EGMT	Eagleton	13.47	93		Pn	21 12 09.3	+0.6
HIN	Hinchinbrook I	13.56	323	Pn	Pn	21 12 10.7	+0.8
YHH	Holmes Hill	14.13	107	Pn	Pn	21 12 20.7	+2.8
YKA	Yellowknife Ar	14.65	29	Pn	Pn	21 12 24.6	-0.1
	0.1nm,0.3s,baz=218,slow=12,SNR=12						
YKA				Sn	Sn	21 14 59.8	-7.1
	0.1nm,0.3s,baz=218,slow=22,SNR=2.9						
NVAR	Mina Array Bea	14.68	141	LR	LR	21 17 43.5	
	comp=Z,48nm,19.3s,baz=348,slow=36						
YKW3	Yellowknife Ar	14.70	29	Pn	P	21 12 30.4	-1.1
MOOW	Moose Ponds	14.75	110		Pn	21 12 29.3	+2.9
KDAK	Kodiak Island	15.03	308	LR	LR	21 16 50.6	
	comp=Z,119nm,18.6s,baz=108,slow=31						
KDAK	Kodiak Island	15.03	308	Pn	P	21 12 28.9	-0.8
KDAK				IAmb	IAmb	21 12 29.4	
	comp=Z,42nm,1.4s						
EGAK	Eagle	15.44	342	Pn	Pn	21 12 34.3	-0.9
DHY	Denali Highway	15.69	330		Pn	21 12 39.0	+0.4
DHY				IAmb	IAmb	21 12 56.5	
	comp=Z,6.6nm,1.0s						
PDAR	Pinedale Array	16.02	111	Pn	P	21 12 46.4	-0.3
	baz=310,slow=9.3,SNR=8.8						
PDAR				LR	LR	21 18 10.0	
	comp=Z,107nm,20.8s,baz=340,slow=35						
RND	Reindeer	16.40	329	Pn	Pn	21 12 47.0	-0.6
ILAR	Eielson Array	16.80	335	Pn	P	21 12 59.7	+4.9
	comp=Z,0.0nm,0.3s,baz=148,slow=11,SNR=12						
KTH	Kantishna Hill	17.19	327		Pn	21 12 56.3	-1.3
KTH				IAmb	IAmb	21 13 05.8	
	comp=Z,17nm,1.3s						
DHRN	Dharma Camp	17.39	14	Pn	P	21 13 01.6	+0.4
INK	Inuvik	17.92	356	P	P	21 13 08.6	+1.5
	comp=Z,0.0nm,0.3s,baz=190,slow=7.9,SNR=4.4						
INK				LR	LR	21 20 13.1	
	comp=Z,131nm,20.2s,baz=164,slow=38						
COLD	Coldfoot	19.56	336	P	Pn	21 13 25.7	-0.7
COLD				IAmb	IAmb	21 13 36.5	
	comp=Z,8.5nm,1.2s						
PFO	Pinyon Flats O	19.62	144	P	P	21 13 25.8	-0.4
XPFO	Pion Flat	19.62	144	P	P	21 13 25.1	-1.1
MDND	Maddock	20.00	86	P	P	21 13 30.4	+0.3
MDND				IAmb	IAmb	21 13 36.5	
	comp=Z,44nm,1.2s						
WUAZ	Wupatki	20.19	131	P	P	21 13 32.2	-0.2
GLA	Glamis	20.75	142	P	P	21 13 37.6	-0.7
GLA				IAmb	IAmb	21 13 45.1	
	comp=Z,17nm,1.4s						
X16A	Lo Mia Camp, P	21.05	133	P	P	21 13 41.5	-0.3
ULM	Lac du Bonnet	21.67	77	P	P	21 13 49.5	+1.4
	comp=Z,2.8nm,0.7s,baz=278,slow=11,SNR=4.5						
ULM				LR	LR	21 22 27.9	
	comp=Z,138nm,20.2s,baz=336,slow=38						
ULM	Lac du Bonnet	21.67	77	P	P	21 13 49.3	+1.2
ULM				IAmb	IAmb	21 13 49.8	
	comp=Z,11nm,1.4s						
EPLO	Experimental L	23.16	78	P	P	21 14 05.2	+1.2
AMTX	Amarillo	25.83	116	P	P	21 14 29.5	+0.5
MSTX	Muleshoe	25.88	119	P	P	21 14 28.3	-1.3
MSTX				IAmb	IAmb	21 14 38.6	
	comp=Z,4.3nm,1.1s						
MNTX	Cornudas Mount	26.23	126	P	P	21 14 31.9	-0.7
MNTX				IAmb	IAmb	21 14 43.8	
	comp=Z,3.6nm,1.4s						
SRIG	Santa Rosalia	26.85	143	P	P	21 14 37.6	-0.5
SRIG				IAmb	IAmb	21 14 47.7	
	comp=Z,10nm,1.2s						
RES	Resolute Bay	28.26	19	LR	LR	21 27 59.4	
	comp=Z,64nm,19.6s,baz=268,slow=40						
GSTR	Great Sitkin T	28.45	291	P	P	21 14 49.9	-2.4
TXAR	Lajitas Array	29.00	127	P	P	21 15 00.1	+2.6
	comp=Z,1.0nm,1.1s,baz=335,slow=5.7,SNR=4.7						
GLMI	Grayling	30.72	83	P	P	21 15 13.4	+0.9
P46A	Rosedale	31.73	93	P	P	21 15 21.1	-0.3
P46A				IAmb	IAmb	21 15 35.5	
	comp=Z,17nm,1.1s						
WLAR	White Oak Lake	31.74	108	P	P	21 15 21.0	-0.5
WLAR				IAmb	IAmb	21 15 33.5	
	comp=Z,15nm,1.0s						
ETX02	Prairie Street	32.20	112	P	P	21 15 25.3	-0.3
346A	Big Creek Wild	35.55	107	P	P	21 15 54.5	-0.1
JSC	Jenkinsville	38.74	96	P	P	21 16 19.5	-2.3
JSC				IAmb	IAmb	21 16 35.6	
	comp=Z,18nm,0.9s						
PETK	Petropavlovsk-	43.00	303	P	P	21 16 59.2	+2.5
	comp=Z,4.2nm,0.9s,baz=55,slow=12,SNR=2.7						
H11N2	WAKE ISLAND Hy	57.95	262	T	T	22 21 34.4	
	baz=42,slow=76,SNR=192						
H11N3	WAKE ISLAND Hy	57.95	262	T	T	22 21 30.0	
	baz=42,slow=76,SNR=200						
H11N1	WAKE ISLAND Hy	57.97	262	T	T	22 21 31.1	
	baz=42,slow=76,SNR=130						
H11S1	WAKE ISLAND Hy	58.98	261	T	T	22 22 48.4	
	baz=40,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	58.99	261	T	T	22 22 46.2	
	baz=40,slow=75,SNR=12						
H11S3	WAKE ISLAND Hy	59.00	261	T	T	22 22 47.8	
	baz=40,slow=75,SNR=11						
NBO00	NORSAR Array S	64.43	20	P	P	21 19 32.1	-1.4
HHC	Hu-ho-hao-te	74.26	316	eP	P	21 20 38.8	+4.0
JOW	Kunigami	76.70	296	P	P	21 20 47.1	-1.7
WMQ	Urumqi	80.46	333	eP	P	21 21 15.3	+5.9
LZH	Lanzhou	81.57	319	eP	P	21 21 16.5	+1.0
LZH				pP	sP	21 21 19.8	-0.1
LZH				sP	PcP	21 21 21.3	-0.1
LZH				ePP	PP	21 24 24.6	+3.4
KSH	Kashi	87.47	340	P	P	21 21 51.6	+6.3
KSH				sP	pwP	21 22 01.3	+10

IDC **15** 21:10:22.8±5.5,21.°66S×178.°26W,h473^{km}±57^{km},mb3.4/6, mb1 3.5/7,mb1mx3.2/33,mbtmp4.2/7,Error ellipse: s-maj=42.2km s-min=31.0km az=29.0

NEIC **15** 21:10:33.8±1.6,21.°7S±0.°1×178.°8W±0.°1,h586^{km}±9^{km}, mb4.2/28, Error ellipse: s-maj=20.8km s-min=16.9km az=122.0

ISC 15 21:10:34.3±0.7,21.°8S±0.°1×178.°7W±0.°1,h600^{km},n43, σ1.°39/44,mb4.1/19,Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
MSVF	Nonsavu	5.07	323	P	P	21 12 05.9	-2.1
NIUE	Niue	8.69	73	P	P	21 12 40.0	-0.3
URZ	Urewera	16.78	191	P	P	21 13 54.6	-4.0
	0.1nm,0.3s,baz=333,slow=6.8,SNR=2.2						
URZ				S	S	21 16 43.3	-1.6
	0.1nm,0.3s,baz=103,slow=19,SNR=2.4						
URZ	Urewera	16.78	191	P	P	21 13 59.3	+0.7
URZ				IAmb	IAmb	21 14 07.1	
	comp=Z,6.9nm,1.0s						
BKZ	Black Stump Fm	17.78	192	P	P	21 14 07.7	-0.1
BHW	Baring Head	20.27	194	P	P	21 14 31.1	+0.9
THZ	Tophouse	21.11	198	P	P	21 14 39.1	+1.3
THZ				IAmb	IAmb	21 14 42.1	
	comp=Z,7.6nm,1.0s						
LTZ	Lake Taylor	22.23	198	P	P	21 14 47.8	-0.1
LTZ				IAmb	IAmb	21 14 49.7	
	comp=Z,7.6nm,1.2s						
FOZ	Fox Glacier	23.66	201	P	P	21 15 00.8	+0.3
FOZ				IAmb	IAmb	21 15 05.2	
	comp=Z,6.6nm,0.9s						
MLZ	Mavora Lakes	25.86	202	P	P	21 15 18.9	-1.0
MLZ				IAmb	IAmb	21 15 37.0	
	comp=Z,4.7nm,1.0s						
WHZ	Wether Hill Ro	26.38	201	P	P	21 15 26.7	+2.3
EIDS	Eidsvold	27.87	257	P	P	21 15 37.8	+0.1
EIDS				IAmb	IAmb	21 15 47.8	
	comp=Z,4.3nm,1.0s						
ARMA	Armidale	27.90	246	P	P	21 15 37.9	-0.2
ARMA				IAmb	IAmb	21 15 40.4	
	comp=Z,4.7nm,0.7s						
CTA	Charters Tower	32.71	267	P	P	21 16 19.0	-0.2
	comp=Z,3.5nm,0.6s,baz=87,slow=10,SNR=7.0						
STKA	Stephens Creek	36.62	246	P	P	21 16 52.8	+1.2
	comp=Z,1.2nm,0.5s,baz=74,slow=12,SNR=5.1						
STKA	Stephens Creek	36.62	246	P	P	21 16 52.7	+1.2
COEN	Coen	37.01	276	P	P	21 16 53.9	-1.1
COEN				IAmb	IAmb	21 16 54.1	
	comp=Z,8.5nm,1.1s						
BBOO	Buckleboo	41.37	245	P	P	21 17 30.1	+0.4
BBOO				IAmb	IAmb	21 17 30.8	
	comp=Z,4.8nm,0.8s						
AS31	Alice Springs	43.57	258	P	P	21 17 46.8	-0.2
ASAR	Alice Springs	43.57	258	P	P	21 17 47.1	+0.1
	comp=Z,4.6nm,0.8s,baz=96,slow=7.8,SNR=68						
ASAR				PcP	PcP	21 19 22.6	+1.7
	comp=Z,0.5nm,0.6s,baz=112,slow=3.6,SNR=5.6						
WR0	Warramunga Arr	43.58	264	P	P	21 17 46.6	-0.5
WB0	Warramunga Arr	43.75	264	P	P	21 17 47.8	-0.6
WB0				IAmb	IAmb	21 17 48.6	
	comp=Z,4.9nm,0.7s						
WB2	Warramunga Arr	43.75	264	P	P	21 17 50.6	+2.2
WRAB	Tennant Creek	43.76	264	P	P	21 17 47.7	-0.7
WRAB				IAmb	IAmb	21 17 48.6	
	comp=Z,5.8nm,0.8s						
WRA	Warramunga Arr	43.76	264	P	P	21 17 48.2	-0.3
	comp=Z,3.4nm,0.7s,baz=97,slow=6.3,SNR=18						
FORT	Forrest	48.16	248	P	P	21 18 21.9	+0.3
FORT				IAmb	IAmb	21 18 32.1	
	comp=Z,9.3nm,0.9s						
KNRA	Kununurra	49.91	268	P	P	21 18 34.2	-0.4
SOEI	Soe	55.88	273	P	P	21 19 18.8	+1.7
SOEI				IAmb	IAmb	21 19 27.2	
	comp=Z,12nm,0.9s						
PSAA2	Pilbara Seismi	56.72	258	P	P	21 19 21.7	-0.9
PSAD3	Pilbara Seismi	56.77	258	P	P	21 19 22.6	-0.4
MJAR	Matsushiro Arr	70.87	324	P	P	21 20 52.0	0.0
	comp=Z,2.6nm,0.9s,baz=120,slow=5.7,SNR=2.8						
YULB	Yu-li	73.66	304	P	P	21 21 06.6	-1.7
YULB				IAmb	IAmb	21 21 14.0	
	comp=Z,6.4nm,1.0s						
KS19	Wonju Array Si	77.49	319	P	P	21 21 30.7	+1.5
SNCC	San Nicolas Is	78.63	47	P	P	21 21 34.1	-1.2
PAGB	Antelope Grade	79.60	45	P	P	21 21 43.3	+2.8
USA0B	Ussuriysk Arra	79.67	326	P	P	21 21 38.2	-2.4
BEKR	Beckworth	81.99	41	P	P	21 21 53.2	+0.3
S22A	4UR Ranch, Cre	89.79	49		pP	21 24 37.9	-1.4
CMAR	Chiang Mai Arr	89.92	290	P	P	21 22 33.9	+1.8
	comp=Z,0.8nm,0.7s,baz=142,slow=3.9,SNR=6.9						
AKASG	Malin Array Be	143.81	330	PKP	PKPdf	21 29 01.6	-0.3
	comp=Z,0.2nm,0.3s,baz=42,slow=4.8,SNR=8.9						
BRTR	Keskin Array B	147.19	310	PKPbc	PKiKP	21 29 12.7	-0.5
	comp=Z,0.6nm,0.6s,baz=115,slow=5.6,SNR=4.8						
MMAI	Mount Meron Ar	147.85	298	PKPbc	PKiKP	21 29 15.1	+0.5
	comp=Z,1.2nm,0.6s,baz=80,slow=6.9,SNR=4.9						
GERES	GERESS Array B	151.26	343	PKPbc	PKiKP	21 29 21.3	+0.1
	comp=Z,0.4nm,0.7s,baz=348,slow=4.1,SNR=3.4						

NIED **15** 21:12:00,38.°60N×142.°40E,h44^{km},Mw3.9 Best double couple: $M_0$7.04000×10^{14} NP1:ϕ_s195.00000°,δ67.00000°, λ65.00000°. NP2:ϕ_s66.00000°,δ33.00000°,λ136.00000°.

JMA **15** 21:12:23.7±0.1,38.°64N×142.°38E,h41^{km}±1^{km},M4.3

JMA Felt I J1.

IDC **15** 21:12:24.0±0.7,38.°64N×142.°38E,h42^{km}±5^{km},mb3.6/15, mb1 3.8/20,mb1mx3.6/52,mbtmp3.8/20,ML3.3/5,MS2.7/4, Ms1 2.7/4,ms1mx2.6/40,Error ellipse: s-maj=15.3km s-min=11.6km az=90.0

NEIC **15** 21:12:24.4±1.3,38.°66N±0.°07×142.°4E±0.°1,h49^{km}±4^{km}, mb4.3/12,Error ellipse: s-maj=15.6km s-min=7.8km az=118.0

ISC 15 21:12:24.0±0.7,38.°66N±0.°04×142.°38E±0.°06,h44^{km}±5^{km}, n61,σ0.°98/74,mb3.9/20,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
OFUJ	Ofunato	0.69	307	P	Pn	21 12 37.4	-0.1
OFUJ				S	Sn	21 12 47.2	0.0
JKMT	Kesennumamotoy	0.72	282	P	Pn	21 12 37.6	-0.3
JKMT				S	Sn	21 12 47.3	-0.5
JIKH	Ishinomakikobu	0.80	244	P	Pn	21 12 38.4	-0.4
JIKH				S	Sn	21 12 48.6	-1.0
JIO	Ouri	0.83	256	P	Pn	21 12 39.0	-0.3
JIO				S	Sn	21 12 49.8	-0.7
JMK	Ichinoseki	0.95	288	P	Pn	21 12 41.0	+0.1
JMK				S	Sn	21 12 53.4	+0.1
JOM	Ohasama	1.17	314	P	Pn	21 12 44.5	+0.5
JOM				eS	Sn	21 12 59.6	+0.8
JTH	Tanohata	1.34	343	P	Pn	21 12 46.4	+0.1
JTH				eS	Sn	21 13 03.6	+0.7
JOU	Okura	1.38	258	P	Pn	21 12 47.0	+0.2
JOU				eS	Sn	21 13 04.2	+0.4
JMM	Marumori	1.48	238	P	Pn	21 12 47.8	-0.3
JMM				eS	Sn	21 13 05.3	-0.9
JRG	Rokugo	1.54	299	P	Pn	21 12 49.7	+0.6
JRG				eS	Sn	21 13 08.4	+0.5
JYK	Kaneyama	1.60	280	P	Pn	21 12 50.3	+0.5
JFK	Kawauchi	1.75	223	P	Pn	21 12 51.6	-0.4
JFK				eS	Sn	21 13 12.0	-1.1
ERM	Erimo	3.41	10	Pn	Pn	21 13 15.2	+0.6
MJAR	Matsushiro Arr	3.93	239	P	Pn	21 13 23.4	+1.6
	0.6nm,0.3s,baz=188,slow=26,SNR=22						
MJAR				LR	LR	21 15 15.3	
	comp=Z,105nm,18.3s,baz=75,slow=44						
MAJO	Matsushiro	3.93	239		Pn	21 13 23.4	+1.6
MAT	Matsushiro	3.93	239	P	Pn	21 13 23.9	+2.1
MAT				eS	Sn	21 14 11.3	+4.6
MJB9	Matsu-Tunnel	3.93	239		Pn	21 13 23.4	+1.6
INU	Inuyama	5.41	234	Pn	Pn	21 13 42.8	+0.6
ASAJ	Asahikawa	5.46	2	P	Pn	21 13 43.3	+0.6
	1.7nm,0.3s,baz=196,slow=16,SNR=21						
ASAJ				S	Sn	21 14 43.7	-0.5
	0.5nm,0.3s,baz=81,slow=19,SNR=2.7						
ASAJ				LR	LR	21 16 23.3	
	comp=Z,88nm,19.8s,baz=174,slow=44						
JKA	Kamikawa-asahi	5.46	2		Pn	21 13 43.3	+0.6
JKA					Sn	21 14 43.7	-0.5
YSS	Yuzh-Sakhalins	8.29	2	Pn	Pn	21 14 22.2	+0.6
USA0B	Ussuriysk Arra	9.56	309	Pn	Pn	21 14 39.4	+0.3
USRK	Ussuriysk Ar.	9.56	309	P	Pn	21 14 40.6	+1.6
	baz=118,slow=14,SNR=15						
MDJ	Mudanjiang	11.26	306	Pn	Pn	21 15 02.5	+0.3
KSRS	Korea Array	11.46	268	P	Pn	21 15 06.8	+1.8
	0.2nm,0.3s,baz=84,slow=14,SNR=6.8						
KSRS				LR	LR	21 19 29.2	
	comp=Z,25nm,20.6s,baz=90,slow=37						
KS19	Wonju Array Si	11.50	269	Pn	Pn	21 15 05.8	+0.3
KLR	Kul'dur	13.04	328	P	Pn	21 15 25.1	-1.4
	0.1nm,0.3s,baz=160,slow=15,SNR=2.8						
KLR				pP	P	21 15 34.0	-1.8
	0.3nm,0.3s,baz=164,slow=7.5,SNR=4.4						
KLR				LR	LR	21 19 53.7	
	comp=Z,51nm,19.0s,baz=194,slow=34						
SEY	Seymchan	25.05	11	P	P	21 17 45.3	+1.5
	1.7nm,0.6s,baz=172,slow=7.3,SNR=8.0						
SONM	Songino Array	27.55	301	P	P	21 18 07.0	+0.3
	0.8nm,0.6s,baz=104,slow=9.5,SNR=6.5						
ENH	Enshi	28.26	263	P	P	21 18 13.6	+0.5
ENH				IAmb	IAmb	21 18 21.8	
	comp=Z,6.1nm,0.5s						
H11N2	WAKE ISLAND Hy	28.38	125	T	T	21 48 47.5	
	baz=317,slow=75,SNR=84						
H11N1	WAKE ISLAND Hy	28.39	125	T	T	21 48 40.6	
	baz=317,slow=75,SNR=94						
H11N3	WAKE ISLAND Hy	28.40	125	T	T	21 48 41.3	
	baz=317,slow=75,SNR=61						
H11S1	WAKE ISLAND Hy	29.16	127	T	T	21 49 36.0	
	baz=318,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	29.16	127	T	T	21 49 32.0	
	baz=318,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	29.18	127	T	T	21 49 33.5	
	baz=318,slow=76,SNR=19						
ZAA0	Zalesovo Array	41.41	311	P	P	21 20 05.0	-0.8
ZALV	Zalesovo Beam	41.41	311	P	P	21 20 06.0	+0.2
	comp=Z,1.7nm,0.5s,baz=90,slow=7.8,SNR=9.6						
ZALV				pP	pP	21 20 17.2	-0.5
	comp=Z,1.1nm,0.6s,baz=88,slow=8.3,SNR=3.5						
CMAR	Chiang Mai Arr	42.66	254	P	P	21 20 16.6	+0.2
	comp=Z,0.3nm,0.6s,baz=40,slow=4.7,SNR=3.6						
MK31	Makanchi Array	43.92	301	P	P	21 20 26.4	0.0
MKAR	Makanchi Array	43.92	301	P	P	21 20 26.6	+0.3
	comp=Z,0.8nm,0.4s,baz=82,slow=10,SNR=34						
MKAR				pP	pP	21 20 38.4	-0.1
	comp=Z,1.0nm,0.7s,baz=82,slow=8.9,SNR=5.3						
MAKZ	Makanchi	44.13	301	P	P	21 20 28.4	+0.4
KURK	Kurchatov	45.55	307	P	P	21 20 38.9	-0.3
KURK				IAmb	IAmb	21 20 42.5	
	comp=Z,4.4nm,0.7s						
KTH	Kantishna Hill	45.98	35	P	P	21 20 42.5	0.0
ILAR	Eielson Array	47.72	33	P	P	21 20 56.4	+0.4
	comp=Z,0.6nm,0.7s,baz=263,slow=6.5,SNR=5.9						
BRVK	Borovoye	50.11	312	P	P	21 21 14.3	-0.2
BRVK				IAmb	IAmb	21 21 16.8	
	comp=Z,1.3nm,0.7s						
AAK	Ala-Archa	50.40	297	P	P	21 21 15.9	-1.2
	comp=Z,1.4nm,0.9s,baz=49,slow=9.3,SNR=2.6						
AAK	Ala-Archa	50.40	297	IAmb	IAmb	21 21 21.6	
	comp=Z,2.6nm,1.1s						
ABKAR	Akbulak array	57.48	310	P	P	21 22 07.8	-0.6
ABKAR				IAmb	IAmb	21 22 08.9	
	comp=Z,1.0nm,0.5s						
WRAB	Tennant Creek	58.77	189	P	P	21 22 17.1	-0.5
WRAB				IAmb	IAmb	21 22 28.9	
	comp=Z,3.3nm,1.1s						
WR0	Warramunga Arr	58.77	189	P	P	21 22 15.9	-1.7
WB2	Warramunga Arr	58.78	189	P	P	21 22 17.1	-0.5
WRA	Warramunga Arr	58.78	189	P	P	21 22 16.9	-0.8
	comp=Z,0.6nm,0.6s,baz=7.5,slow=7.0,SNR=8.9						
WRA				pP	pP	21 22 29.4	-0.6
	comp=Z,0.8nm,0.6s,baz=9.5,slow=4.7,SNR=3.3						
WRA				sP	sP	21 22 36.3	+1.3
	comp=Z,0.5nm,0.5s,baz=9.3,slow=4.6,SNR=2.2						
YKA	Yellowknife Ar	62.02	31	P	P	21 22 38.9	-0.4
	comp=Z,0.2nm,0.5s,baz=291,slow=9.7,SNR=3.4						
ASAR	Alice Springs	62.50	189	P	P	21 22 42.9	-0.2
	comp=Z,0.4nm,0.6s,baz=11,slow=5.9,SNR=6.5						
ASAR				pP	pP	21 22 54.8	-0.7
	comp=Z,0.7nm,0.7s,baz=3.9,slow=5.7,SNR=5.9						
FINES	FINESS Array B	67.73	332	P	P	21 23 16.4	-0.1
	comp=Z,1.7nm,0.9s,baz=35,slow=7.5,SNR=3.5						
NVAR	Mina Array Bea	73.41	54	P	P	21 23 52.3	+0.5
	comp=Z,0.5nm,0.8s,baz=291,slow=7.6,SNR=3.6						
AKASG	Malin Array Be	73.48	322	P	P	21 23 51.3	-0.4
	comp=Z,0.3nm,0.4s,baz=42,slow=6.1,SNR=3.2						
PDAR	Pinedale Array	75.99	46	P	P	21 24 07.5	+0.9
	comp=Z,0.9nm,0.5s,baz=259,slow=1.3,SNR=9.8						
TXAR	Lajitas Array	88.53	53	P	P	21 25 12.7	+0.4
	comp=Z,0.4nm,0.7s,baz=297,slow=2.5,SNR=5.2						
LPAZ	La Paz	145.21	59	PKPbc	PKPbc	21 31 57.5	-0.1
	comp=Z,0.6nm,0.4s,baz=34,slow=7.3,SNR=3.4						

IDC 15 21:14:18.7±4.8,19.°62S×66.°60E,h0^{km},mb3.6/4, mb1 3.8/4,mb1mx3.3/49,mbtmp3.6/4,Error ellipse: s-maj=131.3km s-min=40.6km az=64.0, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
H08S1	Diego Garcia H	13.20	26	T	T	21 31 29.5	
	baz=205,slow=76,SNR=8.2						
H08S2	Diego Garcia H	13.21	26	T	T	21 31 33.5	
	baz=205,slow=76,SNR=8.2						
H08S3	Diego Garcia H	13.22	26	T	T	21 31 30.9	
	baz=205,slow=76,SNR=31						
H08N3	Diego Garcia H	13.87	19	T	T	21 32 17.1	
	baz=198,slow=76,SNR=17						
H08N1	Diego Garcia H	13.88	19	T	T	21 32 18.4	
	baz=198,slow=76,SNR=8.7						
H08N2	Diego Garcia H	13.89	19	T	T	21 32 24.9	
	baz=198,slow=76,SNR=12						
CMAR	Chiang Mai Arr	49.39	42	P	P	21 23 10.3	-0.2
	0.2nm,0.6s,baz=230,slow=7.0,SNR=2.7						
ASAR	Alice Springs	62.18	107	P	P	21 24 42.6	+0.2
	0.6nm,0.8s,baz=264,slow=6.3,SNR=8.6						
WRA	Warramunga Arr	63.31	103	P	P	21 24 49.6	-0.3
	0.7nm,0.9s,baz=260,slow=6.2,SNR=2.5						
ZALV	Zalesovo Beam	74.93	11	P	P	21 26 01.3	0.0

0.7nm,0.6s,baz=212,slow=5.1,SNR=3.6

*IDC **15** 21:24:41.7±2.7, 36.°10N×70.°84E, h87km±24km, mb3.9/21, mb1 4.0/26, mb1mx3.9/55, mbtmp4.3/26, MS4.1/2, Ms1 4.1/2, ms1mx2.9/34, Error ellipse: s-maj=17.9km s-min=11.5km az=177.0*
*MOS **15** 21:24:44.7±1.0, 36.°49N×70.°91E, h106km, mb4.6/16, Error ellipse: s-maj=6.1km s-min=4.4km az=103.1*
*NEIC **15** 21:24:45.3±3.1, 36.°38N±0.°05×70.°84E±0.°04, h117km±6km, Error ellipse: s-maj=8.0km s-min=3.0km az=206.0*
*NNC **15** 21:24:45.3±2.2, 36.°98N×70.°42E, h0km, mb5.3, mpv5.0, Error ellipse: s-maj=21.9km s-min=10.8km az=157.0*
*NEIC **15** 21:24:45.4±3.0, 36.°39N±0.°05×70.°84E±0.°07, h116km±3km, mb4.5/33, Error ellipse: s-maj=7.9km s-min=7.2km az=111.0*
*BJI **15** 21:24:46.6±0.0, 36.°53N×71.°16E, h104km, mB4.7/28, mb4.4/31*
ISC 15 21:24:44.1±0.3, 36.°36N±0.°03×70.°87E±0.°03, h100km, h100km:pP-P, n223, σ2°27/253, mb4.2/39, 27C-22D, Hindu Kush region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KBL Kabul 2.35 220 Pn 21 25 24.1 +2.6
KBL Sn Sn 21 25 53.5 +3.5
KBL Kabul 2.35 220 PN Pn 21 25 24.1 +2.6
KBL 21 25 53.5
CEP Cherat 2.66 161 ⇓P Pn 21 25 28.6 +3.0
CEP S Sn 21 26 01.0 +3.6
CHCP Chirah Chowk 3.33 143 ⇓P Pn 21 25 37.3 +2.9
NIL Nilore 3.33 143 Pn 21 25 37.5 +3.1
NIL Nilore 3.33 143 PN Pn 21 25 37.5 +3.1
BTK Batken 3.70 359 Pn 21 25 41.4 +2.1
BTK Sn Sn 21 26 24.1 +2.1
JMU Jammu 4.92 136 eP Pn 21 25 55.0 -0.8
JMU eS Sn 21 26 49.0 -2.5
TAS Tashkent 5.11 347 Pn Pn 21 25 59.2 +0.8
TAS Tashkent 5.11 347 PN Pn 21 25 59.2 +0.8
KSH Kashi 5.12 50 P Pn 21 25 56.3 -2.2
KSH sP 21 26 22.1
KSH S Sn 21 26 47.3 -9.2
KSH pmax pmax
comp=Z,83nm,0.7s
ARSB Arslanbob 5.23 18 Pn Pn 21 26 00.5 +0.4
ARSB Sn Sn 21 26 59.2 +0.1
ARSB Arslanbob 5.23 18 PN Pn 21 26 00.1 +0.1
THN Thein Dam 5.60 133 eP Pn 21 26 07.5 +2.6
THN eS Sn 21 27 07.5 -0.4
DHRM DHARAMSHALA 6.08 131 eP Pn 21 26 13.4 +1.8
DHRM eS Sn 21 27 18.6 -1.4
DHRM IAML 21 27 21.2
comp=N,1μm,0.1s
DHRM IAML 21 27 22.9
comp=E,2μm,0.4s
AML Almayashu 6.17 20 P Pn 21 26 13.7 +0.6
SNR=384
NRN Naryn 6.46 37 Pn Pn 21 26 16.7 -0.2
NRN Sn Sn 21 27 27.9 -1.4
UCH Uchtor 6.51 25 P Pn 21 26 18.4 +0.7
SNR=64
KZA Kyzart 6.65 29 P Pn 21 26 20.4 +0.8
SNR=28
EKS2 Erkin-Say 6.69 19 P Pn 21 26 20.6 +0.8
SNR=126
BHK Bhakra 6.74 135 ePN Pn 21 26 21.1 +0.5
BHK eSN Sn 21 27 34.8 -1.1
KK31 Karatay Array 6.75 358 ⇓P Pn 21 26 19.3 -1.3
comp=E,53nm,0.5s,baz=192,slow=15,SNR=950
KK31 ⇑S Sn 21 27 30.5 -5.4
comp=E,88nm,0.8s,baz=189,slow=22,SNR=4.7
KK31 Karatay Array 6.75 358 Pn 21 26 20.6 +0.1
KK31 Sn Sn 21 27 32.6 -3.2
KK31 Karatay Array 6.75 358 PN Pn 21 26 20.6 +0.1
KKAR Karatay Array 6.75 358 Pn 21 26 20.6 +0.1
KKAR Karatay Array 6.75 358 PN Pn 21 26 20.6 +0.1
AAK Ala-Archa 6.87 23 P Pn 21 26 23.2 +0.8
comp=E,14nm,0.3s,baz=193,slow=8.3,SNR=248
AAK S Sn 21 27 37.9 -1.2
comp=E,12nm,0.3s,baz=155,slow=23,SNR=7.6
AAK LR LR 21 28 56.1
comp=E,43nm,20.7s,baz=173,slow=36
AAK Ala-Archa 6.87 23 P Pn 21 26 23.2 +0.8
SNR=128
AAK Ala-Archa 6.87 23 ⇑P Pn 21 26 23.0 +0.7
comp=E,75nm,0.6s
AAK ⇑S Sn 21 27 35.4 -3.7
comp=E,77nm,0.7s
AAK Ala-Archa 6.87 23 Pn 21 26 22.4 0.0
AAK Ala-Archa 6.87 23 d iPN Pn 21 26 22.9 +0.5
KBK Karagaybulak 7.04 25 P Pn 21 26 26.1 +1.4
SNR=44
FRU1 Bishkek 7.07 23 Pn 21 26 26.1 +1.1
FRU1 Bishkek 7.07 23 PN Pn 21 26 26.1 +1.1
ULHL Ulahol 7.20 34 P Pn 21 26 28.8 +1.8
SNR=20
CHMS Chumysh 7.28 23 P Pn 21 26 29.5 +1.7
SNR=33
CHMS Chumysh 7.28 23 ⇑P Pn 21 26 28.0 +0.3
comp=E,93nm,0.6s
CHMS ⇑S Sn 21 27 46.5 -2.2
comp=E,68nm,0.7s
HRA Herat 7.32 257 Pn 21 26 30.1 +1.5
USP Ospenovka 7.45 21 P Pn 21 26 30.9 +0.8
SNR=34
KDJ Kajisay 7.56 38 Pn 21 26 31.9 +0.1
KDJ Kajisay 7.56 38 PN Pn 21 26 31.9 +0.1
MDOK Medeo 8.29 33 P Pn 21 26 42.1 +0.3
comp=E,47nm,0.8s
MDOK S Sn 21 28 13.2 -0.6
comp=E,20nm,0.7s
MDOK Medeo 8.29 33 PN Pn 21 26 42.5 +0.8
KNDC Almaty 8.30 32 ⇓P Pn 21 26 44.3 +2.6
comp=E,103nm,0.8s
KNDC ⇓S Sn 21 28 14.5 +0.7
comp=E,84nm,1.1s
KNDC Almaty 8.30 32 PN Pn 21 26 44.3 +2.6
PRZ Przheval'sk 8.45 41 Pn 21 26 43.9 +0.1
PRZ Przheval'sk 8.45 41 PN Pn 21 26 43.9 +0.1
DDI Dehra Dun 8.50 133 eP Pn 21 26 44.6 +0.1
DDI eS Sn 21 28 11.8 -6.9
DDI IAML 21 28 19.4
comp=N,357nm,0.2s
DDI IAML 21 28 19.7
comp=E,509nm,0.2s
JOSI Joshimath 9.28 126 eP Pn 21 26 55.3 +0.2
JOSI ex x 21 28 34.1
JOSI IAML 21 28 38.4
comp=N,519nm,0.6s
JOSI IAML 21 28 38.7
comp=E,422nm,0.4s
NDI New Delhi 9.33 143 eP Pn 21 26 57.0 +1.2
NDI eS Sn 21 28 34.0 -5.0
KUDL Kundal 9.46 148 eP Pn 21 26 47.3 -10
KUDL eS Sn 21 28 26.4 -16
PDGK Podgornoye 9.61 41 ⇓P Pn 21 27 00.4 +0.9
comp=E,13nm,0.7s
PDGK ⇑S Sn 21 28 52.5 +6.8
comp=E,29nm,1.0s
ASHT Ashkhabad 10.10 283 Pn Pn 21 27 05.8 -0.3
ASHT Ashkhabad 10.10 283 P Pn 21 27 05.8 -0.3
GEYT Alibeck 10.31 283 P Pn 21 27 06.7 -2.3
comp=E,6.1nm,0.3s,baz=108,slow=10,SNR=55
GEYT S Sn 21 28 55.1 -7.4
comp=E,5.6nm,0.3s,baz=128,slow=19,SNR=7.6
GYA0 ALIBECK ARRAY 10.31 283 P Pn 21 27 07.2 -1.8
GYA0 S Sn 21 28 58.6 -4.0
GYA0B ALIBECK ARRAY 10.31 283 ⇑P Pn 21 27 07.2 -1.8
GYA0B ⇓S Sn 21 28 58.6 -3.9
GYA0B ALIBECK ARRAY 10.31 283 Pn 21 27 07.5 -1.5
AJM Ajmer 10.36 161 eP Pn 21 27 09.0 -0.8
AJM iS Sn 21 28 57.0 -6.9
AJM Ajmer 10.36 161 eP Pn 21 27 09.0 -0.8
BHUJ Bhuj 13.10 185 ex Pn 21 27 44.1 -2.2
BHUJ IAmb IAmb 21 27 46.8
comp=Z,80nm,0.7s
MAKZ Makanchi 13.33 35 Pn 21 27 49.3 0.0
MAKZ Makanchi 13.33 35 P Pn 21 27 49.3 0.0
MK31 Makanchi Array 13.47 36 Pn 21 27 49.5 -1.6
MK31 Makanchi Array 13.47 36 P Pn 21 27 49.5 -1.6
MKAR Makanchi Array 13.47 36 P Pn 21 27 50.3 -0.8
comp=Z,0.5nm,0.3s,baz=224,slow=14,SNR=46
MKAR Makanchi Array 13.47 36 iP Pn 21 27 50.2 -0.8
MKAR pmax pmax
comp=Z,9.0nm,0.7s
DANN Dangsing 13.49 123 eP Pn 21 27 50.0 -1.8
comp=Z,32nm,0.3s
DANN eS Sn 21 30 09.7 -11
BHPL Bhopal 14.25 155 ex Pn 21 27 55.1 -6.2
BHPL ex x 21 30 25.7
BHPL IAML 21 30 36.7
comp=E,26nm,0.4s
GKN Gorkha 14.31 122 eP Pn 21 28 00.0 -2.2
GKN eS Sn 21 30 29.4 -11
WMQ Urumqi 14.86 55 eP Pn 21 28 08.9 -0.2
WMQ pmax pmax
comp=E,13nm,0.7s
WMQ pmax pmax
comp=E,100nm,4.5s
WMQ LR LR
comp=E,170nm,17.3s
WMQ LR LR
comp=E,710nm,21.7s
WMQ LR LR
comp=E,6.0nm,19.5s
WMQ Urumqi 14.86 55 Pn Pn 21 28 08.8 -0.3
WMQ Urumqi 14.86 55 P Pn 21 28 08.8 -0.3
DMN Daman 14.88 122 eP Pn 21 28 07.8 -1.8
comp=E,25nm,0.3s
DMN eS Sn 21 30 42.6 -11
KKN Kakani 14.89 121 eP Pn 21 28 07.5 -2.2
comp=E,14nm,0.2s
PKIN Phulchoki 15.10 121 eP Pn 21 28 10.3 -2.1
comp=E,11nm,0.2s
PKIN eS Sn 21 30 47.4 -12
PKI Pulchoki 15.12 121 eP Pn 21 28 10.6 -2.0
comp=E,18nm,0.2s
PKI eS Sn 21 30 47.7 -12
AB31 Akbulak array 15.16 332 ⇑P Pn 21 28 10.8 -2.0
comp=E,12nm,0.4s,baz=142,slow=12,SNR=621
AB31 ⇓S Sn 21 30 52.1 -7.9
comp=E,32nm,0.7s,baz=156,slow=23,SNR=16
AB31 Akbulak array 15.16 332 P Pn 21 28 10.7 -2.0
AB31 S Sn 21 30 52.8 -7.2
ABKAR Akbulak array 15.16 332 Pn 21 28 11.1 -1.7
GUN Gumba 15.23 119 eP Pn 21 28 11.7 -2.5
comp=E,13nm,0.2s
KURBB Kurchatov Arra 15.29 19 P Pn 21 28 11.1 -3.2
comp=E,0.1nm,0.3s,baz=213,slow=12,SNR=11
KURK Kurchatov 15.40 19 Pn 21 28 14.1 -1.6
KURK Kurchatov 15.40 19 c eP Pn 21 28 17.6 +1.9
JIRN Jiri 15.60 119 eP Pn 21 28 17.0 -1.8
comp=E,94nm,0.4s
JIRN eS Sn 21 31 00.2 -11
RAMN Ramite 16.33 121 eP Pn 21 28 26.1 -1.6
comp=E,25nm,0.2s
BVAR Borovoye Array 16.67 359 P Pn 21 28 29.6 -1.9
comp=E,2.9nm,0.3s,baz=160,slow=12,SNR=62
BRVK Borovoye 16.71 359 P Pn 21 28 30.3 -1.6
BRVK Borovoye 16.71 359 d eP Pn 21 28 30.7 -1.2
BRVK pmax pmax
comp=Z,39nm,1.3s
WSAR Wadi Sarin 16.82 222 P Pn 21 28 29.2 -4.4
comp=Z,0.1nm,0.3s,baz=78,slow=18,SNR=1.8
AKTO Aktyubinsk 16.86 331 P Pn 21 28 33.4 -0.4
comp=Z,4.5nm,0.3s,baz=134,slow=13,SNR=43
AKTO S Sn 21 31 26.7 -14
comp=Z,0.6nm,0.3s,baz=127,slow=20,SNR=3.8
AKTO Aktyubinsk 16.86 331 ⇓P Pn 21 28 33.0 -0.8
comp=Z,65nm,0.8s
AKTO ⇓S Sn 21 31 33.0 -7.8
comp=Z,34nm,0.9s
TAPN Taplejung 16.87 117 eP Pn 21 28 33.1 -1.3
comp=Z,23nm,0.4s
TAPN eS Sn 21 31 28.1 -14
ODAN Odare 16.94 119 eP Pn 21 28 33.6 -1.6
comp=Z,32nm,0.5s
UOSS Minazif 16.97 232 P P 21 28 36.7 +1.0
GTK Tadong 17.53 116 ex Pn 21 28 40.6 -1.7
GTK eS Sn 21 31 42.5 -15
GTK IAML 21 31 48.8
comp=N,17nm,0.6s
LKRN Lenkeran, Azer 17.68 284 P Pn 21 28 46.3 +2.4
POO Poona 17.95 171 ex Pn 21 28 47.0 -0.3
LSA Lhasa 18.23 106 P P 21 28 51.8 +1.7
LSA Lhasa 18.23 106 P 21 28 51.6 +1.5
LSA Lhasa 18.23 106 P P 21 28 51.6 +1.5
SEKA Sheki 19.06 292 P P 21 29 00.5 0.0
MNGR Mingechevir, A 19.10 291 P P 21 29 01.7 +0.9
GANJ Ganja 19.67 290 P P 21 29 07.7 +0.2
BTLR Botlikh 20.00 296 d eP P 21 29 10.2 +1.4
HYB Hyderabad 20.05 158 iP P 21 29 12.0 +2.5
HYB esP sP 21 29 45.0 +3.0
HYB eS Sn 21 33 08.0 +10
ZAA0 Zalesovo Array 20.09 25 P P 21 29 09.3 -0.2
ZALV Zalesovo Beam 20.09 25 P P 21 29 09.2 -0.3
comp=N,52nm,0.5s,baz=220,slow=11,SNR=180
ZALV S S 21 32 41.2 -8.3
comp=N,0.6nm,0.5s,baz=201,slow=12,SNR=2.1
NAX Nakhchivan 20.24 286 P Pn 21 29 13.9 -0.4
GROC Groznyy 20.41 297 eP P 21 29 14.8 +1.7
GROC e*PP pP 21 29 35.6 +3.1
GROC e*SP sP 21 29 50.2 +5.0
GROC e*SS sS 21 33 33.7 +4.3
GROC pmax pmax
comp=Z,62nm,1.3s
GNI Garni 20.84 288 P P 21 29 20.2 +2.3
comp=Z,49nm,0.9s,baz=14,slow=2.8,SNR=51
GNI Garni 20.84 288 P P 21 29 18.9 +0.9
GNI Garni 20.84 288 P P 21 29 18.9 +0.9
SHL Shillong 20.94 115 P P 21 29 19.6 +0.6
SHL Shillong 20.94 115 P P 21 29 19.7 +0.6
TBLG Delisi 20.96 293 P P 21 29 20.0 +0.9
TBLG Delisi 20.96 293 P P 21 29 20.0 +0.9
TEZP TEZPUR 21.03 111 ex P 21 29 19.3 -0.5
TEZP IAmb IAmb 21 29 25.8
comp=Z,6.8nm,0.4s
KZRT Kazreti 21.18 292 P P 21 29 23.2 +1.8
GUDG Gudauri 21.24 295 P P 21 29 24.2 +1.9
SVE Sverdlovsk 21.61 345 ⇓eP P 21 29 26.6 +0.8
SVE eS S 21 33 23.6 +4.4
SVE pmax pmax
comp=Z,47nm,1.0s
ZEI Tsey 21.71 295 eP P 21 29 27.2 0.0
ZEI pmax pmax
comp=Z,8.0nm,0.7s
ARU Arti 21.74 341 P P 21 29 27.7 +0.6
comp=Z,5.5nm,0.8s,baz=154,slow=9.3,SNR=22
ARU S S 21 33 21.6 0.0
comp=Z,0.8nm,0.5s,baz=343,slow=19,SNR=3.8
ARU Arti 21.74 341 P P 21 29 27.1 0.0
ARU Arti 21.74 341 d iP P 21 29 27.8 +0.6
ARU *PP pP 21 29 49.9 +3.0
ARU 21 30 05.5
ARU S S 21 33 23.8 +2.2
ARU *SS sS 21 34 00.0 +4.3
ARU pmax pmax
comp=Z,22nm,0.9s
AKH Akhalkalaki 21.86 292 ⇑P P 21 29 32.0 +3.1
AKH Akhalkalaki 21.86 292 P P 21 29 30.1 +1.2
AKH Akhalkalaki 21.86 292 P P 21 29 30.1 +1.2
ONI Oni 22.01 295 P P 21 29 33.7 +3.4
NCK Nalchik 22.04 297 ⇓eP P 21 29 32.0 +1.5
NCK pmax pmax
comp=Z,24nm,0.6s
KBZ Khabaz 22.58 298 P P 21 29 36.2 +0.1
comp=Z,4.3nm,0.9s,baz=111,slow=8.0,SNR=9.3
KBZ S S 21 33 41.8 +5.6
comp=Z,1.6nm,0.8s,baz=75,slow=12,SNR=2.2
KBZ Khabaz 22.58 298 d eP P 21 29 37.1 +1.0
NEY Neytrino 22.63 296 ⇑eP P 21 29 39.0 +2.1
NEY pmax pmax
comp=Z,3.0nm,0.9s
KVAR Kislovodsk Arr 22.76 298 P P 21 29 37.2 -0.8
comp=Z,3.7nm,0.6s,baz=90,slow=20,SNR=11
KVAR S S 21 33 45.7 +6.3
comp=Z,5.5nm,0.9s,baz=77,slow=19,SNR=2.7
KIV Kislovodsk 22.77 298 ⇑P P 21 29 39.8 +1.7
KIV Kislovodsk 22.77 298 P P 21 29 38.0 -0.2
KIV Kislovodsk 22.77 298 eP P 21 29 39.4 +1.3
KIV eS S 21 33 41.4 +2.0
KIV pmax pmax
comp=Z,44nm,0.9s
GTA Gaotai 23.00 74 eP P 21 29 38.4 -2.1
GTA pP pP 21 30 01.5 -0.4
GTA sP sP 21 30 13.5 -1.5
GTA pmax pmax
comp=Z,76nm,5.5s
GTA LR LR
comp=Z,220nm,15.8s
GTA LR LR
comp=Z,310nm,15.1s
GTA LR LR
comp=Z,350nm,15.8s
SIMRM Sittwe 25.15 124 P 21 29 59.0 -1.1
RAYN Ar Rayn 25.35 247 P P 21 30 01.0 -0.9
RAYN Ar Rayn 25.35 247 P P 21 30 01.0 -0.9
VRH Novokhopyorsk 25.54 315 eP P 21 30 17.9 +15
VRH pmax pmax
comp=Z,10.0nm,0.7s
KIRV Kirov 26.33 334 P P 21 30 11.6 +1.3
comp=Z,12nm,0.6s,baz=129,slow=0.4,SNR=5.7
LZH Lanzhou 26.53 81 ⇑P P 21 30 12.6 0.0
LZH pP pP 21 30 37.5 +1.4
LZH sP sP 21 30 51.8 +3.4
LZH PP PnPn 21 31 01.3 +2.4
LZH pmax pmax
comp=Z,23nm,1.0s
LZH pmax pmax
comp=Z,72nm,4.8s
GAZ Gaziantep 26.90 282 P P 21 30 13.4 -2.4
VSR Storozhevoye 27.03 313 eP P 21 30 20.4 +3.7
VSR pmax pmax
comp=Z,6.0nm,0.6s
CD2 Chengdu 27.83 92 P P 21 30 23.5 -0.6
CD2 pmax pmax
comp=Z,10.0nm,0.5s
SONM Songino Array 28.50 55 P P 21 30 31.6 +1.5
comp=Z,2.6nm,0.8s,baz=263,slow=9.3,SNR=20
ILGA Ilgaz 29.23 291 P P 21 30 35.1 -1.5
MMAI Mount Meron Ar 29.26 274 P P 21 30 37.0 +0.2
comp=Z,1.7nm,0.6s,baz=69,slow=9.3,SNR=4.3
BR131 Keskin Array S 29.38 288 P P 21 30 37.7 -0.3
BR131 Keskin Array S 29.38 288 c iP P 21 30 39.6 +1.6
BRTR Keskin Array B 29.38 288 P P 21 30 38.0 0.0
comp=Z,2.4nm,0.7s,baz=104,slow=8.6,SNR=17
BRTR Keskin Array B 29.38 288 P 21 30 38.0 0.0
BRTR Keskin Array B 29.38 288 c eP P 21 30 39.9 +1.9
BRTR pmax pmax
comp=Z,3.0nm,0.7s
CMAR Chiang Mai Arr 30.48 118 P P 21 30 51.4 +3.7
comp=Z,1.2nm,0.9s,baz=304,slow=8.6,SNR=10
HHC Hu-ho-hao-te 31.91 69 eP P 21 31 01.1 +0.9
HHC pmax pmax
comp=Z,2.0nm,1.0s
HHC pmax pmax
comp=Z,67nm,4.3s
HHC LR LR
comp=Z,110nm,15.3s
HHC LR LR
comp=Z,61nm,15.3s
HHC LR LR
comp=Z,120nm,11.1s
ELL Elmali 32.73 283 P P 21 31 07.2 -0.2
ELL Elmali 32.73 283 P P 21 31 07.2 -0.2
AKASG Malin Array Be 32.96 309 P P 21 31 08.7 -0.4
comp=Z,1.5nm,0.6s,baz=80,slow=7.3,SNR=8.5
AKASG Malin Array Be 32.96 309 c eP P 21 31 09.3 +0.3
AKASG pmax pmax
comp=Z,1.0nm,0.5s
PBKT Sadao Pong 33.17 118 P P 21 31 12.6 +1.4
LEOM Leova 33.17 301 ⇓P P 21 31 20.1 +9.1
LEOM Leova 33.17 301 ⇓P P 21 31 20.1 +9.2
PLOR Plostina 34.27 300 ⇑P P 21 31 23.1 +2.6
PLOR Plostina 34.27 300 ⇑P P 21 31 23.1 +2.6
MLR Muntele Rosu 34.76 299 ⇑P P 21 31 21.9 -3.0
MLR Muntele Rosu 34.76 299 ⇑P P 21 31 21.9 -3.0
BURAR Bucovina Array 35.28 303 ⇑P P 21 31 30.8 +1.5
BURAR Bucovina Array 35.28 303 ⇑P P 21 31 30.8 +1.5
VOIR 35.39 299 ⇑P P 21 31 34.3 +4.0
VOIR 35.39 299 ⇑P P 21 31 34.3 +4.0
ARR Arges 35.69 299 ⇑P P 21 31 35.8 +3.0
WHN Wuhan 36.50 86 P P 21 31 46.3 +6.5
KOLS Kolonicke sedl 37.28 305 eP P 21 31 48.5 +2.3
KOLS Kolonicke sedl 37.28 305 eP P 21 31 48.5 +2.3
FINES FINESS Array B 37.55 326 P P 21 31 48.6 +0.3
comp=Z,3.9nm,0.7s,baz=109,slow=9.1,SNR=16
BZS Buzias 37.80 300 ⇓P P 21 31 52.3 +1.7
BZS Buzias 37.80 300 ⇓P P 21 31 52.3 +1.7
SUF Sumiainen 37.99 328 P P 21 31 52.5 +0.5
SUF pmax pmax
comp=Z,21nm,2.8s
MSF Maaselka 38.27 334 P P 21 31 54.2 -0.1
MSF pmax pmax
comp=Z,12nm,2.4s
NIE Niedzica 38.58 306 P P 21 31 58.9 +1.8
OUL Oulu 39.06 332 P P 21 32 01.2 +0.4
OUL pmax pmax
comp=Z,27nm,2.7s
NJ2 Nanjing 39.59 82 eP P 21 32 05.3 -0.5
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
NJ2 LR LR
comp=Z,870nm,14.5s
NJ2 LR LR
comp=Z,580nm,13.5s
NJ2 LR LR
comp=Z,1μm,16.5s
MORC Moravsky Berou 40.37 307 P P 21 32 14.3 +2.3
ARCES ARCESS Array B 41.24 338 P P 21 32 19.5 +0.6
comp=Z,4.9nm,0.7s,baz=112,slow=8.5,SNR=18
GERES GERESS Array B 42.93 305 P P 21 32 33.8 +0.8
comp=Z,0.2nm,0.4s,baz=98,slow=7.2,SNR=3.1
CLL Collm 43.20 309 eP P 21 32 35.0 0.0
CLL Collm 43.20 309 eP P 21 32 35.0 0.0
NORES NORESS Array B 44.25 323 P P 21 32 43.5 +0.3
NB2 NORSAR Subarra 44.44 323 P P 21 32 44.0 -0.8
comp=Z,16nm,1.2s,baz=97,slow=7.9
NOA NORSAR Array B 44.44 323 P P 21 32 44.0 -0.8
comp=Z,2.8nm,0.9s,baz=97,slow=7.9,SNR=6.3
WDD Wied Dalam 44.97 287 P P 21 32 46.9 -2.4
NACB Ninganchiao 45.00 91 P P 21 32 49.5 -0.2
KSRS Korea Array 45.02 71 P P 21 32 50.7 +1.1
comp=Z,0.8nm,0.6s,baz=286,slow=5.9,SNR=4.6
YULB Yu-li 45.13 92 P P 21 32 49.0 -1.7
KONO Kongsberg 45.13 321 P P 21 32 50.1 -0.1
KONO Kongsberg 45.13 321 P P 21 32 50.2 -0.1
LATE Laterza 45.22 297 P P 21 32 52.2 +0.9
CORL Corleone 45.29 290 P P 21 32 50.6 -1.4
KLR Kul'dur 45.31 54 P P 21 32 53.0 +1.2
comp=Z,0.7nm,0.4s,baz=180,slow=5.1,SNR=2.9
TIXI Tiksi 45.95 22 P P 21 32 56.6 +0.1
TIXI Tiksi 45.95 22 ⇑eP P 21 32 56.8 +0.3
TIXI pmax pmax
comp=Z,6.0nm,0.9s
TUE Stuetta 46.17 303 P P 21 32 56.2 -2.7
USRK Ussuriysk Ar. 46.33 61 LR LR 21 54 03.4
comp=Z,214nm,19.7s,baz=186,slow=38
SZP Santa 47.45 100 P P 21 33 08.0 -0.9
KEST Kesra 48.98 289 P P 21 33 21.6 +0.9
comp=Z,1.8nm,0.8s,baz=131,slow=9.3,SNR=3.1
KEST Kesra 48.98 289 P P 21 33 19.2 -1.4
DAG Danmarks Havn 54.84 344 iP P 21 34 03.9 +0.5
comp=Z,4.7nm,0.8s
DAG Danmarks Havn 54.84 344 iP P 21 34 03.9 +0.5
DAG pmax pmax
comp=Z,5.0nm,0.8s
BILL Bilibino 58.78 26 d eP P 21 34 31.1 -0.3
BILL pmax pmax
comp=Z,15nm,2.4s
PETK Petropavlovsk- 60.14 44 LR LR 22 02 28.5
comp=Z,136nm,18.6s,baz=241,slow=38
TORD Torodi Ar. Bea 65.61 269 P P 21 35 14.8 -3.0
comp=Z,2.1nm,0.7s,baz=46,slow=5.8,SNR=10
TORD PcP PcP 21 35 47.6 -0.9
comp=Z,1.2nm,0.5s,baz=42,slow=5.2,SNR=2.6
TOLK Toolik Lake Re 71.09 15 P P 21 35 52.1 +1.0
MACI Morro de la Ar 71.92 292 P P 21 35 52.7 -4.3
C36M Paulatuk 74.03 5 P P 21 36 06.0 -2.4
INK Inuvik 74.06 9 P P 21 36 09.7 +1.0
INK Inuvik 74.06 9 P P 21 36 09.7 +1.0
ILAR Eielson Array 74.95 16 P P 21 36 13.1 -0.8
comp=Z,1.7nm,0.9s,baz=314,slow=4.7,SNR=12
YKA Yellowknife Ar 81.39 3 P P 21 36 49.9 +0.5
comp=Z,1.4nm,0.6s,baz=348,slow=5.3,SNR=27
YKA Yellowknife Ar 81.39 3 ⇑eP P 21 36 49.9 +0.5
YKA pmax pmax
comp=Z,2.0nm,0.6s
WRA Warramunga Arr 82.00 122 P P 21 36 51.2 -2.1
comp=Z,2.0nm,0.8s,baz=322,slow=4.8,SNR=9.8
ASAR Alice Springs 84.25 125 P P 21 37 02.7 -2.1

comp=Z,1.4nm,0.7s,baz=312,slow=5.1,SNR=19

TAP 15 21:34:32.3,23.61N×120.70E,h10km,ML1.1,1C,A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHN5	Tsauling	0.02	248	⇑iP	Pg	21 34 34.5	+0.3
	baz=248						
CHN5				iS	Sg	21 34 36.1	+0.6
	baz=248						
ALS	Alishan	0.14	134	eP	Pg	21 34 36.3	+0.7
	baz=132						
ALS				eS	Sg	21 34 39.1	+1.1
	baz=132						
WGK	Gukeng	0.15	303	P	Pg	21 34 36.1	+0.5
	baz=303						
WGK				eS	Sg	21 34 39.1	+1.2
	baz=303						
WHYT	Xinyi Township	0.17	57	P	Pb	21 34 36.8	-0.8
	baz=57						
WJS	Zhushan	0.22	7	eP	Pb	21 34 37.9	-0.5
	baz=7.0						
WJS				eS	Sg	21 34 41.9	+2.0
	baz=7.0						
CHN4	Tsaushan	0.27	201	eP	Pb	21 34 38.7	-0.5
	baz=200						
CHN4				eS	Sb	21 34 43.4	-0.5
	baz=200						
WNT	Mingjian	0.27	357	eP	Pg	21 34 38.5	+0.7
	baz=358						
SSLB	Suanglung	0.30	52	eP	Pg	21 34 38.8	+0.6
	baz=52						
SSLB				eS	Sb	21 34 44.2	-0.5
	baz=52						
TPUB	Ta-pu	0.31	192	eP	Pb	21 34 39.7	-0.2
	baz=191						

TAP 15 21:34:37.3,23.65N×120.75E,h15km,ML1.1,1C,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHN5	Tsauling	0.08	227	⇑iP	Pg	21 34 40.8	+0.3
	baz=227						
CHN5				iS	Sg	21 34 43.3	+0.7
	baz=227						
WHYT	Xinyi Township	0.11	67	iP	Pb	21 34 41.2	+0.1
	baz=66						
WHYT				S	Sb	21 34 43.9	+0.2
	baz=66						
ALS	Alishan	0.15	159	P	Pb	21 34 42.1	0.0
	baz=156						
ALS				S	Sb	21 34 45.4	+0.1
	baz=156						
WJS	Zhushan	0.17	355	eP	Pg	21 34 41.1	-0.4
	baz=354						
WJS				eS	Sb	21 34 45.7	+0.2
	baz=354						
WNT	Mingjian	0.23	346	iP	Pb	21 34 43.5	+0.3
	baz=347						
WNT				S	Sb	21 34 47.2	0.0
	baz=347						
WNT	Mingjian	0.23	346	eS	Pb	21 34 43.5	+0.2
	baz=358						
SSLB	Suanglung	0.23	55	P	Pb	21 34 43.2	-0.1
	baz=55						
SSLB				S	Sb	21 34 47.2	-0.1
	baz=55						
CHN4	Tsaushan	0.33	205	P	Pb	21 34 45.1	+0.1
	baz=204						
CHN4				S	Sb	21 34 50.3	+0.2
	baz=204						
TPUB	Ta-pu	0.37	197	P	Pg	21 34 45.1	+0.3
	baz=196						
TPUB				S	Sb	21 34 51.7	+0.6
	baz=196						
VWDT	VWDT	0.38	75	eP	Pg	21 34 44.9	-0.1
	baz=74						
VWDT				eS	Sb	21 34 52.2	+0.8
	baz=74						
WTP	Ta-pu	0.42	197	P	Pb	21 34 46.4	-0.1
	baz=195						
WTP				eS	Sb	21 34 53.1	+0.3
	baz=195						
TWK	Hsinying	0.45	212	P	Pb	21 34 47.3	+0.2
	baz=210						
TWK				S	Sb	21 34 54.1	+0.5
	baz=210						
OWD	Renai	0.49	53	eP	Pb	21 34 47.8	0.0
	baz=52						
OWD				eS	Sb	21 34 54.9	-0.1
	baz=52						
CHN1	Nanshi	0.51	203	P	Pb	21 34 47.8	-0.2
	baz=203						
CHN1				S	Sb	21 34 55.9	+0.7
	baz=203						
ELDTW	Lidau	0.53	152	eP	Pb	21 34 48.4	0.0
	baz=151						
ELDTW				eS	Sb	21 34 57.3	+1.5
	baz=151						
CHGB	Renai	0.56	44	eP	Pb	21 34 48.9	-0.2
	baz=44						
YULB	Yu-li	0.57	117	eS	Sb	21 34 57.4	+0.4
	baz=117						

JMA 15 21:39:36.3,36.75N×140.63E,h4km±1km,M3.2
JMA Felt I J1.
IDC 15 21:39:40.6±3.5,36.87N×140.67E,h40km±30km,mb3.3/6, mb1 3.5/7,mb1mx3.3/28,mbtmp3.5/7,ML3.5/1,Error ellipse: s-maj=24.7km s-min=18.5km az=131.0
ISC 15 21:39:36.2±1.2,36.74N±0.04×140.69E±0.06,h9km±8km, n21,σ0.98/21,mb3.5/6,3C-1D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.16	217	⇑P	Pg	21 39 39.3	-0.3
ONAJ	Iwakimizuishiy	0.38	14	P	Pg	21 39 43.6	0.0
ONAJ				S	Sg	21 39 49.3	+0.7
JYT	Yasato	0.64	218	⇑P	Pg	21 39 48.3	-0.4
JYT				eS	Sg	21 39 57.1	0.0
JFK	Kawauchi	0.65	13	⇑P	Pg	21 39 48.6	-0.1
JFK				S	Sg	21 39 57.2	0.0
JSB	Shiboa	0.66	291	P	Pg	21 39 48.9	0.0
JFT	Otama	0.83	340	⇓P	Pg	21 39 51.8	-0.4
JFT				S	Sg	21 40 02.7	-0.3
MJAR	Matsushiro Arr	2.00	265	P	Pn	21 40 10.8	+0.6
	3.0nm,0.3s,baz=83,slow=15,SNR=118						
MJAR				S	Sn	21 40 35.5	+0.1
	4.9nm,0.3s,baz=97,slow=30,SNR=22						
MAT	Matsushiro	2.00	265	P	Pn	21 40 10.8	+0.6
MAT				S	Sn	21 40 36.8	+1.4
ASAJ	Asahikawa	7.51	11	P	Pn	21 41 26.7	+0.8
	0.7nm,0.3s,baz=234,slow=18,SNR=8.0						
SONM	Songino Array	27.47	305	P	P	21 45 22.4	-0.3
	0.3nm,0.6s,baz=97,slow=9.5,SNR=3.4						
H11N2	WAKE ISLAND Hy	28.50	119	T	T	22 15 15.6	
	baz=312,slow=76,SNR=16						
H11N1	WAKE ISLAND Hy	28.51	119	T	T	22 15 16.5	
	baz=312,slow=76,SNR=19						
H11N3	WAKE ISLAND Hy	28.52	119	T	T	22 15 17.3	
	baz=312,slow=76,SNR=17						
H11S1	WAKE ISLAND Hy	29.20	121	T	T	22 16 06.0	
	baz=311,slow=74						
H11S3	WAKE ISLAND Hy	29.20	121	T	T	22 16 07.1	
	baz=311						
H11S2	WAKE ISLAND Hy	29.21	121	T	T	22 16 08.2	
	baz=311,slow=74						
ZALV	Zalesovo Beam	41.68	313	P	P	21 47 25.0	0.0
	0.4nm,0.3s,baz=83,slow=6.7,SNR=3.0						
MKAR	Makanchi Array	43.78	302	P	P	21 47 42.1	0.0
	0.1nm,0.5s,baz=82,slow=11,SNR=3.1						
WRA	Warramunga Arr	56.69	187	P	P	21 49 19.8	-0.3
	0.5nm,0.8s,baz=3.6,slow=4.2,SNR=4.8						
ASAR	Alice Springs	60.42	187	P	P	21 49 48.4	+2.3
	0.4nm,0.9s,baz=20,slow=11,SNR=3.6						
NOA	NORSAR Array B	74.23	337	P	P	21 51 10.6	-2.6
	1.5nm,1.1s,baz=38,slow=2.1,SNR=3.5						

IDC 15 21:41:01.8±1.2,36.73N×140.67E,h0km,mb3.5/6, mb1 3.7/6,mb1mx3.5/26,mbtmp3.5/6,MS3.9/5,Ms1 3.9/5, ms1mx3.2/34,Error ellipse: s-maj=29.1km s-min=23.8km az=34.0
JMA 15 21:41:03.4,36.75N×140.63E,h3km±1km,M3.4
JMA Felt II J1.
ISC 15 21:41:03.1±1.2,36.74N±0.04×140.65E±0.07,h9km±8km, n23,σ0.71/19,mb3.4/6,MS4.0/5,4C,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.14	207	⇑P	Pg	21 41 06.4	+0.2
ONAJ	Iwakimizuishiy	0.38	18	P	Pg	21 41 10.8	+0.1
ONAJ				S	Sg	21 41 16.4	+0.6
JYT	Yasato	0.63	216	⇑P	Pb	21 41 15.5	-0.7
JYT				eS	Sb	21 41 24.4	-0.7
JSB	Shiboa	0.63	292	⇑P	Pb	21 41 16.0	-0.3
JFK	Kawauchi	0.66	16	⇑P	Pg	21 41 15.6	-0.2
JFT	Otama	0.82	342	P	Pb	21 41 18.9	-0.7
JFT				eS	Sb	21 41 30.0	-0.7
MJAR	Matsushiro Arr	1.97	265	Pn	Pn	21 41 37.2	+0.4
	4.2nm,0.3s,baz=88,slow=15,SNR=16						
MJAR				Sn	Sn	21 42 01.8	+0.2
	7.9nm,0.3s,baz=61,slow=33,SNR=20						
MAT	Matsushiro	1.97	265	P	Pb	21 41 38.2	-1.0
MAT				S	Sb	21 42 04.4	+0.5
SONM	Songino Array	27.45	305	P	P	21 46 48.6	-0.8
	0.6nm,0.4s,baz=99,slow=8.2,SNR=5.1						
SONM				LR	LR	21 57 48.6	
	comp=Z,371nm,18.3s,baz=146,slow=37						
H11N2	WAKE ISLAND Hy	28.53	119	T	T	22 16 43.0	
	baz=312,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	28.54	119	T	T	22 16 43.6	
	baz=312,slow=75,SNR=21						
H11N3	WAKE ISLAND Hy	28.55	119	T	T	22 16 43.7	
	baz=312,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	29.22	121	T	T	22 17 33.2	
	baz=314,slow=76,SNR=81						
H11S3	WAKE ISLAND Hy	29.22	121	T	T	22 17 35.2	
	baz=314,slow=76,SNR=106						
H11S2	WAKE ISLAND Hy	29.24	121	T	T	22 17 36.8	
	baz=314,slow=76,SNR=50						
ZALV	Zalesovo Beam	41.66	313	P	P	21 48 52.1	+0.4
	0.8nm,0.5s,baz=88,slow=5.8,SNR=3.5						
ZALV				LR	LR	22 06 20.2	
	comp=Z,233nm,18.1s,baz=128,slow=36						
MKAR	Makanchi Array	43.76	302	P	P	21 49 09.4	+0.5
	0.2nm,0.6s,baz=86,slow=9.7,SNR=1.7						
WRA	Warramunga Arr	56.69	187	P	P	21 50 45.9	-1.0
	0.1nm,0.3s,baz=7.2,slow=5.0,SNR=5.0						
ASAR	Alice Springs	60.41	187	P	P	21 51 14.0	+1.1
	0.4nm,0.8s,baz=18,slow=6.2,SNR=2.6						
DZM	Mont Dzumac	63.36	153	LR	LR	22 15 23.9	
	comp=Z,29nm,21.5s,baz=212,slow=33						
NOA	NORSAR Array B	74.22	337	LR	LR	22 31 17.6	
	comp=Z,79nm,18.2s,baz=75,slow=41						
PDAR	Pinedale Array	78.31	45	P	P	21 53 04.3	+0.4
	0.1nm,0.5s,baz=331,slow=3.3,SNR=1.5						
BRTR	Keskin Array B	78.59	311	LR	LR	22 30 11.4	
	comp=Z,48nm,18.0s,baz=344,slow=38						

SOME 15 22:07:53.0,39.18N×72.00E,h0km
KRNET 15 22:07:59.2±0.1,39.11N×71.43E,mb3.0
NNC 15 22:08:07.3±3.2,39.55N×71.80E,h0km,mb3.5,mpv3.1, Error ellipse: s-maj=28.3km s-min=17.5km az=35.0
ISC 15 22:08:01.5±3.0,39.2N±0.2×71.50E±0.07,h10km,n23, σ2.31/35,17C-7D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.00	329	⇓iP	Pg	22 08 19.0	-1.8
	baz=34						
BTK				⇓iS	Sg	22 08 33.3	-0.6
	baz=34						
ARSB	Arslanbob	2.41	28	⇑iP	Pn	22 08 41.9	+0.8
	baz=28						
ARSB				⇑iS	Sn	22 09 13.2	+2.5
	baz=28						
ARK	Arkit	2.62	8	⇑iP	Pn	22 08 44.5	+0.5
	baz=9.0						
ARK				⇑iS	Sn	22 09 17.8	+1.9
	baz=9.0						
IUG	Iuzhnay	3.15	340	eP	Pb	22 08 55.4	-2.2
	1.8nm,0.3s						
IUG				eS	Sb	22 09 37.6	+1.6
	43nm,0.7s						
AML	Almayashu	3.37	29	⇑iP	Pn	22 08 55.7	+1.1
	baz=29						
AML				⇑iS	Sn	22 09 37.0	+2.2
	baz=29						
AML	Almayashu	3.37	29	P	Pn	22 08 56.5	+1.9
	SNR=18						
ARLS	Aral	3.42	38	⇑iP	Pn	22 08 55.8	+0.7
	baz=38						
ARLS				⇑iS	Sn	22 09 37.6	+1.8
	baz=38						
MRKS	Merke	3.77	20	eP	Pn	22 09 02.3	+2.4
	5.0nm,0.5s						
MRKS				eS	Sn	22 09 49.5	+5.1
	4.0nm,0.3s						
UCH	Uchtor	3.79	36	⇑iP	Pn	22 09 01.7	+1.2
	baz=36						
UCH				⇑iS	Sn	22 09 47.3	+1.9
	baz=36						
UCH	Uchtor	3.79	36	P	Pn	22 09 02.5	+2.0
	SNR=6.0						
EKS2	Erkin-Say	3.86	26	⇑eP	Pn	22 09 02.4	+1.3
	baz=26						
EKS2				⇑iS	Sn	22 09 48.2	+1.6
	baz=26						
EKS2	Erkin-Say	3.86	26	P	Pn	22 09 03.6	+2.5
	SNR=6.7						
KK31	Karatay Array	3.97	350	Pn	Pn	22 09 04.2	+1.7
	1.1nm,0.3s,baz=171,slow=12,SNR=36						
KK31				⇑Sn	Sn	22 09 51.5	+2.4
	1.0nm,0.3s,baz=167,slow=24,SNR=3.7						
KK31				⇑Lg	Lg	22 10 02.7	
	6.6nm,0.8s,baz=163,slow=31,SNR=5.2						
KZA	Kyzart	4.05	44	⇑eP	Pn	22 09 05.6	+1.6
	baz=43						
KZA				⇑iS	Sn	22 09 53.5	+1.9
	baz=43						
KZA	Kyzart	4.05	44	P	Pn	22 09 06.6	+2.6
	SNR=6.2						
AAK	Ala-Archa	4.12	33	⇓eP	Pn	22 09 05.8	+1.2
	baz=32						
AAK				⇓iS	Sn	22 09 54.6	+1.7
	baz=32						
AAK	Ala-Archa	4.12	33	P	Pn	22 09 06.7	+2.1
	SNR=6.3						
AAK	Ala-Archa	4.12	33	⇓Pn	Pn	22 09 06.2	+1.6
	1.6nm,0.3s						
AAK				⇓Lg	Lg	22 10 04.3	
	4.4nm,0.9s						
KBK	Karagaybulak	4.33	36	P	Pn	22 09 09.8	+2.2
	SNR=5.7						
CHMS	Chumysh	4.52	32	P	Pn	22 09 12.0	+1.9
	SNR=7.7						
CHMS	Chumysh	4.52	32	⇑Pn	Pn	22 09 11.9	+1.8
	3.0nm,0.4s						
CHMS				⇓Lg	Lg	22 10 14.9	
	2.8nm,0.5s						
USP	Ospenovka	4.65	28	P	Pn	22 09 13.3	+1.5
	SNR=7.9						
DGS	Degeres	5.17	37	eP	Pb	22 09 24.9	-7.1
	1.4nm,0.5s						
DGS				eS	Sb	22 10 28.1	-6.1
	1.3nm,0.8s						

KRNET 15 22:09:41.1±0.1,42.21N×76.48E,h35km,mb1.7,8C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	Ulahol	0.18	283	⇓iP	Pn	22 09 47.7	-0.4
	baz=83						
ULHL				⇓iS	Sn	22 09 51.9	-0.9
	baz=83						
ULHL	Ulahol	0.18	283	P	Pn	22 09 48.3	+0.2
	SNR=17						
BOOM	Boomskoye usch	0.49	305	⇑iP	Pn	22 09 51.8	-0.1
	baz=6.0						
BOOM				⇑iS	Sn	22 09 59.3	0.0
	baz=6.0						
KDJ	Kajisay	0.52	98	⇑iP	Pn	22 09 52.2	-0.1
	baz=98						
KDJ				⇑iS	Sn	22 10 00.0	-0.1
	baz=98						
NRN	Naryn	0.85	205	⇑iP	Pn	22 09 57.9	+1.0
	baz=6.0						
NRN				⇑eS	Sn	22 10 10.0	+1.7
	baz=6.0						
KZA	Kyzart	0.93	263	⇑iP	Pn	22 09 58.4	+0.4
	baz=63						
KZA				⇑eS	Sn	22 10 10.9	+0.6
	baz=63						

IDC 15 22:19:02.4±0.9,11.89N×86.16W,h0km,mb3.9/9, mb1 4.1/12,mb1mx3.9/36,mbtmp3.9/12,ML3.1/3,MS3.5/4, Ms1 3.5/4,ms1mx2.9/34,Error ellipse: s-maj=42.7km s-min=16.0km az=50.0
UCR 15 22:19:04.5±2.1,11.08N×87.02W,h65km±64km,MD4.2, ML3.5,mb4.4(NEIC)
SNET 15 22:19:05.5±0.9,11.34N×86.90W,h114km±24km,ML3.6
INET 15 22:19:05.8,11.14N×86.95W,h21km,ML3.8
NEIC 15 22:19:11.0±2.6,11.44N±0.09×86.71W±0.10,h79km±7km, mb4.4/46,Error ellipse: s-maj=16.7km s-min=8.4km az=49.0
ISC 15 22:19:07.4±1.3,11.25N±0.07×86.90W±0.06,h50km±11km, n105,σ1.77/109,mb4.4/28,MS3.5/3,2D,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	0.97	18	⇓eP	Pn	22 19 25.4	+0.5
COPN				eS	Sn	22 19 42.1	+4.5
COPN	Copaltepe	0.97	18	⇓eP	Pn	22 19 25.4	+0.5
COPN				eS	Sn	22 19 42.1	+4.5
MOMN	Momotombo	1.21	17	eP	Pn	22 19 28.4	+0.4
MOMN				eS	Sn	22 19 46.9	+3.6
MOMN	Momotombo	1.21	17	eP	Pn	22 19 28.4	+0.4
MOMN				eS	Sn	22 19 46.9	+3.6
CRIN	San Cristobal	1.45	354	eP	Pn	22 19 30.9	-0.4
NY14	Universidad de	1.47	114	iP	Pn	22 19 29.4	-2.2
LAPC	Finca la Perla	1.52	108	iP	Pn	22 19 29.9	-2.4
BUEV	Buena Vista	1.54	107	iP	Pn	22 19 30.2	-2.3
GPS3	Bodega del ICE	1.59	108	iP	Pn	22 19 31.2	-2.2
GUAI	GUAI	1.68	125	iP	Pn	22 19 31.4	-3.0
LIM1	Limonal	1.71	109	iP	Pn	22 19 32.8	-2.1
GUAB	Guayabo de Bag	1.73	108	iP	Pn	22 19 33.1	-2.1
MESS	Mesas	1.75	107	iP	Pn	22 19 34.4	-1.0
COLC	Colonia	1.77	109	iP	Pn	22 19 33.1	-2.6
HORNC	Hornillas	1.78	107	iP	Pn	22 19 34.2	-1.6
CUI	Cuipilapa	1.81	109	eP	Pn	22 19 34.8	-1.4
ACON	Acoyapa	1.84	67		Pn	22 19 35.1	-1.5
ACON	Acoyapa	1.84	67	eP	Pn	22 19 35.1	-1.5
ESTN	Estel	1.91	16		Pn	22 19 37.2	-0.5
JTS	Las Juntas de	2.14	116	Pn	Pn	22 19 39.0	-1.7
	16nm,0.3s,baz=4.4,slow=6.9,SNR=54						
JTS				LR	LR	22 20 09.6	
	comp=Z,137nm,18.6s,baz=8.0,slow=34						
JTS				Sn	Sn	22 20 11.4	+5.2
	30nm,0.3s,baz=7.0,slow=32,SNR=3.8						
JTS	Las Juntas de	2.14	116		Pn	22 19 41.7	+0.9
JTS	Las Juntas de	2.14	116	eP	Pn	22 19 38.6	-2.2
CNCH	Conchagua	2.21	336	eP	Pn	22 19 41.0	-0.8
CNCH	Conchagua	2.21	336	eP	Pn	22 19 41.0	-0.8
LCND	La Caada	2.26	335	eP	Pn	22 19 41.0	-1.4
LCND				eS	Sn	22 20 09.1	0.0
LCND				IAML		22 20 23.4	
	comp=Z,325nm,0.6s						
LCND	La Caada	2.26	335	eP	Pn	22 19 41.0	-1.4
LCND				eS	Sn	22 20 09.1	0.0
LCND				IAML		22 20 23.4	
	comp=Z,325nm,0.6s						
ARE1	Arenal 1	2.29	110	eP	Pn	22 19 42.8	0.0
JUCU	Jucuar¡n	2.39	327	eP	Pn	22 19 43.5	-0.7
JUCU	Jucuar¡n	2.39	327	eP	Pn	22 19 43.5	-0.7
FAGO	Alcalda de S	2.70	334	eP	Pn	22 19 47.4	-1.0
FAGO				eS	Sn	22 20 19.6	-0.3
FAGO	Alcalda de S	2.70	334	eP	Pn	22 19 47.4	-1.0
FAGO				eS	Sn	22 20 19.6	-0.3
TGUH	Tegucigalpa,Un	2.81	353		Pn	22 19 50.7	+0.6
HDC	Heredia	3.01	114	Pn	Pn	22 19 54.3	+1.6
LFRS	El Faro	3.16	318	eP	Pn	22 19 54.2	-0.7
LCR2	La Lucha 2	3.22	117	eP	Pn	22 19 55.1	-0.7
IXG	Ixpaco	4.51	310	eP	Pn	22 20 13.2	-0.2
IXG	Ixpaco	4.51	310	eP	Pn	22 20 13.2	-0.2
BRU2	Volcan	4.81	120	eP	Pn	22 20 18.4	+0.8
APG	El Apazote	5.09	317	Pn	Pn	22 20 21.6	+0.1
	comp=Z,0.3nm,0.3s,baz=110,slow=15,SNR=2.0						
APG				Sn	Sn	22 21 23.6	+4.4
	baz=85,slow=15,SNR=2.1						
BCIP	Isla Barro Col	7.26	106	Pn	Pn	22 20 52.7	+1.8
TEIG	Tepich	9.02	352	Pn	Pn	22 21 08.3	-6.8
	comp=Z,0.2nm,0.3s,baz=320,slow=17,SNR=1.9						
TEIG	Tepich	9.02	352		Pn	22 21 11.0	-4.1
CMIG	Matias Romero	9.67	308	Pn	Pn	22 21 25.4	+1.3
	comp=Z,0.3nm,0.3s,baz=163,slow=12,SNR=3.8						
CBCY	The Bluff, Cay	10.89	38	Pn	Pn	22 21 37.5	-3.1
ROSC	El Rosal	13.99	116	LR	LR	22 28 04.0	
	comp=Z,100nm,20.8s,baz=186,slow=40						
ATAH	Atahualpa	20.13	155	LR	LR	22 30 36.0	
	comp=Z,108nm,18.0s,baz=334,slow=34						
Z50A	Ashland	21.92	2	P	P	22 23 56.7	+0.1
237A	Washetta, Mont	22.23	340	P	P	22 23 59.5	-0.3
GOGA	Godfrey	22.28	8	P	P	22 23 58.6	-1.8
GOGA				IAmb	IAmb	22 24 09.3	
	comp=Z,28nm,1.4s						
Y49A	Blount Mountai	22.51	1	P	P	22 24 02.9	0.0
Y49A				IAmb	IAmb	22 24 05.7	
	comp=Z,16nm,1.2s						
Y52A	Lilburn	22.66	6	P	P	22 24 04.2	-0.3
Y52A				IAmb	IAmb	22 24 16.3	
	comp=Z,25nm,1.2s						
WHTX	Lake Whitney,	22.82	336	P	P	22 24 05.5	-0.7
OXF	Oxford	23.27	355	P	P	22 24 10.2	-0.4
OXF				IAmb	IAmb	22 24 11.5	
	comp=Z,18nm,0.8s						
X51A	Calhoun	23.29	4	P	P	22 24 10.8	0.0
X51A				IAmb	IAmb	22 24 12.1	
	comp=Z,15nm,0.9s						
TXAR	Lajitas Array	23.84	321	P	P	22 24 16.7	+0.6
	comp=Z,2.6nm,0.8s,baz=136,slow=10,SNR=27						
TXAR				PcP	PcP	22 28 02.4	+4.0
	comp=Z,0.9nm,0.8s,baz=137,slow=4.4,SNR=7.3						
TX31	Lajitas Ar. Si	23.84	321	P	P	22 24 17.4	+1.2
TX32	Lajitas Array	23.84	321	P	P	22 24 17.4	+1.2
W50A	Signal Mountai	23.89	3	P	P	22 24 16.5	0.0
BG3	Lake Jocassee	23.91	8	P	P	22 24 17.2	+0.5
UALR	University of	23.94	349	P	P	22 24 15.4	-1.5
UALR				IAmb	IAmb	22 24 22.5	
	comp=Z,6.0nm,0.6s						
MIAR	Mount Ida	23.98	346	P	P	22 24 17.3	+0.1
CPCT	Cooper Cave	24.19	5	P	P	22 24 19.2	0.0
CPCT				IAmb	IAmb	22 24 22.2	
	comp=Z,16nm,0.9s						
ABTX	Abilene, Hawle	24.29	333	P	P	22 24 20.3	+0.1
V51A	Loudon	24.55	5	P	P	22 24 22.9	+0.4
V51A				IAmb	IAmb	22 24 32.4	
	comp=Z,16nm,1.1s						
V53A	Saluda	24.59	8	P	P	22 24 23.8	+0.9
W57A	Gilead	24.61	14	P	P	22 24 22.3	-0.7
CLTN	Cedars of Leba	24.74	1	P	P	22 24 24.0	-0.1
CLTN				IAmb	IAmb	22 24 26.6	
	comp=Z,11nm,0.9s						
LCAR	Lake Charles	25.01	352	P	P	22 24 25.8	-0.8
U40A	Yellville	25.57	349	IAmb	IAmb	22 24 32.5	
	comp=Z,8.0nm,0.8s						
FNO	Franklin	25.73	340	P	P	22 24 33.6	+0.4
WMOK	Wichita Mounta	25.77	337	P	P	22 24 35.3	+1.7
WMOK				IAmb	IAmb	22 24 44.4	
	comp=Z,12nm,1.1s						
T49A	Edmonton	25.77	3	P	P	22 24 33.7	+0.1
T49A				IAmb	IAmb	22 24 36.9	
	comp=Z,23nm,1.5s						
TUL1	Leonard	25.84	343	P	P	22 24 33.1	-1.1
TUL1				IAmb	IAmb	22 24 34.3	
	comp=Z,9.8nm,0.9s						
P48A	Milroy	28.13	2	P	P	22 24 54.5	-0.2
P48A				IAmb	IAmb	22 24 54.7	
	comp=Z,18nm,1.3s						
ANMO	Albuquerque	29.55	326	P	P	22 25 07.4	-0.2
	comp=Z,0.4nm,0.3s,baz=164,slow=8.1,SNR=3.6						
N53A	Lisbon	29.92	9	P	P	22 25 10.3	-0.3
N53A				IAmb	IAmb	22 25 11.3	
	comp=Z,12nm,0.8s						

SAML	**Samuel**	**30.97**	**129**	P	**P**	**22 25 20.4**	**+0.3**
SAML				IAmb	IAmb	22 25 21.0	
	comp=Z,5.2nm,0.8s						
M56A	**Emporium**	**31.08**	**13**	P	**P**	**22 25 20.6**	**-0.2**
N59A	**State Game Lan**	**31.14**	**16**	P	**P**	**22 25 20.4**	**-0.9**
M57A	**Sunshine Farm,**	**31.18**	**14**	P	**P**	**22 25 21.4**	**-0.3**
L59A	**Walton**	**32.52**	**17**	P	**P**	**22 25 33.0**	**-0.5**
H43A	**Windswept, Lux**	**33.11**	**359**	P	**P**	**22 25 36.6**	**-1.9**
ECSD	**EROS Data Cent**	**33.44**	**347**	IAmb	IAmb	22 25 40.8	
	comp=Z,5.8nm,0.8s						
COWI	**Conover**	**34.78**	**357**	P	**P**	**22 25 51.8**	**-1.3**
PDAR	**Pinedale Array**	**37.08**	**332**	P	**P**	**22 26 13.0**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=113,slow=6.9,SNR=2.1						
REDW	**Red Top Meadow**	**38.14**	**331**	P	**P**	**22 26 22.6**	**+0.5**
REDW				IAmb	IAmb	22 26 23.6	
	comp=Z,6.2nm,1.1s						
NVAR	**Mina Array Bea**	**38.95**	**319**	P	**P**	**22 26 31.3**	**+2.4**
	comp=Z,1.0nm,0.8s,baz=112,slow=8.9,SNR=4.7						
NVAR				PcP	**PcP**	**22 28 41.2**	**+2.5**
	comp=Z,2.1nm,0.8s,baz=136,slow=4.2,SNR=7.9						
ULM	**Lac du Bonnet**	**39.58**	**351**	P	**P**	**22 26 31.7**	**-2.0**
	comp=Z,4.7nm,0.8s,baz=169,slow=8.4,SNR=8.3						
ULM	**Lac du Bonnet**	**39.58**	**351**	IAmb	IAmb	22 26 32.6	
	comp=Z,6.1nm,0.9s						
SCHQ	**Schefferville**	**46.27**	**16**	P	P	22 27 22.9	-4.9
	comp=Z,2.5nm,0.8s,baz=342,slow=20,SNR=2.6						
SCHQ	**Schefferville**	**46.27**	**16**	P	**P**	**22 27 23.5**	**-4.3**
BDFB	**Brasilia**	**46.86**	**124**	P	**P**	**22 27 31.5**	**-1.6**
	comp=Z,2.9nm,0.8s,baz=268,slow=8.5,SNR=4.1						
BDFB	**Brasilia**	**46.86**	**124**	IAmb	IAmb	22 27 45.8	
	comp=Z,6.5nm,1.2s						
CPUP	**Villa Florida**	**47.14**	**143**	LR	LR	22 47 44.7	
	comp=Z,53nm,18.5s,baz=224,slow=36						
FCC	**Fort Churchill**	**47.73**	**355**	P	**P**	**22 27 37.6**	**-1.4**
FCC				IAmb	IAmb	22 27 53.1	
	comp=Z,6.4nm,1.2s						
YKA	**Yellowknife Ar**	**54.90**	**345**	P	**P**	**22 28 31.9**	**-0.8**
	comp=Z,1.9nm,1.1s,baz=136,slow=7.5,SNR=12						
YKA				PcP	**PcP**	**22 29 34.7**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=144,slow=4.0,SNR=6.1						
ILAR	**Eielson Array**	**67.33**	**336**	P	**P**	**22 29 56.6**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=118,slow=6.2,SNR=4.6						
AFI	**Afiamalu**	**87.78**	**255**	LR	LR	23 06 48.2	
	comp=Z,35nm,18.0s,baz=79,slow=32						
SONM	**Songino Array**	**120.00**	**350**	PKP	**PKiKP**	**22 37 53.4**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=71,slow=1.7,SNR=2.6						
KSRS	**Korea Array**	**121.57**	**328**	PKP	**PKiKP**	**22 37 57.8**	**+1.7**
	comp=Z,1.0nm,0.8s,baz=12,slow=1.2,SNR=6.7						
KSH	**Kashi**	**127.04**	**17**	PKP	**PKiKP**	**22 38 07.8**	**+0.7**
KSH				sPKP		22 38 21.9	
KSH				PP	**PP**	**22 40 08.1**	**+4.2**
LZH	**Lanzhou**	**131.84**	**348**	*e*PKP	**PKPdf**	**22 38 16.3**	**+0.5**
LZH				pPKP	pPKPdf	22 38 32.5	+1.5
LZH				sPKP		22 38 39.3	
ASAR	**Alice Springs**	**139.31**	**247**	PKhKP	**PKPdf**	**22 38 28.2**	**-1.7**
	comp=Z,0.4nm,0.9s,baz=116,slow=2.2,SNR=3.3						
WRA	**Warramunga Arr**	**139.44**	**253**	PKhKP	**PKPdf**	**22 38 31.8**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=73,slow=2.8,SNR=3.2						
CMAR	**Chiang Mai Arr**	**149.92**	**349**	PKPbc	**PKPbc**	**22 38 52.2**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=322,slow=3.5,SNR=4.8						

*IDC **15** 22:45:01.6±2.7, 5°.34N×123°.87E, h551km±38km, mb3.0/8, mb1 3.1/8, mb1mx2.8/41, mbtmp4.0/8, Error ellipse: s-maj=29.0km s-min=9.8km az=64.0*

ISC 15 22:44:57.9±0.8, **5°.4N**±0°.1×**123°.9E**±0°.2, **h500**km, **n10,** σ**1§24**/12, **mb3.8**/9, **1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**2.03**	**37**	⇑*i*P	**S**	**22 46 55.8**	**-0.5**
FITZ	**Fitzroy Crossi**	**23.39**	**176**	P	**P**	**22 49 27.9**	**+0.7**
	1.0nm,0.4s,baz=357,slow=9.5,SNR=3.7						
WRA	**Warramunga Arr**	**27.19**	**158**	P	**P**	**22 50 00.3**	**-0.6**
	0.9nm,0.6s,baz=315,slow=11,SNR=31						
CMAR	**Chiang Mai Arr**	**27.57**	**300**	P	**P**	**22 50 06.3**	**+2.0**
	1.0nm,0.7s,baz=114,slow=7.8,SNR=8.2						
KRVT	**Keravat (AS076**	**29.73**	**108**	P	**P**	**22 50 24.6**	**+1.4**
	93nm,0.6s,baz=257,slow=4.9,SNR=3.7						
ASAR	**Alice Springs**	**30.49**	**162**	P	**P**	**22 50 30.0**	**+0.4**
	2.2nm,0.3s,baz=338,slow=7.1,SNR=69						
ASAR				S	**S**	**22 54 53.9**	**-1.5**
	0.3nm,0.6s,baz=343,slow=13,SNR=5.1						
NWAO	**Narrogin (SRO)**	**38.61**	**189**	P	**P**	**22 51 37.0**	**-0.5**
	1.8nm,0.5s,baz=40,slow=7.9,SNR=3.8						
SONM	**Songino Array**	**44.87**	**343**	P	**P**	**22 52 26.7**	**-0.4**
	0.5nm,0.9s,baz=154,slow=6.8,SNR=3.7						
MKAR	**Makanchi Array**	**54.59**	**326**	P	**P**	**22 53 38.9**	**+0.2**
	2.6nm,0.4s,baz=120,slow=8.0,SNR=108						
MKAR				PcP	**PcP**	**22 54 32.4**	**-1.8**
	0.4nm,0.4s,baz=137,slow=3.2,SNR=4.8						
ZALV	**Zalesovo Beam**	**57.84**	**334**	P	**P**	**22 54 00.2**	**-0.8**
	0.5nm,0.4s,baz=120,slow=8.5,SNR=3.2						

*IDC **15** 22:57:58.9±0.9, 5°.81S×146°.48E, h0km, mb3.8/9, mb1 4.0/12, mb1mx3.9/33, mbtmp3.9/12, ML3.9/2, MS3.1/5, Ms1 3.1/5, ms1mx2.8/25, Error ellipse: s-maj=35.5km s-min=12.9km az=87.0*

ISC 15 22:58:00.5±0.8, **5°.83S**±0°.08×**146°.5E**±0°.2, **h10**km, **n15,** σ**1§13**/16, **mb3.8**/9, **MS3.0**/3, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.61**	**170**	Pn	**Pn**	**22 58 57.2**	**+0.6**
	13nm,0.3s,baz=337,slow=5.2,SNR=17						
PMG				Pg	**Pb**	**22 59 05.8**	**+1.3**
	8.5nm,0.3s,baz=301,slow=5.5,SNR=6.9						
PMG				Sn	**Sn**	**22 59 36.5**	**-2.8**
	8.3nm,0.3s,baz=351,slow=3.5,SNR=3.6						
PMG				Lg	Lg	22 59 55.0	
	14nm,0.3s,baz=332,slow=23,SNR=5.9						
PMG				LR	LR	23 00 38.1	
	comp=Z,249nm,18.0s,baz=2.0,slow=44						
KRVT	**Keravat (AS076**	**5.71**	**75**	LR	LR	23 01 14.5	
	comp=Z,101nm,18.9s,baz=224,slow=34						
CTA	**Charters Tower**	**14.18**	**181**	Pn	**Pn**	**23 01 22.4**	**+0.9**
	0.5nm,0.3s,baz=356,slow=16,SNR=4.0						
WRA	**Warramunga Arr**	**18.35**	**219**	P	**P**	**23 02 14.8**	**-0.5**
	0.3nm,0.3s,baz=47,slow=12,SNR=16						
ASAR	**Alice Springs**	**21.48**	**213**	P	**P**	**23 02 49.8**	**+0.2**
	2.7nm,0.6s,baz=54,slow=8.6,SNR=58						
ASAR				LR	LR	23 11 44.3	
	comp=Z,61nm,19.4s,baz=52,slow=38						
FITZ	**Fitzroy Crossi**	**23.74**	**237**	P	**P**	**23 03 12.4**	**-0.7**
	1.3nm,0.3s,baz=55,slow=11,SNR=6.6						
FITZ				LR	LR	23 12 35.6	
	comp=Z,49nm,18.4s,baz=22,slow=37						
STKA	**Stephens Creek**	**26.32**	**189**	P	**P**	**23 03 36.5**	**0.0**
	3.9nm,0.8s,baz=20,slow=10,SNR=6.7						
STKA				LR	LR	23 14 55.9	
	comp=Z,48nm,18.2s,baz=101,slow=39						
KSRS	**Korea Array**	**46.42**	**340**	P	**P**	**23 06 27.6**	**+0.3**
	0.4nm,0.4s,baz=148,slow=10,SNR=3.3						
USRK	**Ussuriysk Ar.**	**51.49**	**347**	P	**P**	**23 07 05.8**	**-0.4**
	0.9nm,0.7s,baz=166,slow=5.5,SNR=2.1						
SONM	**Songino Array**	**64.02**	**331**	P	**P**	**23 08 35.4**	**+1.0**
	0.2nm,0.6s,baz=157,slow=4.1,SNR=2.5						
MKAR	**Makanchi Array**	**77.05**	**321**	P	**P**	**23 09 54.2**	**+0.2**
	0.4nm,0.8s,baz=94,slow=11,SNR=4.2						
ZALV	**Zalesovo Beam**	**78.60**	**328**	P	**P**	**23 10 02.6**	**+0.3**
	0.3nm,0.4s,baz=109,slow=7.8,SNR=2.3						
ILAR	**Eielson Array**	**85.52**	**23**	P	**P**	**23 10 38.0**	**-0.5**
	0.6nm,0.6s,baz=251,slow=4.9,SNR=8.0						
TORD	**Torodi Ar. Bea**	**144.57**	**284**	PKP	**PKPdf**	**23 17 37.2**	**-1.2**
	2.1nm,0.9s,baz=62,slow=3.4,SNR=9.3						
DBIC	**Dimbokro**	**151.52**	**273**	PKPbc	**PKPbc**	**23 17 54.5**	**-1.5**
	1.9nm,0.7s,baz=124,slow=3.6,SNR=3.0						

*NEIC **15** 23:20:46.2±1.6, 37°.29N±0°.02×97°.65W±0°.05, h5km±1km, mb_Lg3.1/36, Error ellipse: s-maj=7.0km s-min=2.9km az=288.0*

*ANF **15** 23:20:46.2±0.5, 37°.27N×97°.63W, h5km, ML3.9/12, Error ellipse: s-maj=5.9km s-min=4.1km az=48.0*

ISC 15 23:20:45.7±0.8, **37°.31N**±0°.03×**97°.63W**±0°.03, **h10**km, **n43,** σ**1§21**/42, **Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**1.44**	**230**		**Pb**	**23 21 11.8**	**-0.8**
U32A					**Sg**	**23 21 35.5**	**-0.5**
ADOK	**Arcadia Dam**	**1.66**	**173**	Pn	**Pb**	**23 21 16.1**	**-0.3**
OKCFA	**Oklahoma City**	**1.89**	**176**	Pn	**Pb**	**23 21 20.1**	**-0.2**
OKCSW	**OKLAHOMA CITY**	**1.90**	**175**	Pn	**Pb**	**23 21 19.6**	**-0.9**
OKCSW					**Sg**	**23 21 45.2**	**-1.6**
KSU1	**Kansas State U**	**1.96**	**24**	IAmb_Lg		23 21 52.3	
	comp=Z,74nm,0.9s						
KSU1	**Kansas State U**	**1.96**	**24**	P	**Pb**	**23 21 20.7**	**-0.8**
	baz=204						
KSU1				S	**Sb**	**23 21 47.3**	**+1.2**
	baz=204						
TUL1	**Leonard**	**2.03**	**133**		**Pb**	**23 21 21.2**	**-1.4**
TUL1				IAmb_Lg		23 21 52.0	
	comp=Z,121nm,0.8s						
TUL1	**Leonard**	**2.03**	**133**	P	**Pb**	**23 21 21.4**	**-1.2**
	baz=313						
TUL1				S	**Sb**	**23 21 47.4**	**-0.5**
	baz=313						
FNO	**Franklin**	**2.05**	**175**		**Pb**	**23 21 22.5**	**-0.5**
W35A	**Tecumseh**	**2.23**	**164**		**Pb**	**23 21 24.6**	**-1.6**
CBKS	**Cedar Bluff**	**2.25**	**313**		**Pb**	**23 21 24.9**	**-1.4**
CBKS	**Cedar Bluff**	**2.25**	**313**	P	**Pn**	**23 21 23.6**	**+0.7**
	baz=132						
CBKS				S	**Sb**	**23 21 53.4**	**-0.8**
	baz=132						
WMOK	**Wichita Mounta**	**2.73**	**200**		**Pn**	**23 21 30.3**	**+0.8**
WMOK	**Wichita Mounta**	**2.73**	**200**	P	**Pn**	**23 21 30.6**	**+1.0**
	baz=20						
WMOK				S	**Sn**	**23 22 04.1**	**+1.5**
	baz=20						
HHAR	**Hobbs**	**3.13**	**108**		**Pn**	**23 21 37.0**	**+1.9**
X37A	**Clayton**	**3.27**	**145**		**Pn**	**23 21 38.0**	**+1.0**
W39A	**Magazine**	**3.75**	**123**	P	**Pn**	**23 21 44.8**	**+1.2**
	baz=305						
W39A				S	**Sn**	**23 22 28.9**	**+1.1**
	baz=305						
U40A	**Yellville**	**3.94**	**102**		**Pn**	**23 21 47.3**	**+1.1**
U40A				IAmb_Lg		23 22 49.1	
	comp=Z,32nm,0.9s						
U40A	**Yellville**	**3.94**	**102**	P	**Pn**	**23 21 47.2**	**+0.9**
	baz=285						
U40A				S	**Sn**	**23 22 34.1**	**+1.5**
	baz=285						
AMTX	**Amarillo**	**4.08**	**235**	Pb	**Pb**	**23 21 58.6**	**+1.0**
	baz=52						
AMTX				S	**Sn**	**23 22 37.8**	**+1.8**
	baz=52						
BGNE	**Belgrade**	**4.12**	**354**	IAmb_Lg		23 23 07.9	
	comp=Z,38nm,0.8s						
BGNE	**Belgrade**	**4.12**	**354**	P	**Pn**	**23 21 50.2**	**+1.5**
	baz=174						
MGMO	**Mountain Grove**	**4.28**	**90**		**Pn**	**23 21 51.0**	**+0.1**
MIAR	**Mount Ida**	**4.29**	**129**		**Pn**	**23 21 51.4**	**+0.5**
MIAR				IAmb_Lg		23 23 01.9	
	comp=Z,36nm,0.8s						
MIAR	**Mount Ida**	**4.29**	**129**	P	**Pn**	**23 21 52.7**	**+1.7**
	baz=311						
MIAR				S	**Sn**	**23 22 42.4**	**+1.4**
	baz=311						
KSCO	**Kaye Shedlock'**	**4.29**	**295**	Pb	**Pb**	**23 22 02.7**	**+1.3**
	baz=112						
WHAR	**Wooly Hollow**	**4.76**	**113**		**Pn**	**23 21 57.5**	**+0.1**
WHAR				IAmb_Lg		23 23 17.9	
	comp=Z,43nm,0.7s						
X40A	**Basin Creek Fa**	**4.80**	**124**		**Pn**	**23 21 60.0**	**+2.0**
X40A				IAmb_Lg		23 23 19.3	
	comp=Z,34nm,0.7s						
X40A	**Basin Creek Fa**	**4.80**	**124**	Pb	**Pb**	**23 22 09.7**	**-0.1**
	baz=307						
X40A				S	**Sn**	**23 22 54.1**	**+0.5**
	baz=307						
W41B	**Gary Mavity, V**	**4.84**	**114**	IAmb_Lg		23 23 26.7	
	comp=Z,36nm,0.9s						
W41B	**Gary Mavity, V**	**4.84**	**114**	Pb	**Pb**	**23 22 11.4**	**+0.9**
	baz=298						
W41B				S	**Sn**	**23 22 54.8**	**+0.2**
	baz=298						
OGNE	**Ogallala**	**5.00**	**318**	Pn	**Pn**	**23 22 02.4**	**+1.7**
OGNE				IAmb_Lg		23 23 37.2	
	comp=Z,26nm,0.8s						
T25A	**Trinidad**	**5.42**	**270**	IAmb_Lg		23 23 47.7	
	comp=Z,26nm,0.8s						
SCIA	**State Center**	**5.72**	**35**	IAmb_Lg		23 23 53.1	
	comp=Z,21nm,0.7s						
PBMO	**Poplar Bluff**	**5.78**	**93**	IAmb_Lg		23 23 49.5	
	comp=Z,29nm,0.8s						
S44A	**Carbondale**	**6.67**	**84**	IAmb_Lg		23 24 16.5	
	comp=Z,34nm,0.9s						
P43A	**Skaggs, Pawnee**	**6.77**	**67**	IAmb_Lg		23 24 23.9	
	comp=Z,32nm,0.9s						
L40A	**Anamosa**	**6.85**	**44**	IAmb_Lg		23 24 31.9	
	comp=Z,20nm,0.9s						
HDIL	**Hopedale**	**7.26**	**61**	IAmb_Lg		23 24 39.3	
	comp=Z,27nm,0.9s						
N23A	**Red Feather La**	**7.39**	**302**	IAmb_Lg		23 24 43.3	
	comp=Z,23nm,1.1s						
SMCO	**Snowmass**	**7.59**	**287**		**Pg**	**23 23 08.9**	**-2.2**
O44A	**Mansfield**	**7.70**	**66**	IAmb_Lg		23 24 56.5	
	comp=Z,17nm,0.8s						
RSSD	**Black Hills**	**8.37**	**326**	IAmb_Lg		23 25 20.7	
	comp=Z,17nm,0.7s						

*BEO **15** 23:35:06.7±0.9, 38°.23N×20°.51E, h25km±5km, ML3.0/4*

*ATH **15** 23:35:07.0, 38°.32N×20°.42E, h15km, ML2.9/22, Error ellipse: s-maj=1.2km s-min=0.6km az=262.0*

*THE **15** 23:35:07.3, 38°.33N×20°.41E, h13km, ML3.0/7, Error ellipse: s-maj=1.1km s-min=0.3km az=268.0*

ISC 15 23:35:06.9±0.8, **38°.31N**±0°.02×**20°.43E**±0°.02, **h16**km±4km, **n83,** σ**0§68**/125, **1C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF1	**Kardakata, Kep**	**0.05**	**135**	P	**Pg**	**23 35 09.7**	**-0.1**
KEF1				S	**Sg**	**23 35 11.5**	**-0.3**
KEF4	**Livadi, Kephal**	**0.06**	**181**	P	**Pg**	**23 35 09.9**	**0.0**
KEF4				S	**Sg**	**23 35 12.0**	**+0.2**
AGT1	**Agia Thekli**	**0.07**	**208**	P	**Pg**	**23 35 10.0**	**0.0**
AGT1				S	**Sg**	**23 35 12.1**	**+0.1**
LXR1	**Lixouri, Cepha**	**0.11**	**175**	P	**Pg**	**23 35 10.6**	**+0.2**
LXR1				S	**Sb**	**23 35 13.1**	**-0.1**
LXRA	**Lixouri, Kepha**	**0.11**	**175**	P	**Pg**	**23 35 10.5**	**+0.1**
LXRA				S	**Sb**	**23 35 13.4**	**+0.2**
KEF3	**Kipouria, Keph**	**0.13**	**209**	P	**Pg**	**23 35 10.7**	**+0.1**
KEF3				S	**Sb**	**23 35 13.4**	**-0.2**
CHV1	**Chavriata, Kef**	**0.13**	**195**	P	**Pg**	**23 35 10.8**	**+0.1**
ARGA	**Argostoli. Kep**	**0.14**	**163**	P	**Pg**	**23 35 10.8**	**+0.1**
ARGA				S	**Sg**	**23 35 13.5**	**+0.2**
ARG2	**Argostoli**	**0.14**	**160**	P	**Pg**	**23 35 10.9**	**+0.1**
ARG2				S	**Sg**	**23 35 13.6**	**+0.3**
KEF2	**Argostoli. Kep**	**0.15**	**162**	P	**Pg**	**23 35 11.0**	**+0.1**
KEF2				S	**Sg**	**23 35 14.0**	**+0.3**
FSK	**Fiskardo**	**0.18**	**36**	P	**Pg**	**23 35 11.3**	**0.0**
FSK				S	**Sg**	**23 35 14.2**	**-0.1**
	17μm,0.2s						
VLS	**Valsamata**	**0.19**	**136**	P	**Pg**	**23 35 11.3**	**-0.1**
VLS				S	**Sg**	**23 35 14.6**	**+0.1**
	35μm,0.1s						
VLS	**Valsamata**	**0.19**	**136**	P	**Pg**	**23 35 11.4**	**-0.1**
VLS				S	**Sg**	**23 35 14.6**	**+0.1**
VLS				AML	AML	23 35 14.7	
	comp=N,76857μm,0.2s						
VLS				AML	AML	23 35 15.3	
	comp=E,59834μm,0.2s						
EVGI	**Lefkada island**	**0.36**	**30**	P	**Pg**	**23 35 14.3**	**0.0**
EVGI				S	**Sg**	**23 35 19.8**	**+0.5**
EVGI	**Lefkada island**	**0.36**	**30**	P	**Pg**	**23 35 14.5**	**+0.2**
EVGI				S	**Sb**	**23 35 20.2**	**0.0**
MGNA	**Meganis**	**0.45**	**40**	P	**Pg**	**23 35 15.6**	**-0.3**
MGNA				S	**Sg**	**23 35 21.5**	**-0.4**
MGNA				AML	AML	23 35 22.8	
	comp=N,2700μm,0.3s						
MGNA				AML	AML	23 35 23.1	
	comp=E,4070μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.47**	**157**	P	**Pg**	**23 35 16.1**	**-0.3**
VLMS				S	**Sb**	**23 35 24.3**	**+0.6**
VLMS				AML	AML	23 35 25.9	
	comp=E,6983μm,0.2s						
VLMS				AML	AML	23 35 35.8	
	comp=N,7714μm,0.5s						
LKD2	**Lefkada island**	**0.51**	**21**	P	**Pg**	**23 35 16.8**	**-0.2**
LKD2				S	**Sb**	**23 35 24.5**	**-0.2**
	comp=N,2μm,0.5s						
LKD2	**Lefkada island**	**0.51**	**21**	P	**Pg**	**23 35 16.9**	**-0.2**
LKD2				S	**Sb**	**23 35 24.9**	**+0.2**
LKD2				AML	AML	23 35 29.4	
	comp=E,2870μm,0.3s						
LKD2				AML	AML	23 35 30.0	
	comp=N,4843μm,0.6s						
TSLK	**Tsoukalades, L**	**0.54**	**19**	P	**Pg**	**23 35 17.6**	**0.0**
TSLK				S	**Sb**	**23 35 25.6**	**0.0**
	comp=N,2μm,0.5s						
TSLK	**Tsoukalades, L**	**0.54**	**19**	P	**Pg**	**23 35 17.6**	**0.0**
TSLK				S	**Sb**	**23 35 25.4**	**-0.2**
TSLK				AML	AML	23 35 27.9	
	comp=E,2854μm,0.6s						
TSLK				AML	AML	23 35 31.2	
	comp=N,3943μm,0.3s						
AST1	**Astakos**	**0.57**	**66**	P	**Pg**	**23 35 17.9**	**-0.2**
AST1				S	**Sb**	**23 35 27.2**	**+0.9**
ZAK2	**Zakynthos**	**0.64**	**144**	P	**Pg**	**23 35 19.6**	**+0.1**
ZAK2				S	**Sn**	**23 35 30.7**	**-0.5**
PDO	**Prodromos**	**0.66**	**64**	P	**Pg**	**23 35 19.2**	**-0.6**
PDO				S	**Sb**	**23 35 29.1**	**+0.1**
PDO	**Prodromos**	**0.66**	**64**	P	**Pg**	**23 35 19.0**	**-0.8**
PDO				S	**Sg**	**23 35 28.6**	**0.0**
PDO				AML	AML	23 35 37.4	
	comp=E,1951μm,0.8s						
PDO				AML	AML	23 35 38.6	
	comp=N,2647μm,0.3s						
VTN	**Vitineika**	**0.72**	**123**	P	**Pg**	**23 35 20.7**	**-0.2**
KRI1	**kERI**	**0.72**	**154**	P	**Pg**	**23 35 20.4**	**-0.5**
KRI1				S	**Sn**	**23 35 32.5**	**-0.6**
RLS	**Riolos of Patr**	**0.86**	**107**	P	**Pb**	**23 35 23.1**	**-0.3**
RLS				S	**Sn**	**23 35 36.2**	**-0.3**
RLS				AML	AML	23 35 43.4	
	comp=N,1667μm,0.5s						
RLS				AML	AML	23 35 43.5	
	comp=E,888μm,0.4s						
PVO	**Paravola**	**0.92**	**70**	P	**Pb**	**23 35 24.5**	**+0.1**
PVO				S	**Sn**	**23 35 38.4**	**+0.5**
	comp=E,1μm,0.5s						
PVO	**Paravola**	**0.92**	**70**	P	**Pg**	**23 35 24.7**	**+0.1**
PVO				AML	AML	23 35 44.1	
	comp=N,1678μm,0.4s						
PVO				AML	AML	23 35 44.3	
	comp=E,2334μm,0.7s						
UPR	**University Cam**	**1.07**	**91**	P	**Pg**	**23 35 28.0**	**+0.4**
DRO	**Drossia**	**1.07**	**109**	P	**Pb**	**23 35 26.9**	**-0.2**
DRO	**Drossia**	**1.07**	**109**	P	**Pb**	**23 35 27.0**	**-0.1**
DRO				AML	AML	23 35 49.4	
	comp=N,1276μm,0.3s						
DRO				AML	AML	23 35 52.6	
	comp=E,3260μm,0.6s						
ANX	**Ano Chora**	**1.21**	**76**	P	**Pn**	**23 35 29.3**	**+0.1**
ANX	**Ano Chora**	**1.21**	**76**	P	**Pn**	**23 35 29.2**	**+0.1**
ANX				AML	AML	23 35 52.4	
	comp=N,1492μm,0.6s						
ANX				AML	AML	23 35 52.6	
	comp=E,1419μm,0.6s						
IGT	**Igoumenitsa**	**1.22**	**357**	P	**Pb**	**23 35 29.8**	**+0.2**
IGT	**Igoumenitsa**	**1.22**	**357**	*e*Pg	**Pb**	**23 35 29.8**	**+0.2**
IGT				*e*Sg	**Sg**	**23 35 48.6**	**+2.2**
IGT	**Igoumenitsa**	**1.22**	**357**	P	**Pb**	**23 35 29.7**	**+0.2**
IGT				S	**Sg**	**23 35 46.5**	**+0.1**
IGT				AML	AML	23 35 49.9	
	comp=E,1096μm,0.7s						
IGT				AML	AML	23 35 51.5	
	comp=N,1127μm,0.3s						
LAKA	**Lakka**	**1.22**	**93**	P	**Pn**	**23 35 29.4**	**0.0**
LAKA				S	**Sn**	**23 35 46.0**	**+0.4**
	comp=N,440nm,0.4s						
LAKA	**Lakka**	**1.22**	**93**	P	**Pn**	**23 35 29.4**	**0.0**
LAKA				S	**Sg**	**23 35 47.8**	**+1.3**
LAKA				AML	AML	23 35 49.7	
	comp=E,814μm,0.4s						
LAKA				AML	AML	23 35 50.3	
	comp=N,1046μm,0.4s						
EVR	**Evrytania**	**1.24**	**60**	P	**Pn**	**23 35 29.8**	**+0.1**
EVR	**Evrytania**	**1.24**	**60**	P	**Pb**	**23 35 30.1**	**+0.2**
EVR				AML	AML	23 35 58.9	
	comp=N,486μm,0.5s						
EVR				AML	AML	23 36 03.0	
	comp=E,442μm,0.6s						
AMT	**Artemida-Makis**	**1.28**	**127**	P	**Pg**	**23 35 31.7**	**+0.2**
AMT				AML	AML	23 35 56.3	
	comp=E,1461μm,0.6s						
AMT				AML	AML	23 35 57.4	
	comp=N,1034μm,0.7s						
SERG	**Sergoula**	**1.29**	**85**	P	**Pn**	**23 35 30.1**	**-0.1**
SERG				S	**Sb**	**23 35 47.4**	**+0.4**
	comp=N,460nm,0.5s						
SERG	**Sergoula**	**1.29**	**85**	P	**Pn**	**23 35 30.1**	**-0.1**
SERG				S	**Sg**	**23 35 49.2**	**+0.8**
SERG				AML	AML	23 35 55.9	
	comp=N,928μm,0.5s						
SERG				AML	AML	23 36 01.5	
	comp=E,894μm,0.6s						
TRIZ	**Trizonia**	**1.30**	**87**	P	**Pn**	**23 35 30.2**	**-0.1**
TRIZ	**Trizonia**	**1.30**	**87**	P	**Pn**	**23 35 30.4**	**+0.1**
ALIK	**Aliki, Aigiali**	**1.33**	**92**	P	**Pn**	**23 35 31.0**	**+0.3**
KALE	**Kalithea**	**1.35**	**86**	P	**Pn**	**23 35 31.0**	**-0.1**
KALE	**Kalithea**	**1.35**	**86**	P	**Pn**	**23 35 31.4**	**+0.3**
KALE				AML	AML	23 36 02.6	
	comp=N,564μm,0.4s						
KALE				AML	AML	23 36 02.6	
	comp=E,360μm,0.9s						
JAN	**Janina**	**1.38**	**14**	P	**Pg**	**23 35 34.2**	**+0.7**
JAN				S	**Sg**	**23 35 53.0**	**+1.5**
JAN				AML	AML	23 35 55.8	
	comp=E,1221μm,0.6s						
JAN				AML	AML	23 35 55.8	
	comp=N,1008μm,0.4s						
KLV	**Kalavryta, Ach**	**1.39**	**101**	P	**Pb**	**23 35 32.3**	**-0.1**
KLV				S	**Sg**	**23 35 53.0**	**+1.4**
KLV				AML	AML	23 35 58.5	
	comp=E,365μm,0.5s						
KLV				AML	AML	23 35 58.5	
	comp=N,384μm,0.5s						
KASA	**Kassiopi**	**1.48**	**345**	P	**Pg**	**23 35 35.1**	**-0.3**
KEK	**Kerkira**	**1.48**	**341**	P	**Pb**	**23 35 34.1**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.51**	**62**	P	**Pb**	**23 35 35.2**	**+0.7**
MAKR				AML	AML	23 36 07.4	
	comp=E,633μm,0.5s						
MAKR				AML	AML	23 36 13.0	
	comp=N,749μm,0.5s						
ITM	**Ithomi**	**1.64**	**133**	P	**Pb**	**23 35 37.3**	**+0.6**
ITM				S	**Sg**	**23 35 59.8**	**0.0**
ITM				AML	AML	23 36 03.5	
	comp=N,324μm,0.6s						
ITM				AML	AML	23 36 11.4	
	comp=E,441μm,0.5s						
AGG	**Agios Georgios**	**1.65**	**64**	P	**Pg**	**23 35 38.0**	**-0.6**
AGG				AML	AML	23 36 07.5	
	comp=E,429μm,0.4s						
AGG				AML	AML	23 36 07.6	
	comp=N,396μm,0.4s						
PYL	**PYLOS**	**1.76**	**143**	P	**Pb**	**23 35 38.2**	**-0.5**
THL	**Klokotos Trika**	**1.76**	**44**	P	**Pb**	**23 35 39.1**	**+0.4**
KPRO	**Kipourio**	**1.79**	**24**	P	**Pb**	**23 35 40.7**	**-0.6**
AXAR	**Agios Charalam**	**1.81**	**75**	P	**Pb**	**23 35 39.9**	**+0.3**
VLX	**Vlachokerasia**	**1.81**	**121**	P	**Pb**	**23 35 40.0**	**+0.3**
VLX				S	**Sg**	**23 36 04.9**	**-0.3**
VLX				AML	AML	23 36 14.7	
	comp=N,601μm,0.5s						
VLX				AML	AML	23 36 18.4	
	comp=E,816μm,0.6s						
PROD	**Prodromos**	**1.95**	**91**	P	**Pb**	**23 35 42.3**	**+0.3**
LTK	**Loutraki**	**2.02**	**97**	P	**Pb**	**23 35 43.0**	**-0.3**
DYR	**Agios Nikonas**	**2.17**	**135**	P	**Pb**	**23 35 44.5**	**-1.2**
VIL2	**Platees**	**2.24**	**92**	P	**Pb**	**23 35 46.4**	**-0.6**
KRND	**KRANIDI**	**2.35**	**112**	P	**Pb**	**23 35 47.9**	**-0.9**
DID	**Didima**	**2.37**	**109**	P	**Pb**	**23 35 47.8**	**-1.3**
LIT	**Litokhoron**	**2.40**	**41**	P	**Pb**	**23 35 48.1**	**-1.6**
MRKA	**Markates**	**2.51**	**80**	P	**Pn**	**23 35 49.6**	**+2.5**
VLY	**Voula,Athens**	**2.70**	**99**	P	**Pn**	**23 35 51.4**	**+1.8**
OHR	**Ohrid**	**2.81**	**6**	*i* Pn	**Pg**	**23 36 01.1**	**+0.4**
TIR	**Tirane**	**3.06**	**352**	*e*Pn	**Pn**	**23 35 55.8**	**+1.2**
SRS	**Serrai**	**3.71**	**40**	*e*Pn	**Pn**	**23 36 02.5**	**-1.1**
SG1	**Sgolgore (BA)**	**3.84**	**312**	⇑*i*Pn	**Pn**	**23 36 06.6**	**+1.3**
SG1				Sn	**Sn**	**23 36 50.3**	**+0.1**
PDG	**Podgorica**	**4.21**	**348**	*e*Pn	**Pn**	**23 36 10.4**	**0.0**
PDG				*e*Sn	**Sn**	**23 36 58.7**	**-0.5**
BOSS	**Bosilegrad**	**4.46**	**20**	*e*Pn	**Pn**	**23 36 12.9**	**-1.0**
BARS	**Barje**	**4.62**	**13**	*e*Pn	**Pn**	**23 36 16.1**	**0.0**
TREB	**Trebinje**	**4.67**	**341**	*e*Pn	**Pn**	**23 36 16.8**	**0.0**
TREB				*e*Sn	**Sn**	**23 37 09.0**	**-1.7**
SJES	**Sjenica**	**4.96**	**356**	*e*Pn	**Pn**	**23 36 21.1**	**+0.4**
STON	**Ston**	**5.00**	**336**	*e*Pn	**Pn**	**23 36 20.7**	**-0.6**
BOVS	**Bovan**	**5.40**	**10**	*e*Pn	**Pn**	**23 36 27.0**	**+0.2**
BOVS				*e*Sn	**Sn**	**23 37 26.0**	**-2.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HAPS	Han Pijesak,BI	5.87	350	ePn	Pn	23 36 33.7	+0.3
HAPS				eSn	Sn	23 37 39.0	-1.4

ISK **16** *00:14:00.9, 34.31N 26.61E, h15km, ML3.4/15*
ATH **16** *00:14:01.7, 34.26N±26.54E, h10km±3km, ML2.7/3, Error ellipse: s-maj=4.7km s-min=2.4km az=10.0*
THE **16** *00:14:02.9, 34.48N±26.73E, h2km±7km, ML2.6/4, Error ellipse: s-maj=11.0km s-min=1.9km az=93.0*
IDC **16** *00:14:04.7±4.0, 34.45N±26.58E, h23km±27km, mb3.5/5, mb1 3.5/7, mb1mx3.2/48, mbtmp3.5/7, ML3.6/2, MS3.2/1, Ms1 3.2/1, ms1mx2.3/36, Error ellipse: s-maj=27.0km s-min=22.3km az=170.0*
DDA **16** *00:14:04.5, 35.10N±26.55E, h3km±5km, ML2.7*
ISC 16 00:14:04.3±1.6, **34.39N**±0.06 **26.58E**±0.03, **h23**km±12km, **n63**, σ1§**27**/71, **mb3.7**/5, **Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res
ZKR	Zakros	0.78	338	P	Pb	00 14 17.2	-2.1
ZKR				S	Sb	00 14 29.8	+0.3
	445nm,0.6s						
ZKR	Zakros	0.78	338	P	Pb	00 14 18.5	-0.8
ZKR				S	Sn	00 14 30.5	-0.4
ZKR				AML	AML	00 14 34.2	
	comp=E,1082μm,0.5s						
ZKR				AML	AML	00 14 43.5	
	comp=N,572μm,0.7s						
ZKR	Zakros	0.78	338	PG	Pb	00 14 18.2	-1.1
ZKR				SG	Sn	00 14 30.6	-0.4
STIA	Sitia Lasithi	0.91	334	P	Pb	00 14 20.5	-0.8
FRMA	Ierapetra Chan	0.94	312	P	Pb	00 14 21.1	-0.8
FRMA				S	Sb	00 14 33.7	-0.2
	comp=N,288nm,0.5s						
NPS	Neapolis	1.18	318	P	Pb	00 14 25.3	-0.1
NPS				S	Sb	00 14 42.1	+1.2
	comp=N,450nm,0.4s						
NPS	Neapolis	1.18	318	P	Pn	00 14 25.0	-0.3
NPS				S	Sb	00 14 42.3	+1.3
NPS				AML	AML	00 14 47.6	
	comp=N,696μm,0.5s						
NPS				AML	AML	00 14 47.8	
	comp=E,1113μm,0.6s						
LAST	Lasithi	1.19	311	P	Pn	00 14 24.9	-0.6
LAST				S	Sb	00 14 43.2	+1.9
	comp=E,258nm,0.5s						
LAST	Lasithi	1.19	311	P	Pn	00 14 25.0	-0.6
LAST				S	Sb	00 14 43.3	+2.1
LAST				AML	AML	00 14 47.8	
	comp=E,505μm,0.5s						
LAST				AML	AML	00 14 50.5	
	comp=N,545μm,0.7s						
KARP	Karpathos	1.25	22	P	Pb	00 14 28.7	+1.5
KARP	Karpathos	1.25	22	PN	Pn	00 14 25.5	-0.8
HRKL	Herakleio	1.53	308	PN	Pn	00 14 29.5	-0.6
SIVA	Sivas	1.59	294	P	Pb	00 14 32.1	-0.9
IDI	Anoyia	1.66	303	Pg	Pb	00 14 33.4	-0.7
	comp=N,1.7nm,0.3s,baz=133,slow=13,SNR=14						
IDI				Lg	Lg	00 14 57.9	
	comp=N,6.9nm,0.3s,baz=198,slow=23,SNR=11						
IDI	Anoyia	1.66	303	P	Pb	00 14 34.0	-0.2
IDI				S	Sb	00 14 57.8	+3.2
IDI	Anoyia	1.66	303	PN	Pn	00 14 31.3	-0.7
GVDS	Gavdos	2.10	283	PN	Pn	00 14 37.7	-0.4
GVD	Gavdhos	2.11	283	P	Pn	00 14 38.6	+0.5
GVD	Gavdhos	2.11	283	PN	Pn	00 14 37.4	-0.7
SANT	Santorini	2.18	335	PN	Pn	00 14 38.8	-0.3
SANT	Santorini	2.18	335	iP	Pn	00 14 34.0	-5.2
VAM	Vamos	2.21	298	P	Pb	00 14 41.9	-1.6
ARG	Arkhangelos	2.22	34	P	Pb	00 14 42.6	-1.0
ARG	Arkhangelos	2.22	34	PN	Pn	00 14 38.9	-0.7
THT2	Imerovigli	2.25	335	PN	Pn	00 14 39.7	-0.4
KOSK	Kos Island	2.38	8	PN	Pn	00 14 41.4	-0.4
IMMV	Iera Moni Meta	2.39	297	P	Pn	00 14 43.4	+1.4
IMMV	Iera Moni Meta	2.39	297	PN	Pn	00 14 41.3	-0.7
DAT	Datca	2.47	19	PN	Pn	00 14 42.8	-0.4
APE	Apeiranthos	2.81	343	P	Pn	00 14 49.2	+1.4
APE	Apeiranthos	2.81	343	PN	Pn	00 14 47.7	-0.1
APE	Apeiranthos	2.81	343	iP	Pn	00 14 49.3	+1.5
DALY	Dalyan (Mula)	2.95	34	PN	Pn	00 14 49.7	0.0
TURN	Turunc	2.98	33	PN	Pn	00 14 46.6	-3.4
TURN	Turunc	2.98	33	iP	Pn	00 14 49.9	-0.1
TURN				iS	Sn	00 15 13.9	-11
FETY	Fethiye	3.03	42	PN	Pn	00 14 50.7	-0.1
AKAS	Kas	3.08	52	PN	Pn	00 14 50.9	-0.7
AKAS	Kas	3.08	52	iP	Pn	00 14 53.5	+1.9
AKAS				iS	Sn	00 15 12.3	-16
AKAS				IAML		00 15 39.0	
	comp=N,34nm,1.2s						
KTHA	Kythira Island	3.43	304	PN	Pn	00 14 56.3	0.0
AYDN	Tasoluk	3.43	17	iP	Pn	00 14 59.5	+3.1
ELL	Elmali	3.59	48	PN	Pn	00 14 58.4	-0.2
TAVA	DENIZLI_Tavas	3.61	31	iP	Pb	00 15 03.8	-3.6
TAVA				iS	Sn	00 15 22.0	-19
AKUM	Antalya-Kumluc	3.63	57	iP	Pn	00 14 58.8	-0.2
AYDB	Zeytinkoy-Aydi	3.71	16	PN	Pn	00 15 00.1	-0.1
KORT	Korkuteli	4.02	49	PN	Pn	00 15 04.6	0.0
KORT	Korkuteli	4.02	49	iP	Pn	00 15 08.0	+3.4
KEPZ	Antalya-Kepez	4.80	57	iP	Pn	00 15 16.4	+1.3
GAZI	Gazipasa	5.04	67	PN	Pn	00 15 18.6	+0.2
SEYD	Seydisehir-KON	5.22	53	PN	Pn	00 15 21.7	+0.7
CSS	Mathiatis	5.59	82	PN	Pn	00 15 26.1	+0.1
TEKE	Tekeli-Mersin	5.62	70	PN	Pn	00 15 26.6	+0.2
BERE	Bereket-Mersin	5.77	68	PN	Pn	00 15 28.9	+0.4
AKKU	Akkuyu-Mersin	5.97	71	PN	Pn	00 15 31.2	+0.1
IKL	Isikli	6.09	70	PN	Pn	00 15 33.3	+0.4
KEBE	Keben-Mersin	6.17	69	PN	Pn	00 15 34.4	+0.3
MMAI	Mount Meron Ar	7.48	98	Pn	Pn	00 15 51.9	-0.1
	comp=N,0.6nm,0.3s,baz=280,slow=10,SNR=7.8						
MMAI				Sn	Sn	00 17 15.4	-0.7
	comp=N,0.7nm,0.3s,baz=277,slow=23,SNR=5.2						
GERES	GERESS Array B	17.32	330	P	P	00 18 05.4	-0.4
	comp=N,0.1nm,0.3s,baz=138,slow=10,SNR=5.9						
DAVOX	Davos/Dischmat	17.68	319	LR	LR	00 27 05.3	
	comp=N,77nm,18.1s,baz=260,slow=44						
FINES	FINESS Array B	27.07	359	P	P	00 19 43.4	-1.3
	comp=N,2.2nm,1.0s,baz=163,slow=7.2,SNR=3.6						
TORD	Torodi Ar. Bea	30.92	233	P	P	00 20 20.2	+0.8
	comp=N,0.4nm,0.8s,baz=36,slow=9.1,SNR=2.3						
ARCES	ARCESS Array B	35.20	359	P	P	00 20 55.0	-1.3
	comp=N,2.5nm,1.1s,baz=171,slow=8.2,SNR=5.6						
MKAR	Makanchi Array	43.23	56	P	P	00 22 05.1	+1.5
	comp=N,0.3nm,0.6s,baz=274,slow=5.9,SNR=4.1						
ZALV	Zalesovo Beam	44.70	46	P	P	00 22 15.9	+0.7
	comp=N,0.5nm,0.5s,baz=266,slow=12,SNR=3.1						

PGC **16** *00:19:20.0±2.2, 50.42N±130.26W, h10km, MLSn3.8/36, Mw4.5/36, Mw4.5/37, 203km west of Pt. Hardy, Bc Vancouver Island, Canada Region*
IDC **16** *00:19:21.2±1.0, 50.67N±130.10W, h0km, mb3.8/5, mb1 4.1/10, mb1mx3.8/44, mbtmp3.9/10, ML4.3/3, MS3.5/24, Ms1 3.5/24, ms1mx3.4/42, Error ellipse: s-maj=16.4km s-min=10.9km az=61.0*
NEIC **16** *00:19:23.1±2.2, 50.65N±0.07 129.96W±0.10, h10km±1km, Error ellipse: s-maj=12.5km s-min=8.8km az=220.0*
ISC 16 00:19:21.8±1.6, **50.63N**±0.05 **130.03W**±0.04, **h5**km±10km, **n293**, σ1§**62**/281, **mb4.2**/15, **MS3.6**/17, **Vancouver Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res
HOLB	Holberg	1.21	89	Pn	Pg	00 19 43.1	-1.8
HOLB				Sn	Sg	00 19 59.0	-1.5
BPBC	Brooks Peninsu	1.52	107	Pn	Pn	00 19 45.9	-3.8
PACB	Port Alice, BC	1.63	96	Pn	Pn	00 19 48.5	-2.6
PHC	Port Hardy	1.65	86	Pn	Pn	00 19 49.7	-1.6
PHC				Sn	Sn	00 20 10.2	-2.7
MAYB	Maynard	1.84	96	Pn	Pn	00 19 51.6	-2.5
BBB	Bella Bella	1.96	37	Pn	Pn	00 19 55.4	-0.3
	22nm,0.3s,baz=208,slow=7.0,SNR=200						
BBB				Sn	Sn	00 20 19.0	-1.5
	228nm,0.3s,baz=226,slow=6.2,SNR=32						
BBB				LR	LR	00 20 22.9	
	comp=Z,195nm,21.2s,baz=100,slow=32						
BBB	Bella Bella	1.96	37	Pn	Pn	00 19 55.2	-0.4
BBB				Sn	Sn	00 20 18.8	-1.7
BBB	Bella Bella	1.96	37	P	Pn	00 19 55.6	0.0
EDB	Eliza Dome	2.02	111	Pn	Pn	00 19 53.0	-3.4
TLCB	Telegraph Cove	2.04	91	Pn	Pn	00 19 55.0	-1.6
TLCB				Sn	Sn	00 20 20.2	-2.2
HG3B	Hotspring	2.14	336	Pn	Pn	00 19 56.1	-1.9
HG3B				Sn	Sn	00 20 22.7	-2.2
BNB	Barry Inlet	2.22	332	Pn	Pn	00 19 56.8	-2.5
BNB				Sn	Sn	00 20 24.8	-2.4
BCBC	Bella Coola	2.68	48	Pn	Pn	00 20 07.1	+1.6
BCBC				Sn	Sn	00 20 39.4	+1.1
GDR	Gold River	2.70	107	Pn	Pn	00 20 03.3	-2.5
MOBC	Moresby Island	2.79	335	Pn	Pn	00 20 05.0	-2.0
MOBC				Sn	Sn	00 20 38.9	-2.5
MOBC	Moresby Island	2.79	335	Pn	Pn	00 20 05.8	-1.2
SPLB	Strathcona Par	2.90	103	Pn	Pn	00 20 06.3	-2.2
DIB	Dawson Inlet,	2.99	330	Pn	Pn	00 20 07.6	-2.1
DIB	Dawson Inlet,	2.99	330		Pn	00 20 07.6	-2.1
H02S1	DAWSON INLET T	2.99	330	Pn	Pn	00 20 07.7	-2.0
H02S1				Sn	Sn	00 20 44.6	-1.2
CBB	Campbell River	3.05	100	Pn	Pn	00 20 08.7	-1.9
TOFB	Tofino	3.05	118	Pn	Pn	00 20 07.9	-2.6
H02N1	VAN INLET T-PH	3.05	330	Pn	Pn	00 20 08.7	-2.0
H02N1				Sn	Sn	00 20 46.6	-0.9
VIB	Van Inlet	3.05	330	Pn	Pn	00 20 08.3	-2.3
VIB				Sn	Sn	00 20 45.0	-2.5
BTB	Buttle Lake	3.13	110	Pn	Pn	00 20 09.2	-2.7
B012	Ucluelet	3.37	119	Pn	Pn	00 20 11.8	-3.2
OZB	Mount Ozzard	3.38	118	Pn	Pn	00 20 11.4	-3.8
B928	Bamfield	3.65	118	Pn	Pn	00 20 16.8	-2.0
B927	Port Alberni	3.66	111	Pn	Pn	00 20 16.8	-2.1
RUBB	Prince Rupert	3.70	358	Pn	Pn	00 20 18.9	-0.6
RUBB				Sn	Sn	00 21 01.0	-2.4
TXB	Texada	3.71	102	Pn	Pn	00 20 17.8	-1.9
MGB	Mount Grey	3.82	113	Pn	Pn	00 20 18.9	-2.4
SHB	Sechelt	4.09	102	Pn	Pn	00 20 23.2	-1.8
NLLB	Nanaimo Lost L	4.15	108	Pn	Pn	00 20 23.9	-1.7
OCP	Olym-Cheeka Pk	4.23	122	Pn	Pn	00 20 24.7	-2.1
B926	Mesachie Lake	4.23	113	Pn	Pn	00 20 24.7	-2.1
UBRB	Upper Baezaeko	4.33	56	Pn	Pn	00 20 29.8	+1.6
UBRB				Sn	Sn	00 21 21.3	+2.2
BPCB	Bare Point	4.44	110	Pn	Pn	00 20 27.9	-1.8
WPB	Watts Point	4.49	100	Pn	Pn	00 20 29.6	-0.8
BIB	Bowen Island	4.50	103	Pn	Pn	00 20 29.3	-1.3
LZB	Mount Lazard	4.51	114	Pn	Pn	00 20 29.3	-1.4
WSLR	Whistler	4.58	94	Pn	Pn	00 20 30.4	-1.2
OBC	Olympics--Boni	4.68	121	Pn	Pn	00 20 32.3	-0.8
B010	North Saanich	4.71	112	Pn	Pn	00 20 31.6	-1.8
PGC	Sidney	4.71	112	Pn	Pn	00 20 31.7	-1.7
PGC	Sidney	4.71	112	Pn	Pn	00 20 32.3	-1.1
B009	North Saanich	4.71	112	Pn	Pn	00 20 32.3	-1.1
B011	North Saanich	4.71	112	Pn	Pn	00 20 32.0	-1.4
PA12	PA12 Sannich	4.71	112	Pn	Pn	00 20 31.7	-1.7
SNB	Saturna Island	4.82	110	Pn	Pn	00 20 34.6	-0.4
VGZ	Gonzales	4.90	114	Pn	Pn	00 20 35.0	-1.0
HNBB	Haney	5.00	103	Pn	Pn	00 20 35.5	-1.8
MCW	Mount Constitu	5.07	110	Pn	Pn	00 20 37.6	-0.8
A04D	Lummi Island	5.12	109	P	Pn	00 20 39.3	+0.3
	baz=292						
FSB	Fort Saint Jam	5.18	40	Pn	Pn	00 20 41.5	+1.5
FSB				Sn	Sn	00 21 40.2	+0.1
LLLB	Lillooet	5.18	87	Pn	Pn	00 20 39.7	-0.2
LLLB	Lillooet	5.18	87		Pn	00 20 39.8	-0.2
NLWA	Neilton Lookou	5.19	126		Pn	00 20 39.2	-0.8
BLN	Blyn Mountain	5.31	117	Pn	Pn	00 20 40.7	-1.0
VDB	Vedder Mountai	5.37	104	Pn	Pn	00 20 42.7	+0.2
HDW	Hoodsport	5.46	120	Pn	Pn	00 20 43.0	-0.8
D03D	Eldon	5.51	122	P	Pn	00 20 44.0	-0.5
	baz=304						
MBW	Mount Baker	5.59	106	Pn	Pn	00 20 45.7	0.0
CMW	Cultus Mountai	5.60	110	Pn	Pn	00 20 45.9	+0.1
GNW	Green Mountain	5.64	120	Pn	Pn	00 20 45.3	-0.8
HOPB	Hope	5.69	99	Pn	Pn	00 20 46.7	-0.1
B05A	Bryant	5.69	112	P	Pn	00 20 47.2	+0.3
	baz=295,SNR=14						
JCW	Jim Creek	5.82	112	Pn	Pn	00 20 48.3	-0.4
E03A	Lebam	5.92	131	Pn	Pn	00 20 49.2	-0.9
B06A	Marblemount	5.95	108	Pn	Pn	00 20 50.0	-0.3
B06A	Marblemount	5.95	108		Pn	00 20 50.4	+0.1
D05A	Enumclaw	6.32	120	Pn	Pn	00 20 55.0	-0.5
D05A	Enumclaw	6.32	120		Pn	00 20 56.1	+0.6
E04D	Cinebar	6.41	127	P	Pn	00 20 58.2	+1.4
	baz=310						
LON	Longmire	6.68	122	Pn	Pn	00 21 00.0	-0.6
LON	Longmire	6.68	122		Pn	00 21 00.9	+0.3
PNT	Penticton	6.84	97	Pn	Pn	00 21 02.2	-0.5
F04A	Amboy	6.92	130	Pn	Pn	00 21 04.0	+0.3
LTY	Liberty	7.03	115	Pn	Pn	00 21 05.2	-0.1
LTY	Liberty	7.03	115		Pn	00 21 05.6	+0.3
BMBC	Bull Mountain	7.19	38	P	Pn	00 21 09.2	+1.7
BMBC				S	Sn	00 22 29.5	0.0
B08A	Colville Reser	7.33	104	Pn	Pn	00 21 08.9	-0.4
B08A	Colville Reser	7.33	104		Pn	00 21 08.9	-0.4
MNB	Mounoet Dainar	7.45	73	P	Pn	00 21 12.4	+1.2
SLEB	Sale Mountain	7.54	81	P	Pn	00 21 13.3	+0.8
NBC4	NorthernBC 4	7.57	44	S	Sn	00 22 37.7	-1.0
DLBC	Dease Lake	7.82	360	Pn	Pn	00 21 18.7	+2.6
	2.1nm,0.3s,baz=177,slow=6.0,SNR=22						
DLBC				Sn	Sn	00 22 47.0	+2.0
	3.0nm,0.3s,baz=243,slow=17,SNR=5.9						
DLBC	Dease Lake	7.82	360	P	Pn	00 21 18.2	+2.1
DLBC				S	Sn	00 22 46.2	+1.3
E07A	Sunnyside	7.88	117		Pn	00 21 17.1	+0.2
H04A	Detroit Lake	7.96	135	Pn	Pn	00 21 18.0	-0.1
JIS	Juneau Island	8.07	343	Pn	Pn	00 21 20.7	+1.3
NBC5	NorthernBC 5	8.14	29	P	Pn	00 21 23.6	+3.1
NBC5				S	Sn	00 22 54.0	+1.2
C09A	Chrisman Ranch	8.20	106	P	Pn	00 21 20.6	-0.7
F07A	Phinny Hill Vi	8.24	121	Pn	Pn	00 21 21.1	-0.7
G06A	Carlson Farm,	8.30	127	P	Pn	00 21 23.7	+1.0
NEW	Newport	8.74	101	Pn	Pn	00 21 28.8	+0.1
	0.9nm,0.3s,baz=297,slow=11,SNR=13						
NEW				LR	LR	00 24 49.1	
	comp=Z,493nm,20.7s,baz=284,slow=37						
NEW	Newport	8.74	101	P	Pn	00 21 28.5	-0.2
	baz=289						
E09A	Wood Farm, Sta	8.89	113		Pn	00 21 30.7	0.0
FNBB	Fort Nelson	9.21	23	P	Pn	00 21 37.5	+2.4
FNBB				S	Sn	00 23 20.9	+1.9
HUMO	Hull Mountain	9.38	146	Pn	Pn	00 21 39.9	+2.4
NBC6	NorthernBC 6	9.42	29	P	Pn	00 21 42.8	+4.9
NBC6				S	Sn	00 23 24.0	-0.2
I07A	Izee	9.69	129	Pn	Pn	00 21 42.2	+0.4
YBH	Yreka Blue Hor	10.24	148	Pn	Pn	00 21 52.4	+3.1
	0.1nm,0.3s,baz=334,slow=11,SNR=4.0						
YBH				LR	LR	00 25 20.7	
	comp=Z,164nm,20.0s,baz=330,slow=35						
YBH	Yreka Blue Hor	10.24	148	Pn	Pn	00 21 51.2	+1.8
BSMT	Bassoo Peak	10.35	100	P	Pn	00 21 50.1	-0.8
WHY	Whitehorse	10.41	347	Pn	Pn	00 21 54.1	+2.4
JCC	Jacoby Creek,	10.67	155	Pn	Pn	00 21 57.9	+2.8
JTMT	Jette	10.70	100	P	Pn	00 21 55.6	-0.1
FBMT	Ferry Basin	10.74	101	P	Pn	00 21 55.8	-0.5
YBMT	Yellow Bay	10.83	99	P	Pn	00 21 57.7	+0.3
SWMT	Swartz Lake	10.97	100	P	Pn	00 21 58.8	-0.6
MSO	Missoula	11.28	104	P	Pn	00 22 03.4	-0.2
	baz=294,SNR=6.5						
WDC	Whiskeytown Da	11.33	150	Pn	Pn	00 22 07.0	+2.8
SLMT	Seeley Lake	11.39	101	P	Pn	00 22 04.7	-0.5
BPMT	Black Pine Rid	11.76	105	P	Pn	00 22 10.4	+0.1
OVMT	Ovando	11.77	101	P	Pn	00 22 10.1	-0.2
CTGM	Chitina Glacie	12.13	333	Pn	Pn	00 22 17.3	+2.2
SUCK	Suckling Hills	12.25	326	Pn	Pn	00 22 19.0	+2.4
BARN	Barnard Glacie	12.30	333	Pn	Pn	00 22 19.0	+1.4
BALM	Baldy	12.49	331	Pn	Pn	00 22 24.3	+4.3
ORV	Oroville	12.60	148		Pn	00 22 22.9	+1.4
HOPS	Hopland Field	12.63	154	Pn	Pn	00 22 23.0	+1.0
LRM	Limekiln Ridge	12.66	106	P	Pn	00 22 22.1	-0.5
LRM	Limekiln Ridge	12.66	106	Pn	Pn	00 22 14.8	-7.8
BEKR	Beckworth	12.73	144		Pn	00 22 22.6	-0.9
VRDI	Verde Repeater	12.98	330	Pn	Pn	00 22 29.4	+2.6
GLB	Gilahina Butte	13.25	330	Pn	Pn	00 22 33.8	+3.3
EGMT	Eagleton	13.47	93		Pn	00 22 35.7	+2.2
EGMT	Eagleton	13.47	93	P	Pn	00 22 36.5	+3.1
	baz=288,SNR=6.7						
HIN	Hinchinbrook I	13.48	323	Pn	Pn	00 22 37.2	+3.8
FID	Port Fidalgo	13.69	324	Pn	Pn	00 22 38.1	+1.7
YHL	Hebgen Lake	13.92	107		Pn	00 22 40.1	+0.3
YHB	Horse Butte	13.97	108		Pn	00 22 40.8	+0.4
YMR	Madison River	14.15	108		Pn	00 22 43.6	+0.7
YHH	Holmes Hill	14.16	107		Pn	00 22 43.5	+0.4
YNR	Norris Junctio	14.30	107	P	Pn	00 22 47.1	+2.1
KVN	Kaiserville	14.32	139	P	Pn	00 22 47.2	+1.9
H17A	Grant Village	14.53	108	P	Pn	00 22 50.2	+2.1
LKWY	Lake	14.55	107	P	Pn	00 22 48.3	-0.1
YKA	Yellowknife Ar	14.56	29	Pn	Pn	00 22 47.3	-0.8
	0.2nm,0.3s,baz=218,slow=12,SNR=26						
YKA				Sn	Sn	00 25 23.0	-6.6
	0.3nm,0.3s,baz=222,slow=23,SNR=6.5						
YNE	Yellowstone No	14.56	105		Pn	00 22 49.2	+0.6
YKW3	Yellowknife Ar	14.60	29	P	Pn	00 22 47.9	-0.8
YKW3				S	Sn	00 25 23.2	-7.6
NVAR	Mina Array Bea	14.77	141	Pn	Pn	00 22 54.3	+3.0
	baz=316,slow=10,SNR=4.8						
SNOW	Snow King Moun	14.94	111	P	Pn	00 22 53.6	-0.1
REDW	Red Top Meadow	14.94	112		Pn	00 22 54.1	+0.4
RLMT	Red Lodge	14.96	104	P	Pn	00 22 55.1	+1.2
	baz=298						
KDAK	Kodiak Island	14.96	307	LR	LR	00 26 51.2	
	comp=Z,184nm,20.2s,baz=112,slow=30						
KDAK	Kodiak Island	14.96	307		P	00 22 57.5	-1.8
DOT	Dot Lake	15.05	335	P	P	00 22 59.5	-0.8
DOT	Dot Lake	15.05	335	P	P	00 22 57.5	-2.9
AHID	Auburn Hatcher	15.15	114		Pn	00 22 55.9	-0.6
AHID				IAmb	IAmb	00 23 04.8	
	comp=Z,17nm,1.0s						
RC01	Rabbit Creek A	15.16	321		P	00 22 58.9	-2.7
HOM	Homer	15.24	315		Pn	00 22 59.2	+1.9
BGU	Big Grassy Mou	15.29	123	P	Pn	00 22 59.3	+1.0
SCRK	Sand Creek	15.30	336	Pn	Pn	00 22 59.8	+1.6
RIDG	Independent Ri	15.34	335	P	P	00 23 01.2	-2.3
EGAK	Eagle	15.34	342		Pn	00 23 00.1	+1.5
SPUT	South Promonto	15.34	121	P	Pn	00 22 59.5	+0.6
SUA	Susitna One	15.78	321	P	Pn	00 23 06.1	-2.4
SUA				IAmb	IAmb	00 23 18.1	
	comp=Z,16nm,0.8s						
DUG	Dugway, Tooele	15.93	124	P	Pn	00 23 07.2	+0.6
DUG				IAmb	IAmb	00 23 16.1	
	comp=Z,23nm,1.6s						
DUG	Dugway, Tooele	15.93	124	P	P	00 23 10.7	+0.4
	baz=316,SNR=7.5						
R11A	Troy Canyon, C	15.99	135	P	Pn	00 23 08.3	+0.7
R11A	Troy Canyon, C	15.99	135	P	Pn	00 23 08.4	+0.9
	baz=324						
PD31	Pinedale Array	16.06	111		Pn	00 23 08.4	0.0
PDAR	Pinedale Array	16.06	111	Pn	Pn	00 23 10.2	+1.8
	comp=Z,0.3nm,0.3s,baz=316,slow=10,SNR=43						
PDAR				LR	LR	00 29 17.0	
	comp=Z,136nm,19.6s,baz=326,slow=37						
LAO	LASA Array	16.19	95	P	Pn	00 23 10.1	+0.2
LAO				IAmb	IAmb	00 23 27.8	
	comp=Z,32nm,1.4s						
HDA	Harding Lake	16.44	333	P	P	00 23 14.4	-1.3
HDA				IAmb	IAmb	00 23 39.3	
	comp=Z,35nm,1.9s						
PAGB	Antelope Grade	16.49	151	P	Pn	00 23 13.8	+0.1
PAGB				IAmb	IAmb	00 23 24.2	
	comp=Z,18nm,1.1s						
NLU	North Lily Min	16.49	123	P	Pn	00 23 15.4	+1.4
MCK	McKinley	16.55	330	P	P	00 23 15.4	-1.6
MCK				IAmb	IAmb	00 23 26.0	
	comp=Z,54nm,1.8s						
PSUT	Pine Spring	16.66	130	P	Pn	00 23 17.5	+1.5
IL31		16.70	334	P	P	00 23 18.9	+0.3
IL31				IAmb	IAmb	00 23 28.0	
	comp=Z,23nm,1.1s						
ILAR	Eielson Array	16.70	334	Pn	P	00 23 20.4	+1.9
	comp=Z,0.1nm,0.3s,baz=146,slow=11,SNR=24						
ILAR				LR	LR	00 29 20.8	
	comp=Z,103nm,18.8s,baz=148,slow=36						
TRF	Thorofare Moun	16.82	327	P	P	00 23 20.4	+0.4
TRF				IAmb	IAmb	00 23 32.0	
	comp=Z,16nm,1.0s						
WRH	Wood River Hil	16.82	332	P	P	00 23 21.4	+1.5
WRH				IAmb	IAmb	00 23 39.2	
	comp=Z,64nm,2.0s						
CCB	Clear Creek Bu	16.87	333	P	P	00 23 21.4	+1.1
CCB				IAmb	IAmb	00 24 06.3	
	comp=Z,28nm,1.7s						
TPNV	Topopah Spring	16.87	139	IAmb	IAmb	00 23 27.2	
	comp=Z,48nm,1.8s						
TPNV	Topopah Spring	16.87	139	P	P	00 23 22.1	+1.3
	baz=328						
DGMT	Dagmar	16.87	87		Pn	00 23 18.4	-0.1
DGMT				IAmb	IAmb	00 23 23.3	
	comp=Z,25nm,0.9s						
DAC	Darwin (Calif)	16.92	143		Pn	00 23 20.9	+1.6
BWN	Browne	17.03	330		P	00 23 19.8	-0.5
BWN				IAmb	IAmb	00 23 42.7	
	comp=Z,22nm,1.0s						
ISA	Isabella, Lake	17.14	146	P	Pn	00 23 22.2	+0.3
ISA				IAmb	IAmb	00 23 32.4	
	comp=Z,24nm,1.6s						
DHRN	Dharma Camp	17.28	14	P	P	00 23 24.1	-0.8
FFC	Flin Flon	17.43	66	P	Pn	00 23 25.4	0.0
BPAW	Bear Paw Mtn.	17.48	328	P	P	00 23 27.2	+0.1
MSU	Marysvale	17.51	127	P	Pn	00 23 26.1	-0.7
P17A	Butcher Ranch,	17.55	122	P	Pn	00 23 26.2	-1.0
SVW2	Sparrevohn	17.63	316		P	00 23 30.8	+1.9
SVW2				IAmb	IAmb	00 23 36.3	
	comp=Z,24nm,1.4s						
CCUT	Cedar City	17.67	131		P	00 23 29.1	+0.3
SHPR	Sheep Range	17.71	137	P	Pn	00 23 30.1	+0.9
Q16A	Castle Valley	17.73	124		Pn	00 23 30.4	+1.0
SZCU	Shurtz Canyon	17.77	131	P	Pn	00 23 30.7	+0.7
INK	Inuvik	17.81	356	Pn	P	00 23 31.9	+1.1
	comp=Z,0.0nm,0.3s,baz=162,slow=11,SNR=4.9						
INK				LR	LR	00 30 36.9	
	comp=Z,186nm,21.9s,baz=166,slow=38						
INK	Inuvik	17.81	356	P	P	00 23 30.8	0.0
INK	Inuvik	17.81	356	P	P	00 23 31.4	+0.6
INK				IAmb	IAmb	00 23 37.0	
	comp=Z,27nm,1.8s						
MTPU	Mount Pierson	17.87	128	P	Pn	00 23 32.4	+1.1
SRU	San Rafael Swe	17.93	122	P	Pn	00 23 32.3	+0.4
K22A	Casper	17.95	107	IAmb	IAmb	00 23 34.7	
	comp=Z,13nm,0.9s						
MLY	Manley	18.02	331	P	P	00 23 35.0	+1.8
KNB	Kanab	18.36	131	P	Pn	00 23 37.9	+0.7
O20A	White River Ci	18.49	116	P	P	00 23 37.9	-0.8
O20A				IAmb	IAmb	00 23 58.3	
	comp=Z,25nm,1.4s						
O20A	White River Ci	18.49	116	P	P	00 23 39.8	+1.0
	baz=311						
MWC	Mount Wilson	18.59	147	P	P	00 23 38.8	-1.0
MWC				IAmb	IAmb	00 23 49.5	
	comp=Z,19nm,1.2s						
PASC	Pasadena Art C	18.59	148	P	P	00 23 39.5	-0.1
RSSD	Black Hills	18.71	100	P	Pn	00 23 42.7	+1.3
RSSD	Black Hills	18.71	100	P	Pn	00 23 42.5	+1.1
	baz=299						
KUKN	Kugluktuk,NWT	18.76	18	P	Pn	00 23 42.4	+0.8
C36M	Paulatuk	18.99	6	P	Pn	00 23 45.1	+0.8
U15A	North Rim	19.09	131	P	P	00 23 45.6	+0.2
N23A	Red Feather La	19.34	111	P	P	00 23 48.5	+0.3
PHWY	Pilot Hill	19.38	109	IAmb	IAmb	00 23 50.4	
	comp=Z,14nm,1.0s						
COLD	Coldfoot	19.46	336	P	P	00 23 52.4	+2.3
COLD	Coldfoot	19.46	336	P	P	00 23 50.4	+0.4
COLD				IAmb	IAmb	00 23 59.1	
	comp=Z,11nm,1.1s						
PFO	Pinyon Flats O	19.71	145	Pn	Pn	00 23 56.1	+2.7
	comp=Z,0.1nm,0.3s,baz=303,slow=7.2,SNR=3.7						
PFO				LR	LR	00 31 41.4	
	comp=Z,114nm,18.1s,baz=322,slow=37						
PFO	Pinyon Flats O	19.71	145		P	00 23 53.5	+0.1
XPFO	Pion Flat	19.71	145	P	P	00 23 52.4	+0.4
XPFO				IAmb	IAmb	00 24 02.9	
	comp=Z,17nm,1.7s						
SMCO	Snowmass	19.86	116	IAmb	IAmb	00 24 00.4	
	comp=Z,8.2nm,0.9s						
MDND	Maddock	19.99	86	P	P	00 23 55.6	+0.8
MDND	Maddock	19.99	86	P	Pn	00 23 59.1	+2.5
	baz=289,SNR=7.5						
109C	Camp Elliot, M	20.13	147	P	P	00 23 57.7	+1.2
109C				IAmb	IAmb	00 24 01.1	
	comp=Z,38nm,1.8s						
ISCO	Idaho Springs	20.23	113		P	00 23 57.7	-0.1
ISCO				IAmb	IAmb	00 24 02.1	
	comp=Z,27nm,1.9s						
WUAZ	Wupatki	20.26	131		P	00 23 57.7	-0.4
Y12C	Blythe	20.34	140	P	P	00 23 59.9	+1.2
Y12C				IAmb	IAmb	00 24 11.8	
	comp=Z,42nm,2.0s						
TOLK	Toolik Lake Re	20.40	339	P	Pn	00 24 00.5	-0.8
TOLK				IAmb	IAmb	00 24 13.4	
	comp=Z,19nm,1.0s						
MVCO	Mesa Verde	20.41	123	IAmb	IAmb	00 24 07.6	
	comp=Z,12nm,1.1s						
MVCO	Mesa Verde	20.41	123	P	P	00 24 01.2	+1.4
	baz=317						

BAR Barrett 20.47 146 P P 00 23 59.9 -0.3
BAR IAmb IAmb 00 24 18.8
comp=Z,20nm,1.8s
GLA Glamis 20.83 142 P P 00 24 05.3 +1.2
GLA IAmb IAmb 00 24 08.9
comp=Z,13nm,1.1s
S22A 4UR Ranch, Cre 20.93 119 IAmb IAmb 00 24 31.5
comp=Z,18nm,1.8s
X16A Lo Mia Camp, P 21.12 133 P P 00 24 06.8 -0.7
X16A IAmb IAmb 00 24 12.9
comp=Z,11nm,1.1s
113A Mohawk Valley, 21.50 140 P P 00 24 12.0 +0.7
113A IAmb IAmb 00 24 32.6
comp=Z,14nm,1.7s
ULM Lac du Bonnet 21.65 78 P P 00 24 12.5 -0.2
comp=Z,10nm,0.6s,baz=285,slow=10,SNR=13
ULM LR LR 00 32 47.2
comp=Z,228nm,20.1s,baz=301,slow=37
ULM Lac du Bonnet 21.65 78 P P 00 24 11.9 -0.8
OGNE Ogallala 21.68 106 P P 00 24 13.0 -0.2
SDCO Great Sand Dun 21.68 117 P P 00 24 14.1 +0.6
baz=314,SNR=5.7
X18A Snowflake 21.74 130 IAmb IAmb 00 24 17.4
comp=Z,8.5nm,0.8s
D32A Dogwood Acres, 21.88 86 P P 00 24 15.5 +0.2
FCC Fort Churchill 22.07 55 P P 00 24 18.1 +0.9
FCC Fort Churchill 22.07 55 P P 00 24 17.9 +0.8
FCC IAmb IAmb 00 24 44.0
comp=Z,15nm,1.2s
KSCO Kaye Shedlock' 22.50 111 P P 00 24 22.2 0.0
214A Organ Pipe Nat 22.61 139 P P 00 24 23.0 -0.1
EPLO Experimental L 23.14 78 P P 00 24 27.7 -0.9
TUC Tucson 23.18 135 P P 00 24 30.6 +1.4
TUC IAmb IAmb 00 24 31.4
comp=Z,5.6nm,0.9s
TUC Tucson 23.18 135 P P 00 24 30.5 +1.3
baz=327
ANMO Albuquerque 23.20 124 P P 00 24 30.3 +0.8
comp=Z,1.0nm,0.4s,baz=338,slow=10,SNR=6.3
ANMO LR LR 00 33 23.4
comp=Z,149nm,18.9s,baz=318,slow=36
ANMO Albuquerque 23.20 124 P P 00 24 30.6 +1.0
ANMO IAmb IAmb 00 24 39.3
comp=Z,10.0nm,1.4s
ANMO Albuquerque 23.20 124 P P 00 24 30.3 +0.8
baz=319
ECSD EROS Data Cent 23.59 94 IAmb IAmb 00 24 36.9
comp=Z,8.7nm,0.8s
ECSD EROS Data Cent 23.59 94 P P 00 24 34.8 +1.7
baz=298,SNR=7.3
BGNE Belgrade 23.82 100 P P 00 24 36.0 +0.5
SOLO Sioux Lookout 24.06 77 P P 00 24 37.1 -0.6
121A Cookes Peak, D 24.42 129 IAmb IAmb 00 24 42.1
comp=Z,14nm,1.4s
319A Douglas 24.66 133 P P 00 24 44.0 +0.7
ATKO Atikokan Iron 24.72 79 P P 00 24 43.6 -0.1
PKLO Pickle Lake 24.74 72 P P 00 24 43.3 -0.5
EYMN Ely 25.09 81 P P 00 24 47.6 +0.6
baz=290
HSIG 25.95 139 P P 00 24 54.0 -0.9
HSIG IAmb IAmb 00 25 52.4
comp=Z,4.5nm,0.7s
TBO Thunder Bay 26.15 78 P P 00 24 57.0 +0.3
MNTX Cornudas Mount 26.29 127 IAmb IAmb 00 24 59.4
comp=Z,5.2nm,1.0s
MNTX Cornudas Mount 26.29 127 P P 00 24 58.6 +0.5
baz=323,SNR=5.8
GTO Geraldton 27.30 75 P P 00 25 07.9 +0.8
WMOK Wichita Mounta 27.66 113 IAmb IAmb 00 25 11.5
comp=Z,5.5nm,0.8s
WMOK Wichita Mounta 27.66 113 P P 00 25 10.8 +0.5
baz=314
RES Resolute Bay 28.15 19 LR LR 00 36 33.4
comp=Z,144nm,18.1s,baz=212,slow=37
TUL1 Leonard 28.64 108 P P 00 25 19.8 +0.7
TXAR Lajitas Array 29.07 127 P P 00 25 23.2 +0.2
comp=Z,1.4nm,0.9s,baz=331,slow=7.4,SNR=12
TXAR LR LR 00 37 47.1
comp=Z,54nm,18.9s,baz=0.0,slow=38
SCHQ Schefferville 37.34 58 LR LR 00 40 32.3
comp=Z,255nm,21.5s,baz=360,slow=34
PETK Petropavlovsk- 42.94 303 LR LR 00 43 43.9
comp=Z,32nm,20.8s,baz=61,slow=34
MA2 Magadan 43.58 314 LR LR 00 43 59.4
comp=Z,56nm,18.1s,baz=78,slow=34
H11N2 WAKE ISLAND Hy 57.97 262 T T 01 31 42.7
baz=42,slow=75,SNR=706
H11N3 WAKE ISLAND Hy 57.97 262 T T 01 31 43.0
baz=42,slow=75,SNR=610
H11N1 WAKE ISLAND Hy 57.99 262 T T 01 31 44.0
baz=42,slow=75,SNR=418
ARCES ARCESS Array B 58.81 10 LR LR 00 55 38.6
comp=Z,71nm,18.4s,baz=274,slow=37
H11S1 WAKE ISLAND Hy 59.00 261 T T 01 33 09.5
baz=50,slow=76,SNR=40
H11S2 WAKE ISLAND Hy 59.01 261 T T 01 33 05.9
baz=50,slow=76,SNR=24
H11S3 WAKE ISLAND Hy 59.02 261 T T 01 33 15.7
baz=50,slow=76,SNR=25
SDV Santo Domingo 63.98 109 LR LR 01 01 15.0
comp=Z,17nm,18.7s,baz=281,slow=39
NOA NORSAR Array B 64.41 20 LR LR 00 57 45.5
comp=Z,41nm,19.4s,baz=210,slow=36
ROSC El Rosal 65.03 115 LR LR 01 02 19.7
comp=Z,25nm,18.4s,baz=256,slow=40
FINES FINESS Array B 66.64 12 LR LR 00 58 44.6
comp=Z,54nm,21.1s,baz=317,slow=36
KSRS Korea Array 68.83 303 LR LR 00 56 45.8
comp=Z,7.2nm,21.4s,baz=185,slow=33
ZALV Zalesovo Beam 71.76 339 P P 00 30 45.1 +0.6
comp=Z,0.2nm,0.3s,baz=27,slow=9.7,SNR=2.7
ATAH Atahualpa 72.72 125 LR LR 01 03 23.5
comp=Z,38nm,19.1s,baz=357,slow=36
HHC Hu-ho-hao-te 74.19 316 eP P 00 30 59.3 0.0
MKAR Makanchi Array 79.02 338 P P 00 31 26.7 +0.2
comp=Z,0.2nm,0.6s,baz=33,slow=4.0,SNR=3.9
GTA Gaotai 80.25 323 eP P 00 31 31.6 -1.8
GTA pP PcP 00 31 38.6 -2.0
GTA sP sP 00 31 42.3 +7.4
WMQ Urumqi 80.36 333 eP P 00 31 36.3 +2.4
LZH Lanzhou 81.49 319 eP P 00 31 38.4 -1.7
LZH pP PcP 00 31 44.1 -2.0
LZH sP sP 00 31 46.1 +4.5
LZH PP PP 00 34 44.8 -0.7
KSH Kashi 87.37 340 P P 00 32 10.4 +0.6
KSH sP PcP 00 32 21.1 +9.2
KSH PP PP 00 35 38.5 +5.4
KSH Kashi 87.37 340 S S 00 42 47.9 -2.9
BRTR Keskin Array B 88.88 13 LR LR 01 14 25.5
comp=Z,22nm,20.0s,baz=350,slow=37
CMAR Chiang Mai Arr 98.87 314 LR LR 01 19 07.5
comp=Z,9.5nm,18.1s,baz=40,slow=36
CPUP Villa Florida 99.80 120 LR LR 01 26 00.9
comp=Z,17nm,19.2s,baz=174,slow=40

IDC 16 00:31:37.3±13.0, 51°.98N×179°.68W, h141km±127km, mb2.9/6, mb1 3.3/7, mb1mx3.0/43, mbtmp3.5/7, ML4.0/1, Error ellipse: s-maj=86.9km s-min=30.5km az=155.0
NEIC 16 00:31:42.7±0.5, 52°.3N±0°.2×179°.82W±0°.05, h195km±8km, Error ellipse: s-maj=28.6km s-min=3.4km az=184.0
AEIC 16 00:31:43±1.8, 52°.5N±0°.2×179°.6W±0°.1, h181km±6km, ML2.9/5, Error ellipse: s-maj=24.3km s-min=10.5km az=185.0
ISC 16 00:31:42.7±1.0, 52°.3N±0°.2×179°.81W±0°.07, h194km±9km, n17, σ0§64/23, mb3.2/5, Andreanof Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TAFP Tanaga Falls P 1.19 108 Pn 00 32 13.4 +0.1
TAFP Sn 00 32 37.2 +0.3
TAPA Tanaga Point A 1.32 110 Pn 00 32 14.3 0.0
TAPA Sn 00 32 39.5 +0.6
KIMD Kanaga Island 1.68 107 Pn 00 32 17.7 +0.3
KIMD Sn 00 32 44.7 +0.3
KIWB Kanaga Island 1.70 104 Pn 00 32 17.9 +0.2
ADK Adak 1.97 101 Pn 00 32 20.4 0.0
ADK Sn 00 32 49.7 0.0
ADK Adak 1.97 101 Pn Pn 00 32 20.1 -0.3
ADK Sn Sn 00 32 48.4 -1.3
GSTD Great Sitkin T 2.27 95 Pn 00 32 24.0 +0.3
GSTD Sn 00 32 54.5 -1.0
GSTR Great Sitkin T 2.31 93 Pn Pn 00 32 22.9 -1.2
GSMY Great Sitkin M 2.32 95 Pn 00 32 24.5 +0.3

SMY Shemya 3.75 279 Pn Pn 00 32 40.7 -0.3
KDAK Kodiak Island 16.48 60 P P 00 35 20.8 -1.0
0.6nm,0.3s,baz=270,slow=8.1,SNR=7.9
ILAR Eielson Array 20.94 41 P P 00 36 10.6 +0.7
0.4nm,0.5s,baz=222,slow=8.2,SNR=6.3
YKA Yellowknife Ar 35.06 47 P P 00 38 17.3 +0.8
0.4nm,0.5s,baz=281,slow=7.7,SNR=8.8
PDAR Pinedale Array 46.63 72 P P 00 39 51.4 -0.1
0.3nm,0.4s,baz=337,slow=2.1,SNR=2.8
TXAR Lajitas Array 59.13 81 P P 00 41 22.9 +0.1
0.1nm,0.4s,baz=285,slow=3.9,SNR=4.6
WRA Warramunga Arr 82.25 223 P P 00 43 41.6 -0.4
0.6nm,0.8s,baz=32,slow=6.0,SNR=2.6
ASAR Alice Springs 85.75 222 P P 00 43 59.7 +0.1
0.3nm,0.6s,baz=21,slow=6.5,SNR=5.7

IDC 16 00:34:39.0±3.0, 27°.03N×65°.72E, h0km, mb3.5/4, mb1 3.5/4, mb1mx3.3/41, mbtmp3.5/4, MS3.4/2, Ms1 3.4/2, ms1mx2.7/25, Error ellipse: s-maj=91.5km s-min=29.3km az=148.0, Pakistan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MKAR Makanchi Array 23.68 29 P P 00 39 51.1 -1.1
0.8nm,0.7s,baz=207,slow=10.0,SNR=9.0
BVAR Borovoye Array 26.20 6 P P 00 40 15.8 +0.5
1.0nm,0.7s,baz=174,slow=13,SNR=6.9
SONM Songino Array 37.83 46 P P 00 41 57.8 +0.4
0.3nm,0.6s,baz=255,slow=9.0,SNR=2.9
KMBO Kilima Mbogo 39.18 229 LR LR 00 57 31.1
comp=Z,23nm,20.7s,baz=71,slow=35
TORD Torodi Ar. Bea 61.13 271 P P 00 44 55.4 -0.2
1.0nm,0.9s,baz=54,slow=7.0,SNR=4.9
DBIC Dimbokro 69.70 267 LR LR 01 22 14.0
comp=Z,53nm,18.8s,baz=328,slow=41

THE 16 00:48:06.7, 38°.23N×20°.38E, h14km, ML2.0/3, Error ellipse: s-maj=0.9km s-min=0.4km az=254.0
ATH 16 00:48:06.6, 38°.24N×20°.38E, h15km±1km, ML2.7/2, Error ellipse: s-maj=2.3km s-min=1.0km az=255.0
ISC 16 00:48:06.5±1.3, 38°.24N±0°.03×20°.38E±0°.06, h15km±5km, n27, σ0§35/46, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AGT1 Agia Thekli 0.01 14 P Pg 00 48 09.2 0.0
AGT1 S Sg 00 48 10.8 -0.2
KEF3 Kipouria, Keph 0.04 217 P Pg 00 48 09.4 +0.1
KEF3 S Sg 00 48 11.1 0.0
KEF4 Livadi, Kephal 0.04 59 P Pg 00 48 09.3 0.0
KEF4 S Sg 00 48 10.9 -0.2
CHV1 Chavriata, Kef 0.05 178 P Pg 00 48 09.5 +0.2
CHV1 S Sg 00 48 11.4 +0.2
LXR1 Lixouri, Cepha 0.06 128 P Pg 00 48 09.5 +0.1
LXR1 S Sg 00 48 11.6 +0.4
LXRA Lixouri, Kepha 0.06 129 P Pg 00 48 09.5 +0.1
LXRA S Sg 00 48 11.3 +0.1
KEF1 Kardakata, Kep 0.08 60 P Pg 00 48 09.6 -0.1
KEF1 S Sg 00 48 11.3 -0.3
ARGA Argostoli. Kep 0.10 127 P Pg 00 48 09.8 0.0
ARGA S Sg 00 48 11.4 -0.5
ARG2 Argostoli 0.10 124 P Pg 00 48 09.9 +0.1
ARG2 S Sg 00 48 12.0 0.0
KEF2 Argostoli. Kep 0.11 130 P Pg 00 48 10.0 +0.1
KEF2 S Sg 00 48 11.8 -0.3
VLS Valsamata 0.18 110 P Pg 00 48 10.8 0.0
VLS S Sg 00 48 13.8 +0.1
4μm,0.1s
VLS Valsamata 0.18 110 P Pg 00 48 10.8 0.0
VLS S Sg 00 48 13.3 -0.4
VLS AML AML 00 48 13.8
comp=N,7425μm,0.2s
VLS AML AML 00 48 14.1
comp=E,10292μm,0.1s
KFL Anninata 0.35 111 P Pg 00 48 13.7 +0.1
KFL S Sg 00 48 19.2 +0.7
VLMS Volimes, Zakyn 0.42 148 P Pg 00 48 15.1 0.0
VLMS S Sg 00 48 21.2 +0.4
VLMS AML AML 00 48 23.3
comp=E,2518μm,0.1s
VLMS AML AML 00 48 24.0
comp=N,2102μm,0.2s
EVGI Lefkada island 0.44 29 P Pg 00 48 15.2 -0.2
EVGI S Sg 00 48 22.0 +0.6
EVGI Lefkada island 0.44 29 P Pg 00 48 15.2 -0.2
EVGI S Sg 00 48 21.6 +0.2
LKD2 Lefkada island 0.59 22 P Pg 00 48 18.0 -0.2
LKD2 S Sb 00 48 26.9 +0.1
comp=N,55nm,0.1s
LKD2 Lefkada island 0.59 22 P Pg 00 48 17.5 -0.7
TSLK Tsoukalades, L 0.63 20 P Pg 00 48 18.6 -0.2
TSLK S Sb 00 48 28.6 +0.9
comp=N,62nm,0.3s
TSLK Tsoukalades, L 0.63 20 P Pg 00 48 18.5 -0.3
TSLK S Sb 00 48 28.3 +0.5
KRI1 kERI 0.67 149 P Pg 00 48 19.2 -0.4
PDO Prodromos 0.73 60 P Pg 00 48 20.8 +0.1
RLS Riolos of Patr 0.88 101 P Pb 00 48 22.8 -0.6
RLS Riolos of Patr 0.88 101 P Pb 00 48 22.7 -0.6
PVO Paravola 0.98 67 P Pb 00 48 25.4 +0.3
PVO Paravola 0.98 67 P Pb 00 48 25.0 -0.1
DRO Drossia 1.09 105 P Pb 00 48 26.7 -0.3

IDC 16 01:02:24.1±2.0, 1°.11N×126°.47E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/22, mbtmp3.5/3, Error ellipse: s-maj=189.9km s-min=23.6km az=66.0, Northern Molucca Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 22.30 160 P P 01 07 22.3 -1.1
0.4nm,0.5s,baz=339,slow=11,SNR=7.0
ASAR Alice Springs 25.67 164 P P 01 07 56.7 +0.8
0.5nm,0.5s,baz=343,slow=12,SNR=8.8
MKAR Makanchi Array 59.56 326 P P 01 12 29.5 -0.1
0.8nm,0.5s,baz=120,slow=7.8,SNR=31

NORS 16 01:43:58.2±0.0, 43°.48N×45°.87E, h12km, MPVA3.5
MOS 16 01:43:58.8±0.0, 43°.46N×45°.84E, h13km, MPVA3.6
TIF 16 01:43:58.4, 43°.44N×45°.73E, h9km±3km
ISC 16 01:44:00.3±1.1, 43°.48N±0°.04×45°.84E±0°.02, h13km±9km, n35, σ1§27/65, Eastern Caucasus

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GROC Groznyy 0.28 187 i Pg Pg 01 44 04.8 -1.3
GROC eSg Sb 01 44 11.5 -0.2
KMGR Komgaron 0.83 240 ePg Pb 01 44 16.4 -0.2
KMGR eSg Sn 01 44 29.4 -0.5
TRKR Terskaya 0.84 287 ePg Pb 01 44 16.4 -0.4
TRKR eSg Sg 01 44 29.5 +1.8
DBC Dubki 0.86 122 i Pg Pb 01 44 16.1 -1.0
DBC eSg Sg 01 44 28.7 +0.5
BTLR Botlikh 0.86 161 ePg Pb 01 44 15.0 -2.2
BTKR Batakoyurt 0.95 264 i Pg Pb 01 44 18.5 -0.2
BTKR eSg Sn 01 44 33.5 +0.7
VLKR Vladikavkaz 0.95 243 ePg Pb 01 44 18.5 -0.3
VLKR eSg Sn 01 44 32.5 -0.4
KRNR Karanay 1.02 130 ePg Pb 01 44 19.0 -0.8
KRNR eSg Sn 01 44 34.5 -0.1
UNCR Uncukul 1.03 137 ePg Pb 01 44 20.0 -0.1
UNCR eSg Sn 01 44 36.0 +1.1
XNZR Khunzakh 1.13 146 ePg Pb 01 44 21.2 -0.6
XNZR eSg Sg 01 44 37.1 +0.2
BUJR Buynaksk 1.13 125 ePg Pb 01 44 22.3 +0.5
BUJR eSg Sg 01 44 39.2 +2.3
PRTR Priterechnaya 1.17 284 ePg Pn 01 44 22.0 -0.3
PRTR eSg Sg 01 44 39.1 +1.2
ARNR Ardon 1.18 256 ePg Pb 01 44 22.8 +0.3
ARNR eSg Sg 01 44 39.6 +1.4
STDR Stavd-Durt 1.30 266 i Pg Pn 01 44 24.5 +0.3
MAK Makhachkala 1.32 112 ePg Pn 01 44 23.7 -0.8
MAK eSg Sn 01 44 44.0 +1.0
KORR Kora 1.35 254 i Pg Pn 01 44 24.5 -0.4
KORR eSg Sg 01 44 45.2 +1.2
GNBR Gunib 1.37 143 i Pg Pb 01 44 25.6 -0.2
GNBR eSg Sg 01 44 45.8 +1.5
GUDG Gudauri 1.43 225 P Pn 01 44 23.9 -2.2
GUDG S Sn 01 44 42.7 -2.1

LSNR Lesken 1.48 263 i Pg Pn 01 44 26.9 +0.2
LSNR eSg Sg 01 44 48.1 0.0
ZEI Tsey 1.58 245 ePg Pn 01 44 27.3 -0.9
ZEI eSg Sn 01 44 48.7 +0.1
NCK Nalchik 1.64 271 ePg Pb 01 44 30.9 +0.5
NCK eSg Sg 01 44 52.8 -0.2
LGD Lagodekhi 1.67 170 P Pb 01 44 30.7 -0.2
LGD S Sg 01 44 53.1 -1.0
LGD Lagodekhi 1.67 170 ePg Pb 01 44 30.7 -0.2
LGD eSg Sb 01 44 52.5 +0.7
DIGR Digorskoe uzhe 1.75 251 i Pg Pn 01 44 30.1 -0.5
DIGR eSg Sb 01 44 53.5 -0.9
TBLG Delisi 1.93 205 P Pn 01 44 33.4 +0.5
TBLG S Sb 01 45 00.1 +0.8
BTNK Botanikuri 1.95 204 P Pn 01 44 33.6 +0.4
ONI Oni 1.96 244 P Pn 01 44 34.2 +0.9
ONI S Sb 01 45 00.7 +0.3
DDFL Dedoflistskaro 2.04 174 P Pb 01 44 38.2 +0.9
DDFL S Sg 01 45 12.3 +6.3
PYA1 Pyatigorsk 2.07 287 ePg Pn 01 44 35.4 +0.5
PYA1 eSg Sb 01 45 02.8 -0.6
NEY Neytrino 2.29 265 ePn Pn 01 44 37.9 0.0
NEY eSn Sb 01 45 08.1 -1.7
SHA1 Shidzhatmaz 2.33 277 ePn Pn 01 44 37.1 -1.4
SHA1 eSn Sn 01 45 07.9 +0.8
KIV Kislovodsk 2.34 283 ePn Pn 01 44 39.0 +0.5
AKT Akhty 2.44 144 ePn Pn 01 44 41.0 +1.0
AKT eSn Sb 01 45 12.0 -2.1
GOF Gofitskoye 2.56 309 ePn Pn 01 44 41.7 +0.2
GOF eSn Sn 01 45 13.8 +1.4
GNI Garni 3.43 194 ePn Pn 01 44 54.4 +0.8

CRAAG 16 01:48:09.1, 36°.29N×1°.93E, Ml2.8
MDD 16 01:48:11.3±0.8, 36°.44N×1°.92E, h0km, mb3.5/2, Error ellipse: s-maj=10.1km s-min=6.3km az=141.0, PRXIMO
ISC 16 01:48:11.5±1.6, 36°.42N±0°.10×1°.93E±0°.06, h20km, n13, σ1§36/20, Northern Algeria

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
EBNR Beni Rached 0.35 248 P Pb 01 48 16.9 -2.1
ECHA Ech Chlef 0.53 239 P Pb 01 48 21.5 -0.6
ECHF Ech Chlef 0.54 241 P Pb 01 48 21.5 -0.9
ABA Alger-Bouzarea 0.97 67 P Pb 01 48 29.2 -0.4
ABA Alger-Bouzarea 0.97 67 P Pb 01 48 29.2 -0.4
OKGL Djebel Kef Gue 1.11 250 P Pb 01 48 30.0 -2.0
5.1nm,0.1s,SNR=7.9
EIBI Ibiza 2.64 350 P Pn 01 48 54.0 +1.0
4.6nm,0.2s,SNR=23
EIBI S Sn 01 49 24.6 +0.1
5.4nm,0.2s,SNR=7.9
EBEN2 Beniarda presa 2.81 324 P Pn 01 48 56.2 +0.9
0.5nm,0.1s,SNR=7.9
EBEN2 S Sn 01 49 27.4 -1.2
2.1nm,0.2s,SNR=7.9
ETOS Mallorca 3.41 12 P Pn 01 49 03.3 -0.3
0.4nm,0.2s,SNR=4.0
ETOS S Sn 01 49 42.5 -1.1
0.8nm,0.1s,SNR=7.9
ETOB Tobarra 3.54 310 P Pn 01 49 06.9 +1.5
0.3nm,0.2s,SNR=4.0
ETOB S Sn 01 49 46.4 -0.4
0.3nm,0.2s,SNR=7.9
SESP Santiago Espad 3.95 297 P Pn 01 49 12.4 +1.3
0.7nm,0.2s,SNR=7.9
SESP S Sn 01 49 58.3 +1.4
0.9nm,0.2s,SNR=7.9
EQES Quesada 4.23 291 P Pn 01 49 17.1 +2.3
0.2nm,0.1s,SNR=7.9
EQES S Sn 01 50 05.0 +1.3
0.2nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.36 335 P Pn 01 49 18.5 +1.7
0.4nm,0.1s,SNR=7.4
EMOS S Sn 01 50 05.9 -1.3
0.4nm,0.1s,SNR=7.9

TUL 16 01:51:47.8±2.9, 35°.78N±0°.02×97°.48W±0°.02, h5km±3km, ML3.3, Error ellipse: s-maj=3.2km s-min=1.6km az=125.0
ANF 16 01:51:48.1±0.3, 35°.77N×97°.46W, h5km, ML4.2/14, Error ellipse: s-maj=4.7km s-min=3.0km az=168.0
NEIC 16 01:51:49.8±8.0, 35°.66N±0°.02×97°.42W±0°.03, h1km±4km, Error ellipse: s-maj=3.6km s-min=3.3km az=199.0
ISC 16 01:51:49.5±0.6, 35°.73N±0°.03×97°.40W±0°.02, h13km±4km, n110, σ2§61/131, Oklahoma

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ADOK Arcadia Dam 0.08 165 Pg 01 51 50.9 -1.5
ADOK Sg 01 51 53.3 -1.1
OK009 Oakdale Elemen 0.15 188 Pg 01 51 51.8 -1.5
OK009 Sg Sg 01 51 55.5 -0.4
OK005 Luther M Schoo 0.19 115 Pg 01 51 53.4 -0.4
OK005 Sg Sg 01 51 57.4 +0.7
OK001 Jones High Sch 0.19 153 Pg Pg 01 51 53.0 -0.9
OK001 Sg Sg 01 51 57.3 +0.4
OKCFA Oklahoma City 0.32 188 Pg Pg 01 51 54.8 -1.3
OKCFA Sg Sg 01 52 00.1 -0.4
OKCSW OKLAHOMA CITY 0.33 186 Pg Pg 01 51 55.1 -1.1
OKCSW Sg Sg 01 52 00.7 0.0
FNO Franklin 0.48 180 Pg Pb 01 51 58.3 -1.4
FNO Sg Sb 01 52 05.8 -0.8
W35A Tecumseh 0.72 143 Pg Pb 01 52 02.3 -1.2
W35A Sg Sb 01 52 13.5 -0.2
TUL1 Leonard 1.32 82 Pn Pn 01 52 12.5 -1.0
TUL1 Leonard 1.32 82 P Pn 01 52 12.7 -0.9
baz=265
TUL1 S Sb 01 52 31.4 +0.6
baz=265
U32A Winter Ranch, 1.45 297 Pn 01 52 12.9 -2.5
WMOK Wichita Mounta 1.51 229 Pn 01 52 14.9 -1.2
WMOK Sn Sn 01 52 34.8 -0.9
WMOK Wichita Mounta 1.51 229 P Pn 01 52 15.0 -1.2
baz=45
WMOK S Sn 01 52 34.4 -1.2
baz=45
HHAR Hobbs 2.86 78 Pn 01 52 34.9 +0.2
HHAR Sg Sb 01 53 16.0 +0.8
W39A Magazine 3.00 99 Pn 01 52 37.3 +0.6
W39A Magazine 3.00 99 P Pn 01 52 37.5 +0.9
baz=282
W39A S Sn 01 53 14.7 +2.3
baz=282
MIAR Mount Ida 3.35 110 Pn 01 52 42.1 +0.7
MIAR Lg 01 53 38.5
MIAR Mount Ida 3.35 110 P Pn 01 52 42.6 +1.1
baz=292
MIAR S Sn 01 53 23.8 +2.7
baz=292
KSU1 Kansas State U 3.42 10 P Pn 01 52 41.2 -1.2
baz=192
CBKS Cedar Bluff 3.60 329 Pn 01 52 43.7 -1.2
CBKS Cedar Bluff 3.60 329 P Pn 01 52 44.0 -0.9
baz=149
AMTX Amarillo 3.60 258 Pn Pn 01 52 44.1 -0.9
AMTX Amarillo 3.60 258 P Pn 01 52 44.6 -0.5
baz=74
ABTX Abilene, Hawle 3.62 212 Pn Pn 01 52 44.2 -1.0
ABTX Pg Pb 01 52 53.0 -0.3
ABTX Abilene, Hawle 3.62 212 P Pn 01 52 45.0 -0.2
baz=29
ABTX S Sn 01 53 28.6 +0.8
baz=29
WHTX Lake Whitney, 3.73 181 Pn 01 52 47.0 +0.3
WHTX Lake Whitney, 3.73 181 P Pn 01 52 47.0 +0.3
baz=360
WHTX S Sn 01 53 33.0 +2.4
baz=360
U40A Yellville 3.73 79 Pn 01 52 46.6 -0.2
U40A Pg Pb 01 52 56.0 +0.8
U40A Sg Sb 01 53 45.9 +5.5
U40A Yellville 3.73 79 P Pn 01 52 46.9 +0.1
baz=263
X40A Basin Creek Fa 3.94 107 Pn 01 52 50.0 +0.3
X40A Pg Pb 01 53 01.2 +2.4
X40A LR 01 53 53.9
X40A Basin Creek Fa 3.94 107 P Pn 01 52 51.0 +1.4
baz=290
X40A S Sn 01 53 38.7 +3.0
baz=290
237A Washetta, Mont 3.95 160 Pn 01 52 48.7 -1.0
237A Pg Pb 01 52 57.8 -1.1

WLAR	White Oak Lake	4.08	119	Pn	Pn	01 52 50.3	-1.2
WHAR	Wooly Hollow	4.19	95	Pn	Pn	01 52 53.5	+0.5
WHAR				Pg	Pb	01 53 02.8	-0.2
WHAR				Sg	Sg	01 53 59.7	-4.3
W41B	Gary Mavity, V	4.24	96	Pn	Pn	01 52 54.2	+0.5
W41B				Pg	Pb	01 53 04.3	+0.4
W41B				Sg	Sg	01 54 01.2	-4.4
W41B	Gary Mavity, V	4.24	96	P	Pn	01 52 54.4	+0.6
	baz=280						
W41B				S	Sn	01 53 44.4	+1.4
	baz=280						
UALR	University of	4.25	102	Pn	Pn	01 52 55.1	+1.3
UALR				Pg	Pb	01 53 05.5	+1.5
UALR					LR	01 54 03.7	
MGMO	Mountain Grove	4.37	70	Pn	Pn	01 52 55.4	-0.2
MGMO				Pg	Pb	01 53 06.3	+0.2
MGMO				Sg	Sb	01 54 05.2	+6.4
Z41A	Richland Creek	4.53	122	Pn	Pn	01 52 57.3	-0.4
MSTX	Muleshoe	4.76	250		Pn	01 53 00.1	-0.9
MSTX				Pg	Pb	01 53 12.0	-0.8
MSTX				Sg	Sb	01 54 15.0	+5.1
MSTX	Muleshoe	4.76	250	P	Pn	01 52 59.7	-1.2
	baz=66						
MSTX				S	Sn	01 53 56.4	+0.4
	baz=66						
435B	Jarrell	4.94	182	Pn	Pn	01 53 02.5	-0.9
435B				Pg	Pb	01 53 17.7	+1.8
435B				Sg	Sg	01 54 21.5	-6.6
CCAR	Cane Creek	4.97	110	Pn	Pn	01 53 05.2	+1.4
LCAR	Lake Charles	5.08	84	Pn	Pn	01 53 06.1	+0.8
LCAR				Pg	Pb	01 53 21.2	+3.1
LCAR				Sg	Sb	01 54 24.7	+5.7
KSCO	Kaye Shedlock'	5.30	310	Pn	Pn	01 53 07.4	-1.0
KSCO				Pg	Pb	01 53 24.3	+2.4
KSCO					LR	01 54 32.8	
KSCO	Kaye Shedlock'	5.30	310	P	Pn	01 53 07.0	-1.4
	baz=127						
CCM	Cathedral Cave	5.45	63	Pg	Pb	01 53 27.4	+3.0
CCM					LR	01 54 39.7	
CCM	Cathedral Cave	5.45	63	P	Pn	01 53 10.3	-0.1
	baz=247						
X43A	Marvell	5.48	101	Pg	Pb	01 53 29.0	+4.1
X43A				Sg	Sb	01 54 38.0	+7.5
HBAR	Harrisburg	5.49	90	Pn	Pn	01 53 08.7	-2.2
HBAR				Pg	Pg	01 53 30.9	-3.7
HBAR					LR	01 54 42.0	
JCT	Junction City	5.62	202	Pn	Pn	01 53 10.5	-2.1
JCT				Pg	Pb	01 53 30.4	+3.1
JCT					LR	01 54 47.3	
JCT	Junction City	5.62	202	P	Pn	01 53 12.8	+0.1
	baz=20						
BGNE	Belgrade	5.70	354	Pn	Pn	01 53 09.5	-4.2
BGNE				Pg	Pb	01 53 29.9	+1.2
BGNE	Belgrade	5.70	354	P	Pn	01 53 13.2	-0.6
	baz=174						
PBMO	Poplar Bluff	5.73	77	Pg	Pb	01 53 32.1	+2.9
PBMO				Sn	Sn	01 54 19.3	-0.4
PBMO				Sg	Sg	01 54 47.9	-5.3
T25A	Trinidad	5.83	286	Pn	Pn	01 53 14.5	-1.2
T25A				Pg	Pb	01 53 33.2	+2.2
T25A				Sg	Sb	01 54 47.0	+6.2
T25A	Trinidad	5.83	286	P	Pn	01 53 14.4	-1.4
	baz=102						
PARMO	Parma	6.25	79	Pn	Pn	01 53 19.9	-1.4
PARMO				Sg	Sb	01 55 02.5	+10
OGNE	Ogallala	6.35	326		Pn	01 53 22.1	-0.8
OGNE				Pg	Pb	01 54 44.3	+4.5
OGNE					LR	01 55 05.5	
OGNE	Ogallala	6.35	326	P	Pn	01 53 22.0	-0.8
	baz=144						
SLM	Saint Louis	6.41	61	Pn	Pn	01 53 23.7	+0.2
SLM				Sg	Sb	01 55 07.2	+10
LNXT	Lenox	6.43	84	Pn	Pn	01 53 23.3	-0.4
LNXT				Sg	Sg	01 55 08.3	-7.4
HENM	Henderson Moun	6.48	79	Sg	Sg	01 55 10.8	-6.6
OXF	Oxford	6.66	98		Pn	01 53 27.0	0.0
OXF	Oxford	6.66	98	P	Pn	01 53 27.3	+0.3
	baz=283						
SDCO	Great Sand Dun	6.81	290		Pn	01 53 28.2	-1.1
SDCO				Pg	Pb	01 53 53.9	+6.1
SDCO				Sg	Sb	01 55 17.9	+8.7
SCIA	State Center	6.97	27	Pg	Pg	01 53 58.6	-4.3
SCIA					LR	01 55 26.3	
N41A	Harden Midland	7.15	44	Pn	Pn	01 53 32.2	-1.5
N41A					Pb	01 54 00.2	+6.7
N41A				Sg	Sb	01 55 30.7	+12
P43A	Skaggs, Pawnee	7.36	56	Pn	Pn	01 53 36.7	+0.1
P43A					LR	01 55 39.0	
ANMO	Albuquerque	7.45	267	Pn	Pn	01 53 34.4	-3.6
ANMO				Pg	Pb	01 54 04.2	+5.6
833A	Chaparral WMA,	7.58	193		Lg	01 55 45.6	
PLAL	Pickwick Lake	7.65	93	Pn	Pn	01 53 40.1	-0.5
PLAL				Sg	Sg	01 55 48.5	-6.6
ISCO	Idaho Springs	7.67	304	Pn	Pn	01 53 39.3	-1.8
ISCO				Pg	Pg	01 54 10.9	-5.4
ISCO				Sn	Sn	01 55 03.1	-4.9
ISCO				Sg	Sb	01 55 44.5	+11
MNTX	Cornudas Mount	7.77	241		Pn	01 53 41.3	-1.0
MNTX				Pg	Pb	01 54 09.7	+5.7
S22A	4UR Ranch, Cre	7.83	288	Pn	Pn	01 53 38.0	-5.4
S22A				Pg	Pb	01 54 12.6	+7.3
S22A					LR	01 55 53.0	
L40A	Anamosa	7.94	35	Pn	Pn	01 53 43.5	-1.1
L40A				Sg	Sb	01 55 53.4	+12
HDIL	Hopedale	7.99	51	Pn	Pn	01 53 44.5	-0.7
HDIL					LR	01 55 58.0	
OLIL	Olney	8.00	65		Lg	01 56 00.2	
ECSD	EROS Data Cent	8.01	4		Pn	01 53 44.4	-1.1
ECSD				Pg	Pb	01 54 13.4	+5.3
ECSD				Sg	Sb	01 55 54.3	+11
USIN	University of	8.11	71	Sg	Sg	01 56 03.3	-6.5
TX31	Lajitas Ar. Si	8.29	221	Pn	Pn	01 53 47.5	-2.0
TX31				Pg	Pb	01 54 18.6	+5.7
TX31				Sg	Sg	01 56 05.2	-10
TX32	Lajitas Array	8.29	221	Pn	Pn	01 53 48.4	-1.0
TX32				Pg	Pb	01 54 18.9	+6.0
TX32				Sg	Sg	01 56 04.9	-11
O44A	Mansfield	8.32	55	Sg	Sg	01 56 07.4	-8.9
N23A	Red Feather La	8.46	310	Pn	Pn	01 53 50.7	-1.2
N23A					LR	01 56 10.1	
L42A	Oliver, Polo	8.69	42	Pn	Pn	01 53 53.8	-1.0
L42A				LR	LR	01 56 19.0	
SUSD	Miller	8.78	353	Pn	Pn	01 53 52.4	-3.7
SUSD				LR	LR	01 56 22.3	
P46A	Rosedale	8.96	61	LR	LR	01 56 26.8	
CLTN	Cedars of Leba	8.98	84	LR	LR	01 56 29.2	
JFWS	Jewell Farm	9.06	36	Pn	Pn	01 53 59.2	-0.6
JFWS				LR	LR	01 56 29.6	
MVCO	Mesa Verde	9.06	283	LR	LR	01 56 26.5	
121A	Cookes Peak, D	9.18	253	LR	LR	01 56 32.6	
WCI	Wyandotte Cave	9.23	71	LR	LR	01 56 34.7	
M44A	Midewin, Midew	9.25	50	LR	LR	01 56 33.7	
BLO	Bloomington	9.30	65	LR	LR	01 56 38.6	
SFIN	Lafayette	9.35	57	LR	LR	01 56 38.2	
T49A	Edmonton	9.66	78	LR	LR	01 56 49.0	
I40A	Norwalk	9.67	31	LR	LR	01 56 44.5	
RWWY	Rawlins	9.70	311	LR	LR	01 56 42.5	
L44A	Lake County Fo	9.79	46	LR	LR	01 56 54.2	
RSSD	Black Hills	9.80	331	LR	LR	01 56 51.7	
K22A	Casper	9.89	317	LR	LR	01 56 53.8	
K43A	Burlington	9.89	43	LR	LR	01 56 56.8	
SPMN	Marine on St.	10.10	19	LR	LR	01 57 01.7	
P48A	Milroy	10.20	65	LR	LR	01 57 05.3	
N47A	Urbana	10.53	57	LR	LR	01 57 15.8	
L46A	Eue Claire	10.68	51	LR	LR	01 57 22.6	
RDMU	Red Mountain	10.73	300	LR	LR	01 57 19.3	
SRU	San Rafael Swe	10.97	292	LR	LR	01 57 31.8	
G40A	Rib Lake	10.98	28	LR	LR	01 57 32.4	
YMP	Mirror Lake Pl	13.25	317		Sn	01 57 29.3	+4.5

BJI 16 01:57:59.7±0.0, 35°.97N×82°.48E, h7km, ML3.7/7
NNC 16 01:58:08.0±1.9, 36°.43N×82°.62E, h16km±16km, mb4.1, mpv3.8, Error ellipse: s-maj=28.0km s-min=18.1km az=64.0
IDC 16 01:58:17.1±11.0, 37°.39N×82°.95E, h0km, mb3.4/1, mb1 3.7/5, mb1mx3.3/49, mbtmp3.7/5, ML3.3/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/39, Error ellipse: s-maj=165.5km s-min=44.4km az=25.0

ISC 16 01:58:06.1±2.5, 36°.4N±0°.2×82°.4E±0°.1, h10km, n11, σ1.47/14, 3C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	5.95	304	Pg	Pb	01 59 48.6	-1.2
KSH				smax	smax		
	comp=N,160nm,1.1s						
KSH				smax	smax		
	comp=E,170nm,0.9s						
PDGK	Podgornoye	7.30	343	⇑Pn	Pn	01 59 53.8	+1.0
	2.5nm,0.4s						
PDGK				⇓Sn	Sn	02 01 17.7	+1.9
	18nm,0.8s						
PDGK				⇓Lg	Lg	02 02 00.0	
	21nm,0.8s						
WMQ	Urumqi	8.50	27	eP	Pn	02 00 09.4	+0.2
WMQ				S	Sn	02 01 43.0	-2.2
WMQ				smax	smax		
	comp=N,11nm,1.1s						
WMQ				smax	smax		
	comp=E,12nm,1.3s						
MK31	Makanchi Array	10.42	360	Pn	Pn	02 00 35.8	+0.2
	0.9nm,0.4s,baz=182,slow=12,SNR=68						
MK31				⇓Sn	Sn	02 02 32.7	+0.3
	1.4nm,0.7s,baz=182,slow=24,SNR=4.0						
MKAR	Makanchi Array	10.42	360	Pn	Pn	02 00 36.0	+0.5
	0.9nm,0.3s,baz=182,slow=14,SNR=59						
MAKZ	Makanchi	10.44	359	⇑Pn	Pn	02 00 36.4	+0.6
	5.7nm,0.5s						
MAKZ				⇑Sn	Sn	02 02 32.7	-0.1
	1.4nm,0.6s						
KURBB	Kurchatov Arra	14.52	350	Pn	Pn	02 01 30.0	-1.5
	0.0nm,0.3s,baz=174,slow=12,SNR=6.9						
ZALV	Zalesovo Beam	17.67	5	Pn	Pn	02 02 09.5	-2.6
	0.2nm,0.3s,baz=186,slow=12,SNR=8.9						
BVAR	Borovoye Array	18.66	337	Pn	Pn	02 02 25.1	+0.8
	0.5nm,0.3s,baz=143,slow=9.7,SNR=20						
SONM	Songino Array	21.11	50	P	P	02 02 52.4	+1.5
	2.2nm,1.0s,baz=238,slow=12,SNR=12						
WSAR	Wadi Sarin	24.31	244	LR	LR	02 15 14.4	
	comp=Z,32nm,18.1s,baz=128,slow=40						

IDC 16 02:18:12.8±2.1, 15°.95S×177°.25W, h409km±25km, mb3.5/9, mb1 3.8/10, mb1mx3.6/24, mbtmp4.3/10, Error ellipse: s-maj=36.3km s-min=12.9km az=146.0
NEIC 16 02:18:13.1±2.4, 15°.8S±0°.1×177°.2W±0°.1, h407km±9km, mb4.2/16, Error ellipse: s-maj=24.7km s-min=15.5km az=141.0

ISC 16 02:18:12.5±0.6, 15°.8S±0°.1×177°.23W±0°.09, h400km, n30, σ1.40/31, mb4.1/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.93	246	Pn	Pn	02 19 37.0	+3.1
AFI	Afiamalu	5.58	71	P	Pn	02 19 42.5	+1.7
	5.0nm,0.3s,baz=3.9,slow=2.8,SNR=11						
AFI				S	S	02 20 50.5	-2.1
	0.6nm,0.3s,baz=73,slow=21,SNR=3.2						
AFI	Afiamalu	5.58	71		Pn	02 19 42.3	+1.5
FUNA	Funafuti	8.00	334		Pn	02 20 07.1	-0.5
URZ	Urewera	22.96	191	P	P	02 22 40.3	-3.5
	8.1nm,0.6s,baz=39,slow=10,SNR=4.4						
URZ	Urewera	22.96	191	P	P	02 22 41.7	-2.1
URZ				IAmb	IAmb	02 22 42.8	
	comp=Z,8.5nm,0.7s						
FOZ	Fox Glacier	29.80	199	P	P	02 23 44.5	+0.1
STKA	Stephens Creek	40.67	239	P	P	02 25 15.9	-0.2
	comp=Z,1.5nm,0.6s,baz=64,slow=13,SNR=4.7						
WRA	Warramunga Arr	46.17	257	P	P	02 25 58.2	-1.3
	comp=Z,1.5nm,0.7s,baz=93,slow=6.2,SNR=22						
AS31	Alice Springs	46.49	252	P	P	02 26 01.1	-0.9
ASAR	Alice Springs	46.49	252	P	P	02 26 01.0	-1.0
	comp=Z,20nm,0.7s,baz=84,slow=8.0,SNR=206						
FORT	Forrest	51.96	243	P	P	02 26 41.7	-1.0
USA0B	Ussuriysk Arra	75.51	325	P	P	02 29 13.5	-0.7
CMB	Columbia Colle	75.51	43	P	P	02 29 15.2	+0.8
CMB				IAmb	IAmb	02 29 16.2	
	comp=Z,4.8nm,1.0s						
NVAR	Mina Array Bea	77.10	44	P	P	02 29 24.1	+0.6
	comp=Z,2.2nm,0.8s,baz=222,slow=7.9,SNR=7.5						
MSU	Marysvale	81.30	46	P	P	02 29 47.1	+1.2
TMUT	Trail Mountain	82.33	46	P	P	02 29 52.0	+0.6
SRU	San Rafael Swe	82.72	46	P	P	02 29 53.6	+0.5
HDA	Harding Lake	83.23	13	P	P	02 29 54.3	-0.6
CCB	Clear Creek Bu	83.26	12	P	P	02 29 54.1	-0.9
IL31		83.56	13	P	P	02 29 55.5	-1.0
IL31				IAmb	IAmb	02 29 56.4	
	comp=Z,7.4nm,1.1s						
ILAR	Eielson Array	83.56	13	P	P	02 29 55.2	-1.3
	comp=Z,3.8nm,1.0s,baz=222,slow=5.7,SNR=18						
MCMT	McKenzie Canyo	83.88	40	P	P	02 29 59.7	+0.8
TX31	Lajitas Ar. Si	83.89	57	P	P	02 30 00.5	+1.3
TX31				IAmb	IAmb	02 30 01.9	
	comp=Z,6.3nm,1.3s						
TX32	Lajitas Array	83.89	57	P	P	02 30 00.5	+1.3
TX32				IAmb	IAmb	02 30 01.9	
	comp=Z,6.5nm,1.3s						
TXAR	Lajitas Array	83.89	57	P	P	02 30 00.8	+1.6
	comp=Z,1.8nm,0.8s,baz=222,slow=6.4,SNR=19						
YHL	Hebgen Lake	84.93	41	P	P	02 30 04.6	+0.4
PDAR	Pinedale Array	85.02	43	P	P	02 30 04.3	-0.3
	comp=Z,0.6nm,0.7s,baz=180,slow=1.5,SNR=5.4						
YKA	Yellowknife Ar	91.92	24	P	P	02 30 35.6	-0.7
	comp=Z,0.5nm,0.8s,baz=248,slow=4.9,SNR=7.1						
BRTR	Keskin Array B	144.03	318	PKP	PKPab	02 37 00.7	+0.1
	comp=Z,1.5nm,0.8s,baz=36,slow=2.3,SNR=6.7						

MOS 16 02:26:15.9±0.0, 41°.17N×47°.51E, h8km, MPVA3.8
DRS 16 02:26:16.5±0.0, 41°.09N×47°.56E, h14km
NORS 16 02:26:17.2±0.0, 41°.23N×47°.56E, h6km, MPVA3.1

ISC 16 02:26:13.9±2.3, 40°.99N±0°.08×47°.60E±0°.06, h16km±11km, n20, σ1.32/38, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKT	Akhty	0.50	12	i Pg	Pb	02 26 24.4	0.0
AKT				eSg	Sb	02 26 30.5	-0.9
KSMR	Kasumkent	0.73	33	i Pg	Pn	02 26 30.0	+0.4
KSMR				i Sg	Sn	02 26 40.0	-0.4
URKR	Urkarakh	1.17	1	ePg	Pg	02 26 36.5	-0.1
URKR				eSg	Sg	02 26 51.5	-0.4
KMKR	Kumukh	1.20	342	ePg	Pg	02 26 37.0	-0.1
KMKR				eSg	Sg	02 26 52.5	-0.3
DDFL	Dedoflistskaro	1.20	293	P	Pg	02 26 38.7	+1.6
LGD	Lagodekhi	1.32	310	P	Pg	02 26 39.2	-0.2
LGD				S	Sg	02 26 56.5	-0.1
LGD	Lagodekhi	1.32	310	i Pg	Pg	02 26 39.2	-0.2
LGD				eSg	Sg	02 26 56.4	-0.2
GNBR	Gunib	1.48	342	ePg	Pg	02 26 41.9	-0.4
GNBR				eSg	Sg	02 27 00.7	-0.8
XNZR	Khunzakh	1.69	337	ePg	Pg	02 26 47.6	+1.2
XNZR				eSg	Sg	02 27 09.6	+1.3
BTLR	Botlikh	1.96	329	ePg	Pb	02 26 50.0	+0.8
BTLR				eSg	Sg	02 27 17.4	+0.4
DBC	Dubki	2.11	345	i Pg	Pb	02 26 54.0	-0.3
BTNK	Botanikuri	2.22	289	P	Pn	02 26 51.9	+1.9
BTNK				S	Sb	02 27 20.7	0.0
TBLG	Delisi	2.27	290	P	Pb	02 26 53.0	-1.5
TBLG				S	Sb	02 27 22.1	-0.3
KZRT	Kazreti	2.44	280	P	Pb	02 26 55.8	-1.7
KZRT				S	Sb	02 27 25.5	-1.9
GROC	Groznyy	2.58	329	ePn	Pb	02 26 59.6	-0.2
GROC				eSn	Sb	02 27 31.4	+0.1
GUDG	Gudauri	2.76	303	P	Pb	02 27 00.3	-2.6
GUDG				S	Sb	02 27 35.7	-0.9
GUDG	Gudauri	2.76	303	ePn	Pb	02 27 01.1	-1.9
GUDG				eSn	Sb	02 27 35.6	-0.9
LACR	Lac	3.07	308	ePn	Pb	02 27 06.7	-1.5
LACR				eSn	Sb	02 27 44.0	-1.4
AKH	Akhalkalaki	3.12	279	ePn	Pb	02 27 07.9	-1.2
AKH				eSn	Sb	02 27 47.0	0.0
ZEI	Tsey	3.29	304	ePn	Pn	02 27 08.4	+3.5
ZEI				eSn	Sb	02 27 49.0	-2.9

IDC 16 02:31:17.5±0.8, 13°.22N×144°.21E, h134km±7km, mb3.5/11, mb1 3.8/11, mb1mx3.5/38, mbtmp3.9/11, Error ellipse: s-maj=24.8km s-min=16.4km az=92.0
NEIC 16 02:31:17.9±0.8, 13°.20N±0°.08×144°.2E±0°.2, h137km±8km, mb4.2/4, Error ellipse: s-maj=24.9km s-min=11.6km az=98.0

ISC 16 02:31:17.8±0.8, 13°.2N±0°.1×144°.2E±0°.1, h138km, n16, σ0.82/17, mb3.8/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.74	59	P	Pn	02 31 39.6	+0.3
GUMO				S	Sn	02 31 55.4	-0.2
	403nm,0.3s,baz=17,slow=22,SNR=82						
JNU	Nakatsue	23.26	331	P	P	02 36 13.2	+0.1
	8.7nm,0.7s,baz=140,slow=6.1,SNR=5.0						
KSRS	Korea Array	28.19	332	P	P	02 36 57.4	0.0
	1.2nm,0.6s,baz=140,slow=9.7,SNR=7.4						
WRA	Warramunga Arr	34.35	197	P	P	02 37 51.2	-0.4
	0.7nm,0.6s,baz=19,slow=9.6,SNR=7.0						
ASAR	Alice Springs	38.01	195	P	P	02 38 22.8	+0.1
	0.3nm,0.6s,baz=14,slow=9.4,SNR=4.8						
SONM	Songino Array	46.68	325	P	P	02 39 33.2	+0.5
	0.4nm,0.5s,baz=139,slow=7.4,SNR=5.3						
MK31	Makanchi Array	61.32	316	P	P	02 41 19.2	+0.3
MK31				IAmb	IAmb	02 42 52.9	
	comp=Z,3.2nm,1.6s						
MKAR	Makanchi Array	61.32	316	P	P	02 41 19.1	+0.2
	comp=Z,0.7nm,0.3s,baz=93,slow=8.7,SNR=39						
NIL	Nilore	67.03	301	P	P	02 41 56.9	+0.5
NIL				IAmb	IAmb	02 41 58.2	
	comp=Z,4.3nm,0.8s						
ILAR	Eielson Array	69.18	25	P	P	02 42 07.8	-1.4
	comp=Z,0.4nm,0.6s,baz=250,slow=5.8,SNR=7.1						
YKA	Yellowknife Ar	83.49	27	P	P	02 43 30.3	+0.4
	comp=Z,0.2nm,0.4s,baz=287,slow=5.1,SNR=8.4						
NVAR	Mina Array Bea	87.65	51	P	P	02 43 53.3	+2.0
	comp=Z,1.4nm,0.7s,baz=267,slow=8.0,SNR=5.6						
FINES	FINESS Array B	91.24	335	P	P	02 44 05.8	-1.4
	comp=Z,3.9nm,1.1s,baz=87,slow=5.6,SNR=5.4						
PD31	Pinedale Array	92.68	45	P	P	02 44 14.2	-0.5
PDAR	Pinedale Array	92.68	45	P	P	02 44 15.1	+0.4
	comp=Z,0.3nm,0.6s,baz=251,slow=0.9,SNR=3.8						
TORD	Torodi Ar. Bea	134.55	304	PKP	PKiKP	02 50 22.0	-0.2
	comp=Z,0.4nm,0.6s,baz=35,slow=2.8,SNR=7.3						

UPP 16 02:33:51.8±2.8, 67°.63N×33°.72E, h0km, ML2.1, Suspected explosion
KOLA 16 02:33:51.8, 67°.68N×33°.76E, M2.3, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)
NAO 16 02:33:52.6±1.1, 67°.66N×33°.64E, ML2.6
HEL 16 02:33:52.9±0.5, 67°.71N×33°.62E, h0km, ML2.3, Explosion
IDC 16 02:33:54.4±2.7, 67°.77N×33°.40E, h0km, mb1 3.2/3, mb1mx3.0/36, mbtmp3.1/3, ML2.4/3, Error ellipse: s-maj=29.8km s-min=10.5km az=72.0

ISC 16 02:33:49.8±1.5, 67°.69N±0°.04×33°.78E±0°.08, h0km, n45, σ1.94/83, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APZ9	Apatity	0.19	230	Pg	Pg	02 33 55.0	+1.5
APZ9				Lg	Lg	02 33 57.3	
APZ9	Apatity	0.19	230	Pg	Pg	02 33 55.0	+1.5
APZ9				Sg	Sg	02 33 57.3	+1.4
APA0	Apatity Array	0.32	254	Pg	Pg	02 33 57.2	+1.4
	baz=86,slow=16						
APA0				Lg	Lg	02 34 01.4	
	baz=86,slow=37						
APA0	Apatity Array	0.32	254	Pg	Pg	02 33 57.2	+1.4
	baz=86,slow=16						
APA0				Sg	Sg	02 34 01.4	+1.5
	baz=86,slow=37						
VRF	Varrio	1.59	274	PG	Pb	02 34 20.0	0.0
VRF				MSG		02 34 38.8	
	comp=Z,40nm,0.2s						
VRF				SN	Sn	02 34 40.1	-0.3
KU6	Riekki	2.27	224	PN	Pb	02 34 30.7	-1.0
	baz=41						
KU6				MSG		02 34 59.2	
	comp=Z,13nm,0.2s						
KU6				SG	Sb	02 35 01.6	+1.3
MSF	Maaselka	2.59	229	PN	Pb	02 34 35.8	-1.4
	baz=48						
MSF				SB	Sb	02 35 10.7	+1.2
SGF	Sodankyl	2.79	268	PN	Pn	02 34 37.1	+1.4
SGF				SG	Sb	02 35 15.4	+0.2
RNF	Rovaniemi	3.22	254	PN	Pn	02 34 43.2	+1.7
RNF				SN	Sn	02 35 22.9	+2.3
KEV	Kevo	3.22	313	Pn	Pn	02 34 44.3	+2.8
KEV				Sn	Sn	02 35 22.1	+1.5
KEV				Lg	Lg	02 35 30.5	
KEV	Kevo	3.22	313	PN	Pn	02 34 44.1	+2.5
KEV				SN	Sn	02 35 22.2	+1.5
KEV				MSG		02 35 25.9	
	comp=Z,11nm,0.2s						
KEV	Kevo	3.22	313	eP	Pn	02 34 43.9	+2.3
KEV				eS	Sn	02 35 21.8	+1.2
ARA0	ARCESS Array S	3.55	305	Pn	Pn	02 34 48.1	+2.0
	baz=122,slow=16						
ARA0				Pg	Pg	02 34 56.3	-1.5
	baz=118,slow=16						
ARA0				Sn	Sn	02 35 28.9	+0.2
	baz=128,slow=28						
ARA0				Lg	Lg	02 35 39.4	
	baz=119,slow=37						
ARA0	ARCESS Array S	3.55	305	Pn	Pn	02 34 48.1	+2.0
	baz=122,slow=16						
ARA0				Pg	Pg	02 34 56.3	-1.5
	baz=118,slow=16						
ARA0				Sn	Sn	02 35 28.9	+0.2
	baz=128,slow=28						
ARCES	ARCESS Array B	3.55	305	Pn	Pn	02 34 48.1	+2.0
	comp=Z,1.3nm,0.3s,baz=121,slow=14,SNR=269						
ARCES				Sn	Sn	02 35 29.4	+0.7
	comp=Z,1.8nm,0.3s,baz=118,slow=28,SNR=13						
ARCES				Lg	Lg	02 35 39.4	
	comp=Z,4.4nm,0.3s,baz=116,slow=32,SNR=15						
ARE0	ARCESS Array S	3.55	305	PN	Pn	02 34 47.8	+1.7
	baz=122						
ARE0				SN	Sn	02 35 28.9	+0.2
ARE0	ARCESS Array S	3.55	305	eP	Pn	02 34 47.8	+1.7
ARE0				eS	Sn	02 35 28.9	+0.2
ARE0				IAML		02 35 47.2	
	comp=Z,6.7nm,0.2s						
HEF	Hetta	3.87	285	Pn	Pn	02 34 52.0	+1.6
HEF				Sn	Sn	02 35 36.8	+0.3
HEF				Lg	Lg	02 35 49.3	
HEF	Hetta	3.87	285	PN	Pn	02 34 51.9	+1.4
	baz=98						
HEF				SN	Sn	02 35 37.0	+0.5
HEF	Hetta	3.87	285	eP	Pn	02 34 51.5	+1.1
HEF				eS	Sn	02 35 36.7	+0.2
TOF	Tornio	4.07	251	PN	Pn	02 34 53.9	+0.7
TOF				SN	Sn	02 35 41.3	0.0
OUL	Oulu	4.11	234	PN	Pn	02 34 56.8	+3.0
OUL				SG	Sg	02 36 01.6	-0.1
KTK1	Kautokeino	4.12	294	Pn	Pn	02 34 56.5	+2.5
KTK1				Sn	Sn	02 35 42.4	-0.5
KTK1				Lg	Lg	02 35 55.9	
PAJU	Pajala	4.18	266	P	Pn	02 34 55.8	+1.0
LANU	Lannavaara	4.48	280	P	Pn	02 34 59.6	+0.7
LANU				S	Sn	02 35 51.2	-0.4
LANU	Lannavaara	4.48	280	PN	Pn	02 34 59.3	+0.4
LANU				SN	Sn	02 35 51.5	0.0
ERTU	Ertsjaerv	4.67	261	P	Pn	02 35 02.4	+1.0
ERTU	Ertsjaerv	4.67	261	PN	Pn	02 35 02.2	+0.8
ERTU				SN	Sn	02 35 55.5	-0.7
KIF	Kilpisjarvi	4.98	291	Pn	Pn	02 35 06.7	+1.0
KIF				Sn	Sn	02 36 03.1	-0.8
KIF	Kilpisjarvi	4.98	291	eP	Pn	02 35 07.0	+1.3
KIF				eS	Sn	02 36 03.1	-0.8
KUA	Kurravaara	5.10	279	P	Pn	02 35 08.3	+0.9
KUA				S	Sn	02 36 06.4	-0.5
DUNU	Dundret	5.13	270	P	Pn	02 35 09.3	+1.6
HARU	Harads	5.27	259	P	Pn	02 35 09.5	-0.1
SJUU	Sjulsmark	5.33	251	P	Pn	02 35 10.8	+0.4
SJUU				S	Sn	02 36 12.0	-0.3
RATU	Laukkuluspa	5.39	278	P	Pn	02 35 12.4	+1.0
RATU				S	Sn	02 36 13.4	-0.7
TRO	Tromso	5.76	297	eP	Pn	02 35 18.6	+2.2
TRO				eS	Sn	02 36 22.8	-0.2
TRO				IAML		02 36 25.6	
	comp=Z,2.9nm,0.4s						
STEI	Steigen	7.02	281	eP	Pn	02 35 33.6	-0.1
STEI				eS	Sn	02 36 47.9	-6.1
STEI				IAML		02 36 57.0	
	comp=Z,3.1nm,0.7s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FIA0	FINESS Array S	7.09	211	Pn	Pn	02 35 35.4	+0.8
	baz=27,slow=12						
FIA0				Sn	Sn	02 36 52.9	-3.0
	baz=20,slow=28						
FIA0				Lg	Lg	02 37 28.3	
	baz=30,slow=28						
FIA0	FINESS Array S	7.09	211	Pn	Pn	02 35 35.4	+0.8
	baz=27,slow=12						
FIA0				Sn	Sn	02 36 52.9	-3.0
	baz=20,slow=28						
FIA0				Sg	Sb	02 37 28.3	+10
	baz=30,slow=28						
FINES	FINESS Array B	7.09	211	Pn	Pn	02 35 36.3	+1.7
	comp=Z,0.1nm,0.3s,baz=27,slow=12,SNR=4.4						
FINES				Sn	Sn	02 36 55.2	-0.6
	comp=Z,0.3nm,0.3s,baz=24,slow=22,SNR=6.5						
HFS	Hagfors	11.59	239	Pn	Pn	02 36 35.4	-0.8
	baz=46,slow=11						
HFS				Sn	Sn	02 38 38.4	-7.8
	baz=56,slow=22						
HFS	Hagfors	11.59	239	Pn	Pn	02 36 35.4	-0.8
	baz=46,slow=11						
HFS				Sn	Sn	02 38 38.4	-7.8
	baz=56,slow=22						
SPA0	Spitsbergen Ar	11.62	342	Pn	Pn	02 36 35.8	-0.8
	baz=142,slow=22						
SPA0	Spitsbergen Ar	11.62	342	Pn	Pn	02 36 35.8	-0.8
	baz=142,slow=22						
NOA	NORSAR Array B	11.77	246	Pn	Pn	02 36 38.4	-0.3
	comp=Z,0.0nm,0.3s,baz=44,slow=11,SNR=2.9						

THE 16 02:47:19.5, 38.°40N×20.°45E, h10km±1km, ML2.8/6, Error ellipse: s-maj=1.6km s-min=0.4km az=265.0
ATH 16 02:47:19.1, 38.°40N×20.°47E, h14km±1km, ML2.7/10, Error ellipse: s-maj=1.9km s-min=0.6km az=255.0
BEO 16 02:47:20.2±2.2, 38.°40N×20.°05E, h14km±1km, ML3.1/5
ISC 16 02:47:19.4±0.8, **38.°40N**±0.°02×**20.°47E**±0.°03, **h11**km±5km, **n58**, σ0§72/89, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	Fiskardo	0.10	49	P	Pg	02 47 21.7	-0.4
FSK				S	Sg	02 47 23.6	-0.5
	9µm,0.3s						
KEF1	Kardakata, Kep	0.12	179	P	Pg	02 47 22.1	-0.2
KEF1				S	Sg	02 47 24.4	0.0
KEF4	Livadi, Kephal	0.14	194	P	Pg	02 47 22.6	-0.1
KEF4				S	Sg	02 47 25.4	+0.4
AGT1	Agia Thekli	0.16	204	P	Pg	02 47 22.9	-0.1
AGT1				S	Sg	02 47 25.8	+0.3
LXR1	Lixouri, Cepha	0.20	187	P	Pg	02 47 23.7	+0.1
LXR1				S	Sg	02 47 27.5	+1.0
LXRA	Lixouri, Kepha	0.20	187	P	Pg	02 47 23.7	+0.1
LXRA				S	Sg	02 47 27.0	+0.5
KEF3	Kipouria, Keph	0.21	206	P	Pg	02 47 23.8	-0.1
KEF3				S	Sg	02 47 27.9	+0.9
ARG2	Argostoli	0.22	176	P	Pg	02 47 24.0	+0.1
ARG2				S	Sg	02 47 27.6	+0.5
ARGA	Argostoli. Kep	0.22	178	P	Pg	02 47 23.9	-0.1
ARGA				S	Sg	02 47 27.6	+0.5
CHV1	Chavriata, Kef	0.22	198	P	Pg	02 47 24.0	0.0
CHV1				S	Sg	02 47 28.2	+1.0
KEF2	Argostoli. Kep	0.23	176	P	Pg	02 47 24.1	-0.1
KEF2				S	Sg	02 47 27.7	+0.3
VLS	Valsamata	0.24	156	P	Pg	02 47 24.2	-0.1
VLS				S	Sg	02 47 28.1	+0.4
VLS	Valsamata	0.24	156	P	Pg	02 47 24.1	-0.3
VLS				S	Sg	02 47 27.8	+0.1
VLS				AML	AML	02 47 28.4	
	comp=E,12389µm,0.3s						
VLS				AML	AML	02 47 28.5	
	comp=N,10042µm,0.3s						
EVGI	Lefkada island	0.27	33	P	Pg	02 47 24.9	0.0
EVGI				S	Sg	02 47 29.4	+0.7
EVGI	Lefkada island	0.27	33	P	Pg	02 47 24.9	0.0
EVGI				S	Sg	02 47 29.0	+0.4
MGNA	Meganis	0.36	44	P	Pg	02 47 26.2	-0.4
MGNA				S	Sg	02 47 32.1	+0.6
MGNA				AML	AML	02 47 36.0	
	comp=N,2577µm,0.2s						
MGNA				AML	AML	02 47 36.4	
	comp=E,3807µm,0.3s						
LKD2	Lefkada island	0.42	21	P	Pg	02 47 27.4	-0.3
LKD2				S	Sb	02 47 34.4	-0.8
	comp=E,865nm,0.4s						
LKD2	Lefkada island	0.42	21	P	Pg	02 47 27.3	-0.3
LKD2				S	Sg	02 47 33.2	-0.2
LKD2				AML	AML	02 47 37.9	
	comp=N,1754µm,0.6s						
LKD2				AML	AML	02 47 39.7	
	comp=E,1744µm,0.5s						
TSLK	Tsoukalades, L	0.45	19	P	Pg	02 47 28.2	-0.1
TSLK				S	Sg	02 47 35.0	+0.7
	comp=E,1µm,0.6s						
TSLK	Tsoukalades, L	0.45	19	P	Pg	02 47 28.0	-0.3
TSLK				S	Sg	02 47 35.3	+0.9
TSLK				AML	AML	02 47 39.4	
	comp=E,2537µm,0.6s						
TSLK				AML	AML	02 47 40.1	
	comp=N,2831µm,0.5s						
AST1	Astakos	0.51	73	P	Pg	02 47 29.3	0.0
AST1				S	Sb	02 47 37.7	0.0
VLMS	Volimes, Zakyn	0.54	163	P	Pg	02 47 29.2	-0.7
VLMS				S	Sg	02 47 38.0	+0.9
VLMS				AML	AML	02 47 41.7	
	comp=N,10333µm,0.3s						
VLMS				AML	AML	02 47 42.2	
	comp=E,5826µm,0.3s						
PDO	Prodromos	0.60	70	P	Pg	02 47 30.7	-0.3
PDO				S	Sg	02 47 38.3	-0.6
PDO				AML	AML	02 47 45.0	
	comp=N,2686µm,0.6s						
PDO				AML	AML	02 47 48.1	
	comp=E,2380µm,0.5s						
VTN	Vitineika	0.74	130	P	Pg	02 47 33.7	0.0
VTN	Vitineika	0.74	130	P	Pg	02 47 33.6	0.0
KRI1	kERI	0.78	159	P	Pg	02 47 33.6	-0.9
KRI1				S	Sb	02 47 46.1	+0.6
RLS	Riolos of Patr	0.86	113	P	Pg	02 47 35.2	-0.7
RLS	Riolos of Patr	0.86	113	P	Pg	02 47 35.2	-0.7
RLS				S	Sg	02 47 47.4	+0.3
RLS				AML	AML	02 47 57.4	
	comp=N,752µm,0.9s						
RLS				AML	AML	02 47 57.4	
	comp=E,776µm,0.7s						
PVO	Paravola	0.86	75	P	Pg	02 47 35.9	-0.1
PVO				S	Sn	02 47 50.1	+0.2
	comp=E,818nm,0.6s						
PVO	Paravola	0.86	75	P	Pg	02 47 35.7	-0.3
DRO	Drossia	1.07	114	P	Pb	02 47 38.9	-1.0
DRO				S	Sn	02 47 55.3	+0.1
	comp=E,708nm,0.5s						
DRO	Drossia	1.07	114	P	Pb	02 47 39.2	-0.8
DRO				S	Sn	02 47 55.1	-0.1
DRO				AML	AML	02 48 03.2	
	comp=N,1421µm,0.6s						
DRO				AML	AML	02 48 08.2	
	comp=E,1594µm,0.7s						
IGT	Igoumenitsa	1.14	355	P	Pb	02 47 40.2	-0.9
IGT				S	Sn	02 47 57.9	+1.0
	comp=E,305nm,0.5s						
IGT	Igoumenitsa	1.14	355	ePg	Pn	02 47 41.0	-0.2
IGT				eSg	Sn	02 47 56.6	-0.3
IGT	Igoumenitsa	1.14	355	P	Pb	02 47 40.6	-0.5
ANX	Ano Chora	1.16	80	P	Pn	02 47 40.5	-1.0
EVR	Evrytania	1.17	63	P	Pn	02 47 40.9	-0.9
SERG	Sergoula	1.25	89	P	Pn	02 47 42.0	-0.7
SERG	Sergoula	1.25	89	P	Pn	02 47 42.3	-0.4
TRIZ	Trizonia	1.26	91	P	Pn	02 47 42.2	-0.6
TRIZ	Trizonia	1.26	91	P	Pn	02 47 42.3	-0.6
AMT	Artemida-Makis	1.31	131	P	Pn	02 47 43.6	+0.1
KALE	Kalithea	1.31	90	P	Pn	02 47 43.0	-0.7
KLV	Kalavryta, Ach	1.37	104	P	Pn	02 47 43.9	-0.5
KLV				S	Sg	02 48 05.2	+1.7
KLV				AML	AML	02 48 06.1	
	comp=N,356µm,0.5s						
KLV				AML	AML	02 48 10.7	
	comp=E,261µm,0.5s						
KEK	Kerkira	1.42	339	P	Pb	02 47 45.3	-0.4
KEK				AML	AML	02 48 15.0	
	comp=N,300µm,0.4s						
KEK				AML	AML	02 48 15.8	
	comp=E,396µm,0.3s						
MAKR	Makrakomi, Fth	1.44	64	P	Pn	02 47 45.8	+0.4
AGG	Agios Georgios	1.59	66	P	Pb	02 47 48.1	-0.6
ITM	Ithomi	1.68	136	P	Pb	02 47 50.2	0.0
THL	Klokotos Trika	1.68	45	P	Pb	02 47 50.6	+0.3
KPRO	Kipourio	1.71	24	P	Pb	02 47 51.4	+0.6
SRS	Serrai	3.63	41	ePn	Pn	02 48 18.1	+2.6
PDG	Podgorica	4.13	347	ePn	Pn	02 48 22.2	-0.2
BARS	Barje	4.53	13	ePn	Pn	02 48 29.5	+1.6
TREB	Trebinje	4.61	340	ePn	Pn	02 48 27.1	-1.8
VTS	Vitosha	4.72	26	ePn	Pn	02 48 32.6	+2.1
SJES	Sjenica	4.88	356	ePn	Pn	02 48 33.2	+0.5
IVAS	Ivanjica	5.18	357	ePn	Pn	02 48 36.8	0.0
HAPS	Han Pijesak,Bl	5.80	349	ePn	Pn	02 48 43.7	-1.7

IDC 16 02:53:05.7±2.4, 18.°97S×175.°46W, h163km±21km, mb4.6/21, mb1 4.8/22, mb1mx4.7/27, mbtmp5.0/22, Error ellipse: s-maj=14.0km s-min=10.3km az=133.0
BJI 16 02:53:05.2±0.0, 18.°90S×175.°32W, h173km, mB5.2/26, mb5.1/46
NEIC 16 02:53:07.3±1.3, 18.°97S±0.°10×175.°5W±0.°1, h180km±4km, mb4.8/145, Error ellipse: s-maj=14.3km s-min=13.9km az=203.0
KLM 16 02:53:10.0, 19.°45S×175.°30W, h208km, mb5.2
GCMT 16 02:53:13.3±0.5, 19.°07S±0.°04×175.°25W±0.°03, h223km±4km, MW5.1/70, Moment Tensor Solution. s23,c26; s70,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.32±.25; $M_{\theta\theta}$5.20±.33; $M_{\phi\phi}$-0.88±.26; $M_{r\theta}$1.32±.32; $M_{r\phi}$1.09±.23; $M_{\theta\phi}$-1.54±.19; Best double couple: $M_0$5.33400×10^{16} NP1:ϕ_s58.00000°, δ43.00000°, λ-124.00000°. NP2:ϕ_s281.00000°, δ55.00000°, λ-62.00000°. Principal axes: T 5.5040, Plg6.0000°, Azm352.0000°; N -0.3410, Plg23.0000°, Azm84.0000°; P -5.1640, Plg66.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 16 02:53:09.2±0.3, **19.°13S**±0.°05×**175.°43W**±0.°06, **h200**km, **n487**, σ1§09/467, **mb4.8**/108, **28C-29D**, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.21	90	P	Pn	02 54 24.3	-2.0
	baz=5.1,SNR=50						
NIUE	Niue	5.21	90		Pn	02 54 24.4	-1.8
AFI	Afiamalu	6.26	35	P	Pn	02 54 33.9	-6.0
	15nm,0.3s,baz=240,slow=2.8,SNR=21						
AFI				S	Sn	02 55 36.8	-15
	105nm,0.3s,baz=46,slow=22,SNR=18						
AFI	Afiamalu	6.26	35		Pn	02 54 34.1	-5.9
MSVF	Nonsavu	6.34	282		Pn	02 54 44.5	+3.6
GLKZ	Green Lake	10.34	192	S	Sn	02 57 26.0	-2.1
FUNA	Funafuti	11.76	333	Pn	Pn	02 55 47.4	-3.7
SANVU	Saraoutou	16.98	280	P	P	02 56 53.0	-1.0
SANVU				IAmb	IAmb	02 57 00.6	
	comp=Z,64nm,0.9s						
DZM	Mont Dzumac	17.22	257	eP	Pn	02 57 00.3	+2.1
	comp=Z,240nm,1.1s						
DZM	Mont Dzumac	17.22	257	P	Pn	02 57 00.6	+2.4
	comp=Z,2.6nm,0.3s,baz=87,slow=15,SNR=26						
DZM	Mont Dzumac	17.22	257	P	Pn	02 56 59.5	+1.3
NOUC	Port Laguerre	17.35	257	P	Pn	02 57 00.2	+0.6
MXZ	Matakaoa Point	19.16	195	P	Pn	02 57 19.5	-1.3
MXZ				IAmb	IAmb	02 57 32.5	
	comp=Z,31nm,1.0s						
MXZ	Matakaoa Point	19.16	195	P	Pn	02 57 20.4	-0.4
MXZ				S	S	03 00 38.5	-5.4
KUZ	Kuaotunu	19.19	202	P	Pn	02 57 21.6	+0.5
WMGZ	Waiomatatini S	19.38	195	P	Pn	02 57 22.8	-0.6
WIAZ	Waiheke Island	19.45	203	P	Pn	02 57 24.7	+0.4
HAZ	Te Kaha	19.48	196	P	P	02 57 22.8	+1.9
PKGZ	Pakihiroa	19.53	196	P	Pn	02 57 24.8	-0.5
PKGZ				S	S	03 00 43.7	-7.5
PUZ	Puketiti	19.66	195	P	Pn	02 57 25.7	-1.1
PUZ				S	S	03 00 56.0	+2.3
RUGZ	Raukumara Rang	19.71	196	P	P	02 57 25.1	+1.7
RUGZ				S	S	03 00 53.7	-1.1
MKAZ	Moumakai	19.71	203	P	Pn	02 57 26.6	-0.8
AWAZ	Awhitu Peninsu	19.87	204	P	Pn	02 57 28.1	-1.2
MWZ	Matawai	20.09	196	P	P	02 57 29.3	+1.8
URZ	Urewera	20.14	197	P	P	02 57 28.0	+0.1
	comp=Z,20nm,0.3s,baz=276,slow=3.7,SNR=37						
URZ				S	S	03 00 59.5	-3.4
	comp=Z,2.9nm,0.3s,baz=78,slow=23,SNR=4.6						
URZ	Urewera	20.14	197	P	P	02 57 29.0	+1.1
URZ	Urewera	20.14	197	P	P	02 57 28.5	+0.6
TOZ	Tahuroa Road	20.16	201	P	Pn	02 57 31.7	-1.0
RAGZ	Rawiri	20.27	196	P	P	02 57 31.5	+2.0
RIGZ	Rimuhau	20.38	195	P	P	02 57 32.2	+1.6
RTZ	Ruatahuna	20.51	197	P	P	02 57 33.8	+1.8
PRGZ	Paritu Road	20.56	195	P	Pn	02 57 36.3	-1.6
KNZ	Kokohu	20.70	195	P	P	02 57 36.3	+2.3
RAHZ	Arahi	20.76	197	P	P	02 57 35.9	+1.3
MTHZ	Maungataniwha	20.77	197	P	P	02 57 37.1	+2.4
MHGZ	Mahia Peninsul	20.77	195	P	Pn	02 57 38.8	-1.8
MRHZ	Matea Rd	20.87	198	P	P	02 57 37.2	+1.4
NMHZ	Naumai	21.00	197	P	P	02 57 39.6	+2.4
HIZ	Hauiti	21.08	202	P	P	02 57 40.8	+2.8
ARHZ	Aropaoanui	21.11	196	P	P	02 57 40.8	+2.6
MCHZ	McNeill Hill	21.36	197	P	P	02 57 42.3	+1.5
PLWZ	Palliser	23.74	198	P	P	02 58 04.1	+1.0
QRZ	Quartz Range	23.96	203	P	P	02 58 06.8	+1.6
TBI	Tubuai	24.56	104	eLR	LR	03 03 22.5	
	comp=Z,175nm,28.2s						
PAE	Paea	24.57	91	eT	T	03 22 35.0	
	comp=Z,3.3nm,0.3s						
PPT2	Papeete2	24.58	91	eLR	LR	03 04 14.2	
	comp=Z,122nm,25.0s						
THZ	Tophouse	24.65	201	P	P	02 58 13.1	+1.6
THZ				IAmb	IAmb	02 58 21.7	
	comp=Z,21nm,0.7s						
MEH	Mehetia	25.98	92	eT	T	03 24 33.6	
	comp=Z,20nm,0.3s						
RPZ	Rata Peaks	27.01	202	P	P	02 58 34.0	+1.4
	comp=Z,25nm,0.8s,baz=340,slow=1.2,SNR=6.5						
RPZ	Rata Peaks	27.01	202	P	P	02 58 34.2	+1.5
RPZ				IAmb	IAmb	02 58 38.0	
	comp=Z,24nm,0.8s						
FOZ	Fox Glacier	27.31	204	P	P	02 58 35.3	+0.1
FOZ				IAmb	IAmb	02 58 41.3	
	comp=Z,26nm,0.7s						
MLZ	Mavora Lakes	29.51	204	P	P	02 58 55.8	+1.0
MLZ				IAmb	IAmb	02 58 56.0	
	comp=Z,24nm,0.9s						
WHZ	Wether Hill Ro	30.02	204	P	P	02 59 00.3	+1.1
EIDS	Eidsvold	31.55	253	P	P	02 59 13.0	+0.1
	baz=32,SNR=16						
EIDS	Eidsvold	31.55	253	P	P	02 59 13.0	+0.1
ARMA	Armidale	31.84	243	P	P	02 59 16.7	+1.2
	baz=32,SNR=28						
ARMA	Armidale	31.84	243	P	P	02 59 16.7	+1.2
RMQ	Roma	33.73	251	P	P	02 59 32.6	+0.8
	baz=34,SNR=31						
CNB	Canberra Magne	34.99	235	P	P	02 59 43.4	+0.8
	baz=35,SNR=12						
CTA	Charters Tower	36.05	262	P	P	02 59 52.0	+0.3
	comp=Z,103nm,0.8s,baz=90,slow=11,SNR=110						
CTA				PcP	PcP	03 02 14.5	+0.9
	comp=Z,4.9nm,0.7s,baz=82,slow=3.9,SNR=3.9						
CMSA	Cobar Meteorol	37.06	243	P	P	03 00 00.9	+0.8
	baz=37,SNR=16						
PMG	Port Moresby	37.44	280	P	P	03 00 04.0	+0.4
	comp=Z,68nm,0.9s,baz=116,slow=5.5,SNR=9.7						
PMG	Port Moresby	37.44	280	P	P	03 00 03.2	-0.3
QLP	Quilpie	37.78	251	P	P	03 00 06.2	0.0
	baz=38,SNR=33						
MTSU	Mount Surprise	38.09	265	P	P	03 00 09.0	-0.1
	baz=38,SNR=9.9						
TOO	Toolangi	38.65	233	P	P	03 00 14.7	+1.3
	baz=39,SNR=12						
TOO	Toolangi	38.65	233	P	P	03 00 13.7	+0.3
TOO				IAmb	IAmb	03 00 15.3	
	comp=Z,18nm,0.8s						
COEN	Coen	39.94	271	P	P	03 00 24.2	-0.1
	baz=40,SNR=20						
COEN	Coen	39.94	271	P	P	03 00 24.3	0.0
COEN				IAmb	IAmb	03 00 24.7	
	comp=Z,19nm,0.8s						
STKA	Stephens Creek	40.56	243	P	P	03 00 30.0	+0.8
	baz=41,SNR=24						
STKA	Stephens Creek	40.56	243	P	P	03 00 29.7	+0.5
	comp=Z,28nm,1.0s,baz=85,slow=9.3,SNR=30						
STKA				PcP	PcP	03 02 28.7	+1.2
	comp=Z,3.7nm,0.6s,baz=125,slow=9.7,SNR=3.2						
STKA	Stephens Creek	40.56	243	P	P	03 00 29.4	+0.2
QIS	Mount Isa	42.22	260	P	P	03 00 42.3	-0.6
	baz=42,SNR=11						
HTT	Hallett	43.00	241	P	P	03 00 49.2	+0.1
	baz=43,SNR=18						
BBOO	Buckleboo	45.32	243	P	P	03 01 07.5	+0.1
	baz=46,SNR=8.2						
BBOO	Buckleboo	45.32	243	P	P	03 01 07.3	-0.1
BBOO				IAmb	IAmb	03 01 08.0	
	comp=Z,79nm,1.4s						
GENI	Genyem	46.41	285	P	P	03 01 18.0	+1.9
	comp=Z,8µmcomp=Z,62nm,1.0s						
WRAB	Tennant Creek	47.19	260	P	P	03 01 20.8	-1.4
AS31	Alice Springs	47.19	255	P	P	03 01 21.9	-0.2
AS31				IAmb	IAmb	03 01 23.1	
	comp=Z,26nm,0.7s						
ASAR	Alice Springs	47.19	255	P	P	03 01 21.9	-0.3
	comp=Z,105nm,0.8s,baz=87,slow=8.4,SNR=733						
ASAR				PcP	PcP	03 02 50.8	+0.4
	comp=Z,23nm,0.7s,baz=102,slow=3.9,SNR=19						
ASAR				S	S	03 07 56.6	-3.2
	comp=Z,2.4nm,0.9s,baz=92,slow=17,SNR=10						
WRA	Warramunga Arr	47.20	260	P	P	03 01 21.4	-0.8
	comp=Z,36nm,0.4s,baz=98,slow=8.7,SNR=173						
WRA				PcP	PcP	03 02 50.9	+0.4
	comp=Z,16nm,0.7s,baz=92,slow=3.6,SNR=10						
KDU	Kakadu	50.36	269	P	P	03 01 45.8	-0.5
	baz=50,SNR=34						
FORT	Forrest	52.05	246	P	P	03 01 58.2	-0.5
	baz=52,SNR=22						
FORT	Forrest	52.05	246	P	P	03 01 58.0	-0.7
WRKA	Warakurna	52.17	253	P	P	03 01 59.2	-0.5
	baz=52,SNR=83						
KNRA	Kununurra	53.18	264	P	P	03 02 06.8	-0.3
	baz=53,SNR=40						
KNRA	Kununurra	53.18	264	P	P	03 02 06.0	-1.1
SWI	Sorong	55.27	283	P	P	03 02 21.9	-0.3
	comp=Z,86nm,1.0s						
FITZ	Fitzroy Crossi	55.62	261	P	P	03 02 24.4	-0.2
	baz=56,SNR=30						
FITZ	Fitzroy Crossi	55.62	261	P	P	03 02 23.7	-0.9
FITZ				IAmb	IAmb	03 02 25.1	
	comp=Z,15nm,0.6s						
KMBL	Kambalda	57.33	245	P	P	03 02 36.0	-0.5
	baz=58,SNR=6.9						
SOEI	Soe	58.90	270	P	P	03 02 48.9	+1.1
	comp=Z,2µmcomp=Z,186nm,0.7s						
SOEI	Soe	58.90	270	P	P	03 02 47.7	-0.1
VNDA	Vanda	59.49	186	P	P	03 02 53.9	+3.2
	comp=Z,29nm,1.2s,baz=345,slow=7.2,SNR=6.1						
SANI	Sanana	59.72	279	P	P	03 02 52.4	-0.9
	comp=Z,70nm,0.8s						
PSA00	Pilbara Seismi	60.34	256	P	P	03 02 56.8	-0.6
MEEK	Meekatharra	60.65	250	P	P	03 02 58.6	-0.9
	baz=61,SNR=19						
NWAO	Narrogin (SRO)	61.14	242	P	P	03 03 02.6	0.0
	baz=61,SNR=6.5						
NWAO	Narrogin (SRO)	61.14	242	P	P	03 03 01.5	-1.2
RKGY	Rocky Gully	61.22	240	P	P	03 03 03.5	+0.3
	baz=61,SNR=6.5						
BLDU	Ballidu	61.82	245	P	P	03 03 06.6	-0.6
	baz=62,SNR=23						
MUN	Mundaring	62.09	243	P	P	03 03 08.9	-0.2
	baz=62,SNR=7.3						
MORW	Morawa	62.58	247	P	P	03 03 11.8	-0.5
	baz=63,SNR=9.7						
MORW	Morawa	62.58	247	P	P	03 03 11.2	-1.2
MATI	Mati	63.00	289	eP	P	03 03 11.9	-3.4
LUWI	Luwuk	63.08	279	P	P	03 03 16.0	+0.2
	comp=Z,2µmcomp=Z,77nm,1.1s						
KCP	Kidapawan	64.08	288	⇃iP	P	03 03 21.9	-0.4
BKSI	Bulukumba	64.14	273	P	P	03 03 21.5	-1.2
	comp=Z,22nm,1.8s						
APSI	Ampana	64.18	279	P	P	03 03 23.4	+0.4
	comp=Z,719nmcomp=Z,60nm,0.9s						
SKMP	Bagumbayan, Su	64.36	287	eP	P	03 03 22.5	-1.7
MRSI	Marisa	64.40	280	P	P	03 03 24.4	0.0
	comp=Z,1µmcomp=Z,21nm,0.5s						
BNSI	Bone	64.45	274	P	P	03 03 25.2	+0.4
	comp=Z,43nm,1.1s						
GIRL	Giralia	65.25	253	P	P	03 03 30.6	+0.8
	baz=65,SNR=11						
GIRL	Giralia	65.25	253	P	P	03 03 30.4	+0.6
PLAI	Plampang	65.30	269	P	P	03 03 28.9	-1.3
	comp=Z,90nm,1.0s						
PAGZ	Pagadian	65.96	288	eP	P	03 03 33.1	-1.3
MPSI	Mapaga	66.26	279	P	P	03 03 36.5	+0.1
	comp=Z,540nmcomp=Z,31nm,0.8s						
PVCP	Virac	67.80	294	eP	P	03 03 36.5	-9.5
JAGI	Jajag, Banyuwa	68.83	268	P	P	03 03 51.0	-1.5
	comp=Z,59nm,1.0s						
JAGI	Jajag, Banyuwa	68.83	268	P	P	03 03 50.4	-2.1
MJAR	Matsushiro Arr	70.58	322	P	P	03 04 02.4	-0.3
	comp=Z,10.0nm,0.6s,baz=143,slow=6.2,SNR=22						
MAT	Matsushiro	70.59	322	P	P	03 04 01.8	-0.9
QSPA	South Pole Qui	70.94	180	P	P	03 04 06.7	+2.2
PWJI	Pagerwojo	71.18	268	P	P	03 04 05.8	-1.0
	comp=Z,42nm,1.1s						
PCJI	Pacitan	71.72	267	P	P	03 04 09.6	-0.4
	comp=Z,160nm,0.8s						
JNU	Nakatsue	72.98	315	IAmb	IAmb	03 04 18.1	
	comp=Z,28nm,0.8s						
SBUM	Sibu	74.18	278	P	P	03 04 23.8	-0.6
SBUM	Sibu	74.18	278	P	P	03 04 25.0	+0.6
TPUB	Ta-pu	75.30	301	P	P	03 04 29.3	-1.3
PKM	Mcpherson Peak	75.32	45	P	P	03 04 32.0	+1.2
	baz=234						
LEM	Lembang	75.49	268	P	P	03 04 32.1	-0.1
	comp=Z,54nm,1.1s						
PETK	Petropavlovsk-	75.61	344	P	P	03 04 31.4	-0.3
	comp=Z,16nm,0.7s,baz=117,slow=8.7,SNR=18						
KSM	Kuching	75.63	277	P	P	03 04 33.0	+0.2
KSM	Kuching	75.63	277	P	P	03 04 34.0	+1.2
YSS	Yuzh-Sakhalins	75.79	332	P	P	03 04 32.9	0.0
ARVC	Arvin	76.11	45	P	P	03 04 36.1	+1.1
	baz=234						
MURC	Murrieta	76.35	47	P	P	03 04 37.2	+0.7
	baz=236						
BFSC	Mount Baldy Ra	76.39	46	P	P	03 04 37.3	+0.5
	baz=235						
MONP2	Monument Peak	76.50	48	P	P	03 04 38.5	+1.0
	baz=236						
EDW2	Edwards Air Fo	76.53	45	P	P	03 04 38.3	+0.8
	baz=235,SNR=8.1						
IKP	In-Ko-Pah, Jac	76.58	48	P	P	03 04 38.8	+1.0
	baz=237						
ISA	Isabella, Lake	76.66	45	P	P	03 04 37.9	-0.2
ISA				IAmb	IAmb	03 04 40.1	
	comp=Z,13nm,1.1s						
ISA	Isabella, Lake	76.66	45	P	P	03 04 39.2	+1.0
	baz=234,SNR=6.1						
SRIG	Santa Rosalia	76.66	55	P	P	03 04 38.3	0.0
SRIG				IAmb	IAmb	03 04 40.1	
	comp=Z,15nm,0.8s						
O02D	Mt. Diablo Mer	76.69	39	P	P	03 04 39.4	+1.1
	baz=230						
CMB	Columbia Colle	76.83	42	P	P	03 04 39.2	+0.1
PFO	Pinyon Flats O	76.87	47	P	P	03 04 40.5	+1.1
	baz=236						
TPFO	Pinon Flats	76.87	47	P	P	03 04 40.3	+0.9
	baz=236						
AFDM	Forest Hills D	77.02	41	P	P	03 04 39.6	-0.4
N02D	Trinity Center	77.25	38	P	P	03 04 42.6	+1.3
	baz=230						
O03E	Paynes Creek	77.35	39	P	P	03 04 42.6	+0.7
	baz=231						
BELC	Belle Mtn. Jos	77.40	47	P	P	03 04 43.6	+1.1
	baz=236						
MDPB	Devils Postpil	77.42	43	IAmb	IAmb	03 04 44.2	
	comp=Z,13nm,1.1s						
KSRS	Korea Array	77.50	317	P	P	03 04 43.7	+1.0
	comp=Z,15nm,0.9s,baz=135,slow=6.3,SNR=70						
MPMC	Manual Prospec	77.54	45	P	P	03 04 44.4	+1.1
	baz=235,SNR=12						
KS19	Wonju Array Si	77.56	317	P	P	03 04 43.2	+0.1
KS19				IAmb	IAmb	03 04 45.0	
	comp=Z,24nm,1.0s						
GSC	Goldstone, Bar	77.57	46	P	P	03 04 44.2	+0.9
	baz=236,SNR=7.3						
BC3	Big Chuckawall	77.59	48	P	P	03 04 44.6	+1.1
	baz=237						
GLA	Glamis	77.71	48	P	P	03 04 45.2	+1.2
	baz=237						
WAKR	Walker	77.71	42	P	P	03 04 44.4	+0.3
GMRC	Granite Mounta	78.07	47	P	P	03 04 47.0	+0.9

	baz=236						
IRM	Iron Mountain	78.08	47	P	P	03 04 47.1	+1.1
	baz=237						
FURC	Furnace Creek,	78.19	45	P	P	03 04 47.6	+1.1
	baz=235						
SHOC	Shoshone, Teco	78.27	45	P	P	03 04 47.8	+0.8
	baz=236						
Y12C	Blythe	78.30	48	P	P	03 04 48.4	+1.2
	baz=237						
PPBI	Pangkal Pinang	78.36	272	P	P	03 04 48.3	+0.3
	comp=Z,32nm,1.2s						
NVAR	Mina Array Bea	78.38	42	P	P	03 04 48.5	+0.6
	comp=Z,9.8nm,0.8s,baz=224,slow=9.0,SNR=28						
PAHR	Pah Rah Range	78.46	41	P	P	03 04 47.9	-0.3
NV11	Mina Array Sit	78.48	42	P	P	03 04 48.0	-0.2
NV11				IAmb	IAmb	03 04 50.0	
	comp=Z,17nm,1.1s						
214A	Organ Pipe Nat	78.58	50	P	P	03 04 50.2	+1.4
	baz=239						
KASI	Kota Agung	78.84	268	P	P	03 04 49.7	-0.9
	comp=Z,70nm,1.0s						
PDMCI	Parker Dam,Lak	78.86	48	P	P	03 04 51.6	+1.4
	baz=238						
TPNV	Topopah Spring	78.87	45	P	P	03 04 50.1	-0.4
TPNV				IAmb	IAmb	03 04 52.3	
	comp=Z,12nm,0.8s						
TPNV	Topopah Spring	78.87	45	P	P	03 04 51.3	+0.9
	baz=236,SNR=10						
KVN	Kaiserville	78.87	42	P	P	03 04 50.5	0.0
USRK	Ussuriysk Ar.	79.22	324	P	P	03 04 53.0	+1.0
	comp=Z,3.7nm,0.7s,baz=64,slow=4.4,SNR=6.3						
Y14A	Wickenburg	79.47	49	IAmb	IAmb	03 04 55.7	
	comp=Z,14nm,1.1s						
MDSI	Maura Dua	79.47	269	P	P	03 04 52.3	-1.7
	comp=Z,20nm,1.2s						
J05D	Fort Rock, OR	79.55	37	P	P	03 04 54.9	+0.9
	baz=231						
R11A	Troy Canyon, C	80.09	44	P	P	03 04 57.6	+0.6
	baz=236						
TUC	Tucson	80.24	51	P	P	03 04 59.4	+1.5
TUC	Tucson	80.24	51	P	P	03 04 59.5	+1.7
	baz=240						
MDJ	Mudanjiang	80.82	324	P	P	03 05 01.8	+1.3
MDJ				pmax	pmax		
	comp=Z,20nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,130nm,4.5s						
X16A	Lo Mia Camp, P	80.83	49	IAmb	IAmb	03 05 03.6	
	comp=Z,12nm,0.8s						
NJ2	Nanjing	80.90	308	eP	P	03 05 02.5	+1.3
NJ2				pmax	pmax		
	comp=Z,17nm,0.9s						
319A	Douglas	80.90	52	IAmb	IAmb	03 05 04.1	
	comp=Z,14nm,0.9s						
CCUT	Cedar City	81.12	45	P	P	03 05 02.6	0.0
U15A	North Rim	81.26	47	IAmb	IAmb	03 05 06.0	
	comp=Z,15nm,1.0s						
WUAZ	Wupatki	81.43	48	P	P	03 05 05.7	+1.5
	baz=239						
ELK	Elko	81.65	42	P	P	03 05 04.8	-0.5
B05A	Bryant	82.25	33	P	P	03 05 08.8	+0.9
	baz=230						
HAWA	Hanford	82.43	35	IAmb	IAmb	03 05 10.7	
	comp=Z,18nm,1.1s						
121A	Cookes Peak, D	82.57	52	IAmb	IAmb	03 05 13.0	
	comp=Z,10nm,0.9s						
121A	Cookes Peak, D	82.57	52	P	P	03 05 12.1	+1.9
	baz=242						
RC01	Rabbit Creek A	82.57	12	IAmb	IAmb	03 05 11.1	
	comp=Z,16nm,1.0s						
GAMB	Gambell	82.68	2	P	P	03 05 10.4	+0.6
GAMB				IAmb	IAmb	03 05 11.3	
	comp=Z,12nm,1.0s						
SUA	Susitna One	82.72	12	IAmb	IAmb	03 05 10.4	
	comp=Z,18nm,0.8s						
CN2	Changchun	82.72	321	⇓P	P	03 05 11.1	+0.6
CN2				esP	sP	03 06 11.3	-7.7
CN2				eS	S	03 15 12.8	+1.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
E08A	Dider Farm, El	82.75	35	IAmb	IAmb	03 05 12.1	
	comp=Z,31nm,1.4s						
BMO	Blue Mountains	82.75	38	P	P	03 05 10.4	-0.3
MFID	Camas Ranch	82.79	39	P	P	03 05 10.6	-0.4
DUG	Dugway, Tooele	82.90	43	P	P	03 05 11.5	-0.2
DUG	Dugway, Tooele	82.90	43	P	P	03 05 11.8	+0.1
	baz=238,SNR=6.3						
D08A	Wollman Farm,	83.17	35	P	P	03 05 12.4	-0.3
D08A				IAmb	IAmb	03 05 14.4	
	comp=Z,16nm,1.2s						
GHO	Glory Hole Cre	83.36	12	IAmb	IAmb	03 05 14.0	
	comp=Z,20nm,0.8s						
F10A	Beach Ranch, E	83.46	37	IAmb	IAmb	03 05 15.4	
	comp=Z,21nm,0.9s						
WHN	Wuhan	83.61	305	⇑P	P	03 05 16.3	+1.0
B08A	Colville Reser	83.74	34	IAmb	IAmb	03 05 16.5	
	comp=Z,9.9nm,0.9s						
HVU	Hansel Valley	83.77	42	P	P	03 05 15.3	-0.8
JRMM	Jerantut	83.81	276	P	P	03 05 17.0	+0.3
LLLB	Lillooet	83.87	31	IAmb	IAmb	03 05 17.5	
	comp=Z,12nm,1.1s						
Y22D	IRIS PASSCAL I	83.93	51	P	P	03 05 19.1	+2.0
	baz=242						
MNTX	Cornudas Mount	83.99	54	P	P	03 05 18.4	+1.1
MNTX				IAmb	IAmb	03 05 19.9	
	comp=Z,32nm,1.2s						
MNTX	Cornudas Mount	83.99	54	P	P	03 05 19.0	+1.7
	baz=243						
PDSI	Padang	84.13	271	P	P	03 05 18.5	+0.1
TIA	Tai'an	84.16	311	P	P	03 05 19.0	+1.0
TIA				pmax	pmax		
	comp=Z,23nm,1.0s						
GLB	Gilahina Butte	84.19	15	IAmb	IAmb	03 05 18.0	
	comp=Z,13nm,0.6s						
MVCO	Mesa Verde	84.28	48	P	P	03 05 20.0	+1.1
	baz=241						
TX31	Lajitas Ar. Si	84.29	56	IAmb	IAmb	03 05 21.8	
	comp=Z,22nm,1.2s						
TX32	Lajitas Array	84.29	56	IAmb	IAmb	03 05 21.8	
	comp=Z,22nm,1.2s						
TXAR	Lajitas Array	84.29	56	P	P	03 05 20.4	+1.5
	comp=Z,7.8nm,0.9s,baz=216,slow=6.2,SNR=60						
TRF	Thorofare Moun	84.63	11	P	P	03 05 18.6	-1.3
ANMO	Albuquerque	84.67	50	P	P	03 05 21.9	+1.1
ANMO				IAmb	IAmb	03 05 23.2	
	comp=Z,15nm,1.0s						
ANMO	Albuquerque	84.67	50	P	P	03 05 22.4	+1.5
	baz=242						
NEW	Newport	84.86	35	P	P	03 05 21.5	+0.2
	baz=234						
UBPT	Khong Chiam	84.99	288	P	P	03 05 23.1	+0.5
UBPT				IAmb	IAmb	03 05 24.1	
	comp=Z,21nm,1.1s						
IPM	Ipoh	85.37	276	P	P	03 05 24.4	-0.2
IPM	Ipoh	85.37	276	P	P	03 05 25.0	+0.4
S22A	4UR Ranch, Cre	85.71	48	P	P	03 05 26.3	+0.2
S22A	4UR Ranch, Cre	85.71	48	P	P	03 05 27.2	+1.2
	baz=242						
O20A	White River Ci	85.88	45	P	P	03 05 27.2	+0.4
	baz=241						
SNOW	Snow King Moun	85.92	41	IAmb	IAmb	03 05 28.7	
	comp=Z,10nm,1.1s						
RIDG	Independent Ri	85.97	13	IAmb	IAmb	03 05 27.2	
	comp=Z,16nm,1.0s						
MLY	Manley	86.00	10	P	P	03 05 25.6	-0.9
MLY				IAmb	IAmb	03 05 26.5	
	comp=Z,16nm,1.1s						
DOT	Dot Lake	86.06	13	IAmb	IAmb	03 05 27.6	
	comp=Z,21nm,0.8s						
HDA	Harding Lake	86.13	12	IAmb	IAmb	03 05 27.5	
	comp=Z,20nm,0.8s						
HDA	Harding Lake	86.13	12	P	P	03 05 26.8	-0.3
	baz=207,SNR=18						
PDAR	Pinedale Array	86.32	42	P	P	03 05 28.9	0.0
	comp=Z,1.6nm,0.7s,baz=203,slow=3.5,SNR=14						
TCOL	CIGO, UAF Yank	86.37	11	P	P	03 05 27.9	-0.3
	baz=206,SNR=6.2						
COLA	College	86.37	11	P	P	03 05 27.8	-0.4
MDM	Murphy Dome	86.38	11	IAmb	IAmb	03 05 28.6	
	comp=Z,25nm,1.0s						
IL31		86.47	12	IAmb	IAmb	03 05 29.8	
	comp=Z,19nm,1.1s						
ILAR	Eielson Array	86.47	12	P	P	03 05 27.9	-0.8
	comp=Z,9.8nm,0.9s,baz=233,slow=6.0,SNR=48						
SDCO	Great Sand Dun	86.64	48	P	P	03 05 31.2	+0.6

	baz=243						
BJI	Beijing	86.64	314	P	P	03 05 31.0	+0.9
BJI				pmax	pmax		
	comp=Z,21nm,1.2s						
POKR	Poker Plat Res	86.67	11	P	P	03 05 29.2	-0.5
	baz=206,SNR=5.3						
RPSI	Rantau Prapat	86.76	274	P	P	03 05 31.0	-0.3
RPSI				IAmb	IAmb	03 05 31.9	
	comp=Z,23nm,1.0s						
PSI	Prapat	86.79	274	P	P	03 05 31.0	-0.7
	comp=Z,13nm,0.8s,baz=23,slow=8.1,SNR=7.3						
MSTX	Muleshoe	86.96	53	P	P	03 05 32.1	+0.1
MSTX				IAmb	IAmb	03 05 33.4	
	comp=Z,9.7nm,0.8s						
MSTX	Muleshoe	86.96	53	P	P	03 05 33.0	+0.9
	baz=245						
WALA	Waterton Lakes	87.06	35	IAmb	IAmb	03 05 32.8	
	comp=Z,8.8nm,0.8s						
T25A	Trinidad	87.14	49	P	P	03 05 33.9	+0.9
	baz=244						
DAWY	Dawson	87.50	15	IAmb	IAmb	03 05 35.1	
	comp=Z,21nm,1.0s						
EGAK	Eagle	87.68	14	IAmb	IAmb	03 05 35.7	
	comp=Z,20nm,1.1s						
RLMT	Red Lodge	87.68	40	P	P	03 05 36.3	+1.0
	baz=240						
N23A	Red Feather La	87.78	45	IAmb	IAmb	03 05 38.0	
	comp=Z,8.9nm,1.1s						
N23A	Red Feather La	87.78	45	P	P	03 05 36.2	+0.3
	baz=242						
BILL	Bilibino	87.94	353	P	P	03 05 35.4	-0.3
BILL				IAmb	IAmb	03 05 36.6	
	comp=Z,15nm,1.4s						
AMTX	Amarillo	88.17	52	IAmb	IAmb	03 05 39.2	
	comp=Z,9.9nm,0.8s						
PLCA	Paso Flores	88.44	133	P	P	03 05 40.7	+1.7
	comp=Z,2.1nm,0.9s,baz=314,slow=7.7,SNR=4.8						
PLCA	Paso Flores	88.44	133	IAmb	IAmb	03 05 42.6	
	comp=Z,4.0nm,1.0s						
SYO	Syowa Base	88.58	192	⇓eP	P	03 05 37.8	-1.1
ABTX	Abilene, Hawle	88.79	55	IAmb	IAmb	03 05 42.5	
	comp=Z,15nm,0.8s						
ABTX	Abilene, Hawle	88.79	55	P	P	03 05 41.6	+1.0
	baz=246						
EGMT	Eagleton	88.86	38	P	P	03 05 41.7	+1.1
	baz=239						
KSCO	Kaye Shedlock'	89.22	48	IAmb	IAmb	03 05 45.9	
	comp=Z,19nm,1.2s						
XAN	Xi'an	89.25	306	P	P	03 05 43.6	+0.9
XAN				pmax	pmax		
	comp=Z,41nm,1.3s						
SNAA	Sanae	89.29	178	P	P	03 05 43.1	+0.7
SNAA	Sanae	89.29	178	P	P	03 05 42.5	+0.2
SNAA				IAmb	IAmb	03 05 44.0	
	comp=Z,12nm,0.8s						
VNA3	Neumayer Olymp	89.33	175	P	P	03 05 43.3	+0.9
PBKT	Sadao Pong	89.50	288	P	P	03 05 44.8	+0.7
PBKT				IAmb	IAmb	03 05 47.5	
	comp=Z,16nm,1.5s						
VNA2	Neumayer--Watz	89.80	176	P	P	03 05 45.8	+1.2
	baz=188,slow=3.2						
VNA1	Neumayer--Stat	90.01	176	P	P	03 05 46.8	+1.3
EPYK	Eagle Plains	90.04	15	P	P	03 05 45.9	+0.2
	baz=216						
HHC	Hu-ho-hao-te	90.15	313	⇓iP	P	03 05 48.3	+1.5
HHC				pmax	pmax		
	comp=Z,22nm,1.1s						
HHC				pmax	pmax		
	comp=Z,65nm,5.2s						
WMOK	Wichita Mounta	90.29	53	P	P	03 05 47.6	+0.1
	baz=247						
LAO	LASA Array	90.30	40	P	P	03 05 49.0	+1.7
	baz=242,SNR=7.3						
RSSD	Black Hills	90.50	43	P	P	03 05 48.1	-0.4
RSSD				IAmb	IAmb	03 05 49.5	
	comp=Z,11nm,1.1s						
RSSD	Black Hills	90.50	43	P	P	03 05 48.7	+0.1
	baz=244						
KMI	Kunming	90.90	296	P	P	03 05 52.3	+1.5
KMI				pmax	pmax		
	comp=Z,11nm,0.7s						
CMAR	Chiang Mai Arr	91.95	289	P	P	03 05 56.9	+1.4
	comp=Z,9.3nm,0.9s,baz=114,slow=3.0,SNR=43						
CHTO	Chiang Mai	92.07	289	P	P	03 05 56.6	+0.6
CHTO				IAmb	IAmb	03 05 58.1	
	comp=Z,19nm,1.2s						
CD2	Chengdu	92.10	302	P	P	03 05 55.8	-0.3
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
DGMT	Dagmar	92.33	39	P	P	03 05 58.0	+1.3
	baz=244,SNR=6.3						
INK	Inuvik	92.34	14	IAmb	IAmb	03 05 56.8	
	comp=Z,13nm,1.0s						
TUL1	Leonard	92.99	53	P	P	03 06 01.0	+1.0
	baz=249						
BGNE	Belgrade	93.33	47	P	P	03 06 03.1	+1.7
	baz=247						
KSU1	Kansas State U	93.56	50	P	P	03 06 03.5	+1.0
	baz=248						
LZH	Lanzhou	93.87	307	⇑P	P	03 06 05.8	+1.6
LZH				pP	pP	03 06 52.8	-0.2
LZH				sP	sP	03 07 12.0	-1.6
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH				pmax	pmax		
	comp=Z,110nm,5.4s						
LZH				LR	LR		
	comp=Z,200nm,17.5s						
LZH				LR	LR		
	comp=Z,210nm,17.6s						
LZH				LR	LR		
	comp=Z,370nm,19.7s						
YKA	Yellowknife Ar	94.27	24	P	P	03 06 04.8	-0.3
	comp=Z,3.7nm,0.8s,baz=240,slow=4.6,SNR=56						
YKA				PKKP	PKKPdf	03 23 04.1	-2.7
	comp=Z,0.3nm,0.5s,baz=42,slow=2.1,SNR=7.6						
ECSD	EROS Data Cent	95.25	46	P	P	03 06 10.1	0.0
	baz=249						
C36M	Paulatuk	95.46	16	P	P	03 06 10.0	-0.4
	baz=228						
SONM	Songino Array	96.32	318	P	P	03 06 16.2	+1.1
	comp=Z,1.0nm,0.7s,baz=137,slow=2.8,SNR=7.8						
GTA	Gaotai	97.99	309	P	Pdif	03 06 23.0	+0.2
GTA				pP	pP	03 07 11.4	-0.2
GTA				sP	sP	03 07 28.3	-3.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TIXI	Tiksi	98.06	345	P	P	03 06 21.2	-1.0
TIXI				IAmb	IAmb	03 06 22.5	
	comp=Z,3.2nm,0.8s						
JFWS	Jewell Farm	99.36	48	Pdiff	Pdif	03 06 29.5	+0.8
	baz=253						
ZALV	Zalesovo Beam	110.94	321	PKiKP	PKiKP	03 11 17.0	-1.2
	comp=Z,1.1nm,0.4s,baz=186,slow=1.2,SNR=7.6						
MKAR	Makanchi Array	112.01	314	PKiKP	PKiKP	03 11 19.6	-1.0
	comp=Z,1.2nm,0.6s,baz=144,slow=0.9,SNR=23						
MKAR				PKKPbc	PKKPbc	03 22 13.8	-0.5
	comp=Z,0.6nm,0.7s,baz=273,slow=3.6,SNR=7.4						
BRVK	Borovoye	119.63	321		PKPdf	03 11 34.2	-0.8
KK31	Karatay Array	120.27	309		PKPdf	03 11 35.9	-0.7
KKAR	Karatay Array	120.27	309		PKPdf	03 11 35.9	-0.7
KBL	Kabul	121.34	299		PKiKP	03 11 39.1	-0.2
ARU	Arti	125.42	327		PKPdf	03 11 45.5	-0.4
ABKAR	Akbulak array	126.73	318		PKPdf	03 11 48.2	-0.5
ARCES	ARCESS Array B	127.99	351	PKP	PKPdf	03 11 50.3	-0.3
	comp=Z,5.5nm,0.5s,baz=18,slow=1.6,SNR=46						
BOSA	Boshof	128.50	203	PKP	PKiKP	03 11 53.9	+0.2
	comp=Z,4.8nm,0.9s,baz=170,slow=3.6,SNR=6.7						
GEYT	Alibeck	130.06	304	PKP	PKiKP	03 11 56.1	-0.1
	comp=Z,2.0nm,0.8s,baz=90,slow=1.4,SNR=5.3						
KLMR	Klimovskoe	131.56	338	ePKPdf	PKPdf	03 11 57.0	-0.5
KLMR				AMP		03 11 58.9	
	comp=Z,12nm,1.2s						
FINES	FINESS Array B	135.10	346	PKhKP	PKPdf	03 12 01.5	-2.7
	comp=Z,6.5nm,0.8s,baz=72,slow=1.6,SNR=17						
FINES				PKP	PKiKP	03 12 05.4	-0.2
	comp=Z,5.8nm,0.8s,baz=64,slow=3.2,SNR=17						
KMBO	Kilima Mbogo	142.11	242	PKhKP	PKPdf	03 12 15.8	-2.9
	comp=Z,1.8nm,0.5s,baz=122,slow=3.6,SNR=7.1						
AKASG	Malin Array Be	142.92	334	PKhKP	PKPdf	03 12 14.2	-4.5
	comp=Z,1.5nm,0.4s,baz=43,slow=4.2,SNR=20						
GKP	Gorka Klasztor	144.53	347	ePKP	PKPbc	03 12 20.6	0.0
SEVA	Sevastopol	144.93	323	⇓P	PKiKP	03 12 28.5	+2.2
BEL	Belsk	144.96	342	ePKP	PKPdf	03 12 22.7	+0.4
BSEG	Bad Segeberg	144.97	354	ePKPbc	PKPab	03 12 22.2	0.0
	baz=10,slow=2.7						
SORM	Soroca	145.22	332	⇓P	PKPdf	03 12 22.5	-0.3

RUE	Ruedersdorf	145.94	350	ePKPbc	PKPab	03 12 25.3	-0.5
	baz=10,slow=2.7						
BZK	Bozkurt	146.21	319	⇑P	PKPab	03 12 27.0	-0.2
RETH	Rethem/Aller,	146.25	355	ePKPbc	PKPab	03 12 26.4	-0.6
	baz=10,slow=2.7						
KWP	Kalwaria Pacla	146.27	339	ePKP	PKPab	03 12 26.4	-0.8
KWP	Kalwaria Pacla	146.27	339		PKPbc	03 12 26.1	0.0
IAS	Iasi	146.28	331	⇑P	PKPbc	03 12 26.4	+0.3
GAZ	Gaziantep	146.29	309		PKPab	03 12 27.3	-0.5
NRDL	Niedersach Rie	146.42	354	ePKPbc	PKPab	03 12 26.8	-0.7
	baz=10,slow=2.7						
LEOM	Leova	146.49	330	⇑P	PKPab	03 12 27.5	-0.6
OJC	Ojcow	146.68	342	ePKP	PKPbc	03 12 27.7	+0.4
OJC	Ojcow	146.68	342		PKPbc	03 12 26.7	-0.5
PRAR	RASCA	146.75	333	⇓P	PKPbc	03 12 27.9	+0.4
IBBN	Ibbenburen	146.79	356	ePKPbc	PKPbc	03 12 28.0	+0.6
	baz=10,slow=2.7						
BUR08	Bucovina Ar. S	146.96	334		PKPbc	03 12 28.7	+0.5
BURAR	Bucovina Array	146.97	334	⇑P	PKPab	03 12 29.1	-1.1
KOLS	Kolonicke sedl	147.01	338	ePKP	PKPbc	03 12 28.8	+0.6
KOLS				e		03 12 30.4	
KSP	Ksiaz	147.01	346	ePKP	PKPab	03 12 28.9	-1.1
CLZ	Clausthal	147.04	353	ePKPbc	PKPab	03 12 29.0	-1.2
	baz=10,slow=2.7						
VARL	Varlezi	147.10	329	⇑P	PKPab	03 12 29.3	-1.2
GHRR		147.19	330	⇓P	PKPab	03 12 30.0	-0.9
CLL	Collm	147.20	350	ePKPbc	PKPbc	03 12 29.2	+0.6
	baz=10,slow=2.7						
CLL	Collm	147.20	350	⇓iPKPbc	PKPbc	03 12 28.9	+0.3
	comp=Z,56nm,0.9s						
CLL				⇑iPKPab	PKPab	03 12 30.5	-0.3
	comp=Z,18nm,0.8s						
CLL				epPKiKP	pPKiKP	03 13 25.0	+3.2
TESR	Tescani	147.21	331	⇓P	PKPbc	03 12 28.8	0.0
NIE	Niedzica	147.24	341	ePKP	PKPab	03 12 29.8	-1.3
OSTC	Ostas	147.30	346	ePKP	PKPdf	03 12 26.7	+0.4
OSTC				ex	x	03 12 29.4	
CHVC	Chvalec	147.31	346	ePKP	PKPbc	03 12 29.2	+0.2
CRVS	Cervenica-Dubn	147.32	339	ePKP	PKPbc	03 12 29.3	+0.3
CRVS				e		03 12 32.2	
GTTG	Gottingen	147.37	354	ePKPbc	PKPbc	03 12 29.7	+0.6
	baz=10,slow=2.7						
UPC	Upice	147.39	346	ePKP	PKPdf	03 12 27.1	+0.7
UPC				ex	x	03 12 29.6	
JURR	Jurilovca	147.39	327	⇓P	PKPbc	03 12 29.8	+0.4
BRG	Berggiesshubel	147.46	349	ePKPbc	PKPbc	03 12 30.0	+0.7
	baz=10,slow=2.7						
DPC	Dobruska-Polom	147.47	346	ePKP	PKPdf	03 12 27.2	+0.6
DPC				ex	x	03 12 30.0	
CFR	Carcaliu	147.48	328	⇑P	PKPbc	03 12 29.3	-0.2
OKC	Ostrava-Krasne	147.49	344	ePKP	PKPbc	03 12 28.4	-1.0
FBE	Freiberg	147.52	350	ePKPbc	PKiKP	03 12 30.5	-0.9
	baz=10,slow=2.7						
TOPG	Topolog	147.57	328	⇑P	PKPbc	03 12 30.5	+0.7
ODBI	Odobesti	147.58	330	⇑P	PKiKP	03 12 31.4	-0.3
TRPA	Tarpa	147.60	337	⇓P	PKPbc	03 12 30.1	+0.4
BMR	Baia Mare	147.62	336	⇓P	PKPbc	03 12 30.5	+0.6
KRLC	Kraliky	147.62	345	ePKP	PKPdf	03 12 27.0	+0.1
KRLC				ex	x	03 12 29.6	
BR131	Keskin Array S	147.63	316		PKPbc	03 12 30.4	0.0
BRTR	Keskin Array B	147.63	316	PKP	PKPdf	03 12 26.8	-0.6
	comp=Z,15nm,0.7s,baz=58,slow=3.3,SNR=48						
BRTR				PKPbc	PKPbc	03 12 30.4	0.0
	comp=Z,15nm,0.7s,baz=141,slow=5.2,SNR=55						
VRI	Vrincioaia	147.66	330	⇑P	PKPbc	03 12 29.7	-0.4
PVCC	Panska Ves	147.67	348	ePKP	PKPbc	03 12 28.3	-1.6
PVCC				ex	x	03 12 30.7	
MBAR	Mbarara	147.68	236		PKPbc	03 12 31.9	+0.6
PLOR	Plostina	147.70	331	⇑P	PKPbc	03 12 29.7	-0.5
MORC	Moravsky Berou	147.70	344	ePKP	PKPbc	03 12 30.2	+0.1
MORC	Moravsky Berou	147.70	344	⇓P	PKPbc	03 12 30.8	+0.7
ARCR	ARCALIA	147.75	334	⇓P	PKiKP	03 12 31.2	-0.9
TIRR	Tirgusor	147.84	327	⇑P	PKPbc	03 12 31.1	+0.5
BISRR	Bisoca	147.90	330	⇑P	PKiKP	03 12 32.3	-0.2
OZUR		147.91	332	⇑P	PKiKP	03 12 31.7	-0.8
HARR	Harsova	147.93	328	⇑P	PKPbc	03 12 31.3	+0.5
MOX	Moxa	148.06	352	ePKPbc	PKPbc	03 12 31.4	+0.5
	baz=10,slow=2.7						
ANTO	Ankara	148.11	316	⇑P	PKiKP	03 12 32.5	-0.7
ANTO	Ankara	148.11	316		PKPbc	03 12 31.7	+0.2
PLN	Plauen	148.13	351	ePKPbc	PKPbc	03 12 31.7	+0.6
	baz=10,slow=2.7						
PRA	Prague	148.14	348	ePKP	PKiKP	03 12 31.8	-0.9
TANN	Tannenbergstha	148.16	350	ePKPbc	PKiKP	03 12 32.0	-0.9
	baz=10,slow=2.7						
DOPR	Dopca	148.19	332	⇑P	PKiKP	03 12 32.5	-0.6
PRU	Pruhonice	148.19	348	ePKP	PKPdf	03 12 27.8	0.0
PRU				ex	x	03 12 31.5	
GOPC	GO Pecny, Ondr	148.21	347	ePKP	PKPbc	03 12 31.3	-0.1
GUNZ	Gunzen	148.23	351	ePKPbc	PKiKP	03 12 32.3	-0.7
	baz=10,slow=2.7						
AMRR	Amara	148.28	328	⇑P	PKiKP	03 12 32.8	-0.4
WERN	Wernitzgruen	148.29	350	ePKPbc	PKiKP	03 12 32.6	-0.6
	baz=10,slow=2.7						
MLR	Muntele Rosu	148.30	331	⇓P	PKPbc	03 12 32.2	+0.3
MLR	Muntele Rosu	148.30	331		PKPbc	03 12 32.1	+0.2
NKC	Novy Kostel	148.33	350	ePKP	PKPbc	03 12 31.9	+0.2
CJR	Cluj-Napoca	148.36	335	⇓P	PKiKP	03 12 32.5	-0.9
VRAC	Vranov	148.37	345	ePKP	PKPbc	03 12 32.0	+0.2
VRAC	Vranov	148.37	345	⇓P	PKPbc	03 12 32.2	+0.4
VYHS	Vyhne	148.51	342	ePKP	PKiKP	03 12 32.8	-0.8
VYHS				e		03 12 36.6	
JAVC	Velka Javorina	148.51	343	ePKP	PKiKP	03 12 33.5	-0.2
MEM	Membach	148.57	358	PKiKP	PKPbc	03 12 32.6	+0.4
SECR		148.58	330	⇑P	PKiKP	03 12 33.0	-0.9
BTNL	Ternell	148.59	358	PKiKP	PKPbc	03 12 32.6	+0.2
PBCC	Pribram	148.59	348	ePKP	PKPbc	03 12 32.4	+0.1
BSTI	Sart Tilman	148.60	359	PKiKP	PKPbc	03 12 32.6	+0.3
MANZ	Manzenberg	148.63	351	ePKPbc	PKiKP	03 12 33.2	-0.6
	baz=10,slow=2.7						
DRGR		148.65	336	⇑P	PKPbc	03 12 33.1	+0.4
TREC	Trest	148.65	346	ePKP	PKPdf	03 12 28.8	+0.2
TREC				ex	x	03 12 32.5	
KRUC	Moravsky	148.65	345	ePKP	PKPbc	03 12 32.4	-0.1
PSZ	Piszkesteto	148.69	340	⇑P	PKPbc	03 12 32.9	+0.2
VOIR		148.75	332	⇓P	PKiKP	03 12 34.0	-0.2
SULR		148.76	329	⇓P	PKiKP	03 12 33.6	-0.5
BCLA	Clavier	148.77	359	PKiKP	PKPab	03 12 36.7	-0.4
TNS	Taunus Mts	148.82	355	ePKPbc	PKiKP	03 12 33.6	-0.7
	baz=10,slow=2.7						
ROTZ	Rotzenmuhle	148.82	350	ePKPbc	PKiKP	03 12 33.7	-0.5
	baz=10,slow=2.7						
SMOL	Smolenice	148.89	343	ePKP	PKiKP	03 12 34.2	-0.2
SMOL				e		03 12 38.4	
BMRD	Maredsous	148.90	360	PKiKP	PKPbc	03 12 33.2	+0.1
MTUR	Matau	148.90	331	⇓P	PKPab	03 12 36.1	-1.8
ARR	Arges	148.99	332	⇓P	PKiKP	03 12 34.5	-0.3
GRA1	Grafenberg Arr	149.04	352		PKPbc	03 12 33.6	+0.1
GRF	Grafenberg Arr	149.04	352	ePKPbc	PKiKP	03 12 34.3	-0.4
	baz=10,slow=2.7						
MODS	Modra-Piesok	149.06	343	ePKP	PKPbc	03 12 33.5	-0.1
MODS				e		03 12 38.8	
DOU	Dourbes	149.10	360	PKiKP	PKPbc	03 12 33.9	+0.3
KHC	Kasperske Hory	149.20	348	ePKP	PKPdf	03 12 29.4	-0.1
KHC				ex	x	03 12 34.1	
KHC				ex	x	03 12 39.1	
PRD	Provadia	149.25	326	iP	PKiKP	03 12 34.6	-0.6
ORH	Orhaniye	149.26	320	iP	PKPab	03 12 37.7	-1.8
ZST	Bratislava	149.27	343	ePKP	PKPbc	03 12 33.9	-0.2
ZST				e		03 12 39.2	
DEV	Deva	149.31	334	⇑P	PKPbc	03 12 35.8	+0.5
WET	Wettzell	149.31	349	ePKPbc	PKiKP	03 12 34.8	-0.5
	baz=10,slow=2.7						
RAZG	Razgrad	149.45	328	⇑P	PKPbc	03 12 34.6	-0.1
GEC2	GERESS Array S	149.45	348	ePKPbc	PKiKP	03 12 35.2	-0.5
	baz=10,slow=2.7						
GERES	GERESS Array B	149.45	348	PKP	PKPdf	03 12 29.9	-0.1
	comp=Z,6.1nm,0.7s,baz=96,slow=2.0,SNR=6.9						
GERES				PKPbc	PKPbc	03 12 34.8	+0.2
	comp=Z,11nm,0.7s,baz=132,slow=2.0,SNR=27						
WLF	Walferdange	149.51	358	ePKPbc	PKiKP	03 12 35.8	+0.2
	baz=10,slow=2.7						
WLF	Walferdange	149.51	358	PKiKP	PKPbc	03 12 34.4	-0.2
WLF	Walferdange	149.51	358		PKPbc	03 12 34.6	0.0
GZR	Gura Zlata	149.76	334	⇓P	PKPbc	03 12 35.3	-0.2
CONA	Conrad Observa	149.84	345	iPKiKP	PKiKP	03 12 36.1	-0.4
	comp=Z,21nm,0.8s,SNR=9.4						
SZH	Strazhica	149.95	328	iP	PKPbc	03 12 35.8	-0.1
BZS	Buzias	150.05	336	⇑P	PKPbc	03 12 36.1	0.0
VLAD	Vladila	150.15	331	⇑P	PKiKP	03 12 37.1	0.0
SRE	Strehaia	150.17	333	⇓P	PKiKP	03 12 37.2	+0.1
STU	Stuttgart	150.19	354	ePKPbc	PKiKP	03 12 37.0	0.0

baz=10,slow=2.7
MOA Molln 150.28 347 iPKiKP PKPbc 03 12 36.6 0.0
comp=Z,8.7nm,0.7s
LEF Lefka 150.32 308 ⇑P PKPbc 03 12 36.5 -0.5
BANR Banloc 150.43 336 ⇓P PKiKP 03 12 37.9 +0.3
PLVB Pleven 150.51 329 ⇓P PKiKP 03 12 37.7 -0.2
FUR Furstenfeldbru 150.53 351 ePKPbc PKiKP 03 12 37.8 0.0
baz=10,slow=2.7
ARSA Arzberg 150.55 345 ePKiKP PKPbc 03 12 37.0 -0.2
comp=Z,14nm,1.4s,SNR=5.6
MORH Mrgy, Hungar 150.60 340 eP PKPbc 03 12 37.0 -0.3
RJOB Jochberg 150.69 349 ePKPbc PKiKP 03 12 37.9 -0.3
baz=10,slow=2.7
MDVR Moldovita 150.70 335 ⇓P PKPbc 03 12 37.8 +0.1
BFO Black Forest 150.71 355 ePKPbc PKiKP 03 12 37.9 -0.2
baz=10,slow=2.7
BFO Black Forest 150.71 355 PKPbc 03 12 37.6 0.0
DIM Dimitrovgrad 151.03 327 iP PKiKP 03 12 38.7 -0.3
UBR Ueberruh 151.16 352 ePKPbc PKiKP 03 12 39.1 -0.1
baz=10,slow=2.7
SOKA Soboth 151.21 345 ePKPbc PKPbc 03 12 38.4 -0.4
comp=Z,17nm,0.8s,SNR=8.7
KBA Koelnbreinsper 151.21 347 ePKPbc PKPbc 03 12 38.3 -0.7
comp=Z,18nm,0.6s,SNR=7.8
RETA Reutte 151.26 351 iPKiKP PKPbc 03 12 38.9 -0.1
comp=Z,16nm,0.8s
WATA Walderalm 151.29 350 ePKiKP PKPbc 03 12 38.9 -0.2
comp=Z,12nm,0.5s,SNR=8.4
WTTA Wattenberg 151.35 350 iPKiKP PKPbc 03 12 39.3 0.0
comp=Z,25nm,0.5s,SNR=14
MOTA Moosalm 151.35 351 iPKiKP PKPbc 03 12 39.1 -0.1
comp=Z,20nm,0.9s,SNR=6.4
KDZ Kurdzhali 151.38 326 iP PKPbc 03 12 39.2 -0.1
SQTA Sankt Quirin 151.46 351 iPKiKP PKPbc 03 12 39.5 0.0
comp=Z,25nm,0.7s,SNR=7.7
OBKA Obir 151.48 345 iPKiKP PKPbc 03 12 39.1 -0.4
comp=Z,9.4nm,0.8s
MYKA Terra Mystica 151.57 347 iPKPbc PKPbc 03 12 39.0 -0.7
comp=Z,17nm,0.5s,SNR=7.8
DAVA Damuels 151.58 352 ePKiKP PKiKP 03 12 39.8 -0.4
comp=Z,43nm,1.0s,SNR=7.0
MANT Manisa 151.61 318 PKiKP 03 12 40.4 -0.2
ABTA Abfaltersbach 151.69 348 ePKPbc PKiKP 03 12 39.4 -0.5
comp=Z,34nm,0.6s,SNR=12
RZN Rozhen 151.72 327 iP PKPbc 03 12 39.9 -0.4
FETA Feichten 151.72 351 iPKiKP PKiKP 03 12 40.3 -0.2
comp=Z,23nm,0.8s,SNR=6.2
VTS Vitosha 151.75 330 ⇓P PKiKP 03 12 40.7 0.0
VTS Vitosha 151.75 330 iP PKPbc 03 12 40.2 -0.1
VNDS Vrh nad Dolski 151.83 345 iPKPbc PKPbc 03 12 40.0 -0.2
CRES Cresnjev 151.89 344 eP PKPbc 03 12 39.5 -0.8
LJU Ljubljana 151.92 345 iPKPbc PKiKP 03 12 40.4 -0.3
LJU Ljubljana 151.92 345 eP PKPbc 03 12 40.1 -0.3
DIVS Divibare 151.95 336 eP PKPbc 03 12 40.3 -0.3
CRNS Crni Vrh 151.95 346 iPKPbc PKPbc 03 12 40.1 -0.5
STAL STALIGIAL 152.12 348 PKPdf 03 12 34.0 -0.1
STAL PKPbc PKPbc 03 12 40.4 -0.5
FUORN Ofenpass-Fuorn 152.18 352 PKiKP 03 12 41.8 +0.2
MMB Musomiste 152.29 328 iP PKPbc 03 12 40.9 -0.5
HAPS Han Pijesak,Bl 152.35 337 eP PKPbc 03 12 41.2 -0.4
BBLS Lazići 152.37 336 eP PKPbc 03 12 41.2 -0.4
BLY Banja Luka 152.37 340 ⇓P PKPbc 03 12 42.5 +0.9
BLY Banja Luka 152.37 340 eP PKPbc 03 12 41.7 0.0
TRI Trieste 152.42 346 PKPbc 03 12 40.8 -0.6
CTI Castel Tesino 152.52 349 PKPdf 03 12 34.4 -0.4
CTI PKPbc PKPbc 03 12 41.6 -0.3
RUDO Rudo 152.59 336 eP PKPbc 03 12 40.2 -1.8
MGRS Mrkonjic Grad 152.70 340 eP PKPab 03 12 53.2 -0.2
PDG Podgorica 153.64 335 eP PKPbc 03 12 43.9 -0.4
PDG Podgorica 153.64 335 PKiKP 03 12 44.1 -0.3
PDG PKPab 03 12 56.9 -0.8
DRME Dracevica, Mon 153.88 335 eP PKPbc 03 12 44.5 -0.3
ACER Acerenza 156.31 338 PKPdf PKPdf 03 12 40.5 +0.4
ACER PKPab 03 13 09.1 -0.1
ESDC Sonseca Array 158.24 18 PKP PKPdf 03 12 43.1 +0.5
comp=Z,0.2nm,0.5s,baz=332,slow=2.8,SNR=5.3
ESDC PKPab PKPab 03 13 17.7 +0.1
comp=Z,1.7nm,0.5s,baz=332,slow=4.0,SNR=12
KEST Kesra 162.93 347 PKPab PKPab 03 13 37.9 -0.3
comp=Z,4.4nm,0.8s,baz=142,slow=5.3,SNR=5.7
DBIC Dimbokro 164.59 142 PKPab PKPab 03 13 46.7 +0.8
comp=Z,2.8nm,0.7s,baz=301,slow=20,SNR=3.7
TOA0 Torodi Ar. Sit 173.44 155 PKPdf PKPdf 03 12 54.2 -1.1
TOA0 PKPab 03 14 25.7 +0.8
TORD Torodi Ar. Bea 173.44 155 PKP PKPdf 03 12 54.5 -0.8
comp=Z,3.2nm,0.9s,baz=324,slow=1.3,SNR=14
TORD PKPab PKPab 03 14 25.9 +1.0
comp=Z,1.9nm,0.8s,baz=216,slow=2.7,SNR=9.6

WEL 16 03:02:29.8, 42°S±5°×17°2E±°, h12km, ML3.6/7, MLv3.4/36, Error ellipse: s-maj=0.0km s-min=0.0km az=3.3, South Island

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LTZ Lake Taylor 0.36 158 P Pb 03 02 38.5 +0.3
LTZ S Sb 03 02 43.4 -0.4
INZ Inchbonnie 0.55 239 P Pn 03 02 42.5 -0.9
INZ S Sn 03 02 51.0 -1.5
DSZ Denniston Nort 0.73 343 P Pb 03 02 45.0 +0.5
DSZ S Sb 03 02 54.6 +0.1
GVZ Greta Valley S 0.87 127 P Pn 03 02 47.9 0.0
GVZ S Sn 03 02 59.8 -0.7
OXZ Oxford 0.88 182 P Pn 03 02 48.8 +0.9
OXZ S Sn 03 03 00.7 0.0
THZ Tophouse 0.92 42 P Pg 03 02 46.3 -1.1
KHZ Kahutara 1.08 89 P Pn 03 02 50.7 +0.1
WVZ Waitaha Valley 1.18 237 P Pg 03 02 55.2 +2.8
MQZ McQueen's Vall 1.33 162 P Pb 03 02 54.4 -0.1
OKCZ Okains Bay 1.46 151 P Pb 03 02 56.8 -0.1
RPZ Rata Peaks 1.48 210 P Pg 03 02 57.8 -0.4
BSWZ Blackbirch Sta 1.52 62 P Pg 03 02 59.1 +0.1
AKCZ Akaroa Harbour 1.55 157 P Pb 03 02 57.8 -0.5
NNZ Nelson 1.56 39 P Pb 03 02 58.2 -0.4
QRZ Quartz Range 1.65 12 P Pn 03 02 59.3 +0.7
TUWZ Tuamarina 1.72 54 P Pb 03 03 00.6 -0.6
CMWZ Cape Campbell 1.73 67 P Pg 03 03 02.4 -0.6
FOZ Fox Glacier 1.99 236 P Pb 03 03 06.1 +0.2
TCW Tory Channel 2.05 54 P Pb 03 03 05.6 -1.4
DUWZ D'Urville Isla 2.14 41 P Pb 03 03 07.6 -0.9
BHW Baring Head 2.32 64 P Pn 03 03 08.9 +1.1
LBZ Lake Benmore 2.38 215 P Pb 03 03 10.9 -1.7
PLWZ Palliser 2.52 71 P Pn 03 03 10.4 -0.2
MSWZ Moikau Station 2.58 67 P Pn 03 03 11.6 +0.3
CAW Cannon Point 2.60 60 P Pn 03 03 12.2 +0.6
KIW Kapiti Island 2.64 54 P Pn 03 03 13.6 +1.4
ODZ Otahua Downs 2.80 201 P Pn 03 03 15.4 +1.1
OGWZ Otaki Gorge 2.83 56 P Pn 03 03 15.5 +0.7
MTW Mount Morrison 2.86 64 P Pn 03 03 14.8 -0.4
JCZ Jackson Bay 2.91 235 P Pn 03 03 18.6 +2.7
HOWZ Holdsworth Sta 3.00 60 P Pn 03 03 17.1 0.0
MRZ Mangatainoka R 3.17 57 P Pn 03 03 19.5 0.0
WKZ Wanaka 3.26 222 P Pn 03 03 21.6 +0.9
NBEZ Newall Road No 3.45 24 P Pn 03 03 25.8 +2.5
WAZ Wanganui 3.47 40 P Pn 03 03 27.0 +3.5
KHEZ Kahui Hut 3.47 26 P Pn 03 03 25.9 +2.3
PREZ Palmer Road 3.48 28 P Pn 03 03 26.4 +2.7
PKE Pukeiti 3.56 25 P Pn 03 03 27.1 +2.3
VRZ Vera Road 3.89 32 P Pn 03 03 32.1 +2.7
MLZ Mavora Lakes 4.09 223 P Pn 03 03 33.4 +1.3
TUVZ Tukino 4.17 42 P Pn 03 03 36.0 +2.6
BHHZ Black Hill Sta 4.22 47 P Pn 03 03 35.6 +1.7
NGZ Ngauruhoe 4.22 40 P Pn 03 03 36.8 +2.8
HIZ Hauiti 4.46 29 P Pn 03 03 38.6 +1.4
SYZ Scrubby Hill 4.60 206 P Pn 03 03 39.7 +0.7
BKZ Black Stump Fm 4.68 47 P Pn 03 03 45.4 +5.1
TLZ Tolley Road 4.88 34 P Pn 03 03 44.7 +1.7
TOZ Tahuroa Road 5.39 30 P Pn 03 03 51.6 +1.7
MKAZ Moumakai 5.84 25 P Pn 03 03 58.0 +1.9

ATH 16 03:14:31.9, 38°.22N×20°.38E, h12km±1km, ML2.6/3, Error ellipse: s-maj=2.3km s-min=1.1km az=244.0
THE 16 03:14:32.3, 38°.24N×20°.41E, h12km, ML1.9/4, Error ellipse: s-maj=1.5km s-min=0.5km az=256.0
ISC 16 03:14:31.9±1.1, 38°.23N±0°.03×20°.39E±0°.05, h13km±5km, n23, σ0s.25/41, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AGT1 Agia Thekli 0.02 350 P Pg 03 14 34.2 0.0
AGT1 S Sg 03 14 36.1 +0.2
KEF3 Kipouria, Keph 0.04 234 P Pg 03 14 34.2 -0.1
KEF3 S Sg 03 14 35.3 -0.7
KEF4 Livadi, Kephal 0.04 41 P Pg 03 14 34.3 0.0
KEF4 S Sg 03 14 35.8 -0.2
CHV1 Chavriata, Kef 0.04 188 P Pg 03 14 34.2 -0.1
CHV1 S Sg 03 14 36.1 +0.1
LXR1 Lixouri, Cepha 0.05 124 P Pg 03 14 34.4 +0.1
LXR1 S Sg 03 14 36.4 +0.4
LXRA Lixouri, Kepha 0.05 125 P Pg 03 14 34.4 +0.1
LXRA S Sg 03 14 35.9 -0.1
ARGA Argostoli. Kep 0.09 125 P Pg 03 14 34.7 0.0
ARGA S Sg 03 14 36.3 -0.4
ARG2 Argostoli 0.09 122 P Pg 03 14 34.8 0.0
ARG2 S Sg 03 14 37.0 +0.2
KEF2 Argostoli. Kep 0.10 129 P Pg 03 14 34.9 +0.1
KEF2 S Sg 03 14 36.8 -0.2
VLS Valsamata 0.17 107 P Pg 03 14 35.7 -0.2
VLS S Sg 03 14 38.7 +0.2
8µm,0.1s
VLS Valsamata 0.17 107 P Pg 03 14 35.6 -0.2
VLS S Sg 03 14 38.2 -0.3
VLS AML AML 03 14 38.8
comp=N,9789µm,0.2s
VLS AML AML 03 14 39.0
comp=E,20468µm,0.1s
FSK Fiskardo 0.27 30 P Pg 03 14 37.5 -0.1
FSK S Sg 03 14 41.6 +0.2
FSK AML AML 03 14 42.5
comp=N,1054µm,0.2s
FSK AML AML 03 14 42.9
comp=E,2159µm,0.1s
VLMS Volimes, Zakyn 0.41 148 P Pg 03 14 39.7 -0.4
VLMS S Sg 03 14 45.7 +0.1
VLMS AML AML 03 14 47.5
comp=E,1869µm,0.1s
VLMS AML AML 03 14 48.4
comp=N,2127µm,0.3s
EVGI Lefkada island 0.45 28 P Pg 03 14 40.9 +0.1
EVGI S Sg 03 14 46.4 -0.4
EVGI Lefkada island 0.45 28 P Pg 03 14 40.8 0.0
MGNA Meganis 0.53 36 P Pg 03 14 41.8 -0.6
LKD2 Lefkada island 0.60 20 P Pg 03 14 44.1 +0.4
LKD2 S Sb 03 14 52.8 +0.1
comp=N,75nm,0.2s
LKD2 Lefkada island 0.60 20 P Pb 03 14 44.2 -0.1
TSLK Tsoukalades, L 0.63 19 P Pg 03 14 44.2 -0.1
TSLK S Sg 03 14 52.5 -0.2
comp=N,80nm,0.4s
TSLK Tsoukalades, L 0.63 19 P Pg 03 14 44.2 -0.1
KRI1 kERI 0.66 149 P Pg 03 14 44.9 +0.2
KRI1 S Sb 03 14 54.4 +0.1
PVO Paravola 0.97 66 P Pg 03 14 50.5 -0.2
SERG Sergoula 1.32 81 P Pn 03 14 56.4 +0.2
SERG S Sg 03 15 14.5 -0.1
comp=N,60nm,0.4s

IDC 16 03:21:33.3±1.5, 10°.97S×164°.41E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.9/29, mbtmp4.0/6, ML4.1/1, MS3.5/7, Ms1 3.5/7, ms1mx3.1/31, Error ellipse: s-maj=46.3km s-min=27.6km az=120.0
ISC 16 03:21:37.4±1.1, 11°.0S±0°.1×164°.5E±0°.2, h29km, n21, σ1s.10/9, mb3.9/5, MS3.4/8, Santa Cruz Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HNR Honiara 4.72 289 P Pn 03 22 46.0 -0.7
DZM Mont Dzumac 11.15 170 ePn Pn 03 24 14.3 -0.7
6.2nm,0.2s
DZM eSn Sn 03 26 07.5 -11
1.2nm,0.2s
DZM eLR LR 03 26 39.5
comp=Z,436nm,27.8s
DZM Mont Dzumac 11.15 170 Pn Pn 03 24 15.0 -0.1
1.2nm,0.3s,baz=358,slow=6.8,SNR=53
DZM LR LR 03 28 03.3
comp=Z,173nm,19.1s,baz=36,slow=35
CTA Charters Tower 19.71 241 P Pn 03 26 07.8 +1.4
0.2nm,0.3s,baz=65,slow=16,SNR=4.4
AFI Afiamalu 23.37 100 LR LR 03 33 51.0
comp=Z,118nm,20.0s,baz=316,slow=32
H11S2 WAKE ISLAND Hy 29.41 4 T T 03 57 55.8
baz=184,slow=76,SNR=21
H11S3 WAKE ISLAND Hy 29.41 4 T T 03 57 52.5
baz=184,slow=76,SNR=16
H11S1 WAKE ISLAND Hy 29.42 4 T T 03 57 57.0
baz=184,slow=76,SNR=20
STKA Stephens Creek 29.61 222 LR LR 03 38 48.1
comp=Z,141nm,18.4s,baz=27,slow=35
WRA Warramunga Arr 30.32 249 P P 03 27 47.1 +0.5
1.6nm,0.8s,baz=81,slow=9.0,SNR=4.6
WRA LR LR 03 39 28.8
comp=Z,100nm,18.4s,baz=65,slow=36
H11N1 WAKE ISLAND Hy 30.63 4 T T 03 59 37.9
baz=184,slow=76,SNR=17
H11N3 WAKE ISLAND Hy 30.64 5 T T 03 59 28.2
baz=184,slow=76,SNR=14
H11N2 WAKE ISLAND Hy 30.65 4 T T 03 59 28.0
baz=184,slow=76,SNR=19
ASAR Alice Springs 31.69 243 P P 03 27 58.5 -0.2
0.4nm,0.6s,baz=71,slow=9.5,SNR=8.5
ASAR LR LR 03 40 09.4
comp=Z,67nm,18.4s,baz=76,slow=35
PPT Papeete 44.92 104 LR LR 03 45 27.7
comp=Z,42nm,18.1s,baz=232,slow=32
PPT2 Papeete2 44.92 104 eLR LR 03 42 39.3
comp=Z,71nm,27.0s
TBI Tubuai 45.50 112 eLR LR 03 42 45.5
comp=Z,84nm,30.2s
SONM Songino Array 77.91 324 P P 03 33 33.6 +0.9
0.5nm,0.8s,baz=132,slow=5.0,SNR=3.7
ILAR Eielson Array 83.89 19 P P 03 34 04.9 +0.8
2.5nm,0.9s,baz=231,slow=5.5,SNR=17
MKAR Makanchi Array 92.65 317 P P 03 34 45.0 -1.6
0.6nm,0.8s,baz=98,slow=4.4,SNR=5.8
TXAR Lajitas Array 96.92 62 LR LR 04 12 38.0
comp=Z,10nm,18.6s,baz=0.0,slow=32

IDC 16 03:45:01.3±11.0, 22°.80S×179°.83E, h616km±154km, mb3.3/7, mb1 3.6/7, mb1mx3.2/39, mbtmp4.3/7, Error ellipse: s-maj=81.8km s-min=52.2km az=169.0, South of Fiji Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CTA Charters Tower 31.33 269 P P 03 50 34.2 +0.5
11nm,0.5s,baz=95,slow=11,SNR=31
ASAR Alice Springs 42.06 259 P P 03 52 01.0 -0.3
3.4nm,0.9s,baz=92,slow=8.3,SNR=27
WRA Warramunga Arr 42.33 265 P P 03 52 02.7 -0.7
4.0nm,0.9s,baz=99,slow=8.4,SNR=32
FITZ Fitzroy Crossi 50.76 265 P P 03 53 07.3 +0.6
1.7nm,0.5s,baz=90,slow=7.1,SNR=4.0
SIJI Sorong 51.94 288 P P 03 53 15.3 +0.1
8.9nm,0.7s,baz=96,slow=11,SNR=6.9
TXAR Lajitas Array 89.99 58 P P 03 56 56.7 -0.2
0.6nm,0.8s,baz=202,slow=6.2,SNR=5.7
PDAR Pinedale Array 92.02 44 P P 03 57 06.1 0.0
0.6nm,0.9s,baz=212,slow=3.2,SNR=3.1

IDC 16 03:56:38.3±1.2, 19°.40S×71°.22W, h0km, mb3.3/3, mb1 3.9/7, mb1mx3.7/26, mbtmp3.6/7, ML3.7/4, MS3.2/6, Ms1 3.2/6, ms1mx3.1/16, Error ellipse: s-maj=25.4km s-min=20.8km az=107.0
NEIC 16 03:56:39.4±1.6, 19°.56S±0°.03×71°.09W±0°.10, h19km±5km, ML4.0(GUC), Error ellipse: s-maj=13.3km s-min=4.5km az=89.0
GUC 16 03:56:39.9±0.8, 19°.42S×71°.12W, h28km±3km, ML3.9
ISC 16 03:56:37.3±2.0, 19°.49S±0°.04×71°.07W±0°.06, h2km±12km, n48, σ1s.70/50, mb3.5/4, 2C-3D, Off coast of northern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PSGC Pisagua 0.90 97 eP Pb 03 56 55.3 -0.4
PSGC iS Sn 03 57 08.1 -2.6
AP01 Chacalluta 1.30 32 eP Pn 03 57 01.4 -1.2
AP01 eS Sb 03 57 17.8 -2.0
PB11 IPOC Station P 1.36 102 eP Pg 03 57 03.5 +0.1
PB11 iS Sn 03 57 22.2 0.0
PB11 IAML 03 57 26.1
comp=N,7µm,0.5s
PB11 IPOC Station P 1.36 102 Pg 03 57 03.5 +0.1
TA01 Diego Aracena 1.36 142 eP Pb 03 57 03.6 +0.1
TA01 iS Sg 03 57 21.8 +0.7
MNMC Minye Minye 1.44 76 eP Pn 03 57 04.4 -0.2
MNMC iS Sg 03 57 23.4 0.0
MNMC Minye Minye 1.44 76 Pn Pn 03 57 04.1 -0.5
PATCX Punta Patache 1.58 147 ⇓iP Pn 03 57 07.1 +0.6
PATCX iS Sg 03 57 27.6 -0.7
PATCX IAML 03 57 42.1
comp=E,1µm,0.6s
GO01 Chusmiza 1.78 96 eP Pb 03 57 10.2 -0.7
GO01 iS Sg 03 57 34.5 0.0
GO01 Chusmiza 1.78 96 Pn Pb 03 57 09.8 -1.1
PB16 IPOC Station P 1.87 53 eP Pn 03 57 11.3 +0.4
PB16 iS Sb 03 57 35.9 -0.7
PB08 IPOC Station P 1.92 110 eP Pb 03 57 12.2 -1.1
PB08 iS Sg 03 57 38.0 -1.0
PB08 IAML 03 57 44.9
comp=E,1µm,0.5s
PB02 IPOC Station P 2.13 149 ⇓iP Pn 03 57 14.8 +0.8
PB01 IPOC Station P 2.15 137 ⇑iP Pn 03 57 15.2 +1.0
PB01 iS Sb 03 57 42.2 -2.0
PB01 IAML 03 57 53.0
comp=E,939nm,0.6s
PB01 IPOC Station P 2.15 137 Pn 03 57 14.7 +0.4
PB07 IPOC Station P 2.49 154 eP Pn 03 57 19.8 +0.7
PB03 IPOC Station P 2.83 154 ⇓iP Pn 03 57 24.4 +0.7
PB03 IAML 03 58 19.6
comp=E,446nm,0.5s
PB09 IPOC Station P 2.87 144 eP Pn 03 57 25.9 +1.7
PB04 IPOC Station P 2.96 163 ⇑iP Pn 03 57 25.7 +0.1
PB04 IPOC Station P 2.96 163 Pn 03 57 25.3 -0.2
LVC Limon Verde 3.71 147 eP Pn 03 57 37.9 +2.0
LVC Limon Verde 3.71 147 Pn Pn 03 57 38.3 +2.4
comp=E,3.9nm,0.3s,baz=332,slow=8.9,SNR=59
LVC Sn Sn 03 58 21.6 +1.2
comp=E,12nm,0.3s,baz=318,slow=8.2,SNR=4.9
LVC Lg Lg 03 58 35.4
comp=E,19nm,0.3s,baz=73,slow=22,SNR=8.1
LVC Limon Verde 3.71 147 Pn 03 57 37.7 +1.8
PB10 IPOC Station P 4.04 173 Pn 03 57 38.8 -1.4
PB10 Sn 03 58 25.6 -2.5
LPAZ La Paz 4.24 42 Pn Pn 03 57 47.1 +3.7
comp=E,1.9nm,0.3s,baz=244,slow=11,SNR=24
LPAZ Lg Lg 03 58 53.9
baz=76,slow=11,SNR=3.1
LPAZ La Paz 4.24 42 Pn Pn 03 57 46.1 +2.6
GO02 Mina Guanaco 5.81 167 Pn 03 58 03.7 -1.2
NNA Nana 9.30 322 LR LR 04 01 58.3
comp=E,64nm,18.6s,baz=154,slow=35
SIV San Ignacio 10.14 72 Pn Pn 03 59 06.7 +2.6
comp=E,0.9nm,0.3s,baz=277,slow=9.1,SNR=18
SIV LR LR 04 03 33.2
comp=E,342nm,20.8s,baz=282,slow=40
CFA Coronel Fontan 12.34 169 LR LR 04 03 59.4
comp=E,61nm,18.4s,baz=314,slow=35
SAML Samuel 12.96 37 Pn 03 59 43.3 +0.7
CPUP Villa Florida 14.37 121 Pn P 04 00 06.0 -3.1
comp=E,0.1nm,0.3s,baz=276,slow=12,SNR=6.2
CPUP LR LR 04 06 10.8
comp=E,100nm,20.5s,baz=306,slow=39
CPUP Villa Florida 14.37 121 Pn Pn 04 00 01.2 -0.6
PLCA Paso Flores 21.18 179 P P 04 01 27.1 +3.0
comp=E,0.9nm,0.6s,baz=6.1,slow=15,SNR=5.2
PLCA Paso Flores 21.18 179 P P 04 01 22.9 -1.2
BDFB Brasilia 22.30 84 P P 04 01 42.1 +5.7
comp=E,1.5nm,0.5s,baz=267,slow=13,SNR=5.0
MDP Montagnes des 30.43 38 LR LR 04 15 58.5
comp=E,72nm,20.2s,baz=212,slow=38
URIC Uribia, Colomb 31.00 358 P P 04 02 55.2 -1.2
TKL Tuckaleechee C 56.15 348 LR LR 04 31 25.7
comp=E,31nm,18.4s,baz=162,slow=37
TXAR Lajitas Array 57.83 326 P P 04 06 31.0 +0.4
comp=E,0.1nm,0.6s,baz=126,slow=4.7,SNR=3.1
YKA Yellowknife Ar 88.63 341 P P 04 09 32.2 +0.7
comp=E,0.6nm,1.0s,baz=138,slow=4.6,SNR=5.0
H11S2 WAKE ISLAND Hy125.59 279 T T 06 34 51.2
baz=101,slow=74,SNR=28
H11S1 WAKE ISLAND Hy125.60 279 T T 06 34 59.1
baz=101,slow=74,SNR=6.8
H11S3 WAKE ISLAND Hy125.61 279 T T 06 34 56.6
baz=101,slow=74,SNR=11
H11N3 WAKE ISLAND Hy125.62 281 T T 06 34 53.9
baz=100,slow=75,SNR=4.4
H11N2 WAKE ISLAND Hy125.64 281 T T 06 34 55.4
baz=100,slow=75,SNR=6.2
H11N1 WAKE ISLAND Hy125.64 281 T T 06 34 44.3
baz=100,slow=75,SNR=8.5
MKAR Makanchi Array 145.12 33 PKPbc PKPbc 04 16 15.4 -0.6
comp=E,0.3nm,0.7s,baz=329,slow=2.5,SNR=3.7

IDC 16 04:03:16.4±0.9, 51°.62N×179°.22W, h53km±7km, mb3.5/14, mb1 3.7/16, mb1mx3.6/42, mbtmp3.8/16, MS2.9/3, Ms1 3.0/3, ms1mx2.6/32, Error ellipse: s-maj=28.8km s-min=13.6km az=170.0
AEIC 16 04:03:16.9±2.1, 51°.2N±0°.1×179°.0W±0°.2, h39km±6km, ML4.2/26, mb4.1/8(NEIC), Error ellipse: s-maj=21.3km s-min=10.5km az=151.0
NEIC 16 04:03:16.9±1.3, 51°.38N±0°.08×179°.2W±0°.1, h60km±6km, Error ellipse: s-maj=12.2km s-min=9.7km az=186.0
ISC 16 04:03:15.6±0.6, 51°.3N±0°.1×179°.20W±0°.05, h44km, n67, σ1s.66/72, mb4.0/15, Andreanof Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GAEA Gareloi East 0.56 30 Pn 04 03 28.9 +1.6
TASE Tanaga Southea 0.91 53 Pn 04 03 33.2 +1.2
TAFP Tanaga Falls P 0.97 51 Pn 04 03 33.7 +0.9
TAFP Sn 04 03 47.5 +2.0
TAPA Tanaga Point A 1.01 58 Pn 04 03 34.4 +1.0
KIMD Kanaga Island 1.31 68 Pn 04 03 38.1 +0.7
KIMD Sn 04 03 55.4 +1.6
KIKV Kanaga Island 1.40 64 Pn 04 03 39.5 +0.9
KIWB Kanaga Island 1.40 66 Pn 04 03 39.4 +0.8
KIWB Sn Sn 04 03 56.3 +0.5
KICM Kanaga Island 1.40 63 Pn 04 03 40.0 +1.4
ADK Adak 1.68 68 Pn 04 03 43.2 +0.8
ADAG Mount Adagdak 1.76 66 Pn 04 03 44.9 +1.3
GSTD Great Sitkin T 2.05 67 Pn 04 03 48.5 +0.8
GSTD Sn 04 04 13.4 +1.4
GSMY Great Sitkin M 2.10 68 Pn 04 03 49.1 +1.0
GSTR Great Sitkin T 2.11 67 Pn 04 03 49.7 +1.2
ATKA Atka Island 3.24 72 Pn 04 04 04.8 +1.0
ATKA Sn 04 04 40.9 -0.3
KOKL Mount Kliuchef 3.27 70 Pn 04 04 05.6 +1.3
KOKL Sn 04 04 42.8 +0.8
KOFP Korovin Flat P 3.32 71 Pn 04 04 06.4 +1.4
NIKH Nikolski High 6.59 71 Pn 04 04 51.6 +1.8
NIKH Sn 04 06 04.8 +1.2
OKSP Okmok Steeple 6.98 69 Pn 04 04 58.0 +2.9
MREP Makushin Rep't 8.00 67 Pn 04 05 10.8 +1.7
UNV Unalaska Valle 8.15 67 Pn 04 05 12.4 +1.3
CNBA Chernabura Isl 12.31 66 Pn Pn 04 06 05.3 -2.7
PETK Petropavlovsk- 14.27 286 P Pn 04 06 32.5 -2.2
0.2nm,0.3s,baz=96,slow=14,SNR=3.7
PETK LR LR 04 12 01.1
comp=Z,38nm,21.0s,baz=59,slow=37
KDAK Kodiak Island 16.68 57 P Pn 04 07 02.2 -3.6
0.8nm,0.3s,baz=235,slow=4.2,SNR=16
SKT Skwentna 18.44 44 P Pn 04 07 27.1 -0.4
SKT IAmb IAmb 04 08 01.6
comp=Z,17nm,1.2s
SEW Seward 18.79 50 P Pn 04 07 31.1 -0.6
MA2 Magadan 18.80 308 LR LR 04 14 25.0
comp=Z,23nm,20.0s,baz=23,slow=36
BPAW Bear Paw Mtn. 19.57 38 P Pn 04 07 41.4 +0.4
DHY Denali Highway 20.63 43 P P 04 07 51.5 +0.3
DHY IAmb IAmb 04 07 55.5
comp=Z,9.1nm,1.0s
IL31 21.47 39 P P 04 08 01.5 +1.6
IL31 IAmb IAmb 04 08 30.3
comp=Z,7.1nm,1.1s
ILAR Eielson Array 21.47 39 P P 04 07 57.1 -2.8
comp=Z,0.4nm,0.7s,baz=227,slow=10,SNR=4.1
ILAR PcP PcP 04 12 00.2 -1.0
comp=Z,0.3nm,0.8s,baz=276,slow=1.6,SNR=3.7
YSS Yuzh-Sakhalins 25.08 275 P P 04 08 37.8 +2.1
JKA Kamikawa-asahi 26.45 269 P P 04 08 48.7 +0.5
ASAJ Asahikawa 26.45 269 P P 04 08 48.7 +0.5
comp=Z,5.8nm,0.9s,baz=336,slow=19,SNR=3.3
H11N2 WAKE ISLAND Hy 33.35 204 T T 04 45 42.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=17,slow=76,SNR=96						
H11N3	**WAKE ISLAND Hy**	**33.36**	**204**	T	T	04 45 41.5	
	baz=17,slow=76,SNR=95						
H11N1	**WAKE ISLAND Hy**	**33.37**	**204**	T	T	04 45 43.8	
	baz=17,slow=76,SNR=81						
MJAR	**Matsushiro Arr**	**33.52**	**261**	P	**P**	**04 09 51.3**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=53,slow=6.8,SNR=4.8						
H11S1	**WAKE ISLAND Hy**	**34.57**	**204**	T	T	04 47 14.4	
	baz=17,slow=76,SNR=211						
H11S2	**WAKE ISLAND Hy**	**34.59**	**204**	T	T	04 47 15.7	
	baz=17,slow=76,SNR=100						
H11S3	**WAKE ISLAND Hy**	**34.59**	**204**	T	T	04 47 15.1	
	baz=17,slow=76,SNR=112						
YKA	**Yellowknife Ar**	**35.47**	**46**	P	**P**	**04 10 06.2**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=277,slow=12,SNR=3.9						
YKA				pP	**pP**	**04 10 19.1**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=279,slow=9.1,SNR=4.7						
YKA				PcP	**PcP**	**04 12 35.3**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=289,slow=3.1,SNR=3.6						
YKA				ScP	**ScP**	**04 16 14.7**	**-3.1**
	comp=Z,0.3nm,0.6s,baz=286,slow=2.6,SNR=5.8						
KSRS	**Korea Array**	**39.39**	**271**	P	**P**	**04 10 41.0**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=55,slow=8.5,SNR=7.1						
MCMT	**McKenzie Canyo**	**43.44**	**71**	P	**P**	**04 11 14.2**	**-0.1**
NVAR	**Mina Array Bea**	**43.81**	**82**	LR	LR	04 28 30.7	
	comp=Z,37nm,19.1s,baz=244,slow=34						
SONM	**Songino Array**	**46.46**	**296**	P	**P**	**04 11 37.2**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=63,slow=7.8,SNR=14						
PDAR	**Pinedale Array**	**46.57**	**72**	P	**P**	**04 11 38.8**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=331,slow=3.1,SNR=8.6						
PDAR				pP	**pP**	**04 11 52.6**	**+1.5**
	comp=Z,2.8nm,0.7s,baz=315,slow=4.4,SNR=12						
HHC	**Hu-ho-hao-te**	**47.47**	**286**	eP	**P**	**04 11 49.3**	**+3.4**
SRU	**San Rafael Swe**	**48.19**	**76**	P	**P**	**04 11 51.1**	**-0.6**
LZH	**Lanzhou**	**55.16**	**286**	eP	**P**	**04 12 46.3**	**+2.6**
LZH				pP	pP	04 12 57.8	+1.9
LZH				sP	sP	04 13 03.0	+2.1
LZH				PP	**PP**	**04 14 49.6**	**+2.5**
GTA	**Gaotai**	**55.36**	**292**	eP	**P**	**04 12 45.5**	**+0.5**
GTA				pP	pP	04 12 55.6	-1.7
GTA				sP	sP	04 12 59.4	-2.9
TXAR	**Lajitas Array**	**58.91**	**81**	P	**P**	**04 13 09.3**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=300,slow=4.6,SNR=7.5						
TXAR				pP	**pP**	**04 13 23.6**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=304,slow=4.9,SNR=5.4						
WMQ	**Urumqi**	**59.17**	**303**	eP	**P**	**04 13 16.3**	**+4.5**
WMQ				sP	sP	04 13 31.4	+2.2
MKAR	**Makanchi Array**	**59.89**	**308**	P	**P**	**04 13 14.1**	**-2.5**
	comp=Z,0.3nm,0.4s,baz=50,slow=5.7,SNR=11						
H06E1	**SOCORRO T-PHAS**	**62.01**	**95**	T	T	05 20 58.7	
	SNR=3.8						
FINES	**FINESS Array B**	**65.81**	**347**	P	**P**	**04 13 52.8**	**-2.8**
	comp=Z,6.5nm,1.1s,baz=15,slow=6.0,SNR=3.2						
NOA	**NORSAR Array B**	**67.70**	**355**	P	**P**	**04 14 05.8**	**-2.0**
	comp=Z,0.2nm,0.5s,baz=2,slow=6.4,SNR=3.3						
GUN	**Gumba**	**71.65**	**292**	eP	**P**	**04 14 33.5**	**+0.5**
	comp=Z,15nm,0.5s						
JIRN	**Jiri**	**71.66**	**291**	eP	**P**	**04 14 33.8**	**+0.7**
	comp=Z,38nm,0.9s						
RAMN	**Ramite**	**71.95**	**291**	eP	**P**	**04 14 35.1**	**+0.4**
	comp=Z,17nm,0.6s						
KKN	**Kakani**	**72.09**	**292**	eP	**P**	**04 14 36.2**	**+0.7**
PKI	**Pulchoki**	**72.18**	**292**	eP	**P**	**04 14 36.5**	**+0.3**
DANN	**Dangsing**	**72.55**	**294**	eP	**P**	**04 14 38.6**	**+0.3**
	comp=Z,21nm,0.7s						
AKASG	**Malin Array Be**	**75.55**	**342**	P	**P**	**04 14 53.1**	**-2.0**
	comp=Z,0.8nm,0.5s,baz=21,slow=6.5,SNR=3.6						
CLL	**Collm**	**77.25**	**352**	eP	**P**	**04 15 08.0**	**+3.3**
BRTR	**Keskin Array B**	**84.92**	**335**	P	**P**	**04 15 44.0**	**-1.9**
	comp=Z,1.1nm,0.7s,baz=45,slow=3.3,SNR=6.8						
ASAR	**Alice Springs**	**85.25**	**222**	P	**P**	**04 15 47.0**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=19,slow=5.9,SNR=3.3						
BOSA	**Boshof**	**150.85**	**312**	PKPbc	**PKPbc**	**04 23 02.5**	**-0.6**
	comp=Z,3.7nm,0.7s,baz=3.2,slow=2.2,SNR=10						

GCG 16 04:16:44.1±1.0, 15°.67N×93°.29W, h50km±999km, MD4.1
NEIC 16 04:16:44.3±2.1, 15°.18N±0°.08×93°.28W±0°.06, h74km±10km, Error ellipse: s-maj=12.9km s-min=6.5km az=214.0
MEX 16 04:16:45.0±0.6, 15°.19N×93°.29W, h78km±7km, MD4.0
IDC 16 04:16:46.7±3.0, 15°.65N×93°.04W, h77km±23km, mb3.1/5, mb1 3.5/8, mb1mx3.3/31, mbtmp3.4/8, MS3.0/2, Ms1 3.0/2, ms1mx2.5/13, Error ellipse: s-maj=97.7km s-min=23.2km az=27.0
ISC 16 04:16:45.3±0.9, **15°.32N**±0°.07×**93°.32W**±0°.05, **h85**km, **n28**, σ1s.95/33, **mb3.4**/5, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.39**	**14**		**Pn**	**04 16 57.5**	**-1.2**
PCIG					Sn	04 17 07.0	-1.7
PCIG		**0.39**	**14**	iP	**Pn**	**04 16 57.5**	**-1.2**
PCIG				eS	**Sn**	**04 17 07.0**	**-1.7**
THIG		**1.09**	**112**		**Pn**	**04 17 03.2**	**-2.5**
THIG					**Sn**	**04 17 16.5**	**-4.6**
THIG		**1.09**	**112**	eP	**Pn**	**04 17 03.2**	**-2.5**
THIG				eS	**Sn**	**04 17 16.5**	**-4.6**
TGIG		**1.46**	**7**		**Pn**	**04 17 09.7**	**-0.7**
TGIG		**1.46**	**7**	eP	**Pn**	**04 17 09.7**	**-0.7**
CCIG	**Comitan**	**1.48**	**50**		**Pn**	**04 17 10.3**	**-0.5**
CCIG	**Comitan**	**1.48**	**50**	eP	**Pn**	**04 17 10.3**	**-0.5**
STG3	**Santiaguito 3,**	**1.79**	**110**	eP	**Pn**	**04 17 13.9**	**-0.9**
ERG	**Entre ros, C**	**1.90**	**117**	eP	**Pn**	**04 17 16.7**	**+0.6**
CMIG	**Matias Romero**	**2.31**	**320**	P	**Pn**	**04 17 22.0**	**+0.5**
	5.4nm,0.3s,baz=132,slow=13,SNR=74						
CMIG				S	**Sn**	**04 17 44.8**	**-4.4**
	32nm,0.3s,baz=120,slow=20,SNR=14						
CMIG	**Matias Romero**	**2.31**	**320**		**Pn**	**04 17 21.9**	**+0.4**
CMIG	**Matias Romero**	**2.31**	**320**	eP	**Pn**	**04 17 21.9**	**+0.4**
FUG	**Fuego 3**	**2.54**	**110**	eP	**Pn**	**04 17 25.9**	**+1.1**
FUG				eS	**Sn**	**04 17 57.0**	**+2.0**
HUIG	**Huatulco**	**2.73**	**280**		**Pn**	**04 17 26.3**	**-0.8**
HUIG	**Huatulco**	**2.73**	**280**	eP	**Pn**	**04 17 26.3**	**-0.8**
APG	**El Apazote**	**2.77**	**96**	P	**Pn**	**04 17 26.4**	**-1.5**
	5.3nm,0.3s,baz=301,slow=12,SNR=43						
PCG	**Pacaya**	**2.78**	**109**	eS	**Sn**	**04 18 04.0**	**+3.2**
IXG	**Ixpaco**	**3.01**	**112**	eP	**Pn**	**04 17 31.7**	**+0.6**
SNET	**Serv Nac Est T**	**4.28**	**112**	Pn	**Pn**	**04 17 47.1**	**-1.1**
TGUH	**Tegucigalpa,Un**	**5.98**	**101**	Pn	**Pn**	**04 18 10.6**	**-0.8**
TXAR	**Lajitas Array**	**16.90**	**327**	P	**P**	**04 20 38.7**	**+1.4**
	0.0nm,0.3s,baz=121,slow=11,SNR=6.7						
LPIG	**La Paz**	**18.21**	**301**	LR	LR	04 28 10.2	
	comp=Z,40nm,18.9s,baz=215,slow=37						
ANMO	**Albuquerque**	**22.83**	**331**	P	**P**	**04 21 41.5**	**-0.1**
	0.3nm,0.3s,baz=129,slow=12,SNR=3.9						
PDAR	**Pinedale Array**	**30.70**	**336**	P	**P**	**04 22 53.3**	**+0.9**
	0.2nm,0.8s,baz=163,slow=10,SNR=2.1						
NVAR	**Mina Array Bea**	**31.85**	**321**	P	**P**	**04 23 04.1**	**+1.6**
	0.2nm,0.3s,baz=133,slow=6.3,SNR=2.4						
YKA	**Yellowknife Ar**	**49.46**	**347**	P	**P**	**04 25 26.5**	**-0.1**
	0.4nm,0.6s,baz=155,slow=7.2,SNR=9.1						
YKA				LR	LR	04 48 50.2	
	comp=Z,19nm,20.9s,baz=0.0,slow=39						
ILAR	**Eielson Array**	**61.13**	**337**	P	**P**	**04 26 51.4**	**+1.0**
	0.3nm,0.5s,baz=130,slow=5.5,SNR=7.8						

IDC 16 04:48:48.6±1.7, **6°.98S**×**129°.23E**, **h0**km, **mb3.7**/2, **mb1 4.0**/4, **mb1mx3.6**/20, **mbtmp3.9**/4, **ML4.0**/2, **Error ellipse: s-maj=119.7km s-min=26.5km az=65.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.80**	**159**	Pn	Pn	04 52 06.0	+0.3
	0.6nm,0.3s,baz=338,slow=13,SNR=21						
WRA				Sn	Sn	04 54 26.8	-13
	1.5nm,0.3s,baz=336,slow=22,SNR=12						
ASAR	**Alice Springs**	**17.19**	**165**	P	P	04 52 52.0	0.0
	0.9nm,0.3s,baz=343,slow=9.9,SNR=40						
ASAR				S	Sn	04 55 50.9	-11
	0.4nm,0.3s,baz=347,slow=24,SNR=6.6						
STKA	**Stephens Creek**	**27.32**	**157**	P	P	04 54 34.5	-0.8
	0.9nm,0.4s,baz=334,slow=9.8,SNR=4.5						
MKAR	**Makanchi Array**	**67.79**	**327**	P	P	04 59 48.5	+0.1
	0.2nm,0.5s,baz=112,slow=7.2,SNR=5.3						

WEL 16 04:56:36.8±0.8, **35°S**±8°×**18°0E**±1°1, **h193**km±12km, **mB4.2**/7, **MLv4.1**/37, **Mw(mB)3.3**/7, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKGZ	**Pakihiroa**	**2.91**	**206**	P	Pn	04 57 23.6	-1.4
HAZ	**Te Kaha**	**2.91**	**211**	P	Pn	04 57 25.0	+0.1
HAZ				S	Sn	04 58 03.7	+1.1
PUZ	**Puketiti**	**3.02**	**202**	S	Sn	04 58 04.6	-0.3
RUGZ	**Raukumara Rang**	**3.13**	**210**	P	Pn	04 57 28.0	+0.3
RUGZ				S	Sn	04 58 07.5	0.0
TWGZ	**Tauwhareparae**	**3.20**	**205**	P	Pn	04 57 29.1	+0.6
TWGZ				S	Sn	04 58 10.2	+1.2
MWZ	**Matawai**	**3.51**	**209**	P	Pn	04 57 33.4	+1.2
KUZ	**Kuaotunu**	**3.53**	**244**	P	Pn	04 57 29.1	-3.3
RAGZ	**Rawiri**	**3.69**	**209**	P	Pn	04 57 34.9	+0.4
RIGZ	**Rimuhau**	**3.75**	**204**	P	Pn	04 57 35.7	+0.5
RIGZ				S	Sn	04 58 21.0	-0.1
MUGZ	**Murupara**	**3.96**	**215**	P	Pn	04 57 37.6	-0.1
SNGZ	**Shannon Statio**	**3.97**	**207**	P	Pn	04 57 38.7	+0.8
SNGZ				S	Sn	04 58 26.6	+0.7
RTZ	**Ruatahuna**	**3.97**	**212**	P	Pn	04 57 37.4	-0.6
KNZ	**Kokohu**	**4.07**	**203**	P	Pn	04 57 39.8	+0.7
MTHZ	**Maungataniwha**	**4.23**	**212**	P	Pn	04 57 41.0	-0.2
WHHZ	**Waihua**	**4.27**	**206**	P	Pn	04 57 41.7	+0.1
WHHZ				S	Sn	04 58 31.4	-1.3
NMHZ	**Naumai**	**4.45**	**210**	P	Pn	04 57 44.0	0.0
TLZ	**Tolley Road**	**4.51**	**226**	P	Pn	04 57 45.7	+0.9
ARHZ	**Aropaoanui**	**4.52**	**207**	P	Pn	04 57 44.4	-0.4
BKZ	**Black Stump Fm**	**4.64**	**212**	P	Pn	04 57 45.8	-0.6
MCHZ	**McNeill Hill**	**4.79**	**209**	P	Pn	04 57 47.7	-0.6
KWHZ	**Kaweka Forest**	**4.89**	**211**	P	Pn	04 57 48.6	-1.0
KAHZ	**Kahuranaki**	**5.03**	**205**	P	Pn	04 57 50.7	-0.7
HIZ	**Hauiti**	**5.04**	**229**	P	Pn	04 57 53.3	+1.9
NGZ	**Ngauruhoe**	**5.07**	**219**	P	Pn	04 57 51.9	-0.2
KRHZ	**Kereru**	**5.09**	**210**	P	Pn	04 57 50.4	-1.7
BHHZ	**Black Hill Sta**	**5.10**	**213**	P	Pn	04 57 52.0	-0.3
TUVZ	**Tukino**	**5.12**	**218**	P	Pn	04 57 52.5	-0.1
FWVZ	**Far West T-bar**	**5.16**	**218**	P	Pn	04 57 56.2	+3.0
MOVZ	**Moawhango**	**5.17**	**216**	P	Pn	04 57 54.2	+0.9
PKVZ	**Pokaka**	**5.29**	**219**	P	Pn	04 57 56.1	+1.4
PNHZ	**Pukenui**	**5.39**	**210**	P	Pn	04 57 54.0	-2.0
PRHZ	**Porangahau**	**5.53**	**205**	P	Pn	04 57 56.6	-1.2
TSZ	**Takapari Road**	**5.61**	**211**	P	Pn	04 57 57.7	-1.2
BFZ	**Birch Farm**	**6.04**	**206**	P	Pn	04 58 02.2	-2.2
MRZ	**Mangatainoka R**	**6.28**	**210**	P	Pn	04 58 04.9	-2.5
HOWZ	**Holdsworth Sta**	**6.50**	**209**	P	Pn	04 58 08.0	-2.4
TMWZ	**Te Maipa**	**6.54**	**206**	P	Pn	04 58 09.0	-1.9
OGWZ	**Otaki Gorge**	**6.58**	**211**	P	Pn	04 58 09.0	-2.3
KIW	**Kapiti Island**	**6.72**	**213**	P	Pn	04 58 10.2	-3.1
CAW	**Cannon Point**	**6.86**	**211**	P	Pn	04 58 12.1	-3.0
DUWZ	**D'Urville Isla**	**7.14**	**218**	P	Pn	04 58 16.8	-2.1
TCW	**Tory Channel**	**7.29**	**214**	P	Pn	04 58 17.0	-3.7
TUWZ	**Tuamarina**	**7.62**	**215**	P	Pn	04 58 22.2	-2.7
NNZ	**Nelson**	**7.73**	**218**	P	Pn	04 58 23.1	-3.3

IDC 16 04:57:25.6±1.2, 13°.71N×120°.19E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/26, mbtmp3.5/4, Error ellipse: s-maj=152.1km s-min=20.1km az=67.0
ISC 16 04:57:28.2±1.2, **13°.7N**±0°.2×**120°.13E**±0°.09, **h16**km, **n5**, σ0s.74/6, **mb3.3**/4, **1C**, **Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LQP	**Lukban**	**1.44**	**73**	eP	**Pg**	**04 57 56.6**	**+0.7**
LQP				iS	**Sg**	**04 58 13.9**	**-0.7**
SONM	**Songino Array**	**35.92**	**344**	P	**P**	**05 04 27.4**	**-0.5**
	1.4nm,0.6s,baz=161,slow=9.6,SNR=15						
WRA	**Warramunga Arr**	**36.22**	**157**	P	**P**	**05 04 30.1**	**-0.5**
	0.4nm,0.7s,baz=333,slow=9.6,SNR=2.3						
ASAR	**Alice Springs**	**39.49**	**160**	P	**P**	**05 04 58.4**	**+0.2**
	0.2nm,0.4s,baz=334,slow=7.5,SNR=8.0						
MKAR	**Makanchi Array**	**45.72**	**324**	P	**P**	**05 05 48.9**	**+0.3**
	0.2nm,0.6s,baz=125,slow=7.2,SNR=2.4						

IGQ 16 05:10:31.7±0.5, **3°N**±3°×**8°0W**±°, **h0**km, **M4.4**/28, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAC1	**Pacto, Paraso**	**3.28**	**155**	P	Pb	05 11 27.9	-2.9
URCU	**Urcuqui**	**3.39**	**146**	P	Pg	05 11 35.4	-1.3
CUSE	**Cuicocha Este**	**3.43**	**149**	P	Pb	05 11 32.3	-1.3
CUIC	**Cuicocha-Domo**	**3.45**	**149**	P	Pb	05 11 32.8	-1.1
OTAV	**Otavalo**	**3.46**	**150**	P	Pb	05 11 31.1	-3.0
TULM	**Tulcn-Chalpat**	**3.47**	**137**	P	Pg	05 11 42.2	+4.0
YAHU	**Yahuarcocha**	**3.55**	**144**	P	Pb	05 11 36.0	+0.4
IMBA	**Imbabura, San**	**3.56**	**147**	P	Pb	05 11 34.7	-1.1
PULU	**Pululahua**	**3.62**	**153**	P	Pb	05 11 28.6	-0.8
YANA	**Yana**	**3.72**	**155**	P	Pb	05 11 26.2	-4.5
TERV	**Terraza Guagua**	**3.75**	**156**	P	Pb	05 11 25.9	-5.5
GGPC	**Guagua Pichinc**	**3.76**	**156**	P	Pb	05 11 25.8	-5.6
NINA	**Atacazo Ninahu**	**3.94**	**157**	P	Pb	05 11 24.2	-10
CASC	**Dorado de Casc**	**4.19**	**138**	P	Pn	05 11 38.6	+1.6

SKHL 16 05:10:29.8±0.8, 45°.82N×153°.59E, h39km±6km, mb4.5/6
MOS 16 05:10:30.5±0.7, 45°.74N×153°.56E, h42km, mb4.2/1, Error ellipse: s-maj=22.2km s-min=9.9km az=140.8
IDC 16 05:10:38.5±3.6, 46°.67N×152°.68E, h67km±31km, mb3.1/6, mb1 3.5/9, mb1mx3.2/61, mbtmp3.6/9, ML3.5/3, MS3.0/1, Ms1 3.0/1, ms1mx2.6/8, Error ellipse: s-maj=62.5km s-min=17.4km az=147.0
ISC 16 05:10:32.1±0.9, **46°.1N**±0°.1×**153°.21E**±0°.10, **h27**km, **n36**, σ1s.46/36, **mb3.4**/5, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.84**	**259**	eP	**Pn**	**05 11 30.0**	**+0.6**
KUR				AMB	AMB	05 11 33.0	
	10.0nm,0.2s						
KUR				eS	**Sn**	**05 12 12.0**	**-1.6**
KUR				A	A	05 12 28.0	
	227nm,0.4s						
KUR	**Kuril'sk**	**3.84**	**259**	ePN	**Pn**	**05 11 30.0**	**+0.6**
KUR				S	**Sn**	**05 12 12.3**	**-1.3**
KUR				pmax	pmax		
	comp=E,42nm,0.2s						
KUR				pmax	pmax		
	comp=Z,100nm,0.2s						
KUR				pmax	pmax		
	comp=N,65nm,0.3s						
KUR				smax	smax		
	comp=E,227nm,0.4s						
SKR	**Severo-Kuril's**	**4.99**	**22**	eP	**Pn**	**05 11 45.2**	**0.0**
SKR				AMB	AMB	05 11 47.0	
	comp=E,106nm,0.6s						
SKR	**Severo-Kuril's**	**4.99**	**22**	ePN	**Pn**	**05 11 45.2**	**0.0**
SKR				pmax	pmax		
	comp=Z,106nm,0.6s						
SKR				MLR	MLR		
	comp=Z,1μm,16.0s						
SKR				MLR	MLR		
	comp=Z,2μm,15.0s						
SHO	**Shikotan**	**5.04**	**246**	eP	**Pn**	**05 11 46.2**	**+0.4**
SHO				AMB	AMB	05 11 52.0	
	comp=Z,42nm,0.3s						
SHO				iS	**Sn**	**05 12 42.0**	**-1.1**
SHO				A	A	05 12 55.0	
	comp=Z,70nm,0.6s						
SHO				A	A	05 12 55.0	
	comp=Z,90nm,0.6s						
SHO	**Shikotan**	**5.04**	**246**	ePN	**Pn**	**05 11 45.8**	**0.0**
SHO				pmax	pmax		
	comp=Z,42nm,0.3s						
SHO				pmax	pmax		
	comp=N,20nm,0.3s						
SHO				pmax	pmax		
	comp=E,21nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**5.59**	**251**	eP	**Pn**	**05 11 55.0**	**+1.5**
YUK				AMB	AMB	05 12 07.0	
	comp=E,18nm,0.2s						
YUK				eS	**Sn**	**05 12 59.0**	**+2.2**
YUK				A	A	05 13 00.0	
	comp=E,100nm,0.7s						
YUK				A	A	05 13 00.0	
	comp=E,110nm,0.7s						
YUK	**Yuzh-Kuril'sk**	**5.59**	**251**	ePN	**Pn**	**05 11 55.0**	**+1.5**
YUK				eS	**Sn**	**05 12 59.4**	**+2.6**
YUK				pmax	pmax		
	comp=N,38nm,0.2s						
YUK				pmax	pmax		
	comp=Z,182nm,0.2s						
YUK				pmax	pmax		
	comp=E,71nm,0.1s						
YUK				smax	smax		
	comp=N,212nm,0.7s						
YUK				smax	smax		
	comp=E,228nm,0.6s						
GRPR	**Tuman**	**5.67**	**251**	eP	**Pn**	**05 11 56.0**	**+1.5**
GRPR				AMB	AMB	05 12 00.0	
	comp=E,11nm,0.4s						
GRPR				iS	**Sn**	**05 13 00.0**	**+1.3**
GRPR				A	A	05 13 03.0	
	comp=E,100nm,0.6s						
GRPR				A	A	05 13 03.0	
	comp=E,126nm,0.6s						
GRPR	**Tuman**	**5.67**	**251**	ePN	**Pn**	**05 11 56.1**	**+1.5**
GRPR				iS	**Sn**	**05 13 00.2**	**+1.5**
GRPR				pmax	pmax		
	comp=Z,111nm,0.4s						
GRPR				pmax	pmax		
	comp=N,56nm,0.2s						
GRPR				smax	smax		
	comp=N,100nm,0.6s						
GRPR				smax	smax		
	comp=E,126nm,0.5s						
PAU	**Pauzhetka**	**5.89**	**23**	erx	rx	05 12 24.1	
GLVR	**Golovnino**	**5.94**	**249**	eP	**Pn**	**05 11 59.0**	**+0.7**
GLVR				AMB	AMB	05 12 06.0	
	comp=E,10.0nm,0.3s						
GLVR				eS	**Sn**	**05 13 06.0**	**+0.6**
GLVR				A	A	05 13 11.0	
	comp=E,110nm,0.7s						
GLVR				A	A	05 13 11.0	
	comp=E,189nm,0.7s						
GLVR	**Golovnino**	**5.94**	**249**	ePN	**Pn**	**05 11 59.6**	**+1.3**
GLVR				pmax	pmax		
	comp=Z,104nm,0.3s						
NMR	**Nemuro--Hokkai**	**5.98**	**246**	eP	**Pn**	**05 11 58.0**	**-0.8**
NMR				iS	**Sn**	**05 13 03.0**	**-3.3**
NMR	**Nemuro--Hokkai**	**5.98**	**246**	ePN	**Pn**	**05 11 58.4**	**-0.4**
YSS	**Yuzh-Sakhalins**	**7.26**	**281**	eP	**Pn**	**05 12 17.1**	**+0.7**
YSS	**Yuzh-Sakhalins**	**7.26**	**281**	ePN	**Pn**	**05 12 17.4**	**+1.0**
PETK	**Petropavlovsk-**	**7.61**	**21**	P	**Pn**	**05 12 20.9**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=187,slow=15,SNR=7.9						
PETK	**Petropavlovsk-**	**7.61**	**21**	PN	**Pn**	**05 12 21.0**	**-0.2**
JKA	**Kamikawa-asahi**	**7.76**	**259**	eP	**Pn**	**05 12 25.5**	**+2.3**
ASAJ	**Asahikawa**	**7.76**	**259**	P	**Pn**	**05 12 25.5**	**+2.2**
	comp=Z,3.3nm,0.3s,baz=79,slow=21,SNR=16						
MA2	**Magadan**	**13.59**	**355**	LR	LR	05 18 26.6	
	comp=Z,69nm,19.2s,baz=207,slow=36						
MJAR	**Matsushiro Arr**	**14.74**	**235**	P	**P**	**05 14 04.5**	**0.0**
	comp=Z,0.1nm,0.3s,baz=34,slow=9.0,SNR=6.1						
EKMR	**Ekimchan**	**14.85**	**305**	erx	rx	05 14 16.9	
KSRS	**Korea Array**	**20.67**	**254**	P	Pn	05 15 11.2	-1.0
	comp=Z,1.0nm,0.7s,baz=58,slow=12,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**28.60**	**152**	T	T	05 47 53.1	
	baz=340,slow=76,SNR=175						
H11N1	**WAKE ISLAND Hy**	**28.61**	**152**	T	T	05 47 53.7	
	baz=340,slow=76,SNR=120						
H11N3	**WAKE ISLAND Hy**	**28.62**	**152**	T	T	05 47 53.7	
	baz=340,slow=76,SNR=97						
H11S1	**WAKE ISLAND Hy**	**29.68**	**153**	T	T	05 49 17.7	
	baz=340,slow=76,SNR=197						
H11S3	**WAKE ISLAND Hy**	**29.69**	**153**	T	T	05 49 17.1	
	baz=340,slow=76,SNR=112						
H11S2	**WAKE ISLAND Hy**	**29.70**	**153**	T	T	05 49 18.4	
	baz=340,slow=76,SNR=152						
ILAR	**Eielson Array**	**37.03**	**38**	P	**P**	**05 17 38.7**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=257,slow=7.2,SNR=4.1						
MKAR	**Makanchi Array**	**47.31**	**298**	P	**P**	**05 18 59.9**	**-3.3**
	comp=Z,0.3nm,0.6s,baz=76,slow=7.0,SNR=3.4						
YKA	**Yellowknife Ar**	**51.42**	**36**	P	**P**	**05 19 35.4**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=295,slow=6.7,SNR=4.6						
YKA				pP	**pwP**	**05 19 47.9**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=295,slow=7.2,SNR=7.7						
CMAR	**Chiang Mai Arr**	**52.28**	**257**	P	**P**	**05 19 41.6**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=40,slow=7.1,SNR=4.1						
TXAR	**Lajitas Array**	**77.76**	**60**	P	**P**	**05 22 27.7**	**+0.8**
	comp=Z,0.1nm,0.4s,baz=316,slow=3.8,SNR=2.7						

IDC 16 05:11:03.8±5.5, 46°.44N×152°.91E, h52km±43km, mb3.4/4, mb1 3.9/8, mb1mx3.2/62, mbtmp3.8/8, ML4.4/2, MS2.9/1, Ms1 3.0/1, ms1mx2.5/15, Error ellipse: s-maj=99.5km s-min=17.6km az=141.0
SKHL 16 05:11:05.7±0.1, 45°.67N×152°.73E, h86km±1km, mb4.5/5, msh5.5/4
MOS 16 05:11:06.9±1.1, 45°.34N×152°.46E, h87km, mb4.1/1, Error ellipse: s-maj=23.3km s-min=9.9km az=136.3
ISC 16 05:11:00.6±1.1, **46°.1N**±0°.2×**153°.1E**±0°.1, **h40**km, **n23**, σ2s.72/29, **mb3.6**/3, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.76**	**259**	eP	**Pn**	**05 11 57.0**	**+1.0**
KUR				AMB	AMB	05 11 59.0	
	12nm,0.2s						
KUR				eS	**Sn**	**05 12 35.5**	**-3.5**
KUR				A	A	05 12 51.0	
	230nm,0.9s						
KUR				A	A	05 12 51.0	
	147nm,0.9s						
KUR	**Kuril'sk**	**3.76**	**259**	PN	**Pn**	**05 11 57.3**	**+1.3**
KUR				S	**Sn**	**05 12 43.5**	**+4.5**
KUR				pmax	pmax		
	comp=Z,121nm,0.2s						
KUR				pmax	pmax		
	comp=N,55nm,0.1s						
KUR				pmax	pmax		
	comp=E,26nm,0.1s						
KUR				smax	smax		
	comp=N,230nm,0.7s						
KUR				smax	smax		
	comp=E,147nm,0.9s						
SHO	**Shikotan**	**4.96**	**246**	eP	**Pn**	**05 12 13.0**	**+0.5**
SHO				AMB	AMB	05 12 20.0	
	comp=E,30nm,0.5s						
SHO				iS	**Sn**	**05 13 03.4**	**-5.1**
SHO				A	A	05 13 04.1	
	comp=E,113nm,0.4s						
SHO				A	A	05 13 04.1	
	comp=E,73nm,0.4s						
SHO	**Shikotan**	**4.96**	**246**	ePN	**Pn**	**05 12 12.9**	**+0.5**
SHO				pmax	pmax		
	comp=Z,63nm,0.4s						
SHO				pmax	pmax		
	comp=N,13nm,0.2s						
SHO				pmax	pmax		
	comp=E,37nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**5.51**	**251**	eP	**Pn**	**05 12 21.7**	**+1.6**
YUK				AMB	AMB	05 12 23.0	
	comp=E,22nm,0.4s						
YUK				eS	Sn	05 13 15.1	-7.1
YUK				A	A	05 13 23.0	
	comp=E,230nm,0.7s						
YUK				A	A	05 13 23.0	
	comp=E,180nm,0.7s						
YUK	**Yuzh-Kuril'sk**	**5.51**	**251**	ePN	**Pn**	**05 12 22.1**	**+2.0**
YUK				pmax	pmax		
	comp=Z,218nm,0.2s						
YUK				pmax	pmax		
	comp=N,50nm,0.1s						
YUK				pmax	pmax		
	comp=E,78nm,0.1s						
GRPR	**Tuman**	**5.59**	**251**	eP	**Pn**	**05 12 23.0**	**+1.9**
GRPR				AMB	AMB	05 12 26.0	
	comp=E,10.0nm,0.2s						
GRPR				eS	**Sn**	**05 13 19.0**	**-5.1**
GRPR				A	A	05 13 26.0	
	comp=E,124nm,0.5s						
GRPR				A	A	05 13 26.0	
	comp=E,173nm,0.5s						
GRPR	**Tuman**	**5.59**	**251**	PN	**Pn**	**05 12 23.1**	**+1.9**
GRPR				pmax	pmax		
	comp=Z,101nm,0.2s						
GLVR	**Golovnino**	**5.86**	**249**	eP	**Pn**	**05 12 25.0**	**+0.1**
GLVR				AMB	AMB	05 12 31.0	
	comp=Z,18nm,0.6s						
GLVR				eS	**Sn**	**05 13 25.0**	**-5.8**
GLVR	**Golovnino**	**5.86**	**249**	ePN	**Pn**	**05 12 25.5**	**+0.6**
GLVR				pmax	pmax		
	comp=Z,182nm,0.6s						
NMR	**Nemuro--Hokkai**	**5.90**	**245**	eP	**Pn**	**05 12 25.0**	**-0.4**
NMR				eS	Sn	05 13 24.0	-7.7
NMR	**Nemuro--Hokkai**	**5.90**	**245**	ePN	**Pn**	**05 12 25.5**	**+0.1**
PETK	**Petropavlovsk-**	**7.65**	**21**	P	**Pn**	**05 12 48.5**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=185,slow=15,SNR=6.1						
JKA	**Kamikawa-asahi**	**7.68**	**259**	eP	**Pn**	**05 12 52.4**	**+2.6**
ASAJ	**Asahikawa**	**7.68**	**259**	P	**Pn**	**05 12 52.4**	**+2.5**
	comp=Z,2.4nm,0.3s,baz=110,slow=17,SNR=6.2						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MA2	Magadan	13.60	355	P	Pn	05 14 08.6	-2.1
	comp=Z,0.5nm,0.3s,baz=151,slow=8.1,SNR=3.8						
MJAR	Matsushiro Arr	14.67	235	P	Pn	05 14 29.5	+4.2
	comp=Z,0.0nm,0.3s,baz=37,slow=13,SNR=3.4						
KSRS	Korea Array	20.59	254	P	P	05 15 38.8	+2.8
	comp=Z,1.7nm,0.8s,baz=57,slow=11,SNR=4.6						
ILAR	Eielson Array	37.09	38	P	P	05 18 06.6	0.0
	comp=Z,0.8nm,0.9s,baz=278,slow=9.4,SNR=6.7						
ILAR				LR	LR	05 35 23.6	
	comp=Z,17nm,18.2s,baz=311,slow=40						
YKA	Yellowknife Ar	51.48	36	P	P	05 20 02.0	+0.5
	comp=Z,0.3nm,0.4s,baz=296,slow=7.0,SNR=5.9						
YKA				pP	pwP	05 20 15.2	-2.9
	comp=Z,1.6nm,0.8s,baz=296,slow=7.1,SNR=9.8						
YKA	Yellowknife Ar	51.48	36	P	P	05 20 02.0	+0.5
CMAR	Chiang Mai Arr	52.20	257	P	P	05 20 08.9	+1.5
	comp=Z,1.1nm,0.6s,baz=35,slow=7.7,SNR=7.1						
CMAR	Chiang Mai Arr	52.20	257	P	P	05 20 09.0	+1.5

*IDC **16** 05:17:38.0±1.1, 43.°05N×46.°44E, h0km, mb3.6/7, mb1 3.7/12, mb1mx3.5/46, mbtmp3.6/12, ML3.3/5, MS2.7/3, Ms1 2.7/3, ms1mx2.3/36, Error ellipse: s-maj=25.0km s-min=8.4km az=2.0*
*TIF **16** 05:17:38.9, 43.°28N×46.°45E, h3km±2km*
*DRS **16** 05:17:39.6±0.0, 43.°18N×46.°46E, h12km*
*NORS **16** 05:17:40.6±0.0, 43.°14N×46.°55E, h10km, MPVA4.3, Felt I=III MSK at Dubki, Dylym, Khasavurt*
*MOS **16** 05:17:40.0±0.0, 43.°15N×46.°53E, h5km, MPVA4.3*
*NNC **16** 05:17:50.1±6.0, 43.°72N×46.°98E, h37km±56km, mb3.7, Error ellipse: s-maj=87.3km s-min=35.3km az=128.0*
ISC 16 05:17:41.7±0.9, **43.°22N**±0.°02×**46.°59E**±0.°02, **h10km**±6km, **n134**, σ1§76/196, **mb3.8/8, 24C-4D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLMR	Dylym	0.15	168	iPg	Pg	05 17 44.0	-1.1
DLMR				eSg	Sg	05 17 48.0	+0.6
DLMR	Dylym	0.15	168	iPG	Pg	05 17 44.0	-1.1
DBC	Dubki	0.27	138	iPg	Pg	05 17 46.2	-0.9
DBC				eSg	Sg	05 17 50.1	-0.7
DBC	Dubki	0.27	138⇑	ePG	Pg	05 17 46.5	-0.6
DBC				e		05 17 51.4	
KRNR	Karanay	0.46	149	iPg	Pg	05 17 49.7	-1.0
	220nm,0.5s						
KRNR				iSg	Sg	05 17 57.0	+0.3
	858nm,0.2s						
KRNR	Karanay	0.46	149	iPG	Pg	05 17 49.7	-1.0
KRNR				iS	Sg	05 17 57.0	+0.3
KRNR				pmax	pmax		
	comp=Z,220nm,0.5s						
UNCR	Uncukul	0.53	163	ePg	Pg	05 17 50.5	-1.5
	comp=Z,684nm,0.3s						
UNCR				eSg	Sg	05 17 59.0	+0.1
	comp=Z,4µm,0.0s						
UNCR	Uncukul	0.53	163	ePG	Pg	05 17 50.5	-1.5
UNCR				eS	Sg	05 17 59.0	+0.1
UNCR				pmax	pmax		
	comp=Z,684nm,0.3s						
BUJR	Buynaksk	0.55	136	ePg	Pg	05 17 52.6	+0.2
BUJR				eSg	Sb	05 18 01.5	+0.1
BUJR	Buynaksk	0.55	136⇑	ePG	Pg	05 17 53.4	+1.0
BUJR				e		05 18 02.9	
GROC	Groznyy	0.58	269	ePg	Pg	05 17 52.8	-0.2
GROC				eSg	Sg	05 18 02.1	+1.5
GROC	Groznyy	0.58	269	ePG	Pg	05 17 52.7	-0.2
GROC				e		05 18 01.1	
GROC				pmax	pmax		
	comp=Z,166nm,0.5s						
GROC				smax	smax		
	comp=N,615nm,1.0s						
GROC				smax	smax		
	comp=E,549nm,0.5s						
GROC				smax	smax		
	comp=N,430nm,0.9s						
BTLR	Botlikh	0.62	206	ePg	Pg	05 17 51.9	-1.8
	comp=N,309nm,0.7s						
BTLR				eSg	Sg	05 18 00.9	-0.9
	comp=N,1µm,0.8s						
BTLR	Botlikh	0.62	206⇑	ePG	Pg	05 17 52.1	-1.6
BTLR				e		05 18 00.9	
BTLR				pmax	pmax		
	comp=Z,376nm,0.8s						
BTLR				smax	smax		
	comp=E,1µm,0.8s						
KANR	Karaman	0.66	92	ePg	Pb	05 17 56.7	+1.3
KANR				eSg	Sn	05 18 08.4	+0.8
XNZR	Khunzakh	0.68	173	ePg	Pg	05 17 54.2	-0.7
XNZR				eSg	Sg	05 18 03.9	0.0
XNZR	Khunzakh	0.68	173	ePG	Pg	05 17 54.2	-0.7
XNZR				eS	Sg	05 18 03.9	0.0
ARKR	Arakani	0.69	154	iPg	Pg	05 17 54.0	-1.0
	comp=E,281nm,0.4s						
ARKR				eSg	Sg	05 18 04.7	+0.8
	comp=E,489nm,0.5s						
ARKR	Arakani	0.69	154	iPG	Pg	05 17 54.0	-1.0
ARKR				eS	Sg	05 18 04.7	+0.8
ARKR				pmax	pmax		
	comp=Z,281nm,0.4s						
MAK	Makhachkala	0.72	111	ePg	Pg	05 17 56.1	+0.5
MAK				eSg	Sb	05 18 08.1	+1.7
MAK	Makhachkala	0.72	111⇑	iPG	Pg	05 17 56.1	+0.5
MAK				e		05 18 07.9	
MAK				pmax	pmax		
	comp=Z,135nm,0.3s						
MAK				smax	smax		
	comp=E,2µm,0.6s						
MAK				smax	smax		
	comp=E,3µm,0.7s						
GNBR	Gunib	0.88	161	ePg	Pg	05 17 58.1	-0.5
	comp=E,196nm,0.8s						
GNBR				eSg	Sb	05 18 11.0	+0.1
	comp=E,1µm,0.6s						
GNBR	Gunib	0.88	161⇑	ePG	Pg	05 17 58.2	-0.4
GNBR				e		05 18 10.9	
GNBR				pmax	pmax		
	comp=Z,344nm,0.8s						
GNBR				smax	smax		
	comp=N,1µm,0.9s						
SGKR	Sergokala	1.09	134	ePg	Pb	05 18 03.5	+0.7
SGKR				eSg	Sn	05 18 21.0	+2.6
SGKR	Sergokala	1.09	134	ePG	Pb	05 18 03.5	+0.7
SGKR				S	Sn	05 18 21.0	+2.6
SGKR				pmax	pmax		
	comp=Z,1µm,0.3s						
KMKR	Kumukh	1.15	161	iPg	Pg	05 18 03.0	-0.9
KMKR				iSg	Sb	05 18 20.5	+1.5
KMKR	Kumukh	1.15	161⇑	iPG	Pg	05 18 03.0	-0.9
KMKR				iS	Sb	05 18 20.5	+1.5
KMKR				pmax	pmax		
	comp=Z,264nm,0.2s						
KMGR	Komgaron	1.27	263	ePg	Pg	05 18 06.3	+0.2
KMGR				eSg	Sn	05 18 24.8	+2.0
KMGR	Komgaron	1.27	263	ePG	Pg	05 18 06.5	+0.4
KMGR				eS	Sn	05 18 26.1	+3.3
URKR	Urkarakh	1.30	143	ePg	Pg	05 18 06.7	-0.1
URKR				eSg	Sn	05 18 25.6	+1.8
URKR	Urkarakh	1.30	143⇑	ePG	Pg	05 18 06.4	-0.4
URKR				e		05 18 25.5	
LGD	Lagodekhi	1.41	191	P	Pn	05 18 07.7	+0.2
LGD				S	Sn	05 18 28.1	+2.0
LGD	Lagodekhi	1.41	191	iPg	Pg	05 18 07.6	+0.2
LGD				eSg	Sg	05 18 26.0	-0.9
LGD	Lagodekhi	1.41	191	PG	Pg	05 18 07.7	+0.2
LGD				S	Sn	05 18 28.1	+2.0
VLKR	Vladikavkaz	1.41	264	ePg	Pn	05 18 08.3	+0.7
VLKR				eSg	Sn	05 18 28.6	+2.5
VLKR	Vladikavkaz	1.41	264	ePG	Pn	05 18 08.4	+0.9
VLKR				eS	Sn	05 18 29.4	+3.2
TRKR	Terskaya	1.44	291	ePg	Pn	05 18 08.4	+0.5
TRKR				eSg	Sn	05 18 29.5	+2.6
TRKR	Terskaya	1.44	291	ePG	Pn	05 18 08.4	+0.5
TRKR				eS	Sn	05 18 30.0	+3.1
BTKR	Batakoyurt	1.50	277	ePg	Pn	05 18 09.2	+0.4
BTKR				eSg	Sn	05 18 32.3	+3.7
BTKR	Batakoyurt	1.50	277	ePG	Pn	05 18 10.0	+1.2
BTKR				eS	Sg	05 18 29.9	-0.1
ARNR	Ardon	1.69	269	ePg	Pn	05 18 12.0	+0.6
ARNR				eSg	Sn	05 18 34.4	+1.4
LACR	Lac	1.73	258	ePg	Pn	05 18 11.3	-0.7
LACR				eSg	Sn	05 18 34.1	0.0
LACR	Lac	1.73	258c	ePN	Pn	05 18 10.0	-2.0
GUDG	Gudauri	1.73	245	P	Pn	05 18 11.2	-0.9
GUDG				S	Sn	05 18 34.6	+0.3
GUDG	Gudauri	1.73	245	ePg	Pn	05 18 11.1	-0.9
GUDG	Gudauri	1.73	245	PN	Pn	05 18 11.2	-0.9
DRN	Derbent	1.75	132	ePg	Pn	05 18 13.8	+1.7
DRN				eSg	Sg	05 18 37.9	-0.1
DRN	Derbent	1.75	132⇑	ePN	Pn	05 18 14.0	+1.8
DRN				e		05 18 38.1	
DRN				pmax	pmax		
	comp=Z,281nm,0.6s						
DRN				smax	smax		
	comp=N,600nm,0.8s						
PRTR	Priterechnaya	1.76	288	ePg	Pn	05 18 13.9	+1.6
PRTR				eSg	Sn	05 18 37.2	+2.4
PRTR	Priterechnaya	1.76	288c	ePN	Pb	05 18 14.7	+0.6
PRTR				pmax	pmax		
	comp=Z,338nm,0.5s						
DDFL	Dedoflistskaro	1.81	191	P	Pg	05 18 16.2	-0.2
DDFL	Dedoflistskaro	1.81	191	PN	Pg	05 18 16.2	-0.2
KORR	Kora	1.85	267	ePg	Pn	05 18 14.5	+0.9
KORR				eSg	Sn	05 18 38.4	+1.3
KORR	Kora	1.85	267c	ePN	Pn	05 18 14.8	+1.2
STDR	Stavd-Durt	1.85	276	ePg	Pn	05 18 15.6	+2.0
STDR	Stavd-Durt	1.85	276	ePN	Pb	05 18 16.2	+0.5
STDR				eS	Sg	05 18 42.7	+1.5
AKT	Akhty	1.93	154	ePg	Pn	05 18 17.0	+2.2
	comp=Z,578nm,0.7s						
AKT				eSg	Sg	05 18 43.3	-0.6
	comp=Z,1µm,0.5s						
AKT	Akhty	1.93	154	ePN	Pn	05 18 16.5	+1.7
AKT				e		05 18 43.3	
AKT				pmax	pmax		
	comp=Z,578nm,0.8s						
AKT				smax	smax		
	comp=N,825nm,0.6s						
AKT				smax	smax		
	comp=N,1µm,0.5s						
AKT				smax	smax		
	comp=E,986nm,0.4s						
SEAG	Tbilisi Sea	1.96	223	P	Pn	05 18 15.0	-0.2
SEAG	Tbilisi Sea	1.96	223	ePg	Pn	05 18 15.0	-0.2
SEAG	Tbilisi Sea	1.96	223	PN	Pn	05 18 15.0	-0.2
KSMR	Kasumkent	1.98	144	iPg	Pb	05 18 18.0	+0.1
	comp=E,195nm,0.4s						
KSMR				eSg	Sg	05 18 46.0	+0.7
	comp=E,429nm,0.5s						
KSMR	Kasumkent	1.98	144	iPN	Pb	05 18 18.0	+0.1
KSMR				eS	Sg	05 18 46.0	+0.7
KSMR				pmax	pmax		
	comp=Z,195nm,0.4s						
ZEI	Tsey	2.02	259	ePg	Pn	05 18 15.9	-0.2
ZEI	Tsey	2.02	259c	ePN	Pn	05 18 14.6	-1.5
LSNR	Lesken	2.02	273	ePg	Pn	05 18 17.9	+1.9
LSNR				eSg	Sn	05 18 44.2	+2.9
LSNR	Lesken	2.02	273	ePN	Pb	05 18 18.7	+0.1
LSNR				eS	Sg	05 18 46.4	-0.2
TBLG	Delisi	2.02	223	P	Pn	05 18 17.8	+1.8
TBLG				S	Sb	05 18 45.4	+1.6
TBLG	Delisi	2.02	223	PN	Pn	05 18 17.8	+1.8
TBLG				S	Sb	05 18 45.4	+1.6
BTNK	Botanikuri	2.03	221	P	Pn	05 18 17.1	+1.1
BTNK				S	Sn	05 18 43.9	+2.4
BTNK	Botanikuri	2.03	221	ePg	Pn	05 18 17.1	+1.1
BTNK				eSg	Sn	05 18 43.9	+2.4
BTNK	Botanikuri	2.03	221	PN	Pn	05 18 17.1	+1.1
BTNK				S	Sn	05 18 43.9	+2.4
NCK	Nalchik	2.20	278	iPN	Pn	05 18 15.5	-2.9
NCK				MLR	MLR		
	comp=Z,144nm,2.0s						
DIGR	Digorskoe uzhe	2.23	263	ePg	Pn	05 18 19.6	+0.7
DIGR				eSg	Sn	05 18 47.5	+0.9
DIGR	Digorskoe uzhe	2.23	263	ePN	Pn	05 18 20.6	+1.7
DIGR				eS	Sn	05 18 49.8	+3.2
ONI	Oni	2.39	256	P	Pn	05 18 21.1	+0.1
ONI				S	Sb	05 18 55.2	+0.8
ONI	Oni	2.39	256	ePn	Pn	05 18 21.1	+0.1
ONI	Oni	2.39	256	PN	Pn	05 18 21.1	+0.1
ONI				S	Sb	05 18 55.2	+0.8
KZRT	Kazreti	2.45	222	P	Pn	05 18 24.1	+2.3
KZRT				S	Sb	05 18 55.7	-0.4
KZRT	Kazreti	2.45	222	PN	Pn	05 18 24.1	+2.3
KZRT				S	Sb	05 18 55.7	-0.4
TRLG	Trialeti	2.49	228	P	Pn	05 18 24.3	+1.7
TRLG				S	Sn	05 18 56.5	+3.4
TRLG	Trialeti	2.49	228	PN	Pn	05 18 24.3	+1.7
TRLG				S	Sn	05 18 56.5	+3.4
PYA1	Pyatigorsk	2.67	290	ePn	Pn	05 18 25.6	+0.7
PYA1	Pyatigorsk	2.67	290	iPN	Pn	05 18 24.2	-0.7
KBZ	Khabaz	2.73	282	Pn	Pn	05 18 23.9	-1.7
	comp=Z,1.0nm,0.3s,baz=128,slow=4.8,SNR=31						
KBZ				Pb	Pb	05 18 30.6	-0.1
	comp=Z,3.7nm,0.3s,baz=123,slow=13,SNR=29						
KBZ				Sn	Sn	05 18 56.0	-2.8
	comp=Z,4.0nm,0.3s,baz=108,slow=6.4,SNR=6.1						
KBZ				Lg	Lg	05 19 02.3	
	comp=Z,5.9nm,0.3s,baz=165,slow=20,SNR=4.5						
KBZ	Khabaz	2.73	282	ePN	Pn	05 18 24.1	-1.6
NEY	Neytrino	2.83	272	ePn	Pn	05 18 27.6	+0.4
NEY				eSn	Sn	05 19 03.8	+2.4
NEY	Neytrino	2.83	272c	ePN	Pn	05 18 27.4	+0.3
SHAR	Shatzhatmas	2.90	282c	iPN	Pn	05 18 26.8	-1.4
AKH	Akhalkalaki	2.92	233	P	Pn	05 18 31.9	+3.4
AKH				S	Sb	05 19 08.8	-1.1
AKH	Akhalkalaki	2.92	233	PN	Pn	05 18 31.9	+3.4
AKH				S	Sb	05 19 08.8	-1.1
KVAR	Kislovodsk Arr	2.92	286	Pn	Pn	05 18 28.3	-0.1
	baz=107,slow=19,SNR=10.0						
KVAR				Sn	Sn	05 18 58.8	-4.9
	baz=12,slow=19,SNR=8.9						
KVAR				Lg	Lg	05 19 09.0	
	baz=184,slow=16,SNR=5.8						
KIV	Kislovodsk	2.93	286	ePn	Pn	05 18 28.0	-0.4
KIV	Kislovodsk	2.93	286	ePN	Pn	05 18 28.1	-0.4
GOF	Gofitskoye	3.15	307⇑	ePN	Pg	05 18 43.4	+1.4
GOF				eS	Sg	05 19 23.6	+0.9
GOF				smax	smax		
	comp=N,229nm,0.6s						
GNI	Garni	3.36	205	Pn	Pn	05 18 35.8	+1.2
	comp=N,3.4nm,0.3s,baz=288,slow=2.2,SNR=20						
GNI	Garni	3.36	205	ePn	Pn	05 18 35.4	+0.9
GNI	Garni	3.36	205⇑	ePN	Pn	05 18 36.8	+2.3
DOMR	Dombai	3.63	273	ePn	Pn	05 18 37.9	-0.2
DOMR	Dombai	3.63	273	iPN	Pn	05 18 37.9	-0.2
ARXR	Arkhyz	3.89	277⇑	ePN	Pn	05 18 44.3	+2.6
BATM	Batumi	3.97	248	PN	Pn	05 18 43.0	+0.6
ANN	Anapa	6.79	287	eP	Pn	05 19 20.5	-0.9
ANN				eS	Sn	05 20 38.2	-0.5
ANN				pmax	pmax		
	comp=Z,80nm,1.8s						
VRH	Novokhopyorsk	8.64	339	eP	Pn	05 19 49.1	+2.3
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR	Storozhevoye	9.46	330	eP	Pn	05 20 01.0	+3.1
VSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GEYT	Alibeck	10.23	117	Pn	Pn	05 20 06.8	-1.9
	comp=Z,0.6nm,0.3s,baz=304,slow=11,SNR=3.7						
AKTO	Aktyubinsk	10.64	43	Pn	Pn	05 20 13.1	-1.0
	comp=Z,0.4nm,0.3s,baz=208,slow=6.7,SNR=6.2						
AKTO				Sn	Sn	05 22 02.0	-11
	comp=Z,0.8nm,0.3s,baz=172,slow=18,SNR=11						
AKTO				LR	LR	05 24 52.1	
	comp=Z,7.7nm,19.4s,baz=278,slow=40						
AKTO	Aktyubinsk	10.64	43	⇓Pn	Pn	05 20 13.2	-1.0
	comp=Z,2.7nm,0.7s						
AKTO				⇓Sn	Sn	05 22 02.9	-10
	comp=Z,13nm,0.8s						
AB31	Akbulak array	11.04	52	⇑Pn	Pn	05 20 16.9	-2.7
	comp=Z,0.5nm,0.2s,baz=236,slow=12,SNR=31						
AB31				Sn	Sn	05 22 16.9	-6.2
	comp=Z,2.3nm,0.3s,baz=238,slow=16,SNR=8.7						
OBN	Obninsk	13.57	335⇑	eP	Pn	05 20 54.9	+0.8
OBN				eS	Sn	05 23 18.6	-6.3
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MLR	Muntele Rosu	14.94	286	LR	LR	05 27 23.6	
	comp=Z,64nm,18.9s,baz=106,slow=39						
ARU	Arti	15.28	26	LR	LR	05 28 38.7	
	comp=Z,46nm,18.4s,baz=234,slow=43						
ARU	Arti	15.28	26	P	Pn	05 21 20.5	+3.1
ARU				S	Sn	05 24 14.0	+7.4
SVE	Sverdlovsk	16.29	28	eP	Pn	05 21 28.0	-2.5
KK31	Karatay Array	17.45	82	⇑P	Pn	05 21 46.0	+0.8
	comp=Z,0.5nm,0.5s,baz=254,slow=21,SNR=5.8						
KKAR	Karatay Array	17.45	82⇑	eP	P	05 21 51.3	+4.9
PRGR	Permogore	18.46	359	eP	P	05 21 48.7	-8.6
PRGR				e		05 25 10.0	
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BRVK	Borovoye	18.55	50	⇑P	P	05 21 57.6	-0.8
	comp=Z,2.0nm,0.6s						
BRVK	Borovoye	18.55	50c	eP	P	05 21 58.1	-0.3
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR	Borovoye Array	18.59	50	P	P	05 21 58.8	-0.2
	comp=Z,0.6nm,0.3s,baz=249,slow=11,SNR=12						
BVAR				S	Sn	05 25 16.1	-11
	comp=Z,0.5nm,0.3s,baz=252,slow=23,SNR=11						
VYHS	Vyhne	19.98	295	eP	P	05 22 08.1	-6.0
VYHS	Vyhne	19.98	295	ePN	P	05 22 08.1	-6.0
AAK	Ala-Archa	20.41	82⇓	eP	P	05 22 20.3	+1.2
AAK				pmax	pmax		
	comp=Z,6.0nm,2.0s						
FINES	FINESS Array B	21.97	333	P	P	05 22 33.4	-2.0
	comp=Z,1.9nm,0.6s,baz=145,slow=10,SNR=9.5						
FINES	FINESS Array B	21.97	333	iP	P	05 22 35.2	-0.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURBB	Kurchatov Arra	22.91	60	P	P	05 22 45.1	-0.4
	comp=Z,1.9nm,0.8s,baz=267,slow=12,SNR=7.7						
KURBB	Kurchatov Arra	22.91	60	⇓P	P	05 22 45.1	-0.4
	comp=Z,4.1nm,0.7s						
KURK	Kurchatov	22.97	60⇑	eP	P	05 22 46.9	+0.6
KURK				pmax	pmax		
	comp=Z,5.0nm,2.3s						
MKAR	Makanchi Array	25.36	69	P	P	05 23 08.4	-0.5
	comp=Z,0.2nm,0.5s,baz=269,slow=9.4,SNR=4.2						
HFS	Hagfors	26.11	322	P	P	05 23 14.0	-1.5
	comp=Z,4.4nm,0.8s,baz=116,slow=9.4,SNR=3.4						
TORD	Torodi Ar. Bea	48.80	246	P	P	05 26 23.3	-3.9
	comp=Z,0.6nm,0.6s,baz=44,slow=4.4,SNR=5.4						
CMAR	Chiang Mai Arr	50.32	102	P	P	05 26 37.0	-1.8
	comp=Z,0.6nm,0.3s,baz=302,slow=8.4,SNR=3.5						
CMAR	Chiang Mai Arr	50.32	102	P	P	05 26 37.0	-1.8
YKA	Yellowknife Ar	73.56	351	P	P	05 29 12.4	-2.0
	comp=Z,0.2nm,0.8s,baz=12,slow=6.2,SNR=3.5						

*NDI **16** 05:19:21.5±2.2, 9.°96N×94.°33E, h16km±24km, ML3.9, mb4.0(NEIC)*
*IDC **16** 05:19:24.5±3.1, 9.°84N×93.°64E, h127km±28km, mb3.6/20, mb1 3.7/22, mb1mx3.5/53, mbtmp3.9/22, Error ellipse: s-maj=23.3km s-min=14.0km az=62.0*
*NEIC **16** 05:19:24.2±1.8, 9.°90N±0.°07×93.°80E±0.°08, h121km±6km, mb4.0/13, Error ellipse: s-maj=13.0km s-min=8.4km az=56.0*
ISC 16 05:19:22.3±0.5, **9.°84N**±0.°05×**93.°66E**±0.°09, **h100km, n56**, σ1§77/55, **mb3.9/23, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	Port Blair	2.02	333	eP	Pn	05 19 57.4	+2.3
PBA				eS	Sn	05 20 27.2	+7.0
PBA				IAML		05 20 34.4	
	comp=N,716nm,0.3s						
PBA				IAML		05 20 34.8	
	comp=E,797nm,0.1s						
PBA	Port Blair	2.02	333		Pn	05 19 57.6	+2.5
PBA				Sn	Sn	05 20 25.0	+4.9
CMBY	CAMPBELL BAY	2.82	175	eP	Pn	05 20 09.1	+3.4
CMBY				eS	Sn	05 20 41.8	+2.7
CMBY				IAML		05 20 43.7	
	comp=N,589nm,0.3s						
CMBY				IAML		05 20 44.9	
	comp=E,429nm,0.3s						
DGPR	DIGLIPUR	3.39	348	eP	Pn	05 20 16.5	+3.2
DGPR				eS	Sn	05 20 54.9	+2.1
DGPR				eS	Sn	05 20 56.5	+3.8
DGPR				IAML		05 20 58.5	
DGPR				IAML		05 21 05.0	
	comp=N,3µm,1.1s						
DGPR				IAML		05 21 09.0	
	comp=E,276nm,0.6s						
LHMI	Lhok Sumawe	5.62	144	Pn	Pn	05 20 46.6	+3.1
LHMI				Sn	Sn	05 21 47.8	+1.1
PSI	Prapat	8.73	143	P	Pn	05 21 30.0	+4.2
	comp=E,1.4nm,0.3s,baz=340,slow=14,SNR=7.1						
RPSI	Rantau Prapat	8.81	143		Pn	05 21 30.0	+3.1
RPSI	Rantau Prapat	8.81	143	Pn	Pn	05 21 30.3	+3.4
CMAR	Chiang Mai Arr	9.98	30	P	Pn	05 21 44.7	+1.9
	comp=E,0.3nm,0.3s,baz=219,slow=13,SNR=10.0						
SAIH	SAIHA	12.60	357	eP	Pn	05 22 17.9	-0.1
PALK	Pallekele	13.07	260	S	Sn	05 24 40.0	-8.1
	comp=E,1.0nm,0.3s,baz=130,slow=13,SNR=7.3						
SLVN	Son La	15.09	40	P	Pn	05 22 51.0	+0.8
RAMN	Ramite	18.28	340	eP	P	05 23 30.9	+2.3
	comp=E,16nm,0.4s						
TAPN	Taplejung	18.30	343	eP	P	05 23 30.2	+1.4
	comp=E,10nm,0.3s						
JIRN	Jiri	19.07	339	eP	P	05 23 38.7	+1.3
	comp=E,16nm,0.3s						
PKI	Pulchoki	19.28	337	eP	P	05 23 41.8	+2.3
GUN	Gumba	19.41	339	eP	P	05 23 42.1	+1.1
	comp=E,19nm,0.6s						
SBUM	Sibu	19.84	111	P	P	05 23 44.2	-1.2
SBUM				IAmb	IAmb	05 23 59.7	
	comp=Z,9.5nm,1.5s						
LSA	Lhasa	19.90	354	P	P	05 23 46.9	+0.5
LSA				IAmb	IAmb	05 23 51.9	
	comp=Z,7.2nm,1.0s						
H08S3	Diego Garcia H	27.32	231	T	T	05 52 08.2	
	baz=42,slow=74,SNR=15						
H08S2	Diego Garcia H	27.32	231	T	T	05 52 05.5	
	baz=42,slow=74,SNR=2.9						
H08S1	Diego Garcia H	27.33	231	T	T	05 51 57.1	
	baz=42						
ARSB	Arslanbob	36.28	333	P	P	05 26 17.2	+0.9
MK31	Makanchi Array	38.08	347	P	P	05 26 33.6	+2.4
MKAR	Makanchi Array	38.08	347	P	P	05 26 30.5	-0.7
	comp=Z,1.1nm,0.4s,baz=154,slow=6.8,SNR=30						
MAKZ	Makanchi	38.16	347	P	P	05 26 33.8	+1.9
KK31	Karatay Array	38.81	333	P	P	05 26 38.1	+0.7
KK31				IAmb	IAmb	05 26 38.7	
	comp=Z,3.1nm,1.2s						
KKAR	Karatay Array	38.81	333	P	P	05 26 38.2	+0.8
KKAR				IAmb	IAmb	05 26 38.7	
	comp=Z,3.1nm,1.2s						
SONM	Songino Array	39.37	14	P	P	05 26 41.5	-0.6
	comp=Z,1.6nm,0.9s,baz=197,slow=10,SNR=9.7						
SONM				PcP	PcP	05 28 48.3	-0.3
	comp=Z,0.7nm,0.7s,baz=196,slow=3.6,SNR=5.2						
KSRS	Korea Array	41.32	43	P	P	05 26 57.2	-1.0
	comp=Z,0.6nm,0.5s,baz=248,slow=8.0,SNR=4.1						
GEYT	Alibeck	42.44	317	P	P	05 27 07.3	0.0
	comp=Z,2.2nm,0.4s,baz=143,slow=8.3,SNR=6.9						
KURBB	Kurchatov Arra	42.54	346	P	P	05 27 07.2	-0.7
	comp=Z,0.6nm,0.4s,baz=268,slow=23,SNR=8.4						
KURK	Kurchatov	42.60	346	P	P	05 27 07.3	-1.1
ZAA0	Zalesovo Array	44.56	353	P	P	05 27 24.0	0.0
ZALV	Zalesovo Beam	44.56	353	P	P	05 27 23.8	-0.2
	comp=Z,1.3nm,0.3s,baz=175,slow=8.9,SNR=10						
BVAR	Borovoye Array	46.99	341	P	P	05 27 42.3	-0.9
	comp=Z,0.2nm,0.3s,baz=133,slow=9.3,SNR=5.3						
WB0	Warramunga Arr	49.74	126	P	P	05 28 02.0	-2.8
WRA	Warramunga Arr	49.79	127	P	P	05 28 04.8	-0.4
	comp=Z,0.4nm,0.6s,baz=305,slow=8.4,SNR=4.0						
AKTO	Aktyubinsk	50.01	331	P	P	05 28 05.8	-0.6
	comp=Z,0.6nm,0.4s,baz=131,slow=9.3,SNR=3.1						
ASAR	Alice Springs	51.54	131	P	P	05 28 17.0	-1.3
	comp=Z,0.7nm,0.8s,baz=304,slow=6.7,SNR=5.0						
BBOO	Buckleboo	58.58	138	P	P	05 29 07.8	-1.0
BRTR	Keskin Array B	60.80	310	P	P	05 29 22.6	-1.6
	comp=Z,0.6nm,0.7s,baz=109,slow=9.4,SNR=3.3						
TIXI	Tiksi	65.41	12	P	P	05 29 52.5	-1.4
TIXI				IAmb	IAmb	05 29 57.6	
	comp=Z,2.4nm,1.1s						
FINES	FINESS Array B	70.77	332	P	P	05 30 26.6	-0.9
	comp=Z,0.8nm,0.4s,baz=75,slow=4.6,SNR=8.0						
ARCES	ARCESS Array B	73.27	340	P	P	05 30 41.8	-0.5
	comp=Z,1.9nm,0.6s,baz=88,slow=6.4,SNR=11						
TIP	Timpagrande	73.72	308	P	P	05 30 46.4	+0.7
GERES	GERESS Array B	76.06	318	P	P	05 30 58.4	-0.6
	comp=Z,0.8nm,0.7s,baz=69,slow=7.6,SNR=4.2						
BOSA	Boshof	76.23	237	P	P	05 30 59.3	-1.1
	comp=Z,4.5nm,1.2s,baz=96,slow=3.1,SNR=3.6						
BOSA	Boshof	76.23	237	P	P	05 31 01.8	+1.4
HFS	Hagfors	76.53	330	P	P	05 30 59.6	-1.7
	comp=Z,1.4nm,0.4s,baz=104,slow=6.3,SNR=9.5						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOA	NORSAR Array B	77.80	330	P	P	05 31 07.2	-1.2
	comp=Z,0.4nm,0.5s,baz=101,slow=7.1,SNR=2.7						
DAVOX	Davos/Dischmat	78.66	316	P	P	05 31 12.8	-0.8
	comp=Z,0.7nm,0.4s,baz=130,slow=7.9,SNR=4.0						
ESDC	Sonseca Array	89.60	310	P	P	05 32 08.4	-0.6
	comp=Z,0.4nm,0.5s,baz=61,slow=3.9,SNR=4.8						
ILAR	Eielson Array	93.11	22	P	P	05 32 23.8	-1.0
	comp=Z,0.1nm,0.4s,baz=337,slow=7.6,SNR=4.6						
PDAR	Pinedale Array	123.51	20	PKP	PKPdf	05 38 07.7	-0.9
	comp=Z,0.2nm,0.6s,baz=251,slow=2.8,SNR=2.6						
TXAR	Lajitas Array	137.62	23	PKP	PKPdf	05 38 35.5	0.0
	comp=Z,0.2nm,0.5s,baz=197,slow=1.3,SNR=4.7						

IDC 16 05:19:33.5±2.1, 6°.74S×129°.40E, h0km, mb3.1/1, mb1 3.6/4, mb1mx3.3/32, mbtmp3.4/4, ML3.5/3, Error ellipse: s-maj=85.7km s-min=27.7km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.87	198	Pn	Pn	05 22 23.7	-0.5
	0.3nm,0.3s,baz=22,slow=14,SNR=5.8						
FITZ				Sn	Sn	05 24 22.2	-15
	0.1nm,0.3s,baz=30,slow=20,SNR=3.3						
WRA	Warramunga Arr	13.97	160	Pn	Pn	05 22 52.4	-0.6
	0.2nm,0.3s,baz=340,slow=13,SNR=6.1						
WRA				Sn	Sn	05 25 13.7	-15
	0.3nm,0.3s,baz=338,slow=22,SNR=7.1						
ASAR	Alice Springs	17.38	166	P	P	05 23 38.5	-0.5
	0.2nm,0.3s,baz=337,slow=9.4,SNR=12						
ASAR				S	Sn	05 26 35.2	-17
	0.1nm,0.3s,baz=343,slow=25,SNR=4.1						
MKAR	Makanchi Array	67.69	327	P	P	05 30 32.7	0.0
	0.2nm,0.8s,baz=115,slow=6.5,SNR=3.0						

ATH 16 05:29:57.7, 38°.26N×20°.41E, h11km±1km, ML2.7/10, Error ellipse: s-maj=1.6km s-min=0.9km az=247.0

THE 16 05:29:58.1, 38°.26N×20°.39E, h9km, ML2.7/3, Error ellipse: s-maj=1.3km s-min=0.6km az=263.0

ISC 16 05:29:58.0±0.9, 38°.26N±0°.02×20°.44E±0°.03, h10km±4km, n43, σ0°.40/65, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.01	259	P	Pg	05 29 59.5	-0.1
KEF4				S	Sg	05 30 00.9	0.0
KEF1	Kardakata, Kep	0.03	57	P	Pg	05 29 59.8	0.0
KEF1				S	Sg	05 30 01.1	0.0
AGT1	Agia Thekli	0.04	257	P	Pg	05 29 59.7	-0.1
AGT1				S	Sg	05 30 01.0	-0.2
LXR1	Lixouri, Cepha	0.06	178	P	Pg	05 30 00.1	+0.1
LXR1				S	Sg	05 30 01.7	+0.2
LXRA	Lixouri, Kepha	0.06	178	P	Pg	05 30 00.1	+0.1
LXRA				S	Sg	05 30 01.7	+0.3
CHV1	Chavriata, Kef	0.09	209	P	Pg	05 30 00.3	0.0
CHV1				S	Sg	05 30 02.1	+0.1
ARGA	Argostoli. Kep	0.09	157	P	Pg	05 30 00.4	0.0
ARGA				S	Sg	05 30 02.1	0.0
KEF3	Kipouria, Keph	0.09	231	P	Pg	05 30 00.3	-0.1
KEF3				S	Sg	05 30 02.3	+0.2
ARG2	Argostoli	0.09	153	P	Pg	05 30 00.5	+0.1
ARG2				S	Sg	05 30 02.2	+0.1
KEF2	Argostoli. Kep	0.10	157	P	Pg	05 30 00.6	0.0
KEF2				S	Sg	05 30 02.3	-0.1
VLS	Valsamata	0.15	124	P	Pg	05 30 01.3	0.0
VLS				S	Sg	05 30 04.0	+0.4
	14μm,0.1s						
VLS	Valsamata	0.15	124	P	Pg	05 30 01.3	0.0
VLS				S	Sg	05 30 03.9	+0.4
VLS				AML	AML	05 30 04.1	
	comp=N,21570μm,0.1s						
VLS				AML	AML	05 30 04.2	
	comp=E,33270μm,0.1s						
EVGI	Lefkada island	0.40	26	P	Pg	05 30 06.1	+0.2
EVGI				S	Sb	05 30 12.8	-0.6
EVGI	Lefkada island	0.40	26	P	Pg	05 30 06.1	+0.2
EVGI				S	Sg	05 30 12.3	+1.1
VLMS	Volimes, Zakyn	0.42	155	P	Pg	05 30 06.1	-0.2
VLMS				S	Sg	05 30 12.6	+0.8
VLMS				AML	AML	05 30 13.5	
	comp=E,11882μm,0.3s						
VLMS				AML	AML	05 30 13.7	
	comp=N,22720μm,0.4s						
MGNA	Meganis	0.48	35	P	Pg	05 30 07.4	-0.1
MGNA				AML	AML	05 30 15.7	
	comp=E,4596μm,0.3s						
MGNA				AML	AML	05 30 15.8	
	comp=N,3628μm,0.2s						
LKD2	Lefkada island	0.56	18	P	Pg	05 30 08.7	-0.1
LKD2				S	Sb	05 30 17.8	-0.2
	comp=N,390nm,0.3s						
LKD2	Lefkada island	0.56	18	P	Pg	05 30 08.5	-0.3
LKD2				AML	AML	05 30 21.1	
	comp=N,702μm,0.2s						
LKD2				AML	AML	05 30 26.3	
	comp=E,977μm,0.4s						
AST1	Astakos	0.59	61	P	Pg	05 30 09.5	+0.1
AST1				S	Sb	05 30 19.0	+0.3
TSLK	Tsoukalades, L	0.59	17	P	Pg	05 30 09.3	-0.2
TSLK				S	Sg	05 30 17.4	+0.2
	comp=E,480nm,0.3s						
TSLK	Tsoukalades, L	0.59	17	P	Pg	05 30 09.2	-0.2
TSLK				AML	AML	05 30 23.6	
	comp=N,852μm,0.4s						
TSLK				AML	AML	05 30 26.5	
	comp=E,1049μm,0.2s						
ZAK2	Zakynthos	0.60	142	P	Pg	05 30 09.6	+0.1
ZAK2				S	Sb	05 30 19.9	+0.9
PDO	Prodromos	0.68	60	P	Pg	05 30 10.8	-0.3
PDO				S	Sb	05 30 22.4	+1.0
PDO	Prodromos	0.68	60	P	Pg	05 30 10.8	-0.3
PDO				S	Sb	05 30 21.6	+0.2
PDO				AML	AML	05 30 23.1	
	comp=E,2012μm,0.3s						
PDO				AML	AML	05 30 26.0	
	comp=N,2499μm,0.3s						
VTN	Vitineika	0.68	120	P	Pg	05 30 11.1	-0.1
AXS	Araxos	0.74	95	P	Pg	05 30 12.1	-0.2
AXS				AML	AML	05 30 28.4	
	comp=N,601μm,0.4s						
AXS				AML	AML	05 30 29.2	
	comp=E,440μm,0.3s						
RLS	Riolos of Patr	0.84	104	P	Pg	05 30 13.5	-0.6
PVO	Paravola	0.93	67	P	Pg	05 30 16.0	+0.2
PVO	Paravola	0.93	67	P	Pg	05 30 16.1	+0.2
PVO				AML	AML	05 30 34.5	
	comp=E,1072μm,0.3s						
PVO				AML	AML	05 30 36.3	
	comp=N,1768μm,0.3s						
DRO	Drossia	1.05	107	P	Pg	05 30 17.7	-0.5
DRO	Drossia	1.05	107	P	Pg	05 30 17.6	-0.6
ANX	Ano Chora	1.21	74	P	Pn	05 30 21.1	0.0
ANX	Ano Chora	1.21	74	P	Pn	05 30 21.1	0.0
ANX				AML	AML	05 30 43.6	
	comp=N,1412μm,0.5s						
ANX				AML	AML	05 30 43.8	
	comp=E,694μm,0.7s						
LAKA	Lakka	1.22	90	P	Pn	05 30 20.4	-0.7
AMT	Artemida-Makis	1.24	125	P	Pn	05 30 21.2	-0.3
IGT	Igoumenitsa	1.27	356	P	Pn	05 30 21.8	-0.1
SERG	Sergoula	1.28	83	P	Pn	05 30 21.7	-0.4
TRIZ	Trizonia	1.29	85	P	Pn	05 30 21.1	-1.0
ALIK	Aliki, Aigiali	1.32	89	P	Pn	05 30 22.2	-0.3
KALE	Kalithea	1.35	84	P	Pn	05 30 21.8	-1.2
KLV	Kalavryta, Ach	1.37	99	P	Pn	05 30 23.0	-0.2
KLV				AML	AML	05 30 46.7	
	comp=N,132μm,0.2s						
KLV				AML	AML	05 30 50.2	
	comp=E,137μm,0.5s						
KEK	Kerkira	1.53	341	P	Pn	05 30 25.1	-0.4
SG1	Sgolgore (BA)	3.88	313	ePn	Pn	05 30 58.1	+0.3
SG1				Sn	Sn	05 31 43.3	-0.2

ATH 16 05:54:42.1, 38°.22N×20°.40E, h11km±1km, ML2.9/6, Error ellipse: s-maj=1.9km s-min=0.8km az=249.0

THE 16 05:54:42.0, 38°.22N×20°.37E, h10km, ML2.8/5, Error ellipse: s-maj=1.4km s-min=0.6km az=264.0

ISC 16 05:54:42.2±0.9, 38°.22N±0°.02×20°.41E±0°.04, h10km±4km, n36, σ0°.38/63, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.03	136	P	Pg	05 54 44.1	+0.1
LXR1				S	Sg	05 54 45.7	+0.4
LXRA	Lixouri, Kepha	0.03	138	P	Pg	05 54 44.1	+0.1
LXRA				S	Sg	05 54 45.5	+0.2
AGT1	Agia Thekli	0.04	322	P	Pg	05 54 44.1	0.0
AGT1				S	Sg	05 54 45.4	0.0
KEF4	Livadi, Kephal	0.04	16	P	Pg	05 54 44.2	+0.1
KEF4				S	Sg	05 54 45.5	0.0
CHV1	Chavriata, Kef	0.04	211	P	Pg	05 54 44.1	0.0
CHV1				S	Sg	05 54 45.7	+0.2
KEF3	Kipouria, Keph	0.05	249	P	Pg	05 54 44.2	0.0
KEF3				S	Sg	05 54 45.7	0.0
ARGA	Argostoli. Kep	0.07	130	P	Pg	05 54 44.5	+0.1
ARGA				S	Sg	05 54 46.0	0.0
KEF1	Kardakata, Kep	0.07	40	P	Pg	05 54 44.5	+0.1
KEF1				S	Sg	05 54 45.9	-0.1
ARG2	Argostoli	0.07	126	P	Pg	05 54 44.6	+0.2
ARG2				S	Sg	05 54 46.3	+0.2
KEF2	Argostoli. Kep	0.08	134	P	Pg	05 54 44.7	+0.1
KEF2				S	Sg	05 54 46.1	-0.2
VLS	Valsamata	0.15	108	P	Pg	05 54 45.5	0.0
VLS				S	Sg	05 54 48.2	+0.4
	20μm,0.1s						
VLS	Valsamata	0.15	108	P	Pg	05 54 45.5	0.0
VLS				S	Sg	05 54 47.9	0.0
VLS				AML	AML	05 54 48.3	
	comp=N,52049μm,0.1s						
VLS				AML	AML	05 54 48.6	
	comp=E,27773μm,0.1s						
FSK	Fiskardo	0.27	27	P	Pg	05 54 47.6	0.0
FSK				S	Sg	05 54 51.9	+0.7
	comp=E,7μm,0.2s						
FSK	Fiskardo	0.27	27	P	Pg	05 54 47.6	0.0
FSK				S	Sg	05 54 51.6	+0.4
FSK				AML	AML	05 54 52.6	
	comp=E,23085μm,0.1s						
FSK				AML	AML	05 54 52.8	
	comp=N,7611μm,0.1s						
VLMS	Volimes, Zakyn	0.40	150	P	Pg	05 54 49.9	-0.1
VLMS				S	Sg	05 54 56.1	+0.8
VLMS				AML	AML	05 54 57.4	
	comp=E,5171μm,0.5s						
VLMS				AML	AML	05 54 59.9	
	comp=N,6177μm,0.3s						
EVGI	Lefkada island	0.44	26	P	Pg	05 54 50.8	0.0
EVGI				S	Sb	05 54 58.1	-0.6
EVGI	Lefkada island	0.44	26	P	Pg	05 54 50.9	0.0
EVGI				S	Sg	05 54 57.7	+1.0
MGNA	Meganis	0.53	34	P	Pg	05 54 52.3	-0.1
MGNA				S	Sg	05 54 59.9	+0.6
MGNA				AML	AML	05 55 00.9	
	comp=E,5289μm,0.2s						
MGNA				AML	AML	05 55 01.1	
	comp=N,3031μm,0.2s						
ZAK2	Zakynthos	0.58	138	P	Pg	05 54 53.6	+0.2
ZAK2				S	Sb	05 55 03.1	+0.4
LKD2	Lefkada island	0.60	19	P	Pg	05 54 53.4	-0.4
LKD2				S	Sg	05 55 01.8	+0.1
	comp=N,555nm,0.3s						
LKD2	Lefkada island	0.60	19	P	Pg	05 54 53.3	-0.4
LKD2				S	Sg	05 55 01.8	+0.1
LKD2				AML	AML	05 55 06.9	
	comp=E,1061μm,0.3s						
LKD2				AML	AML	05 55 11.5	
	comp=N,1498μm,0.5s						
AST1	Astakos	0.62	59	P	Pg	05 54 54.1	-0.1
AST1				S	Sg	05 55 03.5	+1.1
TSLK	Tsoukalades, L	0.63	18	P	Pg	05 54 54.1	-0.3
TSLK				S	Sg	05 55 02.7	0.0
	comp=N,790nm,0.5s						
TSLK	Tsoukalades, L	0.63	18	P	Pg	05 54 54.1	-0.3
TSLK				S	Sb	05 55 03.9	-0.3
TSLK				AML	AML	05 55 09.1	
	comp=E,1294μm,0.5s						
TSLK				AML	AML	05 55 10.5	
	comp=N,1659μm,0.4s						
KRI1	kERI	0.65	150	P	Pg	05 54 54.1	-0.5
KRI1				S	Sg	05 55 03.3	+0.2
PDO	Prodromos	0.71	58	P	Pg	05 54 56.0	0.0
PDO	Prodromos	0.71	58	P	Pg	05 54 55.8	-0.2
PDO				S	Sg	05 55 05.7	+0.4
RLS	Riolos of Patr	0.85	101	P	Pg	05 54 58.0	-0.5
PVO	Paravola	0.96	65	P	Pg	05 55 00.5	-0.1
PVO				S	Sn	05 55 16.3	+0.9
	comp=N,662nm,0.5s						
PVO	Paravola	0.96	65	P	Pg	05 55 00.3	-0.3
DRO	Drossia	1.06	104	P	Pb	05 55 02.1	-0.5
ANX	Ano Chora	1.24	72	P	Pn	05 55 05.3	-0.4
ANX	Ano Chora	1.24	72	P	Pn	05 55 05.5	-0.2
EVR	Evrytania	1.30	57	P	Pn	05 55 06.0	-0.4
ALIK	Aliki, Aigiali	1.34	88	P	Pn	05 55 06.6	-0.3
SG1	Sgolgore (BA)	3.89	313	ePn	Pn	05 55 42.7	+0.6

OMAN 16 05:58:09.9±5.4, 14°.25N×50°.86E, h20km±38km, ml3.6/5, Error ellipse: s-maj=40.5km s-min=18.4km az=105.0

IDC 16 05:58:13.3±6.9, 13°.85N×52°.30E, h0km, mb3.7/4, mb1 3.7/4, mb1mx3.2/54, mbtmp3.7/4, MS3.1/3, Ms1 3.0/3, ms1mx2.6/43, Error ellipse: s-maj=230.5km s-min=41.6km az=82.0

ISC 16 05:58:13.0±1.7, 14°.10N±0°.08×51°.2E±0°.2, h21km, n16, σ2°.03/13, mb3.7/4, MS3.0/3, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	Socotra	3.34	124	P	Pn	05 59 03.0	-1.1
	SNR=15						
ABTO	Aybut	3.83	32	P	Pn	05 59 08.2	-2.8
ABTO				S	Sn	05 59 53.8	-1.6
RBK	Rabkut	4.47	40	P	Pn	05 59 19.0	-0.7
RBK				S	Sn	06 00 12.4	+1.2
WHFO	Wadi Hawf	4.55	33	P	Pn	05 59 18.1	-2.7
	SNR=11						
DMTO	DMTO	5.12	45	P	Pn	05 59 28.2	-0.3
	SNR=19						
DMTO				S	Sn	06 00 27.8	+0.8
SHAO	Shalim	5.80	47	P	Pn	05 59 37.5	-0.4
MMAI	Mount Meron Ar	23.68	325	LR	LR	06 13 14.9	
	comp=Z,30nm,21.9s,baz=265,slow=37						
GEYT	Alibeck	24.53	13	P	P	06 03 34.4	+3.2
	1.4nm,0.6s,baz=212,slow=5.1,SNR=3.6						
H08N2	Diego Garcia H	28.27	135	T	T	06 32 05.9	
	baz=325,slow=75,SNR=28						
H08N3	Diego Garcia H	28.28	135	T	T	06 32 08.3	
	baz=325,slow=75,SNR=25						
H08N1	Diego Garcia H	28.29	135	T	T	06 32 07.5	
	baz=325,slow=75,SNR=27						
PALK	Pallekele	29.78	100	LR	LR	06 12 48.3	
	comp=Z,33nm,18.2s,baz=28,slow=30						
KBZ	Khabaz	30.37	348	LR	LR	06 17 12.9	
	comp=Z,43nm,20.1s,baz=154,slow=37						
MKAR	Makanchi Array	41.71	32	P	P	06 05 59.9	-0.6
	0.1nm,0.5s,baz=223,slow=6.9,SNR=4.0						
ZALV	Zalesovo Beam	47.73	26	P	P	06 06 50.9	+2.6
	1.1nm,0.5s,baz=225,slow=9.2,SNR=5.0						
ASAR	Alice Springs	89.09	115	P	P	06 11 05.8	-1.6
	0.4nm,0.8s,baz=281,slow=4.2,SNR=6.1						

IDC 16 06:24:49.5±8.3, 36°.54N×71°.59E, h60km±61km, mb1 3.4/6, mb1mx3.0/58, mbtmp3.5/6, ML3.5/5, Error ellipse: s-maj=122.5km s-min=32.5km az=157.0

NNC 16 06:24:57.9±3.4, 37°.38N×71°.09E, h140km±86km, mb3.1, mpv3.6, Error ellipse: s-maj=33.8km s-min=19.2km az=157.0

ISC 16 06:24:58.5±1.8, 37°.4N±0°.1×71°.10E±0°.08, h150km, n11, σ2°.08/18, 3C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.74	356	P	Pn	06 26 22.5	+0.9
	0.8nm,0.2s,baz=13,slow=8.8,SNR=50						
KK31				⇑S	Sn	06 27 26.9	+0.3
	1.5nm,0.3s,baz=182,slow=22,SNR=5.5						
AAK	Ala-Archa	5.86	25	P	Pn	06 26 23.1	-0.4
	2.7nm,0.3s,baz=202,slow=6.5,SNR=32						
AAK				S	Sn	06 27 26.9	-3.0
	1.1nm,0.3s,baz=270,slow=19,SNR=12						
AAK	Ala-Archa	5.86	25	⇓P	Pn	06 26 22.9	-0.6
	4.0nm,0.4s						
AAK				S	Sn	06 27 28.2	-1.8
	8.6nm,0.5s						
CHMS	Chumysh	6.27	25	⇓P	Pn	06 26 27.8	-0.9
	4.2nm,0.5s						
CHMS				⇑S	Sn	06 27 39.3	-0.2
	7.5nm,0.7s						
GEYT	Alibeck	10.31	277	P	Pn	06 27 22.2	-0.3
	1.3nm,0.3s,baz=96,slow=12,SNR=7.8						
GEYT				S	Sn	06 29 13.9	-2.7
	0.7nm,0.3s,baz=100,slow=14,SNR=4.9						
GYA0B	ALIBECK ARRAY	10.31	277	⇑P	Pn	06 27 21.9	-0.7
GYA0B				⇓S	Sn	06 29 14.9	-1.7
MKAR	Makanchi Array	12.54	38	P	Pn	06 27 50.0	-1.7
	0.0nm,0.3s,baz=223,slow=12,SNR=3.9						
KURBB	Kurchatov Arra	14.27	20	P	P	06 28 15.8	-0.6
	baz=207,slow=10,SNR=2.6						
AB31	Akbulak array	14.36	329	⇓P	Pn	06 28 15.0	+0.2
	1.6nm,0.2s,baz=260,slow=35,SNR=11						
AB31				S	Sn	06 30 53.0	-0.9
	1.0nm,0.7s,baz=156,slow=22,SNR=9.8						
AKTO	Aktyubinsk	16.06	328	P	P	06 28 41.8	+5.5
	0.2nm,0.3s,baz=143,slow=13,SNR=4.8						
ZALV	Zalesovo Beam	19.09	25	P	Pn	06 29 14.1	+2.3
	0.4nm,0.3s,baz=216,slow=12,SNR=2.9						

IDC 16 07:01:30.0±1.6, 38°.32N×20°.22E, h0km, mb3.7/3, mb1 3.6/4, mb1mx3.3/40, mbtmp3.6/4, ML2.4/1, Error ellipse: s-maj=39.0km s-min=26.0km az=135.0

ATH 16 07:01:33.2, 38°.23N×20°.38E, h14km, ML3.3/10, Error ellipse: s-maj=1.4km s-min=0.8km az=249.0

THE 16 07:01:33.3, 38°.25N×20°.34E, h12km, ML3.1/6, Error ellipse: s-maj=0.9km s-min=0.4km az=265.0

BEO 16 07:01:35.2±1.0, 38°.25N×20°.09E, h20km±5km, ML3.1/6

ISC 16 07:01:33.1±0.7, 38°.23N±0°.02×20°.38E±0°.03, h15km±3km, n70, σ0°.71/106, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT1	Agia Thekli	0.02	19	P	Pg	07 01 35.6	-0.1
AGT1				S	Sg	07 01 37.4	0.0
KEF3	Kipouria, Keph	0.03	218	P	Pg	07 01 35.7	0.0
KEF3				S	Sg	07 01 37.6	+0.1
CHV1	Chavriata, Kef	0.05	173	P	Pg	07 01 35.8	0.0
CHV1				S	Sg	07 01 37.6	+0.1
KEF4	Livadi, Kephal	0.05	54	P	Pg	07 01 35.7	-0.1
KEF4				S	Sg	07 01 37.3	-0.3
LXRA	Lixouri, Kepha	0.06	121	P	Pg	07 01 35.9	+0.1
LXRA				S	Sg	07 01 37.9	+0.2
LXR1	Lixouri, Cepha	0.06	120	P	Pg	07 01 35.9	0.0
LXR1				S	Sg	07 01 38.0	+0.3
KEF1	Kardakata, Kep	0.09	58	P	Pg	07 01 36.0	-0.2
KEF1				S	Sg	07 01 38.1	-0.1
ARGA	Argostoli. Kep	0.10	123	P	Pg	07 01 36.3	0.0
ARGA				S	Sg	07 01 38.4	+0.1
ARG2	Argostoli	0.10	120	P	Pg	07 01 36.4	+0.1
ARG2				S	Sg	07 01 38.6	+0.2
KEF2	Argostoli. Kep	0.11	126	P	Pg	07 01 36.4	0.0
KEF2				S	Sg	07 01 38.7	+0.2
VLS	Valsamata	0.18	107	P	Pg	07 01 37.2	-0.2
VLS				S	Sg	07 01 40.5	+0.3
	29μm,0.1s						
VLS	Valsamata	0.18	107	P	Pg	07 01 37.2	-0.2
VLS				S	Sg	07 01 40.1	-0.1
VLS				AML	AML	07 01 40.5	
	comp=N,86422μm,0.3s						
VLS				AML	AML	07 01 40.8	
	comp=E,56643μm,0.1s						
FSK	Fiskardo	0.27	33	P	Pg	07 01 38.9	0.0
FSK				S	Sg	07 01 43.1	+0.3
	comp=E,8μm,0.2s						
VLMS	Volimes, Zakyn	0.42	147	P	Pg	07 01 41.6	+0.1
VLMS				S	Sb	07 01 48.1	-0.3
VLMS				AML	AML	07 01 50.4	
	comp=E,33537μm,0.2s						
VLMS				AML	AML	07 01 50.9	
	comp=N,38405μm,0.2s						
EVGI	Lefkada island	0.45	29	P	Pg	07 01 42.0	0.0
EVGI				S	Sg	07 01 48.6	+0.5
EVGI	Lefkada island	0.45	29	P	Pg	07 01 42.0	0.0
EVGI				S	Sg	07 01 48.6	+0.5
MGNA	Meganis	0.54	37	P	Pg	07 01 43.6	-0.1
MGNA				S	Sg	07 01 51.2	+0.3
MGNA				AML	AML	07 01 53.4	
	comp=N,2702μm,0.2s						
MGNA				AML	AML	07 01 53.7	
	comp=E,3414μm,0.2s						
LKD2	Lefkada island	0.60	22	P	Pg	07 01 45.0	+0.1
LKD2				S	Sg	07 01 53.1	+0.2
	comp=E,1μm,0.3s						
LKD2	Lefkada island	0.60	22	P	Pg	07 01 45.0	+0.1
LKD2				S	Sb	07 01 53.7	+0.1
LKD2				AML	AML	07 02 00.7	
	comp=N,2624μm,0.4s						
LKD2				AML	AML	07 02 02.1	
	comp=E,2284μm,0.3s						
ZAK2	Zakynthos	0.60	137	P	Pg	07 01 45.3	+0.4
ZAK2				S	Sn	07 01 55.6	-1.1
TSLK	Tsoukalades, L	0.63	20	P	Pg	07 01 45.3	-0.2
TSLK				S	Sb	07 01 54.6	0.0
	comp=E,998nm,0.6s						
TSLK	Tsoukalades, L	0.63	20	P	Pg	07 01 45.4	-0.1
TSLK				S	Sb	07 01 54.7	+0.1
TSLK				AML	AML	07 02 01.8	
	comp=E,2515μm,0.6s						
TSLK				AML	AML	07 02 08.0	
	comp=N,1981μm,0.5s						
AST1	Astakos	0.64	61	P	Pg	07 01 45.5	-0.1
AST1				S	Sb	07 01 55.5	+0.7
KRI1	kERI	0.67	148	P	Pg	07 01 45.9	-0.2
KRI1				S	Sb	07 01 56.7	+1.2
VTN	Vitineika	0.71	116	P	Pb	07 01 47.3	+0.1
VTN	Vitineika	0.71	116	P	Pg	07 01 47.1	+0.2
VTN				S	Sb	07 01 57.3	+0.5
PDO	Prodromos	0.73	60	P	Pg	07 01 47.1	-0.3
PDO				S	Sn	07 01 59.1	-0.8
PDO	Prodromos	0.73	60	P	Pg	07 01 46.8	-0.6
PDO				S	Sg	07 01 57.1	0.0
PDO				AML	AML	07 02 04.7	
	comp=N,3943μm,0.3s						
PDO				AML	AML	07 02 07.5	
	comp=E,5377μm,0.4s						
RLS	Riolos of Patr	0.88	101	P	Pg	07 01 49.3	-0.7
RLS				S	Sb	07 02 02.1	+0.5
RLS				AML	AML	07 02 08.2	
	comp=N,3461μm,0.6s						
RLS				AML	AML	07 02 12.7	
	comp=E,2072μm,0.6s						
PVO	Paravola	0.98	66	P	Pb	07 01 51.9	0.0
PVO				S	Sn	07 02 07.1	+1.0
	comp=E,2μm,0.4s						
PVO	Paravola	0.98	66	P	Pb	07 01 51.8	0.0
PVO				S	Sg	07 02 05.5	+0.5
PVO				AML	AML	07 02 08.1	
	comp=E,3509μm,0.4s						
PVO				AML	AML	07 02 13.3	
	comp=N,3261μm,0.5s						
DRO	Drossia	1.09	104	P	Pb	07 01 53.5	-0.2
DRO	Drossia	1.09	104	P	Pb	07 01 53.4	-0.2
DRO				S	Sn	07 02 09.0	+0.3
DRO				AML	AML	07 02 17.3	
	comp=E,3754μm,0.7s						
DRO				AML	AML	07 02 18.5	
	comp=N,3415μm,0.6s						
LAKA	Lakka	1.26	89	P	Pn	07 01 56.3	+0.1
LAKA	Lakka	1.26	89	P	Pn	07 01 56.3	+0.1
AMT	Artemida-Makis	1.26	123	P	Pg	07 01 58.0	+0.6
ANX	Ano Chora	1.27	73	P	Pn	07 01 56.7	+0.3
ANX				AML	AML	07 02 21.3	
	comp=N,4357μm,0.5s						
ANX				AML	AML	07 02 21.6	
	comp=E,4064μm,0.8s						
IGT	Igoumenitsa	1.30	359	ePg	Pg	07 01 59.4	+1.3
IGT				eSg	Sg	07 02 16.1	+1.0
EVR	Evrytania	1.32	58	P	Pb	07 01 58.0	+0.4
SERG	Sergoula	1.34	82	P	Pn	07 01 57.5	+0.2
SERG				S	Sn	07 02 15.5	+0.7
	comp=E,958nm,0.5s						
SERG	Sergoula	1.34	82	P	Pn	07 01 57.3	0.0
TRIZ	Trizonia	1.34	84	P	Pn	07 01 57.2	-0.1
TRIZ	Trizonia	1.34	84	P	Pn	07 01 57.4	+0.1
ALIK	Aliki, Aigiali	1.37	88	P	Pn	07 01 57.4	-0.2
KALE	Kalithea	1.40	83	P	Pn	07 01 58.1	0.0
KALE	Kalithea	1.40	83	P	Pn	07 01 58.3	+0.1

KLV	Kalavryta, Ach	1.41	97	P	Pn	07 01 58.8	+0.5
JAN	Janina	1.47	14	P	Pg	07 02 01.6	+0.2
KEK	Kerkira	1.55	343	P	Pg	07 02 02.2	-0.6
MAKR	Makrakomi, Fth	1.58	60	P	Pg	07 02 03.2	-0.3
PYL	PYLOS	1.72	140	P	Pb	07 02 03.8	-0.6
AGG	Agios Georgios	1.72	62	P	Pb	07 02 05.2	+0.8
VLX	Vlachokerasia	1.81	118	P	Pb	07 02 06.1	+0.2
LKR	Lokris	2.10	78	P	Pb	07 02 10.3	-0.7
SG1	Sgolgore (BA)	3.87	314	eP	Pn	07 02 34.1	+2.0
SG1				(Sn)	Sn	07 03 16.6	-0.7
PDG	Podgorica	4.28	349	ePn	Pn	07 02 38.5	+0.8
PDG				eSn	Sn	07 03 26.7	-0.7
IDI	Anoyia	4.67	128	Pn	Pn	07 02 45.1	+2.1
	comp=E,0.1nm,0.3s,baz=337,slow=17,SNR=1.7						
IDI				Sn	Sn	07 03 38.8	+1.8
	comp=E,1.0nm,0.3s,baz=329,slow=22,SNR=6.5						
TREB	Trebinje	4.74	342	ePn	Pn	07 02 43.7	-0.3
VTS	Vitosha	4.90	26	eSn	Sn	07 03 43.4	+0.6
SJES	Sjenica	5.04	357	ePn	Pn	07 02 49.8	+1.6
STON	Ston	5.07	337	ePn	Pn	07 02 48.3	-0.1
IVAS	Ivanjica	5.34	358	eSn	Sn	07 03 52.3	-1.4
BOVS	Bovan	5.49	10	ePn	Pn	07 02 55.3	+0.9
GRUS	Gruza	5.66	2	ePn	Pn	07 02 58.2	+1.6
BBLS	Lazići	5.68	353	eSn	Sn	07 04 00.4	-1.6
DIVS	Divibare	5.87	357	eSn	Sn	07 04 03.3	-3.4
HAPS	Han Pijesak,Bl	5.95	350	ePn	Pn	07 03 00.6	+0.1
TORD	Torodi Ar. Bea	30.00	219	P	P	07 07 40.2	-1.0
	comp=E,0.4nm,0.8s,baz=27,slow=9.7,SNR=1.9						
MKAR	Makanchi Array	45.37	58	P	P	07 09 50.2	-0.6
	comp=E,0.5nm,0.6s,baz=278,slow=6.9,SNR=15						
ZALV	Zalesovo Beam	45.74	48	P	P	07 09 53.0	-0.6
	comp=E,1.2nm,0.6s,baz=262,slow=8.9,SNR=4.4						

AEIC 16 07:04:06.5±1.5,56.°44N±0.°03×156.°44W±0.°07,h56km±8km, ML3.3/53,Error ellipse: s-maj=6.1km s-min=3.6km az=65.0
IDC 16 07:04:07.3±5.0,56.°80N×156.°48W,h54km±38km,mb3.4/8, mb1 3.7/11,mb1mx3.4/41,mbtmp3.7/11,ML3.5/3,MS2.8/2, Ms1 2.8/2,ms1mx2.5/25,Error ellipse: s-maj=35.5km s-min=19.6km az=40.0
ISC 16 07:04:05.8±1.0,56.°48N±0.°05×156.°44W±0.°04, h50km±11km,n71,σ1.°22/79,mb3.6/8,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIR	Chirikof Islan	0.81	145	Pn	Pn	07 04 21.4	+0.4
CHIR					Pn	07 04 21.5	+0.6
CHIR					Sn	07 04 32.4	+0.4
CHIR					Sn	07 04 32.5	+0.5
CHGN	Chignik	1.11	261		Pn	07 04 24.7	-0.2
CHGN				Sn	Sn	07 04 39.5	+0.4
PLBL	Peulik Blue Cr	1.24	351		Pn	07 04 27.6	+0.9
PLBL					Sn	07 04 44.0	+1.8
SII	Sitkinak Islan	1.25	86		Pn	07 04 27.1	+0.1
SII					Pn	07 04 27.9	+0.9
SII				Sn	Sn	07 04 43.8	+1.1
PLK1	Peulik 1	1.32	356		Pn	07 04 28.5	+0.7
PLK5	Peulik 5	1.54	351		Pn	07 04 32.0	+1.3
ANCK	Angle Creek	1.79	16		Pn	07 04 35.2	+0.9
ANCK					Sn	07 04 55.7	-0.3
OHAK	Old Harbor	1.89	66		Pn	07 04 35.4	-0.1
OHAK					Pn	07 04 35.5	0.0
OHAK					Sn	07 04 57.7	-0.4
KAHC	Katmai Hardscr	2.30	19		Pn	07 04 42.1	+0.8
CNBA	Chernabura Isl	2.44	228		Pn	07 04 42.8	-0.3
KDAK	Kodiak Island	2.47	57	P	Pn	07 04 43.4	-0.2
	6.9nm,0.3s,baz=188,slow=3.2,SNR=143						
KDAK				S	Sn	07 05 11.4	-1.1
	24nm,0.3s,baz=163,slow=19,SNR=19						
KDAK	Kodiak Island	2.47	57		Pn	07 04 43.8	+0.3
KDAK					Sn	07 05 13.0	+0.5
SDPT	Sand Point	2.54	245		Pn	07 04 45.2	+0.7
DT1	Dutton Round H	3.57	250		Pn	07 04 58.7	+0.1
RED	Redoubt Volcan	4.39	25		Pn	07 05 11.5	+1.6
RSO	Redoubt South	4.43	24		Pn	07 05 12.2	+1.6
RDWB	Redoubt West	4.44	24		Pn	07 05 12.0	+1.3
DFR	Drift River	4.56	24		Pn	07 05 14.0	+1.7
SVW2	Sparrevohn	4.65	5		Sn	07 06 05.6	-0.4
SVW2	Sparrevohn	4.65	5	Pn	Pn	07 05 14.0	+0.6
SVW2					Pn	07 05 14.2	+0.8
SEW	Seward	5.17	43		Pn	07 05 19.2	-1.3
SLKM	Skilak Lake	5.19	36		Pn	07 05 20.9	+0.2
SPCG	Spurr Capps Gl	5.34	24		Pn	07 05 24.5	+1.5
RC01	Rabbit Creek A	5.79	34	Pn	Pn	07 05 29.6	+0.7
SUA	Susitna One	5.80	28		Pn	07 05 30.2	+1.0
SKT	Skwentna	6.06	23	Pn	Pn	07 05 34.4	+1.7
PWL	Port Wells	6.09	41		Pn	07 05 32.2	-0.9
PMR	Palmer	6.36	33	Pn	Pn	07 05 37.9	+1.1
KNK	Knik Glacier	6.44	37	Pn	Pn	07 05 38.8	+0.8
TT01	Tatalina	6.45	2		Pn	07 05 38.2	+0.2
TTA	Tatalina	6.47	2		Pn	07 05 39.0	+0.6
HIN	Hinchinbrook I	6.53	49	Pn	Pn	07 05 39.2	0.0
GHO	Glory Hole Cre	6.56	33	Pn	Pn	07 05 39.8	+0.2
FID	Port Fidalgo	6.73	46		Pn	07 05 41.7	-0.2
SML	Sawmill	6.77	35	Pn	Pn	07 05 43.6	+1.1
PPLA	Purkeypile	6.78	17		Pn	07 05 43.9	+1.1
EYAK	Cordova Ski Ar	6.92	50	Pn	Pn	07 05 45.2	+0.7
SCM	Sheep Creek Mo	7.12	37		Pn	07 05 48.3	+1.0
RAGM	Ragged Mountai	7.31	53	Pn	Pn	07 05 50.4	+0.6
WAT1	Susitna Watana	7.51	29		Pn	07 05 51.5	-1.1
WAT6	Susitna Watana	7.54	32		Pn	07 05 52.1	-1.0
KTH	Kantishna Hill	7.61	19	Pn	Pn	07 05 54.1	+0.1
WAT2	Susitna Watana	7.61	28		Pn	07 05 53.1	-1.0
TRF	Thorofare Moun	7.64	21		Pn	07 05 54.8	+0.3
RND	Reindeer	7.91	26		Pn	07 05 57.7	-0.4
DHY	Denali Highway	8.03	31	Pn	Pn	07 05 59.3	-0.5
BPAW	Bear Paw Mtn.	8.10	17		Pn	07 06 00.6	-0.1
MCK	McKinley	8.18	24		Pn	07 06 02.5	+0.8
GLB	Gilahina Butte	8.20	47	Pn	Pn	07 06 02.3	+0.3
VRDI	Verde Repeater	8.24	49	Pn	Pn	07 06 02.7	0.0
TGL	Tana Glacier	8.29	53	Pn	Pn	07 06 04.0	+0.7
PAX	Paxson	8.54	36	Pn	Pn	07 06 07.8	+1.2
BALM	Baldy	8.62	52	Pn	Pn	07 06 08.6	+0.6
BARN	Barnard Glacie	8.94	53	Pn	Pn	07 06 12.9	+0.6
MLY	Manley	9.01	16		Pn	07 06 12.9	-0.2
CTGM	Chitina Glacie	9.04	54	Pn	Pn	07 06 14.3	+0.6
ANM	Nome	9.21	335	Pn	Pn	07 06 17.2	+1.3
RIDG	Independent Ri	9.28	34	Pn	Pn	07 06 17.7	+0.8
PS08	TAPS Pump Stn8	9.36	26		Pn	07 06 16.1	-1.7
ILAR	Eielson Array	9.53	25	P	Pn	07 06 17.9	-2.4
	0.9nm,0.3s,baz=216,slow=14,SNR=24						
ILAR				S	Sn	07 07 59.3	-6.5
	0.1nm,0.3s,baz=212,slow=26,SNR=4.2						
INK	Inuvik	15.77	32	P	Pn	07 07 43.0	-1.2
	0.2nm,0.3s,baz=223,slow=8.4,SNR=3.9						
YKA	Yellowknife Ar	21.75	57	P	P	07 08 52.5	-0.2
	0.4nm,0.6s,baz=273,slow=9.8,SNR=10						
YKA				PcP	PcP	07 12 50.9	-0.2
	0.2nm,0.6s,baz=267,slow=2.0,SNR=4.0						
YBH	Yreka Blue Hor	26.23	110	LR	LR	07 17 34.6	
	comp=Z,29nm,18.1s,baz=12,slow=31						
NVAR	Mina Array Bea	30.94	109	P	P	07 10 19.7	+1.7
	0.6nm,0.6s,baz=313,slow=9.8,SNR=3.0						
PDAR	Pinedale Array	32.64	95	P	P	07 10 34.5	+1.6
	0.8nm,0.5s,baz=325,slow=4.8,SNR=11						
TXAR	Lajitas Array	45.69	104	P	P	07 12 23.4	+1.7
	0.4nm,0.7s,baz=310,slow=6.0,SNR=5.4						
MJAR	Matsushiro Arr	47.19	274	LR	LR	07 33 57.6	
	comp=Z,7.6nm,19.3s,baz=245,slow=38						
SONM	Songino Array	55.37	306	P	P	07 13 34.0	-0.5
	0.2nm,0.4s,baz=32,slow=8.5,SNR=2.5						
FINES	FINESS Array B	62.40	359	P	P	07 14 21.4	-1.3
	1.1nm,0.8s,baz=24,slow=11,SNR=2.6						
NOA	NORSAR Array B	62.41	7	P	P	07 14 22.1	-0.8
	0.4nm,0.7s,baz=349,slow=6.8,SNR=2.7						
HFS	Hagfors	63.46	5	P	P	07 14 29.6	-0.3
	6.8nm,1.2s,baz=359,slow=6.2,SNR=4.8						

IDC 16 07:51:56.3±1.0,18.°11N×121.°01E,h0km,mb3.7/7, mb1 3.9/7,mb1mx3.5/39,mbtmp3.7/7,MS2.5/2,Ms1 2.6/2, ms1mx2.4/33,Error ellipse: s-maj=46.2km s-min=19.0km az=59.0
MAN 16 07:51:57.7,18.°49N×120.°75E,h3km,mb4.5,ML3.4,MS3.2
MAN INTENSITY III - LAOAG CITY; BATAC SARRAT PASUQUIN AND PAOAY ILOCOS NORTE.
ISC 16 07:52:00.6±1.5,18.°31N±0.°07×120.°79E±0.°05,h27km±10km, n16,σ2.°04/21,mb3.4/6,2C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.50	219	⇑eP	Pb	07 52 10.5	-0.4
SIPP				eS	Sb	07 52 17.6	-0.2
APYP	Conner	0.62	136	eP	Pb	07 52 12.3	-0.6
APYP				eS	Sb	07 52 21.2	-0.1
SGCP	Mt. Cagua	1.20	93	eP	Pn	07 52 21.4	-0.1
SGCP				eS	Sb	07 52 38.4	+0.7
CAUP	Cauayan	1.68	144	eP	Pb	07 52 30.0	-0.8
CAUP				eS	Sb	07 52 55.5	+4.0
PALP	Palanan	2.00	128	eP	Pb	07 52 34.9	-1.3
PALP				eS	Sb	07 53 03.0	+2.3
SMPP	San Manuel, Pa	2.15	183	eP	Pn	07 52 35.5	+0.8
SMPP				eS	Sn	07 53 02.2	+1.7
BALP	Baler	2.67	163	eP	Pn	07 52 44.4	+2.7
BALP				eS	Sb	07 53 20.0	+0.1
LQP	Lukban	4.24	170	⇑eP	Pb	07 53 11.8	-2.7
JNU	Nakatsue	17.31	30	LR	LR	08 02 45.7	
	comp=Z,16nm,21.4s,baz=160,slow=37						
CMAR	Chiang Mai Arr	20.73	274	P	Pn	07 56 41.1	-0.5
	1.1nm,0.6s,baz=89,slow=8.4,SNR=6.5						
CMAR				LR	LR	08 04 32.2	
	comp=Z,12nm,18.2s,baz=180,slow=36						
WRA	Warramunga Arr	40.27	160	P	P	07 59 31.9	-3.6
	0.4nm,0.7s,baz=343,slow=8.8,SNR=3.1						
MKAR	Makanchi Array	42.46	321	P	P	07 59 55.5	+2.2
	0.5nm,0.7s,baz=118,slow=8.6,SNR=4.8						
ASAR	Alice Springs	43.64	162	P	P	08 00 01.4	-1.6
	0.4nm,0.5s,baz=340,slow=6.8,SNR=9.4						
KURBB	Kurchatov Arra	46.48	324	P	P	08 00 26.9	+1.7
	0.3nm,0.3s,baz=121,slow=8.0,SNR=5.4						
STKA	Stephens Creek	53.74	158	P	P	08 01 18.6	-1.9
	1.5nm,0.4s,baz=312,slow=19,SNR=5.9						
YKA	Yellowknife Ar	88.50	22	P	P	08 04 51.1	+0.7
	0.1nm,0.5s,baz=308,slow=4.6,SNR=5.5						

IDC 16 07:53:19.6±13.0,5.°38S×68.°62E,h0km,mb3.5/3, mb1 3.5/3,mb1mx3.3/37,mbtmp3.5/3,MS3.0/2,Ms1 3.1/2, ms1mx2.7/30,Error ellipse: s-maj=351.6km s-min=28.8km az=50.0,Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N2	Diego Garcia H	2.55	112	Pn	Pn	07 54 01.0	-0.9
H08N2				T	T	07 56 42.5	
	baz=292,slow=74,SNR=425						
H08N3	Diego Garcia H	2.55	112	Pn	Pn	07 54 00.9	-1.1
H08N3				T	T	07 56 42.3	
	baz=292,slow=74,SNR=356						
H08N1	Diego Garcia H	2.57	112	Pn	Pn	07 54 01.1	-1.1
H08N1				T	T	07 56 43.8	
	baz=292,slow=74,SNR=475						
H08S3	Diego Garcia H	4.44	120	Pn	Pn	07 54 29.0	+0.9
	SNR=21						
H08S3				T	T	07 59 08.1	
	baz=286,slow=74,SNR=7.7						
H08S1	Diego Garcia H	4.44	121	Pn	Pn	07 54 29.0	+1.0
H08S1				T	T	07 59 10.5	
	baz=286						
H08S2	Diego Garcia H	4.46	120	Pn	Pn	07 54 29.1	+0.8
H08S2				T	T	07 59 06.3	
	baz=286,slow=74,SNR=4.7						
PALK	Pallekele	17.42	44	LR	LR	08 02 49.4	
	comp=Z,51nm,18.6s,baz=224,slow=33						
CMAR	Chiang Mai Arr	38.15	51	LR	LR	08 13 56.4	
	comp=Z,21nm,18.6s,baz=230,slow=32						
MKAR	Makanchi Array	53.35	12	P	P	08 02 39.9	-0.8
	0.3nm,0.7s,baz=191,slow=7.4,SNR=3.4						
ZALV	Zalesovo Beam	60.66	11	P	P	08 03 31.9	-0.5
	0.4nm,0.4s,baz=217,slow=6.9,SNR=2.7						
SONM	Songino Array	62.53	28	P	P	08 03 46.5	+1.2
	0.5nm,0.8s,baz=236,slow=6.8,SNR=3.2						

UCR 16 07:56:03.8±1.8,8.°82N×82.°97W,h25km±3km
UPA 16 07:56:03.1±1.0,8.°85N×82.°92W,h17km±4km,MW3.7
ISC 16 07:56:03.1±1.1,8.°82N±0.°04×82.°93W±0.°03,h21km±2km, n28,σ0.°85/40,7C-2D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDSV	San Vito	0.04	273	eP	Pb	07 56 08.0	+1.0
EDSV				eS	Sb	07 56 12.1	+2.6
BRU2	Volcan	0.24	96	⇑iP	Pb	07 56 09.4	+0.1
BRU2				eS	Sb	07 56 14.2	+0.6
BRU2	Volcan	0.24	96	eP	Pb	07 56 09.4	+0.1
BCO2	Palmira	0.41	104	⇑iP	Pb	07 56 12.0	+0.3
BCO2				eS	Sb	07 56 18.3	+0.8
PTJ1	Puerto Jimnez	0.46	233	⇓iP	Pb	07 56 12.7	+0.2
PTJ1				eS	Sb	07 56 20.2	+1.3
PTJ1	Puerto Jimnez	0.46	233	eP	Pb	07 56 12.7	+0.2
EDBA	Buenos Aires	0.48	315	eP	Pb	07 56 13.6	+0.6
EDBA				eS	Sn	07 56 21.4	-1.3
BAGA3	Bagala, Chiriq	0.53	131	⇑iP	Pb	07 56 14.2	+0.4
EDPN	Palmar Norte	0.54	285	eP	Pb	07 56 13.6	-0.4
EDPN				eS	Sb	07 56 21.7	+0.4
PIRO	Carate, Puerto	0.57	224	⇑iP	Pb	07 56 14.2	-0.3
PIRO				eS	Sn	07 56 24.3	-0.7
LOCO3	Loma Colorada,	0.65	129	eP	Pb	07 56 15.7	-0.1
LOCO3				eS	Sb	07 56 24.5	0.0
LOMA3	Las Lomas, Chi	0.66	126	⇑iP	Pb	07 56 16.3	+0.3
PEDE3	Pedregal, Chir	0.66	131	⇑iP	Pb	07 56 16.0	-0.1
PEDE3				eS	Sb	07 56 25.8	+0.9
CHIR3	Chiriqui UPA,	0.73	125	⇑iP	Pb	07 56 17.1	0.0
CHIR3				eS	Sb	07 56 27.0	+0.4
EDLM	Las Mercedes	0.80	305	eP	Pb	07 56 17.7	-0.6
RGM0	Gandoca	0.83	23	eP	Pn	07 56 19.8	+0.1
EDDO	Dominical	1.02	295	eP	Pb	07 56 21.4	-0.7
LCR2	La Lucha 2	1.40	311	eP	Pn	07 56 26.9	-0.9
CVTR	Volcan Turrial	1.45	326	eP	Pn	07 56 28.6	+0.1
SJS	Escuela Geolog	1.57	315	eP	Pn	07 56 30.2	+0.2
HDC	Heredia	1.66	315	eP	Pn	07 56 31.4	+0.2
GMAL	Guarumal, Vera	1.98	122	⇓iP	Pn	07 56 35.0	-0.5
GMAL				eS	Sn	07 56 59.1	-0.6
GMAL	Guarumal, Vera	1.98	122	eP	Pn	07 56 35.1	-0.4
SRA1	San Ramn	1.98	310	eP	Pn	07 56 35.8	+0.2
ARE1	Arenal 1	2.40	313	eP	Pn	07 56 42.3	+1.0
JTS	Las Juntas de	2.47	306	eP	Pn	07 56 43.6	+1.3
AZU	Azuero	2.82	111	eP	Pn	07 56 47.6	+0.6
AZU				eS	Sn	07 57 18.5	-1.9
BUEV	Buena Vista	3.13	309	eP	Pn	07 56 50.1	-1.4

IDC 16 08:25:51.2±0.6,60.°30S×47.°01W,h0km,mb4.4/13, mb1 4.4/14,mb1mx4.3/22,mbtmp4.4/14,ML4.4/1,MS3.5/11, Ms1 3.5/11,ms1mx3.4/20,Error ellipse: s-maj=21.6km s-min=14.3km az=62.0
NEIC 16 08:25:53.1±2.2,60.°33S±0.°08×46.°8W±0.°1,h10km±1km, mb4.7/24,Error ellipse: s-maj=13.0km s-min=11.4km az=172.0
ISC 16 08:25:53.0±0.3,60.°35S±0.°06×46.°97W±0.°06,h10km,n86, σ1.°73/80,mb4.6/22,MS3.6/10,1C,Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	8.31	48		Pn	08 27 52.2	-1.1
HOPE				Sn	Sn	08 29 24.9	-2.2
PMSA	Palmer Station	9.03	233	Pn	Pn	08 28 02.5	-0.7
	4.3nm,0.3s,baz=50,slow=9.2,SNR=8.0						
PMSA				Sn	Sn	08 29 38.3	-6.5
	2.0nm,0.3s,baz=18,slow=20,SNR=3.4						
PMSA	Palmer Station	9.03	233	Pn	Pn	08 28 04.0	+0.8
EFI	East Falkland	10.66	320	Pn	Pn	08 28 26.5	+0.9
USHA	Ushuaia	12.73	286	Pn	Pn	08 28 57.4	+3.6
	0.4nm,0.3s,baz=288,slow=19,SNR=5.7						
USHA				LR	LR	08 32 36.5	
	comp=Z,239nm,21.5s,baz=140,slow=32						
GO10	Punta Arenas	14.97	288	Pn	Pn	08 29 25.6	+1.2
GO09	Cerro Castillo	16.80	291		P	08 29 49.5	-0.8
VNA3	Neumayer Olymp	18.39	142	P	P	08 30 09.4	+1.7
VNA1	Neumayer--Stat	18.68	139	P	Pn	08 30 14.0	+2.8
VNA2	Neumayer--Wint	19.03	140	P	Pn	08 30 17.0	+1.7
	baz=291,slow=15						
SNAA	Sanae	20.62	141	P	P	08 30 34.3	0.0
SNAA	Sanae	20.62	141	P	P	08 30 33.0	+0.9
	37nm,1.1s,baz=289,slow=8.7,SNR=38						
SNAA				S	S	08 34 16.3	-5.8
	0.8nm,0.9s,baz=308,slow=16,SNR=2.1						
SNAA	Sanae	20.62	141	P	Pn	08 30 34.5	+0.2
SNAA				IAmb	IAmb	08 30 38.9	
	comp=Z,61nm,1.2s						
PLCA	Paso Flores	24.45	313	P	P	08 31 10.9	-0.9
	comp=Z,4.2nm,0.9s,baz=181,slow=10,SNR=11						
PLCA				LR	LR	08 40 52.0	
	comp=Z,92nm,18.7s,baz=182,slow=37						
PLCA	Paso Flores	24.45	313	P	P	08 31 10.9	-0.9
PLCA				IAmb	IAmb	08 31 20.3	
	comp=Z,14nm,0.8s						
QSPA	South Pole Qui	29.89	180	P	P	08 32 02.6	+2.1
	comp=Z,18nm,0.8s,baz=178,slow=2.5,SNR=70						
QSPA	South Pole Qui	29.89	180	P	P	08 32 02.8	+2.3
GO05	Huala	30.05	316	P	P	08 32 02.9	+0.9
GO05				IAmb	IAmb	08 32 21.7	
	comp=Z,9.3nm,1.1s						
PEL	Peldehue	31.34	320	P	P	08 32 13.6	+0.2
CFA	Coronel Fontan	32.02	324	P	P	08 32 17.9	-1.5
	comp=Z,1.2nm,0.5s,baz=172,slow=8.7,SNR=5.3						
GO04	Tololo Observa	34.13	321	P	P	08 32 38.3	+0.3
GO04				IAmb	IAmb	08 32 54.8	
	comp=Z,10.0nm,0.8s						
CPUP	Villa Florida	34.74	344	P	P	08 32 42.8	-0.2
	comp=Z,2.2nm,0.8s,baz=149,slow=5.6,SNR=5.5						
CPUP				LR	LR	08 45 49.0	
	comp=Z,58nm,21.9s,baz=172,slow=34						
CPUP	Villa Florida	34.74	344	P	P	08 32 43.9	+0.9
GO02	Mina Guanaco	38.48	326	P	P	08 33 15.6	+0.3
SBA	Scott Base	40.51	190	P	P	08 33 34.0	+2.7
LVC	Limon Verde	40.72	328	P	P	08 33 34.3	+0.2
LVC				IAmb	IAmb	08 33 43.6	
	comp=Z,23nm,1.1s						
VNDA	Vanda	41.23	189	LR	LR	08 51 53.1	
	comp=Z,66nm,18.3s,baz=191,slow=38						
MAW	Mawson	42.55	148	P	P	08 33 49.0	+0.8
	comp=Z,4.4nm,0.7s,baz=249,slow=10,SNR=4.5						
MAW				LR	LR	08 51 17.8	
	comp=Z,197nm,18.0s,baz=244,slow=36						
MAW	Mawson	42.55	148	P	P	08 33 51.0	+2.9
BDFB	Brasilia	44.65	359	P	P	08 34 05.8	+0.1
	comp=Z,2.0nm,0.5s,baz=179,slow=3.0,SNR=6.3						
BDFB				LR	LR	08 52 59.6	
	comp=Z,20nm,18.1s,baz=117,slow=36						
BDFB	Brasilia	44.65	359	P	P	08 34 06.5	+0.8
BDFB				IAmb	IAmb	08 34 14.5	
	comp=Z,9.5nm,1.0s						
SIV	San Ignacio	45.46	341	P	P	08 34 13.1	+1.0
	comp=Z,2.0nm,0.6s,baz=152,slow=11,SNR=4.9						
SUR	Sutherland	51.58	89	P	P	08 34 60.0	+0.7
	comp=Z,9.6nm,0.9s,baz=201,slow=8.5,SNR=14						
SUR	Sutherland	51.58	89	P	P	08 35 00.7	+1.5
SUR				IAmb	IAmb	08 35 04.4	
	comp=Z,9.9nm,0.8s						
SAML	Samuel	52.71	340	P	P	08 35 08.4	+0.8
SAML				IAmb	IAmb	08 35 16.4	
	comp=Z,5.7nm,0.8s						
NNA	Nana	53.06	322	LR	LR	08 56 29.6	
	comp=Z,52nm,18.3s,baz=148,slow=35						
RPN	Rapa Nui	53.20	280	LR	LR	08 53 00.1	
	comp=Z,50nm,19.2s,baz=40,slow=31						
H10S2	ASCENSION HYDR	56.68	39	T	T	09 37 24.8	
	baz=199,slow=74,SNR=18						
H10S3	ASCENSION HYDR	56.68	39	T	T	09 37 25.0	
	baz=21,slow=74,SNR=14						
BOSA	Boshof	56.85	90	P	P	08 35 37.4	-0.3
	comp=Z,5.2nm,0.8s,baz=229,slow=7.1,SNR=7.7						
BOSA	Boshof	56.85	90	P	P	08 35 37.7	0.0
H10N3	ASCENSION HYDR	57.78	39	T	T	09 38 38.1	
	baz=198,slow=76,SNR=14						
H10N1	ASCENSION HYDR	57.78	39	T	T	09 38 37.4	
	baz=198,slow=76,SNR=13						
H10N2	ASCENSION HYDR	57.79	39	T	T	09 38 35.1	
	baz=198,slow=76,SNR=19						
LBTB	Lobatse	60.00	88	P	P	08 35 59.9	+0.2
LBTB				IAmb	IAmb	08 36 00.4	
	comp=Z,11nm,1.1s						
TSUM	Tsumeb	60.95	77	P	P	08 36 06.4	+0.2
OTAV	Otavalo	65.13	325	P	P	08 36 35.3	+0.9
OTAV				IAmb	IAmb	08 36 51.1	
	comp=Z,4.9nm,0.9s						
MDP	Montagnes des	65.40	354	LR	LR	09 05 50.1	
	comp=Z,24nm,18.6s,baz=238,slow=37						
ROSC	El Rosal	68.44	331	LR	LR	09 07 32.5	
	comp=Z,49nm,20.3s,baz=269,slow=37						
LSZ	Lusaka	69.51	85	P	P	08 37 02.1	+0.3
LSZ				IAmb	IAmb	08 37 03.3	
	comp=Z,7.1nm,1.1s						
LIC	Lamto	74.08	44	ePKIKP	P	08 37 28.9	-0.1
	comp=Z,6.3nm,0.5s						
KIC	Kosan Boka	74.31	44	ePKIKP	P	08 37 29.4	-0.9
	comp=Z,21nm,1.2s						
TIC	Toumodi	74.48	44	ePKIKP	P	08 37 29.1	-2.2
DBIC	Dimbokro	74.56	44	P	P	08 37 31.5	-0.2
	comp=Z,3.6nm,0.8s,baz=181,slow=2.2,SNR=3.1						
TOA0	Torodi Ar. Sit	82.89	47	P	P	08 38 18.4	+0.9
TOA0				IAmb	IAmb	08 38 27.3	
	comp=Z,9.3nm,1.3s						
TORD	Torodi Ar. Bea	82.89	47	P	P	08 38 18.1	+0.5
	comp=Z,1.8nm,0.7s,baz=210,slow=4.9,SNR=7.7						
ARMA	Armidale	88.28	196	P	P	08 38 44.9	+0.4
FORT	Forrest	89.12	176	P	P	08 38 48.6	+0.3
ASAR	Alice Springs	96.29	181	P	P	08 39 20.4	-1.1
	comp=Z,1.1nm,0.9s,baz=170,slow=3.9,SNR=6.8						
ASAR				PP	PP	08 43 11.2	-2.7
	comp=Z,0.5nm,1.0s,baz=172,slow=7.3,SNR=4.9						
ASAR				LR	LR	09 21 32.1	
	comp=Z,31nm,19.9s,baz=190,slow=35						
WRA	Warramunga Arr	99.99	181	P	Pdif	08 39 36.6	-1.6
	comp=Z,0.8nm,0.9s,baz=170,slow=4.1,SNR=3.0						
CRVS	Cervenica-Dubn	122.09	46	ePKP	PKiKP	08 44 47.6	+0.9
AKASG	Malin Array Be	126.45	50	PKP	PKPdf	08 44 53.2	-1.6
	comp=Z,0.1nm,0.2s,baz=257,slow=2.1,SNR=3.3						
CMAR	Chiang Mai Arr	131.60	135	PKP	PKPdf	08 45 05.0	-0.6
	comp=Z,0.8nm,0.3s,baz=224,slow=3.8,SNR=2.9						
YKA	Yellowknife Ar	132.89	324	PKP	PKPdf	08 45 06.1	-0.5
	comp=Z,0.3nm,0.7s,baz=135,slow=1.7,SNR=5.4						
FINES	FINESS Array B	133.73	39	PKP	PKPdf	08 45 07.0	-1.2
	comp=Z,2.7nm,0.9s,baz=182,slow=5.3,SNR=4.0						
KSH	Kashi	139.38	94	PKP	PKiKP	08 45 24.3	+2.3
KSH				PP	PP	08 48 22.4	+8.0
KSH				PKS		08 48 56.3	
KSH				SKS	SKSdf	08 52 26.6	-3.2
KSH				SKKS	SKKSac	08 55 12.0	+4.3
ARCES	ARCESS Array B	139.42	31	PKhKP	PKPpre	08 45 07	
	comp=Z,2.1nm,0.8s,baz=242,slow=1.3,SNR=6.2						
CD2	Chengdu	144.72	133	PKP	PKPdf	08 45 29.5	+0.1
IL31		145.14	312		PKPbc	08 45 28.5	0.0
ILAR	Eielson Array	145.14	312	PKPbc	PKPbc	08 45 28.1	-0.4
	comp=Z,1.7nm,0.5s,baz=143,slow=1.5,SNR=44						
RND	Reindeer	145.17	310		PKPdf	08 45 29.0	-0.1
CCB	Clear Creek Bu	145.42	312		PKPdf	08 45 29.1	-0.3
WRH	Wood River Hil	145.43	311		PKPdf	08 45 29.4	-0.1
BWN	Browne	145.80	310		PKPab	08 45 31.2	+0.1
BRVK	Borovoye	146.02	74		PKPbc	08 45 31.6	-0.1
MLY	Manley	146.70	311		PKPbc	08 45 33.2	-0.1
WHN	Wuhan	147.69	149	⇑PKPbc	PKPbc	08 45 36.3	-0.8
MAKZ	Makanchi	147.70	91		PKPbc	08 45 35.8	-0.9
MKAR	Makanchi Array	147.85	92	PKPbc	PKPbc	08 45 36.0	-1.1
	comp=Z,2.5nm,0.6s,baz=232,slow=2.5,SNR=42						
KURK	Kurchatov	148.62	83		PKPbc	08 45 37.6	-1.3
XAN	Xi'an	149.35	138	PKPbc	PKPbc	08 45 40.0	-1.4
XAN				pPKP	PKPab	08 45 46.8	+0.7
LZH	Lanzhou	149.37	129	ePKPbc	PKPdf	08 45 34.8	-2.3
LZH				pPKP	pPKPbc	08 45 44.9	+0.1
LZH				sPKP		08 45 48.3	
GTA	Gaotai	150.56	120	PKPbc	PKPbc	08 45 43.8	-0.5
ZALV	Zalesovo Beam	153.60	82	PKPbc	PKPbc	08 45 49.1	-1.3
	comp=Z,0.5nm,0.6s,baz=300,slow=2.8,SNR=3.2						
ZALV				PKPab	PKPab	08 46 01.0	-2.2
	comp=Z,1.3nm,0.7s,baz=224,slow=4.0,SNR=5.3						
KSRS	Korea Array	156.86	170	PKPab	PKPab	08 46 17.1	-0.4
	comp=Z,1.5nm,0.9s,baz=196,slow=3.9,SNR=4.3						
SONM	Songino Array	160.15	117	PKPab	PKPab	08 46 30.8	-1.0
	comp=Z,0.5nm,0.5s,baz=224,slow=4.0,SNR=5.1						

IDC 16 08:31:08.2±1.0,16.°82S×69.°38W,h198km±7km,mb3.1/7, mb1 3.3/9,mb1mx3.2/30,mbtmp3.6/9,Error ellipse: s-maj=20.5km s-min=12.9km az=102.0
ISC 16 08:31:07.9±0.8,16.°81S±0.°08×69.°4W±0.°1,h200km,n11, σ1.°63/13,mb3.2/6,Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	1.32	67	P	Pn	08 31 42.0	+1.1
	130nm,0.3s,baz=296,slow=6.5,SNR=3551						
LPAZ				S	Sn	08 32 06.0	-0.2
	12nm,0.3s,baz=138,slow=19,SNR=10.0						
LVC	Limon Verde	5.79	176	P	Pn	08 32 34.5	+1.8
	2.0nm,0.3s,baz=351,slow=4.5,SNR=26						

LVC S Sn 08 33 37.5 -2.3
2.6nm,0.3s,baz=300,slow=20,SNR=16
SIV San Ignacio 8.03 85 P Pn 08 33 00.7 -1.0
0.5nm,0.3s,baz=279,slow=9.9,SNR=13
BDFB Brasilia 20.57 90 P P 08 35 32.8 +1.1
1.8nm,0.6s,baz=240,slow=11,SNR=3.1
PLCA Paso Flores 23.86 182 P P 08 36 04.8 +1.8
1.1nm,0.7s,baz=33,slow=12,SNR=3.2
TXAR Lajitas Array 56.56 324 P P 08 40 29.3 -0.7
0.1nm,0.7s,baz=174,slow=9.1,SNR=2.6
DBIC Dimbokro 67.93 75 P P 08 41 46.2 +0.5
2.0nm,0.6s,baz=248,slow=5.4,SNR=3.3
PDAR Pinedale Array 69.84 330 P P 08 41 57.7 +0.5
0.1nm,0.4s,baz=113,slow=6.9,SNR=2.5
TORD Torodi Ar. Bea 76.27 72 P P 08 42 34.9 -0.3
1.4nm,0.5s,baz=264,slow=4.9,SNR=11
YKA Yellowknife Ar 86.63 341 P P 08 43 28.6 +0.2
0.1nm,0.4s,baz=134,slow=4.9,SNR=5.4
SONM Songino Array 148.87 5 PKPbc PKPab 08 50 33.4 -3.2
0.2nm,0.4s,baz=349,slow=1.2,SNR=3.8

ATH 16 08:32:02.2, 38.22N×20.42E, h13km±1km, ML2.5/4, Error ellipse: s-maj=2.0km s-min=0.9km az=250.0
THE 16 08:32:02.2, 38.22N×20.43E, h14km, ML2.2/4, Error ellipse: s-maj=1.4km s-min=0.5km az=259.0
ISC 16 08:32:02.0±1.3, 38.22N±0.03×20.43E±0.05, h14km±5km, n23, σ0.29/45, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

LXR1 Lixouri, Cepha 0.02 155 P Pg 08 32 04.6 +0.1
LXR1 S Sg 08 32 06.4 +0.3
LXRA Lixouri, Kepha 0.02 158 P Pg 08 32 04.5 0.0
LXRA S Sg 08 32 06.1 0.0
KEF4 Livadi, Kephal 0.04 356 P Pg 08 32 04.7 +0.1
KEF4 S Sg 08 32 06.3 -0.1
AGT1 Agia Thekli 0.05 313 P Pg 08 32 04.7 +0.1
AGT1 S Sg 08 32 06.5 +0.1
CHV1 Chavriata, Kef 0.05 225 P Pg 08 32 04.7 +0.1
CHV1 S Sg 08 32 06.5 +0.1
ARGA Argostoli. Kep 0.06 136 P Pg 08 32 04.7 0.0
ARGA S Sg 08 32 06.1 -0.4
ARG2 Argostoli 0.06 130 P Pg 08 32 04.8 +0.1
ARG2 S Sg 08 32 06.6 0.0
KEF3 Kipouria, Keph 0.06 256 P Pg 08 32 04.8 0.0
KEF3 S Sg 08 32 06.5 -0.2
KEF1 Kardakata, Kep 0.07 30 P Pg 08 32 04.9 +0.1
KEF1 S Sg 08 32 06.1 -0.6
KEF2 Argostoli. Kep 0.07 139 P Pg 08 32 04.9 0.0
KEF2 S Sg 08 32 06.4 -0.3
VLS Valsamata 0.13 108 P Pg 08 32 05.6 0.0
VLS S Sg 08 32 08.2 +0.2
6μm,0.0s
VLS Valsamata 0.13 108 P Pg 08 32 05.6 0.0
VLS S Sg 08 32 07.7 -0.3
VLS AML AML 08 32 08.3
comp=N,9442μm,0.1s
VLS AML AML 08 32 08.4
comp=E,9831μm,0.1s
FSK Fiskardo 0.26 24 P Pg 08 32 07.8 +0.2
FSK S Sg 08 32 12.2 +0.8
comp=E,2μm,0.2s
FSK Fiskardo 0.26 24 P Pg 08 32 07.8 +0.2
FSK S Sg 08 32 11.1 -0.3
FSK AML AML 08 32 12.6
comp=N,1765μm,0.2s
FSK AML AML 08 32 12.6
comp=E,4527μm,0.3s
VLMS Volimes, Zakyn 0.39 151 P Pg 08 32 09.8 0.0
VLMS S Sg 08 32 15.8 +0.7
VLMS AML AML 08 32 16.8
comp=E,3393μm,0.3s
VLMS AML AML 08 32 16.9
comp=N,3297μm,0.3s
EVGI Lefkada island 0.44 24 P Pg 08 32 10.8 0.0
EVGI S Sb 08 32 17.6 -0.4
EVGI Lefkada island 0.44 24 P Pg 08 32 10.8 0.0
EVGI S Sg 08 32 17.2 +0.5
MGNA Meganis 0.52 33 P Pg 08 32 12.2 -0.1
MGNA S Sg 08 32 19.6 +0.3
LKD2 Lefkada island 0.60 18 P Pg 08 32 13.8 +0.1
LKD2 S Sg 08 32 21.5 -0.2
comp=N,128nm,0.3s
LKD2 Lefkada island 0.60 18 P Pg 08 32 13.5 -0.3
LKD2 S Sg 08 32 21.4 -0.2
LKD2 AML AML 08 32 29.0
comp=N,238μm,0.3s
LKD2 AML AML 08 32 30.0
comp=E,259μm,0.3s
TSLK Tsoukalades, L 0.63 16 P Pg 08 32 14.3 0.0
TSLK S Sg 08 32 22.7 0.0
comp=E,102nm,0.5s
TSLK Tsoukalades, L 0.63 16 P Pg 08 32 14.0 -0.3
KRI1 kERI 0.64 151 P Pg 08 32 13.9 -0.5
KRI1 S Sb 08 32 24.0 +0.4

IDC 16 08:35:03.8±2.1, 0.93N×127.05E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/27, mbtmp3.5/3, Error ellipse: s-maj=167.4km s-min=25.6km az=66.0
DJA 16 08:35:03.6±0.5, 1.°N±3°×12.°7E±°, h10km, M3.3/4, MLv3.3/4
ISC 16 08:35:05.0±1.4, 1.14N±0.09×127.4E±0.2, h10km, n6, σ0.99/7, mb3.5/3, Halmahera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

TNTI Ternate 0.37 178 P Pg 08 35 13.1 +0.7
TNTI S Sb 08 35 20.2 +0.7
LBMI Labuha 1.77 175 P Pb 08 35 36.8 -0.9
SWI Sorong 4.38 117 P Pn 08 36 12.1 +0.4
WRA Warramunga Arr 22.05 162 P P 08 39 59.2 -0.9
1.3nm,0.7s,baz=340,slow=11,SNR=5.9
ASAR Alice Springs 25.47 166 P P 08 40 32.5 -1.0
0.7nm,0.7s,baz=354,slow=16,SNR=9.3
MKAR Makanchi Array 60.03 326 P P 08 45 12.5 +0.4
0.3nm,0.5s,baz=116,slow=8.0,SNR=6.7

IDC 16 08:48:03.8±2.1, 3.57S×129.80E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.4/26, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=171.2km s-min=30.8km az=70.0
DJA 16 08:48:06.3±0.5, 4.°S±4°×12.°9E±°, h10km, M3.4/5, MLv3.4/5
ISC 16 08:48:06.0±0.9, 3.95S±0.07×129.03E±0.07, h10km, n7, σ0.70/9, Seram

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

MSAI Masohi 0.60 350 P Pb 08 48 18.5 -0.2
MSAI S Sb 08 48 26.6 -0.7
AAI Ambon 0.87 287 P Pb 08 48 23.4 +0.1
AAI S Sb 08 48 35.2 +0.7
BNDI Bandanaira 1.04 123 P Pb 08 48 25.6 -0.5
FAKI Fak Fak 3.37 73 P Pn 08 49 00.0 +1.2
WRA Warramunga Arr 16.72 162 Pn Pn 08 52 00.3 -0.3
0.1nm,0.3s,baz=348,slow=12,SNR=4.9
ASAR Alice Springs 20.16 167 P Pn 08 52 42.9 +0.2
0.8nm,0.5s,baz=347,slow=11,SNR=11
ASAR PcP PcP 08 56 55.0 -0.7
0.2nm,0.5s,baz=358,slow=2.4,SNR=4.2
MKAR Makanchi Array 65.16 327 P P 08 58 47.6 +0.2
0.2nm,0.5s,baz=133,slow=6.9,SNR=2.8

IDC 16 08:48:15.6±5.1, 5.71S×129.05E, h288km±58km, mb2.8/1, mb1 2.9/3, mb1mx2.7/24, mbtmp3.5/3, Error ellipse: s-maj=135.5km s-min=17.7km az=71.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

WRA Warramunga Arr 15.05 160 P P 08 51 32.5 -1.5
0.2nm,0.3s,baz=337,slow=12,SNR=9.5
WRA S S 08 54 15.0 -3.8
0.2nm,0.3s,baz=346,slow=34,SNR=2.2
ASAR Alice Springs 18.46 166 P P 08 52 11.7 +0.7
0.2nm,0.3s,baz=348,slow=12,SNR=28
ASAR S S 08 55 27.1 +0.8
0.1nm,0.3s,baz=351,slow=24,SNR=4.1
MKAR Makanchi Array 66.64 327 P P 08 58 35.6 0.0
0.2nm,0.3s,baz=131,slow=6.5,SNR=2.6

IDC 16 08:49:25.1±1.0, 19.41S×70.99W, h0km, mb3.6/5, mb1 3.9/9, mb1mx3.7/32, mbtmp3.7/9, ML3.6/4, MS3.1/2, Ms1 3.1/2, ms1mx2.7/19, Error ellipse: s-maj=30.5km s-min=15.7km az=57.0
NEIC 16 08:49:27.7±1.5, 19.51S±0.05×71.08W±0.10, h21km±8km, Error ellipse: s-maj=14.1km s-min=6.5km az=109.0
GUC 16 08:49:28.7±0.6, 19.42S×71.05W, h29km±2km, ML3.8
ISC 16 08:49:26.2±1.9, 19.48S±0.04×71.08W±0.06, h10km±11km, n39, σ1.49/52, mb3.7/5, 3C-2D, Off coast of northern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

PSGC Pisagua 0.91 98⇓iP Pg 08 49 43.5 -0.2
PSGC iS Sg 08 49 55.5 -0.1
AP01 Chacalluta 1.30 33 eP Pn 08 49 49.6 -0.8
AP01 eS Sn 08 50 06.7 -1.3
AP01 IAML 08 50 12.8
comp=E,6μm,0.6s
PB11 IPOC Station P 1.37 102 eP Pn 08 49 51.5 -0.1
PB11 eS Sb 08 50 09.6 -0.1
PB11 IAML 08 50 13.6
comp=N,4μm,0.3s
PB11 IPOC Station P 1.37 102 Pn 08 49 51.6 +0.1
TA01 Diego Aracena 1.37 142 eP Pn 08 49 51.8 +0.3
TA01 eS Sb 08 50 09.6 -0.1
TA01 IAML 08 50 17.2
comp=E,1μm,0.5s
MNMC Minye Minye 1.44 76 eP Pn 08 49 52.2 -0.5
MNMC eS Sb 08 50 10.6 -1.3
MNMC Minye Minye 1.44 76 Pn 08 49 52.6 -0.1
MNMC Sn Sg 08 50 11.6 -1.1
PATCX Punta Patache 1.59 147⇓iP Pn 08 49 55.1 +0.5
PATCX iS Sn 08 50 15.7 +0.4
PATCX IAML 08 50 32.3
comp=E,976nm,0.6s
GO01 Chusmiza 1.79 96⇑iP Pn 08 49 58.4 +0.7
GO01 iS Sb 08 50 21.6 -0.4
GO01 IAML 08 50 24.5
comp=N,2μm,0.2s
GO01 Chusmiza 1.79 96 Pn 08 49 58.3 +0.7
PB16 IPOC Station P 1.87 53⇑iP Pb 08 49 59.2 -1.6
PB16 eS Sb 08 50 23.2 -1.4
PB08 IPOC Station P 1.93 110⇑iP Pn 08 50 00.4 +0.9
PB08 eS Sb 08 50 25.2 -0.8
PB08 IAML 08 50 35.7
comp=N,601nm,0.5s
PB02 IPOC Station P 2.14 149 eP Pn 08 50 02.9 +0.7
PB02 iS Sn 08 50 28.4 -0.6
PB02 IAML 08 50 41.9
comp=E,2μm,0.8s
PB01 IPOC Station P 2.16 136 eP Pn 08 50 03.2 +0.9
PB01 eS Sn 08 50 29.7 +0.4
PB01 IAML 08 50 41.1
comp=E,627nm,0.7s
PB01 IPOC Station P 2.16 136 Pn 08 50 03.3 +0.9
PB07 IPOC Station P 2.50 154 eP Pn 08 50 07.6 +0.5
PB04 IPOC Station P 2.97 163 Pn 08 50 13.4 -0.2
LVC Limon Verde 3.72 147 Pn Pn 08 50 26.1 +2.1
comp=E,4.0nm,0.3s,baz=333,slow=11,SNR=19
LVC Sn Sn 08 51 08.7 +0.6
comp=E,7.8nm,0.3s,baz=38,slow=12,SNR=5.8
LVC Lg Lg 08 51 21.2
comp=E,11nm,0.3s,baz=72,slow=21,SNR=4.7
LVC Limon Verde 3.72 147 Pn 08 50 26.4 +2.4
PB10 IPOC Station P 4.05 173 Pn Pn 08 50 27.6 -0.6
PB10 Sn Sn 08 51 13.3 -2.4
LPAZ La Paz 4.24 42 Pn Pn 08 50 34.3 +2.9
comp=E,1.5nm,0.3s,baz=242,slow=12,SNR=28
LPAZ Lg Lg 08 51 42.0
baz=294,slow=20,SNR=2.2
LPAZ La Paz 4.24 42 Pn 08 50 35.1 +3.6
GO02 Mina Guanaco 5.82 167 Pn 08 50 53.2 +0.2
NNA Nana 9.29 322 Pn Pn 08 51 42.5 +2.3
comp=E,0.5nm,0.3s,baz=135,slow=17,SNR=1.8
NNA Sn Sn 08 53 20.0 -5.0
comp=E,1.2nm,0.3s,baz=102,slow=14,SNR=3.1
SIV San Ignacio 10.15 72 Pn Pn 08 51 52.2 +0.1
comp=E,0.6nm,0.3s,baz=273,slow=8.5,SNR=16
CPUP Villa Florida 14.38 121 Pn Pn 08 52 51.7 +1.7
comp=E,0.1nm,0.3s,baz=310,slow=11,SNR=8.6
CPUP LR LR 08 58 49.4
comp=E,69nm,19.7s,baz=304,slow=39
PLCA Paso Flores 21.19 179 P P 08 54 14.0 +2.1
comp=E,1.6nm,0.8s,baz=26,slow=9.8,SNR=5.1
PLCA Paso Flores 21.19 179 P P 08 54 10.0 -1.9
PLCA IAmb IAmb 08 54 23.4
comp=Z,12nm,1.5s
BDFB Brasilia 22.31 84 P P 08 54 25.2 +1.0
comp=Z,2.7nm,0.9s,baz=216,slow=14,SNR=3.2
BDFB LR LR 09 04 43.5
comp=Z,58nm,20.6s,baz=349,slow=41
RUSC La Rusia 25.29 355 P P 08 54 54.6 +1.1
TXAR Lajitas Array 57.82 326 P P 08 59 18.5 +0.3
comp=Z,0.2nm,0.8s,baz=148,slow=7.0,SNR=3.0
OMMB Old Mammoth Mi 72.50 322 P P 09 00 55.9 +2.2
TORD Torodi Ar. Bea 78.62 72 P P 09 01 27.2 -1.7
comp=Z,1.4nm,0.7s,baz=253,slow=4.5,SNR=6.5
YKA Yellowknife Ar 88.62 341 P P 09 02 19.6 +0.5
comp=Z,0.3nm,0.8s,baz=127,slow=4.1,SNR=5.5
H11S2 WAKE ISLAND Hy 125.58 279 T T 11 26 37.5
baz=100,slow=74,SNR=6.3
H11S1 WAKE ISLAND Hy 125.58 279 T T 11 26 36.9
baz=100,slow=74,SNR=4.4
H11S3 WAKE ISLAND Hy 125.59 279 T T 11 26 36.9
baz=100,slow=74,SNR=8.0
MKAR Makanchi Array 145.11 33 PKPbc PKPbc 09 09 02.3 -1.2
comp=Z,0.4nm,0.7s,baz=321,slow=3.1,SNR=5.1
SONM Songino Array 151.64 4 PKPbc PKPbc 09 09 21.0 0.0
comp=Z,0.3nm,0.7s,baz=284,slow=1.2,SNR=2.5
SONM PKPab PKPab 09 09 29.2 -0.4
comp=Z,0.3nm,0.6s,baz=356,slow=2.2,SNR=3.5

CNRM 16 08:55:37.6±1.9, 36.38N×7.12W, h0km, Error ellipse: s-maj=25.1km s-min=11.3km az=65.0
INMG 16 08:55:44.9±1.3, 36.56N×7.30W, h22km±10km, ML2.2, Error ellipse: s-maj=5.6km s-min=3.5km az=176.0
SFS 16 08:55:44.0, 36.52N×7.27W, h40km, ML2.2, GOLFO DE VALENCIA
IGIL 16 08:55:44.7, 36.52N×7.28W, h40km, ML2.2
MDD 16 08:55:45.2±1.0, 36.61N×7.26W, h28km±12km, mbLg2.5/17, Error ellipse: s-maj=9.0km s-min=3.6km az=18.0, PRXIMO
ISC 16 08:55:43.1±1.4, 36.57N±0.05×7.23W±0.03, h32km±12km, n61, σ1.27/119, 1C-2D, Strait of Gibraltar

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

PBDV Barranco-do-Ve 0.88 320⇓ePn Pb 08 55 59.9 -0.1
PBDV eSn Sb 08 56 10.8 -0.6
PBDV A A 08 56 13.1
20nm,0.4s
PBDV Barranco-do-Ve 0.88 320 P Pb 08 55 59.9 -0.1
PBDV S Sb 08 56 10.8 -0.6
20nm,0.4s
PVAQ Vaqueiros 0.92 335⇓ePn Pn 08 56 00.7 +0.8
PVAQ eSn Sb 08 56 12.2 -0.4
PVAQ A A 08 56 12.8
50nm,0.3s
PVAQ Vaqueiros 0.92 335 P Pn 08 56 00.7 +0.8
PVAQ S Sb 08 56 12.2 -0.4
50nm,0.3s
PVAQ Vaqueiros 0.92 335 P Pn 08 56 01.6 +1.7
PVAQ S Sb 08 56 12.4 -0.2
PCVE Castro Verde 1.24 329 ePn Pn 08 56 05.2 +0.9
PCVE eSn Sn 08 56 20.6 +0.6
PCVE A A 08 56 21.3
14nm,0.2s
PCVE Castro Verde 1.24 329 P Pn 08 56 05.2 +0.9
PCVE S Sn 08 56 20.6 +0.6
14nm,0.2s
EMIN Mina Concepcio 1.27 20 P Pn 08 56 05.7 +1.0
0.3nm,0.1s,SNR=19
EMIN S Sn 08 56 20.8 0.0
17nm,0.1s,SNR=17
MORF Marmelete 1.36 303 eP Pn 08 56 06.1 +0.2
MORF eS Sn 08 56 22.0 -0.8
MORF AML AML 08 56 26.9
comp=E,32nm,0.2s
MORF Marmelete 1.36 303 ePn Pn 08 56 06.1 +0.2
MORF eSn Sn 08 56 23.2 +0.3
MORF A A 08 56 30.0
comp=E,30nm,0.1s
MORF Marmelete 1.36 303 P Pn 08 56 06.1 +0.2
MORF S Sn 08 56 22.0 -0.8
comp=E,32nm,0.2s
PFVI Vila Bisbo 1.40 294 ePn Pn 08 56 06.8 +0.4
PFVI eSn Sn 08 56 23.5 -0.4
PFVI A A 08 56 31.4
comp=E,20nm,0.5s
PFVI Vila Bisbo 1.40 294 P Pn 08 56 06.9 +0.4
comp=E,2.6nm,0.1s,SNR=5.7
PFVI S Sn 08 56 23.5 -0.4
comp=E,22nm,0.1s,SNR=5.9
PBEJ Beja 1.54 341 ePn Pn 08 56 09.6 +1.2
PBEJ eSn Sn 08 56 27.5 +0.2
PBEJ A A 08 56 34.0
comp=E,9.5nm,0.5s
PBEJ Beja 1.54 341 P Pn 08 56 09.6 +1.2
PBEJ S Sn 08 56 27.5 +0.2
comp=E,4.8nm,0.5s
PTEO Sao Teotonio 1.54 310 ePn Pn 08 56 09.3 +0.9
PTEO eSn Sn 08 56 27.0 -0.4
PTEO A A 08 56 42.7
comp=E,15nm,0.7s
PTEO Sao Teotonio 1.54 310 P Pn 08 56 09.3 +0.9
PTEO S Sn 08 56 27.0 -0.4
comp=E,7.5nm,0.7s
PBAR Barrancos 1.61 5 ePn Pn 08 56 10.7 +1.4
PBAR eSn Sn 08 56 29.4 +0.4
PBAR Barrancos 1.61 5 P Pn 08 56 10.7 +1.4
PBAR S Sn 08 56 29.4 +0.4
PNCL Nicolau / Gran 1.86 326 ePn Pn 08 56 13.6 +0.9
PNCL eSn Sn 08 56 34.8 -0.3
PNCL A A 08 56 46.0
comp=E,8.8nm,0.3s
PNCL Nicolau / Gran 1.86 326 P Pn 08 56 13.6 +0.9
PNCL S Sn 08 56 34.8 -0.3
comp=E,8.8nm,0.3s
EMIJ Mijas 1.98 89 P Pn 08 56 15.1 +0.7
comp=E,1.4nm,0.3s,SNR=7.9
EMIJ S Sn 08 56 38.2 +0.1
comp=E,6.0nm,0.2s,SNR=6.8
HORN Hornachuelos 2.02 50 P Pn 08 56 15.2 +0.2
HORN S Sn 08 56 41.1 +1.9
EVO Evora 2.06 343 ePn Pn 08 56 16.6 +1.1
EVO eSn Sn 08 56 40.6 +0.6
EVO A A 08 56 42.1
comp=E,7.9nm,0.2s
EVO Evora 2.06 343 P Pn 08 56 16.5 +1.0
EVO S Sn 08 56 38.3 -1.8
EVO Evora 2.06 343 eP Pn 08 56 16.5 +1.0
EVO eS Sn 08 56 38.3 -1.8
ECAB El Cabril 2.08 43 P Pn 08 56 16.7 +0.8
comp=E,0.7nm,0.2s,SNR=26
ECAB S Sn 08 56 39.7 -1.0
comp=E,2.8nm,0.1s,SNR=7.2
EBAD Badajoz 2.19 4 P Pn 08 56 18.2 +0.9
comp=E,1.1nm,0.1s,SNR=12
EBAD S Sn 08 56 42.8 -0.5
comp=E,8.0nm,0.1s,SNR=12
PESTR Estremoz 2.31 353 ePn Pn 08 56 20.0 +1.0
PESTR eSn Sn 08 56 46.3 -0.1
PESTR A A 08 56 58.4
comp=E,4.0nm,0.4s
EGOR Sierra Gorda, 2.56 77 P Pn 08 56 24.3 +1.8
comp=E,0.8nm,0.2s,SNR=7.9
EGOR S Sn 08 56 52.8 +0.3
comp=E,12nm,0.4s,SNR=7.9
PMTG Montargil 2.62 343 ePn Pn 08 56 24.2 +1.0
PMTG eSn Sn 08 56 54.0 +0.1
PMTG A A 08 56 56.2
comp=E,7.0nm,0.4s
PMTG Montargil 2.62 343 P Pn 08 56 24.2 +1.0
PMTG S Sn 08 56 54.0 +0.1
comp=E,7.0nm,0.4s
EADA Adamuz 2.65 52 P Pn 08 56 25.2 +1.6
comp=E,0.9nm,0.1s,SNR=7.9
EADA S Sn 08 56 55.2 +0.6
comp=E,2.8nm,0.1s,SNR=7.9
PMRV Marv??o 2.86 357 ePn Pn 08 56 27.5 +1.0
PMRV eSn Sn 08 57 00.1 +0.3
PMRV A A 08 57 01.8
comp=E,14nm,0.6s
PMRV Marv??o 2.86 357 P Pn 08 56 27.5 +1.0
PMRV S Sn 08 57 00.1 +0.3
comp=E,14nm,0.6s
PMAFR Mafra 2.89 326 ePn Pn 08 56 28.1 +1.2
PMAFR eSn Sn 08 57 01.2 +0.7
PMAFR A A 08 57 04.4
comp=E,26nm,0.5s
PMAFR Mafra 2.89 326 P Pn 08 56 28.2 +1.2
comp=E,5.6nm,0.1s,SNR=5.7
PMAFR S Sn 08 56 59.3 -1.2
comp=E,8.1nm,0.1s
ELGU Los Guajares, 2.91 83 P Pn 08 56 30.6 +3.4
comp=E,1.3nm,0.2s,SNR=7.9
ELGU S Sn 08 56 59.3 -1.8
comp=E,5.1nm,0.1s,SNR=7.9
PCBR Castelo Branco 3.27 357 ePn Pn 08 56 33.2 +1.0
PCBR eSn Sn 08 57 09.3 -0.7
PCBR A A 08 57 10.9
comp=E,5.1nm,0.4s
PCBR Castelo Branco 3.27 357 P Pn 08 56 33.2 +1.0
PCBR S Sn 08 57 09.3 -0.7
comp=E,2.6nm,0.4s
EQES Quesada 3.54 68 P Pn 08 56 37.1 +1.1
comp=E,0.7nm,0.1s,SNR=14
EQES S Sn 08 57 15.1 -1.6
comp=E,1.6nm,0.1s
EPLA Plasencia 3.60 14 P Pn 08 56 39.0 +2.2
comp=E,1.0nm,0.1s,SNR=7.9
EPLA S Sn 08 57 17.6 -0.6
comp=E,3.9nm,0.1s,SNR=6.9
PCAS Casmilo, Conde 3.62 344 ePn Pn 08 56 38.4 +1.4
PCAS eSn Sn 08 57 18.8 +0.2
PCAS Casmilo, Conde 3.62 344 P Pn 08 56 38.4 +1.4
PCAS S Sn 08 57 18.8 +0.2
PAB San Pablo 3.74 37 P Pn 08 56 40.2 +1.5
comp=E,1.2nm,0.1s,SNR=7.9
PAB S Sn 08 57 19.0 -2.7
comp=E,0.9nm,0.2s,SNR=7.9
ESDC Sonseca Array 4.03 39 ⇑P Pn 08 56 44.1 +1.4
comp=E,0.4nm,0.2s,baz=224,slow=13,SNR=18
ESDC S Sn 08 57 27.3 -1.4
comp=E,0.5nm,0.3s,baz=223,slow=24,SNR=4.9
SESP Santiago Espad 4.04 66 P Pn 08 56 43.8 +0.9
comp=E,0.4nm,0.1s,SNR=7.9
SESP S Sn 08 57 28.3 -0.8
comp=E,5.8nm,0.1s,SNR=7.9
PVIS Viseu 4.17 353 ePn Pn 08 56 46.0 +1.4
PVIS eSn Sn 08 57 31.1 -1.2
PVIS A A 08 57 35.0
comp=E,17nm,0.8s
PVIS Viseu 4.17 353 P Pn 08 56 46.0 +1.4
PVIS S Sn 08 57 31.1 -1.2
comp=E,8.6nm,0.8s
MD31 MD31 4.21 150 P Pn 08 56 44.1 -1.1
MD31 S Sn 08 57 25.4 -8.0
MVO Moncorvo 4.59 2 ePn Pn 08 56 51.6 +1.2
MVO eSn Sn 08 57 40.7 -1.9
MVO Moncorvo 4.59 2 P Pn 08 56 52.4 +2.0
comp=E,1.4nm,0.1s,SNR=7.9
MVO S Sn 08 57 40.7 -1.9
comp=E,5.0nm,0.3s,SNR=7.9
GUD Guadarrama 4.73 30 P Pn 08 56 54.0 +1.7
comp=E,0.4nm,0.1s,SNR=7.9
GUD S Sn 08 57 44.5 -1.5
comp=E,0.4nm,0.1s,SNR=7.9
EMUR La Murta 4.94 73 P Pn 08 56 57.3 +2.1
comp=E,0.4nm,0.2s,SNR=4.0
EMUR S Sn 08 57 48.6 -2.7
SNR=7.9
ETOB Tobarra 4.96 64 P Pn 08 56 56.0 +0.5
comp=E,3.3nm,0.1s,SNR=147
ETOB S Sn 08 57 49.3 -2.5
comp=E,2.5nm,0.1s,SNR=5.6
PBRG Braganca 5.24 4 ePn Pn 08 57 00.0 +0.7
PBRG eSn Sn 08 57 56.2 -2.4
PBRG Braganca 5.24 4 P Pn 08 57 00.0 +0.7
PBRG S Sn 08 57 56.2 -2.4
ELOB Lobios 5.33 353 S Sn 08 57 58.3 -2.6
comp=E,2.6nm,0.3s,SNR=7.9
ECAL Calabor 5.38 4 P Pn 08 57 02.7 +1.5
comp=E,1.1nm,0.2s,SNR=7.9
ECAL S Sn 08 57 58.8 -3.2
comp=E,0.9nm,0.1s,SNR=7.9
EBEN2 Beniarda presa 5.97 67 P Pn 08 57 09.6 +0.4
comp=E,0.4nm,0.1s,SNR=4.0

EMOS Mosqueruela 6.51 52 P Pn 08 57 19.1 +2.2
comp=E,0.2nm,0.1s,SNR=7.9
EMOS S Sn 08 58 28.4 -1.8
comp=E,0.2nm,0.1s,SNR=7.9

IDC 16 08:59:15.8±29.0, 0.41S×13.22W, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.5/29, mbtmp3.8/3, ML3.3/1, MS3.4/2, Ms1 3.5/2, ms1mx2.8/26, Error ellipse: s-maj=706.0km s-min=83.8km az=169.0, North of Ascension Island

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
H10N2 ASCENSION HYDR 7.47 190 T T 09 07 57.8
baz=11,slow=75,SNR=21
H10N3 ASCENSION HYDR 7.49 190 T T 09 07 58.0
baz=11,slow=75,SNR=25
H10N1 ASCENSION HYDR 7.49 190 T T 09 08 03.5
baz=11,slow=75,SNR=33
DBIC Dimbokro 10.91 50 Pn Pn 09 01 53.4 0.0
0.2nm,0.3s,baz=221,slow=11,SNR=3.2
DBIC Sn Sn 09 03 46.6 -10
0.2nm,0.3s,baz=155,slow=17,SNR=3.7
TORD Torodi Ar. Bea 20.00 47 P P 09 03 50.3 0.0
2.7nm,0.4s,baz=231,slow=9.9,SNR=28
TORD LR LR 09 10 46.8
comp=Z,120nm,19.2s,baz=330,slow=34
GERES GERESS Array B 54.29 22 P P 09 08 43.9 -0.1
0.4nm,0.5s,baz=202,slow=6.9,SNR=4.0
LPAZ La Paz 56.36 251 LR LR 09 30 57.7
comp=Z,36nm,20.9s,baz=70,slow=34

IDC 16 09:21:57.9±1.4, 0.05S×129.36E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/30, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=40.4km s-min=21.0km az=51.0
DJA 16 09:22:00.1±0.3, 0.°S±5°×12°9E±°, h10km, M3.4/7, MLv3.4/7
NEIC 16 09:22:03.9±1.3, 0.1S±0.1×129.38E±0.07, h36km±6km, mb4.3/8, Error ellipse: s-maj=16.6km s-min=7.0km az=210.0
ISC 16 09:22:00.2±0.7, 0.1S±0.1×129.36E±0.06, h10km, n22, σ1s16/22, mb4.3/6, Halmahera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LBMI Labuha 1.94 253 P Pn 09 22 31.8 -1.5
SWI Sorong 2.06 113 P Pn 09 22 34.9 0.0
SIJI Sorong 2.07 113 Pn Pn 09 22 34.5 -0.5
11nm,0.3s,baz=331,slow=19,SNR=96
SIJI Sn Sn 09 23 00.2 -0.7
2.8nm,0.3s,baz=240,slow=11,SNR=4.6
TNTI Ternate 2.16 293 P Pn 09 22 35.9 -0.3
TNTI Ternate 2.16 293 Pn Pn 09 22 36.4 +0.2
AAI Ambon 3.78 198 P Pn 09 22 52.1 -6.5
FAKI Fak Fak 4.05 135 P Pn 09 23 00.7 -1.6
FAKI Fak Fak 4.05 135 Pn Pn 09 23 01.1 -1.2
LUWI Luwuk 6.66 262 Pn Pn 09 23 39.9 +1.8
SAUI Saumlaki 8.10 166 Pn Pn 09 23 59.6 +1.6
SMRI Semarang 20.11 249 P P 09 26 34.5 +0.2
WRAB Tennant Creek 20.34 166 P P 09 26 39.5 +2.7
WRAB IAmb IAmb 09 26 44.5
comp=Z,11nm,1.5s
WRA Warramunga Arr 20.35 166 P P 09 26 35.4 -1.6
comp=Z,0.4nm,0.5s,baz=347,slow=12,SNR=6.9
AS31 Alice Springs 23.87 170 P P 09 27 14.3 +0.3
ASAR Alice Springs 23.88 170 P P 09 27 13.8 -0.3
comp=Z,1.8nm,0.8s,baz=353,slow=9.6,SNR=22
YULB Yu-li 24.59 342 P P 09 27 22.1 +1.4
STKA Stephens Creek 33.70 161 P P 09 28 41.2 -0.4
comp=Z,3.1nm,0.8s,baz=318,slow=8.8,SNR=5.6
STKA Stephens Creek 33.70 161 P P 09 28 41.7 +0.1
MKAR Makanchi Array 62.15 325 P P 09 32 20.7 -0.9
comp=Z,0.3nm,0.8s,baz=119,slow=5.1,SNR=2.9
KBL Kabul 65.91 308 P P 09 32 46.6 -0.3
KBL IAmb IAmb 09 32 48.8
comp=Z,2.6nm,0.5s
KURK Kurchatov 66.33 327 P P 09 32 49.0 0.0
KURK IAmb IAmb 09 32 58.6
comp=Z,2.8nm,1.2s
SKT Skwentna 84.94 28 P P 09 34 35.6 +0.2
SKT IAmb IAmb 09 34 35.7
comp=Z,3.7nm,0.8s

IDC 16 09:42:59.7±64.0, 21.60S×179.58W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/22, mbtmp4.0/3, Error ellipse: s-maj=1161.0km s-min=159.1km az=84.0, Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STKA Stephens Creek 35.98 245 P P 09 50 03.5 +1.0
0.8nm,0.4s,baz=95,slow=11,SNR=3.4
ASAR Alice Springs 42.84 258 P P 09 50 59.3 -0.6
1.1nm,0.4s,baz=95,slow=7.3,SNR=23
WRA Warramunga Arr 43.00 264 P P 09 51 00.8 -0.4
1.2nm,0.5s,baz=103,slow=8.6,SNR=19

NNC 16 09:44:06.7±0.3, 43.00N×78.16E, h2km±2km, mb4.3, mpv4.4, Error ellipse: s-maj=3.7km s-min=1.0km az=173.0
SOME 16 09:44:07.9, 43.02N×78.12E, h10km, MS2.9
MOS 16 09:44:07.4±1.2, 43.08N×78.18E, h9km, mb4.7/2, Error ellipse: s-maj=7.6km s-min=6.7km az=149.1
MOS Felt (II) at Ak-Bulak, Ak-Bulun, Balbay.
IDC 16 09:44:07.1±1.3, 43.09N×78.09E, h0km, mb3.4/2, mb1 3.7/7, mb1mx3.4/40, mbtmp3.7/7, ML3.4/5, MS2.5/2, Ms1 2.5/2, ms1mx2.3/33, Error ellipse: s-maj=19.3km s-min=8.9km az=148.0
KRNET 16 09:44:07.5±0.1, 43.01N×78.15E, h19km, mb4.4
BJI 16 09:44:08.4±0.0, 43.20N×78.18E, h13km, mB4.1/1, mb4.0/3, ML3.7/7
ISC 16 09:44:07.7±1.0, 43.11N±0.02×78.11E±0.01, h4km±7km, n142, σ1s63/242, 42C-32D, Lake Issyk-Kul region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SATY Saty 0.22 102 eP Pg 09 44 11.5 -0.5
2μm,0.2s
SATY eS Sg 09 44 15.0 0.0
21μm,0.2s
SATY Saty 0.22 102 P Pg 09 44 11.5 -0.5
2μm,0.2s
SATY S Sg 09 44 15.0 0.0
21μm,0.2s
SATY Saty 0.22 102 ePG Pg 09 44 11.5 -0.5
ZHN Zhinishke 0.25 75 eP Pg 09 44 12.7 +0.2
baz=53
ZHN eS Sg 09 44 16.5 +0.8
baz=53
ZHN Zhinishke 0.25 75 eP Pg 09 44 12.7 +0.2
931nm,0.1s
ZHN eS Sg 09 44 16.5 +0.8
12μm,0.2s
ZHN Zhinishke 0.25 75 P Pg 09 44 12.7 +0.2
931nm,0.1s
ZHN S Sg 09 44 16.5 +0.8
12μm,0.2s
ZHN Zhinishke 0.25 75 ePG Pg 09 44 12.7 +0.2
ZHN eS Sg 09 44 16.5 +0.8
KURS Kuram 0.39 6 ⇓iP Pb 09 44 17.0 -0.1
baz=2.0
KURS ⇑iS Sb 09 44 23.8 +0.4
baz=2.0
KURS Kuram 0.39 6 ⇓iP Pb 09 44 17.0 -0.1
1μm,0.2s
KURS ⇑iS Sb 09 44 23.9 +0.4
810nm,0.4s
KURS Kuram 0.39 6 P Pb 09 44 17.0 -0.1
1μm,0.2s
KURS S Sb 09 44 23.9 +0.4
810nm,0.4s
ANVS Anan'yevo 0.46 226 ⇑iP Pg 09 44 15.7 -0.8
baz=38
ANVS ⇑iS Sg 09 44 21.5 -1.0
baz=38
KPKS Kokpek 0.55 49 eP Pb 09 44 18.9 -1.1
baz=42
KPKS eS Sb 09 44 27.2 -1.1
baz=42
KPKS Kokpek 0.55 49 eP Pb 09 44 18.9 -1.1
655nm,0.1s
KPKS eS Sb 09 44 27.2 -1.1
7μm,0.4s
KPKS Kokpek 0.55 49 ePG Pb 09 44 18.9 -1.1
KPKS eS Sb 09 44 27.2 -1.1
PRZ Przheval'sk 0.66 161 ⇓iP Pg 09 44 18.9 -1.4
baz=59
PRZ ⇓iS Sg 09 44 27.3 -1.5
baz=59
KOTS Kotyrbulak 0.74 280 eP Pg 09 44 22.6 +0.6
baz=86
KOTS eS Sg 09 44 33.0 +1.4
baz=86
KOTS Kotyrbulak 0.74 280 eP Pg 09 44 22.6 +0.6
812nm,0.2s
KOTS eS Sg 09 44 32.9 +1.4
2μm,0.2s
KOTS Kotyrbulak 0.74 280 P Pg 09 44 22.6 +0.6
812nm,0.2s
KOTS S Sg 09 44 32.9 +1.4
2μm,0.2s
MDOK Medeo 0.78 275 eP Pg 09 44 22.9 +0.2
baz=81
MDOK ⇓iS Sg 09 44 33.8 +1.0
baz=81
MDOK Medeo 0.78 275 eP Pg 09 44 22.9 +0.2
924nm,0.4s
MDOK ⇓iS Sg 09 44 33.8 +1.0
3μm,0.7s
MDOK Medeo 0.78 275 ⇓P Pg 09 44 22.8 +0.1
560nm,0.5s
MDOK ⇓S Sg 09 44 33.9 +1.0
2μm,0.4s
MDOK Medeo 0.78 275 Pg Pg 09 44 22.9 +0.2
924nm,0.4s
MDOK Lg Lg 09 44 33.8
3μm,0.7s
MDOK Medeo 0.78 275 ePG Pg 09 44 22.9 +0.2
MDOK i S Sg 09 44 33.8 +1.0
KNDC Almaty 0.84 278 ⇑P Pg 09 44 24.4 +0.5
104nm,0.2s
KNDC ⇑S Sb 09 44 36.7 +0.1
690nm,0.4s
KNDC Almaty 0.84 278 PG Pg 09 44 24.4 +0.5
KNDC S Sb 09 44 36.7 +0.1
TNSS Tian-Shan 0.85 266 ⇑iP Pg 09 44 24.0 -0.1
baz=72
TNSS ⇓iS Sg 09 44 36.3 +1.0
baz=72
TNSS Tian-Shan 0.85 266 ⇑iP Pg 09 44 24.0 -0.1
177nm,0.2s
TNSS ⇓iS Sg 09 44 36.2 +1.0
1μm,0.3s
TNSS Tian-Shan 0.85 266 P Pg 09 44 24.0 -0.1
177nm,0.2s
TNSS S Sg 09 44 36.2 +1.0
1μm,0.3s
TNSS Tian-Shan 0.85 266 i PG Pg 09 44 24.0 -0.1
TNSS i S Sg 09 44 36.2 +1.0
AAA Alma-Ata 0.88 277 eP Pg 09 44 25.4 +0.8
baz=83
AAA eS Sb 09 44 38.3 +0.6
baz=83
AAA Alma-Ata 0.88 277 eP Pg 09 44 25.4 +0.8
550nm,0.3s
AAA eS Sb 09 44 38.3 +0.6
1μm,0.3s
AAA Alma-Ata 0.88 277 P Pg 09 44 25.4 +0.8
550nm,0.3s
AAA S Sb 09 44 38.3 +0.6
1μm,0.3s
AAA Alma-Ata 0.88 277 ePG Pg 09 44 25.3 +0.8
AAA eS Sb 09 44 38.3 +0.6
AAA pmax pmax
comp=Z,550nm,0.3s
AAA smax smax
comp=N,1μm,0.3s
SHLS Shalkode 0.99 87 eP Pn 09 44 30.9 +2.5
baz=83
SHLS eS Sn 09 44 48.3 +5.4
baz=83
SHLS Shalkode 0.99 87 eP Pn 09 44 30.9 +2.5
comp=N,470nm,0.4s
SHLS eS Sn 09 44 48.3 +5.4
comp=N,1μm,0.4s
SHLS Shalkode 0.99 87 P Pn 09 44 30.9 +2.5
comp=N,470nm,0.4s
SHLS S Sn 09 44 48.3 +5.4
comp=N,1μm,0.4s
SHLS Shalkode 0.99 87 ePG Pn 09 44 30.9 +2.5
SHLS eS Sn 09 44 48.3 +5.4
PDGK Podgornoye 1.03 77 P Pg 09 44 26.2 -1.3
comp=N,231nm,0.3s
PDGK S Sg 09 44 39.7 -1.2
comp=N,379nm,0.3s
PDGK Podgornoye 1.03 77 ⇑P Pg 09 44 26.2 -1.3
comp=N,144nm,0.3s
PDGK ⇓S Sg 09 44 39.5 -1.4
comp=N,598nm,0.6s
PDGK Podgornoye 1.03 77 PG Pg 09 44 26.2 -1.3
PDGK S Sg 09 44 39.5 -1.4
IZV Izvestkoviy 1.10 267 eP Pb 09 44 28.7 -0.7
baz=72
IZV eS Sg 09 44 43.7 +0.7
baz=72
IZV Izvestkoviy 1.10 267 eP Pb 09 44 28.7 -0.7
comp=N,182nm,0.3s
IZV eS Sg 09 44 43.7 +0.7
comp=N,1μm,0.3s
IZV Izvestkoviy 1.10 267 P Pb 09 44 28.7 -0.7
comp=N,182nm,0.3s
IZV S Sg 09 44 43.7 +0.7
comp=N,1μm,0.3s
CHKK Chushkaly 1.11 313 ⇑iP Pn 09 44 30.0 0.0
baz=16
CHKK ⇑eS Sn 09 44 46.1 +0.4
baz=16
CHKK Chushkaly 1.11 313 ⇑iP Pn 09 44 30.0 0.0
comp=N,153nm,0.3s
CHKK eS Sn 09 44 46.1 +0.4
comp=N,2μm,0.2s
CHKK Chushkaly 1.11 313 P Pn 09 44 30.0 0.0
comp=N,153nm,0.3s
CHKK S Sn 09 44 46.1 +0.4
comp=N,2μm,0.2s
CHKK Chushkaly 1.11 313 i PG Pn 09 44 30.0 0.0
CHKK eS Sn 09 44 46.1 +0.4
ARXS Arharly 1.13 350 eP Pn 09 44 30.5 +0.2
comp=N,231nm,0.4s
ARXS eS Sn 09 44 47.1 +0.9
comp=N,2μm,0.5s
ARXS Arharly 1.13 350 P Pn 09 44 30.5 +0.2
comp=N,231nm,0.4s
ARXS S Sn 09 44 47.1 +0.9
comp=N,2μm,0.5s
KDJ Kajisay 1.19 216 ⇓iP Pb 09 44 28.5 -2.4
baz=19
KDJ ⇓iS Sb 09 44 43.5 -3.2
baz=19
KTBS Karatobe 1.21 301 eP Pg 09 44 31.6 +0.8
comp=N,110nm,0.2s
KTBS eS Sn 09 44 48.7 +0.6
comp=N,920nm,0.5s
KTBS Karatobe 1.21 301 P Pg 09 44 31.6 +0.8
comp=N,110nm,0.2s
KTBS S Sn 09 44 48.7 +0.6
comp=N,920nm,0.5s
MTBS Maitube 1.23 272 ⇓iP Pn 09 44 31.1 -0.7
baz=76
MTBS ⇓iS Sb 09 44 47.8 -0.1
baz=76
MTBS Maitube 1.23 272 ⇓iP Pn 09 44 31.1 -0.7
comp=N,107nm,0.4s
MTBS ⇓iS Sb 09 44 47.7 -0.1
comp=N,612nm,0.5s
MTBS Maitube 1.23 272 P Pn 09 44 31.1 -0.7
comp=N,107nm,0.4s
MTBS S Sb 09 44 47.7 -0.1
comp=N,612nm,0.5s
MTBS Maitube 1.23 272 i PG Pn 09 44 31.1 -0.7
MTBS i S Sb 09 44 47.7 -0.1
KUU Kurty 1.51 302 eP Pb 09 44 36.8 +0.5
baz=4.0
KUU eS Sg 09 44 57.7 +1.5
baz=4.0
KUU Kurty 1.51 302 eP Pb 09 44 36.8 +0.5
comp=N,138nm,0.4s
KUU eS Sg 09 44 57.7 +1.5
comp=N,1μm,0.6s
KUU Kurty 1.51 302 P Pb 09 44 36.8 +0.5
comp=N,138nm,0.4s
KUU S Sg 09 44 57.7 +1.5
comp=N,1μm,0.6s
KUU Kurty 1.51 302 ePN Pb 09 44 36.8 +0.5
KUU eS Sg 09 44 57.7 +1.5
KST Kastek 1.57 268 eP Pb 09 44 37.4 0.0
baz=72
KST ⇑iS Sb 09 44 58.5 +0.8
baz=72
KST Kastek 1.57 268 eP Pb 09 44 37.4 0.0
comp=N,195nm,0.4s
KST ⇑iS Sb 09 44 58.5 +0.8
comp=N,350nm,0.5s
KST Kastek 1.57 268 P Pb 09 44 37.4 0.0
comp=N,195nm,0.4s
KST S Sb 09 44 58.5 +0.8
comp=N,350nm,0.5s
ULHL Ulahol 1.62 239 ⇑iP Pn 09 44 36.8 -0.4
baz=42
ULHL ⇑iS Sn 09 44 57.7 -1.0
baz=42
ULHL Ulahol 1.62 239 P Pn 09 44 36.9 -0.3
SNR=55
KTMS Ketmen 1.67 77 eP Pb 09 44 37.8 -1.3
baz=74
KTMS eS Sb 09 44 59.5 -1.0
baz=74
KTMS Ketmen 1.67 77 eP Pb 09 44 37.8 -1.3
comp=N,130nm,0.1s
KTMS eS Sb 09 44 59.5 -1.0
comp=N,563nm,0.4s
KTMS Ketmen 1.67 77 P Pb 09 44 37.8 -1.3
comp=N,130nm,0.1s
KTMS S Sb 09 44 59.5 -1.0
comp=N,563nm,0.4s
BOOM Boomskoye usch 1.71 250 ⇑iP Pn 09 44 38.6 +0.2
baz=53
BOOM ⇑iS Sb 09 45 01.0 -0.7
baz=53
DGS Degeres 1.72 275 eP Pb 09 44 39.6 -0.2
baz=78
DGS eS Sb 09 45 02.1 +0.3
baz=78
DGS Degeres 1.72 275 eP Pb 09 44 39.6 -0.2
comp=N,240nm,0.4s
DGS eS Sb 09 45 02.1 +0.3
comp=N,554nm,0.2s
DGS Degeres 1.72 275 P Pb 09 44 39.6 -0.2
comp=N,240nm,0.4s
DGS S Sb 09 45 02.1 +0.3
comp=N,554nm,0.2s
DJR Jarkent 1.73 44 eP Pb 09 44 39.9 -0.1
comp=N,56nm,0.3s
DJR eS Sg 09 45 03.5 +0.3
comp=N,1μm,0.5s
DJR Jarkent 1.73 44 P Pb 09 44 39.9 -0.1
comp=N,56nm,0.3s
DJR S Sg 09 45 03.5 +0.3
comp=N,1μm,0.5s
KRBS Karabastau 1.87 289 eP Pb 09 44 42.9 +0.4
comp=N,183nm,0.3s
KRBS eS Sg 09 45 08.1 +0.3
comp=N,541nm,0.3s
KRBS Karabastau 1.87 289 Pg Pb 09 44 42.9 +0.4
comp=N,183nm,0.3s
KRBS Lg Lg 09 45 08.1
comp=N,541nm,0.3s
TDK Taldyqorghan 1.91 6 eP Pg 09 44 43.8 -0.5
comp=N,719nm,0.6s
TDK eS Sg 09 45 09.8 +0.8
comp=N,3μm,0.6s
TDK Taldyqorghan 1.91 6 Pg Pg 09 44 43.8 -0.5
comp=N,719nm,0.6s
TDK Lg Lg 09 45 09.8
comp=N,3μm,0.6s
TDK Taldyqorghan 1.91 6 ePN Pg 09 44 43.8 -0.5
TDK eS Sg 09 45 09.8 +0.8
NRN Naryn 2.29 224 ⇑iP Pn 09 44 47.4 +0.9
baz=26
NRN ⇑iS Sn 09 45 15.6 +0.3
baz=26
KZA Kyzart 2.35 245 ⇓iP Pn 09 44 48.3 +0.9
baz=47
KZA ⇓iS Sn 09 45 17.3 +0.5
baz=47
KZA Kyzart 2.35 245 P Pb 09 44 49.6 -1.2
SNR=64
KAPS Kapalarasan 2.36 22 eP Pg 09 44 51.9 -1.0
comp=N,152nm,0.4s
KAPS eS Sg 09 45 23.8 +0.4
comp=N,576nm,0.5s
KAPS Kapalarasan 2.36 22 Pg Pg 09 44 51.9 -1.0
comp=N,152nm,0.4s
KAPS Lg Lg 09 45 23.8
comp=N,576nm,0.5s
KBK Karagaybulak 2.37 260 ⇓iP Pn 09 44 48.6 +1.2
baz=63
KBK ⇓iS Sn 09 45 18.2 +1.2
baz=63
KBK Karagaybulak 2.37 260 P Pb 09 44 50.6 -0.4
SNR=129
CHMS Chumysh 2.46 269 ⇑iP Pn 09 44 50.1 +1.5
baz=71
CHMS ⇑iS Sn 09 45 20.4 +1.2
baz=71
CHMS Chumysh 2.46 269 P Pb 09 44 52.2 -0.4
SNR=29
CHMS Chumysh 2.46 269 ⇑Pn Pb 09 44 49.9 +1.2
comp=N,73nm,0.5s
CHMS ⇑Lg Lg 09 45 25.9
comp=N,90nm,0.3s
CHMS Chumysh 2.46 269 ePN Pb 09 44 50.8 -1.7
SGDS Sogindy 2.56 279 Pg Pb 09 44 55.1 +0.9
comp=N,45nm,0.2s
SGDS Lg Lg 09 45 28.4
comp=N,332nm,0.3s
FRU1 Bishkek 2.57 265 ⇑eP Pn 09 44 51.1 +1.0
baz=67
FRU1 ⇑iS Sn 09 45 23.4 +1.5
baz=67
USP Ospenovka 2.65 275 ⇑iP Pn 09 44 53.1 +2.0
baz=77
USP ⇑iS Sn 09 45 25.0 +1.3
baz=77
USP Ospenovka 2.65 275 P Pb 09 44 55.4 -0.2
SNR=80
AAK Ala-Archa 2.70 261 Pn Pb 09 44 55.4 -1.2
comp=N,21nm,0.3s,baz=84,slow=13,SNR=119
AAK Lg Lg 09 45 32.4
comp=N,36nm,0.3s,baz=359,slow=16,SNR=27
AAK LR LR 09 46 06.8
comp=N,75nm,20.5s,baz=5.0,slow=45
AAK Ala-Archa 2.70 261 ⇑iP Pn 09 44 53.3 +1.3
baz=63
AAK ⇑iS Sn 09 45 26.4 +1.3
baz=63
AAK Ala-Archa 2.70 261 P Pb 09 44 56.2 -0.4
SNR=65
AAK Ala-Archa 2.70 261 ⇑Pg Pb 09 44 56.0 -0.6
comp=N,49nm,0.5s
AAK ⇓Lg Lg 09 45 33.4
comp=N,330nm,0.8s
AAK Ala-Archa 2.70 261 i PN Pb 09 44 55.1 -1.5
UCH Uchtor 2.79 253 ⇑iP Pn 09 44 54.7 +1.2
baz=55
UCH ⇑eS Sn 09 45 28.3 +0.4
baz=55
UCH Uchtor 2.79 253 P Pb 09 44 57.1 -1.3
SNR=108
ARLS Aral 3.06 247 ⇓eP Pn 09 44 57.9 +0.9
baz=49
ARLS ⇓iS Sn 09 45 34.0 -0.2
baz=49
EKS2 Erkin-Say 3.22 264 ⇓eP Pn 09 45 00.7 +1.7
baz=65
EKS2 ⇓iS Sn 09 45 38.7 +0.9
baz=65
EKS2 Erkin-Say 3.22 264 P Pb 09 45 02.6 -2.7
SNR=20
AML Almayashu 3.40 255 ⇑eP Pn 09 45 03.2 +1.4
baz=57
AML ⇑iS Sn 09 45 42.8 0.0
baz=57
AML Almayashu 3.40 255 P Pb 09 45 08.2 -0.5
SNR=44
BTLS Baital 3.51 305 eP Pg 09 45 13.3 -1.7
comp=N,26nm,0.3s
BTLS eS Sg 09 45 59.6 -0.8

	comp=N,138nm,0.7s						
BTLS	**Baital**	**3.51**	**305**	Pg	**Pg**	**09 45 13.3**	**-1.7**
	comp=N,26nm,0.3s						
BTLS				Lg	Lg	09 45 59.6	
	comp=N,138nm,0.7s						
BTLS	**Baital**	**3.51**	**305**	ePN	**Pg**	**09 45 13.3**	**-1.7**
BTLS				eS	**Sg**	**09 45 59.6**	**-0.8**
MRKS	**Merke**	**3.60**	**266**	eP	**Pb**	**09 45 13.8**	**+1.8**
	comp=N,47nm,0.6s						
MRKS				eS	**Sg**	**09 46 00.9**	**-2.6**
	comp=N,118nm,0.3s						
MRKS	**Merke**	**3.60**	**266**	Pg	**Pb**	**09 45 13.8**	**+1.8**
	comp=N,47nm,0.6s						
MRKS				Lg	Lg	09 46 00.9	
	comp=N,118nm,0.3s						
KSH	**Kashi**	**3.93**	**205**	Pg	**Pg**	**09 45 27.3**	**+4.3**
KSH				Sn	**Sg**	**09 46 20.9**	**+7.0**
KSH				smax	smax		
	comp=N,160nm,0.7s						
KSH				smax	smax		
	comp=N,160nm,0.8s						
ARSB	**Arslanbob**	**4.20**	**247**	⇓iP	**Pn**	**09 45 13.7**	**+1.1**
	baz=48						
ARSB				⇓iS	**Sn**	**09 46 01.4**	**-0.8**
	baz=48						
MAKZ	**Makanchi**	**4.61**	**35**	⇑Pn	**Pn**	**09 45 19.0**	**+0.9**
	comp=N,2.5nm,0.5s						
MAKZ				⇓Pg	**Pg**	**09 45 32.4**	**-3.5**
	comp=N,6.9nm,0.8s						
MAKZ				⇓Lg	Lg	09 46 32.1	
	comp=N,106nm,0.9s						
MAKZ	**Makanchi**	**4.61**	**35**	PN	**Pn**	**09 45 20.3**	**+2.2**
MK31	**Makanchi Array**	**4.73**	**37**	Pn	**Pn**	**09 45 19.9**	**+0.1**
	comp=N,2.2nm,0.2s,baz=210,slow=14,SNR=271						
MK31				⇑Sn	**Sn**	**09 46 15.4**	**+0.3**
	comp=N,7.2nm,0.4s,baz=215,slow=26,SNR=4.1						
MK31				Lg	Lg	09 46 38.3	
	comp=N,19nm,0.4s,baz=214,slow=28,SNR=12						
MK31	**Makanchi Array**	**4.73**	**37**	iPN	**Pn**	**09 45 21.9**	**+2.1**
MKAR	**Makanchi Array**	**4.73**	**37**	Pn	**Pn**	**09 45 21.9**	**+2.2**
	comp=N,2.2nm,0.3s,baz=213,slow=15,SNR=217						
MKAR				Pg	**Pb**	**09 45 33.1**	**+2.0**
	comp=N,2.0nm,0.3s,baz=219,slow=15,SNR=11						
MKAR				Sn	**Sn**	**09 46 16.5**	**+1.4**
	comp=N,3.0nm,0.3s,baz=216,slow=27,SNR=5.9						
MKAR				Lg	Lg	09 46 34.4	
	comp=N,20nm,0.3s,baz=214,slow=28,SNR=17						
DZA	**Taraz**	**4.98**	**270**	eP	**Pb**	**09 45 38.8**	**+3.5**
	comp=N,147nm,0.1s						
DZA				eS	**Sg**	**09 46 44.5**	**-3.0**
	comp=N,74nm,0.3s						
DZA	**Taraz**	**4.98**	**270**	Pg	**Pb**	**09 45 38.8**	**+3.5**
	comp=N,147nm,0.1s						
DZA				Lg	Lg	09 46 44.5	
	comp=N,74nm,0.3s						
KK31	**Karatay Array**	**5.56**	**273**	⇑Pn	**Pn**	**09 45 31.4**	**+0.2**
	comp=N,0.6nm,0.6s,baz=86,slow=13,SNR=5.1						
KK31				⇑Pg	**Pb**	**09 45 47.8**	**+2.5**
	comp=N,2.8nm,0.4s,baz=88,slow=15,SNR=32						
KK31				Lg	Lg	09 47 04.1	
	comp=N,29nm,0.4s,baz=91,slow=29,SNR=14						
JBG	**Jabagly**	**5.61**	**266**	Pg	**Pg**	**09 45 52.6**	**-2.6**
	comp=N,15nm,0.8s						
JBG				Lg	Lg	09 47 07.9	
	comp=N,25nm,0.8s						
IUG	**Iuzhnay**	**6.04**	**264**	eP	**Pg**	**09 45 59.9**	**-3.4**
	comp=N,3.3nm,0.5s						
IUG				eS	**Sg**	**09 47 21.1**	**-0.4**
	comp=N,48nm,0.8s						
IUG	**Iuzhnay**	**6.04**	**264**	Pg	**Pg**	**09 45 59.9**	**-3.4**
	comp=N,3.3nm,0.5s						
IUG				Lg	Lg	09 47 21.1	
	comp=N,48nm,0.8s						
ZSN	**Zaisan**	**6.45**	**45**	eP	**Pb**	**09 46 03.5**	**+3.1**
	comp=N,3.0nm,0.5s						
ZSN				eS	**Sg**	**09 47 26.5**	**-8.2**
	comp=N,36nm,0.5s						
ZSN	**Zaisan**	**6.45**	**45**	Pg	**Pb**	**09 46 04.0**	**+3.7**
	comp=N,4.8nm,0.3s						
ZSN				Lg	Lg	09 47 27.4	
	comp=N,36nm,0.5s						
KURBB	**Kurchatov Arra**	**7.53**	**2**	Pn	**Pn**	**09 45 58.2**	**+0.2**
	comp=N,0.1nm,0.3s,baz=181,slow=12,SNR=5.1						
KURBB				Lg	Lg	09 48 05.2	
	comp=N,0.6nm,0.3s,baz=190,slow=26,SNR=11						
KURBB	**Kurchatov Arra**	**7.53**	**2**	⇑Pn	**Pn**	**09 45 57.6**	**-0.5**
	comp=N,0.9nm,0.3s						
KURBB				⇓Lg	Lg	09 48 08.3	
	comp=N,69nm,0.6s						
KURBB	**Kurchatov Arra**	**7.53**	**2**	P	**Pn**	**09 45 57.6**	**-0.5**
KURK	**Kurchatov**	**7.62**	**2**	iP	**Pn**	**09 45 59.6**	**+0.2**
BRZS	**Berezniki**	**7.83**	**333**	Pg	**Pg**	**09 46 34.8**	**-2.8**
	comp=N,8.0nm,0.5s						
BRZS				Lg	Lg	09 48 19.1	
	comp=N,22nm,0.5s						
BVAR	**Borovoye Array**	**11.18**	**335**	Pn	**Pn**	**09 46 48.6**	**+0.5**
	comp=N,0.7nm,0.3s,baz=138,slow=13,SNR=16						
BVAR				Sn	**Sn**	**09 48 47.5**	**-6.0**
	comp=N,0.5nm,0.3s,baz=343,slow=38,SNR=4.4						
BVAR				Lg	Lg	09 49 58.5	
	comp=N,0.4nm,0.3s,baz=339,slow=40,SNR=2.8						
BRVK	**Borovoye**	**11.24**	**335**	⇑Pn	**Pn**	**09 46 48.3**	**-0.7**
	comp=N,4.4nm,0.9s						
BRVK				⇑Sn	**Sn**	**09 48 54.1**	**-0.9**
	comp=N,3.8nm,0.6s						
BRVK				⇓Lg	Lg	09 50 08.8	
	comp=N,21nm,0.9s						
BRVK	**Borovoye**	**11.24**	**335**	iP	**Pn**	**09 46 47.7**	**-1.3**
ZALV	**Zalesovo Beam**	**11.72**	**20**	Pn	**Pn**	**09 46 57.2**	**+1.8**
	comp=N,0.4nm,0.3s,baz=207,slow=13,SNR=13						
ZALV				Lg	Lg	09 50 14.6	
	baz=206,slow=29,SNR=3.4						
ZALV				LR	LR	09 51 53.2	
	comp=N,31nm,19.3s,baz=42,slow=40						
GTA	**Gaotai**	**16.72**	**95**	eP	**P**	**09 48 05.5**	**+0.3**
GTA				pP	sP	09 48 09.3	+1.2
GTA				sP	pP	09 48 11.5	+4.3
GTA				pmax	pmax		
	comp=N,3.0nm,1.0s						
ARU	**Arti**	**18.27**	**324**	P	**Pn**	**09 48 19.8**	**-2.1**
ARU				S	**Sn**	**09 51 46.3**	**+0.2**
SONM	**Songino Array**	**20.33**	**67**	P	Pn	09 48 45.7	-1.1
	comp=N,0.5nm,0.5s,baz=265,slow=12,SNR=4.1						
GNI	**Garni**	**25.02**	**275**	iP	**P**	**09 49 34.7**	**+1.9**
GNI				pmax	pmax		
	comp=Z,14nm,1.4s						
KIV	**Kislovodsk**	**25.58**	**284**	eP	**P**	**09 49 38.6**	**+0.9**
KIV				pmax	pmax		
	comp=Z,15nm,0.8s						
GRNR	**Gornyy**	**39.62**	**58**	eP	P	09 51 33.4	-6.7
GRNR				MLR	MLR		
	comp=Z,70nm,11.0s						
TORD	**Torodi Ar. Bea**	**71.25**	**271**	P	**P**	**09 55 27.3**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=46,slow=5.0,SNR=3.3						

*NNC **16** 09:53:37.6±0.3, 43.00N×78.17E, h0km, mb2.6, mpv3.1, Error ellipse: s-maj=4.2km s-min=1.3km az=173.0*
*SOME **16** 09:53:38.3, 43.02N×78.17E, h10km*
*KRNET **16** 09:53:38.1±0.1, 43.00N×78.17E, h18km, mb3.0*
ISC 16 09:53:38.7±0.7, 43.02N±0.02×78.13E±0.01, h10km, n67, σ1.28/125, 12C-7D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	**Saty**	**0.21**	**79**	eP	**Pg**	**09 53 42.4**	**-0.8**
	39nm,0.1s						
SATY				eS	**Sg**	**09 53 45.4**	**-0.7**
	480nm,0.1s						
SATY	**Saty**	**0.21**	**79**	P	**Pg**	**09 53 42.3**	**-0.8**
	39nm,0.1s						
SATY				S	**Sg**	**09 53 45.4**	**-0.7**
	480nm,0.1s						
ZHN	**Zhinishke**	**0.27**	**56**	eP	**Pg**	**09 53 43.4**	**-0.9**
	baz=50						
ZHN				eS	**Sg**	**09 53 47.1**	**-0.9**
	baz=50						
ZHN	**Zhinishke**	**0.27**	**56**	eP	**Pg**	**09 53 43.4**	**-0.9**
	21nm,0.1s						
ZHN				eS	**Sg**	**09 53 47.1**	**-0.9**
	248nm,0.2s						
ZHN	**Zhinishke**	**0.27**	**56**	P	**Pg**	**09 53 43.4**	**-0.9**
	21nm,0.1s						
ZHN				S	**Sg**	**09 53 47.1**	**-0.9**
	248nm,0.2s						
ANVS	**Anan'yevo**	**0.41**	**235**	⇑iP	**Pg**	**09 53 46.5**	**-0.4**
	baz=40						
ANVS				⇑iS	**Sg**	**09 53 52.4**	**+0.1**
	baz=40						
KURS	**Kuram**	**0.47**	**4**	eP	**Pg**	**09 53 47.7**	**-0.2**
	baz=0.0						
KURS				eS	**Sg**	**09 53 54.4**	**+0.3**
	baz=0.0						
KURS	**Kuram**	**0.47**	**4**	eP	**Pg**	**09 53 47.7**	**-0.2**
	12nm,0.1s						
KURS				eS	**Sg**	**09 53 54.5**	**+0.3**
	66nm,0.3s						
KURS	**Kuram**	**0.47**	**4**	P	**Pg**	**09 53 47.7**	**-0.2**
	12nm,0.1s						
KURS				S	**Sg**	**09 53 54.4**	**+0.3**
	66nm,0.3s						
PRZ	**Przheval'sk**	**0.57**	**159**	⇑iP	**Pg**	**09 53 49.4**	**-0.4**
	baz=60						
PRZ				⇑iS	**Sg**	**09 53 56.8**	**-0.6**
	baz=60						
KPKS	**Kokpek**	**0.60**	**42**	eP	**Pg**	**09 53 49.6**	**-0.9**
	baz=40						
KPKS				eS	**Sg**	**09 53 57.7**	**-0.7**
	baz=40						
KPKS	**Kokpek**	**0.60**	**42**	eP	**Pg**	**09 53 49.6**	**-0.9**
	17nm,0.1s						
KPKS				eS	**Sg**	**09 53 57.8**	**-0.7**
	89nm,0.4s						
UZB	**Uzynbulak**	**0.67**	**79**	eP	**Pg**	**09 53 50.3**	**-1.4**
	baz=77						
UZB				eS	**Sg**	**09 53 59.0**	**-1.5**
	baz=77						
UZB	**Uzynbulak**	**0.67**	**79**	eP	**Pg**	**09 53 50.3**	**-1.4**
	8.9nm,0.1s						
UZB				eS	**Sg**	**09 53 59.0**	**-1.5**
	34nm,0.1s						
UZB	**Uzynbulak**	**0.67**	**79**	P	**Pg**	**09 53 50.3**	**-1.4**
	8.9nm,0.1s						
UZB				S	**Sg**	**09 53 59.0**	**-1.5**
	34nm,0.1s						
KOTS	**Kotyrbulak**	**0.77**	**287**	eP	**Pg**	**09 53 53.6**	**0.0**
	baz=87						
KOTS				eS	**Sb**	**09 54 04.7**	**-0.3**
	baz=87						
KOTS	**Kotyrbulak**	**0.77**	**287**	eP	**Pg**	**09 53 53.6**	**0.0**
	8.1nm,0.1s						
KOTS				eS	**Sb**	**09 54 04.7**	**-0.3**
	9.9nm,0.2s						
KOTS	**Kotyrbulak**	**0.77**	**287**	P	**Pg**	**09 53 53.6**	**0.0**
	8.1nm,0.1s						
KOTS				S	**Sb**	**09 54 04.7**	**-0.3**
	9.9nm,0.2s						
MDOK	**Medeo**	**0.80**	**281**	eP	**Pg**	**09 53 53.7**	**-0.5**
	baz=82						
MDOK				eS	**Sg**	**09 54 04.8**	**0.0**
	baz=82						
MDOK	**Medeo**	**0.80**	**281**	eP	**Pg**	**09 53 53.7**	**-0.5**
	6.0nm,0.1s						
MDOK				eS	**Sg**	**09 54 04.8**	**0.0**
	6.8nm,0.3s						
MDOK	**Medeo**	**0.80**	**281**	⇓P	**Pg**	**09 53 53.6**	**-0.6**
	0.9nm,0.2s						
MDOK				S	**Sg**	**09 54 04.7**	**0.0**
	6.3nm,0.6s						
MDOK	**Medeo**	**0.80**	**281**	Pg	**Pg**	**09 53 53.7**	**-0.6**
	6.0nm,0.1s						
MDOK				Lg	Lg	09 54 04.7	
	6.8nm,0.3s						
TNSS	**Tian-Shan**	**0.86**	**272**	eP	**Pg**	**09 53 55.2**	**-0.3**
	baz=73						
TNSS				eS	**Sb**	**09 54 07.3**	**-0.6**
	baz=73						
TNSS	**Tian-Shan**	**0.86**	**272**	eP	**Pg**	**09 53 55.1**	**-0.3**
	1.1nm,0.1s						
TNSS				eS	**Sb**	**09 54 07.2**	**-0.6**
	6.9nm,0.2s						
TNSS	**Tian-Shan**	**0.86**	**272**	P	**Pg**	**09 53 55.1**	**-0.3**
	1.1nm,0.1s						
TNSS				S	**Sb**	**09 54 07.2**	**-0.6**
	6.9nm,0.2s						
SHLS	**Shalkode**	**0.99**	**81**	eP	**Pn**	**09 54 01.7**	**+2.9**
	baz=82						
SHLS				eS	**Sn**	**09 54 18.7**	**+5.8**
	baz=82						
SHLS	**Shalkode**	**0.99**	**81**	eP	**Pn**	**09 54 01.6**	**+2.9**
	4.9nm,0.1s						
SHLS				eS	**Sn**	**09 54 18.6**	**+5.8**
	16nm,0.3s						
SHLS	**Shalkode**	**0.99**	**81**	P	**Pn**	**09 54 01.6**	**+2.9**
	4.9nm,0.1s						
SHLS				S	**Sn**	**09 54 18.6**	**+5.8**
	16nm,0.3s						
PDGK	**Podgornoye**	**1.04**	**72**	P	**Pg**	**09 53 56.9**	**-2.0**
	2.4nm,0.2s						
PDGK				S	**Sg**	**09 54 10.3**	**-2.2**
	5.7nm,0.3s						
PDGK	**Podgornoye**	**1.04**	**72**	⇓P	**Pg**	**09 53 56.8**	**-2.0**
	1.4nm,0.3s						
PDGK				⇓S	**Sg**	**09 54 10.2**	**-2.2**
	7.3nm,0.5s						
IZV	**Izvestkoviy**	**1.11**	**271**	eP	**Pg**	**09 53 59.5**	**-0.6**
	baz=72						
IZV				eS	**Sb**	**09 54 14.7**	**0.0**
	baz=72						
IZV	**Izvestkoviy**	**1.11**	**271**	eP	**Pg**	**09 53 59.5**	**-0.6**
	2.3nm,0.1s						
IZV				eS	**Sb**	**09 54 14.7**	**0.0**
	12nm,0.2s						
IZV	**Izvestkoviy**	**1.11**	**271**	P	**Pg**	**09 53 59.5**	**-0.6**
	2.3nm,0.1s						
IZV				S	**Sb**	**09 54 14.7**	**0.0**
	12nm,0.2s						
KDJ	**Kajisay**	**1.13**	**219**	⇑iP	**Pg**	**09 53 59.5**	**-0.9**
	baz=20						
KDJ				⇑iS	**Sg**	**09 54 13.7**	**-1.4**
	baz=20						
CHKK	**Chushkaly**	**1.18**	**316**	eP	**Pb**	**09 54 00.7**	**-0.5**
	baz=16						
CHKK				eS	**Sn**	**09 54 17.0**	**-0.4**
	baz=16						
CHKK	**Chushkaly**	**1.18**	**316**	eP	**Pb**	**09 54 00.7**	**-0.5**
	2.8nm,0.2s						
CHKK				eS	**Sn**	**09 54 16.9**	**-0.4**
	25nm,0.3s						
CHKK	**Chushkaly**	**1.18**	**316**	P	**Pb**	**09 54 00.7**	**-0.5**
	2.8nm,0.2s						
CHKK				S	**Sn**	**09 54 16.9**	**-0.4**
	25nm,0.3s						
ARXS	**Arharly**	**1.21**	**350**	eP	**Pn**	**09 54 01.0**	**-0.9**
	5.6nm,0.1s						
ARXS				eS	**Sg**	**09 54 17.5**	**-0.3**
	31nm,0.2s						
ARXS	**Arharly**	**1.21**	**350**	P	**Pn**	**09 54 01.0**	**-0.9**
	5.6nm,0.1s						
ARXS				S	**Sg**	**09 54 17.5**	**-0.3**
	31nm,0.2s						
KTBS	**Karatobe**	**1.26**	**304**	eP	**Pb**	**09 54 02.2**	**-0.5**
	1.7nm,0.2s						
KTBS				eS	**Sn**	**09 54 19.5**	**0.0**
	20nm,0.3s						
KTBS	**Karatobe**	**1.26**	**304**	P	**Pb**	**09 54 02.2**	**-0.5**
	1.7nm,0.2s						
KTBS				S	**Sn**	**09 54 19.5**	**0.0**
	20nm,0.3s						
KUU	**Kurty**	**1.57**	**305**	eP	**Pb**	**09 54 07.6**	**-0.2**
	baz=4.0						
KUU				eS	**Sg**	**09 54 28.6**	**-0.5**
	baz=4.0						
KUU	**Kurty**	**1.57**	**305**	eP	**Pb**	**09 54 07.6**	**-0.2**
	1.6nm,0.1s						
KUU				eS	**Sg**	**09 54 28.6**	**-0.5**
	17nm,0.3s						
KUU	**Kurty**	**1.57**	**305**	P	**Pb**	**09 54 07.6**	**-0.2**
	1.6nm,0.1s						
KUU				S	**Sg**	**09 54 28.6**	**-0.5**
	17nm,0.3s						
KST	**Kastek**	**1.59**	**272**	eP	**Pb**	**09 54 08.5**	**-0.6**
	2.1nm,0.4s						
KST				eS	**Sg**	**09 54 30.1**	**+0.4**
	3.3nm,0.4s						
KST	**Kastek**	**1.59**	**272**	P	**Pb**	**09 54 08.5**	**-0.6**
	2.1nm,0.4s						
KST				S	**Sg**	**09 54 30.1**	**+0.4**
	3.3nm,0.4s						
ULHL	**Ulahol**	**1.59**	**242**	⇑iP	**Pb**	**09 54 07.9**	**-0.4**
	baz=43						
ULHL				⇑iS	**Sb**	**09 54 28.4**	**-0.2**
	baz=43						
KTMS	**Ketmen**	**1.68**	**75**	eP	**Pb**	**09 54 08.5**	**-1.3**
	baz=73						
KTMS				eS	**Sb**	**09 54 30.2**	**-0.9**
	baz=73						
KTMS	**Ketmen**	**1.68**	**75**	eP	**Pb**	**09 54 08.5**	**-1.3**
	6.5nm,0.1s						
KTMS				eS	**Sb**	**09 54 30.2**	**-0.9**
	10nm,0.3s						
KTMS	**Ketmen**	**1.68**	**75**	P	**Pb**	**09 54 08.5**	**-1.3**
	6.5nm,0.1s						
KTMS				S	**Sb**	**09 54 30.2**	**-0.9**
	10nm,0.3s						
BOOM	**Boomskoye usch**	**1.69**	**253**	⇓iP	**Pb**	**09 54 09.6**	**-0.5**
	baz=54						
BOOM				⇓iS	**Sg**	**09 54 32.0**	**-1.2**
	baz=54						
DGS	**Degeres**	**1.74**	**278**	eP	**Pb**	**09 54 10.8**	**0.0**
	baz=79						
DGS				eS	**Sg**	**09 54 34.0**	**-0.6**
	baz=79						
DGS	**Degeres**	**1.74**	**278**	eP	**Pb**	**09 54 10.8**	**0.0**
	1.7nm,0.4s						
DGS				eS	**Sg**	**09 54 34.0**	**-0.6**
	5.4nm,0.3s						
DGS	**Degeres**	**1.74**	**278**	P	**Pb**	**09 54 10.8**	**0.0**
	1.7nm,0.4s						
DGS				S	**Sg**	**09 54 34.0**	**-0.6**
	5.4nm,0.3s						
DJR	**Jarkent**	**1.78**	**42**	eP	**Pb**	**09 54 10.9**	**-0.7**
	2.6nm,0.1s						
DJR				eS	**Sb**	**09 54 34.1**	**+0.1**
	14nm,0.3s						
DJR	**Jarkent**	**1.78**	**42**	P	**Pb**	**09 54 10.9**	**-0.7**
	2.6nm,0.1s						
DJR				S	**Sb**	**09 54 34.1**	**+0.1**
	14nm,0.3s						
KRBS	**Karabastau**	**1.91**	**292**	eP	**Pb**	**09 54 13.9**	**+0.2**
	1.9nm,0.3s						
KRBS				eS	**Sg**	**09 54 39.4**	**-0.8**
	5.4nm,0.2s						
KRBS	**Karabastau**	**1.91**	**292**	Pg	**Pb**	**09 54 13.9**	**+0.2**
	1.9nm,0.3s						
KRBS				Lg	Lg	09 54 39.4	
	5.4nm,0.2s						
TDK	**Taldyqorghan**	**1.99**	**6**	eP	**Pb**	**09 54 14.9**	**-0.2**
	23nm,0.2s						
TDK				eS	**Sb**	**09 54 41.0**	**+1.0**
	55nm,0.4s						
TDK	**Taldyqorghan**	**1.99**	**6**	Pg	**Pb**	**09 54 14.9**	**-0.2**
	23nm,0.2s						
TDK				Lg	Lg	09 54 41.0	
	55nm,0.4s						
NRN	**Naryn**	**2.24**	**226**	⇑iP	**Pb**	**09 54 17.9**	**-1.5**
	baz=27						
NRN				⇑iS	**Sb**	**09 54 45.9**	**-1.3**
	baz=27						
KAPS	**Kapalarasan**	**2.43**	**21**	eP	**Pb**	**09 54 23.0**	**+0.4**
	1.9nm,0.3s						
KAPS				eS	**Sg**	**09 54 55.1**	**-1.7**
	6.6nm,0.3s						
KAPS	**Kapalarasan**	**2.43**	**21**	Pg	**Pb**	**09 54 23.0**	**+0.4**
	1.9nm,0.3s						
KAPS				Lg	Lg	09 54 55.1	
	6.6nm,0.3s						
CHMS	**Chumysh**	**2.48**	**271**	⇓S	**Sb**	**09 54 53.8**	**0.0**
	2.0nm,0.5s						
AAK	**Ala-Archa**	**2.70**	**263**	⇑S	**Sb**	**09 54 58.8**	**-1.6**
	2.5nm,0.6s						
MK31	**Makanchi Array**	**4.79**	**37**	⇓Pn	**Pn**	**09 54 50.4**	**-0.6**
	baz=211,slow=13,SNR=12						
MK31				Lg	Lg	09 56 09.3	
	0.1nm,0.2s,baz=216,slow=28,SNR=7.1						
KK31	**Karatay Array**	**5.58**	**273**	⇑Lg	Lg	09 56 37.9	
	0.2nm,0.3s,baz=177,slow=22,SNR=3.6						

*THE **16** 09:54:40.4, 34.85N×24.24E, h23km±2km, ML2.9/5, Error ellipse: s-maj=3.7km s-min=0.9km az=196.0*
*ATH **16** 09:54:40.1, 34.87N×24.24E, h23km±4km, ML2.8/5, Error ellipse: s-maj=5.0km s-min=1.4km az=216.0*
ISC 16 09:54:40.9±1.0, 34.89N±0.05×24.25E±0.03, h18km±4km, n16, σ0.63/26, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVDS	**Gavdos**	**0.14**	**251**	P	**Pg**	**09 54 44.9**	**-0.2**
GVDS				S	**Sg**	**09 54 48.9**	**+1.0**
	6μm,0.2s						
GVD	**Gavdhos**	**0.14**	**250**	P	**Pg**	**09 54 44.8**	**-0.4**
GVD				S	**Sg**	**09 54 48.5**	**+0.5**
	5μm,0.2s						
GVD	**Gavdhos**	**0.14**	**250**	P	**Pg**	**09 54 44.8**	**-0.4**
GVD				S	**Sg**	**09 54 47.8**	**-0.2**
GVD				AML	AML	09 54 50.7	
	comp=N,11424μm,0.2s						
GVD				AML	AML	09 54 51.6	
	comp=E,11610μm,0.3s						
SIVA	**Sivas**	**0.47**	**74**	P	**Pg**	**09 54 50.9**	**+0.3**
SIVA				S	**Sg**	**09 54 57.7**	**+0.7**
	comp=E,1μm,0.5s						
SIVA	**Sivas**	**0.47**	**74**	P	**Pg**	**09 54 50.8**	**+0.2**
SIVA				S	**Sg**	**09 54 57.0**	**-0.1**
SIVA				AML	AML	09 55 03.5	
	comp=N,2794μm,0.4s						
SIVA				AML	AML	09 55 03.6	
	comp=E,3144μm,0.4s						
PRNS	**Prines Rethymn**	**0.52**	**23**	P	**Pg**	**09 54 50.5**	**-0.8**
VAM	**Vamos**	**0.52**	**355**	P	**Pg**	**09 54 51.0**	**-0.4**
VAM				S	**Sb**	**09 54 59.2**	**+0.6**
	comp=E,850nm,0.4s						
VAM	**Vamos**	**0.52**	**355**	P	**Pg**	**09 54 50.9**	**-0.5**
VAM				S	**Sb**	**09 54 59.2**	**+0.6**
VAM				AML	AML	09 55 01.7	
	comp=E,1759μm,0.5s						
VAM				AML	AML	09 55 02.9	
	comp=N,1613μm,0.3s						
KNDR	**Palaiochora Ch**	**0.58**	**307**	P	**Pb**	**09 54 51.9**	**-0.5**
IMMV	**Iera Moni Meta**	**0.61**	**339**	P	**Pb**	**09 54 52.2**	**-0.9**
IMMV				S	**Sg**	**09 55 02.6**	**+1.3**
	comp=N,1μm,0.3s						
IMMV	**Iera Moni Meta**	**0.61**	**339**	P	**Pb**	**09 54 52.2**	**-0.9**
IMMV				S	**Sg**	**09 55 02.1**	**+0.8**
IMMV				AML	AML	09 55 04.0	
	comp=E,2994μm,0.3s						
IMMV				AML	AML	09 55 06.2	
	comp=N,2271μm,0.3s						
IDI	**Anoyia**	**0.66**	**52**	P	**Pb**	**09 54 53.0**	**-0.8**
IDI				S	**Sb**	**09 55 02.7**	**0.0**
IDI				AML	AML	09 55 08.8	
	comp=N,488μm,0.4s						
IDI				AML	AML	09 55 10.6	
	comp=E,462μm,0.4s						
RODP	**Rodopos**	**0.78**	**329**	P	**Pb**	**09 54 56.0**	**0.0**
LAST	**Lasithi**	**1.04**	**75**	P	**Pb**	**09 55 00.1**	**-0.3**
NPS	**Neapolis**	**1.18**	**71**	P	**Pn**	**09 55 02.5**	**0.0**
ANKY	**Antikythira Is**	**1.25**	**322**	P	**Pb**	**09 55 04.1**	**+0.1**

*MDD **16** 10:42:31.3±0.9, 36.38N×1.68E, h0km, mb4.0/13, Error ellipse: s-maj=9.3km s-min=4.6km az=105.0, PRXIMO*
*CRAAG **16** 10:42:31.9, 36.29N×1.68E, Ml3.3*
ISC 16 10:42:30.9±1.5, 36.43N±0.04×1.52E±0.05, h2km±12km, n46, σ2.11/71, 1C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.14**	**178**	P	**Pg**	**10 42 35.5**	**+1.9**
ECHA	**Ech Chlef**	**0.31**	**204**	P	**Pg**	**10 42 35.6**	**-1.2**
ECHF	**Ech Chlef**	**0.31**	**208**	P	**Pg**	**10 42 35.6**	**-1.3**
EANR	**'Ain N'Sour**	**0.59**	**216**	P	**Pb**	**10 42 44.0**	**+0.1**
EANR	**'Ain N'Sour**	**0.59**	**216**	P	**Pb**	**10 42 44.0**	**+0.1**
OKGL	**Djebel Kef Gue**	**0.81**	**241**	P	**Pn**	**10 42 50.0**	**+0.7**
OKGL	**Djebel Kef Gue**	**0.81**	**241**	⇑P	**Pn**	**10 42 49.3**	**-0.1**
	218nm,0.2s,SNR=18						
OKGL				S	**Sn**	**10 43 01.5**	**-0.5**
	3μm,0.4s,SNR=7.9						
ETRT	**Tiaret**	**1.06**	**190**	P	**Pg**	**10 42 51.0**	**-0.1**
ETRT	**Tiaret**	**1.06**	**190**	P	**Pg**	**10 42 51.0**	**-0.1**
OJGS	**Djebel Guires**	**1.12**	**214**	P	**Pb**	**10 42 49.0**	**-4.0**
OJGS	**Djebel Guires**	**1.12**	**214**	P	**Pb**	**10 42 49.0**	**-4.0**
OJBR	**Djebel Berber**	**1.28**	**229**	P	Pn	10 42 47.0	-8.8
OJBR	**Djebel Berber**	**1.28**	**229**	P	Pn	10 42 47.0	-8.8
ODJA	**Bouhanifia**	**1.75**	**231**	P	**Pn**	**10 43 02.0**	**-0.2**
ODJA	**Bouhanifia**	**1.75**	**231**	P	**Pn**	**10 43 02.0**	**-0.2**
CART	**Cartagena**	**2.33**	**300**	P	**Pn**	**10 43 10.3**	**+0.2**
CART				S	**Sn**	**10 43 36.5**	**-2.7**
CART	**Cartagena**	**2.33**	**300**	eP	**Pn**	**10 43 10.2**	**+0.2**

CART eS Sn 10 43 36.5 -2.7
EIBI Ibiza 2.59 357 P Pn 10 43 15.8 +2.0
8.9nm,0.2s,SNR=9.8
EIBI S Sn 10 43 44.5 -1.4
26nm,0.2s,SNR=6.3
EMUR La Murta 2.62 303 P Pn 10 43 14.9 +0.7
2.1nm,0.2s,SNR=13
EMUR S Sn 10 43 46.9 +0.4
15nm,0.4s,SNR=10.0
EBEN2 Beniarda presa 2.62 329 S Sn 10 43 45.8 -0.7
8.9nm,0.1s,SNR=7.9
ENIJ Nijar 3.05 281 P Pn 10 43 21.8 +1.7
1.9nm,0.1s,SNR=7.9
ENIJ S Sn 10 43 54.1 -3.0
17nm,0.3s,SNR=7.9
ETOB Tobarra 3.29 313 P Pn 10 43 25.5 +2.1
2.0nm,0.1s,SNR=21
ETOB S Sn 10 44 03.0 -0.2
4.7nm,0.2s,SNR=7.5
ETOS Mallorca 3.48 17 P Pn 10 43 26.3 +0.3
0.8nm,0.2s,SNR=7.9
ETOS S Sn 10 44 04.8 -3.0
1.7nm,0.2s,SNR=7.9
EBER Berja 3.58 279 P Pn 10 43 28.5 +1.0
7.5nm,0.2s,SNR=25
EBER S Sn 10 44 11.1 +0.7
4.2nm,0.2s
SESP Santiago Espad 3.66 299 P Pn 10 43 31.7 +3.1
5.7nm,0.2s,SNR=7.9
SESP S Sn 10 44 13.4 +1.1
15nm,0.2s,SNR=7.9
SESP Santiago Espad 3.66 299 P Pn 10 43 24.2 -4.4
SESP S Sn 10 44 14.3 +2.0
ECHE Chera 3.72 329 P Pn 10 43 31.2 +2.0
0.5nm,0.1s,SNR=7.9
ECHE S Sn 10 44 12.9 -0.7
0.7nm,0.2s,SNR=7.9
EQES Quesada 3.92 292 P Pn 10 43 34.8 +2.7
1.5nm,0.1s,SNR=15
EQES S Sn 10 44 20.8 +2.1
1.1nm,0.2s,SNR=7.1
JBK JBK 3.94 239 P Pn 10 43 33.7 +1.2
JBK S Sg 10 44 42.2 +4.6
EQUE Quentar 4.06 282 P Pn 10 43 36.7 +2.7
2.5nm,0.2s,SNR=7.9
EQUE S Sn 10 44 26.0 +3.9
6.1nm,0.5s,SNR=7.9
ELGU Los Guajares, 4.16 277 P Pn 10 43 36.9 +1.4
2.8nm,0.2s,SNR=7.9
ELGU S Sn 10 44 24.1 -0.6
6.5nm,0.3s,SNR=7.9
EMOS Mosqueruela 4.23 339 P Pn 10 43 39.0 +2.6
2.7nm,0.2s,SNR=26
EMOS S Sn 10 44 25.1 -1.3
6.0nm,0.2s
TDRA Tendrara 4.47 222 P Pn 10 43 40.4 +0.5
TDRA S Sg 10 44 54.4 -0.2
EGOR Sierra Gorda, 4.57 280 P Pn 10 43 44.8 +3.7
1.4nm,0.2s,SNR=7.9
EGOR S Sn 10 44 35.4 +0.5
0.1nm,0.1s,SNR=7.9
ERTA Horta de San J 4.61 349 P Pn 10 43 43.3 +1.7
0.2nm,0.1s,SNR=7.9
ERTA S Sn 10 44 33.5 -2.2
0.9nm,0.2s,SNR=7.9
AKLM AKL 4.80 248 P Pn 10 43 46.3 +2.1
AKLM S Sg 10 45 00.9 -4.1
FIGM Figuig 4.87 209 P Pn 10 43 46.5 +1.3
FIGM S Sb 10 44 60.0 +4.0
EMIJ Mijas 5.07 273 P Pn 10 43 47.2 -0.7
1.1nm,0.2s,SNR=7.9
EMIJ S Sn 10 44 44.2 -2.9
1.9nm,0.5s,SNR=7.9
EADA Adamuz 5.16 291 P Pn 10 43 50.3 +1.2
0.5nm,0.2s,SNR=7.9
EADA S Sn 10 44 48.9 -0.3
0.8nm,0.2s,SNR=7.9
ESDC Sonseca Array 5.41 308 P Pn 10 43 53.7 +1.3
0.4nm,0.2s,baz=123,slow=13,SNR=13
ESDC S Sn 10 44 53.4 -1.9
0.3nm,0.3s,baz=122,slow=24,SNR=7.3
PAB San Pablo 5.58 306 P Pn 10 43 56.4 +1.5
0.5nm,0.2s,SNR=7.9
PAB S Sn 10 44 58.0 -1.7
0.9nm,0.5s,SNR=7.9
ECAB El Cabril 5.78 289 P Pn 10 43 58.4 +0.9
0.8nm,0.2s,SNR=7.5
ECAB S Sn 10 45 01.8 -2.5
1.4nm,0.3s,SNR=7.9
EMIN Mina Concepcio 6.69 284 P Pn 10 44 10.2 +0.2
0.7nm,0.2s,SNR=7.9
PVAQ Vaqueiros 7.47 280 eP Pn 10 44 21.8 +1.1
PVAQ Vaqueiros 7.47 280 P Pn 10 44 21.8 +1.1
ELAN Lanestosa 7.79 332 P Pn 10 44 28.9 +3.7
1.1nm,0.2s,SNR=7.9

*DJA **16** 10:50:01.9±0.7, 8°S±3°×10°7E±°, h28km±7km, M4.7/17, mB5.2/5, mb4.8/7, MLv4.6/17, Mw(mB)4.6/5*
*NEIC **16** 10:50:03.6±2.0, 7.79S±0.07×106.54E±0.05, h67km±5km, mb4.6/42, Error ellipse: s-maj=10.3km s-min=7.3km az=193.0*
*IDC **16** 10:50:07.3±1.4, 7.60S×106.69E, h99km±10km, mb4.0/20, mb1 4.0/21, mb1mx3.9/33, mbtmp4.3/21, MS3.2/12, Ms1 3.2/12, ms1mx3.0/38, Error ellipse: s-maj=18.5km s-min=11.1km az=58.0*
ISC 16 10:50:02.0±0.8, 7.84S±0.05×106.48E±0.04, h56km±7km, n140, σ1.61/140, mb4.6/38, MS3.2/10, Jawa

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CNJI Cibinong 0.83 51 P Pn 10 50 17.0 -0.6
CNJI S Sn 10 50 28.1 -1.0
SKJI Sukabumi 0.83 5 P Pn 10 50 17.8 +0.1
SKJI S Sn 10 50 29.0 -0.1
DBJI Dramaga 1.30 12 P Pn 10 50 25.4 +1.5
DBJI S Sn 10 50 42.5 +2.2
CISI Cisompet, Garu 1.35 78 P Pn 10 50 23.7 -0.9
CISI Cisompet, Garu 1.35 78 Pn 10 50 23.3 -1.3
CISI Sn Sn 10 50 40.2 -1.3
LEM Lembang 1.51 48 P Pn 10 50 28.2 +1.4
281nm,0.3s,baz=162,slow=23,SNR=85
LEM S Sn 10 50 47.6 +2.1
352nm,0.3s,baz=128,slow=23,SNR=18
LEM LR LR 10 51 15.9
comp=Z,1μm,19.2s,baz=227,slow=57
LEM Lembang 1.51 48 P Pn 10 50 28.5 +1.6
SBJI Serang 1.74 348 P Pn 10 50 32.1 +2.2
SBJI S Sn 10 50 53.4 +2.4
KPJI Karang Pucung 2.48 79 P Pn 10 50 41.1 +1.2
BLSI Bandar Lampung 2.74 333 P Pn 10 50 46.0 +2.4
BLSI S Sn 10 51 17.4 +1.8
KASI Kota Agung 3.03 319 P Pn 10 50 49.1 +1.6
KLSI 3.58 331 P Pn 10 50 57.2 +2.2
LWLI Liwa 3.69 319 P Pn 10 50 58.5 +1.8
SMRI Semarang 4.00 79 P Pn 10 51 01.4 +0.6
SMRI Semarang 4.00 79 Pn 10 51 00.1 -0.8
UGM Wanagama 4.00 91 P Pn 10 51 01.0 +0.1
UGM Wanagama 4.00 91 Pn 10 50 59.7 -1.2
UGM Sn Sn 10 51 44.6 -1.9
MDSI Maura Dua 4.04 325 P Pn 10 51 03.4 +2.0
PCJI Pacitan 4.66 95 P Pn 10 51 10.3 +0.4
MNAI Manna 4.92 314 P Pn 10 51 15.3 +1.8
MNAI Manna 4.92 314 Pn Pn 10 51 14.7 +1.3
MNAI Sn Sn 10 52 04.6 -4.5
TPI Tanjungpandan 5.18 13 P Pn 10 51 18.3 +1.3
0.2nm642nm81nm,0.9s
KSI Kapahiang 5.68 317 P Pn 10 51 31.7 +7.8
JAGI Jajag, Banyuwa 7.62 95 P Pn 10 51 52.0 +1.6
0.4nm2μm60nm,0.6s
JAGI Jajag, Banyuwa 7.62 95 Pn 10 51 51.5 +1.1
JAGI Sn Sn 10 53 15.4 0.0
PPSI Pulau Pagai 8.18 308 P Pn 10 51 57.6 -0.5
2μm139nm,0.6s
PDSI Padang 9.13 319 P Pn 10 52 18.7 +7.6
COCO West Island 10.44 245 Pn Pn 10 52 29.3 +0.2
COCO Sn Sn 10 54 17.9 -6.7
PSI Prapat 12.98 324 LR LR 10 58 53.1
comp=Z,99nm,18.1s,baz=148,slow=41
KAPI Kappang 13.48 79 P Pn 10 53 10.9 +0.3
0.4nm,0.3s,baz=230,slow=7.9,SNR=3.3
KAPI LR LR 10 58 46.2
comp=Z,84nm,21.1s,baz=262,slow=39
KAPI Kappang 13.48 79 Pn 10 53 11.4 +0.8
TTSI Tana Toraja 14.10 71 P P 10 53 30.8 +5.8
MMRI Maumere 15.61 94 P P 10 53 41.4 -0.5
GIRL Giralia 16.50 154 P Pn 10 53 48.9 -0.9
GIRL IAmb IAmb 10 53 59.9
comp=Z,58nm,0.9s
KKM Kota Kinabalu 16.86 35 P P 10 53 56.0 +0.2
KKM IAmb IAmb 10 54 06.7
comp=Z,44nm,1.4s
MRSI Marisa 17.48 63 P P 10 54 02.4 -0.2
comp=Z,773nmcomp=Z,26nm,0.7s
SOEI Soe 17.68 98 P P 10 54 05.6 +0.7
SOEI IAmb IAmb 10 54 16.0
comp=Z,53nm,1.2s
PSA00 Pilbara Seismi 18.78 138 P Pn 10 54 18.2 +0.4
NLAI Namlea 21.02 79 P P 10 54 41.4 +0.2
comp=Z,63nm,0.5s
FITZ Fitzroy Crossi 21.25 121 P P 10 54 45.1 +1.5
comp=Z,3.3nm,0.6s,baz=280,slow=8.7,SNR=7.5
FITZ LR LR 11 03 05.6
comp=Z,31nm,19.2s,baz=306,slow=37
FITZ Fitzroy Crossi 21.25 121 P P 10 54 44.7 +1.0
MORW Morawa 22.96 158 P P 10 55 03.8 +2.0
MORW IAmb IAmb 10 55 21.9
comp=Z,24nm,1.2s
KNRA Kununurra 23.14 112 P P 10 55 03.3 -0.5
KNRA IAmb IAmb 10 55 10.2
comp=Z,34nm,1.4s
SIJI Sorong 25.65 76 P P 10 55 25.2 -1.6
comp=Z,14nm,0.7s,baz=187,slow=4.2,SNR=5.9
FAKI Fak Fak 26.10 81 P P 10 55 29.1 -1.8
FAKI IAmb IAmb 10 55 30.5
comp=Z,30nm,1.1s
NWAO Narrogin (SRO) 26.89 160 LR LR 11 05 17.7
comp=Z,88nm,21.9s,baz=306,slow=34
CMAR Chiang Mai Arr 27.16 344 P P 10 55 38.4 -2.0
comp=Z,0.9nm,0.5s,baz=180,slow=8.7,SNR=5.3
CMAR LR LR 11 07 42.2
comp=Z,23nm,18.2s,baz=168,slow=39
H01W3 Cape Leeuwin H 27.82 166 T T 11 25 17.0
baz=342,slow=78,SNR=22
H01W1 Cape Leeuwin H 27.84 166 T T 11 25 22.9
baz=342,slow=78,SNR=27
H01W2 Cape Leeuwin H 27.84 166 T T 11 25 18.2
baz=342,slow=78,SNR=24
WB0 Warramunga Arr 29.53 117 P P 10 56 02.2 +0.7
WB0 IAmb IAmb 10 56 05.9
comp=Z,11nm,1.4s
WRA Warramunga Arr 29.54 117 P P 10 56 02.1 +0.5
comp=Z,0.6nm,0.5s,baz=286,slow=12,SNR=13
WRAB Tennant Creek 29.55 117 P P 10 56 02.5 +0.8
WB2 Warramunga Arr 29.55 117 P P 10 56 02.0 +0.3
WR0 Warramunga Arr 29.72 117 P P 10 56 03.7 +0.5
PALK Pallekele 29.77 300 LR LR 11 07 28.5
comp=Z,28nm,18.3s,baz=70,slow=35
AS31 Alice Springs 30.64 124 P P 10 56 11.1 -0.2
ASAR Alice Springs 30.64 124 P P 10 56 12.2 +0.9
comp=Z,0.4nm,0.4s,baz=299,slow=8.5,SNR=14
ASAR PcP PcP 10 59 06.4 -2.2
comp=Z,0.7nm,0.9s,baz=306,slow=2.2,SNR=2.6
KMI Kunming 32.96 354 P P 10 56 38.0 +6.2
H08S2 Diego Garcia H 33.68 268 T T 11 32 13.9
baz=92,slow=76,SNR=12
H08S3 Diego Garcia H 33.69 268 T T 11 32 19.3
baz=92,slow=76,SNR=24
H08S1 Diego Garcia H 33.70 268 T T 11 32 16.0
baz=92,slow=76,SNR=8.2
YULB Yu-li 34.25 25 P P 10 56 43.1 +0.3
COEN Coen 36.51 103 P P 10 57 02.5 +0.1
COEN IAmb IAmb 10 57 02.9
comp=Z,8.2nm,0.9s
CD2 Chengdu 38.61 356 P P 10 57 20.0 +0.1
PMG Port Moresby 40.23 95 P P 10 57 33.9 +0.3
PMG IAmb IAmb 10 57 40.0
comp=Z,13nm,0.9s
JOW Kunigami 40.42 31 P P 10 57 35.2 +0.2
STKA Stephens Creek 40.47 131 P P 10 57 36.6 +1.2
comp=Z,3.3nm,0.5s,baz=301,slow=9.2,SNR=12
STKA Stephens Creek 40.47 131 P P 10 57 36.6 +1.2
NJ2 Nanjing 41.38 16 eP P 10 57 42.9 +0.1
XAN Xi'an 41.71 3 P P 10 57 51.0 +5.5
XAN pP pP 10 58 03.4 +3.6
LZH Lanzhou 43.76 357 eP P 10 58 03.0 +0.8
LZH pP pP 10 58 17.3 +0.6
LZH sP sP 10 58 27.6 +4.5
LZH PP PP 10 59 37.8 -7.3
EIDS Eidsvold 45.90 118 P P 10 58 21.8 +2.5
EIDS IAmb IAmb 10 58 27.5
comp=Z,7.1nm,1.1s
JNU Nakatsue 46.88 28 P P 10 58 25.7 -1.2
JNU IAmb IAmb 10 58 42.5
comp=Z,11nm,1.2s
GTA Gaotai 47.41 353 P P 10 58 30.4 -0.6
GTA pP pP 10 58 42.3 -3.3
GTA sP sP 10 58 48.1 -3.9
GTA PcP PcP 11 00 03.3 +2.4
HHC Hu-ho-hao-te 48.67 5 eP P 10 58 42.3 +1.6
KSRS Korea Array 49.31 23 P P 10 58 43.9 -1.6
comp=Z,3.0nm,0.8s,baz=214,slow=8.6,SNR=15
KSRS LR LR 11 21 12.3
comp=Z,10nm,18.8s,baz=335,slow=38
NIL Nilore 51.93 325 P P 10 59 05.1 -0.3
WMQ Urumqi 54.16 343 eP P 10 59 22.0 +0.3
WMQ pP pP 10 59 36.3 +0.3
CN2 Changchun 54.19 17 eP P 10 59 24.0 +2.2
KSH Kashi 54.94 331 P P 10 59 26.3 -1.2
KSH pP pP 10 59 43.3 +1.3
KSH PcP PcP 11 00 30.3 +1.5
KSH PP PP 11 01 32.4 +1.3
KSH S S 11 06 58.6 -6.7
KSH sS pS 11 07 25.1 +2.8
KBL Kabul 55.04 322 P P 10 59 27.9 -0.5
KBL IAmb IAmb 10 59 29.7
comp=Z,14nm,1.4s
SONM Songino Array 55.43 360 P P 10 59 30.3 -0.6
comp=Z,0.8nm,0.5s,baz=180,slow=11,SNR=8.5
SONM PcP PcP 11 00 30.6 +0.1
comp=Z,1.6nm,0.4s,baz=182,slow=4.0,SNR=16
WSAR Wadi Sarin 56.05 305 P P 10 59 37.4 +1.8
comp=Z,2.6nm,0.4s,baz=132,slow=6.1,SNR=4.6
NRN Naryn 56.44 333 P P 10 59 37.8 -0.7
NRN IAmb IAmb 10 59 38.8
comp=Z,7.1nm,1.1s
KDJ Kajisay 56.48 334 P P 10 59 39.5 +0.9
USA0B Ussuriysk Arra 56.70 22 P P 10 59 38.4 -1.4
USA0B IAmb IAmb 10 59 43.6
comp=Z,5.4nm,1.0s
USRK Ussuriysk Ar. 56.70 22 P P 10 59 38.4 -1.4
comp=Z,1.9nm,0.6s,baz=191,slow=5.4,SNR=9.1
BOOM Boomskoye usch 57.31 333 P P 10 59 44.4 0.0
BTK Batken 57.93 328 P P 10 59 49.0 +0.4
MK31 Makanchi Array 58.50 341 P P 10 59 51.0 -1.5
MK31 IAmb IAmb 10 59 53.4
comp=Z,6.5nm,1.4s
MKAR Makanchi Array 58.50 341 P P 10 59 51.0 -1.5
comp=Z,3.0nm,0.5s,baz=151,slow=7.2,SNR=35
MKAR LR LR 11 26 44.1
comp=Z,25nm,21.4s,baz=176,slow=38
MAKZ Makanchi 58.61 341 P P 10 59 52.7 -0.5
MAKZ IAmb IAmb 10 59 54.3
comp=Z,3.9nm,1.1s
DZM Mont Dzumac 59.29 111 P P 10 59 54.9 -3.7
TLY Talaya 59.33 358 LR LR 11 26 22.2
comp=Z,52nm,18.1s,baz=165,slow=37
KKAR Karatay Array 60.33 330 P P 11 00 04.4 -0.7
ASAJ Asahikawa 61.15 29 LR LR 11 31 26.8
comp=Z,17nm,18.2s,baz=136,slow=41
KURK Kurchatov 63.11 341 P P 11 00 23.8 +0.2
GEYT Alibeck 64.05 319 P P 11 00 30.9 +0.7
comp=Z,1.6nm,0.4s,baz=133,slow=6.3,SNR=4.4
ZAA0 Zalesovo Array 64.21 346 P P 11 00 29.8 -1.1
ZAA0 IAmb IAmb 11 00 31.1
comp=Z,4.2nm,0.5s
ZALV Zalesovo Beam 64.21 346 P P 11 00 30.3 -0.6
comp=Z,4.8nm,0.4s,baz=153,slow=5.9,SNR=20
ZALV LR LR 11 33 30.0
comp=Z,25nm,19.1s,baz=62,slow=41
MAW Mawson 66.42 197 P P 11 00 47.0 +2.0
comp=Z,2.9nm,0.5s,baz=28,slow=6.1,SNR=6.1
MAW Mawson 66.42 197 P P 11 00 47.3 +2.3
MAW IAmb IAmb 11 00 49.9
comp=Z,5.8nm,1.4s
BRVK Borovoye 68.00 337 P P 11 00 55.6 +0.4
BRVK IAmb IAmb 11 00 56.2
comp=Z,14nm,1.1s
ABKAR Akbulak array 69.87 330 P P 11 01 07.3 +0.5
ABKAR IAmb IAmb 11 01 08.6
comp=Z,10nm,0.8s
PETK Petropavlovsk- 74.57 29 P P 11 01 33.7 -1.2
comp=Z,1.7nm,0.8s,baz=258,slow=4.6,SNR=5.7
ARU Arti 75.15 335 LR LR 11 41 38.8
comp=Z,36nm,21.6s,baz=173,slow=41
ARU Arti 75.15 335 P P 11 01 38.1 -0.1
BOSA Boshof 78.62 242 P P 11 02 00.8 +2.3
comp=Z,1.2nm,0.9s,baz=137,slow=6.1,SNR=3.5
BOSA Boshof 78.62 242 IAmb IAmb 11 02 06.5
comp=Z,1.7nm,1.1s
TIXI Tiksi 80.69 7 P P 11 02 07.8 -0.8
TIXI IAmb IAmb 11 02 07.9
comp=Z,7.0nm,0.8s
BR131 Keskin Array S 82.00 312 P P 11 02 17.1 +0.7
BRTR Keskin Array B 82.00 312 P P 11 02 17.1 +0.7
comp=Z,2.5nm,0.8s,baz=134,slow=7.6,SNR=13
QSPA South Pole Qui 82.16 180 P P 11 02 18.3 +1.6
AKASG Malin Array Be 88.03 322 P P 11 02 46.3 +0.2
comp=Z,1.0nm,0.8s,baz=85,slow=4.4,SNR=6.0
FINES FINESS Array B 92.26 332 P P 11 03 06.0 +0.3
comp=Z,2.2nm,0.8s,baz=96,slow=3.8,SNR=5.5
ARCES ARCESS Array B 94.14 340 P P 11 03 13.5 -0.7
comp=Z,2.7nm,0.8s,baz=61,slow=5.7,SNR=5.6
YKA Yellowknife Ar 117.82 20 PKP PKPdf 11 08 41.6 -0.2
comp=Z,0.3nm,0.7s,baz=326,slow=1.9,SNR=4.5
TX31 Lajitas Ar. Si 144.50 49 PKPdf 11 09 33.2 +0.2
TX32 Lajitas Array 144.50 49 PKPdf 11 09 33.4 +0.4
TXAR Lajitas Array 144.50 49 PKP PKPdf 11 09 32.5 -0.5
comp=Z,0.5nm,0.4s,baz=285,slow=1.2,SNR=16
SFIN Lafayette 145.40 18 PKPab 11 09 34.4 +0.2
TUL1 Leonard 145.42 33 PKPbc 11 09 33.9 -0.3
BDFB Brasilia 145.62 227 PKPbc PKPab 11 09 36.6 +0.8
comp=Z,1.4nm,0.6s,baz=107,slow=14,SNR=1.9
MGMO Mountain Grove 146.20 28 PKPbc 11 09 36.4 -0.2
U40A Yellville 146.57 29 PKPdf 11 09 37.0 +0.8
P48A Milroy 146.74 17 PKPbc 11 09 37.6 -0.5
P51A Williamsport 147.34 14 PKPbc 11 09 38.7 -1.1
LCAR Lake Charles 147.60 27 PKPbc 11 09 40.5 -0.1
WCI Wyandotte Cave 147.61 19 PKPbc 11 09 40.4 -0.2
MIAR Mount Ida 147.64 32 PKPbc 11 09 41.2 +0.4
833A Chaparral WMA, 148.19 47 PKPbc 11 09 43.2 +0.8
237A Washetta, Mont 148.25 38 PKPbc 11 09 41.5 -1.0
T47A Sharon Grove 148.46 21 PKPbc 11 09 42.9 0.0
WVT Waverly 148.95 23 PKPbc 11 09 44.3 +0.1
CLTN Cedars of Leba 149.53 21 PKPbc 11 09 46.0 +0.4
V52A Sevierville 150.64 17 PKPbc 11 09 48.7 +0.4
X48A Hartselle 150.73 23 PKPbc 11 09 48.2 -0.4
Y49A Blount Mountai 151.50 23 PKPbc 11 09 50.5 +0.1
Y52A Lilburn 152.33 19 PKiKP 11 09 53.1 +0.5

*IDC **16** 11:02:33.3±0.7, 58.81S×24.79W, h0km, mb3.9/2, mb1 4.0/2, mb1mx3.7/17, mbtmp3.9/2, Error ellipse: s-maj=54.4km s-min=23.6km az=4.0*
ISC 16 11:02:31.9±0.9, 59.9S±0.2×24.3W±0.2, h10km, n10, σ1.66/10, South Sandwich Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VNA1 Neumayer--Stat 12.69 155 P Pn 11 05 32.3 +0.2
VNA3 Neumayer Olymp 12.88 158 P Pn 11 05 34.5 -0.2
VNA2 Neumayer--Watz 13.09 155 P Pn 11 05 37.0 -0.5
baz=321,slow=12
SNAA Sanae 14.64 153 P Pn 11 05 57.7 -1.1
PLCA Paso Flores 34.26 283 P P 11 09 16.7 -1.1
1.0nm,0.8s,baz=158,slow=7.1,SNR=1.8
TORD Torodi Ar. Bea 75.72 26 P P 11 14 15.7 -1.6
0.6nm,0.4s,baz=202,slow=6.2,SNR=3.2
YKA Yellowknife Ar 139.97 314 PKP PKPdf 11 21 59.6 +0.8
0.2nm,0.8s,baz=130,slow=1.8,SNR=3.5
SONM Songino Array 149.29 91 PKPbc PKiKP 11 22 23.1 +2.1
0.1nm,0.3s,baz=181,slow=3.9,SNR=2.6
INK Inuvik 149.67 316 PKPbc PKPbc 11 22 19.4 -0.5
0.6nm,0.8s,baz=100,slow=3.7,SNR=2.1
ILAR Eielson Array 153.69 305 PKPbc PKiKP 11 22 32.3 +2.9
0.4nm,1.0s,baz=135,slow=1.7,SNR=1.8

*BJI **16** 11:14:47.6±0.0, 35.93N×82.45E, h9km, ML3.8/7, Ms3.4/3, Ms7 3.2/2*
*IDC **16** 11:14:49.5±4.1, 36.11N×82.65E, h0km, mb3.4/2, mb1 3.8/6, mb1mx3.4/68, mbtmp3.8/6, ML3.5/4, MS3.6/1, Ms1 3.6/1, ms1mx2.4/33, Error ellipse: s-maj=71.0km s-min=34.5km az=23.0*
*NNC **16** 11:14:56.0±1.7, 36.57N×82.77E, h10km±10km, mb4.2, mpv3.9, Error ellipse: s-maj=23.5km s-min=11.6km az=54.0*
ISC 16 11:14:52.4±2.1, 36.4N±0.1×82.3E±0.1, h10km, n14, σ2.05/15, 5C-3D, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PDGK Podgornoye 7.27 344 ⇑Pn Pn 11 16 41.2 +2.4
5.0nm,0.5s
PDGK ⇑Sn Sn 11 18 04.8 +3.5
37nm,0.7s
PDGK ⇓Lg Lg 11 18 44.4
36nm,0.9s
MDOK Medeo 7.88 331 ⇓Pg Pg 11 17 20.6 -2.6
6.0nm,0.9s
MDOK Lg Lg 11 19 07.4
28nm,1.2s
WMQ Urumqi 8.53 28 eP Pn 11 16 57.3 +1.4
WMQ S Sn 11 18 32.6 +0.4
WMQ smax smax
comp=N,13nm,1.3s
WMQ smax smax
comp=E,13nm,1.3s
AAK Ala-Archa 8.67 319 Pn Pn 11 17 05.5 +7.6
0.1nm,0.3s,baz=144,slow=19,SNR=2.2
AAK Pg Pg 11 17 34.1 -4.1
0.3nm,0.3s,baz=102,slow=14,SNR=2.0
AAK Lg Lg 11 19 29.3
0.6nm,0.3s,baz=282,slow=13,SNR=4.5
AAK Ala-Archa 8.67 319 ⇑Pg Pg 11 17 36.7 -1.6
2.7nm,0.7s
AAK ⇓Lg Lg 11 19 36.4
23nm,1.1s
CHMS Chumysh 8.79 321 ⇑Lg Lg 11 19 39.2
6.4nm,0.7s
MK31 Makanchi Array 10.41 0 Pn Pn 11 17 22.9 +1.2
3.4nm,0.5s,baz=181,slow=13,SNR=79
MK31 ⇑Sn Sn 11 19 18.3 -0.2
1.8nm,0.6s,baz=184,slow=26,SNR=5.1
MKAR Makanchi Array 10.41 0 Pn Pn 11 17 22.9 +1.1
2.5nm,0.3s,baz=185,slow=13,SNR=103
MKAR Sn Sn 11 19 16.3 -2.2
0.1nm,0.3s,baz=183,slow=26,SNR=1.6
KURBB Kurchatov Arra 14.50 350 Pn Pn 11 18 17.3 -0.2
0.0nm,0.3s,baz=173,slow=12,SNR=12
ZALV Zalesovo Beam 17.67 5 P Pn 11 18 56.8 -1.6
0.4nm,0.3s,baz=184,slow=14,SNR=9.8
BVAR Borovoye Array 18.62 337 P Pn 11 19 13.3 +3.1
0.4nm,0.3s,baz=132,slow=8.8,SNR=11
SONM Songino Array 21.17 50 P P 11 19 36.9 -0.9
2.3nm,0.8s,baz=236,slow=11,SNR=14
GERES GERESS Array B 50.34 307 LR LR 11 50 07.2
comp=Z,63nm,20.7s,baz=297,slow=42
YKA Yellowknife Ar 80.54 8 P P 11 27 03.6 -0.8
0.1nm,0.7s,baz=340,slow=5.3,SNR=3.3

*IDC **16** 11:22:47.0±0.9, 38.43N×20.51E, h0km, mb3.8/11, mb1 3.8/19, mb1mx3.7/60, mbtmp3.7/19, ML3.3/8, MS3.3/1, Ms1 3.3/1, ms1mx2.3/48, Error ellipse: s-maj=18.8km s-min=13.8km az=36.0*
*ATH **16** 11:22:48.4, 38.26N×20.37E, h18km±1km, ML3.5/10, Error ellipse: s-maj=1.8km s-min=0.9km az=266.0*
*THE **16** 11:22:48.8, 38.28N×20.33E, h13km, ML3.5/6, Error ellipse: s-maj=1.2km s-min=0.4km az=267.0*
*SKO **16** 11:22:48.5, 38.16N×20.42E, h1km*
*BEO **16** 11:22:49.3±0.7, 38.19N×20.14E, h22km±4km, ML3.5/9*
*PDG **16** 11:22:50.2±0.2, 38.50N×20.25E, h9km±1km, ML3.8/12, Error ellipse: s-maj=1.8km s-min=0.8km az=90.0*
ISC 16 11:22:48.7±0.6, 38.28N±0.02×20.39E±0.03, h15km±4km, n127, σ1.29/183, mb3.9/11, 2D, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AGT1 Agia Thekli 0.03 193 P Pg 11 22 51.4 0.0
AGT1 S Sg 11 22 52.9 -0.4
KEF1 Kardakata, Kep 0.06 93 P Pg 11 22 51.8 +0.2

KEF3 Kipouria, Keph 0.09 204 P Pg 11 22 51.7 -0.2
LXR1 Lixouri, Cepha 0.09 156 P Pg 11 22 52.0 +0.1
LXR1 S Sg 11 22 54.3 +0.4
LXRA Lixouri, Kepha 0.09 157 P Pg 11 22 52.0 +0.1
LXRA S Sg 11 22 54.2 +0.3
CHV1 Chavriata, Kef 0.10 185 P Pg 11 22 51.9 -0.1
CHV1 S Sg 11 22 54.1 0.0
ARGA Argostoli. Kep 0.12 147 P Pg 11 22 52.4 +0.1
ARGA S Sg 11 22 54.8 +0.2
ARG2 Argostoli 0.13 144 P Pg 11 22 52.5 +0.2
ARG2 S Sg 11 22 54.9 +0.2
KEF2 Argostoli. Kep 0.14 147 P Pg 11 22 52.6 +0.1
KEF2 S Sg 11 22 55.0 +0.1
VLS Valsamata 0.19 124 P Pg 11 22 53.3 +0.1
VLS S Sg 11 22 56.6 +0.4
VLS Valsamata 0.19 124 P Pg 11 22 53.3 +0.1
VLS S Sg 11 22 56.6 +0.4
VLS AML AML 11 22 56.7
VLS AML AML 11 22 56.7
FSK Fiskardo 0.22 37 P Pg 11 22 54.3 +0.5
FSK S Sg 11 22 58.1 +1.0
28μm,0.2s
FSK Fiskardo 0.22 37 P Pg 11 22 54.2 +0.5
FSK S Sg 11 22 58.0 +1.0
FSK AML AML 11 22 58.6
comp=N,40728μm,0.2s
FSK AML AML 11 22 58.6
comp=E,68752μm,0.2s
EVGI Lefkada island 0.40 31 P Pg 11 22 57.3 +0.6
EVGI S Sb 11 23 03.4 +0.1
EVGI Lefkada island 0.40 31 P Pg 11 22 57.3 +0.6
EVGI S Sb 11 23 03.4 +0.1
VLMS Volimes, Zakyn 0.46 152 P Pg 11 22 57.8 0.0
VLMS S Sg 11 23 04.3 +0.3
VLMS AML AML 11 23 06.3
comp=E,26944μm,0.2s
VLMS AML AML 11 23 09.5
comp=N,33454μm,0.2s
MGNA Meganis 0.49 40 P Pg 11 22 58.5 +0.1
MGNA AML AML 11 23 08.1
comp=N,11018μm,0.1s
MGNA AML AML 11 23 08.7
comp=E,9323μm,0.1s
LKD2 Lefkada island 0.55 22 P Pg 11 22 59.7 +0.1
LKD2 S Sb 11 23 08.0 +0.3
comp=E,3μm,0.3s
LKD2 Lefkada island 0.55 22 P Pg 11 22 59.6 0.0
TSLK Tsoukalades, L 0.58 21 P Pg 11 23 00.4 +0.2
TSLK S Sb 11 23 09.2 +0.6
comp=E,3μm,0.4s
TSLK Tsoukalades, L 0.58 21 P Pg 11 23 00.3 +0.2
TSLK AML AML 11 23 16.7
comp=N,4389μm,0.7s
TSLK AML AML 11 23 17.1
comp=E,7033μm,0.3s
AST1 Astakos 0.61 64 P Pb 11 23 01.0 0.0
AST1 S Sn 11 23 11.1 -1.1
ZAK2 Zakynthos 0.64 141 P Pb 11 23 01.3 -0.2
ZAK2 S Sn 11 23 12.3 -0.6
PDO Prodromos 0.70 63 P Pb 11 23 02.7 +0.2
PDO S Sn 11 23 13.8 -0.7
comp=E,8μm,0.4s
PDO Prodromos 0.70 63 P Pg 11 23 02.4 +0.1
PDO AML AML 11 23 19.5
comp=N,11270μm,0.3s
PDO AML AML 11 23 23.4
comp=E,11209μm,0.6s
KRI1 kERI 0.70 151 P Pg 11 23 01.9 -0.5
KRI1 S Sn 11 23 13.2 -1.5
VTN Vitineika 0.72 120 P Pb 11 23 02.9 -0.1
VTN Vitineika 0.72 120 P Pg 11 23 02.7 -0.1
RLS Riolos of Patr 0.88 104 P Pb 11 23 05.2 -0.4
RLS S Sn 11 23 19.6 +0.7
comp=E,1μm,0.5s
RLS Riolos of Patr 0.88 104 P Pb 11 23 05.1 -0.4
RLS AML AML 11 23 22.9
comp=N,2136μm,0.6s
RLS AML AML 11 23 27.2
comp=E,2927μm,0.5s
PVO Paravola 0.95 69 P Pg 11 23 07.4 +0.3
PVO S Sn 11 23 22.3 +1.5
comp=E,4μm,0.4s
PVO Paravola 0.95 69 P Pg 11 23 07.5 +0.3
PVO AML AML 11 23 28.2
comp=E,7970μm,0.4s
PVO AML AML 11 23 30.0
comp=N,6663μm,0.5s
DRO Drossia 1.09 107 P Pb 11 23 08.9 -0.4
ANX Ano Chora 1.24 75 P Pn 11 23 11.6 0.0
LAKA Lakka 1.25 91 P Pn 11 23 11.8 +0.2
LAKA AML AML 11 23 37.1
comp=N,1896μm,0.7s
LAKA AML AML 11 23 38.0
comp=E,2574μm,0.7s
IGT Igoumenitsa 1.25 358 ePg Pg 11 23 14.3 +1.5
IGT eSg Sg 11 23 31.7 +2.6
SERG Sergoula 1.31 84 P Pn 11 23 12.7 +0.1
KALE Kalithea 1.38 85 P Pn 11 23 13.7 +0.2
KALE AML AML 11 23 42.0
comp=E,1802μm,0.4s
KALE AML AML 11 23 44.9
comp=N,2842μm,0.5s
KLV Kalavryta, Ach 1.41 99 P Pb 11 23 14.2 -0.4
JAN Janina 1.42 14 P Pg 11 23 16.2 +0.1
KEK Kerkira 1.50 342 P Pb 11 23 16.3 0.0
MAKR Makrakomi, Fth 1.54 61 P Pb 11 23 17.4 +0.4
ITM Ithomi 1.64 132 P Pb 11 23 18.3 -0.3
AXAR Agios Charalam 1.84 74 P Pb 11 23 22.9 +0.8
PROD Prodromos 1.97 90 P Pb 11 23 23.8 -0.5
DID Didima 2.38 108 P Pb 11 23 29.3 -1.9
OHR Ohrid 2.84 6 iPn Pb 11 23 37.0 -2.2
OHR eSn Sb 11 24 12.4 -1.4
OHR eLg Lg 11 24 19.6
comp=N,42nm,0.6s
OHR eLg Lg 11 24 21.5
comp=E,73nm,0.5s
TIR Tirane 3.09 353 ePn Pn 11 23 39.0 +2.1
TAR1 Taranto 3.29 314 ePn Pn 11 23 40.9 +1.2
VAY Valandovo 3.47 28 iPn Pn 11 23 44.2 +2.1
VAY eSn Sn 11 24 26.5 +3.6
VAY eLg Lg 11 24 28.9
comp=N,2μm,10.2s
VAY eLg Lg 11 24 30.7
comp=E,27nm,0.9s
STIP Stip 3.68 21 iPn Pb 11 23 49.4 -4.0
SRS Serrai 3.76 40 ePn Pn 11 23 47.9 +1.8
ULC Ulcinj 3.78 347⇓iPn Pn 11 23 46.7 +0.2
ULC iSn Sn 11 24 30.3 -0.4
SG1 Sgolgore (BA) 3.84 313 ePn Pn 11 23 48.7 +1.4
BAI Bari 3.91 317 ePn Pn 11 23 49.1 +0.9
DRME Dracevica, Mon 4.01 347 ePn Pn 11 23 50.4 +0.8
DRME Dracevica, Mon 4.01 347 ePn Pn 11 23 50.1 +0.5
DRME eSn Sn 11 24 35.5 -0.8
PDG Podgorica 4.23 349 ePn Pn 11 23 53.0 +0.4
PDG eSn Sn 11 24 41.4 -0.4
PDG Podgorica 4.23 349 ePn Pn 11 23 53.4 +0.8
TTG Podgorica 4.23 349 ePn Pn 11 23 52.9 +0.3
TTG eSn Sn 11 24 40.8 -1.0
PVY Plav 4.32 356⇓iPn Pn 11 23 54.9 +0.9
PVY eSn Sn 11 24 43.4 -0.7
CEME Cevo 4.41 346 ePn Pn 11 23 55.3 +0.2
CEME eSn Sn 11 24 45.0 -1.1
HCY Herceg Novi 4.41 341 ePn Pn 11 23 54.7 -0.3
HCY Herceg Novi 4.41 341 ePn Pn 11 23 54.7 -0.3
HCY eSn Sn 11 24 45.0 -1.1
BOSS Bosilegrad 4.50 20 ePn Pn 11 23 57.8 +1.5
IVA Berane 4.60 355 ePn Pn 11 23 57.9 +0.1
IVA eSn Sn 11 24 50.1 -0.9
KOME Kolasin 4.61 352 ePn Pn 11 23 58.7 +0.8
KOME eSn Sn 11 24 50.4 -0.9
NKME Niksic 4.61 347 ePn Pn 11 23 58.0 +0.1
NKME eSn Sn 11 24 49.9 -1.3
BARS Barje 4.66 13 ePn Pn 11 23 59.4 +0.9
BARS eSn Sn 11 24 53.8 +1.5
IDI Anoyia 4.69 128 Pn Pn 11 23 59.9 +1.0
comp=E,0.2nm,0.3s,baz=319,slow=20,SNR=3.2
IDI Sn Sn 11 24 52.7 -0.3
comp=E,1.7nm,0.3s,baz=270,slow=22,SNR=1.7
TREB Trebinje 4.70 341 ePn Pn 11 23 58.3 -0.7
TREB eSn Sn 11 24 51.8 -1.4
TREB Trebinje 4.70 341 ePn Pn 11 23 58.3 -0.7
VAE Valguarnera 4.80 262 Pn Pn 11 24 04.3 +3.8
comp=E,1.9nm,0.3s,baz=131,slow=11,SNR=2.2
VAE Sn Sn 11 24 59.5 +3.7
comp=E,5.2nm,0.3s,baz=246,slow=24,SNR=7.9
BRY Bratogost 4.83 344 ePn Pn 11 24 00.9 0.0
BRY Bratogost 4.83 344 ePn Pn 11 24 00.9 0.0
BRY eSn Sn 11 24 55.2 -1.4
VTS Vitosha 4.84 26 ePn Pn 11 24 03.1 +1.9
VTS eSn Sn 11 24 58.3 +1.3
SELS Selova 4.96 6 ePn Pn 11 24 03.2 +0.5
SJES Sjenica 4.99 356 ePn Pn 11 24 04.0 +0.9
SJES eSn Sn 11 25 00.1 -0.4
STON Ston 5.02 337 ePn Pn 11 24 03.9 +0.5
STON eSn Sn 11 24 58.3 -2.9
STON Ston 5.02 337 ePn Pn 11 24 03.3 -0.1
UPM Unac-Piva 5.04 348 ePn Pn 11 24 03.3 -0.7
UPM Unac-Piva 5.04 348 ePn Pn 11 24 04.5 +0.5
UPM eSn Sn 11 25 00.5 -1.5
PLE Pljevlja 5.10 352 ePn Pn 11 24 05.2 +0.5
PLE eSn Sn 11 25 02.0 -1.3
ZAPS Zavoj 5.27 18 ePn Pn 11 24 09.3 +2.4
IVAS Ivanjica 5.29 358 ePn Pn 11 24 07.2 -0.1
RUDO Rudo 5.39 352 ePn Pn 11 24 06.9 -1.6
BOVS Bovan 5.44 10 ePn Pn 11 24 09.8 +0.6
BOVS eSn Sn 11 25 10.8 -0.7
GRUS Gruza 5.61 2 ePn Pn 11 24 12.2 +0.7
BBLS Lazići 5.63 353 ePn Pn 11 24 13.2 +1.3
BBLS Lazići 5.63 353 ePn Pn 11 24 12.5 +0.6
DIVS Divibare 5.82 357 ePn Pn 11 24 15.5 +1.0
DIVS eSn Sn 11 25 19.5 -1.5
DIVS Divibare 5.82 357 ePn Pn 11 24 14.2 -0.3
HAPS Han Pijesak,Bl 5.90 350 ePn Pn 11 24 13.8 -1.8
TRUS Trudelj 5.94 0 ePn Pn 11 24 15.6 -0.4
MGRS Mrkonjic Grad 6.62 339 ePn Pn 11 24 24.1 -1.3
BLY Banja Luka 6.89 341 ePn Pn 11 24 29.9 +0.7
MORH Mrgy, Hungar 8.03 351 ePn Pn 11 24 42.8 -2.0
MLR Muntele Rosu 8.31 28 Pn Pn 11 24 50.5 +1.8
comp=E,0.3nm,0.3s,baz=206,slow=15,SNR=3.0
CRES Cresnjev 8.38 336 ePn Pn 11 24 49.3 -0.3
LJU Ljubljana 8.89 333 ePn Pn 11 24 55.0 -1.6
SOKA Soboth 9.28 336 ePn Pn 11 25 01.7 -0.3
comp=E,2.3nm,0.3s,SNR=5.9
SOKA Sn Sn 11 26 40.5 -5.4
comp=E,2.4nm,0.5s
OBKA Obir 9.29 334 ePn Pn 11 25 03.0 +0.9
comp=E,1.9nm,0.2s
OBKA Sn Sn 11 26 42.5 -3.8
comp=E,1.9nm,0.2s
ARSA Arzberg 9.65 340 ePn Pn 11 25 07.8 +0.8
comp=E,0.8nm,0.3s
KBA Koelnbreinsper 10.20 332 ePn Pn 11 25 15.8 +1.1
comp=E,0.6nm,0.3s
KBA Sn Sn 11 27 04.9 -4.0
comp=E,1.6nm,0.4s
BRTR Keskin Array B 10.41 78 Pn Pn 11 25 20.5 +2.9
comp=E,0.1nm,0.3s,baz=261,slow=12,SNR=2.8
MOA Molln 10.56 337 ePn Pn 11 25 20.4 +1.0
comp=E,1.5nm,0.2s,SNR=7.6
MOA Sn Sn 11 27 14.7 -2.6
comp=E,1.3nm,0.3s
WTTA Wattenberg 11.04 327 ePn Pn 11 25 27.7 +1.5
comp=E,0.7nm,0.2s
WTTA Sn Sn 11 27 26.4 -2.9
comp=E,2.6nm,0.4s
WATA Walderalm 11.12 327 ePn Pn 11 25 28.5 +1.3
comp=E,0.9nm,0.2s
SQTA Sankt Quirin 11.19 326 ePn Pn 11 25 29.1 +1.0
comp=E,0.8nm,0.2s
SQTA Sn Sn 11 27 32.4 -0.6
comp=E,2.2nm,0.4s
MOTA Moosalm 11.33 326 ePn Pn 11 25 31.9 +1.8
comp=E,0.4nm,0.2s
MOTA Sn Sn 11 27 35.5 -1.0
comp=E,1.6nm,0.4s
DAVOX Davos/Dischmat 11.49 321 Pn Pn 11 25 33.4 +1.0
comp=E,0.2nm,0.3s,baz=144,slow=19,SNR=2.6
GERES GERESS Array B 11.62 338 Pn Pn 11 25 33.4 -0.5
comp=E,0.3nm,0.3s,baz=161,slow=14,SNR=5.4
GERES Sn Sn 11 27 39.8 -3.5
comp=E,0.2nm,0.3s,baz=157,slow=23,SNR=3.8
KBZ Khabaz 17.82 65 P Pn 11 26 55.0 -0.9
comp=E,0.1nm,0.3s,baz=228,slow=14,SNR=1.5
GNI Garni 18.95 77 P P 11 27 08.9 -0.4
comp=E,0.6nm,0.3s,baz=300,slow=16,SNR=4.0
ESDC Sonseca Array 18.98 282 P Pn 11 27 10.4 +0.2
comp=E,0.1nm,0.3s,baz=74,slow=12,SNR=2.6
HFS Hagfors 22.28 351 P P 11 27 44.5 -0.6
comp=E,3.8nm,0.9s,baz=161,slow=9.4,SNR=6.2
HFS LR LR 11 37 14.0
comp=E,79nm,18.4s,baz=122,slow=39
EKA Eskdalemuir Ar 23.29 325 P P 11 27 55.4 -0.3
comp=E,2.2nm,0.8s,baz=135,slow=13,SNR=3.6
FINES FINESS Array B 23.46 7 P P 11 27 56.3 -1.0
comp=E,2.1nm,0.7s,baz=172,slow=9.4,SNR=9.6
NOA NORSAR Array B 23.50 349 P P 11 27 57.5 -0.2
comp=E,0.5nm,0.7s,baz=156,slow=10.0,SNR=2.6
TORD Torodi Ar. Bea 30.05 219 P P 11 28 59.2 +1.9
comp=E,0.5nm,0.6s,baz=29,slow=11,SNR=3.0
ARCES ARCESS Array B 31.43 3 P P 11 29 08.7 -0.3
comp=E,2.3nm,1.0s,baz=191,slow=9.6,SNR=6.3
ARCES PcP PcP 11 32 02.2 +0.3
comp=E,4.8nm,1.0s,baz=204,slow=2.0,SNR=9.1
MKAR Makanchi Array 45.33 58 P P 11 31 05.5 -0.6
comp=E,0.5nm,0.4s,baz=277,slow=6.9,SNR=13
ZALV Zalesovo Beam 45.70 48 P P 11 31 08.4 -0.4
comp=E,2.1nm,0.5s,baz=275,slow=9.2,SNR=6.8
SCHQ Schefferville 58.31 317 P P 11 32 43.1 +0.4
comp=E,2.6nm,0.9s,baz=45,slow=13,SNR=3.8
RES Resolute Bay 59.64 344 P P 11 32 50.8 -0.8
comp=E,1.1nm,0.8s,baz=31,slow=5.9,SNR=4.8
CMAR Chiang Mai Arr 69.97 82 P P 11 33 59.2 -0.6
comp=E,0.3nm,0.3s,baz=291,slow=5.5,SNR=3.6
ASAR Alice Springs 122.28 96 PKP PKPdf 11 41 43.3 0.0
comp=E,0.1nm,0.3s,baz=322,slow=1.6,SNR=5.7

IDC **16** *11:22:58.4±2.6, 22°.98N×142°.39E, h133km±23km, mb3.8/28, mb1 3.9/31, mb1mx3.8/58, mbtmp4.2/31, MS2.4/1, Ms1 2.4/1, ms1mx2.1/30, Error ellipse: s-maj=14.3km s-min=12.8km az=105.0*
NEIC **16** *11:22:59.7±1.6, 23°.03N±0°.08×142°.4E±0°.1, h137km±6km, mb4.5/88, Error ellipse: s-maj=16.9km s-min=11.9km az=88.0*
JMA **16** *11:23:00.3±0.3, 23°.29N×142°.35E, h172km±3km*
ISC 16 11:23:01.7±0.5,**23°.27N**±0°.06×**142°.36E**±0°.08,**h150**km, **n152**,σ1§69/148,**mb4.3**/63,**1D,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	3.35	357	P	Pn	11 23 52.9	-0.6
JHH2				S	Sn	11 24 34.0	+0.3
CBIJ	Chichi jima	3.81	358	P	Pn	11 23 59.4	-0.1
CBIJ				S	Sn	11 24 44.5	+0.1
JCJ	Chichijima	3.81	358	P	Pn	11 23 59.5	0.0
	86nm,0.3s,baz=65,slow=23,SNR=10						
JCJ				S	Sn	11 24 44.0	-0.4
	486nm,0.3s,baz=240,slow=22,SNR=26						
BSO1	Boso 1	11.41	354	P	Pn	11 25 38.9	-0.7
BSO1				eS	Sn	11 27 41.5	-3.9
BSO3	Boso 3	11.60	352	P	Pn	11 25 40.4	-2.1
BSO4	Boso 4	11.81	352	P	Pn	11 25 44.1	-1.2
BSO4				eS	Sn	11 27 54.4	-1.4
JOD2	Odawara 2	12.29	347	P	Pn	11 25 49.7	-1.9
JOD2				eS	Sn	11 28 04.3	-3.1
JHU	Hanno	12.82	349	P	Pn	11 25 55.4	-3.1
JHU				eS	Sn	11 28 12.7	-7.5
INU	Inuyama	12.90	340	Pn	Pn	11 25 59.9	+0.4
JRY	Ryogami san	13.05	347	P	Pn	11 25 59.0	-2.5
JRY				eS	Sn	11 28 17.2	-8.7
MJAR	Matsushiro Arr	13.70	346	P	Pn	11 26 07.3	-2.5
	0.3nm,0.3s,baz=156,slow=11,SNR=19						
MJAR				S	Sn	11 28 30.9	-11
	0.1nm,0.3s,baz=179,slow=7.3,SNR=4.3						
MAJO	Matsushiro	13.71	346		Pn	11 26 08.6	-1.2
MJB9	Matsu-Tunnel	13.71	346		Pn	11 26 08.8	-1.1
JNU	Nakatsue	14.09	317	P	P	11 26 16.9	-1.0
	0.3nm,0.3s,baz=103,slow=9.5,SNR=6.1						
JNU	Nakatsue	14.09	317	Pn	Pn	11 26 14.5	-0.3
JMM	Marumori	14.61	355	P	Pn	11 26 19.5	-1.7
JOM	Ohasama	16.18	357	P	P	11 26 41.3	+0.5
KSRS	Korea Array	18.81	322	P	Pn	11 27 10.8	-1.1
	0.1nm,0.3s,baz=138,slow=10,SNR=4.7						
KSRS				LR	LR	11 34 08.8	
	comp=Z,12nm,19.0s,baz=160,slow=35						
KS19	Wonju Array Si	18.87	322	P	Pn	11 27 15.8	+3.1
SSLB	Suanglung	19.64	276	P	Pn	11 27 21.8	0.0
SSLB				IAmb	IAmb	11 27 33.9	
	comp=Z,19nm,1.2s						
SSE	Sheshan	20.36	297	P	Pn	11 27 28.3	-2.0
JKA	Kamikawa-asahi	20.79	0	P	Pn	11 27 31.9	-3.3
ASAJ	Asahikawa	20.79	0	P	Pn	11 27 31.9	-3.3
	comp=Z,6.0nm,0.7s,baz=195,slow=12,SNR=2.8						
USRK	Ussuriysk Ar.	22.55	340	P	P	11 27 49.8	+0.7
	comp=Z,2.4nm,0.7s,baz=141,slow=8.5,SNR=4.7						
H11N1	WAKE ISLAND Hy	23.09	94	T	T	11 51 56.1	
	baz=282						
H11N2	WAKE ISLAND Hy	23.09	94	T	T	11 52 09.5	
	baz=282						
H11N3	WAKE ISLAND Hy	23.10	94	T	T	11 52 02.3	
	baz=282						
H11S3	WAKE ISLAND Hy	23.21	97	T	T	11 51 17.6	
	baz=284						
H11S1	WAKE ISLAND Hy	23.21	97	T	T	11 50 28.0	
	baz=284						
H11S2	WAKE ISLAND Hy	23.22	97	T	T	11 50 40.1	
	baz=284						
TIA	Tai'an	25.34	306	P	P	11 28 16.6	+1.9
WHN	Wuhan	25.96	292	⇓P	P	11 28 23.5	+3.1
KLR	Kul'dur	27.23	345	P	P	11 28 32.1	+0.6
	comp=Z,1.2nm,0.3s,baz=189,slow=11,SNR=7.5						
XAN	Xi'an	31.12	298	P	P	11 29 06.9	+0.7
XAN	Xi'an	31.12	298	P	P	11 29 07.3	+1.2
PETK	Petropavlovsk-	31.99	18	P	P	11 29 14.3	+0.8
	comp=Z,3.2nm,1.0s,baz=222,slow=11,SNR=3.8						
MA2	Magadan	36.76	7	P	P	11 29 57.1	+2.7
MA2				IAmb	IAmb	11 30 14.4	
	comp=Z,21nm,1.5s						
SONM	Songino Array	37.65	320	P	P	11 30 02.9	+0.6
	comp=Z,1.6nm,0.6s,baz=128,slow=6.5,SNR=14						
GTA	Gaotai	39.35	304	eP	P	11 30 19.3	+2.7
CMAR	Chiang Mai Arr	40.74	272	P	P	11 30 26.0	-2.2
	comp=Z,0.5nm,0.5s,baz=64,slow=8.1,SNR=3.3						
TLY	Talaya	41.05	324	P	P	11 30 30.1	-0.1
	comp=Z,2.4nm,0.4s,baz=139,slow=3.8,SNR=3.7						
TLY	Talaya	41.05	324	IAmb	IAmb	11 30 36.1	
	comp=Z,3.9nm,0.5s						
WB0	Warramunga Arr	43.48	191	P	P	11 30 47.0	-3.1
WB0				IAmb	IAmb	11 30 58.1	
	comp=Z,7.8nm,1.1s						
WR0	Warramunga Arr	43.64	191	P	P	11 30 48.0	-3.5
WRAB	Tennant Creek	43.65	191	P	P	11 30 48.1	-3.5
WB2	Warramunga Arr	43.66	191	P	P	11 30 49.7	-1.9
WRA	Warramunga Arr	43.66	191	P	P	11 30 47.7	-4.0
	comp=Z,0.7nm,0.3s,baz=13,slow=7.9,SNR=14						
ATKA	Atka Island	43.90	38	P	P	11 30 54.2	+1.0
BILL	Bilibino	47.14	12	P	P	11 31 20.5	+2.1
ASAR	Alice Springs	47.38	191	P	P	11 31 16.6	-4.2
	comp=Z,0.4nm,0.7s,baz=13,slow=7.3,SNR=8.4						
WMQ	Urumqi	49.00	309	eP	P	11 31 35.5	+2.3
TIXI	Tiksi	49.02	354	P	P	11 31 34.4	+1.6
ZAA0	Zalesovo Array	52.51	321	P	P	11 32 00.9	+1.7
ZALV	Zalesovo Beam	52.51	321	P	P	11 31 59.3	+0.1
	comp=Z,1.4nm,0.4s,baz=111,slow=7.7,SNR=5.6						
ZALV				PcP	PcP	11 33 06.9	-0.7
	comp=Z,0.9nm,0.4s,baz=106,slow=4.8,SNR=2.7						
MK31	Makanchi Array	53.08	312	P	P	11 32 05.0	+1.5
MKAR	Makanchi Array	53.08	312	P	P	11 32 04.6	+1.0
	comp=Z,1.1nm,0.4s,baz=91,slow=9.1,SNR=24						
MAKZ	Makanchi	53.30	312	P	P	11 32 07.0	+1.8
ANM	Nome	53.32	25	P	P	11 32 06.7	+1.7
ANM				IAmb	IAmb	11 32 20.1	
	comp=Z,7.8nm,1.4s						
CHGN	Chignik	53.95	36	P	P	11 32 10.1	+0.5
ARMA	Armidale	54.12	170	P	P	11 32 09.4	-1.9
ARMA				IAmb	IAmb	11 32 16.1	
	comp=Z,9.9nm,1.1s						
KURK	Kurchatov	55.81	316	P	P	11 32 24.4	+1.2
KURK				IAmb	IAmb	11 32 27.0	
	comp=Z,7.6nm,1.5s						
SVW2	Sparrevohn	56.45	31	P	P	11 32 29.2	+1.7
SVW2				IAmb	IAmb	11 32 37.4	
	comp=Z,14nm,1.5s						
OHAK	Old Harbor	56.90	36	P	P	11 32 30.8	+0.2
KDAK	Kodiak Island	57.35	35	P	P	11 32 33.5	-0.4
	comp=Z,5.4nm,0.4s,baz=276,slow=6.8,SNR=14						
KDAK	Kodiak Island	57.35	35	P	P	11 32 34.6	+0.8
KSH	Kashi	57.73	303	P	P	11 32 41.8	+4.7
CNPM	China Poot	58.29	33	P	P	11 32 40.4	0.0
PPLA	Purkeypile	58.38	29	P	P	11 32 42.0	+0.8
KTH	Kantishna Hill	59.07	29	P	P	11 32 47.0	+1.1
KTH				IAmb	IAmb	11 32 48.2	
	comp=Z,7.9nm,1.3s						
BPAW	Bear Paw Mtn.	59.13	28	P	P	11 32 47.5	+1.3
BPAW				IAmb	IAmb	11 32 49.7	
	comp=Z,5.8nm,1.0s						
SEW	Seward	59.26	33	P	P	11 32 47.1	+0.1
TRF	Thorofare Moun	59.33	29	P	P	11 32 48.5	+0.8
TRF				IAmb	IAmb	11 32 49.0	
	comp=Z,7.1nm,0.8s						
MLY	Manley	59.41	27	P	P	11 32 49.6	+1.5
MLY				IAmb	IAmb	11 32 50.5	
	comp=Z,4.3nm,0.8s						
PMR	Palmer	59.59	31	P	P	11 32 48.8	-0.5
GHO	Glory Hole Cre	59.71	31	P	P	11 32 51.4	+1.1
GHO				IAmb	IAmb	11 32 51.6	
	comp=Z,8.5nm,0.9s						
KNK	Knik Glacier	59.89	31	P	P	11 32 52.1	+0.7
RND	Reindeer	59.96	29	P	P	11 32 52.7	+0.7
RND				IAmb	IAmb	11 32 52.8	
	comp=Z,4.0nm,0.7s						
MCK	McKinley	59.97	29	P	P	11 32 52.4	+0.4
MCK				IAmb	IAmb	11 32 53.1	
	comp=Z,4.7nm,0.6s						
SML	Sawmill	60.00	31	P	P	11 32 52.8	+0.6
WRH	Wood River Hil	60.44	28	P	P	11 32 55.4	+0.3
WRH				IAmb	IAmb	11 33 09.2	
	comp=Z,8.5nm,1.5s						
SCM	Sheep Creek Mo	60.47	31	P	P	11 32 56.3	+0.8
DHY	Denali Highway	60.58	29	P	P	11 32 56.7	+0.4
DHY				IAmb	IAmb	11 33 09.8	
	comp=Z,8.2nm,1.5s						
CCB	Clear Creek Bu	60.59	28	P	P	11 32 56.6	+0.5
CCB				IAmb	IAmb	11 33 01.5	
	comp=Z,4.8nm,1.4s						
HDA	Harding Lake	60.93	28	P	P	11 32 58.2	-0.2
HDA				IAmb	IAmb	11 33 00.2	
	comp=Z,4.7nm,0.9s						
IL31		60.99	28	P	P	11 32 58.6	-0.2
IL31				IAmb	IAmb	11 32 59.4	
	comp=Z,3.1nm,0.7s						
ILAR	Eielson Array	60.99	28	P	P	11 32 58.5	-0.4
	comp=Z,2.7nm,0.7s,baz=256,slow=5.4,SNR=40						
BRVK	Borovoye	61.05	319	P	P	11 33 01.0	+1.6
BRVK				IAmb	IAmb	11 33 03.4	
	comp=Z,6.6nm,1.1s						
PAX	Paxson	61.44	30	P	P	11 33 03.0	+1.0
PAX				IAmb	IAmb	11 33 03.3	
	comp=Z,2.5nm,0.6s						
RIDG	Independent Ri	61.78	29	P	P	11 33 04.6	+0.3
DOT	Dot Lake	62.12	29	P	P	11 33 06.8	+0.3
DOT				IAmb	IAmb	11 33 07.7	
	comp=Z,7.6nm,1.0s						
GLB	Gilahina Butte	62.12	31	P	P	11 33 07.6	+1.1
GLB				IAmb	IAmb	11 33 15.4	
	comp=Z,11nm,1.2s						
SCRK	Sand Creek	62.18	29	P	P	11 33 07.5	+0.5
VRDI	Verde Repeater	62.28	32	P	P	11 33 08.4	+0.6
WAX	Waxell Ridge	62.56	33	P	P	11 33 10.5	+1.0
BALM	Baldy	62.82	32	P	P	11 33 11.7	+0.5
BARN	Barnard Glacie	63.15	32	P	P	11 33 13.9	+0.4
CTGM	Chitina Glacie	63.31	32	P	P	11 33 15.4	+0.8
CTGM				IAmb	IAmb	11 33 16.5	
	comp=Z,8.1nm,1.1s						
EGAK	Eagle	63.44	28	P	P	11 33 15.7	+0.6
EGAK				IAmb	IAmb	11 33 19.1	
	comp=Z,4.2nm,1.0s						
KBL	Kabul	63.92	298	P	P	11 33 20.5	+1.4
KBL				IAmb	IAmb	11 33 21.3	
	comp=Z,6.7nm,0.8s						
DAWY	Dawson	64.20	29	P	P	11 33 21.4	+1.3
DAWY				IAmb	IAmb	11 33 22.2	
	comp=Z,4.9nm,0.8s						
HYT	Haines Junctio	65.19	32	P	P	11 33 28.5	+1.7
HYT				IAmb	IAmb	11 33 47.3	
	comp=Z,5.4nm,1.1s						
EPYK	Eagle Plains	65.29	26	P	P	11 33 28.3	+1.1
EPYK				IAmb	IAmb	11 33 29.2	
	comp=Z,7.0nm,0.7s						
INK	Inuvik	66.44	24	P	P	11 33 34.8	+0.4
	comp=Z,3.2nm,0.6s,baz=292,slow=6.6,SNR=24						
INK	Inuvik	66.44	24	P	P	11 33 34.8	+0.4

INK IAmb IAmb 11 33 35.4
comp=Z,3.5nm,0.7s
WHY Whitehorse 66.48 32 P P 11 33 36.5 +1.5
WHY IAmb IAmb 11 33 36.8
comp=Z,3.8nm,0.8s
JIS Juneau Island 67.01 35 P P 11 33 39.7 +1.5
ARU Arti 67.55 323 P P 11 33 42.5 +0.8
comp=Z,0.8nm,0.4s,baz=117,slow=7.8,SNR=5.4
ARU Arti 67.55 323 P P 11 33 42.5 +0.8
ARU IAmb IAmb 11 33 45.1
comp=Z,2.9nm,0.6s
ABKAR Akbulak array 67.90 315 P P 11 33 44.9 +0.9
AKTO Aktyubinsk 68.90 317 P P 11 33 51.4 +1.2
comp=Z,1.2nm,0.7s,baz=99,slow=14,SNR=2.5
C36M Paulatuk 69.70 22 P P 11 33 55.2 +0.5
C36M IAmb IAmb 11 34 05.9
comp=Z,7.2nm,1.3s
YKA Yellowknife Ar 75.42 28 P P 11 34 28.9 +0.2
comp=Z,2.9nm,0.4s,baz=292,slow=5.7,SNR=42
ARCES ARCESS Array B 77.19 341 P P 11 34 38.7 0.0
comp=Z,3.1nm,0.7s,baz=70,slow=8.9,SNR=11
LTY Liberty 77.78 44 P P 11 34 42.6 +0.3
LTY IAmb IAmb 11 34 43.2
comp=Z,7.3nm,1.2s
B08A Colville Reser 78.22 42 P P 11 34 45.5 +0.8
B08A IAmb IAmb 11 34 45.6
comp=Z,13nm,1.4s
YBH Yreka Blue Hor 78.38 50 P P 11 34 45.7 -0.1
comp=Z,2.9nm,1.0s,baz=336,slow=4.8,SNR=5.7
YBH Yreka Blue Hor 78.38 50 P P 11 34 46.6 +0.7
KCPM Cahto Peak 78.48 52 P P 11 34 47.1 +0.6
HAWA Hanford 78.83 44 P P 11 34 48.8 +0.8
NEW Newport 79.62 42 P P 11 34 52.6 +0.2
comp=Z,3.1nm,0.7s,baz=334,slow=3.3,SNR=8.2
NEW Newport 79.62 42 P P 11 34 53.0 +0.6
NEW IAmb IAmb 11 34 53.3
comp=Z,5.5nm,0.8s
J08A Circle Bar Ran 80.68 47 P P 11 34 59.1 +0.9
BMO Blue Mountains 80.86 45 P P 11 34 59.9 +0.7
WALA Waterton Lakes 81.24 40 P P 11 35 02.1 +1.1
CMB Columbia Colle 81.41 52 P P 11 35 02.9 +0.8
FIA1 FINESS Array S 81.44 334 P P 11 35 01.6 -0.1
FIA1 IAmb IAmb 11 35 06.8
comp=Z,15nm,1.2s
FINES FINESS Array B 81.44 334 P P 11 35 01.4 -0.3
comp=Z,2.4nm,0.5s,baz=67,slow=5.3,SNR=33
JTMT Jette 81.57 42 P P 11 35 03.6 +0.7
MFID Camas Ranch 82.42 46 P P 11 35 08.0 +0.6
NVAR Mina Array Bea 82.76 51 P P 11 35 09.5 +0.1
comp=Z,1.1nm,0.7s,baz=260,slow=5.2,SNR=8.0
R11A Troy Canyon, C 84.73 51 P P 11 35 19.9 +0.5
YHL Hebgen Lake 84.79 43 P P 11 35 20.8 +1.1
YHB Horse Butte 84.83 43 P P 11 35 21.2 +1.4
TPNV Topopah Spring 84.86 52 P P 11 35 20.2 +0.3
TPNV IAmb IAmb 11 35 20.9
comp=Z,5.5nm,1.1s
FFC Flin Flon 84.89 32 P P 11 35 20.2 +0.6
FFC IAmb IAmb 11 35 20.6
comp=Z,5.2nm,0.9s
AKASG Malin Array Be 85.79 324 P P 11 35 23.3 -0.8
comp=Z,0.4nm,0.4s,baz=51,slow=5.5,SNR=2.9
SHPR Sheep Range 85.84 52 P P 11 35 24.5 -0.4
DUG Dugway, Tooele 85.85 48 P P 11 35 25.1 +0.2
DUG IAmb IAmb 11 35 25.8
comp=Z,3.6nm,0.7s
PFO Pinyon Flats O 86.12 55 P P 11 35 26.1 -0.2
comp=Z,2.4nm,1.0s,baz=274,slow=6.8,SNR=4.1
PFO Pinyon Flats O 86.12 55 IAmb IAmb 11 35 26.4
comp=Z,4.9nm,1.1s
PDAR Pinedale Array 86.81 45 P P 11 35 28.9 -0.7
comp=Z,0.4nm,0.7s,baz=318,slow=2.0,SNR=3.7
HFS Hagfors 86.99 337 P P 11 35 28.3 -1.5
comp=Z,3.3nm,1.0s,baz=112,slow=1.6,SNR=10
NOA NORSAR Array B 87.21 338 P P 11 35 29.3 -1.5
comp=Z,1.1nm,1.0s,baz=39,slow=4.6,SNR=2.8
KNB Kanab 87.29 51 P P 11 35 32.4 +0.5
Q16A Castle Valley 87.57 48 P P 11 35 33.5 +0.2
SRU San Rafael Swe 87.92 48 P P 11 35 34.6 -0.3
Y14A Wickenburg 88.56 54 P P 11 35 38.3 +0.5
Y14A IAmb IAmb 11 35 38.9
comp=Z,3.2nm,0.7s
TXAR Lajitas Array 97.74 54 P Pdif 11 36 20.7 +0.4
comp=Z,0.2nm,0.7s,baz=313,slow=4.3,SNR=3.3
PLCA Paso Flores 147.35 130 PKPbc PKPbc 11 42 25.8 -2.1
comp=Z,0.8nm,0.7s,baz=260,slow=5.1,SNR=5.1
PLCA Paso Flores 147.35 130 PKPbc PKPbc 11 42 26.8 -1.1
LPAZ La Paz 150.52 82 PKPbc PKiKP 11 42 36.5 -1.4
comp=Z,1.2nm,0.5s,baz=320,slow=4.0,SNR=5.3
GO02 Mina Guanaco 150.83 100 PKPbc PKiKP 11 42 36.9 -1.1

*NEIC **16** 11:25:36.5±2.6, 58.96N±0.05×154.4W±0.1, h142km±6km, Error ellipse: s-maj=8.4km s-min=6.1km az=123.0*
*AEIC **16** 11:25:38.8±2.6, 58.99N±0.02×154.41W±0.10, h128km±7km, ML3.0/95, Error ellipse: s-maj=7.6km s-min=1.4km az=72.0*
*IDC **16** 11:25:44.2±0.6, 59.28N×151.31W, h0km, mb3.3/1, mb1 3.7/4, mb1mx3.3/53, mbtmp3.5/4, ML3.5/3, Error ellipse: s-maj=7.8km s-min=3.8km az=54.0*
ISC 16 11:25:36.4±1.1, **59.00N**±0.04×**154.38W**±0.05, **h143**km±9km, **n97**, σ**1.40**/115, **Southern Alaska**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KAHC Katmai Hardscr 0.48 223 Pn 11 25 56.4 -0.5
KAHC Sn 11 26 10.8 -1.7
KAHG Katmai Hook Gl 0.52 189 Pn 11 25 57.1 0.0
AUW Augustine West 0.60 52 Pn 11 25 58.0 +0.6
AUP Augustine Pinn 0.61 54 Pn 11 25 58.1 +0.5
ANCK Angle Creek 0.99 216 Pn 11 26 00.6 +0.1
CAHL Cahill 1.07 207 Pn 11 26 00.9 -0.2
KJL Kejulik 1.14 214 Pn 11 26 02.0 +0.3
ILS Iliamna Low So 1.17 34 Pn 11 26 02.8 +0.7
KDAK Kodiak Island 1.55 141 Sn 11 26 27.0 -1.4
KDAK Kodiak Island 1.55 141 Pn Pn 11 26 05.7 -0.1
RED Redoubt Volcan 1.64 29 Pn 11 26 07.7 +0.8
RED Sn 11 26 29.9 -0.4
PLK5 Peulik 5 1.65 233 Pn 11 26 07.7 +0.7
PLK1 Peulik 1 1.68 225 Pn 11 26 07.8 +0.5
RSO Redoubt South 1.68 29 Pn 11 26 08.2 +0.7
RDWB Redoubt West 1.68 27 Pn 11 26 08.2 +0.7
RDWB Sn 11 26 30.8 -0.6
CNPM China Poot 1.70 71 Pn 11 26 08.6 +1.0
CNPM Sn 11 26 31.2 -0.3
RDJH Redoubt Jeurge 1.78 26 Sn 11 26 34.0 +0.7
DFR Drift River 1.81 28 Pn 11 26 09.8 +0.9
DFR Sn 11 26 33.6 -0.2
PLBL Peulik Blue Cr 1.83 226 Pn 11 26 09.8 +0.8
OHAK Old Harbor 1.88 161 Pn 11 26 09.4 -0.2
OHAK Sn 11 26 33.0 -2.0
SVW2 Sparrevohn 2.19 345 Pn 11 26 13.3 +0.1
SII Sitkinak Islan 2.45 177 Pn 11 26 16.1 -0.5
SPCR Spurr Chakacha 2.46 25 Pn 11 26 17.7 +1.1
SPBG Spurr Blockage 2.48 23 Pn 11 26 18.2 +1.4
SPCG Spurr Capps Gl 2.58 26 Pn 11 26 19.3 +1.1
SLKM Skilak Lake 2.59 53 Pn 11 26 19.5 +1.3
SLKM Sn 11 26 49.0 -1.5
SEW Seward 2.74 64 Pn 11 26 21.1 +1.1
SEW Sn 11 26 52.0 -1.8
FIS Fire Island 3.00 42 Pn 11 26 25.2 +2.0
SUA Susitna One 3.06 35 Pn 11 26 24.9 +0.6
SUA Sn 11 27 00.7 -0.6
RC01 Rabbit Creek A 3.13 46 Pn 11 26 26.9 +1.9
SKT Skwentna 3.30 24 Pn 11 26 28.3 +1.1
SKT Sn 11 27 10.3 +3.6
CHGN Chignik 3.47 220 Pn 11 26 29.3 -0.1
PWL Port Wells 3.57 56 Pn 11 26 31.0 +0.3
PMR Palmer 3.69 43 Pn 11 26 31.7 -0.4
PMR Sn 11 27 12.7 -2.7
KNK Knik Glacier 3.82 48 Pn 11 26 33.3 -0.6
GHO Glory Hole Cre 3.88 42 Pn 11 26 33.9 -0.9
GHO Sn 11 27 17.6 -2.6
TT01 Tatalina 4.00 349 Pn 11 26 37.4 +1.1
TTA Tatalina 4.02 349 Pn 11 26 37.0 +0.4
PPLA Purkeypile 4.05 14 Pn 11 26 39.0 +1.9
SML Sawmill 4.11 44 Pn 11 26 37.0 -0.9
GLI Glacier Island 4.12 60 Pn 11 26 38.3 +0.4
HIN Hinchinbrook I 4.23 67 Pn 11 26 40.4 +1.1
FID Port Fidalgo 4.35 63 Pn 11 26 41.1 +0.1
FID Sn 11 27 28.1 -3.1
JPK Jack Peak 4.42 59 Pn 11 26 42.9 +1.0
SCM Sheep Creek Mo 4.50 48 Pn 11 26 43.0 0.0
SCM Sn 11 27 34.8 -0.1
HUR Hurricane 4.61 28 Pn 11 26 44.8 +0.4
EYAK Cordova Ski Ar 4.63 67 Pn 11 26 45.1 +0.5
WAT1 Susitna Watana 4.78 34 Pn 11 26 46.5 0.0
WAT6 Susitna Watana 4.84 39 Pn 11 26 47.5 -0.1
KTH Kantishna Hill 4.86 19 Pn 11 26 47.9 +0.2
WAT2 Susitna Watana 4.87 33 Pn 11 26 48.0 0.0
TRF Thorofare Moun 4.88 22 Pn 11 26 48.7 +0.6
GOAT Goat Mountain 5.13 68 Pn 11 26 52.6 +1.3
RND Reindeer 5.16 29 Pn 11 26 51.2 -0.5
PS12 TAPS Pump St12 5.23 58 Pn 11 26 53.8 +1.2
DHY Denali Highway 5.32 37 Pn 11 26 53.5 -0.4
DHY Sn 11 27 51.5 -2.8
BPAW Bear Paw Mtn. 5.37 16 Pn 11 26 54.3 -0.1
PS11 TAPS Pump St11 5.37 51 Pn 11 26 55.7 +1.3
MCK McKinley 5.42 27 Pn 11 26 55.0 -0.1
BWN Browne 5.69 22 Pn Pn 11 26 58.6 -0.1
GLB Gilahina Butte 5.81 61 Pn 11 27 00.8 +0.4
GLB Sn 11 28 05.1 -0.9
DT1 Dutton Round H 5.81 231 Pn 11 27 01.5 +1.1
PAX Paxson 5.88 44 Pn 11 27 01.0 -0.4
PAX Sn 11 28 05.4 -2.4
VRDI Verde Repeater 5.90 63 Pn 11 27 02.3 +0.6
WAX Waxell Ridge 6.01 71 Pn 11 27 04.0 +1.0
NEA Nenana 6.13 22 Pn Pn 11 27 04.0 -0.6
MCARA McCarthy VSAT 6.15 62 Pn 11 27 05.7 +0.9
WRH Wood River Hil 6.25 26 Pn 11 27 05.6 -0.5
MLY Manley 6.29 14 Pn 11 27 06.1 -0.6
KIAG Kiagna River 6.34 67 Pn 11 27 08.8 +1.3
PTPK Patty Peak 6.35 65 Pn 11 27 09.4 +1.7
BALM Baldy 6.37 66 Pn 11 27 08.5 +0.6
CCB Clear Creek Bu 6.46 26 Pn 11 27 08.1 -0.9
HDA Harding Lake 6.47 30 Pn 11 27 08.8 -0.4
HDA Sn 11 28 18.2 -3.5
MENT Mentasta 6.52 48 Pn 11 27 10.5 +0.7
RIDG Independent Ri 6.60 40 Pn 11 27 11.2 +0.3
PS08 TAPS Pump Stn8 6.61 30 Pn 11 27 10.7 -0.3
MDM Murphy Dome 6.64 23 Pn 11 27 11.1 -0.2
COLA College 6.65 25 Pn 11 27 10.8 -0.6
BARN Barnard Glacie 6.70 67 Pn 11 27 13.9 +1.5
IL31 6.78 28 Pn 11 27 12.4 -0.8
ILAR Eielson Array 6.78 28 Pn Pn 11 27 12.3 -1.0
1.4nm,0.3s,baz=211,slow=13,SNR=91
ILAR Sn Sn 11 28 23.7 -5.5
0.8nm,0.3s,baz=270,slow=26,SNR=8.6
CTGM Chitina Glacie 6.84 68 Pn Pn 11 27 15.8 +1.6
SCRK Sand Creek 7.04 41 Pn 11 27 16.4 -0.4
YUK2 White River 7.26 62 Pn 11 27 22.1 +2.3
BC03 7.34 51 Pn 11 27 22.6 +1.9
YUK3 Moose Creek 7.43 62 Pn 11 27 24.4 +2.2
BVCY Beaver Creek 7.46 57 Pn 11 27 24.7 +2.3
ANM Nome 7.62 322 Pn Pn 11 27 26.7 +2.2
UNV Unalaska Valle 8.47 238 Pn Pn 11 27 36.3 +0.4
EGAK Eagle 8.50 42 Pn Pn 11 27 36.6 +0.3
HYT Haines Junctio 8.67 71 Pn Pn 11 27 43.1 +4.4
DAWY Dawson 8.76 48 Pn Pn 11 27 41.9 +2.1
INK Inuvik 13.06 36 Pn Pn 11 28 37.3 +1.1
0.3nm,0.3s,baz=229,slow=9.6,SNR=11
INK Inuvik 13.06 36 Pn Pn 11 28 37.8 +1.6
YKA Yellowknife Ar 19.52 63 P Pn 11 29 55.3 +0.3
0.2nm,0.3s,baz=276,slow=10.0,SNR=27
SONM Songino Array 54.80 306 P P 11 35 25.4 +34
0.2nm,0.6s,baz=27,slow=6.6,SNR=2.7

*NEIC **16** 11:26:47.3±2.1, 7.22N±0.06×74.82W±0.06, h79km±7km, mb4.3/14, Error ellipse: s-maj=9.4km s-min=8.0km az=115.0*
*IDC **16** 11:26:48.9±2.4, 7.17N×74.74W, h92km±21km, mb3.7/7, mb1 3.8/11, mb1mx3.5/41, mbtmp4.1/11, Error ellipse: s-maj=23.9km s-min=13.9km az=108.0*
*RSNC **16** 11:26:48.2±0.9, 7.22N×74.90W, h58km±4km, ML3.7, Mw3.7*
ISC 16 11:26:46.6±0.6, **7.26N**±0.03×**74.89W**±0.03, **h71**km±6km, **n78**, σ**1.59**/101, **mb4.2**/12, **10C-7D**, **Northern Colombia**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ZARC Zaragoza, Cauc 0.23 9 ⇑iP Pn 11 26 57.7 +0.2
ZARC eS Sn 11 27 05.0 -0.5
ZARC i 11 27 05.6
comp=Z,10μm,0.2s
UREC San Jos de Ur 0.80 308 ⇑iP Pn 11 27 03.1 +0.4
UREC eS Sn 11 27 15.0 +0.3
UREC i 11 27 16.1
comp=Z,4μm,0.2s
PTBC PUERTO BERRIO, 0.84 149 ⇑iP Pn 11 27 03.0 -0.2
PTBC eS Sn 11 27 14.0 -1.5
PTBC i 11 27 15.5
comp=Z,3μm,0.9s
HELC Santa Helena 1.24 211 ⇓iP Pn 11 27 08.4 -0.1
HELC eS Sn 11 27 24.7 -0.1
HELC i 11 27 27.6
comp=Z,1μm,0.2s
DBBC Dabeiba 1.33 260 ⇓eP Pn 11 27 09.8 +0.4
DBBC eS Sn 11 27 27.2 +0.6
DBBC i 11 27 31.2
comp=Z,1μm,0.6s
NORC Norcasia 1.69 179 ⇑iP Pn 11 27 14.3 +0.1
NORC eS Sn 11 27 34.1 -0.9
NORC i 11 27 36.0
comp=Z,1μm,0.6s
SMLC San Martn de 1.73 28 eP Pn 11 27 15.6 +0.9
SMLC i 11 27 39.4
comp=Z,2μm,0.3s
CBOC Ciudad Bolivar 1.78 219 ⇓eP Pn 11 27 16.0 +0.5
CBOC eS Sn 11 27 31.2 -6.2
CBOC i 11 27 46.7
comp=Z,226nm,0.5s
SPBC San Pablo de B 1.80 153 ⇑iP Pn 11 27 15.7 0.0
SPBC i 11 27 47.1
comp=Z,352nm,0.3s
BARC Barichara 1.82 111 ⇓eP Pn 11 27 17.4 +1.2
BARC i 11 27 42.1
comp=Z,4μm,0.7s
OCAC Ocana 1.84 58 ⇓iP Pn 11 27 17.5 +1.3
OCAC eS Sn 11 27 40.4 +1.6
OCAC i 11 27 43.1
comp=Z,631nm,0.2s
GUY2C Guyana, Caldas 2.08 193 ⇓eP Pn 11 27 20.7 +0.9
GUY2C i 11 27 53.4
comp=Z,455nm,0.6s
LCBC Los crdobas, 2.15 317 ⇑eP Pn 11 27 22.1 +1.8
LCBC i 11 27 52.3
comp=Z,266nm,0.2s
PAMC Pamplona, Colo 2.18 88 ⇓iP Pn 11 27 22.8 +1.7
PAMC eS Sn 11 27 48.2 +0.9
PAMC i 11 27 50.6
comp=Z,743nm,0.6s
RUSC La Rusia 2.25 127 ⇑eP Pn 11 27 22.8 +0.6
RUSC eS Sn 11 27 49.6 +0.4
RUSC i 11 27 53.3
comp=Z,476nm,0.8s
RUSC La Rusia 2.25 127 Pn 11 27 22.8 +0.6
ROSC El Rosal 2.47 167 P Pn 11 27 26.0 +1.0
comp=Z,33nm,0.3s,baz=230,slow=1.5,SNR=37
ROSC S Sn 11 27 59.2 +4.8
comp=Z,59nm,0.3s,baz=20,slow=23,SNR=3.0
ROSC El Rosal 2.47 167 ⇑eP Pn 11 27 26.1 +1.0
ROSC i 11 28 02.9
comp=Z,223nm,0.3s
ROSC El Rosal 2.47 167 Pn 11 27 26.2 +1.1
SJCC San Jacinto, C 2.63 354 ⇑eP Pn 11 27 28.0 +1.1
SJCC eS Sn 11 27 59.0 +1.1
SJCC i 11 28 00.9
comp=Z,247nm,0.8s
SOLC Bahia Solano 2.70 248 ⇑eP Pn 11 27 28.7 +0.9
SOLC eS Sn 11 27 49.2 -10
SOLC i 11 27 50.3
comp=Z,165nm,0.9s
PLMC San Jos del P 2.72 211 eP Pn 11 27 29.4 +1.3
PLMC i 11 28 09.7
comp=Z,242nm,0.2s
CAPC Capurgana 2.79 299 eP Pn 11 27 28.4 -0.6
CAPC eS Sn 11 27 59.6 -2.0
CAPC i 11 28 02.9
comp=Z,446nm,0.2s
PTAC Punta Ardita, 2.89 268 eP Pn 11 27 30.8 +0.5
PTAC eS Sn 11 28 04.3 +0.2
PTAC i 11 28 06.8
comp=Z,1μm,0.3s
CODC Agustn Codazz 3.02 28 eP Pn 11 27 33.4 +1.3
CODC eS Sn 11 28 07.8 +0.7
CODC i 11 28 22.3
comp=Z,132nm,0.5s
TAMC Tame, Arauca 3.19 105 eP Pn 11 27 36.4 +2.0
TAMC i 11 28 20.3
comp=Z,175nm,0.3s
ORTC Ortega, Tolima 3.35 186 eP Pn 11 27 38.4 +1.8
ORTC i 11 28 35.3
comp=Z,215nm,0.6s
PIZC Pizarro, Choco 3.35 227 eP Pn 11 27 38.3 +1.7
PIZC i 11 28 59.1
comp=Z,124nm,1.1s
YOTC Yotoco, Valle 3.56 204 eP Pn 11 27 40.1 +0.5
YOTC eS Sn 11 28 20.2 -0.5
YOTC i 11 28 22.9
comp=Z,49nm,0.5s
PTGC Puerto Gaitan, 4.10 138 eP Pn 11 27 46.7 -0.1
PTGC eS Sn 11 28 32.9 -0.7
PTGC i 11 28 37.1
comp=Z,71nm,0.4s
SDV Santo Domingo 4.52 69 P Pn 11 27 54.7 +2.0
comp=Z,11nm,0.3s,baz=214,slow=6.2,SNR=38
SDV S Sn 11 28 44.6 +0.5
comp=Z,42nm,0.3s,baz=43,slow=18,SNR=9.7
SDV Santo Domingo 4.52 69 eP Pn 11 27 54.6 +1.9
SDV i 11 28 49.0
comp=Z,93nm,0.6s
SDV Santo Domingo 4.52 69 Pn 11 27 54.6 +1.9
BCIP Isla Barro Col 5.25 291 Pn Pn 11 28 02.9 +0.4
URIC Uribia, Colomb 5.26 33 eP Pn 11 28 01.4 -1.2
URIC eS Sn 11 28 55.9 -6.0
URIC i 11 29 37.5
comp=Z,34nm,0.4s
URIC Uribia, Colomb 5.26 33 Pn Pn 11 28 02.1 -0.6
FLOC Florencia 5.69 188 Pn 11 28 08.9 +0.3
OTAV Otavalo 7.83 207 Pn Pn 11 28 41.1 +2.9
OTAV Sn 11 30 06.2 +0.5
PCRV Puerto La Cruz 10.54 73 P Pn 11 29 16.1 +1.1
comp=Z,0.7nm,0.3s,baz=216,slow=11,SNR=1.1
PCRV S Sn 11 31 08.7 -2.8
comp=Z,0.9nm,0.3s,baz=344,slow=17,SNR=1.5
PLCV Puerto La Cruz 10.59 73 Pn 11 29 16.1 +0.6
PLCV Sn 11 31 08.7 -3.8
MTDJ Mount Denham 11.20 347 Pn Pn 11 29 26.0 +2.0
SDDR Presa de Saban 12.17 16 Pn Pn 11 29 41.8 +4.7
DR12 Loma Pena Alta 12.65 25 Pn Pn 11 29 43.2 -0.5
CRPR Cabo Rojo, PR 13.10 35 Pn Pn 11 29 48.8 -0.9
MLPR Magueyes Islan 13.11 35 Pn Pn 11 29 49.2 -0.6
MPR Mayaguez 13.25 34 Pn Pn 11 29 52.3 +0.6
AOPR Arecibo Observ 13.57 35 Pn Pn 11 29 56.8 +0.8
SJG San Juan 13.74 37 P Pn 11 29 58.4 +0.1
comp=Z,1.8nm,0.3s,baz=199,slow=16,SNR=1.8
PDPR Patillas Dam, 13.75 38 Pn Pn 11 29 57.8 -0.5
GCPR Guaynabo City 13.93 37 Pn Pn 11 30 01.0 +0.2
HUMP Col San Antoni 13.95 38 Pn Pn 11 30 00.9 -0.1
CBYP Canovanas 14.04 38 Pn Pn 11 30 02.2 -0.1
CUPR Culebra, Puert 14.43 40 Pn Pn 11 30 07.0 -0.3
STVI Saint Thomas 14.67 40 P P 11 30 13.7 -1.1
SAML Samuel 19.89 144 P P 11 31 10.9 -1.4
LPAZ La Paz 24.34 164 P P 11 31 58.1 -0.4
comp=Z,3.7nm,0.5s,baz=338,slow=5.7,SNR=19
LPAZ La Paz 24.34 164 P P 11 31 58.1 -0.4
LPAZ IAmb IAmb 11 31 58.8
comp=Z,4.3nm,0.6s
SIV San Ignacio 26.85 149 P P 11 32 19.5 -1.3
comp=Z,1.5nm,0.4s,baz=324,slow=9.4,SNR=12
GO01 Chusmiza 27.34 168 P P 11 32 24.6 -1.0
PB11 IPOC Station P 27.34 169 P P 11 32 24.0 -1.2
PB11 IAmb IAmb 11 32 31.7
comp=Z,17nm,1.3s
833A Chaparral WMA, 31.22 315 P P 11 33 00.7 +1.2
833A IAmb IAmb 11 33 00.9
comp=Z,3.8nm,0.5s
T47A Sharon Grove 31.61 341 P P 11 33 03.7 +1.0
PENMO Penman 32.02 337 P P 11 33 06.7 +0.4
GO02 Mina Guanaco 32.64 171 P P 11 33 12.1 -0.2
GO02 IAmb IAmb 11 33 12.3
comp=Z,6.5nm,1.2s
BDFB Brasilia 35.03 131 P P 11 33 31.9 -0.9
comp=Z,1.6nm,0.5s,baz=309,slow=19,SNR=3.7
BDFB Brasilia 35.03 131 P P 11 33 32.4 -0.5
GO04 Tololo Observa 37.43 174 P P 11 33 53.5 +0.2
GO04 IAmb IAmb 11 33 55.2
comp=Z,6.3nm,1.1s
GO05 Huala 42.14 176 P P 11 34 31.4 -0.6
GO05 IAmb IAmb 11 34 41.2
comp=Z,15nm,1.4s
SCHQ Schefferville 47.88 6 P P 11 35 18.9 +1.6
comp=Z,1.4nm,0.6s,baz=180,slow=10,SNR=3.8
SCHQ Schefferville 47.88 6 P P 11 35 19.4 +2.1
SCHQ IAmb IAmb 11 35 30.9
comp=Z,2.7nm,1.1s
PLCA Paso Flores 47.92 176 P P 11 35 17.1 -0.8
comp=Z,2.7nm,1.1s,baz=42,slow=9.5,SNR=3.3
PLCA Paso Flores 47.92 176 P P 11 35 17.7 -0.3
PLCA IAmb IAmb 11 35 19.1
comp=Z,3.0nm,1.0s
YKA Yellowknife Ar 62.25 340 P P 11 37 01.2 +0.5
comp=Z,0.3nm,0.5s,baz=129,slow=6.5,SNR=4.6
YKA pP pP 11 37 17.9 -1.4
comp=Z,0.2nm,0.4s,baz=133,slow=6.9,SNR=2.9
TORD Torodi Ar. Bea 75.37 78 P P 11 38 22.7 -0.5
comp=Z,0.3nm,0.5s,baz=285,slow=5.8,SNR=2.1
KK31 Karatay Array 120.84 29 PKPdf PKPdf 11 45 30.9 -0.1
KKAR Karatay Array 120.84 29 PKPdf PKiKP 11 45 31.1 -0.1
ASAR Alice Springs 147.91 236 PKPbc PKPbc 11 46 23.3 -1.3
comp=Z,0.3nm,0.8s,baz=113,slow=3.6,SNR=2.1
WRA Warramunga Arr 148.99 243 PKPbc PKPbc 11 46 26.3 -1.1
comp=Z,0.8nm,1.1s,baz=105,slow=3.0,SNR=1.7

*IDC **16** 11:27:22.7±1.6, 18.68S×175.75W, h210km±16km, mb3.6/10, mb1 3.9/11, mb1mx3.7/31, mbtmp4.1/11, Error ellipse: s-maj=24.8km s-min=11.2km az=132.0*
*NEIC **16** 11:27:25.0±2.8, 18.6S±0.1×175.7W±0.1, h233km±5km, mb4.4/26, Error ellipse: s-maj=15.7km s-min=14.4km az=131.0*
ISC 16 11:27:25.1±0.5, **18.65S**±0.06×**175.74W**±0.07, **h238**km, **n67**, σ**2.27**/77, **mb4.2**/20, **Tonga Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NIUE Niue 5.52 95 P Pn 11 28 48.5 +1.5
NIUE S S 11 29 53.7 +1.4
AFI Afiamalu 6.06 40 P Pn 11 28 51.0 -2.9
1.8nm,0.3s,baz=60,slow=3.4,SNR=12
AFI S S 11 30 01.6 -3.2
52nm,0.3s,baz=121,slow=21,SNR=13
AFI Afiamalu 6.06 40 P 11 28 51.0 -2.9
AFI S 11 30 01.0 -3.7
SANVU Saraoutou 16.61 278 P Pn 11 31 07.8 +2.7
SANVU IAmb IAmb 11 31 20.4
comp=Z,21nm,0.8s
DZM Mont Dzumac 17.05 255 P Pn 11 31 12.1 +1.9
comp=Z,0.5nm,0.3s,baz=82,slow=15,SNR=6.1
DZM Mont Dzumac 17.05 255 P Pn 11 31 12.1 +1.9
DZM IAmb IAmb 11 31 13.7
comp=Z,13nm,0.9s
OUZ Omahuta 19.02 208 P Pn 11 31 36.0 +2.8
MXZ Matakaoa Point 19.55 194 P P 11 31 37.5 +2.5
WMGZ Waiomatatini S 19.77 194 P P 11 31 40.5 -1.5
WMGZ S S 11 35 00.5 -6.6
HAZ Te Kaha 19.86 195 P P 11 31 39.5 +1.2
HAZ S S 11 35 02.0 -6.7
PUZ Puketiti 20.05 194 P P 11 31 41.0 +0.6
RUGZ Raukumara Rang 20.08 195 P P 11 31 42.0 +1.1
RUGZ S S 11 35 07.1 -6.1
MWZ Matawai 20.47 195 P P 11 31 46.2 +1.3
MWZ S S 11 35 15.7 -4.3
TOZ Tahuroa Road 20.50 200 P P 11 31 46.9 +1.7
URZ Urewera 20.51 196 P P 11 31 44.5 -0.8
comp=Z,5.8nm,0.3s,baz=274,slow=3.3,SNR=25
URZ S S 11 35 13.3 -7.3
comp=Z,4.3nm,0.9s,baz=166,slow=21,SNR=1.6
URZ Urewera 20.51 196 P P 11 31 44.1 -1.2
URZ IAmb IAmb 11 31 54.5
comp=Z,8.4nm,0.7s
URZ Urewera 20.51 196 P P 11 31 45.4 +0.1
RAGZ Rawiri 20.65 195 P P 11 31 48.6 +1.7
TARZ Mount Tarawera 20.65 198 P P 11 31 49.8 +2.8
RIGZ Rimuhau 20.77 194 P P 11 31 49.4 +1.3
MUGZ Murupara 20.80 197 P P 11 31 49.1 +0.7
RAHZ Arahi 21.13 196 P P 11 31 53.6 +1.8

MTHZ Maungataniwha 21.14 196 P P 11 31 52.3 +0.5
NMHZ Naumai 21.38 196 P P 11 31 55.5 +1.3
BKZ Black Stump Fm 21.52 197 P P 11 31 54.1 -1.5
BKZ IAmb IAmb 11 32 06.6
comp=Z,9.8nm,1.1s
BKZ Black Stump Fm 21.52 197 P P 11 31 55.2 -0.4
MCHZ McNeill Hill 21.73 196 P P 11 31 58.8 +1.3
KWHZ Kaweka Forest 21.79 197 P P 11 31 59.1 +1.0
KAHZ Kahuranaki 22.02 195 P P 11 32 01.7 +1.5
PXZ Pawanui 22.24 195 P P 11 32 02.7 +0.4
MSWZ Moikau Station 23.96 197 P P 11 32 16.7 -1.2
SNZO South Karori 24.02 198 P P 11 32 17.9 -0.4
SNZO IAmb IAmb 11 32 21.7
comp=Z,17nm,1.0s
BHW Baring Head 24.06 198 P P 11 32 21.1 +2.4
QRZ Quartz Range 24.29 202 P P 11 32 23.4 +2.6
TUWZ Tuamarina 24.36 199 P P 11 32 22.0 +0.5
THZ Tophouse 24.99 200 P P 11 32 27.2 0.0
THZ IAmb IAmb 11 32 34.5
comp=Z,11nm,1.2s
LTZ Lake Taylor 26.11 200 P P 11 32 35.8 -1.5
LTZ IAmb IAmb 11 32 53.5
comp=Z,17nm,1.3s
WHZ Wether Hill Ro 30.34 203 P P 11 33 14.6 -0.1
COEN Coen 39.64 270 P P 11 34 36.3 +2.0
STKA Stephens Creek 40.52 243 P P 11 34 40.5 -0.8
comp=Z,1.2nm,0.3s,baz=154,slow=9.4,SNR=3.2
STKA Stephens Creek 40.52 243 P P 11 34 42.5 +1.3
BBOO Buckleboo 45.28 242 P P 11 35 19.5 +0.1
WR0 Warramunga Arr 46.80 260 P P 11 35 31.5 +0.1
WB0 Warramunga Arr 46.96 260 P P 11 35 32.9 +0.2
WB0 IAmb IAmb 11 35 33.5
comp=Z,12nm,0.5s
WB2 Warramunga Arr 46.98 260 P P 11 35 33.4 +0.6
WB2 IAmb IAmb 11 35 33.7
comp=Z,12nm,0.9s
WRAB Tennant Creek 46.98 260 P P 11 35 32.8 0.0
WRAB IAmb IAmb 11 35 33.6
comp=Z,12nm,0.9s
WRA Warramunga Arr 46.99 260 P P 11 35 33.0 +0.1
comp=Z,4.3nm,0.3s,baz=95,slow=8.2,SNR=22
AS31 Alice Springs 47.03 255 P P 11 35 33.8 +0.6
ASAR Alice Springs 47.03 255 P P 11 35 33.6 +0.4
comp=Z,9.7nm,0.7s,baz=88,slow=8.6,SNR=156
ASAR ScP ScP 11 40 34.3 +2.0
comp=Z,0.3nm,0.9s,baz=81,slow=5.9,SNR=4.2
ASAR S S 11 42 01.3 -5.5
comp=Z,0.5nm,0.9s,baz=92,slow=15,SNR=4.8
KNRA Kununurra 52.93 264 P P 11 36 18.0 +0.5
KNRA IAmb IAmb 11 36 20.3
comp=Z,17nm,1.1s
FITZ Fitzroy Crossi 55.41 261 P P 11 36 36.2 +0.9
FITZ IAmb IAmb 11 36 38.4
comp=Z,8.5nm,1.4s
PSA00 Pilbara Seismi 60.17 255 P P 11 37 08.8 +0.4
PSA00 IAmb IAmb 11 37 10.8
comp=Z,9.4nm,0.9s
MJAR Matsushiro Arr 70.03 322 P P 11 38 12.3 +1.0
comp=Z,1.2nm,0.5s,baz=145,slow=6.4,SNR=8.4
QSPA South Pole Qui 71.41 180 P P 11 38 19.4 +0.1
QSPA IAmb IAmb 11 38 20.3
comp=Z,7.1nm,0.9s
TPUB Ta-pu 74.80 301 P P 11 38 40.3 +0.6
PEA0B Petropavlovsk- 75.07 344 P P 11 38 39.6 -0.9
NVAR Mina Array Bea 78.23 43 P P 11 39 00.1 +1.2
comp=Z,1.2nm,0.7s,baz=225,slow=9.1,SNR=6.9
MNTX Cornudas Mount 83.95 54 P P 11 39 30.6 +1.8
TXAR Lajitas Array 84.27 57 P P 11 39 32.2 +1.6
comp=Z,1.0nm,0.8s,baz=216,slow=7.2,SNR=12
ILAR Eielson Array 86.06 12 P P 11 39 38.8 +0.3
comp=Z,0.1nm,0.3s,baz=208,slow=5.3,SNR=6.2
PDAR Pinedale Array 86.17 42 P P 11 39 40.3 +0.4
comp=Z,0.3nm,0.6s,baz=205,slow=4.0,SNR=3.4
YKA Yellowknife Ar 93.96 24 P P 11 40 15.9 +0.4
comp=Z,0.3nm,0.7s,baz=241,slow=5.1,SNR=3.4
ARCES ARCESS Array B 127.47 351 PKP PKPdf 11 46 00.7 -0.3
comp=Z,5.8nm,0.9s,baz=28,slow=5.5,SNR=4.7
RCBR Riachuelo 133.54 118 PKPdf PKPdf 11 46 12.2 -2.0
CLL Collm 146.69 350 ePKPbc PKPbc 11 46 39.0 +0.3
MORC Moravsky Berou 147.17 344 PKPbc PKPbc 11 46 41.1 +1.0
FUORN Ofenpass-Fuorn 151.67 351 PKPbc PKiKP 11 46 52.3 +0.4

TRN 16 11:46:28.2,17˚64N×61˚61W,h28km,MD3.9,1D, Leeward Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ANWB Willy Bob 0.17 280⇓iP Pn 11 46 35.3 +0.3
ANWB eS Sb 11 46 40.0 +2.2
NVRH Round Hill, Ne 1.05 245 eP Pb 11 46 48.0 +0.1
NVRH eS Sb 11 47 03.7 +2.4
MLYT Lee's Yard 1.07 212 iP Pb 11 46 49.0 +0.8
MLYT eS Sb 11 47 04.8 +3.1
NVBH Bath Hotel, Ne 1.09 242 eS Sb 11 47 04.7 +2.2
SKI Saint Kitts 1.12 254 eP Pb 11 46 49.7 +0.7
SKI eS Sb 11 47 04.5 +1.2
SKOC St. Kitts, UWI 1.13 252 eP Pb 11 46 49.5 +0.4
SKOC eS Sb 11 47 05.1 +1.7
SEUS St. Eustatius 1.32 264 eP Pb 11 46 52.9 +0.5
SEUS eS Sb 11 47 10.6 +1.7
DEG La Desirade 1.42 158 eP Pb 11 46 53.4 -0.7
DEG eS Sb 11 47 12.8 +1.0
SMRT St. Maarten 1.46 287 eP Pb 11 46 54.0 -0.7
SMRT eS Sb 11 47 12.8 -0.1
SABA Saba 1.56 270 eP Pb 11 46 56.1 -0.4
SABA eS Sb 11 47 15.8 0.0
MDPO Dominica; Chan 2.06 176 eP Pb 11 47 02.9 -2.0
MDPO eS Sn 11 47 27.0 +1.4
DWS Wesley 2.08 172 eP Pn 11 47 02.8 +1.5
DWS eS Sn 11 47 28.0 +1.8
FDF Fort de France 2.92 171 eP Pn 11 47 14.9 +2.1
FDF eS Sn 11 47 49.2 +2.1
SLBI Saint Lucia, B 3.65 170 eP Pn 11 47 24.7 +1.9
SLBI eS Sn 11 48 06.8 +1.9
SLAC Saint Lucia, A 3.78 169 eP Pn 11 47 27.1 +2.4
SLAC eS Sn 11 48 09.1 +0.8
MCLT Moule a Chique 3.96 171 eP Pn 11 47 28.7 +1.6
SVV Soufriere Volc 4.31 175 e Pn 11 47 34.0 +2.0
SVB Belmont 4.36 175 e Pn 11 47 34.8 +2.2
SVCV St. Vincent, C 4.36 174 e Pn 11 47 34.1 +1.4
GRGR Grenville 5.47 180 eP Pn 11 47 49.8 +1.8

GCMT **16** *12:00:23.9±0.3, 4˚87N±0˚02×126˚15E±0˚02, h140km±4km, MW4.9/88, Moment Tensor Solution. s24,c25; s88,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-1.68±.13; Mθθ1.15±.13; Mφφ0.53±.15; Mrθ-0.47±.09; Mrφ-1.45±.13; Mθφ2.31±.11; Best double couple: M0 3.14100×10^{16} NP1:φs281.00000°, δ30.00000°, λ-143.00000°. NP2: φs158.00000°, δ72.00000°, λ-65.00000°. Principal axes: T 3.1100, Plg23.0000°, Azm229.0000°; N 0.0630, Plg24.0000°, Azm330.0000°; P -3.1720, Plg56.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC **16** *12:00:23.9±1.9,4˚87N±0˚05×126˚04E±0˚08,h126km±3km, mb4.9/107 Error ellipse: s-maj=11.6km s-min=6.7km az=68.0*
IDC **16** *12:00:24.4±1.1,4˚85N×126˚05E,h133km±9km,mb4.2/26, mb1 4.4/29,mb1mx4.3/36,mbtmp4.7/29,MS3.3/8, Ms1 3.3/8,ms1mx3.0/28,Error ellipse: s-maj=14.0km s-min=6.5km az=78.0*
MAN **16** *12:00:24.4,5˚02N×126˚21E,h127km,mb5.5,ML4.5, MS4.7*
DJA **16** *12:00:24.7±0.2,5˚N±2˚×12˚6E±˚,h121km±2km,M5.0/73, mb5.1/73,mB5.4/34,MLv5.5/12,Mw(mB)4.9/34,Mwp5.0/1*
KLM **16** *12:00:25.0,4˚90N×126˚44E,h144km,mb5.1*
ISC 16 12:00:24.6±0.6,4˚85N±0˚03×126˚13E±0˚04,h134km±5km, n306,σ1§54/350,mb4.8/89,3C-7D,Talaud Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DDMP Don Marcelino, 1.32 342 eP Pn 12 00 49.1 -1.9
DDMP eS Sn 12 01 09.1 -2.1
MATI Mati 2.09 3 eP Pn 12 00 57.3 -2.6
MATI eS Sn 12 01 24.9 -2.1
DAV Davao City (W) 2.28 346⇓eP Pn 12 01 01.0 -1.2
DAV Davao City (W) 2.28 346 P Pn 12 01 01.3 -0.9
DAV Sn Sn 12 01 30.4 -0.7
SKMP Bagumbayan, Su 2.29 317 eP Pn 12 01 00.9 -1.5
SKMP eS Sn 12 01 30.3 -1.1
DMPH Davao City--Mi 2.31 344⇑iP Pn 12 01 12.0 +9.4
DMPH iS Sn 12 01 36.2 +4.4
KCP Kidapawan 2.38 334⇑iP Pn 12 01 03.4 -0.2
KCP iS Sn 12 01 38.5 +4.9
BUKP Musuan 3.19 341 eP Pn 12 01 13.1 -0.8
BUKP eS Sn 12 01 51.4 -0.7
BIPH Bislig 3.32 4⇑iP Pn 12 01 13.3 -2.3
BIPH iS Sn 12 01 51.1 -3.9
CGP Cagayan de Oro 3.86 338⇓eP Pn 12 01 24.0 +1.4
CGP eS Sn 12 02 13.6 +6.1
PAGZ Pagadian 4.04 318 eP Pn 12 01 23.5 -1.5
PAGZ eS Sn 12 02 08.5 -3.5
BUTP Butuan 4.13 353 eP Pn 12 01 25.5 -0.7
TNTI Ternate 4.23 163 P Pn 12 01 27.7 +0.1
TNTI S Sn 12 02 16.2 -0.3
TNTI Ternate 4.23 163 Pn 12 01 26.8 -0.8
TNTI Sn Sn 12 02 15.3 -1.2
KMSI Cibinong 4.75 207 P Pn 12 01 35.6 +1.1
TBP Tagbilaran 5.31 335⇓eP Pn 12 01 42.9 +0.9
MSLP Maasin 5.40 347 eP Pn 12 01 41.1 -2.1
LBMI Labuha 5.62 166 P Pn 12 01 46.5 +0.4
5.2nm5μm176nm,0.5s
LBMI S Sn 12 02 47.0 -2.6
5.2nm5μm176nm,0.5s
LLP Lapu-Lapu 5.84 339 eP Pn 12 01 48.6 -0.5
LLP eS Sn 12 02 52.3 -2.8
MRSI Marisa 6.03 224 P Pn 12 01 53.0 +1.4
6.4nm17μm2μm,0.8s
MRSI S Sn 12 02 58.2 -1.3
6.4nm17μm2μm,0.8s
OCLP Ormoc 6.35 346 eP Pn 12 01 55.5 -0.3
GUIM Jordan 6.73 329 eP Pn 12 02 01.0 0.0
LUWI Luwuk 6.74 210 P Pn 12 02 03.9 +2.7
2.8nm7μm777nm,0.9s
LUWI Luwuk 6.74 210 Pn 12 02 02.7 +1.5
SANI Sanana 6.85 181 P Pn 12 01 59.6 -3.0
3.2nm15μm603nm,0.8s
SANI S Sn 12 03 09.6 -10
3.2nm15μm603nm,0.8s
APSI Ampana 7.26 218 P Pn 12 02 10.9 +2.7
1.6nm5μm502nm,1.3s
APSI S Sn 12 03 32.0 +2.7
1.6nm5μm502nm,1.3s
RCP Roxas 7.46 334⇓eP Pn 12 02 12.9 +2.1
SIJI Sorong 7.65 138 P Pn 12 02 13.1 -0.4
6.1nm,0.3s,baz=125,slow=20,SNR=6.1
SIJI S Sn 12 03 34.4 -4.4
8.1nm,0.3s,baz=163,slow=21,SNR=7.7
MPSI Mapaga 7.67 234 P Pn 12 02 15.7 +2.1
0.5nm2μm151nm,1.1s
NLAI Namlea 8.09 173 P Pn 12 02 17.9 -1.4
7μm234nm,0.9s
NLAI S Sn 12 03 41.7 -7.6
7μm234nm,0.9s
MSAI Masohi 8.61 161 P Pn 12 02 26.8 +0.6
489nm23nm,0.7s
FAKI Fak Fak 9.84 141 P Pn 12 02 43.4 +0.5
1μm80nm,1.0s
FAKI Fak Fak 9.84 141 Pn 12 02 40.3 -2.6
KKM Kota Kinabalu 9.94 277 Pn 12 02 45.5 +1.3
BNDI Bandanaira 10.04 158 P Pn 12 02 43.7 -1.8
10μm338nm,1.2s
TTSI Tana Toraja 10.06 219 P Pn 12 02 47.9 +2.2
7μm781nm,1.1s
LQP Lukban 10.26 334⇓eP Pn 12 02 47.9 -0.6
SMKI Samarinda 10.35 240 P Pn 12 02 52.3 +2.7
SPSI Sidrap Palu 10.81 216 P Pn 12 02 56.4 +0.6
1μm161nm,0.8s
BNSI Bone 10.98 213 P Pn 12 02 59.4 +1.4
1μm136nm,1.0s
BKB Balikpapan 11.04 237 P Pn 12 03 00.7 +1.9
2μm6μm536nm,0.9s
BKB Balikpapan 11.04 237 Pn 12 03 01.1 +2.3
KAPI Kappang 11.68 213 P Pn 12 03 07.8 +0.5
6.0nm,0.3s,baz=16,slow=9.2,SNR=73
KAPI Kappang 11.68 213 Pn 12 03 07.6 +0.3
BKSI Bulukumba 11.75 211 P Pn 12 03 07.9 -0.2
821nm78nm,1.0s
MMRI Maumere 13.94 196 P Pn 12 03 37.0 +0.4
2μm175nm,1.6s
MMRI Maumere 13.94 196 P Pn 12 03 35.6 -1.0
SBUM Sibu 14.08 261 P Pn 12 03 40.0 +1.6
SOEI Soe 14.62 187 P P 12 03 47.1 -0.9
2μm254nm,0.9s
SOEI Soe 14.62 187 Pn 12 03 46.2 +0.9
STKI Sintang 15.38 252 P P 12 03 57.3 +1.0
WSI Waingapu 15.55 202 P P 12 03 58.1 0.0
354nm,1.1s
GENI Genyem 15.85 117 P Pn 12 04 00.9 +0.4
201nm,0.8s
PLAI Plampang 15.93 212 P P 12 04 02.1 -0.3
2μm348nm,0.8s
KSM Kuching 16.15 259 P P 12 04 04.6 -0.2
KSM Kuching 16.15 259 P P 12 04 07.0 +2.2
JAY Jayapura 16.30 116 P P 12 04 08.6 +2.2
4.0nm,0.3s,baz=284,slow=7.6,SNR=11
JAY Jayapura 16.30 116 P P 12 04 06.4 0.0
30nm,0.7s
SRBI Singaraja 16.84 220 P Pn 12 04 13.6 +1.1
2μm244nm,1.1s
KMMI Kalianget 16.94 226 P Pn 12 04 16.7 +3.0
126nm,1.1s
DNP Denpasar 17.29 219 P Pn 12 04 20.3 +2.3
966nm,1.1s
IGBI Denpasar 17.44 219 P Pn 12 04 21.8 +2.0
2μm189nm,0.8s
JAGI Jajag, Banyuwa 17.82 222 P Pn 12 04 25.7 +1.3
92nm,0.9s
JAGI Jajag, Banyuwa 17.82 222 P P 12 04 23.5 +0.3
JAGI IAmb IAmb 12 04 31.0
comp=Z,74nm,0.9s
GRJI Gresik 17.95 229 P Pn 12 04 26.8 +1.0
comp=Z,115nm,0.9s
TWG Pinlang 18.53 345 P P 12 04 28.3 -2.5
DLV T Lat 18.81 293 P Pn 12 04 35.5 -0.7
DLV IAmb IAmb 12 04 36.6
comp=Z,79nm,1.0s
UWJI Ujung Watu 18.84 234 P Pn 12 04 35.5 -0.9
comp=Z,1μmcomp=Z,142nm,1.1s
YULB Yu-li 19.02 346 P P 12 04 33.4 -2.8
TPUB Ta-pu 19.10 344 P 12 04 36.0 -1.1
TPUB IAmb IAmb 12 04 42.8
comp=Z,33nm,0.9s
SSLB Suanglung 19.48 346 P P 12 04 40.4 -0.8
SMRI Semarang 19.62 233 P Pn 12 04 45.1 -0.4
comp=Z,376nm,0.9s
SMRI Semarang 19.62 233 P P 12 04 43.9 +1.2
NACB Ninganchiao 19.71 348 P 12 04 42.4 -1.2
PCJI Pacitan 19.75 229 P Pn 12 04 46.5 -0.6
comp=Z,44nm,0.8s
TPI Tanjungpandan 19.94 248 P P 12 04 47.7 +1.4
comp=Z,754nmcomp=Z,98nm,0.9s
UGM Wanagama 20.07 231 P P 12 04 48.5 +0.8
comp=Z,214nm,1.5s
UGM Wanagama 20.07 231 P P 12 04 47.7 0.0
YHNB Yeheng 20.23 347 P P 12 04 47.8 -1.6
YHNB IAmb IAmb 12 04 59.0
comp=Z,63nm,1.4s
KNRA Kununurra 20.56 173 P P 12 04 51.9 -0.9
baz=21,SNR=8.2
KNRA Kununurra 20.56 173 P P 12 04 52.1 -0.7
KNRA IAmb IAmb 12 05 02.6
comp=Z,49nm,0.8s
KPJI Karang Pucung 21.00 235 P P 12 05 00.4 +2.8
comp=Z,59nm,0.8s
QIZ Qiongzhong 21.24 313 P P 12 04 59.6 -0.6
QIZ S S 12 08 50.5 +1.8
QIZ LR LR
comp=Z,370nm,20.1s
QIZ LR LR
comp=Z,270nm,12.3s
QIZ LR LR
comp=Z,160nm,13.7s
LEM Lembang 21.81 238 P P 12 05 06.6 +0.1
comp=Z,105nm,0.8s,baz=46,slow=7.7,SNR=18
LEM Lembang 21.81 238 P P 12 05 08.1 +1.6
comp=Z,74nm,1.1s
JOW Kunigami 21.96 5 P P 12 05 07.8 +0.1
comp=Z,11nm,0.8s,baz=170,slow=13,SNR=13
JOW Kunigami 21.96 5 P P 12 05 08.5 +0.8
JOW IAmb IAmb 12 05 10.2
comp=Z,55nm,0.7s
CISI Cisompet, Garu 22.04 236 P P 12 05 08.5 -0.2
CISI IAmb IAmb 12 05 09.3
comp=Z,63nm,0.8s
MANU Manus Island 22.29 107 P P 12 05 13.7 +2.4
MANU IAmb IAmb 12 05 19.7
comp=Z,57nm,1.2s
DBJI Dramaga 22.42 240 P P 12 05 15.0 +2.5
MYKOM Kota Tinggi 22.45 263 P P 12 05 13.7 +1.0
MYKOM IAmb IAmb 12 05 15.6
comp=Z,78nm,1.1s
MYKOM Kota Tinggi 22.45 263 P P 12 05 16.0 +3.3
PMBI Palembang 22.69 251 P P 12 05 18.2 +3.1
comp=Z,301nm,0.4s
PMBI Palembang 22.69 251 P P 12 05 16.9 +1.8
FITZ Fitzroy Crossi 22.80 181 P P 12 05 16.9 +0.8
baz=23,SNR=18
FITZ Fitzroy Crossi 22.80 181 P P 12 05 15.9 -0.1
comp=Z,23nm,0.7s,baz=9.5,slow=8.1,SNR=29
FITZ S S 12 09 14.9 -0.2
comp=Z,20nm,1.1s,baz=191,slow=14,SNR=6.3
FITZ Fitzroy Crossi 22.80 181 P P 12 05 16.7 +0.6
FITZ IAmb IAmb 12 05 28.8
comp=Z,66nm,1.1s
UBPT Khong Chiam 22.80 299 P P 12 05 14.6 -1.6
UBPT IAmb IAmb 12 05 16.1
comp=Z,31nm,1.0s
KLSI 23.38 246 P P 12 05 22.6 +1.1
comp=Z,354nmcomp=Z,24nm,1.1s
JRMM Jerantut 23.60 269 P P 12 05 25.0 +1.4
MDSI Maura Dua 23.81 247 P P 12 05 26.9 +1.5
comp=Z,34nm,1.1s
KASI Kota Agung 23.93 245 P P 12 05 29.6 +3.1
LWLI Liwa 24.12 246 P P 12 05 30.1 +1.7
comp=Z,68nm,0.8s
MNAI Manna 24.89 249 P P 12 05 36.7 +1.4
KSI Kapahiang 24.98 251 P P 12 05 38.1 +1.9
IPM Ipoh 25.02 270 P P 12 05 36.5 +0.1
COEN Coen 25.20 138 P P 12 05 38.8 +0.8
baz=25,SNR=19
COEN Coen 25.20 138 P P 12 05 38.0 0.0
COEN IAmb IAmb 12 05 44.2
comp=Z,24nm,0.8s
PMG Port Moresby 25.29 124 P P 12 05 39.8 +1.0
comp=Z,106nm,0.8s,baz=338,slow=3.5,SNR=30
PMG Port Moresby 25.29 124 P P 12 05 39.6 +0.7
BKNI Bangkinang 25.46 261 P P 12 05 39.7 -0.7
WB0 Warramunga Arr 25.77 162 P P 12 05 42.7 -0.5
WRAB Tennant Creek 25.92 162 P P 12 05 44.7 +0.2
WRAB IAmb IAmb 12 05 47.7
comp=Z,24nm,0.6s
WRA Warramunga Arr 25.92 162 P P 12 05 44.6 +0.1
comp=Z,23nm,0.6s,baz=341,slow=10,SNR=61
WRA PcP PcP 12 09 10.7 +0.7
comp=Z,2.8nm,0.8s,baz=335,slow=2.5,SNR=3.3
WRA S S 12 10 02.9 -2.1
comp=Z,2.9nm,1.0s,baz=335,slow=16,SNR=6.8
WRA ScP ScP 12 12 38.4 +1.1
comp=Z,2.9nm,0.9s,baz=344,slow=3.3,SNR=5.4
WB2 Warramunga Arr 25.93 162 P P 12 05 43.6 -0.9
WB2 IAmb IAmb 12 05 47.8
comp=Z,29nm,0.7s
WR0 Warramunga Arr 26.00 162 P P 12 05 45.0 -0.2
WR0 IAmb IAmb 12 05 48.5
comp=Z,18nm,0.7s
PDSI Padang 26.27 258 P P 12 05 50.6 +2.8
comp=Z,665nmcomp=Z,28nm,1.0s
PSA00 Pilbara Seismi 26.97 193 P P 12 05 53.8 0.0
PBKT Sadao Pong 27.29 297 P P 12 05 56.3 -0.4
RABL Rabaul 27.51 109 P P 12 06 00.1 +1.2
NJ2 Nanjing 27.91 347 eP P 12 06 03.9 +1.8
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
KCSI Kotacane, Aceh 28.31 268 P P 12 06 06.3 +0.3
comp=Z,1μmcomp=Z,16nm,0.8s
GYA Guiyang 28.43 321 P P 12 06 11.6 +4.6
GYA pP pwP 12 06 38.8 +1.5
GYA PP PnPn 12 07 08.3 +4.6
GYA S S 12 10 50.9 +6.3
GYA pmax pmax
comp=Z,10.0nm,0.7s
GYA pmax pmax
comp=Z,90nm,4.6s
JNU Nakatsue 28.48 8 P P 12 06 06.9 -0.4
comp=Z,33nm,0.8s,baz=203,slow=3.6,SNR=25
JNU Nakatsue 28.48 8 P P 12 06 06.2 -1.0
JNU IAmb IAmb 12 06 09.8
comp=Z,32nm,0.8s
QIS Mount Isa 28.50 153 P P 12 06 08.2 +0.7
baz=29,SNR=11
AS31 Alice Springs 29.34 165 P P 12 06 14.7 -0.2
ASAR Alice Springs 29.34 165 P P 12 06 15.2 +0.3
comp=Z,7.4nm,0.6s,baz=344,slow=7.2,SNR=117
ASAR PcP PcP 12 09 19.0 +0.7
comp=Z,3.4nm,0.7s,baz=2.5,slow=2.1,SNR=6.0
ASAR S S 12 10 58.9 +0.2
comp=Z,1.8nm,0.9s,baz=350,slow=14,SNR=4.3
ASAR ScP ScP 12 12 48.5 +0.8
comp=Z,4.2nm,0.9s,baz=335,slow=2.8,SNR=8.9
WRKA Warakurna 29.78 176 P P 12 06 19.6 +0.8
baz=30,SNR=13
CMAR Chiang Mai Arr 29.80 299 P P 12 06 18.8 -0.3
comp=Z,1.5nm,0.7s,baz=112,slow=7.0,SNR=11
CMAR ScP ScP 12 12 50.3 +0.9
comp=Z,4.1nm,0.6s,baz=127,slow=1.7,SNR=25
CMAR LR LR 12 21 09.1
comp=Z,96nm,18.7s,baz=126,slow=42
CHTO Chiang Mai 29.94 300 P P 12 06 20.5 +0.1
INU Inuyama 31.98 17 P P 12 06 37.5 -0.5
MEEK Meekatharra 32.13 193 P P 12 06 39.6 +0.1
baz=32,SNR=47
KSRS Korea Array 32.50 3 P P 12 06 43.1 +0.6
comp=Z,5.6nm,0.5s,baz=186,slow=9.6,SNR=44
KSRS PcP PcP 12 09 27.1 +0.8
comp=Z,2.0nm,0.7s,baz=166,slow=2.8,SNR=6.4
KSRS LR LR 12 19 45.0
comp=Z,30nm,21.0s,baz=182,slow=36
KS19 Wonju Array Si 32.54 3 P P 12 06 42.8 -0.2
KS19 IAmb IAmb 12 06 43.6
comp=Z,32nm,1.4s
XAN Xi'an 33.16 333 P P 12 06 53.3 +4.9
XAN pmax pmax
comp=Z,7.0nm,0.8s
XAN Xi'an 33.16 333 P 12 06 46.2 -2.2
CD2 Chengdu 33.40 324 P P 12 06 50.1 -0.4
CD2 pmax pmax
comp=Z,10.0nm,0.5s
MJAR Matsushiro Arr 33.44 18 P P 12 06 49.4 -1.4
comp=Z,14nm,0.9s,baz=194,slow=8.5,SNR=25
MJAR PcP PcP 12 09 28.4 -0.7
comp=Z,1.9nm,0.8s,baz=203,slow=4.8,SNR=5.0
MJAR LR LR 12 20 50.2
comp=Z,23nm,20.5s,baz=170,slow=37
MAJO Matsushiro 33.44 18 P P 12 06 49.9 -0.9
MAJO IAmb IAmb 12 06 51.0
comp=Z,17nm,0.9s
MORW Morawa 35.09 195 P P 12 07 05.4 +0.4
baz=35,SNR=16
MORW Morawa 35.09 195 P P 12 07 04.6 -0.4
FORT Forrest 35.47 177 P P 12 07 09.0 +0.7
baz=36,SNR=21
FORT Forrest 35.47 177 P P 12 07 08.5 +0.3
BJT Baijiatuau 36.15 347 P P 12 07 13.3 -0.6
BJT IAmb IAmb 12 07 32.6
comp=Z,8.2nm,0.6s
BJI Beijing 36.17 347 P P 12 07 13.3 -0.8
BJI pmax pmax
comp=Z,4.0nm,0.7s
KMBL Kambalda 36.24 186 P P 12 07 15.4 +0.6
baz=36,SNR=13
BLDU Ballidu 36.39 194 P P 12 07 16.4 +0.2
baz=37,SNR=42
HNR Honiara 36.57 113 P 12 07 20.0 +2.1
KLBR Kellerberrin 37.10 192 P P 12 07 22.7 +0.5
baz=37,SNR=14
LZH Lanzhou 37.24 330 eP P 12 07 26.9 +3.4
LZH pP pwP 12 07 56.8 +1.1
LZH sP sP 12 08 06.3 -0.9
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,75nm,5.0s
MUN Mundaring 37.82 194 P P 12 07 28.7 +0.5
baz=38,SNR=22
HHC Hu-ho-hao-te 38.16 342 eP P 12 07 32.1 +1.0
HHC pmax pmax
comp=Z,3.0nm,1.0s
HHC pmax pmax

comp=Z,69nm,5.1s
NWAO Narrogin (SRO) 38.50 192 P P 12 07 34.6 +0.7
NWAO Narrogin (SRO) 38.50 192 P P 12 07 34.6 +0.7
EIDS Eidsvold 38.59 142 P P 12 07 35.1 +0.3
EIDS IAmb IAmb 12 07 36.2
comp=Z,28nm,0.8s
BBOO Buckleboo 38.62 167 P P 12 07 35.4 +0.5
SHL Shillong 38.74 306 P P 12 07 35.0 -1.3
SHL IAmb IAmb 12 07 36.6
comp=Z,17nm,0.9s
SHL S S 12 13 21.3 -2.5
CN2 Changchun 38.80 359 eP P 12 07 36.0 -0.2
CN2 pmax pmax
comp=Z,10.0nm,0.7s
STKA Stephens Creek 39.38 159 P P 12 07 42.1 +0.9
comp=Z,31nm,0.8s,baz=335,slow=8.2,SNR=72
STKA PcP PcP 12 09 47.5 +0.5
comp=Z,8.2nm,0.7s,baz=311,slow=3.2,SNR=3.6
STKA S S 12 13 33.4 +0.6
comp=Z,5.4nm,1.0s,baz=158,slow=17,SNR=5.1
STKA LR LR 12 25 06.1
comp=Z,37nm,19.9s,baz=20,slow=38
STKA Stephens Creek 39.38 159 P P 12 07 42.0 +0.8
STKA PcP 12 09 47.5 +0.5
USA0B Ussuriysk Arra 39.53 7 P P 12 07 42.8 +0.5
USA0B IAmb IAmb 12 07 44.4
comp=Z,12nm,0.8s
USRK Ussuriysk Ar. 39.53 7 P P 12 07 42.2 -0.1
comp=Z,12nm,0.8s,baz=192,slow=7.2,SNR=22
USRK LR LR 12 24 53.9
comp=Z,42nm,19.8s,baz=168,slow=37
MDJ Mudanjiang 39.73 4 P P 12 07 44.6 +0.7
MDJ pmax pmax
comp=Z,21nm,1.0s
MDJ pmax pmax
comp=Z,160nm,5.5s
MDJ Mudanjiang 39.73 4 P P 12 07 44.7 +0.8
MDJ IAmb IAmb 12 07 45.8
comp=Z,16nm,0.9s
GTA Gaotai 41.84 329 eP P 12 08 00.8 -0.7
GTA pP pP 12 08 25.1 -5.6
GTA sP sP 12 08 41.1 -4.5
GTA PcP PcP 12 09 56.1 +1.1
GTA ScP ScP 12 13 32.5 -0.6
GTA ScS ScS 12 17 49.6 -1.0
GTA pmax pmax
comp=Z,2.0nm,0.8s
H11N1 WAKE ISLAND Hy 42.34 66 T T 12 54 16.6
baz=255,slow=75,SNR=4.9
H11N2 WAKE ISLAND Hy 42.35 66 T T 12 54 20.7
baz=255,slow=75,SNR=3.8
H11N3 WAKE ISLAND Hy 42.35 66 T T 12 54 21.6
baz=255,slow=75,SNR=4.0
TAPN Taplejung 42.88 306 eP P 12 08 08.9 -1.4
ODAN Odare 42.94 305 eP P 12 08 09.9 -0.9
comp=Z,24nm,0.7s
RAMN Ramite 43.62 305 eP P 12 08 15.2 -1.1
comp=Z,13nm,0.8s
JIRN Jiri 44.24 305 eP P 12 08 20.1 -1.2
YSS Yuzh-Sakhalins 44.34 16 P P 12 08 20.6 -0.7
YSS IAmb IAmb 12 08 23.3
comp=Z,35nm,1.0s
GUN Gumba 44.59 305 eP P 12 08 22.4 -1.7
HIA Hailar 44.59 354 P P 12 08 23.4 +0.1
SANVU Saraoutou 45.40 117 P P 12 08 31.9 +1.7
SONM Songino Array 46.06 342 P P 12 08 34.2 -0.9
comp=Z,1.8nm,0.8s,baz=156,slow=9.4,SNR=9.8
SONM PcP PcP 12 10 08.6 -0.6
comp=Z,3.6nm,0.8s,baz=150,slow=3.6,SNR=6.6
SONM ScP ScP 12 13 49.8 -0.3
comp=Z,1.1nm,1.0s,baz=145,slow=5.3,SNR=4.2
SONM LR LR 12 28 37.0
comp=Z,54nm,18.2s,baz=76,slow=37
DANN Dangsing 46.49 305 eP P 12 08 37.5 -1.4
comp=Z,22nm,0.6s
NOUC Port Laguerre 47.57 126 P P 12 08 47.0 0.0
NOUC IAmb IAmb 12 08 49.4
comp=Z,26nm,0.9s
DZM Mont Dzumac 47.67 126 P P 12 08 49.6 +1.7
WMQ Urumqi 51.47 325 eP P 12 09 18.3 +1.9
WMQ sP sP 12 10 00.0 -1.5
WMQ pmax pmax
comp=Z,17nm,1.9s
WMQ pmax pmax
comp=Z,100nm,4.1s
WMQ LR LR
comp=Z,680nm,29.1s
WMQ LR LR
comp=Z,130nm,29.0s
PETK Petropavlovsk- 54.63 23 P P 12 09 40.1 +0.8
comp=Z,12nm,0.6s,baz=184,slow=4.0,SNR=72
PETK LR LR 12 32 32.5
comp=Z,26nm,21.2s,baz=248,slow=35
PET Petropavlovsk 54.94 23 P P 12 09 42.1 +0.6
MSVF Nonsavu 55.92 115 P P 12 09 51.0 +1.8
MK31 Makanchi Array 56.30 325 P P 12 09 50.4 -1.0
MKAR Makanchi Array 56.30 325 P P 12 09 50.5 -0.9
comp=Z,2.8nm,0.6s,baz=116,slow=7.5,SNR=14
MKAR ScP ScP 12 14 33.2 -0.9
comp=Z,9.9nm,1.1s,baz=116,slow=5.5,SNR=11
MKAR LR LR 12 35 10.7
comp=Z,44nm,20.7s,baz=78,slow=37
MAKZ Makanchi 56.49 325 P P 12 09 51.7 -1.0
NIL Nilore 56.77 307 P P 12 09 54.1 -0.9
NIL IAmb IAmb 12 09 54.9
comp=Z,8.3nm,1.0s
KSH Kashi 56.84 315 P P 12 09 56.3 +0.9
KSH sP sP 12 10 38.8 -2.8
KSH PcP PcP 12 10 52.5 +2.9
KSH PP PP 12 12 07.3 +4.0
KSH S S 12 17 34.5 -4.2
KSH sS sS 12 18 27.0 -5.9
KSH pmax pmax
comp=Z,67nm,1.6s
KSH pmax pmax
comp=Z,250nm,5.0s
KSH LR LR
comp=Z,150nm,5.4s
KSH LR LR
comp=Z,170nm,5.4s
KSH LR LR
comp=Z,210nm,5.7s
YAK Yakutsk 57.12 2 P P 12 09 56.9 +0.1
MA2 Magadan 57.78 15 P P 12 10 02.1 +0.6
MA2 IAmb IAmb 12 10 03.0
comp=Z,13nm,0.7s
ZALV Zalesovo Beam 59.33 333 P P 12 10 10.8 -1.5
comp=Z,1.3nm,0.3s,baz=126,slow=6.9,SNR=8.5
ZALV ScP ScP 12 14 47.1 -0.3
comp=Z,0.6nm,0.7s,baz=149,slow=3.4,SNR=2.9
KBL Kabul 60.37 307 P P 12 10 19.2 -1.0
KURK Kurchatov 60.48 327 P P 12 10 19.4 -0.8
KURK IAmb IAmb 12 10 23.1
comp=Z,5.9nm,0.6s
BTK Batken 60.72 314 P P 12 10 21.4 -0.9
BTK IAmb IAmb 12 10 22.9
comp=Z,9.1nm,1.2s
KK31 Karatay Array 62.01 317 P P 12 10 28.8 -2.0
KKAR Karatay Array 62.01 317 P P 12 10 29.0 -1.8
THZ Tophouse 62.94 142 P P 12 10 37.6 +0.6
THZ IAmb IAmb 12 10 38.4
comp=Z,19nm,0.8s
TUWZ Tuamarina 63.39 141 P P 12 10 39.6 -0.3
BSWZ Blackbirch Sta 63.51 142 P P 12 10 41.6 +0.9
BKZ Black Stump Fm 63.81 138 P P 12 10 42.9 +0.2
BKZ IAmb IAmb 12 10 44.5
comp=Z,18nm,0.8s
BHW Baring Head 63.96 141 P P 12 10 43.1 -0.5
BRVK Borovoye 66.14 327 P P 12 10 56.2 -1.3
TIXI Tiksi 66.74 1 P P 12 11 00.0 -0.9
TIXI IAmb IAmb 12 11 01.4
comp=Z,20nm,0.9s
GEYT Alibeck 69.73 309 P P 12 11 19.5 -0.8
comp=Z,2.2nm,0.8s,baz=80,slow=3.4,SNR=4.9
GAMB Gambell 73.63 24 P P 12 11 43.4 +0.4
GAMB IAmb IAmb 12 11 44.9
comp=Z,15nm,0.9s
ARU Arti 73.68 328 P P 12 11 41.4 -2.1
ANM Nome 76.50 24 P P 12 12 00.3 +0.8
RDOG Red Dog Mine 78.47 21 P P 12 12 11.2 +0.7
RDOG IAmb IAmb 12 12 12.6
comp=Z,15nm,1.0s
RAYN Ar Rayn 79.50 293 P P 12 12 15.2 -1.8
TTA Tatalina 80.18 27 P P 12 12 20.5 +0.6
TTA IAmb IAmb 12 12 21.6
comp=Z,9.2nm,0.6s
CNPM China Poot 82.11 31 P P 12 12 29.9 -0.2
CNPM IAmb IAmb 12 12 30.7
comp=Z,35nm,1.0s
SKT Skwentna 82.14 28 P P 12 12 29.9 -0.3
SKT IAmb IAmb 12 12 31.2
comp=Z,26nm,1.0s
SUA Susitna One 82.48 29 P P 12 12 32.2 +0.1
SUA IAmb IAmb 12 12 33.2
comp=Z,24nm,0.9s
KTH Kantishna Hill 82.54 27 P P 12 12 33.0 +0.6
KTH IAmb IAmb 12 12 34.8
comp=Z,33nm,1.3s
BPAW Bear Paw Mtn. 82.55 26 P P 12 12 33.3 +0.9
MLY Manley 82.73 25 P P 12 12 34.2 +0.9
TRF Thorofare Moun 82.82 27 P P 12 12 34.3 +0.4
TRF IAmb IAmb 12 12 35.3
comp=Z,23nm,1.0s
RC01 Rabbit Creek A 82.94 29 P P 12 12 35.3 +0.9
RC01 IAmb IAmb 12 12 36.6
comp=Z,19nm,0.8s
COLD Coldfoot 83.10 23 P P 12 12 36.8 +1.7
COLD IAmb IAmb 12 12 37.9
comp=Z,10.0nm,0.9s
BWN Browne 83.22 26 P P 12 12 37.1 +1.4
BWN IAmb IAmb 12 12 38.4
comp=Z,27nm,1.0s
PMR Palmer 83.26 29 P P 12 12 36.3 +0.3
PMR IAmb IAmb 12 12 37.1
comp=Z,29nm,1.1s
MCK McKinley 83.44 26 P P 12 12 36.9 0.0
MCK IAmb IAmb 12 12 37.7
comp=Z,19nm,0.9s
RND Reindeer 83.46 27 P P 12 12 36.0 -1.1
RND IAmb IAmb 12 12 38.0
comp=Z,16nm,0.9s
KNK Knik Glacier 83.58 29 P P 12 12 38.0 +0.4
SML Sawmill 83.65 28 P P 12 12 38.7 +0.6
MDM Murphy Dome 83.79 25 P P 12 12 37.6 -1.1
MDM IAmb IAmb 12 12 40.2
comp=Z,9.0nm,0.9s
WRH Wood River Hil 83.83 26 P P 12 12 39.3 +0.5
WRH IAmb IAmb 12 12 40.0
comp=Z,28nm,1.2s
CCB Clear Creek Bu 83.96 26 P P 12 12 39.6 +0.1
CCB IAmb IAmb 12 12 40.4
comp=Z,10nm,0.7s
DHY Denali Highway 84.12 27 P P 12 12 40.9 +0.4
SCM Sheep Creek Mo 84.12 28 P P 12 12 41.5 +1.0
KLMR Klimovskoe 84.14 331 eP P 12 12 38.5 -2.0
KLMR AMP 12 12 41.3
comp=Z,23nm,1.3s
HDA Harding Lake 84.33 26 P P 12 12 40.7 -0.7
HDA IAmb IAmb 12 12 42.6
comp=Z,10nm,0.8s
IL31 84.36 25 P P 12 12 40.2 -1.3
IL31 IAmb IAmb 12 12 42.5
comp=Z,18nm,1.4s
ILAR Eielson Array 84.36 25 P P 12 12 40.9 -0.7
comp=Z,2.3nm,0.4s,baz=247,slow=4.8,SNR=70
VNDA Vanda 84.60 173 P P 12 12 42.8 +0.3
comp=Z,5.2nm,0.9s,baz=332,slow=7.8,SNR=3.6
RIDG Independent Ri 85.26 27 P P 12 12 46.8 +0.6
EGAK Eagle 86.81 25 P P 12 12 54.0 +0.3
EPYK Eagle Plains 88.47 24 P P 12 13 01.7 +0.1
BRTR Keskin Array B 88.85 310 P P 12 13 02.5 -1.6
comp=Z,0.9nm,0.8s,baz=92,slow=7.6,SNR=3.8
KMBO Kilima Mbogo 88.97 269 P P 12 13 05.6 +0.3
comp=Z,1.9nm,0.7s,baz=60,slow=2.9,SNR=5.0
KMBO Kilima Mbogo 88.97 269 P P 12 13 05.9 +0.6
ARCES ARCESS Array B 89.20 340 P P 12 13 03.9 -1.0
comp=Z,3.9nm,0.8s,baz=81,slow=6.9,SNR=13
INK Inuvik 89.35 21 P P 12 13 04.9 -0.7
INK IAmb IAmb 12 13 06.4
comp=Z,18nm,1.3s
FINES FINESS Array B 90.57 332 P P 12 13 10.6 -0.8
comp=Z,1.3nm,0.6s,baz=100,slow=3.7,SNR=11
AKASG Malin Array Be 90.65 321 P P 12 13 10.8 -1.3
comp=Z,0.7nm,0.6s,baz=73,slow=3.9,SNR=4.8
SYO Syowa Base 93.24 201⇓eP P 12 13 23.6 +0.1
SYO Syowa Base 93.24 201⇓ePcP PcP 12 13 26.0 +1.9
QSPA South Pole Qui 94.75 180 P P 12 13 31.2 +0.5
comp=Z,1.8nm,0.8s,baz=272,slow=0.8,SNR=13
QSPA South Pole Qui 94.75 180 IAmb IAmb 12 13 32.7
comp=Z,3.2nm,0.9s
DAG Danmarks Havn 96.07 352 iP P 12 13 35.0 -1.4
DAG Danmarks Havn 96.07 352 iP P 12 13 35.3 -1.1
comp=Z,6.0nm,0.7s
RES Resolute Bay 96.83 10 P P 12 13 36.3 -3.5
NB2 NORSAR Subarra 97.53 334 PKPdf P 12 13 40.6 -2.8
comp=Z,0.9nm,0.9s,baz=44,slow=1.9
NOA NORSAR Array B 97.53 334 P P 12 13 41.9 -1.5
comp=Z,0.9nm,0.8s,baz=66,slow=4.4,SNR=3.6
YKA Yellowknife Ar 98.73 24 P P 12 13 48.4 -0.2
comp=Z,2.9nm,0.8s,baz=299,slow=4.7,SNR=41
YKA PP PP 12 17 52.7 +1.7
comp=Z,0.7nm,1.0s,baz=298,slow=7.1,SNR=4.0
YKA PKKPbc PKKPbc 12 30 15.8 -3.1
comp=Z,0.4nm,0.9s,baz=108,slow=2.1,SNR=5.7
NVAR Mina Array Bea 106.61 48 PKiKP PKiKP 12 18 34.6 0.0
comp=Z,0.2nm,0.5s,baz=251,slow=2.8,SNR=3.0
PDAR Pinedale Array 110.91 41 PKiKP PKiKP 12 18 43.4 +0.9
comp=Z,0.4nm,0.7s,baz=45,slow=0.3,SNR=3.6
PDAR PKKPbc PKKPab 12 29 50.2 -1.8
comp=Z,0.6nm,0.8s,baz=129,slow=5.9,SNR=5.2
MNTX Cornudas Mount 119.00 50 PKPdf 12 18 57.5 -0.6
TX31 Lajitas Ar. Si 121.38 51 PKiKP 12 19 03.5 +0.5
TX32 Lajitas Array 121.38 51 PKiKP 12 19 03.8 +0.8
TXAR Lajitas Array 121.38 51 PKP PKiKP 12 19 03.7 +0.7
comp=Z,1.0nm,0.7s,baz=216,slow=0.5,SNR=17
TOA0 Torodi Ar. Sit 122.00 289 PKPdf PKPdf 12 19 04.2 -0.1
TORD Torodi Ar. Bea 122.00 289 PKP PKPdf 12 19 04.0 -0.3
comp=Z,1.2nm,0.6s,baz=54,slow=2.0,SNR=6.8
I42A Draeger Farm, 122.13 29 PKPdf PKPdf 12 19 03.8 0.0
E46A Sault Ste Mari 122.30 25 PKPdf PKiKP 12 19 05.0 +0.8
VLDQ Val d'Or 123.35 19 PKPdf PKPdf 12 19 05.4 -0.5
JCT Junction City 123.78 48 PKiKP 12 19 08.5 +0.9
D53A Lac Vacive, Po 124.17 19 PKPdf PKPdf 12 19 07.8 +0.2
SADO Sadowa 125.66 22 PKPdf PKiKP 12 19 11.1 +0.2
PLVO Plevna 126.17 20 PKPdf PKiKP 12 19 12.2 +0.3
ACSO Alum Creek Sta 127.77 28 PKPdf PKiKP 12 19 15.4 +0.1
M54A Oil Creek Stat 128.20 25 PKPdf PKiKP 12 19 16.3 +0.2
J58A Remsen 128.26 20 PKPdf PKiKP 12 19 16.2 0.0
J59A Piesco 128.42 19 PKPdf PKiKP 12 19 16.7 +0.2
L56A Greenwood 128.51 22 PKPdf PKiKP 12 19 17.0 +0.3
M56A Emporium 128.82 23 PKPdf PKiKP 12 19 17.5 +0.2
O54A Avella 128.99 26 PKPdf PKiKP 12 19 18.3 +0.6
P53A Whipple 129.10 27 PKPdf PKiKP 12 19 18.5 +0.5
M57A Sunshine Farm, 129.36 23 PKPdf PKiKP 12 19 19.0 +0.6
SSPA Standing Stone 129.66 24 PKPdf PKiKP 12 19 19.3 +0.2
DBIC Dimbokro 129.75 283 PKP PKiKP 12 19 19.7 -0.2
comp=Z,3.6nm,1.0s,baz=122,slow=9.5,SNR=2.3
DBIC SKPbc SKPbc 12 22 29.2 -0.1
comp=Z,8.0nm,0.7s,baz=65,slow=6.0,SNR=11
DBIC Dimbokro 129.75 283 SKPbc 12 22 29.6 +0.2
Q54A Coxs Mills 129.76 27 PKPdf PKiKP 12 19 19.7 +0.4
R58B Mineral 131.92 26 PKPdf PKiKP 12 19 24.1 +0.4
T59A Double "B" Far 132.89 26 PKPdf PKiKP 12 19 26.1 +0.5
PLCA Paso Flores 141.25 160 PKP PKPdf 12 19 39.0 -0.9
comp=Z,2.6nm,1.1s,baz=44,slow=4.7,SNR=3.4
PLCA SKPbc SKiKP 12 23 05.8 -0.8
comp=Z,1.5nm,0.9s,baz=213,slow=10,SNR=3.3
ACON Acoyapa 144.67 62 PKPdf 12 19 47.5 +1.0
JTS Las Juntas de 145.59 64 PKPab 12 19 49.9 +0.9
GO05 Huala 145.65 153 PKPab 12 19 49.3 +0.6
MTDJ Mount Denham 147.29 45 PKPbc PKPbc 12 19 54.4 +1.0
GTBY Guantanamo Bay 147.72 40 PKPbc PKPbc 12 19 55.4 +1.0
PEL Peldehue 147.77 153 PKPbc 12 19 55.0 +0.7
GO04 Tololo Observa 150.17 150 PKiKP 12 20 01.6 +0.1
BCIP Isla Barro Col 150.61 62 PKPbc PKiKP 12 20 02.8 +0.3
SDDR Presa de Saban 150.76 35 PKPbc PKiKP 12 20 02.9 +0.1
OBIP Obispado Ponce 154.02 29 PKPbc PKPbc 12 20 09.1 -0.3
HUMP Col San Antoni 154.28 27 PKPbc PKPbc 12 20 09.8 -0.1
PDPR Patillas Dam, 154.31 28 PKPab PKPab 12 20 24.0 -0.3
MTP Monte Pirata 154.46 27 PKPbc PKiKP 12 20 11.0 +0.6
MTP PKPab PKPab 12 20 25.7 +0.7
GO02 Mina Guanaco 154.78 145 PKPbc PKiKP 12 20 13.0 +1.7
GO02 PKPab 12 20 28.0 +1.3
OTAV Otavalo 154.93 79 PKPdf PKPdf 12 20 00.9 -2.4
RUSC La Rusia 158.05 61 PKPdf PKPab 12 20 42.1 +0.8
CPUP Villa Florida 158.38 172 PKPab PKPab 12 20 41.7 +0.1
comp=Z,2.9nm,0.9s,baz=200,slow=5.7,SNR=3.9
SDV Santo Domingo 158.43 51 PKPdf PKPdf 12 20 08.1 +0.7

IDC 16 12:01:20.8±1.2, 7.°48S×129.°54E, h0km, mb3.8/2, mb1 3.7/5, mb1mx3.6/29, mbtmp3.6/5, ML3.4/3, MS3.5/2, Ms1 3.5/2, ms1mx2.7/31, Error ellipse: s-maj=29.8km s-min=13.3km az=66.0
NEIC 16 12:01:26.3±2.9, 7.°41S±0.°07×129.°64E±0.°09, h46km±12km, mb4.0/3, Error ellipse: s-maj=13.0km s-min=9.3km az=76.0
ISC 16 12:01:22.4±0.9, 7.°61S±0.°08×129.°57E±0.°09, h10km, n19, σ2.°98/19, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SAUI Saumlaki 1.75 102 Pn Pb 12 01 54.0 -0.7
SOEI Soe 5.66 248 Pn Pn 12 02 49.2 +2.5
KNRA Kununurra 8.05 186 Pn Pn 12 03 24.3 +4.8
LUWI Luwuk 9.41 314 Pn Pn 12 03 38.0 -0.1
FITZ Fitzroy Crossi 11.10 200 Pn Pn 12 04 03.1 +1.8
0.2nm,0.3s,baz=26,slow=8.7,SNR=1.6
FITZ Sn Sn 12 06 01.4 -4.3
0.2nm,0.3s,baz=348,slow=12,SNR=1.7
FITZ Fitzroy Crossi 11.10 200 Pn 12 04 04.4 +3.1
JAY Jayapura 12.19 66 LR LR 12 09 28.8
comp=Z,244nm,21.1s,baz=181,slow=40
WB0 Warramunga Arr 12.96 159 Pn Pn 12 04 28.2 +1.4
WRAB Tennant Creek 13.10 160 Pn Pn 12 04 33.0 +4.4
WRA Warramunga Arr 13.10 160 Pn Pn 12 04 30.2 +1.5
0.3nm,0.3s,baz=337,slow=13,SNR=10
WRA Sn Sn 12 06 50.9 -3.7
baz=341,slow=12,SNR=2.0
WB2 Warramunga Arr 13.10 160 Pn Pn 12 04 32.1 +3.4
WR0 Warramunga Arr 13.19 159 Pn Pn 12 04 33.6 +3.7
ASAR Alice Springs 16.50 166 Pn P 12 05 15.5 -1.3
0.1nm,0.3s,baz=341,slow=9.5,SNR=15
KRVT Keravat (AS076 22.57 83 LR LR 12 14 57.0
comp=Z,137nm,21.3s,baz=288,slow=36
STKA Stephens Creek 26.62 157 P P 12 07 03.5 +2.4
0.6nm,0.5s,baz=329,slow=12,SNR=2.9
STKA Stephens Creek 26.62 157 P P 12 07 03.7 +2.5
STKA IAmb IAmb 12 07 06.0
comp=Z,0.9nm,1.4s
MK31 Makanchi Array 68.50 327 P P 12 12 24.4 -0.6
MK31 IAmb IAmb 12 12 32.4
comp=Z,1.6nm,0.8s
MKAR Makanchi Array 68.50 327 P P 12 12 24.1 -1.0
comp=Z,1.1nm,0.7s,baz=117,slow=7.3,SNR=1.3
VNDA Vanda 71.89 173 P P 12 12 43.3 -2.0
VNDA IAmb IAmb 12 12 49.5
comp=Z,10.0nm,1.1s

THE 16 12:10:45.8, 38.°16N×20.°38E, h7km, ML2.6/6, Error ellipse: s-maj=0.8km s-min=0.4km az=257.0
ATH 16 12:10:45.5, 38.°16N×20.°39E, h9km±1km, ML2.6/11, Error ellipse: s-maj=1.7km s-min=1.0km az=248.0
ISC 16 12:10:45.7±1.1, 38.°16N±0.°03×20.°39E±0.°04, h8km±4km, n36, σ0.°49/60, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.03 342 P Pg 12 10 47.0 -0.1
CHV1 S Sg 12 10 47.9 -0.2
LXRA Lixouri, Kepha 0.06 40 P Pg 12 10 47.3 0.0
LXRA S Sg 12 10 48.7 +0.1
LXR1 Lixouri, Cepha 0.06 40 P Pg 12 10 47.3 -0.1
LXR1 S Sg 12 10 48.7 +0.1
KEF3 Kipouria, Keph 0.06 322 P Pg 12 10 47.6 +0.2
KEF3 S Sg 12 10 49.0 +0.4
ARGA Argostoli. Kep 0.07 74 P Pg 12 10 47.6 +0.1
KEF2 Argostoli. Kep 0.07 84 P Pg 12 10 47.7 +0.1
KEF2 S Sg 12 10 49.3 +0.3
ARG2 Argostoli 0.08 75 P Pg 12 10 47.7 +0.1
ARG2 S Sg 12 10 49.2 +0.1
AGT1 Agia Thekli 0.09 356 P Pg 12 10 48.1 +0.2
AGT1 S Sg 12 10 49.9 +0.4
KEF4 Livadi, Kephal 0.10 14 P Pg 12 10 48.2 +0.1
KEF4 S Sg 12 10 50.1 +0.4
KEF1 Kardakata, Kep 0.14 27 P Pg 12 10 48.7 +0.1
KEF1 S Sg 12 10 50.8 +0.2
VLS Valsamata 0.16 83 P Pg 12 10 48.9 0.0
VLS S Sg 12 10 51.6 +0.4
4µm,0.1s
VLS Valsamata 0.16 83 P Pg 12 10 48.8 -0.1
VLS S Sg 12 10 51.4 +0.2
VLS AML AML 12 10 52.5
comp=N,7706µm,0.3s
FSK Fiskardo 0.33 24 P Pg 12 10 52.0 -0.1
FSK S Sg 12 10 57.2 +0.6
comp=N,1µm,0.3s
FSK Fiskardo 0.33 24 P Pg 12 10 52.0 -0.1
FSK S Sg 12 10 57.1 +0.6
FSK AML AML 12 10 59.1
comp=N,1954µm,0.4s
FSK AML AML 12 11 01.1
comp=E,2947µm,0.2s
VLMS Volimes, Zakyn 0.35 143 P Pg 12 10 52.9 +0.3
VLMS S Sg 12 10 58.1 +0.8
VLMS AML AML 12 11 01.0
comp=E,2684µm,0.3s
VLMS AML AML 12 11 02.6
comp=N,3799µm,0.4s
EVGI Lefkada island 0.51 24 P Pg 12 10 55.4 -0.1
EVGI S Sg 12 11 03.0 +0.9
EVGI Lefkada island 0.51 24 P Pg 12 10 55.4 -0.1
EVGI S Sg 12 11 02.8 +0.7
MGNA Meganis 0.59 32 P Pg 12 10 56.9 -0.1
MGNA AML AML 12 11 06.1
comp=N,1454µm,0.5s
MGNA AML AML 12 11 06.6
comp=E,1881µm,0.3s
KRI1 kERI 0.60 146 P Pg 12 10 57.1 -0.1
KRI1 S Sb 12 11 06.3 -0.7
LKD2 Lefkada island 0.66 18 P Pg 12 10 58.1 -0.4
LKD2 S Sg 12 11 07.6 +0.5
comp=E,318nm,0.6s
LKD2 Lefkada island 0.66 18 P Pg 12 10 57.9 -0.5
LKD2 S Sg 12 11 07.5 +0.4
LKD2 AML AML 12 11 13.6
comp=E,571µm,0.4s
LKD2 AML AML 12 11 16.2
comp=N,664µm,0.7s
TSLK Tsoukalades, L 0.70 17 P Pg 12 10 58.6 -0.5
TSLK S Sb 12 11 09.6 -0.3
comp=N,438nm,0.5s
TSLK Tsoukalades, L 0.70 17 P Pg 12 10 58.5 -0.5
TSLK AML AML 12 11 16.4
comp=E,906µm,0.6s
TSLK AML AML 12 11 18.2
comp=N,840µm,0.4s
PDO Prodromos 0.76 54 P Pg 12 11 00.3 0.0
PDO S Sb 12 11 11.9 +0.2
comp=N,918nm,0.4s
PDO Prodromos 0.76 54 P Pg 12 11 00.3 0.0
PVO Paravola 1.00 62 P Pg 12 11 04.8 -0.1
PVO S Sb 12 11 19.0 +0.4
comp=N,470nm,0.6s
PVO Paravola 1.00 62 P Pg 12 11 04.8 -0.1
PVO S Sb 12 11 18.8 +0.1
PVO AML AML 12 11 25.0
comp=N,597µm,0.3s
PVO AML AML 12 11 28.4
comp=E,974µm,0.4s
DRO Drossia 1.06 101 P Pg 12 11 05.5 -0.5
DRO AML AML 12 11 29.4
comp=N,598µm,0.5s
DRO AML AML 12 11 32.8
comp=E,953µm,0.6s
AMT Artemida-Makis 1.22 121 P Pn 12 11 09.4 +0.4
AMT AML AML 12 11 34.2
comp=N,574µm,0.6s
AMT AML AML 12 11 37.5
comp=E,492µm,0.8s
ANX Ano Chora 1.28 70 P Pn 12 11 09.8 -0.1
ANX S Sn 12 11 27.7 +0.4
ANX Ano Chora 1.28 70 P Pn 12 11 08.1 -1.8
ANX AML AML 12 11 34.8
comp=N,824µm,0.6s
ANX AML AML 12 11 35.1
comp=E,687µm,0.5s
SERG Sergoula 1.33 78 P Pn 12 11 09.8 -0.9
IGT Igoumenitsa 1.37 358 P Pn 12 11 11.3 +0.1
IGT AML AML 12 11 36.3
comp=E,186µm,0.3s

IGT AML AML 12 11 40.5
comp=N,134µm,0.3s
KLV Kalavryta, Ach 1.39 94 P **Pn 12 11 11.3 -0.1**
KALE Kalithea 1.40 80 P **Pn 12 11 10.4 -1.2**
MAKR Makrakomi, Fth 1.61 57 P **Pg 12 11 17.5 +1.0**

*IDC **16** 12:14:33.2±2.6, 20.62S×169.23E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.8/31, mbtmp3.8/8, ML3.2/1, Error ellipse: s-maj=95.4km s-min=26.1km az=142.0*
*NEIC **16** 12:14:38.1±2.2, 20.51S±0.06×169.00E±0.07, h23km±6km, mb4.3/6, Error ellipse: s-maj=9.9km s-min=8.9km az=68.0*
ISC 16 12:14:39.0±1.0, 20.6S±0.1×169.0E±0.1, h31km, n19, σ1.11/22, mb3.9/10, Vanuatu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DZM Mont Dzumac 2.83 238 Pn **Pn 12 15 22.0 -0.3**
3.1nm,0.3s,baz=113,slow=14,SNR=221
DZM Sn **Sn 12 15 54.2 -1.2**
46nm,0.3s,baz=334,slow=23,SNR=14
DZM Mont Dzumac 2.83 238 Pn 12 15 21.8 -0.5
DZM **Sn 12 15 55.6 +0.3**
NOUC Port Laguerre 2.96 238 Pn 12 15 23.8 -0.1
NOUC Sn **Sn 12 15 58.2 -0.2**
SANVU Saraoutou 5.38 341 Pn 12 15 57.6 +0.4
STKA Stephens Creek 26.98 240 P **P 12 20 17.7 -0.5**
1.5nm,0.8s,baz=79,slow=18,SNR=3.4
WB0 Warramunga Arr 32.48 265 P **P 12 21 09.3 +2.3**
WB0 IAmb IAmb 12 21 26.5
comp=Z,5.4nm,1.2s
WB2 Warramunga Arr 32.50 265 P **P 12 21 08.8 +1.6**
WB2 IAmb IAmb 12 21 19.7
comp=Z,8.2nm,1.2s
WRA Warramunga Arr 32.51 265 P **P 12 21 06.7 -0.6**
comp=Z,0.7nm,0.9s,baz=98,slow=6.3,SNR=5.0
AS31 Alice Springs 32.63 258 P **P 12 21 09.1 +0.8**
AS31 IAmb IAmb 12 21 13.6
comp=Z,1.8nm,1.3s
ASAR Alice Springs 32.63 258 P **P 12 21 08.6 +0.3**
comp=Z,1.3nm,0.8s,baz=87,slow=8.8,SNR=17
FITZ Fitzroy Crossi 40.92 266 P **P 12 22 20.2 +1.3**
comp=Z,1.2nm,0.6s,baz=82,slow=7.1,SNR=2.4
FITZ Fitzroy Crossi 40.92 266 P **P 12 22 20.4 +1.5**
FITZ IAmb IAmb 12 22 29.3
comp=Z,12nm,1.5s
QSPA South Pole Qui 69.49 180 P **P 12 25 46.4 +1.9**
CMAR Chiang Mai Arr 78.86 295 P **P 12 26 39.7 0.0**
comp=Z,0.2nm,0.3s,baz=129,slow=2.9,SNR=4.1
SONM Songino Array 88.15 323 P **P 12 27 26.7 -0.3**
comp=Z,0.2nm,0.4s,baz=131,slow=4.4,SNR=6.4
ILAR Eielson Array 91.55 17 P **P 12 27 41.1 -1.1**
comp=Z,0.5nm,1.0s,baz=212,slow=6.4,SNR=2.9
ARCES ARCESS Array B 126.29 345 PKP **PKiKP 12 33 37.2 -1.2**
comp=Z,2.7nm,0.9s,baz=42,slow=1.5,SNR=3.3
GERES GERESS Array B 145.55 331 PKPbc **PKPab 12 34 13.5 -1.1**
comp=Z,0.4nm,0.6s,baz=64,slow=4.5,SNR=2.3
FUORN Ofenpass-Fuorn 148.76 331 PKPbc **PKiKP 12 34 24.4 -0.8**

IDC 16 12:40:08.7±14.0, 4.95S×101.77E, h0km, mb3.3/2, mb1 3.3/2, mb1mx3.1/31, mbtmp3.3/2, Error ellipse: s-maj=776.3km s-min=34.6km az=52.0, Southern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
H08S2 Diego Garcia H 29.22 263 T T 13 15 36.3
baz=86,slow=74,SNR=16
H08S3 Diego Garcia H 29.23 263 T T 13 15 33.0
baz=86,slow=74,SNR=21
H08S1 Diego Garcia H 29.24 263 T T 13 15 35.9
baz=86,slow=74,SNR=12
ASAR Alice Springs 36.12 124 P P 12 47 12.3 -0.6
0.2nm,0.6s,baz=304,slow=8.5,SNR=3.8
MKAR Makanchi Array 54.34 344 P P 12 49 36.5 -0.6
0.2nm,0.5s,baz=154,slow=7.2,SNR=5.9
TXAR Lajitas Array 145.83 42 PKPbc PKPab 12 59 51.4 +0.2
0.1nm,0.6s,baz=316,slow=2.5,SNR=2.3

*GCG **16** 12:48:21.0±0.8, 12.55N×90.80W, h4km±114km, MD4.7*
*UCR **16** 12:48:28.9±2.0, 13.23N×90.96W, h0km±13km, ML4.0, mb4.6(NEIC)*
*SNET **16** 12:48:28.1±2.4, 13.11N×91.09W, h14km±36km, ML4.2*
*INET **16** 12:48:29.8, 12.98N×91.00W, h14km, ML4.4*
*IDC **16** 12:48:32.8±2.8, 13.44N×90.42W, h33km±17km, mb4.2/16, mb1 4.4/16, mb1mx4.2/32, mbtmp4.4/16, MS4.0/25, Ms1 4.0/25, ms1mx3.9/40, Error ellipse: s-maj=24.1km s-min=16.7km az=52.0*
*GCMT **16** 12:48:32.5±0.4, 13.09N±0.03×91.04W±0.05, h20km±1km, MW4.8/76, Moment Tensor Solution. s19,c21; s76,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.25±.17; $M_{\theta\theta}$-1.58±.11; $M_{\phi\phi}$-0.66±.10; $M_{r\theta}$0.87±.19; $M_{\theta\phi}$0.61±.06; $M_{\phi r}$0.14±.24; Best double couple: $M_0$2.23700×10^{16} NP1:ϕ_s305.00000°, δ36.00000°, λ106.00000°. NP2: ϕ_s105.00000°, δ56.00000°, λ78.00000°. Principal axes: T 2.4620, Plg76.0000°, Azm339.0000°; N -0.4490, Plg10.0000°, Azm112.0000°; P -2.0120, Plg10.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **16** 12:48:33.5±2.8, 13.31N±0.07×90.84W±0.06, h35km±1km, mb4.6/162 Error ellipse: s-maj=12.4km s-min=8.3km az=212.0*
ISC 16 12:48:29.6±1.5, 13.19N±0.05×90.99W±0.04, h16km±8km, n445, σ1.62/424, mb4.6/72, MS4.1/26, 1C, Near coast of Guatemala

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
IXG Ixpaco 1.11 28 eP **Pn 12 48 50.4 -0.3**
IXG Ixpaco 1.11 28 eP **Pb 12 48 51.3 +0.7**
IXG Ixpaco 1.11 28 eP **Pn 12 48 50.4 -0.3**
PCG Pacaya 1.25 17 eP **Pb 12 48 53.7 +0.6**
FUG Fuego 3 1.26 6 eP **Pg 12 48 53.8 -0.3**
ERG Entre ros, C 1.37 336 eP **Pg 12 48 55.8 -0.2**
ERG eS **Sg 12 49 22.3 +8.5**
CEVE Cerro Verde 1.47 64 eP **Pn 12 48 55.6 -0.1**
CEVE eS **Sb 12 49 18.4 +3.0**
CEVE IAML 12 49 23.1
comp=Z,6µm,0.4s
CEVE Cerro Verde 1.47 64 eP **Pn 12 48 55.6 -0.1**
CEVE eS **Sb 12 49 18.4 +3.0**
CEVE IAML 12 49 23.1
comp=Z,6µm,0.4s
SBLS San Blas 1.48 64 eP **Pn 12 48 55.4 -0.3**
SBLS San Blas 1.48 64 eP **Pn 12 48 55.4 -0.3**
RTR El Retiro 1.48 61 eP **Pn 12 48 56.0 +0.2**
RTR El Retiro 1.48 61 eP **Pn 12 48 56.0 +0.2**
SNJE San Jose 1.51 63 eP **Pn 12 48 56.4 +0.3**
SNJE eS **Sn 12 49 16.2 +0.6**
SNJE San Jose 1.51 63 eP **Pn 12 48 56.4 +0.3**
SNJE eS **Sn 12 49 16.2 +0.6**
NBG Las Nubes 1.53 24 eP **Pb 12 48 58.4 +0.7**
STG3 Santiaguito 3, 1.62 340 eP **Pb 12 48 58.3 -0.9**
BOQS Boqueron 1.75 72 eP **Pn 12 48 59.7 +0.2**
SNET Serv Nac Est T 1.78 74 eP **Pn 12 48 59.2 -0.6**
SNET IAML 12 49 04.6
comp=Z,3µm,0.3s
SNET Serv Nac Est T 1.78 74 Pn 12 48 59.4 -0.4
SNET Serv Nac Est T 1.78 74 eP **Pn 12 48 59.2 -0.6**
SNET IAML 12 49 04.6
comp=Z,3µm,0.3s
UEES Universidad Ev 1.78 73 eP **Pn 12 48 59.9 +0.1**
UEES eS **Sb 12 49 25.4 +1.3**
UEES Universidad Ev 1.78 73 eP **Pn 12 48 59.9 +0.1**
UEES eS **Sb 12 49 25.4 +1.3**
OPAM Oficina de Pla 1.82 73 eS **Sb 12 49 27.5 +2.3**
OPAM IAML 12 49 35.7
comp=Z,2µm,0.6s
OPAM Oficina de Pla 1.82 73 eS **Sb 12 49 27.5 +2.3**
OPAM IAML 12 49 35.7
comp=Z,2µm,0.6s
APG El Apazote 1.88 16 Pg **Pb 12 49 02.9 -0.7**
comp=Z,151nm,0.3s,baz=163,slow=7.4,SNR=276
APG Lg Lg 12 49 24.8
comp=Z,72nm,0.3s,baz=70,slow=20,SNR=8.6
LFU La Fuente 1.91 73 eP **Pn 12 49 02.5 +0.9**
LFU La Fuente 1.91 73 eP **Pn 12 49 02.5 +0.9**
LFRS El Faro 1.92 77 eP **Pn 12 49 01.4 -0.4**
LBRS Las Brisas 1.97 74 eP **Pn 12 49 02.7 +0.2**
MTO3 Montecristo 1.99 52 eP **Pn 12 49 03.3 +0.5**
MTO3 IAML 12 49 38.0
comp=Z,573nm,0.6s
MTO3 Montecristo 1.99 52 eP **Pn 12 49 03.3 +0.5**
MTO3 IAML 12 49 38.0
comp=Z,573nm,0.6s
PAVA Las Pavas 2.06 75 eP **Pn 12 49 04.4 +0.7**
PAVA IAML 12 49 37.8
comp=Z,1µm,0.5s
PAVA Las Pavas 2.06 75 eP **Pn 12 49 04.4 +0.7**
PAVA IAML 12 49 37.8
comp=Z,1µm,0.5s
COEG Centro de Oper 2.10 78 eP **Pn 12 49 04.5 +0.4**
COEG IAML 12 49 09.2
comp=Z,3µm,0.4s
COEG Centro de Oper 2.10 78 eP **Pn 12 49 04.5 +0.4**
COEG IAML 12 49 09.2
comp=Z,3µm,0.4s
THIG 2.11 324 Pn 12 49 03.9 -0.4
MRL Marmol 2.27 34 eP **Pn 12 49 08.1 +1.5**
MRL Marmol 2.27 34 eP **Pb 12 49 09.6 -0.7**
MRL eS **Sb 12 49 41.3 +3.0**
MRL Marmol 2.27 34 eP **Pn 12 49 08.1 +1.5**
COEB Comit de Eme 2.41 82 eS **Sn 12 49 41.3 +3.5**
COEB Comit de Eme 2.41 82 eS **Sn 12 49 41.3 +3.5**
TECA Tecapa 2.44 82 eP **Pn 12 49 09.0 0.0**
TECA Tecapa 2.44 82 eP **Pn 12 49 09.0 0.0**
JUCU Jucuar¡n 2.67 88 eP **Pn 12 49 11.2 -0.8**
JUCU Jucuar¡n 2.67 88 eP **Pn 12 49 11.2 -0.8**
BLLM Bellamira 2.69 84 eP **Pn 12 49 13.2 +0.9**
BLLM Bellamira 2.69 84 eP **Pn 12 49 13.2 +0.9**
CCIG Comitan 3.27 340 Pn 12 49 23.1 +2.7
CCIG Comitan 3.27 340 Pn 12 49 22.1 +1.7
PCIG 3.31 319 Pn 12 49 20.6 -0.1
TGUH Tegucigalpa,Un 3.71 76 Pn 12 49 27.0 +0.5
TGIG 4.12 330 Pn 12 49 33.4 +1.4
ESTN Estel 4.50 91 Pn 12 49 36.6 -0.6
CMIG Matias Romero 5.41 316 Pn **Pn 12 49 49.8 +0.2**
comp=Z,3.0nm,0.3s,baz=116,slow=10,SNR=10
CMIG Sn **Sn 12 50 57.2 +5.6**
comp=Z,3.5nm,0.3s,baz=121,slow=16,SNR=3.9
CMIG Matias Romero 5.41 316 Pn 12 49 50.1 +0.5
HUIG Huatulco 5.58 298 Pn 12 49 51.3 -0.8
ACON Acoyapa 5.80 101 Pn 12 49 53.9 -1.2
JTS Las Juntas de 6.57 115 Pn **Pn 12 50 06.7 +1.1**
comp=Z,2.6nm,0.3s,baz=357,slow=12,SNR=8.3
JTS Sn **Sn 12 51 22.3 +1.9**
comp=Z,0.2nm,0.3s,baz=186,slow=23,SNR=1.0
JTS Lg Lg 12 51 45.8
comp=Z,1.2nm,0.3s,baz=232,slow=13,SNR=3.6
JTS Las Juntas de 6.57 115 Pn 12 50 07.0 +1.3
ESPN Las Esperanzas 6.60 98 Pn 12 50 06.9 +0.8
TLIG Tlapa 8.51 302 Pn 12 50 35.4 +3.1
ZAIG Zacatecas 14.56 313 P 12 51 59.2 -2.6
833A Chaparral WMA, 16.98 334 P 12 52 30.4 +2.0
HKT Hockley 17.28 346 P **P 12 52 31.1 -0.5**
DWPF Disney Wildern 17.32 30 P **P 12 52 32.6 +0.5**
DWPF Disney Wildern 17.32 30 P **P 12 52 32.9 +0.8**
baz=213
PTBC PUERTO BERRIO, 17.57 111 eP **P 12 52 32.8 -1.2**
NORC Norcasia 17.61 114 eP **P 12 52 35.5 0.0**
553A Crawfordville 17.98 19 P **P 12 52 42.2 +2.9**
553A IAmb IAmb 12 52 44.5
comp=Z,36nm,0.6s
ORTC Ortega, Tolima 18.08 119 eP **P 12 52 45.5 +4.8**
342A Flagon Creek P 18.14 356 P **P 12 52 43.6 +2.4**
342A IAmb IAmb 12 52 45.6
comp=Z,40nm,0.8s
346A Big Creek Wild 18.17 4 P **P 12 52 46.7 +5.2**
346A IAmb IAmb 12 53 03.7
comp=Z,96nm,1.4s
344A Westbrook Farm 18.18 1 P **P 12 52 46.2 +4.5**
344A IAmb IAmb 12 52 47.6
comp=Z,74nm,1.3s
BRAL Brewton 18.26 11 P **P 12 52 46.4 +3.9**
BRAL IAmb IAmb 12 53 05.0
comp=Z,49nm,0.7s
ROSC El Rosal 18.42 115 P **Pn 12 52 46.6 +1.8**
comp=Z,0.8nm,0.3s,baz=327,slow=17,SNR=9.3
ROSC El Rosal 18.42 115 P **Pn 12 52 47.9 +3.0**
PRAC Prado 18.48 119 eP **Pn 12 52 46.8 +1.5**
NATX Nacogdoches 18.79 350 P **Pn 12 52 50.0 +1.1**
NATX Nacogdoches 18.79 350 P **Pn 12 52 50.4 +1.5**
baz=168
JCT Junction City 19.04 336 P **Pn 12 52 52.1 +0.2**
JCT Junction City 19.04 336 P **Pn 12 52 54.2 +2.2**
baz=152
352A Blakely 19.04 16 P **P 12 52 53.9 +2.0**
352A IAmb IAmb 12 52 58.1
comp=Z,60nm,1.1s
FLOC Florencia 19.06 126 P **Pn 12 52 56.3 +4.0**
RUSC La Rusia 19.08 111 eP **Pn 12 52 52.8 -0.2**
RUSC La Rusia 19.08 111 P **Pn 12 52 53.7 +0.8**
237A Washetta, Mont 19.24 347 P **Pn 12 52 54.8 +0.5**
HPIG 19.39 317 P **Pn 12 52 57.4 +1.1**
TIGA Tifton 19.40 19 P **Pn 12 52 56.6 +0.4**
TIGA IAmb IAmb 12 53 01.0
comp=Z,36nm,1.1s
TIGA Tifton 19.40 19 P **Pn 12 52 57.9 +1.7**
baz=202
WHTX Lake Whitney, 19.64 343 Pn 12 53 00.2 +1.2
TXAR Lajitas Array 19.92 326 P **Pn 12 53 03.4 +0.9**
comp=Z,3.2nm,0.5s,baz=150,slow=13,SNR=51
TXAR ScP **ScP 13 00 55.5 +2.0**
comp=Z,0.1nm,0.7s,baz=147,slow=5.2,SNR=2.5
TXAR LR LR 13 02 12.7
comp=Z,84nm,18.4s,baz=0.0,slow=41
TX31 Lajitas Ar. Si 19.92 326 P **Pn 12 53 03.5 +1.0**
TX32 Lajitas Array 19.92 326 P **Pn 12 53 03.3 +0.8**
H06E1 SOCORRO T-PHAS 19.95 289 T T 13 13 25.7
SNR=128
H06S1 SOCORRO T 19.97 289 T T 13 13 37.5
SNR=18
H06N1 SOCORRO T-PHAS 20.02 289 T T 13 13 25.6
SNR=7.4
Z41A Richland Creek 20.05 356 P Pn 12 53 02.7 -1.2
Z41A IAmb IAmb 12 53 09.7
comp=Z,24nm,0.9s
Z41A Richland Creek 20.05 356 P Pn 12 53 04.0 +0.2
baz=174
LRAL Lakeview Retre 20.09 10 P Pn 12 53 03.5 -0.9
LRAL Lakeview Retre 20.09 10 P Pn 12 53 04.8 +0.4
baz=191
152A Waverly Hall 20.22 15 P **P 12 53 04.2 +0.2**
152A IAmb IAmb 12 53 13.5
comp=Z,49nm,1.3s
SDV Santo Domingo 20.43 100 P **P 12 53 05.4 -1.2**
comp=Z,1.2nm,0.3s,baz=297,slow=8.8,SNR=22
SDV Santo Domingo 20.43 100 P **P 12 53 05.0 -1.6**
WLAR White Oak Lake 20.50 355 P **P 12 53 07.4 +0.4**
WLAR IAmb IAmb 12 53 14.0
comp=Z,33nm,1.0s
Z50A Ashland 20.50 12 P **P 12 53 07.4 +0.3**
Z50A IAmb IAmb 12 53 17.4
comp=Z,18nm,0.7s
Z50A Ashland 20.50 12 P Pn 12 53 08.0 -1.3
baz=194,SNR=5.8
CCAR Cane Creek 20.65 358 P Pn 12 53 10.2 -0.7
CCAR IAmb IAmb 12 53 22.7
comp=Z,50nm,1.1s
Z52A Williamson 20.80 16 P **P 12 53 11.2 +1.0**
baz=198
ABTX Abilene, Hawle 20.91 339 P Pn 12 53 12.3 -1.7
ABTX IAmb IAmb 12 53 19.6
comp=Z,35nm,1.3s
ABTX Abilene, Hawle 20.91 339 P Pn 12 53 12.4 -1.6
baz=155,SNR=9.5
Y49A Blount Mountai 21.00 11 P **P 12 53 13.0 +0.6**
Y49A IAmb IAmb 12 53 19.3
comp=Z,36nm,1.2s
LPIG La Paz 21.25 303 P **P 12 53 20.2 +5.0**
comp=Z,3.7nm,0.3s,baz=37,slow=10,SNR=5.1
GOGA Godfrey 21.27 18 P **P 12 53 15.0 -0.3**
GOGA IAmb IAmb 12 53 21.8
comp=Z,24nm,0.9s
GOGA Godfrey 21.27 18 P **P 12 53 16.4 +1.1**
baz=200
X40A Basin Creek Fa 21.27 356 P **P 12 53 16.2 +0.8**
X40A Basin Creek Fa 21.27 356 P **P 12 53 15.5 +0.2**
baz=175
OXF Oxford 21.28 4 P **P 12 53 18.0 +2.6**
OXF Oxford 21.28 4 P **P 12 53 18.4 +3.0**
baz=184
Y51A Rockmart 21.31 14 P **P 12 53 16.5 +0.7**
baz=196
MIAR Mount Ida 21.39 354 P **P 12 53 16.4 -0.2**
MIAR Mount Ida 21.39 354 P **P 12 53 16.4 -0.2**
baz=173,SNR=8.9
X48A Hartselle 21.47 9 P **P 12 53 18.2 +0.8**
X48A IAmb IAmb 12 53 23.8
comp=Z,14nm,0.8s
Y52A Lilburn 21.53 16 P **P 12 53 18.3 +0.2**
Y52A IAmb IAmb 12 53 24.3
comp=Z,15nm,0.8s
Y52A Lilburn 21.53 16 P **P 12 53 18.9 +0.8**
baz=198
UALR University of 21.53 357 P **P 12 53 18.7 +0.6**
UALR IAmb IAmb 12 53 25.7
comp=Z,33nm,1.3s
Y53A Monroe 21.65 17 P **P 12 53 20.6 +1.2**
baz=200
FPAL Fort Paine 21.81 12 P **P 12 53 21.1 -0.1**
FPAL IAmb IAmb 12 53 36.5
comp=Z,30nm,1.4s
PLAL Pickwick Lake 21.86 6 P **P 12 53 22.9 +1.3**
W41B Gary Mavity, V 21.92 357 P **P 12 53 22.4 +0.1**
W41B IAmb IAmb 12 53 41.4
comp=Z,28nm,1.3s
W41B Gary Mavity, V 21.92 357 P **P 12 53 23.0 +0.8**
baz=176
WHAR Wooly Hollow 22.04 357 P **P 12 53 24.0 +0.5**
W39A Magazine 22.06 354 P **P 12 53 24.1 +0.4**
W39A IAmb IAmb 12 53 26.6
comp=Z,37nm,1.3s
W39A Magazine 22.06 354 P **P 12 53 24.4 +0.6**
baz=172,SNR=5.3
W49A Belvidere 22.25 10 P **P 12 53 26.4 +0.6**
baz=192
X52A Dahlonega 22.27 16 P **P 12 53 26.4 +0.3**
baz=198,SNR=5.7
X53A Estanollee 22.34 17 P **P 12 53 27.4 +0.6**
baz=200
W35A Tecumseh 22.51 347 P **P 12 53 28.2 -0.4**
W50A Signal Mountai 22.51 12 P **P 12 53 28.5 -0.2**
W50A IAmb IAmb 12 53 41.3
comp=Z,20nm,1.2s
W50A Signal Mountai 22.51 12 P **P 12 53 29.1 +0.5**
baz=194
WMOK Wichita Mounta 22.59 343 P **P 12 53 30.7 +1.2**
baz=160
W51A Cleveland 22.59 13 P **P 12 53 29.6 +0.1**
baz=196
MNTX Cornudas Mount 22.68 327 P **P 12 53 31.2 +0.7**
MNTX IAmb IAmb 12 53 33.6
comp=Z,50nm,1.4s
MNTX Cornudas Mount 22.68 327 P **P 12 53 31.3 +0.8**
baz=141,SNR=31
FNO Franklin 22.73 346 P **P 12 53 30.9 0.0**
V48A Smith Brothers 22.77 9 P **P 12 53 31.0 -0.4**
V48A IAmb IAmb 12 53 32.6
comp=Z,13nm,0.8s
LCAR Lake Charles 22.79 360 P **P 12 53 30.1 -1.4**
CPCT Cooper Cave 22.92 14 P **P 12 53 33.1 +0.1**
V49A McMinnville 22.95 11 P **P 12 53 33.1 -0.1**
baz=192,SNR=7.8
W53A Cullowhee 23.00 17 P **P 12 53 35.0 +1.1**
baz=200
V50A Pikevile 23.01 12 P **P 12 53 34.1 +0.2**
baz=194
WVT Waverly 23.02 7 P **P 12 53 33.4 -0.6**
WVT IAmb IAmb 12 53 48.8
comp=Z,18nm,1.1s
WVT Waverly 23.02 7 P **P 12 53 33.6 -0.3**
baz=188
TUL1 Leonard 23.04 350 P **P 12 53 34.2 0.0**
U40A Yellville 23.13 356 P **P 12 53 34.5 -0.6**
U40A IAmb IAmb 12 53 36.9
comp=Z,17nm,1.1s
U40A Yellville 23.13 356 P **P 12 53 35.3 +0.1**
baz=175,SNR=8.7
HHAR Hobbs 23.15 354 P **P 12 53 33.4 -1.9**
CLTN Cedars of Leba 23.19 10 P **P 12 53 35.2 -0.5**
W54A Cherokee Point 23.21 19 P **P 12 53 35.6 -0.4**
baz=202
MSTX Muleshoe 23.30 335 P **P 12 53 36.4 -0.6**
MSTX Muleshoe 23.30 335 P **P 12 53 36.8 -0.2**
baz=150
V51A Loudon 23.30 14 P **P 12 53 36.5 -0.3**
V51A IAmb IAmb 12 53 44.6
comp=Z,28nm,1.3s
V51A Loudon 23.30 14 P **P 12 53 37.1 +0.3**
baz=196
TKL Tuckaleechee C 23.30 15 P **P 12 53 35.4 -1.5**
comp=Z,10nm,0.5s,baz=179,slow=10,SNR=34
TKL Tuckaleechee C 23.30 15 P **P 12 53 36.8 -0.1**
TKL IAmb IAmb 12 53 38.4
comp=Z,12nm,0.6s
PBMO Poplar Bluff 23.50 1 P **P 12 53 37.6 -1.2**
V52A Sevierville 23.52 15 P **P 12 53 38.1 -0.9**
V52A IAmb IAmb 12 53 44.1
comp=Z,35nm,1.4s
V52A Sevierville 23.52 15 P **P 12 53 39.8 +0.8**
baz=198
V53A Saluda 23.57 17 P **P 12 53 39.6 0.0**
V53A IAmb IAmb 12 53 49.2
comp=Z,19nm,1.1s
V53A Saluda 23.57 17 P **P 12 53 40.5 +0.9**
baz=200
AMTX Amarillo 23.67 338 P **P 12 53 40.6 0.0**
AMTX IAmb IAmb 12 53 46.8
comp=Z,11nm,0.6s
AMTX Amarillo 23.67 338 P **P 12 53 40.4 -0.2**
baz=153
U49A Red Boiling Sp 23.69 10 P **P 12 53 40.5 -0.2**
baz=192,SNR=7.4
ATAH Athaualpa 23.75 148 P **P 12 53 45.0 +3.2**
comp=Z,6.0nm,0.8s,baz=358,slow=14,SNR=4.5
U50A Jamestown 23.78 12 P **P 12 53 41.1 -0.5**
baz=195
MGMO Mountain Grove 23.90 357 P **P 12 53 42.1 -0.5**
MGMO IAmb IAmb 12 53 43.7
comp=Z,22nm,1.1s
V54A Nebo 23.92 18 P **P 12 53 42.9 0.0**
baz=202
U51A La Follette 23.93 14 P **P 12 53 42.7 -0.3**
baz=197
T47A Sharon Grove 23.96 8 P **P 12 53 42.7 -0.4**
TZTN Tazewell 24.20 15 P **P 12 53 45.4 -0.1**
baz=198
W58A Raeford 24.20 24 P **P 12 53 44.4 -1.0**
baz=209
U53A Fall Branch 24.29 17 P **P 12 53 46.0 -0.3**
baz=200,SNR=5.3
T49A Edmonton 24.32 11 P **P 12 53 46.0 -0.6**
T49A IAmb IAmb 12 53 47.0
comp=Z,18nm,0.9s
T49A Edmonton 24.32 11 P **P 12 53 46.2 -0.3**
baz=193,SNR=7.2
SRIG Santa Rosalia 24.34 309 P **P 12 53 49.0 +2.2**
T50A Nancy 24.36 12 P **P 12 53 46.4 -0.6**
baz=194
S44A Carbondale 24.46 3 P **P 12 53 47.1 -0.7**
S44A IAmb IAmb 12 53 48.4
comp=Z,29nm,1.1s
T51A Gray 24.51 14 P **P 12 53 47.9 -0.3**
baz=196
121A Cookes Peak, D 24.64 324 P **P 12 53 53.1 +3.4**
121A IAmb IAmb 12 53 55.7
comp=Z,22nm,0.8s
121A Cookes Peak, D 24.64 324 P **P 12 53 52.7 +3.0**
baz=137,SNR=11
U54A Nelsons Funny 24.65 18 P **P 12 53 49.1 -0.5**
U54A IAmb IAmb 12 53 50.7
comp=Z,40nm,1.3s
U54A Nelsons Funny 24.65 18 P **P 12 53 49.8 +0.2**
baz=202
319A Douglas 24.71 320 P **P 12 53 52.8 +2.4**
319A IAmb IAmb 12 54 00.8
comp=Z,15nm,1.1s
CCM Cathedral Cave 24.77 360 P **P 12 53 49.8 -0.8**
CCM IAmb IAmb 12 53 51.1
comp=Z,27nm,1.3s
CCM Cathedral Cave 24.77 360 P **P 12 53 49.9 -0.8**
baz=179
U55A TA2, Sparta 24.87 19 P **P 12 53 49.8 -1.9**
baz=203
T53A Wise 24.88 16 P **P 12 53 50.6 -1.1**
baz=200
V58A Windy Hill, Pi 24.92 23 P **P 12 53 50.2 -1.8**

baz=208
S49A Springfield 25.02 11 P P 12 53 52.3 -0.6
baz=193
S50A Richmond 25.09 12 P P 12 53 53.2 -0.3
baz=195
S51A Beattyville 25.23 14 P P 12 53 54.4 -0.4
baz=197
WCI Wyandotte Cave 25.29 9 P P 12 53 54.6 -0.7
WCI Wyandotte Cave 25.29 9 P P 12 53 55.1 -0.2
baz=190
Y22D IRIS PASSCAL I 25.34 328 P P 12 53 58.5 +2.5
Y22D IRIS PASSCAL I 25.34 328 P P 12 53 59.3 +3.3
baz=141
S52A Salyersville 25.39 15 P P 12 53 55.9 -0.4
baz=198
R49A Shelbyville 25.53 11 P P 12 53 56.8 -0.7
baz=193
OLIL Olney 25.57 5 P P 12 53 57.4 -0.5
OLIL IAmb IAmb 12 53 58.2
comp=Z,34nm,1.4s
R50A Paris 25.69 12 P P 12 53 57.9 -1.1
R50A IAmb IAmb 12 53 58.8
comp=Z,8.5nm,0.7s
R50A Paris 25.69 12 P P 12 53 58.5 -0.4
baz=195
ANMO Albuquerque 25.79 330 P P 12 53 59.9 -0.2
comp=Z,2.1nm,0.6s,baz=136,slow=11,SNR=11
ANMO PcP PcP 12 57 32.3 +2.6
comp=Z,0.7nm,0.7s,baz=64,slow=2.4,SNR=4.4
ANMO Albuquerque 25.79 330 P P 12 54 01.9 +1.7
ANMO PcP 12 57 31.2 +1.4
ANMO Albuquerque 25.79 330 P P 12 54 02.1 +1.9
baz=143
R51A Hillsboro 25.86 13 P P 12 54 00.1 -0.4
baz=196
Q48A North Vernon 26.06 9 P P 12 54 02.1 -0.2
baz=191
Q49A Aurora 26.28 11 P P 12 54 03.7 -0.6
baz=193
KSU1 Kansas State U 26.29 350 P P 12 54 04.6 +0.2
baz=167
TUC Tucson 26.29 320 P P 12 54 06.7 +2.1
TUC Tucson 26.29 320 P P 12 54 07.5 +2.9
baz=132
Q50A Georgetown 26.30 12 P P 12 54 03.7 -0.8
baz=195
Q51A Peebles 26.61 13 P P 12 54 06.2 -1.1
Q51A IAmb IAmb 12 54 09.7
comp=Z,16nm,0.8s
Q51A Peebles 26.61 13 P P 12 54 06.8 -0.5
baz=196,SNR=6.6
P48A Milroy 26.63 10 P P 12 54 06.4 -1.1
P48A IAmb IAmb 12 54 07.3
comp=Z,11nm,0.9s
P48A Milroy 26.63 10 P P 12 54 06.4 -1.1
baz=192
Q52A Bidwell 26.81 15 P P 12 54 08.5 -0.6
baz=199
P49A Miami Univ. Ec 26.82 11 P P 12 54 08.1 -1.1
baz=193
P50A Jamestown 27.07 12 P P 12 54 11.1 -0.3
baz=195
Q54A Coxs Mills 27.22 17 P P 12 54 12.4 -0.4
baz=202
X18A Snowflake 27.33 324 P P 12 54 17.0 +3.0
214A Organ Pipe Nat 27.38 317 P P 12 54 16.6 +2.2
214A Organ Pipe Nat 27.38 317 P P 12 54 17.1 +2.8
baz=128
O48A Farmland 27.45 10 P P 12 54 13.3 -1.6
baz=192
O50A Cable 27.63 12 P P 12 54 15.4 -1.0
baz=195
W18A Petrified Fore 27.64 325 P P 12 54 18.7 +1.8
W18A IAmb IAmb 12 54 20.7
comp=Z,21nm,1.3s
W18A Petrified Fore 27.64 325 P P 12 54 20.3 +3.5
baz=137,SNR=7.4
SDCO Great Sand Dun 27.67 335 P P 12 54 19.6 +2.4
baz=148
ACSO Alum Creek Sta 27.85 13 P P 12 54 17.6 -0.8
ACSO IAmb IAmb 12 54 18.2
comp=Z,13nm,0.9s
ACSO Alum Creek Sta 27.85 13 P P 12 54 18.0 -0.4
baz=197
O51A Pataskala 27.85 14 P P 12 54 17.7 -0.8
baz=197
P54A Burton 27.90 18 P P 12 54 18.9 0.0
baz=202
O52A Adamsville 28.01 15 P P 12 54 19.0 -0.8
baz=199
N48A Decatur 28.06 10 P P 12 54 19.0 -1.3
baz=192
X16A Lo Mia Camp, P 28.12 322 P P 12 54 23.2 +2.0
S22A 4UR Ranch, Cre 28.25 333 P P 12 54 23.7 +1.4
baz=146
N49A Columbus Grove 28.27 11 P P 12 54 21.4 -0.7
baz=194
N50A Nevada 28.33 13 P P 12 54 22.5 -0.2
baz=196
M47A Cromwell 28.46 8 P P 12 54 22.4 -1.4
baz=191
O54A Avella 28.46 17 P P 12 54 23.5 -0.4
baz=202
113A Mohawk Valley, 28.52 317 P P 12 54 26.7 +2.3
MVCO Mesa Verde 28.59 330 P P 12 54 25.3 -0.1
MVCO IAmb IAmb 12 54 32.2
comp=Z,14nm,1.5s
MVCO Mesa Verde 28.59 330 P P 12 54 27.7 +2.3
baz=142
N51A Ashland 28.64 14 P P 12 54 24.9 -0.5
baz=197
N52A McGinn's Farm, 28.70 15 P P 12 54 25.4 -0.7
baz=199
Y14A Wickenburg 28.76 320 P P 12 54 27.9 +1.2
L40A Anamosa 28.77 360 P P 12 54 25.4 -1.2
L40A IAmb IAmb 12 54 26.1
comp=Z,13nm,0.7s
WUAZ Wupatki 28.85 324 P P 12 54 29.9 +2.3
WUAZ IAmb IAmb 12 54 31.5
comp=Z,18nm,1.4s
WUAZ Wupatki 28.85 324 P P 12 54 31.6 +4.0
baz=135
M50A Fremont 28.96 12 P P 12 54 27.4 -0.9
baz=196
L44A Lake County Fo 29.01 5 P P 12 54 27.7 -1.1
baz=186
M51A Elyria 29.08 14 P P 12 54 28.9 -0.4
baz=198
L47A Sherwood 29.12 9 P P 12 54 27.7 -2.0
baz=191
L48A N Adams 29.21 10 P P 12 54 29.6 -1.0
baz=193
N54A Moraine State 29.30 17 P P 12 54 30.3 -1.0
baz=202
ISCO Idaho Springs 29.48 337 P P 12 54 36.0 +2.7
baz=150
M53A WI Miller and 29.55 16 P P 12 54 33.2 -0.4
baz=200
L50A Kingsville 29.62 12 P P 12 54 33.4 -0.8
baz=196
JFWS Jewell Farm 29.63 1 P P 12 54 32.6 -1.6
JFWS Jewell Farm 29.63 1 P P 12 54 32.8 -1.4
baz=181,SNR=5.7
PDMCI Parker Dam,Lak 29.72 319 P P 12 54 38.3 +3.2
baz=129
N56A West Decatur 29.78 20 P P 12 54 34.0 -1.6
baz=205
U15A North Rim 30.02 324 P P 12 54 41.1 +3.0
U15A IAmb IAmb 12 54 49.7
comp=Z,14nm,1.4s
K48A Perry 30.10 10 P P 12 54 36.7 -1.7
baz=193
L53A Girard 30.14 16 P P 12 54 37.5 -1.3
baz=201
BC3 Big Chuckawall 30.18 317 P P 12 54 42.5 +3.2
baz=126,SNR=6.1
IRM Iron Mountain 30.27 318 P P 12 54 43.5 +3.4
baz=128
ERPA Erie 30.37 16 P P 12 54 40.3 -0.5
baz=201
I42A Draeger Farm, 30.65 3 P P 12 54 42.4 -0.8
I42A IAmb IAmb 12 54 44.2
comp=Z,8.6nm,0.6s
KNB Kanab 30.74 324 P P 12 54 45.9 +1.6
PKCU Pink Cliffs 30.75 326 P P 12 54 48.1 +3.5
J49A Marlette 30.82 11 P P 12 54 42.6 -2.1
baz=195

O20A White River Ci 30.84 334 P P 12 54 47.0 +1.8
baz=145
LCMT Little Creek M 30.97 324 P P 12 54 47.9 +1.6
GMRC Granite Mounta 31.00 318 P P 12 54 49.9 +3.3
baz=128
I45A Fountain 31.01 7 P P 12 54 45.0 -1.4
baz=189
MTPU Mount Pierson 31.12 326 P P 12 54 49.6 +1.7
Q16A Castle Valley 31.25 329 P P 12 54 50.7 +1.9
J52A Paris 31.29 15 P P 12 54 47.4 -1.5
baz=200
SZCU Shurtz Canyon 31.30 325 P P 12 54 51.0 +1.7
CCUT Cedar City 31.42 325 P P 12 54 52.6 +2.2
I49A Point Hope 31.44 11 P P 12 54 48.2 -2.0
baz=195
P17A Butcher Ranch, 31.46 330 P P 12 54 51.6 +0.9
MSU Marysvale 31.46 327 P P 12 54 52.6 +1.8
TMUT Trail Mountain 31.55 329 P P 12 54 52.7 +1.1
TCRU Three Creeks R 31.68 327 P P 12 54 53.9 +1.3
SHPR Sheep Range 31.77 321 P P 12 54 55.8 +2.4
SPMN Marine on St. 31.97 358 P P 12 54 52.6 -2.2
SPMN Marine on St. 31.97 358 P P 12 54 53.5 -1.3
baz=176,SNR=28
G45A Suttons Bay 32.07 7 P P 12 54 54.0 -1.8
G45A Suttons Bay 32.07 7 P P 12 54 53.8 -1.9
baz=190,SNR=7.8
H48A Harrisville 32.08 10 P P 12 54 54.3 -1.6
baz=194
I52A Shelburne 32.14 15 P P 12 54 55.2 -1.2
baz=200
PSUT Pine Spring 32.39 325 P P 12 55 01.4 +2.5
F42A Maple Grove Fa 32.56 4 P P 12 54 57.1 -2.9
F42A IAmb IAmb 12 54 59.2
comp=Z,18nm,1.4s
JLU Jordanelle 32.68 330 P P 12 55 03.5 +2.1
F45A CMU Biological 32.72 7 P P 12 54 59.8 -1.6
baz=190
H52A Wyevale 32.75 15 P P 12 55 01.5 -0.2
baz=200
FURC Furnace Creek, 32.80 320 P P 12 55 05.5 +3.2
baz=128
COWI Conover 32.84 2 P P 12 55 00.6 -2.0
CTU Camp Tracy 32.89 330 P P 12 55 05.2 +2.0
MPMC Manual Prospec 32.95 318 P P 12 55 06.7 +2.8
baz=127,SNR=5.8
I55A Frankford 32.96 18 P P 12 55 02.5 -1.1
baz=204
H53A Bobcaygeon 33.03 16 P P 12 55 02.5 -1.6
baz=202
DUG Dugway, Tooele 33.04 329 P P 12 55 06.7 +2.2
baz=138
DAC Darwin (Calif) 33.15 319 P P 12 55 11.3 +5.8
DAC IAmb IAmb 12 55 12.0
comp=Z,11nm,1.2s
R11A Troy Canyon, C 33.24 323 P P 12 55 09.1 +2.8
R11A IAmb IAmb 12 55 10.6
comp=Z,12nm,1.4s
R11A Troy Canyon, C 33.24 323 P P 12 55 09.8 +3.5
baz=132,SNR=8.7
DELO Deloro Mine 33.25 18 P P 12 55 05.0 -1.1
E43A Lone Tree Farm 33.25 5 P P 12 55 03.7 -2.4
F48A Evansville 33.30 11 P P 12 55 04.4 -2.0
baz=195
E38A The Farm, Brul 33.32 359 P P 12 55 04.2 -2.4
F49A Sandfield 33.34 11 P P 12 55 04.4 -2.5
baz=196
ISA Isabella, Lake 33.37 317 P P 12 55 11.1 +3.8
baz=125
GRAC Grapevine Rang 33.45 320 P P 12 55 11.6 +3.6
baz=128
HWUT Hardware Ranch 33.51 331 P P 12 55 10.5 +1.9
HWUT IAmb IAmb 12 55 19.9
comp=Z,5.5nm,0.8s
G53A Haliburton 33.53 16 P P 12 55 07.0 -1.5
baz=202
PDAR Pinedale Array 33.57 335 P P 12 55 09.2 0.0
comp=Z,0.6nm,0.5s,baz=127,slow=11,SNR=7.7
PDAR PcP PcP 12 57 50.0 +0.4
comp=Z,0.8nm,0.7s,baz=127,slow=5.8,SNR=6.3
E44A Grand Marais A 33.60 6 P P 12 55 08.2 -0.8
baz=189
BGU Big Grassy Mou 33.70 329 P P 12 55 11.8 +1.6
SPUT South Promonto 33.70 330 P P 12 55 11.9 +1.6
D41A Chassel 33.83 3 P P 12 55 09.2 -1.9
VES Vestal, Richgr 33.88 317 P P 12 55 15.5 +3.8
baz=124,SNR=8.3
F52A Sundridge 33.97 15 P P 12 55 10.8 -1.6
baz=200
D46A Sault St. Mari 34.10 9 P P 12 55 11.3 -2.2
baz=192
G55A Calabogie 34.19 18 P P 12 55 13.2 -1.1
baz=205
AHID Auburn Hatcher 34.22 333 P P 12 55 16.1 +1.3
AHID IAmb IAmb 12 55 17.1
comp=Z,4.1nm,0.8s
D47A Chapleau 34.41 10 P P 12 55 14.0 -2.1
baz=193
ALGO Algonquin Park 34.45 16 P P 12 55 14.9 -1.6
baz=202
REDW Red Top Meadow 34.60 334 P P 12 55 18.9 +0.8
PAGB Antelope Grade 34.60 316 P P 12 55 21.4 +3.4
E51A G1948 Merrick 34.62 14 P P 12 55 16.6 -1.4
baz=200,SNR=7.0
SNOW Snow King Moun 34.64 334 P P 12 55 19.5 +1.0
EYMN Ely 34.66 359 P P 12 55 16.1 -2.1
EYMN Ely 34.66 359 P P 12 55 16.2 -2.1
baz=179,SNR=7.5
ELK Elko 34.71 327 P P 12 55 20.7 +1.6
ELK IAmb IAmb 12 55 27.9
comp=Z,7.5nm,1.2s
NV11 Mina Array Sit 34.83 321 P P 12 55 23.0 +2.9
NV11 IAmb IAmb 12 55 24.3
comp=Z,12nm,1.0s
OMMB Old Mammoth Mi 34.85 319 P P 12 55 22.7 +2.2
OMMB IAmb IAmb 12 55 26.2
comp=Z,5.8nm,0.8s
NVAR Mina Array Bea 34.92 321 P P 12 55 23.6 +2.7
comp=Z,7.9nm,0.7s,baz=135,slow=8.3,SNR=44
NVAR PcP PcP 12 57 56.5 +3.0
comp=Z,2.4nm,0.8s,baz=140,slow=3.1,SNR=6.3
NVAR ScP ScP 13 01 39.2 +0.6
comp=Z,0.2nm,0.6s,baz=140,slow=4.7,SNR=2.7
NVAR LR LR 13 12 11.5
comp=Z,314nm,18.3s,baz=100,slow=40
D49A Beulah Townshi 34.93 11 P P 12 55 18.9 -1.7
baz=196
E53A Dumoine, Ponti 34.95 16 P P 12 55 19.5 -1.3
baz=203
E54A Lac Daplat, Po 35.13 17 P P 12 55 20.9 -1.5
baz=204
D51A Lot 18 Range I 35.18 14 P P 12 55 21.0 -1.7
baz=200
KVN Kaiserville 35.19 322 P P 12 55 25.9 +2.7
KVN IAmb IAmb 12 55 31.4
comp=Z,8.7nm,1.2s
AGMN Agassiz Nation 35.24 354 P P 12 55 21.8 -1.5
AGMN Agassiz Nation 35.24 354 P P 12 55 22.4 -0.9
baz=172
MDND Maddock 35.30 350 P P 12 55 22.5 -1.3
SAML Samuel 35.30 127 P P 12 55 22.8 -1.3
E55A Montcerf-Lytto 35.47 18 P P 12 55 24.4 -0.9
baz=205
D53A Lac Vacive, Po 35.58 16 P P 12 55 25.3 -0.9
D53A Lac Vacive, Po 35.58 16 P P 12 55 25.3 -0.9
baz=202
YHH Holmes Hill 35.76 336 P P 12 55 29.6 +1.4
D54A Lac Fusel, La 35.93 17 P P 12 55 27.8 -1.4
baz=204,SNR=5.4
CMB Columbia Colle 35.99 319 P P 12 55 31.5 +1.5
CMB IAmb IAmb 12 55 34.6
comp=Z,6.6nm,1.1s
D55A Sainte-Anne-du 36.16 18 P P 12 55 29.9 -1.3
baz=206
MCMT McKenzie Canyo 36.63 334 P P 12 55 37.6 +2.0
MFID Camas Ranch 36.94 329 P P 12 55 39.3 +1.3
DLMT Dillon 36.95 334 P P 12 55 39.6 +1.4
DLMT IAmb IAmb 12 55 51.5
comp=Z,18nm,1.5s
BEKR Beckworth 37.06 321 P P 12 55 39.9 +0.6
BEKR IAmb IAmb 12 55 50.5
comp=Z,9.9nm,1.1s
ULM Lac du Bonnet 37.18 355 P P 12 55 37.2 -2.6
comp=Z,14nm,0.6s,baz=172,slow=9.0,SNR=36
ULM LR LR 13 14 22.3
comp=Z,316nm,18.3s,baz=163,slow=42
ULM Lac du Bonnet 37.18 355 P P 12 55 37.7 -2.1

LSQQ Lebel-sur-Quev 37.59 15 P P 12 55 41.6 -1.8
baz=202
WVOR Wild Horse Val 37.71 326 P P 12 55 46.1 +1.5
WVOR IAmb IAmb 12 55 47.7
comp=Z,21nm,1.4s
MATQ Matagami 38.08 14 P P 12 55 45.5 -2.0
baz=201,SNR=8.8
EGMT Eagleton 38.09 340 P P 12 55 47.6 0.0
EGMT IAmb IAmb 12 55 49.1
comp=Z,7.9nm,1.1s
EGMT Eagleton 38.09 340 P P 12 55 48.6 +0.9
baz=149
O03E Paynes Creek 38.20 321 P P 12 55 51.8 +3.1
baz=126
J08A Circle Bar Ran 38.25 327 P P 12 55 50.9 +1.7
MSO Missoula 38.69 335 P P 12 55 53.4 +0.7
MSO IAmb IAmb 12 55 54.5
comp=Z,13nm,1.4s
MSO Missoula 38.69 335 P P 12 55 53.9 +1.1
baz=142
I07A Izee 39.29 327 P P 12 55 59.4 +1.5
I07A IAmb IAmb 12 56 00.2
comp=Z,12nm,1.3s
F10A Beach Ranch, E 39.49 331 P P 12 56 00.1 +0.6
C09A Chrisman Ranch 41.33 332 P P 12 56 15.3 +0.7
C09A IAmb IAmb 12 56 16.5
comp=Z,11nm,0.7s
FFC Flin Flon 42.33 351 P P 12 56 22.3 -0.4
LLLB Lillooet 44.99 332 P P 12 56 44.5 +0.3
SCHQ Schefferville 45.65 19 P P 12 56 46.8 -2.5
comp=Z,16nm,0.9s,baz=222,slow=6.0,SNR=22
SCHQ LR LR 13 17 05.5
comp=Z,512nm,18.6s,baz=202,slow=38
SCHQ Schefferville 45.65 19 P P 12 56 46.4 -2.9
BBB Bella Bella 48.95 330 LR LR 13 21 42.9
comp=Z,103nm,19.8s,baz=168,slow=41
CPUP Villa Florida 51.13 140 LR LR 13 20 44.8
comp=Z,122nm,18.4s,baz=335,slow=38
BDFB Brasilia 51.26 123 LR LR 13 20 24.1
comp=Z,113nm,19.0s,baz=296,slow=38
YKA Yellowknife Ar 52.04 346 P P 12 57 37.0 -1.3
comp=Z,2.7nm,0.8s,baz=147,slow=7.7,SNR=29
YKA PcP PcP 12 58 50.3 0.0
comp=Z,0.4nm,0.7s,baz=153,slow=3.9,SNR=4.0
YKA ScP ScP 13 02 47.1 +0.3
comp=Z,0.1nm,0.5s,baz=145,slow=3.9,SNR=4.9
YKA LR LR 13 22 09.2
comp=Z,129nm,19.8s,baz=0.0,slow=39
TAOE Nuku Hiva Isla 53.50 248 eT T 13 55 09.3
comp=Z,111nm,0.3s
PLCA Paso Flores 56.89 162 P P 12 58 15.1 +1.2
comp=Z,1.7nm,1.0s,baz=5.7,slow=10,SNR=2.9
PLCA LR LR 13 17 35.1
comp=Z,77nm,18.4s,baz=2.0,slow=31
PLCA Paso Flores 56.89 162 P P 12 58 16.5 +2.6
PLCA IAmb IAmb 12 58 28.7
comp=Z,7.0nm,1.4s
INK Inuvik 61.49 343 LR LR 13 30 02.8
comp=Z,116nm,18.2s,baz=132,slow=40
INK Inuvik 61.49 343 P P 12 58 44.4 -0.9
RES Resolute Bay 61.53 359 LR LR 13 28 22.3
comp=Z,277nm,18.3s,baz=164,slow=39
RES Resolute Bay 61.53 359 P P 12 58 42.6 -2.8
PMOR Pomariorio Ree 62.90 245 eT T 14 06 53.5
comp=Z,3.3nm,0.3s
GHO Glory Hole Cre 63.56 333 P P 12 58 59.6 +0.3
HDA Harding Lake 63.84 336 P P 12 59 00.9 -0.1
baz=116
IL31 63.97 337 P P 12 59 01.7 -0.1
ILAR Eielson Array 63.97 337 P P 12 59 01.8 -0.1
comp=Z,4.2nm,1.0s,baz=167,slow=4.9,SNR=31
ILAR LR LR 13 32 33.7
comp=Z,110nm,18.1s,baz=136,slow=41
RND Reindeer 64.18 335 P P 12 59 04.2 +0.8
PPT Papeete 65.40 244 LR LR 13 20 35.8
comp=Z,128nm,18.9s,baz=45,slow=29
PPT2 Papeete2 65.41 244 eS S 13 07 58.6 +2.2
comp=Z,57nm,25.0s
PPT2 Papeete2 65.41 244 eLR LR 13 18 43.4
comp=Z,153nm,25.0s
MLY Manley 65.58 336 P P 12 59 11.9 -0.5
SUMG Summit 66.76 15 iP P 12 59 17.4 -2.9
comp=Z,13nm,0.7s
SUMG Summit 66.76 15 P P 12 59 18.2 -2.1
SUMG IAmb IAmb 12 59 20.3
comp=Z,5.3nm,0.7s
TBI Tubuai 67.74 238 eLR LR 13 20 05.0
comp=Z,113nm,28.0s
DAG Danmarks Havn 73.22 13 iP P 12 59 56.7 -2.7
comp=Z,6.2nm,0.6s
ESDC Sonseca Array 79.45 52 P P 13 00 31.5 -4.0
comp=Z,2.1nm,1.0s,baz=299,slow=6.6,SNR=5.3
MDT Midelt 79.98 59 LR LR 13 30 58.1
comp=Z,151nm,19.6s,baz=341,slow=32
SPITS Spitsbergen Ar 80.68 12 LR LR 13 38 10.9
comp=Z,321nm,19.7s,baz=260,slow=37
BILL Bilibino 82.58 338 P P 13 00 51.7 +0.1
BILL IAmb IAmb 13 00 53.9
comp=Z,10nm,1.1s
NOA NORSAR Array B 84.39 29 LR LR 13 36 05.3
comp=Z,69nm,21.3s,baz=280,slow=34
TIC Toumodi 84.60 84 eP P 13 01 02.3 -0.8
TIC Toumodi 84.60 84 P P 13 01 02.3 -0.8
LIC Lamto 84.69 85 eP P 13 01 02.8 -0.7
comp=Z,36nm,0.7s
LIC Lamto 84.69 85 P P 13 01 02.8 -0.7
DBIC Dimbokro 84.75 84 P P 13 01 02.4 -1.4
comp=Z,6.4nm,0.6s,baz=268,slow=5.6,SNR=14
DBIC LR LR 13 33 20.9
comp=Z,74nm,20.1s,baz=276,slow=32
DBIC Dimbokro 84.75 84 P P 13 01 03.1 -0.7
KIC Kosan Boka 84.93 85 eP P 13 01 04.1 -0.6
comp=Z,47nm,1.1s
KIC Kosan Boka 84.93 85 P P 13 01 04.1 -0.6
HFS Hagfors 85.83 29 LR LR 13 42 07.1
comp=Z,72nm,19.7s,baz=289,slow=38
ARCES ARCESS Array B 86.60 18 P P 13 01 09.5 -2.4
comp=Z,4.7nm,1.0s,baz=280,slow=5.2,SNR=4.2
ARCES LR LR 13 40 13.0
comp=Z,107nm,18.3s,baz=296,slow=36
DAVOX Davos/Dischmat 87.80 42 LR LR 13 36 00.0
comp=Z,44nm,21.0s,baz=328,slow=33
CLL Collm 88.36 38 eP P 13 01 20.0 -0.7
GERES GERESS Array B 89.60 40 P P 13 01 24.5 -2.3
comp=Z,0.5nm,0.4s,baz=258,slow=13,SNR=6.3
GERES LR LR 13 37 18.4
comp=Z,115nm,21.3s,baz=288,slow=33
TORD Torodi Ar. Bea 89.61 77 P P 13 01 24.2 -3.2
comp=Z,0.8nm,0.7s,baz=279,slow=5.5,SNR=4.9
TORD LR LR 13 39 30.9
comp=Z,67nm,19.7s,baz=355,slow=34
FINES FINESS Array B 90.81 25 LR LR 13 42 29.6
comp=Z,118nm,19.4s,baz=328,slow=36
VRAC Vranov 91.21 39 LR LR 13 39 53.0
comp=Z,29nm,20.2s,baz=298,slow=34
VYHS Vyhne 92.89 39 eP P 13 01 41.9 -0.1
AKASG Malin Array Be 97.86 34 LR LR 13 49 08.4
comp=Z,68nm,18.0s,baz=270,slow=37
KSRS Korea Array 117.77 326 PKP PKiKP 13 07 16.4 +0.7
comp=Z,1.2nm,0.8s,baz=18,slow=1.5,SNR=4.6
BOSA Boshof 119.12 115 PKP PKiKP 13 07 18.8 +0.1
comp=Z,3.1nm,0.9s,baz=231,slow=6.5,SNR=4.7
BOSA Boshof 119.12 115 PKiKP 13 07 18.1 -0.6
MKAR Makanchi Array 119.99 5 PKP PKiKP 13 07 18.8 -1.0
comp=Z,0.1nm,0.4s,baz=354,slow=3.9,SNR=5.6
LZH Lanzhou 129.03 345 ePKP PKiKP 13 07 46.4 +8.2
LZH pPKP sPKPdf 13 07 56.1 +12
LZH sPKP 13 08 00.5
CD2 Chengdu 133.92 342 PKP PKiKP 13 07 46.4 -1.7
WRA Warramunga Arr 136.14 255 PKhKP PKPpre 13 07 46.7
comp=Z,0.3nm,0.6s,baz=93,slow=3.4,SNR=3.6
ASAR Alice Springs 136.31 250 PKhKP PKPpre 13 07 48.3
comp=Z,0.2nm,0.7s,baz=101,slow=3.2,SNR=4.7
CHTO Chiang Mai 146.73 343 PKPbc 13 08 10.8 -0.9
CM31 Chiang Mai Arr 147.07 342 PKPab 13 08 13.4 -0.7
CMAR Chiang Mai Arr 147.07 342 PKPbc PKPab 13 08 12.6 -1.6
comp=Z,3.7nm,0.6s,baz=340,slow=3.9,SNR=36
UBPT Khong Chiam 147.36 330 PKPab 13 08 14.2 -1.1
PBKT Sadao Pong 148.16 338 PKPbc 13 08 14.8 -0.9

*IDC **16** 12:54:55.7±4.0, 34.91N×139.26E, h61km±47km, mb3.3/2, mb1 3.5/2, mb1mx3.0/31, mbtmp3.5/2, Error ellipse: s-maj=85.6km s-min=30.9km az=61.0*
*JMA **16** 12:54:56.1±0.2, 35.63N×140.03E, h74km±2km, M2.9*

ISC 16 12:54:55.1±1.0, 35°.57N±0°.04×140°.02E±0°.05, h86km±7km, n17, σ0°.92/31, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	Nagara	0.22	136	P	Pn	12 55 07.9	+0.3
JCN				S	Sn	12 55 16.9	0.0
TOK	Tokyo	0.24	298	P	Pn	12 55 08.1	+0.5
TOK				S	Sn	12 55 16.9	-0.1
JSMT	Sammumatsuo	0.36	79	P	Pn	12 55 08.4	+0.1
JSMT				eS	Sn	12 55 18.4	+0.2
JOD2	Odawara 2	0.82	248	P	Pn	12 55 12.6	+0.1
JOD2				S	Sn	12 55 24.1	-1.4
BSO3	Boso 3	0.87	152	P	Pn	12 55 13.3	+0.6
BSO3				S	Sn	12 55 26.8	+0.9
JAG	Ashikaga	0.96	332	P	Pn	12 55 14.1	0.0
JAG				S	Sn	12 55 26.7	-1.6
JIM2	Oshima 3	0.98	210	P	Pn	12 55 14.2	-0.1
JIM2				S	Sn	12 55 27.6	-1.0
JRY	Ryogami san	1.01	296	P	Pn	12 55 15.3	+0.7
JRY				S	Sn	12 55 29.9	+0.6
JFNN	Fujinakano	1.15	251	P	Pn	12 55 17.0	+0.7
JFNN				S	Sn	12 55 32.1	-0.1
JYN	Shimob	1.20	267	P	Pn	12 55 17.6	+0.6
JYN				S	Sn	12 55 33.4	-0.1
BSO1	Boso 1	1.21	139	P	Pn	12 55 16.9	+0.5
JIZS	Izushimoda	1.26	228	P	Pn	12 55 18.3	+0.6
JIZS				S	Sn	12 55 34.4	-0.3
JKT	Katashina	1.34	333	P	Pn	12 55 19.1	+0.4
JKT				S	Sn	12 55 35.7	-0.9
MJAR	Matsushiro Arr	1.75	304	P	Pn	12 55 23.9	0.0
	0.6nm,0.3s,baz=151,slow=14,SNR=57						
MJAR				S	Sn	12 55 47.1	+1.2
	1.6nm,0.3s,baz=49,slow=14,SNR=4.8						
MAT	Matsushiro	1.76	304	P	Pn	12 55 25.4	+1.4
MAT				S	Sn	12 55 44.1	-1.8
MKAR	Makanchi Array	43.95	303	P	P	13 02 55.0	+1.6
	0.6nm,0.9s,baz=87,slow=7.4,SNR=4.3						
WRA	Warramunga Arr	55.47	186	P	P	13 04 19.1	-1.8
	0.7nm,0.9s,baz=0.8,slow=7.5,SNR=8.5						

JMA 16 13:34:11.3±0.2, 23°.57N×123°.27E, h49km±4km, M1.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.69	45	P	Pn	13 34 24.9	0.0
HATJ				S	Sn	13 34 34.5	-0.2
IRIF	Iriomote-Funau	0.87	29	P	Pn	13 34 27.6	+0.3
IRIF				eS	Sn	13 34 38.8	-0.1
YOJ	Yonaguni jima	0.92	345	P	Pn	13 34 28.2	+0.3
YOJ				S	Sn	13 34 39.9	-0.2
JYNG	Yonagunijimaku	0.93	341	P	Pn	13 34 28.2	+0.2
JYNG				eS	Sn	13 34 40.7	+0.4
JKRS	Kuro-shima	0.95	45	P	Pn	13 34 28.9	+0.6
JKRS				S	Sn	13 34 40.9	+0.1
JIJ	Ishigaki jima	1.12	45	P	Pn	13 34 30.8	+0.1
JIJ				S	Sn	13 34 44.7	-0.3
JISG	Ishigakijimahi	1.39	43	P	Pn	13 34 35.0	+0.7
JISG				S	Sn	13 34 50.9	-0.6
JTJ	Tarama	1.69	51	P	Pn	13 34 39.2	+0.8
JTJ				S	Sn	13 35 00.1	+1.3

TAP 16 13:34:59.9, 24°.00N×121°.64E, h41km±1km, ML1.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	Chiawan	0.09	335	P	Pn	13 35 06.7	+0.1
	baz=340						
TWD				eS	Sn	13 35 12.2	+1.0
	baz=340						
NACB	Ninganchiao	0.18	347	eP	Pn	13 35 07.3	+0.2
	baz=347						
NACB				eS	Sn	13 35 12.6	+0.5
	baz=347						
ETLH	Xiulin Townshi	0.25	326	eP	Pn	13 35 08.1	+0.3
	baz=325						
ETLH				eS	Sn	13 35 13.7	+0.3
	baz=325						
ESL	Shilin	0.26	226	eP	Pn	13 35 08.3	+0.5
	baz=224						
ESL				eS	Sn	13 35 14.3	+1.0
	baz=224						
WHF	Hehuan Shan	0.37	294	eP	Pn	13 35 09.4	0.0
	baz=293						
WHF				eS	Sn	13 35 16.5	+0.3
	baz=293						
EGFH	Guangfu	0.38	211	eP	Pn	13 35 09.6	+0.4
	baz=210						
EGFH				eS	Sn	13 35 14.8	-0.8
	baz=210						
OWD	Renai	0.42	265	eP	Pn	13 35 10.3	+0.4
	baz=264						
OWD				eS	Sn	13 35 17.3	+0.5
	baz=264						
CHGB	Renai	0.43	279	eP	Pn	13 35 10.4	+0.4
	baz=278						
CHGB				eS	Sn	13 35 17.9	+0.9
	baz=278						
ENA	Nanau	0.44	12	eS	Sn	13 35 17.9	+1.0
	baz=13						
NNSB	Datong	0.49	332	eS	Sn	13 35 19.2	+0.9
	baz=331						
NNSH	Datong	0.49	332	eS	Sn	13 35 18.6	+0.4
	baz=331						
NNS	Nan Shan	0.50	331	eS	Sn	13 35 19.6	+1.0
	baz=331						
VWDT	VWDT	0.52	242	eS	Sn	13 35 19.4	+0.8
	baz=242						
HGSD	Ruisui	0.54	201	eS	Sn	13 35 20.1	+0.9
	baz=201						
EHY	Hungye	0.57	211	eS	Sn	13 35 18.3	-1.6
	baz=209						
NDT	Datong Townshi	0.61	349	eS	Sn	13 35 22.2	+1.2
	baz=349						
ENTT	Nioudou	0.64	354	eS	Sn	13 35 22.9	+1.1
	baz=354						
YULB	Yu-li	0.68	208	eS	Sn	13 35 20.9	-1.6
	baz=207						
WHYT	Xinyi Township	0.78	248	eS	Sn	13 35 25.9	+0.9
	baz=247						

MAN 16 13:45:07.0, 6°.28N×125°.66E, h144km, mb4.4, ML3.2, MS3.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.18	165	eP	Pn	13 45 26.7	+0.1
DDMP				eS	Sn	13 45 43.2	+1.9
GSPH	General Santos	0.73	255	iP	Pn	13 45 29.3	+0.1
MATI	Mati	0.89	42	eP	Pn	13 45 31.5	+1.2
MATI				eS	Sn	13 45 49.0	+1.0
SKMP	Bagumbayan, Su	1.14	282	eP	Pn	13 45 32.8	+0.4
SKMP				eS	Sn	13 45 52.9	+1.1

WEL 16 13:50:18.7, 44°S±10°×16°8E±1°7, h5km, ML5.2/7, MLv5.0/7, Error ellipse: s-maj=0.0km s-min=0.0km az=109.7

NEIC 16 13:50:23.7±1.4, 44°.11S±0°.06×168°.36E±0°.05, h15km±3km, mb4.7/17, Error ellipse: s-maj=8.6km s-min=4.4km az=158.0

IDC 16 13:50:28.4±2.6, 44°.10S×168°.37E, h51km±24km, mb4.2/7, mb1 4.3/7, mb1mx4.0/21, mbtmp4.4/7, MS3.6/7, Ms1 3.6/7, ms1mx3.3/28, Error ellipse: s-maj=23.8km s-min=14.5km az=23.0

ISC 16 13:50:22.2±0.4, 44°.19S±0°.04×168°.39E±0°.04, h6km, n194, σ1°.41/185, mb4.6/12, MS3.5/9, 1C-1D, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCZ	Jackson Bay	0.31	68	P	Pb	13 50 30.6	+0.4
JCZ				S	Sb	13 50 35.6	+0.1
MSZ	Milford Sound	0.59	214	P	Pg	13 50 33.7	+0.2
WKZ	Wanaka	0.78	145	P	Pb	13 50 38.6	+0.3
MLZ	Mavora Lakes	1.19	189	P	Pg	13 50 44.9	-0.2
MLZ				S	Sb	13 51 01.7	+0.7
FOZ	Fox Glacier	1.22	58		Pn	13 50 46.0	+0.2
FOZ	Fox Glacier	1.22	58	P	Pn	13 50 46.0	+0.2
FOZ				S	Sn	13 51 04.0	+1.4
EAZ	Earnscleugh	1.23	148	P	Pn	13 50 46.7	+0.7
LBZ	Lake Benmore	1.30	99	P	Pg	13 50 49.2	+2.0
DCZ	Deep Cove	1.55	214	P	Pn	13 50 50.3	0.0
WHZ	Wether Hill Ro	1.73	190		Pb	13 50 54.2	-0.3
WHZ	Wether Hill Ro	1.73	190	P	Pn	13 50 53.3	+0.4
ODZ	Otahua Downs	1.82	119		Pb	13 50 55.7	-0.2
ODZ	Otahua Downs	1.82	119	P	Pn	13 50 55.4	+1.3
TUZ	Tuapeka	1.97	154	P	Pb	13 50 58.2	-0.3
RPZ	Rata Peaks	1.98	77	P	Pb	13 50 57.9	-0.8
	94nm,0.3s,baz=275,slow=5.5,SNR=353						
RPZ				S	Sb	13 51 23.8	+0.2
	270nm,0.3s,baz=208,slow=24,SNR=4.9						
RPZ	Rata Peaks	1.98	77		Pb	13 50 57.8	-0.9
RPZ	Rata Peaks	1.98	77	P	Pb	13 50 57.9	-0.8
WVZ	Waitaha Valley	2.04	58	P	Pn	13 50 56.8	-0.2
HHSZ	Highcliff Hill	2.31	138	P	Pn	13 51 02.5	+1.7
PYZ	Puysegur Point	2.32	211		Pn	13 51 02.0	+1.1
PYZ	Puysegur Point	2.32	211	P	Pn	13 51 02.2	+1.2
SYZ	Scrubby Hill	2.41	168	P	Pn	13 51 03.6	+1.5
APZ	The Paps	2.66	186	P	Pn	13 51 07.0	+1.4
INZ	Inchbonnie	2.66	58	P	Pn	13 51 05.5	-0.1
OXZ	Oxford	2.78	73	P	Pn	13 51 07.3	0.0
MQZ	McQueen's Vall	3.12	83		Pn	13 51 12.1	+0.2
MQZ	McQueen's Vall	3.12	83	P	Pn	13 51 12.1	+0.2
LTZ	Lake Taylor	3.15	65		Pn	13 51 12.6	+0.1
LTZ	Lake Taylor	3.15	65	P	Pn	13 51 12.8	+0.3
AMCZ	Amberley	3.25	73	P	Pn	13 51 14.3	+0.6
AKCZ	Akaroa Harbour	3.27	86	P	Pn	13 51 14.6	+0.5
OKCZ	Okains Bay	3.40	84	P	Pn	13 51 16.7	+0.8
DSZ	Denniston Nort	3.50	47	P	Pn	13 51 16.7	-0.5
GVZ	Greta Valley S	3.59	72	P	Pn	13 51 18.6	+0.3
THZ	Tophouse	4.10	55		Pn	13 51 25.6	+0.1
THZ	Tophouse	4.10	55	P	Pn	13 51 25.9	+0.4
KHZ	Kahutara	4.15	67		Pn	13 51 26.6	+0.5
KHZ	Kahutara	4.15	67	P	Pn	13 51 26.0	-0.1
QRZ	Quartz Range	4.54	44		Pn	13 51 31.4	-0.1
QRZ	Quartz Range	4.54	44	P	Pn	13 51 31.2	-0.3
BSWZ	Blackbirch Sta	4.72	60		Pn	13 51 33.8	-0.2
BSWZ	Blackbirch Sta	4.72	60	P	Pn	13 51 34.7	+0.8
NNZ	Nelson	4.72	53	P	Pn	13 51 34.5	+0.6
CMWZ	Cape Campbell	4.92	62		Pn	13 51 37.9	+1.3
CMWZ	Cape Campbell	4.92	62	P	Pn	13 51 41.4	+4.7
TUWZ	Tuamarina	4.93	58		Pn	13 51 37.1	+0.3
TUWZ	Tuamarina	4.93	58	P	Pn	13 51 37.5	+0.7
TCW	Tory Channel	5.26	58	P	Pn	13 51 41.3	0.0
DUWZ	D'Urville Isla	5.31	52	P	Pn	13 51 43.0	+1.0
SNZO	South Karori	5.47	60		Pn	13 51 43.9	-0.2
BHW	Baring Head	5.52	62		Pn	13 51 44.7	-0.1
BHW	Baring Head	5.52	62	P	Pn	13 51 44.7	-0.1
WEL	Wellington	5.52	60	P	Pn	13 51 45.4	+0.5
PLWZ	Palliser	5.68	65		Pn	13 51 45.8	-1.3
PLWZ	Palliser	5.68	65	P	Pn	13 51 46.0	-1.2
MSWZ	Moikau Station	5.75	64		Pn	13 51 46.9	-1.3
MSWZ	Moikau Station	5.75	64	P	Pn	13 51 46.9	-1.3
CAW	Cannon Point	5.80	60	P	Pn	13 51 47.1	-1.7
KIW	Kapiti Island	5.85	58	P	Pn	13 51 48.8	-0.7
PAWZ	Paruwai Farm	5.89	64	P	Pn	13 51 49.3	-0.7
OGWZ	Otaki Gorge	6.04	58	P	Pn	13 51 50.7	-1.3
TRWZ	Traveller	6.05	65	P	Pn	13 51 52.0	-0.2
MTW	Mount Morrison	6.05	62	P	Pn	13 51 50.9	-1.3
HOWZ	Holdsworth Sta	6.20	60	P	Pn	13 51 53.8	-0.5
NMEZ	Namu Road	6.29	43	P	Pn	13 51 56.3	+0.8
NBEZ	Newall Road No	6.40	42	P	Pn	13 51 57.3	+0.3
KHEZ	Kahui Hut	6.45	43	P	Pn	13 51 58.2	+0.5
PREZ	Palmer Road	6.48	44	P	Pn	13 51 59.4	+1.3
OHWZ	Ohakea	6.50	55	P	Pn	13 52 00.6	+2.2
TIWZ	Tintock	6.50	61	P	Pn	13 51 57.3	-1.2
PKE	Pukeiti	6.51	42	P	Pn	13 51 59.2	+0.6
LREZ	Lake Rotokare	6.52	46	P	Pn	13 52 00.3	+1.7
WAZ	Wanganui	6.62	50	P	Pn	13 52 01.3	+1.3
DREZ	Durham Road	6.62	43	P	Pn	13 52 01.0	+1.0
POWZ	Post Office Ro	6.66	58	P	Pn	13 52 02.0	+1.4
PRWZ	Pori Road	6.68	60	P	Pn	13 51 59.5	-1.4
MHEZ	Mangahewa	6.77	43	P	Pn	13 52 03.3	+1.2
BFZ	Birch Farm	6.79	62	P	Pn	13 52 00.2	-2.1
VRZ	Vera Road	6.95	45	P	Pn	13 52 05.4	+0.8
DVHZ	Dannevirke	6.96	59	P	Pn	13 52 02.6	-2.0
TSZ	Takapari Road	6.98	56	P	Pn	13 52 02.8	-2.2
ANWZ	Angora Road	7.05	61	P	Pn	13 52 04.4	-1.5
ANWZ				P	Pn	13 52 04.6	-1.3
PKVZ	Pokaka	7.14	49	P	Pn	13 52 08.3	+1.1
MTVZ	Mangateitei	7.14	50	P	Pn	13 52 10.5	+3.2
PNHZ	Pukenui	7.21	56	P	Pn	13 52 06.7	-1.4
TRVZ	Turoa	7.24	50	P	Pn	13 52 10.4	+1.6
WPHZ	Waipukurau	7.26	58	P	Pn	13 52 13.4	+4.5
FWVZ	Far West T-bar	7.28	50	P	Pn	13 52 10.6	+1.3
WHVZ	Whangaehu Hut	7.28	50	P	Pn	13 52 11.7	+2.5
MOVZ	Moawhango	7.28	52	P	Pn	13 52 09.8	+0.6
TUVZ	Tukino	7.33	50	P	Pn	13 52 10.7	+0.9
TWVZ	Taurewa	7.35	48	P	Pn	13 52 11.6	+1.5
NGZ	Ngauruhoe	7.36	50	P	Pn	13 52 11.8	+1.5
WTVZ	West Tongariro	7.40	49	P	Pn	13 52 11.8	+0.9
BHHZ	Black Hill Sta	7.40	53	P	Pn	13 52 09.6	-1.2
KRVZ	Karewarewa	7.44	49	P	Pn	13 52 12.7	+1.3
HIZ	Hauiti	7.47	43		Pn	13 52 11.0	-0.7
HIZ	Hauiti	7.47	43	P	Pn	13 52 11.6	0.0
KRHZ	Kereru	7.48	55	P	Pn	13 52 11.6	-0.3
PXZ	Pawanui	7.54	59	P	Pn	13 52 11.8	-0.9
KATZ	Kakaramea	7.55	49	P	Pn	13 52 14.7	+1.7
KWHZ	Kaweka Forest	7.66	54	P	Pn	13 52 14.4	+0.1
RATZ	Rangitukua	7.67	49	P	Pn	13 52 15.7	+1.2
WATZ	Wairara	7.77	48	P	Pn	13 52 16.9	+1.1
MCHZ	McNeill Hill	7.80	55	P	Pn	13 52 17.3	+1.0
HATZ	Hinemaiaia	7.83	50	P	Pn	13 52 19.3	+2.6
BKZ	Black Stump Fm	7.87	53		Pn	13 52 16.4	-0.9
BKZ	Black Stump Fm	7.87	53	P	Pn	13 52 16.5	-0.7
WHTZ	Whakaora	7.92	48	P	Pn	13 52 21.1	+3.2
TLZ	Tolley Road	7.95	45	P	Pn	13 52 18.5	+0.2
KUTZ	Kaahu Road	7.98	47	P	Pn	13 52 21.0	+2.3
MRHZ	Matea Rd	8.05	51	P	Pn	13 52 20.0	+0.3
NMHZ	Naumai	8.10	54	P	Pn	13 52 18.6	-1.8
WPRZ	Whakapapatarin	8.14	49	P	Pn	13 52 23.4	+2.5
GRRZ	Galatos Road	8.23	48	P	Pn	13 52 23.8	+1.6
MTHZ	Maungataniwha	8.28	53	P	Pn	13 52 21.3	-1.6
WHHZ	Waihua	8.36	55	P	Pn	13 52 25.8	+1.9
RAHZ	Arahi	8.38	54	P	Pn	13 52 24.6	+0.4
TOZ	Tahuroa Road	8.40	42	P	Pn	13 52 24.4	+0.1
MUGZ	Murupara	8.50	51	P	Pn	13 52 25.8	0.0
OMRZ	Omania	8.55	47	P	Pn	13 52 29.3	+2.8
AWAZ	Awhitu Peninsu	8.55	36	P	Pn	13 52 27.4	+0.8
WTAZ	Waiatarua	8.64	35	P	Pn	13 52 28.4	+0.7
KNZ	Kokohu	8.66	57	P	Pn	13 52 26.2	-1.7
ETAZ	East Tamaki Re	8.77	37	P	Pn	13 52 29.9	+0.4
TGRZ	Tauranga	8.78	45	P	Pn	13 52 30.2	+0.6
URZ	Urewera	8.84	51	P	Pn	13 52 27.6	-2.9
	2.2nm,0.3s,baz=267,slow=4.1,SNR=20						
URZ				S	Sn	13 54 03.2	-7.2
	5.3nm,0.3s,baz=107,slow=16,SNR=7.2						
URZ	Urewera	8.84	51		Pn	13 52 28.4	-2.1
PRGZ	Paritu Road	8.85	57	P	Pn	13 52 29.1	-1.5
MBAZ	Motutapu North	8.91	36	P	Pn	13 52 31.8	+0.3
WIAZ	Waiheke Island	8.99	37	P	Pn	13 52 33.4	+0.8
MXZ	Matakaoa Point	10.00	52	Pn	Pn	13 52 45.7	-0.7
TAU	Tasmania Unive	15.33	267	Pn	Pn	13 53 56.5	-2.5
CAN	Canberra	17.31	294		Pn	13 54 24.4	-0.1
CAN				IAmb	IAmb	13 54 29.3	
	comp=Z,140nm,1.9s						
TOO	Toolangi	18.50	283	P	Pn	13 54 39.9	+0.7
TOO				IAmb	IAmb	13 54 47.0	
	comp=Z,77nm,2.0s						
DZM	Mont Dzumac	22.12	355	eP	P	13 55 22.8	+4.3
	comp=Z,71nm,1.2s						
DZM	Mont Dzumac	22.12	355	P	P	13 55 20.2	+1.8
	comp=Z,22nm,1.1s,baz=169,slow=16,SNR=6.5						
DZM				LR	LR	14 03 23.1	
	comp=Z,110nm,18.1s,baz=176,slow=35						
DZM	Mont Dzumac	22.12	355	P	P	13 55 19.5	+1.0
DZM				IAmb	IAmb	13 55 24.3	
	comp=Z,46nm,1.3s						
EIDS	Eidsvold	23.46	317	P	P	13 55 34.3	+1.8
EIDS				IAmb	IAmb	13 55 35.3	
	comp=Z,11nm,0.8s						
STKA	Stephens Creek	24.31	291	P	P	13 55 40.8	+0.3
	comp=Z,2.3nm,0.9s,baz=138,slow=7.2,SNR=4.8						
STKA				LR	LR	14 04 12.6	
	comp=Z,96nm,18.6s,baz=50,slow=34						
STKA	Stephens Creek	24.31	291	P	P	13 55 41.7	+1.2
VNDA	Vanda	33.55	183	LR	LR	14 08 34.3	
	comp=Z,249nm,19.8s,baz=3.0,slow=32						
AS31	Alice Springs	34.82	295	P	P	13 57 13.7	-0.3
ASAR	Alice Springs	34.82	295	P	P	13 57 14.1	+0.1
	comp=Z,1.9nm,0.8s,baz=128,slow=6.4,SNR=18						
ASAR				PcP	PcP	13 59 45.7	-1.5
	comp=Z,0.4nm,0.7s,baz=126,slow=4.6,SNR=3.7						
ASAR				LR	LR	14 10 53.0	
	comp=Z,60nm,18.7s,baz=142,slow=35						
WR0	Warramunga Arr	37.09	300	P	P	13 57 32.9	-0.5
WR0				IAmb	IAmb	13 58 10.3	
	comp=Z,18nm,1.6s						
WB2	Warramunga Arr	37.22	299	P	P	13 57 34.2	-0.3
WRA	Warramunga Arr	37.23	299	P	P	13 57 34.1	-0.4
	comp=Z,4.7nm,0.8s,baz=137,slow=7.8,SNR=39						
WRAB	Tennant Creek	37.23	299	P	P	13 57 33.8	-0.8
WB0	Warramunga Arr	37.32	300	P	P	13 57 35.2	-0.1
WB0				IAmb	IAmb	13 58 11.3	
	comp=Z,12nm,1.3s						
TBI	Tubuai	40.19	73	eLR	LR	14 09 10.5	
	comp=Z,93nm,25.8s						
NWAO	Narrogin (SRO)	40.95	268	LR	LR	14 12 39.1	
	comp=Z,46nm,18.7s,baz=192,slow=32						
H01W1	Cape Leeuwin H	42.17	264	T	T	14 42 55.9	
	baz=24,slow=74,SNR=15						
H01W2	Cape Leeuwin H	42.18	263	T	T	14 42 45.5	
	baz=119,slow=74,SNR=15						
H01W3	Cape Leeuwin H	42.19	264	T	T	14 42 16.8	
	SNR=15						
PPT2	Papeete2	44.09	67	eLR	LR	14 10 57.3	
	comp=Z,102nm,22.8s						
PPT	Papeete	44.10	67	LR	LR	14 14 27.5	
	comp=Z,83nm,19.4s,baz=208,slow=33						
QSPA	South Pole Qui	45.94	180	P	P	13 58 47.0	+1.4
	comp=Z,11nm,0.8s,baz=16,slow=2.2,SNR=51						
QSPA	South Pole Qui	45.94	180	P	P	13 58 46.9	+1.4
QSPA				IAmb	IAmb	13 58 48.3	
	comp=Z,13nm,0.8s						
SOEI	Soe	51.25	298	P	P	13 59 26.4	-0.6
MAW	Mawson	55.40	207	LR	LR	14 22 00.0	
	comp=Z,99nm,18.7s,baz=226,slow=34						
MAW	Mawson	55.40	207	P	P	13 59 57.9	+1.2
MAW				IAmb	IAmb	14 00 26.2	
	comp=Z,22nm,2.0s						
SYO	Syowa Base	60.95	199⇑	eP	P	14 00 33.4	-2.1
SYO	Syowa Base	60.95	199⇓	epP	pP	14 00 39.0	+1.3
SNAA	Sanae	64.28	183	P	P	14 00 57.4	-0.4
VNA2	Neumayer--Watz	65.16	182	P	P	14 01 03.5	0.0
	baz=152,slow=3.8						
PLCA	Paso Flores	80.24	139	P	P	14 02 34.7	+1.0
	comp=Z,4.9nm,1.0s,baz=243,slow=4.9,SNR=9.1						
PLCA	Paso Flores	80.24	139	P	P	14 02 34.8	+1.0
PBKT	Sadao Pong	86.10	297	P	P	14 03 04.4	+0.3
PBKT				IAmb	IAmb	14 03 05.6	
	comp=Z,9.1nm,0.8s						
CM31	Chiang Mai Arr	88.79	297	P	P	14 03 16.9	-0.1
CMAR	Chiang Mai Arr	88.79	297	P	P	14 03 17.1	+0.1
	comp=Z,6.3nm,0.8s,baz=152,slow=3.4,SNR=44						
H08S2	Diego Garcia H	88.94	260	T	T	15 41 10.9	
	baz=135,slow=76,SNR=430						
H08S1	Diego Garcia H	88.95	260	T	T	15 41 11.9	
	baz=135,slow=76,SNR=289						
H08S3	Diego Garcia H	88.96	260	T	T	15 41 12.4	
	baz=135,slow=76,SNR=653						
H08N1	Diego Garcia H	90.89	260	T	T	15 43 40.8	
	baz=123,slow=78,SNR=70						
H08N3	Diego Garcia H	90.91	260	T	T	15 43 44.9	
	baz=123,slow=78,SNR=67						
H08N2	Diego Garcia H	90.92	260	T	T	15 43 45.1	
	baz=123,slow=78,SNR=55						
CD2	Chengdu	95.17	309	P	P	14 03 47.3	+0.9
HHC	Hu-ho-hao-te	98.86	320	eP	Pdif	14 04 04.9	+2.0
LZH	Lanzhou	99.03	312	eP	Pdif	14 04 03.6	-0.2
LZH				pP	sP	14 04 10.9	+4.0
LZH				sP	pP	14 04 14.3	+8.2
LZH				PP	PP	14 08 08.3	+1.9
ILAR	Eielson Array	114.11	19	PKP	PKPdf	14 09 00.2	-0.9
	comp=Z,0.6nm,1.0s,baz=242,slow=1.9,SNR=3.6						
MKAR	Makanchi Array	118.11	309	PKP	PKPdf	14 09 07.6	-1.9
	comp=Z,0.8nm,1.0s,baz=90,slow=3.6,SNR=5.1						
INK	Inuvik	120.23	21	PKP	PKPdf	14 09 11.5	-1.2
	comp=Z,0.9nm,0.8s,baz=187,slow=4.5,SNR=3.1						
YKA	Yellowknife Ar	122.69	33	PKP	PKPdf	14 09 17.3	-0.4
	comp=Z,0.3nm,0.6s,baz=258,slow=1.7,SNR=7.6						
ULM	Lac du Bonnet	125.36	52	PKP	PKPdf	14 09 21.9	-1.4
	comp=Z,1.5nm,0.6s,baz=241,slow=3.1,SNR=3.5						
BRTR	Keskin Array B	146.38	278	PKPbc	PKPdf	14 10 02.9	+0.4
	comp=Z,4.1nm,0.8s,baz=142,slow=4.9,SNR=19						
BR131	Keskin Array S	146.38	278		PKPdf	14 10 02.7	+0.1
TORD	Torodi Ar. Bea	147.03	204	PKPbc	PKPdf	14 10 04.8	+0.7
	comp=Z,1.3nm,0.5s,baz=138,slow=1.9,SNR=12						
ARCES	ARCESS Array B	148.43	336	PKPbc	PKPbc	14 10 07.7	-0.6
	comp=Z,8.7nm,0.7s,baz=69,slow=4.3,SNR=17						
AKASG	Malin Array Be	151.91	298	PKPbc	PKPbc	14 10 15.7	-1.6
	comp=Z,1.7nm,0.7s,baz=70,slow=2.4,SNR=8.5						
AKASG				PKPab	PKPab	14 10 25.5	-1.1
	comp=Z,2.6nm,0.7s,baz=73,slow=3.9,SNR=9.6						
FINES	FINESS Array B	151.97	321	PKPbc	PKPbc	14 10 15.8	-1.3
	comp=Z,5.5nm,0.6s,baz=78,slow=4.8,SNR=16						
LIT	Litokhoron	154.50	273		PKPab	14 10 37.1	-0.8
KOLS	Kolonicke sedl	156.35	294	ePKP	PKPdf	14 10 19.0	+1.8
KOLS				e		14 10 46.7	
VYHS	Vyhne	158.62	292	ePKP	PKPab	14 10 54.4	-1.0
GERES	GERESS Array B	162.00	294	PKPab	PKPab	14 11 09.1	-1.1
	comp=Z,0.4nm,0.6s,baz=50,slow=6.5,SNR=3.7						

WEL 16 13:57:28.5, 44°S±4°×16°8E±°, h5km, ML3.5/6, MLv3.6/31, Error ellipse: s-maj=0.0km s-min=0.0km az=10.1, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCZ	Jackson Bay	0.36	46	P	Pg	13 57 34.7	-0.8
JCZ				S	Sg	13 57 39.4	-0.8
MSZ	Milford Sound	0.50	225	P	Pg	13 57 37.7	-0.4
WKZ	Wanaka	0.66	140	P	Pb	13 57 43.0	+0.5
WKZ				S	Sb	13 57 52.6	+0.6
MLZ	Mavora Lakes	1.07	192	P	Pg	13 57 49.1	+0.1
MLZ				S	Sn	13 58 05.2	-0.2
EAZ	Earnscleugh	1.10	146	P	Pn	13 57 50.9	+0.3
EAZ				S	Sn	13 58 06.7	+0.4
LBZ	Lake Benmore	1.26	94	P	Pn	13 57 53.1	+0.2
FOZ	Fox Glacier	1.28	52	P	Pg	13 57 50.0	-3.0
FOZ				S	Sg	13 58 06.7	-2.8
DCZ	Deep Cove	1.46	218	P	Pn	13 57 54.8	-0.7
WHZ	Wether Hill Ro	1.61	192	P	Pn	13 57 57.9	+0.3
ODZ	Otahua Downs	1.74	115	P	Pn	13 57 59.9	+0.5
TUZ	Tuapeka	1.84	153	P	Pb	13 58 02.5	-0.1
RPZ	Rata Peaks	1.99	73	P	Pn	13 58 02.0	-0.8
WVZ	Waitaha Valley	2.09	54	P	Pn	13 58 00.8	-3.4
HHSZ	Highcliff Hill	2.19	136	P	Pn	13 58 07.1	+1.5
PYZ	Puysegur Point	2.22	213	P	Pn	13 58 06.5	+0.6
SYZ	Scrubby Hill	2.27	168	P	Pn	13 58 08.2	+1.6
APZ	The Paps	2.53	187	P	Pn	13 58 11.1	+0.8
INZ	Inchbonnie	2.71	55	P	Pn	13 58 09.5	-3.3
OXZ	Oxford	2.80	70	P	Pn	13 58 11.2	-2.7
MQZ	McQueen's Vall	3.11	80	P	Pn	13 58 16.1	-2.1
LTZ	Lake Taylor	3.19	62	P	Pn	13 58 16.8	-2.6
AKCZ	Akaroa Harbour	3.26	84	P	Pn	13 58 18.6	-1.6
DSZ	Denniston Nort	3.57	45	P	Pn	13 58 20.7	-3.9
GVZ	Greta Valley S	3.61	70	P	Pn	13 58 22.7	-2.4
THZ	Tophouse	4.16	54	P	Pn	13 58 30.2	-2.5
KHZ	Kahutara	4.18	65	P	Pn	13 58 31.1	-1.8
QRZ	Quartz Range	4.62	42	P	Pn	13 58 35.5	-3.5
BSWZ	Blackbirch Sta	4.77	59	P	Pn	13 58 40.6	-0.4
NNZ	Nelson	4.79	51	P	Pn	13 58 38.7	-2.5
TUWZ	Tuamarina	4.98	56	P	Pn	13 58 42.6	-1.3
TCW	Tory Channel	5.31	56	P	Pn	13 58 47.2	-1.3
DUWZ	D'Urville Isla	5.37	51	P	Pn	13 58 47.1	-2.1
CAW	Cannon Point	5.85	59	P	Pn	13 58 51.7	-4.1
OGWZ	Otaki Gorge	6.09	57	P	Pn	13 58 56.0	-3.1
HOWZ	Holdsworth Sta	6.25	59	P	Pn	13 59 04.7	+3.4
MRZ	Mangatainoka R	6.43	58	P	Pn	13 58 59.9	-3.9
NBEZ	Newall Road No	6.48	41	P	Pn	13 59 01.1	-3.4
KHEZ	Kahui Hut	6.53	42	P	Pn	13 59 02.3	-3.0
PKE	Pukeiti	6.60	41	P	Pn	13 59 02.9	-3.4
WAZ	Wanganui	6.68	49	P	Pn	13 59 06.6	-0.7
VRZ	Vera Road	7.03	45	P	Pn	13 59 09.8	-2.2
TSZ	Takapari Road	7.03	55	P	Pn	13 59 09.4	-2.7
HIZ	Hauiti	7.05	42	P	Pn	13 59 16.9	-2.2
BKZ	Black Stump Fm	7.93	52	P	Pn	13 59 25.4	+1.0

DJA 16 14:03:42.3±1.4, 8°S±3°×12°5E±°, h12km±11km, M4.2/7, mb4.3/3, MLv4.1/7

IDC 16 14:03:43.9±1.7, 8°.22S×124°.56E, h0km, mb3.8/1,

mb1 3.8/5, mb1mx3.5/37, mbtmp3.7/5, ML3.5/4, Error ellipse: s-maj=83.4km s-min=23.8km az=60.0
ISC 16 14:03:44.5±1.0, 7°.80S±0°.06×125°.17E±0°.08, h27km, n10, σ2°22/16, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	2.14	205	P	Pn	14 04 18.1	-0.4
SOEI				S	Sn	14 04 45.6	+1.3
MMRI	Maumere	3.02	254	P	Pn	14 04 29.7	-0.9
MMRI				S	Sn	14 05 04.1	-1.8
BBSI	Bau Bau	3.46	311	P	Pn	14 04 34.4	-2.2
BBSI				S	Sn	14 05 15.4	-1.3
KDI	Kendari	4.58	326	P	Pn	14 04 50.2	-1.9
WSI	Waingapu	5.16	249	P	Pn	14 04 58.8	-1.2
	0.7nm117nm,0.5s						
WSI				S	Sn	14 05 59.7	+0.9
	0.7nm117nm,0.5s						
KAPI	Kappang	6.06	297	Pn	Pn	14 05 10.6	-1.7
	0.8nm,0.3s,baz=117,slow=6.9,SNR=3.6						
FITZ	Fitzroy Crossi	10.25	177	Pn	Pn	14 06 08.1	-1.7
	0.3nm,0.3s,baz=0.0,slow=3.0,SNR=6.4						
FITZ				Sn	Sn	14 07 56.5	-7.4
	0.8nm,0.3s,baz=109,slow=17,SNR=10						
WRA	Warramunga Arr	14.99	145	Pn	Pn	14 07 15.8	+1.1
	0.4nm,0.3s,baz=315,slow=14,SNR=13						
WRA				Sn	Sn	14 09 56.5	-3.4
	0.2nm,0.3s,baz=325,slow=30,SNR=6.2						
ASAR	Alice Springs	17.86	153	P	P	14 07 52.9	+1.1
	0.1nm,0.3s,baz=321,slow=10,SNR=15						
ASAR				S	Sn	14 11 06.7	-3.0
	0.1nm,0.3s,baz=316,slow=21,SNR=8.6						
MKAR	Makanchi Array	66.37	329	P	P	14 14 35.0	+4.0
	0.6nm,0.6s,baz=129,slow=7.6,SNR=9.9						

SNET 16 14:05:15.6±1.6, 13°.29N×90°.90W, h15km±13km, ML3.3
GCG 16 14:05:17.9±0.7, 13°.30N×91°.04W, h12km±139km, MD3.9
ISC 16 14:05:17.4±2.9, 13°.2N±0°.2×90°.97W±0°.09, h29km, n13, σ0°86/17, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	1.09	28	⇑iP	Pn	14 05 36.9	-0.1
PCG	Pacaya	1.24	16	eP	Pb	14 05 39.2	-1.1
FUG	Fuego 3	1.25	5	eP	Pb	14 05 41.4	+0.9
CEVE	Cerro Verde	1.45	64	eP	Pn	14 05 41.0	-0.9
CEVE				eS	Sb	14 06 01.8	-0.2
CEVE				IAML		14 06 10.2	
	comp=Z,1μm,0.3s						
SBLS	San Blas	1.45	64	eP	Pn	14 05 41.1	-0.9
RTR	El Retiro	1.46	61	eP	Pn	14 05 41.0	-1.0
SNJE	San Jose	1.48	63	eP	Pn	14 05 41.6	-0.7
NBG	Las Nubes	1.51	23	eP	Pb	14 05 45.0	0.0
NBG				eS	Sb	14 06 04.5	+0.8
STG3	Santiaguito 3,	1.62	339	eP	Pn	14 05 44.7	+0.5
STG3				eS	Sb	14 06 05.4	-1.4
UEES	Universidad Ev	1.76	73	eP	Pn	14 05 47.1	+1.0
UEES				eS	Sb	14 06 11.3	+0.5
UEES				IAML		14 06 12.3	
	comp=Z,387nm,0.3s						
LFU	La Fuente	1.88	73	eP	Pn	14 05 48.1	+0.4
MTO3	Montecristo	1.96	52	eP	Pn	14 05 49.1	+0.1
MTO3				IAML		14 06 16.9	
	comp=Z,78nm,0.5s						
MRL	Marmol	2.25	33	eP	Pn	14 05 53.8	+0.9

NEIC 16 14:05:46.0±1.1, 17°.0S±0°.2×179°.3W±0°.2, h532km±11km, mb4.5/11, Error ellipse: s-maj=30.9km s-min=18.6km az=151.0
IDC 16 14:05:48.3±9.1, 16°.89S×179°.41W, h554km±100km, mb3.0/7, mb1 3.3/7, mb1mx3.0/35, mbtmp3.9/7, Error ellipse: s-maj=93.1km s-min=32.6km az=139.0
ISC 16 14:05:46.6±0.7, 17°.0S±0°.2×179°.1W±0°.1, h550km, n20, σ1°29/21, mb4.2/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.79	255	P	P	14 07 01.6	+1.1
AFI	Afiamalu	7.72	67	P	P	14 07 39.1	-2.7
NIUE	Niue	8.98	105	P	P	14 07 52.4	-1.7
MXZ	Matakaoa Point	20.59	186	P	P	14 09 50.4	+2.6
ARMA	Armidale	29.82	238	P	P	14 11 09.5	-0.1
CTA	Charters Tower	32.93	259	P	P	14 11 35.6	-0.7
	5.6nm,1.0s,baz=94,slow=2.2,SNR=3.2						
STKA	Stephens Creek	38.48	240	P	P	14 12 21.7	-0.3
	1.0nm,0.4s,baz=82,slow=10,SNR=6.6						
BBOO	Buckleboo	43.25	240	P	P	14 12 59.2	-0.7
BBOO				IAmb	IAmb	14 13 45.2	
	comp=Z,59nm,1.9s						
WR0	Warramunga Arr	43.94	259	P	P	14 13 04.9	-0.6
WR0				IAmb	IAmb	14 13 37.0	
	comp=Z,24nm,1.8s						
WB0	Warramunga Arr	44.09	259	P	P	14 13 05.7	-1.0
WB0				IAmb	IAmb	14 13 21.2	
	comp=Z,12nm,1.4s						
WB2	Warramunga Arr	44.12	259	P	P	14 13 06.3	-0.6
WB2				IAmb	IAmb	14 13 20.1	
	comp=Z,26nm,1.7s						
WRAB	Tennant Creek	44.12	259	P	P	14 13 05.9	-1.0
WRAB				IAmb	IAmb	14 13 53.5	
	comp=Z,7.7nm,1.1s						
WRA	Warramunga Arr	44.13	259	P	P	14 13 06.1	-0.9
	comp=Z,0.4nm,0.3s,baz=92,slow=8.0,SNR=18						
AS31	Alice Springs	44.38	253	P	P	14 13 08.6	-0.3
ASAR	Alice Springs	44.39	253	P	P	14 13 08.6	-0.4
	comp=Z,4.3nm,0.5s,baz=89,slow=8.0,SNR=65						
ASAR				PcP	PcP	14 14 41.0	+0.2
	comp=Z,0.2nm,0.8s,baz=91,slow=4.0,SNR=2.9						
FORT	Forrest	49.78	244	P	P	14 13 49.1	-0.2
FORT				IAmb	IAmb	14 14 12.7	
	comp=Z,25nm,1.1s						
NWAO	Narrogin (SRO)	59.03	242	P	P	14 14 52.9	-1.3
ILAR	Eielson Array	85.18	13	P	P	14 17 25.6	+1.0
	comp=Z,0.2nm,0.6s,baz=224,slow=5.6,SNR=6.6						
PDAR	Pinedale Array	87.18	44	P	P	14 17 36.6	+1.7
	comp=Z,0.3nm,0.6s,baz=213,slow=4.3,SNR=3.7						
YKA	Yellowknife Ar	93.81	25	P	P	14 18 06.0	+1.2
	comp=Z,0.2nm,0.6s,baz=237,slow=4.5,SNR=3.3						

BJI 16 14:22:03.9±0.0, 6°.94S×147°.18E, h92km, mB5.0/37, mb4.6/50
MOS 16 14:22:04.4±1.0, 6°.88S×146°.83E, h88km, mb4.7/15, Error ellipse: s-maj=9.4km s-min=6.2km az=98.4
NEIC 16 14:22:05.8±1.6, 6°.95S±0°.05×146°.84E±0°.07, h86km±5km, mb5.1/99, Error ellipse: s-maj=10.4km s-min=8.0km az=92.0
IDC 16 14:22:05.8±0.3, 6°.95S×146°.84E, h85km±3km, mb4.3/27, mb1 4.4/31, mb1mx4.4/43, mbtmp4.7/31, MS3.5/18, Ms1 3.5/18, ms1mx3.4/34, Error ellipse: s-maj=11.7km s-min=5.7km az=87.0
GCMT 16 14:22:09.8±0.3, 7°.04S±0°.02×146°.92E±0°.02, h86km±3km, MW5.0/61, Moment Tensor Solution. s30,c33; s61,c86; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.53±.15; Mθθ2.34±.13; Mφφ-2.87±.15; Mrθ-1.44±.08; Mrφ2.28±.12; Mθφ0.34±.11; Best double couple: Mo3.78900×10^16 NP1:φs203.00000°, δ67.00000°, λ172.00000°. NP2: φs296.00000°, δ83.00000°, λ24.00000°. Principal axes: T 3.6900, Plg22.0000°, Azm162.0000°; N 0.1990, Plg65.0000°, Azm312.0000°; P -3.8870, Plg11.0000°, Azm67.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
DJA 16 14:22:10.8±0.6, 7°S±4°×14°7E±°, h96km±5km, M5.1/31, mb5.0/31, mB5.4/13, MLv5.7/3, Mw(mB)4.8/13, Mwp5.8/1
ISC 16 14:22:06.1±0.4, 6°.97S±0°.03×146°.84E±0°.04, h88km±3km, h88km:pP-P, n293, σ1°26/302, mb5.0/103, 6C-3D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	2.44	172	P	Pn	14 22 44.6	+0.6
	355nm,0.3s,baz=1.7,slow=6.4,SNR=1142						
PMG				S	Sn	14 23 12.6	-0.5
	339nm,0.3s,baz=342,slow=11,SNR=15						
PMG	Port Moresby	2.44	172	P	Pn	14 22 44.5	+0.4
PMG	Port Moresby	2.44	172	cePp	Pn	14 22 44.4	+0.4
PMG				pmax	pmax		
	comp=Z,11μm,0.8s						
MANU	Manus Island	4.93	6		Pn	14 23 19.0	+1.3
KRVT	Keravat (AS076	5.80	63	P	Pn	14 23 29.8	+0.1
	comp=Z,95nm,0.3s,baz=330,slow=0.9,SNR=30						
RABL	Rabaul	5.98	63	Pn	Pn	14 23 31.8	-0.3
COEN	Coen	7.82	207	P	Pn	14 23 57.4	+0.2
	baz=7.9,SNR=184						
COEN	Coen	7.82	207		Pn	14 23 57.5	+0.4
GENI	Genyem	7.94	303	P	Pn	14 24 03.7	+4.9
	comp=Z,2.0nmcomp=Z,193nm,0.9s						
SMPI	Sarmi	9.49	301	P	Pn	14 24 37.1	+17
MTSU	Mount Surprise	11.36	192	P	Pn	14 24 46.8	+1.4
	baz=12,SNR=31						
CTA	Charters Tower	13.05	182	P	Pn	14 25 10.0	+1.9
	comp=Z,5.2nm,0.3s,baz=355,slow=14,SNR=63						
CTA				S	Sn	14 27 30.9	-0.6
	comp=Z,1.7nm,0.3s,baz=90,slow=19,SNR=3.6						
CTA	Charters Tower	13.05	182	P	Pn	14 25 10.0	+1.9
CTA						14 27 31.0	
CTAO	Charters Tower	13.05	182	P	P	14 25 12.1	-3.0
CTAO				pmax	pmax		
	comp=Z,59nm,1.4s						
HNR	Honiara	13.21	102	P	Pn	14 25 12.0	+1.8
HNR	Honiara	13.21	102		Pn	14 25 10.1	-0.1
HNR	Honiara	13.21	102	P	Pn	14 25 10.1	-0.1
RKPI	Ransiki, Papua	13.74	293	P	P	14 25 21.6	-1.2
	comp=Z,73nm,1.0s						
FAKI	Fak Fak	15.08	285	P	P	14 25 48.1	+10
FAKI	Fak Fak	15.08	285		Pn	14 25 34.7	+0.2
QIS	Mount Isa	15.21	207	P	Pn	14 25 37.2	+1.1
	baz=15,SNR=79						
KDU	Kakadu	15.24	247	P	Pn	14 25 36.6	+0.1
	baz=15,SNR=31						
SAUI	Saumlaki	15.44	265	P	P	14 25 41.5	-0.2
	comp=Z,10μmcomp=Z,954nm,1.0s						
SAUI	Saumlaki	15.44	265	Pn	Pn	14 25 39.4	+0.3
SIJI	Sorong	16.67	291	P	P	14 25 56.0	+0.7
	comp=Z,1.0nm,0.3s,baz=303,slow=22,SNR=7.1						
SIJI				LR	LR	14 33 19.2	
	comp=Z,277nm,19.9s,baz=123,slow=40						
SWI	Sorong	16.68	291	P	P	14 25 57.0	+1.6
	comp=Z,128nm,0.9s						
SWI	Sorong	16.68	291	P	P	14 25 55.0	-0.4
SWI				pmax	pmax		
	comp=Z,129nm,0.9s						
WB0	Warramunga Arr	17.54	222	P	P	14 26 04.7	-0.2
WR0	Warramunga Arr	17.58	222	P	Pn	14 26 05.6	+0.1
WR0				IAmb	IAmb	14 26 11.3	
	comp=Z,133nm,0.9s						
WRAB	Tennant Creek	17.68	222	P	P	14 26 06.5	0.0
WRAB				IAmb	IAmb	14 26 13.0	
	comp=Z,74nm,0.6s						
WRAB	Tennant Creek	17.68	222	ceP	P	14 26 06.2	-0.3
WRAB				pmax	pmax		
	comp=Z,33nm,1.0s						
WB2	Warramunga Arr	17.69	222	P	Pn	14 26 06.9	0.0
	baz=18						
WB2	Warramunga Arr	17.69	222	P	P	14 26 06.6	0.0
WB2				IAmb	IAmb	14 26 13.1	
	comp=Z,70nm,0.6s						
WRA	Warramunga Arr	17.70	222	P	P	14 26 06.7	0.0
	comp=Z,1.6nm,0.3s,baz=47,slow=11,SNR=30						
WRA				S	Sn	14 29 17.0	-7.1
	comp=Z,1.9nm,0.3s,baz=35,slow=22,SNR=6.0						
WRA				LR	LR	14 33 59.3	
	comp=Z,427nm,19.2s,baz=60,slow=40						
WRA	Warramunga Arr	17.70	222	i P	P	14 26 06.6	-0.1
WRA				pmax	pmax		
	comp=Z,25nm,0.9s						
PATS	Pohnpei	17.87	40	P	Pn	14 26 09.3	+0.2
	baz=18,SNR=4.8						
PATS	Pohnpei	17.87	40	P	Pn	14 26 09.2	+0.2
EIDS	Eidsvold	18.74	168	P	Pn	14 26 19.7	+0.3
	baz=19,SNR=9.1						
EIDS	Eidsvold	18.74	168	P	P	14 26 18.4	+0.4
EIDS				IAmb	IAmb	14 26 22.4	
	comp=Z,94nm,0.9s						
RMQ	Roma	19.49	175	P	Pn	14 26 29.1	+0.8
	baz=20,SNR=150						
QLP	Quilpie	19.66	187	P	Pn	14 26 30.2	0.0
	baz=20,SNR=70						
KNRA	Kununurra	19.70	242	P	Pn	14 26 30.6	-0.3
	baz=20,SNR=7.9						
KNRA	Kununurra	19.70	242	P	P	14 26 28.0	-0.6
KNRA				IAmb	IAmb	14 27 03.3	
	comp=Z,106nm,0.8s						
LBMI	Labuha	20.28	287	P	Pn	14 26 38.1	+0.4
	comp=Z,73nm,1.0s						
GUMO	Guam	20.52	355	LR	LR	14 33 18.1	
	comp=Z,52nm,18.8s,baz=152,slow=33						
AS31	Alice Springs	20.73	215	P	P	14 26 39.7	0.0
ASAR	Alice Springs	20.73	215	P	P	14 26 39.9	+0.2
	comp=Z,9.2nm,0.5s,baz=50,slow=9.4,SNR=92						
ASAR				S	S	14 30 27.0	+0.5
	comp=Z,24nm,0.9s,baz=45,slow=22,SNR=7.9						
ASAR				LR	LR	14 35 46.1	
	comp=Z,198nm,20.2s,baz=46,slow=40						
SANI	Sanana	21.34	282	P	P	14 26 48.9	+2.6
	comp=Z,86nm,0.9s						
SANVU	Saraoutou	21.66	115	P	P	14 26 49.9	+0.2
SANVU				IAmb	IAmb	14 27 17.3	
	comp=Z,83nm,1.1s						
SOEI	Soe	22.50	261	P	P	14 27 01.8	+3.1
	comp=Z,2μmcomp=Z,134nm,1.0s						
SOEI	Soe	22.50	261	P	P	14 26 59.5	+0.8
FITZ	Fitzroy Crossi	23.43	240	P	P	14 27 08.1	+0.5
	baz=24,SNR=9.3						
FITZ	Fitzroy Crossi	23.43	240	P	P	14 27 07.7	0.0
	comp=Z,11nm,0.8s,baz=57,slow=8.3,SNR=16						
FITZ				LR	LR	14 37 27.4	
	comp=Z,145nm,18.8s,baz=60,slow=39						
FITZ	Fitzroy Crossi	23.43	240	P	P	14 27 07.1	-0.6
FITZ				IAmb	IAmb	14 27 34.5	
	comp=Z,48nm,0.9s						
ARMA	Armidale	23.75	170	P	P	14 27 11.8	+1.2
	baz=24,SNR=15						
ARMA	Armidale	23.75	170	P	P	14 27 10.0	-0.7
ARMA				IAmb	IAmb	14 27 14.4	
	comp=Z,46nm,0.8s						
KMSI	Cibinong	24.00	287	P	P	14 27 15.8	+2.9
	comp=Z,2μmcomp=Z,152nm,0.8s						
NOUC	Port Laguerre	24.06	131	P	P	14 27 10.8	-2.5
DZM	Mont Dzumac	24.15	130	P	P	14 27 14.4	+0.2
	comp=Z,51nm,1.0s,baz=284,slow=8.9,SNR=17						
DZM				LR	LR	14 35 57.9	
	comp=Z,237nm,18.6s,baz=328,slow=34						
DZM	Mont Dzumac	24.15	130	P	P	14 27 14.2	-0.1
DZM				IAmb	IAmb	14 27 17.1	
	comp=Z,56nm,1.0s						
BBSI	Bau Bau	24.17	272	P	P	14 27 17.5	+3.1
	comp=Z,29nm,1.1s						
MMRI	Maumere	24.43	264	P	P	14 27 19.5	+2.8
	comp=Z,2μmcomp=Z,83nm,1.1s						
MMRI	Maumere	24.43	264	P	P	14 27 16.9	+0.2
MMRI				IAmb	IAmb	14 27 38.5	
	comp=Z,124nm,1.1s						
CMSA	Cobar Meteorol	24.46	182	P	P	14 27 18.2	+1.4
	baz=25,SNR=63						
LUWI	Luwuk	24.71	283	P	P	14 27 22.2	+2.9
	comp=Z,4μmcomp=Z,143nm,0.5s						
LUWI	Luwuk	24.71	283	P	P	14 27 20.3	+1.0
WRKA	Warakurna	25.24	223	P	P	14 27 24.4	+0.3
	baz=25,SNR=15						
STKA	Stephens Creek	25.26	190	P	P	14 27 24.7	+0.7
	baz=25,SNR=36						
STKA	Stephens Creek	25.26	190	P	P	14 27 24.6	+0.5
	comp=Z,52nm,0.8s,baz=358,slow=8.8,SNR=123						
STKA				LR	LR	14 38 18.5	
	comp=Z,187nm,19.5s,baz=17,slow=38						
STKA	Stephens Creek	25.26	190	P	P	14 27 24.8	+0.7
STKA	Stephens Creek	25.26	190	P	P	14 27 24.8	+0.7
STKA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
APSI	Ampana	25.83	282	P	P	14 27 32.3	+2.8
	comp=Z,731nmcomp=Z,32nm,0.9s						
MRSI	Marisa	25.92	286	P	P	14 27 33.9	+3.6
	comp=Z,19nm,0.6s						
KAPI	Kappang	27.00	273	pP	pP	14 28 02.4	+2.1
	comp=Z,7.7nm,0.6s,baz=105,slow=11,SNR=5.2						
KAPI				LR	LR	14 39 06.4	
	comp=Z,85nm,21.9s,baz=102,slow=38						
SPSI	Sidrap Palu	27.11	275	P	P	14 27 43.7	+2.7
	comp=Z,17nm,1.0s						
TTSI	Tana Toraja	27.19	277	P	P	14 27 44.5	+2.8
	comp=Z,528nmcomp=Z,8.6nm,1.0s						
YNG	Young	27.23	177	P	P	14 27 43.3	+1.4
	baz=27,SNR=25						
HTT	Hallett	27.33	195	P	P	14 27 43.7	+0.8
	baz=28,SNR=39						
BBOO	Buckleboo	27.59	200	P	P	14 27 45.8	+0.7
	baz=28,SNR=39						
BBOO	Buckleboo	27.59	200	P	P	14 27 45.2	+0.1
BBOO				IAmb	IAmb	14 27 46.6	
	comp=Z,62nm,1.0s						
CAN	Canberra	28.28	176	P	P	14 27 52.3	+1.0
CAN	Canberra	28.28	176	P	P	14 27 52.3	+1.0
CAN				pmax	pmax		
	comp=Z,25nm,0.9s						
CNB	Canberra Magne	28.30	176	P	P	14 27 53.0	+1.6
	baz=28,SNR=7.0						
FORT	Forrest	29.50	214	P	P	14 28 02.8	+0.6
MILA	Mila	30.02	176	P	P	14 28 08.0	+1.4
	baz=30,SNR=5.1						
TOO	Toolangi	30.48	182	P	P	14 28 12.7	+2.0
	baz=31,SNR=18						
TOO	Toolangi	30.48	182	P	P	14 28 10.9	+0.2
TOO				IAmb	IAmb	14 28 13.5	
	comp=Z,50nm,0.9s						
TOO	Toolangi	30.48	182	P	P	14 28 10.9	+0.2
TOO				pmax	pmax		
	comp=Z,50nm,0.9s						
H11S3	WAKE ISLAND Hy	32.00	37	T	T	15 01 26.7	
	baz=215,slow=75,SNR=7.0						
H11S2	WAKE ISLAND Hy	32.01	37	T	T	15 01 28.9	
	baz=215						
H11S1	WAKE ISLAND Hy	32.02	37	T	T	15 01 35.9	
	baz=215,slow=75,SNR=4.6						
MSVF	Nonsavu	32.26	112	P	P	14 28 25.1	-1.5
MSVF				IAmb	IAmb	14 29 28.3	
	comp=Z,58nm,1.5s						
MSVF	Nonsavu	32.26	112	P	P	14 28 25.1	-1.5
MSVF				pmax	pmax		
	comp=Z,58nm,1.5s						
JAGI	Jajag, Banyuwa	32.42	265	P	P	14 28 25.9	-2.1
JAGI				IAmb	IAmb	14 29 41.1	
	comp=Z,49nm,1.2s						
H11N1	WAKE ISLAND Hy	33.06	36	T	T	15 02 56.8	
	baz=219,slow=76,SNR=7.4						
H11N3	WAKE ISLAND Hy	33.08	36	T	T	15 02 57.4	
	baz=219,slow=76,SNR=6.8						
H11N2	WAKE ISLAND Hy	33.08	36	T	T	15 02 56.7	
	baz=219,slow=76,SNR=12						
KKM	Kota Kinabalu	33.18	292	P	P	14 28 33.6	-1.2
KKM				IAmb	IAmb	14 29 36.6	
	comp=Z,70nm,1.5s						
MEEK	Meekatharra	33.21	231	P	P	14 28 35.5	+0.7
	baz=33,SNR=15						
GIRL	Giralia	35.04	240	P	P	14 28 51.4	+0.7
MOO	Moorlands	35.32	180	P	P	14 28 55.0	+2.2
	baz=36,SNR=3.9						
TAU	Tasmania Unive	35.79	179	P	P	14 28 57.0	+0.2
TAU	Tasmania Unive	35.79	179	P	P	14 28 57.0	+0.2
TAU				pmax	pmax		
	comp=Z,87nm,1.5s						
MORW	Morawa	36.41	229	P	P	14 29 02.7	+0.4
	baz=36,SNR=4.7						
MORW	Morawa	36.41	229	P	P	14 29 02.4	+0.1
KLBR	Kellerberrin	36.56	224	P	P	14 29 03.9	+0.3
	baz=37,SNR=18						
NWAO	Narrogin (SRO)	37.71	223	P	P	14 29 14.2	+0.9
	baz=38,SNR=6.0						
NWAO	Narrogin (SRO)	37.71	223	P	P	14 29 13.6	+0.3
NWAO	Narrogin (SRO)	37.71	223	P	P	14 29 13.6	+0.3
NWAO				pmax	pmax		
	comp=Z,57nm,1.3s						
MUN	Mundaring	37.86	225	P	P	14 29 15.6	+1.1
	baz=38,SNR=6.1						
RKGY	Rocky Gully	38.90	221	P	P	14 29 24.8	+1.6
	baz=39,SNR=4.7						
YOJ	Yonaguni jima	38.93	324	P	P	14 29 23.0	-0.6
YOJ	Yonaguni jima	38.93	324	P	P	14 29 23.0	-0.6
YULB	Yu-li	39.16	321	P	P	14 29 24.8	-0.8
YULB				IAmb	IAmb	14 30 26.5	
	comp=Z,87nm,1.9s						
TPUB	Ta-pu	39.52	320	P	P	14 29 28.3	-0.2
SSLB	Suanglung	39.67	321	P	P	14 29 29.8	+0.1
SSLB				IAmb	IAmb	14 30 42.2	
	comp=Z,23nm,1.1s						
YHNB	Yeheng	40.06	323	P	P	14 29 33.3	+0.3
TATO	Taipei	40.22	323	P	P	14 29 34.3	0.0
QRZ	Quartz Range	40.77	150	P	P	14 29 40.3	+1.7
QRZ				IAmb	IAmb	14 29 45.0	
	comp=Z,19nm,0.9s						
AFI	Afiamalu	41.23	103	P	P	14 29 43.8	+0.9
	comp=Z,13nm,0.8s,baz=180,slow=7.1,SNR=3.7						
AFI	Afiamalu	41.23	103	P	P	14 29 43.6	+0.7
AFI				IAmb	IAmb	14 30 12.6	
	comp=Z,40nm,1.1s						
AFI	Afiamalu	41.23	103	P	P	14 29 43.6	+0.7
AFI				pmax	pmax		
	comp=Z,40nm,1.1s						
URZ	Urewera	41.47	143	P	P	14 29 45.4	+1.0
	comp=Z,14nm,0.6s,baz=294,slow=5.2,SNR=17						
URZ	Urewera	41.47	143	P	P	14 29 44.3	-0.1
URZ				IAmb	IAmb	14 29 58.5	
	comp=Z,19nm,0.7s						
KNTN	Kanton	41.49	86	P	P	14 29 45.7	+0.7
THZ	Tophouse	41.66	150	P	P	14 29 46.8	+0.8
THZ				IAmb	IAmb	14 29 49.1	
	comp=Z,18nm,0.8s						
BKZ	Black Stump Fm	41.71	145	P	P	14 29 47.9	+1.4
TUWZ	Tuamarina	41.93	149	P	P	14 29 49.4	+1.3
BSWZ	Blackbirch Sta	42.10	149	P	P	14 29 50.6	+1.1
LTZ	Lake Taylor	42.13	152	P	P	14 29 51.2	+1.4
LTZ				IAmb	IAmb	14 29 52.8	
	comp=Z,19nm,0.6s						
RPZ	Rata Peaks	42.31	154	P	P	14 29 51.3	+0.1
RPZ				IAmb	IAmb	14 29 53.5	
	comp=Z,26nm,0.6s						
MSWZ	Moikau Station	42.59	148	P	P	14 29 54.1	+0.6
JNU	Nakatsue	42.66	340	P	P	14 29 53.0	-1.1
	comp=Z,4.7nm,0.7s,baz=13,slow=19,SNR=5.3						
JNU	Nakatsue	42.66	340	P	P	14 29 53.4	-0.8
PLWZ	Palliser	42.71	148	P	P	14 29 54.9	+0.4
WHZ	Wether Hill Ro	42.85	158	P	P	14 29 55.6	+0.1
WHZ				IAmb	IAmb	14 31 29.4	
	comp=Z,74nm,1.6s						
MQZ	McQueen's Vall	43.02	152	P	P	14 29 57.7	+0.8
ODZ	Otahua Downs	43.20	155	P	P	14 29 58.6	+0.2
ODZ				IAmb	IAmb	14 31 26.4	
	comp=Z,43nm,1.4s						
MJAR	Matsushiro Arr	44.04	350	P	P	14 30 03.8	-1.4
	comp=Z,3.8nm,0.9s,baz=172,slow=7.2,SNR=12						
MJAR				LR	LR	14 47 09.0	
	comp=Z,19nm,19.6s,baz=195,slow=34						
MAJO	Matsushiro	44.04	350	P	P	14 30 03.6	-1.5
MAJO				IAmb	IAmb	14 30 44.9	
	comp=Z,24nm,1.1s						
MAJO	Matsushiro	44.04	350	i P	P	14 30 03.6	-1.5
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MAT	Matsushiro	44.04	350	P	P	14 30 03.6	-1.6
MAT				S	S	14 36 27.4	-3.6
MJB9	Matsu-Tunnel	44.04	350	P	P	14 30 03.6	-1.6
MJB9				IAmb	IAmb	14 30 44.9	
	comp=Z,24nm,1.1s						
NJ2	Nanjing	47.10	327	eP	P	14 30 30.3	+0.9
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
IPM	Ipoh	47.12	283	P	P	14 30 29.6	-0.3
IPM				IAmb	IAmb	14 31 05.0	
	comp=Z,18nm,0.8s						
KSRS	Korea Array	47.60	340	P	P	14 30 32.4	-0.7
	comp=Z,5.1nm,0.7s,baz=156,slow=9.1,SNR=24						
KSRS				pP	pP	14 30 54.9	+0.5
	comp=Z,6.7nm,0.8s,baz=158,slow=8.8,SNR=9.7						
KSRS				LR	LR	14 47 30.2	
	comp=Z,74nm,21.9s,baz=134,slow=32						
KS19	Wonju Array Si	47.66	340	P	P	14 30 34.4	+0.7
KULM	Kulim	47.67	284	P	P	14 30 32.8	-1.3
KULM				IAmb	IAmb	14 31 04.2	
	comp=Z,21nm,1.1s						
MCQ	Macquarie Isla	48.39	171	P	P	14 30 40.6	+1.7
	baz=48						
MCQ	Macquarie Isla	48.39	171	P	P	14 30 40.3	+1.3
MCQ	Macquarie Isla	48.39	171	P	P	14 30 40.3	+1.3
RPSI	Rantau Prapat	48.77	280	P	P	14 30 42.1	-0.5
RPSI				IAmb	IAmb	14 31 14.6	
	comp=Z,24nm,1.3s						
PSI	Prapat	48.80	280	P	P	14 30 42.1	-0.9
PSI				pmax	pmax		
	comp=Z,24nm,1.3s						

JKA	Kamikawa-asahi	50.99	356	P	P	14 30 58.2	-0.7
ASAJ	Asahikawa	51.00	356	P	P	14 30 58.2	-0.7
	comp=Z,5.1nm,0.6s,baz=235,slow=8.6,SNR=13						
PBKT	Sadao Pong	51.04	298	P	P	14 30 59.4	-0.3
GYA	Guiyang	51.20	312	eP	P	14 31 06.1	+5.1
GYA				pP	sP	14 31 29.8	-2.6
GYA				PP	PP	14 33 02.6	+3.9
GYA				S	S	14 38 15.8	+2.7
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
USA0B	Ussuriysk Arra	52.67	347	P	P	14 31 11.1	-0.3
USA0B	Ussuriysk Arra	52.67	347	P	P	14 31 11.1	-0.3
USA0B				pmax	pmax		
	comp=Z,11nm,1.0s						
USRK	Ussuriysk Ar.	52.67	347	P	P	14 31 10.8	-0.5
	comp=Z,2.1nm,0.5s,baz=167,slow=7.9,SNR=11						
USRK				pP	pP	14 31 33.3	+0.3
	comp=Z,4.1nm,0.8s,baz=170,slow=9.0,SNR=4.3						
CM31	Chiang Mai Arr	53.57	299	P	P	14 31 18.4	-0.1
CM31				IAmb	IAmb	14 31 50.9	
	comp=Z,31nm,1.1s						
CMAR	Chiang Mai Arr	53.57	299	P	P	14 31 20.1	+1.6
	comp=Z,4.3nm,0.7s,baz=121,slow=5.8,SNR=40						
CMAR				pP	pP	14 31 40.3	0.0
	comp=Z,13nm,0.9s,baz=120,slow=5.7,SNR=12						
CMAR				LR	LR	14 54 22.8	
	comp=Z,21nm,21.7s,baz=134,slow=36						
CHTO	Chiang Mai	53.71	299	P	P	14 31 18.6	-0.9
CHTO				IAmb	IAmb	14 31 51.5	
	comp=Z,16nm,1.1s						
CHTO	Chiang Mai	53.71	299	P	P	14 31 18.6	-0.9
CHTO				pmax	pmax		
	comp=Z,16nm,1.1s						
YSS	Yuzh-Sakhalins	53.81	357	iP	P	14 31 17.9	-1.7
YSS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CN2	Changchun	54.12	341	eP	P	14 31 23.0	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN	Xi'an	54.33	321	P	P	14 31 23.8	0.0
XAN				pmax	pmax		
	comp=Z,15nm,1.1s						
CD2	Chengdu	55.84	315	P	P	14 31 35.3	+0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLR	Kul'dur	57.50	348	P	P	14 31 45.9	-0.2
	comp=Z,1.1nm,0.6s,baz=192,slow=5.0,SNR=5.6						
KLR				pP	pP	14 32 07.0	-1.1
	comp=Z,2.5nm,0.8s,baz=184,slow=6.5,SNR=3.7						
KLR	Kul'dur	57.50	348	iP	P	14 31 45.7	-0.4
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
HHC	Hu-ho-hao-te	57.57	329	eP	P	14 31 49.5	+2.6
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,48nm,5.2s						
TYV	Tymovskoe	57.72	357	eP	P	14 31 47.4	-0.1
TYV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TYV				pmax	pmax		
	comp=Z,500nm,5.1s						
PETK	Petropavlovsk-	60.56	7	P	P	14 32 07.0	-0.1
	comp=Z,2.1nm,0.6s,baz=169,slow=8.0,SNR=18						
PETK				pP	pP	14 32 27.5	-1.9
	comp=Z,13nm,1.0s,baz=174,slow=7.4,SNR=4.8						
PETK				LR	LR	14 53 50.5	
	comp=Z,35nm,21.7s,baz=237,slow=32						
SHL	Shillong	62.41	303	P	P	14 32 20.3	-0.1
SHL				IAmb	IAmb	14 32 42.7	
	comp=Z,23nm,0.8s						
SHL	Shillong	62.41	303	P	P	14 32 20.3	-0.1
SHL				pmax	pmax		
	comp=Z,23nm,0.8s						
ZEA	Zeya	62.70	347	eP	P	14 32 21.4	-0.1
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA	Gaotai	63.38	321	P	P	14 32 27.8	+1.3
GTA				pP	pP	14 32 50.9	+2.0
GTA				sP	PcP	14 33 05.8	+3.0
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,52nm,4.8s						
GTA				LR	LR		
	comp=Z,48nm,19.2s						
GTA				LR	LR		
	comp=Z,89nm,21.0s						
GTA				LR	LR		
	comp=Z,79nm,21.6s						
SONM	Songino Array	65.17	331	P	P	14 32 37.9	-0.2
	comp=Z,0.6nm,0.5s,baz=146,slow=4.5,SNR=7.6						
SONM				pP	pP	14 32 57.9	-2.6
	comp=Z,1.3nm,0.6s,baz=141,slow=5.6,SNR=5.6						
MA2	Magadan	66.41	2	P	P	14 32 44.9	-0.6
	comp=Z,8.0nm,1.0s,baz=147,slow=8.0,SNR=5.8						
MA2				pP	pP	14 33 07.0	-1.0
	comp=Z,6.7nm,0.8s,baz=155,slow=7.0,SNR=4.8						
MA2				LR	LR	15 00 54.6	
	comp=Z,9.9nm,18.6s,baz=140,slow=35						
MA2	Magadan	66.41	2	IAmb	IAmb	14 33 07.5	
	comp=Z,36nm,1.6s						
MA2	Magadan	66.41	2	ceP	P	14 32 44.8	-0.7
MA2				pmax	pmax		
	comp=Z,48nm,2.5s						
TAPN	Taplejung	66.55	304	eP	P	14 32 47.7	+0.2
	comp=Z,55nm,0.9s						
ODAN	Odare	66.63	303	eP	P	14 32 48.7	+0.7
	comp=Z,38nm,0.9s						
RAMN	Ramite	67.32	303	eP	P	14 32 52.4	0.0
	comp=Z,9.4nm,0.6s						
JIRN	Jiri	67.92	303	eP	P	14 32 56.0	-0.2
	comp=Z,24nm,0.7s						
GUN	Gumba	68.26	304	eP	P	14 32 58.2	-0.2
	comp=Z,27nm,0.6s						
ZAK	Zakamensk	68.41	332	eP	P	14 32 59.5	+1.0
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PKI	Pulchoki	68.53	303	eP	P	14 33 00.2	+0.2
PKIN	Phulchoki	68.55	303	eP	P	14 33 00.3	+0.3
KKN	Kakani	68.72	303	eP	P	14 33 01.3	+0.3
	comp=Z,27nm,0.9s						
DMN	Daman	68.80	303	eP	P	14 33 02.4	+0.8
	comp=Z,53nm,0.9s						
SEY	Seymchan	69.83	3	P	P	14 33 06.7	-0.2
	comp=Z,4.9nm,0.9s,baz=164,slow=4.6,SNR=11						
SEY				pP	PcP	14 33 27.6	-1.2
	comp=Z,3.7nm,0.8s,baz=169,slow=8.5,SNR=4.3						
SEY	Seymchan	69.83	3	iP	P	14 33 06.6	-0.3
BOD	Bodaibo	69.85	342	eP	P	14 33 06.0	-1.1
BOD				pmax	pmax		
	comp=Z,8.0nm,1.9s						
YAK	Yakutsk	70.07	351	pP	pP	14 33 30.0	-1.0
	comp=Z,4.2nm,0.3s,baz=144,slow=1.7,SNR=1.9						
YAK	Yakutsk	70.07	351		pP	14 33 30.0	-1.0
YAK	Yakutsk	70.07	351	iP	P	14 33 06.8	-1.5
YAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DANN	Dangsing	70.17	303	eP	P	14 33 10.7	+0.6
	comp=Z,28nm,0.6s						
VNDA	Vanda	70.96	177	P	P	14 33 14.9	+1.4
	comp=Z,14nm,0.7s,baz=333,slow=6.7,SNR=17						
VNDA				LR	LR	15 00 45.4	
	comp=Z,46nm,20.0s,baz=231,slow=33						
VNDA	Vanda	70.96	177	P	P	14 33 14.5	+0.9
VNDA				IAmb	IAmb	14 33 16.4	
	comp=Z,65nm,1.5s						
VNDA	Vanda	70.96	177	P	P	14 33 14.5	+0.9
VNDA				pmax	pmax		
	comp=Z,65nm,1.5s						
WMQ	Urumqi	73.42	320	eP	P	14 33 29.0	0.0
WMQ				sP	sP	14 34 00.5	-0.9
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,42nm,3.6s						
WMQ				LR	LR		
	comp=Z,380nm,29.0s						
WMQ				LR	LR		
	comp=Z,910nm,29.3s						
WMQ				LR	LR		
	comp=Z,130nm,27.9s						
BILL	Bilibino	76.09	7 d	iP	P	14 33 43.9	+0.1
BILL						14 33 54.0	
BILL				e*PP	pP	14 34 06.1	-0.6
BILL				*SP	sP	14 34 19.0	+2.7
BILL				S	S	14 43 16.0	-4.1
BILL				e*SS	ScS	14 43 52.4	+1.9
BILL				SS	SS	14 48 18.0	+2.8
BILL				pmax	pmax		
	comp=Z,14nm,1.3s						
MK31	Makanchi Array	78.14	321	P	P	14 33 56.0	+0.3
MK31	Makanchi Array	78.14	321	P	P	14 33 56.0	+0.3
MK31				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MKAR	Makanchi Array	78.14	321	P	P	14 33 56.2	+0.5
	comp=Z,2.6nm,0.7s,baz=99,slow=8.0,SNR=32						
MKAR				LR	LR	15 09 16.7	
	comp=Z,44nm,21.1s,baz=12,slow=36						
MKAR	Makanchi Array	78.14	321	ceP	P	14 33 56.7	+1.0
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAKZ	Makanchi	78.34	321	P	P	14 33 57.0	+0.1
MAKZ	Makanchi	78.34	321	P	P	14 33 57.0	+0.1
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TIXI	Tiksi	79.36	354	P	P	14 34 00.1	-1.7
	comp=Z,1.6nm,0.4s,baz=171,slow=3.1,SNR=8.9						
TIXI	Tiksi	79.36	354	P	P	14 34 00.6	-1.3
TIXI	Tiksi	79.36	354	ceP	P	14 33 59.5	-2.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.7s						
ZAA0	Zalesovo Array	79.74	328	P	P	14 34 03.4	-0.9
ZAA0					pP	14 34 26.1	-1.3
ZALV	Zalesovo Beam	79.74	328	P	P	14 34 03.4	-0.9
	comp=Z,1.9nm,0.5s,baz=110,slow=6.6,SNR=7.6						
ZALV				pP	pP	14 34 26.6	-0.9
	comp=Z,5.4nm,0.5s,baz=111,slow=5.6,SNR=9.6						
KSH	Kashi	79.90	312	P	P	14 34 07.4	+1.7
KSH				sP	sP	14 34 42.6	+3.9
KSH				PP	PP	14 37 13.6	+5.1
KSH				S	S	14 44 00.6	-1.8
KSH				SKS	SKSac	14 44 13.3	-2.0
KSH				sS	sS	14 44 44.9	+2.5
KSH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,320nm,5.2s						
KSH				LR	LR		
	comp=Z,75nm,6.1s						
KSH				LR	LR		
	comp=Z,99nm,5.3s						
KSH				LR	LR		
	comp=Z,280nm,5.8s						
NIL	Nilore	80.36	306	P	P	14 34 08.8	+0.7
NIL				IAmb	IAmb	14 34 19.7	
	comp=Z,24nm,0.7s						
NIL	Nilore	80.36	306	P	P	14 34 08.8	+0.7
NIL				pmax	pmax		
	comp=Z,24nm,0.7s						
KDAK	Kodiak Island	80.83	28	P	P	14 34 09.4	-0.6
	comp=Z,16nm,1.1s,baz=195,slow=3.8,SNR=4.1						
KDAK	Kodiak Island	80.83	28	P	P	14 34 09.4	-0.6
KDAK				pmax	pmax		
	comp=Z,111nm,1.6s						
MAW	Mawson	81.29	203	P	P	14 34 11.9	-0.4
	comp=Z,6.9nm,0.6s,baz=108,slow=7.0,SNR=8.6						
MAW	Mawson	81.29	203	P	P	14 34 11.9	-0.4
MAW				pmax	pmax		
	comp=Z,17nm,1.8s						
KURK	Kurchatov	81.89	323	P	P	14 34 15.4	-0.4
KURK				pP	pP	14 34 38.5	-0.6
KURK	Kurchatov	81.89	323	iP	P	14 34 14.5	-1.3
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AAK	Ala-Archa	81.91	315	iP	P	14 34 15.4	-0.9
AAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CNPM	China Poot	82.28	27	P	P	14 34 16.8	-0.9
CNPM				IAmb	IAmb	14 34 18.8	
	comp=Z,41nm,1.0s						
RDOG	Red Dog Mine	82.72	17	P	P	14 34 18.8	-0.9
RDOG				IAmb	IAmb	14 34 21.3	
	comp=Z,18nm,0.7s						
QSPA	South Pole Qui	83.00	180	P	P	14 34 21.8	+0.3
RC01	Rabbit Creek A	83.66	26	P	P	14 34 25.4	+0.6
RC01				IAmb	IAmb	14 34 27.0	
	comp=Z,45nm,1.4s						
KBL	Kabul	83.96	306	P	P	14 34 27.1	-0.1
KBL	Kabul	83.96	306	P	P	14 34 27.1	-0.1
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TRF	Thorofare Moun	84.51	24	P	P	14 34 27.9	-1.3
TRF				IAmb	IAmb	14 35 57.8	
	comp=Z,24nm,1.5s						
KK31	Karatay Array	84.85	314	P	P	14 34 30.9	-0.3
KK31	Karatay Array	84.85	314	P	P	14 34 30.9	-0.3
KK31				pmax	pmax		
	comp=Z,12nm,1.4s						
KKAR	Karatay Array	84.85	314	P	P	14 34 31.0	-0.2
KKAR	Karatay Array	84.85	314	P	P	14 34 31.0	-0.2
KKAR				pmax	pmax		
	comp=Z,12nm,1.4s						
SCM	Sheep Creek Mo	85.03	26	P	P	14 34 32.0	+0.3
SCM	Sheep Creek Mo	85.03	26	P	P	14 34 32.0	+0.3
SCM				pmax	pmax		
	comp=Z,108nm,1.9s						
RND	Reindeer	85.07	24	P	P	14 34 31.0	-0.9
RND				IAmb	IAmb	14 34 32.5	
	comp=Z,16nm,0.9s						
RND	Reindeer	85.07	24	P	P	14 34 31.0	-0.9
RND				pmax	pmax		
	comp=Z,17nm,0.9s						
MLY	Manley	85.08	22	P	P	14 34 31.6	-0.2
BWN	Browne	85.17	23	P	P	14 34 32.2	-0.1
MCK	McKinley	85.18	24	P	P	14 34 31.6	-0.8
MCK				IAmb	IAmb	14 34 33.1	
	comp=Z,17nm,1.0s						
MCK	McKinley	85.18	24	P	P	14 34 31.6	-0.8
MCK				pmax	pmax		
	comp=Z,17nm,1.0s						
DHY	Denali Highway	85.53	25	P	P	14 34 33.6	-0.7
WRH	Wood River Hil	85.84	23	P	P	14 34 34.6	-1.0
WRH				IAmb	IAmb	14 35 03.4	
	comp=Z,54nm,1.9s						
CCB	Clear Creek Bu	86.02	23	P	P	14 34 35.3	-1.2
COLA	College	86.10	23	P	P	14 34 35.0	-1.9
COLA				IAmb	IAmb	14 35 13.9	
	comp=Z,11nm,0.8s						
COLA	College	86.10	23	P	P	14 34 35.0	-1.9
COLA				pmax	pmax		
	comp=Z,11nm,0.9s						
HDA	Harding Lake	86.26	23	P	P	14 34 36.5	-1.2
HDA				IAmb	IAmb	14 36 21.9	
	comp=Z,40nm,2.0s						
IL31		86.43	23	P	P	14 34 37.1	-1.4
ILAR	Eielson Array	86.43	23	P	P	14 34 37.0	-1.6
	comp=Z,8.3nm,0.8s,baz=252,slow=4.9,SNR=114						
ILAR				LR	LR	15 08 27.7	
	comp=Z,36nm,21.0s,baz=216,slow=32						
ILAR	Eielson Array	86.43	23	P	P	14 34 37.0	-1.6
RIDG	Independent Ri	86.84	24	P	P	14 34 40.3	-0.4
RIDG				IAmb	IAmb	14 34 42.8	
	comp=Z,48nm,1.7s						
DOT	Dot Lake	87.13	25	P	P	14 34 41.8	-0.2
DOT				IAmb	IAmb	14 34 43.6	
	comp=Z,13nm,1.0s						
BRVK	Borovoye	87.53	324	iP	P	14 34 43.5	-0.6
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
EGAK	Eagle	88.72	24	P	P	14 34 49.6	+0.1
DAWY	Dawson	89.22	25	P	P	14 34 52.4	+0.5
DAWY				IAmb	IAmb	14 34 54.4	
	comp=Z,10.0nm,1.0s						
SYO	Syowa Base	89.63	200⇑	eP	P	14 34 52.6	-1.1
SYO	Syowa Base	89.63	200⇓	ePcP	PcP	14 34 55.0	0.0
EPYK	Eagle Plains	90.95	23	P	P	14 34 59.9	-0.1
EPYK				IAmb	IAmb	14 35 01.6	
	comp=Z,9.4nm,0.8s						
INK	Inuvik	92.61	21	P	P	14 35 07.1	-0.4
	comp=Z,3.5nm,0.9s,baz=248,slow=6.1,SNR=8.6						
INK	Inuvik	92.61	21	P	P	14 35 07.3	-0.2
INK				IAmb	IAmb	14 35 09.3	
	comp=Z,6.2nm,1.1s						
INK	Inuvik	92.61	21	P	P	14 35 07.3	-0.2
INK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ABKAR	Akbulak array	93.20	319	P	P	14 35 09.8	-0.8
GEYT	Alibeck	93.23	308	LR	LR	15 21 15.2	
	comp=Z,22nm,19.7s,baz=35,slow=38						
YBH	Yreka Blue Hor	94.93	49	P	P	14 35 18.8	-0.1
	comp=Z,5.1nm,1.1s,baz=206,slow=4.6,SNR=3.0						
YBH	Yreka Blue Hor	94.93	49	IAmb	IAmb	14 35 20.4	
	comp=Z,74nm,1.9s						
AFDM	Forest Hills D	96.03	52	P	P	14 35 24.4	+0.4
AFDM				IAmb	IAmb	14 35 25.2	
	comp=Z,15nm,1.7s						
NVAR	Mina Array Bea	98.09	52	P	Pdif	14 35 34.2	+0.7
	comp=Z,1.0nm,0.7s,baz=254,slow=6.6,SNR=6.4						
NVAR				LR	LR	15 14 05.6	
	comp=Z,30nm,19.8s,baz=330,slow=32						
YKA	Yellowknife Ar	100.10	28	P	Pdif	14 35 41.1	-0.5
	comp=Z,0.6nm,0.8s,baz=276,slow=5.2,SNR=7.0						
PDAR	Pinedale Array	104.69	48	Pdiff	Pdif	14 36 02.8	0.0
	comp=Z,0.4nm,0.6s,baz=231,slow=4.3,SNR=4.2						
APA	Apatity	105.24	339⇓	iP	Pdif	14 36 05.0	+0.7
APA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
VYHS	Vyhne	119.78	323	eP	Pdif	14 37 08.6	-0.8
VYHS	Vyhne	119.78	323	ePDIFF	Pdif	14 37 08.6	-0.8
PLCA	Paso Flores	121.40	147	PKP	PKiKP	14 40 50.2	+0.4
	comp=Z,1.2nm,0.6s,baz=302,slow=5.0,SNR=7.4						
GERES	GERESS Array B	122.61	325	PKP	PKiKP	14 40 52.2	+0.2
	comp=Z,0.5nm,0.5s,baz=45,slow=1.5,SNR=3.7						
LPAZ	La Paz	138.39	124	PKhKP	PKPpre	14 41 14.3	
	comp=Z,0.7nm,0.7s,baz=233,slow=5.3,SNR=3.8						
SDV	Santo Domingo	142.85	85	PKP	PKPdf	14 41 30.3	-0.4
	comp=Z,2.1nm,0.5s,baz=285,slow=11,SNR=3.8						
TOA0	Torodi Ar. Sit	145.16	283		PKPdf	14 41 34.9	+0.4
TORD	Torodi Ar. Bea	145.16	283	PKPbc	PKPdf	14 41 34.8	+0.3
	comp=Z,13nm,0.8s,baz=79,slow=3.8,SNR=61						
TORD				pPKPbc	pPKPab	14 41 56.8	-1.8
	comp=Z,19nm,0.9s,baz=78,slow=3.6,SNR=8.4						
SJG	San Juan	146.02	68	PKPbc	PKPab	14 41 37.1	-0.3
	comp=Z,10nm,0.7s,baz=302,slow=4.7,SNR=4.7						
SJG				pPKPbc	pPKPbc	14 42 00.8	-0.2
	comp=Z,24nm,0.9s,baz=310,slow=5.6,SNR=4.4						
SJG	San Juan	146.02	68	PKPbc	PKPbc	14 41 36.7	-0.1
SJG	San Juan	146.02	68	PKP2	PKPbc	14 41 36.7	-0.1
SAML	Samuel	146.16	117	PKPbc	PKPdf	14 41 36.6	+0.3
SAML	Samuel	146.16	117	PKP2	PKPdf	14 41 36.6	+0.3
HUMP	Col San Antoni	146.28	68		PKPdf	14 41 36.9	+0.6
KIC	Kosan Boka	151.76	270	ePKIKP	PKiKP	14 41 52.2	+0.1
	comp=Z,15nm,0.8s						
DBIC	Dimbokro	151.89	271	PKPbc	PKiKP	14 41 52.5	+0.2
	comp=Z,7.1nm,0.6s,baz=70,slow=1.5,SNR=17						
DBIC				pPKPbc	pPKPbc	14 42 15.5	-1.4
	comp=Z,13nm,0.8s,baz=108,slow=2.5,SNR=6.2						
DBIC	Dimbokro	151.89	271		PKPbc	14 41 50.8	-1.2
DBIC	Dimbokro	151.89	271	PKIKP	PKPbc	14 41 50.8	-1.2
LIC	Lamto	152.04	270	ePKIKP	PKPbc	14 41 52.3	0.0
	comp=Z,38nm,1.1s						
TIC	Toumodi	152.05	271	ePKIKP	PKiKP	14 41 52.8	+0.1
BDFB	Brasilia	153.14	147	PKPbc	PKiKP	14 41 55.2	+0.2
	comp=Z,5.0nm,0.7s,baz=204,slow=5.1,SNR=7.4						
BDFB				pPKPbc	pPKPbc	14 42 19.7	-0.1
	comp=Z,6.7nm,0.7s,baz=166,slow=5.7,SNR=4.6						

INET **16** *14:23:43.1, 11.68N×87.06W, h15km, MD3.2, ML3.4*
IDC **16** **14:23:29.4**±30.0, **10.90N×86.45W, h0km, mb3.2/3, mb1 3.6/3, mb1mx3.4/25, mbtmp3.2/3, MS3.6/1, Ms1 3.6/1, ms1mx2.4/21, Error ellipse: s-maj=625.0km s-min=134.9km az=3.0, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	24.39	321	P	P	14 28 49.5	-0.2
	0.6nm,0.6s,baz=138,slow=9.5,SNR=7.7						
ANMO	Albuquerque	30.08	326	LR	LR	14 44 12.8	
	comp=Z,101nm,20.0s,baz=304,slow=41						
PDAR	Pinedale Array	37.59	332	P	P	14 30 46.0	-0.1
	0.2nm,0.5s,baz=156,slow=12,SNR=2.5						
YKA	Yellowknife Ar	55.36	345	P	P	14 33 05.1	+0.1
	0.2nm,0.6s,baz=139,slow=7.6,SNR=3.9						

KRSC **16** *14:25:26.5±1.4, 51.50N×154.09E, h454km±23km, ML3.9*
IDC **16** *14:25:27.1±1.4, 51.99N×152.96E, h415km±17km, mb2.9/6, mb1 3.0/10, mb1mx2.7/55, mbtmp3.7/10, Error ellipse: s-maj=27.1km s-min=13.7km az=131.0*
ISC 16 14:25:27.5±0.7, **51.7N**±0.1×**153.58E**±0.09, **h450km, n30, σ2.30**/37, **mb3.3**/6, **Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.91	122	P	P	14 26 26.3	-1.1
SKR				S	S	14 27 11.9	-4.2
PAU	Pauzhetka	2.03	96	P	P	14 26 27.6	-0.5
APC	Apacha	2.51	60	P	P	14 26 29.4	-1.5
ASAK	Asacha	2.75	74	P	P	14 26 32.7	0.0
KDTR	Khodutka, Kamc	2.80	86	P	P	14 26 32.1	-0.8
KDTR				S	S	14 27 22.1	-4.1
PETK	Petropavlovsk-	2.88	60	P	P	14 26 31.6	-1.9
	1.2nm,0.3s,baz=235,slow=6.3,SNR=51						
GRL	Gorelyy	2.89	72	P	P	14 26 33.6	-0.1
MTVR	Mutnovka	2.94	73	P	P	14 26 34.5	+0.4
KRMR	Karymshinskiy	3.01	67	P	P	14 26 33.0	-1.4
RUS	Russkaya	3.13	75	P	P	14 26 35.0	-0.3
RUS				S	S	14 27 21.1	-3.5
DALK	Dalny	3.43	66	P	P	14 26 37.7	0.0
DALK				S	S	14 27 32.3	-2.6
AVH	Avacha	3.51	62	P	P	14 26 39.3	+0.9
KRER	Koryakskii	3.53	61	P	P	14 26 39.0	+0.3
UGLR	Uglovaya	3.54	63	P	P	14 26 39.3	+0.6
SDLR	Sedlovina	3.60	62	P	P	14 26 39.7	+0.5
SDLR				S	S	14 27 35.9	-1.8
SPN	Mys Shipunski	4.18	68	P	P	14 26 42.5	-1.5
SPN				S	S	14 27 40.1	-6.4
ESO	Esso	5.19	34	P	P	14 26 54.3	+0.9
TUMR	Tumrok	5.30	45	P	P	14 26 55.9	+1.2
TUMR				S	S	14 28 03.3	-2.7
KMNR	Kamenistaya	5.65	42	P	P	14 26 58.3	+0.2
SRDR	Sredinnyy	5.85	36	P	P	14 27 00.7	+0.6
KBG	Krutoberegovo	7.04	46	P	P	14 27 12.3	0.0
ASAJ	Asahikawa	10.58	228	P	P	14 27 50.5	-0.4
	0.3nm,0.3s,baz=54,slow=24,SNR=5.4						
SEY	Seymchan	11.26	357	P	P	14 27 55.9	-2.0
	0.2nm,0.3s,baz=111,slow=14,SNR=5.1						
KLR	Kul'dur	14.11	268	P	P	14 28 26.4	-2.6
	0.1nm,0.3s,baz=80,slow=11,SNR=3.8						
ILAR	Eielson Array	32.58	43	P	P	14 31 21.9	+2.3
	0.4nm,0.6s,baz=270,slow=5.5,SNR=5.8						
INK	Inuvik	37.36	36	P	P	14 32 01.7	+2.2
	0.9nm,0.3s,baz=299,slow=8.9,SNR=19						
MKAR	Makanchi Array	45.09	293	P	P	14 32 59.6	-2.0
	0.2nm,0.4s,baz=71,slow=7.8,SNR=4.7						
YKA	Yellowknife Ar	46.82	40	P	P	14 33 17.1	+2.5
	0.4nm,0.4s,baz=301,slow=7.2,SNR=9.2						
WRA	Warramunga Arr	73.32	199	P	P	14 36 15.4	+3.4
	1.2nm,0.6s,baz=16,slow=5.9,SNR=6.9						
ASAR	Alice Springs	77.03	198	P	P	14 36 36.7	+3.9
	0.7nm,0.7s,baz=13,slow=4.9,SNR=4.8						

IDC **16** *14:30:45.2±6.8, 11.83N×84.93W, h34km±60km, mb3.1/4, mb1 3.6/4, mb1mx3.3/35, mbtmp3.3/4, MS2.9/2, Ms1 2.9/2, ms1mx2.6/15, Error ellipse: s-maj=101.3km s-min=33.6km az=65.0*
UCR **16** *14:30:45.8±1.4, 11.08N×86.35W, h1km±8km, MD4.1*
INET **16** *14:30:46.4, 10.93N×86.41W, h15km, MD3.7, ML4.1*
ISC 16 14:30:42.8±1.2, **11.04N**±0.06×**86.55W**±0.06, **h15km**±6km, **n28, σ0.99**/36, **mb3.4**/4, **1C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASN	Masaya	1.02	23	eP	Pg	14 31 03.7	+1.1
NY14	Universidad de	1.07	111	iP	Pg	14 31 04.0	+0.5
NY14				iS	Sb	14 31 17.7	+0.8
BUEV	Buena Vista	1.15	102⇑	iP	Pb	14 31 04.8	+0.4
BUEV				eP	Pg	14 31 05.2	+0.2
BUEV				iS	Sb	14 31 19.4	+0.2
BUEV				eS	Sn	14 31 19.8	-0.1
GB1A	Borinquen Arri	1.15	101	iP	Pg	14 31 05.2	+0.2
GB1A				eS	Sn	14 31 20.8	+0.8
GPS3	Bodega del ICE	1.20	104	iP	Pn	14 31 04.6	-0.5
GPS3				iS	Sb	14 31 20.3	-0.2
BUAI	Buenos Aires	1.21	98	iP	Pb	14 31 05.6	+0.3
BUAI				iS	Sb	14 31 20.8	0.0
GUAI	GUAI	1.28	127	iP	Pb	14 31 06.8	+0.3
LIM1	Limonal	1.32	105	iP	Pn	14 31 06.8	0.0
MESS	Mesas	1.37	102	iP	Pb	14 31 07.8	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
COLC	Colonia	1.38	106	iP	Pn	14 31 07.8	+0.3
COLC				iS	Sn	14 31 24.9	-0.5
HORNC	Hornillas	1.39	103	iP	Pn	14 31 07.7	+0.1
CUI	Cuipilapa	1.42	105	eP	Pb	14 31 08.8	-0.1
CUI				eS	Sn	14 31 26.7	+0.3
ACON	Acoyapa	1.64	56	eP	Pb	14 31 12.1	-0.6
CRIN	San Cristobal	1.72	344	eP	Pg	14 31 16.6	+0.7
JTS	Las Juntas de	1.74	115	Pg	Pb	14 31 13.8	-0.6
	15nm,0.3s,baz=12,slow=12,SNR=38						
JTS				Lg	Lg	14 31 35.0	
	24nm,0.3s,baz=335,slow=19,SNR=7.9						
JTS	Las Juntas de	1.74	115	eP	Pb	14 31 15.1	+0.6
ARE1	Arenal 1	1.89	108	eP	Pb	14 31 17.3	+0.3
CEDE	Laguna Cedeo	1.90	107	eP	Pb	14 31 17.7	+0.5
MATN	Matagalpa	1.98	18	eP	Pb	14 31 18.8	+0.3
ESTN	Estel	2.06	5	eP	Pg	14 31 20.6	-1.7
LCR2	La Lucha 2	2.82	117	eP	Pb	14 31 31.2	-1.8
SDV	Santo Domingo	15.82	96	LR	LR	14 40 16.7	
	comp=Z,34nm,21.0s,baz=83,slow=40						
TXAR	Lajitas Array	24.22	321	P	P	14 36 01.4	+2.3
	1.0nm,0.8s,baz=139,slow=9.2,SNR=13						
LPIG	La Paz	26.05	303	LR	LR	14 47 11.1	
	comp=Z,38nm,19.7s,baz=324,slow=36						
PDAR	Pinedale Array	37.42	332	P	P	14 37 57.3	+1.7
	0.3nm,0.7s,baz=123,slow=9.8,SNR=2.8						
YKA	Yellowknife Ar	55.20	345	P	P	14 40 13.8	-0.8
	0.3nm,0.8s,baz=136,slow=7.5,SNR=5.1						
ILAR	Eielson Array	67.66	336	P	P	14 41 38.5	-0.5
	0.3nm,0.9s,baz=115,slow=4.3,SNR=3.6						
CMAR	Chiang Mai Arr	150.19	349	PKPbc	PKPbc	14 50 31.0	-3.1
	0.4nm,0.5s,baz=343,slow=2.8,SNR=2.7						
CMAR				PKPab	sPKPdf	14 50 35.5	-0.5
	0.4nm,0.5s,baz=343,slow=2.8,SNR=3.9						

JMA 16 14:43:36.9±0.1, 23.90N×121.92E, h35km±4km, M2.5
TAP 16 14:43:37.3, 23.89N×121.92E, h29km, ML2.5, D
ISC 16 14:43:37.3±1.0, 23.89N±0.02×121.93E±0.02, h32km±9km, n55, σ0.43/101, 2D, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.30	274	eP	Pb	14 43 44.9	-0.1
	baz=272						
ENLB				eS	Sn	14 43 51.3	+0.4
	baz=272						
HWA	Hwalien	0.31	287	eP	Pn	14 43 45.6	-0.1
	baz=287						
HWA				eS	Sn	14 43 51.6	+0.4
	baz=287						
TWD	Chiawan	0.36	302	⇓iP	Pb	14 43 45.9	+0.1
	baz=303						
TWD				iS	Sn	14 43 52.0	-0.4
	baz=303						
NACB	Ninganchiao	0.42	313	⇓iP	Pb	14 43 46.6	-0.1
	baz=313						
NACB				iS	Sn	14 43 53.3	-0.7
	baz=313						
ESL	Shilin	0.46	261	P	Pb	14 43 47.2	0.0
	baz=260						
ESL				S	Sn	14 43 54.7	-0.2
	baz=260						
EGFH	Guangfu	0.51	245	eP	Pn	14 43 48.1	-0.3
	baz=244						
EGFH				eS	Sn	14 43 56.3	+0.2
	baz=244						
ETLH	Xiulin Townshi	0.52	308	eP	Pb	14 43 48.1	-0.2
	baz=308						
ETLH				eS	Sn	14 43 56.0	-0.6
	baz=308						
ENA	Nanau	0.57	342	P	Pb	14 43 48.9	-0.1
	baz=343						
ENA				eS	Sn	14 43 57.2	-0.3
	baz=343						
HGSD	Ruisui	0.61	230	P	Pb	14 43 49.4	-0.2
	baz=228						
HGSD				eS	Sn	14 43 58.5	0.0
	baz=228						
WHF	Hehuan Shan	0.66	293	P	Pb	14 43 50.5	-0.3
	baz=293						
WHF				eS	Sn	14 43 60.0	-0.5
	baz=293						
EHY	Hungye	0.67	236	eP	Pn	14 43 50.7	-0.1
	baz=234						
EHY				eS	Sb	14 43 59.7	-0.1
	baz=234						
OWD	Renai	0.69	276	eP	Pb	14 43 50.9	-0.3
	baz=275						
OWD				eS	Sn	14 44 00.5	-0.4
	baz=275						
CHGB	Renai	0.71	284	P	Pb	14 43 51.3	-0.2
	baz=284						
CHGB				S	Sn	14 44 01.1	-0.4
	baz=284						
TWC	Suao	0.72	354	P	Pn	14 43 51.7	+0.3
	baz=355						
TWC				eS	Sn	14 44 01.5	0.0
	baz=355						
VWDT	VWDT	0.73	260	P	Pn	14 43 51.8	+0.3
	baz=259						
VWDT				eS	Sb	14 44 01.2	-0.2
	baz=259						
NNSB	Datong	0.74	317	eP	Pb	14 43 51.4	-0.4
	baz=317						
NNSB				eS	Sn	14 44 01.7	-0.3
	baz=317						
NNSH	Datong	0.74	317	eP	Pb	14 43 51.5	-0.4
	baz=317						
NNSH				eS	Sn	14 44 02.1	+0.2
	baz=317						
YULB	Yu-li	0.76	230	P	Pb	14 43 51.5	-0.6
	baz=229						
YULB				eS	Sb	14 44 01.8	-0.4
	baz=229						
TWT	Tachien	0.78	298	P	Pn	14 43 52.6	+0.3
	baz=297						
TWT				eS	Sn	14 44 03.5	+0.5
	baz=297						
TWF1	Yuli	0.79	228	P	Pn	14 43 52.1	-0.2
	baz=226						
TWF1				eS	Sn	14 44 03.0	0.0
	baz=226						
TDCB	Techi	0.80	298	P	Pn	14 43 52.6	+0.1
	baz=297						
TDCB				eS	Sb	14 44 02.8	-0.6
	baz=297						
NDT	Datong Townshi	0.81	332	eP	Pn	14 43 52.6	0.0
	baz=332						
NDT				eS	Sn	14 44 03.9	+0.3
	baz=332						
ENTT	Nioudou	0.82	336	P	Pn	14 43 52.9	+0.1
	baz=337						
ENTT				S	Sn	14 44 04.2	+0.3
	baz=337						
TWE	Neicheng	0.87	344	P	Pb	14 43 53.8	-0.2
	baz=345						
TWE				S	Sn	14 44 05.1	+0.2
	baz=345						
FULB	Fuli	0.90	221	eP	Pn	14 43 53.5	-0.3
	baz=219						
FULB				eS	Sn	14 44 06.2	+0.4
	baz=219						
SSLB	Suanglung	0.90	264	eP	Pb	14 43 54.1	-0.4
	baz=263						
SSLB				eS	Sn	14 44 05.8	0.0
	baz=263						
DPDB	Guoxing	0.93	279	P	Pb	14 43 54.8	-0.2
	baz=278						
YHNB	Yeheng	0.93	327	P	Pn	14 43 54.4	+0.1
	baz=327						
YHNB				S	Sn	14 44 06.5	-0.2
	baz=327						
NSK	Sanguang	0.94	327	P	Pn	14 43 54.7	+0.2
	baz=327						
NSK				eS	Sn	14 44 06.7	-0.3
	baz=327						
NWLT	Wulai	0.97	336	eP	Pb	14 43 55.3	-0.4
	baz=336						
NWLT				S	Sb	14 44 08.2	-0.1
	baz=336						
YUS	Yu-Shan	0.98	247	eP	Pb	14 43 56.0	-0.1
	baz=245						
YUS				eS	Sn	14 44 08.3	-0.1
	baz=245						
WHP	Taichung City	0.98	294	eP	Pb	14 43 56.2	+0.3
	baz=293						
TYC	Yuchr	0.98	271	P	Pb	14 43 55.7	-0.2
	baz=270						
TYC				eS	Sb	14 44 08.4	-0.1
	baz=270						
WHYT	Xinyi Township	1.00	259	eP	Pb	14 43 56.2	-0.1
	baz=258						
JYNG	Yonagunijimaku	1.08	58	P	Pn	14 43 57.1	+0.7
JYNG				eS	Sn	14 44 10.3	0.0
ELDTW	Lidau	1.09	231	iP	Pn	14 43 56.4	-0.1
	baz=229						
ELDTW				eS	Sn	14 44 10.2	-0.4
	baz=229						
ALS	Alishan	1.10	250	eP	Pb	14 43 57.7	-0.2
	baz=249						
ALS				eS	Sb	14 44 12.0	0.0
	baz=249						
LIOB	Emei	1.13	312	eP	Pb	14 43 58.5	+0.2
	baz=312						
LIOB				eS	Sb	14 44 12.9	+0.2
	baz=312						
NSTT	Nanjuang	1.13	311	eP	Pb	14 43 58.4	+0.1
	baz=311						
NSTT				eS	Sb	14 44 12.6	-0.1
	baz=311						
YOJ	Yonaguni jima	1.14	60	P	Pn	14 43 57.0	-0.1
YOJ				S	Sn	14 44 11.2	-0.5
TWQ1	Liyutan	1.15	294	P	Pb	14 43 58.9	+0.1
	baz=293						
TWQ1				eS	Sb	14 44 14.4	+1.0
	baz=293						
CHN5	Tsauling	1.18	256	P	Pb	14 43 59.3	0.0
	baz=255						
CHN5				eS	Sb	14 44 14.7	+0.4
	baz=255						
YM01	YM01	1.30	345	eS	Sb	14 44 16.6	-1.0
	baz=345						
CHN4	Tsaushan	1.34	247	eS	Sb	14 44 20.2	+1.6
	baz=246						
CHN1	Nanshi	1.46	242	eP	Pb	14 44 04.1	+0.1
	baz=241						
CHN1				eS	Sb	14 44 22.6	+0.4
	baz=241						
IRIF	Iriomote-Funau	1.70	74	P	Pn	14 44 05.6	+0.7
IRIF				eS	Sn	14 44 26.1	+0.5
HATJ	Hateruma jima	1.72	84	P	Pn	14 44 05.1	0.0
HATJ				S	Sn	14 44 26.1	0.0
JKRS	Kuro-shima	1.93	79	P	Pn	14 44 08.8	+0.8
JKRS				S	Sn	14 44 30.9	-0.3
JIJ	Ishigaki jima	2.08	76	P	Pn	14 44 10.0	0.0
JIJ				S	Sn	14 44 33.9	-0.9
JISG	Ishigakijimahi	2.28	72	P	Pn	14 44 12.8	0.0
JISG				eS	Sn	14 44 39.0	-0.9
JTJ	Tarama	2.64	73	P	Pn	14 44 18.2	+0.5
JTJ				S	Sn	14 44 47.8	-0.9
JIRB	Irabujima	3.10	72	P	Pn	14 44 24.3	+0.2
JIKM	Ikemajima	3.20	70	P	Pn	14 44 26.8	+1.4
JMJ2	Miyako jima3	3.21	74	P	Pn	14 44 26.4	+0.7
JOGS	Gusukube	3.29	74	P	Pn	14 44 27.0	+0.3

KRSC 16 14:47:58.0±0.5, 56.46N×161.80E, h72km±5km, ML4.0
IDC 16 14:48:01.8±3.4, 56.43N×161.62E, h72km±36km, mb3.7/9, mb1 3.6/10, mb1mx3.2/43, mbtmp3.5/10, ML2.2/1, MS3.5/3, Ms1 3.5/3, ms1mx2.8/33, Error ellipse: s-maj=27.8km s-min=21.9km az=150.0
ISC 16 14:48:00.8±0.8, 56.45N±0.04×161.77E±0.03, h59km±6km, n50, σ0.89/69, mb3.6/8, MS3.5/3, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SMKR	Semkarok	0.22	309	eP	Pn	14 48 10.1	-0.3
SMKR				eS	Sn	14 48 17.8	+0.5
BDR	Baidarnaya	0.34	292	iP	Pn	14 48 10.9	-0.3
BDR				eS	Sn	14 48 18.9	+0.1
SRKR	Sorokina	0.39	302	iP	Pn	14 48 11.3	-0.4
SRKR				eS	Sn	14 48 20.1	+0.4
KBG	Krutoberegovo	0.55	110	eP	Pn	14 48 13.1	-0.2
KBG				eS	Sn	14 48 23.6	+1.3
KBTR	Krutoberegovo	0.63	112	eP	Pn	14 48 13.7	-0.5
KBTR				eS	Sn	14 48 24.4	+0.5
KLY	Klyuchi	0.64	258	iP	Pn	14 48 12.0	-2.2
KLY				eS	Sn	14 48 21.6	-2.4
CIRR	Tsirk	0.66	240	iP	Pn	14 48 14.1	-0.6
CIRR				eS	Sn	14 48 24.7	-0.1
ZLN	Zelenaya	0.69	232	iP	Pn	14 48 14.5	-0.5
LGNR	Loginova	0.70	239	eP	Pn	14 48 14.8	-0.5
LGNR				eS	Sn	14 48 26.4	+0.5
KRSR	Krestovskiy	0.71	252	iP	Pn	14 48 14.4	-0.8
KRSR				eS	Sn	14 48 25.5	-0.2
BZGR	Bezymyannyi-Gr	0.79	230	iP	Pn	14 48 15.8	-0.4
BZGR				eS	Sn	14 48 28.1	+0.7
KIRR	Kirishev	0.94	239	iP	Pn	14 48 17.6	-0.5
KIRR				eS	Sn	14 48 31.2	+0.3
KPT	Kopyto	0.99	242	eS	Sn	14 48 33.1	+1.1
KMNR	Kamenistaya	1.10	232	eP	Pn	14 48 19.9	-0.3
KMNR				eS	Sn	14 48 35.5	+0.8
KOZ	Kozyrevsk	1.13	251	eP	Pn	14 48 20.4	-0.1
KOZ				eS	Sn	14 48 36.1	+1.0
SRDR	Sredinnyy	1.15	264	eP	Pn	14 48 20.3	-0.5
SRDR				eS	Sn	14 48 36.0	+0.3
TUMD	Tumrok D	1.47	212	eP	Pn	14 48 24.6	-0.4
TUMD				eS	Sn	14 48 43.1	-0.1
TUMR	Tumrok	1.48	219	eP	Pn	14 48 25.4	+0.1
ESO	Esso	1.79	254	eP	Pn	14 48 28.9	-0.5
ESO				eS	Sn	14 48 50.3	-0.8
BKI	Bering	2.68	116	eP	Pn	14 48 40.2	-1.2
BKI				eS	Sn	14 49 11.0	-1.6
PALN	Palana	2.82	341	eP	Pn	14 48 43.3	-0.1
OSSR	Ossora	2.90	13	eP	Pn	14 48 44.4	0.0
OSSR				eS	Sn	14 49 17.7	-0.2
SPN	Mys Shipunski	3.50	198	eP	Pn	14 48 51.3	-1.4
SPN				eS	Sn	14 49 31.7	-1.2
NLC	Nalytchevo	3.57	204	eP	Pn	14 48 53.9	+0.3
NLC				eS	Sn	14 49 35.2	+0.8
SDLR	Sedlovina	3.58	209	eP	Pn	14 48 54.8	+0.8
KRER	Koryakskii	3.60	210	eP	Pn	14 48 54.5	+0.3
AVH	Avacha	3.64	210	eP	Pn	14 48 56.0	+1.4
UGLR	Uglovaya	3.66	209	eP	Pn	14 48 56.0	+1.0
DALK	Dalny	3.84	208	eP	Pn	14 48 56.9	-0.4
PETK	Petropavlovsk-	4.09	217	P	Pn	14 49 00.7	-0.1
	0.7nm,0.3s,baz=63,slow=16,SNR=32						
KRMR	Karymshinskiy	4.20	212	eP	Pn	14 49 04.1	+1.9
KRMR				eS	Sn	14 49 51.1	+1.3
APC	Apacha	4.43	219	eP	Pn	14 49 05.6	+0.3
RUS	Russkaya	4.45	207	P	Pn	14 49 07.6	+2.0
GRL	Gorelyy	4.46	210	eP	Pn	14 49 06.6	+0.7
MTVR	Mutnovka	4.49	209	eP	Pn	14 49 07.6	+1.3
TILK	Tilichiki	4.62	28	eP	Pn	14 49 07.2	-0.8
ASAK	Asacha	4.66	211	eP	Pn	14 49 09.3	+0.7
KDTR	Khodutka, Kamc	5.13	207	eP	Pn	14 49 14.4	-0.5
KMSK	Kamenskaya	6.45	19	eP	Pn	14 49 33.9	+1.0
TIXI	Tiksi	20.53	331	P	P	14 52 34.7	+1.0
	0.9nm,0.5s,baz=155,slow=11,SNR=4.5						
ILAR	Eielson Array	25.83	50	P	P	14 53 25.5	-0.6
	0.6nm,0.7s,baz=254,slow=5.9,SNR=5.6						
INK	Inuvik	30.66	41	P	P	14 54 09.2	+0.3
	0.5nm,0.4s,baz=303,slow=5.4,SNR=4.2						
YKA	Yellowknife Ar	40.08	46	P	P	14 55 29.8	0.0
	0.8nm,0.7s,baz=299,slow=8.0,SNR=10						
NVAR	Mina Array Bea	53.77	73	P	P	14 57 18.0	+0.9
	0.7nm,0.6s,baz=320,slow=8.3,SNR=4.2						
PDAR	Pinedale Array	55.10	64	P	P	14 57 27.4	+0.7
	0.4nm,0.5s,baz=327,slow=2.9,SNR=5.4						
ULM	Lac du Bonnet	55.85	49	LR	LR	15 20 46.9	
	comp=Z,45nm,20.6s,baz=340,slow=35						
FINES	FINESS Array B	57.43	337	LR	LR	15 29 39.3	
	comp=Z,45nm,18.2s,baz=57,slow=44						
AKASG	Malin Array Be	66.23	329	P	P	14 58 40.9	-1.1
	0.2nm,0.3s,baz=32,slow=6.7,SNR=2.8						
AKASG				LR	LR	15 30 35.6	
	comp=Z,27nm,18.0s,baz=275,slow=39						
TXAR	Lajitas Array	68.48	69	P	P	14 58 56.7	0.0
	0.3nm,0.7s,baz=286,slow=4.0,SNR=4.7						
ASAR	Alice Springs	83.21	206	P	P	15 00 19.6	-0.8
	0.4nm,1.1s,baz=14,slow=4.8,SNR=3.7						

IDC 16 14:56:18.1±9.7, 10.54S×163.88E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/37, mbtmp3.7/3, Error ellipse: s-maj=296.4km s-min=53.1km az=123.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	29.95	248	P	P	15 02 29.5	+1.2
	0.8nm,0.8s,baz=81,slow=9.2,SNR=5.0						
ASAR	Alice Springs	31.40	242	P	P	15 02 40.1	-1.0
	0.8nm,0.8s,baz=64,slow=9.7,SNR=10						
MKAR	Makanchi Array	91.91	317	P	P	15 09 28.4	-0.1
	0.4nm,0.8s,baz=101,slow=6.3,SNR=4.3						

IDC 16 15:27:42.4±3.4, 5.76S×151.58E, h59km±24km, mb3.7/3, mb1 3.9/4, mb1mx3.3/52, mbtmp4.0/4, ML2.1/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/30, Error ellipse: s-maj=82.9km s-min=10.4km az=123.0
NEIC 16 15:27:42.8±1.4, 5.48S±0.08×151.4E±0.1, h63km±13km, mb4.4/9, Error ellipse: s-maj=19.7km s-min=8.7km az=114.0
ISC 16 15:27:42.9±0.8, 5.56S±0.09×151.4E±0.1, h57km, n19, σ1.10/19, mb4.3/6, New Britain region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.39	27	P	Pn	15 28 06.0	-0.1
	26nm,0.3s,baz=96,slow=1.4,SNR=26						
KRVT				S	Sn	15 28 26.1	+2.6
	208nm,0.3s,baz=162,slow=8.9,SNR=16						
RABL	Rabaul	1.56	29	Pn	Pn	15 28 07.6	-0.8
PMG	Port Moresby	5.68	227	P	Pn	15 29 06.0	+1.2
	3.6nm,0.3s,baz=34,slow=11,SNR=17						
PMG				S	Sn	15 30 08.6	-0.1
	3.8nm,0.3s,baz=119,slow=15,SNR=7.6						
PMG	Port Moresby	5.68	227		Pn	15 29 05.7	+0.9
HNR	Honiara	9.31	115	Pn	Pn	15 29 55.5	+1.1
SANVU	Saraoutou	18.37	124	P	Pn	15 31 52.6	-1.2
SANVU				IAmb	IAmb	15 32 32.1	
	comp=Z,31nm,1.2s						
WB0	Warramunga Arr	21.75	228	P	P	15 32 31.2	+1.4
WB0				IAmb	IAmb	15 33 19.9	
	comp=Z,32nm,1.9s						
WR0	Warramunga Arr	21.76	227	P	P	15 32 30.9	+0.9
WRAB	Tennant Creek	21.89	228	P	P	15 32 30.8	-0.6
WRAB				IAmb	IAmb	15 32 53.7	
	comp=Z,43nm,2.0s						
WB2	Warramunga Arr	21.89	228	P	P	15 32 31.3	-0.1
WB2				IAmb	IAmb	15 32 53.8	
	comp=Z,28nm,1.8s						
WRA	Warramunga Arr	21.90	228	P	P	15 32 30.6	-0.9
	comp=Z,2.2nm,0.5s,baz=54,slow=10.0,SNR=25						
KNRA	Kununurra	24.39	244	P	P	15 32 56.0	0.0
AS31	Alice Springs	24.65	221	P	P	15 32 58.1	-0.3
ASAR	Alice Springs	24.66	221	P	P	15 32 57.6	-0.9
	comp=Z,1.4nm,0.8s,baz=57,slow=9.1,SNR=25						
FITZ	Fitzroy Crossi	28.07	241	P	P	15 33 28.9	-0.3
	comp=Z,1.8nm,0.5s,baz=63,slow=9.1,SNR=6.7						
FITZ	Fitzroy Crossi	28.07	241	IAmb	IAmb	15 33 54.1	
	comp=Z,15nm,1.4s						
FORT	Forrest	33.33	218	P	P	15 34 14.1	-1.4
URZ	Urewera	40.06	148	LR	LR	15 49 52.9	
	comp=Z,60nm,19.0s,baz=176,slow=33						
TORD	Torodi Ar. Bea	149.20	286	PKPbc	PKPbc	15 47 25.6	-0.6
	comp=Z,1.0nm,0.6s,baz=90,slow=2.5,SNR=6.0						

IDC 16 15:31:15.8±1.6, 28.09N×139.43E, h413km±13km, mb3.2/7, mb1 3.2/9, mb1mx2.7/71, mbtmp3.9/9, Error ellipse: s-maj=53.1km s-min=22.7km az=46.0
NEIC 16 15:31:17.1±2.2, 28.2N±0.1×139.4E±0.2, h420km±10km, mb4.2/5, Error ellipse: s-maj=25.6km s-min=18.7km az=79.0
ISC 16 15:31:16.1±0.7, 28.3N±0.1×139.3E±0.1, h400km, n20, σ1.90/21, mb3.8/10, Bonin Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	2.82	114	P	Pn	15 32 19.1	+1.1
	28nm,0.3s,baz=280,slow=19,SNR=4.0						
JCJ				S	S	15 33 06.8	-1.1
	40nm,0.3s,baz=288,slow=21,SNR=6.2						
JHJ2	Mitsune	4.85	5	P	Pn	15 32 34.4	-2.1
INU	Inuyama	7.32	345	P	P	15 33 08.6	+4.7
MJAR	Matsushiro Arr	8.30	354	P	P	15 33 16.5	+1.7
	0.0nm,0.3s,baz=168,slow=11,SNR=5.1						
MAJO	Matsushiro	8.30	354	P	P	15 33 16.9	+2.2
MJB9	Matsu-Tunnel	8.31	354	P	P	15 33 16.8	+2.0
KLR	Kul'dur	21.72	347	P	P	15 35 37.5	+1.5
	0.8nm,0.5s,baz=170,slow=6.1,SNR=5.5						
ENH	Enshi	26.04	282	P	P	15 36 14.9	-0.2
ENH				IAmb	IAmb	15 36 37.5	
	comp=Z,9.5nm,0.8s						
ZALV	Zalesovo Beam	46.92	319	P	P	15 39 07.3	-1.0
	comp=Z,0.8nm,0.7s,baz=83,slow=12,SNR=6.2						
WB0	Warramunga Arr	47.98	186	P	P	15 39 16.2	-0.6
WB0				IAmb	IAmb	15 39 33.7	
	comp=Z,13nm,1.4s						
WR0	Warramunga Arr	48.16	186	P	P	15 39 17.4	-0.7
WR0				IAmb	IAmb	15 39 40.8	
	comp=Z,31nm,2.0s						
NRN	Naryn	52.50	302	P	P	15 39 49.6	-0.8
RES	Resolute Bay	71.52	13	P	P	15 41 53.9	-0.4
ARCES	ARCESS Array B	71.58	340	P	P	15 41 55.4	+0.6
	comp=Z,1.7nm,0.7s,baz=64,slow=7.2,SNR=5.6						
YKA	Yellowknife Ar	72.33	28	P	P	15 41 57.4	-1.8
	comp=Z,0.3nm,0.5s,baz=295,slow=5.8,SNR=4.8						
FINES	FINESS Array B	75.75	333	P	P	15 42 18.5	-0.3
	comp=Z,0.6nm,0.3s,baz=70,slow=4.2,SNR=13						
HFS	Hagfors	81.32	336	P	P	15 42 48.3	-0.6
	comp=Z,2.6nm,0.9s,baz=35,slow=5.3,SNR=4.0						
NOA	NORSAR Array B	81.56	337	P	P	15 42 49.6	-0.6
	comp=Z,0.4nm,0.5s,baz=52,slow=6.4,SNR=2.5						
LPAZ	La Paz	152.04	71	PKPbc	PKPbc	15 50 24.6	-1.6
	comp=Z,0.5nm,0.5s,baz=284,slow=7.6,SNR=2.8						
LPAZ	La Paz	152.04	71		PKPdf	15 50 22.8	+3.5

IDC 16 15:33:40.6±2.0, 67.54N×158.38W, h0km, mb3.2/1, mb1 3.5/4, mb1mx3.1/68, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=60.4km s-min=22.7km az=19.0
AEIC 16 15:33:44.5±1.3, 67.26N±0.06×157.4W±0.1, h23km±7km, ML3.0/41, Error ellipse: s-maj=9.5km s-min=5.3km az=213.0
NEIC 16 15:33:44.0±1.2, 67.36N±0.07×157.6W±0.1, h25km±6km, Error ellipse: s-maj=9.9km s-min=5.3km az=199.0
ISC 16 15:33:41.6±1.0, 67.35N±0.07×157.64W±0.06, h10km, n48, σ1.14/56, Northern Alaska

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IM03		2.07	130		Pn	15 34 16.4	+0.1
IM03					Sn	15 34 42.7	+0.6
RDOG	Red Dog Mine	2.13	292		Pb	15 34 20.2	0.0
RDOG					LR	15 34 48.4	
PS05	TAPS Pump Stn5	2.78	98		Pn	15 34 26.7	+0.5
PS05					Sn	15 35 00.2	+0.5
COLD	Coldfoot	2.89	89		Pn	15 34 28.1	+0.5
MLY	Manley	3.64	127	Pn	Pn	15 34 38.1	+0.1
MLY	Manley	3.64	127		Sn	15 35 18.7	-2.2
CHUM	Lake Minchumin	4.12	145		Pn	15 34 45.7	+1.2
CHUM					Sn	15 35 31.1	-1.6
ANM	Nome	4.22	232		Pn	15 34 48.1	+2.2
BPAW	Bear Paw Mtn.	4.26	137		Pn	15 34 47.1	+0.6
BPAW					Sn	15 35 35.9	-0.4
NEA	Nenana	4.47	125		Pn	15 34 50.3	+0.9
NEA					Sn	15 35 39.7	-1.6
TTA	Tatalina	4.49	170		Pn	15 34 50.1	+0.4
MDM	Murphy Dome	4.51	118		Pn	15 34 50.2	+0.4
TT01	Tatalina	4.52	171		Pn	15 34 50.2	+0.3
BWN	Browne	4.64	130		Pn	15 34 53.1	+1.4
COLA	College	4.69	117		Pn	15 34 52.4	+0.1
COLA					Sn	15 35 46.1	-0.5
POKR	Poker Plat Res	4.70	114		Pn	15 34 52.4	0.0
KTH	Kantishna Hill	4.73	141		Pn	15 34 53.6	+0.7
CCB	Clear Creek Bu	4.84	119		Pn	15 34 54.4	-0.1
WRH	Wood River Hil	4.86	122		Pn	15 34 54.9	+0.2
TRF	Thorofare Moun	4.97	138		Pn	15 34 57.2	+0.8
PPLA	Purkeypile	5.03	150		Pn	15 34 58.0	+0.8
IL31		5.08	116		Pn	15 34 57.8	+0.1
ILAR	Eielson Array	5.08	116	Pn	Pn	15 34 57.8	0.0
	2.1nm,0.3s,baz=309,slow=14,SNR=63						
ILAR				Sn	Sn	15 35 54.2	-2.2
	0.8nm,0.3s,baz=247,slow=14,SNR=4.9						
MCK	McKinley	5.12	131		Pn	15 34 58.6	+0.3
PRP	Porcupine Dome	5.20	105		Pn	15 34 59.2	-0.2
PS08	TAPS Pump Stn8	5.24	117		Pn	15 35 00.5	+0.6
HDA	Harding Lake	5.28	119		Pn	15 35 01.0	+0.6

RND	Reindeer	5.40	133		Pn	15 35 03.2	+1.0
HUR	Hurricane	5.53	139		Pn	15 35 05.5	+1.6
WAT2	Susitna Watana	5.82	135		Pn	15 35 09.3	+1.3
WAT1	Susitna Watana	5.94	136		Pn	15 35 10.5	+1.0
SKT	Skwentna	5.99	151		Pn	15 35 11.4	+1.2
DHY	Denali Highway	6.08	130		Pn	15 35 12.8	+1.3
SVW2	Sparrevohn	6.34	171		Pn	15 35 16.0	+1.0
RIDG	Independent Ri	6.42	118	Pn	Pn	15 35 16.3	+0.2
SCRK	Sand Creek	6.57	115	Pn	Pn	15 35 18.7	+0.4
SUA	Susitna One	6.62	150	Pn	Pn	15 35 18.4	-0.5
PAX	Paxson	6.75	125	Pn	Pn	15 35 20.0	-0.6
DOT	Dot Lake	6.75	117	Pn	Pn	15 35 20.3	-0.3
PMR	Palmer	6.84	144	Pn	Pn	15 35 22.6	+0.7
SML	Sawmill	6.85	140	Pn	Pn	15 35 22.4	+0.4
SCM	Sheep Creek Mo	7.09	137	Pn	Pn	15 35 25.7	+0.4
EGAK	Eagle	7.18	103	Pn	Pn	15 35 26.9	+0.4
RSO	Redoubt South	7.24	160	Pn	Pn	15 35 28.3	+0.7
INK	Inuvik	9.14	73	Pn	Pn	15 35 56.4	+3.1
	0.1nm,0.3s,baz=276,slow=11,SNR=7.7						
INK				Sn	Sn	15 37 35.0	-1.0
	0.1nm,0.3s,baz=203,slow=15,SNR=2.2						
INK	Inuvik	9.14	73		Pn	15 35 55.8	+2.5
YKA	Yellowknife Ar	18.56	85	P	Pn	15 38 01.0	+2.7
	0.1nm,0.3s,baz=304,slow=11,SNR=7.5						
MKAR	Makanchi Array	57.55	315	P	P	15 43 28.9	-1.9
	0.1nm,0.4s,baz=27,slow=12,SNR=7.9						

JMA 16 15:38:11.0±0.1, 24.°24N×122.°16E, h58km±2km, M2.0
TAP 16 15:38:11.9, 24.°29N×122.°12E, h52km±1km, ML2.6, D
ISC 16 15:38:12.0±1.3, 24.°31N±0.°05×122.°18E±0.°03, h52km±10km, n43, σ0.s56/67, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
EOS1	EOS1	0.24	349	eP	Pn	15 38 21.1	+0.3
	baz=2.0						
EOS1				eS	Sn	15 38 28.2	+1.1
	baz=2.0						
ENA	Nanau	0.41	287	eP	Pn	15 38 22.4	0.0
	baz=292						
ENA				eS	Sn	15 38 30.1	+0.2
	baz=292						
TWC	Suao	0.42	315	eP	Pn	15 38 22.4	-0.1
	baz=323						
TWC				eS	Sn	15 38 29.9	-0.2
	baz=323						
NACB	Ninganchiao	0.55	256	eP	Pn	15 38 23.4	-0.6
	baz=256						
NACB				eS	Sn	15 38 32.1	-0.4
	baz=256						
TWD	Chiawan	0.58	247	eP	Pn	15 38 23.8	-0.5
	baz=246						
TWD				eS	Sn	15 38 32.9	-0.3
	baz=246						
TWE	Neicheng	0.62	312	P	Pn	15 38 24.9	+0.1
	baz=317						
TWE				eS	Sn	15 38 34.4	+0.3
	baz=317						
ETLH	Xiulin Townshi	0.64	261	P	Pn	15 38 24.8	-0.4
	baz=261						
ETLH				eS	Sn	15 38 34.3	-0.5
	baz=261						
ENTT	Nioudou	0.65	301	P	Pn	15 38 25.2	0.0
	baz=305						
ENTT				eS	Sn	15 38 35.1	+0.4
	baz=305						
SLBB	Yuanshan	0.66	312	eP	Pn	15 38 25.6	+0.2
	baz=316						
NDT	Datong Townshi	0.67	296	eP	Pn	15 38 25.5	0.0
	baz=299						
NDT				eS	Sn	15 38 35.2	-0.1
	baz=299						
JYNG	Yonagunijimaku	0.71	78	P	Pn	15 38 25.9	-0.1
JYNG				eS	Sn	15 38 36.4	+0.2
TIPB	Shuangxi	0.73	334	eP	Pn	15 38 25.8	-0.5
	baz=338						
TIPB				eS	Sn	15 38 36.1	-0.6
	baz=338						
NNSB	Datong	0.73	279	eP	Pn	15 38 26.0	-0.4
	baz=281						
NNSH	Datong	0.73	279	eP	Pn	15 38 26.0	-0.4
	baz=281						
NNS	Nan Shan	0.74	280	eP	Pn	15 38 26.0	-0.5
	baz=282						
NWLT	Wulai	0.77	307	eP	Pn	15 38 26.8	0.0
	baz=310						
NWLT				eS	Sn	15 38 37.6	+0.1
	baz=310						
YOJ	Yonaguni jima	0.78	79	P	Pn	15 38 26.6	-0.2
YOJ				eS	Sn	15 38 37.8	+0.2
YHNB	Yeheng	0.81	296	P	Pn	15 38 27.2	-0.2
	baz=299						
YHNB				eS	Sn	15 38 38.0	-0.6
	baz=299						
NSK	Sanguang	0.83	296	eP	Pn	15 38 27.3	-0.3
	baz=299						
WHF	Hehuan Shan	0.85	259	eP	Pn	15 38 27.9	-0.3
	baz=259						
TWT	Tachien	0.92	267	P	Pn	15 38 29.3	+0.5
	baz=267						
TWT				S	Sn	15 38 41.3	+0.1
	baz=267						
TDCB	Techi	0.93	267	P	Pn	15 38 29.1	+0.1
	baz=267						
TDCB				eS	Sn	15 38 41.0	-0.5
	baz=267						
CHGB	Renai	0.95	255	eP	Pn	15 38 29.2	-0.1
	baz=255						
CHGB				eS	Sn	15 38 40.9	-1.1
	baz=255						
OWD	Renai	0.98	249	eP	Pn	15 38 29.2	-0.4
	baz=248						
OWD				eS	Sn	15 38 41.5	-1.1
	baz=248						
YM10	YM10	1.01	326	eP	Pn	15 38 29.1	-0.9
	baz=329						
VWDT	VWDT	1.10	240	P	Pn	15 38 31.0	0.0
	baz=239						
VWDT				eS	Sn	15 38 44.2	-1.0
	baz=239						
LIOB	Emei	1.11	288	eP	Pn	15 38 31.6	+0.3
	baz=289						
NSTT	Nanjuang	1.12	287	eP	Pn	15 38 31.4	0.0
	baz=288						
NSTT				eS	Sn	15 38 46.9	+1.2
	baz=288						
WHP	Taichung City	1.12	269	eP	Pn	15 38 32.4	+0.9
	baz=269						
WHP				eS	Sn	15 38 46.2	+0.2
	baz=269						
DPDB	Guoxing	1.18	257	eP	Pn	15 38 32.5	+0.3
	baz=256						
DPDB				eS	Sn	15 38 48.4	+1.2
	baz=256						
YULB	Yu-li	1.22	222	eP	Pn	15 38 31.6	-1.1
	baz=219						
SSLB	Suanglung	1.23	245	eP	Pn	15 38 32.8	-0.2
	baz=244						
TYC	Yuchr	1.27	252	eP	Pn	15 38 33.8	+0.4
	baz=251						
WHYT	Xinyi Township	1.36	244	eP	Pn	15 38 35.2	+0.6
	baz=242						
FULB	Fuli	1.37	216	eP	Pn	15 38 35.5	+0.7
	baz=214						
IRIF	Iriomote-Funau	1.42	89	P	Pn	15 38 35.2	-0.2
IRIF				eS	Sn	15 38 52.9	0.0
ALS	Alishan	1.49	238	eP	Pn	15 38 37.4	+0.8
	baz=236						
CHN5	Tsauling	1.54	243	eP	Pn	15 38 38.3	+1.1
	baz=242						
JKRS	Kuro-shima	1.67	92	P	Pn	15 38 39.2	+0.3
TPUB	Ta-pu	1.74	235	eP	Pn	15 38 40.9	+1.1
	baz=234						
JIJ	Ishigaki jima	1.79	88	P	Pn	15 38 40.3	-0.2
JIJ				eS	Sn	15 39 01.9	-0.3
JISG	Ishigakijimahi	1.96	81	P	Pn	15 38 42.3	-0.6
JTJ	Tarama	2.32	81	P	Pn	15 38 48.0	+0.2

NIED 16 15:54:00, 36.°60N×142.°90E, h5km, Mw3.9 Best double couple: Mo7.53000×10^14 NP1:φs33.00000°, δ60.00000°, λ99.00000°. NP2:φs196.00000°, δ31.00000°, λ75.00000°.
IDC 16 15:54:44.1±0.9, 36.°31N×143.°03E, h0km, mb3.7/10, mb1 3.9/14, mb1mx3.7/42, mbtmp3.7/14, ML2.8/4, MS3.1/7, Ms1 3.1/7, ms1mx2.8/39, Error ellipse: s-maj=22.0km s-min=18.4km az=102.0
JMA 16 15:54:47.2±0.2, 36.°64N×142.°91E, h33km, M3.8
NEIC 16 15:54:50.4±1.7, 36.°51N±0.°08×142.°95E±0.°09, h36km±8km, mb4.7/7, Error ellipse: s-maj=12.4km s-min=9.8km az=146.0
ISC 16 15:54:49.3±0.8, 36.°62N±0.°05×142.°90E±0.°07, h29km, n55, σ1.s56/53, mb3.8/14, MS3.2/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
ONAJ	Iwakimizuishiy	1.75	286	P	Pn	15 55 16.8	-0.9
JFK	Kawauchi	1.78	295	P	Pn	15 55 16.5	-1.6
JFK				S	Sn	15 55 37.9	-1.9
JHO	Hitachi	1.88	270	P	Pn	15 55 17.9	-1.5
JHYU	Hitachinakayam	1.89	262	P	Pn	15 55 18.5	-1.0
JHYU				S	Sn	15 55 41.7	-0.6
JMST	Minamisoumatoc	1.95	305	P	Pn	15 55 19.0	-1.3
JFT	Otama	2.23	294	P	Pn	15 55 23.7	-0.6
JFT				eS	Sn	15 55 50.3	-0.7
BSO1	Boso 1	2.51	219	P	Pn	15 55 27.5	-0.1
BSO1				eS	Sn	15 55 57.3	+0.3
JMK	Ichinoseki	2.68	331	P	Pn	15 55 29.5	-0.9
JMK				S	Sn	15 56 00.4	-1.4
JAG	Ashikaga	2.78	267	P	Pn	15 55 31.3	-0.6
JYK	Kaneyama	3.05	319	P	Pn	15 55 34.8	-0.7
JOM	Ohasama	3.11	336	eS	Sn	15 56 11.9	-0.7
JRY	Ryogami san	3.29	261	P	Pn	15 55 37.9	-0.9
JOD2	Odawara 2	3.38	247	S	Sn	15 56 18.4	-0.8
JYN	Shimob	3.70	254	P	Pn	15 55 44.7	+0.1
MJAR	Matsushiro Arr	3.78	270	Pn	Pn	15 55 45.5	0.0
	0.9nm,0.3s,baz=78,slow=30,SNR=68						
MJAR				LR	LR	15 57 29.2	
	comp=Z,156nm,19.1s,baz=95,slow=43						
MAJO	Matsushiro	3.78	270		Pn	15 55 46.1	+0.6
MAT	Matsushiro	3.78	270	P	Pn	15 55 46.1	+0.5
MAT	Matsushiro	3.78	270	P	Pn	15 55 46.2	+0.6
MAT				eS	Sn	15 56 29.8	+0.8
MJB9	Matsu-Tunnel	3.78	270		Pn	15 55 46.1	+0.6
JHJ2	Mitsune	4.32	217	Pn	Pn	15 55 54.3	+1.2
JHJ	Hachijo jima 2	4.33	217	Pn	Pn	15 55 52.2	-0.9
	28nm,0.3s,baz=73,slow=19,SNR=3.0						
JHJ				Sn	Sn	15 56 37.5	-5.3
	20nm,0.3s,baz=252,slow=19,SNR=3.6						
INU	Inuyama	4.94	257		Pn	15 56 02.3	+0.8
ERM	Erimo	5.39	2	Pn	Pn	15 56 07.6	0.0
JKA	Kamikawa-asahi	7.49	358		Pn	15 56 35.8	-0.7
JKA					Sn	15 57 57.4	-3.0
ASAJ	Asahikawa	7.49	358	Pn	Pn	15 56 35.8	-0.7
	1.8nm,0.3s,baz=219,slow=14,SNR=26						
ASAJ				Sn	Sn	15 57 57.4	-3.0
	0.7nm,0.3s,baz=16,slow=20,SNR=3.5						
USRK	Ussuriysk Ar.	11.24	316	Pn	Pn	15 57 30.4	+2.6
	baz=118,slow=14,SNR=2.6						
KSRS	Korea Array	12.00	278	Pn	Pn	15 57 40.3	+2.0
	0.1nm,0.3s,baz=95,slow=14,SNR=6.2						
KSRS				LR	LR	16 02 48.7	
	comp=Z,62nm,18.5s,baz=48,slow=40						
KLR	Kul'dur	14.99	331	Pn	P	15 58 21.9	-2.3
	0.1nm,0.3s,baz=184,slow=13,SNR=3.5						
KLR				LR	LR	16 04 10.1	
	comp=Z,42nm,18.3s,baz=162,slow=37						
MA2	Magadan	23.53	10	P	P	15 59 56.6	-0.1
	2.9nm,0.9s,baz=143,slow=9.0,SNR=4.2						
MA2	Magadan	23.53	10	IAmb	IAmb	15 59 59.2	
	comp=Z,51nm,2.0s						
H11N2	WAKE ISLAND Hy	26.92	122	T	T	16 28 38.0	
	baz=314,slow=75,SNR=3.8						
H11N1	WAKE ISLAND Hy	26.93	122	T	T	16 28 40.1	
	baz=314,slow=75,SNR=5.8						
H11N3	WAKE ISLAND Hy	26.94	122	T	T	16 28 43.9	
	baz=314,slow=75,SNR=6.5						
SEY	Seymchan	26.98	10	P	P	16 00 30.5	+2.4
	comp=Z,0.9nm,0.6s,baz=145,slow=8.9,SNR=6.6						
H11S1	WAKE ISLAND Hy	27.64	124	T	T	16 29 31.6	
	baz=316,slow=76,SNR=5.8						
H11S3	WAKE ISLAND Hy	27.64	124	T	T	16 29 36.5	
	baz=316,slow=76,SNR=4.9						
H11S2	WAKE ISLAND Hy	27.66	124	T	T	16 29 39.1	
	baz=316,slow=76,SNR=5.6						
XAN	Xi'an	27.76	275	P	P	16 00 36.1	+0.6
XAN				IAmb	IAmb	16 00 39.6	
	comp=Z,30nm,1.9s						
ENH	Enshi	28.49	267	P	P	16 00 42.6	+0.5
ENH				IAmb	IAmb	16 01 10.3	
	comp=Z,42nm,1.9s						
SONM	Songino Array	29.00	304	P	P	16 00 48.0	+1.5
	comp=Z,4.3nm,1.2s,baz=111,slow=7.4,SNR=13						
TLY	Talaya	31.50	311	LR	LR	16 13 29.3	
	comp=Z,24nm,19.8s,baz=105,slow=35						
AKUT	Akutan	39.10	47	P	P	16 02 12.9	-0.8
CMAR	Chiang Mai Arr	42.56	257	LR	LR	16 23 38.4	
	comp=Z,17nm,18.3s,baz=185,slow=41						
ZALV	Zalesovo Beam	43.07	313	P	P	16 02 47.6	+1.3
	comp=Z,0.3nm,0.3s,baz=88,slow=3.6,SNR=2.9						
MK31	Makanchi Array	45.34	303	P	P	16 03 05.6	+0.9
MKAR	Makanchi Array	45.34	303	P	P	16 03 05.8	+1.0
	comp=Z,0.7nm,0.7s,baz=88,slow=10.0,SNR=11						
KURK	Kurchatov	47.12	309	P	P	16 03 19.1	+0.5
KURK				IAmb	IAmb	16 03 20.2	
	comp=Z,3.8nm,0.8s						
IL31		49.20	32	P	P	16 03 35.3	+0.9
IL31				IAmb	IAmb	16 04 46.2	
	comp=Z,15nm,1.6s						
ILAR	Eielson Array	49.20	32	P	P	16 03 35.9	+1.4
	comp=Z,0.7nm,0.8s,baz=259,slow=6.4,SNR=8.4						
WRA	Warramunga Arr	56.84	190	P	P	16 04 28.0	-3.1
	comp=Z,0.7nm,0.9s,baz=6.5,slow=6.9,SNR=2.9						
ASAR	Alice Springs	60.56	189	P	P	16 04 54.4	-2.7
	comp=Z,0.4nm,0.7s,baz=1.2,slow=6.7,SNR=5.5						
YKA	Yellowknife Ar	63.56	30	P	P	16 05 18.2	+1.5
	comp=Z,0.3nm,0.7s,baz=298,slow=6.4,SNR=5.6						
NOA	NORSAR Array B	75.02	338	LR	LR	16 42 43.2	
	comp=Z,25nm,18.2s,baz=190,slow=38						
AKASG	Malin Array Be	75.34	323	P	P	16 06 30.3	+0.6
	comp=Z,0.7nm,0.6s,baz=43,slow=5.8,SNR=5.2						
PFO	Pinyon Flats O	78.27	57	LR	LR	16 33 56.5	
	comp=Z,21nm,19.7s,baz=56,slow=30						

IDC 16 16:01:25.2±11.0, 6.°30S×129.°96E, h75km±115km, mb3.2/2, mb1 3.6/4, mb1mx3.2/29, mbtmp3.7/4, ML3.8/2, Error ellipse: s-maj=129.3km s-min=39.0km az=62.0
NEIC 16 16:01:26.3±2.5, 6.°17S±0.°10×130.°3E±0.°1, h115km±9km, mb4.2/3, Error ellipse: s-maj=16.2km s-min=13.1km az=61.0
ISC 16 16:01:26.2±0.8, 6.°25S±0.°06×130.°5E±0.°1, h100km, n17, σ1.s87/18, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
SAUI	Saumlaki	1.91	155	Pn	Pn	16 02 03.3	+5.7
FAKI	Fak Fak	3.75	28	Pn	Pn	16 02 22.6	+0.5
FAKI				Sn	Sn	16 03 04.2	-1.1
SOEI	Soe	7.07	240	Pn	Pn	16 03 09.9	+2.8
KNRA	Kununurra	9.52	190	Pn	Pn	16 03 41.1	+0.7
KNRA					Sn	16 05 23.1	-2.5
FITZ	Fitzroy Crossi	12.69	201	Pn	Pn	16 04 22.1	-1.0
WB0	Warramunga Arr	13.97	165	Pn	Pn	16 04 39.5	-0.3
WRAB	Tennant Creek	14.12	165	Pn	Pn	16 04 41.8	+0.1
WRA	Warramunga Arr	14.12	165	P	Pn	16 04 41.2	-0.6
	0.4nm,0.3s,baz=345,slow=12,SNR=29						
WRA				S	Sn	16 07 11.1	-6.3
	0.7nm,0.3s,baz=345,slow=22,SNR=13						
WB2	Warramunga Arr	14.13	165	Pn	Pn	16 04 42.3	+0.4
WR0	Warramunga Arr	14.19	164	Pn	Pn	16 04 44.1	+1.4
COEN	Coen	14.66	122		P	16 04 53.1	+0.9
ASAR	Alice Springs	17.63	170	P	Pn	16 05 27.4	+1.9
	0.4nm,0.3s,baz=353,slow=9.5,SNR=5.9						
ASAR				S	Sn	16 08 39.2	-2.8
	0.2nm,0.3s,baz=359,slow=27,SNR=5.5						
STKA	Stephens Creek	27.54	159	P	P	16 07 05.9	+2.3
	0.4nm,0.3s,baz=331,slow=12,SNR=5.5						
STKA	Stephens Creek	27.54	159	IAmb	IAmb	16 07 21.6	
	comp=Z,5.8nm,1.9s						
MKAR	Makanchi Array	67.86	326	P	P	16 12 14.3	+0.5
	comp=Z,0.2nm,0.6s,baz=122,slow=5.2,SNR=3.3						
KK31	Karatay Array	73.09	318	P	P	16 12 43.0	-2.6
KK31				IAmb	IAmb	16 15 15.1	
	comp=Z,9.2nm,1.8s						
KKAR	Karatay Array	73.09	318	P	P	16 12 42.9	-2.8
KKAR				IAmb	IAmb	16 15 15.1	
	comp=Z,9.2nm,1.8s						

NCEDC 16 16:31:04.5±2.0, 35.°87N±0.°01×121.°49W±0.°02, h10km±5km, ML3.2/26, Error ellipse: s-maj=2.8km s-min=1.5km az=68.0
NEIC 16 16:31:03.9±1.0, 35.°85N±0.°02×121.°54W±0.°04, h18km±3km, Error ellipse: s-maj=5.4km s-min=2.1km az=59.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
PAPM	Alder Peak	0.15	67		Pg	16 31 07.2	-0.3
BAPM	Anderson Peak	0.33	345		Pb	16 31 11.6	+0.1
PHCM	Hearst Castle	0.36	118		Pg	16 31 11.5	0.0
PCCM	Crazy Canyon	0.39	52		Pg	16 31 11.7	-0.3
PHSB	Hesperia Broad	0.39	94		Pg	16 31 11.8	-0.3
PHSB					Sg	16 31 17.5	-0.2
BPOM	Post Ranch	0.42	334		Pb	16 31 13.4	+0.5
PCBM	Cambria	0.51	131		Pg	16 31 14.1	-0.1
PANM	San Antonio Re	0.52	98		Pb	16 31 14.2	-0.2
HAST	Hastings Reser	0.54	359		Pb	16 31 14.8	0.0
HAST					Sb	16 31 22.2	+0.1
BSMM	Soledad Missio	0.54	10		Pb	16 31 14.6	-0.1
PSAM	San Ardo	0.56	72		Pg	16 31 14.6	-0.4
LRC	Lone Oak Road	0.56	45		Pg	16 31 14.8	-0.4
RAMR	Ramage Ranch	0.58	111		Pg	16 31 15.8	+0.2
ARDC	Alexander Ranc	0.60	130		Pb	16 31 15.7	-0.1
ARDC					Sb	16 31 24.3	+0.4
BLDC	Black Mountain	0.60	122		Pg	16 31 15.9	0.0
BLDC	Black Mountain	0.60	122		Pg	16 31 16.4	+0.4
BLDC					Sb	16 31 25.1	+1.1
PMPB	Monarch Peak	0.70	59		Pb	16 31 17.3	-0.2
BJCM	Johnson Can.	0.70	10		Pb	16 31 17.6	0.0
BPIM	Pinnacles	0.70	25		Pb	16 31 17.2	-0.4
LRV	Little Rabbit	0.71	36		Pb	16 31 17.7	0.0
BPCNC	Pine Canyon	0.72	354		Pb	16 31 18.3	+0.1
PPO	Portuguese Can	0.75	89		Pg	16 31 18.6	-0.1
SCZ	Santa Cruz	0.75	8		Pb	16 31 18.5	0.0
BBNM	San Benito	0.76	30		Pb	16 31 18.6	-0.1
LSDC	Los Osos Digit	0.79	134		Pg	16 31 19.4	0.0
BJOM	Mount Johnson	0.80	13		Pb	16 31 18.9	-0.3
HMOM	Monterey	0.81	338		Pb	16 31 19.8	0.0
BSRM	Salinas Radio	0.81	1		Pb	16 31 19.8	0.0
PKD	Bear Valley Ra	0.81	83		Pb	16 31 19.1	-0.4
PVCM	Vineyard Canyo	0.82	85		Pb	16 31 19.3	-0.3
PTAM	Tassajara Cree	0.82	124		Pb	16 31 19.7	+0.1
VPDC	Valencia Peak	0.82	138		Pb	16 31 19.2	-0.4
BBGB	Big Mountain B	0.83	29		Pb	16 31 20.3	+0.2
PWKM	Work Ranch	0.83	92		Pb	16 31 20.1	-0.2
BLRM	Lewis Ranch	0.84	15		Pb	16 31 20.0	0.0
PSTM	Stockdale Moun	0.84	85		Pb	16 31 19.5	-0.5
EFD	Emergency Oper	0.85	128		Pb	16 31 19.9	-0.2
BEHM	Elkhorn Ranch	0.86	20		Pb	16 31 21.0	-0.2
BCGM	Cienega Road	0.87	10		Pb	16 31 20.6	+0.1
DPD	Davis Peak	0.87	135		Pb	16 31 20.2	-0.3
BEMM	Emmet	0.88	24		Pb	16 31 21.2	+0.1
BAVM	Antelope Valle	0.89	27		Pb	16 31 21.2	-0.1
BVYM	Vineyard	0.90	6		Pb	16 31 21.1	+0.1
FRP	Fremont Peak	0.90	2		Pb	16 31 21.2	+0.2
BHRM	Hodges Ranch	0.90	14		Pb	16 31 21.7	0.0
SAO	San Andreas Ge	0.91	5	Pg	Pb	16 31 21.1	-0.1
PCMM	Cholame Hills	0.92	93		Pb	16 31 21.4	+0.1
PHFM	Heflinger Ranc	0.92	88		Pb	16 31 21.4	0.0
BSLM	Silva Ranch	0.93	9		Pb	16 31 22.5	+0.4
TCHL	Shandon	0.94	100		Pb	16 31 21.9	+0.2
HJGM	San Juan Grade	0.94	358		Pb	16 31 22.1	-0.2
HERM	Elkhorn Road	0.95	352		Pb	16 31 22.4	0.0
PMCM	McMillan Canyo	0.96	97		Pb	16 31 22.1	+0.1
GHC	Gold Hill	0.96	91		Pb	16 31 21.8	-0.2
HTUM	Tustin Road	0.98	355		Pb	16 31 22.6	-0.1
PKLM	Kerr Lake	0.98	94		Pb	16 31 22.2	-0.1
CTM	Castle Mountai	0.98	85		Pb	16 31 22.6	-0.2
MOBB	Monterey Bay O	0.98	329		Pb	16 31 23.4	+0.5
HJSM	John Smith Roa	0.98	11		Pb	16 31 23.2	+0.2
HBTM	San Juan Bauti	1.00	359		Pn	16 31 23.1	+0.1
BMSM	Mercy Hot Spri	1.00	37		Pb	16 31 23.8	+0.4
PSNM	Stone Corral	1.01	93		Pb	16 31 22.5	-0.4
TSCN	Private Proper	1.02	107		Pb	16 31 22.8	-0.1
PSRM	Scobie Ranch	1.02	89		Pb	16 31 22.7	-0.4
ANZ	Anzar Road	1.03	358		Pn	16 31 23.4	0.0
HCOM	Corn Cob Canyo	1.04	352		Pn	16 31 23.9	-0.3
TRAM	Private Proper	1.04	99		Pb	16 31 23.2	-0.3
HLTM	Lone Tree Road	1.05	10		Pn	16 31 23.9	+0.3
PARM	Anticline Ridg	1.05	67		Pb	16 31 22.0	-1.5
PAGB	Antelope Grade	1.05	96		Pb	16 31 23.1	-0.5
PMRM	Maxey Ranch	1.06	93		Pb	16 31 23.2	-0.5
OCR	O'Connell Ranc	1.06	1		Pg	16 31 24.9	+0.4
THIS	South End of C	1.07	96		Pb	16 31 23.5	-0.5
PTRM	Twissleman Ran	1.10	100		Pb	16 31 23.9	-0.5
JELB	Ellicott, Sant	1.10	348		Pg	16 31 25.2	0.0
HFEM	San Felipe	1.13	6		Pb	16 31 25.0	0.0
BRMM	Rolling Bench	1.14	30		Pn	16 31 26.1	+0.1
CDC	Canada Road	1.17	2		Pb	16 31 25.9	+0.3
PACP	Pacheco Peak	1.17	10		Pg	16 31 26.2	-0.4
PKEM	Kettleman Hill	1.18	79		Pn	16 31 25.3	-0.2
HLPM	Lions Peak	1.19	356		Pn	16 31 25.7	+0.1
JTGM	Trout Gulch Ro	1.21	347		Pn	16 31 26.0	+0.1
PWMM	Westland Maint	1.22	61		Pn	16 31 24.9	-1.1
PMLM	Mount Lospe	1.22	141		Pn	16 31 25.2	-0.8
HPCM	Pacheco Lake	1.22	10		Pn	16 31 26.5	0.0
SFJWR	San Luis Fatjo	1.23	14		Pn	16 31 26.5	-0.1
JRGM	Rodeo Gulch Ro	1.23	344		Pn	16 31 26.2	-0.1
SLD	San Luis Dam	1.25	12		Pn	16 31 26.9	-0.1
JHLM	Holstrom Ranch	1.28	349		Pn	16 31 26.8	-0.1
JLAB	Laurel Hill	1.31	353		Pn	16 31 27.3	0.0
CADM	Anderson Res.	1.31	357		Pn	16 31 27.4	+0.1
AMC	Almaden	1.33	349		Pn	16 31 27.3	-0.2
JUMM	Mount Umunhum	1.34	348		Pn	16 31 27.5	-0.3
JBNB	Ben Lomond Mou	1.36	339		Pn	16 31 27.7	-0.4
JSTM	Santa Teresa H	1.37	351		Pn	16 31 28.0	-0.1
SMMC	Simmler	1.37	113		Pn	16 31 27.8	-0.3
CCOB	Coe Ranch Numb	1.41	356		Pn	16 31 29.3	-0.4
CARC	Carrizo Plain	1.48	111		Pn	16 31 29.4	-0.4
JSGM	Saratoga Golf	1.49	344		Pn	16 31 29.9	+0.2
MHC	Mount Hamilton	1.49	357		Pn	16 31 30.4	+0.5
ARN	Arnold Ranch	1.49	0		Pn	16 31 30.2	+0.3
JJRM	Joaquin Road	1.58	340		Pn	16 31 31.0	-0.1
JFP	Foothills Park	1.59	341		Pn	16 31 30.9	-0.3
CMMM	Mount Mocho	1.60	1		Pn	16 31 31.9	+0.5
CMLM	Mount Lewis	1.62	357		Pn	16 31 32.2	+0.5
JSFB	Stanford Teles	1.63	342		Pn	16 31 32.4	+0.7
JRSC	Jasper Ridge	1.65	340		Pn	16 31 31.8	-0.1
CMJM	Mission San Jo	1.69	351		Pn	16 31 32.5	0.0
FIGC	Figueroa Mtn.	1.69	131		Pn	16 31 32.2	-0.4
JHPM	Huddart Park	1.70	339		Pn	16 31 33.1	+0.4
PKM	Mcpherson Peak	1.71	124		Pn	16 31 32.9	0.0
MYLM	Yosemite Lake	1.77	30		Pn	16 31 33.8	+0.1
CNIC	Niles Canyon	1.79	349		Pn	16 31 33.8	0.0
OXMT	Ox Mountain	1.79	337		Pn	16 31 34.3	+0.4
MHDM	Hidden Dam	1.83	46		Pn	16 31 34.5	0.0
JCPM	Coyote Point	1.84	340		Pn	16 31 35.2	+0.6
CLCB	Lake Chabot	1.93	347		Pn	16 31 36.0	+0.2
BCW	Bitter Crk WRg	1.96	117		Pn	16 31 36.7	+0.3
CMOB	Morgan Territo	1.96	354		Pn	16 31 36.8	+0.4
MRHM	Rocky Hill	2.03	77		Pn	16 31 36.7	-0.6
BKS	Berkeley--Byer	2.10	345		Pn	16 31 37.8	-0.3
CVPM	Vollmer Peak	2.10	345		Pn	16 31 38.1	-0.1
BRIB	Briones	2.12	347		Pn	16 31 38.7	+0.2
MMIM	Miami Mountain	2.13	42		Pn	16 31 39.4	+0.8
CSPM	San Pablo Ridg	2.19	344		Pn	16 31 39.3	-0.1
HELL	Mitchell Peak,	2.19	67		Pn	16 31 39.6	0.0
CPIM	Pinole Ridge	2.20	346		Pn	16 31 40.0	+0.4
CPMM	Point Molate	2.21	342		Pn	16 31 40.3	+0.7
KCC	Kaiser Creek	2.31	50		Pn	16 31 42.0	+0.9
WOFM	Oak Flat	2.32	97		Pn	16 31 41.0	-0.3
ARVC	Arvin	2.33	107		Pn	16 31 41.1	-0.2
MNHB	New Hogan Dam	2.36	14		Pn	16 31 42.4	+0.7
CMB	Columbia Colle	2.37	23		Pn	16 31 42.0	+0.2
TEJ	El Tejon	2.41	104		Pn	16 31 41.6	-0.8
TJR	Tejon Ranch	2.43	109		Pb	16 31 46.7	-0.3
ISA	Isabella, Lake	2.50	93	Pn	Pn	16 31 43.6	-0.1
MCCM	Marconi Confer	2.53	335	Pn	Pn	16 31 43.5	-0.5
AASM	Arroyo Seco	2.59	7		Pn	16 31 45.8	+0.8
OSI	Osito Audit: C	2.61	117	Pn	Pn	16 31 45.7	+0.4
PYR	Pyramid	2.62	118		Pn	16 31 46.0	+0.5
MDPB	Devils Postpil	2.66	47	Pn	Pn	16 31 47.5	+1.4
OMMB	Old Mammoth Mi	2.69	48		Pn	16 31 45.7	-0.9
AFDM	Forest Hills D	3.12	8		Pn	16 31 53.7	+1.5
WAKR	Walker	3.13	32		Pn	16 31 55.1	+2.5
PASC	Pasadena Art C	3.22	120		Pn	16 31 53.5	-0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWC	**Mount Wilson**	**3.29**	**119**		Pn	16 31 54.7	0.0
HOPS	**Hopland Field**	**3.37**	**339**	Pn	Pn	16 31 57.8	+2.3
PNTR	**Pine Nut**	**3.58**	**25**		Pn	16 31 60.0	+1.2
YERR	**Yerington**	**3.62**	**30**		Pn	16 32 00.8	+1.5
RYN	**Ryan**	**3.67**	**40**	Pn	Pn	16 32 00.9	+1.1
ORV	**Oroville**	**3.70**	**0**		Pn	16 32 01.7	+1.6
GSC	**Goldstone, Bar**	**3.90**	**97**		Pn	16 32 02.9	-0.1
BEKR	**Beckworth**	**4.11**	**13**		Pn	16 32 07.4	+1.4
KCPM	**Cahto Peak**	**4.16**	**338**	Pn	Pn	16 32 08.3	+1.8
TPNV	**Topopah Spring**	**4.40**	**74**	Pn	Pn	16 32 11.6	+1.6
PFO	**Pinyon Flats O**	**4.74**	**117**	Pn	Pn	16 32 14.7	+0.1
XPFO	**Pion Flat**	**4.75**	**117**	Pn	Pn	16 32 14.7	0.0
BAR	**Barrett**	**5.12**	**127**	Pn	Pn	16 32 19.8	0.0
SHPR	**Sheep Range**	**5.20**	**81**	Pn	Pn	16 32 22.5	+1.5

JMA 16 16:55:07.2±0.2, 30.19N×131.69E, h47km±3km, M3.3
IDC 16 16:55:11.2±1.7, 30.48N×131.57E, h49km±16km, mb3.2/6, mb1 3.3/10, mb1mx3.2/42, mbtmp3.3/10, ML2.5/4, MS3.0/2, Ms1 3.0/2, ms1mx2.4/16, Error ellipse: s-maj=25.9km s-min=9.9km az=99.0
ISC 16 16:55:11.4±1.4, 30.38N±0.06×131.49E±0.09, h48km±11km, n25, σ1.58/34, mb3.4/6, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMTN	**Minamitane**	**0.51**	**273**	P	**Pn**	**16 55 21.1**	**-1.6**
JMTN				eS	**Sn**	**16 55 31.3**	**+0.5**
JTN	**Tanegashima 3**	**0.52**	**302**	P	**Pn**	**16 55 21.7**	**-1.1**
JTN				eS	**Sn**	**16 55 33.0**	**+2.0**
JYAK	**Yakushimahirau**	**0.86**	**261**	P	**Pn**	**16 55 25.4**	**-1.8**
JTSR	**Tashiro 2**	**0.93**	**328**	P	**Pn**	**16 55 27.5**	**-0.7**
JTSR				S	**Sn**	**16 55 42.4**	**+1.9**
JKC	**Kuchinoerabu**	**1.12**	**275**	P	**Pn**	**16 55 29.7**	**-1.0**
JKC				eS	**Sn**	**16 55 46.8**	**+1.7**
JNAR	**Kushima--Naru**	**1.16**	**351**	P	**Pn**	**16 55 30.9**	**-0.4**
JNAR				S	**Sn**	**16 55 48.3**	**+2.2**
JNKG	**Nichinankitago**	**1.29**	**356**	P	**Pn**	**16 55 32.6**	**-0.6**
JNKG				S	**Sn**	**16 55 50.7**	**+1.6**
JSU	**Suzuyama**	**1.44**	**322**	P	**Pn**	**16 55 34.5**	**-0.5**
JSU				S	**Sn**	**16 55 55.1**	**+2.3**
JNN	**Nakanoshima**	**1.50**	**250**	P	**Pn**	**16 55 34.1**	**-1.8**
JTZ	**Takazaki**	**1.56**	**347**	P	**Pn**	**16 55 36.6**	**-0.1**
JTZ				S	**Sn**	**16 55 58.1**	**+2.3**
JTSN	**Tsuno**	**1.86**	**0**	P	**Pn**	**16 55 40.4**	**-0.5**
JTSN				eS	**Sn**	**16 56 04.2**	**+1.0**
JZO	**Okuchi**	**1.92**	**337**	P	**Pn**	**16 55 41.5**	**-0.1**
JSJ	**Shimokoshiki**	**2.00**	**311**	P	**Pn**	**16 55 41.4**	**-1.4**
JNU	**Nakatsue**	**2.79**	**349**	P	**Pn**	**16 55 53.3**	**-0.3**
	3.2nm,0.3s,baz=111,slow=2.1,SNR=41						
JNU				S	**Sn**	**16 56 23.7**	**-2.3**
	3.0nm,0.3s,baz=167,slow=10,SNR=9.1						
JOW	**Kunigami**	**4.52**	**219**	P	**Pn**	**16 56 17.3**	**-0.1**
	0.1nm,0.3s,baz=84,slow=18,SNR=3.0						
JOW				S	**Sn**	**16 57 12.7**	**+4.0**
	0.9nm,0.3s,baz=235,slow=29,SNR=6.2						
KSRS	**Korea Array**	**7.66**	**338**	P	**Pn**	**16 57 00.9**	**+0.7**
	0.2nm,0.3s,baz=120,slow=10,SNR=6.0						
MJAR	**Matsushiro Arr**	**8.32**	**41**	P	**Pn**	**16 57 07.8**	**-1.7**
	0.1nm,0.3s,baz=248,slow=13,SNR=7.2						
SONM	**Songino Array**	**25.96**	**319**	P	**P**	**17 00 39.4**	**0.0**
	0.4nm,0.5s,baz=132,slow=8.6,SNR=3.0						
TLY	**Talaya**	**29.60**	**324**	LR	LR	17 12 33.7	
	comp=Z,20nm,18.3s,baz=134,slow=35						
CMAR	**Chiang Mai Arr**	**31.81**	**256**	P	**P**	**17 01 31.5**	**-0.1**
	0.3nm,0.5s,baz=58,slow=7.7,SNR=2.6						
MKAR	**Makanchi Array**	**41.10**	**308**	P	**P**	**17 02 49.4**	**-1.1**
	0.2nm,0.5s,baz=88,slow=11,SNR=4.5						
PMG	**Port Moresby**	**42.32**	**157**	LR	LR	17 17 52.3	
	comp=Z,22nm,19.3s,baz=306,slow=32						
WRA	**Warramunga Arr**	**50.10**	**177**	P	**P**	**17 04 03.3**	**+1.6**
	0.4nm,0.9s,baz=356,slow=8.2,SNR=3.2						
ASAR	**Alice Springs**	**53.78**	**177**	P	**P**	**17 04 27.6**	**-1.5**
	0.4nm,0.9s,baz=14,slow=5.3						
FINES	**FINESS Array B**	**70.68**	**331**	P	**P**	**17 06 22.0**	**+0.3**
	1.1nm,0.8s,baz=81,slow=8.6,SNR=4.6						

IDC 16 16:55:56.2±2.3, 4.58S×78.28W, h0km, mb3.6/5, mb1 4.0/5, mb1mx3.6/33, mbtmp3.6/5, ML2.6/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/30, Error ellipse: s-maj=134.8km s-min=15.5km az=87.0
NEIC 16 16:55:59.8±1.1, 4.62S±0.05×78.4W±0.2, h23km±9km, mb4.5/3, Error ellipse: s-maj=29.6km s-min=7.0km az=97.0
ISC 16 16:56:01.3±0.9, 4.62S±0.10×78.5W±0.2, h35km, n18, σ1.41/16, mb3.7/6, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.50**	**178**	Pn	**Pn**	**16 56 38.5**	**-1.4**
	1.3nm,0.3s,baz=222,slow=4.9,SNR=11						
ATAH				Lg	Lg	16 57 17.3	
	4.8nm,0.3s,baz=40,slow=5.0,SNR=11						
OTAV	**Otavalo**	**4.82**	**1**	eP	**Pn**	**16 57 09.8**	**-2.2**
OTAV	**Otavalo**	**4.82**	**1**	Pn	**Pn**	**16 57 09.4**	**-2.5**
GCUF	**Volcan Galeras**	**5.92**	**11**	eP	**Pn**	**16 57 25.7**	**-1.4**
PTLC	**Puerto Leguiza**	**6.03**	**38**	eP	**Pn**	**16 57 27.6**	**-0.5**
BBAC	**Balboa, Cauca**	**6.71**	**11**	eP	**Pn**	**16 57 37.0**	**-0.7**
FLOC	**Florencia**	**6.79**	**25**	eP	**Pn**	**16 57 37.8**	**-0.7**
FLOC	**Florencia**	**6.79**	**25**	Pn	**Pn**	**16 57 37.4**	**-1.2**
RUSC	**La Rusia**	**11.76**	**27**	Pn	**Pn**	**16 58 46.5**	**-0.6**
PB11	**IPOC Station P**	**17.35**	**151**	P	**Pn**	**17 00 02.2**	**-0.8**
PB11				IAmb	IAmb	17 00 07.2	
	comp=Z,7.0nm,1.0s						
CPUP	**Villa Florida**	**29.61**	**139**	LR	LR	17 15 26.8	
	comp=Z,25nm,18.9s,baz=212,slow=40						
TXAR	**Lajitas Array**	**41.51**	**326**	P	**P**	**17 03 46.2**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=145,slow=9.5,SNR=3.7						
ANMO	**Albuquerque**	**47.34**	**328**	P	**P**	**17 04 32.7**	**+0.5**
ANMO				IAmb	IAmb	17 05 39.9	
	comp=Z,9.1nm,1.8s						
PDAR	**Pinedale Array**	**54.92**	**332**	P	**P**	**17 05 29.4**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=125,slow=9.1,SNR=4.6						
ULM	**Lac du Bonnet**	**56.67**	**347**	P	**P**	**17 05 40.0**	**-1.1**
	comp=Z,1.3nm,0.5s,baz=155,slow=7.7,SNR=4.6						
ULM	**Lac du Bonnet**	**56.67**	**347**	IAmb	IAmb	17 07 10.9	
	comp=Z,28nm,1.9s						
YKA	**Yellowknife Ar**	**72.36**	**343**	P	**P**	**17 07 24.3**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=143,slow=5.5,SNR=7.8						
ILAR	**Eielson Array**	**85.12**	**336**	P	**P**	**17 08 35.6**	**+2.1**
	comp=Z,0.5nm,0.7s,baz=116,slow=4.2,SNR=4.6						

MOS 16 17:07:54.7±0.0, 43.18N×46.54E, h7km, MPVA3.5
DRS 16 17:07:54.9±0.0, 43.33N×46.53E, h16km
NORS 16 17:07:56.5±0.0, 43.10N×46.54E, h10km, MPVA3.6
ISC 16 17:07:55.5±1.2, 43.27N±0.04×46.57E±0.03, h7km±10km, n31, σ1.03/54, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBC	**Dubki**	**0.31**	**142**	ePg	**Pg**	**17 08 01.7**	**0.0**
DBC				eSg	**Sg**	**17 08 06.4**	**+0.6**
KRNR	**Karanay**	**0.51**	**150**	ePg	**Pg**	**17 08 05.0**	**-0.3**
KRNR				i Sg	**Sg**	**17 08 12.0**	**+0.1**
GROC	**Groznyy**	**0.57**	**264**	ePg	**Pb**	**17 08 07.2**	**-0.5**
GROC				eSg	**Sn**	**17 08 17.2**	**-2.4**
BUJR	**Buynaksk**	**0.59**	**138**	ePg	**Pg**	**17 08 07.5**	**+0.6**
BUJR				eSg	**Sb**	**17 08 16.6**	**-0.3**
BTLR	**Botlikh**	**0.65**	**203**	ePg	**Pg**	**17 08 07.5**	**-0.6**
BTLR				eSg	**Sg**	**17 08 16.0**	**-0.5**
XNZR	**Khunzakh**	**0.73**	**172**	ePg	**Pg**	**17 08 09.3**	**-0.3**
XNZR				eSg	**Sg**	**17 08 19.4**	**+0.3**
ARKR	**Arakani**	**0.73**	**154**	ePg	**Pg**	**17 08 09.5**	**-0.1**
ARKR				eSg	**Sg**	**17 08 19.5**	**+0.3**
MAK	**Makhachkala**	**0.75**	**114**	ePg	**Pg**	**17 08 10.2**	**+0.2**
MAK				eSg	**Sn**	**17 08 23.3**	**-0.9**
GNBR	**Gunib**	**0.92**	**161**	ePg	**Pg**	**17 08 13.4**	**+0.2**
GNBR				eSg	**Sg**	**17 08 26.0**	**+0.7**
KMKR	**Kumukh**	**1.20**	**161**	ePg	**Pg**	**17 08 19.0**	**+0.4**
KMKR				eSg	**Sn**	**17 08 36.0**	**+0.5**
KMGR	**Komgaron**	**1.26**	**261**	ePg	**Pg**	**17 08 21.4**	**+1.7**
KMGR				eSg	**Sn**	**17 08 39.3**	**+2.5**
URKR	**Urkarakh**	**1.35**	**144**	ePg	**Pg**	**17 08 21.8**	**+0.4**
VLKR	**Vladikavkaz**	**1.40**	**262**	ePg	**Pg**	**17 08 23.7**	**+1.4**
TRKR	**Terskaya**	**1.41**	**290**	ePg	**Pn**	**17 08 21.1**	**-0.5**
TRKR				eSg	**Sg**	**17 08 43.5**	**+2.7**
LGD	**Lagodekhi**	**1.45**	**190**	P	**Pb**	**17 08 23.0**	**+0.2**
LGD				S	**Sg**	**17 08 42.4**	**+0.2**
LGD	**Lagodekhi**	**1.45**	**190**	ePg	**Pg**	**17 08 23.4**	**+0.2**
LGD				eSg	**Sg**	**17 08 42.3**	**+0.2**
ARNR	**Ardon**	**1.67**	**268**	ePg	**Pb**	**17 08 26.6**	**0.0**
ARNR				eSg	**Sg**	**17 08 48.5**	**-0.7**
LACR	**Lac**	**1.72**	**256**	ePg	**Pb**	**17 08 27.2**	**-0.3**
LACR				eSg	**Sg**	**17 08 50.4**	**-0.4**
DRN	**Derbent**	**1.79**	**133**	ePg	**Pb**	**17 08 28.6**	**-0.1**
DRN				eSg	**Sg**	**17 08 52.7**	**-0.4**
KORR	**Kora**	**1.84**	**265**	ePg	**Pb**	**17 08 29.0**	**-0.5**
KORR				eSg	**Sg**	**17 08 53.1**	**-1.4**
DDFL	**Dedoflistskaro**	**1.85**	**190**	P	**Pg**	**17 08 32.0**	**+1.0**
AKT	**Akhty**	**1.98**	**154**	ePg	**Pb**	**17 08 31.1**	**-0.8**
AKT				eSg	**Sb**	**17 08 56.5**	**-0.4**
BTNK	**Botanikuri**	**2.05**	**220**	P	**Pb**	**17 08 33.4**	**+0.3**
DIGR	**Digorskoe uzhe**	**2.22**	**262**	ePg	**Pn**	**17 08 33.2**	**+0.3**
ONI	**Oni**	**2.38**	**255**	P	**Pb**	**17 08 37.6**	**-1.2**
ONI				S	**Sg**	**17 09 10.9**	**-1.2**
ONI	**Oni**	**2.38**	**255**	ePn	**Pb**	**17 08 37.6**	**-1.2**
KZRT	**Kazreti**	**2.47**	**221**	P	**Pb**	**17 08 40.2**	**-0.1**
KZRT				S	**Sg**	**17 09 12.7**	**-2.2**
KBZ	**Khabaz**	**2.71**	**281**	ePn	**Pn**	**17 08 39.7**	**+0.3**
KBZ				eSn	**Sn**	**17 09 12.8**	**+0.3**
NEY	**Neytrino**	**2.81**	**271**	ePn	**Pb**	**17 08 43.2**	**-2.9**
NEY				eSn	**Sn**	**17 09 15.7**	**+0.5**
SHA1	**Shidzhatmaz**	**2.88**	**281**	ePn	**Pn**	**17 08 42.6**	**+0.5**
GNI	**Garni**	**3.40**	**204**	ePn	**Pn**	**17 08 50.3**	**+1.2**

NCEDC 16 17:24:13.1±1.1, 38.78N±0.02×122.72W±0.03, h2km±7km, Md2.7/96, Error ellipse: s-maj=4.2km s-min=2.2km az=65.0
NEIC 16 17:24:13.0±3.5, 38.75N±0.02×122.62W±0.02, h5km±8km, Error ellipse: s-maj=3.5km s-min=0.9km az=210.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCRM	**Castle Rock Sp**	**0.08**	**289**		Pg	17 24 13.5	-1.4
GBGM	**Boggs Mountain**	**0.08**	**324**		Pg	17 24 14.4	-0.6
GAXM	**Alexander Vall**	**0.12**	**252**		Pg	17 24 14.7	-0.7
GSGM	**Seigler Mounta**	**0.14**	**328**		Pg	17 24 15.5	-0.4
NMTM	**Middletown**	**0.14**	**66**		Pg	17 24 17.6	+1.6
GDXM	**Geysers**	**0.15**	**294**		Pg	17 24 14.5	-1.6
MNRC	**McLaughlin Min**	**0.19**	**45**		Pg	17 24 18.5	+1.7
MAC	**Mark West Spri**	**0.21**	**203**		Pg	17 24 18.0	+0.8
GACM	**Adobe Creek**	**0.23**	**303**		Pg	17 24 16.3	-1.2
GPMM	**Pine Mountain**	**0.28**	**292**		Pg	17 24 17.3	-1.2
NMCNC	**Mill Creek, So**	**0.28**	**237**		Pg	17 24 18.2	-0.2
GCVM	**Cloverdale**	**0.31**	**274**		Pg	17 24 18.1	-1.0
GSSM	**Skaggs Springs**	**0.31**	**262**		Pg	17 24 18.3	-0.8
NBPM	**Berryessa Peak**	**0.34**	**103**		Pb	17 24 22.6	+1.1
GBMM	**Baldy Mountain**	**0.41**	**13**		Pb	17 24 22.0	-0.8
NAPC	**Atlas Peak**	**0.42**	**137**		Pb	17 24 23.0	+0.1
GHLM	**Highland Sprin**	**0.43**	**313**		Pg	17 24 20.3	-1.1
HOPS	**Hopland Field**	**0.43**	**305**	Pg	Pg	17 24 20.5	-0.9
GHCM	**House Creek**	**0.48**	**253**		Pg	17 24 21.7	-0.5
FTR	**Fort Ross**	**0.48**	**243**		Pg	17 24 22.1	-0.2
GDCM	**Dry Creek**	**0.49**	**273**		Pg	17 24 21.6	-0.8
GSNM	**Snow Mountain**	**0.49**	**294**		Pg	17 24 21.6	-0.9
NDHM	**Dunnigan Hills**	**0.55**	**88**		Pn	17 24 27.0	-0.3
GTSM	**Trough Springs**	**0.56**	**1**		Pg	17 24 24.5	+0.6
NADM	**Allendale**	**0.58**	**119**		Pn	17 24 27.8	-0.2
GFC	**Funks Creek**	**0.63**	**24**		Pn	17 24 27.9	-0.8
MCCM	**Marconi Confer**	**0.64**	**199**		Pb	17 24 26.3	-0.3
MCCM	**Marconi Confer**	**0.64**	**199**		Sg	17 24 26.4	-7.0
NOLM	**Olema**	**0.72**	**191**		Pb	17 24 28.2	+0.1
NLHM	**Lake Herman**	**0.72**	**149**		Pb	17 24 28.7	+0.6
GHOM	**Hamilton Openi**	**0.78**	**293**		Pg	17 24 27.2	-0.8
HERB	**Hercules**	**0.78**	**159**		Pb	17 24 29.8	+0.6
OSUM	**Sutter Buttes**	**0.79**	**48**		Pn	17 24 29.3	-0.1
SUTB	**Sutter Butte**	**0.81**	**53**		Pn	17 24 29.3	-0.2
CPMM	**Point Molate**	**0.81**	**168**		Pb	17 24 29.7	0.0
NPRM	**Point Reyes**	**0.81**	**203**		Pb	17 24 29.4	-0.2
CPIM	**Pinole Ridge**	**0.82**	**157**		Pb	17 24 30.3	+0.6
CSPM	**San Pablo Ridg**	**0.82**	**163**		Pb	17 24 30.4	+0.6
GASB	**Alder Springs**	**0.91**	**355**		Pb	17 24 30.9	+0.4
GNAM	**Navarro Ridge**	**0.91**	**300**		Pb	17 24 29.9	-0.6
BRK	**Berkeley--Havi**	**0.91**	**162**		Pb	17 24 31.8	+0.4
CVPM	**Vollmer Peak**	**0.91**	**160**		Pb	17 24 31.2	-0.2
VAK	**Adit at Lawren**	**0.91**	**162**		Pb	17 24 31.7	+0.4
BKS	**Berkeley--Byer**	**0.92**	**161**		Pb	17 24 31.1	-0.3
KRKM	**Rackout Spring**	**0.93**	**332**		Pb	17 24 30.8	0.0
JPRM	**Presidio of Sa**	**0.96**	**173**		Pb	17 24 32.4	+0.4
BDM	**Black Diamond**	**0.99**	**143**		Pb	17 24 32.5	-0.1
CRPB	**Russellman Par**	**1.00**	**146**		Pb	17 24 33.2	+0.4
GVV	**Valley View**	**1.03**	**357**		Pb	17 24 33.4	-0.1
OHCM	**Honcut**	**1.06**	**56**		Pb	17 24 32.6	-0.7
CSLM	**San Leandro Hi**	**1.09**	**159**		Pb	17 24 34.4	0.0
CLCB	**Lake Chabot**	**1.10**	**157**		Pb	17 24 34.5	0.0
CMOB	**Morgan Territo**	**1.13**	**145**		Pb	17 24 35.2	+0.1
SAC	**San Andreas**	**1.17**	**172**		Pb	17 24 35.7	-0.1
JCPM	**Coyote Point**	**1.18**	**169**		Pb	17 24 36.0	-0.1
ORV	**Oroville**	**1.19**	**47**	Pg	Pb	17 24 34.4	-1.3
KCPM	**Cahto Peak**	**1.20**	**322**		Pb	17 24 36.1	0.0
AASM	**Arroyo Seco**	**1.22**	**104**		Pb	17 24 35.7	-0.7
CNIC	**Niles Canyon**	**1.25**	**156**		Pb	17 24 36.9	0.0
OXMT	**Ox Mountain**	**1.25**	**173**		Pb	17 24 36.4	-0.7
AFDM	**Forest Hills D**	**1.30**	**81**		Pb	17 24 36.9	-1.0
MGL	**Magalia**	**1.34**	**37**		Pb	17 24 37.3	-1.3
JRSC	**Jasper Ridge**	**1.37**	**167**		Pb	17 24 37.6	-1.2
JJRM	**Joaquin Road**	**1.44**	**167**		Pb	17 24 40.3	0.0
DONR	**Donner Summit**	**1.89**	**71**		Pn	17 24 47.0	+0.9
CMB	**Columbia Colle**	**1.89**	**111**		Pn	17 24 46.6	+0.6
IND	**Independence**	**1.93**	**68**		Pn	17 24 48.5	-0.4
EMB	**Emerald Bay**	**1.98**	**83**		Pn	17 24 48.9	-0.7
KBF	**Kyburz Flat**	**2.02**	**67**		Pn	17 24 49.4	-1.0
BEKR	**Beckworth**	**2.08**	**57**		Pn	17 24 50.0	+1.2
MPK	**Martis Peak**	**2.09**	**74**		Pb	17 24 50.6	-0.9
GNO	**Genoa**	**2.17**	**84**		Pn	17 24 51.7	-1.1
SAO	**San Andreas Ge**	**2.18**	**155**		Pn	17 24 49.4	-0.6
PEAR	**Peavine Mounta**	**2.23**	**67**		Pn	17 24 52.4	+1.4
BFC	**Buffalo Canyon**	**2.35**	**85**		Pb	17 24 54.4	-1.6
PNTR	**Pine Nut**	**2.37**	**84**		Pb	17 24 54.8	-1.7
WAKR	**Walker**	**2.50**	**95**		Pb	17 24 56.8	-1.8
YERR	**Yerington**	**2.65**	**84**		Pn	17 24 57.8	+1.2
PAHR	**Pah Rah Range**	**2.69**	**68**		Pn	17 24 57.2	+0.1
MDPB	**Devils Postpil**	**3.00**	**111**		Pn	17 25 02.2	+0.7
OMMB	**Old Mammoth Mi**	**3.06**	**111**		Pn	17 25 04.8	+2.3
KVN	**Kaiserville**	**3.54**	**84**		Pn	17 25 08.5	-0.3

IASPEI 16 17:40:04.3±1.0, 45.75N±0.02×14.86E±0.02, h3km±8km, Error ellipse: s-maj=2.9km s-min=2.5km az=4.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009
LJU 16 17:40:04.0, 45.75N×14.86E, h4km, ML1.9
VIE 16 17:40:04.4±0.3, 45.77N×14.89E, h8km, mb2.1/8, ml2.4/10, Error ellipse: s-maj=3.3km s-min=1.4km az=7.0 45 km SE of Ljubljana
RHSSO 16 17:40:04.8±0.3, 45.75N×14.85E, h2km, ML2.5/6
PRU 16 17:40:05.3±0.0, 45.81N×15.01E, h0km
ISC 16 17:40:04.2±0.9, 45.77N±0.01×14.87E±0.01, h4km±6km, n52, σ0.90/98, 3C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VISS	**Visnje**	**0.04**	**335**	⇓iPg	**Pg**	**17 40 05.2**	**-0.1**
VISS				i Sg	**Sg**	**17 40 06.4**	**+0.3**
	comp=Z,1μm,0.1s						
PDKS	**Podkum**	**0.31**	**17**	i Pg	**Pg**	**17 40 10.4**	**+0.2**
PDKS				i Sg	**Sg**	**17 40 15.6**	**+1.3**
	comp=Z,174nm,0.3s						
VNDS	**Vrh nad Dolski**	**0.36**	**341**	⇓iPg	**Pg**	**17 40 11.4**	**+0.4**
VNDS				i Sg	**Sg**	**17 40 16.9**	**+1.2**
	comp=Z,58nm,0.2s						
LJU	**Ljubljana**	**0.36**	**320**	i Pg	**Pg**	**17 40 11.6**	**+0.4**
LJU				i Sg	**Sg**	**17 40 16.9**	**+0.9**
	comp=Z,42nm,0.1s						
LJU	**Ljubljana**	**0.36**	**320**	ePg	**Pg**	**17 40 11.5**	**+0.3**
LJU				eSg	**Sg**	**17 40 16.9**	**+0.9**
LEGS	**Legarje**	**0.37**	**60**	i Pg	**Pg**	**17 40 11.4**	**+0.2**
LEGS				i Sg	**Sg**	**17 40 16.8**	**+0.8**
BOJS	**Bojanci**	**0.38**	**134**	⇓iPg	**Pg**	**17 40 10.9**	**-0.5**
BOJS				i Sg	**Sg**	**17 40 16.0**	**-0.3**
	comp=Z,59nm,0.1s						
KNDS	**Knezji Dol**	**0.41**	**235**	⇑iPg	**Pg**	**17 40 11.9**	**-0.2**
KNDS				eSg	**Sg**	**17 40 17.9**	**+0.3**
	comp=Z,90nm,0.3s						
CRES	**Cresnjev**	**0.42**	**81**	i Pg	**Pg**	**17 40 11.7**	**-0.6**
CRES				eSg	**Sg**	**17 40 18.2**	**+0.5**
	comp=Z,43nm,0.1s						
CRES	**Cresnjev**	**0.42**	**81**	ePg	**Pg**	**17 40 12.3**	**+0.1**
CRES				eSg	**Sg**	**17 40 18.3**	**+0.6**
OZLJ	**Ozalj**	**0.45**	**109**	i Pg	**Pg**	**17 40 12.6**	**-0.1**
OZLJ				Sg	**Sg**	**17 40 19.0**	**+0.4**
CESS	**Cesta pri Krsk**	**0.47**	**63**	i Pg	**Pg**	**17 40 13.4**	**+0.3**
CESS				i Sg	**Sg**	**17 40 20.0**	**+0.8**
RIY	**Rijeka**	**0.52**	**212**	ePg	**Pg**	**17 40 14.0**	**-0.1**
RIY				Sg	**Sg**	**17 40 20.8**	**+0.1**
RIY	**Rijeka**	**0.52**	**212**	⇓iPg	**Pg**	**17 40 13.7**	**-0.3**
RIY				eSg	**Sg**	**17 40 21.0**	**+0.3**
CRNS	**Crni Vrh**	**0.53**	**307**	⇑iPg	**Pg**	**17 40 14.7**	**+0.4**
CRNS				i Sg	**Sg**	**17 40 22.1**	**+1.0**
	comp=Z,24nm,0.1s						
GCIS	**Gornji Cirnik**	**0.54**	**79**	i Pg	**Pg**	**17 40 14.3**	**-0.2**
GCIS				i Sg	**Sg**	**17 40 22.4**	**+0.8**
	comp=Z,16nm,0.2s						
DOBS	**Dobrina**	**0.57**	**47**	i Pg	**Pg**	**17 40 15.2**	**+0.1**
JAVS	**Javornik**	**0.57**	**283**	⇑iPg	**Pg**	**17 40 14.9**	**-0.3**
GOLS	**Golise**	**0.58**	**65**	i Pg	**Pg**	**17 40 15.6**	**+0.2**
GOLS				i Sg	**Sg**	**17 40 23.5**	**+0.5**
	comp=Z,73nm,0.2s						
MOZS	**Mozjanca**	**0.60**	**331**	eSg	**Sg**	**17 40 24.4**	**+0.7**
SKDS	**Skadanscina**	**0.64**	**250**	i Pg	**Pg**	**17 40 15.9**	**-0.5**
SKDS				i Sg	**Sg**	**17 40 25.1**	**+0.5**
	comp=Z,34nm,0.2s						
OBKA	**Obir**	**0.78**	**344**	ePg	**Pg**	**17 40 19.3**	**+0.2**
	comp=Z,9.1nm,0.2s,SNR=29						
OBKA				Sg	**Sb**	**17 40 30.8**	**-0.4**
	comp=Z,59nm,0.2s						
PTJ	**Puntijarka**	**0.78**	**79**	ePg	**Pb**	**17 40 20.4**	**0.0**
PTJ				Sg	**Sb**	**17 40 31.9**	**+0.4**
ZAG	**Zagreb**	**0.79**	**85**	ePg	**Pn**	**17 40 21.0**	**-1.1**
ZAG				Sg	**Sb**	**17 40 31.6**	**+0.2**
ZAG	**Zagreb**	**0.79**	**85**	ePg	**Pb**	**17 40 19.8**	**-0.6**
ZAG				eSg	**Sb**	**17 40 31.2**	**-0.2**
GORS	**Gorjuse**	**0.82**	**313**	i Sg	**Sb**	**17 40 32.2**	**-0.3**
	comp=Z,21nm,0.2s						
PERS	**Pernice**	**0.89**	**11**	i Pg	**Pg**	**17 40 21.2**	**0.0**
PERS				eSg	**Sg**	**17 40 33.2**	**+0.5**
	comp=Z,53nm,0.2s						
SOKA	**Soboth**	**0.92**	**7**	Pg	**Pg**	**17 40 21.8**	**0.0**
	comp=Z,1.6nm,0.2s,SNR=12						
SOKA				Sg	**Sg**	**17 40 34.4**	**+0.6**
	comp=Z,19nm,0.3s						
KALN	**Kalnik**	**1.17**	**71**	i Pg	**Pn**	**17 40 28.1**	**+0.8**
KALN				Sg	**Sn**	**17 40 44.9**	**+1.2**
NVLJ	**Novalja**	**1.20**	**180**	ePg	**Pg**	**17 40 27.8**	**+0.6**
NVLJ				Sg	**Sn**	**17 40 43.7**	**-0.7**
MYKA	**Terra Mystica**	**1.21**	**316**	Pg	**Pn**	**17 40 27.3**	**-0.6**
	comp=Z,9.0nm,0.3s,SNR=18						
MYKA				Sg	**Sn**	**17 40 44.4**	**-0.4**
	comp=Z,17nm,0.3s						
MOSL	**Moslavina**	**1.33**	**96**	ePg	**Pg**	**17 40 29.7**	**0.0**
MOSL				Sg	**Sb**	**17 40 46.5**	**-0.7**
UDBI	**Udbina**	**1.39**	**152**	i Pg	**Pg**	**17 40 31.7**	**+0.9**
UDBI				Sg	**Sg**	**17 40 49.7**	**+0.8**
BEHE	**Becsehely**	**1.50**	**61**	ePn	**Pg**	**17 40 32.9**	**-0.1**
BEHE				eSn	**Sg**	**17 40 53.8**	**+1.3**
ARSA	**Arzberg**	**1.55**	**17**	Pn	**Pb**	**17 40 32.6**	**0.0**
	comp=Z,2.9nm,0.3s,SNR=11						
ARSA				Sn	**Sg**	**17 40 54.4**	**+0.3**
	comp=Z,5.7nm,0.3s						
KBA	**Koelnbreinsper**	**1.68**	**322**	ePn	**Pb**	**17 40 35.7**	**-0.1**
	comp=Z,6.8nm,0.2s,SNR=16						
KBA				Sg	**Sg**	**17 40 58.9**	**+0.7**
	comp=Z,7.2nm,0.3s						
DUGI	**Dugi Otok**	**1.78**	**176**	ePn	**Pb**	**17 40 37.0**	**-0.3**
DUGI				Sg	**Sg**	**17 41 01.1**	**-0.2**
ABTA	**Abfaltersbach**	**1.91**	**302**	Pn	**Pb**	**17 40 38.7**	**-0.8**
	comp=Z,2.4nm,0.3s,SNR=7.3						
ABTA				Sn	**Sb**	**17 41 03.8**	**+0.2**
	comp=Z,6.2nm,0.3s						
BLY	**Banja Luka**	**1.93**	**121**	ePn	**Pb**	**17 40 38.3**	**-1.5**
BLY				eSn	**Sb**	**17 41 02.9**	**-1.3**
MORI	**Morici**	**1.99**	**162**	ePn	**Pb**	**17 40 40.0**	**-0.9**
MORI				Sn	**Sb**	**17 41 06.7**	**+0.6**
KIJV	**Kijevo**	**2.07**	**148**	ePn	**Pb**	**17 40 41.7**	**-0.6**
KIJV				Sn	**Sb**	**17 41 09.0**	**+0.6**
MOA	**Molln**	**2.13**	**349**	Pn	**Pb**	**17 40 42.2**	**-1.1**
	comp=Z,0.4nm,0.2s						
MOA				Sn	**Sb**	**17 41 09.3**	**-0.7**
	comp=Z,1.2nm,0.2s						
ZIRJ	**Zirje**	**2.18**	**165**	i Pn	**Pn**	**17 40 42.0**	**+0.8**
ZIRJ				Sn	**Sb**	**17 41 11.5**	**0.0**
CONA	**Conrad Observa**	**2.27**	**17**	Pn	**Pn**	**17 40 43.5**	**+1.0**
	comp=Z,0.4nm,0.2s						
CONA				Sn	**Sb**	**17 41 12.2**	**-2.0**
	comp=Z,1.9nm,0.4s						
MORH	**Mrgy, Hungar**	**2.67**	**79**	ePn	**Pn**	**17 40 48.7**	**+0.8**
MORH				eSn	**Sb**	**17 41 22.7**	**-2.9**
WTTA	**Wattenberg**	**2.69**	**305**	Pn	**Pb**	**17 40 50.4**	**-2.4**
	comp=Z,0.9nm,0.2s						
WATA	**Walderalm**	**2.76**	**306**	Pn	**Pb**	**17 40 51.5**	**-2.6**
	comp=Z,1.2nm,0.3s						
SQTA	**Sankt Quirin**	**2.92**	**301**	Pn	**Pb**	**17 40 55.1**	**-1.6**
	comp=Z,0.6nm,0.2s						
SQTA				Sg	**Sg**	**17 41 39.7**	**+1.9**
	comp=Z,3.2nm,0.4s						
MOTA	**Moosalm**	**3.04**	**303**	ePn	**Pn**	**17 40 54.1**	**+1.0**
	comp=Z,0.9nm,0.3s						
FETA	**Feichten**	**3.13**	**295**	ePn	**Pn**	**17 40 56.8**	**+2.5**
	comp=Z,0.8nm,0.3s						
KHC	**Kasperske Hory**	**3.48**	**346**	ePn	**Pn**	**17 41 00.6**	**+1.5**
KHC				ePG	**Pg**	**17 41 10.5**	**-0.3**
KHC				eSN	**Sn**	**17 41 40.5**	**-0.2**
KHC				eSG	**Sg**	**17 41 55.3**	**-0.6**
STON	**Ston**	**3.54**	**144**	ePn	**Pn**	**17 41 00.5**	**+0.7**
STON				Sn	**Sn**	**17 41 43.2**	**+1.2**

KRSC 16 17:43:03.2±1.5, 48.31N×156.20E, h41km±29km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.38**	**359**	eP	Pn	17 43 43.0	+3.4
SKR				eS	Sn	17 44 11.5	+4.0
KDTR	**Khodutka, Kamc**	**3.71**	**18**	eP	Pn	17 44 02.7	+4.8
KDTR				eS	Sn	17 44 45.9	+5.6
MTVR	**Mutnovka**	**4.37**	**16**	eP	Pn	17 44 10.8	+3.7
RUS	**Russkaya**	**4.39**	**19**	eP	Pn	17 44 11.0	+3.8
RUS				eS	Sn	17 45 01.4	+4.4
GRL	**Gorelyy**	**4.41**	**15**	eP	Pn	17 44 12.1	+4.4
KRMR	**Karymshinskiy**	**4.69**	**15**	eP	Pn	17 44 16.2	+4.8
KRMR				eS	Sn	17 45 09.1	+4.6
DALK	**Dalny**	**5.00**	**18**	eP	Pn	17 44 21.0	+5.4
DALK				eS	Sn	17 45 17.9	+5.8
AVH	**Avacha**	**5.22**	**17**	eP	Pn	17 44 23.8	+5.1
SDLR	**Sedlovina**	**5.26**	**18**	eP	Pn	17 44 22.2	+2.9
SPN	**Mys Shipunski**	**5.37**	**25**	eP	Pn	17 44 25.9	+5.1
SPN				eS	Sn	17 45 25.4	+4.1

IDC 16 17:54:49.2±3.1, 32.06S×178.32W, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.6/27, mbtmp3.5/3, ML3.3/1, Error ellipse: s-maj=71.6km s-min=46.2km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.23**	**210**	Pn	Pn	17 56 34.9	-1.2
	0.4nm,0.3s,baz=238,slow=1.5,SNR=4.9						
URZ				Sn	Sn	17 57 54.7	-4.3
	1.9nm,0.3s,baz=191,slow=21,SNR=14						
ASAR	**Alice Springs**	**42.77**	**269**	P	P	18 02 48.8	0.0
	0.2nm,0.4s,baz=105,slow=7.8,SNR=5.9						
WRA	**Warramunga Arr**	**43.91**	**274**	P	P	18 02 57.9	0.0
	0.3nm,0.3s,baz=112,slow=7.7,SNR=15						
FINES	**FINESS Array B**	**146.59**	**339**	PKPbc	PKPbc	18 14 31.2	-0.7
	1.9nm,0.9s,baz=41,slow=2.8,SNR=5.4						

DJA 16 18:04:52.5±0.3, 0°S±3°×12°3E±°, h48km±18km, M4.1/12, mb4.3/4, MLv3.9/12, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.73**	**192**	P	Pn	18 05 07.6	+1.0
MRSI	**Marisa**	**1.27**	**309**	P	Pn	18 05 12.9	-0.9
MRSI				S	Sn	18 05 30.0	+0.3
KMSI	**Cibinong**	**1.38**	**50**	P	Pn	18 05 14.0	-1.3

KMSI				S	Sn	18 05 33.0	+0.6
APSI	Ampana	1.41	245	P	Pn	18 05 16.7	+0.9
MPSI	Mapaga	3.10	282	P	Pn	18 05 39.8	+0.8
MPSI				S	Sn	18 06 15.2	+0.4
TTSI	Tana Toraja	4.12	229	P	Pn	18 05 53.4	+0.4
TTSI				S	Sn	18 06 40.3	+0.3
LBMI	Labuha	4.58	94	P	Pn	18 06 00.4	+1.1
SPSI	Sidrap Palu	4.80	221	P	Pn	18 06 02.1	-0.3
BNSI	Bone	4.94	215	P	Pn	18 06 04.2	0.0
BKSI	Bulukumba	5.71	209	P	Pn	18 06 14.8	+0.1
	0.1nm20nm,1.1s						
AAI	Ambon	6.23	123	P	Pn	18 06 21.6	-0.4

NEIC **16** *18:17:40.0±1.5, 19°.56N±0°.10×65°.27W±0°.07, h38km±44km,*
Error ellipse: s-maj=15.4km s-min=7.8km az=209.0
RSPR **16** *18:17:40.2, 19°.55N×65°.23W, h65km±9km, MD3.2/6*
ISC 16 18:17:38.7±2.6,**19°.5N**±0°.1×**65°.25W**±0°.09,**h23km,n30,**
σ0°.66/33,**6C,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
STVI	Saint Thomas	1.21	167	⇑eP	Pb	18 18 00.8	-0.1
STVI	Saint Thomas	1.21	167	eS	Sn	18 18 16.3	+0.5
STVI	Saint Thomas	1.21	167		Pb	18 18 00.6	-0.3
STVI	Saint Thomas	1.21	167		Sn	18 18 16.3	+0.5
CUPR	Culebra, Puert	1.22	182	⇑eP	Pn	18 18 00.4	+0.1
CUPR	Culebra, Puert	1.22	182	eS	Sn	18 18 16.8	+0.7
CUPR	Culebra, Puert	1.22	182		Pn	18 18 00.1	-0.3
CUPR	Culebra, Puert	1.22	182		Sn	18 18 16.8	+0.7
CBYP	Canovanas	1.38	205		Pn	18 18 02.0	-0.6
GCPR	Guaynabo City	1.45	213		Pn	18 18 02.0	-1.5
MTP	Monte Pirata	1.45	191	eS	Sn	18 18 22.6	+0.7
MTP	Monte Pirata	1.45	191	⇑eP	Pn	18 18 03.7	+0.1
MTP	Monte Pirata	1.45	191		Pn	18 18 03.8	+0.1
MTP	Monte Pirata	1.45	191		Sn	18 18 22.6	+0.7
HUMP	Col San Antoni	1.49	203	eS	Sn	18 18 23.4	+0.5
HUMP	Col San Antoni	1.49	203	⇑eP	Pn	18 18 04.5	+0.4
HUMP	Col San Antoni	1.49	203		Pn	18 18 04.5	+0.4
HUMP					Sn	18 18 23.4	+0.5
SJG	San Juan	1.65	211		Pn	18 18 06.2	-0.1
PDPR	Patillas Dam,	1.67	206		Pn	18 18 06.4	-0.2
IGPR	InterUniversit	1.75	208	eS	Sn	18 18 29.6	+0.2
IGPR	InterUniversit	1.75	208	⇑eP	Pn	18 18 08.4	+0.7
IGPR	InterUniversit	1.75	208	Pn	Pn	18 18 08.6	+0.8
IGPR				Sn	Sn	18 18 29.8	+0.4
CDVI	St. Croix	1.83	165	Pn	Pb	18 18 10.3	-1.2
AOPR	Arecibo Observ	1.85	231	eS	Sn	18 18 32.2	+0.5
AOPR	Arecibo Observ	1.85	231	⇑eP	Pn	18 18 09.3	+0.2
AOPR	Arecibo Observ	1.85	231		Pn	18 18 09.3	+0.2
AOPR					Sn	18 18 32.2	+0.5
OBIP	Obispado Ponce	1.96	221		Pn	18 18 09.2	-1.3
AGPR	Aguadilla, PR	2.05	239	Pn	Pn	18 18 11.0	-0.8
MPR	Mayaguez	2.22	234	Pn	Pn	18 18 13.7	-0.4
SDDR	Presa de Saban	5.73	266	Pn	Pn	18 19 03.3	+0.8

SOME **16** *18:52:06.9, 39°.55N×75°.00E, h15km*
KRNET **16** *18:52:07.5±0.1, 39°.38N×75°.50E, mb3.2*
NNC **16** *18:52:09.1±1.5, 39°.71N×75°.01E, h0km, mb3.6, mpv3.3,*
Error ellipse: s-maj=10.9km s-min=6.9km az=161.0
ISC 16 18:52:09.1±1.8,**39°.54N**±0°.08×**75°.06E**±0°.04,**h10km,n44,**
σ1°.96/64,**17C-8D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn	2.02	20	⇓iP	Pb	18 52 45.7	-0.4
	baz=10.0						
NRN				⇓iS	Sg	18 53 13.5	-0.6
	baz=10.0						
ARLS	Aral	2.38	347	⇑eP	Pg	18 52 53.4	-1.4
	baz=41						
ARLS				⇑iS	Sg	18 53 26.8	+1.1
	baz=41						
ARSB	Arslanbob	2.39	319	⇑iP	Pg	18 52 54.8	0.0
	baz=16						
ARSB				⇑iS	Sg	18 53 29.5	+3.8
	baz=16						
KZA	Kyzart	2.54	3	⇑iP	Pb	18 52 54.6	-0.4
	baz=56						
KZA				⇑iS	Sg	18 53 29.0	-1.7
	baz=56						
KZA	Kyzart	2.54	3	P	Pg	18 52 57.7	-0.1
	SNR=5.5						
UCH	Uchtor	2.72	351	⇓iP	Pb	18 52 58.0	0.0
	baz=45						
UCH				⇓iS	Sg	18 53 34.8	-1.6
	baz=45						
UCH	Uchtor	2.72	351	P	Pg	18 53 00.8	-0.4
	SNR=12						
AML	Almayashu	2.79	339	⇑iP	Pb	18 53 00.0	+0.8
	baz=34						
AML				⇑iS	Sg	18 53 38.1	-0.6
	baz=34						
AML	Almayashu	2.79	339	P	Pb	18 53 00.2	+1.0
	SNR=7.1						
ULHL	Ulahol	2.85	18	P	Pb	18 53 01.4	+1.3
	SNR=6.2						
KBK	Karagaybulak	3.11	358	P	Pb	18 53 03.6	-1.0
	SNR=5.7						
AAK	Ala-Archa	3.12	352	P	Pb	18 53 05.4	+0.6
	SNR=5.6						
AAK	Ala-Archa	3.12	352	⇑Pg	Pb	18 53 03.8	-1.0
	5.2nm,0.7s						
AAK				⇓Lg	Lg	18 53 44.6	
	18nm,1.1s						
ARK	Arkit	3.26	315	⇓eP	Pb	18 53 06.6	-0.5
	baz=13						
ARK				⇓iS	Sg	18 53 50.6	-3.2
	baz=13						
EKS2	Erkin-Say	3.27	343	⇑iP	Pb	18 53 06.2	-1.0
	baz=39						
EKS2				⇑iS	Sb	18 53 48.6	+1.6
	baz=39						
BTK	Batken	3.31	280	⇑iP	Pb	18 53 08.0	+0.1
	baz=82						
BTK				⇑iS	Sg	18 53 52.4	-2.9
	baz=82						
CHMS	Chumysh	3.46	356	⇑Lg	Lg	18 53 53.3	
	6.6nm,0.8s						
MRKS	Merke	3.49	337	eP	Pb	18 53 09.9	-1.1
	7.0nm,0.4s						
MRKS				eS	Sb	18 53 55.2	+1.8
	7.2nm,0.7s						
MRKS	Merke	3.49	337	Pg	Pb	18 53 09.9	-1.1
	7.0nm,0.4s						
MRKS				Lg	Lg	18 53 55.2	
	7.2nm,0.7s						
KST	Kastek	3.56	11	eP	Pb	18 53 10.6	-1.7
	12nm,0.7s						
KST				eS	Sb	18 53 56.5	+0.8
	27nm,0.7s						
KST	Kastek	3.56	11	Pg	Pb	18 53 10.6	-1.7
	12nm,0.7s						
KST				Lg	Lg	18 53 56.5	
	27nm,0.7s						
IZV	Izvestkoviy	3.68	18	eP	Pb	18 53 14.7	+0.4
	16nm,1.1s						
IZV				eS	Sg	18 54 03.5	-3.9
	20nm,0.7s						
IZV	Izvestkoviy	3.68	18	Pg	Pb	18 53 14.7	+0.4
	16nm,1.1s						
IZV				Lg	Lg	18 54 03.5	
	20nm,0.7s						
DGS	Degeres	3.74	8	eP	Pb	18 53 13.0	-2.2
	7.3nm,0.5s						
DGS				eS	Sb	18 54 00.7	+0.1
	9.1nm,0.9s						
DGS	Degeres	3.74	8	Pg	Pb	18 53 13.0	-2.2
	7.3nm,0.5s						
DGS				Lg	Lg	18 54 00.7	
	9.1nm,0.9s						
MDOK	Medeo	3.92	22	Pg	Pb	18 53 17.7	-0.6
MDOK				Lg	Lg	18 54 08.0	
KOTS	Kotyrbulak	4.00	22	eP	Pb	18 53 18.7	-1.0
	12nm,0.9s						
KOTS				eS	Sb	18 54 10.4	+2.2
	42nm,0.6s						
KOTS	Kotyrbulak	4.00	22	Pg	Pb	18 53 18.7	-1.0
	12nm,0.9s						
KOTS				Lg	Lg	18 54 10.4	
	42nm,0.6s						
KRBS	Karabastau	4.18	6	eP	Pb	18 53 22.4	-0.2
	2.6nm,0.4s						
KRBS				eS	Sb	18 54 16.8	+3.6
	4.8nm,0.7s						
KRBS	Karabastau	4.18	6	Pg	Pb	18 53 22.4	-0.2
	2.6nm,0.4s						
KRBS				Lg	Lg	18 54 16.8	
	4.8nm,0.7s						
KTBS	Karatobe	4.34	16	eP	Pb	18 53 27.8	+2.3
	1.8nm,0.6s						
KTBS				eS	Sg	18 54 26.2	-2.3
	13nm,0.6s						
KTBS	Karatobe	4.34	16	Pg	Pb	18 53 27.8	+2.3
	1.8nm,0.6s						
KTBS				Lg	Lg	18 54 26.2	
	13nm,0.6s						
KUU	Kurty	4.45	12	eP	Pb	18 53 26.7	-0.6
	3.8nm,0.6s						
KUU				eS	Sb	18 54 24.2	+3.2
	5.4nm,0.5s						
KUU	Kurty	4.45	12	Pg	Pb	18 53 26.7	-0.6
	3.8nm,0.6s						
KUU				Lg	Lg	18 54 24.2	
	5.4nm,0.5s						
JBG	Jabagly	4.47	312	Pg	Pb	18 53 25.8	-1.9
	13nm,0.4s						
JBG				Lg	Lg	18 54 22.7	
	12nm,1.0s						
CHKK	Chushkaly	4.54	18	eP	Pb	18 53 29.4	+0.5
	1.9nm,0.5s						
CHKK				eS	Sb	18 54 28.9	+5.2
	8.9nm,0.7s						
CHKK	Chushkaly	4.54	18	Pg	Pb	18 53 29.4	+0.5
	1.9nm,0.5s						
CHKK				Lg	Lg	18 54 28.9	
	8.9nm,0.7s						
KURS	Kuram	4.58	30	eP	Pb	18 53 30.9	+1.3
	5.4nm,0.6s						
KURS				eS	Sg	18 54 31.3	-4.8
	9.8nm,1.5s						
KURS	Kuram	4.58	30	Pg	Pb	18 53 30.9	+1.3
	5.4nm,0.6s						
KURS				Lg	Lg	18 54 31.3	
	9.8nm,1.5s						
KK31	Karatay Array	4.94	318	⇑Pn	Pn	18 53 23.2	-0.1
	0.2nm,0.3s,baz=134,slow=13,SNR=4.3						
KK31				⇑Pg	Pb	18 53 37.8	+2.1
	1.6nm,0.5s,baz=169,slow=19,SNR=8.3						
KK31				⇓Lg	Lg	18 54 43.1	
	2.1nm,0.5s,baz=130,slow=27,SNR=5.5						
PDGK	Podgornoye	5.04	40	Pg	Pb	18 53 39.6	+2.2
	3.7nm,1.4s						
PDGK				Lg	Lg	18 54 46.5	
	4.3nm,1.6s						
PDGK	Podgornoye	5.04	40	Pg	Pb	18 53 37.8	+0.4
PDGK				⇑Lg	Lg	18 54 43.6	
	12nm,0.9s						
ARXS	Arharly	5.10	23	eP	Pb	18 53 40.6	+2.2
	0.8nm,0.2s						
ARXS				eS	Sg	18 54 48.3	-4.6
	4.4nm,0.6s						
ARXS	Arharly	5.10	23	Pg	Pb	18 53 40.6	+2.2
	0.8nm,0.2s						
ARXS				Lg	Lg	18 54 48.3	
	4.4nm,0.6s						

JMA **16** *18:52:56.3±0.1, 24°.16N×122°.20E, h56km±2km, M2.4*
TAP **16** *18:52:56.9, 24°.24N×122°.20E, h58km, ML3.4, B*
ISC 16 18:52:55.5±1.1,**24°.19N**±0°.02×**122°.23E**±0°.02,**h20km**±8km,
n116,σ0°.78/166,**6D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.37	346	P	Pn	18 53 07.0	+1.2
	baz=339						
EOS1				S	Sn	18 53 14.6	+2.1
	baz=339						
ENA	Nanau	0.50	299	⇓iP	Pn	18 53 08.4	+0.8
	baz=300						
ENA				S	Sn	18 53 16.9	+1.2
	baz=300						
TWC	Suao	0.54	321	iP	Pn	18 53 08.5	+0.4
	baz=322						
TWC				S	Sn	18 53 16.4	-0.3
	baz=322						
NACB	Ninganchiao	0.58	269	⇓iP	Pn	18 53 09.1	+0.4
	baz=256						
NACB				eS	Sn	18 53 18.1	+0.6
	baz=256						
TWD	Chiawan	0.59	260	iP	Pn	18 53 09.3	+0.5
	baz=247						
TWD				S	Sn	18 53 18.4	+0.7
	baz=247						
HWA	Hwalien	0.60	250	iP	Pn	18 53 10.0	+1.0
	baz=244						
HWA				eS	Sn	18 53 19.9	+1.8
	baz=244						
ENLB	Shoufeng	0.64	244	P	Pn	18 53 09.4	0.0
	baz=235						
ENLB				eS	Sn	18 53 19.9	+0.9
	baz=235						
ETLH	Xiulin Townshi	0.68	272	⇓P	Pn	18 53 10.5	+0.3
	baz=267						
ETLH				eS	Sn	18 53 20.5	+0.3
	baz=267						
JYNG	Yonagunijimaku	0.71	68	P	Pn	18 53 11.1	+0.7
JYNG				S	Sn	18 53 21.3	+0.6
ILA	Ilan	0.72	323	eP	Pn	18 53 11.6	+1.0
	baz=329						
TWE	Neicheng	0.74	316	⇓iP	Pn	18 53 11.4	+0.6
	baz=310						
TWE				S	Sn	18 53 21.7	+0.3
	baz=310						
ENTT	Nioudou	0.75	307	iP	Pn	18 53 11.6	+0.6
	baz=304						
ENTT				eS	Sn	18 53 22.1	+0.3
	baz=304						
NTC	Toucheng	0.76	332	P	Pn	18 53 11.4	+0.3
	baz=339						
NTC				eS	Sn	18 53 22.0	0.0
	baz=339						
YOJ	Yonaguni jima	0.77	69	P	Pn	18 53 12.2	+1.0
	baz=73						
YOJ				S	Sn	18 53 23.7	+1.5
	baz=73						
YOJ	Yonaguni jima	0.77	69	P	Pn	18 53 11.8	+0.6
YOJ				eS	Sn	18 53 22.7	+0.5
NDT	Datong Townshi	0.77	303	P	Pn	18 53 11.7	+0.4
	baz=296						
NDT				eS	Sn	18 53 22.6	+0.3
	baz=296						
SLBB	Yuanshan	0.78	317	P	Pn	18 53 12.2	+0.8
	baz=310						
NNSB	Datong	0.81	288	P	Pn	18 53 12.2	+0.3
	baz=284						
NNSB				eS	Sn	18 53 23.4	0.0
	baz=284						
NNSH	Datong	0.81	288	iP	Pn	18 53 12.1	+0.2
	baz=284						
NNSH				eS	Sn	18 53 23.7	+0.3
	baz=284						
ESL	Shilin	0.81	243	P	Pn	18 53 12.1	+0.2
	baz=239						
ESL				eS	Sn	18 53 23.6	+0.2
	baz=239						
NNS	Nan Shan	0.82	288	P	Pn	18 53 12.2	+0.2
	baz=285						
NNS				eS	Sn	18 53 23.6	-0.1
	baz=285						
TWB1	Santiao Chiao	0.85	345	P	Pg	18 53 11.9	+0.3
	baz=346						
TWB1				S	Sb	18 53 22.5	0.0
	baz=346						
TIPB	Shuangxi	0.86	335	iP	Pg	18 53 12.6	+0.7
	baz=343						
WHF	Hehuan Shan	0.88	268	P	Pn	18 53 13.4	+0.2
	baz=255						
WHF				eS	Sn	18 53 25.5	-0.1
	baz=255						
NWLT	Wulai	0.88	312	P	Pn	18 53 13.4	+0.5
	baz=302						
NWLT				eS	Sn	18 53 25.3	+0.2
	baz=302						
EGFH	Guangfu	0.89	235	P	Pn	18 53 13.5	+0.6
	baz=232						
YHNB	Yeheng	0.91	302	⇓eP	Pg	18 53 13.8	+1.0
	baz=299						
YHNB				iS	Sg	18 53 25.6	+1.1
	baz=299						
NSK	Sanguang	0.93	302	⇓iP	Pg	18 53 13.8	+0.8
	baz=299						
NSK				eS	Sg	18 53 25.9	+0.9
	baz=299						
TWT	Tachien	0.96	274	eP	Pg	18 53 15.2	+1.6
	baz=271						
TWT				eS	Sn	18 53 27.9	+0.6
	baz=271						
CHGB	Renai	0.97	263	eP	Pg	18 53 14.8	+1.0
	baz=252						
CHGB				eS	Sn	18 53 27.7	+0.2
	baz=252						
NWF	Wu-fen Shan	0.97	335	P	Pn	18 53 14.0	-0.1
	baz=343						
WFSB	Wu-fen Shan	0.97	335	P	Pn	18 53 14.0	0.0
	baz=343						
TDCB	Techi	0.98	274	eP	Pg	18 53 15.1	+1.2
	baz=271						
TDCB				eS	Sn	18 53 27.8	+0.1
	baz=271						
TWA	Mucha	0.98	324	P	Pg	18 53 14.6	+0.7
	baz=332						
TWA				eS	Sn	18 53 27.2	-0.4
	baz=332						
OWD	Renai	0.99	257	P	Pg	18 53 14.8	+0.8
	baz=254						
OWD				eS	Sg	18 53 27.5	+0.8
	baz=254						
NHDH	Xindian Distri	1.00	321	P	Pg	18 53 15.0	+0.8
	baz=327						
NHDH				eS	Sn	18 53 27.7	-0.3
	baz=327						
HGSD	Ruisui	1.01	227	P	Pn	18 53 14.9	+0.4
	baz=221						
HGSD				eS	Sg	18 53 29.5	+2.4
	baz=221						
TATO	Taipei	1.03	320	eP	Pg	18 53 15.4	+0.7
	baz=318						
TATO				eS	Sn	18 53 28.4	-0.4
	baz=318						
EHY	Hungye	1.07	231	P	Pn	18 53 15.5	+0.1
	baz=237						
VWDT	VWDT	1.08	247	P	Pg	18 53 16.5	+1.0
	baz=237						
VWDT				eS	Sg	18 53 30.6	+1.4
	baz=237						
WLTB	Daxi	1.11	307	P	Pg	18 53 16.9	+1.1
	baz=298						
WLTB				eS	Sn	18 53 30.7	+0.1
	baz=298						
YM01	YM01	1.13	328	iP	Pn	18 53 16.2	-0.1
	baz=338						
YM01				eS	Sb	18 53 30.6	0.0
	baz=338						
YM10	YM10	1.14	328	P	Pn	18 53 16.3	-0.1
	baz=338						
YM11	YM11	1.14	329	P	Pn	18 53 16.2	-0.2
	baz=338						
YM05	YM05	1.15	328	P	Pn	18 53 16.1	-0.4
	baz=337						
YM04	YM04	1.15	327	P	Pn	18 53 16.3	-0.3
	baz=337						
YM04				eS	Sb	18 53 30.9	-0.3
	baz=337						
YM08	YM08	1.15	330	P	Pn	18 53 16.1	-0.5
	baz=339						
YULB	Yu-li	1.16	227	eP	Pn	18 53 16.8	+0.1
	baz=235						
TWS1	Kuangyinshan	1.17	321	P	Pb	18 53 17.2	+0.1
	baz=331						
WHP	Taichung City	1.17	275	P	Pg	18 53 18.2	+1.4
	baz=267						
WHP				eS	Sn	18 53 32.7	+0.3
	baz=267						
ANP	Anpu	1.19	327	eP	Pn	18 53 16.8	-0.3
	baz=327						
TWF1	Yuli	1.19	226	P	Pn	18 53 17.3	+0.2
	baz=234						
LIOB	Emei	1.20	293	P	Pg	18 53 18.3	+1.1
	baz=291						
DPDB	Guoxing	1.20	263	P	Pg	18 53 18.3	+1.1
	baz=257						
NSTT	Nanjuang	1.20	292	P	Pb	18 53 18.2	+0.6
	baz=290						
NSTT				eS	Sn	18 53 33.4	+0.5
	baz=290						
NTST	Danshui	1.20	324	P	Pn	18 53 17.5	+0.3
	baz=333						
TWY	Chenhua	1.23	332	eP	Pn	18 53 17.8	+0.3
	baz=342						
NCU	National Centr	1.23	310	eP	Pn	18 53 17.1	-0.5
	baz=308						
NCUH	Zhongli	1.23	310	eP	Pn	18 53 17.8	+0.2
	baz=308						
SSLB	Suanglung	1.23	251	P	Pb	18 53 18.5	+0.4
	baz=249						
SSLB				S	Sn	18 53 33.9	+0.2
	baz=249						
SBCB	Hsinchu	1.28	298	eP	Pb	18 53 19.0	0.0
	baz=296						
FULB	Fuli	1.30	221	eP	Pn	18 53 19.0	+0.3
	baz=211						
FULB				eS	Sn	18 53 35.4	-0.1
	baz=211						
CHKT	Chengkung	1.34	216	eP	Pn	18 53 19.0	-0.1
	baz=207						
CHKT				eS	Sb	18 53 34.6	-1.7
	baz=207						
WHYT	Xinyi Township	1.35	249	P	Pn	18 53 20.8	+0.7
	baz=242						
NMLH	Miaoli	1.35	285	eP	Pb	18 53 20.4	+0.2
	baz=283						
NMLH				eS	Sn	18 53 36.5	-0.3
	baz=283						
NSY	Sanyi	1.36	280	eP	Pb	18 53 20.9	+0.6
	baz=278						
YUS	Yu-Shan	1.36	240	P	Pb	18 53 20.9	+0.3
	baz=237						
YUS				eS	Sn	18 53 37.2	-0.3
	baz=237						
IRIF	Iriomote-Funau	1.38	84	P	Pn	18 53 20.1	+0.5
IRIF				S	Sn	18 53 37.0	-0.3
TCU	Taichung	1.42	269	eP	Pb	18 53 21.7	+0.4
	baz=267						
WJS	Zhushan	1.42	255	eP	Pg	18 53 22.5	+2.3
	baz=245						
WNT	Mingjian	1.44	258	eP	Pg	18 53 22.8	+2.2
	baz=256						
HATJ	Hateruma jima	1.45	95	P	Pn	18 53 21.3	+0.7
HATJ				S	Sb	18 53 40.0	+0.2
WDJ	Dajia District	1.46	277	eP	Pb	18 53 21.8	-0.1
	baz=275						
ALS	Alishan	1.47	243	eP	Pb	18 53 22.7	+0.4
	baz=233						
ELDTW	Lidau	1.49	228	P	Pn	18 53 21.4	+0.2
	baz=227						
CHN5	Tsauling	1.53	248	eP	Pb	18 53 23.8	+0.5
	baz=246						
WGK	Gukeng	1.60	252	eP	Pb	18 53 24.9	+0.4
	baz=250						
TWH	Lutao	1.62	205	eP	Pn	18 53 23.3	+0.3
	baz=204						
WDLH	Douliu	1.62	253	eP	Pb	18 53 25.2	+0.4
	baz=251						
JKRS	Kuro-shima	1.63	88	P	Pb	18 53 24.3	-0.6
JKRS				eS	Sn	18 53 44.0	+0.6
STYT	Tauyuan	1.69	233	eP	Pb	18 53 25.7	-0.3
	baz=224						
TPUB	Ta-pu	1.71	239	eP	Pb	18 53 26.2	0.0
	baz=238						
CHN4	Tsaushan	1.71	241	eP	Pb	18 53 26.9	+0.6
	baz=240						
TWGBT	Beinan	1.72	218	eP	Pb	18 53 24.7	+0.4
	baz=217						
TWG	Pinlang	1.72	218	eP	Pn	18 53 24.7	+0.3
	baz=217						
RLNB	Erlin	1.73	261	eP	Pb	18 53 25.6	+1.1
	baz=259						
WTP	Ta-pu	1.75	238	eP	Pb	18 53 26.9	-0.1
	baz=236						
JIJ	Ishigaki jima	1.76	84	P	Pn	18 53 25.2	+0.4
JIJ				S	Sn	18 53 45.8	-0.9
CHY	Chiayi	1.79	248	eP	Pb	18 53 27.0	-0.6
	baz=246						
TWK	Hsinying	1.84	240	eP	Pb	18 53 28.1	-0.4
	baz=239						
CHN1	Nanshi	1.85	238	eP	Pb	18 53 28.8	+0.1
	baz=236						
SGST	Jiashian	1.86	234	eP	Pb	18 53 28.0	-1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=233						
SLGT	Liugui	1.87	231	eP	Pb	18 53 28.5	-0.5
	baz=230						
WSF	Szhu	1.91	254	eP	Pb	18 53 28.7	-1.0
	baz=252						
JISG	Ishigakijimahi	1.94	78	P	Pn	18 53 27.9	+0.5
JISG				S	Sn	18 53 49.7	-1.5
ECL	Taimali	1.97	217	eP	Pn	18 53 29.2	+1.5
	baz=216						
SSD	Sandimen	2.05	226	eP	Pb	18 53 31.2	-0.9
	baz=225						
MASBT	Mashibuluo	2.14	223	eP	Pn	18 53 31.6	+1.4
	baz=223						
EAST	Anshuo	2.20	216	eP	Pn	18 53 32.0	+1.1
	baz=215						
LAY	Lan-yu	2.23	196	eP	Pn	18 53 32.4	+1.1
	baz=190						
JTJ	Tarama	2.30	78	P	Pn	18 53 33.1	+0.8
JTJ				eS	Sn	18 53 59.2	-0.9
SCZT	Fangliau	2.33	220	eP	Pb	18 53 35.2	-1.7
	baz=211						
PHUB	P'eng-hu	2.52	255	eP	Pn	18 53 36.6	+1.2
	baz=254						
PNG	Penghu	2.52	256	eS	Sn	18 54 04.7	-0.8
	baz=256						
PTTC	Pingtan	2.59	301	eP	Pn	18 53 35.3	-0.9
	baz=299						
VWUC	VWUC	2.65	288	eP	Pn	18 53 36.5	-0.7
	baz=286						
JIRB	Irabujima	2.76	76	P	Pn	18 53 39.2	+0.6
JIRB				eS	Sn	18 54 10.8	-0.6
MATB	Ma-tsu	2.85	314	eP	Pn	18 53 38.9	-0.9
	baz=312						
JIKM	Ikemajima	2.85	74	S	Sn	18 54 14.2	+0.7
JMJ2	Miyako jima3	2.88	78	eS	Sn	18 54 14.3	0.0
PTMZ	Houxiangcun	2.95	287	eP	Pn	18 53 40.7	-0.6
	baz=286						
XPSS	Dashiqiu	3.29	326	eP	Pn	18 53 45.2	-0.8
	baz=336						
MHZQ	Yeshan	3.47	304	eP	Pn	18 53 47.1	-1.2
	baz=302						
KNMB	Chin-men Tao	3.51	275	eP	Pn	18 53 48.5	-0.5
	baz=265						
AXDP	Jialang	3.94	281	eP	Pn	18 53 54.7	-0.2
	baz=279						
ZPLA	Ao Xicun	4.10	267	eP	Pn	18 53 56.6	-0.4
	baz=259						

THE ***16*** *18:56:18.5, 38.18N×20.41E, h7km±1km, ML3.1/3, Error ellipse: s-maj=1.4km s-min=0.8km az=238.0*
ATH ***16*** *18:56:18.3, 38.17N×20.44E, h8km, ML3.3/23, Error ellipse: s-maj=1.1km s-min=0.6km az=246.0*
BEO ***16*** *18:56:19.8±0.8, 38.12N×20.30E, h24km±5km, ML3.6/8*
PDG ***16*** *18:56:19.1±0.2, 38.27N×20.33E, h15km±1km, ML3.6/10, Error ellipse: s-maj=1.7km s-min=0.7km az=90.0*
IDC ***16*** *18:56:25.8±1.7, 38.28N×20.50E, h60km±18km, mb3.4/14, mb1 3.5/22, mb1mx3.4/58, mbtmp3.7/22, MS2.6/2, Ms1 2.6/2, ms1mx2.3/29, Error ellipse: s-maj=17.9km s-min=11.5km az=36.0*
ISC 16 18:56:18.7±0.6, 38.19N±0.02×20.43E±0.02, h7km±3km, n161, σ1§32/205, mb3.6/14, 17C-5D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXRA	Lixouri, Kepha	0.01	23	P	Pg	18 56 19.6	-0.4
LXRA				S	Sg	18 56 20.4	-0.4
LXR1	Lixouri, Cepha	0.01	25	P	Pg	18 56 19.5	-0.4
LXR1				S	Sg	18 56 20.4	-0.3
ARGA	Argostoli. Kep	0.04	106	P	Pg	18 56 19.8	-0.3
ARGA				S	Sg	18 56 20.8	-0.2
CHV1	Chavriata, Kef	0.04	264	P	Pg	18 56 19.9	-0.2
CHV1				S	Sg	18 56 21.3	+0.3
ARG2	Argostoli	0.05	102	P	Pg	18 56 19.9	-0.2
ARG2				S	Sg	18 56 21.5	+0.3
KEF2	Argostoli. Kep	0.05	117	P	Pg	18 56 20.0	-0.2
KEF2				S	Sg	18 56 21.1	-0.2
KEF3	Kipouria, Keph	0.07	283	P	Pg	18 56 20.4	0.0
KEF3				S	Sg	18 56 22.7	+1.0
KEF4	Livadi, Kephal	0.07	356	P	Pg	18 56 20.5	0.0
KEF4				S	Sg	18 56 22.2	+0.4
AGT1	Agia Thekli	0.07	330	P	Pg	18 56 20.6	+0.1
AGT1				S	Sg	18 56 22.1	+0.3
KEF1	Kardakata, Kep	0.10	19	P	Pg	18 56 20.9	0.0
KEF1				S	Sg	18 56 22.9	+0.5
VLS	Valsamata	0.13	95	P	Pg	18 56 21.2	-0.2
VLS				S	Sg	18 56 23.9	+0.7
VLS	Valsamata	0.13	95	P	Pg	18 56 21.2	-0.2
VLS				S	Sg	18 56 22.5	-0.7
VLS				AML	AML	18 56 27.9	
	comp=N,80034μm,0.3s						
VLS				AML	AML	18 56 31.0	
	comp=E,63349μm,0.6s						
VLMS	Volimes, Zakyn	0.36	149	P	Pg	18 56 25.6	-0.1
VLMS				S	Sg	18 56 30.2	-0.3
VLMS				AML	AML	18 56 35.3	
	comp=N,35993μm,0.4s						
VLMS				AML	AML	18 56 37.8	
	comp=E,25126μm,0.4s						
EVGI	Lefkada island	0.47	22	P	Pg	18 56 27.6	-0.1
EVGI				S	Sb	18 56 35.3	-1.2
EVGI	Lefkada island	0.47	22	P	Pg	18 56 27.7	-0.1
EVGI				S	Sg	18 56 35.0	+1.1
ZAK2	Zakynthos	0.55	137	P	Pg	18 56 29.6	+0.4
MGNA	Meganis	0.55	31	P	Pg	18 56 29.0	-0.3
MGNA				S	Sg	18 56 36.8	+0.3
MGNA				AML	AML	18 56 38.6	
	comp=E,7250μm,0.2s						
MGNA				AML	AML	18 56 40.8	
	comp=N,5137μm,0.3s						
LKD2	Lefkada island	0.63	16	P	Pg	18 56 30.3	-0.5
LKD2				S	Sb	18 56 40.1	-1.0
	comp=N,2μm,0.4s						
LKD2	Lefkada island	0.63	16	P	Pg	18 56 30.4	-0.5
LKD2				AML	AML	18 56 48.1	
	comp=E,4428μm,0.6s						
LKD2				AML	AML	18 56 59.8	
	comp=N,2796μm,1.0s						
AST1	Astakos	0.63	55	P	Pg	18 56 30.6	-0.2
AST1				S	Sb	18 56 41.4	+0.4
TSLK	Tsoukalades, L	0.66	15	P	Pg	18 56 31.0	-0.4
TSLK				S	Sg	18 56 40.3	+0.3
	comp=N,2μm,0.6s						
TSLK	Tsoukalades, L	0.66	15	P	Pg	18 56 31.0	-0.4
TSLK				S	Sb	18 56 41.6	-0.5
TSLK				AML	AML	18 56 55.7	
	comp=E,5035μm,0.5s						
TSLK				AML	AML	18 56 59.5	
	comp=N,3059μm,0.6s						
PDO	Prodromos	0.72	55	P	Pg	18 56 32.5	-0.1
PDO	Prodromos	0.72	55	P	Pg	18 56 32.5	-0.1
PDO				AML	AML	18 56 48.0	
	comp=E,7250μm,0.5s						
PDO				AML	AML	18 56 49.2	
	comp=N,7028μm,0.3s						
RLS	Riolos of Patr	0.83	99	P	Pg	18 56 33.9	-0.7
RLS	Riolos of Patr	0.83	99	P	Pg	18 56 34.0	-0.6
RLS				AML	AML	18 56 53.0	
	comp=N,4082μm,0.6s						
RLS				AML	AML	18 56 58.3	
	comp=E,3640μm,0.9s						
PVO	Paravola	0.96	63	P	Pg	18 56 37.0	-0.2
PVO	Paravola	0.96	63	P	Pg	18 56 37.0	-0.2
PVO				AML	AML	18 56 55.0	
	comp=E,4649μm,0.5s						
PVO				AML	AML	18 57 07.1	
	comp=N,5689μm,0.6s						
DRO	Drossia	1.04	103	P	Pg	18 56 38.1	-0.5
DRO	Drossia	1.04	103	P	Pg	18 56 37.7	-0.9
DRO				AML	AML	18 57 01.7	
	comp=N,6847μm,0.5s						
DRO				AML	AML	18 57 06.9	
	comp=E,7037μm,0.5s						
UPR	University Cam	1.07	84	P	Pg	18 56 38.4	-0.9
AMT	Artemida-Makis	1.21	122	P	Pg	18 56 40.9	-0.9
AMT				AML	AML	18 57 09.4	
	comp=E,6719μm,0.6s						
AMT				AML	AML	18 57 12.8	
	comp=N,7576μm,0.6s						
LAKA	Lakka	1.22	87	P	Pg	18 56 40.7	-1.4
LAKA				AML	AML	18 57 04.3	
	comp=N,2168μm,0.5s						
LAKA				AML	AML	18 57 10.2	
	comp=E,3196μm,1.0s						
ANX	Ano Chora	1.24	70	P	Pg	18 56 41.6	-0.9
ANX				AML	AML	18 57 11.8	
	comp=E,3680μm,0.6s						
ANX				AML	AML	18 57 12.2	
	comp=N,3973μm,0.6s						
SERG	Sergoula	1.30	80	P	Pn	18 56 42.2	-1.1
SERG				AML	AML	18 57 13.2	
	comp=N,3619μm,0.5s						
SERG				AML	AML	18 57 13.6	
	comp=E,3260μm,0.6s						
EVR	Evrytania	1.30	56	P	Pn	18 56 42.1	-1.4
EVR				AML	AML	18 57 15.3	
	comp=E,1519μm,0.8s						
EVR				AML	AML	18 57 23.6	
	comp=N,1100μm,0.6s						
TRIZ	Trizonia	1.30	82	P	Pn	18 56 42.1	-1.3
IGT	Igoumenitsa	1.34	357	P	Pn	18 56 43.3	-0.7
IGT				S	Sn	18 57 03.0	+0.8
	comp=N,640nm,0.6s						
IGT	Igoumenitsa	1.34	357	ePg	Pg	18 56 45.4	+0.9
IGT				eSg	Sn	18 57 04.8	+2.6
IGT	Igoumenitsa	1.34	357	P	Pn	18 56 43.2	-0.8
IGT				AML	AML	18 57 16.0	
	comp=E,1596μm,0.5s						
IGT				AML	AML	18 57 19.1	
	comp=N,1129μm,1.0s						
KALE	Kalithea	1.36	81	P	Pn	18 56 43.0	-1.2
KLV	Kalavryta, Ach	1.36	96	P	Pn	18 56 43.3	-1.0
KLV				AML	AML	18 57 16.6	
	comp=N,2482μm,0.7s						
KLV				AML	AML	18 57 18.0	
	comp=E,2700μm,0.9s						
JAN	Janina	1.50	12	P	Pg	18 56 47.5	0.0
ITM	Ithomi	1.56	130	P	Pn	18 56 46.6	-0.3
ITM				AML	AML	18 57 28.8	
	comp=N,1903μm,1.0s						
ITM				AML	AML	18 57 33.9	
	comp=E,1376μm,1.0s						
MAKR	Makrakomi, Fth	1.57	58	P	Pn	18 56 47.3	+0.2
MAKR				AML	AML	18 57 20.1	
	comp=N,2144μm,1.0s						
MAKR				AML	AML	18 57 25.9	
	comp=E,2264μm,0.5s						
KEK	Kerkira	1.60	342	P	Pn	18 56 47.5	0.0
KEK	Kerkira	1.60	342	P	Pn	18 56 47.6	+0.1
KASA	Kassiopi	1.60	346	P	Pg	18 56 49.1	-0.3
PYL	PYLOS	1.66	141	P	Pn	18 56 47.9	-0.4
PYL	PYLOS	1.66	141	P	Pn	18 56 48.0	-0.3
AGG	Agios Georgios	1.71	60	P	Pn	18 56 49.7	+0.8
AGG				AML	AML	18 57 34.5	
	comp=N,846μm,0.6s						
AGG				AML	AML	18 57 42.0	
	comp=E,962μm,1.0s						
VLX	Vlachokerasia	1.75	117	P	Pb	18 56 51.4	+0.2
AXAR	Agios Charalam	1.84	71	P	Pb	18 56 52.8	+0.1
AXAR				AML	AML	18 57 32.9	
	comp=N,3232μm,0.7s						
AXAR				AML	AML	18 57 43.5	
	comp=E,3011μm,1.2s						
THL	Klokotos Trika	1.85	41	P	Pb	18 56 52.1	-0.7
THL				AML	AML	18 57 25.6	
	comp=E,794μm,0.5s						
THL				AML	AML	18 57 31.5	
	comp=N,826μm,0.8s						
KPRO	Kipourio	1.91	22	P	Pb	18 56 53.9	0.0
LTK	Loutraki	2.01	94	P	Pn	18 56 54.2	+1.1
LOUT	Loutraki	2.02	95	P	Pb	18 56 54.9	-0.8
LKR	Lokris	2.07	76	P	Pb	18 56 55.9	-0.8
DYR	Agios Nikonas	2.08	133	P	Pn	18 56 55.0	+1.0
VIL2	Platees	2.23	89	P	Pb	18 56 58.5	-1.0
NEST	Nestorio	2.27	12	P	Pb	18 56 59.5	-0.7
KRND	KRANIDI	2.30	110	P	Pb	18 56 59.2	-1.3
DID	Didima	2.32	106	P	Pn	18 56 59.1	+1.6
NEO	Neokhori	2.45	62	P	Pn	18 57 01.0	+1.8
XOR	Xorichti	2.46	61	P	Pn	18 57 00.3	+1.0
VLI	Veliai	2.48	126	P	Pn	18 57 00.8	+1.3
MRKA	Markates	2.53	77	P	Pn	18 57 01.4	+1.1
MRKA				AML	AML	18 57 56.6	
	comp=E,323μm,0.9s						
MRKA				AML	AML	18 57 58.1	
	comp=N,486μm,0.9s						
SKIA	Skiathos	2.57	67	P	Pn	18 57 02.3	+1.5
ATHU	Athens Univers	2.66	94	P	Pn	18 57 02.7	+0.7
VLY	Voula,Athens	2.68	96	P	Pn	18 57 03.3	+1.0
PTL	Penteli	2.71	92	P	Pn	18 57 03.8	+1.0
PTL				AML	AML	18 57 59.8	
	comp=N,493μm,0.9s						
PTL				AML	AML	18 58 02.3	
	comp=E,464μm,0.9s						
KTHA	Kythira Island	2.85	132	P	Pn	18 57 06.5	+1.8
AOS	Alonnisos	2.87	69	P	Pn	18 57 06.3	+1.3
OHR	Ohrid	2.93	5	i Pn	Pn	18 57 08.5	+2.6
TIP	Timpagrande	3.04	290	⇑P	Pn	18 57 07.5	+0.1
TIP				⇓S	Sn	18 57 41.5	-2.5
KARY	Karystos	3.16	92	P	Pn	18 57 10.2	+1.3
TIR	Tirane	3.19	352	ePn	Pn	18 57 10.1	+0.8
TIR	Tirane	3.19	352	⇓P	Pn	18 57 09.9	+0.6
TIR				⇓S	Sn	18 57 47.8	+0.3
ANKY	Antikythira Is	3.26	134	P	Pn	18 57 11.7	+1.4
STIP	Stip	3.75	21	i Pn	Pn	18 57 20.0	+2.9
MATE	Matera	3.79	312	⇑P	Pn	18 57 17.0	-0.6
MATE				⇑S	Sn	18 58 00.5	-1.9
SRS	Serrai	3.81	39	ePn	Pn	18 57 19.0	+1.1
SKO	Skopje	3.86	11	ePn	Pn	18 57 19.9	+1.2
ULC	Ulcinj	3.88	347	ePn	Pn	18 57 18.0	-0.9
ULC				eSn	Sn	18 58 03.2	-1.5
DRME	Dracevica, Mon	4.11	347	ePn	Pn	18 57 21.7	-0.3
DRME	Dracevica, Mon	4.11	347	ePn	Pn	18 57 21.6	-0.4
DRME				i Sn	Sn	18 58 08.6	-1.7
APE	Apeiranthos	4.20	104	⇑P	Pn	18 57 25.5	+2.2
PDG	Podgorica	4.33	348	ePn	Pn	18 57 25.1	+0.1
PDG				eSn	Sn	18 58 13.9	-1.9
PDG	Podgorica	4.33	348	⇑P	Pn	18 57 25.5	+0.4
PDG				⇑S	Sn	18 58 14.9	-0.8
PDG	Podgorica	4.33	348	ePn	Pn	18 57 24.3	-0.7
TTG	Podgorica	4.33	348	ePn	Pn	18 57 24.4	-0.6
TTG				eSn	Sn	18 58 13.8	-2.0
PVY	Plav	4.42	355	ePn	Pn	18 57 26.3	0.0
PVY				eSn	Sn	18 58 16.2	-1.9
CEME	Cevo	4.50	346	ePn	Pn	18 57 26.7	-0.8
CEME				eSn	Sn	18 58 17.8	-2.4
HCY	Herceg Novi	4.50	341	⇑iPn	Pn	18 57 26.7	-0.7
HCY				eSn	Sn	18 58 17.7	-2.4
BOSS	Bosilegrad	4.58	19	ePn	Pn	18 57 29.9	+1.4
IDI	Anoyia	4.60	128	P	Pn	18 57 31.8	+3.0
	comp=E,0.6nm,0.3s,baz=256,slow=5.6,SNR=9.6						
IDI				S	Sn	18 58 27.0	+4.3
	comp=E,2.9nm,0.3s,baz=316,slow=23,SNR=12						
IDI				LR	LR	18 59 30.0	
	comp=E,42nm,20.4s,baz=343,slow=40						
IVA	Berane	4.70	355	ePn	Pn	18 57 30.0	-0.1
IVA				eSn	Sn	18 58 23.5	-1.5
KOME	Kolasin	4.71	352	ePn	Pn	18 57 30.4	+0.1
KOME				eSn	Sn	18 58 23.3	-2.0
NKME	Niksic	4.71	347	ePn	Pn	18 57 30.0	-0.3
NKME				eSn	Sn	18 58 23.2	-2.0
BARS	Barje	4.74	12	ePn	Pn	18 57 30.6	-0.1
BARS				eSn	Sn	18 58 24.9	-1.0
TREB	Trebinje	4.79	341	ePn	Pn	18 57 29.8	-1.6
TREB				eSn	Sn	18 58 24.4	-2.8
TREB	Trebinje	4.79	341	ePn	Pn	18 57 29.1	-2.3
VTS	Vitosha	4.92	25	ePn	Pn	18 57 31.5	-1.7
VTS	Vitosha	4.92	25	⇓P	Pn	18 57 34.5	+1.3
VTS				⇑S	Sn	18 58 32.8	+2.4
BRY	Bratogost	4.92	344	ePn	Pn	18 57 32.5	-0.8
BRY				eSn	Sn	18 58 28.5	-2.1
SELS	Selova	5.05	6	ePn	Pn	18 57 34.0	-1.0
SJES	Sjenica	5.08	356	ePn	Pn	18 57 36.0	+0.6
STON	Ston	5.12	337	ePn	Pn	18 57 35.6	-0.2
STON				eSn	Sn	18 58 32.0	-3.2
STON	Ston	5.12	337	ePn	Pn	18 57 34.2	-1.6
IVAS	Ivanjica	5.39	358	ePn	Pn	18 57 38.6	-1.0
BOVS	Bovan	5.53	10	ePn	Pn	18 57 40.9	-0.6
BOVS				eSn	Sn	18 58 42.9	-2.4
GRUS	Gruza	5.70	2	ePn	Pn	18 57 43.1	-0.7
BBLS	Lazići	5.72	353	ePn	Pn	18 57 45.1	+0.8
BBLS	Lazići	5.72	353	ePn	Pn	18 57 40.4	-3.9
ZAGS	Zajecar	5.78	13	ePn	Pn	18 57 44.8	-0.2
DIVS	Divibare	5.91	357	eSn	Sn	18 58 51.7	-3.2
DIVS	Divibare	5.91	357	ePn	Pn	18 57 42.5	-4.4
HAPS	Han Pijesak,Bl	6.00	350	ePn	Pn	18 57 46.7	-1.3
HAPS	Han Pijesak,Bl	6.00	350	ePn	Pn	18 57 45.5	-2.5
TRUS	Trudelj	6.03	360	ePn	Pn	18 57 48.5	+0.1
PLVB	Pleven	6.09	30	⇓P	Pn	18 57 49.6	+0.4
ELND	Elena	6.29	39	⇑P	Pn	18 57 52.0	0.0
MGRS	Mrkonjic Grad	6.71	339	ePn	Pn	18 57 58.4	+0.6
BLY	Banja Luka	6.99	341	⇑P	Pn	18 58 02.2	+0.6
BLY				⇑S	Sn	18 59 20.6	-0.8
GZR	Gura Zlata	7.41	13	⇑P	Pn	18 58 08.6	+1.3
BZS	Buzias	7.48	6	⇑P	Pn	18 58 08.3	+0.1
ARR	Arges	7.83	22	⇑P	Pn	18 58 14.0	+0.9
VOIR		8.02	24	⇑P	Pn	18 58 17.1	+1.3
MORH	Mrgy, Hungar	8.13	351	ePn	Pn	18 58 15.8	-1.4
MLR	Muntele Rosu	8.38	28	P	Pn	18 58 24.8	+4.1
	comp=E,0.1nm,0.3s,baz=143,slow=15,SNR=3.8						
MLR	Muntele Rosu	8.38	28	⇑P	Pn	18 58 21.2	+0.6
CRES	Cresnjev	8.48	336	ePn	Pn	18 58 20.9	-1.1
PLOR	Plostina	8.94	29	⇑P	Pn	18 58 29.9	+1.5
SOKA	Soboth	9.37	337	ePn	Pn	18 58 33.2	-1.1
	comp=E,3.4nm,0.4s						
OBKA	Obir	9.38	334	ePn	Pn	18 58 35.1	+0.7
	comp=E,1.2nm,0.3s						
ARSA	Arzberg	9.75	340	ePn	Pn	18 58 39.0	-0.4
	comp=E,1.2nm,0.3s						
ABTA	Abfaltersbach	10.36	328	ePn	Pn	18 58 48.6	+0.9
	comp=E,3.4nm,0.7s						
VYHS	Vyhne	10.37	354	ePN	Pn	18 58 46.8	-1.0
BRTR	Keskin Array B	10.40	77	P	Pn	18 58 51.9	+3.4
	comp=E,0.1nm,0.3s,baz=265,slow=13,SNR=3.2						
MOA	Molln	10.65	337	ePn	Pn	18 58 52.4	+0.6
	comp=E,1.8nm,0.3s						
WTTA	Wattenberg	11.13	327	ePn	Pn	18 59 00.4	+2.0
	comp=E,1.9nm,0.5s						
WATA	Walderalm	11.21	327	ePn	Pn	18 59 00.2	+0.6
	comp=E,1.9nm,0.5s						
DAVOX	Davos/Dischmat	11.58	321	P	Pn	18 59 07.5	+2.8
	comp=E,0.3nm,0.3s,baz=151,slow=15,SNR=3.9						
GERES	GERESS Array B	11.71	338	P	Pn	18 59 07.3	+1.0
	comp=E,0.1nm,0.3s,baz=166,slow=12,SNR=3.7						
KBZ	Khabaz	17.83	65	P	P	19 00 29.4	+1.4
	comp=E,0.1nm,0.3s,baz=241,slow=5.3,SNR=5.7						
GNI	Garni	18.94	76	P	Pn	19 00 41.7	+0.6
	comp=E,0.2nm,0.3s,baz=288,slow=5.0,SNR=4.6						
GNI				LR	LR	19 08 51.6	
	comp=E,34nm,19.1s,baz=290,slow=40						
ESDC	Sonseca Array	19.03	282	P	Pn	19 00 42.6	+0.6
	comp=E,0.1nm,0.3s,baz=80,slow=10.0,SNR=4.2						
HFS	Hagfors	22.38	351	P	P	19 01 17.2	-0.2
	comp=E,2.5nm,0.8s,baz=168,slow=9.1,SNR=6.5						
EKA	Eskdalemuir Ar	23.38	325	P	P	19 01 29.2	+1.3
	comp=E,1.2nm,0.7s,baz=130,slow=9.0,SNR=4.1						
FINES	FINESS Array B	23.55	7	P	P	19 01 28.6	-0.9
	comp=E,2.5nm,0.8s,baz=176,slow=9.9,SNR=5.9						
NOA	NORSAR Array B	23.59	349	P	P	19 01 31.2	+1.3
	comp=E,1.2nm,0.9s,baz=159,slow=8.6,SNR=3.4						
GEYT	Alibeck	29.54	79	P	P	19 02 24.1	+0.1
	comp=E,1.0nm,0.6s,baz=251,slow=8.5,SNR=3.5						
TORD	Torodi Ar. Bea	29.99	219	P	P	19 02 28.9	+0.8
	comp=E,0.8nm,0.8s,baz=40,slow=7.4,SNR=4.1						
ARCES	ARCESS Array B	31.53	3	P	P	19 02 41.3	+0.1
	comp=E,3.6nm,1.0s,baz=88,slow=33,SNR=4.1						
BVAR	Borovoye Array	37.17	50	P	P	19 03 29.3	-0.9
	comp=E,0.4nm,0.6s,baz=277,slow=5.8,SNR=3.9						
KURBB	Kurchatov Arra	42.28	53	P	P	19 04 11.2	-1.5
	comp=E,0.7nm,0.7s,baz=283,slow=8.8,SNR=7.6						
MKAR	Makanchi Array	45.36	58	P	P	19 04 36.3	-1.3
	comp=E,0.8nm,0.4s,baz=275,slow=7.0,SNR=32						
ZALV	Zalesovo Beam	45.74	48	P	P	19 04 39.3	-1.1
	comp=E,3.0nm,0.6s,baz=271,slow=8.7,SNR=14						
SONM	Songino Array	60.51	51	P	P	19 06 28.8	-0.7
	comp=E,0.4nm,0.7s,baz=279,slow=8.1,SNR=5.4						
YKA	Yellowknife Ar	73.36	340	P	P	19 07 52.0	+1.1
	comp=E,0.2nm,0.6s,baz=39,slow=5.7,SNR=3.2						
ILAR	Eielson Array	76.89	354	P	P	19 08 10.9	-0.3
	comp=E,0.3nm,0.8s,baz=42,slow=4.2,SNR=3.3						

IDC ***16*** *19:02:27.8±0.9, 30.50N×79.20E, h0km, mb3.5/12, mb1 3.6/14, mb1mx3.5/40, mbtmp3.5/14, ML3.4/2, MS2.9/2, Ms1 3.0/2, ms1mx2.4/31, Error ellipse: s-maj=31.8km s-min=16.2km az=55.0*
NDI ***16*** *19:02:30.8±1.9, 30.42N×79.25E, h10km, ML3.7*
ISC 16 19:02:30.1±3.0, 30.44N±0.05×79.28E±0.04, h17km±20km, n23, σ1§72/29, mb3.5/11, Western Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOSI	Joshimath	0.27	65	eP	Pb	19 02 36.5	-0.1
JOSI				eS	Sb	19 02 40.8	-0.2
JOSI				IAML		19 02 41.8	
	comp=N,5μm,0.3s						
JOSI				IAML		19 02 42.0	
	comp=E,5μm,0.3s						
DDI	Dehra Dun	1.06	264	eP	Pb	19 02 50.0	-0.1
DDI				eS	Sb	19 03 04.0	+0.2
DDI				IAML		19 03 04.9	
	comp=E,3μm,0.3s						
DDI				IAML		19 03 05.1	
	comp=N,5μm,0.5s						
SMLA	Simla	1.94	291	eP	Pb	19 03 04.0	-1.1
SMLA				eS	Sb	19 03 29.1	+0.2
SMLA				IAML		19 03 30.6	
	comp=N,2μm,0.4s						
SMLA				IAML		19 03 30.6	
	comp=E,2μm,0.2s						
NDI	New Delhi	2.51	226	eP	Pb	19 03 13.0	-1.8
NDI				ex	Sb	19 03 49.5	+4.1
BHK	Bhakra	2.64	292	ex	Pb	19 03 16.0	-1.0
BHK				ex	Sb	19 03 51.0	+1.8
SONA	Sohna	2.91	222	ex	Sb	19 03 58.2	+1.5
SONA				IAML		19 04 01.5	
	comp=E,207nm,0.2s						
SONA				IAML		19 04 04.0	
	comp=N,106nm,0.2s						
DHRM	DHARAMSHALA	3.12	306	eP	Pn	19 03 20.6	+1.9
DHRM				eS	Sn	19 03 57.4	+1.7
DHRM				IAML		19 04 11.1	
	comp=N,203nm,0.2s						
DHRM				IAML		19 04 13.6	
	comp=E,433nm,0.2s						
KUDL	Kundal	3.34	227	ex	Pn	19 03 13.6	-8.1
KUDL				ex	Sn	19 03 56.7	-4.3
THN	Thein Dam	3.63	304	eP	Pn	19 03 27.5	+1.9
THN				ex	x	19 04 10.5	
AAK	Ala-Archa	12.76	344	Pn	Pn	19 05 29.6	-1.3
	comp=E,0.3nm,0.3s,baz=158,slow=13,SNR=5.7						
AAK				LR	LR	19 11 12.8	
	comp=E,50nm,19.0s,baz=166,slow=41						
MKAR	Makanchi Array	16.49	7	Pn	Pn	19 06 18.4	-2.2
	comp=E,0.1nm,0.3s,baz=190,slow=14,SNR=5.8						
KURBB	Kurchatov Arra	20.16	359	P	P	19 07 03.8	+0.2
	comp=E,0.9nm,0.4s,baz=199,slow=9.1,SNR=9.3						
CMAR	Chiang Mai Arr	21.47	119	P	P	19 07 20.6	+2.6
	comp=E,0.5nm,0.7s,baz=309,slow=13,SNR=5.3						
BVAR	Borovoye Array	23.48	346	P	P	19 07 38.8	0.0
	comp=E,0.4nm,0.3s,baz=150,slow=14,SNR=5.1						
ZALV	Zalesovo Beam	23.83	8	P	P	19 07 40.6	-1.5
	comp=E,0.5nm,0.4s,baz=183,slow=7.2,SNR=3.7						
AKTO	Aktyubinsk	25.54	327	P	P	19 07 57.6	-0.2
	comp=E,0.7nm,0.5s,baz=111,slow=8.6,SNR=3.4						
FINES	FINESS Array B	46.31	328	P	P	19 10 54.5	-0.2
	comp=E,1.4nm,0.7s,baz=126,slow=8.8,SNR=10.0						
ARCES	ARCESS Array B	49.35	338	P	P	19 11 18.6	+0.5
	comp=E,0.9nm,0.5s,baz=113,slow=9.3,SNR=6.9						
NOA	NORSAR Array B	53.31	326	P	P	19 11 47.8	-0.2
	comp=E,0.7nm,0.8s,baz=108,slow=8.4,SNR=2.9						
NOA				LR	LR	19 37 56.6	
	comp=E,14nm,21.5s,baz=310,slow=40						
TORD	Torodi Ar. Bea	72.85	275	P	P	19 13 58.2	-0.3
	comp=E,0.2nm,0.5s,baz=251,slow=5.7,SNR=3.1						
WRA	Warramunga Arr	72.88	126	P	P	19 13 59.5	+1.0
	comp=E,0.5nm,0.9s,baz=319,slow=5.8,SNR=3.0						
ASAR	Alice Springs	75.10	129	P	P	19 14 12.1	+0.7
	comp=E,0.4nm,0.8s,baz=317,slow=6.0,SNR=4.2						
ILAR	Eielson Array	78.51	18	P	P	19 14 29.3	-0.7
	comp=E,0.2nm,0.5s,baz=302,slow=5.5,SNR=3.6						

MAN ***16*** *19:15:57.7, 3.68N×126.35E, h1km, mb5.1, ML4.0, MS4.1*
IDC ***16*** *19:15:58.2±2.2, 4.08N×126.33E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/24, mbtmp3.5/3, Error ellipse: s-maj=198.5km s-min=25.1km az=65.0*
ISC 16 19:15:59.4±1.3, 4.06N±0.07×126.2E±0.1, h10km, n9, σ1§68/13, mb3.5/3, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**2.09**	**346**	*e*P	**Pg**	**19 16 39.8**	**+0.2**
DDMP				*e*S	**Sg**	**19 17 10.8**	**+4.1**
GSPH	**General Santos**	**2.38**	**328**	*e*P	**Pg**	**19 16 45.7**	**+0.6**
MATI	**Mati**	**2.87**	**1**	*e*P	**Pb**	**19 16 50.6**	**-0.1**
MATI				*e*S	**Sg**	**19 17 31.2**	**-0.4**
SKMP	**Bagumbayan, Su**	**2.96**	**326**	*e*P	**Pb**	**19 16 52.5**	**+0.2**
SKMP				*e*S	**Sg**	**19 17 33.5**	**-1.0**
KCP	**Kidapawan**	**3.14**	**339**⇓	*i*P	**Pg**	**19 16 59.6**	**0.0**
BUKP	**Musuan**	**3.96**	**343**	*e*P	**Pb**	**19 17 06.8**	**-2.7**
BUKP				*e*S	**Sb**	**19 17 56.2**	**-1.3**
WRA	**Warramunga Arr**	**25.15**	**162**	P	**P**	**19 21 25.4**	**+0.4**
	1.7nm,0.7s,baz=340,slow=11,SNR=16						
ASAR	**Alice Springs**	**28.56**	**165**	P	**P**	**19 21 55.4**	**-0.3**
	0.3nm,0.6s,baz=357,slow=8.5,SNR=5.3						
MKAR	**Makanchi Array**	**56.99**	**325**	P	**P**	**19 25 46.1**	**+0.8**
	0.2nm,0.4s,baz=118,slow=8.1,SNR=8.1						

UPA ***16*** *19:21:57.8±5.9, 9°.60N×84°.74W, h0km±34km, MW4.4*
INET ***16*** *19:21:57.8, 9°.39N×84°.39W, h0km, ML4.2*
UCR ***16*** *19:21:58.8±1.7, 9°.50N×84°.65W, h4km±7km, MD3.9, mb4.6(NEIC), Fault plane solution: NP1:φs352.65000°, δ64.19000°, λ28.92000°.*
IDC ***16*** *19:22:00.7±2.3, 9°.69N×84°.51W, h30km±13km, mb4.0/17, mb1 4.2/19, mb1mx4.1/30, mbtmp4.2/19, ML3.7/2, MS3.6/12, Ms1 3.6/12, ms1mx3.3/38, Error ellipse: s-maj=26.8km s-min=17.3km az=38.0*
ISC 16 19:22:00.3±0.9**, 9°.57N**±0°.04×**84°.61W**±0°.04**, h31**km±6km**, n217, σ1**§**49**/232**, mb4.5**/27**, MS3.6**/9**, 6C-14D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRA1	**San Ramn**	**0.53**	**14**⇓	*e*P	**Pn**	**19 22 11.0**	**-0.9**
SRA1				*e*S	**Sn**	**19 22 19.6**	**-0.2**
LCR2	**La Lucha 2**	**0.62**	**74**⇓	*i*P	**Pb**	**19 22 12.2**	**-0.7**
HDC	**Heredia**	**0.65**	**48**	*i* P	**Pn**	**19 22 13.3**	**-0.2**
HDC				*i* S	**Sn**	**19 22 24.8**	**+1.9**
HDC	**Heredia**	**0.65**	**48**⇓	*i*P	**Pn**	**19 22 13.3**	**-0.2**
SJS	**Escuela Geolog**	**0.66**	**56**⇓	*e*P	**Pn**	**19 22 13.3**	**-0.4**
JTS	**Las Juntas de**	**0.80**	**335**	Pg	**Pn**	**19 22 14.5**	**-0.9**
	796nm,0.3s,baz=51,slow=9.2,SNR=1102						
JTS				Lg	Lg	19 22 26.7	
	1μm,0.3s,baz=18,slow=23,SNR=39						
JTS	**Las Juntas de**	**0.80**	**335**⇓	*i*P	**Pn**	**19 22 14.6**	**-0.9**
JTS				*e*P	**Pb**	**19 22 14.7**	**-0.9**
JTS	**Las Juntas de**	**0.80**	**335**⇓	*i*P	**Pn**	**19 22 14.6**	**-0.9**
EDDO	**Dominical**	**0.80**	**113**⇓	*e*P	**Pb**	**19 22 14.0**	**-1.6**
CASO	**Castillo**	**0.87**	**352**	*i* P	**Pn**	**19 22 16.6**	**+0.1**
ARE1	**Arenal 1**	**0.89**	**353**⇓	*i*P	**Pn**	**19 22 17.4**	**+0.6**
FORC	**Fortuna**	**0.89**	**356**	*i* P	**Pn**	**19 22 17.3**	**+0.5**
CEDE	**Laguna Cedeo**	**0.92**	**354**	*i* P	**Pn**	**19 22 17.8**	**+0.7**
CEDE			⇓	*i*P	**Pn**	**19 22 17.9**	**+0.7**
CVTR	**Volcan Turrial**	**0.95**	**62**⇓	*e*P	**Pn**	**19 22 18.5**	**+0.6**
EDLM	**Las Mercedes**	**1.04**	**106**⇓	*e*P	**Pn**	**19 22 18.6**	**-0.3**
GUAI	**GUAI**	**1.13**	**308**	*i* P	**Pn**	**19 22 19.2**	**-2.1**
GUAI				*i* S	**Sn**	**19 22 36.4**	**+1.9**
PTEN	**Parque Tenorio**	**1.20**	**342**	*i* P	**Pb**	**19 22 21.9**	**-0.6**
CUI	**Cuipilapa**	**1.21**	**333**⇓	*e*P	**Pb**	**19 22 21.6**	**-1.1**
CUI				*e*S	**Sn**	**19 22 40.2**	**+3.5**
HORNC	**Hornillas**	**1.27**	**334**	*i* P	**Pb**	**19 22 22.4**	**-1.3**
EDPN	**Palmar Norte**	**1.28**	**118**⇑	*i*P	**Pn**	**19 22 21.3**	**-0.9**
GUAB	**Guayabo de Bag**	**1.29**	**332**	*i* P	**Pb**	**19 22 22.9**	**-1.1**
LIM1	**Limonal**	**1.29**	**331**	*i* P	**Pb**	**19 22 22.5**	**-1.5**
MESS	**Mesas**	**1.30**	**334**	*i* P	**Pb**	**19 22 23.0**	**-1.2**
MESS				*i* S	**Sb**	**19 22 41.9**	**+1.3**
EDBA	**Buenos Aires**	**1.37**	**107**⇑	*e*P	**Pb**	**19 22 22.8**	**-0.6**
GPS3	**Bodega del ICE**	**1.40**	**328**	*i* P	**Pb**	**19 22 24.6**	**-1.3**
NY14	**Universidad de**	**1.41**	**320**	*i* P	**Pb**	**19 22 24.5**	**-1.5**
GB1A	**Borinquen Arri**	**1.47**	**328**⇑	*e*P	**Pb**	**19 22 25.6**	**-1.4**
PTJ1	**Puerto Jimnez**	**1.65**	**128**	*e*P	**Pb**	**19 22 28.5**	**+1.4**
PIRO	**Carate, Puerto**	**1.71**	**133**	*e*P	**Pb**	**19 22 30.3**	**-0.8**
RGM0	**Gandoca**	**1.97**	**89**⇓	*e*P	**Pb**	**19 22 34.9**	**-0.7**
BRU2	**Volcan**	**2.04**	**112**	*e*P	**Pn**	**19 22 31.8**	**-0.9**
BRU2				*i* S	**Sb**	**19 23 06.7**	**+4.8**
CNI2	**El Empalme, Bo**	**2.11**	**94**	*e*P	**Pn**	**19 22 34.0**	**+0.5**
CNI2				*i* S	**Sb**	**19 23 04.4**	**+0.7**
BCO2	**Palmira**	**2.22**	**112**	*e*P	**Pn**	**19 22 35.4**	**+0.2**
BCO2				*i* S	**Sb**	**19 23 07.4**	**+0.4**
BAGA3	**Bagala, Chiriq**	**2.33**	**118**	*e*P	**Pn**	**19 22 36.4**	**-0.1**
DVD	**David**	**2.41**	**118**	*e*P	**Pn**	**19 22 38.1**	**+0.5**
DVD				*i* S	**Sb**	**19 23 14.9**	**+2.6**
ACON	**Acoyapa**	**2.45**	**347**⇑	*i*P	**Pn**	**19 22 39.6**	**+1.4**
ESPN	**Las Esperanzas**	**2.63**	**7**⇑	*i*P	**Pn**	**19 22 42.7**	**+2.1**
GMAL	**Guarumal, Vera**	**3.79**	**118**	*e*P	**Pn**	**19 22 56.9**	**+0.3**
GMAL				*e*S	**Sb**	**19 23 50.2**	**-1.7**
ESTN	**Estel**	**3.91**	**334**⇓	*i*P	**Pn**	**19 23 01.6**	**+3.1**
CACAO	**El Cacao, Vera**	**4.31**	**121**	*e*P	Pn	19 23 09.1	+5.3
AZU	**Azuero**	**4.63**	**112**	*e*P	Pn	19 23 13.6	+5.4
BCIP	**Isla Barro Col**	**4.72**	**94**	*e*P	**Pn**	**19 23 10.4**	**+0.9**
BCIP	**Isla Barro Col**	**4.72**	**94**⇑	*i*P	**Pn**	**19 23 10.2**	**+0.8**
CHOR3	**La Chorrera**	**4.83**	**98**	*e*P	**Pn**	**19 23 11.9**	**+1.0**
APG	**El Apazote**	**7.87**	**314**	Pn	**Pn**	**19 23 56.4**	**+3.5**
	1.2nm,0.3s,baz=109,slow=7.3,SNR=4.5						
CMIG	**Matias Romero**	**12.48**	**308**	Pn	**Pn**	**19 24 57.4**	**+1.5**
	2.1nm,0.3s,baz=129,slow=8.7,SNR=19						
SDV	**Santo Domingo**	**13.81**	**92**	Pn	**Pn**	**19 25 15.2**	**+1.0**
	0.6nm,0.3s,baz=251,slow=11,SNR=4.5						
SDV				LR	LR	19 31 30.1	
	comp=Z,192nm,19.0s,baz=304,slow=42						
ATAH	**Atahualpa**	**17.71**	**159**	P	**P**	**19 26 09.7**	**+3.8**
	0.4nm,0.3s,baz=18,slow=15,SNR=4.1						
ATAH				LR	LR	19 32 05.5	
	comp=Z,398nm,19.4s,baz=335,slow=34						
SJG	**San Juan**	**19.82**	**63**	LR	LR	19 33 25.9	
	comp=Z,140nm,19.1s,baz=248,slow=35						
NNA	**Nana**	**22.76**	**160**	LR	LR	19 35 51.8	
	comp=Z,37nm,21.5s,baz=352,slow=36						
833A	**Chaparral WMA,**	**23.27**	**325**	P	**P**	**19 27 05.5**	**+0.1**
	baz=140						
LRAL	**Lakeview Retre**	**23.46**	**355**	P	**P**	**19 27 09.0**	**+1.8**
	baz=174,SNR=7.2						
Z52A	**Williamson**	**23.51**	**0**	P	**P**	**19 27 08.9**	**+1.2**
	baz=180,SNR=9.2						
Z50A	**Ashland**	**23.60**	**357**	P	**P**	**19 27 09.7**	**+1.1**
	baz=176,SNR=9.4						
GOGA	**Godfrey**	**23.75**	**2**	P	**P**	**19 27 10.8**	**+0.7**
	baz=182,SNR=6.2						
NHSC	**New Hope**	**23.78**	**9**	P	**P**	**19 27 11.7**	**+1.5**
	baz=190						
Z57A	**Bowman**	**23.89**	**8**	P	**P**	**19 27 12.8**	**+1.5**
	baz=189						
Z58A	**St. Stephen**	**24.06**	**10**	P	**P**	**19 27 14.3**	**+1.4**
	baz=191						
Y52A	**Lilburn**	**24.19**	**1**	P	**P**	**19 27 15.0**	**+0.9**
	baz=181,SNR=6.8						
Y53A	**Monroe**	**24.19**	**2**	P	**P**	**19 27 15.2**	**+1.0**
	baz=182,SNR=8.0						
Y51A	**Rockmart**	**24.22**	**359**	P	**P**	**19 27 15.5**	**+1.1**
	baz=178,SNR=13						
Y54A	**Tignall**	**24.24**	**4**	P	**P**	**19 27 15.4**	**+0.8**
	baz=184,SNR=5.3						
Y55A	**Saluda**	**24.39**	**6**	P	**P**	**19 27 16.7**	**+0.8**
	baz=186,SNR=6.8						
X53A	**Estanollee**	**24.85**	**3**	P	**P**	**19 27 20.8**	**+0.7**
	baz=183						
X51A	**Calhoun**	**24.88**	**360**	P	**P**	**19 27 22.0**	**+1.6**
	baz=179						
X52A	**Dahlonega**	**24.93**	**1**	P	**P**	**19 27 21.7**	**+0.9**
	baz=181						
X55A	**Gracelyn & Ava**	**24.93**	**6**	P	**P**	**19 27 21.7**	**+0.8**
	baz=187						
X54A	**Belton**	**24.95**	**4**	P	**P**	**19 27 22.2**	**+1.2**
	baz=185						
X56A	**White Oak**	**25.02**	**7**	P	**P**	**19 27 22.9**	**+1.3**
	baz=188						
JCT	**Junction City**	**25.17**	**328**	P	**P**	**19 27 25.2**	**+2.0**
	baz=142,SNR=6.1						
OXF	**Oxford**	**25.21**	**351**	P	**P**	**19 27 23.9**	**+0.6**
	baz=168						
WHTX	**Lake Whitney,**	**25.29**	**334**	P	**P**	**19 27 26.7**	**+2.5**
	baz=149						
W52A	**Murphy**	**25.41**	**1**	P	**P**	**19 27 26.7**	**+1.4**
	baz=181						
W51A	**Cleveland**	**25.47**	**360**	P	**P**	**19 27 29.1**	**+3.4**
	baz=179,SNR=7.6						
W49A	**Belvidere**	**25.48**	**357**	P	**P**	**19 27 26.9**	**+1.1**
	baz=176						
W54A	**Cherokee Point**	**25.50**	**5**	P	**P**	**19 27 27.3**	**+1.3**
	baz=185						
W53A	**Cullowhee**	**25.52**	**3**	P	**P**	**19 27 27.1**	**+0.9**
	baz=183						
W50A	**Signal Mountai**	**25.52**	**359**	P	**P**	**19 27 29.5**	**+3.2**
	baz=178,SNR=12						
KMSC	**Kings Mountain**	**25.63**	**6**	P	**P**	**19 27 28.3**	**+1.1**
	baz=187						
W56A	**Indian Trail**	**25.71**	**8**	P	**P**	**19 27 28.9**	**+1.0**
	baz=189						
W58A	**Raeford**	**25.81**	**10**	P	**P**	**19 27 29.4**	**+0.7**
	baz=192						
W57A	**Gilead**	**25.81**	**9**	P	**P**	**19 27 29.4**	**+0.6**
	baz=190						
TKL	**Tuckaleechee C**	**25.98**	**2**	P	**P**	**19 27 30.1**	**-0.3**
	2.6nm,0.5s,baz=152,slow=12,SNR=7.2						
TKL				LR	LR	19 37 33.2	
	comp=Z,137nm,19.2s,baz=182,slow=36						
V50A	**Pikevile**	**25.99**	**359**	P	**P**	**19 27 33.9**	**+3.5**
	baz=178,SNR=5.0						
V53A	**Saluda**	**26.03**	**3**	P	**P**	**19 27 31.8**	**+0.9**
	baz=184						
V49A	**McMinnville**	**26.11**	**358**	P	**P**	**19 27 32.3**	**+0.8**
	baz=177						
V51A	**Loudon**	**26.12**	**0**	P	**P**	**19 27 32.4**	**+0.9**
	baz=180						
MIAR	**Mount Ida**	**26.18**	**343**	P	**P**	**19 27 33.5**	**+1.3**
	baz=159,SNR=6.0						
W41B	**Gary Mavity, V**	**26.43**	**346**	P	**P**	**19 27 34.1**	**-0.3**
	baz=162						
TXAR	**Lajitas Array**	**26.56**	**320**	P	**P**	**19 27 36.1**	**+0.2**
	2.0nm,0.4s,baz=140,slow=9.8,SNR=40						
TXAR				PcP	**PcP**	**19 31 01.9**	**+1.9**
	0.5nm,0.7s,baz=140,slow=6.0,SNR=4.4						
V58A	**Windy Hill, Pi**	**26.58**	**10**	P	**P**	**19 27 36.4**	**+0.6**
	baz=192,SNR=5.1						
V59A	**Middlesex**	**26.71**	**12**	P	**P**	**19 27 37.6**	**+0.6**
	baz=194						
U50A	**Jamestown**	**26.73**	**360**	P	**P**	**19 27 37.4**	**+0.3**
	baz=179						
U53A	**Fall Branch**	**26.74**	**4**	P	**P**	**19 27 38.2**	**+1.0**
	baz=184						
U49A	**Red Boiling Sp**	**26.84**	**358**	P	**P**	**19 27 38.0**	**-0.2**
	baz=177						
U57A	**Blanch**	**27.17**	**9**	P	**P**	**19 27 41.9**	**+0.8**
	baz=191						
T49A	**Edmonton**	**27.43**	**358**	P	**P**	**19 27 43.6**	**+0.2**
	baz=178						
T57A	**Hurt**	**27.73**	**9**	P	**P**	**19 27 46.9**	**+0.7**
	baz=191						
S51A	**Beattyville**	**27.96**	**2**	P	**P**	**19 27 48.6**	**+0.5**
	baz=182						
S50A	**Richmond**	**27.99**	**0**	P	**P**	**19 27 49.0**	**+0.6**
	baz=180						
T59A	**Double "B" Far**	**28.02**	**12**	P	**P**	**19 27 48.7**	**+0.1**
	baz=195						
S49A	**Springfield**	**28.10**	**359**	P	**P**	**19 27 49.6**	**+0.3**
	baz=178						
LPIG	**La Paz**	**28.46**	**304**	LR	LR	19 38 07.6	
	comp=Z,57nm,18.6s,baz=224,slow=34						
S57A	**Dark Hollow, R**	**28.53**	**9**	P	**P**	**19 27 53.9**	**+0.7**
	baz=191						
WCI	**Wyandotte Cave**	**28.58**	**357**	P	**P**	**19 27 53.7**	**+0.1**
	baz=176						
R50A	**Paris**	**28.59**	**0**	P	**P**	**19 27 54.3**	**+0.6**
	baz=180						
R49A	**Shelbyville**	**28.60**	**359**	P	**P**	**19 27 53.8**	**0.0**
	baz=178						
R51A	**Hillsboro**	**28.62**	**2**	P	**P**	**19 27 54.6**	**+0.6**
	baz=182						
R54A	**Victor**	**28.67**	**6**	P	**P**	**19 27 55.3**	**+0.8**
	baz=187						
R58B	**Mineral**	**28.91**	**11**	P	**P**	**19 27 57.6**	**+1.0**
	baz=194						
CCM	**Cathedral Cave**	**28.99**	**349**	P	**P**	**19 27 57.1**	**-0.2**
	baz=166						
CBN	**Corbin Frederi**	**29.25**	**12**	P	**P**	**19 28 01.2**	**+1.7**
	baz=194						
Q48A	**North Vernon**	**29.25**	**358**	P	**P**	**19 27 59.3**	**-0.3**
	baz=177						
MNTX	**Cornudas Mount**	**29.26**	**322**	P	**P**	**19 28 00.6**	**+0.8**
	baz=134						
Q53A	**Leroy**	**29.30**	**5**	P	**P**	**19 28 00.6**	**+0.6**
	baz=186						
Q49A	**Aurora**	**29.31**	**360**	P	**P**	**19 28 00.5**	**+0.3**
	baz=179						
Q52A	**Bidwell**	**29.34**	**4**	P	**P**	**19 28 00.9**	**+0.4**
	baz=184						
Q51A	**Peebles**	**29.35**	**2**	P	**P**	**19 28 01.2**	**+0.6**
	baz=182,SNR=5.6						
Q54A	**Coxs Mills**	**29.48**	**6**	P	**P**	**19 28 02.6**	**+0.9**
	baz=187						
Q55A	**Buckhannon**	**29.58**	**7**	P	**P**	**19 28 03.8**	**+1.2**
	baz=189						
P48A	**Milroy**	**29.77**	**359**	P	**P**	**19 28 03.9**	**-0.4**
	baz=178						
P49A	**Miami Univ. Ec**	**29.84**	**360**	P	**P**	**19 28 04.0**	**-0.8**
	baz=179						
P53A	**Whipple**	**29.93**	**5**	P	**P**	**19 28 06.1**	**+0.5**
	baz=186						
P52A	**Corning**	**30.02**	**4**	P	**P**	**19 28 06.8**	**+0.3**
	baz=184						
LPAZ	**La Paz**	**30.43**	**147**	LR	LR	19 41 10.0	
	comp=Z,138nm,21.2s,baz=315,slow=38						
O50A	**Cable**	**30.46**	**1**	P	**P**	**19 28 10.4**	**0.0**
	baz=182						
O49A	**Covington**	**30.49**	**0**	P	**P**	**19 28 10.2**	**-0.4**
	baz=180						
O51A	**Pataskala**	**30.50**	**3**	P	**P**	**19 28 10.8**	**+0.1**
	baz=184,SNR=5.1						
O48A	**Farmland**	**30.57**	**359**	P	**P**	**19 28 10.7**	**-0.5**
	baz=179						
ACSO	**Alum Creek Sta**	**30.57**	**2**	P	**P**	**19 28 11.5**	**+0.2**
	baz=183						
N50A	**Nevada**	**31.10**	**2**	P	**P**	**19 28 15.6**	**-0.4**
	baz=182						
N48A	**Decatur**	**31.16**	**359**	P	**P**	**19 28 15.9**	**-0.6**
	baz=179,SNR=5.3						
N52A	**McGinn's Farm,**	**31.22**	**4**	P	**P**	**19 28 17.3**	**+0.3**
	baz=185						
N49A	**Columbus Grove**	**31.23**	**1**	P	**P**	**19 28 16.7**	**-0.3**
	baz=180						
121A	**Cookes Peak, D**	**31.32**	**320**	P	**P**	**19 28 20.5**	**+2.3**
	baz=131						
M49A	**Liberty Center**	**31.78**	**1**	P	**P**	**19 28 21.7**	**-0.3**
	baz=181						
M48A	**Edgerton**	**31.79**	**360**	P	**P**	**19 28 21.1**	**-0.9**
	baz=179						
M53A	**WI Miller and**	**31.93**	**6**	P	**P**	**19 28 23.5**	**+0.3**
	baz=187						
M55A	**Ridgway**	**32.19**	**8**	P	**P**	**19 28 26.1**	**+0.5**
	baz=190						
N59A	**State Game Lan**	**32.19**	**13**	P	**P**	**19 28 26.8**	**+1.2**
	baz=196						
ANMO	**Albuquerque**	**32.20**	**325**	P	**P**	**19 28 26.5**	**+0.5**
	baz=136						
M56A	**Emporium**	**32.29**	**9**	P	**P**	**19 28 26.5**	**+0.1**
	baz=192						
L50A	**Kingsville**	**32.38**	**2**	P	**P**	**19 28 26.6**	**-0.6**
	baz=183						
L53A	**Girard**	**32.48**	**6**	P	**P**	**19 28 28.4**	**+0.3**
	baz=188						
L55A	**Hinsdale**	**32.94**	**8**	P	**P**	**19 28 32.4**	**+0.3**
	baz=191						
K47A	**Vermontville**	**32.98**	**359**	P	**P**	**19 28 31.1**	**-1.3**
	baz=179						
K49A	**Clarkson**	**33.10**	**2**	P	**P**	**19 28 32.7**	**-0.8**
	baz=182						
K48A	**Perry**	**33.11**	**1**	P	**P**	**19 28 32.5**	**-1.1**
	baz=181						
TUC	**Tucson**	**33.14**	**317**	P	**P**	**19 28 36.5**	**+2.4**
	baz=127						
K55A	**Perry**	**33.52**	**9**	P	**P**	**19 28 37.6**	**+0.4**
	baz=191						
J52A	**Paris**	**33.74**	**5**	P	**P**	**19 28 38.4**	**-0.6**
	baz=187						
I51A	**Listowel**	**34.25**	**5**	P	**P**	**19 28 42.9**	**-0.6**
	baz=186						
W18A	**Petrified Fore**	**34.25**	**322**	P	**P**	**19 28 45.4**	**+1.6**
	baz=132						
I49A	**Point Hope**	**34.28**	**2**	P	**P**	**19 28 42.7**	**-1.0**
	baz=183						
214A	**Organ Pipe Nat**	**34.33**	**315**	P	**P**	**19 28 47.2**	**+2.8**
	baz=124						
I52A	**Shelburne**	**34.59**	**6**	P	**P**	**19 28 46.1**	**-0.3**
	baz=187						
J58A	**Remsen**	**34.63**	**12**	P	**P**	**19 28 47.6**	**+0.8**
	baz=196						
ECSD	**EROS Data Cent**	**35.61**	**345**	P	**P**	**19 28 54.6**	**-0.6**
	baz=159						
F49A	**Sandfield**	**36.13**	**3**	P	**P**	**19 29 00.1**	**+0.4**
	baz=184						
GLA	**Glamis**	**36.35**	**315**	P	**P**	**19 29 04.0**	**+2.2**
	baz=123						
Y12C	**Blythe**	**36.53**	**316**	P	**P**	**19 29 06.0**	**+2.8**
	baz=124						
PDMCI	**Parker Dam,Lak**	**36.58**	**317**	P	**P**	**19 29 06.6**	**+2.9**
	baz=125,SNR=10						
ALGO	**Algonquin Park**	**36.69**	**8**	P	**P**	**19 29 03.6**	**-0.8**
	baz=191						
E47A	**Iron Bridge**	**36.77**	**2**	P	**P**	**19 29 03.9**	**-1.3**
	baz=182						
E48A	**Lockeyer**	**36.84**	**3**	P	**P**	**19 29 04.6**	**-1.1**
	baz=184						
E51A	**G1948 Merrick**	**37.09**	**6**	P	**P**	**19 29 07.2**	**-0.6**
	baz=188						
BC3	**Big Chuckawall**	**37.12**	**315**	P	**P**	**19 29 11.5**	**+3.1**
	baz=123,SNR=5.8						
IRM	**Iron Mountain**	**37.18**	**316**	P	**P**	**19 29 11.8**	**+2.9**
	baz=124						
D46A	**Sault St. Mari**	**37.20**	**1**	P	**P**	**19 29 07.2**	**-1.5**
	baz=181						
D47A	**Chapleau**	**37.38**	**2**	P	**P**	**19 29 08.6**	**-1.7**
	baz=182						
MONP2	**Monument Peak**	**37.40**	**313**	P	**P**	**19 29 13.6**	**+2.7**
	baz=121						
D48A	**Paudash Townsh**	**37.55**	**3**	P	**P**	**19 29 10.5**	**-1.3**
	baz=184						
D49A	**Beulah Townshi**	**37.68**	**4**	P	**P**	**19 29 11.6**	**-1.2**
	baz=185						
BELC	**Belle Mtn. Jos**	**37.69**	**315**	P	**P**	**19 29 16.2**	**+3.0**
	baz=123						
D50A	**G1974 Best Tow**	**37.69**	**5**	P	**P**	**19 29 11.7**	**-1.1**
	baz=187						
TPFO	**Pinon Flats**	**37.80**	**314**	P	**P**	**19 29 17.4**	**+3.3**
	baz=122						
PFO	**Pinyon Flats O**	**37.80**	**314**	P	**P**	**19 29 17.5**	**+3.3**
	baz=122						
MURC	**Murrieta**	**38.32**	**314**	P	**P**	**19 29 21.9**	**+3.5**
	baz=121						
GSC	**Goldstone, Bar**	**38.95**	**316**	P	**P**	**19 29 26.9**	**+3.0**
	baz=123						
TPNV	**Topopah Spring**	**39.51**	**319**	P	**P**	**19 29 31.6**	**+3.0**
	baz=125,SNR=6.5						
PDAR	**Pinedale Array**	**39.63**	**331**	P	**P**	**19 29 29.1**	**-0.4**
	0.4nm,0.6s,baz=136,slow=8.7,SNR=4.8						
PDAR				PcP	**PcP**	**19 31 36.9**	**+0.6**
	0.8nm,0.8s,baz=138,slow=5.2,SNR=4.5						
FURC	**Furnace Creek,**	**39.64**	**318**	P	**P**	**19 29 32.6**	**+3.2**
	baz=124						
MPMC	**Manual Prospec**	**39.83**	**317**	P	**P**	**19 29 33.8**	**+2.5**
	baz=123,SNR=6.6						
CWC	**Cottonwood Cre**	**40.44**	**317**	P	**P**	**19 29 39.2**	**+2.9**
	baz=123						
ULM	**Lac du Bonnet**	**41.62**	**349**	P	**P**	**19 29 43.4**	**-2.1**
	1.6nm,0.5s,baz=163,slow=9.0,SNR=5.1						
NVAR	**Mina Array Bea**	**41.70**	**319**	P	**P**	**19 29 48.0**	**+1.3**
	5.4nm,0.6s,baz=132,slow=7.5,SNR=41						
NVAR				PcP	**PcP**	**19 31 44.9**	**+1.9**
	1.3nm,0.7s,baz=138,slow=3.9,SNR=5.3						
SCHQ	**Schefferville**	**47.31**	**14**	P	**P**	**19 30 29.4**	**-1.5**
	3.3nm,0.8s,baz=188,slow=5.6,SNR=7.0						
SCHQ				LR	LR	19 50 49.9	
	comp=Z,187nm,18.2s,baz=60,slow=37						
PLCA	**Paso Flores**	**51.70**	**166**	P	**P**	**19 31 04.3**	**-0.4**
	1.2nm,0.8s,baz=353,slow=8.2,SNR=3.3						
YKA	**Yellowknife Ar**	**57.12**	**344**	P	**P**	**19 31 41.8**	**-1.9**
	0.5nm,0.6s,baz=142,slow=6.8,SNR=11						
YKA				PcP	**PcP**	**19 32 39.2**	**+1.0**
	0.3nm,0.6s,baz=147,slow=4.1,SNR=4.3						
ILAR	**Eielson Array**	**69.77**	**336**	P	**P**	**19 33 06.2**	**-1.1**
	0.5nm,0.6s,baz=104,slow=4.4,SNR=6.2						
ILAR				LR	LR	20 07 01.8	
	comp=Z,50nm,18.4s,baz=138,slow=39						
ESDC	**Sonseca Array**	**76.78**	**51**	P	**P**	**19 33 49.9**	**+0.6**
	2.5nm,0.6s,baz=281,slow=5.6,SNR=23						
DBIC	**Dimbokro**	**78.85**	**85**	P	**P**	**19 34 01.3**	**+0.1**
	4.4nm,1.2s,baz=288,slow=3.2,SNR=3.3						
TORD	**Torodi Ar. Bea**	**84.30**	**78**	P	**P**	**19 34 29.5**	**-0.5**
	1.2nm,0.8s,baz=294,slow=5.5,SNR=7.2						
TORD				LR	LR	20 13 09.1	
	comp=Z,22nm,18.7s,baz=135,slow=36						
NB2	**NORSAR Subarra**	**84.52**	**29**	P	**P**	**19 34 29.8**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=278,slow=5.1						
NOA	**NORSAR Array B**	**84.52**	**29**	P	**P**	**19 34 29.9**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=278,slow=4.9,SNR=4.4						
NOA				LR	LR	20 09 29.8	
	comp=Z,24nm,19.7s,baz=290,slow=34						
DAVA	**Damuels**	**86.08**	**43**	*e*PcP	**P**	**19 34 38.4**	**0.0**
	comp=Z,11nm,0.9s						
RETA	**Reutte**	**86.63**	**43**	PcP	**P**	**19 34 41.1**	**0.0**
	comp=Z,4.7nm,0.8s						
FETA	**Feichten**	**86.69**	**43**	*e*PcP	**P**	**19 34 42.1**	**+0.6**
	comp=Z,7.6nm,0.9s						
SQTA	**Sankt Quirin**	**86.98**	**43**	*e*PcP	**P**	**19 34 43.2**	**+0.4**
	comp=Z,5.3nm,1.0s						
CLL	**Collm**	**87.33**	**39**	*e*P	**P**	**19 34 44.0**	**-0.3**
	comp=Z,11nm,1.4s						
CLL				*e*		19 34 51.0	
CLL				*e*sP	sP	19 35 05.0	+7.3
KEST	**Kesra**	**87.67**	**54**	P	**P**	**19 34 47.4**	**+1.0**
	comp=Z,3.5nm,0.8s,baz=225,slow=8.6,SNR=5.4						
ABTA	**Abfaltersbach**	**87.94**	**43**	*e*PcP	**P**	**19 34 47.3**	**-0.2**
	comp=Z,7.6nm,1.0s						
ARCES	**ARCESS Array B**	**87.98**	**19**	P	**P**	**19 34 46.5**	**-0.5**
	comp=Z,3.2nm,1.0s,baz=270,slow=3.6,SNR=4.1						
BRG	**Berggiesshubel**	**88.00**	**39**	*e*P	**P**	**19 34 47.0**	**-0.6**
	comp=Z,3.4nm,0.9s						
GERES	**GERESS Array B**	**88.29**	**41**	P	**P**	**19 34 48.7**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=288,slow=5.2,SNR=4.6						
GERES				LR	LR	20 08 05.4	
	comp=Z,55nm,21.3s,baz=280,slow=31						
MYKA	**Terra Mystica**	**88.73**	**43**	*e*PcP	**P**	**19 34 51.1**	**0.0**
	comp=Z,6.4nm,1.1s						
OBKA	**Obir**	**89.37**	**43**	*e*PcP	**P**	**19 34 54.8**	**+0.6**
	comp=Z,4.0nm,0.8s						
SOKA	**Soboth**	**89.65**	**43**	*e*P	**P**	**19 34 54.5**	**-1.0**
	comp=Z,2.6nm,0.8s						
FINES	**FINESS Array B**	**91.29**	**27**	P	**P**	**19 35 02.4**	**-0.3**
	comp=Z,2.8nm,1.0s,baz=263,slow=6.9,SNR=3.0						
VYHS	**Vyhne**	**91.67**	**40**	*e*P	**P**	**19 35 05.5**	**+0.7**
SONM	**Songino Array**	**122.02**	**351**	PKP	**PKPdf**	**19 40 52.1**	**-0.1**
	comp=Z,0.9nm,1.2s,baz=29,slow=2.5,SNR=4.3						
MKAR	**Makanchi Array**	**122.68**	**11**	PKP	**PKPdf**	**19 40 52.5**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=22,slow=4.7,SNR=3.6						
KSRS	**Korea Array**	**124.18**	**329**	PKP	**PKiKP**	**19 40 56.9**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=59,slow=3.4,SNR=3.4						
KSH	**Kashi**	**127.94**	**19**	PKP	**PKPdf**	**19 41 02.8**	**-1.0**
KSH				sPKP		19 41 18.3	
KSH				PP	**PP**	**19 43 07.3**	**+2.2**
KSH				PKS	**PKSdf**	**19 44 36.9**	**-3.5**
KSH				SKS	**SKSac**	**19 48 05.5**	**-3.6**
KSH				SKKS	**SKKSac**	**19 49 56.5**	**-5.4**
ASAR	**Alice Springs**	**140.67**	**244**	PKP	**PKPdf**	**19 41 27.7**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=103,slow=3.1,SNR=8.0						
WRA	**Warramunga Arr**	**141.04**	**250**	PKP	**PKPdf**	**19 41 28.5**	**0.0**
	comp=Z,1.2nm,0.9s,baz=95,slow=2.8,SNR=8.0						
CMAR	**Chiang Mai Arr**	**151.93**	**353**	PKPbc	**PKPbc**	**19 41 53.1**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=332,slow=3.0,SNR=20						
CMAR				PKPab	**pPKPbc**	**19 42 00.7**	**-2.7**
	comp=Z,0.4nm,0.7s,baz=339,slow=2.4,SNR=4.5						

WEL 16 19:41:33.0±0.8**, 35°S**±18°×**17°8W**±1°8**, h33**km**, M4.0**/12**, mB4.8**/5**, ML4.3**/12**, MLv4.0**/12**, Mw(mB)4.0**/5**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**3.91**	**221**	P	Pn	19 42 32.0	+1.2
PUZ				S	Sn	19 43 15.9	+0.3
HAZ	**Te Kaha**	**3.97**	**228**	P	Pn	19 42 31.9	+0.4
HAZ				S	Sn	19 43 20.1	+3.2
RUGZ	**Raukumara Rang**	**4.17**	**227**	P	Pn	19 42 34.3	-0.1
MWZ	**Matawai**	**4.50**	**224**	P	Pn	19 42 38.6	-0.3
MWZ				S	Sn	19 43 30.0	-0.2
RIGZ	**Rimuhau**	**4.64**	**219**	P	Pn	19 42 41.5	+0.6
RAGZ	**Rawiri**	**4.68**	**223**	P	Pn	19 42 40.8	-0.6
URZ	**Urewera**	**4.70**	**227**	P	Pn	19 42 40.8	-0.8
MHGZ	**Mahia Peninsul**	**4.92**	**215**	P	Pn	19 42 45.8	+1.2
SNGZ	**Shannon Statio**	**4.92**	**221**	P	Pn	19 42 45.5	+0.8
RTZ	**Ruatahuna**	**5.01**	**225**	P	Pn	19 42 45.2	-0.8
MUGZ	**Murupara**	**5.04**	**228**	P	Pn	19 42 45.2	-1.1
MTHZ	**Maungataniwha**	**5.25**	**224**	P	Pn	19 42 49.6	+0.4
MTHZ				S	Sn	19 43 48.9	+0.3
MRHZ	**Matea Rd**	**5.48**	**226**	P	Pn	19 42 52.2	-0.2
BKZ	**Black Stump Fm**	**5.66**	**224**	P	Pn	19 42 54.8	-0.1
MCHZ	**McNeill Hill**	**5.75**	**220**	P	Pn	19 42 56.0	0.0
MCHZ				S	Sn	19 44 01.1	+0.3

KAHZ Kahuranaki 5.92 217 P Pn 19 42 58.1 -0.3

ATH 16 19:44:24.5, 40.63N×19.90E, h20km±2km, ML2.2/6, Error ellipse: s-maj=2.7km s-min=1.7km az=190.0
TIR 16 19:44:25.0, 40.56N×19.95E, h13km, Md2.8/7
BEO 16 19:44:29.4±1.0, 40.77N×20.10E, h0km, ML2.2/3
ISC 16 19:44:25.0±1.0, 40.62N±0.02×19.94E±0.03, h9km±10km, n32, σ1§48/43, Albania

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

TPE Tepelena 0.33 170 i PG Pg 19 44 31.0 -0.4
TPE i SG Sg 19 44 35.5 -0.2
VLO Vlora 0.37 246 i PG Pg 19 44 32.9 +0.7
VLO i SG Sg 19 44 38.4 +1.3
TIR Tirane 0.73 356 ePg Pn 19 44 40.3 -1.3
TIR eSg Sg 19 44 48.1 -0.5
TIR Tirane 0.73 356 i PG Pb 19 44 39.4 -0.5
TIR i SG Sn 19 44 52.5 -0.4
TIR Tirane 0.73 356 P Pg 19 44 38.6 -0.5
TIR AML AML 19 44 58.8
comp=E,490μm,0.5s
TIR AML AML 19 45 00.9
comp=N,436μm,0.5s
SRN Sarande 0.74 176 i PG Pg 19 44 38.8 -0.4
SRN i SG Sg 19 44 49.0 +0.2
KASA Kassiopi 0.87 180 P Pg 19 44 41.8 +0.1
NEST Nestorio 0.87 103 P Pg 19 44 41.4 -0.3
NEST AML AML 19 45 01.7
comp=E,88μm,0.3s
NEST AML AML 19 45 11.5
comp=N,104μm,0.7s
KEK Kerkira 0.91 187 P Pg 19 44 42.8 +0.4
KEK AML AML 19 45 01.7
comp=N,372μm,0.3s
KEK AML AML 19 45 03.6
comp=E,372μm,0.3s
IGT Igoumenitsa 1.12 164 P Pb 19 44 45.8 -0.8
IGT AML AML 19 45 06.7
comp=N,334μm,0.6s
IGT AML AML 19 45 06.8
comp=E,243μm,0.5s
PHP Peshkopia 1.13 19 i PN Pg 19 44 47.9 +1.2
PHP i SN Sn 19 45 04.8 +1.9
JAN Janina 1.19 144 P Pb 19 44 47.5 -0.1
JAN S Sn 19 45 04.7 +0.6
JAN AML AML 19 45 09.2
comp=N,249μm,0.5s
JAN AML AML 19 45 09.7
comp=E,417μm,0.4s
SCTE Santa Cesarea 1.25 245 P Pn 19 44 47.6 -1.1
KPRO Kipourio 1.27 121 P Pg 19 44 49.7 +0.3
KPRO AML AML 19 45 17.0
comp=E,171μm,0.4s
KPRO AML AML 19 45 18.3
comp=N,147μm,0.5s
MEV Metsovon 1.29 130 P Pn 19 44 49.0 -0.4
PUK Puka 1.43 359 i PN Pg 19 44 52.7 +0.4
PUK i SN Sg 19 45 14.3 +3.5
KZN Kozani 1.43 102 P Pg 19 44 52.7 +0.2
BCI Bajram Curri 1.75 3 i PN Pg 19 44 58.6 +0.4
BCI i SN Sg 19 45 24.2 +3.0
TSLK Tsoukalades, L 1.87 163 P Pn 19 44 57.8 +0.6
PDG Podgorica 1.88 344 ePn Pg 19 45 01.6 +0.5
PDG eSn Sg 19 45 25.5 0.0
GRG Griva 1.90 79 P Pb 19 44 58.7 -1.2
LKD2 Lefkada island 1.91 163 P Pn 19 44 58.2 +0.5
THL Klokotos Trika 1.91 123 P Pb 19 44 59.6 -0.3
LIT Litokhoron 2.02 104 P Pn 19 44 58.9 -0.4
NOCI Noci 2.19 275 P Pn 19 45 01.5 -0.2
KNT Kendrikon 2.31 75 P Pb 19 45 04.7 -2.1
TREB Trebinje 2.41 331 ePn Pb 19 45 08.9 +0.3
BARS Barje 2.61 32 ePn Pb 19 45 09.4 -2.5
SJES Sjenica 2.64 1 ePn Pb 19 45 10.9 -1.7
VTS Vitosha 3.18 50 ePn Pn 19 45 17.8 +2.5
VTS eSn Sn 19 45 53.8 +0.4
BBLS Lazići 3.27 353 ePn Pb 19 45 19.7 -3.5
BOVS Bovan 3.29 23 ePn Pb 19 45 19.5 -4.0

JMA 16 20:11:47.2±0.3, 39.47N×143.38E, h30km±5km, M3.4
IDC 16 20:11:50.6±11.0, 39.83N×142.50E, h0km, mb3.6/3, mb1 3.5/4, mb1mx3.2/47, mbtmp3.5/4, ML2.3/1, Error ellipse: s-maj=215.8km s-min=46.5km az=101.0
ISC 16 20:11:47.4±3.1, 39.53N±0.07×143.3E±0.1, h15km±13km, n17, σ0§74/23, mb3.5/3, Off east coast of Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

MIYJ Miyakonagasawa 1.11 273 P Pn 20 12 08.6 +0.1
MIYJ eS Sg 20 12 24.0 +0.7
JTH Tanohata 1.15 291 P Pg 20 12 09.4 -0.2
JTH eS Sg 20 12 25.0 +0.4
OFUJ Ofunato 1.31 251 P Pn 20 12 11.1 -0.1
OFUJ eS Sb 20 12 27.9 -0.4
JOM Ohasama 1.52 269 P Pb 20 12 14.8 +0.5
JANG Nango 1.58 303 P Pn 20 12 14.9 -0.1
JMK Ichinoseki 1.68 251 P Pn 20 12 16.7 +0.4
JMK eS Sn 20 12 38.0 +0.4
JIO Ouri 1.83 235 P Pn 20 12 18.0 -0.3
JIO eS Sn 20 12 40.6 -0.7
JRG Rokugo 2.03 267 P Pn 20 12 22.3 +1.2
JTM Tenmabayashi 2.10 308 P Pn 20 12 22.7 +0.7
JAH Hinai 2.12 289 P Pb 20 12 24.3 -1.3
JOU Okura 2.33 241 P Pn 20 12 25.9 +0.7
JYK Kaneyama 2.33 256 P Pn 20 12 26.8 +1.6
JNBK Urakawa-nobuka 2.78 352 P Pn 20 12 31.9 +0.5
JNBK eS Sn 20 13 04.8 +0.1
MJAR Matsushiro Arr 4.97 235 Pn Pn 20 13 02.7 +1.1
0.1nm,0.3s,baz=40,slow=14,SNR=15
SONM Songino Array 27.71 300 P P 20 17 35.7 +0.6
0.3nm,0.5s,baz=87,slow=9.5,SNR=3.5
MKAR Makanchi Array 44.07 300 P P 20 19 54.3 -0.4
0.5nm,0.7s,baz=83,slow=9.9,SNR=5.5
KURBB Kurchatov Arra 45.65 306 P P 20 20 07.2 0.0
0.9nm,0.6s,baz=80,slow=8.4,SNR=5.8

SNET 16 20:13:09.9±1.9, 12.07N×88.52W, h14km±9km, ML3.9
INET 16 20:13:10.1, 12.15N×88.42W, h1km, MD3.8, ML3.6
UCR 16 20:13:10.2±2.0, 12.08N×88.52W, h15km±9km, ML3.8, mb4.2(NEIC)
NEIC 16 20:13:15.4±2.1, 12.37N±0.06×88.31W±0.06, h51km±8km, mb4.2/26, Error ellipse: s-maj=9.8km s-min=8.1km az=208.0
IDC 16 20:13:18.7±2.4, 12.75N×88.21W, h63km±20km, mb3.6/7, mb1 3.9/10, mb1mx3.6/40, mbtmp3.9/10, MS3.1/2, Ms1 3.2/2, ms1mx2.7/26, Error ellipse: s-maj=41.3km s-min=21.4km az=40.0
ISC 16 20:13:12.6±2.3, 12.1N±0.1×88.38W±0.05, h47km±16km, n83, σ1§52/101, mb4.2/20, Off coast of central America

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

JUCU Jucuar¡n 1.15 6 eP Pn 20 13 31.2 -1.2
JUCU eS Sn 20 13 48.3 +1.1
JUCU IAML 20 13 57.3
comp=Z,2μm,0.3s
JUCU Jucuar¡n 1.15 6 eP Pn 20 13 31.2 -1.2
JUCU eS Sn 20 13 48.3 +1.1
JUCU IAML 20 13 57.3
comp=Z,2μm,0.3s
ALJI Alcalda de J 1.23 351 eP Pn 20 13 32.4 -1.1
ALJI eS Sn 20 13 49.1 +0.1
ALJI Alcalda de J 1.23 351 eP Pn 20 13 32.4 -1.1
ALJI eS Sn 20 13 49.1 +0.1
CNCH Conchagua 1.29 24 eP Pn 20 13 33.6 -0.7
CNCH eS Sn 20 13 55.9 +5.5
CNCH IAML 20 14 01.4
comp=Z,6μm,0.5s
CNCH Conchagua 1.29 24 eP Pn 20 13 33.6 -0.7
CNCH eS Sn 20 13 55.9 +5.5
CNCH IAML 20 14 01.4
comp=Z,6μm,0.5s
LCND La Caada 1.29 22 eP Pn 20 13 33.4 -0.9
LCND La Caada 1.29 22 eP Pn 20 13 33.4 -0.9
LCY Lacayo 1.32 4 eP Pn 20 13 33.9 -0.8
LCY Lacayo 1.32 4 eP Pn 20 13 33.9 -0.8
BLLM Bellamira 1.34 6 eP Pn 20 13 34.2 -0.8
BLLM Bellamira 1.34 6 eP Pn 20 13 34.2 -0.8
PACA Pacayal 1.36 2 eP Pn 20 13 34.7 -0.7
PACA eS Sn 20 13 53.1 +0.8
PACA Pacayal 1.36 2 eP Pn 20 13 34.7 -0.7
PACA eS Sn 20 13 53.1 +0.8
TECA Tecapa 1.39 355 eP Pn 20 13 34.7 -1.1
TECA Tecapa 1.39 355 eP Pn 20 13 34.7 -1.1
COEB Comit de Eme 1.40 354 eP Pn 20 13 34.6 -1.2
COEB eS Sn 20 13 54.6 +1.5
COEB IAML 20 14 01.2
comp=Z,1μm,0.4s
COEB Comit de Eme 1.40 354 eP Pn 20 13 34.6 -1.2
COEB eS Sn 20 13 54.6 +1.5
COEB IAML 20 14 01.2
comp=Z,1μm,0.4s
COEG Centro de Oper 1.59 342 eP Pn 20 13 37.0 -1.3
COEG eS Sn 20 13 58.8 +1.0
COEG IAML 20 14 05.8
comp=Z,1μm,0.3s
COEG Centro de Oper 1.59 342 eP Pn 20 13 37.0 -1.3
COEG eS Sn 20 13 58.8 +1.0
COEG IAML 20 14 05.8
comp=Z,1μm,0.3s
FAGO Alcalda de S 1.61 10 eP Pn 20 13 38.0 -0.6
FAGO eS Sn 20 13 60.0 +1.8
FAGO IAML 20 14 07.1
comp=Z,428nm,0.5s
FAGO Alcalda de S 1.61 10 eP Pn 20 13 38.0 -0.6
FAGO eS Sn 20 13 60.0 +1.8
FAGO IAML 20 14 07.1
comp=Z,428nm,0.5s
LFRS El Faro 1.65 336 eP Pn 20 13 37.8 -1.5
PAVA Las Pavas 1.69 341 eP Pn 20 13 38.8 -1.0
PAVA eS Sn 20 13 59.9 -0.5
PAVA IAML 20 14 10.1
comp=Z,1μm,0.3s
PAVA Las Pavas 1.69 341 eP Pn 20 13 38.8 -1.0
PAVA eS Sn 20 13 59.9 -0.5
PAVA IAML 20 14 10.1
comp=Z,1μm,0.3s
LBRS Las Brisas 1.75 338 eP Pn 20 13 39.8 -0.9
SNET Serv Nac Est T 1.78 332 Pn 20 13 39.2 -1.8
SNET Sn Sn 20 14 01.0 -1.6
LFU La Fuente 1.79 337 eP Pn 20 13 40.1 -1.0
LFU La Fuente 1.79 337 eP Pn 20 13 40.1 -1.0
BOQS Boqueron 1.85 332 eP Pn 20 13 41.4 -0.7
CEVE Cerro Verde 2.10 325 eP Pn 20 13 44.9 -0.7
CEVE eS Sn 20 14 12.5 +1.8
CEVE IAML 20 14 22.3
comp=Z,2μm,0.4s
CEVE Cerro Verde 2.10 325 eP Pn 20 13 44.9 -0.7
CEVE eS Sn 20 14 12.5 +1.8
CEVE IAML 20 14 22.3
comp=Z,2μm,0.4s
SBLS San Blas 2.11 325 eP Pn 20 13 44.9 -0.8
SBLS San Blas 2.11 325 eP Pn 20 13 44.9 -0.8
SNJE San Jose 2.12 326 eP Pn 20 13 45.0 -0.9
SNJE San Jose 2.12 326 eP Pn 20 13 45.0 -0.9
RTR El Retiro 2.17 326 eP Pn 20 13 45.8 -0.6
RTR El Retiro 2.17 326 eP Pn 20 13 45.8 -0.6
ESTN Estel 2.20 63 Pn 20 13 46.3 -0.5
TGUH Tegucigalpa,Un 2.23 29 Pn 20 13 47.2 0.0
ACON Acoyapa 3.14 92 Pn 20 13 59.9 +0.3
APG El Apazote 3.53 325 P Pn 20 14 04.4 -0.7
comp=Z,0.8nm,0.3s,baz=151,slow=7.3,SNR=5.4
APG S Sn 20 14 49.0 +3.2
comp=Z,3.1nm,0.3s,baz=18,slow=11,SNR=5.0
JTS Las Juntas de 3.81 118 P Pn 20 14 18.9 +10
comp=Z,2.2nm,0.3s,baz=16,slow=8.4,SNR=9.1
JTS S Sn 20 15 13.2 +21
comp=Z,1.8nm,0.3s,baz=326,slow=21,SNR=1.6
JTS Las Juntas de 3.81 118 Pn 20 14 13.4 +4.5
CCIG Comitan 5.53 319 Pn 20 14 32.2 -0.4
CMIG Matias Romero 8.01 309 P Pn 20 15 07.2 +0.7
comp=Z,1.1nm,0.3s,baz=124,slow=8.5,SNR=7.8
CMIG S Sn 20 16 40.8 +4.9
comp=Z,0.3nm,0.3s,baz=28,slow=15,SNR=2.1
SDDR Presa de Saban 17.82 65 Pn P 20 17 13.7 -3.7
833A Chaparral WMA, 19.14 329 P P 20 17 31.1 -0.9
JCT Junction City 21.13 332 P P 20 17 53.5 -0.1
JCT IAmb IAmb 20 17 55.4
comp=Z,8.3nm,0.7s
GOGA Godfrey 21.68 11 P P 20 17 59.5 +0.1
GOGA IAmb IAmb 20 18 02.8
comp=Z,13nm,1.4s
ICMP Isla Caja de M 21.87 72 P P 20 18 01.7 +0.1
TX32 Lajitas Array 22.28 323 P P 20 18 06.7 +0.7
TXAR Lajitas Array 22.28 323 P P 20 18 07.6 +1.6
comp=Z,2.0nm,0.6s,baz=147,slow=11,SNR=33
TX31 Lajitas Ar. Si 22.28 323 P P 20 18 07.5 +1.5
HODGE Hodges 22.73 13 P P 20 18 10.5 -0.1
HODGE IAmb IAmb 20 18 30.2
comp=Z,5.8nm,0.7s
MIAR Mount Ida 22.84 349 P P 20 18 12.5 +0.7
MIAR IAmb IAmb 20 18 14.1
comp=Z,7.3nm,0.8s
ABTX Abilene, Hawle 22.89 335 P P 20 18 10.2 -2.2
ABTX IAmb IAmb 20 18 14.1
comp=Z,12nm,1.1s
W41B Gary Mavity, V 23.24 352 P P 20 18 15.0 -0.7
W41B IAmb IAmb 20 18 17.2
comp=Z,8.3nm,0.8s
X37A Clayton 23.27 345 P P 20 18 17.3 +1.2
X37A IAmb IAmb 20 18 18.5
comp=Z,14nm,1.2s
WHAR Wooly Hollow 23.36 352 P P 20 18 17.2 +0.3
WHAR IAmb IAmb 20 18 18.2
comp=Z,9.5nm,0.9s
BIRD Birdtown, Kers 23.57 17 P P 20 18 19.2 +0.2
BIRD IAmb IAmb 20 18 22.9
comp=Z,7.1nm,0.9s
X58A Rowland 23.82 19 P P 20 18 21.3 0.0
X58A IAmb IAmb 20 18 22.6
comp=Z,8.7nm,0.9s
TKL Tuckaleechee C 23.82 9 P P 20 18 20.9 -0.4
comp=Z,5.2nm,0.9s,baz=170,slow=11,SNR=5.6
W57A Gilead 24.18 17 P P 20 18 24.9 +0.3
W57A IAmb IAmb 20 18 30.9
comp=Z,16nm,1.3s
WMOK Wichita Mounta 24.44 339 P P 20 18 26.6 -0.5
FNO Franklin 24.46 342 P P 20 18 27.5 +0.3
U40A Yellville 24.49 351 P P 20 18 27.3 -0.1
V58A Windy Hill, Pi 25.03 18 P P 20 18 32.8 +0.5
V58A IAmb IAmb 20 18 36.5
comp=Z,7.0nm,0.8s
AMTX Amarillo 25.70 334 P P 20 18 39.3 +0.8
CCM Cathedral Cave 25.97 355 P P 20 18 40.3 -0.6
S54A Dingess, Beckl 26.36 13 P P 20 18 44.4 -0.1
SPMN Marine on St. 33.23 354 P P 20 19 43.7 -1.4
LPAZ La Paz 34.59 144 LR LR 20 33 53.0
comp=Z,27nm,20.2s,baz=30,slow=35
NVAR Mina Array Bea 37.37 320 P P 20 20 23.8 +2.6
comp=Z,0.1nm,0.3s,baz=108,slow=9.8,SNR=3.3
ULM Lac du Bonnet 38.53 352 P P 20 20 29.2 -1.3
comp=Z,5.8nm,0.6s,baz=172,slow=9.3,SNR=15
SCHQ Schefferville 45.88 17 P P 20 21 28.6 -1.6
comp=Z,1.8nm,0.4s,baz=202,slow=9.0,SNR=5.4
BDFB Brasilia 48.54 124 LR LR 20 44 56.5
comp=Z,26nm,18.9s,baz=138,slow=39
YKA Yellowknife Ar 53.71 345 P P 20 22 29.0 -0.6
comp=Z,0.7nm,0.5s,baz=141,slow=7.4,SNR=12
YKA PcP PcP 20 23 36.6 +1.4
comp=Z,0.2nm,0.5s,baz=150,slow=3.7,SNR=3.7
IL31 65.97 336 P P 20 23 55.2 +1.5
IL31 IAmb IAmb 20 24 00.2
comp=Z,3.2nm,1.2s
ILAR Eielson Array 65.97 336 P P 20 23 55.1 +1.3
comp=Z,0.4nm,0.7s,baz=171,slow=3.9,SNR=4.5
MKAR Makanchi Array 120.78 7 PKP PKiKP 20 32 00.8 +0.9
comp=Z,0.1nm,0.3s,baz=349,slow=1.5,SNR=3.1
KSH Kashi 126.62 15 PKP PKPdf 20 32 07.4 -3.9
KSH sPKP 20 32 57.5
KSH PP PP 20 33 54.0 -13
KSH PKS PKSdf 20 35 38.5 -10
KSH SKS SKSdf 20 39 07.1 -13
KSH SKKS SKKSac 20 40 50.8 -11
CMAR Chiang Mai Arr 148.79 346 PKPbc PKiKP 20 32 58.1 +0.8
comp=Z,0.9nm,0.7s,baz=346,slow=3.7,SNR=8.7

ANF 16 20:23:34.7±0.2, 33.84N×82.11W, h7km±1km, ML4.0/99, Error ellipse: s-maj=1.8km s-min=1.1km az=9.0
NEIC 16 20:23:35.4±1.1, 33.83N±0.04×82.07W±0.03, h5km±2km, Error ellipse: s-maj=5.9km s-min=4.8km az=9.0
SLM 16 20:23:35.8±1.0, 33.83N±0.03×82.07W±0.03, h7km±6km, Mwr3.0/6, Error ellipse: s-maj=5.1km s-min=3.0km az=209.0, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}=-0.57; $M_{\theta\theta}$1.82; $M_{\phi\phi}$-1.25; $M_{r\theta}$-0.88; $M_{\theta\phi}$-2.27; $M_{\phi r}$3.11;
ISC 16 20:23:34.7±1.1, 33.80N±0.02×82.10W±0.02, h1km±9km, n179, σ1§32/248, Georgia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

Y55A Saluda 0.24 55 P Pg 20 23 39.8 +0.3
baz=238,SNR=1000
Y55A S Sg 20 23 42.8 +0.2
baz=238
HODGE Hodges 0.45 343 Pg 20 23 43.7 +0.3
HODGE Sg 20 23 49.1 -0.2
Y54A Tignall 0.49 278 P Pg 20 23 44.6 +0.3
baz=93,SNR=612
Y54A S Sg 20 23 51.0 +0.3
baz=93
Y56A Pelion 0.66 90 P Pg 20 23 48.0 +0.6
baz=274,SNR=80
Y56A S Sg 20 23 56.8 +0.7
baz=274
Z56A Williston 0.77 128 Pg 20 23 50.4 +0.9
Z56A Williston 0.77 128 P Pg 20 23 50.4 +0.9
baz=311,SNR=78
Z56A S Sb 20 24 00.8 -1.1
baz=311
X55A Gracelyn & Ava 0.77 30 P Pg 20 23 49.2 -0.3
baz=209,SNR=242
X55A S Sg 20 23 58.9 -0.7
baz=209
X54A Belton 0.78 343 P Pg 20 23 49.6 -0.2
baz=160,SNR=277
X54A S Sg 20 23 59.3 -0.6
baz=160
JSC Jenkinsville 0.85 55 Pg 20 23 50.8 -0.2
PAULI Pauline 1.05 13 Pg 20 23 54.5 -0.4
X56A White Oak 1.12 52 P Pb 20 23 55.5 -1.5
baz=233,SNR=250
X56A S Sg 20 24 09.6 -1.3
baz=233
GOGA Godfrey 1.20 252 Pn 20 23 57.5 -1.2
GOGA Sn Sb 20 24 14.1 -0.3
GOGA Godfrey 1.20 252 P Pn 20 23 57.1 -1.6
baz=70,SNR=1000
GOGA S Sb 20 24 14.0 -0.3
baz=70
X53A Estanollee 1.22 306 P Pn 20 23 57.4 -1.5
baz=123,SNR=200
X53A S Sb 20 24 12.4 -2.4
baz=123
Y53A Monroe 1.24 273 P Pn 20 23 57.9 -1.2
baz=91,SNR=150
Y53A S Sb 20 24 14.1 -1.2
baz=91
Z57A Bowman 1.27 113 P Pb 20 23 59.1 -0.3
baz=296,SNR=77
Z57A S Sn 20 24 16.4 -0.8
baz=296
W54A Cherokee Point 1.29 357 P Pn 20 23 58.5 -1.4
baz=175,SNR=319
BG3 Lake Jocassee 1.38 330 Pn 20 24 00.3 -0.8
Y57A Sumter 1.44 81 Pb 20 24 01.6 -0.7
Y57A Sumter 1.44 81 P Pb 20 24 01.6 -0.7
baz=263,SNR=31
Y57A S Sg 20 24 20.4 -0.6
baz=263
157A Early Branch 1.45 140 Pb Pb 20 24 02.3 -0.2
baz=322,SNR=19
157A Sb Sg 20 24 23.0 +1.7
baz=322
154A Montrose 1.45 216 Pn 20 24 02.4 +0.2
KMSC Kings Mountain 1.48 25 Pn 20 24 02.0 -0.5
KMSC Kings Mountain 1.48 25 Pb Pn 20 24 02.1 -0.5
baz=205,SNR=160
KMSC S Sb 20 24 21.4 -1.0
baz=205
BIRD Birdtown, Kers 1.60 58 Pn 20 24 03.6 -0.5
W53A Cullowhee 1.62 328 Pb Pn 20 24 04.7 +0.1
baz=146,SNR=42
W53A S Sn 20 24 25.3 -1.0
baz=146
Y52A Lilburn 1.64 273 Pn 20 24 04.6 -0.1
Y52A Sn Sb 20 24 26.5 -0.3
Y52A Lilburn 1.64 273 Pb Pn 20 24 04.6 -0.1
baz=91,SNR=65
Y52A S Sn 20 24 25.6 -0.7
baz=91
X52A Dahlonega 1.69 299 Pb Pn 20 24 05.6 +0.2
baz=117,SNR=113
X52A S Sn 20 24 26.5 -1.2
baz=117
NHSC New Hope 1.75 113 Pn 20 24 06.0 -0.2
NHSC New Hope 1.75 113 P Pn 20 24 06.0 -0.2
baz=295,SNR=47
NHSC Sb Sg 20 24 31.8 +0.8
baz=295
X57A Johnson Farm, 1.79 68 Pn Pn 20 24 06.3 -0.5
baz=249
X57A Pb Pb 20 24 07.8 -0.5
baz=249,SNR=33
X57A S Sb 20 24 30.3 -1.0
baz=249
RGRS Roger Stewart 1.83 119 Pn 20 24 07.1 -0.1
W56A Indian Trail 1.83 43 Pn Pn 20 24 07.0 -0.4
baz=224,SNR=107
W56A Pb Pb 20 24 08.2 -0.8
baz=224
CSU Charleston Sou 1.88 115 Pn Pn 20 24 07.7 -0.3
CSU Sg Sg 20 24 34.7 -0.5
255A Hazlehurst 1.89 190 Pn 20 24 09.0 +0.8
158A Hollywood 1.92 123 Pn Pn 20 24 08.2 -0.2
baz=306,SNR=29
158A Pb Pb 20 24 10.4 0.0
baz=306
158A Sb Sg 20 24 36.5 +0.2
baz=306
V53A Saluda 1.96 343 Pb Pb 20 24 10.4 -0.8
baz=161,SNR=346
V53A Sb Sn 20 24 35.7 -0.4
baz=161
Z58A St. Stephen 1.96 103 P Pn 20 24 08.6 -0.6
baz=285,SNR=35
Z58A Sb Sg 20 24 37.6 -0.3
baz=285
V54A Nebo 1.98 4 Pb Pb 20 24 10.9 -0.6
baz=183,SNR=101
V54A Sb Sb 20 24 36.5 -0.2
baz=183
W52A Murphy 1.99 311 Pn 20 24 09.9 +0.4
W52A Murphy 1.99 311 Pb Pn 20 24 11.2 -0.6
baz=129,SNR=21
W52A Sb Sn 20 24 36.9 -0.1
baz=129
Y58A Scranton 2.03 86 Pn Pn 20 24 09.5 -0.6
Y58A Sg Sg 20 24 38.4 -1.5
Y58A Scranton 2.03 86 P Pn 20 24 09.5 -0.6
baz=268,SNR=94
Y58A Sb Sg 20 24 39.3 -0.6
baz=268
Z52A Williamson 2.03 253 Pb Pn 20 24 11.1 +1.1
baz=71,SNR=26
V55A Taylorsville 2.17 19 Pn Pn 20 24 12.0 0.0
V55A Taylorsville 2.17 19 P Pn 20 24 11.9 -0.1
baz=199,SNR=65
W57A Gilead 2.20 52 Pn Pn 20 24 12.1 -0.3
W57A Gilead 2.20 52 P Pn 20 24 12.1 -0.3
baz=233,SNR=58
W57A S Sn 20 24 39.0 -1.3
baz=233
TKL Tuckaleechee C 2.31 324 Pn 20 24 14.5 +0.5
V52A Sevierville 2.38 329 Pn 20 24 16.3 +1.4
V52A Sevierville 2.38 329 P Pb 20 24 17.4 -1.1
baz=148,SNR=102
V52A Sb Sb 20 24 49.1 +0.8
baz=148
V56A Mocksville 2.40 33 P Pn 20 24 15.1 -0.1
baz=214,SNR=81
X58A Rowland 2.41 71 Pn 20 24 15.1 -0.2
X58A Rowland 2.41 71 P Pn 20 24 15.2 -0.2
baz=253,SNR=31
X58A Sb Sg 20 24 50.2 -2.0
baz=253
X51A Calhoun 2.41 289 Pn 20 24 16.0 +0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
X51A	Calhoun	2.41	289	P	Pn	20 24 16.0	+0.7
	baz=107,SNR=24						
Z59A	Georgetown, SC	2.42	102	P	Pn	20 24 14.9	-0.5
	baz=285,SNR=14						
Z59A				Sb	Sg	20 24 51.0	-1.6
	baz=285						
152A	Waverly Hall	2.47	244		Pn	20 24 17.2	+1.1
Y51A	Rockmart	2.47	273	P	Pn	20 24 16.7	+0.6
	baz=91,SNR=23						
W51A	Cleveland	2.58	302	P	Pn	20 24 18.4	+0.7
	baz=120,SNR=89						
W51A				Sb	Sb	20 24 54.8	+0.7
	baz=120						
CPCT	Cooper Cave	2.59	310		Pn	20 24 18.5	+0.7
U53A	Fall Branch	2.59	351	P	Pn	20 24 17.9	+0.1
	baz=170,SNR=52						
Z51A	Franklin	2.61	260		Pn	20 24 19.4	+1.3
W58A	Raeford	2.67	62	P	Pn	20 24 18.1	-0.7
	baz=244,SNR=45						
TIGA	Tifton	2.67	209		Pn	20 24 19.3	+0.4
TIGA	Tifton	2.67	209	P	Pn	20 24 19.3	+0.4
	baz=28						
TIGA				Sn	Sn	20 24 53.0	+1.2
	baz=28						
TIGA				Sb	Sb	20 24 58.8	+2.3
	baz=28						
Y59A	Loris	2.69	85		Pn	20 24 18.6	-0.6
Y59A	Loris	2.69	85	P	Pn	20 24 18.7	-0.4
	baz=267,SNR=6.1						
Y59A				Sb	Sb	20 24 58.2	+1.1
	baz=267						
U54A	Nelsons Funny	2.73	5		Pn	20 24 20.1	+0.4
U54A	Nelsons Funny	2.73	5	P	Pn	20 24 20.0	+0.3
	baz=184,SNR=18						
U54A				Sb	Sb	20 24 59.4	+1.1
	baz=184						
V51A	Loudon	2.73	318		Pn	20 24 20.7	+1.1
V51A	Loudon	2.73	318	P	Pn	20 24 20.6	+0.9
	baz=136,SNR=14						
V51A				Sb	Sb	20 24 58.9	+0.6
	baz=136						
U52A	Thorn Hill	2.79	338	Pn	Pn	20 24 21.0	+0.5
	baz=157,SNR=29						
U52A				Pb	Pb	20 24 25.3	-0.1
	baz=157						
V57A	Coltrane Farms	2.83	42	P	Pn	20 24 20.9	-0.1
	baz=223,SNR=30						
U55A	TA2, Sparta	2.83	17	P	Pn	20 24 21.2	0.0
	baz=198,SNR=21						
U56A	King	2.91	28		Pn	20 24 22.4	+0.3
U56A	King	2.91	28	P	Pn	20 24 22.4	+0.3
	baz=209						
U56A				Sb	Sb	20 25 04.5	+1.0
	baz=209						
TZTN	Tazewell	2.98	337		Pn	20 24 23.8	+0.6
TZTN	Tazewell	2.98	337	P	Pn	20 24 23.7	+0.4
	baz=156,SNR=38						
TZTN				Sb	Sb	20 25 06.8	+1.1
	baz=156						
W50A	Signal Mountai	3.00	299		Pn	20 24 24.8	+1.4
W50A	Signal Mountai	3.00	299	Sb	Sb	20 25 06.9	+0.8
	baz=116						
X59A	McDuffie Farm,	3.00	74	P	Pn	20 24 23.3	-0.1
	baz=256						
X59A				Sb	Sb	20 25 07.2	+1.1
	baz=256						
FPAL	Fort Paine	3.00	285		Pn	20 24 24.0	+0.5
U51A	La Follette	3.02	329	Sb	Sb	20 25 07.5	+0.9
	baz=147						
V50A	Pikevile	3.10	308	P	Pn	20 24 25.2	+0.4
	baz=126,SNR=35						
V58A	Windy Hill, Pi	3.16	50		Pn	20 24 25.1	-0.5
V58A	Windy Hill, Pi	3.16	50	P	Pn	20 24 25.4	-0.2
	baz=232,SNR=7.8						
T53A	Wise	3.20	354	P	Pn	20 24 26.3	+0.2
	baz=173,SNR=78						
T53A				Sb	Sb	20 25 12.6	+0.8
	baz=173						
Y60A	Bolivia	3.24	85	Sb	Sb	20 25 14.3	+1.5
	baz=268						
Z50A	Ashland	3.24	261		Pn	20 24 27.7	+0.9
Z50A	Ashland	3.24	261	P	Pn	20 24 27.8	+1.1
	baz=79,SNR=59						
Z50A				Sb	Sb	20 25 13.7	+0.7
	baz=79						
T54A	Tazewell	3.28	7	P	Pn	20 24 27.5	+0.1
	baz=187,SNR=35						
W59A	Clinton	3.31	65	P	Pn	20 24 27.9	+0.2
	baz=247						
W59A				Sb	Sb	20 25 16.4	+1.2
	baz=247						
352A	Blakely	3.32	227		Pn	20 24 27.6	-0.3
T52A	Hallie	3.38	348		Pn	20 24 29.1	+0.4
T52A	Hallie	3.38	348	P	Pn	20 24 29.0	+0.4
	baz=167,SNR=48						
U57A	Blanch	3.47	40	P	Pn	20 24 29.8	0.0
	baz=221						
T55A	Pulaski	3.48	18	P	Pn	20 24 30.4	+0.3
	baz=198,SNR=25						
T51A	Gray	3.50	335	P	Pn	20 24 31.7	+1.4
	baz=153						
X60A	Albert Glenn T	3.50	76	Sb	Sg	20 25 23.2	-4.1
	baz=259						
Y49A	Blount Mountai	3.59	272		Pn	20 24 32.3	+0.8
T56A	Rocky Mt	3.64	27	P	Pn	20 24 33.1	+0.9
	baz=208						
BLA	Blacksburg	3.67	21		Pn	20 24 33.1	+0.5
BLA	Blacksburg	3.67	21	P	Pn	20 24 33.2	+0.5
	baz=202,SNR=12						
BLA				Sb	Sb	20 25 26.6	+1.1
	baz=202						
W49A	Belvidere	3.69	292	P	Pn	20 24 33.5	+0.6
	baz=109						
W49A				Sb	Sb	20 25 27.2	+1.4
	baz=109						
V49A	McMinnville	3.69	303	Sb	Sb	20 25 27.8	+1.7
	baz=120						
V59A	Middlesex	3.73	57	P	Pn	20 24 33.2	-0.3
	baz=240,SNR=14						
CNNC	Cliffs of the	3.76	66		Pn	20 24 33.6	-0.3
CNNC	Cliffs of the	3.76	66	P	Pn	20 24 34.0	+0.2
	baz=249						
S53A	Williamson	3.88	360	P	Pn	20 24 35.6	+0.2
	baz=179,SNR=11						
U58A	Oxford	3.90	47	P	Pn	20 24 36.0	+0.2
	baz=229						
250A	Grady	3.95	244		Pn	20 24 37.8	+1.3
T57A	Hurt	3.95	35		Pn	20 24 36.5	+0.1
T57A	Hurt	3.95	35	P	Pn	20 24 36.4	-0.1
	baz=217,SNR=21						
T57A				S	Sn	20 25 22.1	-1.3
	baz=217						
S52A	Salyersville	3.95	349	P	Pn	20 24 36.8	+0.3
	baz=168,SNR=11						
S51A	Beattyville	4.02	343		Pn	20 24 38.0	+0.6
S51A	Beattyville	4.02	343	P	Pn	20 24 38.9	+1.5
	baz=162,SNR=12						
S54A	Dingess, Beckl	4.04	9		Pn	20 24 37.1	-0.7
S54A	Dingess, Beckl	4.04	9	P	Pn	20 24 37.9	+0.1
	baz=189,SNR=5.6						
U49A	Red Boiling Sp	4.05	313	P	Pn	20 24 38.4	+0.5
	baz=130						
X48A	Hartselle	4.15	280		Pn	20 24 40.4	+1.1
CLTN	Cedars of Leba	4.16	305		Pn	20 24 39.5	+0.2
LRAL	Lakeview Retre	4.17	261		Pn	20 24 40.6	+1.1
LRAL	Lakeview Retre	4.17	261	P	Pn	20 24 40.4	+0.9
	baz=78,SNR=15						
S55A	Lewisburg	4.17	18	P	Pn	20 24 39.6	+0.1
	baz=198,SNR=23						
U59A	Littleton	4.36	53		Pn	20 24 41.6	-0.4
U59A	Littleton	4.36	53	P	Pn	20 24 41.9	-0.1
	baz=235						
U59A				S	Sn	20 25 29.3	-4.1
	baz=235						
S56A	Natural Bridge	4.38	27	P	Pn	20 24 42.7	+0.3
	baz=208,SNR=8.4						
V60A	Jim Taylor Roa	4.44	62	Sb	Sb	20 25 50.0	+2.6
	baz=245						
W61A	Ground Anchor	4.44	71	P	Pn	20 24 43.5	+0.4
	baz=254						
W61A				Sb	Sb	20 25 49.1	+1.6
	baz=254						
R54A	Victor	4.46	11	P	Pn	20 24 43.1	-0.5
	baz=192,SNR=11						
R54A				Sb	Sb	20 25 51.4	+3.1
	baz=192						
R53A	Hurricane	4.52	1	P	Pn	20 24 44.1	-0.3
	baz=181						
R53A				Sn	Sn	20 25 37.9	+0.3
	baz=181						
R53A				Sb	Sb	20 25 54.1	+4.2
	baz=181						
R52A	Catlettsburg	4.55	355	P	Pn	20 24 46.3	+1.6
	baz=174						
R51A	Hillsboro	4.65	345	P	Pn	20 24 47.1	+1.0
	baz=164,SNR=10						
S57A	Dark Hollow, R	4.71	32		Pn	20 24 47.1	+0.2
S57A	Dark Hollow, R	4.71	32	P	Pn	20 24 48.0	+1.1
	baz=214						
R55A	Marlinton	4.75	19	Pn	Pn	20 24 47.5	-0.1
R55A	Marlinton	4.75	19	P	Pn	20 24 47.4	-0.1
	baz=200,SNR=20						
R55A				Sb	Sb	20 25 59.3	+2.6
	baz=200						
R50A	Paris	4.82	339	P	Pn	20 24 49.0	+0.5
	baz=157						
U60A	Pendleton	4.85	55	P	Pn	20 24 48.9	+0.1
	baz=238						
U60A				Sb	Sb	20 26 02.3	+3.1
	baz=238						
T59A	Double "B" Far	4.88	48	P	Pn	20 24 50.1	+0.8
	baz=231,SNR=7.1						
BRAL	Brewton	4.94	239	P	Pn	20 24 51.3	+1.3
	baz=56						
Q53A	Leroy	5.07	5	P	Pn	20 24 51.8	-0.1
	baz=185,SNR=52						
Q53A				S	Sn	20 25 52.2	+1.1
	baz=185						
R56A	Bull Pasture M	5.09	25	P	Pn	20 24 51.9	-0.4
	baz=206,SNR=14						
Q52A	Bidwell	5.16	359	P	Pn	20 24 52.2	-0.8
	baz=178,SNR=6.4						
Q52A				S	Sn	20 25 52.3	-0.9
	baz=178						
Q50A	Georgetown	5.26	344	P	Pn	20 24 55.4	+1.0
	baz=162,SNR=12						
Q50A				S	Sn	20 25 55.0	-0.7
	baz=162						
Q51A	Peebles	5.31	349	Pn	Pn	20 24 55.0	-0.2
Q51A	Peebles	5.31	349	P	Pn	20 24 55.2	0.0
	baz=168,SNR=5.8						
Q51A				S	Sn	20 25 57.0	0.0
	baz=168						
R57A	Stanardsville	5.34	32	P	Pn	20 24 55.9	+0.3
	baz=214						
R58B	Mineral	5.39	38	P	Pn	20 24 57.1	+0.9
	baz=221						
R58B				S	Sn	20 25 55.9	-2.9
	baz=221						
Q55A	Buckhannon	5.43	17	S	Sn	20 25 59.3	-0.9
	baz=198						
S59A	Mechanicsville	5.56	43	P	Pn	20 24 58.0	-0.5
	baz=226						
R58A	Rapidan	5.58	35	P	Pn	20 24 58.5	-0.4
	baz=218,SNR=14						
P53A	Whipple	5.71	6	Pn	Pn	20 24 60.0	-0.6
P53A	Whipple	5.71	6	P	Pn	20 25 00.3	-0.3
	baz=186,SNR=7.0						
P52A	Corning	5.82	360	P	Pn	20 25 01.6	-0.6
	baz=179,SNR=8.3						
P52A				S	Sn	20 26 08.9	-0.7
	baz=179						
P50A	Jamestown	5.96	347	P	Pn	20 25 06.2	+2.1
	baz=166						
P50A				S	Sn	20 26 12.9	0.0
	baz=166						
Q57A	Strasburg	6.01	29	P	Pn	20 25 05.1	+0.3
	baz=211,SNR=15						
P49A	Miami Univ. Ec	6.10	341	P	Pn	20 25 07.0	+1.0
	baz=159						
OXF	Oxford	6.10	279	Pn	Pn	20 25 04.5	-1.5
OXF	Oxford	6.10	279	S	Sn	20 26 16.1	-0.3
	baz=94						
MCWV	Mont Chateau	6.12	17	Sb	Sb	20 26 40.3	+4.4
	baz=198						
Q58A	Fox Den Farm,	6.25	34	P	Pn	20 25 07.7	-0.3
	baz=216,SNR=11						
O50A	Cable	6.45	350	Sb	Sb	20 26 51.9	+6.5
	baz=168						
O53A	New Philadelph	6.48	6	S	Sn	20 26 23.4	-2.3
	baz=186						
O54A	Avella	6.52	12	P	Pn	20 25 12.6	+0.8
	baz=192						
O54A				S	Sn	20 26 24.5	-2.3
	baz=192						
P58A	Pank, Wackersv	6.86	33	Sb	Sb	20 27 03.2	+5.9
	baz=216						
SDMD	Soldier's Deli	7.02	36	Pn	Pn	20 25 18.4	-0.2
O57A	Amberson	7.33	28	Sb	Sb	20 27 16.0	+5.5
	baz=210						
N55A	Marion Center	7.40	19	Sb	Sb	20 27 19.5	+6.9
	baz=200						
SFIN	Lafayette	7.69	330	Pn	Pn	20 25 26.2	-1.6
M53A	WI Miller and	7.71	8	P	Pn	20 25 28.2	0.0
	baz=189						
M53A				Sn	Sn	20 26 54.9	-1.2
	baz=189						
M53A				Sb	Sb	20 27 30.0	+8.4
	baz=189						
M52A	Chesterland	7.75	4	Pn	Pn	20 25 26.8	-1.9
M54A	Oil Creek Stat	7.93	13	Pn	Pn	20 25 31.0	-0.2
M54A	Oil Creek Stat	7.93	13	P	Pn	20 25 31.0	-0.2
	baz=195,SNR=35						
L54A	Sinclairville	8.70	14	P	Pn	20 25 42.0	+0.3
	baz=195						
X40A	Basin Creek Fa	8.93	277	P	Pn	20 25 43.5	-1.3
	baz=91						
J52A	Paris	9.51	7	P	Pn	20 25 53.3	+0.4
	baz=188						

IDC 16 20:40:28.9±4.0, 44°.92N×94°.10E, h0km, mb1 3.2/5, mb1mx3.0/54, mbtmp3.2/5, ML2.9/5, Error ellipse: s-maj=68.0km s-min=17.5km az=0.0
BJI 16 20:40:29.6±0.0, 44°.89N×94°.02E, h8km, mB3.8/1, mb3.6/3, ML3.5/7
NNC 16 20:40:38.1±2.6, 44°.69N×93°.40E, h20km±10km, mb3.6, mpv3.4, Error ellipse: s-maj=76.3km s-min=18.0km az=21.0
ISC 16 20:40:30.5±1.0, 44°.9N±0°.1×94°.04E±0°.07, h10km, n11, σ1§26/12, 5C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WMQ	Urumqi	4.68	259	ePn	Pn	20 41 42.8	+1.5
WMQ				Sn	Sn	20 42 36.0	+0.3
WMQ				smax	smax		
	comp=N,110nm,0.9s						
WMQ				smax	smax		
	comp=E,130nm,1.1s						
GTA	Gaotai	6.98	140	ePn	Pn	20 42 11.8	-1.1
GTA				smax	smax		
	comp=N,18nm,0.8s						
GTA				smax	smax		
	comp=E,22nm,1.1s						
MK31	Makanchi Array	8.41	287	Pn	Pn	20 42 33.1	+0.6
	0.5nm,0.5s,baz=97,slow=15,SNR=22						
MK31				⇑Pg	Pg	20 43 04.2	-7.3
	1.7nm,0.8s,baz=103,slow=15,SNR=6.4						
MK31				⇑Sn	Sn	20 44 05.2	-2.3
	1.6nm,0.5s,baz=103,slow=13,SNR=4.6						
MK31				⇓Lg	Lg	20 44 51.2	
	4.0nm,0.6s,baz=103,slow=21,SNR=6.9						
MKAR	Makanchi Array	8.41	287	Pn	Pn	20 42 33.0	+0.6
	0.3nm,0.3s,baz=97,slow=14,SNR=17						
MKAR				Pg	Pb	20 43 02.2	+6.0
	0.5nm,0.3s,baz=90,slow=21,SNR=6.6						
MKAR				Sn	Sn	20 44 06.8	-0.7
	0.6nm,0.3s,baz=93,slow=30,SNR=4.2						
MKAR				Lg	Lg	20 45 00.0	
	0.9nm,0.3s,baz=81,slow=27,SNR=4.1						
MAKZ	Makanchi	8.63	287	⇓Pn	Pn	20 42 37.2	+1.8
	1.1nm,0.8s						
MAKZ				⇑Pg	Pg	20 43 09.7	-6.0
	2.5nm,0.8s						
MAKZ				⇑Lg	Lg	20 45 02.5	
	12nm,0.9s						
SONM	Songino Array	9.02	67	Pn	Pn	20 42 41.4	+0.5
	0.2nm,0.3s,baz=250,slow=15,SNR=11						
SONM				Pg		20 43 13.4	
	0.5nm,0.3s,baz=249,slow=19,SNR=14						
SONM				Lg	Lg	20 45 12.4	
	1.6nm,0.3s,baz=269,slow=30,SNR=7.4						
TLY	Talaya	9.30	40	Pn	Pn	20 42 51.0	+6.4
	0.0nm,0.3s,baz=248,slow=18,SNR=1.9						
TLY				Pg		20 43 16.8	
	0.0nm,0.3s,baz=243,slow=12,SNR=7.5						
TLY				Lg	Lg	20 45 22.8	
	0.0nm,0.3s,baz=141,slow=15,SNR=4.2						
ZALV	Zalesovo Beam	10.84	330	Pn	Pn	20 43 06.1	+0.5
	0.1nm,0.3s,baz=158,slow=16,SNR=2.3						
ZALV				Lg	Lg	20 46 17.0	
	0.1nm,0.3s,baz=153,slow=27,SNR=5.7						
KURBB	Kurchatov Arra	11.88	304	Pn	Pn	20 43 19.5	-0.4
	0.0nm,0.3s,baz=109,slow=14,SNR=5.0						
KURBB				Lg	Lg	20 46 49.9	
	0.1nm,0.3s,baz=108,slow=30,SNR=6.8						
KURBB	Kurchatov Arra	11.88	304	⇑Lg	Lg	20 46 48.9	
	14nm,0.6s						
BVAR	Borovoye Array	17.46	306	P	P	20 44 34.7	-0.4
	0.1nm,0.3s,baz=118,slow=12,SNR=3.9						

IDC 16 20:47:30.8±1.1, 4°.19N×126°.80E, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.6/45, mbtmp3.6/8, Error ellipse: s-maj=67.9km s-min=15.6km az=67.0
MAN 16 20:47:32.9, 3°.86N×126°.51E, h14km, mb4.9, ML3.8, MS3.7
NEIC 16 20:47:35.0±2.5, 4°.1N±0°.2×126°.7E±0°.3, h35km±2km, mb4.2/6, Error ellipse: s-maj=62.3km s-min=5.0km az=61.0
ISC 16 20:47:33.0±0.9, 3°.96N±0°.07×126°.7E±0°.2, h10km, n22, σ1§98/26, mb3.9/11, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DDMP	Don Marcelino,	2.34	336	eP	Pn	20 48 11.1	-0.4
DDMP				eS	Sn	20 48 41.3	+0.9
GSPH	General Santos	2.73	321	eP	Pn	20 48 17.5	+0.5
MATI	Mati	3.00	352	eP	Pn	20 48 21.6	+0.9
MATI				eS	Sg	20 49 10.1	+0.7
DAV	Davao City (W)	3.28	341	Pn	Pn	20 48 18.4	-6.1
SKMP	Bagumbayan, Su	3.32	320	eP	Pn	20 48 25.7	+0.7
SKMP				eS	Sn	20 49 04.2	-0.3
KCP	Kidapawan	3.42	332	⇑iP	Pn	20 48 29.4	+3.0
KCP				eS	Sn	20 49 04.9	-2.2
BUKP	Musuan	4.21	338	eP	Pn	20 48 38.8	+1.5
BUKP				eS	Sn	20 49 29.9	+3.1
PAGZ	Pagadian	5.07	320	eP	Pn	20 48 52.3	+3.2
FITZ	Fitzroy Crossi	21.94	183	P	P	20 52 27.9	+1.0
	0.9nm,0.6s,baz=10,slow=11,SNR=3.2						
FITZ	Fitzroy Crossi	21.94	183	P	P	20 52 26.1	-0.8
FITZ				IAmb	IAmb	20 52 26.5	
	comp=Z,17nm,1.4s						
WRA	Warramunga Arr	24.92	163	P	P	20 52 57.9	+1.4
	comp=Z,1.5nm,0.6s,baz=343,slow=10,SNR=13						
WB2	Warramunga Arr	24.92	163	P	P	20 52 57.0	+0.4
WR0	Warramunga Arr	24.99	162	P	P	20 52 57.1	0.0
WR0				IAmb	IAmb	20 52 57.5	
	comp=Z,10nm,1.4s						
ASAR	Alice Springs	28.35	166	P	P	20 53 28.9	+1.5
	comp=Z,0.4nm,0.8s,baz=347,slow=7.1,SNR=4.1						
CMAR	Chiang Mai Arr	30.71	300	P	P	20 53 48.5	+0.1
	comp=Z,0.2nm,0.4s,baz=124,slow=7.7,SNR=4.0						
STKA	Stephens Creek	38.36	159	P	P	20 54 55.0	+0.6
	comp=Z,2.3nm,0.8s,baz=349,slow=10,SNR=3.5						
SONM	Songino Array	47.07	341	P	P	20 56 04.7	-0.4
	comp=Z,0.4nm,0.5s,baz=162,slow=8.7,SNR=6.9						
MK31	Makanchi Array	57.34	325	P	P	20 57 17.9	-3.5
MKAR	Makanchi Array	57.34	325	P	P	20 57 19.4	-2.0
	comp=Z,0.3nm,0.3s,baz=121,slow=7.1,SNR=11						
MAKZ	Makanchi	57.53	325	P	P	20 57 19.8	-2.9
MAKZ				IAmb	IAmb	20 57 38.9	
	comp=Z,2.1nm,1.2s						
ZALV	Zalesovo Beam	60.36	333	P	P	20 57 38.9	-3.3
	comp=Z,0.4nm,0.4s,baz=110,slow=7.0,SNR=2.8						
KURK	Kurchatov	61.52	327	P	P	20 57 47.0	-3.1
KURK				IAmb	IAmb	20 57 48.6	
	comp=Z,1.7nm,0.6s						

IDC 16 20:49:39.8±12.0, 18°.81S×179°.64E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/34, mbtmp3.7/3, Error ellipse: s-maj=379.3km s-min=87.7km az=134.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WRA	Warramunga Arr	42.65	261	P	P	20 57 39.1	+0.6
	0.6nm,0.3s,baz=91,slow=8.3,SNR=14						
ASAR	Alice Springs	42.76	255	P	P	20 57 38.4	-1.0
	0.2nm,0.4s,baz=92,slow=8.5,SNR=6.0						
CMAR	Chiang Mai Arr	87.44	290	P	P	21 02 29.8	0.0
	0.9nm,0.9s,baz=128,slow=3.4,SNR=5.4						

IDC 16 20:53:43.1±8.0, 23°.00S×176°.41W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.9/34, mbtmp4.0/4, Error ellipse: s-maj=268.3km s-min=89.7km az=146.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CTA	Charters Tower	34.79	268	P	P	21 00 36.6	+0.9
	1.3nm,0.4s,baz=92,slow=9.9,SNR=5.3						
ASAR	Alice Springs	45.44	259	P	P	21 02 04.0	-0.2
	1.1nm,1.0s,baz=89,slow=7.9,SNR=6.0						
WRA	Warramunga Arr	45.77	264	P	P	21 02 05.9	-0.9
	0.9nm,0.7s,baz=102,slow=8.5,SNR=12						
CMAR	Chiang Mai Arr	92.33	289	P	P	21 06 55.9	0.0
	0.9nm,0.7s,baz=126,slow=3.3,SNR=8.6						

IDC 16 20:56:06.9±1.4, 27°.48S×178°.09W, h293km±18km, mb3.2/3, mb1 3.6/4, mb1mx3.3/29, mbtmp4.0/4, Error ellipse: s-maj=43.4km s-min=22.9km az=153.0
ISC 16 20:56:06.9±0.9, 27°.69S±0°.09×178°.1W±0°.2, h300km, n23, σ2§20/27, mb3.6/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
RIZ	Raoul Island	1.56	174	P	Pn	20 56 49.1	-1.3
RIZ				S	S	20 57 27.8	+2.8
RAO	Raoul Island	1.56	174	P	Pn	20 56 49.5	-0.9
	419nm,0.3s,baz=344,slow=20,SNR=11						
RAO				S	S	20 57 27.1	+2.1
	303nm,0.3s,baz=265,slow=23,SNR=5.2						
GLKZ	Green Lake	1.57	174	P	Pn	20 56 49.7	-0.8
GLKZ				S	S	20 57 26.7	+1.5
URZ	Urewera	11.27	200	P	P	20 58 43.5	+0.9
	0.9nm,0.3s,baz=278,slow=6.7,SNR=3.9						
URZ				S	S	21 00 50.4	+4.1
	5.4nm,0.3s,baz=190,slow=19,SNR=12						
DVHZ	Dannevirke	13.43	199	P	P	20 59 00.4	-6.2
DVHZ				S	S	21 01 29.6	-5.4
BFZ	Birch Farm	13.77	198	P	Pn	20 59 13.3	+2.7
BFZ				S	S	21 01 38.8	-3.3
MRZ	Mangatainoka R	13.94	200	P	Pn	20 59 13.8	+1.1
MRZ				S	S	21 01 37.9	-8.0
HOWZ	Holdsworth Sta	14.18	200	P	Pn	20 59 16.3	+0.8
OGWZ	Otaki Gorge	14.21	201	P	P	20 59 11.9	-3.2
OGWZ				S	S	21 01 48.8	-2.7
KIW	Kapiti Island	14.34	202	P	P	20 59 12.5	-4.1
TRWZ	Traveller	14.59	199	P	Pn	20 59 25.8	+5.5
DUWZ	D'Urville Isla	14.63	205	P	P	20 59 19.9	+0.1
PAWZ	Paruwai Farm	14.65	200	P	Pn	20 59 21.8	+0.7
MSWZ	Moikau Station	14.73	200	P	Pn	20 59 23.0	+0.9
TCW	Tory Channel	14.86	203	P	P	20 59 21.1	-1.3
THZ	Tophouse	15.84	205	P	P	20 59 35.1	+1.9
ASAR	Alice Springs	43.22	264	P	P	21 03 41.0	+1.6
	0.7nm,0.6s,baz=94,slow=6.8,SNR=9.0						
WRA	Warramunga Arr	43.96	269	P	P	21 03 45.4	+0.1
	2.0nm,0.6s,baz=106,slow=7.5,SNR=11						
NVAR	Mina Array Bea	86.33	43	P	P	21 08 15.9	+0.3
	0.5nm,0.6s,baz=209,slow=8.2,SNR=4.4						
FINES	FINESS Array B	142.57	341	PKP	PKPdf	21 15 01.5	-2.0
	1.7nm,0.8s,baz=46,slow=6.8,SNR=3.2						
NB2	NORSAR Subarra	146.07	352	PKP	PKPab	21 15 11.9	-0.5
	comp=Z,0.6nm,0.5s,baz=24,slow=3.2						
NOA	NORSAR Array B	146.07	352	PKPbc	PKPbc	21 15 11.4	+0.2
	comp=Z,0.8nm,0.7s,baz=16,slow=4.1,SNR=4.8						
AKASG	Malin Array Be	149.05	325	PKPbc	PKPbc	21 15 19.4	+0.1
	comp=Z,0.4nm,0.4s,baz=45,slow=4.8,SNR=4.2						

THE 16 20:57:56.7, 38°.23N×20°.38E, h10km, ML2.7/5, Error ellipse: s-maj=1.3km s-min=0.5km az=259.0
ATH 16 20:57:56.4, 38°.20N×20°.38E, h12km, ML2.6/21, Error ellipse: s-maj=1.4km s-min=0.8km az=251.0

ISC 16 20:57:56.5±0.8, 38.22N±0.02×20.42E±0.03, h12km±4km, n64, σ0.52/90, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.03	142	P	Pg	20 57 58.8	+0.2
LXR1				S	Sg	20 58 00.3	+0.2
LXRA	Lixouri, Kepha	0.03	144	P	Pg	20 57 58.8	+0.2
LXRA				S	Sg	20 58 00.2	+0.1
KEF4	Livadi, Kephal	0.04	8	P	Pg	20 57 58.9	+0.2
KEF4				S	Sg	20 58 00.6	+0.2
AGT1	Agia Thekli	0.04	318	P	Pg	20 57 58.8	0.0
AGT1				S	Sg	20 58 00.0	-0.4
CHV1	Chavriata, Kef	0.05	217	P	Pg	20 57 58.7	-0.1
CHV1				S	Sg	20 58 00.1	-0.3
KEF3	Kipouria, Keph	0.06	252	P	Pg	20 57 58.8	-0.1
KEF3				S	Sg	20 58 00.3	-0.3
ARGA	Argostoli. Kep	0.07	132	P	Pg	20 57 59.2	+0.3
ARGA				S	Sg	20 58 00.8	+0.1
ARG2	Argostoli	0.07	128	P	Pg	20 57 59.2	+0.2
ARG2				S	Sg	20 58 00.8	0.0
KEF2	Argostoli. Kep	0.08	136	P	Pg	20 57 59.3	+0.2
KEF2				S	Sg	20 58 00.7	-0.3
VLS	Valsamata	0.14	108	P	Pg	20 58 00.2	+0.3
VLS				S	Sg	20 58 02.8	+0.3
	27µm,0.1s						
VLS	Valsamata	0.14	108	P	Pg	20 58 00.2	+0.3
VLS				S	Sg	20 58 02.7	+0.3
VLS				AML	AML	20 58 03.0	
	comp=N,46763µm,0.2s						
VLS				AML	AML	20 58 03.0	
	comp=E,58845µm,0.1s						
FSK	Fiskardo	0.26	26	P	Pg	20 58 02.4	+0.4
FSK				S	Sb	20 58 07.0	-0.7
	comp=E,5µm,0.2s						
FSK	Fiskardo	0.26	26	P	Pg	20 58 02.4	+0.4
FSK				S	Sg	20 58 06.4	+0.7
FSK				AML	AML	20 58 07.1	
	comp=N,6467µm,0.3s						
FSK				AML	AML	20 58 07.7	
	comp=E,12901µm,0.2s						
VLMS	Volimes, Zakyn	0.40	151	P	Pg	20 58 04.5	+0.1
VLMS				S	Sg	20 58 10.0	+0.3
VLMS				AML	AML	20 58 11.5	
	comp=E,6277µm,0.2s						
VLMS				AML	AML	20 58 17.4	
	comp=N,5882µm,0.3s						
EVGI	Lefkada island	0.44	25	P	Pg	20 58 05.6	+0.4
EVGI				S	Sb	20 58 12.9	+0.1
EVGI	Lefkada island	0.44	25	P	Pg	20 58 05.7	+0.4
EVGI				S	Sb	20 58 12.9	+0.1
MGNA	Meganis	0.52	34	P	Pg	20 58 07.0	+0.2
MGNA				S	Sb	20 58 15.3	+0.1
MGNA				AML	AML	20 58 16.1	
	comp=E,2736µm,0.1s						
MGNA				AML	AML	20 58 16.1	
	comp=N,2116µm,0.1s						
ZAK2	Zakynthos	0.58	138	P	Pb	20 58 08.6	+0.1
ZAK2				S	Sb	20 58 17.8	+1.1
LKD2	Lefkada island	0.60	18	P	Pg	20 58 08.2	0.0
LKD2				S	Sg	20 58 16.0	-0.1
	comp=N,592nm,0.4s						
LKD2	Lefkada island	0.60	18	P	Pg	20 58 08.3	0.0
LKD2				AML	AML	20 58 24.3	
	comp=E,1032µm,0.3s						
LKD2				AML	AML	20 58 26.2	
	comp=N,1275µm,0.4s						
AST1	Astakos	0.62	59	P	Pg	20 58 08.9	+0.4
AST1				S	Sb	20 58 18.8	+0.9
TSLK	Tsoukalades, L	0.63	17	P	Pg	20 58 08.8	0.0
TSLK				S	Sb	20 58 17.7	-0.6
	comp=N,642nm,0.4s						
TSLK	Tsoukalades, L	0.63	17	P	Pg	20 58 09.0	+0.2
TSLK				AML	AML	20 58 24.1	
	comp=N,1256µm,0.4s						
TSLK				AML	AML	20 58 24.4	
	comp=E,1271µm,0.5s						
KRI1	kERI	0.64	150	P	Pg	20 58 08.7	-0.3
KRI1				S	Sb	20 58 19.0	+0.5
VTN	Vitineika	0.68	116	P	Pg	20 58 10.0	+0.3
VTN	Vitineika	0.68	116	P	Pg	20 58 10.0	+0.3
PDO	Prodromos	0.71	58	P	Pb	20 58 10.6	-0.3
PDO	Prodromos	0.71	58	P	Pb	20 58 10.5	-0.3
PDO				S	Sn	20 58 22.3	-0.9
PDO				AML	AML	20 58 22.9	
	comp=E,1814µm,0.6s						
PDO				AML	AML	20 58 30.5	
	comp=N,1755µm,0.4s						
RLS	Riolos of Patr	0.84	101	P	Pg	20 58 12.6	-0.2
RLS				S	Sn	20 58 26.1	-0.4
	comp=N,210nm,0.3s						
RLS	Riolos of Patr	0.84	101	P	Pg	20 58 12.6	-0.2
RLS				S	Sb	20 58 25.3	+1.0
RLS				AML	AML	20 58 32.4	
	comp=N,440µm,0.3s						
RLS				AML	AML	20 58 36.2	
	comp=E,408µm,0.3s						
PVO	Paravola	0.96	65	P	Pb	20 58 15.2	+0.2
PVO	Paravola	0.96	65	P	Pb	20 58 15.4	+0.4
PVO				AML	AML	20 58 31.8	
	comp=E,1361µm,0.5s						
PVO				AML	AML	20 58 37.1	
	comp=N,1094µm,0.5s						
DRO	Drossia	1.05	104	P	Pb	20 58 16.5	-0.2
DRO	Drossia	1.05	104	P	Pb	20 58 16.6	-0.2
DRO				AML	AML	20 58 35.6	
	comp=E,1094µm,0.3s						
DRO				AML	AML	20 58 36.7	
	comp=N,952µm,0.2s						
LAKA	Lakka	1.23	89	P	Pn	20 58 19.4	-0.1
LAKA				AML	AML	20 58 40.2	
	comp=E,261µm,0.4s						
LAKA				AML	AML	20 58 42.4	
	comp=N,267µm,0.4s						
AMT	Artemida-Makis	1.23	124	P	Pn	20 58 19.0	-0.5
AMT				AML	AML	20 58 49.5	
	comp=E,496µm,0.5s						
AMT				AML	AML	20 58 49.8	
	comp=N,421µm,0.6s						
ANX	Ano Chora	1.24	72	P	Pg	20 58 20.3	0.0
ANX				AML	AML	20 58 45.8	
	comp=E,526µm,0.4s						
ANX				AML	AML	20 58 48.2	
	comp=N,520µm,0.5s						
EVR	Evrytania	1.29	57	P	Pn	20 58 20.6	+0.1
EVR				AML	AML	20 58 52.2	
	comp=N,223µm,0.8s						
EVR				AML	AML	20 58 54.7	
	comp=E,224µm,0.5s						
SERG	Sergoula	1.30	81	P	Pn	20 58 20.7	+0.1
TRIZ	Trizonia	1.31	83	P	Pn	20 58 20.6	0.0
IGT	Igoumenitsa	1.31	357	P	Pb	20 58 21.1	0.0
IGT	Igoumenitsa	1.31	357	P	Pb	20 58 21.3	+0.2
IGT				S	Sg	20 58 39.8	+1.0
KALE	Kalithea	1.36	82	P	Pn	20 58 21.6	+0.1
KALE				AML	AML	20 58 51.9	
	comp=E,239µm,0.4s						
KALE				AML	AML	20 58 54.8	
	comp=N,299µm,0.4s						
KLV	Kalavryta, Ach	1.38	97	P	Pb	20 58 22.2	-0.1
KLV	Kalavryta, Ach	1.38	97	P	Pb	20 58 22.2	-0.1
KLV				AML	AML	20 58 46.4	
	comp=E,144µm,0.3s						
KLV				AML	AML	20 58 46.7	
	comp=N,196µm,0.4s						
MAKR	Makrakomi, Fth	1.56	59	P	Pg	20 58 26.9	+0.4
MAKR				AML	AML	20 58 58.4	
	comp=N,386µm,0.6s						
MAKR				AML	AML	20 58 59.1	
	comp=E,376µm,0.4s						
KEK	Kerkira	1.57	342	P	Pn	20 58 24.9	+0.7
ITM	Ithomi	1.58	131	P	Pn	20 58 25.4	+1.0
PYL	PYLOS	1.69	141	P	Pn	20 58 26.9	+1.1
AGG	Agios Georgios	1.70	61	P	Pg	20 58 28.9	-0.2
AGG				AML	AML	20 58 58.9	
	comp=N,223µm,0.7s						
AGG				AML	AML	20 59 01.7	
	comp=E,176µm,0.5s						
VLX	Vlachokerasia	1.77	118	P	Pg	20 58 30.2	-0.3
THL	Klokotos Trika	1.83	42	P	Pb	20 58 30.4	+0.4
THL				AML	AML	20 59 01.5	
	comp=N,181µm,0.6s						
THL				AML	AML	20 59 06.0	
	comp=E,151µm,0.6s						
AXAR	Agios Charalam	1.84	72	P	Pg	20 58 31.1	-0.7
AXAR				AML	AML	20 59 03.7	
	comp=N,326µm,0.5s						
AXAR				AML	AML	20 59 06.2	
	comp=E,407µm,0.4s						
KPRO	Kipourio	1.88	23	P	Pg	20 58 32.0	-0.6
PROD	Prodromos	1.96	88	P	Pb	20 58 33.0	+1.0
LTK	Loutraki	2.02	95	P	Pb	20 58 32.7	-0.5
LKR	Lokris	2.07	77	P	Pb	20 58 33.9	-0.2
LKR				AML	AML	20 59 02.3	
	comp=E,97µm,0.2s						
LKR				AML	AML	20 59 02.5	
	comp=N,100µm,0.4s						
DYR	Agios Nikonas	2.11	133	P	Pb	20 58 34.0	-0.7
NEST	Nestorio	2.25	12	P	Pb	20 58 36.8	-0.3
VIL2	Platees	2.25	89	P	Pb	20 58 35.9	-1.1
KRND	KRANIDI	2.32	110	P	Pb	20 58 37.6	-0.7
DID	Didima	2.34	107	P	Pb	20 58 37.8	-0.8
NEO	Neokhori	2.45	63	P	Pb	20 58 39.1	-1.3
XOR	Xorichti	2.45	61	P	Pb	20 58 38.8	-1.7

IDC 16 21:29:13.8±57.0, 19.66S×179.55E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/24, mbtmp4.0/3, Error ellipse: s-maj=1018.0km s-min=159.1km az=81.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.10	243	P	P	21 36 17.5	-0.1
	1.5nm,0.7s,baz=79,slow=5.2,SNR=3.0						
WRA	Warramunga Arr	42.44	262	P	P	21 37 10.7	0.0
	1.0nm,0.7s,baz=97,slow=7.6,SNR=15						
ASAR	Alice Springs	42.48	256	P	P	21 37 10.8	-0.3
	2.7nm,0.8s,baz=89,slow=8.7,SNR=24						

TAP 16 21:30:31.8, 24.84N×122.08E, h94km, ML3.8, B
JMA 16 21:30:31.6±0.2, 24.80N×122.03E, h95km±3km, M2.8
ISC 16 21:30:31.6±1.2, 24.86N±0.03×122.04E±0.02, h99km±5km, n133, σ0.93/256, 11C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.16	342	⇑iP	Pn	21 30 45.3	-0.3
	baz=334						
TWB1				S	Sn	21 30 55.1	-0.8
	baz=334						
NTC	Toucheng	0.20	270	P	Pn	21 30 45.5	-0.1
	baz=272						
NTC				eS	Sn	21 30 55.2	-0.9
	baz=272						
TIPB	Shuangxi	0.23	300	⇑iP	Pn	21 30 45.6	-0.2
	baz=298						
TIPB				S	Sn	21 30 55.5	-0.9
	baz=298						
ILA	Ilan	0.28	252	⇑iP	Pn	21 30 46.0	0.0
	baz=254						
ILA				iS	Sn	21 30 56.3	-0.4
	baz=254						
TWC	Suao	0.30	216	⇑iP	Pn	21 30 45.9	-0.2
	baz=220						
TWC				S	Sn	21 30 55.6	-1.2
	baz=220						
EOS1	EOS1	0.32	166	P	Pn	21 30 46.2	+0.1
	baz=171						
EOS1				S	Sn	21 30 56.6	-0.3
	baz=171						
NWF	Wu-fen Shan	0.32	312	⇑iP	Pn	21 30 46.3	+0.1
	baz=309						
NWF				eS	Sn	21 30 56.7	-0.5
	baz=309						
WFSB	Wu-fen Shan	0.32	312	P	Pn	21 30 46.2	0.0
	baz=309						
WFSB				eS	Sn	21 30 56.8	-0.3
	baz=309						
TWE	Neicheng	0.37	249	P	Pn	21 30 46.5	+0.1
	baz=250						
TWE				eS	Sn	21 30 58.3	+0.9
	baz=250						
SLBB	Yuanshan	0.39	255	P	Pn	21 30 46.4	-0.2
	baz=257						
SLBB				eS	Sn	21 30 58.2	+0.4
	baz=257						
TWA	Mucha	0.44	287	P	Pn	21 30 46.9	0.0
	baz=286						
TWA				eS	Sn	21 30 57.7	-0.6
	baz=286						
NHDH	Xindian Distri	0.48	283	⇑iP	Pn	21 30 47.3	+0.1
	baz=283						
NHDH				S	Sn	21 30 59.5	+0.8
	baz=283						
ENTT	Nioudou	0.48	244	P	Pn	21 30 47.5	+0.3
	baz=245						
ENTT				eS	Sn	21 30 59.3	+0.4
	baz=245						
NWLT	Wulai	0.50	261	P	Pn	21 30 47.2	-0.1
	baz=262						
NWLT				S	Sn	21 30 59.0	-0.1
	baz=262						
ENA	Nanau	0.51	213	P	Pn	21 30 47.3	-0.1
	baz=215						
ENA				S	Sn	21 30 58.8	-0.3
	baz=215						
YM01	YM01	0.52	304	⇑iP	Pn	21 30 47.7	+0.2
	baz=302						
YM01				S	Sn	21 30 59.0	-0.3
	baz=302						
TAP	Taipei	0.52	291	P	Pn	21 30 47.6	+0.2
	baz=290						
TAP				eS	Sn	21 30 59.1	-0.1
	baz=290						
YM11	YM11	0.53	306	P	Pn	21 30 47.5	0.0
	baz=304						
YM11				eS	Sn	21 31 00.1	+0.6
	baz=304						
YM08	YM08	0.53	309	P	Pn	21 30 47.5	0.0
	baz=307						
YM08				eS	Sn	21 30 58.5	-1.0
	baz=307						
YM10	YM10	0.53	304	⇑iP	Pn	21 30 47.5	0.0
	baz=303						
YM10				eS	Sn	21 31 01.1	+1.6
	baz=303						
NDT	Datong Townshi	0.55	243	⇑iP	Pn	21 30 48.2	+0.6
	baz=245						
NDT				S	Sn	21 30 60.0	+0.4
	baz=245						
YM04	YM04	0.55	303	P	Pn	21 30 47.5	-0.2
	baz=301						
YM04				eS	Sn	21 31 00.8	+1.1
	baz=301						
ANP	Anpu	0.58	305	P	Pn	21 30 48.1	+0.1
	baz=303						
ANP				eS	Sn	21 31 01.4	+1.2
	baz=303						
TWY	Chenhua	0.58	316	P	Pn	21 30 48.3	+0.4
	baz=314						
TWY				eS	Sn	21 31 00.2	+0.1
	baz=314						
TWS1	Kuangyinshan	0.62	293	P	Pn	21 30 48.7	+0.5
	baz=293						
TWS1				S	Sn	21 31 02.1	+1.5
	baz=293						
NTST	Danshui	0.62	300	eP	Pn	21 30 48.3	+0.1
	baz=299						
NTST				eS	Sn	21 31 02.6	+2.0
	baz=299						
YHNB	Yeheng	0.64	253	P	Pn	21 30 48.6	+0.2
	baz=254						
YHNB				S	Sn	21 31 00.6	-0.4
	baz=254						
NSK	Sanguang	0.65	254	⇑iP	Pn	21 30 48.8	+0.2
	baz=255						
NSK				iS	Sn	21 31 00.8	-0.5
	baz=255						
WLTB	Daxi	0.72	270	P	Pn	21 30 49.8	+0.7
	baz=270						
WLTB				iS	Sn	21 31 03.3	+1.1
	baz=270						
NNSB	Datong	0.74	235	P	Pn	21 30 49.7	+0.3
	baz=236						
NNSB				eS	Sn	21 31 02.7	-0.1
	baz=236						
NNSH	Datong	0.74	235	P	Pn	21 30 50.0	+0.6
	baz=236						
NNSH				eS	Sn	21 31 02.7	0.0
	baz=236						
NNS	Nan Shan	0.74	236	P	Pn	21 30 49.7	+0.3
	baz=237						
NNS				S	Sn	21 31 03.0	+0.3
	baz=237						
PCYT	Pengchaiyu	0.77	2	P	Pn	21 30 50.2	+0.6
	baz=359						
PCYT				eS	Sn	21 31 03.3	+0.3
	baz=359						
NCU	National Centr	0.79	278	P	Pn	21 30 50.5	+0.8
	baz=278						
NCU				iS	Sn	21 31 04.4	+1.1
	baz=278						
NCUH	Zhongli	0.79	278	P	Pn	21 30 50.5	+0.8
	baz=278						
NCUH				S	Sn	21 31 04.2	+0.8
	baz=278						
NACB	Ninganchiao	0.79	211	P	Pn	21 30 49.4	-0.5
	baz=213						
NACB				eS	Sn	21 31 02.5	-1.0
	baz=213						
ETLH	Xiulin Townshi	0.82	219	eP	Pn	21 30 50.0	-0.2
	baz=220						
ETLH				eS	Sn	21 31 03.0	-1.2
	baz=220						
TWD	Chiawan	0.87	208	eP	Pn	21 30 50.3	-0.4
	baz=209						
TWD				iS	Sn	21 31 03.6	-1.3
	baz=209						
JYNG	Yonagunijimaku	0.91	116	P	Pn	21 30 50.9	-0.1
JYNG				eS	Sn	21 31 04.9	-0.7
NHW	Xinwu Township	0.92	280	P	Pn	21 30 51.7	+0.6
	baz=279						
NHW				eS	Sn	21 31 06.7	+1.1
	baz=279						
LIOB	Emei	0.96	258	P	Pn	21 30 52.0	+0.5
	baz=258						
LIOB				iS	Sn	21 31 06.7	+0.2
	baz=258						
HWA	Hwalien	0.96	205	eS	Sn	21 31 06.3	-0.2
	baz=206						
YOJ	Yonaguni jima	0.96	114	P	Pn	21 30 51.5	0.0
	baz=113						
YOJ				eS	Sn	21 31 06.3	-0.2
	baz=113						
YOJ	Yonaguni jima	0.96	114	P	Pn	21 30 51.5	0.0
YOJ				eS	Sn	21 31 06.0	-0.5
SBCB	Hsinchu	0.96	266	P	Pn	21 30 52.3	+0.8
	baz=267						
SBCB				S	Sn	21 31 07.2	+0.7
	baz=267						
NSTT	Nanjuang	0.97	257	P	Pn	21 30 52.1	+0.5
	baz=257						
NSTT				S	Sn	21 31 06.5	-0.2
	baz=257						
HSN	Hsinchu	0.98	267	eP	Pn	21 30 52.0	+0.4
	baz=269						
HSN				S	Sn	21 31 06.8	0.0
	baz=269						
WHF	Hehuan Shan	1.00	225	P	Pn	21 30 52.8	+0.4
	baz=226						
WHF				S	Sn	21 31 07.7	-0.4
	baz=226						
TDCB	Techi	1.00	234	P	Pn	21 30 53.1	+1.0
	baz=234						
TDCB				S	Sn	21 31 07.9	+0.3
	baz=234						
ENLB	Shoufeng	1.03	203	eP	Pn	21 30 53.4	+1.1
	baz=204						
ENLB				eS	Sn	21 31 07.6	-0.3
	baz=204						
CHGB	Renai	1.12	225	P	Pn	21 30 54.3	+0.7
	baz=226						
CHGB				S	Sn	21 31 09.8	-0.2
	baz=226						
WHP	Taichung City	1.15	240	P	Pn	21 30 54.7	+0.9
	baz=241						
WHP				S	Sn	21 31 10.7	+0.2
	baz=241						
ESL	Shilin	1.18	208	eP	Pn	21 30 53.2	-0.8
	baz=209						
ESL				eS	Sn	21 31 08.7	-2.1
	baz=209						
NMLH	Miaoli	1.18	255	P	Pn	21 30 54.7	+0.7
	baz=255						
NMLH				eS	Sn	21 31 11.2	+0.3
	baz=255						
OWD	Renai	1.20	222	P	Pn	21 30 54.9	+0.6
	baz=222						
OWD				eS	Sn	21 31 10.6	-0.9
	baz=222						
NSY	Sanyi	1.25	250	P	Pn	21 30 55.9	+1.1
	baz=250						
NSY				eS	Sn	21 31 13.0	+0.7
	baz=250						
TWQ1	Liyutan	1.26	247	P	Pn	21 30 55.7	+0.8
	baz=247						
TWQ1				eS	Sn	21 31 13.3	+0.7
	baz=247						
PTSB	Yuanli	1.28	252	eP	Pn	21 30 56.6	+1.4
	baz=252						
PTSB				S	Sn	21 31 13.6	+0.5
	baz=252						
DPDB	Guoxing	1.31	231	eP	Pn	21 30 56.3	+0.8
	baz=232						
DPDB				eS	Sn	21 31 14.8	+1.2
	baz=232						
EGFH	Guangfu	1.31	206	eP	Pn	21 30 55.1	-0.5
	baz=206						
EGFH				eS	Sn	21 31 11.6	-1.9
	baz=206						
VWDT	VWDT	1.37	217	P	Pn	21 30 56.8	+0.5
	baz=218						
VWDT				S	Sn	21 31 15.1	+0.2
	baz=218						
WDJ	Dajia District	1.37	249	P	Pn	21 30 57.4	+1.1
	baz=249						
WDJ				S	Sn	21 31 15.3	+0.4
	baz=249						
SMLT	Sun Moon Lake	1.42	227	P	Pn	21 30 57.8	+0.8
	baz=228						
SMLT				eS	Sn	21 31 17.2	+1.0
	baz=228						
TCU	Taichung	1.43	241	P	Pn	21 30 57.7	+0.7
	baz=241						
TCU				S	Sn	21 31 16.8	+0.6
	baz=241						
TYC	Yuchr	1.44	229	P	Pn	21 30 58.0	+0.9
	baz=229						
TYC				iS	Sn	21 31 17.1	+0.8
	baz=229						
SSLB	Suanglung	1.46	223	P	Pn	21 30 58.3	+0.9
	baz=224						
SSLB				eS	Sn	21 31 17.4	+0.6
	baz=224						
HGSD	Ruisui	1.47	203	P	Pn	21 30 58.1	+0.6
	baz=204						
HGSD				eS	Sn	21 31 17.2	+0.2
	baz=204						
EHY	Hungye	1.50	206	eP	Pn	21 30 58.6	+0.8
	baz=207						
EHY				eS	Sn	21 31 17.6	0.0
	baz=207						
WCHH	Zhanghua	1.56	241	eP	Pn	21 30 58.9	+0.3
	baz=241						
WCHH				eS	Sn	21 31 18.7	-0.3
	baz=241						
WNT	Mingjian	1.58	232	eP	Pn	21 30 59.7	+0.9
	baz=232						
WNT				S	Sn	21 31 19.9	+0.5
	baz=232						
WJS	Zhushan	1.58	230	P	Pn	21 30 59.7	+0.9
	baz=230						
WJS				S	Sn	21 31 19.8	+0.3
	baz=230						
WHYT	Xinyi Township	1.59	224	P	Pn	21 31 00.2	+1.2
	baz=224						
WHYT				S	Sn	21 31 20.5	+0.9
	baz=224						
YULB	Yu-li	1.61	205	eP	Pn	21 30 58.4	-0.8
	baz=206						
YULB				eS	Sn	21 31 20.6	+0.4
	baz=206						
IRIF	Iriomote-Funau	1.62	108	P	Pn	21 30 59.1	-0.2
IRIF				S	Sn	21 31 19.5	-0.8
TWF1	Yuli	1.65	205	eP	Pn	21 31 00.4	+0.8
	baz=205						
TWF1				eS	Sn	21 31 20.8	-0.2
	baz=205						

YUS Yu-Shan 1.69 216 P Pn 21 31 01.7 +1.1
baz=217
YUS eS Sn 21 31 23.6 +0.9
baz=217
ALS Alishan 1.75 220 P Pn 21 31 02.4 +1.1
baz=221
ALS eS Sn 21 31 25.4 +1.5
baz=221
CHN5 Tsauling 1.77 225 P Pn 21 31 02.1 +0.8
baz=225
CHN5 S Sn 21 31 24.7 +0.8
baz=225
WGK Gukeng 1.79 230 P Pn 21 31 02.4 +1.0
baz=230
WGK S Sn 21 31 25.1 +1.1
baz=230
FULB Fuli 1.79 203 eP Pn 21 31 01.8 +0.3
baz=203
FULB eS Sn 21 31 24.5 +0.4
baz=203
HATJ Hateruma jima 1.79 116 P Pn 21 31 02.1 +0.6
HATJ eS Sn 21 31 23.9 -0.3
WDLH Douliu 1.80 230 P Pn 21 31 02.3 +0.7
baz=230
WDLH eS Sn 21 31 25.2 +0.8
baz=230
RLNB Erlin 1.81 238 P Pn 21 31 02.0 +0.3
baz=238
RLNB eS Sn 21 31 24.8 +0.2
baz=238
CHKT Chengkung 1.86 200 eP Pn 21 31 02.4 +0.1
baz=200
CHKT eS Sn 21 31 23.3 -2.4
baz=200
WTCT Ta-ch'eng 1.89 239 eS Sn 21 31 26.3 -0.1
baz=239
JKRS Kuro-shima 1.89 109 P Pn 21 31 03.3 +0.6
JKRS S Sn 21 31 26.2 -0.3
ELDTW Lidau 1.91 210 eP Pn 21 31 03.4 +0.3
baz=210
ELDTW eS Sn 21 31 27.4 +0.4
baz=210
CHN2 Minshiung 1.95 228 eS Sn 21 31 29.6 +1.9
baz=228
JIJ Ishigaki jima 1.97 104 P Pn 21 31 03.9 +0.1
JIJ eS Sn 21 31 26.7 -1.6
CHN4 Tsaushan 2.00 222 eP Pn 21 31 05.5 +1.3
baz=222
CHN4 eS Sn 21 31 32.4 +3.3
baz=222
CHY Chiayi 2.00 228 eP Pn 21 31 04.8 +0.6
baz=228
CHY eS Sn 21 31 29.3 +0.2
baz=228
TPUB Ta-pu 2.02 220 P Pn 21 31 05.0 +0.6
baz=220
TPUB eS Sn 21 31 31.6 +2.2
baz=220
STYT Tauyuan 2.06 215 P Pn 21 31 06.1 +1.2
baz=215
STYT eS Sn 21 31 31.5 +1.1
baz=215
WSF Szhu 2.06 234 eS Sn 21 31 30.7 +0.4
baz=234
WTP Ta-pu 2.07 220 ⇑iP Pn 21 31 05.9 +0.8
baz=219
WTP eS Sn 21 31 33.5 +2.8
baz=219
JISG Ishigakijimahi 2.08 97 P Pn 21 31 05.4 +0.3
JISG S Sn 21 31 30.5 -0.3
WLGB Puzi 2.10 230 eP Pn 21 31 06.2 +0.7
baz=230
WLGB eS Sn 21 31 32.0 +0.6
baz=230
TWK Hsinying 2.13 222 P Pn 21 31 06.8 +0.9
baz=222
TWK eS Sn 21 31 32.4 +0.4
baz=222
SNST Tainan City 2.16 221 P Pn 21 31 07.1 +0.8
baz=221
SNST eS Sn 21 31 33.5 +0.8
baz=221
PTTC Pingtan 2.16 288 eP Pn 21 31 06.1 -0.1
baz=287
PTTC eS Sn 21 31 32.9 +0.3
baz=287
CHN1 Nanshi 2.17 220 P Pn 21 31 07.0 +0.6
baz=220
CHN1 S Sn 21 31 33.1 +0.2
baz=220
TWH Lutao 2.20 194 eP Pn 21 31 08.9 +2.1
baz=194
TWH eS Sn 21 31 31.6 -2.0
baz=194
TWG Pinlang 2.21 204 eP Pn 21 31 07.1 +0.2
baz=204
TWG eS Sn 21 31 32.2 -1.8
baz=204
TWGBT Beinan 2.21 204 eP Pn 21 31 06.7 -0.3
baz=204
TWGBT eS Sn 21 31 32.3 -1.6
baz=204
SGST Jiashian 2.21 217 eP Pn 21 31 07.1 +0.1
baz=217
SGST eS Sn 21 31 34.5 +0.4
baz=217
CHN8 Yiju 2.25 228 eP Pn 21 31 07.6 +0.2
baz=228
CHN8 eS Sn 21 31 35.6 +0.8
baz=228
SLGT Liugui 2.25 215 P Pn 21 31 08.9 +1.4
baz=215
SLGT eS Sn 21 31 36.3 +1.4
baz=215
MATB Ma-tsu 2.29 305 eP Pn 21 31 07.7 -0.2
baz=303
MATB eS Sn 21 31 36.3 +0.5
baz=303
VWUC VWUC 2.36 274 eP Pn 21 31 08.4 -0.4
baz=273
VWUC eS Sn 21 31 35.3 -2.0
baz=273
SCLT Jiali 2.38 226 eS Sn 21 31 39.0 +1.1
baz=225
JTJ Tarama 2.43 95 P Pn 21 31 10.6 +0.9
JTJ S Sn 21 31 39.3 +0.4
ECL Taimali 2.46 204 eP Pn 21 31 10.8 +0.7
baz=204
ECL eS Sn 21 31 37.6 -2.1
baz=204
SSD Sandimen 2.47 212 P Pn 21 31 11.6 +1.3
baz=212
SSD eS Sn 21 31 41.0 +1.0
baz=212
MASBT Mashibuluo 2.58 210 eP Pn 21 31 12.6 +0.8
baz=210
MASBT eS Sn 21 31 43.4 +0.8
baz=210
PNG Penghu 2.61 241 eP Pn 21 31 11.1 -1.0
baz=241
PNG eS Sn 21 31 41.3 -2.0
baz=241
PHUB P'eng-hu 2.62 240 eP Pn 21 31 11.4 -0.9
baz=239
PHUB eS Sn 21 31 42.4 -1.2
baz=239
XPSS Dashiqiu 2.66 321 eP Pn 21 31 12.4 -0.3
baz=320
PTMZ Houxiangcun 2.66 275 eP Pn 21 31 12.4 -0.4
baz=274
PTMZ eS Sn 21 31 42.4 -2.1
baz=274
LYJJ Jianjiangzhen 2.66 310 eP Pn 21 31 11.3 -1.6
baz=309
EAST Anshuo 2.69 204 P Pn 21 31 14.8 +1.5
baz=204
EAST eS Sn 21 31 45.6 +0.2
baz=204
WDGT Dungji 2.70 234 P Pn 21 31 13.1 -0.2
baz=234
WDGT eS Sn 21 31 43.9 -1.5
baz=234
WSSB Gushan 2.74 217 eP Pn 21 31 14.8 +0.9
baz=217
WSSB eS Sn 21 31 48.1 +1.5
baz=217
SCZT Fangliau 2.80 208 eP Pn 21 31 16.0 +1.3
baz=208
SCZT eS Sn 21 31 48.1 +0.3
baz=208
LAY Lan-yu 2.84 189 eP Pn 21 31 14.5 -0.8
baz=189
LAY eS Sn 21 31 46.3 -2.5
baz=189
JIRB Irabujima 2.84 90 eS Sn 21 31 49.1 +0.3
VCHM Qimei 2.90 236 eP Pn 21 31 15.6 -0.4
baz=236
VCHM eS Sn 21 31 48.5 -1.6
baz=236
JIKM Ikemajima 2.91 88 eS Sn 21 31 52.2 +1.8
JMJ2 Miyako jima3 2.99 92 P Pn 21 31 17.7 +0.6
JMJ2 eS Sn 21 31 53.2 +1.0
MHZQ Yeshan 2.99 295 eP Pn 21 31 17.7 +0.5
baz=294
JOGS Gusukube 3.06 91 P Pn 21 31 19.3 +1.2
JOGS eS Sn 21 31 54.7 +0.8
KNMB Chin-men Tao 3.35 264 eP Pn 21 31 21.6 -0.4
baz=263
KNMB eS Sn 21 31 58.5 -2.4
baz=263
AXDP Jialang 3.70 272 P Pn 21 31 26.6 -0.1
baz=270
AXDP eS Sn 21 32 06.6 -2.8
baz=270
ZPLA Ao Xicun 4.02 258 eP Pn 21 31 30.6 -0.4
baz=257
ZPLA eS Sn 21 32 16.4 -0.8
baz=257

IDC 16 21:47:09.3±2.4, 2.52N×95.82E, h0km, mb3.8/4, mb1 3.8/6, mb1mx3.5/35, mbtmp3.6/6, ML3.0/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/32, Error ellipse: s-maj=64.6km s-min=24.5km az=51.0
ISC 16 21:47:16.5±1.9, 2.9N±0.2×96.5E±0.2, h33km, n21, σ0.51/14, mb3.9/4, Northern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PSI Prapat 2.47 92 Pn Pb 21 47 60.0 -0.3
1.9nm,0.3s,baz=315,slow=11,SNR=5.9
LEM Lembang 14.73 131 LR LR 21 57 11.4
comp=Z,48nm,20.0s,baz=328,slow=40
CMAR Chiang Mai Arr 15.67 9 Pn P 21 50 59.3 +0.5
baz=197,slow=12,SNR=5.9
ODAN Odare 25.38 341 eP P 21 52 41.3 +0.1
6.5nm,0.6s
RAMN Ramite 25.73 339 eP P 21 52 44.3 -0.1
14nm,0.7s
TAPN Taplejung 25.73 342 eP P 21 52 44.4 -0.1
44nm,1.7s
H08S2 Diego Garcia H 26.09 246 T T 22 18 51.6
baz=68,slow=76,SNR=87
H08S3 Diego Garcia H 26.10 246 T T 22 18 54.0
baz=68,slow=76,SNR=115
H08S1 Diego Garcia H 26.11 246 T T 22 18 55.1
baz=68,slow=76,SNR=54
JIRN Jiri 26.52 339 eP P 21 52 51.2 -0.5
28nm,0.9s
PKI Pulchoki 26.73 338 eP P 21 52 54.0 +0.5
GUN Gumba 26.86 339 eP P 21 52 54.3 -0.4
12nm,0.8s
KKN Kakani 26.97 338 eP P 21 52 55.1 -0.5
DANN Dangsing 28.07 336 eP P 21 53 05.6 +0.1
5.9nm,0.5s
H01W3 Cape Leeuwin H 41.07 158 T T 22 38 23.3
baz=332,slow=76,SNR=70
H01W2 Cape Leeuwin H 41.08 158 T T 22 38 24.2
baz=332,slow=76,SNR=79
H01W1 Cape Leeuwin H 41.09 158 T T 22 38 24.4
baz=332,slow=76,SNR=66
WRA Warramunga Arr 43.56 123 P P 21 55 18.0 +0.3
0.4nm,0.8s,baz=302,slow=9.1,SNR=3.2
MKAR Makanchi Array 45.44 346 P P 21 55 31.8 -0.6
1.2nm,0.7s,baz=162,slow=8.0,SNR=15
SONM Songino Array 45.60 9 P P 21 55 34.4 +0.7
1.0nm,0.7s,baz=192,slow=8.5,SNR=9.9
ZALV Zalesovo Beam 51.79 351 P P 21 56 20.3 -0.7
0.7nm,0.4s,baz=180,slow=7.0,SNR=5.5

IDC 16 22:07:42.7±67.0, 18.52S×172.54W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.7/32, mbtmp4.2/3, Error ellipse: s-maj=1284.0km s-min=204.1km az=83.0, Tonga Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STKA Stephens Creek 43.27 243 P P 22 15 47.0 +0.7
0.7nm,0.4s,baz=101,slow=15,SNR=3.4
ASAR Alice Springs 50.00 254 P P 22 16 39.0 -0.2
5.1nm,0.6s,baz=97,slow=9.0,SNR=60
WRA Warramunga Arr 50.00 259 P P 22 16 38.7 -0.6
0.8nm,0.3s,baz=98,slow=6.8,SNR=15

UCR 16 22:11:00.1±1.7, 10.36N×84.43W, h110km±5km, MD3.7, 2D, Costa Rica

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FORC Fortuna 0.26 294 ⇓iP Pn 22 11 15.9 +0.2
CEDE Laguna Cedeo 0.30 295 eP Pn 22 11 16.3 +0.4
CEDE eS Sn 22 11 28.6 +0.8
ARE1 Arenal 1 0.30 289 eP Pn 22 11 16.1 +0.3
CASO Castillo 0.31 284 ⇓iP Pn 22 11 16.0 +0.1
HDC Heredia 0.47 139 eP Pn 22 11 16.9 0.0
JTS Las Juntas de 0.52 262 eP Pn 22 11 16.9 -0.2
JTS eS Sn 22 11 29.8 0.0
PTEN Parque Tenorio 0.65 303 iP Pn 22 11 18.3 +0.1
CVTR Volcan Turrial 0.74 117 eP Pn 22 11 18.9 -0.3
LCR2 La Lucha 2 0.74 146 eP Pn 22 11 18.8 -0.2
CUI Cuipilapa 0.78 292 iP Pn 22 11 19.5 +0.2
CUI iS Sn 22 11 33.7 +0.1
COLC Colonia 0.82 292 iP Pn 22 11 19.7 +0.1
COLC iS Sn 22 11 34.5 +0.3
MESS Mesas 0.84 297 iP Pn 22 11 20.2 +0.4
GPS3 Bodega del ICE 1.00 293 iP Pn 22 11 21.2 -0.1
GUAI GUAI 1.07 265 iP Pn 22 11 22.6 +0.7
NY14 Universidad de 1.12 285 iP Pn 22 11 23.6 +1.0
EDDO Dominical 1.23 153 eP Pn 22 11 24.7 +0.9
EDDO eS Sn 22 11 42.2 +0.5
EDLM Las Mercedes 1.35 142 eP Pn 22 11 26.0 +0.8
EDLM eS Sn 22 11 44.3 0.0
EDBA Buenos Aires 1.64 136 eP Pn 22 11 28.7 0.0
EDBA eS Sn 22 11 49.6 -0.8
EDPN Palmar Norte 1.69 145 eP Pn 22 11 30.6 +1.4
ACON Acoyapa 1.76 335 eP Pn 22 11 29.9 -0.1
ESPN Las Esperanzas 1.83 4 eP Pn 22 11 30.5 -0.4
BRU2 Volcan 2.31 132 eP Pn 22 11 37.5 +0.3

NNC 16 22:16:28.9±0.4, 43.04N×78.23E, h2km±2km, mb2.8, mpv3.0, Error ellipse: s-maj=4.9km s-min=1.5km az=176.0
KRNET 16 22:16:29.8±0.1, 43.05N×78.23E, h21km, mb2.7
SOME 16 22:16:30.0, 43.07N×78.22E, h10km
ISC 16 22:16:29.8±1.1, 43.05N±0.02×78.20E±0.01, h2km±10km, n52, σ1.04/101, 11C-5D, Lake Issyk-Kul region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SATY Saty 0.15 87 eP Pg 22 16 33.1 +0.4
191nm,0.1s
SATY eS Sg 22 16 35.6 +0.9
397nm,0.1s
SATY Saty 0.15 87 P Pg 22 16 33.1 +0.4
191nm,0.1s
SATY S Sg 22 16 35.6 +0.9
397nm,0.1s
ZHN Zhinishke 0.20 55 eP Pg 22 16 34.0 +0.2
baz=51
ZHN eS Sg 22 16 36.9 +0.4
baz=51
ZHN Zhinishke 0.20 55 eP Pg 22 16 34.0 +0.2
27nm,0.0s
ZHN eS Sg 22 16 36.9 +0.4
138nm,0.1s
ZHN Zhinishke 0.20 55 P Pg 22 16 34.0 +0.2
27nm,0.0s
ZHN S Sg 22 16 36.8 +0.4
138nm,0.1s
KURS Kuram 0.44 357 eP Pg 22 16 38.5 +0.3
baz=54
KURS eS Sg 22 16 44.8 +0.9
baz=54
KURS Kuram 0.44 357 eP Pg 22 16 38.5 +0.3
11nm,0.1s
KURS eS Sg 22 16 44.8 +0.9
7.2nm,0.2s
KURS Kuram 0.44 357 P Pg 22 16 38.5 +0.3
11nm,0.1s
KURS S Sg 22 16 44.8 +0.9
7.2nm,0.2s
ANVS Anan'yevo 0.48 236 ⇑iP Pg 22 16 39.3 +0.4
baz=38
ANVS ⇑iS Sg 22 16 46.4 +1.3
baz=38
KPKS Kokpek 0.54 40 eP Pg 22 16 40.0 -0.2
baz=39
KPKS eS Sg 22 16 47.4 +0.1
baz=39
KPKS Kokpek 0.54 40 eP Pg 22 16 40.0 -0.2
15nm,0.1s
KPKS eS Sg 22 16 47.3 +0.1
42nm,0.2s
PRZ Przheval'sk 0.59 166 ⇓iP Pb 22 16 41.6 -1.3
baz=66
PRZ ⇓iS Sg 22 16 49.2 +0.6
baz=66
UZB Uzynbulak 0.61 81 eP Pg 22 16 40.9 -0.5
11nm,0.1s
UZB eS Sg 22 16 48.9 -0.4
22nm,0.1s
UZB Uzynbulak 0.61 81 P Pg 22 16 40.9 -0.5
11nm,0.1s
UZB S Sg 22 16 48.9 -0.4
22nm,0.1s
KOTS Kotyrbulak 0.82 283 eP Pg 22 16 45.9 +0.4
baz=83
KOTS eS Sb 22 16 57.5 -0.9
baz=83
KOTS Kotyrbulak 0.82 283 eP Pg 22 16 45.9 +0.4
12nm,0.2s
KOTS eS Sb 22 16 57.5 -0.9
7.5nm,0.1s
KOTS Kotyrbulak 0.82 283 P Pg 22 16 45.9 +0.4
12nm,0.2s
KOTS S Sb 22 16 57.5 -0.9
7.5nm,0.1s
MDOK Medeo 0.85 278 eP Pg 22 16 46.2 0.0
2.2nm,0.1s
MDOK eS Sg 22 16 57.7 +0.5
4.8nm,0.2s
MDOK Medeo 0.85 278 ⇑P Pg 22 16 46.1 -0.1
MDOK ⇑S Sg 22 16 57.6 +0.5
MDOK Medeo 0.85 278 Pg Pg 22 16 46.2 0.0
2.2nm,0.1s
MDOK Lg Lg 22 16 57.7
4.8nm,0.2s
TNSS Tian-Shan 0.92 269 eP Pg 22 16 47.7 +0.2
baz=70
TNSS eS Sg 22 17 00.5 +1.1
baz=70
TNSS Tian-Shan 0.92 269 eP Pg 22 16 47.7 +0.2
5.5nm,0.2s
TNSS eS Sg 22 17 00.4 +1.1
5.4nm,0.3s
TNSS Tian-Shan 0.92 269 P Pg 22 16 47.7 +0.2
5.5nm,0.2s
TNSS S Sg 22 17 00.4 +1.1
5.4nm,0.3s
SHLS Shalkode 0.93 83 eP Pn 22 16 52.0 +2.1
3.7nm,0.2s
SHLS eS Sn 22 17 08.0 +4.1
5.6nm,0.3s
SHLS Shalkode 0.93 83 P Pn 22 16 52.1 +2.1
3.7nm,0.2s
SHLS S Sn 22 17 08.0 +4.1
5.6nm,0.3s
PDGK Podgornoye 0.98 73 P Pg 22 16 47.4 -1.1
1.4nm,0.2s
PDGK S Sg 22 17 00.2 -1.1
2.5nm,0.2s
PDGK Podgornoye 0.98 73 ⇓P Pg 22 16 47.2 -1.3
0.5nm,0.3s
PDGK ⇑S Sg 22 16 59.9 -1.4
1.3nm,0.3s
ARXS Arharly 1.19 347 eP Pb 22 16 52.0 -1.2
1.7nm,0.2s
ARXS eS Sb 22 17 07.9 -1.2
11nm,0.1s
ARXS Arharly 1.19 347 P Pb 22 16 52.0 -1.2
1.7nm,0.2s
ARXS S Sb 22 17 07.9 -1.2
11nm,0.1s
KDJ Kajisay 1.19 220 ⇑iP Pb 22 16 52.1 -1.1
baz=20
KDJ ⇑iS Sb 22 17 08.1 -1.0
baz=20
CHKK Chushkaly 1.20 313 eP Pb 22 16 52.6 -0.9
1.0nm,0.1s
CHKK eS Sg 22 17 08.7 +0.6
13nm,0.2s
CHKK Chushkaly 1.20 313 P Pn 22 16 52.6 -0.9
1.0nm,0.1s
CHKK S Sg 22 17 08.7 +0.6
13nm,0.2s
KTBS Karatobe 1.29 301 eP Pn 22 16 54.2 -0.6
2.2nm,0.2s
KTBS eS Sn 22 17 11.7 -1.1
6.6nm,0.2s
KTBS Karatobe 1.29 301 P Pn 22 16 54.2 -0.6
2.2nm,0.2s
KTBS S Sn 22 17 11.7 -1.1
6.6nm,0.2s
KUU Kurty 1.60 302 eP Pb 22 16 59.4 -0.6
2.4nm,0.2s
KUU eS Sb 22 17 20.4 -0.3
4.5nm,0.2s
KUU Kurty 1.60 302 P Pb 22 16 59.4 -0.6
2.4nm,0.2s
KUU S Sb 22 17 20.4 -0.3
4.5nm,0.2s
KTMS Ketmen 1.62 75 eP Pb 22 16 59.1 -1.4
baz=74
KTMS eS Sb 22 17 20.0 -1.4
baz=74
KTMS Ketmen 1.62 75 eP Pb 22 16 59.1 -1.4
0.7nm,0.1s
KTMS eS Sb 22 17 20.0 -1.4
3.0nm,0.1s
KTMS Ketmen 1.62 75 P Pb 22 16 59.1 -1.4
0.7nm,0.1s
KTMS S Sb 22 17 20.0 -1.4
3.0nm,0.1s
KST Kastek 1.64 270 eP Pb 22 17 00.6 -0.3
1.7nm,0.2s
KST eS Sg 22 17 22.6 0.0
3.8nm,0.5s
KST Kastek 1.64 270 P Pb 22 17 00.6 -0.3
1.7nm,0.2s
KST S Sg 22 17 22.6 0.0
3.8nm,0.5s
ULHL Ulahol 1.66 242 ⇓iP Pn 22 16 59.5 -0.6
baz=42
ULHL ⇓iS Sn 22 17 21.5 -1.1
baz=42
DJR Jarkent 1.72 41 eP Pb 22 17 01.2 -1.0
0.4nm,0.1s
DJR eS Sb 22 17 23.6 -0.7
4.3nm,0.3s
DJR Jarkent 1.72 41 P Pb 22 17 01.2 -1.0
0.4nm,0.1s
DJR S Sb 22 17 23.6 -0.7
4.3nm,0.3s
BOOM Boomskoye usch 1.76 252 ⇑iP Pn 22 17 01.6 +0.2
baz=53
BOOM ⇑iS Sb 22 17 24.5 -1.0
baz=53
DGS Degeres 1.79 277 eP Pb 22 17 02.8 -0.6
1.3nm,0.1s
DGS eS Sb 22 17 26.2 -0.1
3.8nm,0.3s
DGS Degeres 1.79 277 P Pb 22 17 02.8 -0.6
1.3nm,0.1s
DGS S Sb 22 17 26.2 -0.1
3.8nm,0.3s
KRBS Karabastau 1.95 290 eP Pb 22 17 05.7 -0.4
1.6nm,0.2s
KRBS eS Sb 22 17 31.3 +0.4
2.1nm,0.2s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRBS	Karabastau 1.6nm,0.2s	1.95	290	Pg	Pb	22 17 05.7	-0.4
KRBS	2.1nm,0.2s			Lg	Lg	22 17 31.3	
NRN	Naryn baz=27	2.30	226	⇑iP	Pn	22 17 09.9	+0.9
NRN	baz=27			⇑iS	Sb	22 17 39.0	-2.2
KAPS	Kapalarasan 0.7nm,0.4s	2.38	20	eP	Pb	22 17 13.1	-0.3
KAPS	3.4nm,0.2s			eS	Sb	22 17 44.0	+0.8
KAPS	Kapalarasan 0.7nm,0.4s	2.38	20	Pg	Pb	22 17 13.1	-0.3
KAPS	3.4nm,0.2s			Lg	Lg	22 17 44.0	

IDC 16 22:21:47.5±1.1, 20°.07N×120°.45E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/37, mbtmp3.5/6, MS3.4/3, Ms1 3.4/3, ms1mx2.7/35, Error ellipse: s-maj=44.6km s-min=21.9km az=65.0
ISC 16 22:21:51.7±1.1, 20°.1N±0°.2×120°.4E±0°.2, h28km, n8, σ0s.94/6, mb3.6/5, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr 0.3nm,0.3s,baz=76,slow=12,SNR=3.6	20.34	269	P	P	22 26 26.8	+0.7
CMAR	comp=Z,18nm,19.0s,baz=90,slow=36			LR	LR	22 33 56.6	
SONM	Songino Array 0.9nm,0.9s,baz=160,slow=8.4,SNR=6.9	29.95	341	P	P	22 27 57.0	-0.6
TLY	Talaya comp=Z,305nm,21.1s,baz=118,slow=37	34.18	341	LR	LR	22 42 44.1	
MKAR	Makanchi Array 0.5nm,0.8s,baz=107,slow=8.7,SNR=4.4	40.90	320	P	P	22 29 31.0	-0.5
WRA	Warramunga Arr 0.8nm,0.9s,baz=344,slow=9.5,SNR=4.7	42.03	160	P	P	22 29 40.8	-0.2
ASAR	Alice Springs 0.3nm,0.3s,baz=343,slow=7.7,SNR=4.7	45.41	163	P	P	22 30 07.6	-0.5
NOA	NORSAR Array B comp=Z,16nm,18.7s,baz=215,slow=38	81.52	332	LR	LR	23 13 40.4	
YKA	Yellowknife Ar 0.4nm,0.8s,baz=317,slow=5.2,SNR=5.3	87.02	22	P	P	22 34 35.4	+1.1

TIR 16 22:25:17.6, 41°.93N×20°.29E, h7km, Md2.6/4
BEO 16 22:25:20.6±0.3, 41°.97N×20°.37E, h2km±3km, ML1.6/11
ISC 16 22:25:18.6±1.2, 41°.94N±0°.03×20°.33E±0°.03, h1km±11km, n14, σ0s.70/28, Albania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PHP	Peshkopia	0.27	161	iPG	Pg	22 25 23.5	-0.3
PHP				iSG	Sg	22 25 27.6	+0.4
PUK	Puka	0.34	288	iPG	Pg	22 25 24.3	-0.8
PUK				iSG	Sg	22 25 29.2	-0.4
BCI	Bajram Curri	0.47	336	iPG	Pg	22 25 27.2	-0.5
BCI				iSG	Sg	22 25 34.3	+0.5
TIR	Tirane	0.68	210	ePg	Pb	22 25 33.3	0.0
TIR				eSg	Sb	22 25 44.6	+1.3
TIR	Tirane	0.68	210	iPG	Pg	22 25 30.9	-0.9
TIR				iSG	Sg	22 25 41.0	+0.4
SKO	Skopje	0.83	87	ePg	Pg	22 25 34.5	-0.1
SKO				eSg	Sg	22 25 46.0	+0.6
PDG	Podgorica	0.94	302	ePg	Pb	22 25 37.6	0.0
PDG				eSg	Sb	22 25 50.0	-0.5
SJES	Sjenica	1.35	349	ePg	Pn	22 25 44.0	-0.7
SJES				eSg	Sn	22 26 02.8	-0.5
SELS	Selova	1.41	24	ePg	Pn	22 25 45.1	-0.4
SELS				eSg	Sb	22 26 04.0	-0.2
BARS	Barje	1.41	51	ePg	Pn	22 25 45.0	-0.5
BARS				eSg	Sn	22 26 04.7	0.0
IVAS	Ivanjica	1.64	356	ePg	Pn	22 25 48.9	+0.2
IVAS				eSg	Sg	22 26 12.1	+0.7
TREB	Trebinje	1.66	299	ePg	Pg	22 25 51.1	+0.7
TREB				eSg	Sg	22 26 13.7	+1.8
BOVS	Bovan	1.98	30	ePg	Pb	22 25 55.9	+0.5
BOVS				eSn	Sn	22 26 18.7	+0.1
ZAPS	Zavoj	2.16	51	ePn	Pb	22 25 57.8	-0.8
ZAPS				eSn	Sn	22 26 24.1	+0.8

JMA 16 22:28:53.1±0.1, 23°.63N×120°.50E, h0km, M3.6
IASPEI 16 22:28:54.8±0.8, 23°.63N±0°.01×120°.52E±0°.02, h14km±4km, Error ellipse: s-maj=2.3km s-min=1.6km az=113.0, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009
TAP 16 22:28:54.4, 23°.62N×120°.55E, h11km, ML3.8, B
ASIES 16 22:28:54.4, 23°.60N×120°.52E, h19km, MW3.2
ISC 16 22:28:55.0±0.7, 23°.63N±0°.01×120°.52E±0°.01, h16km±4km, n142, σ0s.87/237, 31C-17D, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WDLH	Douliu baz=352	0.06	15	⇑P	Pg	22 28 57.5	-0.5
WDLH	baz=352			S	Sg	22 28 59.8	-0.2
WGK	Gukeng baz=20	0.07	34	⇑iP	Pg	22 28 57.5	-0.6
WGK	baz=20			iS	Sg	22 28 60.0	-0.1
CHN2	Minshiung baz=217	0.11	204	⇑iP	Pg	22 28 58.2	-0.2
CHN2	baz=217			iS	Sg	22 29 01.1	+0.5
CHN5	Tsauling baz=102	0.15	103	⇑iP	Pg	22 28 58.2	-0.8
CHN5	baz=102			S	Sg	22 29 00.8	-0.9
CHY	Chiayi baz=220	0.16	214	⇑iP	Pb	22 28 59.1	-0.5
CHY	baz=220			S	Sg	22 29 02.4	+0.6
WLGB	Puzi baz=238	0.25	233	⇑iP	Pb	22 29 00.9	-0.3
WLGB	baz=238			iS	Sg	22 29 06.1	+1.8
WJS	Zhushan baz=40	0.27	45	⇑iP	Pb	22 29 00.9	-0.6
WJS	baz=40			eS	Sb	22 29 05.2	-0.6
WSF	Szhu baz=273	0.28	272	P	Pb	22 29 01.1	-0.4
WSF	baz=273			iS	Sb	22 29 06.3	+0.4
CHN4	Tsaushan baz=171	0.28	167	⇓iP	Pb	22 29 01.0	-0.7
CHN4	baz=171			S	Sb	22 29 05.7	-0.6
ALS	Alishan baz=115	0.29	114	⇓P	Pb	22 29 01.1	-0.8
ALS	baz=115			S	Sb	22 29 05.8	-0.8
WNT	Mingjian baz=28	0.29	31	⇑iP	Pb	22 29 01.4	-0.4
WNT	baz=28			eS	Sb	22 29 06.5	+0.1
RLNB	Erlin baz=319	0.30	330	⇓P	Pb	22 29 01.7	-0.3
RLNB	baz=319			S	Sb	22 29 07.2	+0.5
WHYT	Xinyi Township baz=75	0.31	78	⇑iP	Pg	22 29 01.3	-0.2
WHYT	baz=75			S	Sb	22 29 06.2	-0.9
WTCT	Ta-ch'eng baz=307	0.32	317	⇓iP	Pb	22 29 01.9	-0.4
WTCT	baz=307			S	Sb	22 29 07.8	+0.5
WMLT	Mailiao baz=301	0.32	302	P	Pb	22 29 02.0	-0.4
WMLT	baz=301			iS	Sb	22 29 08.0	+0.6
TPUB	Ta-pu baz=167	0.34	163	⇓P	Pb	22 29 01.9	-0.8
TPUB	baz=167			S	Sb	22 29 07.3	-0.6
TWK	Hsinying baz=187	0.36	185	⇑iP	Pb	22 29 02.7	-0.4
TWK	baz=187			S	Sb	22 29 08.4	-0.1
WTP	Ta-pu baz=170	0.39	167	⇓iP	Pb	22 29 02.9	-0.7
WTP	baz=170			eS	Sb	22 29 09.0	-0.4
CHN8	Yiju baz=228	0.40	225	⇑P	Pb	22 29 03.4	-0.4
CHN8	baz=228			S	Sb	22 29 10.7	+1.1
SNST	Tainan City baz=187	0.41	183	⇑iP	Pb	22 29 03.4	-0.4
SNST	baz=187			S	Sb	22 29 09.8	-0.1
TYC	Yuchr baz=46	0.41	48	⇑iP	Pb	22 29 03.5	-0.3
TYC	baz=46			S	Sb	22 29 09.8	-0.2
YUS	Yu-Shan baz=109	0.42	109	⇓P	Pb	22 29 03.6	-0.7
YUS	baz=109			S	Sb	22 29 09.8	-0.8
SSLB	Suanglung baz=66	0.43	68	⇑P	Pg	22 29 03.3	-0.3
SSLB	baz=66			S	Sg	22 29 09.5	0.0
SMLT	Sun Moon Lake baz=52	0.43	54	⇑iP	Pb	22 29 03.8	-0.4
SMLT	baz=52			S	Sb	22 29 10.3	-0.3
CHN1	Nanshi baz=183	0.44	179	⇓iP	Pb	22 29 04.0	-0.5
CHN1	baz=183			S	Sb	22 29 10.8	0.0
WCHH	Zhanghua baz=1.0	0.45	4	⇓P	Pb	22 29 04.6	0.0
WCHH	baz=1.0			S	Sb	22 29 11.7	+0.7
STYT	Tauyuan baz=157	0.51	155	⇓iP	Pb	22 29 05.0	-0.6
STYT	baz=157			S	Sb	22 29 12.7	-0.2
TCU	Taichung baz=13	0.54	15	eP	Pb	22 29 05.9	-0.1
TCU	baz=13			eS	Sb	22 29 13.4	-0.1
SCLT	Jiali baz=230	0.54	214	P	Pb	22 29 06.0	-0.1
SCLT	baz=230			S	Sn	22 29 15.4	-1.4
DPDB	Guoxing baz=40	0.55	43	⇑iP	Pb	22 29 05.8	-0.5
DPDB	baz=40			S	Sb	22 29 13.8	-0.1
SGST	Jiashian baz=176	0.55	174	⇓eP	Pg	22 29 05.0	-0.9
SGST	baz=176			eS	Sb	22 29 13.8	0.0
CHN3	Shinhua baz=197	0.57	195	eP	Pb	22 29 06.7	+0.1
CHN3	baz=197			eS	Sn	22 29 16.3	-1.2
VWDT	VWDT baz=76	0.58	78	⇑P	Pb	22 29 06.5	-0.2
VWDT	baz=76			eS	Sb	22 29 14.3	-0.5
ELDTW	Lidau baz=135	0.63	134	⇓P	Pb	22 29 07.1	-0.6
ELDTW	baz=135			eS	Sb	22 29 16.1	-0.3
SLGT	Liugui baz=162	0.64	170	eP	Pb	22 29 07.5	-0.4
SLGT	baz=162			eS	Sb	22 29 17.4	+0.8
TAI1	Yung-k'ang baz=206	0.65	205	P	Pb	22 29 08.4	+0.5
TAI1	baz=206			S	Sn	22 29 19.5	+0.2
OWD	Renai baz=60	0.68	62	⇑P	Pb	22 29 08.2	-0.4
OWD	baz=60			S	Sg	22 29 17.2	-0.3
WDJ	Dajia District baz=7.0	0.72	9	eP	Pb	22 29 09.7	+0.5
WDJ	baz=7.0			eS	Sb	22 29 20.4	+1.4
CHGB	Renai baz=53	0.73	54	⇑P	Pg	22 29 09.0	-0.4
CHGB	baz=53			S	Sb	22 29 19.2	-0.3
EHY	Hungye baz=87	0.74	99	P	Pb	22 29 09.4	-0.2
EHY	baz=87			iS	Sb	22 29 19.5	-0.1
YULB	Yu-li baz=108	0.75	108	P	Pg	22 29 09.1	-0.5
YULB	baz=108			S	Sg	22 29 19.1	-0.5
TWQ1	Liyutan baz=16	0.75	18	⇑P	Pb	22 29 10.0	+0.3
TWQ1	baz=16			S	Sb	22 29 21.0	+1.2
WHP	Taichung City baz=29	0.75	31	⇑iP	Pb	22 29 09.7	-0.1
WHP	baz=29			eS	Sb	22 29 20.6	+0.8
TWF1	Yuli baz=111	0.76	111	⇓iP	Pb	22 29 09.6	-0.3
TWF1	baz=111			iS	Sb	22 29 19.7	-0.4
TWM1	Shoushan baz=188	0.81	186	eP	Pn	22 29 11.7	0.0
TWM1	baz=188			eS	Sn	22 29 26.0	+2.5
NSY	Sanyi baz=14	0.81	16	P	Pb	22 29 11.2	+0.5
NSY	baz=14			S	Sn	22 29 23.3	-0.3
FULB	Fuli baz=122	0.83	121	⇓iP	Pn	22 29 11.4	-0.6
FULB	baz=122			eS	Sb	22 29 22.3	+0.4
PTSB	Yuanli baz=10.0	0.83	12	eP	Pb	22 29 11.2	+0.1
PTSB	baz=10.0			eS	Sn	22 29 23.6	-0.4
EGFH	Guangfu baz=86	0.83	87	eP	Pb	22 29 10.8	-0.2
EGFH	baz=86			eS	Sg	22 29 21.5	-0.6
HGSD	Ruisui baz=90	0.84	99	P	Pb	22 29 11.4	+0.3
HGSD	baz=90			S	Sb	22 29 23.0	+0.7
TDCB	Techi baz=42	0.85	43	⇑P	Pg	22 29 10.9	-0.7
TDCB	baz=42			S	Sg	22 29 22.1	-0.8
WHF	Hehuan Shan baz=52	0.85	53	⇑P	Pb	22 29 11.4	-0.3
WHF	baz=52			S	Sb	22 29 23.0	-0.1
ESL	Shilin baz=77	0.85	77	⇑P	Pb	22 29 11.3	-0.2
ESL	baz=77			eS	Sg	22 29 22.2	-0.7
WDGT	Dungji baz=246	0.87	245	P	Pg	22 29 10.9	-1.0
WDGT	baz=246			eS	Sb	22 29 23.1	-0.1
PHUB	P'eng-hu baz=263	0.88	263	eP	Pg	22 29 10.8	-1.3
PHUB	baz=263			S	Sg	22 29 22.5	-1.1
SSD	Sandimen baz=175	0.89	173	P	Pb	22 29 11.9	-0.1
SSD	baz=175			S	Sn	22 29 25.0	-0.3
PNG	Penghu baz=267	0.89	266	⇑eP	Pg	22 29 11.1	-1.2
PNG	baz=267			eS	Sg	22 29 23.1	-0.8
SNJT	Kaohsiung City baz=194	0.89	191	eP	Pn	22 29 12.6	-0.2
SNJT	baz=194			eS	Sn	22 29 27.4	+2.0
SGLT	Jiouru baz=184	0.90	182	eP	Pn	22 29 13.0	0.0
SGLT	baz=184			eS	Sn	22 29 28.4	+2.7
NMLH	Miaoli baz=13	0.94	15	eP	Pb	22 29 13.1	+0.2
NMLH	baz=13			eS	Sn	22 29 26.7	+0.1
CHKT	Chengkung baz=124	0.94	124	P	Pn	22 29 13.4	-0.1
CHKT	baz=124			eS	Sn	22 29 27.2	+0.6
TWG	Pinlang baz=149	0.95	148	⇓iP	Pb	22 29 13.1	0.0
TWG	baz=149			S	Sb	22 29 26.0	+0.5
TWGBT	Beinan baz=149	0.96	147	⇓P	Pb	22 29 13.1	-0.2
TWGBT	baz=149			S	Sb	22 29 26.0	+0.3
WSSB	Gushan baz=212	1.01	194	eP	Pn	22 29 14.6	0.0
WSSB	baz=212			S	Sn	22 29 30.2	+1.8
MASBT	Mashibuluo baz=176	1.02	174	eP	Pb	22 29 14.0	-0.3
MASBT	baz=176			eS	Sn	22 29 28.2	-0.4
ENLB	Shoufeng baz=73	1.03	74	eP	Pg	22 29 13.6	-1.3
ENLB	baz=73			eS	Sb	22 29 27.8	+0.2
TTN	Taitung baz=148	1.04	146	eP	Pn	22 29 15.0	0.0
ETLH	Xiulin Townshi baz=56	1.05	57	eP	Pg	22 29 14.3	-1.0
ETLH	baz=56			eS	Sg	22 29 28.5	-0.6
HWA	Hwalien baz=70	1.05	71	eP	Pn	22 29 15.0	-0.1
HWA	baz=70			S	Sn	22 29 29.2	-0.2
TWD	Chiawan baz=64	1.08	65	P	Pb	22 29 15.1	-0.2
TWD	baz=64			S	Sb	22 29 29.0	-0.2
VCHM	Qimei baz=248	1.09	248	eP	Pb	22 29 14.4	-1.0
VCHM	baz=248			eS	Sb	22 29 29.1	-0.3
NSTT	Nanjuang baz=23	1.09	24	P	Pb	22 29 15.2	-0.3
NSTT	baz=23			S	Sb	22 29 29.7	+0.2
ECL	Taimali baz=149	1.10	159	⇓P	Pn	22 29 15.7	-0.1
ECL	baz=149			eS	Sn	22 29 30.5	-0.2
LIOB	Emei baz=23	1.11	24	⇑iP	Pb	22 29 15.6	-0.2
LIOB	baz=23			eS	Sg	22 29 30.6	-0.3
NNSB	Datong baz=43	1.12	45	⇑P	Pb	22 29 15.3	-0.7
NNSB	baz=43			S	Sb	22 29 30.7	+0.2
NNSH	Datong baz=32	1.12	45	⇑eP	Pb	22 29 15.3	-0.7
NNSH	baz=32			eS	Sb	22 29 30.3	-0.2
NNS	Nan Shan baz=43	1.12	44	eP	Pb	22 29 15.5	-0.6
NNS	baz=43			eS	Sb	22 29 30.5	0.0
NACB	Ninganchiao baz=60	1.12	61	⇑P	Pb	22 29 15.2	-0.8
NACB	baz=60			S	Sb	22 29 30.4	0.0
SSPT	Xinbi baz=180	1.14	178	eP	Pg	22 29 16.6	-0.5
SSPT	baz=180			eS	Sn	22 29 34.2	+2.5
SBCB	Hsinchu baz=18	1.23	20	eP	Pn	22 29 17.0	-0.5
SBCB	baz=18			eS	Sn	22 29 34.9	+1.0
HSN	Hsinchu baz=20	1.24	19	eP	Pn	22 29 17.4	-0.2
SCZT	Fangliau baz=167	1.25	176	eP	Pn	22 29 17.8	-0.1
SCZT	baz=167			eS	Sg	22 29 35.0	-0.5
TWH	Lutao baz=137	1.27	136	P	Pg	22 29 18.6	-0.9
TWH	baz=137			eS	Sg	22 29 35.6	-0.4
EAST	Anshuo baz=175	1.28	166	eP	Pg	22 29 18.5	-0.2
EAST	baz=175			eS	Sg	22 29 36.2	-0.1
WLCH	Liuqiu baz=207	1.28	186	eP	Pb	22 29 18.2	-0.4
TWP	Hsiaoliuchiu baz=208	1.29	187	eP	Pn	22 29 18.1	-0.2
NSK	Sanguang baz=19	1.29	36	⇑P	Pn	22 29 18.4	0.0
NSK	baz=19			eS	Sb	22 29 35.1	-0.3
YHNB	Yeheng baz=19	1.30	37	⇑P	Pn	22 29 18.6	0.0
YHNB	baz=19			eS	Sb	22 29 34.5	-1.0
TAW	Tawu baz=172	1.31	165	eP	Pg	22 29 19.5	-0.8
NDT	Datong Townshi baz=32	1.33	43	eP	Pn	22 29 19.1	+0.2
NDT	baz=32			eS	Sn	22 29 36.8	+0.6
ENA	Nanau baz=53	1.37	54	eP	Pn	22 29 19.7	+0.3
ENA	baz=53			eS	Sg	22 29 38.3	-0.9
ENTT	Nioudou baz=33	1.39	43	eP	Pn	22 29 20.1	+0.4
ENTT	baz=33			eS	Sb	22 29 38.7	+0.7
WLTB	Daxi baz=27	1.39	29	eP	Pb	22 29 20.5	-0.1
WLTB	baz=27			eS	Sg	22 29 39.1	-0.7
NWLT	Wulai baz=38	1.45	38	eP	Pn	22 29 21.0	+0.4
NCUH	Zhongli baz=7.0	1.46	24	eP	Pn	22 29 21.1	+0.4
NCU	National Centr baz=24	1.47	24	eP	Pn	22 29 21.1	+0.3
TWE	Neicheng baz=44	1.51	44	eP	Pb	22 29 22.6	0.0
SLBB	Yuanshan baz=42	1.51	42	eP	Pb	22 29 22.4	-0.3
TWC	Suao baz=51	1.56	51	eP	Pn	22 29 22.9	-0.5
TATO	Taipei baz=33	1.60	33	eP	Pb	22 29 23.6	-0.6
NHDH	Xindian Distri baz=18	1.61	34	eP	Pb	22 29 23.6	-0.8
HEN	Hengchun baz=191	1.63	173	eP	Pn	22 29 23.4	+0.3
TWA	Mucha baz=19	1.66	36	eP	Pb	22 29 24.4	-0.8
VWUC	VWUC baz=322	1.67	324	eP	Pn	22 29 22.6	-1.0
TWS1	Kuangyinshan baz=13	1.68	29	eP	Pb	22 29 25.4	-0.1
TWK1	Hengchun baz=173	1.70	171	eP	Pn	22 29 24.0	0.0
TWKBT	Hengchun baz=173	1.70	171	eP	Pn	22 29 23.6	-0.5
NTC	Toucheng baz=28	1.71	44	eP	Pn	22 29 25.6	-0.4
EOS1	EOS1 baz=58	1.73	58	eP	Pb	22 29 26.7	+0.3
YM04	YM04 baz=14	1.78	31	eP	Pn	22 29 25.0	-0.1
YM01	YM01 baz=14	1.79	32	eP	Pb	22 29 26.9	-0.5
TIPB	Shuangxi baz=25	1.79	41	eP	Pn	22 29 25.9	+0.7
YM10	YM10 baz=15	1.79	32	eP	Pn	22 29 25.1	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANP	Anpu	1.80	30	eP	Pb	22 29 27.1	-0.5
	baz=14						
YM11	YM11	1.81	32	eP	Pb	22 29 27.3	-0.4
	baz=14						
YM08	YM08	1.83	32	eP	Pb	22 29 27.5	-0.7
	baz=15						
NWF	Wu-fen Shan	1.84	38	eP	Pb	22 29 28.0	-0.3
	baz=19						
WFSB	Wu-fen Shan	1.84	38	eP	Pb	22 29 28.0	-0.3
	baz=19						
LAY	Lan-yu	1.85	149	eP	Pn	22 29 25.5	-0.5
	baz=150						
PTMZ	Houxiangcun	1.90	318	eP	Pn	22 29 26.1	-0.7
	baz=316						
TWY	Chenhua	1.91	31	eP	Pb	22 29 28.7	-0.8
	baz=16						
TWB1	Santiao Chiao	1.92	44	eP	Pn	22 29 27.4	+0.5
	baz=26						
PTTC	Pingtan	1.98	340	eP	Pn	22 29 26.8	-1.1
	baz=338						
KNM	Kinmen	2.06	293	eP	Pb	22 29 32.4	+0.4
	baz=289						
KNMB	Chin-men Tao	2.12	293	eP	Pn	22 29 30.0	+0.2
	baz=292						
JYNG	Yonagunijimaku	2.36	69	P	Pn	22 29 34.8	+1.7
JYNG				S	Sb	22 30 04.8	-1.3
YOJ	Yonaguni jima	2.42	70	eP	Pn	22 29 34.5	+0.5
	baz=69						
YOJ	Yonaguni jima	2.42	70	P	Pb	22 29 36.2	-2.0
YOJ				S	Sb	22 30 06.4	-1.4
ZPLA	Ao Xicun	2.56	277	eP	Pn	22 29 35.1	-0.6
	baz=275						
MATB	Ma-tsu	2.56	348	eP	Pn	22 29 34.8	-1.1
	baz=347						
AXDP	Jialang	2.65	299	eP	Pn	22 29 36.2	-0.9
	baz=296						
ZZJH	Jiuhuzhen	2.77	288	eP	Pn	22 29 40.5	+1.8
	baz=286						
MHZQ	Yeshan	2.81	331	eP	Pn	22 29 39.1	-0.1
	baz=331						
IRIF	Iriomote-Funau	3.02	76	P	Pn	22 29 44.0	+1.9
IRIF				eS	Sn	22 30 20.6	+2.6
HATJ	Hateruma jima	3.04	81	P	Pn	22 29 44.2	+1.8
HATJ				eS	Sn	22 30 21.4	+3.0
JKRS	Kuro-shima	3.25	79	P	Pn	22 29 47.7	+2.4
JKRS				eS	Sn	22 30 26.3	+2.6
XPSS	Dashiqiu	3.30	355	eP	Pn	22 29 45.0	-1.0
	baz=354						
JIJ	Ishigaki jima	3.39	77	P	Pn	22 29 48.4	+1.1
JIJ				S	Sn	22 30 28.1	+0.9
JISG	Ishigakijimahi	3.59	74	P	Pn	22 29 51.1	+1.1
JISG				S	Sn	22 30 33.8	+1.7
JIRB	Irabujima	4.41	73	eS	Sn	22 30 56.2	+3.9
JMJ2	Miyako jima3	4.53	75	S	Sn	22 30 58.6	+3.4
VDOS	Pratas Island	4.56	231	eP	Pn	22 30 04.5	+1.1
	baz=238						

IDC 16 22:30:25.7±2.0, 26.°06N×123.°60E, h274km±21km, mb3.3/15, mb1 3.5/21, mb1mx3.4/48, mbtmp4.1/21, Error ellipse: s-maj=16.6km s-min=12.3km az=68.0
JMA 16 22:30:27.1±0.2, 25.°83N×123.°48E, h258km, M4.0
ISC 16 22:30:24.8±0.6, 26.°08N±0.°08×123.°66E±0.°06, h267km±7km, n55, σ1.°74/73, mb3.4/15, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JISG	Ishigakijimahi	1.60	158	P	Pn	22 31 05.9	+0.3
JISG				S	S	22 31 36.1	-1.7
JTJ	Tarama	1.72	146	P	Pn	22 31 07.5	+1.1
JTJ				S	S	22 31 38.4	-1.0
YOJ	Yonaguni jima	1.72	200	P	Pn	22 31 06.1	-0.3
IRIF	Iriomote-Funau	1.74	178	P	Pn	22 31 06.3	-0.3
IRIF				S	S	22 31 36.7	-3.0
JYNG	Yonagunijimaku	1.75	202	P	Pn	22 31 06.2	-0.5
JYNG				S	S	22 31 37.0	-2.8
JIJ	Ishigaki jima	1.77	166	P	Pn	22 31 06.8	0.0
JIJ				S	S	22 31 36.9	-3.2
JIKM	Ikemajima	1.84	128	P	Pn	22 31 08.9	+1.5
JIKM				S	S	22 31 40.7	-0.4
JIRB	Irabujima	1.85	132	P	Pn	22 31 08.5	+1.0
JIRB				S	S	22 31 40.1	-1.2
JKRS	Kuro-shima	1.86	170	P	Pn	22 31 08.0	+0.4
JKRS				S	S	22 31 39.3	-2.2
JMJ2	Miyako jima3	2.01	131	P	Pn	22 31 10.5	+1.6
JMJ2				S	S	22 31 43.5	-0.3
HATJ	Hateruma jima	2.02	176	P	Pn	22 31 09.3	+0.3
HATJ				S	S	22 31 41.0	-2.9
JOGS	Gusukube	2.06	129	P	Pn	22 31 11.0	+1.8
JOGS				S	S	22 31 44.4	0.0
JJT3	Tamagusuku3	3.71	88	P	Pn	22 31 27.5	+1.4
JJT3				eS	S	22 32 13.3	-1.5
JNTH	Nagotoyohara	3.94	83	P	Pn	22 31 29.2	+0.5
JNTH				S	S	22 32 16.4	-3.2
JIH	Iheya	3.97	75	S	S	22 32 16.9	-3.3
JOW	Kunigami	4.20	79	P	Pn	22 31 32.2	+0.4
	1.9nm,0.3s,baz=153,slow=12,SNR=19						
JOW				S	S	22 32 19.5	-5.6
	14nm,0.3s,baz=101,slow=15,SNR=27						
JYRO	Yoronjima	4.39	77	P	Pn	22 31 34.0	+0.1
JOKE	Okinoerabujima	4.57	73	P	Pn	22 31 36.0	-0.1
JNU	Nakatsue	9.41	40	P	P	22 32 39.2	-2.5
	2.6nm,0.3s,baz=262,slow=4.0,SNR=22						
KSRS	Korea Array	11.90	17	P	P	22 33 08.7	-0.6
	3.2nm,0.3s,baz=198,slow=12,SNR=31						
XAN	Xi'an	15.01	305	P	Pn	22 33 44.3	-0.3
XAN				sP	sP	22 34 43.3	-1.8
JHJ	Hachijo jima 2	15.67	60	P	P	22 33 51.0	0.0
	20nm,0.3s,baz=270,slow=20,SNR=3.0						
MJAR	Matsushiro Arr	16.21	46	P	Pn	22 33 58.9	+0.3
	0.1nm,0.3s,baz=238,slow=7.7,SNR=7.7						
HHC	Hu-ho-hao-te	17.83	329	eP	Pn	22 34 18.5	+0.9
USRK	Ussuriysk Ar.	19.30	18	P	P	22 34 30.7	+0.6
	baz=203,slow=10.0,SNR=16						
LZH	Lanzhou	19.65	305	eP	P	22 34 35.4	+1.2
LZH				pP	pP	22 35 27.5	+12
LZH				sP	sP	22 35 55.6	+5.2
LZH				PP		22 39 54.9	
ASAJ	Asahikawa	23.65	36	P	P	22 35 13.2	+0.9
	5.5nm,0.4s,baz=203,slow=6.8,SNR=4.3						
KLR	Kul'dur	23.95	13	P	P	22 35 15.8	+0.9
	5.9nm,0.8s,baz=228,slow=5.7,SNR=18						
GTA	Gaotai	23.97	310	eP	P	22 35 14.5	-0.9
GTA				pP	pP	22 36 07.9	+4.7
GTA				sP	sP	22 36 44.3	+7.3
SONM	Songino Array	25.61	332	P	P	22 35 29.9	-0.2
	0.5nm,0.7s,baz=149,slow=10,SNR=5.9						
TAPN	Taplejung	32.07	280	eP	P	22 36 27.4	-0.1
	8.2nm,0.6s						
ODAN	Odare	32.41	280	eP	P	22 36 30.1	-0.3
	14nm,0.8s						
RAMN	Ramite	33.10	280	eP	P	22 36 36.0	-0.4
JIRN	Jiri	33.38	281	eP	P	22 36 38.6	-0.4
	9.7nm,0.5s						
GUN	Gumba	33.63	282	eP	P	22 36 40.8	-0.3
	11nm,0.7s						
WMQ	Urumqi	34.05	311	eP	P	22 36 45.4	+1.3
PKI	Pulchoki	34.08	281	eP	P	22 36 44.0	-0.9
	15nm,0.8s						
PKIN	Phulchoki	34.09	281	eP	P	22 36 44.2	-0.7
	7.4nm,0.5s						
KKN	Kakani	34.17	282	eP	P	22 36 44.8	-0.7
	8.4nm,0.5s						
DMN	Daman	34.34	281	eP	P	22 36 46.2	-0.9
GKN	Gorkha	34.71	282	eP	P	22 36 49.6	-0.5
DANN	Dangsing	35.45	283	eP	P	22 36 56.2	-0.3
	17nm,0.5s						
MKAR	Makanchi Array	38.61	313	P	P	22 37 22.0	-0.5
	0.6nm,0.3s,baz=100,slow=9.6,SNR=34						
ZALV	Zalesovo Beam	39.94	325	P	P	22 37 32.3	-0.9
	1.0nm,0.6s,baz=112,slow=7.1,SNR=3.1						
KSH	Kashi	41.80	301	P	P	22 37 51.8	+3.0
KSH				pP	pP	22 38 48.8	+5.1
KSH				sP	sP	22 39 19.8	+5.8
KSH				S	S	22 43 50.6	+4.6
KSH				sS	sS	22 45 32.1	+8.3
KSH				SS	SS	22 46 59.1	-4.3
KSH				ScS	ScS	22 47 19.6	-2.4
KURBB	Kurchatov Arra	42.16	318	P	P	22 37 51.0	-0.4
	1.3nm,0.6s,baz=94,slow=7.2,SNR=14						
WRA	Warramunga Arr	46.91	166	P	P	22 38 29.1	0.0
	0.8nm,0.6s,baz=349,slow=8.5,SNR=27						
ASAR	Alice Springs	50.44	168	P	P	22 38 56.0	+0.3
	0.2nm,0.5s,baz=350,slow=6.8,SNR=3.1						
GEYT	Alibeck	55.80	300	P	P	22 39 35.3	+0.7
	5.8nm,0.5s,baz=53,slow=3.0,SNR=20						
KBZ	Khabaz	66.06	308	P	P	22 40 43.7	+0.5
	2.3nm,0.8s,baz=102,slow=8.1,SNR=6.2						
ILAR	Eielson Array	66.50	28	P	P	22 40 46.0	+0.3
	0.2nm,0.4s,baz=286,slow=6.8,SNR=6.9						
FINES	FINESS Array B	70.95	330	P	P	22 41 13.3	+0.2
	0.9nm,0.8s,baz=35,slow=7.0,SNR=5.6						
AKASG	Malin Array Be	72.95	318	P	P	22 41 24.1	-1.0
	0.3nm,0.4s,baz=57,slow=4.9,SNR=3.8						
BRTR	Keskin Array B	73.85	307	P	P	22 41 30.4	-0.4
	1.2nm,0.9s,baz=90,slow=4.2,SNR=7.7						
YKA	Yellowknife Ar	80.35	24	P	P	22 42 06.2	+0.1
	0.3nm,0.5s,baz=303,slow=5.6,SNR=4.4						
YKA				pP	pP	22 43 13.2	+4.3
	0.5nm,0.9s,baz=306,slow=6.9,SNR=3.6						

KRNET 16 22:52:29.1±0.1, 39.°77N×71.°95E, mb3.1
SOME 16 22:52:29.7, 39.°82N×72.°05E, h0km
NNC 16 22:52:32.5±1.1, 39.°86N×72.°06E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=8.3km s-min=4.3km az=1.0
ISC 16 22:52:31.7±1.5, 39.°80N±0.°08×71.°99E±0.°03, h10km, n37, σ2.°29/62, 14C-15D, Tajikistan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BTK	Batken	0.94	286	⇑iP	Pg	22 52 46.6	-3.2
	baz=89						
BTK				⇑iS	Sg	22 52 59.9	-2.1
	baz=89						
ARSB	Arslanbob	1.70	26	⇑eP	Pn	22 53 01.8	+0.2
	baz=26						
ARSB				⇑iS	Sg	22 53 25.5	-0.9
	baz=26						
ARK	Arkit	2.00	359	⇑eP	Pn	22 53 06.4	+0.7
	baz=1.0						
ARK				⇑iS	Sb	22 53 33.8	+0.6
	baz=1.0						
AML	Almayashu	2.66	28	⇓iP	Pn	22 53 16.4	+1.3
	baz=29						
AML				⇓eS	Sb	22 53 50.4	-2.2
	baz=29						
ARLS	Aral	2.71	40	⇓iP	Pn	22 53 16.7	+1.1
	baz=40						
ARLS				⇓iS	Sb	22 53 51.6	-2.3
	baz=40						
IUG	Iuzhnay	2.77	328	eP	Pb	22 53 22.3	+0.8
	3.8nm,0.3s						
IUG				eS	Sg	22 54 00.7	-0.2
	38nm,0.3s						
IUG	Iuzhnay	2.77	328	Pg	Pb	22 53 22.3	+0.8
	3.8nm,0.3s						
IUG				Lg	Lg	22 54 00.7	
	38nm,0.3s						
JBG	Jabagly	2.84	338	Pg	Pb	22 53 23.7	+1.1
	7.6nm,0.3s						
JBG				Lg	Lg	22 54 03.0	
	28nm,0.6s						
MRKS	Merke	3.09	17	eP	Pb	22 53 27.8	+1.0
	7.8nm,0.3s						
MRKS				eS	Sg	22 54 09.9	-1.0
	14nm,0.4s						
MRKS	Merke	3.09	17	Pg	Pb	22 53 27.8	+1.0
	7.8nm,0.3s						
MRKS				Lg	Lg	22 54 09.9	
	14nm,0.4s						
UCH	Uchtor	3.09	37	⇓iP	Pn	22 53 22.4	+1.4
	baz=37						
UCH				⇓iS	Sn	22 54 00.8	+2.7
	baz=37						
CHM	Chimkent	3.10	325	eP	Pb	22 53 28.2	+1.3
	27nm,0.2s						
CHM				eS	Sg	22 54 10.6	-0.6
	122nm,0.5s						
DZA	Taraz	3.13	351	eP	Pb	22 53 28.6	+1.2
	15nm,0.1s						
DZA				eS	Sg	22 54 11.5	-0.8
	37nm,0.3s						
DZA	Taraz	3.13	351	Pg	Pb	22 53 28.7	+1.2
	15nm,0.1s						
DZA				Lg	Lg	22 54 11.5	
	37nm,0.3s						
EKS2	Erkin-Say	3.16	25	⇓eP	Pn	22 53 23.1	+1.4
	baz=25						
EKS2				⇓iS	Sn	22 54 02.3	+2.8
	baz=25						
KZA	Kyzart	3.36	46	⇑eP	Pn	22 53 25.8	+1.2
	baz=46						
KZA				⇑iS	Sn	22 54 07.4	+2.6
	baz=46						
AAK	Ala-Archa	3.41	33	⇑iP	Pn	22 53 26.4	+1.3
	baz=33						
AAK				⇑iS	Sn	22 54 08.3	+2.7
	baz=33						
AAK	Ala-Archa	3.41	33	⇓Pn	Pn	22 53 27.3	+2.2
	1.0nm,0.5s						
AAK				⇑Pg	Pb	22 53 33.9	+1.7
	7.5nm,0.5s						
AAK				⇓Lg	Lg	22 54 17.8	
NRN	Naryn	3.46	61	⇓eP	Pn	22 53 26.7	+0.7
	baz=60						
NRN				⇓eS	Sn	22 54 09.0	+1.8
	baz=60						
KK31	Karatay Array	3.48	342	Pn	Pn	22 53 27.4	+1.4
	0.5nm,0.5s,baz=152,slow=11,SNR=19						
KK31				⇑Pg	Pb	22 53 34.2	+0.7
	1.2nm,0.3s,baz=172,slow=17,SNR=5.7						
KK31				⇓Lg	Lg	22 54 20.5	
	3.3nm,0.3s,baz=157,slow=28,SNR=8.5						
FRU1	Bishkek	3.60	33	⇓iP	Pn	22 53 29.0	+1.3
	baz=33						
FRU1				⇓iS	Sn	22 54 13.0	+2.6
	baz=33						
KBK	Karagaybulak	3.62	37	⇑iP	Pn	22 53 29.4	+1.3
	baz=37						
KBK				⇑iS	Sn	22 54 13.6	+2.6
	baz=37						
SGDS	Sogindy	4.15	28	Pg	Pb	22 53 46.3	+1.4
	3.1nm,0.4s						
SGDS				Lg	Lg	22 54 41.5	
	18nm,0.8s						
KST	Kastek	4.41	41	eP	Pb	22 53 51.5	+2.1
	3.3nm,0.2s						
KST				eS	Sg	22 54 50.6	-2.6
	8.6nm,0.9s						
KST	Kastek	4.41	41	Pg	Pb	22 53 51.4	+2.1
	3.3nm,0.2s						
KST				Lg	Lg	22 54 50.6	
	8.6nm,0.9s						
DGS	Degeres	4.46	38	eP	Pb	22 53 52.4	+2.2
	5.2nm,0.5s						
DGS				eS	Sg	22 54 52.0	-2.9
	7.5nm,0.5s						
DGS	Degeres	4.46	38	Pg	Pb	22 53 52.4	+2.2
	5.2nm,0.5s						
DGS				Lg	Lg	22 54 52.0	
	7.5nm,0.5s						
KRBS	Karabastau	4.77	34	eP	Pb	22 53 57.7	+2.2
	2.2nm,0.5s						
KRBS				eS	Sg	22 55 01.1	-3.7
	3.8nm,0.6s						
KRBS	Karabastau	4.77	34	Pg	Pb	22 53 57.7	+2.2
	2.2nm,0.5s						
KRBS				Lg	Lg	22 55 01.1	
	3.8nm,0.6s						
KOTS	Kotyrbulak	5.15	47	eP	Pb	22 54 04.4	+2.4
	5.0nm,0.7s						
KOTS				eS	Sg	22 55 12.5	-4.7
	8.4nm,0.9s						
KOTS	Kotyrbulak	5.15	47	Pg	Pb	22 54 04.4	+2.4
	5.0nm,0.7s						
KOTS				Lg	Lg	22 55 12.5	
	8.4nm,0.9s						
KUU	Kurty	5.22	37	eP	Pb	22 54 05.4	+2.3
	1.5nm,0.5s						
KUU				eS	Sg	22 55 14.1	-5.2
	5.5nm,0.4s						
KUU	Kurty	5.22	37	Pg	Pb	22 54 05.4	+2.3
	1.5nm,0.5s						
KUU				Lg	Lg	22 55 14.1	
	5.5nm,0.4s						
KTBS	Karatobe	5.25	40	eP	Pb	22 54 06.5	+2.9
	1.0nm,0.4s						
KTBS				eS	Sg	22 55 16.4	-3.9
	7.9nm,0.5s						
KTBS	Karatobe	5.25	40	Pg	Pb	22 54 06.5	+2.9
	1.0nm,0.4s						
KTBS				Lg	Lg	22 55 16.4	
	7.9nm,0.5s						
CHKK	Chushkaly	5.51	41	eP	Pb	22 54 10.8	+2.8
	0.7nm,0.1s						
CHKK				eS	Sg	22 55 23.5	-5.0
	6.7nm,0.6s						
CHKK	Chushkaly	5.51	41	Pg	Pb	22 54 10.7	+2.8
	0.7nm,0.1s						
CHKK				Lg	Lg	22 55 23.5	
	6.7nm,0.6s						

SNET 16 23:07:38.8±2.0, 13.°27N×91.°54W, h32km±961km, ML4.4
UCR 16 23:07:39.1±2.3, 13.°12N×91.°41W, h17km±223km, ML4.1, mb4.4(NEIC)
IDC 16 23:07:46.9±3.3, 13.°44N×90.°62W, h33km±21km, mb4.0/16, mb1 4.2/19, mb1mx4.0/38, mbtmp4.2/19, ML3.9/3, MS3.8/17, Ms1 3.8/17, ms1mx3.7/31, Error ellipse: s-maj=31.2km s-min=13.1km az=43.0
NEIC 16 23:07:51.3±3.0, 13.°37N±0.°04×90.°94W±0.°05, h62km±5km, mb4.4/140, Md4.4/13(MEX), Error ellipse: s-maj=7.4km s-min=4.7km az=122.0
GCG 16 23:07:58.3±3.0, 14.°18N×90.°99W, h54km±55km, MD4.5
ISC 16 23:07:48.3±1.1, 13.°21N±0.°07×91.°06W±0.°04, h47km±9km, n306, σ2.°05/273, mb4.4/65, MS3.9/18, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	1.13	32	eP	Pn	23 08 05.2	-2.7
IXG	Ixpaco	1.13	32	eP	Pn	23 08 05.7	-2.2
IXG	Ixpaco	1.13	32	eP	Pn	23 08 05.2	-2.7
FUG	Fuego 3	1.25	9	eP	Pn	23 08 08.5	-1.1
PCG	Pacaya	1.26	20	eP	Pn	23 08 08.2	-1.5
ERG	Entre ros, C	1.32	338	eP	Pn	23 08 11.3	+0.9
CEVE	Cerro Verde	1.52	66	eP	Pn	23 08 10.2	-3.1
CEVE				eS	Sn	23 08 33.3	+1.2
CEVE					IAML	23 08 42.0	
	comp=Z,9µm,0.5s						
CEVE	Cerro Verde	1.52	66	eP	Pn	23 08 10.2	-3.1
CEVE				eS	Sn	23 08 33.3	+1.2
CEVE					IAML	23 08 42.0	
	comp=Z,9µm,0.5s						
SBLS	San Blas	1.53	65	eP	Pn	23 08 10.2	-3.2
SBLS	San Blas	1.53	65	eP	Pn	23 08 10.2	-3.2
RTR	El Retiro	1.53	63	eP	Pn	23 08 10.6	-2.8
RTR	El Retiro	1.53	63	eP	Pn	23 08 10.6	-2.8
NBG	Las Nubes	1.54	27	eP	Pn	23 08 13.4	-0.2
SNJE	San Jose	1.56	65	eP	Pn	23 08 11.0	-2.7
SNJE	San Jose	1.56	65	eP	Pn	23 08 11.0	-2.7
STG3	Santiaguito 3,	1.58	342	eP	Pn	23 08 13.3	-0.7
SNET	Serv Nac Est T	1.84	75	eP	Pn	23 08 15.2	-2.2
SNET				eS	Sn	23 08 43.1	+3.5
SNET	Serv Nac Est T	1.84	75	Pn	Pn	23 08 15.7	-1.8
SNET	Serv Nac Est T	1.84	75	eP	Pn	23 08 15.2	-2.2
SNET				eS	Sn	23 08 43.1	+3.5
UEES	Universidad Ev	1.84	74	eP	Pn	23 08 15.4	-2.0
UEES				eS	Sn	23 08 42.4	+2.8
UEES	Universidad Ev	1.84	74	eP	Pn	23 08 15.4	-2.0
UEES				eS	Sn	23 08 42.4	+2.8
APG	El Apazote	1.88	18	Pg	Pn	23 08 17.6	-0.6
	comp=Z,71nm,0.3s,baz=150,slow=6.3,SNR=164						
APG				Lg	Lg	23 08 44.2	
	comp=Z,108nm,0.3s,baz=292,slow=20,SNR=12						
LFU	La Fuente	1.96	74	eP	Pn	23 08 17.2	-2.0
LFU	La Fuente	1.96	74	eP	Pn	23 08 17.2	-2.0
LFRS	El Faro	1.98	78	eP	Pn	23 08 16.7	-2.8
LBRS	Las Brisas	2.03	75	eP	Pn	23 08 17.4	-2.7
THIG		2.06	325		Pn	23 08 17.9	-2.5
THIG					Sn	23 08 39.8	-5.1
THIG		2.06	325	eP	Pn	23 08 17.9	-2.5
THIG				i S	Sn	23 08 39.8	-5.1
PAVA	Las Pavas	2.12	76	eP	Pn	23 08 18.9	-2.5
PAVA	Las Pavas	2.12	76	eP	Pn	23 08 18.9	-2.5
COEG	Centro de Oper	2.16	79	eP	Pn	23 08 19.5	-2.3
COEG				eS	Sn	23 08 52.5	+5.1
COEG	Centro de Oper	2.16	79	eP	Pn	23 08 19.5	-2.3
COEG				eS	Sn	23 08 52.5	+5.1
MRL	Marmol	2.29	35	eP	Pn	23 08 24.3	+0.4
COEB	Comit de Eme	2.48	83	eP	Pn	23 08 22.7	-3.5
COEB				eS	Sn	23 08 58.8	+3.5
COEB					IAML	23 09 06.6	
	comp=Z,1µm,0.5s						
COEB	Comit de Eme	2.48	83	eP	Pn	23 08 22.7	-3.5
COEB				eS	Sn	23 08 58.8	+3.5
COEB					IAML	23 09 06.6	
	comp=Z,1µm,0.5s						
TECA	Tecapa	2.50	83	eP	Pn	23 08 23.6	-3.0
TECA	Tecapa	2.50	83	eP	Pn	23 08 23.6	-3.0
JUCU	Jucuar¡n	2.73	89	eP	Pn	23 08 27.2	-2.6
JUCU				eS	Sn	23 09 04.8	+3.2
JUCU					IAML	23 09 12.2	
	comp=Z,754nm,0.6s						
JUCU	Jucuar¡n	2.73	89	eP	Pn	23 08 27.2	-2.6
JUCU				eS	Sn	23 09 04.8	+3.2
JUCU					IAML	23 09 12.2	
	comp=Z,754nm,0.6s						
FAGO	Alcalda de S	2.91	80	eP	Pn	23 08 28.7	-3.4
FAGO					IAML	23 09 16.4	
	comp=Z,302nm,0.8s						
FAGO	Alcalda de S	2.91	80	eP	Pn	23 08 28.7	-3.4
FAGO					IAML	23 09 16.4	
	comp=Z,302nm,0.8s						
LCND	La Caada	3.08	88	eP	Pn	23 08 31.2	-3.3
LCND	La Caada	3.08	88	eP	Pn	23 08 31.2	-3.3
CCIG	Comitan	3.23	341		Pn	23 08 37.9	+1.2
CCIG	Comitan	3.23	341	Pn	Pn	23 08 38.0	+1.3
CCIG	Comitan	3.23	341	eP	Pn	23 08 37.9	+1.2
PCIG		3.25	320		Pn	23 08 35.0	-1.8
PCIG		3.25	320	eP	Pn	23 08 35.0	-1.8
TGUH	Tegucigalpa,Un	3.77	77	Pn	Pn	23 08 43.1	-1.0
TGIG		4.08	331		Pn	23 08 47.9	-0.3
TGIG		4.08	331	eP	Pn	23 08 47.9	-0.3
CMIG	Matias Romero	5.35	317	Pn	Pn	23 09 05.0	-0.6
	comp=Z,2.6nm,0.3s,baz=125,slow=13,SNR=23						
CMIG				Sn	Sn	23 10 13.1	+7.2
	comp=Z,4.9nm,0.3s,baz=16,slow=22,SNR=4.8						
CMIG	Matias Romero	5.35	317		Pn	23 09 06.9	+1.4
CMIG	Matias Romero	5.35	317	eP	Pn	23 09 06.9	+1.4
ACON	Acoyapa	5.87	101	Pn	Pn	23 09 14.0	+1.2
JTS	Las Juntas de	6.64	115	Pn	Pn	23 09 16.7	-6.7
	comp=Z,0.5nm,0.3s,baz=352,slow=14,SNR=1.8						
JTS				Sn	Sn	23 10 31.9	-5.9
	comp=Z,0.7nm,0.3s,baz=336,slow=20,SNR=2.4						
JTS				Lg	Lg	23 11 04.9	
	baz=17,slow=19,SNR=4.3						
JTS	Las Juntas de	6.64	115	Pn	Pn	23 09 25.5	+2.2
ESPN	Las Esperanzas	6.67	98	Pn	Pn	23 09 24.5	+0.8
TLIG	Tlapa	8.44	302	Pn	Pn	23 09 50.0	+1.8
BCIP	Isla Barro Col	11.71	109	Pn	Pn	23 10 34.0	+1.1
ZAIG	Zacatecas	14.50	313	Pn	Pn	23 11 12.7	+1.7
833A	Chaparral WMA,	16.93	334	Pn	Pn	23 11 42.8	+0.8
833A				IAmb	IAmb	23 11 52.7	
	comp=Z,25nm,1.4s						
060A	Indiantown	17.02	34		P	23 11 42.7	-1.5
HKT	Hockley	17.24	346	P	P	23 11 47.0	+0.3
DWPF	Disney Wildern	17.34	30		P	23 11 47.3	-0.5
441A	DeRidder	17.57	354		P	23 11 51.7	+1.3
441A				IAmb	IAmb	23 11 56.3	
	comp=Z,42nm,1.1s						
656A	Willston	17.92	25		P	23 11 54.5	+0.2
OTAV	Otavalo	17.95	135		P	23 11 56.9	+1.8
553A	Crawfordville	17.98	19		P	23 11 54.9	0.0
553A				IAmb	IAmb	23 12 03.3	
	comp=Z,30nm,0.7s						
451A	Vernon	18.01	15		P	23 11 55.2	0.0
342A	Flagon Creek P	18.12	357	P	P	23 11 56.4	0.0
346A	Big Creek Wild	18.16	4	P	P	23 11 57.5	+0.6
346A				IAmb	IAmb	23 12 06.5	
	comp=Z,30nm,0.8s						
344A	Westbrook Farm	18.16	1		P	23 11 56.4	-0.5
344A				IAmb	IAmb	23 12 06.8	
	comp=Z,28nm,0.8s						
BRAL	Brewton	18.26	11		Pn	23 11 58.0	-0.2
ROSC	El Rosal	18.49	115	P	P	23 12 00.6	-0.5
	comp=Z,1.1nm,0.3s,baz=350,slow=18,SNR=4.7						
ROSC	El Rosal	18.49	115	P	Pn	23 12 02.1	+0.5
435B	Jarrell	18.50	342		Pn	23 12 01.1	-0.1
JAKH	Jacmel	18.53	72		Pn	23 12 02.1	+0.5
VBMS	Vicksburg	18.93	1	P	Pn	23 12 05.5	-0.8
JCT	Junction City	19.00	336	P	P	23 12 05.7	-0.4

Code	Station	Δ°	AZ°	Phase	ISC	Time	Res
JCT	Junction City	19.00	336	P	Pn	23 12 10.3	+3.1
	baz=153						
352A	Blakely	19.04	16	P	Pn	23 12 07.3	-0.3
352A				IAmb	IAmb	23 12 13.2	
	comp=Z,40nm,1.1s						
FLOC	Florencia	19.13	126	P	Pn	23 12 09.9	+1.0
250A	Grady	19.20	12	P	Pn	23 12 09.0	-0.5
HPIG		19.34	317		Pn	23 12 13.2	+1.8
HPIG				IAmb	IAmb	23 12 18.2	
	comp=Z,15nm,0.8s						
TIGA	Tifton	19.40	20	P	Pn	23 12 11.4	-0.6
143A	Socs Landing,	19.41	359	P	Pn	23 12 11.8	-0.2
143A				IAmb	IAmb	23 12 24.6	
	comp=Z,28nm,1.1s						
WHTX	Lake Whitney,	19.60	344	P	Pn	23 12 16.5	+2.1
WHTX				IAmb	IAmb	23 12 28.2	
	comp=Z,11nm,0.6s						
TXAR	Lajitas Array	19.86	326	P	P	23 12 17.5	+1.8
	comp=Z,0.2nm,0.3s,baz=153,slow=11,SNR=23						
TXAR				LR	LR	23 22 11.0	
	comp=Z,62nm,18.1s,baz=0.0,slow=43						
H06E1	SOCORRO T-PHAS	19.88	289	T	T	23 32 49.7	
	SNR=35						
H06S1	SOCORRO T	19.90	289	T	T	23 32 36.8	
LRAL	Lakeview Retre	20.09	10	P	Pn	23 12 20.3	+0.3
	baz=192,SNR=5.8						
152A	Waverly Hall	20.22	16	P	Pn	23 12 20.1	-1.6
152A				IAmb	IAmb	23 12 25.3	
	comp=Z,15nm,0.8s						
WLAR	White Oak Lake	20.48	355		Pn	23 12 24.3	-0.4
WLAR				IAmb	IAmb	23 12 28.4	
	comp=Z,25nm,1.0s						
SDV	Santo Domingo	20.49	100	P	P	23 12 18.9	-3.9
	comp=Z,8.0nm,0.8s,baz=280,slow=6.8,SNR=12						
SDV	Santo Domingo	20.49	100	P	P	23 12 20.9	-1.9
SDV				IAmb	IAmb	23 12 24.7	
	comp=Z,9.6nm,0.8s						
Z50A	Ashland	20.50	12	IAmb	IAmb	23 12 32.4	
	comp=Z,12nm,0.8s						
Z50A	Ashland	20.50	12	P	Pn	23 12 23.1	-1.9
	baz=195						
BANI	BANI	20.57	73	P	Pn	23 12 23.6	-2.4
154A	Montrose	20.64	19	P	Pn	23 12 24.4	-2.2
154A				IAmb	IAmb	23 12 40.4	
	comp=Z,30nm,1.0s						
Z52A	Williamson	20.80	16	P	Pn	23 12 26.6	-1.9
	baz=199,SNR=5.5						
257A	Skidaway Islan	20.83	25	P	Pn	23 12 27.7	-1.1
ABTX	Abilene, Hawle	20.87	339	P	Pn	23 12 28.7	-0.7
	baz=156						
Y49A	Blount Mountai	20.99	11	IAmb	IAmb	23 12 34.0	
	comp=Z,18nm,0.9s						
LPIG	La Paz	21.19	304	LR	LR	23 20 53.4	
	comp=Z,187nm,19.1s,baz=147,slow=37						
OXF	Oxford	21.27	4	P	P	23 12 32.3	+1.7
OXF				IAmb	IAmb	23 12 50.0	
	comp=Z,34nm,1.1s						
OXF	Oxford	21.27	4	P	P	23 12 33.8	+3.2
	baz=184						
GOGA	Godfrey	21.27	18	P	P	23 12 30.6	-0.1
GOGA				IAmb	IAmb	23 12 36.3	
	comp=Z,12nm,0.8s						
GOGA	Godfrey	21.27	18	P	P	23 12 31.6	+0.9
	baz=201,SNR=5.4						
Y51A	Rockmart	21.31	14	P	P	23 12 32.8	+1.6
	baz=196,SNR=7.4						
MIAR	Mount Ida	21.37	354	P	P	23 12 32.2	+0.4
	baz=173,SNR=6.1						
X48A	Hartselle	21.46	9	P	P	23 12 35.0	+2.3
X48A				IAmb	IAmb	23 12 38.8	
	comp=Z,13nm,0.8s						
UALR	University of	21.51	357	IAmb	IAmb	23 12 42.1	
	comp=Z,11nm,0.8s						
Y52A	Lilburn	21.53	16	IAmb	IAmb	23 12 38.9	
	comp=Z,30nm,1.4s						
Y52A	Lilburn	21.53	16	P	P	23 12 34.7	+1.3
	baz=199						
X37A	Clayton	21.65	350	P	P	23 12 37.3	+2.5
Y53A	Monroe	21.65	17	P	P	23 12 36.2	+1.4
	baz=200						
FPAL	Fort Paine	21.81	12	P	P	23 12 38.0	+1.5
FPAL				IAmb	IAmb	23 12 42.6	
	comp=Z,8.9nm,0.8s						
W41B	Gary Mavity, V	21.90	357	P	P	23 12 38.2	+0.8
	baz=177						
Y54A	Tignall	21.93	19	P	P	23 12 38.5	+0.8
	baz=202						
RGRS	Roger Stewart	21.98	25	P	P	23 12 40.9	+2.6
X51A	Calhoun	22.00	14	P	P	23 12 39.3	+0.8
	baz=196						
WHAR	Wooly Hollow	22.02	357	IAmb	IAmb	23 12 43.4	
	comp=Z,8.8nm,0.8s						
W39A	Magazine	22.03	354	P	P	23 12 41.3	+2.4
	baz=173						
CSU	Charleston Sou	22.10	25	P	P	23 12 37.6	-2.0
NHSC	New Hope	22.16	25	P	P	23 12 40.7	+0.5
	baz=209						
W49A	Belvidere	22.25	10	P	P	23 12 42.0	+0.8
	baz=192						
X52A	Dahlonega	22.27	16	P	P	23 12 41.4	-0.1
	baz=199,SNR=6.5						
X53A	Estanollee	22.34	17	P	P	23 12 41.6	-0.6
	baz=200						
W35A	Tecumseh	22.48	347	P	P	23 12 44.8	+1.1
W50A	Signal Mountai	22.51	12	IAmb	IAmb	23 12 48.3	
	comp=Z,8.6nm,0.8s						
W50A	Signal Mountai	22.51	12	P	P	23 12 45.0	+1.0
	baz=195						
WMOK	Wichita Mounta	22.55	343	P	P	23 12 43.2	-1.3
	baz=160						
W51A	Cleveland	22.59	14	P	P	23 12 44.8	0.0
	baz=196						
MNTX	Cornudas Mount	22.63	327	IAmb	IAmb	23 12 52.2	
	comp=Z,12nm,0.8s						
MNTX	Cornudas Mount	22.63	327	P	P	23 12 46.1	+0.7
	baz=141,SNR=21						
FNO	Franklin	22.69	346	P	P	23 12 47.5	+1.6
W52A	Murphy	22.73	15	P	P	23 12 48.8	+2.4
W52A				IAmb	IAmb	23 13 00.7	
	comp=Z,12nm,1.0s						
V48A	Smith Brothers	22.76	9	IAmb	IAmb	23 12 52.3	
	comp=Z,6.9nm,0.7s						
LCAR	Lake Charles	22.77	360	IAmb	IAmb	23 13 06.9	
	comp=Z,14nm,1.0s						
LNXT	Lenox	22.84	3	P	P	23 12 46.9	-0.5
BG3	Lake Jocassee	22.90	17	P	P	23 12 49.4	+1.3
CPCT	Cooper Cave	22.92	14	IAmb	IAmb	23 12 52.2	
	comp=Z,7.8nm,0.8s						
V49A	McMinnville	22.94	11	P	P	23 12 48.5	0.0
	baz=193,SNR=7.2						
W53A	Cullowhee	23.00	17	P	P	23 12 51.4	+2.1
	baz=200						
V50A	Pikevile	23.00	12	P	P	23 12 48.4	-0.7
	baz=195						
TUL1	Leonard	23.01	350	P	P	23 12 47.9	-1.2
WVT	Waverly	23.01	7	P	P	23 12 49.7	+0.5
WVT				IAmb	IAmb	23 13 00.9	
	comp=Z,9.0nm,0.8s						
WVT	Waverly	23.01	7	P	P	23 12 49.3	+0.1
	baz=188						
Y58A	Scranton	23.07	25	P	P	23 12 49.8	0.0
Y58A				IAmb	IAmb	23 12 51.1	
	comp=Z,19nm,0.8s						
U40A	Yellville	23.11	356	IAmb	IAmb	23 12 51.9	
	comp=Z,10nm,0.9s						
U40A	Yellville	23.11	356	P	P	23 12 49.4	-0.8
	baz=176,SNR=7.3						
CLTN	Cedars of Leba	23.18	10	IAmb	IAmb	23 12 51.3	
	comp=Z,12nm,1.1s						
MSTX	Muleshoe	23.26	335	P	P	23 12 53.9	+2.0
HICK	Hickman	23.30	4	P	P	23 12 54.1	+2.1
V51A	Loudon	23.30	14	P	P	23 12 52.6	+0.5
V51A				IAmb	IAmb	23 13 08.7	
	comp=Z,14nm,1.3s						
V51A	Loudon	23.30	14	P	P	23 12 52.4	+0.3
	baz=197						
TKL	Tuckaleechee C	23.30	15	P	P	23 12 50.5	-1.6
	comp=Z,7.4nm,0.6s,baz=186,slow=10,SNR=17						
TKL				LR	LR	23 22 59.7	
	comp=Z,698nm,18.7s,baz=212,slow=40						
TKL	Tuckaleechee C	23.30	15	IAmb	IAmb	23 12 53.2	
	comp=Z,8.6nm,0.7s						
PARMO	Parma	23.39	3	P	P	23 12 53.0	+0.1
PBMO	Poplar Bluff	23.48	1	IAmb	IAmb	23 13 07.7	
	comp=Z,8.1nm,0.8s						
V52A	Sevierville	23.52	15	IAmb	IAmb	23 12 59.6	
	comp=Z,9.6nm,0.9s						
V52A	Sevierville	23.52	15	P	P	23 12 53.9	-0.3
	baz=199						
KMSC	Kings Mountain	23.54	20	P	P	23 12 54.7	+0.3
	baz=204						
V53A	Saluda	23.57	17	IAmb	IAmb	23 13 04.2	
	comp=Z,15nm,1.2s						
V53A	Saluda	23.57	17	P	P	23 12 54.9	+0.1
	baz=201						
U49A	Red Boiling Sp	23.69	11	P	P	23 12 54.8	-0.9
	baz=193,SNR=7.0						
U50A	Jamestown	23.78	13	P	P	23 12 56.4	-0.2
	baz=195						
ATAH	Atahualpa	23.80	147	LR	LR	23 20 58.5	
	comp=Z,150nm,18.3s,baz=339,slow=33						
MGMO	Mountain Grove	23.87	358	IAmb	IAmb	23 12 58.7	
	comp=Z,8.9nm,0.9s						
U51A	La Follette	23.93	14	P	P	23 12 58.6	+0.6
	baz=197						
V54A	Nebo	23.93	19	P	P	23 12 56.8	-1.2
	baz=202						
TZTN	Tazewell	24.20	15	P	P	23 13 01.1	+0.6
TZTN				IAmb	IAmb	23 13 06.5	
	comp=Z,14nm,0.8s						
TZTN	Tazewell	24.20	15	P	P	23 12 59.9	-0.6
	baz=198						
V55A	Taylorsville	24.23	20	P	P	23 13 01.4	+0.7
V55A				IAmb	IAmb	23 13 03.0	
	comp=Z,15nm,1.3s						
HSIG		24.27	314	P	P	23 13 04.2	+3.0
SRIG	Santa Rosalia	24.28	309	P	P	23 13 03.5	+2.2
U53A	Fall Branch	24.29	17	P	P	23 13 00.3	-1.0
	baz=201						
T49A	Edmonton	24.31	11	IAmb	IAmb	23 13 07.4	
	comp=Z,11nm,0.8s						
T49A	Edmonton	24.31	11	P	P	23 13 00.8	-0.6
	baz=193,SNR=6.5						
T50A	Nancy	24.36	12	P	P	23 13 01.3	-0.6
	baz=195						
S44A	Carbondale	24.44	3	IAmb	IAmb	23 13 03.8	
	comp=Z,16nm,1.1s						
T51A	Gray	24.50	14	P	P	23 13 02.4	-0.9
	baz=197						
121A	Cookes Peak, D	24.59	324	IAmb	IAmb	23 13 10.7	
	comp=Z,16nm,0.8s						
121A	Cookes Peak, D	24.59	324	P	P	23 13 07.9	+3.6
	baz=138,SNR=9.8						
U54A	Nelsons Funny	24.65	18	IAmb	IAmb	23 13 10.9	
	comp=Z,12nm,0.7s						
U54A	Nelsons Funny	24.65	18	P	P	23 13 04.5	-0.2
	baz=202						
319A	Douglas	24.66	320	P	P	23 13 07.5	+2.7
CCM	Cathedral Cave	24.75	360	P	P	23 13 04.6	-0.9
CCM				IAmb	IAmb	23 13 07.0	
	comp=Z,11nm,1.0s						
CCM	Cathedral Cave	24.75	360	P	P	23 13 04.9	-0.5
	baz=180						
V58A	Windy Hill, Pi	24.93	24	P	P	23 13 05.5	-1.6
	baz=209						
T54A	Tazewell	25.23	18	P	P	23 13 09.3	-0.6
	baz=202						
S51A	Beattyville	25.23	14	P	P	23 13 11.8	+2.0
S51A				IAmb	IAmb	23 13 15.2	
	comp=Z,9.4nm,0.9s						
S51A	Beattyville	25.23	14	P	P	23 13 08.6	-1.2
	baz=197						
WCI	Wyandotte Cave	25.28	9	P	P	23 13 09.3	-1.0
WCI				IAmb	IAmb	23 13 15.7	
	comp=Z,16nm,0.9s						
WCI	Wyandotte Cave	25.28	9	P	P	23 13 09.3	-1.0
	baz=191						
U57A	Blanch	25.41	22	P	P	23 13 10.3	-1.1
	baz=208						
R49A	Shelbyville	25.53	11	P	P	23 13 11.1	-1.4
	baz=194						
R50A	Paris	25.68	12	P	P	23 13 12.7	-1.2
R50A				IAmb	IAmb	23 13 21.2	
	comp=Z,7.4nm,0.8s						
R50A	Paris	25.68	12	P	P	23 13 12.5	-1.4
	baz=195						
ANMO	Albuquerque	25.74	330	P	P	23 13 14.5	-0.2
	comp=Z,0.9nm,0.6s,baz=154,slow=14,SNR=4.0						
ANMO				LR	LR	23 25 29.0	
	comp=Z,139nm,18.6s,baz=126,slow=41						
PCRV	Puerto La Cruz	26.04	94	LR	LR	23 25 17.9	
	comp=Z,288nm,19.9s,slow=41						
Q48A	North Vernon	26.05	9	P	P	23 13 16.6	-0.6
	baz=192						
TUC	Tucson	26.23	320	P	P	23 13 22.3	+3.2
TUC	Tucson	26.23	320	P	P	23 13 21.9	+2.9
	baz=132						
Q51A	Peebles	26.61	13	IAmb	IAmb	23 13 28.7	
	comp=Z,9.0nm,0.7s						
Q51A	Peebles	26.61	13	P	P	23 13 23.0	+0.7
	baz=197						
P50A	Jamestown	27.07	12	P	P	23 13 25.0	-1.5
	baz=196						
Q54A	Coxs Mills	27.23	18	P	P	23 13 27.2	-0.7
	baz=202						
X18A	Snowflake	27.28	324	P	P	23 13 29.4	+0.8
X18A				IAmb	IAmb	23 13 36.0	
	comp=Z,5.2nm,0.7s						
SFIN	Lafayette	27.29	7	P	P	23 13 27.3	-1.1
	baz=188						
214A	Organ Pipe Nat	27.32	317	P	P	23 13 32.5	+3.7
	baz=128						
W18A	Petrified Fore	27.59	325	P	P	23 13 34.6	+3.3
O50A	Cable	27.62	12	P	P	23 13 29.8	-1.6
	baz=196						
ACSO	Alum Creek Sta	27.84	13	P	P	23 13 32.6	-0.8
	baz=197						
P54A	Burton	27.90	18	P	P	23 13 33.4	-0.5
	baz=203						
X16A	Lo Mia Camp, P	28.07	322	P	P	23 13 38.9	+3.2
113A	Mohawk Valley,	28.46	317	P	P	23 13 40.6	+1.7
O54A	Avella	28.47	17	P	P	23 13 37.8	-1.2
	baz=202						
MVCO	Mesa Verde	28.54	330	P	P	23 13 42.9	+3.0
NNA	Nana	28.73	150	LR	LR	23 22 55.9	
	comp=Z,98nm,19.1s,baz=292,slow=32						
OGNE	Ogallala	29.26	343	P	P	23 13 45.8	-0.2
OGNE				IAmb	IAmb	23 14 01.9	
	comp=Z,15nm,1.1s						
W13A	Hualapai Mount	30.01	320	P	P	23 13 57.3	+4.3
BC3	Big Chuckawall	30.12	317	P	P	23 13 57.6	+3.8
	baz=127						
KNB	Kanab	30.68	324	P	P	23 14 02.2	+3.4
MTPU	Mount Pierson	31.07	327	P	P	23 14 05.4	+3.0
CCUT	Cedar City	31.36	325	P	P	23 14 04.9	0.0
MSU	Marysvale	31.41	327	P	P	23 14 05.5	+0.3
SPMN	Marine on St.	31.95	358	P	P	23 14 08.1	-1.5
	baz=177,SNR=9.2						
G45A	Suttons Bay	32.06	7	P	P	23 14 08.6	-2.0
	baz=190						
PSUT	Pine Spring	32.33	325	P	P	23 14 13.4	0.0
MPMC	Manual Prospec	32.90	318	P	P	23 14 21.7	+3.4
	baz=127						
I55A	Frankford	32.96	18	P	P	23 14 16.5	-1.9
	baz=205						
H53A	Bobcaygeon	33.03	16	P	P	23 14 17.4	-1.7
	baz=203						
R11A	Troy Canyon, C	33.19	323	P	P	23 14 22.0	+1.2
R11A	Troy Canyon, C	33.19	323	P	P	23 14 25.8	+5.0
	baz=132						
HWUT	Hardware Ranch	33.47	332	P	P	23 14 24.1	+1.0
HWUT				IAmb	IAmb	23 14 28.1	
	comp=Z,4.3nm,0.8s						
PD31	Pinedale Array	33.52	335	P	P	23 14 25.2	+1.5
PDAR	Pinedale Array	33.52	335	P	P	23 14 23.0	-0.7
	comp=Z,0.9nm,0.8s,baz=127,slow=11,SNR=5.2						
PDAR				PcP	PcP	23 17 04.6	+0.9
	comp=Z,0.2nm,0.5s,baz=122,slow=3.4,SNR=3.4						
G54A	Lake Saint Pet	33.93	16	P	P	23 14 25.7	-1.2
	baz=203						
F52A	Sundridge	33.97	15	P	P	23 14 25.1	-2.2
	baz=201						
D46A	Sault St. Mari	34.09	9	P	P	23 14 26.0	-2.3
	baz=192						
G55A	Calabogie	34.19	18	P	P	23 14 27.5	-1.7
	baz=206						
D47A	Chapleau	34.40	10	P	P	23 14 28.5	-2.5
	baz=194						
ALGO	Algonquin Park	34.45	16	P	P	23 14 29.8	-1.6
	baz=203						
REDW	Red Top Meadow	34.55	334	P	P	23 14 32.5	-0.2
SNOW	Snow King Moun	34.59	334	P	P	23 14 32.1	-0.9
E51A	G1948 Merrick	34.62	14	P	P	23 14 30.9	-2.0
	baz=200						
EYMN	Ely	34.64	359	IAmb	IAmb	23 14 31.3	
	comp=Z,5.7nm,0.8s						
EYMN	Ely	34.64	359	P	P	23 14 30.6	-2.4
	baz=179						
ELK	Elko	34.66	327	P	P	23 14 33.4	-0.1
NV11	Mina Array Sit	34.77	321	IAmb	IAmb	23 14 41.9	
	comp=Z,5.9nm,0.8s						
OMMB	Old Mammoth Mi	34.80	319	P	P	23 14 39.7	+4.8
OMMB				IAmb	IAmb	23 14 41.3	
	comp=Z,3.3nm,0.9s						
MDPB	Devils Postpil	34.86	319	IAmb	IAmb	23 14 39.9	
	comp=Z,4.8nm,1.0s						
NVAR	Mina Array Bea	34.86	321	P	P	23 14 37.4	+2.0
	comp=Z,4.6nm,0.8s,baz=138,slow=8.7,SNR=19						
NVAR				PcP	PcP	23 17 10.2	+2.6
	comp=Z,1.4nm,0.7s,baz=124,slow=3.6,SNR=5.8						
NVAR				LR	LR	23 31 17.6	
	comp=Z,225nm,19.0s,baz=50,slow=40						
D49A	Beulah Townshi	34.92	12	P	P	23 14 33.4	-2.1
	baz=197						
E54A	Lac Daplat, Po	35.13	17	P	P	23 14 35.8	-1.4
	baz=204						
KVN	Kaiserville	35.13	322	P	P	23 14 41.2	+3.5
KVN				IAmb	IAmb	23 14 50.5	
	comp=Z,3.2nm,0.9s						
D51A	Lot 18 Range I	35.17	14	P	P	23 14 35.2	-2.5
	baz=200						
AGMN	Agassiz Nation	35.22	354	P	P	23 14 36.7	-1.2
	baz=172						
D53A	Lac Vacive, Po	35.58	16	P	P	23 14 40.7	-0.4
D53A	Lac Vacive, Po	35.58	16	P	P	23 14 39.8	-1.3
	baz=203						
CMB	Columbia Colle	35.93	319	IAmb	IAmb	23 14 50.2	
	comp=Z,3.8nm,1.0s						
D54A	Lac Fusel, La	35.93	17	P	P	23 14 42.9	-1.3
	baz=204						
PNTR	Pine Nut	36.07	321	P	P	23 14 48.7	+3.0
PNTR				IAmb	IAmb	23 14 53.0	
	comp=Z,5.1nm,0.7s						
D55A	Sainte-Anne-du	36.16	18	P	P	23 14 44.5	-1.6
	baz=206						
PAHR	Pah Rah Range	36.32	322	P	P	23 14 49.7	+1.9
PAHR				IAmb	IAmb	23 14 59.6	
	comp=Z,8.9nm,1.4s						
LPAZ	La Paz	37.05	142	P	P	23 14 57.6	+2.9
ULM	Lac du Bonnet	37.15	355	P	P	23 14 51.9	-2.6
	comp=Z,8.8nm,0.8s,baz=171,slow=8.9,SNR=21						
ULM				LR	LR	23 33 27.9	
	comp=Z,214nm,19.4s,baz=144,slow=42						
LSQQ	Lebel-sur-Quev	37.59	15	P	P	23 14 56.1	-2.2
	baz=203						
WVOR	Wild Horse Val	37.66	326	IAmb	IAmb	23 15 05.5	
	comp=Z,5.1nm,0.9s						
WVOR					PcP	23 17 18.0	+2.1
MATQ	Matagami	38.08	14	P	P	23 15 00.1	-2.2
	baz=202,SNR=5.9						
SIV	San Ignacio	41.48	133	P	P	23 15 29.5	-1.6
	comp=Z,3.4nm,0.9s,baz=322,slow=9.7,SNR=9.4						
FFC	Flin Flon	42.30	351	P	P	23 15 36.4	-0.8
FFC				IAmb	IAmb	23 15 39.7	
	comp=Z,9.3nm,0.9s						
SCHQ	Schefferville	45.65	19	P	P	23 16 01.1	-3.1
	comp=Z,7.5nm,0.8s,baz=227,slow=4.6,SNR=19						
SCHQ				LR	LR	23 36 01.4	
	comp=Z,370nm,18.8s,baz=232,slow=37						
CPUP	Villa Florida	51.19	140	LR	LR	23 39 49.8	
	comp=Z,77nm,18.4s,baz=316,slow=38						
BDFB	Brasilia	51.32	123	LR	LR	23 39 15.5	
	comp=Z,147nm,18.4s,baz=277,slow=37						
YKA	Yellowknife Ar	52.01	346	P	P	23 16 51.6	-1.1
	comp=Z,1.4nm,0.7s,baz=146,slow=7.8,SNR=15						
YKA				LR	LR	23 42 07.7	
	comp=Z,114nm,18.2s,baz=0.0,slow=40						
TAOE	Nuku Hiva Isla	53.45	248	eT	T	00 14 30.2	
	comp=Z,106nm,0.3s						
SPB	Sao Paulo	56.19	130	P	P	23 17 29.0	+5.2
PLCA	Paso Flores	56.93	161	LR	LR	23 35 57.9	
	comp=Z,74nm,21.8s,baz=9.0,slow=30						
INK	Inuvik	61.46	343	P	P	23 17 58.2	-1.4
	comp=Z,2.2nm,0.7s,baz=118,slow=8.1,SNR=9.7						
RES	Resolute Bay	61.51	359	P	P	23 17 57.3	-2.6
	comp=Z,4.7nm,0.7s,baz=189,slow=9.1,SNR=17						
IL31		63.93	337	P	P	23 18 17.9	+1.7
IL31				IAmb	IAmb	23 18 27.2	
	comp=Z,7.8nm,1.2s						
ILAR	Eielson Array	63.93	337	P	P	23 18 14.6	-1.6
	comp=Z,1.8nm,0.9s,baz=133,slow=4.5,SNR=16						
PPT2	Papeete2	65.36	244	eLR	LR	23 37 58.3	
	comp=Z,121nm,24.8s						
MLY	Manley	65.53	336	P	P	23 18 26.9	+0.2
MLY				IAmb	IAmb	23 18 28.8	
	comp=Z,9.3nm,1.3s						
SDPT	Sand Point	67.55	325	P	P	23 18 42.8	+3.1
TBI	Tubuai	67.70	238	eLR	LR	23 39 04.9	
	comp=Z,86nm,27.8s						
PMOZ	Porto Moniz, M	69.49	60	P	P	23 18 54.5	+2.1
MACI	Morro de la Ar	70.38	65	P	P	23 18 58.9	+0.9
ESDC	Sonseca Array	79.49	52	P	P	23 19 47.3	-3.0
	comp=Z,0.3nm,0.4s,baz=299,slow=6.1,SNR=4.8						
ESDC				LR	LR	23 50 07.9	
	comp=Z,54nm,20.5s,baz=195,slow=32						
TIC	Toumodi	84.67	84	ePKP2	P	23 20 16.4	-1.4
LIC	Lamto	84.75	85	ePKP2	P	23 20 16.9	-1.3
	comp=Z,26nm,0.9s						
DBIC	Dimbokro	84.82	84	P	P	23 20 17.1	-1.5
	comp=Z,3.4nm,0.6s,baz=290,slow=3.0,SNR=9.3						
DBIC				LR	LR	23 54 46.9	
	comp=Z,50nm,18.4s,baz=258,slow=33						
KIC	Kosan Boka	85.00	85	ePKP2	P	23 20 17.9	-1.6
	comp=Z,23nm,1.0s						
ARCES	ARCESS Array B	86.60	18	P	P	23 20 25.6	-0.7
	comp=Z,5.0nm,1.1s,baz=294,slow=8.8,SNR=2.7						
CLL	Collm	88.38	38	eP	P	23 20 34.0	-1.3
TORD	Torodi Ar. Bea	89.67	77	P	P	23 20 39.6	-2.4
	comp=Z,0.8nm,0.8s,baz=302,slow=3.9,SNR=3.9						
TORD				LR	LR	23 58 35.6	
	comp=Z,68nm,19.3s,baz=305,slow=34						
MODS	Modra-Piesok	92.01	39	eP	P	23 20 51.6	-0.7
VYHS	Vyhne	92.92	39	eP	P	23 20 55.8	-0.7
MKAR	Makanchi Array	119.98	5	PKP	PKPdf	23 26 33.5	-0.4
	comp=Z,0.1nm,0.2s,baz=299,slow=3.0,SNR=3.4						
KSH	Kashi	126.18	12	PKP	PKiKP	23 26 47.9	+1.3
KSH				sPKP		23 27 00.5	
KSH				PP	PP	23 28 46.3	+7.0
LZH	Lanzhou	128.99	344	ePKP	PKiKP	23 26 53.5	+1.1
LZH				pPKP	pPKPdf	23 27 04.6	-1.4
LZH				sPKP		23 27 09.3	
CD2	Chengdu	133.88	342	PKP	PKPdf	23 27 02.3	+1.3
CMAR	Chiang Mai Arr	147.03	342	PKPbc	PKPbc	23 27 27.9	+1.0
	comp=Z,1.7nm,0.4s,baz=346,slow=2.9,SNR=15						

GCMT 16 23:31:20.0±0.4, 34.85N±0.04×142.34E±0.04, h19km±1km, MW4.8/83, Moment Tensor Solution. s19,c20; s83,c104; Duration: 0 Moment tensor: Scale 10^{16} Nm; M_{rr}1.95±.16; $M_{\theta\theta}$-0.56±.10; $M_{\phi\phi}$-1.39±.10; $M_{r\theta}$-0.21±.27; $M_{r\phi}$-0.62±.06; $M_{\theta\phi}$0.33±.21; **Best double couple:** $M_0$1.87000×10^{16} **NP1:** ϕ_s216.00000°, δ43.00000°, λ103.00000°. **NP2:** ϕ_s19.00000°, δ49.00000°, λ79.00000°. **Principal axes:** T 2.0100, Plg81.0000°, Azm227.0000°; N -0.2800, Plg8.0000°, Azm27.0000°; P -1.7300, Plg3.0000°, Azm117.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT2	Papeete2	83.00	117	eS	S	23 54 48.5	+46
	54nm,23.0s						

SNET 17 00:04:02.1±1.1, 13.18N×91.02W, h15km±18km, ML3.9
UCR 17 00:04:02.1±1.1, 13.18N×91.06W, h21km±17km, ML3.8, mb4.4(NEIC)
GCG 17 00:04:03.6±0.7, 13.18N×91.16W, h12km±9km, MD4.5
NEIC 17 00:04:07.8±2.2, 13.22N±0.08×90.82W±0.03, h57km±6km, mb4.4/84, Md4.4/10(MEX), Error ellipse: s-maj=11.5km s-min=3.7km az=194.0
IDC 17 00:04:11.8±2.3, 13.56N×90.44W, h78km±17km, mb3.8/11, mb1 4.0/15, mb1mx3.8/33, mbtmp4.1/15, MS3.9/7, Ms1 3.9/7, ms1mx3.5/40, Error ellipse: s-maj=36.0km s-min=12.0km az=44.0

ISC 17 00:04:03.2±2.3, 13°.08N±0°.06×91°.04W±0°.05, h24km±15km, n257, σ1§53/249, mb4.4/45, MS4.0/7, 2D, Near coast of Guatemala

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

IXG Ixpaco 1.23 28 ⇓iP Pn 00 04 25.0 -0.2
PCG Pacaya 1.37 18 ⇓eP Pn 00 04 27.5 +0.3
FUG Fuego 3 1.38 8 eP Pn 00 04 27.2 +0.1
CEVE Cerro Verde 1.56 61 eP Pn 00 04 28.2 -1.5
CEVE eS Sn 00 04 50.1 +0.7
CEVE IAML 00 04 57.2
comp=Z,6μm,0.6s
CEVE Cerro Verde 1.56 61 eP Pn 00 04 28.2 -1.5
CEVE eS Sn 00 04 50.1 +0.7
CEVE IAML 00 04 57.2
comp=Z,6μm,0.6s
SBLS San Blas 1.57 61 eP Pn 00 04 28.7 -1.1
SBLS San Blas 1.57 61 eP Pn 00 04 28.7 -1.1
RTR El Retiro 1.58 59 eP Pn 00 04 29.0 -0.9
RTR El Retiro 1.58 59 eP Pn 00 04 29.0 -0.9
SNJE San Jose 1.60 60 eP Pn 00 04 28.8 -1.4
SNJE San Jose 1.60 60 eP Pn 00 04 28.8 -1.4
NBG Las Nubes 1.65 24 eP Pn 00 04 32.1 +1.2
NBG eS Sb 00 04 54.4 +0.9
UNIC Universidad Ca 1.70 58 eP Pn 00 04 30.7 -0.8
UNIC eS Sn 00 04 52.4 -0.2
UNIC IAML 00 05 02.7
comp=Z,622nm,0.4s
UNIC Universidad Ca 1.70 58 eP Pn 00 04 30.7 -0.8
UNIC eS Sn 00 04 52.4 -0.2
UNIC IAML 00 05 02.7
comp=Z,622nm,0.4s
STG3 Santiaguito 3, 1.71 342 eP Pn 00 04 31.3 -0.4
BOQS Boqueron 1.83 69 eP Pn 00 04 32.8 -0.6
SNET Serv Nac Est T 1.86 71 eP Pn 00 04 32.9 -0.8
SNET eS Sn 00 04 55.9 -0.6
SNET IAML 00 05 04.5
comp=Z,1μm,0.3s
SNET Serv Nac Est T 1.86 71 Pn Pn 00 04 33.9 +0.2
SNET Serv Nac Est T 1.86 71 eP Pn 00 04 32.9 -0.8
SNET eS Sn 00 04 55.9 -0.6
SNET IAML 00 05 04.5
comp=Z,1μm,0.3s
LFU La Fuente 1.99 70 eP Pn 00 04 34.9 -0.5
LFU La Fuente 1.99 70 eP Pn 00 04 34.9 -0.5
APG El Apazote 2.00 16 P Pn 00 04 36.6 +0.9
comp=Z,73nm,0.3s,baz=137,slow=8.6,SNR=202
APG S Sn 00 05 00.8 +0.8
comp=Z,157nm,0.3s,baz=295,slow=21,SNR=14
LFRS El Faro 2.00 74 eP Pn 00 04 34.7 -0.9
LFRS eS Sn 00 05 01.1 +1.2
LBRS Las Brisas 2.05 71 eP Pn 00 04 35.6 -0.6
MTO3 Montecristo 2.09 51 eP Pn 00 04 36.5 -0.5
MTO3 Montecristo 2.09 51 eP Pn 00 04 36.5 -0.5
PAVA Las Pavas 2.14 73 eP Pn 00 04 37.3 -0.3
PAVA Las Pavas 2.14 73 eP Pn 00 04 37.3 -0.3
COEG Centro de Oper 2.17 75 eP Pn 00 04 36.9 -1.0
COEG Centro de Oper 2.17 75 eP Pn 00 04 36.9 -1.0
MRL Marmol 2.39 33 eP Pn 00 04 42.8 +1.8
MRL eS Sb 00 05 15.1 +0.2
COEB Comit de Eme 2.48 80 eP Pn 00 04 41.3 -0.9
COEB Comit de Eme 2.48 80 eP Pn 00 04 41.3 -0.9
TECA Tecapa 2.50 80 eP Pn 00 04 42.8 +0.2
TECA Tecapa 2.50 80 eP Pn 00 04 42.8 +0.2
PACA Pacayal 2.67 81 eP Pn 00 04 44.2 -0.7
PACA Pacayal 2.67 81 eP Pn 00 04 44.2 -0.7
JUCU Jucuar¡n 2.72 86 eP Pn 00 04 44.7 -0.8
JUCU Jucuar¡n 2.72 86 eP Pn 00 04 44.7 -0.8
FAGO Alcalda de S 2.92 77 eP Pn 00 04 47.6 -0.5
FAGO Alcalda de S 2.92 77 eP Pn 00 04 47.6 -0.5
LCND La Caada 3.07 85 eP Pn 00 04 50.1 -0.2
LCND La Caada 3.07 85 eP Pn 00 04 50.1 -0.2
CNCH Conchagua 3.13 86 eP Pn 00 04 50.8 -0.4
CNCH Conchagua 3.13 86 eP Pn 00 04 50.8 -0.4
CCIG Comitan 3.36 342 Pn 00 04 56.9 +2.4
CCIG Comitan 3.36 342 Pn 00 04 56.4 +2.0
CCIG Comitan 3.36 342 eP Pn 00 04 56.4 +2.0
PCIG 3.36 321 Pn 00 04 53.9 -0.3
PCIG 3.36 321 eP Pn 00 04 53.9 -0.3
TGUH Tegucigalpa,Un 3.79 75 Pn Pn 00 05 00.3 0.0
TGIG 4.20 332 Pn 00 05 08.7 +2.9
TGIG 4.20 332 eP Pn 00 05 08.7 +2.9
ESTN Estel 4.55 89 Pn Pn 00 05 10.1 -0.5
CMIG Matias Romero 5.45 318 P Pn 00 05 23.5 +0.4
comp=Z,2.1nm,0.3s,baz=130,slow=12,SNR=19
CMIG S Sb 00 06 35.2 -7.7
comp=Z,4.0nm,0.3s,baz=185,slow=23,SNR=3.4
CMIG Matias Romero 5.45 318 Pn 00 05 26.7 +3.6
CMIG Matias Romero 5.45 318 iP Pn 00 05 26.7 +3.6
HUIG Huatulco 5.59 299 Pn 00 05 26.3 +1.3
HUIG Huatulco 5.59 299 iP Pn 00 05 26.3 +1.3
ACON Acoyapa 5.83 100 Pn Pn 00 05 30.2 +2.0
JTS Las Juntas de 6.57 114 P Pn 00 05 40.6 +2.2
comp=Z,2.3nm,0.3s,baz=359,slow=20,SNR=6.1
JTS S Sn 00 06 53.1 +0.5
comp=Z,1.7nm,0.3s,baz=346,slow=21,SNR=1.7
JTS Las Juntas de 6.57 114 Pn 00 05 39.7 +1.3
ESPN Las Esperanzas 6.63 97 Pn Pn 00 05 40.7 +1.5
HDC Heredia 7.44 114 Pn Pn 00 05 52.9 +2.4
TLIG Tlapa 8.52 302 Pn 00 06 09.3 +3.9
HKT Hockley 17.37 346 P Pn 00 08 04.9 +0.9
553A Crawfordville 18.09 19 P 00 08 13.8 +0.5
553A IAmb IAmb 00 08 24.9
comp=Z,27nm,0.9s
346A Big Creek Wild 18.28 4 P 00 08 15.8 +0.5
344A Westbrook Farm 18.29 1 P P 00 08 15.6 +0.1
ROSC El Rosal 18.42 115 P Pn 00 08 17.9 +0.4
comp=Z,0.2nm,0.3s,baz=251,slow=18,SNR=2.6
ROSC El Rosal 18.42 115 P Pn 00 08 19.5 +2.0
ROSC IAmb IAmb 00 08 31.6
comp=Z,21nm,1.0s
FLOC Florencia 19.04 126 P Pn 00 08 26.4 +1.7
RUSC La Rusia 19.08 110 P Pn 00 08 26.7 +1.1
HPIG 19.44 317 P Pn 00 08 32.8 +3.2
WHTX Lake Whitney, 19.73 344 P Pn 00 08 33.4 +0.7
TXAR Lajitas Array 19.98 326 P Pn 00 08 37.1 +1.2
comp=Z,0.3nm,0.3s,baz=151,slow=12,SNR=23
TXAR PcP PcP 00 12 52.5 +2.4
comp=Z,0.0nm,0.3s,baz=148,slow=5.3,SNR=4.0
LRAL Lakeview Retre 20.21 10 Pn 00 08 38.1 -0.3
LRAL IAmb IAmb 00 08 43.5
comp=Z,16nm,1.1s
LRAL Lakeview Retre 20.21 10 P Pn 00 08 38.0 -0.4
baz=192,SNR=6.0
SDV Santo Domingo 20.45 100 P P 00 08 38.2 -1.3
comp=Z,0.5nm,0.3s,baz=307,slow=11,SNR=7.8
SDV Santo Domingo 20.45 100 P P 00 08 38.3 -1.1
WLAR White Oak Lake 20.61 355 P P 00 08 41.2 +0.5
WLAR IAmb IAmb 00 08 48.1
comp=Z,21nm,1.0s
Z50A Ashland 20.62 12 IAmb IAmb 00 08 50.7
comp=Z,14nm,0.8s
Z50A Ashland 20.62 12 P P 00 08 41.5 +0.6
baz=195
154A Montrose 20.76 19 P P 00 08 41.6 -0.7
Z52A Williamson 20.91 16 P P 00 08 44.4 +0.3
baz=199
ABTX Abilene, Hawle 20.99 339 P P 00 08 45.9 +1.0
ABTX IAmb IAmb 00 09 04.0
comp=Z,14nm,1.1s
ABTX Abilene, Hawle 20.99 339 P P 00 08 46.2 +1.3
baz=157
Y49A Blount Mountai 21.11 11 IAmb IAmb 00 08 51.8
comp=Z,24nm,1.2s
LPIG La Paz 21.28 304 LR LR 00 18 13.0
comp=Z,254nm,18.6s,baz=204,slow=39
GOGA Godfrey 21.39 18 P P 00 08 50.1 +0.9
GOGA IAmb IAmb 00 08 55.2
comp=Z,15nm,1.0s
GOGA Godfrey 21.39 18 P P 00 08 50.6 +1.4
baz=201
OXF Oxford 21.39 4 P P 00 08 50.0 +0.9
baz=185
Y51A Rockmart 21.43 14 P P 00 08 51.1 +1.5
baz=197,SNR=7.7
MIAR Mount Ida 21.50 354 IAmb IAmb 00 08 53.3
comp=Z,15nm,1.2s
MIAR Mount Ida 21.50 354 P P 00 08 50.7 +0.3
baz=174
Y52A Lilburn 21.65 16 P P 00 08 52.6 +0.7
Y52A IAmb IAmb 00 08 57.2
comp=Z,15nm,1.1s
Y52A Lilburn 21.65 16 P P 00 08 53.0 +1.0
baz=200
Y53A Monroe 21.77 17 P P 00 08 54.5 +1.3
baz=201
W41B Gary Mavity, V 22.03 357 P P 00 08 56.4 +0.4
baz=178
Y54A Tignall 22.04 19 P P 00 09 00.8 +4.7
baz=203
W39A Magazine 22.16 354 P P 00 08 58.7 +1.3
baz=174
W49A Belvidere 22.37 10 P P 00 09 00.6 +0.9
baz=193
X52A Dahlonega 22.39 16 P P 00 09 00.0 +0.1
baz=199,SNR=5.4
X53A Estanollee 22.46 17 P P 00 09 00.5 -0.1
baz=201
W50A Signal Mountai 22.63 12 P P 00 09 04.0 +1.5
W50A IAmb IAmb 00 09 06.3
comp=Z,12nm,1.1s
W50A Signal Mountai 22.63 12 P P 00 09 02.4 -0.1
baz=195
W51A Cleveland 22.71 13 P P 00 09 03.9 +0.6
baz=197
MNTX Cornudas Mount 22.75 327 IAmb IAmb 00 09 13.3
comp=Z,9.3nm,0.8s
MNTX Cornudas Mount 22.75 327 P P 00 09 05.1 +1.3
baz=142,SNR=18
X54A Belton 22.77 19 P P 00 09 04.2 +0.2
baz=203
FNO Franklin 22.82 346 P P 00 09 04.3 -0.2
W52A Murphy 22.85 15 P P 00 09 04.9 +0.1
baz=199
V48A Smith Brothers 22.88 9 P P 00 09 04.8 -0.3
LCAR Lake Charles 22.90 360 P P 00 09 06.2 +1.0
LCAR IAmb IAmb 00 09 25.2
comp=Z,18nm,1.1s
BG3 Lake Jocassee 23.02 17 P P 00 09 06.3 -0.3
BG3 IAmb IAmb 00 09 25.4
comp=Z,13nm,1.4s
CPCT Cooper Cave 23.04 14 P P 00 09 06.6 -0.2
V49A McMinnville 23.06 11 P P 00 09 06.7 -0.2
baz=194
W53A Cullowhee 23.12 17 P P 00 09 08.4 +0.7
baz=201
V50A Pikevile 23.13 12 P P 00 09 07.4 -0.2
baz=196
WVT Waverly 23.14 7 P P 00 09 07.3 -0.4
WVT Waverly 23.14 7 P P 00 09 07.1 -0.6
baz=189
U40A Yellville 23.24 356 IAmb IAmb 00 09 10.2
comp=Z,8.2nm,0.8s
U40A Yellville 23.24 356 P P 00 09 08.4 -0.3
baz=176,SNR=7.1
W54A Cherokee Point 23.33 19 P P 00 09 09.3 -0.3
baz=203
MSTX Muleshoe 23.38 335 P P 00 09 10.5 +0.2
baz=151
TKL Tuckaleechee C 23.42 15 P P 00 09 10.0 -0.5
comp=Z,3.9nm,0.6s,baz=190,slow=11,SNR=14
TKL LR LR 00 18 59.1
comp=Z,509nm,19.6s,baz=233,slow=39
TKL Tuckaleechee C 23.42 15 IAmb IAmb 00 09 23.6
comp=Z,22nm,1.3s
V52A Sevierville 23.64 15 P P 00 09 13.0 +0.3
baz=199
ATAH Atahualpa 23.68 147 LR LR 00 17 15.2
comp=Z,130nm,18.3s,baz=350,slow=33
V53A Saluda 23.69 17 IAmb IAmb 00 09 27.2
comp=Z,15nm,1.2s
V53A Saluda 23.69 17 P P 00 09 13.7 +0.5
baz=201
U49A Red Boiling Sp 23.81 11 P P 00 09 13.3 -1.0
baz=194
U50A Jamestown 23.90 12 P P 00 09 14.5 -0.7
baz=196
MGMO Mountain Grove 24.00 358 IAmb IAmb 00 09 18.0
comp=Z,11nm,0.8s
V54A Nebo 24.04 18 P P 00 09 17.0 +0.5
baz=203
U51A La Follette 24.05 14 P P 00 09 17.5 +0.9
baz=198
U52A Thorn Hill 24.22 15 P P 00 09 18.6 +0.4
baz=199
TZTN Tazewell 24.32 15 IAmb IAmb 00 09 24.5
comp=Z,20nm,1.2s
TZTN Tazewell 24.32 15 P P 00 09 18.5 -0.5
baz=199
U53A Fall Branch 24.41 17 P P 00 09 18.4 -1.5
baz=201
T49A Edmonton 24.43 11 IAmb IAmb 00 09 29.0
comp=Z,8.2nm,0.8s
T49A Edmonton 24.43 11 P P 00 09 19.0 -1.0
baz=194
T50A Nancy 24.48 12 P P 00 09 19.5 -1.1
baz=195
S44A Carbondale 24.57 3 IAmb IAmb 00 09 22.6
comp=Z,15nm,1.1s
T51A Gray 24.62 14 P P 00 09 21.2 -0.6
baz=198
121A Cookes Peak, D 24.70 324 P P 00 09 24.6 +1.8
121A IAmb IAmb 00 09 29.1
comp=Z,17nm,1.0s
121A Cookes Peak, D 24.70 324 P P 00 09 26.7 +3.9
baz=138,SNR=11
319A Douglas 24.77 320 P P 00 09 24.4 +1.1
U54A Nelsons Funny 24.77 18 P P 00 09 23.5 +0.3
U54A IAmb IAmb 00 09 29.2
comp=Z,9.9nm,0.8s
U54A Nelsons Funny 24.77 18 P P 00 09 22.8 -0.4
baz=203
CCM Cathedral Cave 24.88 360 P P 00 09 23.3 -0.8
CCM Cathedral Cave 24.88 360 P P 00 09 23.3 -0.8
baz=180
S49A Springfield 25.14 11 P P 00 09 25.4 -1.0
baz=194
S51A Beattyville 25.35 14 P P 00 09 28.0 -0.3
baz=198
WCI Wyandotte Cave 25.40 9 P P 00 09 28.2 -0.6
WCI IAmb IAmb 00 09 28.5
comp=Z,18nm,1.1s
WCI Wyandotte Cave 25.40 9 P P 00 09 28.1 -0.7
baz=192
S52A Salyersville 25.51 15 P P 00 09 30.6 +0.8
baz=199
R49A Shelbyville 25.65 11 P P 00 09 30.1 -1.0
baz=194
R50A Paris 25.80 12 P P 00 09 31.5 -1.0
R50A IAmb IAmb 00 09 37.9
comp=Z,7.1nm,0.7s
R50A Paris 25.80 12 P P 00 09 31.5 -1.0
baz=196
ANMO Albuquerque 25.86 330 P P 00 09 35.1 +1.8
comp=Z,0.8nm,0.7s,baz=144,slow=14,SNR=3.5
ANMO Albuquerque 25.86 330 IAmb IAmb 00 09 42.9
comp=Z,1.1nm,0.8s
TUC Tucson 26.34 320 P P 00 09 40.5 +2.9
TUC Tucson 26.34 320 P P 00 09 41.0 +3.5
baz=132
Q51A Peebles 26.73 13 P P 00 09 40.1 -0.7
baz=198
P48A Milroy 26.74 10 P P 00 09 39.5 -1.5
baz=193
Q52A Bidwell 26.93 15 P P 00 09 41.5 -1.2
baz=200
Q54A Coxs Mills 27.34 17 P P 00 09 45.7 -0.7
baz=203
X18A Snowflake 27.39 324 P P 00 09 48.5 +1.4
W18A Petrified Fore 27.70 326 P P 00 09 53.2 +3.4
baz=138
O50A Cable 27.75 12 P P 00 09 48.7 -1.3
baz=196
ACSO Alum Creek Sta 27.96 13 P P 00 09 51.5 -0.4
ACSO IAmb IAmb 00 09 58.5
comp=Z,6.9nm,0.8s
ACSO Alum Creek Sta 27.96 13 P P 00 09 51.2 -0.7
baz=198
N48A Decatur 28.17 10 P P 00 09 52.1 -1.7
baz=193
X16A Lo Mia Camp, P 28.18 322 P P 00 09 55.5 +1.3
O54A Avella 28.58 17 P P 00 09 56.9 -0.6
baz=203
L47A Sherwood 29.24 9 P P 00 10 01.3 -2.0
baz=192
ISCO Idaho Springs 29.56 337 P P 00 10 10.0 +3.5
baz=151
M53A WI Miller and 29.67 16 P P 00 10 06.2 -0.9
baz=201
L50A Kingsville 29.73 12 P P 00 10 05.6 -2.1
baz=197
J49A Marlette 30.94 11 P P 00 10 16.1 -2.1
baz=196
I45A Fountain 31.13 7 P P 00 10 17.4 -2.5
I45A Fountain 31.13 7 P P 00 10 18.0 -1.9
baz=190
MTPU Mount Pierson 31.18 327 P P 00 10 23.1 +2.2
SPMN Marine on St. 32.08 358 P P 00 10 27.0 -1.3
baz=177,SNR=8.3
G45A Suttons Bay 32.19 7 P P 00 10 27.4 -1.8
baz=190
I52A Shelburne 32.26 15 P P 00 10 27.4 -2.5
baz=201
PSUT Pine Spring 32.45 325 P P 00 10 33.7 +1.8
F45A CMU Biological 32.84 7 P P 00 10 33.1 -1.8
baz=190
H52A Wyevale 32.87 15 P P 00 10 33.9 -1.3
baz=201
MPMC Manual Prospec 33.00 318 P P 00 10 39.8 +3.1
baz=127
H53A Bobcaygeon 33.15 16 P P 00 10 36.4 -1.3
baz=203
R11A Troy Canyon, C 33.30 323 P P 00 10 40.2 +0.9
R11A IAmb IAmb 00 10 44.3
comp=Z,8.6nm,1.5s
R11A Troy Canyon, C 33.30 323 P P 00 10 42.7 +3.4
baz=133
G53A Haliburton 33.65 16 P P 00 10 40.3 -1.7
baz=203
PDAR Pinedale Array 33.65 335 P P 00 10 43.0 +0.7
comp=Z,0.7nm,0.8s,baz=138,slow=13,SNR=4.1
G54A Lake Saint Pet 34.04 16 P P 00 10 43.9 -1.6
baz=204
F52A Sundridge 34.09 15 P P 00 10 44.0 -1.8
baz=201
D46A Sault St. Mari 34.22 9 P P 00 10 45.0 -1.9
baz=193
D47A Chapleau 34.52 10 P P 00 10 47.3 -2.3
baz=194
ALGO Algonquin Park 34.57 16 P P 00 10 48.3 -1.6
baz=203
SNOW Snow King Moun 34.72 334 P P 00 10 51.4 -0.2
E51A G1948 Merrick 34.74 14 P P 00 10 49.8 -1.7
baz=200
EYMN Ely 34.77 359 IAmb IAmb 00 10 51.3
comp=Z,4.6nm,0.7s
EYMN Ely 34.77 359 P P 00 10 49.6 -2.1
baz=180,SNR=5.7
ELK Elko 34.77 327 P P 00 10 53.8 +1.7
ELK IAmb IAmb 00 10 57.7
comp=Z,2.6nm,0.9s
NV11 Mina Array Sit 34.89 321 IAmb IAmb 00 10 58.9
comp=Z,7.3nm,1.1s
MDPB Devils Postpil 34.97 319 P P 00 10 56.1 +2.2
MDPB IAmb IAmb 00 10 58.3
comp=Z,6.8nm,1.2s
NVAR Mina Array Bea 34.98 321 P P 00 10 57.2 +3.3
comp=Z,4.3nm,0.8s,baz=138,slow=8.4,SNR=25
NVAR PcP PcP 00 13 28.8 +2.8
comp=Z,1.1nm,0.8s,baz=121,slow=4.3,SNR=5.4
E53A Dumoine, Ponti 35.06 16 P P 00 10 53.7 -0.6
baz=204
E54A Lac Daplat, Po 35.24 17 P P 00 10 54.1 -1.7
baz=204
KVN Kaiserville 35.24 322 P P 00 10 58.2 +2.0
KVN IAmb IAmb 00 11 01.5
comp=Z,3.9nm,1.0s
D51A Lot 18 Range I 35.29 14 P P 00 10 54.2 -2.0
baz=200
AGMN Agassiz Nation 35.34 354 P P 00 10 55.5 -1.1
baz=172
D53A Lac Vacive, Po 35.70 16 P P 00 10 58.8 -1.0
D53A Lac Vacive, Po 35.70 16 P P 00 10 58.8 -1.0
baz=203
D54A Lac Fusel, La 36.05 17 P P 00 11 01.3 -1.5
baz=205
PNTR Pine Nut 36.18 321 P P 00 11 05.0 +0.8
PNTR IAmb IAmb 00 11 11.8
comp=Z,5.8nm,1.0s
GCMT Greycliff 36.23 338 P P 00 11 06.4 +1.9
D55A Sainte-Anne-du 36.27 18 P P 00 11 02.5 -2.1
baz=207
MCMT McKenzie Canyo 36.71 334 P P 00 11 10.7 +2.0
ULM Lac du Bonnet 37.28 355 P P 00 11 11.4 -1.7
comp=Z,12nm,0.9s,baz=174,slow=10,SNR=19
LSQQ Lebel-sur-Quev 37.71 15 P P 00 11 15.0 -1.8
baz=203
WVOR Wild Horse Val 37.78 326 P P 00 11 19.9 +2.2
MATQ Matagami 38.20 14 P P 00 11 19.1 -1.9
baz=202,SNR=6.2
J08A Circle Bar Ran 38.32 327 P P 00 11 22.8 +0.6
F10A Beach Ranch, E 39.57 331 P P 00 11 32.4 -0.2
JTMT Jette 39.64 335 P P 00 11 33.1 -0.1
JTMT IAmb IAmb 00 11 49.8
comp=Z,6.3nm,1.2s
FFC Flin Flon 42.43 351 P P 00 11 55.4 -0.5
FFC IAmb IAmb 00 11 55.7
comp=Z,5.5nm,1.0s
SCHQ Schefferville 45.77 19 P P 00 12 20.4 -2.3
comp=Z,10nm,1.0s,baz=210,slow=6.2,SNR=6.1
SCHQ Schefferville 45.77 19 IAmb IAmb 00 12 22.2
comp=Z,13nm,1.0s
YKA Yellowknife Ar 52.14 346 P P 00 13 10.6 -0.8
comp=Z,1.1nm,0.6s,baz=148,slow=7.6,SNR=20
YKA PcP PcP 00 14 23.8 +0.8
comp=Z,0.4nm,0.7s,baz=153,slow=3.6,SNR=5.7
YKA LR LR 00 39 55.0
comp=Z,136nm,18.9s,baz=0.0,slow=41
C36M Paulatuk 60.00 347 P P 00 14 05.2 -2.3
baz=142,SNR=5.4
INK Inuvik 61.59 343 P P 00 14 18.2 -0.1
INK IAmb IAmb 00 14 19.8
comp=Z,3.0nm,0.8s
RES Resolute Bay 61.63 359 IAmb IAmb 00 14 28.2
comp=Z,3.1nm,1.1s
IL31 64.05 337 P P 00 14 35.6 +0.9
ILAR Eielson Array 64.05 337 P P 00 14 35.0 +0.1
comp=Z,1.9nm,0.9s,baz=132,slow=5.1,SNR=14
MLY Manley 65.66 336 P P 00 14 45.9 +0.6
SUMG Summit 66.88 15 iP P 00 14 50.7 -2.7
comp=Z,18nm,0.9s
SDPT Sand Point 67.67 325 P P 00 14 59.0 +0.8
DAG Danmarks Havn 73.34 13 iP P 00 15 30.0 -2.5
comp=Z,2.6nm,0.6s
NOA NORSAR Array B 84.51 29 LR LR 00 52 37.6
comp=Z,50nm,19.5s,baz=290,slow=35
TIC Toumodi 84.66 84 eP P 00 16 34.7 -1.0
TIC Toumodi 84.66 84 P P 00 16 34.7 -1.0
LIC Lamto 84.74 85 eP P 00 16 35.4 -0.7
comp=Z,9.9nm,0.7s
LIC Lamto 84.74 85 P P 00 16 35.4 -0.7
DBIC Dimbokro 84.81 84 P P 00 16 35.4 -1.1
comp=Z,2.5nm,0.5s,baz=264,slow=7.0,SNR=6.9
DBIC Dimbokro 84.81 84 IAmb IAmb 00 16 35.9
comp=Z,19nm,1.4s
KIC Kosan Boka 84.99 85 eP P 00 16 36.6 -0.8
comp=Z,15nm,0.9s
ARCES ARCESS Array B 86.72 18 LR LR 00 54 22.5
comp=Z,74nm,19.0s,baz=294,slow=35
TORD Torodi Ar. Bea 89.68 77 P P 00 16 58.1 -1.9
comp=Z,0.4nm,0.7s,baz=284,slow=5.8,SNR=2.9
GERES GERESS Array B 89.71 40 P P 00 16 57.6 -2.1
comp=Z,0.2nm,0.4s,baz=280,slow=5.9,SNR=3.3
TIXI Tiksi 91.35 348 LR LR 01 04 09.9
comp=Z,69nm,18.8s,baz=48,slow=40
MKAR Makanchi Array 120.11 5 PKP PKPdf 00 22 51.8 -0.5
comp=Z,0.2nm,0.7s,baz=18,slow=3.8,SNR=3.4
KSH Kashi 126.30 12 PKP PKiKP 00 23 05.9 +1.0
KSH sPKP 00 23 20.3
KSH PP PP 00 24 57.8 -0.1
LZH Lanzhou 129.12 344 ePKP PKiKP 00 23 11.3 +0.6
LZH pPKP sPKPdf 00 23 22.3 +2.2
LZH sPKP 00 23 25.9
CMAR Chiang Mai Arr 147.16 342 PKPbc PKPbc 00 23 46.0 +0.8
comp=Z,1.5nm,0.3s,baz=357,slow=3.6,SNR=9.7

IDC 17 00:30:39.6±1.4, 30°.28N×79°.65E, h0km, mb3.6/7, mb1 3.7/10, mb1mx3.4/49, mbtmp3.6/10, ML3.4/3, MS3.4/2, Ms1 3.4/2, ms1mx2.8/53, Error ellipse: s-maj=29.5km s-min=24.4km az=29.0

DMN 17 00:30:40.7±0.3, 29°.83N×79°.56E, h10km, Ml4.6/11, Error ellipse: s-maj=40.9km s-min=5.6km az=21.0

NDI 17 00:30:42.4±2.0, 30°.30N×79°.94E, h10km, ML3.5

ISC 17 00:30:39.9±0.6, 30°.21N±0°.05×79°.89E±0°.04, h10km, n32, σ1§44/47, mb3.5/5, Western Xizang-India border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOSI	Joshimath	0.51	313	eP	Pg	00 30 49.3	-0.7
JOSI				eS	Sg	00 30 55.4	-1.3
JOSI				IAML		00 31 00.5	
	comp=N,29µm,1.0s						
JOSI				IAML		00 31 09.1	
	comp=E,3µm,0.6s						
DDI	Dehra Dun	1.68	274	eP	Pn	00 31 11.0	+1.5
DDI				eS	Sb	00 31 32.8	+0.7
DDI				IAML		00 31 34.9	
	comp=N,1µm,0.2s						
DDI				IAML		00 31 35.4	
	comp=E,912nm,0.2s						
SMLA	Simla	2.60	291	eP	Pn	00 31 24.4	+2.3
SMLA				eS	Sn	00 31 54.3	+0.6
SMLA				IAML		00 32 05.5	
	comp=N,258nm,0.2s						
SMLA				IAML		00 32 08.1	
	comp=E,216nm,0.7s						
NDI	New Delhi	2.86	239	ex	Pb	00 31 30.0	-1.0
NDI				ex	Sn	00 32 02.0	+2.0
SONA	Sohna	3.20	233	ex	Pb	00 31 40.0	+3.1
SONA				ex	x	00 32 13.8	
BHK	Bhakra	3.30	292	ex	Pb	00 31 41.2	+2.6
DHRM	DHARAMSHALA	3.76	304	eP	Pn	00 31 39.0	+0.8
DHRM				IAML		00 31 44.5	
	comp=N,43nm,0.5s						
DHRM				IAML		00 31 46.5	
	comp=E,34nm,0.5s						
DHRM				eS	Sn	00 32 22.2	-0.4
DANN	Dangsing	3.78	118	ePn	Pn	00 31 40.4	+1.9
DANN				eSn	Sn	00 32 23.8	+0.6
	comp=E,134nm,0.2s						
THN	Thein Dam	4.28	302	eP	Pn	00 31 47.0	+1.9
THN				eS	Sn	00 32 35.0	0.0
GKN	Gorkha	4.62	117	ePn	Pn	00 31 51.7	+1.7
GKN				eSn	Sn	00 32 43.7	-0.2
	comp=E,324nm,0.2s						
DMN	Daman	5.18	119	ePn	Pn	00 31 58.9	+1.1
DMN				eSn	Sn	00 32 57.5	-0.2
	comp=E,72nm,0.3s						
KKN	Kakani	5.22	116	ePn	Pn	00 31 59.5	+1.2
KKN				eSn	Sn	00 32 58.7	0.0
	comp=E,56nm,0.2s						
PKIN	Phulchoki	5.42	118	ePn	Pn	00 32 02.3	+1.3
PKIN				eSn	Sn	00 33 03.5	-0.1
	comp=E,73nm,0.2s						
PKI	Pulchoki	5.43	118	ePn	Pn	00 32 02.3	+1.0
PKI				eSn	Sn	00 33 03.5	-0.5
	comp=E,86nm,0.3s						
GUN	Gumba	5.64	112	ePn	Pn	00 32 06.1	+1.9
GUN				eSn	Sn	00 33 09.2	0.0
	comp=E,83nm,0.3s						
JIRN	Jiri	6.00	114	ePn	Pn	00 32 10.2	+1.1
JIRN				eSn	Sn	00 33 16.9	-1.2
	comp=E,179nm,0.2s						
RAMN	Ramite	6.66	118	ePn	Pn	00 32 18.4	+0.3
RAMN				eSn	Sn	00 33 31.4	-2.7
	comp=E,166nm,0.2s						
JBP	Jabalpur	7.01	180	ex	Pn	00 32 22.4	-0.3
JBP				ex	x	00 33 38.9	
JBP				AML	AML	00 33 59.5	
	comp=Z,30nm,0.3s						
ODAN	Odare	7.31	115	ePn	Pn	00 32 27.8	+0.7
ODAN				eSn	Sn	00 33 48.0	-2.3
	comp=Z,45nm,0.2s						
TAPN	Taplejung	7.35	111	ePn	Pn	00 32 29.4	+1.8
TAPN				eSn	Sn	00 33 49.8	-1.5
	comp=Z,61nm,0.5s						
POO	Poona	12.90	207	ex	Sn	00 36 06.0	-1.2
AAK	Ala-Archa	13.16	342	Pn	Pn	00 33 47.1	0.0
	comp=Z,0.1nm,0.3s,baz=175,slow=12,SNR=4.5						
AAK				LR	LR	00 39 31.7	
	comp=Z,168nm,18.7s,baz=307,slow=41						
MKAR	Makanchi Array	16.66	6	Pn	Pn	00 34 31.0	-2.4
	comp=Z,0.3nm,0.3s,baz=195,slow=14,SNR=14						
GEYT	Alibeck	19.66	299	P	P	00 35 07.1	-2.0
	comp=Z,0.1nm,0.3s,baz=85,slow=5.1,SNR=2.8						
KURBB	Kurchatov Arra	20.42	357	P	P	00 35 16.3	-0.8
	comp=Z,0.5nm,0.3s,baz=183,slow=11,SNR=7.6						
CMAR	Chiang Mai Arr	20.82	120	P	Pn	00 35 26.9	+2.7
	comp=Z,0.6nm,0.3s,baz=308,slow=11,SNR=6.1						
PALK	Pallekele	22.83	178	LR	LR	00 45 14.9	
	comp=Z,92nm,21.1s,baz=30,slow=38						
ZALV	Zalesovo Beam	23.98	7	P	P	00 35 54.8	+0.3
	comp=Z,0.4nm,0.3s,baz=207,slow=13,SNR=4.2						
AKTO	Aktyubinsk	26.07	327	P	P	00 36 13.8	+0.3
	comp=Z,3.9nm,0.7s,baz=119,slow=11,SNR=13						
SONM	Songino Array	26.83	42	P	P	00 36 22.6	+2.0
	comp=Z,0.3nm,0.7s,baz=232,slow=9.0,SNR=3.8						
FINES	FINESS Array B	46.84	328	P	P	00 39 09.8	0.0
	comp=Z,1.3nm,0.6s,baz=114,slow=8.5,SNR=8.3						
TORD	Torodi Ar. Bea	73.49	276	P	P	00 42 12.1	-1.1
	comp=Z,0.3nm,0.8s,baz=48,slow=4.1,SNR=2.6						

ATH 17 00:34:20.2, 38°.17N×20°.40E, h14km, ML2.3/16, Error ellipse: s-maj=1.4km s-min=0.8km az=251.0
THE 17 00:34:20.5, 38°.19N×20°.40E, h14km, ML3.2/8, Error ellipse: s-maj=1.0km s-min=0.5km az=261.0
ISC 17 00:34:20.5±0.9, 38°.18N±0°.02×20°.41E±0°.04, h14km±4km, n60, σ0s.55/80, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	280	P	Pg	00 34 22.8	-0.2
CHV1				S	Sg	00 34 24.7	0.0
	37µm,0.1s						
LXRA	Lixouri, Kepha	0.03	43	P	Pg	00 34 23.0	0.0
LXRA				S	Sg	00 34 24.6	-0.1
LXR1	Lixouri, Cepha	0.03	43	P	Pg	00 34 23.0	0.0
LXR1				S	Sg	00 34 25.0	+0.3
	24µm,0.2s						
ARGA	Argostoli. Kep	0.05	92	P	Pg	00 34 23.0	-0.2
ARGA				S	Sg	00 34 24.8	-0.2
KEF3	Kipouria, Keph	0.06	295	P	Pg	00 34 23.1	-0.1
KEF3				S	Sg	00 34 25.0	0.0
ARG2	Argostoli	0.06	91	P	Pg	00 34 23.0	-0.2
ARG2				S	Sg	00 34 24.8	-0.2
	34µm,0.1s						
KEF2	Argostoli. Kep	0.06	103	P	Pg	00 34 23.0	-0.2
KEF2				S	Sg	00 34 24.6	-0.5
AGT1	Agia Thekli	0.07	342	P	Pg	00 34 23.2	-0.2
AGT1				S	Sg	00 34 25.6	+0.3
	17µm,0.3s						
KEF4	Livadi, Kephal	0.08	7	P	Pg	00 34 23.4	-0.1
KEF4				S	Sg	00 34 25.6	+0.2
KEF1	Kardakata, Kep	0.11	25	P	Pg	00 34 23.6	-0.1
KEF1				S	Sg	00 34 26.1	+0.2
VLS	Valsamata	0.14	91	P	Pg	00 34 23.9	-0.3
VLS				S	Sg	00 34 26.5	-0.1
	26µm,0.1s						
VLS	Valsamata	0.14	91	P	Pg	00 34 23.9	-0.3
VLS				S	Sg	00 34 26.5	-0.1
VLS				AML	AML	00 34 26.7	
	comp=N,42588µm,0.1s						
VLS				AML	AML	00 34 26.9	
	comp=E,57232µm,0.1s						
FSK	Fiskardo	0.30	23	P	Pg	00 34 26.5	-0.3
FSK				S	Sg	00 34 31.1	0.0
	comp=E,1µm,0.1s						
FSK	Fiskardo	0.30	23	P	Pg	00 34 26.6	-0.3
FSK				S	Sg	00 34 31.3	+0.2
FSK				AML	AML	00 34 31.8	
	comp=N,1763µm,0.2s						
FSK				AML	AML	00 34 33.1	
	comp=E,3191µm,0.1s						
VLMS	Volimes, Zakyn	0.36	147	P	Pg	00 34 27.5	-0.4
VLMS				S	Sg	00 34 33.4	+0.6
VLMS				AML	AML	00 34 33.9	
	comp=E,7593µm,0.3s						
VLMS				AML	AML	00 34 35.1	
	comp=N,5390µm,0.2s						
EVGI	Lefkada island	0.48	23	P	Pg	00 34 29.6	-0.5
EVGI				S	Sg	00 34 37.1	+0.6
EVGI	Lefkada island	0.48	23	P	Pg	00 34 29.6	-0.5
EVGI				S	Sb	00 34 37.4	-0.3
ZAK2	Zakynthos	0.55	135	P	Pg	00 34 31.1	-0.2
ZAK2				S	Sb	00 34 40.2	+0.6
	comp=N,3µm,0.2s						
MGNA	Meganis	0.56	32	P	Pg	00 34 31.3	-0.2
MGNA				AML	AML	00 34 40.6	
	comp=E,422µm,0.1s						
MGNA				AML	AML	00 34 41.0	
	comp=N,456µm,0.1s						
KRI1	kERI	0.61	148	P	Pg	00 34 31.6	-0.8
KRI1				S	Sb	00 34 41.9	+0.6
	comp=N,1µm,0.2s						
LKD2	Lefkada island	0.64	17	P	Pg	00 34 32.4	-0.6
LKD2	Lefkada island	0.64	17	P	Pg	00 34 32.4	-0.6
LKD2				AML	AML	00 34 50.4	
	comp=N,327µm,0.2s						
LKD2				AML	AML	00 34 51.9	
	comp=E,410µm,0.2s						
AST1	Astakos	0.64	56	P	Pg	00 34 33.0	-0.1
AST1				S	Sb	00 34 42.5	+0.2
VTN	Vitineika	0.66	113	P	Pg	00 34 33.5	0.0
TSLK	Tsoukalades, L	0.67	16	P	Pg	00 34 33.0	-0.7
TSLK	Tsoukalades, L	0.67	16	P	Pg	00 34 33.0	-0.7
TSLK				AML	AML	00 34 49.9	
	comp=E,385µm,0.3s						
TSLK				AML	AML	00 34 55.0	
	comp=N,390µm,0.4s						
PDO	Prodromos	0.74	55	P	Pb	00 34 35.0	-0.1
PDO	Prodromos	0.74	55	P	Pg	00 34 34.2	-0.7
PDO				AML	AML	00 34 51.8	
	comp=E,675µm,0.4s						
PDO				AML	AML	00 34 53.1	
	comp=N,776µm,0.4s						
RLS	Riolos of Patr	0.84	98	P	Pg	00 34 36.0	-0.8
RLS	Riolos of Patr	0.84	98	P	Pg	00 34 35.9	-0.9
RLS				AML	AML	00 34 58.0	
	comp=E,158µm,0.5s						
RLS				AML	AML	00 34 59.6	
	comp=N,226µm,0.6s						
PVO	Paravola	0.98	63	P	Pb	00 34 38.9	-0.3
PVO	Paravola	0.98	63	P	Pb	00 34 38.9	-0.3
PVO				AML	AML	00 35 00.1	
	comp=N,466µm,0.4s						
PVO				AML	AML	00 35 01.7	
	comp=E,461µm,0.3s						
DRO	Drossia	1.05	102	P	Pb	00 34 40.3	-0.2
DRO	Drossia	1.05	102	P	Pb	00 34 40.0	-0.4
DRO				AML	AML	00 35 02.8	
	comp=E,344µm,0.7s						
DRO				AML	AML	00 35 06.3	
	comp=N,383µm,0.6s						
AMT	Artemida-Makis	1.21	122	P	Pb	00 34 43.5	+0.3
AMT				AML	AML	00 35 12.5	
	comp=N,331µm,0.7s						
AMT				AML	AML	00 35 14.3	
	comp=E,273µm,0.7s						
LAKA	Lakka	1.23	87	P	Pn	00 34 43.5	+0.1
LAKA				AML	AML	00 35 07.3	
	comp=E,109µm,0.6s						
LAKA				AML	AML	00 35 09.7	
	comp=N,107µm,0.7s						
ANX	Ano Chora	1.25	70	P	Pb	00 34 44.0	0.0
ANX	Ano Chora	1.25	70	P	Pn	00 34 43.7	0.0
ANX				AML	AML	00 35 07.7	
	comp=N,353µm,0.6s						
ANX				AML	AML	00 35 08.7	
	comp=E,158µm,0.5s						
SERG	Sergoula	1.31	79	P	Pg	00 34 45.8	0.0
SERG				AML	AML	00 35 09.0	
	comp=N,182µm,0.5s						
SERG				AML	AML	00 35 20.9	
	comp=E,156µm,0.7s						
EVR	Evrytania	1.32	56	P	Pg	00 34 46.1	+0.2
EVR				AML	AML	00 35 13.3	
	comp=N,98µm,0.8s						
EVR				AML	AML	00 35 13.9	
	comp=E,104µm,0.8s						
IGT	Igoumenitsa	1.35	357	P	Pb	00 34 45.5	-0.2
KALE	Kalithea	1.38	81	P	Pb	00 34 45.9	-0.2
KLV	Kalavryta, Ach	1.38	95	P	Pn	00 34 45.5	+0.2
KLV	Kalavryta, Ach	1.38	95	P	Pn	00 34 45.5	+0.2
KLV				AML	AML	00 35 20.4	
	comp=E,62µm,1.1s						
KLV				AML	AML	00 35 22.1	
	comp=N,90µm,1.1s						
JAN	Janina	1.51	13	P	Pg	00 34 49.6	-0.1
ITM	Ithomi	1.56	129	P	Pb	00 34 48.8	-0.4
MAKR	Makrakomi, Fth	1.58	58	P	Pg	00 34 50.4	-0.5
KEK	Kerkira	1.60	343	P	Pb	00 34 49.0	-0.9
PYL	PYLOS	1.66	140	P	Pn	00 34 49.9	+0.7
AGG	Agios Georgios	1.72	60	P	Pb	00 34 52.4	+0.5
AXAR	Agios Charalam	1.86	71	P	Pb	00 34 55.0	+0.7
THL	Klokotos Trika	1.86	42	P	Pb	00 34 54.3	-0.1
KPRO	Kipourio	1.92	22	P	Pb	00 34 55.1	+0.1
PROD	Prodromos	1.96	87	P	Pb	00 34 55.0	-1.0
LTK	Loutraki	2.02	94	P	Pb	00 34 55.8	-1.2
DYR	Agios Nikonas	2.08	132	P	Pb	00 34 58.1	0.0
LKR	Lokris	2.09	76	P	Pb	00 34 57.3	-0.8
NEST	Nestorio	2.29	12	P	Pb	00 35 00.2	-1.4
DID	Didima	2.33	106	P	Pb	00 35 00.5	-1.9
XOR	Xorichti	2.48	61	P	Pn	00 35 02.2	+1.8

IDC 17 00:34:31.3±0.5, 31°.60S×71°.77W, h0km, mb4.8/14, mb1 4.9/19, mb1mx4.8/29, mbtmp4.7/19, ML4.5/5, MS4.4/14, Ms1 4.4/14, ms1mx4.1/30, Error ellipse: s-maj=16.7km s-min=13.8km az=27.0
NEIC 17 00:34:31.6±1.2, 31°.64S±0°.04×71°.89W±0°.09, h10km±1km, Error ellipse: s-maj=11.0km s-min=6.6km az=92.0
SJA 17 00:34:31.5±1.1, 31°.64S×72°.36W, h50km±31km, ML5.1, MW5.2
MOS 17 00:34:32.7±1.5, 31°.58S×71°.88W, h23km, mb5.1/42, Error ellipse: s-maj=12.7km s-min=5.8km az=102.6
BJI 17 00:34:32.5±0.0, 31°.60S×71°.90W, h10km, mB5.3/2, Ms5.1/7, Ms7 5.0/6
GUC 17 00:34:34.9±0.7, 31°.71S×71°.80W, h32km±3km, ML4.9
GCMT 17 00:34:37.0±0.3, 31°.65S±0°.02×72°.06W±0°.03, h30km±1km, MW5.0/68, Moment Tensor Solution. s40,c44; s68,c77; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.97±.21; $M_{\theta\theta}$-0.60±.13; $M_{\phi\phi}$-3.37±.14; $M_{r\theta}$0.99±.19; $M_{r\phi}$-0.69±.08; $M_{\theta\phi}$-2.64±.20; Best double couple: $M_0$4.65800×10^{16} NP1: ϕ_s25.00000°, δ30.00000°, λ116.00000°. NP2: ϕ_s175.00000°, δ63.00000°, λ76.00000°. Principal axes: T 5.0580, Plg68.0000°, Azm57.0000°; N -0.7980, Plg13.0000°, Azm182.0000°; P -4.2570, Plg17.0000°, Azm276.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
VAO 17 00:35:01.5±2.6, 30°.69S×70°.77W, h202km±23km, mb4.6
ISC 17 00:34:33.7±0.9, 31°.69S±0°.03×71°.94W±0°.04, h23km±6km, n855, σ1s.34/867, mb5.1/172, 3C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CO04	Los Peladeros	0.90	114	⇓iP	Pb	00 34 50.0	-0.7
CO04				eS	Sb	00 35 00.5	-1.9
CO02	Combarbal	0.94	59	⇓iP	Pb	00 34 50.6	-0.7
CO02				iS	Sb	00 35 02.6	-0.9
CO02				IAML		00 35 04.1	
	comp=E,132µm,0.5s						
CO03	El Pedregal	1.37	52	⇓iP	Pn	00 34 57.4	0.0
CO03				eS	Sn	00 35 14.5	-0.4
CO03				IAML		00 35 18.9	
	comp=E,38µm,0.3s						
MT02	Curacav	1.71	157	⇑eP	Pn	00 35 02.6	+0.5
MT02				eS	Sn	00 35 22.4	-0.8
GO04	Tololo Observa	1.80	33	⇑eP	Pn	00 35 04.0	+0.5
GO04				eS	Sn	00 35 27.0	+1.2
GO04	Tololo Observa	1.80	33		Pn	00 35 04.0	+0.5
PEL	Peldehue	1.80	144	eP	Pn	00 35 04.3	+0.9
PEL				eS	Sn	00 35 26.6	+1.1
PEL				IAML		00 35 33.4	
	comp=N,16µm,0.5s						
PEL	Peldehue	1.80	144		Pn	00 35 04.6	+1.2
PEL	Peldehue	1.80	144	P	Pn	00 35 04.6	+1.2
PEL	Peldehue	1.80	144	iP	Pn	00 35 04.7	+1.3
PEL				iS	Sb	00 35 27.6	-0.6
STL	Santa Lucia	2.06	148	eP	Pn	00 35 08.0	+1.0
STL				iS	Sn	00 35 33.1	+1.1
STL				IAML		00 35 42.7	
	comp=E,12µm,0.7s						
STL	Santa Lucia	2.06	148	P	Pn	00 35 07.0	0.0
FCH	Farellones	2.15	140	eP	Pn	00 35 09.7	+1.2
FCH				eS	Sn	00 35 36.5	+1.9
FCH				IAML		00 35 41.0	
	comp=E,8µm,0.2s						
MT03	Universidad Ad	2.17	147	eP	Pn	00 35 09.7	+1.1
MT03				eS	Sn	00 35 36.3	+1.6
MT03				IAML		00 35 46.1	
	comp=N,25µm,0.4s						
ANTU	Antumapu	2.18	150	eP	Pb	00 35 10.8	-1.6
ANTU				eS	Sb	00 35 37.2	-1.9
MT01	Popeta	2.25	165	eP	Pn	00 35 10.4	+0.9
MT01				IAML		00 35 46.9	
	comp=E,7µm,0.5s						
RTLS	Leoncito	2.26	94	iP	Pb	00 35 13.5	-0.5
RTLS				iS	Sb	00 35 42.6	+1.1
RTLS				IAML		00 35 44.6	
	comp=Z,10µm,0.4s						
AROD	Rodeo	2.61	55	⇑iP	Pb	00 35 18.2	-1.7
AROD				iS	Sb	00 35 52.4	+0.8
ACCO	Cerro Coronel	2.70	67	⇑iP	Pb	00 35 19.6	-1.9
ASAL	Salagasta	2.79	110	iP	Pb	00 35 21.5	-1.3
ASAL				iS	Sb	00 36 00.7	+4.1
ZON	Zonda	2.79	88	iP	Pb	00 35 20.7	-2.1
ZON				iS	Sb	00 35 57.0	+0.4
ZON				IAML		00 36 05.0	
	comp=Z,4µm,0.4s						
ARCO	CERRO ARCO	2.80	115	iP	Pb	00 35 21.6	-1.5
ARCO				iS	Sb	00 35 57.7	+0.7
ARCO				IAML		00 36 05.1	
	comp=Z,5µm,0.4s						
ACDV	Cuesta del Vie	2.86	59	eP	Pb	00 35 21.7	-2.4
ACDV				iS	Sb	00 35 58.1	-0.6
UTNM	Universidad Te	2.88	116	iP	Pb	00 35 22.9	-1.5
UTNM				iS	Sb	00 35 60.0	+0.7
AAGR	Agrelo	2.98	119	iP	Pb	00 35 24.3	-1.8
AAGR				iS	Sb	00 36 02.4	+0.2
RTLL	Cerro Villicun	2.98	84	iP	Pn	00 35 22.6	+3.0
RTLL				iS	Sb	00 36 01.9	-0.3
RTLL				IAML		00 36 07.0	
	comp=Z,4µm,0.4s						
CFA	Coronel Fontan	3.16	90	Pg	Pn	00 35 25.2	+3.1
	comp=Z,178nm,0.3s,baz=265,slow=11,SNR=615						
CFA				Lg	Lg	00 36 08.4	
	comp=Z,552nm,0.3s,baz=358,slow=17,SNR=13						
CFA				LR	LR	00 36 51.2	
	comp=Z,6µm,19.5s,baz=280,slow=46						
CFA	Coronel Fontan	3.16	90	iP	Pn	00 35 25.2	+3.1
CFA				iS	Sb	00 36 08.0	+0.7
BO02	Sierra Bellavi	3.25	163	eP	Pn	00 35 24.4	+1.1
GO05	Huala	3.31	180		Pn	00 35 24.2	0.0
GO03	Copiap	4.34	20		Pn	00 35 37.4	-1.0
EDS3	Malargue	4.59	153	iP	Pn	00 35 47.3	+5.4
APLL	PUNTA DE LOS L	4.82	76	iP	Pn	00 35 47.7	+2.8
APLL				iS	Sn	00 36 43.6	+3.5
APLL				IAML		00 36 54.0	
	comp=Z,1µm,0.5s						
ACLC	CERRO LA CRUZ	4.86	64	iP	Pn	00 35 47.9	+2.4
CCHI	Chillan	4.91	181	iP	Pn	00 35 48.8	+2.8
CANA	Caviahue	6.23	174	iP	Pn	00 36 06.8	+2.5
GO02	Mina Guanaco	6.82	18		Pn	00 36 11.0	-1.7
PIL	Pilar	6.87	92	iP	Pn	00 36 16.8	+3.8
PIL				iS	Sn	00 37 33.4	+2.9
PB14	IPOC Station P	7.16	11	iP	Pn	00 36 14.7	-2.7
PB14				IAML		00 38 19.2	
	comp=Z,450nm,0.5s						
AHML	Horco Molle	7.56	51	iP	Pn	00 36 21.6	-0.9
AHML				iS	Sn	00 37 46.3	-1.3
PB10	IPOC Station P	8.23	9	Pn	Pn	00 36 31.0	-0.8
PB10	IPOC Station P	8.23	9	iP	Pn	00 36 30.3	-1.5
PB15	IPOC Station P	8.72	15	iP	Pn	00 36 36.7	-2.0
PB05	IPOC Station P	8.93	10	iP	Pn	00 36 37.7	-3.7
PLCA	Paso Flores	9.10	173	Pn	Pn	00 36 45.0	+1.4
	comp=Z,1.2nm,0.3s,baz=1.2,slow=9.9,SNR=44						
PLCA				Lg	Lg	00 39 14.6	
	comp=Z,0.2nm,0.3s,baz=214,slow=19,SNR=2.5						
PLCA				LR	LR	00 40 25.5	
	comp=Z,2µm,21.1s,baz=211,slow=39						
PLCA	Paso Flores	9.10	173		Pn	00 36 45.4	+1.8
LVC	Limon Verde	9.43	17	Pn	Pn	00 36 45.3	-3.3
	comp=Z,4.0nm,0.3s,baz=149,slow=8.3,SNR=28						
LVC				LR	LR	00 40 34.8	
	comp=Z,3µm,20.7s,baz=214,slow=39						
LVC	Limon Verde	9.43	17	Pn	Pn	00 36 46.8	-1.8
LVC	Limon Verde	9.43	17	P	Pn	00 36 46.8	-1.8
PB04	IPOC Station P	9.45	10		Pn	00 36 45.6	-3.0
PB04	IPOC Station P	9.45	10	iP	Pn	00 36 45.8	-2.9
AZAP	Zapla	9.60	41	iP	Pn	00 36 52.5	+1.7
PB09	IPOC Station P	10.14	14	iP	Pn	00 36 54.9	-3.1
PB01	IPOC Station P	10.82	12	Pn	Pn	00 37 03.7	-3.7
PB11	IPOC Station P	12.05	10		Pn	00 37 20.8	-3.5
LPA	La Plata	12.15	109	eP	Pn	00 37 06.3	-19
LPA				S	Sn	00 39 32.6	-7.6
LPA				PCP	PcP	00 43 07.3	-1.3
LPA				PKIKP	PKiKP	00 51 04.8	-1.6
LPA				SKIKS		00 54 34.7	
GO01	Chusmiza	12.22	12	Pn	Pn	00 37 23.1	-3.7
MNMC	Minye Minye	12.68	10	Pn	Pn	00 37 31.0	-1.9
CPUP	Villa Florida	13.85	71	Pn	Pn	00 37 46.9	-1.7
	comp=Z,1.0nm,0.3s,baz=253,slow=9.2,SNR=16						
CPUP				Sn	Sn	00 40 24.2	+2.5
	comp=Z,1.1nm,0.3s,baz=147,slow=19,SNR=4.2						
CPUP				Lg	Lg	00 41 39.4	
	comp=Z,1.8nm,0.3s,baz=62,slow=14,SNR=2.9						
CPUP				LR	LR	00 43 24.5	
	comp=Z,2µm,19.0s,baz=250,slow=39						
CPUP	Villa Florida	13.85	71		Pn	00 37 47.3	-1.3
LPAZ	La Paz	15.72	14	Pn	Pn	00 38 15.1	+0.8
	comp=Z,1.3nm,0.3s,baz=184,slow=7.3,SNR=51						
LPAZ	La Paz	15.72	14	P	Pn	00 38 14.8	+0.5
LPAZ	La Paz	15.72	14	Pn	Pn	00 38 14.6	+0.3
LPAZ	La Paz	15.72	14	P	Pn	00 38 14.6	+0.3
LPAZ				pmax	pmax		
	comp=Z,27nm,0.9s						
ITAB	Concordia	17.81	81	eP	P	00 38 41.6	+1.0
CNLB	Canela	18.33	88	eP	Pn	00 38 50.6	+4.1
SIV	San Ignacio	18.50	35	P	P	00 38 47.2	-1.2
	comp=Z,0.7nm,0.3s,baz=232,slow=12,SNR=61						
SIV				LR	LR	00 47 13.0	
	comp=Z,828nm,18.5s,baz=252,slow=42						
GO09	Cerro Castillo	19.57	181	P	P	00 38 59.0	-0.8
TER01	Tubaro-SC	19.98	87	eP	Pn	00 39 08.2	+1.9
NNA	Nana	20.12	346	P	P	00 39 06.8	+0.7
	comp=Z,5.0nm,0.7s,baz=157,slow=8.3,SNR=2.3						
NNA				LR	LR	00 45 08.3	
	comp=Z,701nm,18.9s,baz=180,slow=32						
NNA	Nana	20.12	346	P	P	00 39 04.9	-1.2
NNA	Nana	20.12	346	P	P	00 39 04.9	-1.2
NNA				pmax	pmax		
	comp=Z,47nm,1.4s						
PP1B	Ponte de Pedra	20.87	52	eP	P	00 39 13.0	-1.2
GO10	Punta Arenas	21.46	179	P	P	00 39 19.2	-1.1
C2SB	Chapadao do Su	21.50	58	eP	P	00 39 19.8	-1.2
SALV	Santo Antonio	21.59	47	eP	P	00 39 20.7	-1.2
EFI	East Falkland	22.43	157	P	P	00 39 29.9	-0.7
EFI	East Falkland	22.43	157	iP	P	00 39 29.6	-1.1
EFI				pmax	pmax		
	comp=Z,41nm,1.0s						
SPB	Sao Paulo	23.13	76	eP	P	00 39 38.7	+0.5
SPB	Sao Paulo	23.13	76	P	P	00 39 37.8	-0.5
USHA	Ushuaia	23.27	175	P	P	00 39 41.7	+2.3
	comp=Z,13nm,0.9s,baz=194,slow=3.1,SNR=6.1						
USHA				LR	LR	00 49 55.3	
	comp=Z,2µm,18.4s,baz=3.0,slow=40						
RCLB	Rio Claro- Sao	23.58	73	eP	P	00 39 41.9	-0.9
SAML	Samuel	24.05	22	eP	P	00 39 47.0	-0.1
SAML	Samuel	24.05	22	P	P	00 39 46.2	-0.9
SAML	Samuel	24.05	22	P	P	00 39 46.2	-0.9
SAML				pmax	pmax		
	comp=Z,18nm,1.0s						
ARAG	Araguaiana, MT	24.28	54	eP	P	00 39 47.8	-1.6
ATAH	Atahualpa	25.16	345	P	P	00 39 58.3	+0.6
	comp=Z,13nm,0.8s,baz=123,slow=9.6,SNR=2.8						
ATAH				LR	LR	00 48 40.8	
	comp=Z,246nm,19.0s,baz=186,slow=34						
IPMB	Ipameri, GO	25.42	63	eP	P	00 39 58.6	-1.2
CLDB	Colider	25.53	39	eP	P	00 39 59.2	-1.5
BDFB	Brasilia	27.03	59	P	P	00 40 13.8	-0.5
	comp=Z,85nm,1.0s,baz=233,slow=7.2,SNR=55						
BDFB				LR	LR	00 51 56.6	
	comp=Z,2µm,21.0s,baz=241,slow=39						
BDFB	Brasilia	27.03	59	P	P	00 40 13.0	-1.4
BDFB	Brasilia	27.03	59	P	P	00 40 13.0	-1.4
BDFB				pmax	pmax		
	comp=Z,86nm,1.0s						
BSFB	Barra de Sao F	30.78	73	eP	P	00 40 46.7	-1.0
OTAV	Otavalo	32.34	348	eP	P	00 41 05.2	+3.3
OTAV	Otavalo	32.34	348	eP	P	00 41 05.6	+3.7

OTAV Otavalo 32.34 348 P P 00 41 00.1 -1.8
OTAV Otavalo 32.34 348 P P 00 41 00.1 -1.8
OTAV pmax pmax
comp=Z,23nm,1.5s
RPN Rapa Nui 32.78 268 P P 00 41 03.9 -1.3
RPN Rapa Nui 32.78 268 P P 00 41 03.9 -1.3
RPN pmax pmax
comp=Z,107nm,1.2s
FLOC Florencia 33.27 353 P P 00 41 08.4 -1.1
MACC Macarena, Meta 33.69 357 eP P 00 41 15.4 +2.3
PRAC Prado 35.31 355 eP P 00 41 33.0 +5.8
ORTC Ortega, Tolima 35.54 354 eP P 00 41 32.2 +3.1
YOTC Yotoco, Valle 35.72 352 eP P 00 41 32.5 +1.7
CHIC Chingaza 36.15 357 eP P 00 41 37.1 +2.3
ROSC El Rosal 36.39 356 P P 00 41 36.0 -0.8
GUY2C Guyana, Caldas 36.85 354 eP P 00 41 43.4 +2.5
NORC Norcasia 37.15 355 eP P 00 41 46.6 +3.7
RUSC La Rusia 37.38 358 eP P 00 41 47.5 +2.2
RUSC La Rusia 37.38 358 P P 00 41 46.1 +0.8
CBOC Ciudad Bolivar 37.54 353 eP P 00 41 48.5 +2.1
HELC Santa Helena 37.82 354 eP P 00 41 50.8 +1.9
BARC Barichara 38.08 358 eP P 00 41 53.5 +2.5
PTBC PUERTO BERRIO, 38.09 356 eP P 00 41 51.0 +0.2
ZARC Zaragoza, Cauc 39.06 355 eP P 00 41 59.9 +1.0
SMLC San Martn de 40.31 357 eP P 00 42 09.1 -0.2
SDV Santo Domingo 40.36 2 eP P 00 42 10.2 +0.3
SDV Santo Domingo 40.36 2 eP P 00 42 10.3 +0.3
SDV Santo Domingo 40.36 2 P P 00 42 08.8 -1.2
SJCC San Jacinto, C 41.46 355 eP P 00 42 20.3 +1.4
URIC Uribia, Colomb 43.14 360 P P 00 42 31.1 -1.4
JTS Las Juntas de 43.56 341 i P P 00 42 38.7 +2.8
JTS pmax pmax
comp=Z,26nm,2.1s
MLPR Magueyes Islan 49.59 6 P P 00 43 21.3 -1.9
CRPR Cabo Rojo, PR 49.62 6 P P 00 43 21.9 -1.5
OBIP Obispado Ponce 49.71 7 P P 00 43 23.0 -1.0
PDPR Patillas Dam, 49.74 7 P P 00 43 21.9 -2.4
PDPR IAmb IAmb 00 43 25.8
comp=Z,26nm,1.0s
SJG San Juan 49.82 7 P P 00 43 23.3 -1.6
SJG San Juan 49.82 7 P P 00 43 23.3 -1.6
SJG pmax pmax
comp=Z,40nm,1.1s
VNA3 Neumayer Olymp 51.47 159 P P 00 43 38.5 +1.6
VNA2 Neumayer--Watz 52.11 158 P P 00 43 43.1 +1.5
baz=289,slow=8.5
SNAA Sanae 53.70 158 P P 00 43 54.8 +1.4
SNAA Sanae 53.70 158 P P 00 43 53.4 +0.1
SNAA IAmb IAmb 00 43 55.6
comp=Z,19nm,0.9s
SNAA Sanae 53.70 158 i P P 00 43 52.6 -0.8
TLIG Tlapa 55.23 329 P P 00 44 03.9 -1.3
ASCN Ascension 58.37 79 P P 00 44 24.7 -2.9
NVL N'lazarevskaya 58.41 157 eP P 00 44 27.5 +0.5
NVL eS S 00 52 24.6 -3.6
NVL pmax pmax
comp=Z,15nm,0.9s
QSPA South Pole Qui 58.54 180 P P 00 44 28.4 +0.2
QSPA IAmb IAmb 00 44 42.7
comp=Z,16nm,0.8s
SHEL Horse Pasture 61.72 92 P P 00 44 49.4 -1.1
SHEL Horse Pasture 61.72 92 P P 00 44 49.4 -1.1
SHEL pmax pmax
comp=Z,141nm,1.3s
TIGA Tifton 63.74 349 P P 00 45 04.6 +1.1
baz=169
NHSC New Hope 64.91 352 P P 00 45 12.5 +1.4
baz=172
Z58A St. Stephen 65.10 353 P P 00 45 14.0 +1.7
baz=173
833A Chaparral WMA, 65.15 333 IAmb IAmb 00 45 16.0
comp=Z,23nm,1.0s
833A Chaparral WMA, 65.15 333 P P 00 45 15.1 +2.3
baz=154,SNR=6.2
Z57A Bowman 65.16 352 P P 00 45 13.5 +0.8
baz=172
HKT Hockley 65.36 337 i P P 00 45 15.2 +1.2
HKT pmax pmax
comp=Z,11nm,1.7s
Z52A Williamson 65.59 349 P P 00 45 16.1 +0.5
baz=168
Y60A Bolivia 65.61 354 P P 00 45 17.1 +1.5
baz=174
GOGA Godfrey 65.66 349 P P 00 45 16.2 +0.2
baz=169
LRAL Lakeview Retre 65.92 346 P P 00 45 18.4 +0.7
baz=166
Z50A Ashland 65.93 347 P P 00 45 16.7 -1.0
Z50A IAmb IAmb 00 45 19.1
comp=Z,14nm,1.1s
Z50A Ashland 65.93 347 P P 00 45 18.4 +0.6
baz=167,SNR=5.2
Y55A Saluda 65.94 351 P P 00 45 18.5 +0.7
baz=171
VBMS Vicksburg 65.94 343 P P 00 45 20.0 +2.2
baz=163
Y54A Tignall 65.98 350 P P 00 45 18.7 +0.6
baz=170
Y53A Monroe 66.11 349 P P 00 45 19.6 +0.7
baz=169
Y52A Lilburn 66.19 349 IAmb IAmb 00 45 21.0
comp=Z,15nm,1.0s
Y52A Lilburn 66.19 349 P P 00 45 20.3 +0.8
baz=169,SNR=5.7
JSC Jenkinsville 66.20 352 P P 00 45 20.5 +1.0
JSC Jenkinsville 66.20 352 P P 00 45 20.5 +1.0
JSC pmax pmax
comp=Z,9.0nm,1.2s
X58A Rowland 66.26 353 P P 00 45 19.4 -0.4
X58A Rowland 66.26 353 P P 00 45 21.0 +1.2
baz=173
HODGE Hodges 66.28 351 P P 00 45 19.5 -0.5
X56A White Oak 66.38 352 P P 00 45 21.5 +0.9
baz=172
Y51A Rockmart 66.40 348 P P 00 45 21.3 +0.6
baz=168,SNR=5.7
X55A Gracelyn & Ava 66.44 351 P P 00 45 21.8 +0.9
baz=171
BIRD Birdtown, Kers 66.47 352 P P 00 45 20.4 -0.8
BIRD IAmb IAmb 00 45 22.8
comp=Z,15nm,1.1s
X54A Belton 66.61 351 P P 00 45 23.1 +1.0
baz=170
143A Socs Landing, 66.63 342 P P 00 45 22.3 +0.1
NATX Nacogdoches 66.67 339 P P 00 45 22.6 +0.1
NATX IAmb IAmb 00 45 25.5
comp=Z,14nm,0.9s
X53A Estanollee 66.70 350 P P 00 45 23.5 +0.8
baz=170,SNR=5.9
W58A Raeford 66.71 353 P P 00 45 23.9 +1.2
baz=173,SNR=5.4
435B Jarrell 66.72 336 P P 00 45 23.6 +0.8
435B IAmb IAmb 00 45 25.7
comp=Z,10nm,0.8s
PAULI Pauline 66.80 351 P P 00 45 23.2 -0.1
PAULI IAmb IAmb 00 45 25.1
comp=Z,14nm,1.1s
CNNC Cliffs of the 66.81 355 P P 00 45 23.2 -0.1
X52A Dahlonega 66.89 349 P P 00 45 24.6 +0.7
baz=169,SNR=7.3
W57A Gilead 66.92 353 P P 00 45 23.9 -0.1
W57A IAmb IAmb 00 45 26.0
comp=Z,15nm,1.0s
W57A Gilead 66.92 353 P P 00 45 24.8 +0.8
baz=173
W56A Indian Trail 66.96 352 P P 00 45 24.9 +0.6
baz=172
X51A Calhoun 67.01 348 P P 00 45 24.9 +0.3
X51A Calhoun 67.01 348 P P 00 45 25.7 +1.1
baz=168,SNR=6.2
KMSC Kings Mountain 67.06 352 P P 00 45 24.0 -0.9
KMSC IAmb IAmb 00 45 26.5
comp=Z,9.4nm,0.8s
KMSC Kings Mountain 67.06 352 P P 00 45 25.8 +0.9
baz=171
W54A Cherokee Point 67.11 351 P P 00 45 26.0 +0.8
baz=171
BG3 Lake Jocassee 67.13 350 P P 00 45 24.4 -1.0
JCT Junction City 67.24 334 IAmb IAmb 00 45 29.0
comp=Z,17nm,0.8s
JCT Junction City 67.24 334 P P 00 45 28.0 +1.7
baz=154,SNR=8.6
237A Washetta, Mont 67.25 338 P P 00 45 25.9 -0.3
V60A Jim Taylor Roa 67.28 355 P P 00 45 25.7 -0.6
V60A IAmb IAmb 00 45 29.0

comp=Z,18nm,0.9s
X48A Hartselle 67.31 347 P P 00 45 26.5 0.0
X48A P 00 45 27.4 +0.9
X48A IAmb IAmb 00 45 28.3
comp=Z,19nm,0.9s
W53A Cullowhee 67.33 350 P P 00 45 27.8 +1.0
baz=170,SNR=7.3
V59A Middlesex 67.36 354 P P 00 45 28.1 +1.4
baz=174
W52A Murphy 67.38 349 P P 00 45 26.9 -0.1
W52A IAmb IAmb 00 45 28.4
comp=Z,9.8nm,0.9s
W52A Murphy 67.38 349 P P 00 45 28.0 +1.0
baz=169
V58A Windy Hill, Pi 67.46 354 P P 00 45 27.0 -0.5
V58A IAmb IAmb 00 45 29.5
comp=Z,13nm,0.9s
V58A Windy Hill, Pi 67.46 354 P P 00 45 28.1 +0.6
baz=173
Z41A Richland Creek 67.53 341 P P 00 45 28.4 +0.5
Z41A IAmb IAmb 00 45 30.7
comp=Z,18nm,1.1s
W51A Cleveland 67.58 349 P P 00 45 29.0 +0.8
baz=168,SNR=5.6
V56A Mocksville 67.62 352 P P 00 45 29.4 +0.9
baz=172,SNR=5.5
V57A Coltrane Farms 67.62 353 P P 00 45 29.1 +0.7
baz=173
W50A Signal Mountai 67.71 348 P P 00 45 29.6 +0.5
W50A IAmb IAmb 00 45 30.9
comp=Z,18nm,1.0s
W50A Signal Mountai 67.71 348 P P 00 45 29.9 +0.8
baz=168,SNR=7.5
V55A Taylorsville 67.75 352 P P 00 45 28.7 -0.5
V55A IAmb IAmb 00 45 31.1
comp=Z,16nm,0.9s
V55A Taylorsville 67.75 352 P P 00 45 30.3 +1.1
baz=172,SNR=5.8
V54A Nebo 67.76 351 P P 00 45 30.1 +0.7
baz=171,SNR=8.7
TX32 Lajitas Array 67.77 330 P P 00 45 30.7 +1.0
TXAR Lajitas Array 67.77 330 P P 00 45 31.2 +1.6
comp=Z,3.3nm,0.8s,baz=149,slow=8.3,SNR=38
TX31 Lajitas Ar. Si 67.77 330 P P 00 45 30.1 +0.5
TX31 P 00 45 31.6 +2.0
V53A Saluda 67.77 350 P P 00 45 28.5 -1.0
V53A IAmb IAmb 00 45 31.1
comp=Z,13nm,0.9s
V53A Saluda 67.77 350 P P 00 45 30.4 +0.9
baz=170,SNR=6.6
WHTX Lake Whitney, 67.78 337 P P 00 45 29.6 0.0
WHTX IAmb IAmb 00 45 32.1
comp=Z,17nm,0.9s
WHTX Lake Whitney, 67.78 337 P P 00 45 31.6 +2.1
baz=157
W49A Belvidere 67.80 347 P P 00 45 30.5 +0.9
baz=167
CPCT Cooper Cave 67.82 349 P P 00 45 29.3 -0.4
CPCT IAmb IAmb 00 45 31.5
comp=Z,13nm,0.9s
OXF Oxford 67.87 344 P P 00 45 29.8 -0.3
OXF Oxford 67.87 344 P P 00 45 29.8 -0.3
OXF pmax pmax
comp=Z,43nm,0.9s
OXF Oxford 67.87 344 P P 00 45 30.8 +0.8
baz=164,SNR=8.1
TKL Tuckaleechee C 67.91 350 P P 00 45 30.3 0.0
TKL IAmb IAmb 00 45 31.7
comp=Z,18nm,0.9s
TKL Tuckaleechee C 67.91 350 P P 00 45 30.3 0.0
TKL pmax pmax
comp=Z,18nm,1.0s
U59A Littleton 67.91 355 P P 00 45 30.0 -0.2
U59A IAmb IAmb 00 45 32.6
comp=Z,16nm,1.1s
U59A Littleton 67.91 355 P P 00 45 31.7 +1.5
baz=175
U60A Pendleton 67.98 355 P P 00 45 32.0 +1.3
baz=175
SYO Syowa Base 67.99 159⇑eP P 00 45 29.8 -0.6
U58A Oxford 68.01 354 P P 00 45 31.7 +0.9
baz=174
WLAR White Oak Lake 68.02 341 P P 00 45 30.6 -0.5
WLAR IAmb IAmb 00 45 35.9
comp=Z,15nm,1.0s
PLAL Pickwick Lake 68.03 346 IAmb IAmb 00 45 32.9
comp=Z,12nm,0.9s
V52A Sevierville 68.06 350 P P 00 45 31.2 0.0
V52A IAmb IAmb 00 45 32.6
comp=Z,20nm,0.9s
V52A Sevierville 68.06 350 P P 00 45 31.7 +0.5
baz=169,SNR=9.5
U57A Blanch 68.12 354 P P 00 45 32.3 +0.7
baz=173
V50A Pikevile 68.13 348 P P 00 45 32.7 +1.1
baz=168,SNR=13
V51A Loudon 68.14 349 P P 00 45 31.2 -0.5
V51A IAmb IAmb 00 45 34.0
comp=Z,14nm,0.9s
V51A Loudon 68.14 349 P P 00 45 32.4 +0.7
baz=169,SNR=6.1
U56A King 68.14 353 P P 00 45 31.6 -0.1
U56A IAmb IAmb 00 45 33.7
comp=Z,20nm,1.0s
U56A King 68.14 353 P P 00 45 33.0 +1.3
baz=172
V49A McMinnville 68.37 348 P P 00 45 33.7 +0.5
baz=167,SNR=12
U55A TA2, Sparta 68.37 352 P P 00 45 33.9 +0.7
baz=172
U53A Fall Branch 68.42 351 P P 00 45 34.0 +0.5
baz=170
U54A Nelsons Funny 68.48 351 P P 00 45 33.6 -0.3
U54A Nelsons Funny 68.48 351 P P 00 45 35.0 +1.0
baz=171,SNR=7.5
T59A Double "B" Far 68.50 355 P P 00 45 34.1 +0.1
T59A Double "B" Far 68.50 355 P P 00 45 35.5 +1.6
baz=175,SNR=5.1
V48A Smith Brothers 68.51 347 P P 00 45 34.5 +0.4
T58A Grand View Acr 68.55 354 P P 00 45 35.6 +1.3
baz=174,SNR=6.1
U51A La Follette 68.65 350 P P 00 45 35.7 +0.8
baz=169,SNR=7.4
T57A Hurt 68.67 354 P P 00 45 35.0 0.0
T57A IAmb IAmb 00 45 36.8
comp=Z,13nm,1.0s
T57A Hurt 68.67 354 P P 00 45 36.0 +1.0
baz=173
TZTN Tazewell 68.74 350 P P 00 45 36.1 +0.6
baz=169
CLTN Cedars of Leba 68.76 348 P P 00 45 35.4 -0.2
CLTN IAmb IAmb 00 45 37.3
comp=Z,14nm,0.8s
T56A Rocky Mt 68.78 353 P P 00 45 37.0 +1.3
baz=173,SNR=6.6
U50A Jamestown 68.82 349 P P 00 45 36.6 +0.6
baz=168,SNR=9.9
T55A Pulaski 68.94 352 P P 00 45 37.8 +1.0
baz=172
MIAR Mount Ida 68.96 341 P P 00 45 36.4 -0.4
MIAR IAmb IAmb 00 45 39.2
comp=Z,16nm,1.4s
MIAR Mount Ida 68.96 341 P P 00 45 36.4 -0.4
MIAR pmax pmax
comp=Z,16nm,1.4s
MIAR Mount Ida 68.96 341 P P 00 45 38.3 +1.5
baz=160
T54A Tazewell 68.98 352 P P 00 45 37.7 +0.7
baz=171,SNR=8.7
T53A Wise 69.03 351 P P 00 45 37.7 +0.4
baz=170
U49A Red Boiling Sp 69.07 348 P P 00 45 38.3 +0.8
baz=167
WVT Waverly 69.09 346 P P 00 45 38.1 +0.5
WVT Waverly 69.09 346 P P 00 45 38.1 +0.5
WVT pmax pmax
comp=Z,27nm,0.9s
WVT Waverly 69.09 346 P P 00 45 38.5 +0.9
baz=166
S61A Accomac 69.10 357 P P 00 45 35.8 -1.8
ABTX Abilene, Hawle 69.11 335 P P 00 45 37.3 -0.7
ABTX IAmb IAmb 00 45 40.5
comp=Z,24nm,0.9s
ABTX Abilene, Hawle 69.11 335 P P 00 45 39.9 +2.0
baz=155,SNR=5.4
S58A Poland Farm, P 69.18 355 P P 00 45 39.8 +1.7
baz=174

T51A Gray 69.21 350 P P 00 45 39.2 +0.8
baz=169,SNR=6.6
S59A Mechanicsville 69.27 355 P P 00 45 40.5 +1.8
baz=175
S56A Natural Bridge 69.37 354 P P 00 45 40.6 +1.2
baz=173
S57A Dark Hollow, R 69.40 354 IAmb IAmb 00 45 41.6
comp=Z,20nm,1.0s
S57A Dark Hollow, R 69.40 354 P P 00 45 40.9 +1.4
baz=174,SNR=6.0
T50A Nancy 69.41 349 P P 00 45 40.1 +0.5
baz=168
UTMT University of 69.51 345 P P 00 45 40.6 +0.4
R58B Mineral 69.51 355 P P 00 45 40.5 +0.3
R58B IAmb IAmb 00 45 42.9
comp=Z,16nm,1.1s
R58B Mineral 69.51 355 P P 00 45 41.7 +1.5
baz=175
GLAT Glass 69.53 345 P P 00 45 40.2 -0.1
S55A Lewisburg 69.56 353 P P 00 45 41.8 +1.2
baz=172
T49A Edmonton 69.61 348 P P 00 45 40.8 -0.1
T49A IAmb IAmb 00 45 42.3
comp=Z,12nm,1.0s
T49A Edmonton 69.61 348 P P 00 45 41.5 +0.6
baz=168,SNR=5.9
W39A Magazine 69.62 341 P P 00 45 41.8 +0.8
W39A IAmb IAmb 00 45 43.8
comp=Z,23nm,1.0s
W39A Magazine 69.62 341 P P 00 45 42.9 +1.9
baz=160,SNR=11
S54A Dingess, Beckl 69.68 352 IAmb IAmb 00 45 43.2
comp=Z,13nm,0.8s
S54A Dingess, Beckl 69.68 352 P P 00 45 42.0 +0.7
baz=172
LCAR Lake Charles 69.77 343 P P 00 45 41.8 0.0
LCAR IAmb IAmb 00 45 43.5
comp=Z,10nm,0.8s
T47A Sharon Grove 69.78 347 IAmb IAmb 00 45 43.5
comp=Z,14nm,0.9s
HICK Hickman 69.78 345 P P 00 45 41.7 -0.1
S52A Salyersville 69.79 351 P P 00 45 42.5 +0.5
baz=170
S51A Beattyville 69.82 350 IAmb IAmb 00 45 45.6
comp=Z,12nm,0.9s
S51A Beattyville 69.82 350 P P 00 45 42.9 +0.7
baz=170
R58A Rapidan 69.86 355 P P 00 45 43.8 +1.5
baz=174
R57A Stanardsville 69.89 354 P P 00 45 43.9 +1.4
baz=174,SNR=7.9
S50A Richmond 69.98 350 P P 00 45 43.8 +0.7
baz=169
PARMO Parma 70.01 345 P P 00 45 43.2 -0.1
R54A Victor 70.02 352 P P 00 45 44.2 +0.8
baz=172
R55A Marlinton 70.03 353 P P 00 45 44.4 +0.9
R55A IAmb IAmb 00 45 45.8
comp=Z,24nm,1.0s
R55A Marlinton 70.03 353 P P 00 45 44.9 +1.5
baz=173,SNR=5.1
R56A Bull Pasture M 70.08 354 P P 00 45 45.5 +1.7
baz=173
SRIG Santa Rosalia 70.13 322 P P 00 45 44.3 0.0
SRIG IAmb IAmb 00 45 53.1
comp=Z,9.3nm,0.7s
PBMO Poplar Bluff 70.27 344 P P 00 45 44.7 -0.2
PBMO IAmb IAmb 00 45 46.6
comp=Z,7.9nm,0.7s
R53A Hurricane 70.28 352 P P 00 45 45.6 +0.6
baz=171
GSR Geological Sur 70.45 356 P P 00 45 44.0 -2.0
U40A Yellville 70.47 342 P P 00 45 46.5 +0.4
U40A IAmb IAmb 00 45 48.1
comp=Z,14nm,1.1s
U40A Yellville 70.47 342 P P 00 45 47.3 +1.1
baz=161,SNR=7.1
Q58A Fox Den Farm, 70.47 355 P P 00 45 47.7 +1.6
baz=175
W35A Tecumseh 70.50 339 P P 00 45 45.8 -0.6
MNTX Cornudas Mount 70.55 330 P P 00 45 47.6 +0.9
baz=150,SNR=16
R50A Paris 70.56 350 P P 00 45 45.3 -1.4
R50A IAmb IAmb 00 45 50.5
comp=Z,17nm,1.2s
Q57A Strasburg 70.62 355 P P 00 45 49.0 +2.0
baz=174,SNR=6.1
PPT Papeete 70.67 261 P P 00 45 46.9 -1.0
PPT Papeete 70.67 261 P P 00 45 46.9 -1.0
HHAR Hobbs 70.69 341 IAmb IAmb 00 45 49.5
comp=Z,17nm,1.0s
R49A Shelbyville 70.70 349 P P 00 45 48.0 +0.5
baz=168
Q55A Buckhannon 70.73 353 P P 00 45 48.8 +1.0
baz=173
WMOK Wichita Mounta 70.73 337 P P 00 45 49.0 +1.1
WMOK pmax pmax
comp=Z,11nm,1.4s
WMOK Wichita Mounta 70.73 337 P P 00 45 48.9 +1.1
baz=156,SNR=7.2
Q53A Leroy 70.75 352 P P 00 45 48.9 +1.1
baz=171
FNO Franklin 70.76 338 P P 00 45 47.8 -0.1
WCI Wyandotte Cave 70.83 348 P P 00 45 47.5 -0.8
WCI IAmb IAmb 00 45 49.3
comp=Z,11nm,0.8s
WCI Wyandotte Cave 70.83 348 P P 00 45 47.5 -0.8
WCI pmax pmax
comp=Z,11nm,0.9s
WCI Wyandotte Cave 70.83 348 P P 00 45 48.7 +0.4
baz=167
HSIG 70.86 324 P P 00 45 47.6 -1.1
TUL1 Leonard 70.87 340 P P 00 45 48.6 0.0
TUL1 IAmb IAmb 00 45 50.5
comp=Z,19nm,1.0s
TUL1 Leonard 70.87 340 P P 00 45 49.7 +1.1
baz=159,SNR=5.4
SDMD Soldier's Deli 70.88 356 P P 00 45 48.1 -0.5
S44A Carbondale 70.89 346 P P 00 45 48.2 -0.5
S44A IAmb IAmb 00 45 50.3
comp=Z,14nm,0.8s
Q52A Bidwell 70.94 351 P P 00 45 49.7 +0.7
baz=171,SNR=6.2
P58A Pank, Wackersv 70.99 356 P P 00 45 50.8 +1.6
baz=175,SNR=5.4
P57A Homestead Farm 71.03 355 P P 00 45 48.6 -0.9
P57A IAmb IAmb 00 45 52.8
comp=Z,24nm,1.0s
P57A Homestead Farm 71.03 355 P P 00 45 51.2 +1.7
baz=175,SNR=5.6
P59A Jarrettsville 71.06 356 P P 00 45 51.6 +2.0
baz=176,SNR=8.5
MGMO Mountain Grove 71.07 343 P P 00 45 49.0 -0.8
MGMO IAmb IAmb 00 45 51.4
comp=Z,20nm,1.4s
P56A Dayton Farm, R 71.12 354 P P 00 45 51.9 +1.8
baz=174
Q51A Peebles 71.15 351 P P 00 45 49.8 -0.4
Q51A IAmb IAmb 00 45 51.7
comp=Z,17nm,0.9s
Q51A Peebles 71.15 351 P P 00 45 51.5 +1.3
baz=170
P55A Reedsville 71.21 354 P P 00 45 51.9 +1.3
baz=173
P60A Greenville 71.22 357 P P 00 45 49.5 -1.1
P60A IAmb IAmb 00 45 53.2
comp=Z,18nm,1.0s
P60A Greenville 71.22 357 P P 00 45 52.4 +1.9
baz=177
PSUB Penn St. - Bra 71.33 357 P P 00 45 51.4 +0.1
PSUB IAmb IAmb 00 45 53.5
comp=Z,19nm,1.1s
P53A Whipple 71.35 352 P P 00 45 50.9 -0.5
P53A IAmb IAmb 00 46 07.8
comp=Z,32nm,1.4s
P53A Whipple 71.35 352 P P 00 45 52.7 +1.2
baz=172
Q49A Aurora 71.36 349 P P 00 45 52.1 +0.6
baz=168,SNR=6.3
MCWV Mont Chateau 71.36 354 P P 00 45 53.1 +1.6
baz=173
P54A Burton 71.37 353 P P 00 45 52.6 +1.1
baz=172,SNR=7.0
Q48A North Vernon 71.42 349 P P 00 45 52.1 +0.3
baz=168
MVL Millersville 71.44 356 P P 00 45 52.5 +0.5
MVL IAmb IAmb 00 45 55.3

comp=Z,18nm,1.2s
O61A Allentown 71.46 358 P P 00 45 54.3 +2.3
baz=178
MSTX Muleshoe 71.48 333 P P 00 45 54.0 +1.5
baz=153,SNR=14
P51A Williamsport 71.56 351 IAmb IAmb 00 45 54.0
comp=Z,17nm,0.8s
P51A Williamsport 71.56 351 P P 00 45 53.3 +0.6
baz=170,SNR=5.8
P52A Corning 71.59 352 P P 00 45 53.4 +0.6
baz=171,SNR=6.3
O58A Lewisberry 71.60 356 P P 00 45 54.6 +1.7
baz=176
OLIL Olney 71.66 347 P P 00 45 52.9 -0.4
OLIL IAmb IAmb 00 45 54.4
comp=Z,22nm,1.1s
CCM Cathedral Cave 71.68 344 P P 00 45 53.0 -0.5
CCM IAmb IAmb 00 45 55.5
comp=Z,19nm,0.9s
CCM Cathedral Cave 71.68 344 P P 00 45 53.0 -0.5
CCM pmax pmax
comp=Z,19nm,1.0s
CCM Cathedral Cave 71.68 344 P P 00 45 54.5 +1.1
baz=163
PAGS Pennsylvania G 71.69 356 P P 00 45 53.5 +0.1
PAGS IAmb IAmb 00 45 55.9
comp=Z,25nm,1.1s
O60A Telford 71.71 357 P P 00 45 55.6 +2.1
baz=177
O57A Amberson 71.73 355 P P 00 45 55.5 +1.8
baz=175
O59A Robesonia 71.74 357 P P 00 45 55.8 +2.0
baz=176,SNR=5.8
P50A Jamestown 71.78 350 P P 00 45 54.8 +0.8
baz=169
P49A Miami Univ. Ec 71.85 350 P P 00 45 54.7 +0.3
baz=169
O56A Blue Knob Stat 71.86 355 P P 00 45 54.1 -0.4
O56A IAmb IAmb 00 46 07.1
comp=Z,20nm,1.4s
O56A Blue Knob Stat 71.86 355 P P 00 45 56.4 +1.9
baz=174
O55A Ligonier 71.86 354 P P 00 45 55.9 +1.4
baz=173
AMTX Amarillo 71.88 335 P P 00 45 55.6 +0.7
AMTX IAmb IAmb 00 45 57.3
comp=Z,29nm,1.1s
AMTX Amarillo 71.88 335 P P 00 45 56.8 +1.9
baz=154
P48A Milroy 71.89 349 IAmb IAmb 00 45 55.2
comp=Z,16nm,0.9s
P48A Milroy 71.89 349 P P 00 45 54.8 +0.2
baz=168,SNR=5.4
SLM Saint Louis 72.01 345 P P 00 45 54.7 -0.7
SLM IAmb IAmb 00 45 57.1
comp=Z,19nm,0.8s
SLM Saint Louis 72.01 345 P P 00 45 54.7 -0.7
SLM pmax pmax
comp=Z,19nm,0.8s
N61A South Mountain 72.11 358 P P 00 45 58.3 +2.4
baz=178
O51A Pataskala 72.15 351 P P 00 45 56.8 +0.6
baz=170,SNR=8.5
SSPA Standing Stone 72.17 355 P P 00 45 57.8 +1.5
baz=175
N60A Cedar Hill Far 72.25 357 P P 00 45 58.7 +1.9
baz=177,SNR=6.9
N57A Milroy 72.27 356 P P 00 45 58.1 +1.2
baz=175
ACSO Alum Creek Sta 72.28 351 P P 00 45 56.7 -0.3
ACSO Alum Creek Sta 72.28 351 P P 00 45 57.9 +0.8
baz=170
O50A Cable 72.29 351 P P 00 45 57.8 +0.7
baz=170,SNR=6.4
N58A Sunbury 72.30 356 P P 00 45 56.1 -1.0
N58A IAmb IAmb 00 45 59.8
comp=Z,26nm,1.0s
N58A Sunbury 72.30 356 P P 00 45 58.9 +1.8
baz=176
121A Cookes Peak, D 72.30 329 P P 00 45 57.2 -0.3
121A IAmb IAmb 00 46 01.1
comp=Z,14nm,0.9s
121A Cookes Peak, D 72.30 329 P P 00 46 00.3 +2.7
baz=148,SNR=9.4
U32A Winter Ranch, 72.30 337 P P 00 45 56.9 -0.4
N59A State Game Lan 72.33 357 P P 00 45 58.1 +0.8
N59A IAmb IAmb 00 46 00.4
comp=Z,26nm,1.0s
N59A State Game Lan 72.33 357 P P 00 45 59.1 +1.8
baz=177
P46A Rosedale 72.34 348 IAmb IAmb 00 45 58.4
comp=Z,16nm,0.9s
PAL Palisades 72.35 358 P P 00 45 55.4 -2.0
PAL IAmb IAmb 00 46 13.6
comp=Z,12nm,0.9s
PAL Palisades 72.35 358 P P 00 45 55.4 -2.0
PAL pmax pmax
comp=Z,12nm,0.9s
N55A Marion Center 72.40 354 P P 00 45 59.3 +1.6
baz=174,SNR=7.2
O49A Covington 72.43 350 P P 00 45 57.5 -0.4
O49A IAmb IAmb 00 45 59.3
comp=Z,16nm,0.9s
O49A Covington 72.43 350 P P 00 45 58.2 +0.3
baz=169
N56A West Decatur 72.48 355 P P 00 45 59.3 +1.1
baz=174
O48A Farmland 72.62 349 P P 00 45 59.5 +0.4
baz=168
N54A Moraine State 72.67 354 P P 00 46 00.7 +1.3
baz=173
M60A Port Jervis 72.69 358 P P 00 46 01.4 +1.9
baz=178,SNR=6.4
N52A McGinn's Farm, 72.70 352 P P 00 46 00.4 +0.9
baz=171
M62A Hamden 72.77 359 P P 00 46 02.0 +2.2
baz=179
M58A Price's Panora 72.81 356 P P 00 46 01.9 +1.8
baz=176
M57A Sunshine Farm, 72.82 356 P P 00 46 00.7 +0.5
M57A IAmb IAmb 00 46 10.8
comp=Z,21nm,1.1s
M57A Sunshine Farm, 72.82 356 P P 00 46 01.9 +1.7
baz=175
P43A Skaggs, Pawnee 72.82 346 P P 00 45 59.9 -0.3
P43A IAmb IAmb 00 46 01.7
comp=Z,14nm,0.8s
N50A Nevada 72.84 351 P P 00 46 01.2 +0.9
baz=170,SNR=6.9
N51A Ashland 72.88 352 P P 00 46 00.5 -0.1
N51A Ashland 72.88 352 P P 00 46 01.2 +0.6
baz=171
M59A Waymart 72.94 357 P P 00 46 02.7 +1.8
baz=177,SNR=6.8
M56A Emporium 73.03 355 P P 00 46 01.9 +0.4
M56A Emporium 73.03 355 P P 00 46 02.8 +1.3
baz=174
M55A Ridgway 73.06 355 P P 00 46 01.4 -0.2
M55A Ridgway 73.06 355 P P 00 46 03.0 +1.3
baz=174
SFIN Lafayette 73.06 348 P P 00 45 59.6 -2.0
O44A Mansfield 73.10 347 P P 00 46 01.5 -0.4
O44A IAmb IAmb 00 46 02.8
comp=Z,13nm,0.9s
N49A Columbus Grove 73.13 350 P P 00 46 02.8 +0.8
baz=169,SNR=10
M54A Oil Creek Stat 73.18 354 P P 00 46 03.3 +1.0
baz=173
L63A North Scituate 73.19 0 P P 00 46 04.2 +1.9
baz=180
N48A Decatur 73.19 350 P P 00 46 02.8 +0.5
baz=168
M53A WI Miller and 73.21 353 P P 00 46 03.8 +1.3
baz=172
BRYW Bryant College 73.24 0 P P 00 46 02.4 -0.3
M51A Elyria 73.27 352 P P 00 46 04.2 +1.4
baz=171
N47A Urbana 73.32 349 P P 00 46 02.9 -0.3
N47A IAmb IAmb 00 46 04.5
comp=Z,30nm,1.2s
N47A Urbana 73.32 349 P P 00 46 03.3 +0.2
baz=168,SNR=6.4
L60A Shokan 73.34 358 P P 00 46 05.4 +2.1
baz=178
M52A Chesterland 73.38 353 P P 00 46 03.3 -0.2
M52A Chesterland 73.38 353 P P 00 46 04.6 +1.1
baz=172,SNR=5.2
M50A Fremont 73.44 351 P P 00 46 03.5 -0.4
M50A IAmb IAmb 00 46 05.3
comp=Z,19nm,0.8s
M50A Fremont 73.44 351 P P 00 46 04.8 +1.0
baz=170
L58A Harry Jones Me 73.46 357 P P 00 46 05.8 +1.8
baz=177
TUC Tucson 73.49 326 P P 00 46 06.9 +2.4
TUC pmax pmax
comp=Z,5.0nm,2.9s
TUC Tucson 73.49 326 P P 00 46 06.6 +2.1
baz=146
L59A Walton 73.57 358 P P 00 46 04.4 -0.3
L59A Walton 73.57 358 P P 00 46 05.7 +1.1
baz=177
BINY Binghamton 73.62 357 P P 00 46 06.5 +1.6
baz=176
M49A Liberty Center 73.64 351 P P 00 46 05.8 +0.8
baz=169,SNR=5.2
L56A Greenwood 73.64 356 P P 00 46 05.5 +0.4
L56A Greenwood 73.64 356 P P 00 46 06.6 +1.5
baz=175,SNR=6.1
L53A Girard 73.68 354 P P 00 46 06.0 +0.8
baz=173
L55A Hinsdale 73.75 355 P P 00 46 07.3 +1.6
baz=174,SNR=5.3
M48A Edgerton 73.76 350 P P 00 46 04.5 -1.2
M48A IAmb IAmb 00 46 07.0
comp=Z,25nm,1.0s
M48A Edgerton 73.76 350 P P 00 46 06.3 +0.6
baz=169
L61B Northampton 73.78 359 P P 00 46 07.6 +1.8
baz=179
ANMO Albuquerque 73.80 331 P P 00 46 07.0 +0.6
ANMO Albuquerque 73.80 331 iP P 00 46 07.9 +1.5
ANMO pmax pmax
comp=Z,6.0nm,1.2s
ANMO Albuquerque 73.80 331 P P 00 46 08.8 +2.4
baz=150
ERPA Erie 73.81 354 P P 00 46 06.3 +0.3
ERPA IAmb IAmb 00 46 07.7
comp=Z,18nm,0.8s
ERPA Erie 73.81 354 P P 00 46 06.9 +0.9
baz=173
HRV Adam Dziewonsk 73.83 0 P P 00 46 08.0 +1.9
baz=180
L54A Sinclairville 73.87 354 P P 00 46 07.7 +1.3
baz=174,SNR=7.9
K60A Five Rivers En 73.96 359 P P 00 46 09.0 +2.1
baz=178
LIC Lamto 73.98 72 eP P 00 46 07.7 0.0
comp=Z,54nm,0.9s
WVNY West Valley, N 73.98 355 P P 00 46 06.9 -0.1
L50A Kingsville 74.05 352 P P 00 46 07.7 +0.3
baz=170
KSU1 Kansas State U 74.07 340 P P 00 46 08.9 +1.3
baz=158
TRY Troy 74.07 359 P P 00 46 07.8 +0.4
N41A Harden Midland 74.13 345 P P 00 46 07.2 -0.7
N41A IAmb IAmb 00 46 09.4
comp=Z,19nm,0.9s
K59A Cooperstown 74.15 358 P P 00 46 09.9 +1.9
baz=177
K58A Earlville 74.16 357 P P 00 46 09.4 +1.3
baz=177,SNR=5.2
L48A N Adams 74.17 350 P P 00 46 08.4 +0.3
baz=169,SNR=7.2
K57A Scipio Center 74.17 356 P P 00 46 09.4 +1.3
baz=176
214A Organ Pipe Nat 74.18 325 P P 00 46 08.2 -0.3
214A Organ Pipe Nat 74.18 325 P P 00 46 11.1 +2.6
baz=145,SNR=6.9
K56A Middlesex 74.19 356 P P 00 46 09.5 +1.3
baz=175
K54A Basiliko Farm, 74.19 355 P P 00 46 09.5 +1.3
baz=174
M44A Midewin, Midew 74.22 347 P P 00 46 08.3 -0.1
M44A IAmb IAmb 00 46 09.7
comp=Z,21nm,0.9s
TIC Toumodi 74.22 72 eP P 00 46 09.0 -0.1
L49A Milan 74.23 351 P P 00 46 09.3 +0.8
baz=170,SNR=6.2
K55A Perry 74.26 355 P P 00 46 10.1 +1.4
baz=175
KIC Kosan Boka 74.29 72 eP P 00 46 09.7 +0.2
comp=Z,83nm,0.9s
L47A Sherwood 74.31 350 P P 00 46 09.3 +0.3
baz=168,SNR=6.4
DBIC Dimbokro 74.37 72 P P 00 46 10.3 +0.3
comp=Z,26nm,0.9s,baz=213,slow=5.9,SNR=28
DBIC LR LR 01 15 41.4
comp=Z,259nm,21.3s,baz=216,slow=33
DBIC Dimbokro 74.37 72 P P 00 46 09.0 -1.0
DBIC Dimbokro 74.37 72 P P 00 46 09.0 -1.0
DBIC pmax pmax
comp=Z,33nm,1.0s
L46A Eue Claire 74.52 349 P P 00 46 09.1 -1.0
L46A IAmb IAmb 00 46 11.0
comp=Z,16nm,0.8s
L46A Eue Claire 74.52 349 P P 00 46 10.4 +0.3
baz=167
K52A Tillsonburg 74.54 353 P P 00 46 11.1 +0.9
baz=172,SNR=5.8
J62A Henniker 74.55 0 P P 00 46 12.6 +2.3
baz=180
ACCN Adirondack Com 74.72 359 P P 00 46 11.6 +0.3
MEDO Medina 74.73 355 P P 00 46 11.0 -0.3
MEDO IAmb IAmb 00 46 13.1
comp=Z,21nm,0.9s
J56A Wolcott 74.73 356 P P 00 46 10.5 -0.9
J56A IAmb IAmb 00 46 13.2
comp=Z,25nm,0.8s
J56A Wolcott 74.73 356 P P 00 46 12.5 +1.2
baz=176
K50A Casco 74.74 352 P P 00 46 11.2 -0.2
K50A Casco 74.74 352 P P 00 46 12.0 +0.6
baz=171
CBKS Cedar Bluff 74.76 338 P P 00 46 11.8 +0.1
CBKS IAmb IAmb 00 46 14.8
comp=Z,30nm,1.1s
CBKS Cedar Bluff 74.76 338 P P 00 46 11.8 +0.1
CBKS pmax pmax
comp=Z,30nm,1.1s
CBKS Cedar Bluff 74.76 338 P P 00 46 13.6 +2.0
baz=156,SNR=6.4
J55A Hilton 74.78 356 P P 00 46 10.7 -0.9
FFD Franklin Falls 74.79 0 P P 00 46 11.6 -0.1
J57A Williamstown 74.82 357 P P 00 46 11.8 0.0
J57A IAmb IAmb 00 46 13.9
comp=Z,25nm,0.9s
J57A Williamstown 74.82 357 P P 00 46 13.2 +1.4
baz=176
J59A Piesco 74.82 358 P P 00 46 12.2 +0.3
J59A IAmb IAmb 00 46 14.3
comp=Z,17nm,1.0s
J59A Piesco 74.82 358 P P 00 46 13.3 +1.4
baz=178,SNR=5.6
J54A Appleton 74.85 355 P P 00 46 11.9 0.0
T25A Trinidad 74.90 334 P P 00 46 12.6 -0.2
T25A IAmb IAmb 00 46 16.2
comp=Z,23nm,0.9s
T25A Trinidad 74.90 334 P P 00 46 15.4 +2.6
baz=152,SNR=8.5
X18A Snowflake 74.95 328 P P 00 46 12.9 -0.2
L44A Lake County Fo 74.96 348 P P 00 46 11.8 -0.9
L44A IAmb IAmb 00 46 14.2
comp=Z,28nm,1.1s
L44A Lake County Fo 74.96 348 P P 00 46 13.8 +1.1
baz=166
K47A Vermontville 74.96 350 P P 00 46 13.3 +0.6
baz=169
K48A Perry 74.97 351 P P 00 46 13.1 +0.3
baz=169
J52A Paris 74.97 354 P P 00 46 13.7 +1.0
baz=172,SNR=5.5
HNH Hanover 75.03 360 P P 00 46 12.2 -0.9
K46A Dorr 75.09 349 P P 00 46 13.3 -0.1
baz=168
L42A Oliver, Polo 75.12 346 P P 00 46 13.3 -0.4
L42A IAmb IAmb 00 46 16.3
comp=Z,35nm,1.4s
I59A Olmsteadville 75.14 359 P P 00 46 15.1 +1.4
baz=178
I60A Shoreham 75.18 359 P P 00 46 15.7 +1.8
baz=179
I61A Oroboro, Fairl 75.25 360 P P 00 46 16.7 +2.3
baz=180
113A Mohawk Valley, 75.31 324 P P 00 46 15.5 +0.6
MAW Mawson 75.37 164 P P 00 46 16.6 +1.7
comp=Z,13nm,1.0s,baz=220,slow=5.4,SNR=4.1
I63A Otisfield 75.38 1 P P 00 46 18.0 +3.0
baz=181
J49A Marlette 75.38 352 P P 00 46 15.3 +0.2
baz=170
PECO Prince Edward 75.40 356 P P 00 46 15.1 0.0
PECO IAmb IAmb 00 46 17.1
comp=Z,23nm,0.9s
J48A Bridge Port 75.41 351 P P 00 46 15.7 +0.5
baz=170,SNR=9.0
I53A Kortright Cn E 75.47 354 P P 00 46 16.8 +1.2
baz=173
J47A Sunmer 75.49 350 IAmb IAmb 00 46 16.4
comp=Z,31nm,1.1s
J47A Sunmer 75.49 350 P P 00 46 16.2 +0.5
baz=169
L40A Anamosa 75.50 345 P P 00 46 15.5 -0.3
X16A Lo Mia Camp, P 75.54 327 P P 00 46 16.8 +0.3
K43A Burlington 75.54 348 P P 00 46 14.6 -1.4
LBNH Lisbon 75.56 0 P P 00 46 16.2 +0.1
LBNH IAmb IAmb 00 46 22.1
comp=Z,28nm,1.4s
LBNH Lisbon 75.56 0 P P 00 46 16.2 +0.1
LBNH pmax pmax
comp=Z,28nm,1.4s
LBNH Lisbon 75.56 0 P P 00 46 18.1 +2.0
baz=180
I51A Listowel 75.58 353 P P 00 46 17.2 +1.0
baz=172,SNR=7.1
I55A Frankford 75.72 356 P P 00 46 18.3 +1.3
baz=175
I52A Shelburne 75.77 354 P P 00 46 18.5 +1.2
baz=173,SNR=5.0
H58A Gabriels 75.77 358 P P 00 46 18.8 +1.5
baz=178,SNR=5.4
SCIA State Center 75.81 344 P P 00 46 16.8 -0.8
SCIA IAmb IAmb 00 46 27.9
comp=Z,24nm,1.1s
SDCO Great Sand Dun 75.85 333 P P 00 46 17.4 -0.9
SDCO Great Sand Dun 75.85 333 P P 00 46 19.9 +1.6
baz=151
H57A Richville 75.85 357 P P 00 46 19.1 +1.4
baz=177
H61A Lyndonville 75.86 0 P P 00 46 20.0 +2.2
baz=180,SNR=6.6
SUR Sutherland 75.88 119 P P 00 46 18.5 -0.2
SUR IAmb IAmb 00 46 20.9
comp=Z,24nm,0.9s
Y14A Wickenburg 75.88 326 P P 00 46 19.1 +0.8
KSCO Kaye Shedlock' 75.91 336 P P 00 46 18.5 +0.1
KSCO IAmb IAmb 00 46 21.6
comp=Z,19nm,0.8s
I49A Point Hope 75.92 352 P P 00 46 17.4 -0.8
I49A IAmb IAmb 00 46 19.3
comp=Z,22nm,1.0s
I49A Point Hope 75.92 352 P P 00 46 18.4 +0.3
baz=170
LONY Lake Ozonia 75.98 358 P P 00 46 18.8 +0.2
LONY IAmb IAmb 00 46 21.3
comp=Z,25nm,1.0s
LONY Lake Ozonia 75.98 358 P P 00 46 20.1 +1.5
baz=178,SNR=5.0
H59A Cadyville 75.98 359 P P 00 46 20.2 +1.7
baz=178,SNR=5.3
H63A New Sharon 76.00 1 P P 00 46 21.2 +2.7
baz=182
H56A Elgin 76.02 357 P P 00 46 20.1 +1.4
baz=176,SNR=6.5
H55A Tweed 76.02 356 P P 00 46 19.9 +1.2
baz=175
GLA Glamis 76.06 324 P P 00 46 19.6 +0.3
GLA Glamis 76.06 324 P P 00 46 19.6 +0.3
GLA pmax pmax
comp=Z,6.0nm,0.7s
JFWS Jewell Farm 76.11 346 IAmb IAmb 00 46 21.1
comp=Z,17nm,0.9s
JFWS Jewell Farm 76.11 346 P P 00 46 20.4 +1.1
baz=164,SNR=5.2
H53A Bobcaygeon 76.14 355 P P 00 46 20.2 +0.8
baz=174
FRNY Flat Rock 76.17 359 P P 00 46 19.7 +0.1
I47A Gladwin 76.21 351 IAmb IAmb 00 46 21.0
comp=Z,21nm,0.8s
I47A Gladwin 76.21 351 P P 00 46 20.3 +0.5
baz=169
I48A Sherman Twp 76.27 351 P P 00 46 20.7 +0.6
baz=170,SNR=5.8
H52A Wyevale 76.31 354 P P 00 46 21.3 +0.9
baz=173,SNR=8.1
S22A 4UR Ranch, Cre 76.37 332 P P 00 46 23.2 +1.9
baz=150
SADO Sadowa 76.37 355 IAmb IAmb 00 46 22.4
comp=Z,24nm,0.9s
WUAZ Wupatki 76.42 328 IAmb IAmb 00 46 25.0
comp=Z,17nm,1.2s
WUAZ Wupatki 76.42 328 P P 00 46 21.5 0.0
baz=146
G63A Kingsbury 76.47 2 P P 00 46 23.2 +2.0
baz=182
Y12C Blythe 76.47 325 P P 00 46 21.3 -0.3
Y12C Blythe 76.47 325 P P 00 46 24.4 +2.8
baz=144
G57A Newington 76.48 358 P P 00 46 22.5 +1.2
baz=177,SNR=6.7
G58A Ormstown 76.50 358 P P 00 46 22.4 +1.0
baz=178
G62A West of Eustis 76.55 1 P P 00 46 22.3 +0.6
G62A West of Eustis 76.55 1 P P 00 46 24.1 +2.3
baz=181,SNR=7.3
MVCO Mesa Verde 76.59 331 P P 00 46 21.8 -0.6
MVCO Mesa Verde 76.59 331 P P 00 46 24.7 +2.3
baz=149
G61A St-Isidore-de- 76.61 0 P P 00 46 24.1 +2.1
baz=180
MOQ Mont Orford 76.63 360 P P 00 46 18.8 -3.5
BGNE Belgrade 76.65 340 P P 00 46 22.5 +0.1
BGNE Belgrade 76.65 340 P P 00 46 24.1 +1.7
baz=157
G53A Haliburton 76.69 355 P P 00 46 23.9 +1.4
baz=174,SNR=10
G55A Calabogie 76.70 357 P P 00 46 24.0 +1.4
baz=176
BAR Barrett 76.71 322 P P 00 46 21.1 -1.9
H48A Harrisville 76.73 352 P P 00 46 22.7 -0.1
H48A Harrisville 76.73 352 P P 00 46 23.5 +0.8
baz=170,SNR=5.1
H47A Mio 76.74 351 P P 00 46 23.4 +0.5
baz=169
I42A Draeger Farm, 76.80 347 P P 00 46 22.9 -0.3
I42A IAmb IAmb 00 46 24.9
comp=Z,18nm,1.0s
BC3 Big Chuckawall 76.86 324 P P 00 46 26.3 +2.4
baz=143,SNR=9.1
G54A Lake Saint Pet 76.92 356 P P 00 46 25.1 +1.2
baz=175
GLMI Grayling 77.02 351 P P 00 46 24.0 -0.4
GLMI IAmb IAmb 00 46 35.4
comp=Z,16nm,0.7s
F63A Nahmakanta, Br 77.07 2 P P 00 46 26.7 +2.1
baz=182
IRM Iron Mountain 77.10 324 P P 00 46 27.8 +2.7
baz=143,SNR=5.1
I40A Norwalk 77.13 346 P P 00 46 25.3 +0.3
I40A IAmb IAmb 00 46 26.5
comp=Z,23nm,1.1s
H43A Windswept, Lux 77.16 348 P P 00 46 24.5 -0.6
H43A IAmb IAmb 00 46 26.8
comp=Z,20nm,1.0s
W13A Hualapai Mount 77.25 326 P P 00 46 26.1 -0.1
F64A Sherman 77.25 3 P P 00 46 27.4 +1.7
baz=183,SNR=5.7
F55A Otter Lake 77.26 357 P P 00 46 27.5 +1.8
baz=176
G47A Hillman 77.26 351 P P 00 46 26.5 +0.8
baz=170,SNR=5.5
F60A Warwick 77.29 360 P P 00 46 27.2 +1.4
baz=180
XPFO Pion Flat 77.33 323 P P 00 46 26.8 +0.2
PFO Pinyon Flats O 77.33 323 LR LR 01 13 41.3
comp=Z,97nm,18.2s,baz=145,slow=30
PFO Pinyon Flats O 77.33 323 P P 00 46 27.1 +0.5
PFO IAmb IAmb 00 46 30.8
comp=Z,14nm,1.1s
PFO Pinyon Flats O 77.33 323 eP P 00 46 27.5 +0.9
PFO pmax pmax

comp=Z,14nm,1.0s
PFO Pinyon Flats O 77.33 323 P P 00 46 29.1 +2.5
baz=142,SNR=5.4
G45A Suttons Bay 77.38 350 P P 00 46 26.0 -0.3
G45A IAmb IAmb 00 46 27.3
comp=Z,10nm,0.8s
G45A Suttons Bay 77.38 350 P P 00 46 27.2 +0.8
baz=168
BELC Belle Mtn. Jos 77.41 324 P P 00 46 29.7 +2.7
baz=143
F52A Sundridge 77.41 355 P P 00 46 28.1 +1.5
baz=174
OGNE Ogallala 77.44 337 P P 00 46 26.8 -0.1
OGNE IAmb IAmb 00 46 29.9
comp=Z,22nm,1.4s
LMN Caledonia Moun 77.44 5 P P 00 46 26.7 0.0
ALGO Algonquin Park 77.47 356 P P 00 46 27.6 +0.7
baz=175,SNR=5.7
TRQ Mont Tremblant 77.58 358 P P 00 46 27.6 0.0
U15A North Rim 77.59 328 P P 00 46 28.5 +0.4
F51A Arnstein 77.59 354 P P 00 46 28.3 +0.8
baz=173
F49A Sandfield 77.63 353 P P 00 46 28.2 +0.4
baz=171,SNR=6.5
ISCO Idaho Springs 77.68 334 P P 00 46 29.2 +0.6
ISCO Idaho Springs 77.68 334 P P 00 46 29.3 +0.6
ISCO pmax pmax
comp=Z,9.0nm,1.1s
ISCO Idaho Springs 77.68 334 P P 00 46 30.9 +2.3
baz=151,SNR=7.9
E60A Ste Agathe de 77.69 0 P P 00 46 29.7 +1.6
baz=180
MURC Murrieta 77.70 323 P P 00 46 31.4 +2.8
baz=142
E58A La Victoria 77.70 359 P P 00 46 29.4 +1.3
baz=179,SNR=5.3
F48A Evansville 77.75 352 P P 00 46 29.0 +0.5
baz=171,SNR=8.1
E57A Chemin Saint G 77.76 358 P P 00 46 29.7 +1.1
baz=178
E63A Oxbow 77.81 2 P P 00 46 29.1 +0.4
E63A Oxbow 77.81 2 P P 00 46 30.8 +2.1
baz=183
E64A Bridgewater 77.83 3 P P 00 46 30.8 +2.0
baz=184
GMRC Granite Mounta 77.86 324 P P 00 46 32.3 +2.8
baz=143,SNR=8.5
E53A Dumoine, Ponti 77.87 356 P P 00 46 30.2 +1.1
baz=175
E54A Lac Daplat, Po 77.90 356 P P 00 46 30.3 +1.0
baz=176,SNR=5.3
E56A St. Veronique 77.92 358 P P 00 46 30.3 +0.9
baz=177,SNR=7.8
F45A CMU Biological 77.98 350 P P 00 46 30.5 +0.7
baz=168
PQI Presque Isle 78.07 3 P P 00 46 30.9 +0.7
E51A G1948 Merrick 78.15 355 P P 00 46 31.6 +1.0
baz=174
HEC Hector,Ludlow 78.23 324 P P 00 46 34.2 +2.7
baz=143,SNR=6.6
D60A Saint Jean D'O 78.24 1 P P 00 46 33.0 +1.9
baz=181,SNR=5.6
KNB Kanab 78.31 328 P P 00 46 32.5 +0.4
KNB Kanab 78.31 328 P P 00 46 32.5 +0.4
KNB pmax pmax
comp=Z,12nm,0.9s
E48A Lockeyer 78.35 353 P P 00 46 32.7 +1.0
baz=171,SNR=9.6
D57A Chemin Vers le 78.36 359 P P 00 46 33.0 +1.2
baz=178,SNR=6.3
ECSD EROS Data Cent 78.38 342 P P 00 46 31.4 -0.6
ECSD IAmb IAmb 00 46 34.0
comp=Z,22nm,0.9s
ECSD EROS Data Cent 78.38 342 P P 00 46 33.1 +1.1
baz=159,SNR=19
D55A Sainte-Anne-du 78.41 358 P P 00 46 33.2 +1.1
baz=177,SNR=7.1
D56A ZEC Mazanza, M 78.41 358 P P 00 46 33.2 +1.1
baz=178
D58A Chemin du LacG 78.42 359 P P 00 46 33.6 +1.4
baz=179,SNR=11
D63A Stockholm 78.44 3 P P 00 46 34.2 +2.0
baz=183
BFSC Mount Baldy Ra 78.44 323 P P 00 46 35.3 +2.6
baz=142,SNR=7.5
D62A Allapoint, All 78.45 2 P P 00 46 32.4 +0.2
D62A Allapoint, All 78.45 2 P P 00 46 34.2 +1.9
baz=182,SNR=6.7
E47A Iron Bridge 78.45 352 P P 00 46 33.1 +0.8
baz=170,SNR=11
F42A Maple Grove Fa 78.47 349 P P 00 46 32.2 -0.2
F42A IAmb IAmb 00 46 33.8
comp=Z,24nm,1.1s
LCMT Little Creek M 78.50 327 P P 00 46 32.5 -0.5
TUQ Turquoise Moun 78.51 325 P P 00 46 35.9 +2.8
baz=143,SNR=8.4
D61A St Aubert, Com 78.54 1 P P 00 46 34.7 +2.0
baz=182
D53A Lac Vacive, Po 78.57 356 P P 00 46 32.2 -0.8
D53A Lac Vacive, Po 78.57 356 P P 00 46 34.0 +1.1
baz=175,SNR=5.5
D54A Lac Fusel, La 78.59 357 P P 00 46 33.6 +0.5
baz=176,SNR=5.7
MWC Mount Wilson 78.64 322 P P 00 46 33.5 -0.4
MWC Mount Wilson 78.64 322 P P 00 46 33.5 -0.4
MWC pmax pmax
comp=Z,7.0nm,0.9s
LATQ La Tuque 78.71 359 P P 00 46 33.9 +0.2
LATQ IAmb IAmb 00 46 35.9
comp=Z,14nm,1.0s
LATQ La Tuque 78.71 359 P P 00 46 35.2 +1.5
baz=179,SNR=5.6
N23A Red Feather La 78.76 334 P P 00 46 36.7 +2.2
baz=151
D50A G1974 Best Tow 78.81 355 P P 00 46 35.3 +1.0
baz=173,SNR=5.7
GSC Goldstone, Bar 78.84 324 P P 00 46 34.9 0.0
GSC Goldstone, Bar 78.84 324 P P 00 46 34.9 0.0
GSC pmax pmax
comp=Z,7.0nm,0.9s
GSC Goldstone, Bar 78.84 324 P P 00 46 37.6 +2.8
baz=142,SNR=6.8
SPMN Marine on St. 78.86 345 P P 00 46 34.2 -0.4
SPMN Marine on St. 78.86 345 P P 00 46 35.2 +0.6
baz=162
E43A Lone Tree Farm 78.88 349 P P 00 46 34.7 0.0
E43A IAmb IAmb 00 46 36.5
comp=Z,20nm,0.9s
E44A Grand Marais A 78.96 350 P P 00 46 36.6 +1.5
baz=168
D46A Sault St. Mari 78.97 352 P P 00 46 35.7 +0.5
baz=170
COWI Conover 78.97 348 P P 00 46 34.8 -0.5
O20A White River Ci 78.98 332 P P 00 46 35.9 +0.2
O20A IAmb IAmb 00 46 38.7
comp=Z,18nm,1.1s
O20A White River Ci 78.98 332 P P 00 46 37.4 +1.8
baz=149
SHPR Sheep Range 78.99 326 P P 00 46 35.8 0.0
CCUT Cedar City 79.00 328 P P 00 46 37.1 +1.2
D48A Paudash Townsh 79.00 353 P P 00 46 35.9 +0.6
baz=172
D47A Chapleau 79.02 352 P P 00 46 36.0 +0.5
baz=170
SRU San Rafael Swe 79.04 330 P P 00 46 35.7 -0.3
SRU San Rafael Swe 79.04 330 P P 00 46 35.7 -0.3
SRU pmax pmax
comp=Z,10.0nm,1.0s
D49A Beulah Townshi 79.05 353 P P 00 46 36.5 +0.9
baz=172,SNR=5.3
EDW2 Edwards Air Fo 79.11 323 P P 00 46 38.5 +2.2
baz=141,SNR=5.8
Q16A Castle Valley 79.16 330 P P 00 46 37.5 +0.8
MSU Marysvale 79.26 329 P P 00 46 38.0 +0.8
MSU Marysvale 79.26 329 P P 00 46 38.0 +0.8
OSI Osito Audit: C 79.28 322 P P 00 46 38.2 +0.9
OSI IAmb IAmb 00 46 40.6
comp=Z,14nm,0.9s
LRMC Laurel Mtn Rad 79.42 324 P P 00 46 40.7 +2.6
baz=142
P17A Butcher Ranch, 79.44 330 P P 00 46 37.6 -0.5
VLDQ Val d'Or 79.59 356 P P 00 46 38.3 -0.2
VLDQ IAmb IAmb 00 46 40.7
comp=Z,24nm,1.1s
TSUM Tsumeb 79.77 106 P P 00 46 39.5 -1.0
TSUM IAmb IAmb 00 46 42.4

comp=Z,17nm,1.1s
MPMC Manual Prospec 79.78 324 P P 00 46 42.4 +2.3
baz=142,SNR=6.8
FURC Furnace Creek, 79.79 325 P P 00 46 43.1 +3.2
baz=142
D41A Chassel 79.80 349 P P 00 46 39.7 0.0
TPNV Topopah Spring 79.87 325 P P 00 46 40.8 +0.3
TPNV Topopah Spring 79.87 325 P P 00 46 40.8 +0.3
TPNV pmax pmax
comp=Z,10.0nm,1.0s
TPNV Topopah Spring 79.87 325 P P 00 46 43.4 +2.8
baz=143,SNR=8.0
RWWY Rawlins 79.92 334 P P 00 46 40.8 0.0
ISA Isabella, Lake 79.97 323 P P 00 46 41.6 +0.6
ISA IAmb IAmb 00 46 44.6
comp=Z,12nm,0.8s
ISA Isabella, Lake 79.97 323 P P 00 46 41.6 +0.6
ISA pmax pmax
comp=Z,13nm,0.9s
ISA Isabella, Lake 79.97 323 P P 00 46 43.9 +2.9
baz=141,SNR=9.7
DAC Darwin (Calif) 80.00 324 P P 00 46 41.4 +0.1
DAC IAmb IAmb 00 46 47.6
comp=Z,16nm,1.1s
DAC Darwin (Calif) 80.00 324 P P 00 46 41.4 +0.1
DAC pmax pmax
comp=Z,16nm,1.1s
PSUT Pine Spring 80.02 328 P P 00 46 41.1 -0.3
PKM Mcpherson Peak 80.07 322 P P 00 46 44.3 +2.6
baz=140,SNR=5.7
MPU Maple Canyon 80.27 330 P P 00 46 43.5 +0.8
CWC Cottonwood Cre 80.37 324 P P 00 46 45.9 +2.6
baz=142
NLU North Lily Min 80.41 330 P P 00 46 44.0 +0.5
VES Vestal, Richgr 80.42 323 P P 00 46 45.9 +2.6
baz=141,SNR=9.3
SMMC Simmler 80.49 322 P P 00 46 46.9 +3.1
baz=140
K22A Casper 80.50 335 P P 00 46 43.8 0.0
K22A IAmb IAmb 00 46 46.8
comp=Z,28nm,1.4s
K22A Casper 80.50 335 P P 00 46 46.0 +2.2
baz=151
LSQQ Lebel-sur-Quev 80.51 357 P P 00 46 44.1 +0.6
baz=176
R11A Troy Canyon, C 80.67 327 P P 00 46 45.3 +0.4
R11A Troy Canyon, C 80.67 327 P P 00 46 47.2 +2.3
baz=144,SNR=9.7
JLU Jordanelle 80.68 331 P P 00 46 43.7 -1.3
CTU Camp Tracy 80.88 330 P P 00 46 45.8 -0.1
DUG Dugway, Tooele 80.92 329 P P 00 46 46.2 +0.1
DUG Dugway, Tooele 80.92 329 P P 00 46 46.2 +0.1
DUG pmax pmax
comp=Z,9.0nm,1.2s
DUG Dugway, Tooele 80.92 329 P P 00 46 47.9 +1.8
baz=146,SNR=6.5
TIN Tinemaha, Big 80.93 324 P P 00 46 49.2 +3.0
baz=142,SNR=6.7
RSSD Black Hills 80.94 337 P P 00 46 46.3 +0.1
RSSD Black Hills 80.94 337 P P 00 46 46.3 +0.1
RSSD pmax pmax
comp=Z,9.0nm,1.0s
RSSD Black Hills 80.94 337 P P 00 46 47.8 +1.6
baz=153
EYMN Ely 81.19 347 P P 00 46 47.0 -0.2
EYMN Ely 81.19 347 P P 00 46 47.8 +0.6
baz=163,SNR=7.1
MATQ Matagami 81.24 356 P P 00 46 48.0 +0.6
baz=175
HWUT Hardware Ranch 81.57 331 IAmb IAmb 00 46 51.9
comp=Z,12nm,0.8s
D32A Dogwood Acres, 81.65 343 P P 00 46 49.2 -0.4
PD31 Pinedale Array 81.74 333 P P 00 46 50.0 -0.5
PDAR Pinedale Array 81.74 333 P P 00 46 51.3 +0.8
comp=Z,1.5nm,0.8s,baz=145,slow=5.4,SNR=9.2
OMMB Old Mammoth Mi 81.75 324 P P 00 46 51.0 +0.2
MDPB Devils Postpil 81.80 324 P P 00 46 51.0 0.0
NV11 Mina Array Sit 81.97 325 P P 00 46 51.9 +0.2
NVAR Mina Array Bea 82.04 325 P P 00 46 54.2 +2.1
comp=Z,7.6nm,0.8s,baz=154,slow=6.2,SNR=39
HVU Hansel Valley 82.21 330 P P 00 46 52.6 -0.3
HVU Hansel Valley 82.21 330 P P 00 46 52.6 -0.3
HVU pmax pmax
comp=Z,10.0nm,0.9s
RYN Ryan 82.30 325 P P 00 46 53.5 0.0
AHID Auburn Hatcher 82.35 332 P P 00 46 52.8 -0.9
SAO San Andreas Ge 82.35 322 P P 00 46 53.5 -0.1
SAO IAmb IAmb 00 46 56.2
comp=Z,16nm,1.2s
SAO San Andreas Ge 82.35 322 P P 00 46 53.5 -0.1
SAO pmax pmax
comp=Z,16nm,1.2s
KVN Kaiserville 82.42 325 P P 00 46 54.3 +0.2
KVN Kaiserville 82.42 325 P P 00 46 54.3 +0.2
ELK Elko 82.44 328 P P 00 46 54.1 -0.1
ELK Elko 82.44 328 P P 00 46 54.1 -0.1
ELK pmax pmax
comp=Z,9.0nm,0.9s
AGMN Agassiz Nation 82.46 344 P P 00 46 53.8 0.0
AGMN IAmb IAmb 00 46 55.4
comp=Z,13nm,1.0s
AGMN Agassiz Nation 82.46 344 P P 00 46 54.7 +0.9
baz=160
WAKR Walker 82.66 324 P P 00 46 55.4 0.0
REDW Red Top Meadow 82.75 332 P P 00 46 55.2 -0.6
SNOW Snow King Moun 82.80 333 P P 00 46 55.4 -0.6
YERR Yerington 82.93 325 P P 00 46 56.5 -0.3
YERR IAmb IAmb 00 47 00.1
comp=Z,12nm,0.9s
MDND Maddock 82.98 342 P P 00 46 56.6 +0.1
MDND Maddock 82.98 342 P P 00 46 58.2 +1.7
baz=157,SNR=5.2
PNTR Pine Nut 83.19 325 P P 00 46 58.4 +0.3
FLWY Flagg Ranch 83.30 333 P P 00 46 58.7 +0.1
TOA0 Torodi Ar. Sit 83.35 70 P P 00 46 59.2 0.0
TORD Torodi Ar. Bea 83.35 70 P P 00 46 59.5 +0.3
comp=Z,27nm,0.9s,baz=257,slow=4.7,SNR=91
TORD LR LR 01 21 36.8
comp=Z,244nm,20.5s,baz=305,slow=34
VCNR Virginia City 83.37 325 P P 00 46 58.0 -1.0
RUBR Rubicon Trail 83.43 324 P P 00 46 58.7 -0.7
RUBR IAmb IAmb 00 47 05.6
comp=Z,14nm,0.8s
PAHR Pah Rah Range 83.56 325 P P 00 47 00.9 +1.0
PAHR IAmb IAmb 00 47 03.2
comp=Z,11nm,0.9s
YUF Upper Falls 83.76 333 P P 00 47 00.9 0.0
AFDM Forest Hills D 83.76 324 P P 00 47 01.6 +0.8
YMR Madison River 83.89 333 P P 00 47 02.6 +1.0
BEKR Beckworth 84.16 325 P P 00 47 02.8 -0.2
BEKR IAmb IAmb 00 47 06.0
comp=Z,8.2nm,0.9s
QLMT Earthquake Lak 84.21 333 P P 00 47 03.1 -0.1
ULM Lac du Bonnet 84.29 345 P P 00 47 03.5 +0.2
comp=Z,10nm,0.9s,baz=160,slow=3.5,SNR=19
ULM Lac du Bonnet 84.29 345 P P 00 47 03.4 +0.2
ULM IAmb IAmb 00 47 05.0
comp=Z,14nm,1.1s
ULM Lac du Bonnet 84.29 345 i P P 00 47 03.1 -0.1
ORV Oroville 84.49 324 P P 00 47 05.1 +0.6
ORV IAmb IAmb 00 47 07.8
comp=Z,12nm,1.1s
ORV Oroville 84.49 324 P P 00 47 05.1 +0.6
ORV pmax pmax
comp=Z,12nm,1.1s
MFID Camas Ranch 84.85 330 P P 00 47 06.6 +0.2
DGMT Dagmar 84.86 339 P P 00 47 06.5 +0.4
DGMT Dagmar 84.86 339 P P 00 47 08.0 +1.9
baz=153,SNR=6.3
DLMT Dillon 85.11 333 P P 00 47 08.2 +0.5
DLMT IAmb IAmb 00 47 10.5
comp=Z,8.6nm,1.1s
O03E Paynes Creek 85.20 324 P P 00 47 08.9 +0.7
baz=139
WVOR Wild Horse Val 85.33 327 P P 00 47 09.6 +0.8
WVOR Wild Horse Val 85.33 327 P P 00 47 09.6 +0.8
WVOR pmax pmax
comp=Z,5.0nm,1.0s
MOD Modoc Plateau 85.69 326 P P 00 47 10.7 0.0
MOD IAmb IAmb 00 47 13.0
comp=Z,8.0nm,0.9s
J08A Circle Bar Ran 85.98 328 P P 00 47 12.4 +0.4
SCHQ Schefferville 86.28 3 P P 00 47 13.2 +0.1
comp=Z,18nm,1.1s,baz=149,slow=2.3,SNR=11
SCHQ Schefferville 86.28 3 P P 00 47 12.7 -0.3

M04C Macdoel 86.35 325 P P 00 47 15.8 +2.0
baz=139
I07A Izee 87.01 328 P P 00 47 18.1 +1.1
I07A IAmb IAmb 00 47 19.9
comp=Z,7.2nm,1.0s
PINE Pine Mountain 87.44 327 P P 00 47 19.0 -0.2
I05D Terrebonne, OR 88.05 327 P P 00 47 23.2 +1.2
baz=140
WALA Waterton Lakes 88.67 334 P P 00 47 25.0 +0.2
WALA IAmb IAmb 00 47 27.1
comp=Z,11nm,1.0s
C09A Chrisman Ranch 89.38 331 IAmb IAmb 00 47 30.2
comp=Z,9.4nm,0.9s
FFC Flin Flon 89.86 343 P P 00 47 30.8 +0.7
FFC IAmb IAmb 00 47 44.7
comp=Z,9.6nm,1.2s
FFC Flin Flon 89.86 343 P P 00 47 30.8 +0.7
FFC pmax pmax
comp=Z,10.0nm,1.2s
AFI Afiamalu 90.95 253 LR LR 01 18 15.3
comp=Z,661nm,21.2s,baz=181,slow=29
TAM Tamanrasset 91.75 64 IAmb IAmb 00 47 41.8
comp=Z,6.7nm,1.2s
ESDC Sonseca Array 94.92 46 P P 00 47 54.3 +0.4
comp=Z,1.4nm,0.9s,baz=251,slow=3.4,SNR=5.6
ESDC LR LR 01 29 32.5
comp=Z,183nm,19.3s,baz=195,slow=35
YKA Yellowknife Ar 99.90 341 P Pdif 00 48 16.1 +0.3
comp=Z,0.9nm,0.7s,baz=142,slow=4.2,SNR=21
KLNR Kaliningrad 116.34 40 ePKIKP PKiKP 00 53 15.3 +0.6
AKASG Malin Array Be 120.56 46 PKP PKPdf 00 53 22.1 -0.8
comp=Z,1.5nm,0.8s,baz=280,slow=2.1,SNR=7.6
BRTR Keskin Array B 120.62 60 PKP PKPdf 00 53 23.6 -0.1
comp=Z,0.9nm,0.9s,baz=177,slow=3.7,SNR=4.9
ARCES ARCESS Array B 121.88 24 PKP PKiKP 00 53 25.6 +0.4
comp=Z,2.5nm,0.8s,baz=254,slow=3.3,SNR=4.3
WRA Warramunga Arr 122.81 210 PKP PKiKP 00 53 28.9 +0.3
comp=Z,3.2nm,0.8s,baz=165,slow=1.6,SNR=6.3
WRAB Tennant Creek 122.81 210 i PKIKP PKPdf 00 53 26.1 -2.3
OBN Obninsk 125.69 42 ePKIKP PKPdf 00 53 32.1 -0.5
OBN e 00 55 26.1
OBN pmax pmax
comp=Z,6.0nm,1.0s
H11S2 WAKE ISLAND Hy125.85 271 T T 03 12 29.9
baz=117,slow=74,SNR=228
H11S1 WAKE ISLAND Hy125.87 271 T T 03 12 32.2
baz=117,slow=74,SNR=180
H11S3 WAKE ISLAND Hy125.87 271 T T 03 12 31.0
baz=117,slow=75,SNR=228
H11N3 WAKE ISLAND Hy126.21 272 T T 03 12 55.4
baz=116,slow=75,SNR=65
H11N1 WAKE ISLAND Hy126.22 272 T T 03 13 00.1
baz=116,slow=75,SNR=21
H11N2 WAKE ISLAND Hy126.22 272 T T 03 12 56.7
baz=116,slow=75,SNR=199
KLMR Klimovskoe 127.48 35 ePKIKP PKPdf 00 53 35.0 -0.9
KLMR pmax pmax
comp=Z,14nm,1.1s
KLMR Klimovskoe 127.48 35 ePKPdf PKPdf 00 53 35.1 -0.9
KLMR AMP 00 53 38.2
comp=Z,14nm,1.1s
NEY Neytrino 128.08 58 i PKIKP PKPdf 00 53 38.0 +0.1
KIV Kislovodsk 128.18 57 ePKIKP PKPdf 00 53 37.8 -0.2
KIV pmax pmax
comp=Z,12nm,1.0s
NCK Nalchik 128.75 57 ePKIKP PKiKP 00 53 40.0 +0.4
GNI Garni 128.99 62 i PKIKP PKiKP 00 53 40.8 +0.4
PRGR Permogore 130.37 34 ePKIKP PKPdf 00 53 41.5 +0.1
PRGR pmax pmax
comp=Z,14nm,1.0s
BILL Bilibino 130.79 335 ePKIKP PKiKP 00 53 42.9 0.0
BILL pmax pmax
comp=Z,1.0nm,1.1s
ARU Arti 137.92 39 PKP PKiKP 00 53 57.2 -0.5
comp=Z,1.7nm,0.8s,baz=340,slow=4.3,SNR=6.0
ARU Arti 137.92 39 PKPdf 00 53 56.8 +1.0
ARU Arti 137.92 39 i PKIKP PKPdf 00 53 55.8 +0.1
ARU 00 56 42.9
ARU SS SS 01 14 48.7 -4.1
SEY Seymchan 138.06 331 PKP PKiKP 00 53 57.9 +0.1
comp=Z,1.6nm,0.7s,baz=67,slow=2.5,SNR=4.1
SEY Seymchan 138.06 331 i PKIKP PKiKP 00 53 55.8 0.0
TIXI Tiksi 138.44 350 i PKIKP PKiKP 00 53 56.9 +0.7
MA2 Magadan 140.24 327 i PKIKP PKiKP 00 54 05.0 +2.6
LUWI Luwuk 144.59 206 PKPdf 00 54 09.7 +0.7
PALK Pallekele 144.78 128 PKPdf 00 54 09.2 -0.2
PALK Pallekele 144.78 128 PKIKP PKPdf 00 54 09.2 -0.2
BRVK Borovoye 145.44 41 PKPab 00 54 10.7 +1.2
BRVK Borovoye 145.44 41 PKIKP PKPab 00 54 10.7 +1.2
BVAR Borovoye Array 145.51 41 PKPbc PKPab 00 54 10.9 +1.1
comp=Z,31nm,0.8s,baz=298,slow=3.2,SNR=189
YAK Yakutsk 146.57 342 PKPbc PKPab 00 54 13.7 +0.2
comp=Z,11nm,0.3s,baz=210,slow=2.4,SNR=16
YAK Yakutsk 146.57 342 PKPbc 00 54 12.4 0.0
YAK Yakutsk 146.57 342 ePKP2 PKPbc 00 54 13.0 +0.6
YAK pmax pmax
comp=Z,75nm,1.0s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=E,7.0nm,0.9s
KBL Kabul 147.33 74 PKPbc 00 54 15.9 +0.1
KBL Kabul 147.33 74 PKP2 PKPbc 00 54 15.9 +0.1
KK31 Karatay Array 148.31 58 PKPdf 00 54 15.9 +1.4
KK31 Karatay Array 148.31 58 PKIKP PKPdf 00 54 15.9 +1.4
KKAR Karatay Array 148.31 58 PKPdf 00 54 15.9 +1.4
KKAR Karatay Array 148.31 58 PKIKP PKPdf 00 54 15.9 +1.4
BTK Batken 148.87 64 PKPbc 00 54 19.9 +0.4
BTK Batken 148.87 64 PKP2 PKPbc 00 54 19.9 +0.4
HYB Hyderabad 149.75 111 i PKP PKPbc 00 54 22.0 -0.3
JKA Kamikawa-asahi 150.27 305 PKiKP 00 54 24.2 +0.7
ASAJ Asahikawa 150.27 305 PKPbc PKiKP 00 54 24.2 +0.7
comp=E,8.9nm,0.9s,baz=54,slow=23,SNR=3.0
NIL Nilore 150.71 77 PKiKP 00 54 24.7 -0.1
NIL Nilore 150.71 77 PKIKP PKiKP 00 54 24.7 -0.1
KCP Kidapawan 150.75 217 i P PKiKP 00 54 26.0 +0.5
KURBB Kurchatov Array 151.10 41 PKP PKPdf 00 54 19.8 +1.3
comp=E,0.8nm,0.7s,baz=298,slow=2.3,SNR=9.1
KURBB PKPbc PKiKP 00 54 25.2 +0.2
comp=E,15nm,0.8s,baz=299,slow=3.0,SNR=22
KURK Kurchatov 151.10 40 PKPdf 00 54 19.8 +1.2
KURK PKiKP 00 54 25.2 +0.2
KURK Kurchatov 151.10 40 PKIKP PKPdf 00 54 19.8 +1.2
KURK 00 54 25.2
AAK Ala-Archa 151.28 58 PKP PKPdf 00 54 20.8 +1.4
comp=E,8.6nm,0.9s,baz=299,slow=18,SNR=3.9
AAK PKPbc PKPbc 00 54 26.8 +1.4
comp=E,7.1nm,0.8s,baz=233,slow=2.6,SNR=24
IPM Ipoh 152.14 165 PKPbc 00 54 28.0 0.0
ZAA0 Zalesovo Array 152.21 30 PKPbc PKiKP 00 54 27.4 +0.3
ZALV Zalesovo Beam 152.21 30 PKP PKPdf 00 54 21.0 +0.8
comp=E,2.1nm,0.8s,baz=293,slow=4.0,SNR=10.0
ZALV PKPbc PKiKP 00 54 27.6 +0.5
comp=E,38nm,0.8s,baz=295,slow=3.1,SNR=113
ZALV PKPab PKPab 00 54 35.8 -0.9
comp=E,15nm,0.6s,baz=304,slow=3.3,SNR=15
NRN Naryn 152.61 60 PKiKP 00 54 29.6 +0.7
NRN PKPab PKPab 00 54 39.7 +0.5
KSH Kashi 152.87 64 PKPbc PKiKP 00 54 29.3 +0.1
KSH sPKP 00 55 01.6
KSH PKS PKSdf 00 57 52.5 -3.8
KSH PP PP 00 57 56.8 -17
KSH SKS SKSdf 01 01 22.8 -4.8
BOD Bodaibo 153.55 353 ePKIKP PKPbc 00 54 29.6 -0.1
BOD pmax pmax
comp=Z,17nm,1.2s
ZEA Zeya 154.00 334 ePKP2 PKPab 00 54 44.7 +0.5
MAKZ Makanchi 154.94 45 PKPdf 00 54 24.9 +0.6
MAKZ PKPbc PKPbc 00 54 33.2 +0.1
MAKZ PKPab PKPab 00 54 48.2 -0.3
MAKZ Makanchi 154.94 45 PKIKP PKPdf 00 54 24.9 +0.6
MAKZ 00 54 33.2
MAKZ 00 54 48.2
MK31 Makanchi Array 155.13 45 PKPdf 00 54 25.1 +0.5
MK31 sPKPdf 00 54 34.1 +0.3
MKAR Makanchi Array 155.13 45 PKP PKPdf 00 54 25.0 +0.4
comp=Z,1.2nm,0.9s,baz=354,slow=1.2,SNR=10
MKAR PKPab PKPab 00 54 49.5 +0.1
comp=Z,7.5nm,0.9s,baz=296,slow=2.3,SNR=6.2
TLY Talaya 159.76 8 PKPab PKPab 00 55 11.4 +2.3
comp=Z,4.9nm,0.8s,baz=315,slow=4.0,SNR=9.8
TLY Talaya 159.76 8 i PKIKP PKPdf 00 54 32.1 +1.8
TLY pmax pmax
comp=Z,4.0nm,0.7s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
WMQ	Urumqi	159.91	47	ePKP	PKPdf	00 54 31.1	+0.3
WMQ				LR	LR		
	comp=Z,640nm,28.9s						
WMQ				LR	LR		
	comp=Z,680nm,29.2s						
WMQ				LR	LR		
	comp=Z,360nm,29.0s						
ZAK	Zakamensk	160.99	9	ePKP2	PKPab	00 55 14.5	-0.1
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SONM	Songino Array	163.82	4	PKPab	PKPab	00 55 28.5	+1.4
	comp=Z,4.1nm,0.9s,baz=340,slow=4.1,SNR=17						
CMAR	Chiang Mai Arr	164.47	146	PKP	PKPdf	00 54 36.5	+0.5
	comp=Z,1.0nm,0.3s,baz=279,slow=2.0,SNR=6.7						
GTA	Gaotai	169.78	39	PKP	PKPdf	00 54 41.3	+1.8
GTA				PKPab	PKPab	00 55 54.9	+1.1
GTA				LR	LR		
	comp=Z,130nm,20.9s						
GTA				LR	LR		
	comp=Z,150nm,20.9s						
GTA				LR	LR		
	comp=Z,230nm,20.3s						
HHC	Hu-ho-hao-te	170.43	344	ePKP	PKPdf	00 54 40.3	+0.5
NJ2	Nanjing	170.81	275	ePKP	PKPdf	00 54 40.3	+0.2
KMI	Kunming	171.96	143	PKP	PKPdf	00 54 43.1	+1.9
KMI				LR	LR		
	comp=Z,160nm,19.9s						
KMI				LR	LR		
	comp=Z,170nm,27.4s						
KMI				LR	LR		
	comp=Z,250nm,35.2s						
LZH	Lanzhou	174.38	37	ePKP	PKPdf	00 54 38.6	-3.1
LZH				pPKP	pPKPdf	00 54 46.3	-2.3
LZH				sPKP		00 54 51.6	
LZH				LR	LR		
	comp=Z,200nm,18.0s						
LZH				LR	LR		
	comp=Z,210nm,18.3s						
LZH				LR	LR		
	comp=Z,210nm,20.1s						
WHN	Wuhan	174.49	260	PKP	PKPdf	00 54 50.4	+8.7
CD2	Chengdu	176.24	101	PKP	PKPdf	00 54 41.0	-1.3
XAN	Xi'an	177.54	343	PKP	PKPdf	00 54 43.8	+1.4
XAN				LR	LR		
	comp=Z,210nm,17.4s						
XAN				LR	LR		
	comp=Z,250nm,19.5s						
XAN				LR	LR		
	comp=Z,360nm,19.5s						

GCG 17 00:42:12.2±0.9, 12.81N×91.07W, h48km±886km, MD3.9
SNET 17 00:42:16.0±1.2, 13.20N×90.89W, h15km±14km, ML2.1
ISC 17 00:42:15.2±3.0, 13.1N±0.1×90.77W±0.08, h10km, n10, σ3.32/14, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	Alcaldia de Sa	1.02	45	eP	Pg	00 42 26.6	-8.3
FAME				eS	Sg	00 42 41.8	-6.5
IXG	Ixpaco	1.09	17	eP	Pg	00 42 35.7	-0.5
IXG				eS	Sg	00 42 50.0	-0.5
IXG	Ixpaco	1.09	17	eP	Pn	00 42 36.9	+0.1
PCG	Pacaya	1.27	7	eP	Pn	00 42 39.3	0.0
PCG				eS	Sn	00 43 01.1	+4.5
FUG	Fuego 3	1.32	357	eP	Pn	00 42 39.4	-0.5
FUG				eS	Sn	00 43 04.6	+6.9
SBLS	San Blas	1.32	57	eP	Pn	00 42 40.3	+0.4
RTR	El Retiro	1.33	55	eP	Pn	00 42 41.3	+1.2
STG3	Santiaguito 3,	1.76	334	eP	Pn	00 42 44.4	-1.7
STG3				eS	Sb	00 43 07.7	-2.3
MTO3	Montecristo	1.86	47	eP	Pn	00 42 48.0	+0.5
MTO3				IAML		00 42 51.2	
	comp=Z,16nm,0.3s						
MRL	Marmol	2.21	28	eP	Pn	00 42 52.6	+0.4

TIR 17 00:45:34.5, 40.09N×20.83E, h7km, Md2.7/5
ATH 17 00:45:35.2, 40.11N×20.83E, h16km±2km, ML2.1/14, Error ellipse: s-maj=2.4km s-min=1.0km az=310.0
THE 17 00:45:35.9, 40.11N×20.82E, h0km±3km, ML2.0/9, Error ellipse: s-maj=3.5km s-min=0.8km az=330.0
ISC 17 00:45:35.9±1.1, 40.10N±0.02×20.82E±0.02, h2km±11km, n40, σ0.79/59, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEST	Nestorio	0.36	28	P	Pg	00 45 42.1	-0.7
NEST				S	Sg	00 45 48.2	+0.6
	552nm,0.6s						
NEST	Nestorio	0.36	28	P	Pg	00 45 42.2	-0.7
NEST				S	Sg	00 45 48.2	+0.6
NEST				AML	AML	00 45 49.4	
	comp=N,1110μm,0.3s						
NEST				AML	AML	00 45 49.6	
	comp=E,1298μm,0.3s						
KPRO	Kipourio	0.44	109	P	Pg	00 45 44.0	-0.3
KPRO				S	Sb	00 45 52.2	-1.2
	comp=E,200nm,0.6s						
KPRO	Kipourio	0.44	109	P	Pg	00 45 44.0	-0.3
KPRO				AML	AML	00 46 00.0	
	comp=E,428μm,0.4s						
KPRO				AML	AML	00 46 00.1	
	comp=N,418μm,0.4s						
JAN	Janina	0.44	177	P	Pg	00 45 43.7	-0.6
JAN				S	Sg	00 45 51.6	+1.6
	comp=N,455nm,0.4s						
JAN	Janina	0.44	177	P	Pg	00 45 43.7	-0.6
JAN				S	Sg	00 45 51.3	+1.3
JAN				AML	AML	00 45 53.9	
	comp=N,1021μm,0.4s						
JAN				AML	AML	00 45 54.0	
	comp=E,806μm,0.4s						
MEV	Metsovon	0.44	135	P	Pg	00 45 44.8	+0.4
MEV	Metsovon	0.44	135	P	Pg	00 45 44.7	+0.4
TPE	Tepelena	0.65	288	P	Pg	00 45 47.6	-0.8
TPE	Tepelena	0.65	288	iPG	Pg	00 45 47.5	-0.9
TPE				iSG	Sg	00 45 57.5	+0.7
SRN	Sarande	0.67	251	P	Pg	00 45 48.2	-0.4
SRN				S	Sb	00 45 59.6	-0.3
	comp=E,170nm,0.4s						
SRN	Sarande	0.67	251	iPG	Pg	00 45 48.3	-0.4
SRN				iSG	Sg	00 45 58.0	+0.7
IGT	Igoumenitsa	0.68	214	P	Pg	00 45 48.2	-0.7
IGT				S	Sb	00 45 59.6	-0.6
	comp=E,110nm,0.5s						
IGT	Igoumenitsa	0.68	214	iPG	Pg	00 45 48.0	-0.9
IGT				iSG	Sg	00 45 58.1	+0.4
IGT	Igoumenitsa	0.68	214	P	Pg	00 45 47.9	-0.9
IGT				S	Sg	00 45 58.0	+0.4
IGT				AML	AML	00 46 05.9	
	comp=E,212μm,0.4s						
IGT				AML	AML	00 46 07.1	
	comp=N,217μm,0.6s						
KZN	Kozani	0.76	74	P	Pg	00 45 50.3	-0.1
KZN				S	Sb	00 46 02.3	-0.3
	comp=N,112nm,0.4s						
KZN	Kozani	0.76	74	P	Pg	00 45 49.5	-0.9
KZN				AML	AML	00 46 05.0	
	comp=E,246μm,0.4s						
KZN				AML	AML	00 46 06.6	
	comp=N,200μm,0.4s						
KASA	Kassiopi	0.77	243	P	Pg	00 45 50.9	+0.3
KASA				AML	AML	00 46 03.1	
	comp=N,742μm,0.6s						
KASA				AML	AML	00 46 05.4	
	comp=E,364μm,0.3s						
KEK	Kerkira	0.88	244	P	Pg	00 45 52.1	-0.6
KEK				S	Sb	00 46 06.6	+0.7
	comp=E,145nm,0.8s						
KEK	Kerkira	0.88	244	P	Pg	00 45 51.9	-0.7
KEK				S	Sg	00 46 04.8	+0.8
KEK				AML	AML	00 46 08.6	
	comp=E,272μm,0.7s						
KEK				AML	AML	00 46 09.2	
	comp=N,308μm,0.9s						
THL	Klokotos Trika	1.06	120	P	Pg	00 45 56.0	-0.2
THL				S	Sb	00 46 11.0	-0.2
	comp=N,48nm,0.5s						
THL	Klokotos Trika	1.06	120	P	Pg	00 45 55.8	-0.4
THL				AML	AML	00 46 22.4	
	comp=E,92μm,0.5s						
THL				AML	AML	00 46 22.6	
	comp=N,94μm,0.5s						
VLO	Vlora	1.08	291	iPN	Pg	00 45 56.0	-0.6
VLO				iSN	Sb	00 46 11.7	-0.2
TSLK	Tsoukalades, L	1.28	186	P	Pg	00 45 59.5	-0.8
LIT	Litokhoron	1.28	89	P	Pg	00 46 00.4	0.0
LIT				S	Sn	00 46 19.6	+1.1
	comp=N,40nm,0.6s						
LIT	Litokhoron	1.28	89	P	Pg	00 45 58.6	-1.7
LIT				AML	AML	00 46 25.0	
	comp=E,76μm,0.7s						
LIT				AML	AML	00 46 25.2	
	comp=N,86μm,0.6s						
LKD2	Lefkada island	1.31	186	P	Pg	00 45 59.3	-1.8
EVR	Evrytania	1.40	147	P	Pn	00 46 02.3	-0.2
EVR	Evrytania	1.40	147	P	Pn	00 46 01.0	-1.5
EVR				AML	AML	00 46 30.3	
	comp=E,123μm,0.5s						
EVR				AML	AML	00 46 30.3	
	comp=N,157μm,0.6s						
GRG	Griva	1.48	54	P	Pn	00 46 02.6	-1.0
GRG				AML	AML	00 46 31.4	
	comp=E,33μm,0.4s						
GRG				AML	AML	00 46 33.4	
	comp=N,54μm,0.5s						
MAKR	Makrakomi, Fth	1.48	137	P	Pb	00 46 04.0	-0.1
MAKR				AML	AML	00 46 32.8	
	comp=E,173μm,0.6s						
MAKR				AML	AML	00 46 33.2	
	comp=N,171μm,0.6s						
PVO	Paravola	1.57	160	P	Pn	00 46 04.5	-0.3
AGG	Agios Georgios	1.58	132	P	Pn	00 46 05.0	+0.1
AGG				AML	AML	00 46 36.5	
	comp=N,79μm,0.4s						
AGG				AML	AML	00 46 37.5	
	comp=E,61μm,0.4s						
PHP	Peshkopia	1.61	350	iPN	Pn	00 46 05.4	0.0
PHP				iSN	Sg	00 46 29.3	+1.6
ANX	Ano Chora	1.73	150	P	Pn	00 46 06.9	-0.1
ANX				AML	AML	00 46 39.6	
	comp=E,110μm,0.6s						
ANX				AML	AML	00 46 40.6	
	comp=N,127μm,0.4s						
AXAR	Agios Charalam	1.94	132	P	Pn	00 46 10.4	+0.5
XOR	Xorichti	1.97	111	P	Pn	00 46 09.4	-0.9
KALE	Kalithea	1.99	149	P	Pn	00 46 10.8	+0.3
NEO	Neokhori	2.01	112	P	Pn	00 46 11.1	+0.3
PUK	Puka	2.07	340	iPN	Pn	00 46 12.8	+1.2
PUK				iSN	Sg	00 46 42.3	-0.1

NEIC 17 00:46:57.6±1.5, 14.73S±0.06×167.27E±0.05, h118km±3km, mb4.8/183, Error ellipse: s-maj=9.6km s-min=5.3km az=153.0
BJI 17 00:46:57.3±0.0, 14.54S×167.52E, h125km, mB5.0/30, mb4.8/46
IDC 17 00:46:57.6±0.6, 14.75S×167.29E, h112km±4km, mb4.4/36, mb1 4.5/38, mb1mx4.5/45, mbtmp4.8/38, Error ellipse: s-maj=10.3km s-min=8.7km az=81.0
GCMT 17 00:46:59.6±0.2, 14.83S±0.01×167.07E±0.02, h124km±1km, MW5.1/107, Moment Tensor Solution. s73,c86; s107,c163; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.05±.15; $M_{\theta\theta}$-3.12±.20; $M_{\phi\phi}$-0.92±.17; $M_{r\theta}$-3.87±.13; $M_{r\phi}$3.18±.17; $M_{\theta\phi}$-1.75±.12; Best double couple: $M_0$6.40500×10^{16} NP1:ϕ_s153.00000°, δ40.00000°, λ141.00000°. NP2:ϕ_s274.00000°, δ66.00000°, λ56.00000°. Principal axes: T 6.8630, Plg56.0000°, Azm140.0000°; N -0.9140, Plg30.0000°, Azm289.0000°; P -5.9470, Plg15.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 17 00:46:56.1±0.2, 14.70S±0.04×167.28E±0.04, h100km, n423, σ1.44/446, mb4.8/123, 14C-9D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.75	185		Pn	00 47 18.0	+4.0
SANVU				Sn	Sn	00 47 32.4	+5.0
DZM	Mont Dzumac	7.38	186	ePn	Pn	00 48 43.1	+1.9
	1μm,1.2s						
DZM				eSn	Sn	00 49 59.7	-3.7
	1μm,1.1s						
DZM				eLR	LR	00 50 18.8	
	comp=Z,2μm,28.8s						
DZM	Mont Dzumac	7.38	186	P	Pn	00 48 43.1	+1.9
	71nm,0.3s,baz=28,slow=12,SNR=315						
DZM				S	Sn	00 50 03.0	-0.4
	25nm,0.3s,baz=115,slow=21,SNR=3.9						
DZM	Mont Dzumac	7.38	186		Pn	00 48 42.7	+1.5
DZM					Sn	00 50 04.4	+1.0
NOUC	Port Laguerre	7.42	187		Pn	00 48 43.2	+1.5
NOUC				Sn	Sn	00 50 04.3	0.0
HNR	Honiara	8.87	305	P	Pn	00 49 05.0	+3.5
	43nm,0.3s,baz=148,slow=4.0,SNR=23						
HNR				S	Sn	00 50 41.4	+1.5
	24nm,0.3s,baz=44,slow=1.2,SNR=4.2						
HNR	Honiara	8.87	305	eP	Pn	00 48 59.0	-2.5
HNR	Honiara	8.87	305	eP	Sn	00 50 38.0	-1.8
HNR	Honiara	8.87	305		Pn	00 49 04.3	+2.8
MSVF	Nonsavu	10.78	108		Pn	00 49 30.9	+3.3
FUNA	Funafuti	13.19	64	Pn	Pn	00 49 59.0	-0.6
LHI	Lord Howe Isla	18.36	203	P	P	00 51 01.9	-0.9
LHI				IAmb	IAmb	00 51 02.8	
	comp=Z,39nm,0.9s						
EIDS	Eidsvold	18.53	233	P	Pn	00 51 07.7	+1.5
	baz=18,SNR=24						
EIDS	Eidsvold	18.53	233	P	P	00 51 06.3	+1.4
EIDS				IAmb	IAmb	00 51 09.3	
	comp=Z,40nm,0.6s						
AFI	Afiamalu	20.31	90	P	P	00 51 26.3	+1.9
	comp=Z,43nm,0.8s,baz=296,slow=11,SNR=7.1						
AFI	Afiamalu	20.31	90	P	P	00 51 24.5	+0.1
AFI				IAmb	IAmb	00 51 29.6	
	comp=Z,75nm,1.0s						
PMG	Port Moresby	20.36	283	P	P	00 51 26.4	+1.6
	comp=Z,25nm,0.7s,baz=136,slow=9.4,SNR=4.1						
PMG	Port Moresby	20.36	283	P	P	00 51 25.2	+0.4
PMG				IAmb	IAmb	00 51 32.4	
	comp=Z,25nm,0.7s						
CTA	Charters Tower	20.76	252	P	P	00 51 30.4	+1.3
	comp=Z,30nm,0.8s,baz=82,slow=12,SNR=32						
RMQ	Roma	20.90	233	P	P	00 51 32.6	+2.1
	baz=21,SNR=13						
ARMA	Armidale	21.26	220	P	P	00 51 36.6	+2.2
	baz=21,SNR=5.7						
ARMA	Armidale	21.26	220	P	P	00 51 34.1	-0.3
ARMA				IAmb	IAmb	00 51 39.3	
	comp=Z,37nm,1.1s						
NIUE	Niue	22.24	104	P	P	00 51 46.1	+1.3
	baz=22,SNR=7.4						
NIUE	Niue	22.24	104	P	P	00 51 45.9	+1.1
MTSU	Mount Surprise	22.28	258	P	P	00 51 46.6	+1.2
	baz=22,SNR=11						
PATS	Pohnpei	23.17	337	P	P	00 51 54.2	+0.1
PATS				IAmb	IAmb	00 51 54.9	
	comp=Z,34nm,0.9s						
COEN	Coen	23.36	269	P	P	00 51 57.0	+1.0
	baz=23,SNR=4.9						
QLP	Quilpie	24.54	238	P	P	00 52 07.4	+0.8
	baz=25,SNR=18						
HIZ	Hauiti	24.65	166	P	P	00 52 06.7	-0.7
MXZ	Matakaoa Point	24.79	159	P	P	00 52 07.1	-1.6
MXZ				IAmb	IAmb	00 52 17.4	
	comp=Z,38nm,0.7s						
URZ	Urewera	25.03	161	P	P	00 52 10.4	-0.4
	comp=Z,14nm,0.5s,baz=258,slow=3.7,SNR=9.7						
URZ	Urewera	25.03	161	P	P	00 52 10.7	-0.1
URZ				IAmb	IAmb	00 52 13.4	
	comp=Z,24nm,0.8s						
BKZ	Black Stump Fm	25.69	163	P	P	00 52 16.4	-0.5
CMSA	Cobar Meteorol	25.90	226	P	P	00 52 19.4	+0.6
	baz=26,SNR=18						
CNB	Canberra Magne	26.09	215	P	P	00 52 21.6	+1.0
	baz=26,SNR=14						
QRZ	Quartz Range	26.43	171	P	P	00 52 23.2	-0.3
QRZ				IAmb	IAmb	00 52 34.3	
	comp=Z,21nm,1.0s						
QIS	Mount Isa	26.98	254	P	P	00 52 28.9	+0.2
	baz=27,SNR=4.2						
TUWZ	Tuamarina	27.26	169	P	P	00 52 29.4	-1.5
SNZO	South Karori	27.29	168	P	P	00 52 30.0	-1.1
SNZO				IAmb	IAmb	00 52 44.2	
	comp=Z,27nm,0.7s						
THZ	Tophouse	27.41	171	P	P	00 52 31.4	-0.9
THZ				IAmb	IAmb	00 52 35.7	
	comp=Z,35nm,0.7s						
BHW	Baring Head	27.42	168	P	P	00 52 31.2	-1.2
MILA	Mila	27.50	213	P	P	00 52 34.6	+1.4
	baz=28,SNR=3.7						
MSWZ	Moikau Station	27.51	167	P	P	00 52 31.9	-1.3
BSWZ	Blackbirch Sta	27.52	169	P	P	00 52 32.8	-0.5
CMWZ	Cape Campbell	27.62	169	P	P	00 52 32.7	-1.4
PLWZ	Palliser	27.66	167	P	P	00 52 33.6	-0.9
KHZ	Kahutara	28.14	170	P	P	00 52 38.0	-0.8
KHZ				IAmb	IAmb	00 52 39.3	
	comp=Z,24nm,0.6s						
LTZ	Lake Taylor	28.32	172	P	P	00 52 39.5	-0.8
FOZ	Fox Glacier	28.82	176	P	P	00 52 44.9	+0.2
STKA	Stephens Creek	29.02	229	P	P	00 52 47.8	+1.1
	baz=29,SNR=75						
STKA	Stephens Creek	29.02	229	P	P	00 52 47.9	+1.1
	comp=Z,32nm,0.4s,baz=48,slow=8.6,SNR=92						
STKA				PcP	PcP	00 55 52.7	-0.2
	comp=Z,13nm,0.7s,baz=19,slow=2.5,SNR=10						
STKA	Stephens Creek	29.02	229	P	P	00 52 47.1	+0.4
STKA				IAmb	IAmb	00 52 49.4	
	comp=Z,8.3nm,0.7s						
STKA					PcP	00 55 52.8	-0.2
RPZ	Rata Peaks	29.10	174	P	P	00 52 46.8	-0.4
	comp=Z,50nm,0.6s,baz=288,slow=2.1,SNR=22						
RPZ	Rata Peaks	29.10	174	P	P	00 52 46.1	-1.2
MQZ	McQueen's Vall	29.27	172	P	P	00 52 48.2	-0.5
MQZ				IAmb	IAmb	00 52 49.1	
	comp=Z,26nm,0.7s						
TOO	Toolangi	29.88	216	P	P	00 52 55.2	+0.9
	baz=30,SNR=4.9						
TOO	Toolangi	29.88	216	P	P	00 52 53.9	-0.4
TOO				IAmb	IAmb	00 52 55.7	
	comp=Z,12nm,0.8s						
ODZ	Otahua Downs	30.38	175	P	P	00 52 58.1	-0.5
ODZ				IAmb	IAmb	00 52 58.3	
	comp=Z,22nm,0.9s						
MLZ	Mavora Lakes	30.58	179	P	P	00 53 00.6	+0.3
MLZ				IAmb	IAmb	00 53 13.7	
	comp=Z,24nm,0.9s						
WHZ	Wether Hill Ro	31.10	179	P	P	00 53 04.4	-0.6
WHZ				IAmb	IAmb	00 53 05.2	
	comp=Z,18nm,0.8s						
PYZ	Puysegur Point	31.37	181	P	P	00 53 06.7	-0.6
WR0	Warramunga Arr	31.65	256	P	P	00 53 09.0	-1.1
HTT	Hallett	31.74	229	P	P	00 53 11.8	+1.0
	baz=32,SNR=17						
WB0	Warramunga Arr	31.78	256	P	P	00 53 10.3	-0.9
WB2	Warramunga Arr	31.83	256	P	P	00 53 10.8	-0.9
WRAB	Tennant Creek	31.83	256		P	00 53 03.2	-8.4
WRA	Warramunga Arr	31.84	256	P	P	00 53 10.8	-1.0
	comp=Z,3.5nm,0.6s,baz=86,slow=8.8,SNR=5.4						
WRA				pP	pP	00 53 37.2	+2.8
	comp=Z,7.1nm,1.0s,baz=86,slow=8.7,SNR=6.6						
WRA				PcP	PcP	00 55 59.8	-0.8
	comp=Z,3.7nm,0.8s,baz=83,slow=2.4,SNR=6.0						
WRA				ScP	ScP	00 59 33.6	-1.4
	comp=Z,1.3nm,0.8s,baz=83,slow=3.5,SNR=1.9						
RAR	Rarotonga	31.97	107	P	P	00 53 13.3	+0.5
	comp=Z,49nm,0.9s,baz=248,slow=7.4,SNR=6.4						
RAR	Rarotonga	31.97	107	P	P	00 53 13.5	+0.7
MOO	Moorlands	32.62	208	P	P	00 53 19.6	+1.3
	baz=33,SNR=3.2						
AS31	Alice Springs	32.69	249	P	P	00 53 18.2	-1.0
ASAR	Alice Springs	32.69	249	P	P	00 53 18.2	-1.0
	comp=Z,9.0nm,0.7s,baz=77,slow=9.0,SNR=55						
ASAR				pP	pP	00 53 44.6	+2.8
	comp=Z,5.2nm,0.6s,baz=76,slow=9.3,SNR=3.9						
ASAR				PcP	PcP	00 56 02.0	-0.9
	comp=Z,4.3nm,0.8s,baz=77,slow=2.5,SNR=7.0						
ASAR				ScP	ScP	00 59 36.8	-1.1
	comp=Z,2.2nm,0.7s,baz=90,slow=3.2,SNR=10.0						
TAU	Tasmania Unive	32.93	207	P	P	00 53 21.3	+0.3
TAU				IAmb	IAmb	00 53 23.8	
	comp=Z,16nm,0.9s						
BBOO	Buckleboo	33.60	232	P	P	00 53 27.7	+0.7
	baz=34,SNR=59						
BBOO	Buckleboo	33.60	232	P	P	00 53 27.0	0.0
KDU	Kakadu	33.85	269	P	P	00 53 29.5	+0.2
	baz=34,SNR=3.5						
KNRA	Kununurra	37.15	263	P	P	00 53 57.1	-0.5
	baz=37,SNR=6.8						
KNRA	Kununurra	37.15	263	P	P	00 53 57.5	-0.1
KNRA				IAmb	IAmb	00 53 58.2	
	comp=Z,24nm,0.9s						
WRKA	Warakurna	37.95	248	P	P	00 54 03.7	-0.6
	baz=38,SNR=16						
SWI	Sorong	38.15	288	P	P	00 54 07.2	+1.2
	comp=Z,25nm,0.8s						
XMAS	Kiritimati	38.69	67	P	P	00 54 11.1	+0.5
FORT	Forrest	39.32	239	P	P	00 54 15.6	0.0
	baz=39,SNR=31						
FORT	Forrest	39.32	239	P	P	00 54 15.3	-0.3
FITZ	Fitzroy Crossi	40.03	259	P	P	00 54 21.5	-0.2
	baz=40,SNR=6.7						
FITZ	Fitzroy Crossi	40.03	259	P	P	00 54 21.3	-0.3
FITZ				IAmb	IAmb	00 54 22.1	
	comp=Z,7.8nm,0.7s						
PAE	Paea	41.48	100	eP	P	00 54 34.5	+1.0
	comp=Z,14nm,1.0s						
PPT2	Papeete2	41.48	100	eP	P	00 54 35.1	+1.4
	comp=Z,76nm,1.1s						
PPT2	Papeete2	41.48	100	eLR	LR	01 06 10.2	
	comp=Z,262nm,30.8s						
PPT	Papeete	41.48	100	P	P	00 54 34.4	+0.7
	comp=Z,57nm,0.8s,baz=240,slow=5.4,SNR=4.9						
PPT	Papeete	41.48	100	P	P	00 54 33.3	-0.4
PPTF	Pamatai, Papee	41.49	100	P	P	00 54 33.6	-0.2
TBI	Tubuai	41.67	109	eLR	LR	01 06 16.7	
	comp=Z,584nm,26.5s						
TIAR	Tiarei	41.70	100	eP	P	00 54 36.9	+1.5
	comp=Z,86nm,1.6s						
SOEI	Soe	42.27	272	P	P	00 54 39.7	-0.5
SOEI				IAmb	IAmb	00 54 44.4	
	comp=Z,21nm,0.8s						
MEH	Mehetia	42.91	101	eP	P	00 54 46.6	+1.4
	comp=Z,79nm,1.2s						
PMOR	Pomariorio Ree	43.28	96	eP	P	00 54 50.0	+1.8
	comp=Z,168nm,0.9s						
VAH	Vaihoa	43.51	97	eP	P	00 54 51.5	+1.5
	comp=Z,262nm,1.4s						
KMBL	Kambalda	44.61	240	P	P	00 54 58.5	-0.2
	baz=45,SNR=5.4						
PSAD2	Pilbara Seismi	45.34	254	P	P	00 55 04.0	-0.6
PSAD2				IAmb	IAmb	00 55 05.0	
	comp=Z,9.8nm,0.8s						
PSAC2	Pilbara Seismi	45.40	254	P	P	00 55 04.7	-0.4
PSAC2				IAmb	IAmb	00 55 05.9	
	comp=Z,20nm,1.1s						
PSAB2	Pilbara Seismi	45.44	254	P	P	00 55 04.3	-1.0
PSAB2				IAmb	IAmb	00 55 06.3	
	comp=Z,20nm,0.9s						
PSAA3	Pilbara Seismi	45.44	254	P	P	00 55 04.7	-0.8
PSAA3				IAmb	IAmb	00 55 06.3	
	comp=Z,14nm,0.9s						
PSAB3	Pilbara Seismi	45.44	254	P	P	00 55 04.1	-1.3
PSAB3				IAmb	IAmb	00 55 08.9	
	comp=Z,11nm,0.8s						
PSAA2	Pilbara Seismi	45.45	254	P	P	00 55 03.1	-2.4
PSAA2				IAmb	IAmb	00 55 06.4	
	comp=Z,18nm,0.8s						
PSA00	Pilbara Seismi	45.45	254	P	P	00 55 05.2	-0.3
PSA00				IAmb	IAmb	00 55 10.9	
	comp=Z,15nm,0.8s						
PSAA1	Pilbara Seismi	45.46	254	P	P	00 55 03.9	-1.7
PSAA1				IAmb	IAmb	00 55 06.5	
	comp=Z,16nm,0.9s						
PSAD1	Pilbara Seismi	45.47	254	P	P	00 55 04.0	-1.6
PSAD1				IAmb	IAmb	00 55 06.5	
	comp=Z,19nm,0.8s						
PSAC3	Pilbara Seismi	45.47	254	P	P	00 55 04.9	-0.8
PSAC3				IAmb	IAmb	00 55 11.1	
	comp=Z,19nm,0.8s						
PSAB1	Pilbara Seismi	45.48	254	P	P	00 55 04.9	-0.8
PSAB1				IAmb	IAmb	00 55 06.5	
	comp=Z,17nm,0.9s						
PSAC1	Pilbara Seismi	45.49	254	P	P	00 55 04.5	-1.3
PSAC1				IAmb	IAmb	00 55 06.7	
	comp=Z,20nm,0.8s						
PSAD3	Pilbara Seismi	45.52	254	P	P	00 55 05.2	-0.8
PSAD3				IAmb	IAmb	00 55 06.9	
	comp=Z,24nm,0.8s						
LUWI	Luwuk	46.01	283	P	P	00 55 08.9	-1.0
MEEK	Meekatharra	46.80	247	P	P	00 55 15.9	-0.2
	baz=47,SNR=43						

BNSI Bone 47.53 278 P P 00 55 22.9 +1.1
comp=Z,19nm,1.1s
KAPI Kappang 47.71 277 P P 00 55 21.8 -1.4
KAPI IAmb IAmb 00 55 25.0
comp=Z,12nm,0.8s
KLBR Kellerberrin 48.12 241 P P 00 55 25.4 -0.8
baz=48,SNR=12
NWAO Narrogin (SRO) 48.77 239 P P 00 55 30.8 -0.4
baz=49,SNR=5.9
NWAO Narrogin (SRO) 48.77 239 P P 00 55 30.2 -1.0
NWAO IAmb IAmb 00 55 31.3
comp=Z,24nm,0.8s
NWAO Narrogin (SRO) 48.77 239 P P 00 55 29.9 -1.2
NWAO IAmb IAmb 00 55 31.4
comp=Z,19nm,0.8s
MPSI Mapaga 49.17 283 P P 00 55 35.5 +1.1
MORW Morawa 49.29 244 P P 00 55 34.7 -0.4
baz=49,SNR=15
MORW Morawa 49.29 244 P P 00 55 34.0 -1.1
HON Honolulu 49.43 44 P P 00 55 35.6 -0.6
MUN Mundaring 49.48 240 P P 00 55 35.5 -1.1
baz=50,SNR=5.7
KKH Kailua Kona 49.70 48 P P 00 55 36.8 -1.5
KHU Kahuku 49.72 48 P P 00 55 38.0 -0.7
SDHHI Sand Hill 50.05 48 P P 00 55 39.9 -1.1
RIM Rim 50.06 48 P P 00 55 37.9 -3.3
GIRL Giralia 50.65 253 P P 00 55 45.9 +0.3
baz=51,SNR=3.7
KKM Kota Kinabalu 54.66 288 P P 00 56 15.4 +0.2
UGM Wanagama 55.94 270 P P 00 56 23.9 -0.5
SMRI Semarang 56.21 271 P P 00 56 24.2 -2.2
KPJI Karang Pucung 57.61 271 P P 00 56 48.0 +12
MJAR Matsushiro Arr 57.88 332 P P 00 56 37.6 -0.1
comp=Z,4.0nm,0.9s,baz=159,slow=8.3,SNR=8.2
MJAR pP pwP 00 57 04.7 +1.0
comp=Z,6.5nm,0.8s,baz=167,slow=8.4,SNR=6.7
KSM Kuching 58.61 281 P P 00 56 42.8 -0.4
CISI Cisompet, Garu 58.64 270 P P 00 56 43.0 -0.5
YULB Yu-li 58.78 309 P P 00 56 43.3 -0.9
YULB IAmb IAmb 00 56 45.4
comp=Z,6.5nm,0.9s
JNU Nakatsue 58.90 324 P P 00 56 45.0 +0.2
comp=Z,8.7nm,0.7s,baz=182,slow=2.3,SNR=6.8
JNU Nakatsue 58.90 324 IAmb IAmb 00 56 47.2
comp=Z,11nm,0.9s
NACB Ninganchiao 59.02 310 P P 00 56 44.0 -1.8
TPUB Ta-pu 59.23 309 P P 00 56 46.7 -0.6
SSLB Suanglung 59.27 310 P P 00 56 47.5 0.0
SSLB IAmb IAmb 00 56 50.2
comp=Z,10nm,0.7s
YHNB Yeheng 59.47 311 P P 00 56 48.9 -0.1
JKA Kamikawa-asahi 62.71 340 P P 00 57 12.5 +2.1
ASAJ Asahikawa 62.72 340 P P 00 57 12.5 +2.1
comp=Z,4.2nm,0.4s,baz=158,slow=11,SNR=3.0
MDSI Maura Dua 62.86 272 P P 00 57 11.1 -0.9
VNDA Vanda 62.89 181 P P 00 57 11.2 0.0
comp=Z,19nm,0.7s,baz=352,slow=8.0,SNR=27
VNDA Vanda 62.89 181 P P 00 57 10.9 -0.3
SBA Scott Base 63.17 180 P P 00 57 13.5 +0.5
CASY Casey 63.56 202 P P 00 57 15.6 -0.2
KSRS Korea Array 63.72 326 P P 00 57 17.0 -0.1
comp=Z,2.1nm,0.8s,baz=135,slow=6.5,SNR=5.6
KSRS pP pP 00 57 45.0 +3.5
comp=Z,3.9nm,0.9s,baz=141,slow=7.4,SNR=4.5
HKPS Hong Kong Po S 63.72 304 P P 00 57 16.9 -0.6
NJ2 Nanjing 65.66 316 eP P 00 57 32.5 +2.6
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
USRK Ussuriysk Ar. 66.86 333 P P 00 57 37.7 +0.4
comp=Z,1.9nm,0.6s,baz=147,slow=41,SNR=3.6
BKNI Bangkinang 67.14 277 P P 00 57 40.8 +1.0
comp=Z,61nm,0.8s
BKNI Bangkinang 67.14 277 P P 00 57 39.4 -0.4
PDSI Padang 67.36 275 P P 00 57 40.4 -0.8
WHN Wuhan 67.93 312 P P 00 57 44.5 +0.2
UBPT Khong Chiam 67.96 293 P P 00 57 45.2 +0.3
UBPT IAmb IAmb 00 57 46.3
comp=Z,8.4nm,0.9s
PETK Petropavlovsk- 68.03 354 P P 00 57 45.5 +1.0
comp=Z,8.0nm,0.8s,baz=161,slow=9.4,SNR=7.3
IPM Ipoh 68.35 281 P P 00 57 47.0 -0.4
IPM IAmb IAmb 00 57 48.5
comp=Z,20nm,0.7s
RPSI Rantau Prapat 69.83 278 P P 00 57 56.1 -0.4
RPSI IAmb IAmb 00 57 57.0
comp=Z,19nm,0.9s
KLR Kul'dur 70.98 336 P P 00 58 04.0 +1.3
comp=Z,1.8nm,0.7s,baz=167,slow=4.6,SNR=6.2
ENH Enshi 71.35 309 P P 00 58 04.5 -1.0
ENH IAmb IAmb 00 58 06.2
comp=Z,18nm,0.8s
GYA Guiyang 71.70 305⇑iP P 00 58 08.3 +0.5
GYA pP pP 00 58 38.0 +5.2
GYA S S 01 07 07.9 -12
GYA sS ScS 01 08 08.3 +3.7
GYA SS SS 01 11 55.3 -2.8
GYA pmax pmax
comp=Z,20nm,0.7s
GYA pmax pmax
comp=Z,140nm,4.9s
SLVN Son La 71.75 299 P P 00 58 07.3 -0.7
LHMI Lhok Sumawe 72.45 280 P P 00 58 10.9 -1.4
PBKT Sadao Pong 72.45 293 P P 00 58 13.4 +1.1
PBKT IAmb IAmb 00 58 14.4
comp=Z,7.9nm,0.8s
MLSI Meulaboh, Aceh 72.69 279 P P 00 58 14.1 +0.3
XAN Xi'an 73.67 313 P P 00 58 19.6 +0.4
XAN pmax pmax
comp=Z,13nm,1.0s
XAN Xi'an 73.67 313 P P 00 58 19.7 +0.4
XAN IAmb IAmb 00 58 20.5
comp=Z,11nm,0.9s
KMI Kunming 74.29 302 P P 00 58 24.8 +1.6
KMI pP pP 00 58 55.4 +7.0
KMI sP sP 00 59 07.8 +8.7
KMI pmax pmax
comp=Z,31nm,0.9s
KMI pmax pmax
comp=Z,150nm,4.1s
KMI LR LR
comp=Z,160nm,19.9s
KMI LR LR
comp=Z,170nm,27.4s
KMI LR LR
comp=Z,250nm,35.2s
SDPT Sand Point 74.90 18 P P 00 58 24.1 -1.6
CMAR Chiang Mai Arr 74.94 294 P P 00 58 28.1 +1.3
comp=Z,5.3nm,0.7s,baz=128,slow=4.6,SNR=29
CHTO Chiang Mai 75.07 294 P P 00 58 27.9 +0.4
CHTO IAmb IAmb 00 58 29.0
comp=Z,7.1nm,0.7s
QSPA South Pole Qui 75.33 180 P P 00 58 27.7 -0.7
HHC Hu-ho-hao-te 75.56 320 eP P 00 58 35.3 +5.2
HHC pP pP 00 59 00.8 +5.6
HHC S S 01 08 05.9 +2.9
HHC pmax pmax
comp=Z,3.0nm,1.0s
HHC pmax pmax
comp=Z,42nm,5.4s
HHC LR LR
comp=Z,140nm,15.2s
HHC LR LR
comp=Z,190nm,16.1s
HHC LR LR
comp=Z,63nm,17.0s
CD2 Chengdu 76.00 308 P P 00 58 33.4 +0.7
CD2 pmax pmax
comp=Z,10.0nm,0.5s
SII Sitkinak Islan 77.93 21 P P 00 58 41.7 -1.2
SEY Seymchan 78.25 353 P P 00 58 44.8 +0.3
comp=Z,8.4nm,0.8s,baz=168,slow=4.7,SNR=21
LZH Lanzhou 78.30 312 ⇑P P 00 58 47.3 +1.7
LZH pP pP 00 59 17.4 +6.4
LZH sP sP 00 59 35.3 +14
LZH pmax pmax
comp=Z,16nm,1.1s
LZH pmax pmax
comp=Z,75nm,5.4s
LZH LR LR
comp=Z,340nm,15.2s
LZH LR LR
comp=Z,350nm,15.5s
LZH LR LR
comp=Z,410nm,18.3s
OHAK Old Harbor 78.76 21 P P 00 58 47.7 +0.3
OHAK IAmb IAmb 00 58 55.0
comp=Z,16nm,1.2s
ANM Nome 81.73 12 P P 00 59 03.1 -0.1
MAW Mawson 81.92 202 P P 00 59 04.0 -0.2
baz=82,SNR=8.5
MAW Mawson 81.92 202 P P 00 59 04.1 -0.1
comp=Z,8.2nm,0.6s,baz=116,slow=7.2,SNR=12
MAW Mawson 81.92 202 IAmb IAmb 00 59 05.7
comp=Z,1.5nm,0.7s
YAK Yakutsk 82.00 343 P P 00 59 05.2 +0.6
comp=Z,7.3nm,0.3s,baz=207,slow=0.8,SNR=6.8
YAK Yakutsk 82.00 343 IAmb IAmb 00 59 06.4
comp=Z,28nm,0.7s
SONM Songino Array 82.47 324 P P 00 59 07.7 0.0
comp=Z,1.7nm,0.6s,baz=154,slow=8.3,SNR=14
BILL Bilibino 82.51 360 P P 00 59 07.0 -0.2
BILL IAmb IAmb 00 59 08.4
comp=Z,14nm,0.9s
GTA Gaotai 82.65 314 P P 00 59 09.8 +1.0
GTA pP pP 00 59 40.1 +5.8
GTA sP sP 00 59 54.6 +10
GTA S S 01 09 14.4 -3.9
GTA pmax pmax
comp=Z,6.0nm,1.3s
GTA pmax pmax
comp=Z,80nm,5.7s
GTA LR LR
comp=Z,140nm,18.4s
GTA LR LR
comp=Z,140nm,19.7s
GTA LR LR
comp=Z,85nm,16.2s
MID Middleton Isla 82.85 22 P P 00 59 08.2 -0.8
RC01 Rabbit Creek A 82.90 20 P P 00 59 09.6 +0.2
RC01 IAmb IAmb 00 59 11.7
comp=Z,15nm,1.1s
SHL Shillong 83.56 298 P P 00 59 13.8 0.0
HMT Hamilton 84.23 22 P P 00 59 15.2 -1.1
HMT IAmb IAmb 00 59 32.3
comp=Z,12nm,0.8s
SAO San Andreas Ge 84.31 50 P P 00 59 14.6 -2.6
SAO IAmb IAmb 00 59 33.1
comp=Z,8.3nm,1.0s
KHMM Horse Mountain 84.34 45 P P 00 59 16.2 -1.2
KHMM IAmb IAmb 00 59 33.2
comp=Z,8.8nm,1.0s
KTH Kantishna Hill 84.40 17 P P 00 59 16.4 -0.7
KTH IAmb IAmb 00 59 17.4
comp=Z,13nm,0.9s
TRF Thorofare Moun 84.51 18 P P 00 59 16.4 -1.4
TRF IAmb IAmb 00 59 18.3
comp=Z,11nm,0.9s
RND Reindeer 84.90 18 P P 00 59 19.6 0.0
RND IAmb IAmb 00 59 20.8
comp=Z,8.4nm,0.8s
DHY Denali Highway 85.12 19 P P 00 59 20.3 -0.5
MCK McKinley 85.12 18 P P 00 59 21.0 +0.4
MCK IAmb IAmb 00 59 21.8
comp=Z,13nm,1.0s
VRDI Verde Repeater 85.14 22 P P 00 59 20.5 -0.5
BWN Browne 85.29 18 P P 00 59 21.4 -0.1
ORV Oroville 85.36 47 P P 00 59 22.0 -0.4
YBH Yreka Blue Hor 85.39 45 P P 00 59 22.5 -0.1
comp=Z,2.7nm,0.9s,baz=209,slow=5.3,SNR=4.1
AFDM Forest Hills D 85.50 48 P P 00 59 23.6 +0.4
LSA Lhasa 85.55 302 P P 00 59 23.4 -0.7
LSA IAmb IAmb 00 59 26.1
comp=Z,7.6nm,0.7s
PCA Pinnacle 85.57 23 P P 00 59 21.9 -1.1
CMB Columbia Colle 85.58 49 P P 00 59 23.4 -0.1
MLY Manley 85.58 17 P P 00 59 22.5 -0.5
PAX Paxson 85.65 20 P P 00 59 23.9 +0.5
CTGM Chitina Glacie 85.73 22 P P 00 59 23.8 0.0
CTGM IAmb IAmb 00 59 24.3
comp=Z,15nm,1.1s
WRH Wood River Hil 85.92 18 P P 00 59 23.6 -0.9
WRH IAmb IAmb 00 59 25.3
comp=Z,7.6nm,0.9s
TLY Talaya 85.97 326 P P 00 59 25.5 +0.4
comp=Z,3.7nm,0.5s,baz=230,slow=5.7,SNR=6.7
TLY Talaya 85.97 326 P P 00 59 25.3 +0.2
TLY IAmb IAmb 00 59 26.0
comp=Z,4.8nm,0.7s
CCB Clear Creek Bu 86.13 18 P P 00 59 23.7 -1.9
CCB IAmb IAmb 00 59 26.9
comp=Z,4.5nm,0.6s
HDA Harding Lake 86.22 18 P P 00 59 25.3 -0.7
HDA IAmb IAmb 00 59 26.8
comp=Z,12nm,0.8s
MDM Murphy Dome 86.24 17 P P 00 59 24.9 -1.3
MDM IAmb IAmb 00 59 27.3
comp=Z,7.0nm,0.8s
BEKR Beckworth 86.29 47 P P 00 59 25.6 -1.6
MDPB Devils Postpil 86.39 50 P P 00 59 27.7 -0.1
RIDG Independent Ri 86.39 19 P P 00 59 26.3 -0.6
RIDG IAmb IAmb 00 59 27.4
comp=Z,7.1nm,0.9s
OMMB Old Mammoth Mi 86.44 50 P P 00 59 27.7 -0.5
WAKR Walker 86.44 49 P P 00 59 27.0 -1.0
IL31 86.50 18 P P 00 59 26.6 -0.7
IL31 IAmb IAmb 00 59 27.6
comp=Z,8.6nm,0.8s
ILAR Eielson Array 86.50 18 P P 00 59 26.1 -1.3
comp=Z,7.6nm,0.7s,baz=236,slow=5.6,SNR=47
ILAR PKKPbc PKKPdf 01 17 22.5 +2.6
comp=Z,0.2nm,0.5s,baz=358,slow=4.3,SNR=6.3
PNTR Pine Nut 86.54 48 P P 00 59 27.7 -0.8
SCRK Sand Creek 86.83 19 P P 00 59 28.6 -0.6
E03A Lebam 86.84 40 P P 00 59 29.1 -0.3
E03A IAmb IAmb 00 59 48.0
comp=Z,20nm,1.1s
PAHR Pah Rah Range 86.93 48 P P 00 59 30.1 -0.2
PFO Pinyon Flats O 86.97 54 P P 00 59 31.0 +0.5
comp=Z,2.1nm,0.8s,baz=257,slow=5.9,SNR=3.7
PFO Pinyon Flats O 86.97 54 IAmb IAmb 00 59 31.9
comp=Z,3.0nm,0.9s
RYN Ryan 87.16 49 P P 00 59 31.0 -0.4
NVAR Mina Array Bea 87.25 49 P P 00 59 31.9 0.0
comp=Z,2.4nm,0.8s,baz=227,slow=7.5,SNR=15
NV11 Mina Array Sit 87.36 49 P P 00 59 31.4 -0.9
KVN Kaiserville 87.62 49 P P 00 59 32.8 -0.8
TAPN Taplejung 87.67 299 eP P 00 59 34.2 -0.1
comp=Z,27nm,0.7s
ODAN Odare 87.79 298 eP P 00 59 34.7 -0.1
comp=Z,49nm,0.6s
TPNV Topopah Spring 88.26 51 P P 00 59 36.9 +0.2
SRIG Santa Rosalia 88.44 61 P P 00 59 37.1 -0.5
SRIG IAmb IAmb 00 59 38.8
comp=Z,8.7nm,0.6s
RAMN Ramite 88.49 298 eP P 00 59 37.7 -0.4
comp=Z,21nm,0.6s
PALK Pallekele 88.53 278 P P 00 59 37.5 -0.8
PALK IAmb IAmb 00 59 39.5
comp=Z,5.4nm,0.9s
Y12C Blythe 88.54 55 P P 00 59 37.4 -0.4
Y12C IAmb IAmb 00 59 39.3
comp=Z,5.6nm,1.1s
SYO Syowa Base 88.74 197⇑eX P 00 59 34.0 -4.1
SYO Syowa Base 88.74 197⇓iPcP P 00 59 36.8 -1.3
SYO Syowa Base 88.74 197⇑epP pP 01 00 07.6 +3.4
113A Mohawk Valley, 88.83 56 P P 00 59 38.7 -0.6
DLBC Dease Lake 88.91 28 P P 00 59 38.4 -0.7
SHPR Sheep Range 88.94 52 P P 00 59 39.1 -0.8
SHPR IAmb IAmb 00 59 41.4
comp=Z,5.8nm,1.2s
JIRN Jiri 89.05 299 eP P 00 59 40.8 -0.1
comp=Z,33nm,0.6s
E07A Sunnyside 89.19 41 P P 00 59 39.5 -1.1
E07A IAmb IAmb 00 59 44.8
comp=Z,6.5nm,0.9s
R11A Troy Canyon, C 89.22 50 P P 00 59 39.8 -1.4
G08A Pilot Rock 89.29 43 P P 00 59 40.7 -0.6
G08A IAmb IAmb 00 59 42.2
comp=Z,7.8nm,1.0s
HAWA Hanford 89.33 42 P P 00 59 39.9 -1.4
214A Organ Pipe Nat 89.35 57 P P 00 59 42.6 +0.8
214A IAmb IAmb 00 59 43.4
comp=Z,5.4nm,1.1s
GUN Gumba 89.39 299 eP P 00 59 42.1 -0.3
comp=Z,26nm,0.7s
W13A Hualapai Mount 89.47 54 P P 00 59 41.3 -1.2
E08A Dider Farm, El 89.67 42 P P 00 59 41.7 -1.1
PKI Pulchoki 89.69 299 eP P 00 59 43.1 -0.7
comp=Z,26nm,0.8s
PKIN Phulchoki 89.70 299 eP P 00 59 43.1 -0.7
comp=Z,15nm,0.6s
Y14A Wickenburg 89.80 55 P P 00 59 43.1 -0.8
KKN Kakani 89.86 299 eP P 00 59 44.1 -0.4
comp=Z,25nm,0.8s
TIXI Tiksi 89.94 349 P P 00 59 43.4 -0.1
comp=Z,2.2nm,0.5s,baz=160,slow=2.8,SNR=6.6
TIXI Tiksi 89.94 349 P P 00 59 42.7 -0.9
TIXI IAmb IAmb 00 59 44.0
comp=Z,7.4nm,1.1s
DMN Daman 89.96 298 eP P 00 59 44.6 -0.4
comp=Z,37nm,0.8s
D08A Wollman Farm, 89.97 41 P P 00 59 43.8 -0.5
HSIG 90.03 60 P P 00 59 44.0 -1.0
BMO Blue Mountains 90.22 44 P P 00 59 45.0 -0.7
ELK Elko 90.26 48 P P 00 59 45.3 -0.8
E09A Wood Farm, Sta 90.27 42 P P 00 59 44.8 -0.9
GKN Gorkha 90.47 299 eP P 00 59 46.3 -0.9
comp=Z,19nm,0.8s
LCMT Little Creek M 90.56 52 P P 00 59 46.9 -0.5
PSUT Pine Spring 90.57 50 P P 00 59 47.2 -0.3
CCUT Cedar City 90.63 51 P P 00 59 46.4 -1.4
F10A Beach Ranch, E 90.67 42 P P 00 59 47.1 -0.6
F10A IAmb IAmb 00 59 48.1
comp=Z,7.2nm,0.8s
MFID Camas Ranch 90.73 45 P P 00 59 47.3 -0.7
TUC Tucson 91.10 57 P P 00 59 48.9 -1.1
U15A North Rim 91.11 53 P P 00 59 49.7 -0.5
X16A Lo Mia Camp, P 91.18 55 P P 00 59 49.9 -0.5
DANN Dangsing 91.31 299 eP P 00 59 49.8 -1.5
comp=Z,11nm,0.5s
PKCU Pink Cliffs 91.40 52 P P 00 59 49.2 -2.4
NEW Newport 91.54 40 P P 00 59 51.3 -0.3
comp=Z,1.6nm,0.7s,baz=238,slow=19,SNR=4.0
NEW Newport 91.54 40 P P 00 59 50.3 -1.3
NEW IAmb IAmb 00 59 52.0
comp=Z,6.7nm,1.1s
WUAZ Wupatki 91.55 54 P P 00 59 50.7 -1.4
WUAZ IAmb IAmb 00 59 56.9
comp=Z,2.6nm,0.7s
TCRU Three Creeks R 91.64 51 P P 00 59 51.5 -1.0
MTPU Mount Pierson 91.67 51 P P 00 59 52.7 -0.1
MSU Marysvale 91.81 51 P P 00 59 53.3 -0.1
DUG Dugway, Tooele 91.85 49 P P 00 59 53.4 +0.1
DUG IAmb IAmb 00 59 54.8
comp=Z,4.2nm,1.1s
BGU Big Grassy Mou 91.91 48 P P 00 59 52.9 -0.7
319A Douglas 92.07 58 P P 00 59 53.2 -1.3
319A IAmb IAmb 00 59 56.1
comp=Z,5.7nm,0.8s
WMQ Urumqi 92.71 315 eP P 00 59 56.8 -0.3
WMQ pP pP 01 00 28.4 +5.3
WMQ sP sP 01 00 42.8 +9.2
WMQ pmax pmax
comp=Z,8.0nm,0.7s
WMQ LR LR
comp=Z,660nm,28.8s
WMQ LR LR
comp=Z,1μm,29.2s
WMQ LR LR
comp=Z,170nm,29.2s
WMQ Urumqi 92.71 315 P P 00 59 57.0 -0.2
WMQ IAmb IAmb 00 59 59.3
comp=Z,5.7nm,0.8s
CTU Camp Tracy 92.77 49 P P 00 59 55.1 -2.5
JLU Jordanelle 92.96 49 P P 00 59 57.9 -0.7
SNAA Sanae 93.58 183 P P 00 59 59.0 -1.7
SNAA Sanae 93.58 183 P P 00 59 59.5 -1.2
LRM Limekiln Ridge 93.78 44 P P 01 00 04.8 +2.5
HPIG 93.97 63 P P 01 00 03.1 -0.4
VNA3 Neumayer Olymp 94.25 181 P P 01 00 01.8 -1.9
VNA2 Neumayer--Watz 94.51 182 P P 01 00 03.3 -1.6
baz=184,slow=4.3
VNA1 Neumayer--Stat 94.81 181 P P 01 00 04.7 -1.5
PDAR Pinedale Array 94.92 47 P P 01 00 07.3 -0.3
comp=Z,0.3nm,0.7s,baz=209,slow=2.8,SNR=3.1
PDAR PKKPbc PKKPdf 01 17 02.4 -2.0
comp=Z,0.5nm,0.7s,baz=79,slow=5.6,SNR=5.4
ANMO Albuquerque 95.28 55 P P 01 00 09.4 +0.1
comp=Z,0.3nm,0.3s,baz=248,slow=1.5,SNR=3.9
ANMO Albuquerque 95.28 55 IAmb IAmb 01 00 12.0
comp=Z,0.9nm,0.9s
TXAR Lajitas Array 96.26 61 P P 01 00 13.9 +0.1
comp=Z,0.5nm,0.6s,baz=228,slow=5.1,SNR=9.5
TXAR PKKPbc PKKPbc 01 16 59.5 -0.7
comp=Z,0.3nm,0.7s,baz=102,slow=3.8,SNR=4.4
MK31 Makanchi Array 97.19 316 P P 01 00 17.9 +0.4
MK31 IAmb IAmb 01 00 18.4
comp=Z,3.1nm,0.8s
MKAR Makanchi Array 97.19 316 P P 01 00 17.8 +0.3
comp=Z,4.0nm,0.6s,baz=95,slow=6.7,SNR=33
MKAR pP pP 01 00 47.7 +4.2
comp=Z,1.8nm,0.7s,baz=89,slow=7.4,SNR=3.7
MKAR PKiKP PKiKP 01 04 51.1 -1.4
comp=Z,0.3nm,0.6s,baz=120,slow=2.2,SNR=4.3
ZAA0 Zalesovo Array 97.37 324 P P 01 00 16.9 -1.2
ZAA0 IAmb IAmb 01 00 17.8
comp=Z,4.4nm,0.8s
ZALV Zalesovo Beam 97.37 324 P P 01 00 17.2 -0.9
comp=Z,3.6nm,0.7s,baz=119,slow=4.5,SNR=12
ZALV PKiKP PKiKP 01 04 51.6 -0.9
comp=Z,0.8nm,0.6s,baz=111,slow=3.2,SNR=4.2
MAKZ Makanchi 97.40 316 P P 01 00 18.5 +0.1
MAKZ IAmb IAmb 01 00 19.3
comp=Z,3.3nm,0.9s
YKA Yellowknife Ar 97.52 27 P P 01 00 17.2 -1.3
comp=Z,0.9nm,0.7s,baz=257,slow=4.7,SNR=14
YKA PKKPbc PKKPbc 01 16 54.2 -3.7
comp=Z,0.8nm,0.7s,baz=71,slow=2.4,SNR=12
KURBB Kurchatov Arra 100.42 320 P Pdif 01 00 32.0 +0.2
comp=Z,0.1nm,0.4s,baz=93,slow=4.8,SNR=3.0
RES Resolute Bay 106.14 16 PKKPbc PKKPbc 01 16 29.5 -3.4
comp=Z,0.0nm,0.3s,baz=175,slow=6.8,SNR=1.3
AKTO Aktyubinsk 113.45 319 PKiKP PKiKP 01 05 21.7 -0.6
comp=Z,2.1nm,0.6s,baz=94,slow=4.1,SNR=10
GEYT Alibeck 113.92 305 PKiKP PKiKP 01 05 23.1 -0.6
comp=Z,1.5nm,0.6s,baz=235,slow=5.2,SNR=5.4
SPA0 Spitsbergen Ar 114.90 354 ePKPdf PKiKP 01 05 23.7 -0.7
ARCES ARCESS Array B 120.22 345 PKP PKPdf 01 05 34.1 -0.8
comp=Z,6.9nm,0.5s,baz=73,slow=1.9,SNR=85
ARCES pPKP pPKPdf 01 06 04.6 +2.7
comp=Z,3.3nm,0.6s,baz=93,slow=1.6,SNR=2.4
ARCES PKKPbc PKKPab 01 15 41.2 -2.3
comp=Z,2.9nm,0.8s,baz=224,slow=2.5,SNR=3.7
ARE0 ARCESS Array S 120.22 345 ePKPdf PKPdf 01 05 34.2 -0.7
KLMR Klimovskoe 120.66 333 ePKPdf PKPdf 01 05 32.6 -3.3
KLMR AMP 01 05 35.9
comp=Z,27nm,1.6s
KTK1 Kautokeino 121.16 346 ePKPdf PKPdf 01 05 35.5 -1.2
TRO Tromso 121.64 348 ePKPdf PKPdf 01 05 36.5 -1.0
SCHQ Schefferville 122.27 34 PKP PKPdf 01 05 38.6 -0.6
comp=Z,1.6nm,0.6s,baz=235,slow=3.2,SNR=4.1
SCHQ PKKPbc PKKPab 01 15 35.1 +0.2
comp=Z,2.8nm,0.9s,baz=122,slow=4.5,SNR=7.2
BOSA Boshof 123.40 220 PKPdf 01 05 42.0 -0.4
STEI Steigen 123.81 348 ePKPdf PKPdf 01 05 40.9 -0.8
GNI Garni 124.11 309 PKPdf 01 05 42.1 -1.3
RAYN Ar Rayn 124.59 289 PKPdf 01 05 44.4 -0.2
OBN Obninsk 124.68 328 PKP PKPdf 01 05 43.2 -0.5
comp=Z,2.4nm,0.5s,baz=60,slow=16,SNR=4.1
KBZ Khabaz 124.73 313 PKP PKPdf 01 05 43.6 -0.6
comp=Z,2.4nm,0.8s,baz=76,slow=1.6,SNR=7.7
MOR8 Moi Rana 125.46 347 ePKPdf PKPdf 01 05 43.7 -1.3
KONS Konsvik 125.47 348 ePKPdf PKPdf 01 05 44.5 -0.4
LBTB Lobatse 125.65 224 PKPdf 01 05 46.4 -0.4
FINES FINESS Array B 125.70 338 PKP PKPdf 01 05 44.8 -0.7
comp=Z,2.5nm,0.6s,baz=17,slow=3.2,SNR=24
FINES pPKP pPKPdf 01 06 15.9 +3.4
comp=Z,4.9nm,1.0s,baz=102,slow=4.5,SNR=2.4
NSS Namsos 127.41 347 ePKPdf PKPdf 01 05 48.3 -0.4
KMBO Kilima Mbogo 128.12 257 PKP PKPdf 01 05 52.6 +0.6
comp=Z,0.6nm,0.3s,baz=52,slow=9.0,SNR=4.6
LSZ Lusaka 129.77 235 PKPdf 01 05 54.8 -0.1
MOL Molde 130.08 348 ePKPdf PKPdf 01 05 52.3 -1.6
NB2 NORSAR Subarra130.59 345 PKPdf PKPdf 01 05 54.5 -0.5
comp=Z,1.0nm,0.5s,baz=31,slow=1.9
NOA NORSAR Array B 130.59 345 PKP PKPdf 01 05 54.8 -0.2
comp=Z,1.3nm,0.6s,baz=35,slow=2.0,SNR=8.4
NOA SKPbc SKPbc 01 09 08.2 -1.5
comp=Z,2.3nm,0.7s,baz=30,slow=3.2,SNR=8.1
HFS Hagfors 130.69 343 PKP PKPdf 01 05 54.6 -0.5
comp=Z,2.6nm,0.7s,baz=67,slow=3.9,SNR=9.7
AKASG Malin Array Be 130.71 326 PKP PKPdf 01 05 54.8 -0.7
comp=Z,1.7nm,0.5s,baz=46,slow=2.8,SNR=12
AKASG SKPbc SKPbc 01 09 08.0 -2.5
comp=Z,1.6nm,0.7s,baz=48,slow=4.6,SNR=12

AKBB Malin Array Si 130.71 326 PKPdf 01 05 55.7 +0.2
NC602 NORSAR Array S 130.77 345 ePKPdf PKPdf 01 05 54.3 -0.9
SKAR Skarslia 131.61 346 ePKPdf PKPdf 01 05 54.3 -2.6
BR131 Keskin Array S 132.49 311 PKPdf PKPdf 01 05 58.3 -1.0
BRTR Keskin Array B 132.49 311 PKP PKPdf 01 05 58.9 -0.5
comp=Z,1.5nm,0.8s,baz=137,slow=3.1,SNR=8.5
BRTR SKPbc SKPbc 01 09 16.2 -1.2
comp=Z,0.8nm,0.6s,baz=100,slow=3.8,SNR=4.5
SORM Soroca 132.52 323 ⇓P PKPdf 01 05 58.3 -0.7
MMAI Mount Meron Ar 132.80 301 PKP PKPdf 01 06 00.8 +0.7
comp=Z,1.4nm,0.5s,baz=80,slow=9.5,SNR=5.2
BLS5 Blasjo 133.15 347 ePKPdf PKPdf 01 05 58.2 -1.7
CFR Carcaliu 134.10 320 ⇓P PKPdf 01 06 02.8 +0.9
TESR Tescani 134.34 322 ⇑P PKPdf 01 06 03.3 +0.8
HARR Harsova 134.46 319 ⇓P PKPdf 01 06 03.5 +0.9
BUR08 Bucovina Ar. S 134.58 324 PKPdf 01 06 04.0 +1.0
BURAR Bucovina Array 134.59 324 ⇑P PKPdf 01 06 03.6 +0.6
TSUM Tsumeb 135.00 222 PKP PKPdf 01 06 03.3 -1.4
comp=Z,3.6nm,0.8s,baz=15,slow=2.8,SNR=8.5
MLR Muntele Rosu 135.29 321 PKP PKPdf 01 06 04.3 -0.1
comp=Z,2.0nm,0.8s,baz=293,slow=2.4,SNR=5.6
DOPR Dopca 135.38 322 ⇑P PKPdf 01 06 04.7 +0.3
KOLS Kolonicke sedl 135.42 327 ePKP PKPdf 01 06 05.3 +0.9
TRPA Tarpa 135.77 326 ⇑P PKPdf 01 06 05.0 0.0
CRVS Cervenica-Dubn 135.86 328 ePKP PKiKP 01 06 08.6 +1.8
ARR Arges 136.14 322 ⇑P PKPdf 01 06 06.3 +0.4
HUMR Humele 136.37 321 ⇑P PKPdf 01 06 05.4 -0.9
DRGR 136.46 325 ⇓P PKPdf 01 06 07.5 +1.0
ELND Elena 136.60 318 ⇑P PKPdf 01 06 06.8 +0.1
OKC Ostrava-Krasne 136.88 331 ePKPDF PKPdf 01 06 07.7 +0.7
PLVB Pleven 137.18 319 ⇑P PKPdf 01 06 09.4 +1.6
MORC Moravsky Berou 137.21 331 ePKP PKPdf 01 06 06.5 -1.2
GZR Gura Zlata 137.22 323 ⇓P PKPdf 01 06 07.1 -0.8
OSTC Ostas 137.25 333 ePKPDF PKPdf 01 06 08.3 +0.5
PSZ Piszkesteto 137.29 328 ⇓P PKPdf 01 06 09.4 +1.4
CHVC Chvalec 137.30 333 ePKPDF PKPdf 01 06 09.6 +1.7
VYHS Vyhne 137.46 329 ePKP PKPdf 01 06 09.7 +1.5
BZS Buzias 137.76 324 ⇓P PKPdf 01 06 08.5 -0.3
JAVC Velka Javorina 137.78 330 ePKP PKPdf 01 06 09.7 +0.9
TIM Timisoara 137.92 324 ⇑P PKiKP 01 06 14.8 +3.7
PVCC Panska Ves 137.98 334 ePKPDF PKPdf 01 06 10.5 +1.4
CLL Collm 138.03 336 ePKPdf PKPdf 01 06 10.0 +0.9
KRUC Moravsky 138.24 331 ePKP PKPdf 01 06 09.2 -0.4
PRU Pruhonice 138.40 334 ePKPDF PKPdf 01 06 11.0 +1.2
VTS Vitosha 138.44 319 ⇓P PKPdf 01 06 10.7 +0.3
VTS Vitosha 138.44 319 PKPdf 01 06 09.9 -0.4
CONA Conrad Observa 139.29 330 ePKPdf PKPdf 01 06 06.2 -5.5
comp=Z,6.2nm,1.1s
KHC Kasperske Hory 139.46 333 ePKPpre PKPdf 01 06 07.5 -4.4
KHC ePKPDF PKiKP 01 06 13.9 -0.3
GERES GERESS Array B 139.62 333 PKhKP PKPpre 01 06 05.8
comp=Z,0.6nm,0.6s,baz=25,slow=3.7,SNR=5.2
GERES PKP PKPdf 01 06 12.2 -0.1
comp=Z,1.9nm,0.6s,baz=62,slow=1.6,SNR=16
GERES SKPbc SKPbc 01 09 38.0 -1.0
comp=Z,0.4nm,0.8s,baz=46,slow=7.0,SNR=3.2
ARSA Arzberg 139.93 330 i PKPdf PKPdf 01 06 10.6 -2.2
MOA Molln 140.10 332 PKPdf PKPdf 01 06 10.1 -2.9
comp=Z,2.8nm,0.9s
IDI Anoyia 140.54 308 PKP PKPdf 01 06 13.9 -0.4
comp=Z,5.0nm,0.6s,baz=8.1,slow=15,SNR=8.9
SOKA Soboth 140.58 330 i PKPdf PKPdf 01 06 08.5 -5.6
comp=Z,0.9nm,0.5s
OBKA Obir 140.93 330 i PKPdf PKPdf 01 06 08.8 -5.9
comp=Z,1.5nm,0.5s
KBA Koelnbreinsper 141.09 331 ePKPdf PKPdf 01 06 10.0 -5.1
comp=Z,3.7nm,0.7s
WATA Walderalm 141.69 333 ePKPdf PKPdf 01 06 13.2 -2.9
comp=Z,4.0nm,1.1s
ABTA Abfaltersbach 141.72 332 PKPdf PKPdf 01 06 11.1 -5.0
comp=Z,1.7nm,0.4s
WTTA Wattenberg 141.72 333 ePKPdf PKPdf 01 06 13.2 -3.0
comp=Z,5.0nm,1.1s
MOTA Moosalm 141.89 334 PKPdf PKPdf 01 06 11.9 -4.6
comp=Z,3.6nm,0.7s
RETA Reutte 141.93 334 ePKPdf PKPdf 01 06 13.0 -3.4
comp=Z,1.8nm,0.5s
SQTA Sankt Quirin 141.94 333 ePKPdf PKPdf 01 06 12.1 -4.4
comp=Z,5.2nm,0.7s
FETA Feichten 142.30 334 ePKPdf PKPdf 01 06 12.8 -4.4
comp=Z,4.4nm,0.8s
DAVA Damuels 142.45 335 ePKPdf PKPdf 01 06 14.4 -3.1
comp=Z,11nm,1.1s
DAVOX Davos/Dischmat 142.85 334 PKhKP PKPdf 01 06 15.0 -3.2
comp=Z,7.3nm,0.6s,baz=245,slow=3.5,SNR=25
ZCCA Zocca 144.23 330 PKPbc 01 06 20.6 +1.7
SENIN Lac Senin/Sane 144.24 336 PKPab 01 06 19.6 +0.8
INTR Introdacqua 144.37 325 PKPab 01 06 19.2 -0.1
AQU L'Aquila 144.41 326 PKPab 01 06 19.6 +0.3
TIP Timpagrande 144.43 319 ⇑P PKPab 01 06 20.0 +0.5
TIP Timpagrande 144.43 319 PKPab 01 06 19.7 +0.2
OSSC Osservatorio P 144.71 329 PKPab 01 06 20.0 -0.3
BNI Bardonecchia 145.57 335 PKPdf 01 06 23.9 +0.9
CLTB Caltabellotta 147.62 320 PKPdf 01 06 28.8 +2.2
SHEL Horse Pasture 148.77 193 PKPbc 01 06 33.4 +0.5
KEST Kesra 151.19 321 PKPbc PKPbc 01 06 38.5 +0.1
comp=Z,18nm,0.7s,baz=32,slow=0.8,SNR=37
PBRG Braganca 152.50 350 ePKPbc PKPbc 01 06 40.9 -0.1
PVRL Vila Real 153.16 352 ePKPab PKPab 01 06 55.3 +0.9
MVO Moncorvo 153.17 350 ePKPbc PKPbc 01 06 43.4 +0.8
PVIS Viseu 153.74 352 ePKPab PKPab 01 06 57.0 +0.2
ESDC Sonseca Array 153.96 344 PKPbc PKPbc 01 06 44.2 -0.1
comp=Z,0.3nm,0.5s,baz=10.0,slow=5.2,SNR=7.1
ESDC PKPab PKPab 01 06 59.0 +1.2
comp=Z,2.2nm,0.7s,baz=15,slow=4.2,SNR=12
MTE Manteigas 154.00 351 ePKPab PKPab 01 06 59.1 +1.1
PBEJ Beja 156.37 350 ePKPab PKPab 01 07 09.3 +1.2
PCVE Castro Verde 156.78 351 ePKPab PKPab 01 07 11.5 +1.7
TOA0 Torodi Ar. Sit 165.92 265 PKPdf PKPdf 01 06 49.1 -1.1
TORD Torodi Ar. Bea 165.92 265 PKP PKPdf 01 06 49.1 -1.2
comp=Z,1.0nm,0.6s,baz=76,slow=0.4,SNR=14
TORD PKPab PKPab 01 07 49.8 -0.8
comp=Z,5.5nm,0.9s,baz=94,slow=4.1,SNR=16
KIC Kosan Boka 168.59 224 ePKIKP PKPdf 01 06 50.7 -1.6
comp=Z,7.0nm,0.7s
LIC Lamto 168.68 223 ePKIKP PKPdf 01 06 50.6 -1.7
comp=Z,20nm,0.9s
DBIC Dimbokro 168.89 225 PKP PKPdf 01 06 51.1 -1.3
comp=Z,2.1nm,0.6s,baz=47,slow=1.1,SNR=8.0
DBIC PKPab PKPab 01 08 04.0 +0.4
comp=Z,1.9nm,0.6s,baz=118,slow=7.0,SNR=4.3
TIC Toumodi 168.99 224 ePKIKP PKPdf 01 06 50.8 -1.7

*SJA **17** 00:47:08.6±0.5, 31.57S×72.51W, h44km±8km, ML4.2, MW4.2*
*IDC **17** 00:47:09.9±1.9, 31.69S×71.67W, h0km, mb4.3/3, mb1 4.1/6, mb1mx3.9/26, mbtmp4.0/6, ML3.9/3, MS3.8/1, Ms1 3.7/1, ms1mx3.2/24, Error ellipse: s-maj=59.5km s-min=35.2km az=108.0*
*GUC **17** 00:47:13.3±0.6, 31.72S×71.81W, h20km±5km, ML4.0*
ISC 17 00:47:08.6±1.9**, 31.67S**±0.03×**72.07W**±0.07**, h1**km±11km**, n39, σ1.78**/57**, mb4.3**/3**, Off coast of central Chile**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CO04 Los Peladeros 1.00 112 eP Pg 00 47 28.4 +0.6
CO04 i S Sg 00 47 38.9 -2.0
CO02 Combarbal 1.02 64 eP Pg 00 47 29.2 +1.0
CO02 i S Sg 00 47 40.8 -0.7
CO03 El Pedregal 1.44 55 eP Pn 00 47 36.4 +0.4
CO03 i S Sn 00 47 53.5 -2.2
MT02 Curacav 1.77 154 eP Pn 00 47 41.0 +0.5
MT02 i S Sn 00 48 03.1 -0.6
GO04 Tololo Observa 1.85 37 i P Pn 00 47 42.6 +1.0
GO04 i S Sn 00 48 06.8 +0.9
PEL Peldehue 1.88 142 eP Pn 00 47 42.7 +0.7
PEL i S Sn 00 48 05.2 -1.2
PEL IAML 00 48 09.0
comp=E,2μm,0.2s
PEL Peldehue 1.88 142 i P Pn 00 47 43.0 +1.0
CLCH Cerro Calan 2.16 144 eP Pn 00 47 47.0 +1.2
CLCH i S Sn 00 48 12.8 -0.4
CLCH IAML 00 48 21.1
comp=N,3μm,0.4s
FCH Farellones 2.24 138 eP Pn 00 47 48.1 +1.0
FCH i S Sn 00 48 15.1 -0.5
MT03 Universidad Ad 2.25 145 eP Pn 00 47 48.4 +1.3
RTLS Leoncito 2.37 94 i P Pb 00 47 51.7 -0.5
RTLS i S Sb 00 48 20.5 -1.6
RTLS IAML 00 48 27.5
comp=Z,698nm,0.5s
LMEL Las Melosas 2.68 145 eP Pn 00 47 54.9 +1.8
LMEL i S Sn 00 48 26.9 +0.5
LMEL IAML 00 48 35.7
comp=N,1μm,0.4s
AROD Rodeo 2.69 57 i P Pb 00 47 56.9 -0.8
AROD i S Sb 00 48 31.5 +0.2
ACCO Cerro Coronel 2.79 68 i P Pb 00 47 58.2 -1.3
ACCO i S Sb 00 48 35.1 +0.8
ASAL Salagasta 2.90 109 i P Pb 00 48 00.0 -1.1
ASAL i S Sb 00 48 39.4 +2.3
ZON Zonda 2.90 89 i P Pb 00 47 59.6 -1.5
ZON i S Sb 00 48 34.6 -2.5
ZON IAML 00 48 47.6
comp=Z,310nm,0.6s
ARCO CERRO ARCO 2.91 115 i P Pb 00 48 01.7 +0.3
ARCO i S Sb 00 48 38.6 +1.1
ARCO IAML 00 48 48.3
comp=Z,474nm,0.4s
ACDV Cuesta del Vie 2.94 60 i P Pb 00 48 01.4 -0.5
ACDV i S Sb 00 48 38.7 +0.3
ACDV IAML 00 48 45.1
comp=Z,371nm,0.4s
AAGR Agrelo 3.09 118 i P Pb 00 48 02.8 -1.6
RTLL Cerro Villicun 3.09 85 i P Pb 00 48 02.2 +3.6
RTLL i S Sb 00 48 41.4 -1.3
RTLL IAML 00 48 46.3
comp=Z,486nm,0.3s
CFA Coronel Fontan 3.27 90 i P Pn 00 48 04.2 +3.1
CFA i S Sb 00 48 46.8 -1.1
GO05 Huala 3.34 178 i P Pn 00 48 02.5 +0.5
AGUA GUANDACOL 3.77 56 i P Pn 00 48 12.4 +4.3
GO03 Copiap 4.36 22 i P Pn 00 48 17.4 +1.2
APLL PUNTA DE LOS L 4.92 77 i P Pn 00 48 26.2 +2.4
APLL i S Sn 00 49 26.1 +4.6
APLL IAML 00 49 34.6
comp=Z,137nm,0.5s
ACLC CERRO LA CRUZ 4.95 64 i P Pn 00 48 27.7 +3.4
CYA Choya 6.31 61 i P Pn 00 48 44.8 +1.9
CYA IAML 00 48 49.4
comp=Z,80nm,0.5s
CYA i S Sn 00 49 55.2 -0.5
AHML Horco Molle 7.63 52 i P Pn 00 49 03.1 +2.1
AHML i S Sn 00 50 25.0 -3.3
AHML IAML 00 50 41.1
comp=Z,32nm,0.6s
PLCA Paso Flores 9.13 173 Pn Pn 00 49 23.3 +1.7
comp=Z,0.4nm,0.3s,baz=353,slow=11,SNR=6.4
CPUP Villa Florida 13.95 71 Pn Pn 00 50 25.8 -1.7
comp=Z,0.1nm,0.3s,baz=222,slow=15,SNR=1.8
LPAZ La Paz 15.72 14 Pn Pn 00 50 54.3 +2.3
comp=Z,0.2nm,0.3s,baz=198,slow=8.3,SNR=4.6
BDFB Brasilia 27.11 60 P P 00 52 52.4 -1.0
comp=Z,6.0nm,1.0s,baz=222,slow=15,SNR=3.4
BDFB LR LR 01 04 24.6
comp=Z,219nm,20.9s,baz=274,slow=39
DBIC Dimbokro 74.47 72 P P 00 58 48.7 -0.4
comp=Z,3.7nm,1.1s,baz=205,slow=5.8,SNR=4.6
TORD Torodi Ar. Bea 83.44 70 P P 00 59 37.0 -1.3
comp=Z,1.8nm,0.8s,baz=240,slow=4.7,SNR=7.4
H11S2 WAKE ISLAND Hyd 25.75 271 T T 03 25 06.4
baz=117,slow=75,SNR=23
H11S1 WAKE ISLAND Hyd 25.76 271 T T 03 25 07.1
baz=117,slow=75,SNR=11
H11S3 WAKE ISLAND Hyd 25.76 271 T T 03 25 07.6
baz=117,slow=75,SNR=13
ZALV Zalesovo Beam 152.25 30 PKPbc PKiKP 01 07 06.3 +0.3
comp=Z,2.4nm,0.5s,baz=304,slow=3.3,SNR=11
MKAR Makanchi Array 155.20 45 PKPab PKPab 01 07 29.6 +1.3
comp=Z,0.6nm,1.0s,baz=270,slow=1.4,SNR=3.5

*OTT **17** 00:58:05.4±0.2, 50.76N×101.90W, h1km, MN3.1/6, 16km southwest from Langenburg, Sk*
*IDC **17** 00:58:06.4±0.9, 50.59N×101.81W, h0km, mb2.5/1, mb1 3.6/5, mb1mx3.2/59, mbtmp3.2/5, ML3.5/3, Error ellipse: s-maj=12.4km s-min=8.2km az=171.0*
ISC 17 00:58:04.0±0.7**, 50.84N**±0.07×**101.93W**±0.05**, h10**km**, n15, σ2.60**/29**, Manitoba**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ULM Lac du Bonnet 3.91 96 Pn Pn 00 59 05.8 +1.7
0.3nm,0.3s,baz=283,slow=14,SNR=11
ULM Pg Pb 00 59 14.5 +1.6
1.7nm,0.3s,baz=280,slow=16,SNR=17
ULM Sn Sn 00 59 50.4 +0.5
1.3nm,0.3s,baz=304,slow=11,SNR=3.9
ULM Lg Lg 01 00 02.2
3.8nm,0.3s,baz=186,slow=12,SNR=11
ULM Lac du Bonnet 3.91 96 PN Pn 00 59 05.4 +1.4
ULM SN Sn 00 59 49.8 -0.1
ULM Trac 01 00 06.6
comp=Z,44nm,0.6s
EPLO Experimental L 5.39 99 PN Pn 00 59 25.6 +1.2
EPLO SN Sn 01 00 25.5 -1.0
EPLO Trac 01 00 34.5
comp=Z,4.8nm,0.1s
SOLO Sioux Lookout 6.35 94 PN Pn 00 59 38.2 +0.6
SOLO SN Sn 01 00 48.5 -1.6
SOLO Trac 01 00 53.1
comp=Z,3.0nm,0.1s
ATKO Atikokan Iron 6.98 103 PN Pn 00 59 47.1 +0.9
ATKO SN Sn 01 01 03.0 -2.6
ATKO Trac 01 01 07.6
comp=Z,2.5nm,0.2s
PKLO Pickle Lake 7.31 80 PN Pn 00 59 51.9 +1.1
PKLO SN Sn 01 01 09.2 -4.6
PKLO Trac 01 01 19.9
comp=Z,89nm,1.2s
EYMN Ely 7.40 109 PN Pn 00 59 52.6 +0.6
EYMN SN Sn 01 01 12.0 -4.0
EDM Edmonton 7.44 293 PN Pn 00 59 54.6 +2.0
EDM SN Sn 01 01 15.4 -1.6
TBO Thunder Bay 8.40 100 PN Pn 01 00 06.5 +0.7
TBO SN Sn 01 01 36.7 -3.9
TBO Trac 01 02 30.6
comp=Z,5.5nm,0.4s
PDAR Pinedale Array 9.62 216 Pn Pn 01 00 23.5 +0.9
0.1nm,0.3s,baz=43,slow=15,SNR=3.0
PDAR Sn Sn 01 02 07.2 -3.6
0.1nm,0.3s,baz=49,slow=26,SNR=3.2
PDAR Lg Lg 01 02 54.9
0.4nm,0.3s,baz=38,slow=37,SNR=6.2
MNB Mounoet Dainar 10.35 284 PN Pn 01 00 35.0 +2.4
MNB SN Sn 01 02 24.1 -4.5
PNPO Pukaskwa Natio 10.38 96 PN Pn 01 00 32.6 -0.2
PNPO SN Sn 01 02 23.5 -5.6
YKA Yellowknife Ar 13.57 334 Pn Pn 01 01 18.6 +2.3
0.1nm,0.3s,baz=143,slow=12,SNR=28
YKA Sn Sn 01 03 43.2 -3.7
0.1nm,0.3s,baz=146,slow=22,SNR=4.7
YKA Lg Lg 01 05 14.0
0.0nm,0.3s,baz=142,slow=28,SNR=4.0
TKL Tuckaleechee C 20.04 132 P Pn 01 02 38.7 -0.2
0.2nm,0.3s,baz=8.1,slow=14,SNR=5.2
TXAR Lajitas Array 21.52 184 P P 01 02 55.2 +2.0
0.1nm,0.5s,baz=0.0,slow=10,SNR=2.5

*BJI **17** 01:05:58.9±0.0, 29.65S×177.06W, h8km, mB5.8/36, mb5.6/55, Ms5.1/31, Ms7 4.8/36*
*KLM **17** 01:05:59.0, 30.19S×178.26W, h0km, mb6.0*
*NEIC **17** 01:06:04.4±3.0, 30.09S±0.04×177.78W±0.10, h34km±3km, mb5.6/225, Ms_20 5.0/81, Mww5.4, Mwc5.5(GCMT), Error ellipse: s-maj=12.2km s-min=6.1km az=94.0*
*MOS **17** 01:06:07.1±1.2, 29.93S×177.81W, h55km, mb5.9/26, MS5.0/8, Error ellipse: s-maj=10.9km s-min=8.4km az=102.9*
*IDC **17** 01:06:07.2±0.8, 29.95S×177.87W, h44km±6km, mb5.2/33, mb1 5.2/34, mb1mx5.1/40, mbtmp5.4/34, ML3.7/1, MS4.6/22, Ms1 4.6/22, ms1mx4.6/23, Error ellipse: s-maj=10.0km s-min=9.2km az=70.0*
*GCMT **17** 01:06:09.4±0.1, 29.98S±0.01×177.61W±0.01, h52km, MW5.4/132, Moment Tensor Solution. s129, c218; s132, c229; Duration: 1.3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.53±.03; $M_{\theta\theta}$-0.08±.02; $M_{\phi\phi}$-1.45±.02; $M_{r\theta}$0.28±.02; $M_{\theta\phi}$-0.44±.02; $M_{\phi r}$0.71±.02; Best double couple: $M_0$1.73300×10^{17} NP1:ϕ_s194.00000°, δ32.00000°, λ86.00000°. NP2:ϕ_s19.00000°, δ58.00000°, λ93.00000°. Principal axes: T 1.7100, Plg77.0000°, Azm297.0000°; N 0.0470, Plg2.0000°, Azm197.0000°; P -1.7560, Plg13.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **17** 01:06:10, 29.96S×177.58W, h53km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.54; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-1.52; $M_{r\theta}$0.27; $M_{\theta\phi}$-0.47; $M_{\phi r}$0.66; Fault plane solution: $M_0$1.75000×10^{17} NP1:ϕ_s193.00000°, δ33.00000°, λ85.00000°. NP2:ϕ_s19.00000°, δ57.00000°, λ93.00000°. Principal axes: T 1.6903, Plg78.0000°, Azm300.0000°; N 0.1164, Plg3.0000°, Azm197.0000°; P -1.8067, Plg12.0000°, Azm106.0000°;*
*NEIC **17** 01:06:19, 29.96S×178.04W, h50km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.55; $M_{\theta\theta}$0.07; $M_{\phi\phi}$-1.63; $M_{r\theta}$0.02; $M_{\theta\phi}$-0.42; $M_{\phi r}$0.04; Fault plane solution: $M_0$1.64000×10^{17} NP1:ϕ_s193.00000°, δ44.00000°, λ90.00000°. NP2:ϕ_s13.00000°, δ46.00000°, λ90.00000°. Principal axes: T 1.5529, Plg89.0000°, Azm306.0000°; N 0.1706, Plg0.0000°, Azm193.0000°; P -1.7235, Plg1.0000°, Azm103.0000°;*
ISC 17 01:06:04.3±0.6**, 30.14S**±0.04×**177.70W**±0.04**, h32**km±3km**, h32**km**:pP-P, n994, σ1.88**/929**, mb5.7**/197**, MS5.0**/80**, 56C-38D, Kermadec Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RAO Raoul Island 0.90 348 P Pn 01 06 21.0 +0.2
baz=250,slow=16
RAO S Sn 01 06 31.8 -0.9
36μm,0.3s,baz=16,slow=18,SNR=18
RAO Raoul Island 0.90 348 Pn 01 06 20.9 +0.1
RAO Sn 01 06 30.4 -2.3
RAO Raoul Island 0.90 348 P Pn 01 06 20.9 +0.1
RAO 01 06 30.4
RIZ Raoul Island 0.91 347 P Pn 01 06 20.9 0.0
RIZ S Sn 01 06 29.6 -3.3
MXZ Matakaoa Point 8.12 203 Pn Pn 01 07 58.7 -1.2
MXZ Sn 01 09 28.3 -2.3
MXZ Matakaoa Point 8.12 203 P Pn 01 07 58.2 -1.7
MXZ S Sn 01 09 28.5 -2.1
WMGZ Waiomatatini S 8.31 202 P Pn 01 08 01.4 -1.3
WMGZ S Sn 01 09 33.9 -1.6
HAZ Te Kaha 8.48 205 P Pn 01 08 03.6 -1.2
HAZ S Sn 01 09 40.0 +0.7
PKGZ Pakihiroa 8.49 203 P Pn 01 08 02.9 -2.2
PKGZ S Sn 01 09 34.9 -4.9
PUZ Puketiti 8.60 202 P Pn 01 08 05.1 -1.4
RUGZ Raukumara Rang 8.70 205 P Pn 01 08 06.3 -1.7
OPRZ Ohinepanea 9.05 210 P Pn 01 08 13.7 +1.0
TKGZ Te Karaka 9.06 203 P Pn 01 08 10.8 -2.1
MWZ Matawai 9.08 205 P Pn 01 08 10.8 -2.4
MARZ Manawahe 9.11 209 P Pn 01 08 14.6 +1.0
URZ Urewera 9.17 207 P Pn 01 08 11.8 -2.5
8.6nm,0.3s,baz=333,slow=4.5,SNR=38
URZ S Sn 01 09 55.8 -0.6
67nm,0.3s,baz=184,slow=19,SNR=15
URZ Urewera 9.17 207 Pn 01 08 12.5 -1.9
URZ Sn 01 09 51.7 -4.7
URZ Urewera 9.17 207 P Pn 01 08 12.2 -2.1
RAGZ Rawiri 9.27 205 P Pn 01 08 13.2 -2.6
KARZ Kaharoa 9.33 211 P Pn 01 08 19.9 +3.3
RIGZ Rimuhau 9.33 202 P Pn 01 08 15.2 -1.4
TARZ Mount Tarawera 9.40 209 P Pn 01 08 19.5 +2.0
TOZ Tahuroa Road 9.45 215 P Pn 01 08 23.2 +5.1
PRGZ Paritu Road 9.49 201 P Pn 01 08 15.9 -2.9
MUGZ Murupara 9.49 207 P Pn 01 08 18.0 -0.8
RTZ Ruatahuna 9.53 206 P Pn 01 08 16.2 -3.2
SNGZ Shannon Statio 9.55 204 P Pn 01 08 18.3 -1.3
KNZ Kokohu 9.65 202 P Pn 01 08 17.4 -3.4
MHGZ Mahia Peninsul 9.70 201 P Pn 01 08 18.6 -2.9
RAHZ Arahi 9.76 205 P Pn 01 08 20.1 -2.3
MTHZ Maungataniwha 9.79 206 P Pn 01 08 20.6 -2.3
WHHZ Waihua 9.85 204 P Pn 01 08 21.4 -2.2
MRHZ Matea Rd 9.94 208 P Pn 01 08 23.9 -1.1
NMHZ Naumai 10.02 205 P Pn 01 08 24.8 -1.2
ARHZ Aropaoanui 10.10 204 P Pn 01 08 24.9 -2.1
WATZ Wairara 10.12 211 P Pn 01 08 31.5 +4.0
BKZ Black Stump Fm 10.20 206 Pn 01 08 25.7 -2.8
BKZ Sn Sn 01 10 15.6 -6.2
BKZ Black Stump Fm 10.20 206 P Pn 01 08 24.9 -3.5
RATZ Rangitukua 10.24 210 P Pn 01 08 33.3 +4.3
KATZ Kakaramea 10.36 210 P Pn 01 08 35.4 +4.6
MCHZ McNeill Hill 10.36 205 P Pn 01 08 28.0 -2.7
HIZ Hauiti 10.38 214 Pn 01 08 31.8 +0.9
HIZ Hauiti 10.38 214 P Pn 01 08 35.2 +4.3
CKHZ Cape Kidnapper 10.42 203 P Pn 01 08 28.2 -3.3
KWHZ Kaweka Forest 10.45 206 P Pn 01 08 28.4 -3.5
WTVZ West Tongariro 10.52 210 P Pn 01 08 36.8 +3.8
TWVZ Taurewa 10.55 211 P Pn 01 08 31.9 -1.5
NGZ Ngauruhoe 10.57 210 P Pn 01 08 33.0 -0.7
KAHZ Kahuranaki 10.61 203 P Pn 01 08 29.9 -4.2
BHHZ Black Hill Sta 10.64 207 P Pn 01 08 30.7 -3.9
FWVZ Far West T-bar 10.65 210 P Pn 01 08 36.1 +1.2
KRHZ Kereru 10.66 206 P Pn 01 08 30.2 -4.6
MOVZ Moawhango 10.70 208 P Pn 01 08 33.6 -1.8
PXZ Pawanui 10.83 203 P Pn 01 08 34.0 -3.0
PNHZ Pukenui 10.96 205 P Pn 01 08 35.2 -3.7
PRHZ Porangahau 11.12 203 P Pn 01 08 36.9 -4.1
TSZ Takapari Road 11.18 206 P Pn 01 08 37.2 -4.6
DVHZ Dannevirke 11.31 205 P Pn 01 08 39.3 -4.3
WAZ Wanganui 11.31 210 P Pn 01 08 42.8 -0.9
ANWZ Angora Road 11.34 203 P Pn 01 08 40.8 -3.3
POWZ Post Office Ro 11.54 206 P Pn 01 08 44.5 -2.3
PRWZ Pori Road 11.61 205 P Pn 01 08 44.8 -2.9
BFZ Birch Farm 11.62 203 P Pn 01 08 42.6 -5.3
CPWZ Castlepoint 11.84 203 P Pn 01 08 47.1 -3.8
TMWZ Te Maipa 12.12 204 P Pn 01 08 48.9 -5.8
MTW Mount Morrison 12.30 205 P Pn 01 08 51.2 -6.0
CAW Cannon Point 12.42 206 P Pn 01 08 53.2 -5.7
TRWZ Traveller 12.45 204 P Pn 01 08 54.1 -5.2
PAWZ Paruwai Farm 12.53 205 P Pn 01 08 54.8 -5.5
NFK Norfolk Island 12.55 271 P Pn 01 09 06.3 +5.7
baz=13,SNR=4.7
MSWZ Moikau Station 12.62 205 Pn 01 08 56.3 -5.3
MSWZ Sn Sn 01 11 13.3 -7.7
MSWZ Moikau Station 12.62 205 P Pn 01 08 55.9 -5.7
SNZO South Karori 12.74 207 Pn 01 08 58.4 -4.7
PLWZ Palliser 12.75 205 Pn 01 08 57.5 -6.0
PLWZ Sn Sn 01 11 15.3 -9.0
BHW Baring Head 12.76 206 Pn 01 08 57.4 -6.0
BHW Baring Head 12.76 206 P Pn 01 08 58.2 -5.2
MSVF Nonsavu 12.94 342 Pn 01 09 06.6 +0.5
MSVF Nonsavu 12.94 342c iP Pn 01 09 09.2 +3.1
MSVF pmax pmax
comp=Z,156nm,1.0s
NIUE Niue 13.08 34 P Pn 01 09 02.5 -5.4
baz=13,SNR=34
NIUE Niue 13.08 34 Pn 01 09 03.4 -4.5
TUWZ Tuamarina 13.15 209 Pn 01 09 04.3 -4.4
TUWZ Sn 01 11 23.8 -10
QRZ Quartz Range 13.30 214 Pn 01 09 08.8 -2.1
QRZ Quartz Range 13.30 214 P Pn 01 09 10.5 -0.3
CMWZ Cape Campbell 13.30 207 Pn Pn 01 09 10.1 -0.8
BSWZ Blackbirch Sta 13.41 208 Pn 01 09 08.7 -3.7
THZ Tophouse 13.86 211 Pn 01 09 14.7 -3.9
THZ Sn Sn 01 11 43.5 -7.9
THZ Tophouse 13.86 211 P Pn 01 09 15.1 -3.5
KHZ Kahutara 14.14 208 Pn 01 09 14.6 -7.6
DSZ Denniston Nort 14.36 213 P Pn 01 09 22.4 -2.9
LTZ Lake Taylor 14.96 210 P Pn 01 09 28.4 -5.2
AMCZ Amberley 15.13 208 P P 01 09 39.1 -1.4
INZ Inchbonnie 15.29 212 P Pn 01 09 34.1 -3.6
OXZ Oxford 15.51 209 P Pn 01 09 37.8 -2.8
MQZ McQueen's Vall 15.57 207 P Pn 01 09 34.9 -6.5
RPZ Rata Peaks 16.24 210 P Pn 01 09 47.4 -2.7
comp=Z,14nm,0.3s,baz=25,slow=1.2,SNR=32
RPZ S Sn 01 12 34.2 -15
comp=Z,8.2nm,0.3s,baz=126,slow=23,SNR=12
RPZ Rata Peaks 16.24 210 P Pn 01 09 47.6 -2.5
DZM Mont Dzumac 16.34 296 eP P 01 09 55.5 +1.4
comp=Z,1μm,1.4s
DZM eLQ LQ 01 13 04.9
comp=Z,3μm,24.5s
DZM eLR LR 01 13 46.6
comp=Z,15μm,25.4s,baz=123
DZM Mont Dzumac 16.34 296 P P 01 09 56.1 +1.9
comp=Z,2.1nm,0.3s,baz=120,slow=13,SNR=40
DZM LR LR 01 14 56.8
comp=Z,7μm,18.6s,baz=131,slow=33
DZM Mont Dzumac 16.34 296 P 01 09 55.0 +0.8
DZM IAmb IAmb 01 10 00.0

comp=Z,614nm,1.3s
NOUC Port Laguerre 16.43 295 Pn 01 09 51.2 -1.4
NOUC IAmb IAmb 01 10 00.9
comp=Z,463nm,1.1s
FOZ Fox Glacier 16.67 213 P Pn 01 09 51.3 -4.1
AFI Afiamalu 17.05 20 P Pn 01 09 54.4 -6.0
comp=Z,7.0nm,0.3s,baz=211,slow=7.0,SNR=5.3
AFI S Sn 01 12 53.7 -15
comp=Z,8.0nm,0.3s,baz=237,slow=23,SNR=6.2
AFI Afiamalu 17.05 20 P Pn 01 09 54.5 -5.9
AFI Sn 01 12 55.6 -14
AFI Afiamalu 17.05 20 P Pn 01 10 02.0 0.0
LBZ Lake Benmore 17.16 211 P Pn 01 09 59.2 -2.4
HHSZ Highcliff Hill 18.20 207 P Pn 01 10 14.5 +0.1
RAR Rarotonga 18.42 65 P Pn 01 10 18.6 +1.4
comp=Z,2.3nm,0.3s,baz=231,slow=9.3,SNR=4.2
RAR S Sn 01 13 27.5 -15
comp=Z,3.1nm,0.3s,baz=128,slow=6.7,SNR=3.4
RAR LR LR 01 15 53.5
comp=Z,1µm,19.9s,baz=242,slow=32
RAR Rarotonga 18.42 65 P P 01 10 16.0 -1.0
RAR Rarotonga 18.42 65 P P 01 10 16.0 -1.0
RAR pmax pmax
comp=Z,76nm,0.7s
TUZ Tuapeka 18.64 209 P Pn 01 10 20.8 +1.1
MLZ Mavora Lakes 18.85 212 P Pn 01 10 18.3 -3.3
SYZ Scrubby Hill 19.32 208 P Pn 01 10 27.8 -0.1
LHI Lord Howe Isla 20.00 260 P Pn 01 10 38.2 +2.0
baz=21,SNR=9.5
LHI Lord Howe Isla 20.00 260 P P 01 10 30.2 -4.1
LHI IAmb IAmb 01 10 41.3
comp=Z,268nm,0.8s
SANVU Saraoutou 20.15 313 P P 01 10 36.7 +0.7
TBI Tubuai 26.06 82 eS S 01 15 59.1 -5.1
comp=Z,1µm,33.0s
TBI eLQ LQ 01 16 45.0
comp=Z,3µm,26.8s
TBI eLR LR 01 18 00.8
comp=Z,6µm,27.0s,baz=247
TBI Tubuai 26.06 82 eT T 01 38 34.6
comp=Z,201nm,0.3s
ARMA Armidale 26.45 262 P P 01 11 42.4 +3.7
baz=27,SNR=92
ARMA Armidale 26.45 262 P P 01 11 37.6 -1.0
ARMA IAmb IAmb 01 11 43.5
comp=Z,139nm,0.7s
RIV Riverview 26.62 254 P P 01 11 43.6 +3.7
baz=27,SNR=6.1
RIV Riverview 26.62 254 P P 01 11 44.0 +4.1
RIV pmax pmax
comp=Z,342nm,1.1s
KNTN Kanton 27.80 13 P P 01 11 49.1 -1.5
KNTN IAmb IAmb 01 11 51.2
comp=Z,340nm,1.6s
EIDS Eidsvold 27.99 272 P P 01 11 54.1 +1.8
baz=29,SNR=48
EIDS Eidsvold 27.99 272 IAmb IAmb 01 11 55.4
comp=Z,121nm,0.8s
EIDS IAMs_20 IAMs_20 01 21 00.0
comp=Z,4µm,20.0s
CNB Canberra Magne 28.11 251 P P 01 11 56.3 +3.0
baz=29,SNR=38
MILA Mila 28.36 247 P P 01 11 58.8 +3.2
baz=29,SNR=34
CAN Canberra 28.41 251 IAmb IAmb 01 12 00.0
comp=Z,142nm,0.8s
CAN Canberra 28.41 251 P P 01 11 59.1 +3.1
CAN pmax pmax
comp=Z,195nm,1.0s
PAE Paea 28.46 71 eT T 01 41 37.2
comp=Z,66nm,0.3s
PPT2 Papeete2 28.50 70 eS S 01 16 40.7 -2.2
comp=Z,1µm,28.8s
PPT2 eLQ LQ 01 17 39.3
comp=Z,3µm,26.0s
PPT2 eLR LR 01 19 09.0
comp=Z,6µm,26.2s,baz=234
PPT2 Papeete2 28.50 70 eT T 01 41 41.2
comp=Z,40nm,0.3s
PPT Papeete 28.51 70 LR LR 01 20 24.2
comp=Z,1µm,21.6s,baz=240,slow=30
TIAR Tiarei 28.71 71 eT T 01 41 56.2
comp=Z,9.0nm,0.3s
YNG Young 28.91 253 P P 01 12 03.5 +3.1
baz=30,SNR=41
HNR Honiara 29.33 310 P P 01 12 04.0 -0.2
comp=Z,57nm,0.5s,baz=20,slow=7.1,SNR=4.8
HNR LR LR 01 21 42.7
comp=Z,2µm,21.6s,baz=150,slow=32
HNR Honiara 29.33 310 P P 01 12 01.6 -2.6
HNR IAmb IAmb 01 12 45.0
comp=Z,122nm,1.1s
HNR Honiara 29.33 310 P P 01 12 01.6 -2.6
HNR pmax pmax
comp=Z,122nm,1.1s
MEH Mehetia 29.60 72 eT T 01 43 01.0
comp=Z,110nm,0.3s
RMQ Roma 29.70 269 P P 01 12 10.7 +3.2
baz=30,SNR=45
MOO Moorlands 30.64 237 P P 01 12 17.5 +1.9
baz=31,SNR=13
TAU Tasmania Unive 30.64 236 P P 01 12 15.2 -0.5
TAU PcP PcP 01 15 14.7 +1.4
TAU Tasmania Unive 30.64 236 P P 01 12 16.9 +1.2
TAU pmax pmax
comp=Z,79nm,1.3s
PMOR Pomariorio Ree 31.25 68 eT T 01 45 06.8
comp=Z,29nm,0.3s
TOO Toolangi 31.31 246 P P 01 12 24.0 +2.3
baz=32,SNR=51
TOO Toolangi 31.31 246 IAmb IAmb 01 12 26.4
comp=Z,91nm,0.8s
TOO Toolangi 31.31 246 P P 01 12 24.0 +2.3
TOO pmax pmax
comp=Z,152nm,0.8s
VAH Vaihoa 31.33 68 eT T 01 45 11.7
comp=Z,283nm,0.3s
CMSA Cobar Meteorol 31.38 258 P P 01 12 24.5 +2.2
baz=32,SNR=131
QLP Quilpie 33.59 267 P P 01 12 43.1 +1.4
baz=34,SNR=66
CTA Charters Tower 34.02 279 P P 01 12 46.7 +1.2
comp=Z,399nm,0.7s,baz=104,slow=11,SNR=531
CTA PcP PcP 01 15 25.0 +1.9
comp=Z,10nm,0.6s,baz=106,slow=12,SNR=2.8
CTA Charters Tower 34.02 279 P P 01 12 48.2 +2.8
CTA pmax pmax
comp=Z,670nm,0.7s
CTAO Charters Tower 34.02 279 IAMs_20 IAMs_20 01 25 12.9
comp=Z,3µm,18.0s
CTAO Charters Tower 34.02 279 P P 01 12 48.3 +2.8
CTAO pmax pmax
comp=Z,608nm,0.7s
STKA Stephens Creek 34.79 257 P P 01 12 54.0 +1.9
baz=35,SNR=408
STKA Stephens Creek 34.79 257 P P 01 12 54.3 +2.2
comp=Z,126nm,0.4s,baz=100,slow=13,SNR=412
STKA PcP PcP 01 15 26.8 +1.7
comp=Z,8.6nm,0.6s,baz=90,slow=1.0,SNR=2.4
STKA LR LR 01 26 11.2
comp=Z,2µm,18.6s,baz=94,slow=35
STKA Stephens Creek 34.79 257 IAmb IAmb 01 12 55.4
comp=Z,39nm,0.6s
MTSU Mount Surprise 36.50 280 P P 01 13 08.8 +1.9
baz=37,SNR=117
HTT Hallett 36.83 253 P P 01 13 11.0 +1.4
baz=37,SNR=208
XMAS Kiritimati 37.39 35 P P 01 13 13.5 -0.9
KRVT Keravat (AS076 38.44 306 P P 01 13 23.2 -0.1
comp=Z,123nm,0.5s,baz=27,slow=0.4,SNR=5.4
KRVT LR LR 01 26 34.1
comp=Z,908nm,21.8s,baz=130,slow=32
PMG Port Moresby 38.73 295 P P 01 13 25.3 -0.4
comp=Z,32nm,0.8s,baz=69,slow=3.9,SNR=6.8
PMG PcP PcP 01 15 38.6 +1.4
comp=Z,43nm,0.8s,baz=111,slow=4.4,SNR=4.4
PMG Port Moresby 38.73 295 IAmb IAmb 01 13 27.8
comp=Z,63nm,1.0s
PMG Port Moresby 38.73 295ceP P 01 13 26.1 +0.3
PMG pmax pmax
comp=Z,305nm,1.7s
BBOO Buckleboo 39.29 254 P P 01 13 30.7 +0.4
baz=40,SNR=314
BBOO Buckleboo 39.29 254 P P 01 13 29.9 -0.5
BBOO IAMs_20 IAMs_20 01 28 44.4
comp=Z,2µm,19.0s
COEN Coen 39.45 285 P P 01 13 32.7 +0.9
baz=40,SNR=57
COEN Coen 39.45 285 P P 01 13 32.7 +0.9
COEN IAmb IAmb 01 13 35.1
comp=Z,58nm,0.7s
COEN IAMs_20 IAMs_20 01 27 54.0
comp=Z,2µm,20.0s
QIS Mount Isa 39.56 274 P P 01 13 33.3 +0.7
baz=40,SNR=61
TAOE Nuku Hiva Isla 40.96 67 eS S 01 19 49.6 -5.0
comp=Z,698nm,28.8s
TAOE eLR LR 01 24 47.8
comp=Z,3µm,28.5s,baz=247
ASAR Alice Springs 43.39 267 P P 01 14 04.5 +0.4
comp=Z,119nm,0.6s,baz=106,slow=7.5,SNR=346
ASAR PcP PcP 01 15 53.4 +1.1
comp=Z,15nm,0.4s,baz=124,slow=4.1,SNR=4.3
ASAR ScP ScP 01 19 40.0 -1.4
comp=Z,3.5nm,0.8s,baz=122,slow=4.5,SNR=4.2
ASAR PKiKP PKiKP 01 22 55.2 +0.2
comp=Z,1.2nm,0.5s,baz=88,slow=1.3,SNR=7.8
WR0 Warramunga Arr 44.17 272 IAMs_20 IAMs_20 01 30 23.8
comp=Z,2µm,21.0s
WR8 Warramunga Arr 44.21 272 IAMs_20 IAMs_20 01 30 13.7
comp=Z,2µm,22.0s
WR7 Warramunga Arr 44.23 272 IAMs_20 IAMs_20 01 30 26.2
comp=Z,2µm,22.0s
WR6 Warramunga Arr 44.25 272 IAMs_20 IAMs_20 01 30 14.8
comp=Z,2µm,22.0s
WR5 Warramunga Arr 44.27 272 IAMs_20 IAMs_20 01 30 48.4
comp=Z,2µm,21.0s
WR4 Warramunga Arr 44.29 272 IAMs_20 IAMs_20 01 30 50.0
comp=Z,2µm,22.0s
WC3 Warramunga Arr 44.32 272 IAMs_20 IAMs_20 01 30 27.6
comp=Z,2µm,22.0s
WR2 Warramunga Arr 44.33 272 IAMs_20 IAMs_20 01 30 51.0
comp=Z,2µm,21.0s
WB1 Warramunga Ar. 44.34 272 IAMs_20 IAMs_20 01 30 19.2
comp=Z,2µm,22.0s
WB2 Warramunga Arr 44.34 272 IAMs_20 IAMs_20 01 30 51.0
comp=Z,2µm,21.0s
WC4 Warramunga Arr 44.34 272 IAMs_20 IAMs_20 01 30 29.4
comp=Z,2µm,22.0s
WRAB Tennant Creek 44.34 272 P P 01 14 11.9 +0.1
WRAB Tennant Creek 44.34 272 IAMs_20 IAMs_20 01 30 29.2
comp=Z,2µm,22.0s
WRAB Tennant Creek 44.34 272ceP P 01 14 11.2 -0.6
WRAB pmax pmax
comp=Z,294nm,0.7s
WR1 Warramunga Arr 44.35 272 IAMs_20 IAMs_20 01 30 51.6
comp=Z,2µm,21.0s
WRA Warramunga Arr 44.35 272 P P 01 14 12.1 +0.3
comp=Z,341nm,0.6s,baz=111,slow=7.8,SNR=79
WRA PcP PcP 01 15 56.0 +0.4
comp=Z,31nm,0.8s,baz=111,slow=3.5,SNR=5.4
WRA ScP ScP 01 19 43.7 -1.6
comp=Z,2.5nm,0.8s,baz=115,slow=3.5,SNR=3.3
WRA S S 01 20 42.2 -2.1
comp=Z,5.0nm,1.1s,baz=112,slow=14,SNR=3.7
WRA LR LR 01 30 51.7
comp=Z,2µm,21.9s,baz=100,slow=34
WB5 Warramunga Arr 44.35 272 IAMs_20 IAMs_20 01 30 24.6
comp=Z,2µm,20.0s
WB7 Warramunga Arr 44.36 272 IAMs_20 IAMs_20 01 30 16.3
comp=Z,2µm,22.0s
WB0 Warramunga Arr 44.37 272 P P 01 14 11.5 -0.5
WB0 IAMs_20 IAMs_20 01 30 19.1
comp=Z,2µm,22.0s
FORT Forrest 46.37 255 P P 01 14 27.6 -0.1
baz=47,SNR=14
FORT Forrest 46.37 255 P P 01 14 25.3 -2.4
FORT IAMs_20 IAMs_20 01 34 10.7
comp=Z,1µm,18.0s
WRKA Warakurna 47.77 262 P P 01 14 38.1 -0.7
baz=48,SNR=203
GENI Genyem 48.38 296 P P 01 14 42.3 -1.2
comp=Z,3µmcomp=Z,228nm,1.0s
VNDA Vanda 48.38 186 P P 01 14 46.4 +3.7
comp=Z,16nm,0.5s,baz=359,slow=7.2,SNR=24
VNDA LR LR 01 31 49.9
comp=Z,308nm,21.5s,baz=22,slow=32
KDU Kakadu 49.13 280 P P 01 14 48.6 -0.6
baz=50,SNR=18
KNRA Kununurra 50.95 274 P P 01 15 03.2 +0.1
baz=52,SNR=64
KNRA Kununurra 50.95 274 IAmb IAmb 01 15 04.6
comp=Z,90nm,1.0s
KNRA IAMs_20 IAMs_20 01 34 45.5
comp=Z,2µm,22.0s
KMBL Kambalda 51.35 252 P P 01 15 05.2 -0.7
baz=52,SNR=15
SAUI Saumlaki 52.49 284 IAMs_20 IAMs_20 01 38 23.6
comp=Z,2µm,18.0s
FITZ Fitzroy Crossi 52.62 270 P P 01 15 15.4 -0.1
baz=53,SNR=65
FITZ Fitzroy Crossi 52.62 270 P P 01 15 15.5 0.0
comp=Z,56nm,0.6s,baz=128,slow=5.2,SNR=71
FITZ Fitzroy Crossi 52.62 270 IAmb IAmb 01 15 17.0
comp=Z,55nm,0.8s
KHLU Kahalu`u 53.71 26 P P 01 15 24.7 +1.2
RKPI Ransiki, Papua 53.76 293 P P 01 15 24.7 +0.7
comp=Z,179nm,0.7s
PUH Pauahi 53.77 27 P P 01 15 24.3 +0.3
MLOA Mauna Loa Obse 53.78 26 P P 01 15 22.7 -1.7
UWB Uwekahuna B 53.80 26 P P 01 15 23.5 -0.6
UWB IAmb IAmb 01 15 27.1
comp=Z,108nm,1.2s
HATHI Halema'uma'u T 53.80 27 P P 01 15 22.6 -1.5
MLH Mauna Loa 53.82 26 P P 01 15 23.6 -0.8
HMH Humu'ula Sheep 53.88 26 P P 01 15 23.9 -1.1
HPAH Hawaii Prepara 54.19 26 P P 01 15 26.4 -0.6
FAKI Fak Fak 54.49 290 P P 01 15 29.5 +0.2
comp=Z,113nm,1.3s
FAKI Fak Fak 54.49 290 P P 01 15 26.4 -3.0
FAKI IAmb IAmb 01 15 29.8
comp=Z,79nm,0.7s
RKGY Rocky Gully 54.50 247 P P 01 15 29.6 +0.5
baz=55,SNR=7.7
KLBR Kellerberrin 54.68 251 P P 01 15 29.5 -1.0
baz=55,SNR=26
NWAO Narrogin (SRO) 54.74 249 P P 01 15 30.0 -0.9
baz=55,SNR=5.6
NWAO Narrogin (SRO) 54.74 249 P P 01 15 31.0 +0.2
comp=Z,3.6nm,0.4s,baz=133,slow=8.3,SNR=8.6
NWAO Narrogin (SRO) 54.74 249 P P 01 15 28.3 -2.6
NWAO PcP PcP 01 16 31.4 -1.8
NWAO Narrogin (SRO) 54.74 249 P P 01 15 28.2 -2.6
NWAO IAmb IAmb 01 15 30.0
comp=Z,63nm,1.2s
NWAO Narrogin (SRO) 54.74 249 P P 01 15 28.3 -2.6
NWAO 01 16 31.5
NWAO pmax pmax
comp=Z,51nm,1.3s
CASY Casey 55.49 208 P P 01 15 34.9 -0.9
MEEK Meekatharra 55.50 257 P P 01 15 35.1 -1.4
baz=56,SNR=22
BLDU Ballidu 55.83 252 P P 01 15 37.5 -1.2
baz=56,SNR=10
MUN Mundaring 55.83 250 P P 01 15 38.1 -0.7
baz=56,SNR=7.6
PSA00 Pilbara Seismi 56.26 263 P P 01 15 39.6 -2.3
PSA00 IAmb IAmb 01 15 42.1
comp=Z,119nm,1.4s
GUMO Guam 56.48 315 P P 01 15 42.9 -0.6
comp=Z,186nm,0.6s,baz=176,slow=6.9,SNR=10.0
GUMO LR LR 01 36 58.4
comp=Z,504nm,20.7s,baz=119,slow=33
GUMO Guam 56.48 315 P P 01 15 42.2 -1.2
GUMO Guam 56.48 315 P P 01 15 42.2 -1.2
GUMO pmax pmax
comp=Z,190nm,0.6s
SIJI Sorong 56.48 291 P P 01 15 43.1 -0.5
comp=Z,94nm,0.5s,baz=133,slow=4.0,SNR=30
SWI Sorong 56.49 291 P P 01 15 43.8 +0.2
comp=Z,2µmcomp=Z,239nm,0.9s
MORW Morawa 56.86 253 P P 01 15 45.1 -1.1
baz=57,SNR=56
MORW Morawa 56.86 253 IAmb IAmb 01 15 46.3
comp=Z,60nm,1.1s
MORW IAMs_20 IAMs_20 01 40 22.5
comp=Z,1µm,21.0s
MSAI Masohi 56.98 287 P P 01 15 48.0 +0.9
comp=Z,708nmcomp=Z,30nm,0.8s
SOEI Soe 57.58 278 P P 01 15 53.2 +1.7
comp=Z,1µmcomp=Z,157nm,1.0s
NLAI Namlea 58.56 286 P P 01 15 58.8 +0.6
comp=Z,2µmcomp=Z,154nm,0.8s
RPN Rapa Nui 59.25 105 P P 01 16 01.2 -1.6
RPN Rapa Nui 59.25 105 P P 01 16 01.3 -1.6
RPN pmax pmax
comp=Z,642nm,2.0s
LBMI Labuha 59.68 289 P P 01 16 07.5 +1.5
comp=Z,83nm,1.0s
QSPA South Pole Qui 59.97 180 P P 01 16 10.5 +3.0
comp=Z,42nm,0.7s,baz=34,slow=1.3,SNR=137
QSPA South Pole Qui 59.97 180 P P 01 16 09.5 +2.1
SANI Sanana 60.14 286 P P 01 16 08.5 -0.6
comp=Z,2µmcomp=Z,203nm,0.7s
TNTI Ternate 60.60 290 P P 01 16 12.9 +0.6
comp=Z,75nm,0.6s
BKSI Bulukumba 63.35 280 P P 01 16 30.5 -0.3
comp=Z,1µmcomp=Z,85nm,0.6s
LUWI Luwuk 63.37 285 P P 01 16 30.9 0.0
comp=Z,3µmcomp=Z,214nm,1.1s
PLAI Plampang 63.62 275 P P 01 16 32.2 -0.4
comp=Z,2µmcomp=Z,254nm,1.0s
BNSI Bone 63.84 281 P P 01 16 33.8 -0.2
comp=Z,1µmcomp=Z,88nm,1.2s
SPSI Sidrap Palu 64.35 281 P P 01 16 36.2 -1.2
comp=Z,2µmcomp=Z,35nm,1.0s
APSI Ampana 64.38 285 P P 01 16 38.1 +0.5
comp=Z,852nmcomp=Z,58nm,1.2s
TTSI Tana Toraja 64.78 282 P P 01 16 39.9 -0.3
comp=Z,1µmcomp=Z,64nm,1.0s
MRSI Marisa 64.90 286 P P 01 16 39.6 -1.3
comp=Z,781nmcomp=Z,58nm,0.6s
IGBI Denpasar 65.89 274 P P 01 16 47.0 -0.4
comp=Z,7µmcomp=Z,181nm,1.5s
KCP Kidapawan 66.10 294⇑iP P 01 16 47.3 -1.5
SRBI Singaraja 66.19 274 P P 01 16 48.9 -0.4
comp=Z,2µmcomp=Z,163nm,1.1s
MPSI Mapaga 66.53 285 P P 01 16 50.4 -1.0
comp=Z,84nm,0.9s
JAGI Jajag, Banyuwa 66.92 274 P P 01 16 53.4 -0.6
comp=Z,160nm,1.2s
JAGI Jajag, Banyuwa 66.92 274 P P 01 16 50.8 -3.2
CGP Cagayan de Oro 67.29 295⇓eP P 01 16 56.0 -0.2
KMMI Kalianget 67.77 275 P P 01 17 00.3 +0.9
comp=Z,2µmcomp=Z,157nm,1.2s
JCJ Chichijima 68.64 322 P P 01 17 04.0 -0.4
comp=Z,90nm,0.5s,baz=293,slow=13,SNR=3.5
JCJ LR LR 01 41 20.9
comp=Z,473nm,20.9s,baz=132,slow=31
PCJI Pacitan 69.63 272 P P 01 17 10.9 0.0
comp=Z,4µmcomp=Z,557nm,0.9s
UWJI Ujung Watu 70.69 274 P P 01 17 17.4 -0.1
comp=Z,78nm,1.0s
RCP Roxas 70.69 296⇓eP P 01 17 16.8 -0.6
SMRI Semarang 70.82 273 P P 01 17 18.1 -0.2
comp=Z,86nm,0.7s
SMRI Semarang 70.82 273 IAmb IAmb 01 17 39.2
comp=Z,73nm,0.9s
SPMM Sapulut 71.78 287 P P 01 17 24.0 -0.1
PBKI Pangkalan Bun 71.92 278 P P 01 17 25.5 +0.6
comp=Z,15µmcomp=Z,591nm,1.1s
KPJI Karang Pucung 71.99 272 P P 01 17 25.0 -0.3
MAW Mawson 72.65 200 P P 01 17 30.0 +1.7
comp=Z,34nm,0.9s,baz=128,slow=8.8,SNR=25
MAW LR LR 01 47 58.5
comp=Z,841nm,20.8s,baz=85,slow=34
MAW Mawson 72.65 200 P P 01 17 29.1 +0.8
MAW PP PP 01 20 05.8 -3.8
CISI Cisompet, Garu 72.85 271 P P 01 17 29.6 -0.9
comp=Z,4µmcomp=Z,162nm,0.7s
CISI Cisompet, Garu 72.85 271 IAMs_20 IAMs_20 01 47 52.7
comp=Z,688nm,21.0s
STKI Sintang 73.50 280 P P 01 17 34.3 0.0
comp=Z,26µmcomp=Z,267nm,0.8s
CNJI Cibinong 73.56 271 P P 01 17 33.9 -0.7
comp=Z,286nm,0.9s
SBUM Sibu 74.12 282 IAmb IAmb 01 17 39.0
comp=Z,49nm,0.9s
SBUM Sibu 74.12 282 P P 01 17 38.0 +0.1
SKJI Sukabumi 74.20 271 P P 01 17 40.2 +1.8
comp=Z,190nm,0.8s
DBJI Dramaga 74.25 272 P P 01 17 38.3 -0.4
comp=Z,237nm,1.1s
KSM Kuching 75.23 281 P P 01 17 44.0 -0.4
TPI Tanjungpandan 75.35 275 P P 01 17 44.8 -0.3
comp=Z,797nmcomp=Z,68nm,1.1s
GO09 Cerro Castillo 75.85 141 P P 01 17 45.9 -1.4
GO09 IAmb IAmb 01 17 51.4
comp=Z,105nm,1.6s
USHA Ushuaia 75.99 146 P P 01 17 50.5 +2.5
comp=Z,9.4nm,0.8s,baz=254,slow=1.3,SNR=3.8
KASI Kota Agung 76.71 271 P P 01 17 51.3 -1.5
comp=Z,1µmcomp=Z,145nm,1.1s
KLSI 76.92 272 P P 01 17 52.0 -2.0
comp=Z,512nmcomp=Z,46nm,1.0s
PPBI Pangkal Pinang 76.96 275 P P 01 17 54.0 -0.2
comp=Z,94nm,1.1s
LWLI Liwa 77.34 272 P P 01 17 55.7 -0.8
comp=Z,9µmcomp=Z,80nm,0.9s
SYO Syowa Base 77.43 193⇓iP P 01 17 55.6 -0.3
SYO Syowa Base 77.43 193⇓ipP pP 01 18 06.5 +1.7
MDSI Maura Dua 77.50 272 P P 01 17 55.2 -2.0
comp=Z,2µmcomp=Z,211nm,0.8s
INU Inuyama 77.85 324 IAmb IAmb 01 18 01.8
comp=Z,70nm,0.9s
MJAR Matsushiro Arr 78.17 325 P P 01 18 00.0 -0.4
comp=Z,38nm,0.8s,baz=161,slow=5.5,SNR=38
MJAR LR LR 01 49 02.0
comp=Z,178nm,20.7s,baz=135,slow=33
MAJO Matsushiro 78.18 325 P P 01 17 57.9 -2.5
MAJO IAmb IAmb 01 18 03.5
comp=Z,85nm,1.0s
MAJO Matsushiro 78.18 325 iP P 01 18 00.2 -0.3
MAJO pmax pmax
comp=Z,98nm,1.0s
MAT Matsushiro 78.18 325 P P 01 17 59.8 -0.7
MJB9 Matsu-Tunnel 78.18 325 IAmb IAmb 01 18 03.5
comp=Z,83nm,1.0s
SNAA Sanae 78.41 178 P P 01 18 02.8 +1.4
SNAA Sanae 78.41 178 P P 01 18 03.1 +1.6
comp=Z,18nm,0.7s,baz=215,slow=6.6,SNR=64
SNAA Sanae 78.41 178 P P 01 18 02.8 +1.4
SNAA IAmb IAmb 01 18 09.4
comp=Z,44nm,0.9s
SNAA Sanae 78.41 178 P P 01 18 02.8 +1.4
SNAA pmax pmax
comp=Z,44nm,0.9s
VNA3 Neumayer Olymp 78.55 176 P P 01 18 03.4 +1.3
MNAI Manna 78.61 272 P P 01 18 00.6 -2.8
VNA2 Neumayer--Watz 78.99 177 P P 01 18 06.1 +1.6
baz=178,slow=4.7
YULB Yu-li 79.13 305 IAmb IAmb 01 20 41.2
comp=Z,41nm,0.6s
NVL N'lazarevskaya 79.15 183 eP P 01 18 07.4 +2.0
NVL eS S 01 28 07.1 +4.6
NVL pmax pmax
comp=Z,97nm,0.9s
VNA1 Neumayer--Stat 79.22 176 P P 01 18 07.6 +1.9
KSI Kapahiang 79.28 272 P P 01 18 06.4 -0.8
SSLB Suanglung 79.62 305 IAmb IAmb 01 18 24.8
comp=Z,40nm,0.8s
MYKOM Kota Tinggi 80.92 277 IAmb IAmb 01 18 16.7
comp=Z,90nm,0.9s
MYKOM Kota Tinggi 80.92 277 P P 01 18 15.0 -0.9
KRJI Kerinci 81.03 273 P P 01 18 15.7 -1.0
comp=Z,414nm,0.7s
SDSI Sungai Dareh 81.64 274 P P 01 18 19.7 0.0
comp=Z,40nm,1.0s
ADK Adak 81.67 1 P P 01 18 17.8 -1.1
ADK Adak 81.67 1 P P 01 18 17.8 -1.1
ADK pmax pmax
comp=Z,453nm,1.6s
PPSI Pulau Pagai 81.95 271 P P 01 18 21.3 -0.1
comp=Z,2µmcomp=Z,207nm,1.1s
ATKA Atka Island 82.04 2 P P 01 18 20.4 -0.4
ASAJ Asahikawa 82.33 332 P P 01 18 23.5 +0.9
comp=Z,67nm,0.6s,baz=205,slow=4.1,SNR=28
PDSI Padang 82.48 273 P P 01 18 22.0 -2.2
comp=Z,4µmcomp=Z,75nm,1.0s
PLCA Paso Flores 82.49 133 P P 01 18 26.8 +2.8
comp=Z,22nm,0.9s,baz=253,slow=5.2,SNR=32
PLCA LR LR 01 46 21.1
comp=Z,698nm,21.8s,baz=287,slow=29
BKNI Bangkinang 82.60 275 P P 01 18 24.2 -0.6
comp=Z,12µmcomp=Z,180nm,1.0s
BKNI Bangkinang 82.60 275 IAMs_20 IAMs_20 01 54 09.4
comp=Z,635nm,22.0s
JRMM Jerantut 83.16 278 P P 01 18 27.0 -0.7
SKR Severo-Kuril's 83.73 344 eP P 01 18 44.0 +14
SKR pmax pmax
comp=Z,1µm,3.1s

SKR MLR MLR
comp=Z,500nm,18.0s
TJN Taejon 83.88 318 ceP P 01 18 30.4 -0.4
UNV Unalaska Valle 84.19 7 IAmb IAmb 01 18 33.4
comp=Z,54nm,0.7s
KSRS Korea Array 84.32 319 P P 01 18 33.8 +0.8
comp=Z,13nm,0.6s,baz=142,slow=5.5,SNR=29
KSRS LR LR 01 55 44.5
comp=Z,125nm,18.1s,baz=125,slow=35
KS19 Wonju Array Si 84.38 319 IAmb IAmb 01 18 35.4
comp=Z,43nm,1.1s
PKM Mcpherson Peak 84.59 44 P P 01 18 38.0 +3.3
baz=227,SNR=5.1
YSS Yuzh-Sakhalins 84.62 334 P P 01 18 35.8 +1.5
YSS Yuzh-Sakhalins 84.62 334 ⇓iP P 01 18 35.8 +1.5
YSS e 01 18 47.4
YSS pmax pmax
comp=Z,600nm,4.6s
IPM Ipoh 84.71 278 P P 01 18 34.9 -0.7
IPM Ipoh 84.71 278 P P 01 18 35.0 -0.7
SRIG Santa Rosalia 84.71 54 IAmb IAmb 01 18 56.0
comp=Z,126nm,1.6s
GO05 Huala 84.72 128 P P 01 18 35.3 -0.1
SMMC Simmler 84.77 44 P P 01 18 39.0 +3.5
baz=227
PBSI Pulau Batu 84.80 273 P P 01 18 35.9 -0.2
comp=Z,119nm,1.3s
109C Camp Elliot, M 84.95 47 P P 01 18 39.2 +2.8
baz=229
OSI Osito Audit: C 85.08 45 P P 01 18 40.3 +3.3
baz=228
DECC Green Verdugo 85.08 46 P P 01 18 39.7 +2.7
baz=228
BAR Barrett 85.10 48 P P 01 18 38.0 +0.9
BAR IAmb IAmb 01 18 58.7
comp=Z,55nm,1.4s
PASC Pasadena Art C 85.12 46 IAmb IAmb 01 18 58.4
comp=Z,40nm,1.4s
QIZ Qiongzhong 85.12 295 P P 01 18 38.1 +0.6
QIZ S S 01 29 06.4 +1.1
QIZ LR LR
comp=Z,210nm,21.5s
QIZ LR LR
comp=Z,430nm,42.2s
MWC Mount Wilson 85.23 46 IAmb IAmb 01 18 59.2
comp=Z,53nm,1.4s
PET Petropavlovsk 85.34 346 P P 01 18 37.6 -0.1
PET Petropavlovsk 85.34 346 eP P 01 18 38.6 +0.9
PET eS S 01 29 05.8 -0.1
PET pmax pmax
comp=Z,89nm,0.6s
ARVC Arvin 85.35 45 P P 01 18 41.1 +2.8
baz=228,SNR=5.2
MURC Murrieta 85.36 47 P P 01 18 41.6 +3.1
baz=229,SNR=9.2
MONP2 Monument Peak 85.39 48 P P 01 18 41.9 +3.0
baz=230,SNR=13
IKP In-Ko-Pah, Jac 85.44 48 P P 01 18 41.7 +2.8
baz=230,SNR=9.8
KULM Kulim 85.44 279 P P 01 18 38.0 -1.3
KULM IAmb IAmb 01 18 40.0
comp=Z,69nm,0.9s
KULM Kulim 85.44 279 P P 01 18 38.0 -1.3
BFSC Mount Baldy Ra 85.49 46 P P 01 18 41.8 +2.6
baz=229,SNR=14
RPSI Rantau Prapat 85.62 276 P P 01 18 38.7 -1.5
RPSI IAMs_20 IAMs_20 01 56 37.3
comp=Z,967nm,22.0s
PETK Petropavlovsk- 85.62 345 P P 01 18 39.4 +0.2
comp=Z,64nm,0.5s,baz=124,slow=7.8,SNR=160
PETK LR LR 01 50 23.2
comp=Z,340nm,21.6s,baz=219,slow=31
PSI Prapat 85.67 276 P P 01 18 38.7 -1.9
PSI pmax pmax
comp=Z,99nm,1.2s
PSI MLR MLR
comp=Z,1µm,22.0s
VES Vestal, Richgr 85.68 44 P P 01 18 42.4 +2.5
baz=228,SNR=14
EDW2 Edwards Air Fo 85.70 45 P P 01 18 42.8 +2.6
baz=228,SNR=16
VOG Valley Oaks Go 85.82 44 P P 01 18 43.5 +2.9
baz=228
SWSC Sam W. Stewart 85.83 48 P P 01 18 43.8 +3.1
baz=230,SNR=6.5
PFO Pinyon Flats O 85.83 47 P P 01 18 42.4 +1.5
comp=Z,9.8nm,0.9s,baz=252,slow=4.5,SNR=17
PFO Pinyon Flats O 85.83 47 P P 01 18 41.9 +1.0
PFO IAmb IAmb 01 19 01.9
comp=Z,44nm,1.2s
PFO Pinyon Flats O 85.83 47c iP P 01 18 39.9 -1.0
PFO pmax pmax
comp=Z,24nm,1.1s
PFO Pinyon Flats O 85.83 47 P P 01 18 43.9 +3.0
baz=230,SNR=14
XPFO Pion Flat 85.84 47 P P 01 18 41.7 +0.8
XPFO IAmb IAmb 01 19 01.9
comp=Z,44nm,1.2s
ISA Isabella, Lake 85.93 45 IAmb IAmb 01 19 03.0
comp=Z,61nm,1.2s
ISA Isabella, Lake 85.93 45 P P 01 18 43.8 +2.6
ISA pmax pmax
comp=Z,61nm,1.2s
ISA Isabella, Lake 85.93 45 P P 01 18 44.3 +3.0
baz=228,SNR=17
BBRC Big Bear Solar 85.97 46 P P 01 18 44.9 +3.2
baz=229
NJ2 Nanjing 86.27 310 eP P 01 18 44.3 +1.4
NJ2 pmax pmax
comp=Z,29nm,0.7s
LRMC Laurel Mtn Rad 86.29 45 P P 01 18 45.4 +2.2
baz=229,SNR=16
MSHR Mys Shultsa 86.29 325 iP P 01 18 44.4 +1.7
BELC Belle Mtn. Jos 86.38 47 P P 01 18 46.3 +2.7
baz=230,SNR=25
CMB Columbia Colle 86.39 42 IAmb IAmb 01 19 04.5
comp=Z,31nm,1.1s
CMB Columbia Colle 86.39 42 P P 01 18 45.4 +2.0
CMB pmax pmax
comp=Z,31nm,1.1s
BC3 Big Chuckawall 86.50 48 P P 01 18 47.1 +2.9
baz=230,SNR=19
GLA Glamis 86.52 48 P P 01 18 47.6 +3.4
baz=230
O02D Mt. Diablo Mer 86.53 39 P P 01 18 47.2 +3.1
baz=225,SNR=24
UBPT Khong Chiam 86.58 290 P P 01 18 44.6 -0.2
PEL Peldehue 86.61 127 P P 01 18 46.3 +1.5
PEL IAmb IAmb 01 19 05.5
comp=Z,56nm,0.9s
PEL Peldehue 86.61 127 P P 01 18 46.3 +1.5
PEL pmax pmax
comp=Z,56nm,0.9s
HSIG 86.65 54 IAmb IAmb 01 19 05.5
comp=Z,79nm,1.6s
CWC Cottonwood Cre 86.68 44 P P 01 18 47.2 +2.1
baz=228
HEC Hector,Ludlow 86.70 46 P P 01 18 47.5 +2.5
baz=230,SNR=13
GSC Goldstone, Bar 86.71 46 IAmb IAmb 01 19 06.8
comp=Z,53nm,1.1s
GSC Goldstone, Bar 86.71 46 P P 01 18 47.6 +2.5
baz=229,SNR=20
MPMC Manual Prospec 86.79 45 P P 01 18 47.7 +2.0
baz=229,SNR=22
ORV Oroville 86.80 40 IAmb IAmb 01 19 06.4
comp=Z,44nm,1.6s
MDPB Devils Postpil 86.88 43 IAMs_20 IAMs_20 01 47 36.6
comp=Z,718nm,22.0s
OMMB Old Mammoth Mi 86.91 43 IAmb IAmb 01 18 49.9
comp=Z,68nm,1.8s
WDC Whiskeytown Da 86.94 39 IAmb IAmb 01 19 07.3
comp=Z,50nm,1.4s
WDC Whiskeytown Da 86.94 39 P P 01 18 48.7 +2.7
WDC pmax pmax
comp=Z,50nm,1.3s
TIN Tinemaha, Big 87.00 44 P P 01 18 49.4 +2.8
baz=228
IRM Iron Mountain 87.02 47 P P 01 18 49.3 +2.7
baz=230,SNR=31
USA0B Ussuriysk Arra 87.09 326 IAmb IAmb 01 18 50.8
comp=Z,52nm,0.9s
USA0B Ussuriysk Arra 87.09 326 iP P 01 18 46.9 +0.3
USRK Ussuriysk Ar. 87.09 326 P P 01 18 47.4 +0.8
comp=Z,70nm,1.1s,baz=132,slow=2.5,SNR=24
USRK LR LR 01 53 43.9
comp=Z,297nm,20.4s,baz=136,slow=33
GMRC Granite Mounta 87.10 47 P P 01 18 49.5 +2.4
baz=230,SNR=12
N02D Trinity Center 87.13 38 P P 01 18 50.0 +3.0
baz=225,SNR=5.9
O03E Paynes Creek 87.15 39 P P 01 18 49.2 +2.0
baz=226,SNR=7.3
Y12C Blythe 87.16 48 IAmb IAmb 01 18 51.5
comp=Z,33nm,1.2s
Y12C Blythe 87.16 48 P P 01 18 50.3 +3.1
baz=231,SNR=10
214A Organ Pipe Nat 87.17 50 IAmb IAmb 01 19 08.7
comp=Z,93nm,1.8s
214A Organ Pipe Nat 87.17 50 P P 01 18 50.1 +2.8
baz=232,SNR=17
WAKR Walker 87.26 42 P P 01 18 48.8 +0.9
WAKR IAmb IAmb 01 19 09.5
comp=Z,72nm,1.5s
M02C Callahan 87.35 38 P P 01 18 50.6 +2.6
baz=225
TUQ Turquoise Moun 87.35 46 P P 01 18 50.8 +2.5
baz=230,SNR=14
TPTI 87.40 275 P P 01 18 48.5 -0.4
SHOC Shoshone, Teco 87.43 46 P P 01 18 51.4 +2.9
baz=230,SNR=7.1
FURC Furnace Creek, 87.44 45 P P 01 18 51.5 +3.1
baz=229
GRAC Grapevine Rang 87.48 44 P P 01 18 51.9 +3.2
baz=229,SNR=7.0
PNTR Pine Nut 87.56 41 P P 01 18 50.2 +0.9
PNTR IAmb IAmb 01 18 52.6
comp=Z,30nm,0.8s
BEKR Beckworth 87.66 40 IAmb IAmb 01 19 10.7
comp=Z,58nm,2.0s
YBH Yreka Blue Hor 87.66 38 P P 01 18 51.1 +1.5
comp=Z,5.1nm,0.8s,baz=215,slow=2.7,SNR=11
NEE2 Needles Airpor 87.75 47 P P 01 18 53.5 +3.5
baz=231
PDMCI Parker Dam,Lak 87.76 48 P P 01 18 52.9 +2.8
baz=231,SNR=15
K02D Willamette Mer 87.84 37 P P 01 18 53.4 +3.0
baz=224
NVAR Mina Array Bea 87.87 43 P P 01 18 52.5 +1.6
comp=Z,11nm,0.7s,baz=221,slow=8.2,SNR=84
NVAR PKKPbc PKKPbc 01 36 40.2 +2.0
comp=Z,0.9nm,0.5s,baz=48,slow=2.3,SNR=5.5
NVAR LR LR 01 55 13.2
comp=Z,390nm,18.1s,baz=203,slow=34
RYN Ryan 87.87 42 IAmb IAmb 01 18 54.0
comp=Z,60nm,1.8s
TYV Tymovskoe 87.92 336 eP P 01 18 51.5 +1.1
TYV pmax pmax
comp=Z,800nm,4.4s
TYV pmax pmax
comp=Z,83nm,1.1s
TPNV Topopah Spring 88.12 45 IAmb IAmb 01 18 55.7
comp=Z,107nm,1.8s
TPNV Topopah Spring 88.12 45 P P 01 18 54.4 +2.4
baz=230,SNR=17
M04C Macdoel 88.16 38 P P 01 18 54.5 +2.5
baz=226
GO04 Tololo Observa 88.18 124 P P 01 18 54.0 +1.3
GO04 IAmb IAmb 01 18 59.0
comp=Z,69nm,1.6s
L04D Klamath Falls 88.22 38 P P 01 18 54.4 +2.1
baz=226
Y14A Wickenburg 88.26 49 IAmb IAmb 01 18 56.6
comp=Z,26nm,0.8s
WHN Wuhan 88.40 307 P P 01 18 54.1 +0.9
W13A Hualapai Mount 88.42 47 IAmb IAmb 01 18 57.5
comp=Z,51nm,1.6s
SHPR Sheep Range 88.51 46 IAmb IAmb 01 19 15.9
comp=Z,36nm,1.4s
MDJ Mudanjiang 88.56 325 P P 01 18 54.1 +0.5
MDJ PcP PcP 01 18 55.1 -0.1
MDJ PP PP 01 22 25.5 +2.9
MDJ S S 01 29 43.0 +5.6
MDJ ScS ScS 01 29 46.8 +3.8
MDJ pmax pmax
comp=Z,39nm,0.9s
MDJ pmax pmax
comp=Z,310nm,5.2s
MDJ LR LR
comp=Z,310nm,17.1s
MDJ LR LR
comp=Z,600nm,21.4s
MLSI Meulaboh, Aceh 88.58 276 P P 01 18 54.1 -0.4
comp=Z,74nm,0.9s
TUC Tucson 88.74 51 P P 01 18 55.1 +0.2
TUC IAmb IAmb 01 19 17.6
comp=Z,75nm,1.4s
TUC Tucson 88.74 51 P P 01 18 55.1 +0.2
TUC pmax pmax
comp=Z,75nm,1.4s
TUC Tucson 88.74 51 P P 01 18 58.1 +3.2
baz=233
DL2 Dalian 88.94 317 P P 01 18 58.3 +2.8
DL2 eS S 01 29 46.8 +5.6
DL2 pmax pmax
comp=Z,55nm,1.2s
DL2 LR LR
comp=Z,430nm,19.4s
DL2 LR LR
comp=Z,550nm,21.6s
I04A Tendick Farm, 89.27 37 P P 01 18 59.4 +2.3
baz=225
R11A Troy Canyon, C 89.43 44 P P 01 19 00.2 +2.1
baz=230
J05D Fort Rock, OR 89.53 37 P P 01 19 00.5 +2.1
baz=226
X16A Lo Mia Camp, P 89.58 49 IAmb IAmb 01 19 03.4
comp=Z,34nm,0.9s
H04D Lebanon 89.61 36 P P 01 19 01.1 +2.5
baz=225
SNY Shenyang 89.76 320 ⇑P P 01 18 59.3 0.0
SNY pmax pmax
comp=Z,37nm,1.1s
SNY pmax pmax
comp=Z,350nm,3.9s
SNY LR LR
comp=Z,610nm,24.8s
TIA Tai'an 89.98 313 P P 01 19 00.6 +0.1
TIA pmax pmax
comp=Z,56nm,1.2s
H04A Detroit Lake 90.01 36 IAmb IAmb 01 19 03.3
comp=Z,50nm,1.2s
PINE Pine Mountain 90.03 37 IAmb IAmb 01 19 04.4
comp=Z,85nm,1.4s
CN2 Changchun 90.09 323 eP P 01 19 00.6 -0.2
CN2 pmax pmax
comp=Z,40nm,1.2s
CN2 pmax pmax
comp=Z,240nm,2.6s
CN2 LR LR
comp=Z,270nm,20.0s
CN2 LR LR
comp=Z,310nm,20.0s
CN2 LR LR
comp=Z,320nm,20.0s
KDAK Kodiak Island 90.09 13 P P 01 19 01.7 +1.2
comp=Z,30nm,1.0s,baz=154,slow=2.5,SNR=5.4
KDAK Kodiak Island 90.09 13 P P 01 19 00.5 0.0
KDAK Kodiak Island 90.09 13 P P 01 19 00.5 0.0
KDAK pmax pmax
comp=Z,273nm,1.9s
GRNR Gornyy 90.17 333 ⇓iP P 01 19 02.7 +1.7
GRNR pmax pmax
comp=Z,50nm,1.3s
I05D Terrebonne, OR 90.20 37 P P 01 19 04.0 +2.5
baz=226
U15A North Rim 90.26 47 IAmb IAmb 01 19 06.3
comp=Z,29nm,0.9s
WUAZ Wupatki 90.29 48 IAmb IAmb 01 19 24.3
comp=Z,59nm,1.3s
WUAZ Wupatki 90.29 48 P P 01 19 05.4 +3.1
baz=232
WVOR Wild Horse Val 90.35 39 IAmb IAmb 01 19 05.4
comp=Z,40nm,1.4s
X18A Snowflake 90.63 50 IAmb IAmb 01 19 26.1
comp=Z,71nm,1.6s
121A Cookes Peak, D 90.92 53 IAmb IAmb 01 19 09.4
comp=Z,51nm,1.6s
121A Cookes Peak, D 90.92 53 P P 01 19 08.3 +3.1
baz=234
KLR Kul'dur 90.94 330c iP P 01 19 04.9 +0.3
KLR pmax pmax
comp=Z,48nm,0.9s
KLR MLR MLR
comp=Z,338nm,19.0s
PBKT Sadao Pong 90.94 289 P P 01 19 06.9 +1.5
I07A Izee 90.99 38 IAmb IAmb 01 19 08.4
comp=Z,24nm,1.1s
SLVN Son La 91.05 294 IAmb IAmb 01 19 17.7
comp=Z,21nm,0.9s
ELK Elko 91.17 42 P P 01 19 07.8 +1.5
ELK pmax pmax
comp=Z,25nm,1.5s
G06A Carlson Farm, 91.18 36 IAmb IAmb 01 19 09.1
comp=Z,49nm,1.1s
GYA Guiyang 91.65 300 ⇑iP P 01 19 10.9 +2.2
GYA SKS SKSac 01 29 38.8 -0.5
GYA sS sS 01 30 20.8 -1.5
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,160nm,5.5s
GYA LR LR
comp=Z,110nm,18.4s
GYA LR LR
comp=Z,190nm,18.4s
GYA LR LR
comp=Z,110nm,17.9s
F07A Phinny Hill Vi 92.00 36 IAmb IAmb 01 19 12.7
comp=Z,45nm,1.5s
TX31 Lajitas Ar. Si 92.03 57 IAmb IAmb 01 19 31.2
comp=Z,26nm,1.4s
TX32 Lajitas Array 92.03 57 IAmb IAmb 01 19 31.2
comp=Z,26nm,1.4s
TXAR Lajitas Array 92.03 57 P P 01 19 12.2 +1.8
comp=Z,2.9nm,0.8s,baz=207,slow=6.6,SNR=25
TXAR PKKPbc PKKPbc 01 36 30.7 +3.7
comp=Z,1.0nm,0.8s,baz=103,slow=5.5,SNR=4.2
TXAR LR LR 01 55 29.4
comp=Z,118nm,18.0s,baz=0.0,slow=32
G08A Pilot Rock 92.09 37 IAmb IAmb 01 19 31.1
comp=Z,30nm,1.1s
MNTX Cornudas Mount 92.11 54 IAmb IAmb 01 19 31.2
comp=Z,37nm,1.8s
MNTX Cornudas Mount 92.11 54 P P 01 19 12.5 +1.9
baz=236
DUG Dugway, Tooele 92.26 44 P P 01 19 13.4 +2.2
baz=232
CMIG Matias Romero 92.42 72 P P 01 19 14.5 +2.2
comp=Z,3.4nm,0.7s,baz=280,slow=3.3,SNR=8.4
E07A Sunnyside 92.48 36 IAmb IAmb 01 19 15.3
comp=Z,50nm,1.5s
BJI Beijing 92.92 315 P P 01 19 14.4 +0.4
BJI pmax pmax
comp=Z,9.0nm,1.3s
MA2 Magadan 93.11 345 P P 01 19 13.4 -1.0
MA2 IAmb IAmb 01 19 17.9
comp=Z,33nm,1.4s
MA2 Magadan 93.11 345 IAMs_20 IAMs_20 01 54 59.2
comp=Z,659nm,22.0s
MA2 Magadan 93.11 345ceP P 01 19 12.8 -1.6
MA2 pmax pmax
comp=Z,17nm,1.2s
ANMO Albuquerque 93.21 51 P P 01 19 15.1 -0.7
ANMO Albuquerque 93.21 51 iP P 01 19 14.9 -0.9
ANMO pmax pmax
comp=Z,6.0nm,0.9s
ANMO Albuquerque 93.21 51 P P 01 19 18.0 +2.2
baz=235
E09A Wood Farm, Sta 93.33 37 IAmb IAmb 01 19 36.1
comp=Z,21nm,1.1s
CM31 Chiang Mai Arr 93.56 289 IAmb IAmb 01 19 21.9
comp=Z,39nm,1.1s
CMAR Chiang Mai Arr 93.56 289 P P 01 19 19.1 +1.6
comp=Z,26nm,1.0s,baz=140,slow=3.3,SNR=65
CMAR PP PP 01 23 01.9 -0.8
comp=Z,3.5nm,0.8s,baz=140,slow=6.0,SNR=6.7
CMAR LR LR 02 02 53.6
comp=Z,104nm,20.6s,baz=162,slow=36
RC01 Rabbit Creek A 93.71 13 IAmb IAmb 01 19 20.4
comp=Z,55nm,1.2s
CHTO Chiang Mai 93.74 289 P P 01 19 18.2 -0.1
CHTO IAmb IAmb 01 19 22.4
comp=Z,33nm,1.1s
CHTO PP PP 01 23 02.8 -1.3
CHTO Chiang Mai 93.74 289 P P 01 19 18.2 -0.1
CHTO 01 23 02.8
CHTO pmax pmax
comp=Z,33nm,1.1s
LVC Limon Verde 93.83 119 P P 01 19 22.8 +3.5
comp=Z,3.1nm,0.6s,baz=107,slow=3.5,SNR=3.9
LVC Limon Verde 93.83 119 P P 01 19 20.4 +1.1
LVC IAmb IAmb 01 19 40.8
comp=Z,50nm,1.6s
LVC Limon Verde 93.83 119 P P 01 19 20.4 +1.1
LVC pmax pmax
comp=Z,50nm,1.7s
SUA Susitna One 93.86 13 IAmb IAmb 01 19 19.7
comp=Z,31nm,1.0s
TIY Taiyuan 93.89 312 eP P 01 19 21.1 +2.4
KMI Kunming 93.94 297 P P 01 19 20.8 +1.4
KMI pP pP 01 19 30.1 +1.5
KMI PP PP 01 23 08.6 +2.7
KMI S S 01 30 23.3 -4.4
KMI sS sS 01 30 43.3 +0.4
KMI pmax pmax
comp=Z,20nm,0.7s
KMI pmax pmax
comp=Z,200nm,4.5s
KMI LR LR
comp=Z,150nm,6.3s
KMI LR LR
comp=Z,210nm,4.8s
KMI LR LR
comp=Z,200nm,13.9s
XAN Xi'an 94.16 307 P P 01 19 20.3 +0.3
XAN S S 01 30 30.5 +1.6
XAN pmax pmax
comp=Z,8.0nm,0.6s
XAN LR LR
comp=Z,210nm,16.2s
XAN LR LR
comp=Z,240nm,21.6s
XAN LR LR
comp=Z,360nm,20.6s
SKT Skwentna 94.19 12 IAmb IAmb 01 19 39.5
comp=Z,22nm,1.3s
KNK Knik Glacier 94.27 14 IAmb IAmb 01 19 21.9
comp=Z,24nm,1.1s
PMR Palmer 94.29 13 IAmb IAmb 01 19 21.8
comp=Z,21nm,1.0s
GHO Glory Hole Cre 94.50 13 IAmb IAmb 01 19 23.4
comp=Z,36nm,1.0s
S22A 4UR Ranch, Cre 94.56 49 P P 01 19 25.0 +3.0
baz=235
AHID Auburn Hatcher 94.85 43 IAmb IAmb 01 19 26.3
comp=Z,12nm,0.7s
PB11 IPOC Station P 94.86 116 IAMs_20 IAMs_20 01 51 02.1
comp=Z,587nm,22.0s
SCM Sheep Creek Mo 94.88 14 IAmb IAmb 01 19 24.9
comp=Z,32nm,1.0s
O20A White River Ci 95.03 46 P P 01 19 25.7 +1.7
baz=234
APG El Apazote 95.05 76 P P 01 19 27.5 +2.8
comp=Z,4.2nm,0.8s,baz=250,slow=4.7,SNR=5.1
MSTX Muleshoe 95.20 54 IAmb IAmb 01 19 44.7
comp=Z,20nm,1.2s
MSTX Muleshoe 95.20 54 P P 01 19 26.8 +1.9
baz=237
REDW Red Top Meadow 95.35 42 IAmb IAmb 01 19 47.2
comp=Z,35nm,1.5s
SNOW Snow King Moun 95.47 42 IAmb IAmb 01 19 29.1
comp=Z,14nm,0.8s
BARN Barnard Glacie 95.49 17 IAmb IAmb 01 21 33.3
comp=Z,75nm,1.8s
KTH Kantishna Hill 95.76 12 IAmb IAmb 01 19 28.0
comp=Z,20nm,1.0s
PDAR Pinedale Array 95.76 43 P P 01 19 28.6 +1.2
comp=Z,2.2nm,0.8s,baz=213,slow=3.5,SNR=21
PDAR PKKPbc PKKPbc 01 36 17.8 -0.2
comp=Z,2.6nm,0.5s,baz=86,slow=4.2,SNR=15
PDAR LR LR 01 55 33.2
comp=Z,304nm,21.1s,baz=236,slow=31
TRF Thorofare Moun 95.78 12 IAmb IAmb 01 19 33.7
comp=Z,28nm,1.0s
TRF IAMs_20 IAMs_20 01 51 30.7
comp=Z,751nm,19.0s
SEY Seymchan 95.78 347 iP P 01 19 25.4 -1.2
DHY Denali Highway 95.99 13 IAmb IAmb 01 19 31.7
comp=Z,30nm,1.5s
RND Reindeer 96.00 13 IAmb IAmb 01 19 30.1

comp=Z,34nm,1.0s
H17A Grant Village 96.13 42 P P 01 19 32.5 +3.5
baz=233
ZEA Zeya 96.14 331 eP P 01 19 29.0 +0.5
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=Z,35nm,1.0s
CD2 Chengdu 96.17 302 P P 01 19 30.1 +0.8
CD2 S S 01 30 48.4 +1.9
CD2 pmax pmax
comp=Z,20nm,0.5s
HHC Hu-ho-hao-te 96.24 314 eP P 01 19 29.4 0.0
HHC S S 01 30 41.5 -5.3
HHC pmax pmax
comp=Z,5.0nm,1.0s
HHC pmax pmax
comp=Z,98nm,5.3s
HHC LR LR
comp=Z,200nm,18.9s
HHC LR LR
comp=Z,150nm,18.9s
HHC LR LR
comp=Z,290nm,19.9s
MCK McKinley 96.28 12 IAmb IAmb 01 19 33.0
comp=Z,17nm,0.9s
MENT Mentasta 96.64 15 IAmb IAmb 01 19 33.0
comp=Z,20nm,1.2s
RIDG Independent Ri 97.10 14 IAmb IAmb 01 19 34.7
comp=Z,18nm,1.1s
WRH Wood River Hil 97.11 12 IAmb IAmb 01 19 34.8
comp=Z,41nm,1.3s
DOT Dot Lake 97.19 14 IAmb IAmb 01 19 35.6
comp=Z,13nm,0.9s
HDA Harding Lake 97.27 13 IAmb IAmb 01 19 34.9
comp=Z,14nm,1.0s
HDA Harding Lake 97.27 13 P Pdif 01 19 34.3 +0.8
baz=207
TGUH Tegucigalpa,Un 97.28 78 IAMs_20 IAMs_20 01 52 49.0
comp=Z,478nm,22.0s
CCB Clear Creek Bu 97.33 12 IAmb IAmb 01 19 37.8
comp=Z,11nm,0.7s
TCOL CIGO, UAF Yank 97.52 12 P Pdif 01 19 35.4 +0.9
baz=206
COLA College 97.52 12 P P 01 19 33.2 -1.2
COLA IAmb IAmb 01 19 39.2
comp=Z,18nm,0.8s
COLA College 97.52 12 P P 01 19 33.2 -1.2
COLA pmax pmax
comp=Z,18nm,0.8s
K22A Casper 97.53 45 P Pdif 01 19 36.6 +1.2
baz=236
ILAR Eielson Array 97.61 13 P Pdif 01 19 35.4 +0.4
comp=Z,3.8nm,0.7s,baz=224,slow=5.5,SNR=26
ILAR PKiKP PKiKP 01 24 08.8 -0.2
comp=Z,1.1nm,0.7s,baz=297,slow=2.2,SNR=12
ILAR PKKPbc PKKPbc 01 36 13.2 -0.3
comp=Z,1.1nm,0.5s,baz=23,slow=2.9,SNR=12
ILAR LR LR 01 57 58.5
comp=Z,58nm,19.6s,baz=225,slow=32
POKR Poker Flat Res 97.82 12 P Pdif 01 19 36.6 +0.8
baz=206
LPAZ La Paz 98.01 114 P Pdif 01 19 41.6 +2.9
comp=Z,1.2nm,0.6s,baz=324,slow=4.8,SNR=7.1
LPAZ PKKPbc PKKPbc 01 36 11.8 +0.9
comp=Z,1.1nm,0.6s,baz=124,slow=3.3,SNR=4.3
LPAZ LR LR 01 55 05.7
comp=Z,217nm,21.9s,baz=215,slow=30
LPAZ La Paz 98.01 114 P Pdif 01 19 39.4 +0.6
LPAZ La Paz 98.01 114 P Pdif 01 19 39.4 +0.7
LPAZ pmax pmax
comp=Z,18nm,2.0s
ACON Acoyapa 98.06 81 IAMs_20 IAMs_20 01 52 55.4
comp=Z,656nm,19.0s
RDOG Red Dog Mine 98.51 6 IAmb IAmb 01 19 41.1
comp=Z,24nm,1.4s
BILL Bilibino 98.61 354 P P 01 19 38.7 -0.6
BILL Bilibino 98.61 354 eP P 01 19 38.2 -1.1
BILL e 01 23 40.6
BILL pmax pmax
comp=Z,4.0nm,0.8s
BILL MLR MLR
comp=Z,281nm,19.0s
LZH Lanzhou 98.78 307 ⇑P Pdif 01 19 43.6 +2.5
LZH pP sP 01 19 52.5 -0.8
LZH PP PP 01 23 41.0 -2.0
LZH pmax pmax
comp=Z,16nm,1.2s
LZH pmax pmax
comp=Z,56nm,5.0s
LZH LR LR
comp=Z,290nm,17.2s
LZH LR LR
comp=Z,280nm,17.9s
LZH LR LR
comp=Z,250nm,18.2s
CBKS Cedar Bluff 99.83 51 IAMs_20 IAMs_20 02 02 42.8
comp=Z,673nm,20.0s
RSSD Black Hills 99.85 45 Pdiff Pdif 01 19 47.8 +2.1
baz=238
CPUP Villa Florida 99.94 128 PKKPbc PKKPbc 01 36 05.4 +0.4
comp=Z,4.0nm,0.7s,baz=46,slow=3.5,SNR=10
YAK Yakutsk 101.10 338 i P Pdif 01 19 51.3 +0.8
YAK pmax pmax
comp=Z,15nm,0.8s
EPYK Eagle Plains 101.16 16 Pdiff Pdif 01 19 52.9 +2.1
baz=216
SONM Songino Array 103.12 318 P Pdif 01 20 00.1 0.0
comp=Z,0.6nm,0.4s,baz=122,slow=3.5,SNR=6.8
SONM PKiKP PKiKP 01 24 19.2 -0.4
comp=Z,0.7nm,0.4s,baz=42,slow=1.1,SNR=7.2
SONM PKKPbc PKKPbc 01 35 58.3 +1.3
comp=Z,0.9nm,0.6s,baz=293,slow=3.8,SNR=6.6
SONM PKKP PKKPdf 01 36 06.3 +0.6
comp=Z,0.5nm,0.5s,baz=293,slow=2.8,SNR=3.9
GTA Gaotai 103.19 308 eP PKiKP 01 24 20.4 +0.4
GTA pP PP 01 24 28.5 +12
GTA sP 01 24 32.8
INK Inuvik 103.46 15 Pdiff Pdif 01 20 02.1 +1.3
comp=Z,3.3nm,1.1s,baz=171,slow=4.7,SNR=6.5
INK PKiKP PKiKP 01 24 19.9 +0.5
comp=Z,1.6nm,0.6s,baz=135,slow=3.8,SNR=8.6
PALK Pallekele 103.63 271 IAMs_20 IAMs_20 02 07 53.6
comp=Z,547nm,19.0s
YKA Yellowknife Ar 105.09 25 Pdiff Pdif 01 20 10.1 +1.8
comp=Z,0.3nm,0.5s,baz=239,slow=4.6,SNR=4.1
YKA PKiKP PKiKP 01 24 22.6 0.0
comp=Z,1.8nm,0.6s,baz=254,slow=1.6,SNR=52
YKA PKKPbc PKKPbc 01 35 50.0 -1.3
comp=Z,2.3nm,0.5s,baz=40,slow=2.8,SNR=37
YKA PKKP PKKPab 01 36 07.0 +2.2
comp=Z,3.0nm,0.9s,baz=43,slow=4.7,SNR=10
TLY Talaya 106.55 320 eP Pdif 01 20 21.4 +6.4
TLY pmax pmax
comp=Z,5.0nm,0.9s
TAPN Taplejung 106.86 292 eP PKiKP 01 24 27.8 +0.5
comp=Z,32nm,1.0s
ODAN Odare 106.90 292 eP PKiKP 01 24 28.2 +0.8
comp=Z,32nm,0.6s
RAMN Ramite 107.58 291 eP PKiKP 01 24 28.8 +0.2
comp=Z,30nm,0.7s
ULM Lac du Bonnet 107.69 42 PKiKP PKiKP 01 24 28.8 +1.0
comp=Z,1.1nm,0.6s,baz=71,slow=1.0,SNR=3.2
ULM PKKPbc PKKPbc 01 35 44.0 +1.1
comp=Z,0.4nm,0.3s,baz=66,slow=4.5,SNR=5.3
ULM PKKP PKKPdf 01 35 55.9 -1.0
comp=Z,6.7nm,0.9s,baz=48,slow=3.6,SNR=12
JIRN Jiri 108.21 292 eP PKiKP 01 24 29.7 -0.3
comp=Z,40nm,0.5s
GUN Gumba 108.56 292 eP PKiKP 01 24 30.3 -0.3
comp=Z,22nm,0.6s
PKI Pulchoki 108.80 291 eP PKiKP 01 24 30.6 -0.4
comp=Z,14nm,0.5s
PKIN Phulchoki 108.81 291 eP PKiKP 01 24 30.5 -0.5
comp=Z,11nm,0.5s
KKN Kakani 109.00 292 eP PKiKP 01 24 31.3 +0.1
DMN Daman 109.06 291 eP PKiKP 01 24 30.6 -0.8
comp=Z,12nm,0.5s
EYMN Ely 109.34 45 PKiKP PKiKP 01 24 31.1 +0.1
baz=246
DANN Dangsing 110.45 292 eP PKiKP 01 24 33.8 -0.2
comp=Z,26nm,0.6s
WMQ Urumqi 113.27 308 ePKP PKiKP 01 24 37.9 -0.7
WMQ LR LR
comp=Z,240nm,29.3s
WMQ LR LR
comp=Z,1µm,28.9s
WMQ LR LR
comp=Z,360nm,29.1s
BDFB Brasilia 113.52 126 PKiKP PKiKP 01 24 41.2 +1.1
comp=Z,3.6nm,0.6s,baz=221,slow=1.4,SNR=6.4
D46A Sault St. Mari 113.67 48 P PKiKP 01 24 39.2 0.0
baz=251
O54A Avella 113.93 56 P PKiKP 01 24 40.6 +0.7
baz=250
E47A Iron Bridge 114.02 49 P PKPdf 01 24 39.7 -0.1
baz=251
F48A Evansville 114.25 50 P PKPdf 01 24 40.1 -0.2
baz=251
D47A Chapleau 114.33 48 P PKPdf 01 24 40.5 0.0
baz=251
E48A Lockeyer 114.76 49 P PKiKP 01 24 41.5 +0.2
baz=252
D48A Paudash Townsh 115.21 49 P PKPdf 01 24 41.9 -0.3
baz=252
SUR Sutherland 115.39 197 PKP PKPdf 01 24 44.8 +1.4
comp=Z,7.3nm,0.5s,baz=32,slow=2.9,SNR=14
D50A G1974 Best Tow 116.48 49 P PKPdf 01 24 44.5 -0.1
baz=254
E51A G1948 Merrick 116.53 50 P PKPdf 01 24 44.2 -0.5
baz=253
H53A Bobcaygeon 116.58 52 P PKPdf 01 24 44.6 -0.3
baz=253
SMLA Simla 116.81 292 eP PKPdf 01 24 45.1 -0.6
SMLA i x x 01 24 49.2
RES Resolute Bay 116.92 17 PKP PKiKP 01 24 45.0 +0.3
comp=Z,5.4nm,0.7s,baz=280,slow=2.1,SNR=20
E52A Mattawa 117.02 50 P PKPdf 01 24 45.6 0.0
baz=254
ALGO Algonquin Park 117.33 51 P PKPdf 01 24 46.3 0.0
baz=254
K57A Scipio Center 117.48 55 P PKiKP 01 24 47.2 +0.5
baz=253
BOSA Boshof 117.61 203 PKiKP 01 24 48.6 +1.0
BOSA Boshof 117.61 203 PKIKP PKiKP 01 24 48.7 +1.0
E53A Dumoine, Ponti 117.71 50 P PKPdf 01 24 47.0 0.0
baz=254
L58A Harry Jones Me 117.76 55 P PKiKP 01 24 47.8 +0.6
baz=253
MK31 Makanchi Array 117.80 310 i PKIKP PKPdf 01 24 46.3 -0.9
MKAR Makanchi Array 117.80 310 Pdiff Pdif 01 21 09.0 +3.7
comp=Z,0.7nm,0.7s,baz=85,slow=6.0,SNR=6.0
MKAR PKP PKPdf 01 24 46.6 -0.6
comp=Z,16nm,0.5s,baz=179,slow=0.8,SNR=68
MKAR PKKPbc PKKPab 01 35 10.8 +1.1
comp=Z,1.3nm,0.5s,baz=271,slow=2.9,SNR=16
D53A Lac Vacive, Po 117.87 50 PKPdf 01 24 47.3 0.0
D53A Lac Vacive, Po 117.87 50 P PKPdf 01 24 47.2 0.0
baz=255
DHRM DHARAMSHALA 117.88 293 eP PKPdf 01 24 47.5 -0.6
DHRM i x x 01 24 51.6
ZALV Zalesovo Beam 118.01 318 PKP PKPdf 01 24 46.2 -1.1
comp=Z,9.0nm,0.5s,baz=170,slow=1.4,SNR=32
MAKZ Makanchi 118.02 310 PKPdf 01 24 46.7 -0.9
MAKZ Makanchi 118.02 310 PKIKP PKPdf 01 24 46.7 -0.9
E54A Lac Daplat, Po 118.04 50 P PKPdf 01 24 47.4 -0.2
baz=255
VLDQ Val d'Or 118.29 48 PKPdf 01 24 47.7 -0.3
D54A Lac Fusel, La 118.58 50 P PKPdf 01 24 48.2 -0.5
baz=256
E55A Montcerf-Lytto 118.80 51 P PKPdf 01 24 49.0 0.0
baz=256
PDGK Podgornoye 118.80 306 PKIKP PKPdf 01 24 48.6 -0.8
LSQQ Lebel-sur-Quev 118.83 48 P PKPdf 01 24 48.7 -0.3
baz=256
D55A Sainte-Anne-du 119.33 50 P PKPdf 01 24 50.1 0.0
baz=256
E56A St. Veronique 119.51 51 P PKPdf 01 24 50.2 -0.2
baz=256
SKI Saint Kitts 119.81 86 IAMs_20 IAMs_20 02 27 43.0
comp=Z,392nm,18.0s
D56A ZEC Mazanza, M 119.81 50 P PKPdf 01 24 51.1 +0.1
baz=257
G58A Ormstown 119.84 52 P PKPdf 01 24 51.1 +0.1
baz=256
I60A Shoreham 120.05 54 P PKiKP 01 24 52.4 +0.8
baz=256
KSH Kashi 120.33 301 PKP PKiKP 01 24 53.1 +0.6
KSH PP PP 01 26 27.8 +8.6
KSH PKS PKSdf 01 28 28.1 -1.1
KSH SKS SKSdf 01 32 01.3 -0.9
KSH SKKS SKKSac 01 33 12.8 -3.5
KSH SS SS 01 42 51.1 +5.3
KSH AMB AMB
comp=Z,90nm,4.5s
KSH LR LR
comp=Z,110nm,5.0s
KSH LR LR
comp=Z,160nm,4.6s
KSH LR LR
comp=Z,160nm,7.5s
D57A Chemin Vers le 120.38 50 P PKPdf 01 24 52.1 0.0
baz=257
E58A La Victoria 120.65 51 P PKPdf 01 24 52.8 +0.2
baz=257
NIL Nilore 120.76 293 PKPdf 01 24 53.4 +0.1
NIL Nilore 120.76 293 PKIKP PKPdf 01 24 53.4 +0.1
KURK Kurchatov 121.06 314 PKPdf 01 24 52.6 -0.6
KURK Kurchatov 121.06 314 IAMs_20 IAMs_20 02 03 23.1
comp=Z,294nm,19.0s
KURK Kurchatov 121.06 314c iPKIKP PKPdf 01 24 52.2 -1.0
KURK pmax pmax
comp=Z,58nm,0.8s
D58A Chemin du LacG 121.07 50 P PKPdf 01 24 53.5 0.0
baz=258
KURBB Kurchatov Arra 121.09 314 PKP PKPdf 01 24 52.6 -0.7
comp=Z,50nm,0.7s,baz=114,slow=1.8
KURBB PKKPbc PKKPbc 01 34 58.6 +2.0
comp=Z,1.3nm,0.8s,baz=277,slow=4.9,SNR=10
KZA Kyzart 121.51 303 P PKiKP 01 24 55.4 +0.2
SNR=18
KBK Karagaybulak 121.86 304 P PKPdf 01 24 55.2 -0.2
SNR=23
E60A Ste Agathe de 121.89 52 P PKiKP 01 24 55.3 +0.2
baz=258
UCH Uchtor 122.08 303 P PKPdf 01 24 56.4 +0.2
SNR=52
AAK Ala-Archa 122.18 304 PKKPbc PKKPbc 01 34 54.7 +2.2
comp=Z,1.4nm,0.6s,baz=250,slow=3.6,SNR=5.0
AAK Ala-Archa 122.18 304 P PKPdf 01 24 55.7 -0.3
SNR=17
AAK Ala-Archa 122.18 304 PKPdf 01 24 55.6 -0.3
AAK PP 01 26 24.9 -7.0
AAK Ala-Archa 122.18 304 i PKIKP PKPdf 01 24 55.3 -0.6
G62A West of Eustis 122.28 53 P PKiKP 01 24 56.4 +0.4
baz=258
USP Ospenovka 122.32 305 P PKPdf 01 24 55.6 -0.4
SNR=19
E61A Lac Etchemin 122.55 52 P PKiKP 01 24 57.2 +0.7
baz=259
AML Almayashu 122.65 303 P PKPdf 01 24 57.1 0.0
SNR=42
EKS2 Erkin-Say 122.71 304 P PKPdf 01 24 56.9 0.0
SNR=30
D61A St Aubert, Com 122.90 51 P PKiKP 01 24 57.8 +0.7
baz=260
H64A Troy 123.08 54 P PKiKP 01 24 58.0 +0.4
baz=259
G64A Maxfield 123.52 53 P PKiKP 01 24 59.0 +0.6
baz=259
D62A Allapoint, All 123.64 51 P PKPdf 01 24 58.5 +0.1
baz=260
D63A Stockholm 124.27 51 P PKPdf 01 24 59.8 +0.2
baz=261
G65A Princeton 124.34 54 P PKiKP 01 25 00.9 +0.9
baz=260
KBL Kabul 124.36 293 PKiKP 01 25 00.9 +0.2
KBL Kabul 124.36 293 PKIKP PKiKP 01 25 00.9 +0.2
E64A Bridgewater 124.36 52 P PKiKP 01 25 00.3 +0.3
baz=261
KK31 Karatay Array 125.15 304 i PKIKP PKPdf 01 25 00.8 -0.6
SCHQ Schefferville 125.87 42 PKP PKiKP 01 25 03.2 +0.4
comp=Z,13nm,0.9s,baz=341,slow=1.6,SNR=12
BVAR Borovoye Array 126.40 316 PKP PKPdf 01 25 03.5 0.0
comp=Z,52nm,0.6s,baz=133,slow=1.7,SNR=158
BRVK Borovoye 126.47 316 PKPdf PKPdf 01 25 03.2 -0.3
BRVK PP PP 01 26 54.6 -5.4
BRVK Borovoye 126.47 316c iPKIKP PKPdf 01 25 03.4 -0.2
BRVK pmax pmax
comp=Z,47nm,0.8s
NOR Nord 127.92 3 i P PKPdf 01 25 05.6 0.0
NOR Nord 127.92 3 i PKIKP PKPdf 01 25 05.6 0.0
LSZ Lusaka 128.42 213 PKPdf 01 25 09.1 +0.5
LSZ Lusaka 128.42 213 PKIKP PKPdf 01 25 09.1 +0.5
TSUM Tsumeb 128.79 199 PKiKP 01 25 11.1 +1.2
TSUM PP PP 01 27 11.4 -3.0
RCBR Riachuelo 128.82 128 PKP PKiKP 01 25 10.3 +0.3
comp=Z,13nm,0.7s,baz=210,slow=5.6,SNR=6.8
SOCY Socotra 129.04 261 PKiKP 01 25 10.4 -0.1
KBS Kingsbay 130.94 358 ePKPdf PKiKP 01 25 12.4 +0.1
SPA0 Spitsbergen Ar 131.46 356 ePKPdf PKiKP 01 25 13.5 +0.1
SPA0 Spitsbergen Ar 131.46 356 PKiKP 01 25 13.8 +0.3
SPITS Spitsbergen Ar 131.46 356 PKP PKiKP 01 25 13.5 +0.1
comp=Z,23nm,0.7s,baz=131,slow=4.4,SNR=5.2
SVE Sverdlovsk 131.86 321 ePKIKP PKPdf 01 25 13.3 -0.4
SVE pmax pmax
comp=Z,31nm,0.9s
DAG Danmarks Havn 132.25 6 i P PKPdf 01 25 13.0 -0.9
comp=Z,7.7nm,0.7s
DAG Danmarks Havn 132.25 6 i PKIKP PKPdf 01 25 13.0 -0.9
DAG pmax pmax
comp=Z,8.0nm,0.7s
UOSS Minazif 132.29 277 PKPdf 01 25 16.1 +0.6
SUMG Summit 132.38 15 i P PKiKP 01 25 16.8 +0.9
SUMG Summit 132.38 15 PKPpre PKPpre 01 25 03.1
SUMG PKPdf 01 25 11.8 -3.0
SUMG PP PP 01 27 32.6 -5.6
SUMG Summit 132.38 15 i PKIKP PKiKP 01 25 16.8 +0.9
ARU Arti 133.05 321 PKP PKPdf 01 25 16.4 +0.4
comp=Z,34nm,0.5s,baz=97,slow=2.6,SNR=58
ARU SKPbc SKPbc 01 28 39.6 -1.8
comp=Z,1.9nm,0.6s,baz=290,slow=2.5,SNR=3.6
ARU Arti 133.05 321 i PKIKP PKPdf 01 25 15.2 -0.8
ARU 01 27 40.7
ARU SS SS 01 45 14.7 -8.4
ARU MLR MLR
comp=Z,429nm,22.0s
GEYT Alibeck 133.69 295 PKhKP PKPpre 01 25 03.8
comp=Z,2.6nm,0.7s,baz=199,slow=3.1,SNR=6.1
GEYT PKP PKPdf 01 25 18.2 +0.3
comp=Z,25nm,0.9s,baz=263,slow=1.2,SNR=28
GEYT SKPbc SKPbc 01 28 43.1 -1.2
comp=Z,4.2nm,0.7s,baz=222,slow=2.0,SNR=7.7
GYA0 ALIBECK ARRAY 133.69 295 PKIKP PKPdf 01 25 18.0 +0.2
AKTO Aktyubinsk 134.12 313 PKhKP PKPpre 01 25 05.0
comp=Z,4.3nm,0.5s,baz=117,slow=5.6,SNR=17
AKTO PKP PKPdf 01 25 18.4 +0.2
comp=Z,21nm,0.6s,baz=92,slow=3.2,SNR=35
AKTO SKPbc SKPbc 01 28 44.3 -0.9
comp=Z,6.2nm,1.0s,baz=40,slow=5.1,SNR=5.7
KMBO Kilima Mbogo 134.44 233 PKhKP PKPpre 01 25 13.7
comp=Z,0.6nm,0.3s,baz=50,slow=5.6,SNR=4.6
KMBO PKP PKiKP 01 25 22.3 +0.6
comp=Z,8.6nm,0.9s,baz=18,slow=1.0,SNR=15
KMBO SKPbc SKPbc 01 28 46.2 -1.6
comp=Z,9.9nm,1.0s,baz=74,slow=4.1,SNR=10
KMBO Kilima Mbogo 134.44 233 PKiKP 01 25 21.6 -0.1
KMBO Kilima Mbogo 134.44 233 PKIKP PKiKP 01 25 21.6 -0.1
KIRV Kirov 137.25 326 PKhKP PKPpre 01 25 15.0
comp=Z,14nm,0.6s,baz=58,slow=1.9,SNR=6.2
KIRV PKP PKiKP 01 25 25.1 -0.4
comp=Z,80nm,0.5s,baz=108,slow=1.5,SNR=15
KIRV Kirov 137.25 326 i PKIKP PKPdf 01 25 23.6 -0.1
SCO Scoresbysund 137.38 12 i P PKiKP 01 25 26.0 +0.5
comp=Z,8.2nm,1.0s
SCO Scoresbysund 137.38 12 i PKIKP PKiKP 01 25 26.0 +0.5
SCO pmax pmax
comp=Z,8.0nm,1.0s
LVZ Lovozero 137.68 342 PKPdf 01 25 23.9 -0.4
LVZ Lovozero 137.68 342 PKIKP PKPdf 01 25 23.9 -0.4
PRGR Permogore 137.72 331 ePKHKP PKPpre 01 25 15.4
HAMF Hammerfest 137.72 350 ePKPdf PKPdf 01 25 25.0 +0.8
APA Apatity 138.24 343⇓iPKIKP PKPdf 01 25 23.5 -1.8
APA pmax pmax
comp=Z,14nm,1.1s
ARCES ARCESS Array B 138.39 348 PKhKP PKPpre 01 25 15.7
comp=Z,4.9nm,0.5s,baz=52,slow=2.0,SNR=54
ARCES PKP PKiKP 01 25 27.4 -0.3
comp=Z,20nm,0.5s,baz=48,slow=1.3,SNR=16
ARE0 ARCESS Array S 138.39 348 e PKPdf 01 25 18.0 -7.5
ARE0 ePKPdf PKiKP 01 25 26.4 -1.3
MBAR Mbarara 139.16 227 PKIKP PKiKP 01 25 30.9 -0.3
KLMR Klimovskoe 140.65 332 ePKHKP PKPdf 01 25 19.8 -10
KLMR Klimovskoe 140.65 332 ePKPdf PKPdf 01 25 19.9 -10
KLMR AMP 01 25 31.7
comp=Z,45nm,0.8s
KLMR ePP PP 01 27 57.9 -32
RAYN Ar Rayn 141.07 271 PKPdf 01 25 26.5 -5.4
RAYN IAMs_20 IAMs_20 02 25 34.6
comp=Z,283nm,20.0s
RAYN Ar Rayn 141.07 271 PKHKP PKPdf 01 25 26.5 -5.4
LOF Lofoten 141.40 353 ePKPdf PKPdf 01 25 31.6 +0.6
STEI Steigen 141.40 352 e PKPdf 01 25 25.3 -5.7
STEI ePKPdf PKiKP 01 25 31.9 -1.9
BORG Borgarnes 142.34 16 PKP PKPdf 01 25 32.2 -0.6
comp=Z,27nm,1.2s,baz=333,slow=2.3
KONS Konsvik 143.02 353 e PKPbc 01 25 30.7 -0.1
GROC Groznyy 143.16 303 ePKHKP PKPbc 01 25 31.2 -0.8
GROC e 01 28 43.5
VRH Novokhopyorsk 144.03 317 ePKIKP PKPbc 01 25 34.4 +0.2
VRH pmax pmax
comp=Z,60nm,0.6s
GNI Garni 144.18 298 PKP PKPbc 01 25 35.7 +0.5
comp=Z,31nm,0.9s,baz=190,slow=1.0,SNR=20
GNI Garni 144.18 298 PKPbc 01 25 35.6 +0.3
GNI Garni 144.18 298 PKIKP PKPbc 01 25 35.6 +0.3
MOS Moscow 144.26 326 ePKHKP PKPab 01 25 32.9 -1.5
MOS e 01 28 48.6
GOF Gofitskoye 144.85 307⇓iPKIKP PKPbc 01 25 37.5 +0.5
GOF pmax pmax
comp=Z,127nm,0.9s
FINES FINESS Array B 144.99 340 PKP PKPbc 01 25 36.4 -0.5
comp=Z,289nm,0.6s,baz=56,slow=4.0,SNR=2716
AKH Akhalkalaki 145.04 300 ⇓P PKPdf 01 25 38.5 0.0
NSS Namsos 145.05 353 ePKPbc PKPbc 01 25 36.9 -0.2
OBN Obninsk 145.10 326 PKP PKPbc 01 25 37.0 -0.4
comp=Z,38nm,0.5s,baz=77,slow=1.5,SNR=39
OBN Obninsk 145.10 326 PKPbc 01 25 37.0 -0.4
OBN Obninsk 145.10 326c iPKIKP PKPbc 01 25 36.4 -1.0
OBN e 01 28 59.4
OBN ePPP PPP 01 32 10.6
OBN pmax pmax
comp=Z,93nm,1.0s
KBZ Khabaz 145.18 304 PKP PKPbc 01 25 37.8 -0.2
comp=Z,30nm,0.7s,baz=154,slow=2.4,SNR=52
KIV Kislovodsk 145.29 305 ⇑P PKPbc 01 25 38.1 -0.5
KIV Kislovodsk 145.29 305 PKPbc 01 25 38.7 +0.1
KIV Kislovodsk 145.29 305 i PKP2 PKPbc 01 25 37.7 -0.9
KIV pmax pmax
comp=Z,189nm,1.1s
VORR Voronezh 145.31 319 PKP2 PKPbc 01 25 36.0 -2.2
VORR pmax pmax
comp=Z,300nm,1.4s
VSR Storozhevoye 145.52 318 ePKP2 PKPdf 01 25 38.1 -0.7
VSR pmax pmax
comp=Z,130nm,0.5s
VORD Divnogorie 145.54 318 ePKP2 PKPdf 01 25 38.0 -0.8
VORD pmax pmax
comp=Z,90nm,0.6s
BATM Batumi 146.36 301 ⇓P PKPbc 01 25 42.4 +0.5
BATM Batumi 146.36 301 ⇓PKP2 PKPbc 01 25 42.4 +0.5
BCA Borcka 146.43 301 ⇑P PKPbc 01 25 42.0 -0.1
TBLU Trondheim 146.48 353 ePKPbc PKPbc 01 25 41.4 -0.1
VSU Vasula 147.09 336 eP PKPbc 01 25 43.3 -0.1
MOL Molde 147.38 355 ePKPbc PKPbc 01 25 44.5 +0.5
SOC Sochi 147.48 305 ePKIKP PKPdf 01 25 41.6 -0.7
SOC i 01 25 46.5
SOC ePPP PPP 01 32 29.1
SOC pmax pmax
comp=Z,74nm,0.8s
SOC pmax pmax
comp=Z,118nm,0.7s
SOC MLR MLR
comp=Z,257nm,17.0s
DOMB Dombas 147.78 354 ePKPbc PKPbc 01 25 45.5 +0.3
AKN Aaknes 147.80 356 ePKPbc PKPbc 01 25 45.9 +0.6
FOO Floro 148.48 357 ePKPbc PKPbc 01 25 47.8 +0.8
NB2 NORSAR Subarra 148.53 352 PKP PKPbc 01 25 47.2 0.0
comp=Z,84nm,0.7s,baz=11,slow=2.8
NB2 NORSAR Subarra 148.53 352 PKPab PKPbc 01 25 47.2 0.0
baz=11,slow=2.8
NOA NORSAR Array B 148.53 352 PKPbc PKPbc 01 25 47.2 0.0
comp=Z,14nm,0.5s,baz=15,slow=4.1,SNR=133
ANN Anapa 148.78 308c iPKP2 PKPbc 01 25 48.0 -0.3
ANN eSS SS 01 48 28.4 +1.2
ANN eSSS SSS 01 54 02.4
ANN pmax pmax

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,353nm,1.0s						
NC602	NORSAR Array S	148.78	351	epPKPdf	PKPbc	01 25 47.8	0.0
HYA	Hoyanger	148.86	356	ePKPbc	PKPbc	01 25 48.7	+0.7
SUE	Sulen	149.03	358	ePKPbc	PKPbc	01 25 48.9	+0.5
HFS	Hagfors	149.04	349	PKPbc	PKPbc	01 25 47.9	-0.6
	comp=Z,201nm,0.8s,baz=58,slow=3.7,SNR=147						
SKAR	Skarslia	149.19	354	ePKPbc	PKiKP	01 25 49.7	-0.4
SLIT	Slitere, Latvi	149.21	339	eP	PKPbc	01 25 48.4	-0.6
IZAR	Zarasai	149.28	333	eP	PKPbc	01 25 49.7	+0.5
ISAL	Salakas	149.46	333	eP	PKPbc	01 25 49.9	+0.2
MICGM	Minsk	149.49	330	⇑eP	PKPbc	01 25 50.0	+0.2
MICGM				PM		01 25 51.0	
	comp=Z,0.8nm,1.2s						
MNK	Minsk	149.49	330	⇑ePKP2	PKPbc	01 25 50.0	+0.2
MNK				pmax	pmax		
	comp=Z,820nm,1.2s						
IIGN	Ignalina	149.58	333	eP	PKPbc	01 25 50.2	+0.3
IIGN				IAmb	IAmb	01 25 55.4	
	comp=Z,92nm,0.6s						
ASK	Askoy	149.59	357	ePKPbc	PKPbc	01 25 50.4	+0.6
OSL	Oslo	149.66	352	ePKPbc	PKiKP	01 25 50.9	-0.1
NACGM	Naroch	149.67	332	eP	PKPdf	01 25 45.0	-0.5
NACGM				PM		01 25 54.0	
	comp=Z,1.6nm,1.0s						
BER	Bergen	149.68	357	ePKPbc	PKPbc	01 25 50.6	+0.6
KONO	Kongsberg	150.08	353	ePKPbc	PKiKP	01 25 51.7	-0.2
KONO	Kongsberg	150.08	353		PKiKP	01 25 51.6	+0.5
KONO				PKPab	PKPab	01 25 55.0	-2.0
KONO	Kongsberg	150.08	353	PKP2	PKPab	01 25 55.0	-2.0
ODD1	Odda	150.08	356	ePKPbc	PKiKP	01 25 51.8	-0.2
GAZ	Gaziantep	150.23	293	IAMs_20	IAMs_20	02 32 21.5	
	comp=Z,306nm,22.0s						
PABE	Paberze	150.32	335	eP	PKPbc	01 25 52.0	+0.2
PABE				IAmb	IAmb	01 25 57.0	
	comp=Z,369nm,0.5s						
ASF	Jabal al Asfar	150.40	283	PKPbc	PKiKP	01 25 53.5	-0.1
	comp=Z,68nm,0.8s,baz=43,slow=1.3,SNR=18						
BLS5	Blasjo	150.58	356	ePKPbc	PKPbc	01 25 52.8	+0.5
PBUR	Paburge	150.63	337	eP	PKiKP	01 25 53.1	0.0
PBUR				IAmb	IAmb	01 25 57.7	
	comp=Z,374nm,0.6s						
KMY	Karmoy	150.86	357	ePKPbc	PKiKP	01 25 53.6	+0.1
SIM	Simferopol'	150.98	309	ePKPbc	PKiKP	01 25 54.5	+0.2
SIM				e		01 25 58.0	
SIM				pmax	pmax		
	comp=Z,124nm,0.9s						
DIKM	Dikmen	151.10	302	⇑P	PKiKP	01 25 54.6	0.0
AKASG	Malin Array Be	151.25	323	PKP	PKPdf	01 25 48.0	-0.1
	comp=Z,7.0nm,1.0s,baz=54,slow=1.8,SNR=13						
AKASG				PKPbc	PKPbc	01 25 54.3	+0.2
	comp=Z,156nm,0.5s,baz=46,slow=3.0,SNR=457						
HWQ	Hawqa	151.31	287	eP	PKPbc	01 25 55.0	0.0
RCY	Rachaya	151.38	285	eP	PKiKP	01 25 55.7	0.0
SEVA	Sevastopol	151.41	309	⇑P	PKPbc	01 25 54.8	+0.2
BHL	Bhannes	151.55	286	eP	PKPbc	01 25 55.7	+0.2
SNART	Snartemo	151.60	355	ePKPbc	PKiKP	01 25 55.2	+0.2
BEYL	Beirut	151.68	286	eP	PKPbc	01 25 55.8	+0.1
MMAI	Mount Meron Ar	151.72	284	PKPbc	PKPbc	01 25 57.0	+0.7
	comp=Z,180nm,0.6s,baz=84,slow=7.6,SNR=237						
EIL	Elat	151.75	277	PKP	PKPdf	01 25 50.0	+0.4
	comp=Z,18nm,1.1s,baz=110,slow=2.2,SNR=10.0						
EIL				PKPbc	PKiKP	01 25 56.4	0.0
	comp=Z,183nm,0.8s,baz=38,slow=1.1,SNR=22						
SUW	Suwalki	151.76	334	ePKPdf	PKPdf	01 25 49.1	+0.3
SUW				ePKPbc	PKPbc	01 25 55.3	+0.2
SUW				ePKPab	sPKPbc	01 26 06.8	-0.8
BZK	Bozkurt	151.94	304	⇓P	PKPbc	01 25 56.3	+0.3
BRTR	Keskin Array B	152.70	299	PKP	PKPdf	01 25 50.4	-0.6
	comp=Z,2.6nm,0.9s,baz=114,slow=2.3,SNR=15						
BRTR				PKPbc	PKiKP	01 25 58.4	+0.2
	comp=Z,33nm,0.6s,baz=146,slow=5.4,SNR=158						
BRTR				PP	PP	01 29 43.7	+1.6
	comp=Z,1.1nm,0.9s,baz=92,slow=3.6,SNR=3.6						
SORM	Soroca	153.16	319	⇑P	PKPbc	01 25 58.0	-0.5
SORM	Soroca	153.16	319	⇑PKIKP	PKPbc	01 25 58.0	-0.5
MUD	Monsted U'grnd	153.25	352	i P	PKPab	01 26 05.0	-5.3
MUD	Monsted U'grnd	153.25	352	i PKIKP	PKPab	01 26 05.0	-5.3
ANTO	Ankara	153.31	300	⇑P	PKPbc	01 25 59.3	0.0
ANTO	Ankara	153.31	300		PKPbc	01 25 56.3	-2.9
ANTO	Ankara	153.31	300	PKIKP	PKPbc	01 25 56.3	-2.9
BSD	Bornholm Skovb	153.45	344	⇑P	PKiKP	01 25 59.2	+0.2
	comp=Z,42nm,0.6s						
BSD	Bornholm Skovb	153.45	344	i P	PKiKP	01 25 59.5	+0.5
BSD	Bornholm Skovb	153.45	344	⇑i PKIKP	PKiKP	01 25 59.2	+0.2
BSD				pmax	pmax		
	comp=Z,42nm,0.6s						
COP	Copenhagen	153.47	347	i P	PKiKP	01 25 59.4	+0.4
COP	Copenhagen	153.47	347	i PKIKP	PKiKP	01 25 59.4	+0.4
LEF	Lefka	153.82	289	⇓P	PKPab	01 26 03.9	+3.5
LEOM	Leova	154.08	316	⇑P	PKPbc	01 26 00.3	-0.2
LEOM	Leova	154.08	316	⇑PKIKP	PKPbc	01 26 00.3	-0.2
LVV	L'vov	154.40	326	ePKP	PKPbc	01 26 01.3	+0.2
JURR	Jurilovca	154.49	312	⇓P	PKPbc	01 26 00.9	-0.5
EKA	Eskdalemuir Ar	154.51	7	PKP	PKPdf	01 25 52.4	-0.3
	comp=Z,1.2nm,0.6s,baz=328,slow=1.6,SNR=5.7						
EKA				PKPab	PKPab	01 26 16.5	+0.8
	comp=Z,37nm,0.6s,baz=328,slow=3.0,SNR=47						
ESK	Eskdalemuir	154.53	7	PKPdf	PKPdf	01 25 51.6	-1.2
ESK				PKPbc	PKPbc	01 26 00.4	-0.8
ESK					sPKPbc	01 26 14.1	+0.4
ESK	Eskdalemuir	154.53	7	PKIKP	PKPdf	01 25 51.6	-1.2
ESK						01 26 14.1	
TOPG	Topolog	154.76	313	⇓P	PKiKP	01 26 02.7	+0.7
CFR	Carcaliu	154.77	314	⇓P	PKPbc	01 26 00.9	-1.1
CFR	Carcaliu	154.77	314	⇑PKIKP	PKPbc	01 26 00.9	-1.1
PRAR	RASCA	154.78	320	⇓P	PKPbc	01 26 01.0	-1.0
GHRR		154.79	316	⇓P	PKPbc	01 25 58.1	-4.0
TIRR	Tirgusor	154.92	312	⇓P	PKPbc	01 26 01.5	-0.9
TIRR	Tirgusor	154.92	312	⇑PKIKP	PKPbc	01 26 01.5	-0.9
TESR	Tescani	155.01	318	⇓P	PKPdf	01 26 02.2	+8.4
MFTR	Murfatlar	155.04	311	⇓P	PKPdf	01 26 03.2	+9.3
PETR	Petresti	155.07	316	⇑P	PKPdf	01 26 05.5	+12
MANR	Mangalia	155.08	310	⇓P	PKPdf	01 26 03.3	+9.4
HARR	Harsova	155.13	313	⇓P	PKPdf	01 26 04.3	+10
HARR	Harsova	155.13	313	⇓PKIKP	PKPdf	01 26 04.3	+10
ODBI	Odobesti	155.15	316	⇓P	PKPdf	01 26 04.0	+10
KWP	Kalwaria Pacla	155.16	327	ePKPdf	PKPdf	01 25 53.9	0.0
KWP				ePKPbc	PKPbc	01 26 03.5	
KWP				ePKPab	PKPab	01 26 19.7	+1.0
BURAR	Bucovina Array	155.19	321	⇓P	PKPdf	01 26 05.0	+11
BURAR	Bucovina Array	155.19	321	⇓PKIKP	PKPdf	01 26 05.0	+11
LIC	Lamto	155.23	162	ePKPdf	PKPdf	01 25 56.3	+1.2
	comp=Z,23nm,0.8s						
VRI	Vrincioaia	155.30	316	⇑P	PKPdf	01 26 03.4	+9.3
VRI	Vrincioaia	155.30	316	⇑PKIKP	PKPdf	01 26 03.4	+9.2
PLOR	Plostina	155.35	316	⇓P	PKPdf	01 26 03.0	+8.7
PLOR	Plostina	155.35	316	⇓PKIKP	PKPdf	01 26 03.0	+8.7
KIC	Kosan Boka	155.44	163	ePKIKP	PKPdf	01 25 56.6	+1.2
	comp=Z,11nm,0.7s						
BISRR	Bisoca	155.47	316	⇓P	PKPdf	01 26 04.5	+10
BSEG	Bad Segeberg	155.52	349	ePKPab	PKPab	01 26 20.8	+0.8
	baz=23,slow=4.4						
TIC	Toumodi	155.64	162	ePKIKP	PKPdf	01 25 56.7	+1.1
	comp=Z,3.0nm,0.3s						
DBIC	Dimbokro	155.71	162	PKP	PKPdf	01 25 56.5	+0.8
	comp=Z,4.0nm,0.6s,baz=170,slow=1.5,SNR=17						
DBIC				PKPab	PKPab	01 26 24.2	+2.4
	comp=Z,6.8nm,0.7s,baz=229,slow=0.4,SNR=3.7						
DBIC	Dimbokro	155.71	162		PKPdf	01 25 55.1	-0.6
DBIC	Dimbokro	155.71	162	PKIKP	PKPdf	01 25 55.1	-0.6
OZUR		155.73	318	⇑P	PKPdf	01 26 04.1	+9.3
ISR	Istrita	155.79	315	⇑P	PKPdf	01 26 03.1	+8.1
ISR	Istrita	155.79	315	⇑PKIKP	PKPdf	01 26 03.1	+8.2
KOLS	Kolonicke sedl	155.85	327	ePKPdf	PKPdf	01 25 55.2	+0.4
KOLS	Kolonicke sedl	155.85	327	ePKP	PKPdf	01 25 55.2	+0.4
KOLS				e		01 26 24.7	
MLR	Muntele Rosu	155.96	316	P	PKPdf	01 25 55.2	-0.1
	comp=Z,7.0nm,0.9s,baz=167,slow=1.7,SNR=12						
MLR				PKPab	PKPab	01 26 23.0	+0.6
	comp=Z,15nm,0.7s,baz=346,slow=7.8,SNR=6.3						
MLR	Muntele Rosu	155.96	316	⇑P	PKPdf	01 26 00.1	+4.8
MLR	Muntele Rosu	155.96	316	⇑PKIKP	PKPdf	01 26 00.1	+4.8
OJC	Ojcow	156.01	332	ePKP	PKPdf	01 25 54.7	-0.3
DOPR	Dopca	156.04	318	⇑P	PKPdf	01 26 04.8	+10
UZH	Uzhgorod	156.04	326	ePKIKP	PKPdf	01 26 03.0	+8.0
UZH				e		01 26 22.9	
RUE	Ruedersdorf	156.13	343	ePKPab	PKPab	01 26 23.4	+0.7
	baz=23,slow=4.4						
RUE	Ruedersdorf	156.13	343	eP	PKPdf	01 25 56.1	+1.1
NEF	NEVSHA	156.18	310	eP	PKPdf	01 26 05.8	+10
SULR		156.19	314	⇑P	PKPdf	01 26 09.1	+14
CRVS	Cervenica-Dubn	156.25	327	ePKIKP	PKPdf	01 25 55.8	+0.4
CRVS	Cervenica-Dubn	156.25	327	ePKP	PKPdf	01 25 55.8	+0.4
CRVS				e		01 26 26.7	
TRPA	Tarpa	156.26	325	⇓P	PKPdf	01 25 58.9	+3.5
NIE	Niedzica	156.40	330	ePKP	PKPdf	01 25 57.0	+1.4
VOIR		156.53	317	⇓P	PKPdf	01 25 57.2	+1.3
VOIR		156.53	317	⇓PKIKP	PKPdf	01 25 57.2	+1.3
ARR	Arges	156.81	317	⇑P	PKPdf	01 25 56.5	+0.3
KSP	Ksiaz	156.82	337	ePKPdf	PKPdf	01 25 56.5	+0.5
KSP				ePKPbc	PKPbc	01 26 07.7	
KSP				ePKPab	PKPab	01 26 26.5	+0.8
RETH	Rethem/Aller,	156.83	349	ePKPab	PKPab	01 26 26.4	+0.7
	baz=23,slow=4.4						
NRDL	Niedersach Rie	156.93	348	ePKPab	PKPab	01 26 26.7	+0.6
	baz=23,slow=4.4						
OKC	Ostrava-Krasne	156.97	333	ePKPAB	PKPab	01 26 27.7	+1.3
OKC	Ostrava-Krasne	156.97	333	ePKP2	PKPab	01 26 27.7	+1.3
KECS	Kecovo	157.00	328	ePKP2	PKPab	01 26 29.7	+3.1
KECS	Kecovo	157.00	328	ePKP	PKPab	01 26 29.7	+3.1
DRGR		157.04	322	⇓P	PKPdf	01 26 05.9	+9.4
DRGR		157.04	322	⇓PKIKP	PKPdf	01 26 05.9	+9.4
HUMR	Humele	157.05	315	⇑P	PKPdf	01 26 06.8	+10
SZH	Strazhica	157.06	311	eP	PKPab	01 26 27.1	0.0
OSTC	Ostas	157.09	337	ePKPDF	PKPdf	01 25 57.3	+0.9
OSTC				ePKPAB	PKPab	01 26 30.6	+3.7
CHVC	Chvalec	157.11	337	ePKPDF	PKPdf	01 25 57.1	+0.7
CHVC				ePKPAB	PKPab	01 26 30.2	+3.2
EDRB	Edirne	157.11	307	P	PKPab	01 26 26.1	-1.3
ASSE	Asse, Remlinge	157.17	347	ePKPab	PKPab	01 26 27.8	+0.7
	baz=23,slow=4.4						
UPC	Upice	157.19	337	ePKPDF	PKPdf	01 25 57.3	+0.8
UPC				ePKPAB	PKPab	01 26 28.6	+1.2
UPC	Upice	157.19	337	ePKIKP	PKPdf	01 25 57.3	+0.8
DPC	Dobruska-Polom	157.22	336	ePKPDF	PKPdf	01 25 56.9	+0.3
DPC				ePKPAB	PKPab	01 26 28.5	+0.9
DPC				AMS	AMS	02 38 10.0	
	comp=Z,600nm,24.4s						
DPC	Dobruska-Polom	157.22	336	ePKIKP	PKPdf	01 25 56.9	+0.3
DPC				MLR	MLR		
	comp=Z,600nm,24.4s						
ELND	Elena	157.25	311	⇓P	PKPdf	01 25 57.6	+0.8
MORC	Moravsky Berou	157.25	334	ePKP	PKPdf	01 25 56.5	-0.2
MORC				e		01 26 26.9	
MORC	Moravsky Berou	157.25	334	⇓P	PKPdf	01 25 56.7	0.0
MORC	Moravsky Berou	157.25	334	⇓PKIKP	PKPdf	01 25 56.7	0.0
YER	Yerkesik	157.31	295	P	PKPab	01 26 28.3	-0.2
CLL	Collm	157.40	342	ePKPab	PKPab	01 26 28.6	+0.4
	baz=23,slow=4.4						
CLL	Collm	157.40	342	ePKPdf	PKPdf	01 25 57.0	+0.3
CLL				ePKPdf22		01 26 00.0	
CLL				⇓iPKPdiff	sPKPdf	01 26 08.3	-0.9
	comp=Z,20nm,1.1s						
CLL				ePKPdiff2		01 26 11.0	
	comp=Z,13nm,0.9s						
CLL				⇑iPKPab	PKPab	01 26 27.7	-0.5
	comp=Z,40nm,0.9s						
CLL				i PKP(2)		01 26 30.4	
	comp=Z,77nm,1.0s						
CLL				LmV		02 37 00.0	
	comp=Z,200nm,22.0s						
CLL	Collm	157.40	342	⇓ePKIKP	PKPdf	01 25 57.0	+0.3
CLL				i		01 26 08.3	
IBBN	Ibbenburen	157.49	351	ePKPab	PKPab	01 26 29.3	+0.8
	baz=23,slow=4.4						
CLZ	Clausthal	157.50	347	ePKPab	PKPab	01 26 29.6	+0.9
	baz=23,slow=4.4						
BRG	Berggiesshubel	157.53	340	ePKPab	PKPab	01 26 29.5	+0.7
	baz=23,slow=4.4						
PVCC	Panska Ves	157.64	339	ePKPDF	PKPdf	01 25 57.7	+0.6
PVCC				epPKP	sPKPdf	01 26 11.2	+1.6
PVCC				ePKPAB	PKPab	01 26 30.3	+1.0
PVCC	Panska Ves	157.64	339	ePKIKP	PKPdf	01 25 57.7	+0.6
PVCC				e		01 26 11.2	
FBE	Freiberg	157.65	341	ePKPab	PKPab	01 26 30.3	+1.0
	baz=23,slow=4.4						
VLAD	Vladila	157.68	314	⇑P	PKPdf	01 25 57.6	+0.4
PSZ	Piszkesteto	157.68	328	⇑P	PKPdf	01 25 57.4	+0.1
PSZ	Piszkesteto	157.68	328	⇑PKIKP	PKPdf	01 25 57.4	+0.1
VYHS	Vyhne	157.73	330	ePKP2	PKPab	01 26 33.0	+3.2
VYHS	Vyhne	157.73	330	ePKP	PKPab	01 26 33.0	+3.2
NEUB	Neuenburg	157.79	344	ePKPab	PKPab	01 26 30.6	+0.7
	baz=23,slow=4.4						
GTTG	Gottingen	157.87	347	ePKPab	PKPab	01 26 31.0	+0.8
	baz=23,slow=4.4						
JAVC	Velka Javorina	157.94	332	ePKP	PKPdf	01 25 58.4	+0.8
JAVC				e		01 26 32.2	
VRAC	Vranov	157.99	334	e	PKPab	01 26 30.9	0.0
VRAC	Vranov	157.99	334	PKPab	PKPab	01 26 31.3	+0.5
	comp=Z,27nm,0.9s,baz=20,slow=5.7,SNR=13						
SRE	Strehaia	158.04	317	⇑P	PKPdf	01 25 59.8	+2.1
SRE	Strehaia	158.04	317	⇑PKIKP	PKPdf	01 25 59.8	+2.1
PRU	Pruhonice	158.12	338	ePKPAB	PKPab	01 26 31.8	+0.4
PRU	Pruhonice	158.12	338	ePKP2	PKPab	01 26 31.8	+0.4
EZN	Ezine	158.13	303	P	PKPab	01 26 31.4	-0.4
KRUC	Moravsky	158.27	334	ePKP	PKPdf	01 25 57.7	-0.2
KRUC				e		01 26 32.5	
SMOL	Smolenice	158.31	332	ePKP2	PKPab	01 26 36.0	+3.7
SMOL	Smolenice	158.31	332	ePKP	PKPab	01 26 36.0	+3.7
SMG	Samos	158.32	297	P	PKPab	01 26 32.2	-0.6
TANN	Tannenbergstha	158.35	342	ePKPab	PKPab	01 26 33.3	+0.8
	baz=23,slow=4.4						
MOX	Moxa	158.35	344	ePKPab	PKPab	01 26 33.0	+0.6
	baz=23,slow=4.4						
MOX				eL	L	02 38 07.3	
	comp=Z,292nm,19.0s						
PLN	Plauen	158.37	343	ePKPab	PKPab	01 26 33.2	+0.8
	baz=23,slow=4.4						
BZS	Buzias	158.38	321	⇑P	PKPdf	01 25 57.2	-0.9
BZS	Buzias	158.38	321	⇑PKIKP	PKPdf	01 25 57.2	-0.9
TREC	Trest	158.40	336	ePKPDF	PKPdf	01 25 58.5	+0.4
TREC				ePKPAB	PKPab	01 26 32.9	+0.2
TREC	Trest	158.40	336	ePKIKP	PKPdf	01 25 58.5	+0.4
TREC				e		01 26 32.9	
GUNZ	Gunzen	158.43	342	ePKPab	PKPab	01 26 33.7	+1.0
	baz=23,slow=4.4						
SRO	Srobarova	158.48	330	ePKP2	PKPab	01 26 36.2	+3.2
SRO	Srobarova	158.48	330	ePKP	PKPab	01 26 36.2	+3.2
MODS	Modra-Piesok	158.48	332	ePKP2	PKPab	01 26 35.1	+2.1
MODS	Modra-Piesok	158.48	332	ePKP	PKPab	01 26 35.1	+2.1
SMTH	Samothraki Isl	158.48	305	P	PKPab	01 26 32.5	-0.9
WERN	Wernitzgruen	158.49	342	ePKPab	PKPab	01 26 34.1	+1.1
	baz=23,slow=4.4						
NKC	Novy Kostel	158.52	342	ePKPAB	PKPab	01 26 33.1	0.0
NKC	Novy Kostel	158.52	342	ePKP2	PKPab	01 26 33.1	0.0
PGB	Panagyurishte	158.54	311	eP	PKPab	01 26 34.1	+0.5
UBBA	Unterbreizbach	158.55	347	ePKPab	PKPab	01 26 33.5	+0.5
	baz=23,slow=4.4						
ZST	Bratislava	158.69	332	ePKP2	PKPab	01 26 36.0	+2.1
ZST	Bratislava	158.69	332	ePKP	PKPab	01 26 36.0	+2.1
MDVR	Moldovita	158.84	319	⇑P	PKPdf	01 25 58.5	-0.3
ROTZ	Rotzenmuhle	159.01	342	ePKPab	PKPab	01 26 36.4	+1.1
	baz=23,slow=4.4						
VTS	Vitosha	159.11	312	P	PKPab	01 26 34.8	-1.4
VTS	Vitosha	159.11	312	⇑P	PKPab	01 26 36.4	+0.2
VTS	Vitosha	159.11	312	eP	PKPab	01 26 35.8	-0.4
VTS	Vitosha	159.11	312	⇑PKP2	PKPab	01 26 36.4	+0.2
KHC	Kasperske Hory	159.18	339	ePKPDF	PKPdf	01 25 58.6	-0.4
KHC				epPKP	sPKPdf	01 26 15.6	+4.1
KHC				ePKPAB	PKPab	01 26 36.0	0.0
KHC	Kasperske Hory	159.18	339	ePKIKP	PKPdf	01 25 58.6	-0.4
KHC				e		01 26 15.6	
KHC				e		01 26 36.0	
BEBN	Eben Emael	159.21	354	PKPab	PKPab	01 26 36.1	+0.1
MMB	Musomiste	159.27	309	eP	PKPab	01 26 36.2	-0.6
ZKR	Zakros	159.27	290	P	PKPab	01 26 37.6	+0.6
UCC	Uccle	159.30	356	PKPab	PKPab	01 26 36.6	+0.2
AHRW	Bad Neuenahr-A	159.30	351	ePKPab	PKPab	01 26 37.0	+0.6
	baz=23,slow=4.4						
GRF	Grafenberg Arr	159.33	343	ePKPab	PKPab	01 26 37.9	+1.2
	baz=23,slow=4.4						
GRF				eL	L	02 48 45.5	
	comp=Z,203nm,21.8s						
MEM	Membach	159.36	353	PKPab	PKPab	01 26 37.0	+0.3
WET	Wettzell	159.38	340	ePKPab	PKPab	01 26 38.0	+1.1
	baz=23,slow=4.4						
GEC2	GERESS Array S	159.39	338	ePKPab	PKPab	01 26 37.6	+0.5
	baz=23,slow=4.4						
GERES	GERESS Array B	159.39	338	PKP	PKPdf	01 25 59.0	-0.3
	comp=Z,3.6nm,0.8s,baz=90,slow=1.3,SNR=15						
GERES				PKPab	PKPab	01 26 37.6	+0.5
	comp=Z,12nm,0.6s,baz=34,slow=4.5,SNR=22						
GERES	GERESS Array B	159.39	338	PKP2	PKPab	01 26 37.6	+0.5
GERES						02 25 59.1	
CONA	Conrad Observa	159.40	333	ePKPdf	PKPdf	01 25 59.2	-0.2
	comp=Z,8.4nm,1.7s						
CONA				ePKPab	PKPab	01 26 37.6	+0.5
	comp=Z,40nm,1.1s						
TNS	Taunus Mts	159.41	349	ePKPab	PKPab	01 26 37.6	+0.6
	baz=23,slow=4.4						
BSTI	Sart Tilman	159.43	354	PKPab	PKPab	01 26 37.1	+0.2
BCLA	Clavier	159.61	354	PKPab	PKPab	01 26 37.7	0.0
BHOU	Houvegnez	159.61	353	PKPab	PKPab	01 26 38.1	+0.3
OUR	Ouranopolis	159.62	306	P	PKPab	01 26 37.9	-0.4
BGES	Gesves	159.66	355	PKPab	PKPab	01 26 38.2	+0.2
BGES				x	x	01 26 40.7	
NPS	Neapolis	159.75	291	P	PKPab	01 26 39.5	+0.4
BMRD	Maredsous	159.77	355	PKPab	PKPab	01 26 38.6	+0.1
LAST	Lasithi	159.87	290	P	PKPab	01 26 39.4	-0.3
DOU	Dourbes	159.99	356	PKPab	PKPab	01 26 39.8	+0.3
DOU				x	x	01 26 42.3	
PAIG	Paliouri	160.00	305	P	PKPab	01 26 38.4	-1.5
KNT	Kendrikon	160.02	309	P	PKPab	01 26 38.4	-1.6
MOA	Molln	160.06	336	ePKPdf	PKPdf	01 25 59.3	-0.7
	comp=Z,10nm,1.6s						
MOA				PKPab	PKPab	01 26 39.6	-0.3
	comp=Z,32nm,1.1s						
ARSA	Arzberg	160.09	333	ePKPdf	PKPdf	01 25 59.8	-0.3
	comp=Z,4.5nm,1.0s						
ARSA				ePKPab	PKPab	01 26 40.4	+0.3
	comp=Z,4.9nm,0.7s						
VAY	Valandovo	160.17	310	i P	PKPab	01 26 40.4	-0.2
STIP	Stip	160.24	311	i P	PKPab	01 26 40.1	-0.8
WLF	Walferdange	160.28	353	ePKPab	PKPab	01 26 41.8	+1.1
	baz=23,slow=4.4						
WLF	Walferdange	160.28	353	PKPab	PKPab	01 26 40.9	+0.2
IDI	Anoyia	160.33	291	PKP	PKPdf	01 26 01.2	+0.4
	comp=Z,11nm,0.8s,baz=50,slow=5.8,SNR=5.7						
IDI				PKPab	PKPab	01 26 41.5	-0.1
	comp=Z,48nm,0.9s,baz=19,slow=1.5,SNR=10						
SKO	Skopje	160.58	313	i P	PKPab	01 26 43.4	+1.0
RJOB	Jochberg	160.65	338	ePKPab	PKPab	01 26 43.6	+1.1
	baz=23,slow=4.4						
STU	Stuttgart	160.66	346	ePKPab	PKPab	01 26 43.0	+0.6
	baz=23,slow=4.4						
FUR	Furstenfeldbru	160.72	342	ePKPab	PKPab	01 26 43.8	+1.0
	baz=23,slow=4.4						
SOKA	Soboth	160.75	333	ePKPdf	PKPdf	01 26 00.4	-0.5
	comp=Z,10nm,1.3s						
SOKA				PKPab	PKPab	01 26 42.0	-1.0
	comp=Z,36nm,1.2s						
LIT	Litokhoron	160.76	307	P	PKPab	01 26 42.0	-1.3
VAM	Vamos	160.86	292	P	PKPab	01 26 45.4	+1.5
CHAN	Chania	160.97	292	P	PKPab	01 26 45.4	+1.1
IMMV	Iera Moni Meta	161.03	292	P	PKPab	01 26 44.1	-0.5
KBA	Koelnbreinsper	161.04	336	ePKPdf	PKPdf	01 26 00.5	-0.8
	comp=Z,12nm,1.5s						
KBA				ePKPab	PKPab	01 26 47.3	+2.9
	comp=Z,26nm,0.6s,SNR=5.4						
OBKA	Obir	161.08	333	ePKPab	PKPab	01 26 45.6	+1.1
	comp=Z,11nm,0.9s						
BFO	Black Forest	161.25	347	ePKPab	PKPab	01 26 45.6	+0.5
	baz=23,slow=4.4						
BFO	Black Forest	161.25	347	PKPdf	PKPdf	01 26 00.8	-0.5
BFO					PKPab	01 26 41.2	-3.8
BFO	Black Forest	161.25	347	PKIKP	PKPdf	01 26 00.8	-0.5
BFO						01 26 41.3	
MYKA	Terra Mystica	161.32	335	ePKPab	PKPab	01 26 45.0	-0.5
	comp=Z,21nm,0.6s						
PHP	Peshkopia	161.37	313	P	PKPab	01 26 45.8	-0.1
WATA	Walderalm	161.39	340	PKPdf	PKPdf	01 26 01.6	0.0
	comp=Z,2.6nm,0.5s						
WATA				ePKPab	PKPab	01 26 46.3	+0.5
	comp=Z,27nm,0.6s,SNR=9.6						
WTTA	Wattenberg	161.44	340	ePKPdf	PKPdf	01 26 01.3	-0.5
	comp=Z,20nm,1.8s						
WTTA				ePKPab	PKPab	01 26 46.7	+0.6
	comp=Z,32nm,0.8s,SNR=8.4						
MAKR	Makrakomi, Fth	161.45	304	P	PKPdf	01 26 01.0	-0.9
RETA	Reutte	161.48	342	ePKPab	PKPab	01 26 46.6	+0.4
	comp=Z,68nm,0.7s,SNR=16						
MOTA	Moosalm	161.52	341	ePKPdf	PKPdf	01 26 01.4	-0.5
	comp=Z,13nm,1.6s						
MOTA				ePKPab	PKPab	01 26 46.8	+0.4
	comp=Z,94nm,0.9s,SNR=16						
SQTA	Sankt Quirin	161.60	340	ePKPdf	PKPdf	01 26 01.4	-0.4
	comp=Z,6.3nm,1.2s						
SQTA				ePKPab	PKPab	01 26 47.3	+0.5
	comp=Z,55nm,0.9s,SNR=12						
ABTA	Abfaltersbach	161.62	337	ePKPdf	PKPdf	01 26 01.0	-0.9
	comp=Z,14nm,1.3s						
ABTA				ePKPab	PKPab	01 26 46.5	-0.2
	comp=Z,28nm,0.7s,SNR=5.4						
EVR	Evrytania	161.72	304	P	PKPab	01 26 46.0	-1.7
ANX	Ano Chora	161.76	303	P	PKPdf	01 26 02.0	-0.3
KLV	Kalavryta, Ach	161.79	301	P	PKPdf	01 25 59.0	-3.3
DAVA	Damuels	161.90	343	ePKPdf	PKPdf	01 26 01.8	-0.5
	comp=Z,12nm,1.7s						
DAVA				ePKPab	PKPab	01 26 48.4	+0.3
	comp=Z,99nm,1.2s,SNR=14						
FETA	Feichten	161.92	341	ePKPdf	PKPdf	01 26 02.2	-0.1
	comp=Z,7.6nm,1.1s						
FETA				ePKPab	PKPab	01 26 48.9	+0.7
	comp=Z,51nm,1.0s,SNR=6.3						
DRO	Drossia	162.15	301	P	PKPab	01 26 49.0	-0.5
RLS	Riolos of Patr	162.29	302	P	PKPab	01 26 49.3	-0.7
DAVOX	Davos/Dischmat	162.37	343	PKP	PKPdf	01 26 02.9	+0.1
	comp=Z,5.6nm,0.8s,baz=65,slow=8.1,SNR=9.8						
DAVOX				PKPab	PKPab	01 26 50.3	+0.1
	comp=Z,71nm,0.7s,baz=7.9,slow=1.4,SNR=28						
TOA0	Torodi Ar. Sit	163.08	178		PKPdf	01 26 04.7	+0.6
TORD	Torodi Ar. Bea	163.08	178	PKP	PKPdf	01 26 05.1	+1.0
	comp=Z,7.2nm,0.8s,baz=286,slow=1.2,SNR=19						
TORD				PKPab	PKPab	01 26 55.8	+2.0
	comp=Z,39nm,0.7s,baz=170,slow=3.2,SNR=22						
TIP	Timpagrande	165.09	311	⇑P	PKPdf	01 26 04.8	-0.5
MVO	Moncorvo	166.64	32	ePKPdf	PKPdf	01 26 06.9	+0.4
MTE	Manteigas	166.99	35	ePKPdf	PKPdf	01 26 08.5	+1.7
PCBR	Castelo Branco	167.44	37	ePKPdf	PKPdf	01 26 09.1	+2.0
VAE	Valguarnera	167.56	309	PKPab	PKPab	01 27 14.1	+0.8
	comp=Z,14nm,1.0s,baz=259,slow=10,SNR=4.9						
PMTG	Montargil	167.57	41	ePKPdf	PKPdf	01 26 07.1	-0.1
PNCL	Nicolau / Gran	168.01	46	ePKPdf	PKPdf	01 26 10.0	+2.5
PNCL	Nicolau / Gran	168.01	46	ePKPab	PKPab	01 27 15.6	+0.4
EVO	Evora	168.06	43	ePKPdf	PKPdf	01 26 09.4	+1.8
PTEO	Sao Teotonio	168.23	48	ePKPdf	PKPdf	01 26 09.9	+2.2
MORF	Marmelete	168.42	49	eP	PKPdf	01 26 08.3	+0.3
MORF	Marmelete	168.42	49	ePKPdf	PKPdf	01 26 11.4	+3.5
PBEJ	Beja	168.47	44	ePKPdf	PKPdf	01 26 10.0	+2.1
PCVE	Castro Verde	168.62	46	ePKPdf	PKPdf	01 26 10.7	+2.7
PBDV	Barranco-do-Ve	168.92	48	ePKPdf	PKPdf	01 26 10.5	+2.3
ESDC	Sonseca Array	169.19	27	PKP	PKPdf	01 26 09.7	+1.4
	comp=Z,5.7nm,0.8s,baz=337,slow=2.7,SNR=16						
ESDC				PKPab	PKPab	01 27 21.4	+1.1
	comp=Z,1.0nm,0.5s,baz=335,slow=4.3,SNR=9.6						
ESDC				PP	PP	01 31 10.2	+0.8
	comp=Z,1.8nm,1.0s,baz=349,slow=4.7,SNR=5.1						
KEST	Kesra	171.87	315	PKP	PKPdf	01 26 11.2	+1.3
	comp=Z,8.7nm,0.8s,baz=249,slow=5.8,SNR=7.0						
KEST				PKPab	PKPab	01 27 33.0	+0.6
	comp=Z,8.7nm,0.8s,baz=259,slow=3.3,SNR=9.1						
TAM	Tamanrasset	172.14	202		PKPdf	01 26 09.7	-0.8
TAM					PKPab	01 27 35.2	+1.4
TAM	Tamanrasset	172.14	202	PKP2	PKPab	01 27 35.3	+1.4
TAM						02 26 09.7	

IDC ***17*** *01:34:18.6±0.8, 30°.21N×131°.55E, h0km, mb3.5/9, mb1 3.7/12, mb1mx3.6/38, mbtmp3.5/12, ML3.1/3, Error ellipse: s-maj=26.9km s-min=16.8km az=76.0*

JMA ***17*** *01:34:21.3±0.2, 30°.22N×131°.68E, h48km±3km, M3.3*

ISC 17 01:34:21.2±1.8, **30°.25N**±0°.06×**131°.57E**±0°.06, **h16**km±10km, **n22**, σ**0s.58**/32, **mb3.5**/9, **Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMTN	Minamitane	0.59	285	P	Pn	01 34 34.9	-0.1
JMTN				S	Sn	01 34 45.5	+1.2
JTN	Tanegashima 3	0.65	309	P	Pn	01 34 35.6	-0.2
JTN				S	Sn	01 34 46.8	+1.1
JYAK	Yakushimahirau	0.91	270	P	Pg	01 34 39.1	+0.1
JYAK				S	Sn	01 34 52.2	0.0
JTSR	Tashiro 2	1.07	329	P	Pb	01 34 41.1	-0.3
JTSR				S	Sb	01 34 54.9	-0.3
JKC	Kuchinoerabu	1.20	281	P	Pg	01 34 44.6	+0.2
JKC				S	Sg	01 35 00.2	0.0
JNAR	Kushima--Naru	1.30	349	P	Pn	01 34 44.8	+0.1
JNAR				eS	Sb	01 35 01.3	-0.4
JNKG	Nichinankitago	1.42	353	P	Pn	01 34 46.4	0.0
JNKG				S	Sn	01 35 04.6	-0.1

JSU Suzuyama 1.58 323 eS Sn 01 35 08.6 0.0
JTZ Takazaki 1.70 346 P Pn 01 34 50.3 +0.1
JTZ S Sn 01 35 11.5 -0.1
JZO Okuchi 2.06 337 S Sn 01 35 20.3 -0.3
JNU Nakatsue 2.93 349 Pn Pn 01 35 08.3 +1.2
3.6nm,0.3s,baz=204,slow=9.4,SNR=25
JNU Sn Sn 01 35 42.4 +0.5
4.1nm,0.3s,baz=193,slow=15,SNR=7.7
MJAR Matsushiro Arr 8.38 40 Pn Pn 01 36 22.6 +0.6
0.1nm,0.3s,baz=241,slow=14,SNR=6.1
KLR Kul'dur 18.96 0 P Pn 01 38 42.2 -0.1
0.1nm,0.3s,baz=160,slow=6.7,SNR=3.6
SONM Songino Array 26.10 319 P P 01 39 53.5 -0.8
0.2nm,0.4s,baz=126,slow=7.3,SNR=4.1
ZALV Zalesovo Beam 41.00 319 P P 01 42 03.9 +0.7
0.2nm,0.3s,baz=119,slow=8.4,SNR=2.4
MKAR Makanchi Array 41.23 308 P P 01 42 04.6 -0.7
0.2nm,0.6s,baz=108,slow=9.3,SNR=2.8
MKAR PcP PcP 01 44 04.3 +0.2
0.5nm,0.9s,baz=101,slow=2.9,SNR=3.0
KURBB Kurchatov Arra 44.13 313 P P 01 42 27.8 -0.9
0.5nm,0.7s,baz=101,slow=9.1,SNR=7.5
WRA Warramunga Arr 49.97 177 P P 01 43 13.8 -0.8
0.7nm,0.7s,baz=352,slow=8.2,SNR=3.5
ASAR Alice Springs 53.65 177 P P 01 43 42.2 +0.1
0.6nm,0.6s,baz=12,slow=12,SNR=8.1
YKA Yellowknife Ar 73.65 26 P P 01 45 53.3 -0.3
0.3nm,0.8s,baz=292,slow=6.6,SNR=3.6
BRTR Keskin Array B 76.88 308 P P 01 46 13.9 +1.0
0.5nm,0.8s,baz=67,slow=3.7,SNR=3.3
NVAR Mina Array Bea 85.62 48 P P 01 46 59.5 +0.1
0.5nm,0.7s,baz=302,slow=5.2,SNR=4.0

IDC 17 01:45:49.5±4.5, 29°.89S×177°.61W, h50km±35km, mb3.4/2, mb1 3.7/2, mb1mx3.3/32, mbtmp3.6/2, Error ellipse: s-maj=57.4km s-min=28.7km az=160.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.69	337	P	Pn	01 46 03.7	+0.7
	92nm,0.3s,baz=157,slow=20,SNR=9.8						
RAO				S	Sn	01 46 14.5	+1.6
	580nm,0.3s,baz=27,slow=21,SNR=15						
ASAR	Alice Springs	43.48	266	P	P	01 53 47.8	-0.2
	0.3nm,0.4s,baz=104,slow=7.4,SNR=3.7						
WRA	Warramunga Arr	44.42	271	P	P	01 53 55.5	-0.1
	0.6nm,0.3s,baz=110,slow=8.1,SNR=14						
FINES	FINESS Array B	144.78	340	PKP	PKPbc	02 05 19.5	+0.4
	2.2nm,0.8s,baz=18,slow=2.2,SNR=10						

BEO 17 02:12:20.3±1.2, 38°.25N×19°.99E, h0km, ML3.2/2
ATH 17 02:12:22.8, 38°.40N×20°.45E, h7km±2km, ML2.8/22, Error ellipse: s-maj=2.6km s-min=0.8km az=246.0
THE 17 02:12:23.3, 38°.37N×20°.43E, h6km±3km, ML3.1/9, Error ellipse: s-maj=3.9km s-min=0.5km az=253.0
ISC 17 02:12:22.4±0.8, 38°.35N±0°.02×20°.49E±0°.03, h15km±5km, n54, σ0s.82/74, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF1	Kardakata, Kep	0.07	194	P	Pg	02 12 25.5	+0.2
KEF1				S	Sg	02 12 27.5	+0.3
KEF4	Livadi, Kephal	0.10	211	P	Pb	02 12 25.8	-0.2
KEF4				S	Sb	02 12 28.4	-0.1
FSK	Fiskardo	0.13	26	P	Pg	02 12 25.6	-0.4
FSK				S	Sg	02 12 27.7	-0.6
	10μm,0.2s						
AGT1	Agia Thekli	0.13	222	P	Pg	02 12 25.9	-0.1
AGT1				S	Sg	02 12 28.6	+0.3
	18μm,0.3s						
LXRA	Lixouri, Kepha	0.15	196	P	Pb	02 12 27.2	+0.3
LXRA				S	Sb	02 12 30.4	+0.5
ARG2	Argostoli	0.17	181	P	Pb	02 12 27.4	+0.2
ARG2				S	Sb	02 12 30.4	0.0
	35μm,0.2s						
ARGA	Argostoli. Kep	0.17	183	P	Pb	02 12 26.6	-0.6
ARGA				S	Sb	02 12 30.2	-0.2
KEF2	Argostoli. Kep	0.18	181	P	Pb	02 12 26.7	-0.7
KEF2				S	Sb	02 12 30.3	-0.5
VLS	Valsamata	0.18	155	P	Pb	02 12 27.5	0.0
VLS				S	Sb	02 12 31.4	+0.5
	8μm,0.3s						
VLS	Valsamata	0.18	155	P	Pb	02 12 27.5	0.0
VLS				S	Sb	02 12 31.4	+0.5
VLS				AML	AML	02 12 31.6	
	comp=E,15664μm,0.3s						
VLS				AML	AML	02 12 31.7	
	comp=N,16509μm,0.3s						
MGNA	Meganis	0.39	37	P	Pg	02 12 29.5	-0.8
MGNA				S	Sg	02 12 34.7	-0.9
MGNA				AML	AML	02 12 37.3	
	comp=N,8406μm,0.2s						
MGNA				AML	AML	02 12 37.4	
	comp=E,3440μm,0.1s						
LKD2	Lefkada island	0.46	16	P	Pg	02 12 31.7	+0.1
LKD2				AML	AML	02 12 42.1	
	comp=E,2064μm,0.2s						
LKD2				AML	AML	02 12 43.6	
	comp=N,2479μm,0.4s						
VLMS	Volimes, Zakyn	0.49	164	P	Pb	02 12 33.2	+0.5
VLMS				S	Sn	02 12 41.8	-1.3
VLMS				AML	AML	02 12 43.3	
	comp=E,12880μm,0.2s						
VLMS				AML	AML	02 12 43.9	
	comp=N,15545μm,0.3s						
TSLK	Tsoukalades, L	0.49	15	P	Pg	02 12 32.4	+0.2
TSLK				S	Sb	02 12 40.1	+0.2
	comp=N,1μm,0.6s						
TSLK	Tsoukalades, L	0.49	15	P	Pg	02 12 32.3	+0.1
TSLK				AML	AML	02 12 45.1	
	comp=E,3086μm,0.4s						
TSLK				AML	AML	02 12 46.0	
	comp=N,2136μm,0.7s						
AST1	Astakos	0.51	67	P	Pb	02 12 33.2	+0.2
AST1				S	Sb	02 12 41.9	-1.7
	comp=N,5μm,0.3s						
PDO	Prodromos	0.60	65	P	Pb	02 12 34.9	+0.3
PDO				S	Sn	02 12 44.7	-1.1
	comp=N,3μm,0.4s						
PDO	Prodromos	0.60	65	P	Pb	02 12 34.8	+0.2
PDO				AML	AML	02 12 49.2	
	comp=N,4620μm,0.3s						
PDO				AML	AML	02 12 49.5	
	comp=E,3348μm,0.4s						
VTN	Vitineika	0.69	128	P	Pn	02 12 36.9	-0.8
RLS	Riolos of Patr	0.82	110	P	Pn	02 12 39.2	-0.2
RLS				S	Sn	02 12 52.2	+0.9
	comp=E,442nm,0.5s						
RLS	Riolos of Patr	0.82	110	P	Pn	02 12 38.9	-0.4
RLS				AML	AML	02 13 01.3	
	comp=N,942μm,0.5s						
RLS				AML	AML	02 13 01.6	
	comp=E,816μm,0.6s						
PVO	Paravola	0.85	71	P	Pn	02 12 40.0	+0.1
PVO				S	Sn	02 12 54.0	+1.8
	comp=E,1μm,0.4s						
PVO	Paravola	0.85	71	P	Pn	02 12 39.8	-0.1
PVO				AML	AML	02 12 56.5	
	comp=N,2477μm,0.5s						
PVO				AML	AML	02 13 00.1	
	comp=E,2130μm,0.4s						
DRO	Drossia	1.04	112	P	Pg	02 12 42.5	+0.1
DRO				AML	AML	02 13 05.8	
	comp=N,2142μm,0.4s						
DRO				AML	AML	02 13 06.3	
	comp=E,2014μm,0.4s						
ANX	Ano Chora	1.15	77	P	Pg	02 12 44.5	0.0
ANX				AML	AML	02 13 09.4	
	comp=E,1597μm,0.6s						
ANX				AML	AML	02 13 09.6	
	comp=N,2390μm,0.5s						
EVR	Evrytania	1.18	61	P	Pg	02 12 44.8	-0.4
EVR				AML	AML	02 13 08.9	
	comp=N,530μm,0.7s						
EVR				AML	AML	02 13 12.7	
	comp=E,496μm,0.5s						
IGT	Igoumenitsa	1.19	354	P	Pn	02 12 43.5	-1.0
IGT				AML	AML	02 13 06.1	
	comp=N,481μm,0.3s						
IGT				AML	AML	02 13 10.3	
	comp=E,535μm,0.7s						
SERG	Sergoula	1.23	86	P	Pg	02 12 46.1	0.0
SERG				AML	AML	02 13 10.0	
	comp=N,1179μm,0.4s						
SERG				AML	AML	02 13 10.2	
	comp=E,842μm,0.3s						
TRIZ	Trizonia	1.24	89	P	Pg	02 12 46.1	-0.3
AMT	Artemida-Makis	1.26	130	P	Pg	02 12 47.9	+1.3
AMT				AML	AML	02 13 13.6	
	comp=N,798μm,0.4s						
AMT				AML	AML	02 13 16.8	
	comp=E,970μm,0.8s						
KALE	Kalithea	1.30	88	P	Pg	02 12 47.1	-0.3
KALE				AML	AML	02 13 13.4	
	comp=N,1034μm,0.6s						
KALE				AML	AML	02 13 14.6	
	comp=E,529μm,0.6s						
KLV	Kalavryta, Ach	1.34	103	P	Pg	02 12 48.1	-0.1
KLV	Kalavryta, Ach	1.34	103	P	Pg	02 12 48.1	-0.1
KLV				AML	AML	02 13 16.9	
	comp=E,322μm,0.6s						
KLV				AML	AML	02 13 19.4	
	comp=N,256μm,0.5s						
MAKR	Makrakomi, Fth	1.45	62	P	Pg	02 12 50.5	+0.3
MAKR				AML	AML	02 13 19.5	
	comp=E,833μm,0.6s						
MAKR				AML	AML	02 13 22.0	
	comp=N,623μm,0.7s						
KEK	Kerkira	1.47	339	P	Pg	02 12 50.5	-0.1
AGG	Agios Georgios	1.59	64	P	Pg	02 12 52.9	0.0
AGG				AML	AML	02 13 24.9	
	comp=E,429μm,0.4s						
AGG				AML	AML	02 13 34.8	
	comp=N,259μm,0.5s						
ITM	Ithomi	1.63	135	P	Pg	02 12 54.8	+1.1
THL	Klokotos Trika	1.70	44	P	Pg	02 12 55.2	+0.2
THL				AML	AML	02 13 26.5	
	comp=N,214μm,0.7s						
THL				AML	AML	02 13 28.1	
	comp=E,280μm,0.8s						
VLX	Vlachokerasia	1.78	123	P	Pg	02 12 57.4	+0.7
VLX				AML	AML	02 13 33.4	
	comp=N,607μm,0.6s						
VLX				AML	AML	02 13 36.1	
	comp=E,445μm,0.6s						
PROD	Prodromos	1.90	92	P	Pg	02 12 58.4	-0.4
PROD				AML	AML	02 13 36.7	
	comp=N,272μm,0.3s						
PROD				AML	AML	02 13 37.5	
	comp=E,402μm,0.6s						
LTK	Loutraki	1.98	99	P	Pg	02 12 59.0	-1.4
LOUT	Loutraki	1.99	100	P	Pg	02 12 59.3	-1.3
LKR	Lokris	1.99	80	P	Pg	02 12 59.1	-1.5
LKR				AML	AML	02 13 33.1	
	comp=N,137μm,0.4s						
LKR				AML	AML	02 13 33.2	
	comp=E,143μm,0.3s						
DYR	Agios Nikonas	2.15	137	P	Pg	02 13 03.1	-0.6
VIL2	Platees	2.19	93	P	Pg	02 13 03.2	-1.2
MRKA	Markates	2.45	81	P	Pb	02 13 05.9	-0.3
PDG	Podgorica	4.19	347	ePn	Pn	02 13 24.5	-1.2
PDG				eSn	Sn	02 14 14.7	+0.4
BOSS	Bosilegrad	4.41	19	ePn	Pn	02 13 30.5	+1.7
TREB	Trebinje	4.66	340	ePn	Pn	02 13 31.7	-0.5
VTS	Vitosha	4.75	25	ePn	Pn	02 13 36.7	+3.1
SJES	Sjenica	4.93	356	ePn	Pn	02 13 35.8	-0.2
SJES				eSn	Sn	02 14 33.6	+0.9
IVAS	Ivanjica	5.23	357	ePn	Pn	02 13 39.7	-0.4
IVAS				eSn	Sn	02 14 39.9	-0.3
BOVS	Bovan	5.36	9	ePn	Pn	02 13 43.7	+1.9
DIVS	Divibare	5.76	356	ePn	Pn	02 13 48.2	+0.8

IDC 17 02:17:22.2±0.7, 22°.75S×68°.90W, h104km±4km, mb3.5/4, mb1 3.6/9, mb1mx3.4/32, mbtmp3.8/9, Error ellipse: s-maj=22.0km s-min=17.8km az=78.0
GUC 17 02:17:22.8±0.6, 22°.66S×69°.10W, h103km±3km, ML3.9
SJA 17 02:17:22.2±0.8, 22°.70S×69°.14W, h108km±4km, ML3.1, MW3.4
ISC 17 02:17:22.0±0.6, 22°.77S±0°.05×69°.05W±0°.05, h108km±4km, n35, σ1s.32/57, mb3.9/4, 9C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.20	38	eP	Pn	02 17 38.2	+0.6
LVC				i S	Sn	02 17 49.3	+0.1
LVC	Limon Verde	0.20	38	P	Pn	02 17 38.0	+0.4
	685nm,0.3s,baz=59,slow=6.0,SNR=5200						
LVC				LR	LR	02 17 45.4	
	comp=Z,88nm,20.5s,baz=52,slow=168						
LVC				S	Sn	02 17 49.3	+0.1
	1μm,0.3s,baz=222,slow=22,SNR=236						
LVC	Limon Verde	0.20	38	eP	Pn	02 17 38.2	+0.6
LVC				eS	Sn	02 17 50.2	+1.0
LVC				IAML		02 17 51.0	
	comp=Z,2μm,0.1s						
PB06	IPOC Station P	0.49	277	⇑iP	Pn	02 17 39.2	+0.6
PB06				i S	Sn	02 17 52.0	+0.7
PB06				IAML		02 17 52.6	
	comp=E,8μm,0.1s						
PB06	IPOC Station P	0.49	277	eP	Pn	02 17 39.3	+0.6
PB15	IPOC Station P	0.59	222	⇑iP	Pn	02 17 40.6	+1.2
PB15				i S	Sn	02 17 54.4	+1.8
PB15	IPOC Station P	0.59	222	eP	Pn	02 17 40.7	+1.2
PB15				eS	Sn	02 17 54.3	+1.7
PB03	IPOC Station P	0.97	318	⇑iP	Pn	02 17 42.8	-0.1
PB03				eS	Sn	02 17 57.4	-1.2
PB03				IAML		02 18 00.4	
	comp=E,3μm,0.3s						
PB03	IPOC Station P	0.97	318	eP	Pn	02 17 42.8	-0.1
PB03				eS	Sn	02 17 58.0	-0.6
PB09	IPOC Station P	0.99	349	⇓iP	Pn	02 17 43.5	+0.4
PB09				eS	Sn	02 17 58.8	-0.1
PB09				IAML		02 18 01.5	
	comp=N,4μm,0.4s						
PB09	IPOC Station P	0.99	349	eP	Pn	02 17 43.5	+0.4
PB09				eS	Sn	02 17 59.3	+0.4
PB05	IPOC Station P	1.07	265	⇑iP	Pn	02 17 44.2	+0.4
PB05				i S	Sn	02 18 00.5	+0.2
PB05	IPOC Station P	1.07	265	eP	Pn	02 17 44.3	+0.4
PB04	IPOC Station P	1.11	293	⇑iP	Pn	02 17 44.4	+0.1
PB04				i S	Sn	02 18 01.4	+0.2
PB04				IAML		02 18 09.8	
	comp=N,2μm,0.3s						
PB04	IPOC Station P	1.11	293	eP	Pn	02 17 44.5	+0.1
PB07	IPOC Station P	1.30	323	⇑iP	Pn	02 17 46.3	-0.2
PB07				eS	Sn	02 18 03.7	-1.3
PB07				IAML		02 18 05.0	
	comp=E,4μm,0.4s						
PB10	IPOC Station P	1.57	242	⇑iP	Pn	02 17 49.9	+0.4
PB10				i S	Sn	02 18 10.4	-0.1
PB10				IAML		02 18 11.6	
	comp=E,1μm,0.2s						
PB10	IPOC Station P	1.57	242	eP	Pn	02 17 50.0	+0.4
PB10				eS	Sn	02 18 10.8	+0.3
PB02	IPOC Station P	1.65	331	⇑iP	Pn	02 17 50.1	-0.4
PB02				eS	Sn	02 18 11.0	-1.3
PB02				IAML		02 18 12.7	
	comp=E,5μm,0.3s						
PB02	IPOC Station P	1.65	331	eP	Pn	02 17 50.2	-0.4
PB01	IPOC Station P	1.77	346	⇑iP	Pn	02 17 51.7	-0.3
PB01				eS	Sn	02 18 13.5	-1.4
PB01				IAML		02 18 16.0	
	comp=E,3μm,0.5s						
YJA	Yavi	3.32	80	eP	Pn	02 18 15.6	+3.0
YJA				IAML		02 18 16.6	
	comp=Z,9.9nm,0.4s						
SLA	San Lorenzo	3.78	122	eP	Pn	02 18 22.1	+3.6
LPAZ	La Paz	6.51	8	P	Pn	02 18 56.3	+0.5
	comp=Z,0.7nm,0.3s,baz=196,slow=7.9,SNR=17						
CFA	Coronel Fontan	8.83	176	P	Pn	02 19 25.5	-1.3
	comp=Z,2.0nm,0.3s,baz=355,slow=2.9,SNR=15						
CFA				S	Sn	02 20 59.2	-5.3
	comp=Z,1.6nm,0.3s,baz=124,slow=23,SNR=7.0						
SIV	San Ignacio	10.10	50	P	Pn	02 19 41.0	-3.1
	comp=Z,0.8nm,0.3s,baz=249,slow=10,SNR=18						
SIV				S	Sn	02 21 24.6	-11
	comp=Z,0.6nm,0.3s,baz=298,slow=22,SNR=6.0						
CPUP	Villa Florida	11.24	111	P	Pn	02 19 57.0	-2.3
	comp=Z,0.1nm,0.3s,baz=286,slow=10,SNR=4.5						
PLCA	Paso Flores	17.95	184	P	P	02 21 23.1	-0.6
	comp=Z,0.0nm,0.3s,baz=6.0,slow=19,SNR=2.5						
BDFB	Brasilia	21.07	74	P	P	02 21 57.8	-0.1
	comp=Z,2.6nm,0.4s,baz=253,slow=10,SNR=12						
TXAR	Lajitas Array	61.60	326	P	P	02 27 29.1	+0.8
	comp=Z,0.4nm,1.0s,baz=134,slow=3.9,SNR=3.1						
TORD	Torodi Ar. Bea	77.90	70	P	P	02 29 08.0	-0.5
	comp=Z,2.3nm,0.6s,baz=255,slow=5.1,SNR=34						
TORD				pP	pP	02 29 36.3	-0.6
	comp=Z,0.8nm,0.6s,baz=260,slow=5.4,SNR=3.6						
YKA	Yellowknife Ar	92.34	341	P	P	02 30 19.5	-0.1
	comp=Z,0.2nm,0.9s,baz=131,slow=5.4,SNR=4.2						
YKA				pP	pP	02 30 49.0	+0.5
	comp=Z,0.2nm,0.6s,baz=122,slow=5.9,SNR=3.1						
YKA				sP	sP	02 30 59.6	-0.6
	comp=Z,0.4nm,0.7s,baz=137,slow=4.4,SNR=6.8						
ASAR	Alice Springs	128.73	207	PKP	PKPdf	02 36 18.4	+1.0
	comp=Z,0.2nm,0.3s,baz=174,slow=2.8,SNR=2.6						
WRA	Warramunga Arr	131.80	210	PKP	PKPdf	02 36 23.8	+0.5
	comp=Z,0.9nm,0.5s,baz=142,slow=2.0,SNR=2.3						
MKAR	Makanchi Array	146.73	37	PKPbc	PKPbc	02 36 52.1	+0.8
	comp=Z,0.3nm,0.8s,baz=337,slow=3.3,SNR=3.4						
MKAR				pPKPbc	pPKPdf	02 37 19.5	-0.4
	comp=Z,0.7nm,0.8s,baz=316,slow=3.3,SNR=5.2						

OSPL 17 02:18:55.8±2.4, 17°.91N×68°.49W, h0km±999km, ML2.9
RSPR 17 02:18:57.3, 18°.00N×68°.44W, h83km±3km, MD3.3/15
NEIC 17 02:18:57.1±2.7, 18°.3N±0°.2×68°.35W±0°.07, h99km±12km, Error ellipse: s-maj=27.9km s-min=5.4km az=196.0
ISC 17 02:18:56.5±1.3, 18°.25N±0°.09×68°.39W±0°.03, h99km±8km, n62, σ1s.36/83, 11C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.26	2	⇑i P	Pn	02 19 10.8	0.0
PCDR	Punta Cana, DR	0.26	2	eS	Sn	02 19 21.8	+0.3
PCDR	Punta Cana, DR	0.26	2		Pn	02 19 10.8	0.0
PCDR					Sn	02 19 21.8	+0.3
DR12	Loma Pena Alta	1.08	300		Pn	02 19 16.8	-1.0
DR12					Sn	02 19 32.4	-1.4
MPR	Mayaguez	1.19	92	Pn	Pn	02 19 19.2	+0.2
MPR					Sn	02 19 34.6	-1.4
AGPR	Aguadilla, PR	1.24	80	⇓eP	Pn	02 19 20.9	+1.3
AGPR	Aguadilla, PR	1.24	80	eS	Sn	02 19 38.5	+1.6
AGPR	Aguadilla, PR	1.24	80		Pn	02 19 20.9	+1.3
AGPR					Sn	02 19 38.5	+1.6
CRPR	Cabo Rojo, PR	1.24	101	⇑i P	Pn	02 19 19.9	+0.2
CRPR	Cabo Rojo, PR	1.24	101	eS	Sn	02 19 36.7	-0.4
CRPR	Cabo Rojo, PR	1.24	101		Pn	02 19 19.9	+0.2
CRPR					Sn	02 19 36.7	-0.4
LSP	Las Mesas	1.24	93	⇑eP	Pn	02 19 20.1	+0.4
LSP	Las Mesas	1.24	93	eS	Sn	02 19 37.2	0.0
LSP	Las Mesas	1.24	93		Pn	02 19 20.1	+0.4
LSP					Sn	02 19 37.2	0.0
MLPR	Magueyes Islan	1.31	102	⇑i P	Pn	02 19 19.6	-0.9
MLPR	Magueyes Islan	1.31	102	eS	Sn	02 19 37.2	-1.3
MLPR	Magueyes Islan	1.31	102		Pn	02 19 19.6	-0.9
MLPR					Sn	02 19 37.2	-1.3
SDD	Santo Domingo	1.46	278	i P	Pn	02 19 20.5	-1.7
SDD				eS	Sn	02 19 39.6	-2.1
SDD				IAML		02 19 44.7	
	comp=Z,58nm,0.8s						
SDD	Santo Domingo	1.46	278		Pn	02 19 22.3	+0.1
GBPR	Guanica, Bosqu	1.46	100	⇑eP	Pn	02 19 22.6	+0.3
GBPR	Guanica, Bosqu	1.46	100	eS	Sn	02 19 41.7	-0.1
GBPR	Guanica, Bosqu	1.46	100		Pn	02 19 22.6	+0.3
GBPR					Sn	02 19 41.7	-0.1
AOPR	Arecibo Observ	1.56	86	⇑eP	Pn	02 19 24.2	+0.7
AOPR	Arecibo Observ	1.56	86	⇑eP	Pn	02 19 24.4	+0.9
AOPR	Arecibo Observ	1.56	86	eS	Sn	02 19 44.5	+0.5
AOPR	Arecibo Observ	1.56	86		Pn	02 19 24.4	+0.9
AOPR					Sn	02 19 44.5	+0.5
OBIP	Obispado Ponce	1.71	97	⇑i P	Pn	02 19 25.0	-0.3
OBIP	Obispado Ponce	1.71	97	eS	Sn	02 19 46.9	-0.4
OBIP	Obispado Ponce	1.71	97		Pn	02 19 25.0	-0.3
OBIP					Sn	02 19 46.9	-0.4
CELP	Cerrillos	1.73	95	⇓eP	Pn	02 19 26.0	+0.3
CELP				eS	Sn	02 19 47.6	-0.2
CELP	Cerrillos	1.73	95		Pn	02 19 26.0	+0.3
CELP					Sn	02 19 47.6	-0.2
EMPR	Esperanza - Ma	1.78	82	⇑eP	Pn	02 19 27.4	+1.1
EMPR	Esperanza - Ma	1.78	82	eS	Sn	02 19 50.1	+1.1
EMPR	Esperanza - Ma	1.78	82		Pn	02 19 27.4	+1.1
EMPR					Sn	02 19 50.1	+1.1
ICMP	Isla Caja de M	1.81	101	Pn	Pn	02 19 26.7	+0.1
BANI	BANI	1.87	275	Pn	Pn	02 19 28.6	+1.1
BON1	Bonao	2.02	290	i P	Pn	02 19 29.5	+0.2
BON1				eS	Sn	02 19 54.8	+0.4
SJG	San Juan	2.14	93		Pn	02 19 31.6	+0.8
IGPR	InterUniversit	2.19	97	⇑eP	Pn	02 19 31.6	0.0
IGPR	InterUniversit	2.19	97		Sn	02 19 57.3	-1.0
GCPR	Guaynabo City	2.19	88	⇑eP	Pn	02 19 32.0	+0.4
GCPR	Guaynabo City	2.19	88		Sn	02 19 55.6	-2.9
GCPR	Guaynabo City	2.19	88		Pn	02 19 32.0	+0.4
PDPR	Patillas Dam,	2.27	95	⇑eP	Pn	02 19 32.7	+0.2
PDPR	Patillas Dam,	2.27	95		Sn	02 19 59.0	-1.1
PDPR	Patillas Dam,	2.27	95		Pn	02 19 32.7	+0.2
CBYP	Canovanas	2.41	89	Pn	Pn	02 19 34.9	+0.4
HUMP	Col San Antoni	2.42	92	⇑eP	Pn	02 19 35.4	+0.9
HUMP	Col San Antoni	2.42	92		Sn	02 20 04.1	+0.4
HUMP	Col San Antoni	2.42	92		Pn	02 19 35.4	+0.9
SC01	Santiago de lo	2.50	298	i P	Pn	02 19 37.1	+1.4
SC01				eS	Sn	02 20 08.7	+3.0
SC01				IAML		02 20 16.6	
	comp=Z,127nm,0.3s						
SC01	Santiago de lo	2.50	298		Pn	02 19 37.4	+1.7
MTP	Monte Pirata	2.70	93	⇑eP	Pn	02 19 39.1	+0.8
MTP	Monte Pirata	2.70	93	eS	Sn	02 20 11.5	+1.1
MTP	Monte Pirata	2.70	93		Pn	02 19 39.1	+0.8
MTP					Sn	02 20 11.5	+1.1
SDDR	Presa de Saban	2.84	285	i P	Pn	02 19 42.7	+2.5
SDDR				eS	Sn	02 20 15.1	+1.3
SDDR				IAML		02 20 27.1	
	comp=Z,44nm,0.7s						
SDDR	Presa de Saban	2.84	285		Pn	02 19 42.8	+2.5
CUPR	Culebra, Puert	2.96	88	Pn	Pn	02 19 44.4	+2.8
CUPR					Sn	02 20 12.7	-3.8
STVI	Saint Thomas	3.27	88	⇑eP	Pn	02 19 46.7	+0.9
STVI	Saint Thomas	3.27	88		Pn	02 19 46.7	+0.9
CDVI	St. Croix	3.49	98	Pn	Pn	02 19 48.6	-0.1
CDVI					Sn	02 20 25.1	-4.1
GRTK	Grand Turk	4.15	322	Pn	Pn	02 19 55.7	-1.9
GRTK					Sn	02 20 40.6	-4.4

CNRM 17 02:39:07.6±1.0, 36°.41N×9°.87W, h86km±16km, Error ellipse: s-maj=8.7km s-min=4.8km az=106.0
SFS 17 02:39:11.0, 36°.50N×9°.80W, h16km, ML3.0, SW. CABO DE SAN VICENTE
LDG 17 02:39:12.3±0.2, 36°.57N×9°.89W, h15km, Ml2.9/3, Error ellipse: s-maj=2.9km s-min=2.1km az=51.0
MDD 17 02:39:12.0±1.1, 36°.60N×9°.88W, h16km±9km, mbLg3.1/24, Error ellipse: s-maj=12.7km s-min=6.9km az=44.0, PRXIMO
IGIL 17 02:39:13.7, 36°.49N×9°.88W, h31km, ML3.0
INMG 17 02:39:13.1±1.3, 36°.49N×9°.89W, h31km±13km, MD2.4, ML2.6, Error ellipse: s-maj=9.1km s-min=3.9km az=56.0
ISC 17 02:39:10.1±2.9, 36°.49N±0°.05×9°.86W±0°.07, h33km±6km, n98, σ1s.90/178, 6C, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.05	52	⇑eP	Pn	02 39 30.2	+1.7
PFVI				eS	Sn	02 39 43.0	+1.1
PFVI				A	A	02 39 44.2	
	81nm,0.1s						
PFVI	Vila Bisbo	1.05	52	⇑P	Pn	02 39 30.2	+1.7
	44nm,0.1s,SNR=18						
PFVI				S	Sn	02 39 43.1	+1.1
	72nm,0.1s,SNR=5.5						
PFVI	Vila Bisbo	1.05	52	P	Pn	02 39 30.3	+1.7
PFVI				S	Sn	02 39 43.1	+1.1
	SNR=13						
PFVI				S	Sb	02 39 43.4	0.0
MORF	Marmelete	1.27	49	eP	Pn	02 39 33.3	+1.8
MORF				eS	Sn	02 39 48.0	+0.5
MORF				AML	AML	02 39 50.8	
	comp=E,182nm,0.2s						
MORF	Marmelete	1.27	49	⇑eP	Pn	02 39 33.3	+1.8
MORF				eS	Sn	02 39 48.5	+1.0
MORF				A	A	02 39 50.5	
	comp=E,75nm,0.1s						
MORF	Marmelete	1.27	49	P	Pn	02 39 33.3	+1.8
MORF				S	Sn	02 39 48.5	+1.0
	comp=E,75nm,0.1s						
PTEO	Sao Teotonio	1.40	40	eP	Pn	02 39 34.9	+1.7

PTEO eS Sn 02 39 51.4 +0.9
PTEO A A 02 39 53.2
comp=E,28nm,0.2s
PTEO Sao Teotonio 1.40 40 P Pn 02 39 34.9 +1.7
PTEO S **Sn 02 39 51.4 +0.9**
comp=E,14nm,0.2s
PBDV Barranco-do-Ve 1.73 63 eP **Pn 02 39 39.9 +2.2**
PBDV eS **Sn 02 39 59.7 +1.1**
PBDV A A 02 40 09.3
comp=E,22nm,0.4s
PBDV Barranco-do-Ve 1.73 63 P Pn 02 39 39.9 +2.2
PBDV S **Sn 02 39 59.7 +1.1**
comp=E,22nm,0.4s
PCVE Castro Verde 1.85 51⇑ePn **Pn 02 39 41.7 +2.2**
PCVE eSn **Sn 02 40 03.0 +1.2**
PCVE A A 02 40 04.2
comp=E,22nm,0.3s
PCVE Castro Verde 1.85 51 P Pn 02 39 41.7 +2.2
PCVE S **Sn 02 40 03.0 +1.2**
comp=E,22nm,0.3s
PNCL Nicolau / Gran 1.94 33⇑ePn **Pn 02 39 42.1 +1.4**
PNCL eSn **Sn 02 40 04.4 +0.5**
PNCL A A 02 40 06.2
comp=E,19nm,0.1s
PNCL Nicolau / Gran 1.94 33 P Pn 02 39 42.1 +1.4
PNCL S **Sn 02 40 04.4 +0.5**
comp=E,19nm,0.1s
PVAQ Vaqueiros 1.95 61 ePn **Pn 02 39 42.8 +2.0**
PVAQ eSn **Sn 02 40 04.9 +0.8**
PVAQ A A 02 40 07.7
comp=E,36nm,0.1s
PVAQ Vaqueiros 1.95 61 P Pn 02 39 42.8 +2.0
PVAQ S **Sn 02 40 04.9 +0.8**
comp=E,36nm,0.1s
EGRO El Granado 2.17 60 P Pn 02 39 46.7 +2.8
comp=E,0.6nm,0.1s,SNR=11
EGRO S **Sn 02 40 10.8 +1.1**
comp=E,16nm,0.1s,SNR=13
PBEJ Beja 2.21 45 ePn **Pn 02 39 45.9 +1.4**
PBEJ eSn **Sn 02 40 10.7 0.0**
PBEJ A A 02 40 12.3
comp=E,12nm,0.1s
PBEJ Beja 2.21 45 P Pn 02 39 45.9 +1.4
PBEJ S **Sn 02 40 10.7 0.0**
comp=E,6.2nm,0.1s
PMAFR Mafra 2.51 10 ePn **Pn 02 39 49.9 +1.4**
PMAFR eSn **Sn 02 40 18.2 +0.2**
PMAFR A A 02 40 20.3
comp=E,97nm,0.2s
PMAFR Mafra 2.51 10 P Pn 02 39 49.8 +1.3
comp=E,7.1nm,0.1s,SNR=12
PMAFR S **Sn 02 40 17.8 -0.2**
comp=E,144nm,0.2s,SNR=27
EVO Evora 2.52 35 ePn **Pn 02 39 49.9 +1.3**
EVO eSn **Sn 02 40 17.9 -0.3**
EVO A A 02 40 20.7
comp=E,25nm,0.1s
EVO Evora 2.52 35 P Pn 02 39 49.9 +1.3
EVO S **Sn 02 40 17.9 -0.3**
comp=E,25nm,0.1s
EVO Evora 2.52 35 eP **Pn 02 39 49.9 +1.3**
EVO eS **Sn 02 40 17.9 -0.3**
PBAR Barrancos 2.81 52 ePn **Pn 02 39 54.7 +2.0**
PBAR eSn **Sn 02 40 26.6 +1.2**
PBAR Barrancos 2.81 52 P Pn 02 39 54.7 +2.0
PBAR S **Sn 02 40 26.6 +1.2**
EMIN Mina Concepcio 2.85 62 P Pn 02 39 54.9 +1.7
comp=E,0.8nm,0.1s,SNR=21
EMIN S **Sn 02 40 26.7 +0.2**
comp=E,6.0nm,0.1s,SNR=6.2
PMTG Montargil 2.89 26 ePn **Pn 02 39 55.0 +1.3**
PMTG eSn **Sn 02 40 26.6 -0.7**
PMTG A A 02 40 29.4
comp=E,16nm,0.1s
PMTG Montargil 2.89 26 P Pn 02 39 55.0 +1.3
PMTG S **Sn 02 40 26.6 -0.7**
comp=E,16nm,0.1s
PESTR Estremoz 2.98 36 ePn **Pn 02 39 56.9 +1.8**
PESTR eSn **Sn 02 40 29.5 -0.2**
PESTR A A 02 40 31.8
comp=E,4.8nm,0.2s
PESTR Estremoz 2.98 36 P Pn 02 39 54.5 -0.6
PESTR S **Sn 02 40 29.2 -0.5**
EBAD Badajoz 3.20 44 ⇑P **Pn 02 39 59.1 +1.1**
comp=E,2.4nm,0.1s,SNR=18
EBAD S **Sn 02 40 34.6 -0.4**
comp=E,13nm,0.1s,SNR=9.1
PTOM Tomar 3.33 20 ePn **Pn 02 40 01.3 +1.5**
PTOM eSn **Sn 02 40 37.4 -0.8**
PTOM A A 02 40 40.6
comp=E,13nm,0.2s
PTOM Tomar 3.33 20 P Pn 02 40 01.3 +1.5
PTOM S **Sn 02 40 37.4 -0.8**
comp=E,6.3nm,0.2s
PMRV Marv??o 3.53 33 ePn **Pn 02 40 03.8 +1.3**
PMRV eSn **Sn 02 40 42.0 -1.1**
PMRV A A 02 40 45.1
comp=E,8.1nm,0.4s
PMRV Marv??o 3.53 33 P Pn 02 40 03.8 +1.3
PMRV S **Sn 02 40 42.0 -1.1**
comp=E,8.1nm,0.4s
ECEU Ceuta 3.68 98 P Pn 02 40 07.4 +2.8
comp=E,1.3nm,0.1s,SNR=5.4
SMIR Smir Dam 3.72 101 P Pn 02 40 00.4 -4.7
SMIR S **Sn 02 40 45.6 -2.2**
PCAS Casmilo, Conde 3.72 16 ePn **Pn 02 40 06.5 +1.3**
PCAS eSn **Sn 02 40 47.4 -0.4**
PCAS A A 02 40 49.7
comp=E,7.3nm,0.2s
PCAS Casmilo, Conde 3.72 16 P Pn 02 40 06.5 +1.3
PCAS S **Sn 02 40 47.4 -0.4**
comp=E,7.3nm,0.2s
PCBR Castelo Branco 3.84 29 ePn **Pn 02 40 08.4 +1.6**
PCBR eSn **Sn 02 40 49.9 -0.9**
PCBR A A 02 40 55.9
comp=E,4.6nm,0.3s
PCBR Castelo Branco 3.84 29 P Pn 02 40 08.4 +1.6
PCBR S **Sn 02 40 49.9 -0.9**
comp=E,2.3nm,0.3s
ECAB El Cabril 3.88 65 P Pn 02 40 09.4 +1.9
comp=E,0.9nm,0.1s,SNR=5.8
ECAB S **Sn 02 40 51.3 -0.6**
comp=E,3.7nm,0.1s,SNR=8.5
COI Coimbra 3.89 17 eSn **Sn 02 40 50.7 -1.2**
COI A A 02 40 56.2
comp=E,12nm,0.4s
COI Coimbra 3.89 17 S Sn 02 40 50.7 -1.2
comp=E,5.9nm,0.4s
EMIJ Mijas 4.10 87 P Pn 02 40 12.0 +1.6
comp=E,0.2nm,0.1s,SNR=6.4
EMIJ S **Sn 02 40 57.4 +0.2**
comp=E,2.4nm,0.1s,SNR=6.2
MTE Manteigas 4.31 24 ePn **Pn 02 40 14.5 +1.2**
MTE eSn **Sn 02 41 00.8 -1.7**
MTE A A 02 41 03.9
comp=E,6.4nm,0.3s
MTE Manteigas 4.31 24 P Pn 02 40 14.5 +1.2
MTE S **Sn 02 41 00.8 -1.7**
comp=E,3.2nm,0.3s
SRHM Skhour des Reh 4.32 157 P Pn 02 40 12.8 -0.6
SRHM S **Sn 02 41 04.6 +1.8**
PVIS Viseu 4.50 19 ePn **Pn 02 40 16.8 +0.9**
PVIS eSn **Sn 02 41 05.6 -1.4**
PVIS A A 02 41 08.0
comp=E,8.7nm,0.3s
PVIS Viseu 4.50 19 P Pn 02 40 16.8 +0.9
PVIS S **Sn 02 41 05.6 -1.4**
comp=E,4.3nm,0.3s
EADA Adamuz 4.54 67 P Pn 02 40 18.6 +2.2
comp=E,0.6nm,0.1s,SNR=16
EADA S **Sn 02 41 06.2 -1.8**
comp=E,5.3nm,0.1s
EPLA Plasencia 4.65 39 P Pn 02 40 19.7 +1.7
comp=E,0.7nm,0.1s,SNR=7.9
EPLA S **Sn 02 41 09.7 -1.1**
comp=E,9.3nm,0.1s,SNR=8.7
EGOR Sierra Gorda, 4.66 81 P Pn 02 40 21.6 +3.4
comp=E,0.1nm,0.1s,SNR=7.9
EGOR S **Sn 02 41 11.8 +0.6**
comp=E,2.2nm,0.2s,SNR=7.9
IFR Ifrane 4.89 126 eP **Pn 02 40 22.0 +0.6**
IFR eS **Sn 02 41 13.2 -3.6**
PALE Palemas 4.98 103 P Pn 02 40 20.0 -2.4
PALE S **Sn 02 41 16.4 -2.5**
ELGU Los Guajares, 5.03 84 P Pn 02 40 26.1 +2.9
comp=E,0.9nm,0.2s,SNR=7.9
ELGU S **Sn 02 41 21.8 +1.6**
comp=E,3.8nm,0.2s,SNR=7.9
PVRL Vila Real 5.07 19 ePn **Pn 02 40 24.9 +1.2**
PVRL eSn **Sn 02 41 18.9 -2.2**
PVRL A A 02 41 22.0
comp=E,13nm,0.2s
PVRL Vila Real 5.07 19 P Pn 02 40 24.9 +1.2
PVRL S **Sn 02 41 18.9 -2.2**
comp=E,6.4nm,0.2s
MVO Moncorvo 5.17 24 ePn **Pn 02 40 26.4 +1.3**
MVO eSn **Sn 02 41 21.5 -2.2**
MVO Moncorvo 5.17 24 P Pn 02 40 26.6 +1.5
comp=E,0.4nm,0.1s,SNR=4.0
MVO S **Sn 02 41 22.0 -1.7**
comp=E,5.7nm,0.1s,SNR=4.0
EQUE Quentar 5.20 80 S Sn 02 41 26.1 +1.6
comp=E,0.8nm,0.1s,SNR=7.9
PAB San Pablo 5.32 53 P Pn 02 40 28.8 +1.6
comp=E,1.0nm,0.1s,SNR=7.9
PAB S **Sn 02 41 25.3 -2.1**
comp=E,2.1nm,0.2s,SNR=7.9
OUK Oukaimeden 5.52 162 P Pn 02 40 27.3 -3.0
OUK S **Sn 02 41 28.2 -4.5**
MD31 MD31 5.54 129 P **Pn 02 40 28.6 -1.7**
MD31 S **Sn 02 41 29.5 -3.4**
GORA Gorafe 5.55 78 P Pn 02 40 33.7 +3.4
comp=E,1.4nm,0.2s,SNR=7.9
GORA S **Sn 02 41 33.2 +0.1**
comp=E,5.6nm,0.2s,SNR=7.9
ELOB Lobios 5.55 14 P Pn 02 40 30.6 +0.2
comp=E,0.2nm,0.0s,SNR=7.9
ELOB S **Sn 02 41 29.7 -3.4**
comp=E,3.1nm,0.1s,SNR=7.9
EQES Quesada 5.58 74 P Pn 02 40 32.5 +1.6
comp=E,0.9nm,0.2s,SNR=9.7
EQES S **Sn 02 41 33.5 -0.4**
comp=E,2.6nm,0.1s,SNR=11
EBER Berja 5.62 84 P Pn 02 40 33.9 +2.5
comp=E,0.1nm,0.1s,SNR=7.9
EBER S **Sn 02 41 34.7 -0.2**
comp=E,0.9nm,0.2s,SNR=7.9
ESDC Sonseca Array 5.64 54 P Pn 02 40 33.1 +1.5
comp=E,0.6nm,0.1s,baz=240,slow=13,SNR=29
ESDC S **Sn 02 41 34.2 -1.0**
comp=E,7.0nm,0.2s,baz=240,slow=24,SNR=45
MDT Midelt 5.67 129 P **Pn 02 40 30.5 -1.6**
MDT S **Sn 02 41 32.7 -3.4**
EZAM Zamans 5.73 9 S Sn 02 41 34.3 -3.0
comp=E,1.8nm,0.1s,SNR=7.9
PBRG Braganca 5.84 24 ePn **Pn 02 40 35.6 +1.3**
PBRG eSn **Sn 02 41 38.5 -1.6**
PBRG A A 02 41 39.7
comp=E,2.7nm,0.5s
PBRG Braganca 5.84 24 P Pn 02 40 35.6 +1.3
PBRG S **Sn 02 41 38.5 -1.6**
comp=E,1.4nm,0.5s
ECAL Calabor 5.96 23 P Pn 02 40 37.3 +1.2
comp=E,2.3nm,0.2s,SNR=7.5
ECAL S **Sn 02 41 40.1 -3.1**
comp=E,3.8nm,0.2s,SNR=7.9
TTIG Tnine Tigouga, 6.04 168 P Pn 02 40 32.5 -4.7
TTIG S **Sn 02 41 41.3 -4.0**
SESP Santiago Espad 6.06 72 P Pn 02 40 39.2 +1.8
comp=E,0.8nm,0.1s,SNR=7.9
SESP S **Sn 02 41 44.4 -1.3**
comp=E,5.1nm,0.1s,SNR=7.9
SESP Santiago Espad 6.06 72 P Pn 02 40 33.1 -4.3
SESP S **Sn 02 41 43.9 -1.8**
GUD Guadarrama 6.10 45 P Pn 02 40 39.4 +1.4
comp=E,2.0nm,0.2s,SNR=18
GUD S **Sn 02 41 44.8 -1.9**
comp=E,8.4nm,0.3s,SNR=7.2
UCM Universidad Co 6.45 52 eP **Pn 02 40 44.8 +2.1**
UCM eS **Sn 02 41 53.4 -1.7**
EAGO Agolada(Pontev 6.46 12 P Pn 02 40 44.1 +1.3
comp=E,1.9nm,0.1s,SNR=7.9
EAGO S **Sn 02 41 52.3 -3.0**
comp=E,0.8nm,0.2s,SNR=7.9
EMAZ Mazaricos 6.49 6 S Sn 02 41 51.8 -4.4
comp=E,5.9nm,0.1s,SNR=7.9
ETOB Tobarra 6.95 69 P Pn 02 40 51.1 +1.5
comp=E,2.0nm,0.3s,SNR=8.1
ETOB S **Sn 02 42 05.3 -2.1**
comp=E,2.2nm,0.2s,SNR=6.9
EMUR La Murta 7.02 76 S Sn 02 42 07.2 -1.9
comp=E,0.8nm,0.4s,SNR=7.9
SJPF Ste Jean 9.38 42 ePn **Pn 02 41 24.4 +1.6**
SJPF eSn **Sn 02 43 02.2 -4.9**
comp=E,0.5nm,0.3s
SJPF Ste Jean 9.38 42 P Pn 02 41 24.4 +1.6
SJPF S **Sn 02 43 02.2 -4.9**
comp=E,0.2nm,0.3s
ETSF Etsaut 9.61 45 ePn **Pn 02 41 27.1 +1.0**
ETSF eSn **Sn 02 43 07.8 -5.1**
comp=E,0.3nm,0.2s
ETSF Etsaut 9.61 45 P Pn 02 41 27.1 +1.0
ETSF S **Sn 02 43 07.8 -5.1**
comp=E,0.2nm,0.2s
EPF Esparros 10.21 47 ePn **Pn 02 41 35.2 +0.9**
EPF eSn **Sn 02 43 22.4 -5.3**
comp=E,0.2nm,0.2s
EPF Esparros 10.21 47 P Pn 02 41 35.2 +0.9
EPF S **Sn 02 43 22.4 -5.3**
comp=E,0.1nm,0.2s
LFF La Frestale 11.66 40 ePn **Pn 02 41 54.5 +0.6**
LFF La Frestale 11.66 40 P Pn 02 41 54.5 +0.6
RJF Les Rejaudoux 12.31 41 ePn **Pn 02 42 03.8 +0.9**
RJF Les Rejaudoux 12.31 41 P Pn 02 42 03.8 +0.9
CAF Calviac 12.36 43 ePn **Pn 02 42 04.3 +0.7**
CAF Calviac 12.36 43 P Pn 02 42 04.3 +0.7
QUIF Quistinic 12.45 21 ePn **Pn 02 42 04.7 -0.1**
QUIF Quistinic 12.45 21 P Pn 02 42 04.7 -0.1

IDC **17** *03:26:11.0±2.9, 54.75N×163.84W, h0km, mb3.8/7, mb1 4.0/9, mb1mx3.7/41, mbtmp3.8/9, ML4.0/2, Error ellipse: s-maj=49.0km s-min=31.1km az=66.0*
NEIC **17** *03:26:38.9±1.9, 55.53N±0.05×160.46W±0.09, h93km±6km, Error ellipse: s-maj=7.3km s-min=6.6km az=118.0*
AEIC **17** *03:26:40.8±3.0, 55.52N±0.10×160.5W±0.1, h79km±6km, ML3.8/31, mb4.3/0(NEIC), Error ellipse: s-maj=14.9km s-min=7.8km az=154.0*
ISC 17 03:26:39.6±0.8, 55.59N±0.07×160.36W±0.05, h86km±8km, n86, σ1.45/104, mb3.9/7, Alaska Peninsula

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SDPT Sand Point 0.25 195 Pn 03 26 52.1 -0.2
SDPT **Sn 03 27 00.6 -1.0**
VNWF Veniaminof 8 0.72 39 Pn 03 26 57.0 +1.0
VNWF **Sn 03 27 10.0 +1.8**
VNSS Veniaminof 8 0.81 39 Pn 03 26 58.4 +1.3
VNFG Fog Glacier, M 0.83 33 Pn 03 26 58.4 +1.3
PVV Pavlof Volcano 0.84 255 Pn 03 26 56.0 -1.1
CNBA Chernabura Isl 0.89 150 Pn 03 26 57.0 -0.8
CNBA **Sn 03 27 11.0 -0.2**
VNSG Veniaminof 6 0.90 53 Pn 03 26 59.0 +1.1
VNSG **Sn 03 27 13.6 +2.1**
VNNF Veniaminof 3 0.91 40 Pn 03 26 59.7 +1.7
HAG Hague Volcano 0.92 253 Pn 03 26 57.1 -1.0
BLHA Black Hill 0.97 277 Pn 03 26 57.4 -1.3
DT1 Dutton Round H 1.20 247 Pn 03 27 00.0 -1.3
FALS False Pass 1.90 248 Pn 03 27 08.8 -1.4
FALS **Sn 03 27 31.9 -1.7**
SSBA Shishaldin 2.31 251 Pn 03 27 14.2 -1.5
WESE West Dahl East 2.68 247 Pn 03 27 20.2 -0.5
CHIR Chirikof Islan 2.69 83 Pn **Pn 03 27 21.5 +0.7**
CHIR **Sn 03 27 53.9 +1.4**
WESP Westdahl Peak 2.74 248 Pn 03 27 20.8 -0.7
PLK1 Peulik 1 3.03 42 Pn 03 27 27.0 +1.7
AKUT Akutan 3.45 247 Pn **Pn 03 27 31.2 +0.2**
AKBBA Akutan Broad B 3.55 247 Pn 03 27 32.0 -0.4
SII Sitkinak Islan 3.59 72 Pn **Pn 03 27 33.6 +0.6**
UNV Unalaska Valle 3.97 246 Pn **Pn 03 27 36.6 -1.4**
MSW Makushin Switc 4.08 248 Pn 03 27 39.0 -0.6
MREP Makushin Rep't 4.11 247 Pn 03 27 38.7 -1.3
KAHC Katmai Hardscr 4.23 41 Pn 03 27 43.5 +1.9
OHAK Old Harbor 4.26 65 Pn 03 27 41.9 0.0
KDAK Kodiak Island 4.82 60 Pn **Pn 03 27 49.6 0.0**
16nm,0.3s,baz=218,slow=3.3,SNR=138
KDAK Sn **Sn 03 28 42.8 -1.2**
4.2nm,0.3s,baz=308,slow=22,SNR=1.3
KDAK Kodiak Island 4.82 60 Pn 03 27 49.4 -0.1
SVW2 Sparrevohn 6.06 23 Pn 03 28 07.1 +0.6
HOM Homer 6.21 45 Pn **Pn 03 28 10.9 +2.5**
CNPM China Poot 6.29 48 Pn **Pn 03 28 11.2 +1.5**
CNPM Sn **Sn 03 29 19.6 -0.4**
RED Redoubt Volcan 6.30 37 Pn 03 28 12.8 +3.0
RSO Redoubt South 6.33 36 Pn 03 28 13.8 +3.5
SEW Seward 7.37 48 Pn **Pn 03 28 25.2 +1.0**
SEW **Sn 03 29 45.0 -1.1**
SUA Susitna One 7.74 37 Pn 03 28 30.4 +1.0
SUA **Sn 03 29 56.2 +0.8**
RC01 Rabbit Creek A 7.84 41 Pn 03 28 32.4 +1.6
SKT Skwentna 7.87 32 Pn 03 28 33.6 +2.5
PMR Palmer 8.39 40 Pn **Pn 03 28 37.9 -0.3**
KNK Knik Glacier 8.53 42 Pn 03 28 39.9 -0.2
KNK **Sn 03 30 13.7 -0.8**
GHO Glory Hole Cre 8.59 39 Pn 03 28 41.1 +0.2
GLI Glacier Island 8.77 47 Pn **Pn 03 28 44.6 +1.2**
HIN Hinchinbrook I 8.79 51 Pn **Pn 03 28 44.1 +0.5**
SML Sawmill 8.82 40 Pn **Pn 03 28 43.4 -0.7**
SML **Sn 03 30 21.3 -0.4**
FID Port Fidalgo 8.96 49 Pn **Pn 03 28 45.4 -0.6**
FID **Sn 03 30 22.1 -3.1**
EYAK Cordova Ski Ar 9.19 51 Pn **Pn 03 28 48.9 -0.2**
SCM Sheep Creek Mo 9.21 42 Pn 03 28 49.3 -0.2
KTH Kantishna Hill 9.30 27 Pn **Pn 03 28 52.1 +1.5**
ANM Nome 9.34 347 Pn **Pn 03 28 50.3 -0.7**
TRF Thorofare Moun 9.38 29 Pn **Pn 03 28 52.9 +1.0**
RAGM Ragged Mountai 9.61 54 Pn **Pn 03 28 55.4 +0.6**
RAGM **Sn 03 30 41.2 +0.4**
BPAW Bear Paw Mtn. 9.73 25 Pn **Pn 03 28 58.1 +1.6**
HMT Hamilton 9.78 54 Pn **Pn 03 28 58.1 +1.0**
MCK McKinley 9.98 31 Pn **Pn 03 29 00.4 +0.5**
DHY Denali Highway 9.99 36 Pn 03 28 59.3 -0.9
DHY **Sn 03 30 48.5 -1.9**
GLB Gilahina Butte 10.44 49 Pn 03 29 06.1 0.0
GLB **Sn 03 30 59.5 -1.5**
VRDI Verde Repeater 10.50 51 Pn **Pn 03 29 06.8 -0.2**
VRDI Sn **Sn 03 31 04.0 +1.3**
MLY Manley 10.58 23 Pn **Pn 03 29 09.1 +1.0**
PAX Paxson 10.59 40 Pn 03 29 07.8 -0.4
NEA Nenana 10.61 27 Pn **Pn 03 29 07.3 -1.0**
MCARA McCarthy VSAT 10.75 50 Pn **Pn 03 29 10.8 +0.5**
WRH Wood River Hil 10.79 29 Pn 03 29 09.1 -1.8
MESA MESA 10.81 57 Pn **Pn 03 29 12.8 +1.4**
BALM Baldy 10.91 53 Pn **Pn 03 29 12.8 +0.2**
BALM Sn **Sn 03 31 13.7 +1.0**
COLA College 11.17 29 Pn **Pn 03 29 16.9 +1.0**
BARN Barnard Glacie 11.23 53 Pn **Pn 03 29 16.9 -0.1**
CTGM Chitina Glacie 11.35 54 Pn **Pn 03 29 19.2 +0.6**
CTGM Sn **Sn 03 31 24.5 +1.2**
ILAR Eielson Array 11.36 30 Pn **Pn 03 29 15.7 -2.9**
0.4nm,0.3s,baz=222,slow=13,SNR=16
ILAR Sn **Sn 03 31 19.8 -3.6**
0.2nm,0.3s,baz=335,slow=29,SNR=4.3
PCA Pinnacle 11.60 59 Pn 03 29 22.6 +0.6
PCA **Sn 03 31 32.3 +2.8**
HYT Haines Junctio 13.10 57 Pn **Pn 03 29 44.1 +1.9**
EGAK Eagle 13.20 38 Pn **Pn 03 29 41.3 -2.0**
DAWY Dawson 13.47 42 Pn 03 29 46.6 -0.3
SIT Sitka 13.95 74 Pn **Pn 03 29 53.8 +0.8**
SKAG Skagway 13.96 64 Pn **Pn 03 29 55.6 +2.5**
WHY Whitehorse 14.33 59 Pn **Pn 03 29 59.6 +1.5**
EPYK Eagle Plains 15.63 37 IAmb IAmb 03 30 19.5
comp=Z,11nm,0.6s
INK Inuvik 17.72 33 P **P 03 30 38.9 -1.1**
comp=Z,0.5nm,0.3s,baz=212,slow=7.7,SNR=18
INK Inuvik 17.72 33 IAmb IAmb 03 30 41.2
comp=Z,2.9nm,0.8s
BBB Bella Bella 19.21 87 P **P 03 30 56.9 +0.5**
comp=Z,47nm,1.2s,baz=194,slow=11,SNR=3.2
C36M Paulatuk 21.24 35 P **P 03 31 16.6 -1.6**
C36M IAmb IAmb 03 31 32.4
comp=Z,11nm,1.5s
YKA Yellowknife Ar 24.07 55 P **P 03 31 46.6 +0.1**
comp=Z,0.5nm,0.5s,baz=272,slow=9.2,SNR=23
NVAR Mina Array Bea 32.80 104 P **P 03 33 03.0 -1.7**
comp=Z,0.2nm,0.5s,baz=297,slow=10.0,SNR=1.4
PDAR Pinedale Array 34.80 90 P **P 03 33 20.2 -1.8**
comp=Z,0.4nm,0.6s,baz=307,slow=4.4,SNR=4.3
ULM Lac du Bonnet 37.98 70 P **P 03 33 47.5 -1.2**
comp=Z,0.6nm,0.4s,baz=297,slow=2.3,SNR=1.6
SCHQ Schefferville 49.36 50 P **P 03 35 18.6 -1.2**
comp=Z,1.7nm,0.8s,baz=300,slow=8.1,SNR=1.5
HHC Hu-ho-hao-te 56.57 295 eP **P 03 36 15.3 +2.2**
FINES FINESS Array B 63.19 357 P P 03 36 44.3 -14
comp=Z,1.6nm,0.9s,baz=195,slow=14,SNR=1.2
WMQ Urumqi 65.51 312 eP **P 03 37 17.3 +3.8**

IDC **17** *03:40:39.2±3.0, 39.54N×143.45E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.4/34, mbtmp3.6/5, ML2.7/1, MS3.1/2, Ms1 3.2/2, ms1mx2.5/42, Error ellipse: s-maj=71.1km s-min=32.9km az=73.0*
JMA **17** *03:40:40.3±0.1, 39.41N×143.42E, h20km±3km, M3.7*
ISC 17 03:40:43.9±3.2, 39.41N±0.06×143.3E±0.1, h28km±20km, n28, σ1.02/26, mb3.5/4, Off east coast of Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MIYJ Miyakonagasawa 1.16 279 P **Pn 03 41 03.2 -1.0**
MIYJ eS **Sb 03 41 20.0 +0.2**
JTH Tanohata 1.23 296 P **Pn 03 41 04.3 -0.9**
JTH eS **Sb 03 41 21.7 -0.2**
OFUJ Ofunato 1.31 256 P **Pn 03 41 05.7 -0.5**
JOM Ohasama 1.55 273 P **Pn 03 41 09.6 -0.1**
JANG Nango 1.68 306 P **Pn 03 41 10.5 -0.8**
JMK Ichinoseki 1.68 255 P **Pn 03 41 11.4 +0.1**
JIO Ouri 1.79 239 P **Pn 03 41 12.4 -0.5**
JRG Rokugo 2.06 271 P **Pn 03 41 17.1 +0.4**
JAH Hinai 2.19 292 P **Pn 03 41 18.6 +0.2**
JAH eS **Sn 03 41 46.9 +2.3**
JTM Tenmabayashi 2.19 310 P **Pn 03 41 18.1 -0.4**
JTM eS **Sn 03 41 45.3 +0.6**
JYK Kaneyama 2.34 259 P **Pn 03 41 20.9 +0.5**
JNBK Urakawa-nobuka 2.90 352 P **Pn 03 41 28.1 0.0**
JNBK eS **Sn 03 42 02.0 0.0**
JFT Otama 2.99 232 P **Pn 03 41 29.5 0.0**
MAT Matsushiro 4.93 236 P **Pn 03 41 57.6 +1.4**
MAT eS **Sn 03 42 49.4 -2.9**
MJAR Matsushiro Arr 4.93 236 Pn **Pn 03 41 56.9 +0.7**
0.3nm,0.3s,baz=41,slow=13,SNR=15
USRK Ussuriysk Ar. 9.70 303 LR LR 03 46 55.8
comp=Z,60nm,21.2s,baz=268,slow=39
SONM Songino Array 27.79 300 P **P 03 46 30.7 +0.2**
0.3nm,0.7s,baz=90,slow=7.9,SNR=2.5
SONM Songino Array 27.79 300 P **P 03 46 30.7 +0.2**
H11N2 WAKE ISLAND Hy 28.24 127 T T 04 16 31.2
baz=312,slow=75,SNR=8.2
H11N1 WAKE ISLAND Hy 28.25 127 T T 04 16 23.2
SNR=7.5
H11N3 WAKE ISLAND Hy 28.26 127 T T 04 16 16.0
baz=322,slow=75,SNR=7.4
H11S1 WAKE ISLAND Hy 29.05 129 T T 04 17 38.1
baz=328,slow=76,SNR=5.4
H11S3 WAKE ISLAND Hy 29.05 129 T T 04 17 44.4
baz=328,slow=76,SNR=4.2
H11S2 WAKE ISLAND Hy 29.07 129 T T 04 17 40.7
baz=328,slow=76,SNR=2.3
ZALV Zalesovo Beam 41.46 310 P **P 03 48 26.6 -1.3**
0.6nm,0.3s,baz=79,slow=7.5,SNR=2.7
MKAR Makanchi Array 44.16 300 P **P 03 48 49.9 -0.1**
0.4nm,0.7s,baz=82,slow=11,SNR=3.6
ILAR Eielson Array 46.70 34 LR LR 04 12 03.5
comp=Z,33nm,18.2s,baz=84,slow=40
WRA Warramunga Arr 59.63 190 P **P 03 50 46.2 +0.8**
0.6nm,1.0s,baz=9.4,slow=9.3,SNR=1.4

MOS **17** *03:41:03.7±1.2, 40.14N×72.32E, h26km, mb4.1/3, Error ellipse: s-maj=19.2km s-min=10.5km az=86.0*
MOS Felt (II) at Aravan, Zhany-Kyshtak, Nariman, Tepe-Korgon.
KRNET **17** *03:41:08.0±0.1, 40.64N×72.55E, h13km, mb3.8*
SOME **17** *03:41:09.7, 40.82N×72.63E, h10km*
ISU **17** *03:41:09.0, 40.80N×72.30E, h10km*
NNC **17** *03:41:10.5±0.8, 40.83N×72.55E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=7.5km s-min=3.9km az=172.0*
ISC 17 03:41:09.6±1.0, 40.65N±0.04×72.36E±0.02, h17km±5km, n83, σ1.63/126, 34C-15D, Kyrgyzstan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

ANR Andizhan 0.11 359 iP Pg 03 41 12.6 -0.7
ANR eS Sg 03 41 16.3 +0.5
FRG Fergana 0.45 281 eP Pn 03 41 21.2 -0.1
FRG eS Sn 03 41 29.1 +0.2
ARSB Arslanbob 0.82 35⇓iP Pb 03 41 22.4 -3.1
baz=25
ARSB ⇓iS Sb 03 41 32.8 -3.6
baz=25
ARK Arkit 1.19 345⇓iP Pn 03 41 30.9 -0.6
baz=39
ARK ⇓iS Sn 03 41 47.7 +0.3
baz=39
ARK Arkit 1.19 345 eP Pn 03 41 30.3 -1.2
ARK eS Sb 03 41 45.6 -1.3
BTK Batken 1.32 244⇓iP Pg 03 41 35.2 +0.2
baz=47
BTK ⇓iS Sg 03 41 54.8 +2.5
baz=47
AML Almayashu 1.79 34⇓iP Pn 03 41 40.1 0.0
baz=30
AML ⇓iS Sb 03 42 03.7 -0.7
baz=30
AML Almayashu 1.79 34 P Pn 03 41 39.8 -0.3
SNR=504
ARLS Aral 1.91 50⇑eP Pn 03 41 41.6 +0.1
baz=47
ARLS ⇑iS Sn 03 42 06.0 +0.7
baz=47
MRKS Merke 2.19 17 eP Pb 03 41 47.7 -1.2
192nm,0.4s
MRKS eS Sb 03 42 14.5 -1.3
91nm,0.3s
MRKS Merke 2.19 17 Pg Pb 03 41 47.7 -1.2
192nm,0.4s
MRKS Lg Lg 03 42 14.5
91nm,0.3s
UCH Uchtor 2.26 45⇑iP Pn 03 41 47.3 +0.7
baz=42
UCH ⇑iS Sb 03 42 16.1 -1.9
baz=42
UCH Uchtor 2.26 45 P Pn 03 41 47.0 +0.4
SNR=155
EKS2 Erkin-Say 2.27 27⇑iP Pn 03 41 47.8 +1.3
baz=24
EKS2 ⇑iS Sb 03 42 16.8 -1.3
baz=24
EKS2 Erkin-Say 2.27 27 P Pn 03 41 47.5 +1.0
SNR=25
DZA Taraz 2.37 341 eP Pb 03 41 52.8 +0.9
70nm,0.2s
DZA eS Sb 03 42 23.4 +2.6
182nm,0.2s
TAS Tashkent 2.42 287 eP Pg 03 41 55.4 -0.6
TAS eS Sg 03 42 28.9 +1.5
AAK Ala-Archa 2.55 38⇑iP Pn 03 41 51.3 +1.0
baz=35
AAK ⇑iS Sn 03 42 22.9 +1.9
baz=35
AAK Ala-Archa 2.55 38 P Pn 03 41 51.3 +1.0
SNR=67
AAK Ala-Archa 2.55 38 ⇑Pn Pn 03 41 51.0 +0.7
58nm,0.5s
AAK ⇑Lg Lg 03 42 25.4
98nm,0.4s
AAK Ala-Archa 2.55 38c iPN Pn 03 41 51.3 +1.0
AAK iS Sb 03 42 25.2 -0.9
KZA Kyzart 2.60 56⇓eP Pn 03 41 51.7 +0.5
baz=54
KZA ⇓iS Sn 03 42 23.7 +1.1
baz=54
KZA Kyzart 2.60 56 P Pn 03 41 52.4 +1.2
SNR=26
CHM Chimkent 2.66 310 eP Pg 03 41 59.8 -0.9
90nm,0.1s
CHM eS Sg 03 42 35.9 +0.7
456nm,0.4s
CHM Chimkent 2.66 310 PN Pb 03 41 56.6 -0.2
CHM 03 41 59.9
FRU1 Bishkek 2.75 37⇑iP Pn 03 41 54.2 +1.3
baz=35
FRU1 ⇑iS Sn 03 42 27.5 +1.7
baz=35
KBK Karagaybulak 2.79 43⇑iP Pn 03 41 54.7 +1.1
baz=41
KBK ⇑iS Sn 03 42 28.5 +1.6
baz=41
KBK Karagaybulak 2.79 43 P Pn 03 41 55.7 +2.1
SNR=20
KK31 Karatay Array 2.82 331 ⇑Pn Pn 03 41 55.0 +1.2
1.2nm,0.6s,baz=138,slow=12,SNR=93
KK31 ⇓Pg Pb 03 41 59.9 +0.5
2.3nm,0.3s,baz=143,slow=17,SNR=19
KK31 ⇑Lg Lg 03 42 35.5
25nm,0.3s,baz=136,slow=33,SNR=4.4
KK31 Karatay Array 2.82 331 PN Pn 03 41 55.0 +1.2
NRN Naryn 2.86 73⇑eP Pn 03 41 54.4 -0.3
baz=72
NRN ⇑iS Sn 03 42 28.8 -0.1
baz=72
CHMS Chumysh 2.95 36⇑iP Pn 03 41 56.9 +1.2
baz=34
CHMS ⇑iS Sn 03 42 32.7 +2.0
baz=34
CHMS Chumysh 2.95 36 P Pn 03 41 57.0 +1.3
SNR=6.2
CHMS Chumysh 2.95 36 ⇑Pg Pb 03 41 59.9 -1.8
32nm,0.6s
CHMS ⇑Lg Lg 03 42 37.0
48nm,0.6s
USP Ospenovka 3.06 31⇑iP Pn 03 41 58.6 +1.3
baz=28
USP ⇑iS Sn 03 42 35.4 +1.9
baz=28
USP Ospenovka 3.06 31 P Pn 03 41 59.0 +1.8
SNR=5.2
BOOM Boomskoye usch 3.25 54⇑iP Pn 03 42 00.7 +0.7
baz=53
BOOM ⇑iS Sn 03 42 38.8 +0.4
baz=53
ULHL Ulahol 3.33 60⇓iP Pn 03 42 01.3 +0.3
baz=59
ULHL ⇓iS Sn 03 42 40.4 +0.2
baz=59
KST Kastek 3.60 47 eP Pb 03 42 12.4 -0.4
33nm,0.2s
KST eS Sb 03 42 57.9 +1.6
27nm,0.7s
KST Kastek 3.60 47 Pg Pb 03 42 12.4 -0.4
33nm,0.2s
KST Lg Lg 03 42 57.0
27nm,0.7s
DGS Degeres 3.63 43 eP Pb 03 42 13.3 -0.1
32nm,0.5s
DGS eS Sb 03 42 59.3 +2.1
58nm,0.6s
DGS Degeres 3.63 43 Pg Pb 03 42 13.3 -0.1
32nm,0.5s
DGS Lg Lg 03 42 58.5
58nm,0.6s
KDJ Kajisay 3.92 66⇑iP Pn 03 42 09.6 +0.5
baz=65
KDJ ⇑iS Sn 03 42 54.2 -0.5
baz=65
KRBS Karabastau 3.92 38 eP Pb 03 42 17.8 -0.4
36nm,0.3s
KRBS eS Sb 03 43 06.9 +1.6
10nm,0.3s
KRBS Karabastau 3.92 38 Pg Pb 03 42 17.8 -0.4
36nm,0.3s
KRBS Lg Lg 03 43 07.7
10nm,0.3s
MTBS Maitube 3.92 49 eP Pb 03 42 18.0 -0.3
10.0nm,0.2s
MTBS eS Sb 03 43 07.2 +1.8
33nm,0.2s
MTBS Maitube 3.92 49 Pg Pb 03 42 18.0 -0.3
10.0nm,0.2s
MTBS Lg Lg 03 43 07.8
33nm,0.2s
IZV Izvestkoviy 3.97 52 eP Pb 03 42 19.3 +0.1
11nm,0.3s
IZV eS Sb 03 43 09.0 +2.0
39nm,0.3s
IZV Izvestkoviy 3.97 52 Pg Pb 03 42 19.3 +0.1
11nm,0.3s
IZV Lg Lg 03 43 09.0
39nm,0.3s
TNSS Tian-Shan 4.17 54 eP Pb 03 42 23.3 +0.5
18nm,0.3s
TNSS eS Sb 03 43 15.9 +2.8
37nm,0.5s
TNSS Tian-Shan 4.17 54 Pg Pb 03 42 23.3 +0.5
18nm,0.3s
TNSS Lg Lg 03 43 15.9
37nm,0.5s
MDOK Medeo 4.31 53 eP Pb 03 42 24.4 -0.5
18nm,0.2s
MDOK eS Sb 03 43 18.3 +1.7
24nm,0.5s
MDOK Medeo 4.31 53 ⇑Pg Pb 03 42 24.2 -0.8
6.0nm,0.3s
MDOK ⇓Lg Lg 03 43 18.8
28nm,0.7s
MDOK Medeo 4.31 53 Pg Pb 03 42 24.4 -0.5
18nm,0.2s
MDOK Lg Lg 03 43 18.7
24nm,0.5s
MDOK Medeo 4.31 53 PN Pb 03 42 24.1 -0.8
KOTS Kotyrbulak 4.38 52 eP Pb 03 42 26.0 -0.3
40nm,0.4s
KOTS eS Sb 03 43 20.8 +1.9
40nm,0.5s
KOTS Kotyrbulak 4.38 52 Pg Pb 03 42 26.0 -0.3
40nm,0.4s
KOTS Lg Lg 03 43 20.8
40nm,0.5s
KUU Kurty 4.38 41 eP Pb 03 42 26.2 +0.1
11nm,0.2s
KUU eS Sb 03 43 21.3 +2.6
30nm,0.5s
KUU Kurty 4.38 41 Pg Pb 03 42 26.2 +0.1
11nm,0.2s
KUU Lg Lg 03 43 21.9
30nm,0.5s
KTBS Karatobe 4.44 45 eP Pb 03 42 27.5 +0.4
14nm,0.3s
KTBS eS Sb 03 43 23.5 +3.3
59nm,0.5s
KTBS Karatobe 4.44 45 Pg Pb 03 42 27.5 +0.4
14nm,0.3s
KTBS Lg Lg 03 43 23.5
59nm,0.5s
ANVS Anan'yevo 4.51 60⇑iP Pn 03 42 17.9 +0.7
baz=59
ANVS ⇑iS Sn 03 43 08.6 -0.7
baz=59
BTLS Baital 4.56 15 eP Pb 03 42 30.8 +1.7
1.5nm,0.2s
BTLS eS Sb 03 43 29.2 +5.4
11nm,0.4s
BTLS Baital 4.56 15 Pg Pb 03 42 30.8 +1.7
1.5nm,0.2s
BTLS Lg Lg 03 43 28.0
11nm,0.4s
CHKK Chushkaly 4.70 45 eP Pb 03 42 31.3 -0.2
9.2nm,0.3s
CHKK eS Sb 03 43 29.9 +2.2
29nm,0.5s
CHKK Chushkaly 4.70 45 Pg Pb 03 42 31.3 -0.2
9.2nm,0.3s
CHKK Lg Lg 03 43 29.9
29nm,0.5s
KURS Kuram 5.17 55 eP Pb 03 42 39.9 +0.3
4.7nm,0.6s
KURS eS Sb 03 43 44.9 +3.5
8.4nm,1.3s
KURS Kuram 5.17 55 Pg Pb 03 42 39.9 +0.3
4.7nm,0.6s
KURS Lg Lg 03 43 46.5
8.4nm,1.3s
ARXS Arharly 5.39 47 eP Pb 03 42 43.5 +0.2
8.3nm,0.3s
ARXS eS Sb 03 43 50.6 +2.9
19nm,0.6s
ARXS Arharly 5.39 47 Pg Pb 03 42 43.5 +0.2
8.3nm,0.3s
ARXS Lg Lg 03 43 51.9
19nm,0.6s
UZB Uzynbulak 5.56 61 eP Pb 03 42 48.4 +2.1
3.0nm,0.7s
UZB eS Sb 03 43 58.7 +6.0
18nm,0.6s
SHLS Shalkode 5.86 62 eP Pg 03 42 59.2 -2.6
3.0nm,0.2s
SHLS eS Sg 03 44 17.3 -0.4
18nm,0.8s
PDGK Podgornoye 5.95 61 ⇑Pg Pb 03 42 53.9 +1.0
4.1nm,0.7s
PDGK ⇓Lg Lg 03 44 09.5
31nm,0.9s
PDGK Podgornoye 5.95 61 PN Pb 03 42 53.8 +1.0
MK31 Makanchi Array 9.45 46⇑iP Pn 03 43 28.4 +3.5
KURK Kurchatov 10.97 21 eP Pn 03 43 47.4 +1.7
BRVK Borovoye 12.50 354 eP Pn 03 44 07.7 +1.2
ZALV Zalesovo Beam 15.73 28 eP Pn 03 44 50.8 +0.7
ARU Arti 18.19 335 iP P 03 45 21.8 +0.6
ARU pmax pmax
comp=Z,2.0nm,1.1s
GNI Garni 21.01 278 iP P 03 45 47.8 -4.6
GNI pmax pmax
comp=Z,8.0nm,1.0s
KBZ Khabaz 22.00 288 iP P 03 45 59.1 -3.6
KBZ pmax pmax
comp=Z,1.0nm,1.0s
KIRV Kirov 23.11 329 iP P 03 46 13.6 -0.7
OBN Obninsk 27.66 314 eP P 03 46 54.5 -1.7
OBN e 03 47 38.3
OBN pmax pmax
comp=Z,4.0nm,0.9s

*DJA **17** 03:50:40.5±0.6,0°N±3°×12°0E±°,h24km±6km,M4.7/17, mB4.9/5,mb4.7/7,MLv4.9/17,Mw(mB)4.2/5,Mwp5.3/1*
*BJI **17** 03:50:41.0±0.0,0°.50N×120°.30E,h50km,mB5.1/8, mb4.6/9*
*NEIC **17** 03:50:42.1±1.9,0°.20N±0°.08×120°.25E±0°.06,h86km±6km, mb4.5/21,Error ellipse: s-maj=11.1km s-min=8.6km az=191.0*
*IDC **17** 03:50:43.8±2.6,0°.21N×120°.29E,h101km±24km,mb4.0/19, mb1 4.1/22,mb1mx4.0/45,mbtmp4.4/22,MS3.2/7, Ms1 3.2/7,ms1mx2.9/35,Error ellipse: s-maj=19.3km s-min=10.0km az=74.0*
ISC 17 03:50:42.0±0.4,0°.23N±0°.05×120°.29E±0°.04,h85km,n108, σ1§28/109,mb4.4/26,1C,Minahassa Peninsula, Sulawesi

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MPSI Mapaga 0.41 285 P Pn 03 50 50.9 -4.6
PCI Palu 1.22 202 P Pn 03 51 11.2 +7.2
MRSI Marisa 1.67 82 P Pn 03 51 08.4 -1.2
MRSI S Sn 03 51 28.8 -1.8
APSI Ampana 1.77 130 P Pn 03 51 09.4 -1.6
APSI S Sn 03 51 32.8 -0.2
LUWI Luwuk 2.78 117 P Pn 03 51 24.9 +0.4
LUWI S Sn 03 51 57.4 +0.2
LUWI Luwuk 2.78 117 Pn 03 51 24.9 +0.4
LUWI Sn 03 51 56.5 -0.8
SMKI Samarinda 3.16 258 P Pn 03 51 28.5 -1.1
TTSI Tana Toraja 3.29 188 P Pn 03 51 31.8 +0.4
KMSI Cibinong 3.70 85 P Pn 03 51 37.1 +0.1
BKB Balikpapan 3.71 246 P Pn 03 51 35.4 -1.6
BKB Balikpapan 3.71 246 Pn 03 51 34.8 -2.2
BKB Sn 03 52 15.7 -3.9
SPSI Sidrap Palu 4.20 187 P Pn 03 51 45.1 +1.4
BNSI Bone 4.61 182 P Pn 03 51 49.8 +0.6
KAPI Kappang 5.24 186 P Pn 03 51 58.1 +0.2
12nm,0.3s,baz=311,slow=4.1,SNR=22
KAPI LR LR 03 53 55.8
comp=Z,150nm,18.7s,baz=354,slow=37
KAPI Kappang 5.24 186 Pn Pn 03 51 58.6 +0.7
BKSI Bulukumba 5.52 182 P Pn 03 52 00.3 -1.4
0.4nm1μm57nm,0.5s
BBSI Bau Bau 6.12 158 P Pn 03 52 10.5 +0.6
0.1nm385nm47nm,0.8s
SANI Sanana 6.13 112 P Pn 03 52 06.3 -3.7
0.4nm1μm82nm,0.9s
KKM Kota Kinabalu 7.07 325 Pn 03 52 21.9 -0.9
NLAI Namlea 7.63 117 P Pn 03 52 30.8 +0.3
0.4nm94nm,0.6s
SBUM Sibu 8.37 285 Pn Pn 03 52 39.6 -0.9
STKI Sintang 8.82 269 P Pn 03 52 48.3 +1.6
KSM Kuching 10.06 277 Pn 03 53 03.0 -0.7
JAGI Jajag, Banyuwa 10.59 215 Pn Pn 03 53 10.6 -0.3
SOEI Soe 10.68 158 P Pn 03 53 14.2 +2.0
36nm,0.7s
FAKI Fak Fak 12.35 105 Pn Pn 03 53 34.2 -0.7
KPJI Karang Pucung 13.60 236 P P 03 53 56.4 -0.9
LEM Lembang 14.46 241 P Pn 03 54 04.5 +1.7
3.6nm,0.3s,baz=274,slow=20,SNR=3.5
LEM LR LR 04 00 36.8
comp=Z,54nm,18.3s,baz=186,slow=41
CNJI Cibinong 15.12 240 P P 03 54 16.6 +2.4
KLSI 16.30 252 P P 03 54 29.5 +2.2
3μm12nm,1.0s
MDSI Maura Dua 16.77 254 P P 03 54 33.7 +1.2
KASI Kota Agung 16.78 250 P P 03 54 39.0 +6.4
KDU Kakadu 17.63 137 P P 03 54 42.2 +0.2
baz=18,SNR=6.4
KNRA Kununurra 17.88 152 P P 03 54 45.4 +0.6
baz=18
KNRA Kununurra 17.88 152 P P 03 54 42.2 -2.6
KNRA IAmb IAmb 03 54 47.8
comp=Z,28nm,0.9s
FITZ Fitzroy Crossi 18.96 164 P P 03 54 55.8 -0.7
baz=19,SNR=6.0
FITZ Fitzroy Crossi 18.96 164 P P 03 54 57.4 +0.8
comp=Z,0.4nm,0.3s,baz=359,slow=6.5,SNR=10
FITZ Fitzroy Crossi 18.96 164 P P 03 54 56.4 -0.2
BKNI Bangkinang 19.25 270 P P 03 54 58.2 -1.7
IPM Ipoh 19.70 283 P P 03 55 04.6 -0.2
IPM IAmb IAmb 03 55 07.1
comp=Z,16nm,0.7s
KULM Kulim 20.25 285 P P 03 55 11.0 +0.3
KULM IAmb IAmb 03 55 12.4
comp=Z,24nm,0.9s
UBPT Khong Chiam 20.93 316 P P 03 55 20.1 +2.1
RPSI Rantau Prapat 21.50 277 P P 03 55 24.8 +0.6
PSI Prapat 21.51 277 P P 03 55 24.8 +0.4
comp=Z,4.0nm,0.4s,baz=143,slow=7.3,SNR=3.0
PSI LR LR 04 04 23.0
comp=Z,76nm,19.5s,baz=84,slow=38
PSA00 Pilbara Seismi 21.68 181 P P 03 55 24.4 -1.5
PSA00 IAmb IAmb 03 55 26.2
comp=Z,14nm,0.7s
WB0 Warramunga Arr 24.21 146 P P 03 55 50.9 +0.1
WB0 IAmb IAmb 03 55 51.5
comp=Z,18nm,0.6s
WRA Warramunga Arr 24.32 146 P P 03 55 52.2 +0.3
comp=Z,21nm,0.6s,baz=334,slow=9.5,SNR=86
WR0 Warramunga Arr 24.44 146 P P 03 55 52.1 -0.9
WR0 IAmb IAmb 03 55 54.0
comp=Z,18nm,0.7s
WRKA Warakurna 26.29 163 P P 03 56 09.8 +0.1
baz=26,SNR=7.4
MEEK Meekatharra 26.76 183 P P 03 56 13.7 -0.2
baz=27,SNR=13
AS31 Alice Springs 27.19 152 P P 03 56 18.2 +0.4
ASAR Alice Springs 27.19 152 P P 03 56 17.8 0.0
comp=Z,1.7nm,0.4s,baz=323,slow=7.8,SNR=23
ASAR PcP PcP 03 59 35.6 -0.8
comp=Z,1.0nm,0.4s,baz=339,slow=2.5,SNR=7.0
ASAR LR LR 04 08 31.6
comp=Z,55nm,19.1s,baz=296,slow=39
CMAR Chiang Mai Arr 27.71 312 P P 03 56 23.1 +0.5
comp=Z,1.8nm,0.6s,baz=134,slow=4.1,SNR=4.8
GUMO Guam 27.72 60 LR LR 04 07 06.6
comp=Z,35nm,18.6s,baz=214,slow=35
QIS Mount Isa 28.00 139 P P 03 56 25.1 0.0
baz=28,SNR=8.6
MORW Morawa 29.42 188 P P 03 56 37.8 +0.2
baz=30,SNR=3.2
MORW Morawa 29.42 188 P P 03 56 37.5 0.0
MORW IAmb IAmb 03 56 39.6
comp=Z,20nm,1.4s
FORT Forrest 31.71 167 P P 03 56 57.9 +0.2
baz=32,SNR=15
FORT Forrest 31.71 167 P P 03 56 57.8 +0.1
NWAO Narrogin (SRO) 33.11 185 P P 03 57 10.3 +0.4
baz=33,SNR=6.9
NWAO Narrogin (SRO) 33.11 185 P P 03 57 10.3 +0.4
QLP Quilpie 35.25 141 P P 03 57 29.2 +0.6
baz=35,SNR=5.8
BBOO Buckleboo 36.07 157 P P 03 57 35.5 0.0
baz=36,SNR=12
BBOO Buckleboo 36.07 157 P P 03 57 35.6 0.0
KSRS Korea Array 37.70 10 P P 03 57 49.5 +0.2
comp=Z,1.2nm,0.6s,baz=188,slow=9.0,SNR=4.1
STKA Stephens Creek 37.77 150 P P 03 57 50.4 +0.5
baz=38,SNR=12
STKA Stephens Creek 37.77 150 P P 03 57 50.4 +0.5
comp=Z,9.3nm,0.5s,baz=324,slow=7.8,SNR=26
STKA LR LR 04 16 07.4
comp=Z,28nm,19.2s,baz=12,slow=40
HTT Hallett 37.79 154 P P 03 57 50.8 +0.6
baz=38,SNR=13
CMSA Cobar Meteorol 39.72 145 P P 03 58 06.8 +0.6
baz=40,SNR=20
TAPN Taplejung 41.30 313 eP P 03 58 20.5 +0.8
comp=Z,9.0nm,0.4s
RAMN Ramite 41.88 312 eP P 03 58 26.4 +1.9
comp=Z,14nm,0.7s
JIRN Jiri 42.58 313 eP P 03 58 31.5 +1.2
comp=Z,22nm,0.4s
GUN Gumba 42.95 313 eP P 03 58 34.4 +1.2
comp=Z,20nm,0.5s
PKI Pulchoki 43.11 312 eP P 03 58 35.2 +0.7
comp=Z,10nm,0.6s
PKIN Phulchoki 43.12 312 eP P 03 58 35.5 +1.0
GTA Gaotai 43.26 337 eP P 03 58 40.5 +5.2
GTA pP pP 03 58 51.8 -3.9
GTA sP sP 03 58 56.8 -8.7
GTA pmax pmax
comp=Z,3.0nm,1.0s
KKN Kakani 43.33 312 eP P 03 58 37.5 +1.4
DMN Daman 43.36 312 eP P 03 58 37.4 +1.0
CNB Canberra Magne 44.56 146 P P 03 58 46.7 +1.0
baz=45,SNR=5.3
DANN Dangsing 44.76 312 eP P 03 58 48.6 +1.0
comp=Z,24nm,0.7s
USRK Ussuriysk Ar. 45.00 12 P P 03 58 49.5 +0.6
comp=Z,2.7nm,0.6s,baz=198,slow=6.4,SNR=8.7
SONM Songino Array 48.93 348 P P 03 59 19.5 -0.2
comp=Z,1.0nm,0.7s,baz=162,slow=8.6,SNR=8.6
MK31 Makanchi Array 57.02 330 P P 04 00 20.1 +1.1
MK31 IAmb IAmb 04 00 36.5
comp=Z,2.5nm,0.8s
MKAR Makanchi Array 57.02 330 P P 04 00 20.0 +0.9
comp=Z,0.5nm,0.5s,baz=127,slow=10.0,SNR=11
MAKZ Makanchi 57.19 330 P P 04 00 21.3 +1.1
MAKZ IAmb IAmb 04 00 37.0
comp=Z,4.7nm,1.2s
ZALV Zalesovo Beam 61.01 337 P P 04 00 46.9 +0.4
comp=Z,1.4nm,0.5s,baz=110,slow=7.3,SNR=4.7
PETK Petropavlovsk- 61.18 25 P P 04 00 48.1 +0.5
comp=Z,4.0nm,0.8s,baz=185,slow=7.2,SNR=3.2
KURBB Kurchatov Arra 61.43 331 P P 04 00 50.0 +0.7
comp=Z,0.8nm,0.5s,baz=133,slow=6.6,SNR=9.5
KURK Kurchatov 61.45 331 P P 04 00 50.0 +0.6
MA2 Magadan 63.76 17 P P 04 01 05.0 +0.3
comp=Z,5.1nm,0.5s,baz=187,slow=17,SNR=5.7
MA2 Magadan 63.76 17 IAmb IAmb 04 01 06.2
comp=Z,6.2nm,0.7s
SEY Seymchan 66.97 15 P P 04 01 25.4 +0.1
comp=Z,2.3nm,0.6s,baz=201,slow=6.3,SNR=7.0
TIXI Tiksi 71.52 3 P P 04 01 52.5 -0.7
comp=Z,4.1nm,0.6s,baz=160,slow=5.2,SNR=12
TIXI Tiksi 71.52 3 P P 04 01 53.0 -0.2
TIXI IAmb IAmb 04 01 53.2
comp=Z,4.6nm,0.7s
MAW Mawson 78.31 199 P P 04 02 33.0 +0.5
comp=Z,5.6nm,0.7s,baz=107,slow=11,SNR=5.3
MAW Mawson 78.31 199 P P 04 02 33.1 +0.7
VNDA Vanda 80.86 172 P P 04 02 45.8 -0.3
comp=Z,6.2nm,0.9s,baz=333,slow=6.7,SNR=3.8
SYO Syowa Base 86.88 201⇑eP P 04 03 16.6 -0.3
BRTR Keskin Array B 87.27 310 P P 04 03 19.1 -0.7
comp=Z,1.1nm,1.0s,baz=140,slow=7.9,SNR=6.1
ILAR Eielson Array 91.00 25 P P 04 03 34.9 -1.5
comp=Z,0.3nm,0.7s,baz=262,slow=4.3,SNR=4.9
NOA NORSAR Array B 98.95 332 LR LR 04 51 54.3
comp=Z,17nm,18.1s,baz=295,slow=37
YKA Yellowknife Ar 105.27 23 PKiKP PKiKP 04 08 54.1 -0.4
comp=Z,0.3nm,0.6s,baz=298,slow=2.0,SNR=4.8
TORD Torodi Ar. Bea 117.73 285 PKP PKPdf 04 09 18.6 -0.9
comp=Z,0.5nm,0.7s,baz=43,slow=1.3,SNR=4.5
PDAR Pinedale Array 118.17 40 PKP PKPdf 04 09 19.4 -0.6
comp=Z,0.5nm,0.7s,baz=22,slow=1.6,SNR=3.9
ULM Lac du Bonnet 121.01 26 PKP PKPdf 04 09 22.5 -2.3
comp=Z,1.5nm,0.6s,baz=265,slow=5.1,SNR=4.0

TXAR Lajitas Array 128.80 51 PKP PKiKP 04 09 41.6 +0.4
comp=Z,0.2nm,0.6s,baz=345,slow=3.0,SNR=2.6
BDFB Brasilia 160.82 216 PKPab PKPab 04 11 13.8 -2.1
comp=Z,1.8nm,0.7s,baz=327,slow=6.5,SNR=2.4
LPAZ La Paz 162.01 153 PKP PKPdf 04 10 34.8 -0.5
comp=Z,1.2nm,0.8s,baz=142,slow=3.7,SNR=4.5
LPAZ PKPab PKPab 04 11 21.9 +0.3
comp=Z,0.8nm,0.6s,baz=198,slow=6.6,SNR=3.6

IDC 17 04:10:08.7±1.0, 27°.41N×52°.80E, h0km, mb3.8/18, mb1 3.9/22, mb1mx3.8/50, mbtmp3.8/22, ML3.8/4, MS3.3/8, Ms1 3.3/8, ms1mx3.0/41, Error ellipse: s-maj=22.4km s-min=14.9km az=170.0
TEH 17 04:10:10.9, 27°.56N×52°.95E, h7km, ML4.0
THR 17 04:10:12.1±0.7, 27°.69N×53°.05E, h13km, ML4.4
NEIC 17 04:10:13.6±2.2, 27°.49N±0°.07×52°.89E±0°.02, h38km±9km, Error ellipse: s-maj=10.8km s-min=2.4km az=176.0
OMAN 17 04:10:14.7±3.2, 27°.21N×52°.64E, h115km±38km, ml3.9/9, Error ellipse: s-maj=40.4km s-min=13.0km az=275.0
DSN 17 04:10:15.2±0.6, 27°.16N×52°.77E, h15km, Error ellipse: s-maj=12.0km s-min=5.3km az=33.0
ISC 17 04:10:12.0±0.4, 27°.51N±0°.04×52°.89E±0°.04, h20km, n156, σ1°75/166, mb4.0/22, MS3.4/6, 6C-3D, Southern Iran

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC

LMD1 Lamerd 0.30 125 ePg Pb 04 10 16.4 -2.3
LMD1 eSg Sb 04 10 22.1 -1.1
JHRM Jahrom 1.16 31 ePg Pb 04 10 31.7 -1.7
LAR1 LAR 1.32 83 ePg Pn 04 10 35.4 0.0
LAR1 e 04 11 07.9
AHBU AHRAM 1.95 314 ePn Pn 04 10 47.0 +3.0
SHI Shiraz 2.15 351 ePn Pn 04 10 48.4 +1.5
SHI e 04 11 34.1
IKAZ Kazeroun 2.44 338 ePn Pn 04 10 53.2 +2.1
IKAZ e 04 11 44.8
JRN Qarnain Island 2.56 181 ePn Pn 04 10 54.8 +2.4
GENO Geno 2.92 91 Pn Pn 04 10 58.8 +1.4
GENO Geno 2.92 91 ePn Pn 04 10 58.9 +1.4
GENO e 04 12 29.4
SHME Shamm 3.25 116 P Pn 04 11 04.6 +2.7
SHME Shamm 3.25 116 ePn Pn 04 11 02.7 +0.8
BANOM Banah 3.43 117 iP Pn 04 11 07.0 +2.6
SNR=13
BANOM Banah 3.43 117 P Pn 04 11 07.2 +2.8
SNR=13
BANOM Banah 3.43 117 ePn Pn 04 11 06.0 +1.6
NIAN Nian 3.50 88 ePn Pn 04 11 07.2 +1.9
NIAN e 04 12 20.6
NAZ Nazwa, Dubai 3.54 135 iP Pn 04 11 07.9 +2.1
SNR=13
NAZ S Sn 04 11 49.3 +2.3
NAZ Nazwa, Dubai 3.54 135 P Pn 04 11 08.4 +2.6
SNR=13
NAZ S Sn 04 11 50.9 +3.8
NAZ Nazwa, Dubai 3.54 135 ePn Pn 04 11 08.4 +2.6
SLWR Sila 3.59 198 ePn Pn 04 11 10.2 +3.6
MSFE Esma-Masafi 3.63 125 P Pn 04 11 09.4 +2.2
MSFE Esma-Masafi 3.63 125 ePn Pn 04 11 09.6 +2.5
KLNJ Kolanjah 3.66 342 ePn Pn 04 11 07.1 -0.8
MDH Madha 3.77 125 P Pn 04 11 11.7 +2.7
MDH Madha 3.77 125 P Pn 04 11 11.7 +2.7
MDH Madha 3.77 125 ePn Pn 04 11 12.4 +3.4
UOSS Minazif 3.92 130 iP Pn 04 11 11.7 +0.5
SNR=8.2
UOSS Minazif 3.92 130 Pn 04 11 11.5 +0.3
UOSS Sn 04 11 51.0 -5.6
UOSS Minazif 3.92 130 P Pn 04 11 12.3 +1.2
UOSS Minazif 3.92 130 ePn Pn 04 11 11.4 +0.3
HATD Hatta, Dubai 3.95 132 P Pn 04 11 13.3 +1.7
HATD S Sn 04 12 00.8 +3.4
HATD Hatta, Dubai 3.95 132 ePn Pn 04 11 13.3 +1.7
ASHO Ashiyiah 4.00 134 iP Pn 04 11 13.7 +1.4
SNR=17
ASHO Ashiyiah 4.00 134 Pn 04 11 12.7 +0.4
ASHO Ashiyiah 4.00 134 P Pn 04 11 13.9 +1.6
SNR=16
ASHO S Sn 04 12 01.3 +2.6
ASHO Ashiyiah 4.00 134 ePn Pn 04 11 12.7 +0.4
IMEH Mehriz 4.14 21 ePn Pn 04 11 15.0 +0.6
TVBK TV Kerman 4.20 53 ePn Pn 04 11 16.3 +1.1
KHGB Koh Gabri 4.24 47 ePn Pn 04 11 16.6 +0.9
IRAM Ramesheh 4.30 354 ePn Pn 04 11 16.9 +0.3
IBRJ Brojen 4.61 342 ePn Pn 04 11 23.0 +2.3
IBAF Bafgh 4.68 29 ePn Pn 04 11 22.0 +0.3
SOHO SOHO 4.70 135 P Pn 04 11 23.1 +1.3
SOHO SOHO 4.70 135 ePn Pn 04 11 22.8 +1.0
CHMN Cheshme madani 4.71 59 Pn Pn 04 11 24.7 +2.5
CHMN Cheshme madani 4.71 59 ePn Pn 04 11 24.7 +2.5
CHMN e 04 11 27.8
ICHK Chekchek 4.89 15 ePn Pn 04 11 25.5 +0.8
YZKH Yazd 5.08 16 ePn Pn 04 11 27.7 +0.6
YZKH Yazd 5.08 16 ePn Pn 04 11 27.7 +0.6
JHBN Jahan bin 5.08 338 ePn Pn 04 11 29.1 +1.7
UMZA Um Al Zommool 5.20 156 ePn Pn 04 11 31.6 +2.9
ARQ Araqi 5.30 141 P Pn 04 11 31.2 +1.2
IZEF Zefreh 5.39 355 ePn Pn 04 11 31.8 +0.3
HOQ Hoqain 5.59 133 P Pn 04 11 35.6 +1.6
SNR=6.5
HOQ S Sn 04 12 35.9 -1.8
ANAR Anarak 5.70 7 Pn Pn 04 11 36.9 +1.2
ANAR Anarak 5.70 7 ePn Pn 04 11 36.9 +1.2
SHGR Shooshtar-Gavs 5.80 323 ePn Pn 04 11 38.3 +1.4
SHGR IAML 04 12 54.0
comp=N,93nm,0.5s
SHGR IAML 04 13 03.1
comp=E,108nm,0.5s
SHGR Shooshtar-Gavs 5.80 323 ePn Pn 04 11 38.3 +1.4
IKLH Kolahrood 5.90 349 ePn Pn 04 11 38.1 -0.4
BSY Bisya 6.14 140 P Pn 04 11 43.0 +1.3
SNR=27
BSY S Sn 04 12 52.4 +1.0
BIDO Bidbid 6.18 129 P Pn 04 11 43.9 +1.7
BIDO S Sn 04 12 53.1 +0.9
TPRV Parvadeh(Tabas 6.40 30 ePn Pn 04 11 44.6 -0.7
SMDO Samad 6.44 132 P Pn 04 11 46.6 +0.8
SMDO S Sn 04 13 00.6 +1.8
WSAR Wadi Sarin 6.71 128 Pn Pn 04 11 50.2 +0.8
comp=E,6.7nm,0.3s,baz=302,slow=12,SNR=42
WSAR Sn Sn 04 13 04.8 -0.6
baz=346,slow=16,SNR=1.0
WSAR LR LR 04 14 49.5
comp=E,75nm,19.7s,baz=324,slow=42
WSAR Wadi Sarin 6.71 128 P Pn 04 11 50.8 +1.4
SNR=23
JMDO Jabal Madar 6.97 136 P Pn 04 11 53.5 +0.5
BSRN Basiran 7.00 49 ePn Pn 04 11 53.7 +0.1
BSRN Basiran 7.00 49 Pn Pn 04 11 53.6 +0.1
BSRN Basiran 7.00 49 ePn Pn 04 11 53.7 +0.1
CHBR Chabahar 7.06 104 ePn Pn 04 11 56.1 +1.9
CHBR Chabahar 7.06 104 Pn Pn 04 11 56.1 +1.9
CHBR Chabahar 7.06 104 ePn Pn 04 11 56.1 +1.9
BMDN Meydan 7.07 331 Pn Pn 04 11 56.0 +1.5
BMDN Meydan 7.07 331 ePn Pn 04 11 56.0 +1.5
TKDS Koohdasht(Taba 7.09 30 ePn Pn 04 11 54.3 -0.4
TNSJ Nastanj 7.18 26 ePn Pn 04 11 55.8 -0.2
ZHSF Zahedan 7.24 71 ePn Pn 04 11 57.4 +0.5
ZHSF Zahedan 7.24 71 ePn Pn 04 11 57.4 +0.5
BDRS Dareh Seyedi 7.29 333 Pn Pn 04 11 57.6 0.0
BDRS Dareh Seyedi 7.29 333 ePn Pn 04 11 57.7 +0.1
WBK Wadi Bani Khal 7.36 130 P Pn 04 11 59.5 +1.1
IVRN Varamin 7.53 353 ePn Pn 04 12 00.7 0.0
HSAM Samen 7.63 332 ePn Pn 04 12 01.5 -0.7
RAYN Ar Rayn 7.77 241 iP Pn 04 12 04.0 -0.1
SNR=9.9
RAYN Ar Rayn 7.77 241 Pn 04 12 04.5 +0.5
RAYN Sn Sn 04 13 29.2 -2.2
HAGD Aghdareh 7.96 337 ePn Pn 04 12 07.7 +0.9
MHTO MHTO 7.98 143 P Pn 04 12 08.0 +1.1
SNR=13
MHTO S Sn 04 13 33.6 -2.9
IKOM Komasi 8.09 326 ePn Pn 04 12 07.9 -0.6
IALM Almabolaq 8.37 332 ePn Pn 04 12 12.1 -0.3
HSRG Sareghieh 8.65 334 ePn Pn 04 12 20.0 +3.6
SHRT Shahrakht 8.83 44 ePn Pn 04 12 18.7 +0.1
SHRT Shahrakht 8.83 44 ePn Pn 04 12 18.7 +0.1
IGLO Ghaloghah 9.00 5 ePn Pn 04 12 22.6 +1.6
ZNJK Zanjan 9.80 340 ePn Pn 04 12 34.3 +2.2
ZNJK Zanjan 9.80 340 ePn Pn 04 12 34.3 +2.2
GEYT Alibeck 11.28 22 Pn Pn 04 12 52.7 +0.6
comp=E,1.0nm,0.3s,baz=206,slow=9.9,SNR=5.9
GYA0B ALIBECK ARRAY 11.28 22 Pn Pn 04 12 51.5 -0.5
GNI Garni 14.30 334 Pn P 04 13 41.0 +0.5
comp=E,1.1nm,0.3s,baz=313,slow=2.6,SNR=11
GNI LR LR 04 20 20.4
comp=E,26nm,20.1s,baz=139,slow=43
GNI Garni 14.30 334 iP P 04 13 42.3 +1.8
SNR=7.5
GNI Garni 14.30 334 Pn 04 13 33.3 -0.2
KBL Kabul 15.51 59 Pn Pn 04 13 47.0 -2.8
KBL IAmb IAmb 04 13 56.6
comp=Z,7.8nm,1.1s
KBL Kabul 15.51 59 P Pn 04 13 51.5 +1.8
SNR=7.2
AKH Akhalkalaki 15.87 333 ⇑P P 04 14 01.0 +3.1
MMAI Mount Meron Ar 16.07 294 Pn Pn 04 13 56.4 -0.5
comp=Z,0.4nm,0.3s,baz=96,slow=10,SNR=2.7
GAZ Gaziantep 16.36 310 Pn Pn 04 13 59.4 -1.2
KBZ Khabaz 18.08 336 P P 04 14 23.8 +1.5
comp=Z,0.1nm,0.3s,baz=160,slow=8.6,SNR=12
KIV Kislovodsk 18.36 336 P P 04 14 24.5 -0.8
KIV IAmb IAmb 04 14 33.5
comp=Z,13nm,1.0s
NIL Nilore 18.55 66 P P 04 14 26.4 -1.2
NIL IAmb IAmb 04 14 34.2
comp=Z,12nm,1.0s
BTK Batken 19.41 45 P P 04 14 35.4 -1.6
BTK IAmb IAmb 04 14 42.2
comp=Z,21nm,1.5s
BRTR Keskin Array B 20.09 312 P P 04 14 44.7 +0.3
comp=Z,1.3nm,0.8s,baz=130,slow=12,SNR=12
BR131 Keskin Array S 20.09 312 P P 04 14 43.8 -0.6
BR131 IAmb IAmb 04 15 00.8
comp=Z,7.1nm,0.8s
ANTO Ankara 20.72 312 ⇑P P 04 14 53.5 +2.3
ANTO Ankara 20.72 312 P P 04 14 51.1 -0.1
ANTO IAmb IAmb 04 14 56.1
comp=Z,7.8nm,0.8s
ILGA Ilgaz 20.76 316 P P 04 14 49.7 -2.1
ILGA IAmb IAmb 04 14 59.1
comp=Z,16nm,1.2s
KK31 Karatay Array 21.12 38 P P 04 14 53.2 -2.2
KKAR Karatay Array 21.12 38 P P 04 14 52.5 -2.9
ISP Isparta 21.41 304 P P 04 14 59.1 +0.4
ISP IAmb IAmb 04 15 11.9
comp=Z,8.6nm,0.9s
ARSB Arslanbob 21.48 45 P P 04 14 57.9 -1.6
ELL Elmali 21.49 301 P P 04 14 59.6 0.0
KSH Kashi 22.59 52 P P 04 15 08.4 -3.0
AAK Ala-Archa 23.15 44 P P 04 15 19.7 +2.4
comp=Z,0.8nm,0.5s,baz=64,slow=3.3,SNR=3.1
AAK Ala-Archa 23.15 44 P P 04 15 14.9 -2.3
AAK IAmb IAmb 04 15 27.4
comp=Z,8.5nm,1.4s
AKTO Aktyubinsk 23.22 8 P P 04 15 19.4 +1.7
comp=Z,0.7nm,0.4s,baz=171,slow=12,SNR=7.3
AKTO LR LR 04 26 32.3
comp=Z,112nm,18.6s,baz=182,slow=42
NRN Naryn 23.48 48 P P 04 15 17.9 -2.8
NRN IAmb IAmb 04 15 27.4
comp=Z,4.6nm,1.0s
IDI Anoyia 25.07 295 P P 04 15 36.6 +1.4
comp=Z,8.9nm,0.9s,baz=114,slow=7.6,SNR=4.9
TIRR Tirgusor 25.90 317 ⇑P P 04 15 44.4 +1.9
TOPG Topolog 26.14 318 ⇑P P 04 15 46.6 +1.8
CFR Carcaliu 26.45 318 ⇓P P 04 15 49.9 +2.4
MLR Muntele Rosu 27.93 317 ⇑P P 04 16 03.5 +2.5
VOIR 28.45 316 ⇑P P 04 16 08.5 +2.9
BVAR Borovoye Array 28.61 22 P P 04 16 06.8 0.0
comp=Z,0.5nm,0.4s,baz=212,slow=8.8,SNR=5.5
AKASG Malin Array Be 29.32 329 P P 04 16 12.4 -0.7
comp=Z,0.3nm,0.3s,baz=114,slow=7.1,SNR=5.5
AKBB Malin Array Si 29.32 329 P P 04 16 11.2 -1.9
BURAR Bucovina Array 29.48 320 ⇓P P 04 16 16.2 +1.5
BUR08 Bucovina Ar. S 29.50 320 P P 04 16 14.1 -0.9
MKAR Makanchi Array 30.06 42 P P 04 16 20.6 +0.8
comp=Z,0.2nm,0.7s,baz=228,slow=12,SNR=2.7
MKAR LR LR 04 30 11.9
comp=Z,55nm,18.3s,baz=244,slow=40
KURBB Kurchatov Arra 30.20 33 P P 04 16 22.3 +1.3
comp=Z,0.3nm,0.6s,baz=233,slow=8.6,SNR=4.4
KURK Kurchatov 30.30 33 P P 04 16 20.5 -1.3
KURK IAmb IAmb 04 16 34.8
comp=Z,2.4nm,1.1s
DRGR 30.53 317 ⇓P P 04 16 25.8 +1.8
KOLS Kolonicke sedl 31.85 320 eP P 04 16 38.7 +3.2
ZALV Zalesovo Beam 35.29 33 P P 04 17 06.0 +0.6
comp=Z,0.7nm,0.3s,baz=241,slow=8.1,SNR=1.6
SQTA Sankt Quirin 37.97 313 P P 04 17 28.7 +0.2
comp=Z,2.0nm,0.6s
FINES FINESS Array B 38.38 340 P P 04 17 31.1 -0.4
comp=Z,3.0nm,0.5s,baz=144,slow=9.2,SNR=38
DAVA Damuels 38.86 312 eP P 04 17 35.7 -0.3
comp=Z,3.2nm,0.4s
GTA Gaotai 40.49 61 eP P 04 17 52.0 +2.3
GTA pP pP 04 17 55.3 -0.8
GTA sP sP 04 17 58.0 -0.7
NOA NORSAR Array B 43.59 332 P P 04 18 13.8 -0.8
comp=Z,1.4nm,0.7s,baz=120,slow=8.1,SNR=5.7
ARCES ARCESS Array B 44.97 347 P P 04 18 26.4 +1.0
comp=Z,1.5nm,0.7s,baz=160,slow=7.8,SNR=6.5
SONM Songino Array 45.94 49 P P 04 18 35.2 +1.7
comp=Z,0.4nm,0.5s,baz=269,slow=9.6,SNR=4.8
ESDC Sonseca Array 48.17 300 P P 04 18 51.3 +0.3
comp=Z,0.2nm,0.6s,baz=60,slow=5.2,SNR=2.6
TORD Torodi Ar. Bea 49.76 264 P P 04 19 03.0 -0.4
comp=Z,1.2nm,0.5s,baz=62,slow=8.2,SNR=10
DBIC Dimbokro 58.41 260 P P 04 20 04.8 -1.9
comp=Z,1.6nm,0.6s,baz=68,slow=6.1,SNR=3.5
DBIC LR LR 04 48 34.5
comp=Z,73nm,19.7s,baz=101,slow=40
DBIC Dimbokro 58.41 260 P P 04 20 05.1 -1.5
KSRS Korea Array 62.56 60 LR LR 04 50 44.9
comp=Z,21nm,18.2s,baz=75,slow=39
USRK Ussuriysk Ar. 63.89 52 LR LR 04 49 13.0
comp=Z,43nm,19.6s,baz=88,slow=37
MJAR Matsushiro Arr 70.68 58 LR LR 04 55 06.8
comp=Z,18nm,18.4s,baz=305,slow=38
ILAR Eielson Array 86.73 8 P P 04 22 53.3 -1.0
comp=Z,0.3nm,0.8s,baz=324,slow=4.5,SNR=3.3
YKA Yellowknife Ar 89.75 354 P P 04 23 08.0 -0.7
comp=Z,0.7nm,0.7s,baz=5.3,slow=5.0,SNR=17

MOS 17 04:39:33.2±1.4, 39°.40N×77°.66E, h16km, mb4.1/3, Error ellipse: s-maj=21.4km s-min=6.6km az=92.2
IDC 17 04:39:34.9±1.8, 40°.08N×77°.70E, h0km, mb3.6/4, mb1 3.5/7, mb1mx3.3/43, mbtmp3.4/7, ML3.0/3, MS2.0/1, Ms1 2.0/1, ms1mx1.8/44, Error ellipse: s-maj=27.4km s-min=20.6km az=156.0
KRNET 17 04:39:40.6±0.1, 40°.47N×77°.50E, mb3.9
SOME 17 04:39:40.9, 40°.48N×77°.48E, h5km
NNC 17 04:39:44.3±1.7, 40°.54N×77°.63E, h0km, mb4.4, mpv4.2, Error ellipse: s-maj=11.8km s-min=8.3km az=165.0
ISC 17 04:39:38.5±1.9, 40°.39N±0°.06×77°.64E±0°.03, h5km±10km, n102, σ1°88/147, mb3.8/6, 27C-19D, Kyrgyzstan-Xinjiang border region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC

NRN Naryn 1.62 311 ⇑iP Pn 04 40 08.6 +0.6
baz=10.0
NRN ⇑iS Sn 04 40 29.5 0.0
baz=10.0
KDJ Kajisay 1.77 349 ⇓iP Pb 04 40 12.5 +0.9
baz=52
KDJ ⇓iS Sg 04 40 35.4 -0.1
baz=52
ULHL Ulahol 2.13 331 ⇓iP Pb 04 40 18.2 +0.5
baz=32
ULHL ⇓iS Sb 04 40 45.3 +0.7
baz=32
ULHL Ulahol 2.13 331 P Pb 04 40 18.7 +0.9
SNR=22
PRZ Przheval'sk 2.17 15 ⇑iP Pb 04 40 19.3 +0.9
baz=19
PRZ ⇑iS Sg 04 40 47.9 -0.3
baz=19
ANVS Anan'yevo 2.39 1 ⇓iP Pb 04 40 22.3 +0.1
baz=3.0
ANVS ⇓iS Sb 04 40 52.8 +0.8
baz=3.0
BOOM Boomskoye usch 2.46 329 ⇑eP Pb 04 40 22.5 -0.7
baz=30
BOOM ⇑iS Sb 04 40 53.0 -0.9
baz=30
KZA Kyzart 2.47 314 ⇓iP Pn 04 40 22.6 +2.8
baz=14
KZA ⇓iS Sb 04 40 53.1 -1.3
baz=14
KZA Kyzart 2.47 314 P Pb 04 40 24.3 +0.7
SNR=121
TNSS Tian-Shan 2.69 349 eP Pg 04 40 29.9 -0.3
109nm,0.2s
TNSS eS Sg 04 41 05.3 +0.2
82nm,0.3s
TNSS Tian-Shan 2.69 349 Pg Pg 04 40 29.9 -0.3
109nm,0.2s
TNSS Lg Lg 04 41 05.3
82nm,0.3s
TNSS Tian-Shan 2.69 349 ePN Pg 04 40 29.9 -0.3
SATY Saty 2.73 12 eP Pg 04 40 30.9 +0.1
61nm,0.3s
SATY eS Sg 04 41 07.2 +1.0
125nm,0.3s
SATY Saty 2.73 12 Pg Pg 04 40 30.9 +0.1
61nm,0.3s
SATY Lg Lg 04 41 07.6
125nm,0.3s
SATY Saty 2.73 12 ePN Pg 04 40 30.9 +0.1
IZV Izvestkoviy 2.75 344 eP Pb 04 40 30.4 +2.1
113nm,0.5s
IZV eS Sg 04 41 06.2 -0.7
172nm,0.6s
IZV Izvestkoviy 2.75 344 Pg Pb 04 40 30.4 +2.1
113nm,0.5s
IZV Lg Lg 04 41 06.6
172nm,0.6s
MDOK Medeo 2.81 351 ⇓iP Pg 04 40 31.8 -0.5
76nm,0.3s
MDOK eS Sg 04 41 08.4 -0.2
139nm,0.3s
MDOK Medeo 2.81 351 Pn Pb 04 40 31.3 +2.1
52nm,0.5s
MDOK Sn Sb 04 41 04.8 +0.9
100nm,0.5s
MDOK Medeo 2.81 351 Pg Pg 04 40 31.8 -0.5
76nm,0.3s
MDOK Lg Lg 04 41 08.4
139nm,0.3s
MDOK Medeo 2.81 351 iPN Pg 04 40 31.8 -0.5
ZHN Zhinishke 2.84 12 eP Pg 04 40 32.9 -0.1
36nm,0.2s
ZHN eS Sg 04 41 10.1 +0.4
35nm,0.2s
ZHN Zhinishke 2.84 12 Pg Pg 04 40 32.9 -0.1
36nm,0.2s
ZHN Lg Lg 04 41 10.1
35nm,0.2s
ZHN Zhinishke 2.84 12 ePN Pg 04 40 32.9 -0.1
AAA Alma-Ata 2.87 349 eP Pg 04 40 33.4 -0.1
101nm,0.1s
AAA eS Sg 04 41 10.9 +0.3
148nm,0.3s
AAA Alma-Ata 2.87 349 Pg Pg 04 40 33.4 -0.1
101nm,0.1s
AAA Lg Lg 04 41 10.9
148nm,0.3s
AAA Alma-Ata 2.87 349 ePN Pg 04 40 33.3 -0.1
AAA pmax pmax
comp=Z,106nm,0.2s
KNDC Almaty 2.87 350 ⇑Pn Pb 04 40 30.5 +0.2
comp=Z,68nm,0.6s
KNDC ⇑Sn Sb 04 41 05.8 +0.1
comp=Z,101nm,0.4s
KNDC Almaty 2.87 350 PN Pg 04 40 32.9 -0.6
KOTS Kotyrbulak 2.87 352 eP Pg 04 40 32.7 -0.8
comp=Z,423nm,0.3s
KOTS eS Sg 04 41 10.1 -0.5
comp=Z,359nm,0.4s
KOTS Kotyrbulak 2.87 352 Pg Pg 04 40 32.7 -0.8
comp=Z,423nm,0.3s
KOTS Lg Lg 04 41 10.1
comp=Z,359nm,0.4s
MTBS Maitube 2.88 342 eP Pb 04 40 32.4 +1.9
MTBS eS Sg 04 41 09.9 -1.2
MTBS Maitube 2.88 342 Pg Pb 04 40 32.4 +1.9
MTBS Lg Lg 04 41 09.9
MTBS Maitube 2.88 342 ePN Pb 04 40 32.4 +1.9
ARLS Aral 2.90 302 ⇓eP Pn 04 40 28.3 +2.8
baz=1.0
ARLS ⇓iS Sn 04 41 03.3 +2.4
baz=1.0
KST Kastek 2.93 335 eP Pb 04 40 33.3 +1.9
comp=Z,35nm,0.1s
KST eS Sg 04 41 10.9 -1.8
comp=Z,60nm,0.5s
KST Kastek 2.93 335 Pg Pb 04 40 33.3 +1.9
comp=Z,35nm,0.1s
KST Lg Lg 04 41 10.9
comp=Z,60nm,0.5s
UZB Uzynbulak 2.94 20 eP Pg 04 40 35.4 +0.5
comp=Z,16nm,0.4s
UZB eS Sg 04 41 14.8 +1.7
comp=Z,40nm,0.4s
UZB Uzynbulak 2.94 20 Pg Pg 04 40 35.4 +0.5
comp=Z,16nm,0.4s
UZB Lg Lg 04 41 15.1
comp=Z,40nm,0.4s
UZB Uzynbulak 2.94 20 ePN Pg 04 40 35.4 +0.5
UCH Uchtor 2.98 309 ⇑iP Pn 04 40 29.5 +2.6
baz=9.0
UCH ⇑iS Sn 04 41 05.6 +2.3
baz=9.0
UCH Uchtor 2.98 309 P Pn 04 40 30.1 +3.2
SNR=12
KBK Karagaybulak 3.03 319 ⇓iP Pn 04 40 30.2 +2.9
baz=20
KBK ⇓iS Sn 04 41 06.7 +2.6
baz=20
KBK Karagaybulak 3.03 319 P Pb 04 40 34.8 +1.7
SNR=31
SHLS Shalkode 3.08 26 eP Pg 04 40 39.6 +2.0
comp=Z,21nm,0.3s
SHLS eS Sg 04 41 22.2 +4.6
comp=Z,74nm,0.5s
SHLS Shalkode 3.08 26 Pg Pg 04 40 39.6 +2.0
comp=Z,21nm,0.3s
SHLS Lg Lg 04 41 23.0
comp=Z,74nm,0.5s
SHLS Shalkode 3.08 26 ePN Pg 04 40 39.6 +2.0
KURS Kuram 3.12 7 eP Pb 04 40 37.0 +2.5
comp=Z,18nm,0.2s
KURS eS Sg 04 41 17.5 -1.2
comp=Z,40nm,0.6s
KURS Kuram 3.12 7 Pg Pb 04 40 37.0 +2.5
comp=Z,18nm,0.2s
KURS Lg Lg 04 41 17.5
comp=Z,40nm,0.6s
DGS Degeres 3.17 335 eP Pb 04 40 37.7 +2.3
comp=Z,29nm,0.4s
DGS eS Sg 04 41 18.7 -1.7
comp=Z,70nm,0.4s
DGS Degeres 3.17 335 Pg Pb 04 40 37.7 +2.3
comp=Z,29nm,0.4s
DGS Lg Lg 04 41 18.7
comp=Z,70nm,0.4s
KPKS Kokpek 3.17 14 eP Pg 04 40 38.6 -0.7
comp=Z,94nm,0.3s
KPKS eS Sg 04 41 20.5 +0.1
comp=Z,124nm,0.3s
KPKS Kokpek 3.17 14 ePN Pg 04 40 38.6 -0.7
PDGK Podgornoye 3.25 25 Pg Pg 04 40 40.0 -0.7
comp=Z,9.3nm,0.3s
PDGK Lg Lg 04 41 23.6
comp=Z,44nm,0.6s
PDGK Podgornoye 3.25 25 ⇑Pn Pb 04 40 35.4 -1.3
comp=Z,14nm,0.4s
PDGK ⇓Sn Sb 04 41 15.7 -0.9
comp=Z,69nm,0.5s
AAK Ala-Archa 3.26 315 Pn Pn 04 40 33.1 +2.7
comp=Z,7.9nm,0.3s,baz=121,slow=6.7,SNR=33
AAK Pg Pb 04 40 38.4 +1.5
comp=Z,9.3nm,0.3s,baz=128,slow=10,SNR=65
AAK Lg Lg 04 41 20.0
comp=Z,7.8nm,0.3s,baz=308,slow=15,SNR=14
AAK LR LR 04 41 43.5
comp=Z,19nm,19.9s,baz=148,slow=37
AAK Ala-Archa 3.26 315 ⇑eP Pn 04 40 33.5 +3.1
baz=15
AAK ⇑iS Sn 04 41 11.7 +2.1
baz=15
AAK Ala-Archa 3.26 315 P Pb 04 40 38.4 +1.5

SNR=12
AAK Ala-Archa 3.26 315 ⇓Pn Pb 04 40 37.7 +0.8
comp=Z,63nm,0.7s
AAK ⇑Sn Sb 04 41 17.6 +0.6
comp=Z,61nm,0.9s
AAK Ala-Archa 3.26 315 ePN Pn 04 40 33.5 +3.1
CHMS Chumysh 3.38 321⇑iP Pn 04 40 35.2 +3.2
baz=22
CHMS ⇑iS Sn 04 41 15.0 +2.4
baz=22
CHMS Chumysh 3.38 321 P Pb 04 40 40.6 +1.6
SNR=7.2
CHMS Chumysh 3.38 321 ⇑Pn Pn 04 40 36.4 +4.3
comp=Z,42nm,0.6s
CHMS ⇓Sn Sb 04 41 19.0 -1.5
comp=Z,49nm,0.6s
KTBS Karatobe 3.40 348 eP Pb 04 40 41.4 +2.2
comp=Z,28nm,0.2s
KTBS eS Sg 04 41 25.1 -2.4
comp=Z,102nm,0.3s
KTBS Karatobe 3.40 348 Pg Pb 04 40 41.4 +2.2
comp=Z,28nm,0.2s
KTBS Lg Lg 04 41 25.8
comp=Z,102nm,0.3s
AML Almayashu 3.44 302⇑iP Pn 04 40 36.0 +2.8
baz=1.0
AML ⇑iS Sn 04 41 16.3 +1.7
baz=1.0
AML Almayashu 3.44 302 P Pn 04 40 36.9 +3.7
SNR=13
CHKK Chushkaly 3.50 352 eP Pg 04 40 44.0 -1.4
comp=Z,32nm,0.2s
CHKK eS Sg 04 41 29.4 -1.4
comp=Z,65nm,0.2s
CHKK Chushkaly 3.50 352 Pg Pg 04 40 44.0 -1.4
comp=Z,32nm,0.2s
CHKK Lg Lg 04 41 29.3
comp=Z,65nm,0.2s
CHKK Chushkaly 3.50 352 ePN Pg 04 40 44.0 -1.4
KUU Kurty 3.63 345 eP Pb 04 40 45.3 +2.1
comp=Z,15nm,0.2s
KUU ⇑iS Sg 04 41 31.4 -3.8
comp=Z,47nm,0.5s
KUU Kurty 3.63 345 Pg Pb 04 40 45.3 +2.1
comp=Z,15nm,0.2s
KUU Lg Lg 04 41 31.4
comp=Z,47nm,0.5s
KUU Kurty 3.63 345 ePN Pb 04 40 45.3 +2.1
ARSB Arslanbob 3.65 286⇑iP Pn 04 40 39.5 +3.7
baz=85
ARSB ⇑iS Sn 04 41 22.9 +3.6
baz=85
EKS2 Erkin-Say 3.68 309⇓iP Pn 04 40 39.2 +3.0
baz=9.0
EKS2 ⇓iS Sn 04 41 21.9 +1.9
baz=9.0
USP Ospenovka 3.71 322⇑iP Pn 04 40 39.5 +3.0
baz=22
USP ⇑iS Sn 04 41 22.7 +2.1
baz=22
USP Ospenovka 3.71 322 P Pb 04 40 46.1 +1.5
SNR=23
MNBS Baschi 3.73 9 eP Pg 04 40 49.0 -1.0
comp=Z,21nm,0.3s
MNBS eS Sg 04 41 38.2 -0.1
comp=Z,91nm,0.4s
MNBS Baschi 3.73 9 Pg Pg 04 40 49.0 -1.0
comp=Z,21nm,0.3s
MNBS Lg Lg 04 41 38.4
comp=Z,91nm,0.4s
MRKS Merke 4.06 307 eP Pb 04 40 52.8 +2.3
comp=Z,27nm,0.3s
MRKS ⇑iS Sb 04 41 44.4 +4.4
comp=Z,9.2nm,0.6s
MRKS Merke 4.06 307 Pg Pb 04 40 52.8 +2.3
comp=Z,27nm,0.3s
MRKS Lg Lg 04 41 44.4
comp=Z,9.2nm,0.6s
DJR Jarkent 4.25 21 eP Pg 04 40 58.9 -1.1
comp=Z,1.9nm,0.3s
DJR eS Sg 04 41 55.1 +0.1
comp=Z,21nm,0.4s
DJR Jarkent 4.25 21 Pg Pg 04 40 58.9 -1.1
comp=Z,1.9nm,0.3s
DJR Lg Lg 04 41 54.4
comp=Z,21nm,0.4s
KAPS Kapalarasan 5.05 14 eP Pg 04 41 13.0 -2.3
comp=Z,5.2nm,0.3s
KAPS eS Sg 04 42 19.2 -1.5
comp=Z,14nm,0.6s
KAPS Kapalarasan 5.05 14 Pg Pg 04 41 13.0 -2.3
comp=Z,5.2nm,0.3s
KAPS Lg Lg 04 42 18.7
comp=Z,14nm,0.6s
BTLS Baital 5.35 332 eP Pg 04 41 17.6 -3.3
comp=Z,1.2nm,0.3s
BTLS eS Sg 04 42 26.7 -3.5
comp=Z,14nm,0.6s
KK31 Karatay Array 5.98 299 Pg Pn 04 41 32.7 -0.3
comp=Z,1.4nm,0.5s,baz=116,slow=17,SNR=13
KK31 ⇑Lg Lg 04 42 55.6
comp=Z,1.7nm,0.5s,baz=113,slow=28,SNR=4.1
MK31 Makanchi Array 7.24 26 Pn Pn 04 41 27.5 +2.6
comp=Z,0.1nm,0.3s,baz=203,slow=15,SNR=5.2
MK31 ⇓Lg Lg 04 43 27.8
comp=Z,1.3nm,0.6s,baz=205,slow=22,SNR=3.9
MK31 Makanchi Array 7.24 26 eP Pn 04 41 24.4 -0.5
MKAR Makanchi Array 7.24 26 Pn Pn 04 41 26.7 +1.7
comp=Z,0.2nm,0.3s,baz=207,slow=16,SNR=7.9
MKAR Sn Sn 04 42 49.2 +1.7
comp=Z,0.2nm,0.3s,baz=205,slow=21,SNR=6.2
MKAR Lg Lg 04 43 28.1
comp=Z,0.3nm,0.3s,baz=258,slow=36,SNR=2.3
KURBB Kurchatov Arra 10.25 3 Pn Pn 04 42 08.0 +1.8
comp=Z,0.0nm,0.3s,baz=194,slow=11,SNR=4.3
KURBB Lg Lg 04 45 04.5
comp=Z,0.0nm,0.3s,baz=172,slow=31,SNR=5.0
KURK Kurchatov 10.35 3 eP Pn 04 42 06.0 -1.5
BVAR Borovoye Array 13.57 341 Pn Pn 04 42 54.6 +3.0
comp=Z,0.3nm,0.3s,baz=138,slow=8.8,SNR=1.8
BVAR Lg Lg 04 46 48.5
comp=Z,0.1nm,0.3s,baz=228,slow=42,SNR=2.1
BRVK Borovoye 13.63 341 eP Pn 04 42 51.1 -1.2
ZALV Zalesovo Beam 14.40 17 eP Pn 04 43 01.5 -1.4
SONM Songino Array 21.86 61 P P 04 44 29.8 -2.2
comp=Z,0.3nm,0.7s,baz=320,slow=6.7,SNR=4.6
GNI Garni 25.02 280⇑iP P 04 45 02.9 -0.7
GNI pmax pmax
comp=Z,7.0nm,1.0s
KBZ Khabaz 25.89 289 iP P 04 45 10.4 -0.8
KBZ pmax pmax
comp=Z,1.0nm,0.9s
OBN Obninsk 30.78 312 eP P 04 45 52.1 -2.6
OBN e 04 46 54.6
OBN pmax pmax
comp=Z,3.0nm,0.9s
ARCES ARCESS Array B 39.72 334 P P 04 47 11.4 -0.1
comp=Z,4.6nm,1.0s,baz=109,slow=9.8,SNR=1.9
TORD Torodi Ar. Bea 70.94 271 P P 04 50 54.8 -2.4
comp=Z,0.6nm,0.5s,baz=48,slow=6.0,SNR=6.4
YKA Yellowknife Ar 76.99 6 P P 04 51 30.6 -1.3
comp=Z,0.3nm,0.8s,baz=350,slow=5.2,SNR=4.8

TAP 17 04:51:23.5, 24.08N×122.19E, h29km, ML3.5, D
JMA 17 04:51:23.0, 24.01N×122.19E, h37km±2km, M3.0
ISC 17 04:51:21.2±1.1, 24.02N±0.02×122.28E±0.02, h19km±3km, n107, σ0.66/187, Taiwan region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res

EOS1 EOS1 0.55 345 P Pn 04 51 33.1 -0.8
baz=354
EOS1 S Sb 04 51 40.7 +1.2
baz=354
HWA Hwalien 0.62 266 eS Sg 04 51 42.6 +0.8
baz=258
TWD Chiawan 0.63 276 P Pg 04 51 34.3 +0.7
baz=269
TWD eS Sg 04 51 42.1 0.0
baz=269
ENLB Shoufeng 0.63 260 iP Pg 04 51 34.2 +0.5
baz=242
ENLB eS Sg 04 51 42.6 +0.4
baz=242
ENA Nanau 0.64 310 P Pg 04 51 34.2 +0.3
baz=316
ENA eS Sb 04 51 42.2 0.0
baz=316
NACB Ninganchiao 0.65 284 P Pg 04 51 34.4 +0.5
baz=266
NACB eS Sb 04 51 42.4 0.0
baz=266
TWC Suao 0.71 326 P Pg 04 51 35.2 +0.1
baz=340
TWC eS Sb 04 51 44.0 -0.3
baz=340
JYNG Yonagunijimaku 0.74 55 P Pn 04 51 38.1 +1.4
JYNG S Sn 04 51 49.4 +1.9
ETLH Xiulin Townshi 0.75 285 P Pg 04 51 36.2 +0.2
baz=268
ETLH eS Sb 04 51 45.7 0.0
baz=268
YOJ Yonaguni jima 0.80 56 P Pn 04 51 39.0 +1.5
YOJ eS Sn 04 51 50.5 +1.6
ESL Shilin 0.80 255 P Pg 04 51 36.9 0.0
baz=242
ESL eS Sg 04 51 47.6 +0.1
baz=242
EGFH Guangfu 0.85 246 P Pg 04 51 38.1 +0.2
baz=228
EGFH eS Sg 04 51 49.3 0.0
baz=228
TWE Neicheng 0.90 321 P Pn 04 51 38.7 0.0
baz=335
TWE eS Sg 04 51 50.0 -0.5
baz=335
ENTT Nioudou 0.90 314 P Pg 04 51 38.6 -0.1
baz=325
ENTT eS Sg 04 51 50.3 -0.3
baz=325
NDT Datong Townshi 0.91 310 P Pn 04 51 38.9 -0.1
baz=310
NDT eS Sb 04 51 50.4 +0.3
baz=310
NNSB Datong 0.92 297 P Pg 04 51 38.9 -0.2
baz=284
NNSB eS Sb 04 51 50.0 -0.4
baz=284
NNSH Datong 0.92 297 iP Pg 04 51 38.9 -0.2
baz=284
NNSH eS Sb 04 51 50.0 -0.3
baz=284
NNS Nan Shan 0.93 297 iP Pg 04 51 39.1 -0.2
baz=285
NNS eS Sb 04 51 50.4 -0.3
baz=285
NTC Toucheng 0.93 334 P Pn 04 51 39.5 +0.2
baz=348
NTC eS Sg 04 51 51.2 -0.3
baz=348
WHF Hehuan Shan 0.94 278 P Pb 04 51 39.2 +0.1
baz=263
WHF eS Sb 04 51 51.0 -0.3
baz=263
SLBB Yuanshan 0.94 321 P Pn 04 51 39.8 +0.4
baz=323
HGSD Ruisui 0.94 236 eP Pg 04 51 40.0 +0.5
baz=230
CHGB Renai 1.01 273 P Pn 04 51 40.6 0.0
baz=257
CHGB eS Sb 04 51 52.8 -0.5
baz=257
OWD Renai 1.01 267 P Pn 04 51 40.5 0.0
baz=261
OWD S Sb 04 51 52.4 -0.8
baz=261
EHY Hungye 1.01 240 eP Pn 04 51 40.5 +0.1
baz=227
TWB1 Santiao Chiao 1.02 345 P Pg 04 51 40.8 -0.3
baz=360
TIPB Shuangxi 1.03 337 P Pg 04 51 41.3 0.0
baz=349
TIPB eS Sn 04 51 54.2 -0.6
baz=349
NWLT Wulai 1.04 317 P Pn 04 51 40.7 0.0
baz=318
NWLT eS Sb 04 51 53.9 +0.1
baz=318
YHNB Yeheng 1.05 308 P Pn 04 51 41.1 +0.1
baz=308
YHNB eS Sb 04 51 53.3 -0.9
baz=308
TDCB Techi 1.05 283 P Pn 04 51 41.3 +0.2
baz=270
TDCB eS Sb 04 51 53.5 -0.8
baz=270
NSK Sanguang 1.07 308 P Pn 04 51 41.3 +0.1
baz=308
NSK eS Sb 04 51 53.4 -1.3
baz=308
VWDT VWDT 1.07 256 P Pg 04 51 41.9 -0.2
baz=239
VWDT eS Sb 04 51 55.1 +0.2
baz=239
YULB Yu-li 1.09 236 P Pb 04 51 41.8 +0.3
baz=243
YULB eS Sb 04 51 55.7 +0.2
baz=243
TWF1 Yuli 1.12 234 P Pb 04 51 42.4 +0.4
baz=242
TWF1 eS Sb 04 51 56.1 0.0
baz=242
NWF Wu-fen Shan 1.14 337 P Pg 04 51 42.8 -0.6
baz=354
NWF eS Sn 04 51 57.1 -0.4
baz=354
WFSB Wu-fen Shan 1.14 337 P Pg 04 51 42.7 -0.6
baz=354
WFSB eS Sn 04 51 57.3 0.0
baz=354
TWA Mucha 1.15 327 P Pg 04 51 43.6 +0.1
baz=329
TWA eS Sn 04 51 57.5 0.0
baz=329
NHDH Xindian Distri 1.17 324 P Pg 04 51 43.6 -0.2
baz=325
NHDH eS Sb 04 51 57.3 -0.2
baz=325
SSLB Suanglung 1.23 260 P Pb 04 51 44.2 +0.3
baz=254
SSLB eS Sb 04 51 58.5 -1.0
baz=254
DPDB Guoxing 1.24 271 iP Pb 04 51 44.3 +0.3
baz=259
DPDB eS Sn 04 52 00.2 +0.4
baz=259
CHKT Chengkung 1.24 223 P Pn 04 51 42.5 -1.0
baz=207
CHKT eS Sb 04 51 57.9 -1.7
baz=207
WHP Taichung City 1.25 282 P Pb 04 51 44.6 +0.4
baz=269
WHP eS Sb 04 51 59.8 -0.1
baz=269
WLTB Daxi 1.25 312 P Pg 04 51 44.7 -0.7
baz=301
WLTB eS Sn 04 52 00.7 +0.7
baz=301
SMLT Sun Moon Lake 1.27 264 P Pb 04 51 44.6 0.0
baz=259
SMLT eS Sn 04 52 00.9 +0.3
baz=259
YM01 YM01 1.30 330 P Pb 04 51 45.1 +0.1
baz=346
YM01 eS Sb 04 52 01.7 +0.5
baz=346
TYC Yuchr 1.31 265 P Pb 04 51 45.1 0.0
baz=261
YM10 YM10 1.31 330 P Pb 04 51 45.1 -0.1
baz=346
YM10 eS Sn 04 52 01.4 -0.1
baz=346
YM11 YM11 1.31 331 eP Pb 04 51 45.7 +0.4
baz=333
LIOB Emei 1.31 299 iP Pg 04 51 45.9 -0.6
baz=298
LIOB eS Sb 04 52 01.6 -0.1
baz=298
NSTT Nanjuang 1.32 298 P Pg 04 51 45.9 -0.7
baz=297
NSTT eS Sb 04 52 01.4 -0.2
baz=297
YM04 YM04 1.32 329 eP Pb 04 51 45.2 -0.1
baz=331
YM04 eS Sn 04 52 00.8 -0.9
baz=331
YM08 YM08 1.32 332 P Pb 04 51 45.3 -0.1
baz=334
YUS Yu-Shan 1.33 247 P Pb 04 51 46.0 +0.2
baz=241
YUS eS Sn 04 52 01.8 -0.7
baz=241
WHYT Xinyi Township 1.34 256 eP Pg 04 51 46.9 -0.3
baz=240
WHYT eS Sb 04 52 03.6 +1.0
baz=240
IRIF Iriomote-Funau 1.36 76 P Pg 04 51 47.8 +0.3
IRIF S Sg 04 52 04.8 -0.5
NCUH Zhongli 1.37 314 eS Sb 04 52 03.5 0.0
baz=314
HATJ Hateruma jima 1.40 88 P Pg 04 51 47.9 -0.2
HATJ eS Sg 04 52 06.1 -0.2
TWQ1 Liyutan 1.42 284 P Pb 04 51 47.1 +0.2
baz=280
TWQ1 eS Sb 04 52 04.9 +0.2
baz=280
ELDTW Lidau 1.42 235 eP Pn 04 51 46.1 0.0
baz=217
ELDTW eS Sn 04 52 04.5 +0.1
baz=217
WJS Zhushan 1.43 262 eP Pg 04 51 48.4 -0.5
baz=258
WJS eS Sb 04 52 05.8 +0.6
baz=258
NSY Sanyi 1.44 286 P Pg 04 51 48.4 -0.6
baz=283
NSY eS Sb 04 52 05.8 +0.3
baz=283
ALS Alishan 1.44 250 P Pb 04 51 47.9 +0.3
baz=244
ALS eS Sn 04 52 05.4 +0.2
baz=244
NMLH Miaoli 1.45 291 P Pb 04 51 48.2 +0.5
baz=288
NMLH eS Sb 04 52 06.3 +0.6
baz=288
WNT Mingjian 1.47 265 P Pb 04 51 49.0 -0.5
baz=260
WNT eS Sb 04 52 06.7 +0.5
baz=260
TCU Taichung 1.47 275 eP Pb 04 51 48.4 +0.4
baz=271
TCU eS Sb 04 52 07.1 +0.9
baz=271
TWH Lutao 1.50 210 iP Pb 04 51 47.9 -0.5
baz=205
TWH eS Sn 04 52 05.0 -1.1
baz=205
PTSB Yuanli 1.50 287 eS Sb 04 52 07.5 +0.3
baz=283
CHN5 Tsauling 1.53 254 P Pb 04 51 49.6 +0.6
baz=240
CHN5 eS Sb 04 52 08.8 +0.9
baz=240
WDJ Dajia District 1.53 283 eP Pb 04 51 48.8 -0.2
baz=279
WDJ eS Sb 04 52 08.0 -0.1
baz=279
WCHH Zhanghua 1.57 273 eP Pb 04 51 50.0 +0.3
baz=268
WCHH eS Sb 04 52 10.0 +0.8
baz=268
JKRS Kuro-shima 1.59 82 P Pg 04 51 51.6 -0.3
WGK Gukeng 1.61 258 eS Sb 04 52 11.7 +1.5
baz=254
PCYT Pengchaiyu 1.61 353 eP Pb 04 51 50.5 +0.1
baz=357
TWGBT Beinan 1.63 223 P Pn 04 51 48.7 -0.1
baz=218
TWGBT eS Sn 04 52 08.2 -1.1
baz=218
WDLH Douliu 1.63 259 eP Pb 04 51 51.0 +0.3
baz=242
WDLH eS Sb 04 52 11.0 +0.2
baz=242
TWG Pinlang 1.63 223 P Pn 04 51 49.3 +0.4
baz=218
TWG eS Sn 04 52 08.0 -1.4
baz=218
TTN Taitung 1.63 220 eS Sb 04 52 10.6 -0.3
baz=206
TPUB Ta-pu 1.67 245 P Pb 04 51 52.0 +0.5
baz=240
TPUB eS Sb 04 52 12.9 +0.8
baz=240
CHN4 Tsaushan 1.68 247 P Pb 04 51 52.4 +0.9
baz=233
CHN4 eS Sb 04 52 13.7 +1.3
baz=233
WTP Ta-pu 1.71 244 P Pb 04 51 52.3 +0.2
baz=239
WTP eS Sb 04 52 13.2 0.0
baz=239
CHN2 Minshiung 1.72 254 eS Sg 04 52 15.3 -1.5
baz=249
JIJ Ishigaki jima 1.73 78 P Pb 04 51 52.6 +0.1
JIJ eS Sb 04 52 14.7 +0.8
RLNB Erlin 1.76 266 eS Sb 04 52 13.8 -0.8
baz=262
CHY Chiayi 1.78 253 eP Pb 04 51 54.0 +0.8
baz=249
CHY eS Sb 04 52 15.2 +0.1
baz=249
TWK Hsinying 1.81 246 eP Pb 04 51 53.6 -0.1
baz=241
TWK eS Sb 04 52 15.7 -0.3
baz=241
CHN1 Nanshi 1.81 243 P Pb 04 51 54.0 +0.3
baz=238
CHN1 eS Sb 04 52 16.1 0.0
baz=238
SLGT Liugui 1.81 236 P Pb 04 51 54.2 +0.4
baz=221
SLGT eS Sb 04 52 16.2 0.0
baz=221
SGST Jiashian 1.81 239 eP Pb 04 51 53.2 -0.6
baz=235
SGST eS Sb 04 52 16.3 +0.1
baz=235
SNST Tainan City 1.82 244 P Pb 04 51 54.6 +0.8
baz=240
SNST eS Sb 04 52 16.5 +0.3
baz=240
WTCT Ta-ch'eng 1.84 266 eS Sb 04 52 17.0 +0.2
baz=274
WSF Szhu 1.92 259 eS Sb 04 52 19.0 -0.3
baz=254
JISG Ishigakijimahi 1.94 73 P Pb 04 51 55.2 -0.7
JISG eS Sb 04 52 19.4 -0.3
SSD Sandimen 1.97 230 eP Pb 04 51 56.3 -0.3
baz=219
SSD eS Sb 04 52 20.2 -0.6
baz=219
MASBT Mashibuluo 2.06 228 eP Pb 04 51 57.2 -0.9
baz=214
MASBT eS Sb 04 52 22.4 -0.9
baz=214
LAY Lan-yu 2.08 199 eP Pn 04 51 56.1 +0.9
baz=198
LAY eS Sn 04 52 18.4 -2.2
baz=198
JTJ Tarama 2.29 74 P Pb 04 52 00.6 -1.4
JTJ eS Sb 04 52 28.8 -1.2
WSSB Gushan 2.31 234 eS Sb 04 52 31.9 +1.6
baz=229
TWKBT Hengchun 2.47 213 eS Sn 04 52 30.4 +0.3
baz=210
TWK1 Hengchun 2.47 214 eS Sn 04 52 31.4 +1.2
baz=210
WDGT Dungji 2.52 253 P Pn 04 52 02.8 +1.7
baz=237
WDGT eS Sn 04 52 31.7 +0.4
baz=237
PHUB P'eng-hu 2.53 259 eS Sn 04 52 31.6 0.0
baz=269
PNG Penghu 2.54 260 eP Pn 04 52 02.5 +1.1
baz=257
PTTC Pingtan 2.72 303 eP Pn 04 52 03.4 -0.4
baz=302
VCHM Qimei 2.74 253 P Pn 04 52 06.1 +2.0
baz=237
VCHM eS Sn 04 52 36.7 0.0
baz=237

VWUC VWUC 2.75 291 eP Pn 04 52 04.2 -0.1
baz=289
MATB Ma-tsu 3.00 316 eP Pn 04 52 07.2 -0.5
baz=315
PTMZ Houxiangcun 3.05 290 eP Pn 04 52 08.2 -0.2
baz=288

IDC **17** *04:54:58.6±0.8, 35.°82N×97.°54W, h0km, mb3.5/3, mb1 3.8/11, mb1mx3.6/54, mbtmp3.5/11, ML3.4/8, MS3.1/7, Ms1 3.1/7, ms1mx2.9/35, Error ellipse: s-maj=12.3km s-min=9.2km az=158.0*
NEIC **17** *04:54:58.6±2.6, 35.°82N±0.°03×97.°48W±0.°04, h1km±5km, Error ellipse: s-maj=5.6km s-min=3.4km az=55.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.58; $M_{\theta\theta}$6.31; $M_{\phi\phi}$-4.74; $M_{r\theta}$2.44; $M_{\theta\phi}$1.46; $M_{\phi r}$-2.74; Fault plane solution: $M_0$6.93000×10^{14} NP1: ϕ_s303.66000°, δ78.99000°, λ-34.09000°. NP2: ϕ_s41.03000°, δ56.62000°, λ-166.77000°. Principal axes: T 7.0474, Plg15.0000°, Azm356.0000°; N -0.2499, Plg54.0000°, Azm108.0000°; P -6.7975, Plg32.0000°, Azm257.0000°;*
ANF **17** *04:54:59.5±0.3, 35.°76N×97.°49W, h5km, ML5.0/16 Error ellipse: s-maj=4.4km s-min=3.0km az=163.0*
TUL **17** *04:54:59±2.6, 35.°78N±0.°04×97.°47W±0.°04, h7km±5km, ML3.8, mb3.9/12(NEIC), Mwr3.8/22(NEIC), Error ellipse: s-maj=5.2km s-min=4.3km az=174.0*
ISC 17 04:54:59.0±1.0, **35.°85N**±0.°02×**97.°41W**±0.°03, **h6**km±7km, **n196,** σ**1.s63**/230, **Oklahoma**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
ADOK Arcadia Dam 0.20 171 Pg 04 55 02.6 -0.3
ADOK Sg 04 55 05.2 -0.4
OK009 Oakdale Elemen 0.27 182 Pg 04 55 03.5 -0.7
OK001 Jones High Sch 0.30 161 Pg Pg 04 55 04.8 -0.2
OK001 Sg 04 55 08.9 -0.1
OKCFA Oklahoma City 0.43 185 Pg 04 55 06.6 -0.8
OKCFA Sg 04 55 12.0 -1.1
TUL1 Leonard 1.31 87 Pn 04 55 24.1 +0.2
TUL1 Sg 04 55 42.2 +1.0
TUL1 Leonard 1.31 87 P Pn 04 55 23.9 +0.1
baz=265
TUL1 S Sg 04 55 42.9 +1.6
baz=265
U32A Winter Ranch, 1.39 293 Pn 04 55 24.7 -0.3
U32A Sn 04 55 43.6 -0.1
WMOK Wichita Mounta 1.58 226 Pn 04 55 26.4 -1.0
WMOK Sn 04 55 45.6 -2.6
WMOK Wichita Mounta 1.58 226 P Pn 04 55 26.5 -1.0
baz=46
WMOK S Sn 04 55 46.2 -2.0
baz=46
HHAR Hobbs 2.84 80 Pn 04 55 46.2 +1.3
W39A Magazine 3.03 101 Pn 04 55 48.9 +1.5
W39A Magazine 3.03 101 P Pn 04 55 48.9 +1.5
baz=282
W39A S Sn 04 56 26.4 +2.4
baz=282
KSU1 Kansas State U 3.31 11 Pn Pn 04 55 53.4 +2.1
baz=192
KSU1 Pb Pg 04 56 01.5 -0.8
baz=192
KSU1 Sb Sg 04 56 45.6 +0.4
baz=192
MIAR Mount Ida 3.40 111 Pn 04 55 54.4 +1.9
MIAR Mount Ida 3.40 111 P Pn 04 55 54.1 +1.6
baz=292
MIAR S Sn 04 56 35.5 +2.3
baz=292
CBKS Cedar Bluff 3.49 329 Pn 04 55 55.5 +1.6
CBKS Pg Pb 04 56 03.9 +2.6
CBKS Cedar Bluff 3.49 329 Pn Pn 04 55 55.8 +1.9
baz=149
CBKS Pb Pb 04 56 03.8 +2.6
baz=149
CBKS Sb Sg 04 56 51.0 -0.1
baz=149
AMTX Amarillo 3.62 256 Pn 04 55 55.2 -0.5
AMTX Amarillo 3.62 256 P Pn 04 55 57.1 +1.5
baz=74
ABTX Abilene, Hawle 3.71 211 Pn 04 55 55.9 -1.0
ABTX Abilene, Hawle 3.71 211 P Pn 04 55 56.3 -0.5
baz=29
ABTX S Sn 04 56 40.0 -0.9
baz=29
U40A Yellville 3.72 81 Pn 04 55 57.9 +0.9
U40A Yellville 3.72 81 P Pn 04 55 58.6 +1.6
baz=262
U40A Sb Sg 04 56 56.6 -2.0
baz=262
WHTX Lake Whitney, 3.85 181 P Pn 04 55 58.4 -0.3
baz=360
WHTX Sb Sb 04 56 55.2 +1.1
baz=360
X40A Basin Creek Fa 3.99 109 P Pn 04 56 02.4 +1.8
baz=290
X40A Sb Sg 04 57 03.5 -3.5
baz=290
237A Washetta, Mont 4.06 160 Pn 04 56 01.0 -0.7
WLAR White Oak Lake 4.14 120 Pn 04 56 03.3 +0.5
W41B Gary Mavity, V 4.26 98 Pn Pn 04 56 05.7 +1.3
baz=280
W41B Pb Pb 04 56 15.2 +0.9
baz=280
W41B S Sn 04 56 55.6 +1.1
baz=280
W41B Sb Sg 04 57 13.7 -2.3
baz=280
MGMO Mountain Grove 4.34 71 Pn 04 56 06.8 +1.3
Z41A Richland Creek 4.60 123 Pn 04 56 09.0 0.0
Z41A Richland Creek 4.60 123 P Pn 04 56 10.4 +1.4
baz=304
NATX Nacogdoches 4.68 150 Pn Pn 04 56 09.8 -0.3
MSTX Muleshoe 4.79 248 Pn 04 56 11.4 -0.3
MSTX Pg Pb 04 56 23.9 +0.5
MSTX Muleshoe 4.79 248 Pn Pn 04 56 11.5 -0.3
baz=66
MSTX Pb Pb 04 56 24.2 +0.8
baz=66
435B Jarrell 5.06 182 Pn 04 56 15.0 -0.3
435B Jarrell 5.06 182 P Pn 04 56 15.0 -0.3
baz=1.1
435B Sb Sb 04 57 31.8 +2.9
baz=1.1
KSCO Kaye Shedlock' 5.21 309 Pn Pn 04 56 18.1 +0.5
KSCO Sn 04 57 15.7 -2.5
KSCO Kaye Shedlock' 5.21 309 S Sn 04 57 16.7 -1.5
baz=127
CCM Cathedral Cave 5.41 64 Pn 04 56 21.9 +1.8
CCM Pg Pb 04 56 38.0 +4.2
CCM Cathedral Cave 5.41 64 P Pn 04 56 21.9 +1.8
baz=247
X43A Marvell 5.51 102 Pn 04 56 21.8 +0.3
X43A Marvell 5.51 102 P Pn 04 56 24.0 +2.5
baz=285
X43A Sb Sg 04 57 50.1 -5.7
baz=285
BGNE Belgrade 5.58 354 Pn 04 56 22.2 -0.3
BGNE Pg Pb 04 56 41.8 +5.1
BGNE Belgrade 5.58 354 P Pn 04 56 23.5 +1.0
baz=174
PBMO Poplar Bluff 5.71 79 Pn 04 56 25.1 +0.8
JCT Junction City 5.72 201 P Pn 04 56 23.4 -1.1
baz=20
T25A Trinidad 5.79 285 P Pn 04 56 25.8 +0.3
baz=102
143A Socs Landing, 5.88 121 Pn 04 56 29.2 +2.6
HKT Hockley 6.03 167 Pn Pn 04 56 28.9 +0.3
MET Memphis--Engin 6.14 95 Pn Pn 04 56 29.5 -0.7
MET Sn Sn 04 57 39.8 -1.0
PENMO Penman 6.32 82 Pn Pn 04 56 32.8 0.0
GLAT Glass 6.59 84 Pn Pn 04 56 34.2 -2.2
HICK Hickman 6.65 82 Pn Pn 04 56 36.4 -0.8
OXF Oxford 6.69 99 P Pn 04 56 38.6 +1.0
baz=283
OXF S Sn 04 57 55.8 +1.7
baz=283
SDCO Great Sand Dun 6.76 289 Pn 04 56 40.3 +1.2
SDCO Great Sand Dun 6.76 289 P Pn 04 56 40.2 +1.2
baz=105
VBMS Vicksburg 6.77 120 S Sn 04 57 56.2 0.0
baz=304
Q24A Divide 6.90 299 S Sn 04 57 58.5 -1.4
baz=115
N41A Harden Midland 7.08 45 Pn Pn 04 56 45.1 +2.0
N41A Pg 04 57 11.4 -3.1
344A Westbrook Farm 7.09 126 Pn Pn 04 56 44.1 +0.9
ANMO Albuquerque 7.44 266 Pn Pn 04 56 48.4 +0.1
0.3nm,0.3s,baz=100,slow=16,SNR=8.4
ANMO Pg Pb 04 57 09.7 +1.0
3.3nm,0.3s,baz=84,slow=17,SNR=14
ANMO Lg Lg 04 58 51.0
3.3nm,0.3s,baz=341,slow=9.0,SNR=5.6
ANMO LR LR 04 59 49.1
comp=Z,178nm,21.4s,baz=69,slow=40
ANMO Albuquerque 7.44 266 Pn 04 56 48.6 +0.3
ANMO Albuquerque 7.44 266 Pb Pb 04 57 09.8 +1.2
baz=81
ISCO Idaho Springs 7.59 304 Pn 04 56 51.1 +0.6
ISCO Pg Pg 04 57 18.9 -5.6
ISCO Sn 04 58 15.4 -1.6
ISCO Idaho Springs 7.59 304 P Pn 04 56 50.9 +0.5
baz=120
WVT Waverly 7.77 85 Pn 04 56 52.2 -0.4
WVT Waverly 7.77 85 P Pn 04 56 53.3 +0.8
baz=270
S22A 4UR Ranch, Cre 7.79 287 Pn Pn 04 56 54.3 +1.2
MNTX Cornudas Mount 7.82 240 P Pn 04 56 52.6 -0.7
baz=56
L40A Anamosa 7.85 36 Pn 04 56 55.2 +1.5
ECSD EROS Data Cent 7.90 4 Pn 04 56 54.6 +0.3
ECSD EROS Data Cent 7.90 4 P Pn 04 56 54.4 +0.1
baz=185
HDIL Hopedale 7.93 51 P Pn 04 56 56.9 +2.1
baz=236
OLIL Olney 7.96 66 Pn Pn 04 56 55.9 +0.7
346A Big Creek Wild 7.98 122 Pn Pn 04 56 56.4 +1.0
USIN University of 8.09 72 Pn Pn 04 56 57.5 +0.7
PHWY Pilot Hill 8.33 313 Pn Pn 04 56 59.3 -1.2
PHWY Sn 04 58 29.3 -5.7
TX31 Lajitas Ar. Si 8.37 221 Pn 04 56 59.5 -1.5
TX32 Lajitas Array 8.37 221 Pn 04 56 58.8 -2.2
TXAR Lajitas Array 8.37 221 Pn Pn 04 56 58.5 -2.4
0.1nm,0.3s,baz=47,slow=11,SNR=11
TXAR Pg Pb 04 57 30.2 +5.8
1.9nm,0.3s,baz=68,slow=14,SNR=14
TXAR Lg Lg 04 59 13.9
6.4nm,0.3s,baz=40,slow=30,SNR=6.2
P46A Rosedale 8.91 62 Pn Pn 04 57 09.9 +1.6
JFWS Jewell Farm 8.97 36 Pn 04 57 10.1 +1.1
JFWS Jewell Farm 8.97 36 P Pn 04 57 10.8 +1.8
baz=220
CLTN Cedars of Leba 8.98 85 Pn 04 57 11.8 +2.6
WCI Wyandotte Cave 9.20 72 Pn 04 57 14.2 +2.1
WCI Wyandotte Cave 9.20 72 P Pn 04 57 14.3 +2.1
baz=258
SFIN Lafayette 9.30 58 P Pn 04 57 16.7 +3.2
baz=244
V49A McMinnville 9.35 87 P Pn 04 57 17.4 +3.1
baz=273
U49A Red Boiling Sp 9.43 83 P Pn 04 57 17.5 +2.2
baz=269
T49A Edmonton 9.65 79 Pn Pn 04 57 18.8 +0.5
RSSD Black Hills 9.70 330 Pn 04 57 21.1 +1.9
RSSD Black Hills 9.70 330 P Pn 04 57 21.3 +2.1
baz=147
L44A Lake County Fo 9.72 47 Pn Pn 04 57 21.4 +2.1
K43A Burlington 9.81 43 Pn Pn 04 57 22.7 +2.1
Z50A Ashland 9.82 102 P Pn 04 57 21.6 +0.9
baz=288
W50A Signal Mountai 9.88 90 Pn Pn 04 57 23.4 +1.8
S49A Springfield 9.91 75 P Pn 04 57 23.5 +1.6
baz=262
250A Grady 10.03 109 Pn 04 57 24.6 +1.0
R49A Shelbyville 10.08 72 Pn Pn 04 57 25.7 +1.5
R49A Shelbyville 10.08 72 P Pn 04 57 25.5 +1.2
baz=259
T50A Nancy 10.20 80 P Pn 04 57 28.2 +2.4
baz=267
I42A Draeger Farm, 10.34 37 Pn Pn 04 57 30.3 +2.5
X18A Snowflake 10.35 266 Pn Pn 04 57 27.1 -1.1
Q49A Aurora 10.44 69 P Pn 04 57 30.4 +1.3
baz=256
CPCT Cooper Cave 10.50 88 Pn Pn 04 57 30.7 +0.8
S50A Richmond 10.60 76 P Pn 04 57 33.9 +2.5
baz=264
V51A Loudon 10.60 86 Pn 04 57 33.3 +1.9
V51A Loudon 10.60 86 P Pn 04 57 32.7 +1.3
baz=274
L46A Eue Claire 10.62 51 Pn 04 57 31.9 +0.4
L46A Sn 04 59 30.4 -0.3
P49A Miami Univ. Ec 10.71 66 P Pn 04 57 34.2 +1.3
baz=254
U51A La Follette 10.85 83 P Pn 04 57 38.7 +3.9
baz=271
G40A Rib Lake 10.88 28 Pn 04 57 35.2 0.0
G40A Sn 04 59 35.5 -1.8
SRU San Rafael Swe 10.92 291 Pn Pn 04 57 35.5 -0.3
TKL Tuckaleechee C 11.08 87 Pn Pn 04 57 37.8 -0.2
0.4nm,0.3s,baz=222,slow=11,SNR=6.6
TKL Sn Sn 04 59 42.8 +0.6
0.6nm,0.3s,baz=179,slow=2.8,SNR=1.9
TKL Lg Lg 05 00 43.6
2.1nm,0.3s,baz=350,slow=24,SNR=4.3
TKL LR LR 05 02 04.3
comp=Z,73nm,18.2s,baz=126,slow=38
Q50A Georgetown 11.10 70 P Pn 04 57 39.6 +1.4
baz=258
Y52A Lilburn 11.14 96 Pn Pn 04 57 39.7 +0.8
V52A Sevierville 11.21 86 Pn Pn 04 57 41.7 +2.0
V52A Sevierville 11.21 86 P Pn 04 57 40.3 +0.5
baz=274
TZTN Tazewell 11.22 82 Pn Pn 04 57 43.1 +3.1
TZTN Tazewell 11.22 82 P Pn 04 57 42.8 +2.9
baz=270
S51A Beattyville 11.23 77 P Pn 04 57 41.7 +1.7
baz=265
K46A Dorr 11.30 49 P Pn 04 57 40.0 -0.9
baz=236
R51A Hillsboro 11.31 73 P Pn 04 57 42.9 +1.8
baz=261
H43A Windswept, Lux 11.33 38 Pn Pn 04 57 41.2 0.0
N49A Columbus Grove 11.55 60 Pn Pn 04 57 46.6 +2.3
E38A The Farm, Brul 11.61 20 Pn 04 57 45.1 -0.1
Q51A Peebles 11.62 70 Pn Pn 04 57 47.5 +2.2
S52A Salyersville 11.64 77 P Pn 04 57 46.7 +1.0
baz=265
PD31 Pinedale Array 11.67 310 Pn 04 57 45.3 -0.9
PDAR Pinedale Array 11.67 310 Pn Pn 04 57 46.0 -0.2
0.2nm,0.3s,baz=120,slow=14,SNR=8.9
PDAR Pg 04 58 37.3
0.3nm,0.3s,baz=104,slow=18,SNR=4.3
PDAR Lg Lg 05 01 04.6
1.0nm,0.3s,baz=122,slow=20,SNR=7.0
PDAR LR LR 05 02 59.8
comp=Z,67nm,19.9s,baz=106,slow=42
T52A Hallie 11.68 80 Pn Pn 04 57 47.3 +1.1
T52A Hallie 11.68 80 P Pn 04 57 46.8 +0.7
baz=268
GOGA Godfrey 11.74 98 Pn Pn 04 57 46.8 -0.2
GOGA Godfrey 11.74 98 P Pn 04 57 47.2 +0.3
baz=286
K47A Vermontville 11.78 51 P Pn 04 57 47.3 -0.1
baz=239
L48A N Adams 11.79 55 P Pn 04 57 47.8 +0.1
baz=243
V53A Saluda 11.86 87 Pn Pn 04 57 48.3 -0.4
COWI Conover 11.99 29 Pn 04 57 50.6 +0.2
ACSO Alum Creek Sta 12.19 65 Pn 04 57 52.1 -0.9
J47A Sunmer 12.19 49 Pn Pn 04 57 54.8 +1.7
J47A Sunmer 12.19 49 P Pn 04 57 53.6 +0.5
baz=237
553A Crawfordville 12.26 114 Pn 04 57 54.4 +0.3
K48A Perry 12.40 52 P Pn 04 57 55.5 -0.5
baz=240
AGMN Agassiz Nation 12.49 5 Pn 04 57 55.6 -1.5
U54A Nelsons Funny 12.62 82 Pn Pn 04 58 00.3 +1.3
P52A Corning 12.67 68 P Pn 04 58 00.7 +1.1
baz=257
G45A Suttons Bay 12.81 41 Pn 04 58 01.7 +0.2
G45A Suttons Bay 12.81 41 P Pn 04 58 01.4 -0.1
baz=228
I47A Gladwin 12.82 47 Pn Pn 04 58 01.8 +0.2
N51A Ashland 12.83 62 Pn Pn 04 58 03.7 +1.8
EYMN Ely 12.86 18 P Pn 04 58 00.0 -2.2
baz=202
J48A Bridge Port 12.87 51 Pn 04 58 01.4 -0.9
D41A Chassel 13.01 28 Pn 04 58 02.2 -2.0
FXWY Fox Creek 13.04 311 Pn Pn 04 58 09.3 +4.4
S54A Dingess, Beckl 13.05 77 P Pn 04 58 05.6 +0.7
baz=266
V55A Taylorsville 13.14 85 Pn Pn 04 58 07.0 +0.8
J49A Marlette 13.30 51 P Pn 04 58 07.7 -0.6
baz=240
O53A New Philadelph 13.50 66 P Pn 04 58 11.3 +0.4
baz=256
I49A Point Hope 13.79 50 Pn Pn 04 58 15.3 +0.3
I49A Point Hope 13.79 50 P Pn 04 58 15.1 +0.1
baz=239
G47A Hillman 13.88 44 P Pn 04 58 14.0 -2.1
baz=232
R55A Marlinton 14.02 75 Pn Pn 04 58 18.0 -0.2
R55A Marlinton 14.02 75 P Pn 04 58 18.0 -0.2
baz=265
O54A Avella 14.10 67 Pn 04 58 19.9 +0.6
W57A Gilead 14.21 88 Pn Pn 04 58 20.8 +0.1
E46A Sault Ste Mari 14.40 39 Pn Pn 04 58 21.8 -1.5
ULM Lac du Bonnet 14.44 4 Pn Pn 04 58 19.7 -4.1
0.3nm,0.3s,baz=180,slow=11,SNR=3.7
ULM Sn Sn 05 00 50.5 -14
0.4nm,0.3s,baz=256,slow=15,SNR=2.0
ULM Lg Lg 05 02 29.3
1.0nm,0.3s,baz=287,slow=22,SNR=5.0
ULM LR LR 05 04 10.3
comp=Z,154nm,20.9s,baz=318,slow=38
ULM Lac du Bonnet 14.44 4 Pn Pn 04 58 20.1 -3.6
N54A Moraine State 14.58 64 Pn Pn 04 58 24.3 -1.4
R56A Bull Pasture M 14.59 75 P Pn 04 58 25.0 -1.1
baz=265
T57A Hurt 14.67 80 Pn Pn 04 58 27.4 +0.5
M54A Oil Creek Stat 14.96 62 Pn Pn 04 58 31.3 +0.4
F48A Evansville 14.96 44 P Pn 04 58 27.8 -3.1
baz=233
F49A Sandfield 15.25 45 P Pn 04 58 32.4 -2.4
baz=235
D47A Chapleau 15.48 39 P Pn 04 58 34.9 -2.9
baz=229
M55A Ridgway 15.60 63 Pn Pn 04 58 38.9 -0.5
PFO Pinyon Flats O 15.82 267 LR LR 05 05 02.7
comp=Z,94nm,18.6s,baz=58,slow=38
T59A Double "B" Far 16.03 80 P 04 58 49.0 +0.5
T59A IAmb IAmb 04 58 56.6
comp=Z,9.7nm,1.2s
SSPA Standing Stone 16.06 67 Pn Pn 04 58 47.1 +1.8
SADO Sadowa 16.51 52 Pn Pn 04 58 49.6 -1.5
comp=Z,0.3nm,0.3s,baz=264,slow=14,SNR=1.2
SADO Lg Lg 05 03 32.8
comp=Z,0.9nm,0.3s,baz=305,slow=7.7,SNR=3.1
SADO Sadowa 16.51 52 IAmb IAmb 04 58 51.1
comp=Z,9.8nm,1.2s
NVAR Mina Array Bea 16.86 285 Pn Pn 04 58 54.5 -1.2
comp=Z,0.1nm,0.3s,baz=107,slow=12,SNR=1.8
NVAR LR LR 05 05 37.6
comp=Z,78nm,21.3s,baz=12,slow=38
MVL Millersville 17.12 70 P Pn 04 58 57.8 -0.9
MVL IAmb IAmb 04 59 14.9
comp=Z,13nm,1.3s
PLVO Plevna 17.95 53 P Pn 04 59 08.8 -0.3
PLVO IAmb IAmb 04 59 17.9
comp=Z,12nm,1.4s
J57A Williamstown 18.11 59 P Pn 04 59 10.8 -0.2
K58A Earlville 18.18 61 P Pn 04 59 11.1 -0.8
K58A IAmb IAmb 04 59 22.2
comp=Z,17nm,1.2s
L59A Walton 18.47 63 P Pn 04 59 17.1 +1.5
D53A Lac Vacive, Po 18.49 47 P P 04 59 14.2 -1.5
D53A IAmb IAmb 04 59 22.4
comp=Z,8.9nm,1.3s
CMIG Matias Romero 18.82 172 P Pn 04 59 19.8 0.0
comp=Z,0.2nm,0.3s,baz=333,slow=9.0,SNR=2.7
CMIG LR LR 05 07 35.9
comp=Z,26nm,19.9s,baz=24,slow=40
NCB Newcomb 19.50 58 P P 04 59 27.6 +0.8
YBH Yreka Blue Hor 20.54 294 P P 04 59 38.7 +0.6
comp=Z,2.1nm,0.7s,baz=62,slow=9.5,SNR=5.3
YBH Yreka Blue Hor 20.54 294 P Pn 04 59 39.4 -0.9
FCC Fort Churchill 23.03 4 P P 05 00 06.4 +1.9
SCHQ Schefferville 28.33 38 P P 05 00 55.3 +2.0
YKA Yellowknife Ar 28.75 343 P P 05 00 57.2 +0.3
comp=Z,0.7nm,1.0s,baz=144,slow=9.0,SNR=5.3
ILAR Eielson Array 41.15 330 P P 05 02 45.3 +1.7
comp=Z,0.7nm,0.8s,baz=107,slow=7.1,SNR=8.2

IDC **17** *04:54:53.3±1.1, 41.°75N×15.°28E, h0km, mb3.5/3, mb1 3.6/10, mb1mx3.4/57, mbtmp3.5/10, ML3.4/6, Error ellipse: s-maj=19.7km s-min=13.4km az=78.0*
BEO **17** *04:54:58.8±0.9, 41.°82N×13.°61E, h15km, ML3.5/5*
PRU **17** *04:54:58.9±0.0, 41.°65N×13.°76E, h12km*
ROM **17** *04:54:58.3±0.1, 41.°724N±0.°004×13.°841E±0.°006, h15km±1km, ML3.4/45, Mw3.4, Error ellipse: s-maj=0.6km s-min=0.1km az=39.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.20; $M_{\theta\theta}$1.47; $M_{\phi\phi}$-0.27; $M_{r\theta}$0.67; $M_{\theta\phi}$-0.22; $M_{\phi r}$-0.19; Fault plane solution: $M_0$1.51826×10^{14} NP1: ϕ_s282.00000°, δ59.00000°, λ-84.00000°. NP2: ϕ_s91.00000°, δ32.00000°, λ-100.00000°.*
PDG **17** *04:54:58.9±0.5, 41.°75N×13.°84E, h12km, ML3.5/8 Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
LDG **17** *04:54:59.2±0.1, 41.°75N×13.°83E, h10km, Md3.0/1, Ml3.0/11, Error ellipse: s-maj=2.6km s-min=1.7km az=24.0*
ISC 17 04:54:58.5±0.8, **41.°73N**±0.°02×**13.°82E**±0.°02, **h16**km±5km, **n153,** σ**2.s07**/184, **mb3.4**/3, **28C-3D, Southern Italy**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
POFI Posta Fibreno 0.08 259 ⇑P Pg 04 55 01.8 -0.1
POFI S Sg 04 55 04.1 0.0
POFI AML AML
comp=N,51050μm,0.7s
POFI AML AML
comp=E,53650μm,0.8s
POFI AML AML
comp=N,47150μm,0.7s
POFI AML AML
comp=E,53700μm,0.8s
POFI AML AML
comp=E,61200μm,0.8s
POFI AML AML
comp=E,61200μm,0.8s
POFI AML AML
comp=N,51050μm,0.7s
POFI AML AML
comp=E,53700μm,0.8s
POFI AML AML
comp=N,47150μm,0.7s
VVLD Villa Vallelon 0.20 314 ⇑P Pg 04 55 03.6 +0.1
VVLD S Sb 04 55 07.6 +0.1
VVLD AML AML
comp=N,17750μm,0.7s
VVLD AML AML
comp=E,20050μm,0.6s
VVLD AML AML
comp=N,17800μm,0.7s
CERA Filignano 0.20 132 ⇑P Pg 04 55 02.8 -0.6
CERA S Sg 04 55 05.9 -0.8
CERA AML AML
comp=E,77700μm,1.1s
CERA AML AML
comp=N,69700μm,0.7s
CERA AML AML
comp=E,77700μm,1.1s
CERA AML AML
comp=E,79900μm,1.1s
CERA AML AML
comp=N,72450μm,0.7s
CERA AML AML
comp=E,77700μm,1.1s
CERA AML AML
comp=N,72450μm,0.7s
CERA AML AML
comp=N,69700μm,0.7s
CERA AML AML
comp=E,79900μm,1.1s
RNI2 Rionero Sannit 0.25 97 ⇑P Pb 04 55 04.2 -0.5
RNI2 AML AML
comp=E,30650μm,0.2s
RNI2 AML AML
comp=N,28400μm,0.3s
RNI2 AML AML
comp=N,28450μm,0.3s
RNI2 AML AML

comp=E,31850µm,0.2s
RNI2 AML AML
comp=E,30650µm,0.2s
RNI2 AML AML
comp=E,31850µm,0.2s
RNI2 AML AML
comp=N,28400µm,0.3s
INTR Introdacqua 0.29 13 ⇑P Pg 04 55 04.7 -0.1
INTR S Sb 04 55 09.8 -0.2
INTR AML AML
comp=E,26350µm,0.6s
INTR AML AML
comp=N,42000µm,0.7s
MIDA Miranda 0.34 105 ⇑P Pg 04 55 05.1 -0.6
MIDA S Sb 04 55 10.2 -1.2
MIDA AML AML
comp=E,11210µm,0.7s
MIDA AML AML
comp=N,8335µm,1.4s
MIDA AML AML
comp=N,8345µm,1.4s
MIDA AML AML
comp=N,8315µm,1.4s
MIDA AML AML
comp=E,11555µm,0.6s
MIDA AML AML
comp=E,11230µm,0.7s
GUAR Guarcino 0.38 280 ⇑P Pg 04 55 06.7 +0.2
GUAR S Sb 04 55 13.3 +0.7
GUAR AML AML
comp=E,5960µm,0.4s
GUAR AML AML
comp=N,9285µm,0.4s
LPEL Lama dei Pelig 0.42 41 ⇑P Pg 04 55 06.6 -0.5
LPEL S Sb 04 55 13.2 -0.4
LPEL AML AML
comp=N,9160µm,0.2s
LPEL AML AML
comp=N,9165µm,0.2s
LPEL AML AML
comp=E,9570µm,0.5s
PTQR Pietraquaria 0.42 313 ⇑P Pg 04 55 07.4 +0.2
PTQR S Sb 04 55 14.9 +1.0
PTQR AML AML
comp=N,4485µm,0.5s
PTQR AML AML
comp=E,3130µm,0.8s
VAGA Valle Agricola 0.45 135 ⇑P Pg 04 55 06.8 -0.8
VAGA S Sg 04 55 13.2 -0.5
VAGA AML AML
comp=E,8270µm,1.3s
VAGA AML AML
comp=N,12500µm,1.0s
VAGA AML AML
comp=E,8580µm,1.3s
VAGA AML AML
comp=N,12050µm,1.0s
GIUL Giuliano Di Ro 0.46 248 ⇑P Pg 04 55 07.9 +0.2
GIUL S Sb 04 55 15.3 +0.6
GIUL AML AML
comp=E,3935µm,0.9s
GIUL AML AML
comp=N,5710µm,0.9s
SGG Gregorio Mates 0.55 129 P Pg 04 55 08.0 -1.4
SGG AML AML
comp=N,4980µm,0.8s
SGG AML AML
comp=N,16nm,0.8s
SGG AML AML
comp=E,30nm,0.5s
SGG AML AML
comp=E,9600µm,0.5s
TRIV Trivento 0.55 86 ⇑P Pg 04 55 08.9 -0.6
TRIV AML AML
comp=E,3740µm,0.5s
TRIV AML AML
comp=E,3715µm,0.8s
TRIV AML AML
comp=N,4095µm,0.7s
TRIV AML AML
comp=N,3910µm,0.7s
TRIV AML AML
comp=E,3735µm,0.5s
FAGN Fagnano 0.56 342 ⇑P Pg 04 55 09.3 -0.4
FAGN AML AML
comp=N,8720µm,0.5s
FAGN AML AML
comp=E,15550µm,0.6s
FAGN AML AML
comp=E,15550µm,0.6s
T1011 San Potito San 0.58 129 ⇑P Pg 04 55 09.5 -0.6
T1011 AML AML
comp=E,4235µm,0.6s
T1011 AML AML
comp=E,4250µm,0.6s
T1011 AML AML
comp=N,4995µm,1.0s
T1011 AML AML
comp=E,4230µm,0.6s
T1011 AML AML
comp=N,5015µm,1.0s
T1011 AML AML
comp=E,4240µm,0.5s
T1011 AML AML
comp=N,5080µm,1.0s
MODR Mondragone 0.59 175 ⇑P Pg 04 55 09.6 -0.6
MODR AML AML
comp=E,4070µm,0.4s
MODR AML AML
comp=N,5775µm,1.6s
PIGN Pignataro Magg 0.60 153 P Pb 04 55 10.1 -0.5
PIGN AML AML
comp=E,4225µm,0.8s
PIGN AML AML
comp=N,3450µm,0.4s
PIGN AML AML
comp=E,4230µm,0.8s
PIGN AML AML
comp=E,4200µm,0.8s
PIGN AML AML
comp=N,3455µm,0.4s
PIGN AML AML
comp=N,3500µm,0.4s
BSSO Busso 0.61 107 P Pg 04 55 10.2 -0.5
BSSO AML AML
comp=N,3880µm,0.6s
BSSO AML AML
comp=N,1475µm,0.6s
BSSO AML AML
comp=N,3885µm,0.6s
BSSO AML AML
comp=E,4235µm,0.9s
BSSO AML AML
comp=E,1655µm,0.9s
CAFR Castel Frentan 0.63 38 ⇑P Pg 04 55 10.7 -0.3
CAFR AML AML
comp=E,8310µm,0.7s
CAFR AML AML
comp=N,7965µm,0.4s
PTRJ Pietraroja 0.65 124 P Pg 04 55 10.4 -1.0
PTRJ AML AML
comp=E,16450µm,0.4s
PTRJ AML AML
comp=N,11800µm,1.6s
CERT Cerreto 0.66 289 P Pg 04 55 11.2 -0.4
CERT S Sb 04 55 21.3 +0.6
CERT AML AML
comp=E,5330µm,1.2s
CERT AML AML
comp=N,2770µm,0.6s
VCEL Villa Celiera 0.66 2 ⇑P Pg 04 55 11.2 -0.4
VCEL AML AML
comp=E,6145µm,0.6s
VCEL AML AML
comp=E,6140µm,0.6s
VCEL AML AML
comp=N,4150µm,0.3s
FRES Fresagrandinar 0.68 69 P Pg 04 55 10.9 -1.0
FRES AML AML
comp=N,1870µm,1.2s
FRES AML AML
comp=E,2595µm,0.9s
LATB Latina 0.68 250 P Pg 04 55 11.3 -0.6
LATB AML AML
comp=E,1250µm,0.8s
LATB AML AML
comp=N,961µm,0.8s
LATB AML AML
comp=E,1245µm,0.8s
LATB AML AML
comp=N,964µm,0.8s
AQU L'Aquila 0.69 334 P Pg 04 55 11.4 -0.7
AQU AML AML
comp=E,3735µm,1.5s
AQU AML AML
comp=N,4280µm,0.8s
AQU AML AML
comp=N,3920µm,0.8s
AQU AML AML
comp=E,3775µm,0.7s
T0104 Madonna delle 0.72 331 P Pg 04 55 11.8 -0.9
T0104 AML AML
comp=N,4735µm,0.6s
T0104 AML AML
comp=N,4765µm,0.6s
T0104 AML AML
comp=E,4445µm,0.9s
T0104 AML AML
comp=E,4055µm,0.9s
SACR S. Croce Del S 0.75 116 P Pg 04 55 12.3 -0.8
SACR AML AML
comp=E,2260µm,1.1s
SACR AML AML
comp=E,2495µm,1.1s
SACR AML AML
comp=N,2800µm,0.7s
SACR AML AML
comp=N,2890µm,0.7s
CIGN Sant'Elia a Pi 0.82 95 P Pg 04 55 13.4 -1.1
CIGN AML AML
comp=E,1800µm,0.5s
CIGN AML AML
comp=N,2350µm,0.7s
RMP Rome, Mte Porz 0.84 276 P Pb 04 55 13.9 -0.8
RMP AML AML
comp=E,2965µm,0.4s
RMP AML AML
comp=N,3565µm,0.4s
LAV9 Lanuvio 0.84 267 P Pb 04 55 14.2 -0.5
LAV9 AML AML
comp=N,8970µm,0.6s
LAV9 AML AML
comp=E,6665µm,0.6s
LAV9 AML AML
comp=E,6550µm,0.6s
LAV9 AML AML
comp=N,8550µm,0.6s
GATE Gambatesa 0.85 105 P Pn 04 55 15.7 -0.1
GATE AML AML
comp=E,2055µm,0.6s
GATE AML AML
comp=N,2245µm,1.6s
GATE AML AML
comp=E,1042µm,0.6s
GATE AML AML
comp=N,2265µm,1.6s
MTCE Montecelio 0.85 290 P Pb 04 55 14.2 -0.8
MTCE AML AML
comp=E,2065µm,0.7s
MTCE AML AML
comp=N,1785µm,0.8s
CAMP Campotosto 0.86 339 P Pb 04 55 14.3 -0.9
CAMP AML AML
comp=E,1100µm,1.3s
CAMP AML AML
comp=N,1675µm,0.8s
PAOL Paolisi 0.90 141 P Pb 04 55 15.1 -0.7
PAOL AML AML
comp=E,1655µm,0.4s
PAOL AML AML
comp=N,2735µm,0.6s
PAOL AML AML
comp=N,2650µm,0.6s
PAOL AML AML
comp=E,1750µm,0.4s
PSB1 Pescosannita 0.90 124 P Pb 04 55 14.9 -0.9
PSB1 AML AML
comp=N,2455µm,0.7s
PSB1 AML AML
comp=E,2780µm,0.9s
PSB1 AML AML
comp=E,2605µm,0.9s
PSB1 AML AML
comp=N,2740µm,0.8s
TERO Teramo 0.90 350 P Pb 04 55 14.9 -0.9
TERO AML AML
comp=E,1765µm,1.0s
TERO AML AML
comp=N,2010µm,0.9s
TERO AML AML
comp=E,656µm,0.8s
TERO AML AML
comp=E,1760µm,1.0s
TERO AML AML
comp=E,656µm,0.8s
TERO AML AML
comp=N,834µm,0.9s
SMA1 SAN MARTINO 0.97 338 P Pb 04 55 16.0 -0.9
SMA1 AML AML
comp=N,3545µm,0.6s
SMA1 AML AML
comp=E,2945µm,0.6s
MELA Melanico ??? S 0.98 91 P Pb 04 55 15.5 -1.6
MELA AML AML
comp=E,2830µm,0.4s
MELA AML AML
comp=N,3075µm,0.5s
MELA AML AML
comp=E,2715µm,0.4s
MELA AML AML
comp=N,2980µm,0.5s
VENT Ventotene 0.98 198 AML AML
comp=N,4535µm,1.0s
VENT AML AML
comp=E,3645µm,0.3s
LNSS Leonessa 1.04 327 P Pb 04 55 18.5 +0.3
LNSS AML AML
comp=E,3725µm,0.6s
LNSS AML AML
comp=N,2425µm,0.6s
MRB1 Monte Rocchett 1.06 124 P Pg 04 55 18.2 -0.8
MRB1 AML AML
comp=E,3245µm,0.6s
MRB1 AML AML
comp=E,3235µm,0.6s
MRB1 AML AML
comp=N,4150µm,0.5s
MRB1 AML AML
comp=N,4005µm,0.5s
ARRO Arrone 1.15 318 P Pg 04 55 20.9 +0.1
ARRO AML AML
comp=E,974µm,1.2s
ARRO AML AML
comp=N,912µm,0.6s
CESX Cesi 1.27 314 P Pg 04 55 23.2 +0.2
CESX AML AML
comp=N,1150µm,0.8s
CESX AML AML
comp=E,1265µm,1.1s
SGTA Sant Agata di 1.31 117 AML AML
comp=E,980µm,0.6s
SGTA AML AML
comp=N,734µm,1.0s
SGTA AML AML
comp=N,638µm,0.6s
SGTA AML AML
comp=E,966µm,0.5s
FDMO Fiordimonte 1.41 338 P Pn 04 55 24.1 +0.5
FDMO AML AML
comp=N,718µm,0.7s
FDMO AML AML
comp=E,902µm,0.7s
CESI CESI - Serrava 1.44 332 AML AML
comp=E,290µm,0.8s
CESI AML AML
comp=N,674µm,0.9s
SGRT San Giovanni R 1.44 88 P Pb 04 55 24.8 -0.2
SGRT AML AML
comp=E,1162µm,0.7s
SGRT AML AML
comp=N,1012µm,0.5s
CDRU Civita di Ruta 1.68 137 P Pn 04 55 26.9 -0.3
CDRU AML AML
comp=E,298µm,0.5s
CDRU AML AML
comp=N,193µm,0.6s
EL6 Elcito 1.68 342 AML AML
comp=E,1046µm,1.0s
EL6 AML AML
comp=N,1490µm,1.0s
ARVD Arcevia 1.88 340 AML AML
comp=E,410µm,0.8s
ARVD AML AML
comp=N,262µm,0.8s
AMUR Altamura 2.26 111 AML AML
comp=E,321µm,0.6s
AMUR AML AML
comp=N,317µm,1.1s
SG1 Sgolgore (BA) 2.33 112 ePn Pn 04 55 37.8 +1.6
ZIRJ Zirje 2.35 34 ePn Pn 04 55 37.7 +1.3
ZIRJ Sn Sn 04 56 05.8 +1.0
BAI Bari 2.39 104 ePn Pn 04 55 38.3 +1.4
MATE Matera 2.43 115 ⇑P Pb 04 55 40.0 -1.9
MATE ⇑S Sb 04 56 11.3 -0.3
DUGI Dugi Otok 2.44 22 ePn Pn 04 55 38.2 +0.6
DUGI Sn Sn 04 56 07.2 +0.1
MORI Morici 2.55 32 ePn Pn 04 55 39.9 +0.7
MORI Sn Sn 04 56 10.7 +1.0
MAKA Makarska 2.83 56 ePn Pn 04 55 45.4 +2.4
MAKA Sn Sn 04 56 17.4 +0.7
NVLJ Novalja 2.93 15 ePn Pn 04 55 45.6 +1.2
NVLJ Sn Sn 04 56 19.9 +0.6
KIJV Kijevo 2.96 39 ePn Pn 04 55 46.9 +2.0
KIJV Sn Sn 04 56 20.2 +0.2
STON Ston 3.10 67 iPn Pn 04 55 49.4 +2.8
STON Sn Sn 04 56 25.6 +2.3
STON Ston 3.10 67 ePn Pn 04 55 48.1 +1.4
UDBI Udbina 3.14 26 ePn Pn 04 55 49.6 +2.3
UDBI Sn Sn 04 56 24.6 +0.1
DBRK Dubrovnik 3.35 72 ePn Pn 04 55 52.5 +2.4
DBRK Sn Sn 04 56 30.8 +1.2
TIP Timpagrande 3.40 138 ⇑P Pn 04 55 53.8 +2.9
TREB Trebinje 3.51 72 ePn Pn 04 55 54.1 +1.8
HCY Herceg Novi 3.55 77 ePn Pn 04 55 54.3 +1.3
HCY Herceg Novi 3.55 77 ePn Pn 04 55 54.6 +1.6
HCY eSn Sn 04 56 37.5 +2.9
MGRS Mrkonjic Grad 3.60 41 ePn Pn 04 55 55.9 +2.3
PGF Pioggiola 3.67 284 ePn Pn 04 55 54.5 -0.2
PGF Pioggiola 3.67 284 eP Pn 04 55 57.2 +2.5
PGF eSn Sn 04 56 35.3 -2.4
comp=N,48nm,1.1s
BRY Bratogost 3.69 70 ePn Pn 04 55 57.6 +2.6
BRY Bratogost 3.69 70 ePn Pn 04 55 56.9 +1.9
BRY eSn Sn 04 56 41.3 +3.1
CEME Cevo 3.88 76 ePn Pn 04 55 59.2 +1.7
CEME eSn Sn 04 56 45.1 +2.4
BLY Banja Luka 3.89 38 ⇓P Pn 04 56 01.5 +3.9
BLY Banja Luka 3.89 38 AML AML
comp=E,145µm,0.6s
BLY AML AML
comp=N,133µm,0.7s
BLY Banja Luka 3.89 38 ePn Pn 04 55 59.8 +2.2
NKME Niksic 3.95 73 ePn Pn 04 56 00.3 +1.8
NKME eSn Sn 04 56 47.0 +2.5
DRME Dracevica, Mon 4.03 82 ePn Pn 04 56 01.5 +2.0
DRME Dracevica, Mon 4.03 82 ePn Pn 04 56 01.3 +1.8
DRME eSn Sn 04 56 49.2 +2.9
PDG Podgorica 4.11 78 ePn Pn 04 56 02.9 +2.4
PDG eSn Sn 04 56 49.8 +1.6
PDG Podgorica 4.11 78 ⇑P Pn 04 56 03.0 +2.4
PDG Podgorica 4.11 78 ePn Pn 04 56 02.4 +1.8
TTG Podgorica 4.11 78 ePn Pn 04 56 02.6 +2.0
TTG eSn Sn 04 56 51.2 +3.0
CRES Cresnjev 4.26 16 ePn Pn 04 56 03.2 +0.5
VAE Valguarnera 4.27 174 Pn Pn 04 56 01.6 -1.3
comp=N,1.4nm,0.3s,baz=340,slow=17,SNR=1.4
LJU Ljubljana 4.34 7 ePn Pn 04 56 04.6 +0.8
KOME Kolasin 4.37 73 ePn Pn 04 56 06.2 +1.9
KOME eSn Sn 04 56 57.8 +2.9
PLE Pljevlja 4.42 67 ePn Pn 04 56 07.2 +2.3
PLE eSn Sn 04 56 58.7 +2.6
HAPS Han Pijesak,Bl 4.44 56 ePn Pn 04 56 06.8 +1.5
RUDO Rudo 4.51 63 ePn Pn 04 56 08.1 +2.0
TIR Tirane 4.56 93 ⇑P Pn 04 56 08.3 +1.6
BBLS Lazići 4.63 61 ePn Pn 04 56 09.8 +1.9
BBLS eSn Sn 04 57 02.1 +0.8
BBLS Lazići 4.63 61 ePn Pn 04 56 09.3 +1.4
IVA Berane 4.65 74 ePn Pn 04 56 10.5 +2.4
IVA eSn Sn 04 57 03.8 +2.1
SJES Sjenica 4.80 69 ePn Pn 04 56 12.5 +2.3
OBKA Obir 4.80 6 ePn Pn 04 56 13.9 +3.6
comp=N,1.3nm,0.2s
MYKA Terra Mystica 4.90 359 ePn Pn 04 56 13.3 +1.7
comp=N,5.2nm,0.5s
SOKA Soboth 5.02 10 ePn Pn 04 56 15.0 +1.8
comp=N,0.6nm,0.2s
IVAS Ivanjica 5.02 66 ePn Pn 04 56 15.1 +1.9
IVAS eSn Sn 04 57 11.5 +0.6
TEKS Tekeris 5.04 54 eSn Sn 04 57 11.2 -0.1
ABTA Abfaltersbach 5.10 350 ePn Pn 04 56 15.8 +1.5
comp=N,6.5nm,0.5s
DIVS Divibare 5.11 60 ePn Pn 04 56 16.5 +2.0
DIVS eSn Sn 04 57 14.0 +0.8
DIVS Divibare 5.11 60 ePn Pn 04 56 15.9 +1.4
SBF Sospel 5.16 297 eP Pn 04 56 17.8 +2.8
SBF eSn Sn 04 57 10.5 -3.7
comp=N,46nm,0.9s
KBA Koelnbreinsper 5.36 357 ePn Pn 04 56 19.6 +1.7
comp=N,4.3nm,0.7s
TRUS Trudelj 5.44 61 ePn Pn 04 56 20.6 +1.7
GRUS Gruza 5.51 65 ePn Pn 04 56 21.4 +1.5
GRUS eSn Sn 04 57 22.3 +1.4
FRGS Fruska Gora 5.55 50 ePn Pn 04 56 18.9 -1.5
FRF La Foret Royal 5.59 291 eP Pn 04 56 22.9 +1.9
FRF eSn Sn 04 57 21.0 -3.9
comp=N,13nm,0.9s
SELS Selova 5.60 72 ePn Pn 04 56 22.5 +1.4
LMR La Mourre 5.63 289 ePn Pn 04 56 20.9 -0.6
LMR eSn Sn 04 57 21.9 -3.9
comp=N,3.8nm,0.5s
ARSA Arzberg 5.65 12 ePn Pn 04 56 25.0 +3.2
comp=N,1.1nm,0.3s
MORH Mrgy, Hungar 5.67 36 ePn Pn 04 56 23.0 +0.9
FETA Feichten 5.73 338 ePn Pn 04 56 28.3 +5.2
comp=N,3.9nm,0.6s
DAVOX Davos/Dischmat 5.78 332 Pn Pn 04 56 29.0 +5.2
comp=N,0.7nm,0.3s,baz=159,slow=18,SNR=6.5
SQTA Sankt Quirin 5.79 342 Pn Pn 04 56 28.5 +4.7
comp=N,6.2nm,0.4s
MOTA Moosalm 5.94 342 ePn Pn 04 56 31.3 +5.4
comp=N,2.3nm,0.5s
MBDF Montbardon 5.95 303 eP Pn 04 56 30.3 +4.2
MBDF eSn Sn 04 57 29.6 -4.4
comp=N,0.5nm,0.2s
BARS Barje 6.03 77 ePn Pn 04 56 28.4 +1.4
MOA Molln 6.12 3 ePn Pn 04 56 30.6 +2.3
comp=N,8.3nm,0.6s
RETA Reutte 6.15 340 ePn Pn 04 56 33.3 +4.5
comp=N,1.3nm,0.4s
STIP Stip 6.26 88 iPn Pn 04 56 34.6 +4.3
LPG La Plagne 6.36 309 eP Pn 04 56 35.5 +3.7
LPG eSn Sn 04 57 39.4 -4.8
comp=N,4.6nm,0.7s
CONA Conrad Observa 6.36 13 ePn Pn 04 56 32.6 +0.9
comp=N,4.6nm,0.6s
LPL La Plagne 6.38 309 eP Pn 04 56 35.9 +3.9
LPL eSn Sn 04 57 39.8 -4.8
comp=N,91nm,2.0s
SMRF Simiane la Rot 6.46 293 ePn Pn 04 56 31.6 -1.3
SMRF Simiane la Rot 6.46 293 eP Pn 04 56 36.5 +3.6
SMRF eSn Sn 04 57 41.6 -4.7
comp=N,1.5nm,0.4s
MDVR Moldovita 6.52 59 ⇑P Pn 04 56 35.7 +1.9
ZAGS Zajecar 6.53 69 ePn Pn 04 56 34.3 +0.4
ORIF Oris-en-Rattie 6.61 301 eP Pn 04 56 40.5 +5.5
ORIF eSn Sn 04 57 45.0 -4.9
comp=N,3.9nm,0.6s
ZAPS Zavoj 6.70 74 ePn Pn 04 56 37.5 +1.3
BZS Buzias 6.86 53 ⇓P Pn 04 56 40.8 +2.4
KEST Kesra 6.94 212 Pn Pn 04 56 43.5 +4.0
comp=N,0.8nm,0.3s,baz=7.6,slow=5.0,SNR=12
VTS Vitosha 7.05 80 ⇑P Pn 04 56 42.6 +1.4
GERES GERESS Array B 7.11 359 Pn Pn 04 56 41.4 -0.5
comp=N,0.4nm,0.3s,baz=168,slow=13,SNR=9.1
GERES Sn Sn 04 57 59.7 -2.7
comp=N,0.2nm,0.3s,baz=189,slow=25,SNR=2.2
VIVF Saint-Julien-l 7.37 298 eP Pn 04 56 49.3 +4.0

CABF	La Chapelle	7.39	314	eP	Pn	04 56 49.5	+3.7
KHC	Kasperske Hory	7.40	359	ePN	Pn	04 56 46.1	+0.3
KHC				eSN	Sn	04 58 08.2	-1.2
SRE	Strehaia	7.46	64	⇑P	Pn	04 56 39.2	-7.4
GZR	Gura Zlata	7.46	58	⇑P	Pn	04 56 48.7	+1.9
VYHS	Vyhne	7.63	26	ePN	Pn	04 56 49.7	+0.7
LASF	Ste Croix	7.68	291	eP	Pn	04 56 53.7	+4.1
CDF	Champ du Feu	8.12	328	eP	Pn	04 56 57.0	+1.2
TRPA	Tarpa	8.89	41	⇑P	Pn	04 57 08.7	+2.5
VOIR		8.95	62	⇑P	Pn	04 57 09.3	+2.1
MLR	Muntele Rosu	9.56	63	⇓P	Pn	04 57 17.7	+2.1
ESDC	Sonseca Array	13.65	267	Pn	P	04 58 21.7	+1.5
	comp=N,0.1nm,0.3s,baz=76,slow=13,SNR=1.7						
BRTR	Keskin Array B	15.16	91	Pn	Pn	04 58 14.4	-18
	comp=N,0.1nm,0.3s,baz=320,slow=16,SNR=7.8						
MMAI	Mount Meron Ar	19.20	110	Pn	P	04 59 06.7	-15
	comp=N,5.4nm,0.3s,baz=346,slow=17,SNR=9.5						
FINES	FINESS Array B	21.09	16	P	P	04 59 36.9	-4.9
	comp=N,2.3nm,1.0s,baz=172,slow=11,SNR=1.3						
TORD	Torodi Ar. Bea	30.37	204	P	P	05 01 11.3	+1.6
	comp=N,0.4nm,0.6s,baz=28,slow=6.5,SNR=2.6						
MKAR	Makanchi Array	47.89	59	P	P	05 03 25.9	-10
	comp=N,0.1nm,0.3s,baz=204,slow=2.7,SNR=3.8						

KLM **17** *05:27:34.0, 22°.59S×174°.43W, h0km, mb5.6*

NEIC **17** *05:27:36.6±1.7, 22°.38S±0°.07×174°.9W±0°.1, h6km±1km, mb5.0/166, Ms_20 5.4/368, Mwb5.4/31, Mwc5.4(GCMT), Error ellipse: s-maj=17.0km s-min=12.2km az=103.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.27; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$-1.12; $M_{r\theta}$0.34; $M_{\theta\phi}$-0.31; $M_{\phi r}$0.97; Fault plane solution: $M_0$1.61000×10^{17} NP1: ϕ_s194.70000°, δ25.20000°, λ86.91000°. NP2: ϕ_s18.12000°, δ64.84000°, λ91.45000°. Principal axes: T 1.6369, Plg70.0000°, Azm291.0000°; N -0.0567, Plg1.0000°, Azm197.0000°; P -1.5802, Plg20.0000°, Azm107.0000°;*

IDC **17** *05:27:36.5±0.5, 22°.30S×174°.94W, h0km, mb4.9/25, mb1 5.0/27, mb1mx4.9/43, mbtmp4.9/27, ML5.1/2, MS5.1/15, Ms1 5.1/15, ms1mx4.7/44 Error ellipse: s-maj=18.0km s-min=12.6km az=131.0*

MOS **17** *05:27:39.6±1.2, 22°.45S×175°.00W, h31km, mb5.1/30, Error ellipse: s-maj=10.1km s-min=8.1km az=56.9*

GCMT **17** *05:27:39.6±0.1, 22°.55S±0°.01×174°.21W±0°.01, h12km, MW5.4/114, Moment Tensor Solution. s94,c157; s114,c218; Duration: 1s.2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.07±.02; $M_{\theta\theta}$0.10±.02; $M_{\phi\phi}$-1.17±.01; $M_{r\theta}$0.40±.04; $M_{\theta\phi}$0.03±.01; $M_{\phi r}$0.80±.04; Best double couple: $M_0$1.43400×10^{17} NP1: ϕ_s162.00000°, δ30.00000°, λ60.00000°. NP2: ϕ_s15.00000°, δ65.00000°, λ106.00000°. Principal axes: T 1.4380, Plg67.0000°, Azm315.0000°; N -0.0110, Plg14.0000°, Azm188.0000°; P -1.4300, Plg18.0000°, Azm94.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **17** *05:27:40, 22°.52S×174°.19W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.08; $M_{\theta\theta}$0.12; $M_{\phi\phi}$-1.20; $M_{r\theta}$0.28; $M_{\theta\phi}$0.04; $M_{\phi r}$0.98; Fault plane solution: $M_0$1.54000×10^{17} NP1: ϕ_s165.00000°, δ26.00000°, λ67.00000°. NP2: ϕ_s10.00000°, δ66.00000°, λ101.00000°. Principal axes: T 1.5004, Plg67.0000°, Azm300.0000°; N 0.0688, Plg10.0000°, Azm186.0000°; P -1.5692, Plg21.0000°, Azm92.0000°;*

BGR **17** *05:27:42.3±0.0, 22°.50S×175°.50W, h39km±1km, Ms5.7*

BJI **17** *05:27:47.5±0.0, 22°.40S×175°.00W, h75km, mB5.8/39, mb5.3/51, Ms5.8/19, Ms7 5.5/23*

ISC 17 05:27:40.6±0.4**, 22°.44S**±0°.05×**174°.94W**±0°.07**, h31**km±2km**, h31km:pP-P, n690, σ1s.41**/589**, mb5.0**/135**, MS5.4**/198**, 53C-9D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.76	55	P	Pn	05 28 52.5	-11
	baz=5.0						
NIUE	Niue	5.76	55		Pn	05 28 52.8	-11
RAO	Raoul Island	7.30	201	Pn	Pn	05 29 25.6	+0.5
	114nm,0.3s,baz=96,slow=17,SNR=4.0						
RAO				Sn	Sn	05 30 44.6	-2.2
	55nm,0.3s,baz=259,slow=22,SNR=3.8						
RAO	Raoul Island	7.30	201	Pn	Pn	05 29 24.2	-0.9
RAO				Sn	Sn	05 30 46.1	-0.8
RAO	Raoul Island	7.30	201	P	Pn	05 29 24.2	-0.9
RAO						05 30 46.1	
MSVF	Nonsavu	8.08	304	c iP	Pn	05 29 43.1	+7.2
MSVF				pmax	pmax		
	comp=Z,352nm,1.1s						
AFI	Afiamalu	9.00	20	Pn	Pn	05 29 40.1	-8.5
	comp=Z,7.1nm,0.3s,baz=155,slow=3.4,SNR=12						
AFI				Sn	Sn	05 31 10.1	-19
	comp=Z,8.6nm,0.3s,baz=76,slow=22,SNR=3.4						
AFI				LR	LR	05 33 19.9	
	comp=Z,5μm,18.5s,baz=197,slow=39						
AFI	Afiamalu	9.00	20		Pn	05 29 40.6	-8.0
RAR	Rarotonga	14.14	88	Pn	Pn	05 30 46.1	-13
	comp=Z,23nm,0.3s,baz=263,slow=6.2,SNR=43						
RAR				Sn	Sn	05 33 00.7	-34
	baz=334,slow=23,SNR=2.0						
RAR	Rarotonga	14.14	88		Pn	05 30 46.6	-12
FUNA	Funafuti	14.93	337	Pn	Pn	05 31 06.0	-3.7
URZ	Urewera	17.18	202	Pn	Pn	05 31 40.8	+1.1
	comp=Z,2.0nm,0.3s,baz=330,slow=3.3,SNR=9.8						
URZ				S	Sn	05 34 39.1	-9.4
	comp=Z,2.1nm,0.3s,baz=278,slow=23,SNR=6.6						
URZ	Urewera	17.18	202	Pn	Pn	05 31 38.0	-0.3
DZM	Mont Dzumac	17.23	268	eP	P	05 31 43.8	+3.3
	comp=Z,222nm,1.6s						
DZM				eLR	LR	05 35 51.9	
	comp=Z,7μm,27.1s						
DZM	Mont Dzumac	17.23	268	P	P	05 31 43.8	+3.3
	comp=Z,0.4nm,0.3s,baz=93,slow=18,SNR=14						
DZM	Mont Dzumac	17.23	268	Pn	Pn	05 31 38.5	-0.6
DZM				IAmb	IAmb	05 31 48.0	
	comp=Z,67nm,1.1s						
NOUC	Port Laguerre	17.36	268	Pn	Pn	05 31 37.4	-3.3
NOUC				IAmb	IAmb	05 31 50.0	
	comp=Z,63nm,1.1s						
BKZ	Black Stump Fm	18.21	202		Pn	05 31 50.5	-0.5
SANVU	Saraoutou	18.25	289		P	05 31 50.5	-1.1
SANVU				IAmb	IAmb	05 31 57.5	
	comp=Z,160nm,1.0s						
HIZ	Hauiti	18.25	206	P	Pn	05 31 52.7	+1.2
KNTN	Kanton	19.79	10	P	P	05 32 04.7	-3.8
KNTN				IAmb	IAmb	05 32 08.7	
	comp=Z,100nm,1.0s						
MSWZ	Moikau Station	20.64	201	P	P	05 32 17.0	-0.7
SNZO	South Karori	20.74	202	P	P	05 32 16.8	-1.8
SNZO				IAmb	IAmb	05 32 34.1	
	comp=Z,42nm,0.8s						
BHW	Baring Head	20.77	202	P	P	05 32 17.9	-1.0
PLWZ	Palliser	20.78	201	P	P	05 32 19.5	+0.4
QRZ	Quartz Range	21.17	207	P	P	05 32 22.9	-0.4
BSWZ	Blackbirch Sta	21.39	203	P	P	05 32 26.1	+0.4
THZ	Tophouse	21.80	205	P	P	05 32 29.9	-0.2
KHZ	Kahutara	22.13	203	P	P	05 32 31.9	-1.6
KHZ				IAmb	IAmb	05 32 49.6	
	comp=Z,33nm,1.1s						
LTZ	Lake Taylor	22.92	205	P	P	05 32 40.9	-1.1
TBI	Tubuai	23.49	97	eS	S	05 36 38.7	-21
	comp=Z,1μm,21.5s						
TBI				eLQ	LQ	05 36 55.8	
	comp=Z,5μm,26.8s						
TBI				eLR	LR	05 38 08.6	
	comp=Z,8μm,28.5s,baz=271						
TBI	Tubuai	23.49	97	eT	T	05 56 20.8	
	comp=Z,5.5nm,0.4s						
RPZ	Rata Peaks	24.18	205	P	P	05 32 56.8	+2.6
	comp=Z,10nm,0.7s,baz=338,slow=8.8,SNR=2.8						
RPZ	Rata Peaks	24.18	205	P	P	05 32 55.5	+1.3
RPZ				IAmb	IAmb	05 33 07.9	
	comp=Z,34nm,0.8s						
PAE	Paea	24.28	83	eT	T	05 57 22.4	
	comp=Z,9.2nm,0.4s						
PPT2	Papeete2	24.30	83	eLQ	LQ	05 37 29.7	
	comp=Z,4μm,25.5s						
PPT2				eLR	LR	05 38 13.8	
	comp=Z,11μm,27.2s,baz=249						
PPT2	Papeete2	24.30	83	eT	T	05 57 25.5	
	comp=Z,7.2nm,0.4s						
FOZ	Fox Glacier	24.54	207	P	P	05 32 53.2	-4.2
LHI	Lord Howe Isla	24.82	243	P	P	05 33 00.4	+0.3
LHI				IAmb	IAmb	05 33 05.7	
	comp=Z,50nm,0.9s						
ODZ	Otahua Downs	25.46	204	P	P	05 33 03.5	-2.2
ODZ				IAmb	IAmb	05 33 10.7	
	comp=Z,23nm,1.1s						
MLZ	Mavora Lakes	26.74	207	P	P	05 33 17.1	-0.2
MLZ				IAmb	IAmb	05 33 28.3	
	comp=Z,32nm,1.1s						
WHZ	Wether Hill Ro	27.23	207	P	P	05 33 22.3	+0.5
WHZ				IAmb	IAmb	05 33 26.7	
	comp=Z,49nm,1.2s						
HNR	Honiara	27.33	294	LR	LR	05 43 39.4	
	comp=Z,2μm,18.5s,baz=161,slow=35						
PYZ	Puysegur Point	27.99	208	P	P	05 33 27.0	-1.5
ARMA	Armidale	30.89	248	P	P	05 33 57.1	+2.6
	baz=32,SNR=4.4						
ARMA	Armidale	30.89	248	P	P	05 33 55.0	+0.5
ARMA				IAmb	IAmb	05 33 58.1	
	comp=Z,15nm,0.9s						
EIDS	Eidsvold	31.15	258	P	P	05 33 57.2	+0.4
EIDS				IAmb	IAmb	05 33 58.5	
	comp=Z,17nm,1.0s						
RMQ	Roma	33.22	256	P	P	05 34 16.8	+1.8
	baz=34,SNR=8.6						
CAN	Canberra	33.90	240	P	P	05 34 22.1	+1.3
CAN				pmax	pmax		
	comp=Z,24nm,2.3s						
TAOE	Nuku Hiva Isla	36.02	74	IAMs_20	IAMs_20	05 50 53.4	
	comp=Z,4μm,18.0s						
CMSA	Cobar Meteorol	36.07	247	P	P	05 34 40.6	+1.0
	baz=37,SNR=19						
CTA	Charters Tower	36.17	266	P	P	05 34 40.6	0.0
	comp=Z,17nm,1.1s,baz=96,slow=11,SNR=11						
CTAO	Charters Tower	36.17	266	P	P	05 34 40.0	-0.6
CTAO				pmax	pmax		
	comp=Z,29nm,1.5s						
TOO	Toolangi	37.14	237	P	P	05 34 50.6	+1.9
	baz=38,SNR=5.9						
TOO	Toolangi	37.14	237	P	P	05 34 50.1	+1.4
TOO				pmax	pmax		
	comp=Z,20nm,1.9s						
MTSU	Mount Surprise	38.37	269	P	P	05 35 00.3	+1.1
	baz=39,SNR=5.1						
PMG	Port Moresby	38.55	283	P	P	05 35 01.5	+0.7
	comp=Z,10nm,0.2s,baz=92,slow=8.4,SNR=7.3						
PMG	Port Moresby	38.55	283	P	P	05 34 59.9	-0.9
PMG	Port Moresby	38.55	283	c eP	P	05 35 00.2	-0.6
PMG				pmax	pmax		
	comp=Z,142nm,1.0s						
STKA	Stephens Creek	39.58	247	P	P	05 35 10.2	+1.1
	baz=40,SNR=6.4						
STKA	Stephens Creek	39.58	247	P	P	05 35 09.7	+0.5
	comp=Z,9.9nm,1.1s,baz=87,slow=7.6,SNR=8.7						
STKA				LR	LR	05 50 14.4	
	comp=Z,3μm,19.4s,baz=80,slow=34						
STKA	Stephens Creek	39.58	247	P	P	05 35 08.7	-0.5
STKA	Stephens Creek	39.58	247	P	P	05 35 08.7	-0.5
STKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
COEN	Coen	40.56	275	P	P	05 35 18.6	+1.1
	baz=41,SNR=11						
COEN	Coen	40.56	275	P	P	05 35 19.2	+1.7
COEN				IAmb	IAmb	05 35 20.2	
	comp=Z,44nm,1.0s						
MANU	Manus Island	41.83	294	P	P	05 35 26.1	-1.9
HTT	Hallett	41.91	245	P	P	05 35 28.5	+0.1
	baz=43,SNR=7.7						
BBOO	Buckleboo	44.29	246	P	P	05 35 46.9	-0.8
BBOO				IAmb	IAmb	05 35 54.0	
	comp=Z,19nm,1.1s						
BBOO				IAMs_20	IAMs_20	05 52 38.3	
	comp=Z,4μm,20.0s						
AS31	Alice Springs	46.88	258	P	P	05 36 08.5	+0.2
AS31				IAmb	IAmb	05 36 09.6	
	comp=Z,8.6nm,0.9s						
ASAR	Alice Springs	46.88	258	P	P	05 36 07.9	-0.4
	comp=Z,36nm,0.9s,baz=92,slow=8.2,SNR=142						
ASAR				PcP	PcP	05 37 42.1	+1.2
	comp=Z,3.7nm,0.8s,baz=113,slow=3.2,SNR=4.7						
ASAR				LR	LR	05 56 38.5	
	comp=Z,2μm,18.2s,baz=114,slow=37						
WR0	Warramunga Arr	46.99	263	P	P	05 36 08.8	-0.4
WR0				IAmb	IAmb	05 36 09.6	
	comp=Z,19nm,1.1s						
WB0	Warramunga Arr	47.16	263	P	P	05 36 09.9	-0.6
WB2	Warramunga Arr	47.16	263	P	P	05 36 09.4	-1.1
WRAB	Tennant Creek	47.17	263	P	P	05 36 10.6	0.0
WRAB	Tennant Creek	47.17	263	c eP	P	05 36 09.8	-0.8
WRAB				pmax	pmax		
	comp=Z,25nm,1.0s						
WRA	Warramunga Arr	47.17	263	P	P	05 36 09.5	-1.2
	comp=Z,22nm,0.9s,baz=100,slow=7.7,SNR=36						
WRA				LR	LR	05 55 11.6	
	comp=Z,1μm,20.1s,baz=95,slow=35						
FORT	Forrest	51.17	248	P	P	05 36 41.2	+0.1
FORT				IAmb	IAmb	05 36 42.0	
	comp=Z,29nm,0.8s						
WRKA	Warakurna	51.70	255	P	P	05 36 44.7	-0.5
	baz=52,SNR=45						
KNRA	Kununurra	53.38	267	P	P	05 36 57.5	-0.1
	baz=54,SNR=12						
KNRA	Kununurra	53.38	267	P	P	05 36 57.7	+0.1
ANA2	Anatahan	54.49	312	P	P	05 37 03.3	-2.4
FITZ	Fitzroy Crossi	55.60	263	P	P	05 37 14.3	+0.5
	baz=56,SNR=13						
FITZ	Fitzroy Crossi	55.60	263	P	P	05 37 13.8	0.0
FITZ				IAmb	IAmb	05 37 15.8	
	comp=Z,26nm,1.0s						
VNDA	Vanda	56.26	186	LR	LR	05 57 13.6	
	comp=Z,1μm,20.1s,baz=17,slow=32						
SWI	Sorong	56.49	285	P	P	05 37 20.4	+0.2
	comp=Z,2μmcomp=Z,118nm,1.0s						
SWI	Sorong	56.49	285	P	P	05 37 19.2	-1.0
SWI				pmax	pmax		
	comp=Z,118nm,1.0s						
AAI	Ambon	58.06	280	P	P	05 37 30.0	-1.3
AAI				pmax	pmax		
	comp=Z,103nm,0.9s						
NLAI	Namlea	59.24	280	P	P	05 37 39.9	+0.4
	comp=Z,46nm,0.9s						
SOEI	Soe	59.41	272	P	P	05 37 42.7	+1.9
	comp=Z,2μmcomp=Z,162nm,1.0s						
SOEI	Soe	59.41	272	P	P	05 37 40.9	+0.1
SOEI				IAMs_20	IAMs_20	06 03 01.7	
	comp=Z,2μm,22.0s						
KLBR	Kellerberrin	59.84	246	P	P	05 37 42.4	-1.0
	baz=61,SNR=6.3						
PSAD2	Pilbara Seismi	59.90	257	P	P	05 37 43.8	-0.1
PSAD2				IAmb	IAmb	05 37 54.7	
	comp=Z,14nm,1.1s						
PSAB3	Pilbara Seismi	60.00	257	IAMs_20	IAMs_20	06 04 55.3	
	comp=Z,3μm,18.0s						
PSAA3	Pilbara Seismi	60.00	257	IAMs_20	IAMs_20	06 07 42.4	
	comp=Z,4μm,19.0s						
PSA00	Pilbara Seismi	60.01	257	P	P	05 37 44.9	+0.1
PSA00				IAmb	IAmb	05 37 57.9	
	comp=Z,21nm,1.1s						
PSAA2	Pilbara Seismi	60.02	257	P	P	05 37 45.5	+0.7
PSAA2				IAmb	IAmb	05 37 57.8	
	comp=Z,23nm,1.1s						
PSAA2				IAMs_20	IAMs_20	06 04 47.1	
	comp=Z,3μm,18.0s						
PSAA1	Pilbara Seismi	60.02	257	IAMs_20	IAMs_20	06 04 56.3	
	comp=Z,3μm,18.0s						
PSAC1	Pilbara Seismi	60.06	257	IAMs_20	IAMs_20	06 04 49.2	
	comp=Z,3μm,18.0s						
PSAD1	Pilbara Seismi	60.06	257	P	P	05 37 43.9	-1.2
PSAD1				IAmb	IAmb	05 37 58.1	
	comp=Z,23nm,1.1s						
PSAD3	Pilbara Seismi	60.06	257	P	P	05 37 44.8	-0.3
PSAD3				IAmb	IAmb	05 37 58.0	
	comp=Z,16nm,1.1s						
SANI	Sanana	60.74	281	P	P	05 37 49.7	-0.1
	comp=Z,38nm,1.2s						
MMRI	Maumere	61.67	272	IAMs_20	IAMs_20	06 08 07.8	
	comp=Z,2μm,19.0s						
MORW	Morawa	61.74	248	P	P	05 37 54.9	-1.5
	baz=62,SNR=4.1						
MORW	Morawa	61.74	248	P	P	05 37 56.1	-0.4
MORW				IAmb	IAmb	05 38 00.4	
	comp=Z,16nm,0.9s						
MORW				IAMs_20	IAMs_20	06 04 52.8	
	comp=Z,3μm,18.0s						
CASY	Casey	63.45	206	P	P	05 38 08.0	+0.9
LUWI	Luwuk	64.08	280	IAMs_20	IAMs_20	06 09 40.4	
	comp=Z,3μm,19.0s						
GIRL	Giralia	64.78	255	P	P	05 38 15.1	-1.5
GIRL				IAMs_20	IAMs_20	06 05 20.4	
	comp=Z,3μm,20.0s						
BKSI	Bulukumba	64.83	275	P	P	05 38 16.8	-0.3
	comp=Z,576nmcomp=Z,14nm,0.9s						
BNSI	Bone	65.19	276	P	P	05 38 20.0	+0.6
	comp=Z,742nmcomp=Z,28nm,1.6s						
KCP	Kidapawan	65.56	289	⇓ iP	P	05 38 21.7	-0.1
KCP				i S	pP	05 38 31.6	+1.3
PLAI	Plampang	65.73	270	P	P	05 38 23.3	+0.4
	comp=Z,94nm,1.1s						
QSPA	South Pole Qui	67.64	180	P	P	05 38 34.7	+0.3
	comp=Z,14nm,1.1s,baz=40,slow=2.9,SNR=19						
QSPA	South Pole Qui	67.64	180	P	P	05 38 34.1	-0.3
QSPA	South Pole Qui	67.64	180	IAMs_20	IAMs_20	06 03 36.1	
	comp=Z,2μm,20.0s						
JAGI	Jajag, Banyuwa	69.21	269	IAMs_20	IAMs_20	06 13 21.3	
	comp=Z,2μm,22.0s						
SPMM	Sapulut	72.20	283	P	P	05 39 03.0	-0.2
UGM	Wanagama	72.76	268	P	P	05 39 06.6	+0.1
UGM				IAMs_20	IAMs_20	06 13 30.2	
	comp=Z,3μm,22.0s						
SMRI	Semarang	73.15	269	IAMs_20	IAMs_20	06 12 37.7	
	comp=Z,3μm,18.0s						
INU	Inuyama	73.31	321	IAMs_20	IAMs_20	06 05 46.0	
	comp=Z,3μm,18.0s						
MJAR	Matsushiro Arr	73.46	322	P	P	05 39 10.0	-0.1
	comp=Z,12nm,0.7s,baz=146,slow=6.1,SNR=21						
MJAR	Matsushiro Arr	73.46	322	P	P	05 39 10.0	-0.1
MAJO	Matsushiro	73.46	322	P	P	05 39 10.4	+0.3
MAJO				IAmb	IAmb	05 39 23.5	
	comp=Z,15nm,0.9s						
MAJO	Matsushiro	73.46	322	IAMs_20	IAMs_20	06 14 38.2	
	comp=Z,2μm,18.0s						
MAJO	Matsushiro	73.46	322	i P	P	05 39 11.2	+1.1
MAJO				pmax	pmax		
	comp=Z,11nm,0.7s						
MAT	Matsushiro	73.46	322	P	P	05 39 10.8	+0.7
MAT				S	SKiKP	05 48 40.4	+1.6
MJB9	Matsu-Tunnel	73.47	322	IAMs_20	IAMs_20	06 11 16.2	
	comp=Z,2μm,19.0s						
JOW	Kunigami	73.59	309	IAMs_20	IAMs_20	06 02 39.3	
	comp=Z,3μm,19.0s						
SBUM	Sibu	75.13	279	IAMs_20	IAMs_20	06 07 40.3	
	comp=Z,3μm,18.0s						
NIKH	Nikolski High	75.28	4	IAMs_20	IAMs_20	06 08 44.1	
	comp=Z,2μm,19.0s						
CISI	Cisompet, Garu	75.39	268	IAMs_20	IAMs_20	06 14 46.6	
	comp=Z,2μm,20.0s						
LEM	Lembang	75.84	268	P	P	05 39 26.3	+1.7
LEM				pmax	pmax		
	comp=Z,82nm,0.9s						
XMIS	Christmas Isla	76.36	264	IAMs_20	IAMs_20	06 13 21.1	
	comp=Z,1μm,19.0s						
KSM	Kuching	76.49	277	P	P	05 39 28.0	-0.1
TPUB	Ta-pu	77.41	302	P	P	05 39 32.7	-0.4
SAO	San Andreas Ge	77.54	41	IAMs_20	IAMs_20	06 14 28.8	
	comp=Z,2μm,19.0s						
PMPB	Monarch Peak	77.58	42	IAMs_20	IAMs_20	06 19 17.8	
	comp=Z,2μm,18.0s						
PAGB	Antelope Grade	77.62	43	IAMs_20	IAMs_20	06 15 21.0	
	comp=Z,2μm,18.0s						
OSI	Osito Audit: C	77.90	45	IAMs_20	IAMs_20	06 12 01.5	
	comp=Z,1μm,18.0s						
SRIG	Santa Rosalia	78.21	54	IAMs_20	IAMs_20	06 07 59.2	
	comp=Z,2μm,19.0s						
KMRM	Mail Ridge	78.49	38	IAMs_20	IAMs_20	06 08 05.7	
	comp=Z,3μm,19.0s						
PET	Petropavlovsk	78.57	344	eP	P	05 39 36.3	-2.5
PET				e*PP	pP	05 39 46.9	-0.3
PET				eS	S	05 49 31.1	-1.9
PET				pmax	pmax		
	comp=Z,500nm,5.4s						
ISA	Isabella, Lake	78.70	44	P	P	05 39 41.9	+1.8
ISA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
PFO	Pinyon Flats O	78.78	46	P	P	05 39 40.9	+0.3
	comp=Z,1.6nm,0.8s,baz=259,slow=3.8,SNR=4.8						
PFO	Pinyon Flats O	78.78	46	IAMs_20	IAMs_20	06 12 24.1	
	comp=Z,2μm,20.0s						
XPFO	Pion Flat	78.79	46	IAMs_20	IAMs_20	06 12 24.1	
	comp=Z,2μm,20.0s						
PEA0B	Petropavlovsk-	78.89	344	P	P	05 39 41.0	+0.4
PEA0B	Petropavlovsk-	78.89	344	i P	P	05 39 40.6	0.0
PETK	Petropavlovsk-	78.89	344	P	P	05 39 40.8	+0.2
	comp=Z,22nm,0.8s,baz=136,slow=8.8,SNR=11						
YSS	Yuzh-Sakhalins	78.91	332	P	P	05 39 42.0	+1.2
YSS	Yuzh-Sakhalins	78.91	332	⇓ iP	P	05 39 42.9	+2.1
YSS				e		05 39 54.0	
YSS				e		05 42 38.4	
YSS				eS	S	05 49 33.6	-3.4
YSS				e		05 49 46.0	
YSS				pmax	pmax		
	comp=Z,50nm,1.4s						
CMB	Columbia Colle	79.00	41	P	P	05 39 41.9	+0.3
CMB	Columbia Colle	79.00	41	P	P	05 39 41.9	+0.3
CMB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AFDM	Forest Hills D	79.23	40	P	P	05 39 42.4	-0.4
AFDM				IAmb	IAmb	05 39 55.5	
	comp=Z,8.9nm,1.1s						
ORV	Oroville	79.32	39	P	P	05 39 44.2	+1.0
ORV	Oroville	79.32	39	P	P	05 39 44.2	+1.0
ORV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
WDC	Whiskeytown Da	79.39	38	P	P	05 39 43.1	-0.5
WDC				IAmb	IAmb	05 39 56.0	
	comp=Z,10nm,1.1s						
WDC				IAMs_20	IAMs_20	06 09 04.9	
	comp=Z,3μm,20.0s						
WDC	Whiskeytown Da	79.39	38	P	P	05 39 43.1	-0.5
WDC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MDPB	Devils Postpil	79.55	42	P	P	05 39 44.5	-0.4
MDPB				IAmb	IAmb	05 39 55.6	
	comp=Z,9.5nm,1.1s						
MDPB				IAMs_20	IAMs_20	06 20 24.0	
	comp=Z,1μm,18.0s						
GSC	Goldstone, Bar	79.56	45	P	P	05 39 45.0	+0.2
GSC				IAMs_20	IAMs_20	06 13 55.6	
	comp=Z,1μm,18.0s						
GSC	Goldstone, Bar	79.56	45	P	P	05 39 45.0	+0.2
GSC				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GLA	Glamis	79.56	48	P	P	05 39 44.1	-0.7
GLA	Glamis	79.56	48	P	P	05 39 44.1	-0.7
GLA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
OMMB	Old Mammoth Mi	79.58	42	P	P	05 39 45.8	+0.7
OMMB				IAMs_20	IAMs_20	06 16 01.0	
	comp=Z,2μm,18.0s						
QZH	Quanzhou	79.85	302	P	P	05 39 48.3	+1.9
WAKR	Walker	79.87	41	P	P	05 39 48.2	+1.6
WAKR				IAMs_20	IAMs_20	06 08 54.7	
	comp=Z,1μm,20.0s						
YBH	Yreka Blue Hor	80.07	37	P	P	05 39 49.2	+1.8
	comp=Z,4.3nm,0.9s,baz=218,slow=7.3,SNR=5.9						
HSIG		80.09	53	P	P	05 39 45.5	-2.2
HSIG				IAMs_20	IAMs_20	06 08 28.8	
	comp=Z,1μm,20.0s						
113A	Mohawk Valley,	80.13	49	P	P	05 39 47.6	-0.2
113A				IAMs_20	IAMs_20	06 08 31.8	
	comp=Z,1μm,20.0s						
PNTR	Pine Nut	80.15	41	P	P	05 39 47.6	-0.4
PNTR				IAmb	IAmb	05 40 01.1	
	comp=Z,21nm,1.1s						
Y12C	Blythe	80.17	47	P	P	05 39 49.5	+1.4
BEKR	Beckworth	80.19	40	P	P	05 39 49.0	+0.7
KSRS	Korea Array	80.22	317	P	P	05 39 49.5	+1.3
	comp=Z,16nm,1.1s,baz=140,slow=6.1,SNR=17						
VCNR	Virginia City	80.25	40	P	P	05 39 47.7	-0.8
VCNR				IAmb	IAmb	05 40 01.6	
	comp=Z,12nm,1.1s						
KS19	Wonju Array Si	80.29	317	P	P	05 39 48.1	-0.4
KS19				IAmb	IAmb	05 40 07.3	
	comp=Z,9.0nm,1.1s						
YERR	Yerington	80.30	41	P	P	05 39 49.1	+0.3
GO09	Cerro Castillo	80.31	142	IAMs_20	IAMs_20	06 07 42.5	
	comp=Z,3μm,21.0s						
214A	Organ Pipe Nat	80.34	50	P	P	05 39 47.7	-1.4
214A				IAMs_20	IAMs_20	06 09 06.5	
	comp=Z,2μm,19.0s						
RYN	Ryan	80.51	41	P	P	05 39 48.4	-1.6
NVAR	Mina Array Bea	80.52	42	P	P	05 39 50.1	0.0
	comp=Z,4.6nm,1.1s,baz=223,slow=9.3,SNR=17						

NVAR LR LR 06 08 34.6
comp=Z,840nm,19.1s,baz=218,slow=30
NV11 Mina Array Sit 80.61 42 P **P 05 39 51.4 +0.9**
NV11 IAms_20 IAms_20 06 16 44.1
comp=Z,1µm,18.0s
PAHR Pah Rah Range 80.67 40 P **P 05 39 52.3 +1.6**
MAW Mawson 80.70 199 P **P 05 39 52.8 +2.5**
comp=Z,16nm,0.9s,baz=190,slow=7.4,SNR=7.4
MAW LR LR 06 13 57.1
comp=Z,2µm,19.6s,baz=110,slow=34
TPNV Topopah Spring 80.91 44 IAms_20 IAms_20 06 10 21.2
comp=Z,1µm,19.0s
KVN Kaiserville 81.03 41 P **P 05 39 54.1 +1.4**
KVN Kaiserville 81.03 41 P **P 05 39 54.1 +1.4**
KVN pmax pmax
comp=Z,5.0nm,1.1s
INCN Inchon 81.06 317 IAms_20 IAms_20 06 09 12.4
comp=Z,2µm,18.0s
MNAI Manna 81.06 269 P **P 05 39 53.1 -0.1**
Y14A Wickenburg 81.32 48 P **P 05 39 54.0 -0.3**
SHPR Sheep Range 81.35 45 P **P 05 39 53.8 -0.6**
W13A Hualapai Mount 81.38 47 P **P 05 39 54.5 -0.2**
MOD Modoc Plateau 81.53 38 P **P 05 39 53.2 -2.1**
MSHR Mys Shultsa 81.56 323 *i* P **P 05 39 56.6 +1.4**
TUC Tucson 81.97 50 P **P 05 39 56.9 -0.8**
TUC Tucson 81.97 50 IAms_20 IAms_20 06 09 56.7
comp=Z,2µm,20.0s
TUC Tucson 81.97 50 P **P 05 39 56.9 -0.8**
TUC pmax pmax
comp=Z,3.0nm,1.0s
TYV Tymovskoe 81.98 334 *e*P **P 05 39 58.1 +0.9**
TYV pmax pmax
comp=Z,800nm,4.1s
TYV pmax pmax
comp=Z,30nm,1.7s
KDAK Kodiak Island 82.07 12 IAms_20 IAms_20 06 15 05.4
comp=Z,2µm,21.0s
HKPS Hong Kong Po S 82.11 298 P **P 05 39 55.9 -2.7**
R11A Troy Canyon, C 82.17 43 P **P 05 39 57.3 -1.4**
USA0B Ussuriysk Arra 82.17 325 P **P 05 39 58.1 -0.3**
USA0B IAms_20 IAms_20 06 14 57.1
comp=Z,2µm,18.0s
USA0B Ussuriysk Arra 82.17 325 *i* P **P 05 39 59.6 +1.2**
USRK Ussuriysk Ar. 82.17 325 P **P 05 39 59.9 +1.5**
comp=Z,31nm,0.9s,baz=116,slow=4.4,SNR=36
MYKOM Kota Tinggi 82.55 275 P **P 05 40 01.0 -0.1**
MYKOM Kota Tinggi 82.55 275 P **P 05 40 03.0 +1.9**
319A Douglas 82.56 52 P **P 05 39 59.7 -1.2**
319A IAms_20 IAms_20 06 09 56.2
comp=Z,2µm,20.0s
X16A Lo Mia Camp, P 82.66 48 P **P 05 40 01.6 +0.1**
X16A IAmb IAmb 05 40 13.3
comp=Z,9.0nm,1.1s
X16A IAms_20 IAms_20 06 09 51.8
comp=Z,1µm,18.0s
WVOR Wild Horse Val 82.83 38 P **P 05 40 02.8 +0.8**
WVOR IAmb IAmb 05 40 06.5
comp=Z,8.4nm,1.1s
WVOR IAms_20 IAms_20 06 11 48.8
comp=Z,2µm,20.0s
WVOR Wild Horse Val 82.83 38 P **P 05 40 02.8 +0.8**
WVOR pmax pmax
comp=Z,8.0nm,1.1s
LCMT Little Creek M 82.90 45 P **P 05 40 00.5 -2.1**
HPIG 83.03 57 P **P 05 40 02.4 -1.2**
HPIG IAmb IAmb 05 40 14.2
comp=Z,6.3nm,1.1s
CCUT Cedar City 83.13 45 P **P 05 40 03.8 0.0**
KGM Kluang 83.13 275 P **P 05 40 06.0 +1.9**
KNB Kanab 83.18 45 P **P 05 40 02.6 -1.4**
KNB Kanab 83.18 45 P **P 05 40 02.6 -1.4**
KNB pmax pmax
comp=Z,7.0nm,1.1s
U15A North Rim 83.20 46 P **P 05 40 03.5 -0.8**
U15A IAmb IAmb 05 40 18.7
comp=Z,16nm,1.1s
NJ2 Nanjing 83.30 309 *e*P **P 05 40 06.8 +2.3**
NJ2 pmax pmax
comp=Z,24nm,0.6s
WUAZ Wupatki 83.31 47 P **P 05 40 03.6 -1.2**
WUAZ IAms_20 IAms_20 06 10 44.4
comp=Z,1µm,18.0s
SZCU Shurtz Canyon 83.33 45 P **P 05 40 03.9 -0.9**
PSUT Pine Spring 83.38 44 P **P 05 40 04.3 -0.8**
ZAIG Zacatecas 83.54 62 P **P 05 40 03.5 -2.8**
MDJ Mudanjiang 83.74 324 P **P 05 40 06.7 +0.2**
MDJ IAms_20 IAms_20 06 14 04.1
comp=Z,2µm,18.0s
PKCU Pink Cliffs 83.75 45 P **P 05 40 05.4 -1.7**
X18A Snowflake 83.75 49 P **P 05 40 05.3 -1.8**
X18A IAms_20 IAms_20 06 11 02.8
comp=Z,1µm,21.0s
ELK Elko 83.81 41 P **P 05 40 07.4 +0.1**
ELK Elko 83.81 41 P **P 05 40 07.4 +0.1**
ELK pmax pmax
comp=Z,3.0nm,0.9s
MTPU Mount Pierson 84.17 45 P **P 05 40 10.2 +0.9**
W18A Petrified Fore 84.22 48 P **P 05 40 10.1 +0.7**
W18A IAmb IAmb 05 40 15.6
comp=Z,7.3nm,0.9s
QIZ Qiongzhong 84.24 293 P **P 05 40 10.8 +1.2**
QIZ S **S 05 50 37.4 +4.1**
QIZ pmax pmax
comp=Z,440nm,3.7s
121A Cookes Peak, D 84.25 51 P **P 05 40 08.1 -1.5**
TCRU Three Creeks R 84.32 44 P **P 05 40 10.4 +0.4**
MSU Marysvale 84.44 44 P **P 05 40 10.6 0.0**
MSU Marysvale 84.44 44 P **P 05 40 10.6 0.0**
G08A Pilot Rock 84.46 36 P **P 05 40 10.8 +0.5**
G08A IAmb IAmb 05 40 14.2
comp=Z,18nm,1.2s
NKL Nikolayevsk 84.53 335 *e*P **P 05 40 08.1 -2.1**
NKL *e*S **S 05 50 31.6 -3.0**
NKL pmax pmax
comp=N,5.0nm,1.1s
NKL pmax pmax
comp=E,3.0nm,1.1s
NKL pmax pmax
comp=Z,18nm,1.2s
GRNR Gornyy 84.54 331⇓*i*P **P 05 40 12.5 +2.1**
GRNR pmax pmax
comp=Z,9.0nm,1.2s
TLIG Tlapa 84.60 69 P **P 05 40 11.0 -0.7**
TLIG IAmb IAmb 05 40 15.8
comp=Z,7.5nm,1.1s
TLIG IAms_20 IAms_20 06 09 35.0
comp=Z,1µm,20.0s
JRMM Jerantut 84.62 276 P **P 05 40 14.0 +2.3**
PDSI Padang 84.66 271 P **P 05 40 11.8 -0.2**
comp=Z,13nm,1.1s
EPT El Paso 84.79 53 IAms_20 IAms_20 06 11 36.4
comp=Z,2µm,21.0s
PAYG Puerto Ayora 84.80 89 IAms_20 IAms_20 06 25 00.1
comp=Z,1µm,18.0s
UNM Universidad Na 84.84 67 IAms_20 IAms_20 06 09 59.2
comp=Z,1µm,20.0s
SEW Seward 84.84 13 IAms_20 IAms_20 06 20 35.6
comp=Z,1µm,20.0s
HAWA Hanford 84.86 35 P **P 05 40 12.2 +0.1**
HAWA IAmb IAmb 05 40 16.8
comp=Z,4.8nm,0.9s
DUG Dugway, Tooele 84.99 43 P **P 05 40 13.5 +0.4**
DUG Dugway, Tooele 84.99 43 P **P 05 40 13.5 +0.4**
DUG pmax pmax
comp=Z,4.0nm,1.1s
MFID Camas Ranch 85.06 39 P **P 05 40 13.0 -0.3**
MFID IAmb IAmb 05 40 29.5
comp=Z,8.0nm,1.1s
BMO Blue Mountains 85.09 37 P **P 05 40 13.9 +0.4**
BMO IAmb IAmb 05 40 17.9
comp=Z,4.6nm,0.9s
BMO IAms_20 IAms_20 06 12 12.7
comp=Z,2µm,20.0s
BMO Blue Mountains 85.09 37 P **P 05 40 13.9 +0.4**
BMO pmax pmax
comp=Z,5.0nm,1.0s
BGU Big Grassy Mou 85.27 42 P **P 05 40 14.2 -0.4**
NLU North Lily Min 85.32 43 P **P 05 40 14.7 -0.2**
Q16A Castle Valley 85.32 45 P **P 05 40 14.2 -0.7**
SYO Syowa Base 85.45 192⇑*e*P **P 05 40 13.6 -1.2**
SYO Syowa Base 85.45 192⇑*e*pP **P 05 40 15.8 +1.0**
SNY Shenyang 85.52 319 ⇓P **P 05 40 17.6 +2.1**
SNY SKS **SKSac 05 50 33.1 -5.4**
SNY S **SKKSac 05 50 46.1 +0.8**

SNY pmax pmax
comp=Z,38nm,2.5s
SNY pmax pmax
comp=Z,890nm,7.9s
SNY LR LR
comp=Z,5µm,20.0s
CN2 Changchun 85.57 321 *e*P **P 05 40 16.9 +1.1**
CN2 *e*S **SKSac 05 50 33.5 -5.3**
CN2 pmax pmax
comp=Z,60nm,1.4s
CN2 pmax pmax
comp=Z,1µm,3.8s
MNTX Cornudas Mount 85.59 53 P **P 05 40 14.1 -2.1**
MNTX IAmb IAmb 05 40 19.7
comp=Z,5.3nm,1.1s
KLR Kul'dur 85.65 328⇓*i*P **P 05 40 18.2 +2.2**
KLR pmax pmax
comp=Z,65nm,2.6s
Y22D IRIS PASSCAL I 85.65 51 IAms_20 IAms_20 06 12 26.1
comp=Z,2µm,19.0s
RC01 Rabbit Creek A 85.69 12 P **P 05 40 14.5 -1.4**
RC01 IAmb IAmb 05 40 19.7
comp=Z,19nm,1.0s
HIN Hinchinbrook I 85.73 14 IAms_20 IAms_20 06 22 16.0
comp=Z,1µm,18.0s
TXAR Lajitas Array 85.73 56 P **P 05 40 17.1 0.0**
comp=Z,6.2nm,1.1s,baz=209,slow=6.9,SNR=12
TXAR LR LR 06 12 17.7
comp=Z,600nm,18.9s,baz=0.0,slow=31
F10A Beach Ranch, E 85.83 36 P **P 05 40 18.1 +1.0**
F10A IAmb IAmb 05 40 38.2
comp=Z,10nm,0.9s
SRU San Rafael Swe 85.85 45 P **P 05 40 17.9 +0.4**
SRU San Rafael Swe 85.85 45 P **P 05 40 17.9 +0.4**
SRU pmax pmax
comp=Z,19nm,1.1s
SUA Susitna One 85.85 11 P **P 05 40 16.8 -0.1**
SPUT South Promonto 85.85 42 P **P 05 40 17.0 -0.4**
PLCA Paso Flores 85.88 132 LR LR 06 12 45.9
comp=Z,836nm,18.7s,baz=283,slow=32
WHN Wuhan 85.88 305 ⇓P **P 05 40 18.3 +0.7**
WHN S **SKSac 05 50 42.8 +1.5**
WHN pmax pmax
comp=Z,120nm,1.3s
P17A Butcher Ranch, 85.91 44 P **P 05 40 18.0 +0.2**
CTU Camp Tracy 85.94 43 P **P 05 40 18.3 +0.4**
GAMB Gambell 85.96 1 P **P 05 40 17.8 +0.7**
SNAA Sanae 85.98 178 P **P 05 40 18.3 +0.8**
SNAA Sanae 85.98 178 LR LR 06 14 42.4
comp=Z,2µm,20.3s,baz=190,slow=33
SNAA Sanae 85.98 178 P **P 05 40 18.4 +0.8**
SNAA IAmb IAmb 05 40 31.5
comp=Z,22nm,1.1s
SNAA IAms_20 IAms_20 06 15 02.6
comp=Z,2µm,20.0s
SNAA Sanae 85.98 178⇑*e*P **P 05 40 17.6 0.0**
VNA3 Neumayer Olymp 86.01 175 P **P 05 40 19.0 +1.3**
EYAK Cordova Ski Ar 86.03 14 IAms_20 IAms_20 06 20 34.6
comp=Z,1µm,19.0s
FID Port Fidalgo 86.05 14 IAms_20 IAms_20 06 20 19.4
comp=Z,1µm,19.0s
JLU Jordanelle 86.08 43 P **P 05 40 19.0 +0.3**
RAGM Ragged Mountai 86.13 15 IAms_20 IAms_20 06 22 43.2
comp=Z,2µm,18.0s
MVCO Mesa Verde 86.18 47 IAms_20 IAms_20 06 12 23.8
comp=Z,1µm,21.0s
IPM Ipoh 86.19 276 P **P 05 40 21.0 +1.4**
SKT Skwentna 86.19 11 IAms_20 IAms_20 06 18 02.7
comp=Z,1µm,20.0s
KNK Knik Glacier 86.24 12 P **P 05 40 19.8 +1.1**
KNK IAmb IAmb 05 40 32.3
comp=Z,24nm,1.2s
KNK IAms_20 IAms_20 06 23 20.1
comp=Z,1µm,20.0s
PMR Palmer 86.27 12 P **P 05 40 20.9 +2.1**
PMR IAmb IAmb 05 40 36.5
comp=Z,12nm,1.2s
PMR Palmer 86.27 12 P **P 05 40 20.9 +2.1**
PMR pmax pmax
comp=Z,12nm,1.2s
PMR MLR MLR
comp=Z,900nm,19.0s
TTA Tatalina 86.39 9 P **P 05 40 20.2 +0.8**
TTA Tatalina 86.39 9 P **P 05 40 20.2 +0.8**
TCUT Toone Canyon 86.39 43 P **P 05 40 20.5 +0.3**
MA2 Magadan 86.42 343 P **P 05 40 19.0 -0.6**
comp=Z,3.4nm,0.3s,baz=138,slow=5.4,SNR=8.5
MA2 Magadan 86.42 343 P **P 05 40 19.2 -0.4**
MA2 IAmb IAmb 05 40 20.2
comp=Z,12nm,0.9s
MA2 Magadan 86.42 343 IAms_20 IAms_20 06 26 29.7
comp=Z,2µm,18.0s
MA2 Magadan 86.42 343*ce*P **P 05 40 20.0 +0.4**
MA2 pmax pmax
comp=Z,37nm,2.5s
ANMO Albuquerque 86.43 50 P **P 05 40 20.8 +0.3**
comp=Z,4.9nm,1.0s,baz=217,slow=3.3,SNR=10
ANMO Albuquerque 86.43 50 P **P 05 40 20.3 -0.2**
ANMO IAmb IAmb 05 40 32.0
comp=Z,14nm,1.1s
ANMO Albuquerque 86.43 50 IAms_20 IAms_20 06 13 10.6
comp=Z,2µm,19.0s
ANMO Albuquerque 86.43 50 P **P 05 40 20.3 -0.2**
ANMO pmax pmax
comp=Z,14nm,1.1s
VNA2 Neumayer--Watz 86.48 176 P **P 05 40 19.9 -0.1**
baz=188,slow=3.8
HWUT Hardware Ranch 86.57 42 P **P 05 40 20.8 -0.3**
HWUT IAmb IAmb 05 40 24.0
comp=Z,6.7nm,1.1s
HWUT IAms_20 IAms_20 06 25 40.9
comp=Z,1µm,18.0s
KULM Kulim 86.84 277 P **P 05 40 21.0 -1.8**
SCM Sheep Creek Mo 86.85 13 P **P 05 40 22.7 +0.9**
SCM Sheep Creek Mo 86.85 13 P **P 05 40 22.7 +0.9**
SCM pmax pmax
comp=Z,31nm,1.2s
PPLA Purkeypile 86.94 10 IAms_20 IAms_20 06 18 28.4
comp=Z,1µm,19.0s
VRDI Verde Repeater 87.16 15 IAms_20 IAms_20 06 21 00.4
comp=Z,1µm,19.0s
BALM Baldy 87.25 15 P **P 05 40 22.6 -1.2**
BALM IAmb IAmb 05 40 26.7
comp=Z,13nm,1.0s
BALM IAms_20 IAms_20 06 20 51.9
comp=Z,1µm,19.0s
NEW Newport 87.31 34 LR LR 06 14 08.8
comp=Z,3µm,19.1s,baz=222,slow=32
GO05 Huala 87.38 127 P **P 05 40 25.0 -0.1**
GO05 IAmb IAmb 05 40 30.6
comp=Z,12nm,1.1s
GO05 IAms_20 IAms_20 06 14 41.7
comp=Z,2µm,18.0s
BARN Barnard Glacie 87.44 15 P **P 05 40 23.9 -0.8**
CTGM Chitina Glacie 87.44 16 P **P 05 40 25.8 +1.1**
RPSI Rantau Prapat 87.44 274 P **P 05 40 25.5 -0.2**
PSI Prapat 87.48 274 P **P 05 40 25.5 -0.5**
PSI pmax pmax
comp=Z,66nm,1.1s
AHID Auburn Hatcher 87.50 41 P **P 05 40 24.8 -0.8**
AHID IAmb IAmb 05 40 42.5
comp=Z,3.9nm,0.8s
S22A 4UR Ranch, Cre 87.59 47 P **P 05 40 26.1 -0.1**
S22A IAmb IAmb 05 40 45.3
comp=Z,6.4nm,1.1s
S22A IAms_20 IAms_20 06 14 00.2
comp=Z,1µm,20.0s
MCMT McKenzie Canyo 87.62 39 P **P 05 40 25.2 -0.9**
KTH Kantishna Hill 87.76 11 P **P 05 40 24.7 -1.4**
KTH IAmb IAmb 05 40 42.3
comp=Z,12nm,1.1s
KTH IAms_20 IAms_20 06 18 54.2
comp=Z,2µm,19.0s
TRF Thorofare Moun 87.77 11 P **P 05 40 25.4 -0.9**
TRF IAms_20 IAms_20 06 24 23.2
comp=Z,2µm,19.0s
REDW Red Top Meadow 87.98 41 P **P 05 40 28.1 +0.2**
REDW IAmb IAmb 05 40 34.6
comp=Z,4.8nm,1.1s
REDW IAms_20 IAms_20 06 26 50.8
comp=Z,1µm,18.0s
RND Reindeer 87.99 11 P **P 05 40 26.1 -1.1**
RND Reindeer 87.99 11 P **P 05 40 26.1 -1.1**
RND pmax pmax
comp=Z,42nm,1.2s
RND MLR MLR

comp=Z,800nm,19.0s
PAX Paxson 88.25 13 P **P 05 40 28.6 +0.1**
PAX IAmb IAmb 05 40 46.0
comp=Z,5.1nm,1.2s
PAX Paxson 88.25 13 P **P 05 40 28.6 +0.1**
PAX pmax pmax
comp=Z,5.0nm,1.2s
PAX MLR MLR
comp=Z,1µm,20.0s
BPAW Bear Paw Mtn. 88.26 10 IAms_20 IAms_20 06 19 09.4
comp=Z,1µm,20.0s
MCK McKinley 88.27 11 P **P 05 40 28.1 -0.3**
MCK McKinley 88.27 11 P **P 05 40 28.1 -0.3**
MCK pmax pmax
comp=Z,24nm,1.2s
HYT Haines Junctio 88.33 17 P **P 05 40 29.7 +0.7**
HYT IAmb IAmb 05 40 33.8
comp=Z,9.6nm,1.2s
PDAR Pinedale Array 88.45 42 P **P 05 40 28.9 -1.1**
comp=Z,1.8nm,0.9s,baz=205,slow=3.1,SNR=10
PDAR LR LR 06 12 59.2
comp=Z,505nm,19.5s,baz=247,slow=31
QLMT Earthquake Lak 88.45 40 P **P 05 40 29.4 -0.6**
SDCO Great Sand Dun 88.50 48 P **P 05 40 29.6 -0.9**
SDCO IAmb IAmb 05 40 47.1
comp=Z,6.7nm,0.8s
BWN Browne 88.58 11 IAms_20 IAms_20 06 19 08.8
comp=Z,2µm,20.0s
833A Chaparral WMA, 88.60 59 P **P 05 40 30.1 -0.7**
MENT Mentasta 88.60 14 P **P 05 40 29.3 -0.7**
MENT IAmb IAmb 05 40 46.6
comp=Z,8.8nm,1.0s
MSTX Muleshoe 88.60 52 P **P 05 40 30.9 0.0**
MSTX IAmb IAmb 05 40 42.1
comp=Z,8.4nm,0.6s
MSTX IAms_20 IAms_20 06 14 27.3
comp=Z,2µm,19.0s
YHL Hebgen Lake 88.61 40 P **P 05 40 30.4 -0.5**
YHH Holmes Hill 88.77 40 P **P 05 40 31.9 +0.3**
SEY Seymchan 88.92 346 P **P 05 40 31.6 +0.1**
comp=Z,16nm,0.9s,baz=156,slow=5.0,SNR=26
SEY Seymchan 88.92 346⇓*i*P **P 05 40 32.3 +0.8**
T25A Trinidad 88.95 49 IAms_20 IAms_20 06 14 32.4
comp=Z,1µm,19.0s
NEA Nenana 89.02 11 IAms_20 IAms_20 06 19 52.0
comp=Z,1µm,19.0s
RIDG Independent Ri 89.07 13 IAms_20 IAms_20 06 22 40.0
comp=Z,1µm,18.0s
WRH Wood River Hil 89.10 11 P **P 05 40 31.9 -0.4**
PEL Peldehue 89.12 126 IAms_20 IAms_20 06 13 19.1
comp=Z,958nm,19.0s
MLY Manley 89.16 10 P **P 05 40 32.5 -0.2**
MLY IAms_20 IAms_20 06 20 25.3
comp=Z,1µm,21.0s
JCT Junction City 89.24 57 IAms_20 IAms_20 06 17 33.3
comp=Z,2µm,18.0s
HDA Harding Lake 89.26 12 P **P 05 40 32.4 -0.7**
HDA IAmb IAmb 05 40 43.9
comp=Z,12nm,1.1s
TPTI 89.27 274 P **P 05 40 35.9 +1.6**
BJI Beijing 89.27 314 P **P 05 40 34.8 +1.1**
BJI pmax pmax
comp=Z,35nm,2.4s
CCB Clear Creek Bu 89.31 11 P **P 05 40 32.8 -0.5**
CCB IAmb IAmb 05 40 49.4
comp=Z,15nm,1.2s
SCRK Sand Creek 89.46 13 P **P 05 40 33.3 -0.9**
SCRK IAmb IAmb 05 40 49.1
comp=Z,9.0nm,1.2s
IL31 89.59 12 P **P 05 40 34.8 +0.2**
IL31 IAmb IAmb 05 40 48.9
comp=Z,17nm,1.1s
ILAR Eielson Array 89.59 12 P **P 05 40 34.2 -0.4**
comp=Z,6.6nm,1.0s,baz=222,slow=3.8,SNR=26
CCIG Comitan 89.68 72 IAms_20 IAms_20 06 13 30.8
comp=Z,1µm,18.0s
AMTX Amarillo 89.83 52 IAms_20 IAms_20 06 15 17.7
comp=Z,2µm,20.0s
GYA Guiyang 90.07 299⇑*i*P **P 05 40 39.8 +1.9**
GYA pP pwP 05 41 04.4 +13
GYA PP **PP 05 44 11.5 -0.3**
GYA S S 05 51 18.8 -11
GYA sS sS 05 52 00.5 +17
GYA pmax pmax
comp=Z,30nm,1.2s
GYA pmax pmax
comp=Z,120nm,5.5s
GYA LR LR
comp=Z,930nm,19.7s
GYA LR LR
comp=Z,930nm,20.7s
GYA LR LR
comp=Z,2µm,20.4s
K22A Casper 90.29 43 IAms_20 IAms_20 06 25 19.6
comp=Z,1µm,18.0s
DAWY Dawson 90.56 15 P **P 05 40 39.2 0.0**
DAWY IAmb IAmb 05 40 42.6
comp=Z,13nm,1.0s
RDOG Red Dog Mine 90.66 4 P **P 05 40 37.3 -2.2**
RDOG IAmb IAmb 05 40 51.9
comp=Z,15nm,1.2s
RDOG IAms_20 IAms_20 06 22 14.8
comp=Z,1µm,20.0s
TIY Taiyuan 90.69 311 *e*P **P 05 40 42.8 +2.3**
TIY S **S 05 51 31.8 -2.8**
TIY pmax pmax
comp=Z,23nm,1.0s
TIY LR LR
comp=Z,800nm,10.4s
TIY LR LR
comp=Z,900nm,11.7s
TIY LR LR
comp=Z,810nm,12.6s
ZEA Zeya 90.71 330 *e*P **P 05 40 41.3 +1.2**
ZEA *e* 05 51 11.0
ZEA *e*S **S 05 51 34.0 +0.1**
ZEA pmax pmax
comp=N,150nm,2.5s
ZEA pmax pmax
comp=Z,190nm,2.5s
ZEA pmax pmax
comp=Z,500nm,8.0s
ZEA smax smax
comp=N,700nm,11.0s
ZEA MLR MLR
comp=N,2µm,15.0s
ZEA MLR MLR
comp=Z,3µm,15.0s
EGAK Eagle 90.77 14 P **P 05 40 40.2 +0.1**
EGAK IAmb IAmb 05 40 51.6
comp=Z,11nm,1.1s
EGAK IAms_20 IAms_20 06 23 10.8
comp=Z,1µm,19.0s
PBKT Sadao Pong 90.92 287 P **P 05 40 42.0 +0.1**
KSCO Kaye Shedlock' 91.09 48 IAms_20 IAms_20 06 21 30.8
comp=Z,1µm,21.0s
435B Jarrell 91.09 57 IAms_20 IAms_20 06 15 13.4
comp=Z,2µm,20.0s
EGMT Eagleton 91.18 38 IAms_20 IAms_20 06 16 14.8
comp=Z,2µm,19.0s
BILL Bilibino 91.27 353 P **P 05 40 42.2 -0.1**
BILL IAmb IAmb 05 40 47.3
comp=Z,9.5nm,1.1s
BILL Bilibino 91.27 353 *e*P **P 05 40 43.5 +1.2**
BILL *e* 05 40 53.8
BILL *e* 05 44 22.2
BILL pmax pmax
comp=Z,5.0nm,1.0s
XAN Xi'an 91.57 306 P **P 05 40 46.3 +1.7**
XAN pmax pmax
comp=Z,58nm,1.4s
XAN pmax pmax
comp=Z,650nm,4.0s
XAN LR LR
comp=Z,6µm,15.7s
CFA Coronel Fontan 91.66 125 LR LR 06 13 38.4
comp=Z,777nm,19.5s,baz=194,slow=30
WHTX Lake Whitney, 91.70 56 IAms_20 IAms_20 06 15 57.6
comp=Z,2µm,20.0s
GO03 Copiap 91.93 121 IAms_20 IAms_20 06 15 39.5
comp=Z,1µm,18.0s
HKT Hockley 92.11 59 *i* P **P 05 40 48.3 +1.2**
HKT pmax pmax
comp=Z,5.0nm,1.2s
OGNE Ogallala 92.39 46 IAms_20 IAms_20 06 16 31.4
comp=Z,1µm,20.0s

LAO LASA Array 92.53 40 P P 05 40 48.3 -0.5
LAO IAmb IAmb 05 40 60.0
comp=Z,12nm,1.1s
RSSD Black Hills 92.60 43 P P 05 40 48.1 -1.3
RSSD IAmb IAmb 05 41 01.5
comp=Z,14nm,1.1s
RSSD Black Hills 92.60 43 P P 05 40 48.1 -1.3
RSSD pmax pmax
comp=Z,14nm,1.2s
HHC Hu-ho-hao-te 92.74 313 eP P 05 40 51.4 +1.4
HHC S S 05 51 55.1 +2.0
HHC pmax pmax
comp=Z,8.0nm,0.9s
HHC pmax pmax
comp=Z,260nm,6.1s
HHC LR LR
comp=Z,3µm,13.3s
HHC LR LR
comp=Z,2µm,15.2s
HHC LR LR
comp=Z,4µm,13.3s
KMI Kunming 92.76 296 P P 05 40 52.8 +2.2
KMI pP pwP 05 41 11.3 +7.5
KMI sP sP 05 41 19.8 +17
KMI S S 05 51 50.8 -3.3
KMI pmax pmax
comp=Z,45nm,1.8s
KMI pmax pmax
comp=Z,470nm,3.9s
NNA Nana 92.82 104 IAMs_20 IAMs_20 06 15 09.9
comp=Z,1µm,19.0s
237A Washetta, Mont 92.98 57 IAMs_20 IAMs_20 06 19 15.8
comp=Z,2µm,18.0s
CBKS Cedar Bluff 93.00 49 IAMs_20 IAMs_20 06 16 53.5
comp=Z,2µm,18.0s
EPYK Eagle Plains 93.11 14 P P 05 40 53.4 +2.4
EPYK IAmb IAmb 05 40 53.9
comp=Z,11nm,1.1s
CMAR Chiang Mai Arr 93.43 288 P P 05 40 55.8 +2.2
comp=Z,12nm,0.8s,baz=123,slow=3.0,SNR=63
CMAR Chiang Mai Arr 93.43 288 i P P 05 40 56.5 +3.0
CMAR pmax pmax
comp=Z,18nm,1.0s
PB10 IPOC Station P 93.47 117 IAMs_20 IAMs_20 06 13 52.8
comp=Z,1µm,20.0s
GO02 Mina Guanaco 93.53 119 IAMs_20 IAMs_20 06 13 40.9
comp=Z,1µm,20.0s
CHTO Chiang Mai 93.57 289 P P 05 40 54.3 +0.2
CHTO Chiang Mai 93.57 289 P P 05 40 54.3 +0.2
CHTO pmax pmax
comp=Z,29nm,1.1s
BTO Baotou 93.68 313 eP P 05 40 55.3 +1.0
BTO LR LR
comp=Z,440nm,9.0s
BTO LR LR
comp=Z,490nm,6.5s
JTS Las Juntas de 93.85 81 IAMs_20 IAMs_20 06 31 02.3
comp=Z,1µm,18.0s
HDC Heredia 94.51 81 IAMs_20 IAMs_20 06 31 10.9
comp=Z,919nm,19.0s
DGMT Dagmar 94.60 39 P P 05 40 59.0 +0.8
TUL1 Leonard 94.60 53 IAMs_20 IAMs_20 06 17 52.2
comp=Z,2µm,20.0s
LVC Limon Verde 95.23 117 LR LR 06 15 27.5
comp=Z,1µm,19.3s,baz=226,slow=30
LVC Limon Verde 95.23 117 IAMs_20 IAMs_20 06 14 46.3
comp=Z,1µm,20.0s
INK Inuvik 95.41 14 P P 05 41 01.1 -0.3
comp=Z,4.6nm,1.1s,baz=205,slow=2.0,SNR=10
INK Inuvik 95.41 14 P P 05 41 01.8 +0.4
INK IAmb IAmb 05 41 03.9
comp=Z,6.1nm,1.1s
PB01 IPOC Station P 95.44 115 IAMs_20 IAMs_20 06 17 37.2
comp=Z,1µm,18.0s
MIAR Mount Ida 95.71 55 IAMs_20 IAMs_20 06 21 13.8
comp=Z,2µm,18.0s
PB11 IPOC Station P 95.87 114 IAMs_20 IAMs_20 06 19 36.4
comp=Z,2µm,18.0s
MNMC Minye Minye 96.19 113 IAMs_20 IAMs_20 06 17 11.1
comp=Z,2µm,19.0s
LZH Lanzhou 96.20 306 ⇑P P 05 41 09.0 +3.0
LZH pP pwP 05 41 27.8 +8.4
LZH sP sP 05 41 36.9 +19
LZH PP PP 05 45 04.8 +5.1
LZH pmax pmax
comp=Z,17nm,1.4s
LZH pmax pmax
comp=Z,290nm,5.4s
LZH LR LR
comp=Z,250nm,17.6s
LZH LR LR
comp=Z,270nm,18.2s
LZH LR LR
comp=Z,230nm,19.7s
X40A Basin Creek Fa 96.26 55 IAMs_20 IAMs_20 06 20 55.1
comp=Z,2µm,18.0s
GO01 Chusmiza 96.30 114 IAMs_20 IAMs_20 06 16 57.8
comp=Z,2µm,18.0s
143A Socs Landing, 96.68 58 IAMs_20 IAMs_20 06 21 34.4
comp=Z,2µm,18.0s
344A Westbrook Farm 96.74 59 IAMs_20 IAMs_20 06 20 15.0
comp=Z,1µm,18.0s
YKA Yellowknife Ar 97.09 24 P P 05 41 08.8 -0.4
comp=Z,2.7nm,0.8s,baz=236,slow=4.6,SNR=36
MGMO Mountain Grove 97.70 53 IAMs_20 IAMs_20 06 19 46.6
comp=Z,2µm,19.0s
LCAR Lake Charles 98.13 54 IAMs_20 IAMs_20 06 24 39.6
comp=Z,2µm,18.0s
BCIP Isla Barro Col 98.13 83 IAMs_20 IAMs_20 06 21 57.7
comp=Z,838nm,18.0s
D32A Dogwood Acres, 98.35 42 IAMs_20 IAMs_20 06 28 44.6
comp=Z,949nm,18.0s
LPAR Lepanto 98.60 55 IAMs_20 IAMs_20 06 20 15.2
comp=Z,2µm,19.0s
OXF Oxford 98.89 56 IAMs_20 IAMs_20 06 20 58.9
comp=Z,2µm,19.0s
PBMO Poplar Bluff 98.93 54 IAMs_20 IAMs_20 06 20 46.8
comp=Z,2µm,20.0s
SONM Songino Array 99.08 318 P Pdif 05 41 18.3 -0.4
comp=Z,0.7nm,0.9s,baz=108,slow=9.5,SNR=5.5
PVMO Portageville 99.35 55 IAMs_20 IAMs_20 06 20 37.9
comp=Z,2µm,18.0s
PARMO Parma 99.40 54 IAMs_20 IAMs_20 06 20 42.2
comp=Z,1µm,20.0s
PENMO Penman 99.41 55 IAMs_20 IAMs_20 06 23 45.6
comp=Z,2µm,18.0s
GLAT Glass 99.61 55 IAMs_20 IAMs_20 06 23 18.8
comp=Z,2µm,19.0s
HENM Henderson Moun 99.62 54 IAMs_20 IAMs_20 06 20 49.2
comp=Z,2µm,19.0s
HICK Hickman 99.75 55 IAMs_20 IAMs_20 06 21 00.5
comp=Z,2µm,19.0s
PLAL Pickwick Lake 100.08 56 IAMs_20 IAMs_20 06 24 04.9
comp=Z,2µm,19.0s
GTA Gaotai 100.40 308 P Pdif 05 41 26.8 +2.0
GTA pP pwP 05 41 46.0 +7.9
GTA sP sP 05 41 56.9 +20
GTA pmax pmax
comp=Z,4.0nm,1.8s
GTA pmax pmax
comp=Z,200nm,4.6s
WVT Waverly 100.66 55 IAMs_20 IAMs_20 06 24 17.8
comp=Z,2µm,18.0s
X48A Hartselle 100.70 57 IAMs_20 IAMs_20 06 23 33.9
comp=Z,1µm,19.0s
Z50A Ashland 101.18 59 IAMs_20 IAMs_20 06 21 36.6
comp=Z,1µm,19.0s
V48A Smith Brothers 101.30 56 IAMs_20 IAMs_20 06 21 56.8
comp=Z,1µm,20.0s
TIXI Tiksi 101.35 344 i P Pdif 05 41 28.9 +0.9
TIXI pmax pmax
comp=Z,2.0nm,1.1s
352A Blakely 101.39 61 IAMs_20 IAMs_20 06 29 26.2
comp=Z,736nm,18.0s
T47A Sharon Grove 101.50 55 IAMs_20 IAMs_20 06 21 44.9
comp=Z,2µm,20.0s
Z51A Franklin 101.79 59 IAMs_20 IAMs_20 06 22 54.8
comp=Z,2µm,20.0s
CLTN Cedars of Leba 101.80 56 IAMs_20 IAMs_20 06 24 34.8
comp=Z,2µm,18.0s
TLY Talaya 102.18 321 i P Pdif 05 41 32.7 +0.5
TLY pmax pmax
comp=Z,1.0nm,0.8s
Y52A Lilburn 102.84 59 IAMs_20 IAMs_20 06 26 46.8
comp=Z,1µm,18.0s
GOGA Godfrey 103.17 59 IAMs_20 IAMs_20 06 23 55.5
comp=Z,2µm,20.0s
W52A Murphy 103.33 57 IAMs_20 IAMs_20 06 23 26.6
comp=Z,1µm,20.0s
R49A Shelbyville 103.37 54 IAMs_20 IAMs_20 06 23 04.4
comp=Z,2µm,21.0s
BG3 Lake Jocassee 104.08 58 IAMs_20 IAMs_20 06 26 06.5
comp=Z,1µm,18.0s
M48A Edgerton 104.67 51 IAMs_20 IAMs_20 06 23 52.4
comp=Z,2µm,21.0s
Z56A Williston 104.82 60 IAMs_20 IAMs_20 06 24 31.2
comp=Z,1µm,19.0s
N49A Columbus Grove 104.89 52 IAMs_20 IAMs_20 06 23 59.8
comp=Z,2µm,20.0s
PAULI Pauline 104.91 58 IAMs_20 IAMs_20 06 27 29.3
comp=Z,1µm,19.0s
KMSC Kings Mountain 105.38 58 IAMs_20 IAMs_20 06 27 24.8
comp=Z,1µm,18.0s
U54A Nelsons Funny 105.39 57 IAMs_20 IAMs_20 06 26 37.1
comp=Z,970nm,20.0s
V55A Taylorsville 105.67 57 IAMs_20 IAMs_20 06 26 48.6
comp=Z,1µm,19.0s
NHSC New Hope 105.71 60 IAMs_20 IAMs_20 06 25 09.8
comp=Z,1µm,19.0s
BIRD Birdtown, Kers 105.92 59 IAMs_20 IAMs_20 06 33 39.3
comp=Z,900nm,18.0s
N51A Ashland 106.20 52 IAMs_20 IAMs_20 06 25 21.6
comp=Z,2µm,21.0s
SAML Samuel 106.27 107 IAMs_20 IAMs_20 06 26 24.3
comp=Z,776nm,18.0s
W57A Gilead 106.44 58 IAMs_20 IAMs_20 06 28 14.8
comp=Z,1µm,19.0s
SDV Santo Domingo 106.51 87 IAMs_20 IAMs_20 06 23 54.0
comp=Z,799nm,19.0s
BLA Blacksburg 106.66 56 IAMs_20 IAMs_20 06 31 09.7
comp=Z,1µm,19.0s
R55A Marlinton 107.18 55 IAMs_20 IAMs_20 06 30 00.7
comp=Z,2µm,19.0s
V58A Windy Hill, Pi 107.30 58 IAMs_20 IAMs_20 06 27 28.6
comp=Z,1µm,20.0s
V60A Jim Taylor Roa 108.75 58 IAMs_20 IAMs_20 06 28 51.0
comp=Z,1µm,18.0s
CBN Corbin Frederi 109.25 56 IAMs_20 IAMs_20 06 28 57.2
comp=Z,1µm,20.0s
V61A Roper 109.29 58 IAMs_20 IAMs_20 06 29 23.9
comp=Z,1µm,18.0s
WMQ Urumqi 110.34 310 ePKP PKiKP 05 46 10.8 +1.1
WMQ LR LR
comp=Z,350nm,11.1s
WMQ LR LR
comp=Z,400nm,13.7s
WMQ LR LR
comp=Z,360nm,13.7s
MKAR Makanchi Array 114.59 313 PKP PKPdf 05 46 17.4 -0.3
comp=Z,0.6nm,0.7s,baz=67,slow=1.2,SNR=9.1
TULEG Thule 115.41 14 IAMs_20 IAMs_20 06 38 34.5
comp=Z,1µm,20.0s
SMRT St. Maarten 116.41 80 IAMs_20 IAMs_20 06 30 09.0
comp=Z,780nm,19.0s
KURK Kurchatov 117.34 317 IAMs_20 IAMs_20 06 24 06.5
comp=Z,1µm,18.0s
KSH Kashi 118.33 304 PKP PKPdf 05 46 24.3 -0.9
KSH PP PP 05 47 48.1 +6.3
KSH AMB AMB
comp=Z,310nm,11.8s
NOR Nord 120.11 4 i P PKPdf 05 46 17.9 -9.4
NOR Nord 120.11 4 i PKIKP PKPdf 05 46 17.9 -9.4
BRVK Borovoye 122.45 320 i PKIKP PKiKP 05 46 33.3 +0.6
KKAR Karatay Array 122.67 308 PKPdf PKiKP 05 46 33.6 +0.1
KKAR Karatay Array 122.67 308 PKIKP PKiKP 05 46 33.6 +0.1
KBL Kabul 123.31 297 PKiKP 05 46 35.9 +0.6
KBL Kabul 123.31 297 PKIKP PKiKP 05 46 35.9 +0.6
SUMG Summit 124.33 15 i P PKPdf 05 46 36.0 -0.1
SUMG Summit 124.33 15 i PKIKP PKPdf 05 46 36.0 -0.1
DAG Danmarks Havn 124.36 6 i P PKPdf 05 46 34.8 -0.7
DAG Danmarks Havn 124.36 6 i PKIKP PKPdf 05 46 34.8 -0.7
ARU Arti 128.41 325 i PKIKP PKiKP 05 46 45.3 +0.9
ARU 05 48 49.6
ARU 05 53 48.7
ARCES ARCESS Array B 131.31 351 PKP PKPdf 05 46 49.4 +0.4
comp=Z,3.8nm,0.6s,baz=3.5,slow=1.6,SNR=12
GEYT Alibeck 132.22 301 PKP PKiKP 05 46 53.0 +0.2
comp=Z,1.6nm,0.6s,baz=48,slow=2.4,SNR=3.7
KLMR Klimovskoe 134.78 337 ePKIKP PKPdf 05 46 54.6 -1.1
KLMR pmax pmax
comp=Z,23nm,1.5s
KLMR Klimovskoe 134.78 337 ePKPdf PKPdf 05 46 54.6 -1.1
KLMR AMP 05 47 12.0
comp=Z,23nm,1.5s
FINES FINESS Array B 138.40 345 PKP PKPdf 05 47 03.3 +0.9
comp=Z,11nm,1.2s,baz=354,slow=1.9,SNR=5.2
MOS Moscow 138.93 332 ePKIKP PKPdf 05 47 00.2 -3.4
MOS e 05 47 14.1
MOS pmax pmax
comp=Z,37nm,0.9s
MAK Makhachkala 139.36 310 i P Pdif 05 44 15.0 -2.7
MAK i 05 47 05.6
MAK e 05 49 56.5
MAK ePPP PPP 05 53 01.6
MAK e 05 54 11.6
MAK eSS SS 06 08 09.9 -5.7
MAK eSSS SSS 06 13 23.2
OBN Obninsk 139.80 332 ePKIKP PKPdf 05 47 05.1 0.0
OBN e 05 50 00.8
OBN pmax pmax
comp=Z,9.0nm,1.0s
KMBO Kilima Mbogo 140.84 238 PKP PKiKP 05 47 11.4 +0.1
comp=Z,0.7nm,0.3s,baz=321,slow=2.1,SNR=5.5
KMBO Kilima Mbogo 140.84 238 IAMs_20 IAMs_20 06 42 59.9
comp=Z,1µm,20.0s
NB2 NORSAR Subarra 141.19 355 PKP PKPdf 05 47 03.1 -4.5
comp=Z,3.9nm,1.2s,baz=21,slow=4.0
NOA NORSAR Array B 141.19 355 PKP PKPdf 05 47 08.6 +1.0
comp=Z,0.8nm,0.9s,baz=26,slow=2.0,SNR=3.8
ZEI Tsey 141.93 312 i PKHKP PKPpre 05 47 03.5
GNI Garni 142.13 307 IAMs_20 IAMs_20 06 41 26.5
comp=Z,923nm,18.0s
KBZ Khabaz 142.28 313 PKhKP PKPpre 05 47 07.0
comp=Z,1.8nm,0.9s,baz=266,slow=1.1,SNR=4.1
KIV Kislovodsk 142.34 314 ePKIKP PKiKP 05 47 12.1 -1.2
KIV pmax pmax
comp=Z,15nm,1.0s
AKH Akhalkalaki 142.67 310 ⇑P PKPdf 05 47 06.8 -4.2
AKH Akhalkalaki 142.67 310 PKPdf 05 47 08.3 -2.7
AKH Akhalkalaki 142.67 310 PKIKP PKPdf 05 47 08.3 -2.7
CLDR Caldiran 143.02 306 eP PKPbc 05 47 09.2 +0.6
AGRB Hanur-Agry 143.59 307 eP PKPbc 05 47 11.4 +1.2
CUKT Cukurca 143.72 303 eP PKPbc 05 47 10.4 -0.1
SENK Senkaya-Erzuru 143.76 309 eP PKPbc 05 47 11.6 +0.9
AKDM Akdamar-Van 143.94 305 eP PKPbc 05 47 11.1 -0.1
BCA Borcka 143.99 310 ⇑P PKPdf 05 47 12.7 -0.4
BCA Borcka 143.99 310 eP PKPab 05 47 10.1 -0.4
MLAZ Malazgirt-MUS 144.04 306 eP PKPbc 05 47 12.5 +1.0
KOPR Koprukoy-ERZUR 144.30 308 eP PKPbc 05 47 13.1 +0.8
SOC Sochi 144.46 315 ePKIKP PKPbc 05 47 12.9 +0.5
SOC e 05 50 26.3
SOC ePPP PPP 05 53 40.3
SOC eSS SS 06 09 09.7 -4.9
SOC pmax pmax
comp=Z,26nm,0.7s
SIRT Sirnak 144.56 304 eP PKPab 05 47 12.7 -0.2
GURO Guroymak-BITLI 144.59 306 eP PKPdf 05 47 13.9 -0.6
CHOM Cayeli-Rize 144.72 310 eP PKPab 05 47 13.3 +0.1
VRTB Varto-Mus 144.85 307 eP PKPdf 05 47 15.8 +0.9
KARO Karliova-Bingo 145.10 307 eP PKPdf 05 47 15.8 +0.4
SVAN Silvan-Diyarba 145.34 305 eP PKPab 05 47 17.1 +1.4
ANN Anapa 145.36 318 i PKIKP PKPab 05 47 15.5 +0.1
ANN pmax pmax
comp=Z,203nm,1.3s
YEDI Yedisu-Bingol 145.43 308 eP PKPab 05 47 17.7 +1.6
BNGB Bingl 145.47 307 eP PKPab 05 47 17.8 +1.6
SUW Suwalki 145.62 341 ePKP PKPbc 05 47 15.9 +0.2
SUW Suwalki 145.62 341 PKPbc 05 47 15.8 0.0
SUW Suwalki 145.62 341 PKP2 PKPbc 05 47 15.8 0.0
SUW MLR MLR
comp=Z,1µm,19.0s
MUD Monsted U'grnd 145.89 356 i P PKPdf 05 47 16.0 +0.1
comp=Z,151nm,1.3s
MUD Monsted U'grnd 145.89 356 i PKP2 PKPdf 05 47 16.0 +0.1
MUD pmax pmax
comp=Z,150nm,1.3s
ERZN Erzincan 145.99 308 eP PKPbc 05 47 20.1 -0.9
AKASG Malin Array Be 146.06 332 PKPbc PKPdf 05 47 16.7 +0.3
comp=Z,17nm,0.6s,baz=42,slow=4.1,SNR=88
DYBB Diyarbakir 146.19 305 eP PKPab 05 47 19.5 +0.6
ESPY Espiye-Giresun 146.21 311 eP PKPdf 05 47 17.2 +0.2
SVRC Sivrice-ELAZID 146.69 306 eP PKiKP 05 47 21.9 -0.6
SIM Simferopol' 147.29 320 ePKP2 PKPab 05 47 22.7 -0.2
SIM pmax pmax
comp=Z,26nm,0.9s
URFA Urfa 147.34 305 eP PKPbc 05 47 21.9 +0.4
RSDY Resadiye-TOKAT 147.40 311 eP PKPbc 05 47 22.3 +0.8
SVSK Karacayir 147.82 310 eP PKiKP 05 47 24.5 0.0
GKP Gorka Klasztor 147.84 346 ePKP PKPdf 05 47 19.9 +0.7
DARE Darende-Malaty 147.97 308 eP PKiKP 05 47 25.2 +0.1
TOKT Tokat 147.97 311 eP PKPbc 05 47 23.3 +0.2
KVT Kavak 147.99 313 eP PKPbc 05 47 23.7 +0.6
BEL Belsk 148.23 341 ePKP PKPbc 05 47 24.8 -0.2
DIKM Dikmen 148.27 314 ⇑P PKiKP 05 47 25.4 0.0
DIKM Dikmen 148.27 314 eP PKPbc 05 47 24.2 +0.4
BSEG Bad Segeberg 148.30 354 ePKPbc PKPbc 05 47 23.9 +0.5
baz=12,slow=2.5
BSEG epPKPbc pPKPab 05 47 35.8 +0.7
baz=10,slow=2.4
SORM Soroca 148.32 330 ⇑P PKiKP 05 47 24.8 -0.5
SORM Soroca 148.32 330 ⇑PKP2 PKiKP 05 47 24.8 -0.5
GAZ Gaziantep 148.65 305 eP PKiKP 05 47 25.8 -0.7
GAZ Gaziantep 148.65 305 PKPdf 05 47 23.1 +1.8
SARI SarD1z-Kayseri 148.81 308 eP PKPbc 05 47 26.2 +0.7
LVV L'vov 148.85 336 ePKP2 PKPbc 05 47 25.4 +0.4
KIS Kishinev 148.90 328 ePKP PKiKP 05 47 26.0 -0.5
KIS Kishinev 148.90 328 ePKP2 PKiKP 05 47 26.0 -0.5
KIS pmax pmax
comp=Z,1.0nm,3.0s
BZK Bozkurt 148.94 316 ⇑P PKiKP 05 47 27.2 +0.4
BZK Bozkurt 148.94 316 eP PKiKP 05 47 26.6 -0.2
BNN Bunyan 149.06 309 eP PKPdf 05 47 21.3 -0.6
YOZ Yozgat 149.11 311 eP PKPbc 05 47 26.2 0.0
RUE Ruedersdorf 149.26 350 ePKPbc PKPbc 05 47 26.5 +0.6
baz=12,slow=2.5
RUE epPKPbc pPKPab 05 47 38.4 -0.8
baz=10,slow=2.4
CORM Corum 149.36 312 eP PKiKP 05 47 28.0 +0.1
KWP Kalwaria Pacla 149.49 337 ePKP PKiKP 05 47 27.9 +0.2
KWP Kalwaria Pacla 149.49 337 PKPbc 05 47 26.7 +0.1
KWP Kalwaria Pacla 149.49 337 PKP2 PKPbc 05 47 26.7 +0.1
LEOM Leova 149.54 328 ⇑P PKiKP 05 47 28.7 +0.8
LEOM Leova 149.54 328 ⇑PKP2 PKiKP 05 47 28.7 +0.8
RETH Rethem/Aller, 149.57 355 ePKPbc PKiKP 05 47 27.3 -0.4
baz=12,slow=2.5
RETH epPKPbc pPKPab 05 47 39.1 -1.2
baz=10,slow=2.4
ILGA Ilgaz 149.57 314 PKPbc 05 47 25.8 -1.5
ILGA IAMs_20 IAMs_20 06 45 51.4
comp=Z,646nm,20.0s
KOZT Kozan 149.58 307 eP PKPbc 05 47 26.6 -0.6
TAHT Tahtakopru-Hat 149.68 304 eP PKiKP 05 47 28.8 +0.3
NRDL Niedersach Rie 149.74 354 ePKPbc PKiKP 05 47 27.7 -0.3
baz=12,slow=2.5
NRDL epPKPbc pPKPab 05 47 39.6 -1.4
baz=10,slow=2.4
OJC Ojcow 149.95 341 ePKP PKiKP 05 47 28.6 0.0
OJC Ojcow 149.95 341 PKPbc 05 47 26.7 -1.0
ASSE Asse, Remlinge 150.04 353 ePKPbc PKiKP 05 47 28.5 -0.2
baz=12,slow=2.5
ASSE epPKPbc sPKPbc 05 47 40.3 +0.6
baz=10,slow=2.4
BUR08 Bucovina Ar. S 150.10 332 PKPbc 05 47 28.3 0.0
IBBN Ibbenburen 150.11 357 ePKPbc PKiKP 05 47 28.6 -0.3
baz=12,slow=2.5
IBBN epPKPbc sPKPbc 05 47 40.4 +0.5
baz=10,slow=2.4
BURAR Bucovina Array 150.12 332 ⇑P PKiKP 05 47 30.3 +1.1
BURAR Bucovina Array 150.12 332 ⇑PKIKP PKiKP 05 47 30.3 +1.1
KOLS Kolonicke sedl 150.23 337 ePKIKP PKiKP 05 47 29.8 +0.5
KOLS e 05 47 37.6
KOLS Kolonicke sedl 150.23 337 ePKP PKiKP 05 47 29.8 +0.5
KOLS e 05 47 37.6
BR131 Keskin Array S 150.24 312 PKPbc 05 47 28.3 -0.6
BR131 Keskin Array S 150.24 312 PKIKP PKPbc 05 47 28.3 -0.6
BRTR Keskin Array B 150.24 312 PKPbc PKiKP 05 47 29.8 0.0
comp=Z,8.2nm,0.9s,baz=128,slow=3.5,SNR=47
TESR Tescani 150.29 329 ⇑P PKiKP 05 47 29.9 +0.5
KSP Ksiaz 150.32 346 ePKP PKiKP 05 47 29.2 -0.2
CLZ Clausthal 150.36 353 ePKPbc PKiKP 05 47 29.4 0.0
baz=12,slow=2.5
CLZ epPKPbc sPKPbc 05 47 41.2 +0.6
baz=10,slow=2.4
UZH Uzhgorod 150.48 336 ePKIKP PKPbc 05 47 28.7 -0.3
UZH e 05 47 34.0
UZH e 05 47 40.7
CFR Carcaliu 150.49 326 ⇑P PKPbc 05 47 29.4 +0.3
CFR Carcaliu 150.49 326 ⇑PKIKP PKPbc 05 47 29.4 +0.3
NIE Niedzica 150.50 340 ePKP PKiKP 05 47 30.8 +1.0
CLL Collm 150.53 350 ePKPbc PKiKP 05 47 29.6 -0.2
baz=12,slow=2.5
CLL epPKPbc sPKPbc 05 47 41.3 +0.3
baz=10,slow=2.4
CLL Collm 150.53 350 ePKPdf PKPdf 05 47 23.0 -0.7
CLL ePKPbc PKPbc 05 47 28.0 -1.0
comp=Z,31nm,0.9s
CLL i PKPab pPKPdf 05 47 33.2 +0.6
comp=Z,43nm,1.1s
CLL i 05 47 40.8
comp=Z,82nm,1.3s
CLL ePKSdf PKSdf 05 51 00.0 +1.8
CLL e 05 51 53.0
CLL ePSKS 06 01 24.0
CLL ePPPPrev 06 04 30.0
CLL eSS SS 06 10 18.0 -3.1
CLL Collm 150.53 350 PKPbc 05 47 28.0 -1.0
CLL Collm 150.53 350 ePKIKP PKPbc 05 47 28.0 -1.0
CLL i 05 47 33.2
CLL i 05 47 40.8
CLL pmax pmax
comp=Z,31nm,0.9s
CRVS Cervenica-Dubn 150.55 338 ePKIKP PKiKP 05 47 30.6 +0.7
CRVS Cervenica-Dubn 150.55 338 ePKP PKiKP 05 47 30.6 +0.7
TOPG Topolog 150.56 325 ⇓P PKiKP 05 47 30.6 +0.5
OSTC Ostas 150.60 345 ⇑ePKP PKiKP 05 47 30.1 +0.1
GTTG Gottingen 150.69 354 ePKPbc PKiKP 05 47 30.0 -0.1
baz=12,slow=2.5
GTTG epPKPbc sPKPbc 05 47 41.9 +0.5
baz=10,slow=2.4
UPC Upice 150.70 346 ⇑ePKP PKiKP 05 47 31.2 +1.0
UPC Upice 150.70 346 ePKIKP PKiKP 05 47 31.2 +1.0
VRI Vrincioaia 150.72 328 ⇑P PKiKP 05 47 31.0 +0.6
VRI Vrincioaia 150.72 328 ⇑PKIKP PKiKP 05 47 31.0 +0.6
ANTO Ankara 150.75 313 ⇑P PKPbc 05 47 30.1 0.0
ANTO Ankara 150.75 313 PKPbc PKiKP 05 47 29.2 -0.9
ANTO Ankara 150.75 313 PKIKP PKiKP 05 47 29.2 -0.9
PLOR Plostina 150.77 328 ⇑P PKiKP 05 47 30.9 +0.4
PLOR Plostina 150.77 328 ⇑PKIKP PKiKP 05 47 30.9 +0.4
DPC Dobruska-Polom 150.77 345 ⇑ePKP PKiKP 05 47 31.2 +0.8
DPC Dobruska-Polom 150.77 345 ePKIKP PKiKP 05 47 31.2 +0.8
MERS Mersin 150.77 306 eP PKiKP 05 47 30.8 0.0
BR231 Keskin MP Arra 150.78 313 PKiKP 05 47 30.8 0.0
BRG Berggiesshubel 150.78 348 ePKPbc PKiKP 05 47 30.4 +0.1
baz=12,slow=2.5
BRG epPKPbc sPKPbc 05 47 42.1 +0.5
baz=10,slow=2.4
TRPA Tarpa 150.80 336 ⇑P PKiKP 05 47 31.3 +0.9
NEUB Neuenburg 150.81 351 ePKPbc PKiKP 05 47 30.3 0.0
baz=12,slow=2.5
NEUB epPKPbc sPKPbc 05 47 42.0 +0.3
baz=10,slow=2.4
FBE Freiberg 150.84 349 ePKPbc PKiKP 05 47 30.8 +0.4
baz=12,slow=2.5
FBE epPKPbc sPKPbc 05 47 42.6 +0.8
baz=10,slow=2.4
ARCR ARCALIA 150.90 332 ⇑P PKiKP 05 47 31.4 +0.7
KRLC Kraliky 150.91 344 ⇑ePKP PKiKP 05 47 31.1 +0.4
KRLC Kraliky 150.91 344 ePKIKP PKiKP 05 47 31.1 +0.4
HARR Harsova 150.93 325 ⇑P PKiKP 05 47 31.9 +1.1
HARR Harsova 150.93 325 ⇑PKIKP PKiKP 05 47 31.9 +1.1
PVCC Panska Ves 150.99 347 ⇑ePKP PKiKP 05 47 31.7 +1.0
PVCC Panska Ves 150.99 347 ePKIKP PKiKP 05 47 31.7 +1.0
MORC Moravsky Berou 150.99 343 ePKP PKiKP 05 47 31.2 +0.3
MORC Moravsky Berou 150.99 343 ⇑P PKiKP 05 47 31.9 +1.1
MORC Moravsky Berou 150.99 343 PKPbc 05 47 30.5 +0.3
MORC Moravsky Berou 150.99 343 PKIKP PKPbc 05 47 30.5 +0.3
OZUR 151.00 329 ⇑P PKiKP 05 47 32.3 +1.3
KIZK Mersin 151.19 306 eP PKiKP 05 47 31.7 +0.1
DOPR Dopca 151.29 330 ⇑P PKiKP 05 47 32.9 +1.3
MLR Muntele Rosu 151.37 328 ⇑P PKiKP 05 47 32.7 +0.8
MLR Muntele Rosu 151.37 328 PKPbc 05 47 30.6 -0.8
MLR Muntele Rosu 151.37 328 PKIKP PKPbc 05 47 30.6 -0.8
MOX Moxa 151.38 351 ePKPbc PKiKP 05 47 31.7 +0.1
baz=12,slow=2.5
MOX epPKPbc sPKPbc 05 47 43.5 +0.4

	baz=10,slow=2.4						
UBBA	Unterbreizbach	151.41	353	ePKPbc	PKiKP	05 47 31.6	+0.2
	baz=12,slow=2.5						
UBBA				epPKPbc	sPKPbc	05 47 43.2	+0.3
	baz=10,slow=2.4						
PLN	Plauen	151.46	350	ePKPbc	PKiKP	05 47 31.9	+0.1
	baz=12,slow=2.5						
PLN				epPKPbc	sPKPbc	05 47 43.5	+0.3
	baz=10,slow=2.4						
TANN	Tannenbergstha	151.48	350	ePKPbc	PKiKP	05 47 32.1	+0.2
	baz=12,slow=2.5						
TANN				epPKPbc	sPKPbc	05 47 43.7	+0.4
	baz=10,slow=2.4						
PRU	Pruhonice	151.51	347	⇑ePKP	PKiKP	05 47 32.1	+0.3
PRU				epPKP	sPKPbc	05 47 43.0	-0.3
PRU	Pruhonice	151.51	347	ePKiKP	PKiKP	05 47 32.1	+0.3
PRU				e		05 47 43.0	
MDUB	Mudurnu	151.52	315		PKPbc	05 47 31.2	-0.6
GUNZ	Gunzen	151.55	350	ePKPbc	PKiKP	05 47 32.3	+0.4
	baz=12,slow=2.5						
GUNZ				epPKPbc	sPKPbc	05 47 44.0	+0.5
	baz=10,slow=2.4						
WERN	Wernitzgruen	151.61	350	ePKPbc	PKiKP	05 47 32.6	+0.5
	baz=12,slow=2.5						
WERN				epPKPbc	sPKPbc	05 47 44.1	+0.4
	baz=10,slow=2.4						
VRAC	Vranov	151.67	344	ePKP	PKiKP	05 47 32.9	+0.7
VYHS	Vyhne	151.77	340	ePKiKP	PKiKP	05 47 33.3	+0.8
VYHS				e		05 47 42.4	
VYHS	Vyhne	151.77	340	ePKP	PKiKP	05 47 33.3	+0.8
VYHS				e		05 47 42.4	
JAVC	Velka Javorina	151.79	342	ePKP	PKiKP	05 47 34.0	+1.5
VOIR		151.84	329	⇑P	PKiKP	05 47 34.5	+1.7
VOIR		151.84	329	⇑PKiKP	PKiKP	05 47 34.5	+1.7
MEM	Membach	151.87	359	PKiKP	PKiKP	05 47 32.8	+0.2
MEM				pPKP	pPKPab	05 47 47.0	-3.0
MEM				pPKPbc	sPKPab	05 47 52.8	-0.3
MEM				pPKiKP	sPKPbc	05 47 53.2	+9.1
BSTI	Sart Tilman	151.90	359	PKPdf	PKPdf	05 47 27.1	+1.4
BSTI				PKiKP	pPKPdf	05 47 34.1	-0.6
BSTI				PKPab	sPKPbc	05 47 43.8	-0.4
AHRW	Bad Neuenahr-A	151.90	357	ePKPbc	PKiKP	05 47 34.0	+1.4
	baz=12,slow=2.5						
PSZ	Piszkesteto	151.93	339	⇑P	PKPab	05 47 40.1	-1.7
PSZ	Piszkesteto	151.93	339		PKPbc	05 47 32.5	0.0
PSZ				IAMs_20	IAMs_20	06 51 27.0	
	comp=Z,934nm,20.0s						
PSZ	Piszkesteto	151.93	339	PKiKP	PKPbc	05 47 32.5	0.0
KRUC	Moravsky	151.95	344	ePKP	PKiKP	05 47 33.3	+0.5
MANZ	Manzenberg	151.95	350	ePKPbc	PKiKP	05 47 33.1	+0.3
	baz=12,slow=2.5						
BCLA	Clavier	152.07	360	PKPab	PKiKP	05 47 42.3	+0.2
BCLA				pPKPbc	sPKPab	05 47 52.0	-1.9
ARR	Arges	152.09	330	⇓P	PKiKP	05 47 34.5	+1.3
TNS	Taunus Mts	152.14	355	ePKPbc	PKiKP	05 47 33.4	+0.2
	baz=12,slow=2.5						
ROTZ	Rotzenmuhle	152.15	350	ePKPbc	PKiKP	05 47 33.5	+0.3
	baz=12,slow=2.5						
BMRD	Maredsous	152.19	0	PKiKP	PKiKP	05 47 33.7	+0.5
BMRD				PKPab	sPKPbc	05 47 43.8	-1.0
CSS	Mathiatis	152.34	303	PKPbc	PKPbc	05 47 33.6	-0.2
CSS				PKPab	sPKPbc	05 47 45.3	-0.4
MODS	Modra-Piesok	152.34	342	ePKiKP	PKiKP	05 47 34.0	+0.4
MODS	Modra-Piesok	152.34	342	ePKP	PKiKP	05 47 34.0	+0.4
DOU	Dourbes	152.39	1	PKiKP	PKiKP	05 47 34.6	+1.0
DOU				PKPab	sPKPbc	05 47 44.2	-1.1
DOU				pPKiKP	sPKPab	05 47 54.7	-0.5
KHC	Kasperske Hory	152.51	348	⇑ePKP	PKiKP	05 47 34.4	+0.4
KHC				ePKPAB	sPKPbc	05 47 46.4	+0.7
KHC				ex	x	05 48 12.5	
KHC	Kasperske Hory	152.51	348	PKPbc	PKiKP	05 47 34.2	+0.2
KHC				PKPab	sPKPbc	05 47 46.1	+0.4
KHC	Kasperske Hory	152.51	348	PKiKP	PKiKP	05 47 34.2	+0.2
KHC						05 47 46.1	
WET	Wettzell	152.63	349	ePKPbc	PKiKP	05 47 34.6	+0.4
	baz=12,slow=2.5						
SIRR	Siria	152.67	334	⇑P	PKiKP	05 47 35.6	+1.2
GEC2	GERESS Array S	152.76	347	ePKPbc	PKiKP	05 47 34.8	+0.2
	baz=12,slow=2.5						
GEC2	GERESS Array S	152.76	347		PKiKP	05 47 35.4	+0.8
GEC2				PKPab	sPKPbc	05 47 46.3	-0.1
GERES	GERESS Array B	152.76	347	PKPbc	PKiKP	05 47 35.1	+0.5
	comp=Z,2.7nm,0.8s,baz=11,slow=2.7,SNR=17						
WLF	Walferdange	152.81	358	PKPdf	PKPdf	05 47 28.0	+0.8
WLF				PKPbc	PKPab	05 47 44.9	-0.4
WLF				PKiKP	sPKPbc	05 47 46.9	+0.6
WLF	Walferdange	152.81	358		PKiKP	05 47 36.1	+1.6
WLF				PKPab	sPKPbc	05 47 46.6	+0.3
WLF	Walferdange	152.81	358	PKiKP	PKiKP	05 47 36.1	+1.6
WLF						05 47 46.6	
GZR	Gura Zlata	152.91	332	⇑P	PKiKP	05 47 35.7	+0.8
GZR	Gura Zlata	152.91	332	⇑PKiKP	PKiKP	05 47 35.7	+0.8
CONA	Conrad Observa	153.13	344	pPKPdf	PKPdf	05 47 27.5	-0.3
	comp=Z,7.2nm,1.4s						
ELND	Elena	153.21	325	⇑P	PKiKP	05 47 41.4	+5.8
BZS	Buzias	153.22	334	⇑P	PKPbc	05 47 32.9	-2.4
BZS	Buzias	153.22	334	⇑PKiKP	PKPbc	05 47 32.9	-2.4
ISP	Isparta	153.28	311	IAMs_20	IAMs_20	06 48 22.0	
	comp=Z,844nm,19.0s						
MDVR	Moldovita	153.85	332	⇑P	PKPab	05 47 43.8	-6.1
BFO	Black Forest	154.03	355	PKPbc	PKPbc	05 47 37.1	0.0
BFO				PKPab	sPKPbc	05 47 48.1	-0.9
BFO	Black Forest	154.03	355	PKiKP	PKPbc	05 47 37.1	0.0
BFO						05 47 48.1	
SOKA	Soboth	154.50	344	pPKPdf	PKPdf	05 47 29.4	-0.4
	comp=Z,6.5nm,1.2s						
KBA	Koelnbreinsper	154.52	347	ePKPdf	PKPdf	05 47 28.5	-1.5
	comp=Z,10nm,1.5s						
WATA	Walderalm	154.61	350	pPKPdf	PKPdf	05 47 31.0	+1.0
	comp=Z,5.3nm,0.7s						
WTTA	Wattenberg	154.67	349	pPKPdf	PKPdf	05 47 29.8	-0.4
	comp=Z,10nm,1.4s						
MOTA	Moosalm	154.68	350	epPKPdf	PKPdf	05 47 29.7	-0.4
	comp=Z,9.1nm,1.7s						
OBKA	Obir	154.78	344	epPKPdf	PKPdf	05 47 32.0	+1.8
	comp=Z,14nm,1.6s						
VTS	Vitosha	154.80	327	⇑P	PKPdf	05 47 34.5	+4.1
VTS	Vitosha	154.80	327	PKPdf	PKPdf	05 47 29.9	-0.6
VTS				PKPbc	PKiKP	05 47 40.5	+1.4
VTS					PKPab	05 47 53.2	-1.0
VTS				IAMs_20	IAMs_20	07 02 36.3	
	comp=Z,654nm,20.0s						
VTS	Vitosha	154.80	327	PKPdf	PKPdf	05 47 29.9	-0.6
VTS						05 47 40.5	
VTS						05 47 53.2	
DAVA	Damuels	154.90	352	PKPbc	PKPbc	05 47 35.0	-4.1
	comp=Z,6.0nm,1.0s						
ABTA	Abfaltersbach	155.01	348	pPKPdf	PKPdf	05 47 33.7	+3.2
	comp=Z,14nm,1.7s						
LIT	Litokhoron	157.00	324		PKPab	05 48 03.9	+0.4
LIT	Litokhoron	157.00	324	PKP2	PKPab	05 48 03.9	+0.4
SANT	Santorini	157.51	313	IAMs_20	IAMs_20	06 48 52.4	
	comp=Z,479nm,20.0s						
ITM	Ithomi	159.31	319		PKPab	05 48 13.9	+0.3
ESDC	Sonseca Array	161.18	22	PKPab	PKPab	05 48 21.5	-0.1
	comp=Z,1.5nm,0.7s,baz=322,slow=4.5,SNR=6.1						
DBIC	Dimbokro	161.64	147	PKP	PKPab	05 47 39.1	-0.2
	comp=Z,4.9nm,1.0s,baz=359,slow=12,SNR=3.5						
TORD	Torodi Ar. Bea	170.22	160	PKP	PKPdf	05 47 45.2	-1.0
	comp=Z,1.6nm,1.0s,baz=33,slow=0.5,SNR=3.6						
TORD				PKPab	PKPab	05 49 05.3	+3.4
	comp=Z,1.3nm,0.8s,baz=198,slow=3.1,SNR=4.3						

MAN 17 05:30:11.1,8.47N×125.71E,h69km,mb3.9,ML2.6,MS2.1, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGP	Cagayan de Oro	1.00	269	⇑eP	Pn	05 30 31.8	+1.7
CGP				eS	Sn	05 30 44.3	+1.0

NEIC 17 05:37:13.7±2.0,35.80N±0.02×97.45W±0.05,h8km±3km, Error ellipse: s-maj=6.1km s-min=2.4km az=65.0
ANF 17 05:37:13.8±0.5,35.77N×97.46W,h10km,ML3.6/10,Error ellipse: s-maj=8.0km s-min=5.2km az=154.0
TUL 17 05:37:13.2±1.0,35.78N±0.02×97.48W±0.05,h5km±5km, ML2.9,Error ellipse: s-maj=5.9km s-min=2.2km az=61.0
ISC 17 05:37:14.0±1.2,35.77N±0.04×97.43W±0.04,h9km±8km, n37,σ0.87/48,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.13	157		Pg	05 37 16.5	-0.3
ADOK				Sg	Sg	05 37 19.2	+0.3
OKCFA	Oklahoma City	0.35	182		Pg	05 37 20.4	-0.6
OKCFA				Sg	Sg	05 37 26.2	+0.6
OKCSW	OKLAHOMA CITY	0.36	181		Pg	05 37 20.6	-0.5
OKCSW				Sg	Sg	05 37 26.2	+0.3
W35A	Tecumseh	0.77	143		Pg	05 37 28.1	-0.6
W35A				Sg	Sg	05 37 39.3	+0.6
TUL1	Leonard	1.34	83	Pn	Pn	05 37 37.9	-1.0
TUL1	Leonard	1.34	83	P	Pn	05 37 37.9	-1.0
	baz=265						
TUL1				S	Sb	05 37 56.9	+0.3
	baz=265						
U32A	Winter Ranch,	1.41	296		Pn	05 37 38.5	-1.3
WMOK	Wichita Mounta	1.51	227		Pn	05 37 40.4	-0.8
WMOK	Wichita Mounta	1.51	227	P	Pn	05 37 40.7	-0.5
	baz=46						
WMOK				S	Sn	05 38 00.3	-0.7
	baz=46						
HHAR	Hobbs	2.88	79	Pn	Pn	05 38 00.6	+0.6
W39A	Magazine	3.03	100	Pn	Pn	05 38 03.1	+1.0
W39A	Magazine	3.03	100	P	Pn	05 38 02.8	+0.7
	baz=282						
W39A				S	Sn	05 38 38.1	-0.4
	baz=282						
MIAR	Mount Ida	3.39	110	P	Pn	05 38 07.6	+0.6
	baz=292						
MIAR				S	Sn	05 38 47.2	-0.1
	baz=292						
KSU1	Kansas State U	3.39	11	P	Pn	05 38 06.8	-0.3
	baz=192						
KSU1				S	Sn	05 38 47.4	-0.1
	baz=192						
CBKS	Cedar Bluff	3.55	330	Pn	Pn	05 38 10.1	+0.7
CBKS	Cedar Bluff	3.55	330	P	Pn	05 38 09.7	+0.4
	baz=148						
CBKS				S	Sn	05 38 51.4	-0.1
	baz=148						
ABTX	Abilene, Hawle	3.63	211	Pn	Pn	05 38 11.7	+1.3
ABTX	Abilene, Hawle	3.63	211	P	Pn	05 38 11.5	+1.1
	baz=29						
ABTX				S	Sn	05 38 53.8	+0.4
	baz=29						
U40A	Yellville	3.76	80		Pn	05 38 13.0	+0.9
U40A	Yellville	3.76	80	P	Pn	05 38 13.0	+0.9
	baz=263						
WHTX	Lake Whitney,	3.77	180	Pn	Pn	05 38 14.7	+2.5
X40A	Basin Creek Fa	3.98	107	Pn	Pn	05 38 16.2	+1.0
X40A	Basin Creek Fa	3.98	107	P	Pn	05 38 16.1	+0.9
	baz=290						
237A	Washetta, Mont	3.99	160	Pn	Pn	05 38 15.2	-0.2
WLAR	White Oak Lake	4.12	119	Pn	Pn	05 38 17.8	+0.7
WHAR	Wooly Hollow	4.22	95	Pn	Pn	05 38 19.1	+0.6
W41B	Gary Mavity, V	4.27	96	Pn	Pn	05 38 20.1	+0.9
W41B	Gary Mavity, V	4.27	96	P	Pn	05 38 19.6	+0.4
	baz=280						
UALR	University of	4.28	102	Pn	Pn	05 38 20.3	+1.0
MGMO	Mountain Grove	4.39	70	Pn	Pn	05 38 22.7	+2.0
JCT	Junction City	5.64	201	Pn	Pn	05 38 39.0	+1.0
BGNE	Belgrade	5.66	355	Pn	Pn	05 38 38.6	+0.4
T25A	Trinidad	5.79	286	Pn	Pn	05 38 38.7	-1.5
SDCO	Great Sand Dun	6.77	289	Pn	Pn	05 38 53.8	0.0
ISCO	Idaho Springs	7.62	304	Pn	Pn	05 39 05.0	-0.5
ECSD	EROS Data Cent	7.98	4	Pn	Pn	05 39 09.7	-0.4
PHWY	Pilot Hill	8.37	314	Pn	Pn	05 39 15.3	-0.4

BJI 17 05:55:58.8±0.0,18.74N×120.38E,h6km,mB5.4/69, mb5.0/79,ML5.5/1,Ms4.9/93,Ms7 5.3/84
MAN 17 05:55:59.6,18.62N×120.34E,h18km,mb6.1,ML5.2, MS5.7
MAN INTENSITY VI - BURGOS ILOCOS NORTE; INTENSITY V - PASUQUIN ILOCOS NORTE; INTENSITY IV - SARRAT LAOAG & PAOAY ILOCOS NORTE; INTENSITY III - SINAITY ILOCOS SUR; CLAVERIA CAGAYAN; BANGUI ILOCOS NORTE; INTENSITY II - VIGAN CITY SANTA AND BANTAY ILOCOS SUR; CALLAO PENABLANCA AND CALAYAN CAGAYAN; BONTOC MT. PROVINCE; INTENSITY I - BAGUIO CITY.
NEIC 17 05:55:59.2±1.9,18.53N±0.03×120.43E±0.04,h20km±2km, mb5.5/211,Ms_20 5.2/91,Mwb5.5/21,Mww5.5, Mwc5.6(GCMT),Error ellipse: s-maj=6.1km s-min=4.4km az=113.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.15; $M_{\theta\theta}$-0.58; $M_{\phi\phi}$-1.57; $M_{r\theta}$-0.69; $M_{\theta\phi}$-1.52; $M_{\phi r}$0.08; Fault plane solution: $M_0$2.55000×10^{17} NP1:ϕ_s18.31000°,δ43.81000°,λ63.46000°. NP2: ϕ_s232.99000°,δ51.74000°,λ113.20000°. Principal axes: T 2.3761, Plg71.0000°, Azm204.0000°; N 0.3238, Plg18.0000°, Azm38.0000°; P -2.6999, Plg4.0000°, Azm307.0000°;
MOS 17 05:56:00.7±1.0,18.57N×120.52E,h37km,mb5.7/145 Error ellipse: s-maj=6.1km s-min=3.3km az=120.3
GCMT 17 05:56:01.2±0.1,18.63N±0.01×120.25E±0.01,h31km, MW5.5/137,Moment Tensor Solution. s127,c223; s137,c247; Duration: 1.4 Moment tensor: Scale 10^{17} Nm; M_{rr}1.96±.04; $M_{\theta\theta}$-0.09±.03; $M_{\phi\phi}$-1.87±.03; $M_{r\theta}$-0.89±.04; $M_{r\phi}$-1.04±.02; $M_{\theta\phi}$0.13±.04; Best double couple: $M_0$2.35800×10^{17} NP1:ϕ_s3.00000°,δ46.00000°, λ56.00000°. NP2:ϕ_s227.00000°,δ53.00000°,λ120.00000°. Principal axes: T 2.3510, Plg66.0000°, Azm198.0000°; N 0.0140, Plg24.0000°, Azm27.0000°; P -2.3650, Plg4.0000°, Azm296.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
IDC 17 05:56:01.0±3.5,18.49N±0.02×120.52E,h33km±26km,mb4.9/38, mb1 5.0/40,mb1mx5.0/48,mbtmp5.1/40,ML4.2/3,MS4.9/27, Ms1 4.9/27,ms1mx4.8/43 Error ellipse: s-maj=11.4km s-min=8.7km az=89.0
KLM 17 05:56:02.0,18.63N×120.72E,h66km,mb5.6
NEIC 17 05:56:02,18.64N×120.32E,h31km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.05; $M_{\theta\theta}$-0.14; $M_{\phi\phi}$-1.91; $M_{r\theta}$-0.85; $M_{\theta\phi}$-1.11; $M_{\phi r}$0.15; Fault plane solution: $M_0$2.43000×10^{17} NP1:ϕ_s5.00000°, δ46.00000°,λ58.00000°. NP2:ϕ_s227.00000°,δ52.00000°, λ119.00000°. Principal axes: T 2.4081, Plg67.0000°, Azm199.0000°; N 0.0489, Plg22.0000°, Azm28.0000°; P -2.4570, Plg3.0000°, Azm297.0000°;
BGR 17 05:56:02.8±0.0,18.67N×120.78E,h33km,mb5.4,Ms5.3
NEIC 17 05:56:03,18.55N×120.43E,h26km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.37; $M_{\theta\theta}$-0.52; $M_{\phi\phi}$-1.86; $M_{r\theta}$-0.50; $M_{\theta\phi}$-0.90; $M_{\phi r}$0.63; Fault plane solution: $M_0$2.48000×10^{17} NP1:ϕ_s221.00000°, δ43.00000°,λ113.00000°. NP2:ϕ_s11.00000°,δ51.00000°, λ70.00000°. Principal axes: T 2.5979, Plg74.0000°, Azm221.0000°; N -0.2644, Plg15.0000°, Azm24.0000°; P -2.3335, Plg4.0000°, Azm115.0000°;
ISC 17 05:56:00.6±0.5,18.48N±0.02×120.46E±0.03,h29km±3km, n1285,σ1.48/1363,mb5.4/333,MS5.2/108,83C-20D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.56	180	⇓eP	Pn	05 56 13.6	+1.0
SIPP				iS	Sn	05 56 23.9	+3.0
ABRA	Dolores	0.86	164	eP	Pn	05 56 17.7	+0.8
ABRA				eS	Sn	05 56 29.2	+0.7
SZP	Santa	0.93	180		Pn	05 56 18.6	+0.9
SZP				Sg	Sn	05 56 29.9	-0.1
APYP	Conner	0.97	129	eP	Pb	05 56 19.0	+0.2
SGCP	Mt. Cagua	1.53	99	eP	Pb	05 56 27.9	-0.4
SGCP				eS	Sb	05 56 49.4	+2.1
CAUP	Cauayan	2.01	139	eP	Pb	05 56 36.8	+0.3
CAUP				eS	Sb	05 57 05.2	+4.1
BOLP	Bolinao	2.15	194	eP	Pn	05 56 36.0	+1.4
BOLP				eS	Sb	05 57 08.0	+2.8
SMPP	San Manuel, Pa	2.33	175	eP	Pn	05 56 38.1	+1.0
SMPP				eS	Sb	05 57 10.0	-0.3
BBP	Basco	2.41	36	eP	Pn	05 56 38.9	+0.7
BBP				eS	Sn	05 57 04.4	-2.3
BALP	Baler	2.93	158	eP	Pb	05 56 48.6	-3.6
PCPH	Palayan	2.97	168	⇑eP	Pn	05 56 48.5	+2.7
PCPH				eS	Sb	05 57 29.9	+1.3
TWG	Pinlang	4.36	8		Pn	05 57 04.3	-0.6
TWG				Sn	Sn	05 57 51.3	-3.4
TGY	Tagaytay City	4.38	174	Pn	Pn	05 57 09.2	+3.9
	129nm,0.3s,baz=212,slow=2.6,SNR=19						
TGY				Sn	Sb	05 58 05.8	-3.6
	187nm,0.3s,baz=78,slow=23,SNR=2.4						
TGY				LR	LR	05 59 20.7	
	comp=Z,23μm,18.9s,baz=324,slow=46						
TGY	Tagaytay City	4.38	174	⇑eP	Pb	05 57 12.9	-4.0
TGY				eS	Sb	05 58 08.0	-1.4
LQP	Lukban	4.47	166	⇑eP	Pn	05 57 09.6	+2.9
TPUB	Ta-pu	4.80	2		Pn	05 57 09.6	-1.4
TPUB				Sn	Sn	05 58 02.8	-2.9
GQP	Guinayangan	4.94	157	⇓eP	Pn	05 57 16.7	+3.8
GQP				eS	Sb	05 58 17.5	-7.9
YULB	Yu-li	4.95	9		Pn	05 57 11.9	-1.1
SSLB	Suanglung	5.30	5		Pn	05 57 17.1	-0.8
SSLB				Sn	Sn	05 58 13.4	-4.6
NACB	Ninganchiao	5.76	10		Pn	05 57 24.2	0.0
NACB				Sn	Sn	05 58 28.6	-0.8
YHNB	Yeheng	6.22	8		Pn	05 57 31.5	+0.9
KNMB	Chin-men Tao	6.25	342		Pn	05 57 29.1	-1.9
KNMB				Sn	Sn	05 58 35.8	-5.7
YOJ	Yonaguni jima	6.41	21		Pn	05 57 32.7	-0.4
YOJ	Yonaguni jima	6.41	21	P	Pn	05 57 32.7	-0.4
QZH	Quanzhou	6.66	345	Pn	Pn	05 57 34.3	-2.2
QZH				Sn	Sn	05 58 43.8	-7.7
QZH				LR	LR		
	comp=N,8μm,14.2s						
QZH				LR	LR		
	comp=E,10μm,14.2s						
QZH				LR	LR		
	comp=Z,13μm,14.4s						
HKPS	Hong Kong Po S	7.02	304		Pn	05 57 39.6	-1.9
HKPS					Sn	05 58 54.6	-5.9
RCP	Roxas	7.23	162	⇓eP	Pn	05 57 51.3	+6.9
GZH	Guangzhou	8.08	306	P	Pn	05 57 54.6	-1.4
GZH				S	Sn	05 59 22.3	-4.1
GZH				smax	smax		
	comp=N,1μm,0.8s						
GZH				smax	smax		
	comp=E,2μm,0.8s						
GZH				LR	LR		
	comp=N,15μm,15.8s						
GZH				LR	LR		
	comp=E,25μm,14.9s						
QIZ	Qiongzhong	10.07	275	P	Pn	05 58 21.3	-2.1
QIZ				S	Sn	06 00 15.5	+0.1
QIZ				pmax	pmax		
	comp=Z,110nm,0.6s						
QIZ				LR	LR		
	comp=N,5μm,13.7s						
QIZ				LR	LR		
	comp=E,12μm,16.7s						
QIZ				LR	LR		
	comp=Z,16μm,17.3s						
QIZ	Qiongzhong	10.07	275	Pn	Pn	05 58 21.7	-1.7
QIZ				Sn	Sn	06 00 11.3	-4.1
JOW	Kunigami	11.00	40	Pn	Pn	05 58 35.6	-0.6
	1.2nm,0.3s,baz=195,slow=16,SNR=9.6						
JOW	Kunigami	11.00	40		Pn	05 58 31.7	-4.5
KCP	Kidapawan	12.27	158	⇓eP	Pn	05 58 58.1	+4.6
DAV	Davao City (W)	12.39	156	P	Pn	05 58 56.7	+1.5
SSE	Sheshan	12.58	3	P	Pn	05 58 57.3	-0.3
SSE				S	Sn	06 01 17.3	+0.6
SSE				pmax	pmax		
	comp=Z,13nm,0.7s						
SSE				pmax	pmax		
	comp=Z,180nm,3.3s						
SSE				LR	LR		
	comp=N,2μm,15.6s						
SSE				LR	LR		
	comp=E,2μm,15.8s						
KKM	Kota Kinabalu	13.04	199		Pn	05 59 07.4	+3.3
WHN	Wuhan	13.23	336	⇓P	Pn	05 59 05.8	-0.7
WHN				LR	LR		
	comp=N,15μm,12.7s						
WHN				LR	LR		
	comp=E,10μm,12.3s						
WHN				LR	LR		
	comp=Z,26μm,14.7s						
DLV	T Lat	13.25	242		Pn	05 59 08.5	+1.4
NJ2	Nanjing	13.59	354	eP	Pn	05 59 11.1	-0.3
NJ2				S	Sn	06 01 46.4	+4.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,490nm,3.8s						
NJ2				LR	LR		
	comp=N,10μm,17.1s						
NJ2				LR	LR		
	comp=E,9μm,16.1s						
NJ2				LR	LR		
	comp=Z,13μm,18.0s						
SPMM	Sapulut	14.23	196	P	P	05 59 25.0	-2.4
UBPT	Khong Chiam	14.69	260		Pn	05 59 25.5	-1.1
GYA	Guiyang	15.01	304	⇓iP	Pn	05 59 30.8	-0.1
GYA				S	Sn	06 02 13.9	-2.4
GYA				SS	S	06 02 35.3	+1.9
GYA				pmax	pmax		
	comp=Z,60nm,1.0s						
GYA				pmax	pmax		
	comp=Z,960nm,4.5s						
GYA				LR	LR		
	comp=N,5μm,12.2s						
GYA				LR	LR		
	comp=E,7μm,13.2s						
GYA				LR	LR		
	comp=Z,9μm,15.4s						
ENH	Enshi	15.40	322	Pn	Pn	05 59 35.2	-0.8
SLVN	Son La	15.82	283	Pn	Pn	05 59 40.5	-1.1
JNU	Nakatsue	17.32	31	P	Pn	06 00 00.2	-0.2
	1.2nm,0.3s,baz=209,slow=5.9,SNR=18						
JNU	Nakatsue	17.32	31		Pn	06 00 00.5	+0.2
KMI	Kunming	17.72	295	P	P	06 00 07.8	+1.5
KMI				pP	pP	06 00 10.1	-3.1
KMI				sP	pwP	06 00 17.5	+1.0
KMI				PP	PnPn	06 00 20.1	+3.7
KMI				S	S	06 03 26.3	-2.7
KMI				SS	SnSn	06 03 39.3	+3.3
KMI				pmax	pmax		
	comp=Z,46nm,1.3s						
KMI				pmax	pmax		
	comp=Z,1μm,3.7s						
KMI				LR	LR		
	comp=N,5μm,15.5s						
KMI				LR	LR		
	comp=E,13μm,16.3s						
KMI				LR	LR		
	comp=Z,15μm,17.1s						
SBUM	Sibu	17.86	208		Pn	06 00 06.9	-0.2
SBUM	Sibu	17.86	208	P	P	06 00 10.4	+2.4
TIA	Tai'an	17.90	351	P	P	06 00 10.0	+2.0
TIA				pmax	pmax		
	comp=Z,65nm,1.3s						
TIA				pmax	pmax		
	comp=Z,2μm,8.5s						
TIA				LR	LR		
	comp=N,7μm,21.3s						
TIA				LR	LR		
	comp=E,3μm,18.0s						
TIA				LR	LR		
	comp=Z,9μm,19.1s						
MRSI	Marisa	17.95	175	P	P	06 00 09.6	+1.0
	7μm146nm,0.8s						
MPSI	Mapaga	18.04	182	P	Pn	06 00 08.0	-1.3
	54nm,1.1s						
KMSI	Cibinong	18.13	169	P	P	06 00 11.5	+0.9
	204nm,0.7s						
XAN	Xi'an	18.60	329	P	Pn	06 00 17.8	+1.6
XAN				pP	pwP	06 00 25.5	+0.1
XAN				S	Sn	06 03 35.6	-7.8
XAN				pmax	pmax		
	comp=Z,90nm,1.6s						
XAN				pmax	pmax		
	comp=Z,2μm,4.5s						
XAN				LR	LR		
	comp=N,7μm,18.4s						
XAN				LR	LR		
	comp=E,4μm,15.2s						
XAN				LR	LR		
	comp=Z,6μm,14.1s						
XAN	Xi'an	18.60	329	P	Pn	06 00 17.1	+0.9
XAN	Xi'an	18.60	329	P	Pn	06 00 17.1	+0.9
PBKT	Sadao Pong	18.68	267	P	P	06 00 16.1	-0.5
TJN	Taejon	18.84	17	⇑eP	Pn	06 00 19.4	+0.5

SMKI Samarinda 19.08 190 P P 06 00 21.1 +0.1
7µm21µm398nm,0.8s
APSI Ampana 19.31 176 P P 06 00 23.8 +0.3
1µm103nm,1.2s
LUWI Luwuk 19.54 173 P P 06 00 26.1 +0.1
4µm398nm,1.2s
LUWI Luwuk 19.54 173 P P 06 00 26.2 +0.2
LUWI IAmb IAmb 06 00 44.8
comp=Z,628nm,1.3s
CD2 Chengdu 19.55 312 P P 06 00 25.1 -1.0
CD2 sP pP 06 00 31.8 -1.1
CD2 PP pwP 06 00 44.1 +7.0
CD2 S S 06 04 04.1 -1.2
CD2 SS SnSn 06 04 26.9 +6.3
CD2 pmax pmax
comp=Z,130nm,0.8s
CD2 LR LR
comp=Z,12µm,14.2s
CD2 LR LR
comp=Z,12µm,17.8s
CD2 LR LR
comp=Z,19µm,15.0s
KSM Kuching 19.62 212 P P 06 00 26.6 -0.3
KSM Kuching 19.62 212 P Pn 06 00 29.0 +0.6
BKB Balikpapan 19.93 190 P P 06 00 28.3 -2.0
KSRS Korea Array 20.00 18 P P 06 00 30.4 -0.5
comp=Z,2.9nm,0.3s,baz=199,slow=10,SNR=41
KSRS PcP PcP 06 04 46.1 -0.4
comp=Z,0.3nm,0.3s,baz=193,slow=2.7,SNR=4.5
KS19 Wonju Array Si 20.03 17 P P 06 00 30.5 -0.8
KS19 IAmb IAmb 06 00 52.0
comp=Z,331nm,2.0s
LBMI Labuha 20.22 159 P Pn 06 00 34.6 -1.0
comp=Z,5µmcomp=Z,104nm,1.1s
STKI Sintang 20.32 207 P Pn 06 00 36.1 -0.6
comp=Z,12µmcomp=Z,395nm,1.1s
DL2 Dalian 20.38 3 P Pn 06 00 38.1 +0.9
DL2 pmax pmax
comp=Z,71nm,1.0s
DL2 pmax pmax
comp=Z,1µm,9.2s
DL2 LR LR
comp=Z,3µm,24.5s
DL2 LR LR
comp=Z,5µm,16.0s
DL2 LR LR
comp=Z,4µm,14.8s
CHTO Chiang Mai 20.39 274 P Pn 06 00 37.8 +0.3
CHTO Chiang Mai 20.39 274 P Pn 06 00 37.9 +0.4
CHTO pmax pmax
comp=Z,137nm,1.1s
CM31 Chiang Mai Arr 20.41 273 P Pn 06 00 37.9 +0.2
CM31 Chiang Mai Arr 20.41 273 P Pn 06 00 38.5 +0.7
SNR=37
CMAR Chiang Mai Arr 20.41 273 P Pn 06 00 37.2 -0.5
comp=Z,29nm,0.8s,baz=89,slow=8.4,SNR=82
CMAR PcP PcP 06 04 48.3 +0.7
comp=Z,17nm,0.7s,baz=47,slow=0.6,SNR=27
CMAR LR LR 06 08 31.7
comp=Z,3µm,18.9s,baz=87,slow=37
CMAR Chiang Mai Arr 20.41 273ceP Pn 06 00 39.0 +1.3
CMAR pmax pmax
comp=Z,50nm,0.8s
TIY Taiyuan 20.41 341 P Pn 06 00 37.6 0.0
TIY S S 06 04 20.1 -2.5
TIY pmax pmax
comp=Z,58nm,0.9s
TIY LR LR
comp=Z,6µm,14.2s
TIY LR LR
comp=Z,2µm,12.7s
TIY LR LR
comp=Z,6µm,15.3s
SANI Sanana 21.12 164 P P 06 00 39.1 -4.1
TTSI Tana Toraja 21.40 182 P P 06 00 47.7 +1.5
comp=Z,2µmcomp=Z,110nm,1.0s
JCJ Chichijima 21.77 63 P P 06 00 51.2 +1.1
comp=Z,37nm,0.3s,baz=280,slow=22,SNR=1.9
BJT Baijiatuau 21.78 351 P P 06 00 49.5 -0.6
BJT IAmb IAmb 06 00 53.2
comp=Z,139nm,0.9s
BJT Baijiatuau 21.78 351 P P 06 00 49.5 -0.6
BJT pmax pmax
comp=Z,139nm,0.9s
BJI Beijing 21.80 351 P P 06 00 50.4 +0.1
BJI S S 06 04 52.6 +2.7
BJI pmax pmax
comp=Z,21nm,1.4s
BJI LR LR
comp=Z,3µm,19.1s
BJI LR LR
comp=Z,4µm,18.1s
BJI LR LR
comp=Z,4µm,19.2s
SWI Sorong 21.96 150 P P 06 00 52.8 +0.5
comp=Z,1µmcomp=Z,67nm,0.9s
SIJI Sorong 21.97 150 P P 06 00 52.2 -0.2
comp=Z,37nm,0.7s,baz=5.4,slow=14,SNR=8.0
INU Inuyama 22.31 38 P P 06 00 56.1 +0.2
INU IAmb IAmb 06 01 24.8
comp=Z,161nm,1.1s
SPSI Sidrap Palu 22.32 182 P P 06 00 55.8 -0.2
comp=Z,2µmcomp=Z,267nm,1.1s
NLAI Namlea 22.55 162 P P 06 00 57.2 -1.4
comp=Z,2µmcomp=Z,224nm,1.1s
BNSI Bone 22.74 181 P P 06 01 01.0 +0.4
comp=Z,2µmcomp=Z,79nm,1.2s
JRMM Jerantut 22.80 233 P P 06 01 02.0 +0.8
LZH Lanzhou 22.86 323 ⇑P P 06 01 03.9 +2.0
LZH sP pwP 06 01 10.8 -1.1
LZH PP PnPn 06 01 30.9 +4.2
LZH S S 06 05 10.0 +0.1
LZH SS SnSn 06 05 49.6 +7.5
LZH pmax pmax
comp=Z,110nm,1.4s
LZH pmax pmax
comp=Z,2µm,4.3s
LZH LR LR
comp=Z,7µm,14.6s
LZH LR LR
comp=Z,4µm,14.1s
LZH LR LR
comp=Z,8µm,15.2s
MYKOM Kota Tinggi 23.25 226 P P 06 01 04.1 -1.7
MYKOM IAmb IAmb 06 01 08.8
comp=Z,141nm,0.9s
MYKOM IAMs_20 IAMs_20 06 09 14.5
comp=Z,8µm,19.0s
MYKOM Kota Tinggi 23.25 226 P P 06 01 07.0 +1.2
KAPI Kappang 23.36 182 P P 06 01 07.4 +0.5
comp=Z,50nm,0.8s,baz=21,slow=6.0,SNR=16
KAPI Kappang 23.36 182 IAMs_20 IAMs_20 06 10 31.0
comp=Z,5µm,20.0s
KULM Kulim 23.36 238 P P 06 01 04.9 -2.0
KULM IAMs_20 IAMs_20 06 09 38.6
comp=Z,5µm,20.0s
KULM Kulim 23.36 238 P P 06 01 08.0 +1.1
SNY Shenyang 23.42 6 ⇓P P 06 01 07.3 0.0
SNY S S 06 05 16.8 -1.9
SNY pmax pmax
comp=Z,75nm,1.0s
SNY pmax pmax
comp=Z,470nm,3.5s
SNY LR LR
comp=Z,3µm,18.2s
SNY LR LR
comp=Z,3µm,15.5s
SNY LR LR
comp=Z,5µm,20.0s
IPM Ipoh 23.54 236 P P 06 01 09.5 +0.8
IPM Ipoh 23.54 236 P P 06 01 10.0 +1.2
HHC Hu-ho-hao-te 23.56 343 eP P 06 01 09.5 +0.7
HHC S S 06 05 19.3 -2.0
HHC pmax pmax
comp=Z,270nm,5.8s
HHC LR LR
comp=Z,4µm,14.2s
HHC LR LR
comp=Z,2µm,16.1s
HHC LR LR
comp=Z,4µm,15.2s
BKSI Bulukumba 23.66 181 P P 06 01 10.1 +0.3
comp=Z,2µmcomp=Z,113nm,1.0s
BTO Baotou 23.81 340 eP P 06 01 09.9 -1.2
BTO S S 06 05 29.0 +3.9
BTO LR LR
comp=Z,3µm,14.8s
BTO LR LR
comp=Z,3µm,16.8s
MAJO Matsushiro 23.84 37 P P 06 01 11.4 +0.1
MAJO Matsushiro 23.84 37⇑eP P 06 01 11.7 +0.3
MAJO pmax pmax
comp=Z,37nm,1.1s
MAT Matsushiro 23.84 37 P P 06 01 09.7 -1.7
MAT S S 06 05 27.2 +1.7
MJAR Matsushiro Arr 23.84 37 P P 06 01 11.7 +0.3
comp=Z,19nm,0.9s,baz=229,slow=8.7,SNR=14
MJAR LR LR 06 09 56.5
comp=Z,1µm,22.0s,baz=200,slow=35
MJB9 Matsu-Tunnel 23.84 37 P P 06 01 12.2 +0.8
RKPI Ransiki, Papua 24.02 144 P P 06 01 12.8 -0.4
comp=Z,109nm,0.9s
FAKI Fak Fak 24.23 150 P P 06 01 14.3 -0.9
FAKI IAmb IAmb 06 02 11.3
comp=Z,100nm,1.1s
LKP Lekhapani 24.28 296 eP P 06 01 19.4 +3.7
TPI Tanjungpandan 24.58 212 P P 06 01 19.4 +1.0
comp=Z,3µmcomp=Z,124nm,1.6s
CN2 Changchun 25.59 8 eP P 06 01 28.3 +1.0
CN2 eS S 06 05 55.0 +1.6
CN2 sS sS 06 06 02.5 -3.4
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 pmax pmax
comp=Z,620nm,7.1s
CN2 LR LR
comp=Z,3µm,17.0s
CN2 LR LR
comp=Z,2µm,17.0s
CN2 LR LR
comp=Z,3µm,17.0s
KMMI Kalianget 26.17 195 P P 06 01 32.8 +0.1
comp=Z,6µmcomp=Z,133nm,1.2s
PSI Prapat 26.22 236 P P 06 01 34.0 +0.6
comp=Z,53nm,0.9s,baz=35,slow=6.7,SNR=38
PSI PcP PcP 06 05 00.0 0.0
comp=Z,15nm,0.9s,baz=209,slow=5.3,SNR=4.7
PSI Prapat 26.22 236 P P 06 01 34.0 +0.6
PSI 06 05 00.0
PSI pmax pmax
comp=Z,443nm,1.7s
PSI MLR MLR
comp=Z,5µm,21.0s
BKNI Bangkinang 26.25 229 P P 06 01 34.4 +0.9
comp=Z,4µmcomp=Z,360nm,1.1s
BKNI Bangkinang 26.25 229 P P 06 01 32.7 -0.9
BKNI IAMs_20 IAMs_20 06 11 46.1
comp=Z,7µm,18.0s
RPSI Rantau Prapat 26.29 236 P P 06 01 34.0 +0.1
RPSI PcP 06 05 00.0 0.0
RPSI Rantau Prapat 26.29 236 P P 06 01 34.2 +0.3
RPSI IAmb IAmb 06 01 36.8
comp=Z,443nm,1.7s
RPSI IAMs_20 IAMs_20 06 11 20.9
comp=Z,5µm,21.0s
PMBI Palembang 26.29 218 IAMs_20 IAMs_20 06 10 34.4
comp=Z,3µm,22.0s
GRJI Gresik 26.43 198 P P 06 01 35.3 +0.2
comp=Z,2µmcomp=Z,258nm,0.9s
LHMI Lhok Sumawe 26.46 243 P P 06 01 36.8 +1.4
comp=Z,4µmcomp=Z,332nm,1.3s
LHMI Lhok Sumawe 26.46 243 P P 06 01 36.9 +1.5
SDSI Sungai Dareh 26.88 226 P P 06 01 40.5 +1.4
comp=Z,25µmcomp=Z,64nm,1.9s
MDJ Mudanjiang 27.16 14 P P 06 01 42.8 +1.4
MDJ pP pP 06 01 46.0 -3.2
MDJ sP sP 06 01 47.8 -4.4
MDJ PP PnPn 06 02 25.6 +0.4
MDJ PcP PcP 06 05 03.6 +2.1
MDJ S S 06 06 20.5 +2.3
MDJ sS sS 06 06 28.6 -1.9
MDJ SS SnSn 06 07 29.8 +3.1
MDJ ScP ScP 06 08 42.8 +2.8
MDJ PcS PcS 06 08 44.4 +1.5
MDJ ScS ScS 06 12 34.4 +3.4
MDJ pmax pmax
comp=Z,21nm,0.9s
MDJ pmax pmax
comp=Z,610nm,5.3s
MDJ LR LR
comp=Z,2µm,16.4s
MDJ LR LR
comp=Z,4µm,15.0s
MDJ LR LR
comp=Z,4µm,14.2s
MDJ Mudanjiang 27.16 14 P P 06 01 39.3 -2.1
SMRI Semarang 27.23 202 P P 06 01 42.4 +0.1
comp=Z,172nm,1.1s
SMRI Semarang 27.23 202 P P 06 01 39.8 -2.5
SMRI IAmb IAmb 06 01 48.7
comp=Z,208nm,1.1s
PLAI Plampang 27.27 186 P P 06 01 42.9 +0.3
comp=Z,4µmcomp=Z,225nm,1.6s
BRDH Bariadhala 27.27 284 P P 06 01 44.1 +1.4
comp=Z,68nm,0.4s,baz=86,slow=11,SNR=6.5
TPTI 27.35 239 P P 06 01 41.4 -2.0
comp=Z,314nmcomp=Z,26nm,1.0s
SHL Shillong 27.37 290 eP P 06 01 47.3 +3.5
SHL IAmb IAmb 06 02 01.5
comp=Z,39nm,0.9s
SHL Shillong 27.37 290 P P 06 01 44.0 +0.2
SHL IAmb IAmb 06 02 01.4
comp=Z,83nm,1.1s
SHL Shillong 27.37 290 P P 06 01 45.7 +1.9
SNR=12
SHL Shillong 27.37 290 P P 06 01 44.0 +0.2
SHL pmax pmax
comp=Z,83nm,1.1s
USA0B Ussuriysk Arra 27.41 18 P P 06 01 44.3 +0.6
USA0B Ussuriysk Arra 27.41 18 P P 06 01 44.3 +0.6
USA0B pmax pmax
comp=Z,22nm,0.9s
USA0B MLR MLR
comp=Z,2µm,18.0s
USRK Ussuriysk Ar. 27.41 18 P P 06 01 43.4 -0.2
comp=Z,6.9nm,0.7s,baz=204,slow=5.0,SNR=18
USRK PcP PcP 06 05 02.3 +0.2
comp=Z,1.8nm,0.7s,baz=323,slow=29,SNR=3.2
USRK LR LR 06 14 50.4
comp=Z,2µm,18.1s,baz=208,slow=41
MLSI Meulaboh, Aceh 27.43 242 P P 06 01 44.4 +0.2
comp=Z,4µmcomp=Z,361nm,0.8s
GTA Gaotai 27.46 324 ⇓P P 06 01 45.4 +1.0
GTA pP sP 06 01 53.1 -2.4
GTA sP pwP 06 01 56.8 +1.2
GTA PcP PcP 06 05 03.9 +1.4
GTA S S 06 06 24.6 +1.2
GTA sS sS 06 06 33.3 -2.3
GTA PcS PcS 06 08 44.6 +0.2
GTA pmax pmax
comp=Z,14nm,1.2s
GTA pmax pmax
comp=Z,170nm,5.5s
GTA LR LR
comp=Z,3µm,14.9s
GTA LR LR
comp=Z,2µm,15.9s
GTA LR LR
comp=Z,3µm,16.8s
JAGI Jajag, Banyuwa 27.49 194 P P 06 01 45.0 +0.3
comp=Z,1µmcomp=Z,56nm,0.9s
JAGI Jajag, Banyuwa 27.49 194 P P 06 01 45.2 +0.5
JAGI IAmb IAmb 06 01 46.5
comp=Z,152nm,1.5s
PDSI Padang 27.53 228 P P 06 01 44.9 -0.2
comp=Z,42nm,2.2s
PBA Port Blair 27.58 260 ex P 06 01 55.5 +10
PBA Port Blair 27.58 260 IAMs_20 IAMs_20 06 12 35.1
comp=Z,5µm,19.0s
KRJI Kerinci 27.70 224 P P 06 01 47.7 +1.0
comp=Z,10µmcomp=Z,272nm,2.3s
KLSI 27.76 215 P P 06 01 47.6 +0.5
comp=Z,726nmcomp=Z,41nm,1.4s
MDSI Maura Dua 27.90 217 P P 06 01 48.3 0.0
comp=Z,790nmcomp=Z,35nm,0.9s
UGM Wanagama 28.00 201 P P 06 01 50.6 +1.3
comp=Z,7µmcomp=Z,244nm,1.6s
UGM Wanagama 28.00 201 P P 06 01 50.5 +1.3
PCJI Pacitan 28.04 200 P P 06 01 50.0 +0.4
comp=Z,172nm,1.1s
KPJI Karang Pucung 28.06 205 P P 06 01 50.4 +0.7
comp=Z,3µmcomp=Z,100nm,0.8s
LEM Lembang 28.16 208 P P 06 01 52.1 +1.3
comp=Z,68nm,0.7s,baz=74,slow=6.5,SNR=8.6
SOEI Soe 28.31 172 P P 06 01 49.3 -2.8
SOEI IAmb IAmb 06 02 11.9
comp=Z,85nm,1.0s
DBJI Dramaga 28.31 210 P P 06 01 53.9 +1.9
LWLI Liwa 28.40 216 P P 06 01 53.5 +0.6
comp=Z,55nm,0.5s
MNAI Manna 28.51 219 P P 06 01 52.9 -0.9
MNAI IAmb IAmb 06 02 12.1
comp=Z,154nm,1.0s
SNSI Sinabang, Aceh 28.53 239 P P 06 01 53.8 -0.2
comp=Z,6µmcomp=Z,440nm,1.2s
KASI Kota Agung 28.58 215 P P 06 01 54.1 -0.3
comp=Z,90nm,0.8s
CISI Cisompet, Garu 28.72 207 P P 06 01 55.6 -0.1
comp=Z,3µmcomp=Z,197nm,1.3s
CISI Cisompet, Garu 28.72 207 P P 06 01 53.9 -1.8
SISI Saibi 28.79 229 P P 06 01 55.8 -0.5
comp=Z,1µmcomp=Z,60nm,1.1s
LSA Lhasa 28.91 298 P P 06 01 59.3 +1.5
LSA IAmb IAmb 06 02 02.3
comp=Z,75nm,1.0s
LSA IAMs_20 IAMs_20 06 13 52.4
comp=Z,4µm,22.0s
LSA Lhasa 28.91 298 P P 06 01 59.3 +1.5
LSA pmax pmax
comp=Z,75nm,1.0s
LSA MLR MLR
comp=Z,4µm,22.0s
HIA Hailar 30.71 359 P P 06 02 12.9 -0.1
HIA Hailar 30.71 359 P P 06 02 12.9 -0.1
HIA pmax pmax
comp=Z,15nm,0.9s
TAPN Taplejung 31.35 292 eP P 06 02 19.8 +0.6
comp=Z,79nm,1.0s
SONM Songino Array 31.45 342 P P 06 02 20.1 +0.4
comp=Z,7.3nm,0.8s,baz=160,slow=10,SNR=37
SONM PcP PcP 06 05 12.1 -0.4
comp=Z,3.7nm,0.8s,baz=164,slow=2.5,SNR=5.9
SONM LR LR 06 15 48.5
comp=Z,4µm,20.3s,baz=158,slow=38
ODAN Odare 31.56 291 eP P 06 02 21.7 +0.7
comp=Z,111nm,0.7s
ASAJ Asahikawa 31.60 31 LR LR 06 14 27.9
comp=Z,2µm,21.9s,baz=298,slow=35
KLR Kul'dur 32.00 14 LR LR 06 16 21.5
comp=Z,1µm,20.1s,baz=150,slow=38
KLR Kul'dur 32.00 14ceP P 06 02 24.1 -0.2
KLR pmax pmax
comp=Z,56nm,0.9s
RAMN Ramite 32.27 291 eP P 06 02 28.3 +1.1
comp=Z,187nm,0.7s
XMIS Christmas Isla 32.27 208 P P 06 02 26.5 -0.5
BOK Bokaro 32.62 285 ex P 06 02 29.2 -0.9
JIRN Jiri 32.73 293 eP P 06 02 32.2 +0.7
comp=Z,788nm,1.6s
GUN Gumba 33.04 293 eP P 06 02 35.0 +0.9
comp=Z,208nm,0.8s
PKI Pulchoki 33.40 292 eP P 06 02 37.4 +0.1
comp=Z,485nm,1.7s
PKIN Phulchoki 33.42 292 eP P 06 02 38.2 +0.9
KKN Kakani 33.55 293 eP P 06 02 39.5 +1.1
comp=Z,102nm,0.8s
DMN Daman 33.67 292 eP P 06 02 39.9 +0.3
comp=Z,186nm,1.0s
YSS Yuzh-Sakhalins 33.79 28 P P 06 02 40.2 +0.2
YSS IAmb IAmb 06 02 42.1
comp=Z,74nm,0.9s
YSS IAMs_20 IAMs_20 06 15 58.4
comp=Z,4µm,20.0s
YSS Yuzh-Sakhalins 33.79 28⇓iP P 06 02 39.5 -0.5
YSS eS S 06 08 00.0 -2.0
YSS pmax pmax
comp=Z,80nm,1.0s
YSS pmax pmax
comp=Z,400nm,3.3s
GKN Gorkha 34.14 293 eP P 06 02 44.1 +0.6
comp=Z,174nm,0.8s
CHLP Challavanipeta 34.48 276 eP P 06 02 48.1 +1.8
CHLP IAmb IAmb 06 02 49.4
comp=Z,42nm,0.9s
GRNR Gornyy 34.63 18⇓iP P 06 02 38.8 -8.5
GRNR pmax pmax
comp=Z,2.0nm,1.0s
ZAK Zakamensk 34.66 341 eP P 06 02 47.5 -0.1
ZAK e 06 05 21.5
ZAK pmax pmax
comp=Z,11nm,1.1s
ZAK pmax pmax
comp=Z,8.0nm,1.1s
KNRA Kununurra 34.92 166 P P 06 02 48.4 -1.6
KNRA IAmb IAmb 06 02 51.0
comp=Z,42nm,0.8s
DANN Dangsing 34.96 293 eP P 06 02 50.8 +0.1
comp=Z,412nm,1.3s
ZEA Zeya 35.58 7 eP P 06 02 56.2 +0.9
ZEA e 06 04 30.0
ZEA pmax pmax
comp=E,24nm,1.0s
ZEA pmax pmax
comp=N,31nm,0.8s
ZEA pmax pmax
comp=Z,54nm,0.8s
ZEA pmax pmax
comp=N,400nm,5.0s
ZEA pmax pmax
comp=Z,500nm,5.0s
TLY Talaya 35.69 342 LR LR 06 18 25.9
comp=Z,3µm,20.7s,baz=142,slow=38
TLY Talaya 35.69 342 P P 06 02 56.9 +0.5
TLY IAMs_20 IAMs_20 06 18 12.1
comp=Z,3µm,20.0s
TLY Talaya 35.69 342 P P 06 02 57.8 +1.4
TLY Talaya 35.69 342 eP P 06 02 57.0 +0.7
TLY e 06 04 21.5
TLY eS S 06 08 33.5 +2.3
TLY e 06 13 15.9
TLY pmax pmax
comp=Z,48nm,1.1s
TLY MLR MLR
comp=Z,8µm,19.0s
IRK Irkutsk 36.01 343 eP P 06 02 58.4 -0.7
IRK pmax pmax
comp=Z,70nm,2.0s
MOY Mondy 36.50 340 eP P 06 03 04.5 +1.1
MOY pmax pmax
comp=Z,70nm,2.7s
FITZ Fitzroy Crossi 36.71 172 P P 06 03 03.6 -1.7
TYV Tymovskoe 36.81 24 eP P 06 03 05.1 -0.8
TYV pmax pmax
comp=Z,10.0nm,1.4s
TYV pmax pmax
comp=Z,600nm,8.4s
PVM Polavaram 36.93 274 eP P 06 03 08.1 +0.7
PVM IAmb IAmb 06 03 10.0
comp=Z,35nm,0.9s
WMQ Urumqi 37.34 320 eP P 06 03 13.0 +2.4
WMQ pP pP 06 03 16.3 -1.9
WMQ sP sP 06 03 22.1 +0.3
WMQ PP PnPn 06 04 39.4 +2.7
WMQ S S 06 08 55.8 -0.8
WMQ ScS ScS 06 13 23.3 +0.6
WMQ pmax pmax
comp=Z,17nm,0.9s
WMQ pmax pmax
comp=Z,510nm,3.8s
WMQ LR LR
comp=Z,4µm,15.7s
WMQ LR LR
comp=Z,2µm,14.1s
WMQ LR LR
comp=Z,2µm,17.3s
WMQ Urumqi 37.34 320 P P 06 03 09.2 -1.4
WMQ Urumqi 37.34 320 IAMs_20 IAMs_20 06 19 50.8
comp=Z,2µm,21.0s
WMQ Urumqi 37.34 320 P P 06 03 09.2 -1.4
WMQ pmax pmax
comp=Z,22nm,1.0s
WMQ MLR MLR
comp=Z,2µm,21.0s
MYLAV Mylavaram 37.94 274 eP P 06 03 17.5 +1.5
MYLAV IAmb IAmb 06 03 18.7
comp=Z,32nm,1.1s
GGR Gangavaram 38.20 276 eP P 06 03 17.7 -0.4
GGR IAmb IAmb 06 03 20.5

comp=Z,44nm,1.0s
PMG Port Moresby 38.24 134⇓eP P 06 03 17.5 -0.9
PMG pmax pmax
comp=Z,110nm,1.0s
COCO West Island 38.36 219 P P 06 03 20.2 +0.8
COCO West Island 38.36 219 P P 06 03 20.2 +0.8
COCO pmax pmax
comp=Z,323nm,1.2s
COCO MLR MLR
comp=Z,2µm,18.0s
RABL Rabaul 38.52 123 IAMs_20 IAMs_20 06 16 00.7
comp=Z,3µm,20.0s
ADKI Addanki 38.72 272 eP P 06 03 23.7 +1.3
ADKI IAmb IAmb 06 03 25.5
comp=Z,39nm,0.9s
RPR Rampur 38.93 277 eP P 06 03 25.4 +1.2
RPR IAmb IAmb 06 03 26.6
comp=Z,38nm,0.8s
MDRS Chennai 39.01 268 eP P 06 03 24.9 0.0
MDRS IAmb IAmb 06 03 29.2
comp=Z,39nm,0.6s
NJS Nagarjunasagar 39.23 274 eP P 06 03 27.2 +0.5
NJS IAmb IAmb 06 03 29.2
comp=Z,49nm,0.8s
COEN Coen 39.25 144 P P 06 03 24.9 -2.0
SKHT Srikalahasti 39.37 269 eP P 06 03 28.8 +0.9
SKHT IAmb IAmb 06 03 30.9
comp=Z,50nm,0.9s
BOD Bodaibo 39.57 355 eP P 06 03 29.0 0.0
BOD pmax pmax
comp=Z,19nm,2.2s
SRLM Srisailam 39.70 273 eP P 06 03 31.1 +0.4
SRLM IAmb IAmb 06 03 32.9
comp=Z,29nm,1.0s
HYB Hyderabad 39.81 275 i P P 06 03 31.0 -0.7
HYB esP sP 06 03 41.0 -2.0
HYB Hyderabad 39.81 275 eP P 06 03 32.4 +0.7
PSA00 Pilbara Seismi 39.81 181 P P 06 03 29.4 -2.1
PSA00 IAmb IAmb 06 03 31.9
comp=Z,108nm,0.9s
HYBB Hyderabad (bro 39.81 275 eP P 06 03 32.3 +0.6
HYBB IAmb IAmb 06 03 33.9
comp=Z,40nm,0.8s
SRSP Sriramsagar 39.82 278 eP P 06 03 32.2 +0.5
SRSP IAmb IAmb 06 03 33.7
comp=Z,35nm,0.9s
PALK Pallekele 40.23 259 P P 06 03 35.5 +0.3
PALK PcP PcP 06 05 39.3 +0.3
PALK Pallekele 40.23 259 IAMs_20 IAMs_20 06 19 20.2
comp=Z,2µm,21.0s
PALK Pallekele 40.23 259 P P 06 03 36.1 +1.0
PALK Pallekele 40.23 259c iP P 06 03 37.0 +1.8
BHPL Bhopal 40.38 284 eP P 06 03 36.9 +0.6
BHPL IAmb IAmb 06 03 40.2
WB0 Warramunga Arr 40.40 160 P P 06 03 33.7 -2.6
WRAB Tennant Creek 40.54 160 P P 06 03 35.8 -1.8
WRAB Tennant Creek 40.54 160deP P 06 03 35.4 -2.1
WRAB pmax pmax
comp=Z,41nm,1.5s
WRA Warramunga Arr 40.54 160 P P 06 03 35.8 -1.8
comp=Z,23nm,0.8s,baz=340,slow=9.1,SNR=35
WRA PcP PcP 06 05 39.8 +0.1
comp=Z,28nm,0.6s,baz=343,slow=3.2,SNR=16
WRA S S 06 09 35.6 -10
comp=Z,1.3nm,0.8s,baz=68,slow=26,SNR=2.6
WRA Warramunga Arr 40.54 160 i P P 06 03 35.7 -1.8
WRA pmax pmax
comp=Z,26nm,0.8s
WB2 Warramunga Arr 40.55 160 P P 06 03 35.8 -1.8
WB2 IAmb IAmb 06 03 53.9
comp=Z,49nm,0.8s
WR0 Warramunga Arr 40.63 159 P P 06 03 35.5 -2.7
ZSN Zaisan 40.95 323 i P P 06 03 42.8 +2.1
ZSN eS S 06 09 55.5 +4.6
ZSN eLR LR 06 21 35.3
ZSN Zaisan 40.95 323 i P P 06 03 42.8 +2.1
ZSN eS S 06 09 55.5 +4.6
SMLA Simla 41.02 296 eP P 06 03 43.2 +1.7
SMLA IAmb IAmb 06 03 59.8
comp=Z,122nm,1.2s
URV Uravakonda 41.45 272 eP P 06 03 45.2 0.0
URV IAmb IAmb 06 03 47.5
comp=Z,68nm,1.0s
KLRI Killari 41.57 277 eP P 06 03 46.4 +0.2
KLRI IAmb IAmb 06 03 48.2
comp=Z,94nm,0.7s
BHK Bhakra 41.69 297 ex P 06 03 47.8 +0.8
DHRM DHARAMSHALA 41.90 298 eP P 06 03 47.7 -1.3
DHRM IAmb IAmb 06 04 00.8
comp=Z,160nm,1.2s
MK31 Makanchi Array 42.13 321 eP P 06 03 51.5 +1.1
MKAR Makanchi Array 42.13 321 P P 06 03 51.5 +1.1
comp=Z,23nm,0.7s,baz=118,slow=8.4,SNR=61
MKAR PcP PcP 06 05 45.2 +0.6
comp=Z,17nm,0.7s,baz=94,slow=4.9,SNR=6.5
MKAR LR LR 06 21 58.3
comp=Z,1µm,18.5s,baz=121,slow=37
MKAR Makanchi Array 42.13 321 i P P 06 03 52.0 +1.6
MKAR pmax pmax
comp=Z,23nm,0.7s
MAKZ Makanchi 42.33 321 P P 06 03 50.9 -1.1
MAKZ Makanchi 42.33 321 P P 06 03 50.9 -1.1
MAKZ pmax pmax
comp=Z,23nm,0.8s
MAKZ MLR MLR
comp=Z,2µm,19.0s
SHLS Shalkode 42.36 315⇑iP P 06 03 51.3 -1.1
comp=Z,53nm,1.5s
SHLS eS S 06 10 12.5 +0.5
SHLS eLR LR 06 21 38.8
SHLS Shalkode 42.36 315c iP P 06 03 51.3 -1.1
SHLS eS S 06 10 12.5 +0.5
SHLS pmax pmax
comp=Z,53nm,1.5s
PDGK Podgornoye 42.41 315 i P P 06 03 53.7 +0.9
PDGK pmax pmax
comp=Z,82nm,0.8s
UZB Uzynbulak 42.65 314⇑iP P 06 03 55.9 +1.1
comp=Z,39nm,0.7s
UZB eS S 06 10 20.8 +4.4
UZB Uzynbulak 42.65 314c iP P 06 03 55.9 +1.1
UZB eS S 06 10 20.8 +4.4
UZB pmax pmax
comp=Z,39nm,0.7s
PRZ Przheval'sk 42.84 313 IAMs_20 IAMs_20 06 24 15.1
comp=Z,3µm,18.0s
KPKS Kokpek 43.00 315⇑iP P 06 03 58.7 +1.1
comp=Z,52nm,1.0s
KPKS eS S 06 10 22.2 +0.8
KPKS Kokpek 43.00 315c iP P 06 03 58.7 +1.1
KPKS eS S 06 10 22.2 +0.8
KPKS pmax pmax
comp=Z,52nm,1.0s
ZHN Zhinishke 43.06 314 eP P 06 03 59.4 +1.3
ZHN eS S 06 10 27.3 +5.0
ZHN Zhinishke 43.06 314 eP P 06 03 59.4 +1.3
ZHN eS S 06 10 27.3 +5.0
KDJ Kajisay 43.56 312 IAMs_20 IAMs_20 06 24 38.4
comp=Z,3µm,19.0s
KSH Kashi 43.66 308 P P 06 04 06.5 +3.5
KSH pP pwP 06 04 11.3 +0.1
KSH sP sP 06 04 16.8 +2.5
KSH PP PcP 06 05 50.8 +0.8
KSH S S 06 10 32.9 +1.7
KSH ScS ScS 06 14 03.0 +2.2
KSH pmax pmax
comp=Z,9.0nm,1.3s
KSH pmax pmax
comp=Z,160nm,5.6s
KSH LR LR
comp=Z,2µm,15.8s
KSH LR LR
comp=Z,1µm,13.1s
KSH LR LR
comp=Z,6µm,17.0s
H11S3 WAKE ISLAND Hy 43.75 82 T T 06 49 30.8
baz=277,slow=74,SNR=100
H11S1 WAKE ISLAND Hy 43.76 82 T T 06 49 31.7
baz=277,slow=74,SNR=48
H11S2 WAKE ISLAND Hy 43.77 82 T T 06 49 31.0
baz=277,slow=74,SNR=65
TDK Taldygorghan 43.78 317 eLR LR 06 22 28.7
AS31 Alice Springs 43.90 162 P P 06 04 02.8 -2.1
ASAR Alice Springs 43.90 162 P P 06 04 03.0 -1.9
comp=Z,21nm,0.8s,baz=339,slow=6.8,SNR=77
ASAR PcP PcP 06 05 50.6 -0.2
comp=Z,10.0nm,0.7s,baz=338,slow=2.9,SNR=7.9
ASAR S S 06 10 27.2 -7.5
comp=Z,0.5nm,0.7s,baz=308,slow=39,SNR=1.4
YAK Yakutsk 43.98 6 LR LR 06 23 21.0
comp=Z,2µm,20.8s,baz=198,slow=37
YAK Yakutsk 43.98 6 P P 06 04 04.8 -0.2
YAK IAmb IAmb 06 04 24.5
comp=Z,37nm,0.7s
YAK IAMs_20 IAMs_20 06 22 58.7
comp=Z,2µm,21.0s
YAK Yakutsk 43.98 6 eP P 06 04 05.2 +0.1
YAK e*PP sP 06 04 22.5 +5.7
YAK eS S 06 10 32.5 -2.5
YAK eSS SS 06 13 40.9 -11
YAK e 06 14 01.4
YAK eSSS SSS 06 14 36.0
YAK pmax pmax
comp=Z,23nm,0.9s
YAK pmax pmax
comp=N,12nm,0.9s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK smax smax
comp=N,360nm,3.8s
YAK smax smax
comp=E,102nm,3.8s
YAK MLR MLR
comp=Z,2µm,18.0s
YAK MLR MLR
comp=N,2µm,18.0s
YAK MLR MLR
comp=E,905nm,18.0s
MDOK Medeo 44.01 314 i P P 06 04 07.2 +1.4
MDOK eS S 06 10 41.6 +5.4
MDOK eLR LR 06 22 53.6
MDOK Medeo 44.01 314 i P P 06 04 07.2 +1.4
MDOK eS S 06 10 41.6 +5.4
TNSS Tian-Shan 44.03 313 i P P 06 04 08.8 +2.5
TNSS i S S 06 10 37.7 +0.6
TNSS eS S 06 10 42.6 +5.5
TNSS Tian-Shan 44.03 313 i P P 06 04 08.7 +2.5
TNSS eS S 06 10 42.6 +5.5
POO Poona 44.10 278 eP P 06 04 07.3 +0.6
POO IAmb IAmb 06 04 09.2
comp=Z,58nm,0.5s
POO Poona 44.10 278⇑iP P 06 04 04.8 -1.9
comp=Z,110nm,0.9s
AAA Alma-Ata 44.11 314 i P P 06 04 09.2 +2.6
AAA eS S 06 10 42.3 +4.6
AAA eLR LR 06 23 00.4
AAA Alma-Ata 44.11 314 i P P 06 04 09.1 +2.6
AAA eS S 06 10 42.2 +4.6
NRN Naryn 44.18 311 IAMs_20 IAMs_20 06 25 04.1
comp=Z,5µm,18.0s
ULHL Ulahol 44.26 312 P P 06 04 10.3 +2.4
SNR=68
CHKK Chushkaly 44.29 315 eP P 06 04 07.0 -0.9
CHKK i S S 06 10 41.4 +1.3
CHKK eS S 06 10 43.5 +3.4
CHKK Chushkaly 44.29 315 eP P 06 04 07.0 -0.9
CHKK eS S 06 10 43.4 +3.4
MTBS Maitube 44.42 313 eP P 06 04 11.2 +2.2
MTBS Maitube 44.42 313 eP P 06 04 11.2 +2.2
BOOM Boomskoye usch 44.55 312 P P 06 04 11.2 +1.0
BOOM IAmb IAmb 06 04 14.0
comp=Z,51nm,1.0s
BOOM IAMs_20 IAMs_20 06 22 57.5
comp=Z,3µm,22.0s
BOOM Boomskoye usch 44.55 312 P P 06 04 11.2 +1.0
BOOM pmax pmax
comp=Z,51nm,1.0s
BOOM MLR MLR
comp=Z,3µm,22.0s
NIL Nilore 44.63 299 P P 06 04 10.9 +0.1
NIL Nilore 44.63 299 IAMs_20 IAMs_20 06 24 13.7
comp=Z,4µm,18.0s
NIL Nilore 44.63 299 P P 06 04 11.7 +0.9
NIL Nilore 44.63 299 P P 06 04 10.9 +0.1
NIL pmax pmax
comp=Z,208nm,0.9s
NIL MLR MLR
comp=Z,4µm,18.0s
KUU Kurty 44.74 314⇑iP P 06 04 12.7 +1.1
comp=Z,31nm,0.5s
KUU eS S 06 10 50.9 +4.2
KUU eLR LR 06 25 10.0
KUU Kurty 44.74 314c iP P 06 04 12.6 +1.1
KUU eS S 06 10 50.8 +4.2
KUU pmax pmax
comp=Z,31nm,0.5s
ZAA0 Zalesovo Array 44.76 331 P P 06 04 09.4 -2.0
ZAA0 IAMs_20 IAMs_20 06 23 31.1
comp=Z,2µm,20.0s
ZALV Zalesovo Beam 44.76 331 P P 06 04 11.4 0.0
comp=Z,18nm,0.8s,baz=120,slow=7.3,SNR=28
ZALV PcP PcP 06 05 52.7 -0.5
comp=Z,5.5nm,0.7s,baz=96,slow=4.5,SNR=2.1
ZALV LR LR 06 23 51.4
comp=Z,2µm,18.1s,baz=128,slow=37
KZA Kyzart 44.91 312 P P 06 04 15.6 +2.2
SNR=132
PETK Petropavlovsk- 45.02 31 P P 06 04 13.2 -0.4
comp=Z,15nm,0.9s,baz=224,slow=4.1,SNR=3.6
PETK PcP PcP 06 05 53.3 -0.9
comp=Z,4.3nm,0.6s,baz=215,slow=6.0,SNR=1.8
PETK LR LR 06 22 35.6
comp=Z,1µm,20.6s,baz=229,slow=35
SEM Semipalatinsk 45.09 324 i P P 06 04 14.8 +0.4
SEM eS S 06 10 52.4 +0.4
SEM eLR LR 06 27 24.4
SEM Semipalatinsk 45.09 324 i P P 06 04 14.8 +0.4
SEM eS S 06 10 52.3 +0.4
KBK Karagaybulak 45.30 312 P P 06 04 17.9 +1.8
SNR=104
PET Petropavlovsk 45.44 32 eP P 06 04 17.0 +0.2
UCH Uchtor 45.48 312 P P 06 04 20.1 +2.2
SNR=270
CHMS Chumysh 45.54 313 P P 06 04 19.2 +1.3
SNR=78
CHMS Chumysh 45.54 313 i P P 06 04 18.6 +0.7
CHMS pmax pmax
comp=Z,131nm,0.9s
FRU1 Bishkek 45.57 312 IAMs_20 IAMs_20 06 25 04.5
comp=Z,3µm,20.0s
AAK Ala-Archa 45.61 312 LR LR 06 25 30.1
comp=Z,3µm,20.4s,baz=86,slow=39
AAK Ala-Archa 45.61 312 P P 06 04 19.4 +0.7
SNR=43
AAK Ala-Archa 45.61 312 P P 06 04 19.7 +1.1
AAK IAmb IAmb 06 04 22.5
comp=Z,46nm,0.8s
AAK Ala-Archa 45.61 312 IAMs_20 IAMs_20 06 25 16.7
comp=Z,3µm,20.0s
AAK Ala-Archa 45.61 312 P P 06 04 20.4 +1.8
AAK Ala-Archa 45.61 312ceP P 06 04 20.9 +2.3
AAK pmax pmax
comp=Z,54nm,0.8s
SGDS Sogindy 45.77 313 i P P 06 04 20.6 +0.9
SGDS eS S 06 11 06.9 +5.3
USP Ospenovka 45.80 313 P P 06 04 20.6 +0.7
SNR=61
CTA Charters Tower 45.93 145 P P 06 04 21.9 +0.8
CTA pmax pmax
comp=Z,34nm,1.1s
CTAO Charters Tower 45.93 145 P P 06 04 21.9 +0.8
CTAO pmax pmax
comp=Z,32nm,1.1s
AML Almayashu 46.04 311 P P 06 04 24.2 +2.0
SNR=157
EKS2 Erkin-Say 46.13 312 P P 06 04 24.5 +1.9
SNR=85
KURK Kurchatov 46.15 324 P P 06 04 22.9 +0.5
KURK IAmb IAmb 06 04 26.7
comp=Z,89nm,0.9s
KURK Kurchatov 46.15 324 IAMs_20 IAMs_20 06 24 07.2
comp=Z,1µm,18.0s
KURK Kurchatov 46.15 324 P P 06 04 23.6 +1.1
KURK Kurchatov 46.15 324c iP P 06 04 23.1 +0.6
KURK pmax pmax
comp=Z,121nm,1.0s
KURBB Kurchatov Arra 46.16 324 P P 06 04 23.0 +0.5
ARSB Arslanbob 46.33 310 P P 06 04 23.9 -0.4
ARSB Arslanbob 46.33 310 P P 06 04 23.9 -0.4
MA2 Magadan 46.51 21 P P 06 04 24.6 -0.6
baz=206,slow=5.5,SNR=5.0
MA2 PcP PcP 06 05 58.8 -0.4
comp=Z,3.4nm,0.3s,baz=195,slow=8.7,SNR=2.4
MA2 Magadan 46.51 21 P P 06 04 24.2 -1.0
MA2 Magadan 46.51 21⇓iP P 06 04 24.9 -0.3
MA2 pmax pmax
comp=Z,30nm,1.3s
BTLS Baital 46.67 315 eP P 06 04 28.2 +1.4
BTLS Baital 46.67 315 eP P 06 04 28.1 +1.4
MORW Morawa 47.46 185 P P 06 04 31.6 -1.3
BTK Batken 47.64 308 P P 06 04 30.1 -4.4
BTK Batken 47.64 308 P P 06 04 30.1 -4.4
BTK pmax pmax
comp=Z,221nm,1.6s
HNR Honiara 47.83 122 IAMs_20 IAMs_20 06 21 17.6
comp=Z,2µm,21.0s
DZA Taraz 47.92 312 eP P 06 04 38.0 +1.4
DZA eS S 06 11 36.6 +4.3
DZA Taraz 47.92 312 eP P 06 04 37.9 +1.4
DZA eS S 06 11 36.6 +4.3
KBL Kabul 48.20 300 P P 06 04 38.4 -0.7
KBL Kabul 48.20 300 P P 06 04 40.5 +1.5
SNR=49
KBL Kabul 48.20 300 P P 06 04 38.4 -0.7
KBL pmax pmax
comp=Z,101nm,1.1s
KBL MLR MLR
comp=Z,4µm,20.0s
JBG Jabagly 48.37 311 eP P 06 04 40.8 +0.7
JBG eS S 06 11 40.0 +1.1
JBG pmax pmax
comp=Z,35nm,1.1s
KK31 Karatay Array 48.56 312 P P 06 04 42.1 +0.7
KK31 Karatay Array 48.56 312 P P 06 04 42.1 +0.7
KK31 pmax pmax
comp=Z,104nm,0.8s
KKAR Karatay Array 48.56 312 P P 06 04 42.2 +0.8
KKAR Karatay Array 48.56 312 P P 06 04 42.2 +0.8
KKAR pmax pmax
comp=Z,104nm,0.8s
IUG Iuzhnay 48.68 310 eS S 06 11 44.0 +0.9
IUG eLR LR 06 26 26.1
TAS Tashkent 49.04 309 P P 06 04 47.9 +2.8
TAS pmax pmax
comp=Z,125nm,1.2s
BRZS Berezniki 49.28 321⇑iP P 06 04 47.6 +0.7
comp=Z,53nm,0.8s
BRZS eS S 06 11 54.5 +3.3
BRZS eLR LR 06 27 13.5
BRZS Berezniki 49.28 321c iP P 06 04 47.5 +0.7
BRZS eS S 06 11 54.4 +3.3
BRZS pmax pmax
comp=Z,53nm,0.8s
FORT Forrest 49.52 171 P P 06 04 47.5 -1.2
SEY Seymchan 49.56 19 P P 06 04 48.8 +0.1
comp=Z,20nm,0.9s,baz=227,slow=5.9,SNR=37
SEY PcP PcP 06 06 09.5 -0.6
comp=Z,8.8nm,0.8s,baz=191,slow=21,SNR=2.4
SEY Seymchan 49.56 19⇓iP P 06 04 49.3 +0.6
KAAM Kaadhehdhoo 49.88 254 P P 06 04 51.9 0.0
KAAM IAMs_20 IAMs_20 06 26 36.5
comp=Z,3µm,18.0s
KAAM Kaadhehdhoo 49.88 254 P P 06 04 54.7 +2.8
SNR=6.0
NWAO Narrogin (SRO) 51.21 183 LR LR 06 28 15.3
comp=Z,547nm,21.3s,baz=26,slow=38
NWAO Narrogin (SRO) 51.21 183 P P 06 05 00.7 -0.9
NWAO Narrogin (SRO) 51.21 183 P P 06 05 00.5 -1.0
NWAO IAmb IAmb 06 05 02.7
comp=Z,158nm,1.4s
NWAO Narrogin (SRO) 51.21 183 P P 06 05 00.5 -1.0
BRVK Borovoye 51.82 324 P P 06 05 06.6 +0.6
BRVK Borovoye 51.82 324 IAMs_20 IAMs_20 06 28 24.2
comp=Z,1µm,19.0s
BRVK Borovoye 51.82 324 P P 06 05 07.0 +1.0
BRVK Borovoye 51.82 324c iP P 06 05 06.5 +0.6
BRVK pmax pmax
comp=Z,147nm,0.9s
EIDS Eidsvold 52.80 145 P P 06 05 12.9 -0.6
BBOO Buckleboo 53.14 164 P P 06 05 14.4 -1.5
BBOO IAmb IAmb 06 05 16.5
comp=Z,71nm,0.8s
TIXI Tiksi 53.40 3 P P 06 05 16.7 -0.5
comp=Z,38nm,0.9s,baz=157,slow=4.7,SNR=61
TIXI LR LR 06 30 22.0
comp=Z,2µm,18.8s,baz=188,slow=39
TIXI Tiksi 53.40 3 P P 06 05 15.5 -1.8
TIXI IAmb IAmb 06 05 18.9
comp=Z,53nm,1.0s
TIXI IAMs_20 IAMs_20 06 29 30.0
comp=Z,2µm,20.0s
TIXI Tiksi 53.40 3c iP P 06 05 16.2 -1.1
TIXI pmax pmax
comp=Z,55nm,1.0s
HRA Herat 53.80 299 P P 06 05 19.7 -1.5
HRA IAmb IAmb 06 06 28.4
comp=Z,25nm,0.8s
DGAR Diego Garcia 53.89 246 IAMs_20 IAMs_20 06 29 01.4
comp=Z,2µm,18.0s
STKA Stephens Creek 54.02 158 P P 06 05 20.2 -2.2
comp=Z,24nm,0.7s,baz=336,slow=7.7,SNR=43
STKA PcP PcP 06 06 27.2 0.0
comp=Z,12nm,0.8s,baz=318,slow=5.7,SNR=3.3
STKA LR LR 06 30 21.2
comp=Z,488nm,20.8s,baz=354,slow=38
STKA Stephens Creek 54.02 158 P P 06 05 21.6 -0.7
STKA PcP PcP 06 06 27.2 0.0
STKA Stephens Creek 54.02 158 P P 06 05 21.8 -0.6
STKA pmax pmax
comp=Z,7.0nm,1.0s
ASHT Ashkhabad 57.02 304 IAMs_20 IAMs_20 06 32 41.8
comp=Z,2µm,21.0s
ABKAR Akbulak array 57.03 317 P P 06 05 43.5 -0.4
ABKAR IAmb IAmb 06 05 46.5
comp=Z,43nm,0.8s
GEYT Alibeck 57.23 304 P P 06 05 46.4 +0.8
comp=Z,35nm,0.8s,baz=129,slow=4.0,SNR=50
GYA0B ALIBECK ARRAY 57.23 304 P P 06 05 45.1 -0.4
GYA0B IAmb IAmb 06 05 48.9
comp=Z,49nm,0.9s
GYA0B IAMs_20 IAMs_20 06 32 59.4
comp=Z,2µm,21.0s
BILL Bilibino 57.26 19 P P 06 05 44.5 -0.7
BILL Bilibino 57.26 19 eP P 06 05 45.1 -0.1
BILL e 06 06 36.6
BILL e 06 07 54.0
BILL pmax pmax
comp=Z,23nm,1.3s
BILL MLR MLR
comp=Z,1µm,18.0s
WSAR Wadi Sarin 57.60 286 P P 06 05 48.5 +0.2
BIDO Bidbid 58.02 287 P P 06 05 52.4 +1.1
SMDO Samad 58.16 286 P P 06 05 52.6 +0.2
JMDO Jabal Madar 58.20 285 P P 06 05 52.1 -0.5
SVE Sverdlovsk 58.30 326⇓eP P 06 05 53.0 +0.4
SVE pmax pmax
comp=Z,109nm,1.0s
SVE MLR MLR
comp=Z,1µm,16.0s
AKTO Aktyubinsk 58.46 318 LR LR 06 31 40.8
comp=Z,702nm,19.0s,baz=102,slow=37
MHTO MHTO 58.54 284 P P 06 05 55.0 0.0
SNR=7.4
HOQ Hoqain 58.76 287 P P 06 05 56.1 -0.3
BSY Bisya 58.98 286 P P 06 05 57.9 0.0
DQM DQM 59.12 283 P P 06 05 59.1 +0.2
ARU Arti 59.31 325 LR LR 06 34 16.4
comp=Z,1µm,18.2s,baz=96,slow=39
ARU Arti 59.31 325 P P 06 05 59.2 -0.5
ARU Arti 59.31 325c iP P 06 05 59.4 -0.3
ARU 06 06 48.3
ARU S S 06 14 09.3 +3.2
ARU SS SS 06 18 06.5 +5.7
ARU pmax pmax
comp=Z,96nm,1.2s
ARU MLR MLR
comp=Z,1µm,17.0s
ASHO Ashiyiah 59.74 288 P P 06 06 04.6 +1.3
DZM Mont Dzumac 60.40 130 eS S 06 14 19.2 -2.0
comp=Z,655nm,27.2s
DZM eLR LR 06 23 59.8
comp=Z,3µm,22.3s
TOO Toolangi 60.53 157 P P 06 06 08.9 +0.6
TOO IAmb IAmb 06 06 12.0
comp=Z,22nm,0.9s

TOO Toolangi 60.53 157 P P 06 06 08.9 +0.6
TOO pmax pmax
comp=Z,23nm,0.9s
DMTO DMTO 61.94 281 P P 06 06 18.7 +0.4
RBK Rabkut 62.68 281 P P 06 06 24.2 +0.9
SNR=5.2
WHFO Wadi Hawf 63.00 281 P P 06 06 24.6 -0.8
SNR=11
ABTO Aybut 63.56 281 P P 06 06 28.5 -0.6
SNR=5.4
GAMB Gambell 63.81 27 P P 06 06 29.1 -0.8
SOCY Socotra 64.11 275 P P 06 06 31.2 -1.6
SOCY IAMs_20 IAMs_20 06 38 06.8
comp=Z,1μm,18.0s
SOCY Socotra 64.11 275 P P 06 06 31.9 -0.9
SNR=11
KIRV Kirov 64.54 327 iP P 06 06 35.4 +0.7
LKRN Lenkeran, Azer 64.55 305 P P 06 06 35.8 +0.6
AKT Akhty 65.19 308 eP P 06 06 39.8 +0.3
AKT e 06 07 10.6
AKT pmax pmax
comp=Z,51nm,0.8s
MAK Makhachkala 65.28 309 eP P 06 06 35.6 -4.3
MAK ePPP PPP 06 10 34.7
MAK eS S 06 15 16.0 -5.7
MAK eSS SS 06 19 32.9 -1.7
MAK pmax pmax
comp=Z,163nm,1.1s
MAK MLR MLR
comp=Z,995nm,14.0s
SEKA Sheki 65.60 307 P P 06 06 42.9 +0.8
MNGR Mingechevir, A 65.72 307 P P 06 06 44.4 +1.6
TAU Tasmania Unive 65.91 159 P P 06 06 45.6 +1.9
TAU pmax pmax
comp=Z,45nm,1.5s
LGD Lagodekhi 66.28 308 P P 06 06 48.4 +2.0
GANJ Ganja 66.30 307 P P 06 06 47.4 +0.8
GROC Groznyy 66.51 310 eP P 06 06 47.8 0.0
GROC e 06 07 16.1
GROC pmax pmax
comp=Z,45nm,0.9s
ANM Nome 66.67 27 P P 06 06 49.0 +0.5
ANM Nome 66.67 27 P P 06 06 49.0 +0.5
ANM pmax pmax
comp=Z,21nm,1.0s
PRGR Permogore 66.70 330 eP P 06 06 48.3 -0.4
PRGR pmax pmax
comp=Z,37nm,0.7s
NAX Nakhchivan 67.07 305 P P 06 06 52.6 +1.0
MSVF Nonsavu 67.09 119 P P 06 06 54.0 +2.1
MSVF Nonsavu 67.09 119 P P 06 06 54.0 +2.1
MSVF pmax pmax
comp=Z,63nm,0.9s
TBLG Delisi 67.41 308 P P 06 06 54.0 +0.4
TBLG Delisi 67.41 308 P P 06 06 54.0 +0.4
GUDG Gudauri 67.53 309 P P 06 06 54.9 +0.2
GNI Garni 67.55 307 P P 06 06 55.6 +0.9
GNI IAmb IAmb 06 07 03.1
comp=Z,32nm,0.9s
GNI Garni 67.55 307 ceP P 06 06 55.5 +0.8
GNI pmax pmax
comp=Z,138nm,1.2s
KZRT Kazreti 67.69 308 P P 06 06 56.3 +0.9
ZEI Tsey 67.93 309 eP P 06 06 55.4 -1.7
ZEI pmax pmax
comp=Z,31nm,0.8s
MSEY Mahe Island 68.00 257 P P 06 06 57.7 -0.1
MSEY IAmb IAmb 06 07 00.1
comp=Z,60nm,1.0s
MSEY Mahe Island 68.00 257 IAMs_20 IAMs_20 06 34 51.4
comp=Z,1μm,20.0s
MSEY Mahe Island 68.00 257 P P 06 06 57.7 -0.1
MSEY pmax pmax
comp=Z,60nm,1.0s
RDOG Red Dog Mine 68.01 23 P P 06 06 56.6 -0.3
RDOG IAmb IAmb 06 07 26.6
comp=Z,26nm,1.2s
ONI Oni 68.28 309 P P 06 07 00.6 +1.5
CLDR Caldiran 68.29 306 eP P 06 07 00.3 +0.8
BGD Bogdanovka 68.30 308 P P 06 07 01.4 +1.9
GOF Gofitskoye 68.35 312⇑eP P 06 06 59.7 +0.2
GOF pmax pmax
comp=Z,28nm,0.9s
AKH Akhalkalaki 68.37 308 P P 06 07 00.1 +0.3
AKH Akhalkalaki 68.37 308 P P 06 07 00.7 +0.9
AKH IAmb IAmb 06 07 03.0
comp=Z,63nm,0.9s
AKH IAMs_20 IAMs_20 06 41 26.9
comp=Z,2μm,18.0s
AKH Akhalkalaki 68.37 308 P P 06 07 00.7 +0.9
AKH pmax pmax
comp=Z,63nm,0.9s
AKH MLR MLR
comp=Z,2μm,18.0s
KBZ Khabaz 68.58 310 P P 06 07 01.2 +0.4
comp=Z,36nm,0.9s,baz=107,slow=4.1,SNR=66
KBZ LR LR 06 40 34.3
comp=Z,2μm,18.0s,baz=64,slow=39
KIV Kislovodsk 68.70 311 P P 06 07 02.1 +0.3
KIV IAMs_20 IAMs_20 06 41 49.8
comp=Z,1μm,18.0s
KIV Kislovodsk 68.70 311 eP P 06 07 03.0 +1.2
KIV e 06 07 26.5
KIV eS S 06 16 07.7 +4.4
KIV pmax pmax
comp=Z,338nm,1.0s
KIV pmax pmax
comp=Z,165nm,3.4s
KIV MLR MLR
comp=Z,3μm,17.0s
NEY Neytrino 68.75 310⇓eP P 06 07 03.4 +1.2
VRH Novokhopyorsk 68.80 319 eP P 06 07 01.6 -0.5
VRH pmax pmax
comp=Z,100nm,0.8s
VRH MLR MLR
comp=Z,2μm,15.0s
AKDM Akdamar-Van 69.12 305 eP P 06 07 05.1 +0.5
CNBA Chernabura Isl 69.34 38 P P 06 07 03.9 -1.5
CNBA IAmb IAmb 06 08 08.8
comp=Z,92nm,1.4s
RAYN Ar Rayn 69.44 289 P P 06 07 06.5 -0.2
RAYN IAMs_20 IAMs_20 06 42 12.9
comp=Z,1μm,19.0s
RAYN Ar Rayn 69.44 289 P P 06 07 06.5 -0.2
RAYN pmax pmax
comp=Z,93nm,0.9s
RAYN MLR MLR
comp=Z,1μm,19.0s
KLMR Klimovskoe 69.64 329 eP P 06 07 05.5 -1.5
KLMR S S 06 16 17.4 +3.9
KLMR pmax pmax
comp=Z,83nm,1.0s
KLMR MLR MLR
comp=Z,2μm,16.0s
KLMR Klimovskoe 69.64 329 eP P 06 07 05.6 -1.5
KLMR eP P 06 07 05.6 -1.5
KLMR eP P 06 07 05.6 -1.5
KLMR AMP 06 07 08.3
comp=Z,83nm,1.0s
KLMR S S 06 16 17.4 +3.9
KLMR S S 06 16 17.4 +3.9
KLMR LQ LQ 06 31 29.0
KLMR LQ LQ 06 31 29.0
KLMR LR LR 06 35 56.8
KLMR AMP 06 40 09.9
comp=Z,2μm,15.5s
SIRT Sirnak 69.65 304 eP P 06 07 08.3 +0.5
GURO Guroymak-BITLI 69.82 305 eP P 06 07 10.4 +1.5
VRTB Varto-Mus 70.19 306 eP P 06 07 12.6 +1.5
TMCR Tamitsa 70.24 333 eP P 06 07 10.6 -0.1
TMCR pmax pmax
comp=Z,85nm,1.0s
VSR Storozhevoye 70.40 319 eP P 06 07 11.1 -0.9
VSR pmax pmax
comp=Z,70nm,1.1s
VSR MLR MLR
comp=Z,1μm,16.0s
TTA Tatalina 70.79 29 P P 06 07 13.9 -0.4
TTA Tatalina 70.79 29 P P 06 07 13.9 -0.4
BNGB Bingl 70.81 306 eP P 06 07 14.9 0.0
SOC Sochi 70.89 311 eP P 06 07 13.0 -2.1
SOC e 06 09 54.1
SOC ePPP PPP 06 11 37.5
SOC eS S 06 16 32.2 +3.5
SOC eSS SS 06 21 00.2 -1.1
SOC eSSS SSS 06 24 14.6
SOC pmax pmax
comp=Z,47nm,0.8s
SOC MLR MLR
comp=Z,970nm,18.0s
MOS Moscow 70.92 324 eP P 06 07 14.9 -0.2
MOS e 06 07 28.0
MOS e 06 17 13.7
MOS pmax pmax
comp=Z,117nm,1.2s
MOS pmax pmax
comp=Z,67nm,0.9s
MOS MLR MLR
comp=Z,1μm,17.0s
SVW2 Sparrevohn 71.10 31 P P 06 07 16.2 +0.1
SVW2 IAmb IAmb 06 07 48.7
comp=Z,29nm,1.3s
DYBB Diyarbakir 71.39 305 eP P 06 07 19.4 +1.0
LVZ Lovozero 71.46 337 IAMs_20 IAMs_20 06 44 02.9
comp=Z,1μm,18.0s
OBN Obninsk 71.58 323 LR LR 06 41 04.5
comp=Z,459nm,18.2s,baz=62,slow=38
OBN Obninsk 71.58 323 IAMs_20 IAMs_20 06 40 35.8
comp=Z,2μm,18.0s
OBN Obninsk 71.58 323 eP P 06 07 19.3 +0.3
OBN e 06 07 34.5
OBN e 06 09 55.6
OBN ePPP PPP 06 11 42.3
OBN pmax pmax
comp=Z,73nm,1.0s
OBN MLR MLR
comp=Z,2μm,17.0s
APA Apatity 71.96 336⇑iP P 06 07 20.8 -0.3
APA pmax pmax
comp=Z,3.0nm,0.8s
APA MLR MLR
comp=Z,2μm,13.0s
URFA Urfa 72.50 304 eP P 06 07 25.8 +0.7
PPLA Purkeypile 72.53 29 P P 06 07 25.2 +0.4
DAMY Dhamar 72.54 280 IAMs_20 IAMs_20 06 45 18.8
comp=Z,1μm,21.0s
OHAK Old Harbor 72.66 35 P P 06 07 24.7 -0.8
OHAK IAmb IAmb 06 07 28.8
comp=Z,41nm,1.0s
MLY Manley 72.92 26 P P 06 07 27.2 +0.2
MLY IAmb IAmb 06 07 29.2
comp=Z,25nm,0.9s
BPAW Bear Paw Mtn. 72.93 27 P P 06 07 27.5 +0.4
BPAW IAmb IAmb 06 07 48.4
comp=Z,70nm,1.4s
SKT Skwentna 72.94 30 P P 06 07 26.6 -0.6
SKT IAmb IAmb 06 07 29.0
comp=Z,103nm,1.9s
KDAK Kodiak Island 72.96 34 P P 06 07 26.7 -0.5
comp=Z,33nm,0.9s,baz=276,slow=3.5,SNR=10
KDAK Kodiak Island 72.96 34 P P 06 07 26.9 -0.4
KDAK IAmb IAmb 06 07 29.9
comp=Z,55nm,1.0s
KDAK Kodiak Island 72.96 34 P P 06 07 26.9 -0.4
KDAK pmax pmax
comp=Z,55nm,1.0s
KTH Kantishna Hill 73.03 28 P P 06 07 27.6 -0.1
TRF Thorofare Moun 73.32 28 P P 06 07 29.3 -0.2
TRF IAmb IAmb 06 07 53.7
comp=Z,72nm,1.7s
TRF IAMs_20 IAMs_20 06 32 33.4
comp=Z,1μm,19.0s
DARE Darende-Malaty 73.34 306 eP P 06 07 31.4 +1.3
JOF Joensuu 73.34 331 P P 06 07 29.6 +0.2
JOF pmax pmax
comp=Z,43nm,1.0s
SUA Susitna One 73.38 30 P P 06 07 29.4 -0.4
SUA IAmb IAmb 06 07 34.3
comp=Z,63nm,1.2s
CNPM China Poot 73.42 32 P P 06 07 29.5 -0.5
SVSK Karacayir 73.47 307 eP P 06 07 31.9 +1.3
NEA Nenana 73.69 27 P P 06 07 31.1 -0.3
GAZ Gaziantep 73.81 304 eP P 06 07 32.7 -0.1
MSF Maaselka 73.88 335 P P 06 07 32.7 +0.2
MSF pmax pmax
comp=Z,68nm,0.8s
MCK McKinley 73.88 28 P P 06 07 32.0 -0.6
MCK IAmb IAmb 06 07 34.5
comp=Z,38nm,1.1s
MCK McKinley 73.88 28 P P 06 07 32.0 -0.6
MCK pmax pmax
comp=Z,38nm,1.1s
RC01 Rabbit Creek A 73.92 30 P P 06 07 33.1 +0.2
RND Reindeer 73.97 28 P P 06 07 32.3 -0.9
RND IAmb IAmb 06 07 34.2
comp=Z,32nm,0.9s
RND Reindeer 73.97 28 P P 06 07 32.3 -0.9
RND pmax pmax
comp=Z,32nm,0.9s
KVT Kavak 73.97 308 eP P 06 07 34.6 +1.0
MDM Murphy Dome 73.99 26 P P 06 07 33.1 -0.1
MDM IAmb IAmb 06 07 56.6
comp=Z,23nm,0.8s
MDM IAMs_20 IAMs_20 06 45 01.9
comp=Z,806nm,19.0s
KEV Kevo 74.01 339 P P 06 07 32.8 -0.4
KEV IAmb IAmb 06 09 43.9
comp=Z,100nm,1.7s
KEV Kevo 74.01 339 P P 06 07 32.8 -0.4
KEV pmax pmax
comp=Z,100nm,1.7s
WRH Wood River Hil 74.12 27 P P 06 07 33.8 -0.2
PMR Palmer 74.13 30 P P 06 07 33.6 -0.5
PMR Palmer 74.13 30 P P 06 07 33.6 -0.5
PMR pmax pmax
comp=Z,21nm,1.0s
TCOL CIGO, UAF Yank 74.16 26 P P 06 07 34.4 +0.2
baz=280
COLA College 74.16 26 P P 06 07 33.9 -0.3
COLA College 74.16 26 P P 06 07 33.9 -0.3
COLA pmax pmax
comp=Z,20nm,1.1s
GHO Glory Hole Cre 74.20 30 P P 06 07 33.7 -0.9
GHO IAmb IAmb 06 07 54.5
comp=Z,116nm,1.8s
CCB Clear Creek Bu 74.22 27 P P 06 07 34.5 -0.1
POKR Poker Plat Res 74.29 26 P P 06 07 34.1 -1.0
baz=280
SML Sawmill 74.47 30 P P 06 07 35.4 -0.7
SML IAmb IAmb 06 07 40.5
comp=Z,41nm,1.0s
KNK Knik Glacier 74.48 30 P P 06 07 35.7 -0.4
KNK IAmb IAmb 06 07 45.8
comp=Z,33nm,0.9s
ARCES ARCESS Array B 74.56 339 P P 06 07 35.6 -0.9
comp=Z,7.4nm,0.5s,baz=76,slow=7.2,SNR=63
ARCES LR LR 06 45 22.2
comp=Z,843nm,18.6s,baz=48,slow=40
ARCES ARCESS Array B 74.56 339 eP P 06 07 36.0 -0.5
ARE0 ARCESS Array S 74.56 339 eP P 06 07 36.4 -0.1
IL31 74.58 26 P P 06 07 35.1 -1.5
ILAR Eielson Array 74.58 26 P P 06 07 35.0 -1.6
comp=Z,3.7nm,0.8s,baz=271,slow=3.8,SNR=29
SGF Sodankyl 74.60 336 P P 06 07 37.1 +0.4
SGF pmax pmax
comp=Z,54nm,0.9s
HDA Harding Lake 74.62 27 P P 06 07 35.7 -1.2
HDA Harding Lake 74.62 27 P P 06 07 35.5 -1.5
baz=281
SIM Simferopol' 74.64 313 ceP P 06 07 38.6 +1.2
SIM eS SKiKP 06 17 06.0 +4.8
SIM pmax pmax
comp=Z,75nm,0.9s
DHY Denali Highway 74.68 28 P P 06 07 36.8 -0.7
YOZ Yozgat 74.79 307 eP P 06 07 38.1 -0.5
ATD Arta Tunnel 74.80 277 P P 06 07 36.9 -2.0
ATD IAmb IAmb 06 07 41.9
comp=Z,42nm,1.0s
KOZT Kozan 74.83 305 eP P 06 07 38.3 -0.4
SPA0 Spitsbergen Ar 74.89 348 eP P 06 07 38.6 +0.4
SPA0 Spitsbergen Ar 74.89 348 P P 06 07 36.9 -1.3
SPA0 IAmb IAmb 06 07 40.8
comp=Z,80nm,1.1s
SPITS Spitsbergen Ar 74.89 348 P P 06 07 38.5 +0.2
SPITS pmax pmax
comp=Z,29nm,0.7s
FYU Fort Yukon 74.91 24 P P 06 07 38.2 -0.3
SCM Sheep Creek Mo 74.93 29 P P 06 07 39.6 +0.7
SCM IAmb IAmb 06 07 41.1
comp=Z,86nm,1.3s
SCM Sheep Creek Mo 74.93 29 P P 06 07 39.6 +0.7
SCM pmax pmax
comp=Z,87nm,1.3s
BZK Bozkurt 75.30 310 ⇑P P 06 07 41.7 +0.4
OUL Oulu 75.32 334 P P 06 07 41.4 +0.5
OUL pmax pmax
comp=Z,52nm,1.0s
HSPB Hornsund (broa 75.43 347 eP P 06 07 40.4 -0.9
HSPB Hornsund (broa 75.43 347 eP P 06 07 41.3 -0.1
KBS Kingsbay 75.47 349 eP P 06 07 41.2 -0.3
KBS Kingsbay 75.47 349 P P 06 07 41.7 +0.1
KBS IAmb IAmb 06 07 42.9
comp=Z,25nm,0.8s
KBS Kingsbay 75.47 349 IAMs_20 IAMs_20 06 44 58.6
comp=Z,4μm,18.0s
KBS Kingsbay 75.47 349 ceP P 06 07 42.3 +0.7
KBS pmax pmax
comp=Z,264nm,2.5s
PAX Paxson 75.55 28 P P 06 07 42.5 +0.1
PAX Paxson 75.55 28 P P 06 07 42.5 +0.1
PAX pmax pmax
comp=Z,19nm,1.1s
RIDG Independent Ri 75.66 27 P P 06 07 42.0 -1.0
RIDG IAmb IAmb 06 07 44.8
comp=Z,50nm,1.2s
ILGA Ilgaz 75.70 309 P P 06 07 44.7 +0.9
ILGA IAmb IAmb 06 07 46.9
comp=Z,47nm,1.4s
SUF Sumiainen 75.71 332 P P 06 07 43.4 +0.2
SUF pmax pmax
comp=Z,69nm,0.9s
SCRK Sand Creek 75.98 27 P P 06 07 43.8 -1.1
MERS Mersin 75.98 304 eP P 06 07 45.9 +0.5
FIA1 FINESS Array S 76.02 330 P P 06 07 44.5 -0.5
FIA1 IAmb IAmb 06 07 46.4
comp=Z,58nm,0.9s
FINES FINESS Array B 76.02 330 P P 06 07 44.4 -0.6
comp=Z,40nm,0.8s,baz=84,slow=5.9,SNR=73
FINES LR LR 06 44 08.1
comp=Z,2μm,19.8s,baz=74,slow=38
DOT Dot Lake 76.02 27 P P 06 07 44.5 -0.5
DOT IAmb IAmb 06 07 46.9
comp=Z,44nm,1.6s
BR131 Keskin Array S 76.04 307 P P 06 07 44.8 -1.0
BR131 Keskin Array S 76.04 307 P P 06 07 45.7 0.0
SNR=8.6
BR131 Keskin Array S 76.04 307 ceP P 06 07 45.7 0.0
BRTR Keskin Array B 76.04 307 P P 06 07 45.5 -0.3
comp=Z,3.5nm,0.6s,baz=139,slow=5.5,SNR=26
HIZ Hauiti 76.23 139 P P 06 07 47.3 +0.9
QRZ Quartz Range 76.26 142 P P 06 07 48.2 +1.6
QRZ IAmb IAmb 06 07 49.5
comp=Z,42nm,0.9s
QRZ IAMs_20 IAMs_20 06 45 24.6
comp=Z,1μm,18.0s
MENT Mentasta 76.34 28 P P 06 07 46.7 -0.1
MENT IAmb IAmb 06 07 49.7
comp=Z,37nm,1.4s
VSU Vasula 76.37 327 eP P 06 07 46.8 -0.1
VSU Vasula 76.37 327 ceP P 06 07 46.5 -0.5
YESY Yesilyurt 76.39 306 eP P 06 07 48.1 +0.4
ANTO Ankara 76.64 308 P P 06 07 47.1 -2.0
ANTO IAmb IAmb 06 07 50.8
comp=Z,37nm,1.1s
ANTO Ankara 76.64 308 P P 06 07 47.1 -2.0
ANTO pmax pmax
comp=Z,37nm,1.1s
GLB Gilahina Butte 76.66 29 P P 06 07 47.6 -1.1
GLB IAmb IAmb 06 08 10.6
comp=Z,39nm,1.2s
AKASG Malin Array Be 76.69 319 P P 06 07 47.6 -1.4
comp=Z,25nm,0.8s,baz=63,slow=5.7,SNR=50
AKASG Malin Array Be 76.69 319 iP P 06 07 48.4 -0.6
AKASG pmax pmax
comp=Z,25nm,0.8s
AKBB Malin Array Si 76.69 319 P P 06 07 46.2 -2.8
AKBB IAmb IAmb 06 07 49.8
comp=Z,34nm,0.8s
AKBB Malin Array Si 76.69 319 P P 06 07 46.2 -2.8
AKBB pmax pmax
comp=Z,34nm,0.9s
KEBE Keben-Mersin 76.71 304 eP P 06 07 50.4 +0.9
TRO Tromso 76.78 339 eP P 06 07 48.6 -0.5
TEVE Tevekalti-Mers 76.92 304 eP P 06 07 50.9 +0.2
EGAK Eagle 76.97 26 P P 06 07 49.5 -0.9
THZ Tophouse 77.08 143 P P 06 07 52.1 +0.9
THZ IAmb IAmb 06 07 53.0
comp=Z,33nm,0.8s
BERE Bereket-Mersin 77.12 304 eP P 06 07 52.2 +0.3
VAF Ylistaro 77.18 332 P P 06 07 52.0 +0.5
VAF pmax pmax
comp=Z,77nm,1.0s
TEKE Tekeli-Mersin 77.25 304 eP P 06 07 52.3 -0.2
IZAR Zarasai 77.26 325 eP P 06 07 52.5 +0.4
IZAR IAmb IAmb 06 07 54.1
comp=Z,31nm,0.8s
RPZ Rata Peaks 77.30 145 P P 06 07 52.7 +0.3
RPZ IAmb IAmb 06 07 55.4
comp=Z,54nm,1.0s
CSS Mathiatis 77.36 303 P P 06 07 52.5 -0.6
CSS Mathiatis 77.36 303 P P 06 07 53.0 -0.1
CSS IAMs_20 IAMs_20 06 45 48.3
comp=Z,1μm,22.0s
LTZ Lake Taylor 77.37 144 P P 06 07 54.6 +1.7
LTZ IAmb IAmb 06 07 56.6
comp=Z,65nm,1.1s
IIGN Ignalina 77.37 324 eP P 06 07 53.0 +0.3
IIGN IAmb IAmb 06 07 54.8
comp=Z,23nm,0.8s
ISAL Salakas 77.37 325 eP P 06 07 52.7 0.0
ISAL IAmb IAmb 06 07 54.8
comp=Z,28nm,0.8s
TUWZ Tuamarina 77.47 142 P P 06 07 53.4 0.0
HDMB Hadim 77.55 305 eP P 06 07 54.5 +0.1
KIZT Kizilcal 77.56 307 eP P 06 07 54.7 +0.4
BKZ Black Stump Fm 77.64 139 P P 06 07 54.7 +0.2
BKZ IAmb IAmb 06 07 58.5
comp=Z,78nm,1.3s
LEF Lefka 77.67 303 ⇑P P 06 07 55.6 +0.8
MDUB Mudurnu 77.69 309 eP P 06 07 55.6 +0.6
MDUB Mudurnu 77.69 309 P P 06 07 54.0 -1.0
BARN Barnard Glacie 77.76 30 P P 06 07 55.3 +0.2
BARN IAmb IAmb 06 08 10.5
comp=Z,86nm,1.6s
KIS Kishinev 77.81 316 eP P 06 07 54.0 -1.3
KIS Kishinev 77.81 316 eP P 06 07 54.0 -1.3
KIS e 06 08 04.0
KIS e 06 18 38.0
KIS MLR MLR
comp=Z,1μm,20.0s
SORM Soroca 77.84 317 ⇑P P 06 07 54.9 -0.7
SORM Soroca 77.84 317 P P 06 07 54.8 -0.7
KHZ Kahutara 77.86 143 P P 06 07 54.8 -0.7
KHZ IAmb IAmb 06 07 57.2
comp=Z,41nm,0.9s
DAWY Dawson 77.91 26 P P 06 07 54.7 -1.0
NOR Nord 77.91 354 iP P 06 07 54.0 -1.3
comp=Z,24nm,1.1s
NOR Nord 77.91 354 iP P 06 07 54.0 -1.3
NOR pmax pmax
comp=Z,24nm,1.1s
CTGM Chitina Glacie 77.94 30 P P 06 07 56.6 +0.6
CTGM IAmb IAmb 06 07 58.4
comp=Z,35nm,0.8s
GULT Gulveren 78.21 309 eP P 06 07 57.0 -0.8
MSWZ Moikau Station 78.24 141 P P 06 07 58.2 +0.5
EPYK Eagle Plains 78.26 24 P P 06 07 57.0 -0.5
EPYK IAmb IAmb 06 08 12.3
comp=Z,36nm,1.2s
EPYK Eagle Plains 78.26 24 P P 06 07 56.4 -1.1
baz=289
JURR Jurilovca 78.31 313 ⇑P P 06 07 58.2 0.0
PLWZ Palliser 78.33 141 P P 06 07 58.8 +0.6
PABE Paberze 78.57 325 eP P 06 08 00.0 +0.7
STEI Steigen 78.60 338 eP P 06 07 58.8 -0.5
TOPG Topolog 78.63 314 ⇑P P 06 07 59.7 -0.3
SHUT Suhut-Afyon 78.65 307 eP P 06 07 59.9 -0.4
PCA Pinnacle 78.70 30 P P 06 07 59.1 -1.0
PCA IAmb IAmb 06 08 06.7
comp=Z,60nm,1.2s
TIRR Tirgusor 78.71 313 ⇑P P 06 08 00.4 0.0
TIRR Tirgusor 78.71 313 P P 06 07 59.5 -0.9
TIRR Tirgusor 78.71 313 P P 06 07 59.5 -0.9

CFR Carcaliu 78.72 314 ⇑P P 06 07 59.8 -0.6
CFR Carcaliu 78.72 314 P P 06 08 00.3 -0.1
CFR pmax pmax
comp=Z,40nm,0.9s
HRT Hereke 78.74 309 eP P 06 08 00.4 -0.3
INK Inuvik 78.75 21 P P 06 07 59.5 -0.6
comp=Z,9.3nm,0.9s,baz=292,slow=5.7,SNR=30
INK Inuvik 78.75 21 P P 06 07 59.5 -0.6
INK IAmb IAmb 06 08 15.7
comp=Z,38nm,1.4s
INK Inuvik 78.75 21 P P 06 07 59.5 -0.6
INK pmax pmax
comp=Z,38nm,1.4s
BIR Birlad 78.79 315 ⇑P P 06 08 01.4 +0.6
BIR Birlad 78.79 315 P P 06 08 01.4 +0.6
ISP Isparta 78.86 306 IAMs_20 IAMs_20 06 48 22.8
comp=Z,844nm,19.0s
ISP Isparta 78.86 306 P P 06 08 01.4 -0.1
ISP pmax pmax
comp=Z,48nm,0.9s
HARR Harsova 78.99 313 ⇑P P 06 08 02.1 +0.1
HARR Harsova 78.99 313 P P 06 08 02.0 +0.1
YLV Yalova 79.02 309 eP P 06 08 02.6 +0.3
ISK Istanbul-Kandi 79.12 310 P P 06 08 03.2 +0.5
LOF Lofoten 79.12 339 eP P 06 08 01.6 -0.5
PETR Petresti 79.19 315 ⇑P P 06 08 04.1 +1.1
TVSB Tavsanli 79.24 308 eP P 06 08 03.8 +0.2
ODBI Odobesti 79.30 315 ⇑P P 06 08 04.6 +1.0
TESR Tescani 79.38 315 ⇑P P 06 08 03.2 -0.8
PRAR RASCA 79.42 316 ⇑P P 06 08 04.1 -0.2
SUW Suwalki 79.43 323 eP P 06 08 04.3 +0.2
SUW Suwalki 79.43 323 P P 06 08 03.6 -0.5
SUW IAMs_20 IAMs_20 06 49 46.3
comp=Z,1µm,19.0s
SUW Suwalki 79.43 323 P P 06 08 03.6 -0.5
SUW pmax pmax
comp=Z,170nm,0.9s
FURI Furi 79.48 276 IAMs_20 IAMs_20 06 43 58.2
comp=Z,987nm,18.0s
VRI Vrincioaia 79.50 315 ⇑P P 06 08 05.6 +0.9
VRI Vrincioaia 79.50 315 P P 06 08 04.8 +0.1
VRI pmax pmax
comp=Z,113nm,1.1s
MOR8 Moi Rana 79.54 337 eP P 06 08 02.7 -1.8
PLOR Plostina 79.55 315 ⇑P P 06 08 06.4 +1.4
PLOR Plostina 79.55 315 P P 06 08 06.4 +1.4
BISRR Bisoca 79.59 315 ⇑P P 06 08 06.8 +1.5
ELL Elmali 79.60 305 eP P 06 08 05.7 +0.1
ELL Elmali 79.60 305 P P 06 08 04.9 -0.7
ELL Elmali 79.60 305 P P 06 08 04.9 -0.7
ELL pmax pmax
comp=Z,483nm,1.5s
HYT Haines Junctio 79.77 29 P P 06 08 06.0 0.0
HYT IAmb IAmb 06 08 28.6
comp=Z,37nm,1.2s
KONS Konsvik 79.91 337 eP P 06 08 06.5 0.0
BURAR Bucovina Array 80.01 317 ⇑P P 06 08 08.0 +0.3
BURAR Bucovina Array 80.01 317 P P 06 08 07.9 +0.3
BUR08 Bucovina Ar. S 80.02 317 P P 06 08 06.7 -0.9
BUR08 IAmb IAmb 06 08 09.4
comp=Z,32nm,0.8s
OZUR 80.06 315 ⇑P P 06 08 08.8 +1.0
MLR Muntele Rosu 80.13 315 P P 06 08 08.4 +0.2
comp=Z,34nm,0.8s,baz=191,slow=5.3,SNR=82
MLR Muntele Rosu 80.13 315 ⇓P P 06 08 08.7 +0.4
MLR Muntele Rosu 80.13 315 P P 06 08 07.4 -0.9
MLR IAmb IAmb 06 08 10.2
comp=Z,48nm,0.9s
MLR IAMs_20 IAMs_20 06 49 19.7
comp=Z,1µm,20.0s
MLR Muntele Rosu 80.13 315 P P 06 08 07.4 -0.9
MLR pmax pmax
comp=Z,48nm,0.9s
LVV L'vov 80.14 319 eP P 06 08 08.4 +0.3
SULR 80.14 314 ⇑P P 06 08 09.2 +1.0
MANT Manisa 80.17 307 P P 06 08 06.6 -2.2
FETY Fethiye 80.27 305 P P 06 08 08.9 -0.2
FETY Fethiye 80.27 305 eP P 06 08 08.7 -0.4
RAZG Razgrad 80.28 313 ⇑P P 06 08 09.9 +0.9
DOPR Dopca 80.37 315 ⇑P P 06 08 08.9 -0.5
BALB Balikesir 80.37 309 eP P 06 08 08.7 -0.8
EDRB Edirne 80.59 311 P P 06 08 10.0 -0.6
ARCR ARCALIA 80.73 316 ⇑P P 06 08 12.1 +0.8
VOIR 80.75 315 ⇑P P 06 08 11.2 -0.3
VOIR 80.75 315 P P 06 08 11.5 0.0
VOIR pmax pmax
comp=Z,15nm,0.8s
YER Yerkesik 80.75 306 P P 06 08 12.5 +0.8
AYDB Zeytinkoy-Aydi 80.83 307 eP P 06 08 12.4 +0.2
ELND Elena 80.90 312 ⇑P P 06 08 13.0 +0.7
ABPO Ambohimpanom 80.97 247 P P 06 08 13.3 +0.1
ABPO IAmb IAmb 06 08 15.3
comp=Z,61nm,1.4s
ABPO Ambohimpanom 80.97 247 IAMs_20 IAMs_20 06 40 18.7
comp=Z,1µm,20.0s
ABPO Ambohimpanom 80.97 247 P P 06 08 13.3 +0.1
ABPO pmax pmax
comp=Z,61nm,1.4s
LPK Lapseki 80.99 309 eP P 06 08 12.7 -0.1
COPA Copaceanca 81.01 313 ⇑P P 06 08 13.4 +0.6
KWP Kalwaria Pacla 81.01 319 eP P 06 08 13.0 +0.2
KWP Kalwaria Pacla 81.01 319 P P 06 08 12.5 -0.3
KWP Kalwaria Pacla 81.01 319 P P 06 08 12.5 -0.3
KWP pmax pmax
comp=Z,101nm,0.9s
WHY Whitehorse 81.03 29 P P 06 08 12.7 -0.1
ARR Arges 81.05 315 ⇑P P 06 08 12.7 -0.4
HUMR Humele 81.06 314 ⇑P P 06 08 13.6 +0.5
ARG Arkhangelos 81.13 305 P P 06 08 14.6 +0.9
ARG pmax pmax
comp=Z,74nm,1.0s
NSS Namsos 81.14 335 eP P 06 08 13.0 -0.1
SKAG Skagway 81.26 30 P P 06 08 13.3 -0.6
SKAG IAmb IAmb 06 08 17.3
comp=Z,30nm,1.1s
CJR Cluj-Napoca 81.33 316 ⇑P P 06 08 14.9 +0.2
CJR Cluj-Napoca 81.33 316 P P 06 08 14.8 +0.2
ALN Alexandroupoli 81.36 310 P P 06 08 13.3 -1.5
ALN Alexandroupoli 81.36 310 P P 06 08 14.3 -0.5
ALN IAmb IAmb 06 08 16.1
comp=Z,28nm,1.1s
ALN Alexandroupoli 81.36 310 P P 06 08 14.3 -0.5
ALN pmax pmax
comp=Z,28nm,1.1s
C36M Paulatuk 81.39 19 P P 06 08 13.5 -0.8
C36M IAmb IAmb 06 08 15.3
comp=Z,41nm,1.2s
C36M Paulatuk 81.39 19 P P 06 08 13.4 -1.0
baz=300
GCAM G?zelcaml? 81.40 307 eP P 06 08 14.5 -0.5
EZN Ezine 81.47 309 eP P 06 08 15.4 0.0
BEL Belsk 81.47 322 eP P 06 08 15.9 +0.7
BEL Belsk 81.47 322 P P 06 08 16.1 +0.9
BEL pmax pmax
comp=Z,156nm,0.9s
KOLS Kolonicke sedl 81.50 319 eP P 06 08 15.6 +0.2
KOLS pmax pmax
comp=Z,26nm,1.7s
KOLS Kolonicke sedl 81.50 319 eP P 06 08 15.6 +0.2
UZH Uzhgorod 81.58 318 ⇓iP P 06 08 16.8 +1.0
UZH e 06 08 29.1
TRPA Tarpa 81.58 318 ⇑P P 06 08 16.1 +0.3
VLAD Vladila 81.61 313 ⇓P P 06 08 15.9 -0.1
PLVB Pleven 81.64 313 ⇑P P 06 08 15.7 -0.5
RDO Rodhopi 81.66 310 P P 06 08 16.2 -0.1
PRK Paraskevi 81.67 308 P P 06 08 16.3 -0.2
SMG Samos 81.70 307 P P 06 08 16.8 +0.1
DAG Danmarks Havn 81.87 351 iP P 06 08 15.5 -1.3
comp=Z,14nm,0.7s
DAG Danmarks Havn 81.87 351 iP P 06 08 15.5 -1.3
DAG pmax pmax
comp=Z,15nm,0.7s
DRGR 81.89 317 ⇑P P 06 08 18.1 +0.5
DRGR 81.89 317 P P 06 08 18.3 +0.7
DRGR pmax pmax
comp=Z,85nm,1.2s
PLD Plovdiv 81.97 312 P P 06 08 18.2 +0.2
PLD pmax pmax
comp=Z,2.0nm,1.4s
CRVS Cervenica-Dubn 82.02 319 eP P 06 08 19.7 +1.6
CRVS pmax pmax
comp=Z,55nm,1.2s
CRVS Cervenica-Dubn 82.02 319 eP P 06 08 19.7 +1.6
DEV Deva 82.05 316 ⇑P P 06 08 18.4 0.0
DEV Deva 82.05 316 P P 06 08 19.7 +1.4
DEV pmax pmax
comp=Z,81nm,1.1s
KARP Karpathos 82.07 305 P P 06 08 19.2 +0.5
KARP Karpathos 82.07 305 P P 06 08 18.9 +0.2
CHOS Chios island 82.09 308 P P 06 08 17.7 -1.1
JIS Juneau Island 82.16 31 P P 06 08 19.1 +0.5
JIS IAmb IAmb 06 08 21.5
comp=Z,29nm,1.1s
HFS Hagfors 82.19 331 P P 06 08 17.7 -1.1
comp=Z,28nm,0.7s,baz=101,slow=3.2,SNR=40
SRE Strehaia 82.23 314 ⇑P P 06 08 20.3 +0.9
SRE Strehaia 82.23 314 P P 06 08 20.2 +0.9
GZR Gura Zlata 82.28 315 ⇑P P 06 08 20.2 +0.5
KAVA Kavala 82.44 311 P P 06 08 19.9 -0.6
PUNG Punghina 82.53 314 ⇑P P 06 08 21.7 +0.8
NIE Niedzica 82.57 320 eP P 06 08 21.2 +0.2
NIE Niedzica 82.57 320 P P 06 08 21.2 +0.2
NIE pmax pmax
comp=Z,15nm,1.0s
OJC Ojcow 82.60 320 eP P 06 08 21.7 +0.6
OJC Ojcow 82.60 320 P P 06 08 20.4 -0.7
OJC IAmb IAmb 06 08 22.9
comp=Z,44nm,0.7s
OJC Ojcow 82.60 320 P P 06 08 20.4 -0.7
OJC pmax pmax
comp=Z,44nm,0.7s
NC405 NORSAR Array S 82.68 332 P P 06 08 20.5 -0.9
SIRR Siria 82.75 316 ⇑P P 06 08 22.4 +0.4
KECS Kecovo 82.77 319 eP P 06 08 22.9 +0.9
KECS pmax pmax
comp=Z,11nm,0.8s
KECS Kecovo 82.77 319 eP P 06 08 22.9 +0.9
NC303 NORSAR Array S 82.78 333 eP P 06 08 21.4 -0.5
NC303 NORSAR Array S 82.78 333 P P 06 08 21.4 -0.5
NVR Nevrokopi 82.80 311 P P 06 08 21.5 -0.9
VTS Vitosha 82.85 312 P P 06 08 23.4 +0.6
VTS Vitosha 82.85 312 ⇑P P 06 08 23.3 +0.5
VTS Vitosha 82.85 312 P P 06 08 22.0 -0.8
VTS IAmb IAmb 06 08 24.9
comp=Z,59nm,1.0s
VTS Vitosha 82.85 312 P P 06 08 22.0 -0.8
VTS pmax pmax
comp=Z,59nm,1.0s
NB201 NORSAR Array S 82.89 332 P P 06 08 21.9 -0.5
NC602 NORSAR Array S 82.92 332 P P 06 08 21.6 -0.9
NORES NORESS Array B 82.92 332 P P 06 08 26.0 +3.5
NORES pmax pmax
comp=Z,11nm,0.6s
NB2 NORSAR Subarra 82.93 332 P P 06 08 21.4 -1.3
comp=Z,56nm,1.0s,baz=63,slow=5.3
NB2 NORSAR Subarra 82.93 332 P P 06 08 21.4 -1.3
baz=63,slow=5.3
NOA NORSAR Array B 82.93 332 P P 06 08 21.0 -1.7
comp=Z,32nm,0.8s,baz=63,slow=5.1,SNR=76
NOA PKKP PKKPdf 06 26 35.6 -1.1
comp=Z,0.8nm,0.8s,baz=205,slow=1.9,SNR=3.4
NOA LR LR 06 50 09.4
comp=Z,2µm,18.3s,baz=60,slow=39
BZS Buzias 82.99 316 ⇑P P 06 08 23.0 -0.2
GKP Gorka Klasztor 83.02 324 eP P 06 08 23.0 -0.2
NC204 NORSAR Array S 83.03 333 P P 06 08 22.1 -1.1
OUR Ouranopolis 83.03 310 P P 06 08 22.8 -0.7
SRS Serrai 83.06 311 P P 06 08 23.6 -0.1
SRS pmax pmax
comp=Z,31nm,1.0s
NBO00 NORSAR Array S 83.13 333 P P 06 08 23.7 0.0
SANT Santorini 83.15 306 ⇑P P 06 08 23.4 -0.9
SANT Santorini 83.15 306 P P 06 08 22.3 -1.9
NAO01 NORSAR Array S 83.16 332 P P 06 08 22.9 -0.9
IOSP Ios island 83.17 306 P P 06 08 23.2 -1.1
THR3 Thira Island, 83.18 306 P P 06 08 23.8 -0.6
MDVR Moldovita 83.19 315 ⇑P P 06 08 24.0 -0.4
THR6 Thira Island, 83.20 306 P P 06 08 23.1 -1.4
PSZ Piszkesteto 83.33 318 ⇑P P 06 08 25.7 +0.6
PSZ Piszkesteto 83.33 318 P P 06 08 25.3 +0.2
PSZ Piszkesteto 83.33 318 P P 06 08 25.3 +0.2
PAIG Paliouri 83.38 310 P P 06 08 24.7 -0.6
PAIG Paliouri 83.38 310 P P 06 08 24.4 -0.9
PAIG pmax pmax
comp=Z,91nm,1.0s
DOMB Dombas 83.41 334 eP P 06 08 24.6 -0.5
AOS Alonnisos 83.47 309 P P 06 08 24.4 -1.4
LAST Lasithi 83.50 305 P P 06 08 25.9 -0.3
KIBK Kibwezi 83.54 265 P P 06 08 28.8 +2.0
SNR=8.0
KNT Kendrikon 83.55 311 P P 06 08 25.3 -0.9
KNT Kendrikon 83.55 311 P P 06 08 25.4 -0.8
KNT pmax pmax
comp=Z,38nm,1.6s
BSD Bornholm Skovb 83.58 326 iP P 06 08 25.3 -0.7
comp=Z,86nm,1.0s
BSD Bornholm Skovb 83.58 326 eP P 06 08 25.3 -0.7
BSD pmax pmax
comp=Z,86nm,1.0s
HORT Hortiatis 83.58 311 P P 06 08 24.6 -1.9
OSL Oslo 83.63 332 eP P 06 08 25.8 -0.4
VAY Valandovo 83.73 311 iP P 06 08 26.9 -0.2
VAY Valandovo 83.73 311 P P 06 08 26.8 -0.3
VAY pmax pmax
comp=Z,88nm,1.1s
OKC Ostrava-Krasne 83.73 320 AMS AMS 06 49 10.0
comp=Z,900nm,17.3s
MOL Molde 83.79 335 eP P 06 08 26.3 -0.6
VYHS Vyhne 83.79 319 eP P 06 08 28.2 +0.9
VYHS pmax pmax
comp=Z,34nm,1.1s
VYHS Vyhne 83.79 319 eP P 06 08 28.2 +0.9
STIP Stip 83.88 312 iP P 06 08 26.7 -1.2
KMBO Kilima Mbogo 83.91 267 P P 06 08 29.6 +0.8
comp=Z,16nm,1.0s,baz=56,slow=6.0,SNR=26
KMBO LR LR 06 43 12.5
comp=Z,939nm,20.9s,baz=70,slow=34
KMBO Kilima Mbogo 83.91 267 P P 06 08 29.8 +1.0
KMBO IAmb IAmb 06 08 32.2
comp=Z,70nm,1.4s
KMBO Kilima Mbogo 83.91 267 IAMs_20 IAMs_20 06 42 59.3
comp=Z,1µm,20.0s
KMBO Kilima Mbogo 83.91 267 P P 06 08 30.4 +1.6
KMBO Kilima Mbogo 83.91 267 iP P 06 08 31.3 +2.5
KMBO pmax pmax
comp=Z,17nm,1.0s
IDI Anoyia 83.92 305 P P 06 08 27.1 -1.3
comp=Z,15nm,0.7s,baz=121,slow=7.1,SNR=17
VLY Voula,Athens 83.95 308 P P 06 08 27.3 -1.0
GRG Griva 83.97 311 P P 06 08 27.0 -1.4
GRG pmax pmax
comp=Z,46nm,1.0s
BUD Budapest 84.03 318 P P 06 08 29.7 +1.2
BUD pmax pmax
comp=Z,34nm,1.0s
MORC Moravsky Berou 84.12 321 eP P 06 08 29.2 +0.2
MORC Moravsky Berou 84.12 321 ⇑P P 06 08 29.4 +0.4
MORC Moravsky Berou 84.12 321 P P 06 08 29.2 +0.2
MORC IAmb IAmb 06 08 30.9
comp=Z,18nm,1.0s
MORC Moravsky Berou 84.12 321 P P 06 08 29.2 +0.2
MORC pmax pmax
comp=Z,18nm,1.0s
LIT Litokhoron 84.19 310 P P 06 08 27.3 -2.2
LIT Litokhoron 84.19 310 P P 06 08 27.2 -2.2
LIT IAmb IAmb 06 08 30.8
comp=Z,61nm,1.2s
LIT Litokhoron 84.19 310 P P 06 08 27.3 -2.2
LIT pmax pmax
comp=Z,61nm,1.2s
AKN Aaknes 84.20 334 eP P 06 08 29.0 -0.1
KONO Kongsberg 84.27 332 eP P 06 08 29.0 -0.5
LODK Lodwar 84.28 272 P P 06 08 32.5 +1.9
SNR=10
LKR Lokris 84.28 309 P P 06 08 28.9 -1.1
SKO Skopje 84.31 312 iP P 06 08 30.8 +0.7
SKO Skopje 84.31 312 P P 06 08 32.0 +1.9
SKO pmax pmax
comp=Z,98nm,1.1s
SKAR Skarslia 84.37 333 eP P 06 08 30.0 0.0
RES Resolute Bay 84.37 9 P P 06 08 29.2 -0.5
comp=Z,23nm,0.8s,baz=313,slow=5.5,SNR=78
RES Resolute Bay 84.37 9 P P 06 08 29.9 +0.2
RES IAmb IAmb 06 08 31.4
comp=Z,31nm,0.9s
RES Resolute Bay 84.37 9 P P 06 08 29.9 +0.2
RES pmax pmax
comp=Z,31nm,0.9s
JAVC Velka Javorina 84.38 320 eP P 06 08 31.4 +1.0
VAM Vamos 84.42 305 P P 06 08 31.5 +0.7
KSP Ksiaz 84.46 322 eP P 06 08 31.0 +0.3
KRLC Kraliky 84.47 321 eP P 06 08 30.6 -0.2
KRLC AMS AMS 06 48 00.0
comp=Z,900nm,16.8s
KRLC Kraliky 84.47 321 eP P 06 08 30.6 -0.2
KRLC MLR MLR
comp=Z,900nm,16.8s
DID Didima 84.48 308 P P 06 08 28.9 -2.2
IMMV Iera Moni Meta 84.57 305 P P 06 08 31.6 +0.1
DIVS Divibare 84.59 315 ⇑iP P 06 08 30.6 -1.0
OSTC Ostas 84.62 322 eP P 06 08 32.9 +1.4
OSTC AMS AMS 06 48 50.0
comp=Z,900nm,15.6s
DPC Dobruska-Polom 84.64 321 eP P 06 08 31.5 -0.1
DPC AMS AMS 06 55 30.0
comp=Z,900nm,16.6s
DPC Dobruska-Polom 84.64 321 eP P 06 08 31.5 -0.1
DPC MLR MLR
comp=Z,900nm,16.6s
KZN Kozani 84.64 311 P P 06 08 31.0 -0.9
AGG Agios Georgios 84.66 309 P P 06 08 30.4 -1.6
AGG Agios Georgios 84.66 309 P P 06 08 30.3 -1.7
AGG IAmb IAmb 06 08 31.5
comp=Z,32nm,1.0s
AGG Agios Georgios 84.66 309 P P 06 08 30.3 -1.7
AGG pmax pmax
comp=Z,32nm,1.0s
CHVC Chvalec 84.70 322 eP P 06 08 32.3 +0.4
CHVC AMS AMS 06 48 50.0
comp=Z,1µm,16.6s
RODP Rodopos 84.71 306 P P 06 08 33.7 +1.4
MORH Mrgy, Hungar 84.73 317 eP P 06 08 32.4 +0.3
UPC Upice 84.76 322 eP P 06 08 32.9 +0.7
UPC AMS AMS 06 49 00.0
comp=Z,1µm,17.8s
UPC Upice 84.76 322 eP P 06 08 32.9 +0.7
UPC MLR MLR
comp=Z,1µm,17.8s
MODS Modra-Piesok 84.80 319 eP P 06 08 32.7 +0.2
MODS pmax pmax
comp=Z,53nm,1.7s
MODS Modra-Piesok 84.80 319 eP P 06 08 32.7 +0.2
MAKR Makrakomi, Fth 84.81 309 P P 06 08 31.2 -1.5
CASY Casey 84.83 184 P P 06 08 33.3 +1.4
CASY IAmb IAmb 06 08 34.4
comp=Z,46nm,1.1s
VRAC Vranov 84.87 320 eP P 06 08 32.9 +0.2
VRAC Vranov 84.87 320 ⇑P P 06 08 33.0 +0.2
VRAC Vranov 84.87 320 P P 06 08 33.0 +0.2
VRAC pmax pmax
comp=Z,68nm,1.1s
KNDR Palaiochora Ch 84.87 305 P P 06 08 33.6 +0.6
ANKY Antikythira Is 84.96 306 P P 06 08 32.8 -0.7
VLI Veliai 84.96 307 P P 06 08 31.7 -1.8
ZST Bratislava 84.98 319 eP P 06 08 33.7 +0.4
ZST pmax pmax
comp=Z,346nm,1.1s
ZST Bratislava 84.98 319 eP P 06 08 33.6 +0.3
TULEG Thule 85.02 2 P P 06 08 32.8 -0.2
TULEG IAmb IAmb 06 08 34.2
comp=Z,16nm,0.9s
KTHA Kythira Island 85.02 306 P P 06 08 32.5 -1.3
OHR Ohrid 85.06 312 iP P 06 08 33.0 -0.9
OHR Ohrid 85.06 312 P P 06 08 33.6 -0.4
OHR pmax pmax
comp=Z,70nm,0.8s
KTHR Kythira 85.06 306 P P 06 08 33.7 -0.3
BBLS Lazići 85.06 315 ⇑iP P 06 08 34.7 +0.7
KRUC Moravsky 85.08 320 eP P 06 08 34.2 +0.4
KRUC Moravsky 85.08 320 P P 06 08 34.7 +0.9
KRUC pmax pmax
comp=Z,32nm,1.1s
ANX Ano Chora 85.10 309 P P 06 08 30.0 -4.3
KLV Kalavryta, Ach 85.11 308 P P 06 08 33.2 -1.1
PHP Peshkopia 85.11 312 P P 06 08 34.0 -0.2
VLX Vlachokerasia 85.17 308 P P 06 08 33.5 -1.1
RUDO Rudo 85.18 314 eP P 06 08 33.6 -0.8
PLE Pljevlja 85.27 314 P P 06 08 38.0 +3.0
HAPS Han Pijesak,Bl 85.29 315 eP P 06 08 34.0 -1.1
FOO Floro 85.29 334 eP P 06 08 35.3 +0.7
DYR Agios Nikonas 85.41 307 P P 06 08 35.2 -0.5
DRO Drossia 85.47 308 P P 06 08 35.5 -0.6
SOP Sopron 85.51 319 P P 06 08 36.5 +0.5
SOP pmax pmax
comp=Z,32nm,1.0s
TREC Trest 85.54 321 eP P 06 08 36.9 +0.7
TREC AMS AMS 06 50 10.0
comp=Z,2µm,19.7s
TREC Trest 85.54 321 eP P 06 08 36.9 +0.7
TREC MLR MLR
comp=Z,2µm,19.7s
ITM Ithomi 85.57 308 P P 06 08 35.4 -1.2
ITM Ithomi 85.57 308 P P 06 08 35.0 -1.6
PVCC Panska Ves 85.60 322 eP P 06 08 37.3 +0.9
PVCC AMS AMS 06 49 30.0
comp=Z,1µm,15.8s
PVCC Panska Ves 85.60 322 eP P 06 08 37.3 +0.9
PVCC MLR MLR
comp=Z,1µm,15.8s
AMT Artemida-Makis 85.62 308 P P 06 08 35.9 -0.9
GOET G??ttrup 85.64 329 iP P 06 08 37.6 +1.2
comp=Z,227nm,0.9s
PDG Podgorica 85.68 313 ⇑P P 06 08 37.3 +0.4
PDG Podgorica 85.68 313 eP P 06 08 36.7 -0.2
PDG Podgorica 85.68 313 P P 06 08 36.9 0.0
PDG IAmb IAmb 06 08 38.2
comp=Z,47nm,1.0s
BLS5 Blasjo 85.79 332 eP P 06 08 37.2 0.0
PYL PYLOS 85.81 307 P P 06 08 36.6 -1.1
DRME Dracevica, Mon 85.81 313 ⇑iP P 06 08 37.7 +0.1
BRG Berggiesshubel 85.82 322 eP P 06 08 38.9 +1.4
comp=Z,59nm,1.0s,baz=63,slow=4.8
BRG Berggiesshubel 85.82 322 P P 06 08 37.5 0.0
BRG pmax pmax
comp=Z,61nm,1.1s
PRU Pruhonice 85.83 322 eP P 06 08 38.3 +0.8
PRU AMS AMS 06 49 30.0
comp=Z,1µm,15.0s
PRU Pruhonice 85.83 322 eP P 06 08 38.3 +0.8
PRU MLR MLR
comp=Z,1µm,15.0s
BEHE Becsehely 85.84 318 eP P 06 08 38.4 +0.8
CONA Conrad Observa 85.85 319 ePcP P 06 08 38.5 +0.7
comp=Z,14nm,0.8s,SNR=14
MUD Monsted U'grnd 85.94 329 iP P 06 08 38.0 +0.1
comp=Z,81nm,1.0s
MUD Monsted U'grnd 85.94 329 P P 06 08 38.9 +1.0
MUD pmax pmax
comp=Z,91nm,1.0s
IGT Igoumenitsa 85.94 310 P P 06 08 37.3 -1.0
IGT Igoumenitsa 85.94 310 P P 06 08 37.1 -1.2
IGT pmax pmax
comp=Z,61nm,1.0s
BRY Bratogost 86.00 314 eP P 06 08 38.7 0.0
BRY Bratogost 86.00 314 P P 06 08 39.6 +0.9
FBE Freiberg 86.14 323 eP P 06 08 40.8 +1.7
comp=Z,70nm,1.1s,baz=63,slow=4.8
CLL Collm 86.18 323 eP P 06 08 40.3 +1.1
comp=Z,46nm,1.1s,baz=63,slow=4.8
CLL Collm 86.18 323 eP P 06 08 38.0 -1.2
comp=Z,46nm,1.1s
CLL e(PP) 06 11 42.0
CLL ePPP PPP 06 13 54.0
CLL eS S 06 19 13.0 +0.8
CLL ePS PnS 06 20 17.0 +5.0
CLL ePPS PPS 06 20 36.0
CLL eSS SS 06 24 42.0 -8.4
CLL e 06 29 18.0
CLL eSSSS 06 31 18.0
CLL LmH 06 53 00.0
comp=N,700nm,19.9s
CLL LmH 06 53 00.0
comp=E,600nm,18.1s
CLL LmV 06 53 00.0
comp=Z,1µm,19.0s
CLL Collm 86.18 323 P P 06 08 38.0 -1.2
CLL IAmb IAmb 06 08 41.3
comp=Z,49nm,1.1s
CLL Collm 86.18 323 eP P 06 08 38.0 -1.2
CLL eS S 06 19 13.0 +0.8
CLL pmax pmax

comp=Z,46nm,1.1s
CLL MLR MLR
comp=Z,1µm,19.0s
BLY Banja Luka 86.22 316 ⇑P **P 06 08 40.1 +0.5**
BLY Banja Luka 86.22 316 *e*P **P 06 08 40.3 +0.7**
BLY Banja Luka 86.22 316 P **P 06 08 39.9 +0.3**
BLY IAmb IAmb 06 08 41.5
comp=Z,41nm,0.9s
PBCC Pribram 86.28 321 *e*P **P 06 08 40.6 +0.8**
ARSA Arzberg 86.33 319 *e*PcP **P 06 08 40.3 +0.2**
comp=Z,16nm,0.9s,SNR=6.0
MGRS Mrkonjic Grad 86.42 316 *e*P **P 06 08 41.1 +0.5**
BSEG Bad Segeberg 86.51 326 *e*P **P 06 08 42.2 +1.5**
comp=Z,41nm,1.2s,baz=63,slow=4.8
GOLS Golise 86.75 318 *i* P **P 06 08 42.8 +0.6**
KHC Kasperske Hory 86.75 321 *e*P **P 06 08 42.5 +0.3**
KHC *e*x x 06 08 55.5
KHC AMS AMS 06 49 30.0
comp=Z,1µm,20.1s
KHC Kasperske Hory 86.75 321 P **P 06 08 41.5 -0.6**
KHC Kasperske Hory 86.75 321 *de*P **P 06 08 43.1 +0.9**
KHC pmax pmax
comp=Z,52nm,1.8s
GEC2 GERESS Array S 86.80 321 *e*P **P 06 08 43.9 +1.4**
comp=Z,31nm,1.3s,baz=63,slow=4.8
GEC2 GERESS Array S 86.80 321 P **P 06 08 42.3 -0.2**
GEC2 IAmb IAmb 06 08 44.1
comp=Z,22nm,1.1s
GEC2 GERESS Array S 86.80 321 P **P 06 08 43.2 +0.7**
GEC2 pmax pmax
comp=Z,19nm,1.1s
GERES GERESS Array B 86.80 321 P **P 06 08 42.3 -0.2**
comp=Z,6.3nm,0.8s,baz=57,slow=5.4,SNR=34
PERS Pernice 86.83 318 *i* P **P 06 08 43.0 +0.4**
SOKA Soboth 86.86 318 *e*PcP **P 06 08 42.9 +0.1**
comp=Z,12nm,0.9s,SNR=6.5
MOA Molln 86.86 320 *e*PcP **P 06 08 43.7 +1.0**
comp=Z,54nm,1.6s,SNR=13
CRES Cresnjev 86.93 317 *i* P **P 06 08 43.9 +0.8**
CRES Cresnjev 86.93 317 *e*P **P 06 08 43.7 +0.6**
NKC Novy Kostel 86.95 322 AMS AMS 06 50 20.0
comp=Z,1µm,15.8s
NKC Novy Kostel 86.95 322 P **P 06 08 43.5 +0.4**
NKC pmax pmax
comp=Z,9.0nm,1.7s
GUNZ Gunzen 86.97 322 *e*P **P 06 08 44.6 +1.4**
comp=Z,55nm,1.6s,baz=63,slow=4.8
WERN Wernitzgruen 86.97 322 *e*P **P 06 08 44.7 +1.4**
comp=Z,40nm,1.6s,baz=63,slow=4.8
PLN Plauen 87.01 323 *e*P **P 06 08 44.6 +1.2**
comp=Z,46nm,1.8s,baz=63,slow=4.8
ASSE Asse, Remlinge 87.13 324 *e*P **P 06 08 45.1 +1.3**
comp=Z,76nm,2.0s,baz=63,slow=4.8
KULLO Kullorsuaq 87.14 359 *i* P **P 06 08 42.7 -0.8**
comp=Z,50nm,1.0s
KULLO Kullorsuaq 87.14 359 *i* P **P 06 08 42.7 -0.8**
KULLO pmax pmax
comp=Z,50nm,1.0s
WET Wettzell 87.17 321 *e*P **P 06 08 45.8 +1.6**
comp=Z,23nm,1.4s,baz=63,slow=4.8
WET Wettzell 87.17 321 P **P 06 08 45.2 +1.0**
WET pmax pmax
comp=Z,14nm,1.9s
OBKA Obir 87.23 318 *e*PcP **P 06 08 45.0 +0.4**
comp=Z,15nm,0.9s
MOX Moxa 87.26 323 *e*P **P 06 08 45.8 +1.3**
comp=Z,73nm,2.1s,baz=63,slow=4.8
MOX *e*L L 06 54 52.9
comp=Z,1µm,19.2s
MANZ Manzenberg 87.26 322 *e*P **P 06 08 46.0 +1.5**
comp=Z,25nm,1.4s,baz=63,slow=4.8
NRDL Niedersach Rie 87.27 325 *e*P **P 06 08 46.2 +1.7**
comp=Z,136nm,2.3s,baz=63,slow=4.8
ROTZ Rotzenmuhle 87.30 322 *e*P **P 06 08 46.3 +1.6**
comp=Z,29nm,1.4s,baz=63,slow=4.8
CLZ Clausthal 87.42 324 *e*P **P 06 08 46.8 +1.4**
comp=Z,97nm,1.9s,baz=63,slow=4.8
LJU Ljubljana 87.44 318 *e*P **P 06 08 45.7 +0.2**
SCO Scoresbysund 87.47 348 *i* P **P 06 08 44.8 -0.3**
comp=Z,212nm,2.7s
SCO Scoresbysund 87.47 348 *e*P **P 06 08 44.8 -0.3**
SCO pmax pmax
comp=Z,210nm,2.7s
RETH Rethem/Aller, 87.56 325 *e*P **P 06 08 47.2 +1.3**
comp=Z,22nm,1.1s,baz=63,slow=4.8
KBA Koelnbreinsper 87.75 319 *e*PcP **P 06 08 47.1 -0.1**
comp=Z,14nm,1.1s
KBA Koelnbreinsper 87.75 319 P **P 06 08 47.3 +0.1**
KBA pmax pmax
comp=Z,18nm,1.0s
MYKA Terra Mystica 87.76 319 *e*PcP **P 06 08 47.1 0.0**
comp=Z,11nm,1.2s
GRB1 Grafenberg Arr 87.78 322 P **P 06 08 48.3 +1.2**
GRB1 pmax pmax
comp=Z,30nm,0.9s
RJOB Jochberg 87.81 320 *e*P **P 06 08 48.6 +1.3**
comp=Z,31nm,1.3s,baz=63,slow=4.8
GRF Grafenberg Arr 87.90 322 *e*L L 07 02 37.5
comp=Z,845nm,19.4s
SUMG Summit 88.07 354 *i* P **P 06 08 48.0 -0.5**
comp=Z,144nm,1.1s
SUMG Summit 88.07 354 P **P 06 08 47.9 -0.6**
SUMG Summit 88.07 354 *i* P **P 06 08 48.0 -0.5**
SUMG pmax pmax
comp=Z,140nm,1.1s
ABTA Abfaltersbach 88.41 319 *e*PcP **P 06 08 49.7 -0.6**
comp=Z,12nm,0.7s,SNR=5.8
YKA Yellowknife Ar 88.47 22 P **P 06 08 49.6 -0.4**
comp=Z,23nm,0.8s,baz=312,slow=4.7,SNR=198
YKA PKiKP **PKiKP** 06 13 49.3 -1.4
comp=Z,0.3nm,0.5s,baz=315,slow=1.9,SNR=5.2
YKA PKKPbc **PKKPdf** 06 26 28.6 +1.4
comp=Z,0.4nm,1.0s,baz=108,slow=2.3,SNR=3.9
YKA LR LR 06 52 44.1
comp=Z,273nm,18.3s,baz=0.0,slow=38
FUR Furstenfeldbru 88.55 321 *e*P **P 06 08 52.4 +1.6**
comp=Z,73nm,1.5s,baz=63,slow=4.8
IBBN Ibbenburen 88.63 325 *e*P **P 06 08 52.3 +1.3**
comp=Z,29nm,1.2s,baz=63,slow=4.8
TIP Timpagrande 88.65 311 P **P 06 08 52.2 +0.7**
TIP Timpagrande 88.65 311 ⇑P **P 06 08 52.0 +0.5**
TIP Timpagrande 88.65 311 P **P 06 08 51.5 0.0**
WTTA Wattenberg 88.73 320 *e*PcP **P 06 08 51.5 -0.3**
comp=Z,20nm,0.7s,SNR=7.2
WATA Walderalm 88.73 320 *e*PcP **P 06 08 51.0 -0.8**
comp=Z,12nm,0.8s
SQTA Sankt Quirin 89.01 320 *e*PcP **P 06 08 52.9 -0.2**
comp=Z,18nm,0.7s,SNR=6.4
MOTA Moosalm 89.02 320 *e*PcP **P 06 08 52.7 -0.4**
comp=Z,10nm,0.8s,SNR=5.5
RETA Reutte 89.16 320 *e*PcP **P 06 08 53.9 +0.2**
comp=Z,8.4nm,0.8s
CTI Castel Tesino 89.25 319 P **P 06 08 53.2 -1.0**
CTI IAmb IAmb 06 08 55.1
comp=Z,37nm,1.4s
CTI Castel Tesino 89.25 319 P **P 06 08 53.2 -1.0**
CTI pmax pmax
comp=Z,37nm,1.4s
TNS Taunus Mts 89.25 323 *e*P **P 06 08 55.4 +1.4**
comp=Z,30nm,1.4s,baz=63,slow=4.8
FETA Feichten 89.39 320 *e*PcP **P 06 08 54.8 -0.1**
comp=Z,23nm,0.9s,SNR=9.7
UBR Ueberruh 89.47 321 *e*P **P 06 08 56.3 +1.1**
comp=Z,32nm,0.9s,baz=63,slow=4.8
TEOL Teolo 89.54 318 P **P 06 08 55.6 +0.1**
CEL Celeste 89.63 310 P **P 06 08 55.8 -0.3**
NRCA Norcia 89.69 315 P **P 06 08 56.5 +0.2**
NRCA IAmb IAmb 06 08 58.0
comp=Z,39nm,1.0s
AQU L'Aquila 89.70 315 P **P 06 08 56.8 +0.4**
AQU IAmb IAmb 06 08 58.6
comp=Z,39nm,0.9s
AQU L'Aquila 89.70 315 P **P 06 08 56.8 +0.4**
AQU pmax pmax
comp=Z,39nm,0.9s
DAVA Damuels 89.78 320 *e*PcP **P 06 08 57.0 +0.2**
comp=Z,24nm,1.1s
FUORN Ofenpass-Fuorn 89.86 320 P **P 06 08 57.4 +0.1**
MURB Monte Urbino 89.90 316 P **P 06 08 58.0 +0.7**
MBAR Mbarara 89.92 269 P **P 06 08 58.8 +0.8**
MBAR Mbarara 89.92 269 P **P 06 08 58.8 +0.8**
MBAR pmax pmax
comp=Z,8.0nm,0.9s
SALO Salr 90.15 319 P **P 06 08 57.5 -0.8**
SLE Schleitheim 90.39 321 P **P 06 08 58.2 -1.2**
SLE pmax pmax

comp=Z,19nm,0.9s
ZCCA Zocca 90.43 317 P **P 06 09 02.2 +2.5**
OSSC Osservatorio P 90.62 317 P **P 06 08 59.9 -0.7**
OSSC IAmb IAmb 06 09 01.4
comp=Z,25nm,1.0s
WLF Walferdange 90.82 324 P **P 06 09 00.8 -0.5**
WLF IAmb IAmb 06 09 03.3
comp=Z,23nm,0.9s
WLF Walferdange 90.82 324 P **P 06 09 00.8 -0.5**
WLF pmax pmax
comp=Z,23nm,0.9s
VLC Villacollemand 90.90 317 IAMs_20 IAMs_20 06 55 58.2
comp=Z,1µm,20.0s
SENIN Lac Senin/Sane 91.78 320 P **P 06 09 05.5 -0.6**
SENIN IAmb IAmb 06 09 07.5
comp=Z,17nm,0.8s
LLLB Lillooet 92.17 34 P **P 06 09 09.1 +1.5**
LLLB IAmb IAmb 06 09 11.0
comp=Z,42nm,1.2s
SAOF Saorge 92.78 318 P **P 06 09 11.1 +0.5**
SAOF pmax pmax
comp=Z,47nm,1.0s
BNI Bardonecchia 92.81 320 P **P 06 09 10.1 -0.7**
BNI IAmb IAmb 06 09 17.6
comp=Z,27nm,0.9s
BNI Bardonecchia 92.81 320 P **P 06 09 10.1 -0.7**
BNI pmax pmax
comp=Z,27nm,0.9s
ISO Isola 93.00 319 P **P 06 09 10.8 -0.8**
ISO pmax pmax
comp=Z,25nm,1.6s
D03D Eldon 93.14 37 P **P 06 09 13.8 +1.7**
baz=302
B05A Bryant 93.32 36 P **P 06 09 14.3 +1.5**
baz=303
ORIF Oris-en-Rattie 93.36 320 P **P 06 09 14.5 +1.2**
ORIF pmax pmax
comp=Z,25nm,1.4s
E04D Cinebar 93.96 38 P **P 06 09 18.1 +2.3**
baz=302
B08A Colville Reser 94.80 35 P **P 06 09 20.8 +1.0**
B08A IAmb IAmb 06 09 22.1
comp=Z,19nm,1.1s
I03D Drain, OR 94.99 41 P **P 06 09 20.7 +0.1**
baz=301
PPT Papeete 95.40 107 LR LR 06 48 26.1
comp=Z,404nm,18.4s,baz=284,slow=33
PPT2 Papeete2 95.40 107 *e*S **S 06 20 34.8 -3.1**
comp=Z,532nm,25.2s
PPT2 Papeete2 95.40 107 *e*LR LR 06 40 11.6
comp=Z,1µm,25.2s
KEST Kesra 95.44 310 P **P 06 09 22.7 -0.4**
comp=Z,7.5nm,1.0s,baz=306,slow=1.5,SNR=6.0
KEST Kesra 95.44 310 P **P 06 09 23.6 +0.6**
KEST IAmb IAmb 06 09 25.3
comp=Z,21nm,1.2s
I04A Tendick Farm, 95.52 40 P **P 06 09 24.3 +1.2**
baz=302
C09A Chrisman Ranch 95.70 35 P **P 06 09 24.1 +0.2**
D08A Wollman Farm, 95.77 36 P **P 06 09 25.5 +1.3**
D08A IAmb IAmb 06 09 26.6
comp=Z,17nm,1.0s
NEW Newport 96.06 35 P **P 06 09 24.8 -0.7**
comp=Z,8.7nm,1.0s,baz=317,slow=3.3,SNR=12
NEW Newport 96.06 35 P **P 06 09 26.1 +0.6**
NEW IAmb IAmb 06 09 28.9
comp=Z,12nm,1.1s
NEW Newport 96.06 35 P **P 06 09 26.2 +0.6**
NEW pmax pmax
comp=Z,12nm,1.1s
NEW Newport 96.06 35 P **P 06 09 26.2 +0.6**
baz=306
YBH Yreka Blue Hor 96.41 42 P **P 06 09 26.3 -1.0**
comp=Z,5.2nm,1.1s,baz=194,slow=3.1,SNR=4.7
YBH Yreka Blue Hor 96.41 42 P **P 06 09 26.1 -1.2**
YBH IAmb IAmb 06 09 44.6
comp=Z,43nm,1.9s
YBH Yreka Blue Hor 96.41 42 P **P 06 09 26.2 -1.2**
YBH pmax pmax
comp=Z,43nm,1.9s
L04D Klamath Falls 96.42 42 P **P 06 09 27.5 +0.1**
baz=302
M02C Callahan 96.50 43 P **P 06 09 28.9 +1.2**
baz=302
J05D Fort Rock, OR 96.51 40 P **P 06 09 28.7 +0.9**
baz=303
N02D Trinity Center 96.81 43 P **P 06 09 28.7 -0.4**
baz=302
LSZ Lusaka 96.82 256 IAMs_20 IAMs_20 06 45 19.3
comp=Z,1µm,20.0s
M04C Macdoel 96.94 42 P **P 06 09 30.4 +0.6**
baz=302
O02D Mt. Diablo Mer 97.17 44 P Pdif 06 09 31.6 +0.7
baz=302
TBI Tubuai 97.21 112 *e*S **S 06 20 47.4 -5.7**
comp=Z,441nm,23.0s
TBI Tubuai 97.21 112 *e*LQ LQ 06 36 48.8
comp=Z,373nm,28.5s
TBI *e*LR LR 06 41 00.7
comp=Z,967nm,31.8s
FRB Frobisher Bay 97.74 4 P **P 06 09 31.3 -1.4**
FRB pmax pmax
comp=Z,30nm,1.1s
O03E Paynes Creek 97.75 43 P Pdif 06 09 33.9 +0.4
baz=302
FCC Fort Churchill 97.96 17 P **P 06 09 32.9 -0.9**
FCC Fort Churchill 97.96 17 P **P 06 09 32.9 -0.9**
FCC pmax pmax
comp=Z,7.0nm,1.0s
BMO Blue Mountains 97.97 37 P Pdif 06 09 35.9 +1.5
BMO IAmb IAmb 06 10 53.0
comp=Z,28nm,1.9s
BMO Blue Mountains 97.97 37 P Pdif 06 09 35.9 +1.5
BMO pmax pmax
comp=Z,28nm,1.9s
ORV Oroville 98.34 44 P **P 06 09 36.0 0.0**
ORV Oroville 98.34 44 P Pdif 06 09 36.0 0.0
ORV pmax pmax
comp=Z,10.0nm,1.3s
FFC Flin Flon 98.61 23 P **P 06 09 36.6 -0.2**
FFC IAmb IAmb 06 09 38.7
comp=Z,32nm,1.9s
FFC Flin Flon 98.61 23 P **P 06 09 36.6 -0.2**
FFC pmax pmax
comp=Z,32nm,1.9s
VNDA Vanda 98.78 172 LR LR 06 58 14.0
comp=Z,249nm,18.5s,baz=356,slow=38
AFDM Forest Hills D 99.01 44 P **Pdif 06 09 39.4 +0.3**
NVAR Mina Array Bea 101.04 43 P **Pdif 06 09 48.8 +0.4**
comp=Z,2.9nm,0.9s,baz=289,slow=4.0,SNR=13
NVAR PKiKP **PKiKP 06 14 14.8 +1.3**
comp=Z,0.6nm,0.7s,baz=273,slow=1.9,SNR=4.8
NVAR PKKPbc **PKKPbc 06 25 59.1 -1.1**
comp=Z,0.9nm,0.7s,baz=140,slow=4.7,SNR=8.3
TAOE Nuku Hiva Isla 101.61 96 *e*LR LR 06 42 52.5
comp=Z,2µm,24.2s
PKM Mcpherson Peak 101.98 47 P **Pdif 06 09 54.3 +1.8**
baz=303
ESDC Sonseca Array 102.34 319 PP **PP 06 14 05.5 -0.3**
comp=Z,2.8nm,0.8s,baz=46,slow=7.7,SNR=9.3
R11A Troy Canyon, C 102.83 42 P **Pdif 06 09 58.1 +1.8**
baz=306
TPNV Topopah Spring 103.22 43 P **Pdif 06 10 00.5 +2.5**
baz=306
PDAR Pinedale Array 103.65 35 PP **PP 06 14 14.7 -0.9**
comp=Z,0.7nm,0.9s,baz=306,slow=5.0,SNR=3.9
PDAR PKKPbc **PKKPbc 06 25 51.8 -0.9**
comp=Z,0.9nm,0.8s,baz=146,slow=4.6,SNR=5.6
SYO Syowa Base 103.86 201⇑*e*Pdiff **Pdif 06 10 02.6 +2.9**
SYO Syowa Base 103.86 201⇑*e*Pdiff pPdif 06 10 09.4 +0.6
TAM Tamanrasset 104.35 300 IAMs_20 IAMs_20 07 07 05.2
comp=Z,744nm,19.0s
ULM Lac du Bonnet 104.43 23 PP **PKiKP 06 14 19.4 +0.4**
comp=Z,1.2nm,0.8s,baz=231,slow=3.2,SNR=2.9
PFO Pinyon Flats O 105.00 46 P **Pdif 06 10 08.1 +2.3**
baz=305
QSPA South Pole Qui 108.30 180 Pdiff **Pdif 06 10 17.4 -2.3**
comp=Z,1.0nm,1.0s,baz=105,slow=12,SNR=3.1
SDCO Great Sand Dun 109.33 37 P **PKiKP 06 14 29.0 +0.1**
baz=314
ECSD EROS Data Cent 109.38 28 P **PKiKP 06 14 28.6 +0.2**
baz=323
ANMO Albuquerque 110.67 40 P **PKiKP 06 14 32.5 +1.2**
baz=312
D47A Chapleau 111.40 17 P **PKiKP 06 14 31.9 -0.3**
baz=336
TORD Torodi Ar. Bea 111.94 293 Pdiff **Pdif 06 10 34.8 -2.1**

comp=Z,0.1nm,0.3s,baz=339,slow=7.7,SNR=4.6
TORD PKiKP **PKiKP 06 14 32.9 -1.1**
comp=Z,5.3nm,0.8s,baz=39,slow=1.5,SNR=23
TORD PP **PP 06 15 13.6 -3.6**
comp=Z,2.7nm,0.8s,baz=56,slow=6.5,SNR=5.9
TORD PKKPbc **PKKPbc 06 25 25.9 +0.2**
comp=Z,1.2nm,0.9s,baz=280,slow=3.0,SNR=4.3
D50A G1974 Best Tow 112.15 15 P **PKiKP 06 14 33.2 -0.4**
baz=339
E48A Lockeyer 112.19 17 P **PKiKP 06 14 33.4 -0.2**
baz=337
F48A Evansville 112.66 17 P **PKiKP 06 14 34.2 -0.4**
baz=336
JFWS Jewell Farm 112.69 24 P **PKiKP 06 14 34.4 -0.2**
baz=328
F49A Sandfield 112.88 17 P **PKiKP 06 14 34.1 -0.8**
baz=337
G47A Hillman 112.89 18 P **PKiKP 06 14 34.4 -0.6**
baz=335
NVL N'lazarevskaya 113.44 200 *i* PKIKP **PKiKP 06 14 33.8 -1.3**
NVL pmax pmax
comp=Z,4.0nm,0.7s
MNTX Cornudas Mount 113.51 42 P **PKiKP 06 14 37.5 +0.9**
baz=312
MSTX Muleshoe 113.54 38 P **PKiKP 06 14 37.2 +0.5**
baz=315
E56A St. Veronique 113.78 12 P **PKiKP 06 14 36.7 +0.1**
baz=344
E57A Chemin Saint G 114.08 11 P **PKiKP 06 14 36.8 -0.5**
baz=345
WMOK Wichita Mounta 115.25 35 P **PKiKP 06 14 39.3 -0.6**
baz=319
L48A N Adams 115.62 20 P **PKiKP 06 14 39.7 -0.6**
baz=334
TUL1 Leonard 115.94 32 PKPdf 06 14 41.1 0.0
TUL1 Leonard 115.94 32 P **PKPdf 06 14 41.5 +0.4**
baz=322
TX31 Lajitas Ar. Si 116.19 43 PKPdf 06 14 41.6 -0.3
TX32 Lajitas Array 116.19 43 PKPdf 06 14 41.2 -0.7
TXAR Lajitas Array 116.19 43 PKP **PKPdf 06 14 41.7 -0.2**
comp=Z,4.7nm,0.7s,baz=228,slow=0.6,SNR=34
TXAR PKKPbc **PKKPab 06 25 16.6 -1.3**
comp=Z,1.1nm,0.8s,baz=158,slow=8.1,SNR=8.9
ABTX Abilene, Hawle 116.33 37 P **PKPdf 06 14 41.5 -0.5**
baz=317
CCM Cathedral Cave 116.36 28 P **PKiKP 06 14 40.6 -1.3**
baz=326
N49A Columbus Grove 116.62 21 P **PKiKP 06 14 41.6 -0.7**
baz=334
J59A Piesco 116.85 12 P **PKPdf 06 14 42.4 -0.3**
baz=344
O48A Farmland 116.88 22 P **PKPdf 06 14 42.5 -0.3**
baz=333
L54A Sinclairville 116.89 16 P **PKPdf 06 14 42.6 -0.2**
baz=339
U40A Yellville 117.02 30 PKPdf 06 14 41.9 -1.4
U40A Yellville 117.02 30 P **PKPdf 06 14 42.3 -0.9**
baz=324
N50A Nevada 117.10 20 P **PKPdf 06 14 42.3 -0.9**
baz=335
L55A Hinsdale 117.17 16 P **PKPdf 06 14 42.7 -0.7**
baz=340
O49A Covington 117.23 21 P **PKPdf 06 14 42.7 -0.8**
baz=334
M53A Wl Miller and 117.25 18 P **PKPdf 06 14 42.8 -0.7**
baz=338
K58A Earlville 117.28 13 P **PKiKP 06 14 44.0 +0.4**
baz=343
M54A Oil Creek Stat 117.47 17 P **PKPdf 06 14 42.8 -1.2**
baz=338
P48A Milroy 117.49 22 P **PKPdf 06 14 43.5 -0.5**
baz=332
W39A Magazine 117.50 31 P **PKiKP 06 14 44.2 0.0**
baz=323
O50A Cable 117.50 21 P **PKPdf 06 14 43.9 -0.1**
baz=334
SNAA Sanae 117.63 197 PKPdf **PKPdf 06 14 42.2 -1.1**
SNAA Sanae 117.63 197 PKP **PKPdf 06 14 41.7 -1.6**
comp=Z,3.7nm,1.0s,baz=280,slow=7.3,SNR=8.5
SNAA PKKPbc **PKKPab 06 25 05.2 -2.3**
comp=Z,4.1nm,1.1s,baz=325,slow=18,SNR=4.0
SNAA Sanae 117.63 197 PKPdf 06 14 43.1 -0.2
SNAA Sanae 117.63 197 PKIKP **PKPdf 06 14 43.1 -0.2**
ACSO Alum Creek Sta 117.64 20 PKiKP 06 14 43.2 -1.1
ACSO Alum Creek Sta 117.64 20 P **PKiKP 06 14 44.6 +0.3**
baz=335
L57A Andrews Acres 117.73 15 P **PKiKP 06 14 44.7 +0.2**
baz=342
BINY Binghamton 117.74 14 P **PKiKP 06 14 44.5 0.0**
baz=342
M55A Ridgway 117.75 16 P **PKPdf 06 14 43.8 -0.7**
baz=339
PBMO Poplar Bluff 117.78 28 PKPdf 06 14 43.9 -0.8
N53A Lisbon 117.78 18 P **PKiKP 06 14 44.6 0.0**
baz=337
JCT Junction City 117.79 39 PKPdf 06 14 44.6 -0.3
JCT Junction City 117.79 39 PKIKP **PKPdf 06 14 44.6 -0.3**
JCT Junction City 117.79 39 P **PKPdf 06 14 44.5 -0.3**
baz=316
O51A Pataskala 117.84 20 P **PKPdf 06 14 43.7 -1.0**
baz=335
Q48A North Vernon 117.84 23 P **PKPdf 06 14 43.9 -0.8**
baz=332
M56A Emporium 117.89 16 P **PKiKP 06 14 44.7 0.0**
baz=340
P50A Jamestown 117.93 21 P **PKPdf 06 14 43.9 -1.0**
baz=334
LCAR Lake Charles 118.04 29 PKPdf 06 14 44.9 -0.2
MIAR Mount Ida 118.12 32 PKiKP 06 14 45.5 +0.1
MIAR Mount Ida 118.12 32 PKIKP **PKiKP 06 14 45.5 +0.1**
MIAR Mount Ida 118.12 32 P **PKPdf 06 14 44.7 -0.6**
baz=323
WCI Wyandotte Cave 118.25 24 PKPdf 06 14 45.0 -0.5
WCI Wyandotte Cave 118.25 24 PKIKP **PKPdf 06 14 45.0 -0.5**
WCI Wyandotte Cave 118.25 24 P **PKPdf 06 14 45.5 0.0**
baz=331
W41B Gary Mavity, V 118.27 30 P **PKPdf 06 14 45.3 -0.3**
baz=325
N56A West Decatur 118.39 16 P **PKPdf 06 14 44.7 -1.0**
baz=340
P52A Corning 118.46 20 P **PKPdf 06 14 44.8 -1.1**
baz=336
O54A Avella 118.49 18 P **PKiKP 06 14 46.3 +0.3**
baz=338
UALR University of 118.54 31 PKiKP 06 14 46.3 +0.1
Q51A Peebles 118.61 21 P **PKPdf 06 14 45.9 -0.3**
baz=334
R49A Shelbyville 118.61 23 P **PKPdf 06 14 45.7 -0.5**
baz=332
SSPA Standing Stone 118.76 16 P **PKiKP 06 14 46.5 0.0**
baz=340
P53A Whipple 118.83 19 P **PKPdf 06 14 46.2 -0.4**
baz=336
N58A Sunbury 118.86 15 P **PKiKP 06 14 46.0 -0.6**
baz=342
435B Jarrell 118.87 37 PKPdf 06 14 46.9 0.0
M60A Port Jervis 118.87 13 P **PKiKP 06 14 47.9 +1.2**
baz=344
O56A Blue Knob Stat 118.92 17 P **PKPdf 06 14 46.4 -0.4**
baz=339
R50A Paris 118.93 22 P **PKPdf 06 14 45.9 -0.9**
baz=333
N59A State Game Lan 119.01 14 P **PKiKP 06 14 47.1 +0.1**
baz=342
S49A Springfield 119.02 23 P **PKPdf 06 14 46.5 -0.5**
baz=332
Q52A Bidwell 119.02 20 P **PKPdf 06 14 46.3 -0.7**
baz=335
R51A Hillsboro 119.17 22 P **PKPdf 06 14 47.2 -0.1**
baz=334
P55A Reedsville 119.28 18 P **PKiKP 06 14 47.8 +0.2**
baz=338
VNA2 Neumayer--Watz 119.28 197 PKPdf **PKPdf 06 14 45.8 -0.6**
baz=94,slow=2.0
PAL Palisades 119.33 12 P **PKiKP 06 14 47.9 +0.4**
baz=344
Q53A Leroy 119.36 20 P **PKiKP 06 14 47.9 +0.2**
baz=336
S50A Richmond 119.44 23 P **PKPdf 06 14 46.6 -1.2**
baz=333
WVT Waverly 119.45 26 PKPdf 06 14 46.8 -1.1
WVT Waverly 119.45 26 PKIKP **PKPdf 06 14 46.8 -1.1**
WVT Waverly 119.45 26 P **PKPdf 06 14 47.2 -0.7**
baz=329
Q54A Coxs Mills 119.46 19 P **PKiKP 06 14 47.1 -0.7**
baz=337
T49A Edmonton 119.52 24 P **PKPdf 06 14 48.0 0.0**

baz=332
P56A Dayton Farm, R 119.56 17 P PKPdf 06 14 47.8 -0.2
baz=339
833A Chaparral WMA, 119.58 41 PKPdf 06 14 47.8 -0.6
833A Chaparral WMA, 119.58 41 P PKiKP 06 14 48.6 +0.2
baz=316
Q55A Buckhannon 119.67 18 P PKPdf 06 14 47.5 -0.8
baz=338
VNA3 Neumayer Olymp 119.74 197 PKPdf PKPdf 06 14 46.3 -1.0
S51A Beattyville 119.76 22 PKPdf 06 14 47.4 -1.1
S51A Beattyville 119.76 22 P PKPdf 06 14 48.2 -0.2
baz=334
T50A Nancy 119.86 23 P PKPdf 06 14 47.2 -1.4
baz=332
Q56A Snyder Ridge, 119.89 18 P PKPdf 06 14 47.9 -0.8
baz=338
S52A Salyersville 119.91 21 P PKPdf 06 14 48.0 -0.8
baz=334
U49A Red Boiling Sp 119.94 24 P PKPdf 06 14 47.9 -1.0
baz=331
CLTN Cedars of Leba 120.09 25 PKPdf 06 14 48.9 -0.3
OXF Oxford 120.13 28 PKPdf 06 14 48.0 -1.2
OXF Oxford 120.13 28 PKIKP PKPdf 06 14 48.0 -1.2
OXF Oxford 120.13 28 P PKPdf 06 14 48.5 -0.7
baz=327
R54A Victor 120.14 19 P PKPdf 06 14 48.6 -0.6
baz=336
S53A Williamson 120.23 21 P PKPdf 06 14 48.9 -0.5
baz=335
T51A Gray 120.24 23 P PKPdf 06 14 49.0 -0.4
baz=333
PLAL Pickwick Lake 120.32 27 PKPdf 06 14 47.9 -1.6
R55A Marlinton 120.32 19 P PKPdf 06 14 49.4 -0.2
baz=337
S54A Dingess, Beckl 120.39 20 P PKPdf 06 14 49.2 -0.6
baz=336
U50A Jamestown 120.39 24 P PKPdf 06 14 48.8 -0.9
baz=332
Q58A Fox Den Farm, 120.41 16 P PKPdf 06 14 48.9 -0.7
baz=340
R56A Bull Pasture M 120.42 18 P PKPdf 06 14 49.7 -0.1
baz=338
T52A Hallie 120.45 22 P PKPdf 06 14 48.8 -1.0
baz=334
HKT Hockley 120.49 37 PKiKP 06 14 51.0 +1.0
HKT Hockley 120.49 37 PKIKP PKiKP 06 14 51.0 +1.0
V49A McMinnville 120.55 25 P PKPdf 06 14 48.5 -1.6
baz=331
DBIC Dimbokro 120.57 290 PKP PKPdf 06 14 49.3 -1.3
comp=Z,8.3nm,0.8s,baz=66,slow=1.9,SNR=12
DBIC Dimbokro 120.57 290 PKiKP 06 14 51.0 +0.3
DBIC Dimbokro 120.57 290 PKIKP PKiKP 06 14 51.0 +0.3
KIC Kosan Boka 120.60 289 *e*PKIKP PKPdf 06 14 50.3 -0.3
comp=Z,38nm,0.8s
S55A Lewisburg 120.67 19 P PKPdf 06 14 49.3 -0.9
baz=337
T53A Wise 120.72 21 P PKPdf 06 14 49.9 -0.5
baz=335
TIC Toumodi 120.72 290 *e*PKIKP PKPdf 06 14 50.8 -0.1
comp=Z,1.7nm,0.2s
U51A La Follette 120.73 23 P PKPdf 06 14 49.7 -0.6
baz=333
TZTN Tazewell 120.75 22 P PKPdf 06 14 49.5 -0.9
baz=334
R57A Stanardsville 120.78 17 P PKPdf 06 14 49.6 -0.8
baz=339
LIC Lamto 120.91 289 *e*PKIKP PKPdf 06 14 50.8 -0.4
comp=Z,68nm,1.0s
R58A Rapidan 120.92 17 P PKPdf 06 14 49.9 -0.8
baz=340
V50A Pikevile 120.94 24 P PKPdf 06 14 50.0 -0.8
baz=332
U52A Thorn Hill 120.96 22 P PKPdf 06 14 50.3 -0.5
baz=334
W49A Belvidere 120.96 25 P PKPdf 06 14 49.9 -0.9
baz=330
T54A Tazewell 120.97 20 P PKPdf 06 14 50.0 -0.9
baz=336
V51A Loudon 121.12 23 P PKPdf 06 14 50.7 -0.4
baz=332
T55A Pulaski 121.18 20 P PKPdf 06 14 50.1 -1.1
baz=336
X48A Hartselle 121.21 26 PKPdf 06 14 49.6 -1.7
U53A Fall Branch 121.26 22 P PKiKP 06 14 51.5 -0.1
baz=334
R58B Mineral 121.27 17 P PKPdf 06 14 51.1 -0.2
baz=340
W50A Signal Mountai 121.27 25 PKPdf 06 14 51.0 -0.5
W50A Signal Mountai 121.27 25 P PKPdf 06 14 50.5 -1.0
baz=331
CPCT Cooper Cave 121.36 24 PKPdf 06 14 51.6 0.0
V52A Sevierville 121.36 23 PKPdf 06 14 51.4 -0.2
V52A Sevierville 121.36 23 P PKPdf 06 14 50.9 -0.6
baz=333
TKL Tuckaleechee C 121.46 23 PKPdf 06 14 50.9 -0.9
TKL Tuckaleechee C 121.46 23 PKIKP PKPdf 06 14 50.9 -0.9
T56A Rocky Mt 121.50 19 P PKPdf 06 14 51.0 -0.8
baz=337
W51A Cleveland 121.53 24 P PKPdf 06 14 51.7 -0.2
baz=332
S59A Mechanicsville 121.61 16 P PKiKP 06 14 52.2 +0.1
baz=340
U55A TA2, Sparta 121.66 20 P PKPdf 06 14 51.2 -1.0
baz=336
T57A Hurt 121.77 19 P PKPdf 06 14 51.8 -0.5
baz=338
V53A Saluda 121.80 22 PKPdf 06 14 52.4 -0.1
V53A Saluda 121.80 22 P PKPdf 06 14 52.2 -0.2
baz=334
W52A Murphy 121.90 24 PKPdf 06 14 52.1 -0.6
W52A Murphy 121.90 24 P PKPdf 06 14 52.3 -0.4
baz=333
Y49A Blount Mountai 121.99 26 PKPdf 06 14 51.8 -1.0
V54A Nebo 122.01 21 P PKPdf 06 14 52.1 -0.8
baz=335
W53A Cullowhee 122.12 23 P PKPdf 06 14 52.8 -0.4
baz=334
V55A Taylorsville 122.19 21 P PKPdf 06 14 52.4 -0.8
baz=336
U57A Blanch 122.27 19 P PKPdf 06 14 52.2 -1.1
baz=338
T59A Double "B" Far 122.28 17 PKPdf 06 14 53.0 -0.2
T59A Double "B" Far 122.28 17 P PKPdf 06 14 52.9 -0.4
baz=340
X52A Dahlonega 122.35 24 P PKPdf 06 14 52.7 -0.8
baz=333
BG3 Lake Jocassee 122.36 23 PKPdf 06 14 53.5 -0.1
LRAL Lakeview Retre 122.44 27 PKPdf 06 14 52.4 -1.3
LRAL Lakeview Retre 122.44 27 P PKPdf 06 14 52.9 -0.8
baz=329
V56A Mocksville 122.47 20 P PKPdf 06 14 52.8 -0.9
baz=336
W54A Cherokee Point 122.55 22 P PKPdf 06 14 52.9 -1.0
baz=334
V57A Coltrane Farms 122.63 19 P PKPdf 06 14 53.1 -0.9
baz=337
X53A Estanollee 122.66 23 P PKPdf 06 14 53.6 -0.5
baz=333
Z50A Ashland 122.72 26 PKPdf 06 14 53.8 -0.5
Z50A Ashland 122.72 26 P PKPdf 06 14 53.0 -1.3
baz=330
KMSC Kings Mountain 122.80 21 PKPdf 06 14 53.8 -0.6
PAULI Pauline 122.92 22 PKPdf 06 14 52.9 -1.7
Y52A Lilburn 122.94 24 PKPdf 06 14 54.6 -0.1
Y52A Lilburn 122.94 24 P PKPdf 06 14 54.6 -0.1
baz=332
X54A Belton 122.97 22 P PKPdf 06 14 54.2 -0.5
baz=334
W56A Indian Trail 123.06 21 P PKiKP 06 14 55.1 +0.1
baz=336
Y53A Monroe 123.13 24 P PKiKP 06 14 55.5 +0.2
baz=333
V59A Middlesex 123.21 18 P PKPdf 06 14 54.4 -0.6
baz=339
W57A Gilead 123.23 20 P PKPdf 06 14 54.7 -0.5
baz=337
HODGE Hodges 123.29 23 PKPdf 06 14 54.3 -1.0
X55A Gracelyn & Ava 123.30 22 P PKPdf 06 14 54.5 -0.8
baz=335
Z52A Williamson 123.39 25 P PKPdf 06 14 55.3 -0.2
baz=332
Y54A Tignall 123.46 23 P PKPdf 06 14 55.5 -0.1
baz=334
GOGA Godfrey 123.57 24 PKiKP 06 14 56.6 +0.5
GOGA Godfrey 123.57 24 PKIKP PKiKP 06 14 56.6 +0.5
GOGA Godfrey 123.57 24 P PKiKP 06 14 56.3 +0.2
baz=333
W58A Raeford 123.60 19 P PKPdf 06 14 55.3 -0.6
baz=338
JSC Jenkinsville 123.60 22 PKPdf 06 14 55.9 0.0
JSC Jenkinsville 123.60 22 PKIKP PKPdf 06 14 55.9 0.0
Y55A Saluda 123.70 22 P PKPdf 06 14 55.7 -0.4
baz=334
152A Waverly Hall 123.72 26 PKPdf 06 14 56.1 -0.1
X58A Rowland 124.00 20 P PKiKP 06 14 56.8 -0.1
baz=337
BRAL Brewton 124.01 29 PKPdf 06 14 56.8 0.0
BRAL Brewton 124.01 29 P PKiKP 06 14 57.2 +0.1
baz=328
Y56A Pelion 124.03 22 P PKPdf 06 14 56.7 0.0
baz=335
X60A Albert Glenn T 124.40 18 P PKPdf 06 14 56.9 -0.5
baz=339
352A Blakely 124.67 26 PKPdf 06 14 57.4 -0.6
Z57A Bowman 124.69 22 P PKiKP 06 14 58.5 +0.2
baz=336
Z58A St. Stephen 124.96 21 P PKiKP 06 14 59.2 +0.4
baz=336
TIGA Tifton 125.26 25 PKPdf 06 14 58.4 -0.8
TLIG Tlapa 127.51 49 PKPdf 06 15 04.2 +0.3
CMIG Matias Romero 130.42 47 PKP PKPdf 06 15 09.4 0.0
comp=Z,3.4nm,0.7s,baz=305,slow=4.2,SNR=5.6
ACON Acoyapa 140.57 42 PKPdf 06 15 27.7 -0.6
USHA Ushuaia 143.08 171 PKP PKPbc 06 15 29.5 +1.1
comp=Z,18nm,1.0s,baz=236,slow=2.1,SNR=12
GO10 Punta Arenas 144.25 168 PKPdf 06 15 33.2 -0.6
GO09 Cerro Castillo 145.75 166 PKPab 06 15 37.4 +0.3
BCIP Isla Barro Col 146.00 38 *e*P PKPdf 06 15 37.3 -0.6
UPA Univ. de Panam 146.33 38 *e*P PKPbc 06 15 39.1 -0.4
EFI East Falkland 146.86 182 PKPab 06 15 40.8 -0.5
EFI East Falkland 146.86 182 PKP2 PKPab 06 15 40.8 -0.5
FDF Fort de France 146.96 3 PKPbc 06 15 40.5 -0.8
FDF Fort de France 146.96 3 PKP2 PKPbc 06 15 40.6 -0.8
URIC Uribia, Colomb 147.59 23 PKPbc 06 15 42.0 -1.1
SJCC San Jacinto, C 147.86 30 *e*P PKPbc 06 15 43.9 -0.1
SMLC San Martn de 149.33 29 *e*P PKPdf 06 15 44.3 +0.9
UREC San Jos de Ur 149.53 33 *e*P PKPdf 06 15 44.9 +1.2
DBBC Dabeiba 149.79 34 *e*P PKPdf 06 15 46.5 +2.2
OCAC Ocana 150.17 28 *e*P PKiKP 06 15 51.1 +0.3
SDV Santo Domingo 150.69 23 PKPdf PKPdf 06 15 45.7 -0.1
SDV PKPbc PKPbc 06 15 51.2 0.0
PIZC Pizarro, Choco 150.82 39 *e*P PKiKP 06 15 52.9 +1.0
HELC Santa Helena 150.85 34 *e*P PKPbc 06 15 52.1 +0.3
CBOC Ciudad Bolivar 150.86 35 *e*P PKPbc 06 15 51.7 0.0
PTBC PUERTO BERRIO 151.11 32 *e*P PKPbc 06 15 51.3 -0.7
PAMC Pamplona, Colo 151.25 28 *e*P PKPbc 06 15 53.0 0.0
PLMC San Jos del P 151.50 37 *e*P PKiKP 06 15 54.6 +1.1
NORC Norcasia 151.73 34 *e*P PKPbc 06 15 53.4 -0.1
GUY2C Guyana, Caldas 151.75 35 *e*P PKPbc 06 15 53.5 -0.5
SPBC San Pablo de B 152.06 32 *e*P PKPbc 06 15 54.4 0.0
YOTC Yotoco, Valle 152.21 38 *e*P PKPdf 06 15 49.3 +1.2
RUSC La Rusia 152.34 30 *e*P PKiKP 06 15 55.6 -0.1
TAMC Tame, Arauca 152.45 27 *e*P PKiKP 06 15 56.5 +1.1
ROSC El Rosal 152.63 34 *e*P PKPdf 06 15 50.8 +1.9
ORTC Ortega, Tolima 152.90 36 *e*P PKiKP 06 15 56.0 -0.1
CHIC Chingaza 153.11 33 *e*P PKPdf 06 15 48.9 -0.8
BBAC Balboa, Cauca 153.19 42 *e*P PKPdf 06 15 50.5 +1.0
PRAC Prado 153.26 36 *e*P PKPbc 06 15 56.7 -0.2
OTAV Otavalo 153.71 47 PKPbc PKiKP 06 15 59.6 +1.1
OTAV Otavalo 153.71 47 PKIKP PKiKP 06 15 59.6 +1.1
CRUC La Cruz 153.73 42 *e*P PKiKP 06 15 59.4 +1.0
RCBR Riachuelo 153.73 296 PKPdf PKPdf 06 15 46.6 -3.5
RCBR PKiKP 06 15 58.6 +0.6
RCBR PKPab sPKPbc 06 16 07.2 -3.1
RCBR Riachuelo 153.73 296 PKIKP PKiKP 06 15 58.6 +0.6
RCBR 06 16 07.2
PTGC Puerto Gaitan, 154.27 30 *e*P PKPdf 06 15 51.0 +0.2
FLOC Florencia 154.53 40 *e*P PKPdf 06 15 53.0 +1.7
FLOC Florencia 154.53 40 PKPab PKPab 06 16 12.2 -1.8
PLCA Paso Flores 155.89 159 PKP PKPdf 06 15 53.0 +0.7
comp=Z,3.2nm,1.1s,baz=288,slow=6.0,SNR=3.2
PLCA PKPbc PKPbc 06 16 02.6
comp=Z,4.1nm,0.7s,baz=265,slow=2.1,SNR=13
PLCA PKPab PKPab 06 16 19.6 +0.5
comp=Z,6.4nm,1.0s,baz=243,slow=4.7,SNR=4.7
PLCA Paso Flores 155.89 159 PKPdf 06 15 52.8 +0.4
PLCA PKPab 06 16 21.0 +1.9
PLCA Paso Flores 155.89 159 PKP2 PKPab 06 16 21.0 +1.9
PLCA 07 15 52.8
ATAH Atahualpa 158.46 61 PKP PKPdf 06 15 57.5 +0.7
comp=Z,16nm,1.0s,baz=273,slow=2.4,SNR=7.3
ATAH PKPab PKPab 06 16 31.7 +0.2
comp=Z,16nm,1.0s,baz=340,slow=4.3,SNR=4.8
CFA Coronel Fontan 164.75 151 PKP PKPdf 06 16 02.4 0.0
comp=Z,3.1nm,0.7s,baz=260,slow=2.8,SNR=7.8
CFA PKPab PKPab 06 16 58.7 +0.8
comp=Z,1.1nm,0.4s,baz=350,slow=5.0,SNR=4.4
GO02 Mina Guanaco 168.55 127 PKPdf 06 16 01.7 -4.1
BDFB Brasilia 168.62 283 PKP PKPdf 06 16 04.2 -1.6
comp=Z,15nm,1.1s,baz=46,slow=1.5,SNR=11
BDFB PKPab PKPab 06 17 15.3 -0.4
comp=Z,9.8nm,0.9s,baz=86,slow=3.7,SNR=5.8
BDFB Brasilia 168.62 283 PKPdf 06 16 05.9 +0.1
BDFB PKPab 06 17 14.8 -0.9
BDFB Brasilia 168.62 283 PKIKP PKPdf 06 16 05.9 +0.1
BDFB 06 17 14.8
SAML Samuel 169.89 21 PKPdf 06 16 05.6 -0.9
SAML PKPab 06 17 19.8 -1.0
SAML Samuel 169.89 21 PKP2 PKPab 06 17 19.8 -1.0
SAML 07 16 05.6
LPAZ La Paz 171.52 76 PKPdf 06 16 07.4 -0.7
LPAZ La Paz 171.52 76 PKIKP PKPdf 06 16 07.4 -0.7
CPUP Villa Florida 171.93 194 PKP PKPdf 06 16 08.0 +0.7
comp=Z,3.7nm,1.0s,baz=81,slow=2.7,SNR=3.9
CPUP PKPab PKPab 06 17 29.2 -0.4
comp=Z,9.1nm,1.0s,baz=158,slow=4.7,SNR=10
CPUP Villa Florida 171.93 194 PKPdf 06 16 06.2 -1.0
CPUP PKPab 06 17 28.9 -0.7
CPUP Villa Florida 171.93 194 PKIKP PKPdf 06 16 06.2 -1.0
CPUP 06 17 28.9

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*IDC **17** 06:05:52.0±0.7, 35°.24S×111°.10W, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.1/36, mbtmp4.2/11, MS4.5/6, Ms1 4.5/6, ms1mx4.2/16, Error ellipse: s-maj=25.1km s-min=20.1km az=73.0*

*NEIC **17** 06:05:53.6±1.1, 35°.4S±0°.1×111°.0W±0°.2, h10km±1km, mb4.7/12, Error ellipse: s-maj=27.9km s-min=22.2km az=283.0*

*GCMT **17** 06:05:58.6±0.3, 35°.33S±0°.02×110°.97W±0°.02, h19km±1km, MW5.0/111, Moment Tensor Solution. s35,c40; s111,c159; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.16±.23; $M_{\theta\theta}$-0.47±.19; $M_{\phi\phi}$1.63±.18; $M_{r\theta}$-0.79±.39; $M_{\theta\phi}$-4.25±.13; $M_{\phi r}$-0.60±.35; Best double couple: $M_0$4.54300×10^{16} NP1:ϕ_s5.00000°, δ77.00000°, λ-13.00000°. NP2:ϕ_s98.00000°, δ77.00000°, λ-167.00000°. Principal axes: T 4.9570, Plg0.0000°, Azm232.0000°; N -0.8290, Plg72.0000°, Azm142.0000°; P -4.1300, Plg18.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 06:05:54.0±0.7, **35°.3S**±0°.1×**110°.9W**±0°.1, **h10**km, **n35**, σ**1.14**/29, **mb4.5**/16, **MS4.5**/6, **1C, Southern East Pacific Rise**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PLCA Paso Flores 32.06 112 P P 06 12 21.5 +0.4
2.6nm,0.9s,baz=9.7,slow=6.5,SNR=4.1
USHA Ushuaia 35.09 137 P P 06 12 47.8 +0.7
12nm,1.0s,baz=332,slow=7.0,SNR=4.9
CFA Coronel Fontan 35.61 96 P P 06 12 53.4 +1.4
2.1nm,0.8s,baz=255,slow=13,SNR=5.9
GO02 Mina Guanaco 36.90 86 P P 06 13 03.0 -0.3
GO02 IAmb IAmb 06 13 10.2
comp=Z,11nm,0.9s
NNA Nana 38.61 62 P P 06 13 17.4 -0.1
NNA IAmb IAmb 06 13 35.0
comp=Z,29nm,1.4s
LVC Limon Verde 38.61 82 P P 06 13 16.6 -1.4
LVC IAmb IAmb 06 13 25.6
comp=Z,18nm,1.1s
PMSA Palmer Station 40.58 151 LR LR 06 26 01.5
comp=Z,298nm,18.1s,baz=332,slow=30
LPAZ La Paz 42.55 75 P P 06 13 51.1 +0.3
comp=Z,2.7nm,0.9s,baz=226,slow=4.6,SNR=6.2
LPAZ La Paz 42.55 75 P P 06 13 51.1 +0.3
SAML Samuel 50.79 71 P P 06 14 53.6 -1.1
JTS Las Juntas de 51.59 33 P P 06 14 58.6 -2.1
comp=Z,14nm,1.0s,baz=310,slow=12,SNR=4.3
JTS Las Juntas de 51.59 33 P P 06 15 00.8 +0.2
JTS IAmb IAmb 06 15 01.0
comp=Z,17nm,1.1s
ROSC El Rosal 52.71 48 LR LR 06 33 19.2
comp=Z,429nm,20.2s,baz=228,slow=31
ROSC El Rosal 52.71 48 P P 06 15 09.6 +0.2
ROSC IAmb IAmb 06 15 11.3
comp=Z,16nm,1.1s
QSPA South Pole Qui 54.88 180 P P 06 15 25.8 +1.3
comp=Z,2.8nm,0.9s,baz=221,slow=6.0,SNR=2.8
ARGC Ariguani, Magd 56.75 45 *e*P P 06 15 43.4 +5.1
SNAA Sanae 62.25 160 P P 06 16 14.3 -1.3
comp=Z,3.1nm,0.9s,baz=134,slow=3.8,SNR=3.6
SNAA Sanae 62.25 160 P P 06 16 14.8 -0.8
SNAA IAmb IAmb 06 16 23.9
comp=Z,8.4nm,1.2s
Z41A Richland Creek 70.31 16 P P 06 17 07.5 0.0
CCUT Cedar City 72.54 358 P P 06 17 20.8 -0.4
NVAR Mina Array Bea 73.70 354 P P 06 17 27.6 -0.4
comp=Z,1.0nm,0.9s,baz=182,slow=6.0,SNR=6.2
SYO Syowa Base 73.72 169⥣ *e*P P 06 17 25.4 -2.2
KVN Kaiserville 74.30 354 P P 06 17 32.1 +0.6
KVN IAmb IAmb 06 17 46.5
comp=Z,6.6nm,1.2s
PDAR Pinedale Array 77.72 1 P P 06 17 50.4 -0.7
comp=Z,0.9nm,0.8s,baz=177,slow=5.8,SNR=5.7
NEW Newport 83.40 356 LR LR 06 50 23.3
comp=Z,539nm,18.8s,baz=282,slow=32
E43A Lone Tree Farm 84.14 16 P P 06 18 25.3 +0.5
STKA Stephens Creek 84.63 235 LR LR 06 50 13.7
comp=Z,234nm,19.3s,baz=24,slow=32
ASAR Alice Springs 95.11 236 P P 06 19 16.6 -1.2
comp=Z,0.7nm,1.0s,baz=114,slow=5.2,SNR=4.6
ASAR LR LR 06 55 11.4
comp=Z,130nm,19.1s,baz=126,slow=31
WRA Warramunga Arr 97.28 239 LR LR 06 59 26.0
comp=Z,263nm,19.0s,baz=160,slow=33
YKA Yellowknife Ar 97.52 358 P P 06 19 27.4 0.0
comp=Z,1.1nm,1.2s,baz=287,slow=7.7,SNR=3.5
BUR08 Bucovina Ar. S 145.36 56 PKPbc 06 25 31.5 -0.2
AKASG Malin Array Be 147.51 49 PKPbc PKPbc 06 25 38.9 +1.1
comp=Z,0.2nm,0.3s,baz=58,slow=37,SNR=1.8
CMAR Chiang Mai Arr 148.67 245 PKPbc PKPdf 06 25 41.0 +2.9
comp=Z,1.7nm,0.3s,baz=128,slow=2.8,SNR=8.1
SONM Songino Array 149.70 306 PKPbc PKPdf 06 25 40.5 +1.4
comp=Z,0.3nm,0.4s,baz=167,slow=37,SNR=1.7
BRTR Keskin Array B 151.68 70 PKPbc PKPbc 06 25 48.9 +0.2
comp=Z,0.4nm,0.7s,baz=258,slow=5.7,SNR=2.9

IDC 17 06:20:21.9±2.2, **6°.08S**×**129°.84E, h0**km, **mb3.6**/1, **mb1 3.7**/4, **mb1mx3.4**/38, **mbtmp3.6**/4, **ML3.7**/3, **Error ellipse: s-maj=92.8km s-min=28.5km az=76.0, Banda Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FITZ Fitzroy Crossi 12.63 199 Pn Pn 06 23 24.4 +1.5
0.4nm,0.3s,baz=29,slow=10,SNR=13
FITZ Sn Sn 06 25 36.0 -8.4
0.3nm,0.3s,baz=158,slow=22,SNR=1.5
WRA Warramunga Arr 14.45 163 Pn Pn 06 23 46.9 -1.0
0.4nm,0.3s,baz=343,slow=13,SNR=21
WRA Sn Sn 06 26 17.1 -12
0.4nm,0.3s,baz=331,slow=24,SNR=4.9
ASAR Alice Springs 17.91 168 P Pn 06 24 32.2 -0.4
0.2nm,0.3s,baz=348,slow=10.0,SNR=7.0
ASAR Sn Sn 06 27 39.6 -14
0.1nm,0.3s,baz=322,slow=16,SNR=1.9
MKAR Makanchi Array 67.38 327 P P 06 31 19.0 0.0
0.3nm,0.4s,baz=122,slow=8.0,SNR=5.4

IDC 17 07:01:43.8±7.8, **19°.59S**×**175°.10E, h0**km, **mb3.7**/3, **mb1 4.0**/3, **mb1mx3.6**/26, **mbtmp3.7**/3, **Error ellipse: s-maj=350.3km s-min=38.0km az=147.0, South of Fiji Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 38.29 262 P P 07 09 05.4 -1.0
0.5nm,0.9s,baz=97,slow=7.6,SNR=1.5
ASAR Alice Springs 38.42 256 P P 07 09 07.8 +0.3
0.6nm,0.4s,baz=89,slow=7.7,SNR=16
ILAR Eielson Array 89.01 15 P P 07 14 40.1 0.0
0.6nm,0.9s,baz=222,slow=7.5,SNR=5.5

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*MDD **17** 07:24:05.9±2.3, 37°.52N×13°.47W, h0km, mb4.3/2, Error ellipse: s-maj=20.5km s-min=18.6km az=20.0, PRXIMO*

*IGIL **17** 07:24:06.2, 37°.58N×13°.45W, h0km, ML2.4*

*INMG **17** 07:24:07.0±1.1, 37°.27N×13°.89W, h10km, ML2.4, Error ellipse: s-maj=9.3km s-min=7.6km az=166.0*

ISC 17 07:24:05.5±3.9, **37°.57N**±0°.10×**13°.4W**±0°.2, **h10**km, **n32**, σ**1.37**/57, **Azores-Cape St. Vincent Ridge**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMAFR Mafra 3.54 66 *e*Pn Pn 07 25 02.1 +1.5
PMAFR *e*Sn Sn 07 25 45.0 +2.4
PMAFR A A 07 25 51.0
17nm,0.8s
PMAFR Mafra 3.54 66 P Pn 07 25 02.1 +1.5
4.3nm,0.1s,SNR=7.9
PMAFR S Sn 07 25 42.6 +0.1
8.7nm,0.2s,SNR=7.9
PFVI Vila Bisbo 3.69 95 *e*Pn Pn 07 25 03.0 +0.4
PFVI *e*Sn Sn 07 25 44.8 -1.4
PFVI A A 07 25 51.5
8.5nm,0.8s
PFVI Vila Bisbo 3.69 95 P Pn 07 25 03.0 +0.4
2.3nm,0.1s,SNR=7.9
PFVI S Sn 07 25 44.7 -1.5
7.9nm,0.4s,SNR=7.9
PTEO Sao Teotonio 3.74 89 *e*Pn Pn 07 25 04.0 +0.8
PTEO *e*Sn Sn 07 25 46.5 -0.8
PTEO A A 07 25 47.6
7.9nm,0.8s
PTEO Sao Teotonio 3.74 89 P Pn 07 25 04.0 +0.8
PTEO S Sn 07 25 46.5 -0.8
4.0nm,0.8s
MORF Marmelete 3.81 92 *e*P Pn 07 25 04.5 +0.2
MORF *e*S Sn 07 25 47.2 -1.9
MORF AML AML 07 25 53.4
comp=N,9.1nm,0.3s
MORF Marmelete 3.81 92 *e*Pn Pn 07 25 04.7 +0.4
MORF *e*Sn Sn 07 25 47.9 -1.3
MORF A A 07 25 56.7
comp=N,5.3nm,0.1s
MORF Marmelete 3.81 92 P Pn 07 25 04.7 +0.4
MORF S Sn 07 25 47.9 -1.3
comp=N,5.3nm,0.1s
PNCL Nicolau / Gran 3.92 81 *e*Pn Pn 07 25 06.4 +0.7
PNCL *e*Sn Sn 07 25 51.2 -0.5
PNCL A A 07 25 55.7
comp=N,2.9nm,0.3s
PNCL Nicolau / Gran 3.92 81 P Pn 07 25 06.4 +0.7
PNCL S Sn 07 25 51.2 -0.5
comp=N,2.9nm,0.3s
PCVE Castro Verde 4.28 87 *e*Pn Pn 07 25 11.4 +0.7
PCVE *e*Sn Sn 07 25 59.6 -1.1
PCVE A A 07 26 02.3
comp=N,2.8nm,0.7s
PCVE Castro Verde 4.28 87 P Pn 07 25 11.4 +0.7
PCVE S Sn 07 25 59.6 -1.1
comp=N,2.8nm,0.7s
PMTG Montargil 4.36 68 *e*Pn Pn 07 25 12.4 +0.6
PMTG *e*Sn Sn 07 26 03.4 +0.8
PMTG A A 07 26 05.6
comp=N,2.5nm,0.7s
PMTG Montargil 4.36 68 P Pn 07 25 12.4 +0.6
PMTG S Sn 07 26 03.4 +0.8
comp=N,2.5nm,0.7s
EVO Evora 4.38 76 *e*Sn Sn 07 26 02.7 -0.5
EVO A A 07 26 07.6
comp=N,4.8nm,0.1s
EVO Evora 4.38 76 S Sn 07 26 02.7 -0.5
comp=N,4.8nm,0.1s
PBDV Barranco-do-Ve 4.39 93 *e*Sn Sn 07 26 03.3 -0.1
PBDV A A 07 26 08.4
comp=N,2.8nm,0.4s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PBDV	Barranco-do-Ve	4.39	93	S	Sn	07 26 03.3	-0.1
	comp=N,2.8nm,0.4s						
PVAQ	Vaqueiros	4.54	90	ePn	Pn	07 25 15.6	+1.3
PVAQ				eSn	Sn	07 26 06.3	-0.9
PVAQ				A	A	07 26 11.9	
	comp=N,4.1nm,0.7s						
PVAQ	Vaqueiros	4.54	90	P	Pn	07 25 15.6	+1.3
PVAQ				S	Sn	07 26 06.3	-0.9
	comp=N,4.1nm,0.7s						
EGRO	El Granado	4.72	89	S	Sn	07 26 10.6	-1.0
	comp=N,2.4nm,0.2s,SNR=6.5						
PESTR	Estremoz	4.78	72	ePn	Pn	07 25 19.3	+1.7
PESTR				eSn	Sn	07 26 13.4	+0.4
PESTR				A	A	07 26 19.5	
	comp=N,1.7nm,0.6s						
PMRV	Marv??o	5.08	67	ePn	Pn	07 25 23.1	+1.3
PMRV				eSn	Sn	07 26 20.4	-0.2
PMRV				A	A	07 26 26.3	
	comp=N,3.8nm,0.6s						
PMRV	Marv??o	5.08	67	P	Pn	07 25 23.1	+1.3
PMRV				S	Sn	07 26 20.4	-0.2
	comp=N,3.8nm,0.6s						
EBAD	Badajoz	5.19	75	P	Pn	07 25 24.3	+1.1
	comp=N,0.7nm,0.1s,SNR=7.9						
EBAD				S	Sn	07 26 22.2	-1.0
	comp=N,0.7nm,0.1s,SNR=5.9						
EMIN	Mina Concepcio	5.36	86	P	Pn	07 25 26.5	+0.9
	comp=N,0.4nm,0.2s,SNR=7.9						
EMIN				S	Sn	07 26 25.2	-2.2
	comp=N,1.4nm,0.3s,SNR=7.9						
ELOB	Lobios	5.96	42	P	Pn	07 25 35.6	+1.7
	comp=N,0.6nm,0.2s,SNR=4.0						
ELOB				S	Sn	07 26 38.6	-3.7
	comp=N,8.5nm,0.4s,SNR=7.9						
ECAB	El Cabril	6.36	83	P	Pn	07 25 40.7	+1.4
	comp=N,0.8nm,0.1s,SNR=7.9						
ECAB				S	Sn	07 26 50.0	-2.0
	comp=N,3.8nm,0.5s,SNR=7.9						
EAGO	Agolada(Pontev	6.64	36	S	Sn	07 26 54.4	-4.4
	comp=N,0.1nm,0.3s,SNR=7.9						
ECAL	Calabor	6.75	48	S	Sn	07 27 00.5	-1.3
	comp=N,1.2nm,0.2s,SNR=7.9						
EADA	Adamuz	7.03	82	P	Pn	07 25 49.8	+1.3
	comp=N,0.5nm,0.1s,SNR=7.9						
EADA				S	Sn	07 27 06.5	-1.9
	comp=N,2.2nm,0.4s,SNR=7.9						

NNC 17 07:24:45.9±5.7,36.62N×70.51E,h0km,mb3.5,mpv3.1, 3C,Error ellipse: s-maj=61.6km s-min=35.6km az=143.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.47	0	Pn	Pn	07 26 24.0	+1.5
	0.5nm,0.3s,baz=180,slow=12,SNR=17						
KK31				⇑Sn	Sn	07 27 38.2	+1.2
	0.9nm,0.3s,baz=182,slow=23,SNR=4.4						
AAK	Ala-Archa	6.75	26	⇑Pn	Pn	07 26 25.8	-0.6
	0.5nm,0.3s						
AAK				⇑Sn	Sn	07 27 44.9	+0.9
	1.3nm,0.4s						
AB31	Akbulak array	14.79	332	P	Pn	07 28 14.1	-2.1
	0.8nm,0.5s,baz=164,slow=12,SNR=16						

NNC 17 08:16:52.7±0.5, 44.90N×79.45E, h0km, mb3.5, mpv3.4, Error ellipse: s-maj=4.4km s-min=3.2km az=108.0
SOME 17 08:16:53.0, 44.92N×79.47E, h10km
ISC 17 08:16:52.4±1.2, 44.90N±0.02×79.46E±0.03, h1km±11km, n48, σ0.85/82, 6C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPS	Kapalarasan	0.39	349	eP	Pg	08 16 59.9	0.0
	79nm,0.2s						
KAPS				eS	Sg	08 17 05.2	+0.3
	167nm,0.1s						
KAPS	Kapalarasan	0.39	349	P	Pg	08 16 59.9	0.0
	79nm,0.2s						
KAPS				S	Sg	08 17 05.3	+0.3
	226nm,0.2s						
DJR	Jarkent	0.62	157	eP	Pg	08 17 04.1	-0.2
	22nm,0.1s						
DJR				eS	Sg	08 17 12.4	+0.2
	29nm,0.2s						
DJR	Jarkent	0.62	157	P	Pg	08 17 04.0	-0.2
	32nm,0.2s						
DJR				S	Sg	08 17 12.4	+0.2
	29nm,0.2s						
TDK	Taldyqorghan	0.75	278	eP	Pg	08 17 07.6	+0.7
	19nm,0.1s						
TDK				eS	Sb	08 17 18.2	-1.0
	111nm,0.2s						
TDK	Taldyqorghan	0.75	278	P	Pg	08 17 07.6	+0.7
	19nm,0.1s						
TDK				S	Sb	08 17 18.2	-1.0
	111nm,0.2s						
MNBS	Baschi	1.12	223	eP	Pg	08 17 13.3	-0.5
	14nm,0.3s						
MNBS				eS	Sg	08 17 27.9	-0.4
	196nm,0.3s						
MNBS	Baschi	1.12	223	P	Pg	08 17 13.3	-0.5
	14nm,0.3s						
MNBS				S	Sg	08 17 27.9	-0.4
	196nm,0.3s						
ARXS	Arharly	1.35	240	eP	Pn	08 17 18.2	-0.4
	11nm,0.3s						
ARXS				eS	Sg	08 17 36.2	+0.3
	80nm,0.2s						
ARXS	Arharly	1.35	240	P	Pn	08 17 18.2	-0.4
	11nm,0.3s						
ARXS				S	Sg	08 17 36.2	+0.3
	80nm,0.2s						
KPKS	Kokpek	1.54	201	eP	Pn	08 17 21.3	+0.2
	28nm,0.2s						
KPKS				eS	Sb	08 17 42.0	+0.2
	154nm,0.3s						
PDGK	Podgornoye	1.57	179	P	Pn	08 17 21.5	-0.1
	33nm,0.1s						
PDGK				S	Sn	08 17 42.5	-0.2
	8.0nm,0.2s						
PDGK	Podgornoye	1.57	179	⇑P	Pn	08 17 21.6	-0.1
	12nm,0.2s						
PDGK				⇑S	Sn	08 17 41.5	-1.2
	9.4nm,0.4s						
KTMS	Ketmen	1.59	156	eP	Pn	08 17 21.5	-0.4
	15nm,0.1s						
KTMS				eS	Sn	08 17 41.8	-1.4
	12nm,0.1s						
KURS	Kuram	1.69	214	eP	Pb	08 17 24.4	0.0
	2.5nm,0.3s						
KURS				eS	Sg	08 17 47.0	+0.3
	30nm,0.5s						
KURS	Kuram	1.69	214	P	Pb	08 17 24.3	0.0
	2.5nm,0.3s						
KURS				S	Sg	08 17 47.0	+0.3
	30nm,0.5s						
SHLS	Shalkode	1.74	180	eP	Pb	08 17 25.1	-0.2
	13nm,0.1s						
SHLS				eS	Sb	08 17 48.3	+0.5
	15nm,0.2s						
SHLS	Shalkode	1.74	180	P	Pg	08 17 26.7	+0.8
	7.7nm,0.2s						
SHLS				S	Sg	08 17 50.8	+2.4
	15nm,0.2s						
UZB	Uzynbulak	1.78	190	eP	Pb	08 17 25.5	-0.5
	13nm,0.2s						
UZB				eS	Sb	08 17 48.8	-0.1
	40nm,0.4s						
UZB	Uzynbulak	1.78	190	P	Pb	08 17 25.5	-0.5
	13nm,0.2s						
UZB				S	Sb	08 17 48.8	-0.1
	40nm,0.4s						
CHKK	Chushkaly	2.06	240	eP	Pb	08 17 30.6	0.0
	3.8nm,0.0s						
CHKK				eS	Sg	08 17 57.9	-0.6
	70nm,0.2s						
CHKK	Chushkaly	2.06	240	Pg	Pb	08 17 30.6	0.0
	3.8nm,0.0s						
CHKK				Lg	Lg	08 17 57.9	
	70nm,0.2s						
KTBS	Karatobe	2.32	240	eP	Pb	08 17 35.3	+0.2
	6.6nm,0.3s						
KTBS				eS	Sb	08 18 05.6	+1.3
	132nm,0.4s						
KTBS	Karatobe	2.32	240	Pg	Pb	08 17 35.3	+0.2
	6.6nm,0.3s						
KTBS				Lg	Lg	08 18 05.6	
	132nm,0.4s						
KOTS	Kotyrbulak	2.38	226	eP	Pb	08 17 37.1	+1.0
	18nm,0.3s						
KOTS				eS	Sg	08 18 08.7	0.0
	163nm,0.5s						
KOTS	Kotyrbulak	2.38	226	Pg	Pb	08 17 37.1	+1.0
	18nm,0.3s						
KOTS				Lg	Lg	08 18 08.7	
	163nm,0.5s						
KUU	Kurty	2.45	247	eP	Pb	08 17 37.3	0.0
	11nm,0.4s						
KUU				eS	Sb	08 18 09.2	+1.2
	85nm,0.3s						
KUU	Kurty	2.45	247	Pg	Pb	08 17 37.3	0.0
	11nm,0.4s						
KUU				Lg	Lg	08 18 09.2	
	85nm,0.3s						
MDOK	Medeo	2.46	226	eP	Pb	08 17 37.9	+0.4
	5.8nm,0.4s						
MDOK				eS	Sg	08 18 10.3	-1.1
	35nm,0.7s						
MDOK	Medeo	2.46	226	⇑Pn	Pb	08 17 37.0	-0.5
	4.2nm,0.4s						
MDOK				⇑Sn	Sb	08 18 09.6	+1.2
	37nm,0.7s						
MDOK	Medeo	2.46	226	Pg	Pb	08 17 37.9	+0.4
	5.8nm,0.4s						
MDOK				Lg	Lg	08 18 10.3	
	35nm,0.7s						
MAKZ	Makanchi	2.59	42	⇑Pn	Pn	08 17 36.3	+0.7
	1.6nm,0.5s						
MAKZ				⇓Sn	Sb	08 18 10.4	-1.8
	13nm,0.4s						
TNSS	Tian-Shan	2.60	225	eP	Pb	08 17 40.8	+0.7
	4.3nm,0.3s						
TNSS				eS	Sg	08 18 15.1	-0.9
	40nm,0.5s						
TNSS	Tian-Shan	2.60	225	Pg	Pb	08 17 40.8	+0.7
	4.3nm,0.3s						
TNSS				Lg	Lg	08 18 15.1	
	40nm,0.5s						
MK31	Makanchi Array	2.74	45	Pn	Pn	08 17 38.4	+0.8
	1.3nm,0.2s,baz=219,slow=15,SNR=215						
MK31				Sn	Sn	08 18 11.8	+0.5
	1.7nm,0.2s,baz=231,slow=21,SNR=13						
IZV	Izvestkoviy	2.77	229	eP	Pb	08 17 43.5	+0.6
	4.3nm,0.4s						
IZV				eS	Sb	08 18 19.6	+2.1
	36nm,0.5s						
IZV	Izvestkoviy	2.77	229	Pg	Pb	08 17 43.5	+0.6
	4.3nm,0.4s						
IZV				Lg	Lg	08 18 19.6	
	36nm,0.5s						
MTBS	Maitube	2.81	232	eP	Pb	08 17 43.9	+0.3
	4.4nm,0.2s						
MTBS				eS	Sb	08 18 20.3	+1.8
	66nm,0.3s						
MTBS	Maitube	2.81	232	Pg	Pb	08 17 43.9	+0.3
	4.4nm,0.2s						
MTBS				Lg	Lg	08 18 20.3	
	66nm,0.3s						
KRBS	Karabastau	2.97	247	eP	Pb	08 17 46.4	+0.2
	2.2nm,0.3s						
KRBS				eS	Sb	08 18 24.6	+1.5
	8.8nm,0.3s						
KRBS	Karabastau	2.97	247	Pg	Pb	08 17 46.4	+0.2
	2.2nm,0.3s						
KRBS				Lg	Lg	08 18 24.6	
	8.8nm,0.3s						
DGS	Degeres	3.13	239	eP	Pb	08 17 49.4	+0.4
	4.2nm,0.3s						
DGS				eS	Sb	08 18 29.7	+2.0
	30nm,0.5s						
DGS	Degeres	3.13	239	Pg	Pb	08 17 49.4	+0.4
	4.2nm,0.3s						
DGS				Lg	Lg	08 18 29.7	
	30nm,0.5s						
KST	Kastek	3.13	235	eP	Pb	08 17 49.1	0.0
	3.4nm,0.5s						
KST				eS	Sb	08 18 29.5	+1.7
	13nm,0.4s						
KST	Kastek	3.13	235	Pg	Pb	08 17 49.1	0.0
	3.4nm,0.5s						
KST				Lg	Lg	08 18 29.5	
	13nm,0.4s						
AAK	Ala-Archa	4.25	240	⇓Pg	Pb	08 18 08.3	+0.3
	3.5nm,1.1s						
AAK				⇓Lg	Lg	08 19 09.5	
	4.6nm,0.6s						
MRKS	Merke	5.00	247	eP	Pg	08 18 25.7	-2.5
	0.6nm,0.1s						
MRKS				eS	Sg	08 19 32.0	-1.0
	6.0nm,0.5s						
KURK	Kurchatov	5.84	355	⇑Lg	Lg	08 19 55.4	
	7.8nm,0.8s						

IDC 17 08:30:33.0±0.9, 1.07N×126.74E, h0km, mb4.1/6, mb1 4.2/7, mb1mx3.9/43, mbtmp4.1/7, ML3.6/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/35, Error ellipse: s-maj=49.5km s-min=17.2km az=65.0
NEIC 17 08:30:39.4±1.8, 0.91N±0.07×126.44E±0.05, h46km±8km, mb4.3/10, Error ellipse: s-maj=10.6km s-min=6.8km az=201.0
ISC 17 08:30:38.6±0.7, 1.0N±0.1×126.44E±0.06, h39km, n21, σ1.14/23, mb4.2/12, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.94	101	Pn	Pn	08 30 56.1	+0.8
TNTI				Sn	Sn	08 31 08.0	+0.4
LUWI	Luwuk	4.17	242	Pn	Pn	08 31 39.4	-0.2
LUWI				Sn	Sn	08 32 27.4	+0.2
FITZ	Fitzroy Crossi	18.94	182	P	Pn	08 34 58.8	+1.5
	0.1nm,0.3s,baz=21,slow=8.6,SNR=1.3						
WB0	Warramunga Arr	22.02	160	P	P	08 35 30.6	+0.9
WB0				IAmb	IAmb	08 35 34.0	
	comp=Z,5.7nm,0.5s						
GUMO	Guam	22.15	55	LR	LR	08 41 50.8	
	comp=Z,57nm,20.5s,baz=156,slow=31						
WRA	Warramunga Arr	22.16	160	P	P	08 35 31.2	0.0
	comp=Z,2.8nm,0.5s,baz=336,slow=11,SNR=47						
WB2	Warramunga Arr	22.16	160	P	P	08 35 32.1	+0.8
WB2				IAmb	IAmb	08 35 49.0	
	comp=Z,11nm,0.9s						
WR0	Warramunga Arr	22.25	160	P	P	08 35 33.3	+1.1
WR0				IAmb	IAmb	08 35 33.4	
	comp=Z,11nm,1.4s						
PMG	Port Moresby	23.06	117	P	P	08 35 38.0	-2.8
	comp=Z,22nm,0.4s,baz=331,slow=6.1,SNR=9.5						
AS31	Alice Springs	25.52	164	P	P	08 36 05.3	+1.6
ASAR	Alice Springs	25.52	164	P	P	08 36 04.5	+0.9
	comp=Z,2.3nm,0.5s,baz=348,slow=13,SNR=25						
ASAR				PcP	PcP	08 39 34.1	-0.5
	comp=Z,0.3nm,0.6s,baz=344,slow=2.2,SNR=4.1						
BBOO	Buckleboo	34.78	166	P	P	08 37 26.9	+1.4
STKA	Stephens Creek	35.67	158	P	P	08 37 31.6	-1.5
	comp=Z,2.0nm,0.7s,baz=358,slow=7.6,SNR=5.2						
STKA	Stephens Creek	35.67	158	P	P	08 37 32.0	-1.1
SONM	Songino Array	49.84	342	P	P	08 39 28.1	+0.2
	comp=Z,1.0nm,0.8s,baz=152,slow=8.1,SNR=6.9						
MK31	Makanchi Array	59.68	326	P	P	08 40 39.7	+0.6
MK31				IAmb	IAmb	08 40 44.0	
	comp=Z,1.3nm,1.1s						
MKAR	Makanchi Array	59.68	326	P	P	08 40 39.8	+0.7
	comp=Z,0.8nm,0.4s,baz=118,slow=7.5,SNR=18						
TUWZ	Tuamarina	60.19	140	P	P	08 40 41.9	-0.7
BKZ	Black Stump Fm	60.74	137	P	P	08 40 45.3	-1.2
KBL	Kabul	63.00	309	P	P	08 41 01.9	-0.1
KBL				IAmb	IAmb	08 41 04.6	
	comp=Z,2.1nm,0.7s						
KURK	Kurchatov	63.93	328	P	P	08 41 08.1	+0.5
KURK				IAmb	IAmb	08 41 09.2	
	comp=Z,5.4nm,0.8s						

IDC 17 08:38:04.8±1.7, 16.13S×176.06W, h366km±74km, mb3.4/3, mb1 3.7/4, mb1mx3.1/34, mbtmp4.2/4, Error ellipse: s-maj=320.1km s-min=23.8km az=144.0
NEIC 17 08:38:04.6±1.3, 16.2S±0.1×175.9W±0.1, h378km±7km, mb4.1/11, Error ellipse: s-maj=26.7km s-min=11.0km az=137.0
ISC 17 08:38:04.2±0.7, 16.4S±0.2×175.9W±0.1, h360km, n18, σ1.64/20, mb4.0/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.71	59	P	Pn	08 39 23.3	+1.9
	16nm,0.3s,baz=204,slow=1.3,SNR=30						
AFI				S	S	08 40 23.7	0.0
	3.2nm,0.3s,baz=210,slow=22,SNR=1.2						
AFI	Afiamalu	4.71	59		Pn	08 39 23.1	+1.8
AFI					S	08 40 24.2	+0.5
MSVF	Nonsavu	5.90	256	Pn	Pn	08 39 38.3	+3.9
URZ	Urewera	22.63	194	P	P	08 42 36.7	+1.4
BBOO	Buckleboo	46.20	240	P	P	08 45 52.4	-0.5
BBOO				IAmb	IAmb	08 45 58.8	
	comp=Z,21nm,1.3s						
WR0	Warramunga Arr	47.05	258	P	P	08 45 59.9	-1.6
WR0				IAmb	IAmb	08 46 02.4	
	comp=Z,11nm,1.1s						
WB0	Warramunga Arr	47.21	258	P	P	08 46 01.7	-0.9
WB0				IAmb	IAmb	08 46 02.3	
	comp=Z,4.5nm,0.8s						
WB2	Warramunga Arr	47.23	258	P	P	08 46 01.0	-1.8
WB2				IAmb	IAmb	08 46 02.5	
	comp=Z,4.6nm,0.8s						
WRAB	Tennant Creek	47.23	258	P	P	08 46 00.9	-1.9
WRAB				IAmb	IAmb	08 46 13.9	
	comp=Z,11nm,1.3s						
WRA	Warramunga Arr	47.24	258	P	P	08 46 02.1	-0.8
	comp=Z,2.0nm,0.6s,baz=91,slow=7.0,SNR=4.2						
AS31	Alice Springs	47.48	253	P	P	08 46 03.6	-1.1
ASAR	Alice Springs	47.48	253	P	P	08 46 04.2	-0.5
	comp=Z,5.7nm,0.4s,baz=88,slow=7.7,SNR=227						
FORT	Forrest	52.79	244	P	P	08 46 43.7	-0.3
FITZ	Fitzroy Crossi	55.62	259	P	P	08 47 03.3	-1.1
FITZ				IAmb	IAmb	08 47 11.2	
	comp=Z,16nm,1.4s						
PSA00	Pilbara Seismi	60.58	254	P	P	08 47 38.0	-0.4
PSA00				IAmb	IAmb	08 47 39.3	
	comp=Z,14nm,1.2s						
QSPA	South Pole Qui	73.66	180	P	P	08 48 57.4	-1.8
ILAR	Eielson Array	83.90	12	P	P	08 49 52.4	-1.6
	comp=Z,0.1nm,0.4s,baz=207,slow=5.6,SNR=5.5						
BRTR	Keskin Array B	145.32	318	PKPbc	PKPab	08 56 59.7	-1.6
	comp=Z,0.7nm,0.7s,baz=279,slow=2.4,SNR=4.0						

ISU 17 09:15:29.0, 41.50N×70.50E, h5km
KRNET 17 09:15:30.8±0.1, 41.57N×70.38E, h30km, mb3.1
SOME 17 09:15:30.4, 41.57N×70.63E, h0km
ISC 17 09:15:30.1±1.2, 41.50N±0.03×70.46E±0.04, h3km±11km, n30, σ1.56/52, 24C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSK	Pskem	0.43	351	eP	Pg	09 15 38.6	+0.1
PSK				eS	Sb	09 15 45.1	-2.4
IUG	Iuzhnay	0.73	334	eP	Pb	09 15 44.5	-1.0
	6.9nm,0.2s						
IUG				eS	Sb	09 15 54.1	-1.7
	250nm,0.3s						
TAS	Tashkent	0.90	259	⇑iP	Pg	09 15 46.6	-0.6
	baz=54						
TAS				⇑iS	Sg	09 15 58.6	-0.3
	baz=54						
CHM	Chimkent	1.04	322	eP	Pn	09 15 52.1	+0.4
	92nm,0.3s						
CHM				eS	Sn	09 16 06.9	+0.1
	561nm,0.3s						
ARK	Arkit	1.16	75	⇑iP	Pn	09 15 53.2	-0.2
	baz=80						
ARK				⇑iS	Sn	09 16 09.6	-0.3
	baz=80						
ARK	Arkit	1.16	75	eP	Pb	09 15 51.0	-1.9
ARK				eS	Sn	09 16 12.4	+2.5
BTK	Batken	1.46	169	⇑iP	Pg	09 15 58.6	+0.5
	baz=67						
BTK				⇑iS	Sg	09 16 19.3	+2.3
	baz=67						
BTK	Batken	1.46	169	eP	Pb	09 15 57.6	-0.4
BTK				eS	Sg	09 16 31.4	+14
DZA	Taraz	1.54	25	eP	Pg	09 16 00.4	+0.9
	51nm,0.1s						
DZA				eS	Sg	09 16 20.8	+1.4
	81nm,0.1s						
KK31	Karatay Array	1.61	1	Pn	Pb	09 15 59.9	-0.5
	2.2nm,0.2s,baz=185,slow=16,SNR=237						
KK31				⇑Sn	Sg	09 16 24.7	+3.0
	5.1nm,0.2s,baz=186,slow=24,SNR=9.5						
ARSB	Arslanbob	1.90	94	⇓iP	Pb	09 16 04.5	-1.0
	baz=96						
ARSB				⇓iS	Sg	09 16 30.0	-1.2
	baz=96						
ARSB	Arslanbob	1.90	94	eP	Pb	09 16 04.0	-1.5
ARSB				eS	Sb	09 16 29.3	-0.4
MRKS	Merke	2.40	58	eP	Pb	09 16 13.9	-0.2
	5.0nm,0.2s						
MRKS				eS	Sb	09 16 44.6	+0.5
	30nm,0.2s						
AML	Almayashu	2.50	74	⇑iP	Pn	09 16 12.8	+0.8
	baz=76						
AML				⇑iS	Sb	09 16 44.8	-2.3
	baz=76						
AML	Almayashu	2.50	74	P	Pb	09 16 15.5	-0.3
	SNR=45						
EKS2	Erkin-Say	2.73	64	⇑iP	Pb	09 16 15.7	+0.8
	baz=66						
EKS2				⇑iS	Sb	09 16 49.5	-4.0
	baz=66						
EKS2	Erkin-Say	2.73	64	P	Pb	09 16 19.3	-0.2
	SNR=13						
ARLS	Aral	2.91	82	⇑eP	Pb	09 16 19.2	-3.6
	baz=83						
ARLS				⇑iS	Sn	09 16 54.2	+1.1
	baz=83						
UCH	Uchtor	3.11	75	⇑eP	Pn	09 16 21.5	+1.0
	baz=77						
UCH				⇑iS	Sn	09 16 59.5	+1.1
	baz=77						
UCH	Uchtor	3.11	75	P	Pb	09 16 26.5	+0.2
	SNR=7.4						
AAK	Ala-Archa	3.21	68	⇑eP	Pn	09 16 22.3	+0.7
	baz=69						
AAK				⇑iS	Sn	09 17 01.3	+0.9
	baz=69						
AAK	Ala-Archa	3.21	68	P	Pb	09 16 28.3	+0.5
	SNR=7.0						
AAK	Ala-Archa	3.21	68	⇑Pg	Pb	09 16 27.6	-0.2
	2.5nm,0.5s						
AAK				⇓Lg	Lg	09 17 10.0	
	13nm,0.6s						
USP	Ospenovka	3.47	58	⇓iP	Pn	09 16 25.8	+0.7
	baz=60						
USP				⇓iS	Sn	09 17 07.1	+0.3
	baz=60						
USP	Ospenovka	3.47	58	P	Pb	09 16 32.7	+0.5
	SNR=5.5						
CHMS	Chumysh	3.52	63	⇑iP	Pn	09 16 26.5	+0.8
	baz=65						
CHMS				⇑iS	Sn	09 17 08.4	+0.5
	baz=65						
KBK	Karagaybulak	3.53	69	⇑iP	Pn	09 16 26.9	+0.9
	baz=71						
KBK				⇑iS	Sn	09 17 09.2	+0.8
	baz=71						
KZA	Kyzart	3.62	79	⇑iP	Pn	09 16 28.7	+1.2
	baz=80						
KZA				⇑iS	Sn	09 17 12.1	+1.1
	baz=80						
KZA	Kyzart	3.62	79	P	Pb	09 16 36.7	+1.6
	SNR=7.4						
KST	Kastek	4.36	67	eP	Pb	09 16 49.6	+2.2
	2.5nm,0.4s						
KST				eS	Sg	09 17 45.7	-4.4
	14nm,0.6s						

ISK 17 09:32:25.7, 39.66N×29.52E, h5km±1km, ML1.9/4, Suspected Mining explosion.
DDA 17 09:32:26.3, 39.68N×29.43E, h7km±2km, MD2.5
ISC 17 09:32:26.3±1.1, 39.70N±0.04×29.47E±0.04, h0km, n9, σ0.68/13, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TVSB	Tavsanli	0.25	182	PG	Pg	09 32 30.5	-0.6
TVSB				SG	Sg	09 32 35.4	+1.0
GDZ	Gediz	0.61	179	iP	Pg	09 32 37.7	-0.4
GDZ				iS	Sg	09 32 47.0	+1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DURS	Dursunbey	0.78	263	iP	Pg	09 32 40.5	-0.7
DURS				iS	Sg	09 32 51.9	+0.7
BORA	Eskisehir	0.78	76	PG	Pg	09 32 41.1	-0.2
BORA	Eskisehir	0.78	76	iP	Pg	09 32 40.6	-0.7
BORA				iS	Sb	09 32 53.6	-0.4
YLV	Yalova	0.87	355	PG	Pb	09 32 44.7	+0.3
SRCK	Saricakaya, Es	0.95	69	PG	Pg	09 32 44.9	+0.3
SRCK	Saricakaya, Es	0.95	69	iP	Pb	09 32 45.3	-0.4
GULT	Gulveren	1.08	47	PN	Pb	09 32 47.8	-0.2

TEH 17 09:34:39.9, 27°.52N×57°.50E, h24km, ML3.4
OMAN 17 09:34:45.5±0.3, 27°.06N×57°.68E, h18km±18km, ml2.8/9, Error ellipse: s-maj=3.6km s-min=1.9km az=19.0
ISC 17 09:34:39.9±1.1, 27°.47N±0°.04×57°.49E±0°.07, h25km, n15, σ1§35/20, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.52	21	eSg	Sb	09 34 56.7	-0.9
NIAN	Nian	0.59	279	ePg	Pn	09 34 52.4	-0.3
IBND	Bandar-abas	0.85	269	ePg	Pn	09 34 56.5	+0.3
IBND				e		09 35 09.0	
GENO	Geno	1.18	267	ePg	Pn	09 35 01.0	+0.1
GENO				e		09 35 24.8	
BANOM	Banah	1.87	215	P	Pb	09 35 14.0	+0.6
	SNR=19						
BANOM				S	Sb	09 35 37.4	+1.0
NGRK	Negar Kerman	2.27	343	e	Sb	09 35 48.8	+0.5
CHMN	Cheshme madani	2.39	1	ePn	Pn	09 35 19.2	+1.5
CHMN				e		09 35 21.4	
MDH	Madha	2.41	207	P	Pn	09 35 19.3	+1.6
TVBK	TV Kerman	2.59	346	ePn	Pn	09 35 20.9	+0.3
TVBK				e		09 35 57.3	
KHGB	Koh Gabri	3.03	343	ePn	Pn	09 35 27.3	+0.8
KHGB				e		09 36 07.7	
ASHO	Ashiyiah	3.06	205	P	Pn	09 35 27.8	+1.2
HOQ	Hoqain	3.87	182	P	Pn	09 35 38.0	+0.2
	SNR=18						
HOQ				S	Sn	09 36 19.5	-3.0
WSAR	Wadi Sarin	4.33	166	P	Pn	09 35 45.5	+1.4
WSAR				S	Sn	09 36 32.3	-1.6
SMDO	Samad	4.42	173	P	Pn	09 35 45.9	+0.5
SMDO				S	Sn	09 36 35.4	-0.7
WBK	Wadi Bani Khal	5.02	164	P	Pn	09 35 54.7	+1.1
	SNR=9.8						
WBK				S	Sn	09 36 48.3	-2.5

MOS 17 09:41:33.8±0.9, 6°.52N×71°.76W, h34km, mb5.6/45, Error ellipse: s-maj=7.4km s-min=5.3km az=76.2
BJI 17 09:41:34.0±0.0, 6°.50N×71°.80W, h30km, mB5.5/30, Ms5.4/17, Ms7 5.0/17
VAO 17 09:41:36.4±0.3, 6°.47N×71°.58W, h37km±2km, mb5.4
NEIC 17 09:41:36.2±2.1, 6°.54N±0°.05×71°.70W±0°.06, h43km±4km, mb5.7/501, Mwb5.4/42, Mww5.4, Mwc5.4(GCMT), Error ellipse: s-maj=9.2km s-min=6.2km az=130.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr0.98; Mθθ-0.10; Mφφ-0.88; Mrθ0.25; Mθφ0.59; Mφr0.80; Fault plane solution: M0 1.39000×10^{17} NP1: φs127.82000°, δ36.05000°, λ47.19000°. NP2: φs356.71000°, δ64.42000°, λ116.32000°. Principal axes: T 1.4149, Plg61.0000°, Azm307.0000°; N -0.0543, Plg24.0000°, Azm165.0000°; P -1.3606, Plg15.0000°, Azm68.0000°;
RSNC 17 09:41:37.6±0.8, 6°.50N×71°.72W, h43km±4km, ML5.3, Mw5.5, Fault plane solution: NP1:φs91.00000°, δ68.00000°, λ18.00000°.
IDC 17 09:41:37.0±1.7, 6°.43N×71°.80W, h53km±15km, mb4.9/24, mb1 5.1/29, mb1mx5.1/32, mbtmp5.2/29, ML4.6/4, MS4.6/31, Ms1 4.6/31, ms1mx4.6/35, Error ellipse: s-maj=9.5km s-min=6.9km az=81.0
CAR 17 09:41:38.4±1.9, 6°.48N±0°.05×71°.70W±0°.05, h36km±4km, Error ellipse: s-maj=8.9km s-min=5.7km az=134.0
GCMT 17 09:41:40.2±0.1, 6°.64N±0°.01×71°.58W±0°.01, h51km, MW5.3/129, Moment Tensor Solution. s109,c166; s129,c234; Duration: 1±1 Moment tensor: Scale 10^{17} Nm; Mrr0.73±.02; Mθθ0.30±.02; Mφφ-1.03±.02; Mrθ0.18±.01; Mθφ0.40±.01; Mφr0.70±.02; Best double couple: M0 1.21700×10^{17} NP1:φs136.00000°, δ35.00000°, λ43.00000°. NP2:φs8.00000°, δ67.00000°, λ117.00000°. Principal axes: T 1.0940, Plg59.0000°, Azm316.0000°; N 0.2420, Plg25.0000°, Azm177.0000°; P -1.3390, Plg17.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC 17 09:41:40, 6°.68N×71°.58W, h51km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr0.77; Mθθ0.33; Mφφ-1.10; Mrθ0.17; Mθφ0.41; Mφr0.70; Fault plane solution: M0 1.28000×10^{17} NP1:φs137.00000°, δ35.00000°, λ46.00000°. NP2:φs7.00000°, δ66.00000°, λ116.00000°. Principal axes: T 1.1172, Plg60.0000°, Azm317.0000°; N 0.2809, Plg24.0000°, Azm176.0000°; P -1.3981, Plg17.0000°, Azm78.0000°;
NEIC 17 09:41:44, 6°.54N×71°.58W, h46km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr1.26; Mθθ-0.14; Mφφ-1.12; Mrθ0.38; Mθφ0.27; Mφr0.96; Fault plane solution: M0 1.60000×10^{17} NP1:φs151.00000°, δ29.00000°, λ59.00000°. NP2:φs6.00000°, δ65.00000°, λ106.00000°. Principal axes: T 1.7081, Plg66.0000°, Azm305.0000°; N -0.2319, Plg15.0000°, Azm179.0000°; P -1.4762, Plg19.0000°, Azm84.0000°;
OSPL 17 09:41:48.2±3.6, 7°.33N×71°.38W, h109km±414km, ML5.8
ISC 17 09:41:35.9±0.4, 6°.54N±0°.03×71°.71W±0°.03, h41km±3km, h41km:pP-P, n1148, σ1§59/1011, mb5.6/321, MS4.7/37, 50C-29D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAMC	Tame, Arauca	0.13	221	⇑iPg	Pn	09 41 43.6	+0.7
TAMC				eSg	Sn	09 41 49.9	+2.1
PAMC	Pamplona, Colo	1.27	309	⇑iP	Pn	09 41 58.6	+1.1
PAMC				eS	Sn	09 42 15.9	+2.2
BARC	Barichara	1.47	272	⇑eP	Pn	09 42 01.2	+1.1
BARC				eS	Sn	09 42 20.2	+2.0
RUSC	La Rusia	1.51	245	⇓iP	Pn	09 42 02.1	+1.1
RUSC				eS	Sn	09 42 20.5	+0.8
RUSC				i		09 42 26.0	
	comp=Z,44µm,1.6s						
RUSC	La Rusia	1.51	245	Pn	Pn	09 42 01.7	+0.8
RUSC				Sn	Sn	09 42 21.8	+2.1
SOCV	Socops	1.93	26	⇓iP	Pn	09 42 07.8	+1.6
SOCV				eS	Sn	09 42 32.4	+3.0
ELOV	Elorza	2.25	78	⇓iP	Pn	09 42 13.2	+2.5
ELOV				eS	Sn	09 42 50.5	+13
OCAC	Ocana	2.33	317	⇑iP	Pn	09 42 13.2	+1.4
OCAC				eS	Sn	09 42 42.0	+2.6
OCAC				i		09 42 50.5	
	comp=Z,54µm,0.4s						
PTGC	Puerto Gaitan,	2.36	190	eP	Pn	09 42 12.9	+0.8
PTGC				i		09 42 60.0	
	comp=Z,39µm,0.8s						
SPBC	San Pablo de B	2.51	250	eP	Pn	09 42 16.4	+2.1
SPBC				eS	Sn	09 42 45.5	+1.7
SPBC				i		09 42 48.8	
	comp=Z,12µm,0.5s						
SDV	Santo Domingo	2.57	24	P	Pn	09 42 16.9	+1.7
	comp=Z,724nm,0.3s,baz=174,slow=10,SNR=2509						
SDV				S	Sn	09 42 42.7	-2.5
	comp=Z,3µm,0.3s,baz=217,slow=15,SNR=10						
SDV				LR	LR	09 43 15.6	
	comp=Z,17µm,19.0s,baz=306,slow=36						
SDV	Santo Domingo	2.57	24	⇓iP	Pn	09 42 17.1	+2.0
SDV				eS	Sn	09 42 47.1	+1.9
SDV				i		09 43 06.7	
	comp=Z,33µm,0.6s						
SDV	Santo Domingo	2.57	24	eP	Pn	09 42 17.1	+2.0
SDV	Santo Domingo	2.57	24		Pn	09 42 16.6	+1.4
SDV				Sn	Sn	09 42 44.4	-0.8
CTAU	Tausa, Cundina	2.68	240	iP	Pn	09 42 19.5	+2.6
CTAU				i		09 42 56.3	
	comp=Z,7µm,0.4s						
PTBC	PUERTO BERRIO,	2.73	270	⇓eP	Pn	09 42 17.0	-0.3
PTBC				eS	Sn	09 42 48.4	-0.7
PTBC				i		09 43 08.1	
	comp=Z,11µm,0.6s						
CHIC	Chingaza	2.77	227	⇓iP	Pn	09 42 18.9	+0.8
CHIC				i		09 43 19.6	
	comp=Z,8µm,1.1s						
CVER	Cruz Verde, Cu	3.09	230	iP	Pn	09 42 23.8	+1.2
CVER				eS	Sn	09 42 58.5	-0.2
ROSC	El Rosal	3.10	237	P	Pn	09 42 25.1	+2.5
	comp=Z,338nm,0.3s,baz=231,slow=5.8,SNR=230						
ROSC				S	Sn	09 42 59.6	+0.9
	comp=Z,979nm,0.3s,baz=24,slow=23,SNR=10						
ROSC				LR	LR	09 43 04.0	
	comp=Z,8µm,21.1s,baz=57,slow=29						
ROSC	El Rosal	3.10	237	⇓iP	Pn	09 42 25.0	+2.4
ROSC				i		09 43 44.1	
	comp=Z,7µm,1.5s						
ROSC	El Rosal	3.10	237	Pn	Pn	09 42 24.9	+2.3
SMLC	San Martn de	3.25	314	⇑eP	Pn	09 42 24.3	-0.1
SMLC				i		09 43 21.1	
	comp=Z,11µm,0.9s						
ZARC	Zaragoza, Cauc	3.27	287	⇑iP	Pn	09 42 25.2	+0.6
ZARC				eS	Sn	09 43 02.7	+0.3
ZARC				i		09 43 22.3	
	comp=Z,9µm,0.4s						
NORC	Norcasia	3.29	253	eP	Pn	09 42 25.6	+0.6
NORC				eS	Sn	09 43 03.2	+0.2
NORC				i		09 43 09.2	
	comp=Z,5µm,0.3s						
CODC	Agustn Codazz	3.79	333	⇑iP	Pn	09 42 32.0	+0.2
CODC				eS	Sn	09 43 15.7	+0.5
CODC				i		09 43 44.9	
	comp=Z,4µm,0.5s						
HELC	Santa Helena	3.82	265	eP	Pn	09 42 32.6	+0.2
HELC				eS	Sn	09 43 17.3	+1.0
HELC				i		09 43 20.7	
	comp=Z,4µm,0.6s						
GUY2C	Guyana, Caldas	3.87	251	⇓iP	Pn	09 42 34.7	+1.4
UREC	San Jos de Ur	3.99	288	⇑iP	Pn	09 42 35.5	+1.0
UREC				i		09 43 44.1	
	comp=Z,3µm,0.7s						
GUVC	San Jose del G	4.07	193	eP	Pn	09 42 36.5	+0.8
GUVC				eS	Sn	09 43 21.5	-0.6
GUVC				i		09 43 23.6	
	comp=Z,12µm,0.2s						
GUVC				i		09 43 24.5	
	comp=Z,14µm,0.2s						
ARGC	Ariguani, Magd	4.15	323	⇑eP	Pn	09 42 37.8	+1.0
ARGC				eS	Sn	09 43 25.2	+1.2
ARGC				i		09 44 10.4	
	comp=Z,5µm,0.8s						
PRAC	Prado	4.23	229	eP	Pn	09 42 38.9	+0.9
PRAC				eS	Sn	09 43 26.5	+0.4
PRAC				i		09 43 32.5	
	comp=Z,6µm,1.2s						
CBOC	Ciudad Bolivar	4.33	261	eP	Pn	09 42 41.8	+2.4
CBOC				eS	Sn	09 43 31.3	+2.4
CBOC				i		09 43 53.7	
	comp=Z,3µm,1.2s						
ORTC	Ortega, Tolima	4.39	234	⇓iP	Pn	09 42 40.7	+0.6
ORTC				eS	Sn	09 43 30.4	+0.4
ORTC				i		09 44 05.0	
	comp=Z,3µm,1.8s						
SJCC	San Jacinto, C	4.79	314	⇑iP	Pn	09 42 47.1	+1.4
SJCC				eS	Sn	09 43 41.1	+1.1
SJCC				i		09 43 45.2	
	comp=Z,3µm,0.6s						
PLMC	San Jos del P	4.83	251	eP	Pn	09 42 49.1	+2.9
PLMC				i		09 44 09.7	
	comp=Z,2µm,1.4s						
MACC	Macarena, Meta	4.86	206	⇓iP	Pn	09 42 46.7	+0.2
MACC				eS	Sn	09 43 39.9	-1.6
MACC				i		09 44 22.8	
	comp=Z,10µm,0.8s						
URIC	Uribia, Colomb	5.14	357	eP	Pn	09 42 49.8	-0.6
URIC				eS	Sn	09 43 46.2	-2.3
URIC				i		09 44 29.3	
	comp=Z,2µm,0.6s						
URIC	Uribia, Colomb	5.14	357		Pn	09 42 50.9	+0.5
URIC				Sn	Sn	09 43 47.2	-1.3
LCBC	Los crdobas,	5.17	297	eP	Pn	09 42 52.0	+1.3
LCBC				eS	Sn	09 43 53.2	+4.1
LCBC				i		09 44 31.0	
	comp=Z,3µm,2.1s						
SMRC	Santa Marta, M	5.23	332	eP	Pn	09 42 50.4	-1.2
SMRC				eS	Sn	09 43 46.4	-4.3
SMRC				i		09 44 23.1	
	comp=Z,4µm,0.8s						
YOTC	Yotoco, Valle	5.27	241	⇓iP	Pn	09 42 52.7	+0.4
YOTC				eS	Sn	09 43 54.2	+2.4
YOTC				i		09 43 57.7	
	comp=Z,963nm,1.2s						
SOLC	Bahia Solano	5.68	267	eP	Pn	09 42 59.3	+1.6
SOLC				i		09 44 08.4	
	comp=Z,1µm,0.8s						
PIZC	Pizarro, Choco	5.84	255	eP	Pn	09 43 03.3	+3.3
PIZC				eS	Sn	09 44 10.1	+4.4
PIZC				i		09 44 16.7	
	comp=Z,2µm,1.7s						
CAPC	Capurgana	5.97	291	eP	Pn	09 43 00.3	-1.5
CAPC				eS	Sn	09 44 05.8	-3.3
CAPC				i		09 44 09.1	
	comp=Z,1µm,0.9s						
PTAC	Punta Ardita,	6.09	276	eP	Pn	09 43 04.1	+0.7
PTAC				i		09 44 48.2	
	comp=Z,1µm,1.9s						
FLOC	Florencia	6.30	219	⇓eP	Pn	09 43 06.5	+0.2
FLOC				eS	Sn	09 44 19.1	+1.9
FLOC				i		09 44 56.9	
	comp=Z,3µm,1.0s						
FLOC	Florencia	6.30	219		Pn	09 43 06.2	-0.1
PTLC	Puerto Leguiza	7.04	206	⇓iP	Pn	09 43 20.1	+3.7
PTLC				eS	Sn	09 44 39.1	+3.9
PTLC				i		09 44 57.4	
	comp=Z,2µm,1.4s						
BBAC	Balboa, Cauca	7.12	231	⇓eP	Pn	09 43 18.4	+0.7
BBAC				eS	Sn	09 44 42.3	+4.8
BBAC				i		09 45 03.4	
	comp=Z,339nm,1.2s						
CRUC	La Cruz	7.19	227	eP	Pn	09 43 20.1	+1.2
CRUC				i		09 44 42.1	
	comp=Z,424nm,0.9s						
GR1C	Gorgona, Isla	7.33	242	eP	Pn	09 43 20.6	+0.1
GCUF	Volcan Galeras	7.71	227	⇓eP	Pn	09 43 27.1	+1.0
GCUF				i		09 45 25.3	
	comp=Z,408nm,2.4s						
PCRV	Puerto La Cruz	7.87	62	P	Pn	09 43 28.5	+0.6
	comp=Z,237nm,0.3s,baz=216,slow=7.6,SNR=482						
PCRV				S	Sn	09 44 55.3	-0.6
	comp=Z,177nm,0.3s,baz=347,slow=23,SNR=6.5						
PCRV				Lg	Lg	09 45 43.7	
	comp=Z,86nm,0.3s,baz=165,slow=22,SNR=2.7						
PCRV				LR	LR	09 47 28.2	
	comp=Z,13µm,18.1s,slow=44						
PLCV	Puerto La Cruz	7.91	62		Pn	09 43 28.5	+0.1
BCIP	Isla Barro Col	8.47	288	eP	Pn	09 43 36.8	+0.7
BCIP				eS	Sn	09 45 06.0	-4.4
BCIP				i		09 45 47.2	
	comp=Z,334nm,2.6s						
BCIP	Isla Barro Col	8.47	288		Pn	09 43 35.0	-1.1
BCIP	Isla Barro Col	8.47	288	P	Pn	09 43 35.0	-1.1
OTAV	Otavalo	9.19	227	⇓eP	Pn	09 43 48.5	+2.1
OTAV				eS	Sn	09 45 35.1	+6.3
OTAV	Otavalo	9.19	227	eP	Pn	09 43 49.0	+2.6
OTAV	Otavalo	9.19	227		Pn	09 43 48.0	+1.6
OTAV	Otavalo	9.19	227	P	Pn	09 43 48.0	+1.6
TPP	Pointe-a-Pierr	10.82	69	eP	Pn	09 44 08.3	0.0
TRN	Trinidad (W)	10.97	67	eP	Pn	09 44 08.9	-1.5
TBH	Brigand Hill	11.23	69	eP	Pn	09 44 12.6	-1.3
GRGR	Grenville	11.37	60	eP	Pn	09 44 12.0	-3.9
GRHS	Sauteurs	11.42	60	eP	Pn	09 44 16.1	-0.5
GRSS	Sisters	11.48	59	eP	Pn	09 44 18.3	+0.9
BANI	BANI	11.86	6		Pn	09 44 22.0	-0.6
LGNH	Logne	11.94	356	iP	Pn	09 44 23.5	-0.1
LGNH				eS	Sn	09 46 28.4	-7.1
LGNH	Logne	11.94	356		Pn	09 44 23.4	-0.1
SDD	Santo Domingo	11.98	8	iP	Pn	09 44 25.3	+1.2
SDD				eS	Sn	09 46 24.9	-12
SDD				IAML		09 46 51.7	
	comp=Z,49nm,0.5s						
TOSP	Speyside	12.01	66	eP	Pn	09 44 21.9	-2.6
TOSP	Speyside	12.01	66		Pn	09 44 22.3	-2.2
YHJ	Yallahs	12.22	338	⇓iP	Pn	09 44 29.1	+1.7
SVB	Belmont	12.28	56	eP	Pn	09 44 27.2	-1.1
SVB	Belmont	12.28	56		Pn	09 44 27.5	-0.8
SVV	Soufriere Volc	12.33	56	eP	Pn	09 44 29.4	+0.4
PCDR	Punta Cana, DR	12.34	15	iP	Pn	09 44 28.6	-0.5
PCDR				eS	Sn	09 46 35.8	-9.5
PCDR				IAML		09 46 48.3	
	comp=Z,147nm,0.6s						
PCDR	Punta Cana, DR	12.34	15	Pn	Pn	09 44 28.4	-0.6
PCJ	Portland Cotta	12.34	335	⇓iP	Pn	09 44 29.2	0.0
PCJ				AMb	AMB	09 44 30.7	
	comp=Z,7µm,0.0s						
SSV	Crater Summit	12.36	56	eP	Pn	09 44 26.9	-2.5
SVCV	St. Vincent, C	12.37	56	eP	Pn	09 44 28.2	-1.3
SDDR	Presa de Saban	12.38	2	⇑iP	Pn	09 44 32.0	+2.4
SDDR	Presa de Saban	12.38	2	iP	Pn	09 44 30.7	+1.0
SDDR				eS	Sn	09 46 39.2	-7.1
SDDR				IAML		09 46 53.4	
	comp=Z,190nm,0.6s						
SFAN	Fancy Village	12.40	56	eP	Pn	09 44 26.5	-3.5
HOJ	Hope	12.42	337	⇑iP	Pn	09 44 30.8	+0.7
OBIP	Obispado Ponce	12.47	23	Pn	Pn	09 44 29.3	-1.6
AGPR	Aguadilla, PR	12.68	20	iP	Pn	09 44 31.5	-2.2
AGPR				eS	Sn	09 46 44.8	-8.8
AGPR				IAML		09 46 56.8	
	comp=Z,69nm,0.6s						
SJG	San Juan	12.72	25	P	Pn	09 44 34.4	+0.2
	comp=Z,46nm,0.3s,baz=198,slow=12,SNR=48						
SJG				S	Sn	09 46 41.2	-13
	comp=Z,1.9nm,0.3s,baz=259,slow=22,SNR=2.7						
SJG				LR	LR	09 50 04.0	
	comp=Z,2µm,21.3s,baz=210,slow=39						
SJG	San Juan	12.72	25		Pn	09 44 34.1	-0.1
SJG	San Juan	12.72	25	P	Pn	09 44 34.1	-0.1
MCJ	Malvern	12.74	333	⇓iP	Pn	09 44 33.6	-1.0
SLB	Belfond	12.75	55	eP	Pn	09 44 33.6	-1.1
MCLT	Moule a Chique	12.77	55	eP	Pn	09 44 33.2	-1.7
BNJ	Bonny Gate	12.78	337	⇑iP	Pn	09 44 35.4	+0.2
SC01	Santiago de lo	12.85	4	iP	Pn	09 44 38.7	+2.7
SC01				IAML		09 47 05.0	
	comp=Z,206nm,0.6s						
SLAC	Saint Lucia, A	12.90	55	eP	Pn	09 44 27.9	-8.9
SLBI	Saint Lucia, B	12.91	54	eP	Pn	09 44 34.7	-2.2
MTDJ	Mount Denham	12.94	334	⇓iP	Pn	09 44 36.4	-0.9
MTDJ				AMb	AMB	09 44 37.5	
	comp=Z,6µm,0.1s						
BBJ	Bamboo Saint A	12.96	336	⇓iP	Pn	09 44 37.9	+0.2
FDF	Fort de France	13.18	51	eP	Pn	09 44 38.6	-2.1
FDF	Fort de France	13.18	51		Pn	09 44 38.8	-1.9
FDF	Fort de France	13.18	51	P	Pn	09 44 38.8	-1.9
MDPO	Dominica; Chan	13.48	47	eP	Pn	09 44 39.7	-5.0
BCHC	Barbados, Cave	13.58	60	eP	Pn	09 44 46.2	+0.2
DWS	Wesley	13.58	48	eP	Pn	09 44 36.9	-9.2
JTS	Las Juntas de	13.62	287	P	Pn	09 44 47.5	+0.8
	comp=Z,1.1nm,0.3s,baz=163,slow=11,SNR=14						
JTS				LR	LR	09 50 22.8	
	comp=Z,4µm,21.4s,baz=188,slow=39						
JTS	Las Juntas de	13.62	287		Pn	09 44 46.6	-0.1
JTS	Las Juntas de	13.62	287	c iP	Pn	09 44 47.3	+0.6
JTS				pmax	pmax		
	comp=Z,93nm,1.1s						
ESPN	Las Esperanzas	13.64	295	Pn	Pn	09 44 44.9	-2.0
BBGH	Gun Hill	13.65	60	eP	Pn	09 44 46.7	-0.2
GTBY	Guantanamo Bay	13.72	346	iP	Pn	09 44 48.0	+0.1
GTBY				eS	Sn	09 47 13.1	-5.8
GTBY				IAML		09 47 20.1	
	comp=Z,34nm,0.6s						
GTBY	Guantanamo Bay	13.72	346		Pn	09 44 47.3	-0.6
MLYT	Lee's Yard	13.75	42	eP	Pn	09 44 46.0	-2.4
NVBH	Bath Hotel, Ne	13.77	39	eP	Pn	09 44 46.8	-1.8
SABA	Saba	13.77	36	eP	Pn	09 44 45.5	-3.1
NVRH	Round Hill, Ne	13.83	39	eP	Pn	09 44 47.0	-2.5
SKI	Saint Kitts	13.85	38	eP	Pn	09 44 46.6	-3.2
SKI	Saint Kitts	13.85	38	P	Pn	09 44 50.8	+1.0
ANWB	Willy Bob	14.71	40	eP	Pn	09 44 52.0	-9.2
GRTK	Grand Turk	14.90	2	Pn	Pn	09 45 05.0	+1.2
ATAH	Atahualpa	15.13	206	P	Pn	09 45 06.9	-0.4
	comp=Z,3.6nm,0.3s,baz=35,slow=8.3,SNR=31						
ATAH				S	Sn	09 47 51.1	-3.0
	comp=Z,0.7nm,0.3s,baz=196,slow=23,SNR=2.0						
ATAH				Lg	Lg	09 49 29.6	
	comp=Z,2.0nm,0.3s,baz=79,slow=14,SNR=3.8						
ATAH				LR	LR	09 52 29.8	
	comp=Z,6µm,21.3s,baz=14,slow=44						
CBCY	The Bluff, Cay	15.28	330	Pn	Pn	09 45 08.0	-0.8
TGUH	Tegucigalpa,Un	17.03	297		Pn	09 45 30.6	-0.7
TGUH				IAmb	IAmb	09 45 35.5	
	comp=Z,677nm,1.1s						
SAML	Samuel	17.57	151	eP	Pn	09 45 35.3	-2.6
SAML	Samuel	17.57	151	P	Pn	09 45 36.3	-1.6
SAML	Samuel	17.57	151	P	Pn	09 45 36.3	-1.6
SAML				pmax	pmax		
	comp=Z,381nm,1.1s						
MDP	Montagnes des	19.02	93	P	P	09 45 54.6	+0.1
	comp=Z,44nm,0.3s,baz=283,slow=14,SNR=85						
MDP				S	S	09 49 30.2	+1.7
	comp=Z,4.6nm,0.3s,baz=175,slow=21,SNR=3.6						
MDP				Lg	Lg	09 51 29.6	
	comp=Z,9.2nm,0.3s,baz=358,slow=15,SNR=5.9						
MDP				LR	LR	09 53 26.2	
	comp=Z,9µm,19.2s,baz=276,slow=37						
NNA	Nana	19.10	196	P	P	09 45 55.9	+0.5
	comp=Z,3.7nm,0.3s,baz=359,slow=11,SNR=23						
NNA				S	Sn	09 49 27.1	-2.5
	comp=Z,0.8nm,0.3s,baz=283,slow=8.3,SNR=2.4						
NNA	Nana	19.10	196	P	P	09 45 55.3	-0.1
PAYG	Puerto Ayora	19.88	250	P	P	09 46 03.5	-0.4
PAYG				IAmb	IAmb	09 46 22.4	
	comp=Z,435nm,1.7s						
APG	El Apazote	20.24	296	P	P	09 46 07.1	-1.0
	comp=Z,58nm,0.7s,baz=121,slow=3.9,SNR=39						
APG				LR	LR	09 56 10.2	
	comp=Z,2µm,19.0s,baz=124,slow=43						
061Z	Ochoppi	21.14	336	P	P	09 46 17.7	+0.3
060A	Indiantown	21.99	339	P	P	09 46 27.3	+0.8
060A				IAmb	IAmb	09 46 32.9	
	comp=Z,399nm,1.0s						
CCIG	Comitan	22.22	298	P	P	09 46 28.1	-1.3
CCIG				IAmb	IAmb	09 46 32.6	
	comp=Z,245nm,1.2s						
LPAZ	La Paz	22.95	171	P	P	09 46 37.7	+0.2
	comp=Z,56nm,0.6s,baz=355,slow=4.1,SNR=90						
LPAZ				S	S	09 50 44.1	-1.3
	comp=Z,11nm,0.8s,baz=313,slow=7.7,SNR=1.6						
LPAZ				LR	LR	09 56 18.7	
	comp=Z,3µm,20.9s,baz=338,slow=39						
LPAZ	La Paz	22.95	171	eP	P	09 46 37.4	-0.1
LPAZ	La Paz	22.95	171	P	P	09 46 36.7	-0.7
LPAZ				IAmb	IAmb	09 46 59.7	
	comp=Z,152nm,0.8s						
DWPF	Disney Wildern	23.36	338	P	P	09 46 40.6	-0.1
DWPF				IAmb	IAmb	09 46 44.3	
	comp=Z,450nm,1.1s						
DWPF	Disney Wildern	23.36	338	P	P	09 46 41.9	+1.2
	baz=155						
CLDB	Colider	23.45	137	eP	P	09 46 40.9	-1.0
SIV	San Ignacio	24.73	155	P	P	09 46 54.0	+0.3
	comp=Z,68nm,1.0s,baz=347,slow=9.1,SNR=137						
SIV				S	S	09 51 11.7	-1.5
	comp=Z,15nm,0.7s,baz=356,slow=20,SNR=2.2						
SIV				Lg	Lg	09 54 27.6	
	comp=Z,69nm,0.8s,baz=272,slow=21,SNR=3.6						
SIV				LR	LR	09 57 09.2	
	comp=Z,5µm,18.5s,baz=350,slow=38						
656A	Willston	24.91	337	IAmb	IAmb	09 46 58.4	
	comp=Z,228nm,0.9s						
CMIG	Matias Romero	24.96	297	P	P	09 46 52.5	-3.3
	comp=Z,5.5nm,0.5s,baz=104,slow=8.1,SNR=18						
CMIG				LR	LR	09 58 55.8	
	comp=Z,1µm,19.0s,baz=112,slow=42						
MNMC	Minye Minye	25.59	175	P	P	09 47 00.7	-0.9
GO01	Chusmiza	26.16	175	IAmb	IAmb	09 47 08.5	
	comp=Z,186nm,0.9s						
PB11	IPOC Station P	26.21	176	IAmb	IAmb	09 47 08.5	
	comp=Z,112nm,0.8s						
553A	Crawfordville	26.40	335	IAmb	IAmb	09 47 12.6	
	comp=Z,324nm,1.1s						
257A	Skidaway Islan	26.77	342	IAmb	IAmb	09 47 14.9	
	comp=Z,150nm,1.1s						
TIGA	Tifton	27.16	337	IAmb	IAmb	09 47 22.2	
	comp=Z,221nm,1.2s						
TIGA	Tifton	27.16	337	P	P	09 47 17.4	+2.0
	baz=153,SNR=25						
255A	Hazlehurst	27.19	340	IAmb	IAmb	09 47 19.0	
	comp=Z,175nm,1.1s						
158A	Hollywood	27.24	344	P	P	09 47 18.2	+2.1
	baz=161						
451A	Vernon	27.34	333	IAmb	IAmb	09 47 20.7	
	comp=Z,304nm,1.2s						

SALV Santo Antonio 27.36 145 eP P 09 47 17.4 0.0
157A Early Branch 27.41 343 P P 09 47 20.2 +2.5
baz=160,SNR=8.2
Z59A Georgetown, SC 27.49 346 P P 09 47 20.4 +2.0
baz=164,SNR=7.9
NHSC New Hope 27.59 345 P P 09 47 21.6 +2.4
baz=162,SNR=7.4
Z58A St. Stephen 27.71 345 P P 09 47 22.5 +2.1
baz=162,SNR=8.6
352A Blakely 27.73 335 IAmb IAmb 09 47 23.7
comp=Z,155nm,0.9s
Z57A Bowman 27.91 344 P P 09 47 24.1 +2.0
baz=161,SNR=17
Y60A Bolivia 27.99 348 P P 09 47 24.5 +1.7
Y60A IAmb IAmb 09 47 25.4
comp=Z,158nm,0.9s
154A Montrose 28.04 339 IAmb IAmb 09 47 26.6
comp=Z,160nm,1.0s
Y59A Loris 28.11 347 IAmb IAmb 09 47 26.9
comp=Z,110nm,0.7s
Y59A Loris 28.11 347 P P 09 47 26.2 +2.3
baz=165
Z56A Williston 28.13 343 P P 09 47 26.0 +1.9
baz=159,SNR=9.7
Y58A Scranton 28.22 346 P P 09 47 26.5 +1.6
baz=163
BRAL Brewton 28.41 332 IAmb IAmb 09 47 30.2
comp=Z,207nm,0.8s
BRAL Brewton 28.41 332 P P 09 47 28.9 +2.2
baz=147,SNR=15
X60A Albert Glenn T 28.50 349 P P 09 47 29.2 +1.8
baz=167
Y57A Sumter 28.50 345 P P 09 47 29.3 +1.8
baz=162,SNR=6.7
Y56A Pelion 28.54 343 P P 09 47 29.9 +2.2
baz=160
X59A McDuffie Farm, 28.62 348 P P 09 47 30.2 +1.7
baz=166
152A Waverly Hall 28.69 337 IAmb IAmb 09 47 32.2
comp=Z,118nm,0.9s
250A Grady 28.73 334 IAmb IAmb 09 47 32.7
comp=Z,222nm,1.0s
Y55A Saluda 28.84 342 P P 09 47 32.1 +1.6
baz=159,SNR=41
X57A Johnson Farm, 28.85 346 P P 09 47 31.8 +1.3
baz=163,SNR=6.2
GOGA Godfrey 28.89 339 P P 09 47 32.4 +1.6
baz=155,SNR=21
W60A Pink Hill 28.91 350 P P 09 47 32.4 +1.4
baz=168,SNR=7.9
Z52A Williamson 29.03 338 P P 09 47 34.1 +1.9
baz=153,SNR=28
Y54A Tignall 29.03 341 P P 09 47 33.6 +1.4
baz=157,SNR=12
LVC Limon Verde 29.09 175 P P 09 47 32.2 -1.0
comp=Z,20nm,0.6s,baz=1.9,slow=4.7,SNR=26
LVC LR LR 10 00 14.0
comp=Z,1µm,20.0s,baz=334,slow=38
LVC Limon Verde 29.09 175 eP P 09 47 32.6 -0.6
LVC Limon Verde 29.09 175 P P 09 47 32.2 -1.0
X56A White Oak 29.12 344 P P 09 47 34.4 +1.5
baz=161,SNR=9.4
CNNC Cliffs of the 29.13 350 P P 09 47 34.8 +1.9
baz=167
W59A Clinton 29.16 349 P P 09 47 34.3 +1.1
baz=166,SNR=6.4
PP1B Ponte de Pedra 29.18 146 eP P 09 47 34.0 +0.4
W58A Raeford 29.18 347 P P 09 47 35.1 +1.6
baz=165,SNR=7.3
X55A Gracelyn & Ava 29.27 343 P P 09 47 35.7 +1.4
baz=160,SNR=8.1
Y53A Monroe 29.33 340 P P 09 47 36.3 +1.6
baz=155,SNR=18
Z51A Franklin 29.44 337 IAmb IAmb 09 47 38.9
comp=Z,140nm,0.8s
V61A Roper 29.46 352 P P 09 47 37.9 +2.0
baz=170
W57A Gilead 29.48 346 P P 09 47 36.8 +0.7
baz=163,SNR=8.5
Y52A Lilburn 29.50 339 P P 09 47 38.0 +1.7
baz=154,SNR=29
V60A Jim Taylor Roa 29.54 351 IAmb IAmb 09 47 39.0
comp=Z,114nm,0.8s
V60A Jim Taylor Roa 29.54 351 P P 09 47 38.5 +1.9
baz=169,SNR=12
X54A Belton 29.57 342 P P 09 47 38.5 +1.7
baz=158,SNR=14
ARAG Araguaiana, MT 29.61 138 eP P 09 47 37.6 +0.2
W56A Indian Trail 29.61 345 P P 09 47 38.3 +1.0
baz=162
Z50A Ashland 29.68 335 IAmb IAmb 09 47 41.0
comp=Z,124nm,0.8s
Z50A Ashland 29.68 335 P P 09 47 39.6 +1.7
baz=151,SNR=56
V59A Middlesex 29.70 349 P P 09 47 39.1 +1.1
baz=167,SNR=19
KMSC Kings Mountain 29.82 344 P P 09 47 40.5 +1.4
baz=160,SNR=7.7
X53A Estanollee 29.82 340 P P 09 47 40.5 +1.4
baz=156,SNR=6.9
PB10 IPOC Station P 29.89 178 P P 09 47 38.9 -0.9
V58A Windy Hill, Pi 29.90 348 P P 09 47 41.5 +1.6
baz=165
Y51A Rockmart 29.91 337 P P 09 47 41.3 +1.3
baz=153,SNR=25
LRAL Lakeview Retre 29.95 334 IAmb IAmb 09 47 43.4
comp=Z,109nm,0.9s
LRAL Lakeview Retre 29.95 334 P P 09 47 42.0 +1.7
baz=148,SNR=56
U61A Possum Corner 29.97 352 P P 09 47 41.9 +1.5
baz=170
W54A Cherokee Point 30.01 343 P P 09 47 42.8 +2.0
baz=159,SNR=16
X52A Dahlonega 30.11 340 P P 09 47 43.3 +1.5
baz=155,SNR=31
V57A Coltrane Farms 30.14 347 P P 09 47 43.4 +1.5
baz=164,SNR=21
U59A Littleton 30.20 350 P P 09 47 43.8 +1.4
baz=168
U60A Pendleton 30.21 351 P P 09 47 44.0 +1.4
baz=169,SNR=14
V56A Mocksville 30.23 346 P P 09 47 44.3 +1.6
baz=162,SNR=21
U58A Oxford 30.37 349 P P 09 47 45.5 +1.5
baz=166,SNR=29
W53A Cullowhee 30.39 341 P P 09 47 46.9 +2.6
baz=157,SNR=20
Y49A Blount Mountai 30.41 335 IAmb IAmb 09 47 47.2
comp=Z,92nm,0.8s
X51A Calhoun 30.42 338 P P 09 47 46.6 +2.2
baz=154
V55A Taylorsville 30.45 345 P P 09 47 46.7 +2.0
baz=161,SNR=12
U57A Blanch 30.57 348 P P 09 47 46.7 +1.0
baz=165,SNR=23
W52A Murphy 30.57 340 P P 09 47 47.8 +2.0
baz=156,SNR=40
V54A Nebo 30.59 343 P P 09 47 47.9 +2.0
baz=160,SNR=16
FPAL Fort Paine 30.68 337 IAmb IAmb 09 47 49.6
comp=Z,107nm,1.1s
U56A King 30.72 346 P P 09 47 48.8 +1.8
baz=163,SNR=9.8
V53A Saluda 30.74 342 P P 09 47 49.2 +1.9
baz=158,SNR=14
T59A Double "B" Far 30.76 351 IAmb IAmb 09 47 49.8
comp=Z,97nm,0.8s
T59A Double "B" Far 30.76 351 P P 09 47 48.8 +1.4
baz=169,SNR=24
T60A Surry 30.81 352 P P 09 47 49.6 +1.8
baz=170
T58A Grand View Acr 30.90 349 P P 09 47 49.8 +1.2
baz=167,SNR=38
W51A Cleveland 30.92 339 P P 09 47 50.9 +2.0
baz=154,SNR=38
VBMS Vicksburg 31.00 328 P P 09 47 51.3 +1.8
baz=142,SNR=65
U55A TA2, Sparta 31.03 345 P P 09 47 52.0 +2.1
baz=162,SNR=7.7
T57A Hurt 31.09 348 IAmb IAmb 09 47 52.8
comp=Z,102nm,0.9s
T57A Hurt 31.09 348 P P 09 47 51.7 +1.4
baz=165,SNR=29
AQDB Aquidauana 31.11 150 eP P 09 47 51.9 +1.3
V52A Sevierville 31.14 341 P P 09 47 52.5 +1.7
baz=157,SNR=21
W50A Signal Mountai 31.16 338 P P 09 47 52.9 +1.9
baz=153,SNR=36

X48A Hartselle 31.19 335 IAmb IAmb 09 47 53.9
comp=Z,115nm,0.8s
U54A Nelsons Funny 31.25 344 IAmb IAmb 09 47 55.4
comp=Z,173nm,1.1s
U54A Nelsons Funny 31.25 344 P P 09 47 53.6 +1.8
baz=160,SNR=36
C2SB Chapadao do Su 31.28 144 eP P 09 47 52.7 +0.5
T56A Rocky Mt 31.29 347 P P 09 47 53.8 +1.7
baz=164,SNR=16
U53A Fall Branch 31.31 343 P P 09 47 53.8 +1.4
baz=159,SNR=24
S60A Water View 31.35 352 P P 09 47 55.3 +2.7
baz=170,SNR=6.6
V51A Loudon 31.36 340 P P 09 47 54.6 +1.9
baz=155,SNR=47
441A DeRidder 31.41 323 P P 09 47 55.7 +2.5
W49A Belvidere 31.45 337 P P 09 47 55.1 +1.6
baz=152,SNR=15
S58A Poland Farm, P 31.47 350 IAmb IAmb 09 47 55.9
comp=Z,115nm,1.3s
S58A Poland Farm, P 31.47 350 P P 09 47 54.9 +1.3
baz=168,SNR=12
S59A Mechanicsville 31.50 352 P P 09 47 55.5 +1.7
baz=169,SNR=24
V50A Pikevile 31.50 339 P P 09 47 55.8 +1.8
baz=154,SNR=27
T55A Pulaski 31.55 346 P P 09 47 56.3 +1.9
baz=163,SNR=12
BLA Blacksburg 31.55 347 IAmb IAmb 09 47 57.4
comp=Z,80nm,0.8s
BLA Blacksburg 31.55 347 P P 09 47 56.5 +2.0
baz=163,SNR=17
U52A Thorn Hill 31.58 342 P P 09 47 56.1 +1.4
baz=158,SNR=24
T54A Tazewell 31.69 345 P P 09 47 57.1 +1.4
baz=161,SNR=16
U51A La Follette 31.77 341 P P 09 47 58.0 +1.7
baz=156,SNR=27
TZTN Tazewell 31.77 342 IAmb IAmb 09 47 59.3
comp=Z,110nm,1.2s
TZTN Tazewell 31.77 342 P P 09 47 58.1 +1.8
baz=157,SNR=16
S57A Dark Hollow, R 31.77 349 IAmb IAmb 09 47 58.9
comp=Z,83nm,0.8s
S57A Dark Hollow, R 31.77 349 P P 09 47 57.6 +1.3
baz=166,SNR=32
R58B Mineral 31.78 351 P P 09 47 58.2 +1.8
baz=168,SNR=7.9
S56A Natural Bridge 31.81 348 P P 09 47 58.6 +1.9
baz=165,SNR=6.9
T53A Wise 31.88 343 P P 09 47 59.0 +1.6
baz=159,SNR=23
V49A McMinnville 31.88 338 P P 09 47 58.8 +1.5
baz=153,SNR=38
R60A Leonardtown, M 31.90 353 P P 09 47 59.7 +2.4
baz=171
R59A King George, V 31.90 352 P P 09 47 59.3 +1.9
baz=170,SNR=15
CBN Corbin Frederi 31.94 352 P P 09 47 59.5 +1.7
baz=169,SNR=15
U50A Jamestown 32.08 340 P P 09 48 01.0 +1.9
baz=155,SNR=40
S55A Lewisburg 32.11 347 P P 09 48 01.3 +2.0
baz=163,SNR=22
T52A Hallie 32.12 343 IAmb IAmb 09 48 02.5
comp=Z,151nm,1.1s
T52A Hallie 32.12 343 P P 09 48 01.0 +1.6
baz=159,SNR=26
R58A Rapidan 32.13 351 P P 09 48 01.3 +1.8
baz=168,SNR=29
BDFB Brasilia 32.19 133 P P 09 48 01.8 +1.4
comp=Z,43nm,0.8s,baz=299,slow=10,SNR=45
BDFB Lg Lg 09 58 24.7
comp=Z,97nm,1.0s,baz=168,slow=19,SNR=3.3
BDFB LR LR 10 01 49.9
comp=Z,5µm,18.5s,baz=307,slow=38
BDFB Brasilia 32.19 133 P P 09 48 00.9 +0.6
R57A Stanardsville 32.22 350 P P 09 48 02.4 +2.2
baz=167,SNR=21
T51A Gray 32.28 341 P P 09 48 02.7 +1.8
baz=157,SNR=57
OXF Oxford 32.29 332 IAmb IAmb 09 48 02.9
comp=Z,129nm,1.0s
OXF Oxford 32.29 332 P P 09 48 01.9 +1.1
baz=146,SNR=17
S54A Dingess, Beckl 32.32 346 IAmb IAmb 09 48 04.2
comp=Z,80nm,0.9s
S54A Dingess, Beckl 32.32 346 P P 09 48 02.9 +1.7
baz=162,SNR=16
CLTN Cedars of Leba 32.33 338 IAmb IAmb 09 48 04.1
comp=Z,180nm,1.3s
S53A Williamson 32.42 344 P P 09 48 03.8 +1.7
baz=160,SNR=17
KVTX Kingsville 32.47 313 IAmb IAmb 09 48 04.7
comp=Z,150nm,0.8s
R56A Bull Pasture M 32.49 349 P P 09 48 04.7 +2.1
baz=166,SNR=15
Q59A Harwood 32.49 353 P P 09 48 04.7 +2.1
baz=171
U49A Red Boiling Sp 32.50 339 P P 09 48 04.0 +1.3
baz=153,SNR=31
R55A Marlinton 32.51 348 IAmb IAmb 09 48 06.1
comp=Z,82nm,0.9s
R55A PcP 09 50 50.6 +1.5
R55A Marlinton 32.51 348 P P 09 48 04.7 +1.8
baz=164,SNR=27
HKT Hockley 32.52 319 P P 09 48 03.5 +0.5
HKT IAmb IAmb 09 48 05.4
comp=Z,196nm,1.3s
HKT Hockley 32.52 319 iP P 09 48 03.9 +1.0
HKT pmax pmax
comp=Z,191nm,1.4s
Q60A Greensboro 32.54 354 P P 09 48 05.6 +2.6
baz=172
R54A Victor 32.61 346 P P 09 48 05.3 +1.6
baz=163,SNR=21
T50A Nancy 32.62 340 P P 09 48 05.5 +1.7
baz=155,SNR=47
S52A Salyersville 32.68 343 P P 09 48 05.7 +1.4
baz=159,SNR=18
Q58A Fox Den Farm, 32.71 351 P P 09 48 06.0 +1.4
baz=169,SNR=16
S51A Beattyville 32.80 342 P P 09 48 06.8 +1.5
baz=158,SNR=19
Q57A Strasburg 32.92 350 P P 09 48 08.1 +1.8
baz=168,SNR=13
T49A Edmonton 32.94 339 IAmb IAmb 09 48 09.3
comp=Z,68nm,0.8s
T49A Edmonton 32.94 339 P P 09 48 08.1 +1.5
baz=154,SNR=38
WVT Waverly 32.95 336 P P 09 48 07.2 +0.6
WVT Waverly 32.95 336 P P 09 48 07.3 +0.6
WVT pmax pmax
comp=Z,255nm,1.2s
WVT Waverly 32.95 336 P P 09 48 07.7 +1.0
baz=150
R53A Hurricane 32.99 345 IAmb IAmb 09 48 09.9
comp=Z,111nm,1.2s
R53A Hurricane 32.99 345 P P 09 48 08.9 +1.9
baz=161,SNR=9.3
X43A Marvell 33.00 330 IAmb IAmb 09 48 09.8
comp=Z,202nm,1.2s
X43A Marvell 33.00 330 P P 09 48 08.8 +1.7
baz=143,SNR=13
NATX Nacogdoches 33.01 322 P P 09 48 08.4 +1.2
baz=135,SNR=50
Z41A Richland Creek 33.02 326 P P 09 48 08.6 +1.3
baz=139,SNR=71
S50A Richmond 33.08 341 P P 09 48 09.8 +2.0
baz=156,SNR=34
R52A Catlettsburg 33.17 344 P P 09 48 10.4 +1.8
baz=160,SNR=8.3
Q55A Buckhannon 33.19 348 P P 09 48 11.7 +2.9
baz=165,SNR=25
P58A Pank, Wackersv 33.19 352 P P 09 48 10.1 +1.4
baz=170,SNR=6.4
P59A Jarrettsville 33.20 353 P P 09 48 10.6 +1.8
baz=171,SNR=5.0
P57A Homestead Farm 33.29 351 IAmb IAmb 09 48 13.0
comp=Z,97nm,1.0s
P57A Homestead Farm 33.29 351 P P 09 48 12.0 +2.4
baz=168,SNR=20
P60A Greenville 33.32 354 P P 09 48 11.6 +1.8
baz=173,SNR=8.3
Q54A Coxs Mills 33.34 347 IAmb IAmb 09 48 13.2
comp=Z,93nm,0.8s
Q54A Coxs Mills 33.34 347 P P 09 48 12.2 +2.2
baz=163,SNR=21

Q53A Leroy 33.38 346 P P 09 48 12.2 +1.9
baz=162,SNR=29
R51A Hillsboro 33.41 343 P P 09 48 12.6 +2.0
baz=158,SNR=24
P56A Dayton Farm, R 33.45 350 P P 09 48 13.3 +2.4
baz=167,SNR=40
S49A Springfield 33.47 340 P P 09 48 12.8 +1.6
baz=155,SNR=55
O61A Allentown 33.51 356 P P 09 48 13.4 +2.0
baz=175,SNR=5.4
MVL Millersville 33.58 354 P P 09 48 13.6 +1.5
MVL IAmb IAmb 09 48 15.0
comp=Z,112nm,1.2s
R50A Paris 33.61 342 P P 09 48 14.4 +2.0
baz=157,SNR=48
P55A Reedsville 33.63 349 P P 09 48 14.8 +2.2
baz=165,SNR=14
IPMB Ipameri, GO 33.64 137 eP P 09 48 13.3 +0.4
Q52A Bidwell 33.66 345 P P 09 48 14.8 +1.9
baz=161,SNR=36
O58A Lewisberry 33.77 353 P P 09 48 15.7 +2.0
baz=171,SNR=17
MCWV Mont Chateau 33.78 349 P P 09 48 16.3 +2.5
baz=165,SNR=20
O60A Telford 33.80 355 P P 09 48 16.1 +2.1
baz=173
ZAIG Zacatecas 33.83 302 IAmb IAmb 09 48 17.8
comp=Z,85nm,1.1s
P54A Burton 33.86 348 P P 09 48 16.4 +1.9
baz=164,SNR=23
O59A Robesonia 33.87 354 P P 09 48 16.9 +2.2
baz=172,SNR=7.6
R49A Shelbyville 33.89 341 IAmb IAmb 09 48 17.4
comp=Z,50nm,0.8s
R49A Shelbyville 33.89 341 P P 09 48 16.3 +1.5
baz=156,SNR=19
UALR University of 33.94 329 IAmb IAmb 09 48 17.3
comp=Z,73nm,0.8s
P53A Whipple 33.95 347 P P 09 48 16.8 +1.5
P53A IAmb IAmb 09 48 18.3
comp=Z,97nm,0.9s
P53A Whipple 33.95 347 P P 09 48 17.3 +2.0
baz=163,SNR=21
O57A Amberson 33.95 352 P P 09 48 17.3 +2.0
baz=169,SNR=23
X40A Basin Creek Fa 33.98 328 IAmb IAmb 09 48 17.6
comp=Z,123nm,0.9s
X40A Basin Creek Fa 33.98 328 P P 09 48 16.1 +0.5
baz=140,SNR=70
833A Chaparral WMA, 34.00 313 IAmb IAmb 09 48 16.8
comp=Z,105nm,0.8s
833A Chaparral WMA, 34.00 313 P P 09 48 15.5 -0.4
baz=124,SNR=51
Q51A Peebles 34.01 344 IAmb IAmb 09 48 19.1
comp=Z,77nm,0.8s
Q51A Peebles 34.01 344 P P 09 48 17.7 +1.8
baz=159,SNR=18
Q50A Georgetown 34.02 343 P P 09 48 18.0 +2.0
baz=158,SNR=30
O56A Blue Knob Stat 34.15 351 IAmb IAmb 09 48 20.5
comp=Z,119nm,0.9s
O56A Blue Knob Stat 34.15 351 P P 09 48 19.2 +2.1
baz=168,SNR=30
N61A South Mountain 34.15 356 P P 09 48 18.6 +1.6
baz=175,SNR=5.7
W41B Gary Mavity, V 34.20 329 P P 09 48 18.4 +0.8
baz=142,SNR=62
O55A Ligonier 34.21 350 P P 09 48 19.9 +2.3
baz=166,SNR=19
WCI Wyandotte Cave 34.21 339 P P 09 48 18.5 +0.9
WCI IAmb IAmb 09 48 20.3
comp=Z,94nm,0.9s
WCI Wyandotte Cave 34.21 339 P P 09 48 18.5 +0.9
WCI pmax pmax
comp=Z,94nm,1.0s
WCI Wyandotte Cave 34.21 339 P P 09 48 18.9 +1.3
baz=154
435B Jarrell 34.22 318 P P 09 48 18.5 +0.8
baz=130,SNR=72
P52A Corning 34.26 346 P P 09 48 19.6 +1.6
baz=161,SNR=55
N60A Cedar Hill Far 34.32 355 P P 09 48 20.6 +2.1
baz=174,SNR=6.0
P51A Williamsport 34.36 344 IAmb IAmb 09 48 21.8
comp=Z,85nm,0.8s
P51A Williamsport 34.36 344 P P 09 48 20.8 +1.9
baz=160,SNR=20
PAL Palisades 34.38 357 P P 09 48 20.9 +1.9
baz=176
O54A Avella 34.39 348 P P 09 48 21.1 +1.9
baz=165,SNR=9.3
SSPA Standing Stone 34.40 352 P P 09 48 20.8 +1.6
SSPA Standing Stone 34.40 352 P P 09 48 21.0 +1.7
baz=169
PCMB Pacaembu 34.41 145 eP P 09 48 20.1 +0.6
MIAR Mount Ida 34.42 327 IAmb IAmb 09 48 21.4
comp=Z,110nm,0.8s
MIAR Mount Ida 34.42 327 P P 09 48 19.7 +0.2
baz=139,SNR=98
N59A State Game Lan 34.43 355 IAmb IAmb 09 48 22.6
comp=Z,74nm,0.9s
N59A State Game Lan 34.43 355 P P 09 48 21.3 +1.8
baz=173,SNR=14
N58A Sunbury 34.45 353 P P 09 48 21.5 +1.8
baz=171,SNR=13
Q49A Aurora 34.45 342 P P 09 48 21.1 +1.4
baz=156,SNR=14
N57A Milroy 34.47 352 P P 09 48 21.4 +1.6
baz=170,SNR=16
TRCB Terra Rica 34.61 148 eP P 09 48 21.4 +0.2
TRCB epP pP 09 48 31.1 -1.5
O53A New Philadelph 34.63 347 P P 09 48 23.0 +1.7
baz=163,SNR=36
Q48A North Vernon 34.65 341 P P 09 48 23.2 +1.8
baz=155,SNR=20
M61A Granite Spring 34.68 357 P P 09 48 23.4 +1.8
baz=176,SNR=5.5
P50A Jamestown 34.68 343 P P 09 48 23.3 +1.6
baz=159,SNR=26
N55A Marion Center 34.72 350 P P 09 48 24.1 +2.2
baz=167,SNR=23
M63A Gales Ferry 34.72 360 P P 09 48 24.2 +2.3
baz=179,SNR=5.5
N56A West Decatur 34.74 351 P P 09 48 24.3 +2.2
baz=168,SNR=25
M60A Port Jervis 34.74 356 P P 09 48 23.7 +1.6
baz=175,SNR=5.2
M62A Hamden 34.77 358 P P 09 48 24.1 +1.7
baz=178
O51A Pataskala 34.87 345 P P 09 48 25.4 +2.2
baz=161,SNR=36
M64A Tiverton 34.87 1 P P 09 48 25.1 +1.9
baz=181
P49A Miami Univ. Ec 34.88 342 P P 09 48 24.9 +1.5
baz=157,SNR=16
WHTX Lake Whitney, 34.91 320 P P 09 48 24.5 +0.7
baz=131,SNR=67
M58A Price's Panora 34.95 354 P P 09 48 26.1 +2.1
baz=172,SNR=18
M57A Sunshine Farm, 34.99 353 IAmb IAmb 09 48 27.5
comp=Z,76nm,0.8s
M57A Sunshine Farm, 34.99 353 P P 09 48 26.3 +2.0
baz=171,SNR=17
M59A Waymart 35.02 355 P P 09 48 26.6 +2.1
baz=174,SNR=12
W39A Magazine 35.02 328 P P 09 48 25.6 +1.0
baz=140,SNR=223
P48A Milroy 35.03 341 IAmb IAmb 09 48 26.7
comp=Z,196nm,1.7s
P48A Milroy 35.03 341 P P 09 48 25.5 +0.8
baz=156,SNR=15
ACSO Alum Creek Sta 35.04 345 IAmb IAmb 09 48 27.8
comp=Z,68nm,0.8s
ACSO Alum Creek Sta 35.04 345 P P 09 48 26.6 +1.8
baz=160,SNR=15
N54A Moraine State 35.07 349 IAmb IAmb 09 48 28.2
comp=Z,124nm,0.8s
N54A Moraine State 35.07 349 P P 09 48 26.8 +1.8
baz=166,SNR=24
N53A Lisbon 35.09 348 IAmb IAmb 09 48 28.0
comp=Z,71nm,1.0s
N53A Lisbon 35.09 348 P P 09 48 27.0 +1.9
baz=164,SNR=12
O50A Cable 35.13 344 P P 09 48 27.2 +1.7
baz=159,SNR=73
M56A Emporium 35.28 352 P P 09 48 28.5 +1.7
baz=169,SNR=36
N52A McGinn's Farm, 35.28 347 P P 09 48 28.6 +1.8

baz=163,SNR=56
M55A Ridgway 35.35 351 P P 09 48 29.1 +1.6
baz=168,SNR=33
L62A Suffield 35.36 359 P P 09 48 29.1 +1.7
baz=178
O49A Covington 35.37 343 P P 09 48 29.4 +1.8
baz=158,SNR=21
L60A Shokan 35.38 357 P P 09 48 29.5 +1.9
baz=176,SNR=6.7
U40A Yellville 35.43 330 P P 09 48 29.0 +0.8
baz=142,SNR=264
CPUP Villa Florida 35.52 157 P P 09 48 26.9 -2.2
comp=Z,4.2nm,0.6s,baz=340,slow=9.2,SNR=12
CPUP PcP PcP 09 50 57.4 -0.3
comp=Z,8.7nm,0.9s,baz=329,slow=6.1,SNR=3.5
CPUP LR LR 10 04 09.2
comp=Z,3µm,19.2s,baz=340,slow=38
CPUP Villa Florida 35.52 157 P P 09 48 26.8 -2.2
JCT Junction City 35.54 316 IAmb IAmb 09 48 30.4
comp=Z,216nm,1.4s
JCT Junction City 35.54 316 P P 09 48 29.3 +0.1
baz=126,SNR=52
M54A Oil Creek Stat 35.54 350 P P 09 48 30.7 +1.7
baz=166,SNR=45
N51A Ashland 35.54 346 IAmb IAmb 09 48 31.7
comp=Z,127nm,1.1s
N51A Ashland 35.54 346 P P 09 48 30.7 +1.6
baz=162,SNR=16
L61A Hillsdale 1, H 35.55 358 P P 09 48 31.0 +1.9
baz=177,SNR=8.2
L58A Harry Jones Me 35.55 355 P P 09 48 31.0 +1.8
baz=173,SNR=12
N50A Nevada 35.59 345 P P 09 48 31.2 +1.7
baz=160,SNR=30
QUA2 Belchertown 35.60 359 P P 09 48 30.9 +1.4
QUA2 IAmb IAmb 09 48 31.9
comp=Z,116nm,1.5s
L57A Andrews Acres 35.61 353 P P 09 48 31.6 +1.9
baz=171,SNR=16
L59A Walton 35.63 356 P P 09 48 31.8 +2.0
baz=174,SNR=6.9
M53A WI Miller and 35.66 348 P P 09 48 31.9 +1.8
baz=165,SNR=14
O48A Farmland 35.68 342 P P 09 48 31.4 +1.2
baz=157,SNR=16
WES Weston 35.70 0 P P 09 48 30.8 +0.4
WES IAmb IAmb 09 48 32.3
comp=Z,169nm,1.3s
WES Weston 35.70 0 P P 09 48 30.8 +0.4
WES pmax pmax
comp=Z,169nm,1.3s
BINY Binghamton 35.72 355 IAmb IAmb 09 48 33.5
comp=Z,76nm,0.9s
BINY Binghamton 35.72 355 P P 09 48 32.3 +1.7
baz=173,SNR=11
L61B Northampton 35.78 359 P P 09 48 32.9 +1.9
baz=178
HRV Adam Dziewonsk 35.82 0 P P 09 48 32.2 +0.8
HRV IAmb IAmb 09 48 34.5
comp=Z,123nm,1.3s
HRV Adam Dziewonsk 35.82 0 P P 09 48 32.2 +0.8
HRV pmax pmax
comp=Z,123nm,1.3s
HRV Adam Dziewonsk 35.82 0 P P 09 48 33.7 +2.2
baz=180
L56A Greenwood 35.83 353 IAmb IAmb 09 48 34.4
comp=Z,128nm,0.8s
L56A Greenwood 35.83 353 P P 09 48 33.0 +1.4
baz=170,SNR=27
M51A Elyria 35.89 346 P P 09 48 33.4 +1.4
baz=162,SNR=24
M52A Chesterland 35.90 348 IAmb IAmb 09 48 35.0
comp=Z,99nm,0.9s
M52A Chesterland 35.90 348 P P 09 48 33.7 +1.6
baz=164,SNR=20
HHAR Hobbs 35.93 329 IAmb IAmb 09 48 33.8
comp=Z,96nm,0.8s
K62A Royalston 35.98 359 P P 09 48 34.8 +2.0
K62A IAmb IAmb 09 48 35.7
comp=Z,92nm,1.1s
K62A Royalston 35.98 359 P P 09 48 34.8 +2.0
baz=179
K60A Five Rivers En 35.98 357 P P 09 48 35.3 +2.5
baz=176
L55A Hinsdale 36.00 351 P P 09 48 34.8 +1.8
baz=169,SNR=22
K63A Dunstable 36.01 0 P P 09 48 34.9 +2.0
baz=180,SNR=6.5
N49A Columbus Grove 36.01 344 IAmb IAmb 09 48 35.5
comp=Z,123nm,0.9s
N49A Columbus Grove 36.01 344 P P 09 48 34.4 +1.4
baz=159,SNR=30
K61A Williamstown 36.01 358 P P 09 48 35.2 +2.2
baz=177
CCM Cathedral Cave 36.04 333 P P 09 48 33.5 +0.1
CCM Cathedral Cave 36.04 333 P P 09 48 33.5 +0.1
CCM pmax pmax
comp=Z,162nm,0.8s
CCM Cathedral Cave 36.04 333 P P 09 48 34.2 +0.8
baz=146
L53A Girard 36.08 349 P P 09 48 35.4 +1.7
baz=166,SNR=21
SLM Saint Louis 36.09 335 IAmb IAmb 09 48 35.4
comp=Z,135nm,1.1s
TRY Troy 36.09 358 IAmb IAmb 09 48 36.8
comp=Z,106nm,1.4s
M50A Fremont 36.16 345 IAmb IAmb 09 48 37.0
comp=Z,106nm,0.8s
M50A Fremont 36.16 345 P P 09 48 36.0 +1.7
baz=161,SNR=20
L54A Sinclairville 36.19 350 P P 09 48 36.1 +1.6
baz=167,SNR=32
ERPA Erie 36.19 350 IAmb IAmb 09 48 37.3
comp=Z,96nm,0.8s
ERPA Erie 36.19 350 P P 09 48 36.7 +2.1
baz=166,SNR=19
N48A Decatur 36.19 343 P P 09 48 35.9 +1.2
baz=157,SNR=27
K59A Cooperstown 36.20 356 P P 09 48 36.7 +2.0
baz=175,SNR=6.8
K58A Earlville 36.25 355 IAmb IAmb 09 48 37.8
comp=Z,71nm,0.9s
K58A Earlville 36.25 355 P P 09 48 36.9 +1.8
baz=173,SNR=11
K57A Scipio Center 36.30 354 P P 09 48 37.3 +1.8
baz=172,SNR=11
K56A Middlesex 36.36 353 P P 09 48 37.8 +1.7
baz=171,SNR=12
N47A Urbana 36.41 342 IAmb IAmb 09 48 38.7
comp=Z,136nm,0.8s
N47A Urbana 36.41 342 P P 09 48 37.5 +1.0
baz=156,SNR=23
SFIN Lafayette 36.41 340 P P 09 48 37.9 +1.4
baz=154,SNR=77
K54A Basiliko Farm, 36.45 351 P P 09 48 38.4 +1.5
baz=168,SNR=22
M49A Liberty Center 36.47 344 P P 09 48 38.4 +1.4
baz=159,SNR=18
K55A Perry 36.48 352 P P 09 48 38.6 +1.5
baz=169,SNR=9.2
PTGB Pitanga 36.48 149 eP P 09 48 37.6 +0.2
J62A Henniker 36.54 360 P P 09 48 39.7 +2.2
baz=180
J60A Lant Hill Farm 36.59 358 P P 09 48 40.0 +2.1
baz=177,SNR=11
J63A Strafford 36.60 1 P P 09 48 40.3 +2.3
baz=181
TUL1 Leonard 36.64 326 P P 09 48 38.6 +0.1
baz=137,SNR=111
J61A Chester 36.67 359 P P 09 48 40.7 +2.0
baz=179,SNR=6.0
M48A Edgerton 36.68 344 IAmb IAmb 09 48 41.0
comp=Z,88nm,0.9s
M48A Edgerton 36.68 344 P P 09 48 40.0 +1.2
baz=158,SNR=15
O44A Mansfield 36.70 338 IAmb IAmb 09 48 40.1
comp=Z,59nm,0.5s
L50A Kingsville 36.71 346 P P 09 48 40.4 +1.4
baz=161,SNR=51
ABTX Abilene, Hawle 36.74 319 P P 09 48 39.9 +0.5
baz=129,SNR=122
FRTB Fartura 36.74 145 eP P 09 48 40.0 +0.5
J58A Remsen 36.81 356 IAmb IAmb 09 48 42.6
comp=Z,76nm,0.8s
J58A Remsen 36.81 356 P P 09 48 41.4 +1.5
baz=174,SNR=17
M47A Cromwell 36.83 342 P P 09 48 41.3 +1.3
baz=157,SNR=24
J59A Piesco 36.86 357 P P 09 48 42.2 +1.9
baz=175,SNR=7.6
J56A Wolcott 36.87 354 IAmb IAmb 09 48 42.7
comp=Z,131nm,1.1s
J56A Wolcott 36.87 354 P P 09 48 41.9 +1.6
baz=171,SNR=14
J57A Williamstown 36.92 355 IAmb IAmb 09 48 43.3
comp=Z,133nm,0.9s
J57A Williamstown 36.92 355 P P 09 48 42.1 +1.3
baz=173,SNR=24
K52A Tillsonburg 36.97 349 P P 09 48 42.9 +1.7
baz=165,SNR=20
J55A Hilton 36.98 353 IAmb IAmb 09 48 43.6
comp=Z,108nm,0.8s
J55A Hilton 36.98 353 P P 09 48 42.7 +1.4
baz=170,SNR=12
L49A Milan 37.01 345 P P 09 48 43.3 +1.7
baz=160,SNR=30
L48A N Adams 37.03 344 P P 09 48 43.1 +1.4
baz=159,SNR=24
K51A Iona Station 37.07 348 P P 09 48 43.7 +1.6
baz=164,SNR=12
J54A Appleton 37.10 352 IAmb IAmb 09 48 44.9
comp=Z,203nm,1.5s
J54A Appleton 37.10 352 P P 09 48 44.3 +2.0
baz=168,SNR=5.1
I59A Olmsteadville 37.16 357 P P 09 48 44.9 +2.1
baz=176
AAM Ann Arbor 37.16 345 IAmb IAmb 09 48 46.6
comp=Z,71nm,0.6s
AAM Ann Arbor 37.16 345 P P 09 48 44.8 +2.0
baz=160,SNR=8.7
I60A Shoreham 37.19 358 P P 09 48 45.1 +2.1
baz=177
I61A Oroboro, Fairl 37.25 359 P P 09 48 45.9 +2.3
baz=179
L47A Sherwood 37.27 343 P P 09 48 44.6 +0.8
baz=158,SNR=32
I64A Boothbay 37.28 2 P P 09 48 46.6 +2.8
baz=183
HDIL Hopedale 37.36 338 IAmb IAmb 09 48 45.7
comp=Z,123nm,0.9s
HDIL Hopedale 37.36 338 P P 09 48 44.7 +0.2
baz=150,SNR=19
K50A Casco 37.36 347 P P 09 48 46.1 +1.6
baz=162,SNR=29
J52A Paris 37.37 349 P P 09 48 46.1 +1.5
baz=166,SNR=25
I63A Otisfield 37.38 1 P P 09 48 46.6 +1.9
baz=182
LBNH Lisbon 37.56 360 IAmb IAmb 09 48 49.0
comp=Z,60nm,0.8s
LBNH Lisbon 37.56 360 P P 09 48 47.8 +1.7
baz=180,SNR=11
WMOK Wichita Mounta 37.56 322 P P 09 48 46.1 -0.3
baz=132,SNR=157
K49A Clarkson 37.56 346 P P 09 48 47.7 +1.4
baz=161,SNR=5.7
L46A Eue Claire 37.63 342 P P 09 48 48.3 +1.4
baz=156,SNR=14
M44A Midewin, Midew 37.64 340 IAmb IAmb 09 48 48.4
comp=Z,140nm,1.0s
TX31 Lajitas Ar. Si 37.71 311 IAmb IAmb 09 48 49.6
comp=Z,106nm,0.8s
TX32 Lajitas Array 37.71 311 IAmb IAmb 09 48 49.6
comp=Z,115nm,0.9s
TXAR Lajitas Array 37.71 311 P P 09 48 48.0 +0.2
comp=Z,80nm,0.7s,baz=126,slow=8.9,SNR=553
TXAR PcP PcP 09 51 04.4 -0.1
comp=Z,5.6nm,0.8s,baz=124,slow=6.2,SNR=3.7
TXAR LR LR 10 08 55.6
comp=Z,131nm,18.3s,baz=0.0,slow=44
TXAR P3KPbc 10 19 11.0
comp=Z,0.3nm,0.7s,baz=341,slow=2.7,SNR=4.4
K48A Perry 37.75 345 P P 09 48 48.9 +1.1
baz=160,SNR=43
I53A Kortright Cn E 37.78 351 P P 09 48 49.7 +1.6
baz=167,SNR=12
RCBR Riachuelo 37.78 108 eP P 09 48 49.1 +0.5
RCBR epP pP 09 48 58.3 -1.8
RCBR Riachuelo 37.78 108 P P 09 48 48.9 +0.3
RCBR IAmb IAmb 09 49 03.8
comp=Z,170nm,1.9s
RCBR Riachuelo 37.78 108 P P 09 48 48.9 +0.3
RCBR pmax pmax
comp=Z,170nm,1.9s
H58A Gabriels 37.80 357 P P 09 48 49.8 +1.6
baz=176,SNR=5.3
H61A Lyndonville 37.85 360 P P 09 48 50.7 +2.0
baz=180,SNR=5.4
K47A Vermontville 37.86 344 P P 09 48 49.8 +1.0
baz=158,SNR=29
H60A Morristown 37.89 359 P P 09 48 51.0 +2.0
baz=178,SNR=7.5
H62A Milan 37.89 1 P P 09 48 51.2 +2.2
baz=181
I55A Frankford 37.90 353 P P 09 48 50.2 +1.2
baz=170,SNR=14
H57A Richville 37.91 356 P P 09 48 50.8 +1.7
baz=174,SNR=11
H59A Cadyville 38.00 358 P P 09 48 51.5 +1.6
baz=177,SNR=8.0
H63A New Sharon 38.01 2 P P 09 48 52.4 +2.5
baz=183
I51A Listowel 38.01 349 P P 09 48 51.6 +1.6
baz=165,SNR=45
LONY Lake Ozonia 38.02 357 P P 09 48 51.9 +1.8
baz=175,SNR=6.9
H64A Troy 38.02 3 P P 09 48 52.0 +1.9
baz=184
J49A Marlette 38.03 346 P P 09 48 51.5 +1.2
baz=161,SNR=29
CFA Coronel Fontan 38.07 175 P P 09 48 48.6 -2.1
comp=Z,16nm,0.8s,baz=340,slow=9.3,SNR=24
K46A Dorr 38.09 343 P P 09 48 51.5 +0.8
baz=157,SNR=31
I52A Shelburne 38.12 350 P P 09 48 52.4 +1.4
baz=166,SNR=43
H56A Elgin 38.12 355 P P 09 48 52.2 +1.3
baz=173,SNR=22
HPIG 38.13 306 IAmb IAmb 09 48 53.1
comp=Z,100nm,0.8s
J48A Bridge Port 38.13 346 IAmb IAmb 09 48 53.3
comp=Z,149nm,0.9s
J48A Bridge Port 38.13 346 P P 09 48 52.2 +1.2
baz=160,SNR=34
H55A Tweed 38.17 354 P P 09 48 52.6 +1.3
baz=171,SNR=16
DELO Deloro Mine 38.19 353 IAmb IAmb 09 48 53.6
comp=Z,51nm,0.7s
L44A Lake County Fo 38.30 340 IAmb IAmb 09 48 54.0
comp=Z,153nm,1.0s
L44A Lake County Fo 38.30 340 P P 09 48 53.0 +0.5
baz=154,SNR=14
J47A Sunmer 38.34 344 P P 09 48 53.8 +1.1
baz=159,SNR=32
H53A Bobcaygeon 38.36 352 P P 09 48 54.0 +1.1
baz=169,SNR=16
G60A Masonville 38.42 359 P P 09 48 55.4 +2.0
baz=179,SNR=6.3
G59A Clarenceville 38.42 358 P P 09 48 55.2 +1.8
baz=178,SNR=6.1
G63A Kingsbury 38.47 2 P P 09 48 55.9 +2.0
baz=183,SNR=5.3
I49A Point Hope 38.51 347 P P 09 48 55.5 +1.3
baz=162,SNR=54
G58A Ormstown 38.52 357 P P 09 48 55.8 +1.5
baz=176,SNR=12
G57A Newington 38.52 356 P P 09 48 55.7 +1.4
baz=175,SNR=24
G62A West of Eustis 38.55 1 P P 09 48 56.3 +1.8
G62A IAmb IAmb 09 48 57.6
comp=Z,80nm,0.8s
G62A West of Eustis 38.55 1 P P 09 48 56.6 +2.1
baz=182,SNR=12
ITAB Concordia 38.55 151 eP P 09 48 53.9 -0.9
ITAB epP pP 09 49 05.5 -0.8
G61A St-Isidore-de- 38.60 0 P P 09 48 57.1 +2.1
baz=180,SNR=8.0
HAL Halifax 38.61 9 P P 09 48 56.9 +1.9
HAL IAmb IAmb 09 49 11.2
comp=Z,269nm,1.9s
HAL Halifax 38.61 9 P P 09 48 56.9 +1.9
HAL pmax pmax
comp=Z,269nm,1.9s
H52A Wyevale 38.62 351 P P 09 48 56.5 +1.3
baz=167,SNR=23
SADO Sadowa 38.63 352 IAmb IAmb 09 48 57.4
comp=Z,105nm,0.7s
PKME Peaks-Kenny Pk 38.64 3 P P 09 48 57.3 +2.1
baz=184
G64A Maxfield 38.65 3 P P 09 48 57.4 +2.0
baz=185,SNR=6.3
J46A Howard City 38.67 344 P P 09 48 56.5 +1.0
baz=158,SNR=17
GGN Saint George 38.67 6 IAmb IAmb 09 48 58.4
comp=Z,95nm,0.9s
G65A Princeton 38.68 5 P P 09 48 58.0 +2.4
baz=186,SNR=5.1
L42A Oliver, Polo 38.75 338 IAmb IAmb 09 48 57.3
comp=Z,84nm,0.9s
G55A Calabogie 38.81 354 P P 09 48 57.8 +1.0
baz=172,SNR=16
G53A Haliburton 38.91 352 P P 09 48 58.6 +1.0
baz=169,SNR=29
I48A Sherman Twp 38.95 346 P P 09 48 58.9 +1.0
baz=161,SNR=28
J45A Montague 38.96 343 P P 09 48 58.8 +0.9
baz=156,SNR=5.7
I47A Gladwin 38.99 345 IAmb IAmb 09 49 00.5
comp=Z,138nm,1.1s
I47A Gladwin 38.99 345 P P 09 48 59.7 +1.5
baz=160,SNR=15
F63A Nahmakanta, Br 39.08 3 P P 09 49 00.8 +1.8
baz=184
G54A Lake Saint Pet 39.11 353 P P 09 49 00.2 +1.0
baz=170,SNR=31
I46A Reed City 39.16 344 P P 09 49 00.5 +0.8
baz=158,SNR=13
F59A Saint Guilaume 39.18 359 P P 09 49 01.3 +1.5
baz=178,SNR=5.2
F57A Harrington 39.21 357 P P 09 49 02.1 +2.0
baz=175
F60A Warwick 39.28 360 P P 09 49 02.1 +1.4
baz=180,SNR=9.3
F64A Sherman 39.29 4 P P 09 49 02.1 +1.5
F64A Sherman 39.29 4 P P 09 49 02.5 +1.8
baz=185
F61A St Evariste 39.30 1 P P 09 49 02.3 +1.6
baz=181
H48A Harrisville 39.35 347 IAmb IAmb 09 49 03.2
comp=Z,91nm,0.6s
H48A Harrisville 39.35 347 P P 09 49 02.3 +1.1
baz=162,SNR=26
F55A Otter Lake 39.36 355 P P 09 49 02.6 +1.4
baz=173,SNR=7.8
L40A Anamosa 39.39 337 IAmb IAmb 09 49 02.5
comp=Z,64nm,0.7s
KSU1 Kansas State U 39.44 329 P P 09 49 01.6 -0.5
baz=139,SNR=98
H47A Mio 39.46 346 P P 09 49 03.9 +1.7
baz=160,SNR=21
I45A Fountain 39.47 343 IAmb IAmb 09 49 04.0
comp=Z,249nm,1.4s
I45A Fountain 39.47 343 P P 09 49 03.1 +0.9
baz=157,SNR=6.0
AMTX Amarillo 39.47 320 P P 09 49 03.4 +0.9
baz=129
PEL Peldehue 39.47 179 P P 09 49 01.8 -0.6
BSFB Barra de Sao F 39.51 130 eP P 09 49 03.7 +0.8
TRQ Mont Tremblant 39.62 357 PcP 09 51 10.3 +0.3
MSTX Muleshoe 39.63 318 P P 09 49 03.9 0.0
baz=127,SNR=188
ALGO Algonquin Park 39.65 353 P P 09 49 04.8 +1.0
baz=170,SNR=45
F52A Sundridge 39.66 352 P P 09 49 05.0 +1.1
baz=168,SNR=36
E60A Ste Agathe de 39.69 0 P P 09 49 05.4 +1.4
baz=180
E58A La Victoria 39.71 358 P P 09 49 05.3 +1.1
baz=178,SNR=9.2
GBN Guysborough 39.72 11 P P 09 49 05.5 +1.2
GBN IAmb IAmb 09 50 00.6
comp=Z,243nm,1.8s
JFWS Jewell Farm 39.76 339 P P 09 49 04.9 +0.2
baz=150,SNR=70
E61A Lac Etchemin 39.76 1 P P 09 49 06.2 +1.5
baz=182,SNR=12
GLMI Grayling 39.77 346 IAmb IAmb 09 49 09.4
comp=Z,109nm,0.7s
GLMI Grayling 39.77 346 P P 09 49 06.4 +1.7
baz=160,SNR=9.7
E57A Chemin Saint G 39.78 357 P P 09 49 06.2 +1.3
baz=176,SNR=48
E63A Oxbow 39.84 4 IAmb IAmb 09 49 07.3
comp=Z,138nm,1.5s
E63A Oxbow 39.84 4 P P 09 49 07.0 +1.7
baz=185,SNR=5.2
E64A Bridgewater 39.88 4 P P 09 49 07.5 +1.9
baz=186,SNR=7.5
F51A Arnstein 39.88 351 P P 09 49 06.5 +0.9
baz=167,SNR=34
G47A Hillman 39.92 347 P P 09 49 07.3 +1.4
baz=161,SNR=41
E55A Montcerf-Lytto 39.95 355 P P 09 49 07.6 +1.5
baz=173,SNR=14
H45A Beulah 39.95 344 P P 09 49 07.3 +1.1
baz=158,SNR=7.4
E56A St. Veronique 39.96 356 P P 09 49 07.4 +1.1
baz=175,SNR=8.9
E53A Dumoine, Ponti 40.03 354 P P 09 49 07.9 +1.1
baz=171,SNR=18
E54A Lac Daplat, Po 40.03 354 P P 09 49 08.0 +1.1
baz=172,SNR=14
E52A Mattawa 40.05 353 P P 09 49 07.8 +0.8
baz=169,SNR=32
SCIA State Center 40.07 335 P P 09 49 07.9 +0.6
baz=146,SNR=13
F49A Sandfield 40.09 349 P P 09 49 08.1 +0.7
baz=164,SNR=38
PQI Presque Isle 40.11 4 P P 09 49 09.4 +1.9
I42A Draeger Farm, 40.16 341 IAmb IAmb 09 49 09.6
comp=Z,108nm,0.6s
MNTX Cornudas Mount 40.19 313 P P 09 49 08.9 +0.5
baz=122,SNR=479
D60A Saint Jean D'O 40.23 1 P P 09 49 10.2 +1.7
baz=181,SNR=13
G45A Suttons Bay 40.24 345 IAmb IAmb 09 49 10.7
comp=Z,105nm,0.8s
G45A Suttons Bay 40.24 345 P P 09 49 09.7 +1.1
baz=158,SNR=23
F48A Evansville 40.27 348 P P 09 49 09.7 +0.9
baz=163,SNR=50
G46A Petoskey 40.29 346 P P 09 49 10.2 +1.1
baz=160,SNR=20
H43A Windswept, Lux 40.31 342 IAmb IAmb 09 49 10.9
comp=Z,121nm,0.9s
D59A Saint-Raymond 40.32 360 P P 09 49 11.4 +2.1
baz=180
D57A Chemin Vers le 40.38 358 P P 09 49 11.2 +1.4
baz=177,SNR=12
E51A G1948 Merrick 40.41 352 P P 09 49 11.4 +1.3
baz=168,SNR=55
D58A Chemin du LacG 40.42 359 P P 09 49 11.5 +1.4
baz=178,SNR=7.2
D56A ZEC Mazanza, M 40.45 357 P P 09 49 11.6 +1.2
baz=175,SNR=18
D62A Allapoint, All 40.46 3 P P 09 49 12.3 +1.8
D62A Allapoint, All 40.46 3 P P 09 49 12.2 +1.8
baz=184,SNR=8.3
D55A Sainte-Anne-du 40.47 356 P P 09 49 11.5 +1.0
baz=174,SNR=17
D63A Stockholm 40.47 4 P P 09 49 12.4 +1.8
baz=186,SNR=6.5
D61A St Aubert, Com 40.54 2 P P 09 49 13.0 +2.0
baz=182,SNR=18
D54A Lac Fusel, La 40.69 355 P P 09 49 13.2 +0.8
baz=172,SNR=39
LATQ La Tuque 40.71 359 P P 09 49 13.9 +1.5
baz=178,SNR=13
D53A Lac Vacive, Po 40.72 354 IAmb IAmb 09 49 15.0
comp=Z,102nm,0.8s
D53A Lac Vacive, Po 40.72 354 P P 09 49 13.8 +1.2
baz=171,SNR=32
I40A Norwalk 40.74 339 IAmb IAmb 09 49 14.2
comp=Z,101nm,0.8s
F45A CMU Biological 40.80 345 P P 09 49 14.1 +0.9
baz=159,SNR=24
E48A Lockeyer 40.81 349 P P 09 49 14.6 +1.3
baz=164
BATG Bathurst New B 40.88 6 P P 09 49 15.2 +1.3
CBKS Cedar Bluff 40.91 326 P P 09 49 14.7 +0.3
baz=135,SNR=34
D51A Lot 18 Range I 40.94 352 P P 09 49 15.6 +1.2
baz=168,SNR=25
E47A Iron Bridge 41.01 348 P P 09 49 16.1 +1.2

baz=162,SNR=38
D50A G1974 Best Tow 41.08 352 P P 09 49 16.6 +1.1
baz=168,SNR=23
TER01 Tubaro-SC 41.10 149 eP P 09 49 15.3 -0.6
TER01 epP pP 09 49 25.6 -2.0
GO05 Huala 41.32 180 P P 09 49 16.6 -1.1
D48A Paudash Townsh 41.41 350 P P 09 49 19.4 +1.1
baz=165,SNR=62
D47A Chapleau 41.54 348 P P 09 49 20.1 +0.7
baz=163,SNR=41
D46A Sault St. Mari 41.58 347 P P 09 49 20.4 +0.7
baz=161,SNR=38
VLDQ Val d'Or 41.72 354 IAmb IAmb 09 49 23.6
comp=Z,128nm,1.1s
E44A Grand Marais A 41.77 345 P P 09 49 22.5 +1.3
baz=159,SNR=20
G40A Rib Lake 41.80 340 IAmb IAmb 09 49 23.5
comp=Z,389nm,1.9s
PLTB Pedras Altas 41.82 157 eP P 09 49 19.7 -2.1
PLTB epP pP 09 49 32.0 -1.4
E43A Lone Tree Farm 41.83 344 IAmb IAmb 09 49 23.3
comp=Z,222nm,1.6s
BGNE Belgrade 41.95 330 P P 09 49 22.5 -0.4
baz=139,SNR=12
COWI Conover 42.20 342 P P 09 49 25.0 +0.2
COWI IAmb IAmb 09 49 26.6
comp=Z,208nm,1.4s
121A Cookes Peak, D 42.37 312 IAmb IAmb 09 49 29.4
comp=Z,118nm,0.8s
121A Cookes Peak, D 42.37 312 P P 09 49 28.1 +1.6
baz=120,SNR=99
Y22D IRIS PASSCAL I 42.54 315 IAmb IAmb 09 49 33.7
comp=Z,140nm,1.0s
Y22D IRIS PASSCAL I 42.54 315 P P 09 49 29.6 +1.7
baz=122
T25A Trinidad 42.60 320 IAmb IAmb 09 49 31.4
comp=Z,117nm,0.9s
T25A Trinidad 42.60 320 P P 09 49 30.0 +1.6
baz=128,SNR=58
LSQQ Lebel-sur-Quev 42.61 355 P P 09 49 29.0 +1.0
baz=172
ANMO Albuquerque 42.68 316 P P 09 49 29.9 +0.8
ANMO Albuquerque 42.68 316 P P 09 49 29.9 +0.8
ANMO pmax pmax
comp=Z,118nm,1.3s
ANMO Albuquerque 42.68 316 P P 09 49 30.0 +0.8
baz=123
SPMN Marine on St. 42.68 338 IAmb IAmb 09 49 29.7
comp=Z,172nm,1.5s
SPMN Marine on St. 42.68 338 P P 09 49 28.8 +0.1
baz=148,SNR=14
KSCO Kaye Shedlock' 42.70 324 IAmb IAmb 09 49 30.9
comp=Z,250nm,1.1s
KSCO Kaye Shedlock' 42.70 324 P P 09 49 29.8 +0.7
baz=131,SNR=24
D41A Chassel 42.90 343 IAmb IAmb 09 49 32.0
comp=Z,124nm,1.1s
319A Douglas 42.94 310 IAmb IAmb 09 49 33.8
comp=Z,196nm,0.8s
ECSD EROS Data Cent 43.02 333 IAmb IAmb 09 49 32.0
comp=Z,188nm,1.8s
ECSD EROS Data Cent 43.02 333 P P 09 49 30.9 -0.6
baz=142,SNR=36
MATQ Matagami 43.37 354 P P 09 49 35.0 +0.9
baz=171,SNR=45
E38A The Farm, Brul 43.43 340 IAmb IAmb 09 49 36.4
comp=Z,172nm,1.4s
SDCO Great Sand Dun 43.66 320 IAmb IAmb 09 49 39.7
comp=Z,92nm,0.8s
SDCO Great Sand Dun 43.66 320 P P 09 49 38.3 +1.3
baz=127,SNR=229
Q24A Divide 44.18 322 P P 09 49 42.4 +1.2
Q24A IAmb IAmb 09 49 43.4
comp=Z,152nm,1.4s
Q24A Divide 44.18 322 P P 09 49 42.2 +0.9
baz=128,SNR=15
DRLN Deer Lake 44.23 13 P P 09 49 42.3 +1.2
DRLN IAmb IAmb 09 49 58.2
comp=Z,174nm,1.7s
TUC Tucson 44.50 310 P P 09 49 43.9 +0.3
TUC IAmb IAmb 09 49 45.7
comp=Z,120nm,1.0s
TUC Tucson 44.50 310 P P 09 49 43.9 +0.3
TUC pmax pmax
comp=Z,120nm,1.0s
TUC Tucson 44.50 310 P P 09 49 44.4 +0.8
baz=117
S22A 4UR Ranch, Cre 44.51 319 IAmb IAmb 09 49 47.2
comp=Z,256nm,1.3s
S22A 4UR Ranch, Cre 44.51 319 P P 09 49 45.3 +1.4
baz=126,SNR=188
EYMN Ely 44.58 341 P P 09 49 43.7 -0.2
EYMN IAmb IAmb 09 49 45.2
comp=Z,88nm,0.8s
EYMN Ely 44.58 341 P P 09 49 44.0 0.0
baz=151,SNR=71
SUSD Miller 44.63 332 P P 09 49 44.4 -0.1
baz=140,SNR=10
X18A Snowflake 44.92 314 IAmb IAmb 09 49 49.8
comp=Z,218nm,1.4s
ISCO Idaho Springs 44.98 323 P P 09 49 48.9 +1.3
baz=128,SNR=197
W18A Petrified Fore 45.06 314 P P 09 49 49.6 +1.4
baz=120,SNR=22
MVCO Mesa Verde 45.31 318 IAmb IAmb 09 49 52.4
comp=Z,141nm,0.9s
MVCO Mesa Verde 45.31 318 P P 09 49 51.0 +0.9
baz=123,SNR=111
SMCO Snowmass 45.44 321 IAmb IAmb 09 49 53.9
comp=Z,69nm,0.9s
PHWY Pilot Hill 45.83 324 IAmb IAmb 09 49 56.3
comp=Z,74nm,0.8s
N23A Red Feather La 45.86 324 P P 09 49 55.8 +1.2
baz=129,SNR=139
214A Organ Pipe Nat 45.90 309 P P 09 49 55.6 +1.0
baz=115,SNR=169
X16A Lo Mia Camp, P 45.95 313 IAmb IAmb 09 49 57.6
comp=Z,55nm,0.8s
AGMN Agassiz Nation 46.41 338 P P 09 49 58.3 0.0
baz=146,SNR=38
WUAZ Wupatki 46.42 314 P P 09 50 00.1 +1.2
baz=119,SNR=211
O20A White River Ci 46.79 321 IAmb IAmb 09 50 04.2
comp=Z,70nm,0.8s
O20A White River Ci 46.79 321 P P 09 50 03.0 +1.2
baz=126,SNR=47
RSSD Black Hills 46.91 328 P P 09 50 03.0 +0.3
RSSD IAmb IAmb 09 50 05.0
comp=Z,68nm,0.6s
RSSD Black Hills 46.91 328 P P 09 50 03.0 +0.3
RSSD pmax pmax
comp=Z,68nm,0.6s
RSSD Black Hills 46.91 328 P P 09 50 03.5 +0.9
baz=133
113A Mohawk Valley, 46.97 309 IAmb IAmb 09 50 04.9
comp=Z,89nm,0.9s
PLCA Paso Flores 47.05 179 P P 09 50 02.2 -1.3
comp=Z,32nm,1.1s,baz=26,slow=8.9,SNR=30
PLCA PcP PcP 09 51 34.5 -0.7
comp=Z,14nm,0.8s,baz=24,slow=7.0,SNR=5.7
PLCA Paso Flores 47.05 179 eP P 09 50 02.4 -1.1
K22A Casper 47.30 325 P P 09 50 06.4 +0.7
baz=130,SNR=67
MDND Maddock 47.54 335 P P 09 50 07.6 +0.4
baz=141,SNR=47
PDMCI Parker Dam,Lak 47.90 311 P P 09 50 10.9 +0.7
baz=115,SNR=29
GLA Glamis 47.90 309 P P 09 50 11.2 +0.9
baz=114,SNR=55
Y12C Blythe 47.95 310 IAmb IAmb 09 50 12.6
comp=Z,69nm,1.0s
Y12C Blythe 47.95 310 P P 09 50 11.3 +0.6
baz=115,SNR=30
ULM Lac du Bonnet 48.04 339 P P 09 50 10.4 -0.6
comp=Z,84nm,0.9s,baz=144,slow=8.0,SNR=143
ULM LR LR 10 11 07.3
comp=Z,678nm,21.9s,baz=148,slow=37
ULM Lac du Bonnet 48.04 339 IAmb IAmb 09 50 11.9
comp=Z,118nm,0.9s
W13A Hualapai Mount 48.05 312 IAmb IAmb 09 50 14.1
comp=Z,83nm,1.1s
SCHQ Schefferville 48.32 4 P P 09 50 14.4 +1.3
comp=Z,41nm,0.7s,baz=189,slow=6.1,SNR=70
SCHQ PcP PcP 09 51 39.4 0.0
comp=Z,8.8nm,0.6s,baz=167,slow=4.8,SNR=2.4
SCHQ LR LR 10 09 44.7
comp=Z,350nm,21.3s,baz=207,slow=35
SCHQ Schefferville 48.32 4 IAmb IAmb 09 50 15.1

comp=Z,53nm,0.8s
NEE2 Needles Airpor 48.45 311 P P 09 50 15.7 +1.2
baz=115,SNR=7.6
IRM Iron Mountain 48.59 311 P P 09 50 16.3 +0.7
baz=114,SNR=150
SWSC Sam W. Stewart 48.61 309 P P 09 50 16.6 +0.9
baz=113,SNR=42
BC3 Big Chuckawall 48.62 310 P P 09 50 16.4 +0.5
baz=114,SNR=52
TCRU Three Creeks R 48.70 317 P P 09 50 17.9 +1.2
IKP In-Ko-Pah, Jac 48.73 308 P P 09 50 17.7 +0.9
baz=112,SNR=18
MONP2 Monument Peak 49.07 308 P P 09 50 20.3 +0.8
baz=112,SNR=18
PD31 Pinedale Array 49.14 323 IAmb IAmb 09 50 21.5
comp=Z,121nm,1.1s
PDAR Pinedale Array 49.14 323 P P 09 50 20.1 +0.2
comp=Z,76nm,0.8s,baz=128,slow=8.5,SNR=281
PDAR PcP PcP 09 51 42.4 -0.5
comp=Z,15nm,0.9s,baz=115,slow=7.8,SNR=3.4
PDAR LR LR 10 15 17.9
comp=Z,250nm,19.0s,baz=136,slow=41
BELC Belle Mtn. Jos 49.17 310 P P 09 50 20.9 +0.6
baz=114,SNR=59
GMRC Granite Mounta 49.24 311 P P 09 50 21.4 +0.7
baz=114,SNR=47
TPFO Pinon Flats 49.37 309 P P 09 50 22.2 +0.5
baz=113,SNR=27
XPFO Pion Flat 49.37 309 P P 09 50 21.6 -0.1
PFO Pinyon Flats O 49.37 309 P P 09 50 21.8 0.0
PFO Pinyon Flats O 49.37 309c iP P 09 50 22.0 +0.3
PFO pmax pmax
comp=Z,81nm,1.4s
PFO Pinyon Flats O 49.37 309 P P 09 50 22.4 +0.6
baz=113,SNR=24
109C Camp Elliot, M 49.60 308 P P 09 50 24.3 +0.9
baz=112,SNR=12
SHPR Sheep Range 49.60 313 IAmb IAmb 09 50 25.9
comp=Z,127nm,1.3s
HWUT Hardware Ranch 49.70 321 IAmb IAmb 09 50 25.7
comp=Z,94nm,1.1s
TUQ Turquoise Moun 49.70 312 P P 09 50 24.9 +0.6
baz=115,SNR=157
DUG Dugway, Tooele 49.75 319 IAmb IAmb 09 50 26.8
comp=Z,88nm,1.1s
DUG Dugway, Tooele 49.75 319 P P 09 50 25.4 +0.9
baz=121,SNR=68
HEC Hector,Ludlow 49.76 311 P P 09 50 25.5 +0.8
baz=114,SNR=108
LAO LASA Array 49.79 329 P P 09 50 25.0 +0.4
baz=133,SNR=21
MURC Murrieta 49.94 309 P P 09 50 26.7 +0.8
baz=112,SNR=21
BBRC Big Bear Solar 49.98 310 P P 09 50 27.6 +1.2
baz=113,SNR=37
DGMT Dagmar 50.05 332 P P 09 50 27.5 +1.0
baz=136,SNR=54
AHID Auburn Hatcher 50.06 322 IAmb IAmb 09 50 28.5
comp=Z,102nm,0.9s
SHOC Shoshone, Teco 50.16 312 P P 09 50 28.3 +0.8
baz=115,SNR=61
SNOW Snow King Moun 50.26 323 IAmb IAmb 09 50 31.2
comp=Z,96nm,0.8s
RRX Edison Barstow 50.28 311 P P 09 50 29.7 +1.2
baz=113,SNR=6.3
GSC Goldstone, Bar 50.30 311 IAmb IAmb 09 50 30.8
comp=Z,84nm,0.8s
GSC Goldstone, Bar 50.30 311 P P 09 50 29.6 +0.8
baz=114,SNR=69
RLMT Red Lodge 50.40 326 IAmb IAmb 09 50 32.4
comp=Z,141nm,1.2s
RLMT Red Lodge 50.40 326 P P 09 50 30.2 +0.7
baz=128,SNR=10
MOOW Moose Ponds 50.42 324 P P 09 50 30.0 +0.4
MOOW IAmb IAmb 09 50 31.4
comp=Z,63nm,0.9s
FXWY Fox Creek 50.52 323 IAmb IAmb 09 50 32.2
comp=Z,50nm,0.8s
BFSC Mount Baldy Ra 50.53 310 P P 09 50 30.7 +0.2
baz=112,SNR=8.9
TPNV Topopah Spring 50.58 313 IAmb IAmb 09 50 33.4
comp=Z,93nm,1.0s
TPNV Topopah Spring 50.58 313 P P 09 50 32.1 +1.2
baz=116,SNR=89
H17A Grant Village 50.70 324 P P 09 50 33.0 +1.2
baz=126,SNR=22
R11A Troy Canyon, C 50.73 315 IAmb IAmb 09 50 34.2
comp=Z,49nm,0.9s
R11A Troy Canyon, C 50.73 315 P P 09 50 32.9 +0.9
baz=117,SNR=86
SCI2 San Clemente I 50.77 308 P P 09 50 33.5 +1.3
baz=111
CIS Catalina Islan 50.81 308 P P 09 50 33.3 +0.8
baz=111,SNR=18
FURC Furnace Creek, 50.83 312 P P 09 50 33.6 +1.2
baz=115,SNR=69
FMP Fort Macarthur 50.83 309 P P 09 50 33.8 +1.2
baz=112
PASC Pasadena Art C 50.91 309 IAmb IAmb 09 50 36.1
comp=Z,154nm,1.6s
LRMC Laurel Mtn Rad 51.03 311 P P 09 50 34.9 +0.6
baz=113,SNR=43
EDW2 Edwards Air Fo 51.03 310 P P 09 50 34.6 +0.4
baz=113,SNR=56
DECC Green Verdugo 51.06 309 P P 09 50 35.5 +1.1
baz=112,SNR=6.2
MPMC Manual Prospec 51.12 312 P P 09 50 35.4 +0.4
baz=114,SNR=31
GRAC Grapevine Rang 51.41 313 P P 09 50 38.0 +0.9
baz=115,SNR=20
OSI Osito Audit: C 51.49 310 P P 09 50 38.0 +0.4
baz=112,SNR=8.0
BLG Laguna Peak, P 51.57 309 P P 09 50 39.1 +0.9
baz=111,SNR=9.4
ISA Isabella, Lake 51.70 311 IAmb IAmb 09 50 41.3
comp=Z,65nm,1.2s
ISA Isabella, Lake 51.70 311 P P 09 50 39.9 +0.7
baz=113,SNR=36
CWC Cottonwood Cre 51.71 312 P P 09 50 40.2 +0.8
baz=114
ARVC Arvin 51.76 310 P P 09 50 40.6 +1.0
baz=112,SNR=35
SCZ2 Santa Cruz Isl 51.97 308 P P 09 50 42.5 +1.3
baz=111,SNR=15
TIN Tinemaha, Big 52.07 313 P P 09 50 43.8 +1.8
baz=114,SNR=13
VES Vestal, Richgr 52.23 311 P P 09 50 44.3 +1.3
baz=112,SNR=74
PKM Mcpherson Peak 52.43 309 P P 09 50 45.9 +1.1
baz=111,SNR=17
DLMT Dillon 52.43 324 IAmb IAmb 09 50 46.9
comp=Z,135nm,1.2s
EGMT Eagleton 52.48 329 P P 09 50 45.5 +0.7
baz=130,SNR=41
NVAR Mina Array Bea 52.69 314 P P 09 50 47.2 +0.6
comp=Z,26nm,0.6s,baz=119,slow=6.9,SNR=174
NVAR PcP PcP 09 51 54.6 -1.6
comp=Z,5.1nm,0.6s,baz=140,slow=4.5,SNR=4.1
NVAR LR LR 10 16 43.6
comp=Z,401nm,19.8s,baz=147,slow=40
SMMC Simmler 52.72 310 P P 09 50 47.8 +1.1
baz=111,SNR=23
MLAC Mammoth, Mammo 52.74 313 P P 09 50 48.8 +1.7
baz=114
KVN Kaiserville 52.80 315 IAmb IAmb 09 50 49.2
comp=Z,58nm,0.9s
OMMB Old Mammoth Mi 52.85 313 IAmb IAmb 09 50 50.2
comp=Z,116nm,1.3s
MDPB Devils Postpil 52.92 313 IAmb IAmb 09 50 50.6
comp=Z,111nm,1.1s
RYN Ryan 52.93 314 IAmb IAmb 09 50 50.2
comp=Z,51nm,0.9s
PAGB Antelope Grade 53.06 310 IAmb IAmb 09 50 51.1
comp=Z,107nm,0.9s
MFID Camas Ranch 53.33 321 IAmb IAmb 09 50 53.0
comp=Z,88nm,0.9s
WAKR Walker 53.53 314 IAmb IAmb 09 50 55.1
comp=Z,55nm,1.0s
PMPB Monarch Peak 53.66 311 IAmb IAmb 09 50 55.1
comp=Z,113nm,1.1s
FFC Flin Flon 53.85 339 P P 09 50 54.2 -0.4
FFC IAmb IAmb 09 50 55.7
comp=Z,53nm,1.1s
FFC Flin Flon 53.85 339 P P 09 50 54.2 -0.4
FFC pmax pmax
comp=Z,53nm,1.1s
PNTR Pine Nut 53.88 314 IAmb IAmb 09 50 57.6
comp=Z,66nm,0.9s

VCNR Virginia City 54.00 315 IAmb IAmb 09 50 58.6
comp=Z,122nm,1.1s
MSO Missoula 54.03 325 IAmb IAmb 09 50 58.1
comp=Z,49nm,0.9s
MSO Missoula 54.03 325 P P 09 50 56.9 +0.6
baz=124,SNR=22
RUBR Rubicon Trail 54.26 314 IAmb IAmb 09 51 03.5
comp=Z,111nm,1.0s
SAO San Andreas Ge 54.34 311 IAmb IAmb 09 51 00.3
comp=Z,119nm,1.4s
WVOR Wild Horse Val 54.67 318 IAmb IAmb 09 51 04.3
comp=Z,127nm,1.1s
BEKR Beckworth 54.73 315 IAmb IAmb 09 51 03.2
comp=Z,54nm,0.9s
FCC Fort Churchill 54.88 346 IAmb IAmb 09 51 02.8
comp=Z,83nm,1.2s
J08A Circle Bar Ran 54.99 320 IAmb IAmb 09 51 04.7
comp=Z,80nm,1.2s
WALA Waterton Lakes 55.30 327 IAmb IAmb 09 51 06.8
comp=Z,70nm,1.1s
ORV Oroville 55.42 314 IAmb IAmb 09 51 08.3
comp=Z,58nm,1.1s
F10A Beach Ranch, E 55.49 323 IAmb IAmb 09 51 08.1
comp=Z,65nm,0.9s
O03E Paynes Creek 55.92 315 P P 09 51 09.8 -0.2
baz=113,SNR=17
I07A Izee 55.99 320 IAmb IAmb 09 51 12.8
comp=Z,77nm,1.0s
HOPS Hopland Field 56.34 313 IAmb IAmb 09 51 15.1
comp=Z,78nm,1.2s
M04C Macdoel 56.54 317 P P 09 51 14.8 +0.3
baz=114,SNR=30
O02D Mt. Diablo Mer 56.57 314 P P 09 51 13.6 -1.1
baz=112,SNR=14
NEW Newport 56.62 325 P P 09 51 14.8 0.0
baz=122
J05D Fort Rock, OR 56.76 318 P P 09 51 16.8 +0.8
baz=115,SNR=22
N02D Trinity Center 56.82 315 P P 09 51 15.3 -1.1
baz=113,SNR=5.5
K04D Chiloquin, OR 56.83 317 P P 09 51 17.4 +1.0
baz=115,SNR=7.2
KCPM Cahto Peak 56.96 314 IAmb IAmb 09 51 19.8
comp=Z,127nm,1.1s
L04D Klamath Falls 57.03 317 P P 09 51 18.2 +0.2
baz=114,SNR=19
D08A Wollman Farm, 57.05 323 IAmb IAmb 09 51 19.6
comp=Z,180nm,1.6s
M02C Callahan 57.08 316 P P 09 51 17.7 -0.6
baz=113
I05D Terrebonne, OR 57.28 319 P P 09 51 21.2 +1.6
baz=116,SNR=5.9
J04D Umpqua Nationa 57.32 318 P P 09 51 21.1 +1.1
baz=115,SNR=17
KHMM Horse Mountain 57.50 315 IAmb IAmb 09 51 23.1
comp=Z,106nm,1.1s
GO09 Cerro Castillo 57.58 180 P P 09 51 20.5 -0.8
G05D Wamic, OR 57.66 320 P P 09 51 24.1 +1.9
baz=116
I04A Tendick Farm, 57.75 318 P P 09 51 23.4 +0.5
baz=115,SNR=8.4
L02E Cave Junction 57.90 316 P P 09 51 24.4 +0.5
baz=113
F05D White Salmon 58.04 321 P P 09 51 26.2 +1.3
baz=117
K02D Willamette Mer 58.15 317 P P 09 51 26.4 +0.7
baz=113
H04D Lebanon 58.27 319 P P 09 51 26.7 +0.3
baz=115
I03D Drain, OR 58.33 318 P P 09 51 27.4 +0.6
baz=114
J01E Myrtle Point 58.51 317 P P 09 51 29.1 +1.0
baz=113
C06D Leavenworth 58.64 323 P P 09 51 29.6 +0.7
baz=118
COR Corvallis 58.66 319 P P 09 51 30.2 +1.1
COR Corvallis 58.66 319 P P 09 51 30.2 +1.1
COR pmax pmax
comp=Z,742nm,1.9s
I02D Swisshome 58.82 318 P P 09 51 32.1 +1.9
baz=114
E04D Cinebar 59.03 321 P P 09 51 31.8 +0.1
baz=116
EFI East Falkland 59.15 170 P P 09 51 31.2 -1.0
EFI IAmb IAmb 09 51 45.2
comp=Z,32nm,0.6s
EFI East Falkland 59.15 170⇓iP P 09 51 31.4 -0.9
EFI pmax pmax
comp=Z,27nm,1.1s
B06A Marblemount 59.27 324 P P 09 51 33.2 0.0
D04E Lakebay 59.43 322 P P 09 51 34.7 +0.3
baz=116
B05A Bryant 59.51 323 P P 09 51 34.7 -0.3
baz=117,SNR=7.2
D03D Eldon 59.78 322 P P 09 51 37.3 +0.4
baz=116,SNR=7.2
A04D Lummi Island 60.08 324 P P 09 51 39.7 +0.9
baz=117
NLWA Neilton Lookou 60.19 322 P P 09 51 41.3 +1.6
ANGG Ammassalik, Gr 63.60 15 P P 09 52 02.5 +0.3
YKA Yellowknife Ar 64.02 339 P P 09 52 04.7 -0.3
comp=Z,45nm,0.6s,baz=127,slow=6.8,SNR=820
YKA PKPKPKP P'P'df 10 21 04.6 +6.6
comp=Z,0.4nm,1.0s,baz=272,slow=3.0,SNR=3.7
YKA LR LR 10 22 11.6
comp=Z,234nm,18.3s,baz=0.0,slow=38
ILULI Ilulissat 64.05 8 iP P 09 52 05.4 +0.3
comp=Z,108nm,1.1s
ILULI Ilulissat 64.05 8 iP P 09 52 05.4 +0.3
ILULI pmax pmax
comp=Z,110nm,1.1s
MORF Marmelete 64.71 52 eP P 09 52 10.8 +0.7
MORF AMb AMB 09 52 28.1
comp=Z,129nm,1.8s
MORF Marmelete 64.71 52 eP P 09 52 12.8 +2.7
comp=Z,131nm,1.5s
MORF Marmelete 64.71 52 eP P 09 52 10.8 +0.7
PNCL Nicolau / Gran 64.97 51 eP P 09 52 14.1 +2.4
comp=Z,74nm,1.4s
PCVE Castro Verde 65.25 52 eP P 09 52 16.2 +2.6
PBDV Barranco-do-Ve 65.26 52 eP P 09 52 16.0 +2.3
PTOM Tomar 65.37 49 eP P 09 52 16.3 +2.0
PMTG Montargil 65.40 50 eP P 09 52 16.0 +1.5
PCAS Casmilo, Conde 65.40 49 eP P 09 52 16.4 +1.9
PBEJ Beja 65.46 51 eP P 09 52 17.5 +2.6
TIC Toumodi 66.19 86 eP P 09 52 20.4 +0.3
comp=Z,26nm,0.7s
LIC Lamto 66.22 86 eP P 09 52 21.5 +1.3
comp=Z,107nm,0.9s
DBIC Dimbokro 66.36 86 P P 09 52 22.4 +1.3
comp=Z,44nm,0.8s,baz=257,slow=5.9,SNR=40
DBIC LR LR 10 18 30.7
comp=Z,538nm,20.9s,baz=233,slow=33
KIC Kosan Boka 66.49 86 eP P 09 52 22.7 +0.7
comp=Z,75nm,0.7s
DLBC Dease Lake 68.25 331 IAmb IAmb 09 52 34.6
comp=Z,80nm,1.1s
PAB San Pablo 68.44 50 P P 09 52 35.3 +1.3
PAB San Pablo 68.44 50 P P 09 52 35.3 +1.3
PAB pmax pmax
comp=Z,22nm,1.1s
KULLO Kullorsuaq 68.51 4⇑iP P 09 52 33.5 -0.1
comp=Z,58nm,1.2s
KULLO Kullorsuaq 68.51 4⇑iP P 09 52 33.5 -0.1
KULLO pmax pmax
comp=Z,58nm,1.2s
ESDC Sonseca Array 68.75 50 P P 09 52 36.6 +0.7
comp=Z,2.8nm,0.6s,baz=262,slow=6.3,SNR=18
SUMG Summit 69.01 10⇑iP P 09 52 37.9 +0.6
comp=Z,422nm,0.8s
SUMG Summit 69.01 10⇑iP P 09 52 37.9 +0.6
SUMG pmax pmax
comp=Z,420nm,0.8s
SCO Scoresbysund 71.20 16 iP P 09 52 50.8 +0.6
SCO Scoresbysund 71.20 16 iP P 09 52 50.8 +0.6
C36M Paulatuk 71.28 343 P P 09 52 49.5 -1.1
baz=124,SNR=6.0
TORD Torodi Ar. Bea 72.42 78 P P 09 52 59.2 +0.6
comp=Z,2.1nm,0.3s,baz=284,slow=6.6,SNR=49
TORD PKPKPKP P'P'df 10 20 42.0 -3.9
comp=Z,1.4nm,1.1s,baz=92,slow=3.6,SNR=4.4
TORD LR LR 10 23 12.5
comp=Z,745nm,20.2s,baz=285,slow=34
GRR Gorron 72.45 41 eP P 09 52 58.5 +0.4
GRR pmax pmax
comp=Z,73nm,1.4s
EPF Esparros 72.45 47 eP P 09 52 59.3 +0.9

EPF pmax pmax
comp=Z,62nm,1.6s
MFF Saint Martin d 72.63 43 eP **P** **09 52 59.9 +0.7**
MFF pmax pmax
comp=Z,88nm,1.5s
FLN La Foliniere 72.76 41 eP **P** **09 53 00.5 +0.5**
FLN pmax pmax
comp=Z,154nm,1.8s
LDF La Druitiere 72.97 41 eP **P** **09 53 01.6 +0.4**
LDF pmax pmax
comp=Z,203nm,2.2s
PCA Pinnacle 73.75 331 IAmb IAmb 09 53 07.5
comp=Z,88nm,1.2s
INK Inuvik 73.78 340 IAmb IAmb 09 53 06.9
comp=Z,211nm,1.8s
CAF Calviac 73.93 45 eP **P** **09 53 07.4 +0.4**
CAF pmax pmax
comp=Z,40nm,1.3s
EPYK Eagle Plains 74.18 338 IAmb IAmb 09 53 09.7
comp=Z,76nm,1.2s
EPYK Eagle Plains 74.18 338 P **P** **09 53 08.4 +0.4**
baz=111,SNR=21
TCF Toulx Ste Croi 74.19 44 eP **P** **09 53 08.7 +0.2**
TCF pmax pmax
comp=Z,41nm,1.7s
BGF Bois d'Agland 74.67 44 eP **P** **09 53 11.4 +0.2**
BGF pmax pmax
comp=Z,9.0nm,0.6s
EGAK Eagle 75.43 336 IAmb IAmb 09 53 17.0
comp=Z,98nm,1.2s
LOR Lormes 75.44 43 eP **P** **09 53 15.6 -0.1**
LOR pmax pmax
comp=Z,20nm,1.1s
VRDI Verde Repeater 75.55 332 IAmb IAmb 09 53 18.6
comp=Z,64nm,1.1s
DAG Danmarks Havn 75.67 11⇑iP **P** **09 53 16.1 -0.3**
comp=Z,42nm,0.8s
DAG Danmarks Havn 75.67 11⇑iP **P** **09 53 16.1 -0.3**
DAG pmax pmax
comp=Z,42nm,0.8s
VIVF Saint-Julien-l 75.76 45 eP **P** **09 53 19.1 +1.5**
VIVF pmax pmax
comp=Z,16nm,1.1s
GLB Gilahina Butte 75.77 332 IAmb IAmb 09 53 19.8
comp=Z,95nm,1.3s
RAGM Ragged Mountai 75.96 331 IAmb IAmb 09 53 20.8
comp=Z,146nm,1.2s
BAIF Baives 75.98 40 eP **P** **09 53 18.6 -0.1**
BAIF pmax pmax
comp=Z,11nm,1.0s
MENT Mentasta 76.06 333 IAmb IAmb 09 53 21.2
comp=Z,141nm,1.6s
DOU Dourbes 76.23 40 P **P** **09 53 20.2 +0.1**
DOU pP **PcP** **09 53 28.1 -3.8**
DOU sP **pP** **09 53 31.1 -1.4**
DOT Dot Lake 76.37 334 P **P** **09 53 21.6 +0.9**
DOT IAmb IAmb 09 53 22.8
comp=Z,80nm,0.9s
GIVF Givet 76.38 40 eP **P** **09 53 21.2 +0.3**
GIVF pmax pmax
comp=Z,34nm,1.1s
SCRK Sand Creek 76.42 334 IAmb IAmb 09 53 23.1
comp=Z,80nm,1.1s
ORIF Oris-en-Rattie 76.62 45 eP **P** **09 53 23.9 +1.3**
ORIF pmax pmax
comp=Z,9.0nm,0.9s
RIDG Independent Ri 76.73 334 IAmb IAmb 09 53 24.8
comp=Z,101nm,1.0s
PAX Paxson 76.85 333 IAmb IAmb 09 53 25.2
comp=Z,71nm,1.1s
CABF La Chapelle 76.89 44 eP **P** **09 53 24.5 +0.4**
CABF pmax pmax
comp=Z,13nm,1.1s
LMR La Mourre 76.97 47 eP **P** **09 53 24.9 +0.4**
LMR pmax pmax
comp=Z,82nm,1.9s
HAU Haudompre 77.18 42 eP **P** **09 53 26.0 +0.4**
HAU pmax pmax
comp=Z,2.0nm,0.2s
MBDF Montbardon 77.25 46 eP **P** **09 53 28.9 +2.7**
MBDF pmax pmax
comp=Z,9.0nm,1.0s
LPL La Plagne 77.27 45 eP **P** **09 53 27.4 +1.0**
LPL pmax pmax
comp=Z,30nm,1.3s
LPG La Plagne 77.28 45 eP **P** **09 53 27.6 +1.1**
LPG pmax pmax
comp=Z,41nm,1.5s
PRP Porcupine Dome 77.40 336 IAmb IAmb 09 53 27.9
comp=Z,46nm,0.8s
SCM Sheep Creek Mo 77.49 332 IAmb IAmb 09 53 29.0
comp=Z,114nm,1.0s
HINF Hinteralfeld 77.50 43 eP **P** **09 53 27.2 -0.2**
HINF pmax pmax
comp=Z,11nm,0.9s
FYU Fort Yukon 77.51 337 IAmb IAmb 09 53 28.7
comp=Z,106nm,1.4s
SENIN Lac Senin/Sane 77.71 44 P **P** **09 53 29.6 +0.8**
HDA Harding Lake 77.77 335 IAmb IAmb 09 53 29.8
comp=Z,56nm,0.8s
HDA Harding Lake 77.77 335 P **P** **09 53 28.8 +0.3**
baz=100,SNR=35
ILAR Eielson Array 77.81 335 P **P** **09 53 28.4 -0.3**
comp=Z,15nm,0.8s,baz=109,slow=4.3,SNR=136
ILAR PP **PP** **09 56 22.0 -2.5**
comp=Z,6.5nm,0.9s,baz=97,slow=7.4,SNR=10
ILAR LR LR 10 29 56.4
comp=Z,555nm,20.1s,baz=108,slow=37
CDF Champ du Feu 77.83 42 eP **P** **09 53 29.4 +0.1**
CDF pmax pmax
comp=Z,47nm,1.7s
SML Sawmill 77.96 332 P **P** **09 53 30.1 +0.4**
SML IAmb IAmb 09 53 31.4
comp=Z,145nm,1.3s
KNK Knik Glacier 77.96 331 IAmb IAmb 09 53 31.4
comp=Z,93nm,1.2s
POKR Poker Plat Res 78.11 335 P **P** **09 53 31.2 +0.8**
baz=100,SNR=24
CCB Clear Creek Bu 78.18 335 IAmb IAmb 09 53 31.8
comp=Z,96nm,1.8s
GHO Glory Hole Cre 78.23 332 IAmb IAmb 09 53 32.8
comp=Z,84nm,1.0s
TCOL CIGO, UAF Yank 78.24 335 P **P** **09 53 31.6 +0.5**
baz=100,SNR=5.1
SEW Seward 78.26 330 IAmb IAmb 09 53 32.3
comp=Z,88nm,1.1s
WRH Wood River Hil 78.27 335 P **P** **09 53 31.4 +0.1**
MDM Murphy Dome 78.41 335 IAmb IAmb 09 53 33.6
comp=Z,77nm,1.1s
RND Reindeer 78.44 333 IAmb IAmb 09 53 34.4
comp=Z,120nm,0.9s
MCK McKinley 78.52 334 IAmb IAmb 09 53 34.5
comp=Z,119nm,1.4s
NEA Nenana 78.71 335 IAmb IAmb 09 53 35.1
comp=Z,97nm,1.0s
NOR Nord 78.72 7⇑iP **P** **09 53 33.6 +0.1**
comp=Z,32nm,1.1s
NOR Nord 78.72 7⇑iP **P** **09 53 33.6 +0.1**
NOR pmax pmax
comp=Z,32nm,1.1s
BWN Browne 78.82 334 IAmb IAmb 09 53 35.6
comp=Z,120nm,1.0s
KEST Kesra 78.96 55 P **P** **09 53 37.6 +1.8**
comp=Z,30nm,1.0s,baz=221,slow=1.6,SNR=18
KEST LR LR 10 25 45.1
comp=Z,136nm,20.8s,baz=202,slow=34
SUA Susitna One 79.05 331 IAmb IAmb 09 53 37.5
comp=Z,66nm,0.8s
CNPM China Poot 79.09 329 IAmb IAmb 09 53 37.1
comp=Z,62nm,0.9s
MEH Mehetia 79.13 250 eP **P** **09 53 37.1 +0.2**
comp=Z,57nm,1.1s
KTH Kantishna Hill 79.38 333 IAmb IAmb 09 53 38.9
comp=Z,95nm,1.2s
SKAR Skarslia 79.44 30 eP **P** **09 53 38.9 +1.1**
BPAW Bear Paw Mtn. 79.47 334 IAmb IAmb 09 53 39.3
comp=Z,88nm,1.3s
MLY Manley 79.48 335 IAmb IAmb 09 53 39.3
comp=Z,68nm,1.2s
SKT Skwentna 79.48 332 IAmb IAmb 09 53 39.5
comp=Z,92nm,1.2s
DAVA Damuels 79.53 43 eP **P** **09 53 40.0 +1.3**
comp=Z,19nm,0.8s
PPLA Purkeypile 79.88 333 IAmb IAmb 09 53 41.6
comp=Z,89nm,0.7s
OHAK Old Harbor 79.98 327 IAmb IAmb 09 53 41.5
comp=Z,66nm,1.1s

FETA Feichten 80.10 44 eP **P** **09 53 42.9 +1.1**
comp=Z,14nm,0.8s
RETA Reutte 80.13 43 eP **P** **09 53 43.1 +1.2**
comp=Z,6.5nm,0.8s
TIAR Tiarei 80.27 251 eP **P** **09 53 43.4 +0.3**
comp=Z,29nm,1.1s
MOTA Moosalm 80.36 43 eP **P** **09 53 43.3 +0.1**
comp=Z,16nm,1.0s
SQTA Sankt Quirin 80.43 43 eP **P** **09 53 44.6 +1.0**
comp=Z,21nm,1.3s
PPT Papeete 80.49 251 P **P** **09 53 44.7 +0.5**
comp=Z,81nm,1.1s,baz=70,slow=15,SNR=5.2
PPT LR LR 10 22 04.1
comp=Z,179nm,20.1s,baz=20,slow=30
PPT2 Papeete2 80.49 251 eP **P** **09 53 44.9 +0.5**
comp=Z,168nm,1.4s
PPT2 Papeete2 80.49 251 eS **S** **10 03 46.7 -1.8**
comp=Z,124nm,25.5s
PPT2 Papeete2 80.49 251 eLR LR 10 18 53.3
comp=Z,1μm,26.2s
PAE Paea 80.51 251 eP **P** **09 53 44.8 +0.5**
comp=Z,41nm,1.1s
WATA Walderalm 80.68 43 eP **P** **09 53 46.2 +1.3**
comp=Z,1.3nm,0.5s
NC204 NORSAR Array S 80.68 29 IAmb IAmb 09 53 46.2
comp=Z,101nm,1.2s
WTTA Wattenberg 80.72 43 eP **P** **09 53 46.0 +0.8**
comp=Z,2.5nm,0.5s
NB2 NORSAR Subarra 80.89 29 P **P** **09 53 46.4 +0.8**
comp=Z,33nm,1.1s,baz=268,slow=5.3
NB2 NORSAR Subarra 80.89 29 P **P** **09 53 46.4 +0.8**
baz=268,slow=5.3
NOA NORSAR Array B 80.89 29 P **P** **09 53 46.5 +0.9**
comp=Z,15nm,1.0s,baz=266,slow=5.4,SNR=22
NOA LR LR 10 28 07.6
comp=Z,115nm,19.5s,baz=270,slow=34
NC602 NORSAR Array S 81.03 30 eP **P** **09 53 47.1 +0.8**
NORES NORESS Array B 81.03 30 P **P** **09 53 49.4 +3.1**
NORES pmax pmax
comp=Z,12nm,0.7s
NC405 NORSAR Array S 81.13 29 IAmb IAmb 09 53 49.2
comp=Z,95nm,1.2s
ABTA Abfaltersbach 81.32 44 eP **P** **09 53 49.5 +1.2**
comp=Z,7.8nm,0.6s
SVW2 Sparrevohn 81.35 331 IAmb IAmb 09 53 48.6
comp=Z,54nm,0.7s
NSS Namsos 81.41 26 eP **P** **09 53 49.0 +0.8**
TBI Tubuai 81.42 245 eS **S** **10 03 56.7 -1.2**
comp=Z,70nm,27.0s
TBI Tubuai 81.42 245 eLR LR 10 19 17.4
comp=Z,473nm,29.5s
CLL Collm 81.63 39 eP **P** **09 53 51.0 +1.3**
comp=Z,15nm,1.4s
CLL e 09 56 18.0
CLL ePP **PP** **09 56 53.0 -3.5**
CLL ePPP PPP 09 58 48.0
CLL eS **S** **10 03 55.0 -4.0**
CLL ePS **PnS** **10 04 56.0 +5.0**
CLL eSS **SS** **10 09 18.0 +1.3**
CLL eSSSS 10 15 24.0
CLL Collm 81.63 39 eP **P** **09 53 51.0 +1.3**
CLL eS **S** **10 03 55.0 -4.0**
CLL pmax pmax
comp=Z,15nm,1.4s
PUH Pauahi 81.76 289 P **P** **09 53 51.7 +0.5**
KBA Koelnbreinsper 81.89 43 eP **P** **09 53 52.1 +0.7**
comp=Z,14nm,1.1s
KHC Kasperske Hory 82.02 41 eP **P** **09 53 52.6 +0.8**
KHC Kasperske Hory 82.02 41ceP **P** **09 53 52.2 +0.4**
KHC pmax pmax
comp=Z,38nm,1.3s
MYKA Terra Mystica 82.10 44 eP **P** **09 53 52.8 +0.4**
comp=Z,5.9nm,0.6s
GERES GERESS Array B 82.10 42 P **P** **09 53 52.5 +0.2**
comp=Z,2.7nm,0.7s,baz=273,slow=4.1,SNR=20
GERES LR LR 10 26 30.9
comp=Z,143nm,21.6s,baz=266,slow=33
LOF Lofoten 82.20 22 eP **P** **09 53 53.0 +0.7**
PBCC Pribram 82.28 41 eP **P** **09 53 54.7 +1.5**
KHLU Kahalu`u 82.38 289 P **P** **09 53 54.8 +0.4**
KHLU IAmb IAmb 09 53 57.0
comp=Z,84nm,0.9s
KBS Kingsbay 82.40 11 eP **P** **09 53 55.1 +1.8**
KBS Kingsbay 82.40 11 P **P** **09 53 54.7 +1.5**
KBS Kingsbay 82.40 11ceP **P** **09 53 54.7 +1.5**
KBS pmax pmax
comp=Z,575nm,1.7s
MOA Molln 82.50 43 eP **P** **09 53 54.9 +0.6**
comp=Z,8.4nm,0.9s
MOR8 Moi Rana 82.50 24 eP **P** **09 53 55.4 +1.4**
CHGN Chignik 82.78 326 IAmb IAmb 09 53 56.1
comp=Z,70nm,1.1s
STEI Steigen 82.84 22 eP **P** **09 53 57.1 +1.5**
HSPB Hornsund (broa 83.05 13 eP **P** **09 53 59.0 +2.4**
SPA0 Spitsbergen Ar 83.25 12 eP **P** **09 53 58.3 +0.7**
SPITS Spitsbergen Ar 83.25 12 P **P** **09 53 58.7 +1.0**
SPITS pmax pmax
comp=Z,3.0nm,0.3s
ARSA Arzberg 83.37 43 eP **P** **09 53 59.4 +0.6**
comp=Z,5.4nm,0.7s
CONA Conrad Observa 83.57 43 eP **P** **09 54 00.3 +0.4**
comp=Z,14nm,1.1s
KRUC Moravsky 83.87 41 eP **P** **09 54 02.5 +1.1**
VRAC Vranov 83.98 41 eP **P** **09 54 03.0 +1.0**
KRLC Kraliky 84.07 40 eP **P** **09 54 03.6 +1.2**
KRLC Kraliky 84.07 40 eP **P** **09 54 03.6 +1.2**
TRO Tromso 84.14 21 eP **P** **09 54 03.3 +1.0**
MODS Modra-Piesok 84.49 42 eP **P** **09 54 05.0 +0.4**
MODS Modra-Piesok 84.49 42 eP **P** **09 54 05.0 +0.4**
MORC Moravsky Berou 84.58 41 eP **P** **09 54 06.4 +1.4**
MORC Moravsky Berou 84.58 41 ⇑P **P** **09 54 06.5 +1.4**
MORC Moravsky Berou 84.58 41 ⇑P **P** **09 54 06.5 +1.4**
JAVC Velka Javorina 84.72 42 eP **P** **09 54 03.6 -2.2**
TIP Timpagrande 84.73 51 P **P** **09 54 05.8 -0.2**
VYHS Vyhne 85.52 42 eP **P** **09 54 10.4 +0.7**
VYHS Vyhne 85.52 42 eP **P** **09 54 10.4 +0.7**
KTK1 Kautokeino 85.72 21 eP **P** **09 54 10.9 +0.6**
KLNR Kaliningrad 85.83 36⇑eP **P** **09 54 10.7 -0.4**
ARE0 ARCESS Array S 86.45 20 eP **P** **09 54 14.7 +0.8**
ARCES ARCESS Array B 86.45 20 P **P** **09 54 14.2 +0.4**
comp=Z,19nm,0.9s,baz=281,slow=3.3,SNR=47
ARCES LR LR 10 28 14.3
comp=Z,105nm,21.7s,baz=324,slow=32
SLIT Slitere, Latvi 86.67 33 eP P 09 54 23.4 +8.3
VNA3 Neumayer Olymp 87.49 163 P **P** **09 54 19.1 +0.2**
BZS Buzias 87.70 45 ⇑P **P** **09 54 21.7 +1.3**
BZS Buzias 87.70 45 ⇑P **P** **09 54 21.7 +1.3**
MDVR Moldovita 87.87 45 ⇑P **P** **09 54 22.3 +0.9**
VNA2 Neumayer--Watz 88.00 163 P **P** **09 54 21.6 +0.4**
baz=305,slow=5.9
TRPA Tarpa 88.01 42 ⇑P **P** **09 54 22.9 +1.1**
FINES FINESS Array B 88.02 28 P **P** **09 54 21.9 +0.3**
comp=Z,6.9nm,0.6s,baz=277,slow=3.0,SNR=22
FINES LR LR 10 32 10.2
comp=Z,154nm,19.8s,baz=277,slow=34
DRGR 88.31 43 ⇑P **P** **09 54 23.9 +0.5**
DRGR 88.31 43 ⇑P **P** **09 54 23.9 +0.5**
GZR Gura Zlata 88.54 45 ⇑P **P** **09 54 25.8 +1.3**
GZR Gura Zlata 88.54 45 ⇑P **P** **09 54 25.8 +1.3**
GAMB Gambell 88.59 334 IAmb IAmb 09 54 26.5
comp=Z,59nm,0.9s
VSU Vasula 88.88 31 eP **P** **09 54 26.1 +0.4**
VSU Vasula 88.88 31c iP **P** **09 54 25.8 +0.1**
VSU pmax pmax
comp=Z,92nm,1.0s
ISAL Salakas 89.07 34 eP **P** **09 54 27.7 +1.0**
IZAR Zarasai 89.11 34 eP **P** **09 54 27.1 +0.3**
IZAR IAmb IAmb 09 54 35.4
comp=Z,17nm,0.5s
IIGN Ignalina 89.17 34 eP **P** **09 54 28.1 +0.9**
IIGN IAmb IAmb 09 54 29.9
comp=Z,21nm,1.2s
ARCR ARCALIA 89.38 43 ⇑P **P** **09 54 30.0 +1.7**
NACGM Naroch 89.56 35 e **P** **09 54 28.0 -1.0**
NACGM eLQ LQ 10 28 12.0
NACGM eLR LR 10 30 32.0
SNAA Sanae 89.65 163 P **P** **09 54 29.5 +0.4**
SNAA Sanae 89.65 163 P **P** **09 54 29.5 +0.4**
SNAA IAmb IAmb 09 54 31.3
comp=Z,51nm,1.2s
SNAA Sanae 89.65 163c iP **P** **09 54 28.9 -0.2**
APA Apatity 89.71 22⇑iP P 09 54 21.3 -8.1
APA pmax pmax
comp=Z,7.0nm,1.0s
ARR Arges 89.84 44 ⇑P **P** **09 54 31.5 +0.9**

BURAR Bucovina Array 89.87 42 ⇑P **P** **09 54 32.6 +1.9**
BURAR Bucovina Array 89.87 42 ⇑P **P** **09 54 32.6 +1.9**
LVZ Lovozero 90.07 21 P **P** **09 54 32.0 +0.8**
LVZ IAmb IAmb 09 54 33.3
comp=Z,61nm,1.4s
LVZ Lovozero 90.07 21⇓eP **P** **09 54 31.8 +0.6**
LVZ pmax pmax
comp=Z,28nm,0.9s
VOIR 90.11 44 ⇑P **P** **09 54 32.6 +0.7**
VOIR 90.11 44 ⇑P **P** **09 54 32.6 +0.7**
MLR Muntele Rosu 90.73 44 ⇑P **P** **09 54 35.8 +1.0**
MLR Muntele Rosu 90.73 44 ⇑P **P** **09 54 35.8 +1.0**
TSUM Tsumeb 91.45 109 P **P** **09 54 40.1 +1.3**
SORM Soroca 91.85 41 ⇑P **P** **09 54 40.4 +0.6**
SORM Soroca 91.85 41 ⇑P **P** **09 54 40.4 +0.6**
AKASG Malin Array Be 91.86 39 P **P** **09 54 39.5 -0.3**
comp=Z,3.3nm,1.0s,baz=276,slow=3.3,SNR=6.1
AKASG LR LR 10 35 45.1
comp=Z,167nm,18.8s,baz=285,slow=35
KIS Kishinev 92.39 42 eP **P** **09 54 43.0 +0.7**
KIS Kishinev 92.39 42 eP **P** **09 54 43.0 +0.7**
KIS e 09 54 56.0
TMCR Tamitsa 92.60 24 eP **P** **09 54 42.2 -0.7**
TMCR pmax pmax
comp=Z,41nm,1.3s
NVL N'lazarevskaya 93.99 161 eP **P** **09 54 49.3 +0.2**
NVL pmax pmax
comp=Z,11nm,0.8s
KLMR Klimovskoe 94.44 27 eP **P** **09 54 49.4 -2.0**
KLMR pmax pmax
comp=Z,37nm,1.7s
KLMR Klimovskoe 94.44 27 eP **P** **09 54 49.5 -2.0**
KLMR AMP 09 54 53.4
comp=Z,37nm,1.7s
OBN Obninsk 94.96 33 eP **P** **09 54 53.6 -0.3**
OBN e 09 58 43.4
OBN ePPP PPP 10 00 47.8
OBN pmax pmax
comp=Z,29nm,1.6s
OBN MLR MLR
comp=Z,255nm,19.0s
BILL Bilibino 95.36 341 eP **P** **09 54 54.5 -1.0**
BILL e 09 58 45.6
BILL ePPP PPP 10 00 47.4
BILL pmax pmax
comp=Z,17nm,1.2s
BILL MLR MLR
comp=Z,317nm,22.0s
QSPA South Pole Qui 96.55 180 P **P** **09 55 00.9 -0.2**
QSPA IAmb IAmb 09 55 02.2
comp=Z,43nm,1.1s
PRGR Permogore 96.81 25 eP P 09 54 58.4 -3.8
PRGR pmax pmax
comp=Z,7.0nm,0.5s
ANN Anapa 98.77 43 eP P 09 55 03.9 -7.5
ANN e*PP Pdif 09 55 15.5 +4.1
ANN eS **SKSac** **10 05 38.6 -7.9**
ANN pmax pmax
comp=Z,100nm,1.1s
BOSA Boshof 99.19 118 LR LR 10 36 05.2
comp=Z,645nm,21.4s,baz=280,slow=33
SOC Sochi 100.72 44 eP **Pdif** **09 55 08.5 -12**
SOC e 09 59 28.8
SOC ePPP PPP 10 01 41.0
SOC eSS SS 10 13 53.9 +2.0
SOC MLR MLR
comp=Z,119nm,15.0s
TIXI Tiksi 100.80 353⇓iP **Pdif** **09 55 19.6 -0.3**
TIXI pmax pmax
comp=Z,4.0nm,0.9s
SYO Syowa Base 103.62 160⇑ePdiff **Pdif** **09 55 34.0 +1.6**
GEYT Alibeck 115.72 42 PKP **PKiKP** **10 00 14.2 -0.1**
comp=Z,1.1nm,0.5s,baz=280,slow=8.9,SNR=4.2
ZALV Zalesovo Beam 116.58 15 PKP **PKPdf** **10 00 15.1 -0.4**
comp=Z,1.8nm,0.5s,baz=300,slow=2.9,SNR=10.0
KURK Kurchatov 117.48 21 **PKPdf** **10 00 17.1 -0.2**
KURK Kurchatov 117.48 21d iPKIKP **PKPdf** **10 00 17.4 +0.1**
KURK pmax pmax
comp=Z,4.0nm,1.3s
KLR Kul'dur 120.81 342d iPKIKP **PKPdf** **10 00 23.3 -0.5**
TLY Talaya 121.88 3⇓iPKIKP **PKPdf** **10 00 25.9 +0.1**
DZM Mont Dzumac 121.91 248 eLR LR 10 38 07.1
comp=Z,226nm,24.7s
MAKZ Makanchi 121.98 21 **PKPdf** **10 00 25.3 -0.8**
MAKZ Makanchi 121.98 21 PKIKP **PKPdf** **10 00 25.3 -0.8**
MK31 Makanchi Array 122.10 21 **PKPdf** **10 00 25.4 -0.9**
MK31 Makanchi Array 122.10 21 PKIKP **PKPdf** **10 00 25.5 -0.9**
MKAR Makanchi Array 122.10 21 PKP **PKPdf** **10 00 25.6 -0.8**
comp=Z,1.8nm,0.5s,baz=309,slow=2.4,SNR=27
MKAR PP **PP** **10 02 04.2 +3.8**
comp=Z,0.7nm,0.8s,baz=316,slow=5.1,SNR=3.8
MKAR PKKPbc **PKKPbc** **10 10 20.4 -4.3**
comp=Z,0.5nm,0.9s,baz=170,slow=7.4,SNR=4.5
AAK Ala-Archa 122.20 29 **PKPdf** **10 00 27.1 +0.2**
AAK Ala-Archa 122.20 29d iPKIKP **PKPdf** **10 00 27.8 +0.9**
AAK pmax pmax
comp=Z,8.0nm,1.3s
KBL Kabul 124.84 40 **PKPdf** **10 00 32.7 +0.5**
KBL Kabul 124.84 40 PKIKP **PKPdf** **10 00 32.7 +0.5**
USRK Ussuriysk Ar. 125.16 339 PKP **PKPdf** **10 00 30.8 -1.5**
comp=Z,6.9nm,0.9s,baz=326,slow=2.1,SNR=6.0
KSH Kashi 125.30 30 PKP **PKPdf** **10 00 34.1 +1.2**
KSH sPKP 10 00 50.5
KSH PP **PP** **10 02 28.4 +6.1**
KSH PKS **PKSdf** **10 04 11.3 +1.7**
KSH SKS **SKSdf** **10 07 38.3 -3.5**
KSH SKKS **SKKSac** **10 09 18.8 +0.4**
KSH AMB AMB
comp=Z,86nm,5.4s
KSH LR LR
comp=Z,130nm,5.3s
KSH LR LR
comp=Z,170nm,5.4s
KSH LR LR
comp=Z,120nm,8.0s
MDJ Mudanjiang 125.59 341 PKP **PKPdf** **10 00 33.8 +0.7**
MDJ AMB AMB
comp=Z,210nm,4.3s
SONM Songino Array 125.84 2 PKP **PKPdf** **10 00 33.2 -0.4**
comp=Z,3.5nm,0.7s,baz=283,slow=0.9,SNR=22
WMQ Urumqi 126.53 18 ePKP **PKPdf** **10 00 35.3 +0.3**
WMQ AMB AMB
comp=Z,100nm,3.9s
MJAR Matsushiro Arr 128.79 329 PKP **PKPdf** **10 00 38.7 -0.8**
comp=Z,3.1nm,1.0s,baz=331,slow=2.2,SNR=5.5
KSRS Korea Array 132.56 339 PKP **PKPdf** **10 00 45.6 -0.9**
comp=Z,3.7nm,0.8s,baz=340,slow=1.0,SNR=8.8
HHC Hu-ho-hao-te 132.75 357 ePKP **PKPdf** **10 00 48.0 +1.0**
HHC LR LR
comp=Z,280nm,25.6s
HHC LR LR
comp=Z,170nm,24.6s
BJI Beijing 133.09 352 PKP **PKPdf** **10 00 47.3 -0.1**
GTA Gaotai 133.62 9 PKP **PKPdf** **10 00 48.6 -0.1**
GTA sPKP 10 01 02.0
GTA PP **PP** **10 03 16.3 +0.3**
GTA AMB AMB
comp=Z,100nm,5.7s
GTA LR LR
comp=Z,220nm,23.8s
GTA LR LR
comp=Z,210nm,20.3s
LZH Lanzhou 137.40 5 ePKP **PKPdf** **10 00 56.4 +0.5**
LZH sPKP 10 01 10.5
LZH LR LR
comp=Z,250nm,18.0s
LZH LR LR
comp=Z,260nm,18.3s
LZH LR LR
comp=Z,270nm,20.1s
DANN Dangsing 138.01 33 eP **PKPdf** **10 00 57.9 +0.5**
comp=Z,66nm,0.9s
GKN Gorkha 138.76 33 eP **PKPdf** **10 00 58.7 +0.1**
DMN Daman 139.32 32 eP **PKPdf** **10 00 59.7 -0.1**
PKIN Phulchoki 139.50 32 eP **PKPdf** **10 01 00.5 +0.4**
PKI Pulchoki 139.51 32 eP **PKPdf** **10 00 59.7 -0.5**
XAN Xi'an 139.64 359 PKP **PKPdf** **10 00 54.4 -5.5**
XAN sPKP 10 01 08.4
XAN LR LR
comp=Z,200nm,30.4s
XAN LR LR
comp=Z,140nm,24.9s
JIRN Jiri 139.85 31 eP **PKPdf** **10 01 01.1 +0.2**
STKA Stephens Creek 139.99 227 PKhKP PKPpre 10 00 54.6

comp=Z,1.0nm,0.6s,baz=78,slow=5.1,SNR=3.4
STKA SKP 10 04 32.5
comp=Z,0.9nm,0.6s,baz=130,slow=7.7,SNR=3.3
KLRI Killari 140.29 51 ePKPdf **PKPdf 10 01 01.2 -0.2**
NJ2 Nanjing 140.33 346 ePKP **PKPdf 10 01 01.3 +0.2**
RAMN Ramite 140.63 31 eP **PKPdf 10 01 01.8 -0.3**
comp=Z,55nm,1.0s
ODAN Odare 141.11 31 eP **PKPdf 10 01 01.4 -1.6**
SRSP Sriramsagar 141.12 49 ePKPdf **PKPdf 10 01 02.4 -0.5**
HYBB Hyderabad (bro 142.18 51 ePKPdf **PKPdf 10 01 05.2 +0.3**
CD2 Chengdu 142.51 6 PKP **PKPdf 10 01 03.3 -1.8**
URV Uravakonda 142.56 55 ePKPdf **PKPdf 10 01 05.1 -0.4**
WHN Wuhan 142.68 351 PKP **PKPdf 10 01 00.1 -5.2**
GGR Gangavaram 143.19 48 ePKPdf **PKPdf 10 01 07.3 +0.7**
NJS Nagarjunasagar 143.28 51 ePKPdf PKPbc 10 01 06.4 +2.6
KAAM Kaadhehdhoo 144.09 80 PKPbc 10 01 07.9 +1.6
MYLAV Mylavaram 144.17 49 ePKPdf **PKPab 10 01 07.5 +1.5**
ADKI Addanki 144.21 51 ePKPdf **PKPab 10 01 06.5 +0.3**
PVM Polavaram 144.60 48 ePKPab **PKPab 10 01 08.3 +0.8**
COEN Coen 144.93 265 PKPab 10 01 08.9 0.0
SKHT Srikalahasti 145.20 55 ePKPdf **PKPbc 10 01 10.6 +0.8**
BWNR Bhubaneshwar 145.36 39 eP **PKiKP 10 01 18.0 +3.8**
CHLP Challavanipeta 145.49 43 ePKPbc **PKPdf 10 01 10.4 -0.2**
YOJ Yonaguni jima 146.01 336 PKPdf 10 01 11.3 0.0
YOJ Yonaguni jima 146.01 336 PKP2 **PKPdf 10 01 11.3 0.0**
GYA Guiyang 147.16 3⇓iPKPbc **PKPdf 10 01 13.8 +0.4**
GYA SKKS 10 11 26.3
GYA SS **SS 10 23 37.9 +1.3**
GYA AMB AMB
comp=Z,120nm,8.1s
GYA LR LR
comp=Z,220nm,20.8s
GYA LR LR
comp=Z,160nm,20.3s
SSLB Suanglung 147.43 338 PKPdf 10 01 14.2 +0.4
TPUB Ta-pu 147.99 338 PKPdf 10 01 17.8 +3.1
KMI Kunming 148.07 10 PKPbc **PKPdf 10 01 15.0 -0.1**
KMI AMB AMB
comp=Z,130nm,3.9s
KMI LR LR
comp=Z,190nm,7.6s
KMI LR LR
comp=Z,200nm,6.2s
KMI LR LR
comp=Z,230nm,21.1s
PALK Pallekele 149.25 64 PKPdf 10 01 18.0 +1.0
FORT Forrest 149.58 215 PKPdf 10 01 17.7 +0.7
ASAR Alice Springs 150.07 233 PKP **PKPdf 10 01 17.4 -0.6**
comp=Z,12nm,0.9s,baz=116,slow=3.5,SNR=45
ASAR PKPbc **PKPbc 10 01 21.5 -1.6**
comp=Z,13nm,0.9s,baz=122,slow=3.3,SNR=81
WR0 Warramunga Arr 151.24 240 PKPbc 10 01 24.4 -1.4
WRAB Tennant Creek 151.41 240 PKPdf 10 01 19.6 -0.6
WRAB **PKPbc 10 01 25.2 -1.1**
WRAB Tennant Creek 151.41 240 PKIKP **PKPdf 10 01 19.6 -0.6**
WRAB 10 01 25.2
WRA Warramunga Arr 151.42 240 PKP **PKPdf 10 01 19.2 -1.0**
comp=Z,7.5nm,0.9s,baz=104,slow=1.6,SNR=24
WRA PKPbc **PKPbc 10 01 24.6 -1.8**
comp=Z,17nm,0.9s,baz=102,slow=4.0,SNR=60
WB0 Warramunga Arr 151.44 240 PKPdf 10 01 19.7 -0.5
CHTO Chiang Mai 153.18 20 PKPdf 10 01 23.1 +0.3
CHTO **PKPbc 10 01 30.0 -0.3**
CHTO Chiang Mai 153.18 20 PKIKP **PKPbc 10 01 30.0 -0.3**
CMAR Chiang Mai Arr 153.51 20 PKP **PKPdf 10 01 23.2 -0.1**
comp=Z,3.3nm,0.7s,baz=309,slow=2.0,SNR=20
CMAR PKPbc **PKPbc 10 01 30.8 -0.2**
comp=Z,6.4nm,0.6s,baz=319,slow=3.3,SNR=23
CMAR PKPab **sPKPdf 10 01 42.5 +1.5**
comp=Z,16nm,0.9s,baz=322,slow=5.5,SNR=20
QIZ Qiongzhong 154.55 357 PKPbc **PKPdf 10 01 23.8 -1.0**
QIZ PP **PP 10 05 22.9 +1.7**
QIZ SS SS 10 25 02.6 +4.3
QIZ LR LR
comp=Z,160nm,21.5s
QIZ LR LR
comp=Z,200nm,16.7s
QIZ LR LR
comp=Z,200nm,18.6s

IDC 17 09:50:15.0±1.3, 12°.36N×143°.08E, h0km, mb3.8/6, mb1 4.1/7, mb1mx3.8/33, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=77.8km s-min=18.2km az=115.0
NEIC 17 09:50:16.8±0.6, 12°.3N±0°.2×143°.2E±0°.1, h10km±2km, mb4.6/7, Error ellipse: s-maj=34.3km s-min=9.1km az=318.0
ISC 17 09:50:19.3±0.9, 12°.3N±0°.2×143°.2E±0°.2, h27km, n14, σ0°.82/15, mb4.2/11, South of Mariana Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GUMO Guam 2.06 50 Pn **Pn 09 50 51.6 -0.5**
31nm,0.3s,baz=158,slow=6.9,SNR=10
GUMO Sn **Sn 09 51 15.8 -1.0**
43nm,0.3s,baz=338,slow=22,SNR=12
GUMO Guam 2.06 50 Sn 09 51 17.9 +1.1
MAJO Matsushiro 24.58 350 P **P 09 55 36.8 -0.3**
MAJO IAmb IAmb 09 55 39.1
comp=Z,19nm,0.9s
WB0 Warramunga Arr 33.01 195 P **P 09 56 52.6 +0.2**
WR0 Warramunga Arr 33.16 195 P **P 09 56 53.5 -0.2**
WR0 IAmb IAmb 09 56 58.0
comp=Z,7.8nm,1.1s
WRAB Tennant Creek 33.18 195 P **P 09 56 53.9 +0.1**
WRAB IAmb IAmb 09 56 55.9
comp=Z,12nm,1.5s
WB2 Warramunga Arr 33.19 195 P **P 09 56 54.0 +0.1**
WB2 IAmb IAmb 09 57 07.8
comp=Z,9.0nm,1.1s
WRA Warramunga Arr 33.19 195 P **P 09 56 54.0 0.0**
comp=Z,2.5nm,0.7s,baz=18,slow=9.7,SNR=18
ASAR Alice Springs 36.87 194 P **P 09 57 26.1 +0.4**
comp=Z,0.8nm,0.6s,baz=18,slow=11,SNR=23
STKA Stephens Creek 43.93 182 P **P 09 58 23.1 -0.8**
comp=Z,0.7nm,0.5s,baz=351,slow=10,SNR=2.9
BBOO Buckleboo 45.35 189 P **P 09 58 34.9 -0.4**
BBOO IAmb IAmb 09 58 35.9
comp=Z,7.1nm,0.8s
ILAR Eielson Array 70.43 25 P **P 10 01 29.9 -0.9**
comp=Z,0.3nm,0.7s,baz=266,slow=5.4,SNR=5.6
YKA Yellowknife Ar 84.75 27 P **P 10 02 51.0 +0.2**
comp=Z,0.6nm,0.5s,baz=284,slow=5.2,SNR=12
NVAR Mina Array Bea 88.98 51 P **P 10 03 14.1 +1.9**
comp=Z,0.4nm,0.5s,baz=277,slow=5.3,SNR=4.0

JMA 17 09:54:53.1±0.2, 34°.22N×140°.28E, h51km±3km, M3.0, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BSO3 Boso 3 0.61 18 P Pn 09 55 06.2 +0.7
BSO3 X 09 55 17.1
JMKN Mikurajimanish 0.66 240 P Pn 09 55 06.3 -0.1
JMKN S Sn 09 55 16.0 0.0
BSO1 Boso 1 0.72 53 P Pn 09 55 06.6 0.0
BSO4 Boso 4 0.77 4 P Pn 09 55 08.6 +0.9
JIM2 Oshima 3 0.86 306 P Pn 09 55 09.0 0.0
JIM2 eS Sn 09 55 20.4 -0.2
JTHY Toshimahigashi 0.87 291 P Pn 09 55 09.5 +0.3
JTHY S Sn 09 55 22.0 +1.1
KTJ3 Kamata3 1.23 306 P Pn 09 55 13.7 -0.2
KTJ3 S Sn 09 55 28.6 -0.6
JIZS Izushimoda 1.26 294 P Pn 09 55 14.6 +0.2
JIZS eS Sn 09 55 30.3 +0.1
JOD2 Odawara 2 1.43 317 P Pn 09 55 16.7 0.0
JOD2 S Sn 09 55 33.8 -0.6
MAT Matsushiro 2.87 324 P Pn 09 55 37.9 +1.5
MAT S Sn 09 56 11.7 +2.0

JMA 17 10:02:28.3±0.2, 23°.99N×122°.64E, h27km±3km, M3.0
TAP 17 10:02:28.0, 23°.96N×122°.72E, h33km±1km, ML3.3, D
ISC 17 10:02:27.8±1.1, 23°.94N±0°.03×122°.66E±0°.02, h22km±5km, n95, σ0°.88/176, Taiwan region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JYNG Yonagunijimaku 0.57 27 P **Pb 10 02 38.9 -0.3**
JYNG S **Sb 10 02 46.2 -0.8**
YOJ Yonaguni jima 0.61 31 P **Pb 10 02 39.7 -0.2**
baz=27
YOJ S **Sb 10 02 47.5 -0.6**
baz=27
YOJ Yonaguni jima 0.61 31 P **Pb 10 02 39.6 -0.3**
YOJ S **Sb 10 02 47.3 -0.8**
EOS1 EOS1 0.78 321 P **Pn 10 02 43.3 -0.2**
baz=317
EOS1 S **Sn 10 02 54.9 +0.4**
baz=317
ENLB Shoufeng 0.97 268 eP **Pn 10 02 45.3 -0.8**
baz=256
ENLB eS **Sb 10 02 59.4 +1.1**
baz=256
ENA Nanau 0.97 300 iP **Pn 10 02 45.9 -0.3**
baz=298
ENA iS **Sb 10 03 00.3 +1.9**
baz=298
TWD Chiawan 0.99 279 iP **Pn 10 02 45.6 -0.8**
baz=277
TWD S **Sb 10 02 59.3 +0.6**
baz=277
TWC Suao 1.00 312 iP **Pb 10 02 46.3 -0.1**
baz=309
TWC S **Sb 10 02 59.2 0.0**
baz=309
NACB Ninganchiao 1.01 284 P **Pn 10 02 45.9 -0.7**
baz=269
NACB eS **Sb 10 02 59.8 +0.5**
baz=269
HATJ Hateruma jima 1.05 83 P **Pb 10 02 47.6 +0.3**
HATJ S **Sb 10 03 01.8 +1.2**
IRIF Iriomote-Funau 1.05 68 P **Pn 10 02 47.2 0.0**
IRIF eS **Sb 10 03 01.8 +1.2**
ETLH Xiulin Townshi 1.11 284 P **Pn 10 02 47.9 -0.2**
baz=283
ESL Shilin 1.13 264 eP **Pn 10 02 47.8 -0.6**
baz=263
ESL S **Sn 10 03 02.6 -0.6**
baz=263
EGFH Guangfu 1.16 257 eP **Pn 10 02 48.4 -0.3**
baz=245
EGFH S **Sn 10 03 03.5 -0.5**
baz=245
ILA Ilan 1.18 315 eS **Sb 10 03 05.8 +1.6**
baz=313
NTC Toucheng 1.19 320 P **Pb 10 02 49.9 +0.3**
baz=332
NTC S **Sb 10 03 05.5 +0.9**
baz=332
TWE Neicheng 1.20 311 iP **Pb 10 02 49.9 +0.1**
baz=309
TWE S **Sb 10 03 06.0 +1.1**
baz=309
HGSD Ruisui 1.22 249 P **Pn 10 02 49.8 +0.3**
baz=249
HGSD eS **Sn 10 03 05.1 -0.3**
baz=249
ENTT Nioudou 1.22 305 iP **Pb 10 02 49.9 -0.3**
baz=290
ENTT S **Sb 10 03 06.7 +1.2**
baz=290
TWB1 Santiao Chiao 1.23 330 P **Pn 10 02 49.3 -0.4**
baz=328
TWB1 S **Sb 10 03 05.6 -0.3**
baz=328
NDT Datong Townshi 1.24 302 P **Pb 10 02 50.4 -0.1**
baz=288
NDT S **Sb 10 03 08.1 +1.9**
baz=288
SLBB Yuanshan 1.24 311 eP **Pb 10 02 51.1 +0.6**
baz=309
JKRS Kuro-shima 1.27 76 P **Pb 10 02 50.8 -0.1**
JKRS S **Sb 10 03 08.0 +1.2**
NNSB Datong 1.27 293 P **Pn 10 02 50.2 -0.1**
baz=280
NNSB S **Sb 10 03 07.2 +0.2**
baz=280
NNSH Datong 1.27 293 P **Pn 10 02 49.8 -0.5**
baz=281
NNSH S **Sb 10 03 06.7 -0.3**
baz=281
NNS Nan Shan 1.28 293 P **Pn 10 02 50.5 0.0**
baz=281
NNS eS **Sb 10 03 07.0 -0.4**
baz=281
TIPB Shuangxi 1.28 324 iP **Pb 10 02 50.6 -0.7**
baz=334
TIPB eS **Sb 10 03 06.8 -0.6**
baz=334
WHF Hehuan Shan 1.30 280 iP **Pn 10 02 50.7 -0.3**
baz=278
WHF eS **Sb 10 03 08.1 0.0**
baz=278
EHY Hungye 1.30 251 P **Pn 10 02 50.6 -0.1**
baz=250
EHY S **Sn 10 03 06.6 -0.8**
baz=250
NWLT Wulai 1.35 309 P **Pb 10 02 52.4 0.0**
baz=307
NWLT S **Sb 10 03 09.9 +0.7**
baz=307
OWD Renai 1.36 271 P **Pn 10 02 51.7 +0.1**
baz=270
OWD S **Sn 10 03 08.5 -0.6**
baz=270
YULB Yu-li 1.36 247 P **Pn 10 02 51.6 +0.1**
baz=237
YULB S **Sn 10 03 08.3 -0.7**
baz=237
CHGB Renai 1.37 275 P **Pn 10 02 51.9 +0.1**
baz=265
CHGB eS **Sn 10 03 09.4 0.0**
baz=265
TWF1 Yuli 1.38 245 P **Pn 10 02 52.0 +0.2**
baz=235
TWF1 S **Sn 10 03 09.6 +0.2**
baz=235
YHNB Yeheng 1.38 302 P **Pb 10 02 52.3 -0.7**
baz=301
YHNB eS **Sb 10 03 10.6 +0.3**
baz=301
NWF Wu-fen Shan 1.39 325 P **Pb 10 02 52.2 -0.9**
baz=323
NWF S **Sb 10 03 10.0 -0.3**
baz=323
WFSB Wu-fen Shan 1.39 325 P **Pb 10 02 52.0 -1.0**
baz=323
WFSB S **Sb 10 03 09.8 -0.5**
baz=323
NSK Sanguang 1.40 302 iP **Pn 10 02 52.4 +0.3**
baz=301
NSK eS **Sb 10 03 10.9 +0.1**
baz=301
VWDT VWDT 1.41 263 P **Pn 10 02 52.1 0.0**
baz=262
VWDT S **Sn 10 03 09.7 -0.3**
baz=262
TDCB Techi 1.41 283 eP **Pn 10 02 52.4 0.0**
baz=272
TDCB eS **Sb 10 03 11.5 +0.3**
baz=272
JIJ Ishigaki jima 1.42 72 P **Pn 10 02 52.3 +0.1**
JIJ S **Sn 10 03 09.7 -0.5**
CHKT Chengkung 1.45 235 S **Sn 10 03 09.3 -1.9**
baz=225
FULB Fuli 1.46 240 P **Pn 10 02 52.5 -0.4**
baz=230
FULB S **Sn 10 03 10.8 -0.4**
baz=230
NHDH Xindian Distri 1.46 315 eS **Sb 10 03 11.7 -0.6**
baz=328
YM01 YM01 1.56 321 eP **Pn 10 02 54.8 +0.4**
baz=319
YM01 eS **Sn 10 03 13.6 -0.4**
baz=319
SSLB Suanglung 1.57 265 P **Pn 10 02 54.5 +0.1**
baz=264
SSLB S **Sn 10 03 13.5 -0.7**
baz=264
YM10 YM10 1.58 321 P **Pb 10 02 55.4 -0.9**
baz=319
YM11 YM11 1.58 321 P **Pb 10 02 55.1 -1.2**
baz=320
YM11 eS **Sb 10 03 14.2 -1.6**
baz=320
WLTB Daxi 1.58 306 eS **Sb 10 03 15.8 0.0**
baz=292
DPDB Guoxing 1.59 274 P **Pn 10 02 55.8 +1.1**
baz=273
DPDB eS **Sn 10 03 15.4 +0.7**
baz=273
WHP Taichung City 1.61 283 P **Pb 10 02 56.9 +0.1**
baz=271
WHP eS **Sb 10 03 16.4 -0.3**
baz=271
YUS Yu-Shan 1.63 255 P **Pn 10 02 56.4 +0.8**
baz=254
YUS S **Sn 10 03 16.0 -0.3**
baz=254
JISG Ishigakijimahi 1.64 66 P **Pn 10 02 55.2 -0.1**
JISG S **Sn 10 03 15.3 -0.4**
TWH Lutao 1.64 222 P **Pn 10 02 54.7 -0.5**
baz=221
TWH S **Sn 10 03 13.9 -1.8**
baz=221
TWY Chenhua 1.65 324 P **Pn 10 02 55.2 -0.2**
baz=323
TWY eS **Sb 10 03 15.8 -2.0**
baz=323
TYC Yuchr 1.65 269 P **Pn 10 02 56.3 +0.8**
baz=268
TYC eS **Sn 10 03 16.9 +0.8**
baz=268
LIOB Emei 1.66 295 P **Pb 10 02 57.0 -0.7**
baz=295
WHYT Xinyi Township 1.68 262 eP **Pn 10 02 56.8 +1.0**
baz=251
WHYT S **Sn 10 03 17.8 +1.1**
baz=251
ELDTW Lidau 1.68 244 P **Pn 10 02 56.5 +0.5**
baz=243
ELDTW eS **Sn 10 03 16.7 -0.4**
baz=243
NCUH Zhongli 1.69 308 eP **Pb 10 02 57.3 -0.9**
baz=307
NCUH eS **Sb 10 03 19.7 +0.6**
baz=307
ALS Alishan 1.76 256 eP **Pn 10 02 58.5 +1.3**
baz=256
ALS eS **Sn 10 03 19.4 +0.4**
baz=256
PCYT Pengchaiyu 1.77 342 eP **Pn 10 02 56.6 -0.6**
baz=341
TWQ1 Liyutan 1.77 284 eP **Pb 10 02 59.1 -0.5**
baz=283
TWQ1 eS **Sb 10 03 21.7 +0.2**
baz=283
WJS Zhushan 1.78 267 P **Pb 10 02 59.6 0.0**
baz=266
WJS S **Sb 10 03 22.6 +1.1**
baz=266
WNT Mingjian 1.81 269 eS **Sb 10 03 23.1 +0.6**
baz=268
TCU Taichung 1.83 277 eS **Sb 10 03 23.2 +0.2**
baz=276
TWGBT Beinan 1.83 233 eP **Pn 10 02 57.4 -0.6**
baz=224
TWGBT eS **Sn 10 03 19.7 -0.9**
baz=224
TWG Pinlang 1.84 233 eP **Pn 10 02 57.9 -0.1**
baz=224
TWG S **Sn 10 03 20.0 -0.6**
baz=224
CHN5 Tsauling 1.85 260 iP **Pn 10 03 00.0 +1.7**
baz=250
CHN5 S **Sn 10 03 22.8 +1.7**
baz=250
STYT Tauyuan 1.91 247 P **Pn 10 03 00.1 +1.0**
baz=238
STYT eS **Sn 10 03 22.3 -0.3**
baz=238
WDLH Douliu 1.96 263 eP **Pb 10 03 01.8 -1.0**
baz=262
WDLH S **Sb 10 03 27.0 +0.1**
baz=262
TPUB Ta-pu 1.97 252 P **Pn 10 03 02.0 +2.1**
baz=244
TPUB eS **Sn 10 03 25.1 +1.2**
baz=244
CHN4 Tsaushan 1.99 253 P **Pb 10 03 02.3 -0.9**
baz=244
CHN4 S **Sb 10 03 26.7 -0.8**
baz=244
JTJ Tarama 1.99 69 P **Pn 10 03 00.7 +0.6**
JTJ eS **Sn 10 03 24.3 0.0**
WTP Ta-pu 2.00 250 P **Pn 10 03 02.2 +1.8**
baz=243
WTP S **Sn 10 03 26.6 +1.9**
baz=243
ECL Taimali 2.06 230 eP **Pn 10 03 01.5 +0.4**
baz=241
ECL eS **Sn 10 03 25.5 -0.7**
baz=241
SLGT Liugui 2.08 244 P **Pn 10 03 02.6 +1.2**
baz=237
SLGT S **Sn 10 03 27.9 +1.3**
baz=237
CHN1 Nanshi 2.10 250 P **Pn 10 03 04.0 +2.4**
baz=249
CHN1 S **Sn 10 03 29.5 +2.4**
baz=249
CHY Chiayi 2.10 258 eS **Sn 10 03 29.7 -1.0**
baz=258
RLNB Erlin 2.11 269 eS **Sb 10 03 30.8 -0.3**
baz=282
SNST Tainan City 2.11 251 eP **Pn 10 03 04.1 +2.3**
baz=250
SNST S **Sb 10 03 30.6 -0.5**
baz=250
LAY Lan-yu 2.15 209 P **Pn 10 03 01.1 -1.3**
baz=208
LAY eS **Sn 10 03 26.4 -2.0**
baz=208
EAST Anshuo 2.28 228 P **Pn 10 03 04.3 +0.1**
baz=235
EAST eS **Sn 10 03 29.9 -1.6**
baz=235
MASBT Mashibuluo 2.29 235 eP **Pn 10 03 05.6 +1.4**
baz=229
MASBT eS **Sn 10 03 32.3 +0.6**
baz=229
SCZT Fangliau 2.44 231 eP **Pn 10 03 07.1 +0.7**
baz=224
SCZT eS **Sn 10 03 35.1 -0.5**
baz=224
JIRB Irabujima 2.45 68 P **Pn 10 03 07.7 +1.2**
JIRB eS **Sn 10 03 36.5 +0.6**
JIKM Ikemajima 2.55 67 P **Pn 10 03 06.6 -1.3**
JIKM S **Sn 10 03 38.7 +0.4**
JMJ2 Miyako jima3 2.56 71 P **Pn 10 03 08.3 +0.3**
JMJ2 eS **Sn 10 03 38.2 -0.2**
TWKBT Hengchun 2.62 221 eP **Pn 10 03 09.6 +0.8**
baz=220
TWKBT eS **Sn 10 03 40.0 0.0**
baz=220
TWK1 Hengchun 2.62 221 S **Sn 10 03 40.5 +0.5**
baz=220
WDGT Dungji 2.84 257 P **Pn 10 03 13.5 +1.7**
baz=256
WDGT S **Sn 10 03 46.1 +0.8**
baz=256
PHUB P'eng-hu 2.87 262 eP **Pn 10 03 12.4 +0.2**
baz=276
PHUB S **Sn 10 03 46.8 +0.8**
baz=276
PNG Penghu 2.87 263 eP **Pn 10 03 13.0 +0.7**
baz=278
PNG S **Sn 10 03 47.3 +1.1**
baz=278
VCHM Qimei 3.06 257 eP **Pn 10 03 15.7 +0.9**
baz=255
VCHM eS **Sn 10 03 51.6 +1.0**
baz=255
VWUC VWUC 3.11 290 eP **Pn 10 03 15.6 0.0**
baz=290
VWUC eS **Sn 10 03 53.2 +1.1**
baz=290

NNC 17 10:13:18.8±20.0, 37°.46N×69°.76E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=191.5km s-min=101.8km az=168.0
ISC 17 10:13:12.6±3.8, 36°.8N±0°.2×70°.3E±0°.2, h10km, n10, σ2°.07/12, 1C-2D, Hindu Kush region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AML Almayashu 5.92 25 P **Pn 10 14 42.5 +1.7**
SNR=47

KK31 Karatay Array 6.28 2 Pn Pn 10 14 48.4 +3.2
0.6nm,0.3s,baz=185,slow=13,SNR=7.4
KK31 ⇑Sn Sn 10 15 56.9 -0.1
1.0nm,0.3s,baz=192,slow=25,SNR=4.9
UCH Uchtor 6.31 30 P Pn 10 14 47.5 +1.4
SNR=9.1
EKS2 Erkin-Say 6.42 24 P Pn 10 14 49.4 +2.0
SNR=10
KZA Kyzart 6.51 35 P Pn 10 14 49.5 +0.8
SNR=17
AAK Ala-Archa 6.65 28 P Pn 10 14 52.4 +1.8
SNR=8.6
AAK Ala-Archa 6.65 28 ⇓Pn Pn 10 14 51.9 +1.3
2.7nm,0.4s
AAK ⇓Sn Sn 10 16 04.7 -1.8
2.0nm,0.5s
CHMS Chumysh 7.06 28 P Pn 10 14 57.6 +1.6
SNR=6.9
USP Ospenovka 7.21 25 P Pn 10 14 59.6 +1.7
SNR=5.0
AB31 Akbulak array 14.53 332 P Pn 10 16 35.9 -2.3
1.0nm,0.5s,baz=176,slow=9.7,SNR=27

IDC 17 10:33:11.0±1.3,4°.13N×126°.79E,h0km,mb3.7/6, mb1 3.9/6,mb1mx3.6/45,mbtmp3.7/6,Error ellipse: s-maj=106.0km s-min=19.3km az=71.0
NEIC 17 10:33:17.9±1.8,4°.1N±0°.1×126°.9E±0°.2,h54km±12km, mb4.1/8,Error ellipse: s-maj=24.5km s-min=16.6km az=87.0
MAN 17 10:33:18.7,3°.91N×126°.31E,h67km,mb5.0,ML3.9,MS3.9
ISC 17 10:33:17.6±1.0,4°.00N±0°.08×127°.0E±0°.2,h45km,n15, σ1§99/15,mb3.9/9,1D,Talaud Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KCP Kidapawan 3.57 327⇓iP Pn 10 34 10.3 -0.3
KCP iS Sn 10 34 55.4 +3.8
LUWI Luwuk 6.58 221 Pn Pn 10 34 51.0 -0.9
FITZ Fitzroy Crossi 22.00 184 P P 10 38 08.8 +0.7
2.4nm,0.7s,baz=0.0,slow=11,SNR=1.7
FITZ Fitzroy Crossi 22.00 184 IAmb IAmb 10 38 11.9
comp=Z,7.6nm,1.1s
WB0 Warramunga Arr 24.70 163 P P 10 38 35.4 +0.7
WB0 IAmb IAmb 10 38 46.7
comp=Z,9.7nm,1.1s
WRAB Tennant Creek 24.84 163 P P 10 38 36.0 0.0
WRAB IAmb IAmb 10 38 53.3
comp=Z,6.7nm,0.9s
WRA Warramunga Arr 24.85 163 P P 10 38 37.5 +1.4
comp=Z,1.9nm,0.6s,baz=342,slow=9.6,SNR=17
WB2 Warramunga Arr 24.85 163 P P 10 38 38.1 +2.1
WR0 Warramunga Arr 24.92 163 P P 10 38 39.5 +2.8
WR0 IAmb IAmb 10 38 44.2
comp=Z,7.8nm,1.1s
ASAR Alice Springs 28.30 167 P P 10 39 08.7 +1.5
comp=Z,0.4nm,0.7s,baz=354,slow=8.4,SNR=2.8
BBOO Buckleboo 37.59 168 P P 10 40 29.4 +1.4
STKA Stephens Creek 38.27 160 P P 10 40 33.4 -0.3
comp=Z,1.3nm,0.8s,baz=332,slow=12,SNR=1.7
SONM Songino Array 47.15 341 P P 10 41 44.2 -1.4
comp=Z,0.3nm,0.5s,baz=168,slow=6.9,SNR=4.0
MK31 Makanchi Array 57.52 325 P P 10 43 00.5 -2.0
MKAR Makanchi Array 57.52 325 P P 10 42 59.9 -2.6
comp=Z,0.4nm,0.4s,baz=122,slow=7.5,SNR=7.5

IDC 17 10:34:59.6±1.7,10°.09S×161°.25E,h0km,mb3.7/4, mb1 3.9/5,mb1mx3.7/44,mbtmp3.7/5,ML3.8/1,Error ellipse: s-maj=32.1km s-min=28.1km az=158.0
ISC 17 10:35:01.1±1.4,10°.1S±0°.2×161°.2E±0°.1,h10km,n7, σ1§02/9,mb3.7/4,Bougainville-Solomon Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HNR Honiara 1.44 298 Pn Pg 10 35 27.6 -1.1
238nm,0.3s,baz=160,slow=3.7,SNR=91
HNR Sn Sg 10 35 46.6 -0.9
346nm,0.3s,baz=16,slow=14,SNR=10
HNR Honiara 1.44 298 iP Sg 10 35 49.0 +1.5
HNR iS Pg 10 35 29.0 +0.3
CTA Charters Tower 17.53 234 P P 10 39 07.7 +0.8
0.2nm,0.3s,baz=64,slow=18,SNR=2.6
WRA Warramunga Arr 27.72 246 P P 10 40 50.2 +0.3
0.8nm,0.5s,baz=74,slow=9.1,SNR=4.9
ASAR Alice Springs 29.35 239 P P 10 41 03.6 -0.9
0.5nm,1.1s,baz=63,slow=10,SNR=1.7
SONM Songino Array 75.33 325 P P 10 46 45.1 +0.2
0.7nm,0.6s,baz=138,slow=5.3,SNR=6.3
ILAR Eielson Array 84.09 20 P P 10 47 31.9 +0.1
0.2nm,0.5s,baz=244,slow=5.1,SNR=4.4

GCG 17 10:47:05.8±0.4,13°.67N×91°.89W,h26km±35km,MD3.7
SNET 17 10:47:12.7±1.1,14°.03N×91°.42W,h28km±999km,ML3.8
UCR 17 10:47:12.8±1.1,14°.03N×91°.43W,h28km±999km,ML3.7
ISC 17 10:47:11.7±3.1,14°.0N±0°.2×91°.5W±0°.1,h29km±15km,n18, σ2§81/28,1C,Near coast of Guatemala

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ERG Entre ros, C 0.47 347 eP Pn 10 47 23.3 +0.8
STG3 Santiaguito 3, 0.73 352 eP Pb 10 47 25.8 -0.3
FUG Fuego 3 0.76 52⇑eP Pb 10 47 28.4 +1.7
PCG Pacaya 0.92 64 eP Pb 10 47 31.1 +1.8
PCG eS Sn 10 47 50.7 +9.2
FAME Alcaldia de Sa 1.41 95 eP Pn 10 47 26.5 -9.0
FAME eS Sn 10 47 44.7 -8.5
FAME Alcaldia de Sa 1.41 95 eP Pn 10 47 26.5 -9.0
FAME eS Sn 10 47 44.7 -8.5
RTR El Retiro 1.76 93 eP Pn 10 47 41.8 +1.3
RTR El Retiro 1.76 93 eP Pn 10 47 41.8 +1.3
CEVE Cerro Verde 1.79 95 eP Pn 10 47 42.0 +1.1
CEVE eS Sn 10 48 04.5 +1.6
CEVE IAML 10 48 14.7
comp=Z,940nm,0.3s
CEVE Cerro Verde 1.79 95 eP Pn 10 47 42.0 +1.1
CEVE eS Sn 10 48 04.5 +1.6
CEVE IAML 10 48 14.7
comp=Z,940nm,0.3s
SBLS San Blas 1.79 94 eP Pn 10 47 42.0 +1.0
SBLS eS Sb 10 48 04.9 -1.2
SBLS San Blas 1.79 94 eP Pn 10 47 42.0 +1.0
SBLS eS Sb 10 48 04.9 -1.2
SNJE San Jose 1.81 93 eP Pn 10 47 42.1 +1.0
SNJE eS Sn 10 48 05.0 +1.9
SNJE San Jose 1.81 93 eP Pn 10 47 42.1 +1.0
SNJE eS Sn 10 48 05.0 +1.9
UNIC Universidad Ca 1.86 90 eP Pn 10 47 42.8 +1.1
UNIC eS Sb 10 48 06.3 -1.6
UNIC Universidad Ca 1.86 90 eP Pn 10 47 42.8 +1.1
UNIC eS Sb 10 48 06.3 -1.6
BOQS Boqueron 2.13 96 eP Pn 10 47 47.2 +1.6
BOQS eS Sn 10 48 12.9 +1.6
LFRS El Faro 2.36 98 eP Pn 10 47 49.8 +1.1
LFRS eS Sn 10 48 17.8 +1.1

IDC 17 10:50:22.9±0.9,4°.09N×126°.52E,h0km,mb3.8/7, mb1 4.0/7,mb1mx3.7/33,mbtmp3.8/7,Error ellipse: s-maj=88.0km s-min=18.1km az=71.0
NEIC 17 10:50:35.5±0.9,4°.0N±0°.1×126°.5E±0°.1,h105km±10km, mb4.1/8,Error ellipse: s-maj=24.3km s-min=9.8km az=120.0
MAN 17 10:50:36.9,4°.43N×126°.21E,h71km,mb5.0,ML3.9,MS3.9
ISC 17 10:50:29.5±0.8,4°.14N±0°.08×127°.1E±0°.2,h45km,n18, σ1§54/18,mb4.1/11,1C-1D,Talaud Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GSPH General Santos 2.87 313⇓eP Pn 10 51 12.8 0.0
KCP Kidapawan 3.47 326⇑eP Pn 10 51 21.5 +0.5
KCP eS Sn 10 52 04.1 +3.1
LUWI Luwuk 6.70 220 Pn Pn 10 52 05.4 0.0
WB0 Warramunga Arr 24.82 163 P P 10 55 48.6 +0.9
WB0 IAmb IAmb 10 55 50.9
comp=Z,6.0nm,1.0s
WRAB Tennant Creek 24.97 164 P P 10 55 50.6 +1.6
WRA Warramunga Arr 24.97 164 P P 10 55 48.9 -0.2
comp=Z,2.0nm,0.7s,baz=344,slow=10,SNR=10
WB2 Warramunga Arr 24.98 164 P P 10 55 49.7 +0.6
WB2 IAmb IAmb 10 55 59.0
comp=Z,7.5nm,1.1s
WR0 Warramunga Arr 25.05 163 P P 10 55 50.8 +1.0
WR0 IAmb IAmb 10 56 05.2
comp=Z,8.0nm,1.0s
ASAR Alice Springs 28.43 167 P P 10 56 20.7 +0.6
comp=Z,0.4nm,0.7s,baz=346,slow=7.3,SNR=9.5
BBOO Buckleboo 37.72 168 P P 10 57 41.5 +0.6
STKA Stephens Creek 38.39 160 P P 10 57 47.6 +1.0
comp=Z,2.1nm,0.7s,baz=337,slow=9.6,SNR=4.6
STKA Stephens Creek 38.39 160 IAmb IAmb 10 57 51.3
comp=Z,0.8nm,1.0s
SONM Songino Array 47.02 341 P P 10 58 56.2 -0.4
comp=Z,0.5nm,0.5s,baz=150,slow=7.9,SNR=5.2
MK31 Makanchi Array 57.42 325 P P 11 00 12.0 -1.7
MK31 IAmb IAmb 11 00 22.1
comp=Z,2.6nm,1.4s
MKAR Makanchi Array 57.42 325 P P 11 00 11.0 -2.6
comp=Z,0.8nm,0.6s,baz=130,slow=7.9,SNR=12
KURK Kurchatov 61.58 327 P P 11 00 39.7 -2.5
ILAR Eielson Array 84.60 25 P P 11 02 59.0 +1.1
comp=Z,0.4nm,0.8s,baz=254,slow=5.3,SNR=2.8
ARCES ARCESS Array B 90.19 340 P P 11 03 23.4 -1.4
comp=Z,1.0nm,0.7s,baz=74,slow=9.5,SNR=3.5

VAO 17 11:05:55.4±0.6,29°.02S×69°.93W,h10km,mb4.5
SJA 17 11:06:00.4±0.8,28°.88S×69°.99W,h116km±8km,ML4.5, MW4.4
GUC 17 11:06:00.9±0.9,28°.98S×70°.02W,h118km±6km,ML4.9
IDC 17 11:06:01.8±1.4,28°.87S×69°.74W,h106km±12km,mb4.2/8, mb1 4.3/13,mb1mx4.1/27,mbtmp4.6/13,MS2.9/4, Ms1 3.0/4,ms1mx2.8/25,Error ellipse: s-maj=21.8km s-min=9.5km az=78.0
NEIC 17 11:06:02.4±1.9,28°.96S±0°.04×69°.90W±0°.09,h116km±4km, Error ellipse: s-maj=11.3km s-min=5.8km az=92.0
ISC 17 11:06:01.9±0.5,28°.96S±0°.03×69°.99W±0°.04,h112km±4km, n351,σ1§43/345,mb4.7/59,2C-6D,Chile-Argentina border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AC05 El Transito 0.28 296⇑iP Pn 11 06 19.0 +1.0
AC05 iS Sn 11 06 31.5 +1.3
AC05 IAML 11 06 32.7
comp=E,62μm,0.2s
AROD Rodeo 1.29 160 iP Pn 11 06 28.4 +1.7
AROD eS Sn 11 06 47.6 +2.1
GO03 Copiap 1.38 351 Pn 11 06 28.4 +0.8
GO03 Sn Sn 11 06 47.7 +0.8
GO04 Tololo Observa 1.40 210 eP Pn 11 06 28.1 +0.1
GO04 iS Sn 11 06 48.4 +0.7
GO04 Tololo Observa 1.40 210 Pn 11 06 28.4 +0.5
GO04 Sn Sn 11 06 48.5 +0.7
GO04 Tololo Observa 1.40 210 eP Pn 11 06 28.2 +0.3
GO04 eS Sn 11 06 48.9 +1.2
VCA Vinchina 1.58 82⇑iP Pn 11 06 32.1 +2.1
VCA iS Sn 11 06 54.1 +2.8
ACCO Cerro Coronel 1.81 154 iP Pn 11 06 34.4 +1.4
CO03 El Pedregal 1.97 198⇓iP Pn 11 06 35.1 +0.3
CO03 iS Sn 11 07 00.2 +0.4
CO03 IAML 11 07 02.3
comp=E,8μm,0.3s
AC02 Maricunga 2.25 20⇓iP Pn 11 06 39.8 +1.1
AC02 eS Sn 11 07 09.3 +2.6
AC02 IAML 11 07 10.9
comp=N,5μm,0.3s
CO02 Combarbal 2.40 201⇓iP Pn 11 06 40.1 -0.2
CO02 eS Sn 11 07 09.5 -0.2
CO02 IAML 11 07 10.5
comp=N,10μm,0.3s
ACLC CERRO LA CRUZ 2.70 101 iP Pn 11 06 44.5 +0.4
RTLL Cerro Villicun 2.70 151 iP Pn 11 06 44.9 +0.7
RTLL iP 11 06 45.0
RTLL eS Sn 11 07 17.4 +0.8
RTLL eS 11 07 17.5
RTLL IAML 11 07 19.7
comp=Z,2μm,0.4s
RTLL IAML 11 07 19.8
comp=Z,3μm,0.4s
ZON Zonda 2.82 157 iP Pn 11 06 45.9 +0.2
ZON eS Sn 11 07 20.6 +1.3
ZON IAML 11 07 29.0
comp=Z,696nm,0.7s
AC01 Pan de Azucar 2.85 349⇓iP Pn 11 06 46.2 +0.1
AC01 eS Sn 11 07 19.5 -0.5
RTLS Leoncito 2.89 168 iP Pn 11 06 48.4 +1.5
RTLS eS Sn 11 07 23.4 +1.9
RTLS IAML 11 07 25.6
comp=Z,1μm,0.8s
CFA Coronel Fontan 3.04 151 P Pn 11 06 49.2 +0.6
comp=Z,178nm,0.3s,baz=320,slow=12,SNR=1911
CFA S Sn 11 07 23.8 -0.8
comp=Z,146nm,0.3s,baz=338,slow=10,SNR=15
CFA Coronel Fontan 3.04 151 iP Pn 11 06 48.9 +0.3
CO04 Los Peladeros 3.19 195⇓iP Pn 11 06 50.2 -0.5
CO04 eS Sn 11 07 27.8 -0.6
APLL PUNTA DE LOS L 3.33 116 iP Pn 11 06 52.8 +0.3
APLL eS Sn 11 07 31.5 -0.1
CYA Choya 3.71 83 iP Pn 11 06 57.1 -0.5
CYA IAML 11 06 57.7
comp=Z,2μm,0.1s
CYA eS Sn 11 07 38.7 -1.9
CYA IAML 11 07 39.6
comp=Z,1μm,0.6s
ASAL Salagasta 3.75 165 iP Pn 11 06 59.2 +1.1
ASAL IAML 11 07 47.2
comp=Z,618nm,0.7s
GO02 Mina Guanaco 3.80 5 Pn 11 06 58.7 -0.2
GO02 Sn Sn 11 07 43.4 +0.4
ARCO CERRO ARCO 3.98 167 eP Pn 11 07 01.9 +0.8
ARCO IAML 11 07 52.5
comp=Z,627nm,0.5s
PEL Peldehue 4.21 188 Pn 11 07 03.2 -1.0
PEL Sn Sn 11 07 51.8 -0.8
AAGR Agrelo 4.23 167 iP Pn 11 07 05.3 +0.8
AAGR IAML 11 08 01.3
comp=Z,360nm,0.5s
FCH Farellones 4.36 183⇓iP Pn 11 07 06.8 +0.3
FCH eS Sn 11 07 56.7 +0.2
AHML Horco Molle 4.66 63 iP Pn 11 07 09.3 -0.8
AHML IAML 11 08 06.2
comp=Z,161nm,0.6s
PB10 IPOC Station P 5.45 355 Pn 11 07 18.3 -2.5
PB10 Sn Sn 11 08 23.8 +1.4
GO05 Huala 6.25 195 Pn 11 07 27.7 -4.0
LVC Limon Verde 6.40 9 P Pn 11 07 32.1 -1.9
comp=Z,35nm,0.3s,baz=159,slow=9.5,SNR=436
LVC S Sn 11 08 42.2 -3.7
comp=Z,26nm,0.3s,baz=35,slow=19,SNR=8.0
LVC LR LR 11 09 53.6
comp=Z,107nm,21.3s,baz=222,slow=37
LVC Limon Verde 6.40 9 eP Pn 11 07 30.7 -3.3
LVC Limon Verde 6.40 9 Pn 11 07 31.9 -2.2
LVC Sn Sn 11 08 42.8 -3.1
PB04 IPOC Station P 6.60 359 Pn 11 07 33.3 -3.4
PB09 IPOC Station P 7.16 6 iP Pn 11 07 42.4 -1.9
PB01 IPOC Station P 7.89 3 Pn 11 07 50.6 -3.5
PB11 IPOC Station P 9.16 2 Pn 11 08 06.4 -5.0
GO01 Chusmiza 9.28 5 Pn 11 08 08.9 -4.3
MNMC Minye Minye 9.79 2 Pn 11 08 15.3 -4.7
CPUP Villa Florida 11.53 80 P Pn 11 08 38.8 -4.3
comp=Z,0.4nm,0.3s,baz=268,slow=11,SNR=5.9
CPUP LR LR 11 13 56.8
comp=Z,41nm,19.2s,baz=214,slow=42
CPUP Villa Florida 11.53 80 Pn Pn 11 08 39.2 -3.9
PLCA Paso Flores 11.76 182 P Pn 11 08 43.7 -2.4
comp=Z,0.3nm,0.3s,baz=18,slow=13,SNR=16
PLCA LR LR 11 12 58.5
comp=Z,93nm,21.4s,baz=32,slow=35
PLCA Paso Flores 11.76 182 eP Pn 11 08 42.5 -3.6
PLCA Paso Flores 11.76 182 Pn 11 08 43.2 -2.9
LPAZ La Paz 12.73 8 P Pn 11 08 56.8 -2.7
comp=Z,2.0nm,0.3s,baz=179,slow=6.4,SNR=106
LPAZ LR LR 11 14 56.4
comp=Z,70nm,18.6s,baz=164,slow=42
LPAZ La Paz 12.73 8 eP Pn 11 08 57.2 -2.3
LPAZ La Paz 12.73 8 Pn 11 08 56.1 -3.5
PLTB Pedras Altas 14.42 105 eP Pn 11 09 17.7 -3.1
SIV San Ignacio 15.30 34 P Pn 11 09 29.1 -3.0
comp=Z,0.9nm,0.3s,baz=238,slow=12,SNR=19
ITAB Concordia 15.86 88 eP Pn 11 09 38.5 -0.3
PTGB Pitanga 16.55 79 eP Pn 11 09 47.3 -0.1
TRCB Terra Rica 16.77 73 eP P 11 09 51.1 +0.6
PCMB Pacaembu 18.44 71 eP Pn 11 10 09.9 -0.3
C2SB Chapadao do Su 18.66 61 eP Pn 11 10 13.5 +0.7
SAML Samuel 20.91 19 eP Pn 11 10 37.5 -1.7
SAML Samuel 20.91 19 P P 11 10 35.2 -0.3
SAML IAmb IAmb 11 10 42.3
comp=Z,41nm,0.9s
BDFB Brasilia 24.21 62 P P 11 11 09.3 +0.8
comp=Z,2.2nm,0.5s,baz=235,slow=16,SNR=3.1
BDFB Brasilia 24.21 62 P P 11 11 07.6 -0.8
USHA Ushuaia 25.88 178 P P 11 11 25.2 +2.3
comp=Z,12nm,1.0s,baz=335,slow=5.6,SNR=5.3
RUSC La Rusia 34.78 355 P P 11 12 43.2 +0.8
NBCL Cascavel-CE 38.84 57 eP P 11 13 20.9 +4.6
SNAA Sanae 55.62 159 P P 11 15 25.7 -0.1
SNAA IAmb IAmb 11 15 27.2
comp=Z,8.7nm,1.4s
QSPA South Pole Qui 61.26 180 P P 11 16 05.8 +0.7
QSPA IAmb IAmb 11 16 06.7
comp=Z,6.5nm,0.7s
352A Blakely 61.76 346 P P 11 16 09.0 +0.4
Z52A Williamson 63.30 346 P P 11 16 18.8 -0.1
baz=166
833A Chaparral WMA, 63.53 331 P P 11 16 22.4 +2.0
baz=151,SNR=6.4
Z50A Ashland 63.69 345 IAmb IAmb 11 16 22.1
comp=Z,9.6nm,0.8s
Z50A Ashland 63.69 345 P P 11 16 21.4 +0.1
baz=164
Y53A Monroe 63.78 347 P P 11 16 22.1 +0.1
baz=167
Y52A Lilburn 63.89 347 P P 11 16 22.7 +0.1
baz=166
X56A White Oak 63.97 350 P P 11 16 23.6 +0.4
baz=169
X55A Gracelyn & Ava 64.04 349 P P 11 16 24.1 +0.5
baz=169
Y51A Rockmart 64.12 346 P P 11 16 24.0 -0.2
baz=165,SNR=5.0
W58A Raeford 64.23 352 P P 11 16 25.5 +0.6
baz=171
X54A Belton 64.24 349 P P 11 16 25.4 +0.5
baz=168
X52A Dahlonega 64.57 347 P P 11 16 27.3 +0.2
baz=167
NATX Nacogdoches 64.78 337 P P 11 16 29.0 +0.4
NATX Nacogdoches 64.78 337 P P 11 16 30.5 +2.0
baz=156
V58A Windy Hill, Pi 64.98 352 P P 11 16 29.7 +0.1
baz=171
W53A Cullowhee 64.98 348 P P 11 16 30.1 +0.2
baz=167
W52A Murphy 65.05 347 P P 11 16 30.4 +0.2
baz=167
X48A Hartselle 65.10 345 IAmb IAmb 11 16 31.4
comp=Z,10nm,0.8s
V56A Mocksville 65.18 351 P P 11 16 31.7 +0.7
baz=170
HPIG 65.26 325 P P 11 16 32.9 +0.9
HPIG IAmb IAmb 11 16 34.2
comp=Z,6.4nm,0.6s
W51A Cleveland 65.28 347 P P 11 16 32.1 +0.4
baz=166
V55A Taylorsville 65.33 350 P P 11 16 32.6 +0.6
baz=169
V54A Nebo 65.37 349 P P 11 16 32.7 +0.5
baz=169,SNR=5.0
V53A Saluda 65.41 349 IAmb IAmb 11 16 33.5
comp=Z,9.1nm,0.8s
V53A Saluda 65.41 349 P P 11 16 32.8 +0.3
baz=168
W50A Signal Mountai 65.43 346 IAmb IAmb 11 16 33.8
comp=Z,9.8nm,0.8s
W50A Signal Mountai 65.43 346 P P 11 16 33.2 +0.5
baz=165
CPCT Cooper Cave 65.51 347 IAmb IAmb 11 16 34.1
comp=Z,9.8nm,0.8s
TKL Tuckaleechee C 65.57 348 IAmb IAmb 11 16 34.1
comp=Z,9.0nm,0.8s
JCT Junction City 65.59 332 P P 11 16 35.1 +1.3
JCT IAmb IAmb 11 16 35.6
comp=Z,8.7nm,0.7s
JCT Junction City 65.59 332 P P 11 16 35.4 +1.6
baz=152,SNR=9.2
U56A King 65.69 351 P P 11 16 35.2 +0.9
baz=170
V52A Sevierville 65.72 348 P P 11 16 34.5 0.0
baz=167
OXF Oxford 65.74 342 P P 11 16 34.8 +0.2
baz=162
V51A Loudon 65.82 347 P P 11 16 35.2 0.0
baz=166
V50A Pikevile 65.84 347 P P 11 16 35.5 +0.3
baz=166,SNR=7.4
PLAL Pickwick Lake 65.85 344 IAmb IAmb 11 16 35.8
comp=Z,8.6nm,0.8s
WHTX Lake Whitney, 66.00 335 IAmb IAmb 11 16 37.8
comp=Z,7.4nm,0.7s
WHTX Lake Whitney, 66.00 335 P P 11 16 37.5 +1.1
baz=154
T58A Grand View Acr 66.05 353 P P 11 16 37.5 +1.0
baz=172
U53A Fall Branch 66.05 349 P P 11 16 36.3 -0.3
baz=168
U54A Nelsons Funny 66.08 350 P P 11 16 37.0 +0.1
baz=169
V49A McMinnville 66.10 346 P P 11 16 36.8 -0.1
baz=165,SNR=6.9
X43A Marvell 66.15 341 P P 11 16 38.7 +1.4
baz=160
T57A Hurt 66.18 352 P P 11 16 38.1 +0.7
baz=171
V48A Smith Brothers 66.28 345 IAmb IAmb 11 16 39.7
comp=Z,13nm,0.9s
TXAR Lajitas Array 66.30 328 P P 11 16 39.8 +1.3
comp=Z,1.8nm,0.7s,baz=152,slow=8.3,SNR=25
TXAR pP PcP 11 17 08.8 +1.3
comp=Z,0.8nm,0.8s,baz=151,slow=8.0,SNR=3.2
T56A Rocky Mt 66.31 351 P P 11 16 39.1 +0.9
baz=170
U51A La Follette 66.32 348 P P 11 16 38.4 +0.1
baz=167
CLTN Cedars of Leba 66.51 346 IAmb IAmb 11 16 40.5
comp=Z,5.3nm,0.7s
U50A Jamestown 66.51 347 P P 11 16 39.6 0.0
baz=166
T54A Tazewell 66.57 350 P P 11 16 40.1 +0.2
baz=169
T53A Wise 66.64 349 P P 11 16 40.4 0.0
baz=168
S58A Poland Farm, P 66.65 353 P P 11 16 41.6 +1.2
baz=172
U49A Red Boiling Sp 66.80 346 P P 11 16 41.2 -0.1
baz=165
T51A Gray 66.87 348 P P 11 16 41.8 -0.1
baz=167
WVT Waverly 66.89 344 P P 11 16 42.2 +0.3
WVT Waverly 66.89 344 P P 11 16 42.0 +0.1
baz=163
S57A Dark Hollow, R 66.90 352 P P 11 16 42.6 +0.6
baz=172
MIAR Mount Ida 66.98 339 P P 11 16 43.6 +1.0
MIAR IAmb IAmb 11 16 44.3
comp=Z,7.3nm,0.9s
MIAR Mount Ida 66.98 339 P P 11 16 43.4 +0.9
baz=158,SNR=6.0
R58B Mineral 66.98 353 P P 11 16 43.7 +1.3
baz=173
S55A Lewisburg 67.11 351 P P 11 16 44.1 +0.8
baz=170
W41B Gary Mavity, V 67.16 340 P P 11 16 43.8 +0.1
W41B IAmb IAmb 11 16 45.1
comp=Z,6.5nm,0.7s
W41B Gary Mavity, V 67.16 340 P P 11 16 44.3 +0.7
baz=159
WHAR Wooly Hollow 67.28 340 P P 11 16 43.9 -0.5
WHAR IAmb IAmb 11 16 45.9
comp=Z,8.0nm,0.9s
T49A Edmonton 67.32 347 P P 11 16 44.0 -0.6
T49A IAmb IAmb 11 16 44.9
comp=Z,7.7nm,0.7s
T49A Edmonton 67.32 347 P P 11 16 44.7 +0.1
baz=165
R57A Stanardsville 67.38 353 P P 11 16 46.1 +1.1
baz=172
ABTX Abilene, Hawle 67.41 333 IAmb IAmb 11 16 47.4
comp=Z,13nm,0.9s
ABTX Abilene, Hawle 67.41 333 P P 11 16 46.6 +1.2

baz=152,SNR=6.3
T47A Sharon Grove 67.54 345 IAmb IAmb 11 16 46.8
comp=Z,16nm,1.1s
R55A Marlinton 67.56 351 P **P** **11 16 47.4 +1.2**
baz=170
R54A Victor 67.58 351 P **P** **11 16 46.7 +0.4**
baz=170
W39A Magazine 67.65 339 P **P** **11 16 47.5 +0.7**
W39A IAmb IAmb 11 16 48.5
comp=Z,9.5nm,0.8s
W39A Magazine 67.65 339 P **P** **11 16 48.1 +1.4**
baz=158,SNR=6.1
S50A Richmond 67.65 348 P **P** **11 16 46.9 +0.2**
baz=166
LCAR Lake Charles 67.68 342 P **P** **11 16 47.2 +0.3**
HENM Henderson Moun 67.84 343 P **P** **11 16 48.4 +0.5**
Q57A Strasburg 68.10 353 P **P** **11 16 51.1 +1.6**
baz=172
R50A Paris 68.22 348 P **P** **11 16 50.2 -0.1**
baz=167
U40A Yellville 68.44 340 IAmb IAmb 11 16 52.7
comp=Z,9.3nm,0.7s
U40A Yellville 68.44 340 P **P** **11 16 52.3 +0.6**
baz=159,SNR=7.5
P59A Jarrettsville 68.48 355 P **P** **11 16 53.3 +1.5**
baz=174
P57A Homestead Farm 68.50 353 P **P** **11 16 53.6 +1.6**
baz=172
Q52A Bidwell 68.53 350 P **P** **11 16 52.4 +0.2**
baz=168
WCI Wyandotte Cave 68.56 346 P **P** **11 16 52.1 -0.2**
baz=165
HHAR Hobbs 68.69 339 P **P** **11 16 53.5 +0.2**
HHAR IAmb IAmb 11 16 54.9
comp=Z,8.6nm,0.8s
P54A Burton 68.91 351 P **P** **11 16 54.7 +0.2**
baz=170,SNR=5.4
TUL1 Leonard 68.95 338 P **P** **11 16 55.2 +0.4**
baz=156,SNR=8.9
MGMO Mountain Grove 69.01 341 IAmb IAmb 11 16 57.2
comp=Z,16nm,1.3s
Q49A Aurora 69.03 348 P **P** **11 16 55.0 -0.3**
baz=166
MNTX Cornudas Mount 69.08 328 P **P** **11 16 56.0 +0.3**
baz=147,SNR=6.2
P51A Williamsport 69.17 349 P **P** **11 16 56.2 +0.1**
baz=168
P52A Corning 69.17 350 P **P** **11 16 56.2 +0.1**
baz=169
CCM Cathedral Cave 69.57 342 P **P** **11 16 59.3 +0.6**
CCM Cathedral Cave 69.57 342 P **P** **11 16 59.3 +0.6**
baz=160
N57A Milroy 69.72 354 P **P** **11 17 00.3 +0.9**
baz=173
O51A Pataskala 69.75 350 P **P** **11 16 59.8 +0.1**
baz=168
MSTX Muleshoe 69.86 331 IAmb IAmb 11 17 02.4
comp=Z,17nm,0.9s
MSTX Muleshoe 69.86 331 P **P** **11 17 01.8 +1.2**
baz=150
N55A Marion Center 69.89 353 P **P** **11 17 01.5 +1.0**
baz=172
ACSO Alum Creek Sta 69.89 349 IAmb IAmb 11 17 01.4
comp=Z,13nm,0.8s
ACSO Alum Creek Sta 69.89 349 P **P** **11 17 00.7 +0.2**
baz=168
O50A Cable 69.91 349 P **P** **11 17 01.1 +0.4**
baz=167
O49A Covington 70.08 348 IAmb IAmb 11 17 02.4
comp=Z,20nm,1.1s
O49A Covington 70.08 348 P **P** **11 17 01.6 -0.1**
baz=167
AMTX Amarillo 70.20 333 IAmb IAmb 11 17 05.2
comp=Z,13nm,1.1s
O48A Farmland 70.29 348 P **P** **11 17 02.9 -0.1**
baz=166
M59A Waymart 70.33 356 P **P** **11 17 04.7 +1.5**
baz=175
N50A Nevada 70.44 349 P **P** **11 17 03.8 -0.1**
baz=168
M56A Emporium 70.50 353 P **P** **11 17 05.2 +0.9**
baz=172
M55A Ridgway 70.54 353 P **P** **11 17 05.3 +0.7**
baz=172
N49A Columbus Grove 70.76 349 P **P** **11 17 06.0 +0.1**
baz=167,SNR=6.2
SFIN Lafayette 70.79 346 P **P** **11 17 05.5 -0.5**
baz=164
N48A Decatur 70.85 348 P **P** **11 17 06.0 -0.4**
baz=166
L58A Harry Jones Me 70.86 355 P **P** **11 17 07.5 +1.1**
baz=175
121A Cookes Peak, D 70.90 327 P **P** **11 17 09.3 +2.2**
baz=146
N47A Urbana 71.00 347 P **P** **11 17 06.8 -0.5**
baz=166,SNR=5.1
M50A Fremont 71.04 350 P **P** **11 17 08.0 +0.5**
baz=168
L56A Greenwood 71.08 354 P **P** **11 17 08.8 +1.0**
baz=173
L55A Hinsdale 71.22 353 P **P** **11 17 09.7 +1.1**
baz=172
M49A Liberty Center 71.26 349 P **P** **11 17 08.8 -0.1**
baz=167,SNR=5.5
L54A Sinclairville 71.36 353 P **P** **11 17 10.4 +1.0**
baz=171
HDIL Hopedale 71.45 345 P **P** **11 17 10.2 +0.2**
baz=162
K58A Earlville 71.56 356 P **P** **11 17 11.4 +0.7**
baz=175
K54A Basiliko Farm, 71.66 353 P **P** **11 17 12.1 +0.8**
baz=172
K55A Perry 71.72 354 P **P** **11 17 12.4 +0.8**
baz=173
L48A N Adams 71.80 349 P **P** **11 17 12.3 +0.3**
baz=167
DBIC Dimbokro 71.91 71 P **P** **11 17 13.6 +0.2**
comp=Z,5.7nm,0.7s,baz=227,slow=8.8,SNR=9.9
DBIC Dimbokro 71.91 71 P **P** **11 17 13.4 0.0**
DBIC IAmb IAmb 11 17 14.2
comp=Z,7.1nm,0.8s
L47A Sherwood 71.97 348 P **P** **11 17 13.0 -0.1**
baz=166
J56A Wolcott 72.16 355 P **P** **11 17 14.7 +0.6**
baz=174
TUC Tucson 72.21 324 P **P** **11 17 17.3 +2.5**
baz=143
J57A Williamstown 72.22 355 P **P** **11 17 15.6 +1.1**
baz=174
ANMO Albuquerque 72.28 329 P **P** **11 17 16.8 +1.5**
ANMO Albuquerque 72.28 329 P **P** **11 17 17.5 +2.1**
baz=147
J52A Paris 72.49 352 P **P** **11 17 16.4 +0.3**
baz=170
K48A Perry 72.58 349 P **P** **11 17 16.7 0.0**
baz=167
K47A Vermontville 72.60 348 P **P** **11 17 16.6 -0.3**
baz=166
CBKS Cedar Bluff 72.92 336 P **P** **11 17 20.1 +1.2**
baz=153
J49A Marlette 72.97 350 P **P** **11 17 18.7 -0.3**
baz=168
214A Organ Pipe Nat 72.98 323 IAmb IAmb 11 17 22.6
comp=Z,15nm,1.2s
214A Organ Pipe Nat 72.98 323 P **P** **11 17 21.7 +2.3**
baz=142,SNR=15
J48A Bridge Port 73.01 350 P **P** **11 17 19.2 0.0**
baz=167
I51A Listowel 73.11 352 P **P** **11 17 20.3 +0.4**
baz=170
H61A Lyndonville 73.16 359 P **P** **11 17 21.8 +1.7**
baz=178
I55A Frankford 73.16 354 P **P** **11 17 20.7 +0.6**
baz=173
T25A Trinidad 73.25 332 IAmb IAmb 11 17 24.0
comp=Z,10nm,0.9s
T25A Trinidad 73.25 332 P **P** **11 17 23.1 +2.0**
baz=149,SNR=7.6
I52A Shelburne 73.27 352 P **P** **11 17 21.3 +0.5**
baz=171
H56A Elgin 73.42 355 P **P** **11 17 22.1 +0.5**
baz=174
I49A Point Hope 73.49 350 P **P** **11 17 21.8 -0.3**
baz=168
H52A Wyevale 73.80 353 P **P** **11 17 24.2 +0.4**
baz=171
I47A Gladwin 73.83 349 P **P** **11 17 24.1 +0.1**
baz=167
G57A Newington 73.85 356 P **P** **11 17 24.9 +0.9**
baz=176
I48A Sherman Twp 73.86 350 P **P** **11 17 24.3 +0.1**
baz=168
JFWS Jewell Farm 73.91 345 P **P** **11 17 24.8 +0.3**
baz=162
W18A Petrified Fore 73.95 327 P **P** **11 17 28.1 +2.9**
baz=144
G53A Haliburton 74.14 354 P **P** **11 17 26.3 +0.5**
baz=172
KSCO Kaye Shedlock' 74.16 334 P **P** **11 17 28.2 +2.0**
baz=151
X16A Lo Mia Camp, P 74.22 325 IAmb IAmb 11 17 30.0
comp=Z,9.5nm,1.1s
SDCO Great Sand Dun 74.22 331 P **P** **11 17 28.4 +1.6**
SDCO Great Sand Dun 74.22 331 P **P** **11 17 28.6 +1.8**
baz=148,SNR=5.7
H48A Harrisville 74.31 350 P **P** **11 17 27.4 +0.6**
baz=168
G54A Lake Saint Pet 74.37 354 P **P** **11 17 27.8 +0.6**
baz=173
S22A 4UR Ranch, Cre 74.79 330 P **P** **11 17 32.1 +2.0**
baz=147
F52A Sundridge 74.88 353 P **P** **11 17 30.6 +0.6**
baz=172
ALGO Algonquin Park 74.92 354 P **P** **11 17 30.6 +0.4**
baz=173
WUAZ Wupatki 75.06 326 IAmb IAmb 11 17 34.9
comp=Z,11nm,1.1s
WUAZ Wupatki 75.06 326 P **P** **11 17 33.9 +2.3**
baz=143,SNR=7.8
MVCO Mesa Verde 75.08 329 IAmb IAmb 11 17 34.6
comp=Z,8.0nm,0.9s
MVCO Mesa Verde 75.08 329 P **P** **11 17 33.6 +1.9**
baz=146,SNR=7.2
Q24A Divide 75.11 332 P **P** **11 17 33.9 +2.0**
baz=149,SNR=5.1
F49A Sandfield 75.17 351 P **P** **11 17 31.7 0.0**
baz=169
Y12C Blythe 75.28 323 P **P** **11 17 35.1 +2.4**
baz=141
E53A Dumoine, Ponti 75.30 355 P **P** **11 17 33.1 +0.6**
baz=173
F48A Evansville 75.31 351 P **P** **11 17 32.8 +0.3**
baz=169
E54A Lac Daplat, Po 75.32 355 P **P** **11 17 33.1 +0.5**
baz=174
E51A G1948 Merrick 75.63 353 P **P** **11 17 34.8 +0.5**
baz=172
D63A Stockholm 75.66 1 P **P** **11 17 35.9 +1.4**
baz=182
D62A Allapoint, All 75.69 1 P **P** **11 17 36.1 +1.4**
baz=181
BC3 Big Chuckawall 75.70 322 P **P** **11 17 37.3 +2.1**
baz=140,SNR=7.2
D57A Chemin Vers le 75.70 357 P **P** **11 17 35.6 +0.8**
baz=176
D58A Chemin du LacG 75.74 358 P **P** **11 17 36.1 +1.1**
baz=177
D55A Sainte-Anne-du 75.78 356 P **P** **11 17 35.6 +0.4**
baz=175
E48A Lockeyer 75.89 351 P **P** **11 17 36.1 +0.3**
baz=169
IRM Iron Mountain 75.92 323 P **P** **11 17 38.3 +1.9**
baz=140
D54A Lac Fusel, La 76.00 355 P **P** **11 17 36.3 -0.1**
baz=174
D53A Lac Vacive, Po 76.00 355 P **P** **11 17 37.1 +0.6**
baz=173
ISCO Idaho Springs 76.01 332 P **P** **11 17 39.0 +1.9**
baz=148
E47A Iron Bridge 76.02 351 P **P** **11 17 36.9 +0.4**
baz=168,SNR=7.1
SMCO Snowmass 76.05 331 IAmb IAmb 11 17 40.6
comp=Z,9.4nm,0.9s
TPFO Pinon Flats 76.21 321 P **P** **11 17 40.5 +2.4**
baz=139
U15A North Rim 76.23 326 IAmb IAmb 11 17 41.7
comp=Z,8.1nm,1.1s
BELC Belle Mtn. Jos 76.26 322 P **P** **11 17 40.6 +2.2**
baz=140
D50A G1974 Best Tow 76.29 353 P **P** **11 17 38.4 +0.3**
baz=171
ECSD EROS Data Cent 76.35 340 IAmb IAmb 11 17 39.9
comp=Z,11nm,0.8s
ECSD EROS Data Cent 76.35 340 P **P** **11 17 39.2 +0.7**
baz=156,SNR=11
D48A Paudash Townsh 76.53 352 P **P** **11 17 39.5 +0.1**
baz=169
D46A Sault St. Mari 76.56 350 P **P** **11 17 39.5 0.0**
baz=167
D47A Chapleau 76.58 351 P **P** **11 17 39.5 -0.3**
baz=168
MURC Murrieta 76.61 321 P **P** **11 17 42.6 +2.3**
baz=139
GMRC Granite Mounta 76.67 323 P **P** **11 17 42.9 +2.2**
baz=140,SNR=6.1
BBRC Big Bear Solar 76.96 322 P **P** **11 17 45.0 +2.6**
baz=139
HEC Hector,Ludlow 77.07 322 P **P** **11 17 45.2 +2.4**
baz=140,SNR=7.5
PHWY Pilot Hill 77.23 333 P **P** **11 17 44.8 +0.9**
TUQ Turquoise Moun 77.31 323 P **P** **11 17 46.5 +2.3**
baz=140,SNR=5.3
BFSC Mount Baldy Ra 77.34 321 P **P** **11 17 46.4 +2.0**
baz=139
O20A White River Ci 77.39 331 IAmb IAmb 11 17 47.5
comp=Z,9.4nm,0.9s
O20A White River Ci 77.39 331 P **P** **11 17 46.8 +2.1**
baz=146,SNR=6.7
MAW Mawson 77.50 163 P **P** **11 17 45.2 +0.5**
GSC Goldstone, Bar 77.68 322 P **P** **11 17 47.9 +1.6**
GSC Goldstone, Bar 77.68 322 P **P** **11 17 48.3 +2.1**
baz=139
DECC Green Verdugo 77.73 321 P **P** **11 17 48.8 +2.4**
baz=138
LSQQ Lebel-sur-Quev 77.91 355 P **P** **11 17 47.3 +0.2**
baz=174
EDW2 Edwards Air Fo 78.00 321 P **P** **11 17 49.6 +1.6**
baz=138
LRMC Laurel Mtn Rad 78.28 322 P **P** **11 17 51.7 +2.1**
baz=139
FURC Furnace Creek, 78.59 323 P **P** **11 17 53.4 +2.3**
baz=139
MPMC Manual Prospec 78.61 322 P **P** **11 17 53.3 +1.8**
baz=139
TPNV Topopah Spring 78.63 324 IAmb IAmb 11 17 54.9
comp=Z,12nm,1.3s
TPNV Topopah Spring 78.63 324 P **P** **11 17 54.1 +2.5**
baz=140,SNR=6.5
K22A Casper 78.80 333 IAmb IAmb 11 17 56.1
comp=Z,19nm,1.4s
K22A Casper 78.80 333 P **P** **11 17 54.2 +1.9**
baz=148
ISA Isabella, Lake 78.85 322 P **P** **11 17 55.0 +2.3**
baz=138
TSUM Tsumeb 78.90 106 pP 11 18 25.9 +2.4
EYMN Ely 78.95 345 IAmb IAmb 11 17 54.0
comp=Z,9.2nm,1.1s
EYMN Ely 78.95 345 P **P** **11 17 53.5 +0.6**
baz=161
PKM Mcpherson Peak 79.02 320 P **P** **11 17 56.1 +2.3**
baz=137
RSSD Black Hills 79.12 336 P **P** **11 17 55.8 +1.7**
baz=150
CWC Cottonwood Cre 79.21 322 P **P** **11 17 56.4 +1.7**
baz=139
VES Vestal, Richgr 79.31 321 P **P** **11 17 57.1 +2.0**
baz=138
R11A Troy Canyon, C 79.37 325 P **P** **11 17 57.6 +2.0**
baz=141,SNR=8.5
DUG Dugway, Tooele 79.47 328 P **P** **11 17 58.0 +1.9**
baz=143
HWUT Hardware Ranch 80.04 330 IAmb IAmb 11 18 01.2
comp=Z,10.0nm,0.9s
PDAR Pinedale Array 80.12 332 P **P** **11 18 00.4 +0.8**
comp=Z,1.5nm,0.6s,baz=131,slow=6.4,SNR=14
AGMN Agassiz Nation 80.33 343 IAmb IAmb 11 18 01.6
comp=Z,7.7nm,0.8s
AGMN Agassiz Nation 80.33 343 P **P** **11 18 00.7 +0.4**
baz=157,SNR=6.9
MLAC Mammoth, Mammo 80.50 323 P **P** **11 18 04.1 +2.3**
baz=138
NVAR Mina Array Bea 80.82 324 P **P** **11 18 05.0 +1.6**
comp=Z,2.9nm,0.8s,baz=157,slow=6.1,SNR=16
TOA0 Torodi Ar. Sit 80.83 70 P **P** **11 18 03.4 -0.4**
TOA0 IAmb IAmb 11 18 04.5
comp=Z,7.5nm,0.7s
TORD Torodi Ar. Bea 80.83 70 P **P** **11 18 03.6 -0.1**
comp=Z,5.5nm,0.6s,baz=262,slow=4.8,SNR=24
TORD pP **pP** **11 18 35.5 +1.6**
comp=Z,5.1nm,0.8s,baz=259,slow=5.2,SNR=7.4
BOSA Boshof 80.85 118 P **P** **11 18 03.7 -0.2**
comp=Z,4.5nm,0.8s,baz=145,slow=3.0,SNR=6.4
BOSA Boshof 80.85 118 P **P** **11 18 02.9 -1.0**
YERR Yerington 81.72 323 IAmb IAmb 11 18 10.9
comp=Z,9.2nm,0.9s
ULM Lac du Bonnet 82.14 344 P **P** **11 18 10.1 +0.3**
comp=Z,8.6nm,0.8s,baz=139,slow=6.0,SNR=22
ULM Lac du Bonnet 82.14 344 IAmb IAmb 11 18 10.8
comp=Z,11nm,1.0s
RUBR Rubicon Trail 82.25 323 IAmb IAmb 11 18 13.8
comp=Z,11nm,1.0s
PAHR Pah Rah Range 82.33 324 P **P** **11 18 12.8 +1.6**
PAHR IAmb IAmb 11 18 14.1
comp=Z,12nm,1.0s
LBTB Lobatse 82.81 114 P **P** **11 18 13.7 -0.5**
LBTB IAmb IAmb 11 18 15.1
comp=Z,11nm,1.3s
DGMT Dagmar 82.95 338 P **P** **11 18 15.5 +1.4**
baz=150
ORV Oroville 83.33 322 IAmb IAmb 11 18 18.9
comp=Z,12nm,1.1s
EGMT Eagleton 84.54 334 P **P** **11 18 22.9 +0.6**
baz=146
J08A Circle Bar Ran 84.60 327 IAmb IAmb 11 18 25.2
comp=Z,10.0nm,0.9s
I05D Terrebonne, OR 86.72 326 P **P** **11 18 34.9 +1.8**
baz=137
FCC Fort Churchill 89.67 348 IAmb IAmb 11 18 48.3
comp=Z,8.7nm,0.8s
ASAR Alice Springs 122.85 206 PKP **PKPdf** **11 24 45.0 -0.4**
comp=Z,1.6nm,0.7s,baz=139,slow=1.8,SNR=20
WRA Warramunga Arr 126.01 209 PKP **PKPdf** **11 24 51.5 -0.1**
comp=Z,3.9nm,0.6s,baz=160,slow=1.7,SNR=53
PETK Petropavlovsk- 137.73 318 PKP **PKiKP** **11 25 13.6 -0.9**
comp=Z,8.7nm,1.1s,baz=169,slow=1.5,SNR=3.5
YAK Yakutsk 144.47 344 PKPbc 11 25 23.5 +0.4
KAPI Kappang 144.95 197 **PKPdf** **11 25 26.6 0.0**
KK31 Karatay Array 145.41 55 **PKPdf** **11 25 26.7 +0.1**
KKAR Karatay Array 145.41 55 **PKPdf** **11 25 26.6 0.0**
EKS2 Erkin-Say 147.85 55 P **PKPbc** **11 25 35.0 +1.0**
SNR=7.9
AML Almayashu 147.91 56 P **PKPdf** **11 25 32.9 +1.6**
SNR=6.0
KURK Kurchatov 147.93 39 **PKPbc** **11 25 34.2 +0.5**
AAK Ala-Archa 148.37 55 P **PKiKP** **11 25 36.6 -0.3**
SNR=10
AAK Ala-Archa 148.37 55 **PKPdf** **11 25 32.4 +0.6**
AAK **PKiKP** **11 25 36.6 -0.3**
CHMS Chumysh 148.46 54 P **PKiKP** **11 25 36.4 -0.5**
SNR=6.3
UCH Uchtor 148.48 56 P **PKiKP** **11 25 37.2 -0.3**
SNR=14
KBK Karagaybulak 148.69 55 P **PKiKP** **11 25 37.6 0.0**
SNR=6.2
ZALV Zalesovo Beam 149.01 29 PKPbc **PKPbc** **11 25 35.5 -0.8**
comp=Z,11nm,0.6s,baz=300,slow=3.5,SNR=33
ZALV pPKPbc **pPKPbc** **11 26 08.7 +0.7**
comp=Z,3.0nm,0.6s,baz=288,slow=2.9,SNR=2.4
ULHL Ulahol 149.72 55 P **PKiKP** **11 25 40.2 +0.4**
SNR=6.8
KSH Kashi 150.11 60 PKPbc **PKiKP** **11 25 40.3 -0.3**
KSH sPKP 11 26 16.3
KSH PKS **PKSdf** **11 29 04.8 -4.7**
KSH PP **PP** **11 29 10.4 -5.3**
KSH SKS **SKSdf** **11 32 33.4 +1.1**
KSH Kashi 150.11 60 SKKS **SKKSac** **11 35 58.3 +2.4**
KSH AMB AMB
comp=Z,180nm,4.6s
KSH LR LR
comp=N,52nm,6.3s
KSH LR LR
comp=E,31nm,8.4s
KSH LR LR
comp=Z,89nm,7.1s
MAKZ Makanchi 151.81 43 **PKPbc** **11 25 43.0 -0.4**
MK31 Makanchi Array 152.01 43 **PKPdf** **11 25 36.7 -0.4**
MK31 PKPbc **PKPbc** **11 25 43.5 -0.2**
MKAR Makanchi Array 152.01 43 PKP **PKPdf** **11 25 37.7 +0.5**
comp=Z,0.4nm,0.7s,baz=325,slow=1.5,SNR=4.3
MKAR PKPbc **PKPbc** **11 25 43.7 -0.1**
comp=Z,6.1nm,0.8s,baz=312,slow=2.2,SNR=49
MKAR pPKPbc **pPKPbc** **11 26 15.7 +0.4**
comp=Z,2.3nm,0.7s,baz=315,slow=2.6,SNR=5.1
KLR Kul'dur 153.81 327 PKPbc **PKPbc** **11 25 47.2 -0.4**
comp=Z,1.3nm,0.5s,baz=34,slow=2.5,SNR=8.4
WMQ Urumqi 156.81 44 *e*P **PKPdf** **11 25 43.8 -0.2**
SONM Songino Array 160.94 7 PKP **PKPdf** **11 25 48.6 -0.2**
comp=Z,0.9nm,0.9s,baz=269,slow=2.4,SNR=6.0
SONM PKPab **sPKPdf** **11 26 32.4 -0.1**
comp=Z,1.5nm,0.8s,baz=337,slow=3.9,SNR=9.6
CMAR Chiang Mai Arr 165.45 134 PKP **PKPdf** **11 25 53.5 -0.2**
comp=Z,0.5nm,0.4s,baz=276,slow=1.6,SNR=4.4
CMAR PKPab **PKPab** **11 26 50.1 -2.3**
comp=Z,0.6nm,0.4s,baz=219,slow=15,SNR=5.1
GTA Gaotai 166.60 36 PKP **PKPdf** **11 25 54.9 +0.6**
GTA pPKP pPKPdf 11 26 23.3 -2.7
GTA sPKP 11 26 33.9
HHC Hu-ho-hao-te 168.07 354 *e*P **PKPdf** **11 25 53.3 -1.9**
LZH Lanzhou 171.19 35 *e*PKP **PKPdf** **11 25 58.5 +1.2**
LZH pPKP pPKPdf 11 26 23.6 -5.8
LZH sPKP 11 26 33.3
NJ2 Nanjing 171.77 294 *e*P **PKPdf** **11 25 57.3 -0.2**
CD2 Chengdu 174.24 69 PKP **PKPdf** **11 25 57.3 -1.3**

SJA 17 11:20:40.3±1.0, 21.73S×68.82W, h126km±7km, ML3.3, MW3.4
GUC 17 11:20:41.2±0.7, 21.77S×68.81W, h120km±4km, ML3.3
ISC 17 11:20:42.0±1.6, 21.77S±0.04×68.83W±0.06, h122km±12km, n20, σ0.37/36, Chile-Bolivia border region

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)

PB09 IPOC Station P 0.38 266 *e*P **Pn** **11 20 59.4 -0.3**
PB09 *i*S **Sn** **11 21 13.1 -0.1**
PB09 IAML 11 21 14.8
comp=N,586nm,0.2s
PB09 IPOC Station P 0.38 266 *i*P **Pn** **11 20 59.5 -0.3**
PB09 *e*S **Sn** **11 21 12.9 -0.2**
PB03 IPOC Station P 0.90 252 *e*P **Pn** **11 21 03.5 0.0**
PB03 *i*S **Sn** **11 21 19.8 +0.1**
PB03 IAML 11 21 20.8
comp=E,968nm,0.3s
PB01 IPOC Station P 0.95 320 *e*P **Pn** **11 21 03.6 -0.3**
PB01 *i*S **Sn** **11 21 20.3 0.0**
PB01 IAML 11 21 22.2
comp=E,2µm,0.1s
PB07 IPOC Station P 0.98 272 *e*P **Pn** **11 21 04.5 +0.2**
PB07 *i*S **Sn** **11 21 21.6 +0.6**
PB07 IAML 11 21 23.4
comp=E,780nm,0.5s
PB02 IPOC Station P 1.09 294 *e*P **Pn** **11 21 05.3 +0.1**
PB02 *i*S **Sn** **11 21 23.2 +0.4**
PB02 IAML 11 21 25.2
comp=N,955nm,0.3s
PB06 IPOC Station P 1.16 216 *e*P **Pn** **11 21 05.9 -0.1**
PB06 *i*S **Sn** **11 21 24.1 -0.1**
PB06 IAML 11 21 24.8
comp=E,1µm,0.4s
PB06 IPOC Station P 1.16 216 *i*P **Pn** **11 21 06.0 0.0**
PB06 *e*S **Sn** **11 21 24.1 -0.1**
PB04 IPOC Station P 1.34 245 *e*P **Pn** **11 21 08.1 0.0**
PB04 *i*S **Sn** **11 21 28.2 +0.4**
PB04 IPOC Station P 1.34 245 *i*P **Pn** **11 21 07.9 -0.1**
PB04 *e*S **Sn** **11 21 27.7 0.0**
PB04 IAML 11 21 29.7
comp=Z,316nm,0.1s
PB15 IPOC Station P 1.55 202 *i*P **Pn** **11 21 10.6 +0.2**
PB15 *e*S **Sn** **11 21 32.9 +0.9**
PB08 IPOC Station P 1.65 349 *e*P **Pn** **11 21 12.0 +0.2**
PB08 *i*S **Sn** **11 21 34.8 +0.5**
PB05 IPOC Station P 1.67 229 *i*P **Pn** **11 21 11.5 -0.1**
PB05 *e*S **Sn** **11 21 33.7 -0.5**
TA01 Diego Aracena 1.74 313 *e*P **Pn** **11 21 12.0 -0.4**
TA01 *i*S **Sn** **11 21 35.6 +0.1**
GO01 Chusmiza 2.12 351 *e*P **Pn** **11 21 17.5 -0.1**
GO01 *i*S **Sn** **11 21 45.4 +0.7**
PB11 IPOC Station P 2.14 339 *e*P **Pn** **11 21 16.9 -0.6**
PB11 *i*S **Sn** **11 21 44.4 -0.3**
PB10 IPOC Station P 2.35 222 *i*P **Pn** **11 21 19.7 -0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YJA	Yavi	3.11	98	i P	Pn	11 21 29.7	-0.4
HJA	Humahuaca	3.47	115	i P	Pn	11 21 35.4	+0.4
AZAP	Zapla	4.24	126	i P	Pn	11 21 44.7	-0.3

BJI **17** *11:34:05.1±0.0, 41°.22N×84°.39E, h11km, mb4.0/4, ML3.9/10, Ms3.8/6, Ms7 3.8/3*
IDC **17** *11:34:05.4±1.2, 41°.49N×84°.87E, h0km, mb3.6/5, mb1 3.8/10, mb1mx3.5/59, mbtmp3.7/10, ML3.3/5, MS2.2/6, Ms1 3.2/6, ms1mx2.8/47, Error ellipse: s-maj=30.2km s-min=15.4km az=64.0*
NNC **17** *11:34:08.9±5.7, 41°.45N×84°.24E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=51.5km s-min=36.4km az=140.0*
ISC 17 11:34:04.9±0.9, **41°.27N**±0°.07×**84°.54E**±0°.06, **h10**km, **n23**, σ**3§02**/26, **mb3.6**/3, **9C-1D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	3.45	41	ePg	Pb	11 35 06.3	+0.2
WMQ				Sn	Sb	11 35 50.8	+2.6
WMQ				smax	smax		
	comp=N,260nm,1.1s						
WMQ				smax	smax		
	comp=E,320nm,1.3s						
WMQ				LR	LR		
	comp=N,1μm,4.0s						
WMQ				LR	LR		
	comp=E,250nm,3.9s						
PDGK	Podgornoye	4.27	300	⇑Pn	Pn	11 35 11.0	+0.9
	11nm,0.6s						
PDGK				⇑Pg	Pg	11 35 25.2	-1.5
	54nm,0.7s						
PDGK				⇑Lg	Lg	11 36 07.6	
	426nm,1.1s						
MK31	Makanchi Array	5.75	344	Pn	Pn	11 35 30.9	+0.6
	2.1nm,0.6s,baz=156,slow=13,SNR=29						
MK31				⇑Pg	Pb	11 35 48.2	+2.9
	10nm,0.6s,baz=159,slow=17,SNR=11						
MK31				⇑Lg	Lg	11 37 04.9	
	46nm,0.6s						
MKAR	Makanchi Array	5.75	344	Pn	Pn	11 35 31.8	+1.5
	0.8nm,0.3s,baz=150,slow=13,SNR=18						
MKAR				Pg	Pg	11 35 50.8	-4.2
	1.7nm,0.3s,baz=165,slow=17,SNR=10						
MKAR				Lg	Lg	11 37 02.7	
	2.9nm,0.3s,baz=148,slow=24,SNR=5.1						
MKAR				LR	LR	11 37 58.3	
	comp=Z,143nm,20.8s,baz=164,slow=41						
MAKZ	Makanchi	5.83	342	⇑Pn	Pn	11 35 33.2	+1.8
	2.8nm,0.6s						
MAKZ				⇑Pg	Pb	11 35 51.2	+4.5
	16nm,0.9s						
MAKZ				⇑Lg	Lg	11 37 06.8	
	57nm,1.0s						
KSH	Kashi	6.77	258	Pn	Pn	11 35 50.5	+6.1
KSH				LR	LR		
	comp=Z,490nm,6.4s						
AAK	Ala-Archa	7.61	284	Pn	Pn	11 35 57.8	+1.9
	0.4nm,0.3s,baz=97,slow=14,SNR=7.4						
AAK				Sn	Sn	11 37 19.5	-2.8
	0.4nm,0.3s,baz=223,slow=22,SNR=3.8						
AAK				Lg	Lg	11 38 02.6	
	0.4nm,0.3s,baz=198,slow=18,SNR=2.3						
KURBB	Kurchatov Arra	10.24	338	Pn	Pn	11 36 32.3	+0.5
	0.1nm,0.3s,baz=153,slow=12,SNR=12						
KURBB				Sn	Sn	11 38 20.0	-6.6
	0.1nm,0.3s,baz=44,slow=26,SNR=5.0						
KURBB				Lg	Lg	11 39 30.4	
	0.2nm,0.3s,baz=153,slow=33,SNR=5.0						
KURK	Kurchatov	10.30	338	⇑Pn	Pn	11 36 34.0	+1.4
	4.6nm,1.0s						
KURK				⇓Sn	Sn	11 38 33.9	+5.9
	12nm,0.9s						
CHCP	Chirah Chowk	11.74	233	P	Pn	11 36 50.9	-1.5
CEP	Cherat	12.47	237	P	Pn	11 37 00.0	-2.5
ZALV	Zalesovo Beam	12.68	1	Pn	Pn	11 37 02.5	-2.7
	0.9nm,0.3s,baz=178,slow=15,SNR=8.8						
ZALV				Sn	Sn	11 39 21.3	-5.1
	0.5nm,0.3s,baz=171,slow=20,SNR=5.0						
ZALV				Lg	Lg	11 40 40.8	
	0.6nm,0.3s,baz=183,slow=23,SNR=1.2						
ZALV				LR	LR	11 42 23.8	
	comp=Z,73nm,19.9s,baz=41,slow=40						
THW	Thamme Wali	13.26	234	P	Pn	11 37 10.5	-2.7
BVAR	Borovoye Array	15.16	326	Pn	Pn	11 37 38.7	-0.2
	0.2nm,0.3s,baz=126,slow=15,SNR=12						
BVAR				Lg	Lg	11 42 06.8	
	0.1nm,0.3s,baz=163,slow=32,SNR=3.6						
TLY	Talaya	16.73	45	LR	LR	11 44 44.4	
	comp=Z,67nm,21.1s,baz=212,slow=39						
SONM	Songino Array	16.87	60	Pn	Pn	11 38 00.7	-0.4
	0.2nm,0.3s,baz=253,slow=14,SNR=1.7						
SONM				Lg	Lg	11 43 03.2	
	0.2nm,0.3s,baz=331,slow=46,SNR=1.2						
SONM				LR	LR	11 44 59.2	
	comp=Z,151nm,18.1s,baz=182,slow=40						
AKTO	Aktyubinsk	20.53	305	P	Pn	11 38 45.5	+0.2
	2.3nm,0.6s,baz=98,slow=11,SNR=10						
GEYT	Alibeck	20.60	269	P	Pn	11 38 50.2	+3.8
	1.5nm,0.6s,baz=75,slow=17,SNR=2.2						
ARU	Arti	22.65	321	LR	LR	11 48 27.3	
	comp=Z,77nm,20.1s,baz=119,slow=38						
CMAR	Chiang Mai Arr	25.87	147	P	P	11 39 38.2	+1.4
	0.6nm,0.4s,baz=322,slow=9.9,SNR=6.6						
KIRV	Kirov	28.03	320	LR	LR	11 51 53.9	
	comp=Z,65nm,19.6s,baz=358,slow=38						
ARCES	ARCESS Array B	41.27	333	P	P	11 41 50.8	+0.9
	2.2nm,0.9s,baz=80,slow=10,SNR=1.1						
YKA	Yellowknife Ar	75.44	9	P	P	11 45 50.6	+2.1
	0.2nm,0.7s,baz=336,slow=5.7,SNR=3.7						

IDC **17** *11:44:32.3±1.8, 4°.14N×126°.70E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/41, mbtmp3.9/5, MS2.9/2, Ms1 2.9/2, ms1mx2.4/41, Error ellipse: s-maj=113.1km s-min=25.3km az=67.0*
NEIC **17** *11:44:37.2±0.9, 4°.14N±0°.07×126°.64E±0°.07, h35km±2km, mb4.1/11, Error ellipse: s-maj=15.1km s-min=8.5km az=45.0*
ISC 17 11:44:34.6±0.9, **4°.03N**±0°.07×**126°.8E**±0°.1, **h10**km, **n24**, σ**1§60**/23, **mb4.1**/10, **1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	3.23	339	Pn	Pn	11 45 23.8	-1.7
TNTI	Ternate	3.30	169	Pn	Pn	11 45 28.2	+1.8
KCP	Kidapawan	3.38	331	⇑eP	Pn	11 45 32.3	+4.7
KCP				i S	Sg	11 46 25.2	+1.8
LUWI	Luwuk	6.42	218	Pn	Pn	11 46 09.7	+0.4
SIJI	Sorong	6.64	137	LR	LR	11 48 50.0	
	comp=Z,70nm,20.6s,baz=127,slow=38						
BKB	Balikpapan	11.16	242	Pn	Pn	11 47 12.9	-1.5
KAPI	Kappang	11.38	218	LR	LR	11 52 13.3	
	comp=Z,74nm,18.6s,baz=92,slow=40						
SOEI	Soe	13.92	190	Pn	Pn	11 47 51.9	-0.2
KSM	Kuching	16.61	262	Pn	Pn	11 48 26.8	-1.0
KSM				IAmb	IAmb	11 48 45.1	
	comp=Z,6.0nm,0.8s						
JAGI	Jajag, Banyuwa	17.66	225		Pn	11 48 40.5	-0.5
KNRA	Kununurra	19.68	174	P	P	11 49 04.1	0.0
FITZ	Fitzroy Crossi	22.02	183	P	P	11 49 30.2	+0.9
	comp=Z,2.6nm,0.6s,baz=87,slow=13,SNR=2.3						
FITZ	Fitzroy Crossi	22.02	183	P	P	11 49 29.4	+0.1
FITZ				IAmb	IAmb	11 49 39.8	
	comp=Z,11nm,1.4s						
WB0	Warramunga Arr	24.82	163	P	P	11 49 57.3	+0.1
WB0				IAmb	IAmb	11 49 58.8	
	comp=Z,7.4nm,0.9s						
WRA	Warramunga Arr	24.97	163	P	P	11 49 58.0	-0.5
	comp=Z,3.6nm,0.8s,baz=341,slow=10,SNR=16						
WB2	Warramunga Arr	24.97	163	P	P	11 49 58.8	+0.2
WB2				IAmb	IAmb	11 50 00.3	
	comp=Z,5.7nm,0.8s						
AS31	Alice Springs	28.40	166	P	P	11 50 29.4	-0.1
ASAR	Alice Springs	28.40	166	P	P	11 50 29.9	+0.4
	comp=Z,0.5nm,0.8s,baz=343,slow=6.8,SNR=7.7						
STKA	Stephens Creek	38.41	159	P	P	11 51 56.9	+0.5
	comp=Z,4.1nm,0.8s,baz=327,slow=9.9,SNR=7.2						
STKA	Stephens Creek	38.41	159	P	P	11 51 57.0	+0.6
MK31	Makanchi Array	57.32	325	P	P	11 54 21.1	-1.8
MK31				IAmb	IAmb	11 54 27.6	
	comp=Z,1.9nm,1.4s						
MKAR	Makanchi Array	57.32	325	P	P	11 54 21.4	-1.4
	comp=Z,0.4nm,0.7s,baz=136,slow=8.7,SNR=4.2						
ZAA0	Zalesovo Array	60.33	333	P	P	11 54 41.5	-2.1
ZAA0				IAmb	IAmb	11 54 46.7	
	comp=Z,1.7nm,0.9s						
KURK	Kurchatov	61.50	327	P	P	11 54 49.4	-2.2
KURK				IAmb	IAmb	11 55 00.5	
	comp=Z,2.3nm,1.0s						

IDC **17** *12:12:01.1±0.6, 18°.04S×173°.13W, h0km, mb4.5/14, mb1 4.8/14, mb1mx4.6/26, mbtmp4.5/14, MS4.3/25, Ms1 4.3/25, ms1mx4.2/37, Error ellipse: s-maj=23.8km s-min=12.4km az=119.0*
BJI **17** *12:12:02.7±0.0, 17°.50S×173°.02W, h8km, mB5.5/18, mb5.0/25, Ms5.2/6, Ms7 4.9/2*
NEIC **17** *12:12:05.0±1.0, 18°.0S±0°.1×173°.1W±0°.1, h28km±4km, mb4.9/89, Error ellipse: s-maj=18.4km s-min=16.1km az=158.0*
GCMT **17** *12:12:09.1±0.2, 17°.78S±0°.02×172°.69W±0°.01, h17km, MW5.0/102, Moment Tensor Solution. s62,c84; s102,c151; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.85±.14; $M_{\theta\theta}$-0.58±.10; $M_{\phi\phi}$-3.27±.10; $M_{r\theta}$1.23±.26; $M_{\theta\phi}$-1.80±.06; $M_{\phi r}$1.53±.23; Best double couple: $M_0$4.46700×10^{16} NP1:ϕ_s200.00000°, δ33.00000°, λ80.00000°. NP2:ϕ_s32.00000°, δ58.00000°, λ96.00000°. Principal axes: T 4.3260, Plg76.0000°, Azm321.0000°; N 0.2850, Plg5.0000°, Azm209.0000°; P -4.6080, Plg13.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 17 12:12:05.1±0.4, **17°.85S**±0°.07×**173°.05W**±0°.08, **h26**km, **n204**, σ**1§40**/182, **mb4.8**/55, **MS4.4**/27, **12C-7D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	Niue	3.21	113	P	Pn	12 12 46.9	-6.9
	baz=2.9,SNR=46						
NIUE	Niue	3.21	113		Pn	12 12 46.9	-7.0
NIUE				Sn	Sn	12 13 19.4	-12
AFI	Afiamalu	4.10	18	Pn	Pn	12 12 59.4	-6.8
	6.1nm,0.3s,baz=238,slow=4.3,SNR=16						
AFI				LR	LR	12 14 36.7	
	comp=Z,1μm,19.2s,baz=167,slow=36						
AFI	Afiamalu	4.10	18		Pn	12 12 59.6	-6.6
MSVF	Nonsavu	8.48	269		Pn	12 14 12.7	+6.3
GLKZ	Green Lake	12.21	201	P	Pn	12 15 00.3	+2.9
RAR	Rarotonga	12.96	107	Pn	Pn	12 15 00.6	-7.1
	3.1nm,0.3s,baz=252,slow=8.4,SNR=8.6						
RAR				LR	LR	12 19 40.7	
	comp=Z,610nm,18.1s,baz=293,slow=35						
RAR	Rarotonga	12.96	107		Pn	12 15 01.4	-6.2
SANVU	Saraoutou	19.07	274	P	P	12 16 24.8	-1.0
SANVU				IAmb	IAmb	12 16 42.6	
	comp=Z,99nm,1.2s						
DZM	Mont Dzumac	19.73	254	eP	Pn	12 16 37.2	+2.6
	comp=Z,93nm,1.4s						
DZM				eLR	LR	12 21 14.9	
	comp=Z,2μm,24.1s						
DZM	Mont Dzumac	19.73	254	P	P	12 16 33.7	+0.7
	comp=Z,0.2nm,0.3s,baz=101,slow=17,SNR=5.2						
DZM				LR	LR	12 23 11.2	
	comp=Z,1μm,19.0s,baz=86,slow=34						
DZM	Mont Dzumac	19.73	254	P	P	12 16 31.3	-1.7
NOUC	Port Laguerre	19.86	254	P	P	12 16 32.9	-1.4
OUZ	Omahuta	20.99	212	P	Pn	12 16 48.9	-0.3
WMGZ	Waiomatatini S	21.26	199	P	P	12 16 55.2	+5.8
HAZ	Te Kaha	21.40	200	P	P	12 16 53.7	+2.7
HAZ				S	S	12 20 45.0	-2.2
RUGZ	Raukumara Rang	21.63	200	P	P	12 16 56.6	+3.1
MWZ	Matawai	22.01	200	P	P	12 17 01.2	+3.7
MWZ				S	S	12 20 55.2	-4.0
URZ	Urewera	22.08	201	P	P	12 16 56.5	-1.7
	comp=Z,70nm,0.8s,baz=352,slow=2.1,SNR=23						
URZ				S	S	12 20 58.2	-2.2
	comp=Z,20nm,1.1s,baz=237,slow=24,SNR=4.0						
URZ	Urewera	22.08	201	P	P	12 16 57.2	-1.0
URZ	Urewera	22.08	201	P	P	12 16 59.3	+1.1
URZ				S	S	12 20 58.4	-2.0
OMRZ	Omania	22.21	203	P	P	12 17 02.4	+2.8
TOZ	Tahuroa Road	22.21	205	P	P	12 17 02.4	+2.8
RIGZ	Rimuhau	22.28	199	P	P	12 17 04.3	+3.9
PAE	Paea	22.35	93	eT	T	12 39 10.1	
	comp=Z,2.1nm,0.3s						
PPT2	Papeete2	22.36	93	eS	S	12 21 01.7	-4.4
	comp=Z,2μm,24.4s						
PPT2				eLR	LR	12 22 14.0	
	comp=Z,2μm,26.2s,baz=261						
PPT2	Papeete2	22.36	93	eT	T	12 39 22.2	
	comp=Z,2.6nm,0.4s						
PPT	Papeete	22.36	93	LR	LR	12 24 35.1	
	comp=Z,382nm,18.2s,baz=251,slow=34						
SNGZ	Shannon Statio	22.48	200	P	P	12 17 06.1	+3.5
RAHZ	Arahi	22.69	200	P	P	12 17 07.5	+2.8
MTHZ	Maungataniwha	22.71	201	P	P	12 17 07.4	+2.4
TLZ	Tolley Road	22.72	204	P	P	12 17 08.3	+3.2
TBI	Tubuai	22.74	108	eLQ	LQ	12 21 29.3	
	comp=Z,815nm,26.5s						
TBI				eLR	LR	12 22 15.5	
	comp=Z,2μm,29.8s,baz=290						
BKZ	Black Stump Fm	23.11	201	P	P	12 17 07.1	-2.1
BKZ				IAmb	IAmb	12 17 21.1	
	comp=Z,29nm,0.9s						
BKZ	Black Stump Fm	23.11	201	P	P	12 17 10.1	+0.9
HIZ	Hauiti	23.14	205	P	P	12 17 10.1	+0.7
HIZ	Hauiti	23.14	205	P	P	12 17 12.3	+2.9
NGZ	Ngauruhoe	23.43	203	P	P	12 17 14.1	+1.6
BHHZ	Black Hill Sta	23.55	201	P	P	12 17 14.6	+1.1
KRHZ	Kereru	23.58	201	P	P	12 17 15.3	+1.6
BHW	Baring Head	25.67	201	P	P	12 17 31.0	-1.8
THZ	Tophouse	26.70	204	P	P	12 17 41.4	-0.9
THZ				IAmb	IAmb	12 17 59.4	
	comp=Z,25nm,0.7s						
HNR	Honiara	27.51	284	LR	LR	12 27 18.5	
	comp=Z,2μm,18.1s,baz=120,slow=33						
RPZ	Rata Peaks	29.07	204	P	Pn	12 18 09.3	+5.9
	comp=Z,17nm,0.6s,baz=310,slow=3.0,SNR=9.2						
TAOE	Nuku Hiva Isla	33.19	79	eT	T	12 53 18.2	
	comp=Z,106nm,0.3s						
KRVT	Keravat (AS076	36.73	287	LR	LR	12 32 40.8	
	comp=Z,1μm,19.8s,baz=150,slow=34						
TOO	Toolangi	41.23	233	P	P	12 19 47.1	-0.9
STKA	Stephens Creek	43.15	242	P	P	12 20 02.0	-1.8
	comp=Z,3.7nm,0.9s,baz=102,slow=9.4,SNR=5.6						
STKA				PcP	PcP	12 21 55.1	+1.9
	comp=Z,2.8nm,0.9s,baz=81,slow=6.3,SNR=3.1						
STKA				LR	LR	12 36 20.8	
	comp=Z,350nm,18.1s,baz=56,slow=34						
STKA	Stephens Creek	43.15	242	P	P	12 20 02.5	-1.3
BBOO	Buckleboo	47.91	242	P	P	12 20 39.6	-1.8
BBOO				IAmb	IAmb	12 20 44.1	
	comp=Z,13nm,1.1s						
WB0	Warramunga Arr	49.63	259	P	P	12 20 53.2	-1.6
WB0				IAmb	IAmb	12 20 56.7	
	comp=Z,16nm,0.9s						
WB2	Warramunga Arr	49.64	259	P	P	12 20 53.1	-1.8
WRAB	Tennant Creek	49.65	259	P	P	12 20 53.4	-1.6
WRAB				IAmb	IAmb	12 20 56.9	
	comp=Z,16nm,0.9s						
WRA	Warramunga Arr	49.66	259	P	P	12 20 53.1	-1.9
	comp=Z,12nm,0.9s,baz=93,slow=7.1,SNR=28						
WRA				LR	LR	12 40 43.4	
	comp=Z,727nm,19.1s,baz=100,slow=35						
AS31	Alice Springs	49.71	254	P	P	12 20 54.3	-1.2
ASAR	Alice Springs	49.72	254	P	P	12 20 54.1	-1.4
	comp=Z,26nm,0.9s,baz=86,slow=8.4,SNR=109						
ASAR				PcP	PcP	12 22 18.3	+1.8
	comp=Z,2.0nm,0.8s,baz=105,slow=4.4,SNR=4.4						
ASAR				LR	LR	12 41 33.7	
	comp=Z,306nm,18.2s,baz=84,slow=36						
WRKA	Warakurna	54.71	252	P	P	12 21 32.1	-0.5
	baz=55,SNR=12						
KNRA	Kununurra	55.57	263	P	P	12 21 37.1	-1.7
KNRA				IAmb	IAmb	12 21 40.4	
	comp=Z,17nm,0.9s						
FITZ	Fitzroy Crossi	58.06	259	LR	LR	12 45 51.2	
	comp=Z,429nm,18.5s,baz=101,slow=35						
VNDA	Vanda	60.99	186	LR	LR	12 45 31.3	
	comp=Z,74nm,19.8s,baz=360,slow=33						
PSAD3	Pilbara Seismi	62.90	254	P	P	12 22 29.1	-0.4
KAPI	Kappang	66.78	272	LR	LR	12 50 28.7	
	comp=Z,121nm,19.4s,baz=88,slow=35						
CASY	Casey	68.34	205	P	P	12 23 03.2	-0.7
CASY				IAmb	IAmb	12 23 05.7	
	comp=Z,16nm,1.2s						
MJAR	Matsushiro Arr	71.02	320	P	P	12 23 20.5	-0.3
	comp=Z,3.8nm,1.0s,baz=149,slow=5.2,SNR=4.9						
MJAR				LR	LR	12 48 49.9	
	comp=Z,204nm,22.0s,baz=100,slow=31						
JAGI	Jajag, Banyuwa	71.14	267	P	P	12 23 21.4	-0.7
QSPA	South Pole Qui	72.21	180	P	P	12 23 26.3	-1.4
QSPA				IAmb	IAmb	12 23 34.6	
	comp=Z,11nm,1.0s						
ISA	Isabella, Lake	74.17	44	P	P	12 23 40.2	+0.5
ISA				IAmb	IAmb	12 23 52.7	
	comp=Z,16nm,1.5s						
PFO	Pinyon Flats O	74.35	46	P	P	12 23 40.3	-0.5
PFO				IAmb	IAmb	12 23 53.3	
	comp=Z,11nm,1.2s						
XPFO	Pion Flat	74.35	46	P	P	12 23 40.9	0.0
XPFO				IAmb	IAmb	12 23 53.3	
	comp=Z,9.7nm,1.2s						
CMB	Columbia Colle	74.38	41	P	P	12 23 41.2	+0.4
CMB				IAmb	IAmb	12 23 53.4	
	comp=Z,14nm,1.4s						
SMRI	Semarang	75.07	267	P	P	12 23 44.8	-0.5
GSC	Goldstone, Bar	75.07	45	P	P	12 23 45.5	+0.6
GSC				IAmb	IAmb	12 23 57.4	
	comp=Z,9.7nm,1.1s						
YERR	Yerington	75.67	40	P	P	12 23 48.6	+0.1
113A	Mohawk Valley,	75.77	48	P	P	12 23 49.1	+0.3
NVAR	Mina Array Bea	75.92	41	P	P	12 23 50.8	+0.8
	comp=Z,5.1nm,1.2s,baz=224,slow=8.0,SNR=11						
NVAR				LR	LR	12 55 35.9	
	comp=Z,146nm,18.1s,baz=245,slow=34						
NV11	Mina Array Sit	76.02	41	P	P	12 23 50.8	+0.4
NV11				IAmb	IAmb	12 24 03.1	
	comp=Z,18nm,1.4s						
PAHR	Pah Rah Range	76.02	40	P	P	12 23 51.0	+0.6
PAHR				IAmb	IAmb	12 23 56.3	
	comp=Z,12nm,1.4s						
214A	Organ Pipe Nat	76.03	50	P	P	12 23 50.8	+0.4
KVN	Kaiserville	76.42	41	P	P	12 23 53.5	+0.8
SHPR	Sheep Range	76.85	44	P	P	12 23 55.1	0.0
W13A	Hualapai Mount	76.94	46	P	P	12 23 56.2	+0.4
TUC	Tucson	77.68	50	P	P	12 23 60.0	+0.1
KSM	Kuching	77.75	276	P	P	12 24 00.6	+0.1
KSRS	Korea Array	78.13	316	P	P	12 24 02.9	+0.8
	comp=Z,5.0nm,1.0s,baz=136,slow=6.7,SNR=7.7						
KSRS				LR	LR	12 55 40.5	
	comp=Z,136nm,19.0s,baz=119,slow=34						
WVOR	Wild Horse Val	78.14	38	P	P	12 24 02.4	+0.2
WVOR				IAmb	IAmb	12 24 05.7	
	comp=Z,15nm,1.4s						
X16A	Lo Mia Camp, P	78.29	48	P	P	12 24 04.3	+1.0
319A	Douglas	78.33	52	IAmb	IAmb	12 24 00.9	
	comp=Z,8.9nm,0.7s						
KNB	Kanab	78.70	45	P	P	12 24 06.0	+0.6
U15A	North Rim	78.75	46	P	P	12 24 06.7	+0.8
U15A				IAmb	IAmb	12 24 22.9	
	comp=Z,16nm,1.4s						
J08A	Circle Bar Ran	78.80	37	P	P	12 24 05.9	+0.1
J08A				IAmb	IAmb	12 24 08.6	
	comp=Z,6.6nm,0.9s						
ELK	Elko	79.19	41	P	P	12 24 09.0	+0.8
ELK				IAmb	IAmb	12 24 14.7	
	comp=Z,12nm,1.5s						
USRK	Ussuriysk Ar.	79.53	323	P	P	12 24 10.8	+1.2
	comp=Z,5.5nm,1.1s,baz=111,slow=15,SNR=5.9						
USRK				LR	LR	12 58 31.6	
	comp=Z,229nm,18.4s,baz=126,slow=35						
BMO	Blue Mountains	80.37	37	P	P	12 24 14.9	+0.6
MFID	Camas Ranch	80.38	38	P	P	12 24 15.1	+0.7
MFID				IAmb	IAmb	12 24 21.0	
	comp=Z,9.7nm,1.2s						
DUG	Dugway, Tooele	80.42	42	P	P	12 24 15.1	+0.3
MNTX	Cornudas Mount	81.42	53	P	P	12 24 20.6	+0.5
TX31	Lajitas Ar. Si	81.70	56	P	P	12 24 22.6	+0.9
TX32	Lajitas Array	81.70	56	P	P	12 24 22.2	+0.5
TX32				IAmb	IAmb	12 24 29.6	
	comp=Z,11nm,1.4s						
TXAR	Lajitas Array	81.70	56	P	P	12 24 23.4	+1.7
	comp=Z,1.3nm,1.0s,baz=216,slow=6.2,SNR=8.5						
TXAR				LR	LR	12 52 38.7	
	comp=Z,44nm,20.9s,baz=0.0,slow=30						
NJ2	Nanjing	81.90	307	eP	P	12 24 23.3	+0.7
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ANMO	Albuquerque	82.12	50	P	P	12 24 25.0	+1.1
AHID	Auburn Hatcher	82.89	41	IAmb	IAmb	12 24 43.9	
	comp=Z,13nm,1.4s						
MCMT	McKenzie Canyo	82.94	38	P	P	12 24 28.7	+0.6
RND	Reindeer	83.17	11	P	P	12 24 29.0	+0.5
RND				IAmb	IAmb	12 24 42.2	
	comp=Z,9.0nm,0.9s						
S22A	4UR Ranch, Cre	83.18	47	IAmb	IAmb	12 24 42.9	
	comp=Z,10nm,1.1s						
REDW	Red Top Meadow	83.36	41	IAmb	IAmb	12 24 32.6	
	comp=Z,14nm,1.3s						
DLMT	Dillon	83.39	38	IAmb	IAmb	12 24 49.5	
	comp=Z,13nm,1.2s						
FXWY	Fox Creek	83.40	40	P	P	12 24 29.0	-1.5
FXWY				IAmb	IAmb	12 24 37.3	
	comp=Z,9.4nm,1.3s						
MCK	McKinley	83.45	11	P	P	12 24 31.3	+1.4
SNOW	Snow King Moun	83.47	40	P	P	12 24 29.7	-1.1
SNOW				IAmb	IAmb	12 24 37.7	
	comp=Z,12nm,1.1s						
FLWY	Flagg Ranch	83.84	40	IAmb	IAmb	12 24 37.1	
	comp=Z,15nm,1.1s						
PD31	Pinedale Array	83.86	42	P	P	12 24 33.0	+0.1
PD31				IAmb	IAmb	12 24 35.1	
	comp=Z,8.0nm,1.3s						
PDAR	Pinedale Array	83.86	42	P	P	12 24 33.2	+0.4
	comp=Z,4.2nm,1.1s,baz=208,slow=2.9,SNR=15						
PDAR				LR	LR	13 00 46.4	
	comp=Z,136nm,18.2s,baz=254,slow=35						
H17A	Grant Village	84.08	40	P	P	12 24 33.5	-0.4
H17A				IAmb	IAmb	12 24 39.6	
	comp=Z,6.3nm,1.1s						
SDCO	Great Sand Dun	84.11	47	P	P	12 24 33.7	-0.6
QIZ	Qiongzhong	84.13	292	P	P	12 24 35.6	+1.2
QIZ				S	S	12 34 57.8	-0.2
QIZ				LR	LR		
	comp=Z,240nm,20.6s						
RIDG	Independent Ri	84.23	12	P	P	12 24 34.3	+0.3
LKWY	Lake	84.27	40	IAmb	IAmb	12 24 43.0	
	comp=Z,10.0nm,1.1s						
WRH	Wood River Hil	84.28	11	P	P	12 24 34.2	+0.1
MLY	Manley	84.36	9	P	P	12 24 34.4	-0.2
MLY				IAmb	IAmb	12 24 48.8	
	comp=Z,14nm,1.4s						
COLA	College	84.69	11	P	P	12 24 36.3	+0.1
IL31		84.77	11	P	P	12 24 36.6	0.0
ILAR	Eielson Array	84.77	11	P	P	12 24 36.8	+0.1
	comp=Z,4.6nm,1.1s,baz=220,slow=5.2,SNR=12						
ILAR				LR	LR	12 57 30.9	
	comp=Z,99nm,18.6s,baz=190,slow=32						
PRP	Porcupine Dome	85.69	11	P	P	12 24 41.5	+0.1
DAWY	Dawson	85.70	14	P	P	12 24 41.1	-0.2
DAWY				IAmb	IAmb	12 24 43.3	
	comp=Z,12nm,1.3s						
EGAK	Eagle	85.91	13	P	P	12 24 42.6	+0.3
EGAK				IAmb	IAmb	12 24 44.9	
	comp=Z,11nm,1.2s						
BKNI	Bangkinang	86.20	272	P	P	12 24 44.7	-0.2
BILL	Bilibino	86.97	352	P	P	12 24 46.4	-1.1
PLCA	Paso Flores	87.63	132	P	P	12 24 51.8	+0.3
	comp=Z,1.5nm,0.9s,baz=198,slow=4.4,SNR=3.3						
PLCA				LR	LR	12 57 59.7	
	comp=Z,156nm,18.3s,baz=277,slow=32						
PLCA	Paso Flores	87.63	132	P	P	12 24 50.9	-0.7
PLCA				IAmb	IAmb	12 25 05.4	
	comp=Z,6.8nm,1.3s						
RPSI	Rantau Prapat	88.94	273	P	P	12 24 57.8	-0.3
SYO	Syowa Base	90.28	191	⇑ePcP	PcP	12 25 05.0	+0.6
XAN	Xi'an	90.33	306	P	P	12 25 06.3	+2.1
XAN				pP	sP	12 25 13.3	-1.2
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HHC	Hu-ho-hao-te	90.93	313	eP	P	12 25 07.4	+0.5
HHC				S	SKKSac	12 35 52.3	+0.1
HHC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,61nm,5.3s						
HHC				LR	LR		
	comp=Z,180nm,16.1s						
HHC				LR	LR		

	comp=Z,120nm,14.2s						
PBKT	Sadao Pong	91.28	287	P	P	12 25 07.5	-1.4
YKA	Yellowknife Ar	92.20	23	P	P	12 25 13.0	+0.9
	comp=Z,1.4nm,1.1s,baz=236,slow=4.4,SNR=8.4						
CD2	Chengdu	93.36	301	P	P	12 25 18.4	+0.1
MGMO	Mountain Grove	93.51	52	P	P	12 25 19.0	+0.1
CMAR	Chiang Mai Arr	93.69	288	P	P	12 25 21.8	+1.7
	comp=Z,1.4nm,0.5s,baz=101,slow=2.8,SNR=17						
CHTO	Chiang Mai	93.80	288	P	P	12 25 20.5	-0.1
CHTO				IAmb	IAmb	12 25 32.7	
	comp=Z,9.4nm,1.2s						
LZH	Lanzhou	94.94	306	eP	P	12 25 26.8	+1.2
LZH				pP	pP	12 25 30.0	-3.2
LZH				sP	sP	12 25 32.3	-3.7
LZH				PP	PP	12 29 11.5	-3.6
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH				pmax	pmax		
	comp=Z,53nm,4.3s						
LZH				LR	LR		
	comp=Z,250nm,17.6s						
LZH				LR	LR		
	comp=Z,270nm,18.2s						
ULM	Lac du Bonnet	95.61	39	LR	LR	13 06 47.3	
	comp=Z,208nm,18.2s,baz=280,slow=34						
SONM	Songino Array	96.88	318	LR	LR	13 07 32.1	
	comp=Z,75nm,18.4s,baz=116,slow=34						
LPAZ	La Paz	98.66	110	LR	LR	12 59 41.6	
	comp=Z,181nm,21.9s,baz=256,slow=29						
TLY	Talaya	99.74	321	LR	LR	13 08 16.6	
	comp=Z,125nm,19.2s,baz=108,slow=34						
ROSC	El Rosal	99.76	88	LR	LR	13 03 38.8	
	comp=Z,51nm,18.8s,baz=279,slow=31						
MKAR	Makanchi Array	112.77	314	PKiKP	PKiKP	12 30 40.1	+0.5
	comp=Z,0.6nm,0.9s,baz=46,slow=4.2,SNR=4.7						
KURK	Kurchatov	115.19	318		PKPdf	12 30 44.1	+0.1
LMN	Caledonia Moun	115.23	47		PKiKP	12 30 43.4	-0.9
BOOM	Boomskoye usch	117.23	309		PKPdf	12 30 47.9	-0.6
BRVK	Borovoye	120.06	321		PKPdf	12 30 53.1	-0.2
KMBO	Kilima Mbogo	144.71	241	PKP	PKPdf	12 31 41.8	+0.9
	comp=Z,8.8nm,0.9s,baz=99,slow=3.3,SNR=16						
KMBO	Kilima Mbogo	144.71	241		PKPbc	12 31 40.0	+0.2
SORM	Soroca	145.10	335	⇓P	PKiKP	12 31 52.4	+8.4
KWP	Kalwaria Pacla	145.84	342		PKPab	12 31 42.4	-0.1
OJC	Ojcow	146.10	345	eP	PKPab	12 31 43.8	+0.4
KSP	Ksiaz	146.25	349	eP	PKPab	12 31 44.7	+0.8
CLL	Collm	146.27	353	⇑iPKPbc	PKiKP	12 31 45.2	-1.2
	comp=Z,41nm,1.2s						
CLL				iPKiKP	sPKPab	12 31 55.6	+1.5
CLL	Collm	146.27	353		PKPab	12 31 43.7	-0.3
CHVC	Chvalec	146.53	349	⇑ePKP	PKiKP	12 31 46.4	-0.6
OSTC	Ostas	146.53	349	⇑ePKP	PKPab	12 31 45.0	-0.1
NIE	Niedzica	146.71	344	eP	PKPab	12 31 45.4	-0.4
BURAR	Bucovina Array	146.75	337	⇓P	PKiKP	12 31 47.0	-0.6
CRVS	Cervenica-Dubn	146.86	342	ePKP	PKPab	12 31 46.6	+0.2
MORC	Moravsky Berou	147.02	347	ePKP	PKPbc	12 31 46.2	+0.7
MORC	Moravsky Berou	147.02	347	⇑P	PKPab	12 31 46.7	-0.3
MORC	Moravsky Berou	147.02	347		PKPbc	12 31 44.7	-0.8
TESR	Tescani	147.10	335	⇑P	PKiKP	12 31 47.9	-0.4
TRPA	Tarpa	147.22	341	⇓P	PKPab	12 31 47.0	-0.7
GOPC	GO Pecny, Ondr	147.39	351	⇑ePKP	PKPab	12 31 48.4	0.0
CFR	Carcaliu	147.51	332	⇑P	PKiKP	12 31 49.1	0.0
VRI	Vrincioaia	147.59	334	⇑P	PKiKP	12 31 48.7	-0.6
VRAC	Vranov	147.66	348	ePKP	PKPbc	12 31 48.3	+1.0
VRAC	Vranov	147.66	348	⇓P	PKPab	12 31 59.5	+10
JAVC	Velka Javorina	147.86	347	ePKP	PKPab	12 31 49.7	-0.1
VYHS	Vyhne	147.93	345	ePKP	PKPab	12 31 50.6	0.0
KRUC	Moravsky	147.94	348	ePKP	PKPbc	12 31 48.5	+0.5
HARR	Harsova	147.98	331	⇑P	PKiKP	12 31 50.4	+0.3
CJR	Cluj-Napoca	148.10	338	⇑P	PKPab	12 31 51.0	-0.4
MLR	Muntele Rosu	148.21	334		PKPdf	12 31 45.9	+0.2
BR131	Keskin Array S	148.24	319		PKPbc	12 31 49.5	+0.2
BRTR	Keskin Array B	148.24	319	PKPbc	PKPbc	12 31 49.2	-0.1
	comp=Z,5.6nm,1.0s,baz=126,slow=1.7,SNR=18						
KHC	Kasperske Hory	148.34	352	ePKPAB	PKPab	12 31 53.6	+1.4
KHC	Kasperske Hory	148.34	352		PKPdf	12 31 46.8	+1.1
DRGR		148.34	339	⇓P	PKiKP	12 31 50.8	-0.1
MODS	Modra-Piesok	148.41	347	ePKP	PKPbc	12 31 46.5	+0.7
GERES	GERESS Array B	148.60	351	PKPbc	PKPbc	12 31 49.8	-0.1
	comp=Z,1.7nm,0.8s,baz=323,slow=0.7,SNR=7.3						
ARR	Arges	148.84	336	⇓P	PKiKP	12 31 53.2	+1.2
CONA	Conrad Observa	149.12	348	ePKiKP	PKPbc	12 31 51.6	+0.4
	comp=Z,10nm,1.4s						
SIRR	Siria	149.15	340	⇓P	PKiKP	12 31 53.0	+0.5
MOA	Molln	149.48	350	ePKPdf	PKPdf	12 31 46.9	-0.6
	comp=Z,4.4nm,1.3s						
MOA				ePKiKP	PKiKP	12 31 54.0	+0.9
	comp=Z,12nm,1.4s						
BZS	Buzias	149.73	339	⇑P	PKiKP	12 31 53.5	-0.2
ARSA	Arzberg	149.84	348	ePKPdf	PKPdf	12 31 48.0	-0.1
	comp=Z,4.6nm,1.1s						
ARSA				ePKiKP	PKiKP	12 31 54.8	+0.9
	comp=Z,5.3nm,1.1s						
RETA	Reutte	150.27	355	epPKPdf	PKiKP	12 31 56.1	+1.2
	comp=Z,6.5nm,1.2s						
WATA	Walderalm	150.34	354	epPKPdf	PKiKP	12 31 56.1	+1.0
	comp=Z,9.1nm,1.1s						
KBA	Koelnbreinsper	150.38	351	ePKiKP	PKiKP	12 31 55.8	+0.6
	comp=Z,5.3nm,1.1s						
MOTA	Moosalm	150.38	354	epPKPdf	PKiKP	12 31 56.3	+1.0
	comp=Z,9.5nm,1.1s						
WTTA	Wattenberg	150.41	354	epPKPdf	PKiKP	12 31 56.5	+1.2
	comp=Z,5.8nm,0.7s						
SOKA	Soboth	150.48	349	epPKPdf	PKiKP	12 31 56.1	+0.7
	comp=Z,9.2nm,1.4s						
SQTA	Sankt Quirin	150.50	354	epPKPdf	PKiKP	12 31 56.6	+1.2
	comp=Z,11nm,1.4s						
DAVA	Damuels	150.54	356	ePKiKP	PKPbc	12 31 54.6	-0.3
	comp=Z,4.6nm,0.7s						
FETA	Feichten	150.74	355	PKPdf	PKPdf	12 31 50.2	+0.4
	comp=Z,6.4nm,1.4s						
FETA				epPKPdf	PKiKP	12 31 57.4	+1.5
	comp=Z,7.8nm,1.0s						
ABTA	Abfaltersbach	150.81	352	ePKiKP	PKiKP	12 31 55.9	-0.2
	comp=Z,7.5nm,0.9s						
FUORN	Ofenpass-Fuorn	151.18	355		PKiKP	12 31 57.9	+0.9

IDC 17 12:54:00.7±1.0,28.°65N×107.°23E,h0km,mb3.6/6, mb1 3.8/8,mb1mx3.6/51,mbtmp3.6/8,ML3.8/2,MS4.0/1, Ms1 4.0/1,ms1mx2.9/34,Error ellipse: s-maj=41.4km s-min=20.2km az=74.0

BJI 17 12:54:04.3±0.0,28.°61N×106.°98E,h7km,mb3.5/4, ML3.7/15,Ms3.5/4,Ms7 3.4/2

ISC 17 12:54:02.2±0.7,28.°74N±0.°03×107.°0E±0.°1,h10km,n13, σ1§99/19,mb3.7/6,1D,Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	Guiyang	2.30	188	⇓iPn	Pn	12 54 40.4	+0.1
GYA				Pg	Pg	12 54 46.1	-0.2
GYA				Sn	Sn	12 55 09.1	+0.4
GYA				Sg	Sg	12 55 13.8	-2.3
GYA				smax	smax		
	comp=N,500nm,0.6s						
GYA				smax	smax		
	comp=E,680nm,0.7s						
XAN	Xi'an	5.52	17	Pn	Pn	12 55 22.6	-2.0
XAN				pPn	pPn	12 55 29.3	+2.0
XAN				Pg	Pg	12 55 47.3	-0.7
XAN				Sn	Sn	12 56 29.4	+1.2
XAN				Sg	Sg	12 57 01.5	+1.9
XAN				smax	smax		
	comp=N,77nm,1.0s						
XAN				smax	smax		
	comp=E,76nm,1.5s						
LZH	Lanzhou	7.80	341	ePg	Pg	12 56 32.3	+0.7
LZH				Sg	Sg	12 58 07.3	-5.3
CMAR	Chiang Mai Arr	12.63	218	Pn	Pn	12 57 03.2	+1.2
	comp=E,0.4nm,0.3s,baz=29,slow=12,SNR=11						
SONM	Songino Array	19.07	359	P	Pn	12 58 27.8	+2.2
	comp=E,0.1nm,0.3s,baz=184,slow=11,SNR=7.0						
WMQ	Urumqi	21.58	319	eP	P	12 58 54.8	+2.7
MKAR	Makanchi Array	26.41	320	P	P	12 59 40.7	+1.7
	comp=E,0.4nm,0.7s,baz=123,slow=9.9,SNR=3.7						
JHJ	Hachijo jima 2	28.37	73	LR	LR	13 10 39.3	
	comp=E,321nm,21.0s,baz=156,slow=35						
ZALV	Zalesovo Array	29.95	333	P	P	13 00 10.8	+0.3
	comp=E,0.9nm,0.4s,baz=138,slow=11,SNR=3.5						
WRA	Warramunga Arr	55.12	148	P	P	13 03 33.3	-1.5
	comp=E,0.8nm,0.9s,baz=188,slow=22,SNR=2.2						
ASAR	Alice Springs	58.18	151	P	P	13 03 55.6	-1.0
	comp=E,0.4nm,0.7s,baz=331,slow=7.0,SNR=9.6						
ILAR	Eielson Array	70.86	26	P	P	13 05 18.4	-0.5
	comp=E,0.2nm,0.6s,baz=283,slow=4.8,SNR=2.2						
YKA	Yellowknife Ar	83.17	18	P	P	13 06 28.8	+0.6
	comp=E,0.5nm,0.6s,baz=326,slow=5.3,SNR=13						

ANF 17 12:57:38.9±0.3,35.°76N×97.°46W,h5km,ML4.1/13,Error ellipse: s-maj=4.2km s-min=3.2km az=159.0

NEIC 17 12:57:39.3±1.1,35.°78N±0.°02×97.°448W±0.°005,h8km±4km, Error ellipse: s-maj=2.5km s-min=0.6km az=184.0

TUL 17 12:57:39.1±1.0,35.°77N±0.°02×97.°46W±0.°03,h5km±4km, ML3.1,Error ellipse: s-maj=4.1km s-min=2.1km az=70.0

ISC 17 12:57:39.7±1.0,35.°75N±0.°03×97.°45W±0.°03,h8km±7km, n48,σ0§83/67,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.11	147	Pg	Pg	12 57 42.1	-0.2
ADOK					Sg	12 57 44.6	+0.5
OKCFA	Oklahoma City	0.33	181	Pg	Pg	12 57 46.0	-0.2
OKCFA				Sg	Sg	12 57 51.1	+0.5
OKCSW	OKLAHOMA CITY	0.34	179		Pg	12 57 46.3	-0.1
OKCSW				Sg	Sg	12 57 51.8	+0.9
FNO	Franklin	0.49	176	Pg	Pg	12 57 49.5	+0.3
FNO				Sg	Sb	12 57 57.0	-0.9
W35A	Tecumseh	0.75	142	Pg	Pg	12 57 53.7	-0.6
W35A				Sg	Sg	12 58 04.5	+0.4
TUL1	Leonard	1.35	83		Pn	12 58 03.5	-1.3
TUL1				Sg	Sb	12 58 22.4	-0.4
TUL1	Leonard	1.35	83	P	Pn	12 58 03.6	-1.3
	baz=265						
TUL1				S	Sb	12 58 22.5	-0.2
	baz=265						
U32A	Winter Ranch,	1.41	297		Pn	12 58 04.5	-1.2
WMOK	Wichita Mounta	1.49	228		Pn	12 58 06.3	-0.5
WMOK				Sn	Sn	12 58 25.8	-0.5
WMOK	Wichita Mounta	1.49	228	P	Pn	12 58 06.5	-0.2
	baz=46						
WMOK				S	Sn	12 58 26.0	-0.4
	baz=46						
HHAR	Hobbs	2.89	78		Pn	12 58 26.0	-0.1
W39A	Magazine	3.04	99		Pn	12 58 28.1	0.0
W39A	Magazine	3.04	99	P	Pn	12 58 28.4	+0.3
	baz=282						
W39A				S	Sn	12 59 05.1	+0.4
	baz=282						
MIAR	Mount Ida	3.39	110		Pn	12 58 33.5	+0.6
MIAR	Mount Ida	3.39	110	P	Pn	12 58 33.5	+0.6
	baz=292						
MIAR				S	Sn	12 59 14.3	+1.0
	baz=292						
KSU1	Kansas State U	3.41	11	P	Pn	12 58 32.9	-0.4
	baz=192						
KSU1				Sb	Sb	12 59 24.4	+2.3
	baz=192						
CBKS	Cedar Bluff	3.57	330		Pn	12 58 35.4	0.0
CBKS					Pb	12 58 42.9	-0.2
CBKS	Cedar Bluff	3.57	330	P	Pn	12 58 35.4	0.0
	baz=149						
CBKS				Sb	Sb	12 59 28.3	+1.7
	baz=149						
AMTX	Amarillo	3.57	257		Pn	12 58 35.5	+0.1
AMTX	Amarillo	3.57	257	Pb	Pb	12 58 41.7	-1.4
	baz=74						
AMTX				S	Sn	12 59 18.2	+0.4
	baz=74						
ABTX	Abilene, Hawle	3.61	211		Pn	12 58 36.5	+0.5
ABTX	Abilene, Hawle	3.61	211	P	Pn	12 58 35.7	-0.2
	baz=29						
ABTX				S	Sn	12 59 19.7	+1.0
	baz=29						
WHTX	Lake Whitney,	3.75	180		Pn	12 58 38.6	+0.8
WHTX	Lake Whitney,	3.75	180	Pb	Pb	12 58 45.6	-0.5
	baz=360						
WHTX				Sb	Sb	12 59 34.9	+3.3
	baz=360						
U40A	Yellville	3.77	79		Pn	12 58 37.4	-0.7
U40A	Yellville	3.77	79	P	Pn	12 58 37.6	-0.6
	baz=262						
237A	Washetta, Mont	3.98	160	Pn	Pn	12 58 40.8	-0.2
X40A	Basin Creek Fa	3.98	107	Pn	Pn	12 58 41.4	+0.4
X40A	Basin Creek Fa	3.98	107	P	Pn	12 58 41.4	+0.4
	baz=290						
WHAR	Wooly Hollow	4.23	95		Pn	12 58 44.3	-0.2
W41B	Gary Mavity, V	4.28	96		Pn	12 58 45.0	-0.1
W41B	Gary Mavity, V	4.28	96	P	Pn	12 58 45.0	-0.1
	baz=280						
W41B				S	Sn	12 59 34.9	-0.3
	baz=280						
MSTX	Muleshoe	4.72	250		Pn	12 58 51.3	-0.1
MSTX	Muleshoe	4.72	250	P	Pn	12 58 51.1	-0.3
	baz=66						
MSTX				S	Sn	12 59 46.2	-0.2
	baz=66						
CCM	Cathedral Cave	5.48	63		Pn	12 59 02.3	+0.7
CCM	Cathedral Cave	5.48	63	P	Pn	12 59 01.4	-0.2
	baz=247						
JCT	Junction City	5.61	201		Pn	12 59 03.6	+0.1
T25A	Trinidad	5.79	286		Pn	12 59 05.6	-0.5
T25A	Trinidad	5.79	286	P	Pn	12 59 05.8	-0.2
	baz=102						
SDCO	Great Sand Dun	6.77	290		Pn	12 59 19.6	0.0
SDCO	Great Sand Dun	6.77	290	P	Pn	12 59 19.8	+0.2
	baz=105						
ANMO	Albuquerque	7.41	266	P	Pn	12 59 28.4	+0.1
	baz=81						
ISCO	Idaho Springs	7.63	304	P	Pn	12 59 30.0	-1.5
	baz=120						
MNTX	Cornudas Mount	7.75	241		Pn	12 59 32.5	-0.3
MNTX	Cornudas Mount	7.75	241	P	Pn	12 59 32.4	-0.4
	baz=56						
S22A	4UR Ranch, Cre	7.79	288		Pn	12 59 33.1	-0.6
ECSD	EROS Data Cent	8.00	4		Pn	12 59 34.5	-1.7
ECSD	EROS Data Cent	8.00	4	P	Pn	12 59 35.6	-0.7
	baz=185						

ATH 17 13:12:58.9,38.°21N×20.°43E,h10km±1km,ML1.8/2,Error ellipse: s-maj=2.1km s-min=1.1km az=262.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXRA	Lixouri, Kepha	0.01	167	P	Pg	13 13 01.3	+0.7
LXRA				S	Sg	13 13 01.9	+0.2
KEF4	Livadi, Kephal	0.04	351	P	Pg	13 13 00.6	-0.2
KEF4				S	Sg	13 13 02.2	+0.1
KEF2	Argostoli. Kep	0.06	139	P	Pg	13 13 00.8	-0.2
KEF2				S	Sg	13 13 02.2	-0.2
KEF3	Kipouria, Keph	0.07	261	P	Pg	13 13 00.9	-0.1
KEF3				S	Sg	13 13 02.7	+0.1
KEF1	Kardakata, Kep	0.07	25	P	Pg	13 13 00.8	-0.3
KEF1				S	Sg	13 13 02.4	-0.2
VLS	Valsamata	0.13	106	P	Pg	13 13 01.6	-0.3
VLS				S	Sg	13 13 03.9	-0.1
VLS				AML	AML	13 13 04.0	
	comp=N,1996µm,0.2s						
VLS				AML	AML	13 13 04.2	
	comp=E,1630µm,0.1s						
FSK	Fiskardo	0.27	22	P	Pg	13 13 03.9	-0.3
FSK				S	Sg	13 13 08.6	+0.8
VLMS	Volimes, Zakyn	0.38	152	P	Pg	13 13 06.2	-0.2
VLMS				S	Sg	13 13 12.2	+0.8
VLMS				AML	AML	13 13 14.0	
	comp=E,218µm,0.3s						
VLMS				AML	AML	13 13 14.7	
	comp=N,251µm,0.3s						
LKD2	Lefkada island	0.60	17	P	Pg	13 13 10.1	-0.5
LKD2				S	Sg	13 13 18.5	0.0

TAP 17 13:13:06.1,24.°14N×121.°40E,h9km,ML2.4,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi	0.10	51	P	Pg	13 13 09.2	+0.6
	baz=50						
ETLH				eS	Sg	13 13 11.1	+0.7
	baz=50						
WHF	Hehuan Shan	0.12	270	P	Pg	13 13 09.7	+0.6
	baz=269						
WHF				iS	Sg	13 13 11.7	+0.4
	baz=269						
TWD	Chiawan	0.19	109	P	Pg	13 13 11.0	+0.9
	baz=108						
TWD				S	Sg	13 13 14.7	+1.9
	baz=108						
CHGB	Renai	0.22	248	eP	Pg	13 13 11.9	+1.2
	baz=247						
CHGB				eS	Sg	13 13 15.4	+1.6
	baz=247						
TDCB	Techi	0.24	297	eP	Pg	13 13 12.2	+1.1
	baz=296						
NNSB	Datong	0.28	357	P	Pb	13 13 12.8	-0.7
	baz=357						
NNSB				S	Sg	13 13 16.2	+0.6
	baz=357						

TAP 17 13:13:11.9,24.°16N×121.°41E,h4km,ML2.2,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi	0.08	56	P	Pg	13 13 14.4	+0.8
	baz=56						
ETLH				S	Sg	13 13 15.7	+0.8
	baz=56						
WHF	Hehuan Shan	0.13	262	iP	Pg	13 13 15.2	+0.5
	baz=262						
WHF				iS	Sg	13 13 17.1	+0.4
	baz=262						
NACB	Ninganchiao	0.17	86	P	Pg	13 13 16.3	+1.0
	baz=86						
NACB				S	Sg	13 13 18.6	+1.1
	baz=86						
TWD	Chiawan	0.19	116	P	Pg	13 13 16.7	+1.0
	baz=114						
TWD				S	Sg	13 13 19.5	+1.4
	baz=114						
TWT	Tachien	0.23	293	eP	Pg	13 13 17.8	+1.3
	baz=291						
TWT				S	Sg	13 13 21.2	+1.7
	baz=291						
CHGB	Renai	0.24	245	eP	Pg	13 13 17.4	+0.8
	baz=246						
CHGB				eS	Sg	13 13 20.9	+1.1
	baz=246						
TDCB	Techi	0.25	291	eP	Pg	13 13 16.2	-0.5
	baz=292						
TDCB				S	Sg	13 13 21.3	+1.3
	baz=292						
TDCB	Techi	0.25	291	S	Pg	13 13 16.1	-0.7
	baz=296						
HWA	Hwalien	0.26	136	P	Pb	13 13 18.3	-0.8
	baz=135						
HWA				S	Sb	13 13 23.1	-0.8
	baz=135						
NNSB	Datong	0.27	355	eP	Pg	13 13 17.6	+0.5
	baz=353						
NNSB				eS	Sg	13 13 21.4	+0.7
	baz=353						
NNSH	Datong	0.27	355	S	Pg	13 13 18.0	+0.8
	baz=357						
NNSH	Datong	0.27	355	P	Pg	13 13 17.9	+0.8
	baz=352						
NNSH				S	Sg	13 13 21.5	+0.8
	baz=352						
NNS	Nan Shan	0.28	353	eP	Pg	13 13 18.1	+0.7
	baz=353						
NNS				S	Sg	13 13 22.0	+0.9
	baz=353						
OWD	Renai	0.30	226	P	Pg	13 13 18.3	+0.5
	baz=227						
OWD				S	Sg	13 13 21.9	+0.2
	baz=227						
ENLB	Shoufeng	0.31	146	eS	Sb	13 13 24.0	-1.5
	baz=146						
ESL	Shilin	0.35	177	P	Pg	13 13 19.5	+0.9
	baz=176						
ESL				S	Sg	13 13 24.6	+1.4
	baz=176						
ENA	Nanau	0.40	49	P	Pg	13 13 20.5	+0.8
	baz=34						
ENA				eS	Sg	13 13 26.4	+1.4
	baz=34						
WHP	Taichung City	0.44	285	iP	Pb	13 13 21.8	-0.5
	baz=285						
WHP				S	Sb	13 13 28.1	-1.2
	baz=285						
NDT	Datong Townshi	0.45	12	P	Pg	13 13 21.2	+0.6
	baz=11						
NDT				S	Sg	13 13 27.5	+1.1
	baz=11						
DPDB	Guoxing	0.46	254	P	Pb	13 13 22.3	-0.3
	baz=255						
DPDB				S	Sg	13 13 28.0	+1.2
	baz=255						
VWDT	VWDT	0.48	211	P	Pg	13 13 21.4	+0.3
	baz=219						
VWDT				S	Sg	13 13 28.5	+1.2
	baz=219						
EGFH	Guangfu	0.49	178	P	Pg	13 13 21.8	+0.4
	baz=179						
EGFH				eS	Sg	13 13 27.7	-0.1
	baz=179						
ENTT	Nioudou	0.50	17	P	Pg	13 13 22.3	+0.8
	baz=4.0						
ENTT				S	Sg	13 13 29.0	+1.1
	baz=4.0						
YHNB	Yeheng	0.51	356	P	Pb	13 13 22.6	-0.9
	baz=355						
YHNB				S	Sg	13 13 28.8	+0.5
	baz=355						
NSK	Sanguang	0.51	355	P	Pb	13 13 22.8	-0.7
	baz=354						
NSK				iS	Sg	13 13 29.5	+1.0
	baz=354						
SSLB	Suanglung	0.56	228	P	Pg	13 13 23.2	+0.5
	baz=240						
SSLB				eS	Sg	13 13 31.0	+1.0
	baz=240						
TYC	Yuchr	0.57	243	P	Pg	13 13 23.5	+0.6
	baz=244						
TYC				S	Sg	13 13 30.8	+0.6
	baz=244						
NSTT	Nanjuang	0.60	321	eP	Pb	13 13 24.4	-0.6
	baz=321						
NSTT				S	Sb	13 13 32.6	-1.1
	baz=321						
TWC	Suao	0.60	42	P	Pg	13 13 24.1	+0.7
	baz=31						
TWC				S	Sg	13 13 31.5	+0.3
	baz=31						
LIOB	Emei	0.60	323	eP	Pb	13 13 25.1	+0.1
	baz=323						
LIOB				S	Sb	13 13 33.4	-0.5
	baz=323						
TWE	Neicheng	0.60	23	P	Pg	13 13 24.2	+0.7
	baz=23						
TWE				iS	Sg	13 13 32.6	+1.2
	baz=23						
TWQ1	Liyutan	0.61	288	eS	Sb	13 13 33.8	-0.3
	baz=288						
NWLT	Wulai	0.62	8	eP	Pg	13 13 24.0	+0.2
	baz=357						
NWLT				eS	Sg	13 13 32.5	+0.6
	baz=357						
SLBB	Yuanshan	0.62	19	eP	Pb	13 13 24.8	-0.7
	baz=30						
SLBB				S	Sg	13 13 33.0	+1.0
	baz=30						
EHY	Hungye	0.66	187	eP	Pg	13 13 24.9	+0.3
	baz=178						
EHY				eS	Sg	13 13 33.9	+0.8
	baz=178						
HGSD	Ruisui	0.67	179	eP	Pg	13 13 25.1	+0.4
	baz=180						
HGSD				eS	Sb	13 13 35.1	-0.7
	baz=180						
WHYT	Xinyi Township	0.69	228	P	Pg	13 13 25.7	+0.5
	baz=239						
YULB	Yu-li	0.77	188	eP	Pg	13 13 26.6	-0.2
	baz=189						
YULB				S	Sg	13 13 37.7	+0.8
	baz=189						
TWF1	Yuli	0.81	187	eP	Pg	13 13 28.0	+0.4
	baz=196						
TWF1				S	Sb	13 13 39.2	-0.8
	baz=196						
CHN5	Tsauling	0.88	230	eP	Pb	13 13 30.1	+0.3
	baz=232						
CHN5				eS	Sb	13 13 43.0	+1.1
	baz=232						
TIPB	Shuangxi	0.89	25	eP	Pg	13 13 29.0	0.0
	baz=10.0						
TIPB				S	Sg	13 13 40.8	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=10.0						
YM01	**YM01**	**0.99**	**8**	eP	Pb	13 13 31.4	-0.3
	baz=7.0						
YM01				eS	Sb	13 13 45.2	0.0
	baz=7.0						
ELDTW	**Lidau**	**1.03**	**200**	eP	Pg	13 13 31.4	-0.4
	baz=194						
CHN4	**Tsaushan**	**1.10**	**223**	eP	Pn	13 13 34.4	+0.3
	baz=225						
CHN4				eS	Sn	13 13 51.1	+1.3
	baz=225						
WTP	**Ta-pu**	**1.17**	**219**	P	Pn	13 13 35.2	+0.1
	baz=220						
WTP				S	Sn	13 13 51.2	-0.3
	baz=220						
TWK	**Hsinying**	**1.23**	**224**	P	Pn	13 13 36.6	+0.7
	baz=225						
TWK				eS	Sn	13 13 54.5	+1.4
	baz=225						
CHN1	**Nanshi**	**1.27**	**220**	eP	Pn	13 13 37.0	+0.6
	baz=237						
CHN1				eS	Sn	13 13 55.0	+1.1
	baz=237						
SLGT	**Liugui**	**1.36**	**211**	eP	Pg	13 13 38.8	+0.8
	baz=214						

BUC 17 13:17:22.7±0.3, 44.39N×28.35E, h7km±3km, ml1.2/3, 12C-4D, Error ellipse: s-maj=4.6km s-min=1.1km az=84.0, Romania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TIRR	**Tirgusor**	**0.08**	**37**	⇑P	Pg	13 17 24.6	-0.1
TIRR				⇓S	Sg	13 17 26.4	+0.3
TIRR	**Tirgusor**	**0.08**	**37**	⇑P	Pg	13 17 24.6	-0.1
TIRR				⇓S	Sg	13 17 26.4	+0.3
MFTR	**Murfatlar**	**0.22**	**166**	⇑S	Sg	13 17 30.7	+0.6
MFTR	**Murfatlar**	**0.22**	**166**	⇑S	Sg	13 17 30.7	+0.6
HARR	**Harsova**	**0.42**	**315**	⇑P	Pg	13 17 30.8	-0.1
HARR	**Harsova**	**0.42**	**315**	⇑P	Pg	13 17 30.8	-0.1
TOPG	**Topolog**	**0.48**	**3**	⇑P	Pg	13 17 31.9	-0.2
TOPG				⇓S	Sg	13 17 38.9	+0.6
TOPG	**Topolog**	**0.48**	**3**	⇑P	Pg	13 17 31.9	-0.2
TOPG				⇓S	Sg	13 17 38.9	+0.6
CFR	**Carcaliu**	**0.80**	**349**	⇑P	Pg	13 17 38.2	+0.1
CFR				⇑S	Sb	13 17 49.3	-0.6
CFR	**Carcaliu**	**0.80**	**349**	⇑P	Pg	13 17 38.2	+0.1
CFR				⇑S	Sb	13 17 49.3	-0.6

TEH 17 13:33:58.3, 32.51N×50.01E, h5km, ML3.5
THR 17 13:34:01.5±0.6, 32.61N×50.02E, h14km±11km, ML3.3
ISC 17 13:34:00.7±1.0, 32.49N±0.05×49.98E±0.04, h11km, n46, σ1.47/47, Western Iran

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHBN	**Jahan bin**	**0.63**	**113**	ePg	Pg	13 34 12.2	-0.9
IPIR	**Pirpir**	**0.79**	**75**	ePg	Pg	13 34 13.7	-2.4
ROKH	**ROKH**	**0.90**	**99**	ePg	Pg	13 34 16.4	-1.7
SHGR	**Shooshtar-Gavs**	**1.07**	**250**	ePg	Pn	13 34 22.8	+1.2
SHGR				eSg	Sn	13 34 38.2	+1.8
SHGR				IAML		13 34 39.8	
	comp=N,595nm,0.4s						
IBRJ	**Brojen**	**1.23**	**118**	ePg	Pb	13 34 23.4	-0.7
BMDN	**Meydan**	**1.53**	**321**	ePn	Pn	13 34 27.4	-0.8
IKLH	**Kolahrood**	**1.58**	**58**	ePn	Pn	13 34 27.8	-1.1
IKLH				e		13 34 33.2	
AHWZ	**Ahwaz**	**1.62**	**225**	ePn	Pn	13 34 30.2	+1.0
IKMR	**Kamar-syah**	**1.69**	**308**	ePn	Pn	13 34 30.6	+0.4
IKMR				e		13 34 58.7	
BDRS	**Dareh Seyedi**	**1.73**	**328**	ePn	Pn	13 34 30.2	-0.8
QAM	**Ghamsar**	**1.77**	**44**	ePn	Pn	13 34 30.9	-0.5
IDOB	**Doab**	**1.99**	**311**	ePn	Pn	13 34 34.7	+0.1
KLNJ	**Kolanjah**	**2.01**	**137**	ePn	Pn	13 34 35.9	+1.0
KLNJ				e		13 35 12.9	
IZEF	**Zefreh**	**2.02**	**78**	ePn	Pn	13 34 36.3	+1.3
IZEF				e		13 34 37.8	
ASAO	**Ashtian**	**2.06**	**1**	ePg	Pn	13 34 36.7	+1.3
ASAO	**Ashtian**	**2.06**	**1**	ePn	Pn	13 34 36.7	+1.3
IKFM	**Kafar-mosalman**	**2.07**	**301**	ePn	Pn	13 34 36.0	+0.6
IKFM				e		13 35 11.8	
HSAM	**Samen**	**2.07**	**327**	ePn	Pn	13 34 36.6	+0.9
HSAM				e		13 34 38.3	
IRAM	**Ramesheh**	**2.15**	**108**	ePn	Pn	13 34 37.0	+0.4
GHVR	**GHOM**	**2.27**	**29**	ePn	Pn	13 34 39.1	+0.8
GHVR	**GHOM**	**2.27**	**29**	ePn	Pn	13 34 39.1	+0.8
HAGD	**Aghdareh**	**2.43**	**343**	ePn	Pn	13 34 42.4	+1.8
HAGD				e		13 35 21.2	
IQOM	**Qom**	**2.52**	**21**	ePn	Pn	13 34 43.3	+1.5
IKOM	**Komasi**	**2.67**	**310**	ePn	Pn	13 34 44.4	+0.6
IKOM				e		13 35 34.4	
IALM	**Almabolaq**	**2.81**	**328**	ePn	Pn	13 34 46.7	+0.9
IVRN	**Varamin**	**2.90**	**30**	ePn	Pn	13 34 48.3	+1.5
IVRN				e		13 35 00.2	
IRAZ	**Razeghan**	**2.91**	**359**	ePn	Pn	13 34 48.6	+1.4
HSRG	**Sareghieh**	**3.09**	**333**	ePn	Pn	13 34 51.0	+1.3
HSRG				e		13 35 43.9	
ANAR	**Anarak**	**3.23**	**76**	ePn	Pn	13 34 52.7	+1.2
QABG	**Abgarm-Qazvin**	**3.23**	**354**	ePn	Pn	13 34 53.1	+1.5
IMHD	**Mahdasht**	**3.24**	**10**	ePn	Pn	13 34 54.5	+2.9
IVIS	**Veis**	**3.31**	**309**	ePn	Pn	13 34 52.4	-0.2
IGHG	**Ghaleghazi**	**3.40**	**304**	ePn	Pn	13 34 53.4	-0.4
IGHG				e		13 35 57.9	
IDMV	**Damavand**	**3.52**	**28**	ePn	Pn	13 34 57.7	+2.0
IDHR	**Dehrash**	**3.73**	**307**	ePn	Pn	13 34 57.9	-0.4
IDHR				e		13 35 12.0	
ILAS	**Lasjerd**	**3.81**	**40**	ePn	Pn	13 35 00.9	+1.4
IFIR	**Firoozkooh**	**3.90**	**35**	ePn	Pn	13 35 02.7	+1.9
YZKH	**Yazd**	**3.90**	**90**	ePn	Pn	13 35 02.7	+2.1
YZKH	**Yazd**	**3.90**	**90**	ePn	Pn	13 35 02.7	+2.1
QALM	**Alamut, Qazvin**	**3.98**	**8**	ePn	Pn	13 35 04.5	+2.7
IALA	**Alasht**	**4.29**	**32**	ePn	Pn	13 35 08.5	+2.4
ISHM	**Shahmirzad**	**4.30**	**39**	ePn	Pn	13 35 09.3	+2.9
IANJ	**Anjilo**	**4.42**	**47**	ePn	Pn	13 35 08.6	+0.7
TPRV	**Parvadeh(Tabas**	**5.67**	**83**	ePn	Pn	13 35 26.2	+1.2
TNSJ	**Nastanj**	**5.75**	**73**	ePn	Pn	13 35 27.1	+1.1
TKDS	**Koohdasht(Taba**	**6.10**	**77**	ePn	Pn	13 35 31.7	+0.8

IDC 17 13:36:50.3±1.1, 1.00N×123.21E, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.6/30, mbtmp3.7/6, ML3.9/1, Error ellipse: s-maj=107.3km s-min=18.5km az=67.0
NEIC 17 13:37:00.7±1.4, 0.73N±0.09×122.68E±0.10, h91km±11km, mb4.3/10, Error ellipse: s-maj=14.0km s-min=12.4km az=92.0
ISC 17 13:36:55.6±0.9, 1.00N±0.09×123.3E±0.2, h35km, n18, σ1.21/17, mb4.3/11, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**2.09**	**194**	Pn	Pn	13 37 29.8	+1.6
TNTI	**Ternate**	**4.10**	**93**	Pn	Pn	13 38 09.6	+14
KAPI	**Kappang**	**6.94**	**210**	Pn	Pn	13 38 33.8	-1.0
KKM	**Kota Kinabalu**	**8.64**	**306**	Pn	Pn	13 38 59.2	+0.8
KNRA	**Kununurra**	**17.44**	**162**	P	P	13 40 58.9	+1.7
FITZ	**Fitzroy Crossi**	**19.12**	**173**	P	P	13 41 14.9	-0.8
	0.3nm,0.3s,baz=24,slow=13,SNR=3.1						
YULB	**Yu-li**	**22.34**	**355**	P	P	13 41 51.9	+1.4
YULB				IAmb	IAmb	13 42 23.9	
	comp=Z,28nm,1.5s						
WB0	**Warramunga Arr**	**23.34**	**153**	P	P	13 42 01.1	+0.2
WB0				IAmb	IAmb	13 42 01.2	
	comp=Z,34nm,2.0s						
WRAB	**Tennant Creek**	**23.47**	**153**	P	P	13 42 02.4	+0.2
WRAB				IAmb	IAmb	13 42 31.4	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**23.47**	**153**	P	P	13 42 02.0	-0.2
	comp=Z,2.0nm,0.5s,baz=331,slow=10,SNR=34						
WB2	**Warramunga Arr**	**23.48**	**153**	P	P	13 42 02.4	+0.2
WB2				IAmb	IAmb	13 42 06.7	
	comp=Z,27nm,1.7s						
WR0	**Warramunga Arr**	**23.58**	**153**	P	P	13 42 03.1	-0.1
WR0				IAmb	IAmb	13 42 08.5	
	comp=Z,21nm,1.6s						
ASAR	**Alice Springs**	**26.61**	**158**	P	P	13 42 32.4	+1.5
	comp=Z,0.2nm,0.4s,baz=344,slow=14,SNR=5.2						
STKA	**Stephens Creek**	**37.02**	**154**	P	P	13 44 00.4	-1.7
	comp=Z,1.5nm,0.7s,baz=336,slow=10.0,SNR=3.6						
SONM	**Songino Array**	**48.89**	**345**	P	P	13 45 38.6	+0.4
	comp=Z,0.5nm,0.7s,baz=165,slow=9.3,SNR=5.6						
MKAR	**Makanchi Array**	**57.91**	**328**	P	P	13 46 43.5	-0.7
	comp=Z,0.3nm,0.4s,baz=122,slow=9.0,SNR=7.5						
KURK	**Kurchatov**	**62.25**	**330**	P	P	13 47 12.7	-1.2
BRVK	**Borovoye**	**67.84**	**329**	P	P	13 47 48.3	-1.9
BRVK				IAmb	IAmb	13 47 50.6	
	comp=Z,2.7nm,0.8s						

MAN 17 13:45:38.7, 13.19N×124.13E, h9km, mb4.0, ML2.7, MS2.3, Luzon

ISU 17 13:48:56.0, 41.50N×73.10E, h15km
KRNET 17 13:48:57.9±0.1, 41.40N×73.17E, h17km, mb3.3
SOME 17 13:48:57.7, 41.42N×73.20E, h10km
KNET 17 13:48:59.4±0.5, 41.45N×73.33E, h0km, ml2.8, Error ellipse: s-maj=4.1km s-min=2.9km az=79.0
NNC 17 13:48:59.3±1.3, 41.47N×73.17E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=10.1km s-min=6.7km az=170.0
ISC 17 13:48:58.3±1.1, 41.44N±0.03×73.26E±0.02, h2km±10km, n64, σ1.58/110, 36C-19D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.24**	**242**	eP	Pg	13 49 01.0	-1.8
ARSB				eS	Sg	13 49 04.5	-1.4
AML	**Almayashu**	**0.77**	**25**	⇑iP	Pg	13 49 13.5	+0.6
	baz=28						
AML				⇑iS	Sb	13 49 24.7	-1.0
	baz=28						
AML	**Almayashu**	**0.77**	**25**	P	Pg	13 49 13.6	+0.6
	60nm,0.1s,SNR=222						
AML				⇑S	Sb	13 49 25.7	0.0
	258nm,0.3s						
ARLS	**Aral**	**0.90**	**62**	⇑iP	Pb	13 49 16.4	-0.4
	baz=61						
ARLS				⇑iS	Sn	13 49 29.5	-2.4
	baz=61						
ARK	**Arkit**	**1.04**	**291**	⇓iP	Pg	13 49 16.1	-2.1
	baz=94						
ARK				⇓iS	Sg	13 49 29.7	-1.9
	baz=94						
ARK	**Arkit**	**1.04**	**291**	eP	Pg	13 49 15.1	-3.1
ARK				eS	Sg	13 49 30.0	-1.6
UCH	**Uchtor**	**1.23**	**49**	⇓iP	Pb	13 49 22.2	-0.2
	baz=50						
UCH				⇓iS	Sn	13 49 39.8	-0.5
	baz=50						
UCH	**Uchtor**	**1.23**	**49**	⇑P	Pb	13 49 22.3	-0.2
	40nm,0.2s,SNR=173						
MRKS	**Merke**	**1.31**	**359**	eP	Pn	13 49 22.8	-0.9
	53nm,0.2s						
MRKS				eS	Sg	13 49 40.9	+0.6
	160nm,0.3s						
MRKS	**Merke**	**1.31**	**359**	P	Pn	13 49 22.6	-1.1
	61nm,0.1s						
MRKS				S	Sg	13 49 40.9	+0.6
	160nm,0.1s						
FRG	**Fergana**	**1.32**	**238**	eP	Pg	13 49 26.5	+3.0
FRG				eS	Sg	13 49 46.7	+6.1
AAK	**Ala-Archa**	**1.51**	**37**	⇓iP	Pb	13 49 27.1	0.0
	baz=38						
AAK				⇓iS	Sg	13 49 48.4	+1.5
	baz=38						
AAK	**Ala-Archa**	**1.51**	**37**	⇓P	Pb	13 49 27.2	0.0
	31nm,0.3s,SNR=66						
AAK				⇓S	Sg	13 49 48.4	+1.5
	63nm,0.2s						
AAK	**Ala-Archa**	**1.51**	**37**	⇓P	Pg	13 49 27.3	+0.1
	14nm,0.3s						
AAK				⇑S	Sg	13 49 48.3	+1.4
	79nm,0.6s						
KZA	**Kyzart**	**1.62**	**66**	⇑iP	Pg	13 49 29.2	-0.1
	baz=66						
KZA				⇑iS	Sg	13 49 52.1	+1.8
	baz=66						
KZA	**Kyzart**	**1.62**	**66**	⇑P	Pg	13 49 29.5	+0.2
	22nm,0.2s,SNR=33						
KZA				⇓S	Sg	13 49 52.6	+2.2
	46nm,0.2s						
FRU1	**Bishkek**	**1.71**	**36**	⇑iP	Pb	13 49 30.2	-0.3
	baz=37						
FRU1				⇑iS	Sg	13 49 53.9	+0.7
	baz=37						
KBK	**Karagaybulak**	**1.75**	**45**	⇑iP	Pb	13 49 31.4	+0.1
	baz=46						
KBK				⇑iS	Sg	13 49 55.5	+1.0
	baz=46						
KBK	**Karagaybulak**	**1.75**	**45**	⇓P	Pg	13 49 32.3	+0.5
	25nm,0.1s,SNR=66						
KBK				⇑S	Sg	13 49 57.7	+3.1
	208nm,0.3s						
CHMS	**Chumysh**	**1.91**	**35**	⇓iP	Pb	13 49 33.5	-0.5
	baz=36						
CHMS				⇓iS	Sg	13 49 59.5	-0.3
	baz=36						
CHMS	**Chumysh**	**1.91**	**35**	⇑P	Pg	13 49 34.9	0.0
	23nm,0.1s,SNR=36						
CHMS				⇓S	Sg	13 50 01.3	+1.6
	99nm,0.3s						
CHMS	**Chumysh**	**1.91**	**35**	⇓Pn	Pg	13 49 34.8	-0.1
	9.3nm,0.2s						
CHMS				⇑Sn	Sg	13 50 01.1	+1.3
	46nm,0.3s						
DZA	**Taraz**	**2.04**	**316**	eP	Pb	13 49 37.0	+0.8
	63nm,0.1s						
DZA				eS	Sg	13 50 05.1	+1.2
	201nm,0.3s						
USP	**Ospenovka**	**2.05**	**26**	⇑iP	Pb	13 49 35.2	-1.0
	baz=27						
USP				⇑iS	Sb	13 50 02.6	+0.4
	baz=27						
USP	**Ospenovka**	**2.05**	**26**	⇑P	Pb	13 49 36.7	+0.5
	43nm,0.3s,SNR=41						
USP				⇓S	Sg	13 50 05.9	+1.8
	202nm,0.3s						
NRN	**Naryn**	**2.06**	**89**	⇓iP	Pb	13 49 35.3	-1.3
	baz=88						
NRN				⇓iS	Sb	13 50 01.7	-1.1
	baz=88						
BOOM	**Boomskoye usch**	**2.26**	**61**	⇑iP	Pb	13 49 38.4	-1.5
	baz=61						
BOOM				⇑iS	Sb	13 50 08.2	-0.2
	baz=61						
BTK	**Batken**	**2.31**	**234**	⇑iP	Pn	13 49 36.6	-0.9
	baz=34						
BTK				⇑iS	Sn	13 50 05.2	-1.3
	baz=34						
BTK	**Batken**	**2.31**	**234**	eP	Pn	13 49 39.0	+1.5
BTK				eS	Sn	13 50 05.1	-1.4
ULHL	**Ulahol**	**2.37**	**69**	⇑iP	Pb	13 49 40.1	-1.7
	baz=69						
ULHL				⇑iS	Sb	13 50 11.0	-0.6
	baz=69						
ULHL	**Ulahol**	**2.37**	**69**	⇓P	Pb	13 49 42.0	+0.2
	SNR=17						
IUG	**Iuzhnay**	**2.52**	**287**	eP	Pb	13 49 43.4	-0.9
	8.8nm,0.2s						
IUG				eS	Sb	13 50 16.6	+0.9
	179nm,0.3s						
KST	**Kastek**	**2.57**	**50**	eP	Pb	13 49 45.4	+0.2
	7.7nm,0.5s						
KST				eS	Sg	13 50 19.4	-1.4
	85nm,0.5s						
KST	**Kastek**	**2.57**	**50**	Pg	Pb	13 49 45.2	0.0
	28nm,0.2s						
KST				Lg	Lg	13 50 20.9	
	80nm,0.5s						
DGS	**Degeres**	**2.59**	**45**	eP	Pb	13 49 46.5	+0.9
	30nm,0.5s						
DGS				eS	Sg	13 50 22.0	+0.5
	60nm,0.5s						
DGS	**Degeres**	**2.59**	**45**	Pg	Pb	13 49 46.5	+0.9
	30nm,0.5s						
DGS				Lg	Lg	13 50 22.7	
	60nm,0.5s						
KK31	**Karatay Array**	**2.63**	**310**	⇑Pg	Pn	13 49 44.5	+2.7
	6.3nm,0.3s,baz=131,slow=17,SNR=90						
KK31				Lg	Lg	13 50 19.5	
	18nm,0.3s,baz=125,slow=28,SNR=14						
KRBS	**Karabastau**	**2.88**	**37**	eP	Pb	13 49 51.2	+0.8
	15nm,0.4s						
KRBS				eS	Sg	13 50 29.9	-0.8
	36nm,0.5s						
KRBS	**Karabastau**	**2.88**	**37**	Pg	Pb	13 49 51.2	+0.8
	15nm,0.4s						
KRBS				Lg	Lg	13 50 29.9	
	36nm,0.5s						
MTBS	**Maitube**	**2.90**	**53**	eP	Pb	13 49 51.8	+1.1
	2.6nm,0.1s						
MTBS				eS	Sg	13 50 30.7	-0.6
	40nm,0.4s						
MTBS	**Maitube**	**2.90**	**53**	Pg	Pb	13 49 50.7	0.0
	6.9nm,0.2s						
MTBS				Lg	Lg	13 50 30.6	
	40nm,0.4s						
IZV	**Izvestkoviy**	**2.96**	**56**	eP	Pb	13 49 53.1	+1.3
	17nm,0.4s						
IZV				eS	Sg	13 50 33.1	-0.2
	60nm,0.5s						
IZV	**Izvestkoviy**	**2.96**	**56**	Pg	Pb	13 49 53.1	+1.3
	17nm,0.4s						
IZV				Lg	Lg	13 50 33.7	
	60nm,0.5s						
KDJ	**Kajisay**	**3.01**	**75**	⇑iP	Pn	13 49 49.0	+1.8
	baz=75						
KDJ				⇑iS	Sb	13 50 26.5	-3.6
	baz=75						
TNSS	**Tian-Shan**	**3.17**	**58**	eP	Pb	13 49 57.2	+1.6
	2.1nm,0.3s						
TNSS				eS	Sg	13 50 40.0	-0.1
	19nm,0.6s						
TNSS	**Tian-Shan**	**3.17**	**58**	Pg	Pb	13 49 56.8	+1.2
	6.0nm,0.3s						
TNSS				Lg	Lg	13 50 40.0	
	18nm,0.4s						
MDOK	**Medeo**	**3.30**	**57**	eP	Pb	13 49 59.2	+1.6
	2.7nm,0.4s						
MDOK				eS	Sg	13 50 43.4	-0.8
	31nm,0.7s						
MDOK	**Medeo**	**3.30**	**57**	⇑Pn	Pb	13 49 55.4	-2.2
	7.2nm,0.6s						
MDOK				⇑Lg	Lg	13 50 43.0	
	29nm,0.6s						
MDOK	**Medeo**	**3.30**	**57**	Pg	Pb	13 49 58.3	+0.7
	8.3nm,0.4s						
MDOK				Lg	Lg	13 50 43.1	
	31nm,0.5s						
KUU	**Kurty**	**3.34**	**42**	eP	Pb	13 50 00.2	+1.9
	3.8nm,0.2s						
KUU				eS	Sg	13 50 45.0	-0.7
	70nm,0.5s						
KUU	**Kurty**	**3.34**	**42**	Pg	Pb	13 50 00.1	+1.8
	5.2nm,0.3s						
KUU				Lg	Lg	13 50 45.1	
	70nm,0.5s						
KOTS	**Kotyrbulak**	**3.37**	**57**	eP	Pg	13 50 01.5	-1.4
	12nm,0.5s						
KOTS				eS	Sg	13 50 47.1	+0.5
	89nm,0.6s						
KOTS	**Kotyrbulak**	**3.37**	**57**	Pg	Pb	13 50 00.2	+1.3
	11nm,0.3s						
KOTS				Lg	Lg	13 50 46.2	
	89nm,0.5s						
KTBS	**Karatobe**	**3.40**	**47**	eP	Pb	13 50 00.8	+1.5
	6.2nm,0.3s						
KTBS				eS	Sg	13 50 46.5	-0.9
	117nm,0.3s						
KTBS	**Karatobe**	**3.40**	**47**	Pg	Pb	13 50 00.8	+1.5
	6.2nm,0.3s						
KTBS				Lg	Lg	13 50 46.5	
	117nm,0.3s						
ANVS	**Anan'yevo**	**3.54**	**66**	⇑eP	Pn	13 49 56.3	+1.8
	baz=66						
ANVS				⇑iS	Sn	13 50 38.9	+1.8
	baz=66						
BTLS	**Baital**	**3.65**	**9**	eP	Pb	13 50 04.5	+1.0
	2.5nm,0.3s						
BTLS				eS	Sg	13 50 53.0	-2.4
	18nm,0.3s						
CHKK	**Chushkaly**	**3.66**	**47**	eP	Pg	13 50 06.2	-2.2
	0.9nm,0.1s						
CHKK				eS	Sg	13 50 55.1	-0.7
	28nm,0.2s						
CHKK	**Chushkaly**	**3.66**	**47**	Pg	Pb	13 50 05.9	+2.2
	5.6nm,0.4s						
CHKK				Lg	Lg	13 50 55.0	
	29nm,0.3s						
KURS	**Kuram**	**4.17**	**59**	eP	Pg	13 50 15.6	-2.6
	1.1nm,0.6s						
KURS				eS	Sg	13 51 11.3	-0.9
	7.0nm,1.0s						
KPKS	**Kokpek**	**4.50**	**61**	eP	Pg	13 50 22.0	-2.4
	3.7nm,0.5s						
KPKS				eS	Sg	13 51 23.1	+0.4
	33nm,0.7s						
UZB	**Uzynbulak**	**4.60**	**66**	eP	Pb	13 50 22.9	+3.1
	1.2nm,0.6s						
UZB				eS	Sg	13 51 24.2	-1.9
	7.4nm,0.6s						
PDGK	**Podgornoye**	**4.99**	**66**	⇑Pg	Pg	13 50 30.6	-3.2
	3.7nm,0.9s						
PDGK				⇑Lg	Lg	13 51 36.5	
	13nm,0.7s						
MK31	**Makanchi Array**	**8.42**	**47**	Pn	Pn	13 51 04.6	+3.4
	0.2nm,0.4s,baz=228,slow=12,SNR=6.0						
MK31				⇑Lg	Lg	13 53 28.1	
	1.1nm,0.6s,baz=241,slow=28,SNR=2.7						

MEX 17 13:50:43.9±1.0, 16.45N×93.88W, h128km±11km, MD4.0
NEIC 17 13:50:43.1±1.3, 16.44N±0.06×93.88W±0.04, h124km±8km, Error ellipse: s-maj=9.2km s-min=4.2km az=206.0
ISC 17 13:50:43.8±1.9, 16.40N±0.07×93.89W±0.04, h116km±16km, n12, σ0.82/23, Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGIG		**0.83**	**63**		Pn	13 51 03.4	-0.6
TGIG					Sn	13 51 18.6	-0.6
TGIG		**0.83**	**63**	i P	Pn	13 51 03.4	-0.6
TGIG				i S	Sn	13 51 18.6	-0.6
PCIG		**0.95**	**137**		Pn	13 51 05.3	+0.3
PCIG					Sn	13 51 22.2	+1.2
PCIG		**0.95**	**137**	eP	Pn	13 51 05.3	+0.3
PCIG				i S	Sn	13 51 22.2	+1.2
CMIG	**Matias Romero**	**1.17**	**306**		Pn	13 51 07.3	0.0
CMIG					Sn	13 51 25.3	+0.2
CMIG	**Matias Romero**	**1.17**	**306**	i P	Pn	13 51 07.3	0.0
CMIG				i S	Sn	13 51 25.3	+0.2
CCIG	**Comitan**	**1.69**	**94**		Pn	13 51 12.9	-0.5
CCIG					Sn	13 51 36.4	+0.4
CCIG	**Comitan**	**1.69**	**94**	eP	Pn	13 51 12.9	-0.5
CCIG				i S	Sn	13 51 36.4	+0.4
HUIG	**Huatulco**	**2.22**	**254**		Pn	13 51 18.3	-1.6
HUIG					Sn	13 51 47.1	-0.3
HUIG	**Huatulco**	**2.22**	**254**	i P	Pn	13 51 18.3	-1.6
HUIG				i S	Sn	13 51 47.1	-0.3
VHO	**Vista Hermosa**	**2.80**	**284**	i P	Pn	13 51 28.8	+1.3
VHO				i S	Sn	13 52 02.0	+0.8
TLIG	**Tlapa**	**4.62**	**285**	Pn	Pn	13 51 52.1	+0.4

BJI 17 13:59:33.0±0.0, 53.60N×163.60W, h10km, mB5.2/50, mb4.8/62, Ms5.0/43, Ms7 4.7/44
IDC 17 13:59:34.5±0.5, 53.60N×163.72W, h0km, mb4.5/43, mb1 4.7/46, mb1mx4.6/68, mbtmp4.5/46, ML3.9/3, MS4.3/41, Ms1 4.3/41, ms1mx4.1/63, Error ellipse: s-maj=15.8km s-min=8.7km az=177.0
MOS 17 13:59:37.3±1.1, 53.53N×163.60W, h33km, mb5.2/86, MS4.8/6, Error ellipse: s-maj=7.5km s-min=4.3km az=93.7
AEIC 17 13:59:37.5±2.0, 53.46N±0.06×163.61W±0.07, h38km±4km, Error ellipse: s-maj=8.4km s-min=5.8km az=158.0
NEIC 17 13:59:38.0±1.8, 53.53N±0.03×163.58W±0.07, h29km±3km, mb5.0/234, ML4.4/36(AEIC), Error ellipse: s-maj=5.6km s-min=3.9km az=96.0
BGR 17 13:59:39.7±0.0, 53.48N×163.54W, h36km, mb5.1, Ms4.3
GCMT 17 13:59:40.0±0.2, 53.48N±0.02×163.52W±0.03, h18km, MW5.0/98, Moment Tensor Solution. s44,c58; s98,c147; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.83±.16; Mθθ-2.21±.11; Mφφ-0.62±.10; Mrθ2.41±.27; Mrφ-1.88±.07; Mθφ0.70±.23; Best double couple: Mo4.03800×10^16 NP1:φs222.00000°, δ28.00000°, λ66.00000°. NP2: φs69.00000°, δ65.00000°, λ102.00000°. Principal axes: T 3.7980, Plg68.0000°, Azm2.0000°; N 0.4730, Plg11.0000°, Azm243.0000°; P -4.2780, Plg19.0000°, Azm149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate

function

ISC 17 13:59:38.4±0.5, 53°.53N±0°.05×163°.58W±0°.03, h30km±3km, h31km:pP-P, n813, σ1s13/848, mb5.0/252, MS4.5/59, 32C-17D, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	**West Dahl East**	**1.12**	**328**		**Pn**	**13 59 58.0**	**-0.1**
WESP	**Westdahl Peak**	**1.18**	**326**		**Pn**	**13 59 59.0**	**+0.1**
WEBT	**Westdahl Beart**	**1.27**	**327**		**Pn**	**14 00 00.4**	**+0.3**
SSLW	**Shishaldin Wes**	**1.29**	**346**		**Pn**	**13 59 59.7**	**-0.7**
SSBA	**Shishaldin**	**1.29**	**346**		**Pn**	**14 00 00.4**	**0.0**
SSBA					**Sb**	**14 00 18.0**	**-0.3**
FALS	**False Pass**	**1.34**	**4**		**Pn**	**14 00 01.2**	**+0.3**
FALS	**False Pass**	**1.34**	**4**		**Sn**	**14 00 18.7**	**+1.0**
AKUT	**Akutan**	**1.44**	**296**		**Pn**	**14 00 01.9**	**-0.4**
AKBBA	**Akutan Broad B**	**1.51**	**293**		**Pn**	**14 00 03.0**	**-0.3**
AKLV	**Akutan Long Va**	**1.55**	**295**		**Pn**	**14 00 03.6**	**-0.3**
AKMO	**Akutan Morgan**	**1.55**	**292**		**Pn**	**14 00 03.6**	**-0.3**
AKMO					**Sn**	**14 00 22.2**	**-0.8**
AKRB	**Akutan Reef Bi**	**1.60**	**293**		**Pn**	**14 00 04.2**	**-0.3**
DT1	**Dutton Round H**	**1.76**	**25**		**Pn**	**14 00 06.8**	**0.0**
UNV	**Unalaska Valle**	**1.77**	**282**		**Pn**	**14 00 05.9**	**-1.0**
UNV	**Unalaska Valle**	**1.77**	**282**		**Sn**	**14 00 27.4**	**-1.0**
MNAT	**Makushin Natee**	**1.88**	**282**		**Pn**	**14 00 07.8**	**-0.7**
MTBL	**Makushin Table**	**1.90**	**285**		**Pn**	**14 00 08.3**	**-0.5**
MREP	**Makushin Rep't**	**1.91**	**280**		**Pn**	**14 00 07.8**	**-1.1**
MSW	**Makushin Switc**	**1.95**	**283**		**Pn**	**14 00 08.7**	**-0.7**
MSW					**Sn**	**14 00 31.8**	**-1.0**
MGOD	**Makushin Gods**	**1.98**	**279**		**Pn**	**14 00 09.3**	**-0.6**
MCIR	**Makushin Cirqu**	**2.02**	**284**		**Pn**	**14 00 10.0**	**-0.4**
HAG	**Hague Volcano**	**2.04**	**28**		**Pn**	**14 00 11.6**	**+0.9**
HAG	**Hague Volcano**	**2.04**	**28**	P	**Pn**	**14 00 11.6**	**+0.9**
PVV	**Pavlof Volcano**	**2.13**	**29**		**Pn**	**14 00 13.2**	**+1.4**
BLHA	**Black Hill**	**2.35**	**21**		**Pn**	**14 00 16.2**	**+1.3**
SDPT	**Sand Point**	**2.57**	**43**		**Pn**	**14 00 18.1**	**+0.2**
OKFG	**Magazine Ridge**	**2.59**	**269**		**Pn**	**14 00 17.8**	**-0.5**
CNBA	**Chernabura Isl**	**2.68**	**59**		**Pn**	**14 00 18.8**	**-0.6**
OKSP	**Okmok Steeple**	**2.84**	**266**		**Pn**	**14 00 20.7**	**-0.9**
NIKH	**Nikolski High**	**3.22**	**262**		**Pn**	**14 00 26.3**	**+0.5**
CHGN	**Chignik**	**4.08**	**45**		**Pn**	**14 00 39.0**	**+0.4**
SII	**Sitkinak Islan**	**6.20**	**57**		**Pn**	**14 01 07.3**	**-0.3**
ATKA	**Atka Island**	**6.57**	**263**	Pn	**Pn**	**14 01 13.7**	**+0.9**
OHAK	**Old Harbor**	**6.93**	**54**		**Pn**	**14 01 16.1**	**-1.6**
KDAK	**Kodiak Island**	**7.54**	**51**	Pn	**Pn**	**14 01 24.9**	**-1.2**
	5.2nm,0.3s,baz=169,slow=4.9,SNR=80						
KDAK				Sn	**Sn**	**14 02 45.5**	**-4.9**
	1.2nm,0.3s,baz=164,slow=23,SNR=7.5						
KDAK	**Kodiak Island**	**7.54**	**51**		**Pn**	**14 01 25.1**	**-1.0**
ADK	**Adak**	**8.13**	**264**		**Pn**	**14 01 34.7**	**+0.5**
ADK	**Adak**	**8.13**	**264**	P	**Pn**	**14 01 34.7**	**+0.5**
KIWB	**Kanaga Island**	**8.42**	**264**		**Pn**	**14 01 39.0**	**+0.9**
SVW2	**Sparrevohn**	**8.73**	**26**		**Pn**	**14 01 42.7**	**+0.3**
CNPM	**China Poot**	**9.08**	**44**		**Pn**	**14 01 47.1**	**-0.1**
RSO	**Redoubt South**	**9.11**	**36**		**Pn**	**14 01 49.2**	**+1.3**
SEW	**Seward**	**10.15**	**44**		**Pn**	**14 02 01.0**	**-0.9**
TTA	**Tatalina**	**10.23**	**20**		**Pn**	**14 02 03.1**	**+0.1**
TTA	**Tatalina**	**10.23**	**20**	P	**Pn**	**14 02 03.1**	**+0.1**
SUA	**Susitna One**	**10.52**	**36**		**Pn**	**14 02 06.6**	**-0.4**
SKT	**Skwentna**	**10.62**	**32**		**Pn**	**14 02 07.8**	**-0.5**
RC01	**Rabbit Creek A**	**10.63**	**39**		**Pn**	**14 02 08.1**	**-0.4**
ANM	**Nome**	**11.11**	**356**	Pn	**Pn**	**14 02 16.0**	**+1.0**
ANM	**Nome**	**11.11**	**356**	P	**Pn**	**14 02 16.0**	**+1.0**
PPLA	**Purkeypile**	**11.13**	**28**		**Pn**	**14 02 17.1**	**+1.8**
PMR	**Palmer**	**11.18**	**38**		**Pn**	**14 02 13.8**	**-2.1**
PMR	**Palmer**	**11.18**	**38**	P	**Pn**	**14 02 13.8**	**-2.1**
KNK	**Knik Glacier**	**11.32**	**40**		**Pn**	**14 02 16.3**	**-1.5**
GHO	**Glory Hole Cre**	**11.37**	**38**		**Pn**	**14 02 15.6**	**-3.0**
GLI	**Glacier Island**	**11.56**	**44**	Pn	**Pn**	**14 02 19.6**	**-1.5**
HIN	**Hinchinbrook I**	**11.56**	**47**		**Pn**	**14 02 19.7**	**-1.5**
EYAK	**Cordova Ski Ar**	**11.96**	**47**		**Pn**	**14 02 24.5**	**-2.1**
KTH	**Kantishna Hill**	**12.00**	**28**		**Pn**	**14 02 28.7**	**+1.5**
SCM	**Sheep Creek Mo**	**12.01**	**40**		**Pn**	**14 02 24.8**	**-2.5**
SCM	**Sheep Creek Mo**	**12.01**	**40**	P	**Pn**	**14 02 24.8**	**-2.5**
TRF	**Thorofare Moun**	**12.11**	**30**		**Pn**	**14 02 29.1**	**+0.3**
RAGM	**Ragged Mountai**	**12.36**	**49**		**Pn**	**14 02 30.9**	**-1.2**
BPAW	**Bear Paw Mtn.**	**12.42**	**26**		**Pn**	**14 02 32.4**	**-0.4**
RND	**Reindeer**	**12.51**	**32**		**Pn**	**14 02 31.9**	**-2.3**
RND	**Reindeer**	**12.51**	**32**	P	**Pn**	**14 02 31.9**	**-2.3**
MCK	**McKinley**	**12.72**	**31**		**Pn**	**14 02 34.8**	**-2.2**
MCK	**McKinley**	**12.72**	**31**	P	**Pn**	**14 02 34.8**	**-2.2**
DHY	**Denali Highway**	**12.77**	**35**		**Pn**	**14 02 34.7**	**-3.1**
BWN	**Browne**	**12.89**	**29**		**Pn**	**14 02 37.9**	**-1.4**
GLB	**Gilahina Butte**	**13.22**	**45**		**Pn**	**14 02 42.2**	**-1.6**
MLY	**Manley**	**13.23**	**24**		**Pn**	**14 02 44.3**	**+0.3**
VRDI	**Verde Repeater**	**13.27**	**46**		**Pn**	**14 02 42.8**	**-1.8**
PAX	**Paxson**	**13.38**	**38**		**Pn**	**14 02 44.4**	**-1.6**
PAX	**Paxson**	**13.38**	**38**	P	**Pn**	**14 02 44.4**	**-1.6**
SMY	**Shemya**	**13.42**	**276**	Pn	**Pn**	**14 02 43.6**	**-2.9**
SMY	**Shemya**	**13.42**	**276**	P	**Pn**	**14 02 43.6**	**-2.9**
WRH	**Wood River Hil**	**13.52**	**30**		**Pn**	**14 02 44.8**	**-3.0**
MCARA	**McCarthy VSAT**	**13.53**	**46**	Pn	**Pn**	**14 02 47.1**	**-0.9**
BALM	**Baldy**	**13.68**	**48**		**Pn**	**14 02 48.7**	**-1.4**
CCB	**Clear Creek Bu**	**13.73**	**30**		**Pn**	**14 02 47.5**	**-3.2**
HDA	**Harding Lake**	**13.82**	**31**		**Pn**	**14 02 48.7**	**-3.2**
HDA	**Harding Lake**	**13.82**	**31**	P	**Pn**	**14 02 51.1**	**-0.8**
	baz=226						
MDM	**Murphy Dome**	**13.84**	**28**	Pn	**Pn**	**14 02 48.6**	**-3.7**
TCOL	**CIGO, UAF Yank**	**13.88**	**29**	P	**Pn**	**14 02 52.0**	**-0.7**
	baz=222						
COLA	**College**	**13.88**	**29**		**Pn**	**14 02 51.4**	**-1.4**
COLA	**College**	**13.88**	**29**	P	**Pn**	**14 02 51.4**	**-1.4**
BARN	**Barnard Glacie**	**13.99**	**49**		**Pn**	**14 02 53.2**	**-1.3**
MENT	**Mentasta**	**14.02**	**40**		**Pn**	**14 02 52.6**	**-2.1**
RIDG	**Independent Ri**	**14.07**	**36**		**Pn**	**14 02 53.2**	**-2.2**
IL31		**14.09**	**30**		**Pn**	**14 02 52.0**	**-3.6**
ILAR	**Eielson Array**	**14.09**	**30**	Pn	**Pn**	**14 02 52.5**	**-3.2**
	0.4nm,0.3s,baz=232,slow=12,SNR=19						
ILAR				LR	LR	14 08 55.4	
	comp=Z,3μm,18.3s,baz=236,slow=40						
CTGM	**Chitina Glacie**	**14.10**	**49**		**Pn**	**14 02 54.9**	**-1.1**
POKR	**Poker Plat Res**	**14.18**	**29**	P	**Pn**	**14 02 57.1**	**+0.2**
	baz=223						
DOT	**Dot Lake**	**14.30**	**37**		**Pn**	**14 02 55.9**	**-2.6**
PCA	**Pinnacle**	**14.31**	**53**	Pn	**Pn**	**14 02 58.6**	**-0.2**
SCRK	**Sand Creek**	**14.52**	**36**		**Pn**	**14 02 58.8**	**-2.8**
RDOG	**Red Dog Mine**	**14.58**	**1**	Pn	**Pn**	**14 03 00.0**	**-2.3**
PRP	**Porcupine Dome**	**15.03**	**30**		**Pn**	**14 03 05.0**	**-3.4**
DHAK	**Deception Hill**	**15.08**	**58**	Pn	**Pn**	**14 03 07.6**	**-1.5**
COLD	**Coldfoot**	**15.19**	**20**		**Pn**	**14 03 11.6**	**+1.1**
HYT	**Haines Junctio**	**15.83**	**52**	Pn	**Pn**	**14 03 18.2**	**-0.7**
FYU	**Fort Yukon**	**15.87**	**27**	P	**P**	**14 03 21.5**	**-1.1**
EGAK	**Eagle**	**15.99**	**36**		**Pn**	**14 03 19.1**	**-1.7**
DAWY	**Dawson**	**16.27**	**40**		**Pn**	**14 03 22.6**	**-1.7**
SIT	**Sitka**	**16.42**	**66**	Pn	**Pn**	**14 03 26.2**	**0.0**
SIT				IAmb	IAmb	14 03 50.3	
	comp=Z,115nm,1.3s						
SIT	**Sitka**	**16.42**	**66**	P	**Pn**	**14 03 26.2**	**0.0**
SIT				pmax	pmax		
	comp=Z,115nm,1.3s						
SKAG	**Skagway**	**16.60**	**58**	P	**P**	**14 03 30.0**	**-0.8**
BESE	**Bessie Mountai**	**16.74**	**61**	P	**P**	**14 03 32.2**	**-0.3**
JIS	**Juneau Island**	**16.97**	**62**	P	**P**	**14 03 35.4**	**+0.6**
WHY	**Whitehorse**	**17.04**	**54**	P	**P**	**14 03 35.4**	**-0.4**
EPYK	**Eagle Plains**	**18.41**	**35**	P	**P**	**14 03 49.4**	**-1.3**
EPYK	**Eagle Plains**	**18.41**	**35**	P	**P**	**14 03 50.0**	**-0.7**
	baz=239,SNR=34						
DLBC	**Dease Lake**	**19.27**	**62**	P	**Pn**	**14 04 02.3**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=255,slow=10.0,SNR=9.8						
BILL	**Bilibino**	**20.37**	**327**	P	**P**	**14 04 11.2**	**-0.9**
BILL	**Bilibino**	**20.37**	**327**	ceP	**P**	**14 04 12.2**	**+0.1**
BILL				e		14 04 26.0	
BILL				e		14 04 33.9	
BILL				pmax	pmax		
	comp=Z,50nm,1.1s						
BILL				MLR	MLR		
	comp=Z,3μm,17.0s						
INK	**Inuvik**	**20.47**	**32**	P	**P**	**14 04 11.7**	**-1.5**
	comp=Z,14nm,0.8s,baz=230,slow=12,SNR=34						
INK	**Inuvik**	**20.47**	**32**	P	**P**	**14 04 11.1**	**-2.1**
INK	**Inuvik**	**20.47**	**32**	P	**P**	**14 04 11.1**	**-2.1**
INK				pmax	pmax		
	comp=Z,37nm,0.9s						
BBB	**Bella Bella**	**21.32**	**79**	LR	LR	14 10 30.4	
	comp=Z,487nm,20.0s,baz=298,slow=31						
PET	**Petropavlovsk**	**22.42**	**284**	P	**P**	**14 04 35.1**	**+0.8**
PET				IAmb	IAmb	14 05 09.0	
	comp=Z,101nm,1.3s						
PET	**Petropavlovsk**	**22.42**	**284**	P	**P**	**14 04 35.1**	**+0.8**
PET				pmax	pmax		
	comp=Z,101nm,1.3s						
PEA0B	**Petropavlovsk-**	**22.95**	**285**	P	**P**	**14 04 39.7**	**-0.2**
PEA0B	**Petropavlovsk-**	**22.95**	**285**	P	**P**	**14 04 39.7**	**-0.2**
PEA0B				pmax	pmax		
	comp=Z,135nm,1.4s						
PETK	**Petropavlovsk-**	**22.95**	**285**	P	**P**	**14 04 39.1**	**-0.7**
	comp=Z,9.8nm,0.5s,baz=84,slow=10,SNR=38						
PETK				LR	LR	14 13 26.4	
	comp=Z,914nm,20.6s,baz=78,slow=36						
C36M	**Paulatuk**	**24.01**	**34**	P	**P**	**14 04 49.2**	**-0.8**
C36M	**Paulatuk**	**24.01**	**34**	P	**P**	**14 04 50.3**	**+0.3**
	baz=249,SNR=22						
SEY	**Seymchan**	**24.54**	**310**	P	**P**	**14 04 53.9**	**-1.0**
	comp=Z,4.7nm,0.7s,baz=117,slow=8.1,SNR=11						
SEY				LR	LR	14 16 22.5	
	comp=Z,816nm,18.4s,baz=3.0,slow=41						
SEY	**Seymchan**	**24.54**	**310**	⇑eP	**P**	**14 04 54.6**	**-0.3**
MA2	**Magadan**	**25.45**	**302**	P	**P**	**14 05 03.0**	**-0.2**
	comp=Z,5.9nm,0.5s,baz=89,slow=11,SNR=11						
MA2				LR	LR	14 15 51.5	
	comp=Z,459nm,18.0s,baz=105,slow=39						
MA2	**Magadan**	**25.45**	**302**	P	**P**	**14 05 03.0**	**-0.2**
MA2	**Magadan**	**25.45**	**302**	deP	**P**	**14 05 03.5**	**+0.3**
MA2				pmax	pmax		
	comp=Z,27nm,1.7s						
NLWA	**Neilton Lookou**	**25.75**	**88**	P	**P**	**14 05 05.6**	**-0.5**
NLWA				IAmb	IAmb	14 05 25.1	
	comp=Z,49nm,1.0s						
YKA	**Yellowknife Ar**	**26.82**	**51**	P	**P**	**14 05 16.7**	**+1.2**
	comp=Z,13nm,0.8s,baz=270,slow=7.8,SNR=137						
YKA				PcP	**PcP**	**14 08 37.9**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=275,slow=2.3,SNR=5.2						
YKA				LR	LR	14 16 52.9	
	comp=Z,1μm,18.0s,baz=0.0,slow=39						
HAWA	**Hanford**	**28.83**	**86**	P	**P**	**14 05 34.6**	**+1.0**
HAWA				IAmb	IAmb	14 05 54.9	
	comp=Z,56nm,1.5s						
NEW	**Newport**	**29.34**	**81**	P	**P**	**14 05 39.6**	**+1.3**
	comp=Z,2.0nm,0.6s,baz=278,slow=4.9,SNR=4.0						
NEW				LR	LR	14 15 09.5	
	comp=Z,315nm,20.9s,baz=300,slow=32						
NEW	**Newport**	**29.34**	**81**	P	**P**	**14 05 39.6**	**+1.3**
NEW				pmax	pmax		
	comp=Z,15nm,1.1s						
NEW	**Newport**	**29.34**	**81**	P	**P**	**14 05 40.0**	**+1.7**
	baz=298						
YBH	**Yreka Blue Hor**	**29.55**	**97**	P	**P**	**14 05 42.3**	**+2.1**
	comp=Z,1.6nm,0.7s,baz=180,slow=10,SNR=3.8						
YBH				LR	LR	14 15 16.0	
	comp=Z,346nm,18.1s,baz=304,slow=32						
YBH	**Yreka Blue Hor**	**29.55**	**97**	IAmb	IAmb	14 06 20.6	
	comp=Z,25nm,1.4s						
YBH	**Yreka Blue Hor**	**29.55**	**97**	P	**P**	**14 05 42.3**	**+2.1**
YBH				pmax	pmax		
	comp=Z,25nm,1.5s						
I07A	**Izee**	**30.08**	**90**	P	**P**	**14 05 45.8**	**+0.8**
I07A				IAmb	IAmb	14 06 03.8	
	comp=Z,20nm,1.0s						
F10A	**Beach Ranch, E**	**30.42**	**85**	P	**P**	**14 05 48.6**	**+0.7**
F10A				IAmb	IAmb	14 06 01.7	
	comp=Z,43nm,1.6s						
J08A	**Circle Bar Ran**	**31.11**	**91**	P	**P**	**14 05 54.1**	**+0.1**
J08A				IAmb	IAmb	14 06 11.4	
	comp=Z,19nm,1.0s						
JTMT	**Jette**	**31.27**	**80**	P	**P**	**14 05 55.2**	**-0.1**
WVOR	**Wild Horse Val**	**31.55**	**92**	P	**P**	**14 05 57.1**	**-0.8**
WVOR				IAmb	IAmb	14 06 15.5	
	comp=Z,23nm,1.1s						
WVOR	**Wild Horse Val**	**31.55**	**92**	P	**P**	**14 05 57.1**	**-0.8**
WVOR				pmax	pmax		
	comp=Z,23nm,1.2s						
TYV	**Tymovskoe**	**32.42**	**288**	eP	P	14 06 12.9	+7.7
TYV				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TYV				pmax	pmax		
	comp=Z,800nm,7.6s						
MFID	**Camas Ranch**	**32.66**	**88**	P	**P**	**14 06 09.0**	**+1.4**
MFID				IAmb	IAmb	14 06 28.3	
	comp=Z,17nm,0.9s						
PAHR	**Pah Rah Range**	**32.79**	**97**	P	**P**	**14 06 10.2**	**+1.4**
VCNR	**Virginia City**	**32.89**	**98**	P	**P**	**14 06 09.9**	**+0.1**
PNTR	**Pine Nut**	**33.06**	**98**	P	**P**	**14 06 12.7**	**+1.5**
PNTR				IAmb	IAmb	14 06 37.3	
	comp=Z,18nm,0.8s						
YERR	**Yerington**	**33.34**	**98**	P	**P**	**14 06 15.5**	**+1.9**
YERR				IAmb	IAmb	14 06 34.1	
	comp=Z,14nm,1.0s						
WAKR	**Walker**	**33.53**	**98**	P	**P**	**14 06 17.4**	**+2.0**
TIXI	**Tiksi**	**33.58**	**328**	P	**P**	**14 06 14.5**	**-0.7**
	comp=Z,10nm,0.7s,baz=95,slow=11,SNR=23						
TIXI				PcP	**PcP**	**14 08 55.2**	**+0.4**
	comp=Z,1.4nm,0.3s,baz=100,slow=1.3,SNR=4.9						
TIXI	**Tiksi**	**33.58**	**328**	P	**P**	**14 06 14.2**	**-1.0**
TIXI				IAmb	IAmb	14 06 16.1	
	comp=Z,11nm,0.7s						
TIXI	**Tiksi**	**33.58**	**328**	⇑eP	**P**	**14 06 14.5**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,16nm,1.0s						
MCMT	**McKenzie Canyo**	**33.64**	**84**	P	**P**	**14 06 17.2**	**+0.9**
EGMT	**Eagleton**	**33.78**	**77**	P	**P**	**14 06 18.9**	**+1.6**
	baz=300						
RES	**Resolute Bay**	**33.79**	**26**	P	**P**	**14 06 16.5**	**-0.5**
	comp=Z,4.1nm,0.7s,baz=251,slow=12,SNR=10						
RES				LR	LR	14 21 43.5	
	comp=Z,941nm,18.4s,baz=278,slow=39						
RES	**Resolute Bay**	**33.79**	**26**	P	**P**	**14 06 16.7**	**-0.3**
RES	**Resolute Bay**	**33.79**	**26**	P	**P**	**14 06 16.7**	**-0.3**
RES				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KVN	**Kaiserville**	**33.97**	**97**	P	**P**	**14 06 20.0**	**+0.8**
KVN	**Kaiserville**	**33.97**	**97**	P	**P**	**14 06 20.0**	**+0.8**
KVN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
YSS	**Yuzh-Sakhalins**	**34.24**	**281**	⇑eP	**P**	**14 06 21.4**	**+0.3**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NVAR	**Mina Array Bea**	**34.25**	**98**	P	**P**	**14 06 23.6**	**+1.9**
	comp=Z,2.3nm,0.7s,baz=299,slow=9.1,SNR=18						
NVAR				LR	LR	14 17 32.9	
	comp=Z,230nm,20.9s,baz=330,slow=31						
MDPB	**Devils Postpil**	**34.32**	**99**	P	**P**	**14 06 22.5**	**+0.2**
MDPB				IAmb	IAmb	14 06 42.8	
	comp=Z,32nm,1.5s						
NV11	**Mina Array Sit**	**34.34**	**97**	P	**P**	**14 06 22.1**	**-0.2**
OMMB	**Old Mammoth Mi**	**34.38**	**99**	P	**P**	**14 06 24.3**	**+1.4**
OMMB				IAmb	IAmb	14 06 44.0	
	comp=Z,15nm,1.1s						
ELK	**Elko**	**34.60**	**92**	P	**P**	**14 06 23.7**	**-1.0**
ELK				IAmb	IAmb	14 06 42.5	
	comp=Z,18nm,1.0s						
ELK	**Elko**	**34.60**	**92**	P	**P**	**14 06 23.7**	**-1.0**
ELK				pmax	pmax		
	comp=Z,18nm,1.0s						
YHL	**Hebgen Lake**	**34.61**	**83**	P	**P**	**14 06 26.2**	**+1.4**
YHH	**Holmes Hill**	**34.84**	**83**	P	**P**	**14 06 26.9**	**+0.1**
YAK	**Yakutsk**	**35.05**	**311**	P	**P**	**14 06 26.6**	**-1.4**
	comp=Z,3.1nm,0.3s,baz=102,slow=1.4,SNR=10						
YAK	**Yakutsk**	**35.05**	**311**	P	**P**	**14 06 26.4**	**-1.7**
YAK				IAmb	IAmb	14 06 38.5	
	comp=Z,20nm,0.9s						
YAK	**Yakutsk**	**35.05**	**311**	eP	**P**	**14 06 26.3**	**-1.7**
YAK				e*PP	**pP**	**14 06 35.9**	**-0.4**
YAK				e		14 09 06.4	
YAK				eS	**S**	**14 11 57.6**	**-0.4**
YAK				e*SS	**sS**	**14 12 11.8**	**-0.7**
YAK				e		14 16 51.1	
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				smax	smax		
	comp=N,136nm,3.8s						
YAK				smax	smax		
	comp=E,110nm,3.8s						
YAK				MLR	MLR		
	comp=Z,806nm,19.0s						
YAK				MLR	MLR		
	comp=N,779nm,17.0s						
YAK				MLR	MLR		
	comp=E,613nm,18.0s						
LKWY	**Lake**	**35.23**	**83**	P	**P**	**14 06 30.9**	**+0.7**
LKWY				IAmb	IAmb	14 07 01.8	
	comp=Z,11nm,0.9s						
LKWY	**Lake**	**35.23**	**83**	P	**P**	**14 06 30.9**	**+0.7**
LKWY				pmax	pmax		
	comp=Z,11nm,0.9s						
HVU	**Hansel Valley**	**35.44**	**88**	P	**P**	**14 06 32.2**	**+0.4**
HVU	**Hansel Valley**	**35.44**	**88**	P	**P**	**14 06 32.2**	**+0.4**
HVU				pmax	pmax		
	comp=Z,11nm,0.9s						
BGU	**Big Grassy Mou**	**35.81**	**90**	P	**P**	**14 06 35.1**	**+0.2**
JKA	**Kamikawa-asahi**	**35.87**	**277**	P	**P**	**14 06 35.3**	**0.0**
ASAJ	**Asahikawa**	**35.87**	**277**	P	**P**	**14 06 35.3**	**0.0**
	comp=Z,27nm,1.0s,baz=44,slow=13,SNR=3.7						
ASAJ				LR	LR	14 18 19.0	
	comp=Z,360nm,22.0s,baz=142,slow=31						
GRNR	**Gornyy**	**35.98**	**291**	⇑iP	**P**	**14 06 34.8**	**-1.3**
GRNR				eS	**S**	**14 12 10.9**	**-1.6**
GRNR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GRNR				smax	smax		
	comp=N,2.0nm,1.3s						
GRNR				MLR	MLR		
	comp=Z,250nm,16.0s						
MPMC	**Manual Prospec**	**36.33**	**100**	P	**P**	**14 06 41.6**	**+2.2**
	baz=314						
DUG	**Dugway, Tooele**	**36.39**	**90**	P	**P**	**14 06 40.0**	**0.0**
DUG				IAmb	IAmb	14 06 57.0	
	comp=Z,19nm,1.0s						
DUG	**Dugway, Tooele**	**36.39**	**90**	P	**P**	**14 06 40.0**	**0.0**
DUG				pmax	pmax		
	comp=Z,19nm,1.0s						
DUG	**Dugway, Tooele**	**36.39**	**90**	P	**P**	**14 06 41.8**	**+1.9**
	baz=309,SNR=7.9						
FURC	**Furnace Creek,**	**36.42**	**99**	P	**P**	**14 06 42.3**	**+2.3**
	baz=313						
TPNV	**Topopah Spring**	**36.45**	**98**	P	**P**	**14 06 41.5**	**+1.0**
TPNV				IAmb	IAmb	14 07 01.3	
	comp=Z,14nm,0.8s						
TPNV	**Topopah Spring**	**36.45**	**98**	P	**P**	**14 06 41.5**	**+1.0**
TPNV				pmax	pmax		
	comp=Z,15nm,0.9s						
TPNV	**Topopah Spring**	**36.45**	**99**	P	**P**	**14 06 42.6**	**+2.0**
	baz=312,SNR=5.4						
DGMT	**Dagmar**	**36.76**	**73**	P	**P**	**14 06 43.6**	**+0.7**
	baz=301						
PD31	**Pinedale Array**	**36.77**	**85**	P	**P**	**14 06 44.6**	**+1.4**
PDAR	**Pinedale Array**	**36.77**	**85**	P	**P**	**14 06 44.6**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=299,slow=3.7,SNR=12						
PDAR				LR	LR	14 19 58.5	
	comp=Z,161nm,18.2s,baz=314,slow=33						
PSUT	**Pine Spring**	**36.83**	**93**	P	**P**	**14 06 44.6**	**+0.8**
JLU	**Jordanelle**	**36.95**	**89**	P	**P**	**14 06 45.4**	**+0.5**
NLU	**North Lily Min**	**36.98**	**90**	P	**P**	**14 06 45.4**	**+0.3**
SNCC	**San Nicolas Is**	**37.12**	**105**	P	**P**	**14 06 46.1**	**0.0**
SHOC	**Shoshone, Teco**	**37.15**	**99**	P	**P**	**14 06 48.3**	**+2.0**
	baz=314						
FCC	**Fort Churchill**	**37.47**	**53**	P	**P**	**14 06 47.8**	**-0.9**
FCC				IAmb	IAmb	14 07 02.3	
	comp=Z,36nm,1.0s						
FCC	**Fort Churchill**	**37.47**	**53**	P	**P**	**14 06 47.8**	**-0.9**
FCC				pmax	pmax		
	comp=Z,36nm,1.0s						
BFSC	**Mount Baldy Ra**	**37.50**	**102**	P	**P**	**14 06 51.3**	**+2.0**
	baz=315						
TCRU	**Three Creeks R**	**37.62**	**92**	P	**P**	**14 06 51.7**	**+1.2**
CCUT	**Cedar City**	**37.77**	**94**	P	**P**	**14 06 52.8**	**+1.0**
MSU	**Marysvale**	**37.84**	**92**	P	**P**	**14 06 52.9**	**+0.5**
MSU	**Marysvale**	**37.84**	**92**	P	**P**	**14 06 52.9**	**+0.5**
HEC	**Hector,Ludlow**	**37.86**	**100**	P	**P**	**14 06 54.3**	**+2.0**
	baz=315						
TMUT	**Trail Mountain**	**37.92**	**90**	P	**P**	**14 06 52.8**	**-0.3**
P17A	**Butcher Ranch,**	**38.08**	**90**	P	**P**	**14 06 53.8**	**-0.5**
MTPU	**Mount Pierson**	**38.15**	**93**	P	**P**	**14 06 56.0**	**+1.0**
Q16A	**Castle Valley**	**38.18**	**91**	P	**P**	**14 06 56.1**	**+0.9**
LCMT	**Little Creek M**	**38.20**	**95**	P	**P**	**14 06 56.1**	**+0.8**
GMRC	**Granite Mounta**	**38.28**	**100**	P	**P**	**14 06 57.5**	**+1.5**
	baz=314						
KNB	**Kanab**	**38.44**	**94**	P	**P**	**14 06 58.5**	**+1.1**
KNB	**Kanab**	**38.44**	**94**	P	**P**	**14 06 58.5**	**+1.1**
KNB				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SRU	**San Rafael Swe**	**38.45**	**90**	P	**P**	**14 06 58.7**	**+1.3**
SRU	**San Rafael Swe**	**38.45**	**90**	P	**P**	**14 06 58.7**	**+1.3**
SRU				pmax	pmax		
	comp=Z,16nm,0.9s						
BELC	**Belle Mtn. Jos**	**38.64**	**101**	P	**P**	**14 06 59.9**	**+1.0**
	baz=315						
PFO	**Pinyon Flats O**	**38.64**	**102**	P	**P**	**14 07 00.2**	**+1.2**
PFO	**Pinyon Flats O**	**38.64**	**102**	P	**P**	**14 07 00.2**	**+1.2**
PFO				pmax	pmax		
	comp=Z,12nm,1.4s						
XPFO	**Pion Flat**	**38.65**	**102**	P	**P**	**14 07 00.0**	**+1.0**
IRM	**Iron Mountain**	**39.03**	**100**	P	**P**	**14 07 03.8**	**+1.7**
	baz=315						
W13A	**Hualapai Mount**	**39.11**	**98**	P	**P**	**14 07 04.4**	**+1.3**
U15A	**North Rim**	**39.15**	**95**	P	**P**	**14 07 04.2**	**+0.7**
O20A	**White River Ci**	**39.16**	**87**	P	**P**	**14 07 04.2**	**+0.8**
O20A				IAmb	IAmb	14 07 23.2	
	comp=Z,27nm,0.9s						
O20A	**White River Ci**	**39.16**	**87**	P	**P**	**14 07 04.6**	**+1.3**
	baz=309,SNR=12						
RSSD	**Black Hills**	**39.24**	**79**	P	**P**	**14 07 04.3**	**+0.3**
RSSD	**Black Hills**	**39.24**	**79**	P	**P**	**14 07 04.3**	**+0.3**
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RSSD	**Black Hills**	**39.24**	**79**	P	**P**	**14 07 05.2**	**+1.2**
	baz=306						
KLR	**Kul'dur**	**39.36**	**291**	P	**P**	**14 07 03.2**	**-1.4**
	comp=Z,5.2nm,0.8s,baz=43,slow=7.2,SNR=11						
KLR	**Kul'dur**	**39.36**	**291**	d iP	**P**	**14 07 02.1**	**-2.6**
KLR				pmax	pmax		
	comp=Z,14nm,1.4s						
ZEA	**Zeya**	**39.52**	**299**	eP	**P**	**14 07 04.1**	**-1.9**
ZEA				pmax	pmax		
	comp=Z,28nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,1μm,16.0s						
ZEA				MLR	MLR		
	comp=E,500nm,15.0s						
Y12C	**Blythe**	**39.68**	**100**	P	**P**	**14 07 09.3**	**+1.8**
	baz=315						
MDND	**Maddock**	**39.70**	**71**	P	**P**	**14 07 07.5**	**-0.1**
MDND	**Maddock**	**39.70**	**71**	P	**P**	**14 07 09.6**	**+2.0**
	baz=303,SNR=5.5						
TULEG	**Thule**	**39.80**	**21**	P	**P**	**14 07 08.2**	**+0.2**
GLA	**Glamis**	**40.00**	**101**	P	**P**	**14 07 12.0**	**+1.8**
	baz=316						
N23A	**Red Feather La**	**40.05**	**84**	P	**P**	**14 07 10.9**	**0.0**
WUAZ	**Wupatki**	**40.32**	**95**	P	**P**	**14 07 13.3**	**+0.3**
Y14A	**Wickenburg**	**40.44**	**98**	P	**P**	**14 07 14.2**	**+0.3**
ULM	**Lac du Bonnet**	**40.49**	**66**	P	**P**	**14 07 14.8**	**+0.8**
	comp=E,5.9nm,0.8s,baz=304,slow=7.7,SNR=14						
ULM				LR	LR	14 23 55.0	
	comp=E,471nm,20.9s,baz=306,slow=36						
ULM	**Lac du Bonnet**	**40.49**	**66**	P	**P**	**14 07 14.1**	**0.0**
ULM				IAmb	IAmb	14 07 31.1	
	comp=Z,19nm,0.9s						
ULM	**Lac du Bonnet**	**40.49**	**66**	P	**P**	**14 07 14.1**	**0.0**
ULM				pmax	pmax		
	comp=Z,19nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**40.66**	**225**	T	T	14 50 51.5	
	baz=26,slow=76,SNR=130						
H11N3	**WAKE ISLAND Hy**	**40.66**	**225**	T	T	14 50 55.5	
	baz=26,slow=76,SNR=146						
H11N1	**WAKE ISLAND Hy**	**40.68**	**225**	T	T	14 50 55.5	
	baz=26,slow=76,SNR=130						
MVCO	**Mesa Verde**	**40.89**	**91**	P	**P**	**14 07 17.2**	**-0.6**
MVCO	**Mesa Verde**	**40.89**	**91**	P	**P**	**14 07 19.0**	**+1.1**
	baz=312						
S22A	**4UR Ranch, Cre**	**41.53**	**89**	P	**P**	**14 07 26.1**	**+2.9**
	baz=311						
AGMN	**Agassiz Nation**	**41.55**	**69**	P	**P**	**14 07 23.4**	**+0.5**
AGMN				IAmb	IAmb	14 07 42.5	
	comp=Z,27nm,1.1s						
AGMN	**Agassiz Nation**	**41.55**	**69**	P	**P**	**14 07 23.8**	**+1.0**
	baz=304,SNR=6.9						
W18A	**Petrified Fore**	**41.56**	**94**	P	**P**	**14 07 24.1**	**+0.8**
H11S1	**WAKE ISLAND Hy**	**41.83**	**225**	T	T	14 52 31.5	
	baz=26,slow=76,SNR=86						
X18A	**Snowflake**	**41.84**	**95**	P	**P**	**14 07 26.3**	**+0.7**
H11S2	**WAKE ISLAND Hy**	**41.84**	**225**	T	T	14 52 27.3	
	baz=26,slow=76,SNR=111						
H11S3	**WAKE ISLAND Hy**	**41.85**	**225**	T	T	14 52 32.8	
	baz=26,slow=76,SNR=94						
214A	**Organ Pipe Nat**	**41.97**	**100**	P	**P**	**14 07 27.3**	**+0.9**
214A	**Organ Pipe Nat**	**41.97**	**100**	P	**P**	**14 07 28.1**	**+1.7**
	baz=316						
USRK	**Ussuriysk Ar.**	**42.04**	**284**	P	**P**	**14 07 27.5**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=34,slow=10,SNR=3.0						
USRK				LR	LR	14 26 55.1	
	comp=Z,273nm,18.7s,baz=49,slow=39						
SDCO	**Great Sand Dun**	**42.33**	**88**	P	**P**	**14 07 30.5**	**+0.9**

SDCO	Great Sand Dun	42.33	88	P	P	14 07 31.1	+1.4
	baz=311						
TUC	Tucson	42.91	98	P	P	14 07 35.8	+1.7
	baz=316						
MDJ	Mudanjiang	43.17	286	P	P	14 07 35.4	-0.7
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,390nm,5.2s						
MAJO	Matsushiro	43.21	271	P	P	14 07 36.5	0.0
MAJO	Matsushiro	43.21	271⇓	eP	P	14 07 36.7	+0.2
MAJO				pmax	pmax		
	comp=Z,35nm,1.2s						
MAT	Matsushiro	43.21	271	P	P	14 07 36.5	0.0
MJAR	Matsushiro Arr	43.21	271	P	P	14 07 36.4	-0.1
	comp=Z,9.0nm,0.9s,baz=44,slow=7.9,SNR=11						
MJAR				LR	LR	14 26 15.4	
	comp=Z,263nm,20.4s,baz=70,slow=37						
MJB9	Matsu-Tunnel	43.21	271	P	P	14 07 36.8	+0.3
T25A	Trinidad	43.38	87	P	P	14 07 38.2	+0.1
T25A				IAmb	IAmb	14 07 59.0	
	comp=Z,24nm,1.3s						
T25A	Trinidad	43.38	87	P	P	14 07 39.3	+1.3
	baz=312						
ANMO	Albuquerque	43.64	91	P	P	14 07 41.4	+1.2
	comp=Z,1.0nm,0.6s,baz=286,slow=8.2,SNR=3.6						
ANMO				LR	LR	14 23 22.9	
	comp=Z,212nm,19.6s,baz=346,slow=33						
ANMO	Albuquerque	43.64	91	P	P	14 07 41.0	+0.9
ANMO	Albuquerque	43.64	91⇓	eP	P	14 07 40.9	+0.7
ANMO	Albuquerque	43.64	91	P	P	14 07 41.4	+1.2
	baz=314						
ECSD	EROS Data Cent	43.78	75	P	P	14 07 40.7	-0.3
ECSD				IAmb	IAmb	14 07 56.4	
	comp=Z,20nm,1.1s						
ECSD	EROS Data Cent	43.78	75	P	P	14 07 41.0	0.0
	baz=308,SNR=5.6						
NOR	Nord	43.95	7	iP	P	14 07 41.7	-0.2
	comp=Z,15nm,1.0s						
NOR	Nord	43.95	7	iP	P	14 07 41.7	-0.2
NOR				pmax	pmax		
	comp=Z,15nm,1.0s						
BOD	Bodaibo	43.96	310	eP	P	14 07 40.5	-1.7
BOD				pmax	pmax		
	comp=Z,13nm,1.4s						
EYMN	Ely	44.16	67	P	P	14 07 44.2	+0.2
EYMN				IAmb	IAmb	14 08 01.4	
	comp=Z,20nm,1.0s						
EYMN	Ely	44.16	67	P	P	14 07 44.7	+0.7
	baz=306,SNR=5.5						
BGNE	Belgrade	44.33	78	P	P	14 07 45.3	-0.1
BGNE				IAmb	IAmb	14 08 01.2	
	comp=Z,39nm,1.1s						
121A	Cookes Peak, D	44.53	95	P	P	14 07 46.7	-0.6
E38A	The Farm, Brul	44.92	68	P	P	14 07 50.0	0.0
E38A				IAmb	IAmb	14 07 51.5	
	comp=Z,17nm,0.9s						
FRB	Frobisher Bay	45.95	38	LR	LR	14 28 39.9	
	comp=Z,1μm,20.6s,baz=300,slow=38						
FRB	Frobisher Bay	45.95	38	P	P	14 07 58.4	+0.5
CN2	Changchun	46.03	288	eP	P	14 07 57.8	-1.1
CN2				eS	S	14 14 45.8	+3.8
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				pmax	pmax		
	comp=Z,400nm,4.4s						
CN2				LR	LR		
	comp=Z,400nm,20.0s						
CN2				LR	LR		
	comp=Z,350nm,20.0s						
CN2				LR	LR		
	comp=Z,530nm,21.0s						
G40A	Rib Lake	46.48	69	P	P	14 08 02.7	+0.3
G40A				IAmb	IAmb	14 08 21.7	
	comp=Z,36nm,1.6s						
MSTX	Muleshoe	46.51	89	P	P	14 08 03.7	+0.8
	baz=314						
MNTX	Cornudas Mount	46.55	94	P	P	14 08 04.1	+1.0
MNTX	Cornudas Mount	46.55	94	P	P	14 08 04.7	+1.6
	baz=316,SNR=9.2						
COWI	Conover	46.56	67	P	P	14 08 02.7	-0.3
COWI				IAmb	IAmb	14 08 16.5	
	comp=Z,18nm,1.3s						
KSU1	Kansas State U	46.71	80	P	P	14 08 04.8	+0.5
	baz=311						
SCIA	State Center	46.87	74	P	P	14 08 05.8	+0.3
SCIA				IAmb	IAmb	14 08 21.9	
	comp=Z,19nm,0.9s						
I40A	Norwalk	47.10	71	P	P	14 08 07.2	-0.1
I40A				IAmb	IAmb	14 08 08.2	
	comp=Z,16nm,0.7s						
F42A	Maple Grove Fa	47.32	67	P	P	14 08 09.0	+0.1
F42A				IAmb	IAmb	14 08 38.0	
	comp=Z,29nm,1.1s						
E43A	Lone Tree Farm	47.56	66	P	P	14 08 11.2	+0.4
E43A				IAmb	IAmb	14 08 24.2	
	comp=Z,10nm,0.8s						
KBS	Kingsbay	47.78	1	eP	P	14 08 12.1	0.0
KBS	Kingsbay	47.78	1	P	P	14 08 12.8	+0.7
KBS	Kingsbay	47.78	1⇓	eP	P	14 08 12.6	+0.5
KBS				pmax	pmax		
	comp=Z,98nm,1.0s						
L40A	Anamosa	47.92	73	P	P	14 08 13.3	-0.3
L40A				IAmb	IAmb	14 08 28.7	
	comp=Z,24nm,1.0s						
JFWS	Jewell Farm	47.93	71	P	P	14 08 12.9	-0.8
JFWS				IAmb	IAmb	14 08 14.0	
	comp=Z,18nm,0.7s						
JFWS	Jewell Farm	47.93	71	P	P	14 08 12.9	-0.8
JFWS				pmax	pmax		
	comp=Z,18nm,0.7s						
JFWS	Jewell Farm	47.93	71	P	P	14 08 13.3	-0.4
	baz=310,SNR=5.5						
I42A	Draeger Farm,	48.06	70	P	P	14 08 14.4	-0.3
I42A				IAmb	IAmb	14 08 15.7	
	comp=Z,15nm,0.8s						
DAG	Danmarks Havn	48.08	10⇑	iP	P	14 08 14.2	-0.2
	comp=Z,28nm,0.8s						
DAG	Danmarks Havn	48.08	10⇑	iP	P	14 08 14.2	-0.2
DAG				pmax	pmax		
	comp=Z,28nm,0.8s						
WMOK	Wichita Mounta	48.36	86	P	P	14 08 17.6	+0.4
WMOK				IAmb	IAmb	14 08 34.2	
	comp=Z,16nm,0.9s						
WMOK	Wichita Mounta	48.36	86	P	P	14 08 17.6	+0.4
SPA0	Spitsbergen Ar	48.56	0	eP	P	14 08 17.4	-0.7
SPITS	Spitsbergen Ar	48.56	0	P	P	14 08 17.7	-0.4
	comp=Z,14nm,0.9s,baz=87,slow=4.3,SNR=7.7						
SPITS				LR	LR	14 29 27.2	
	comp=Z,344nm,18.5s,baz=10.0,slow=37						
SUMG	Summit	48.59	19	iP	P	14 08 19.8	+0.9
	comp=Z,71nm,0.9s						
SUMG	Summit	48.59	19	P	P	14 08 19.3	+0.4
SUMG	Summit	48.59	19	iP	P	14 08 19.8	+0.9
SUMG				pmax	pmax		
	comp=Z,71nm,0.9s						
KSRS	Korea Array	48.71	280	P	P	14 08 20.6	+0.8
	comp=Z,6.9nm,0.8s,baz=57,slow=7.4,SNR=13						
KSRS				LR	LR	14 28 32.8	
	comp=Z,156nm,20.6s,baz=50,slow=36						
L42A	Oliver, Polo	48.84	72	P	P	14 08 19.9	-0.8
L42A				IAmb	IAmb	14 08 39.3	
	comp=Z,15nm,0.8s						
N41A	Harden Midland	49.01	74	P	P	14 08 22.1	+0.1
E46A	Sault Ste Mari	49.02	64	P	P	14 08 22.0	-0.1
K43A	Burlington	49.14	70	P	P	14 08 22.8	-0.2
K43A				IAmb	IAmb	14 08 38.5	
	comp=Z,22nm,0.9s						
TX31	Lajitas Ar. Si	49.28	95	P	P	14 08 24.8	+0.4
TX32	Lajitas Array	49.28	95	P	P	14 08 24.9	+0.6
TXAR	Lajitas Array	49.28	95	P	P	14 08 25.3	+1.0
	comp=Z,2.9nm,0.6s,baz=300,slow=5.5,SNR=46						
TXAR				ScP	ScP	14 13 41.4	+1.8
	comp=Z,2.0nm,1.1s,baz=294,slow=2.9,SNR=7.4						
TXAR				LR	LR	14 28 21.3	
	comp=Z,114nm,18.6s,baz=0.0,slow=35						
LPIG	La Paz	49.30	105	LR	LR	14 25 35.0	
	comp=Z,72nm,20.1s,baz=314,slow=32						
TJN	Taejon	49.77	279⇑	eP	P	14 08 28.2	+0.4
D48A	Paudash Townsh	49.82	62	P	P	14 08 28.1	-0.2
	baz=310						
JNU	Nakatsue	49.93	273	P	P	14 08 30.4	+1.2
	comp=Z,15nm,0.9s,baz=167,slow=14,SNR=3.1						
HDIL	Hopedale	50.00	73	P	P	14 08 28.9	-0.7
HDIL	Hopedale	50.00	73	P	P	14 08 29.4	-0.1
	baz=312,SNR=10						
M44A	Midewin, Midew	50.16	72	P	P	14 08 29.9	-0.9
M44A				IAmb	IAmb	14 08 31.9	
	comp=Z,27nm,1.0s						
HHAR	Hobbs	50.17	81	P	P	14 08 30.1	-0.8
P43A	Skaggs, Pawnee	50.48	74	P	P	14 08 32.4	-0.7
X37A	Clayton	50.49	83	P	P	14 08 33.5	+0.1
X37A				IAmb	IAmb	14 08 46.8	
	comp=Z,15nm,0.8s						
CCM	Cathedral Cave	50.54	77	P	P	14 08 32.4	-1.3
CCM	Cathedral Cave	50.54	77	P	P	14 08 32.4	-1.3
CCM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CCM	Cathedral Cave	50.54	77	P	P	14 08 32.6	-1.1
	baz=313						
MGMO	Mountain Grove	50.56	79	P	P	14 08 32.4	-1.5
MGMO				IAmb	IAmb	14 08 48.1	
	comp=Z,9.8nm,0.8s						
H48A	Harrisville	50.62	65	P	P	14 08 34.6	+0.4
F49A	Sandfield	50.62	64	P	P	14 08 34.7	+0.5
	baz=310						
L46A	Eue Claire	50.74	70	P	P	14 08 35.5	+0.3
SLM	Saint Louis	50.74	76	P	P	14 08 34.8	-0.4
SLM	Saint Louis	50.74	76	P	P	14 08 34.8	-0.4
SLM				pmax	pmax		
	comp=Z,24nm,0.6s						
O44A	Mansfield	50.74	73	P	P	14 08 35.0	-0.1
JCT	Junction City	50.75	90	P	P	14 08 34.6	-0.9
JCT				IAmb	IAmb	14 09 04.3	
	comp=Z,22nm,1.2s						
JCT	Junction City	50.75	90	P	P	14 08 34.6	-0.9
JCT				pmax	pmax		
	comp=Z,23nm,1.3s						
JCT	Junction City	50.75	90	P	P	14 08 35.8	+0.3
	baz=316						
U40A	Yellville	50.76	80	P	P	14 08 33.8	-1.6
U40A				IAmb	IAmb	14 08 47.1	
	comp=Z,10nm,0.8s						
U40A	Yellville	50.76	80	P	P	14 08 34.5	-0.9
	baz=313,SNR=6.3						
D50A	G1974 Best Tow	50.88	61	P	P	14 08 36.0	-0.2
	baz=310						
W39A	Magazine	51.01	81	P	P	14 08 36.9	-0.4
W39A				IAmb	IAmb	14 08 58.3	
	comp=Z,12nm,0.9s						
W39A	Magazine	51.01	81	P	P	14 08 37.2	-0.1
	baz=314						
WHTX	Lake Whitney,	51.07	87	P	P	14 08 38.1	+0.3
WHTX				IAmb	IAmb	14 08 51.7	
	comp=Z,13nm,0.9s						
D51A	Lot 18 Range I	51.18	61	P	P	14 08 38.5	+0.2
	baz=310						
SFIN	Lafayette	51.37	72	P	P	14 08 38.6	-1.3
SFIN				IAmb	IAmb	14 08 41.2	
	comp=Z,14nm,0.9s						
SFIN	Lafayette	51.37	72	P	P	14 08 39.6	-0.3
	baz=312						
E51A	G1948 Merrick	51.48	61	P	P	14 08 40.3	-0.3
	baz=311						
VLDQ	Val d'Or	51.50	59	P	P	14 08 38.2	-2.6
VLDQ				IAmb	IAmb	14 08 59.9	
	comp=Z,50nm,1.9s						
MIAR	Mount Ida	51.58	82	P	P	14 08 41.2	-0.4
MIAR	Mount Ida	51.58	82	P	P	14 08 41.2	-0.4
MIAR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MIAR	Mount Ida	51.58	82	P	P	14 08 41.7	+0.1
	baz=314						
P46A	Rosedale	51.82	73	P	P	14 08 42.4	-0.8
P46A				IAmb	IAmb	14 09 02.4	
	comp=Z,13nm,0.8s						
WHAR	Wooly Hollow	51.82	80	P	P	14 08 42.3	-1.1
WHAR				IAmb	IAmb	14 09 57.7	
	comp=Z,22nm,1.6s						
N47A	Urbana	51.83	71	P	P	14 08 42.5	-0.8
N47A				IAmb	IAmb	14 08 43.8	
	comp=Z,24nm,0.8s						
N47A	Urbana	51.83	71	P	P	14 08 42.8	-0.5
	baz=312,SNR=5.6						
PBMO	Poplar Bluff	51.89	78	P	P	14 08 42.7	-1.1
OLIL	Olney	51.90	74	P	P	14 08 43.4	-0.5
W41B	Gary Mavity, V	51.93	80	P	P	14 08 43.6	-0.6
W41B				IAmb	IAmb	14 09 04.2	
	comp=Z,18nm,1.2s						
W41B	Gary Mavity, V	51.93	80	P	P	14 08 43.4	-0.7
	baz=314						
S44A	Carbondale	51.94	76	P	P	14 08 43.1	-1.2
S44A				IAmb	IAmb	14 08 59.8	
	comp=Z,11nm,0.9s						
F52A	Sundridge	52.05	62	P	P	14 08 44.8	-0.1
	baz=311						
E52A	Mattawa	52.08	61	P	P	14 08 45.1	0.0
	baz=311						
SCHQ	Schefferville	52.14	47	P	P	14 08 45.9	+0.4
	comp=Z,14nm,0.9s,baz=310,slow=9.2,SNR=13						
SCHQ				LR	LR	14 33 31.7	
	comp=Z,454nm,20.1s,baz=305,slow=39						
SCHQ	Schefferville	52.14	47	P	P	14 08 45.6	+0.1
SCHQ				IAmb	IAmb	14 08 47.1	
	comp=Z,19nm,0.9s						
N48A	Decatur	52.22	70	P	P	14 08 45.6	-0.6
	baz=312						
PARMO	Parma	52.36	77	P	P	14 08 46.4	-0.9
TLY	Talaya	52.43	308	P	P	14 08 46.7	-1.0
TLY				IAmb	IAmb	14 08 59.5	
	comp=Z,17nm,0.9s						
TLY	Talaya	52.43	308	eP	P	14 08 47.8	+0.1
TLY				eS	S	14 16 08.7	-2.8
TLY				pmax	pmax		
	comp=Z,60nm,1.2s						
TLY				MLR	MLR		
	comp=Z,2μm,15.0s						
I51A	Listowel	52.46	65	P	P	14 08 49.1	+1.1
	baz=312						
WLAR	White Oak Lake	52.46	82	P	P	14 08 48.2	+0.1
BLO	Bloomington	52.51	73	P	P	14 08 47.8	-0.6
BLO				IAmb	IAmb	14 08 53.0	
	comp=Z,20nm,0.9s						
BLO	Bloomington	52.51	73	P	P	14 08 47.8	-0.6
BLO				pmax	pmax		
	comp=Z,20nm,1.0s						
E53A	Dumoine, Ponti	52.53	60	P	P	14 08 48.3	-0.2
	baz=312						
O48A	Farmland	52.55	71	P	P	14 08 47.7	-1.0
	baz=313,SNR=7.0						
N49A	Columbus Grove	52.65	70	P	P	14 08 48.9	-0.5
N49A				IAmb	IAmb	14 09 07.4	
	comp=Z,12nm,0.9s						
N49A	Columbus Grove	52.65	70	P	P	14 08 49.0	-0.4
	baz=312						
USIN	University of	52.68	75	P	P	14 08 49.2	-0.4
E54A	Lac Daplat, Po	52.74	60	P	P	14 08 50.0	-0.1
	baz=312						
P48A	Milroy	52.94	72	P	P	14 08 50.6	-0.9
P48A				IAmb	IAmb	14 09 03.2	
	comp=Z,33nm,1.4s						
P48A	Milroy	52.94	72	P	P	14 08 51.3	-0.3
	baz=313						
D55A	Sainte-Anne-du	53.23	59	P	P	14 08 53.6	-0.1
	baz=312						
SCO	Scoresbysund	53.26	15	iP	P	14 08 54.2	+0.8
SCO	Scoresbysund	53.26	15	P	P	14 08 53.8	+0.3
SCO				IAmb	IAmb	14 08 56.2	
	comp=Z,24nm,1.2s						
SCO	Scoresbysund	53.26	15	iP	P	14 08 54.2	+0.8
P49A	Miami Univ. Ec	53.29	71	P	P	14 08 53.3	-0.8
	baz=313,SNR=5.4						
ZAK	Zakamensk	53.47	307	eP	P	14 08 54.8	-0.6
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
O50A	Cable	53.49	70	P	P	14 08 55.5	-0.1
	baz=313						
HKT	Hockley	53.51	88⇓	eP	P	14 08 59.8	+4.0
HKT				pmax	pmax		
	comp=Z,10.0nm,1.6s						
D56A	ZEC Mazanza, M	53.58	58	P	P	14 08 55.6	-0.5
	baz=312						
N51A	Ashland	53.66	68	P	P	14 08 56.0	-0.8
N51A				IAmb	IAmb	14 09 32.4	
	comp=Z,14nm,0.9s						
SONM	Songino Array	53.66	303	P	P	14 08 57.0	+0.1
	comp=Z,11nm,0.8s,baz=49,slow=6.2,SNR=56						
SONM				LR	LR	14 32 20.5	
	comp=Z,274nm,21.6s,baz=40,slow=37						
MOY	Mondy	53.67	310	eP	P	14 08 57.2	+0.3
MOY				pmax	pmax		
	comp=Z,15nm,1.4s						
T47A	Sharon Grove	53.67	75	P	P	14 08 56.5	-0.5
T47A				IAmb	IAmb	14 09 12.9	
	comp=Z,21nm,0.9s						
P50A	Jamestown	53.75	71	P	P	14 08 57.0	-0.5
	baz=313						
G55A	Calabogie	53.77	61	P	P	14 08 56.8	-0.9
	baz=312						
E56A	St. Veronique	53.77	59	P	P	14 08 55.2	-2.4
	baz=312						
WVT	Waverly	53.85	76	P	P	14 08 57.6	-0.7
WVT				IAmb	IAmb	14 08 59.1	
	comp=Z,18nm,0.7s						
WVT	Waverly	53.85	76	P	P	14 08 57.6	-0.7
WVT				pmax	pmax		
	comp=Z,18nm,0.7s						
WVT	Waverly	53.85	76	P	P	14 08 58.4	+0.1
	baz=314						
OXF	Oxford	54.06	79	P	P	14 08 59.1	-0.7
OXF	Oxford	54.06	79	P	P	14 08 59.1	-0.7
OXF				pmax	pmax		
	comp=Z,68nm,1.2s						
OXF	Oxford	54.06	79	P	P	14 08 59.8	0.0
	baz=315						
M53A	WI Miller and	54.24	67	P	P	14 09 01.7	+0.6
	baz=313						
R50A	Paris	54.37	72	P	P	14 09 01.9	-0.1
R50A				IAmb	IAmb	14 09 03.0	
	comp=Z,14nm,0.8s						
R50A	Paris	54.37	72	P	P	14 09 02.3	+0.2
	baz=314						
Q51A	Peebles	54.41	71	P	P	14 09 01.9	-0.4
Q51A	Peebles	54.41	71	P	P	14 09 02.8	+0.4
	baz=314,SNR=9.7						
L54A	Sinclairville	54.44	65	P	P	14 09 03.3	+0.8
	baz=313						
H56A	Elgin	54.46	61	P	P	14 09 02.8	+0.2
	baz=313						
T49A	Edmonton	54.49	74	P	P	14 09 02.8	-0.2
T49A				IAmb	IAmb	14 09 03.9	
	comp=Z,10nm,0.9s						
T49A	Edmonton	54.49	74	P	P	14 09 03.3	+0.3
	baz=314						
PLAL	Pickwick Lake	54.51	78	P	P	14 09 02.6	-0.5
PLAL				IAmb	IAmb	14 09 29.8	
	comp=Z,14nm,1.1s						
J55A	Hilton	54.54	63	P	P	14 09 03.7	+0.4
J55A				IAmb	IAmb	14 09 39.4	
	comp=Z,25nm,1.4s						
N53A	Lisbon	54.58	68	P	P	14 09 03.3	-0.3
N53A	Lisbon	54.58	68	P	P	14 09 03.5	-0.1
	baz=314						
V48A	Smith Brothers	54.70	76	P	P	14 09 04.4	-0.1
S50A	Richmond	54.74	73	P	P	14 09 04.8	0.0
	baz=314						
U49A	Red Boiling Sp	54.77	75	P	P	14 09 04.7	-0.3
	baz=314						
R51A	Hillsboro	54.78	72	P	P	14 09 05.2	+0.2
	baz=314,SNR=16						
T50A	Nancy	54.95	73	P	P	14 09 06.3	0.0
	baz=314						
V49A	McMinnville	55.22	75	P	P	14 09 07.8	-0.4
	baz=315						
S51A	Beattyville	55.23	72	P	P	14 09 07.2	-1.1
S51A				IAmb	IAmb	14 09 24.7	
	comp=Z,14nm,0.9s						
S51A	Beattyville	55.23	72	P	P	14 09 07.4	-0.9
	baz=314						
M55A	Ridgway	55.26	66	P	P	14 09 07.6	-1.0
M55A	Ridgway	55.26	66	P	P	14 09 08.7	+0.2
	baz=314						
U50A	Jamestown	55.37	74	P	P	14 09 08.8	-0.6
	baz=315						
J57A	Williamstown	55.41	62	P	P	14 09 09.4	-0.1
	baz=314						
L56A	Greenwood	55.45	64	P	P	14 09 09.8	-0.1
W49A	Belvidere	55.46	76	P	P	14 09 09.4	-0.6
	baz=315						
X48A	Hartselle	55.48	77	P	P	14 09 08.7	-1.5
X48A				IAmb	IAmb	14 09 25.2	
	comp=Z,9.9nm,0.9s						
T51A	Gray	55.50	73	P	P	14 09 10.1	-0.2
	baz=315,SNR=7.7						
M56A	Emporium	55.57	65	P	P	14 09 10.9	+0.2
M56A	Emporium	55.57	65	P	P	14 09 10.9	+0.2
	baz=314						
P54A	Burton	55.61	68	P	P	14 09 10.9	-0.2
	baz=314						
N55A	Marion Center	55.62	66	P	P	14 09 10.6	-0.5
	baz=314						
HHC	Hu-ho-hao-te	55.72	294	eP	P	14 09 12.3	+0.4
HHC				S	S	14 16 55.1	-1.2
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,82nm,5.4s						
HHC				LR	LR		
	comp=Z,230nm,14.2s						
HHC				LR	LR		
	comp=Z,280nm,13.3s						
HHC				LR	LR		
	comp=Z,190nm,15.2s						
V50A	Pikevile	55.75	75	P	P	14 09 11.5	-0.5
	baz=315						
H59A	Cadyville	55.76	60	P	P	14 09 11.6	-0.4
	baz=314						
U51A	La Follette	55.87	73	P	P	14 09 12.6	-0.4
	baz=315						
L57A	Andrews Acres	55.93	64	P	P	14 09 13.6	+0.3
	baz=314						
T52A	Hallie	55.95	72	P	P	14 09 12.0	-1.5
T52A				IAmb	IAmb	14 09 21.4	
	comp=Z,32nm,1.2s						
T52A	Hallie	55.95	72	P	P	14 09 13.4	-0.1
	baz=315						
W50A	Signal Mountai	55.96	75	P	P	14 09 12.5	-1.1
W50A				IAmb	IAmb	14 09 28.6	
	comp=Z,14nm,0.8s						
W50A	Signal Mountai	55.96	75	P	P	14 09 13.5	-0.1
	baz=315						
TZTN	Tazewell	56.02	73	P	P	14 09 13.4	-0.6
TZTN				IAmb	IAmb	14 09 29.2	
	comp=Z,17nm,1.1s						
TZTN	Tazewell	56.02	73	P	P	14 09 13.9	-0.1
	baz=315						
HAMF	Hammerfest	56.03	357	eP	P	14 09 13.2	-0.3
U52A	Thorn Hill	56.23	73	P	P	14 09 15.3	-0.2
	baz=315						
FPAL	Fort Paine	56.25	76	P	P	14 09 15.0	-0.8
FPAL				IAmb	IAmb	14 09 28.2	
	comp=Z,13nm,0.8s						
Q55A	Buckhannon	56.26	69	P	P	14 09 15.4	-0.4
	baz=315						
Y49A	Blount Mountai	56.27	77	P	P	14 09 14.9	-0.9
Y49A				IAmb	IAmb	14 09 27.4	
	comp=Z,13nm,0.9s						
T53A	Wise	56.29	72	P	P	14 09 16.2	+0.2
	baz=315						
W51A	Cleveland	56.30	75	P	P	14 09 15.7	-0.4
	baz=315						
SSPA	Standing Stone	56.32	66	P	P	14 09 15.5	-0.6
R54A	Victor	56.32	70	P	P	14 09 15.6	-0.6
	baz=315						
D62A	Allapoint, All	56.40	55	P	P	14 09 16.1	-0.4
N57A	Milroy	56.42	65	P	P	14 09 16.6	-0.2
	baz=314						
V52A	Sevierville	56.49	74	P	P	14 09 16.6	-0.8
V52A				IAmb	IAmb	14 09 31.9	
	comp=Z,16nm,0.9s						
V52A	Sevierville	56.49	74	P	P	14 09 17.4	0.0
	baz=315						
TKL	Tuckaleechee C	56.52	74	P	P	14 09 16.6	-1.0
TKL				IAmb	IAmb	14 09 32.9	
	comp=Z,12nm,1.1s						
TKL	Tuckaleechee C	56.52	74	P	P	14 09 16.6	-1.0
TKL				pmax	pmax		
	comp=Z,12nm,1.1s						
U53A	Fall Branch	56.70	73	P	P	14 09 18.2	-0.7
	baz=315						
BTO	Baotou	56.73	295	eP	P	14 09 16.9	-2.2
R55A	Marlinton	56.74	69	P	P	14 09 19.1	0.0
O57A	Amberson	56.75	66	P	P	14 09 19.0	-0.2
	baz=315						
T54A	Tazewell	56.78	71	P	P	14 09 19.6	+0.1
	baz=315						
KEV	Kevo	56.79	356	P	P	14 09 18.2	-0.7
KEV	Kevo	56.79	356	P	P	14 09 18.2	-0.7

KEV pmax pmax
comp=Z,176nm,1.9s
W52A Murphy 56.83 75 P P 14 09 19.3 -0.5
baz=316
S55A Lewisburg 56.88 70 P P 14 09 20.3 +0.2
baz=315
G62A West of Eustis 56.97 57 P P 14 09 20.9 +0.3
Z50A Ashland 56.99 77 P P 14 09 19.6 -1.4
Z50A IAmb IAmb 14 09 20.7
comp=Z,13nm,0.8s
Z50A Ashland 56.99 77 P P 14 09 19.9 -1.1
baz=316,SNR=7.9
Y51A Rockmart 57.03 76 P P 14 09 20.0 -1.2
baz=316
P57A Homestead Farm 57.06 67 P P 14 09 21.2 -0.1
P57A IAmb IAmb 14 09 57.2
comp=Z,30nm,1.4s
P57A Homestead Farm 57.06 67 P P 14 09 21.4 0.0
baz=315
V53A Saluda 57.06 73 P P 14 09 21.1 -0.3
V53A IAmb IAmb 14 10 09.7
comp=Z,31nm,1.6s
V53A Saluda 57.06 73 P P 14 09 21.4 -0.1
baz=316
ARCES ARCESS Array B 57.07 356 P P 14 09 21.3 +0.3
comp=Z,8.2nm,0.9s,baz=6.9,slow=7.5,SNR=14
ARCES LR LR 14 36 13.0
comp=Z,355nm,18.1s,baz=348,slow=39
ARE0 ARCESS Array S 57.07 356 eP P 14 09 20.7 -0.3
ARE0 ARCESS Array S 57.07 356 P P 14 09 21.1 0.0
TRO Tromso 57.14 359 eP P 14 09 21.5 +0.1
E63A Oxbow 57.17 55 P P 14 09 20.6 -1.4
X52A Dahlonega 57.20 75 P P 14 09 22.0 -0.5
baz=316
W53A Cullowhee 57.22 74 P P 14 09 22.6 -0.1
baz=316
BLA Blacksburg 57.33 70 P P 14 09 23.7 +0.4
baz=315
S56A Natural Bridge 57.47 69 P P 14 09 24.9 +0.6
baz=315
U55A TA2, Sparta 57.47 71 P P 14 09 24.2 -0.2
baz=316
V54A Nebo 57.48 73 P P 14 09 24.9 +0.5
baz=316
F64A Sherman 57.60 56 P P 14 09 24.1 -0.9
R57A Stanardsville 57.62 68 P P 14 09 25.6 +0.3
baz=315
Q58A Fox Den Farm, 57.62 67 P P 14 09 24.9 -0.4
baz=315
T56A Rocky Mt 57.67 70 P P 14 09 26.0 +0.3
baz=316
KTK1 Kautokeino 57.67 357 eP P 14 09 25.0 -0.2
BATG Bathurst New B 57.70 53 P P 14 09 25.6 -0.2
NJ2 Nanjing 57.81 281 eP P 14 09 26.3 -0.4
NJ2 pmax pmax
comp=Z,16nm,0.5s
Z52A Williamson 57.91 76 P P 14 09 26.4 -1.1
baz=316
LVZ Lovozero 58.13 352 P P 14 09 28.8 +0.2
LVZ Lovozero 58.13 352⇑eP P 14 09 28.3 -0.2
LVZ pmax pmax
comp=Z,36nm,1.3s
Y54A Tignall 58.43 75 P P 14 09 29.9 -1.1
baz=316
U57A Blanch 58.49 70 P P 14 09 31.2 -0.2
baz=316,SNR=5.8
T58A Grand View Acr 58.57 69 P P 14 09 31.8 -0.2
baz=316
X55A Gracelyn & Ava 58.59 73 P P 14 09 31.2 -0.9
baz=316
STEI Steigen 58.86 1 eP P 14 09 33.2 -0.3
ZAA0 Zalesovo Array 58.86 320 P P 14 09 32.7 -1.0
ZALV Zalesovo Beam 58.86 320 P P 14 09 33.7 0.0
comp=Z,4.1nm,0.6s,baz=30,slow=6.9,SNR=16
ZALV PcP PcP 14 10 23.6 +0.7
comp=Z,2.8nm,0.7s,baz=50,slow=4.6,SNR=4.5
ZALV LR LR 14 37 38.4
comp=Z,585nm,18.6s,baz=8.5,slow=39
V58A Windy Hill, Pi 59.07 71 P P 14 09 35.8 +0.4
baz=316
SGF Sodankyl 59.12 355 P P 14 09 34.7 -0.6
SGF pmax pmax
comp=Z,21nm,1.4s
V59A Middlesex 59.59 70 P P 14 09 39.2 +0.2
baz=316
MSF Maaselka 60.50 354 P P 14 09 45.5 +0.6
MSF pmax pmax
comp=Z,16nm,1.1s
TMCR Tamitsa 61.45 349 eP P 14 09 50.6 -0.7
TMCR pmax pmax
comp=Z,61nm,1.1s
OUL Oulu 61.50 355 P P 14 09 51.9 +0.3
OUL pmax pmax
comp=Z,26nm,1.7s
XAN Xi'an 62.06 290 P P 14 09 55.8 -0.1
XAN pP pP 14 10 01.0 -3.4
XAN pmax pmax
comp=Z,12nm,1.4s
XAN LR LR
comp=Z,270nm,24.9s
XAN LR LR
comp=Z,430nm,19.5s
XAN LR LR
comp=Z,390nm,20.1s
NSS Namsos 62.23 2 eP P 14 09 56.3 -0.2
PRGR Permogore 62.88 345 eP P 14 10 00.2 -0.7
PRGR pmax pmax
comp=Z,33nm,0.9s
GTA Gaotai 63.00 300 P P 14 10 01.9 -0.3
GTA pP pP 14 10 05.1 -5.6
GTA sP sP 14 10 07.8 -6.1
GTA pmax pmax
comp=Z,11nm,1.2s
GTA pmax pmax
comp=Z,160nm,5.2s
GTA LR LR
comp=Z,500nm,14.9s
GTA LR LR
comp=Z,480nm,17.1s
GTA LR LR
comp=Z,760nm,16.5s
JOF Joensuu 63.31 352 P P 14 10 04.2 +0.5
JOF pmax pmax
comp=Z,9.0nm,1.1s
LZH Lanzhou 63.34 295 ⇑P P 14 10 05.1 +0.5
LZH pP pP 14 10 10.0 -3.0
LZH sP sP 14 10 13.3 -3.0
LZH PP PP 14 12 25.9 +2.2
LZH pmax pmax
comp=Z,23nm,1.2s
LZH pmax pmax
comp=Z,130nm,4.3s
LZH LR LR
comp=Z,660nm,14.6s
LZH LR LR
comp=Z,640nm,15.2s
LZH LR LR
comp=Z,410nm,17.9s
VAF Ylistaro 63.67 357 P P 14 10 06.2 +0.1
KURK Kurchatov 63.76 321 P P 14 10 06.5 -0.4
KURK IAmb IAmb 14 10 08.8
comp=Z,24nm,1.1s
KURK Kurchatov 63.76 321c iP P 14 10 06.7 -0.2
KURK pmax pmax
comp=Z,26nm,1.3s
SUF Sumiainen 63.84 355 P P 14 10 08.3 +1.0
SUF pmax pmax
comp=Z,24nm,1.1s
MOL Molde 64.04 5 eP P 14 10 08.4 -0.1
SVE Sverdlovsk 64.22 335⇓eP P 14 10 10.4 +0.5
SVE pmax pmax
comp=Z,32nm,1.1s
AKN Aaknes 64.40 5 eP P 14 10 11.1 +0.1
KLMR Klimovskoe 64.49 348 eP P 14 10 09.1 -2.4
KLMR pmax pmax
comp=Z,31nm,1.2s
KLMR Klimovskoe 64.49 348 eP P 14 10 09.1 -2.4
KLMR AMP 14 10 13.0
comp=Z,31nm,1.2s
KLMR LR LR 14 37 59.8
KLMR AMP 14 45 49.4
comp=Z,423nm,16.1s
DOMB Dombas 64.63 4 eP P 14 10 12.3 -0.2
BRVK Borovoye 64.72 327 P P 14 10 12.9 -0.2
BRVK IAmb IAmb 14 10 15.4
comp=Z,15nm,0.8s

BRVK Borovoye 64.72 327ceP P 14 10 13.7 +0.5
BRVK pmax pmax
comp=Z,26nm,1.3s
ARU Arti 65.10 336 P P 14 10 15.2 -0.4
ARU Arti 65.10 336c iP P 14 10 15.5 -0.1
ARU S S 14 18 56.1 +0.4
ARU SS SS 14 23 04.9 -2.1
ARU pmax pmax
comp=Z,29nm,0.9s
ARU MLR MLR
comp=Z,417nm,16.0s
FIA1 FINESS Array S 65.12 355 P P 14 10 15.4 -0.2
FINES FINESS Array B 65.12 355 P P 14 10 15.6 0.0
comp=Z,16nm,0.8s,baz=17,slow=8.0,SNR=28
FINES LR LR 14 41 02.5
comp=Z,267nm,18.1s,baz=12,slow=38
FINES FINESS Array B 65.12 355 i P P 14 10 16.1 +0.5
FINES pmax pmax
comp=Z,16nm,0.8s
NC204 NORSAR Array S 65.46 3 P P 14 10 17.7 -0.2
MK31 Makanchi Array 65.47 316 P P 14 10 16.9 -1.3
MK31 Makanchi Array 65.47 316 i P P 14 10 17.3 -0.9
MKAR Makanchi Array 65.47 316 P P 14 10 17.6 -0.6
comp=Z,2.0nm,0.5s,baz=44,slow=6.3,SNR=28
MKAR LR LR 14 40 11.6
comp=Z,307nm,20.3s,baz=30,slow=37
WMQ Urumqi 65.50 311 eP P 14 10 18.9 +0.4
WMQ sP pP 14 10 27.8 +0.6
WMQ pmax pmax
comp=Z,10.0nm,1.3s
WMQ pmax pmax
comp=Z,110nm,3.6s
WMQ LR LR
comp=Z,370nm,20.9s
WMQ LR LR
comp=Z,320nm,20.9s
WMQ LR LR
comp=Z,180nm,23.1s
NC303 NORSAR Array S 65.53 3 P P 14 10 19.0 +0.7
MAKZ Makanchi 65.59 317 P P 14 10 17.5 -1.5
MAKZ Makanchi 65.59 317 P P 14 10 17.5 -1.5
MAKZ pmax pmax
comp=Z,4.0nm,0.8s
NC405 NORSAR Array S 65.65 3 P P 14 10 18.6 -0.4
NB201 NORSAR Array S 65.70 3 P P 14 10 19.9 +0.4
NB2 NORSAR Subarra 65.71 3 P P 14 10 19.5 0.0
comp=Z,31nm,1.2s,baz=358,slow=6.9
NB2 NORSAR Subarra 65.71 3 P P 14 10 19.5 0.0
baz=358,slow=6.9
NOA NORSAR Array B 65.71 3 P P 14 10 19.9 +0.4
comp=Z,11nm,0.9s,baz=357,slow=6.6,SNR=21
NOA LR LR 14 40 48.6
comp=Z,143nm,18.7s,baz=0.0,slow=38
SKAR Skarslia 65.96 4 eP P 14 10 21.5 +0.4
ASK Askoy 65.99 6 eP P 14 10 21.1 -0.1
NC602 NORSAR Array S 66.02 3 eP P 14 10 21.6 +0.1
NORES NORESS Array B 66.02 3 P P 14 10 23.6 +2.1
NORES pmax pmax
comp=Z,8.0nm,0.6s
KONO Kongsberg 67.05 4⇑iP P 14 10 29.6 +1.6
BLS5 Blasjo 67.12 6 eP P 14 10 28.6 0.0
CD2 Chengdu 67.28 291 P P 14 10 29.0 -1.1
CD2 pmax pmax
comp=Z,30nm,0.6s
AFI Afiamalu 67.53 189 LR LR 14 39 03.3
comp=Z,115nm,18.0s,baz=71,slow=35
VSU Vasula 68.06 354⇑eP P 14 10 34.7 +0.3
VSU pmax pmax
comp=Z,73nm,1.3s
GYA Guiyang 69.04 286⇑iP P 14 10 42.9 +1.7
GYA pmax pmax
comp=Z,10.0nm,0.9s
PDGK Podgornoye 69.44 316 i P P 14 10 43.8 +0.3
PDGK pmax pmax
comp=Z,26nm,1.2s
EKA Eskdalemuir Ar 70.31 12 P P 14 10 48.8 +0.4
OBN Obninsk 70.45 348 eP P 14 10 49.4 +0.1
OBN e 14 11 11.2
OBN ePPP PPP 14 15 08.1
OBN pmax pmax
comp=Z,48nm,1.3s
OBN MLR MLR
comp=Z,341nm,18.0s
PRZ Przheval'sk 70.59 316 P P 14 10 50.7 +0.1
PRZ IAmb IAmb 14 11 05.6
comp=Z,30nm,1.4s
PRZ Przheval'sk 70.59 316 P P 14 10 50.7 +0.1
PRZ pmax pmax
comp=Z,30nm,1.5s
ABKAR Akbulak array 71.19 332 P P 14 10 54.3 +0.4
ABKAR IAmb IAmb 14 10 56.4
comp=Z,25nm,1.1s
KDJ Kajisay 71.39 317 P P 14 10 55.3 -0.1
KDJ IAmb IAmb 14 11 00.2
comp=Z,10.0nm,1.1s
KDJ Kajisay 71.39 317 P P 14 10 55.3 -0.1
KDJ pmax pmax
comp=Z,10.0nm,1.1s
USP Ospenovka 71.50 319 P P 14 10 56.8 +0.8
SNR=13
BOOM Boomskoye usch 71.59 318 P P 14 10 57.0 +0.3
BOOM Boomskoye usch 71.59 318 P P 14 10 57.0 +0.3
NACGM Naroch 71.60 354 e P 14 10 55.0 -1.2
CHMS Chumysh 71.63 319 P P 14 10 57.3 +0.6
SNR=6.6
ULHL Ulahol 71.67 317 P P 14 10 58.4 +1.2
SNR=5.7
PPT Papeete 71.82 166 LR LR 14 34 28.6
comp=Z,205nm,20.9s,baz=348,slow=29
PPT Papeete 71.82 166 P P 14 10 58.3 +0.4
PPT Papeete 71.82 166 P P 14 10 58.3 +0.4
FRU1 Bishkek 71.84 319 P P 14 10 58.8 +0.8
FRU1 Bishkek 71.84 319 P P 14 10 58.8 +0.8
FRU1 pmax pmax
comp=Z,95nm,1.7s
KBK Karagaybulak 71.84 319 P P 14 10 59.2 +1.0
SNR=11
PPT2 Papeete2 71.84 166 eS S 14 20 13.9 -2.7
comp=Z,78nm,26.2s
PPT2 Papeete2 71.84 166 eLR LR 14 32 47.5
comp=Z,313nm,23.0s,baz=346
PPTF Pamatai, Papee 71.84 166 P P 14 10 58.4 +0.2
AAK Ala-Archa 72.04 319 P P 14 11 00.6 +1.2
SNR=13
AAK Ala-Archa 72.04 319 P P 14 10 59.2 -0.1
AAK IAmb IAmb 14 11 16.4
comp=Z,20nm,1.1s
AAK Ala-Archa 72.04 319c iP P 14 10 59.9 +0.6
AAK pmax pmax
comp=Z,22nm,1.3s
EKS2 Erkin-Say 72.30 319 P P 14 11 01.8 +1.0
SNR=16
KMI Kunming 72.31 288 P P 14 11 02.8 +1.5
KMI pP pP 14 11 06.6 -3.2
KMI sP sP 14 11 12.1 -0.9
KMI pmax pmax
comp=Z,9.0nm,0.8s
KMI pmax pmax
comp=Z,96nm,4.0s
KMI LR LR
comp=Z,280nm,18.9s
KMI LR LR
comp=Z,360nm,18.9s
KMI LR LR
comp=Z,390nm,18.0s
UCH Uchtor 72.38 319 P P 14 11 03.0 +1.3
SNR=5.4
NRN Naryn 72.45 317 P P 14 11 01.0 -1.0
NRN IAmb IAmb 14 11 14.7
comp=Z,8.8nm,0.9s
NRN Naryn 72.45 317 P P 14 11 01.0 -1.0
NRN pmax pmax
comp=Z,9.0nm,0.9s
JAY Jayapura 72.48 240 LR LR 14 40 32.8
comp=Z,88nm,18.9s,baz=350,slow=34
LPSR Galich'ya Gora 72.59 346 eP P 14 11 01.7 -0.5
LPSR pmax pmax
comp=Z,40nm,1.5s
SUW Suwalki 72.68 356 P P 14 11 03.1 +0.3
SUW Suwalki 72.68 356 P P 14 11 03.1 +0.3
SUW pmax pmax
comp=Z,113nm,1.5s
AML Almayashu 72.78 319 P P 14 11 05.3 +1.2
SNR=20
BSEG Bad Segeberg 72.79 4 eP P 14 11 05.4 +2.0

comp=Z,17nm,0.9s,baz=357,slow=5.7
BSEG epP sP 14 11 15.8 +0.5
baz=357,slow=5.7
QIZ Qiongzhong 72.92 279 P P 14 11 03.8 -0.9
QIZ S S 14 20 28.8 -0.4
QIZ LR LR
comp=Z,210nm,19.0s
QIZ LR LR
comp=Z,260nm,25.3s
QIZ LR LR
comp=Z,170nm,16.7s
DAV Davao City (W) 72.99 259 LR LR 14 39 07.9
comp=Z,296nm,21.9s,baz=86,slow=32
KK31 Karatay Array 73.16 322 P P 14 11 05.8 -0.1
KK31 IAmb IAmb 14 11 20.4
comp=Z,14nm,1.1s
KK31 Karatay Array 73.16 322 i P P 14 11 05.9 +0.1
KKAR Karatay Array 73.16 322 P P 14 11 05.7 -0.1
KKAR IAmb IAmb 14 11 20.4
comp=Z,14nm,1.1s
KKAR Karatay Array 73.16 322 P P 14 11 05.7 -0.1
KKAR pmax pmax
comp=Z,14nm,1.1s
VRH Novokhopyorsk 73.50 344 eP P 14 11 06.8 -0.8
VRH pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 73.90 345 eP P 14 11 08.9 -1.0
VSR pmax pmax
comp=Z,10.0nm,0.5s
RETH Rethem/Aller, 73.94 4 eP P 14 11 12.2 +2.1
comp=Z,22nm,1.1s,baz=357,slow=5.7
RETH epP sP 14 11 22.7 +0.6
baz=357,slow=5.7
KSH Kashi 74.08 316 P P 14 11 15.3 +3.9
KSH pP pP 14 11 19.3 -1.0
KSH sP PcP 14 11 25.9 -0.6
KSH PP PP 14 14 02.0 +5.7
KSH S S 14 20 44.3 +2.2
KSH ScS ScS 14 21 20.9 +1.5
KSH pmax pmax
comp=Z,9.0nm,1.3s
KSH pmax pmax
comp=Z,60nm,4.3s
KSH LR LR
comp=Z,210nm,13.2s
KSH LR LR
comp=Z,390nm,13.6s
KSH LR LR
comp=Z,860nm,21.0s
VORD Divnogorie 74.12 345 eP P 14 11 10.1 -1.1
VORD pmax pmax
comp=Z,20nm,1.5s
NRDL Niedersach Rie 74.22 4 eP P 14 11 13.6 +1.9
comp=Z,19nm,1.1s,baz=357,slow=5.7
NRDL epP sP 14 11 24.2 +0.5
baz=357,slow=5.7
IBBN Ibbenburen 74.29 6 eP P 14 11 14.4 +2.2
comp=Z,44nm,1.3s,baz=357,slow=5.7
IBBN epP sP 14 11 25.0 +0.8
baz=357,slow=5.7
RAR Rarotonga 74.50 176 LR LR 14 38 04.5
comp=Z,103nm,18.6s,baz=353,slow=31
SLVN Son La 74.59 285 P P 14 11 14.4 -0.2
SLVN IAmb IAmb 14 11 27.7
comp=Z,15nm,1.0s
ASSE Asse, Remlinge 74.61 4 eP P 14 11 15.7 +1.8
comp=Z,18nm,1.1s,baz=357,slow=5.7
CLZ Clausthal 74.88 4 eP P 14 11 17.9 +2.1
comp=Z,33nm,1.1s,baz=357,slow=5.7
CLZ epP sP 14 11 28.6 +0.8
baz=357,slow=5.7
BUG Bochum--Univer 75.12 6 eP P 14 11 18.5 +1.4
comp=Z,61nm,1.4s,baz=357,slow=5.7
BUG Bochum--Univer 75.12 6 P P 14 11 18.8 +1.8
BUG pmax pmax
comp=Z,37nm,1.4s
GTTG Gottingen 75.16 4 eP P 14 11 19.3 +2.0
comp=Z,31nm,1.0s,baz=357,slow=5.7
GTTG epP sP 14 11 29.9 +0.7
baz=357,slow=5.7
PMG Port Moresby 75.27 231 P P 14 11 18.3 0.0
PMG IAmb IAmb 14 11 28.3
comp=Z,38nm,1.4s
PMG Port Moresby 75.27 231 P P 14 11 18.3 0.0
PMG pmax pmax
comp=Z,38nm,1.5s
CLL Collm 75.50 2 eP P 14 11 21.6 +2.4
comp=Z,13nm,1.0s,baz=357,slow=5.7
CLL epP PcP 14 11 32.1 0.0
baz=357,slow=5.7
CLL Collm 75.50 2 i P P 14 11 20.1 +0.9
comp=Z,13nm,1.0s
CLL i 14 11 25.9
CLL i sP PcP 14 11 32.2 0.0
comp=Z,21nm,1.3s
CLL LmH 14 50 00.0
comp=N,100nm,22.0s
CLL LmH 14 50 00.0
comp=E,100nm,19.0s
CLL Collm 75.50 2 P P 14 11 19.0 -0.2
CLL IAmb IAmb 14 11 33.5
comp=Z,17nm,1.1s
CLL Collm 75.50 2 i P P 14 11 20.1 +0.9
CLL i 14 11 25.9
CLL i 14 11 32.2
CLL pmax pmax
comp=Z,13nm,1.0s
NEUB Neuenburg 75.57 3 eP P 14 11 21.3 +1.7
comp=Z,36nm,1.1s,baz=357,slow=5.7
AKASG Malin Array Be 75.59 352 P P 14 11 19.4 -0.4
comp=Z,7.1nm,0.7s,baz=12,slow=5.8,SNR=23
AKASG LR LR 14 49 37.1
comp=Z,208nm,18.4s,baz=15,slow=40
AKASG Malin Array Be 75.59 352 i P P 14 11 19.3 -0.4
AKASG pmax pmax
comp=Z,8.0nm,0.7s
AKBB Malin Array Si 75.59 352 P P 14 11 19.1 -0.6
AKBB Malin Array Si 75.59 352 P P 14 11 19.1 -0.6
AKBB pmax pmax
comp=Z,54nm,1.5s
BTK Batken 75.67 320 P P 14 11 20.2 -0.4
BTK IAmb IAmb 14 11 25.5
comp=Z,24nm,1.1s
BTK Batken 75.67 320 P P 14 11 20.2 -0.4
BTK pmax pmax
comp=Z,24nm,1.1s
BSTI Sart Tilman 75.86 7 PcP PcP 14 11 33.3 -0.4
MEM Membach 75.87 7 P P 14 11 22.5 +1.1
MEM PcP sP 14 11 33.5 +0.2
MEM Membach 75.87 7 P P 14 11 22.6 +1.2
MEM pmax pmax
comp=Z,49nm,1.3s
BRG Berggiesshubel 75.95 2 eP P 14 11 23.3 +1.5
comp=Z,13nm,1.1s,baz=357,slow=5.7
BRG epP sP 14 11 34.0 +0.2
baz=357,slow=5.7
AHRW Bad Neuenahr-A 76.01 6 eP P 14 11 24.1 +2.0
comp=Z,26nm,1.1s,baz=357,slow=5.7
AHRW epP PcP 14 11 34.7 +0.4
baz=357,slow=5.7
BMRD Maredsous 76.08 8 P P 14 11 23.7 +1.2
BMRD PcP pwP 14 11 34.4 0.0
MOX Moxa 76.12 3 eP P 14 11 24.5 +1.7
comp=Z,18nm,1.0s,baz=357,slow=5.7
MOX epP sP 14 11 35.2 +0.4
baz=357,slow=5.7
MOX eL L 14 46 23.0
comp=Z,168nm,20.8s
SIJI Sorong 76.19 249 P P 14 11 24.2 +0.5
comp=Z,12nm,0.8s,baz=249,slow=2.5,SNR=3.7
CHVC Chvalec 76.26 0 eP P 14 11 25.2 +1.6
PLN Plauen 76.30 3 eP P 14 11 25.5 +1.7
comp=Z,10nm,1.0s,baz=357,slow=5.7
PLN epP sP 14 11 36.1 +0.2
baz=357,slow=5.7
PVCC Panska Ves 76.31 1 eP P 14 11 25.9 +2.0
PVCC Panska Ves 76.31 1 eP P 14 11 25.9 +2.0
TANN Tannenbergstha 76.38 3 eP P 14 11 26.2 +1.8
comp=Z,35nm,1.5s,baz=357,slow=5.7
TANN epP sP 14 11 36.9 +0.5
baz=357,slow=5.7
TNS Taunus Mts 76.41 5 eP P 14 11 26.3 +1.8
comp=Z,16nm,1.0s,baz=357,slow=5.7
TNS epP sP 14 11 36.9 +0.3
baz=357,slow=5.7
DPC Dobruska-Polom 76.50 0 eP P 14 11 26.3 +1.3

DPC Dobruska-Polom 76.50 0 eP P 14 11 26.3 +1.3
WERN Wernitzgruen 76.50 3 eP P 14 11 27.1 +2.0
comp=Z,15nm,1.0s,baz=357,slow=5.7
WERN epP sP 14 11 37.6 +0.5
baz=357,slow=5.7
NKC Novy Kostel 76.56 3 eP P 14 11 26.7 +1.4
NKC Novy Kostel 76.56 3 eP P 14 11 26.7 +1.4
OJC Ojcow 76.59 358 P P 14 11 26.0 +0.5
OJC IAmb IAmb 14 11 39.1
comp=Z,27nm,1.6s
OJC Ojcow 76.59 358 P P 14 11 26.0 +0.5
OJC pmax pmax
comp=Z,27nm,1.6s
KRLC Kraliky 76.77 360 eP P 14 11 28.1 +1.5
KRLC Kraliky 76.77 360 eP P 14 11 28.1 +1.5
WLF Walferdange 76.82 7 eP P 14 11 29.0 +2.3
comp=Z,39nm,1.3s,baz=357,slow=5.7
WLF epP sP 14 11 39.5 +0.7
baz=357,slow=5.7
PRU Pruhonice 76.85 1 eP P 14 11 28.4 +1.5
PRU Pruhonice 76.85 1 eP P 14 11 28.4 +1.5
ROTZ Rotzenmuhle 77.02 3 eP P 14 11 30.0 +2.1
comp=Z,21nm,1.4s,baz=357,slow=5.7
ROTZ epP sP 14 11 40.5 +0.6
baz=357,slow=5.7
GRF Grafenberg Arr 77.06 3 eP P 14 11 30.3 +2.2
comp=Z,23nm,1.0s,baz=357,slow=5.7
GRF epP sP 14 11 40.9 +0.7
baz=357,slow=5.7
GRF eL L 14 46 51.0
comp=Z,159nm,20.4s
MORC Moravsky Berou 77.07 359 eP P 14 11 29.0 +0.8
MORC e 14 11 40.1
MORC Moravsky Berou 77.07 359 ⇓P P 14 11 29.4 +1.2
MORC Moravsky Berou 77.07 359 P P 14 11 28.3 +0.1
MORC IAmb IAmb 14 11 40.6
comp=Z,19nm,1.4s
MORC Moravsky Berou 77.07 359 P P 14 11 28.3 +0.1
MORC pmax pmax
comp=Z,19nm,1.4s
KWP Kalwaria Pacla 77.08 356 eP P 14 11 29.3 +1.0
KWP Kalwaria Pacla 77.08 356 P P 14 11 27.9 -0.3
KWP Kalwaria Pacla 77.08 356 P P 14 11 28.0 -0.3
KWP pmax pmax
comp=Z,69nm,1.2s
PBCC Pribram 77.14 2 eP P 14 11 30.2 +1.6
BANI BANI 77.31 76 P P 14 11 28.0 -2.1
NIE Niedzica 77.38 357 eP P 14 11 31.1 +1.1
TBI Tubuai 77.52 167 eLR LR 14 35 08.9
comp=Z,283nm,32.5s,baz=348
VRAC Vranov 77.54 360 eP P 14 11 31.7 +0.8
VRAC e 14 11 43.3
VRAC Vranov 77.54 360 eP P 14 11 32.0 +1.1
comp=Z,10nm,1.0s,baz=351,slow=4.3,SNR=6.4
VRAC Vranov 77.54 360 ⇓P P 14 11 32.2 +1.3
VRAC Vranov 77.54 360 P P 14 11 32.0 +1.1
WET Wettzell 77.66 2 eP P 14 11 33.6 +2.1
comp=Z,9.8nm,1.2s,baz=357,slow=5.7
WET epP sP 14 11 44.2 +0.6
baz=357,slow=5.7
KHC Kasperske Hory 77.69 2 eP P 14 11 33.1 +1.4
KHC ex x 14 11 37.6
KHC ex x 14 11 44.7
KHC Kasperske Hory 77.69 2 P P 14 11 32.4 +0.7
KHC Kasperske Hory 77.69 2 eP P 14 11 33.1 +1.4
KHC e 14 11 44.7
KRUC Moravsky 77.79 0 eP P 14 11 33.0 +0.8
KRUC e 14 11 44.5
KOLS Kolonicke sedl 77.80 356 eP P 14 11 33.7 +1.4
KOLS Kolonicke sedl 77.80 356 eP P 14 11 33.7 +1.4
CRVS Cervenica-Dubn 77.86 357 eP P 14 11 34.1 +1.5
CRVS pmax pmax
comp=Z,131nm,2.4s
CRVS Cervenica-Dubn 77.86 357 eP P 14 11 34.1 +1.5
GEC2 GERESS Array S 77.98 2 eP P 14 11 35.1 +1.7
comp=Z,9.5nm,1.0s,baz=357,slow=5.7
GEC2 epP sP 14 11 45.6 +0.2
baz=357,slow=5.7
GEC2 GERESS Array S 77.98 2 P P 14 11 33.4 0.0
GEC2 IAmb IAmb 14 11 46.5
comp=Z,11nm,1.1s
GERES GERESS Array B 77.98 2 P P 14 11 34.1 +0.7
comp=Z,4.3nm,0.8s,baz=0.0,slow=4.3,SNR=24
JAVC Velka Javorina 77.98 359 eP P 14 11 35.0 +1.6
JAVC e 14 11 46.9
UZH Uzhgorod 78.10 356 eP P 14 11 35.0 +1.1
UZH i 14 11 46.0
SORM Soroca 78.21 352 ⇑P P 14 11 35.3 +0.7
SORM Soroca 78.21 352 P P 14 11 35.2 +0.7
BFO Black Forest 78.29 6 eP P 14 11 36.7 +1.7
comp=Z,30nm,1.8s,baz=357,slow=5.7
BFO epP sP 14 11 47.3 +0.2
baz=357,slow=5.7
KECS Kecovo 78.31 357 eP P 14 11 36.8 +1.7
KECS pmax pmax
comp=Z,9.0nm,1.0s
KECS Kecovo 78.31 357 eP P 14 11 36.8 +1.7
ECH Echery 78.33 6 P P 14 11 34.5 -0.8
ECH IAmb IAmb 14 11 48.3
comp=Z,25nm,1.1s
ECH Echery 78.33 6 P P 14 11 34.5 -0.8
ECH pmax pmax
comp=Z,25nm,1.1s
SMOL Smolenice 78.33 359 eP P 14 11 36.9 +1.6
SMOL pmax pmax
comp=Z,5.0nm,1.0s
SMOL Smolenice 78.33 359 eP P 14 11 36.9 +1.6
VYHS Vyhne 78.34 358 eP P 14 11 36.4 +1.1
VYHS pmax pmax
comp=Z,10.0nm,1.0s
VYHS Vyhne 78.34 358 eP P 14 11 36.4 +1.1
UBPT Khong Chiam 78.43 280 P P 14 11 36.3 +0.1
UBPT IAmb IAmb 14 11 48.8
comp=Z,26nm,1.1s
MODS Modra-Piesok 78.47 359 eP P 14 11 36.9 +0.8
MODS pmax pmax
comp=Z,16nm,1.1s
MODS Modra-Piesok 78.47 359 eP P 14 11 36.9 +0.8
TRPA Tarpa 78.59 356 ⇓P P 14 11 38.2 +1.5
FUR Furstenfeldbru 78.59 4 eP P 14 11 38.6 +1.8
comp=Z,60nm,1.4s,baz=357,slow=5.7
FUR epP sP 14 11 49.2 +0.5
baz=357,slow=5.7
TAPN Taplejung 78.69 301 eP P 14 11 38.2 +0.3
comp=Z,39nm,0.9s
PSZ Piszkesteto 78.89 358 ⇓P P 14 11 39.6 +1.2
PSZ Piszkesteto 78.89 358 P P 14 11 38.6 +0.2
PSZ IAmb IAmb 14 11 52.9
comp=Z,23nm,1.1s
PSZ Piszkesteto 78.89 358 P P 14 11 38.6 +0.2
PSZ pmax pmax
comp=Z,23nm,1.1s
CONA Conrad Observa 78.92 0 iP P 14 11 40.0 +1.4
comp=Z,12nm,0.9s,SNR=5.3
CONA esP sP 14 11 51.4 +0.7
comp=Z,21nm,1.1s
BUR08 Bucovina Ar. S 78.93 354 P P 14 11 38.8 +0.1
BUR08 IAmb IAmb 14 11 52.1
comp=Z,16nm,1.1s
BURAR Bucovina Array 78.96 354 ⇓P P 14 11 39.7 +0.8
BURAR Bucovina Array 78.96 354 P P 14 11 39.6 +0.8
RJOB Jochberg 79.07 2 eP P 14 11 41.2 +1.8
comp=Z,23nm,1.5s,baz=357,slow=5.7
RJOB epP sP 14 11 51.9 +0.4
baz=357,slow=5.7
GUN Gumba 79.16 302 eP P 14 11 41.0 +0.4
comp=Z,67nm,0.9s
GOF Gofitskoye 79.19 341⇑eP P 14 11 41.4 +1.4
GOF pmax pmax
comp=Z,58nm,0.7s
JIRN Jiri 79.21 302 eP P 14 11 41.4 +0.5
comp=Z,68nm,0.5s
ODAN Odare 79.25 301 eP P 14 11 40.8 -0.1
RETA Reutte 79.25 4 esP sP 14 11 53.0 +0.5
comp=Z,22nm,1.4s
MOTA Moosalm 79.40 4 eP P 14 11 42.2 +0.9
comp=Z,22nm,1.0s
MOTA isP sP 14 11 53.9 +0.5
comp=Z,36nm,1.1s
CHTO Chiang Mai 79.42 287 P P 14 11 40.7 -1.0
CHTO Chiang Mai 79.42 287 P P 14 11 40.7 -1.0
CHTO pmax pmax
comp=Z,8.0nm,1.1s
WATA Walderalm 79.43 3 iP P 14 11 42.7 +1.2
comp=Z,15nm,0.9s
WATA isP sP 14 11 54.1 +0.5
comp=Z,30nm,1.2s
WTTA Wattenberg 79.50 3 eP P 14 11 43.2 +1.3
comp=Z,17nm,0.9s,SNR=5.2
WTTA esP sP 14 11 54.7 +0.7
comp=Z,27nm,1.2s
SQTA Sankt Quirin 79.53 4 eP P 14 11 43.0 +1.0
comp=Z,25nm,0.9s,SNR=6.5
SQTA esP sP 14 11 54.8 +0.7
comp=Z,45nm,1.2s
KKN Kakani 79.56 303 eP P 14 11 43.0 +0.4
RAMN Ramite 79.58 301 eP P 14 11 43.0 +0.3
comp=Z,42nm,0.7s
ARSA Arzberg 79.60 1 eP P 14 11 43.5 +1.2
comp=Z,12nm,1.0s
ARSA isP sP 14 11 55.2 +0.9
comp=Z,22nm,1.1s
DZM Mont Dzumac 79.63 208 eLR LR 14 36 31.7
comp=Z,282nm,22.6s
DZM Mont Dzumac 79.63 208 LR LR 14 44 22.4
comp=Z,173nm,18.4s,baz=30,slow=34
PKI Pulchoki 79.67 303 eP P 14 11 43.5 +0.2
PKIN Phulchoki 79.67 303 eP P 14 11 43.4 +0.1
comp=Z,23nm,0.8s
GKN Gorkha 79.70 303 eP P 14 11 43.6 +0.3
comp=Z,66nm,0.9s
CMAR Chiang Mai Arr 79.71 287 P P 14 11 43.5 +0.3
comp=Z,3.5nm,0.8s,baz=17,slow=5.3,SNR=23
CMAR LR LR 14 49 10.8
comp=Z,144nm,20.2s,baz=44,slow=37
FETA Feichten 79.71 4 eP P 14 11 44.0 +0.9
comp=Z,21nm,1.0s,SNR=6.7
FETA esP sP 14 11 55.8 +0.7
comp=Z,31nm,1.3s
KBA Koelnbreinsper 79.74 2 eP P 14 11 44.6 +1.4
comp=Z,35nm,1.1s,SNR=10
KBA esP sP 14 11 56.0 +0.7
comp=Z,35nm,1.0s
KBA Koelnbreinsper 79.74 2 P P 14 11 45.1 +1.9
DMN Daman 79.79 303 eP P 14 11 44.4 +0.5
DANN Dangsing 79.85 304 eP P 14 11 44.9 +0.6
comp=Z,117nm,0.7s
DAVOX Davos/Dischmat 79.92 5 P P 14 11 45.4 +1.2
comp=Z,7.8nm,0.6s
DRGR 79.92 356 ⇓P P 14 11 44.8 +0.7
PBKT Sadao Pong 80.04 284 P P 14 11 44.0 -1.0
PBKT IAmb IAmb 14 11 57.5
comp=Z,14nm,0.9s
ABTA Abfaltersbach 80.05 3 ePcP P 14 11 46.6 +1.8
comp=Z,19nm,1.2s
ABTA isP sP 14 11 57.6 +0.7
comp=Z,29nm,1.1s
FUORN Ofenpass-Fuorn 80.09 4 P P 14 11 46.1 +0.9
FUORN IAmb IAmb 14 11 59.7
comp=Z,31nm,1.1s
SOKA Soboth 80.17 1 eP P 14 11 46.6 +1.2
comp=Z,25nm,1.1s,SNR=9.7
SOKA esP sP 14 11 58.4 +0.9
comp=Z,48nm,1.3s
PERS Pernice 80.21 1 eP P 14 11 46.7 +1.1
PERS e 14 11 57.9
NIL Nilore 80.22 315 P P 14 11 45.6 -0.2
NIL Nilore 80.22 315 P P 14 11 45.6 -0.2
NIL pmax pmax
comp=Z,22nm,0.7s
KVAR Kislovodsk Arr 80.32 341 P P 14 11 47.1 +0.8
comp=Z,2.5nm,0.4s,baz=287,slow=19,SNR=6.7
KIV Kislovodsk 80.32 341 ⇓P P 14 11 47.9 +1.7
KIV Kislovodsk 80.32 341 P P 14 11 46.1 -0.1
KIV IAmb IAmb 14 11 59.5
comp=Z,18nm,1.1s
KIV Kislovodsk 80.32 341 eP P 14 11 46.6 +0.3
KIV pmax pmax
comp=Z,50nm,1.1s
KIV MLR MLR
comp=Z,590nm,19.0s
OBKA Obir 80.33 1 P P 14 11 47.6 +1.3
comp=Z,30nm,0.9s,SNR=7.2
OBKA isP sP 14 11 59.0 +0.6
comp=Z,27nm,0.9s
OZUR 80.44 353 ⇑P P 14 11 48.7 +1.9
SIRR Siria 80.48 356 ⇑P P 14 11 47.3 +0.3
KBZ Khabaz 80.50 341 P P 14 11 48.1 +1.0
comp=Z,11nm,0.8s,baz=354,slow=1.4,SNR=22
KBZ LR LR 14 52 36.8
comp=Z,293nm,18.5s,baz=14,slow=40
ROBS Robic 80.58 2 eP P 14 11 48.5 +1.0
NCK Nalchik 80.58 340⇑eP P 14 11 50.2 +2.6
NCK pmax pmax
comp=Z,25nm,0.7s
VRI Vrincioaia 80.59 353 ⇑P P 14 11 48.5 +0.8
VRI Vrincioaia 80.59 353 P P 14 11 48.4 +0.8
PLOR Plostina 80.62 353 ⇑P P 14 11 49.2 +1.4
PLOR Plostina 80.62 353 P P 14 11 49.1 +1.4
MLR Muntele Rosu 81.03 353 P P 14 11 51.2 +1.1
comp=Z,0.9nm,0.4s,baz=254,slow=8.3,SNR=4.2
MLR Muntele Rosu 81.03 353 IAmb IAmb 14 12 04.0
comp=Z,13nm,1.2s
MLR Muntele Rosu 81.03 353 P P 14 11 51.2 +1.1
MLR pmax pmax
comp=Z,13nm,1.2s
BZS Buzias 81.14 356 ⇑P P 14 11 51.4 +0.9
VOIR 81.14 354 ⇓P P 14 11 51.7 +1.0
VOIR 81.14 354 P P 14 11 51.6 +1.0
CFR Carcaliu 81.16 352 ⇓P P 14 11 51.3 +0.6
CFR Carcaliu 81.16 352 P P 14 11 51.2 +0.6
KBL Kabul 81.17 318 P P 14 11 49.4 -1.7
KBL Kabul 81.17 318 P P 14 11 49.4 -1.7
KBL pmax pmax
comp=Z,38nm,0.4s
ZEI Tsey 81.20 340 eP P 14 11 51.1 0.0
ZEI pmax pmax
comp=Z,11nm,0.7s
SEVA Sevastopol 81.21 348 ⇑P P 14 11 52.8 +2.0
TOPG Topolog 81.44 351 ⇑P P 14 11 53.3 +1.2
BNI Bardonecchia 81.45 7 P P 14 11 52.5 +0.2
BNI Bardonecchia 81.45 7 P P 14 11 52.6 +0.2
BNI pmax pmax
comp=Z,31nm,1.1s
AKT Akhty 81.60 337 eP P 14 11 54.0 +0.8
AKT pmax pmax
comp=Z,22nm,0.8s
TBLG Delisi 82.04 339 P P 14 11 54.9 -0.5
TBLG Delisi 82.04 339 P P 14 11 54.9 -0.5
TBLG pmax pmax
comp=Z,37nm,1.0s
GEYT Alibeck 82.04 328 P P 14 11 56.6 +1.2
comp=Z,6.8nm,0.9s,baz=325,slow=4.2,SNR=12
GEYT LR LR 14 53 09.3
comp=Z,307nm,18.6s,baz=35,slow=39
GYA0B ALIBECK ARRAY 82.04 328 P P 14 11 55.3 -0.1
GYA0B IAmb IAmb 14 12 08.2
comp=Z,20nm,1.1s
PLVB Pleven 83.21 354 ⇑P P 14 12 02.7 +1.3
GNI Garni 83.55 339 P P 14 12 03.7 +0.3
GNI Garni 83.55 339⇓eP P 14 12 05.9 +2.5
GNI pmax pmax
comp=Z,32nm,0.8s
DIKM Dikmen 83.82 346 ⇑P P 14 12 07.3 +2.7
HRA Herat 83.86 323 P P 14 12 05.5 +0.3
VTS Vitosha 84.05 355 ⇑P P 14 12 06.9 +0.9
VTS Vitosha 84.05 355 P P 14 12 05.6 -0.4
VTS IAmb IAmb 14 12 19.1
comp=Z,9.3nm,1.0s
VTS Vitosha 84.05 355 P P 14 12 05.6 -0.4
VTS pmax pmax
comp=Z,9.0nm,1.0s
ESDC Sonseca Array 85.52 16 P P 14 12 15.3 +2.1
comp=Z,1.4nm,0.8s,baz=355,slow=4.5,SNR=5.9
ESDC LR LR 14 53 01.3
comp=Z,112nm,18.5s,baz=300,slow=38
RUSC La Rusia 85.60 86 P P 14 12 13.9 -0.5
BR131 Keskin Array S 85.94 347 P P 14 12 15.2 -0.2
BR131 IAmb IAmb 14 12 28.5
comp=Z,15nm,1.0s
BR131 Keskin Array S 85.94 347 P P 14 12 15.2 -0.2
BR131 pmax pmax
comp=Z,15nm,1.0s
BRTR Keskin Array B 85.94 347 P P 14 12 16.4 +0.9
comp=Z,10nm,0.9s,baz=38,slow=2.2,SNR=35
BRTR LR LR 14 55 06.6
comp=Z,126nm,19.3s,baz=342,slow=39
BRTR Keskin Array B 85.94 347 iP P 14 12 16.7 +1.3
BRTR pmax pmax
comp=Z,10.0nm,0.9s
LIT Litokhoron 86.60 355 P P 14 12 18.7 +0.2
LIT IAmb IAmb 14 12 31.0
comp=Z,18nm,1.2s
LIT Litokhoron 86.60 355 P P 14 12 18.7 +0.2
LIT pmax pmax
comp=Z,18nm,1.2s
TIP Timpagrande 87.67 360 ⇑P P 14 12 25.6 +1.8
TIP Timpagrande 87.67 360 P P 14 12 24.1 +0.3
WRA Warramunga Arr 90.52 236 P P 14 12 36.3 -0.9
comp=Z,1.5nm,1.2s,baz=33,slow=5.7,SNR=3.8
ASAR Alice Springs 93.88 235 P P 14 12 51.7 -1.0
comp=Z,0.2nm,0.5s,baz=34,slow=5.0,SNR=4.3
STKA Stephens Creek 97.41 225 LR LR 14 54 31.8
comp=Z,50nm,19.0s,baz=25,slow=34
TORD Torodi Ar. Bea 112.41 16 PKiKP PKiKP 14 18 10.7 -0.8
comp=Z,0.2nm,0.5s,baz=309,slow=1.4,SNR=2.6
TSUM Tsumeb 145.73 358 PKPdf 14 19 14.0 +0.1
LBTB Lobatse 150.71 343 PKPbc 14 19 27.6 +0.2
LBTB Lobatse 150.71 343 PKIKP PKPbc 14 19 27.6 +0.2
SYO Syowa Base 161.10 206⇑ePKPdf PKPdf 14 19 36.0 +2.0

IDC **17** *14:03:31.8±1.1, 52.56S×16.06E, h0km, mb4.0/2, mb1 4.1/2, mb1mx3.7/31, mbtmp4.0/2, MS3.7/3, Ms1 3.7/3, ms1mx3.2/23, Error ellipse: s-maj=83.9km s-min=38.3km az=54.0*
ISC 17 14:03:33.3±1.1, **52.5S**±0.2×**16.1E**±0.4, **h10km, n15,** σ**1.15**/9, **Southwest of Africa**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
SNAA Sanae 20.95 197 P P 14 08 15.4 -0.7
VNA2 Neumayer--Watz 21.27 201 P P 14 08 21.5 +2.1
baz=24,slow=11
VNA3 Neumayer Olymp 22.01 202 P P 14 08 26.1 -1.2
BOSA Boshof 24.84 20 LR LR 14 16 19.8
comp=Z,82nm,19.4s,baz=326,slow=31
VNDA Vanda 48.49 171 LR LR 14 31 23.6
comp=Z,86nm,19.5s,baz=208,slow=34
TORD Torodi Ar. Bea 66.57 345 P P 14 14 23.5 0.0
1.3nm,0.9s,baz=183,slow=5.0,SNR=4.8
H01W2 Cape Leeuwin H 67.65 118 T T 15 28 55.0
baz=221,slow=75,SNR=5.8
H01W3 Cape Leeuwin H 67.66 118 T T 15 28 57.5
baz=221,slow=75,SNR=6.2
H01W1 Cape Leeuwin H 67.66 118 T T 15 28 58.1
baz=221,slow=75,SNR=4.2
ASAR Alice Springs 86.89 126 P P 14 16 18.5 +0.1
0.8nm,0.7s,baz=201,slow=4.6,SNR=11
KEST Kesra 88.08 355 LR LR 14 54 28.1
comp=Z,107nm,21.7s,baz=287,slow=35
NVAR Mina Array Bea 145.64 264 PKPbc PKPdf 14 23 11.4 -0.1
1.3nm,0.7s,baz=131,slow=4.1,SNR=13
YKA Yellowknife Ar 152.37 311 PKPbc PKPbc 14 23 27.2 -0.9
1.2nm,0.8s,baz=89,slow=2.2,SNR=20
INK Inuvik 158.56 329 PKPab PKPab 14 24 04.7 +0.1
1.7nm,1.0s,baz=145,slow=1.9,SNR=4.5
ILAR Eielson Array 164.93 331 PKPab PKPab 14 24 33.5 +0.8
0.6nm,0.8s,baz=23,slow=3.8,SNR=6.8

TAP **17** *14:30:03.7, 24.78N×122.80E, h2km, ML2.9, D*
JMA **17** *14:30:03.5±0.1, 24.83N×122.89E, h28km±3km, M2.2*
ISC 17 14:30:01.8±1.2, **24.88N**±0.07×**122.90E**±0.03, **h10km, n42,** σ**0.88**/46, **Taiwan region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
JYNG Yonagunijimaku 0.43 174 P Pb 14 30 11.7 +0.2
JYNG eS Sb 14 30 17.4 -0.7
YOJ Yonaguni jima 0.43 166 P Pb 14 30 11.9 +0.3
baz=148
YOJ S Sb 14 30 17.8 -0.3
baz=148
YOJ Yonaguni jima 0.43 166 P Pb 14 30 11.7 +0.2
YOJ eS Sb 14 30 17.6 -0.5
EOS1 EOS1 0.77 245 P Pb 14 30 17.5 +0.2
baz=250
EOS1 eS Sb 14 30 27.0 -0.8
baz=250
IRIF Iriomote-Funau 0.94 126 P Pg 14 30 20.2 +0.4
TIPB Shuangxi 0.98 275 eP Pg 14 30 20.0 -0.6
baz=282
TWC Suao 0.99 254 eP Pn 14 30 21.8 0.0
baz=246
TWE Neicheng 1.13 262 eP Pg 14 30 23.4 -0.1
baz=267
ENA Nanau 1.15 247 eP Pg 14 30 23.3 -0.5
baz=250
HATJ Hateruma jima 1.17 135 P Pb 14 30 23.9 -0.2
JKRS Kuro-shima 1.20 122 P Pb 14 30 24.4 -0.2
ENTT Nioudou 1.23 259 eP Pn 14 30 25.1 -0.1
baz=263
JIJ Ishigaki jima 1.25 114 P Pn 14 30 24.5 -0.8
NDT Datong Townshi 1.29 258 P Pg 14 30 26.8 +0.3
baz=262
JISG Ishigakijimahi 1.32 103 P Pn 14 30 25.9 -0.4
NACB Ninganchiao 1.38 239 P Pb 14 30 27.4 -0.3
baz=242
YHNB Yeheng 1.40 262 eP Pg 14 30 28.5 -0.2
baz=266
NSK Sanguang 1.41 262 P Pg 14 30 29.9 +0.9
baz=266
NNSB Datong 1.45 252 P Pn 14 30 28.5 +0.3
baz=255
NNSH Datong 1.45 252 P Pn 14 30 28.8 -0.2
baz=255
ETLH Xiulin Townshi 1.45 243 P Pg 14 30 29.1 -0.6
baz=245
NNS Nan Shan 1.46 253 P Pg 14 30 30.0 +0.3
baz=256
JTJ Tarama 1.66 98 P Pn 14 30 32.0 +1.1
TWT Tachien 1.69 249 eP Pg 14 30 33.5 -0.7
baz=251
TDCB Techi 1.70 249 eP Pb 14 30 33.1 -0.2
baz=251
NSTT Nanjuang 1.74 262 eP Pg 14 30 36.0 +0.8
baz=265
CHGB Renai 1.77 243 eP Pg 14 30 34.8 -1.0
baz=244
OWD Renai 1.82 240 eP Pb 14 30 35.1 -0.2
baz=241
WHP Taichung City 1.88 252 eP Pg 14 30 37.9 +0.2
baz=254
HGSD Ruisui 1.93 224 eP Pn 14 30 35.1 +0.4
baz=225
VWDT VWDT 1.96 235 eP Pn 14 30 35.5 +0.5
baz=236
YULB Yu-li 2.08 225 eP Pn 14 30 36.5 -0.3
baz=211
TWF1 Yuli 2.11 224 eP Pn 14 30 37.1 -0.1
baz=210
WHYT Xinyi Township 2.21 238 eP Pb 14 30 40.9 -1.0
baz=226
FULB Fuli 2.23 221 eP Pn 14 30 38.2 -0.6
baz=221
ALS Alishan 2.35 235 P Pb 14 30 42.6 -1.8
baz=235
CHN5 Tsauling 2.40 238 eP Pn 14 30 45.1 0.0
baz=239
ELDTW Lidau 2.41 226 P Pn 14 30 41.9 +0.5
baz=226
TPUB Ta-pu 2.60 233 P Pn 14 30 45.9 +1.9
baz=220
TWK Hsinying 2.73 234 eP Pn 14 30 48.0 +2.3
baz=234
MASBT Mashibuluo 3.07 223 eP Pn 14 30 52.4 +2.0
baz=211
EAST Anshuo 3.12 217 eP Pn 14 30 53.7 +2.6
baz=217

IDC **17** *14:49:23.8±1.6, 9.00S×117.70E, h0km, mb3.3/2, mb1 3.7/5, mb1mx3.4/44, mbtmp3.5/5, ML3.5/3, Error ellipse: s-maj=45.2km s-min=21.6km az=62.0*
DJA **17** *14:49:31.0±0.3, 9°S±3°×11°8E±°, h10km, M4.0/8, MLv4.0/8*
ISC 17 14:49:28.1±0.8, **8.99S**±0.07×**117.95E**±0.05, **h10km, n13,** σ**1.54**/15, **Sumbawa region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
PLAI Plampang 0.23 313 P Pg 14 49 33.3 +0.4
PLAI S Sg 14 49 36.9 +0.8
WSI Waingapu 2.42 107 P Pb 14 50 13.6 +1.8
DNP Denpasar 2.72 276 P Pg 14 50 22.4 +2.1
IGBI Denpasar 2.77 273 P Pn 14 50 12.7 +0.1

SRBI	Singaraja	2.85	288	P	Pn	14 50 14.3	+0.6
JAGI	Jajag, Banyuwa	3.79	277	P	Pn	14 50 27.0	+0.4
BKSI	Bulukumba	4.23	31	P	Pn	14 50 33.7	+1.0
KAPI	Kappang	4.33	25	Pn	Pn	14 50 34.2	+0.1
	4.6nm,0.3s,baz=224,slow=3.8,SNR=11						
KAPI				Sn	Sn	14 51 24.4	-0.4
	22nm,0.3s,baz=298,slow=18,SNR=18						
BNSI	Bone	5.04	25	P	Pn	14 50 45.4	+1.6
FITZ	Fitzroy Crossi	11.74	141	Pn	Pn	14 52 15.9	0.0
	0.2nm,0.3s,baz=315,slow=10.0,SNR=2.8						
FITZ				Sn	Sn	14 54 18.7	-8.4
	0.2nm,0.3s,baz=180,slow=20,SNR=4.0						
WRA	Warramunga Arr	19.23	126	P	P	14 53 51.2	-1.5
	0.2nm,0.3s,baz=301,slow=13,SNR=8.4						
ASAR	Alice Springs	21.12	136	P	P	14 54 12.2	-1.1
	0.8nm,0.8s,baz=328,slow=12,SNR=16						
MKAR	Makanchi Array	63.98	334	P	P	14 59 58.2	-3.5
	0.3nm,0.4s,baz=135,slow=6.5,SNR=12						

JMA 17 15:00:34.6,24°.12N×121°.79E,h61km±1km,M2.0
TAP 17 15:00:35.9,24°.16N×121°.81E,h48km,ML2.7,B
ISC 17 15:00:36.5±1.4,24°.16N±0°.02×121°.84E±0°.02,h39km±1km, n64,σ1s.06/119,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.22	273	P	Pn	15 00 44.5	-0.2
	baz=272						
NACB				eS	Sn	15 00 50.5	-0.9
	baz=272						
TWD	Chiawan	0.23	250	P	Pn	15 00 44.8	+0.2
	baz=246						
TWD				eS	Sn	15 00 50.7	-0.6
	baz=246						
ENA	Nanau	0.28	342	P	Pn	15 00 44.7	0.0
	baz=348						
ENA				eS	Sn	15 00 51.5	+0.4
	baz=348						
ETLH	Xiulin Townshi	0.33	278	P	Pn	15 00 45.2	+0.2
	baz=278						
ETLH				eS	Sn	15 00 52.7	+1.0
	baz=278						
TWC	Suao	0.45	1	P	Pn	15 00 46.5	0.0
	baz=6.0						
TWC				eS	Sn	15 00 55.7	+2.2
	baz=6.0						
EOS1	EOS1	0.47	34	iP	Pn	15 00 48.0	+1.2
	baz=37						
EOS1				eS	Sn	15 00 58.2	+4.3
	baz=37						
NNSB	Datong	0.49	303	iP	Pn	15 00 47.1	-0.1
	baz=304						
NNSB				eS	Sn	15 00 55.6	+0.9
	baz=304						
NNSH	Datong	0.49	303	P	Pn	15 00 47.0	-0.2
	baz=304						
NNSH				eS	Sn	15 00 55.4	+0.7
	baz=304						
ESL	Shilin	0.51	227	P	Pn	15 00 46.5	-0.8
	baz=223						
ESL				eS	Sn	15 00 54.8	-0.1
	baz=223						
NNS	Nan Shan	0.51	303	P	Pn	15 00 47.2	-0.2
	baz=304						
NNS				eS	Sn	15 00 55.5	+0.5
	baz=304						
WHF	Hehuan Shan	0.52	268	P	Pn	15 00 47.5	-0.4
	baz=267						
WHF				eS	Sn	15 00 55.9	0.0
	baz=267						
NDT	Datong Townshi	0.53	326	iP	Pn	15 00 47.6	-0.1
	baz=328						
NDT				S	Sn	15 00 56.7	+1.2
	baz=328						
ENTT	Nioudou	0.54	333	iP	Pn	15 00 47.8	0.0
	baz=335						
ENTT				eS	Sn	15 00 57.5	+1.8
	baz=335						
TWE	Neicheng	0.58	345	P	Pn	15 00 48.5	+0.1
	baz=348						
TWE				eS	Sn	15 00 57.5	+0.9
	baz=348						
TWT	Tachien	0.61	279	P	Pn	15 00 49.0	0.0
	baz=278						
TWT				eS	Sn	15 00 58.3	+0.6
	baz=278						
CHGB	Renai	0.61	261	iP	Pn	15 00 48.7	-0.3
	baz=259						
CHGB				eS	Sn	15 00 58.0	+0.2
	baz=259						
SLBB	Yuanshan	0.62	343	P	Pn	15 00 49.1	+0.1
	baz=344						
SLBB				S	Sn	15 00 59.0	+1.3
	baz=344						
TDCB	Techi	0.63	279	P	Pn	15 00 49.0	-0.1
	baz=278						
TDCB				eS	Sn	15 00 58.4	+0.4
	baz=278						
OWD	Renai	0.64	251	P	Pn	15 00 48.6	-0.7
	baz=250						
OWD				eS	Sn	15 00 57.9	-0.4
	baz=250						
YHNB	Yeheng	0.66	320	iP	Pn	15 00 49.1	-0.4
	baz=321						
YHNB				eS	Sn	15 00 58.7	0.0
	baz=321						
NSK	Sanguang	0.67	320	P	Pn	15 00 49.1	-0.6
	baz=321						
NSK				eS	Sn	15 00 59.5	+0.4
	baz=321						
NWLT	Wulai	0.69	334	P	Pn	15 00 49.6	-0.2
	baz=335						
NWLT				eS	Sn	15 01 00.0	+0.7
	baz=335						
NTC	Toucheng	0.69	359	eP	Pn	15 00 50.1	+0.2
	baz=1.0						
NTC				eS	Sn	15 00 57.8	-1.5
	baz=1.0						
VWDT	VWDT	0.75	238	eP	Pn	15 00 50.3	-0.4
	baz=236						
VWDT				S	Sn	15 01 00.8	0.0
	baz=236						
HGSD	Ruisui	0.77	210	P	Pn	15 00 50.8	0.0
	baz=207						
HGSD				eS	Sn	15 01 02.2	+1.1
	baz=207						
EHY	Hungye	0.80	216	eP	Pn	15 00 51.2	-0.2
	baz=213						
EHY				eS	Sn	15 01 00.4	-1.8
	baz=213						
TIPB	Shuangxi	0.81	359	P	Pn	15 00 51.8	+0.3
	baz=1.0						
TIPB				eS	Sn	15 01 03.2	+1.0
	baz=1.0						
WHP	Taichung City	0.82	278	P	Pn	15 00 51.9	+0.2
	baz=278						
WHP				eS	Sn	15 01 03.0	+0.3
	baz=278						
DPDB	Guoxing	0.84	262	P	Pn	15 00 51.8	-0.1
	baz=260						
DPDB				eS	Sn	15 01 05.8	+2.6
	baz=260						
TWA	Mucha	0.85	344	eP	Pn	15 00 52.2	+0.2
	baz=346						
TWA				eS	Sn	15 01 03.9	+0.7
	baz=346						
TWB1	Santiao Chiao	0.85	9	eP	Pn	15 00 51.8	-0.3
	baz=11						
TWB1				eS	Sn	15 01 05.1	+1.7
	baz=11						
SSLB	Suanglung	0.89	245	eP	Pn	15 00 51.9	-0.7
	baz=244						
SSLB				eS	Sn	15 01 07.1	+2.8
	baz=244						
LIOB	Emei	0.89	303	P	Pn	15 00 52.5	-0.1
	baz=303						
NSTT	Nanjuang	0.89	302	P	Pn	15 00 52.1	-0.5
	baz=302						
NSTT				eS	Sn	15 01 04.8	+0.4
	baz=302						
SMLT	Sun Moon Lake	0.90	252	P	Pn	15 00 52.9	+0.1
	baz=251						
SMLT				eS	Sn	15 01 07.5	+2.9
	baz=251						
YULB	Yu-li	0.91	213	eP	Pn	15 00 52.4	-0.4
	baz=211						
TYC	Yuchr	0.93	254	P	Pn	15 00 53.5	+0.4
	baz=253						
TYC				eS	Sn	15 01 05.5	+0.3
	baz=253						
TWF1	Yuli	0.94	212	eP	Pn	15 00 53.6	+0.3
	baz=209						
YM01	YM01	1.01	346	P	Pn	15 00 54.0	-0.2
	baz=347						
YM01				eS	Sn	15 01 06.6	-0.7
	baz=347						
WHYT	Xinyi Township	1.01	243	P	Pn	15 00 54.4	+0.2
	baz=241						
WHYT				eS	Sn	15 01 07.6	+0.3
	baz=241						
YM05	YM05	1.03	346	eP	Pn	15 00 53.6	-0.9
	baz=347						
YM05				eS	Sn	15 01 06.9	-0.8
	baz=347						
YUS	Yu-Shan	1.05	231	eP	Pn	15 00 54.7	-0.5
	baz=229						
YUS				eS	Sn	15 01 09.1	+0.3
	baz=229						
JYNG	Yonagunijimaku	1.05	74	P	Pn	15 00 54.2	-0.5
JYNG				eS	Sn	15 01 08.3	+0.1
WJS	Zhushan	1.07	252	P	Pn	15 00 55.4	+0.5
	baz=250						
WJS				eS	Sn	15 01 08.9	+0.3
	baz=250						
FULB	Fuli	1.08	208	eP	Pn	15 00 55.4	+0.3
	baz=206						
FULB				eS	Sn	15 01 09.6	+0.7
	baz=206						
YOJ	Yonaguni jima	1.11	74	eP	Pn	15 00 55.4	-0.2
	baz=74						
YOJ				eS	Sn	15 01 10.4	+0.8
	baz=74						
YOJ	Yonaguni jima	1.11	74	P	Pn	15 00 55.4	-0.2
YOJ				eS	Sn	15 01 10.4	+0.8
ALS	Alishan	1.15	236	eP	Pn	15 00 56.6	+0.3
	baz=234						
ALS				eS	Sn	15 01 07.7	-3.2
	baz=234						
CHN5	Tsauling	1.20	242	P	Pn	15 00 57.3	+0.4
	baz=241						
CHN5				eS	Sn	15 01 12.1	+0.1
	baz=241						
CHN4	Tsaushan	1.40	235	P	Pn	15 00 60.0	+0.5
	baz=233						
CHN4				eS	Sn	15 01 16.8	+0.1
	baz=233						
TPUB	Ta-pu	1.40	232	P	Pn	15 00 59.8	+0.2
	baz=231						
TPUB				eS	Sn	15 01 18.6	+1.8
	baz=231						
WTP	Ta-pu	1.44	231	eP	Pn	15 01 00.2	0.0
	baz=229						
WTP				eS	Sn	15 01 19.6	+1.7
	baz=229						
TWK	Hsinying	1.52	235	eS	Sn	15 01 21.0	+1.1
	baz=233						
CHN1	Nanshi	1.54	231	eP	Pn	15 01 01.2	-0.4
	baz=230						
CHN1				eS	Sn	15 01 21.8	+1.4
	baz=230						
SLGT	Liugui	1.59	223	eP	Pn	15 01 02.7	+0.5
	baz=222						
SLGT				eS	Sn	15 01 22.8	+1.2
	baz=222						
IRIF	Iriomote-Funau	1.74	84	S	Sn	15 01 24.7	-0.4
HATJ	Hateruma jima	1.80	93	eS	Sn	15 01 26.4	-0.3
JKRS	Kuro-shima	1.98	87	P	Pn	15 01 07.8	+0.2
JKRS				eS	Sn	15 01 32.1	+0.9
EAST	Anshuo	1.99	207	eP	Pn	15 01 09.0	+1.3
	baz=206						
JIJ	Ishigaki jima	2.12	84	P	Pn	15 01 08.9	-0.5
JIJ				S	Sn	15 01 32.8	-1.6
PHUB	P'eng-hu	2.17	253	eS	Sn	15 01 34.4	-1.4
	baz=252						
JISG	Ishigakijimahi	2.30	79	P	Pn	15 01 11.3	-0.5
JISG				eS	Sn	15 01 37.7	-1.2
PTTC	Pingtan	2.30	306	eP	Pn	15 01 09.4	-2.6
	baz=305						
PTTC				eS	Sn	15 01 35.7	-3.4
	baz=305						
JTJ	Tarama	2.66	79	eS	Sn	15 01 47.4	-0.3

SJA 17 15:34:51.3±1.2,21°.25S×67°.28W,h194km±9km,ML3.0, MW3.1
GUC 17 15:34:52.4±0.6,21°.21S×67°.44W,h215km±7km,ML3.7
ISC 17 15:34:49.9±1.8,21°.24S±0°.04×67°.33W±0°.04, h218km±15km,n35,σ1s.32/67,5C-6D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.87	252⇑	iP	Pn	15 35 29.9	+1.3
PB09				iS	S	15 35 58.9	+0.1
PB09	IPOC Station P	1.87	252	iP	Pn	15 35 30.0	+1.3
YJA	Yavi	1.93	119	iP	Pn	15 35 30.1	+0.5
YJA				iS	S	15 35 57.6	-2.6
LVC	Limon Verde	2.00	227	iP	Pn	15 35 31.3	+1.1
LVC				iS	S	15 36 01.6	+0.1
LVC	Limon Verde	2.00	227	iP	Pn	15 35 31.4	+1.2
LVC				iS	S	15 36 02.1	+0.6
PB01	IPOC Station P	2.03	275	eP	Pn	15 35 30.6	+0.5
PB01				iS	S	15 35 59.9	-1.4
PB01					IAML	15 36 03.2	
	comp=E,256nm,0.3s						
PB08	IPOC Station P	2.03	302⇓	iP	Pn	15 35 31.4	+0.8
PB08				iS	S	15 36 01.3	-0.7
PB08	IPOC Station P	2.03	302	iP	Pn	15 35 31.5	+1.0
PB08				iS	S	15 36 01.2	-0.7
GO01	Chusmiza	2.35	311⇑	iP	Pn	15 35 34.5	+0.7
GO01				iS	S	15 36 10.0	+2.1
PB03	IPOC Station P	2.40	250	eP	Pn	15 35 34.9	+1.0
PB03				iS	S	15 36 07.2	-1.1
PB03					IAML	15 36 08.6	
	comp=E,219nm,0.2s						
PB03	IPOC Station P	2.40	250	iP	Pn	15 35 35.0	+1.0
PB03				iS	S	15 36 07.1	-1.1
PB02	IPOC Station P	2.40	268⇓	iP	Pn	15 35 34.9	+0.9
PB02				iS	S	15 36 06.7	-1.5
PB02					IAML	15 36 09.0	
	comp=E,346nm,0.2s						
PB02	IPOC Station P	2.40	268	iP	Pn	15 35 34.9	+0.9
PB02				iS	S	15 36 06.6	-1.5
PB07	IPOC Station P	2.43	258⇑	eP	Pn	15 35 35.2	+0.8
PB07				iS	S	15 36 07.2	-1.7
PB07					IAML	15 36 07.9	
	comp=N,267nm,0.4s						
PB07	IPOC Station P	2.43	258	iP	Pn	15 35 35.4	+1.0
PB07				iS	S	15 36 07.6	-1.3
PB06	IPOC Station P	2.54	235⇓	iP	Pn	15 35 36.8	+1.2
PB06				iS	S	15 36 10.8	-0.2
PB06					IAML	15 36 12.3	
	comp=E,96nm,0.1s						
PB06	IPOC Station P	2.54	235	iP	Pn	15 35 36.8	+1.2
PB06				iS	S	15 36 11.2	+0.1
PB06					IAML	15 36 16.9	
	comp=Z,46nm,0.4s						
PB11	IPOC Station P	2.63	304⇓	iP	Pn	15 35 36.9	+0.3
PB11				iS	S	15 36 11.4	-1.4
PB11					IAML	15 36 13.8	
	comp=N,392nm,0.2s						
HJA	Humahuaca	2.64	138	iP	Pn	15 35 38.2	+1.3
HJA				iS	S	15 36 13.5	+0.1
HJA					IAML	15 36 16.2	
	comp=Z,26nm,0.3s						
PATCX	Punta Patache	2.67	278	iP	Pn	15 35 37.5	+0.6
PATCX				iS	S	15 36 11.7	-1.7
TA01	Diego Aracena	2.75	284	eP	Pn	15 35 37.7	0.0
TA01				iS	S	15 36 12.2	-2.6
TA01					IAML	15 36 13.8	
	comp=E,171nm,0.4s						
PB15	IPOC Station P	2.79	225⇓	iP	Pn	15 35 39.9	+1.6
PB15				iS	S	15 36 16.6	+0.5
PB15	IPOC Station P	2.79	225	iP	Pn	15 35 40.0	+1.6
PB04	IPOC Station P	2.84	247⇑	iP	Pn	15 35 39.8	+1.0
PB04				iS	S	15 36 15.5	-1.4
PB04					IAML	15 36 18.3	
	comp=N,146nm,0.1s						
PB04	IPOC Station P	2.84	247	iP	Pn	15 35 39.9	+1.0
PB04				iS	S	15 36 15.8	-1.2
PB04					IAML	15 36 19.8	
	comp=Z,92nm,0.1s						
MNMC	Minye Minye	2.99	314⇑	iP	Pn	15 35 41.8	+1.1
MNMC				iS	S	15 36 19.4	-0.9
MNMC					IAML	15 36 22.6	
	comp=N,118nm,0.3s						
MNMCX	Minye Minye	2.99	314	iP	Pn	15 35 41.8	+1.1
MNMCX				iS	S	15 36 19.8	-0.4
PSGC	Pisagua	3.09	301	iP	Pn	15 35 41.2	-0.4
PSGC				iS	S	15 36 19.3	-2.7
PSGC					IAML	15 36 20.7	
	comp=N,58nm,0.2s						
PSGCX	Pisagua	3.09	301	iP	Pn	15 35 41.2	-0.4
PSGCX				iS	S	15 36 19.0	-3.0
PB05	IPOC Station P	3.11	238	iP	Pn	15 35 43.3	+1.4
PB05				iS	S	15 36 21.3	-1.2
PB16	IPOC Station P	3.54	324⇓	iP	Pn	15 35 48.9	+1.4
PB16				iS	S	15 36 33.9	+1.5
AZAP	Zapla	3.63	145	iP	Pn	15 35 48.8	+0.7
AZAP				iS	S	15 36 32.1	-1.5
PB10	IPOC Station P	3.75	232	iP	Pn	15 35 50.3	+1.0
PB10				iS	S	15 36 33.6	-2.2
PB10					IAML	15 36 37.9	
	comp=Z,12nm,0.2s						
ASTB	Santa Barbara	3.78	136	iP	Pn	15 35 50.6	+0.7
ASTB				iS	S	15 36 34.8	-2.1
LPAZ	La Paz	4.98	351	iP	Pn	15 36 06.5	+1.2

BJI 17 15:53:23.4±0.0,35°.90N×82°.40E,h9km,ML3.6/7
IDC 17 15:53:26.3±11.0,36°.25N×82°.15E,h0km,mb3.6/1, mb1 3.7/3,mb1mx3.3/39,mbtmp3.7/3,ML3.4/2,Error ellipse: s-maj=153.4km s-min=52.0km az=51.0
ISC 17 15:53:32.1±2.5,36°.5N±0°.2×82°.6E±0°.1,h10km,n5,σ0s.74/8, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	6.05	302	Pn	Pn	15 55 01.6	-0.1
KSH				Sn	Sn	15 56 11.1	+0.1
KSH				smax	smax		
	comp=N,60nm,0.7s						
KSH				smax	smax		
	comp=E,68nm,0.7s						
WMQ	Urumqi	8.29	26	eP	Pn	15 55 32.4	0.0
WMQ				S	Sn	15 57 07.0	+0.8
WMQ				smax	smax		
	comp=N,11nm,1.1s						
WMQ				smax	smax		
	comp=E,10.0nm,1.1s						
MKAR	Makanchi Array	10.30	359	Pn	Pn	15 55 58.5	-1.3
	0.6nm,0.3s,baz=180,slow=13,SNR=24						
MKAR				Sn	Sn	15 57 55.7	+0.3
	0.3nm,0.3s,baz=182,slow=24,SNR=6.5						
ZALV	Zalesovo Beam	17.53	4	P	Pn	15 57 36.6	+0.2
	0.3nm,0.3s,baz=198,slow=13,SNR=2.9						
SONM	Songino Array	20.88	50	P	P	15 58 14.6	+0.3
	2.8nm,0.9s,baz=242,slow=10.0,SNR=12						

ECX 17 16:23:26.8±0.5,31°.58N×115°.61W,h8km±3km,MD2.3, ML2.5
MEX 17 16:23:27.5±0.3,31°.54N×115°.56W,h8km±6km,MD3.8
ISC 17 16:23:23.6±1.5,31°.56N±0°.05×115°.56W±0°.06, h13km±15km,n15,σ0s.91/26,1C-4D,Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBX	El Chinero	0.44	101⇑	eP	Pn	16 23 35.5	-0.1
ECBX				eS	Sn	16 23 42.2	-1.3
SPIG	San Pedro Mart	0.52	171⇓	eP	Pn	16 23 36.8	-0.2
SPIG				eS	Sn	16 23 44.3	-1.5
SPIG	San Pedro Mart	0.52	171	eP	Pn	16 23 36.8	-0.2
SPIG				iS	Sn	16 23 44.1	-1.7
SPX	San Pedro Mart	0.53	171	eP	Pn	16 23 36.8	-0.3
SPX				eS	Sn	16 23 44.4	-1.7
SPX					IAML	16 23 45.5	
	comp=E,162nm,0.3s						
SPX			⇓	e		16 23 45.5	
SPX	San Pedro Mart	0.53	171	iP	Pn	16 23 36.8	-0.3
SPX				eS	Sb	16 23 43.7	+1.1
ESJX	Sierra Juarez	0.55	323	eP	Pg	16 23 34.4	-0.2
ESJX				eS	Sg	16 23 41.4	-0.6
SFX	San Felipe	0.80	130	eP	Pn	16 23 42.0	+1.4
SFX				eS	Sn	16 23 53.0	+0.7
SQX	San Quintin	1.02	196	eP	Pn	16 23 45.0	+1.4
SQX				eS	Sn	16 23 58.5	+0.8
ERMX	Rumorosa	1.07	338	eP	Pg	16 23 44.8	+0.6
ERMX				eS	Sg	16 23 58.9	-0.2
IKP	In-Ko-Pah, Jac	1.18	337⇓	eP	Pg	16 23 46.9	+0.5
CBX	Cerro Bola	1.20	309	eP	Pg	16 23 46.9	+0.2
CBX				eS	Sg	16 24 02.3	-0.1
CBX					IAML	16 24 02.8	
	comp=N,188nm,0.2s						
CBX			⇓	e		16 24 02.8	
CBX	Cerro Bola	1.20	309	iP	Pg	16 23 47.0	+0.2
CBX				iS	Sg	16 24 02.4	-0.1
BAR	Barrett	1.46	320	eP	Pg	16 23 51.3	-0.4
MONP2	Monument Peak	1.52	331	eP	Pg	16 23 52.5	-0.4
OLP	Otay Lakes Par	1.56	312	eP	Pg	16 23 53.2	-0.5

IDC 17 16:34:58.4±2.9,3°.05N×127°.37E,h0km,mb3.1/3, mb1 3.4/3,mb1mx3.1/43,mbtmp3.2/3,MS3.1/1,Ms1 3.1/1, ms1mx2.3/17,Error ellipse: s-maj=256.0km s-min=26.6km az=67.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.51	135	LR	LR	16 38 03.0	
	comp=Z,206nm,20.3s,baz=342,slow=34						
WRA	Warramunga Arr	23.86	164	P	P	16 40 12.8	-0.9
	0.2nm,0.4s,baz=342,slow=9.5,SNR=7.0						
ASAR	Alice Springs	27.31	167	P	P	16 40 45.3	+0.2
	0.2nm,0.7s,baz=342,slow=7.9,SNR=4.1						
MKAR	Makanchi Array	58.47	325	P	P	16 44 56.7	+0.4
	0.1nm,0.3s,baz=114,slow=8.3,SNR=4.9						

THE 17 16:49:09.3,38°.19N×20°.40E,h10km,ML2.8/9,Error ellipse: s-maj=0.8km s-min=0.4km az=234.0
ATH 17 16:49:09.6,38°.20N×20°.41E,h8km±1km,ML2.2/7,Error ellipse: s-maj=1.5km s-min=0.8km az=246.0
ISC 17 16:49:09.6±1.0,38°.20N±0°.03×20°.42E±0°.04,h8km±4km, n34,σ0s.38/57,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.02	79	P	Pg	16 49 11.1	+0.1
LXR1				S	Sg	16 49 12.5	+0.5
	61μm,0.3s						
LXRA	Lixouri, Kepha	0.02	80	P	Pg	16 49 11.1	+0.1
LXRA				S	Sg	16 49 11.7	-0.3
CHV1	Chavriata, Kef	0.03	243	P	Pg	16 49 11.1	0.0
CHV1				S	Sg	16 49 12.3	+0.2
	65μm,0.3s						
KEF3	Kipouria, Keph	0.05	277	P	Pg	16 49 11.3	0.0
KEF3				S	Sg	16 49 12.8	+0.2
ARGA	Argostoli. Kep	0.05	112	P	Pg	16 49 11.4	+0.1
ARGA				S	Sg	16 49 12.9	+0.3
AGT1	Agia Thekli	0.06	335	P	Pg	16 49 11.4	0.0
AGT1				S	Sg	16 49 12.8	+0.1
	29μm,0.1s						
ARG2	Argostoli	0.06	108	P	Pg	16 49 11.5	+0.1
ARG2				S	Sg	16 49 13.0	+0.3
	12μm,0.1s						
KEF4	Livadi, Kephal	0.06	7	P	Pg	16 49 11.4	0.0
KEF4				S	Sg	16 49 13.0	+0.3
KEF2	Argostoli. Kep	0.07	119	P	Pg	16 49 11.6	+0.1
KEF2				S	Sg	16 49 13.1	+0.2
KEF1	Kardakata, Kep	0.09	28	P	Pg	16 49 11.9	0.0
KEF1				S	Sg	16 49 13.5	0.0
VLS	Valsamata	0.14	98	P	Pg	16 49 12.6	0.0
VLS				S	Sg	16 49 15.1	+0.4
	2μm,0.1s						
VLS	Valsamata	0.14	98	P	Pg	16 49 12.6	0.0
VLS				S	Sg	16 49 15.0	+0.4
VLS				AML	AML	16 49 15.3	
	comp=E,5405μm,0.2s						
VLS				AML	AML	16 49 15.9	
	comp=N,4957μm,0.1s						
VSK1	VASILIKIADES	0.24	29	P	Pg	16 49 14.5	+0.1
VSK1				S	Sg	16 49 18.5	+0.8
	comp=N,2μm,0.2s						

FSK	Fiskardo	0.29	24	P	Pg	16 49 15.1	-0.2
FSK				S	Sg	16 49 19.7	+0.6
	comp=N,658nm,0.1s						
FSK	Fiskardo	0.29	24	P	Pg	16 49 15.1	-0.2
FSK				S	Sg	16 49 19.8	+0.6
VLMS	Volimes, Zakyn	0.38	149	P	Pg	16 49 17.0	+0.1
VLMS				S	Sg	16 49 22.1	+0.2
VLMS				AML	AML	16 49 25.8	
	comp=E,1344μm,0.3s						
VLMS				AML	AML	16 49 27.0	
	comp=N,1694μm,0.3s						
EVGI	Lefkada island	0.46	24	P	Pg	16 49 18.3	-0.3
EVGI				S	Sg	16 49 25.8	+1.1
	comp=N,392nm,0.1s						
EVGI	Lefkada island	0.46	24	P	Pg	16 49 18.3	-0.3
MGNA	Meganis	0.55	33	P	Pg	16 49 19.6	-0.5
LKD2	Lefkada island	0.62	18	P	Pg	16 49 21.4	-0.2
LKD2				S	Sg	16 49 30.0	+0.3
LKD2				AML	AML	16 49 34.6	
	comp=E,283μm,0.3s						
LKD2				AML	AML	16 49 36.1	
	comp=N,292μm,0.3s						
AST1	Astakos	0.63	57	P	Pg	16 49 21.7	-0.1
AST1				S	Sb	16 49 31.5	-0.3
	comp=N,578nm,0.3s						
TSLK	Tsoukalades, L	0.66	17	P	Pg	16 49 22.3	+0.1
TSLK				S	Sg	16 49 31.3	+0.6
TSLK				AML	AML	16 49 38.8	
	comp=E,309μm,0.3s						
TSLK				AML	AML	16 49 42.1	
	comp=N,398μm,0.4s						
PDO	Prodromos	0.72	56	P	Pg	16 49 23.6	0.0
PDO				S	Sg	16 49 33.6	+0.7
PDO				AML	AML	16 49 38.8	
	comp=E,464μm,0.6s						
PDO				AML	AML	16 49 38.8	
	comp=N,658μm,0.5s						
RLS	Riolos of Patr	0.84	99	P	Pg	16 49 25.6	-0.2
RLS				S	Sb	16 49 37.8	-0.1
RLS				AML	AML	16 49 41.7	
	comp=N,259μm,0.4s						
RLS				AML	AML	16 49 41.9	
	comp=E,345μm,0.2s						
PVO	Paravola	0.97	64	P	Pg	16 49 27.9	-0.3
PVO	Paravola	0.97	64	P	Pg	16 49 27.9	-0.3
PVO				S	Sb	16 49 41.6	+0.1
PVO				AML	AML	16 49 45.0	
	comp=E,587μm,0.3s						
PVO				AML	AML	16 49 45.7	
	comp=N,350μm,0.3s						
DRO	Drossia	1.05	103	P	Pg	16 49 29.1	-0.7
DRO	Drossia	1.05	103	P	Pg	16 49 29.5	-0.2
AMT	Artemida-Makis	1.22	123	P	Pg	16 49 34.0	+1.1
ANX	Ano Chora	1.25	71	P	Pn	16 49 33.0	-0.5
IGT	Igoumenitsa	1.33	357	P	Pg	16 49 35.7	+0.5
KALE	Kalithea	1.37	81	P	Pn	16 49 34.5	-0.6
MAKR	Makrakomi, Fth	1.57	58	P	Pg	16 49 40.0	+0.3
PYL	PYLOS	1.67	141	P	Pb	16 49 40.7	0.0

IDC 17 16:52:36.9±0.9, 30°.28S×176°.35W, h0km, mb4.2/4, mb1 4.4/5, mb1mx4.0/21, mbtmp4.2/5, ML4.1/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/28, Error ellipse: s-maj=25.2km s-min=23.7km az=4.0

NEIC 17 16:52:40.1±1.1, 30°.33S±0°.09×176°.4W±0°.1, h24km±3km, mb4.7/10, Error ellipse: s-maj=17.9km s-min=11.8km az=59.0

ISC 17 16:52:38.6±0.8, 30°.33S±0°.08×176°.4W±0°.1, h10km, n36, σ1s.54/37, mb4.3/5, 1C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.71	309	Pn	Pn	16 53 08.8	+0.4
	218nm,0.3s,baz=175,slow=16,SNR=11						
RAO				Sn	Sn	16 53 29.5	-0.8
	1μm,0.3s,baz=11,slow=24,SNR=21						
RAO	Raoul Island	1.71	309		Pn	16 53 08.7	+0.3
URZ	Urewera	9.56	212	Pn	Pn	16 54 54.8	-1.4
	1.6nm,0.3s,baz=276,slow=4.9,SNR=14						
URZ				Sn	Sn	16 56 44.8	+1.2
	3.2nm,0.3s,baz=290,slow=21,SNR=9.2						
URZ	Urewera	9.56	212		Pn	16 54 55.4	-0.8
BKZ	Black Stump Fm	10.57	212	Pn	Pn	16 55 08.3	-1.9
HIZ	Hauiti	10.89	219	Pn	Pn	16 55 14.2	-0.3
MSWZ	Moikau Station	12.96	209	Pn	Pn	16 55 40.6	-2.2
PLWZ	Palliser	13.09	209	Pn	Pn	16 55 42.4	-2.1
QRZ	Quartz Range	13.80	218	Pn	Pn	16 55 53.3	-0.9
THZ	Tophouse	14.30	214	Pn	Pn	16 55 58.8	-2.3
KHZ	Kahutara	14.52	211	Pn	Pn	16 56 01.6	-2.4
LTZ	Lake Taylor	15.39	213	Pn	Pn	16 56 11.6	-4.1
LTZ				IAmb	IAmb	16 57 05.7	
	comp=Z,112nm,1.8s						
RPZ	Rata Peaks	16.67	213	Pn	Pn	16 56 30.9	-1.4
RPZ				IAmb	IAmb	16 57 04.9	
	comp=Z,122nm,1.6s						
DZM	Mont Dzumac	17.45	294	LR	LR	17 02 16.7	
	comp=Z,33nm,18.4s,baz=199,slow=33						
ODZ	Otahua Downs	17.88	211		Pn	16 56 46.8	-0.6
ODZ				IAmb	IAmb	16 57 22.1	
	comp=Z,30nm,1.2s						
WHZ	Wether Hill Ro	19.77	214	P	P	16 57 09.5	+0.8
WHZ				IAmb	IAmb	16 58 08.4	
	comp=Z,54nm,1.4s						
STKA	Stephens Creek	35.84	256	LR	LR	17 13 54.0	
	comp=Z,47nm,18.7s,baz=172,slow=36						
BBOO	Buckleboo	40.32	254	P	P	17 00 17.0	+0.7
AS31	Alice Springs	44.50	266	P	P	17 00 50.7	+0.3
ASAR	Alice Springs	44.50	266	P	P	17 00 50.9	+0.5
	comp=Z,1.3nm,0.5s,baz=105,slow=6.9,SNR=43						
ASAR				PcP	PcP	17 02 35.5	+1.7
	comp=Z,0.4nm,0.8s,baz=128,slow=3.8,SNR=2.8						
WR0	Warramunga Arr	45.30	271	P	P	17 00 56.5	-0.3
WB2	Warramunga Arr	45.47	271	P	P	17 00 57.5	-0.7
WRAB	Tennant Creek	45.48	271	P	P	17 00 57.6	-0.7
WRAB				IAmb	IAmb	17 02 41.3	
	comp=Z,25nm,1.5s						
WRA	Warramunga Arr	45.48	271	P	P	17 00 57.7	-0.6
	comp=Z,1.8nm,0.5s,baz=110,slow=7.9,SNR=37						
WB0	Warramunga Arr	45.51	271	P	P	17 00 57.8	-0.7
SYO	Syowa Base	77.49	193	⇑eX	P	17 04 35.1	+1.3
PETK	Petropavlovsk-	86.10	345	P	P	17 05 18.6	-0.7
	comp=Z,3.8nm,0.9s,baz=136,slow=9.4,SNR=3.9						
NVAR	Mina Array Bea	87.25	42	P	P	17 05 24.5	-1.0
	comp=Z,0.5nm,0.5s,baz=225,slow=7.4,SNR=4.1						
MKAR	Makanchi Array	118.80	310	PKP	PKPdf	17 11 26.4	-0.5
	comp=Z,0.2nm,0.6s,baz=77,slow=6.4,SNR=3.8						
ARCES	ARCESS Array B	138.81	349	PKP	PKPdf	17 12 02.8	-1.3
	comp=Z,4.6nm,1.0s,baz=42,slow=1.5,SNR=4.8						
FINES	FINESS Array B	145.55	341	PKPbc	PKPdf	17 12 15.5	-0.8
	comp=Z,11nm,0.8s,baz=45,slow=3.5,SNR=27						
NB2	NORSAR Subarra	148.88	353	PKP	PKPdf	17 12 24.7	+2.8
	comp=Z,0.9nm,0.6s,baz=8.5,slow=2.8						
NOA	NORSAR Array B	148.88	353	PKPbc	PKPdf	17 12 25.2	+3.3
	comp=Z,1.5nm,0.7s,baz=12,slow=4.4,SNR=5.2						
AKASG	Malin Array Be	152.07	324	PKPbc	PKPbc	17 12 33.4	-0.4
	comp=Z,3.3nm,0.6s,baz=46,slow=2.9,SNR=19						
AKBB	Malin Array Si	152.07	324		PKPbc	17 12 32.6	-1.1
TORD	Torodi Ar. Bea	162.81	174	PKPab	PKPab	17 13 30.7	+0.5
	comp=Z,1.2nm,0.7s,baz=209,slow=4.0,SNR=5.5						

IDC 17 16:56:28.9±7.8, 36°.34N×82°.05E, h0km, mb2.7/1, mb1 3.3/3, mb1mx3.1/33, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=117.4km s-min=44.0km az=65.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	10.45	1	Pn	Pn	16 59 02.1	+2.1
	0.4nm,0.3s,baz=182,slow=12,SNR=25						
MKAR				Sn	Sn	17 00 54.7	-3.1
	0.1nm,0.3s,baz=186,slow=22,SNR=2.6						
MKAR				Lg	Lg	17 02 01.4	
	0.0nm,0.3s,baz=171,slow=29,SNR=2.8						
ZALV	Zalesovo Beam	17.72	5	P	Pn	17 00 36.0	-0.9
	0.2nm,0.3s,baz=191,slow=13,SNR=2.7						
SONM	Songino Array	21.32	50	P	P	17 01 17.2	-0.2
	0.3nm,0.8s,baz=251,slow=9.0,SNR=2.8						

IDC 17 17:09:04.9±3.0, 35°.25S×179°.45W, h0km, mb4.2/3, mb1 4.3/4, mb1mx3.9/26, mbtmp4.2/4, ML3.9/1, Error ellipse: s-maj=64.4km s-min=35.8km az=122.0

WEL 17 17:09:11.5, 41°.5S±0°.6×174°.4E±0°.8, h15km±1km, M2.9/23, ML3.1/23, MLv2.9/23, Error ellipse: s-maj=0.0km s-min=0.0km az=114.6

ISC 17 17:09:10.9±0.8, 41°.50S±0°.03×174°.43E±0°.02, h10km, n75, σ1s.25/78, mb4.2/3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.29	213	P	Pb	17 09 18.7	+0.4
CMWZ				S	Sb	17 09 23.8	+0.5
TCW	Tory Channel	0.31	339	P	Pb	17 09 18.9	+0.3
TCW				S	Sb	17 09 23.4	-0.4
WEL	Wellington	0.34	50	P	Pb	17 09 19.4	+0.4
WEL				S	Sb	17 09 24.5	0.0
BHW	Baring Head	0.35	74	P	Pb	17 09 19.4	+0.2
BHW				S	Sb	17 09 24.8	0.0
TUWZ	Tuamarina	0.37	281	P	Pg	17 09 19.5	+1.2
BSWZ	Blackbirch Sta	0.46	243	P	Pg	17 09 21.3	+1.3
BSWZ				S	Sb	17 09 28.0	-0.1
CAW	Cannon Point	0.62	51	P	Pb	17 09 24.3	+0.3
MSWZ	Moikau Station	0.63	82	P	Pb	17 09 24.5	+0.5
PLWZ	Palliser	0.63	96	P	Pb	17 09 24.4	+0.4
KIW	Kapiti Island	0.74	30	P	Pb	17 09 26.3	+0.4
PAWZ	Paruwai Farm	0.76	81	P	Pb	17 09 26.9	+0.5
DUWZ	D'Urville Isla	0.80	331	P	Pb	17 09 27.5	+0.6
NNZ	Nelson	0.84	290	P	Pb	17 09 27.9	+0.3
MTW	Mount Morrison	0.88	67	P	Pb	17 09 29.1	+0.8
OGWZ	Otaki Gorge	0.89	40	P	Pb	17 09 28.8	+0.3
TRWZ	Traveller	0.95	84	P	Pg	17 09 29.9	+0.5
HOWZ	Holdsworth Sta	1.02	54	P	Pb	17 09 31.4	+0.7
KHZ	Kahutara	1.13	216	P	Pb	17 09 32.4	-0.1
THZ	Tophouse	1.17	257	P	Pb	17 09 33.1	-0.2
TMWZ	Te Maipa	1.17	71	P	Pb	17 09 33.0	-0.4
MRZ	Mangatainoka R	1.21	46	P	Pb	17 09 34.4	+0.4
TIWZ	Tintock	1.32	57	P	Pn	17 09 35.6	+0.1
OHWZ	Ohakea	1.46	28	P	Pg	17 09 39.5	+0.5
CPWZ	Castlepoint	1.47	67	P	Pg	17 09 41.6	+2.6
PRWZ	Pori Road	1.50	52	P	Pn	17 09 38.1	+0.1
POWZ	Post Office Ro	1.51	43	P	Pn	17 09 38.8	+0.8
QRZ	Quartz Range	1.58	295	P	Pb	17 09 40.3	0.0
BFZ	Birch Farm	1.60	60	P	Pn	17 09 38.5	-0.8
DVHZ	Dannevirke	1.79	48	P	Pn	17 09 41.5	-0.4
WAZ	Wanganui	1.80	14	P	Pg	17 09 45.5	+0.1
TSZ	Takapari Road	1.85	39	P	Pn	17 09 43.3	+0.5
ANWZ	Angora Road	1.87	57	P	Pn	17 09 42.4	-0.6
DSZ	Denniston Nort	1.98	262	P	Pn	17 09 46.4	+1.8
LREZ	Lake Rotokare	2.04	360	P	Pg	17 09 50.4	+0.3
LTZ	Lake Taylor	2.05	231	P	Pn	17 09 45.2	-0.3
PNHZ	Pukenui	2.08	41	P	Pn	17 09 46.5	+0.5
KHEZ	Kahui Hut	2.23	352	P	Pg	17 09 52.9	-0.8
MTVZ	Mangateitei	2.26	21	P	Pb	17 09 53.4	+1.5
NBEZ	Newall Road No	2.27	349	P	Pg	17 09 55.1	+0.6
MOVZ	Moawhango	2.33	26	P	Pb	17 09 53.4	+0.4
BHHZ	Black Hill Sta	2.37	32	P	Pb	17 09 53.9	+0.2
KRHZ	Kereru	2.38	39	P	Pb	17 09 55.5	+1.7
VRZ	Vera Road	2.39	6	P	Pb	17 09 53.6	-0.5
WHVZ	Whangaehu Hut	2.39	22	P	Pb	17 09 55.6	+1.5
FWVZ	Far West T-bar	2.41	21	P	Pb	17 09 55.6	+1.1
TUVZ	Tukino	2.42	23	P	Pb	17 09 55.5	+0.8
NGZ	Ngauruhoe	2.49	22	P	Pb	17 09 56.7	+0.8
WTVZ	West Tongariro	2.54	21	P	Pb	17 09 57.9	+1.2
KWHZ	Kaweka Forest	2.58	37	P	Pb	17 09 58.9	+1.7
KRVZ	Karewarewa	2.58	22	P	Pb	17 09 58.6	+1.3
KATZ	Kakaramea	2.71	21	P	Pb	17 10 00.9	+1.4
RITZ	Rihia Road	2.75	24	P	Pb	17 10 02.3	+2.1
BKZ	Black Stump Fm	2.82	35	P	Pb	17 10 02.0	+0.6
RATZ	Rangitukua	2.83	22	P	Pb	17 10 03.5	+1.9
HATZ	Hinemaiaia	2.90	27	P	Pb	17 10 03.9	+1.1
WATZ	Wairara	2.97	20	P	Pb	17 10 05.7	+1.8
HIZ	Hauiti	3.00	6	P	Pb	17 10 02.9	-1.6
MRHZ	Matea Rd	3.07	30	P	Pb	17 10 05.2	-0.5
TLZ	Tolley Road	3.28	15	P	Pn	17 10 08.1	-1.2
KNZ	Kokohu	3.51	46	P	Pn	17 10 11.2	-1.9
SNGZ	Shannon Statio	3.52	40	P	Pn	17 10 12.9	-0.4
MHGZ	Mahia Peninsul	3.55	50	P	Pn	17 10 12.7	-1.1
PRGZ	Paritu Road	3.69	47	P	Pn	17 10 10.4	+2.2
KARZ	Kaharoa	3.75	23	P	Pb	17 10 16.1	-1.2
RAGZ	Rawiri	3.78	38	P	Pn	17 10 10.3	+0.9
RIGZ	Rimuhau	3.79	44	P	Pn	17 10 08.6	-0.9
URZ	Urewera	3.84	33	Pn	Pn	17 10 09.0	-1.1
	7.2nm,0.3s,baz=266,slow=4.0,SNR=108						
URZ				Sn	Sn	17 10 57.6	+2.3
	12nm,0.3s,baz=159,slow=22,SNR=18						
URZ	Urewera	3.84	33	P	Pn	17 10 09.0	-1.1
MARZ	Manawahe	3.92	27	P	Pn	17 10 11.7	+0.5
OPRZ	Ohinepanea	4.01	25	P	Pn	17 10 10.7	-1.7
MKAZ	Moumakai	4.43	8	P	Pn	17 10 21.2	+3.0
CTA	Charters Tower	32.03	303	P	P	17 15 49.4	+12
	0.9nm,0.3s,baz=117,slow=9.0,SNR=3.6						
ASAR	Alice Springs	38.09	285	P	P	17 16 56.8	+27
	3.9nm,0.7s,baz=115,slow=7.5,SNR=67						
WRA	Warramunga Arr	40.14	290	P	P	17 17 07.8	+21
	1.5nm,0.6s,baz=119,slow=7.7,SNR=32						
FINES	FINESS Array B	152.40	327	PKPbc	PKPdf	17 28 54.0	-5.3
	1.2nm,0.7s,baz=44,slow=4.6,SNR=5.7						

WEL 17 17:16:25.4, 37°S±9°×17°7E±°, h245km±12km, M3.4/50, MLv3.4/50, Error ellipse: s-maj=0.0km s-min=0.0km az=165.2, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUZ	Kuaotunu	1.09	267	P	Pn	17 17 00.6	+0.2
HAZ	Te Kaha	1.21	152	P	Pn	17 17 00.6	-0.4
HAZ				S	S	17 17 28.4	-0.9
MXZ	Matakaoa Point	1.31	132	P	Pn	17 17 01.5	-0.3
MXZ				S	S	17 17 29.6	-0.9
RUGZ	Raukumara Rang	1.36	160	P	Pn	17 17 01.6	-0.7
RUGZ				S	S	17 17 28.8	-2.7
PKGZ	Pakihiroa	1.44	147	P	Pn	17 17 03.2	+0.4
WMGZ	Waiomatatini S	1.55	137	P	Pn	17 17 03.6	0.0
WMGZ				S	S	17 17 30.5	-3.2
WIAZ	Waiheke Island	1.57	266	P	Pn	17 17 04.5	+0.7
URZ	Urewera	1.57	179	P	Pn	17 17 03.9	+0.2
MKAZ	Moumakai	1.59	254	P	Pn	17 17 03.3	-0.6
PUZ	Puketiti	1.67	146	P	Pn	17 17 04.4	-0.1
MWZ	Matawai	1.68	168	P	Pn	17 17 05.0	+0.3
MUGZ	Murupara	1.80	188	P	Pn	17 17 06.2	+0.5
TKGZ	Te Karaka	1.85	161	P	Pn	17 17 06.2	+0.2
RTZ	Ruatahuna	1.93	182	P	Pn	17 17 06.9	+0.1
TLZ	Tolley Road	2.05	216	P	Pn	17 17 10.6	+2.7
RIGZ	Rimuhau	2.09	165	P	Pn	17 17 08.5	+0.3
SNGZ	Shannon Statio	2.10	174	P	Pn	17 17 08.6	+0.3
MTHZ	Maungataniwha	2.17	185	P	Pn	17 17 09.1	0.0
MTHZ	Maungataniwha	2.17	185	P	S	17 17 41.6	-1.9
MRHZ	Matea Rd	2.21	194	P	Pn	17 17 10.2	+0.9
RAHZ	Arahi	2.22	180	P	Pn	17 17 10.0	+0.5
RAHZ	Arahi	2.22	180	P	S	17 17 46.1	+1.7
KNZ	Kokohu	2.38	169	P	Pn	17 17 10.7	-0.2
WHHZ	Waihua	2.39	177	P	Pn	17 17 11.4	+0.4
WHHZ	Waihua	2.39	177	P	S	17 17 48.3	+1.1
NMHZ	Naumai	2.42	185	P	S	17 17 51.0	+3.1
BKZ	Black Stump Fm	2.52	190	P	Pn	17 17 12.3	-0.2
MHGZ	Mahia Peninsul	2.55	165	P	Pn	17 17 13.1	+0.4
ARHZ	Aropaoanui	2.57	181	P	S	17 17 44.8	-5.8
WTVZ	West Tongariro	2.69	205	P	Pn	17 17 15.5	+1.1
NGZ	Ngauruhoe	2.75	205	P	Pn	17 17 16.0	+1.1
MCHZ	McNeill Hill	2.77	186	P	Pn	17 17 15.3	+0.3
MCHZ	McNeill Hill	2.77	186	P	S	17 17 54.2	-0.1
KWHZ	Kaweka Forest	2.78	191	P	Pn	17 17 15.5	+0.3
KWHZ	Kaweka Forest	2.78	191	P	S	17 17 56.2	+1.6
TUVZ	Tukino	2.81	203	P	Pn	17 17 16.2	+0.6
BHHZ	Black Hill Sta	2.91	196	P	Pn	17 17 16.2	-0.3
MOVZ	Moawhango	2.91	201	P	Pn	17 17 16.7	+0.1
CKHZ	Cape Kidnapper	2.96	180	P	S	17 17 56.9	-1.2
KRHZ	Kereru	3.00	191	P	Pn	17 17 17.3	-0.3
VRZ	Vera Road	3.05	216	P	Pn	17 17 19.7	+1.7
KAHZ	Kahuranaki	3.10	183	P	Pn	17 17 18.7	0.0
KAHZ	Kahuranaki	3.10	183	P	S	17 17 58.3	-2.6
PNHZ	Pukenui	3.29	192	P	Pn	17 17 19.4	-1.4
PNHZ	Pukenui	3.29	192	P	S	17 18 04.4	-0.4
PXZ	Pawanui	3.34	183	P	Pn	17 17 20.6	-0.7
PXZ	Pawanui	3.34	183	P	S	17 18 02.7	-2.9
WPHZ	Waipukurau	3.41	188	P	S	17 18 06.0	-1.0
TSZ	Takapari Road	3.48	194	P	Pn	17 17 21.9	-1.0
DVHZ	Dannevirke	3.68	191	P	Pn	17 17 24.1	-1.0
BFZ	Birch Farm	4.04	189	P	Pn	17 17 28.1	-1.2
MRZ	Mangatainoka R	4.14	196	P	Pn	17 17 28.7	-1.7
HOWZ	Holdsworth Sta	4.38	196	P	Pn	17 17 31.4	-2.0
OGWZ	Otaki Gorge	4.38	199	P	Pn	17 17 31.6	-1.8
KIW	Kapiti Island	4.50	201	P	Pn	17 17 32.8	-2.0
MTW	Mount Morrison	4.63	195	P	Pn	17 17 34.5	-1.9
CAW	Cannon Point	4.68	199	P	Pn	17 17 35.5	-1.5
DUWZ	D'Urville Isla	4.79	210	P	Pn	17 17 36.4	-2.0
TRWZ	Traveller	4.83	193	P	Pn	17 17 37.6	-1.2
MSWZ	Moikau Station	4.93	196	P	Pn	17 17 38.0	-2.1
TCW	Tory Channel	5.02	205	P	Pn	17 17 38.9	-2.2
BHW	Baring Head	5.02	199	P	Pn	17 17 39.0	-2.1
PLWZ	Palliser	5.08	196	P	Pn	17 17 39.8	-2.1
TUWZ	Tuamarina	5.33	206	P	Pn	17 17 43.0	-1.9
NNZ	Nelson	5.36	211	P	Pn	17 17 43.0	-2.4
QRZ	Quartz Range	5.45	219	P	Pn	17 17 44.3	-2.2
BSWZ	Blackbirch Sta	5.60	205	P	Pn	17 17 46.6	-1.8
THZ	Tophouse	6.01	211	P	Pn	17 17 51.0	-2.5
KHZ	Kahutara	6.34	204	P	Pn	17 17 54.9	-2.6
DSZ	Denniston Nort	6.50	217	P	Pn	17 17 57.6	-2.1
LTZ	Lake Taylor	7.12	210	P	Pn	17 18 03.3	-4.2
OXZ	Oxford	7.67	209	P	Pn	17 18 10.6	-3.8
MQZ	McQueen's Vall	7.78	204	P	Pn	17 18 12.1	-3.7
ODZ	Otahua Downs	9.66	208	P	Pn	17 18 37.2	-2.4

IDC 17 17:42:38.6±4.7, 32°.58S×178°.26W, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.6/32, mbtmp3.6/3, Error ellipse: s-maj=196.1km s-min=54.1km az=164.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	33.99	283	P	P	17 49 25.1	+0.9
	1.8nm,0.7s,baz=104,slow=8.3,SNR=3.3						
ASAR	Alice Springs	42.81	269	P	P	17 50 37.8	-0.6
	0.4nm,1.0s,baz=108,slow=7.9,SNR=3.7						
WRA	Warramunga Arr	44.00	275	P	P	17 50 47.3	-0.7
	0.3nm,0.4s,baz=114,slow=7.6,SNR=4.6						
FINES	FINESS Array B	147.10	339	PKPbc	PKPbc	18 02 22.0	-0.7
	2.6nm,1.1s,baz=356,slow=2.1,SNR=3.4						

IDC 17 17:53:50.4±0.6, 2°.88S×86°.17E, h0km, mb4.0/19, mb1 4.1/20, mb1mx4.0/57, mbtmp4.1/20, ML4.5/1, MS3.4/12, Ms1 3.5/12, ms1mx3.2/38, Error ellipse: s-maj=16.9km s-min=16.2km az=130.0

NEIC 17 17:53:51.8±1.4, 2°.9S±0°.1×86°.1E±0°.1, h10km±1km, mb4.4/13, Error ellipse: s-maj=18.1km s-min=17.4km az=154.0

ISC 17 17:53:51.9±0.6, 2°.93S±0°.09×86°.17E±0°.09, h10km, n69, σ1s.16/60, mb4.3/23, MS3.4/10, 3C-7D, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	Pallekele	11.51	332	Pn	Pn	17 56 35.1	-1.4
	3.0nm,0.3s,baz=174,slow=10.0,SNR=25						
PALK				Sn	Sn	17 58 34.9	-10
	4.0nm,0.3s,baz=219,slow=24,SNR=8.3						
PALK				LR	LR	18 00 42.2	
	comp=Z,181nm,18.6s,baz=166,slow=36						
PALK	Pallekele	11.51	332		Pn	17 56 35.0	-1.5
PSI	Prapat	13.96	66	LR	LR	18 02 14.0	
	comp=Z,203nm,18.7s,baz=223,slow=36						
DGAR	Diego Garcia	14.36	251	Pn	Pn	17 57 15.6	+0.2
H08S2	Diego Garcia H	14.40	250	T	T	18 12 13.0	
	baz=70,slow=74,SNR=9.0						
H08S3	Diego Garcia H	14.40	251	T	T	18 12 18.9	
	baz=70,slow=74,SNR=7.9						
H08S1	Diego Garcia H	14.41	251	T	T	18 12 17.0	
	baz=70,slow=74,SNR=14						
LEM	Lembang	21.71	101	LR	LR	18 06 29.6	
	comp=Z,112nm,19.0s,baz=235,slow=35						
PBKT	Sadao Pong	24.28	37	P	P	17 59 09.5	0.0
PBKT				IAmb	IAmb	17 59 20.6	
	comp=Z,7.5nm,1.0s						
CMAR	Chiang Mai Arr	24.70	30	P	P	17 59 11.8	-1.6
	comp=Z,2.5nm,0.9s,baz=224,slow=10.0,SNR=19						
CMAR				LR	LR	18 08 32.8	
	comp=Z,43nm,18.6s,baz=240,slow=36						
BRDH	Bariadhala	26.01	12	LR	LR	18 09 43.9	
	comp=Z,66nm,19.5s,baz=184,slow=37						
UBPT	Khong Chiam	26.32	46	P	P	17 59 28.1	0.0
UBPT				IAmb	IAmb	17 59 40.0	
	comp=Z,22nm,1.5s						
ODAN	Odare	29.64	2	eP	P	17 59 59.7	+1.7
	comp=Z,13nm,0.8s						
RAMN	Ramite	29.71	1	eP	P	18 00 01.0	+2.4
	comp=Z,6.6nm,0.8s						
PKI	Pulchoki	30.34	359	eP	P	18 00 05.5	+1.3
DMN	Daman	30.38	358	eP	P	18 00 06.3	+1.8
	comp=Z,8.0nm,0.7s						
KKN	Kakani	30.56	358	eP	P	18 00 07.4	+1.4
	comp=Z,8.7nm,0.6s						
GUN	Gumba	30.67	359	eP	P	18 00 08.6	+1.4
	comp=Z,24nm,0.8s						
GKN	Gorkha	30.79	357	eP	P	18 00 09.8	+1.8
	comp=Z,22nm,0.9s						
DANN	Dangsing	31.19	356	eP	P	18 00 13.1	+1.4
	comp=Z,13nm,0.6s						
OPO	Ambohidratompo	41.19	245	P	P	18 01 38.0	+0.7
	comp=Z,4.4nm,0.8s,baz=105,slow=16,SNR=3.6						
XAN	Xi'an	42.57	28	P	P	18 01 45.9	-2.2
XAN				pP	sP	18 01 52.5	+2.1
GTA	Gaotai	43.97	15	P	P	18 02 00.3	+0.8
GTA				pP	sP	18 02 04.3	+2.5
GTA				sP	pwP	18 02 07.1	-0.4
NRN	Naryn	45.12	349	P	P	18 02 10.6	+1.7
ARSB	Arslanbob	45.66	346	P	P	18 02 13.8	+0.8
ARSB				IAmb	IAmb	18 02 15.4	
	comp=Z,6.0nm,1.2s						
AAK	Ala-Archa	46.58	348	P	P	18 02 22.3	+2.1
GEYT	Alibeck	48.25	330	P	P	18 02 34.5	+1.3
	comp=Z,3.8nm,0.7s,baz=146,slow=11,SNR=9.0						
GEYT				LR	LR	18 23 39.7	
	comp=Z,40nm,19.5s,baz=140,slow=37						
MK31	Makanchi Array	49.63	357	P	P	18 02 43.0	-0.6
MKAR	Makanchi Array	49.63	357	P	P	18 02 43.0	-0.6
	comp=Z,0.6nm,0.6s,baz=197,slow=5.5,SNR=8.1						
MAKZ	Makanchi	49.67	356	P	P	18 02 43.4	-0.4
MAKZ				IAmb	IAmb	18 02 48.0	
	comp=Z,3.0nm,0.8s						
WRA	Warramunga Arr	49.92	114	P	P	18 02 47.1	+0.8
	comp=Z,0.8nm,0.8s,baz=288,slow=9.1,SNR=5.5						
ASAR	Alice Springs	50.49	118	P	P	18 02 50.5	-0.1
	comp=Z,1.3nm,0.9s,baz=292,slow=8.0,SNR=14						
ASAR				LR	LR	18 24 24.5	
	comp=Z,31nm,18.9s,baz=307,slow=36						
SONM	Songino Array	53.57	17	P	P	18 03 13.0	-0.1
	comp=Z,1.3nm,0.9s,baz=195,slow=7.5,SNR=9.3						
ZALV	Zalesovo Beam	56.69	359	P	P	18 03 35.3	-0.1
	comp=Z,1.4nm,0.5s,baz=188,slow=6.0,SNR=6.3						
MATP	Matopo	58.76	248	P	P	18 03 50.0	-0.8
	comp=Z,2.7nm,0.8s,baz=109,slow=4.8,SNR=5.2						
STKA	Stephens Creek	59.41	126	P	P	18 03 55.5	+0.6
	comp=Z,1.6nm,0.7s,baz=297,slow=5.9,SNR=4.1						
STKA	Stephens Creek	59.41	126	P	P	18 03 55.3	+0.3
STKA				IAmb	IAmb	18 04 38.1	
	comp=Z,5.8nm,1.9s						
LBTB	Lobatse	62.19	243	LR	LR	18 25 50.8	
	comp=Z,58nm,19.8s,baz=134,slow=31						
BOSA	Boshof	63.19	239	P	P	18 04 20.6	-0.1
	comp=Z,1.8nm,0.5s,baz=78,slow=6.4,SNR=9.0						
BOSA	Boshof	63.19	239	P	P	18 04 20.5	-0.3
BRTR	Keskin Array B	64.14	317	P	P	18 04 26.6	-0.2
	comp=Z,0.9nm,0.9s,baz=116,slow=5.6,SNR=4.1						
KLR	Kul'dur	65.18	31	P	P	18 04 33.7	+0.4
	comp=Z,1.6nm,0.8s,baz=201,slow=17,SNR=3.9						
RAZG	Razgrad	70.62	318	⇑P	P	18 05 08.2	+0.5
SORM	Soroca	71.42	323	⇓P	P	18 05 12.4	0.0
VRI	Vrincioaia	71.43	321	⇓P	P	18 05 13.2	+0.7
PLOR	Plostina	71.47	321	⇓P	P	18 05 13.8	+1.0
TESR	Tescani	71.75	321	⇓P	P	18 05 15.2	+0.7
MLR	Muntele Rosu	71.78	320	⇑P	P	18 05 15.7	+0.9
MLR	Muntele Rosu	71.78	320	P	P	18 05 14.7	-0.1
AGG	Agios Georgios	71.87	313	P	P	18 05 12.6	-2.8
VOIR		72.33	320	⇓P	P	18 05 16.6	-1.5
BURAR	Bucovina Array	73.10	322	⇓P	P	18 05 23.9	+1.3
MDVR	Moldovita	74.28	318	⇑P	P	18 05 29.6	+0.1
BZS	Buzias	74.64	319	⇓P	P	18 05 32.1	+0.6
VYHS	Vyhne	77.41	321	eP	P	18 05 49.2	+1.9
FINES	FINESS Array B	78.77	335	P	P	18 05 54.4	-0.1
	comp=Z,0.5nm,0.5s,baz=90,slow=6.9,SNR=3.6						
FINES				LR	LR	18 44 49.5	
	comp=Z,40nm,18.1s,baz=240,slow=39						
TIXI	Tiksi	79.38	13	P	P	18 05 57.1	-0.6
	comp=Z,3.1nm,0.7s,baz=250,slow=4.3,SNR=14						

TIXI	Tiksi	79.38	13	P	P	18 05 57.5	-0.2
TIXI				IAmb	IAmb	18 06 00.2	
	comp=Z,3.6nm,0.8s						
DZM	Mont Dzumac	79.89	112	LR	LR	18 39 26.8	
	comp=Z,26nm,18.2s,baz=17,slow=34						
GERES	GERESS Array B	80.76	320	P	P	18 06 05.5	-0.2
	comp=Z,0.6nm,0.9s,baz=101,slow=5.1,SNR=3.6						
GERES				LR	LR	18 42 53.8	
	comp=Z,36nm,19.0s,baz=310,slow=36						
KEST	Kesra	81.04	307	P	P	18 06 08.6	+1.0
	comp=Z,4.4nm,0.8s,baz=117,slow=5.8,SNR=5.0						
KEST	Kesra	81.04	307	P	P	18 06 08.9	+1.4
KEST				IAmb	IAmb	18 06 10.2	
	comp=Z,7.5nm,1.0s						
SEY	Seymchan	82.01	25	P	P	18 06 12.1	+0.2
	comp=Z,0.9nm,0.7s,baz=220,slow=18,SNR=3.6						
TORD	Torodi Ar. Bea	85.29	283	P	P	18 06 29.0	-0.8
	comp=Z,2.7nm,1.1s,baz=83,slow=5.8,SNR=6.7						
NOA	NORSAR Array B	85.31	332	LR	LR	18 46 34.5	
	comp=Z,12nm,18.6s,baz=270,slow=37						
NVAR	Mina Array Bea	138.19	29	PKP	PKiKP	18 13 19.3	-0.9
	comp=Z,0.4nm,0.6s,baz=287,slow=2.3,SNR=4.3						
LPAZ	La Paz	148.22	232	PKPbc	PKiKP	18 13 41.2	-0.6
	comp=Z,2.1nm,0.7s,baz=130,slow=6.1,SNR=6.6						
LPAZ	La Paz	148.22	232		PKPdf	18 13 34.7	-2.0
TXAR	Lajitas Array	152.13	19	PKPbc	PKPbc	18 13 47.7	-0.8
	comp=Z,0.9nm,0.6s,baz=185,slow=4.1,SNR=8.2						

IDC 17 18:07:25.2±2.3, 24.61S×179.85E, h481km±23km, mb3.7/9, mb1 3.8/9, mb1mx3.6/26, mbtmp4.5/9, Error ellipse: s-maj=21.5km s-min=19.6km az=157.0

NEIC 17 18:07:25.7±1.7, 24.7S±0.1×179.91E±0.10, h497km±7km, mb4.7/34, Error ellipse: s-maj=18.7km s-min=10.2km az=148.0

ISC 17 18:07:27.2±0.6, 24.64S±0.08×179.91E±0.10, h517km, n56, σ1.32/58, mb4.5/23, 2C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.09	346	P	P	18 09 13.7	-1.4
DZM	Mont Dzumac	12.63	279	P	P	18 10 13.4	+0.8
	1.4nm,0.3s,baz=93,slow=21,SNR=14						
URZ	Urewera	13.78	189	S	S	18 12 50.2	0.0
	1.6nm,0.3s,baz=80,slow=23,SNR=11						
QRZ	Quartz Range	17.28	199	P	P	18 10 59.8	-0.2
PLWZ	Palliser	17.32	192	P	P	18 10 58.7	-1.6
TUWZ	Tuamarina	17.46	195	P	P	18 10 59.8	-1.9
THZ	Tophouse	18.04	197	P	P	18 11 05.8	-1.1
THZ				IAmb	IAmb	18 11 16.5	
	comp=Z,33nm,1.3s						
KHZ	Kahutara	18.49	195	P	P	18 11 09.6	-1.4
KHZ				IAmb	IAmb	18 11 36.8	
	comp=Z,56nm,1.5s						
LTZ	Lake Taylor	19.16	197	P	P	18 11 16.5	-0.7
HNR	Honiara	24.30	305	P	P	18 12 02.9	-0.8
	comp=Z,30nm,0.7s,baz=147,slow=14,SNR=4.0						
HNR	Honiara	24.30	305	P	P	18 12 02.3	-1.5
HNR				IAmb	IAmb	18 12 03.7	
	comp=Z,37nm,1.0s						
ARMA	Armidale	25.69	251	P	P	18 12 15.5	-0.6
ARMA				IAmb	IAmb	18 12 22.5	
	comp=Z,18nm,1.3s						
EIDS	Eidsvold	26.11	262	P	P	18 12 20.1	+0.3
CAN	Canberra	28.70	241	P	P	18 12 41.9	-0.5
CAN				IAmb	IAmb	18 13 02.0	
	comp=Z,22nm,1.4s						
TOO	Toolangi	31.98	238	P	P	18 13 10.9	+0.3
TOO				IAmb	IAmb	18 14 01.2	
	comp=Z,20nm,1.5s						
TAU	Tasmania Unive	32.37	228	P	P	18 13 14.1	+0.3
TAU				IAmb	IAmb	18 14 50.1	
	comp=Z,56nm,1.4s						
RABL	Rabaul	33.56	303	P	P	18 13 24.4	+0.1
STKA	Stephens Creek	34.37	249	P	P	18 13 31.4	+0.5
	comp=Z,5.4nm,0.4s,baz=93,slow=10,SNR=38						
STKA	Stephens Creek	34.37	249	P	P	18 13 31.3	+0.4
PMG	Port Moresby	34.66	290	P	P	18 13 33.5	+0.1
PMG				IAmb	IAmb	18 13 34.4	
	comp=Z,13nm,0.9s						
COEN	Coen	36.16	280	P	P	18 13 45.6	-0.3
COEN				IAmb	IAmb	18 14 07.2	
	comp=Z,24nm,1.4s						
BBOO	Buckleboo	39.08	248	P	P	18 14 08.9	-0.7
BBOO				IAmb	IAmb	18 14 09.9	
	comp=Z,19nm,1.2s						
AS31	Alice Springs	41.84	261	P	P	18 14 31.8	-0.1
ASAR	Alice Springs	41.84	261	P	P	18 14 31.8	-0.1
	comp=Z,4.2nm,0.4s,baz=89,slow=6.7,SNR=352						
ASAR				ScP	ScP	18 19 21.1	+4.3
	comp=Z,0.7nm,0.9s,baz=121,slow=4.1,SNR=3.7						
WR0	Warramunga Arr	42.09	267	P	P	18 14 33.3	-0.5
WB2	Warramunga Arr	42.27	267	P	P	18 14 34.9	-0.4
WB2				IAmb	IAmb	18 14 35.2	
	comp=Z,20nm,0.5s						
WRAB	Tennant Creek	42.27	267	P	P	18 14 34.9	-0.4
WB0	Warramunga Arr	42.27	267	P	P	18 14 34.6	-0.7
WB0				IAmb	IAmb	18 14 35.5	
	comp=Z,22nm,0.5s						
WRA	Warramunga Arr	42.28	267	P	P	18 14 34.6	-0.7
	comp=Z,10nm,0.3s,baz=99,slow=6.8,SNR=477						
WRA				ScP	ScP	18 19 22.4	+3.7
	comp=Z,4.2nm,1.2s,baz=105,slow=4.1,SNR=8.4						
FORT	Forrest	45.98	250	P	P	18 15 02.9	-0.9
KNRA	Kununurra	48.60	270	P	P	18 15 23.8	0.0
KNRA				IAmb	IAmb	18 15 24.6	
	comp=Z,25nm,0.5s						
FITZ	Fitzroy Crossi	50.69	266	P	P	18 15 39.3	+0.2
FAKI	Fak Fak	50.72	288	P	P	18 15 39.2	-0.2
NWAO	Narrogin (SRO)	54.85	246	P	P	18 16 08.7	0.0
PSA00	Pilbara Seismi	54.95	260	P	P	18 16 08.7	-0.9
PSA00				IAmb	IAmb	18 17 52.4	
	comp=Z,30nm,1.5s						
MORW	Morawa	56.54	250	P	P	18 16 20.0	-0.5
MORW				IAmb	IAmb	18 17 50.2	
	comp=Z,39nm,1.4s						
GIRL	Giralia	59.67	257	P	P	18 16 43.2	+1.4
JAGI	Jajag, Banyuwa	64.51	272	P	P	18 17 12.4	-1.0
JAGI				IAmb	IAmb	18 18 44.7	
	comp=Z,19nm,1.1s						
QSPA	South Pole Qui	65.44	180	P	P	18 17 19.6	+1.0
	comp=Z,1.7nm,0.7s,baz=258,slow=1.6,SNR=8.4						
QSPA	South Pole Qui	65.44	180	P	P	18 17 19.5	+1.0
UGM	Wanagama	68.03	271	P	P	18 17 34.7	-0.7
KSM	Kuching	72.15	280	P	P	18 17 59.6	-0.2
KSRS	Korea Array	78.76	320	P	P	18 18 37.3	+1.3
	comp=Z,1.5nm,0.7s,baz=132,slow=6.5,SNR=4.6						
SYO	Syowa Base	82.27	193⇑	eP	P	18 19 01.0	+7.2
SYO	Syowa Base	82.27	193⇑	eP	P	18 19 04.0	+10
MDPB	Devils Postpil	84.38	44	P	P	18 19 04.9	-0.3
MDPB				IAmb	IAmb	18 19 22.4	
	comp=Z,7.5nm,0.6s						
NVAR	Mina Array Bea	85.34	44	P	P	18 19 11.1	+1.2
	comp=Z,0.7nm,0.8s,baz=229,slow=8.3,SNR=3.8						
CMAR	Chiang Mai Arr	89.70	290	P	P	18 19 32.6	+2.2
	comp=Z,1.5nm,0.8s,baz=143,slow=3.4,SNR=13						
TXAR	Lajitas Array	90.89	58	P	P	18 19 38.0	+2.1
	comp=Z,0.9nm,0.8s,baz=217,slow=5.5,SNR=6.3						
YNE	Yellowstone No	94.15	42	P	P	18 19 50.4	-0.2
YNE				pP	pP	18 21 41.3	-4.1
ABPO	Ambohimpanom	116.70	231		PKPdf	18 25 11.0	-2.5
ARCES	ARCESS Array B	132.59	348	PKP	PKiKP	18 25 43.0	-0.3
	comp=Z,3.7nm,1.0s,baz=72,slow=2.9,SNR=3.9						
FINES	FINESS Array B	139.12	341	PKP	PKiKP	18 25 56.5	-0.3
	comp=Z,3.7nm,1.1s,baz=83,slow=3.4,SNR=3.5						
AKASG	Malin Array Be	145.55	327	PKPbc	PKPbc	18 26 07.1	-0.3
	comp=Z,0.4nm,0.3s,baz=43,slow=4.1,SNR=5.3						
BR131	Keskin Array S	147.95	306		PKPab	18 26 19.3	+0.3
BRTR	Keskin Array B	147.95	306	PKPbc	PKPbc	18 26 14.8	+0.3
	comp=Z,0.8nm,0.6s,baz=121,slow=3.7,SNR=5.9						
BRTR				PKPab	PKPab	18 26 20.1	+1.0
	comp=Z,1.3nm,0.5s,baz=88,slow=3.3,SNR=9.2						

NIC 17 18:21:06.3±0.0, 35.41N×31.11E, h43km±13km, Md3.5/2, Ml2.4/3

DDA 17 18:21:07.3, 35.76N×31.38E, h8km±3km, ML1.6

ISC 17 18:21:06.2±1.4, 35.70N±0.05×31.44E±0.06, h10km±12km, n8, σ0.87/14, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.89	53	iP	Pb	18 21 24.3	+0.5
GAZI				iS	Sg	18 21 33.8	-1.1
GAZI				IAML		18 21 39.0	
	comp=E,24nm,0.6s						
GAZI				IAML		18 21 43.0	
	comp=N,15nm,0.6s						
AKMS	Akamas	1.00	132	P	Pg	18 21 25.3	-0.1
AKMS				S	Sb	18 21 39.2	+0.4
AKMS				AML	AML	18 21 42.7	
	comp=N,0.3nm,0.4s						
AKMS				AML	AML	18 21 42.7	
	comp=N,0.3nm,0.4s						
AKMS				AMd		18 22 15.1	
AKMS				AMd		18 22 15.1	
AKUM	Antalya-Kumluc	1.09	305	iP	Pg	18 21 27.3	+0.3
AKUM				iS	Sb	18 21 41.0	-0.4
AKUM				IAML		18 21 46.0	
	comp=N,98nm,1.1s						
AKUM				IAML		18 21 46.0	
	comp=E,25nm,0.7s						
ALFC	Alefka	1.09	119	P	Pb	18 21 27.2	+0.1
ALFC				S	Sn	18 21 43.3	+0.5
ALFC				AML	AML	18 21 47.1	
	comp=E,0.2nm,0.4s						
ALFC				AML	AML	18 21 47.1	
	comp=E,0.2nm,0.4s						
KEPZ	Antalya-Kepez	1.21	6	iP	Pn	18 21 29.2	-0.1
KEPZ				iS	Sn	18 21 46.1	+0.3
KEPZ				IAML		18 21 51.0	
	comp=E,16nm,0.6s						
KEPZ				IAML		18 21 54.0	
	comp=N,9.9nm,0.8s						
NATA	Nata	1.30	134	P	Pn	18 21 29.0	-1.5
NATA				S	Sg	18 21 49.3	+1.2
NATA				AML	AML	18 21 58.5	
	comp=N,0.3nm,0.5s						
NATA				AML	AML	18 21 58.5	
	comp=N,0.3nm,0.5s						
NATA				AMd		18 22 25.2	
NATA				AMd		18 22 25.2	
SZAC	Souni	1.51	128	P	Pn	18 21 32.2	-1.2
CSS	Mathiatis	1.71	115	P	Pn	18 21 36.4	+0.3

IDC 17 18:32:17.9±1.9, 22.31S×171.65E, h115km±14km, mb4.2/16, mb1 4.3/19, mb1mx4.2/35, mbtmp4.6/19, MS3.3/8, Ms1 3.3/8, ms1mx3.1/25, Error ellipse: s-maj=17.7km s-min=13.2km az=159.0

BJI 17 18:32:17.0±0.0, 22.40S×171.70E, h121km, mB4.9/11, mb4.7/17

NEIC 17 18:32:19.0±1.7, 22.35S±0.10×171.62E±0.10, h125km±6km, mb4.8/51, Error ellipse: s-maj=14.2km s-min=12.9km az=197.0

ISC 17 18:32:16.0±0.4, 22.39S±0.06×171.70E±0.06, h98km, n113, σ1.19/114, mb4.8/39, 2C, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.88	273	P	Pn	18 33 29.4	+2.2
	30nm,0.3s,baz=73,slow=20,SNR=1294						
DZM				S	Sn	18 34 23.7	+1.1
	39nm,0.3s,baz=129,slow=21,SNR=14						
NOUC	Port Laguerre	5.01	272		Pn	18 33 31.2	+2.4
MSVF	Nonsavu	7.56	53		Pn	18 34 06.7	+3.1
SANVU	Saraoutou	8.12	328		Pn	18 34 13.7	+2.6
HIZ	Hauiti	16.29	171	P	P	18 36 01.8	+1.6
HIZ				IAmb	IAmb	18 36 03.2	
	comp=Z,64nm,1.2s						
URZ	Urewera	16.48	165	P	P	18 36 04.9	+2.7
	comp=Z,1.7nm,0.3s,baz=10,slow=6.2,SNR=9.1						
URZ	Urewera	16.48	165	P	P	18 36 04.2	+2.0
HNR	Honiara	17.13	317	P	P	18 36 10.2	+0.6
	comp=Z,7.9nm,0.3s,baz=245,slow=4.5,SNR=9.8						
HNR				LR	LR	18 41 52.8	
	comp=Z,118nm,19.1s,baz=187,slow=34						
HNR	Honiara	17.13	317	P	P	18 36 11.0	+1.5
BKZ	Black Stump Fm	17.21	167	P	P	18 36 12.6	+2.2
QRZ	Quartz Range	18.39	178	P	Pn	18 36 25.1	+0.7
QRZ				IAmb	IAmb	18 36 44.7	
	comp=Z,68nm,1.4s						
SNZO	South Karori	19.03	173	P	P	18 36 30.9	+0.7
SNZO				IAmb	IAmb	18 36 38.8	
	comp=Z,58nm,1.0s						
TUWZ	Tuamarina	19.07	175	P	Pn	18 36 32.3	-0.2
EIDS	Eidsvold	19.09	257	P	P	18 36 31.8	+0.8
BHW	Baring Head	19.15	173	P	P	18 36 32.4	+0.9
MSWZ	Moikau Station	19.20	172	P	P	18 36 32.5	+0.5
THZ	Tophouse	19.34	177	P	Pn	18 36 35.4	-0.3
THZ				IAmb	IAmb	18 36 36.6	
	comp=Z,35nm,0.8s						
BSWZ	Blackbirch Sta	19.35	175	P	Pn	18 36 35.2	-0.6
PLWZ	Palliser	19.35	172	P	P	18 36 33.8	0.0
ARMA	Armidale	19.66	242	P	P	18 36 37.0	-0.3
KHZ	Kahutara	20.02	176	P	P	18 36 41.8	+0.8
KHZ				IAmb	IAmb	18 36 43.8	
	comp=Z,50nm,0.9s						
LTZ	Lake Taylor	20.34	179	P	P	18 36 45.7	+1.3
FOZ	Fox Glacier	21.14	184	P	P	18 36 55.1	+2.1
RPZ	Rata Peaks	21.27	181	P	P	18 36 56.6	+2.2
	comp=Z,24nm,0.8s,baz=197,slow=16,SNR=4.5						
RPZ				LR	LR	18 43 53.4	
	comp=Z,121nm,18.9s,baz=44,slow=33						
RPZ	Rata Peaks	21.27	181	P	P	18 36 55.7	+1.3
RPZ				IAmb	IAmb	18 36 57.5	
	comp=Z,57nm,1.0s						
MLZ	Mavora Lakes	23.10	186	P	P	18 37 15.6	+2.2
CAN	Canberra	23.62	232	P	P	18 37 19.3	+1.0
WHZ	Wether Hill Ro	23.64	187	P	P	18 37 19.4	+1.2
WHZ				IAmb	IAmb	18 37 21.2	
	comp=Z,59nm,1.2s						
CTA	Charters Tower	23.82	271	P	P	18 37 21.3	+1.1
	comp=Z,3.0nm,0.4s,baz=92,slow=11,SNR=11						
RAR	Rarotonga	26.50	93	LR	LR	18 47 07.0	
	comp=Z,27nm,19.3s,baz=270,slow=34						
PMG	Port Moresby	26.85	295	P	P	18 37 47.0	-0.6
	comp=Z,10nm,0.7s,baz=121,slow=12,SNR=5.2						
PMG	Port Moresby	26.85	295	P	P	18 37 47.9	+0.3
PMG				IAmb	IAmb	18 38 29.3	
	comp=Z,26nm,1.1s						
STKA	Stephens Creek	28.33	244	P	P	18 38 00.0	-0.7
	comp=Z,2.2nm,0.6s,baz=74,slow=11,SNR=7.7						
STKA				LR	LR	18 47 49.7	
	comp=Z,47nm,18.7s,baz=34,slow=33						
STKA	Stephens Creek	28.33	244	P	P	18 38 01.7	+1.0
COEN	Coen	28.33	282	P	P	18 38 02.2	+1.4
COEN				IAmb	IAmb	18 38 49.4	
	comp=Z,30nm,1.4s						
WR0	Warramunga Arr	34.68	267	P	P	18 38 55.5	-1.0
AS31	Alice Springs	34.74	260	P	P	18 38 56.9	-0.1
ASAR	Alice Springs	34.74	260	P	P	18 38 56.1	-1.0
	comp=Z,5.1nm,0.8s,baz=72,slow=9.6,SNR=63						
ASAR				S	S	18 44 18.8	-1.6
	comp=Z,0.7nm,1.0s,baz=85,slow=12,SNR=4.3						
ASAR				ScP	ScP	18 45 05.1	-0.3
	comp=Z,0.4nm,0.8s,baz=107,slow=4.2,SNR=7.1						
WB0	Warramunga Arr	34.85	267	P	P	18 38 56.8	-1.2
WB0				IAmb	IAmb	18 38 59.4	
	comp=Z,6.5nm,0.5s						
WB2	Warramunga Arr	34.86	267	P	P	18 38 56.8	-1.2
WRAB	Tennant Creek	34.86	267	P	P	18 38 57.2	-0.9
WRAB				IAmb	IAmb	18 39 34.0	
	comp=Z,18nm,1.4s						
WRA	Warramunga Arr	34.87	267	P	P	18 38 57.0	-1.2
	comp=Z,2.3nm,0.3s,baz=96,slow=8.5,SNR=120						
JAY	Jayapura	35.99	299	P	P	18 39 07.8	-0.1
	comp=Z,33nm,0.8s,baz=141,slow=6.3,SNR=4.5						
FORT	Forrest	39.71	248	P	P	18 39 39.3	+0.3
FORT				IAmb	IAmb	18 39 40.5	
	comp=Z,20nm,0.7s						
KNRA	Kununurra	41.03	272	P	P	18 39 49.2	-0.8
KNRA				IAmb	IAmb	18 40 59.2	
	comp=Z,38nm,1.2s						
FAKI	Fak Fak	42.87	291	P	P	18 40 04.6	-0.4
FITZ	Fitzroy Crossi	43.30	267	P	P	18 40 08.8	+0.4
	comp=Z,13nm,0.6s,baz=117,slow=6.5,SNR=26						
FITZ	Fitzroy Crossi	43.30	267	P	P	18 40 08.9	+0.5
FITZ				IAmb	IAmb	18 40 10.1	
	comp=Z,39nm,1.5s						
GUMO	Guam	44.39	321	LR	LR	18 56 21.7	
	comp=Z,48nm,20.1s,baz=116,slow=33						
SIJI	Sorong	44.76	293	P	P	18 40 20.1	0.0
	comp=Z,8.9nm,0.5s,baz=152,slow=7.3,SNR=6.3						
PSA00	Pilbara Seismi	47.89	261	P	P	18 40 44.4	-0.2
PSA00				IAmb	IAmb	18 41 00.6	
	comp=Z,22nm,1.4s						
NWAO	Narrogin (SRO)	48.91	245	P	P	18 40 52.2	0.0
NWAO	Narrogin (SRO)	48.91	245	P	P	18 40 52.3	0.0
NWAO				IAmb	IAmb	18 42 18.5	
	comp=Z,35nm,1.4s						
MORW	Morawa	50.20	250	P	P	18 41 01.6	-0.5
MORW				IAmb	IAmb	18 41 38.5	
	comp=Z,23nm,1.2s						
LUWI	Luwuk	52.06	287	P	P	18 41 16.0	-0.2
VNDA	Vanda	55.38	183	LR	LR	19 02 08.7	
	comp=Z,58nm,18.1s,baz=285,slow=32						
VNDA	Vanda	55.38	183	P	P	18 41 40.0	+0.5
SBA	Scott Base	55.56	181	P	P	18 41 42.5	+1.8
JAGI	Jajag, Banyuwa	56.86	274	P	P	18 41 50.1	-0.8
CASY	Casey	58.20	205	P	P	18 41 59.2	-0.3
UGM	Wanagama	60.41	274	P	P	18 42 16.2	+0.6
KKM	Kota Kinabalu	61.19	291	P	P	18 42 21.5	+0.5
KKM				IAmb	IAmb	18 42 21.7	
	comp=Z,14nm,0.8s						
KSM	Kuching	64.32	283	P	P	18 42 41.5	-0.2
YOJ	Yonaguni jima	66.37	312	P	P	18 42 53.6	-1.0
MJAR	Matsushiro Arr	66.61	331	P	P	18 42 54.5	-1.4
	comp=Z,2.7nm,0.5s,baz=159,slow=7.5,SNR=11						
MAJO	Matsushiro	66.61	331	P	P	18 42 54.1	-1.8
MAJO				IAmb	IAmb	18 45 21.9	
	comp=Z,16nm,1.2s						
MJB9	Matsu-Tunnel	66.61	331	P	P	18 42 53.9	-2.1
MJB9				IAmb	IAmb	18 45 21.9	
	comp=Z,17nm,1.2s						
YULB	Yu-li	66.89	310	P	P	18 42 56.7	-1.3
YULB				IAmb	IAmb	18 45 13.9	
	comp=Z,23nm,1.5s						
TPUB	Ta-pu	67.31	309	P	P	18 42 59.2	-1.4
SSLB	Suanglung	67.39	310	P	P	18 42 59.5	-1.6
QSPA	South Pole Qui	67.68	180	P	P	18 43 02.2	-0.3
QSPA				IAmb	IAmb	18 43 03.3	
	comp=Z,32nm,1.3s						
KSRS	Korea Array	72.40	325	P	P	18 43 31.6	+0.1
	comp=Z,5.3nm,0.8s,baz=146,slow=6.2,SNR=12						
KSRS				LR	LR	19 13 43.4	
	comp=Z,11nm,20.0s,baz=78,slow=34						
IPM	Ipoh	73.98	282	P	P	18 43 42.1	+0.7
IPM				IAmb	IAmb	18 43 42.8	
	comp=Z,38nm,1.5s						
KIWB	Kanaga Island	74.57	7	P	P	18 43 43.6	-0.3
KULM	Kulim	74.66	282	P	P	18 43 45.2	-0.1
KULM				IAmb	IAmb	18 44 08.9	
	comp=Z,26nm,1.4s						
PETK	Petropavlovsk-	76.16	351	P	P	18 43 52.7	-0.3
	comp=Z,5.3nm,0.7s,baz=144,slow=7.3,SNR=8.2						
PETK				LR	LR	19 16 20.6	
	comp=Z,33nm,19.6s,baz=243,slow=35						
CN2	Changchun	78.34	328	eP	P	18 44 05.4	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ENH	Enshi	79.44	309	P	P	18 44 11.8	0.0
ENH				IAmb	IAmb	18 44 12.1	
	comp=Z,11nm,0.7s						
CMAR	Chiang Mai Arr	81.88	294	P	P	18 44 26.1	+1.0
	comp=Z,1.7nm,0.8s,baz=146,slow=4.2,SNR=14						
XAN	Xi'an	81.92	312	P	P	18 44 25.0	0.0
XAN				pP	pwP	18 44 51.9	-0.4
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN	Xi'an	81.92	312	P	P	18 44 24.8	-0.2
XAN				IAmb	IAmb	18 44 25.7	
	comp=Z,24nm,1.3s						
SYO	Syowa Base	82.55	196⇑	eP	P	18 44 25.2	-2.4
SYO	Syowa Base	82.55	196⇑	ePcP	PcP	18 44 33.0	+0.6
HHC	Hu-ho-hao-te	84.10	319	eP	P	18 44 37.5	+1.4
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,49nm,5.3s						
SNAA	Sanae	86.11	182	P	P	18 44 44.1	-1.6
SNAA	Sanae	86.11	182	P	P	18 44 44.1	-1.6
SNAA				IAmb	IAmb	18 46 21.6	
	comp=Z,15nm,1.5s						
LZH	Lanzhou	86.54	311	eP	P	18 44 48.9	+0.5
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
VNA3	Neumayer Olymp	86.61	180	P	P	18 44 46.6	-1.5
VNA2	Neumayer--Watz	86.93	180	P	P	18 44 48.5	-1.1
	baz=187,slow=4.2						
NVAR	Mina Array Bea	89.19	48	P	P	18 45 00.5	-0.6
	comp=Z,0.7nm,0.4s,baz=277,slow=2.4,SNR=8.8						
GTA	Gaotai	90.95	313	P	P	18 45 09.3	+0.1
GTA				pP	sP	18 45 41.8	-2.8
GTA				sP	pwP	18 45 53.4	+16
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SONM	Songino Array	91.11	322	P	P	18 45 08.9	-0.8
	comp=Z,1.9nm,0.8s,baz=149,slow=5.3,SNR=14						
ILAR	Eielson Array	92.57	16	P	P	18 45 13.6	-2.3
	comp=Z,0.6nm,0.7s,baz=226,slow=5.2,SNR=9.3						
WMQ	Urumqi	101.03	313	eP	Pdif	18 45 55.8	+1.0
WMQ				pmax	pmax		
	comp=Z,27nm,5.5s						
WMQ				LR	LR		
	comp=Z,510nm,29.2s						
WMQ				LR	LR		
	comp=Z,1μm,29.1s						
WMQ				LR	LR		
	comp=Z,60nm,29.2s						
MKAR	Makanchi Array	105.59	314	Pdiff	Pdif	18 46 13.2	-1.7
	comp=Z,0.5nm,0.7s,baz=85,slow=5.9,SNR=6.2						
KOLS	Kolonicke sedl	144.12	325	ePKP	PKPab	18 51 38.1	+0.1
CRVS	Cervenica-Dubn	144.56	326	ePKP	PKPab	18 51 37.8	-1.8
VYHS	Vyhne	146.17	327	ePKP	PKPbc	18 51 44.4	-0.5
KARP	Karpathos	146.51	301		PKPdf	18 51 44.9	+0.2
BRG	Berggiesshubel	146.70	334	ePKP	PKPbc	18 51 46.5	+0.2
	comp=Z,4.7nm,1.0s						
CLL	Collm	146.73	335	ePKPbc	PKPbc	18 51 46.0	-0.3
	comp=Z,6.0nm,0.6s						
CLL				epPKiKP	sPKPdf	18 52 21.0	-0.2
VTS	Vitosha	146.91	315		PKPab	18 51 48.7	-0.2
MODS	Modra-Piesok	147.03	328	ePKP	PKPbc	18 51 48.0	+0.7
GERES	GERESS Array B	148.34	332	PKPbc	PKPbc	18 51 49.8	-1.2
	comp=Z,1.7nm,0.6s,baz=38,slow=2.4,SNR=14						
LIT	Litokhoron	148.52	311		PKPab	18 51 54.3	-1.0
WATA	Walderalm	150.42	332	iPKPab	PKPab	18 52 04.6	+1.7
	comp=Z,1.6nm,0.5s						
WTTA	Wattenberg	150.45	332	iPKPab	PKPab	18 52 04.4	+1.3
	comp=Z,6.1nm,1.4s						
MOTA	Moosalm	150.62	333	iPKPab	PKPab	18 52 04.4	+0.7
	comp=Z,3.5nm,0.8s						
SQTA	Sankt Quirin	150.67	332	iPKPab	PKPab	18 52 04.8	+0.9
	comp=Z,1.5nm,0.6s						
FETA	Feichten	151.03	333	ePKPab	PKPab	18 52 04.6	-0.9
	comp=Z,4.9nm,0.8s						
DAVA	Damuels	151.17	334	iPKPab	PKPab	18 52 05.4	-0.7
	comp=Z,3.6nm,0.5s						
FUORN	Ofenpass-Fuorn	151.54	333		PKPab	18 52 07.0	-0.8
TORD	Torodi Ar. Bea	166.77	228	PKPab	PKPab	18 53 13.1	-1.2
	comp=Z,0.8nm,0.8s,baz=135,slow=3.7,SNR=4.8						

IDC 17 18:43:43.8±1.7, 7.38S×124.31E, h0km, mb3.4/1, mb1 3.6/4, mb1mx3.4/31, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=118.7km s-min=26.3km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.73	173	Pn	Pn	18 46 19.0	+0.2
	0.1nm,0.3s,baz=22,slow=19,SNR=3.1						
FITZ				Sn	Sn	18 48 04.2	-16
	0.7nm,0.3s,baz=84,slow=22,SNR=7.9						
WRA	Warramunga Arr	15.83	143	Pn	Pn	18 47 30.2	-1.9
	0.1nm,0.3s,baz=316,slow=12,SNR=6.6						
WRA				Sn	Sn	18 50 13.5	-11
	0.1nm,0.3s,baz=318,slow=27,SNR=3.5						
ASAR	Alice Springs	18.63	151	P	P	18 48 01.9	-1.3
	0.1nm,0.3s,baz=333,slow=12,SNR=4.8						
MKAR	Makanchi Array	65.57	330	P	P	18 54 29.4	0.0
	0.2nm,0.4s,baz=127,slow=8.3,SNR=6.8						

ROM 17 18:49:09.2±0.1, 41.738N±0.009×13.866E±0.008, h10km, ML0.7/1, 3C-1D, Error ellipse: s-maj=1.2km s-min=0.3km az=209.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POFI	Posta Fibreno	0.12	260	P	Pg	18 49 12.8	+0.6
POFI				S	Sg	18 49 15.0	+0.7
POFI				AML	AML		
	comp=N,50μm,0.7s						

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res
POFI				AML	AML		
	comp=E,55μm,0.1s						
POFI	Posta Fibreno	0.12	260	⇓P	Pg	18 49 12.8	+0.6
POFI				AML	AML		
	comp=E,55μm,0.1s						
POFI				AML	AML		
	comp=N,50μm,0.7s						
POFI				AML	AML		
	comp=E,55μm,0.1s						
POFI				AML	AML		
	comp=N,50μm,0.7s						
CERA	Filignano	0.18	141	P	Pg	18 49 13.7	+0.5
CERA				S	Sg	18 49 16.8	+0.9
CERA	Filignano	0.18	141	⇑P	Pg	18 49 13.8	+0.6
VVLD	Villa Vallelon	0.23	306	P	Pg	18 49 14.5	+0.5
VVLD				S	Sg	18 49 18.3	+1.1
VVLD	Villa Vallelon	0.23	306	P	Pg	18 49 14.6	+0.7
INTR	Introdacqua	0.28	6	P	Pb	18 49 15.7	-0.6
INTR				S	Sg	18 49 19.8	+1.1
INTR	Introdacqua	0.28	6	P	Pn	18 49 19.6	+0.2
MIDA	Miranda	0.31	108	P	Pg	18 49 16.0	+0.6
MIDA				S	Sb	18 49 21.0	-0.9
SRES	S.Oreste - Sor	1.13	297	S	Sb	18 49 37.0	-8.5
SRES	S.Oreste - Sor	1.13	297	S	Sb	18 49 37.0	-8.5
ARRO	Arrone	1.17	316	⇑P	Pb	18 49 27.6	-4.0
ARRO	Arrone	1.17	316	⇑P	Pb	18 49 27.6	-4.0
MURB	Monte Urbino	1.82	327	S	Sb	18 50 06.0	+0.5
ATVO	AVT- Monte Val	1.97	327	S	Sn	18 50 05.0	-2.3
BADI	Badiali	2.14	326	S	Sn	18 50 08.0	-3.5
CPGN	Carpegna, Ital	2.36	332	P	Pb	18 49 51.5	-0.3
CPGN	Carpegna, Ital	2.36	332	P	Pb	18 49 51.5	-0.3
CSNT	Castellina Chi	2.57	313	S	Sn	18 50 14.0	-8.3
CSNT	Castellina Chi	2.57	313	S	Sn	18 50 14.0	-8.3
TRI	Trieste	3.97	359	S	Sn	18 50 56.0	-0.7
TRI	Trieste	3.97	359	S	Sn	18 50 56.0	-0.7
MFNL	Monte Finestre	4.01	191	S	Sn	18 50 51.0	-6.7
MFNL	Monte Finestre	4.01	191	S	Sn	18 50 51.0	-6.7
BORM	Bormio	5.36	333	P	Pb	18 50 38.5	-4.4
BORM	Bormio	5.36	333	P	Pb	18 50 38.5	-4.4

ROM 17 18:50:02.3±0.1, 43.°381N±0.°003×12.°512E±0.°003, h6km, Md1.1/3, Error ellipse: s-maj=0.3km s-min=0.1km az=19.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res
ATFO	Monte Foce - G	0.05	108	S	Pg	18 50 04.0	+0.3
ATFO	Monte Foce - G	0.05	108	P	Pg	18 50 03.9	+0.1
ATFO				S	Sg	18 50 04.9	+0.1
ATFO				END			
ATVO	AVT- Monte Val	0.08	271	P	Pg	18 50 04.3	+0.2
ATVO				S	Sg	18 50 05.7	+0.3
ATVO				END			
ATPI	Pietralunga -	0.11	311	S	Pg	18 50 05.0	+0.4
ATPI	Pietralunga -	0.11	311	P	Pg	18 50 04.9	+0.3
ATPI				S	Sg	18 50 07.0	+0.8
ATPI				END			
MURB	Monte Urbino	0.12	175	P	Pg	18 50 05.3	+0.5
MURB				S	Sg	18 50 07.4	+0.9
FRON	Frontone	0.21	49	S	Pg	18 50 07.0	+0.6
FRON	Frontone	0.21	49	P	Pg	18 50 06.8	+0.4
FRON				S	Sg	18 50 10.6	+1.4
BADI	Badiali	0.23	303	P	Pg	18 50 07.4	+0.5
BADI				S	Sg	18 50 11.6	+1.6

IDC 17 19:18:09.2±1.7, 4.°55N×95.°04E, h0km, mb3.4/3, mb1 3.6/5, mb1mx3.3/56, mbtmp3.4/5, ML3.5/2, Error ellipse: s-maj=56.5km s-min=20.1km az=47.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res
PSI	Prapat	4.25	114	Pn	Pn	19 19 17.9	+2.5
	1.5nm,0.3s,baz=156,slow=18,SNR=6.3						
PSI				Lg	Lg	19 20 23.9	
	0.8nm,0.3s,baz=359,slow=2.2,SNR=5.2						
CMAR	Chiang Mai Arr	14.34	15	Pn	Pn	19 21 35.0	+1.4
	0.1nm,0.3s,baz=210,slow=11,SNR=6.4						
H08S2	Diego Garcia H	25.55	242	T	T	19 51 01.1	
H08S3	Diego Garcia H	25.55	242	T	T	19 51 01.4	
	baz=357,slow=74,SNR=8.1						
H08S1	Diego Garcia H	25.57	242	T	T	19 51 10.7	
	baz=58,slow=74,SNR=15						
MKAR	Makanchi Array	43.50	347	P	P	19 26 13.8	-0.6
	0.3nm,0.8s,baz=159,slow=5.2,SNR=3.5						
WRA	Warramunga Arr	45.65	124	P	P	19 26 30.6	-1.4
	0.5nm,0.9s,baz=302,slow=9.5,SNR=4.9						
ASAR	Alice Springs	47.14	128	P	P	19 26 44.4	+0.7
	0.3nm,0.4s,baz=301,slow=8.0,SNR=11						
ASAR				PcP	PcP	19 28 15.6	0.0
	0.6nm,0.7s,baz=310,slow=3.0,SNR=5.0						

IDC 17 19:22:36.8±0.8, 15.°02S×173.°37W, h0km, mb3.9/9, mb1 4.2/9, mb1mx4.0/28, mbtmp3.9/9, MS3.4/10, Ms1 3.4/10, ms1mx3.2/37, Error ellipse: s-maj=46.6km s-min=17.7km az=138.0
NEIC 17 19:22:40.5±2.2, 15.°07S±0.°06×172.°9W±0.°1, h35km±1km, mb4.4/10, Error ellipse: s-maj=24.8km s-min=6.1km az=291.0
ISC 17 19:22:39.9±0.6, 15.°06S±0.°09×173.°0W±0.°1, h30km, n37, σ2.°00/28, mb4.0/11, MS3.5/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
AFI	Afiamalu	1.65	46	Pn	Pn	19 23 06.2	-0.8
	72nm,0.3s,baz=22,slow=2.0,SNR=58						
AFI				LR	LR	19 23 15.4	
	comp=Z,65nm,20.2s,baz=237,slow=20						
AFI				Sn	Sn	19 23 23.4	-3.9
	374nm,0.3s,baz=187,slow=6.5,SNR=29						
AFI	Afiamalu	1.65	46		Pn	19 23 06.1	-0.8
AFI					Sn	19 23 24.1	-3.2
NIUE	Niue	4.96	144		Pn	19 23 51.5	-1.0
NIUE					Sn	19 24 40.5	-8.3
RAR	Rarotonga	13.98	118	LR	LR	19 31 09.9	
	comp=Z,26nm,18.8s,baz=342,slow=36						
DZM	Mont Dzumac	20.68	247	LR	LR	19 34 07.7	
	comp=Z,118nm,20.9s,baz=36,slow=34						
URZ	Urewera	24.70	199	P	P	19 27 59.5	+1.0
	8.3nm,0.5s,baz=359,slow=2.1,SNR=8.8						
URZ				LR	LR	19 36 19.9	
	comp=Z,134nm,20.1s,baz=32,slow=33						
URZ	Urewera	24.70	199	P	P	19 27 59.4	+0.9
HIZ	Hauiti	25.70	202	P	P	19 28 04.9	-2.5
BKZ	Black Stump Fm	25.73	199	P	P	19 28 05.6	-2.2
MSWZ	Moikau Station	28.16	199	P	P	19 28 30.1	+0.5
PLWZ	Palliser	28.30	199	P	P	19 28 28.2	-2.7
QRZ	Quartz Range	28.59	203	P	P	19 28 33.9	+0.4
THZ	Tophouse	29.26	202	P	P	19 28 40.6	+1.1
KHZ	Kahutara	29.62	200	P	P	19 28 42.2	-0.3
RPZ	Rata Peaks	31.63	202	LR	LR	19 40 50.8	
	comp=Z,91nm,20.1s,baz=104,slow=35						
H11S2	WAKE ISLAND Hy	38.87	328	T	T	20 10 43.5	
	baz=146,slow=75,SNR=14						
H11S3	WAKE ISLAND Hy	38.89	328	T	T	20 10 42.1	
	baz=146,slow=75,SNR=10						
H11S1	WAKE ISLAND Hy	38.89	328	T	T	20 10 40.0	
	baz=146,slow=75,SNR=9.9						
H11N3	WAKE ISLAND Hy	39.81	330	T	T	20 11 52.4	
	baz=142,slow=75,SNR=7.6						
H11N2	WAKE ISLAND Hy	39.83	330	T	T	20 12 03.0	
	baz=132,slow=75,SNR=3.0						
STKA	Stephens Creek	44.53	240	P	P	19 30 47.2	-2.0
	1.9nm,0.7s,baz=66,slow=10.0,SNR=5.1						
STKA				LR	LR	19 48 43.9	
	comp=Z,22nm,19.3s,baz=27,slow=35						
STKA	Stephens Creek	44.53	240	P	P	19 30 47.6	-1.5
WRA	Warramunga Arr	50.29	256	P	P	19 31 33.0	-1.1
	0.9nm,0.6s,baz=91,slow=6.7,SNR=18						
ASAR	Alice Springs	50.58	252	P	P	19 31 34.8	-1.5
	2.1nm,0.6s,baz=85,slow=7.9,SNR=36						
ASAR				LR	LR	19 50 59.9	
	comp=Z,79nm,21.2s,baz=124,slow=34						
VNDA	Vanda	63.75	186	LR	LR	19 59 10.3	
	comp=Z,33nm,18.6s,baz=241,slow=34						
MJAR	Matsushiro Arr	68.93	320	LR	LR	19 58 38.5	
	comp=Z,20nm,21.8s,baz=10.0,slow=32						
NVAR	Mina Array Bea	73.83	42	P	P	19 34 14.5	+2.5
	0.2nm,0.5s,baz=211,slow=5.1,SNR=2.7						
QSPA	South Pole Qui	74.98	180	P	P	19 34 19.3	+1.1
QSPA				IAmb	IAmb	19 34 21.3	
	comp=Z,4.3nm,0.9s						
TXAR	Lajitas Array	80.11	56	P	P	19 34 51.0	+3.4
	comp=Z,0.5nm,0.9s,baz=235,slow=5.5,SNR=3.5						
WRH	Wood River Hil	81.55	11	P	P	19 34 56.3	+2.0
PDAR	Pinedale Array	81.76	42	P	P	19 34 58.2	+2.0
	comp=Z,0.2nm,0.5s,baz=144,slow=2.1,SNR=3.7						
PDAR				LR	LR	20 03 40.8	
	comp=Z,51nm,19.0s,baz=296,slow=30						
CCB	Clear Creek Bu	81.76	11	P	P	19 34 55.0	-0.4
CCB				IAmb	IAmb	19 34 58.0	
	comp=Z,4.0nm,0.8s						
ILAR	Eielson Array	82.04	11	P	P	19 34 58.4	+1.5
	comp=Z,0.9nm,0.8s,baz=216,slow=5.0,SNR=7.4						
YKA	Yellowknife Ar	89.64	23	P	P	19 35 36.4	+1.9
	comp=Z,0.8nm,0.9s,baz=234,slow=4.5,SNR=9.1						
ULM	Lac du Bonnet	93.43	39	LR	LR	20 10 50.4	
	comp=Z,53nm,18.6s,baz=120,slow=31						
GERES	GERESS Array B	145.86	352	PKPbc	PKiKP	19 42 17.5	-2.5
	comp=Z,0.4nm,0.7s,baz=15,slow=5.5,SNR=4.8						
BRTR	Keskin Array B	146.13	322	PKPbc	PKiKP	19 42 19.6	-1.3
	comp=Z,1.3nm,0.9s,baz=46,slow=5.3,SNR=8.3						

IDC 17 19:31:59.5±8.7, 18.°40S×169.°51E, h232km±48km, mb3.8/4, mb1 3.9/4, mb1mx3.3/39, mbtmp4.4/4, MS3.7/2, Ms1 3.7/2, ms1mx2.8/28, Error ellipse: s-maj=101.1km s-min=71.8km az=94.0
NEIC 17 19:32:01.2±0.8, 18.°7S±0.°1×169.°6E±0.°2, h259km±13km, mb4.4/7, Error ellipse: s-maj=22.0km s-min=13.8km az=114.0
ISC 17 19:31:57.1±1.3, 18.°7S±0.°1×170.°1E±0.°2, h240km, n17, σ0.°98/16, mb4.3/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
SANVU	Saraoutou	4.22	319	Pn	Pn	19 33 04.3	+1.2
DZM	Mont Dzumac	4.77	225	P	Pn	19 33 10.6	+0.8
	0.6nm,0.3s,baz=47,slow=19,SNR=5.3						
DZM				S	S	19 34 07.2	-0.3
	0.8nm,0.3s,baz=259,slow=10,SNR=3.3						
NOUC	Port Laguerre	4.88	225	Pn	Pn	19 33 12.5	+1.4
FUNA	Funafuti	13.45	43	P	P	19 35 00.3	-0.1
CTA	Charters Tower	22.49	263	P	P	19 36 35.9	-0.7
	8.4nm,1.2s,baz=99,slow=8.8,SNR=5.2						
RAR	Rarotonga	28.46	100	LR	LR	19 48 28.0	
	comp=Z,32nm,18.2s,baz=208,slow=34						
STKA	Stephens Creek	28.78	237	P	P	19 37 34.0	+1.1
	2.3nm,0.6s,baz=78,slow=8.6,SNR=7.1						
STKA	Stephens Creek	28.78	237	P	P	19 37 32.8	-0.1
WR0	Warramunga Arr	33.49	262	P	P	19 38 13.3	-0.9
WR0				IAmb	IAmb	19 38 23.8	
	comp=Z,10.0nm,1.3s						
WB0	Warramunga Arr	33.65	262	P	P	19 38 14.5	-1.1
WB0				IAmb	IAmb	19 39 22.6	
	comp=Z,19nm,1.5s						
WB2	Warramunga Arr	33.67	262	P	P	19 38 14.8	-0.9
WB2				IAmb	IAmb	19 39 15.1	
	comp=Z,21nm,1.4s						
WRAB	Tennant Creek	33.68	262	P	P	19 38 14.8	-1.0
WRAB				IAmb	IAmb	19 39 03.1	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	33.69	262	P	P	19 38 14.5	-1.4
	comp=Z,1.3nm,0.5s,baz=95,slow=8.5,SNR=45						
AS31	Alice Springs	34.00	255	P	P	19 38 18.1	-0.5
ASAR	Alice Springs	34.01	255	P	P	19 38 18.1	-0.5
	comp=Z,10nm,0.5s,baz=81,slow=9.0,SNR=269						
FITZ	Fitzroy Crossi	42.06	263	P	P	19 39 25.3	-0.5
FITZ				IAmb	IAmb	19 40 00.6	
	comp=Z,17nm,1.4s						
YAK	Yakutsk	86.59	342	LR	LR	20 18 13.4	
	comp=Z,159nm,21.8s,baz=48,slow=32						

CNRM 17 20:10:51.2±0.7, 36.°36N×7.°00W, h0km, Error ellipse: s-maj=9.5km s-min=5.0km az=58.0
SFS 17 20:10:54.0, 36.°53N×6.°86W, ML1.9, GOLFO DE CADIZ
MDD 17 20:10:55.6±0.9, 36.°53N×6.°95W, h63km±14km, mb2.7/13, Error ellipse: s-maj=6.7km s-min=3.4km az=10.0, PRXIMO
INMG 17 20:10:56.9±1.5, 36.°45N×7.°00W, h29km±10km, ML1.9, Error ellipse: s-maj=4.1km s-min=2.7km az=34.0
ISC 17 20:10:54.7±1.4, 36.°47N±0.°04×6.°96W±0.°03, h30km±14km, n39, σ0.°96/75, 1C, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
PBDV	Barranco-do-Ve	1.10	315	eP	Pn	20 11 14.8	+0.7
PBDV				eS	Sn	20 11 28.2	-0.1
PBDV				A	A	20 11 31.5	
	7.7nm,0.3s						
PBDV	Barranco-do-Ve	1.10	315	P	Pn	20 11 14.8	+0.7
PBDV				S	Sn	20 11 28.2	-0.1
	7.7nm,0.3s						
PVAQ	Vaqueiros	1.11	327	⇑eP	Pn	20 11 15.0	+0.7
PVAQ				eS	Sn	20 11 28.6	-0.1
PVAQ				A	A	20 11 29.4	
	25nm,0.3s						
PVAQ	Vaqueiros	1.11	327	P	Pn	20 11 15.0	+0.7
PVAQ				S	Sn	20 11 28.6	-0.1
	25nm,0.3s						
EGRO	El Granado	1.15	339	P	Pb	20 11 15.6	-0.3
	1.3nm,0.1s,SNR=6.5						
EGRO				S	Sb	20 11 29.8	-0.6
	7.5nm,0.1s,SNR=12						
EMIN	Mina Concepcio	1.32	10	P	Pn	20 11 17.5	+0.4
	0.6nm,0.2s,SNR=11						
EMIN				S	Sn	20 11 33.4	-0.3
	4.7nm,0.1s						
PCVE	Castro Verde	1.45	324	eP	Pn	20 11 19.2	+0.3
PCVE				eS	Sn	20 11 37.2	+0.3
PCVE				A	A	20 11 46.2	
	12nm,0.6s						
PCVE	Castro Verde	1.45	324	P	Pn	20 11 19.2	+0.3
PCVE				S	Sn	20 11 37.2	+0.3
	12nm,0.6s						
MORF	Marmelete	1.59	302	eP	Pn	20 11 21.8	+0.9
MORF				eS	Sn	20 11 40.5	-0.1
MORF				A	A	20 11 41.0	
	5.3nm,0.1s						
MORF	Marmelete	1.59	302	P	Pn	20 11 21.8	+0.9
MORF				S	Sn	20 11 40.5	-0.1
	5.3nm,0.1s						
PFVI	Vila Bisbo	1.64	295	eS	Sn	20 11 41.1	-0.5
PFVI				A	A	20 11 45.3	
	6.5nm,0.8s						
PFVI	Vila Bisbo	1.64	295	P	Pn	20 11 23.4	+1.9
	0.6nm,0.1s,SNR=7.9						
PFVI				S	Sn	20 11 41.3	-0.2
	4.8nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	1.64	295	P	Pn	20 11 20.5	-1.0
PFVI				S	Sb	20 11 45.9	+1.4
PBEJ	Beja	1.72	335	eS	Sn	20 11 43.4	-0.1
PBEJ	Beja	1.72	335	S	Sn	20 11 43.4	-0.1
EMIJ	Mijas	1.77	86	P	Pn	20 11 23.2	-0.1
	0.5nm,0.3s,SNR=7.9						
EMIJ				S	Sn	20 11 45.4	+0.6
	1.6nm,0.3s,SNR=7.9						
PTEO	Sao Teotonio	1.77	308	eP	Pn	20 11 24.4	+1.0
PTEO				eS	Sn	20 11 42.5	-2.5
PTEO				A	A	20 11 51.8	
	8.9nm,0.9s						
PTEO	Sao Teotonio	1.77	308	P	Pn	20 11 24.4	+1.0
PTEO				S	Sn	20 11 42.5	-2.5
	4.4nm,0.9s						
HORN	Hornachuelos	1.94	44	P	Pb	20 11 28.4	-1.0
HORN				S	Sb	20 11 53.5	+0.4
ECAB	El Cabril	2.02	37	P	Pn	20 11 27.5	+0.7
	0.2nm,0.1s,SNR=9.8						
ECAB				S	Sn	20 11 52.1	+0.9
	3.3nm,0.3s						
EVO	Evora	2.23	338	P	Pn	20 11 29.9	+0.3
EVO				S	Sn	20 11 55.9	-0.2
EVO	Evora	2.23	338	eP	Pn	20 11 29.9	+0.3
EVO				eS	Sn	20 11 55.9	-0.2
EBAD	Badajoz	2.29	359	P	Pn	20 11 31.0	+0.6
	0.5nm,0.1s,SNR=7.1						
EBAD				S	Sn	20 11 56.6	-1.0
	1.7nm,0.0s						
EGOR	Sierra Gorda,	2.38	73	P	Pn	20 11 33.5	+1.7
	0.3nm,0.2s,SNR=7.9						
EGOR				S	Sn	20 11 59.8	-0.3
	1.0nm,0.3s,SNR=7.9						
PESTR	Estremoz	2.45	348	eP	Pn	20 11 33.4	+0.7
PESTR				eS	Sn	20 12 01.8	+0.2
PESTR				A	A	20 12 02.5	
	8.2nm,0.7s						
EADA	Adamuz	2.55	48	P	Pn	20 11 35.1	+1.0
	0.4nm,0.1s,SNR=7.9						
EADA				S	Sn	20 12 03.0	-1.1
	1.5nm,0.1s,SNR=7.9						
ELGU	Los Guajares,	2.71	81	P	Pn	20 11 38.1	+1.8
	0.2nm,0.1s,SNR=7.9						
ELGU				S	Sn	20 12 09.4	+1.2
	5.1nm,0.3s,SNR=7.9						
PMTG	Montargil	2.79	339	eP	Pn	20 11 37.9	+0.6
PMTG				eS	Sn	20 12 10.2	+0.3
PMTG				A	A	20 12 11.4	
	2.3nm,0.2s						
PMTG	Montargil	2.79	339	P	Pn	20 11 37.9	+0.6
PMTG				S	Sn	20 12 10.2	+0.3
	2.3nm,0.2s						
PMRV	Marv??o	2.98	354	ePn	Pn	20 11 40.8	+0.9
PMRV				eSn	Sn	20 12 13.4	-1.2
PMRV				A	A	20 12 14.6	
	3.6nm,0.2s						
PMRV	Marv??o	2.98	354	P	Pn	20 11 40.8	+0.9
PMRV				S	Sn	20 12 13.4	-1.2
	3.6nm,0.2s						
EQES	Quesada	3.38	66	P	Pn	20 11 47.1	+1.5
	0.3nm,0.1s,SNR=7.9						
EQES				S	Sn	20 12 24.3	-0.5
	0.9nm,0.3s,SNR=7.9						
PCBR	Castelo Branco	3.39	353	ePn	Pn	20 11 46.6	+1.0
PCBR				eSn	Sn	20 12 23.8	-1.1
PCBR	Castelo Branco	3.39	353	P	Pn	20 11 46.6	+1.0
PCBR				S	Sn	20 12 23.8	-1.1
PAB	San Pablo	3.70	33	P	Pn	20 11 51.0	+1.1
	0.2nm,0.1s,SNR=7.9						
PAB				S	Sn	20 12 31.9	-0.7
	0.1nm,0.2s,SNR=7.9						
SESP	Santiago Espad	3.89	64	P	Pn	20 11 53.8	+1.2
	0.6nm,0.1s,SNR=7.9						
SESP				S	Sn	20 12 36.1	-1.2
	3.0nm,0.1s,SNR=7.9						
MD31	MD31	4.02	153	P	Pn	20 11 54.7	+0.3
MD31				S	Sn	20 12 40.3	-0.3
MDT	Midelt	4.13	151	P	Pn	20 11 55.9	0.0
MDT				S	Sn	20 12 42.5	-0.7
ETOB	Tobarra	4.82	62	P	Pn	20 12 05.3	0.0
	0.3nm,0.1s,SNR=7.9						
ETOB				S	Sn	20 12 57.3	-2.8
	0.5nm,0.2s,SNR=7.9						

IDC 17 20:16:19.9±1.2, 54.°80N×157.°30W, h0km, mb3.8/12, mb1 4.0/15, mb1mx3.7/45, mbtmp3.8/15, ML4.1/3, Error ellipse: s-maj=27.2km s-min=15.4km az=162.0
AEIC 17 20:16:21±2.1, 54.°8N±0.°1×157.°1W±0.°1, h31km±8km, ML3.6/23, Error ellipse: s-maj=21.5km s-min=7.2km az=161.0
NEIC 17 20:16:22.7±2.0, 54.°9N±0.°1×157.°2W±0.°1, h29km±8km, Error ellipse: s-maj=22.2km s-min=7.6km az=156.0
ISC 17 20:16:25.4±0.8, 55.°08N±0.°10×157.°20W±0.°07, h35km, n71, σ1.°14/73, mb3.6/12, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
CHIR	Chirikof Islan	1.17	50		Pn	20 16 43.7	-1.4
CNBA	Chernabura Isl	1.40	260		Pn	20 16 45.7	-2.8
CHGN	Chignik	1.41	331		Pn	20 16 49.9	+1.4
SDPT	Sand Point	1.90	280		Pn	20 16 54.6	-0.6
SII	Sitkinak Islan	2.26	48		Pn	20 16 59.4	-0.8
OHAK	Old Harbor	3.06	44		Pn	20 17 10.7	-0.5
FALS	False Pass	3.59	269	Pn	Pn	20 17 15.6	-2.9
KDAK	Kodiak Island	3.73	42	Pn	Pn	20 17 19.6	-0.7
	5.5nm,0.3s,baz=145,slow=5.2,SNR=109						
KDAK				Sn	Sn	20 18 03.1	+0.1
	6.1nm,0.3s,baz=224,slow=22,SNR=6.3						
AKUT	Akutan	5.07	263	Pn	Pn	20 17 36.8	-2.0
CNPM	China Poot	5.50	33		Pn	20 17 45.1	+0.3
UNV	Unalaska Valle	5.57	261	Pn	Pn	20 17 43.8	-1.8
RSO	Redoubt South	5.90	22		Pn	20 17 49.2	-1.1
SVW2	Sparrevohn	6.09	7	Pn	Pn	20 17 54.3	+1.5
SEW	Seward	6.53	36		Pn	20 17 57.2	-1.6
RC01	Rabbit Creek A	7.20	30		Pn	20 18 08.6	+0.6
SUA	Susitna One	7.25	25	Pn	Pn	20 18 08.9	+0.2
SKT	Skwentna	7.53	21	Pn	Pn	20 18 13.0	+0.5
HIN	Hinchinbrook I	7.81	43	Pn	Pn	20 18 15.0	-1.4
KNK	Knik Glacier	7.84	32		Pn	20 18 16.1	-0.8
GLI	Glacier Island	7.91	39	Pn	Pn	20 18 16.0	-1.7
FID	Port Fidalgo	8.05	41		Pn	20 18 19.4	-0.2
SML	Sawmill	8.19	31	Pn	Pn	20 18 22.1	+0.5
EYAK	Cordova Ski Ar	8.20	43		Pn	20 18 22.2	+0.5
SCM	Sheep Creek Mo	8.51	33		Pn	20 18 25.8	-0.3
RAGM	Ragged Mountai	8.55	46	Pn	Pn	20 18 26.9	+0.4
KTH	Kantishna Hill	9.08	18	Pn	Pn	20 18 34.8	+1.0
TRF	Thorofare Moun	9.10	20	Pn	Pn	20 18 33.6	-0.6
RND	Reindeer	9.37	24		Pn	20 18 36.8	-1.0
DHY	Denali Highway	9.47	28		Pn	20 18 38.6	-0.6
GLB	Gilahina Butte	9.50	42		Pn	20 18 38.4	-1.1
VRDI	Verde Repeater	9.51	44	Pn	Pn	20 18 38.9	-0.9
BPAW	Bear Paw Mtn.	9.57	17	Pn	Pn	20 18 40.0	-0.5
MCK	McKinley	9.64	22	Pn	Pn	20 18 41.1	-0.2
MCARA	McCarthy VSAT	9.77	44	Pn	Pn	20 18 43.0	-0.3
BALM	Baldy	9.86	47		Pn	20 18 42.8	-1.8
BWN	Browne	9.91	20	Pn	Pn	20 18 44.5	-0.7
PAX	Paxson	9.94	33		Pn	20 18 46.3	+0.7
BARN	Barnard Glacie	10.16	48	Pn	Pn	20 18 48.8	0.0
CTGM	Chitina Glacie	10.26	48	Pn	Pn	20 18 49.6	-0.4
NEA	Nenana	10.35	20		Pn	20 18 50.1	-1.1
PCA	Pinnacle	10.38	54	Pn	Pn	20 18 51.8	+0.3
WRH	Wood River Hil	10.46	22	Pn	Pn	20 18 51.2	-1.5
MENT	Mentasta	10.48	36		Pn	20 18 52.8	-0.2
MLY	Manley	10.48	15	Pn	Pn	20 18 52.8	-0.2
HDA	Harding Lake	10.67	25		Pn	20 18 54.3	-1.3
CCB	Clear Creek Bu	10.68	22		Pn	20 18 53.8	-1.8
RIDG	Independent Ri	10.70	31		Pn	20 18 56.1	+0.2
DOT	Dot Lake	10.87	33	Pn	Pn	20 18 58.0	-0.3
IL31		10.99	24		Pn	20 18 58.4	-1.4
ILAR	Eielson Array	10.99	24	Pn	Pn	20 18 58.0	-1.8
	1.0nm,0.3s,baz=218,slow=14,SNR=35						
ILAR				Sn	Sn	20 20 57.8	-3.6
	0.2nm,0.3s,baz=200,slow=27,SNR=3.8						
DHAK	Deception Hill	11.07	61	Pn	Pn	20 19 00.2	-0.8
SCRK	Sand Creek	11.13	31	Pn	Pn	20 19 02.1	+0.1
HYT	Haines Junctio	11.91	53	Pn	Pn	20 19 13.1	+0.5
ADK	Adak	12.04	263	Pn	Pn	20 19 12.8	-1.4
EGAK	Eagle	12.57	33		Pn	20 19 21.9	+0.4
WHY	Whitehorse	13.09	56	Pn	Pn	20 19 29.4	+0.7
INK	Inuvik	17.20	30	P	P	20 20 23.7	-0.1
	1.1nm,0.3s,baz=240,slow=10,SNR=15						
INK	Inuvik	17.20	30	P	P	20 20 23.4	-0.4
C36M	Paulatuk	20.65	33	P	P	20 21 01.3	-0.2
YKA	Yellowknife Ar	22.90	54	P	P	20 21 25.4	-0.3
	0.5nm,0.7s,baz=271,slow=9.3,SNR=8.5						
PETK	Petropavlovsk-	26.18	285	P	P	20 21 56.5	+0.3
	4.2nm,0.6s,baz=90,slow=13,SNR=8.8						
SEY	Seymchan	26.48	308	P	P	20 21 58.9	+0.1
	1.1nm,0.7s,baz=90,slow=20,SNR=3.7						
TIXI	Tiksi	34.27	327	P	P	20 23 08.1	+0.6
	1.0nm,0.6s,baz=80,slow=23,SNR=6.7						
ASAJ	Asahikawa	39.34	280	P	P	20 23 50.9	-0.1
	15nm,1.1s,baz=90,slow=20,SNR=3.8						
KLR	Kul'dur	42.25	293	P	P	20 24 14.6	-0.2
	0.7nm,0.6s,baz=351,slow=5.3,SNR=4.3						
TXAR	Lajitas Array	45.80	102	P	P	20 24 43.7	+0.1
	0.2nm,0.6s,baz=305,slow=3.2,SNR=2.9						
SONM	Songino Array	55.85	306	P	P	20 25 59.5	+0.4
	1.3nm,0.7s,baz=41,slow=6.8,SNR=10						
FINES	FINESS Array B	63.79	358	P	P	20 26 54.6	+1.4
	2.9nm,0.9s,baz=23,slow=10,SNR=3.9						
MKAR	Makanchi Array	66.81	320	P	P	20 27 14.1	+1.0
	0.1nm,0.4s,baz=49,slow=6.4,SNR=5.5						
AKASG	Malin Array Be	74.45	356	P	P	20 28 01.5	+2.0
	0.2nm,0.3s,baz=8.4,slow=5.9,SNR=2.7						
CMAR	Chiang Mai Arr	82.72	292	P	P	20 28 45.4	-0.2
	0.4nm,0.7s,baz=356,slow=4.9,SNR=4.7						

IDC 17 20:26:24.6±0.7, 0.°15S×16.°39W, h0km, mb4.0/16, mb1 4.1/16, mb1mx4.0/36, mbtmp4.0/16, MS3.8/18, Ms1 3.8/18, ms1mx3.6/44, Error ellipse: s-maj=19.4km s-min=17.3km az=126.0
NEIC 17 20:26:25.1±3.0, 0.°3S±0.°1×16.°24W±0.°06, h10km±1km, mb4.8/14, Error ellipse: s-maj=23.0km s-min=8.6km az=164.0

ISC 17 20:26:26.0±0.5, **0°.2S**±0°.1×**16°.28W**±0°.09, **h13km**, **n51**, σ**1s47**/38, **mb4.3**/20, **MS3.8**/17, **2C**, **North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**7.75**	**167**	T	T	20 36 16.7	
	baz=345,slow=74,SNR=107						
H10N3	**ASCENSION HYDR**	**7.76**	**167**	T	T	20 36 13.6	
	baz=345,slow=74,SNR=185						
H10N1	**ASCENSION HYDR**	**7.77**	**167**	T	T	20 36 12.4	
	baz=345,slow=74,SNR=169						
H10S3	**ASCENSION HYDR**	**8.81**	**170**	T	T	20 37 43.5	
	baz=348,slow=74,SNR=131						
H10S2	**ASCENSION HYDR**	**8.82**	**169**	T	T	20 37 44.2	
	baz=232,slow=74,SNR=73						
LIC	**Lamto**	**12.93**	**60**	*e*P	**Pn**	**20 29 28.6**	**-1.0**
	68nm,1.2s						
TIC	**Toumodi**	**13.15**	**58**	*e*P	**Pn**	**20 29 30.7**	**-1.9**
KIC	**Kosan Boka**	**13.24**	**60**	*e*P	**Pn**	**20 29 31.9**	**-2.0**
	47nm,1.2s						
DBIC	**Dimbokro**	**13.30**	**59**	Pn	**Pn**	**20 29 31.9**	**-2.7**
	0.5nm,0.3s,baz=234,slow=13,SNR=8.2						
DBIC				LR	LR	20 33 54.9	
	comp=Z,486nm,19.2s,baz=224,slow=34						
RCBR	**Riachuelo**	**20.36**	**254**	P	**P**	**20 31 03.0**	**+0.5**
	4.3nm,0.5s,baz=77,slow=14,SNR=7.1						
RCBR				LR	LR	20 36 41.9	
	comp=Z,393nm,19.8s,baz=88,slow=30						
RCBR	**Riachuelo**	**20.36**	**254**	P	**P**	**20 31 01.0**	**-1.5**
TOA0	**Torodi Ar. Sit**	**22.23**	**53**	P	**P**	**20 31 20.6**	**-2.0**
TOA0				IAmb	IAmb	20 31 26.7	
	comp=Z,67nm,1.1s						
TORD	**Torodi Ar. Bea**	**22.23**	**53**	P	**P**	**20 31 21.7**	**-0.9**
	comp=Z,40nm,1.1s,baz=242,slow=8.7,SNR=56						
TORD				LR	LR	20 39 15.9	
	comp=Z,321nm,19.1s,baz=265,slow=35						
BDFB	**Brasilia**	**34.87**	**242**	LR	LR	20 46 37.1	
	comp=Z,162nm,19.0s,baz=104,slow=35						
ESDC	**Sonseca Array**	**41.28**	**14**	P	**P**	**20 34 12.3**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=188,slow=7.9,SNR=3.9						
ESDC				LR	LR	20 52 06.9	
	comp=Z,75nm,18.6s,baz=320,slow=37						
KEST	**Kesra**	**43.01**	**31**	P	**P**	**20 34 27.0**	**+1.6**
	comp=Z,2.6nm,0.9s,baz=210,slow=20,SNR=2.7						
KEST				LR	LR	20 53 23.3	
	comp=Z,250nm,19.4s,baz=200,slow=38						
LSZ	**Lusaka**	**46.38**	**111**	P	**P**	**20 34 55.6**	**+2.9**
	comp=Z,3.2nm,0.7s,baz=289,slow=6.5,SNR=10.0						
LSZ	**Lusaka**	**46.38**	**111**	P	**P**	**20 34 50.8**	**-1.9**
LSZ				IAmb	IAmb	20 35 04.4	
	comp=Z,16nm,1.6s						
MBAR	**Mbarara**	**47.01**	**91**	P	**P**	**20 34 57.1**	**-0.6**
CPUP	**Villa Florida**	**47.27**	**233**	LR	LR	20 54 18.0	
	comp=Z,186nm,18.2s,baz=56,slow=35						
LBTB	**Lobatse**	**47.37**	**125**	P	**P**	**20 35 01.9**	**+1.6**
	comp=Z,2.9nm,0.8s,baz=234,slow=12,SNR=4.1						
LBTB	**Lobatse**	**47.37**	**125**	P	**P**	**20 35 01.2**	**+0.9**
LBTB				IAmb	IAmb	20 35 05.8	
	comp=Z,8.2nm,1.1s						
SAML	**Samuel**	**47.50**	**258**	P	**P**	**20 35 01.1**	**-0.2**
SAML				IAmb	IAmb	20 35 01.9	
	comp=Z,7.1nm,1.1s						
BOSA	**Boshof**	**48.69**	**129**	P	**P**	**20 35 11.3**	**+0.9**
	comp=Z,4.3nm,0.9s,baz=314,slow=5.5,SNR=4.7						
BOSA				LR	LR	20 52 10.4	
	comp=Z,73nm,19.8s,baz=306,slow=32						
BOSA	**Boshof**	**48.69**	**129**	P	**P**	**20 35 09.4**	**-1.1**
BOSA				IAmb	IAmb	20 35 20.4	
	comp=Z,19nm,1.3s						
KMBO	**Kilima Mbogo**	**53.53**	**91**	P	**P**	**20 35 49.0**	**+1.7**
	comp=Z,1.3nm,0.5s,baz=280,slow=8.2,SNR=5.8						
KMBO				LR	LR	20 57 12.9	
	comp=Z,164nm,20.0s,baz=204,slow=34						
KMBO	**Kilima Mbogo**	**53.53**	**91**	P	**P**	**20 35 45.6**	**-1.7**
LPAZ	**La Paz**	**53.54**	**250**	P	**P**	**20 35 47.3**	**-0.3**
	comp=Z,1.8nm,0.9s,baz=39,slow=1.8,SNR=5.2						
LPAZ				LR	LR	20 57 26.7	
	comp=Z,200nm,19.7s,baz=76,slow=35						
LPAZ	**La Paz**	**53.54**	**250**	P	**P**	**20 35 45.8**	**-1.9**
GERES	**GERESS Array B**	**55.31**	**24**	P	**P**	**20 35 59.1**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=280,slow=9.1,SNR=5.3						
GERES				PP	**PP**	**20 38 05.3**	**+2.2**
	comp=Z,1.3nm,0.9s,baz=206,slow=8.9,SNR=4.6						
VRAC	**Vranov**	**56.86**	**25**	LR	LR	21 03 24.0	
	comp=Z,90nm,18.0s,baz=276,slow=39						
GO02	**Mina Guanaco**	**57.11**	**240**	P	**P**	**20 36 12.0**	**-1.0**
GO02				IAmb	IAmb	20 36 15.1	
	comp=Z,15nm,1.1s						
EIL	**Elat**	**57.11**	**54**	LR	LR	21 03 36.7	
	comp=Z,75nm,18.0s,baz=281,slow=39						
ROSC	**El Rosal**	**58.19**	**276**	LR	LR	20 58 59.3	
	comp=Z,111nm,18.5s,baz=88,slow=34						
MLR	**Muntele Rosu**	**58.80**	**34**	LR	LR	21 04 15.6	
	comp=Z,116nm,18.3s,baz=302,slow=39						
BRTR	**Keskin Array B**	**60.39**	**43**	P	**P**	**20 36 35.4**	**0.0**
	comp=Z,1.1nm,0.8s,baz=238,slow=6.9,SNR=6.9						
BRTR				LR	LR	21 06 51.0	
	comp=Z,23nm,18.9s,baz=189,slow=40						
AKASG	**Malin Array Be**	**63.73**	**30**	P	**P**	**20 36 58.5**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=232,slow=5.7,SNR=3.0						
AKASG				LR	LR	21 07 17.1	
	comp=Z,59nm,18.1s,baz=270,slow=38						
HFS	**Hagfors**	**64.53**	**16**	LR	LR	21 05 20.3	
	comp=Z,22nm,19.5s,baz=242,slow=36						
FINES	**FINESS Array B**	**69.42**	**20**	P	**P**	**20 37 34.0**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=240,slow=11,SNR=2.4						
SNAA	**Sanae**	**71.85**	**176**	P	**P**	**20 37 49.3**	**+1.1**
	comp=Z,3.0nm,0.9s,baz=326,slow=5.3,SNR=4.0						
SNAA	**Sanae**	**71.85**	**176**	P	**P**	**20 37 48.7**	**+0.5**
SYO	**Syowa Base**	**78.11**	**162**	⇑*e*P	**P**	**20 38 22.0**	**-2.4**
SYO	**Syowa Base**	**78.11**	**162**	⇑*e*pP	**P**	**20 38 25.0**	**+0.6**
AKTO	**Aktyubinsk**	**80.21**	**39**	LR	LR	21 20 53.5	
	comp=Z,24nm,18.8s,baz=295,slow=41						
MSTX	**Muleshoe**	**87.22**	**304**	P	**P**	**20 39 11.6**	**-1.1**
TXAR	**Lajitas Array**	**87.83**	**299**	P	**P**	**20 39 15.2**	**-0.5**
	comp=Z,0.9nm,1.0s,baz=103,slow=6.6,SNR=6.4						
SDCO	**Great Sand Dun**	**89.53**	**308**	P	**P**	**20 39 22.4**	**-1.5**
SDCO				IAmb	IAmb	20 39 28.6	
	comp=Z,7.0nm,1.4s						
QSPA	**South Pole Qui**	**89.84**	**180**	P	**P**	**20 39 25.8**	**+1.4**
QSPA				IAmb	IAmb	20 39 27.8	
	comp=Z,13nm,1.4s						
YKA	**Yellowknife Ar**	**94.06**	**333**	P	**P**	**20 39 43.9**	**0.0**
	comp=Z,0.2nm,0.7s,baz=84,slow=5.0,SNR=4.3						
ASAR	**Alice Springs**	**142.55**	**131**	PKhKP	PKPpre	20 45 56.9	
	comp=Z,0.9nm,0.8s,baz=217,slow=3.8,SNR=5.6						
WRA	**Warramunga Arr**	**144.92**	**127**	PKPbc	**PKPdf**	**20 46 03.5**	**-0.4**
	comp=Z,3.6nm,0.9s,baz=240,slow=2.1,SNR=11						

IDC ***17*** *20:41:27.3±12.0, 24°.20S×69°.20W, h0km, mb4.0/1, mb1 4.0/1, mb1mx3.5/27, mbtmp4.0/1, Error ellipse: s-maj=919.1km s-min=109.8km az=1.0*
GUC ***17*** *20:41:36.7±0.5, 25°.97S×69°.30W, h108km±5km, ML3.2*
ISC 17 20:41:37.3±1.2, **25°.97S**±0°.05×**69°.4W**±0°.2, **h107km**±12km, **n8**, σ**0s77**/13, **2C-1D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.83**	**345**	⇓*i*P	**Pn**	**20 41 56.6**	**-0.3**
GO02				*i* S	**Sn**	**20 42 11.7**	**0.0**
GO02				IAML		20 42 14.2	
	comp=N,1µm,0.2s						
PB14	**IPOC Station P**	**1.64**	**324**	⇑*i*P	**Pn**	**20 42 06.4**	**+0.5**
PB14				*i* S	**Sn**	**20 42 28.4**	**+0.7**
PB14				IAML		20 42 36.0	
	comp=E,192nm,0.5s						
GO03	**Copiap**	**1.80**	**206**	⇑*i*P	**Pn**	**20 42 07.4**	**-0.3**
GO03				*i* S	**Sn**	**20 42 31.5**	**+0.6**
GO03				IAML		20 42 32.6	
	comp=N,360nm,0.6s						
PB10	**IPOC Station P**	**2.67**	**336**	*e*P	**Pn**	**20 42 19.0**	**+0.1**
PB10				*i* S	**Sn**	**20 42 49.0**	**-1.9**
PB15	**IPOC Station P**	**2.75**	**358**	*e*P	**Pn**	**20 42 20.6**	**+0.5**
PB15				*i* S	**Sn**	**20 42 53.3**	**+0.3**
TORD	**Torodi Ar. Bea**	**79.26**	**70**	P	**P**	**20 53 31.0**	**-0.2**
	comp=N,1.0nm,0.7s,baz=253,slow=5.8,SNR=7.5						
ZALV	**Zalesovo Beam**	**146.12**	**28**	PKP	**PKPbc**	**21 01 04.6**	**+0.1**
	comp=N,0.7nm,0.4s,baz=316,slow=4.1,SNR=4.4						
MKAR	**Makanchi Array**	**149.40**	**40**	PKPbc	**PKPbc**	**21 01 13.8**	**+0.2**
	comp=N,0.8nm,0.8s,baz=297,slow=2.8,SNR=7.7						

IDC ***17*** *20:54:44.2±0.6, 0°.08S×16°.39W, h0km, mb4.1/15, mb1 4.3/16, mb1mx4.0/53, mbtmp4.2/16, ML3.9/1, MS3.9/25, Ms1 3.9/25, ms1mx3.8/37, Error ellipse: s-maj=21.1km s-min=15.0km az=161.0*
NEIC ***17*** *20:54:45.4±1.8, 0°.1S±0°.1×16°.3W±0°.1, h10km±1km, mb4.8/10, Error ellipse: s-maj=25.5km s-min=17.5km az=161.0*
GCMT ***17*** *20:54:47.4±0.3, 0°.05S±0°.04×16°.48W±0°.02, h19km±1km, MW4.9/86, Moment Tensor Solution. s26,c28; s86,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.57±.19; $M_{\theta\theta}$0.19±.11; $M_{\phi\phi}$2.38±.12; $M_{r\theta}$-0.83±.30; $M_{r\phi}$-0.55±.07; $M_{\theta\phi}$-0.40±.20; Best double couple: $M_0$2.68500×10^{16} NP1: ϕ_s151.00000°, δ45.00000°, λ-114.00000°. NP2: ϕ_s3.00000°, δ50.00000°, λ-67.00000°. Principal axes: T 2.5170, Plg2.0000°, Azm78.0000°; N 0.3410, Plg17.0000°, Azm168.0000°; P -2.8530, Plg73.0000°, Azm340.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 17 20:54:45.5±0.6, **0°.1S**±0°.1×**16°.35W**±0°.09, **h13km**, **n57**, σ**1s50**/36, **mb4.3**/17, **MS3.9**/24, **1D**, **North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**7.87**	**166**	T	T	21 04 26.2	
	baz=345,slow=74,SNR=187						
H10N3	**ASCENSION HYDR**	**7.88**	**167**	T	T	21 04 26.9	
	baz=345,slow=74,SNR=264						
H10N1	**ASCENSION HYDR**	**7.89**	**166**	T	T	21 04 36.0	
	baz=345,slow=74,SNR=315						
H10S3	**ASCENSION HYDR**	**8.93**	**169**	T	T	21 06 03.4	
	baz=349,slow=74,SNR=232						
H10S2	**ASCENSION HYDR**	**8.94**	**169**	T	T	21 06 03.9	
	baz=231,slow=74,SNR=215						
LIC	**Lamto**	**12.94**	**61**	*e*P	**Pn**	**20 57 50.1**	**+0.7**
	64nm,1.2s						
LIC	**Lamto**	**12.94**	**61**		**Pn**	**20 57 50.1**	**+0.7**
TIC	**Toumodi**	**13.16**	**59**	*e*P	**Pn**	**20 57 50.1**	**-2.2**
TIC	**Toumodi**	**13.16**	**59**		**Pn**	**20 57 50.1**	**-2.2**
KIC	**Kosan Boka**	**13.26**	**61**	*e*P	**Pn**	**20 57 53.7**	**0.0**
	111nm,1.4s						
KIC	**Kosan Boka**	**13.26**	**61**		**Pn**	**20 57 53.7**	**0.0**
DBIC	**Dimbokro**	**13.31**	**59**	Pn	**Pn**	**20 57 52.8**	**-1.6**
	0.7nm,0.3s,baz=234,slow=14,SNR=11						
DBIC				LR	LR	21 02 05.0	
	comp=Z,920nm,21.0s,baz=222,slow=33						
DBIC	**Dimbokro**	**13.31**	**59**	Pn	**Pn**	**20 57 51.6**	**-2.7**
RCBR	**Riachuelo**	**20.32**	**253**	P	Pn	20 59 23.7	0.0
	4.3nm,0.8s,baz=87,slow=14,SNR=4.0						
RCBR				LR	LR	21 04 52.4	
	comp=Z,773nm,21.0s,baz=74,slow=30						
RCBR	**Riachuelo**	**20.32**	**253**	P	**P**	**20 59 21.6**	**0.0**
TOA0	**Torodi Ar. Sit**	**22.23**	**53**	P	**P**	**20 59 40.9**	**-1.3**
TORD	**Torodi Ar. Bea**	**22.23**	**53**	P	**P**	**20 59 41.4**	**-0.8**
	55nm,1.1s,baz=242,slow=9.0,SNR=67						
TORD				LR	LR	21 07 44.7	
	comp=Z,517nm,18.0s,baz=255,slow=35						
MDT	**Midelt**	**34.59**	**18**	LR	LR	21 15 19.2	
	comp=Z,247nm,19.7s,baz=208,slow=36						
BDFB	**Brasilia**	**34.85**	**242**	LR	LR	21 14 02.5	
	comp=Z,272nm,19.5s,baz=99,slow=33						
ESDC	**Sonseca Array**	**41.20**	**15**	LR	LR	21 19 55.6	
	comp=Z,110nm,19.5s,baz=150,slow=37						
KEST	**Kesra**	**42.96**	**31**	LR	LR	21 21 44.0	
	comp=Z,452nm,19.4s,baz=178,slow=38						
LSZ	**Lusaka**	**46.49**	**111**	P	**P**	**21 03 14.3**	**+1.2**
	3.1nm,0.8s,baz=289,slow=5.2,SNR=6.4						
LSZ	**Lusaka**	**46.49**	**111**	P	**P**	**21 03 13.2**	**+0.1**
LSZ				IAmb	IAmb	21 03 24.2	
	comp=Z,6.6nm,0.9s						
SIV	**San Ignacio**	**46.84**	**248**	P	**P**	**21 03 16.4**	**+0.6**
	comp=Z,3.1nm,1.0s,baz=96,slow=9.3,SNR=7.4						
CPUP	**Villa Florida**	**47.27**	**233**	P	**P**	**21 03 19.3**	**+0.4**
	comp=Z,2.4nm,0.8s,baz=51,slow=8.9,SNR=3.0						
CPUP				LR	LR	21 22 47.3	
	comp=Z,302nm,18.1s,baz=52,slow=36						
SAML	**Samuel**	**47.45**	**258**	P	**P**	**21 03 21.2**	**+0.7**
SAML				IAmb	IAmb	21 03 24.1	
	comp=Z,11nm,1.2s						
LBTB	**Lobatse**	**47.49**	**125**	P	**P**	**21 03 22.2**	**+1.4**
	comp=Z,2.1nm,0.7s,baz=315,slow=7.4,SNR=4.2						
LBTB	**Lobatse**	**47.49**	**125**	P	**P**	**21 03 21.9**	**+1.1**
MATP	**Matopo**	**48.27**	**118**	P	**P**	**21 03 27.8**	**+0.9**
	comp=Z,9.6nm,1.1s,baz=276,slow=5.6,SNR=9.4						
BOSA	**Boshof**	**48.82**	**129**	P	**P**	**21 03 31.3**	**+0.2**
	comp=Z,5.9nm,1.0s,baz=286,slow=7.3,SNR=5.6						
BOSA				LR	LR	21 20 19.8	
	comp=Z,77nm,21.7s,baz=311,slow=31						
BOSA	**Boshof**	**48.82**	**129**	P	**P**	**21 03 31.2**	**+0.2**
BOSA				IAmb	IAmb	21 03 34.7	
	comp=Z,11nm,1.1s						
LPAZ	**La Paz**	**53.50**	**250**	P	**P**	**21 04 07.2**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=47,slow=4.3,SNR=5.0						
LPAZ				LR	LR	21 25 56.8	
	comp=Z,312nm,19.1s,baz=76,slow=35						
KMBO	**Kilima Mbogo**	**53.61**	**91**	P	**P**	**21 04 09.7**	**+2.3**
	comp=Z,0.5nm,0.3s,baz=256,slow=14,SNR=3.6						
GERES	**GERESS Array B**	**55.24**	**24**	P	**P**	**21 04 20.4**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=224,slow=7.0,SNR=4.6						
GERES				PP	**PP**	**21 06 19.2**	**-2.9**
	comp=Z,1.2nm,0.9s,baz=211,slow=9.2,SNR=4.7						
EKA	**Eskdalemuir Ar**	**56.32**	**9**	P	**P**	**21 04 27.1**	**+1.1**
	comp=Z,2.7nm,0.9s,baz=178,slow=7.5,SNR=3.9						
ROSC	**El Rosal**	**58.11**	**276**	LR	LR	21 27 18.2	
	comp=Z,160nm,18.4s,baz=74,slow=34						
BRTR	**Keskin Array B**	**60.37**	**43**	P	**P**	**21 04 55.9**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=207,slow=7.9,SNR=7.2						
BRTR				LR	LR	21 34 12.3	
	comp=Z,57nm,19.0s,baz=194,slow=39						
PLCA	**Paso Flores**	**63.52**	**224**	LR	LR	21 28 49.6	
	comp=Z,92nm,21.5s,baz=92,slow=32						
AKASG	**Malin Array Be**	**63.68**	**30**	P	**P**	**21 05 16.8**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=232,slow=6.2,SNR=4.1						
AKASG				LR	LR	21 33 39.2	
	comp=Z,90nm,20.7s,baz=260,slow=37						
NOA	**NORSAR Array B**	**64.56**	**14**	LR	LR	21 33 03.3	
	comp=Z,56nm,21.9s,baz=205,slow=36						
KBZ	**Khabaz**	**68.34**	**42**	LR	LR	21 36 52.4	
	comp=Z,26nm,18.9s,baz=266,slow=37						
JTS	**Las Juntas de**	**68.98**	**281**	LR	LR	21 35 59.4	
	comp=Z,24nm,20.0s,baz=178,slow=36						
FINES	**FINESS Array B**	**69.34**	**20**	LR	LR	21 36 34.5	
	comp=Z,55nm,18.9s,baz=229,slow=36						
BG3	**Lake Jocassee**	**71.03**	**307**	P	**P**	**21 06 03.8**	**+0.3**
SADO	**Sadowa**	**71.09**	**318**	LR	LR	21 33 10.8	
	comp=Z,54nm,19.2s,baz=164,slow=32						
TKL	**Tuckaleechee C**	**71.86**	**308**	LR	LR	21 33 16.8	
	comp=Z,53nm,18.7s,baz=130,slow=32						
TEIG	**Tepich**	**73.11**	**291**	LR	LR	21 32 23.5	
	comp=Z,36nm,20.0s,baz=320,slow=31						
GEYT	**Alibeck**	**77.85**	**51**	LR	LR	21 44 37.5	
	comp=Z,97nm,18.2s,baz=20,slow=38						
SYO	**Syowa Base**	**78.24**	**162**	⇓*e*X	**P**	**21 06 42.0**	**-2.6**
WMOK	**Wichita Mounta**	**83.84**	**305**	P	**P**	**21 07 15.2**	**-0.1**
WMOK				IAmb	IAmb	21 07 23.7	
	comp=Z,8.8nm,1.2s						
MSTX	**Muleshoe**	**87.10**	**304**	P	**P**	**21 07 30.2**	**-1.5**
TXAR	**Lajitas Array**	**87.72**	**299**	P	**P**	**21 07 33.5**	**-1.3**
	comp=Z,0.8nm,0.8s,baz=46,slow=4.1,SNR=3.5						
TXAR				LR	LR	21 44 00.5	
	comp=Z,19nm,19.8s,baz=0.0,slow=34						
SDCO	**Great Sand Dun**	**89.40**	**308**	P	**P**	**21 07 43.6**	**+0.8**
SDCO				IAmb	IAmb	21 07 53.7	
	comp=Z,6.4nm,1.2s						
PDAR	**Pinedale Array**	**92.45**	**313**	LR	LR	21 42 20.2	
	comp=Z,65nm,21.8s,baz=90,slow=31						
MKAR	**Makanchi Array**	**96.02**	**43**	LR	LR	21 58 06.3	
	comp=Z,63nm,18.2s,baz=267,slow=40						
ASAR	**Alice Springs**	**142.67**	**131**	PKhKP	**PKPdf**	**21 14 15.9**	**-3.6**
	comp=Z,0.9nm,0.8s,baz=225,slow=4.1,SNR=6.8						
WRA	**Warramunga Arr**	**145.04**	**127**	PKPbc	**PKPab**	**21 14 23.3**	**+0.2**
	comp=Z,4.3nm,0.9s,baz=242,slow=2.8,SNR=12						

IDC 17 20:59:10.7±3.0, **9°.63S**×**119°.27E**, **h0km**, **mb3.3**/2, **mb1 3.4**/4, **mb1mx3.3**/32, **mbtmp3.3**/4, **ML3.0**/2, **Error ellipse: s-maj=174.7km s-min=26.5km az=53.0**, **Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.80**	**127**	P	Pn	21 03 19.9	-0.2
	0.0nm,0.3s,baz=301,slow=12,SNR=3.2						
ASAR	**Alice Springs**	**19.76**	**137**	P	P	21 03 42.6	+0.2
	0.1nm,0.3s,baz=320,slow=12,SNR=4.9						
SONM	**Songino Array**	**58.34**	**350**	P	P	21 09 07.9	+0.2
	0.4nm,1.0s,baz=152,slow=6.5,SNR=2.9						
MKAR	**Makanchi Array**	**65.14**	**333**	P	P	21 09 53.1	-0.3
	0.2nm,0.6s,baz=128,slow=7.9,SNR=3.7						

GUC ***17*** *21:15:12.4±0.6, 34°.06S×72°.21W, h24km±5km, ML3.9*
SJA ***17*** *21:15:13.0±0.8, 33°.83S×72°.23W, h24km±10km, ML3.9, MW3.6*
ISC 17 21:15:10.9±1.7, **34°.07S**±0°.04×**72°.25W**±0°.07, **h10km**±10km, **n29**, σ**1s27**/46, **9C-3D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MT01	**Popeta**	**0.86**	**77**	⇓*i*P	**Pg**	**21 15 27.7**	**+0.2**
MT01				*i* S	**Sg**	**21 15 38.8**	**+0.1**
MT01				IAML		21 15 39.3	
	comp=N,10µm,0.3s						
GO05	**Huala**	**0.98**	**164**	⇓*i*P	**Pg**	**21 15 29.6**	**-0.2**
GO05				*i* S	**Sg**	**21 15 43.0**	**+0.4**
GO05				IAML		21 15 43.8	
	comp=E,7µm,0.3s						
VA01	**Torpederas**	**1.16**	**26**	*e*P	**Pb**	**21 15 32.4**	**-0.6**
MT02	**Curacav**	**1.23**	**49**	⇑*i*P	**Pn**	**21 15 33.3**	**-0.9**
MT02				*i* S	**Sb**	**21 15 49.0**	**-1.2**
RCDM	**Rinconada Maip**	**1.33**	**65**	⇓*i*P	**Pn**	**21 15 35.9**	**+0.3**
RCDM				*i* S	**Sb**	**21 15 53.4**	**+0.2**
BO02	**Sierra Bellavi**	**1.42**	**121**	⇑*i*P	**Pn**	**21 15 36.9**	**+0.1**
BO02				*e*S	**Sn**	**21 15 54.8**	**-0.7**
ANTU	**Antumapu**	**1.44**	**70**	*e*P	**Pb**	**21 15 37.9**	**+0.1**
ANTU				*e*S	**Sn**	**21 15 55.0**	**-1.0**
ANTU				IAML		21 16 02.7	
	comp=E,4µm,0.5s						
STL	**Santa Lucia**	**1.48**	**65**	⇑*i*P	**Pn**	**21 15 37.4**	**-0.3**
STL				*i* S	**Sn**	**21 15 56.2**	**-0.9**
ROC1	**El Roble**	**1.50**	**44**	*i* P	**Pn**	**21 15 38.1**	**0.0**
ROC1				*i* S	**Sn**	**21 15 57.2**	**-0.7**
ROCH	**El Roble**	**1.50**	**44**	*i* P	**Pn**	**21 15 37.9**	**-0.3**
ROCH				*e*S	**Sn**	**21 15 57.5**	**-0.5**
ROCH				IAML		21 16 04.4	
	comp=N,3µm,0.4s						
FSR	**Penalolen**	**1.55**	**68**	⇑*e*P	**Pn**	**21 15 38.9**	**+0.2**
FSR				*e*S	**Sn**	**21 15 58.3**	**-0.5**
MT03	**Universidad Ad**	**1.56**	**69**	⇑*i*P	**Pn**	**21 15 38.5**	**-0.2**
MT03				*i* S	**Sn**	**21 15 58.5**	**-0.6**
MT03				IAML		21 16 04.8	
	comp=E,4µm,0.4s						
CLCH	**Cerro Calan**	**1.58**	**65**	⇑*i*P	**Pn**	**21 15 39.0**	**0.0**
CLCH				*e*S	**Sn**	**21 15 58.9**	**-0.6**
CLCH				IAML		21 16 05.2	
	comp=N,3µm,0.4s						
PEL	**Peldehue**	**1.60**	**55**	⇑*i*P	**Pn**	**21 15 39.5**	**+0.2**
PEL				*e*S	**Sn**	**21 16 00.1**	**+0.1**
PEL				IAML		21 16 07.9	
	comp=E,2µm,0.3s						
PEL	**Peldehue**	**1.60**	**55**	*i* P	**Pn**	**21 15 39.6**	**+0.2**
LMEL	**Las Melosas**	**1.72**	**83**	⇑*i*P	**Pn**	**21 15 41.2**	**+0.2**
LMEL				*e*S	**Sn**	**21 16 03.6**	**+0.5**
LMEL				IAML		21 16 04.7	
	comp=N,3µm,0.5s						
FCH	**Farellones**	**1.79**	**66**	⇑*i*P	**Pn**	**21 15 42.1**	**-0.1**
FCH				*i* S	**Sn**	**21 16 05.6**	**+0.4**
FCH				IAML		21 16 11.3	
	comp=E,2µm,0.4s						
CCHI	**Chillan**	**2.54**	**177**	*e*P	**Pn**	**21 15 53.7**	**+1.6**
CCHI				*i* S	**Sb**	**21 16 26.1**	**-1.7**
CCHI				IAML		21 16 38.5	
	comp=E,2µm,0.3s						
EDS3	**Malargue**	**2.90**	**127**	*e*P	**Pb**	**21 16 02.8**	**0.0**
AAGR	**Agrelo**	**3.02**	**72**	*e*P	**Pb**	**21 16 03.6**	**-1.2**
ARCO	**CERRO ARCO**	**3.03**	**67**	*e*P	**Pb**	**21 16 04.6**	**-0.5**
ARCO				IAML		21 16 09.9	
	comp=Z,489nm,0.4s						
ASAL	**Salagasta**	**3.22**	**64**	*e*P	**Pb**	**21 16 06.1**	**-2.1**
ASAL				*e*S	**Sb**	**21 16 50.2**	**+2.7**
RTLS	**Leoncito**	**3.36**	**49**	*e*P	**Pn**	**21 16 06.9**	**+3.1**
RTLS				IAML		21 16 59.6	
	comp=Z,229nm,0.5s						
RTCV	**Cerro Valdivia**	**3.82**	**56**	*e*P	**Pb**	**21 16 15.3**	**-3.1**
CFA	**Coronel Fontan**	**4.18**	**55**	*e*P	**Pn**	**21 16 16.7**	**+2.0**
ACCO	**Cerro Coronel**	**4.39**	**39**	*e*P	**Pn**	**21 16 20.4**	**+2.4**
AMOG	**MOGNA**	**4.45**	**47**	*e*P	**Pn**	**21 16 20.2**	**+1.7**
ACAN	**Cantantal**	**4.61**	**69**	*e*P	**Pn**	**21 16 23.3**	**+2.6**
AGUA	**GUANDACOL**	**5.58**	**36**	*e*P	**Pn**	**21 16 35.5**	**+1.5**

DJA ***17*** *21:35:05.2±0.9, 0°N±5°×12°2E±°, h97km±16km, M3.5/6, MLv3.5/6*
IDC ***17*** *21:35:09.8±15.0, 0°.17N×122°.41E, h197km±163km, mb3.1/5, mb1 3.3/6, mb1mx3.0/42, mbtmp3.7/6, ML3.8/1, Error ellipse: s-maj=112.5km s-min=23.4km az=61.0*
ISC 17 21:35:01.9±0.9, **0°.42N**±0°.09×**122°.5E**±0°.1, **h114km**, **n10**, σ**1s46**/12, **mb3.6**/5, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.60**	**275**	P	**Pn**	**21 35 21.7**	**+1.9**
LUWI	**Luwuk**	**1.47**	**171**	P	**Pn**	**21 35 31.0**	**+2.4**
APSI	**Ampana**	**1.60**	**214**	P	**Pn**	**21 35 31.2**	**+1.1**
APSI				S	**Sn**	**21 35 51.5**	**-0.1**
MPSI	**Mapaga**	**2.65**	**268**	P	**Pn**	**21 35 44.1**	**+0.8**
FITZ	**Fitzroy Crossi**	**18.66**	**171**	P	**P**	**21 39 10.8**	**-0.2**
	0.2nm,0.3s,baz=344,slow=7.4,SNR=3.2						
WRA	**Warramunga Arr**	**23.31**	**151**	P	**P**	**21 39 58.8**	**-1.1**
	2.3nm,0.8s,baz=322,slow=9.5,SNR=34						
ASAR	**Alice Springs**	**26.37**	**156**	P	**P**	**21 40 26.7**	**-0.9**
	0.4nm,0.5s,baz=343,slow=14,SNR=9.1						
STKA	**Stephens Creek**	**36.84**	**152**	P	**P**	**21 41 57.7**	**-1.5**
	0.9nm,0.4s,baz=334,slow=11,SNR=3.6						
SONM	**Songino Array**	**49.27**	**346**	P	**P**	**21 43 40.0**	**+0.9**
	0.2nm,0.5s,baz=166,slow=8.9,SNR=4.0						
MKAR	**Makanchi Array**	**58.02**	**328**	P	**P**	**21 44 43.1**	**+0.3**
	0.3nm,0.5s,baz=129,slow=8.3,SNR=6.0						
MKAR				pP	**sP**	**21 45 21.5**	**-1.7**
	0.3nm,0.5s,baz=121,slow=7.7,SNR=6.3						

IDC 17 21:44:24.2±2.1, **27°.45N**×**96°.67E**, **h0km**, **mb3.0**/3, **mb1 3.2**/4, **mb1mx3.0**/52, **mbtmp3.1**/4, **ML3.5**/1, **MS3.4**/2, **Ms1 3.4**/2, **ms1mx2.7**/16, **Error ellipse: s-maj=64.4km s-min=31.3km az=76.0**, **Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.19**	**166**	Pn	Pn	21 46 37.9	-0.2
	0.1nm,0.3s,baz=340,slow=13,SNR=4.9						
SONM	**Songino Array**	**21.73**	**18**	P	P	21 49 16.9	-0.2
	0.2nm,0.6s,baz=210,slow=13,SNR=2.9						
MKAR	**Makanchi Array**	**22.39**	**333**	P	P	21 49 22.9	-1.2
	0.3nm,0.7s,baz=147,slow=9.8,SNR=6.6						
KURBB	**Kurchatov Arra**	**26.95**	**334**	P	P	21 50 08.3	+1.1
	0.5nm,0.6s,baz=151,slow=11,SNR=6.0						
JNU	**Nakatsue**	**30.00**	**71**	LR	LR	22 03 57.1	
	comp=Z,49nm,21.0s,baz=229,slow=39						
JHJ	**Hachijo jima 2**	**37.47**	**71**	LR	LR	22 08 33.4	
	comp=Z,74nm,19.7s,baz=116,slow=39						

RSNC 17 21:59:39.3±0.7, **10°.59N**×**72°.90W**, **h53km**±13km, **ML3.3**, **Mw3.7**, **2C**, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CODC	**Agustn Codazz**	**0.84**	**220**	⇑*i*P	Pn	21 59 54.4	-0.6
CODC				*e*S	Sn	22 00 06.2	-0.3
CODC				*i*		22 00 08.4	
	comp=Z,927nm,0.2s						
URIC	**Uribia, Colomb**	**1.42**	**39**	*e*P	Pn	22 00 02.4	-0.4
URIC				*e*S	Sn	22 00 19.8	-0.6
URIC				*i*		22 00 24.0	
	comp=Z,355nm,0.1s						
SMRC	**Santa Marta, M**	**1.42**	**294**	*e*P	Pn	22 00 01.8	-1.0
SMRC				*e*S	Sn	22 00 18.3	-2.2
SMRC				*i*		22 00 19.5	
	comp=Z,270nm,0.2s						
ARGC	**Ariguani, Magd**	**1.51**	**242**	*e*P	Pn	22 00 03.8	-0.3
ARGC				*e*S	Sn	22 00 22.0	-0.6
ARGC				*i*		22 00 34.1	
	comp=Z,279nm,0.3s						
SMLC	**San Martn de**	**2.12**	**213**	*e*P	Pn	22 00 10.8	-1.5
SMLC				*e*S	Sn	22 00 42.4	+5.0
SMLC				*i*		22 00 45.9	
	comp=Z,495nm,0.1s						
SJCC	**San Jacinto, C**	**2.35**	**253**	⇑*e*P	Pn	22 00 17.2	+1.7
SJCC				*e*S	Sn	22 00 46.3	+3.1

SJCC				i		22 00 49.6	
	comp=Z,93nm,0.5s						
OCAC	Ocana	2.37	190	eP	Pn	22 00 15.2	-0.7
OCAC				eS	Sn	22 00 44.5	+0.6
OCAC				i		22 00 57.9	
	comp=Z,254nm,0.4s						
SDV	Santo Domingo	2.80	127	eP	Pn	22 00 21.7	-0.1
PAMC	Pamplona, Colo	3.23	177	eP	Pn	22 00 27.6	-0.4
PAMC				eS	Sn	22 01 04.2	-1.4
PAMC				i		22 01 25.3	
	comp=Z,65nm,0.2s						
BRRC	Barranca, Sant	3.55	193	eP	Pn	22 00 30.9	-1.0
BRRC				eS	Sn	22 01 12.5	-0.1
BRRC				i		22 01 23.3	
	comp=Z,46nm,0.3s						
PTBC	PUERTO BERRIO,	4.30	201	eP	Pn	22 00 43.2	+0.9
PTBC				i		22 01 37.1	
	comp=Z,44nm,0.5s						
RUSC	La Rusia	4.67	182	eP	Pn	22 00 48.3	+0.6
HELC	Santa Helena	5.08	211	eP	Pn	22 00 56.2	+2.8
HELC				eS	Sn	22 01 55.4	+4.5
HELC				i		22 02 17.3	
	comp=Z,13nm,0.4s						
NORC	Norcasia	5.36	202	eP	Pn	22 00 58.1	+1.3
NORC				eS	Sn	22 02 00.9	+3.6
NORC				i		22 02 07.5	
	comp=Z,19nm,0.4s						
GUY2C	Guyana, Caldas	5.86	205	eP	Pn	22 01 06.6	+2.5
CHIC	Chingaza	5.97	188	eP	Pn	22 01 06.6	+1.0
CHIC				eS	Sn	22 02 13.4	+0.4

IDC 17 22:01:24.5±1.2, 13.°16N×145.°92E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.5/46, mbtmp3.8/5, Error ellipse: s-maj=28.6km s-min=22.3km az=14.0
ISC 17 22:01:31.4±1.1, 13.°1N±0.°2×145.°8E±0.°1, h50km, n6, σ0.°82/7, mb3.6/5, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.00	296	Pn	Pn	22 01 48.1	-1.0
	72nm,0.3s,baz=100,slow=3.2,SNR=15						
GUMO				Sn	Sn	22 02 03.0	+0.8
	161nm,0.3s,baz=14,slow=19,SNR=13						
GUMO				LR	LR	22 02 13.2	
	comp=Z,268nm,19.1s,baz=124,slow=44						
WRA	Warramunga Arr	34.76	199	P	P	22 08 17.3	+0.2
	0.9nm,0.9s,baz=22,slow=9.7,SNR=3.2						
MKAR	Makanchi Array	62.43	316	P	P	22 11 50.1	+0.7
	0.3nm,0.6s,baz=92,slow=7.8,SNR=5.2						
ILAR	Eielson Array	68.59	25	P	P	22 12 29.1	+0.3
	0.3nm,0.6s,baz=246,slow=5.7,SNR=6.1						
YKA	Yellowknife Ar	82.84	27	P	P	22 13 50.0	-0.2
	0.4nm,0.7s,baz=283,slow=5.1,SNR=5.3						
FINES	FINESS Array B	91.94	335	P	P	22 14 33.9	-0.5
	2.6nm,1.0s,baz=83,slow=3.4,SNR=4.7						

IDC 17 22:23:37.4±1.1, 23.°27S×66.°53W, h210km±15km, mb3.5/1, mb1 3.3/7, mb1mx3.0/46, mbtmp3.8/7, Error ellipse: s-maj=23.2km s-min=18.3km az=162.0
ISC 17 22:23:36.7±0.9, 23.°4S±0.°1×66.°42W±0.°09, h201km, n8, σ1.°29/9, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.42	287	P	Pn	22 24 20.2	+0.1
	14nm,0.3s,baz=113,slow=7.6,SNR=3.8						
LVC				S	S	22 24 53.1	-0.1
	7.9nm,0.3s,baz=299,slow=19,SNR=4.7						
LPAZ	La Paz	7.22	347	P	Pn	22 25 21.8	+1.3
	0.5nm,0.3s,baz=162,slow=8.7,SNR=5.6						
CPUP	Villa Florida	8.77	112	P	Pn	22 25 41.1	+1.2
	0.1nm,0.3s,baz=270,slow=5.1,SNR=3.6						
SIV	San Ignacio	8.89	35	P	Pn	22 25 42.8	+1.1
	0.2nm,0.3s,baz=236,slow=13,SNR=7.1						
PLCA	Paso Flores	17.67	190	P	Pn	22 27 31.5	+0.7
	0.4nm,0.3s,baz=20,slow=11,SNR=2.9						
BDFB	Brasilia	18.96	69	P	Pn	22 27 44.3	-1.9
	0.5nm,0.3s,baz=263,slow=8.1,SNR=7.6						
TORD	Torodi Ar. Bea	75.84	69	P	P	22 35 00.2	-1.1
	0.7nm,0.4s,baz=255,slow=5.3,SNR=11						
MKAR	Makanchi Array	145.69	39	PKPbc	PKPbc	22 42 51.1	-0.8
	0.2nm,0.5s,baz=298,slow=3.1,SNR=3.1						

NORS 17 22:35:14.2±0.0, 41.°70N×45.°43E, h7km, MPVA3.4
DRS 17 22:35:14.8±0.0, 41.°75N×45.°32E, h16km
TIF 17 22:35:16.2, 41.°88N×45.°47E, h36km±1km
DDA 17 22:35:18.6, 41.°52N×45.°34E, h8km±3km, ML2.3
ISC 17 22:35:16.5±1.2, 41.°78N±0.°02×45.°41E±0.°02, h18km±4km, n32, σ0.°81/66, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEAG	Tbilisi Sea	0.46	269	P	Pn	22 35 27.7	-0.5
SEAG				S	Sn	22 35 36.0	0.0
BTNK	Botanikuri	0.47	259	P	Pn	22 35 27.4	-1.0
BTNK				S	Sn	22 35 36.4	+0.2
BTNK	Botanikuri	0.47	259	iP	Pb	22 35 27.3	+1.0
BTNK				iS	Sn	22 35 35.6	-0.6
BTNK				IAML		22 35 37.0	
	comp=E,379nm,0.1s						
BTNK				IAML		22 35 37.0	
	comp=N,308nm,0.1s						
TBLG	Delisi	0.51	265	P	Pn	22 35 28.0	-0.9
TBLG				S	Sn	22 35 37.1	-0.1
TBLG	Delisi	0.51	265	iP	Pb	22 35 27.9	+1.0
TBLG				iS	Sn	22 35 36.4	-0.7
TBLG				IAML		22 35 37.0	
	comp=E,164nm,0.6s						
DDFL	Dedoflistskaro	0.62	122	P	Pn	22 35 30.3	-0.1
DDFL				S	Sn	22 35 43.1	+3.0
DDFL	Dedoflistskaro	0.62	122	iP	Pn	22 35 30.4	-0.1
DDFL				iS	Sn	22 35 41.2	+1.2
LGD	Lagodekhi	0.62	84	P	Pb	22 35 28.6	-0.2
LGD				S	Sb	22 35 37.3	+0.1
KZRT	Kazreti	0.85	243	P	Pg	22 35 33.0	-0.2
KZRT				S	Sn	22 35 45.7	0.0
KZRT	Kazreti	0.85	243	iP	Pg	22 35 33.1	-0.2
KZRT				iS	Sn	22 35 45.3	-0.4
GUDG	Gudauri	0.98	315	P	Pb	22 35 33.5	-1.6
GUDG				S	Sb	22 35 47.5	-0.3
GUDG	Gudauri	0.98	315	iPg	Pb	22 35 33.7	-1.4
GUDG				eSg	Sb	22 35 47.7	-0.1
TRLG	Trialeti	1.01	257	P	Pg	22 35 35.9	-0.3
TRLG				S	Sn	22 35 50.9	+1.1
BTLR	Botlikh	1.07	34	iPg	Pb	22 35 35.1	-1.5
BTLR				eSg	Sb	22 35 48.8	-1.5
GNBR	Gunib	1.31	61	iPg	Pb	22 35 39.4	-0.5
GNBR				eSg	Sb	22 35 57.0	0.0
LACR	Lac	1.34	322	iPg	Pb	22 35 40.0	-0.4
LACR				eSg	Sn	22 35 58.2	+0.4
KMGR	Komgaron	1.34	343	ePg	Pb	22 35 41.4	+0.1
KMGR				eSg	Sg	22 36 00.8	+0.7
VLKR	Vladikavkaz	1.38	337	ePg	Pb	22 35 42.1	+0.2
VLKR				ePg	Pb	22 35 42.1	+0.2
VLKR				eSg	Sg	22 36 02.5	+1.2
VLKR				eSg	Sg	22 36 02.5	+1.2
GROC	Groznyy	1.46	11	iPg	Pb	22 35 43.4	+0.4
GROC				eSg	Sg	22 36 04.3	+0.7
BGD	Bogdanovka	1.46	250	P	Pb	22 35 43.1	-0.1
BGD				S	Sg	22 36 03.9	+0.2
AKH	Akhalkalaki	1.49	256	P	Pb	22 35 43.7	0.0
AKH				S	Sg	22 36 04.1	-0.5
ZEI	Tsey	1.51	313	ePg	Pb	22 35 43.9	-0.3
ZEI				eSg	Sg	22 36 05.1	-0.4
DBC	Dubki	1.63	40	ePg	Pb	22 35 45.3	-0.7
DBC				eSg	Sb	22 36 06.1	-0.1
KORR	Kora	1.65	323	ePg	Pb	22 35 46.8	+0.5
KORR				eSg	Sg	22 36 09.3	-0.4
ONI	Oni	1.67	300	P	Pb	22 35 45.9	+0.9
ONI				S	Sb	22 36 08.4	+1.0
EAK	Akyaka	1.74	232	iP	Pb	22 35 47.7	-0.4
EAK				iS	Sb	22 36 09.1	-0.6
EAK				IAML		22 36 20.0	
	comp=E,31nm,0.5s						
AKT	Akhty	1.76	99	iPg	Pb	22 35 46.5	+0.3
AKT				eSg	Sb	22 36 08.8	-1.3
DIGR	Digorskoe uzhe	1.76	310	ePg	Pb	22 35 48.6	+1.0
DIGR				eSg	Sb	22 36 11.7	+1.3
TKB	Tkibuli	1.89	289	P	Pb	22 35 49.6	-0.9
TKB				S	Sb	22 36 14.5	+0.6
LSNR	Lesken	1.91	323	ePg	Pb	22 35 51.1	+0.3
LSNR				eSg	Sg	22 36 18.0	0.0
IGDI	IGDIR	2.16	208	iP	Pb	22 35 55.0	-0.1
IGDI				iS	Sb	22 36 20.6	-0.9
DAGI	Agillar	2.72	256	iP	Pb	22 36 05.3	+0.5
DAGI				iS	Sb	22 36 38.0	+0.2

IDC 17 22:40:15.0±1.1, 33.°76N×89.°10E, h0km, mb3.7/8, mb1 3.8/11, mb1mx3.6/47, mbtmp3.6/11, ML2.2/1, MS3.2/5, Ms1 3.3/5, ms1mx2.8/50, Error ellipse: s-maj=36.8km s-min=19.3km az=51.0
BJI 17 22:40:20.5±0.0, 33.°90N×89.°25E, h7km, mb3.7/4, ML3.5/2, Ms3.4/2, Ms7 3.3/2
DMN 17 22:40:49.2±46.0, 31.°66N×88.°19E, h10km, Error ellipse: s-maj=1126.3km s-min=39.8km az=25.0
ISC 17 22:40:17.9±0.7, 33.°94N±0.°07×89.°1E±0.°1, h17km, n25, σ1.°56/23, mb3.7/7, MS3.0/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	4.58	157	Pn	Pn	22 41 29.6	+2.8
LSA				Sg	Sg	22 42 42.8	-2.1
LSA				LR	LR		
	comp=N,280nm,4.1s						
GUN	Gumba	6.61	206	eP	Pn	22 41 56.2	+1.5
TAPN	Taplejung	6.68	191	eP	Pn	22 41 57.5	+2.0
	12nm,0.7s						
JIRN	Jiri	6.74	203	eP	Pn	22 41 58.3	+1.9
	15nm,0.6s						
PKI	Pulchoki	7.09	208	eP	Pn	22 42 02.6	+1.3
PKIN	Phulchoki	7.09	208	eP	Pn	22 42 02.7	+1.5
	6.7nm,0.7s						
DMN	Daman	7.18	210	eP	Pn	22 42 04.6	+2.2
	7.9nm,0.8s						
ODAN	Odare	7.21	192	eP	Pn	22 42 03.5	+0.7
	16nm,0.6s						
RAMN	Ramite	7.29	198	eP	Pn	22 42 04.9	+1.0
	11nm,0.5s						
WMQ	Urumqi	9.93	354	eP	Pn	22 42 39.3	-0.5
MKAR	Makanchi Array	13.84	340	Pn	Pn	22 43 32.4	-0.9
	0.0nm,0.3s,baz=140,slow=11,SNR=3.4						
AAK	Ala-Archa	14.37	311	Pn	P	22 43 44.8	-2.7
	0.1nm,0.3s,baz=129,slow=16,SNR=2.2						
CMAR	Chiang Mai Arr	17.75	148	P	Pn	22 44 23.6	-0.7
	baz=324,slow=13,SNR=7.4						
CMAR				LR	LR	22 51 47.2	
	comp=Z,33nm,18.5s,baz=355,slow=39						
SONM	Songino Array	19.01	38	P	P	22 44 39.8	+0.9
	0.7nm,0.3s,baz=226,slow=13,SNR=7.3						
ZALV	Zalesovo Beam	20.23	353	P	Pn	22 44 53.8	-0.2
	1.8nm,0.5s,baz=167,slow=11,SNR=7.0						
BVAR	Borovoye Array	23.29	331	P	P	22 45 25.9	+1.3
	0.5nm,0.6s,baz=139,slow=12,SNR=4.6						
GEYT	Alibeck	25.33	288	LR	LR	22 57 39.4	
	comp=Z,43nm,21.6s,baz=45,slow=41						
KSRS	Korea Array	31.58	72	LR	LR	23 02 05.9	
	comp=Z,19nm,18.3s,baz=20,slow=42						
BRTR	Keskin Array B	44.16	294	P	P	22 48 25.9	0.0
	0.7nm,0.9s,baz=50,slow=1.9,SNR=4.4						
AKASG	Malin Array Be	46.03	310	P	P	22 48 40.5	+0.1
	0.4nm,0.4s,baz=64,slow=6.5,SNR=4.3						
FINES	FINESS Array B	48.04	325	P	P	22 48 57.0	+1.1
	3.2nm,1.1s,baz=99,slow=12,SNR=4.9						
NB2	NORSAR Subarra	55.22	325	P	P	22 49 50.0	+0.3
	comp=Z,0.8nm,0.7s,baz=82,slow=7.4						
NOA	NORSAR Array B	55.22	325	P	P	22 49 50.0	+0.3
	comp=Z,1.1nm,0.7s,baz=83,slow=7.1,SNR=4.7						
NOA				LR	LR	23 16 31.2	
	comp=Z,17nm,19.0s,baz=255,slow=39						
GERES	GERESS Array B	56.24	310	P	P	22 49 58.4	+1.1
	comp=Z,1.1nm,0.8s,baz=79,slow=6.9,SNR=8.3						
GERES				LR	LR	23 15 58.2	
	comp=Z,141nm,18.2s,baz=294,slow=38						
WRA	Warramunga Arr	68.76	134	P	P	22 51 19.7	-1.4
	comp=Z,0.3nm,0.8s,baz=326,slow=5.9,SNR=2.8						

IDC 17 22:45:38.1±4.7, 33.°32N×89.°24E, h0km, mb3.5/2, mb1 3.7/5, mb1mx3.3/51, mbtmp3.6/5, ML2.8/3, MS3.6/1, Ms1 3.6/1, ms1mx2.5/47, Error ellipse: s-maj=85.2km s-min=49.1km az=161.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	14.46	341	Pn	Pn	22 49 02.4	-1.6
	0.0nm,0.3s,baz=142,slow=13,SNR=2.8						
KURBB	Kurchatov Arra	19.00	339	P	P	22 50 00.2	-0.9
	0.0nm,0.3s,baz=149,slow=12,SNR=4.2						
SONM	Songino Array	19.43	37	P	P	22 50 06.3	+0.2
	0.1nm,0.3s,baz=225,slow=13,SNR=4.2						
GUMO	Guam	54.04	97	LR	LR	23 19 57.4	
	comp=Z,56nm,19.0s,baz=105,slow=38						
NOA	NORSAR Array B	55.79	325	P	P	22 55 16.2	-0.5
	0.7nm,0.8s,baz=83,slow=7.2,SNR=3.3						
GERES	GERESS Array B	56.73	310	P	P	22 55 24.0	+0.3
	0.2nm,0.4s,baz=68,slow=8.8,SNR=4.1						

SIGU 17 22:52:00.7±0.2, 44.°68N×36.°70E, h4km±2km
MOS 17 22:52:00.1±0.0, 44.°61N×36.°82E, h20km, MPVA3.5
ISC 17 22:52:00.2±1.1, 44.°62N±0.°06×36.°78E±0.°02, h11km±9km, n24, σ0.°70/46, 1C-5D, Crimea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANN	Anapa	0.50	68⇓	iPg	Pg	22 52 10.0	0.0
	baz=65						
ANN				Pgm		22 52 10.5	
	baz=65						
ANN				iSg	Sg	22 52 16.3	-0.4
	baz=65						
ANN				Sgm		22 52 17.1	
	baz=65						
ANN	Anapa	0.50	68	iPg	Pg	22 52 10.2	+0.2
ANN				iSg	Sg	22 52 16.2	-0.4
KERU	Kerch	0.73	342⇓	iPg	Pn	22 52 17.1	+0.7
	baz=345						
KERU				Pgm		22 52 17.2	
	baz=345						
KERU				eSg	Sn	22 52 27.1	-0.4
	baz=345						
KERU				eLg	Lg	22 52 29.1	
	baz=345						
KERU	Kerch	0.73	342	iPg	Pn	22 52 17.1	+0.7
KERU				eSg	Sn	22 52 27.1	-0.4
GL1R	Gelendzhik	0.93	94	ePg	Pb	22 52 19.0	+0.7
	baz=97						
GL1R	Gelendzhik	0.93	94	iPg	Pb	22 52 18.9	+0.7
GL1R				iSg	Sb	22 52 31.3	+0.7
FEO	Feodosiya	1.06	293	ePg	Pn	22 52 21.9	+0.9
	baz=290						
FEO				Pgm		22 52 22.6	
	baz=290						
FEO				eSg	Sn	22 52 34.8	-1.0
	baz=290						
FEO				Sgm		22 52 36.3	
	baz=290						
FEO	Feodosiya	1.06	293	ePg	Pn	22 52 21.9	+0.9
FEO				eSg	Sn	22 52 34.8	-1.0
SUDU	Sudak	1.29	283⇓	ePn	Pg	22 52 24.9	-0.1
	baz=280						
SUDU				Pnm		22 52 25.4	
	baz=280						
SUDU				iSn	Sg	22 52 41.9	0.0
	baz=280						
SUDU				Snm		22 52 42.7	
	baz=280						
SUDU	Sudak	1.29	283	ePg	Pg	22 52 24.9	-0.1
SUDU				eSg	Sg	22 52 41.9	0.0
ALU	Alushta	1.69	273⇑	ePn	Pb	22 52 30.7	-0.6
	baz=271						
ALU				Pnm		22 52 31.1	
	baz=271						
ALU				e		22 52 51.3	
	baz=271						
ALU				eSn	Sb	22 52 52.4	-0.2
	baz=271						
ALU				Snm		22 52 52.7	
	baz=271						
ALU				Snm		22 52 55.9	
	baz=271						
ALU	Alushta	1.69	273	ePg	Pb	22 52 30.7	-0.6
ALU				eSg	Sb	22 52 52.4	-0.2
TPSR	Tuapse	1.75	107	ePg	Pn	22 52 31.1	+0.6
TPSR				iSg	Sn	22 52 52.8	+0.1
YAL	Yalta	1.88	267	ePn	Pn	22 52 33.0	+0.8
	baz=265						
YAL				eSn	Sb	22 52 57.0	-0.9
	baz=265						
YAL	Yalta	1.88	267	ePg	Pn	22 52 33.0	+0.8
SIM	Simferopol'	1.92	281⇓	iPn	Pn	22 52 33.2	+0.4
	baz=279						
SIM				Pnm		22 52 33.5	
	baz=279						
SIM				eSn	Sn	22 52 57.4	+0.4
	baz=279						
SIM				Snm		22 52 59.1	
	baz=279						
SIM	Simferopol'	1.92	281	iPg	Pn	22 52 33.2	+0.4
SIM				eSg	Sn	22 52 57.4	+0.4
LZRR	Lazarevskoye	1.99	109	iPg	Pn	22 52 33.7	0.0
LZRR				iSg	Sn	22 52 57.4	-1.3
SEV	Sevastopol'	2.22	269⇓	ePn	Pn	22 52 37.7	+0.8
	baz=267						
SEV				Pnm		22 52 38.0	
	baz=267						
SEV				eSn	Sn	22 53 05.2	+0.9
	baz=267						
SEV				Snm		22 53 07.0	
	baz=267						
SEV				Snm		22 53 07.0	
	baz=267						
SEV	Sevastopol'	2.22	269	ePg	Pn	22 52 37.7	+0.8
SEV				eSg	Sn	22 53 05.2	+0.9
SOC	Sochi	2.36	115	ePn	Pn	22 52 39.2	+0.4
SOC				eSn	Sn	22 53 08.2	+0.5
GUZR	Guzeripl'	2.48	103	iPn	Pn	22 52 40.2	-0.3
GUZR				eSn	Sn	22 53 09.6	-1.3
SHA1	Shidzhatmaz	4.32	100	ePn	Pn	22 53 06.4	+0.4
SHA1				eSn	Sn	22 53 55.7	-0.8
KBZ	Khabaz	4.49	99	ePn	Pn	22 53 08.8	+0.6
KBZ				eSn	Sn	22 53 58.8	-1.5

IDC 17 23:04:59.3±0.9, 27.°86N×140.°09E, h334km±14km, mb3.0/7, mb1 3.3/8, mb1mx3.0/44, mbtmp3.7/8, Error ellipse: s-maj=33.5km s-min=20.2km az=77.0
ISC 17 23:05:00.1±0.8, 27.°8N±0.°2×140.°3E±0.°2, h350km, n8, σ1.°19/9, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.85	112	P	Pn	23 05 50.3	-0.2
	20nm,0.3s,baz=118,slow=23,SNR=5.1						
JCJ				S	S	23 06 29.4	-1.4
	21nm,0.3s,baz=294,slow=19,SNR=4.7						
SONM	Songino Array	33.02	316	P	P	23 11 03.5	-0.3
	0.2nm,0.3s,baz=128,slow=7.7,SNR=8.3						
WRA	Warramunga Arr	47.83	188	P	P	23 13 04.5	+0.6
	0.6nm,0.9s,baz=12,slow=7.2,SNR=4.5						
MKAR	Makanchi Array	48.70	309	P	P	23 13 08.3	-1.9
	0.1nm,0.3s,baz=89,slow=10,SNR=5.0						
ARCES	ARCESS Array B	72.30	340	P	P	23 15 48.5	+0.7
	1.8nm,0.8s,baz=54,slow=12,SNR=3.8						
YKA	Yellowknife Ar	72.31	28	P	P	23 15 48.9	+0.9
	0.4nm,0.5s,baz=292,slow=6.0,SNR=4.8						
KBZ	Khabaz	76.27	312	P	P	23 16 12.0	+1.0
	1.1nm,0.7s,baz=103,slow=8.5,SNR=4.1						
FINES	FINESS Array B	76.54	333	P	P	23 16 12.3	+0.2
	0.8nm,0.3s,baz=72,slow=4.8,SNR=15						

IDC 17 23:13:24.7±4.2, 15.°17S×167.°51E, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.7/38, mbtmp3.9/4, Error ellipse: s-maj=200.3km s-min=36.7km az=144.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	32.74	250	P	P	23 19 59.2	-0.3
	0.5nm,0.7s,baz=74,slow=9.5,SNR=5.9						
ILAR	Eielson Array	86.87	18	P	P	23 26 09.6	-1.3
	0.9nm,1.0s,baz=227,slow=6.3,SNR=5.5						
MKAR	Makanchi Array	97.68	316	P	Pdif	23 27 01.9	+0.3
	0.3nm,0.8s,baz=108,slow=3.2,SNR=3.2						
YKA	Yellowknife Ar	97.83	27	P	Pdif	23 27 02.7	+0.9
	0.2nm,0.5s,baz=258,slow=4.5,SNR=3.7						

IDC 17 23:21:00.3±1.9, 4.°19N×126.°75E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/48, mbtmp3.7/5, MS3.1/2, Ms1 3.1/2, ms1mx2.5/35, Error ellipse: s-maj=108.6km s-min=25.4km az=68.0
ISC 17 23:21:02.3±1.7, 4.°2N±0.°3×127.°1E±0.°6, h10km, n7, σ1.°45/5, mb3.6/5, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	3.42	324⇑	iP	Pb	23 22 04.0	+0.9
FITZ	Fitzroy Crossi	22.21	184	P	P	23 25 58.7	-0.4
	1.9nm,0.7s,baz=30,slow=14,SNR=3.2						
WRA	Warramunga Arr	25.04	164	P	P	23 26 26.9	0.0
	5.1nm,1.2s,baz=340,slow=11,SNR=10						
WRA				LR	LR	23 36 37.8	
	comp=Z,48nm,20.5s,baz=230,slow=37						
PSI	Prapat	28.15	268	LR	LR	23 38 47.3	
	comp=Z,32nm,19.8s,baz=156,slow=38						
ASAR	Alice Springs	28.50	167	P	P	23 26 57.1	-0.9
	0.2nm,0.3s,baz=2.0,slow=10.0,SNR=4.1						
STKA	Stephens Creek	38.45	160	P	P	23 28 25.4	+0.9
	0.9nm,0.3s,baz=321,slow=13,SNR=3.5						
MKAR	Makanchi Array	57.37	325	P	P	23 30 49.4	-1.5
	0.2nm,0.4s,baz=119,slow=8.2,SNR=4.3						

IDC 17 23:30:25.2±2.1, 5.°53S×130.°82E, h0km, mb3.9/1, mb1 3.9/4, mb1mx3.6/32, mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=82.8km s-min=27.4km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.48	202	Pn	Pn	23 33 36.3	-1.5
	0.4nm,0.3s,baz=21,slow=11,SNR=11						
FITZ				Sn	Sn	23 35 52.1	-16
	0.8nm,0.3s,baz=181,slow=21,SNR=7.4						
WRA	Warramunga Arr	14.73	167	Pn	Pn	23 33 56.4	+1.4
	0.3nm,0.3s,baz=348,slow=11,SNR=8.8						
WRA				Sn	Sn	23 36 26.2	-13
	0.4nm,0.3s,baz=352,slow=20,SNR=6.7						
ASAR	Alice Springs	18.28	171	P	Pn	23 34 40.2	-0.2
	0.2nm,0.3s,baz=346,slow=10.0,SNR=7.6						
MKAR	Makanchi Array	67.46	326	P	P	23 41 22.9	+0.1
	0.5nm,0.4s,baz=113,slow=8.1,SNR=13						

TEH 17 23:34:50.6, 35.°99N×53.°61E, h12km, ML3.5
THR 17 23:34:50.4±0.5, 35.°94N×53.°64E, h14km±4km, ML3.6
ISC 17 23:34:51.4±0.9, 35.°98N±0.°04×53.°62E±0.°02, h10km, n54, σ1.°61/55, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISHM	Shahmirzad	0.32	237	ePg	Pg	23 34 56.9	-1.0
ISHM				eSg	Sb	23 35 03.7	-1.0
ISHM				e		23 35 05.5	
IGLO	Ghaloghah	0.55	18	ePg	Pg	23 35 01.4	-0.7
IGLO				e		23 35 12.3	
IANJ	Anjilo	0.56	155	ePg	Pg	23 35 01.2	-1.2
IANJ				e		23 35 15.2	
IALA	Alasht	0.67	279			23 35 15.8	
IALA				ePg	Pg	23 35 03.3	-1.0
IFIR	Firoozkooh	0.78	245	e		23 35 18.9	
IFIR				ePg	Pg	23 35 05.5	-1.0
ILAS	Lasjerd	0.81	222	e		23 35 26.0	
ILAS				ePg	Pg	23 35 06.4	-0.5
IPRN	Peran	1.07	284	ePg	Pg	23 35 10.6	-1.4
IPRN				e		23 35 44.2	
IDMV	Damavand	1.35	253	ePg	Pn	23 35 15.9	-0.7
IDMV				e		23 35 43.2	
IVRN	Varamin	1.83	238	ePn	Pb	23 35 24.4	-0.6
IVRN				e		23 35 53.9	
IMND	Minoodasht	1.92	48	ePg	Pb	23 35 24.8	-1.7
IMND				e		23 35 26.9	
SHRO	Shahrood	1.94	89	ePg	Pb	23 35 25.4	-1.5
SHRO	Shahrood	1.94	89	ePg	Pb	23 35 25.4	-1.5
IHSB	Hasanabad	1.98	255	ePn	Pb	23 35 26.7	-0.9
IHSB				e		23 35 31.2	
CHTH	Charan	2.03	269	ePg	Pb	23 35 27.7	-0.8

CHTH Charan 2.03 269 ePg Pb 23 35 27.7 -0.8
THKV Tehran--Karaj 2.23 269 ePn Pn 23 35 28.9 +0.4
THKV IAML 23 36 05.7
comp=E,247nm,0.4s
THKV Tehran--Karaj 2.23 269 ePn Pn 23 35 28.9 +0.4
KRSH Karshahi 2.35 212 ePn Pn 23 35 31.1 +0.9
KRSH e 23 36 06.8
IQOM Qom 2.37 242 ePn Pb 23 35 31.7 -2.7
IQOM e 23 36 09.5
IMHD Mahdasht 2.42 264 ePn Pb 23 35 34.8 -0.2
IMHD e 23 35 41.1
GHVR GHOM 2.42 232 ePn Pn 23 35 31.9 +0.8
GHVR IAML 23 36 17.2
comp=E,309nm,0.3s
GHVR GHOM 2.42 232 ePn Pn 23 35 31.9 +0.8
QALM Alamut, Qazvin 2.45 281 ePn Pb 23 35 34.2 -1.4
QALM e 23 36 10.7
IGZV Ghazvin 2.78 279 e Sg 23 36 23.7 +3.0
ANAR Anarak 2.79 178 ePn Pn 23 35 37.3 +1.1
ANAR e 23 36 35.8
QAM Ghamsar 2.85 220 ePn Pn 23 35 37.9 +0.8
QAM e 23 36 36.9
IRAZ Razeghan 3.06 260 ePn Pn 23 35 40.8 +0.8
IKLH Kolahrood 3.14 213 ePn Pn 23 35 42.3 +1.1
IKLH e 23 36 38.8
TNSJ Nastanj 3.17 129 ePn Pn 23 35 43.5 +2.0
TNSJ e 23 36 42.3
IZEF Zefreh 3.26 200 ePn Pn 23 35 43.3 +0.5
IZEF e 23 36 41.4
ASAO Ashtian 3.27 245 ePn Pn 23 35 43.6 +0.7
ASAO Ashtian 3.27 245 ePn Pn 23 35 43.6 +0.7
QABG Abgarm-Qazvin 3.29 266 ePn Pn 23 35 44.7 +1.5
BJRD Bojnurd 3.49 59 ePn Pn 23 35 46.7 +0.9
BJRD Bojnurd 3.49 59 ePn Pn 23 35 46.7 +0.9
ISFR Sfrayin 3.69 72 ePn Pn 23 35 50.6 +1.9
ISFR e 23 36 02.2
TKDS Koohdasht(Taba 3.73 128 ePn Pn 23 35 50.5 +1.4
HAGD Aghdareh 3.84 254 ePn Pn 23 35 52.0 +1.3
TPRV Parvadeh(Tabas 3.88 138 ePn Pn 23 35 52.6 +1.4
TPRV e 23 37 09.8
IPIR Pirpir 3.99 215 ePn Pn 23 35 55.1 +2.2
IKRD Kardeh 4.03 77 ePn Pg 23 36 07.2 -1.3
ISAD Sadrabad 4.06 179 ePn Pn 23 35 54.7 +0.9
IEMG Emamgholi 4.29 69 ePn Pn 23 35 59.4 +2.4
IPAY Payeh 4.37 82 ePn Pn 23 36 00.3 +2.3
BDRS Dareh Seyedi 4.39 244 ePn Pn 23 36 01.4 +3.1
HSAM Samen 4.48 248 ePn Pn 23 36 02.3 +2.8
BMDN Meydan 4.57 241 ePn Pn 23 36 03.5 +2.8
IDOB Doab 4.98 246 ePn Pn 23 36 09.7 +3.3
AFRZ Afriz 5.12 118 ePn Pn 23 36 09.8 +1.5
ITEG Tejag 5.24 125 ePn Pn 23 36 11.6 +1.7
IMYA Miami 5.25 84 ePn Pn 23 36 12.5 +2.4
IKFM Kafar-mosalman 5.35 244 ePn Pn 23 36 13.6 +2.4
IKOO Kooshah 5.70 127 ePn Pn 23 36 17.1 +0.8
IMON Monand 5.71 117 ePn Pn 23 36 18.3 +1.9

IDC 17 23:45:44.1±30.0, 22°.13S×178°.39W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.8/34, mbtmp4.1/4, Error ellipse: s-maj=573.5km s-min=153.1km az=90.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.78	246	P	P	23 52 53.6	0.0
	0.7nm,0.3s,baz=90,slow=10,SNR=3.0						
ASAR	Alice Springs	43.82	258	P	P	23 53 52.1	-0.1
	1.2nm,0.5s,baz=97,slow=7.6,SNR=16						
WRA	Warramunga Arr	44.04	264	P	P	23 53 54.1	+0.1
	1.9nm,0.5s,baz=101,slow=8.6,SNR=36						
FITZ	Fitzroy Crossi	52.47	264	P	P	23 54 58.6	-0.5
	1.0nm,0.4s,baz=90,slow=8.1,SNR=3.0						

IDC 17 23:49:27.5±2.5, 4°.50S×101°.48E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.7/40, mbtmp3.9/7, ML4.1/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/37, Error ellipse: s-maj=103.5km s-min=18.0km az=53.0
DJA 17 23:49:31.8±1.1, 4°S±5'×10°2E±°, h12km±10km, M4.0/10, mB5.4/1, MLv4.0/10, Mw(mB)4.9/1
ISC 17 23:49:33.5±1.1, 4°.3S±0°.1×101°.8E±0°.1, h30km, n29, σ1°.12/18, mb3.9/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	Kapahiang	1.05	50	P	Pb	23 49 53.4	+0.3
MNAI	Manna	1.17	92	P	Pb	23 49 55.3	+0.2
KRJI	Kerinci	2.24	352	P	Pn	23 50 10.4	+1.7
PPSI	Pulau Pagai	2.35	311	P	Pn	23 50 10.5	+0.4
LWLI	Liwa	2.37	107	P	Pn	23 50 11.9	+1.4
MDSI	Maura Dua	2.39	94	P	Pn	23 50 12.2	+1.5
KLSI		2.96	97	P	Pn	23 50 20.3	+1.8
PDSI	Padang	3.64	339	P	Pn	23 50 27.8	0.0
SISI	Saibi	4.01	318	P	Pn	23 50 34.3	+1.3
LEM	Lembang	6.32	113	Pn	Pn	23 51 06.4	+1.6
	4.0nm,0.3s,baz=308,slow=19,SNR=2.5						
CISI	Cisompet, Garu	6.80	118	P	Pn	23 51 10.6	-0.8
KAPI	Kappang	17.92	93	LR	LR	00 01 21.6	
	comp=Z,34nm,18.2s,baz=283,slow=39						
PALK	Pallekele	23.99	299	LR	LR	00 03 20.2	
	comp=Z,42nm,18.3s,baz=34,slow=35						
H08S2	Diego Garcia H	29.31	262	T	T	00 25 45.1	
	baz=86,slow=76,SNR=15						
H08S3	Diego Garcia H	29.32	262	T	T	00 25 49.3	
	baz=86,slow=76,SNR=112						
H08S1	Diego Garcia H	29.33	262	T	T	00 25 45.2	
	baz=86,slow=76,SNR=12						
H08N1	Diego Garcia H	30.70	265	T	T	00 27 59.4	
	baz=257,slow=76,SNR=8.7						
H08N2	Diego Garcia H	30.71	265	T	T	00 28 00.8	
	baz=257,slow=76,SNR=6.3						
H08N3	Diego Garcia H	30.72	265	T	T	00 28 00.4	
	baz=257,slow=76,SNR=9.6						
H01W3	Cape Leeuwin H	32.49	161	T	T	00 30 07.6	
	baz=334						
H01W2	Cape Leeuwin H	32.51	161	T	T	00 30 08.0	
	baz=334,SNR=5.9						
H01W1	Cape Leeuwin H	32.51	161	T	T	00 30 11.1	
	baz=334						
WRA	Warramunga Arr	35.30	119	P	P	23 56 25.4	-0.9
	0.5nm,0.3s,baz=303,slow=8.3,SNR=13						
ASAR	Alice Springs	36.46	125	P	P	23 56 35.4	-0.7
	0.9nm,0.6s,baz=302,slow=8.5,SNR=8.2						
STKA	Stephens Creek	46.29	131	P	P	23 57 56.6	0.0
	2.2nm,0.5s,baz=303,slow=7.5,SNR=5.5						
SONM	Songino Array	52.10	4	P	P	23 58 40.7	-0.2
	1.0nm,0.8s,baz=186,slow=10.0,SNR=8.9						
MKAR	Makanchi Array	53.74	343	P	P	23 58 52.1	-0.8
	0.7nm,0.6s,baz=150,slow=8.3,SNR=12						
ZALV	Zalesovo Beam	59.78	348	P	P	23 59 34.9	-0.7
	1.2nm,0.6s,baz=176,slow=4.3,SNR=5.7						
TXAR	Lajitas Array	145.36	41	PKPbc	PKPbc	00 09 09.1	-0.1
	0.9nm,0.6s,baz=296,slow=1.1,SNR=9.6						

GUC 18 00:06:38.5±0.6, 21°.23S×68°.84W, h116km±3km, ML3.7
IDC 18 00:06:39.7±1.1, 21°.35S×68°.30W, h109km±14km, mb3.3/3, mb1 3.4/6, mb1mx3.3/19, mbtmp3.7/6, MS2.3/1, Ms1 2.3/1, ms1mx2.2/9, Error ellipse: s-maj=29.7km s-min=16.7km az=118.0
ISC 18 00:06:37.7±0.9, 21°.21S±0°.03×68°.89W±0°.07, h120km±8km, n27, σ0°.84/42, 16C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.58	287⇑	iP	Pn	00 06 56.3	-0.1
PB01				iS	Sn	00 07 10.2	-0.2
PB01				IAML		00 07 11.0	
	comp=E,8μm,0.2s						
PB09	IPOC Station P	0.67	209⇑	iP	Pn	00 06 57.3	+0.2
PB09				iS	Sn	00 07 11.9	+0.2
PB09				IAML		00 07 14.9	
	comp=N,1μm,0.4s						
PB02	IPOC Station P	0.94	263⇑	iP	Pn	00 06 59.8	+0.4
PB02				iS	Sn	00 07 16.1	+0.3
PB02				IAML		00 07 18.5	
	comp=E,4μm,0.3s						
PB07	IPOC Station P	1.06	241⇑	iP	Pn	00 07 00.9	+0.3
PB07				iS	Sn	00 07 17.9	0.0
PB07				IAML		00 07 19.7	
	comp=N,2μm,0.2s						
PB08	IPOC Station P	1.10	347⇑	iP	Pn	00 07 01.8	+0.6
PB08				iS	Sn	00 07 19.4	+0.5
PB08				IAML		00 07 21.0	
	comp=E,1μm,0.2s						
PB03	IPOC Station P	1.16	224⇑	iP	Pn	00 07 01.8	+0.2
PB03				iS	Sn	00 07 19.4	-0.3
PB03				IAML		00 07 19.9	
	comp=E,2μm,0.6s						
PATCX	Punta Patache	1.24	288⇑	iP	Pn	00 07 03.0	+0.6
PATCX				iS	Sn	00 07 21.8	+0.7
PATCX				IAML		00 07 22.8	
	comp=N,2μm,0.2s						
TA01	Diego Aracena	1.37	298⇑	iP	Pn	00 07 03.9	+0.2
TA01				iS	Sn	00 07 23.3	-0.1
TA01				IAML		00 07 25.7	
	comp=E,2μm,0.3s						
LVC	Limon Verde	1.39	181⇑	iP	Pn	00 07 05.0	+0.6
LVC				iS	Sn	00 07 24.8	+0.3
LVC	Limon Verde	1.39	181	P	Pn	00 07 04.8	+0.5
	comp=E,18nm,0.3s,baz=37,slow=8.6,SNR=132						
LVC				S	Sn	00 07 24.6	+0.1
	comp=E,88nm,0.3s,baz=253,slow=21,SNR=64						
GO01	Chusmiza	1.56	349⇑	iP	Pn	00 07 07.0	+0.5
GO01				iS	Sn	00 07 28.9	+0.6
GO01				IAML		00 07 31.7	
	comp=N,2μm,0.3s						
PB06	IPOC Station P	1.61	203⇑	iP	Pn	00 07 07.1	+0.4
PB06				iS	Sn	00 07 28.8	0.0
PB06				IAML		00 07 31.1	
	comp=E,867nm,0.2s						
PB11	IPOC Station P	1.61	333	iP	Pn	00 07 06.8	0.0
PB11				iS	Sn	00 07 29.1	+0.3
PB11				IAML		00 07 30.4	
	comp=N,2μm,0.2s						
PB04	IPOC Station P	1.62	226⇑	iP	Pn	00 07 06.9	+0.2
PB04				iS	Sn	00 07 28.9	+0.1
PB04				IAML		00 07 32.1	
	comp=N,821nm,0.2s						
PSGC	Pisagua	1.98	324⇑	iP	Pn	00 07 10.7	-0.4
PSGC				iS	Sn	00 07 35.6	-1.0
PB05	IPOC Station P	2.04	217⇑	iP	Pn	00 07 11.8	0.0
PB05				iS	Sn	00 07 37.3	-0.5
PB05				IAML		00 07 38.8	
	comp=E,264nm,0.4s						
PB15	IPOC Station P	2.06	195⇑	eP	Pn	00 07 12.5	+0.3
PB15				iS	Sn	00 07 38.9	+0.4
MNMC	Minye Minye	2.18	342⇑	iP	Pn	00 07 14.1	+0.4
MNMC				iS	Sn	00 07 41.9	+0.6
MNMC				IAML		00 07 44.2	
	comp=N,832nm,0.3s						
LPAZ	La Paz	4.95	8	P	Pn	00 07 53.3	+2.6
	comp=N,0.3nm,0.3s,baz=222,slow=9.6,SNR=3.7						
SIV	San Ignacio	9.05	56	P	Pn	00 08 42.0	-3.5
	comp=N,4.3nm,0.3s,baz=256,slow=11,SNR=96						
CFA	Coronel Fontan	10.37	177	P	Pn	00 09 09.7	+6.5
	comp=N,0.4nm,0.3s,baz=292,slow=20,SNR=13						
NNA	Nana	11.92	319	LR	LR	00 14 36.6	
	comp=N,16nm,21.3s,baz=50,slow=38						
PLCA	Paso Flores	19.51	184	P	Pn	00 10 57.8	-0.2
	comp=N,0.1nm,0.3s,baz=319,slow=6.2,SNR=2.9						
BDFB	Brasilia	20.56	78	P	P	00 11 06.2	-0.9
	comp=N,3.2nm,0.4s,baz=274,slow=6.3,SNR=7.6						
TXAR	Lajitas Array	60.41	325	P	P	00 16 41.6	+6.9
	comp=N,0.2nm,0.5s,baz=62,slow=16,SNR=2.0						
TORD	Torodi Ar. Bea	77.24	70	P	P	00 18 18.9	-0.2
	comp=N,0.4nm,0.6s,baz=251,slow=5.5,SNR=7.3						
MKAR	Makanchi Array	145.39	36	PKPbc	PKPab	00 26 03.0	+1.1
	comp=N,0.5nm,1.0s,baz=316,slow=3.3,SNR=3.7						

NIED 18 00:30:00, 35°.60N×141°.10E, h14km, Mw3.7 Best double couple: Mo4.53000×10^14 NP1:φs12.00000°, δ59.00000°, λ-69.00000°. NP2:φs155.00000°, δ37.00000°, λ-120.00000°.
IDC 18 00:30:12.3±1.1, 35°.41N×141°.04E, h0km, mb3.8/7, mb1 3.9/9, mb1mx3.6/43, mbtmp3.7/9, ML2.7/2, Error ellipse: s-maj=29.9km s-min=17.8km az=93.0
JMA 18 00:30:15.2±0.2, 35°.64N×140°.97E, h15km±1km, M4.0
JMA Felt I J1.
ISC 18 00:30:13.4±1.9, 35°.58N±0°.05×141°.06E±0°.07, h4km±11km, n26, σ1°.67/28, mb3.6/8, 6C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.20	308	⇑P	Pg	00 30 18.6	+1.3
CHOJ				S	Sg	00 30 21.0	+1.0
JSMT	Sammumatsuo	0.50	278	⇑P	Pb	00 30 24.0	-0.7
JIHU	Itakohorinouch	0.58	312	⇑P	Pb	00 30 25.3	-0.7
JIHU				S	Sb	00 30 33.2	-1.4
JCN	Nagara	0.71	257	⇑P	Pb	00 30 28.8	+0.5
JCN				S	Sb	00 30 39.4	+0.9
BSO4	Boso 4	0.83	225	⇓P	Pn	00 30 31.6	-0.1
BSO3	Boso 3	0.89	210	⇓P	Pn	00 30 32.5	+0.1
BSO1	Boso 1	0.92	184	⇑P	Pn	00 30 32.7	+0.1
JYT	Yasato	0.95	313	⇑P	Pb	00 30 30.9	-1.5
JYT				S	Sg	00 30 42.1	-2.0
JHO	Hitachi	1.10	339	P	Pb	00 30 33.5	-1.5
JHO				S	Sg	00 30 46.8	-2.1
MJAR	Matsushiro Arr	2.50	293	Pn	Pn	00 30 54.1	-0.7
	1.0nm,0.3s,baz=98,slow=7.9,SNR=20						
MJAR				Sn	Sb	00 31 30.3	+0.4
	1.2nm,0.3s,baz=316,slow=13,SNR=7.6						
MAT	Matsushiro	2.50	293	P	Pn	00 30 54.0	-0.8
MAT				eS	Sb	00 31 28.3	-1.7
JHJ	Hachijo jima 2	2.67	204	Pn	Pn	00 30 54.2	-2.8
	4.7nm,0.3s,baz=247,slow=19,SNR=1.5						
JHJ				Sn	Sn	00 31 26.1	-3.7
	18nm,0.3s,baz=84,slow=20,SNR=1.5						
H11N2	WAKE ISLAND Hy	27.69	118	T	T	01 05 01.4	
	baz=310,slow=75,SNR=90						
H11N1	WAKE ISLAND Hy	27.69	118	T	T	01 04 59.7	
	baz=310,slow=75,SNR=74						
H11N3	WAKE ISLAND Hy	27.70	118	T	T	01 05 04.2	
	baz=310,slow=75,SNR=71						
SEY	Seymchan	28.27	11	P	P	00 36 08.3	+1.0
	0.5nm,0.3s,baz=349,slow=23,SNR=4.3						
H11S1	WAKE ISLAND Hy	28.35	120	T	T	01 05 51.0	
	baz=312,slow=75,SNR=375						
H11S3	WAKE ISLAND Hy	28.35	120	T	T	01 05 49.3	
	baz=312,slow=75,SNR=294						
H11S2	WAKE ISLAND Hy	28.36	120	T	T	01 05 50.5	
	baz=312,slow=75,SNR=389						
SONM	Songino Array	28.39	306	P	P	00 36 09.1	+0.4
	0.4nm,0.6s,baz=112,slow=12,SNR=1.8						
MKAR	Makanchi Array	44.66	303	P	P	00 38 27.0	-0.1
	0.5nm,0.7s,baz=82,slow=7.2,SNR=5.6						
ILAR	Eielson Array	50.88	32	P	P	00 39 15.2	+0.1
	0.5nm,0.8s,baz=271,slow=6.0,SNR=4.4						
BVAR	Borovoye Array	51.35	313	P	P	00 39 22.2	+3.5
	0.6nm,0.6s,baz=104,slow=6.1,SNR=4.1						
WRA	Warramunga Arr	55.58	188	P	P	00 39 48.3	-1.7
	1.4nm,0.8s,baz=5.7,slow=7.7,SNR=9.4						
ASAR	Alice Springs	59.31	188	P	P	00 40 15.0	-1.3
	0.2nm,0.4s,baz=14,slow=11,SNR=2.1						
FINES	FINESS Array B	69.97	332	P	P	00 41 27.4	+1.9
	3.2nm,1.1s,baz=207,slow=16,SNR=1.6						

IDC 18 01:11:45.6±0.9, 4°.21N×71°.28W, h0km, mb3.5/7, mb1 3.8/10, mb1mx3.6/31, mbtmp3.7/10, ML2.9/3, MS2.8/3, Ms1 2.8/3, ms1mx2.5/34, Error ellipse: s-maj=21.9km s-min=15.7km az=37.0
RSNC 18 01:11:48.7±1.5, 3°.90N×71°.53W, h0km±11km, ML3.5, Mw3.6
ISC 18 01:11:46.0±1.8, 3°.99N±0°.04×71°.41W±0°.05, h2km±11km, n27, σ1°.64/39, mb3.5/6, 1C-2D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTGC	Puerto Gaitan,	0.75	286⇑	iP	Pg	01 12 00.1	-0.3
PTGC				eS	Sg	01 12 09.8	-0.4
GUVC	San Jose del G	1.88	220	eP	Pn	01 12 18.2	-1.0
GUVC				eS	Sn	01 12 42.2	-1.4
GUVC				i		01 12 47.7	
	comp=Z,675nm,0.2s						
CHIC	Chingaza	2.40	286	eP	Pn	01 12 27.1	+0.3
CHIC				eS	Sb	01 13 00.0	-0.5
CHIC				i		01 13 02.0	
	comp=Z,326nm,0.5s						
TAMC	Tame, Arauca	2.46	351⇓	eP	Pb	01 12 30.2	-0.9
TAMC				eS	Sg	01 13 06.3	+1.1
TAMC				i		01 13 07.5	
	comp=Z,242nm,0.4s						
RUSC	La Rusia	2.52	319⇓	eP	Pn	01 12 30.1	+1.5
RUSC				eS	Sb	01 13 02.9	-1.2
RUSC				i		01 13 16.5	
	comp=Z,172nm,1.7s						
ROSC	El Rosal	3.02	286	Pn	Pn	01 12 36.8	+1.4
	comp=Z,7.0nm,0.3s,baz=121,slow=20,SNR=9.4						
ROSC				Pg	Pg	01 12 45.5	+1.5
	comp=Z,17nm,0.3s,baz=129,slow=14,SNR=15						
ROSC				Lg	Lg	01 13 25.4	
	comp=Z,24nm,0.3s,baz=134,slow=23,SNR=5.3						
ROSC	El Rosal	3.02	286	eP	Pn	01 12 36.6	+1.2
ROSC				i		01 13 37.7	
	comp=Z,91nm,0.6s						
MACC	Macarena, Meta	3.04	233	eP	Pn	01 12 36.9	+1.6
MACC				eS	Sn	01 13 14.3	+1.9
MACC				i		01 13 21.1	
	comp=Z,214nm,0.5s						
SPBC	San Pablo de B	3.12	302	eP	Pn	01 12 38.5	+2.0
SPBC				eS	Sb	01 13 20.6	-0.5
SPBC				i		01 13 27.7	
	comp=Z,93nm,0.3s						
PRAC	Prado	3.48	266	eP	Pn	01 12 42.3	+1.0
PRAC				i		01 13 42.6	
	comp=Z,79nm,0.6s						
PAMC	Pamplona, Colo	3.57	339	eP	Pn	01 12 44.9	+2.0
PAMC				i		01 13 46.4	
	comp=Z,115nm,0.4s						
NORC	Norcasia	3.79	295	eP	Pn	01 12 47.0	+1.4
NORC				eS	Sn	01 13 28.8	-2.0
NORC				i		01 13 47.6	
	comp=Z,36nm,0.5s						
ORTC	Ortega, Tolima	3.83	269	eP	Pn	01 12 46.4	+0.3
ORTC				eS	Sg	01 13 46.3	-2.8
ORTC				i		01 13 52.4	
	comp=Z,92nm,0.6s						
PTBC	PUERTO BERRIO,	3.95	310	eP	Pn	01 12 49.3	+1.5
PTBC				i		01 13 52.9	
	comp=Z,43nm,0.7s						
ANIL	Santa Ana	4.01	277	eP	Pn	01 12 50.0	+1.1
ANIL				eS	Sb	01 13 48.5	+1.7
ANIL				i		01 13 51.5	
	comp=Z,856nm,0.6s						
FLOC	Florencia	4.86	241	eP	Pn	01 13 02.8	+2.4
FLOC				eS	Sb	01 14 08.8	-2.3
FLOC				i		01 14 21.8	
	comp=Z,102nm,0.4s						
ZARC	Zaragoza, Cauc	4.89	316	eP	Pn	01 13 02.5	+1.8
ZARC				i		01 14 06.6	
	comp=Z,26nm,0.6s						
SDV	Santo Domingo	4.93	9	Pn	Pn	01 12 59.4	-2.0
	comp=Z,7.8nm,0.3s,baz=349,slow=14,SNR=22						
SDV				Sn	Sn	01 13 59.8	+0.6
	comp=Z,21nm,0.3s,baz=335,slow=17,SNR=3.0						
SDV				Lg	Lg	01 14 23.8	
	comp=Z,17nm,0.3s,baz=82,slow=23,SNR=7.4						
SDV				LR	LR	01 14 56.1	
	comp=Z,50nm,19.2s,baz=325,slow=41						
PCRV	Puerto La Cruz	9.11	47	Pn	Pn	01 13 57.5	-1.2
	comp=Z,1.0nm,0.3s,baz=215,slow=12,SNR=1.9						
LPAZ	La Paz	20.40	171	P	Pn	01 16 26.9	-0.3
	comp=Z,1.7nm,0.7s,baz=348,slow=13,SNR=6.0						
LPAZ				LR	LR	01 24 29.4	
	comp=Z,25nm,22.0s,baz=100,slow=37						
APG	El Apazote	21.72	302	P	P	01 16 40.0	+0.9
	comp=Z,1.7nm,0.7s,baz=55,slow=5.6,SNR=3.7						
SIV	San Ignacio	22.33	153	P	P	01 16 47.9	+2.5
	comp=Z,1.1nm,0.9s,baz=3.6,slow=8.2,SNR=5.3						
SIV				Lg	Lg	01 23 25.7	
	comp=Z,1.2nm,0.7s,baz=248,slow=22,SNR=2.1						
SIV				LR	LR	01 25 34.6	
	comp=Z,49nm,18.3s,baz=155,slow=37						
TXAR	Lajitas Array	39.62	313	P	P	01 19 18.8	-0.7
	comp=Z,0.3nm,0.6s,baz=134,slow=11,SNR=4.2						
PLCA	Paso Flores	44.51	179	P	P	01 20 01.2	+2.0
	comp=Z,1.7nm,1.2s,baz=1.9,slow=11,SNR=3.0						
YKA	Yellowknife Ar	66.49	340	P	P	01 22 34.3	-2.7
	comp=Z,0.1nm,0.4s,baz=134,slow=6.6,SNR=6.3						
TORD	Torodi Ar. Bea	72.66	78	P	P	01 23 14.9	-1.2
	comp=Z,0.5nm,0.9s,baz=275,slow=4.2,SNR=1.5						
ASAR	Alice Springs	148.69	229	PKPbc	PKPdf	01 31 34.1	+1.8
	comp=Z,0.3nm,0.4s,baz=130,slow=3.1,SNR=2.7						

THE 18 01:12:29.7, 38°.23N×20°.37E, h10km, ML3.2/11, Error ellipse: s-maj=1.4km s-min=0.6km az=257.0
ATH 18 01:12:29.6, 38°.21N×20°.40E, h11km, ML2.5/12, Error ellipse: s-maj=1.7km s-min=0.9km az=245.0
ISC 18 01:12:29.8±0.9, 38°.21N±0°.02×20°.40E±0°.04, h11km±4km, n61, σ0°.59/86, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXRA	Lixouri, Kepha	0.03	116	P	Pg	01 12 31.8	0.0
LXRA				S	Sg	01 12 33.1	-0.2
LXR1	Lixouri, Cepha	0.03	114	P	Pg	01 12 31.8	0.0
LXR1				S	Sg	01 12 33.3	+0.1
	100μm,0.2s						
CHV1	Chavriata, Kef	0.03	205	P	Pg	01 12 31.8	0.0
CHV1				S	Sg	01 12 33.2	-0.1
	81μm,0.2s						
KEF3	Kipouria, Keph	0.04	255	P	Pg	01 12 31.9	0.0
KEF3				S	Sg	01 12 33.4	-0.1
KEF4	Livadi, Kephal	0.05	24	P	Pg	01 12 31.8	-0.1
KEF4				S	Sg	01 12 33.3	-0.2
ARGA	Argostoli. Kep	0.07	121	P	Pg	01 12 32.2	0.0
ARGA				S	Sg	01 12 33.8	-0.1
ARG2	Argostoli	0.08	117	P	Pg	01 12 32.2	0.0
ARG2				S	Sg	01 12 34.0	0.0
	34μm,0.2s						
KEF2	Argostoli. Kep	0.08	125	P	Pg	01 12 32.4	+0.1
KEF2				S	Sg	01 12 34.1	-0.1
VLS	Valsamata	0.15	104	P	Pg	01 12 33.2	-0.1
VLS				S	Sg	01 12 35.9	+0.1
	13μm,0.1s						
VLS	Valsamata	0.15	104	P	Pg	01 12 33.2	-0.1
VLS				S	Sg	01 12 35.6	-0.2
VLS				AML	AML	01 12 35.9	
	comp=N,22575μm,0.1s						
VLS				AML	AML	01 12 36.0	
	comp=E,26877μm,0.1s						
VSK1	VASILIKIADES	0.23	34	P	Pg	01 12 34.6	-0.1
VSK1				S	Sg	01 12 38.6	+0.6
	comp=E,8μm,0.2s						
FSK	Fiskardo	0.28	27	P	Pg	01 12 35.4	-0.1
FSK				S	Sg	01 12 39.5	+0.3
	comp=E,3μm,0.1s						
FSK	Fiskardo	0.28	27	P	Pg	01 12 35.4	-0.1
FSK				S	Sg	01 12 39.1	-0.1
FSK				AML	AML	01 12 40.0	
	comp=N,3008μm,0.2s						
FSK				AML	AML	01 12 40.3	
	comp=E,8263μm,0.1s						
KFL	Anninata	0.32	109	P	Pg	01 12 36.2	-0.1
KFL				S	Sg	01 12 41.3	+0.6
	comp=E,6μm,0.3s						
KFL	Anninata	0.32	109	P	Pg	01 12 36.2	-0.1
KFL				S	Sg	01 12 40.7	0.0
KFL				AML	AML	01 12 41.8	
	comp=N,5393μm,0.3s						
KFL				AML	AML	01 12 42.0	
	comp=E,17174μm,0.3s						
VLMS	Volimes, Zakyn	0.40	148	P	Pg	01 12 37.5	-0.2
VLMS				S	Sg	01 12 44.3	-0.6
VLMS				AML	AML	01 12 45.0	
	comp=E,5345μm,0.1s						
VLMS				AML	AML	01 12 46.5	
	comp=N,6008μm,0.2s						
EVGI	Lefkada island	0.45	26	P	Pg	01 12 38.5	-0.2
EVGI				S	Sb	01 12 46.0	-0.6
EVGI	Lefkada island	0.45	26	P	Pg	01 12 38.5	-0.2
EVGI				S	Sg	01 12 45.3	+0.6
MGNA	Meganis	0.54	35	P	Pg	01 12 39.9	-0.4
MGNA				S	Sb	01 12 48.2	-0.8
ZAK2	Zakynthos	0.58	137	P	Pg	01 12 41.3	+0.2
ZAK2				S	Sb	01 12 51.4	+1.2
	comp=N,5μm,0.4s						
LKD2	Lefkada island	0.61	19	P	Pg	01 12 41.1	-0.5
LKD2				S	Sg	01 12 49.3	-0.3
LKD2	Lefkada island	0.61	19	P	Pg	01 12 41.2	-0.5
LKD2				AML	AML	01 12 56.3	
	comp=N,430μm,0.2s						
LKD2				AML	AML	01 12 57.6	
	comp=E,510μm,0.3s						
AST1	Astakos	0.63	59	P	Pg	01 12 41.3	-0.8
AST1				S	Sb	01 12 51.8	+0.1
	comp=E,1μm,0.3s						

KRI1	kERI	0.64	149	P	Pg	01 12 41.7	-0.6
KRI1				S	Sb	01 12 52.6	+0.6
	comp=E,1μm,0.2s						
TSLK	Tsoukalades, L	0.64	18	P	Pg	01 12 41.9	-0.4
TSLK	Tsoukalades, L	0.64	18	P	Pg	01 12 41.9	-0.4
TSLK				AML	AML	01 12 56.9	
	comp=E,445μm,0.4s						
TSLK				AML	AML	01 12 60.0	
	comp=N,437μm,0.4s						
VTN	Vitineika	0.69	115	P	Pg	01 12 43.0	-0.1
VTN				S	Sb	01 12 54.5	+1.2
VTN	Vitineika	0.69	115	P	Pg	01 12 43.0	-0.1
PDO	Prodromos	0.72	58	P	Pg	01 12 43.7	-0.2
PDO				AML	AML	01 13 00.3	
	comp=E,696μm,0.4s						
PDO				AML	AML	01 13 01.3	
	comp=N,1025μm,0.3s						
AXS	Araxos	0.77	91	P	Pg	01 12 44.2	-0.4
AXS	Araxos	0.77	91	P	Pg	01 12 44.3	-0.4
AXS				AML	AML	01 12 59.1	
	comp=N,466μm,0.2s						
AXS				AML	AML	01 13 03.1	
	comp=E,439μm,0.4s						
RLS	Riolos of Patr	0.85	100	P	Pg	01 12 45.5	-0.8
RLS	Riolos of Patr	0.85	100	P	Pg	01 12 45.6	-0.7
RLS				AML	AML	01 13 01.4	
	comp=E,219μm,0.3s						
RLS				AML	AML	01 13 01.6	
	comp=N,384μm,0.3s						
PVO	Paravola	0.97	65	P	Pg	01 12 48.2	-0.3
PVO	Paravola	0.97	65	P	Pg	01 12 48.3	-0.3
PVO				AML	AML	01 13 09.5	
	comp=E,676μm,0.3s						
PVO				AML	AML	01 13 10.5	
	comp=N,548μm,0.3s						
DRO	Drossia	1.07	104	P	Pb	01 12 49.6	-0.7
DRO				S	Sn	01 13 06.8	+1.3
	comp=N,352nm,0.2s						
DRO	Drossia	1.07	104	P	Pb	01 12 49.6	-0.7
DRO				AML	AML	01 13 09.9	
	comp=N,532μm,0.2s						
DRO				AML	AML	01 13 10.6	
	comp=E,852μm,0.2s						
AMT	Artemida-Makis	1.24	123	P	Pn	01 12 52.8	-0.3
ANX	Ano Chora	1.25	72	P	Pn	01 12 53.2	-0.2
ANX	Ano Chora	1.25	72	P	Pn	01 12 53.1	-0.2
ANX				AML	AML	01 13 21.6	
	comp=N,338μm,0.6s						
ANX				AML	AML	01 13 22.0	
	comp=E,301μm,0.5s						
EVR	Evrytania	1.31	57	P	Pn	01 12 54.2	+0.1
IGT	Igoumenitsa	1.32	358	P	Pg	01 12 54.7	-0.5
SERG	Sergoula	1.32	81	P	Pn	01 12 53.5	-0.7
TRIZ	Trizonia	1.32	83	P	Pb	01 12 54.7	0.0
KALE	Kalithea	1.38	82	P	Pn	01 12 54.4	-0.7
KALE	Kalithea	1.38	82	P	Pn	01 12 54.4	-0.7
KLV	Kalavryta, Ach	1.39	96	P	Pn	01 12 55.2	0.0
KLV	Kalavryta, Ach	1.39	96	P	Pn	01 12 54.9	-0.3
KEK	Kerkira	1.57	343	P	Pb	01 12 58.3	-0.6
MAKR	Makrakomi, Fth	1.57	59	P	Pb	01 13 00.2	+0.2
ITM	Ithomi	1.59	130	P	Pb	01 12 59.0	-0.3
AGG	Agios Georgios	1.71	61	P	Pg	01 13 02.5	-0.2
AXAR	Agios Charalam	1.86	72	P	Pb	01 13 03.7	0.0
KPRO	Kipourio	1.89	23	P	Pb	01 13 04.9	+0.5
PROD	Prodromos	1.97	88	P	Pb	01 13 05.2	-0.5
LKR	Lokris	2.09	77	P	Pb	01 13 06.5	-1.2
VIL2	Platees	2.26	89	P	Pb	01 13 09.4	-1.2
KRND	KRANIDI	2.33	110	P	Pb	01 13 10.9	-0.9
DID	Didima	2.35	107	P	Pb	01 13 10.5	-1.7
XOR	Xorichti	2.47	61	P	Pb	01 13 12.1	+2.1
AOS	Alonnisos	2.88	70	P	Pn	01 13 17.1	+1.4

RSPR 18 01:14:59.0, 18.84N×64.39W, h26km±10km, MD2.4/4
TRN 18 01:14:58.1, 18.77N×64.57W, h26km, M2.4(RSPR), 7C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	Tortola	0.35	187⇓	eP	Pn	01 15 07.9	+0.4
TBVI	Tortola	0.35	187⇓	eP	Pn	01 15 07.9	+0.4
TBVI				eS	Sn	01 15 14.4	+0.8
STVI	Saint Thomas	0.55	222⇑	eP	Pn	01 15 11.2	+0.9
STVI	Saint Thomas	0.55	222⇑	eP	Pn	01 15 11.2	+0.9
STVI				eS	Sn	01 15 20.7	+2.1
CUPR	Culebra, Puert	0.82	236⇑	eP	Pn	01 15 14.9	+1.0
CUPR	Culebra, Puert	0.82	236	eS	Sn	01 15 27.9	+2.7
MTP	Monte Pirata	1.15	235⇑	eP	Pb	01 15 19.7	+0.4
MTP	Monte Pirata	1.15	235⇑	eP	Pb	01 15 19.7	+0.4
MTP				eS	Sb	01 15 36.1	+2.3
CBYP	Canovanas	1.32	248⇑	eP	Pb	01 15 22.3	+0.1
CBYP	Canovanas	1.32	248	eS	Sb	01 15 40.2	+1.5
CBYP	Canovanas	1.32	248⇑	eP	Pb	01 15 22.3	+0.1
CBYP				eS	Sb	01 15 40.2	+1.5

JMA 18 01:21:16.6±0.1, 24.60N×122.18E, h57km±3km, M1.8
TAP 18 01:21:17.7, 24.64N×122.10E, h44km, ML2.7, C
ISC 18 01:21:17.1±1.3, 24.64N±0.04×122.18E±0.03, h48km±8km, n37, σ0.40/65, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.10	210	P	Pn	01 21 24.8	+0.3
	baz=164						
EOS1				iS	Sn	01 21 30.7	+0.9
	baz=164						
TWC	Suao	0.30	265	iP	Pn	01 21 25.7	-0.3
	baz=260						
TWC				iS	Sn	01 21 31.6	-0.8
	baz=260						
NTC	Toucheng	0.39	304	eP	Pn	01 21 27.1	+0.2
	baz=310						
NTC				eS	Sn	01 21 34.1	+0.3
	baz=310						
TWB1	Santiao Chiao	0.41	335	eP	Pn	01 21 27.5	+0.4
	baz=345						
TWB1				eS	Sn	01 21 34.2	-0.1
	baz=345						
ILA	Ilan	0.42	288	eS	Sn	01 21 33.9	-0.5
	baz=290						
ENA	Nanau	0.45	243	eS	Sn	01 21 35.0	-0.1
	baz=236						
TIPB	Shuangxi	0.47	316	eP	Pn	01 21 28.0	+0.2
	baz=322						
TIPB				eS	Sn	01 21 35.0	-0.5
	baz=322						
TWE	Neicheng	0.48	280	eP	Pn	01 21 27.6	-0.3
	baz=281						
TWE				eS	Sn	01 21 34.8	-0.8
	baz=281						
SLBB	Yuanshan	0.51	283	eP	Pn	01 21 28.3	-0.1
	baz=284						
SLBB				eS	Sn	01 21 35.6	-0.9
	baz=284						
ENTT	Nioudou	0.56	271	eP	Pn	01 21 28.9	0.0
	baz=269						
ENTT				eS	Sn	01 21 36.9	-0.6
	baz=269						
NWF	Wu-fen Shan	0.57	320	eP	Pn	01 21 29.3	+0.2
	baz=325						
NWF				eS	Sn	01 21 38.4	+0.7
	baz=325						
WFSB	Wu-fen Shan	0.57	320	eP	Pn	01 21 29.2	+0.2
	baz=325						
WFSB				eS	Sn	01 21 37.6	+0.1
	baz=325						
NDT	Datong Townshi	0.61	267	eP	Pn	01 21 29.9	+0.3
	baz=265						
NDT				eS	Sn	01 21 38.2	-0.3
	baz=265						
NWLT	Wulai	0.64	283	eP	Pn	01 21 30.4	+0.5
	baz=283						
NWLT				eS	Sn	01 21 38.8	-0.3
	baz=283						
TWA	Mucha	0.64	302	eS	Sn	01 21 39.0	-0.4
	baz=305						
NACB	Ninganchiao	0.71	230	P	Pn	01 21 30.5	-0.3
	baz=224						
NACB				S	Sn	01 21 41.5	+0.8
	baz=224						
JYNG	Yonagunijimaku	0.72	105	P	Pn	01 21 31.0	0.0
JYNG				eS	Sn	01 21 41.0	0.0
TAP	Taipei	0.73	303	eS	Sn	01 21 41.3	-0.1
	baz=306						
YHNB	Yeheng	0.73	273	eP	Pn	01 21 31.7	+0.4
	baz=272						
YHNB				eS	Sn	01 21 41.4	-0.2
	baz=272						
NSK	Sanguang	0.75	273	eP	Pn	01 21 31.6	+0.1
	baz=272						
NSK				eS	Sn	01 21 41.5	-0.4
	baz=272						
YM01	YM01	0.75	313	eP	Pn	01 21 31.7	+0.2
	baz=316						
YM01				eS	Sn	01 21 42.0	0.0
	baz=316						
NNSB	Datong	0.76	254	eP	Pn	01 21 31.6	0.0
	baz=251						
NNSB				eS	Sn	01 21 41.9	-0.3
	baz=251						
NNSH	Datong	0.76	254	eP	Pn	01 21 31.7	+0.1
	baz=251						
NNSH				eS	Sn	01 21 42.0	-0.2
	baz=251						
NNS	Nan Shan	0.76	255	eP	Pn	01 21 31.6	-0.1
	baz=252						
NNS				eS	Sn	01 21 41.9	-0.4
	baz=252						
YM10	YM10	0.77	313	eS	Sn	01 21 42.2	-0.1
	baz=316						
ETLH	Xiulin Townshi	0.77	236	eP	Pn	01 21 31.9	+0.1
	baz=232						
ETLH				eS	Sn	01 21 42.4	+0.1
	baz=232						
YOJ	Yonaguni jima	0.77	103	P	Pn	01 21 31.7	0.0
YOJ				eS	Sn	01 21 42.3	0.0
YM04	YM04	0.78	311	eP	Pn	01 21 31.6	-0.2
	baz=314						
YM04				eS	Sn	01 21 43.0	+0.5
	baz=314						
TWS1	Kuangyinshan	0.83	304	eP	Pn	01 21 32.9	+0.4
	baz=306						
TWS1				eS	Sn	01 21 44.3	+0.5
	baz=306						
NCU	National Centr	0.96	290	eP	Pn	01 21 34.1	-0.2
	baz=291						
NCU				eS	Sn	01 21 46.7	-0.2
	baz=291						
WHF	Hehuan Shan	0.97	240	P	Pn	01 21 34.7	-0.1
	baz=236						
WHF				S	Sn	01 21 47.5	-0.2
	baz=236						
LIOB	Emei	1.06	271	eP	Pn	01 21 35.9	+0.2
	baz=270						
LIOB				eS	Sn	01 21 49.3	0.0
	baz=270						
ESL	Shilin	1.07	220	eS	Sn	01 21 49.9	+0.5
	baz=216						
VWDT	VWDT	1.29	228	eS	Sn	01 21 55.7	+0.8
	baz=224						
IRIF	Iriomote-Funau	1.44	102	S	Sn	01 21 58.1	-0.4
JKRS	Kuro-shima	1.71	103	S	Sn	01 22 05.3	+0.2
JIJ	Ishigaki jima	1.81	98	P	Pn	01 21 45.7	0.0
JIJ				S	Sn	01 22 06.7	-0.8

IDC 18 01:34:24.5±1.7, 63.67N×150.23W, h100km±18km, mb3.3/4, mb1 3.4/7, mb1mx3.1/38, mbtmp3.5/7, Error ellipse: s-maj=31.2km s-min=12.0km az=115.0
NEIC 18 01:34:26.9±1.1, 63.66N±0.04×149.64W±0.08, h125km±4km, Error ellipse: s-maj=5.4km s-min=5.0km az=50.0
AEIC 18 01:34:27±1.0, 63.65N±0.03×149.56W±0.08, h122km±4km, ML3.2/82, Error ellipse: s-maj=5.2km s-min=4.9km az=49.0
ISC 18 01:34:26.9±0.8, 63.64N±0.03×149.63W±0.03, h126km±5km, n107, σ0.77/123, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCK	McKinley	0.32	74		Pn	01 34 44.9	+0.2
MCK					Sn	01 34 57.6	-0.5
TRF	Thorofare Moun	0.35	237		Pn	01 34 45.3	+0.3
RND	Reindeer	0.42	124		Pn	01 34 45.1	-0.1
RND					Sn	01 34 58.4	-0.6
BWN	Browne	0.54	8		Pn	01 34 46.3	+0.6
BWN					Sn	01 34 59.7	-0.3
KTH	Kantishna Hill	0.58	262		Pn	01 34 46.4	+0.3
KTH					Sn	01 35 00.2	-0.5
HUR	Hurricane	0.67	180		Pn	01 34 46.6	0.0
BPAW	Bear Paw Mtn.	0.76	308		Pn	01 34 47.2	-0.1
BPAW					Sn	01 35 01.7	-1.1
WAT2	Susitna Watana	0.83	145		Pn	01 34 47.8	-0.3
WAT1	Susitna Watana	0.95	149		Pn	01 34 48.8	-0.2
WAT1					Sn	01 35 05.2	-0.6
NEA	Nenana	0.97	14		Pn	01 34 49.0	-0.1
NEA					Sn	01 35 05.0	-1.0
WRH	Wood River Hil	1.07	39		Pn	01 34 50.0	-0.1
WRH					Sn	01 35 06.9	-0.8
DHY	Denali Highway	1.17	118		Pn	01 34 51.4	+0.1
CHUM	Lake Minchumin	1.22	283		Pn	01 34 51.6	+0.1
CHUM					Sn	01 35 09.8	-0.6
CCB	Clear Creek Bu	1.29	38		Pn	01 34 52.1	-0.2
CCB					Sn	01 35 10.7	-0.9
WAT6	Susitna Watana	1.37	140		Pn	01 34 53.5	+0.1
WAT6					Sn	01 35 14.1	+0.6
PPLA	Purkeypile	1.38	238		Pn	01 34 53.7	+0.2
HDA	Harding Lake	1.41	56		Pn	01 34 53.5	-0.1
MDM	Murphy Dome	1.46	24		Pn	01 34 54.4	+0.2
TCOL	CIGO, UAF Yank	1.46	31		Pn	01 34 54.3	+0.1
TCOL					Sn	01 35 14.3	-0.7
COLA	College	1.46	31		Pn	01 34 54.2	+0.1
COLA					Sn	01 35 14.1	-0.9
MLY	Manley	1.47	341		Pn	01 34 54.3	-0.1
MLY					Sn	01 35 14.4	-1.1
PS08	TAPS Pump Stn8	1.53	53		Pn	01 34 54.8	-0.2
IL31		1.65	45		Pn	01 34 56.1	-0.2
ILAR	Eielson Array	1.65	45	P	Pn	01 34 55.9	-0.5
	6.7nm,0.3s,baz=226,slow=11,SNR=249						
ILAR				S	Sn	01 35 17.9	-1.0
	5.1nm,0.3s,baz=222,slow=16,SNR=6.7						
PS10	TAPS Pump St10	1.74	96		Pn	01 34 58.7	+1.1
POKR	Poker Plat Res	1.76	32		Pn	01 34 57.8	+0.1
SKT	Skwentna	1.89	208		Pn	01 34 59.1	-0.2
GHO	Glory Hole Cre	1.91	170		Pn	01 35 00.1	+0.5
SML	Sawmill	1.94	161		Pn	01 35 00.1	+0.2
PAX	Paxson	2.00	108		Pn	01 35 00.9	+0.2
PMR	Palmer	2.07	173		Pn	01 35 02.0	+0.5
SCM	Sheep Creek Mo	2.10	149		Pn	01 35 02.1	+0.1
RIDG	Independent Ri	2.13	85		Pn	01 35 02.5	+0.2
PS06	TAPS Pump Stn6	2.22	359		Pn	01 35 03.5	+0.2
SUA	Susitna One	2.25	194		Pn	01 35 04.8	+1.0
KNK	Knik Glacier	2.30	166		Pn	01 35 04.7	+0.3
PS11	TAPS Pump St11	2.47	128		Pn	01 35 06.9	+0.4
DOT	Dot Lake	2.48	87		Pn	01 35 06.6	-0.1
FIS	Fire Island	2.52	186		Pn	01 35 08.5	+1.4
SCRK	Sand Creek	2.53	80		Pn	01 35 07.3	0.0
RC01	Rabbit Creek A	2.56	181		Pn	01 35 09.2	+1.5
PRP	Porcupine Dome	2.58	41		Pn	01 35 08.4	+0.4
SPCG	Spurr Capps Gl	2.61	206		Pn	01 35 09.2	+0.8
CRP	Crater Peak	2.66	207		Pn	01 35 10.1	+1.0
SPBG	Spurr Blockage	2.71	209		Pn	01 35 10.2	+0.5
SPCR	Spurr Chakacha	2.73	207		Pn	01 35 10.8	+0.9
SPWE	Spurr West	2.74	211		Pn	01 35 11.2	+1.1
MENT	Mentasta	2.76	102		Pn	01 35 10.3	0.0
PWL	Port Wells	2.86	167		Pn	01 35 11.8	+0.3
IM03		2.94	325		Pn	01 35 12.4	0.0
JPK	Jack Peak	2.96	150		Pn	01 35 12.3	-0.5
TTA	Tatalina	2.97	259		Pn	01 35 12.8	-0.2
TT01	Tatalina	2.98	258		Pn	01 35 12.9	-0.2
PS12	TAPS Pump St12	3.01	134		Pn	01 35 13.5	+0.1
GLI	Glacier Island	3.02	156		Pn	01 35 13.9	+0.4
SLKM	Skilak Lake	3.16	185		Pn	01 35 16.1	+0.6
FID	Port Fidalgo	3.26	152		Pn	01 35 16.7	0.0
DFR	Drift River	3.38	206		Pn	01 35 19.6	+1.2
RDJH	Redoubt Jeurge	3.41	207		Pn	01 35 19.9	+1.1
GLB	Gilahina Butte	3.49	127		Pn	01 35 19.8	+0.1
RDWB	Redoubt West	3.51	207		Pn	01 35 21.2	+1.1
RSO	Redoubt South	3.52	206		Pn	01 35 21.5	+1.2
SEW	Seward	3.55	179		Pn	01 35 20.5	-0.1
RED	Redoubt Volcan	3.56	206		Pn	01 35 21.5	+0.7
HIN	Hinchinbrook I	3.58	154		Pn	01 35 20.6	-0.4
BC03		3.58	96		Pn	01 35 20.6	-0.3
EYAK	Cordova Ski Ar	3.60	148		Pn	01 35 21.4	+0.1
COLD	Coldfoot	3.61	356		Pn	01 35 22.1	+0.8
VRDI	Verde Repeater	3.76	127		Pn	01 35 23.5	0.0
SVW2	Sparrevohn	3.77	230		Pn	01 35 23.8	+0.4
MCARA	McCarthy VSAT	3.81	124		Pn	01 35 24.7	+0.7
GOAT	Goat Mountain	3.84	141		Pn	01 35 24.5	0.0
EGAK	Eagle	3.87	69		Pn	01 35 24.4	-0.3
RAGM	Ragged Mountai	4.02	142		Pn	01 35 26.6	-0.2
PTPK	Patty Peak	4.14	123		Pn	01 35 29.1	+0.4
HMT	Hamilton	4.17	140		Pn	01 35 28.4	-0.4
CNPM	China Poot	4.20	191		Pn	01 35 29.5	+0.2
BALM	Baldy	4.29	124		Pn	01 35 30.0	-0.4
BM03	Burnt Mountain	4.33	27		Pn	01 35 30.8	-0.1
NICHA	Nichawak Mount	4.34	139		Pn	01 35 30.9	-0.2
KIAG	Kiagna River	4.36	126		Pn	01 35 30.6	-0.8
KHIT	Khitrov Hills	4.40	134		Pn	01 35 31.4	-0.5
YUK1	Sand Pete Hill	4.42	106		Pn	01 35 31.9	-0.4
YUK2	White River	4.45	111		Pn	01 35 32.9	+0.3
MID	Middleton Isla	4.51	158		Pn	01 35 33.9	+0.5
BARN	Barnard Glacie	4.53	121		Sn	01 36 23.8	-1.7
BARN	Barnard Glacie	4.53	121		Pn	01 35 34.1	+0.4
DAWY	Dawson	4.55	80		Pn	01 35 33.5	-0.4
YUK3	Moose Creek	4.62	110		Pn	01 35 35.4	+0.4
AUW	Augustine West	4.67	205		Pn	01 35 36.3	+0.9
AUJK	Augustine Jueg	4.67	204		Pn	01 35 35.8	+0.4
GRNC	Granite Creek	4.71	125		Pn	01 35 35.9	-0.2
KULT	Kultieth River	4.72	133		Pn	01 35 35.8	-0.3
TOLK	Toolik Lake Re	5.02	0		Pn	01 35 40.7	+0.6
MESA	MESA	5.03	130		Pn	01 35 40.1	-0.3
RKAV	Rock Avalanche	5.15	127		Pn	01 35 41.6	-0.4
PCA	Pinnacle	5.68	125		Pn	01 35 49.2	+0.1
KDAK	Kodiak Island	6.06	195	P	Pn	01 35 51.9	-2.1
	0.9nm,0.3s,baz=41,slow=6.9,SNR=24						
KDAK				S	Sn	01 36 57.6	-4.4
	2.8nm,0.3s,baz=149,slow=17,SNR=3.3						
EPYK	Eagle Plains	6.12	58		Pn	01 35 54.4	-0.5
PNL	Peninsula	6.29	125		Pn	01 35 56.8	-0.4
SII	Sitkinak Islan	7.46	200		Pn	01 36 11.9	-1.1
INK	Inuvik	8.05	47	P	Pn	01 36 21.5	+0.8
	0.2nm,0.3s,baz=236,slow=16,SNR=15						
YKA	Yellowknife Ar	15.79	78	P	P	01 38 04.0	+0.8
	0.1nm,0.3s,baz=296,slow=11,SNR=5.8						
TXAR	Lajitas Array	45.00	117	P	P	01 42 31.9	+2.3
	0.2nm,0.6s,baz=337,slow=8.8,SNR=2.3						
ARCES	ARCESS Array B	47.06	2	P	P	01 42 44.9	-0.2
	2.6nm,0.9s,baz=16,slow=6.8,SNR=1.6						
FINES	FINESS Array B	55.19	3	P	P	01 43 45.1	-0.6
	1.3nm,0.7s,baz=1.4,slow=7.6,SNR=4.1						
MKAR	Makanchi Array	62.54	322	P	P	01 44 36.1	-0.7
	0.1nm,0.3s,baz=30,slow=6.7,SNR=1.9						

SKHL 18 01:43:46.7±0.1, 43.29N×146.32E, h35km±4km, mb4.0/3
JMA 18 01:43:48.1±0.2, 43.31N×146.12E, h48km±1km, M2.7
ISC 18 01:43:46.1±3.0, 43.32N±0.09×146.2E±0.2, h20km±7km, n11, σ0.64/19, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.36	278	P	Pn	01 43 56.8	+0.6
NEM2				eS	Sn	01 44 03.0	+0.3
NMR	Nemuro--Hokkai	0.38	278	iP	Pn	01 43 56.0	-0.3
NMR				iS	Sn	01 44 03.0	0.0
GLVR	Golovnino	0.67	309	iP	Pn	01 44 00.0	-0.4
GLVR				AMB	AMB	01 44 00.0	
	66nm,0.3s						
GLVR				iS	Sn	01 44 10.0	-0.3
GLVR				A	A	01 44 10.0	
	1μm,0.7s						
GLVR				A	A	01 44 10.0	
	796nm,0.7s						
GRPR	Tuman	0.76	334	iP	Pn	01 44 01.0	-0.6
GRPR				AMB	AMB	01 44 01.0	
	51nm,0.2s						
GRPR				iS	Sb	01 44 10.0	-0.4
GRPR				A	A	01 44 11.0	
	172nm,0.3s						
GRPR				A	A	01 44 11.0	
	1μm,0.3s						
YUK	Yuzh-Kuril'sk	0.77	339	eP	Pb	01 44 01.0	+0.2
YUK				AMB	AMB	01 44 02.0	
	204nm,0.3s						
YUK				iS	Sb	01 44 11.0	+0.2
YUK				A	A	01 44 11.0	
	283nm,0.5s						
YUK				A	A	01 44 11.0	
	400nm,0.5s						
JKHN	Kushirohamanak	0.82	254	P	Pn	01 44 02.5	+0.1
JKHN				eS	Sb	01 44 12.9	+0.7
JRA	Rausu	1.02	308	P	Pn	01 44 05.2	0.0
JAK	Akkeshi	1.17	255	P	Pn	01 44 06.9	-0.4
JAK				eS	Sb	01 44 20.6	-1.7
JAR	Ashorobuto	1.80	270	P	Pn	01 44 16.2	+0.3
JAR				eS	Sn	01 44 37.4	-0.8
JOB	Onbets	1.81	258	P	Pn	01 44 16.2	+0.2
JTKR	Abashiri--Toko	1.81	292	P	Pn	01 44 16.7	+0.6

SOME 18 02:02:24.5, 39.77N×76.00E, h0km
NNC 18 02:02:27.6±1.3, 39.85N×76.01E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=9.1km s-min=6.5km az=156.0
KRNET 18 02:02:32.2±0.1, 39.98N×75.87E, mb3.3
ISC 18 02:02:27.3±2.4, 39.85N±0.09×75.95E±0.04, h3km±16km, n59, σ1.52/88, 25C-12D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn	1.58	1⇑	iP	Pg	02 02 59.1	+1.4
	baz=3.0						
NRN			⇑	iS	Sg	02 03 19.5	+1.3
	baz=3.0						
KZA	Kyzart	2.29	347⇑	eP	Pg	02 03 11.6	+0.4
	baz=48						
KZA			⇑	iS	Sg	02 03 40.4	-0.5
	baz=48						
KZA	Kyzart	2.29	347	P	Pg	02 03 12.5	+1.3
	SNR=17						
ARLS	Aral	2.36	329⇓	eP	Pg	02 03 12.1	-0.4
	baz=29						
ARLS			⇓	iS	Sb	02 03 41.2	+1.1
	baz=29						
ULHL	Ulahol	2.41	5⇓	iP	Pg	02 03 13.6	+0.2
	baz=7.0						
ULHL			⇓	iS	Sg	02 03 43.6	-1.0
	baz=7.0						
ULHL	Ulahol	2.41	5	P	Pg	02 03 14.2	+0.8
	SNR=9.2						
KDJ	Kajisay	2.46	22⇓	iP	Pg	02 03 14.7	+0.2
	baz=25						
KDJ			⇓	iS	Sg	02 03 45.7	-0.7
	baz=25						
UCH	Uchtor	2.61	336⇓	iP	Pb	02 03 16.2	+1.2
	baz=36						
UCH			⇓	iS	Sb	02 03 48.2	+0.5
	baz=36						
UCH	Uchtor	2.61	336	P	Pg	02 03 17.3	-0.1
	SNR=34						
BOOM	Boomskoye usch	2.64	360⇑	iP	Pb	02 03 16.3	+1.0
	baz=1.0						
BOOM			⇑	iS	Sb	02 03 48.5	+0.4
	baz=1.0						
ARSB	Arslanbob	2.70	304⇑	iP	Pb	02 03 17.2	+0.9
	baz=2.0						
ARSB			⇑	iS	Sb	02 03 49.8	0.0
	baz=2.0						
AML	Almayashu	2.85	324⇑	eP	Pb	02 03 19.3	+0.3
	baz=23						
AML			⇑	iS	Sb	02 03 53.9	-0.5
	baz=23						
AML	Almayashu	2.85	324	P	Pb	02 03 20.3	+1.3
	SNR=24						
KBK	Karagaybulak	2.91	345⇑	iP	Pb	02 03 20.2	+0.4
	baz=46						
KBK			⇑	iS	Sb	02 03 55.0	-0.8
	baz=46						
KBK	Karagaybulak	2.91	345	P	Pg	02 03 23.8	+0.8
	SNR=42						
AAK	Ala-Archa	2.99	339⇑	eP	Pb	02 03 21.5	+0.2
	baz=39						
AAK			⇑	iS	Sb	02 03 56.7	-1.7
	baz=39						
AAK	Ala-Archa	2.99	339	P	Pb	02 03 22.4	+1.1
	SNR=28						
AAK	Ala-Archa	2.99	339 ⇓	Pg	Pb	02 03 22.1	+0.7
	6.2nm,0.3s						
AAK			⇑	Lg	Lg	02 04 03.5	
	12nm,0.5s						
KST	Kastek	3.19	0	eP	Pb	02 03 26.0	+1.3

	15nm,0.4s						
KST				eS	Sg	02 04 10.8	+1.0
	17nm,0.5s						
KST	**Kastek**	**3.19**	**0**	Pg	**Pb**	**02 03 26.0**	**+1.3**
	15nm,0.4s						
KST				Lg	Lg	02 04 10.8	
	17nm,0.5s						
ANVS	**Anan'yevo**	**3.20**	**23**	⇑eP	**Pb**	**02 03 24.2**	**-0.7**
	baz=25						
ANVS				⇑iS	**Sb**	**02 04 02.9**	**-1.5**
	baz=25						
IZV	**Izvestkoviy**	**3.22**	**9**	eP	**Pb**	**02 03 26.5**	**+1.2**
	8.4nm,0.5s						
IZV				eS	**Sg**	**02 04 11.4**	**+0.6**
	18nm,0.5s						
IZV	**Izvestkoviy**	**3.22**	**9**	Pg	**Pb**	**02 03 26.5**	**+1.2**
	8.4nm,0.5s						
IZV				Lg	Lg	02 04 11.4	
	18nm,0.5s						
EKS2	**Erkin-Say**	**3.25**	**330**	⇑iP	**Pb**	**02 03 24.9**	**-0.8**
	baz=30						
EKS2				⇑iS	**Sb**	**02 04 02.9**	**-2.8**
	baz=30						
EKS2	**Erkin-Say**	**3.25**	**330**	P	**Pb**	**02 03 26.9**	**+1.2**
	SNR=8.1						
TNSS	**Tian-Shan**	**3.27**	**13**	eP	**Pb**	**02 03 27.3**	**+1.1**
	16nm,0.3s						
TNSS				eS	**Sg**	**02 04 13.1**	**+0.6**
	9.0nm,0.6s						
TNSS	**Tian-Shan**	**3.27**	**13**	Pg	**Pb**	**02 03 27.3**	**+1.1**
	16nm,0.3s						
TNSS				Lg	Lg	02 04 13.1	
	9.0nm,0.6s						
CHMS	**Chumysh**	**3.27**	**344**	⇑iP	**Pb**	**02 03 25.1**	**-0.9**
	baz=45						
CHMS				⇑iS	**Sb**	**02 04 03.6**	**-2.7**
	baz=45						
CHMS	**Chumysh**	**3.27**	**344**	⇓Pg	**Pb**	**02 03 26.2**	**+0.2**
	3.3nm,0.5s						
CHMS				⇑Lg	Lg	02 04 12.7	
	12nm,0.5s						
MTBS	**Maitube**	**3.30**	**6**	eP	**Pb**	**02 03 27.6**	**+1.1**
	9.5nm,0.3s						
MTBS				eS	**Sg**	**02 04 13.3**	**+0.1**
	13nm,0.3s						
MTBS	**Maitube**	**3.30**	**6**	Pg	**Pb**	**02 03 27.6**	**+1.1**
	9.5nm,0.3s						
MTBS				Lg	Lg	02 04 13.3	
	13nm,0.3s						
DGS	**Degeres**	**3.39**	**358**	eP	**Pb**	**02 03 28.9**	**+0.8**
	12nm,0.5s						
DGS				eS	**Sg**	**02 04 15.7**	**-0.5**
	20nm,0.5s						
DGS	**Degeres**	**3.39**	**358**	Pg	**Pb**	**02 03 28.9**	**+0.8**
	12nm,0.5s						
DGS				Lg	Lg	02 04 15.7	
	20nm,0.5s						
MDOK	**Medeo**	**3.41**	**14**	eP	**Pb**	**02 03 29.0**	**+0.6**
	5.6nm,0.3s						
MDOK				eS	**Sg**	**02 04 15.2**	**-1.7**
	12nm,0.6s						
MDOK	**Medeo**	**3.41**	**14**	Pg	**Pb**	**02 03 27.4**	**-1.1**
	2.5nm,0.4s						
MDOK				Lg	Lg	02 04 17.9	
	11nm,0.6s						
MDOK	**Medeo**	**3.41**	**14**	Pg	**Pb**	**02 03 29.0**	**+0.6**
	5.6nm,0.3s						
MDOK				Lg	Lg	02 04 16.0	
	12nm,0.6s						
KOTS	**Kotyrbulak**	**3.49**	**14**	eP	**Pb**	**02 03 30.4**	**+0.6**
	11nm,0.4s						
KOTS				eS	**Sg**	**02 04 18.4**	**-1.1**
	40nm,0.5s						
KOTS	**Kotyrbulak**	**3.49**	**14**	Pg	**Pb**	**02 03 30.5**	**+0.6**
	11nm,0.4s						
KOTS				Lg	Lg	02 04 18.4	
	40nm,0.5s						
MRKS	**Merke**	**3.55**	**326**	eP	**Pb**	**02 03 32.2**	**+1.5**
	8.3nm,0.4s						
MRKS				eS	**Sg**	**02 04 21.1**	**-0.1**
	8.7nm,0.5s						
MRKS	**Merke**	**3.55**	**326**	Pg	**Pb**	**02 03 32.2**	**+1.5**
	8.3nm,0.4s						
MRKS				Lg	Lg	02 04 21.1	
	8.7nm,0.5s						
USP	**Ospenovka**	**3.58**	**343**	P	**Pb**	**02 03 30.5**	**-0.8**
	SNR=14						
SGDS	**Sogindy**	**3.73**	**345**	Pg	**Pb**	**02 03 35.1**	**+1.2**
	2.7nm,0.4s						
SGDS				Lg	Lg	02 04 26.2	
	9.1nm,0.4s						
KRBS	**Karabastau**	**3.85**	**357**	eP	**Pb**	**02 03 37.5**	**+1.6**
	4.6nm,0.5s						
KRBS				eS	**Sg**	**02 04 29.8**	**-1.1**
	5.6nm,0.4s						
KRBS	**Karabastau**	**3.85**	**357**	Pg	**Pb**	**02 03 37.5**	**+1.6**
	4.6nm,0.5s						
KRBS				Lg	Lg	02 04 29.8	
	5.6nm,0.4s						
KTBS	**Karatobe**	**3.90**	**8**	eP	**Pb**	**02 03 38.6**	**+1.9**
	6.6nm,0.4s						
KTBS				eS	**Sg**	**02 04 32.0**	**-0.5**
	23nm,0.4s						
KTBS	**Karatobe**	**3.90**	**8**	Pg	**Pb**	**02 03 38.6**	**+1.9**
	6.6nm,0.4s						
KTBS				Lg	Lg	02 04 32.0	
	23nm,0.4s						
KUU	**Kurty**	**4.05**	**4**	eP	**Pb**	**02 03 41.3**	**+2.1**
	1.3nm,0.1s						
KUU				eS	**Sg**	**02 04 36.6**	**-0.8**
	18nm,0.6s						
KUU	**Kurty**	**4.05**	**4**	Pg	**Pb**	**02 03 41.3**	**+2.1**
	1.3nm,0.1s						
KUU				Lg	Lg	02 04 36.6	
	18nm,0.6s						
CHKK	**Chushkaly**	**4.08**	**11**	eP	**Pb**	**02 03 42.0**	**+2.3**
	2.0nm,0.3s						
CHKK				eS	**Sg**	**02 04 37.7**	**-0.5**
	8.3nm,0.4s						
CHKK	**Chushkaly**	**4.08**	**11**	Pg	**Pb**	**02 03 42.0**	**+2.3**
	2.0nm,0.3s						
CHKK				Lg	Lg	02 04 37.7	
	8.3nm,0.4s						
KPKS	**Kokpek**	**4.15**	**29**	eP	**Pb**	**02 03 42.0**	**+1.0**
	5.1nm,0.3s						
KPKS				eS	**Sg**	**02 04 37.6**	**-3.1**
	14nm,0.6s						
PDGK	**Podgornoye**	**4.37**	**36**	Pg	**Pb**	**02 03 46.0**	**+1.2**
	0.9nm,0.5s						
PDGK				Lg	Lg	02 04 45.0	
	2.4nm,0.7s						
PDGK	**Podgornoye**	**4.37**	**36**	⇑Pg	**Pg**	**02 03 50.0**	**-1.1**
	1.3nm,0.5s						
PDGK				⇑Lg	Lg	02 04 47.3	
	2.5nm,0.5s						
ARXS	**Arharly**	**4.58**	**17**	eP	**Pb**	**02 03 51.5**	**+3.2**
	3.6nm,0.5s						
ARXS				eS	**Sg**	**02 04 53.9**	**-0.4**
	3.8nm,0.5s						
ARXS	**Arharly**	**4.58**	**17**	Pg	**Pb**	**02 03 51.5**	**+3.2**
	3.6nm,0.5s						
ARXS				Lg	Lg	02 04 53.9	
	3.8nm,0.5s						
JBG	**Jabagly**	**4.82**	**304**	Pg	**Pb**	**02 03 56.3**	**+3.8**
	2.7nm,0.3s						
JBG				Lg	Lg	02 05 02.3	
	3.9nm,0.4s						
KK31	**Karatay Array**	**5.22**	**310**	⇓Pn	Pn	02 03 51.1	+4.8
	0.1nm,0.3s,baz=128,slow=13,SNR=4.3						
KK31				⇓Pg	**Pg**	**02 04 03.9**	**-3.4**
	0.5nm,0.4s,baz=121,slow=16,SNR=10						
KK31				⇑Lg	Lg	02 05 13.9	
	0.6nm,0.3s,baz=125,slow=28,SNR=3.5						
BTLS	**Baital**	**5.38**	**345**	eP	**Pb**	**02 04 04.9**	**+3.1**
	0.2nm,0.1s						
BTLS				eS	**Sg**	**02 05 16.9**	**-3.0**
	3.0nm,0.2s						
BTLS	**Baital**	**5.38**	**345**	Pg	**Pb**	**02 04 04.9**	**+3.1**
	1.1nm,0.5s						
BTLS				Lg	Lg	02 05 16.9	
	2.7nm,0.5s						

*IDC **18** 02:12:42.2±3.2, 50°.44N×175°.37W, h0km, mb3.3/6, mb1 3.6/6, mb1mx3.4/37, mbtmp3.4/6, Error ellipse: s-maj=82.3km s-min=33.3km az=174.0*
*AEIC **18** 02:12:45.6±1.3, 50°.51N±0°.05×175°.27W±0°.08, h6km±6km, ML3.0/19, Error ellipse: s-maj=8.8km s-min=5.5km az=140.0*
ISC 18 02:12:42.3±3.1, **50°.5N**±0°.1×**175°.29W**±0°.05, **h0**km±17km, **n21**, σ0s.**88**/26, **mb3.6**/5, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSIG	**Igitkin Island**	**1.57**	**345**		**Pg**	**02 13 12.8**	**+0.4**
GSMY	**Great Sitkin M**	**1.65**	**343**		**Pg**	**02 13 14.1**	**+0.2**
ADK	**Adak**	**1.67**	**329**		**Sg**	**02 13 35.7**	**-0.1**
ADK	**Adak**	**1.67**	**329**		**Pb**	**02 13 13.9**	**+0.1**
GSTD	**Great Sitkin T**	**1.68**	**342**		**Pg**	**02 13 14.5**	**0.0**
GSTD					**Sg**	**02 13 37.1**	**+0.9**
KIMD	**Kanaga Island**	**1.78**	**317**		**Pb**	**02 13 16.0**	**+0.2**
KIRH	**Kanaga Island**	**1.83**	**322**		**Pb**	**02 13 16.7**	**+0.1**
ATKA	**Atka Island**	**1.86**	**21**		**Pb**	**02 13 16.5**	**-0.7**
ATKA					**Sb**	**02 13 40.9**	**-0.1**
KOFP	**Korovin Flat P**	**1.95**	**22**		**Pb**	**02 13 18.4**	**-0.3**
KOFP					**Sb**	**02 13 44.0**	**+0.3**
KOKL	**Mount Kliuchef**	**1.97**	**20**		**Pb**	**02 13 18.7**	**-0.4**
KOSE	**Korovin Southe**	**2.03**	**22**		**Pb**	**02 13 19.7**	**-0.4**
KOSE					**Sg**	**02 13 46.9**	**-0.5**
TASE	**Tanaga Southea**	**2.21**	**309**		**Pb**	**02 13 22.6**	**-0.5**
TAFP	**Tanaga Falls P**	**2.22**	**311**		**Pb**	**02 13 22.8**	**-0.5**
TAFP					**Sb**	**02 13 50.3**	**-1.0**
NIKH	**Nikolski High**	**4.72**	**55**		**Pn**	**02 13 56.1**	**+1.4**
KDAK	**Kodiak Island**	**15.13**	**52**	Pn	**Pn**	**02 16 14.3**	**-2.8**
	0.2nm,0.3s,baz=39,slow=22,SNR=1.2						
ILAR	**Eielson Array**	**20.63**	**35**	P	**P**	**02 17 22.5**	**-0.4**
	0.3nm,0.5s,baz=226,slow=9.4,SNR=7.5						
INK	**Inuvik**	**26.96**	**33**	P	**P**	**02 18 25.2**	**+0.2**
	3.3nm,1.3s,baz=276,slow=8.3,SNR=2.1						
YKA	**Yellowknife Ar**	**34.25**	**46**	P	**P**	**02 19 31.1**	**+1.6**
	0.3nm,0.8s,baz=272,slow=7.1,SNR=4.3						
PDAR	**Pinedale Array**	**44.45**	**73**	P	**P**	**02 20 55.1**	**0.0**
	0.1nm,0.4s,baz=308,slow=3.1,SNR=2.0						
MKAR	**Makanchi Array**	**62.33**	**311**	P	**P**	**02 23 05.9**	**-0.2**
	0.2nm,0.5s,baz=41,slow=7.9,SNR=2.8						
BRTR	**Keskin Array B**	**86.66**	**338**	P	**P**	**02 25 27.5**	**-0.3**
	0.3nm,0.6s,baz=36,slow=5.8,SNR=1.7						

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*IDC **18** 02:22:27.9±0.8, 24°.19S×69°.46W, h82km±6km, mb3.5/5, mb1 3.8/8, mb1mx3.6/24, mbtmp3.9/8, MS2.7/2, Ms1 2.7/2, ms1mx2.5/19, Error ellipse: s-maj=29.0km s-min=8.2km az=100.0*
*NEIC **18** 02:22:27.1±1.1, 24°.11S±0°.04×69°.52W±0°.06, h76km±7km, Error ellipse: s-maj=8.4km s-min=5.4km az=82.0*
*SJA **18** 02:22:27.5±0.9, 24°.08S×69°.49W, h75km, ML3.6, MW3.4*
*GUC **18** 02:22:27.9±0.7, 24°.11S×69°.54W, h91km±5km, ML4.1*
ISC 18 02:22:27.3±0.6, **24°.12S**±0°.03×**69°.54W**±0°.04, **h84**km±6km, **n72**, σ1s.**65**/104, **mb3.8**/8, **15C-2D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**0.91**	**4**	⇑iP	**Pn**	**02 22 46.8**	**+1.0**
PB15				i S	**Sn**	**02 23 00.4**	**+0.9**
PB15	**IPOC Station P**	**0.91**	**4**	i P	**Pn**	**02 22 46.8**	**+1.0**
PB15				eS	**Sn**	**02 23 00.8**	**+1.3**
PB14	**IPOC Station P**	**0.94**	**237**	⇑iP	**Pn**	**02 22 47.8**	**+1.6**
PB14				i S	**Sn**	**02 23 02.1**	**+1.9**
PB14				IAML		02 23 03.5	
	comp=E,3μm,0.5s						
PB14	**IPOC Station P**	**0.94**	**237**	i P	**Pn**	**02 22 47.8**	**+1.6**
PB14				eS	**Sn**	**02 23 02.6**	**+2.4**
GO02	**Mina Guanaco**	**1.04**	**183**	⇓iP	**Pn**	**02 22 48.7**	**+1.3**
GO02				i S	**Sn**	**02 23 04.5**	**+2.2**
GO02				IAML		02 23 06.7	
	comp=N,11μm,0.2s						
GO02	**Mina Guanaco**	**1.04**	**183**		**Pn**	**02 22 47.8**	**+0.4**
GO02				Sn	**Sn**	**02 23 01.8**	**-0.6**
PB10	**IPOC Station P**	**1.11**	**303**	⇓iP	**Pn**	**02 22 48.7**	**+0.9**
PB10				i S	**Sn**	**02 23 04.7**	**+1.3**
PB10				IAML		02 23 07.6	
	comp=N,3μm,0.3s						
PB10	**IPOC Station P**	**1.11**	**303**		**Pn**	**02 22 48.3**	**+0.4**
PB10				Sn	**Sn**	**02 23 02.5**	**-0.9**
PB10	**IPOC Station P**	**1.11**	**303**	i P	**Pn**	**02 22 49.5**	**+1.6**
PB10				eS	**Sn**	**02 23 05.4**	**+2.1**
PB05	**IPOC Station P**	**1.40**	**334**	⇑iP	**Pn**	**02 22 52.6**	**+1.0**
PB05				i S	**Sn**	**02 23 11.1**	**+1.2**
PB05				IAML		02 23 13.2	
	comp=E,4μm,0.6s						
PB05	**IPOC Station P**	**1.40**	**334**	i P	**Pn**	**02 22 52.6**	**+1.0**
PB05				eS	**Sn**	**02 23 11.2**	**+1.2**
PB06	**IPOC Station P**	**1.41**	**359**	⇑iP	**Pn**	**02 22 52.8**	**+1.0**
PB06				i S	**Sn**	**02 23 11.3**	**+1.1**
PB06				IAML		02 23 12.8	
	comp=E,4μm,0.2s						
PB06	**IPOC Station P**	**1.41**	**359**	i P	**Pn**	**02 22 52.5**	**+0.7**
PB06				eS	**Sn**	**02 23 11.3**	**+1.1**
LVC	**Limon Verde**	**1.61**	**21**	⇑iP	**Pn**	**02 22 55.6**	**+1.1**
LVC				i S	**Sn**	**02 23 16.4**	**+1.3**
LVC	**Limon Verde**	**1.61**	**21**	P	**Pn**	**02 22 55.7**	**+1.1**
	comp=E,320nm,0.3s,baz=174,slow=9.4,SNR=2684						
LVC				S	**Sn**	**02 23 16.2**	**+1.1**
	comp=E,451nm,0.3s,baz=25,slow=24,SNR=43						
LVC	**Limon Verde**	**1.61**	**21**		**Pn**	**02 22 54.0**	**-0.5**
LVC				Sn	**Sn**	**02 23 14.4**	**-0.7**
LVC	**Limon Verde**	**1.61**	**21**	⇑iP	**Pn**	**02 22 55.7**	**+1.1**
LVC				eS	**Sn**	**02 23 16.0**	**+0.9**
LVC				IAML		02 23 17.7	
	comp=Z,973nm,0.8s						
PB04	**IPOC Station P**	**1.86**	**342**	⇑iP	**Pn**	**02 22 58.1**	**+0.4**
PB04				i S	**Sn**	**02 23 21.5**	**+0.8**
PB04				IAML		02 23 26.2	
	comp=E,2μm,0.2s						
PB04	**IPOC Station P**	**1.86**	**342**		**Pn**	**02 22 57.7**	**0.0**
PB04				Sn	**Sn**	**02 23 20.3**	**-0.4**
PB04	**IPOC Station P**	**1.86**	**342**	i P	**Pn**	**02 22 58.2**	**+0.4**
PB04				eS	**Sn**	**02 23 21.5**	**+0.8**
PB03	**IPOC Station P**	**2.07**	**354**	⇑iP	**Pn**	**02 23 01.0**	**+0.6**
PB03				i S	**Sn**	**02 23 26.6**	**+0.9**
PB03				IAML		02 23 33.8	
	comp=E,1μm,0.4s						
PB03	**IPOC Station P**	**2.07**	**354**	i P	**Pn**	**02 23 01.0**	**+0.6**
PB03				eS	**Sn**	**02 23 26.5**	**+0.9**
PB09	**IPOC Station P**	**2.33**	**7**	⇑iP	**Pn**	**02 23 05.3**	**+1.5**
PB09				i S	**Sn**	**02 23 34.0**	**+2.2**
PB09				IAML		02 23 42.3	
	comp=E,973nm,0.7s						
PB09	**IPOC Station P**	**2.33**	**7**	i P	**Pn**	**02 23 05.2**	**+1.3**
PB07	**IPOC Station P**	**2.40**	**352**	⇑iP	**Pn**	**02 23 05.1**	**+0.2**
PB07	**IPOC Station P**	**2.40**	**352**	i P	**Pn**	**02 23 05.1**	**+0.2**
PB02	**IPOC Station P**	**2.81**	**353**	⇑iP	**Pn**	**02 23 10.3**	**+0.1**
PB02	**IPOC Station P**	**2.81**	**353**	i P	**Pn**	**02 23 10.5**	**+0.3**
PB01	**IPOC Station P**	**3.06**	**1**	⇑iP	**Pn**	**02 23 13.8**	**+0.2**
PB01				i S	**Sn**	**02 23 49.4**	**0.0**
PB01	**IPOC Station P**	**3.06**	**1**		**Pn**	**02 23 13.8**	**+0.2**
PB01	**IPOC Station P**	**3.06**	**1**	i P	**Pn**	**02 23 14.0**	**+0.3**
PB01				eS	**Sn**	**02 23 55.8**	**+6.4**
PATCX	**Punta Patache**	**3.33**	**350**	⇑iP	**Pn**	**02 23 16.4**	**-0.9**
PATCX				i S	**Sn**	**02 23 53.0**	**-2.9**
PATCX				IAML		02 24 12.4	
	comp=E,1μm,0.9s						
PATCX	**Punta Patache**	**3.33**	**350**	i P	**Pn**	**02 23 16.5**	**-0.8**
PATCX				eS	Sn	02 24 06.0	+10
GO03	**Copiap**	**3.52**	**190**	⇑iP	**Pn**	**02 23 19.9**	**+0.2**
GO03				i S	**Sn**	**02 24 02.5**	**+2.2**
GO03	**Copiap**	**3.52**	**190**		**Pn**	**02 23 20.1**	**+0.3**
GO03	**Copiap**	**3.52**	**190**	i P	**Pn**	**02 23 20.0**	**+0.2**
GO03				eS	**Sn**	**02 24 03.9**	**+3.6**
PB08	**IPOC Station P**	**3.98**	**5**	⇑eP	**Pn**	**02 23 24.9**	**-1.4**
PB08				i S	**Sn**	**02 24 14.1**	**+2.1**
PB11	**IPOC Station P**	**4.34**	**359**		**Pn**	**02 23 29.8**	**-1.2**
GO01	**Chusmiza**	**4.44**	**4**		**Pn**	**02 23 32.0**	**-0.7**
AHML	**Horco Molle**	**4.63**	**126**	eP	**Pn**	**02 23 38.2**	**+3.3**
VCA	**Vinchina**	**4.75**	**166**	⇑eP	**Pn**	**02 23 39.5**	**+2.9**
VCA	**Vinchina**	**4.75**	**166**	i P	**Pn**	**02 23 38.6**	**+2.0**
MNMC	**Minye Minye**	**4.96**	**359**	Pn	**Pn**	**02 23 38.4**	**-1.2**
CYA	**Choya**	**5.46**	**143**	eP	**Pn**	**02 23 48.4**	**+2.3**
CYA				IAML		02 23 50.9	
	comp=Z,19nm,0.5s						
ACLC	**CERRO LA CRUZ**	**5.77**	**157**	i P	**Pn**	**02 23 52.1**	**+1.6**
AROD	**Rodeo**	**6.02**	**179**	i P	**Pn**	**02 23 55.7**	**+1.6**
GO04	**Tololo Observa**	**6.13**	**190**		**Pn**	**02 23 53.5**	**-2.1**
GO04	**Tololo Observa**	**6.13**	**190**	i P	**Pn**	**02 23 53.1**	**-2.4**
GO04				eS	Sn	02 25 20.7	+16
ACCO	**Cerro Coronel**	**6.46**	**176**	i P	**Pn**	**02 24 01.3**	**+1.3**
APLL	**PUNTA DE LOS L**	**6.80**	**157**	i P	**Pn**	**02 24 04.7**	**+0.3**
CFA	**Coronel Fontan**	**7.54**	**172**	P	**Pn**	**02 24 14.6**	**0.0**
	comp=Z,5.9nm,0.3s,baz=355,slow=11,SNR=59						
CFA				S	**Sn**	**02 25 33.4**	**-5.2**
	comp=Z,0.7nm,0.3s,baz=232,slow=19,SNR=1.0						
CFA				LR	LR	02 27 36.4	
	comp=Z,70nm,20.8s,baz=298,slow=41						
LPAZ	**La Paz**	**7.90**	**10**	P	**Pn**	**02 24 20.7**	**+0.6**
	comp=Z,1.4nm,0.3s,baz=200,slow=5.4,SNR=45						
LPAZ	**La Paz**	**7.90**	**10**		**Pn**	**02 24 19.5**	**-0.6**
ROC1	**El Roble**	**8.92**	**188**		**Pn**	**02 24 29.4**	**-4.1**
PEL	**Peldehue**	**9.05**	**186**	Pn	**Pn**	**02 24 36.0**	**+0.9**
GO05	**Huala**	**11.05**	**190**	Pn	**Pn**	**02 24 59.0**	**-3.3**
SIV	**San Ignacio**	**11.34**	**46**	P	**Pn**	**02 25 02.9**	**-3.5**
	comp=Z,3.6nm,0.3s,baz=228,slow=7.2,SNR=43						
NNA	**Nana**	**13.92**	**329**	LR	LR	02 30 22.9	
	comp=Z,24nm,20.0s,baz=106,slow=34						
PLCA	**Paso Flores**	**16.59**	**183**	P	**Pn**	**02 26 14.0**	**-0.7**
	comp=Z,0.0nm,0.3s,baz=8.2,slow=17,SNR=2.1						
PLCA	**Paso Flores**	**16.59**	**183**	P	**Pn**	**02 26 14.0**	**-0.7**
PLCA				IAmb	IAmb	02 26 26.1	
	comp=Z,3.3nm,1.1s						
BDFB	**Brasilia**	**21.91**	**71**	P	**P**	**02 27 11.9**	**-1.9**
BDFB				IAmb	IAmb	02 27 17.5	
	comp=Z,2.9nm,1.1s						
TXAR	**Lajitas Array**	**62.46**	**326**	P	**P**	**02 32 40.2**	**-1.7**
	comp=Z,0.3nm,0.7s,baz=142,slow=10,SNR=2.0						
PDAR	**Pinedale Array**	**76.09**	**331**	P	**P**	**02 34 07.1**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=126,slow=9.1,SNR=2.0						
NVAR	**Mina Array Bea**	**77.20**	**323**	P	**P**	**02 34 13.4**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=151,slow=7.7,SNR=2.3						
ULM	**Lac du Bonnet**	**77.64**	**343**	P	**P**	**02 34 14.9**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=172,slow=21,SNR=3.0						
TOA0	**Torodi Ar. Sit**	**78.78**	**70**	P	**P**	**02 34 21.6**	**+0.3**
TOA0				IAmb	IAmb	02 34 22.9	
	comp=Z,1.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.78**	**70**	P	**P**	**02 34 21.9**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=259,slow=5.1,SNR=23						
TORD				pP	**pP**	**02 34 44.1**	**-0.1**
	comp=Z,5.5nm,0.7s,baz=255,slow=5.0,SNR=19						
YKA	**Yellowknife Ar**	**93.46**	**341**	P	**P**	**02 35 34.0**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=221,slow=4.5,SNR=8.8						
YKA				pP	**pP**	**02 35 56.0**	**0.0**
	comp=Z,0.5nm,0.6s,baz=136,slow=4.3,SNR=4.6						
ASAR	**Alice Springs**	**127.33**	**207**	PKP	**PKiKP**	**02 41 23.6**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=175,slow=3.4,SNR=4.2						
WRA	**Warramunga Arr**	**130.41**	**210**	PKP	**PKiKP**	**02 41 29.9**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=152,slow=1.7,SNR=1.8						
ZALV	**Zalesovo Beam**	**144.55**	**26**	PKP	**PKPdf**	**02 41 54.1**	**+0.4**
	comp=Z,2.4nm,0.7s,baz=278,slow=4.3,SNR=7.3						
MKAR	**Makanchi Array**	**148.07**	**38**	PKPbc	**PKiKP**	**02 42 04.8**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=313,slow=2.7,SNR=14						
MKAR				pPKPbc	**pPKPbc**	**02 42 27.2**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=354,slow=2.6,SNR=3.8						

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*ANF **18** 02:23:50.5±0.8, 22°.22S×66°.52W, h30km, Error ellipse: s-maj=19.0km s-min=9.3km az=140.0*
*VAO **18** 02:24:01.0±1.0, 22°.04S×67°.26W, h10km, mb4.3*
*IDC **18** 02:24:08.3±0.8, 22°.22S×67°.06W, h165km±8km, mb4.0/10, mb1 4.1/15, mb1mx3.9/26, mbtmp4.4/15, Error ellipse: s-maj=14.1km s-min=12.0km az=2.0*
*NEIC **18** 02:24:10.5±1.4, 22°.28S±0°.08×67°.9W±0°.2, h233km±9km, Error ellipse: s-maj=22.0km s-min=11.4km az=80.0*
*GUC **18** 02:24:10.4±0.4, 22°.26S×67°.57W, h221km±6km, ML4.8*
*SCB **18** 02:24:11.0±2.0, 22°.38S×67°.23W, h189km±13km, ML3.9/7, Error ellipse: s-maj=8.1km s-min=3.3km az=0.0*
ISC 18 02:24:08.7±0.6, **22°.35S**±0°.04×**67°.22W**±0°.03, **h176**km±6km, **n267**, σ1s.**44**/280, **mb4.5**/21, **1C**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.59**	**260**	P	**Pn**	**02 24 43.2**	**+1.6**
	180nm,0.3s,baz=99,slow=8.2,SNR=7.3						
LVC				S	**Sn**	**02 25 07.9**	**+0.9**
	110nm,0.3s,baz=246,slow=20,SNR=6.8						
LVC	**Limon Verde**	**1.59**	**260**		**Pn**	**02 24 42.9**	**+1.3**
LVC					**Sn**	**02 25 07.6**	**+0.7**
YJA	**Yavi**	**1.59**	**84**	P	**Pn**	**02 24 43.5**	**+1.8**
YJA				S	**Sn**	**02 25 08.1**	**+1.0**
YJA				AML	AML	02 25 09.4	
	180nm,0.6s						
MOCB	**Mochara**	**1.83**	**54**	P	**Pn**	**02 24 45.8**	**+1.6**
MOCB				S	**Sn**	**02 25 11.3**	**-0.3**
PB09	**IPOC Station P**	**1.96**	**286**	⇑iP	**Pn**	**02 24 46.9**	**+1.7**
PB09				i S	**Sn**	**02 25 14.8**	**+1.3**
PB06	**IPOC Station P**	**2.21**	**260**	P	**Pn**	**02 24 49.4**	**+1.4**
PB06				S	**Sn**	**02 25 18.8**	**+0.4**
PB06				AML	AML	02 25 20.6	
	259nm,0.4s						
PB01	**IPOC Station P**	**2.48**	**301**	i P	**Pn**	**02 24 52.0**	**+0.9**
PB01				i S	**Sn**	**02 25 23.5**	**-0.4**
PB01				IAML		02 25 25.8	
	comp=E,2μm,0.2s						
PB01	**IPOC Station P**	**2.48**	**301**	Pn	**Pn**	**02 24 50.9**	**-0.2**
PB01				S	**Sn**	**02 25 22.5**	**-1.4**
PB07	**IPOC Station P**	**2.55**	**284**	i P	**Pn**	**02 24 52.8**	**+0.8**
PB07				i S	**Sn**	**02 25 24.7**	**-0.9**
PB07				IAML		02 25 26.2	
	comp=N,3μm,0.2s						
PB02	**IPOC Station P**	**2.69**	**292**	i P	**Pn**	**02 24 54.3**	**+0.7**
PB02				i S	**Sn**	**02 25 27.0**	**-1.4**
PB02				IAML		02 25 29.8	
	comp=E,2μm,0.2s						
PB02	**IPOC Station P**	**2.69**	**292**	P	**Pn**	**02 24 54.2**	**+0.7**
PB02				S	**Sn**	**02 25 26.3**	**-2.1**
PB04	**IPOC Station P**	**2.71**	**270**	P	**Pn**	**02 24 54.8**	**+0.9**
PB04				S	**Sn**	**02 25 27.8**	**-1.2**
PB04				AML	AML	02 25 30.3	
	comp=E,331nm,0.2s						
PB04	**IPOC Station P**	**2.71**	**270**	Pn	**Pn**	**02 24 53.5**	**-0.4**
PB04				S	**Sn**	**02 25 24.1**	**-4.9**
SLA	**San Lorenzo**	**2.84**	**147**	P	**Pn**	**02 24 57.4**	**+2.0**
PB08	**IPOC Station P**	**2.84**	**320**	eP	**Pn**	**02 24 57.2**	**+1.4**
PB08				i S	**Sn**	**02 25 33.1**	**+0.8**
PB08				IAML		02 25 35.9	
	comp=E,760nm,0.2s						
PATCX	**Punta Patache**	**3.13**	**299**	eP	**Pn**	**02 24 58.8**	**-0.1**
PATCX				i S	**Sn**	**02 25 35.9**	**-2.0**
PATCX				IAML		02 25 37.8	
	comp=E,2μm,0.3s						
GO01	**Chusmiza**	**3.24**	**325**	eP	Pn	02 25 07.0	+6.3
GO01				i S	**Sn**	**02 25 41.0**	**-0.2**
GO01				IAML		02 25 47.0	
	comp=N,1μm,0.1s						
TA01	**Diego Aracena**	**3.28**	**302**	i P	**Pn**	**02 25 00.3**	**-0.4**
TA01				i S	**Sn**	**02 25 38.8**	**-2.4**
TA01				IAML		02 25 41.0	
	comp=E,2μm,0.3s						
PB10	**IPOC Station P**	**3.29**	**249**	P	**Pn**	**02 25 00.9**	**+0.2**
PB10				S	**Sn**	**02 25 37.9**	**-3.4**
PB10				AML	AML	02 25 40.5	
	comp=E,198nm,0.3s						
PB10	**IPOC Station P**	**3.29**	**249**	Pn	**Pn**	**02 24 59.9**	**-0.8**
PB10				S	**Sn**	**02 25 38.1**	**-3.2**
PB11	**IPOC Station P**	**3.44**	**318**	i S	**Sn**	**02 25 43.5**	**-1.4**
PB11				IAML		02 25 45.5	
	comp=E,1μm,0.7s						
GO02	**Mina Guanaco**	**3.54**	**217**	Pn	**Pn**	**02 25 04.7**	**+0.5**
GO02				S	**Sn**	**02 25 47.1**	**-0.5**
MNMC	**Minye Minye**	**3.90**	**325**	eP	**Pn**	**02 25 08.2**	**-0.6**
MNMC				i S	**Sn**	**02 25 54.1**	**-1.5**
BS03	**Mojotorillo**	**4.02**	**42**	P	**Pn**	**02 25 11.1**	**+0.7**
BS03				S	**Sn**	**02 25 56.1**	**-2.5**
BS03				AML	AML	02 25 57.8	
	comp=E,188nm,0.7s						
BS06	**Camiri**	**4.15**	**57**	P	**Pn**	**02 25 12.8**	**+1.1**
BS06				S	**Sn**	**02 25 59.1**	**-1.8**
BS06				AML	AML	02 26 03.3	
	comp=E,145nm,0.8s						
PB16	**IPOC Station P**	**4.54**	**331**	eP	**Pn**	**02 25 15.3**	**-1.9**
PB16				i S	**Sn**	**02 26 09.2**	**-1.5**
PB16				IAML		02 26 11.0	
	comp=N,155nm,0.5s						
BS08	**Valle Grande**	**4.81**	**38**	P	**Pn**	**02 25 20.7**	**+0.2**
BS08				S	**Sn**	**02 26 13.4**	**-3.3**
BS08				AML	AML	02 26 15.5	
	comp=N,125nm,0.5s						
BBOJ	**La Paz, Jacaqu**	**5.42**	**350**	P	**Pn**	**02 25 31.4**	**+2.7**
BBOE	**La Paz, Chanca**	**5.55**	**352**	P	**Pn**	**02 25 33.4**	**+3.0**
BBOD	**La Paz, Gloria**	**5.83**	**347**	P	**Pn**	**02 25 36.0**	**+2.0**
GO03	**Copiap**	**5.89**	**207**	Pn	**Pn**	**02 25 33.2**	**-1.2**
GO03				S	**Sn**	**02 26 38.6**	**-3.1**
LPAZ	**La Paz**	**6.09**	**352**	eP	**Pn**	**02 25 38.8**	**+1.3**
LPAZ	**La Paz**	**6.09**	**352**	P	**Pn**	**02 25 39.0**	**+1.5**

comp=N,19nm,0.3s,baz=108,slow=3.4,SNR=83
LPAZ S Sn 02 26 45.6 -1.7
baz=241,slow=13,SNR=0.9
LPAZ La Paz 6.09 352 P Pn 02 25 39.0 +1.5
LPAZ La Paz 6.09 352 Pn 02 25 36.2 -1.3
LPAZ Sn 02 26 43.6 -3.7
SIV San Ignacio 8.59 44 P Pn 02 26 07.4 -2.4
comp=N,42nm,0.3s,baz=232,slow=11,SNR=74
SIV S Sn 02 27 38.8 -7.0
comp=N,6.5nm,0.3s,baz=171,slow=23,SNR=2.9
CFA Coronel Fontan 9.26 185 P Pn 02 26 18.8 +0.1
comp=N,1.3nm,0.3s,baz=171,slow=14,SNR=1.5
CFA S Sn 02 27 55.7 -6.2
comp=N,5.9nm,0.3s,baz=171,slow=20,SNR=6.0
CPUP Villa Florida 9.85 116 P Pn 02 26 24.7 -1.6
comp=N,0.3nm,0.3s,baz=281,slow=13,SNR=3.3
SALV Santo Antonio 12.63 61 eP Pn 02 27 00.1 -2.4
TRCB Terra Rica 13.48 95 eP Pn 02 27 14.6 +1.4
NNA Nana 13.80 317 P P 02 27 20.2 +0.1
comp=N,1.5nm,0.3s,baz=159,slow=10,SNR=12
PTGB Pitanga 14.10 103 eP Pn 02 27 22.8 +1.9
ITAB Concordia 14.54 113 eP P 02 27 28.8 +0.8
PCMB Pacaembu 14.82 90 eP Pn 02 27 30.6 +0.7
CLDB Colider 15.80 46 eP Pn 02 27 40.8 -1.1
ARAG Araguaiana, MT 15.99 68 eP P 02 27 45.0 +0.9
PLCA Paso Flores 18.54 188 P P 02 28 14.5 +2.4
comp=N,0.1nm,0.3s,baz=18,slow=14,SNR=3.6
PLCA Paso Flores 18.54 188 P P 02 28 09.9 -2.2
BDFB Brasilia 19.34 73 P P 02 28 20.4 -0.5
comp=N,2.3nm,0.3s,baz=250,slow=12,SNR=20
BDFB Brasilia 19.34 73 P P 02 28 20.8 -0.1
OTAV Otavalo 24.98 333 eP P 02 29 22.4 +5.6
FLOC Florencia 25.17 340 P P 02 29 12.8 -5.2
RUSC La Rusia 28.65 348 P P 02 29 43.8 -5.8
EFI East Falkland 30.12 169 P P 02 30 00.2 -1.5
SDV Santo Domingo 31.22 353 P P 02 30 10.8 -1.2
comp=N,4.1nm,0.5s,baz=173,slow=10,SNR=4.0
URIC Uribia, Colomb 34.16 352 P P 02 30 33.0 -4.3
MLPR Magueyes Islan 40.07 0 P P 02 31 23.4 -3.6
MLPR IAmb IAmb 02 31 26.6
comp=Z,23nm,1.0s
CRPR Cabo Rojo, PR 40.11 0 P P 02 31 24.0 -3.3
ANWB Willy Bob 40.13 8 P P 02 31 23.3 -4.1
OBIP Obispado Ponce 40.15 1 P P 02 31 23.7 -3.9
OBIP IAmb IAmb 02 31 31.8
comp=Z,20nm,1.1s
SJG San Juan 40.23 2 P P 02 31 23.8 -4.5
SJG IAmb IAmb 02 31 35.4
comp=Z,13nm,1.0s
GCPR Guaynabo City 40.42 2 P P 02 31 25.8 -4.1
GCPR IAmb IAmb 02 31 30.3
comp=Z,20nm,1.1s
DWPF Disney Wildern 52.01 344 P P 02 33 00.2 +0.1
baz=162
TIGA Tifton 55.74 343 P P 02 33 26.8 -0.3
baz=161
BRAL Brewton 56.51 340 P P 02 33 32.8 +0.2
baz=157
Y58A Scranton 57.19 348 P P 02 33 37.4 +0.2
baz=166
Y56A Pelion 57.42 346 P P 02 33 39.0 +0.1
baz=164
GOGA Godfrey 57.57 344 P P 02 33 39.5 -0.5
baz=161
Y55A Saluda 57.69 346 P P 02 33 40.8 0.0
baz=163
X58A Rowland 57.75 348 P P 02 33 41.4 +0.3
baz=166
Y54A Tignall 57.81 345 P P 02 33 41.8 +0.2
baz=162
Y53A Monroe 58.03 344 P P 02 33 43.2 +0.1
baz=161
X56A White Oak 58.03 347 P P 02 33 43.3 +0.2
baz=164
Z50A Ashland 58.10 342 P P 02 33 43.4 -0.3
baz=159,SNR=7.2
X55A Gracelyn & Ava 58.15 346 P P 02 33 44.0 +0.1
baz=164
Y52A Lilburn 58.16 344 P P 02 33 43.8 -0.3
baz=161
W58A Raeford 58.18 348 P P 02 33 44.0 -0.1
baz=166
LRAL Lakeview Retre 58.22 340 P P 02 33 44.2 -0.3
baz=158
X54A Belton 58.39 345 P P 02 33 45.7 +0.1
baz=163
W56A Indian Trail 58.56 347 P P 02 33 46.7 -0.1
baz=165
X53A Estanollee 58.57 344 P P 02 33 46.8 -0.1
baz=162
KMSC Kings Mountain 58.72 346 P P 02 33 48.0 0.0
baz=164
V59A Middlesex 58.73 350 P P 02 33 47.2 -0.8
baz=167
X52A Dahlonega 58.81 344 P P 02 33 48.3 -0.4
baz=161
W54A Cherokee Point 58.86 346 P P 02 33 49.1 +0.2
baz=163,SNR=5.5
X51A Calhoun 59.03 343 P P 02 33 49.9 -0.2
baz=160
V57A Coltrane Farms 59.13 348 P P 02 33 51.0 +0.2
baz=166
W53A Cullowhee 59.17 345 P P 02 33 51.4 +0.2
baz=162,SNR=8.4
833A Chaparral WMA, 59.18 327 P P 02 33 52.0 +0.8
baz=144
V56A Mocksville 59.19 347 P P 02 33 51.5 +0.3
baz=165
W52A Murphy 59.29 344 P P 02 33 51.9 0.0
baz=161
V55A Taylorsville 59.38 347 P P 02 33 53.0 +0.5
baz=164,SNR=6.7
V54A Nebo 59.47 346 P P 02 33 53.5 +0.4
baz=163,SNR=5.6
V53A Saluda 59.56 345 P P 02 33 53.8 0.0
baz=162
W51A Cleveland 59.57 343 P P 02 33 53.7 0.0
baz=160,SNR=5.2
U57A Blanch 59.58 349 P P 02 33 54.1 +0.3
baz=166
U56A King 59.69 348 P P 02 33 55.0 +0.5
baz=165
W50A Signal Mountai 59.75 343 P P 02 33 54.9 -0.2
baz=160,SNR=5.4
T59A Double "B" Far 59.80 350 P P 02 33 55.8 +0.5
baz=168
V52A Sevierville 59.92 345 P P 02 33 55.8 -0.3
baz=162,SNR=5.2
W49A Belvidere 59.94 342 P P 02 33 55.9 -0.5
baz=159
U55A TA2, Sparta 59.98 347 P P 02 33 57.0 +0.4
baz=164
V51A Loudon 60.07 344 P P 02 33 56.8 -0.4
baz=161
V50A Pikeville 60.14 343 P P 02 33 57.5 -0.1
baz=160,SNR=7.9
U54A Nelsons Funny 60.16 346 P P 02 33 58.2 +0.3
baz=164
U53A Fall Branch 60.17 346 P P 02 33 58.2 +0.3
baz=163
S61A Accomac 60.24 352 P P 02 33 59.6 +1.4
baz=170
T56A Rocky Mt 60.28 348 P P 02 33 59.0 +0.4
baz=166
OXF Oxford 60.35 339 P P 02 33 58.4 -0.7
baz=156
U52A Thorn Hill 60.39 345 P P 02 33 58.9 -0.5
baz=162
V49A McMinnville 60.45 343 P P 02 33 59.3 -0.4
baz=159,SNR=5.3
T55A Pulaski 60.52 348 P P 02 34 00.7 +0.5
baz=165
U51A La Follette 60.53 344 P P 02 33 59.9 -0.4
baz=161
T54A Tazewell 60.62 347 P P 02 34 00.6 -0.4
baz=164
T53A Wise 60.76 346 P P 02 34 01.6 -0.3
baz=163
U50A Jamestown 60.77 344 P P 02 34 01.7 -0.3
baz=161
X43A Marvell 60.86 338 P P 02 34 02.8 +0.2
baz=154
SNAA Sanae 60.97 161 P P 02 34 04.2 +1.3
comp=Z,2.3nm,0.9s,baz=221,slow=19,SNR=2.3
T51A Gray 61.07 345 P P 02 34 03.6 -0.3
baz=162
S55A Lewisburg 61.09 348 P P 02 34 04.7 +0.6
baz=165
U49A Red Boiling Sp 61.12 343 P P 02 34 03.6 -0.6
baz=160
JCT Junction City 61.14 328 P P 02 34 05.1 +0.5
baz=145
R58A Rapidan 61.17 350 P P 02 34 04.0 -0.6
baz=168
S54A Dingess, Beckl 61.28 347 P P 02 34 05.4 +0.1
baz=164
WHTX Lake Whitney, 61.30 331 P P 02 34 05.6 0.0
baz=147
WVT Waverly 61.34 341 P P 02 34 05.3 -0.4
baz=158
R55A Marlinton 61.52 348 P P 02 34 08.2 +1.3
baz=166
Q60A Greensboro 61.56 352 P P 02 34 07.9 +0.8
baz=170
T49A Edmonton 61.61 343 P P 02 34 07.0 -0.5
baz=160
MIAR Mount Ida 61.88 335 P P 02 34 09.6 +0.2
baz=152
Q55A Buckhannon 62.20 349 P P 02 34 12.6 +1.1
baz=166
TXAR Lajitas Array 62.23 324 P P 02 34 12.5 +0.5
comp=Z,1.1nm,0.6s,baz=152,slow=8.2,SNR=13
R51A Hillsboro 62.26 345 P P 02 34 11.4 -0.4
baz=162
Q54A Coxs Mills 62.33 348 P P 02 34 12.0 -0.3
baz=165
Q53A Leroy 62.34 347 P P 02 34 13.1 +0.7
baz=164
W39A Magazine 62.53 336 P P 02 34 14.9 +1.2
baz=152
P54A Burton 62.86 349 P P 02 34 17.2 +1.3
baz=166
WCI Wyandotte Cave 62.87 343 P P 02 34 15.2 -0.7
baz=160
P53A Whipple 62.92 348 P P 02 34 16.2 0.0
baz=165
P52A Corning 63.22 347 P P 02 34 18.0 -0.1
baz=164
U40A Yellville 63.22 337 P P 02 34 18.1 -0.2
baz=153
O55A Ligonier 63.24 350 P P 02 34 18.4 +0.1
baz=167
P49A Miami Univ. Ec 63.70 345 P P 02 34 21.4 +0.1
baz=161
N55A Marion Center 63.75 350 P P 02 34 22.2 +0.5
baz=167
O51A Pataskala 63.81 347 P P 02 34 21.6 -0.4
baz=163
ACSO Alum Creek Sta 63.97 347 P P 02 34 22.4 -0.7
baz=163
CCM Cathedral Cave 64.19 339 P P 02 34 24.3 -0.2
baz=155
WMOK Wichita Mounta 64.20 331 P P 02 34 24.2 -0.5
baz=147
N49A Columbus Grove 64.89 346 P P 02 34 28.4 -0.6
baz=162
MNTX Cornudas Mount 64.99 324 P P 02 34 30.3 +0.4
baz=140,SNR=6.7
SFIN Lafayette 65.10 343 P P 02 34 29.7 -0.6
baz=159
ERPA Erie 65.22 350 P P 02 34 30.9 -0.2
baz=166
L54A Sinclairville 65.22 350 P P 02 34 31.8 +0.6
baz=167
M49A Liberty Center 65.38 346 P P 02 34 31.3 -0.8
baz=162
MSTX Muleshoe 65.44 328 P P 02 34 33.5 +0.6
baz=143,SNR=5.5
J59A Piesco 65.83 354 P P 02 34 36.0 +0.9
baz=172
J56A Wolcott 65.90 352 P P 02 34 35.3 -0.1
baz=170
L48A N Adams 65.92 346 P P 02 34 35.2 -0.5
baz=162
L47A Sherwood 66.13 345 P P 02 34 36.3 -0.6
baz=161
J52A Paris 66.40 349 P P 02 34 39.0 +0.3
baz=166
LBNH Lisbon 66.40 356 P P 02 34 39.8 +1.1
baz=175
K48A Perry 66.67 347 P P 02 34 39.9 -0.5
baz=162
H57A Richville 66.91 354 P P 02 34 42.4 +0.7
baz=171
319A Douglas 66.92 321 P P 02 34 35.4 -7.0
319A IAmb IAmb 02 34 45.4
comp=Z,7.2nm,0.8s
I51A Listowel 67.04 349 P P 02 34 42.5 -0.1
baz=165
J47A Sunmer 67.24 346 P P 02 34 43.7 -0.3
baz=162
G57A Newington 67.50 354 P P 02 34 45.2 -0.3
baz=172
G55A Calabogie 67.83 353 P P 02 34 48.3 +0.7
baz=170
I48A Sherman Twp 67.91 347 P P 02 34 47.3 -0.8
baz=163
I47A Gladwin 67.92 347 P P 02 34 47.2 -1.0
baz=162
CBKS Cedar Bluff 68.05 333 P P 02 34 43.5 -5.7
CBKS Cedar Bluff 68.05 333 P P 02 34 50.0 +0.8
baz=147,SNR=7.1
ANMO Albuquerque 68.07 326 P P 02 34 42.9 -6.7
ANMO Albuquerque 68.07 326 P P 02 34 51.0 +1.4
baz=140
G54A Lake Saint Pet 68.14 352 P P 02 34 49.7 +0.1
baz=168
SCIA State Center 68.31 339 P P 02 34 50.6 -0.1
baz=154
JFWS Jewell Farm 68.32 342 P P 02 34 50.6 -0.2
baz=156
TUC Tucson 68.47 321 P P 02 34 53.6 +1.6
baz=136
ALGO Algonquin Park 68.69 352 P P 02 34 53.1 +0.2
baz=169
F52A Sundridge 68.71 351 P P 02 34 53.2 +0.2
baz=167
E57A Chemin Saint G 68.72 355 P P 02 34 53.4 +0.2
baz=172
G47A Hillman 68.89 347 P P 02 34 54.6 +0.4
baz=163
F51A Arnstein 68.92 351 P P 02 34 54.2 -0.2
baz=167
E56A St. Veronique 68.93 354 P P 02 34 54.6 +0.2
baz=172
E54A Lac Daplat, Po 69.05 353 P P 02 34 55.0 -0.1
baz=169
E53A Dumoine, Ponti 69.05 352 P P 02 34 55.2 0.0
baz=169
E52A Mattawa 69.09 352 P P 02 34 55.1 -0.3
baz=168
F49A Sandfield 69.11 349 P P 02 34 55.3 -0.2
baz=165
G45A Suttons Bay 69.14 346 P P 02 34 55.3 -0.4
baz=161
F48A Evansville 69.28 349 P P 02 34 56.3 -0.2
baz=164
D57A Chemin Vers le 69.30 355 P P 02 34 56.8 +0.1
baz=173
D58A Chemin du LacG 69.31 356 P P 02 34 57.1 +0.4
baz=174
D56A ZEC Mazanza, M 69.41 354 P P 02 34 57.3 -0.1
baz=172
214A Organ Pipe Nat 69.42 320 P P 02 34 59.7 +1.9
baz=135
D55A Sainte-Anne-du 69.44 354 P P 02 34 57.7 +0.1
baz=171
E51A G1948 Merrick 69.45 351 P P 02 34 57.5 -0.1
baz=167
BGNE Belgrade 69.62 336 P P 02 34 52.8 -6.1
BGNE Belgrade 69.62 336 P P 02 34 59.6 +0.8
baz=149
D54A Lac Fusel, La 69.70 353 P P 02 34 58.7 -0.5
baz=170
F45A CMU Biological 69.72 346 P P 02 34 59.0 -0.3
baz=161
D53A Lac Vacive, Po 69.75 352 P P 02 34 59.7 +0.3
baz=169
SDCO Great Sand Dun 69.78 328 P P 02 35 01.7 +1.5
baz=142,SNR=15
E48A Lockeyer 69.83 349 P P 02 35 00.2 +0.3
baz=165
D51A Lot 18 Range I 69.98 351 P P 02 35 00.7 -0.1
baz=167
E47A Iron Bridge 70.01 348 P P 02 35 01.1 +0.1
baz=164
D50A G1974 Best Tow 70.12 351 P P 02 35 01.4 -0.3
baz=167
S22A 4UR Ranch, Cre 70.43 328 P P 02 35 05.8 +1.6
baz=141
D48A Paudash Townsh 70.44 349 P P 02 35 03.4 -0.2
baz=165
D47A Chapleau 70.55 349 P P 02 35 03.7 -0.7
baz=164
D46A Sault St. Mari 70.57 348 P P 02 35 04.1 -0.4
baz=163
Q24A Divide 70.58 329 P P 02 35 06.5 +1.4
baz=142
OGNE Ogallala 70.80 333 P P 02 35 07.2 +1.1
baz=145
MVCO Mesa Verde 70.87 326 P P 02 35 08.3 +1.5
baz=139,SNR=7.0
ECSD EROS Data Cent 71.08 338 P P 02 35 07.5 -0.1
baz=151
WUAZ Wupatki 71.14 323 P P 02 35 10.0 +1.7
baz=136
ISCO Idaho Springs 71.46 330 P P 02 35 11.6 +1.2
baz=142
LSQQ Lebel-sur-Quev 71.61 353 P P 02 35 10.8 +0.2
baz=170
SMCO Snowmass 71.62 328 P P 02 35 03.7 -7.7
SMCO IAmb IAmb 02 35 13.8
comp=Z,6.8nm,0.8s
Y12C Blythe 71.70 320 P P 02 35 14.1 +2.5
baz=134
D41A Chassel 71.72 345 P P 02 35 05.5 -5.9
D41A IAmb IAmb 02 35 12.6
comp=Z,9.8nm,0.8s
MONP2 Monument Peak 72.27 318 P P 02 35 17.5 +2.3
baz=132
IRM Iron Mountain 72.36 320 P P 02 35 17.2 +1.7
baz=133
MATQ Matagami 72.38 353 P P 02 35 14.9 -0.3
baz=169
N23A Red Feather La 72.48 330 P P 02 35 17.9 +1.5
baz=142
O20A White River Ci 72.98 328 P P 02 35 20.8 +1.6
baz=140,SNR=9.6
GMRC Granite Mounta 73.09 320 P P 02 35 22.1 +2.1
baz=133
EYMN Ely 73.29 343 P P 02 35 20.8 +0.1
baz=156
SRU San Rafael Swe 73.35 326 P P 02 35 13.2 -8.2
HEC Hector,Ludlow 73.53 320 P P 02 35 24.6 +2.2
baz=133
K22A Casper 74.14 331 P P 02 35 27.4 +1.5
baz=142
RSSD Black Hills 74.25 333 P P 02 35 19.4 -7.1
RSSD Black Hills 74.25 333 P P 02 35 27.6 +1.1
baz=144
EDW2 Edwards Air Fo 74.57 319 P P 02 35 29.8 +1.4
baz=132
AGMN Agassiz Nation 74.86 341 P P 02 35 29.9 +0.2
baz=152
TPNV Topopah Spring 74.93 321 IAmb IAmb 02 35 33.8
comp=Z,7.7nm,1.1s
TPNV Topopah Spring 74.93 321 P P 02 35 32.7 +2.1
baz=133
MPMC Manual Prospec 75.05 320 P P 02 35 32.4 +1.1
baz=132
DUG Dugway, Tooele 75.34 326 P P 02 35 34.6 +1.8
baz=136
ISA Isabella, Lake 75.38 319 P P 02 35 34.9 +1.8
baz=131
R11A Troy Canyon, C 75.52 323 P P 02 35 36.1 +2.1
baz=134
PDAR Pinedale Array 75.63 329 P P 02 35 35.5 +0.9
comp=Z,1.8nm,0.7s,baz=129,slow=8.1,SNR=16
CWC Cottonwood Cre 75.66 320 P P 02 35 36.6 +1.9
baz=132
HWUT Hardware Ranch 75.74 327 P P 02 35 28.5 -6.6
HWUT IAmb IAmb 02 35 38.4
comp=Z,4.2nm,0.7s
TOA0 Torodi Ar. Sit 76.17 69 P P 02 35 36.7 -1.2
TOA0 IAmb IAmb 02 35 38.2
comp=Z,6.6nm,0.9s
TORD Torodi Ar. Bea 76.17 69 P P 02 35 37.5 -0.4
comp=Z,5.1nm,0.5s,baz=262,slow=5.9,SNR=27
ULM Lac du Bonnet 76.61 342 P P 02 35 39.5 0.0
comp=Z,9.7nm,0.5s,baz=155,slow=6.3,SNR=32
SCHQ Schefferville 76.87 0 P P 02 35 40.4 -0.5
comp=Z,2.5nm,0.7s,baz=195,slow=1.5,SNR=3.6
SCHQ Schefferville 76.87 0 P P 02 35 36.3 -4.6
NVAR Mina Array Bea 77.13 321 P P 02 35 44.7 +1.7
comp=Z,1.2nm,0.8s,baz=158,slow=6.8,SNR=8.0
LAO LASA Array 77.23 334 P P 02 35 44.1 +0.9
baz=143
RLMT Red Lodge 77.31 331 P P 02 35 45.2 +1.3
baz=140
KVN Kaiserville 77.43 322 P P 02 35 37.1 -7.6
DGMT Dagmar 77.88 336 P P 02 35 48.1 +1.3
baz=145
YHL Hebgen Lake 77.98 330 P P 02 35 41.5 -6.2
PNTR Pine Nut 78.33 321 P P 02 35 41.4 -8.2
PNTR IAmb IAmb 02 35 52.7
comp=Z,7.1nm,0.8s
EGMT Eagleton 79.76 333 P P 02 35 58.2 +1.1
baz=140
O03E Paynes Creek 80.40 321 P P 02 36 01.3 +0.7
baz=130
O02D Mt. Diablo Mer 80.90 320 P P 02 36 05.3 +2.0
baz=129
BOSA Boshof 81.66 117 P P 02 36 08.2 +0.4
comp=Z,1.3nm,0.5s,baz=278,slow=5.0,SNR=5.0
J05D Fort Rock, OR 82.02 323 P P 02 36 11.1 +1.9
baz=130
YKA Yellowknife Ar 92.51 340 P P 02 36 59.9 +0.6
comp=Z,2.0nm,0.4s,baz=133,slow=4.4,SNR=32
ASAR Alice Springs 129.86 205 PKP PKPdf 02 42 57.9 -0.1
comp=Z,0.5nm,0.3s,baz=135,slow=3.0,SNR=6.7
WRA Warramunga Arr 132.99 208 PKP PKPdf 02 43 04.2 +0.3
comp=Z,0.7nm,0.3s,baz=162,slow=1.8,SNR=4.3
ZALV Zalesovo Beam 142.03 27 PKhKP PKPpre 02 43 12.7
comp=Z,0.7nm,0.3s,baz=0.4,slow=21,SNR=2.5
ZALV PKP PKPdf 02 43 19.8 +0.4
comp=Z,1.3nm,0.4s,baz=280,slow=3.0,SNR=3.8
MKAR Makanchi Array 145.37 38 PKPbc PKPdf 02 43 26.6 +1.0
comp=Z,2.1nm,0.5s,baz=336,slow=3.0,SNR=37
USRK Ussuriysk Ar. 153.06 329 PKPbc PKPbc 02 43 45.7 +0.4
comp=Z,1.7nm,0.6s,baz=41,slow=15,SNR=4.2
SONM Songino Array 154.06 10 PKP PKPdf 02 43 40.4 +1.1
comp=Z,0.4nm,0.7s,baz=301,slow=1.0,SNR=2.9
SONM PKPbc PKPbc 02 43 48.0 +0.5
comp=Z,0.7nm,0.4s,baz=292,slow=1.2,SNR=9.9

*IDC **18** 02:43:33.3±1.4, 2.09N±127.99E, h0km, mb4.1/5, mb1 4.4/6, mb1mx3.8/37, mbtmp4.3/6, ML4.6/1, Error ellipse: s-maj=51.8km s-min=21.1km az=68.0*
*NEIC **18** 02:43:38.3±0.6, 2.05N±0.09 127.96E±0.08, h35km±2km, mb4.2/8, Error ellipse: s-maj=19.9km s-min=3.7km az=140.0*
ISC 18 02:43:37.9±1.1, 2.0N±0.1 128.0E±0.1, h35km, n17, σ0.80/18, mb4.3/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.39	206	Pn	Pn	02 43 59.8	-1.0
LUWI	Luwuk	6.03	240	Pn	Pn	02 45 05.1	+0.5
LUWI					Sn	02 46 12.5	+0.1
KAPI	Kappang	10.79	230	Pn	Pn	02 46 11.0	+1.1
	4.8nm,0.3s,baz=88,slow=9.0,SNR=8.1						
KAPI	Kappang	10.79	230		Pn	02 46 10.5	+0.6
FITZ	Fitzroy Crossi	20.14	186	P	P	02 48 09.2	+0.1
	2.6nm,0.9s,baz=16,slow=7.4,SNR=1.7						
FITZ	Fitzroy Crossi	20.14	186	P	P	02 48 08.2	-0.9
WB0	Warramunga Arr	22.57	164	P	P	02 48 35.9	+0.6
WRA	Warramunga Arr	22.72	164	P	P	02 48 37.9	+1.0
	7.8nm,0.5s,baz=343,slow=11,SNR=44						
WB2	Warramunga Arr	22.72	164	P	P	02 48 37.6	+0.7
WB2				IAmb	IAmb	02 48 38.8	
	comp=Z,9.0nm,0.9s						
WR0	Warramunga Arr	22.79	164	P	P	02 48 38.2	+0.5
WR0				IAmb	IAmb	02 49 39.3	
	comp=Z,7.5nm,0.6s						
ASAR	Alice Springs	26.19	168	P	P	02 49 09.7	+0.3
	comp=Z,1.9nm,0.5s,baz=351,slow=7.5,SNR=26						
STKA	Stephens Creek	36.12	160	P	P	02 50 37.8	+1.0
	comp=Z,4.4nm,0.4s,baz=339,slow=7.6,SNR=14						
STKA	Stephens Creek	36.12	160	P	P	02 50 37.4	+0.6
STKA				IAmb	IAmb	02 50 38.3	
	comp=Z,1.2nm,0.8s						

WHZ	Wether Hill Ro	59.36	149	P	P	02 53 35.8	-0.8
WHZ				IAmb	IAmb	02 53 36.7	
	comp=Z,1.8nm,0.6s						
MK31	Makanchi Array	59.64	325	P	P	02 53 38.9	+0.3
MKAR	Makanchi Array	59.64	325	P	P	02 53 39.2	+0.6
	comp=Z,0.3nm,0.3s,baz=116,slow=7.7,SNR=14						
NIL	Nilore	59.94	308	P	P	02 53 39.9	-1.0

*ISK **18** 02:48:03.2, 35°.13N×30°.15E, h76km, ML3.5/38*
*NIC **18** 02:48:05.8±0.0, 35°.18N×30°.28E, h40km±22km, Ml3.7/4*
*THE **18** 02:48:09.1, 35°.30N×29°.94E, h45km±8km, ML3.1/5, Error ellipse: s-maj=8.3km s-min=2.2km az=114.0*
*GII **18** 02:48:09.1±0.4, 34°.89N×30°.50E, h40km, MD3.2/3*
*DDA **18** 02:48:09.9, 35°.63N×29°.98E, h39km±1km, MW3.5*
*ATH **18** 02:48:21.4, 35°.59N×28°.59E, h39km±5km, ML2.4/3, Error ellipse: s-maj=6.7km s-min=1.4km az=12.0*
ISC 18 02:48:05.0±1.4, **35°.22N**±0°.06×**30°.12E**±0°.04, **h47km**±41km, **n128**, σ1s.56/113, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	Kas	1.09	338	P	Pn	02 48 25.1	+1.0
AKAS				SN	Sn	02 48 41.1	+2.9
AKAS	Kas	1.09	338	i P	Pn	02 48 24.6	+0.5
AKAS				i S	Sn	02 48 33.3	-5.0
AKAS				IAML		02 48 41.0	
	comp=N,420nm,0.5s						
AKUM	Antalya-Kumluc	1.11	9	i P	Pn	02 48 24.8	+0.5
AKUM				i S	Sn	02 48 36.4	-2.1
KEMT	Kemer-ANTALYA	1.43	14	PN	Pn	02 48 29.4	+0.9
ELL	Elmali	1.54	354	PN	Pn	02 48 31.6	+1.5
ELL				SN	Sn	02 48 51.2	+2.2
FETY	Fethiye	1.65	329	PN	Pn	02 48 32.5	+1.0
FETY	Fethiye	1.65	329	i P	Pn	02 48 32.7	+1.2
FETY				i S	Sn	02 48 51.3	-0.2
FETY				IAML		02 48 52.0	
	comp=E,195nm,0.2s						
FETY				IAML		02 48 52.0	
	comp=N,248nm,0.2s						
ANTB	Antalya	1.73	14	PN	Pn	02 48 33.5	+0.8
AKMS	Akamas	1.82	96	P	Pn	02 48 33.4	-0.6
AKMS				AML	AML	02 48 53.5	
	comp=N,1.5nm,0.4s						
AKMS				AML	AML	02 48 53.5	
	comp=N,1.5nm,0.4s						
AKMS				S	Sn	02 48 53.6	-2.4
ARG	Arkhangelos	1.90	302	P	Pn	02 48 36.1	+1.1
ARG	Arkhangelos	1.90	302	P	Pn	02 48 36.2	+1.1
ARG				AML	AML	02 49 02.1	
	comp=E,254μm,0.3s						
ARG				AML	AML	02 49 02.2	
	comp=N,159μm,0.3s						
ARG	Arkhangelos	1.90	302	PN	Pn	02 48 35.6	+0.6
OSC1	CSNet OBS 1	1.96	151	P	Pn	02 48 35.3	-0.6
DALY	Dalyan (Mula)	1.99	324	PN	Pn	02 48 37.2	+1.0
DALY	Dalyan (Mula)	1.99	324	i P	Pn	02 48 37.4	+1.2
DALY				i S	Sn	02 48 56.8	-3.1
ALFC	Alefka	2.03	91	P	Pn	02 48 36.2	-0.6
ALFC				AML	AML	02 48 58.4	
	comp=N,1.7nm,0.4s						
ALFC				AML	AML	02 48 58.4	
	comp=N,1.7nm,0.4s						
ALFC				S	Sn	02 48 58.9	-2.1
ALFC				AML	AML	02 48 59.9	
	comp=N,1.9nm,0.1s						
ALFC				AML	AML	02 48 59.9	
	comp=N,1.9nm,0.1s						
ALAN	Alanya-ANTALYA	2.05	49	PN	Pn	02 48 36.8	-0.2
GAZI	Gazipasa	2.05	60	PN	Pn	02 48 36.5	-0.6
GAZI	Gazipasa	2.05	60	i P	Pn	02 48 36.5	-0.6
GAZI				i S	Sn	02 48 58.6	-2.9
GAZI				IAML		02 49 00.0	
	comp=E,170nm,0.4s						
GAZI				IAML		02 49 00.0	
	comp=N,171nm,0.6s						
NATA	Nata	2.06	102	P	Pn	02 48 36.8	-0.4
NATA				AML	AML	02 49 00.2	
	comp=N,2.2nm,0.3s						
NATA				AML	AML	02 49 00.2	
	comp=N,2.2nm,0.3s						
NATA				S	Sn	02 49 00.3	-1.3
TURN	Turunc	2.06	324	PN	Pn	02 48 39.9	+2.8
TURN	Turunc	2.06	324	i P	Pn	02 48 40.3	+3.1
TURN				i S	Sn	02 49 02.2	+0.6
GOLH	Golhisar	2.06	347	i P	Pn	02 48 40.1	+2.8
GOLH				i S	Sn	02 49 00.7	-1.2
KEPZ	Antalya-Kepez	2.06	35	i P	Pn	02 48 38.2	+0.9
KEPZ				i S	Sn	02 49 01.2	-0.7
MRSB	Marmaris-Mugla	2.16	314	PN	Pn	02 48 39.6	+1.0
BCK	Bucak	2.27	9	PN	Pn	02 48 41.1	+1.0
LEF	Lefka	2.27	92	PN	Pn	02 48 38.7	-1.4
LEF	Lefka	2.27	92	i P	Pn	02 48 38.5	-1.5
LEF				i S	Sn	02 48 59.4	-7.4
SZAC	Souni	2.31	101	P	Pn	02 48 40.1	-0.6
SZAC				S	Sn	02 49 06.6	-1.4
SZAC				AML	AML	02 49 07.2	
	comp=N,0.8nm,0.3s						
SZAC				AML	AML	02 49 07.2	
	comp=N,0.8nm,0.3s						
YER	Yerkesik	2.42	323	PN	Pn	02 48 43.4	+1.2
KARP	Karpathos	2.44	279	P	Pn	02 48 43.9	+1.5
KARP				S	Sn	02 49 10.4	-0.7
	comp=N,192nm,0.1s						
KARP	Karpathos	2.44	279	P	Pn	02 48 43.5	+1.1
KARP				AML	AML	02 49 14.9	
	comp=N,318μm,0.2s						
KARP				AML	AML	02 49 16.1	
	comp=E,459μm,0.2s						
KARP	Karpathos	2.44	279	PN	Pn	02 48 42.8	+0.4
TAVA	DENIZLI_Tavas	2.44	337	i P	Pn	02 48 44.5	+2.0
TAVA				i S	Sn	02 49 08.6	-2.7
BRDR	BURDUR-Merkez	2.47	359	i P	Pn	02 48 45.4	+2.4
BRDR				i S	Sn	02 49 12.2	+0.2
BRDR				IAML		02 49 15.0	
	comp=E,105nm,0.3s						
DATC	Datca-Mugla	2.52	308	PN	Pn	02 48 44.6	+1.1
DAT	Datca	2.56	307	PN	Pn	02 48 45.1	+1.0
DAT	Datca	2.56	307	i P	Pn	02 48 45.7	+1.6
DAT				i S	Sn	02 49 13.1	-0.9
SEYD	Seydisehir-KON	2.58	32	PN	Pn	02 48 45.4	+0.9
HDMB	Hadim	2.59	47	PN	Pn	02 48 45.2	+0.6
ASGA	Asgata	2.60	99	P	Pn	02 48 43.8	-0.8
TEKE	Tekeli-Mersin	2.60	68	PN	Pn	02 48 44.9	+0.3
ISP	Isparta	2.62	7	PN	Pn	02 48 46.2	+1.3
CSS	Mathiatis	2.64	95	PN	Pn	02 48 44.8	-0.4
CSS	Mathiatis	2.64	95	P	Pn	02 48 44.3	-1.0
CSS				S	Sn	02 49 13.7	-2.4
CSS	Mathiatis	2.64	95	Pn	Pn	02 48 44.2	-1.0
ERMK	Ermenek	2.67	57	i P	Pn	02 48 46.3	+0.5
ERMK				i S	Sn	02 49 08.7	-8.4
ERMK				IAML		02 49 21.0	
	comp=N,82nm,0.5s						
ERMK				IAML		02 49 27.0	
	comp=E,60nm,0.3s						
BASM	Basmaki-Afyon	2.69	359	PN	Pn	02 48 47.2	+1.2
BERE	Bereket-Mersin	2.76	65	PN	Pn	02 48 47.3	+0.4
OSC2	CSNet OBS 4	2.78	140	P	Pn	02 48 47.2	+0.1
OSC2				S	Sn	02 49 17.5	-1.9
NISR	Nisiros	2.80	301	P	Pn	02 48 48.5	+1.2
BAGO	Egridir - ISPA	2.82	11	i P	Pn	02 48 50.0	+2.3
BAGO				i S	Sn	02 49 20.7	+0.3
MVOU	Mavrovouni	2.88	93	P	Pn	02 48 47.7	-0.7
BODT	Bodrum	2.92	310	PN	Pn	02 48 50.2	+1.1
AKK2	Akkuyu-Mersin	2.94	71	PN	Pn	02 48 49.6	+0.4
AKKU	Akkuyu-Mersin	2.94	70	PN	Pn	02 48 49.8	+0.5
TEVE	Tevekalti-Mers	2.96	65	PN	Pn	02 48 50.1	+0.5
KOSK	Kos Island	2.97	302	PN	Pn	02 48 50.8	+1.1
KZIL	AFYON_Kizioren	3.03	0	i P	Pn	02 48 52.3	+1.7
KZIL				i S	Sn	02 49 25.5	-0.3
AYDN	Tasoluk	3.03	324	i P	Pn	02 48 52.3	+1.7
AYDN				i S	Sn	02 49 21.9	-3.8
AYDN				IAML		02 49 29.0	
	comp=N,41nm,0.5s						
AYDN				IAML		02 49 31.0	
	comp=E,48nm,0.5s						
TISA	Tisan-Mersin	3.04	71	PN	Pn	02 48 51.1	+0.4
IKL	Isikli	3.07	70	PN	Pn	02 48 51.4	+0.3
KARG	Kargicak-Mersi	3.08	70	PN	Pn	02 48 51.7	+0.5
DOGA	KONYA_Doganhis	3.14	23	i P	Pn	02 48 54.5	+2.4
KHAL	Karahalli	3.19	351	i P	Pn	02 48 53.8	+1.1
KHAL				i S	Sn	02 49 27.4	-2.1
ZKR	Zakros	3.20	269	P	Pn	02 48 53.4	+0.6
ZKR				S	Sn	02 49 28.2	-1.6
	comp=E,92nm,0.4s						
ZKR	Zakros	3.20	269	P	Pn	02 48 54.0	+1.1
ZKR	Zakros	3.20	269	PN	Pn	02 48 53.5	+0.6
KRMN	Karaman	3.20	52	PN	Pn	02 48 53.9	+0.9
AYDB	Zeytinkoy-Aydi	3.26	327	PN	Pn	02 48 55.1	+1.3
KONT	Konya--Tatoy	3.26	33	PN	Pn	02 48 55.1	+1.4
STIA	Sitia Lasithi	3.30	271	P	Pn	02 48 55.9	+1.7
STIA				S	Sn	02 49 32.1	-0.1
SHUT	Suhut-Afyon	3.34	6	PN	Pn	02 48 56.6	+1.7
GCAM	G?zelcaml?	3.40	318	PN	Pn	02 48 57.2	+1.7
GCAM	G?zelcaml?	3.40	318	i P	Pn	02 48 56.9	+1.4
GCAM				i S	Sn	02 49 31.4	-3.1
GCAM				IAML		02 49 34.0	
	comp=N,68nm,0.5s						
GCAM				IAML		02 49 35.0	
	comp=E,134nm,0.2s						
LADK	Ladik-KONYA	3.48	31	PN	Pn	02 48 57.9	+1.2
KULA	Kula-Manisa	3.49	341	PN	Pn	02 48 58.5	+1.6
MANT	Manisa	3.50	339	i P	Pn	02 48 58.3	+1.2
BOLV	Bolvadin	3.56	11	i P	Pn	02 49 00.3	+2.5
BOLV				i S	Sn	02 49 36.5	-2.1
USAK	Uak-Merkez	3.60	346	i P	Pn	02 48 59.2	+0.8
USAK				i S	Sn	02 49 36.8	-2.8
USAK				IAML		02 49 38.0	
	comp=N,59nm,1.3s						
SMG	Samos	3.63	314	P	Pn	02 48 59.6	+0.9
SMG				S	Sn	02 49 38.9	-1.4
	comp=N,120nm,0.2s						
NPS	Neapolis	3.69	272	P	Pn	02 49 01.3	+1.7
NPS				S	Sn	02 49 41.0	-0.8
	comp=N,100nm,0.3s						
NPS	Neapolis	3.69	272	P	Pn	02 49 01.5	+2.0
AMGA	Amorgos Island	3.79	296	P	Pn	02 49 01.6	+0.7
LAST	Lasithi	3.80	270	P	Pn	02 49 01.8	+0.6
LAST				S	Sn	02 49 44.5	-0.2
	comp=N,58nm,0.5s						
LAST	Lasithi	3.80	270	P	Pn	02 49 02.8	+1.6
GEDZ	Gediz	3.86	352	PN	Pn	02 49 03.4	+1.4
KERG	Konya-Eregli	3.91	55	i P	Pn	02 49 03.1	+0.4
KERG				i S	Sn	02 49 41.3	-6.0
KERG				IAML		02 49 50.0	
	comp=N,35nm,0.4s						
KIZT	Kizilcal	3.92	21	PN	Pn	02 49 03.6	+0.9
SANT	Santorini	3.96	288	P	Pn	02 49 03.8	+0.6
SANT	Santorini	3.96	288	PN	Pn	02 49 03.9	+0.6
SAP2K	Karterados	3.98	289	P	Pn	02 49 04.4	+0.9
SAP1	Santorini-Akro	4.01	288	P	Pn	02 49 04.7	+0.8
SAP1	Santorini-Akro	4.01	288	P	Pn	02 49 04.7	+0.8
THT2	Imerovigli	4.01	289	PN	Pn	02 49 05.0	+1.1
CHBY	Cihanbeyli	4.02	33	PN	Pn	02 49 05.3	+1.1
APE	Apeiranthos	4.15	298	P	Pn	02 49 07.1	+1.2
APE	Apeiranthos	4.15	298	P	Pn	02 49 07.1	+1.2
APE	Apeiranthos	4.15	298	PN	Pn	02 49 06.9	+1.0
IOSP	Ios island	4.20	292	P	Pn	02 49 07.2	+0.7
IOSP	Ios island	4.20	292	P	Pn	02 49 06.8	+0.3
CIFT	Cifteler, Eski	4.20	10	PN	Pn	02 49 07.9	+1.3
URLA	Izmir	4.22	319	PN	Pn	02 49 07.8	+0.9
TVSB	Tavsanli	4.25	353	PN	Pn	02 49 08.4	+1.0
IDI	Anoyia	4.28	272	P	Pn	02 49 08.6	+0.9
GULE	Gulek	4.29	60	i P	Pn	02 49 09.5	+1.6
GULE				i S	Sn	02 49 54.8	-2.0
GULE				IAML		02 49 59.0	
	comp=N,37nm,0.4s						
GULE				IAML		02 50 00.0	
	comp=E,61nm,0.8s						
AUSIV	SIVRIHISAR	4.36	15	PN	Pn	02 49 10.0	+1.1
SVRH	Sivrihisar-ESK	4.37	14	PN	Pn	02 49 10.1	+1.2
CHOS	Chios island	4.54	315	PN	Pn	02 49 12.5	+1.2
DKL	Dikili	4.62	327	PN	Pn	02 49 13.7	+1.4
MMA0B	Mount Meron ar	4.90	115	Pn	Pn	02 49 14.7	-1.6
KSDI	Kefar Szold	5.01	112	Pn	Pn	02 49 16.3	-1.4
KSDI				Sn	Sn	02 50 09.5	-4.9
IMMV	Iera Moni Meta	5.03	275	P	Pn	02 49 18.4	+0.5
NATI	Neve Ativ	5.04	111	Pn	Pn	02 49 16.8	-1.3
NATI				Sn	Sn	02 50 10.2	-4.9
SLTI	Sal'it	5.06	125	Pn	Pn	02 49 17.0	-1.4
MMLI	Mount Malkishu	5.21	121	Pn	Pn	02 49 18.8	-1.7
QRNJ	Al-Qirein	5.38	121	Pn	Pn	02 49 21.2	-1.5
HMDT	Nahal Hemdat	5.39	122	Pn	Pn	02 49 21.4	-1.5
AMAZ	Amatzia	5.44	131	Pn	Pn	02 49 22.1	-1.5
KZIT	Kziot	5.60	139	Pn	Pn	02 49 24.4	-1.4
KZIT				Sn	Sn	02 50 22.9	-6.0
YTIR	Yattir	5.68	131	Pn	Pn	02 49 25.7	-1.3
DSI	Dead Sea	5.71	128	Pn	Pn	02 49 26.0	-1.3
DAMI2	DAM2	6.01	131	Pn	Pn	02 49 30.0	-1.4
PRNI	Paran	6.36	138	Pn	Pn	02 49 34.5	-1.7
PRNI				Sn	Sn	02 50 40.6	-7.0
KRMI	Paran Flat	6.40	141	Pn	Pn	02 49 34.9	-1.9
KRMI				Sn	Sn	02 50 41.2	-7.3
HRFI	Mount Harif	6.62	140	Pn	Pn	02 49 38.5	-1.4
HRFI				Sn	Sn	02 50 47.7	-6.4
MBRI	Mt Berech	6.75	142	Pn	Pn	02 49 39.9	-1.8
EIL	Elat	6.88	142	Pn	Pn	02 49 41.5	-1.8

*IDC **18** 03:08:27.7±1.2, 18°.62S×177°.75W, h608km±16km, mb3.6/10, mb1 3.9/12, mb1mx3.5/36, mbtmp4.5/12, Error ellipse: s-maj=26.2km s-min=10.2km az=145.0*
*NEIC **18** 03:08:27.3±1.2, 18°.6S±0°.1×177°.8W±0°.1, h610km±4km, mb4.6/37, Error ellipse: s-maj=17.4km s-min=13.4km az=145.0*
ISC 18 03:08:26.7±0.4, **18°.55S**±0°.08×**177°.80W**±0°.07, **h600km**, **n86**, σ0s.97/89, **mb4.5/24**, **2C-8D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.03	281	P	P	03 09 53.7	+1.2
AFI	Afiamalu	7.40	52	P	P	03 10 21.2	+0.7
	12nm,0.3s,baz=178,slow=0.9,SNR=8.8						
AFI				S	S	03 11 53.8	+0.2
	4.6nm,0.3s,baz=48,slow=23,SNR=3.9						
AFI	Afiamalu	7.40	52	P	P	03 10 20.8	+0.3
AFI					S	03 11 53.6	0.0
NIUE	Niue	7.47	95	P	P	03 10 22.5	+1.4
FUNA	Funafuti	10.38	343	P	P	03 10 49.9	+0.5
SANVU	Saraoutou	14.68	280	P	P	03 11 32.6	+0.6
DZM	Mont Dzumac	15.19	254	P	P	03 11 39.4	+2.7
	3.0nm,0.3s,baz=145,slow=18,SNR=21						
NOUC	Port Laguerre	15.33	254	P	P	03 11 38.9	+1.1
NOUC				IAmb	IAmb	03 11 51.4	
	comp=Z,16nm,1.1s						
KNTN	Kanton	16.77	22	P	P	03 11 51.0	-0.2
URZ	Urewera	20.13	192	P	P	03 12 20.8	-0.6
	comp=Z,14nm,0.3s,baz=278,slow=3.4,SNR=26						
URZ	Urewera	20.13	192	P	P	03 12 21.1	-0.3
URZ				IAmb	IAmb	03 12 27.2	
	comp=Z,16nm,0.9s						
HIZ	Hauiti	20.90	196	P	P	03 12 29.1	+0.8
HIZ				IAmb	IAmb	03 12 31.8	
	comp=Z,20nm,1.2s						
BKZ	Black Stump Fm	21.13	192	P	P	03 12 29.0	-1.5
BKZ				IAmb	IAmb	03 12 36.9	
	comp=Z,8.9nm,1.2s						
MSWZ	Moikau Station	23.55	193	P	P	03 12 51.5	-0.5
THZ	Tophouse	24.46	197	P	P	03 13 00.1	+0.1
THZ				IAmb	IAmb	03 13 06.1	
	comp=Z,12nm,1.0s						
KHZ	Kahutara	24.90	195	P	P	03 13 02.7	-1.1
KHZ				IAmb	IAmb	03 13 12.5	
	comp=Z,23nm,1.2s						
MLZ	Mavora Lakes	29.20	201	P	P	03 13 41.8	+0.5
EIDS	Eidsvold	29.60	251	P	P	03 13 45.7	+0.6
EIDS				IAmb	IAmb	03 13 47.2	
	comp=Z,8.9nm,0.9s						
ARMA	Armidale	30.13	241	P	P	03 13 49.6	-0.1
ARMA				IAmb	IAmb	03 13 52.2	
	comp=Z,6.4nm,0.5s						
CAN	Canberra	33.78	234	P	P	03 14 21.0	+0.5
CAN				IAmb	IAmb	03 14 23.5	
	comp=Z,14nm,1.0s						
TOO	Toolangi	37.22	232	P	P	03 14 49.2	+0.4
TOO				IAmb	IAmb	03 14 51.3	
	comp=Z,21nm,1.1s						
COEN	Coen	37.69	271	P	P	03 14 52.8	0.0
STKA	Stephens Creek	38.84	242	P	P	03 15 03.7	+1.8
	comp=Z,12nm,0.7s,baz=84,slow=9.5,SNR=25						
STKA	Stephens Creek	38.84	242	P	P	03 15 02.2	+0.3
KHLU	Kahalu`u	43.58	31	P	P	03 15 38.2	-1.2
BBOO	Buckleboo	43.61	242	P	P	03 15 40.1	+0.6
HMH	Humu'ula Sheep	43.78	31	P	P	03 15 42.1	+0.9
HMH				IAmb	IAmb	03 15 47.7	
	comp=Z,44nm,1.1s						
PTCN	Pitcairn Islan	44.58	107	P	P	03 15 46.8	-0.3
WR0	Warramunga Arr	44.90	260	P	P	03 15 50.0	+0.4
WB0	Warramunga Arr	45.06	260	P	P	03 15 51.2	+0.5
WB2	Warramunga Arr	45.08	260	P	P	03 15 51.4	+0.4
WRAB	Tennant Creek	45.08	260	P	P	03 15 51.2	+0.2
WRA	Warramunga Arr	45.09	260	P	P	03 15 51.4	+0.4
	comp=Z,25nm,0.3s,baz=98,slow=6.7,SNR=53						
WRA				PcP	PcP	03 17 18.6	0.0
	comp=Z,1.5nm,0.3s,baz=91,slow=3.6,SNR=2.0						
AS31	Alice Springs	45.18	255	P	P	03 15 52.1	+0.4
AS31				IAmb	IAmb	03 15 54.0	
	comp=Z,11nm,0.4s						
ASAR	Alice Springs	45.18	255	P	P	03 15 52.7	+1.0
	comp=Z,19nm,0.3s,baz=86,slow=8.7,SNR=366						
ASAR				PcP	PcP	03 17 18.8	-0.1
	comp=Z,2.2nm,0.4s,baz=106,slow=4.2,SNR=6.3						
ASAR				S	S	03 21 48.0	-1.0
	comp=Z,2.1nm,0.8s,baz=91,slow=16,SNR=14						
FORT	Forrest	50.26	245	P	P	03 16 29.7	+0.3
FORT				IAmb	IAmb	03 16 30.3	
	comp=Z,26nm,0.9s						
KNRA	Kununurra	51.01	265	P	P	03 16 35.5	+0.6
KNRA				IAmb	IAmb	03 16 36.2	
	comp=Z,20nm,0.8s						
FAKI	Fak Fak	51.27	281	P	P	03 16 36.5	-0.4
FAKI				IAmb	IAmb	03 16 40.4	
	comp=Z,32nm,1.1s						
FITZ	Fitzroy Crossi	53.50	261	P	P	03 16 53.0	+0.3
PSA00	Pilbara Seismi	58.31	256	P	P	03 17 25.8	0.0
NWAO	Narrogin (SRO)	59.43	242	P	P	03 17 33.1	+0.1
MORW	Morawa	60.76	247	P	P	03 17 41.4	-0.5
UGM	Wanagama	70.21	268	P	P	03 18 40.4	-0.6
UGM				IAmb	IAmb	03 18 46.2	
	comp=Z,17nm,0.7s						
QSPA	South Pole Qui	71.51	180	P	P	03 18 47.6	-0.2
SSLB	Suanglung	73.07	303	P	P	03 18 57.0	-0.4
SSLB				IAmb	IAmb	03 19 10.3	
	comp=Z,15nm,1.0s						
TPUB	Ta-pu	73.09	302	P	P	03 18 56.9	-0.6
TPUB				IAmb	IAmb	03 18 57.6	
	comp=Z,14nm,0.6s						
NVAR	Mina Array Bea	79.48	43	P	P	03 19 33.2	+0.8
	comp=Z,0.9nm,0.6s,baz=223,slow=9.0,SNR=7.2						
U15A	North Rim	82.52	48	P	P	03 19 49.8	+1.7
TXAR	Lajitas Array	85.85	57	P	P	03 20 06.5	+2.1
	comp=Z,0.9nm,0.7s,baz=205,slow=5.5,SNR=8.4						
ILAR	Eielson Array	86.38	13	P	P	03 20 05.5	-0.3
	comp=Z,0.4nm,0.4s,baz=217,slow=5.1,SNR=22						
PDAR	Pinedale Array	87.42	43	P	P	03 20 12.3	+0.7
	comp=Z,0.6nm,0.6s,baz=203,slow=3.3,SNR=5.8						
SYO	Syowa Base	88.66	193	⇓eP	P	03 20 14.6	-2.0
CMAR	Chiang Mai Arr	89.65	289	P	P	03 20 23.7	+1.5
	comp=Z,1.1nm,0.4s,baz=111,slow=3.3,SNR=9.3						
YKA	Yellowknife Ar	94.67	25	P	P	03 20 43.3	-0.8
	comp=Z,0.2nm,0.7s,baz=253,slow=5.0,SNR=4.4						
MKAR	Makanchi Array	110.00	314	PKiKP	PKiKP	03 25 49.8	-1.1
	comp=Z,0.5nm,0.4s,baz=179,slow=0.7,SNR=14						
ARCES	ARCESS Array B	127.05	350	PKP	PKiKP	03 26 23.0	-0.4
	comp=Z,1.2nm,0.4s,baz=58,slow=0.9,SNR=38						
FINES	FINESS Array B	133.96	344	PKhKP	PKPpre	03 26 31.0	
	comp=Z,1.5nm,0.9s,baz=86,slow=2.5,SNR=4.7						
FINES				PKP	PKiKP	03 26 36.8	-0.8
	comp=Z,1.6nm,0.9s,baz=66,slow=4.8,SNR=4.2						
NOA	NORSAR Array B	137.08	354	PKP	PKiKP	03 26 43.0	-1.0
	comp=Z,0.8nm,0.8s,baz=347,slow=2.3,SNR=2.5						
HFS	Hagfors	137.65	351	PKhKP	PKPpre	03 26 35.2	
	comp=Z,1.0nm,0.4s,baz=92,slow=7.4,SNR=7.5						
AKASG	Malin Array Be	141.40	332	PKhKP	PKPdf	03 26 45.0	-5.1
	comp=Z,1.0nm,0.3s,baz=39,slow=4.1,SNR=8.7						
EKA	Eskdalemuir Ar	143.06	5	PKhKP	PKPab	03 26 50.4	-0.3
	comp=Z,0.4nm,0.4s,baz=329,slow=2.5,SNR=7.0						
BURAR	Bucovina Array	145.45	332	⇑P	PKPab	03 26 60.0	-0.4
BRTR	Keskin Array B	145.65	315	PKPbc	PKPbc	03 26 59.2	-0.5
	comp=Z,1.8nm,0.9s,baz=130,slow=2.6,SNR=9.7						
ASF	Jabal al Asfar	146.00	300	PKPbc	PKPbc	03 27 00.3	-0.6
	comp=Z,0.3nm,0.3s,baz=157,slow=6.8,SNR=3.7						
TRPA	Tarpa	146.17	335	⇓P	PKPbc	03 27 01.1	+0.5
CLL	Collm	146.21	348	ePKPbc	PKiKP	03 27 02.0	-1.0
HARR	Harsova	146.22	326	⇓P	PKPbc	03 27 01.4	+0.4
DOPR	Dopca	146.60	330	⇓P	PKiKP	03 27 02.8	-1.2
MMAI	Mount Meron Ar	146.98	302	PKPbc	PKPbc	03 27 03.9	+0.4
	comp=Z,2.4nm,0.4s,baz=74,slow=6.2,SNR=18						
DRGR		147.17	334	⇑P	PKPbc	03 27 03.8	+0.3
ARR	Arges	147.40	330	⇓P	PKiKP	03 27 05.3	-0.4
GZR	Gura Zlata	148.24	332	⇓P	PKPbc	03 27 05.8	-0.4
GERES	GERESS Array B	148.38	345	PKPbc	PKPbc	03 27 06.6	0.0
	comp=Z,0.2nm,0.3s,baz=57,slow=4.9,SNR=6.6						
BZS	Buzias	148.56	333	⇓P	PKPbc	03 27 07.0	+0.1
CONA	Conrad Observa	148.65	342	i PKiKP	PKiKP	03 27 08.1	-0.2
	comp=Z,8.9nm,1.5s						
BANR	Banloc	148.96	334	⇓P	PKPdf	03 27 03.3	+0.2
KBA	Koelnbreinsper	150.11	345	i PKiKP	PKPbc	03 27 10.3	-0.6
	comp=Z,1.9nm,0.4s						
WATA	Walderalm	150.28	347	i PKiKP	PKPbc	03 27 11.1	-0.1
	comp=Z,3.4nm,0.4s						
RETA	Reutte	150.30	348	i PKiKP	PKiKP	03 27 11.3	-0.4
	comp=Z,0.5nm,0.3s						
OBKA	Obir	150.31	343	i PKiKP	PKiKP	03 27 11.4	-0.3
	comp=Z,1.2nm,0.5s						
WTTA	Wattenberg	150.34	347	i PKiKP	PKiKP	03 27 11.6	-0.3
	comp=Z,5.7nm,0.3s						
MOTA	Moosalm	150.37	348	i PKiKP	PKPbc	03 27 11.4	-0.1
	comp=Z,1.0nm,0.3s						
SQTA	Sankt Quirin	150.47	347	i PKiKP	PKPbc	03 27 11.3	-0.4
	comp=Z,1.6nm,0.4s						
ABTA	Abfaltersbach	150.62	345	i PKiKP	PKPbc	03 27 11.5	-0.4
	comp=Z,4.2nm,0.5s						
DAVA	Damuels	150.66	349	i PKiKP	PKiKP	03 27 12.4	-0.2
	comp=Z,2.1nm,0.5s						
FETA	Feichten	150.75	348	i PKiKP	PKiKP	03 27 12.6	-0.2
	comp=Z,1.3nm,0.6s						

*IDC **18** 03:20:09.3±1.2, 23°.47S×175°.21W, h0km, mb4.4/13, mb1 4.6/13, mb1mx4.4/30, mbtmp4.4/13, MS3.8/4, Ms1 3.8/4, ms1mx3.3/32, Error ellipse: s-maj=53.5km s-min=19.9km az=153.0*
*NEIC **18** 03:20:12.0±1.8, 23°.2S±0°.1×174°.7W±0°.1, h69km±7km, mb4.7/6, Error ellipse: s-maj=21.0km s-min=16.9km az=159.0*
ISC 18 03:20:09.6±0.8, **23°.7S**±0°.2×**175°.2W**±0°.1, **h10km**, **n45**, σ2s.20/32, **mb4.5/15**, **MS3.8/6**, **1D**, **Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	6.75	48		Pn	03 21 39.6	-9.3
NIUE				Sn	Sn	03 22 44.0	-22
MSVF	Nonsavu	8.68	312		Pn	03 22 15.6	+0.2
AFI	Afiamalu	10.29	19	Pn	Pn	03 22 28.7	-8.8
	3.9nm,0.3s,baz=282,slow=1.1,SNR=4.5						
AFI				Sn	Sn	03 24 12.5	-21
	4.4nm,0.3s,baz=118,slow=20,SNR=2.1						
AFI	Afiamalu	10.29	19		Pn	03 22 28.5	-9.0
AFI					Sn	03 24 14.3	-19
RAR	Rarotonga	14.49	83	Pn	Pn	03 23 28.3	-6.5
	3.6nm,0.3s,baz=258,slow=7.9,SNR=6.6						
RAR				LR	LR	03 28 16.8	
	comp=Z,364nm,21.6s,baz=276,slow=34						
RAR	Rarotonga	14.49	83		Pn	03 23 26.9	-7.9
DZM	Mont Dzumac	16.99	272	Pn	P	03 24 11.9	+2.5
	0.2nm,0.3s,baz=43,slow=18,SNR=3.8						
SANVU	Saraoutou	18.49	293	P	P	03 24 25.1	-0.9
SANVU				IAmb	IAmb	03 24 42.1	
	comp=Z,42nm,0.7s						
TBI	Tubuai	23.60	94	eLR	LR	03 30 54.5	
	comp=Z,329nm,22.5s						
PAE	Paea	24.70	81	eT	T	03 50 51.6	
	comp=Z,2.0nm,0.4s						
PPT2	Papeete2	24.73	81	eLR	LR	03 31 21.3	
	comp=Z,295nm,21.8s						
PPT	Papeete	24.74	80	LR	LR	03 32 59.2	
	comp=Z,240nm,20.4s,baz=210,slow=31						
HNR	Honiara	27.66	297	LR	LR	03 35 21.5	
	comp=Z,51nm,20.9s,baz=154,slow=33						
TAOE	Nuku Hiva Isla	36.63	72	eLR	LR	03 37 04.6	
	comp=Z,173nm,22.3s						
STKA	Stephens Creek	38.86	248	P	P	03 27 36.8	+1.6
	comp=Z,1.2nm,0.3s,baz=89,slow=9.2,SNR=3.9						
COEN	Coen	40.44	276	P	P	03 27 45.5	-3.1
ASAR	Alice Springs	46.38	259	P	P	03 28 37.8	+1.2
	comp=Z,3.4nm,0.8s,baz=94,slow=8.1,SNR=25						
WR0	Warramunga Arr	46.60	264	P	P	03 28 37.6	-0.7
WR0				IAmb	IAmb	03 28 40.6	

comp=Z,6.2nm,0.9s
WB0 Warramunga Arr 46.79 265 P P 03 28 39.9 +0.1
WB0 IAmb IAmb 03 28 41.0
comp=Z,6.0nm,0.8s
WRA Warramunga Arr 46.79 264 P P 03 28 40.5 +0.7
comp=Z,4.3nm,0.7s,baz=102,slow=8.4,SNR=26
JAY Jayapura 47.54 290 LR LR 03 47 32.9
comp=Z,266nm,18.1s,baz=336,slow=35
KNRA Kununurra 53.08 268 P P 03 29 27.2 -0.3
FITZ Fitzroy Crossi 55.21 264 P P 03 29 41.4 -1.7
FITZ IAmb IAmb 03 29 47.9
comp=Z,6.8nm,0.8s
MJAR Matsushiro Arr 74.33 323 P P 03 31 47.1 -0.3
comp=Z,1.7nm,0.6s,baz=136,slow=6.1,SNR=4.2
PETK Petropavlovsk- 80.06 344 P P 03 32 19.2 0.0
comp=Z,4.9nm,0.8s,baz=161,slow=9.2,SNR=2.9
NVAR Mina Array Bea 81.64 42 P P 03 32 28.8 +0.5
comp=Z,1.4nm,0.8s,baz=226,slow=8.1,SNR=7.6
USRK Ussuriysk Ar. 83.08 325 P P 03 32 36.9 +1.5
comp=Z,8.5nm,0.8s,baz=131,slow=4.6,SNR=11
SYO Syowa Base 84.14 192⇓eX P 03 32 32.4 -8.1
TXAR Lajitas Array 86.66 56 P P 03 32 55.0 +1.1
comp=Z,0.7nm,0.9s,baz=207,slow=8.0,SNR=5.3
PSI Prapat 87.33 274 P P 03 32 58.1 +0.5
comp=Z,10nm,0.9s,baz=225,slow=4.3,SNR=4.1
PDAR Pinedale Array 89.57 42 P P 03 33 08.0 +0.3
comp=Z,0.2nm,0.6s,baz=236,slow=11,SNR=3.4
ILAR Eielson Array 90.90 12 P P 03 33 11.9 -1.1
comp=Z,2.4nm,1.1s,baz=237,slow=4.1,SNR=7.2
CMAR Chiang Mai Arr 93.61 288 P P 03 33 29.4 +2.7
comp=Z,5.9nm,0.8s,baz=123,slow=3.0,SNR=27
YKA Yellowknife Ar 98.37 24 P Pdif 03 33 47.6 +0.3
comp=Z,0.4nm,1.0s,baz=213,slow=4.3,SNR=3.5
MBAR Mbarara 145.07 230 PKPbc 03 39 42.6 -5.2
AKASG Malin Array Be 147.08 331 PKPbc PKPbc 03 39 51.5 -1.0
comp=Z,2.7nm,0.6s,baz=41,slow=4.4,SNR=12
EKA Eskdalemuir Ar 147.89 9 PKPbc PKPbc 03 39 53.4 -1.3
comp=Z,0.9nm,0.8s,baz=175,slow=32,SNR=2.3
BR131 Keskin Array S 150.90 310 PKPdf PKPdf 03 39 50.3 -6.9
BRTR Keskin Array B 150.90 310 PKP PKPdf 03 39 59.7 +2.5
comp=Z,1.6nm,0.8s,baz=94,slow=3.7,SNR=10.0
BRTR PKPbc PKPbc 03 40 03.9 +0.9
comp=Z,1.6nm,0.8s,baz=132,slow=4.4,SNR=8.7
CLL Collm 151.75 349 ePKPab PKiKP 03 40 07.0 +2.3
comp=Z,8.0nm,1.2s
CLL i 03 40 22.4
OSTC Ostas 151.78 345 ePKPAB PKiKP 03 40 05.4 +0.6
DPC Dobruska-Polom 151.95 344 ePKPAB PKPab 03 40 15.5 +1.5
KHC Kasperske Hory 153.72 347 ePKPAB PKPab 03 40 19.5 -2.0
GERES GERESS Array B 153.96 347 PKPbc PKPbc 03 40 08.6 -0.9
comp=Z,0.3nm,0.7s,baz=182,slow=2.8,SNR=2.7
TORD Torodi Ar. Bea 169.07 164 PKP PKPdf 03 40 20.1 +2.1
comp=Z,1.2nm,1.1s,baz=290,slow=4.4,SNR=3.7

IDC 18 03:27:44.8±2.6, 0°.60N×128°.75E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/40, mbtmp3.3/3, Error ellipse: s-maj=196.9km s-min=27.8km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.14	165	P	P	03 32 30.5	-1.1
	0.4nm,0.3s,baz=346,slow=12,SNR=1.6						
ASAR	Alice Springs	24.63	169	P	P	03 33 08.0	+0.7
	0.6nm,0.7s,baz=337,slow=10,SNR=5.6						
MKAR	Makanchi Array	61.26	325	P	P	03 38 01.9	-0.1
	0.1nm,0.3s,baz=121,slow=8.4,SNR=5.3						

BJI 18 03:34:05.1±0.0, 1°.26N×123°.28E, h30km, mB5.4/55, mb5.4/77, Ms4.9/60, Ms7 4.6/31
GCMT 18 03:34:10.6±0.1, 1°.93N±0°.01×122°.97E±0°.01, h17km, MW5.3/126, Moment Tensor Solution. s86,c125; s126,c220; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr-0.76±.02; Mθθ0.84±.01; Mϕϕ-0.07±.02; Mrθ0.39±.04; Mrϕ-0.42±.01; Mθϕ-0.17±.05; Best double couple: M0 0.98100×10^17 NP1:ϕs110.00000°, δ32.00000°, λ-92.00000°. NP2:ϕs292.00000°, δ58.00000°, λ-89.00000°. Principal axes: T 1.1020, Plg13.0000°, Azm21.0000°; N -0.2420, Plg1.0000°, Azm112.0000°; P -0.8590, Plg77.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
KLM 18 03:34:11.0, 1°.87N×123°.07E, h30km, mb5.6
NEIC 18 03:34:11, 1°.88N×123°.03E, h15km, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr-6.34; Mθθ8.53; Mϕϕ-2.18; Mrθ1.74; Mrϕ-4.55; Mθϕ-3.46; Fault plane solution: M0 9.72000×10^16 NP1:ϕs81.00000°, δ44.00000°, λ-135.00000°. NP2:ϕs316.00000°, δ61.00000°, λ-56.00000°. Principal axes: T 10.6816, Plg10.0000°, Azm22.0000°; N -2.3436, Plg30.0000°, Azm118.0000°; P -8.3380, Plg59.0000°, Azm276.0000°;
MOS 18 03:34:11.0±0.9, 1°.77N×122°.89E, h41km, mb5.8/61 Error ellipse: s-maj=7.9km s-min=4.1km az=118.2
DJA 18 03:34:12.3±0.7, 2°N±3°×12°3E±°, h31km±8km, M5.2/37, mb5.5/37, mB5.7/35, MLv5.4/18, Mw(mB)5.2/35, Mwp5.4/8
IDC 18 03:34:12.9±1.4, 1°.71N×122°.99E, h46km±12km, mb5.0/42, mb1 5.0/47, mb1mx4.9/57, mbtmp5.2/47, ML4.9/4, MS4.2/22, Ms1 4.2/22, ms1mx4.0/37, Error ellipse: s-maj=11.5km s-min=6.9km az=79.0
NEIC 18 03:34:12.6±2.3, 1°.75N±0°.05×122°.88E±0°.05, h43km±4km, mb5.4/148, Mwc5.3(GCMT), Error ellipse: s-maj=8.5km s-min=5.5km az=214.0
ISC 18 03:34:12.9±0.4, 1°.67N±0°.03×122°.94E±0°.04, h45km±3km, h45km:pP-P, n1107, σ1°23/1169, mb5.4/188, MS4.4/38, 32C-37D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.50	136	P	Pn	03 34 36.0	-1.4
MRSI	Marisa	1.55	220	P	Pn	03 34 36.8	-1.3
LUWI	Luwuk	2.70	184	P	Pn	03 34 54.7	+0.9
LUWI	Luwuk	2.70	184		Pn	03 34 54.2	+0.4
LUWI				Sn	Sn	03 35 26.6	+1.3
APSI	Ampana	2.87	207	P	Pn	03 34 56.7	+0.5
MPSI	Mapaga	3.32	247	P	Pn	03 35 02.0	-0.4
TNTI	Ternate	4.51	101	P	Pn	03 35 19.4	+0.7
TNTI	Ternate	4.51	101		Pn	03 35 18.8	0.0
SANI	Sanana	4.79	140	P	Pn	03 35 21.0	-1.5
SKMP	Bagumbayan, Su	5.08	18	eP	Pn	03 35 21.5	-5.0
SKMP				eS	Sn	03 36 11.9	-12
LBMI	Labuha	5.10	117	P	Pn	03 35 27.5	+0.7
	1.8nm5μm428nm,0.9s						
DDMP	Don Marcelino,	5.20	32	eP	Pn	03 35 23.1	-5.2
TTSI	Tana Toraja	5.63	214	P	Pn	03 35 35.4	+1.3
	7.5nm10μm18μm2μm,0.7s						
KCP	Kidapawan	5.72	22⇓	eP	Pn	03 35 32.0	-3.4
DAV	Davao City (W)	5.97	26	P	Pn	03 35 37.1	-1.7
	42nm,0.3s,baz=129,slow=1.0,SNR=26						
DAV				S	Sn	03 36 43.6	-2.4
	85nm,0.3s,baz=73,slow=21,SNR=1.5						
DAV				LR	LR	03 38 28.1	
	comp=Z,2μm,19.5s,baz=162,slow=43						
DAV	Davao City (W)	5.97	26⇑	iP	Pn	03 35 36.2	-2.7
DAV	Davao City (W)	5.97	26	Pn	Pn	03 35 35.1	-3.7
SMKI	Samarinda	6.11	250	P	Pn	03 35 40.3	-0.4
	2.6nm8μm591nm,1.0s						
PAGZ	Pagadian	6.16	4	eP	Pn	03 35 35.2	-6.1
MATI	Mati	6.20	32	eP	Pn	03 35 37.9	-4.0
NLAI	Namlea	6.40	140	P	Pn	03 35 44.6	-0.1
	1.4nm2μm167nm,0.6s						
SPSI	Sidrap Palu	6.43	210	P	Pn	03 35 45.5	+0.4
	2.6nm7μm672nm,0.6s						
BUKP	Musuan	6.52	19	eP	Pn	03 35 43.0	-3.4
BNSI	Bone	6.66	205	P	Pn	03 35 49.3	+1.0
	2.5nm7μm867nm,0.8s						
BKB	Balikpapan	6.71	244	P	Pn	03 35 48.6	-0.4
	2.3nm10μm6μm685nm,0.7s						
BKB	Balikpapan	6.71	244		Pn	03 35 48.5	-0.4
CGP	Cagayan de Oro	6.96	14⇓	eP	Pn	03 35 52.8	+0.4
BBSI	Bau Bau	7.12	183	P	Pn	03 35 55.5	+1.0
	0.6nm2μm162nm,1.0s						
SPMM	Sapulut	7.14	295	P	Pn	03 35 54.0	-0.9
KAPI	Kappang	7.36	206	P	Pn	03 35 58.1	+0.2
	11nm,0.3s,baz=30,slow=7.6,SNR=40						
KAPI				S	Sn	03 37 22.5	+2.3
	baz=32,slow=19,SNR=0.9						
KAPI	Kappang	7.36	206		Pn	03 35 58.2	+0.3
AAI	Ambon	7.47	135	P	Pn	03 36 15.4	+16
BKSI	Bulukumba	7.49	202	P	Pn	03 36 00.9	+1.2
	0.9nm8μm2μm218nm,0.7s						
BUTP	Butuan	7.73	20	eP	Pn	03 36 03.3	+0.4
MSAI	Masohi	7.78	130	P	Pn	03 36 03.9	+0.2
	0.7nm2μm237nm,0.9s						
KKM	Kota Kinabalu	8.00	303		Pn	03 36 04.1	-2.6
MSLP	Maasin	8.62	13	eP	Pn	03 36 14.2	-1.0
SWI	Sorong	8.69	107	P	Pn	03 36 28.2	+12
SIJI	Sorong	8.70	107	P	Pn	03 36 22.9	+6.7
	2.3nm,0.3s,baz=270,slow=9.3,SNR=7.4						
BATP	Bataraza	8.74	324	eP	Pn	03 36 10.5	-6.3
GUIM	Jordan	8.91	358	eP	Pn	03 36 15.4	-3.6
CUYO	Cuyo Island	9.32	348	eP	Pn	03 36 22.3	-2.5
OCLP	Ormoc	9.47	10	eP	Pn	03 36 29.6	+2.8
RCP	Roxas	9.83	359⇑	eP	Pn	03 36 30.7	-1.0
ENPP	El Nido	10.10	340	eP	Pn	03 36 30.6	-4.8
FAKI	Fak Fak	10.36	116	Pn	Pn	03 36 39.1	+0.1
BUSP	Coron	10.62	345	eP	Pn	03 36 39.9	-2.6
OTRP	Odiongan	10.66	355	eP	Pn	03 36 40.0	-3.1
SBUM	Sibu	10.74	274		Pn	03 36 42.9	-1.3
SBUM	Sibu	10.74	274	P	Pn	03 36 44.0	-0.3
SJMP	San Jose	10.88	351	eP	Pn	03 36 46.3	+0.3
SOEI	Soe	11.42	173	P	Pn	03 37 01.9	+8.2
SOEI	Soe	11.42	173		Pn	03 36 55.6	+1.9
STKI	Sintang	11.57	262	P	Pn	03 36 56.2	+0.6
	104nm,0.7s						
PLAI	Plampang	11.63	206	P	Pn	03 36 57.6	+1.2
	5μm3μm195nm,0.9s						
RKPI	Ransiki, Papua	11.67	106	P	Pn	03 37 12.3	+15
PVCP	Virac	11.91	6	eP	Pn	03 36 59.5	-0.7
LUBP	Lubang	12.28	348	eP	Pn	03 37 01.9	-3.3
TGY	Tagaytay City	12.51	351	P	Pn	03 37 09.2	+0.7
	baz=176,slow=4.1,SNR=5.7						
KSM	Kuching	12.63	269		Pn	03 37 08.4	-1.7
KSM	Kuching	12.63	269	P	Pn	03 37 11.0	+0.9
IGBI	Denpasar	13.00	217	P	P	03 37 26.7	+2.3
JAGI	Jajag, Banyuwa	13.35	221	P	Pn	03 37 17.6	-2.3
	2μm137nm,1.1s						
JAGI	Jajag, Banyuwa	13.35	221		Pn	03 37 18.9	-1.0
BALP	Baler	14.05	355	eP	P	03 37 36.8	+0.7
SMPP	San Manuel, Pa	14.56	351	eP	Pn	03 37 34.9	-1.4
CAUP	Cauayan	15.22	356	eP	Pn	03 37 46.7	+1.8
PCJI	Pacitan	15.29	230	P	Pn	03 37 45.5	-0.3
	2μm120nm,1.2s						
TPI	Tanjungpandan	15.90	254	P	Pn	03 37 53.7	-0.1
	2μm106nm,1.0s						
ABRA	Dolores	16.03	352	eP	Pn	03 37 53.9	-1.4
SMPI	Sarmi	16.18	103	P	P	03 38 08.7	+8.9
APYP	Conner	16.18	354	eP	Pn	03 37 56.6	-0.6
KPJI	Karang Pucung	16.60	237	P	Pn	03 38 02.1	-0.4
	11μm2μm105nm,0.8s						
KDU	Kakadu	17.11	147	P	Pn	03 38 08.0	-1.0
	baz=17,SNR=18						
LEM	Lembang	17.47	241	P	P	03 38 16.9	+2.6
	5.7nm,0.3s,baz=44,slow=6.7,SNR=12						
LEM	Lembang	17.47	241	P	P	03 38 17.7	+3.4
LEM				pmax	pmax		
	comp=Z,101nm,1.1s						
DLV	T Lat	17.60	306		Pn	03 38 12.9	-2.3
CISI	Cisompet, Garu	17.66	239	P	P	03 38 16.7	+0.5
	comp=Z,5μmcomp=Z,201nm,0.9s						
CISI	Cisompet, Garu	17.66	239	P	Pn	03 38 15.3	-0.5
CISI				IAmb	IAmb	03 38 22.9	
	comp=Z,207nm,1.0s						
GENI	Genyem	17.73	104	P	P	03 38 27.5	+10
CNJI	Cibinong	18.12	240	P	Pn	03 38 22.5	+1.1
	comp=Z,3μmcomp=Z,278nm,1.1s						
KNRA	Kununurra	18.17	162	P	Pn	03 38 22.5	+0.6
	baz=18,SNR=54						
KNRA	Kununurra	18.17	162	P	Pn	03 38 22.8	+0.8
KNRA				IAmb	IAmb	03 38 35.8	
	comp=Z,149nm,0.8s						
JAY	Jayapura	18.24	103	P	Pn	03 38 23.8	+0.9
	comp=Z,0.5nm,0.3s,baz=329,slow=18,SNR=2.8						
JAY	Jayapura	18.24	103	P	Pn	03 38 32.8	+10
PMBI	Palembang	18.73	256		P	03 38 28.1	+0.1
PMBI				IAmb	IAmb	03 38 44.4	
	comp=Z,348nm,0.7s						
MYKOM	Kota Tinggi	19.09	271	P	P	03 38 30.7	-1.2
MYKOM	Kota Tinggi	19.09	271	P	Pn	03 38 33.0	-0.1
KLSI		19.26	251	P	P	03 38 34.2	+0.3
	comp=Z,1μmcomp=Z,96nm,1.3s						
MDSI	Maura Dua	19.72	252	P	P	03 38 40.4	-0.2
	comp=Z,2μmcomp=Z,278nm,1.1s						
FITZ	Fitzroy Crossi	19.82	172	P	Pn	03 38 40.1	+0.2
	baz=20,SNR=160						
FITZ	Fitzroy Crossi	19.82	172	P	P	03 38 40.1	+0.2
	comp=Z,16nm,0.3s,baz=2.3,slow=8.2,SNR=369						
FITZ				S	S	03 42 19.7	-1.1
	baz=1.4,slow=23,SNR=3.9						
FITZ				LR	LR	03 48 11.5	
	comp=Z,524nm,19.2s,baz=348,slow=42						
FITZ	Fitzroy Crossi	19.82	172	P	P	03 38 40.5	+0.6
LWLI	Liwa	20.00	251	P	Pn	03 38 44.5	+0.4
	comp=Z,11μmcomp=Z,254nm,0.8s						
JRMM	Jerantut	20.56	277	P	P	03 38 49.0	+1.0
MNAI	Manna	20.85	253	P	P	03 38 52.3	+1.1
	comp=Z,11μmcomp=Z,752nm,1.3s						
MNAI	Manna	20.85	253	P	P	03 38 50.2	-1.0
KSI	Kapahiang	21.02	255	P	P	03 38 55.2	+2.2
	comp=Z,9μmcomp=Z,867nm,0.9s						
TWG	Pinlang	21.11	355	P	P	03 38 51.4	-2.4
QIZ	Qiongzhong	21.50	324	P	P	03 38 57.4	-0.7
QIZ				pP	pP	03 39 06.0	-1.7
QIZ				S	S	03 42 56.3	+2.0
QIZ				sS	sS	03 43 11.3	+1.4
QIZ				pmax	pmax		
	comp=Z,90nm,0.8s						
QIZ				LR	LR		
	comp=Z,1μm,12.3s						
QIZ				LR	LR		
	comp=Z,680nm,12.3s						
TPUB	Ta-pu	21.62	354	P	P	03 38 57.5	-1.8
TPUB				IAmb	IAmb	03 39 12.1	
	comp=Z,278nm,0.9s						
YULB	Yu-li	21.66	356	P	P	03 38 57.8	-1.9
SDSI	Sungai Dareh	21.67	263	P	P	03 39 00.2	+0.3
	comp=Z,2μmcomp=Z,126nm,1.1s						
KRJI	Kerinci	21.80	260	P	P	03 39 02.5	+1.1
	comp=Z,20μmcomp=Z,936nm,1.2s						
UBPT	Khong Chiam	21.91	309	P	P	03 39 00.9	-1.6
UBPT					S	03 43 02.0	-0.2
BKNI	Bangkinang	21.94	267	P	P	03 39 04.0	+1.1
	comp=Z,23μmcomp=Z,232nm,1.0s						
BKNI	Bangkinang	21.94	267	P	P	03 39 01.2	-1.7
BKNI				IAmb	IAmb	03 39 05.6	
	comp=Z,159nm,0.8s						
IPM	Ipoh	22.06	278	P	P	03 39 02.9	-1.3
IPM				IAmb	IAmb	03 39 05.7	
	comp=Z,205nm,1.0s						
IPM	Ipoh	22.06	278	P	P	03 39 05.0	+0.8
SSLB	Suanglung	22.07	355	P	P	03 39 02.0	-2.2
SSLB				IAmb	IAmb	03 39 16.3	
	comp=Z,128nm,0.9s						
HKPS	Hong Kong Po S	22.20	338	P	P	03 39 03.1	-2.4
NACB	Ninganchiao	22.41	357	P	P	03 39 05.2	-2.6
KULM	Kulim	22.54	280	P	P	03 39 08.3	-0.9
KULM				IAmb	IAmb	03 39 12.1	
	comp=Z,142nm,0.8s						
KULM	Kulim	22.54	280	P	P	03 39 09.0	-0.3
PDSI	Padang	22.62	264	P	P	03 39 10.5	+0.3
	comp=Z,4μmcomp=Z,66nm,0.8s						
YOJ	Yonaguni jima	22.66	0	P	P	03 39 09.8	-0.6
YOJ				IAmb	IAmb	03 39 12.7	
	comp=Z,186nm,0.8s						
YOJ	Yonaguni jima	22.66	0	P	P	03 39 09.8	-0.6
YOJ				pmax	pmax		
	comp=Z,186nm,0.8s						
YHNB	Yeheng	22.92	356	P	P	03 39 11.1	-2.1
YHNB				IAmb	IAmb	03 39 26.2	
	comp=Z,119nm,1.1s						
PSA00	Pilbara Seismi	23.30	187	P	P	03 39 16.0	-0.9
PPSI	Pulau Pagai	23.35	259	P	P	03 39 19.1	+1.6
	comp=Z,4μmcomp=Z,392nm,1.0s						
QZH	Quanzhou	23.52	350⇑	iP	P	03 39 20.9	+1.9
QZH				S	S	03 43 30.9	+1.2
QZH				pmax	pmax		
	comp=Z,810nm,2.8s						
RPSI	Rantau Prapat	24.02	273	P	P	03 39 23.0	-0.8
RPSI					PcP	03 43 02.0	-3.1
RPSI	Rantau Prapat	24.02	273	P	P	03 39 24.4	+0.6
RPSI					PcP	03 43 05.5	+0.5
PSI	Prapat	24.03	273	P	P	03 39 24.4	+0.4
	comp=Z,139nm,0.9s,baz=93,slow=6.7,SNR=125						
PSI				PcP	PcP	03 43 05.5	+0.3
	comp=Z,21nm,0.9s,baz=169,slow=1.3,SNR=5.9						
PSI				LR	LR	03 50 47.9	
	comp=Z,813nm,20.1s,baz=90,slow=41						
SISI	Saibi	24.04	263	P	P	03 39 23.3	-0.7
	comp=Z,2μmcomp=Z,96nm,0.6s						
WB0	Warramunga Arr	24.08	153	P	P	03 39 24.1	-0.2
WB0				IAmb	IAmb	03 39 26.4	
	comp=Z,190nm,0.8s						
WRAB	Tennant Creek	24.21	153	P	P	03 39 25.5	0.0
WRAB	Tennant Creek	24.21	153c	iP	P	03 39 25.1	-0.4
WRA	Warramunga Arr	24.21	153	P	P	03 39 25.2	-0.3
	comp=Z,233nm,0.8s,baz=333,slow=9.8,SNR=89						
WRA				S	S	03 43 40.2	-0.9
	comp=Z,1.5nm,0.9s,baz=40,slow=7.3,SNR=1.0						
WB2	Warramunga Arr	24.22	153	P	P	03 39 25.5	-0.1
WR0	Warramunga Arr	24.32	153	P	P	03 39 26.2	-0.3
GUMO	Guam	24.71	60	LR	LR	03 47 52.8	
	comp=Z,365nm,19.1s,baz=250,slow=33						
COEN	Coen	25.36	128	P	P	03 39 37.1	+1.1
	baz=25,SNR=4.3						
COEN	Coen	25.36	128	P	P	03 39 36.3	+0.3
GIRL	Giralia	25.61	199	P	P	03 39 38.8	+0.7
	baz=26,SNR=13						
GIRL	Giralia	25.61	199	P	P	03 39 38.8	+0.7
GIRL				IAmb	IAmb	03 39 39.5	
	comp=Z,180nm,0.8s						
LHMI	Lhok Sumawe	26.18	278	P	P	03 39 44.9	+1.4
	comp=Z,3μmcomp=Z,398nm,0.9s						
LHMI	Lhok Sumawe	26.18	278	P	P	03 39 41.4	-2.1
PBKT	Sadao Pong	26.21	306	P	P	03 39 41.9	-1.8
PMG	Port Moresby	26.51	115	P	P	03 39 47.6	+1.1
	comp=Z,14nm,0.8s,baz=274,slow=15,SNR=1.7						
PMG	Port Moresby	26.51	115	P	P	03 39 45.9	-0.5
PMG				IAmb	IAmb	03 40 03.7	
	comp=Z,69nm,0.9s						
MLSI	Meulaboh, Aceh	26.63	276	P	P	03 39 47.4	-0.1
SLVN	Son La	26.95	318	P	P	03 39 48.6	-1.8
SLVN					S	03 44 17.6	-7.1
WRKA	Warakurna	27.05	169	P	P	03 39 51.6	+0.4
	baz=27,SNR=306						
AS31	Alice Springs	27.35	158	P	P	03 39 54.6	+0.8
ASAR	Alice Springs	27.35	158	P	P	03 39 54.6	+0.7
	comp=Z,28nm,0.8s,baz=334,slow=7.2,SNR=184						
ASAR				PcP	PcP	03 43 12.8	+0.3
	comp=Z,7.7nm,0.7s,baz=1.1,slow=2.4,SNR=7.0						
ASAR				ScP	ScP	03 46 51.6	+2.2
	comp=Z,4.6nm,1.0s,baz=350,slow=3.0,SNR=8.3						
ASAR				LR	LR	03 53 09.5	
	comp=Z,613nm,18.4s,baz=322,slow=42						
ASAR				P3KPbc		04 12 23.9	
	comp=Z,0.2nm,0.3s,baz=144,slow=6.5,SNR=5.3						
QIS	Mount Isa	27.47	144	P	P	03 39 56.0	+1.0
	baz=28,SNR=130						
MEEK	Meekatharra	28.45	188	P	P	03 40 03.0	-0.6
	baz=29,SNR=30						
MTSU	Mount Surprise	28.81	134	P	P	03 40 07.5	+0.5
	baz=29,SNR=5.6						
CM31	Chiang Mai Arr	28.85	307	P	P	03 40 05.5	-1.9
CMAR	Chiang Mai Arr	28.85	307	P	P	03 40 07.6	+0.2
	comp=Z,10.0nm,0.9s,baz=132,slow=7.2,SNR=34						
CMAR				PcP	PcP	03 43 17.2	+0.9
	comp=Z,14nm,0.9s,baz=167,slow=1.6,SNR=21						
CMAR				LR	LR	03 52 03.5	
	comp=Z,902nm,21.8s,baz=121,slow=37						
CHTO	Chiang Mai	29.04	307	P	P	03 40 08.1	-1.0
CHTO					PcP	03 43 14.0	-2.7
CHTO	Chiang Mai	29.04	307	P	P	03 40 09.3	+0.2
CHTO				pmax	pmax		
	comp=Z,29nm,0.9s						
GYA	Guiyang	29.20	329⇓	iP	P	03 40 10.8	+0.4
GYA				pP	pP	03 40 20.8	-0.3
GYA				PP	PnPn	03 41 03.9	-1.0
GYA				PcP	PcP	03 43 18.0	+0.9
GYA				S	S	03 45 00.0	0.0
GYA				sS	sS	03 45 17.3	-0.8
GYA				SS	SnSn	03 46 34.1	+5.9
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,230nm,4.8s						
GYA				LR	LR		
	comp=Z,760nm,12.8s						
GYA				LR	LR		
	comp=Z,690nm,13.2s						
GYA				LR	LR		
	comp=Z,930nm,14.8s						
WHN	Wuhan	29.85	345⇑	iP	P	03 40 17.1	+1.1
WHN				S	S	03 45 15.5	+5.5
WHN				pmax	pmax		
	comp=Z,150nm,1.1s						
WHN				LR	LR		
	comp=Z,2μm,10.1s						
WHN				LR	LR		
	comp=Z,800nm,13.3s						
WHN				LR	LR		
	comp=Z,2μm,19.2s						
KMI	Kunming	30.39	322	P	P	03 40 22.3	+1.1
KMI				pP	pP	03 40 33.1	+1.2
KMI				sP	sP	03 40 36.4	-0.3
KMI				S	S	03 45 18.8	-0.3
KMI				sS	sS	03 45 35.3	-1.9
KMI				pmax	pmax		
	comp=Z,32nm,0.8s						
KMI				pmax	pmax		
	comp=Z,240nm,3.5s						
KMI				LR	LR		
	comp=Z,410nm,14.4s						
KMI				LR	LR		
	comp=Z,510nm,15.4s						
KMI				LR	LR		
	comp=Z,800nm,16.1s						
NJ2	Nanjing	30.47	353	eP	P	03 40 23.3	+1.9
NJ2				pP	pP	03 40 32.6	+0.6
NJ2				pmax	pmax		
	comp=Z,43nm,0.6s						
MORW	Morawa	31.27	192	P	P	03 40 28.6	0.0
	baz=31,SNR=12						
MORW	Morawa	31.27	192	P	P	03 40 28.5	-0.1
MORW				IAmb	IAmb	03 40 29.3	
	comp=Z,64nm,0.8s						
JNU	Nakatsue	32.16	13	P	P	03 40 37.6	+1.1
	comp=Z,40nm,1.1s,baz=128,slow=2.7,SNR=4.6						
JNU	Nakatsue	32.16	13	IAmb	IAmb	03 40 41.3	
	comp=Z,38nm,1.1s						
FORT	Forrest	32.63	172	P	P	03 40 40.9	+0.4
	baz=33,SNR=105						
FORT	Forrest	32.63	172	P	P	03 40 40.9	+0.4
BLDU	Ballidu	32.65	190	P	P	03 40 40.1	-0.5
	baz=33,SNR=31						
KMBL	Kambalda	32.87	182	P	P	03 40 42.7	+0.1
	baz=33,SNR=29						
KLBR	Kellerberrin	33.44	188	P	P	03 40 47.3	-0.3
	baz=34,SNR=25						
CD2	Chengdu	34.29	330	P	P	03 40 54.5	-0.6
CD2				sP	sP	03 41 10.3	-0.4
CD2				PP	PnPn	03 42 11.8	+1.3
CD2				S	S	03 46 20.3	+1.0
CD2				sS	sS	03 46 37.3	-0.2
CD2				pmax	pmax		
	comp=Z,100nm,0.9s						
CD2				pmax	pmax		
	comp=Z,190nm,3.5s						
CD2				LR	LR		
	comp=Z,1μm,17.1s						
CD2				LR	LR		
	comp=Z,670nm,10.8s						
CD2				LR	LR		
	comp=Z,1μm,15.7s						
SIMRM	Sittwe	34.63	304	P	P	03 40 59.6	+1.5
SIMRM				IAmb	IAmb	03 41 01.5	
	comp=Z,39nm,0.8s						
XAN	Xi'an	34.77	339	P	P	03 40 58.8	-0.4
XAN				pP	pP	03 41 05.3	-4.7
XAN				PcP	PcP	03 43 32.0	0.0
XAN				S	S	03 46 28.6	+1.9
XAN				pmax	pmax		
	comp=Z,78nm,1.4s						
XAN				LR	LR		
	comp=Z,1μm,16.3s						
XAN				LR	LR		
	comp=Z,2μm,18.4s						
XAN				LR	LR		
	comp=Z,740nm,18.4s						
QLP	Quilpie	34.80	145	P	P	03 41 00.6	+1.2
	baz=35,SNR=11						
NWAO	Narrogin (SRO)	34.83	188	P	P	03 40 59.6	0.0
	baz=35,SNR=7.7						

NWAO Narrogin (SRO) 34.83 188 P P 03 40 59.6 0.0
comp=Z,24nm,0.7s,baz=6.8,slow=8.6,SNR=12
NWAO Narrogin (SRO) 34.83 188 P P 03 40 59.8 +0.1
NWAO IAmb IAmb 03 41 00.7
comp=Z,35nm,0.8s
NWAO Narrogin (SRO) 34.83 188 P P 03 40 59.7 +0.1
NWAO IAmb IAmb 03 41 00.7
comp=Z,28nm,0.8s
KSRS Korea Array 35.91 7 P P 03 41 08.7 -0.1
comp=Z,11nm,0.8s,baz=184,slow=9.5,SNR=22
KSRS PcP PcP 03 43 35.9 +0.7
comp=Z,5.8nm,0.9s,baz=184,slow=3.4,SNR=7.7
KSRS LR LR 03 54 36.8
comp=Z,274nm,21.9s,baz=179,slow=34
BBOO Buckleboo 36.47 161 P P 03 41 13.9 +0.2
baz=37,SNR=27
BBOO Buckleboo 36.47 161 P P 03 41 14.2 +0.6
BBOO IAmb IAmb 03 41 15.4
comp=Z,105nm,1.1s
RKGY Rocky Gully 36.52 188 P P 03 41 15.4 +1.3
baz=37,SNR=7.2
BRDH Bariadhala 36.88 307 P P 03 41 18.8 +1.5
comp=Z,158nm,0.6s,baz=86,slow=5.2,SNR=9.8
BRDH LR LR 03 57 43.5
comp=Z,980nm,21.0s,baz=124,slow=38
DL2 Dalian 37.08 358 P P 03 41 18.3 -0.5
DL2 S S 03 47 03.3 +1.6
DL2 pmax pmax
comp=Z,82nm,0.7s
DL2 LR LR
comp=Z,740nm,15.9s
DL2 LR LR
comp=Z,690nm,14.3s
TIY Taiyuan 37.15 346 P P 03 41 19.8 +0.3
MAJO Matsushiro 37.46 20⇓eP P 03 41 18.7 -3.4
MJAR Matsushiro Arr 37.46 20 P P 03 41 20.1 -2.0
comp=Z,8.8nm,0.8s,baz=192,slow=9.2,SNR=23
MJAR PcP PcP 03 43 41.1 +1.1
comp=Z,11nm,1.1s,baz=221,slow=5.3,SNR=5.0
MJAR LR LR 03 54 14.2
comp=Z,506nm,21.7s,baz=195,slow=32
MJB9 Matsu-Tunnel 37.47 20 P P 03 41 20.5 -1.7
RMQ Roma 37.47 140 P P 03 41 23.6 +1.3
baz=38,SNR=5.0
STKA Stephens Creek 37.76 154 P P 03 41 25.8 +1.1
baz=38,SNR=69
STKA Stephens Creek 37.76 154 P P 03 41 25.8 +1.1
comp=Z,35nm,0.6s,baz=323,slow=9.3,SNR=75
STKA LR LR 03 57 26.4
comp=Z,322nm,19.2s,baz=316,slow=37
STKA Stephens Creek 37.76 154 P P 03 41 25.4 +0.7
HTT Hallett 38.02 158 P P 03 41 28.1 +1.2
baz=38,SNR=44
SHL Shillong 38.21 311 P P 03 41 28.9 +0.2
SNR=79
EIDS Eidsvold 38.27 136 P P 03 41 29.2 +0.2
LZH Lanzhou 38.55 335 ⇑P P 03 41 32.9 +1.4
LZH sP sP 03 41 46.0 -1.2
LZH S S 03 47 27.6 +3.1
LZH sS sS 03 47 43.1 +0.2
LZH pmax pmax
comp=Z,63nm,1.3s
LZH pmax pmax
comp=Z,280nm,5.4s
LZH LR LR
comp=Z,860nm,16.3s
LZH LR LR
comp=Z,1μm,17.4s
BJI Beijing 38.69 352 P P 03 41 31.9 -0.4
BJI PcP PcP 03 43 43.5 -0.1
BJI S S 03 47 26.9 +0.9
BJI sS sS 03 47 47.9 +3.5
BJI pmax pmax
comp=Z,52nm,0.9s
BJI pmax pmax
comp=Z,160nm,3.7s
BJI LR LR
comp=Z,160nm,8.6s
BJI LR LR
comp=Z,450nm,16.0s
CMSA Cobar Meteorol 39.46 149 P P 03 41 40.8 +1.9
baz=40,SNR=42
SNY Shenyang 39.98 1 ⇑P P 03 41 42.6 -0.5
SNY pmax pmax
comp=Z,55nm,1.2s
HHC Hu-ho-hao-te 40.34 347 eP P 03 41 46.3 +0.1
HHC S S 03 47 52.9 +1.8
HHC pmax pmax
comp=Z,27nm,1.4s
HHC pmax pmax
comp=Z,170nm,4.7s
MSHR Mys Shultsa 41.39 9⇓eP P 03 41 54.3 -0.4
CN2 Changchun 42.01 3 eP P 03 41 59.1 -0.7
CN2 epP pP 03 42 10.1 -0.7
CN2 eS S 03 48 15.1 -0.5
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 LR LR
comp=Z,360nm,20.0s
CN2 LR LR
comp=Z,610nm,20.0s
ARMA Armidale 42.02 142 P P 03 42 02.3 +2.1
baz=42,SNR=13
ARMA Armidale 42.02 142 P P 03 42 00.7 +0.5
ARMA IAmb IAmb 03 42 14.9
comp=Z,79nm,0.8s
ODAN Odare 42.31 310 eP P 03 42 03.2 +0.4
comp=Z,439nm,0.9s
TAPN Taplejung 42.32 310 eP P 03 42 03.2 +0.3
comp=Z,431nm,1.0s
PALK Pallekele 42.46 279 P P 03 42 04.3 +0.4
comp=Z,22nm,0.9s,baz=84,slow=6.1,SNR=12
PALK Pallekele 42.46 279 i P P 03 42 04.8 +0.9
SNR=9.9
PALK Pallekele 42.46 279 P P 03 42 02.3 -1.6
PALK IAmb IAmb 03 42 05.5
comp=Z,48nm,1.1s
PALK Pallekele 42.46 279 P P 03 42 05.0 +1.0
PALK Pallekele 42.46 279d iP P 03 42 04.6 +0.6
RAMN Ramite 42.97 309 eP P 03 42 08.9 +0.7
comp=Z,502nm,0.9s
YNG Young 43.03 149 P P 03 42 10.5 +2.3
baz=43,SNR=13
GTA Gaotai 43.08 334 ⇓P P 03 42 09.3 +0.6
GTA pP pP 03 42 18.3 -1.4
GTA sP sP 03 42 22.5 -2.0
GTA PcP PcP 03 43 59.0 +0.9
GTA PcS PcS 03 47 48.6 -2.0
GTA S S 03 48 33.1 +1.4
GTA sS sS 03 48 48.9 -1.4
GTA pmax pmax
comp=Z,56nm,1.2s
GTA pmax pmax
comp=Z,280nm,5.5s
GTA LR LR
comp=Z,450nm,15.8s
GTA LR LR
comp=Z,680nm,15.8s
USRK Ussuriysk Ar. 43.11 10 P P 03 42 08.0 -0.6
comp=Z,5.4nm,0.8s,baz=204,slow=7.1,SNR=8.2
USRK LR LR 03 58 22.3
comp=Z,265nm,21.5s,baz=201,slow=34
MDJ Mudanjiang 43.17 7 P P 03 42 08.3 -0.9
MDJ pmax pmax
comp=Z,20nm,1.4s
MDJ pmax pmax
comp=Z,390nm,4.6s
JIRN Jiri 43.64 310 eP P 03 42 14.2 +0.5
comp=Z,892nm,1.1s
GUN Gumba 44.00 310 eP P 03 42 17.0 +0.4
comp=Z,637nm,0.8s
CAN Canberra 44.13 149 P P 03 42 17.7 +0.5
CAN Canberra 44.13 149 P P 03 42 17.7 +0.5
CAN pmax pmax
comp=Z,188nm,0.7s
PKI Pulchoki 44.20 309 eP P 03 42 18.2 +0.1
comp=Z,443nm,1.2s
PKIN Phulchoki 44.21 309 eP P 03 42 18.2 0.0
comp=Z,138nm,0.7s
TOO Toolangi 44.28 154 P P 03 42 20.5 +2.3
baz=44,SNR=4.8
TOO Toolangi 44.28 154 P P 03 42 19.4 +1.1
TOO IAmb IAmb 03 42 33.2
comp=Z,60nm,0.9s
TOO Toolangi 44.28 154 P P 03 42 19.4 +1.1
TOO pmax pmax
comp=Z,60nm,1.0s
CNB Canberra Magne 44.32 149 P P 03 42 21.2 +2.5
baz=44,SNR=16
KKN Kakani 44.40 309 eP P 03 42 19.9 +0.2
DMN Daman 44.45 309 eP P 03 42 20.5 +0.4
comp=Z,513nm,1.0s
TEY Ternei 44.84 14⇑eP P 03 42 22.2 -0.3
TEY pmax pmax
comp=N,20nm,1.1s
TEY pmax pmax
comp=Z,30nm,1.3s
GKN Gorkha 45.00 309 eP P 03 42 24.5 +0.1
comp=Z,624nm,0.8s
DANN Dangsing 45.85 309 eP P 03 42 31.6 +0.4
comp=Z,1μm,0.7s
HYB Hyderabad 46.33 293 i P P 03 42 34.0 -0.8
HYB epP pP 03 42 46.0 -0.1
HYB esP sP 03 42 53.0 +2.1
KLR Kul'dur 47.98 8 P P 03 42 46.2 -0.9
comp=Z,8.1nm,0.7s,baz=204,slow=4.6,SNR=22
KLR LR LR 04 02 28.6
comp=Z,342nm,20.5s,baz=210,slow=35
KLR Kul'dur 47.98 8⇓eP P 03 42 45.5 -1.6
KLR pmax pmax
comp=Z,17nm,0.9s
SONM Songino Array 48.17 345 P P 03 42 48.8 0.0
comp=Z,75nm,1.0s,baz=160,slow=7.7,SNR=257
SONM PcP PcP 03 44 15.1 -0.6
comp=Z,12nm,0.9s,baz=172,slow=3.8,SNR=4.0
SONM LR LR 04 04 19.5
comp=Z,334nm,19.7s,baz=152,slow=38
YSS Yuzh-Sakhalins 48.30 18 eP P 03 42 48.7 -0.9
YSS pmax pmax
comp=Z,20nm,1.2s
KAAM Kaadhehdhoo 49.95 269 P P 03 43 02.5 -0.4
KAAM IAmb IAmb 03 43 20.5
comp=Z,38nm,1.0s
GRNR Gornyy 50.24 11⇓iP P 03 43 02.7 -1.7
GRNR eS S 03 50 16.7 +3.2
GRNR pmax pmax
comp=Z,20nm,1.0s
CIT Chita 50.79 353 eP P 03 43 08.8 +0.2
CIT e 03 43 25.3
POO Poona 50.94 293 eP P 03 43 07.0 -3.3
DGAR Diego Garcia 51.17 259 P P 03 43 11.7 -0.3
DGAR Diego Garcia 51.17 259 P P 03 43 12.5 +0.4
DGAR Diego Garcia 51.17 259 P P 03 43 11.7 -0.3
DGAR pmax pmax
comp=Z,174nm,1.0s
ZAK Zakamensk 51.33 344 eP P 03 43 12.8 0.0
ZAK pmax pmax
comp=Z,32nm,0.9s
ZEA Zeya 52.02 3 eP P 03 43 16.8 -0.9
ZEA pmax pmax
comp=N,29nm,1.2s
ZEA pmax pmax
comp=Z,60nm,1.4s
WMQ Urumqi 52.35 328 P P 03 43 21.1 +0.6
WMQ sP pwP 03 43 38.5 +0.5
WMQ S S 03 50 48.5 +5.5
WMQ pmax pmax
comp=Z,64nm,1.1s
WMQ pmax pmax
comp=Z,210nm,3.7s
WMQ LR LR
comp=Z,330nm,17.7s
WMQ LR LR
comp=Z,240nm,17.7s
WMQ LR LR
comp=Z,530nm,19.3s
TLY Talaya 52.41 345 P P 03 43 21.4 +0.7
comp=Z,62nm,0.7s,baz=184,slow=5.4,SNR=120
TLY Talaya 52.41 345 P P 03 43 19.4 -1.3
TLY Talaya 52.41 345 P P 03 43 21.4 +0.7
TLY Talaya 52.41 345 eP P 03 43 21.2 +0.5
TLY eS S 03 50 51.3 +7.9
TLY pmax pmax
comp=Z,229nm,1.0s
TLY MLR MLR
comp=Z,590nm,17.0s
H08N1 Diego Carcia H 52.45 261 P P 03 43 21.2 0.0
baz=103,slow=3.7,SNR=13
H08N2 Diego Garcia H 52.46 261 P P 03 43 21.1 -0.2
baz=103,slow=3.7,SNR=8.9
H08N3 Diego Garcia H 52.47 261 P P 03 43 21.3 0.0
baz=103,slow=3.7,SNR=14
IRK Irkutsk 52.77 346 eP P 03 43 21.9 -1.4
IRK pmax pmax
comp=Z,102nm,1.4s
BHK Bhakra 52.92 309 ex P 03 43 25.2 +0.4
MOY Mondy 53.13 343 eP P 03 43 26.6 +0.5
MOY pmax pmax
comp=Z,111nm,1.8s
THN Thein Dam 53.88 310 eP P 03 43 32.0 +0.2
NIL Nilore 56.27 310 P P 03 43 47.9 -1.2
NIL Nilore 56.27 310 P P 03 43 49.5 +0.4
NIL Nilore 56.27 310 P P 03 43 47.9 -1.2
NIL pmax pmax
comp=Z,148nm,1.0s
BOD Bodaibo 56.44 354⇑iP P 03 43 49.2 -0.6
BOD pmax pmax
comp=Z,89nm,1.2s
PRZ Przheval'sk 56.88 322 P P 03 43 52.1 -1.3
PRZ Przheval'sk 56.88 322 P P 03 43 52.1 -1.3
PRZ pmax pmax
comp=Z,177nm,1.2s
KSH Kashi 56.91 318 P P 03 43 55.3 +1.6
KSH pP pP 03 44 06.5 +1.3
KSH sP pwP 03 44 11.4 +0.8
KSH PcP PcP 03 44 48.8 0.0
KSH PP PP 03 46 06.6 +6.0
KSH S S 03 51 43.5 -1.1
KSH sS sS 03 52 06.8 +3.6
KSH SS SS 03 55 38.3 +4.8
KSH pmax pmax
comp=Z,63nm,1.0s
KSH pmax pmax
comp=Z,720nm,2.8s
KSH LR LR
comp=Z,250nm,5.7s
KSH LR LR
comp=Z,340nm,6.1s
MK31 Makanchi Array 57.18 328 P P 03 43 55.9 +0.6
MK31 Makanchi Array 57.18 328 i P P 03 43 55.5 +0.2
MKAR Makanchi Array 57.18 328 P P 03 43 55.9 +0.6
comp=Z,69nm,0.9s,baz=130,slow=7.8,SNR=462
MKAR PcP PcP 03 44 49.2 -0.3
comp=Z,33nm,0.8s,baz=116,slow=5.5,SNR=11
MKAR PKPPKP 04 13 57.5
comp=Z,1.2nm,1.0s,baz=299,slow=2.5,SNR=5.6
MAKZ Makanchi 57.35 328 P P 03 43 55.5 -1.0
MAKZ Makanchi 57.35 328 P P 03 43 56.5 0.0
KDJ Kajisay 57.45 321 P P 03 43 58.9 +1.4
KDJ Kajisay 57.45 321 P P 03 43 58.9 +1.4
KDJ pmax pmax
comp=Z,96nm,0.9s
NRN Naryn 57.85 320 P P 03 43 59.1 -1.4
NRN IAmb IAmb 03 44 02.3
comp=Z,48nm,0.8s
NRN Naryn 57.85 320 P P 03 43 59.1 -1.4
NRN pmax pmax
comp=Z,48nm,0.9s
ULHL Ulahol 58.10 320 P P 03 44 03.4 +1.2
SNR=54
BOOM Boomskoye usch 58.42 321 P P 03 44 05.3 +1.0
BOOM IAmb IAmb 03 44 06.6
comp=Z,52nm,0.9s
BOOM Boomskoye usch 58.42 321 P P 03 44 05.3 +1.0
BOOM pmax pmax
comp=Z,52nm,0.9s
KZA Kyzart 58.66 320 P P 03 44 07.8 +1.6
SNR=125
PETK Petropavlovsk- 58.79 24 P P 03 44 07.5 +1.1
comp=Z,8.0nm,0.8s,baz=186,slow=6.5,SNR=4.3
PETK PcP PcP 03 44 55.0 -0.7
comp=Z,3.7nm,0.4s,baz=330,slow=8.6,SNR=5.6
PETK LR LR 04 06 24.5
comp=Z,166nm,21.5s,baz=238,slow=33
KBK Karagaybulak 59.14 320 P P 03 44 10.7 +1.4
SNR=59
UCH Uchtor 59.20 320 P P 03 44 11.5 +1.4
SNR=145
FRU1 Bishkek 59.42 320 P P 03 44 12.6 +1.5
FRU1 IAmb IAmb 03 44 13.2
comp=Z,68nm,1.1s
FRU1 Bishkek 59.42 320 P P 03 44 12.6 +1.5
FRU1 pmax pmax
comp=Z,68nm,1.2s
AAK Ala-Archa 59.42 320 P P 03 44 12.5 +1.3
comp=Z,71nm,0.9s,baz=112,slow=5.2,SNR=167
AAK Ala-Archa 59.42 320 P P 03 44 12.5 +1.3
SNR=113
AAK Ala-Archa 59.42 320 i P P 03 44 12.5 +1.3
SNR=134
AAK Ala-Archa 59.42 320 P P 03 44 10.4 -0.9
AAK Ala-Archa 59.42 320 P P 03 44 12.4 +1.1
AAK Ala-Archa 59.42 320d iP P 03 44 12.3 +1.1
AAK pmax pmax
comp=Z,115nm,1.0s
CHMS Chumysh 59.44 321 P P 03 44 11.8 +0.7
SNR=29
AML Almayashu 59.69 319 P P 03 44 14.8 +1.4
SNR=5.8
USP Ospenovka 59.73 321 P P 03 44 14.0 +0.8
SNR=126
ARSB Arslanbob 59.78 318 P P 03 44 11.8 -1.9
ARSB Arslanbob 59.78 318 P P 03 44 11.8 -1.9
ARSB pmax pmax
comp=Z,130nm,1.0s
KBL Kabul 59.84 310 P P 03 44 13.2 -1.1
KBL Kabul 59.84 310 P P 03 44 14.7 +0.4
KBL Kabul 59.84 310 P P 03 44 13.2 -1.1
KBL pmax pmax
comp=Z,173nm,0.8s
EKS2 Erkin-Say 59.89 320 P P 03 44 15.8 +1.4
SNR=97
YAK Yakutsk 60.43 4 P P 03 44 16.4 -1.1
YAK Yakutsk 60.43 4 eP P 03 44 16.6 -0.9
YAK e*PP pP 03 44 28.3 -0.6
YAK e 03 45 00.3
YAK e 03 46 29.3
YAK eS S 03 52 29.4 +0.3
YAK e*SS pS 03 52 42.9 +0.5
YAK eSS SS 03 56 29.4 +1.8
YAK pmax pmax
comp=Z,62nm,0.9s
YAK pmax pmax
comp=N,41nm,1.1s
YAK pmax pmax
comp=E,18nm,1.5s
YAK pmax pmax
comp=Z,534nm,6.6s
YAK pmax pmax
comp=E,261nm,5.9s
YAK pmax pmax
comp=N,304nm,8.5s
YAK smax smax
comp=E,150nm,4.7s
YAK smax smax
comp=N,154nm,4.6s
YAK MLR MLR
comp=Z,123nm,17.0s
YAK MLR MLR
comp=N,114nm,18.0s
YAK MLR MLR
comp=E,71nm,23.0s
ZAA0 Zalesovo Array 60.78 335 P P 03 44 18.4 -1.6
ZAA0 IAmb IAmb 03 44 20.2
comp=Z,65nm,1.1s
ZALV Zalesovo Beam 60.78 335 P P 03 44 19.5 -0.6
comp=Z,40nm,0.9s,baz=121,slow=5.5,SNR=102
ZALV PKPPKP P'P'df 04 13 45.1 +6.2
comp=Z,0.6nm,0.3s,baz=294,slow=1.5,SNR=5.5
KURBB Kurchatov Arra 61.50 330 P P 03 44 25.2 +0.2
comp=Z,60nm,0.8s,baz=129,slow=6.1,SNR=294
KURBB Kurchatov Arra 61.50 330 P P 03 44 24.9 -0.1
KURK Kurchatov 61.52 330 P P 03 44 23.3 -1.8
KURK Kurchatov 61.52 330 P P 03 44 25.6 +0.4
KURK Kurchatov 61.52 330d iP P 03 44 25.2 +0.1
KURK pmax pmax
comp=Z,156nm,0.8s
MA2 Magadan 61.65 16 P P 03 44 24.6 -1.3
MA2 IAmb IAmb 03 44 27.3
comp=Z,33nm,0.9s
MA2 Magadan 61.65 16⇓eP P 03 44 26.2 +0.3
MA2 pmax pmax
comp=Z,42nm,1.3s
KK31 Karatay Array 62.22 319 P P 03 44 28.3 -1.8
KK31 Karatay Array 62.22 319 i P P 03 44 29.6 -0.5
KKAR Karatay Array 62.22 319 P P 03 44 28.6 -1.5
KKAR Karatay Array 62.22 319 P P 03 44 28.6 -1.5
KKAR pmax pmax
comp=Z,87nm,0.9s
TAS Tashkent 62.27 317 P P 03 44 31.8 +1.4
TAS Tashkent 62.27 317 P P 03 44 31.8 +1.4
TAS pmax pmax
comp=Z,216nm,0.9s
RPZ Rata Peaks 62.35 142 P P 03 44 31.2 +0.3
THZ Tophouse 62.49 140 P P 03 44 32.5 +0.5
THZ IAmb IAmb 03 44 48.5
comp=Z,24nm,0.8s
KHZ Kahutara 63.23 140 P P 03 44 36.8 +0.1
KHZ IAmb IAmb 03 44 50.4
comp=Z,41nm,0.9s
SEY Seymchan 64.92 14⇑iP P 03 44 48.1 +0.7
HRA Herat 65.11 307 P P 03 44 48.3 -1.3
HRA IAmb IAmb 03 44 50.3
comp=Z,39nm,0.9s
WBK Wadi Bani Khal 65.40 294 P P 03 44 50.6 -0.8
WSAR Wadi Sarin 65.80 295 P P 03 44 53.1 -0.8
MHTO MHTO 66.08 292 P P 03 44 55.1 -0.7
SNR=7.3
BIDO Bidbid 66.30 295 P P 03 44 56.5 -0.7
SMDO Samad 66.30 294 P P 03 44 56.5 -0.8
DQM DQM 66.34 291 P P 03 44 57.1 -0.4
BSY Bisya 67.03 294 P P 03 45 01.1 -0.8
BVAR Borovoye Array 67.04 329 P P 03 45 01.1 -0.2
comp=Z,16nm,0.7s,baz=131,slow=8.1,SNR=89
BRVK Borovoye 67.11 329 P P 03 45 00.5 -1.2
BRVK IAmb IAmb 03 45 02.3
comp=Z,40nm,0.9s
BRVK Borovoye 67.11 329d iP P 03 45 01.5 -0.2
BRVK pmax pmax
comp=Z,127nm,1.7s
MSEY Mahe Island 67.70 264 P P 03 45 06.7 +0.5
MSEY Mahe Island 67.70 264 P P 03 45 04.7 -1.6
MSEY IAmb IAmb 03 45 07.5
comp=Z,78nm,1.1s
MSEY Mahe Island 67.70 264 P P 03 45 04.7 -1.6
MSEY pmax pmax
comp=Z,78nm,1.2s
ARQ Araqi 67.73 294 P P 03 45 05.4 -0.9
SHAO Shalim 67.94 289 P P 03 45 07.2 -0.4
SHAO Shalim 67.94 289 P P 03 45 07.0 -0.6
MDH Madha 68.22 297 P P 03 45 07.7 -1.7
UOSS Minazif 68.25 296 P P 03 45 08.9 -0.7
HATD Hatta, Dubai 68.30 296 P P 03 45 09.8 0.0
BANOM Banah 68.32 297 P P 03 45 09.7 -0.3
ASHO Ashiyiah 68.35 296 P P 03 45 11.1 +1.0
MSFE Esma-Masafi 68.36 297 P P 03 45 11.8 +1.7
CASY Casey 68.38 185 P P 03 45 10.1 +0.7
CASY IAmb IAmb 03 45 23.9
comp=Z,24nm,0.8s
ALNE Al Ain 68.53 295 P P 03 45 11.1 -0.2
SOCY Socotra 69.08 282 P P 03 45 13.1 -1.9
SOCY IAmb IAmb 03 45 14.6
comp=Z,48nm,0.9s
GEYT Alibeck 69.27 310 P P 03 45 16.3 +0.6
comp=Z,39nm,0.9s,baz=134,slow=4.3,SNR=68
GYA0B ALIBECK ARRAY 69.27 310 P P 03 45 16.4 +0.7
GYA0B IAmb IAmb 03 45 17.6
comp=Z,68nm,1.1s
WHFO Wadi Hawf 69.68 288 P P 03 45 17.3 -1.2
TIXI Tiksi 69.98 2 P P 03 45 17.7 -1.5
comp=Z,56nm,0.9s,baz=164,slow=3.8,SNR=99
ABTO Aybut 70.09 288 P P 03 45 20.3 -0.8
AB31 Akbulak array 71.39 322 i P P 03 45 27.7 -0.6
ABKAR Akbulak array 71.39 322 P P 03 45 27.0 -1.3
ABKAR IAmb IAmb 03 45 28.8
comp=Z,32nm,0.9s
BILL Bilibino 72.52 16 P P 03 45 33.7 -1.0
BILL Bilibino 72.52 16d iP P 03 45 33.4 -1.3
BILL pmax pmax
comp=Z,39nm,1.7s
BILL MLR MLR
comp=Z,119nm,17.0s
AKTO Aktyubinsk 72.96 323 P P 03 45 37.5 -0.1
comp=Z,50nm,0.8s,baz=105,slow=7.2,SNR=144
SVE Sverdlovsk 73.77 330c iP P 03 45 42.0 -0.3
SVE pmax pmax

comp=Z,201nm,1.1s
ARU Arti 74.68 329 P P 03 45 46.8 -0.8
comp=Z,31nm,0.8s,baz=121,slow=2.8,SNR=106
ARU Arti 74.68 329 P P 03 45 46.8 -0.8
ARU Arti 74.68 329 d iP P 03 45 46.7 -0.9
ARU pmax pmax
comp=Z,138nm,0.9s
LKRN Lenkeran, Azer 76.62 309 P P 03 45 59.1 0.0
GAMB Gambell 77.81 24 P P 03 46 04.5 -0.6
GAMB IAmb IAmb 03 46 06.7
comp=Z,39nm,1.0s
RAYN Ar Rayn 77.82 294 i P P 03 46 05.7 -0.5
SNR=18
RAYN Ar Rayn 77.82 294 P P 03 46 04.7 -1.5
RAYN IAmb IAmb 03 46 06.7
comp=Z,32nm,1.1s
RAYN Ar Rayn 77.82 294 P P 03 46 04.7 -1.5
RAYN pmax pmax
comp=Z,32nm,1.2s
AKT Akhty 77.83 312 eP P 03 46 06.1 +0.1
AKT e 03 46 14.4
AKT e 03 49 03.0
AKT pmax pmax
comp=Z,43nm,0.7s
SEKA Sheki 78.19 312 P P 03 46 07.9 0.0
MNGR Mingechevir, A 78.21 311 P P 03 46 08.6 +0.7
GANJ Ganja 78.77 311 P P 03 46 10.9 -0.2
LGD Lagodekhi 78.99 312 P P 03 46 13.6 +1.4
NAX Nakhchivan 79.22 309 P P 03 46 14.0 +0.4
GROC Groznyy 79.50 314 eP P 03 46 14.2 -0.7
GROC e 03 46 20.9
GROC e 03 49 19.4
GROC pmax pmax
comp=Z,62nm,1.2s
GNI Garni 79.91 310 P P 03 46 17.4 -0.1
comp=Z,10nm,0.9s,baz=226,slow=3.0,SNR=17
GNI Garni 79.91 310 i P P 03 46 18.1 +0.6
SNR=7.7
GNI Garni 79.91 310 P P 03 46 15.1 -2.4
GNI Garni 79.91 310 d iP P 03 46 17.7 +0.2
GNI pmax pmax
comp=Z,154nm,1.7s
KIRV Kirov 80.03 329 P P 03 46 16.6 -0.8
comp=Z,107nm,0.7s,baz=105,slow=2.7,SNR=35
TBLG Delisi 80.09 312 P P 03 46 19.1 +0.8
TBLG IAmb IAmb 03 46 19.2
comp=Z,34nm,0.8s
TBLG Delisi 80.09 312 P P 03 46 19.1 +0.8
GUDG Gudauri 80.37 313 P P 03 46 19.6 -0.4
MAW Mawson 80.54 200 LR LR 04 15 04.4
comp=Z,267nm,21.4s,baz=54,slow=30
ZEI Tsey 80.83 313 eP P 03 46 17.8 -4.6
ZEI pmax pmax
comp=Z,36nm,1.0s
BGD Bogdanovka 80.89 311 P P 03 46 23.6 +0.8
AKH Akhalkalaki 80.98 312 P P 03 46 24.2 +1.0
AKH IAmb IAmb 03 46 24.8
comp=Z,39nm,0.9s
AKH Akhalkalaki 80.98 312 P P 03 46 24.2 +1.0
AKH pmax pmax
comp=Z,39nm,0.9s
NCK Nalchik 81.12 314⇓eP P 03 46 23.5 -0.2
NCK pmax pmax
comp=Z,97nm,2.2s
ONI Oni 81.13 313 P P 03 46 24.5 +0.6
KBZ Khabaz 81.65 314 P P 03 46 26.2 -0.2
comp=Z,17nm,0.9s,baz=119,slow=2.4,SNR=30
KBZ LR LR 04 29 23.3
comp=Z,80nm,18.6s,baz=64,slow=40
GOF Gofitskoye 81.68 315⇑eP P 03 46 26.3 -0.3
GOF pmax pmax
comp=Z,38nm,0.7s
NEY Neytrino 81.73 313⇓eP P 03 46 28.4 +1.2
NEY pmax pmax
comp=Z,9.0nm,1.0s
KIV Kislovodsk 81.83 314 P P 03 46 28.0 +0.4
KIV Kislovodsk 81.83 314 P P 03 46 26.4 -1.2
KIV Kislovodsk 81.83 314 eP P 03 46 26.8 -0.7
KIV pmax pmax
comp=Z,33nm,1.0s
VNDA Vanda 81.89 172 P P 03 46 28.3 +1.3
comp=Z,6.8nm,0.8s,baz=24,slow=5.7,SNR=2.1
VNDA LR LR 04 21 29.3
comp=Z,335nm,20.5s,baz=334,slow=35
PRGR Permogore 82.52 332⇓iP P 03 46 29.3 -1.3
PRGR pmax pmax
comp=Z,76nm,0.9s
RDOG Red Dog Mine 82.56 21 P P 03 46 31.6 +0.8
RDOG IAmb IAmb 03 46 32.7
comp=Z,46nm,1.0s
VRH Novokhopyorsk 83.20 321 eP P 03 46 33.2 -1.2
VRH pmax pmax
comp=Z,80nm,0.8s
SOC Sochi 83.94 313 eP P 03 46 36.5 -1.9
SOC eS S 03 56 58.1 -0.9
SOC pmax pmax
comp=Z,19nm,0.6s
SVW2 Sparrevohn 84.42 29 P P 03 46 41.6 +1.2
TTA Tatalina 84.44 27 P P 03 46 41.7 +1.1
TTA IAmb IAmb 03 46 43.2
comp=Z,50nm,1.2s
TTA Tatalina 84.44 27 P P 03 46 41.7 +1.1
TTA pmax pmax
comp=Z,50nm,1.2s
SII Sitkinak Islan 84.68 33 P P 03 46 43.0 +1.2
VORD Divnogorie 84.70 321 eP P 03 46 40.8 -1.2
VORD pmax pmax
comp=Z,90nm,0.8s
VSR Storozhevoye 84.80 321 eP P 03 46 41.2 -1.3
VSR pmax pmax
comp=Z,100nm,1.0s
LPSR Galich'ya Gora 85.04 322 eP P 03 46 43.0 -0.7
LPSR pmax pmax
comp=Z,220nm,0.9s
OHAK Old Harbor 85.22 33 P P 03 46 44.9 +0.4
OHAK IAmb IAmb 03 46 45.9
comp=Z,47nm,0.9s
KLMR Klimovskoe 85.34 331 eP P 03 46 40.6 -4.4
KLMR pmax pmax
comp=Z,239nm,1.1s
KLMR Klimovskoe 85.34 331 eP P 03 46 40.6 -4.4
KLMR AMP 03 46 45.1
comp=Z,239nm,1.1s
GAZ Gaziantep 85.59 307 P P 03 46 47.1 +0.2
GAZ IAmb IAmb 03 46 47.7
comp=Z,24nm,0.9s
ANN Anapa 85.64 315 eP P 03 46 45.9 -1.0
ANN e 03 50 02.0
ANN pmax pmax
comp=Z,317nm,1.5s
KMBO Kilima Mbogo 85.73 269 P P 03 46 48.5 +0.2
comp=Z,8.3nm,0.9s,baz=71,slow=5.0,SNR=15
KMBO Kilima Mbogo 85.73 269 i P P 03 46 49.0 +0.7
SNR=11
KMBO Kilima Mbogo 85.73 269 P P 03 46 46.6 -1.7
RSO Redoubt South 85.74 30 P P 03 46 48.5 +1.2
ASF Jabal al Asfar 85.77 302 P P 03 46 48.2 +0.3
comp=Z,25nm,1.0s,baz=39,slow=2.3,SNR=29
MOS Moscow 85.99 326 eP P 03 46 46.4 -1.9
MOS e 03 46 57.3
MOS e 03 50 07.2
MOS pmax pmax
comp=Z,300nm,1.0s
MOS pmax pmax
comp=Z,234nm,1.0s
TMCR Tamitsa 86.28 334 eP P 03 46 48.1 -1.5
OBN Obninsk 86.56 325 P P 03 46 50.4 -0.7
comp=Z,24nm,0.7s,baz=357,slow=0.2,SNR=28
OBN Obninsk 86.56 325 P P 03 46 50.5 -0.7
OBN Obninsk 86.56 325 d iP P 03 46 49.9 -1.3
OBN eS S 03 57 27.1 +2.8
OBN pmax pmax
comp=Z,285nm,1.7s
OBN MLR MLR
comp=Z,137nm,16.0s
BPAW Bear Paw Mtn. 86.79 26 P P 03 46 52.7 +0.6
BPAW IAmb IAmb 03 46 56.9
comp=Z,14nm,1.0s
MLY Manley 86.94 25 P P 03 46 52.8 -0.1
MLY IAmb IAmb 03 46 55.1
comp=Z,20nm,1.0s
TRF Thorofare Moun 87.07 27 P P 03 46 53.1 -0.6
COLD Coldfoot 87.25 23 P P 03 46 55.8 +1.5
BWN Browne 87.46 26 P P 03 46 55.1 -0.2
BWN IAmb IAmb 03 46 56.2

comp=Z,27nm,1.2s
LODK Lodwar 87.49 273 P P 03 46 58.2 +1.5
SNR=14
TOLK Toolik Lake Re 87.54 21 P P 03 46 56.6 +0.8
TOLK IAmb IAmb 03 46 58.9
comp=Z,41nm,0.9s
TOLK Toolik Lake Re 87.54 21 P P 03 46 56.4 +0.7
baz=268
MCK McKinley 87.68 26 P P 03 46 55.9 -0.6
MCK IAmb IAmb 03 46 56.7
comp=Z,20nm,1.0s
MCK McKinley 87.68 26 P P 03 46 55.9 -0.6
MCK pmax pmax
comp=Z,20nm,1.0s
RND Reindeer 87.71 27 P P 03 46 55.8 -0.9
RND IAmb IAmb 03 46 56.5
comp=Z,14nm,0.9s
RND Reindeer 87.71 27 P P 03 46 55.8 -0.9
RND pmax pmax
comp=Z,14nm,0.9s
LVZ Lovozero 87.82 338 P P 03 46 54.2 -2.8
LVZ IAmb IAmb 03 46 57.0
comp=Z,36nm,1.0s
LVZ Lovozero 87.82 338 ceP P 03 46 55.7 -1.4
LVZ pmax pmax
comp=Z,56nm,1.7s
KNK Knik Glacier 87.87 29 P P 03 46 57.4 -0.1
SIM Simferopol' 88.00 315 deP P 03 46 57.7 -0.7
SIM pmax pmax
comp=Z,21nm,1.0s
WRH Wood River Hil 88.06 26 P P 03 46 57.6 -0.7
WRH IAmb IAmb 03 46 58.9
comp=Z,23nm,1.2s
CCB Clear Creek Bu 88.18 26 P P 03 46 57.8 -1.0
CCB IAmb IAmb 03 46 58.7
comp=Z,16nm,1.1s
APA Apatity 88.29 337⇓iP P 03 46 56.7 -2.6
APA pmax pmax
comp=Z,15nm,1.0s
APA MLR MLR
comp=Z,600nm,16.0s
POKR Poker Plat Res 88.34 25 P P 03 47 00.7 +1.2
baz=270
DHY Denali Highway 88.38 27 P P 03 46 59.8 -0.2
BR131 Keskin Array S 88.41 310 P P 03 46 59.7 -1.0
BR131 Keskin Array S 88.41 310 P P 03 46 59.7 -1.0
BR131 pmax pmax
comp=Z,5.0nm,1.1s
BRTR Keskin Array B 88.41 310 P P 03 46 59.5 -1.1
comp=Z,2.4nm,0.7s,baz=149,slow=4.1,SNR=17
BRTR PP PP 03 50 24.3 -4.5
comp=Z,4.9nm,1.0s,baz=111,slow=6.8,SNR=9.5
BRTR LR LR 04 33 01.5
comp=Z,54nm,20.2s,baz=72,slow=40
HDA Harding Lake 88.55 26 P P 03 46 59.3 -1.3
HDA Harding Lake 88.55 26 P P 03 46 58.7 -1.9
baz=271
IL31 88.58 25 P P 03 46 59.2 -1.4
ILAR Eielson Array 88.58 25 P P 03 46 58.9 -1.8
comp=Z,2.5nm,0.8s,baz=250,slow=5.1,SNR=27
ILAR PKKPbc PKKPbc 04 04 44.5 -0.3
comp=Z,0.6nm,1.0s,baz=160,slow=2.3,SNR=4.2
ILAR LR LR 04 32 23.2
comp=Z,14nm,18.5s,baz=278,slow=39
CSS Mathiatis 88.74 305 P P 03 47 01.5 -0.6
SYO Syowa Base 89.16 201⇓eP P 03 47 02.6 -0.6
SYO Syowa Base 89.16 201⇓esP sP 03 47 20.1 -0.1
PAX Paxson 89.25 27 P P 03 47 03.7 -0.3
PAX Paxson 89.25 27 P P 03 47 03.7 -0.3
PAX pmax pmax
comp=Z,12nm,1.2s
RIDG Independent Ri 89.50 26 P P 03 47 04.8 -0.3
RIDG IAmb IAmb 03 47 10.8
comp=Z,21nm,1.2s
PUL Pulkovo 89.90 330⇓eP P 03 47 05.7 -1.2
PUL pmax pmax
comp=Z,55nm,0.9s
MENT Mentasta 90.05 27 P P 03 47 08.0 +0.3
GLB Gilahina Butte 90.11 29 P P 03 47 08.2 +0.2
GLB IAmb IAmb 03 47 08.5
comp=Z,12nm,1.0s
BALM Baldy 90.84 29 P P 03 47 11.9 +0.4
BALM IAmb IAmb 03 47 12.7
comp=Z,17nm,1.0s
EGAK Eagle 91.03 25 P P 03 47 12.2 +0.1
ARCES ARCESS Array B 91.06 340 P P 03 47 10.2 -2.0
comp=Z,11nm,0.8s,baz=78,slow=5.9,SNR=18
ARCES LR LR 04 32 12.5
comp=Z,106nm,19.1s,baz=96,slow=38
AKASG Malin Array Be 91.08 321 P P 03 47 10.8 -1.9
comp=Z,8.6nm,0.8s,baz=70,slow=4.5,SNR=32
AKASG PP PP 03 50 52.4 +2.8
comp=Z,2.1nm,0.8s,baz=67,slow=7.3,SNR=4.4
AKBB Malin Array Si 91.08 321 P P 03 47 11.2 -1.5
AKBB IAmb IAmb 03 47 12.1
comp=Z,21nm,1.1s
AKBB Malin Array Si 91.08 321 P P 03 47 11.2 -1.5
AKBB pmax pmax
comp=Z,21nm,1.1s
BARN Barnard Glacie 91.17 29 P P 03 47 14.0 +0.9
BARN IAmb IAmb 03 47 14.7
comp=Z,19nm,0.9s
CTGM Chitina Glacie 91.34 29 P P 03 47 14.8 +1.0
CTGM IAmb IAmb 03 47 15.5
comp=Z,23nm,1.0s
ELL Elmali 91.45 307 P P 03 47 13.8 -1.1
ELL Elmali 91.45 307 P P 03 47 13.8 -1.1
ELL pmax pmax
comp=Z,40nm,1.0s
QSPA South Pole Qui 91.59 180 P P 03 47 15.1 +0.2
QSPA IAmb IAmb 03 47 30.5
comp=Z,12nm,1.1s
KIS Kishinev 91.61 317 eP P 03 47 13.0 -2.2
KIS Kishinev 91.61 317 eP P 03 47 13.0 -2.2
JURR Jurilovca 91.73 315 ⇑P P 03 47 14.5 -1.4
SPA0 Spitsbergen Ar 91.75 349 P P 03 47 14.8 -0.5
SPITS Spitsbergen Ar 91.75 349 P P 03 47 14.3 -1.0
baz=104,slow=12
FIA1 FINESS Array S 91.84 331 P P 03 47 14.5 -1.4
FIA1 IAmb IAmb 03 47 15.2
comp=Z,22nm,0.8s
FINES FINESS Array B 91.84 331 P P 03 47 14.4 -1.6
comp=Z,11nm,0.6s,baz=72,slow=5.4,SNR=42
FINES PKiKP PKiKP 03 52 06.2 -0.2
comp=Z,1.4nm,0.8s,baz=122,slow=2.5,SNR=3.4
SORM Soroca 91.84 318 ⇑P P 03 47 15.5 -0.7
SORM Soroca 91.84 318 P P 03 47 15.5 -0.7
VSU Vasula 91.85 328 eP P 03 47 14.4 -1.6
VSU Vasula 91.85 328 d iP P 03 47 14.0 -2.0
VSU pmax pmax
comp=Z,82nm,1.1s
DAWY Dawson 91.87 26 P P 03 47 16.6 +0.4
LEOM Leova 92.04 316 ⇓P P 03 47 16.7 -0.5
LEOM Leova 92.04 316 P P 03 47 16.7 -0.5
TOPG Topolog 92.08 315 ⇑P P 03 47 15.6 -1.9
NACGM Naroch 92.20 325 e P 03 47 16.0 -1.7
CFR Carcaliu 92.22 315 ⇓P P 03 47 16.6 -1.5
CFR Carcaliu 92.22 315 P P 03 47 16.6 -1.5
HARR Harsova 92.41 315 ⇓P P 03 47 17.8 -1.1
HARR Harsova 92.41 315 P P 03 47 17.8 -1.1
IZAR Zarasai 92.41 326 eP P 03 47 18.1 -0.6
MANT Manisa 92.41 308 P P 03 47 19.1 -0.3
IIGN Ignalina 92.47 325 eP P 03 47 18.5 -0.5
IIGN IAmb IAmb 03 47 19.8
comp=Z,29nm,1.0s
ISAL Salakas 92.50 326 eP P 03 47 18.5 -0.7
ISAL IAmb IAmb 03 47 19.8
comp=Z,18nm,0.9s
EPYK Eagle Plains 92.63 23 P P 03 47 19.4 -0.1
EPYK IAmb IAmb 03 47 21.1
comp=Z,38nm,1.1s
EPYK Eagle Plains 92.63 23 P P 03 47 18.7 -0.9
baz=280
PETR Petresti 92.81 316 ⇑P P 03 47 18.8 -1.9
TESR Tescani 93.14 317 ⇓P P 03 47 21.4 -0.9
VRI Vrincioaia 93.15 316 ⇑P P 03 47 21.9 -0.5
VRI Vrincioaia 93.15 316 P P 03 47 21.9 -0.5
PLOR Plostina 93.20 316 ⇑P P 03 47 22.1 -0.7
PLOR Plostina 93.20 316 P P 03 47 22.0 -0.7
HYT Haines Junctio 93.21 29 P P 03 47 22.9 +0.4
HYT IAmb IAmb 03 47 24.1
comp=Z,8.4nm,0.9s
INK Inuvik 93.45 21 P P 03 47 23.0 -0.2
INK IAmb IAmb 03 47 23.9
comp=Z,21nm,1.1s

INK Inuvik 93.45 21 P P 03 47 23.0 -0.2
INK pmax pmax
comp=Z,21nm,1.2s
PABE Paberze 93.72 326 eP P 03 47 24.1 -0.6
PABE IAmb IAmb 03 47 25.2
comp=Z,117nm,0.9s
MLR Muntele Rosu 93.73 316 P P 03 47 24.2 -1.1
comp=Z,11nm,0.9s,baz=32,slow=2.6,SNR=15
MLR PP PP 03 51 10.7 -0.1
comp=Z,10.0nm,1.0s,baz=52,slow=5.4,SNR=6.2
MLR Muntele Rosu 93.73 316 ⇑P P 03 47 24.5 -0.8
MLR Muntele Rosu 93.73 316 P P 03 47 24.4 -0.8
MLR IAmb IAmb 03 47 25.9
comp=Z,16nm,0.9s
MLR Muntele Rosu 93.73 316 P P 03 47 24.4 -0.8
MLR pmax pmax
comp=Z,16nm,0.9s
KARP Karpathos 93.75 306 P P 03 47 24.2 -1.2
BURAR Bucovina Array 93.99 318 ⇑P P 03 47 25.0 -1.4
BURAR Bucovina Array 93.99 318 P P 03 47 24.9 -1.4
BUR08 Bucovina Ar. S 94.00 318 P P 03 47 25.2 -1.2
BUR08 IAmb IAmb 03 47 27.0
comp=Z,20nm,1.1s
ELND Elena 94.06 313 ⇓P P 03 47 25.1 -1.6
DOPR Dopca 94.07 316 ⇑P P 03 47 26.2 -0.4
VOIR 94.37 316 ⇓P P 03 47 26.9 -1.2
VOIR 94.37 316 P P 03 47 26.8 -1.2
COPA Copaceanca 94.40 314 ⇑P P 03 47 26.8 -1.3
SUW Suwalki 94.40 324 eP P 03 47 27.1 -0.8
SUW Suwalki 94.40 324 P P 03 47 26.9 -0.9
SUW Suwalki 94.40 324 eP P 03 47 27.1 -0.8
LVV L'vov 94.49 320 eP P 03 47 27.2 -1.2
WHY Whitehorse 94.51 29 P P 03 47 29.4 +0.9
WHY IAmb IAmb 03 47 30.2
comp=Z,25nm,1.0s
SKAG Skagway 94.53 30 P P 03 47 29.9 +1.5
SKAG IAmb IAmb 03 47 30.2
comp=Z,21nm,1.0s
ARR Arges 94.67 316 ⇑P P 03 47 27.1 -2.4
NOR Nord 94.78 355 i P P 03 47 27.8 -1.4
NOR Nord 94.78 355 i P P 03 47 27.8 -1.4
PLVB Pleven 94.92 314 ⇑P P 03 47 28.6 -2.0
VLAD Vladila 95.00 314 ⇑P P 03 47 29.2 -1.7
LSZ Lusaka 95.02 255 P P 03 47 30.1 -1.6
LSZ Lusaka 95.02 255 P P 03 47 30.1 -1.6
LSZ pmax pmax
comp=Z,5.0nm,0.9s
JIS Juneau Island 95.24 31 P P 03 47 33.2 +1.5
JIS IAmb IAmb 03 47 33.6
comp=Z,14nm,1.0s
KWP Kalwaria Pacla 95.37 320 eP P 03 47 31.9 -0.6
KWP Kalwaria Pacla 95.37 320 P P 03 47 31.6 -0.9
KWP Kalwaria Pacla 95.37 320 eP P 03 47 31.9 -0.6
TRPA Tarpa 95.71 319 ⇑P P 03 47 32.7 -1.3
KOLS Kolonicke sedl 95.76 319 eP P 03 47 33.7 -0.6
KOLS pmax pmax
comp=Z,11nm,1.1s
KOLS Kolonicke sedl 95.76 319 eP P 03 47 33.6 -0.7
UZH Uzhgorod 95.79 319 eP P 03 47 32.2 -2.2
UZH e 03 47 47.0
UZH e 03 51 33.0
DRGR 95.80 317 ⇑P P 03 47 33.9 -0.7
DRGR 95.80 317 P P 03 47 33.9 -0.7
DRGR pmax pmax
comp=Z,10.0nm,1.2s
GZR Gura Zlata 95.96 316 ⇓P P 03 47 34.3 -1.0
KLNR Kaliningrad 96.01 325⇓eP P 03 47 34.8 -0.4
VTS Vitosha 96.02 313 ⇑P P 03 47 34.6 -1.3
VTS Vitosha 96.02 313 P P 03 47 34.4 -1.4
VTS Vitosha 96.02 313 P P 03 47 34.4 -1.4
VTS pmax pmax
comp=Z,6.0nm,1.1s
CRVS Cervenica-Dubn 96.29 319 eP P 03 47 36.5 -0.2
CRVS pmax pmax
comp=Z,56nm,1.2s
CRVS Cervenica-Dubn 96.29 319 eP P 03 47 36.5 -0.2
C36M Paulatuk 96.40 19 P P 03 47 35.8 -0.9
baz=292
SIRR Siria 96.60 317 ⇑P P 03 47 37.4 -0.8
BZS Buzias 96.73 316 ⇑P P 03 47 37.5 -1.2
BZS Buzias 96.73 316 P P 03 47 38.2 -0.6
BZS pmax pmax
comp=Z,19nm,1.5s
LIT Litokhoron 96.92 311 P P 03 47 38.1 -1.7
LIT Litokhoron 96.92 311 P P 03 47 38.1 -1.7
LIT pmax pmax
comp=Z,7.0nm,1.2s
NIE Niedzica 96.95 320 eP P 03 47 38.8 -0.9
NIE Niedzica 96.95 320 eP P 03 47 38.8 -0.9
OJC Ojcow 97.12 321 eP P 03 47 40.1 -0.3
OJC Ojcow 97.12 321 P P 03 47 39.5 -0.9
OJC IAmb IAmb 03 47 40.7
comp=Z,12nm,0.9s
OJC Ojcow 97.12 321 eP P 03 47 40.1 -0.3
LBTB Lobatse 97.36 245 P P 03 47 41.2 -1.0
LBTB IAmb IAmb 03 47 43.1
comp=Z,12nm,0.9s
LBTB Lobatse 97.36 245 P P 03 47 41.2 -1.0
LBTB pmax pmax
comp=Z,12nm,1.0s
PSZ Piszkesteto 97.49 319 ⇓P P 03 47 41.3 -1.0
PSZ Piszkesteto 97.49 319 P P 03 47 41.5 -0.8
PSZ IAmb IAmb 03 47 42.4
comp=Z,8.6nm,1.0s
PSZ Piszkesteto 97.49 319 P P 03 47 41.5 -0.8
PSZ pmax pmax
comp=Z,9.0nm,1.0s
BOSA Boshof 97.55 242 P P 03 47 42.6 -0.4
comp=Z,6.6nm,1.1s,baz=58,slow=2.6,SNR=5.5
BOSA LR LR 04 31 53.0
comp=Z,57nm,18.1s,baz=68,slow=35
BOSA Boshof 97.55 242 IAmb IAmb 03 47 57.7
comp=Z,9.2nm,1.1s
HFS Hagfors 98.04 331 P P 03 47 42.3 -2.1
baz=104,slow=3.0
VYHS Vyhne 98.08 319 eP P 03 47 43.9 -0.9
VYHS pmax pmax
comp=Z,21nm,1.9s
VYHS Vyhne 98.08 319 eP P 03 47 43.9 -0.9
MORC Moravsky Berou 98.63 321 ePDIFF P 03 47 46.9 -0.4
MORC Moravsky Berou 98.63 321 ⇑P P 03 47 47.0 -0.2
MORC Moravsky Berou 98.63 321 P P 03 47 47.1 -0.2
MORC Moravsky Berou 98.63 321 P P 03 47 47.1 -0.2
MORC pmax pmax
comp=Z,4.0nm,0.9s
NC405 NORSAR Array S 98.65 333 P P 03 47 45.3 -1.8
JAVC Velka Javorina 98.75 320 ePDIFF Pdif 03 47 48.1 +0.2
DAG Danmarks Havn 98.76 352 i P P 03 47 45.4 -1.8
comp=Z,18nm,1.0s
DAG Danmarks Havn 98.76 352 i P P 03 47 45.4 -1.8
DAG pmax pmax
comp=Z,18nm,1.0s
BSD Bornholm Skovb 98.86 326⇓iP P 03 47 47.1 -1.0
comp=Z,54nm,1.0s
BSD Bornholm Skovb 98.86 326⇓iP P 03 47 47.1 -1.0
BSD pmax pmax
comp=Z,54nm,1.0s
NB2 NORSAR Subarra 98.91 333 P P 03 47 45.6 -2.7
comp=Z,9.3nm,0.9s,baz=73,slow=4.4
NB2 NORSAR Subarra 98.91 333 P P 03 47 45.6 -2.7
baz=73,slow=4.4
NOA NORSAR Array B 98.91 333 P P 03 47 45.9 -2.4
comp=Z,6.6nm,0.9s,baz=71,slow=4.5,SNR=16
NOA PP PP 03 51 47.9 -2.1
comp=Z,1.5nm,1.0s,baz=74,slow=7.8,SNR=3.6
NOA PKKPbc PKKPdf 04 04 21.6 +1.1
comp=Z,0.6nm,0.8s,baz=6.5,slow=6.3,SNR=3.5
NOA LR LR 04 35 43.0
comp=Z,100nm,20.5s,baz=45,slow=37
NC204 NORSAR Array S 99.03 333 P Pdif 03 47 47.5 -1.3
KRLC Kraliky 99.04 321 ePDIFF Pdif 03 47 48.7 -0.4
KRLC Kraliky 99.04 321 eP Pdif 03 47 48.7 -0.4
KSP Ksiaz 99.16 322 eP Pdif 03 47 49.6 0.0
KSP Ksiaz 99.16 322 eP Pdif 03 47 49.6 0.0
DPC Dobruska-Polom 99.26 322 ePDIFF Pdif 03 47 50.1 0.0
DPC Dobruska-Polom 99.26 322 eP Pdif 03 47 50.1 0.0
OSTC Ostas 99.28 322 ePDIFF Pdif 03 47 49.6 -0.5
VRAC Vranov 99.34 320 ePDIFF Pdif 03 47 50.2 -0.2
VRAC Vranov 99.34 320 P Pdif 03 47 49.0 -1.4
comp=Z,1.4nm,0.6s,baz=84,slow=13,SNR=4.6
VRAC Vranov 99.34 320 P Pdif 03 47 49.0 -1.4
CHVC Chvalec 99.37 322 ePDIFF Pdif 03 47 49.9 -0.7
KRUC Moravsky 99.53 320 ePDIFF Pdif 03 47 50.8 -0.4
CONA Conrad Observa 100.14 319 ePdiff Pdif 03 47 53.6 -0.5

comp=Z,4.8nm,1.4s
CONA PP PP 03 52 03.4 +3.5
comp=Z,14nm,1.2s
ARSA Arzberg 100.53 319 ePdiff Pdif 03 47 55.0 -0.7
comp=Z,6.1nm,1.3s
ARSA ePP PP 03 52 09.3 +6.5
comp=Z,15nm,1.6s
BRG Berggiesshubel 100.59 322 i PKP Pdif 03 47 55.5 -0.4
comp=Z,16nm,1.1s
BRG e 03 52 00.2
comp=Z,12nm,1.4s
BRG Berggiesshubel 100.59 322 i P Pdif 03 47 55.5 -0.4
BRG e 03 52 00.2
BRG pmax pmax
comp=Z,16nm,1.1s
BRG pmax pmax
comp=Z,12nm,1.4s
CLL Collm 101.04 323 i Pdif 03 47 58.1 +0.2
comp=Z,20nm,1.5s
CLL epPdif pPdif 03 48 09.0 -1.1
CLL i PP PP 03 52 10.0 +3.6
comp=Z,16nm,1.2s
CLL ePKiKP PKiKP 03 52 22.0 -0.9
CLL e 04 08 17.0
CLL Lm MLR 04 41 00.0
comp=Z,200nm,19.8s
CLL Collm 101.04 323 i P Pdif 03 47 58.1 +0.2
CLL i 03 52 10.0
CLL pmax pmax
comp=Z,20nm,1.5s
CLL pmax pmax
comp=Z,16nm,1.2s
PDKS Podkum 101.17 318 ePP PP 03 52 09.7 +2.1
MOA Molln 101.20 319 ePdiff Pdif 03 47 58.4 -0.4
comp=Z,12nm,1.5s
MOA PP PP 03 52 09.2 +1.4
comp=Z,9.1nm,1.1s
GERES GERESS Array B 101.30 321 P Pdif 03 47 57.9 -1.4
comp=Z,0.7nm,0.6s,baz=87,slow=4.5,SNR=9.1
GERES PP PP 03 52 07.2 -1.4
comp=Z,3.7nm,0.9s,baz=68,slow=4.9,SNR=10
KHC Kasperske Hory 101.30 321 ePDIFF Pdif 03 47 58.6 -0.6
KHC Kasperske Hory 101.30 321 eP Pdif 03 47 58.6 -0.6
ABTA Abfaltersbach 102.65 319 ePP PP 03 52 16.4 -2.5
comp=Z,8.0nm,1.6s
YKA Yellowknife Ar 102.91 24 P Pdif 03 48 05.6 -0.3
comp=Z,0.9nm,0.8s,baz=299,slow=4.7,SNR=12
YKA PKiKP PKiKP 03 52 24.7 -1.3
comp=Z,1.5nm,0.9s,baz=302,slow=2.1,SNR=12
YKA PKKPbc PKKPbc 04 04 06.9 +1.0
comp=Z,0.4nm,0.8s,baz=115,slow=2.7,SNR=3.8
WTTA Wattenberg 103.07 319 ePdiff Pdif 03 48 06.1 -1.2
comp=Z,6.5nm,1.1s
WTTA ePKiKP PP 03 52 22.6 +0.5
comp=Z,13nm,1.1s
WATA Walderalm 103.09 319 ePdiff Pdif 03 48 05.9 -1.4
comp=Z,9.7nm,1.4s
SQTA Sankt Quirin 103.36 319 ePdiff Pdif 03 48 07.5 -1.1
comp=Z,5.5nm,1.3s
SQTA PP PP 03 52 22.4 -1.8
comp=Z,12nm,1.3s
MOTA Moosalm 103.40 320 i Pdiff Pdif 03 48 07.5 -1.2
comp=Z,10nm,1.3s
MOTA ePKiKP PKiKP 03 52 28.3 +0.8
comp=Z,12nm,1.0s
FETA Feichten 103.74 319 ePdiff Pdif 03 48 09.2 -1.0
comp=Z,6.4nm,1.3s
FETA ePKiKP PKiKP 03 52 29.6 +1.4
comp=Z,9.6nm,1.1s
DAVA Damuels 104.21 320 ePdiff Pdif 03 48 10.4 -1.9
comp=Z,8.7nm,1.8s
DAVA ePP PP 03 52 32.4 +1.9
comp=Z,16nm,1.1s
DAVOX Davos/Dischmat 104.37 319 Pdiff Pdif 03 48 12.4 -0.6
comp=Z,1.9nm,0.8s,baz=133,slow=10.0,SNR=3.3
DAVOX PKiKP PKiKP 03 52 28.1 -1.3
comp=Z,3.7nm,1.1s,baz=66,slow=3.4,SNR=3.5
M04C Macdoel 107.42 45 P PKiKP 03 52 36.2 +1.1
baz=289
MSO Missoula 110.73 38 P PKiKP 03 52 41.3 +0.1
baz=297
NVAR Mina Array Bea 111.08 48 PKIKP PKiKP 03 52 43.0 +0.8
comp=Z,2.3nm,0.8s,baz=255,slow=2.8,SNR=15
NVAR PKKPbc PKKPab 04 03 49.3 -0.3
comp=Z,1.1nm,0.8s,baz=145,slow=5.2,SNR=6.1
CWC Cottonwood Cre 111.92 50 P PKiKP 03 52 44.7 +0.9
baz=290
GRAC Grapevine Rang 112.28 49 P PKiKP 03 52 45.8 +1.5
baz=290
EDW2 Edwards Air Fo 112.50 51 P PKiKP 03 52 45.8 +1.0
baz=289
MPMC Manual Prospec 112.50 50 P PKiKP 03 52 45.8 +0.8
baz=290
EGMT Eagleton 112.66 35 P PKiKP 03 52 44.9 +0.1
baz=301
FURC Furnace Creek, 112.84 49 P PKiKP 03 52 47.1 +1.8
baz=291
R11A Troy Canyon, C 113.11 47 P PKiKP 03 52 46.9 +0.9
baz=292
TPNV Topopah Spring 113.13 48 P PKiKP 03 52 47.0 +0.9
baz=291
GSC Goldstone, Bar 113.28 50 P PKiKP 03 52 47.7 +1.4
baz=290
SHOC Shoshone, Teco 113.48 50 P PKiKP 03 52 48.3 +1.7
baz=291
TUQ Turquoise Moun 113.91 50 P PKiKP 03 52 49.4 +1.8
baz=291
PFO Pinyon Flats O 114.12 52 P PKiKP 03 52 49.1 +1.1
baz=290
TPFO Pinon Flats 114.13 52 P PKiKP 03 52 49.1 +1.1
baz=290
GMRC Granite Mounta 114.34 50 P PKiKP 03 52 49.8 +1.3
baz=291
DUG Dugway, Tooele 114.35 44 P PKiKP 03 52 49.3 +1.0
baz=295
BELC Belle Mtn. Jos 114.35 51 P PKiKP 03 52 49.8 +1.3
baz=290
MONP2 Monument Peak 114.39 53 P PKiKP 03 52 50.1 +1.4
baz=289
SWSC Sam W. Stewart 114.86 52 P PKPdf 03 52 51.4 +2.1
baz=290
BC3 Big Chuckawall 114.89 52 P PKPdf 03 52 51.0 +1.5
baz=290
IRM Iron Mountain 114.96 51 P PKPdf 03 52 51.6 +2.1
baz=291
PD31 Pinedale Array 115.37 40 PKPdf 03 52 50.6 +0.3
PDAR Pinedale Array 115.37 40 PKP PKiKP 03 52 50.0 -0.3
comp=Z,2.0nm,0.9s,baz=60,slow=1.8,SNR=13
PDAR PKKPbc PKKPab 04 03 30.2 -0.4
comp=Z,1.4nm,0.9s,baz=116,slow=6.8,SNR=6.5
LAO LASA Array 115.40 35 P PKPdf 03 52 51.2 +1.2
baz=303
MSU Marysvale 115.50 45 PKPdf 03 52 52.5 +1.9
MSU Marysvale 115.50 45 PKIKP PKPdf 03 52 52.6 +1.9
DGMT Dagmar 115.53 33 PKPdf 03 52 51.1 +0.9
DGMT Dagmar 115.53 33 P PKPdf 03 52 51.0 +0.9
baz=306
Y12C Blythe 115.59 51 P PKPdf 03 52 52.0 +1.3
baz=291
KNB Kanab 115.64 47 PKPdf 03 52 52.8 +1.9
KNB Kanab 115.64 47 PKIKP PKPdf 03 52 52.8 +1.9
PDMCI Parker Dam,Lak 115.69 50 P PKPdf 03 52 51.9 +1.1
baz=292
MTPU Mount Pierson 115.69 46 PKPdf 03 52 53.2 +2.0
TMUT Trail Mountain 115.85 44 PKPdf 03 52 52.8 +1.4
Q16A Castle Valley 116.04 45 PKiKP 03 52 53.5 +1.8
U15A North Rim 116.27 48 PKiKP 03 52 53.9 +1.6
ESDC Sonseca Array 116.42 316 PKP PKPdf 03 52 51.3 -0.9
comp=Z,0.2nm,0.5s,baz=288,slow=28,SNR=4.0
ESDC PP PP 03 53 57.5 -1.1
comp=Z,5.3nm,1.0s,baz=56,slow=6.3,SNR=7.6
Y14A Wickenburg 116.70 50 PKiKP 03 52 54.2 +1.3
WUAZ Wupatki 117.32 48 PKiKP 03 52 55.8 +1.6
WUAZ Wupatki 117.32 48 P PKiKP 03 52 55.5 +1.3
baz=294
K22A Casper 117.37 39 P PKPdf 03 52 53.7 -0.3
baz=301
O20A White River Ci 117.50 42 P PKiKP 03 52 55.4 +1.0
baz=299
214A Organ Pipe Nat 117.58 52 PKiKP 03 52 56.1 +1.4
214A Organ Pipe Nat 117.58 52 P PKiKP 03 52 55.9 +1.2
baz=292
X16A Lo Mia Camp, P 117.71 49 PKiKP 03 52 56.4 +1.4
RSSD Black Hills 118.11 37 PKPdf 03 52 54.1 -1.4
RSSD Black Hills 118.11 37 PKIKP PKPdf 03 52 54.1 -1.4
RSSD Black Hills 118.11 37 P PKPdf 03 52 55.2 -0.3
baz=304

MDND Maddock 118.34 31 PKiKP 03 52 55.6 0.0
MDND Maddock 118.34 31 P PKPdf 03 52 55.2 -0.3
baz=310
ULM Lac du Bonnet 118.54 27 PKP PKPdf 03 52 55.2 -0.7
comp=Z,9.8nm,0.9s,baz=313,slow=3.1,SNR=18
ULM Lac du Bonnet 118.54 27 PKPdf 03 52 55.4 -0.5
ULM Lac du Bonnet 118.54 27 PKIKP PKPdf 03 52 55.4 -0.5
MVCO Mesa Verde 118.69 45 P PKiKP 03 52 58.1 +1.2
baz=297
W18A Petrified Fore 118.70 48 P PKiKP 03 52 58.0 +1.0
baz=295
X18A Snowflake 118.79 49 PKiKP 03 52 58.6 +1.5
TUC Tucson 119.04 51 PKPdf 03 52 56.0 -1.5
TUC Tucson 119.04 51 PKIKP PKPdf 03 52 56.0 -1.5
TUC Tucson 119.04 51 P PKiKP 03 52 58.5 +0.9
baz=293
ISCO Idaho Springs 119.42 42 P PKiKP 03 52 58.9 +0.5
baz=301
S22A 4UR Ranch, Cre 119.61 44 P PKiKP 03 52 59.6 +0.8
baz=299
TOA0 Torodi Ar. Sit 119.91 286 PKPdf 03 52 58.5 -1.0
TORD Torodi Ar. Bea 119.91 286 PKP PKPdf 03 52 58.7 -0.7
comp=Z,10nm,0.8s,baz=56,slow=2.1,SNR=53
TORD PP PP 03 54 22.2 -1.6
comp=Z,7.0nm,1.2s,baz=65,slow=3.9,SNR=4.0
TORD PKKPbc PKKPab 04 03 12.4 +1.9
comp=Z,2.4nm,0.8s,baz=268,slow=4.3,SNR=11
AGMN Agassiz Nation 119.91 29 PKPdf 03 52 57.9 -0.7
AGMN Agassiz Nation 119.91 29 P PKPdf 03 52 57.7 -0.8
baz=314
Q24A Divide 120.16 42 P PKiKP 03 53 00.1 +0.3
baz=301
SDCO Great Sand Dun 120.53 44 P PKiKP 03 53 01.2 +0.7
baz=300
ANMO Albuquerque 121.19 47 P PKiKP 03 53 02.9 +1.1
baz=298
121A Cookes Peak, D 121.27 50 PKiKP 03 53 03.4 +1.4
121A Cookes Peak, D 121.27 50 P PKiKP 03 53 03.3 +1.2
baz=295
T25A Trinidad 121.58 44 P PKPdf 03 53 02.4 0.0
baz=301
KSCO Kaye Shedlock' 121.81 41 PKiKP 03 53 03.4 +0.6
KSCO Kaye Shedlock' 121.81 41 P PKiKP 03 53 03.0 +0.1
baz=303
EYMN Ely 122.20 27 PKPdf 03 53 03.0 0.0
EYMN Ely 122.20 27 P PKPdf 03 53 02.5 -0.4
baz=318
ECSD EROS Data Cent 122.60 33 P PKPdf 03 53 03.3 -0.6
baz=311
SCHQ Schefferville 123.12 7 PKP PKiKP 03 53 05.0 +0.3
comp=Z,11nm,1.0s,baz=353,slow=3.0,SNR=12
E38A The Farm, Brul 123.16 28 PKPdf 03 53 04.4 -0.4
BGNE Belgrade 123.20 36 PKPdf 03 53 05.1 -0.1
BGNE Belgrade 123.20 36 P PKPdf 03 53 04.8 -0.3
baz=308
MNTX Cornudas Mount 123.46 50 P PKiKP 03 53 06.9 +0.7
baz=297
SPMN Marine on St. 123.56 30 P PKPdf 03 53 05.1 -0.6
baz=316
CBKS Cedar Bluff 123.78 40 PKiKP 03 53 06.8 +0.1
CBKS Cedar Bluff 123.78 40 PKIKP PKiKP 03 53 06.8 +0.1
CBKS Cedar Bluff 123.78 40 P PKiKP 03 53 06.7 +0.1
baz=306
D41A Chassel 124.16 26 PKPdf 03 53 07.2 +0.1
MSTX Muleshoe 124.33 46 PKiKP 03 53 08.3 +0.4
MSTX Muleshoe 124.33 46 P PKiKP 03 53 07.9 0.0
baz=300
AMTX Amarillo 124.64 45 P PKiKP 03 53 08.6 +0.1
baz=302
COWI Conover 124.65 27 PKPdf 03 53 07.9 -0.2
G40A Rib Lake 124.79 28 PKPdf 03 53 07.7 -0.4
HPIG 125.24 55 PKiKP 03 53 10.0 -0.1
F42A Maple Grove Fa 125.36 26 PKiKP 03 53 09.7 +0.2
E43A Lone Tree Farm 125.37 25 PKPdf 03 53 09.4 0.0
KSU1 Kansas State U 125.56 38 P PKiKP 03 53 10.2 +0.1
baz=309
I40A Norwalk 125.61 29 PKPdf 03 53 09.3 -0.4
E44A Grand Marais A 125.62 24 PKiKP 03 53 10.4 +0.4
E44A Grand Marais A 125.62 24 P PKiKP 03 53 10.4 +0.4
baz=324
U32A Winter Ranch, 125.66 42 PKiKP 03 53 10.8 +0.5
SCIA State Center 125.67 33 PKPdf 03 53 10.0 +0.1
SCIA State Center 125.67 33 P PKPdf 03 53 09.9 +0.1
baz=314
MATQ Matagami 125.79 16 P PKPdf 03 53 09.4 -0.4
baz=334
TX31 Lajitas Ar. Si 125.84 52 PKiKP 03 53 11.6 +0.5
TX32 Lajitas Array 125.84 52 PKiKP 03 53 11.6 +0.6
TXAR Lajitas Array 125.84 52 PKP PKiKP 03 53 11.4 +0.3
comp=Z,5.9nm,0.8s,baz=257,slow=1.1,SNR=38
D46A Sault St. Mari 126.15 23 P PKPdf 03 53 10.6 0.0
baz=326
D47A Chapleau 126.36 22 P PKPdf 03 53 10.9 -0.1
baz=327
E46A Sault Ste Mari 126.48 23 PKiKP 03 53 11.6 0.0
JFWS Jewell Farm 126.51 30 P PKPdf 03 53 11.1 -0.2
baz=317
F45A CMU Biological 126.54 25 P PKiKP 03 53 11.6 -0.3
baz=324
LSQQ Lebel-sur-Quev 126.61 16 P PKPdf 03 53 10.7 -0.7
baz=335
L40A Anamosa 126.62 31 PKPdf 03 53 11.1 -0.5
WMOK Wichita Mounta 126.73 43 PKiKP 03 53 12.4 -0.1
WMOK Wichita Mounta 126.73 43 PKIKP PKiKP 03 53 12.5 -0.1
WMOK Wichita Mounta 126.73 43 P PKiKP 03 53 12.5 -0.1
baz=304
D48A Paudash Township 126.74 21 P PKPdf 03 53 11.0 -0.7
baz=329
E47A Iron Bridge 126.80 22 P PKPdf 03 53 11.9 +0.1
baz=327
G45A Suttons Bay 127.00 25 PKPdf 03 53 12.4 +0.1
G45A Suttons Bay 127.00 25 P PKiKP 03 53 12.5 -0.2
baz=323
G46A Petoskey 127.11 24 P PKPdf 03 53 12.4 0.0
baz=324
KIC Kosan Boka 127.17 279 ePKiKP PKPdf 03 53 13.1 -0.3
comp=Z,50nm,1.0s
KIC Kosan Boka 127.17 279 PKPdf 03 53 13.1 -0.3
E48A Lockeyer 127.20 22 P PKPdf 03 53 12.8 +0.2
baz=328
OKCFA Oklahoma City 127.24 42 PKiKP 03 53 14.3 +0.8
DBIC Dimbokro 127.25 280 PKP PKPdf 03 53 13.5 0.0
comp=Z,19nm,1.0s,baz=52,slow=2.1,SNR=14
DBIC Dimbokro 127.25 280 PKPdf 03 53 11.8 -1.8
ABTX Abilene, Hawle 127.27 46 PKPdf 03 53 11.2 -2.0
ABTX Abilene, Hawle 127.27 46 P PKiKP 03 53 14.1 +0.4
baz=302
VLDQ Val d'Or 127.33 17 PKPdf 03 53 12.1 -0.6
TIC Toumodi 127.41 280 ePKiKP PKPdf 03 53 13.2 -0.7
TIC Toumodi 127.41 280 PKPdf 03 53 13.2 -0.7
TIC Toumodi 127.41 280 PKIKP PKPdf 03 53 13.2 -0.7
D50A G1974 Best Tow 127.42 19 P PKPdf 03 53 12.5 -0.5
baz=331
X34A Smith Ranch, M 127.45 43 PKiKP 03 53 14.6 +0.6
LIC Lamto 127.47 279 ePKiKP PKPdf 03 53 13.5 -0.5
comp=Z,70nm,1.1s
LIC Lamto 127.47 279 PKPdf 03 53 13.5 -0.5
F48A Evansville 127.58 22 P PKPdf 03 53 13.1 -0.2
baz=327
GLMI Grayling 127.61 25 P PKiKP 03 53 14.1 +0.1
baz=324
G47A Hillman 127.64 24 P PKPdf 03 53 13.5 +0.1
baz=326
D51A Lot 18 Range I 127.64 19 P PKPdf 03 53 12.7 -0.8
baz=332
W35A Tecumseh 127.77 42 PKiKP 03 53 14.9 +0.3
F49A Sandfield 127.85 22 P PKPdf 03 53 13.9 +0.1
baz=328
H47A Mio 127.97 24 P PKPdf 03 53 14.6 -0.1
baz=325
I46A Reed City 127.97 26 P PKiKP 03 53 14.5 -0.2
baz=323
TUL1 Leonard 128.03 40 PKiKP 03 53 15.1 0.0
TUL1 Leonard 128.03 40 P PKiKP 03 53 15.1 0.0
baz=308
E51A G1948 Merrick 128.09 20 P PKPdf 03 53 13.8 -0.5
baz=331
D53A Lac Vacive, Po 128.18 18 PKPdf 03 53 14.2 -0.3
D53A Lac Vacive, Po 128.18 18 P PKPdf 03 53 13.9 -0.5
baz=334
L44A Lake County Fo 128.21 29 P PKiKP 03 53 14.9 -0.3
baz=320
H48A Harrisville 128.24 24 P PKPdf 03 53 14.2 -0.4
baz=326
JCT Junction City 128.25 48 P PKPdf 03 53 15.4 +0.2
baz=300

D54A Lac Fusel, La 128.43 17 P PKPdf 03 53 14.2 -0.7
baz=335
F51A Arnstein 128.47 20 P PKPdf 03 53 14.9 -0.1
baz=330
I48A Sherman Twp 128.51 24 P PKPdf 03 53 15.3 +0.1
baz=325
E52A Mattawa 128.59 19 P PKPdf 03 53 15.2 -0.1
baz=332
HDIL Hopedale 128.72 31 P PKPdf 03 53 15.2 -0.5
baz=317
M44A Midewin, Midew 128.74 30 PKiKP 03 53 16.3 -0.1
F52A Sundridge 128.79 20 P PKPdf 03 53 15.7 0.0
baz=331
J47A Sunmer 128.80 26 PKiKP 03 53 16.2 -0.2
J47A Sunmer 128.80 26 P PKiKP 03 53 16.2 -0.2
baz=324
K46A Dorr 128.81 27 P PKPdf 03 53 15.9 +0.1
baz=322
E53A Dumoine, Ponti 128.82 18 P PKPdf 03 53 15.7 0.0
baz=333
D55A Sainte-Anne-du 128.89 16 P PKPdf 03 53 15.8 0.0
baz=336
E54A Lac Daplat, Po 128.92 18 P PKPdf 03 53 15.9 0.0
baz=334
D56A ZEC Mazanza, M 129.06 16 P PKiKP 03 53 16.5 -0.3
baz=337
I49A Point Hope 129.07 24 PKiKP 03 53 17.2 +0.3
I49A Point Hope 129.07 24 P PKiKP 03 53 17.1 +0.2
baz=326
ALGO Algonquin Park 129.07 19 P PKiKP 03 53 16.7 -0.2
baz=333
L46A Eue Claire 129.10 28 P PKiKP 03 53 16.9 -0.2
baz=321
WHTX Lake Whitney, 129.17 45 P PKiKP 03 53 18.1 +0.6
baz=304
K47A Vermontville 129.18 26 P PKiKP 03 53 16.8 -0.4
baz=323
J48A Bridge Port 129.20 25 PKiKP 03 53 17.1 -0.1
J48A Bridge Port 129.20 25 P PKiKP 03 53 17.0 -0.2
baz=325
LATQ La Tuque 129.24 14 P PKPdf 03 53 16.6 +0.1
baz=340
D57A Chemin Vers le 129.31 15 P PKPdf 03 53 15.9 -0.8
baz=338
CCM Cathedral Cave 129.42 35 PKPdf 03 53 16.2 -0.8
CCM Cathedral Cave 129.42 35 PKIKP PKPdf 03 53 16.3 -0.8
CCM Cathedral Cave 129.42 35 P PKPdf 03 53 17.0 -0.1
baz=314
J49A Marlette 129.42 25 P PKiKP 03 53 17.2 +0.3
baz=326
E56A St. Veronique 129.44 16 P PKiKP 03 53 17.2 +0.3
baz=337
K48A Perry 129.46 26 P PKiKP 03 53 17.0 0.0
baz=324
D58A Chemin du LacG 129.49 14 P PKPdf 03 53 17.0 0.0
baz=339
G54A Lake Saint Pet 129.56 19 P PKPdf 03 53 17.4 +0.2
baz=332
U40A Yellville 129.60 38 P PKPdf 03 53 17.4 -0.1
baz=311
G53A Haliburton 129.62 20 P PKPdf 03 53 16.1 -1.2
baz=332
833A Chaparral WMA, 129.62 50 PKiKP 03 53 19.6 +1.1
833A Chaparral WMA, 129.62 50 P PKiKP 03 53 19.1 +0.6
baz=299
L47A Sherwood 129.64 27 P PKiKP 03 53 17.9 -0.2
baz=322
435B Jarrell 129.73 47 P PKiKP 03 53 19.4 +0.7
baz=303
W39A Magazine 129.76 40 PKPdf 03 53 18.0 +0.2
W39A Magazine 129.76 40 P PKPdf 03 53 17.9 +0.1
baz=309
E57A Chemin Saint G 129.81 15 P PKiKP 03 53 18.2 -0.2
baz=338
I51A Listowel 129.90 23 P PKiKP 03 53 18.9 +0.3
baz=328
M47A Cromwell 129.93 28 P PKiKP 03 53 18.8 +0.1
baz=322
SFIN Lafayette 129.97 30 PKiKP 03 53 18.9 0.0
SFIN Lafayette 129.97 30 P PKiKP 03 53 18.8 0.0
baz=320
L48A N Adams 130.01 27 P PKiKP 03 53 18.2 +0.1
baz=323
H53A Bobcaygeon 130.12 20 P PKPdf 03 53 18.0 -0.2
baz=332
K50A Casco 130.12 25 P PKPdf 03 53 17.5 -0.8
baz=326
G55A Calabogie 130.12 18 P PKPdf 03 53 16.1 -2.1
baz=334
L49A Milan 130.17 26 P PKPdf 03 53 18.4 0.0
baz=324
M48A Edgerton 130.25 27 PKPdf 03 53 19.4 +0.1
M48A Edgerton 130.25 27 P PKPdf 03 53 18.1 -0.5
baz=323
N47A Urbana 130.27 28 PKiKP 03 53 19.2 -0.2
N47A Urbana 130.27 28 P PKPdf 03 53 18.1 -0.5
baz=321
MIAR Mount Ida 130.30 40 PKPdf 03 53 16.8 -2.1
MIAR Mount Ida 130.30 40 PKIKP PKPdf 03 53 16.8 -2.1
MIAR Mount Ida 130.30 40 P PKiKP 03 53 19.4 -0.2
baz=309
P46A Rosedale 130.49 31 PKiKP 03 53 20.1 +0.2
J52A Paris 130.58 22 P PKPdf 03 53 18.0 -1.1
baz=329
M49A Liberty Center 130.59 27 P PKiKP 03 53 20.0 -0.1
baz=324
N48A Decatur 130.60 28 P PKiKP 03 53 19.1 -0.2
baz=322
K51A Iona Station 130.62 24 P PKiKP 03 53 20.0 -0.1
baz=327
L50A Kingsville 130.64 25 P PKPdf 03 53 18.8 -0.4
baz=325
E61A Lac Etchemin 130.66 12 P PKPdf 03 53 19.0 -0.3
baz=342
OLIL Olney 130.68 32 PKiKP 03 53 19.9 -0.4
W41B Gary Mavity, V 130.74 39 P PKiKP 03 53 19.5 -0.1
baz=311
PBMO Poplar Bluff 130.77 36 PKiKP 03 53 19.4 -0.2
F60A Warwick 130.77 14 P PKiKP 03 53 20.7 +0.4
baz=340
G57A Newington 130.78 17 P PKiKP 03 53 20.2 -0.1
baz=336
LCAR Lake Charles 130.82 37 PKPdf 03 53 20.1 +0.4
N49A Columbus Grove 130.94 27 PKPdf 03 53 19.9 0.0
N49A Columbus Grove 130.94 27 P PKPdf 03 53 19.9 0.0
baz=323
O48A Farmland 131.01 29 P PKiKP 03 53 20.5 -0.5
baz=322
WLAR White Oak Lake 131.13 41 PKiKP 03 53 21.8 +0.4
BLO Bloomington 131.17 31 PKiKP 03 53 21.6 +0.3
BLO Bloomington 131.17 31 PKIKP PKiKP 03 53 21.6 +0.3
E64A Bridgewater 131.18 10 P PKPdf 03 53 19.5 -0.7
baz=346
LONY Lake Ozonia 131.34 17 P PKiKP 03 53 21.1 -0.4
baz=336
O49A Covington 131.45 28 PKPdf 03 53 20.7 -0.2
O49A Covington 131.45 28 P PKPdf 03 53 20.5 -0.4
baz=323
P48A Milroy 131.50 29 PKPdf 03 53 20.9 -0.1
P48A Milroy 131.50 29 P PKPdf 03 53 20.8 -0.1
baz=321
N50A Nevada 131.53 26 P PKPdf 03 53 20.9 -0.1
baz=324
J55A Hilton 131.53 20 P PKiKP 03 53 21.9 0.0
baz=332
H59A Cadyville 131.56 16 P PKiKP 03 53 22.1 +0.2
baz=338
Z41A Richland Creek 131.60 41 P PKiKP 03 53 22.1 -0.2
baz=309
H58A Gabriels 131.63 16 P PKiKP 03 53 22.2 +0.1
baz=337
ERPA Erie 131.73 23 P PKiKP 03 53 22.1 -0.3
baz=329
N51A Ashland 131.75 26 PKiKP 03 53 21.4 0.0
N51A Ashland 131.75 26 P PKPdf 03 53 21.2 -0.2
baz=325
Q48A North Vernon 131.75 30 P PKPdf 03 53 21.4 0.0
baz=320
L53A Girard 131.76 23 P PKiKP 03 53 21.5 +0.1
baz=328
P49A Miami Univ. Ec 131.78 29 P PKiKP 03 53 21.9 +0.4
baz=322
K54A Basiliko Farm, 131.79 21 P PKiKP 03 53 21.3 -0.1
baz=331
O50A Cable 131.82 27 P PKiKP 03 53 21.2 -0.4
baz=323
L54A Sinclairville 131.89 22 P PKiKP 03 53 22.6 0.0

baz=330
WCI Wyandotte Cave 132.00 31 PKPdf 03 53 20.5 -1.5
WCI Wyandotte Cave 132.00 31 PKIKP PKPdf 03 53 20.5 -1.5
WCI Wyandotte Cave 132.00 31 P PKPdf 03 53 21.2 -0.7
baz=319
J57A Williamstown 132.01 19 P PKiKP 03 53 23.1 +0.3
baz=334
M53A WI Miller and 132.03 24 P PKPdf 03 53 22.0 0.0
baz=328
ACSO Alum Creek Sta 132.04 27 PKiKP 03 53 22.8 -0.2
ACSO Alum Creek Sta 132.04 27 P PKPdf 03 53 22.3 +0.3
baz=324
I58A Old Forge 132.07 17 P PKiKP 03 53 23.2 +0.1
baz=336
H61A Lyndonville 132.12 14 P PKiKP 03 53 22.9 -0.2
baz=340
N52A McGinn's Farm, 132.13 25 P PKPdf 03 53 21.9 -0.2
baz=326
P50A Jamestown 132.16 28 P PKPdf 03 53 22.2 -0.1
baz=323
K56A Middlesex 132.20 20 P PKiKP 03 53 22.8 -0.5
baz=332
L55A Hinsdale 132.26 21 P PKPdf 03 53 22.6 +0.2
baz=331
J58A Remsen 132.27 18 PKiKP 03 53 23.4 0.0
J58A Remsen 132.27 18 P PKPdf 03 53 22.1 -0.2
baz=335
O51A Pataskala 132.28 27 P PKPdf 03 53 22.3 -0.2
baz=325
M54A Oil Creek Stat 132.37 23 PKPdf 03 53 23.1 +0.5
M54A Oil Creek Stat 132.37 23 P PKPdf 03 53 22.3 -0.4
baz=329
I60A Shoreham 132.41 16 P PKiKP 03 53 23.3 -0.3
baz=338
J59A Piesco 132.41 17 PKiKP 03 53 23.3 -0.4
J59A Piesco 132.41 17 P PKPdf 03 53 23.0 +0.4
baz=336
K57A Scipio Center 132.44 19 P PKPdf 03 53 22.5 -0.2
baz=333
T47A Sharon Grove 132.49 33 PKiKP 03 53 24.3 +0.3
N53A Lisbon 132.50 25 P PKPdf 03 53 22.9 0.0
baz=327
R49A Shelbyville 132.52 30 PKiKP 03 53 23.6 -0.4
R49A Shelbyville 132.52 30 P PKPdf 03 53 23.0 0.0
baz=320
P51A Williamsport 132.61 27 PKPdf 03 53 23.2 +0.1
P51A Williamsport 132.61 27 P PKPdf 03 53 23.0 -0.1
baz=324
L56A Greenwood 132.61 21 PKPdf 03 53 23.1 0.0
L56A Greenwood 132.61 21 P PKPdf 03 53 23.0 -0.1
baz=332
K58A Earlville 132.70 19 PKiKP 03 53 25.1 +0.7
K58A Earlville 132.70 19 P PKiKP 03 53 23.7 +0.5
baz=334
N54A Moraine State 132.71 24 P PKPdf 03 53 23.4 +0.1
baz=328
WVT Waverly 132.71 34 PKPdf 03 53 21.7 -1.7
WVT Waverly 132.71 34 PKIKP PKPdf 03 53 21.7 -1.7
WVT Waverly 132.71 34 P PKPdf 03 53 23.2 -0.2
baz=316
M55A Ridgway 132.75 22 PKPdf 03 53 23.9 +0.5
M55A Ridgway 132.75 22 P PKPdf 03 53 23.2 -0.1
baz=330
Q51A Peebles 132.84 28 PKiKP 03 53 24.3 -0.4
Q51A Peebles 132.84 28 P PKPdf 03 53 22.7 -0.9
baz=323
S49A Springfield 132.85 31 P PKPdf 03 53 23.2 -0.4
baz=320
143A Socs Landing, 132.87 40 PKiKP 03 53 24.8 -0.1
P52A Corning 132.91 27 P PKPdf 03 53 23.7 +0.1
baz=325
OXF Oxford 132.92 37 PKiKP 03 53 24.8 -0.2
OXF Oxford 132.92 37 PKIKP PKiKP 03 53 24.8 -0.2
OXF Oxford 132.92 37 P PKPdf 03 53 24.6 -0.3
baz=313
R50A Paris 132.95 30 P PKPdf 03 53 24.1 +0.4
baz=322
M56A Emporium 132.96 22 PKPdf 03 53 24.2 +0.4
M56A Emporium 132.96 22 P PKPdf 03 53 23.5 -0.2
baz=331
L57A Andrews Acres 132.98 20 P PKPdf 03 53 23.8 +0.1
baz=333
BINY Binghamton 133.10 19 P PKiKP 03 53 24.6 -0.5
baz=334
O54A Avella 133.21 25 PKPdf 03 53 24.7 +0.5
O54A Avella 133.21 25 P PKPdf 03 53 24.5 +0.3
baz=327
T49A Edmonton 133.24 32 PKiKP 03 53 25.3 -0.3
T49A Edmonton 133.24 32 P PKPdf 03 53 24.7 +0.3
baz=319
L58A Harry Jones Me 133.28 19 P PKPdf 03 53 24.8 +0.5
baz=334
R51A Hillsboro 133.30 29 P PKPdf 03 53 24.7 +0.3
baz=322
P53A Whipple 133.35 26 PKPdf 03 53 24.9 +0.4
P53A Whipple 133.35 26 P PKPdf 03 53 24.8 +0.3
baz=326
K60A Five Rivers En 133.37 17 P PKiKP 03 53 25.2 -0.4
baz=337
S50A Richmond 133.38 30 P PKPdf 03 53 24.3 -0.3
baz=321
PLAL Pickwick Lake 133.39 36 PKPdf 03 53 24.4 -0.3
Q52A Bidwell 133.39 27 P PKPdf 03 53 23.7 -0.9
baz=324
N56A West Decatur 133.41 22 P PKPdf 03 53 24.0 -0.6
baz=330
M57A Sunshine Farm, 133.47 21 PKiKP 03 53 25.8 -0.1
M57A Sunshine Farm, 133.47 21 P PKPdf 03 53 25.0 +0.4
baz=332
J63A Strafford 133.51 14 P PKiKP 03 53 25.4 -0.5
baz=341
U49A Red Boiling Sp 133.56 32 P PKPdf 03 53 24.8 -0.1
baz=319
V48A Smith Brothers 133.56 34 PKPdf 03 53 25.4 +0.4
CLTN Cedars of Leba 133.57 33 PKiKP 03 53 26.1 -0.1
O55A Ligonier 133.62 24 P PKPdf 03 53 25.4 +0.4
baz=329
P54A Burton 133.65 25 P PKPdf 03 53 25.2 +0.1
baz=327
T50A Nancy 133.67 31 P PKPdf 03 53 25.3 +0.1
baz=320
M58A Price's Panora 133.67 20 P PKPdf 03 53 25.5 +0.4
baz=333
R52A Catlettsburg 133.72 28 P PKiKP 03 53 26.3 -0.2
baz=324
VBMS Vicksburg 133.75 40 P PKPdf 03 53 26.9 +0.2
baz=311
Q53A Leroy 133.81 27 P PKiKP 03 53 26.0 -0.7
baz=325
S51A Beattyville 133.81 29 PKPdf 03 53 25.9 +0.4
S51A Beattyville 133.81 29 P PKPdf 03 53 25.7 +0.3
baz=322
L60A Shokan 133.85 18 P PKiKP 03 53 26.2 -0.5
baz=336
O56A Blue Knob Stat 133.87 23 PKPdf 03 53 25.8 +0.3
O56A Blue Knob Stat 133.87 23 P PKPdf 03 53 25.5 0.0
baz=330
M59A Waymart 133.87 19 P PKPdf 03 53 25.4 0.0
baz=334
MCWV Mont Chateau 133.87 25 P PKPdf 03 53 25.9 +0.4
baz=328
P55A Reedsville 134.00 25 P PKPdf 03 53 25.1 -0.6
baz=328
Q54A Coxs Mills 134.01 26 PKPdf 03 53 26.2 +0.5
Q54A Coxs Mills 134.01 26 P PKPdf 03 53 25.9 +0.2
baz=326
V49A McMinnville 134.04 33 P PKPdf 03 53 25.5 -0.5
baz=318
R53A Hurricane 134.05 27 PKiKP 03 53 27.0 -0.2
R53A Hurricane 134.05 27 P PKiKP 03 53 26.8 -0.3
baz=324
N58A Sunbury 134.06 21 PKiKP 03 53 26.7 -0.4
N58A Sunbury 134.06 21 P PKPdf 03 53 25.5 -0.3
baz=332
U50A Jamestown 134.12 32 P PKPdf 03 53 26.5 +0.5
baz=320
T51A Gray 134.16 30 P PKPdf 03 53 26.8 -0.7
baz=321
W49A Belvidere 134.32 34 P PKiKP 03 53 26.2 -0.3
baz=317
Q55A Buckhannon 134.33 25 P PKPdf 03 53 26.4 0.0
baz=327
X48A Hartselle 134.36 35 PKPdf 03 53 27.0 +0.5
P56A Dayton Farm, R 134.41 24 P PKPdf 03 53 26.7 +0.2
baz=329
ODNJ Ogdensburg 134.55 19 PKiKP 03 53 27.4 -0.7
V50A Pikevile 134.55 32 P PKPdf 03 53 27.4 +0.6
baz=319
N60A Cedar Hill Far 134.58 19 P PKPdf 03 53 27.4 +0.6
baz=334
M61A Granite Spring 134.60 18 P PKPdf 03 53 26.9 +0.2
baz=336
R54A Victor 134.60 27 P PKPdf 03 53 26.9 0.0
baz=326
O58A Lewisberry 134.61 21 P PKPdf 03 53 27.4 +0.6
baz=332
TZTN Tazewell 134.69 30 PKiKP 03 53 28.4 -0.2
TZTN Tazewell 134.69 30 P PKPdf 03 53 27.8 +0.6
baz=321
S54A Dingess, Beckl 134.77 27 P PKiKP 03 53 28.5 -0.2
baz=325
W50A Signal Mountai 134.79 33 P PKiKP 03 53 28.7 -0.1
baz=318
PAL Palisades 134.84 18 PKPdf 03 53 27.7 +0.5
PAL Palisades 134.84 18 PKIKP PKPdf 03 53 27.7 +0.5
V51A Loudon 134.85 32 P PKiKP 03 53 28.5 -0.3
baz=320
U52A Thorn Hill 134.90 30 P PKiKP 03 53 28.6 -0.4
baz=322
MVL Millersville 134.93 21 PKiKP 03 53 28.4 -0.5
O60A Telford 134.97 20 P PKiKP 03 53 28.2 -0.7
baz=334
Q57A Strasburg 134.98 24 P PKPdf 03 53 28.1 +0.5
baz=329
P58A Pank, Wackersv 135.03 22 P PKPdf 03 53 27.8 +0.2
baz=331
CPCT Cooper Cave 135.03 32 PKiKP 03 53 29.5 +0.2
R56A Bull Pasture M 135.11 25 P PKPdf 03 53 28.3 +0.4
baz=328
W51A Cleveland 135.12 33 P PKPdf 03 53 26.4 -1.5
baz=319
Y49A Blount Mountai 135.15 35 PKiKP 03 53 29.0 -0.5
S55A Lewisburg 135.16 27 P PKPdf 03 53 28.0 0.0
baz=326
V52A Sevierville 135.21 31 P PKPdf 03 53 27.2 -0.9
baz=321
T54A Tazewell 135.25 28 P PKPdf 03 53 28.3 +0.1
baz=324
TKL Tuckaleechee C 135.26 31 PKPdf 03 53 27.5 -0.7
TKL Tuckaleechee C 135.26 31 PKIKP PKPdf 03 53 27.5 -0.7
U53A Fall Branch 135.32 30 P PKPdf 03 53 27.0 -1.3
baz=322
P60A Greenville 135.35 20 P PKPdf 03 53 26.3 -1.9
baz=333
Q58A Fox Den Farm, 135.35 23 P PKPdf 03 53 28.4 +0.1
baz=330
LRAL Lakeview Retre 135.39 37 PKiKP 03 53 29.4 -0.7
LRAL Lakeview Retre 135.39 37 P PKPdf 03 53 28.9 +0.4
baz=315
X51A Calhoun 135.51 33 P PKPdf 03 53 27.7 -1.0
baz=319
R57A Stanardsville 135.57 24 P PKPdf 03 53 28.9 +0.2
baz=329
T55A Pulaski 135.57 27 P PKPdf 03 53 28.9 +0.1
baz=325
W52A Murphy 135.61 32 P PKiKP 03 53 30.0 -0.4
baz=320
S56A Natural Bridge 135.65 26 P PKPdf 03 53 28.3 -0.6
baz=327
BLA Blacksburg 135.66 27 PKPdf 03 53 28.9 -0.1
BLA Blacksburg 135.66 27 PKIKP PKPdf 03 53 28.9 -0.1
BLA Blacksburg 135.66 27 P PKPdf 03 53 28.6 -0.4
baz=326
V53A Saluda 135.75 30 P PKPdf 03 53 28.6 -0.6
baz=322
R58A Rapidan 135.78 24 P PKPdf 03 53 29.1 0.0
baz=329
Z50A Ashland 135.87 36 PKPpre 03 53 16.4
Z50A Ashland 135.87 36 P PKPdf 03 53 27.9 -1.5
baz=316
U55A TA2, Sparta 135.95 28 P PKPdf 03 53 28.3 -1.3
baz=324
W53A Cullowhee 135.96 31 P PKPdf 03 53 30.3 +0.6
baz=321
T56A Rocky Mt 135.98 27 P PKPdf 03 53 29.5 0.0
baz=326
X52A Dahlonega 136.00 32 P PKPdf 03 53 30.4 +0.8
baz=320
V54A Nebo 136.09 30 P PKPdf 03 53 30.2 +0.4
baz=323
CBN Corbin Frederi 136.11 23 P PKPdf 03 53 30.0 +0.4
baz=330
R58B Mineral 136.12 24 PKiKP 03 53 31.5 +0.1
R58B Mineral 136.12 24 P PKPdf 03 53 30.2 +0.5
baz=329
BG3 Lake Jocassee 136.21 31 PKPpre 03 53 18.1
S58A Poland Farm, P 136.35 24 PKPdf 03 53 30.9 +0.8
S58A Poland Farm, P 136.35 24 P PKPdf 03 53 30.5 +0.4
baz=329
T57A Hurt 136.35 26 P PKiKP 03 53 31.5 -0.4
baz=327
U56A King 136.38 28 P PKiKP 03 53 31.5 -0.5
baz=325
V55A Taylorsville 136.39 29 P PKiKP 03 53 31.6 -0.4
baz=324
X53A Estanollee 136.40 32 P PKPdf 03 53 31.1 +0.8
baz=320
Y52A Lilburn 136.47 33 PKPdf 03 53 31.3 +0.8
Y52A Lilburn 136.47 33 P PKPdf 03 53 31.0 +0.5
baz=319
W54A Cherokee Point 136.52 30 P PKPdf 03 53 30.6 0.0
baz=322
S59A Mechanicsville 136.53 23 P PKPdf 03 53 30.8 +0.4
baz=330
250A Grady 136.57 37 PKPpre 03 53 20.4
BRAL Brewton 136.65 39 PKPpre 03 53 21.1
BRAL Brewton 136.65 39 P PKiKP 03 53 32.3 -0.3
baz=314
T58A Grand View Acr 136.71 25 P PKPdf 03 53 31.1 +0.2
baz=328
Y53A Monroe 136.74 33 P PKPdf 03 53 30.8 -0.2
baz=320
V56A Mocksville 136.77 28 P PKPdf 03 53 30.7 -0.2
baz=325
R61A Willards 136.77 21 P PKiKP 03 53 32.8 +0.2
baz=333
U57A Blanch 136.79 27 P PKPdf 03 53 30.7 -0.3
baz=327
X54A Belton 136.84 31 P PKPdf 03 53 31.4 +0.2
baz=322
KMSC Kings Mountain 136.90 30 PKPdf 03 53 31.8 +0.6
KMSC Kings Mountain 136.90 30 P PKPdf 03 53 31.6 +0.4
baz=323
PAULI Pauline 136.92 30 PKPdf 03 53 32.0 +0.7
152A Waverly Hall 136.99 35 PKPdf 03 53 31.6 +0.1
V57A Coltrane Farms 137.04 27 P PKPdf 03 53 30.7 -0.8
baz=326
T59A Double "B" Far 137.10 24 PKPdf 03 53 32.0 +0.5
T59A Double "B" Far 137.10 24 P PKPdf 03 53 31.5 0.0
baz=329
GOGA Godfrey 137.14 33 PKPpre 03 53 21.3
GOGA PKiKP 03 53 32.8 -0.7
GOGA Godfrey 137.14 33 PKHKP PKPpre 03 53 21.3
GOGA 03 53 32.8
GOGA Godfrey 137.14 33 P PKPdf 03 53 32.3 +0.6
baz=320
U58A Oxford 137.17 26 P PKPdf 03 53 31.6 -0.1
baz=328
Y54A Tignall 137.21 32 P PKPdf 03 53 32.1 +0.3
baz=321
W56A Indian Trail 137.27 29 P PKPdf 03 53 32.6 +0.7
baz=324
X55A Gracelyn & Ava 137.28 30 P PKPdf 03 53 32.0 0.0
baz=322
U59A Littleton 137.53 25 P PKPdf 03 53 32.9 +0.5
baz=329
W57A Gilead 137.54 28 PKiKP 03 53 34.2 -0.2
W57A Gilead 137.54 28 P PKiKP 03 53 33.8 -0.5
baz=325
X56A White Oak 137.57 30 P PKPdf 03 53 33.1 +0.6
baz=323
Y55A Saluda 137.59 31 P PKPdf 03 53 33.2 +0.7
baz=322
V59A Middlesex 137.83 26 P PKPdf 03 53 33.6 +0.7
baz=328
W58A Raeford 138.00 28 P PKiKP 03 53 34.7 -0.6
baz=326
Z56A Williston 138.32 31 P PKiKP 03 53 35.8 -0.2
baz=322
TIGA Tifton 138.54 35 PKPpre 03 53 25.8
Z57A Bowman 138.68 31 P PKPdf 03 53 35.4 +0.8
baz=323
PLCA Paso Flores 139.24 164 PKhKP PKPpre 03 53 29.0
comp=Z,1.3nm,0.8s,baz=251,slow=14,SNR=3.7
PLCA PKP PKPdf 03 53 36.4 +0.9
comp=Z,4.3nm,0.7s,baz=214,slow=2.4,SNR=9.1
PLCA Paso Flores 139.24 164 PKPdf 03 53 34.9 -0.6
656A Willston 140.67 36 PKPdf 03 53 36.9 -1.4
PEL Peldehue 146.18 159 PKPdf 03 53 46.9 -1.0
PEL Peldehue 146.18 159 PKIKP PKPdf 03 53 46.9 -1.0
ROC1 El Roble 146.21 159 PKPab 03 53 49.8 -0.2
TGUH Tegucigalpa,Un 146.23 61 PKPdf 03 53 48.8 +0.2
GO04 Tololo Observa 148.79 157 PKPbc 03 53 57.0 +0.5
ACON Acoyapa 148.95 63 PKPbc 03 53 55.2 -1.8
CBCY The Bluff, Cay 149.19 45 PKiKP 03 53 58.4 -0.2
JTS Las Juntas de 149.80 66 PKPbc 03 53 58.0 -1.1
JTS Las Juntas de 149.80 66 PKP2 PKPbc 03 53 58.0 -1.1
GO03 Copiap 151.30 155 PKPbc 03 54 02.1 -0.2
MTDJ Mount Denham 151.77 45 PKiKP 03 54 04.2 +0.1
GTBY Guantanamo Bay 152.17 39 PKPbc PKPbc 03 54 02.3 -2.2
GO02 Mina Guanaco 153.70 154 PKiKP 03 54 09.5 +1.2
CPUP Villa Florida 155.48 179 PKP PKPdf 03 54 02.9 +0.5
comp=Z,8.7nm,1.1s,baz=198,slow=4.2,SNR=5.5
CPUP PKPab PKPab 03 54 28.9 +1.1
comp=Z,6.6nm,0.8s,baz=41,slow=3.6,SNR=4.3
CPUP Villa Florida 155.48 179 PKPdf 03 54 00.5 -1.9
CPUP PKPab 03 54 27.5 -0.4
PTAC Punta Ardita, 157.52 67 *e*P PKPdf 03 54 09.8 +4.5
TUMC Tumaco 158.06 81 *e*P PKPdf 03 54 06.4 +0.4
SOLC Bahia Solano 158.22 69 *e*P PKPdf 03 54 09.0 +2.8
SJCC San Jacinto, C 158.61 57 *e*P PKPdf 03 54 08.4 +1.6
UREC San Jos de Ur 159.33 63 *e*P PKPdf 03 54 08.0 +0.4
CBOC Ciudad Bolivar 159.65 68 *e*P PKPdf 03 54 08.5 +0.4
CRUC La Cruz 159.85 81 *e*P PKPdf 03 54 09.7 +1.1
YOTC Yotoco, Valle 159.92 74 *e*P PKPdf 03 54 08.8 +0.4
HELC Santa Helena 159.97 67 *e*P PKPdf 03 54 09.4 +0.7
ZARC Zaragoza, Cauc 160.04 63 *e*P PKPdf 03 54 09.0 +0.7
URIC Uribia, Colomb 160.08 48 *e*P PKPdf 03 54 05.4 -3.0
SMLC San Martn de 160.11 58 *e*P PKPdf 03 54 08.5 +0.1
RREF El Recreo 160.60 70 *e*P PKPdf 03 54 11.3 +1.5
PTBC PUERTO BERRIO,160.81 65 *e*P PKPdf 03 54 07.2 -2.0
NORC Norcasia 160.81 68 *e*P PKPdf 03 54 11.7 +2.5
ORTC Ortega, Tolima 161.00 73 *e*P PKPdf 03 54 09.5 0.0
OCAC Ocana 161.03 59 *e*P PKPdf 03 54 10.0 +0.4
FLOC Florencia 161.13 80 *e*P PKPdf 03 54 11.2 +1.6
FLOC Florencia 161.13 80 PKPdf 03 54 10.6 +1.0
PRAC Prado 161.40 73 *e*P PKPdf 03 54 09.8 0.0
SPBC San Pablo de B 161.52 67 *e*P PKPdf 03 54 10.3 +0.2
ROSC El Rosal 161.58 69 PKP PKPdf 03 54 11.3 +0.8
comp=Z,13nm,0.7s,baz=187,slow=5.0,SNR=8.8
ROSC El Rosal 161.58 69 *e*P PKPdf 03 54 11.7 +1.2
ROSC El Rosal 161.58 69 PKPdf 03 54 11.8 +1.3
LPAZ La Paz 161.83 144 PKP PKPdf 03 54 12.3 +1.3
comp=Z,8.4nm,1.1s,baz=14,slow=2.9,SNR=18
LPAZ La Paz 161.83 144 PKPdf 03 54 11.8 +0.9
LPAZ La Paz 161.83 144 PKIKP PKPdf 03 54 11.8 +0.9
BARC Barichara 161.93 63 *e*P PKPdf 03 54 10.3 -0.4
PAMC Pamplona, Colo 162.01 60 *e*P PKPdf 03 54 11.2 +0.1
CHIC Chingaza 162.20 69 *e*P PKPdf 03 54 11.2 0.0
RUSC La Rusia 162.32 65 *e*P PKPdf 03 54 11.4 +0.1
RUSC La Rusia 162.32 65 PKPdf 03 54 11.3 -0.1
MACC Macarena, Meta 162.79 77 *e*P PKPdf 03 54 11.5 +0.2
SDV Santo Domingo 162.88 52 PKPdf 03 54 09.7 -1.8
TAMC Tame, Arauca 163.23 61 *e*P PKPdf 03 54 09.6 -2.2
SAML Samuel 170.54 140 PKPdf 03 54 15.6 -1.5
SAML PKPab 03 55 33.9 -0.3
SAML Samuel 170.54 140 PKIKP PKPdf 03 54 15.6 -1.5
SAML 03 55 33.9

*IDC **18** 04:13:04.2±3.7, 54.°04N×163.°88W, h0km, mb3.7/6, mb1 3.7/8, mb1mx3.5/36, mbtmp3.6/8, ML2.6/2, MS3.8/2, Ms1 3.8/2, ms1mx2.9/51, Error ellipse: s-maj=91.7km s-min=20.9km az=163.0*

*NEIC **18** 04:13:04.8±0.9, 53.°50N±0.°05×163.°56W±0.°05, h24km±7km, Error ellipse: s-maj=7.9km s-min=4.2km az=186.0*

*AEIC **18** 04:13:04±1.2, 53.°45N±0.°04×163.°60W±0.°04, h20km±2km, ML3.2/20, mb3.3/3(NEIC), Error ellipse: s-maj=7.7km s-min=3.0km az=208.0*

ISC 18 04:13:04.3±2.2, **53.°50N**±0.°10×**163.°50W**±0.°04, **h23**km±14km, **n46**, σ**1.s08**/48, **mb3.8**/6, **Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	1.17	327		Pb	04 13 25.6	-0.2
WESP	Westdahl Peak	1.23	324		Pn	04 13 26.4	+0.3
WESP					Sb	04 13 43.4	+1.1
WEBT	Westdahl Beart	1.32	326		Pn	04 13 27.8	+0.5
SSLW	Shishaldin Wes	1.32	344		Pn	04 13 27.9	+0.5
SSBA	Shishaldin	1.32	344		Pn	04 13 27.5	+0.1
SSBA					Sb	04 13 45.2	+0.2
FALS	False Pass	1.36	2		Pb	04 13 28.5	-0.5
AKSA	Akutan Strait	1.45	297		Pn	04 13 28.7	-0.4
AKSA					Sn	04 13 47.6	+0.2
AKUT	Akutan	1.49	296		Pn	04 13 29.6	0.0
AKUT					Sn	04 13 48.3	0.0
AKBBA	Akutan Broad B	1.56	293		Pn	04 13 30.5	-0.1
AKBBA					Sn	04 13 49.8	-0.4
AKLV	Akutan Long Va	1.60	295		Pn	04 13 30.8	-0.4
AKLV					Sn	04 13 51.3	+0.2
AKMO	Akutan Morgan	1.60	293		Pn	04 13 30.9	-0.3
AKMO					Sb	04 13 52.1	-0.9
AKGG	Akutan Green G	1.64	296		Pn	04 13 32.1	+0.5
DT1	Dutton Round H	1.76	23		Pn	04 13 34.3	+1.0
UNV	Unalaska Valle	1.82	282		Pn	04 13 34.2	0.0
UNV					Sn	04 13 56.2	-0.3
MNAT	Makushin Natee	1.93	283		Pn	04 13 35.3	-0.4
MNAT					Sn	04 13 58.7	-0.6
MTBL	Makushin Table	1.95	285		Pn	04 13 36.7	+0.7
MREP	Makushin Rep't	1.96	280		Pn	04 13 36.0	-0.1
MSW	Makushin Switc	2.00	283		Pn	04 13 36.4	-0.2
MSW					Sn	04 14 01.0	+0.1
MGOD	Makushin Gods	2.03	280		Pn	04 13 37.3	+0.2
MCIR	Makushin Cirqu	2.07	284		Pn	04 13 37.5	-0.1
SDPT	Sand Point	2.56	42		Pn	04 13 45.7	+1.4
OKFG	Magazine Ridge	2.64	270		Pn	04 13 45.3	-0.1
CNBA	Chernabura Isl	2.65	59		Pn	04 13 46.9	+1.4
OKTU	Okmok Mt. Tuli	2.72	269		Pn	04 13 46.3	-0.3
OKSP	Okmok Steeple	2.88	267		Pn	04 13 48.3	-0.5
NIKH	Nikolski High	3.27	263		Pn	04 13 53.5	-0.5
KDAK	Kodiak Island	7.51	51	Pn	Pn	04 14 51.5	-0.7
	0.4nm,0.3s,baz=210,slow=5.0,SNR=6.8						
KDAK				Sn	Sn	04 16 11.2	-5.4
	0.1nm,0.3s,baz=330,slow=12,SNR=1.3						
ILAR	Eielson Array	14.09	30	Pn	Pn	04 16 17.8	-4.3
	0.0nm,0.3s,baz=222,slow=13,SNR=1.7						
DOT	Dot Lake	14.28	37	Pn	Pn	04 16 24.5	-0.4
HYT	Haines Junctio	15.80	52	Pn	Pn	04 16 45.8	+0.6
HYT				IAmb	IAmb	04 16 59.6	
	comp=Z,3.7nm,1.1s						
EGAK	Eagle	15.98	36	Pn	Pn	04 16 47.6	+0.4
EGAK				IAmb	IAmb	04 17 05.9	
	comp=Z,1.7nm,0.8s						
DAWY	Dawson	16.25	40	P	Pn	04 16 52.0	+1.2
DAWY				IAmb	IAmb	04 16 56.5	
	comp=Z,2.2nm,0.8s						
PETK	Petropavlovsk-	23.00	285	P	P	04 18 07.5	+0.4
	comp=Z,2.1nm,0.6s,baz=96,slow=13,SNR=1.8						
YKA	Yellowknife Ar	26.79	51	P	P	04 18 45.0	+2.9
	comp=Z,0.3nm,0.5s,baz=272,slow=9.3,SNR=10.0						
H11N2	WAKE ISLAND Hy	40.68	226	T	T	05 04 25.7	
	baz=26,slow=76,SNR=5.0						
H11N3	WAKE ISLAND Hy	40.69	226	T	T	05 04 21.6	
	baz=26,slow=76,SNR=5.4						
H11N1	WAKE ISLAND Hy	40.70	226	T	T	05 04 28.0	
	baz=26,slow=76,SNR=4.8						
H11S1	WAKE ISLAND Hy	41.85	225	T	T	05 05 58.3	
	baz=25,slow=76,SNR=3.9						
H11S2	WAKE ISLAND Hy	41.86	225	T	T	05 05 54.6	
	baz=25,slow=76,SNR=5.6						
H11S3	WAKE ISLAND Hy	41.87	225	T	T	05 05 54.2	
	baz=25,slow=76,SNR=4.4						
SCHQ	Schefferville	52.12	47	LR	LR	04 44 09.9	
	comp=Z,170nm,18.6s,baz=333,slow=36						
SONM	Songino Array	53.71	303	P	P	04 22 24.5	+0.3
	comp=Z,0.5nm,0.6s,baz=44,slow=6.7,SNR=6.6						
FINES	FINESS Array B	65.15	355	P	P	04 23 42.5	-0.2
	comp=Z,1.2nm,0.6s,baz=26,slow=11,SNR=1.8						
MKAR	Makanchi Array	65.52	316	P	P	04 23 44.6	-0.8
	comp=Z,0.2nm,0.4s,baz=37,slow=5.6,SNR=4.7						
AKASG	Malin Array Be	75.62	352	P	P	04 24 46.4	-0.5
	comp=Z,0.5nm,0.6s,baz=10.0,slow=5.7,SNR=2.7						
URZ	Urewera	92.92	195	LR	LR	05 00 49.1	
	comp=Z,21nm,20.3s,baz=346,slow=31						

IDC 18 04:27:55.5±60.0,20.70S×178.62W,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.8/21,mbtmp3.9/3,Error ellipse: s-maj=1088.0km s-min=167.2km az=83.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.18	244	P	P	04 35 08.2	-0.3
	1.4nm,0.5s,baz=91,slow=11,SNR=3.4						
ASAR	Alice Springs	43.91	257	P	P	04 36 04.1	-0.3
	1.4nm,0.7s,baz=103,slow=7.9,SNR=12						
WRA	Warramunga Arr	44.00	262	P	P	04 36 05.3	+0.2
	0.4nm,0.5s,baz=93,slow=8.2,SNR=11						

IDC 18 04:28:25.6±2.1,34.12N×45.65E,h0km,mb3.3/3, mb1 3.4/3,mb1mx3.2/30,mbtmp3.4/3,Error ellipse: s-maj=62.2km s-min=31.6km az=155.0
ISN 18 04:28:26.6±0.8,34.31N×45.67E,h8km±4km,ML3.6
TEH 18 04:28:28.0,34.23N×45.57E,h8km,ML3.8
THR 18 04:28:30.9±0.8,34.26N×45.77E,h15km,ML3.6
ISC 18 04:28:29.1±1.5,34.23N±0.03×45.58E±0.03,h12km±11km, n55,σ1.34/63,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	Dehrash	0.81	55	ePg	Pg	04 28 44.4	-0.5
IDHR				eSg	Sb	04 28 56.2	-0.1
IDHR				e		04 28 58.4	
IGHG	Ghaleghazi	0.83	83	ePg	Pg	04 28 44.9	-0.2
IGHG				e		04 28 47.9	
IGHG				eSg	Sb	04 28 56.6	0.0
IVIS	Veis	1.09	74	ePg	Pb	04 28 49.3	-0.6
IVIS				e		04 28 52.5	
IVIS				eSg	Sn	04 29 05.1	-0.2
IBDR	Badra	1.16	165	ePg	Pn	04 28 50.0	-1.0
IBDR				eSg	Sb	04 29 07.0	+1.1
IBDR				AML	AML	04 29 12.6	
	comp=N,1μm,0.4s						
IBDR				AML	AML	04 29 13.2	
	comp=E,2μm,0.6s						
IBDR	Badra	1.16	165	ePg	Pn	04 28 50.0	-1.0
ILIN	Lien	1.33	59	ePg	Pn	04 28 53.8	+0.1
ILIN				eSg	Sg	04 29 12.9	+0.8
ILIN				e		04 29 16.1	
BHD	Baghdad	1.38	226	ePg	Pn	04 28 55.6	+1.5
BHD				eSg	Sb	04 29 15.5	+3.1
BHD	Baghdad	1.38	226	ePg	Pn	04 28 55.6	+1.5
IKRK	Kirkuk	1.55	319	ePn	Pn	04 28 56.0	-0.4
IKRK				eSn	Sb	04 29 18.0	+0.8
IKRK				AML	AML	04 29 22.3	
	comp=E,1μm,0.4s						
IKRK				AML	AML	04 29 29.7	
	comp=N,712nm,0.7s						
IKRK	Kirkuk	1.55	319	ePn	Pn	04 28 56.0	-0.4
IKOM	Komasi	1.60	91	ePn	Pb	04 28 59.0	+0.3
IKOM				e		04 29 28.5	
SNGE	Sanandaj	1.69	59	IAML		04 29 26.6	
	comp=N,708nm,0.4s						
IKFM	Kafar-mosalman	2.02	110	ePn	Pn	04 29 04.1	+1.3
IDOB	Doab	2.21	101	e		04 29 47.5	
IDOB				ePn	Pn	04 29 07.0	+1.4
IALM	Almabolaq	2.23	73	ePn	Pb	04 29 07.9	-1.5
IKMR	Kamar-syah	2.44	106	ePn	Pn	04 29 10.1	+1.5
IKMR				e		04 29 52.5	
HSRG	Sareghieh	2.44	65	ePn	Pn	04 29 10.9	+1.9
HSAM	Samen	2.51	90	ePn	Pn	04 29 11.2	+1.4
HSAM				e		04 29 16.5	
MAHB	Mahabad	2.53	2	ePn	Pn	04 29 12.1	+2.0
MAHB				e		04 29 57.8	
BDRS	Dareh Seyedi	2.75	95	ePn	Pn	04 29 14.3	+1.0
BDRS				e		04 30 03.8	
BMDN	Meydan	2.76	101	ePn	Pn	04 29 14.6	+1.4
BMDN				e		04 30 05.3	
MSL	Mosul	2.96	318	ePn	Pn	04 29 16.0	+0.2
MSL				eSn	Sn	04 29 52.0	+0.8
MSL	Mosul	2.96	318	ePn	Pn	04 29 16.0	+0.2
HAGD	Aghdareh	3.00	78	ePn	Pn	04 29 18.2	+1.6
HAGD				e		04 30 10.1	
NSR	Nassriya	3.25	171	ePn	Pn	04 29 20.0	+0.2
NSR				eSn	Sn	04 30 00.3	+1.9
NSR	Nassriya	3.25	171	ePn	Pn	04 29 20.0	+0.2
SHGR	Shooshtar-Gavs	3.43	127	ePn	Pn	04 29 24.6	+2.2
SHGR	Shooshtar-Gavs	3.43	127	ePn	Pn	04 29 24.6	+2.2
ZNJK	Zanjan	3.52	45	ePn	Pn	04 29 25.8	+2.1
ZNJK	Zanjan	3.52	45	ePn	Pn	04 29 25.8	+2.1
QABG	Abgarm-Qazvin	3.60	65	ePn	Pn	04 29 26.5	+1.6
KHMZ	Khomeyn	3.67	96	ePn	Pn	04 29 26.6	+0.7
KHMZ	Khomeyn	3.67	96	ePn	Pn	04 29 26.6	+0.7
ASAO	Ashtian	3.69	84	ePn	Pn	04 29 27.9	+1.8
ASAO	Ashtian	3.69	84	ePn	Pn	04 29 27.9	+1.8
IRAZ	Razeghan	3.77	71	ePn	Pn	04 29 28.7	+1.6
ISRB	Sarab	3.96	25	ePn	Pn	04 29 31.7	+1.8
ISRB				e		04 30 44.1	
IQOM	Qom	4.58	81	ePn	Pn	04 29 38.7	+0.4
JHBN	Jahan bin	4.71	114	ePn	Pn	04 29 40.4	+0.2
QAM	Ghamsar	4.89	94	ePn	Pn	04 29 43.7	+1.1
GRMI	Germi	4.93	22	ePn	Pn	04 29 45.4	+2.3
GRMI	Germi	4.93	22	ePn	Pn	04 29 45.4	+2.3
ROKH	ROKH	4.94	111	ePn	Pn	04 29 44.0	+0.7
IKLH	Kolahrood	5.08	99	ePn	Pn	04 29 46.2	+1.0
IVRN	Varamin	5.13	80	ePn	Pn	04 29 46.8	+1.1
KRSH	Karshahi	5.45	91	ePn	Pn	04 29 51.2	+1.0
IDMV	Damavand	5.47	74	ePn	Pn	04 29 51.4	+0.8
IZEF	Zefreh	5.79	101	ePn	Pn	04 29 56.3	+1.3
KLNJ	Kolanjah	6.01	121	ePn	Pn	04 29 57.7	-0.3
IFIR	Firoozkooh	6.06	75	ePn	Pn	04 29 59.8	+1.1
ANAR	Anarak	6.87	96	ePn	Pn	04 30 10.2	+0.5
GHB	Gharebagh	7.65	127	ePn	Pn	04 30 21.1	+0.5
AKASG	Malin Array Be	20.33	329	P	P	04 33 04.6	-0.3
	comp=N,0.5nm,0.5s,baz=135,slow=10.0,SNR=2.4						
MKAR	Makanchi Array	30.32	54	P	P	04 34 39.0	-1.4
	comp=N,0.3nm,0.5s,baz=250,slow=9.9,SNR=5.5						
TORD	Torodi Ar. Bea	44.91	253	P	P	04 36 42.3	-1.5
	comp=N,0.4nm,0.9s,baz=52,slow=5.6,SNR=5.0						

IDC 18 04:40:55.2±2.6,7.05S×110.70E,h0km,mb4.1/4, mb1 4.2/4,mb1mx3.7/38,mbtmp4.1/4,Error ellipse: s-maj=165.3km s-min=22.8km az=51.0
DJA 18 04:41:21.4±0.6,8.°S±15.°×11.°1E±.°,h238km±6km,M3.8/10, mb4.0/1,MLv3.6/10
ISC 18 04:41:21.4±1.0,7.45S±0.2×110.95E±0.08,h250km,n13, σ1.79/15,mb3.8/4,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRI	Semarang	0.59	302	P	Pn	04 41 53.9	-0.7
UGM	Wanagama	0.69	217	P	Pn	04 41 54.0	-1.0
UGM				S	S	04 42 19.1	-2.3
PCJI	Pacitan	0.86	165	P	Pn	04 41 54.8	-0.9
PCJI				S	S	04 42 19.8	-2.9
GRJI	Gresik	1.58	74	P	Pn	04 42 00.0	-0.3
KPJI	Karang Pucung	2.00	271	P	Pn	04 42 03.6	-0.2
CISI	Cisompet, Garu	3.11	266	P	Pn	04 42 14.1	-1.1
JAGI	Jajag, Banyuwa	3.36	109	P	Pn	04 42 15.9	-2.0
CNJI	Cibinong	3.79	271	P	Pn	04 42 22.7	0.0
PLAI	Plampang	5.62	101	P	Pn	04 42 59.9	-1.2
WRA	Warramunga Arr	25.90	121	P	P	04 46 32.2	+1.3
	0.6nm,0.4s,baz=295,slow=12,SNR=13						
ASAR	Alice Springs	27.35	129	P	P	04 46 46.0	+2.2
	1.1nm,0.5s,baz=304,slow=8.6,SNR=10						
STKA	Stephens Creek	37.55	135	P	P	04 48 14.8	+2.8
	1.6nm,0.3s,baz=305,slow=11,SNR=4.0						
MKAR	Makanchi Array	59.63	338	P	P	04 50 58.4	-0.9
	1.0nm,0.3s,baz=152,slow=7.4,SNR=30						

IDC 18 04:55:03.8±2.8,32.36S×178.10W,h0km,mb4.3/2, mb1 4.4/3,mb1mx4.0/23,mbtmp4.2/3,ML3.8/1,MS3.0/2, Ms1 3.0/2,ms1mx2.6/28,Error ellipse: s-maj=70.6km s-min=35.3km az=118.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.07	212	Pn	Pn	04 56 48.9	+0.4
	1.5nm,0.3s,baz=263,slow=4.4,SNR=12						
URZ				Sn	Sn	04 58 09.2	-0.3
	3.2nm,0.3s,baz=257,slow=16,SNR=7.9						
RPZ	Rata Peaks	14.18	214	LR	LR	05 03 58.9	
	comp=Z,38nm,20.1s,baz=39,slow=38						
DZM	Mont Dzumac	17.13	303	LR	LR	05 04 41.2	
	comp=Z,73nm,18.6s,baz=216,slow=34						
ASAR	Alice Springs	42.96	269	P	P	05 03 05.2	+0.4
	0.5nm,0.5s,baz=111,slow=4.7,SNR=2.8						
WRA	Warramunga Arr	44.12	274	P	P	05 03 13.8	-0.4
	5.2nm,0.3s,baz=113,slow=7.3,SNR=12						
FINES	FINESS Array B	146.94	339	PKPbc	PKPbc	05 14 46.7	-0.9
	1.2nm,0.4s,baz=47,slow=3.5,SNR=20						

NIED 18 04:56:00,38.40N×142.10E,h50km,Mw4.0 Best double couple: $M_0$9.99000×10^14 NP1:φs71.00000°,δ64.00000°, λ114.00000°. NP2:φs206.00000°,δ35.00000°,λ50.00000°.
JMA 18 04:56:05.7±0.1,38.44N×142.04E,h48km±1km,M4.1
JMA Felt II J1.
NEIC 18 04:56:09.7±1.1,38.24N±0.09×141.90E±0.03,h92km±8km, mb4.3/3,Error ellipse: s-maj=13.4km s-min=3.5km az=183.0
IDC 18 04:56:10.3±2.1,38.35N×141.94E,h95km±19km,mb3.6/12, mb1 3.8/15,mb1mx3.6/46,mbtmp3.9/15,MS2.8/10, Ms1 2.9/10,ms1mx2.8/36,Error ellipse: s-maj=23.5km s-min=15.0km az=129.0
ISC 18 04:56:05.0±1.6,38.43N±0.05×142.1E±0.1,h43km±13km, n47,σ1.39/48,mb3.9/15,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.53	258	P	Pn	04 56 16.4	+0.2
JIKH				S	Sn	04 56 23.8	-0.4
JIO	Ouri	0.61	273	P	Pn	04 56 17.4	+0.1
JIO				S	Sn	04 56 25.4	-0.6
JKMT	Kesennumamotoy	0.64	307	P	Pn	04 56 17.9	+0.2
JKMT				S	Sn	04 56 26.5	-0.2
OFUJ	Ofunato	0.74	332	P	Pn	04 56 19.5	+0.4
OFUJ				S	Sn	04 56 29.5	+0.2
JMK	Ichinoseki	0.88	307	P	Pn	04 56 21.2	+0.3
JMK				eS	Sn	04 56 32.3	-0.3
JOU	Okura	1.15	267	P	Pn	04 56 24.8	+0.2
JOU				S	Sn	04 56 39.1	-0.1
JMM	Marumori	1.19	242	P	Pn	04 56 24.9	-0.3
JMM				S	Sn	04 56 39.0	-1.1
JOM	Ohasama	1.23	328	P	Pn	04 56 26.4	+0.7
JOM				eS	Sn	04 56 41.8	+0.6
JFK	Kawauchi	1.45	223	P	Pn	04 56 28.7	-0.1
JFK				eS	Sn	04 56 46.0	-0.6
JYK	Kaneyama	1.47	290	P	Pn	04 56 29.4	+0.4
JYK				eS	Sn	04 56 47.4	+0.5
JRG	Rokugo	1.51	310	P	Pn	04 56 30.0	+0.4
JYS	Shirataka	1.63	263	P	Pn	04 56 31.7	+0.5
JYS				eS	Sn	04 56 51.3	+0.3
JFT	Otama	1.68	238	P	Pn	04 56 32.5	+0.6
JFT				S	Sn	04 56 51.9	-0.3
MJAR	Matsushiro Arr	3.64	240	P	Pn	04 57 00.2	+1.4
	0.3nm,0.3s,baz=48,slow=13,SNR=9.9						
MJAR				S	Sn	04 57 43.2	+2.7
	0.5nm,0.3s,baz=255,slow=24,SNR=4.7						
MJAR				LR	LR	04 58 40.9	
	comp=Z,80nm,20.8s,baz=45,slow=44						
MAJO	Matsushiro	3.64	240		Pn	04 57 00.6	+1.8
MAJO				Sn	Sn	04 57 37.7	-2.8
MAT	Matsushiro	3.64	240	P	Pn	04 57 00.2	+1.4
MAT				S	Sn	04 57 46.9	+6.4
MJB9	Matsu-Tunnel	3.64	240		Pn	04 57 00.5	+1.6
JHJ	Hachijo jima 2	5.63	200	LR	LR	04 59 20.1	
	comp=Z,135nm,20.1s,baz=353,slow=34						
ASAJ	Asahikawa	5.70	3	P	Pn	04 57 35.0	+8.0
	1.1nm,0.3s,baz=208,slow=18,SNR=3.7						
ASAJ				LR	LR	04 59 23.8	
	comp=Z,39nm,19.8s,baz=20,slow=33						
JKA	Kamikawa-asahi	5.70	3		Pn	04 57 35.0	+8.0
USRK	Ussuriysk Ar.	9.56	310	P	Pn	04 58 24.1	+4.2
	baz=118,slow=13,SNR=9.3						
USRK				LR	LR	05 01 48.7	
	comp=Z,57nm,19.0s,baz=95,slow=36						
JNU	Nakatsue	10.55	243	LR	LR	05 03 10.3	
	comp=Z,40nm,19.5s,baz=82,slow=40						
KSRS	Korea Array	11.26	269	LR	LR	05 02 26.3	
	comp=Z,22nm,20.7s,baz=110,slow=34						
KLR	Kul'dur	13.13	329	LR	LR	05 03 54.5	
	comp=Z,59nm,20.9s,baz=164,slow=35						
PETK	Petropavlovsk-	18.20	31	LR	LR	05 07 12.6	
	comp=Z,78nm,18.9s,baz=249,slow=36						
SEY	Seymchan	25.32	11	P	P	05 01 29.4	+2.0
	1.8nm,0.6s,baz=178,slow=12,SNR=5.4						
H11N2	WAKE ISLAND Hy	28.42	124	T	T	05 32 15.8	
	baz=316,slow=76,SNR=192						
H11N1	WAKE ISLAND Hy	28.43	124	T	T	05 32 16.4	
	baz=316,slow=76,SNR=224						
H11N3	WAKE ISLAND Hy	28.44	124	T	T	05 32 17.1	
	baz=316,slow=76,SNR=161						
H11S1	WAKE ISLAND Hy	29.18	126	T	T	05 33 22.5	
	baz=318,slow=76,SNR=33						
H11S3	WAKE ISLAND Hy	29.18	126	T	T	05 33 15.4	
	baz=318,slow=76,SNR=55						
H11S2	WAKE ISLAND Hy	29.20	126	T	T	05 33 15.4	
	baz=318,slow=76,SNR=49						
ZALV	Zalesovo Beam	41.41	311	P	P	05 03 46.5	-0.4
	1.3nm,0.5s,baz=84,slow=7.3,SNR=3.7						
MK31	Makanchi Array	43.87	301	P	P	05 04 06.8	-0.3
MK31				IAmb	IAmb	05 04 11.0	
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	43.87	301	P	P	05 04 05.8	-1.3
	comp=Z,0.9nm,0.8s,baz=86,slow=8.7,SNR=8.0						
KURK	Kurchatov	45.53	307	P	P	05 04 19.5	-0.7
KURK				IAmb	IAmb	05 04 20.3	
	comp=Z,3.9nm,0.8s						
ILAR	Eielson Array	48.02	33	P	P	05 04 39.4	-0.1
	comp=Z,0.5nm,0.8s,baz=260,slow=6.8,SNR=6.5						
ILAR				LR	LR	05 25 10.3	
	comp=Z,19nm,18.4s,baz=6.5,slow=36						
WB0	Warramunga Arr	58.34	189	P	P	05 05 53.4	-2.3
WB0				IAmb	IAmb	05 06 07.3	
	comp=Z,5.3nm,1.1s						
WRA	Warramunga Arr	58.52	189	P	P	05 05 56.3	-0.7
	comp=Z,0.9nm,0.6s,baz=5.4,slow=7.2,SNR=4.0						
YKA	Yellowknife Ar	62.32	31	P	P	05 06 22.5	-0.1
	comp=Z,0.4nm,0.7s,baz=295,slow=6.4,SNR=7.8						
FINES	FINESS Array B	67.85	332	P	P	05 06 58.2	-0.2
	comp=Z,4.5nm,1.0s,baz=216,slow=9.4,SNR=4.7						
KBZ	Khabaz	70.42	311	P	P	05 07 14.3	-0.3
	comp=Z,1.7nm,0.9s,baz=186,slow=4.5,SNR=4.2						
NB2	NORSAR Subarra	73.12	337	P	P	05 07 30.6	0.0
	comp=Z,0.8nm,0.7s,baz=38,slow=6.2						
NOA	NORSAR Array B	73.12	337	P	P	05 07 30.2	-0.4
	comp=Z,1.5nm,0.8s,baz=37,slow=6.0,SNR=4.9						
NOA				LR	LR	05 47 29.9	
	comp=Z,12nm,18.3s,baz=255,slow=42						
AKASG	Malin Array Be	73.54	322	P	P	05 07 32.5	-0.7
	comp=Z,0.9nm,0.6s,baz=47,slow=5.6,SNR=5.5						
PDAR	Pinedale Array	76.29	46	P	P	05 07 50.4	+0.8
	comp=Z,0.4nm,0.6s,baz=272,slow=1.6,SNR=6.1						
TXAR	Lajitas Array	88.83	53	P	P	05 08 55.4	+0.5
	comp=Z,0.4nm,0.7s,baz=270,slow=2.5,SNR=4.0						

IDC 18 05:11:41.1±1.6,29.25N×104.18E,h0km,mb3.7/4, mb1 3.8/4,mb1mx3.4/41,mbtmp3.7/4,Error ellipse: s-maj=219.5km s-min=27.6km az=57.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	24.45	322	P	P	05 17 02.5	+0.9
	0.6nm,0.8s,baz=125,slow=10,SNR=4.4						
ZALV	Zalesovo Beam	28.43	336	P	P	05 17 37.1	-0.2
	2.1nm,0.7s,baz=140,slow=9.4,SNR=8.0						
KURBB	Kurchatov Arra	28.77	325	P	P	05 17 39.9	-0.6
	0.6nm,0.8s,baz=123,slow=9.9,SNR=5.0						
WRA	Warramunga Arr	56.91	146	P	P	05 21 28.1	-0.1
	0.6nm,0.8s,baz=332,slow=7.7,SNR=2.9						

IDC 18 05:20:34.5±6.7,20.66S×178.96W,h635km±86km, mb2.7/5,mb1 3.1/5,mb1mx2.9/21,mbtmp3.6/5,Error ellipse: s-maj=126.1km s-min=31.5km az=160.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.60	257	P	P	05 27 45.1	0.0
	0.6nm,0.5s,baz=102,slow=7.2,SNR=6.4						
WRA	Warramunga Arr	43.69	262	P	P	05 27 45.9	0.0
	0.4nm,0.6s,baz=96,slow=7.5,SNR=8.1						
NVAR	Mina Array Bea	81.76	44	P	P	05 31 48.7	-0.3
	0.4nm,0.6s,baz=230,slow=7.9,SNR=3.9						
TXAR	Lajitas Array	87.90	58	P	P	05 32 19.2	+0.5
	0.3nm,0.9s,baz=222,slow=4.7,SNR=2.7						
ILAR	Eielson Array	88.67	13	P	P	05 32 21.2	0.0
	0.8nm,1.0s,baz=220,slow=5.9,SNR=4.6						
AKASG	Malin Array Be	142.71	330	PKP	PKPdf	05 38 54.9	-1.9
	1.4nm,0.5s,baz=38,slow=4.4,SNR=8.4						
BRTR	Keskin Array B	146.27	312	PKPbc	PKPbc	05 39 05.9	0.0
	0.4nm,0.6s,baz=101,slow=2.9,SNR=3.0						

ATH 18 05:20:59.2,38.30N×20.37E,h12km±2km,ML2.8/2,Error ellipse: s-maj=2.2km s-min=1.0km az=159.0
THE 18 05:20:59.5,38.30N×20.40E,h11km,ML2.7/10,Error ellipse: s-maj=1.2km s-min=0.3km az=265.0
ISC 18 05:20:59.4±1.0,38.30N±0.02×20.40E±0.05,h12km±5km, n31,σ0.45/52,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.04	155	P	Pg	05 21 01.5	-0.1
KEF4				S	Sg	05 21 03.0	-0.1
AGT1	Agia Thekli	0.05	198	P	Pg	05 21 01.5	-0.1
AGT1				S	Sg	05 21 03.0	-0.2
	20μm,0.2s						
KEF1	Kardakata, Kep	0.06	107	P	Pg	05 21 01.5	-0.2
KEF1				S	Sg	05 21 03.1	-0.2
LXR1	Lixouri, Cepha	0.10	163	P	Pg	05 21 02.3	+0.2
LXR1				S	Sg	05 21 04.7	+0.6
	29μm,0.1s						
LXRA	Lixouri, Kepha	0.10	164	P	Pg	05 21 02.3	+0.2
LXRA				S	Sg	05 21 04.7	+0.6
KEF3	Kipouria, Keph	0.10	205	P	Pg	05 21 02.2	+0.1
KEF3				S	Sg	05 21 04.3	+0.1
CHV1	Chavriata, Kef	0.11	188	P	Pg	05 21 02.4	+0.1
CHV1				S	Sg	05 21 04.9	+0.5
	15μm,0.2s						
ARGA	Argostoli. Kep	0.13	153	P	Pg	05 21 02.6	0.0
ARGA				S	Sg	05 21 05.3	+0.4
ARG2	Argostoli	0.13	150	P	Pg	05 21 02.6	0.0
ARG2				S	Sg	05 21 05.1	+0.1
	7μm,0.1s						
KEF2	Argostoli. Kep	0.14	153	P	Pg	05 21 02.8	0.0
KEF2				S	Sg	05 21 05.2	0.0
VSK1	VASILIKIADES	0.17	48	P	Pg	05 21 03.2	0.0
VSK1				S	Sg	05 21 06.1	+0.1
	4μm,0.1s						
VLS	Valsamata	0.19	128	P	Pg	05 21 03.4	-0.1
VLS				S	Sg	05 21 06.4	+0.1
	4μm,0.2s						
VLS	Valsamata	0.19	128	P	Pg	05 21 03.4	-0.1
VLS				S	Sg	05 21 06.5	+0.1
VLS				AML	AML	05 21 06.6	
	comp=N,8648μm,0.2s						
VLS				AML	AML	05 21 07.0	
	comp=E,7505μm,0.1s						
FSK	Fiskardo	0.21	37	P	Pg	05 21 03.8	0.0
KFL	Anninata	0.36	121	P	Pg	05 21 06.3	-0.2
EVGI	Lefkada island	0.38	31	P	Pg	05 21 06.9	-0.1
EVGI				S	Sg	05 21 12.8	+0.7
EVGI	Lefkada island	0.38	31	P	Pg	05 21 07.0	-0.1
EVGI				S	Sg	05 21 13.1	+1.0
VLMS	Volimes, Zakyn	0.47	154	P	Pg	05 21 08.4	-0.2
VLMS				S	Sg	05 21 15.7	+1.0
VLMS				AML	AML	05 21 17.5	
	comp=E,2086μm,0.2s						
VLMS				AML	AML	05 21 18.0	
	comp=N,2583μm,0.2s						
MGNA	Meganis	0.47	40	P	Pg	05 21 08.4	-0.3
LKD2	Lefkada island	0.53	22	P	Pg	05 21 09.1	-0.7
LKD2				S	Sg	05 21 17.7	+0.9
	comp=N,125nm,0.2s						
LKD2	Lefkada island	0.53	22	P	Pg	05 21 09.1	-0.7
LKD2				S	Sg	05 21 17.8	+0.9
TSLK	Tsoukalades, L	0.56	20	P	Pg	05 21 10.2	-0.2
TSLK				S	Sb	05 21 19.3	0.0
	comp=N,155nm,0.4s						
TSLK	Tsoukalades, L	0.56	20	P	Pg	05 21 10.0	-0.4
KRI1	kERI	0.71	152	P	Pg	05 21 12.3	-0.9
KRI1				S	Sb	05 21 23.9	+0.5
	comp=N,808nm,0.1s						
PVO	Paravola	0.94	70	P	Pg	05 21 17.3	-0.2
PVO	Paravola	0.94	70	P	Pg	05 21 17.3	-0.2
DRO	Drossia	1.09	108	P	Pb	05 21 19.8	-0.3
DRO				S	Sn	05 21 36.5	+1.0
	comp=N,108nm,0.4s						
ANX	Ano Chora	1.23	75	P	Pn	05 21 21.9	-0.6
SERG	Sergoula	1.31	84	P	Pn	05 21 22.9	-0.6
SERG	Sergoula	1.31	84	P	Pn	05 21 22.9	-0.6
KLV	Kalavryta, Ach	1.40	100	P	Pn	05 21 24.7	-0.1

OSPL 18 05:23:36.2±0.5,19.05N×66.83W,h0km±22km,ML2.2
RSPR 18 05:23:36.6,19.16N×66.89W,h24km±20km,MD2.9/13
NEIC 18 05:23:36.2±1.1,19.09N±0.06×66.83W±0.04,h36km±48km, Error ellipse: s-maj=9.2km s-min=4.4km az=154.0
ISC 18 05:23:36.8±1.6,19.03N±0.08×66.84W±0.04,h29km,n52, σ0.71/62,17C-3D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.61	205	iP	Pb	05 23 47.3	-1.8
AGPR				eS	Sb	05 23 56.2	-1.2
AGPR				IAML		05 24 01.5	
	comp=Z,110nm,0.2s						
AGPR	Aguadilla, PR	0.61	205	⇓eP	Pb	05 23 48.8	-0.3
AGPR	Aguadilla, PR	0.61	205	eS	Sb	05 23 57.8	+0.4
AGPR	Aguadilla, PR	0.61	205		Pb	05 23 48.8	-0.3
AGPR					Sb	05 23 57.8	+0.4
EMPR	Esperanza - Ma	0.62	152	⇑eP	Pb	05 23 49.5	+0.3
EMPR	Esperanza - Ma	0.62	152	eS	Sb	05 23 59.2	+1.7
EMPR	Esperanza - Ma	0.62	152		Pb	05 23 49.5	+0.3
AOPR	Arecibo Observ	0.68	173	⇑eP	Pb	05 23 50.1	-0.1
AOPR	Arecibo Observ	0.68	173		Pb	05 23 50.1	-0.1
MPR	Mayaguez	0.86	200	iP	Pn	05 23 52.2	-0.8
MPR				eS	Sn	05 24 03.9	-0.7
MPR				IAML		05 24 20.6	
	comp=Z,33nm,0.5s						
MPR	Mayaguez	0.86	200		Pn	05 23 52.6	-0.4
LSP	Las Mesas	0.88	196	⇓eP	Pn	05 23 53.0	-0.3
LSP	Las Mesas	0.88	196		Pn	05 23 53.0	-0.3
CELP	Cerrillos	0.98	166	⇑eP	Pn	05 23 54.4	-0.2
CELP				eS	Sn	05 24 07.8	+0.4
CELP	Cerrillos	0.98	166		Pn	05 23 54.4	-0.2
CELP					Sn	05 24 07.8	+0.4
OBIP	Obispado Ponce	1.00	167	⇑eP	Pn	05 23 54.1	-0.8
OBIP	Obispado Ponce	1.00	167		Pn	05 23 54.1	-0.8
OBIP	Obispado Ponce	1.00	167	Sn	Sn	05 24 07.3	-0.7
GCPR	Guaynabo City	1.01	135	⇑eP	Pn	05 23 54.6	-0.4
GCPR	Guaynabo City	1.01	135		Pn	05 23 54.6	-0.4
GCPR	Guaynabo City	1.01	135	Sn	Sn	05 24 07.2	-1.1
GBPR	Guanica, Bosqu	1.05	182	⇑eP	Pn	05 23 55.8	+0.2
GBPR	Guanica, Bosqu	1.05	182	eS	Sn	05 24 10.3	+1.1
GBPR	Guanica, Bosqu	1.05	182		Pn	05 23 55.8	+0.2
GBPR					Sn	05 24 10.3	+1.1
CRPR	Cabo Rojo, PR	1.05	194	⇑eP	Pn	05 23 55.4	-0.1
CRPR	Cabo Rojo, PR	1.05	194	eS	Sn	05 24 09.2	0.0
CRPR	Cabo Rojo, PR	1.05	194		Pn	05 23 55.4	-0.1
CRPR					Sn	05 24 09.2	0.0
MLPR	Magueyes Islan	1.07	191	⇓eP	Pn	05 23 55.0	-0.8
MLPR	Magueyes Islan	1.07	191	eS	Sn	05 24 09.6	-0.1
MLPR	Magueyes Islan	1.07	191		Pn	05 23 55.0	-0.8
MLPR					Sn	05 24 09.6	-0.1
SJG	San Juan	1.12	144		Pn	05 23 57.7	+1.2
CBYP	Canovanas	1.19	129	⇑eP	Pn	05 23 56.9	-0.7
CBYP	Canovanas	1.19	129	⇑eP	Pn	05 23 57.0	-0.7
CBYP	Canovanas	1.19	129		Pn	05 23 57.0	-0.7
IGPR	InterUniversit	1.26	147	⇑eP	Pn	05 23 58.6	+0.1
IGPR	InterUniversit	1.26	147	⇑eP	Pn	05 23 58.6	+0.1
IGPR	InterUniversit	1.26	147	eS	Sn	05 24 15.7	+1.2
IGPR	InterUniversit	1.26	147		Pn	05 23 58.6	+0.1
PDPR	Patillas Dam,	1.27	142	⇑eP	Pn	05 23 58.6	+0.1
PDPR	Patillas Dam,	1.27	142		Pn	05 23 58.6	+0.1
HUMP	Col San Antoni	1.28	133	⇑eP	Pn	05 23 58.4	-0.4
HUMP	Col San Antoni	1.28	133	eS	Sn	05 24 15.7	+0.7
HUMP	Col San Antoni	1.28	133	⇑eP	Pn	05 23 58.7	-0.1
HUMP	Col San Antoni	1.28	133		Pn	05 23 58.7	-0.1
HUMP					Sn	05 24 15.7	+0.7
MTP	Monte Pirata	1.53	127	⇑eP	Pn	05 24 01.4	-0.7
MTP	Monte Pirata	1.53	127		Pn	05 24 01.4	-0.7
PCDR	Punta Cana, DR	1.55	251	iP	Pn	05 24 03.5	+1.0
PCDR				eS	Sn	05 24 23.2	+1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCDR					IAML	05 24 28.4	
	comp=Z,64nm,0.6s						
PCDR	Punta Cana, DR	1.55	251	Pn	Pn	05 24 02.2	-0.3
CUPR	Culebra, Puert	1.64	116⇑	eP	Pn	05 24 03.1	-0.6
CUPR	Culebra, Puert	1.64	116		Pn	05 24 03.1	-0.6
STVI	Saint Thomas	1.91	110⇑	eP	Pn	05 24 06.5	-0.9
STVI	Saint Thomas	1.91	110		Pn	05 24 06.5	-0.9

TAP 18 05:27:12.8, 24°.80N×122°.31E, h13km, ML3.1, C, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.29	214	P	Pg	05 27 18.6	-0.3
	baz=214						
EOS1				S	Sg	05 27 23.4	+0.4
	baz=214						
TWB1	Santiao Chiao	0.36	306	eP	Pg	05 27 20.1	0.0
	baz=306						
TWB1				iS	Sg	05 27 25.0	0.0
	baz=306						
NTC	Toucheng	0.44	278	eP	Pg	05 27 21.3	-0.2
	baz=277						
TWC	Suao	0.46	246	eP	Pg	05 27 21.7	-0.2
	baz=245						
TWC				eS	Sg	05 27 28.0	0.0
	baz=245						
TIPB	Shuangxi	0.47	292	eP	Pg	05 27 22.2	0.0
	baz=291						
TWE	Neicheng	0.59	263	eP	Pg	05 27 23.5	-0.8
	baz=262						
SLBB	Yuanshan	0.61	266	eP	Pg	05 27 24.8	0.0
	baz=266						
ENTT	Nioudou	0.69	257	iP	Pg	05 27 25.7	-0.6
	baz=256						
YOJ	Yonaguni jima	0.72	117	iP	Pg	05 27 26.1	-0.6
	baz=117						
YOJ				eS	Sg	05 27 35.9	-0.4
	baz=117						
NWLT	Wulai	0.73	269	eP	Pg	05 27 26.7	-0.4
	baz=268						

TAP 18 05:27:16.5, 24°.18N×121°.71E, h44km, ML2.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.11	269	iP	Pn	05 27 23.8	+0.2
	baz=268						
NACB				iS	Sn	05 27 29.2	+0.6
	baz=268						
TWD	Chiawan	0.14	228	iP	Pn	05 27 24.1	+0.3
	baz=226						
TWD				S	Sn	05 27 29.6	+0.8
	baz=226						
ETLH	Xiulin Townshi	0.21	278	iP	Pn	05 27 24.5	+0.1
	baz=278						
ETLH				iS	Sn	05 27 30.3	+0.4
	baz=278						
HWA	Hwalien	0.22	206	eP	Pn	05 27 24.6	+0.3
	baz=204						
ENA	Nanau	0.25	6	eP	Pn	05 27 24.6	0.0
	baz=234						
ENA	Nanau	0.25	6	P	Pn	05 27 24.6	0.0
	baz=7.0						
ENA				S	Sn	05 27 31.1	+0.8
	baz=7.0						
ENLB	Shoufeng	0.29	200	eP	Pn	05 27 24.4	-0.5
	baz=200						
ENLB				eS	Sn	05 27 31.7	+0.9
	baz=200						
NNSB	Datong	0.39	310	eP	Pn	05 27 26.6	+0.5
	baz=309						
NNSB				S	Sn	05 27 33.8	+0.8
	baz=309						
NNSH	Datong	0.39	310	P	Pn	05 27 26.6	+0.4
	baz=309						
NNSH				iS	Sn	05 27 33.8	+0.7
	baz=309						
NNS	Nan Shan	0.41	310	eP	Pn	05 27 26.9	+0.5
	baz=310						
NNS				S	Sn	05 27 34.0	+0.7
	baz=310						
WHF	Hehuan Shan	0.41	266	eP	Pn	05 27 27.0	+0.3
	baz=265						
ESL	Shilin	0.44	215	eP	Pn	05 27 26.3	-0.4
	baz=214						
TWC	Suao	0.45	16	eP	Pn	05 27 26.8	+0.1
	baz=17						
TWC				eS	Sn	05 27 35.3	+1.3
	baz=17						
NDT	Datong Townshi	0.46	337	eP	Pn	05 27 27.3	+0.3
	baz=255						
NDT	Datong Townshi	0.46	337	iP	Pn	05 27 27.3	+0.4
	baz=336						
NDT				iS	Sn	05 27 35.3	+1.0
	baz=336						
ENTT	Nioudou	0.48	344	P	Pn	05 27 27.5	+0.4
	baz=344						
ENTT				iS	Sn	05 27 35.7	+1.0
	baz=344						
TWT	Tachien	0.50	279	eP	Pn	05 27 28.7	+1.2
	baz=278						
CHGB	Renai	0.51	257	eP	Pn	05 27 28.2	+0.6
	baz=256						
TDCB	Techi	0.51	279	eP	Pn	05 27 28.6	+0.9
	baz=278						
OWD	Renai	0.54	246	P	Pn	05 27 28.4	+0.3
	baz=245						
OWD				eS	Sn	05 27 36.9	+0.7
	baz=245						
TWE	Neicheng	0.54	356	P	Pn	05 27 28.3	+0.4
	baz=357						
YHNB	Yeheng	0.58	328	P	Pn	05 27 29.0	+0.5
	baz=328						
YHNB				eS	Sn	05 27 37.8	+0.7
	baz=328						
NSK	Sanguang	0.59	327	P	Pn	05 27 29.1	+0.4
	baz=327						
NSK				eS	Sn	05 27 37.9	+0.5
	baz=327						
VWDT	VWDT	0.67	231	P	Pn	05 27 30.3	+0.7
	baz=231						
VWDT				S	Sn	05 27 40.2	+1.2
	baz=231						
WHP	Taichung City	0.71	278	eP	Pn	05 27 31.7	+1.6
	baz=278						
WHP				eS	Sn	05 27 42.2	+2.1
	baz=278						
HGSD	Ruisui	0.73	201	eP	Pn	05 27 30.8	+0.4
	baz=201						
HGSD				eS	Sn	05 27 41.8	+1.3
	baz=201						
SSLB	Suanglung	0.79	241	eP	Pn	05 27 31.9	+0.6
	baz=240						
SMLT	Sun Moon Lake	0.80	249	eP	Pn	05 27 32.4	+1.0
	baz=248						
TIPB	Shuangxi	0.80	7	eP	Pn	05 27 32.2	+0.8
	baz=7.0						
TIPB				eS	Sn	05 27 43.9	+1.7
	baz=7.0						
YULB	Yu-li	0.87	206	eP	Pn	05 27 32.8	+0.4
	baz=205						
YUS	Yu-Shan	0.98	226	eP	Pn	05 27 34.9	+0.7
	baz=225						
YUS				eS	Sn	05 27 48.2	+1.1
	baz=225						
FULB	Fuli	1.05	202	eP	Pn	05 27 35.9	+1.1
	baz=201						
CHN5	Tsauling	1.11	239	eP	Pn	05 27 38.2	+2.5
	baz=238						
CHN1	Nanshi	1.47	228	eP	Pn	05 27 42.5	+2.0
	baz=227						

IDC 18 05:44:40.8±3.6, 5°.80S×130°.88E, h0km, mb3.4/1, mb1 3.7/3, mb1mx3.4/29, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=258.6km s-min=32.2km az=72.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.45	167	Pn	Pn	05 48 07.8	+1.0
	0.3nm,0.3s,baz=348,slow=11,SNR=8.7						
WRA				Sn	Sn	05 50 31.7	-16
	0.2nm,0.3s,baz=331,slow=25,SNR=1.7						
ASAR	Alice Springs	18.00	171	P	Pn	05 48 52.0	-0.6
	0.2nm,0.3s,baz=347,slow=9.4,SNR=9.7						
MKAR	Makanchi Array	67.72	326	P	P	05 55 40.2	0.0
	0.1nm,0.6s,baz=140,slow=6.5,SNR=4.3						

RSNC 18 06:16:12.3±0.4, 6°.63N×71°.71W, h23km±7km, ML1.7, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TAMC	Tame, Arauca	0.21	202⇑	iPg	Pb	06 16 17.7	-0.3
TAMC				i		06 16 22.0	
	comp=Z,36nm,0.1s						
PAMC	Pamplona, Colo	1.21	306	eP	Pn	06 16 33.6	-0.6
PAMC				eS	Sn	06 16 49.6	-0.6
PAMC				i		06 16 51.0	
	comp=Z,19nm,0.2s						
BARC	Barichara	1.46	269	eP	Pn	06 16 36.4	-1.1
BARC				eS	Sn	06 16 55.6	-0.5
BARC				i		06 16 56.3	
	comp=Z,14nm,0.3s						
RUSC	La Rusia	1.55	242	eP	Pn	06 16 38.1	-0.9

GCG 18 06:25:59.6±0.4, 15°.22N×91°.98W, h114km±60km, MD4.0
MEX 18 06:26:03.2±0.3, 14°.22N×92°.44W, h45km±78km, MD3.7
ISC 18 06:25:58.8±3.9, 14°.0N±0°.3×92°.5W±0°.1, h35km, n5, σ0.14/7, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		0.94	14	iP	Pn	06 26 15.4	-0.1
STG3	Santiaguito 3,	1.15	51	eP	Pn	06 26 18.6	+0.1
FUG	Fuego 3	1.67	74	eP	Pn	06 26 25.7	+0.1
FUG				eS	Sn	06 26 45.8	-0.1
PCIG		1.84	338	eP	Pn	06 26 28.0	+0.1
PCG	Pacaya	1.87	77	eP	Pn	06 26 28.4	-0.2
PCG				eS	Sn	06 26 51.2	+0.1

NEIC 18 07:50:31.8±0.8, 16°.23N±0°.06×94°.46W±0°.04, h101km±12km, Error ellipse: s-maj=8.9km s-min=6.1km az=186.0
MEX 18 07:50:33.0±1.0, 16°.22N×94°.48W, h98km±16km, MD4.0
ISC 18 07:50:31.6±1.6, 16°.17N±0°.07×94°.46W±0°.04, h96km±19km, n14, σ1.32/26, Oaxaca

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	1.00	336		Pn	07 50 51.8	0.0
CMIG					Sn	07 51 06.5	-0.4
CMIG	Matias Romero	1.00	336	iP	Pn	07 50 51.8	0.0
CMIG				iS	Sn	07 51 06.5	-0.4
PCIG		1.28	111		Pn	07 50 55.9	+1.0
PCIG					Sn	07 51 13.4	+0.9
PCIG		1.28	111	iP	Pn	07 50 55.9	+1.0
PCIG				iS	Sn	07 51 13.4	+0.9
HUIG	Huatulco	1.64	256		Pn	07 50 58.7	-0.6
HUIG					Sn	07 51 20.5	+0.1
HUIG	Huatulco	1.64	256	eP	Pn	07 50 58.7	-0.6
HUIG				iS	Sn	07 51 20.5	+0.1
CCIG	Comitan	2.23	87	Pn	Pn	07 51 07.8	+0.6
CCIG				Sn	Sn	07 51 30.5	-4.0
VHO	Vista Hermosa	2.36	293	eP	Pn	07 51 09.6	+0.7
VHO				eS	Sn	07 51 37.4	-0.1
PEIG	Puerto Escondi	2.59	267	iP	Pn	07 51 11.2	-0.6
PEIG				iS	Sn	07 51 39.5	-3.2
YOIG	Yosondua	3.04	283	eP	Pn	07 51 18.9	+0.9
YOIG				iS	Sn	07 51 55.8	+2.0
PNIG	Pinotepa	3.53	274		Pn	07 51 24.4	0.0
PNIG					Sn	07 52 05.8	+0.5
PNIG	Pinotepa	3.53	274	eP	Pn	07 51 24.4	0.0
PNIG				iS	Sn	07 52 05.8	+0.5
TLIG	Tlapa	4.17	290	Pn	Pn	07 51 34.1	+1.0
TEIG	Tepich	7.13	55	Pn	Pn	07 52 13.0	-0.2

IDC 18 07:55:41.7±0.7, 6°.78N×73°.00W, h158km±8km, mb3.3/6, mb1 3.6/8, mb1mx3.3/29, mbtmp3.8/8, Error ellipse: s-maj=23.7km s-min=7.4km az=129.0
RSNC 18 07:55:43.1±0.8, 6°.82N×73°.15W, h150km±3km, ML3.7, Mw3.7
ISC 18 07:55:41.8±0.7, 6°.84N±0°.03×73°.11W±0°.03, h156km±6km, n42, σ1.39/73, mb3.6/6, 13C-7D, Northern Colombia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.26	195⇑	iP	Pn	07 56 03.5	+0.2
BARC				eS	Sn	07 56 18.8	-0.9
BARC				i		07 56 19.8	
	comp=Z,2μm,0.3s						
PAMC	Pamplona, Colo	0.64	40⇑	iP	Pn	07 56 06.3	+1.1
PAMC				eS	Sn	07 56 23.2	+0.2
PAMC				i		07 56 25.2	
	comp=Z,462nm,0.7s						
RUSC	La Rusia	0.94	178⇓	iP	Pn	07 56 07.3	0.0
RUSC				eS	Sn	07 56 26.1	-0.7
RUSC				i		07 56 27.2	
	comp=Z,540nm,0.8s						
PTBC	PUERTO BERRIO,	1.37	257⇑	eP	Pn	07 56 09.8	-0.7
PTBC				eS	Sn	07 56 31.5	-1.0
PTBC				i		07 56 37.9	
	comp=Z,498nm,0.4s						
TAMC	Tame, Arauca	1.37	107⇓	iP	Pn	07 56 11.8	+1.2
TAMC				eS	Sn	07 56 33.1	+0.4
TAMC				i		07 56 42.7	
	comp=Z,224nm,0.7s						
OCAC	Ocana	1.40	352⇑	eP	Pn	07 56 11.5	+0.5
OCAC				eS	Sn	07 56 33.4	-0.1
OCAC				i		07 56 36.8	
	comp=Z,466nm,0.2s						
SPBC	San Pablo de B	1.52	219	eP	Pn	07 56 12.1	0.0
SPBC				eS	Sn	07 56 34.6	-0.8
SPBC				i		07 56 42.2	
	comp=Z,682nm,0.2s						
ZARC	Zaragoza, Cauc	1.85	291⇑	eP	Pn	07 56 15.8	+0.2
ZARC				eS	Sn	07 56 41.3	-0.2
ZARC				i		07 56 46.6	
	comp=Z,523nm,0.4s						
NORC	Norcasia	2.16	234	eP	Pn	07 56 19.2	0.0
NORC				eS	Sn	07 56 48.3	+0.3
NORC				i		07 56 53.4	
	comp=Z,345nm,0.2s						
SMLC	San Martn de	2.17	334	eP	Pn	07 56 19.4	+0.2
SMLC				eS	Sn	07 56 48.7	+0.5
SMLC				i		07 56 50.3	
	comp=Z,255nm,0.2s						
CHIC	Chingaza	2.28	196⇓	eP	Pn	07 56 21.2	+0.2
CHIC				eS	Sn	07 56 50.8	-0.5
CHIC				i		07 56 58.8	
	comp=Z,251nm,0.7s						
ROSC	El Rosal	2.32	211	P	Pn	07 56 23.4	+1.9
	comp=Z,68nm,0.3s,baz=253,slow=23,SNR=189						
ROSC				S	Sn	07 56 52.3	+0.2
	comp=Z,196nm,0.3s,baz=130,slow=22,SNR=16						
ROSC	El Rosal	2.32	211⇑	eP	Pn	07 56 23.0	+1.5
ROSC				eS	Sn	07 56 54.2	+2.1
ROSC				i		07 56 56.6	
	comp=Z,525nm,0.8s						
ROSC				i		07 56 58.2	
	comp=Z,644nm,0.8s						
HELC	Santa Helena	2.48	255	eP	Pn	07 56 23.2	-0.2
HELC				eS	Sn	07 56 55.9	+0.4
HELC				i		07 57 01.2	
	comp=Z,273nm,0.5s						
CVER	Cruz Verde, Cu	2.50	203⇓	eP	Pn	07 56 25.8	+2.2
CVER				i		07 57 01.6	
	comp=Z,3μm,0.5s						
UREC	San Jos de Ur	2.56	291⇑	eP	Pn	07 56 23.3	-0.7
UREC				eS	Sn	07 56 54.2	-2.5
UREC				i		07 57 06.2	
	comp=Z,248nm,0.3s						
GUY2C	Guyana, Caldas	2.76	234⇑	eP	Pn	07 56 27.1	+0.2
GUY2C				eS	Sn	07 57 04.6	+3.0
GUY2C				i		07 57 14.7	
	comp=Z,240nm,0.5s						
PTGC	Puerto Gaitan,	2.80	160⇑	iP	Pn	07 56 26.6	-0.4
PTGC				eS	Sn	07 57 00.2	-1.7
PTGC				i		07 57 03.0	
	comp=N,309nm,0.3s						
CBOC	Ciudad Bolivar	3.04	252⇑	eP	Pn	07 56 30.6	+0.5
CBOC				eS	Sn	07 57 06.9	-0.5
CBOC				i		07 57 20.9	
	comp=Z,70nm,0.7s						
DBBC	Dabeiba	3.08	273	eP	Pn	07 56 30.8	+0.3
DBBC				eS	Sn	07 57 07.4	-0.8
DBBC				i		07 57 09.2	
	comp=Z,250nm,0.3s						
CODC	Agustn Codazz	3.09	354⇑	eP	Pn	07 56 30.7	+0.2
CODC				eS	Sn	07 57 08.9	+0.5
CODC				i		07 57 19.6	
	comp=Z,88nm,0.6s						
SDV	Santo Domingo	3.19	50	P	Pn	07 56 32.8	+0.9
	comp=Z,42nm,0.3s,baz=215,slow=10,SNR=633						
SDV				S	Sn	07 57 09.7	-1.1
	comp=Z,28nm,0.3s,baz=45,slow=15,SNR=17						
ARGC	Ariguani, Magd	3.20	340⇓	eP	Pn	07 56 33.4	+1.5
ARGC				eS	Sn	07 57 12.5	+1.6
ARGC				i		07 57 22.9	
	comp=Z,88nm,0.3s						
PRAC	Prado	3.57	210	e	Pn	07 56 36.6	-0.2
PRAC				eP	Pn	07 56 36.6	-0.2
PRAC				eS	Sn	07 57 18.5	-1.0
PRAC				i		07 57 23.1	
	comp=Z,262nm,0.3s						
ORTC	Ortega, Tolima	3.60	216	eP	Pn	07 56 37.4	+0.2
ORTC				eS	Sn	07 57 20.3	+0.1
ORTC				i		07 57 24.4	
	comp=Z,124nm,0.8s						
SJCC	San Jacinto, C	3.66	326⇑	eP	Pn	07 56 37.6	-0.2
SJCC				eS	Sn	07 57 18.7	-2.8
SJCC				i		07 57 31.8	
	comp=Z,64nm,0.5s						
PLMC	San Jos del P	3.69	239⇓	eP	Pn	07 56 39.0	+0.7
PLMC				eS	Sn	07 57 19.9	-2.4
PLMC				i		07 57 25.5	
	comp=Z,112nm,0.2s						
YOTC	Yotoco, Valle	4.29	229⇓	eP	Pn	07 56 45.8	-0.3
YOTC				i		07 57 47.7	
	comp=Z,20nm,1.4s						
GUVC	San Jose del G	4.30	173	eP	Pn	07 56 45.9	-0.3
GUVC				eS	Sn	07 57 35.8	-0.5
GUVC				i		07 57 41.2	
	comp=Z,156nm,0.3s						
GUVC				i		07 57 41.4	
	comp=Z,153nm,0.5s						
PTAC	Punta Ardita,	4.67	274	eP	Pn	07 56 51.0	0.0
PTAC				eS	Sn	07 57 42.6	-2.3
PTAC				i		07 57 44.3	
	comp=Z,80nm,0.3s						
MACC	Macarena, Meta	4.72	189⇑	eP	Pn	07 56 50.4	-1.3
MACC				eS	Sn	07 57 42.0	-4.3
MACC				i		07 57 44.6	
	comp=Z,62nm,1.1s						
URIC	Uribia, Colomb	4.95	13	eP	Pn	07 56 54.1	-0.6
URIC				eS	Sn	07 57 48.2	-3.5
URIC				i		07 57 54.3	
	comp=Z,19nm,0.6s						
BAUV	El Baul	5.44	67	eP	Pn	07 56 59.5	-1.7
BAUV	El Baul	5.44	67	eS	Sn	07 57 58.5	-4.7
LPAZ	La Paz	23.50	168	P	P	08 00 37.9	-0.5
	comp=Z,0.7nm,0.8s,baz=342,slow=6.4,SNR=2.2						
TXAR	Lajitas Array	36.45	312	P	P	08 02 32.8	+0.9
	comp=Z,0.3nm,0.4s,baz=128,slow=8.8,SNR=7.5						
ULM	Lac du Bonnet	47.27	340	P	P	08 03 59.2	0.0
	comp=Z,1.2nm,0.4s,baz=144,slow=7.0,SNR=5.1						
PDAR	Pinedale Array	48.06	324	P	P	08 04 06.2	+0.4
	comp=Z,0.3nm,0.5s,baz=132,slow=8.1,SNR=3.8						
SCHQ	Schefferville	48.12	5	P	P	08 04 06.7	+1.0
	comp=Z,2.0nm,0.8s,baz=190,slow=6.1,SNR=3.9						
YKA	Yellowknife Ar	63.25	340	P	P	08 05 53.7	+0.4
	comp=Z,0.9nm,0.5s,baz=134,slow=6.6,SNR=38						
ASAR	Alice Springs	149.13	234	PKPbc	PKPbc	08 15 11.6	-1.0
	comp=Z,0.4nm,0.7s,baz=111,slow=4.0,SNR=5.2						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	08 15 14.6	-1.1
	comp=Z,0.2nm,0.4s,baz=108,slow=2.9,SNR=6.2						

WEL 18 08:14:37.8±0.5, 35°S±4°×17°8W±°, h107km±20km, M5.1/71, mB5.6/60, ML5.9/7, MLv5.7/71, Mw(mB)5.1/60
BJI 18 08:14:39.1±0.0, 35°.02S×179°.32W, h19km, mB5.7/13, mb5.2/17, Ms5.3/10, Ms7 5.0/1
MOS 18 08:14:41.7±1.0, 34°.72S×179°.50W, h26km, mb5.5/28, MS5.0/8, Error ellipse: s-maj=10.1km s-min=8.1km az=97.7
NEIC 18 08:14:42.5±1.4, 34°.80S±0°.06×179°.4W±0°.1, h27km±3km, mb5.4/78, Ms_20 5.5/334, Mwc5.6(GCMT), Error ellipse: s-maj=13.9km s-min=7.4km az=114.0
IDC 18 08:14:44.1±1.4, 34°.74S×179°.50W, h33km±9km, mb4.8/23, mb1 4.8/25, mb1mx4.7/38, mbtmp5.0/25, ML4.5/2, MS4.8/16, Ms1 4.8/16, ms1mx4.7/26, Error ellipse: s-maj=11.0km s-min=10.2km az=25.0
GCMT 18 08:14:47.5±0.1, 34°.82S±0°.01×178°.95W±0°.01, h17km, MW5.5/145, Moment Tensor Solution. s122,c221; s145,c259; Duration: 1.4s Moment tensor: Scale 10^{17} Nm; M_{rr}1.39±.03; $M_{\theta\theta}$-0.26±.02; $M_{\phi\phi}$-1.13±.02; $M_{r\theta}$0.47±.04; $M_{\theta\phi}$-0.49±.01; $M_{\phi r}$1.77±.07; Best double couple: $M_0$2.28600×10^{17} NP1:ϕ_s211.00000°,δ19.00000°, λ103.00000°. NP2:ϕ_s17.00000°,δ72.00000°,λ86.00000°. Principal axes: T 2.3180, Plg63.0000°, Azm280.0000°; N -0.0650, Plg4.0000°, Azm18.0000°; P -2.2540, Plg27.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC 18 08:14:48, 34°.85S×178°.83W, h21km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.58; $M_{\theta\theta}$-0.23; $M_{\phi\phi}$-1.35; $M_{r\theta}$0.35; $M_{\theta\phi}$-0.57; $M_{\phi r}$1.78; Fault plane solution: $M_0$2.41000×10^{17} NP1:ϕ_s211.00000°, δ21.00000°,λ106.00000°. NP2:ϕ_s14.00000°,δ70.00000°, λ84.00000°. Principal axes: T 2.4224, Plg65.0000°, Azm274.0000°; N -0.0247, Plg6.0000°, Azm16.0000°; P -2.3977, Plg24.0000°, Azm109.0000°;
ISC 18 08:14:44.6±0.2, 34°.80S±0°.04×179°.33W±0°.05, h43km, n712, σ1.71/586, mb5.3/83, MS5.3/191, 25C-13D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.35	214		Pn	08 15 32.8	-1.7
MXZ				Sn	Sn	08 16 11.8	-1.1
MXZ	Matakaoa Point	3.35	214	P	Pn	08 15 31.6	-2.8
MXZ				S	Sn	08 16 11.1	-1.9
PKGZ	Pakihiroa	3.72	213	P	Pn	08 15 38.4	-1.2
PKGZ				S	Sn	08 16 21.8	-0.5
HAZ	Te Kaha	3.76	218	P	Pn	08 15 38.9	-1.1
HAZ				S	Sn	08 16 24.8	+1.9
PUZ	Puketiti	3.80	210	P	Pn	08 15 38.8	-1.8
PUZ				S	Sn	08 16 23.0	-1.0
RUGZ	Raukumara Rang	3.97	217	P	Pn	08 15 42.5	-0.6
WHRZ	Whale Island	4.26	223	P	Pn	08 15 47.8	+0.8
TKGZ	Te Karaka	4.28	211	P	Pn	08 15 45.7	-1.5
TKGZ				S	Sn	08 16 34.8	-1.0
MWZ	Matawai	4.34	215	P	Pn	08 15 46.3	-1.7
MWZ				S	Sn	08 16 36.2	-1.1
URZ	Urewera	4.48	219	Pn	Pn	08 15 48.4	-1.6
	94nm,0.3s,baz=46,slow=6.2,SNR=389						
URZ				Sn	Sn	08 16 41.4	+0.6
	62nm,0.3s,baz=11,slow=13,SNR=3.7						
URZ	Urewera	4.48	219		Pn	08 15 48.2	-1.8
URZ				Sn	Sn	08 16 40.3	-0.5
URZ	Urewera	4.48	219	P	Pn	08 15 48.4	-1.6
OPRZ	Ohinepanea	4.50	226	P	Pn	08 15 50.1	-0.1
RAGZ	Rawiri	4.52	214	P	Pn	08 15 49.4	-1.1
MARZ	Manawahe	4.52	224	P	Pn	08 15 50.4	-0.2
RIGZ	Rimuhau	4.54	210	P	Pn	08 15 48.6	-2.3
RIGZ				S	Sn	08 16 41.8	-0.5
EDRZ	Edgecumbe	4.57	223	P	Pn	08 15 52.0	+0.8
TGRZ	Tauranga	4.60	229	P	Pn	08 15 51.6	-0.1
PRGZ	Paritu Road	4.68	208	P	Pn	08 15 50.8	-1.9
LIRZ	Lichensteins R	4.70	226	P	Pn	08 15 55.0	+2.0
MKRZ	Makatiti	4.75	224	P	Pn	08 15 54.4	+0.7
OMRZ	Omania	4.78	225	P	Pn	08 15 54.3	+0.1
SNGZ	Shannon Statio	4.79	213	P	Pn	08 15 52.8	-1.4
TARZ	Mount Tarawera	4.79	223	P	Pn	08 15 54.7	+0.3
KARZ	Kaharoa	4.80	227	P	Pn	08 15 54.5	+0.2
RTZ	Ruatahuna	4.82	217	P	Pn	08 15 54.2	-0.6
MUGZ	Murupara	4.82	219	P	Pn	08 15 54.1	-0.6
KNZ	Kokohu	4.84	209	P	Pn	08 15 51.8	-3.1
RRRZ	Republican Roa	4.86	222	P	Pn	08 15 55.2	-0.1
MHGZ	Mahia Peninsul	4.87	206	P	Pn	08 15 52.8	-2.6
KMRZ	Kaimai	4.88	230	P	Pn	08 15 55.5	+0.1
HLRZ	Highlands Stat	4.89	224	P	Pn	08 15 55.7	0.0
UTU	Utuhina	4.93	226	P	Pn	08 15 57.2	+1.0

HSRZ Hossack Road 4.99 224 P Pn 08 15 57.3 +0.2
RAHZ Arahi 5.01 214 P Pn 08 15 56.6 -0.7
HRRZ Handcock Road 5.03 223 P Pn 08 15 57.6 +0.1
PRRZ Plateau Road 5.04 222 P Pn 08 15 57.0 -0.7
MTHZ Maungataniwha 5.07 216 P Pn 08 15 57.4 -0.8
GRRZ Galatos Road 5.10 225 P Pn 08 15 58.7 +0.2
ALRZ Allen Road 5.11 222 P Pn 08 15 58.3 -0.4
WPRZ Whakapapatarin 5.18 223 P Pn 08 15 59.1 -0.5
MRHZ Matea Rd 5.27 219 P Pn 08 16 00.0 -0.9
NMHZ Naumai 5.28 215 P Pn 08 15 59.6 -1.4
ARHZ Aropaoanui 5.33 212 P Pn 08 15 59.7 -2.0
KUTZ Kaahu Road 5.36 225 P Pn 08 16 02.2 +0.1
WHTZ Whakaora 5.40 223 P Pn 08 16 02.9 +0.3
TLZ Tolley Road 5.42 228 P Pn 08 16 03.3 +0.3
BKZ Black Stump Fm 5.49 216 Pn 08 16 01.8 -2.1
BKZ Sn Sn 08 17 03.5 -2.2
BKZ Black Stump Fm 5.49 216 P Pn 08 16 01.8 -2.1
WATZ Wairara 5.56 224 P Pn 08 16 04.3 -0.5
MCHZ McNeill Hill 5.61 213 P Pn 08 16 03.7 -1.9
CKHZ Cape Kidnapper 5.63 210 P Pn 08 16 02.2 -3.6
RATZ Rangitukua 5.64 223 P Pn 08 16 05.3 -0.7
GLKZ Green Lake 5.65 13 P Pn 08 15 58.1 -8.0
GLKZ S Sn 08 17 02.6 -7.1
RAO Raoul Island 5.66 13 Pn Pn 08 16 00.4 -5.8
78nm,0.3s,baz=81,slow=22,SNR=2.3
RAO Sn Sn 08 17 05.6 -4.4
150nm,0.3s,baz=184,slow=22,SNR=3.3
RAO Raoul Island 5.66 13 Pn Pn 08 16 05.1 -1.1
RAO Sn Sn 08 17 08.1 -1.9
RAO Raoul Island 5.66 13 P Pn 08 16 05.1 -1.1
RAO 08 17 08.1
RIZ Raoul Island 5.67 13 S Sn 08 17 02.9 -7.2
RITZ Rihia Road 5.67 221 P Pn 08 16 06.1 -0.3
KWHZ Kaweka Forest 5.72 215 P Pn 08 16 04.9 -2.3
KATZ Kakaramea 5.76 222 P Pn 08 16 07.5 -0.2
KAHZ Kahuranaki 5.83 210 P Pn 08 16 04.6 -3.9
KRVZ Karewarewa 5.88 222 P Pn 08 16 08.2 -1.0
WTVZ West Tongariro 5.92 222 P Pn 08 16 08.6 -1.2
KRHZ Kereru 5.92 214 P Pn 08 16 07.4 -2.5
BHHZ Black Hill Sta 5.95 217 P Pn 08 16 08.3 -1.9
NGZ Ngauruhoe 5.96 221 P Pn 08 16 09.6 -0.8
HIZ Hauiti 5.96 230 Pn 08 16 09.2 -1.1
HIZ Hauiti 5.96 230 P Pn 08 16 10.3 0.0
TWVZ Taurewa 5.97 223 P Pn 08 16 09.3 -1.3
TUVZ Tukino 5.99 221 P Pn 08 16 09.8 -1.1
PXZ Pawanui 6.03 209 P Pn 08 16 09.9 -1.3
FWVZ Far West T-bar 6.04 221 P Pn 08 16 10.8 -0.7
WHVZ Whangaehu Hut 6.04 221 P Pn 08 16 11.2 -0.4
MOVZ Moawhango 6.04 219 P Pn 08 16 10.4 -1.1
TRVZ Turoa 6.07 221 P Pn 08 16 11.6 -0.5
PKVZ Pokaka 6.18 222 P Pn 08 16 12.9 -0.4
PNHZ Pukenui 6.22 214 P Pn 08 16 10.5 -3.4
WPHZ Waipukurau 6.24 211 P Pn 08 16 10.5 -3.6
PRHZ Porangahau 6.32 209 P Pn 08 16 13.0 -2.3
VRZ Vera Road 6.40 226 P Pn 08 16 16.2 -0.1
TSZ Takapari Road 6.44 214 P Pn 08 16 13.3 -3.7
DVHZ Dannevirke 6.55 212 P Pn 08 16 14.6 -3.8
ANWZ Angora Road 6.55 209 P Pn 08 16 15.0 -3.4
WAZ Wanganui 6.70 221 P Pn 08 16 19.3 -1.2
POWZ Post Office Ro 6.80 213 P Pn 08 16 19.3 -2.5
LREZ Lake Rotokare 6.83 225 P Pn 08 16 21.2 -1.0
BFZ Birch Farm 6.83 210 P Pn 08 16 17.5 -4.7
PRWZ Pori Road 6.84 212 P Pn 08 16 19.0 -3.4
PREZ Palmer Road 6.90 227 P Pn 08 16 26.6 +3.4
PKE Pukeiti 6.91 229 P Pn 08 16 24.9 +1.5
KHEZ Kahui Hut 6.96 228 P Pn 08 16 24.9 +0.9
NBEZ Newall Road No 7.03 229 P Pn 08 16 26.0 +1.0
CPWZ Castlepoint 7.04 209 P Pn 08 16 21.9 -3.2
TIWZ Tintock 7.06 211 P Pn 08 16 22.8 -2.6
MRZ Mangatainoka R 7.10 213 P Pn 08 16 21.7 -4.2
NMEZ Namu Road 7.11 228 P Pn 08 16 28.7 +2.7
TMWZ Te Maipa 7.34 210 P Pn 08 16 23.7 -5.4
OGWZ Otaki Gorge 7.41 214 P Pn 08 16 26.7 -3.5
MTW Mount Morrison 7.54 211 P Pn 08 16 27.7 -4.2
KIW Kapiti Island 7.57 215 P Pn 08 16 28.0 -4.4
TRWZ Traveller 7.66 209 P Pn 08 16 29.4 -4.2
CAW Cannon Point 7.69 213 P Pn 08 16 29.6 -4.4
PAWZ Paruwai Farm 7.76 211 P Pn 08 16 30.1 -4.8
MSWZ Moikau Station 7.86 211 P Pn 08 16 31.0 -5.3
WEL Wellington 7.97 214 P Pn 08 16 29.6 -8.2
PLWZ Palliser 7.99 211 P Pn 08 16 33.1 -5.0
SNZO South Karori 8.02 214 Pn 08 16 36.0 -2.4
SNZO Sn Sn 08 18 02.8 -5.0
BHW Baring Head 8.02 213 P Pn 08 16 34.4 -4.1
TCW Tory Channel 8.14 216 P Pn 08 16 35.2 -5.0
TUWZ Tuamarina 8.47 217 P Pn 08 16 40.7 -4.0
NNZ Nelson 8.60 220 P Pn 08 16 42.2 -4.3
BSWZ Blackbirch Sta 8.72 216 Pn 08 16 43.4 -4.8
BSWZ Blackbirch Sta 8.72 216 P Pn 08 16 44.2 -3.9
THZ Tophouse 9.24 219 Pn 08 16 50.4 -4.9
KHZ Kahutara 9.43 214 Pn 08 16 52.7 -5.0
KHZ Kahutara 9.43 214 P Pn 08 16 52.4 -5.3
DSZ Denniston Nort 9.82 223 P Pn 08 16 59.3 -4.0
GVZ Greta Valley S 10.09 214 P Pn 08 17 03.0 -3.8
LTZ Lake Taylor 10.31 217 P Pn 08 17 04.1 -5.8
OKCZ Okains Bay 10.68 211 P Pn 08 17 09.0 -5.9
INZ Inchbonnie 10.69 220 P Pn 08 17 11.9 -3.1
OXZ Oxford 10.83 216 P Pn 08 17 11.6 -5.4
MQZ McQueen's Vall 10.84 213 P Pn 08 17 10.4 -6.7
AKCZ Akaroa Harbour 10.86 211 P Pn 08 17 11.2 -6.2
RPZ Rata Peaks 11.60 217 Pn Pn 08 17 22.3 -5.2
7.6nm,0.3s,baz=33,slow=4.2,SNR=20
RPZ Sn Sn 08 19 24.5 -11
9.7nm,0.3s,baz=353,slow=22,SNR=16
RPZ Rata Peaks 11.60 217 Pn Pn 08 17 22.9 -4.6
RPZ Rata Peaks 11.60 217 P Pn 08 17 23.8 -3.7
FOZ Fox Glacier 12.11 221 P Pn 08 17 30.2 -4.2
LBZ Lake Benmore 12.52 217 P Pn 08 17 35.0 -5.1
ODZ Otahua Downs 12.79 214 P Pn 08 17 38.4 -5.3
JCZ Jackson Bay 13.03 221 P Pn 08 17 43.1 -3.9
WKZ Wanaka 13.42 218 P Pn 08 17 49.5 -2.9
HHSZ Highcliff Hill 13.46 212 P Pn 08 17 49.8 -3.0
MSZ Milford Sound 13.88 221 P Pn 08 17 56.3 -2.4
TUZ Tuapeka 13.94 214 P Pn 08 17 55.8 -3.6
MLZ Mavora Lakes 14.25 218 Pn 08 18 01.1 -2.6
MLZ Mavora Lakes 14.25 218 P Pn 08 18 00.7 -2.9
SYZ Scrubby Hill 14.61 213 P Pn 08 18 04.7 -3.6
APZ The Paps 15.35 215 P Pn 08 18 15.1 -3.2
MSVF Nonsavu 17.16 352 P Pn 08 18 39.6 -1.8
MSVF Nonsavu 17.16 352 *i* P Pn 08 18 39.9 -1.5
MSVF pmax pmax
comp=Z,115nm,1.1s
NIUE Niue 17.75 30 P Pn 08 18 47.4 -1.1
NIUE IAmb IAmb 08 19 18.3
comp=Z,513nm,1.6s
DZM Mont Dzumac 17.79 312 P Pn 08 18 48.6 -0.5
comp=Z,0.4nm,0.3s,baz=132,slow=12,SNR=14
DZM LR LR 08 24 48.6
comp=Z,14μm,18.2s,baz=133,slow=34
NOUC Port Laguerre 17.85 311 P Pn 08 18 51.2 +1.1
NOUC IAmb IAmb 08 19 04.0
comp=Z,249nm,1.2s
RAR Rarotonga 21.89 57 P P 08 19 30.9 -3.1
comp=Z,25nm,0.9s,baz=249,slow=6.5,SNR=3.1
RAR LR LR 08 28 55.7
comp=Z,1μm,18.3s,baz=228,slow=39
RAR Rarotonga 21.89 57 P P 08 19 31.7 -2.3
RAR IAmb IAmb 08 19 36.6
comp=Z,133nm,1.6s
RAR Rarotonga 21.89 57 P P 08 19 31.7 -2.3
RAR pmax pmax
comp=Z,133nm,1.6s
AFI Afiamalu 21.89 20 P P 08 19 32.7 -1.5
comp=Z,60nm,0.9s,baz=12,slow=15,SNR=5.3
AFI S S 08 23 35.9 +2.1
comp=Z,36nm,0.8s,baz=287,slow=11,SNR=3.9
AFI Afiamalu 21.89 20 P P 08 19 32.4 -1.7
AFI IAmb IAmb 08 20 08.1
comp=Z,110nm,1.1s
SANVU Saraoutou 22.76 325 P P 08 19 42.8 -0.5
SANVU IAmb IAmb 08 20 02.2
comp=Z,136nm,0.8s
ARMA Armidale 24.81 272 P P 08 20 03.1 +0.3
baz=25,SNR=17
ARMA Armidale 24.81 272 P P 08 20 02.8 0.0
MCQ Macquarie Isla 24.84 211 P P 08 20 01.6 -1.1
MCQ Macquarie Isla 24.84 211 P P 08 20 01.6 -1.1
MCQ pmax pmax
comp=Z,478nm,1.4s
CNB Canberra Magne 25.58 260 P P 08 20 10.1 +0.3
baz=26,SNR=9.1

CAN Canberra 25.87 260 P P 08 20 12.4 0.0
CAN Canberra 25.87 260 P P 08 20 12.4 0.0
CAN pmax pmax
comp=Z,36nm,1.2s
CAN MLR MLR
comp=Z,4μm,18.0s
YNG Young 26.53 262 P P 08 20 18.9 +0.7
baz=27,SNR=5.1
TAU Tasmania Unive 27.07 243 P P 08 20 22.3 -0.7
TAU Tasmania Unive 27.07 243 P P 08 20 22.3 -0.7
TAU pmax pmax
comp=Z,49nm,1.2s
TAU MLR MLR
comp=Z,3μm,22.0s
MOO Moorlands 27.11 244 P P 08 20 24.6 +1.1
baz=27,SNR=5.6
EIDS Eidsvold 27.19 282 P P 08 20 25.0 +0.7
baz=27,SNR=9.3
EIDS Eidsvold 27.19 282 P 08 20 24.5 +0.2
TBI Tubuai 28.39 74 *e*LR LR 08 27 45.8
comp=Z,4μm,28.2s,baz=237
TBI Tubuai 28.39 74 *e*T T 08 49 40.9
comp=Z,8.0nm,0.4s
TOO Toolangi 28.43 254 P P 08 20 35.1 -0.1
TOO IAmb IAmb 08 20 53.0
comp=Z,85nm,1.7s
TOO Toolangi 28.43 254 P P 08 20 35.1 -0.1
TOO pmax pmax
comp=Z,85nm,1.7s
TOO MLR MLR
comp=Z,3μm,18.0s
RMQ Roma 28.59 278 P P 08 20 37.6 +0.8
baz=29,SNR=37
CMSA Cobar Meteorol 29.37 266 P P 08 20 44.0 +0.4
baz=29,SNR=52
PAE Paea 31.51 65 *e*T T 08 52 58.6
comp=Z,1.3nm,0.2s
PPT2 Papeete2 31.56 65 *e*S S 08 26 10.2 +1.2
comp=Z,212nm,27.0s
PPT2 *e*LQ LQ 08 27 31.6
comp=Z,2μm,23.5s
PPT2 *e*LR LR 08 29 09.3
comp=Z,4μm,26.2s,baz=229
PPT2 Papeete2 31.56 65 *e*T T 08 53 37.4
comp=Z,2.7nm,0.4s
PPT Papeete 31.57 65 LR LR 08 30 15.6
comp=Z,1μm,20.9s,baz=216,slow=29
HNR Honiara 31.58 318 P P 08 21 03.6 +0.4
comp=Z,94nm,0.8s,baz=177,slow=15,SNR=1.7
HNR LR LR 08 31 38.8
comp=Z,1μm,21.7s,baz=174,slow=32
HNR Honiara 31.58 318 P P 08 21 02.9 -0.3
QLP Quilpie 32.25 275 P P 08 21 09.6 +0.6
baz=32,SNR=14
STKA Stephens Creek 32.63 264 P P 08 21 13.2 +0.8
comp=Z,21nm,0.9s,baz=106,slow=9.4,SNR=11
STKA PcP PcP 08 23 57.3 -0.4
comp=Z,17nm,0.8s,baz=56,slow=2.3,SNR=8.6
STKA ScP ScP 08 27 40.1 +2.0
comp=Z,5.9nm,1.1s,baz=90,slow=10,SNR=3.9
STKA LR LR 08 33 48.6
comp=Z,3μm,19.4s,baz=98,slow=35
STKA Stephens Creek 32.63 264 P P 08 21 12.8 +0.4
STKA PcP 08 23 57.8 +0.1
STKA Stephens Creek 32.63 264 P P 08 21 12.8 +0.4
STKA 08 23 57.8
STKA pmax pmax
comp=Z,7.0nm,1.0s
STKA MLR MLR
comp=Z,700nm,20.0s
CTA Charters Tower 33.69 287 P P 08 21 22.6 +0.9
comp=Z,100nm,0.8s,baz=116,slow=11,SNR=82
CTA ScP ScP 08 27 43.3 +1.3
comp=Z,5.7nm,0.8s,baz=225,slow=1.4,SNR=5.3
CTA LR LR 08 34 24.0
comp=Z,1μm,18.8s,baz=125,slow=35
CTAO Charters Tower 33.69 287 P P 08 21 23.6 +1.9
CTAO pmax pmax
comp=Z,162nm,1.1s
HTT Hallett 34.41 260 P P 08 21 28.1 +0.1
baz=34,SNR=6.9
MTSU Mount Surprise 36.29 288 P P 08 21 45.8 +1.7
baz=36,SNR=43
BBOO Buckleboo 36.89 260 P P 08 21 49.5 +0.4
baz=37,SNR=10
BBOO Buckleboo 36.89 260 P P 08 21 48.6 -0.5
BBOO IAmb IAmb 08 21 50.5
comp=Z,80nm,1.1s
BBOO PcP 08 24 09.3 -0.8
QIS Mount Isa 38.76 281 P P 08 22 05.5 +0.5
baz=39,SNR=40
COEN Coen 39.64 292 P P 08 22 13.7 +1.3
baz=40,SNR=6.4
COEN Coen 39.64 292 P P 08 22 12.1 -0.3
COEN IAmb IAmb 08 22 14.8
comp=Z,85nm,0.9s
COEN IAMs_20 IAMs_20 08 38 14.8
comp=Z,6μm,18.0s
PMG Port Moresby 39.71 302 P P 08 22 12.0 -1.0
comp=Z,15nm,0.6s,baz=80,slow=6.2,SNR=4.6
PMG LR LR 08 36 34.2
comp=Z,5μm,19.7s,baz=138,slow=33
PMG Port Moresby 39.71 302 P P 08 22 12.0 -1.0
PMG IAmb IAmb 08 22 32.9
comp=Z,56nm,1.2s
PMG Port Moresby 39.71 302 IAMs_20 IAMs_20 08 36 12.8
comp=Z,5μm,20.0s
PMG Port Moresby 39.71 302 P P 08 22 12.0 -1.0
KRVT Keravat (AS076 40.31 312 P P 08 22 16.4 -1.6
comp=Z,722nm,1.0s,baz=307,slow=5.1,SNR=7.4
KRVT LR LR 08 37 26.9
comp=Z,1μm,20.6s,baz=135,slow=34
RABL Rabaul 40.31 313 P P 08 22 17.4 -0.6
AS31 Alice Springs 41.96 272 P P 08 22 30.8 -0.7
ASAR Alice Springs 41.96 272 P P 08 22 31.4 -0.1
comp=Z,90nm,0.8s,baz=115,slow=7.7,SNR=721
ASAR ScP ScP 08 28 12.3 -1.0
comp=Z,1.6nm,0.8s,baz=133,slow=4.1,SNR=5.4
ASAR S S 08 28 45.8 -1.5
comp=Z,4.5nm,0.8s,baz=119,slow=15,SNR=9.9
ASAR LR LR 08 40 40.2
comp=Z,4μm,18.4s,baz=118,slow=37
WR0 Warramunga Arr 43.17 278 P P 08 22 40.9 -0.5
WR0 IAmb IAmb 08 22 42.4
comp=Z,86nm,0.9s
WR0 IAMs_20 IAMs_20 08 41 13.5
comp=Z,4μm,18.0s
WR9 Warramunga Arr 43.20 278 IAMs_20 IAMs_20 08 41 23.1
comp=Z,5μm,18.0s
WR8 Warramunga Arr 43.21 278 IAMs_20 IAMs_20 08 41 14.4
comp=Z,4μm,18.0s
WR7 Warramunga Arr 43.23 278 IAMs_20 IAMs_20 08 41 06.9
comp=Z,3μm,18.0s
WR6 Warramunga Arr 43.25 278 IAMs_20 IAMs_20 08 41 15.4
comp=Z,4μm,18.0s
WR5 Warramunga Arr 43.27 278 IAMs_20 IAMs_20 08 41 16.9
comp=Z,4μm,18.0s
WR4 Warramunga Arr 43.29 278 IAMs_20 IAMs_20 08 41 25.5
comp=Z,5μm,18.0s
WC3 Warramunga Arr 43.31 278 IAMs_20 IAMs_20 08 41 18.1
comp=Z,4μm,18.0s
WR2 Warramunga Arr 43.33 278 IAMs_20 IAMs_20 08 41 26.5
comp=Z,4μm,18.0s
WB1 Warramunga Ar. 43.33 278 IAMs_20 IAMs_20 08 41 35.7
comp=Z,5μm,18.0s
WB2 Warramunga Arr 43.34 278 IAMs_20 IAMs_20 08 41 18.8
comp=Z,4μm,18.0s
WC4 Warramunga Arr 43.34 278 IAMs_20 IAMs_20 08 41 26.8
comp=Z,5μm,18.0s
WB3 Warramunga Arr 43.34 278 IAMs_20 IAMs_20 08 41 18.9
comp=Z,4μm,18.0s
WRAB Tennant Creek 43.34 278 P P 08 22 42.2 -0.6
WRAB IAmb IAmb 08 22 43.6
comp=Z,99nm,0.7s
WRAB Tennant Creek 43.34 278 IAMs_20 IAMs_20 08 41 27.4
comp=Z,5μm,18.0s
WRAB Tennant Creek 43.34 278*c* *i*P P 08 22 42.1 -0.6
WRAB pmax pmax
comp=Z,30nm,0.6s
WR1 Warramunga Arr 43.35 278 IAMs_20 IAMs_20 08 41 28.0
comp=Z,4μm,18.0s
WRA Warramunga Arr 43.35 278 P P 08 22 42.4 -0.4
comp=Z,95nm,0.8s,baz=120,slow=7.5,SNR=182
WRA ScP ScP 08 28 18.0 -0.9
comp=Z,1.4nm,1.0s,baz=116,slow=3.8,SNR=4.0
WRA S S 08 29 05.8 -2.0
comp=Z,4.0nm,1.0s,baz=118,slow=14,SNR=5.2

WRA LR LR 08 41 20.9
comp=Z,3μm,18.4s,baz=130,slow=37
WC1 Warramunga Arr 43.35 278 IAMs_20 IAMs_20 08 41 27.3
comp=Z,5μm,18.0s
WB5 Warramunga Arr 43.36 278 IAMs_20 IAMs_20 08 41 27.3
comp=Z,5μm,18.0s
WB7 Warramunga Arr 43.36 278 IAMs_20 IAMs_20 08 41 28.9
comp=Z,4μm,18.0s
WB8 Warramunga Arr 43.38 278 IAMs_20 IAMs_20 08 41 28.8
comp=Z,5μm,18.0s
WB9 Warramunga Arr 43.38 278 IAMs_20 IAMs_20 08 41 21.1
comp=Z,4μm,18.0s
WB0 Warramunga Arr 43.39 278 IAmb IAmb 08 22 44.0
comp=Z,114nm,0.8s
WB0 IAMs_20 IAMs_20 08 41 20.2
comp=Z,4μm,18.0s
SBA Scott Base 43.57 184 P P 08 22 45.0 +1.2
SBA Scott Base 43.57 184 P P 08 22 45.0 +1.2
SBA pmax pmax
comp=Z,622nm,1.9s
VNDA Vanda 43.61 186 P P 08 22 46.9 +2.7
comp=Z,2.6nm,0.7s,baz=194,slow=12,SNR=1.8
FORT Forrest 44.00 260 P P 08 22 47.6 -0.3
baz=44,SNR=86
FORT Forrest 44.00 260 P P 08 22 47.3 -0.6
FORT IAMs_20 IAMs_20 08 40 42.0
comp=Z,3μm,18.0s
TAOE Nuku Hiva Isla 44.17 64 *e*S S 08 29 22.4 +2.5
comp=Z,374nm,24.9s
TAOE *e*LR LR 08 35 00.4
comp=Z,2μm,27.0s
WRKA Warakurna 45.98 267 P P 08 23 02.6 -1.2
baz=46,SNR=18
KDU Kakadu 48.75 285 P P 08 23 24.8 -0.5
baz=49,SNR=11
KMBL Kambalda 48.77 257 P P 08 23 24.6 -0.7
baz=49,SNR=4.5
JAY Jayapura 49.09 302 P P 08 23 27.1 -0.9
comp=Z,59nm,1.0s,baz=4.7,slow=6.2,SNR=6.5
JAY LR LR 08 41 58.1
comp=Z,1μm,21.4s,baz=170,slow=33
GENI Genyem 49.41 301 P P 08 23 29.5 -0.9
comp=Z,80nm,1.1s
KNRA Kununurra 50.09 279 P P 08 23 35.6 +0.1
baz=50,SNR=9.9
KNRA Kununurra 50.09 279 P P 08 23 35.1 -0.4
KNRA IAmb IAmb 08 23 36.5
comp=Z,72nm,0.9s
KNRA IAMs_20 IAMs_20 08 45 20.5
comp=Z,3μm,18.0s
CASY Casey 50.75 209 P P 08 23 40.1 +0.3
CASY IAmb IAmb 08 23 42.0
comp=Z,62nm,0.8s
FITZ Fitzroy Crossi 51.39 274 P P 08 23 45.4 +0.1
baz=52,SNR=12
FITZ Fitzroy Crossi 51.39 274 P P 08 23 44.4 -0.9
comp=Z,34nm,0.8s,baz=154,slow=8.2,SNR=28
FITZ Fitzroy Crossi 51.39 274 P P 08 23 44.9 -0.4
FITZ IAmb IAmb 08 23 46.3
comp=Z,45nm,0.9s
FITZ IAMs_20 IAMs_20 08 45 48.7
comp=Z,4μm,18.0s
NWAO Narrogin (SRO) 51.91 253 P P 08 23 48.0 -1.1
baz=52,SNR=7.3
NWAO Narrogin (SRO) 51.91 253 P P 08 23 45.4 -3.6
comp=Z,12nm,0.6s,baz=119,slow=5.7,SNR=15
NWAO LR LR 08 44 34.6
comp=Z,646nm,21.0s,baz=120,slow=35
NWAO Narrogin (SRO) 51.91 253 P P 08 23 48.1 -1.0
NWAO IAmb IAmb 08 23 49.0
comp=Z,57nm,1.6s
NWAO Narrogin (SRO) 51.91 253 P P 08 23 48.1 -1.0
NWAO pmax pmax
comp=Z,57nm,1.6s
KLBR Kellerberrin 51.98 255 P P 08 23 48.6 -1.0
baz=52,SNR=22
SAUI Saumlaki 52.47 289 IAMs_20 IAMs_20 08 46 48.9
comp=Z,5μm,18.0s
MUN Mundaring 53.06 254 P P 08 23 56.8 -0.8
baz=53,SNR=8.1
BLDU Ballidu 53.17 255 P P 08 23 56.7 -1.8
baz=53,SNR=4.7
MEEK Meekatharra 53.23 261 P P 08 23 57.5 -1.5
baz=53,SNR=21
MORW Morawa 54.32 257 P P 08 24 05.7 -1.1
baz=54,SNR=9.8
MORW Morawa 54.32 257 P P 08 24 05.8 -1.1
MORW IAmb IAmb 08 24 07.3
comp=Z,43nm,1.2s
PSAB3 Pilbara Seismi 54.45 267 IAMs_20 IAMs_20 08 46 23.5
comp=Z,2μm,20.0s
PSAA3 Pilbara Seismi 54.46 267 IAMs_20 IAMs_20 08 50 10.7
comp=Z,3μm,18.0s
PSAC3 Pilbara Seismi 54.46 267 IAMs_20 IAMs_20 08 50 51.7
comp=Z,2μm,18.0s
PSA00 Pilbara Seismi 54.47 267 P P 08 24 06.8 -1.2
PSA00 IAmb IAmb 08 24 07.8
comp=Z,36nm,0.8s
PSA00 IAMs_20 IAMs_20 08 50 50.9
comp=Z,2μm,18.0s
PSAA2 Pilbara Seismi 54.48 267 IAMs_20 IAMs_20 08 48 45.0
comp=Z,2μm,18.0s
PSAA1 Pilbara Seismi 54.48 267 IAMs_20 IAMs_20 08 50 51.1
comp=Z,2μm,18.0s
PSAB1 Pilbara Seismi 54.49 267 IAMs_20 IAMs_20 08 50 36.5
comp=Z,2μm,18.0s
PSAD1 Pilbara Seismi 54.54 267 IAMs_20 IAMs_20 08 50 08.7
comp=Z,2μm,19.0s
MBWA Marble Bar 54.76 267 IAMs_20 IAMs_20 08 50 12.6
comp=Z,2μm,18.0s
FAKI Fak Fak 54.96 294 P P 08 24 10.8 -0.8
QSPA South Pole Qui 55.32 180 P P 08 24 14.4 +0.7
comp=Z,20nm,0.8s,baz=26,slow=1.1,SNR=101
QSPA South Pole Qui 55.32 180 P P 08 24 14.7 +1.0
QSPA IAmb IAmb 08 24 27.7
comp=Z,99nm,1.2s
SOEI Soe 57.01 282 P P 08 24 25.1 -1.3
comp=Z,100nm,0.9s
SOEI pP pP 08 24 38.2 +0.6
comp=Z,100nm,0.9s
SOEI Soe 57.01 282 P P 08 24 26.2 -0.2
SOEI IAMs_20 IAMs_20 08 49 13.3
comp=Z,3μm,20.0s
SWI Sorong 57.05 295 P P 08 24 26.1 -0.5
comp=Z,2μmcomp=Z,44nm,1.5s
SWI Sorong 57.05 295 P P 08 24 26.3 -0.3
SWI pmax pmax
comp=Z,43nm,2.0s
GIRL Giralia 58.57 263 P P 08 24 37.5 +0.3
baz=59,SNR=6.3
GIRL Giralia 58.57 263 P P 08 24 37.0 -0.2
GIRL IAMs_20 IAMs_20 08 49 49.8
comp=Z,4μm,19.0s
HMH Humu'ula Sheep 58.66 27 P P 08 24 38.9 +0.9
MMRI Maumere 59.29 281 P P 08 24 41.8 -0.4
comp=Z,4μmcomp=Z,220nm,1.2s
MMRI Maumere 59.29 281 P P 08 24 41.8 -0.4
MMRI IAMs_20 IAMs_20 08 51 37.3
comp=Z,2μm,19.0s
HLK Haleakala 59.45 25 P P 08 24 43.6 +0.2
SANI Sanana 60.29 290 P P 08 24 48.4 -0.7
KAPI Kappang 63.40 283 P P 08 25 09.1 -0.9
KAPI IAmb IAmb 08 25 22.6
comp=Z,43nm,1.2s
KAPI Kappang 63.40 283 P P 08 25 09.1 -0.9
KAPI pmax pmax
comp=Z,43nm,1.2s
KAPI MLR MLR
comp=Z,1μm,18.0s
JAGI Jajag, Banyuwa 65.95 277 P P 08 25 25.7 -1.0
JAGI IAmb IAmb 08 25 26.4
comp=Z,28nm,0.8s
MAW Mawson 67.81 201 P P 08 25 41.7 +4.1
comp=Z,32nm,1.1s,baz=90,slow=5.2,SNR=4.2
MAW Mawson 67.81 201 P P 08 25 38.7 +1.1
MAW IAmb IAmb 08 25 52.8
comp=Z,37nm,1.8s
MAW Mawson 67.81 201 P P 08 25 38.7 +1.1
MAW pmax pmax
comp=Z,37nm,1.8s
BKB Balikpapan 67.91 285 IAMs_20 IAMs_20 08 56 56.3
comp=Z,1μm,18.0s
PMSA Palmer Station 68.73 155 P P 08 25 44.1 +0.6
PMSA IAmb IAmb 08 26 57.5
comp=Z,48nm,0.9s
UGM Wanagama 69.23 275 IAMs_20 IAMs_20 08 58 40.4
comp=Z,2μm,18.0s

CISI Cisompet, Garu 71.65 274 P P 08 26 01.2 -1.0
CISI IAmb IAmb 08 26 25.3
comp=Z,63nm,1.1s
CISI IAMs_20 IAMs_20 08 59 17.8
comp=Z,1μm,18.0s
LEM Lembang 72.22 274 P P 08 26 05.3 -0.5
LEM pmax pmax
comp=Z,46nm,1.2s
SYO Syowa Base 72.58 194⇓ iP P 08 26 05.4 -1.4
SYO Syowa Base 72.58 194⇓ ipP pP 08 26 13.0 -5.1
SYO Syowa Base 72.58 194⇓ isP sP 08 26 16.6 -5.9
KKM Kota Kinabalu 72.93 290 P P 08 26 08.6 -1.3
KKM IAmb IAmb 08 26 09.6
comp=Z,34nm,1.1s
GO09 Cerro Castillo 73.08 141 P P 08 26 10.8 +0.7
GO09 IAmb IAmb 08 26 15.4
comp=Z,66nm,1.3s
SNAA Sanae 73.79 179 P P 08 26 14.9 +0.8
SNAA Sanae 73.79 179 P P 08 26 14.4 +0.4
comp=Z,12nm,1.0s,baz=225,slow=5.6,SNR=7.3
SNAA Sanae 73.79 179 P P 08 26 14.2 +0.1
SNAA IAmb IAmb 08 26 26.2
comp=Z,80nm,1.3s
SNAA Sanae 73.79 179 i P P 08 26 13.3 -0.8
SBUM Sibu 73.86 285 P P 08 26 14.4 -0.9
VNA3 Neumayer Olymp 73.99 177 P P 08 26 15.8 +0.6
VNA2 Neumayer--Watz 74.41 177 P P 08 26 18.6 +1.0
baz=175,slow=6.6
NVL N'lazarevskaya 74.42 184 eP P 08 26 20.9 +3.3
NVL eS S 08 35 47.6 -1.1
NVL eSSS SSS 08 44 00.0
NVL pmax pmax
comp=Z,62nm,1.4s
KSM Kuching 74.81 283 P P 08 26 19.9 -0.9
MNAI Manna 77.44 273 IAMs_20 IAMs_20 09 00 02.6
comp=Z,1μm,22.0s
COCO West Island 78.13 263 IAMs_20 IAMs_20 09 05 12.2
comp=Z,1μm,18.0s
MYKOM Kota Tinggi 80.22 279 IAMs_20 IAMs_20 09 04 55.9
comp=Z,1μm,19.0s
PLCA Paso Flores 80.33 133 P P 08 26 52.4 +1.0
comp=Z,5.2nm,0.9s,baz=253,slow=4.6,SNR=10
PLCA LR LR 08 57 26.0
comp=Z,503nm,18.2s,baz=260,slow=32
PLCA Paso Flores 80.33 133 P 08 26 51.8 +0.4
PLCA Paso Flores 80.33 133 P P 08 26 51.8 +0.4
PLCA pmax pmax
comp=Z,22nm,1.5s
MJAR Matsushiro Arr 81.25 327 P P 08 26 54.7 -1.3
comp=Z,3.2nm,0.8s,baz=146,slow=6.4,SNR=6.2
MJAR LR LR 09 01 48.2
comp=Z,196nm,19.2s,baz=185,slow=35
MAJO Matsushiro 81.25 327 i P P 08 26 53.1 -2.9
MAJO pmax pmax
comp=Z,8.0nm,1.0s
BKNI Bangkinang 81.67 276 P P 08 26 57.0 -1.7
BKNI IAMs_20 IAMs_20 09 05 16.0
comp=Z,1μm,20.0s
GO05 Huala 82.97 128 IAMs_20 IAMs_20 08 59 32.1
comp=Z,964nm,18.0s
QZH Quanzhou 83.59 306⇑ iP P 08 27 11.3 +2.9
IPM Ipoh 84.06 280 IAMs_20 IAMs_20 09 09 11.8
comp=Z,943nm,18.0s
RPSI Rantau Prapat 84.75 277 P P 08 27 12.6 -2.1
RPSI IAmb IAmb 08 27 13.7
comp=Z,32nm,1.1s
RPSI IAMs_20 IAMs_20 09 04 07.8
comp=Z,2μm,22.0s
PSI Prapat 84.81 277 P P 08 27 12.6 -2.5
PSI pmax pmax
comp=Z,32nm,1.1s
PSI MLR MLR
comp=Z,2μm,22.0s
ROC1 El Roble 84.81 127 P P 08 27 15.4 +0.3
PEL Peldehue 84.93 127 P P 08 27 14.8 -0.6
PEL IAmb IAmb 08 27 16.8
comp=Z,23nm,0.9s
PEL Peldehue 84.93 127 P P 08 27 14.8 -0.6
PEL pmax pmax
comp=Z,23nm,0.9s
QIZ Qiongzhong 85.90 296 P P 08 27 19.3 -0.9
QIZ S S 08 37 52.3 +1.7
QIZ pmax pmax
comp=Z,24nm,2.3s
QIZ LR LR
comp=Z,270nm,17.5s
QIZ LR LR
comp=Z,340nm,18.3s
KIWB Kanaga Island 86.31 1 P P 08 27 22.0 +0.6
ADK Adak 86.35 2 P P 08 27 22.4 +0.8
ADK Adak 86.35 2 P P 08 27 22.4 +0.8
ADK pmax pmax
comp=Z,407nm,1.7s
GO04 Tololo Observa 86.70 125 P P 08 27 23.6 -0.9
GO04 IAmb IAmb 08 27 42.5
comp=Z,22nm,1.3s
ATKA Atka Island 86.76 3 P P 08 27 24.1 +0.5
UBPT Khong Chiam 86.90 291 P P 08 27 24.8 -0.3
UBPT IAmb IAmb 08 27 25.4
comp=Z,24nm,1.3s
KSRS Korea Array 87.00 321 P P 08 27 25.4 +0.3
comp=Z,2.5nm,0.6s,baz=139,slow=5.4,SNR=12
SMY Shemya 87.36 356 P P 08 27 26.6 +0.1
SMY Shemya 87.36 356 P P 08 27 26.6 +0.1
SMY pmax pmax
comp=Z,144nm,1.0s
CFA Coronel Fontan 87.50 127 P P 08 27 28.4 +0.4
comp=Z,9.2nm,0.8s,baz=237,slow=4.0,SNR=24
LHMI Lhok Sumawe 87.81 278 IAMs_20 IAMs_20 09 10 06.0
comp=Z,1μm,20.0s
YSS Yuzh-Sakhalins 88.23 335 eP P 08 27 31.4 +0.6
YSS pmax pmax
comp=Z,20nm,0.8s
NJ2 Nanjing 88.28 312 eP P 08 27 34.4 +3.0
NJ2 pmax pmax
comp=Z,21nm,0.5s
SRIG Santa Rosalia 88.53 55 P P 08 27 33.5 +0.7
SRIG IAmb IAmb 08 28 07.6
comp=Z,14nm,1.3s
GO03 Copiap 88.69 123 IAMs_20 IAMs_20 09 00 44.2
comp=Z,1μm,18.0s
MONP2 Monument Peak 89.53 49 P P 08 27 39.6 +2.0
baz=227
PET Petropavlovsk 89.54 347 eP P 08 27 36.9 +0.1
PET eS S 08 38 25.3 +1.4
PET pmax pmax
comp=Z,77nm,1.0s
PET MLR MLR
comp=Z,2μm,18.0s
MURC Murrieta 89.54 48 P P 08 27 39.6 +2.3
baz=227
IKP In-Ko-Pah, Jac 89.56 49 P P 08 27 39.7 +2.1
baz=227
BFSC Mount Baldy Ra 89.70 47 P P 08 27 39.8 +1.6
baz=226
PEA0B Petropavlovsk- 89.80 346 P P 08 27 38.7 +0.7
PEA0B Petropavlovsk- 89.80 346 P P 08 27 38.7 +0.7
PEA0B pmax pmax
comp=Z,146nm,1.2s
PETK Petropavlovsk- 89.80 346 P P 08 27 38.4 +0.3
comp=Z,36nm,0.7s,baz=145,slow=8.0,SNR=27
PETK LR LR 09 02 39.3
comp=Z,296nm,20.5s,baz=196,slow=32
EDW2 Edwards Air Fo 89.94 46 P P 08 27 41.2 +1.9
baz=226
SWSC Sam W. Stewart 89.95 49 P P 08 27 43.8 +4.5
baz=227
VES Vestal, Richgr 89.97 45 P P 08 27 41.1 +1.9
baz=226
TPFO Pinon Flats 90.00 48 P P 08 27 46.4 +6.8
baz=227
PFO Pinyon Flats O 90.00 48 P P 08 27 40.2 +0.6
PFO IAmb IAmb 08 27 55.8
comp=Z,28nm,1.5s
PFO Pinyon Flats O 90.00 48 i P P 08 27 44.3 +4.7
PFO pmax pmax
comp=Z,10.0nm,1.3s
PFO Pinyon Flats O 90.00 48 P P 08 27 45.8 +6.2
baz=227
BBRC Big Bear Solar 90.16 47 P P 08 27 44.4 +3.9
baz=227
ISA Isabella, Lake 90.20 45 P P 08 27 40.6 +0.2
ISA IAmb IAmb 08 27 57.1
comp=Z,17nm,1.1s
ISA Isabella, Lake 90.20 45 P P 08 27 40.7 +0.2
ISA pmax pmax
comp=Z,17nm,1.2s
ISA Isabella, Lake 90.20 45 P P 08 27 42.7 +2.3
baz=226
USA0B Ussuriysk Arra 90.23 327 i P P 08 27 37.3 -2.9
USRK Ussuriysk Ar. 90.23 327 P P 08 27 40.3 +0.1
comp=Z,5.2nm,0.9s,baz=67,slow=3.2,SNR=6.1
LRMC Laurel Mtn Rad 90.54 46 P P 08 27 44.5 +2.4
baz=226
BELC Belle Mtn. Jos 90.54 48 P P 08 27 44.3 +2.1
baz=227
GLA Glamis 90.63 49 P P 08 27 44.8 +2.4
baz=228
BC3 Big Chuckawall 90.64 48 P P 08 27 44.6 +1.9
baz=228
GO02 Mina Guanaco 90.67 121 P P 08 27 43.5 +0.1
GO02 IAMs_20 IAMs_20 09 01 44.6
comp=Z,1μm,19.0s
CMB Columbia Colle 90.77 43 P P 08 27 43.7 +0.7
CMB IAMs_20 IAMs_20 09 15 11.5
comp=Z,835nm,18.0s
CMB Columbia Colle 90.77 43 P P 08 27 43.7 +0.7
CMB pmax pmax
comp=Z,11nm,1.1s
HEC Hector,Ludlow 90.90 47 P P 08 27 46.2 +2.5
baz=227
GSC Goldstone, Bar 90.94 47 P P 08 27 45.0 +1.1
GSC IAmb IAmb 08 28 04.3
comp=Z,28nm,1.4s
GSC Goldstone, Bar 90.94 47 P P 08 27 45.0 +1.1
GSC pmax pmax
comp=Z,28nm,1.4s
GSC Goldstone, Bar 90.94 47 P P 08 27 46.4 +2.5
baz=227
CWC Cottonwood Cre 90.97 45 P P 08 27 45.7 +1.6
baz=226
O02D Mt. Diablo Mer 91.00 40 P P 08 27 46.6 +2.5
baz=223
PB10 IPOC Station P 91.02 120 IAMs_20 IAMs_20 09 01 49.0
comp=Z,813nm,18.0s
MPMC Manual Prospec 91.05 46 P P 08 27 44.6 +0.1
baz=226
AFDM Forest Hills D 91.09 42 P P 08 27 44.9 +0.5
113A Mohawk Valley, 91.10 50 P P 08 27 45.2 +0.5
113A IAmb IAmb 08 28 00.8
comp=Z,16nm,1.2s
PBKT Sadao Pong 91.14 289 P P 08 27 44.4 -0.8
IRM Iron Mountain 91.17 48 P P 08 27 47.2 +2.2
baz=228
214A Organ Pipe Nat 91.18 51 P P 08 27 45.3 +0.2
214A IAmb IAmb 08 28 01.4
comp=Z,15nm,1.2s
214A Organ Pipe Nat 91.18 51 P P 08 27 46.8 +1.7
baz=229
ORV Oroville 91.24 41 P P 08 27 45.1 +0.1
ORV Oroville 91.24 41 P P 08 27 45.2 +0.1
ORV pmax pmax
comp=Z,11nm,1.5s
GMRC Granite Mounta 91.28 48 P P 08 27 47.7 +2.1
baz=228
Y12C Blythe 91.28 49 P P 08 27 46.3 +0.9
Y12C IAmb IAmb 08 28 01.7
comp=Z,11nm,1.1s
Y12C Blythe 91.28 49 P P 08 27 47.1 +1.7
baz=228
TUQ Turquoise Moun 91.56 47 P P 08 27 48.6 +1.8
baz=227
O03E Paynes Creek 91.61 40 P P 08 27 51.6 +4.7
baz=224
RUBR Rubicon Trail 91.62 42 IAMs_20 IAMs_20 09 04 16.9
comp=Z,1μm,20.0s
GRAC Grapevine Rang 91.77 45 P P 08 27 50.2 +2.5
baz=226
M02C Callahan 91.85 39 P P 08 27 51.6 +3.6
baz=223
PDMCI Parker Dam,Lak 91.89 49 P P 08 27 50.9 +2.6
baz=228
YERR Yerington 92.08 43 IAMs_20 IAMs_20 09 04 06.1
comp=Z,950nm,19.0s
NVAR Mina Array Bea 92.22 43 P P 08 27 50.6 +0.6
comp=Z,0.9nm,0.7s,baz=223,slow=7.9,SNR=5.5
RYN Ryan 92.23 43 IAMs_20 IAMs_20 09 04 21.5
comp=Z,848nm,18.0s
Y14A Wickenburg 92.35 50 P P 08 27 50.8 +0.3
Y14A IAMs_20 IAMs_20 09 10 37.7
comp=Z,872nm,18.0s
TPNV Topopah Spring 92.39 46 P P 08 27 52.5 +1.8
baz=227
PAHR Pah Rah Range 92.50 42 IAMs_20 IAMs_20 09 04 56.3
comp=Z,1μm,19.0s
TUC Tucson 92.72 52 P P 08 27 52.8 +0.6
TUC Tucson 92.72 52 P P 08 27 52.8 +0.6
TUC pmax pmax
comp=Z,7.0nm,1.0s
TUC Tucson 92.72 52 P P 08 27 53.9 +1.6
baz=230
LVC Limon Verde 92.76 120 P P 08 27 54.9 +1.8
comp=Z,4.4nm,0.8s,baz=236,slow=6.9,SNR=4.7
LVC Limon Verde 92.76 120 P P 08 27 53.2 0.0
LVC IAmb IAmb 08 28 12.0
comp=Z,9.8nm,0.9s
LVC Limon Verde 92.76 120 IAMs_20 IAMs_20 09 07 30.1
comp=Z,829nm,18.0s
LVC Limon Verde 92.76 120 P P 08 27 53.2 0.0
LVC pmax pmax
comp=Z,10.0nm,1.0s
HPIG 92.83 59 IAMs_20 IAMs_20 09 08 04.3
comp=Z,888nm,18.0s
CN2 Changchun 92.98 323 eP P 08 27 52.6 -0.4
CN2 esP pP 08 28 06.4 +1.8
CN2 eS S 08 38 54.8 -0.8
CN2 pmax pmax
comp=Z,10.0nm,1.0s
NNA Nana 93.26 107 IAMs_20 IAMs_20 09 10 03.4
comp=Z,882nm,18.0s
PB01 IPOC Station P 93.33 118 P P 08 27 55.0 -0.5
X16A Lo Mia Camp, P 93.65 50 P P 08 27 57.6 +0.9
X16A IAMs_20 IAMs_20 09 08 37.0
comp=Z,779nm,19.0s
R11A Troy Canyon, C 93.72 45 IAMs_20 IAMs_20 09 11 58.7
comp=Z,880nm,19.0s
CMAR Chiang Mai Arr 93.81 290 P P 08 27 57.9 +0.4
comp=Z,1.6nm,0.3s,baz=146,slow=4.2,SNR=11
CMAR PP PP 08 31 42.3 -1.3
comp=Z,1.2nm,0.3s,baz=140,slow=6.3,SNR=7.1
KLR Kul'dur 94.28 330 LR LR 09 02 52.9
comp=Z,241nm,21.9s,baz=165,slow=31
KLR Kul'dur 94.28 330 eP P 08 27 57.0 -1.9
KLR pmax pmax
comp=Z,2.0nm,1.1s
MNMC Minye Minye 94.45 117 P P 08 28 00.8 -0.1
MNMC IAmb IAmb 08 28 29.5
comp=Z,40nm,1.8s
X18A Snowflake 94.67 51 IAMs_20 IAMs_20 09 08 09.0
comp=Z,715nm,18.0s
KMI Kunming 94.81 297 P P 08 28 03.5 +1.3
KMI pP pP 08 28 09.5 -4.5
KMI sP sP 08 28 14.4 -3.9
KMI pmax pmax
comp=Z,9.0nm,0.9s
KMI pmax pmax
comp=Z,52nm,3.5s
PBA Port Blair 94.87 281 IAMs_20 IAMs_20 09 11 29.4
comp=Z,1μm,22.0s
TXAR Lajitas Array 95.68 58 P P 08 28 07.5 +1.6
comp=Z,1.1nm,1.1s,baz=207,slow=5.3,SNR=4.2
ANMO Albuquerque 97.18 52 i P Pdif 08 28 14.8 +2.0
ANMO pmax pmax
comp=Z,1.0nm,1.5s
MA2 Magadan 97.24 345 eP Pdif 08 28 12.2 0.0
MA2 pmax pmax
comp=Z,9.0nm,1.2s
MVCO Mesa Verde 97.26 49 IAMs_20 IAMs_20 09 10 43.7
comp=Z,826nm,18.0s
LPAZ La Paz 97.32 115 P P 08 28 14.3 -0.1
comp=Z,1.1nm,0.9s,baz=227,slow=7.5,SNR=4.1
LPAZ La Paz 97.32 115 P P 08 28 13.8 -0.6
CD2 Chengdu 97.48 302 P P 08 28 13.9 -0.1
CPUP Villa Florida 98.09 130 P Pdif 08 28 18.2 +1.3
comp=Z,1.8nm,1.0s,baz=23,slow=11,SNR=3.0
CPUP PKKPbc PKKPbc 08 44 48.8 +0.3
comp=Z,1.6nm,0.6s,baz=21,slow=2.5,SNR=5.0
HHC Hu-ho-hao-te 98.48 314 eP Pdif 08 28 27.5 +9.1
HHC Hu-ho-hao-te 98.48 314 eP Pdif 08 28 19.9 +1.5
HHC pmax pmax
comp=Z,4.0nm,0.9s
HHC pmax pmax
comp=Z,89nm,5.5s
HHC LR LR
comp=Z,160nm,16.1s
HHC LR LR
comp=Z,130nm,17.1s
SEY Seymchan 100.00 347 i P Pdif 08 28 23.6 -0.8
PDAR Pinedale Array 100.07 45 P Pdif 08 28 25.4 -0.2
comp=Z,0.2nm,0.8s,baz=191,slow=7.8,SNR=2.4
ABTX Abilene, Hawle 100.40 58 IAMs_20 IAMs_20 09 15 02.8
comp=Z,800nm,18.0s
LZH Lanzhou 100.44 307 eP Pdif 08 28 29.4 +2.1
LZH pP pP 08 28 39.1 0.0
LZH sP sP 08 28 43.6 +0.2
LZH PP PP 08 32 41.3 +6.6
LZH pmax pmax
comp=Z,14nm,1.3s
LZH pmax pmax
comp=Z,62nm,4.9s
LZH LR LR
comp=Z,250nm,17.6s
LZH LR LR
comp=Z,270nm,18.2s
TRF Thorofare Moun 100.62 13 IAMs_20 IAMs_20 09 11 11.1
comp=Z,944nm,20.0s
435B Jarrell 100.82 60 IAMs_20 IAMs_20 09 13 15.9
comp=Z,834nm,19.0s
RND Reindeer 100.85 13 IAMs_20 IAMs_20 09 10 46.1
comp=Z,746nm,20.0s
MCK McKinley 101.13 13 IAMs_20 IAMs_20 09 11 22.5
comp=Z,888nm,19.0s
BWN Browne 101.43 13 IAMs_20 IAMs_20 09 11 52.4
comp=Z,1μm,20.0s
WHTX Lake Whitney, 101.58 59 IAMs_20 IAMs_20 09 17 38.1
comp=Z,658nm,19.0s
WHY Whitehorse 101.84 21 IAMs_20 IAMs_20 09 16 31.6
comp=Z,751nm,19.0s
NEA Nenana 101.87 13 IAMs_20 IAMs_20 09 12 16.6
comp=Z,770nm,19.0s
CCB Clear Creek Bu 102.17 13 IAMs_20 IAMs_20 09 12 25.1
comp=Z,616nm,19.0s
PALK Pallekele 102.28 270 IAMs_20 IAMs_20 09 12 45.9
comp=Z,1μm,20.0s
COLA College 102.37 13 IAMs_20 IAMs_20 09 12 12.2
comp=Z,791nm,20.0s
ILAR Eielson Array 102.46 14 P Pdif 08 28 37.4 +2.1
comp=Z,1.6nm,1.2s,baz=224,slow=5.8,SNR=6.2
ILAR PP PP 08 32 45.1 -3.9
comp=Z,1.7nm,1.1s,baz=223,slow=8.5,SNR=5.7
U32A Winter Ranch, 102.94 55 IAMs_20 IAMs_20 09 08 42.9
comp=Z,709nm,21.0s
BILL Bilibino 103.10 354⇑ eP Pdif 08 28 39.2 +1.1
BILL e 08 33 03.1
BILL eSS SS 08 47 31.9 -0.8
BILL pmax pmax
comp=Z,2.0nm,1.1s
BILL MLR MLR
comp=Z,334nm,18.0s
OKCFA Oklahoma City 103.47 56 IAMs_20 IAMs_20 09 09 39.8
comp=Z,725nm,19.0s
OGNE Ogallala 103.53 49 IAMs_20 IAMs_20 09 15 16.4
comp=Z,797nm,20.0s
FYU Fort Yukon 104.37 13 IAMs_20 IAMs_20 09 13 44.3
comp=Z,604nm,19.0s
GTA Gaotai 104.95 308 eP PKiKP 08 33 03.8 +1.9
GTA pP PP 08 33 08.0 -0.4
GTA sP 08 33 10.8
SAML Samuel 105.69 113 IAMs_20 IAMs_20 09 13 21.5
comp=Z,571nm,18.0s
WHAR Wooly Hollow 106.98 59 IAMs_20 IAMs_20 09 21 52.0
comp=Z,825nm,18.0s
INK Inuvik 108.31 16 PKiKP PKiKP 08 33 10.7 +3.7
comp=Z,1.1nm,0.6s,baz=246,slow=3.0,SNR=8.2
OXF Oxford 108.64 61 IAMs_20 IAMs_20 09 19 00.9
comp=Z,972nm,18.0s
LNXT Lenox 109.36 59 IAMs_20 IAMs_20 09 27 32.0
comp=Z,845nm,19.0s
MTDJ Mount Denham 109.67 81 IAMs_20 IAMs_20 09 12 03.0
comp=Z,947nm,20.0s
HENM Henderson Moun 109.67 59 IAMs_20 IAMs_20 09 16 43.2
comp=Z,612nm,20.0s
YKA Yellowknife Ar 109.88 27 Pdiff Pdif 08 29 15.6 +7.2
comp=Z,0.1nm,0.5s,baz=266,slow=5.5,SNR=3.4
YKA PKiKP PKiKP 08 33 12.4 +2.2
comp=Z,0.7nm,0.9s,baz=257,slow=1.7,SNR=6.3
YKA PKKPbc PKKPbc 08 44 13.4 -1.3
comp=Z,0.5nm,0.7s,baz=42,slow=3.1,SNR=11
BDFB Brasilia 111.79 129 IAMs_20 IAMs_20 09 16 34.5
comp=Z,821nm,19.0s
ULM Lac du Bonnet 112.05 43 PKiKP PKiKP 08 33 20.2 +5.5
comp=Z,1.7nm,0.8s,baz=178,slow=2.1,SNR=4.2
TIXI Tiksi 112.19 344 i PKiKP PKiKP 08 33 12.6 -1.7
TIXI pmax pmax
comp=Z,1.0nm,1.0s
R50A Paris 114.02 59 IAMs_20 IAMs_20 09 23 48.4
comp=Z,550nm,19.0s
T52A Hallie 114.46 61 IAMs_20 IAMs_20 09 24 43.1
comp=Z,540nm,19.0s
KMSC Kings Mountain 114.80 63 IAMs_20 IAMs_20 09 27 15.3
comp=Z,567nm,18.0s
WMQ Urumqi 115.02 307 ePKP PKPdf 08 33 20.4 -0.3
WMQ LR LR
comp=Z,420nm,29.0s
WMQ LR LR
comp=Z,990nm,27.7s
V55A Taylorsville 115.19 63 IAMs_20 IAMs_20 09 28 10.7
comp=Z,672nm,18.0s
N49A Columbus Grove 115.26 57 IAMs_20 IAMs_20 09 21 19.0
comp=Z,760nm,19.0s
ACSO Alum Creek Sta 115.80 58 IAMs_20 IAMs_20 09 31 07.4
comp=Z,733nm,18.0s
S54A Dingess, Beckl 115.96 61 IAMs_20 IAMs_20 09 27 38.8
comp=Z,519nm,18.0s
U56A King 116.02 63 IAMs_20 IAMs_20 09 14 06.5
comp=Z,536nm,18.0s
X58A Rowland 116.02 65 IAMs_20 IAMs_20 09 34 09.7
comp=Z,5μm,20.0s
M50A Fremont 116.24 56 IAMs_20 IAMs_20 09 22 25.0
comp=Z,779nm,19.0s
BLA Blacksburg 116.35 62 IAMs_20 IAMs_20 09 25 04.4
comp=Z,499nm,18.0s
N51A Ashland 116.50 57 IAMs_20 IAMs_20 09 17 21.0
comp=Z,651nm,19.0s
Y60A Bolivia 116.62 66 IAMs_20 IAMs_20 09 33 44.7
comp=Z,5μm,22.0s
V58A Windy Hill, Pi 116.71 64 IAMs_20 IAMs_20 09 26 22.0
comp=Z,465nm,18.0s
R55A Marlinton 117.02 61 IAMs_20 IAMs_20 09 29 10.2
comp=Z,695nm,19.0s
K50A Casco 117.08 55 IAMs_20 IAMs_20 09 34 26.1
comp=Z,5μm,18.0s
T57A Hurt 117.11 62 IAMs_20 IAMs_20 09 25 15.5
comp=Z,494nm,19.0s
CNNC Cliffs of the 117.39 65 IAMs_20 IAMs_20 09 35 10.0
comp=Z,4μm,18.0s
M52A Chesterland 117.46 57 IAMs_20 IAMs_20 09 23 55.2
comp=Z,759nm,19.0s
Q56A Snyder Ridge, 117.99 60 IAMs_20 IAMs_20 09 27 05.5
comp=Z,587nm,18.0s
V60A Jim Taylor Roa 118.07 64 IAMs_20 IAMs_20 09 35 21.9
comp=Z,3μm,19.0s
T59A Double "B" Far 118.34 63 IAMs_20 IAMs_20 09 35 32.1
comp=Z,3μm,19.0s
V61A Roper 118.59 65 IAMs_20 IAMs_20 09 35 54.7
comp=Z,3μm,19.0s
U61A Possum Corner 118.90 64 IAMs_20 IAMs_20 09 35 30.1
comp=Z,4μm,18.0s
V62A Hyde County Ai 118.96 65 IAMs_20 IAMs_20 09 35 48.5
comp=Z,4μm,20.0s
CBN Corbin Frederi 118.97 62 IAMs_20 IAMs_20 09 36 14.5
comp=Z,3μm,18.0s
MK31 Makanchi Array 119.68 309 PKPdf 08 33 29.0 -0.5
MK31 Makanchi Array 119.68 309 PKIKP PKPdf 08 33 29.0 -0.5
MKAR Makanchi Array 119.68 309 PKP PKPdf 08 33 28.9 -0.5
comp=Z,4.0nm,0.6s,baz=120,slow=0.7,SNR=44
MKAR PKKPbc PKKPbc 08 43 42.5 +2.1
comp=Z,0.3nm,0.7s,baz=336,slow=2.7,SNR=4.6
MKAR Makanchi Array 119.68 309 PKIKP PKPdf 08 33 29.0 -0.5
WVNY West Valley, N 119.68 57 IAMs_20 IAMs_20 09 34 07.1
comp=Z,5μm,19.0s
SDMD Soldier's Deli 119.81 61 IAMs_20 IAMs_20 09 34 30.8
comp=Z,2μm,21.0s
MAKZ Makanchi 119.89 308 PKPdf 08 33 29.4 -0.5
MAKZ Makanchi 119.89 308 PKIKP PKPdf 08 33 29.4 -0.5
J54A Appleton 119.97 56 IAMs_20 IAMs_20 09 34 12.5
comp=Z,5μm,19.0s
MEDO Medina 120.06 56 IAMs_20 IAMs_20 09 34 10.4
comp=Z,5μm,20.0s
SADO Sadowa 120.17 54 IAMs_20 IAMs_20 09 34 24.6

comp=Z,5µm,18.0s
Q60A Greensboro 120.38 61 IAMs_20 IAMs_20 09 35 36.8
comp=Z,3µm,18.0s
N58A Sunbury 120.43 59 IAMs_20 IAMs_20 09 33 47.1
comp=Z,5µm,19.0s
R61A Willards 120.49 62 IAMs_20 IAMs_20 09 35 19.9
comp=Z,5µm,18.0s
ZAA0 Zalesovo Array 120.52 317 PKPdf 08 33 29.8 -1.0
ZALV Zalesovo Beam 120.52 317 PKP PKPdf 08 33 30.1 -0.7
comp=Z,5.1nm,0.7s,baz=159,slow=2.2,SNR=18
J55A Hilton 120.53 56 IAMs_20 IAMs_20 09 34 09.5
comp=Z,5µm,19.0s
PRZ Przheval'sk 120.78 303 PKiKP 08 33 32.1 0.0
PRZ Przheval'sk 120.78 303 PKIKP PKiKP 08 33 32.1 0.0
J56A Wolcott 121.19 56 IAMs_20 IAMs_20 09 34 06.0
comp=Z,5µm,20.0s
LUPA Lehigh Univers 121.30 60 IAMs_20 IAMs_20 09 33 40.5
comp=Z,506nm,18.0s
P61A Hammonton 121.38 61 IAMs_20 IAMs_20 09 34 10.4
comp=Z,5µm,20.0s
PLVO Plevna 121.64 54 IAMs_20 IAMs_20 09 34 19.6
comp=Z,5µm,18.0s
RES Resolute Bay 121.77 18 PKP PKPdf 08 33 32.2 -0.4
comp=Z,3.4nm,0.9s,baz=267,slow=4.0,SNR=11
RES Resolute Bay 121.77 18 PKPdf 08 33 32.4 -0.2
RES IAMs_20 IAMs_20 09 38 03.3
comp=Z,4µm,18.0s
D53A Lac Vacive, Po 121.88 52 IAMs_20 IAMs_20 09 34 35.4
comp=Z,4µm,19.0s
NRN Naryn 122.09 301 PKPdf 08 33 34.3 -0.4
NRN Naryn 122.09 301 PKIKP PKPdf 08 33 34.3 -0.4
ULHL Ulahol 122.19 302 P PKPdf 08 33 34.7 -0.1
SNR=14
BOOM Boomskoye usch 122.49 302 PKPdf 08 33 35.1 -0.2
BOOM Boomskoye usch 122.49 302 PKIKP PKPdf 08 33 35.1 -0.2
KZA Kyzart 122.83 301 P PKiKP 08 33 36.7 +0.3
SNR=7.2
LONY Lake Ozonia 123.19 56 IAMs_20 IAMs_20 09 34 08.7
comp=Z,4µm,19.0s
KURK Kurchatov 123.22 312 PKPdf 08 33 35.6 -0.4
KURK Kurchatov 123.22 312c iPKIKP PKPdf 08 33 35.7 -0.4
KURK pmax pmax
comp=Z,39nm,1.7s
TRY Troy 123.22 58 IAMs_20 IAMs_20 09 39 03.8
comp=Z,6µm,21.0s
NCB Newcomb 123.23 56 IAMs_20 IAMs_20 09 34 01.9
comp=Z,4µm,19.0s
KBK Karagaybulak 123.23 302 P PKPdf 08 33 36.8 +0.1
SNR=6.5
UCH Uchtor 123.40 301 P PKiKP 08 33 37.7 +0.1
SNR=15
CHMS Chumysh 123.48 302 P PKPdf 08 33 36.9 -0.1
SNR=7.1
AAK Ala-Archa 123.55 302 P PKPdf 08 33 36.8 -0.5
SNR=5.3
AAK Ala-Archa 123.55 302 PKPdf 08 33 37.1 -0.1
AAK Ala-Archa 123.55 302 i PKIKP PKPdf 08 33 35.0 -2.3
USP Ospenovka 123.74 302 P PKPdf 08 33 37.2 -0.3
SNR=8.0
LSZ Lusaka 123.75 212 PKPdf 08 33 38.4 -0.1
LSZ Lusaka 123.75 212 PKIKP PKPdf 08 33 38.4 -0.1
FRNY Flat Rock 123.93 56 IAMs_20 IAMs_20 09 34 07.3
comp=Z,5µm,21.0s
TSUM Tsumeb 123.94 199 IAMs_20 IAMs_20 09 32 06.3
comp=Z,516nm,18.0s
AML Almayashu 123.95 301 P PKPdf 08 33 38.4 +0.1
SNR=24
EKS2 Erkin-Say 124.06 302 P PKiKP 08 33 38.6 +0.1
SNR=7.9
ARSB Arslanbob 124.20 300 PKPdf 08 33 38.4 -0.1
ARSB Arslanbob 124.20 300 PKIKP PKPdf 08 33 38.4 -0.1
VT1 Waterbury 124.35 56 IAMs_20 IAMs_20 09 34 00.4
comp=Z,5µm,20.0s
KBL Kabul 124.82 291 PKPdf 08 33 40.2 +0.2
KBL Kabul 124.82 291 PKIKP PKPdf 08 33 40.2 +0.2
KBL MLR MLR
comp=Z,300nm,21.0s
SOCY Socotra 126.86 259 IAMs_20 IAMs_20 09 30 51.0
comp=Z,533nm,18.0s
TULEG Thule 128.31 16 IAMs_20 IAMs_20 09 38 04.9
comp=Z,4µm,20.0s
BRVK Borovoye 128.76 313 PKPdf 08 33 46.6 0.0
BRVK Borovoye 128.76 313c iPKIKP PKPdf 08 33 46.7 0.0
BRVK pmax pmax
comp=Z,28nm,1.7s
HRA Herat 130.04 288 IAMs_20 IAMs_20 09 41 41.1
comp=Z,624nm,21.0s
KMBO Kilima Mbogo 130.51 232 PKP PKiKP 08 33 53.3 +0.8
comp=Z,1.1nm,0.5s,baz=90,slow=3.5,SNR=6.2
KMBO SKPbc SKPbc 08 37 13.4 +1.7
comp=Z,1.0nm,0.3s,baz=128,slow=5.8,SNR=6.6
KMBO Kilima Mbogo 130.51 232 PKPdf 08 33 51.9 +0.3
KMBO Kilima Mbogo 130.51 232 IAMs_20 IAMs_20 09 40 56.9
comp=Z,1µm,22.0s
KMBO Kilima Mbogo 130.51 232 PKIKP PKPdf 08 33 51.9 +0.3
UOSS Minazif 131.38 274 IAMs_20 IAMs_20 09 41 27.2
comp=Z,572nm,19.0s
ASHT Ashkhabad 134.06 292 IAMs_20 IAMs_20 09 41 30.3
comp=Z,756nm,19.0s
GEYT Alibeck 134.26 291 PKP PKPdf 08 33 57.1 -0.6
comp=Z,1.8nm,0.5s,baz=282,slow=1.4,SNR=5.5
GEYT SKPbc SKPab 08 37 25.9 -0.9
comp=Z,15nm,1.0s,baz=211,slow=2.6,SNR=18
GYA0B ALIBECK ARRAY 134.26 291 IAMs_20 IAMs_20 09 45 39.7
comp=Z,1µm,19.0s
MBAR Mbarara 134.93 225 IAMs_20 IAMs_20 09 40 26.4
comp=Z,2µm,20.0s
ATD Arta Tunnel 135.28 249 IAMs_20 IAMs_20 09 29 56.7
comp=Z,478nm,20.0s
KBS Kingsbay 135.52 357 IAMs_20 IAMs_20 09 39 01.1
comp=Z,4µm,18.0s
ARU Arti 135.68 318 PKPdf 08 33 59.4 -0.2
ARU IAMs_20 IAMs_20 09 40 46.6
comp=Z,2µm,19.0s
ARU Arti 135.68 318 i PKIKP PKiKP 08 34 01.0 -0.2
ARU 08 36 35.3
DAMY Dhamar 135.88 254 IAMs_20 IAMs_20 09 41 09.0
comp=Z,885nm,22.0s
SPA0 Spitsbergen Ar 136.00 355 ePKPdf PKPdf 08 34 00.7 -0.6
SPITS Spitsbergen Ar 136.00 355 PKP PKPdf 08 33 59.7 0.0
comp=Z,14nm,1.0s,baz=145,slow=10,SNR=3.6
FURI Furi 136.72 243 IAMs_20 IAMs_20 09 45 27.3
comp=Z,1µm,22.0s
DAG Danmarks Havn 137.03 6 i P PKPdf 08 34 02.4 +0.8
comp=Z,6.7nm,1.1s
DAG Danmarks Havn 137.03 6 i PKIKP PKPdf 08 34 02.4 +0.8
DAG pmax pmax
comp=Z,7.0nm,1.1s
RAYN Ar Rayn 139.56 266 IAMs_20 IAMs_20 09 45 17.4
comp=Z,1µm,20.0s
KIRV Kirov 140.19 322 i PKIKP PKPdf 08 34 04.7 -3.1
PRGR Permogore 141.01 328 ePKIKP PKiKP 08 34 12.5 +0.6
PRGR pmax pmax
comp=Z,11nm,0.7s
KEV Kevo 142.12 345 IAMs_20 IAMs_20 09 39 16.5
comp=Z,4µm,19.0s
ARCES ARCESS Array B 142.61 346 PKhKP PKPpre 08 34 08.1
comp=Z,3.1nm,0.6s,baz=45,slow=7.4,SNR=15
ARCES PKP PKPdf 08 34 12.9 +1.0
comp=Z,6.8nm,0.8s,baz=42,slow=2.0,SNR=14
ARE0 ARCESS Array S 142.61 346 ePKPdf PKPdf 08 34 12.6 +0.6
AKT Akhty 142.76 295⇑ePKIKP PKiKP 08 34 20.3 +4.0
AKT pmax pmax
comp=Z,25nm,0.2s
KMKR Kumukh 143.29 296 i PKHKP PKPab 08 34 05.0 -5.1
ARKR Arakani 143.40 296 ePKHKP PKPpre 08 34 07.0 -3.4
ARKR eS PKPbc 08 34 12.5 +1.0
GNBR Gunib 143.40 296⇑PKHKP PKPpre 08 34 02.5
KTK1 Kautokeino 143.49 347 ePKPdf PKPdf 08 34 12.3 -1.2
XNZR Khunzakh 143.60 296⇑ePKHKP PKPpre 08 34 06.3
XNZR e 08 34 11.8
KLMR Klimovskoe 144.01 328 ePKPdf PKPab 08 34 09.5 -2.6
KLMR AMP 08 34 16.4
comp=Z,45nm,1.4s
GROC Groznyy 144.30 297 ePKIKP PKPab 08 34 12.7 -1.0
GROC e 08 37 28.6
GROC pmax pmax
comp=Z,63nm,1.2s
GNI Garni 144.89 292 PKPab 08 34 16.1 -0.2
GNI Garni 144.89 292 IAMs_20 IAMs_20 09 52 37.1
comp=Z,3µm,20.0s
GNI Garni 144.89 292c iPKIKP PKPab 08 34 16.3 0.0
GNI pmax pmax
comp=Z,231nm,1.7s
ZEI Tsey 145.68 297 i PKP2 PKPdf 08 34 15.8 -2.5
ZEI pmax pmax

comp=Z,60nm,1.1s
STEI Steigen 145.79 350 ePKPbc PKPbc 08 34 18.2 +0.2
LOF Lofoten 145.83 351 ePKPbc PKPbc 08 34 18.3 +0.2
AKH Akhalkalaki 145.93 294 IAMs_20 IAMs_20 09 40 23.5
comp=Z,2µm,19.0s
GOF Gofitskoye 146.27 301⇑iPKP2 PKPbc 08 34 19.9 -0.3
GOF pmax pmax
comp=Z,213nm,1.4s
VRH Novokhopyorsk 146.31 312 ePKP2 PKPdf 08 34 19.3 +0.5
VRH pmax pmax
comp=Z,330nm,0.7s
KBZ Khabaz 146.42 298 PKPbc PKPbc 08 34 20.2 -0.5
comp=Z,33nm,1.0s,baz=136,slow=1.4,SNR=46
KBZ Khabaz 146.42 298c iPKIKP PKPdf 08 34 19.0 -0.2
NEY Neytrino 146.55 297 i PKP2 PKPbc 08 34 20.9 -0.4
KIV Kislovodsk 146.57 299 ⇑P PKPbc 08 34 21.3 +0.1
KIV Kislovodsk 146.57 299 PKPdf 08 34 20.1 +0.5
KIV IAMs_20 IAMs_20 09 52 21.0
comp=Z,2µm,18.0s
KIV Kislovodsk 146.57 299 ePKIKP PKPdf 08 34 19.0 -0.7
KIV pmax pmax
comp=Z,113nm,1.1s
SHA1 Shidzhatmaz 146.59 298 i PKIKP PKPdf 08 34 19.3 -0.6
MOS Moscow 147.19 321 ePKIKP PKPdf 08 34 19.6 -0.6
MOS e 08 34 29.8
MOS pmax pmax
comp=Z,300nm,1.5s
MOS pmax pmax
comp=Z,164nm,0.9s
VRTB Varto-Mus 147.32 290 eP PKPbc 08 34 24.5 +0.9
BCA Borcka 147.34 294 ⇓P PKPbc 08 34 23.4 -0.1
KONS Konsvik 147.43 351 ePKPbc PKPbc 08 34 23.1 +0.3
MOR8 Moi Rana 147.55 350 ePKPbc PKPbc 08 34 22.8 -0.4
LPSR Galich'ya Gora 147.60 315 ePKP2 PKPbc 08 34 23.7 0.0
LPSR pmax pmax
comp=Z,140nm,1.0s
KARO Karliova-Bingo 147.65 290 eP PKPbc 08 34 25.4 +0.8
VORD Divnogorie 147.85 312 ePKP2 PKPbc 08 34 23.8 -0.6
VORD pmax pmax
comp=Z,230nm,1.8s
VSR Storozhevoye 147.86 313 ePKP2 PKPbc 08 34 23.6 -0.8
VSR pmax pmax
comp=Z,100nm,0.7s
BNGB Bingl 147.91 289 eP PKPbc 08 34 25.4 +0.2
OBN Obninsk 148.00 321 ⇑P PKPbc 08 34 25.3 +0.7
OBN Obninsk 148.00 321 PKPdf 08 34 22.5 +1.0
OBN IAMs_20 IAMs_20 09 50 31.4
comp=Z,2µm,18.0s
OBN Obninsk 148.00 321⇓iPKP2 PKPbc 08 34 24.0 -0.6
OBN e 08 37 55.7
OBN pmax pmax
comp=Z,282nm,1.7s
YEDI Yedisu-Bingol 148.05 290 eP PKPbc 08 34 25.8 +0.2
DYBB Diyarbakir 148.23 287 eP PKPbc 08 34 26.0 0.0
BAYT Aydintepe-Bayb 148.42 292 eP PKPbc 08 34 27.3 +0.8
FIA1 FINESS Array S 148.81 337 PKPdf 08 34 23.8 +1.2
FINES FINESS Array B 148.81 337 PKPbc PKPbc 08 34 26.3 -0.3
comp=Z,35nm,0.8s,baz=98,slow=6.6,SNR=66
SVRC Sivrice-ELAZID 148.92 288 eP PKPbc 08 34 28.3 +0.4
URFA Urfa 149.21 286 eP PKPbc 08 34 28.2 -0.3
NSS Namsos 149.46 350 ePKPab PKPab 08 34 32.9 -0.1
ESPY Espiye-Giresun 149.51 293 eP PKPbc 08 34 28.4 -0.7
ARPR Arapgir-MALATY 149.74 289 eP PKiKP 08 34 31.0 +0.2
ANN Anapa 150.26 301 i PKIKP PKPbc 08 34 30.0 -0.7
ANN pmax pmax
comp=Z,145nm,1.1s
DARE Darende-Malaty 150.37 288 eP PKiKP 08 34 32.2 +0.1
GAZ Gaziantep 150.45 285 eP PKiKP 08 34 32.3 0.0
GAZ Gaziantep 150.45 285 PKiKP 08 34 31.9 -0.3
GAZ IAMs_20 IAMs_20 09 40 07.6
comp=Z,3µm,19.0s
RSDY Resadiye-TOKAT 150.57 292 eP PKiKP 08 34 32.4 +0.1
VSU Vasula 150.68 332 eP PKPbc 08 34 31.6 +0.4
VSU Vasula 150.68 332c iPKIKP PKiKP 08 34 31.8 -0.1
VSU pmax pmax
comp=Z,446nm,1.3s
SVSK Karacayir 150.81 291 eP PKiKP 08 34 33.1 +0.3
TBLU Trondheim 150.91 351 ePKPab PKPab 08 34 38.9 -0.2
RCY Rachaya 150.95 278 eP PKPbc 08 34 32.9 0.0
SHBL Chebaa 151.00 277 eP PKiKP 08 34 33.4 -0.2
LIC Lamto 151.08 168 ePKIKP PKiKP 08 34 34.1 0.0
comp=Z,84nm,0.6s
QRWL Qaraoun 151.09 278 eP PKiKP 08 34 33.8 +0.1
TOKT Tokat 151.16 292 eP PKiKP 08 34 33.1 0.0
TAHT Tahtakopru-Hat 151.17 284 eP PKiKP 08 34 33.6 -0.1
BHL Bhannes 151.19 278 eP PKPbc 08 34 33.5 +0.1
KIC Kosan Boka 151.26 169 ePKIKP PKPbc 08 34 34.2 +0.2
comp=Z,55nm,0.7s
TIC Toumodi 151.49 168 ePKIKP PKiKP 08 34 34.9 -0.1
comp=Z,68nm,0.8s
KVT Kavak 151.54 293 eP PKiKP 08 34 34.5 +0.2
DBIC Dimbokro 151.54 168 PKP PKPdf 08 34 29.7 +1.3
comp=Z,2.7nm,0.8s,baz=194,slow=5.2,SNR=5.1
DBIC PKPbc PKPbc 08 34 35.5 +0.4
comp=Z,18nm,0.7s,baz=169,slow=2.4,SNR=35
DBIC PKPab PKPab 08 34 43.4 +0.4
comp=Z,38nm,0.8s,baz=156,slow=5.5,SNR=18
DBIC Dimbokro 151.54 168 PKPdf 08 34 28.4 0.0
DBIC PKPbc 08 34 35.5 +0.4
DBIC PKPab 08 34 43.5 +0.4
KOZT Kozan 151.58 286 eP PKPbc 08 34 34.2 +0.1
CEYT Ceyhan 151.59 285 eP PKiKP 08 34 34.5 0.0
MOL Molde 151.88 353 epPKPdf PKPbc 08 34 34.3 +0.1
DIKM Dikmen 152.11 295 ⇑P PKPbc 08 34 35.2 +0.1
DOMB Dombas 152.22 352 epPKPdf PKPbc 08 34 34.8 +0.1
AKN Aaknes 152.31 354 ePKPbc PKiKP 08 34 35.5 +0.3
SIM Simferopol' 152.58 302 ePKIKP PKPbc 08 34 36.5 +0.2
SIM pmax pmax
comp=Z,21nm,1.0s
IZAR Zarasai 152.66 328 eP PKiKP 08 34 36.5 +0.4
IZAR IAmb IAmb 08 34 43.0
comp=Z,24nm,1.0s
MICGM Minsk 152.67 324⇑eP PKiKP 08 34 37.0 +0.9
MICGM PM 08 34 38.0
comp=Z,0.3nm,1.0s
MNK Minsk 152.67 324⇑ePKIKP PKiKP 08 34 37.0 +0.9
MNK pmax pmax
comp=Z,330nm,1.0s
NC303 NORSAR Array S 152.68 349 PKPbc 08 34 35.8 +0.1
NC405 NORSAR Array S 152.73 348 PKPdf 08 34 29.9 +1.1
ISAL Salakas 152.83 328 eP PKiKP 08 34 36.5 +0.1
ISAL IAmb IAmb 08 34 42.8
comp=Z,23nm,1.1s
NB2 NORSAR Subarra152.88 349 PKP PKPbc 08 34 35.9 -0.4
comp=Z,59nm,2.0s,baz=17,slow=2.6
NB2 NORSAR Subarra152.88 349 pPKPdf PKPbc 08 34 35.9 -0.4
baz=17,slow=2.6
NOA NORSAR Array B 152.88 349 PKP PKPdf 08 34 29.9 +0.8
comp=Z,1.1nm,0.8s,baz=28,slow=1.8,SNR=3.1
NOA PKPbc PKPbc 08 34 36.3 0.0
comp=Z,4.0nm,0.9s,baz=22,slow=4.7,SNR=24
NOA PKPab PKPab 08 34 47.1 -0.4
comp=Z,8.0nm,0.7s,baz=24,slow=3.3,SNR=18
IIGN Ignalina 152.92 327 eP PKPbc 08 34 36.5 0.0
NACGM Naroch 152.95 326 e PKPbc 08 34 36.0 -0.5
NC602 NORSAR Array S 153.12 348 epPKPdf PKPbc 08 34 35.9 -0.8
CSS Mathiatis 153.27 280 PKPbc 08 34 37.4 -0.6
ILGA Ilgaz 153.30 293 PKPbc 08 34 37.8 -0.3
ILGA IAMs_20 IAMs_20 09 40 00.6
comp=Z,3µm,20.0s
BR131 Keskin Array S 153.40 290 PKPbc 08 34 37.3 -0.9
BR131 Keskin Array S 153.40 290 PKIKP PKPbc 08 34 37.3 -0.9
BRTR Keskin Array B 153.40 290 PKPbc PKPbc 08 34 36.6 -1.6
comp=Z,9.0nm,0.7s,baz=141,slow=2.5,SNR=41
BRTR PKPab pPKPbc 08 34 50.4 +0.2
comp=Z,8.7nm,0.7s,baz=154,slow=4.8,SNR=10
SKAR Skarslia 153.64 352 epPKPdf PKPbc 08 34 36.8 -1.2
LEF Lefka 153.65 280 ⇑P PKiKP 08 34 39.4 +0.6
PABE Paberze 153.80 329 eP PKPbc 08 34 38.1 -0.2
PABE IAmb IAmb 08 34 40.9
comp=Z,39nm,0.7s
AKASG Malin Array Be 153.91 316 PKP PKPdf 08 34 29.8 -1.0
comp=Z,0.4nm,0.4s,baz=66,slow=1.5,SNR=7.8
AKASG PKPbc PKiKP 08 34 38.9 +0.1
comp=Z,9.2nm,0.6s,baz=54,slow=2.6,SNR=28
AKASG PKPab PKPab 08 34 51.5 -0.6
comp=Z,10nm,0.7s,baz=51,slow=2.8,SNR=13
AKBB Malin Array Si 153.91 316 PKPdf 08 34 29.9 -0.8
AKBB PKPbc 08 34 38.7 -0.1
AKBB Malin Array Si 153.91 316 PKIKP PKPbc 08 34 38.7 -0.1
KIEV Kiev 153.93 316 PKIKP PKPdf 08 34 30.0 -0.8
ANTO Ankara 154.04 291 PKPbc 08 34 38.7 -0.8
ANTO Ankara 154.04 291 IAMs_20 IAMs_20 09 39 46.3
comp=Z,3µm,19.0s

ANTO Ankara 154.04 291 PKIKP PKPbc 08 34 38.7 -0.8
KONO Kongsberg 154.46 349 ePKPab PKPab 08 34 54.1 0.0
KONO Kongsberg 154.46 349 IAMs_20 IAMs_20 09 52 50.5
comp=Z,4µm,20.0s
BLS5 Blasjo 155.08 353 ePKPab PKPab 08 34 57.1 +0.3
SUW Suwalki 155.14 327 IAMs_20 IAMs_20 09 58 54.6
comp=Z,4µm,20.0s
SORM Soroca 155.50 311 ⇑P PKPdf 08 34 33.9 +0.9
TOPG Topolog 156.57 304 ⇓P PKPdf 08 34 44.9 +10
TIRR Tirgusor 156.65 303 ⇓P PKPdf 08 34 44.2 +10
VRI Vrincioaia 157.37 307 ⇓P PKPab 08 35 07.2 +0.1
PLOR Plostina 157.43 307 ⇑P PKPab 08 35 07.6 +0.1
BURAR Bucovina Array 157.64 312 ⇓P PKPab 08 34 57.6 -11
MLR Muntele Rosu 158.01 307 ⇓P PKPab 08 34 38.8 +2.3
KWP Kalwaria Pacla 158.07 319 PKPdf PKPdf 08 34 36.0 -0.3
KWP PKPab 08 35 09.8 -0.3
KWP Kalwaria Pacla 158.07 319 PKIKP PKPdf 08 34 36.0 -0.3
KWP 08 35 09.8
KARP Karpathos 158.35 280 PKPdf PKPdf 08 34 37.4 +0.2
KARP PKPab 08 35 11.3 -0.5
TOA0 Torodi Ar. Sit 158.42 183 PKPdf 08 34 37.2 -0.6
TORD Torodi Ar. Bea 158.42 183 PKP PKPdf 08 34 39.5 +1.7
comp=Z,5.6nm,1.0s,baz=336,slow=0.4,SNR=8.8
TORD PKPab PKPab 08 35 12.4 +0.1
comp=Z,9.0nm,0.7s,baz=177,slow=3.4,SNR=16
VOIR 158.62 307 ⇑P PKPdf 08 34 47.8 +11
ELND Elena 158.82 300 ⇓P PKPab 08 34 38.0 +0.5
TRPA Tarpa 158.98 316 ⇑P PKPab 08 35 14.1 +0.1
ALN Alexandroupoli 159.09 294 IAMs_20 IAMs_20 09 55 21.8
comp=Z,2µm,20.0s
CRVS Cervenica-Dubn 159.16 319 ePKP2 PKPab 08 35 14.8 0.0
CRVS Cervenica-Dubn 159.16 319 ePKP PKPab 08 35 14.8 0.0
DRGR 159.54 312 ⇑P PKPab 08 35 16.2 -0.4
RUE Ruedersdorf 160.00 336 eP PKPab 08 35 15.7 -2.5
SIRR Siria 160.43 312 ⇑P PKPab 08 35 20.7 +0.3
DPC Dobruska-Polom 160.72 328 ePKPAB PKPab 08 35 20.7 -0.8
DPC Dobruska-Polom 160.72 328 ePKP2 PKPab 08 35 20.7 -0.8
VYHS Vyhne 160.79 321 ePKP2 PKPab 08 35 22.0 +0.1
VYHS Vyhne 160.79 321 ePKP PKPab 08 35 22.0 +0.1
MDVR Moldovita 161.05 308 ⇑P PKPdf 08 34 39.9 -0.1
CLL Collm 161.25 335 ePKPdf PKPdf 08 34 42.0 +2.1
CLL ePKPdiff sPKPdf 08 35 01.0 +4.8
CLL ⇓iPKPab PKPab 08 35 23.8 +0.1
CLL Collm 161.25 335⇓ePKIKP PKPdf 08 34 42.0 +2.1
CLL i 08 35 23.8
BRG Berggiesshubel 161.27 333 ePKP PKPdf 08 34 39.4 -0.5
comp=Z,17nm,1.5s
BRG Berggiesshubel 161.27 333 ePKIKP PKPdf 08 34 39.4 -0.5
BRG pmax pmax
comp=Z,17nm,1.5s
GERES GERESS Array B 162.97 329 PKP PKPdf 08 34 41.3 -0.5
comp=Z,0.7nm,0.7s,baz=97,slow=3.1,SNR=6.1
GERES PKPab PKPab 08 35 31.8 +0.3
comp=Z,0.8nm,0.7s,baz=60,slow=5.4,SNR=5.0
SOKA Soboth 163.93 322 i PKPdf PKPdf 08 34 41.4 -1.4
comp=Z,8.1nm,1.4s
KBA Koelnbreinsper 164.47 326 i PKPdf PKPdf 08 34 42.8 -0.6
comp=Z,6.8nm,1.2s
STU Stuttgart 164.68 338 PKPab 08 35 38.3 -0.5
STU Stuttgart 164.68 338 PKP2 PKPab 08 35 38.3 -0.5
WTTA Wattenberg 165.07 330 ePKPdf PKPdf 08 34 44.2 +0.3
comp=Z,7.1nm,1.2s
ABTA Abfaltersbach 165.09 327 ePKPdf PKPdf 08 34 40.1 -3.7
comp=Z,8.0nm,1.2s
MOTA Moosalm 165.22 331 ePKPdf PKPdf 08 34 39.8 -4.2
comp=Z,8.5nm,1.0s
BFO Black Forest 165.33 339 PKPab 08 35 40.7 -1.1
BFO Black Forest 165.33 339 PKP2 PKPab 08 35 40.7 -1.1
FETA Feichten 165.63 331 ePKPdf PKPdf 08 34 38.9 -5.4
comp=Z,9.7nm,1.4s
ESDC Sonseca Array 173.90 36 PKP PKPdf 08 34 51.1 +1.8
comp=Z,0.1nm,0.3s,baz=333,slow=3.0,SNR=5.1
ESDC PKPab PKPab 08 36 21.5 +1.4
comp=Z,0.1nm,0.3s,baz=337,slow=3.4,SNR=2.8

IDC 18 08:16:52.5±1.1, 34.77S×179.19W, h0km, mb5.1/5, mb1 5.1/6, mb1mx4.3/44, mbtmp5.0/6, MS4.2/4, Ms1 4.2/4, ms1mx4.0/24, Error ellipse: s-maj=38.3km s-min=26.9km az=136.0

NEIC 18 08:16:53.5±1.7, 34.8S±0.1×179.1W±0.2, h10km±2km, mb4.9/9, Error ellipse: s-maj=29.3km s-min=11.4km az=118.0

ISC 18 08:16:58.2±1.1, 34.8S±0.1×179.2W±0.2, h42km, n28, σ1§00/27, mb4.9/10, MS4.3/4, 1D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	4.58	220	Pn	Pn	08 18 03.8	-1.0
	baz=233,slow=3.6,SNR=2.0						
URZ				Sn	Sn	08 18 56.3	-0.5
	12nm,0.3s,baz=155,slow=22,SNR=3.5						
URZ	Urewera	4.58	220		Pn	08 18 04.3	-0.5
URZ				Sn	Sn	08 18 55.7	-1.0
RAO	Raoul Island	5.62	11	Pn	Pn	08 18 16.8	-2.4
RAO				Sn	Sn	08 19 22.1	-0.4
THZ	Tophouse	9.34	219	Pn	Pn	08 19 08.7	-1.5
EIDS	Eidsvold	27.31	282	P	P	08 22 39.4	+0.5
CTA	Charters Tower	33.80	287	P	P	08 23 38.2	+1.9
	16nm,0.8s,baz=110,slow=9.1,SNR=3.9						
COEN	Coen	39.75	292	P	P	08 24 27.9	+0.9
COEN				IAmb	IAmb	08 24 29.1	
	comp=Z,16nm,0.9s						
AS31	Alice Springs	42.08	272	P	P	08 24 45.6	-0.6
ASAR	Alice Springs	42.08	272	P	P	08 24 46.2	+0.1
	comp=Z,14nm,0.7s,baz=114,slow=8.0,SNR=6.0						
WB2	Warramunga Arr	43.46	277	P	P	08 24 56.9	-0.4
WB2				IAmb	IAmb	08 24 57.8	
	comp=Z,23nm,0.8s						
WRAB	Tennant Creek	43.46	277	P	P	08 24 56.7	-0.7
WRAB				IAmb	IAmb	08 24 57.8	
	comp=Z,17nm,0.8s						
WRA	Warramunga Arr	43.47	277	P	P	08 24 57.2	-0.2
	comp=Z,15nm,0.8s,baz=128,slow=7.7,SNR=6.2						
WB0	Warramunga Arr	43.51	278	P	P	08 24 57.6	-0.1
WB0				IAmb	IAmb	08 24 58.2	
	comp=Z,18nm,0.8s						
FORT	Forrest	44.12	260	P	P	08 25 02.2	-0.3
PSA00	Pilbara Seismi	54.59	267	P	P	08 26 22.9	+0.3
PSA00				IAmb	IAmb	08 26 30.1	
	comp=Z,18nm,1.4s						
GIRL	Giralia	58.70	263	P	P	08 26 52.3	+0.6
GUMO	Guam	58.98	318	LR	LR	08 50 29.7	
	comp=Z,189nm,19.2s,baz=122,slow=34						
SYO	Syowa Base	72.63	194	⇓iX	P	08 28 29.0	+8.2
JNU	Nakatsue	82.20	320	LR	LR	09 00 05.6	
	comp=Z,207nm,21.6s,baz=132,slow=32						
KSRS	Korea Array	87.06	321	LR	LR	09 05 06.3	
	comp=Z,138nm,19.3s,baz=135,slow=33						
PETK	Petropavlovsk-	89.81	346	P	P	08 29 52.7	+0.9
	comp=Z,7.2nm,0.8s,baz=124,slow=5.0,SNR=5.4						
KLR	Kul'dur	94.32	330	LR	LR	09 16 44.4	
	comp=Z,85nm,18.1s,baz=166,slow=38						
KDAK	Kodiak Island	94.89	14	P	P	08 30 16.5	+1.4
	comp=Z,19nm,1.2s,baz=179,slow=3.1,SNR=4.2						
MKAR	Makanchi Array	119.77	308	PKP	PKiKP	08 35 43.8	+0.4
	comp=Z,0.5nm,0.6s,baz=172,slow=1.2,SNR=4.6						
FINES	FINESS Array B	148.84	337	PKPbc	PKiKP	08 36 41.1	-0.6
	comp=Z,3.7nm,0.6s,baz=42,slow=5.0,SNR=3.7						
BRTR	Keskin Array B	153.50	290	PKPbc	PKPbc	08 36 52.0	-0.2
	comp=Z,3.5nm,1.0s,baz=140,slow=2.5,SNR=5.0						
BRTR				PKPab	PKPab	08 37 03.5	-1.2
	comp=Z,2.5nm,0.8s,baz=127,slow=1.9,SNR=4.0						
AKASG	Malin Array Be	153.99	316	PKPbc	PKiKP	08 36 53.0	+0.4
	comp=Z,1.1nm,0.4s,baz=52,slow=2.5,SNR=3.5						
TORD	Torodi Ar. Bea	158.44	182	PKPab	PKPab	08 37 27.5	+1.5
	comp=Z,1.2nm,0.7s,baz=188,slow=3.0,SNR=2.3						

IDC 18 08:18:12.1±3.0, 34.71S×179.35W, h0km, mb4.5/2, mb1 4.8/3, mb1mx4.0/43, mbtmp4.6/3, Error ellipse: s-maj=72.7km s-min=36.0km az=122.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	4.55	218	Pn	Pn	08 19 23.2	+1.1
	baz=45,slow=20,SNR=2.1						
URZ				Sn	Sn	08 20 14.8	-0.9
	6.5nm,0.3s,baz=308,slow=2.9,SNR=2.4						
ASAR	Alice Springs	41.94	272	P	P	08 26 04.9	+0.1
	5.2nm,0.8s,baz=117,slow=7.6,SNR=3.8						
WRA	Warramunga Arr	43.32	277	P	P	08 26 15.6	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	6.2nm,0.8s,baz=120,slow=7.5,SNR=4.7						
FINES	FINESS Array B	148.72	337	PKPbc	PKPbc	08 37 59.8	-0.7
	1.9nm,0.7s,baz=64,slow=3.2,SNR=2.3						

IDC 18 08:23:01.0±2.9,34.69S×179.56W,h0km,mb3.8/2, mb1 4.0/3,mb1mx3.7/39,mbtmp3.8/3,ML3.5/1,Error ellipse: s-maj=71.5km s-min=35.8km az=120.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	4.46	216	Pn	Pn	08 24 09.7	-0.1
	2.3nm,0.3s,baz=45,slow=5.7,SNR=7.7						
URZ				Sn	Sn	08 25 03.4	+1.0
	3.8nm,0.3s,baz=180,slow=21,SNR=4.2						
ASAR	Alice Springs	41.76	272	P	P	08 30 52.2	0.0
	0.7nm,0.5s,baz=114,slow=8.3,SNR=6.6						
WRA	Warramunga Arr	43.14	278	P	P	08 31 03.1	-0.3
	0.8nm,0.6s,baz=119,slow=7.6,SNR=4.5						
FINES	FINESS Array B	148.63	336	PKPbc	PKPbc	08 42 48.5	-0.6
	2.4nm,1.0s,baz=28,slow=3.7,SNR=2.4						

IDC 18 08:24:32.4±1.4,5.20S×150.71E,h0km,mb3.3/2, mb1 3.7/2,mb1mx3.3/40,mbtmp3.4/2,Error ellipse: s-maj=89.4km s-min=18.9km az=142.0,New Britain region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.58	56	Pn	Pb	08 25 02.5	0.0
	29nm,0.3s,baz=137,slow=2.2,SNR=13						
KRVT				Sn	Sg	08 25 23.8	+0.6
	69nm,0.3s,baz=286,slow=23,SNR=15						
WRA	Warramunga Arr	21.65	226	P	P	08 29 26.6	+2.0
	1.1nm,0.4s,baz=54,slow=10,SNR=5.7						
ASAR	Alice Springs	24.48	220	P	P	08 29 53.0	-0.5
	0.6nm,0.6s,baz=57,slow=8.8,SNR=5.5						
TORD	Torodi Ar. Bea	148.44	287	PKPbc	PKPdf	08 44 20.3	+1.7
	0.2nm,0.4s,baz=115,slow=2.9,SNR=3.0						

JMA 18 08:50:42.9±0.1,39.13N×142.38E,h31km±1km,M3.9
JMA Felt I J1.
IDC 18 08:50:48.1±2.5,39.10N×142.21E,h63km±23km,mb3.3/7, mb1 3.5/10,mb1mx3.3/41,mbtmp3.6/10,ML3.0/3,Error ellipse: s-maj=26.5km s-min=14.9km az=98.0
ISC 18 08:50:43.7±0.9,39.08N±0.04×142.22E±0.08,h21km±4km, n27,σ1°66/31,mb3.7/7,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.43	271	P	Pn	08 50 54.1	-0.6
OFUJ				S	Sn	08 51 01.5	-0.4
MIYJ	Miyakonagasawa	0.59	328	P	Pb	08 50 54.9	-0.5
MIYJ				S	Sb	08 51 03.2	-0.2
JKMT	Kesennumamotoy	0.64	246	P	Pn	08 50 57.2	-0.4
JKMT				S	Sn	08 51 07.1	0.0
JMK	Ichinoseki	0.79	261	P	Pn	08 50 59.7	+0.1
JMK				S	Sn	08 51 11.4	+0.6
JOM	Ohasama	0.82	299	P	Pb	08 50 59.8	+0.5
JOM				S	Sb	08 51 11.9	+0.3
JTH	Tanohata	0.91	342	P	Pb	08 50 59.0	-1.7
JIO	Ouri	0.92	228	P	Pb	08 51 00.9	-0.1
JIO				S	Sb	08 51 13.4	+0.6
JKZ	Kuzumaki	1.14	323	P	Pn	08 51 03.8	-0.7
JKZ				eS	Sb	08 51 19.0	-0.1
JRG	Rokugo	1.27	285	P	Pb	08 51 07.2	+0.2
JRG				eS	Sb	08 51 25.1	+2.2
JANG	Nango	1.41	337	P	Pn	08 51 07.1	-1.0
MJAR	Matsushiro Arr	4.06	233	P	Pn	08 51 47.6	+3.0
	0.3nm,0.3s,baz=43,slow=12,SNR=26						
MAT	Matsushiro	4.06	233	P	Pn	08 51 47.7	+3.0
MAT				eS	Sb	08 52 38.9	-4.3
ASAJ	Asahikawa	5.04	3	P	Pn	08 52 00.1	+1.9
	0.9nm,0.3s,baz=264,slow=5.4,SNR=3.9						
ASAJ				S	Sn	08 52 59.4	+3.6
	0.5nm,0.3s,baz=32,slow=27,SNR=2.6						
KLR	Kul'dur	12.62	327	P	Pn	08 53 43.1	+1.3
	0.1nm,0.3s,baz=138,slow=5.7,SNR=3.7						
H11N2	WAKE ISLAND Hy	28.72	125	T	T	09 27 00.7	
	baz=318,slow=76,SNR=92						
H11N1	WAKE ISLAND Hy	28.73	125	T	T	09 27 00.4	
	baz=318,slow=76,SNR=91						
H11N3	WAKE ISLAND Hy	28.74	125	T	T	09 27 01.3	
	baz=318,slow=76,SNR=80						
H11S1	WAKE ISLAND Hy	29.50	127	T	T	09 28 00.6	
	baz=319,slow=76,SNR=6.4						
H11S3	WAKE ISLAND Hy	29.51	127	T	T	09 28 02.3	
	baz=319,slow=76,SNR=9.3						
H11S2	WAKE ISLAND Hy	29.52	127	T	T	09 28 00.1	
	baz=319,slow=76,SNR=7.7						
ZALV	Zalesovo Beam	41.04	311	P	P	08 58 24.7	-0.6
	0.5nm,0.4s,baz=102,slow=12,SNR=2.7						
MKAR	Makanchi Array	43.60	300	P	P	08 58 45.3	-1.0
	0.4nm,0.6s,baz=76,slow=10,SNR=4.6						
KURBB	Kurchatov Arra	45.27	307	P	P	08 58 58.7	-0.9
	1.3nm,0.6s,baz=80,slow=8.3,SNR=8.9						
ILAR	Eielson Array	47.44	33	P	P	08 59 15.1	-1.3
	0.5nm,0.6s,baz=260,slow=5.8,SNR=8.3						
BVAR	Borovoye Array	49.69	311	P	P	08 59 33.6	-0.3
	0.4nm,0.5s,baz=55,slow=7.8,SNR=4.1						
WRA	Warramunga Arr	59.17	189	P	P	09 00 41.4	-1.7
	0.4nm,0.4s,baz=8.8,slow=4.7,SNR=8.9						
ASAR	Alice Springs	62.90	189	P	P	09 01 09.3	+1.0
	0.5nm,0.9s,baz=8.5,slow=7.5,SNR=3.1						

WEL 18 09:16:12.4±0.8,35°S±8°×17°9W±1°0,h194km±12km, M4.0/24,mB3.6/1,ML4.1/13,MLv4.0/24,Mw(mB)2.4/1, East of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	3.11	218	P	Pn	09 17 02.1	-0.8
WMGZ				S	Sn	09 17 43.6	+1.0
PKGZ	Pakihiroa	3.34	221	P	Pn	09 17 04.9	-0.9
PKGZ				S	Sn	09 17 47.2	-0.4
PUZ	Puketiti	3.38	217	P	Pn	09 17 05.4	-0.9
PUZ				S	Sn	09 17 47.7	-0.8
HAZ	Te Kaha	3.41	226	P	Pn	09 17 06.1	-0.5
HAZ				S	Sn	09 17 51.6	+2.6
RUGZ	Raukumara Rang	3.61	224	P	Pn	09 17 09.1	-0.1
RUGZ				S	Sn	09 17 55.6	+1.8
TKGZ	Te Karaka	3.87	218	P	Pn	09 17 12.6	+0.4
MWZ	Matawai	3.96	221	P	Pn	09 17 13.1	-0.3
MWZ				S	Sn	09 17 60.0	-1.4
RIGZ	Rimuhau	4.12	216	P	Pn	09 17 15.4	-0.1
RIGZ				S	Sn	09 18 05.2	+0.1
URZ	Urewera	4.14	225	P	Pn	09 17 15.2	-0.5
OPRZ	Ohinepanea	4.23	234	P	Pn	09 17 16.3	-0.5
SNGZ	Shannon Statio	4.39	219	P	Pn	09 17 19.8	+1.0
KNZ	Kokohu	4.41	214	P	Pn	09 17 17.8	-1.3
MHGZ	Mahia Peninsul	4.42	211	P	Pn	09 17 20.3	+1.2
RTZ	Ruatahuna	4.46	223	P	Pn	09 17 19.9	+0.1
MUGZ	Murupara	4.49	226	P	Pn	09 17 19.6	-0.4
RAHZ	Arahi	4.62	220	P	Pn	09 17 23.0	+1.3
RAHZ				S	Sn	09 18 15.1	-1.3
MTHZ	Maungataniwha	4.70	222	P	Pn	09 17 23.9	+1.1
TOZ	Tahuroa Road	4.89	240	P	Pn	09 17 25.7	+0.4
NMHZ	Naumai	4.90	220	P	Pn	09 17 26.9	+1.5
MKAZ	Moumakai	4.91	248	P	Pn	09 17 24.9	-0.4
BKZ	Black Stump Fm	5.12	222	P	Pn	09 17 27.8	-0.3
MCHZ	McNeill Hill	5.22	218	P	Pn	09 17 29.8	+0.5
WCZ	Waipu Caves	5.33	262	P	Pn	09 17 30.0	-0.8
RATZ	Rangitukua	5.33	228	P	Pn	09 17 31.7	+0.8
KWHZ	Kaweka Forest	5.34	220	P	Pn	09 17 31.0	0.0
KAHZ	Kahuranaki	5.40	215	P	Pn	09 17 30.8	-1.0
BHHZ	Black Hill Sta	5.58	222	P	Pn	09 17 34.6	+0.5
TSZ	Takapari Road	6.05	218	P	Pn	09 17 40.0	-0.2
MRZ	Mangatainoka R	6.70	217	P	Pn	09 17 47.7	-0.9
THZ	Tophouse	8.89	222	P	Pn	09 18 17.4	+0.2

ATH 18 09:16:13.8,40.40N×21.87E,h4km±46km,ML0.0,Error ellipse: s-maj=46.4km s-min=1.5km az=281.0, Suspected Mining explosion.,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KZN	Kozani	0.11	219	P	Pg	09 16 16.0	-0.1
LIT	Litokhoron	0.56	121	P	Pg	09 16 24.9	+0.3
KPRO	Kipourio	0.58	221	P	Pg	09 16 25.1	+0.1
GRG	Griva	0.69	36	P	Pg	09 16 27.0	-0.1
THL	Klokotos Trika	0.84	172	P	Pg	09 16 29.9	+0.1
HORT	Hortiatis	0.96	77	P	Pg	09 16 31.9	-0.3
AGG	Agios Georgios	1.42	165	P	Pn	09 16 39.7	-0.6
PAIG	Paliouri	1.47	108	P	Pn	09 16 41.1	+0.1
ANX	Ano Chora	1.80	179	P	Pb	09 16 47.7	+0.3

INET 18 09:26:43.7,15.76N×59.07W,h15km,mb6.6
IDC 18 09:27:10.4±0.3,14.70N×59.01W,h0km,mb5.7/28, mb1 5.8/32,mb1mx5.8/32,mbtmp5.7/32,ML5.0/4,MS6.1/38, Ms1 6.1/38,ms1mx6.0/54,Error ellipse: s-maj=8.9km s-min=6.6km az=149.0
MOS 18 09:27:10.8±0.8,14.71N×58.95W,h11km,mb6.4/162, MS6.3/90,Error ellipse: s-maj=4.6km s-min=3.3km az=55.9
BGR 18 09:27:13.6±0.0,14.07N×59.25W,h48km,mb6.5, mB_BB6.8,Ms6.5
OSPL 18 09:27:13.1±8.0,15.36N×58.13W,h301km±65km,ML6.5
BJI 18 09:27:13.0±0.0,14.66N×58.97W,h20km,mB6.5/62, Ms6.7/82,Ms7 6.5/72
NEIC 18 09:27:13.1±1.9,14.67N±0.04×58.93W±0.05,h15km±2km, mb6.3/690,Ms_20 6.3/740,Mwb6.3/86,Mwc6.6/45,Mww6.5, Md6.4/67(TRN),Mwc6.5(GCMT),Error ellipse: s-maj=7.7km s-min=6.2km az=85.0,Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr-1.35; Mθθ-1.68; Mφφ3.03; Mrθ2.38; Mθφ0.90; Mφr-1.08; Fault plane solution: M0 3.81000×10^18 NP1:φs225.58000°, δ52.87000°,λ-26.04000°. NP2:φs332.02000°,δ69.52000°, λ-139.88000°. Principal axes: T 3.3088, Plg10.0000°, Azm95.0000°; N 0.8565, Plg46.0000°, Azm355.0000°; P -4.1653, Plg42.0000°, Azm195.0000°;
TRN 18 09:27:14.6,14.70N×59.17W,h17km,MD6.4
TRN Felt widely in Martinique, Dominica, Saint Lucia,Nort h of Barbados. Felt widely in Martinique, Dominica, Saint Lucia, SSt. Vincent, Barbados and Grenada, MMI IV, V.t. Vincent, Barbados and Grenad a, MMI IV, V.
NEIC 18 09:27:17,14.59N×59.02W,h12km,Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr-3.57; Mθθ-3.29; Mφφ6.86; Mrθ3.46; Mθφ0.53; Mφr-2.27; Fault plane solution: M0 7.26000×10^18 NP1:φs218.00000°, δ48.00000°,λ-29.00000°. NP2:φs328.00000°,δ68.00000°, λ-134.00000°. Principal axes: T 7.3349, Plg12.0000°, Azm89.0000°; N -0.1513, Plg41.0000°, Azm348.0000°; P -7.1836, Plg47.0000°, Azm192.0000°;
GCMT 18 09:27:18.1±0.0,14.76N×58.89W,h14km,MW6.5/160, Moment Tensor Solution. s160,c377; s153,c595; Duration: 4s1 Moment tensor: Scale 10^18Nm; Mrr-3.35±.02; Mθθ-3.36±.02; Mφφ6.70±.02; Mrθ1.70±.05; Mθφ0.68±.02; Mφr0.10±.04; Best double couple: M0 5.91000×10^18 NP1:φs328.00000°,δ59.00000°, λ-146.00000°. NP2:φs219.00000°,δ61.00000°, λ-36.00000°. Principal axes: T 6.7500, Plg1.0000°, Azm274.0000°; N -1.6910, Plg45.0000°, Azm5.0000°; P -5.0690, Plg45.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function
NEIC 18 09:27:19,14.74N×58.92W,h13km,Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr-3.51; Mθθ-3.33; Mφφ6.83; Mrθ1.62; Mθφ0.77; Mφr0.02; Fault plane solution: M0 6.18000×10^18 NP1:φs329.00000°, δ59.00000°,λ-144.00000°. NP2:φs219.00000°, δ60.00000°,λ-37.00000°. Principal axes: T 6.8933, Plg1.0000°, Azm274.0000°; N -1.8316, Plg44.0000°, Azm5.0000°; P -5.0617, Plg46.0000°, Azm184.0000°;
NEIC 18 09:27:28.6,14.97N×58.23W,h24km,Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr-4.96; Mθθ-2.65; Mφφ7.61; Mrθ-0.59; Mθφ1.36; Mφr-6.86; Fault plane solution: M0 9.38000×10^18 NP1:φs192.36000°, δ21.53000°,λ-82.89000°. NP2:φs4.72000°,δ68.64000°, λ-92.80000°. Principal axes: T 10.7867, Plg24.0000°, Azm97.0000°; N -2.8093, Plg3.0000°, Azm6.0000°; P -7.9774, Plg66.0000°, Azm270.0000°;
ISC 18 09:27:14.8±0.4,14.60N±0.02×58.97W±0.03,h28km±2km, h29km:pP-P,n2526,σ1°57/3072,mb6.3/578,MS6.3/498, 71C-165D,North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BBGH	Gun Hill	1.55	202	eP	Pb	09 27 43.3	+0.3
BBGH				eS	Sb	09 28 05.3	+3.1
BBGH	Gun Hill	1.55	202	Pn	Pb	09 27 43.0	0.0
BBGH				Sg	Sb	09 28 04.8	+2.6
BBSP	Saint Philip	1.56	198	eP	Pb	09 27 43.0	0.0
BBSP	Saint Philip	1.56	198		Pb	09 27 43.0	0.0
BCHC	Barbados, Cave	1.59	204	eP	Pb	09 27 44.0	+0.4
BCHC				eS	Sb	09 28 04.2	+1.0
BCHC	Barbados, Cave	1.59	204	e	Sb	09 28 08.0	+4.8
MPOM	Morne Pois Mar	1.83	266	⇑eP	Pn	09 27 44.4	-0.1
ILAM	Ilet Lapin Mar	1.85	276	⇑eP	Pn	09 27 43.7	-1.0
LPMF	Morne Lapointe	1.93	270	⇑eP	Pn	09 27 45.3	-0.5
SLAC	Saint Lucia, A	1.99	250	⇑iP	Pn	09 27 46.6	0.0
SLAC				eS	Sn	09 28 10.0	-0.6
ZAM	Aeronautique	1.99	270	⇑eP	Pn	09 27 46.2	-0.4
TRMF	Trois Ilets	2.01	269	⇑eP	Pn	09 27 46.7	-0.2
SLBI	Saint Lucia, B	2.02	254	eP	Pn	09 27 47.1	+0.1
SLBI				eS	Sn	09 28 10.9	-0.5
SLBI	Saint Lucia, B	2.02	254		Pn	09 27 47.1	+0.1
SLBI					Sn	09 28 10.9	-0.5
BIM	Bigot	2.03	268	⇑eP	Pn	09 27 47.3	+0.1
MCLT	Moule a Chique	2.10	245	⇑eP	Pn	09 27 49.8	+1.6
MCLT				eS	Sn	09 28 13.3	-0.1
MCLT	Moule a Chique	2.10	245	Pn	Pn	09 27 44.5	-3.7
MCLT				Sn	Sn	09 28 06.6	-6.9
FDF	Fort de France	2.11	274	eP	Pn	09 27 47.6	-0.8
FDF				eS	Sn	09 28 10.0	-3.7
FDF	Fort de France	2.11	274		Pn	09 27 47.7	-0.7
FDF				Sn	Sn	09 28 12.8	-0.9
FDF	Fort de France	2.11	274	P	Pn	09 27 47.7	-0.7
FDF						09 28 12.8	
BAMF	Morne Balai	2.12	276	eP	Pn	09 27 47.6	-0.9
GBMF	Grand Be	2.13	276	eP	Pn	09 27 47.8	-0.9
CXM	Morne La Croix	2.14	276	eP	Pn	09 27 48.1	-0.6
SVN	Savane Anatole	2.14	277	eP	Pn	09 27 48.1	-0.6
SLB	Belfond	2.15	249	eP	Pn	09 27 49.9	+1.0
SLB	Belfond	2.15	249		Pn	09 27 49.9	+1.0
PML	Morne Lenard	2.15	275	eP	Pn	09 27 48.0	-0.8
PCM	Pelee Case Pet	2.18	276	eP	Pn	09 27 48.4	-0.8
DWS	Wesley	2.46	293	⇑iP	Pn	09 27 52.1	-1.0
DWS				eS	Sn	09 28 20.0	-2.2
DWS	Wesley	2.46	293		Pn	09 27 52.1	-1.0
DWS					Sn	09 28 20.0	-2.2
SVCV	St. Vincent, C	2.49	238	eP	Pn	09 27 54.2	+0.7
SVCV				eS	Sn	09 28 23.9	+1.0
SVCV	St. Vincent, C	2.49	238		Pn	09 27 54.2	+0.7
SVCV					Sn	09 28 23.9	+1.0
SSV	Crater Summit	2.50	240	eP	Pn	09 27 54.4	+0.7
SSV	Crater Summit	2.50	240		Pn	09 27 54.4	+0.7
SVV	Soufriere Volc	2.52	240	eP	Pn	09 27 55.2	+1.3
SVV	Soufriere Volc	2.52	240		Pn	09 27 55.2	+1.3
SVB	Belmont	2.58	240	eP	Pn	09 27 55.4	+0.7
SVB				eS	Sn	09 28 24.4	-0.7
SVB	Belmont	2.58	240		Pn	09 27 55.4	+0.7
SVB				Sn	Sn	09 28 25.0	-0.1
MDPO	Dominica; Chan	2.58	292	eP	Pn	09 27 54.0	-0.8
MDPO				eS	Sn	09 28 23.0	-2.3
MAGL	Barre de l'ile	2.60	301	eP	Pn	09 27 54.2	-0.9
DEG	La Desirade	2.64	311	eP	Pn	09 27 54.0	-1.6
DEG	La Desirade	2.64	311		Pn	09 27 54.0	-1.6
H05N1	Guadeloupe/Mar	2.64	311	Pn	Pn	09 27 54.5	-1.0
H05N1				Sn	Sn	09 28 21.3	-5.4
TDBA	Terre de Bas,	2.86	296	eP	Pn	09 27 58.2	-0.4
CBE	Ff, Capester	2.94	300	⇑eP	Pn	09 27 59.3	-0.3
ABD	La Joyeuse, An	3.06	308	eP	Pn	09 27 59.8	-1.5
GRSS	Sisters	3.44	229	eP	Pn	09 28 08.4	+1.9
GRSS	Sisters	3.44	229		Pn	09 28 10.1	+3.6
GRSS					Sn	09 28 49.9	+3.5
GRSS	Sisters	3.44	229		Pn	09 28 08.4	+1.9
GRHS	Sauteurs	3.51	228	eP	Pn	09 28 10.1	+2.6
GRHS				eS	Sn	09 28 49.9	+1.7
GRGR	Grenville	3.58	227	eP	Pn	09 28 10.2	+1.7
GRGR				eS	Sn	09 28 50.6	+0.7
GRGR	Grenville	3.58	227	e	Sb	09 28 56.2	-4.4
GRGR	Grenville	3.58	227		Pn	09 28 09.7	+1.2
GRGR				Sn	Sn	09 28 51.5	+1.6
TOSP	Speyside	3.62	205	eP	Pn	09 28 11.3	+2.3
TOSP				eS	Sn	09 28 53.1	+2.3
TOSP	Speyside	3.62	205		Pn	09 28 11.2	+2.3
TOSP				Sn	Sn	09 28 51.7	+1.0
BPA	Boggy Peak	3.69	312	i P	Pn	09 28 09.8	-0.3
BPA				eS	Sn	09 28 50.4	-2.3
BPA	Boggy Peak	3.69	312	e	Sb	09 29 06.5	+2.7
BPA	Boggy Peak	3.69	312		Pn	09 28 09.8	-0.3
BPA					Sn	09 28 50.4	-2.3
MLYT	Lee's Yard	3.75	305	eP	Pn	09 28 10.3	-0.6
MLYT				eS	Sn	09 28 51.7	-2.5
ANWB	Willy Bob	4.08	319	eP	Pn	09 28 15.3	0.0
ANWB				eS	Sn	09 28 59.5	-2.7
ANWB	Willy Bob	4.08	319	Pn	Pn	09 28 12.7	-2.7
ANWB				Sn	Sn	09 29 00.1	-2.1
NEV	Hard Times	4.29	307	eP	Pn	09 28 18.0	-0.2
NEV	Hard Times	4.29	307		Pn	09 28 18.0	-0.2
NVBH	Bath Hotel, Ne	4.31	306	eP	Pn	09 28 18.8	+0.2
NVBH	Bath Hotel, Ne	4.31	306		Pn	09 28 18.8	+0.2
NVRH	Round Hill, Ne	4.34	307	eP	Pn	09 28 18.8	-0.2
NVRH	Round Hill, Ne	4.34	307	eS	Sn	09 29 05.6	-3.0
NVRH	Round Hill, Ne	4.34	307		Pn	09 28 18.8	-0.2
NVRH					Sn	09 29 05.6	-3.0
SKOC	St. Kitts, UWI	4.50	307	eP	Pn	09 28 20.3	-0.8
SKOC	St. Kitts, UWI	4.50	307	eS	Sn	09 29 08.9	-3.7
SKI	Saint Kitts	4.53	307	eP	Pn	09 28 20.4	-1.2
SKI	Saint Kitts	4.53	307	eS	Sn	09 29 10.9	-2.5
SKI	Saint Kitts	4.53	307		Pn	09 28 20.4	-1.2
SKI				Sn	Sn	09 29 12.3	-1.1
SKI	Saint Kitts	4.53	307	P	Pn	09 28 20.4	-1.2
SKI				S	Sn	09 29 12.5	-0.9
TBH	Brigand Hill	4.57	207	eP	Pn	09 28 24.3	+2.2
TBH	Brigand Hill	4.57	207		Pn	09 28 24.3	+2.2
TBH	Brigand Hill	4.57	207	P	Pn	09 28 24.3	+2.2
TRN	Trinidad (W)	4.59	211	eP	Pn	09 28 25.3	+3.0
TRN	Trinidad (W)	4.59	211	eS	Sn	09 29 17.2	+2.5
TRN	Trinidad (W)	4.59	211		Pn	09 28 25.3	+3.0
TRN					Sn	09 29 17.2	+2.5
TRN	Trinidad (W)	4.59	211	P	Pn	09 28 25.3	+3.0
TRN						09 29 17.2	
SEUS	St. Eustatius	4.81	307	eP	Pn	09 28 24.6	-0.8
SEUS	St. Eustatius	4.81	307	eS	Sn	09 29 16.9	-3.4
SEUS	St. Eustatius	4.81	307	Pn	Pn	09 28 24.5	-1.0
SEUS				Sn	Sn	09 29 20.0	-0.3
TPP	Pointe-a-Pierr	4.89	210	eP	Pn	09 28 30.0	+3.4
TPP	Pointe-a-Pierr	4.89	210		Pn	09 28 30.0	+3.4
TPP	Pointe-a-Pierr	4.89	210	P	Pn	09 28 30.0	+3.4
GUIV	Guiria	5.05	219	eP	Pn	09 28 31.0	+2.3
GUIV	Guiria	5.05	219	eS	Sn	09 29 26.0	-0.1
GUIV	Guiria	5.05	219	eS	Sn	09 29 26.4	+0.3
GUIV	Guiria	5.05	219		Pn	09 28 31.0	+2.3
GUIV					Sn	09 29 26.0	-0.1
SABA	Saba	5.09	307	eP	Pn	09 28 28.2	-1.0
SABA	Saba	5.09	307	eS	Sn	09 29 23.6	-3.5
SABA	Saba	5.09	307	Pn	Pn	09 28 28.2	-1.0
SABA				Sn	Sn	09 29 26.0	-1.1
SMRT	St. Maarten	5.23	312	⇑eP	Pn	09 28 28.6	-2.6
SMRT	St. Maarten	5.23	312	eP	Pn	09 28 30.6	-0.6
SMRT	St. Maarten	5.23	312	eS	Sn	09 29 26.5	-4.1
SMRT	St. Maarten	5.23	312		Pn	09 28 28.6	-2.6
SMRT				Sn	Sn	09 29 25.5	-5.0
CDVI	St. Croix	6.39	300		Pn	09 28 46.1	-1.0
CDVI				Sn	Sn	09 29 54.7	-4.5
STVI	Saint Thomas	6.85	304		Pn	09 28 51.5	-2.0
STVI				Sn	Sn	09 30 09.6	-0.9
ORIV	Oritupano	7.00	219	eP	Pn	09 28 57.7	+2.2
ORIV	Oritupano	7.00	219	eS	Sn	09 30 12.9	-1.4
ORIV	Oritupano	7.00	219		Pn	09 28 57.7	+2.2
ORIV					Sn	09 30 12.9	-1.4
PLCV	Puerto La Cruz	7.04	232		Pn	09 28 56.8	+0.8
PLCV					Sn	09 30 15.2	0.0
PCRV	Puerto La Cruz	7.06	232	Pn	Pn	09 28 56.8	+0.4
	231nm,0.3s,baz=61,slow=3.1,SNR=186						
PCRV				Sn	Sn	09 30 15.2	-0.7
	390nm,0.3s,baz=114,slow=20,SNR=9.8						
CUPR	Culebra, Puert	7.09	302		Pn	09 28 55.3	-1.4
CUPR				Sn	Sn	09 30 13.6	-2.9
MTP	Monte Pirata	7.21	300		Pn	09 28 56.3	-2.1
MTP				Sn	Sn	09 30 18.1	-1.3
HUMP	Col San Antoni	7.48	299		Pn	09 29 01.4	-0.7
HUMP				Sn	Sn	09 30 25.4	-0.7
CBYP	Canovanas	7.55	300		Pn	09 29 02.2	-0.9
CBYP					Pn	09 29 02.6	-0.6
CBYP				Sn	Sn	09 30 27.2	-0.7
PDPR	Patillas Dam,	7.58	298		Pn	09 29 02.5	-1.0
PDPR				Sn	Sn	09 30 26.6	-1.8
IGPR	InterUniversit	7.63	297		Pn	09 29 03.4	-0.7
IGPR				Sn	Sn	09 30 26.8	-2.8
SJG	San Juan	7.73	298	eP	Pn	09 29 04.4	-1.1
SJG	San Juan	7.73	298	Pn	Pn	09 29 03.3	-2.1
	149nm,0.3s,baz=108,slow=12,SNR=130						
SJG				Sn	Sn	09 30 23.1	-9.0
	96nm,0.3s,baz=287,slow=19,SNR=1.4						
SJG	San Juan	7.73	298		Pn	09 29 04.6	-0.9
SJG				Sn	Sn	09 30 29.5	-2.6
GCPR	Guaynabo City	7.76	299		Pn	09 29 05.3	-0.7
GCPR				Sn	Sn	09 30 30.8	-2.1
ICMP	Isla Caja de M	7.96	295		Pn	09 29 07.9	-0.8
ICMP				Sn	Sn	09 30 35.2	-2.7
OBIP	Obispado Ponce	8.09	296		Pn	09 29 08.3	-2.2
OBIP				Sn	Sn	09 30 40.1	-1.0
EMPR	Esperanza - Ma	8.21	299		Pn	09 29 10.9	-1.3
EMPR				Sn	Sn	09 30 37.2	-6.8
AOPR	Arecibo Observ	8.34	298		Pn	09 29 12.9	-1.2
AOPR				Sn	Sn	09 30 45.4	-2.0
MLPR	Magueyes Islan	8.45	294		Pn	09 29 13.1	-2.3
MLPR				Sn	Sn	09 30 49.9	0.0
CRPR	Cabo Rojo, PR	8.52	295		Pn	09 29 15.3	-1.0
CRPR				Sn	Sn	09 30 49.2	-2.3
MPR	Mayaguez	8.62	296	i P	Pn	09 29 17.7	-0.1
MPR				eS	Sn	09 30 53.5	-0.7
MPR					IAML	09 31 10.0	
	comp=Z,654nm,0.6s						
MPR	Mayaguez	8.62	296		Pn	09 29 16.9	-0.9
MPR				Sn	Sn	09 30 53.7	-0.4
AGPR	Aguadilla, PR	8.70	297	i P	Pn	09 29 17.6	-1.3
AGPR				eS	Sn	09 30 55.2	-0.9
AGPR					IAML	09 31 08.7	
	comp=Z,1μm,0.3s						
AGPR	Aguadilla, PR	8.70	297		Pn	09 29 18.6	-0.3
AGPR				Sn	Sn	09 30 55.4	-0.7
PCDR	Punta Cana, DR	9.83	295	i P	Pn	09 29 33.5	-0.8
PCDR				eS	Sn	09 31 24.0	+0.2
PCDR					IAML	09 31 30.0	
	comp=Z,1μm,0.8s						
PCDR	Punta Cana, DR	9.83	295		Pn	09 29 33.0	-1.4
PCDR				Sn	Sn	09 31 23.4	-0.4
BAUV	El Baul	10.51	239	eP	Pn	09 29 44.3	+0.7
BAUV	El Baul	10.51	239	eS	Sn	09 31 34.1	-6.4
BAUV	El Baul	10.51	239		Pn	09 29 44.3	+0.7
BAUV					Sn	09 31 34.1	-6.4
DR12	Loma Pena Alta	10.81	294		Pn	09 29 47.2	-0.6
DR12				Sn	Sn	09 31 44.3	-3.7
SDD	Santo Domingo	11.17	292		Pn	09 29 52.0	-0.7
SDD				Sn	Sn	09 31 55.4	-1.4
MDP	Montagnes des	11.31	146	Pn	Pn	09 29 50.2	-4.4
	comp=Z,117nm,0.3s,baz=339,slow=16,SNR=278						
MDP				Sn	Sn	09 31 47.7	-12
	comp=Z,423nm,0.3s,baz=63,slow=17,SNR=13						
MDP				LR	LR	09 34 24.5	
	comp=Z,239μm,21.5s,baz=322,slow=38						
BANI	BANI	11.55	291		Pn	09 29 59.0	+0.9
BANI				Sn	Sn	09 32 04.4	-1.9
SC01	Santiago de lo	12.23	295		Pn	09 30 04.6	-2.6
SDDR	Presa de Saban	12.57	292	eP	Pn	09 30 10.6	-1.4
SDDR	Presa de Saban	12.57	292	eS	Sn	09 32 27.1	-4.1
SDDR	Presa de Saban	12.57	292	i P	Pn	09 30 09.6	-2.4
SDDR				eS	Sn	09 32 29.2	-2.0
SDDR					IAML	09 32 37.6	
	comp=Z,1μm,0.8s						
SDDR	Presa de Saban	12.57	292		Pn	09 30 08.5	-3.4
SDV	Santo Domingo	12.75	245	Pn	Pn	09 30 14.2	-0.3
	comp=Z,8.7nm,0.3s,baz=68,slow=9.8,SNR=85						
SDV				Sn	Sn	09 32 35.0	-0.7
	comp=Z,41nm,0.3s,baz=88,slow=23,SNR=6.0						
SDV	Santo Domingo	12.75	245	eP	Pn	09 30 13.9	-0.6
SDV	Santo Domingo	12.75	245		Pn	09 30 14.4	-0.1

URIC Uribia, Colomb 13.00 259 Pn 09 30 13.5 -4.4
GRTK Grand Turk 13.45 303 Pn Pn 09 30 19.0 -4.9
LGNH Logne 13.64 288 iP Pn 09 30 25.1 -1.5
LGNH eS Sn 09 32 53.3 -3.8
LGNH Logne 13.64 288 Pn 09 30 25.0 -1.5
CODC Agustn Codazz 14.88 253⇑iP Pn 09 30 39.8 -3.7
PAMC Pamplona, Colo 15.28 243⇑eP Pn 09 30 47.6 -1.6
OCAC Ocana 15.41 247 eP Pn 09 30 50.7 +0.1
ARGC Ariguani, Magd 15.65 254⇑eP Pn 09 30 48.7 -4.9
SMLC San Martn de 15.86 250⇑iP Pn 09 30 53.5 -2.9
BARC Barichara 16.07 242 eP Pn 09 30 58.6 -0.5
GTBY Guantanamo Bay 16.30 291 iP Pn 09 30 54.9 -7.0
GTBY eS Sn 09 33 51.0 -11
GTBY Guantanamo Bay 16.30 291 Pn Pn 09 30 55.2 -6.6
RUSC La Rusia 16.35 240⇑iP Pn 09 31 02.4 -0.6
RUSC La Rusia 16.35 240 Pn 09 31 02.6 -0.4
SJCC San Jacinto, C 16.51 255⇑iP Pn 09 30 60.0 -4.7
PTGC Puerto Gaitan, 16.58 233 eP Pn 09 31 03.5 -2.0
CMJ Castle Mountai 17.06 284⇑iP Pn 09 31 11.1 -0.5
ZARC Zaragoza, Cauc 17.11 247 eP Pn 09 31 11.0 -1.1
YHJ Yallahs 17.14 283⇓iP Pn 09 31 11.5 -1.0
PTBC PUERTO BERRIO, 17.19 244 eP Pn 09 31 10.8 -2.3
SPBC San Pablo de B 17.31 241⇑iP Pn 09 31 14.2 -0.5
HOJ Hope 17.40 284⇓iP Pn 09 31 14.5 -1.2
STH Stony Hill 17.46 284 iP Pn 09 31 15.4 -1.1
CHIC Chingaza 17.59 237⇑iP Pn 09 31 17.7 -0.7
UREC San Jos de Ur 17.61 249⇑iP Pn 09 31 14.0 -4.3
PCJ Portland Cotta 17.75 283⇑iP Pn 09 31 19.8 -0.2
CVER Cruz Verde, Cu 17.93 238⇑eP P 09 31 23.8 +0.6
BBJ Bamboo Saint A 17.94 285⇓iP Pn 09 31 21.1 -1.4
ROSC El Rosal 17.95 239 P P 09 31 24.2 +0.8
comp=Z,26nm,0.3s,baz=95,slow=7.4,SNR=168
ROSC S Sn 09 34 45.1 +2.4
comp=Z,18nm,0.3s,baz=16,slow=21,SNR=2.6
ROSC El Rosal 17.95 239 eP P 09 31 24.0 +0.7
ROSC El Rosal 17.95 239 P P 09 31 24.1 +0.7
ROSC IAmb IAmb 09 31 52.7
comp=Z,6μm,1.7s
LCBC Los crdobas, 17.96 253 eP Pn 09 31 21.9 -0.7
GUVC San Jose del G 18.03 230 eP P 09 31 23.9 0.0
NORC Norcasia 18.03 242 eP Pn 09 31 22.3 -1.3
MTDJ Mount Denham 18.17 284 Pn 09 31 23.0 -2.3
MCJ Malvern 18.27 283⇓iP P 09 31 25.6 -0.9
HELC Santa Helena 18.29 245⇑iP P 09 31 24.9 -2.1
BBSR BB Station 18.45 345 P P 09 31 26.5 -1.8
DBBC Dabeiba 18.52 248 eP P 09 31 28.5 -0.8
GUY2C Guyana, Caldas 18.63 242⇑eP Pn 09 31 31.5 +0.2
CBOC Ciudad Bolivar 18.87 244 eP P 09 31 31.7 -1.5
PRAC Prado 19.05 237⇑iP P 09 31 35.1 0.0
MACC Macarena, Meta 19.20 231 eP P 09 31 35.9 -0.9
ORTC Ortega, Tolima 19.24 238⇑iP P 09 31 36.6 -0.5
PLMC San Jos del P 19.57 242⇑eP P 09 31 39.7 -1.1
PTAC Punta Ardita, 19.91 250 eP P 09 31 43.9 -0.6
SOLC Bahia Solano 19.93 247 eP Pn 09 31 45.8 -0.7
YOTC Yotoco, Valle 20.11 240⇑iP P 09 31 45.1 -1.7
PIZC Pizarro, Choco 20.47 244⇑eP P 09 31 50.1 -0.5
CBCY The Bluff, Cay 20.50 287 P P 09 31 48.8 -2.0
FLOC Florencia 20.95 233 eP P 09 31 55.4 -0.3
FLOC Florencia 20.95 233 P P 09 31 54.8 -0.9
BCIP Isla Barro Col 21.11 258 eP P 09 31 57.6 +0.2
BCIP Isla Barro Col 21.11 258 P P 09 31 57.7 +0.2
BCIP Isla Barro Col 21.11 258 P P 09 31 57.7 +0.2
BCIP pmax pmax
comp=Z,13μm,1.7s
PTLC Puerto Leguiza 21.22 229 eP P 09 32 00.9 +2.3
FSCY Frank Sound, G 21.75 286 P P 09 32 01.8 -2.5
BBAC Balboa, Cauca 21.95 237 eP P 09 32 07.2 +0.5
CRUC La Cruz 21.98 236 eP P 09 32 06.9 -0.2
CMBC Cumbal 23.05 236⇓eP P 09 32 20.7 +2.1
TUMC Tumaco 23.27 239 eP P 09 32 20.2 -0.2
TUMC Tumaco 23.27 239 P P 09 32 19.1 -1.3
061Z Ochoppi 23.40 302 P P 09 32 20.7 -0.9
060A Indiantown 23.47 305 P P 09 32 21.1 -1.1
SAML Samuel 23.76 190 eP P 09 32 26.1 +1.0
SAML Samuel 23.76 190 P P 09 32 26.4 +1.3
SAML Samuel 23.76 190 P P 09 32 26.4 +1.3
SAML pmax pmax
comp=Z,5μm,2.0s
SAML MLR MLR
comp=Z,58μm,21.0s
OTAV Otavalo 23.97 235 eP P 09 32 27.1 -0.6
OTAV Otavalo 23.97 235 P P 09 32 26.2 -1.4
OTAV Otavalo 23.97 235 P P 09 32 26.2 -1.4
OTAV pmax pmax
comp=Z,516nm,1.1s
OTAV MLR MLR
comp=Z,42μm,20.0s
ESPN Las Esperanzas 24.75 268 P P 09 32 35.7 +1.5
DWPF Disney Wildern 24.81 306 P P 09 32 34.9 +0.3
DWPF IAmb IAmb 09 33 19.1
comp=Z,1μm,1.2s
DWPF Disney Wildern 24.81 306 P P 09 32 35.0 +0.3
baz=118
HDC Heredia 24.98 262 P P 09 32 38.3 +1.8
CLDB Colider 25.50 173 eP P 09 32 41.2 +0.2
ACON Acoyapa 25.63 267 P P 09 32 43.1 +0.9
NBPS Pedro II - PI 25.65 136 eP P 09 32 43.8 +1.3
JTS Las Juntas de 25.72 263 P P 09 32 43.1 0.0
comp=Z,28nm,0.5s,baz=239,slow=5.1,SNR=30
JTS S S 09 37 21.5 +11
comp=Z,12nm,0.9s,baz=110,slow=20,SNR=1.4
JTS Las Juntas de 25.72 263 P P 09 32 43.0 -0.1
JTS IAmb IAmb 09 33 13.5
comp=Z,1μm,1.6s
JTS Las Juntas de 25.72 263c iP P 09 32 42.5 -0.6
V62A Hyde County Ai 25.85 327 P P 09 32 44.1 +0.1
V62A IAmb IAmb 09 32 48.8
comp=Z,1μm,1.2s
V62A IAMs_20 IAMs_20 09 42 32.6
comp=Z,73μm,20.0s
V62A Hyde County Ai 25.85 327 P P 09 32 45.0 +1.0
baz=140
NBMO Morrinhos-CE 25.86 132 eP P 09 32 45.3 +1.1
SMTB Santa Maria do 25.90 153 eP P 09 32 46.1 +1.4
Y60A Bolivia 26.01 321 P P 09 32 46.5 +1.0
Y60A IAmb IAmb 09 32 54.5
comp=Z,808nm,0.8s
Y60A IAMs_20 IAMs_20 09 43 24.9
comp=Z,79μm,21.0s
Y60A Bolivia 26.01 321 P P 09 32 45.8 +0.4
baz=133,SNR=25
Y60A S S 09 37 15.5 +1.0
baz=133
W61A Ground Anchor 26.13 325 P P 09 32 46.9 +0.4
baz=137,SNR=21
W61A S S 09 37 19.6 +3.2
baz=137
Z59A Georgetown, SC 26.16 319 P P 09 32 48.0 +1.1
baz=130
Z59A S S 09 37 18.3 +1.3
baz=130
656A Willston 26.26 308 P P 09 32 47.8 0.0
X60A Albert Glenn T 26.26 323 P P 09 32 48.1 +0.4
baz=135,SNR=24
X60A S S 09 37 19.7 +1.1
baz=135
V61A Roper 26.36 326 P P 09 32 48.3 -0.3
V61A Roper 26.36 326 P P 09 32 49.0 +0.5
baz=139,SNR=18
V61A S S 09 37 22.3 +2.3
baz=139
Y59A Loris 26.40 320 P P 09 32 49.0 0.0
Y59A IAmb IAmb 09 32 56.9
comp=Z,1μm,0.9s
Y59A IAMs_20 IAMs_20 09 43 36.2
comp=Z,94μm,21.0s
Y59A Loris 26.40 320 P P 09 32 49.4 +0.4
baz=132,SNR=29
Y59A S S 09 37 21.3 +0.6
baz=132
158A Hollywood 26.44 317 P P 09 32 50.2 +0.8
baz=128,SNR=8.8
158A S S 09 37 22.6 +1.2
baz=128
W60A Pink Hill 26.45 324 P P 09 32 50.0 +0.6
baz=136,SNR=54
W60A S S 09 37 22.9 +1.5
baz=136
CSU Charleston Sou 26.51 317 P P 09 32 48.7 -1.3
257A Skidaway Islan 26.55 314 P P 09 32 50.6 +0.2
456A Hilliard 26.56 311 P P 09 32 49.1 -1.4
Z58A St. Stephen 26.57 318 P P 09 32 51.0 +0.5
baz=130,SNR=47
Z58A S S 09 37 24.6 +1.3
baz=130
X59A McDuffie Farm, 26.63 322 P P 09 32 51.4 +0.4
baz=134,SNR=32
X59A S S 09 37 25.7 +1.3
baz=134
ESTN Estel 26.64 270 P P 09 32 53.0 +1.6
NHSC New Hope 26.66 317 P P 09 32 51.2 -0.2
NHSC IAmb IAmb 09 33 12.3
comp=Z,1μm,1.1s
NHSC New Hope 26.66 317 P P 09 32 51.9 +0.6
baz=129,SNR=32
CNNC Cliffs of the 26.68 324 P P 09 32 51.8 +0.3
CNNC IAmb IAmb 09 32 57.9
comp=Z,1μm,1.1s
CNNC IAMs_20 IAMs_20 09 43 30.5
comp=Z,65μm,21.0s
CNNC Cliffs of the 26.68 324 P P 09 32 52.1 +0.5
baz=136,SNR=35
U61A Possum Corner 26.70 327 P P 09 32 50.9 -0.7
U61A IAmb IAmb 09 33 08.9
comp=Z,1μm,1.2s
U61A IAMs_20 IAMs_20 09 43 28.9
comp=Z,84μm,20.0s
U61A Possum Corner 26.70 327 P P 09 32 52.0 +0.4
baz=140,SNR=15
U61A S S 09 37 26.1 +0.8
baz=140
V60A Jim Taylor Roa 26.71 325 P P 09 32 52.4 +0.6
V60A IAmb IAmb 09 33 24.0
comp=Z,810nm,1.1s
V60A IAMs_20 IAMs_20 09 43 30.3
comp=Z,78μm,21.0s
V60A Jim Taylor Roa 26.71 325 P P 09 32 52.1 +0.3
baz=138,SNR=59
V60A S S 09 37 26.7 +1.1
baz=138
Y58A Scranton 26.84 319 P P 09 32 53.3 +0.3
Y58A IAmb IAmb 09 33 01.8
comp=Z,1μm,1.1s
Y58A IAMs_20 IAMs_20 09 43 38.8
comp=Z,83μm,21.0s
Y58A Scranton 26.84 319 P P 09 32 53.4 +0.4
baz=131,SNR=30
Y58A S S 09 37 30.1 +2.4
baz=131
157A Early Branch 26.94 316 P P 09 32 54.8 +0.9
baz=127,SNR=47
157A S S 09 37 31.9 +2.6
baz=127
W59A Clinton 26.95 323 P P 09 32 54.4 +0.5
baz=135,SNR=59
W59A S S 09 37 31.8 +2.4
baz=135
X58A Rowland 27.07 321 P P 09 32 55.7 +0.7
X58A IAmb IAmb 09 33 15.7
comp=Z,534nm,1.0s
X58A IAMs_20 IAMs_20 09 43 55.8
comp=Z,86μm,22.0s
X58A Rowland 27.07 321 P P 09 32 55.5 +0.5
baz=132,SNR=42
X58A S S 09 37 32.6 +1.4
baz=132
Z57A Bowman 27.12 317 P P 09 32 56.0 +0.5
baz=128,SNR=23
Z57A S S 09 37 34.0 +1.8
baz=128
U60A Pendleton 27.18 327 P P 09 32 56.6 +0.6
baz=139,SNR=89
U60A S S 09 37 34.4 +1.4
baz=139
V59A Middlesex 27.25 324 P P 09 32 57.3 +0.6
baz=136,SNR=93
V59A S S 09 37 35.0 +0.8
baz=136
W58A Raeford 27.32 322 P P 09 32 57.7 +0.5
baz=133,SNR=42
W58A S S 09 37 36.7 +1.5
baz=133
S61A Accomac 27.36 330 P P 09 32 57.5 0.0
S61A IAmb IAmb 09 33 25.2
comp=Z,977nm,1.1s
S61A Accomac 27.36 330 P P 09 32 57.8 +0.2
baz=143,SNR=9.8
Y57A Sumter 27.37 319 P P 09 32 57.9 +0.1
Y57A IAMs_20 IAMs_20 09 44 16.9
comp=Z,75μm,20.0s
Y57A Sumter 27.37 319 P P 09 32 58.3 +0.5
baz=130,SNR=36
Y57A S S 09 37 37.6 +1.5
baz=130
TGUH Tegucigalpa,Un 27.42 272 P P 09 33 00.2 +1.6
TGUH IAMs_20 IAMs_20 09 44 40.7
comp=Z,62μm,19.0s
U59A Littleton 27.43 326 P P 09 32 58.1 -0.2
U59A IAmb IAmb 09 33 17.3
comp=Z,1μm,1.8s
U59A IAMs_20 IAMs_20 09 43 30.4
comp=Z,67μm,21.0s
U59A Littleton 27.43 326 P P 09 32 58.8 +0.5
baz=137,SNR=59
U59A S S 09 37 36.9 -0.1
baz=137
T60A Surry 27.46 328 P P 09 32 59.5 +0.9
T60A IAMs_20 IAMs_20 09 43 51.1
comp=Z,72μm,21.0s
T60A Surry 27.46 328 P P 09 32 59.6 +1.1
baz=140,SNR=93
T60A S S 09 37 39.7 +2.2
baz=140
X57A Johnson Farm, 27.47 320 P P 09 32 59.1 +0.5
baz=131,SNR=20
X57A S S 09 37 38.8 +1.1
baz=131
255A Hazlehurst 27.54 313 P P 09 32 58.8 -0.5
Z56A Williston 27.58 316 P P 09 32 59.4 -0.3
Z56A IAmb IAmb 09 33 31.1
comp=Z,692nm,0.8s
Z56A Williston 27.58 316 P P 09 33 00.4 +0.8
baz=127,SNR=47
Z56A S S 09 37 40.1 +0.7
baz=127
R61A Willards 27.72 332 P P 09 33 00.8 0.0
R61A Willards 27.72 332 P P 09 33 01.6 +0.8
baz=144,SNR=8.8
NBCL Cascavel-CE 27.75 131 eP P 09 33 02.7 +1.4
NBPB Pedra_Branca-C 27.75 135 eP P 09 33 02.4 +1.0
T59A Double "B" Far 27.76 327 P P 09 33 01.5 +0.3
T59A IAMs_20 IAMs_20 09 44 12.1
comp=Z,78μm,21.0s
T59A Double "B" Far 27.76 327 P P 09 33 01.7 +0.5
baz=139,SNR=41
T59A S S 09 37 42.6 +0.4
baz=139
V58A Windy Hill, Pi 27.78 323 P P 09 33 01.6 +0.3
V58A IAmb IAmb 09 33 43.1
comp=Z,631nm,1.3s
V58A Windy Hill, Pi 27.78 323 P P 09 33 01.7 +0.3
baz=134,SNR=80
V58A S S 09 37 43.8 +1.3
baz=134
BIRD Birdtown, Kers 27.82 320 P P 09 33 02.3 +0.5
BIRD IAMs_20 IAMs_20 09 44 29.8
comp=Z,87μm,20.0s
Y56A Pelion 27.82 317 P P 09 33 02.4 +0.6
baz=128,SNR=22
Y56A S S 09 37 44.4 +1.2
baz=128
S60A Water View 27.86 329 P P 09 33 03.0 +0.9
baz=141,SNR=37
S60A S S 09 37 46.0 +2.3
baz=141
W57A Gilead 27.86 321 P P 09 33 02.2 +0.1
W57A IAMs_20 IAMs_20 09 44 19.9
comp=Z,80μm,22.0s
W57A Gilead 27.86 321 P P 09 33 02.4 +0.2
baz=132,SNR=42
W57A S S 09 37 44.8 +1.0
baz=132
U58A Oxford 27.88 325 P P 09 33 02.9 +0.6
baz=136,SNR=173
U58A S S 09 37 45.2 +1.1
baz=136
TIGA Tifton 28.08 311 P P 09 33 05.2 +1.1
TIGA Tifton 28.08 311 P P 09 33 05.1 +1.0
baz=121,SNR=47
TIGA S S 09 37 51.2 +3.8
baz=121
X56A White Oak 28.08 319 P P 09 33 04.4 +0.3
baz=130,SNR=70
X56A S S 09 37 48.5 +1.2
baz=130
JSC Jenkinsville 28.10 318 P P 09 33 04.3 +0.1
JSC Jenkinsville 28.10 318 P P 09 33 04.3 +0.1
JSC pmax pmax
comp=Z,265nm,1.5s
JSC MLR MLR
comp=Z,44μm,21.0s
553A Crawfordville 28.10 308 P P 09 33 05.0 +0.7
553A IAmb IAmb 09 33 22.1
comp=Z,1μm,1.2s
Q61A Milford 28.16 332 P P 09 33 05.1 +0.3
baz=145,SNR=16
Q61A S S 09 37 50.8 +2.4
baz=145
W56A Indian Trail 28.21 320 P P 09 33 05.6 +0.3
baz=131,SNR=35
W56A S S 09 37 50.7 +1.3
baz=131
S59A Mechanicsville 28.22 328 P P 09 33 06.1 +0.8
baz=140,SNR=40
S59A S S 09 37 51.1 +1.6
baz=140
V57A Coltrane Farms 28.23 322 P P 09 33 05.7 +0.3
baz=133,SNR=83
V57A S S 09 37 49.2 -0.4
baz=133
R60A Leonardtown, M 28.26 330 P P 09 33 06.8 +1.1
baz=142,SNR=14
R60A S S 09 37 51.6 +1.6
baz=142
T58A Grand View Acr 28.27 326 P P 09 33 06.1 +0.3
baz=137,SNR=94
T58A S S 09 37 50.3 +0.1
baz=137
Y55A Saluda 28.27 317 P P 09 33 06.3 +0.4
baz=127,SNR=44
Y55A S S 09 37 51.4 +1.0
baz=127
U57A Blanch 28.35 324 P P 09 33 06.9 +0.4
baz=135,SNR=64
U57A S S 09 37 52.4 +0.9
baz=135
154A Montrose 28.36 313 P P 09 33 07.1 +0.5
154A IAmb IAmb 09 33 48.8
comp=Z,1μm,1.2s
X55A Gracelyn & Ava 28.45 318 P P 09 33 07.9 +0.4
baz=128,SNR=70
X55A S S 09 37 53.5 +0.3
baz=128
R59A King George, V 28.47 329 P P 09 33 08.0 +0.5
baz=141,SNR=36
R59A S S 09 37 54.6 +1.3
baz=141
TEIG Tepich 28.49 286 P P 09 33 08.3 +0.4
comp=Z,266nm,0.9s,baz=229,slow=23,SNR=68
TEIG S S 09 37 53.5 -0.6
comp=Z,20nm,0.9s,baz=132,slow=2.8,SNR=1.8
TEIG LR LR 09 43 18.8
comp=Z,17μm,19.2s,baz=320,slow=34
TEIG Tepich 28.49 286 P P 09 33 08.1 +0.1
Q60A Greensboro 28.50 332 P P 09 33 07.6 -0.1
Q60A Greensboro 28.50 332 P P 09 33 08.3 +0.6
baz=144,SNR=8.0
Q60A S S 09 37 55.6 +1.9
baz=144
S58A Poland Farm, P 28.50 327 P P 09 33 08.2 +0.4
S58A IAmb IAmb 09 33 14.3
comp=Z,559nm,1.1s
S58A IAMs_20 IAMs_20 09 44 33.7
comp=Z,74μm,20.0s
S58A Poland Farm, P 28.50 327 P P 09 33 08.4 +0.6
baz=138,SNR=90
S58A S S 09 37 55.1 +1.3
baz=138
P61A Hammonton 28.58 334 P P 09 33 08.8 +0.4
P61A IAmb IAmb 09 33 26.7
comp=Z,939nm,1.3s
P61A Hammonton 28.58 334 P P 09 33 09.3 +0.8
baz=147,SNR=19
P61A S S 09 37 57.3 +2.3
baz=147
CBN Corbin Frederi 28.60 329 P P 09 33 09.0 +0.3
CBN IAMs_20 IAMs_20 09 44 04.3
comp=Z,56μm,20.0s
CBN Corbin Frederi 28.60 329 P P 09 33 09.3 +0.6
baz=140
V56A Mocksville 28.61 321 P P 09 33 09.0 +0.2
baz=132,SNR=54
V56A S S 09 37 56.7 +1.1
baz=132
R58B Mineral 28.68 328 P P 09 33 08.9 -0.5
R58B IAMs_20 IAMs_20 09 46 39.3
comp=Z,71μm,18.0s
R58B Mineral 28.68 328 P P 09 33 09.8 +0.4
baz=139,SNR=51
R58B S S 09 37 56.7 +0.1
baz=139
KMSC Kings Mountain 28.69 319 P P 09 33 08.9 -0.6
KMSC IAMs_20 IAMs_20 09 44 56.7
comp=Z,83μm,21.0s
KMSC Kings Mountain 28.69 319 P P 09 33 09.9 +0.4
baz=130,SNR=59
KMSC S S 09 37 58.5 +1.7
baz=130
T57A Hurt 28.71 325 P P 09 33 09.8 +0.2
T57A IAMs_20 IAMs_20 09 44 41.2
comp=Z,68μm,22.0s
T57A Hurt 28.71 325 P P 09 33 10.2 +0.5
baz=136,SNR=68
T57A S S 09 37 57.2 0.0
baz=136
M65A Busby, Falmout 28.72 342 P P 09 33 09.3 -0.3
M65A IAmb IAmb 09 33 25.9
comp=Z,1μm,1.8s
M65A IAMs_20 IAMs_20 09 44 55.1
comp=Z,67μm,19.0s
M65A Busby, Falmout 28.72 342 P P 09 33 09.6 0.0
baz=156,SNR=11
M65A S S 09 37 59.0 +1.9
baz=156
HODGE Hodges 28.72 317 P P 09 33 09.4 -0.3
HODGE IAMs_20 IAMs_20 09 44 47.6
comp=Z,74μm,22.0s
Q59A Harwood 28.77 330 P P 09 33 10.6 +0.5
baz=142,SNR=8.2
Q59A S S 09 37 59.3 +1.4
baz=142
Y54A Tignall 28.78 316 P P 09 33 11.0 +0.6
baz=126,SNR=32
Y54A S S 09 37 59.8 +1.4
baz=126
PAULI Pauline 28.79 318 P P 09 33 10.9 +0.5
PAULI IAMs_20 IAMs_20 09 44 48.5
comp=Z,76μm,22.0s
N63A Mattituck 28.82 338 P P 09 33 10.9 +0.3
baz=152
O61A Allentown 28.83 335 P P 09 33 11.2 +0.5
baz=148,SNR=31
O61A S S 09 38 01.3 +2.4
baz=148
M64A Tiverton 28.88 341 P P 09 33 11.4 +0.3
baz=155,SNR=16
M64A S S 09 38 00.2 +0.5
baz=155
U56A King 28.90 322 P P 09 33 11.9 +0.5
U56A King 28.90 322 P P 09 33 11.9 +0.5
baz=133,SNR=58
U56A S S 09 38 00.5 +0.2
baz=133
ATAH Atahualpa 28.93 223 P P 09 33 13.3 +0.9
comp=Z,473nm,0.9s,baz=31,slow=4.8,SNR=116
ATAH S S 09 38 01.8 0.0
comp=Z,51nm,0.9s,baz=75,slow=7.6,SNR=2.0
L65A Cape Cod Natio 28.97 343 P P 09 33 12.0 +0.1
baz=158
X54A Belton 28.98 317 P P 09 33 12.8 +0.6
baz=128,SNR=38
X54A S S 09 38 01.6 +0.1
baz=128
R58A Rapidan 29.00 328 P P 09 33 12.9 +0.7
baz=139,SNR=69
R58A S S 09 38 00.2 -1.4
baz=139
M63A Gales Ferry 29.02 339 P P 09 33 12.7 +0.3

baz=153,SNR=28
M63A S S 09 38 01.9 0.0
baz=153
GOGA Godfrey 29.06 314 P P 09 33 10.9 -1.9
GOGA Godfrey 29.06 314 P P 09 33 10.9 -1.9
GOGA pmax pmax
comp=Z,200nm,1.2s
GOGA MLR MLR
comp=Z,53µm,21.0s
GOGA Godfrey 29.06 314 P P 09 33 13.5 +0.7
baz=124,SNR=53
P60A Greenville 29.06 333 P P 09 33 12.9 +0.2
P60A Greenville 29.06 333 P P 09 33 13.1 +0.3
baz=145,SNR=21
P60A S S 09 38 02.4 -0.1
baz=145
V55A Taylorsville 29.07 321 P P 09 33 13.8 +0.9
V55A IAMs_20 IAMs_20 09 44 55.9
comp=Z,78µm,21.0s
V55A Taylorsville 29.07 321 P P 09 33 13.8 +0.9
baz=131,SNR=69
V55A S S 09 38 04.0 +1.1
baz=131
PSUB Penn St. - Bra 29.08 333 P P 09 33 12.8 -0.1
352A Blakely 29.09 310 P P 09 33 14.1 +1.0
S57A Dark Hollow, R 29.09 326 P P 09 33 13.7 +0.6
S57A IAMs_20 IAMs_20 09 44 31.4
comp=Z,69µm,20.0s
S57A Dark Hollow, R 29.09 326 P P 09 33 13.7 +0.6
baz=137,SNR=56
S57A S S 09 38 05.4 +2.2
baz=137
L64A Middleborough 29.12 342 P P 09 33 13.3 +0.1
baz=156,SNR=23
L64A S S 09 38 04.4 +1.0
baz=156
N62A Caumsett State 29.12 337 P P 09 33 13.7 +0.4
baz=150
N62A S S 09 38 04.4 +0.9
baz=150
T56A Rocky Mt 29.17 324 P P 09 33 14.4 +0.6
baz=134,SNR=55
T56A S S 09 38 05.8 +1.4
baz=134
CPNY Central Park 29.19 336 P P 09 33 13.5 -0.3
CPNY IAmb IAmb 09 33 30.2
comp=Z,669nm,1.6s
W54A Cherokee Point 29.19 318 P P 09 33 14.7 +0.7
baz=129,SNR=58
W54A S S 09 38 06.7 +1.9
baz=129
P59A Jarrettsville 29.26 332 P P 09 33 15.0 +0.5
baz=144,SNR=41
P59A S S 09 38 06.7 +1.0
baz=144
YLE Yale 29.26 338 P P 09 33 15.4 +1.0
R57A Stanardsville 29.26 327 P P 09 33 15.6 +1.0
baz=139,SNR=38
R57A S S 09 38 07.4 +1.6
baz=139
N61A South Mountain 29.29 336 P P 09 33 15.1 +0.4
baz=149,SNR=15
N61A S S 09 38 07.2 +1.1
baz=149
SDMD Soldier's Deli 29.29 331 P P 09 33 14.2 -0.6
L63A North Scituate 29.29 340 P P 09 33 14.8 0.0
baz=154
L63A S S 09 38 07.5 +1.4
baz=154
451A Vernon 29.30 307 P P 09 33 13.6 -1.4
451A IAmb IAmb 09 33 29.7
comp=Z,668nm,1.2s
BRYW Bryant College 29.32 341 P P 09 33 14.3 -0.7
Q58A Fox Den Farm, 29.32 329 P P 09 33 15.5 +0.4
baz=141,SNR=52
Q58A S S 09 38 07.9 +1.2
baz=141
BRNJ Basking Ridge 29.34 335 P P 09 33 15.4 +0.2
BRNJ IAmb IAmb 09 33 31.9
comp=Z,1µm,2.0s
SNET Serv Nac Est T 29.35 272 P P 09 33 16.6 +0.9
SNET IAMs_20 IAMs_20 09 46 50.3
comp=Z,60µm,20.0s
PAL Palisades 29.35 337 P P 09 33 14.8 -0.4
PAL Palisades 29.35 337 P P 09 33 14.9 -0.4
PAL pmax pmax
comp=Z,374nm,1.3s
PAL MLR MLR
comp=Z,38µm,20.0s
PAL Palisades 29.35 337 P P 09 33 15.5 +0.2
baz=150,SNR=23
PAL S S 09 38 07.3 +0.2
baz=150
M62A Hamden 29.35 338 P P 09 33 16.1 +0.8
baz=152,SNR=24
M62A S S 09 38 07.6 +0.5
baz=152
S56A Natural Bridge 29.37 325 P P 09 33 16.6 +1.0
baz=136,SNR=24
S56A S S 09 38 09.2 +1.7
baz=136
O60A Telford 29.38 334 P P 09 33 16.4 +0.8
baz=146,SNR=20
O60A S S 09 38 08.2 +0.7
baz=146
Y53A Monroe 29.39 315 P P 09 33 16.6 +0.8
baz=125,SNR=42
Y53A S S 09 38 09.7 +1.8
baz=125
U55A TA2, Sparta 29.40 322 P P 09 33 16.8 +0.9
baz=132,SNR=87
U55A S S 09 38 09.9 +1.7
baz=132
V54A Nebo 29.48 320 P P 09 33 17.3 +0.7
baz=130,SNR=58
V54A S S 09 38 11.0 +1.7
baz=130
BLA Blacksburg 29.52 324 P P 09 33 18.2 +1.3
BLA Blacksburg 29.52 324 P P 09 33 18.3 +1.3
BLA pmax pmax
comp=Z,2µm,1.9s
BLA MLR MLR
comp=Z,57µm,22.0s
BLA Blacksburg 29.52 324 P P 09 33 17.7 +0.8
baz=134,SNR=50
MVL Millersville 29.53 332 P P 09 33 17.6 +0.6
MVL IAmb IAmb 09 33 33.7
comp=Z,719nm,1.4s
152A Waverly Hall 29.54 312 P P 09 33 17.8 +0.7
152A IAmb IAmb 09 33 35.5
comp=Z,708nm,1.3s
M61A Granite Spring 29.56 337 P P 09 33 17.5 +0.4
baz=150,SNR=21
M61A S S 09 38 09.4 -1.0
baz=150
P58A Pank, Wackersv 29.57 330 P P 09 33 17.5 +0.3
baz=142,SNR=48
P58A S S 09 38 12.6 +2.1
baz=142
X53A Estanollee 29.57 316 P P 09 33 18.4 +1.0
baz=126,SNR=46
X53A S S 09 38 13.0 +2.2
baz=126
BCX Boston College 29.58 341 P P 09 33 17.9 +0.6
BCX IAmb IAmb 09 33 33.7
comp=Z,1µm,1.8s
BCX IAMs_20 IAMs_20 09 45 30.0
comp=Z,53µm,20.0s
LUPA Lehigh Univers 29.60 334 P P 09 33 18.8 +1.3
BG3 Lake Jocassee 29.62 318 P P 09 33 18.9 +1.1
NBMA Muriti-CE 29.63 136 eP P 09 33 18.6 +0.5
NBPA Parau_RN 29.64 131 eP P 09 33 19.1 +1.0
T55A Pulaski 29.66 323 P P 09 33 19.2 +1.0
baz=133,SNR=83
T55A S S 09 38 14.5 +2.3
baz=133
WES Weston 29.67 341 P P 09 33 16.6 -1.5
WES IAmb IAmb 09 33 33.5
comp=Z,938nm,1.6s
WES IAMs_20 IAMs_20 09 45 53.4
comp=Z,57µm,20.0s
WES Weston 29.67 341 P P 09 33 16.6 -1.5
WES pmax pmax
comp=Z,938nm,1.6s
WES MLR MLR
comp=Z,57µm,20.0s
ODNJ Ogdensburg 29.69 336 P P 09 33 16.9 -1.4

N60A Cedar Hill Far 29.71 335 P P 09 33 19.2 +0.6
baz=147,SNR=61
N60A S S 09 38 14.2 +1.4
baz=147
O59A Robesonia 29.71 333 P P 09 33 19.6 +1.1
baz=145,SNR=92
O59A S S 09 38 14.8 +2.0
baz=145
Y52A Lilburn 29.72 315 P P 09 33 15.6 -3.2
Y52A IAMs_20 IAMs_20 09 45 44.3
comp=Z,56µm,20.0s
Y52A Lilburn 29.72 315 P P 09 33 19.7 +1.0
baz=124,SNR=31
Y52A S S 09 38 15.4 +2.3
baz=124
Q57A Strasburg 29.76 329 P P 09 33 20.2 +1.2
baz=140,SNR=49
Q57A S S 09 38 15.9 +2.3
baz=140
L62A Suffield 29.79 339 P P 09 33 19.6 +0.4
baz=153
R56A Bull Pasture M 29.81 327 P P 09 33 20.9 +1.4
baz=137,SNR=48
R56A S S 09 38 17.5 +2.9
baz=137
KSCT Kent School, K 29.82 338 P P 09 33 19.8 +0.3
KSCT IAmb IAmb 09 33 36.0
comp=Z,764nm,1.8s
HRV Adam Dziewonsk 29.86 341 P P 09 33 19.6 -0.2
HRV IAmb IAmb 09 33 36.4
comp=Z,842nm,1.6s
HRV Adam Dziewonsk 29.86 341 IAMs_20 IAMs_20 09 45 58.3
comp=Z,54µm,20.0s
HRV Adam Dziewonsk 29.86 341 P P 09 33 19.6 -0.2
HRV pmax pmax
comp=Z,843nm,1.7s
HRV MLR MLR
comp=Z,54µm,20.0s
HRV Adam Dziewonsk 29.86 341 P P 09 33 20.2 +0.5
baz=155
W53A Cullowhee 29.88 318 P P 09 33 21.4 +1.2
baz=127,SNR=76
W53A S S 09 38 18.2 +2.4
baz=127
U54A Nelsons Funny 29.88 321 P P 09 33 19.7 -0.5
U54A IAMs_20 IAMs_20 09 45 43.3
comp=Z,74µm,21.0s
U54A Nelsons Funny 29.88 321 P P 09 33 21.0 +0.8
baz=131,SNR=49
U54A S S 09 38 17.8 +2.1
baz=131
PAGS Pennsylvania G 29.89 332 P P 09 33 20.2 +0.1
PAGS IAMs_20 IAMs_20 09 44 49.2
comp=Z,52µm,20.0s
O58A Lewisberry 29.89 332 P P 09 33 21.2 +1.1
baz=143,SNR=40
O58A S S 09 38 16.9 +1.2
baz=143
M60A Port Jervis 29.91 336 P P 09 33 20.7 +0.5
baz=148,SNR=18
M60A S S 09 38 17.5 +1.7
baz=148
P57A Homestead Farm 29.91 330 P P 09 33 19.5 -0.7
P57A IAmb IAmb 09 33 37.3
comp=Z,644nm,1.6s
P57A Homestead Farm 29.91 330 P P 09 33 21.3 +1.0
baz=141,SNR=33
P57A S S 09 38 18.4 +2.5
baz=141
QUA2 Belchertown 29.91 340 P P 09 33 20.1 -0.2
QUA2 IAMs_20 IAMs_20 09 45 29.7
comp=Z,53µm,20.0s
S55A Lewisburg 29.96 324 P P 09 33 21.9 +1.1
baz=135,SNR=82
S55A S S 09 38 17.8 +1.0
baz=135
V53A Saluda 29.96 319 P P 09 33 21.9 +1.1
V53A IAMs_20 IAMs_20 09 45 47.4
comp=Z,79µm,21.0s
V53A Saluda 29.96 319 P P 09 33 21.7 +0.9
baz=128,SNR=89
V53A S S 09 38 17.8 +0.9
baz=128
K63A Dunstable 30.01 341 P P 09 33 21.7 +0.5
baz=155,SNR=22
K63A S S 09 38 17.8 +0.4
baz=155
X52A Dahlonega 30.03 316 P P 09 33 22.4 +0.9
baz=125,SNR=30
X52A S S 09 38 19.3 +1.3
baz=125
N59A State Game Lan 30.03 334 P P 09 33 21.0 -0.4
N59A State Game Lan 30.03 334 P P 09 33 22.3 +0.9
baz=146,SNR=41
N59A S S 09 38 20.0 +2.1
baz=146
T54A Tazewell 30.09 322 P P 09 33 22.9 +0.8
baz=132,SNR=82
T54A S S 09 38 19.9 +0.9
baz=132
R55A Marlinton 30.11 326 P P 09 33 21.6 -0.5
R55A IAMs_20 IAMs_20 09 45 35.2
comp=Z,72µm,21.0s
R55A Marlinton 30.11 326 P P 09 33 24.0 +1.8
baz=136,SNR=41
R55A S S 09 38 22.8 +3.6
baz=136
Q56A Snyder Ridge, 30.16 328 P P 09 33 22.6 0.0
Q56A IAMs_20 IAMs_20 09 45 24.6
comp=Z,67µm,20.0s
Q56A Snyder Ridge, 30.16 328 P P 09 33 24.1 +1.5
baz=138
Q56A S S 09 38 22.2 +2.2
baz=138
L61B Northampton 30.17 340 P P 09 33 23.1 +0.5
baz=153,SNR=21
HAL Halifax 30.20 353 P P 09 33 22.9 +0.1
HAL IAMs_20 IAMs_20 09 43 47.2
comp=Z,59µm,20.0s
HAL Halifax 30.20 353 P P 09 33 22.9 +0.1
HAL pmax pmax
comp=Z,237nm,1.3s
HAL MLR MLR
comp=Z,59µm,20.0s
Z51A Franklin 30.20 313 P P 09 33 22.3 -0.7
Z51A IAmb IAmb 09 33 41.4
comp=Z,1µm,1.9s
Z51A IAMs_20 IAMs_20 09 45 03.1
comp=Z,56µm,22.0s
K62A Royalston 30.21 340 P P 09 33 21.1 -1.8
K62A IAMs_20 IAMs_20 09 45 48.8
comp=Z,48µm,19.0s
K62A Royalston 30.21 340 P P 09 33 23.7 +0.8
baz=154,SNR=16
U53A Fall Branch 30.24 320 P P 09 33 24.2 +0.8
baz=130,SNR=34
U53A S S 09 38 23.1 +1.7
baz=130
L61A Hillsdale 1, H 30.25 338 P P 09 33 24.1 +0.9
baz=151,SNR=56
L61A S S 09 38 22.6 +1.4
baz=151
O57A Amberson 30.29 331 P P 09 33 24.9 +1.2
baz=142,SNR=103
O57A S S 09 38 24.3 +2.3
baz=142
L60A Shokan 30.32 337 P P 09 33 24.8 +0.9
baz=150,SNR=38
L60A S S 09 38 24.1 +1.4
baz=150
250A Grady 30.33 309 P P 09 33 22.4 -1.7
250A IAMs_20 IAMs_20 09 45 21.6
comp=Z,56µm,22.0s
P56A Dayton Farm, R 30.33 329 P P 09 33 25.8 +1.8
baz=139,SNR=64
P56A S S 09 38 26.0 +3.4
baz=139
W52A Murphy 30.33 317 P P 09 33 23.3 -0.8
W52A IAMs_20 IAMs_20 09 45 48.4
comp=Z,62µm,22.0s
W52A Murphy 30.33 317 P P 09 33 25.2 +1.0
baz=126,SNR=33
W52A S S 09 38 24.7 +2.0
baz=126
N58A Sunbury 30.38 333 P P 09 33 24.8 +0.4
N58A Sunbury 30.38 333 P P 09 33 25.1 +0.7
baz=144,SNR=34

N58A S S 09 38 24.8 +1.6
baz=144
M59A Waymart 30.41 335 P P 09 33 25.5 +0.8
baz=147,SNR=55
M59A S S 09 38 25.4 +1.6
baz=147
J63A Strafford 30.41 342 P P 09 33 25.1 +0.4
baz=156,SNR=24
S54A Dingess, Beckl 30.44 324 P P 09 33 26.3 +1.2
S54A IAMs_20 IAMs_20 09 45 47.0
comp=Z,56µm,22.0s
S54A Dingess, Beckl 30.44 324 P P 09 33 26.1 +1.0
baz=134,SNR=48
S54A S S 09 38 25.5 +1.1
baz=134
SALV Santo Antonio 30.48 174 eP P 09 33 26.5 +1.0
R54A Victor 30.52 324 P P 09 33 27.2 +1.4
baz=134,SNR=86
R54A S S 09 38 27.9 +2.3
baz=134
BRAL Brewton 30.55 307 P P 09 33 26.8 +0.7
BRAL IAmb IAmb 09 33 47.0
comp=Z,534nm,1.0s
BRAL Brewton 30.55 307 P P 09 33 27.4 +1.4
baz=116,SNR=15
V52A Sevierville 30.56 318 P P 09 33 26.2 +0.1
V52A IAMs_20 IAMs_20 09 45 55.5
comp=Z,86µm,22.0s
V52A Sevierville 30.56 318 P P 09 33 26.9 +0.7
baz=128,SNR=57
K61A Williamstown 30.57 339 P P 09 33 27.1 +1.0
baz=152,SNR=64
K61A S S 09 38 28.2 +2.0
baz=152
TKL Tuckaleechee C 30.57 318 P P 09 33 26.2 0.0
TKL IAMs_20 IAMs_20 09 45 55.6
comp=Z,82µm,22.0s
TKL Tuckaleechee C 30.57 318 P P 09 33 26.2 0.0
TKL pmax pmax
comp=Z,276nm,1.2s
TKL MLR MLR
comp=Z,82µm,22.0s
RCBR Riachuelo 30.58 130 eP P 09 33 28.4 +1.8
RCBR Riachuelo 30.58 130 P P 09 33 26.4 -0.1
RCBR IAmb IAmb 09 33 50.1
comp=Z,908nm,1.6s
RCBR Riachuelo 30.58 130 P P 09 33 26.4 -0.1
RCBR pmax pmax
comp=Z,908nm,1.6s
J62A Henniker 30.59 341 P P 09 33 27.0 +0.8
baz=155,SNR=38
J62A S S 09 38 27.0 +0.5
baz=155
Q55A Buckhannon 30.60 327 P P 09 33 28.3 +1.9
baz=137,SNR=66
Q55A S S 09 38 29.9 +3.0
baz=137
I64A Boothbay 30.61 345 P P 09 33 27.0 +0.6
baz=160,SNR=14
T53A Wise 30.62 321 P P 09 33 27.9 +1.2
baz=131,SNR=53
T53A S S 09 38 29.8 +2.6
baz=131
X51A Calhoun 30.66 315 P P 09 33 27.4 +0.5
X51A IAMs_20 IAMs_20 09 45 49.9
comp=Z,60µm,22.0s
X51A Calhoun 30.66 315 P P 09 33 28.0 +1.0
baz=124,SNR=27
X51A S S 09 38 30.3 +2.5
baz=124
N57A Milroy 30.68 332 P P 09 33 27.9 +0.8
baz=143,SNR=49
N57A S S 09 38 30.3 +2.2
baz=143
M58A Price's Panora 30.70 334 P P 09 33 28.1 +0.8
baz=145,SNR=53
M58A S S 09 38 30.9 +2.5
baz=145
Z50A Ashland 30.71 312 P P 09 33 27.9 +0.5
Z50A IAmb IAmb 09 33 45.7
comp=Z,681nm,1.9s
Z50A Ashland 30.71 312 P P 09 33 28.2 +0.8
baz=121,SNR=36
Z50A S S 09 38 30.5 +1.9
baz=121
K60A Five Rivers En 30.74 338 P P 09 33 28.0 +0.4
baz=151,SNR=5.5
K60A S S 09 38 31.1 +2.2
baz=151
SSPA Standing Stone 30.75 331 P P 09 33 28.2 +0.6
SSPA Standing Stone 30.75 331 IAMs_20 IAMs_20 09 47 50.0
comp=Z,47µm,19.0s
SSPA Standing Stone 30.75 331 P P 09 33 28.6 +0.9
baz=142
U52A Thorn Hill 30.76 319 P P 09 33 28.6 +0.7
baz=129,SNR=54
U52A S S 09 38 31.3 +1.9
baz=129
FFD Franklin Falls 30.76 342 P P 09 33 27.1 -0.6
FFD IAmb IAmb 09 33 30.1
comp=Z,531nm,1.3s
FFD IAMs_20 IAMs_20 09 46 16.1
comp=Z,60µm,20.0s
TRY Troy 30.76 339 P P 09 33 26.1 -1.6
TRY IAmb IAmb 09 33 30.2
comp=Z,613nm,1.3s
O56A Blue Knob Stat 30.78 330 P P 09 33 29.1 +1.0
O56A IAmb IAmb 09 33 45.4
comp=Z,829nm,1.3s
O56A Blue Knob Stat 30.78 330 P P 09 33 29.4 +1.3
baz=141,SNR=72
O56A S S 09 38 32.1 +2.3
baz=141
GBN Guysborough 30.79 357 P P 09 33 27.2 -0.8
GBN IAMs_20 IAMs_20 09 44 15.7
comp=Z,61µm,20.0s
L59A Walton 30.80 336 P P 09 33 26.7 -1.5
L59A IAmb IAmb 09 33 44.9
comp=Z,890nm,1.8s
L59A Walton 30.80 336 P P 09 33 29.0 +0.8
baz=148,SNR=31
L59A S S 09 38 30.5 +0.5
baz=148
S53A Williamson 30.83 323 P P 09 33 29.7 +1.2
baz=132,SNR=102
S53A S S 09 38 32.4 +1.9
baz=132
P55A Reedsville 30.84 328 P P 09 33 30.2 +1.6
baz=138,SNR=43
P55A S S 09 38 33.9 +3.3
baz=138
EMMW East Machias 30.87 348 P P 09 33 27.7 -0.9
EMMW IAmb IAmb 09 33 31.1
comp=Z,638nm,1.7s
NBLI Livramento-PB 30.87 134 eP P 09 33 30.6 +1.4
H66A Whiting 30.91 348 P P 09 33 29.5 +0.5
baz=164,SNR=11
W51A Cleveland 30.93 316 P P 09 33 30.3 +0.9
baz=125,SNR=61
W51A S S 09 38 34.3 +2.3
baz=125
ARAG Araguaiana, MT 30.93 166 eP P 09 33 30.4 +1.0
J61A Chester 30.93 341 P P 09 33 29.6 +0.4
baz=154,SNR=24
J61A S S 09 38 33.4 +1.6
baz=154
CPCT Cooper Cave 30.94 317 P P 09 33 30.3 +0.9
CPCT IAMs_20 IAMs_20 09 46 06.4
comp=Z,62µm,22.0s
M57A Sunshine Farm, 30.96 333 P P 09 33 30.5 +0.9
M57A IAmb IAmb 09 33 46.8
comp=Z,646nm,1.1s
M57A Sunshine Farm, 30.96 333 P P 09 33 30.6 +1.1
baz=144,SNR=107
M57A S S 09 38 34.3 +1.9
baz=144
MCWV Mont Chateau 30.96 328 P P 09 33 30.5 +0.9
MCWV IAmb IAmb 09 33 47.1
comp=Z,653nm,1.6s
MCWV Mont Chateau 30.96 328 P P 09 33 31.2 +1.6
baz=138,SNR=78
TZTN Tazewell 30.96 319 P P 09 33 30.1 +0.4
TZTN IAmb IAmb 09 33 36.7
comp=Z,547nm,1.2s
TZTN IAMs_20 IAMs_20 09 46 18.1
comp=Z,68µm,21.0s
TZTN Tazewell 30.96 319 P P 09 33 30.7 +1.0

	baz=129,SNR=80				
T52A	Hallie	30.97 321	P	P	09 33 30.5 +0.8
T52A			IAmb	IAmb	09 33 36.1
	comp=Z,453nm,1.2s				
T52A			IAMs_20	IAMs_20	09 46 17.2
	comp=Z,72µm,22.0s				
T52A	Hallie	30.97 321	P	P	09 33 30.6 +0.8
	baz=130,SNR=70				
T52A			S	S	09 38 35.0 +2.3
	baz=130				
I63A	Otisfield	30.98 344	P	P	09 33 29.8 +0.1
I63A			IAmb	IAmb	09 33 32.5
	comp=Z,616nm,1.4s				
I63A	Otisfield	30.98 344	P	P	09 33 30.7 +0.9
	baz=158,SNR=38				
I63A			S	S	09 38 33.7 +1.1
	baz=158				
Q54A	Coxs Mills	31.00 326	P	P	09 33 31.4 +1.5
Q54A			IAmb	IAmb	09 33 36.8
	comp=Z,399nm,0.8s				
Q54A			IAMs_20	IAMs_20	09 46 12.8
	comp=Z,67µm,20.0s				
Q54A	Coxs Mills	31.00 326	P	P	09 33 31.7 +1.8
	baz=136,SNR=142				
Q54A			S	S	09 38 34.1 +1.1
	baz=136				
L58A	Harry Jones Me	31.00 335	P	P	09 33 30.9 +0.9
	baz=147,SNR=47				
L58A			S	S	09 38 33.8 +0.7
	baz=147				
H65A	Eastbrook	31.02 347	P	P	09 33 30.6 +0.6
	baz=162,SNR=18				
H65A			S	S	09 38 32.7 -0.5
	baz=162				
V51A	Loudon	31.03 317	P	P	09 33 30.9 +0.6
V51A			IAMs_20	IAMs_20	09 46 09.9
	comp=Z,71µm,22.0s				
V51A	Loudon	31.03 317	P	P	09 33 31.1 +0.8
	baz=126,SNR=62				
V51A			S	S	09 38 36.2 +2.5
	baz=126				
I62A	Tamworth	31.04 343	P	P	09 33 27.7 -2.5
I62A			IAmb	IAmb	09 33 47.2
	comp=Z,572nm,1.5s				
I62A			IAMs_20	IAMs_20	09 46 24.4
	comp=Z,61µm,20.0s				
I62A	Tamworth	31.04 343	P	P	09 33 30.9 +0.7
	baz=156,SNR=16				
I62A			S	S	09 38 34.8 +1.4
	baz=156				
O55A	Ligonier	31.10 329	P	P	09 33 32.6 +1.8
	baz=139,SNR=86				
O55A			S	S	09 38 36.7 +2.0
	baz=139				
J60A	Lant Hill Farm	31.13 339	P	P	09 33 32.0 +1.0
	baz=152,SNR=68				
J60A			S	S	09 38 37.2 +2.3
	baz=152				
GGN	Saint George	31.15 349	P	P	09 33 31.8 +0.7
GGN			IAmb	IAmb	09 33 47.9
	comp=Z,802nm,1.7s				
N56A	West Decatur	31.16 331	P	P	09 33 32.7 +1.3
	baz=142,SNR=61				
N56A			S	S	09 38 37.7 +2.1
	baz=142				
U51A	La Follette	31.16 319	P	P	09 33 32.4 +1.0
	baz=128,SNR=50				
U51A			S	S	09 38 38.2 +2.5
	baz=128				
FPAL	Fort Paine	31.16 314	P	P	09 33 30.7 -0.8
FPAL			IAMs_20	IAMs_20	09 46 18.5
	comp=Z,62µm,22.0s				
HNH	Hanover	31.17 341	P	P	09 33 31.5 +0.1
HNH			IAmb	IAmb	09 33 48.2
	comp=Z,730nm,1.5s				
HNH			IAMs_20	IAMs_20	09 46 48.0
	comp=Z,57µm,19.0s				
R53A	Hurricane	31.17 324	P	P	09 33 30.3 -1.2
R53A			IAmb	IAmb	09 33 38.4
	comp=Z,595nm,1.1s				
R53A			IAMs_20	IAMs_20	09 46 10.3
	comp=Z,50µm,21.0s				
R53A	Hurricane	31.17 324	P	P	09 33 32.6 +1.2
	baz=133,SNR=102				
R53A			S	S	09 38 37.4 +1.7
	baz=133				
BINY	Binghamton	31.19 335	P	P	09 33 31.8 +0.2
BINY	Binghamton	31.19 335	P	P	09 33 32.4 +0.9
	baz=147,SNR=60				
H64A	Troy	31.19 346	P	P	09 33 32.4 +0.9
	baz=161,SNR=20				
H64A			S	S	09 38 36.0 +0.1
	baz=161				
WVL	Waterville	31.22 345	P	P	09 33 31.3 -0.5
WVL			IAmb	IAmb	09 33 48.8
	comp=Z,1µm,1.9s				
WVL			IAMs_20	IAMs_20	09 48 18.4
	comp=Z,60µm,19.0s				
K59A	Cooperstown	31.23 337	P	P	09 33 32.7 +0.8
	baz=149,SNR=41				
K59A			S	S	09 38 37.7 +1.0
	baz=149				
P54A	Burton	31.25 327	P	P	09 33 33.5 +1.3
	baz=137,SNR=37				
P54A			S	S	09 38 39.4 +2.3
	baz=137				
Q53A	Leroy	31.29 325	P	P	09 33 33.8 +1.3
	baz=134,SNR=158				
Q53A			S	S	09 38 39.0 +1.4
	baz=134				
W50A	Signal Mountai	31.32 316	P	P	09 33 33.7 +0.8
W50A			IAMs_20	IAMs_20	09 46 20.7
	comp=Z,55µm,22.0s				
W50A	Signal Mountai	31.32 316	P	P	09 33 33.9 +1.0
	baz=124,SNR=51				
W50A			S	S	09 38 41.0 +2.7
	baz=124				
ACCN	Adirondack Com	31.34 339	P	P	09 33 31.0 -1.8
ACCN			IAmb	IAmb	09 33 35.4
	comp=Z,538nm,1.2s				
I61A	Oroboro, Fairl	31.35 341	P	P	09 33 33.8 +0.8
	baz=155,SNR=27				
I61A			S	S	09 38 39.0 +0.6
	baz=155				
G65A	Princeton	31.36 348	P	P	09 33 33.2 +0.2
G65A			IAmb	IAmb	09 33 35.7
	comp=Z,1µm,1.7s				
G65A	Princeton	31.36 348	P	P	09 33 33.8 +0.8
	baz=164,SNR=21				
G65A			S	S	09 38 38.6 +0.1
	baz=164				
Y49A	Blount Mountai	31.36 313	P	P	09 33 33.5 +0.3
Y49A			IAMs_20	IAMs_20	09 45 38.9
	comp=Z,50µm,21.0s				
LRAL	Lakeview Retre	31.38 311	P	P	09 33 34.5 +1.2
LRAL			IAmb	IAmb	09 33 52.0
	comp=Z,886nm,1.6s				
LRAL	Lakeview Retre	31.38 311	P	P	09 33 34.4 +1.1
	baz=119,SNR=140				
L57A	Andrews Acres	31.38 334	P	P	09 33 34.4 +1.1
	baz=145,SNR=100				
L57A			S	S	09 38 40.8 +1.8
	baz=145				
N55A	Marion Center	31.38 330	P	P	09 33 34.7 +1.4
	baz=141,SNR=71				
N55A			S	S	09 38 40.1 +1.0
	baz=141				
NBTA	Tacaratu-PE	31.39 137	eP	P	09 33 35.2 +1.6
NBPN	Ponto Novo - B	31.39 143	eP	P	09 33 34.3 +0.7
S52A	Salyersville	31.40 322	P	P	09 33 34.5 +1.0
	baz=131,SNR=91				
S52A			S	S	09 38 40.8 +1.5
	baz=131				
H63A	New Sharon	31.41 345	P	P	09 33 34.5 +1.1
	baz=159,SNR=20				
H63A			S	S	09 38 38.6 -0.7
	baz=159				
NBPV	Pedro Velho	31.43 130	eP	P	09 33 35.6 +1.7
V50A	Pikevile	31.45 317	P	P	09 33 34.8 +0.9
	baz=125,SNR=100				
V50A			S	S	09 38 42.6 +2.4
	baz=125				
T51A	Gray	31.48 320	P	P	09 33 35.0 +0.8
	baz=128,SNR=94				
T51A			S	S	09 38 41.7 +1.1
	baz=128				
K58A	Earlville	31.53 336	P	P	09 33 35.2 +0.6
K58A			IAmb	IAmb	09 33 51.6
	comp=Z,802nm,1.4s				
K58A	Earlville	31.53 336	P	P	09 33 35.6 +1.0
	baz=148,SNR=62				
K58A			S	S	09 38 43.2 +2.0
	baz=148				
LBNH	Lisbon	31.54 342	P	P	09 33 35.0 +0.4
LBNH			IAmb	IAmb	09 33 37.3
	comp=Z,529nm,1.2s				
LBNH			IAMs_20	IAMs_20	09 46 39.9
	comp=Z,60µm,19.0s				
LBNH	Lisbon	31.54 342	P	P	09 33 35.0 +0.4
LBNH			pmax	pmax	
	comp=Z,529nm,1.3s				
LBNH			MLR	MLR	
	comp=Z,60µm,19.0s				
LBNH	Lisbon	31.54 342	P	P	09 33 35.7 +1.1
	baz=156,SNR=45				
LMN	Caledonia Moun	31.54 352	P	P	09 33 34.2 -0.4
LMN			IAmb	IAmb	09 33 36.7
	comp=Z,842nm,1.6s				
LMN			IAMs_20	IAMs_20	09 44 36.7
	comp=Z,64µm,21.0s				
M56A	Emporium	31.55 332	P	P	09 33 35.9 +1.1
M56A			IAmb	IAmb	09 33 51.8
	comp=Z,399nm,1.1s				
M56A	Emporium	31.55 332	P	P	09 33 36.0 +1.2
	baz=143,SNR=40				
M56A			S	S	09 38 43.4 +1.7
	baz=143				
R52A	Catlettsburg	31.57 323	P	P	09 33 35.7 +0.6
	baz=132,SNR=46				
R52A			S	S	09 38 43.0 +1.0
	baz=132				
I60A	Shoreham	31.61 340	P	P	09 33 36.0 +0.7
	baz=153,SNR=49				
I60A			S	S	09 38 44.7 +2.2
	baz=153				
O54A	Avella	31.62 328	P	P	09 33 36.0 +0.6
O54A			IAMs_20	IAMs_20	09 46 09.3
	comp=Z,72µm,20.0s				
O54A	Avella	31.62 328	P	P	09 33 36.8 +1.4
	baz=138,SNR=73				
O54A			S	S	09 38 44.2 +1.4
	baz=138				
H62A	Milan	31.63 343	P	P	09 33 36.2 +0.8
H62A			IAMs_20	IAMs_20	09 46 43.1
	comp=Z,63µm,19.0s				
H62A	Milan	31.63 343	P	P	09 33 36.9 +1.5
	baz=157,SNR=52				
H62A			S	S	09 38 45.1 +2.3
	baz=157				
P53A	Whipple	31.66 326	P	P	09 33 35.9 +0.2
P53A			IAMs_20	IAMs_20	09 46 34.3
	comp=Z,61µm,20.0s				
P53A	Whipple	31.66 326	P	P	09 33 37.0 +1.3
	baz=135,SNR=78				
P53A			S	S	09 38 45.0 +1.6
	baz=135				
G64A	Maxfield	31.66 347	P	P	09 33 36.4 +0.8
	baz=162,SNR=41				
G64A			S	S	09 38 44.0 +0.8
	baz=162				
S51A	Beattyville	31.68 321	P	P	09 33 36.9 +0.9
S51A			IAmb	IAmb	09 33 42.8
	comp=Z,411nm,0.9s				
S51A			IAMs_20	IAMs_20	09 46 50.4
	comp=Z,69µm,21.0s				
S51A	Beattyville	31.68 321	P	P	09 33 37.0 +1.0
	baz=130,SNR=170				
S51A			S	S	09 38 44.7 +0.9
	baz=130				
J59A	Piesco	31.70 338	P	P	09 33 36.4 +0.3
J59A			IAmb	IAmb	09 33 53.0
	comp=Z,581nm,1.4s				
J59A	Piesco	31.70 338	P	P	09 33 37.0 +1.0
	baz=150,SNR=55				
J59A			S	S	09 38 45.9 +2.0
	baz=150				
U50A	Jamestown	31.71 318	P	P	09 33 37.2 +0.8
	baz=127,SNR=84				
U50A			S	S	09 38 46.1 +1.7
	baz=127				
G63A	Kingsbury	31.73 346	P	P	09 33 37.0 +0.8
	baz=160,SNR=30				
G63A			S	S	09 38 45.1 +0.7
	baz=160				
I59A	Olmsteadville	31.77 339	S	S	09 38 47.0 +2.0
	baz=152				
Q52A	Bidwell	31.78 324	P	P	09 33 37.9 +1.1
	baz=133,SNR=182				
Q52A			S	S	09 38 46.7 +1.4
	baz=133				
PKME	Peaks-Kenny Pk	31.79 346	P	P	09 33 36.0 -0.8
PKME			IAMs_20	IAMs_20	09 48 38.4
	comp=Z,51µm,18.0s				
PKME	Peaks-Kenny Pk	31.79 346	P	P	09 33 37.5 +0.7
	baz=161,SNR=14				
NNA	Nana	31.80 215	P	P	09 33 38.6 +1.3
NNA	Nana	31.80 215	IAMs_20	IAMs_20	09 48 50.8
	comp=Z,73µm,22.0s				
NNA	Nana	31.80 215 *d*	iP	P	09 33 37.7 +0.5
L56A	Greenwood	31.80 333	P	P	09 33 37.6 +0.6
L56A			IAmb	IAmb	09 33 53.8
	comp=Z,752nm,1.3s				
L56A	Greenwood	31.80 333	P	P	09 33 37.8 +0.8
	baz=144,SNR=67				
L56A			S	S	09 38 46.7 +1.2
	baz=144				
H61A	Lyndonville	31.81 342	P	P	09 33 37.9 +0.9
	baz=156,SNR=48				
H61A			S	S	09 38 48.0 +2.4
	baz=156				
M55A	Ridgway	31.81 331	P	P	09 33 37.4 +0.3
M55A	Ridgway	31.81 331	P	P	09 33 38.5 +1.4
	baz=142,SNR=128				
M55A			S	S	09 38 47.0 +1.3
	baz=142				
K57A	Scipio Center	31.85 335	P	P	09 33 38.1 +0.7
	baz=146,SNR=37				
K57A			S	S	09 38 47.9 +1.6
	baz=146				
VT1	Waterbury	31.88 341	P	P	09 33 38.7 +1.1
VT1			IAmb	IAmb	09 33 53.4
	comp=Z,604nm,1.8s				
VT1			IAMs_20	IAMs_20	09 46 58.5
	comp=Z,49µm,20.0s				
J58A	Remsen	31.90 337	P	P	09 33 38.4 +0.6
J58A			IAmb	IAmb	09 33 54.8
	comp=Z,410nm,1.2s				
J58A	Remsen	31.90 337	P	P	09 33 39.1 +1.3
	baz=149,SNR=51				
J58A			S	S	09 38 48.5 +1.5
	baz=149				
W49A	Belvidere	31.93 315	P	P	09 33 39.1 +0.9
	baz=123,SNR=42				
W49A			S	S	09 38 50.0 +2.3
	baz=123				
BDFB	Brasilia	31.94 160	P	P	09 33 40.4 +1.9
	comp=Z,58nm,0.7s,baz=342,slow=10,SNR=78				
BDFB			S	S	09 38 43.8 -4.4
	comp=Z,27nm,0.8s,baz=175,slow=26,SNR=1.6				
BDFB	Brasilia	31.94 160	P	P	09 33 38.5 0.0
BDFB			IAmb	IAmb	09 33 41.6
	comp=Z,928nm,1.9s				
LPAZ	La Paz	31.99 197	P	P	09 33 41.3 +1.7
	comp=Z,81nm,0.7s,baz=19,slow=10.0,SNR=141				
LPAZ			S	S	09 38 46.5 -3.5
	comp=Z,27nm,0.9s,baz=200,slow=2.0,SNR=2.7				
LPAZ			LR	LR	09 49 15.6
	comp=Z,100µm,21.7s,baz=5.5,slow=41				
LPAZ			PKPKKP	P'P'df	10 07 20.5 +4.3
	comp=Z,0.8nm,0.4s,baz=300,slow=4.9,SNR=4.1				
LPAZ	La Paz	31.99 197	P	P	09 33 41.0 +1.5
LPAZ	La Paz	31.99 197	P	P	09 33 41.0 +1.5
LPAZ			S	S	09 38 46.5 -3.5
LPAZ			pmax	pmax	
	comp=Z,198nm,0.9s				
CCIG	Comitan	31.99 277	P	P	09 33 39.2 0.0
CCIG			IAMs_20	IAMs_20	09 47 43.0
	comp=Z,65µm,22.0s				
N54A	Moraine State	32.01 329	P	P	09 33 39.7 +0.9
N54A			IAmb	IAmb	09 33 56.1
	comp=Z,724nm,1.3s				
N54A	Moraine State	32.01 329	P	P	09 33 40.4 +1.5
	baz=139,SNR=82				
N54A			S	S	09 38 50.2 +1.3
	baz=139				
V49A	McMinnville	32.04 316	P	P	09 33 40.2 +1.0
	baz=124,SNR=48				
V49A			S	S	09 38 51.6 +2.2
	baz=124				
NCB	Newcomb	32.04 339	P	P	09 33 39.7 +0.6
NCB			IAmb	IAmb	09 33 41.6
	comp=Z,540nm,1.4s				
G62A	West of Eustis	32.05 345	P	P	09 33 39.8 +0.7
G62A			IAmb	IAmb	09 33 56.3
	comp=Z,969nm,1.8s				
G62A	West of Eustis	32.05 345	P	P	09 33 40.1 +1.0
	baz=159,SNR=24				
G62A			S	S	09 38 51.1 +1.7
	baz=159				
I58A	Old Forge	32.06 338	P	P	09 33 40.3 +1.0
	baz=150,SNR=102				
I58A			S	S	09 38 51.9 +2.2
	baz=150				
H60A	Morristown	32.07 341	P	P	09 33 40.2 +0.9
	baz=154,SNR=28				
H60A			S	S	09 38 51.4 +1.8
	baz=154				
T50A	Nancy	32.07 319	P	P	09 33 40.5 +1.1
	baz=127,SNR=144				
T50A			S	S	09 38 52.4 +2.5
	baz=127				
R51A	Hillsboro	32.10 322	P	P	09 33 40.8 +1.1
	baz=131,SNR=153				
R51A			S	S	09 38 52.5 +2.2
	baz=131				
O53A	New Philadelph	32.11 327	P	P	09 33 41.1 +1.4
	baz=136,SNR=108				
O53A			S	S	09 38 52.1 +1.7
	baz=136				
X48A	Hartselle	32.12 313	P	P	09 33 40.8 +0.9
F64A	Sherman	32.16 348	P	P	09 33 39.8 -0.2
F64A			IAmb	IAmb	09 33 56.7
	comp=Z,752nm,1.7s				
F64A	Sherman	32.16 348	P	P	09 33 40.5 +0.5
	baz=163,SNR=16				
F64A			S	S	09 38 50.6 -0.3
	baz=163				
K56A	Middlesex	32.16 334	P	P	09 33 40.8 +0.7
	baz=145,SNR=37				
K56A			S	S	09 38 51.9 +0.8
	baz=145				
F63A	Nahmakanta, Br	32.16 347	P	P	09 33 39.1 -1.0
F63A			IAmb	IAmb	09 33 56.7
	comp=Z,1µm,1.9s				
F63A			IAMs_20	IAMs_20	09 48 47.3
	comp=Z,55µm,20.0s				
F63A	Nahmakanta, Br	32.16 347	P	P	09 33 40.7 +0.6
	baz=161,SNR=21				
F63A			S	S	09 38 52.8 +1.7
	baz=161				
P52A	Corning	32.17 325	P	P	09 33 41.2 +1.0
	baz=134,SNR=220				
P52A			S	S	09 38 52.4 +1.1
	baz=134				
S50A	Richmond	32.20 320	P	P	09 33 41.8 +1.2
	baz=129,SNR=68				
S50A			S	S	09 38 52.9 +1.0
	baz=129				
J57A	Williamstown	32.21 336	P	P	09 33 40.5 0.0
J57A			IAmb	IAmb	09 33 57.5
	comp=Z,874nm,1.4s				
J57A	Williamstown	32.21 336	P	P	09 33 41.4 +0.9
	baz=148,SNR=63				
J57A			S	S	09 38 53.1 +1.3
	baz=148				
L55A	Hinsdale	32.22 332	P	P	09 33 41.9 +1.2
	baz=143,SNR=80				
L55A			S	S	09 38 52.5 +0.3
	baz=143				
PP1B	Ponte de Pedra	32.25 173	eP	P	09 33 42.0 +0.9
M54A	Oil Creek Stat	32.27 330	P	P	09 33 41.1 0.0
M54A	Oil Creek Stat	32.27 330	P	P	09 33 42.2 +1.1
	baz=140,SNR=73				
M54A			S	S	09 38 54.0 +1.2
	baz=140				
N53A	Lisbon	32.32 328	P	P	09 33 42.3 +0.7
N53A			IAMs_20	IAMs_20	09 46 41.8
	comp=Z,59µm,20.0s				
N53A	Lisbon	32.32 328	P	P	09 33 42.9 +1.3
	baz=138,SNR=115				
N53A			S	S	09 38 54.2 +0.5
	baz=138				
G61A	St-Isidore-de-	32.38 343	P	P	09 33 43.2 +1.2
	baz=157,SNR=60				
G61A			S	S	09 38 55.1 +0.6
	baz=157				
U49A	Red Boiling Sp	32.38 317	P	P	09 33 43.6 +1.4
	baz=125,SNR=136				
U49A			S	S	09 38 56.5 +1.8
	baz=125				
H58A	Gabriels	32.42 339	P	P	09 33 43.0 +0.6
	baz=152,SNR=29				
H58A			S	S	09 38 56.8 +1.6
	baz=152				
J56A	Wolcott	32.44 335	P	P	09 33 42.4 -0.1
J56A			IAmb	IAmb	09 33 44.7
	comp=Z,588nm,1.1s				
J56A	Wolcott	32.44 335	P	P	09 33 43.2 +0.6
	baz=146,SNR=36				
Q51A	Peebles	32.44 323	P	P	09 33 43.5 +0.8
Q51A			IAmb	IAmb	09 33 49.1
	comp=Z,402nm,1.0s				
Q51A			IAMs_20	IAMs_20	09 47 02.1
	comp=Z,53µm,22.0s				
Q51A	Peebles	32.44 323	P	P	09 33 44.0 +1.4
	baz=132,SNR=113				
Q51A			S	S	09 38 57.3 +1.7
	baz=132				
G60A	Masonville	32.44 342	P	P	09 33 43.4 +0.9
	baz=155,SNR=42				
G60A			S	S	09 38 56.8 +1.3
	baz=155				
H59A	Cadyville	32.46 340	P	P	09 33 43.7 +1.0
	baz=153,SNR=85				
H59A			S	S	09 38 58.7 +3.0
	baz=153				
WVNY	West Valley, N	32.48 332	P	P	09 33 43.8 +0.9
WVNY			IAmb	IAmb	09 33 49.3
	comp=Z,459nm,0.9s				
K55A	Perry	32.50 333	P	P	09 33 43.9 +0.8
	baz=144,SNR=26				
K55A			S	S	09 38 57.4 +1.0
	baz=144				
CLTN	Cedars of Leba	32.51 316	P	P	09 33 43.5 +0.3
346A	Big Creek Wild	32.52 306	P	P	09 33 44.3 +0.9
346A			IAmb	IAmb	09 33 50.6
	comp=Z,491nm,1.0s				
R50A	Paris	32.54 321	P	P	09 33 42.4 -1.1
R50A			IAmb	IAmb	09 33 51.1
	comp=Z,490nm,1.3s				
R50A			IAMs_20	IAMs_20	09 47 16.7
	comp=Z,74µm,21.0s				
R50A	Paris	32.54 321	P	P	09 33 45.1 +1.6
	baz=130,SNR=93				
R50A			S	S	09 38 58.6 +1.5
	baz=130				
T49A	Edmonton	32.57 318	P	P	09 33 43.1 -0.7
T49A			IAMs_20	IAMs_20	09 47 07.6
	comp=Z,78µm,21.0s				
T49A	Edmonton	32.57 318	P	P	09 33 45.0 +1.2
	baz=126,SNR=54				
T49A			S	S	09 38 59.5 +1.9
	baz=126				
E64A	Bridgewater	32.58 349	P	P	09 33 44.0 +0.2
	baz=164,SNR=24				
E64A			S	S	09 38 56.9 -0.7
	baz=164				
P51A	Williamsport	32.58 324	P	P	09 33 45.0 +1.1
	baz=133,SNR=153				
P51A			S	S	09 38 59.0 +1.2
	baz=133				
FRNY	Flat Rock	32.59 341	IAmb	IAmb	09 33 46.4
	comp=Z,652nm,1.2s				
ALLY	Alegheny Colle	32.61 330	IAmb	IAmb	09 33 50.4
	comp=Z,412nm,0.9s				
ALLY			IAMs_20	IAMs_20	09 46 47.3
	comp=Z,52µm,21.0s				
V48A	Smith Brothers	32.65 315	P	P	09 33 43.3 -1.2
V48A			IAmb	IAmb	09 33 51.8
	comp=Z,443nm,1.4s				
V48A			IAMs_20	IAMs_20	09 47 24.7
	comp=Z,55µm,21.0s				

L54A	Sinclairville	32.67 331	P	P	09 33 45.5 +1.0
	baz=142,SNR=50				
L54A			S	S	09 38 59.6 +0.5
	baz=142				
K54A	Basiliko Farm,	32.68 333	P	P	09 33 45.6 +0.9
	baz=143,SNR=31				
K54A			S	S	09 38 59.2 0.0
	baz=143				
G59A	Clarenceville	32.69 341	P	P	09 33 45.6 +1.0
	baz=154,SNR=90				
G59A			S	S	09 39 01.2 +2.0
	baz=154				
Q50A	Georgetown	32.69 322	P	P	09 33 46.3 +1.5
	baz=131,SNR=34				
Q50A			S	S	09 38 59.0 -0.5
	baz=131				
E63A	Oxbow	32.70 348	IAmb	IAmb	09 34 01.7
	comp=Z,1µm,2.0s				
E63A			IAMs_20	IAMs_20	09 49 29.6
	comp=Z,39µm,18.0s				
E63A	Oxbow	32.70 348	P	P	09 33 45.5 +0.7
	baz=163,SNR=22				
E63A			S	S	09 38 58.9 -0.6
	baz=163				
M53A	WI Miller and	32.71 329	P	P	09 33 46.1 +1.1
	baz=139,SNR=51				
M53A			S	S	09 39 00.2 +0.4
	baz=139				
LONY	Lake Ozonia	32.74 339	P	P	09 33 45.6 +0.4
	baz=151				
N52A	McGinn's Farm,	32.77 327	P	P	09 33 46.9 +1.4
	baz=136,SNR=69				
N52A			S	S	09 39 01.1 +0.5
	baz=136				
O51A	Pataskala	32.79 325	P	P	09 33 46.8 +1.1
	baz=134,SNR=106				
O51A			S	S	09 39 01.3 +0.3
	baz=134				
S49A	Springfield	32.82 320	P	P	09 33 47.2 +1.3
	baz=128,SNR=82				
S49A			S	S	09 39 03.8 +2.2
	baz=128				
J55A	Hilton	32.83 334	P	P	09 33 43.9 -2.1
J55A			IAmb	IAmb	09 34 02.2
	comp=Z,686nm,1.6s				
J55A	Hilton	32.83 334	P	P	09 33 46.4 +0.5
	baz=145,SNR=13				
J55A			S	S	09 39 01.2 -0.2
	baz=145				
JANB	Januaria	32.84 153	eP	P	09 33 47.3 +1.0
PQI	Presque Isle	32.86 348	P	P	09 33 46.0 -0.2
PQI			IAmb	IAmb	09 33 48.6
	comp=Z,908nm,2.0s				
F61A	St Evariste	32.88 344	P	P	09 33 46.8 +0.5
	baz=158,SNR=9.7				
F61A			S	S	09 39 02.4 +0.2
	baz=158				
H57A	Richville	32.88 338	P	P	09 33 47.4 +1.0
	baz=150,SNR=38				
H57A			S	S	09 39 04.0 +1.8
	baz=150				
ERPA	Erie	32.89 331	IAmb	IAmb	09 34 03.5
	comp=Z,1µm,1.6s				
ERPA			IAMs_20	IAMs_20	09 46 15.8
	comp=Z,40µm,21.0s				
ERPA	Erie	32.89 331	P	P	09 33 47.6 +1.0
	baz=140,SNR=22				
L53A	Girard	32.90 330	P	P	09 33 47.6 +1.0
	baz=140,SNR=40				
L53A			S	S	09 39 03.2 +0.6
	baz=140				
NBLA	Lagarto - SE	32.97 139	eP	P	09 33 47.9 +0.4
NBAN	Anadia - AL	32.98 136	eP	P	09 33 48.4 +0.8
MEDO	Medina	33.02 333	P	P	09 33 48.0 +0.4
MEDO			IAmb	IAmb	09 33 49.9
	comp=Z,603nm,1.3s				
G58A	Ormstown	33.02 340	P	P	09 33 48.3 +0.7
	baz=153,SNR=31				
G58A			S	S	09 39 06.7 +2.2
	baz=153				
ACSO	Alum Creek Sta	33.05 325	IAmb	IAmb	09 33 54.9
	comp=Z,574nm,0.9s				
ACSO			IAMs_20	IAMs_20	09 47 27.2
	comp=Z,53µm,20.0s				
ACSO	Alum Creek Sta	33.05 325	P	P	09 33 49.3 +1.3
	baz=134,SNR=193				
R49A	Shelbyville	33.06 320	IAmb	IAmb	09 33 55.2
	comp=Z,409nm,1.1s				
R49A			IAMs_20	IAMs_20	09 47 33.5
	comp=Z,67µm,22.0s				
R49A	Shelbyville	33.06 320	P	P	09 33 49.6 +1.5
	baz=128,SNR=92				
R49A			S	S	09 39 07.0 +1.8
	baz=128				
NBRF	Rio Formoso -	33.08 133	eP	P	09 33 49.6 +1.3
P50A	Jamestown	33.09 324	P	P	09 33 49.6 +1.3
	baz=132,SNR=46				
P50A			S	S	09 39 07.5 +1.8
	baz=132				
BATG	Bathurst New B	33.12 351	P	P	09 33 47.7 -0.7
PLAL	Pickwick Lake	33.12 313	IAmb	IAmb	09 33 53.2
	comp=Z,564nm,1.1s				
M52A	Chesterland	33.13 328	IAmb	IAmb	09 34 05.4
	comp=Z,765nm,1.4s				
M52A			IAMs_20	IAMs_20	09 47 16.1
	comp=Z,50µm,20.0s				
M52A	Chesterland	33.13 328	P	P	09 33 49.6 +1.0
	baz=138,SNR=28				
M52A			S	S	09 39 07.0 +0.8
	baz=138				
F60A	Warwick	33.13 343	P	P	09 33 48.8 +0.2
	baz=157,SNR=29				
E61A	Lac Etchemin	33.18 345	P	P	09 33 49.8 +0.8
	baz=159,SNR=39				
E61A			S	S	09 39 08.5 +1.6
	baz=159				
J54A	Appleton	33.19 333	P	P	09 33 49.2 +0.1
J54A			IAmb	IAmb	09 33 51.4
	comp=Z,793nm,1.3s				
J54A	Appleton	33.19 333	P	P	09 33 49.7 +0.7
	baz=144,SNR=27				
J54A			S	S	09 39 07.1 +0.1
	baz=144				
N51A	Ashland	33.21 327	IAmb	IAmb	09 34 05.9
	comp=Z,772nm,1.6s				
N51A			IAMs_20	IAMs_20	09 47 31.2
	comp=Z,68µm,20.0s				
N51A	Ashland	33.21 327	P	P	09 33 50.1 +0.8
	baz=136,SNR=45				
N51A			S	S	09 39 07.9 +0.4
	baz=136				
D63A	Stockholm	33.23 349	P	P	09 33 50.4 +1.0
	baz=164,SNR=50				
D63A			S	S	09 39 08.3 +0.6
	baz=164				
F59A	Saint Guilaume	33.26 342	P	P	09 33 50.0 +0.4
	baz=155,SNR=12				
F59A			S	S	09 39 09.6 +1.6
	baz=155				
G57A	Newington	33.30 339	P	P	09 33 50.9 +0.9
	baz=151,SNR=30				
G57A			S	S	09 39 09.9 +1.3
	baz=151				
H56A	Elgin	33.31 337	P	P	09 33 50.7 +0.5
	baz=148,SNR=39				
H56A			S	S	09 39 09.6 +0.6
	baz=148				
Q49A	Aurora	33.34 322	P	P	09 33 51.9 +1.4
	baz=130,SNR=113				
Q49A			S	S	09 39 11.8 +2.2
	baz=130				
O50A	Cable	33.35 324	P	P	09 33 52.1 +1.5
	baz=133,SNR=49				
O50A			S	S	09 39 11.2 +1.4
	baz=133				
E60A	Ste Agathe de	33.36 344	P	P	09 33 50.6 0.0
	baz=158,SNR=7.0				
E60A			S	S	09 39 10.1 +0.4
	baz=158				
M51A	Elyria	33.40 327	P	P	09 33 52.1 +1.1
	baz=136,SNR=57				
M51A			S	S	09 39 10.7 +0.3
	baz=136				
D62A	Allapoint, All	33.46 347	P	P	09 33 51.4 0.0
D62A			IAmb	IAmb	09 34 08.1
	comp=Z,629nm,1.6s				
D62A	Allapoint, All	33.46 347	P	P	09 33 51.8 +0.4
	baz=162,SNR=43				
D62A			S	S	09 39 11.0 -0.2
	baz=162				
N50A	Nevada	33.52 326	P	P	09 33 53.0 +0.9
	baz=134,SNR=152				
N50A			S	S	09 39 11.3 -1.0
	baz=134				
T47A	Sharon Grove	33.53 317	IAmb	IAmb	09 33 59.1
	comp=Z,524nm,1.5s				
T47A			IAMs_20	IAMs_20	09 47 39.0
	comp=Z,54µm,22.0s				
344A	Westbrook Farm	33.54 305	IAmb	IAmb	09 34 13.8
	comp=Z,478nm,1.1s				
WVT	Waverly	33.55 315	P	P	09 33 52.8 +0.5
WVT			IAmb	IAmb	09 34 11.3
	comp=Z,442nm,1.4s				
WVT	Waverly	33.55 315	IAMs_20	IAMs_20	09 47 40.5
	comp=Z,54µm,22.0s				
WVT	Waverly	33.55 315	P	P	09 33 52.8 +0.5
WVT			pmax	pmax	
	comp=Z,442nm,1.4s				
WVT			MLR	MLR	
	comp=Z,54µm,22.0s				
WVT	Waverly	33.55 315	P	P	09 33 53.0 +0.7
	baz=122				
I55A	Frankford	33.55 335	P	P	09 33 52.8 +0.6
	baz=146,SNR=28				
I55A			S	S	09 39 12.6 -0.1
	baz=146				
P49A	Miami Univ. Ec	33.58 323	P	P	09 33 53.7 +1.1
	baz=131,SNR=229				
P49A			S	S	09 39 14.0 +0.8
	baz=131				
F58A	St-Lin Laurent	33.59 341	P	P	09 33 53.0 +0.5
	baz=153,SNR=7.2				
F58A			S	S	09 39 15.2 +2.1
	baz=153				
H55A	Tweed	33.63 336	P	P	09 33 53.7 +0.7
	baz=147,SNR=27				
H55A			S	S	09 39 14.7 +0.8
	baz=147				
VBMS	Vicksburg	33.67 307	P	P	09 33 54.8 +1.3
VBMS			IAmb	IAmb	09 34 00.9
	comp=Z,953nm,1.4s				
VBMS			IAMs_20	IAMs_20	09 47 53.2
	comp=Z,66µm,22.0s				
VBMS	Vicksburg	33.67 307	P	P	09 33 55.0 +1.5
	baz=114,SNR=21				
C2SB	Chapadao do Su	33.70 169	eP	P	09 33 55.8 +2.0
WCI	Wyandotte Cave	33.72 319	P	P	09 33 54.7 +0.8
WCI	Wyandotte Cave	33.72 319	IAMs_20	IAMs_20	09 47 55.1
	comp=Z,78µm,21.0s				
WCI	Wyandotte Cave	33.72 319	P	P	09 33 54.7 +0.8
WCI			pmax	pmax	
	comp=Z,2µm,1.9s				
WCI			MLR	MLR	
	comp=Z,78µm,21.0s				
WCI	Wyandotte Cave	33.72 319	P	P	09 33 55.2 +1.4
	baz=127				
D60A	Saint Jean D'O	33.73 345	P	P	09 33 54.4 +0.6
	baz=159,SNR=55				
D60A			S	S	09 39 17.0 +1.6
	baz=159				
K52A	Tillsonburg	33.74 331	P	P	09 33 54.8 +0.9
	baz=140,SNR=36				
K52A			S	S	09 39 15.6 -0.1
	baz=140				
E59A	St. Maurice	33.75 343	P	P	09 33 54.4 +0.5
	baz=156,SNR=11				
E59A			S	S	09 39 16.0 +0.3
	baz=156				
DELO	Deloro Mine	33.78 336	P	P	09 33 53.8 -0.4
DELO			IAmb	IAmb	09 34 10.7
	comp=Z,610nm,1.6s				
O49A	Covington	33.78 324	P	P	09 33 55.4 +1.0
	baz=132,SNR=214				
O49A			S	S	09 39 17.2 +0.8
	baz=132				
Q48A	North Vernon	33.80 321	P	P	09 33 55.6 +1.1
	baz=128,SNR=196				
Q48A			S	S	09 39 17.6 +0.9
	baz=128				
D61A	St Aubert, Com	33.83 346	P	P	09 33 55.4 +0.8
	baz=160,SNR=37				
OXF	Oxford	33.85 311	P	P	09 33 55.6 +0.7
OXF	Oxford	33.85 311	P	P	09 33 55.6 +0.7
OXF			pmax	pmax	
	comp=Z,1µm,1.1s				
OXF			MLR	MLR	
	comp=Z,33µm,22.0s				
OXF	Oxford	33.85 311	P	P	09 33 55.8 +0.8
	baz=118				
E58A	La Victoria	33.88 342	P	P	09 33 55.4 +0.3
	baz=155,SNR=59				
E58A			S	S	09 39 19.3 +1.7
	baz=155				
M50A	Fremont	33.91 327	IAmb	IAmb	09 34 01.5
	comp=Z,420nm,0.9s				
M50A			IAMs_20	IAMs_20	09 47 21.7
	comp=Z,66µm,20.0s				
M50A	Fremont	33.91 327	P	P	09 33 56.4 +1.1
	baz=135,SNR=54				
M50A			S	S	09 39 17.6 -0.6
	baz=135				
P48A	Milroy	33.95 322	IAMs_20	IAMs_20	09 48 00.0
	comp=Z,70µm,21.0s				
P48A	Milroy	33.95 322	P	P	09 33 56.2 +0.4
	baz=130,SNR=150				
P48A			S	S	09 39 19.6 +0.5
	baz=130				
J52A	Paris	33.98 331	P	P	09 33 56.5 +0.5
	baz=141,SNR=38				
J52A			S	S	09 39 19.5 +0.1
	baz=141				
PLVO	Plevna	34.00 337	P	P	09 33 55.6 -0.5
PLVO			IAmb	IAmb	09 34 12.5
	comp=Z,438nm,1.5s				
I53A	Kortright Cn E	34.04 333	P	P	09 33 56.8 +0.3
	baz=143,SNR=9.3				
I53A			S	S	09 39 19.3 -0.9
	baz=143				
G55A	Calabogie	34.05 337	P	P	09 33 56.8 +0.2
	baz=148,SNR=28				
G55A			S	S	09 39 20.3 0.0
	baz=148				
D59A	Saint-Raymond	34.05 344	P	P	09 33 56.9 +0.4
	baz=157,SNR=51				
D59A			S	S	09 39 21.8 +1.4
	baz=157				
IPMB	Ipameri, GO	34.07 162	eP	P	09 33 58.4 +1.4
K51A	Iona Station	34.08 330	P	P	09 33 57.6 +0.8
	baz=139,SNR=29				
K51A			S	S	09 39 21.5 +0.5
	baz=139				
TRQ	Mont Tremblant	34.14 341	P	P	09 33 57.8 +0.4
SACV	Santiago Islan	34.17 85	IAMs_20	IAMs_20	09 43 59.6
	comp=Z,50µm,20.0s				
E57A	Chemin Saint G	34.18 341	P	P	09 33 58.4 +0.7
	baz=153,SNR=121				
E57A			S	S	09 39 24.0 +1.6
	baz=153				
N49A	Columbus Grove	34.19 325	IAMs_20	IAMs_20	09 48 03.4
	comp=Z,59µm,21.0s				
N49A	Columbus Grove	34.19 325	P	P	09 33 58.4 +0.5
	baz=133,SNR=38				
N49A			S	S	09 39 22.8 +0.1
	baz=133				
H53A	Bobcaygeon	34.21 335	P	P	09 33 58.6 +0.6
	baz=145,SNR=99				
H53A			S	S	09 39 22.4 -0.5
	baz=145				
L50A	Kingsville	34.24 328	P	P	09 33 58.9 +0.6
	baz=136,SNR=44				
L50A			S	S	09 39 24.2 +0.8
	baz=136				
O48A	Farmland	34.30 323	P	P	09 33 59.4 +0.6
	baz=131,SNR=121				
O48A			S	S	09 39 25.8 +1.4
	baz=131				
PB16	IPOC Station P	34.33 198⇓	iP	P	09 33 59.8 -0.1
UTMT	University of	34.37 315	P	P	09 34 00.1 +0.6
F55A	Otter Lake	34.41 338	P	P	09 34 00.1 +0.4
	baz=149,SNR=13				
F55A			S	S	09 39 25.5 -0.4
	baz=149				
D58A	Chemin du LacG	34.42 343	P	P	09 34 00.2 +0.4
	baz=156,SNR=38				
D58A			S	S	09 39 26.8 +0.7
	baz=156				
BLO	Bloomington	34.44 321	P	P	09 34 01.3 +1.3
BLO			IAmb	IAmb	09 34 06.4
	comp=Z,360nm,0.9s				
BLO			IAMs_20	IAMs_20	09 48 04.9
	comp=Z,70µm,22.0s				
BLO	Bloomington	34.44 321	P	P	09 34 01.3 +1.3
BLO			pmax	pmax	
	comp=Z,360nm,0.9s				
BLO			MLR	MLR	
	comp=Z,70µm,22.0s				
USIN	University of	34.45 318	IAMs_20	IAMs_20	09 48 28.4
	comp=Z,60µm,21.0s				
M49A	Liberty Center	34.46 326	P	P	09 34 01.1 +0.9
	baz=134,SNR=65				
M49A			S	S	09 39 26.7 0.0
	baz=134				
HALT	Halls	34.48 314	P	P	09 34 01.1 +0.7
I52A	Shelburne	34.49 333	P	P	09 34 00.6 +0.1
	baz=142				
PAYG	Puerto Ayora	34.50 247	P	P	09 34 01.9 +1.0
PAYG			IAmb	IAmb	09 34 17.8
	comp=Z,443nm,0.9s				
MET	Memphis--Engin	34.52 312	P	P	09 34 01.6 +0.8
MET			IAMs_20	IAMs_20	09 48 35.3
	comp=Z,49µm,22.0s				
143A	Socs Landing,	34.55 307	P	P	09 34 01.8 +0.7
E56A	St. Veronique	34.58 340	P	P	09 34 01.5 +0.4
	baz=152,SNR=57				
E56A			S	S	09 39 29.7 +1.2
	baz=152				
DRLN	Deer Lake	34.58 2	P	P	09 34 00.4 -0.7
DRLN			IAMs_20	IAMs_20	09 46 33.1
	comp=Z,70µm,21.0s				
SADO	Sadowa	34.60 334	P	P	09 34 00.9 -0.5
SADO			IAmb	IAmb	09 34 06.9
	comp=Z,435nm,0.8s				
GLAT	Glass	34.62 314	P	P	09 34 02.8 +1.1
GLAT			IAMs_20	IAMs_20	09 48 13.1
	comp=Z,47µm,22.0s				
N48A	Decatur	34.62 324	P	P	09 34 02.4 +0.8
	baz=132,SNR=165				
N48A			S	S	09 39 30.2 +0.8
	baz=132				
D57A	Chemin Vers le	34.64 342	P	P	09 34 02.2 +0.6
	baz=154,SNR=60				
D57A			S	S	09 39 30.1 +0.6
	baz=154				
LATQ	La Tuque	34.66 343	P	P	09 34 02.3 +0.6
LATQ	La Tuque	34.66 343	P	P	09 34 02.4 +0.6
	baz=156,SNR=71				
I51A	Listowel	34.67 331	P	P	09 34 02.2 +0.2
	baz=140,SNR=30				
I51A			S	S	09 39 29.6 -0.5
	baz=140				
K50A	Casco	34.67 329	P	P	09 34 00.9 -1.1
K50A			IAmb	IAmb	09 34 08.5
	comp=Z,408nm,0.9s				
K50A			IAMs_20	IAMs_20	09 48 03.0
	comp=Z,52µm,20.0s				
K50A	Casco	34.67 329	P	P	09 34 02.8 +0.8
	baz=137,SNR=39				
K50A			S	S	09 39 30.9 +0.9
	baz=137				
G53A	Haliburton	34.68 335	P	P	09 34 02.6 +0.6
	baz=145,SNR=98				
G53A			S	S	09 39 30.6 +0.5
	baz=145				
LNXT	Lenox	34.68 314	P	P	09 34 02.8 +0.7
LNXT			IAMs_20	IAMs_20	09 48 38.6
	comp=Z,42µm,20.0s				
G54A	Lake Saint Pet	34.69 336	P	P	09 34 02.5 +0.3
	baz=146,SNR=55				
G54A			S	S	09 39 30.7 +0.3
	baz=146				
H07S1	FLORES T-PHASE	34.69 39	eP	P	09 34 03.3 +1.0
HICK	Hickman	34.72 315	P	P	09 34 03.2 +0.7
HICK			IAmb	IAmb	09 34 10.0
	comp=Z,880nm,1.3s				
HICK			IAMs_20	IAMs_20	09 48 15.7
	comp=Z,51µm,22.0s				
342A	Flagon Creek P	34.77 304	P	P	09 34 04.8 +1.9
342A			IAMs_20	IAMs_20	09 48 21.4
	comp=Z,54µm,22.0s				
L49A	Milan	34.79 327	P	P	09 34 04.0 +1.0
	baz=135,SNR=94				
L49A			S	S	09 39 33.0 +1.2
	baz=135				
H52A	Wyevale	34.82 333	P	P	09 34 03.4 +0.1
	baz=143,SNR=42				
H52A			S	S	09 39 27.9 -4.4
	baz=143				
AAM	Ann Arbor	34.86 327	IAMs_20	IAMs_20	09 48 01.1
	comp=Z,59µm,21.0s				
AAM	Ann Arbor	34.86 327	P	P	09 34 04.8 +1.1
	baz=135				
M48A	Edgerton	34.87 325	P	P	09 34 03.9 +0.2
M48A			IAmb	IAmb	09 34 09.4
	comp=Z,355nm,0.9s				
M48A			IAMs_20	IAMs_20	09 48 23.3
	comp=Z,63µm,21.0s				
M48A	Edgerton	34.87 325	P	P	09 34 04.4 +0.6
	baz=133,SNR=27				
M48A			S	S	09 39 32.8 -0.4
	baz=133				
X43A	Marvell	34.93 310	P	P	09 34 05.4 +1.1
X43A	Marvell	34.93 310	P	P	09 34 05.6 +1.3
	baz=117,SNR=40				
X43A			S	S	09 39 37.9 +3.8
	baz=117				
D56A	ZEC Mazanza, M	34.94 341	P	P	09 34 04.7 +0.5
	baz=153,SNR=116				
D56A			S	S	09 39 34.9 +0.8
	baz=153				
H07N1	FLORES T-PHASE	34.94 39	eP	P	09 34 06.0 +1.6
PEBM	Pemiscott Bayo	34.95 313	P	P	09 34 04.7 +0.3
PEBM			IAmb	IAmb	09 34 08.4
	comp=Z,531nm,1.1s				
PENMO	Penman	34.95 314	P	P	09 34 05.2 +0.7
PENMO			IAmb	IAmb	09 34 29.6
	comp=Z,523nm,0.9s				
PENMO			IAMs_20	IAMs_20	09 48 23.8
	comp=Z,51µm,22.0s				
HENM	Henderson Moun	34.98 315	P	P	09 34 05.5 +0.8
HENM			IAMs_20	IAMs_20	09 48 24.5
	comp=Z,52µm,22.0s				
GNAR	Gosnell	34.98 313	P	P	09 34 05.5 +0.7
PVMO	Portageville	34.98 314	P	P	09 34 05.9 +1.1
PVMO			IAmb	IAmb	09 34 26.5
	comp=Z,618nm,0.9s				
PVMO			IAMs_20	IAMs_20	09 48 24.6
	comp=Z,51µm,22.0s				
AQDB	Aquidauana	35.00 175	eP	P	09 34 06.8 +1.9
LPAR	Lepanto	35.01 312	P	P	09 34 04.7 -0.3
LPAR			IAmb	IAmb	09 34 22.8
	comp=Z,943nm,1.4s				
N47A	Urbana	35.02 324	P	P	09 34 05.6 +0.6
N47A			IAMs_20	IAMs_20	09 48 30.3
	comp=Z,50µm,22.0s				
N47A	Urbana	35.02 324	P	P	09 34 05.9 +0.8
	baz=131,SNR=353				
N47A			S	S	09 39 36.1 +0.7
	baz=131				
L48A	N Adams	35.03 326	P	P	09 34 06.1 +1.0
	baz=134,SNR=172				
L48A			S	S	09 39 35.1 -0.5
	baz=134				
K49A	Clarkson	35.10 328	P	P	09 34 06.4 +0.7
	baz=136,SNR=48				
K49A			S	S	09 39 36.7 -0.1
	baz=136				
MNMC	Minye Minye	35.11 198⇓	iP	P	09 34 05.5 -0.7
MNMC	Minye Minye	35.11 198	P	P	09 34 05.4 -0.9
MNMC			IAmb	IAmb	09 34 09.8
	comp=Z,1µm,1.9s				
MNMC			IAMs_20	IAMs_20	09 51 07.8
	comp=Z,77µm,21.0s				
ITRB	Iturama	35.12 166	eP	P	09 34 07.7 +1.6
NBIT	Itapeh - BA	35.13 146	eP	P	09 34 07.7 +1.5
P46A	Rosedale	35.13 321	P	P	09 34 07.1 +1.1
P46A			IAmb	IAmb	09 34 13.2
	comp=Z,828nm,1.1s				
P46A			IAMs_20	IAMs_20	09 48 49.2
	comp=Z,70µm,21.0s				
D55A	Sainte-Anne-du	35.14 340	P	P	09 34 06.3 +0.3
	baz=152,SNR=120				
D55A			S	S	09 39 37.5 +0.4
	baz=152				

ALGO Algonquin Park 35.14 337 P P 09 34 06.4 +0.4
baz=147,SNR=86
PARMO Parma 35.15 314 P P 09 34 06.0 -0.1
PARMO IAmb IAmb 09 34 12.5
comp=Z,524nm,0.9s
PARMO IAMs_20 IAMs_20 09 48 39.9
comp=Z,48µm,21.0s
OLIL Olney 35.17 319 P P 09 34 07.2 +0.8
OLIL IAmb IAmb 09 34 13.4
comp=Z,678nm,1.1s
OLIL IAMs_20 IAMs_20 09 48 50.3
comp=Z,70µm,21.0s
E54A Lac Daplat, Po 35.23 338 P P 09 34 06.9 +0.2
baz=148,SNR=66
E54A S S 09 39 36.7 -1.8
baz=148
HBAR Harrisburg 35.24 312 P P 09 34 07.3 +0.3
441A DeRidder 35.25 303 P P 09 34 08.7 +1.5
441A IAmb IAmb 09 34 15.0
comp=Z,688nm,1.0s
441A IAMs_20 IAMs_20 09 48 41.2
comp=Z,44µm,21.0s
M47A Cromwell 35.29 324 P P 09 34 08.5 +1.1
baz=131,SNR=20
M47A S S 09 39 39.8 +0.2
baz=131
CCAR Cane Creek 35.33 309 P P 09 34 09.3 +1.5
CCAR IAMs_20 IAMs_20 09 47 47.0
comp=Z,43µm,21.0s
S44A Carbondale 35.35 316 P P 09 34 08.7 +0.8
S44A IAmb IAmb 09 34 27.9
comp=Z,631nm,0.8s
S44A IAMs_20 IAMs_20 09 48 35.1
comp=Z,53µm,22.0s
E53A Dumoine, Ponti 35.35 337 P P 09 34 08.1 +0.3
baz=148,SNR=66
E53A S S 09 39 40.7 +0.3
baz=148
J49A Marlette 35.36 329 P P 09 34 08.3 +0.4
baz=137,SNR=57
J49A S S 09 39 40.5 -0.1
baz=137
K48A Perry 35.46 327 P P 09 34 09.6 +0.8
baz=135,SNR=218
K48A S S 09 39 42.5 +0.3
baz=135
L47A Sherwood 35.47 325 P P 09 34 09.4 +0.6
baz=133,SNR=104
L47A S S 09 39 41.8 -0.5
baz=133
GO01 Chusmiza 35.50 197 ⇓iP P 09 34 09.7 -0.2
GO01 Chusmiza 35.50 197 IAmb IAmb 09 34 13.7
comp=Z,710nm,1.6s
GO01 IAMs_20 IAMs_20 09 51 23.3
comp=Z,80µm,22.0s
F52A Sundridge 35.51 335 P P 09 34 09.6 +0.4
baz=145,SNR=117
F52A S S 09 39 43.5 +0.5
baz=145
SFIN Lafayette 35.53 322 P P 09 34 09.4 +0.1
SFIN IAmb IAmb 09 34 16.1
comp=Z,349nm,1.0s
SFIN IAMs_20 IAMs_20 09 48 48.7
comp=Z,60µm,21.0s
SFIN Lafayette 35.53 322 P P 09 34 10.3 +0.9
baz=128,SNR=67
SFIN S S 09 39 44.3 +1.1
baz=128
I49A Point Hope 35.63 330 P P 09 34 10.5 +0.2
I49A IAmb IAmb 09 34 16.4
comp=Z,425nm,0.9s
I49A IAMs_20 IAMs_20 09 48 21.3
comp=Z,42µm,19.0s
I49A Point Hope 35.63 330 P P 09 34 10.8 +0.6
baz=138,SNR=78
I49A S S 09 39 44.6 -0.1
baz=138
J48A Bridge Port 35.64 328 P P 09 34 10.4 +0.1
J48A IAmb IAmb 09 34 16.2
comp=Z,428nm,0.9s
J48A IAMs_20 IAMs_20 09 48 33.6
comp=Z,53µm,20.0s
J48A Bridge Port 35.64 328 P P 09 34 10.8 +0.5
baz=136,SNR=98
J48A S S 09 39 44.9 0.0
baz=136
E52A Mattawa 35.65 336 P P 09 34 10.5 +0.2
baz=146,SNR=44
E52A S S 09 39 44.9 -0.1
baz=146
D54A Lac Fusel, La 35.65 339 P P 09 34 10.6 +0.2
baz=150,SNR=100
D54A S S 09 39 44.2 -0.8
baz=150
PBMO Poplar Bluff 35.67 314 IAMs_20 IAMs_20 09 48 45.7
comp=Z,49µm,22.0s
PSGC Pisagua 35.71 198 ⇓iP P 09 34 10.2 -1.0
PB11 IPOC Station P 35.72 197 ⇓iP P 09 34 10.7 -0.7
PB11 IPOC Station P 35.72 197 IAmb IAmb 09 34 48.8
comp=Z,654nm,1.1s
PB11 IAMs_20 IAMs_20 09 51 17.1
comp=Z,69µm,22.0s
CALA Caldeira 35.82 42 eP P 09 34 12.0 0.0
K47A Vermontville 35.83 326 P P 09 34 12.8 +0.8
baz=134,SNR=198
K47A S S 09 39 47.7 -0.2
baz=134
HOR Horta 35.84 43 eP P 09 34 13.0 +0.9
comp=Z,876nm,0.8s
LCAR Lake Charles 35.84 313 P P 09 34 11.4 -0.8
LCAR IAMs_20 IAMs_20 09 49 26.4
comp=Z,47µm,22.0s
PCED Cedros 35.85 42 eP P 09 34 13.8 +1.6
comp=Z,1µm,1.3s
Z41A Richland Creek 35.85 307 IAmb IAmb 09 34 33.9
comp=Z,567nm,1.1s
Z41A IAMs_20 IAMs_20 09 49 10.9
comp=Z,53µm,22.0s
Z41A Richland Creek 35.85 307 P P 09 34 13.3 +1.0
baz=113,SNR=47
Z41A S S 09 39 53.2 +4.7
baz=113
F51A Arnstein 35.86 335 P P 09 34 12.5 +0.3
baz=144,SNR=124
F51A S S 09 39 48.0 -0.2
baz=144
PCAN Candelaria 35.90 43 eP P 09 34 13.8 +1.2
comp=Z,792nm,1.3s
PB08 IPOC Station P 35.94 196 ⇓iP P 09 34 13.5 -0.1
PICO Pico 35.96 43 eP P 09 34 14.6 +1.4
comp=Z,900nm,1.2s
D53A Lac Vacive, Po 35.96 338 IAmb IAmb 09 34 29.3
comp=Z,642nm,1.3s
D53A IAMs_20 IAMs_20 09 49 15.8
comp=Z,28µm,20.0s
D53A Lac Vacive, Po 35.96 338 P P 09 34 13.3 +0.3
baz=148,SNR=99
D53A S S 09 39 49.1 -0.6
baz=148
L46A Eue Claire 36.10 325 IAMs_20 IAMs_20 09 49 12.9
comp=Z,46µm,20.0s
L46A Eue Claire 36.10 325 P P 09 34 15.1 +0.8
baz=131,SNR=20
L46A S S 09 39 51.8 -0.2
baz=131
UALR University of 36.12 310 P P 09 34 14.8 +0.2
UALR IAmb IAmb 09 34 51.8
comp=Z,527nm,1.3s
J47A Sunmer 36.13 327 IAMs_20 IAMs_20 09 49 01.6
comp=Z,60µm,20.0s
J47A Sunmer 36.13 327 P P 09 34 15.5 +1.0
baz=134,SNR=166
J47A S S 09 39 53.2 +0.8
baz=134
E51A G1948 Merrick 36.18 336 P P 09 34 15.4 +0.4
baz=145,SNR=122
E51A S S 09 39 52.9 -0.3
baz=145
ROSA Rosais 36.20 43 eP P 09 34 16.6 +1.4
comp=Z,933nm,1.2s
ROSA Rosais 36.20 43 P P 09 34 15.7 +0.5
ROSA IAmb IAmb 09 34 20.8
comp=Z,573nm,1.0s
O44A Mansfield 36.22 320 IAMs_20 IAMs_20 09 49 23.3
comp=Z,74µm,22.0s
W41B Gary Mavity, V 36.23 310 IAmb IAmb 09 34 19.3
comp=Z,730nm,1.1s
W41B IAMs_20 IAMs_20 09 51 14.7
comp=Z,37µm,20.0s
W41B Gary Mavity, V 36.23 310 P P 09 34 16.3 +0.9
baz=116,SNR=266
W41B S S 09 39 55.9 +1.8
baz=116
I48A Sherman Twp 36.24 329 P P 09 34 15.9 +0.5
baz=137,SNR=136
I48A S S 09 39 54.4 +0.3
baz=137
PMAN Manadas 36.25 43 eP P 09 34 17.2 +1.6
comp=Z,469nm,0.9s
WLAR White Oak Lake 36.26 308 P P 09 34 17.1 +1.3
K46A Dorr 36.27 326 P P 09 34 16.3 +0.6
baz=132,SNR=108
K46A S S 09 39 54.8 +0.3
baz=132
WHAR Wooly Hollow 36.31 311 P P 09 34 16.5 +0.3
WHAR IAmb IAmb 09 34 19.8
comp=Z,789nm,1.2s
X40A Basin Creek Fa 36.37 309 IAmb IAmb 09 34 20.5
comp=Z,413nm,1.1s
X40A Basin Creek Fa 36.37 309 P P 09 34 17.6 +0.9
baz=114,SNR=176
X40A S S 09 39 59.9 +3.5
baz=114
H48A Harrisville 36.43 330 IAmb IAmb 09 34 33.3
comp=Z,930nm,1.2s
H48A Harrisville 36.43 330 P P 09 34 17.5 +0.4
baz=138,SNR=69
H48A S S 09 39 56.3 -0.7
baz=138
SRBC Serra Branca 36.50 42 eP P 09 34 19.1 +1.3
comp=Z,3µm,1.5s
SLM Saint Louis 36.50 317 IAMs_20 IAMs_20 09 49 41.8
comp=Z,49µm,20.0s
I47A Gladwin 36.52 328 IAMs_20 IAMs_20 09 51 22.9
comp=Z,54µm,19.0s
I47A Gladwin 36.52 328 P P 09 34 18.7 +0.8
baz=136,SNR=133
I47A S S 09 39 59.8 +1.4
baz=136
PGRA Graciosa 36.54 42 eP P 09 34 19.2 +1.1
comp=Z,1µm,1.3s
P43A Skaggs, Pawnee 36.59 319 IAMs_20 IAMs_20 09 49 34.0
comp=Z,68µm,21.0s
D51A Lot 18 Range I 36.59 336 P P 09 34 18.9 +0.4
baz=146,SNR=195
D51A S S 09 39 59.6 +0.1
baz=146
TA01 Diego Aracena 36.64 198 ⇓iP P 09 34 18.8 -0.2
J46A Howard City 36.64 327 P P 09 34 19.7 +0.8
baz=133,SNR=64
J46A S S 09 40 00.6 +0.3
baz=133
F49A Sandfield 36.65 333 P P 09 34 19.0 +0.1
baz=141,SNR=80
F49A S S 09 40 00.2 0.0
baz=141
M44A Midewin, Midew 36.71 322 IAmb IAmb 09 34 26.0
comp=Z,666nm,1.1s
M44A IAMs_20 IAMs_20 09 49 33.1
comp=Z,48µm,21.0s
VLDQ Val d'Or 36.76 339 P P 09 34 18.9 -0.9
VLDQ IAmb IAmb 09 34 37.2
comp=Z,875nm,1.4s
PCMB Pacaembu 36.77 168 eP P 09 34 21.6 +1.5
NATX Nacogdoches 36.78 304 P P 09 34 21.4 +1.2
NATX Nacogdoches 36.78 304 P P 09 34 21.5 +1.3
baz=109,SNR=50
H47A Mio 36.79 329 P P 09 34 20.9 +0.8
baz=136,SNR=14
H47A S S 09 40 03.4 +0.9
baz=136
ADH Angra Heroismo 36.83 43 eP P 09 34 22.0 +1.5
comp=Z,1µm,1.3s
D50A G1974 Best Tow 36.84 336 P P 09 34 21.1 +0.5
baz=145,SNR=122
D50A S S 09 40 03.5 +0.3
baz=145
PATCX Punta Patache 36.87 198 ⇓iP P 09 34 21.1 -0.1
CCM Cathedral Cave 36.88 315 P P 09 34 21.2 +0.2
CCM IAmb IAmb 09 34 39.8
comp=Z,381nm,1.0s
CCM Cathedral Cave 36.88 315 IAMs_20 IAMs_20 09 49 42.8
comp=Z,48µm,21.0s
CCM Cathedral Cave 36.88 315 P P 09 34 21.2 +0.2
CCM pmax pmax
comp=Z,381nm,1.0s
CCM MLR MLR
comp=Z,48µm,21.0s
CCM Cathedral Cave 36.88 315 P P 09 34 21.4 +0.4
baz=121
PB01 IPOC Station P 36.89 196 ⇓iP P 09 34 21.5 +0.2
BB19B Bebedouro 36.89 164 eP P 09 34 22.6 +1.3
PSCM Serra do Cume 36.93 43 eP P 09 34 22.6 +1.2
comp=Z,874nm,1.1s
I46A Reed City 36.95 328 P P 09 34 22.0 +0.4
baz=134,SNR=46
I46A S S 09 40 05.0 +0.1
baz=134
F48A Evansville 36.95 332 P P 09 34 21.7 +0.2
baz=140,SNR=113
F48A S S 09 40 04.6 -0.3
baz=140
MIAR Mount Ida 36.95 309 P P 09 34 20.0 -1.7
MIAR Mount Ida 36.95 309 P P 09 34 20.0 -1.7
MIAR pmax pmax
comp=Z,415nm,1.3s
MIAR MLR MLR
comp=Z,29µm,20.0s
MIAR Mount Ida 36.95 309 P P 09 34 22.4 +0.7
baz=114,SNR=70
HDIL Hopedale 36.97 320 IAmb IAmb 09 34 28.4
comp=Z,798nm,1.2s
HDIL Hopedale 36.97 320 P P 09 34 22.6 +0.8
baz=126,SNR=104
G47A Hillman 37.04 330 P P 09 34 22.9 +0.7
baz=138,SNR=177
G47A S S 09 40 06.2 0.0
baz=138
J45A Montague 37.10 326 IAMs_20 IAMs_20 09 49 51.3
comp=Z,63µm,19.0s
J45A Montague 37.10 326 P P 09 34 23.3 +0.5
baz=132,SNR=12
J45A S S 09 40 07.6 +0.4
baz=132
L44A Lake County Fo 37.13 323 P P 09 34 23.4 +0.4
L44A IAMs_20 IAMs_20 09 49 45.1
comp=Z,51µm,22.0s
L44A Lake County Fo 37.13 323 P P 09 34 23.9 +0.9
baz=129,SNR=102
L44A S S 09 40 07.9 +0.1
baz=129
MGMO Mountain Grove 37.14 313 P P 09 34 23.0 -0.3
MGMO IAmb IAmb 09 34 28.0
comp=Z,650nm,1.4s
MGMO IAMs_20 IAMs_20 09 50 43.8
comp=Z,44µm,19.0s
GLMI Grayling 37.15 329 P P 09 34 23.5 +0.2
GLMI IAMs_20 IAMs_20 09 49 07.6
comp=Z,42µm,20.0s
GLMI Grayling 37.15 329 P P 09 34 24.3 +1.0
baz=136,SNR=133
HKT Hockley 37.19 301 P P 09 34 24.0 +0.4
HKT IAmb IAmb 09 34 29.3
comp=Z,1µm,1.6s
HKT Hockley 37.19 301 IAMs_20 IAMs_20 09 51 18.9
comp=Z,59µm,22.0s
HKT Hockley 37.19 301 P P 09 34 24.0 +0.4
HKT pmax pmax
comp=Z,1µm,1.6s
HKT MLR MLR
comp=Z,59µm,22.0s
U40A Yellville 37.19 312 P P 09 34 24.0 +0.4
U40A IAmb IAmb 09 34 27.6
comp=Z,547nm,1.1s
U40A IAMs_20 IAMs_20 09 50 07.2
comp=Z,46µm,22.0s
U40A Yellville 37.19 312 P P 09 34 24.1 +0.4
baz=117,SNR=224
U40A S S 09 40 08.0 -0.8
baz=117
H46A Fife Lake 37.24 329 P P 09 34 24.6 +0.6
baz=135,SNR=13
H46A S S 09 40 10.7 +1.3
baz=135
E48A Lockeyer 37.26 333 P P 09 34 24.9 +0.8
baz=141,SNR=383
E48A S S 09 40 09.3 -0.3
baz=141
PB02 IPOC Station P 37.27 197 ⇓iP P 09 34 25.1 +0.6
W39A Magazine 37.37 310 P P 09 34 26.6 +1.4
W39A IAmb IAmb 09 34 29.8
comp=Z,847nm,1.1s
W39A IAMs_20 IAMs_20 09 49 19.1
comp=Z,47µm,22.0s
W39A Magazine 37.37 310 P P 09 34 26.9 +1.7
baz=114,SNR=230
W39A S S 09 40 15.1 +3.4
baz=114
LSQQ Lebel-sur-Quev 37.41 340 P P 09 34 25.8 +0.4
baz=151
I45A Fountain 37.42 327 P P 09 34 25.7 +0.1
I45A IAmb IAmb 09 34 32.0
comp=Z,981nm,1.1s
I45A Fountain 37.42 327 P P 09 34 26.0 +0.5
baz=133,SNR=82
I45A S S 09 40 12.9 +0.8
baz=133
PDA Ponta Delgada 37.44 46 eP P 09 34 26.2 +0.5
comp=Z,2µm,1.3s
SJMB Sao Joao De Ma 37.44 152 eP P 09 34 27.2 +1.3
PSMA Santa Maria 37.45 47 eP P 09 34 27.2 +1.3
comp=Z,959nm,1.3s
PSMN Pico do Norte, 37.50 47 eP P 09 34 26.4 +0.1
comp=Z,765nm,1.4s
GRON Grota Negra 37.54 46 eP P 09 34 28.9 +2.3
comp=Z,1µm,1.3s
CMLA Cha da Macela 37.54 46 eP P 09 34 28.0 +1.4
comp=Z,2µm,1.1s
CMLA Cha da Macela 37.54 46 P P 09 34 26.7 0.0
CMLA Cha da Macela 37.54 46 IAMs_20 IAMs_20 09 45 39.7
comp=Z,46µm,20.0s
CMLA Cha da Macela 37.54 46 P P 09 34 26.7 0.0
CMLA pmax pmax
comp=Z,1µm,0.9s
PB09 IPOC Station P 37.54 196 ⇓iP P 09 34 27.8 +0.8
PCALD Caldeiras da R 37.58 46 eP P 09 34 28.3 +1.3
comp=Z,2µm,1.3s
G46A Petoskey 37.63 330 P P 09 34 27.9 +0.7
baz=136,SNR=67
G46A S S 09 40 16.0 +0.8
baz=136
D48A Paudash Townsh 37.65 334 P P 09 34 27.7 +0.3
baz=142,SNR=114
D48A S S 09 40 14.2 -1.3
baz=142
PB07 IPOC Station P 37.65 197 ⇓iP P 09 34 28.1 +0.3
TRCB Terra Rica 37.67 170 eP P 09 34 29.7 +1.8
K43A Burlington 37.70 324 P P 09 34 28.0 +0.1
K43A IAmb IAmb 09 34 34.3
comp=Z,566nm,1.2s
K43A IAMs_20 IAMs_20 09 50 02.3
comp=Z,54µm,22.0s
BSFB Barra de Sao F 37.71 151 eP P 09 34 29.6 +1.4
E47A Iron Bridge 37.73 332 P P 09 34 28.7 +0.6
baz=139,SNR=206
E47A S S 09 40 17.1 +0.4
baz=139
H45A Beulah 37.73 328 P P 09 34 29.1 +1.0
baz=134,SNR=49
H45A S S 09 40 16.4 -0.4
baz=134
237A Washetta, Mont 37.78 304 IAmb IAmb 09 34 35.4
comp=Z,888nm,1.1s
BART Pico Bartolome 37.79 46 eP P 09 34 30.4 +1.5
comp=Z,669nm,1.4s
G45A Suttons Bay 37.83 329 IAmb IAmb 09 34 45.7
comp=Z,529nm,1.1s
G45A IAMs_20 IAMs_20 09 52 21.4
comp=Z,52µm,20.0s
G45A Suttons Bay 37.83 329 P P 09 34 29.6 +0.7
baz=135,SNR=92
G45A S S 09 40 19.1 +0.8
baz=135
PB03 IPOC Station P 37.92 196 ⇓iP P 09 34 30.2 +0.1
HHAR Hobbs 37.95 311 P P 09 34 30.6 +0.4
HHAR IAmb IAmb 09 34 34.0
comp=Z,426nm,1.0s
BSCB Bom Sucesso 38.02 158 eP P 09 34 31.9 +1.0
N41A Harden Midland 38.03 319 P P 09 34 30.9 +0.2
N41A IAmb IAmb 09 34 36.8
comp=Z,850nm,1.1s
L42A Oliver, Polo 38.05 322 P P 09 34 31.4 +0.5
L42A IAMs_20 IAMs_20 09 50 26.6
comp=Z,50µm,22.0s
D47A Chapleau 38.11 333 P P 09 34 31.6 +0.3
baz=140
D47A S S 09 40 21.9 -0.6
baz=140
TLIG Tlapa 38.11 280 P P 09 34 32.4 +0.5
E46A Sault Ste Mari 38.13 331 IAmb IAmb 09 34 48.3
comp=Z,799nm,1.1s
E46A IAMs_20 IAMs_20 09 49 15.4
comp=Z,37µm,20.0s
F45A CMU Biological 38.21 330 P P 09 34 33.1 +1.0
baz=136,SNR=212
F45A S S 09 40 26.7 +2.6
baz=136
LVC Limon Verde 38.24 195 ⇓iP P 09 34 33.7 +0.7
LVC Limon Verde 38.24 195 eP P 09 34 33.6 +0.6
LVC Limon Verde 38.24 195 P P 09 34 33.7 +0.7
LVC Limon Verde 38.24 195 P P 09 34 33.7 +0.7
LVC pmax pmax
comp=Z,2µm,1.7s
LVC MLR MLR
comp=Z,92µm,21.0s
MATQ Matagami 38.24 340 P P 09 34 32.7 +0.4
baz=150,SNR=114
PB04 IPOC Station P 38.30 197 ⇓iP P 09 34 33.2 -0.2
PB04 IPOC Station P 38.30 197 P P 09 34 33.1 -0.2
KVTX Kingsville 38.37 296 IAmb IAmb 09 34 40.9
comp=Z,857nm,1.1s
D46A Sault St. Mari 38.40 332 P P 09 34 34.0 +0.3
baz=139,SNR=126
D46A S S 09 40 27.8 +0.9
baz=139
RCLB Rio Claro- Sao 38.46 163 eP P 09 34 36.1 +1.6
PB06 IPOC Station P 38.50 196 ⇓iP P 09 34 35.4 +0.5
H43A Windswept, Lux 38.53 326 P P 09 34 35.6 +0.7
H43A IAmb IAmb 09 34 41.0
comp=Z,600nm,0.9s
UNM Universidad Na 38.68 283 P P 09 34 37.1 +0.3
UNM IAmb IAmb 09 34 46.6
comp=Z,914nm,1.7s
UNM Universidad Na 38.68 283 P P 09 34 37.1 +0.3
UNM pmax pmax
comp=Z,914nm,1.7s
UNM MLR MLR
comp=Z,22µm,21.0s
I42A Draeger Farm, 38.78 325 P P 09 34 37.1 +0.1
I42A IAMs_20 IAMs_20 09 50 21.8
comp=Z,52µm,21.0s
PB05 IPOC Station P 38.81 197 ⇓iP P 09 34 37.3 -0.2
FRTB Fartura 38.81 166 eP P 09 34 39.0 +1.6
435B Jarrell 38.87 301 P P 09 34 38.2 +0.3
435B Jarrell 38.87 301 P P 09 34 38.2 +0.3
baz=106,SNR=58
435B S S 09 40 34.2 -0.2
baz=106
JFWS Jewell Farm 38.94 323 P P 09 34 38.8 +0.4
JFWS IAmb IAmb 09 34 54.8
comp=Z,2µm,1.9s
JFWS Jewell Farm 38.94 323 IAMs_20 IAMs_20 09 51 03.1
comp=Z,43µm,21.0s
JFWS Jewell Farm 38.94 323 P P 09 34 38.8 +0.4
JFWS pmax pmax
comp=Z,2µm,1.9s
JFWS MLR MLR
comp=Z,43µm,21.0s
JFWS Jewell Farm 38.94 323 P P 09 34 38.8 +0.4
baz=127,SNR=99
PB15 IPOC Station P 38.95 195 ⇓iP P 09 34 39.4 +0.6
E44A Grand Marais A 39.08 330 P P 09 34 40.4 +1.0
E44A IAmb IAmb 09 34 56.6
comp=Z,971nm,1.4s
E44A IAMs_20 IAMs_20 09 50 16.5
comp=Z,37µm,20.0s
E44A Grand Marais A 39.08 330 P P 09 34 40.8 +1.4
baz=136,SNR=114
E44A S S 09 40 39.0 +1.9
baz=136

WHTX Lake Whitney, 39.11 303 P P 09 34 40.2 +0.3
WHTX IAmb IAmb 09 34 45.3
comp=Z,2µm,1.9s
WHTX Lake Whitney, 39.11 303 P P 09 34 40.2 +0.3
baz=107,SNR=78
WHTX S S 09 40 37.6 -0.4
baz=107
TUL1 Leonard 39.16 310 P P 09 34 40.7 +0.4
TUL1 IAmb IAmb 09 34 44.4
comp=Z,698nm,0.9s
TUL1 Leonard 39.16 310 P P 09 34 40.8 +0.5
baz=113,SNR=182
TUL1 S S 09 40 40.8 +2.2
baz=113
VAO Valinhos 39.17 162 eP P 09 34 42.3 +1.8
E43A Lone Tree Farm 39.43 329 P P 09 34 42.8 +0.4
E43A IAMs_20 IAMs_20 09 53 10.9
comp=Z,45µm,19.0s
PB10 IPOC Station P 39.53 197⇓iP P 09 34 43.4 -0.1
PB10 IPOC Station P 39.53 197 P P 09 34 42.9 -0.5
SLA San Lorenzo 39.59 189⇓iP P 09 34 44.2 +0.1
SPB Sao Paulo 39.60 163 eP P 09 34 45.7 +1.8
PTGB Pitanga 39.65 170 eP P 09 34 46.1 +1.6
VAS01 Vassouras-RJ 39.68 157 eP P 09 34 46.2 +1.4
W35A Tecumseh 39.69 308 P P 09 34 44.8 +0.1
I40A Norwalk 39.75 324 IAmb IAmb 09 34 51.4
comp=Z,688nm,1.0s
I40A IAMs_20 IAMs_20 09 51 25.4
comp=Z,54µm,21.0s
833A Chaparral WMA, 39.83 297 P P 09 34 45.6 -0.4
833A IAmb IAmb 09 34 51.7
comp=Z,856nm,1.3s
833A Chaparral WMA, 39.83 297 P P 09 34 45.6 -0.4
baz=101,SNR=81
833A S S 09 40 48.1 -0.7
baz=101
PARB Paraibuna 39.90 161 eP P 09 34 47.0 +0.4
SCIA State Center 40.18 319 IAmb IAmb 09 34 55.1
comp=Z,582nm,1.1s
SCIA State Center 40.18 319 P P 09 34 49.3 +0.6
baz=122,SNR=48
OKCFA Oklahoma City 40.23 308 IAmb IAmb 09 35 03.9
comp=Z,795nm,1.3s
OKCFA IAMs_20 IAMs_20 09 52 22.6
comp=Z,43µm,22.0s
X34A Smith Ranch, M 40.23 307 P P 09 34 49.8 +0.5
X34A IAmb IAmb 09 35 04.5
comp=Z,851nm,1.4s
COWI Conover 40.34 327 P P 09 34 50.2 +0.3
G40A Rib Lake 40.37 326 P P 09 34 50.8 +0.6
G40A IAMs_20 IAMs_20 09 53 42.7
comp=Z,57µm,20.0s
PB14 IPOC Station P 40.55 196⇓iP P 09 34 52.6 +0.4
SCHQ Schefferville 40.61 353 P P 09 34 52.4 +0.3
comp=Z,216nm,1.1s,baz=166,slow=7.1,SNR=146
SCHQ PP PP 09 36 25.6 -0.3
comp=Z,65nm,0.6s,baz=184,slow=7.6,SNR=6.3
SCHQ LR LR 09 50 19.3
comp=Z,37µm,21.4s,baz=172,slow=34
SCHQ Schefferville 40.61 353 P P 09 34 52.3 +0.2
SCHQ IAmb IAmb 09 34 54.2
comp=Z,985nm,1.5s
SCHQ IAMs_20 IAMs_20 09 49 56.7
comp=Z,40µm,21.0s
JCT Junction City 40.64 300 P P 09 34 52.4 -0.3
JCT IAmb IAmb 09 35 07.9
comp=Z,1µm,1.1s
JCT Junction City 40.64 300 P P 09 34 52.4 -0.3
JCT pmax pmax
comp=Z,1µm,1.1s
JCT Junction City 40.64 300 P P 09 34 52.9 +0.1
baz=104,SNR=217
D41A Chassel 40.69 329 P P 09 34 53.2 +0.5
D41A IAmb IAmb 09 35 09.8
comp=Z,928nm,1.2s
D41A IAMs_20 IAMs_20 09 51 50.1
comp=Z,38µm,21.0s
CPUP Villa Florida 40.71 178 P P 09 34 53.1 0.0
comp=Z,172nm,0.8s,baz=1.1,slow=8.3,SNR=190
CPUP LR LR 09 55 15.7
comp=Z,29µm,20.1s,baz=358,slow=41
CPUP Villa Florida 40.71 178 eP P 09 34 53.5 +0.3
CPUP Villa Florida 40.71 178 P P 09 34 52.7 -0.4
TIJ01 Guaruva-PR 40.85 166 eP P 09 34 55.4 +1.0
GO02 Mina Guanaco 40.85 195 P P 09 34 55.1 +0.4
GO02 IAMs_20 IAMs_20 09 54 16.0
comp=Z,62µm,22.0s
WMOK Wichita Mounta 41.02 307 P P 09 34 55.7 0.0
baz=109,SNR=170
ABTX Abilene, Hawle 41.06 303 P P 09 34 56.2 +0.1
ABTX IAmb IAmb 09 35 01.9
comp=Z,887nm,1.1s
ABTX Abilene, Hawle 41.06 303 P P 09 34 56.3 +0.1
baz=106,SNR=98
ABTX S S 09 41 07.3 0.0
baz=106
KSU1 Kansas State U 41.08 314 IAMs_20 IAMs_20 09 55 00.9
comp=Z,44µm,21.0s
KSU1 Kansas State U 41.08 314 P P 09 34 55.9 -0.2
baz=116,SNR=52
MACI Morro de la Ar 41.58 64 P P 09 34 59.6 -1.1
MACI IAmb IAmb 09 35 22.4
comp=Z,650nm,1.1s
U32A Winter Ranch, 41.74 309 IAMs_20 IAMs_20 09 53 06.8
comp=Z,46µm,22.0s
SPMN Marine on St. 41.80 324 IAMs_20 IAMs_20 09 52 28.6
comp=Z,46µm,22.0s
SPMN Marine on St. 41.80 324 P P 09 35 02.0 +0.1
baz=126,SNR=192
SPMN S S 09 41 17.4 -0.4
baz=126
E38A The Farm, Brul 41.94 326 IAMs_20 IAMs_20 09 52 29.4
comp=Z,55µm,20.0s
ZAIG Zacatecas 41.97 288 P P 09 35 05.0 +1.0
PMOZ Porto Moniz, M 42.01 57 eP P 09 35 05.0 +1.0
comp=Z,2µm,1.3s
PMOZ eS S 09 41 27.0 +5.6
PMOZ eLQ LQ 09 44 48.8
PMOZ eLR LR 09 46 37.8
comp=Z,24µm,20.0s
PMOZ Porto Moniz, M 42.01 57 P P 09 35 05.5 +1.5
SNR=10
PMOZ Porto Moniz, M 42.01 57 P P 09 35 04.6 +0.5
ITAB Concordia 42.11 171 eP P 09 35 05.8 +1.2
PMAR Madeira 42.21 57 eP P 09 35 07.1 +1.3
comp=Z,978nm,1.4s
EYMN Ely 42.76 328 P P 09 35 09.3 -0.5
EYMN Ely 42.76 328 P P 09 35 09.9 +0.1
baz=130,SNR=136
PMPS Porto Santo 42.77 57 eP P 09 35 11.7 +1.6
comp=Z,554nm,1.5s
PMPST Porto Santo, M 42.78 57 eP P 09 35 12.3 +2.2
comp=Z,620nm,1.5s
BGNE Belgrade 43.15 316 P P 09 35 13.3 +0.2
BGNE IAMs_20 IAMs_20 09 53 19.9
comp=Z,53µm,22.0s
BGNE Belgrade 43.15 316 P P 09 35 13.6 +0.5
baz=117,SNR=105
BGNE S S 09 41 38.5 +0.6
baz=117
CBKS Cedar Bluff 43.18 312 P P 09 35 13.5 +0.1
CBKS IAmb IAmb 09 35 29.8
comp=Z,1µm,1.2s
CBKS IAMs_20 IAMs_20 09 56 18.8
comp=Z,28µm,20.0s
CBKS Cedar Bluff 43.18 312 P P 09 35 13.5 +0.1
CBKS pmax pmax
comp=Z,1µm,1.3s
CBKS MLR MLR
comp=Z,28µm,20.0s
CBKS Cedar Bluff 43.18 312 P P 09 35 14.1 +0.7
baz=112,SNR=60
ECSD EROS Data Cent 43.26 320 P P 09 35 13.8 -0.2
ECSD EROS Data Cent 43.26 320 P P 09 35 14.0 0.0
baz=120,SNR=138
AMTX Amarillo 43.33 306 P P 09 35 14.9 +0.2
AMTX Amarillo 43.33 306 P P 09 35 15.1 +0.4
baz=107
GO03 Copiap 43.34 195 IAMs_20 IAMs_20 09 56 52.8
comp=Z,46µm,22.0s
TX31 Lajitas Ar. Si 43.70 297 P P 09 35 18.0 +0.2
TX32 Lajitas Array 43.70 297 P P 09 35 17.8 0.0
TXAR Lajitas Array 43.70 297 P P 09 35 17.9 +0.1
comp=Z,39nm,0.6s,baz=112,slow=8.1,SNR=124
TXAR PP PP 09 37 00.4 +0.7
comp=Z,28nm,0.9s,baz=59,slow=11,SNR=2.8
TXAR LR LR 09 59 20.6
comp=Z,5µm,19.3s,baz=0.0,slow=44
MSTX Muleshoe 43.95 304 P P 09 35 20.1 +0.4
MSTX IAMs_20 IAMs_20 09 56 25.3
comp=Z,32µm,22.0s
MSTX Muleshoe 43.95 304 P P 09 35 20.1 +0.4
baz=105,SNR=274
MSTX S S 09 41 50.8 +0.9
baz=105
ITQB Itaqui 44.07 177 eP P 09 35 20.1 -0.3
CNLB Canela 44.35 170 eP P 09 35 23.6 +0.8
CPSB Cacapava Do Su 45.06 173 eP P 09 35 27.9 -0.4
SUSD Miller 45.08 319 P P 09 35 28.1 -0.4
SUSD Miller 45.08 319 P P 09 35 28.4 -0.1
baz=119,SNR=24
SUSD S S 09 42 05.1 -0.8
baz=119
HPIG 45.12 294 P P 09 35 29.9 +0.6
HPIG IAmb IAmb 09 35 35.9
comp=Z,525nm,1.0s
D32A Dogwood Acres, 45.29 324 IAmb IAmb 09 35 45.0
comp=Z,244nm,0.8s
D32A IAMs_20 IAMs_20 09 54 47.1
comp=Z,45µm,22.0s
AGMN Agassiz Nation 45.30 326 P P 09 35 29.6 -0.5
AGMN IAmb IAmb 09 35 35.2
comp=Z,418nm,1.0s
AGMN IAMs_20 IAMs_20 09 56 45.1
comp=Z,48µm,20.0s
AGMN Agassiz Nation 45.30 326 P P 09 35 30.0 -0.1
baz=125,SNR=305
KSCO Kaye Shedlock' 45.36 311 P P 09 35 31.5 +0.6
KSCO IAMs_20 IAMs_20 09 57 57.3
comp=Z,39µm,20.0s
KSCO Kaye Shedlock' 45.36 311 P P 09 35 31.6 +0.7
baz=110,SNR=50
KSCO S S 09 42 11.4 +1.1
baz=110
MNTX Cornudas Mount 45.58 300 P P 09 35 33.4 +0.7
MNTX Cornudas Mount 45.58 300 P P 09 35 33.4 +0.7
baz=101,SNR=776
OGNE Ogallala 45.63 314 P P 09 35 33.4 +0.4
OGNE IAMs_20 IAMs_20 09 58 02.4
comp=Z,42µm,19.0s
OGNE Ogallala 45.63 314 P P 09 35 33.5 +0.5
baz=112,SNR=44
GO04 Tololo Observa 45.95 194 P P 09 35 35.5 -0.2
GO04 IAmb IAmb 09 36 11.2
comp=Z,556nm,1.0s
GO04 IAMs_20 IAMs_20 09 56 16.9
comp=Z,44µm,22.0s
T25A Trinidad 46.10 308 P P 09 35 37.5 +0.6
T25A IAmb IAmb 09 35 52.1
comp=Z,1µm,1.8s
T25A Trinidad 46.10 308 P P 09 35 37.9 +1.0
baz=107,SNR=44
T25A S S 09 42 22.0 +0.8
baz=107
PLTB Pedras Altas 46.38 174 eP P 09 35 39.0 +0.2
ULM Lac du Bonnet 46.45 328 P P 09 35 38.2 -0.9
comp=Z,125nm,1.0s,baz=125,slow=6.9,SNR=116
ULM LR LR 09 55 17.0
comp=Z,41µm,20.5s,baz=134,slow=36
ULM PKPKPKP P'P'df 10 07 04.2 -2.8
comp=Z,0.7nm,0.5s,baz=338,slow=3.5,SNR=3.4
ULM Lac du Bonnet 46.45 328 P P 09 35 38.0 -1.2
SDCO Great Sand Dun 47.10 308 P P 09 35 45.7 +0.8
SDCO IAmb IAmb 09 36 03.0
comp=Z,186nm,0.9s
SDCO Great Sand Dun 47.10 308 P P 09 35 45.7 +0.8
baz=106,SNR=95
ANMO Albuquerque 47.14 304 P P 09 35 46.4 +1.3
ANMO IAmb IAmb 09 36 00.8
comp=Z,367nm,1.2s
ANMO Albuquerque 47.14 304 IAMs_20 IAMs_20 09 58 16.8
comp=Z,26µm,21.0s
ANMO Albuquerque 47.14 304deP P 09 35 46.3 +1.3
ANMO pmax pmax
comp=Z,256nm,1.7s
ANMO Albuquerque 47.14 304 P P 09 35 46.5 +1.5
baz=103
MDND Maddock 47.16 323 P P 09 35 43.6 -1.2
MDND IAMs_20 IAMs_20 09 55 22.5
comp=Z,42µm,22.0s
MDND Maddock 47.16 323 P P 09 35 44.7 0.0
baz=121,SNR=77
MDND S S 09 42 32.6 -3.0
baz=121
Q24A Divide 47.20 310 P P 09 35 46.4 +0.8
Q24A IAMs_20 IAMs_20 09 56 16.9
comp=Z,36µm,22.0s
Q24A Divide 47.20 310 P P 09 35 46.4 +0.8
baz=108
Q24A S S 09 42 37.3 +0.2
baz=108
SFNM Sidi Ifni 47.25 63 P P 09 35 48.0 +2.2
SNR=7.6
SFNM P P 09 35 48.0 +2.2
SNR=7.6
Y22D IRIS PASSCAL I 47.32 303 P P 09 35 48.2 +1.7
Y22D IAMs_20 IAMs_20 09 56 33.7
comp=Z,39µm,22.0s
Y22D IRIS PASSCAL I 47.32 303 P P 09 35 48.1 +1.7
baz=102,SNR=42
Y22D S S 09 42 43.2 +4.6
baz=102
NRS Narsarsuaq 47.52 9⇓iP P 09 35 47.7 +0.4
NRS Narsarsuaq 47.52 9 P P 09 35 47.2 -0.1
NRS IAMs_20 IAMs_20 09 53 33.1
comp=Z,46µm,20.0s
NRS Narsarsuaq 47.52 9⇓iP P 09 35 47.7 +0.4
NRS MLR MLR
comp=Z,47µm,21.0s
121A Cookes Peak, D 47.73 301 P P 09 35 51.4 +1.7
121A Cookes Peak, D 47.73 301 P P 09 35 51.6 +1.9
baz=100,SNR=216
121A S S 09 42 48.9 +4.3
baz=100
ISCO Idaho Springs 47.80 311 P P 09 35 51.3 +1.0
ISCO IAmb IAmb 09 36 06.1
comp=Z,934nm,1.9s
ISCO IAMs_20 IAMs_20 09 59 09.0
comp=Z,31µm,21.0s
ISCO Idaho Springs 47.80 311 P P 09 35 51.3 +1.0
ISCO pmax pmax
comp=Z,934nm,1.9s
ISCO MLR MLR
comp=Z,31µm,21.0s
ISCO Idaho Springs 47.80 311 P P 09 35 51.6 +1.4
baz=108,SNR=94
S22A 4UR Ranch, Cre 48.12 308 P P 09 35 53.8 +1.0
S22A 4UR Ranch, Cre 48.12 308 P P 09 35 54.0 +1.2
baz=105,SNR=149
S22A S S 09 42 51.4 +1.2
baz=105
PHWY Pilot Hill 48.17 313 P P 09 35 53.7 +0.6
PHWY IAmb IAmb 09 36 10.7
comp=Z,472nm,1.1s
PHWY IAMs_20 IAMs_20 09 58 46.8
comp=Z,23µm,20.0s
RSSD Black Hills 48.22 317 P P 09 35 53.3 -0.1
RSSD IAmb IAmb 09 36 10.0
comp=Z,513nm,1.4s
RSSD Black Hills 48.22 317 P P 09 35 53.3 -0.1
RSSD pmax pmax
comp=Z,513nm,1.4s
RSSD MLR MLR
comp=Z,69µm,22.0s
RSSD Black Hills 48.22 317 P P 09 35 53.9 +0.5
baz=113
N23A Red Feather La 48.39 312 P P 09 35 55.7 +0.9
N23A IAmb IAmb 09 36 13.9
comp=Z,331nm,1.1s
N23A IAMs_20 IAMs_20 09 57 18.5
comp=Z,26µm,21.0s
N23A Red Feather La 48.39 312 P P 09 35 55.9 +1.1
baz=109,SNR=60
N23A S S 09 42 56.0 +2.2
baz=109
ROC1 El Roble 48.68 194 P P 09 35 56.7 -0.2
PEL Peldehue 48.77 193 P P 09 35 57.2 -0.2
PEL IAMs_20 IAMs_20 09 58 47.1
comp=Z,32µm,22.0s
PEL Peldehue 48.77 193 P P 09 35 57.2 -0.2
PEL pmax pmax
comp=Z,1µm,1.7s
PEL MLR MLR
comp=Z,32µm,22.0s
TTIG Tnine Tigouga, 48.89 62 P P 09 35 60.0 +1.4
SNR=11
TTIG P P 09 35 60.0 +1.4
SNR=11
MVCO Mesa Verde 49.27 307 P P 09 36 02.1 +0.6
MVCO IAMs_20 IAMs_20 09 56 47.1
comp=Z,34µm,21.0s
MVCO Mesa Verde 49.27 307 P P 09 36 02.6 +1.1
baz=104,SNR=61
K22A Casper 49.37 314 IAMs_20 IAMs_20 09 57 39.6
comp=Z,33µm,21.0s
K22A Casper 49.37 314 P P 09 36 03.1 +0.9
baz=110,SNR=139
K22A S S 09 43 09.4 +2.0
baz=110
H10N3 ASCENSION HYDR49.42 114 T T 10 29 15.1
baz=295,slow=75,SNR=393
H10N2 ASCENSION HYDR49.42 114 T T 10 29 28.7
baz=295,slow=75,SNR=304
H10N1 ASCENSION HYDR49.44 114 T T 10 29 16.7
baz=295,slow=75,SNR=318
OUK Oukaimeden 49.46 61 P P 09 36 05.0 +1.8
SNR=21
OUK P P 09 36 05.0 +1.8
SNR=21
RWWY Rawlins 49.54 313 IAmb IAmb 09 36 23.4
comp=Z,400nm,1.2s
RWWY IAMs_20 IAMs_20 09 59 42.1
comp=Z,26µm,22.0s
FRB Frobisher Bay 49.55 354 P P 09 36 02.3 -0.5
ASCN Ascension 49.58 114 P P 09 36 03.8 -0.1
ASCN IAmb IAmb 09 36 50.1
comp=Z,320nm,1.1s
ASCN IAMs_20 IAMs_20 09 51 46.3
comp=Z,25µm,22.0s
PFVI Vila Bisbo 49.73 54 eP P 09 36 05.2 +0.4
comp=Z,344nm,1.4s
PFVI eS S 09 43 12.5 +0.3
PFVI Vila Bisbo 49.73 54 IAMs_20 IAMs_20 09 57 35.4
comp=Z,22µm,19.0s
H10S3 ASCENSION HYDR49.78 115 T T 10 29 45.7
baz=295,slow=75,SNR=263
H10S2 ASCENSION HYDR49.80 115 T T 10 30 10.1
baz=285,slow=75,SNR=248
W18A Petrified Fore 49.80 304 IAmb IAmb 09 36 22.1
comp=Z,470nm,1.0s
W18A IAMs_20 IAMs_20 09 58 46.4
comp=Z,26µm,22.0s
W18A Petrified Fore 49.80 304 P P 09 36 07.1 +1.5
baz=101,SNR=33
W18A S S 09 43 17.7 +4.0
baz=101
PMAFR Mafra 49.82 51 eP P 09 36 05.5 +0.1
comp=Z,414nm,1.5s
PMAFR eS S 09 43 15.5 +2.0
O20A White River Ci 49.83 311 IAmb IAmb 09 36 48.7
comp=Z,358nm,1.2s
O20A IAMs_20 IAMs_20 10 00 26.7
comp=Z,33µm,20.0s
O20A White River Ci 49.83 311 P P 09 36 07.0 +1.3
baz=106,SNR=77
O20A S S 09 43 17.0 +3.1
baz=106
LIS Lisbon 49.86 51 eP P 09 36 05.8 +0.1
LIS eS S 09 43 15.5 +1.5
LIS AMS AMS 09 53 01.2
comp=Z,23µm,20.9s
LIS Lisbon 49.86 51 eP P 09 36 05.8 +0.1
LIS eS S 09 43 15.5 +1.5
X18A Snowflake 49.87 303 IAmb IAmb 09 36 25.8
comp=Z,468nm,0.9s
PTEO Sao Teotonio 49.91 53 eP P 09 36 06.0 -0.1
comp=Z,349nm,1.2s
MORF Marmelete 49.91 53 eP P 09 36 06.1 -0.1
MORF eS S 09 43 16.2 +1.4
MORF AMS AMS 09 58 14.8
comp=Z,19µm,19.0s
MORF Marmelete 49.91 53 eP P 09 36 06.6 +0.4
comp=Z,511nm,1.3s
MORF eS S 09 43 15.3 +0.5
MORF Marmelete 49.91 53 eP P 09 36 06.1 -0.1
MORF eS S 09 43 16.2 +1.4
AVE Averroes 50.14 59 P P 09 36 08.8 +0.9
SNR=8.3
AVE Averroes 50.14 59⇓iP P 09 36 07.9 0.0
AVE iS S 09 43 18.0 0.0
DGMT Dagmar 50.16 322 IAMs_20 IAMs_20 09 57 52.8
comp=Z,42µm,21.0s
DGMT Dagmar 50.16 322 P P 09 36 08.5 +0.7
baz=116,SNR=92
PNCL Nicolau / Gran 50.19 52 eP P 09 36 07.0 -1.2
comp=Z,415nm,1.3s
PNCL eS S 09 43 20.6 +2.1
TUC Tucson 50.20 300 P P 09 36 10.5 +1.9
TUC IAmb IAmb 09 36 25.6
comp=Z,360nm,0.9s
TUC Tucson 50.20 300 P P 09 36 10.5 +1.9
TUC pmax pmax
comp=Z,360nm,1.0s
TUC MLR MLR
comp=Z,18µm,22.0s
TUC Tucson 50.20 300 P P 09 36 10.3 +1.7
baz=98
PBDV Barranco-do-Ve 50.45 54 eP P 09 36 11.2 +0.9
comp=Z,438nm,1.4s
PBDV eS S 09 43 24.1 +1.7
PCVE Castro Verde 50.46 53 eP P 09 36 10.8 +0.5
comp=Z,227nm,1.2s
PCVE eS S 09 43 24.6 +2.3
PTOM Tomar 50.65 50 eP P 09 36 11.8 +0.1
comp=Z,423nm,1.3s
PMTG Montargil 50.65 51 eP P 09 36 11.9 +0.2
comp=Z,688nm,1.3s
PMTG eS S 09 43 26.7 +1.8
LAO LASA Array 50.65 319 P P 09 36 12.5 +0.8
LAO LASA Array 50.65 319 P P 09 36 12.7 +1.0
baz=113,SNR=110
PVAQ Vaqueiros 50.66 53 eP P 09 36 12.5 +0.7
comp=Z,266nm,1.8s
PVAQ eS S 09 43 26.6 +1.5
PVAQ eLQ LQ 09 48 32.9
PVAQ eLR LR 09 50 08.5
comp=Z,17µm,20.0s
PVAQ Vaqueiros 50.66 53 P P 09 36 13.7 +1.9
SNR=11
PVAQ P P 09 36 13.7 +1.9
SNR=11
PVAQ Vaqueiros 50.66 53 P P 09 36 12.2 +0.5
PBEJ Beja 50.68 53 eP P 09 36 12.6 +0.7
comp=Z,192nm,1.4s
EVO Evora 50.68 52 eP P 09 36 11.3 -0.6
comp=Z,221nm,1.4s
EVO Evora 50.68 52 iP P 09 36 15.9 +3.9
EVO iS S 09 43 28.5 +3.1
PCAS Casmilo, Conde 50.70 50 eP P 09 36 12.4 +0.4
comp=Z,545nm,1.3s
PCAS eS S 09 43 27.4 +1.8
RTC Rabat Centre 50.70 58 P P 09 36 14.1 +2.0
SNR=10.0
RTC P P 09 36 14.1 +2.0
SNR=10.0
COI Coimbra 50.80 50 eP P 09 36 13.2 +0.4
comp=Z,932nm,1.4s
COI eS S 09 43 28.0 +1.0
COI Coimbra 50.80 50 P P 09 36 12.9 +0.1
COI IAmb IAmb 09 36 27.6
comp=Z,580nm,0.9s
COI IAMs_20 IAMs_20 09 54 05.4
comp=Z,24µm,20.0s
COI Coimbra 50.80 50 P P 09 36 12.9 +0.1
COI pmax pmax
comp=Z,580nm,1.0s
ZHG ZHG 50.80 59 P P 09 36 13.1 +0.1
SNR=22
ZHG P P 09 36 13.1 +0.1
SNR=22
GO05 Huala 50.84 194 IAmb IAmb 09 36 15.5
comp=Z,1µm,1.8s
GO05 IAMs_20 IAMs_20 09 59 22.6
comp=Z,25µm,22.0s
X16A Lo Mia Camp, P 51.06 303 IAmb IAmb 09 36 34.4
comp=Z,325nm,1.0s
X16A IAMs_20 IAMs_20 10 00 46.8
comp=Z,35µm,22.0s
PESTR Estremoz 51.08 52 eS S 09 43 33.0 +2.0

PESTR Estremoz 51.08 52 P P 09 36 15.8 +0.8
SNR=8.8
PESTR P P 09 36 15.8 +0.8
SNR=8.8
WUAZ Wupatki 51.19 304 P P 09 36 17.1 +1.1
WUAZ IAmb IAmb 09 36 35.3
comp=Z,612nm,1.0s
WUAZ IAMs_20 IAMs_20 09 59 30.2
comp=Z,25µm,22.0s
WUAZ Wupatki 51.19 304 P P 09 36 17.8 +1.7
baz=100,SNR=157
FCC Fort Churchill 51.21 337 P P 09 36 15.4 -0.1
FCC Fort Churchill 51.21 337 P P 09 36 15.5 -0.1
FCC pmax pmax
comp=Z,301nm,1.1s
ZGR Zagora 51.26 63 P P 09 36 18.0 +1.4
SNR=16
ZGR P P 09 36 18.0 +1.4
SNR=16
PVIS Viseu 51.31 49 eP P 09 36 16.5 -0.2
comp=Z,247nm,1.2s
PMRV Marv??o 51.36 51 eP P 09 36 17.3 +0.2
comp=Z,379nm,1.5s
PMRV eS S 09 43 35.0 +0.1
PMRV eSS SS 09 47 12.7 +1.9
PMRV eLQ LQ 09 48 32.6
PMRV eLR LR 09 50 24.0
comp=Z,15µm,18.0s
TZRR Tazzarine 51.37 62 P P 09 36 19.0 +1.6
SNR=27
TZRR P P 09 36 19.0 +1.6
SNR=27
PCBR Castelo Branco 51.40 50 eP P 09 36 17.3 0.0
comp=Z,330nm,1.3s
MTE Manteigas 51.49 50 eP P 09 36 18.2 +0.1
comp=Z,457nm,1.4s
MTE eS S 09 43 38.0 +1.3
MTE eSS SS 09 47 16.7 +3.9
MTE eLQ LQ 09 48 43.0
MTE eLR LR 09 50 29.6
comp=Z,22µm,18.0s
MTE Manteigas 51.49 50 IAMs_20 IAMs_20 09 54 34.7
comp=Z,25µm,18.0s
PD31 Pinedale Array 51.53 313 P P 09 36 18.7 +0.1
PD31 IAmb IAmb 09 36 35.8
comp=Z,326nm,0.9s
PDAR Pinedale Array 51.53 313 P P 09 36 18.9 +0.3
comp=Z,93nm,1.0s,baz=117,slow=7.7,SNR=217
PDAR S S 09 43 35.8 -1.8
comp=Z,0.9nm,0.7s,baz=134,slow=8.5,SNR=2.3
PDAR LR LR 09 59 11.2
comp=Z,20µm,21.6s,baz=120,slow=37
PDAR PKPPKP 10 07 02.8
comp=Z,1.2nm,1.0s,baz=135,slow=0.8,SNR=4.0
PVRL Vila Real 51.59 49 eP P 09 36 19.5 +0.7
comp=Z,308nm,1.3s
SFS San Fernando 51.66 55 P P 09 36 20.7 +1.4
SFS San Fernando 51.66 55⇓iP P 09 36 21.5 +2.2
SFS iS S 09 43 42.7 +3.8
Q16A Castle Valley 51.72 308 P P 09 36 20.6 +0.6
CNIL Conil 51.76 55 eP P 09 36 22.5 +2.5
214A Organ Pipe Nat 51.87 299 P P 09 36 22.6 +1.6
214A IAmb IAmb 09 36 27.4
comp=Z,689nm,1.8s
214A Organ Pipe Nat 51.87 299 P P 09 36 22.9 +1.9
baz=96,SNR=157
214A S S 09 43 44.3 +2.3
baz=96
SICH Sidi Chahed 51.99 58 P P 09 36 24.0 +2.2
SNR=15
IFR Ifrane 52.06 59⇓iP P 09 36 22.9 +0.4
IFR iS S 09 43 47.6 +2.6
MVO Moncorvo 52.06 49 eP P 09 36 22.6 +0.3
comp=Z,311nm,1.8s
MVO eS S 09 43 44.2 -0.4
MVO eLQ LQ 09 49 09.4
MVO eLR LR 09 50 41.6
comp=Z,16µm,18.0s
RLMT Red Lodge 52.07 316 IAmb IAmb 09 36 39.5
comp=Z,800nm,1.4s
RLMT Red Lodge 52.07 316 P P 09 36 23.5 +1.0
baz=109,SNR=332
FFC Flin Flon 52.07 330 P P 09 36 21.6 -0.5
FFC IAmb IAmb 09 36 37.9
comp=Z,861nm,1.9s
FFC Flin Flon 52.07 330 IAMs_20 IAMs_20 09 59 28.2
comp=Z,34µm,20.0s
FFC Flin Flon 52.07 330 P P 09 36 21.6 -0.5
FFC pmax pmax
comp=Z,861nm,2.0s
FFC MLR MLR
comp=Z,34µm,20.0s
U15A North Rim 52.09 305 IAMs_20 IAMs_20 09 58 40.8
comp=Z,39µm,22.0s
CHEFC Chefchaouen 52.12 57 P P 09 36 25.1 +2.2
SNR=23
CHEFC P P 09 36 25.1 +2.2
SNR=23
SMIR Smir Dam 52.18 56 P P 09 36 25.1 +1.9
SNR=26
SMIR P P 09 36 25.1 +1.9
SNR=26
CEU Ceuta 52.22 56⇓iP P 09 36 26.0 +2.6
CEU iS S 09 43 50.6 +3.9
Y14A Wickenburg 52.27 302 P P 09 36 25.3 +1.3
Y14A IAmb IAmb 09 36 41.3
comp=Z,288nm,0.9s
PKCU Pink Cliffs 52.29 306 P P 09 36 24.9 +0.4
LIJA Lijar 52.37 55 iP P 09 36 25.0 +0.3
MDT Midelt 52.41 60 P P 09 36 26.4 +1.3
SNR=15
PBRG Braganca 52.44 48 eP P 09 36 25.4 +0.3
comp=Z,208nm,1.5s
PBRG eS S 09 43 51.4 +1.8
REAL Reales 52.45 55 eP P 09 36 26.5 +1.1
TRQA Tornquist 52.45 183 eP P 09 36 26.3 +1.3
GCMT Greycliff 52.55 317 P P 09 36 26.2 +0.2
CTU Camp Tracy 52.56 310 P P 09 36 27.1 +1.0
SNOW Snow King Moun 52.57 314 P P 09 36 26.3 0.0
SNOW IAmb IAmb 09 36 44.9
comp=Z,339nm,1.1s
ARF Arif 52.59 62 P P 09 36 29.0 +2.5
SNR=15
ARF P P 09 36 29.0 +2.5
SNR=15
REDW Red Top Meadow 52.61 314 IAmb IAmb 09 36 44.0
comp=Z,958nm,1.4s
AHID Auburn Hatcher 52.62 313 IAMs_20 IAMs_20 09 58 29.5
comp=Z,32µm,22.0s
HWUT Hardware Ranch 52.65 311 P P 09 36 26.8 0.0
HWUT IAmb IAmb 09 36 44.2
comp=Z,534nm,1.1s
MOOW Moose Ponds 52.65 314 IAMs_20 IAMs_20 09 59 57.2
comp=Z,31µm,22.0s
HORN Hornachuelos 52.66 53 P P 09 36 27.7 +1.0
SNR=37
FLWY Flagg Ranch 52.72 315 P P 09 36 26.5 -0.9
FLWY IAmb IAmb 09 36 44.3
comp=Z,708nm,1.4s
FLWY IAMs_20 IAMs_20 09 59 16.9
comp=Z,38µm,22.0s
TPAW Teton Pass 52.72 314 P P 09 36 26.9 -0.5
H17A Grant Village 52.72 315 P P 09 36 28.3 +0.9
H17A Grant Village 52.72 315 P P 09 36 28.7 +1.3
baz=108,SNR=21
YUF Upper Falls 52.78 315 P P 09 36 28.7 +0.9
FXWY Fox Creek 52.81 314 P P 09 36 28.0 -0.1
YPP Pitchstone Pla 52.84 315 P P 09 36 28.5 +0.1
YNR Norris Junctio 52.89 315 P P 09 36 28.3 -0.4
PVLZ Peæn de 52.97 57⇓iP P 09 36 29.1 +0.1
PVLZ iS S 09 43 59.2 +2.3
ANGG Ammassalik, Gr 52.97 11 IAmb IAmb 09 36 44.4
comp=Z,577nm,1.3s
ANGG IAMs_20 IAMs_20 09 55 12.3
comp=Z,21µm,21.0s
EMAL Malaga-Limoner 53.11 55⇓iP P 09 36 30.9 +0.8
EMAL iS S 09 44 02.0 +3.2
W13A Hualapai Mount 53.16 303 IAMs_20 IAMs_20 10 02 04.2
comp=Z,30µm,22.0s
DUG Dugway, Tooele 53.23 309 IAmb IAmb 09 36 49.1
comp=Z,438nm,1.1s
DUG IAMs_20 IAMs_20 10 02 49.9
comp=Z,21µm,20.0s
DUG Dugway, Tooele 53.23 309 P P 09 36 32.4 +1.2
baz=103,SNR=226
PDMCI Parker Dam,Lak 53.26 302 P P 09 36 32.8 +1.6
baz=97,SNR=81
PDMCI S S 09 44 04.4 +3.5
baz=97
EGMT Eagleton 53.38 320 P P 09 36 32.7 +0.7
EGMT Eagleton 53.38 320 P P 09 36 32.9 +0.9
baz=111,SNR=138
QLMT Earthquake Lak 53.44 315 P P 09 36 34.3 +1.7
Y12C Blythe 53.50 301 IAmb IAmb 09 36 40.4
comp=Z,730nm,1.9s
Y12C Blythe 53.50 301 P P 09 36 34.5 +1.5
baz=97,SNR=59
Y12C S S 09 44 08.4 +4.1
baz=97
TIC Toumodi 53.51 93 eP P 09 36 32.4 -0.9
comp=Z,182nm,0.8s
BGU Big Grassy Mou 53.56 310 P P 09 36 34.3 +0.8
LIC Lamto 53.60 93 eP P 09 36 33.2 -0.8
comp=Z,181nm,0.8s
DBIC Dimbokro 53.66 92 P P 09 36 34.6 +0.1
comp=Z,104nm,0.6s,baz=271,slow=7.4,SNR=68
DBIC S S 09 44 03.5 -3.4
comp=Z,3.4nm,0.8s,baz=129,slow=9.7,SNR=1.8
DBIC LR LR 09 57 11.5
comp=Z,40µm,18.4s,baz=245,slow=34
DBIC PKPPKP P'P'df 10 06 59.5 +2.9
comp=Z,4.8nm,1.0s,baz=203,slow=1.2,SNR=3.6
DBIC Dimbokro 53.66 92 P P 09 36 34.5 +0.1
DBIC Dimbokro 53.66 92 P P 09 36 34.5 +0.1
DBIC S S 09 44 03.5 -3.4
DBIC pmax pmax
comp=Z,198nm,1.0s
GLA Glamis 53.68 300 P P 09 36 34.8 +0.4
GLA IAmb IAmb 09 36 53.4
comp=Z,646nm,1.5s
GLA Glamis 53.68 300 P P 09 36 34.8 +0.4
GLA pmax pmax
comp=Z,646nm,1.5s
GLA MLR MLR
comp=Z,9µm,19.0s
GLA Glamis 53.68 300 P P 09 36 36.1 +1.7
baz=96,SNR=47
PAB San Pablo 53.69 51 P P 09 36 33.5 -0.9
PAB San Pablo 53.69 51 P P 09 36 33.5 -0.9
PAB pmax pmax
comp=Z,185nm,1.2s
NEE2 Needles Airpor 53.71 303 P P 09 36 36.1 +1.6
baz=97,SNR=8.3
KIC Kosan Boka 53.84 93 eP P 09 36 34.9 -0.9
comp=Z,557nm,1.5s
ESDC Sonseca Array 54.01 51 P P 09 36 37.1 +0.4
comp=Z,49nm,1.0s,baz=260,slow=6.9,SNR=70
ESDC S S 09 44 10.8 -0.2
comp=Z,0.1nm,0.3s,baz=78,slow=37,SNR=2.5
ESDC LR LR 09 54 52.6
comp=Z,14µm,20.7s,baz=255,slow=31
ESBB Sonseca Array 54.01 51 P P 09 36 37.1 +0.4
GUD Guadarrama 54.06 50 P P 09 36 38.4 +1.2
IRM Iron Mountain 54.06 302 P P 09 36 38.9 +1.7
baz=97,SNR=185
MELI Melilla 54.09 57⇓iP P 09 36 38.5 +1.2
MELI iS S 09 44 13.4 +1.2
BC3 Big Chuckawall 54.26 301 P P 09 36 40.4 +1.6
baz=96,SNR=109
DLMT Dillon 54.38 316 P P 09 36 40.5 +1.1
SHPR Sheep Range 54.38 305 P P 09 36 40.8 +1.2
SHPR IAmb IAmb 09 36 56.1
comp=Z,486nm,1.6s
SHPR IAMs_20 IAMs_20 10 00 17.5
comp=Z,37µm,22.0s
MCMT McKenzie Canyo 54.40 315 P P 09 36 40.9 +1.2
LRM Limekiln Ridge 54.41 316 P P 09 36 40.8 +1.0
SWSC Sam W. Stewart 54.48 300 P P 09 36 41.7 +1.6
baz=95,SNR=62
GMRC Granite Mounta 54.56 302 P P 09 36 42.3 +1.4
baz=97,SNR=78
TDRA Tendrara 54.59 60 P P 09 36 42.2 +1.0
SNR=29
TDRA P P 09 36 42.2 +1.0
SNR=29
UCM Universidad Co 54.67 51 iP P 09 36 41.5 0.0
UCM iS S 09 44 22.3 +2.4
IKP In-Ko-Pah, Jac 54.72 300 P P 09 36 43.8 +1.9
baz=95,SNR=42
BELC Belle Mtn. Jos 54.75 301 P P 09 36 43.9 +1.6
baz=96,SNR=52
ILULI Ilulissat 54.81 3⇓iP P 09 36 41.5 -0.4
ILULI Ilulissat 54.81 3 P P 09 36 41.4 -0.4
ILULI IAMs_20 IAMs_20 09 59 02.9
comp=Z,21µm,20.0s
ILULI Ilulissat 54.81 3⇓iP P 09 36 41.5 -0.4
ILULI MLR MLR
comp=Z,18µm,18.0s
SESP Santiago Espad 54.81 54 P P 09 36 43.7 +1.0
SNR=29
TUQ Turquoise Moun 54.85 303 P P 09 36 44.6 +1.6
baz=97,SNR=59
R11A Troy Canyon, C 55.00 307 P P 09 36 44.8 +0.7
R11A IAmb IAmb 09 37 00.5
comp=Z,780nm,1.7s
R11A IAMs_20 IAMs_20 10 01 53.7
comp=Z,31µm,22.0s
R11A Troy Canyon, C 55.00 307 P P 09 36 45.6 +1.6
baz=99,SNR=264
MONP2 Monument Peak 55.00 300 P P 09 36 46.0 +1.8
baz=95,SNR=108
XPFO Pion Flat 55.09 301 P P 09 36 45.9 +1.1
XPFO IAmb IAmb 09 36 52.4
comp=Z,739nm,1.9s
PFO Pinyon Flats O 55.09 301 P P 09 36 45.1 +0.3
PFO IAmb IAmb 09 36 52.4
comp=Z,738nm,1.9s
PFO Pinyon Flats O 55.09 301 iP P 09 36 45.7 +0.9
PFO pmax pmax
comp=Z,549nm,2.2s
PFO Pinyon Flats O 55.09 301 P P 09 36 46.4 +1.7
baz=95,SNR=34
HEC Hector,Ludlow 55.12 302 P P 09 36 46.5 +1.6
baz=96,SNR=27
ELK Elko 55.16 310 P P 09 36 45.3 0.0
ELK IAmb IAmb 09 37 03.1
comp=Z,359nm,1.1s
ELK IAMs_20 IAMs_20 10 03 59.9
comp=Z,25µm,19.0s
ELK Elko 55.16 310 P P 09 36 45.3 0.0
ELK pmax pmax
comp=Z,359nm,1.1s
ELK MLR MLR
comp=Z,25µm,19.0s
BAR Barrett 55.19 300 P P 09 36 46.0 +0.7
BAR IAmb IAmb 09 37 02.2
comp=Z,248nm,1.1s
SHOC Shoshone, Teco 55.19 304 P P 09 36 46.9 +1.6
baz=97,SNR=33
TPNV Topopah Spring 55.31 305 P P 09 36 47.0 +0.7
TPNV IAmb IAmb 09 37 04.5
comp=Z,278nm,1.0s
TPNV IAMs_20 IAMs_20 10 00 47.1
comp=Z,28µm,22.0s
TPNV Topopah Spring 55.31 305 P P 09 36 47.0 +0.7
TPNV pmax pmax
comp=Z,278nm,1.0s
TPNV MLR MLR
comp=Z,28µm,22.0s
TPNV Topopah Spring 55.31 305 P P 09 36 48.1 +1.8
baz=98,SNR=189
BBRC Big Bear Solar 55.54 302 P P 09 36 49.9 +1.8
baz=96,SNR=33
GSC Goldstone, Bar 55.55 303 P P 09 36 48.0 +0.1
GSC IAmb IAmb 09 37 04.4
comp=Z,906nm,1.9s
GSC IAMs_20 IAMs_20 10 02 22.9
comp=Z,29µm,21.0s
GSC Goldstone, Bar 55.55 303 P P 09 36 48.1 +0.1
GSC pmax pmax
comp=Z,907nm,1.9s
GSC MLR MLR
comp=Z,29µm,21.0s
GSC Goldstone, Bar 55.55 303 P P 09 36 49.6 +1.5
baz=96,SNR=60
109C Camp Elliot, M 55.57 300 IAmb IAmb 09 37 05.3
comp=Z,292nm,1.1s
109C Camp Elliot, M 55.57 300 P P 09 36 49.3 +1.3
baz=94,SNR=32
RRX Edison Barstow 55.66 302 P P 09 36 50.5 +1.8
baz=96,SNR=7.9
MSO Missoula 55.69 317 P P 09 36 49.4 +0.5
MSO IAmb IAmb 09 37 05.8
comp=Z,427nm,1.6s
MSO Missoula 55.69 317 P P 09 36 49.5 +0.6
baz=106,SNR=45
MURC Murrieta 55.70 301 P P 09 36 50.8 +1.7
baz=95,SNR=61
FURC Furnace Creek, 55.74 304 P P 09 36 50.9 +1.7
baz=97,SNR=73
CART Cartagena 55.95 54⇓iP P 09 36 49.0 -1.6
CART iS S 09 44 37.6 +0.6
CCA1 Carnmenellis 55.95 39 eP P 09 36 50.8 +0.3
CCA1 IAmb IAmb 09 36 53.2
comp=Z,616nm,1.5s
CCA1 IAMs_20 IAMs_20 09 57 10.2
comp=Z,30µm,19.8s
PLCA Paso Flores 56.09 191 P P 09 36 52.6 +1.1
comp=Z,222nm,0.8s,baz=32,slow=7.7,SNR=338
PLCA S S 09 44 40.0 +1.4
comp=Z,2.9nm,1.0s,baz=31,slow=12,SNR=1.7
PLCA PKPPKP P'P'df 10 06 42.7 -3.8
comp=Z,1.7nm,0.9s,baz=132,slow=3.2,SNR=3.1
PLCA Paso Flores 56.09 191 eP P 09 36 52.3 +0.7
PLCA Paso Flores 56.09 191 P P 09 36 52.6 +1.1
PLCA IAmb IAmb 09 36 55.5
comp=Z,454nm,1.0s
MFID Camas Ranch 56.14 313 P P 09 36 52.5 +0.4
MFID IAMs_20 IAMs_20 10 02 12.6
comp=Z,26µm,21.0s
BFSC Mount Baldy Ra 56.15 302 P P 09 36 53.7 +1.4
baz=95,SNR=35
JTMT Jette 56.18 318 P P 09 36 53.0 +0.7
MPMC Manual Prospec 56.19 304 P P 09 36 54.0 +1.3
baz=96,SNR=85
GRAC Grapevine Rang 56.20 305 P P 09 36 54.3 +1.7
baz=97,SNR=48
LRMC Laurel Mtn Rad 56.28 303 P P 09 36 54.5 +1.1
baz=96,SNR=46
BORG Borgarnes 56.29 18 P P 09 36 52.8 +0.2
BORG IAmb IAmb 09 37 12.9
comp=Z,359nm,1.1s
BORG Borgarnes 56.29 18 IAMs_20 IAMs_20 10 00 37.0
comp=Z,28µm,18.0s
BORG Borgarnes 56.29 18 P P 09 36 52.8 +0.2
BORG pmax pmax
comp=Z,359nm,1.2s
BORG MLR MLR
comp=Z,28µm,18.0s
DAC Darwin (Calif) 56.30 304 IAMs_20 IAMs_20 10 03 45.4
comp=Z,28µm,22.0s
WALA Waterton Lakes 56.33 320 P P 09 36 53.1 -0.3
MWC Mount Wilson 56.47 301 P P 09 36 56.0 +1.2
MWC IAmb IAmb 09 37 10.7
comp=Z,852nm,1.7s
MWC IAMs_20 IAMs_20 10 01 19.1
comp=Z,20µm,22.0s
MWC Mount Wilson 56.47 301 P P 09 36 56.0 +1.2
MWC pmax pmax
comp=Z,852nm,1.7s
MWC MLR MLR
comp=Z,20µm,22.0s
EDW2 Edwards Air Fo 56.48 302 P P 09 36 56.0 +1.4
baz=95,SNR=67
QUIF Quistinic 56.54 42 eP P 09 36 55.6 +0.9
QUIF pmax pmax
comp=Z,244nm,1.2s
PASC Pasadena Art C 56.57 301 P P 09 36 57.0 +1.7
PASC Pasadena Art C 56.57 301 IAMs_20 IAMs_20 10 01 21.8
comp=Z,20µm,22.0s
ROSF Rostrenen 56.59 41 eP P 09 36 54.7 -0.4
ROSF pmax pmax
comp=Z,552nm,1.6s
FMP Fort Macarthur 56.63 301 P P 09 36 57.4 +1.8
baz=94
HTL Hartland 56.67 38 eP P 09 36 56.1 +0.5
HTL IAmb IAmb 09 36 57.6
comp=Z,1µm,2.3s
HTL IAMs_20 IAMs_20 09 56 14.2
comp=Z,38µm,18.3s
DECC Green Verdugo 56.70 301 P P 09 36 57.1 +0.9
baz=95,SNR=12
CIS Catalina Islan 56.70 300 P P 09 36 57.8 +1.6
baz=94,SNR=22
CWC Cottonwood Cre 56.71 304 P P 09 36 58.0 +1.6
baz=96
SJPF Ste Jean 56.71 48 eP P 09 36 56.2 +0.1
SJPF pmax pmax
comp=Z,330nm,1.0s
SCI2 San Clemente I 56.79 300 P P 09 36 58.7 +2.0
baz=94
TIN Tinemaha, Big 56.90 305 P P 09 36 59.3 +1.7
baz=97
ISA Isabella, Lake 56.95 303 P P 09 36 59.7 +1.8
ISA IAmb IAmb 09 37 14.6
comp=Z,476nm,1.6s
ISA IAMs_20 IAMs_20 10 04 11.5
comp=Z,21µm,22.0s
ISA Isabella, Lake 56.95 303 P P 09 36 59.7 +1.8
ISA pmax pmax
comp=Z,476nm,1.6s
ISA MLR MLR
comp=Z,21µm,22.0s
ISA Isabella, Lake 56.95 303 P P 09 36 59.7 +1.8
baz=96,SNR=46
ISA S S 09 44 56.4 +5.9
baz=96
NV11 Mina Array Sit 57.01 306 IAmb IAmb 09 37 16.5
comp=Z,564nm,1.3s
NV11 IAMs_20 IAMs_20 10 02 47.0
comp=Z,26µm,22.0s
SGMF Saint Gilles 57.03 42 eP P 09 36 58.0 -0.2
SGMF pmax pmax
comp=Z,323nm,1.0s
OSI Osito Audit: C 57.05 302 P P 09 36 59.5 +0.8
baz=95
OSI S S 09 44 56.0 +4.1
baz=95
NVAR Mina Array Bea 57.12 306 P P 09 37 00.2 +0.9
comp=Z,42nm,0.7s,baz=102,slow=6.0,SNR=162
NVAR S S 09 44 51.5 -1.5
comp=Z,0.4nm,0.7s,baz=318,slow=37,SNR=2.2
NVAR LR LR 10 01 38.1
comp=Z,22µm,21.5s,baz=101,slow=36
NVAR PKPPKP P'P'df 10 06 43.4 -9.3
comp=Z,1.1nm,1.0s,baz=223,slow=1.5,SNR=4.9
ETSF Etsaut 57.15 48 eP P 09 36 59.3 +0.1
ETSF pmax pmax
comp=Z,195nm,1.4s
ARVC Arvin 57.19 302 P P 09 37 01.3 +1.7
baz=95,SNR=22
ARVC S S 09 44 56.1 +2.6
baz=95
CLGH Cloghs, Cushen 57.25 33 eP P 09 36 59.8 +0.2
CLGH IAmb IAmb 09 37 00.9
comp=Z,182nm,1.0s
CLGH IAMs_20 IAMs_20 09 59 58.9
comp=Z,30µm,18.9s
BLG Laguna Peak, P 57.30 301 P P 09 37 01.3 +0.9
baz=94,SNR=7.6
RYN Ryan 57.32 307 P P 09 37 01.5 +0.8
RYN IAMs_20 IAMs_20 10 02 58.2
comp=Z,19µm,19.0s
YRC Rhoscolyn 57.40 35⇓eP P 09 37 00.1 -0.5
YRC IAmb IAmb 09 37 02.2
comp=Z,669nm,1.9s
EANR 'Ain N'Sour 57.43 57 P P 09 37 02.1 +0.8
MLAC Mammoth, Mammo57.44 305 P P 09 37 03.4 +1.7
baz=96,SNR=12
MLAC S S 09 45 02.4 +5.1
baz=96
VES Vestal, Richgr 57.46 303 P P 09 37 03.0 +1.6
baz=95,SNR=57
BMO Blue Mountains 57.48 314 P P 09 37 01.4 -0.2
BMO Blue Mountains 57.48 314 P P 09 37 01.4 -0.2
BMO pmax pmax
comp=Z,222nm,1.2s
BMO MLR MLR
comp=Z,48µm,22.0s
WPS Cemaes, Angles 57.49 35 eP P 09 37 01.1 -0.2
WPS IAmb IAmb 09 37 02.8
comp=Z,489nm,1.7s
WPS IAMs_20 IAMs_20 10 00 24.7
comp=Z,34µm,18.2s
WLF1 Llynfaes 57.51 35 eP P 09 37 01.5 +0.1
WLF1 IAmb IAmb 09 37 06.7
comp=Z,284nm,1.0s
WLF1 IAMs_20 IAMs_20 10 00 25.1
comp=Z,67µm,19.1s

JSA Saint Aubin 57.53 41 eP P 09 37 01.3 -0.4
JSA IAmb IAmb 09 37 04.4
comp=Z,500nm,1.6s
JSA IAMs_20 IAMs_20 09 56 32.4
comp=Z,28µm,15.7s
OMMB Old Mammoth Mi 57.57 305 IAmb IAmb 09 37 19.7
comp=Z,226nm,0.9s
YLL Llanberis 57.58 36 eP P 09 37 01.7 -0.3
WME Myndd Eilian 57.60 35⇓eP P 09 37 01.9 -0.2
SNCC San Nicolas Is 57.62 300 P P 09 37 03.8 +1.2
baz=93
SNCC S S 09 45 02.0 +2.7
baz=93
ECHA Ech Chlef 57.67 56 P P 09 37 03.8 +0.9
F10A Beach Ranch, E 57.68 315 IAMs_20 IAMs_20 10 02 35.1
comp=Z,27µm,21.0s
VOG Valley Oaks Go 57.74 304 P P 09 37 04.1 +0.7
baz=95
SCZ2 Santa Cruz Isl 57.76 301 P P 09 37 04.7 +1.1
baz=94,SNR=6.8
IOMK Kirk Michael 57.77 34 eP P 09 37 03.3 0.0
IOMK IAmb IAmb 09 37 05.0
comp=Z,743nm,1.5s
IOMK IAMs_20 IAMs_20 09 55 51.3
comp=Z,74µm,20.5s
EBNR Beni Rached 57.81 56 P P 09 37 04.9 +0.9
SBC Santa Barbara 57.86 302 P P 09 37 05.6 +1.3
baz=94
MCH1 Michaelchurch 57.88 37⇓eP P 09 37 03.7 -0.3
MCH1 IAmb IAmb 09 37 05.5
comp=Z,576nm,1.7s
MCH1 IAMs_20 IAMs_20 09 57 02.8
comp=Z,47µm,17.8s
GAL1 Galloway 57.91 34 eP P 09 37 04.6 +0.3
GAL1 IAmb IAmb 09 37 05.8
comp=Z,544nm,1.8s
GAL1 IAMs_20 IAMs_20 09 56 05.7
comp=Z,42µm,22.0s
YERR Yerington 57.92 307 IAmb IAmb 09 37 23.3
comp=Z,981nm,1.9s
YERR IAMs_20 IAMs_20 10 03 17.1
comp=Z,29µm,21.0s
PKM Mcpherson Peak 57.97 302 P P 09 37 06.8 +1.5
baz=94,SNR=25
PKM S S 09 45 10.0 +5.8
baz=94
WVOR Wild Horse Val 57.97 311 P P 09 37 05.3 +0.2
WVOR IAMs_20 IAMs_20 10 05 39.2
comp=Z,24µm,20.0s
WVOR Wild Horse Val 57.97 311 P P 09 37 05.3 +0.2
WVOR pmax pmax
comp=Z,272nm,1.4s
WVOR MLR MLR
comp=Z,24µm,20.0s
WAKR Walker 58.01 306 P P 09 37 07.1 +1.6
WAKR IAMs_20 IAMs_20 10 03 20.6
comp=Z,29µm,21.0s
J08A Circle Bar Ran 58.02 312 IAmb IAmb 09 37 22.5
comp=Z,431nm,1.2s
J08A IAMs_20 IAMs_20 10 03 22.3
comp=Z,29µm,21.0s
FOEL Foel Wylfa 58.05 36 eP P 09 37 05.7 +0.4
FOEL IAMs_20 IAMs_20 09 58 30.1
comp=Z,52µm,18.9s
HLM1 Long Mynd 58.11 37 eP P 09 37 05.3 -0.5
HLM1 IAmb IAmb 09 37 07.2
comp=Z,931nm,1.7s
HLM1 IAMs_20 IAMs_20 09 58 21.3
comp=Z,55µm,18.2s
PAHR Pah Rah Range 58.12 308 IAMs_20 IAMs_20 10 03 08.4
comp=Z,24µm,22.0s
NEW Newport 58.15 318 P P 09 37 06.0 -0.2
NEW IAmb IAmb 09 37 12.1
comp=Z,330nm,0.9s
NEW Newport 58.15 318 P P 09 37 06.0 -0.2
NEW pmax pmax
comp=Z,330nm,0.9s
NEW MLR MLR
comp=Z,42µm,22.0s
NEW Newport 58.15 318 P P 09 37 06.1 -0.1
baz=104,SNR=255
SMMC Simmler 58.15 303 P P 09 37 08.3 +1.9
baz=94,SNR=26
SMMC S S 09 45 12.1 +5.8
baz=94
MFF Saint Martin d 58.20 44 eP P 09 37 06.4 -0.1
MFF pmax pmax
comp=Z,173nm,1.1s
PNTR Pine Nut 58.21 307 IAMs_20 IAMs_20 10 03 25.8
comp=Z,33µm,22.0s
VCNR Virginia City 58.27 307 P P 09 37 08.1 +0.7
PGBU Glenifferbraes 58.39 33 eP P 09 37 07.1 -0.5
PGBU IAmb IAmb 09 37 08.9
comp=Z,757nm,1.7s
PGBU IAMs_20 IAMs_20 10 00 42.1
comp=Z,25µm,17.7s
PAGB Antelope Grade 58.39 303 P P 09 37 07.8 -0.2
KPL Plockton 58.40 31 eP P 09 37 07.5 -0.1
KPL IAMs_20 IAMs_20 09 59 19.1
comp=Z,16µm,16.3s
E09A Wood Farm, Sta 58.42 316 IAmb IAmb 09 37 24.4
comp=Z,517nm,1.4s
E09A IAMs_20 IAMs_20 10 02 43.7
comp=Z,29µm,21.0s
LFF La Frestale 58.46 46 eP P 09 37 08.0 -0.3
LFF pmax pmax
comp=Z,165nm,1.1s
FLN La Foliniere 58.49 41 eP P 09 37 08.1 -0.4
FLN pmax pmax
comp=Z,250nm,1.0s
SSW Stow on the Wo 58.54 38 eP P 09 37 08.9 +0.2
RUBR Rubicon Trail 58.63 307 P P 09 37 10.4 +0.5
RUBR IAMs_20 IAMs_20 10 03 40.0
comp=Z,34µm,22.0s
KAC Achnashellach 58.64 31 eP P 09 37 08.3 -1.0
KESW Keswick, Cumbr 58.68 34 eP P 09 37 09.6 -0.1
KESW IAmb IAmb 09 37 11.3
comp=Z,851nm,2.0s
LDF La Druitiere 58.68 42 eP P 09 37 09.5 -0.3
LDF pmax pmax
comp=Z,165nm,1.1s
STNC Stoke 58.68 36 eP P 09 37 09.7 0.0
STNC IAmb IAmb 09 37 13.2
comp=Z,439nm,1.5s
STNC IAMs_20 IAMs_20 09 58 49.5
comp=Z,53µm,18.8s
CMB Columbia Colle 58.71 306 P P 09 37 11.0 +0.8
CMB IAMs_20 IAMs_20 10 02 46.0
comp=Z,29µm,22.0s
CMB Columbia Colle 58.71 306 P P 09 37 11.0 +0.8
CMB pmax pmax
comp=Z,193nm,1.3s
CMB MLR MLR
comp=Z,29µm,22.0s
G08A Pilot Rock 58.72 314 P P 09 37 10.4 +0.1
G08A IAmb IAmb 09 37 26.7
comp=Z,584nm,1.6s
WOL Wolverton 58.72 38 eP P 09 37 10.4 +0.4
WOL IAmb IAmb 09 37 11.6
comp=Z,1µm,1.8s
WOL IAMs_20 IAMs_20 09 57 19.5
comp=Z,24µm,18.5s
TOC7 Torodi Ar. Sit 58.74 83 IAMs_20 IAMs_20 10 01 57.7
comp=Z,80µm,18.0s
TOB4 Torodi Ar. Sit 58.75 83 IAMs_20 IAMs_20 10 01 57.9
comp=Z,79µm,18.0s
TOA1 Torodi Ar. Sit 58.76 83 IAMs_20 IAMs_20 10 01 58.0
comp=Z,80µm,18.0s
TOB1 Torodi Ar. Sit 58.76 83 IAMs_20 IAMs_20 10 01 59.0
comp=Z,541nm,18.0s
TOA0 Torodi Ar. Sit 58.76 83 P P 09 37 10.2 -0.7
TOA0 IAmb IAmb 09 37 27.4
comp=Z,426nm,1.5s
TORD Torodi Ar. Bea 58.76 83 P P 09 37 10.4 -0.4
comp=Z,73nm,0.9s,baz=290,slow=5.0,SNR=101
TORD S S 09 45 13.2 -1.5
comp=Z,1.2nm,0.8s,baz=9.7,slow=36,SNR=3.1
TORD LR LR 09 58 57.5
comp=Z,52µm,21.9s,baz=300,slow=32
TORD PKPPKP P'P'df 10 06 47.9 -1.6
comp=Z,3.8nm,1.1s,baz=40,slow=1.2,SNR=7.1
TOC4 Torodi Ar. Sit 58.77 83 IAMs_20 IAMs_20 10 02 06.4
comp=Z,79µm,18.0s
TOB3 Torodi Ar. Sit 58.77 83 IAMs_20 IAMs_20 10 01 57.4
comp=Z,78µm,18.0s
TOC2 Torodi Ar. Sit 58.78 83 IAMs_20 IAMs_20 10 01 58.7
comp=Z,81µm,18.0s
TOC3 Torodi Ar. Sit 58.79 83 IAMs_20 IAMs_20 10 01 58.8
comp=Z,80µm,18.0s
C09A Chrisman Ranch 58.79 317 IAmb IAmb 09 37 27.0
comp=Z,356nm,1.2s
INVG Invergeldie, C 58.85 32 eP P 09 37 09.8 -1.0
INVG IAmb IAmb 09 37 11.8
comp=Z,294nm,1.6s
INVG IAMs_20 IAMs_20 09 57 35.0
comp=Z,27µm,18.8s
PMPB Monarch Peak 58.87 304 P P 09 37 11.3 -0.1
PMPB IAMs_20 IAMs_20 10 05 23.6
comp=Z,22µm,21.0s
I07A Izee 58.88 313 P P 09 37 11.8 +0.4
I07A IAmb IAmb 09 37 28.1
comp=Z,443nm,1.2s
ESK Eskdalemuir 58.88 34 eP P 09 37 10.4 -0.6
ESK IAmb IAmb 09 37 12.3
comp=Z,556nm,1.8s
ESK IAMs_20 IAMs_20 09 56 34.7
comp=Z,39µm,19.5s
ESK Eskdalemuir 58.88 34 P P 09 37 10.7 -0.3
ESK IAmb IAmb 09 37 12.7
comp=Z,529nm,1.8s
ESK Eskdalemuir 58.88 34 IAMs_20 IAMs_20 09 56 49.0
comp=Z,37µm,20.0s
ESK Eskdalemuir 58.88 34 P P 09 37 10.7 -0.3
ESK pmax pmax
comp=Z,529nm,1.8s
BEKR Beckworth 58.89 308 P P 09 37 11.8 +0.2
BEKR IAMs_20 IAMs_20 10 04 59.7
comp=Z,23µm,22.0s
EKB Eskdalemuir 58.90 33 P P 09 37 10.9 -0.2
EKB IAmb IAmb 09 37 12.8
comp=Z,525nm,1.8s
EKB2 Eskdalemuir Ar 58.90 34 P P 09 37 10.8 -0.3
EKB2 IAmb IAmb 09 37 12.9
comp=Z,485nm,1.8s
EKA Eskdalemuir Ar 58.91 33 PKPPKP P'P'df 10 06 53.2 +4.0
comp=Z,1.6nm,0.7s,baz=63,slow=6.2,SNR=4.5
EKR3 Eskdalemuir Ar 58.91 34 P P 09 37 10.8 -0.5
EKR3 IAmb IAmb 09 37 13.0
comp=Z,670nm,1.9s
EKB5 Eskdalemuir Ar 58.92 33 P P 09 37 11.1 -0.2
EKB5 IAmb IAmb 09 37 13.1
comp=Z,742nm,2.0s
EKB6 Eskdalemuir Ar 58.92 33 P P 09 37 11.1 -0.2
EKB6 IAmb IAmb 09 37 13.1
comp=Z,760nm,2.0s
E08A Dider Farm, El 59.03 316 P P 09 37 12.4 +0.2
E08A IAmb IAmb 09 37 28.7
comp=Z,402nm,1.3s
E08A IAMs_20 IAMs_20 10 03 13.9
comp=Z,24µm,20.0s
D08A Wollman Farm, 59.05 316 IAMs_20 IAMs_20 10 03 31.6
comp=Z,31µm,21.0s
LBWR Ladybower, Pea 59.06 36 eP P 09 37 12.5 +0.2
LBWR IAmb IAmb 09 37 18.3
comp=Z,330nm,1.0s
LBWR IAMs_20 IAMs_20 09 59 11.3
comp=Z,47µm,18.9s
ABA Alger-Bouzarea 59.06 56 P P 09 37 12.0 -0.7
RJF Les Rejaudoux 59.07 46 eP P 09 37 12.0 -0.6
RJF pmax pmax
comp=Z,200nm,1.0s
MDO Dochfour 59.08 31 eP P 09 37 12.3 0.0
CWF Charnwood Fore 59.09 37 eP P 09 37 12.0 -0.5
CWF IAmb IAmb 09 37 14.0
comp=Z,613nm,1.7s
CWF IAMs_20 IAMs_20 09 59 00.6
comp=Z,47µm,19.0s
MOD Modoc Plateau 59.11 310 P P 09 37 13.2 +0.1
MOD IAmb IAmb 09 37 31.2
comp=Z,250nm,1.4s
MOD IAMs_20 IAMs_20 10 04 01.9
comp=Z,27µm,21.0s
EBL Broad Law 59.13 33 eP P 09 37 11.6 -1.1
SUMG Summit 59.21 7⇓iP P 09 37 13.5 0.0
comp=Z,3µm,1.5s
SUMG Summit 59.21 7⇓iP P 09 37 13.5 0.0
SUMG pmax pmax
comp=Z,2µm,1.5s
SUMG MLR MLR
comp=Z,120µm,21.0s
MTLF Montolieu 59.23 48 eP P 09 37 15.4 +1.7
MTLF pmax pmax
comp=Z,154nm,1.0s
AFDM Forest Hills D 59.26 307 P P 09 37 14.8 +0.7
AFDM IAmb IAmb 09 37 50.8
comp=Z,255nm,1.3s
AFDM IAMs_20 IAMs_20 10 03 58.4
comp=Z,32µm,22.0s
HPK Haverah Park 59.29 35 eP P 09 37 13.9 0.0
HPK IAmb IAmb 09 37 15.5
comp=Z,842nm,1.8s
HPK IAMs_20 IAMs_20 09 59 51.8
comp=Z,22µm,17.4s
HAWA Hanford 59.33 316 P P 09 37 14.7 +0.3
HAWA IAMs_20 IAMs_20 10 03 13.9
comp=Z,23µm,21.0s
ADJB Djebel Djouab 59.34 56 P P 09 37 16.0 +1.3
CAF Calviac 59.38 46 eP P 09 37 14.4 -0.4
CAF pmax pmax
comp=Z,233nm,1.0s
EDMD Edmundbyers 59.39 34 eP P 09 37 14.1 -0.4
EDMD IAmb IAmb 09 37 15.7
comp=Z,487nm,1.7s
EDMD IAMs_20 IAMs_20 09 56 50.0
comp=Z,34µm,20.7s
ESY Stoneypath 59.41 33⇓eP P 09 37 13.6 -1.1
EDU Dundee 59.42 32 eP P 09 37 14.3 -0.4
SAO San Andreas Ge 59.44 304 IAMs_20 IAMs_20 10 05 41.4
comp=Z,24µm,22.0s
F07A Phinny Hill Vi 59.50 315 IAmb IAmb 09 37 32.3
comp=Z,343nm,1.3s
E07A Sunnyside 59.58 316 IAMs_20 IAMs_20 10 03 30.6
comp=Z,19µm,20.0s
B08A Colville Reser 59.61 318 P P 09 37 15.7 -0.6
MCD Coleburn Disti 59.69 31⇓eP P 09 37 15.8 -0.8
AKET Djebel Ketaf 59.69 57 P P 09 37 18.7 +1.5
ORV Oroville 59.73 307 P P 09 37 18.0 +0.8
ORV IAmb IAmb 09 37 35.1
comp=Z,478nm,1.2s
ORV IAMs_20 IAMs_20 10 04 12.9
comp=Z,26µm,22.0s
ORV Oroville 59.73 307 P P 09 37 18.0 +0.8
ORV pmax pmax
comp=Z,478nm,1.2s
ORV MLR MLR
comp=Z,26µm,22.0s
TCF Toulx Ste Croi 59.73 45 eP P 09 37 16.8 -0.4
TCF pmax pmax
comp=Z,487nm,1.6s
PINE Pine Mountain 59.86 312 IAMs_20 IAMs_20 10 04 41.0
comp=Z,18µm,21.0s
G06A Carlson Farm, 59.87 314 P P 09 37 19.6 +1.4
GDLE Glaisdale, N Y 59.89 35 eP P 09 37 18.3 +0.3
GDLE IAmb IAmb 09 37 20.2
comp=Z,676nm,1.7s
GDLE IAMs_20 IAMs_20 10 00 19.8
comp=Z,31µm,17.2s
MLA1 Latheron 59.91 30⇓eP P 09 37 17.4 -0.7
KULLO Kullorsuaq 59.99 1⇓iP P 09 37 18.2 -0.1
KULLO i 09 37 36.6
KULLO Kullorsuaq 59.99 1⇓iP P 09 37 18.2 -0.1
KULLO MLR MLR
comp=Z,20µm,17.0s
J05D Fort Rock, OR 59.99 312 P P 09 37 20.0 +0.8
baz=98,SNR=38
ATAF Djebel Tarf 60.00 57 P P 09 37 20.0 +0.7
O03E Paynes Creek 60.04 308 P P 09 37 19.5 +0.1
baz=96,SNR=69
O03E S S 09 45 32.1 +1.5
baz=96
CLF Chambon-Foret 60.11 43 P P 09 37 20.2 +0.6
CLF IAMs_20 IAMs_20 09 59 26.4
comp=Z,25µm,19.0s
BGF Bois d'Agland 60.22 44 eP P 09 37 19.9 -0.5
BGF pmax pmax
comp=Z,180nm,1.1s
I05D Terrebonne, OR 60.22 313 P P 09 37 22.2 +1.6
baz=99,SNR=56
I05D S S 09 45 36.5 +3.6
baz=99
M04C Macdoel 60.23 310 P P 09 37 21.9 +1.0
baz=97,SNR=91
M04C S S 09 45 37.4 +4.1
baz=97
LTY Liberty 60.26 316 P P 09 37 21.2 +0.3
LTY IAMs_20 IAMs_20 10 04 19.5
comp=Z,29µm,21.0s
K04D Chiloquin, OR 60.28 311 P P 09 37 22.0 +0.9
baz=98,SNR=37
K04D S S 09 45 38.5 +4.8
baz=98
SCO Scoresbysund 60.29 13⇓iP P 09 37 20.5 0.0
comp=Z,528nm,1.7s
SCO Scoresbysund 60.29 13 IAmb IAmb 09 37 22.4
comp=Z,458nm,1.6s
SCO IAMs_20 IAMs_20 09 59 40.7
comp=Z,25µm,20.0s
SCO Scoresbysund 60.29 13⇓iP P 09 37 20.5 0.0
SCO pmax pmax
comp=Z,530nm,1.7s
SCO MLR MLR
comp=Z,24µm,22.0s
MAHO Mahon 60.31 52 iP P 09 37 22.9 +1.7
MAHO iS S 09 45 35.3 +1.4
G05D Wamic, OR 60.35 314 P P 09 37 22.8 +1.4
baz=99,SNR=17
G05D S S 09 45 37.9 +3.5
baz=99
C06D Leavenworth 60.54 317 P P 09 37 22.4 -0.3
baz=101
C06D S S 09 45 36.1 -0.6
baz=101
F05D White Salmon 60.55 315 P P 09 37 24.0 +1.2
baz=100,SNR=58
F05D S S 09 45 41.2 +4.3
baz=100
AVF Avril sur Loir 60.60 44 eP P 09 37 22.4 -0.6
AVF pmax pmax
comp=Z,169nm,1.1s
J04D Umpqua Nationa 60.62 312 P P 09 37 24.2 +0.7
baz=98,SNR=18
WDC Whiskeytown Da 60.63 308 P P 09 37 23.1 -0.3
WDC IAMs_20 IAMs_20 10 05 43.6
comp=Z,20µm,22.0s
WDC Whiskeytown Da 60.63 308 P P 09 37 23.1 -0.3
WDC pmax pmax
comp=Z,163nm,1.1s
WDC MLR MLR
comp=Z,20µm,22.0s
L04D Klamath Falls 60.63 310 P P 09 37 24.0 +0.5
baz=97,SNR=19
L04D S S 09 45 40.1 +1.8
baz=97
GDXM Geysers 60.66 306 IAmb IAmb 09 37 49.2
comp=Z,475nm,2.0s
MCCM Marconi Confer 60.68 306 P P 09 37 24.7 +1.0
MCCM IAmb IAmb 09 37 42.0
comp=Z,339nm,0.9s
MCCM IAMs_20 IAMs_20 10 06 00.1
comp=Z,18µm,22.0s
SHEL Horse Pasture 60.72 118 P P 09 37 23.8 -0.5
SHEL IAmb IAmb 09 37 42.8
comp=Z,460nm,1.4s
SHEL Horse Pasture 60.72 118 P P 09 37 23.8 -0.5
SSF Saint Saulge 60.75 44 eP P 09 37 23.1 -1.0
SSF pmax pmax
comp=Z,180nm,1.1s
O02D Mt. Diablo Mer 60.78 308 P P 09 37 23.9 -0.5
baz=95,SNR=14
N02D Trinity Center 60.79 309 P P 09 37 23.8 -0.7
baz=96,SNR=20
YBH Yreka Blue Hor 60.88 310 P P 09 37 24.4 -0.8
YBH IAMs_20 IAMs_20 10 08 04.2
comp=Z,26µm,20.0s
YBH Yreka Blue Hor 60.88 310 P P 09 37 24.4 -0.8
YBH pmax pmax
comp=Z,90nm,0.8s
YBH MLR MLR
comp=Z,26µm,20.0s
HOPS Hopland Field 60.89 307 P P 09 37 27.3 +2.2
HOPS IAmb IAmb 09 37 47.8
comp=Z,533nm,1.2s
SMF Signal de Mont 60.91 45 eP P 09 37 24.6 -0.6
SMF pmax pmax
comp=Z,235nm,1.0s
I04A Tendick Farm, 60.91 312 P P 09 37 25.0 -0.3
baz=98,SNR=13
LON Longmire 60.94 316 P P 09 37 25.2 -0.2
LON IAmb IAmb 09 37 43.5
comp=Z,639nm,1.6s
LON IAMs_20 IAMs_20 10 04 15.5
comp=Z,23µm,21.0s
LON Longmire 60.94 316 P P 09 37 25.2 -0.2
LON pmax pmax
comp=Z,639nm,1.6s
LON MLR MLR
comp=Z,23µm,21.0s
M02C Callahan 60.95 309 P P 09 37 25.3 -0.3
baz=96,SNR=19
CKHR Kef el Ahmar 61.01 57 P P 09 37 27.3 +1.1
LOR Lormes 61.02 44 eP P 09 37 25.1 -0.9
LOR pmax pmax
comp=Z,166nm,1.0s
D05A Enumclaw 61.14 316 IAmb IAmb 09 37 42.5
comp=Z,240nm,1.0s
D05A IAMs_20 IAMs_20 10 04 47.6
comp=Z,28µm,22.0s
HUMO Hull Mountain 61.16 311 P P 09 37 27.1 +0.2
HUMO IAMs_20 IAMs_20 10 05 22.0
comp=Z,25µm,21.0s
SSB Saint Sauveur 61.17 46 IAmb IAmb 09 37 42.2
comp=Z,192nm,1.0s
VIVF Saint-Julien-l 61.20 47 eP P 09 37 27.6 +0.4
VIVF pmax pmax
comp=Z,173nm,1.0s
F04A Amboy 61.22 315 IAmb IAmb 09 37 52.1
comp=Z,193nm,0.9s
TAM Tamanrasset 61.24 72 IAMs_20 IAMs_20 10 03 37.2
comp=Z,21µm,19.0s
TAM Tamanrasset 61.24 72 P P 09 37 28.5 +0.5
H04D Lebanon 61.24 313 P P 09 37 27.5 0.0
baz=98,SNR=11
DFRA Djebel Bou Aff 61.33 56 P P 09 37 29.1 +0.8
KCPM Cahto Peak 61.34 307 IAMs_20 IAMs_20 10 05 14.6
comp=Z,29µm,21.0s
B05A Bryant 61.40 317 P P 09 37 27.0 -1.4
baz=100,SNR=27
E04D Cinebar 61.42 315 P P 09 37 28.5 -0.1
baz=99,SNR=14
WAL1 Walls 61.48 29 eP P 09 37 28.1 -0.7
KMRM Mail Ridge 61.48 308 IAMs_20 IAMs_20 10 07 51.3
comp=Z,29µm,20.0s
KHMM Horse Mountain 61.56 309 P P 09 37 30.4 +0.6
SAN1 Sandwick 61.57 29⇓eP P 09 37 28.1 -1.2
I03D Drain, OR 61.57 312 P P 09 37 29.5 -0.1
baz=97,SNR=11
L02E Cave Junction 61.58 310 P P 09 37 29.2 -0.6
baz=96
YKA Yellowknife Ar 61.61 334 P P 09 37 28.6 -1.0
comp=Z,90nm,0.8s,baz=108,slow=7.4,SNR=369
YKA PKPPKP P'P'df 10 06 47.0 +2.4
comp=Z,3.7nm,1.0s,baz=290,slow=2.2,SNR=11
COR Corvallis 61.65 313 P P 09 37 29.6 -0.6
COR Corvallis 61.65 313 IAMs_20 IAMs_20 10 05 00.5
comp=Z,25µm,22.0s
COR Corvallis 61.65 313 P P 09 37 29.6 -0.6
COR pmax pmax
comp=Z,851nm,1.4s
COR MLR MLR
comp=Z,25µm,22.0s
F04D Rainier, OR 61.65 315 P P 09 37 30.3 +0.1
baz=98
D04E Lakebay 61.66 316 P P 09 37 30.5 +0.3
baz=99,SNR=9.6
K02D Willamette Mer 61.69 311 P P 09 37 30.9 +0.3
baz=96,SNR=8.6
G03D McMinnville, O 61.71 314 P P 09 37 30.3 -0.2
baz=98,SNR=24
LLLB Lillooet 61.71 320 P P 09 37 30.5 -0.1
CTEI Djebel Teioual 61.73 57 P P 09 37 32.4 +1.3
KRMB Red Mountain 61.75 309 IAmb IAmb 09 37 48.0
comp=Z,496nm,1.5s
BAIF Baives 61.77 41 eP P 09 37 30.2 -0.7
BAIF pmax pmax
comp=Z,157nm,1.1s
JCC Jacoby Creek, 61.78 309 P P 09 37 32.5 +1.4
CASM Ain Smara 61.81 57 P P 09 37 32.3 +0.8
YEL1 Yell 61.84 28⇓eP P 09 37 30.6 -0.5
A04D Lummi Island 61.88 318 P P 09 37 30.3 -1.3
baz=100

D03D Eldon 61.93 316 P P 09 37 30.8 -1.2
baz=99,SNR=11
J01E Myrtle Point 61.93 311 P P 09 37 33.4 +1.3
baz=96
I02D Swisshome 61.98 312 P P 09 37 33.7 +1.3
baz=97
CKFL Kef-Lekhel 62.00 56 P P 09 37 33.8 +0.9
F03A Seaside 62.01 314 P P 09 37 34.0 +1.4
UCC Uccle 62.01 40 P P 09 37 31.4 -1.1
UCC IAmb IAmb 09 37 34.2
comp=Z,611nm,1.7s
UCC IAMs_20 IAMs_20 09 59 37.7
comp=Z,28μm,19.0s
UCC Uccle 62.01 40 P P 09 37 31.4 -1.1
UCC pmax pmax
comp=Z,611nm,1.7s
KBO Bosley Butte 62.05 310 IAMs_20 IAMs_20 10 08 35.2
comp=Z,24μm,20.0s
ORIF Oris-en-Rattie 62.06 47 eP P 09 37 33.7 +0.6
ORIF pmax pmax
comp=Z,438nm,1.8s
CAEH 'Ain El Ouahch 62.12 56 P P 09 37 34.0 +0.5
TULEG Thule 62.16 357 P P 09 37 32.6 -0.5
TULEG IAMs_20 IAMs_20 10 02 37.3
comp=Z,24μm,20.0s
GIVF Givet 62.17 41 eP P 09 37 32.9 -0.7
GIVF pmax pmax
comp=Z,626nm,1.8s
LMR La Mourre 62.33 49 eP P 09 37 38.8 +4.0
LMR pmax pmax
comp=Z,131nm,1.2s
CABF La Chapelle 62.43 45 eP P 09 37 35.2 -0.3
CABF pmax pmax
comp=Z,194nm,1.2s
CMAH Djebel Manchou 62.57 56 P P 09 37 37.2 +0.6
BNI Bardonecchia 62.64 47 P P 09 37 37.4 +0.4
BNI Bardonecchia 62.64 47 P P 09 37 37.4 +0.4
BNI pmax pmax
comp=Z,181nm,1.3s
MBDF Montbardon 62.67 47 eP P 09 37 37.4 +0.2
MBDF pmax pmax
comp=Z,309nm,1.4s
LPL La Plagne 62.73 46 eP P 09 37 38.0 +0.3
LPL pmax pmax
comp=Z,299nm,1.4s
LPG La Plagne 62.74 46 eP P 09 37 38.2 +0.3
LPG pmax pmax
comp=Z,222nm,1.3s
HAU Haudompre 62.80 43 eP P 09 37 37.0 -0.9
HAU pmax pmax
comp=Z,303nm,1.8s
WLF Walferdange 62.94 41 eP P 09 37 38.8 +0.1
comp=Z,697nm,1.9s,baz=264,slow=6.4
WLF epP pwP 09 37 52.3 +0.8
baz=264,slow=6.4
WLF Walferdange 62.94 41 P P 09 37 39.7 +1.0
MEM Membach 63.01 40 P P 09 37 39.4 +0.2
LOMF Lomont 63.03 44 P P 09 37 40.3 +0.8
SBF Sospel 63.05 48 eP P 09 37 39.2 -0.5
SBF pmax pmax
comp=Z,179nm,1.1s
HINF Hinteralfeld 63.11 44 eP P 09 37 38.8 -1.2
HINF pmax pmax
comp=Z,263nm,1.8s
SENIN Lac Senin/Sane 63.23 45 IAmb IAmb 09 37 58.2
comp=Z,232nm,1.2s
SENIN IAMs_20 IAMs_20 10 01 56.1
comp=Z,23μm,18.0s
MOF Molkenrain 63.31 44 P P 09 37 41.1 -0.2
ECH Echery 63.37 43 P P 09 37 41.4 -0.3
ECH IAMs_20 IAMs_20 10 03 55.8
comp=Z,14μm,18.0s
ECH Echery 63.37 43 P P 09 37 41.4 -0.3
ECH pmax pmax
comp=Z,151nm,1.0s
CDF Champ du Feu 63.48 43 eP P 09 37 40.2 -2.3
CDF pmax pmax
comp=Z,608nm,1.8s
AHRW Bad Neuenahr-A 63.67 41 eP P 09 37 44.0 +0.5
comp=Z,862nm,1.8s,baz=264,slow=6.4
AHRW epP pwP 09 37 57.6 +1.3
baz=264,slow=6.4
LANF Langenberg 63.90 42 P P 09 37 45.5 +0.3
BUG Bochum--Univer 63.93 40 eP P 09 37 45.2 0.0
comp=Z,672nm,1.9s,baz=264,slow=6.4
BUG epP pwP 09 37 58.7 +0.6
baz=264,slow=6.4
JMIC Jan Mayen 63.99 16⇓iP P 09 37 46.0 +0.7
JMIC IVmB_BB 09 37 53.3
comp=Z,4μm,2.8s
JMIC eS S 09 46 21.1 +1.8
JMIC IVMs_BB IVMs_BB 10 03 13.7
comp=Z,7μm,19.7s
PGF Pioggiola 64.08 50 eP P 09 37 46.4 -0.2
PGF pmax pmax
comp=Z,248nm,1.1s
KEST Kesra 64.11 57 P P 09 37 47.6 +0.8
comp=Z,127nm,0.9s,baz=152,slow=6.1,SNR=27
KEST LR LR 10 02 15.4
comp=Z,18μm,21.6s,baz=222,slow=33
KEST PKPPKP P'P'df 10 06 38.2 -3.2
comp=Z,5.4nm,1.0s,baz=226,slow=4.2,SNR=4.6
KEST Kesra 64.11 57 P P 09 37 47.0 +0.1
KEST IAMs_20 IAMs_20 10 01 52.3
comp=Z,22μm,22.0s
KTD Kalmit 64.13 42 P P 09 37 46.8 +0.1
BFO Black Forest 64.16 43 eP P 09 37 46.7 -0.3
comp=Z,516nm,2.1s,baz=264,slow=6.4
BFO epP pwP 09 38 00.2 +0.5
baz=264,slow=6.4
BFO Black Forest 64.16 43 P P 09 37 46.6 -0.3
BFO IAmb IAmb 09 37 48.8
comp=Z,438nm,2.0s
BFO IAMs_20 IAMs_20 10 04 29.2
comp=Z,13μm,18.0s
BFO Black Forest 64.16 43 P P 09 37 46.6 -0.3
BFO pmax pmax
comp=Z,439nm,2.0s
SLE Schleitheim 64.20 44 P P 09 37 47.2 0.0
IBBN Ibbenburen 64.37 39 eP P 09 37 48.1 0.0
comp=Z,814nm,1.8s,baz=264,slow=6.4
IBBN epP pwP 09 38 01.7 +0.7
baz=264,slow=6.4
KMY Karmoy 64.45 31 eP P 09 37 47.6 -0.8
KMY IVmB_BB 09 37 48.6
comp=Z,3μm,2.1s
KMY eS S 09 46 25.0 -0.3
TNS Taunus Mts 64.49 41 eP P 09 37 49.0 0.0
comp=Z,434nm,1.7s,baz=264,slow=6.4
TNS epP pwP 09 38 02.6 +0.7
baz=264,slow=6.4
MSSA Maissana 64.58 48 P P 09 37 49.3 -0.5
TOD Tromm 64.63 42 P P 09 37 49.1 -0.8
TUE Stuetta 64.65 45 IAmb IAmb 09 38 07.5
comp=Z,279nm,1.3s
TUE IAMs_20 IAMs_20 10 05 31.7
comp=Z,17μm,19.0s
SUE Sulen 64.71 29 eP P 09 37 50.1 -0.1
SUE IVmB_BB 09 37 53.0
comp=Z,5μm,4.3s
SUE eS S 09 46 31.4 +3.0
SUE IVMs_BB IVMs_BB 10 03 34.0
comp=Z,7μm,17.6s
ASK Askoy 64.76 30 eP P 09 37 50.6 +0.1
ASK IVmB_BB 09 37 53.8
comp=Z,3μm,3.6s
ASK eS S 09 46 30.6 +1.5
HLG Helgoland 64.77 37 epP pP 09 38 04.0 +5.8
baz=264,slow=6.4
STU Stuttgart 64.79 43 eP P 09 37 50.4 -0.5
comp=Z,333nm,1.6s,baz=264,slow=6.4
STU epP pwP 09 38 03.9 +0.2
baz=264,slow=6.4
STU Stuttgart 64.79 43 IAmb IAmb 09 38 05.4
comp=Z,213nm,1.1s
STU Stuttgart 64.79 43 P P 09 37 51.5 +0.6
BER Bergen 64.80 30⇓iP P 09 37 50.7 0.0
BER IVmB_BB 09 37 53.5
comp=Z,4μm,4.2s
BER eS S 09 46 31.5 +1.9
BER IVMs_BB IVMs_BB 10 04 25.0
comp=Z,9μm,18.1s
BER Bergen 64.80 30 P P 09 37 51.1 +0.4
FOO Floro 64.99 28 eP P 09 37 51.8 -0.2
FOO IVmB_BB 09 37 51.8
comp=Z,3μm,2.1s
FOO eS S 09 46 34.5 +2.5
FOO IVMs_BB IVMs_BB 09 58 36.1
comp=Z,7μm,28.0s
DAVA Damuels 65.09 44 iP P 09 37 53.6 +0.5
comp=Z,326nm,1.2s,SNR=88
DAVA Damuels 65.09 44 P P'P'df 10 06 38.5 -1.1
comp=Z,83nm,1.7s
BLS5 Blasjo 65.10 31⇓iP P 09 37 52.8 0.0
BLS5 IVmB_BB 09 37 54.8
comp=Z,4μm,2.4s
BLS5 eS S 09 46 36.1 +2.6
BLS5 IVMsBB 10 01 11.9
comp=Z,6μm,16.0s
PRMA PARMA 65.18 47 IAmb IAmb 09 37 59.3
comp=Z,333nm,1.1s
VLC Villacollemand 65.20 48 P P 09 37 53.3 -0.4
VLC IAmb IAmb 09 38 07.9
comp=Z,293nm,1.1s
SNART Snartemo 65.23 32 eP P 09 37 53.4 -0.2
SNART IVmB_BB 09 37 55.1
comp=Z,1μm,2.1s
SNART eS S 09 46 37.1 +2.1
UBR Ueberruh 65.28 44 eP P 09 37 54.3 0.0
comp=Z,468nm,2.0s,baz=264,slow=6.4
UBR epP pwP 09 38 07.8 +1.0
baz=264,slow=6.4
FUORN Ofenpass-Fuorn 65.29 45 IAMs_20 IAMs_20 10 00 58.7
comp=Z,17μm,20.0s
ODD1 Odda 65.30 30⇓iP P 09 37 54.0 -0.1
ODD1 eS S 09 46 38.6 +2.6
SALO Salr 65.39 46 P P 09 37 54.1 -0.9
SALO IAmb IAmb 09 38 08.2
comp=Z,240nm,1.2s
HYA Hoyanger 65.41 29⇓iP P 09 37 54.5 -0.2
HYA eS S 09 46 40.8 +3.8
RETH Rethem/Aller, 65.41 38 eP P 09 37 55.1 +0.3
comp=Z,828nm,1.9s,baz=264,slow=6.4
RETH epP pwP 09 38 08.7 +1.0
baz=264,slow=6.4
CASP Castiglione de 65.47 49 IAmb IAmb 09 38 09.9
comp=Z,338nm,1.0s
UBBA Unterbreizbach 65.55 41 eP P 09 37 55.7 +0.1
comp=Z,408nm,1.9s,baz=264,slow=6.4
UBBA epP pwP 09 38 09.3 +0.8
baz=264,slow=6.4
DAG Danmarks Havn 65.56 9⇓iP P 09 37 55.2 -0.3
comp=Z,271nm,1.2s
DAG Danmarks Havn 65.56 9⇓iP P 09 37 55.2 -0.3
DAG pmax pmax
comp=Z,270nm,1.2s
DAG MLR MLR
comp=Z,33μm,18.0s
GTTG Gottingen 65.61 40 eP P 09 37 56.3 +0.1
comp=Z,447nm,1.7s,baz=264,slow=6.4
GTTG epP pwP 09 38 09.8 +0.8
baz=264,slow=6.4
ZCCA Zocca 65.63 48 P P 09 37 56.6 0.0
ZCCA IAmb IAmb 09 38 13.1
comp=Z,377nm,1.1s
FETA Feichten 65.64 45 iP P 09 37 57.0 +0.2
comp=Z,375nm,1.1s,SNR=144
FETA Feichten 65.64 45 P P'P'df 10 06 35.4 -3.4
comp=Z,36nm,2.1s
RETA Reutte 65.70 44 iP P 09 37 57.1 +0.1
comp=Z,208nm,1.6s,SNR=56
RETA Reutte 65.70 44 P P'P'df 10 06 30.8 -7.8
comp=Z,11nm,1.4s
OSSC Osservatorio P 65.78 49 P P 09 37 57.0 -0.5
OSSC IAmb IAmb 09 38 15.0
comp=Z,214nm,1.1s
OSSC IAMs_20 IAMs_20 10 03 19.9
comp=Z,18μm,19.0s
NRDL Niedersach Rie 65.83 39 eP P 09 37 57.9 +0.4
comp=Z,654nm,1.8s,baz=264,slow=6.4
NRDL epP pwP 09 38 11.4 +1.1
baz=264,slow=6.4
HOMB Homborsund 65.89 32⇓iP P 09 37 58.2 +0.4
HOMB IVmB_BB 09 38 00.2
comp=Z,5μm,2.5s
HOMB eS S 09 46 46.0 +3.1
HOMB IVMs_BB IVMs_BB 10 04 17.3
comp=Z,8μm,16.2s
MUD Monsted U'grnd 65.90 34⇓iP P 09 37 57.8 -0.1
comp=Z,853nm,1.8s
MUD Monsted U'grnd 65.90 34⇓iP P 09 37 57.8 -0.1
MUD pmax pmax
comp=Z,850nm,1.8s
MUD MLR MLR
comp=Z,31μm,18.0s
CLZ Clausthal 65.90 39 eP P 09 37 58.1 0.0
comp=Z,474nm,1.8s,baz=264,slow=6.4
CLZ epP pwP 09 38 11.7 +0.7
baz=264,slow=6.4
MOTA Moosalm 65.92 44 iP P 09 37 58.4 -0.1
comp=Z,183nm,1.1s,SNR=57
MOTA Moosalm 65.92 44 P P'P'df 10 06 34.2 -4.0
comp=Z,75nm,1.9s
SQTA Sankt Quirin 65.98 45 iP P 09 37 59.0 +0.1
comp=Z,226nm,1.0s,SNR=87
SQTA Sankt Quirin 65.98 45 P P'P'df 10 06 36.2 -1.9
comp=Z,60nm,1.8s
EFI East Falkland 66.00 179 P P 09 37 58.7 +0.2
EFI IAmb IAmb 09 38 14.9
comp=Z,316nm,1.3s
EFI East Falkland 66.00 179 iP P 09 37 59.6 +1.1
EFI pmax pmax
comp=Z,164nm,1.1s
GOET G??ttrup 66.03 34 iP P 09 37 59.8 +1.0
comp=Z,431nm,1.3s
AKN Aaknes 66.04 28⇓iP P 09 37 58.9 +0.1
AKN IVmB_BB 09 38 01.4
comp=Z,5μm,2.6s
AKN eS S 09 46 48.8 +3.9
AKN IVMs_BB IVMs_BB 09 59 10.2
comp=Z,7μm,25.4s
FUR Furstenfeldbru 66.11 44 eP P 09 37 59.4 -0.1
comp=Z,692nm,1.8s,baz=264,slow=6.4
FUR epP pwP 09 38 12.9 +0.9
baz=264,slow=6.4
ASSE Asse, Remlinge 66.12 39 eP P 09 37 59.8 +0.4
comp=Z,971nm,1.9s,baz=264,slow=6.4
ASSE epP pwP 09 38 13.4 +1.1
baz=264,slow=6.4
BSEG Bad Segeberg 66.15 37 eP P 09 37 59.3 -0.2
comp=Z,522nm,1.9s,baz=264,slow=6.4
BSEG epP pwP 09 38 12.9 +0.5
baz=264,slow=6.4
TEOL Teolo 66.18 47 P P 09 37 59.4 -0.6
TEOL IAmb IAmb 09 38 14.3
comp=Z,350nm,1.1s
TEOL IAMs_20 IAMs_20 10 04 13.4
comp=Z,19μm,18.0s
GRF Grafenberg Arr 66.20 42 eP P 09 37 59.9 -0.2
comp=Z,638nm,1.9s,baz=264,slow=6.4
GRF epP pwP 09 38 13.4 +0.5
baz=264,slow=6.4
GRF eL L 10 03 27.5
comp=Z,27μm,18.6s
GRF Grafenberg Arr 66.20 42 P P 09 38 00.2 +0.1
CTI Castel Tesino 66.21 46 P P 09 37 59.9 -0.4
CTI IAmb IAmb 09 38 16.4
comp=Z,211nm,1.0s
CTI Castel Tesino 66.21 46 P P 09 37 59.9 -0.4
CTI pmax pmax
comp=Z,211nm,1.0s
WATA Walderalm 66.24 44 iP P 09 38 00.3 -0.3
comp=Z,166nm,1.5s,SNR=37
WATA Walderalm 66.24 44 P P'P'df 10 06 35.4 -2.4
comp=Z,52nm,1.6s
WTTA Wattenberg 66.28 45 iP P 09 38 00.6 -0.3
comp=Z,140nm,1.3s,SNR=40
WTTA Wattenberg 66.28 45 P P'P'df 10 06 35.6 -2.1
comp=Z,66nm,1.8s
SKAR Skarslia 66.29 30⇓iP P 09 38 00.9 +0.4
SKAR IVmB_BB 09 38 04.4
comp=Z,3μm,3.3s
SKAR eS S 09 46 50.6 +2.6
SKAR IVMs_BB IVMs_BB 10 05 18.5
comp=Z,6μm,17.3s
GRC1 Grafenberg Arr 66.34 43 P P 09 38 00.8 -0.2
MOL Molde 66.39 28⇓iP P 09 38 01.3 +0.4
MOL IVmB_BB 09 38 04.6
comp=Z,4μm,3.7s
MOL eS S 09 46 53.5 +4.5
MOL IVMs_BB IVMs_BB 09 59 32.0
comp=Z,9μm,22.1s
MOX Moxa 66.55 41 eP P 09 38 02.1 -0.2
comp=Z,324nm,2.1s,baz=264,slow=6.4
MOX epP pwP 09 38 15.6 +0.5
baz=264,slow=6.4
MOX eL L 10 03 39.4
comp=Z,34μm,18.9s
MOX Moxa 66.55 41 P P 09 38 01.9 -0.4
NEUB Neuenburg 66.70 40 eP P 09 38 02.9 -0.3
comp=Z,681nm,2.1s,baz=264,slow=6.4
NEUB epP pwP 09 38 16.4 +0.3
baz=264,slow=6.4
KONO Kongsberg 66.71 31⇓iP P 09 38 03.3 +0.2
KONO IVmB_BB 09 38 06.6
comp=Z,4μm,4.0s
KONO eS S 09 46 56.3 +3.3
KONO IVMs_BB IVMs_BB 10 02 08.5
comp=Z,6μm,23.2s
KONO Kongsberg 66.71 31 P P 09 38 03.2 +0.1
KONO IAmb IAmb 09 38 05.1
comp=Z,341nm,1.6s
KONO Kongsberg 66.71 31 IAMs_20 IAMs_20 10 02 11.0
comp=Z,19μm,21.0s
KONO Kongsberg 66.71 31ceP P 09 38 02.8 -0.3
KONO pmax pmax
comp=Z,229nm,1.7s
MANZ Manzenberg 66.80 42 eP P 09 38 04.0 0.0
comp=Z,708nm,1.9s,baz=264,slow=6.4
MANZ epP pwP 09 38 17.5 +0.7
baz=264,slow=6.4
ABTA Abfaltersbach 66.84 45 iP P 09 38 04.0 -0.4
comp=Z,139nm,1.3s,SNR=45
ABTA Abfaltersbach 66.84 45 P P'P'df 10 06 33.7 -2.9
comp=Z,36nm,1.9s
ROTZ Rotzenmuhle 66.85 42 eP P 09 38 04.1 -0.1
comp=Z,470nm,2.0s,baz=264,slow=6.4
ROTZ epP pwP 09 38 17.6 +0.6
baz=264,slow=6.4
PLN Plauen 66.88 41 eP P 09 38 04.1 -0.3
comp=Z,288nm,1.9s,baz=264,slow=6.4
PLN epP pwP 09 38 17.6 +0.4
baz=264,slow=6.4
DOMB Dombas 66.95 28⇓iP P 09 38 04.9 +0.2
DOMB IVmB_BB 09 38 08.6
comp=Z,3μm,4.6s
DOMB eS S 09 46 58.6 +2.6
DOMB IVMs_BB IVMs_BB 10 02 15.6
comp=Z,5μm,14.6s
STAL STALIGIAL 66.95 46 IAmb IAmb 09 38 20.0
comp=Z,349nm,1.6s
STAL IAMs_20 IAMs_20 10 08 34.8
comp=Z,17μm,19.0s
GUNZ Gunzen 66.98 41 eP P 09 38 04.9 -0.2
comp=Z,467nm,2.2s,baz=264,slow=6.4
GUNZ epP pwP 09 38 18.4 +0.5
baz=264,slow=6.4
WERN Wernitzgruen 67.00 41 eP P 09 38 05.2 0.0
comp=Z,570nm,2.2s,baz=264,slow=6.4
WERN epP pwP 09 38 18.7 +0.7
baz=264,slow=6.4
NKC Novy Kostel 67.04 41 eP P 09 38 05.5 0.0
NKC ex x 09 38 17.9
NKC eS S 09 46 57.1 -0.3
NKC AMS AMS 10 02 00.0
comp=Z,30μm,18.8s
NKC Novy Kostel 67.04 41 eP P 09 38 05.5 0.0
NKC eS S 09 46 57.1 -0.3
NKC MLR MLR
comp=Z,30μm,18.8s
TANN Tannenbergstha 67.06 41 eP P 09 38 05.5 -0.1
comp=Z,701nm,1.8s,baz=264,slow=6.4
TANN epP pwP 09 38 19.0 +0.5
baz=264,slow=6.4
RJOB Jochberg 67.09 44 eP P 09 38 05.5 -0.3
comp=Z,319nm,2.0s,baz=264,slow=6.4
RJOB epP pwP 09 38 19.0 +0.6
baz=264,slow=6.4
NRCA Norcia 67.13 49 P P 09 38 04.9 -1.3
NRCA IAMs_20 IAMs_20 10 03 37.6
comp=Z,19μm,21.0s
CLTB Caltabellotta 67.21 55 IAmb IAmb 09 38 23.1
comp=Z,463nm,1.3s
WET Wettzell 67.24 43 eP P 09 38 06.4 -0.3
comp=Z,290nm,1.7s,baz=264,slow=6.4
WET epP pwP 09 38 20.0 +0.7
baz=264,slow=6.4
WET Wettzell 67.24 43 P P 09 38 06.4 -0.3
CORL Corleone 67.27 55 P P 09 38 07.4 +0.2
CORL IAmb IAmb 09 38 30.4
comp=Z,371nm,1.1s
CORL IAMs_20 IAMs_20 10 05 46.8
comp=Z,19μm,19.0s
OSL Oslo 67.32 31 eP P 09 38 06.9 -0.1
OSL IVmB_BB 09 38 09.4
comp=Z,3μm,2.9s
OSL eS S 09 47 03.0 +2.6
AQU L'Aquila 67.33 50⇓iP P 09 38 07.7 +0.2
AQU L'Aquila 67.33 50 P P 09 38 07.5 0.0
AQU IAmb IAmb 09 38 37.3
comp=Z,249nm,1.0s
AQU IAMs_20 IAMs_20 10 03 33.1
comp=Z,16μm,20.0s
AQU L'Aquila 67.33 50 P P 09 38 07.5 0.0
AQU pmax pmax
comp=Z,249nm,1.0s
KBA Koelnbreinsper 67.43 45 iP P 09 38 07.8 -0.4
comp=Z,166nm,1.5s,SNR=59
KBA Koelnbreinsper 67.43 45 P P'P'df 10 06 32.0 -3.7
comp=Z,24nm,2.0s
KBA Koelnbreinsper 67.43 45 P P 09 38 07.6 -0.6
CLL Collm 67.48 40 eP P 09 38 08.9 +0.7
comp=Z,390nm,1.8s,baz=264,slow=6.4
CLL epP pwP 09 38 22.4 +1.4
baz=264,slow=6.4
CLL Collm 67.48 40⇓iP P 09 38 08.7 +0.5
comp=Z,390nm,1.8s
CLL ePlp 09 38 11.0
comp=Z,3μm,18.2s
CLL ePmax 09 38 12.0
CLL i 09 38 21.8
comp=Z,191nm,1.1s
CLL i 09 38 27.0
CLL eS S 09 47 05.0 +2.4
CLL ePPS PPS 09 47 35.0
CLL eSS SS 09 51 12.0 -11
CLL eSSS SSS 09 54 36.0
CLL Lmax 10 02 00.0
CLL LmV 10 02 00.0
comp=Z,24μm,20.4s
CLL L L 10 04 00.0
comp=N,9μm,19.9s
CLL L L 10 04 00.0
comp=E,13μm,21.3s
CLL L L 10 04 00.0
comp=Z,17μm,20.4s
CLL ePKPPKPdP'P'df 10 06 37.0 +1.7
CLL Collm 67.48 40 IAMs_20 IAMs_20 10 02 29.8
comp=Z,24μm,20.0s
CLL Collm 67.48 40⇓iP P 09 38 08.7 +0.5
CLL eS S 09 47 05.0 +2.4
CLL pmax pmax
comp=Z,390nm,1.8s
CLL MLR MLR
comp=Z,24μm,20.4s
ROBS Robic 67.51 46 eP P 09 38 08.0 -0.5
NBO00 NORSAR Array S 67.55 30 P P 09 38 08.1 -0.4
NAO01 NORSAR Array S 67.57 30 P P 09 38 08.2 -0.3
NC204 NORSAR Array S 67.59 29 P P 09 38 07.8 -0.9
COP Copenhagen 67.59 35⇓iP P 09 38 08.9 +0.2
comp=Z,195nm,1.4s
COP Copenhagen 67.59 35⇓iP P 09 38 08.9 +0.2
COP pmax pmax
comp=Z,200nm,1.4s
COP MLR MLR
comp=Z,19μm,18.0s
MYKA Terra Mystica 67.61 45 eP P 09 38 08.8 -0.4
comp=Z,186nm,1.6s
MYKA Terra Mystica 67.61 45 P P'P'df 10 06 29.9 -5.4
comp=Z,19nm,1.3s
TRI Trieste 67.67 46 P P 09 38 08.9 -0.6
TRI IAmb IAmb 09 38 25.9
comp=Z,195nm,1.2s
TRI Trieste 67.67 46 P P 09 38 08.9 -0.6
TRI pmax pmax
comp=Z,195nm,1.2s
FBE Freiberg 67.67 41 eP P 09 38 09.5 +0.1
comp=Z,666nm,2.0s,baz=264,slow=6.4
FBE epP pwP 09 38 23.0 +0.8

baz=264,slow=6.4
KHC Kasperske Hory 67.70 43 eP P 09 38 09.0 -0.6
KHC epP pP 09 38 12.7 -4.7
KHC ex x 09 38 22.4
KHC ePCP PcP 09 38 34.5 -1.9
KHC eS S 09 47 07.1 +1.7
KHC AMS AMS 10 06 00.0
comp=Z,12μm,18.1s
KHC ePKPPKP 10 06 29.7
KHC ex x 10 06 36.4
KHC Kasperske Hory 67.70 43 P P 09 38 08.5 -1.1
KHC Kasperske Hory 67.70 43d iP P 09 38 08.7 -0.9
KHC pmax pmax
comp=Z,417nm,2.0s
INTR Introdacqua 67.70 50 P P 09 38 08.6 -1.3
INTR IAmb IAmb 09 38 41.1
comp=Z,231nm,1.3s
INTR IAMs_20 IAMs_20 10 03 34.8
comp=Z,17μm,21.0s
C36M Paulatuk 67.74 340 P P 09 38 07.8 -1.7
C36M IAmb IAmb 09 38 34.9
comp=Z,352nm,1.5s
C36M IAMs_20 IAMs_20 10 07 16.1
comp=Z,16μm,21.0s
C36M Paulatuk 67.74 340 P P 09 38 08.1 -1.3
baz=108
TBLU Trondheim 67.75 27⇓iP P 09 38 10.6 +1.0
TBLU IVmBBB 09 38 12.7
comp=Z,4μm,2.3s
TBLU eS S 09 47 10.5 +5.1
TBLU IVMs_BB IVMs_BB 10 00 26.2
comp=Z,6μm,25.0s
GEC2 GERESS Array S 67.76 43 eP P 09 38 09.7 -0.5
comp=Z,377nm,1.8s,baz=264,slow=6.4
GEC2 epP pwP 09 38 23.2 +0.6
baz=264,slow=6.4
GEC2 GERESS Array S 67.76 43 P P 09 38 09.7 -0.5
GEC2 IAmb IAmb 09 38 24.1
comp=Z,177nm,1.0s
GERES GERESS Array B 67.76 43 P P 09 38 09.7 -0.5
comp=Z,52nm,1.0s,baz=258,slow=4.0,SNR=83
GERES LR LR 10 04 47.7
comp=Z,6μm,18.1s,baz=254,slow=33
GERES PKPPKP P'P'df 10 06 33.4 -1.6
comp=Z,4.6nm,1.1s,baz=90,slow=1.3,SNR=15
NB2 NORSAR Subarra 67.76 30 P P 09 38 10.0 +0.2
comp=Z,1μm,2.0s,baz=260,slow=6.5
NB2 NORSAR Subarra 67.76 30 P P 09 38 10.0 +0.2
baz=260,slow=6.5
NB2 NORSAR Subarra 67.76 30 P P 09 38 08.3 -1.5
NB2 pmax pmax
comp=Z,4μm,2.1s
NOA NORSAR Array B 67.76 30 P P 09 38 10.0 +0.2
comp=Z,36nm,1.0s,baz=260,slow=6.3,SNR=27
NOA S S 09 46 55.6 -10
comp=Z,0.5nm,0.5s,baz=348,slow=12,SNR=4.7
NOA LR LR 10 02 42.9
comp=Z,11μm,21.4s,baz=260,slow=32
NOA NORSAR Array B 67.76 30 P P 09 38 10.0 +0.2
DLBC Dease Lake 67.77 327 IAmb IAmb 09 38 27.3
comp=Z,275nm,0.9s
NC602 NORSAR Array S 67.86 30⇓iP P 09 38 10.4 0.0
NC602 eS S 09 47 08.9 +2.0
NC602 IVMsBB 10 01 44.7
comp=Z,7μm,23.0s
NORES NORESS Array B 67.86 30 P P 09 38 10.9 +0.5
NORES pmax pmax
comp=Z,104nm,1.3s
NC303 NORSAR Array S 67.87 29 P P 09 38 10.4 -0.1
RGN Rugen 67.97 37 eP P 09 38 11.2 0.0
comp=Z,831nm,2.0s,baz=264,slow=6.4
RGN epP pwP 09 38 24.7 +0.7
baz=264,slow=6.4
RGN Rugen 67.97 37 eP P 09 38 10.3 -0.8
PBCC Pribram 68.00 42 eP P 09 38 11.6 +0.1
PBCC ex x 09 38 15.0
PBCC ex x 09 38 24.0
PBCC eS S 09 47 08.7 -0.2
BRG Berggiesshubel 68.04 41 iP P 09 38 11.7 0.0
comp=Z,359nm,1.7s
BRG i 09 38 24.3
comp=Z,225nm,1.2s
BRG S S 09 47 02.0 -7.3
BRG SCS SKiKP 09 48 02.0 -3.7
BRG SS SS 09 51 22.0 -10
BRG ePKPPKP 10 06 27.9
comp=Z,124nm,2.0s
BRG Berggiesshubel 68.04 41 eP P 09 38 11.5 -0.2
comp=Z,358nm,1.7s,baz=264,slow=6.4
BRG epP pwP 09 38 25.1 +0.5
baz=264,slow=6.4
BRG Berggiesshubel 68.04 41 iP P 09 38 11.7 0.0
BRG S S 09 47 02.0 -7.3
BRG 09 48 02.0
BRG pmax pmax
comp=Z,359nm,1.7s
BRG MLR MLR
comp=N,4μm,22.8s
BRG MLR MLR
comp=E,21μm,18.9s
BRG MLR MLR
comp=Z,34μm,19.0s
RUE Ruedersdorf 68.06 39 eP P 09 38 11.5 -0.2
comp=Z,598nm,2.0s,baz=264,slow=6.4
RUE epP pwP 09 38 25.0 +0.4
baz=264,slow=6.4
RUE Ruedersdorf 68.06 39 eP P 09 38 10.8 -0.9
MOA Molln 68.09 44 iP P 09 38 11.7 -0.4
comp=Z,178nm,1.5s,SNR=70
MOA Molln 68.09 44 P P'P'df 10 06 33.1 -1.3
comp=Z,28nm,1.5s
MOZS Mozjanca 68.16 46 eP P 09 38 12.7 +0.1
RIY Rijeka 68.16 47⇓iP P 09 38 12.4 -0.2
VAE Valguarnera 68.16 55 PKPPKP P'P'ab 10 06 37.8 +1.0
comp=Z,8.7nm,0.4s,baz=175,slow=2.2,SNR=6.9
PAOL Paolisi 68.20 51 IAmb IAmb 09 38 28.1
comp=Z,347nm,1.2s
PAOL IAMs_20 IAMs_20 10 05 51.2
comp=Z,14μm,20.0s
LJU Ljubljana 68.21 46 eP P 09 38 13.1 +0.2
LJU e 09 38 26.1
LJU eS S 09 47 13.4 +1.9
LJU eSS SS 09 51 32.6 -1.9
LJU Ljubljana 68.21 46⇓iP P 09 38 12.9 0.0
OBKA Obir 68.24 45 iP P 09 38 13.0 -0.2
comp=Z,190nm,1.4s,SNR=41
OBKA Obir 68.24 45 P P'P'df 10 06 30.4 -3.9
comp=Z,43nm,2.1s
MOBC Moresby Island 68.26 322 P P 09 38 13.4 +0.3
GO10 Punta Arenas 68.27 188 P P 09 38 14.7 +1.7
GO10 IAMs_20 IAMs_20 10 10 36.8
comp=Z,18μm,21.0s
PRA Prague 68.31 42 eP P 09 38 15.1 +1.7
PRA ex x 09 38 27.1
PRA eS S 09 47 08.6 -3.9
PRA AMS AMS 10 02 50.0
comp=Z,24μm,18.9s
PRA Prague 68.31 42 eP P 09 38 15.1 +1.7
PRA eS S 09 47 08.6 -3.9
PRA MLR MLR
comp=Z,24μm,18.9s
PRU Pruhonice 68.37 42 eP P 09 38 14.2 +0.4
PRU eS S 09 47 15.2 +1.9
PRU AMS AMS 10 04 40.0
comp=Z,21μm,17.3s
PRU ePKPPKP 10 06 35.2
PRU Pruhonice 68.37 42 eP P 09 38 14.2 +0.4
PRU eS S 09 47 15.2 +1.9
PRU MLR MLR
comp=Z,21μm,17.3s
PVCC Panska Ves 68.42 41 eP P 09 38 14.2 +0.1
PVCC ex x 09 38 27.0
PVCC eS S 09 47 17.1 +3.3
PVCC AMS AMS 10 03 10.0
comp=Z,30μm,18.5s
PVCC Panska Ves 68.42 41 eP P 09 38 14.2 +0.1
PVCC eS S 09 47 17.1 +3.3
PVCC MLR MLR
comp=Z,30μm,18.5s
GOPC GO Pecny, Ondr 68.53 42 eP P 09 38 14.9 +0.1
GOPC epP pP 09 38 22.1 -0.4
GOPC eS S 09 47 15.4 +0.2
GOPC AMS AMS 10 04 40.0
comp=Z,20μm,17.7s
GOPC GO Pecny, Ondr 68.53 42 eP P 09 38 14.9 +0.1
GOPC e 09 38 22.1
GOPC eS S 09 47 15.4 +0.2
GOPC MLR MLR
comp=Z,20μm,17.7s
DIB Dawson Inlet, 68.57 322 P P 09 38 15.5 +0.5
DIB IAMs_20 IAMs_20 10 11 45.9
comp=Z,22μm,19.0s
H02S1 DAWSON INLET T 68.57 322 P P 09 38 15.6 +0.6
SNR=12
SOKA Soboth 68.57 45 iP P 09 38 14.6 -0.7
comp=Z,132nm,1.6s,SNR=63
SOKA Soboth 68.57 45 P P'P'df 10 06 30.4 -3.3
comp=Z,61nm,1.7s
H02N1 VAN INLET T-PH 68.61 322 P P 09 38 16.8 +1.4
SNR=4.7
PERS Pernice 68.63 45 eP P 09 38 14.8 -0.8
PERS e 09 38 27.9
PERS eS S 09 47 15.7 -1.0
PERS eSS SS 09 51 36.5 -4.6
NSS Namsos 68.75 26⇓iP P 09 38 15.8 0.0
NSS IVmB_BB 09 38 18.1
comp=Z,5μm,2.5s
NSS eS S 09 47 21.6 +4.4
NSS IVMsBB 10 02 35.5
comp=Z,6μm,23.0s
HFS Hagfors 68.83 31 LR LR 10 03 47.2
comp=Z,17μm,21.2s,baz=242,slow=32
CRES Cresnjev 68.85 46⇓iP P 09 38 16.5 -0.4
ARSA Arzberg 68.92 45 iP P 09 38 16.9 -0.4
comp=Z,207nm,1.2s,SNR=84
ARSA Arzberg 68.92 45 P P'P'df 10 06 28.8 -4.2
comp=Z,63nm,2.0s
BSD Bornholm Skovb 68.94 36⇓iP P 09 38 16.6 -0.6
comp=Z,159nm,1.2s
BSD Bornholm Skovb 68.94 36⇓iP P 09 38 16.6 -0.6
BSD pmax pmax
comp=Z,160nm,1.2s
BSD MLR MLR
comp=Z,25μm,19.0s
TREC Trest 68.95 43 eP P 09 38 17.1 -0.4
TREC ex x 09 38 29.9
TREC eS S 09 47 18.7 -1.6
TREC AMS AMS 10 05 50.0
comp=Z,8μm,18.1s
TREC Trest 68.95 43 eP P 09 38 17.1 -0.4
TREC eS S 09 47 18.7 -1.6
TREC MLR MLR
comp=Z,8μm,18.1s
SGRT San Giovanni R 69.08 51 P P 09 38 17.5 -1.0
SGRT IAMs_20 IAMs_20 10 06 21.3
comp=Z,21μm,19.0s
CONA Conrad Observa 69.17 44 iP P 09 38 18.8 -0.1
comp=Z,236nm,1.6s,SNR=129
CONA Conrad Observa 69.17 44 P P'P'df 10 06 28.0 -4.6
comp=Z,43nm,1.7s
ACER Acerenza 69.25 52 P P 09 38 18.4 -1.1
ACER IAMs_20 IAMs_20 10 06 54.9
comp=Z,15μm,19.0s
CEL Celeste 69.30 54 P P 09 38 18.1 -1.8
NOR Nord 69.33 6⇓iP P 09 38 19.0 -0.2
comp=Z,368nm,1.5s
NOR Nord 69.33 6⇓iP P 09 38 19.0 -0.2
NOR pmax pmax
comp=Z,370nm,1.5s
NOR MLR MLR
comp=Z,37μm,22.0s
UPC Upice 69.34 41 eP P 09 38 19.4 -0.4
UPC epP pP 09 38 23.2 -4.3
UPC ex x 09 38 32.8
UPC eS S 09 47 23.6 -1.2
UPC AMS AMS 10 05 00.0
comp=Z,35μm,18.3s
UPC Upice 69.34 41 eP P 09 38 19.4 -0.4
UPC e 09 38 23.2
UPC eS S 09 47 23.6 -1.2
UPC MLR MLR
comp=Z,35μm,18.3s
CHVC Chvalec 69.37 41 eP P 09 38 19.9 -0.1
CHVC ex x 09 38 23.2
CHVC ex x 09 38 33.0
CHVC eS S 09 47 25.2 0.0
CHVC AMS AMS 10 05 00.0
comp=Z,32μm,18.3s
KOGS Kog 69.41 46 eP P 09 38 20.1 -0.3
OSTC Ostas 69.47 41 eP P 09 38 20.0 -0.6
OSTC ex x 09 38 32.1
OSTC eS S 09 47 25.3 -1.0
OSTC AMS AMS 10 05 10.0
comp=Z,32μm,18.1s
STOK Stokkvaagen 69.52 24 eP P 09 38 20.5 -0.1
STOK eS S 09 47 27.8 +1.6
KSP Ksiaz 69.53 41 eP P 09 38 21.0 +0.1
KSP eS S 09 47 30.2 +3.2
KSP eL L 10 03 28.2
comp=Z,34μm,19.4s
KSP Ksiaz 69.53 41 eP P 09 38 21.0 +0.1
KSP eS S 09 47 30.2 +3.2
DPC Dobruska-Polom 69.53 41 eP P 09 38 21.3 +0.2
DPC eS S 09 47 25.2 -1.9
DPC AMS AMS 10 05 00.0
comp=Z,29μm,17.7s
DPC ePKPPKP P'P'df 10 06 25.7 -6.2
DPC Dobruska-Polom 69.53 41 eP P 09 38 21.3 +0.2
DPC eS S 09 47 25.2 -1.9
DPC MLR MLR
comp=Z,29μm,17.7s
KRUC Moravsky 69.54 43⇓iP P 09 38 20.8 -0.3
KRUC eS S 09 47 28.4 +1.2
KRUC e 09 55 22.5
KRUC ePKPPKP P'P'df 10 06 25.6 -6.2
KRUC Moravsky 69.54 43 P P 09 38 20.8 -0.3
KONS Konsvik 69.59 24⇓iP P 09 38 21.1 +0.1
KONS IVmBBB 09 38 23.8
comp=Z,5μm,2.5s
KONS eS S 09 47 29.1 +2.1
USHA Ushuaia 69.62 186 PKPPKP P'P'df 10 06 32.5 +7.9
comp=Z,2.8nm,1.0s,baz=225,slow=2.3,SNR=4.1
VRAC Vranov 69.68 43⇓iP P 09 38 21.8 -0.2
VRAC eS S 09 47 30.6 +1.7
VRAC e 09 55 25.9
VRAC ePKPPKP P'P'df 10 06 26.0 -5.6
VRAC Vranov 69.68 43 LR LR 10 06 00.8
comp=Z,9μm,18.2s,baz=262,slow=34
VRAC PKPPKP P'P'bc 10 06 27.2 -3.5
comp=Z,1.6nm,0.4s,baz=101,slow=3.6,SNR=8.2
VRAC Vranov 69.68 43 ⇑P P 09 38 22.0 +0.1
VRAC Vranov 69.68 43 P P 09 38 22.5 +0.5
BEHE Becsehely 69.77 46⇓iP P 09 38 22.8 +0.2
KRLC Kraliky 69.82 42 eP P 09 38 23.1 +0.3
KRLC ex x 09 38 36.0
KRLC eS S 09 47 30.3 -0.2
KRLC AMS AMS 10 04 10.0
comp=Z,19μm,20.3s
KRLC Kraliky 69.82 42 eP P 09 38 23.1 +0.3
KRLC eS S 09 47 30.3 -0.2
KRLC MLR MLR
comp=Z,19μm,20.3s
MATE Matera 69.83 52 ⇓P P 09 38 22.0 -1.0
TIP Timpagrande 69.94 53 ⇓P P 09 38 22.4 -1.4
TIP Timpagrande 69.94 53 P P 09 38 22.0 -1.8
TIP IAMs_20 IAMs_20 10 07 20.2
comp=Z,19μm,19.0s
ZST Bratislava 70.00 44 eP P 09 38 22.8 -1.1
ZST eS S 09 47 31.3 -1.3
ZST Bratislava 70.00 44 eP P 09 38 22.8 -1.1
ZST eS S 09 47 31.3 -1.3
MGRS Mrkonjic Grad 70.01 48 eP P 09 38 24.4 +0.3
JIS Juneau Island 70.03 327 P P 09 38 24.4 +0.5
LOF Lofoten 70.05 22⇓iP P 09 38 23.9 0.0
LOF IVmB_BB 09 38 26.6
comp=Z,5μm,4.5s
LOF eS S 09 47 34.8 +2.3
LOF IVMs_BB IVMs_BB 10 08 14.2
comp=Z,5μm,19.3s
MOR8 Moi Rana 70.06 24⇓iP P 09 38 24.7 +0.7
MOR8 IVmB_BB 09 38 27.4
comp=Z,4μm,3.1s
MOR8 eS S 09 47 36.0 +3.4
MOR8 IVMs_BB IVMs_BB 10 05 08.8
comp=Z,5μm,21.1s
BLY Banja Luka 70.08 47 ⇓P P 09 38 25.5 +1.0
BLY Banja Luka 70.08 47⇓iP P 09 38 24.4 -0.1
BLY Banja Luka 70.08 47 P P 09 38 23.8 -0.7
MODS Modra-Piesok 70.12 44 eP P 09 38 23.5 -1.2
MODS pmax pmax
comp=Z,567nm,1.7s
MODS Modra-Piesok 70.12 44 eP P 09 38 23.5 -1.2
MODS eS S 09 47 28.6 -5.5
GKP Gorka Klasztor 70.19 38 eP P 09 38 25.2 +0.2
GKP eS S 09 47 36.3 +1.7
GKP eL L 10 03 29.0
comp=Z,23μm,21.3s
GKP Gorka Klasztor 70.19 38 eP P 09 38 25.2 +0.2
GKP eS S 09 47 36.3 +1.7
SMOL Smolenice 70.22 43 eP P 09 38 25.8 +0.5
SMOL pmax pmax
comp=Z,148nm,1.8s
SMOL Smolenice 70.22 43 eP P 09 38 25.8 +0.5
MORC Moravsky Berou 70.30 42⇓iP P 09 38 25.9 +0.1
MORC eS S 09 47 37.2 +1.0
MORC e 09 55 41.8
MORC ePKPPKP P'P'df 10 06 23.9 -6.7
MORC Moravsky Berou 70.30 42 ⇓P P 09 38 25.9 +0.1
MORC Moravsky Berou 70.30 42 P P 09 38 25.6 -0.2
MORC IAMs_20 IAMs_20 10 04 42.5
comp=Z,15μm,20.0s
MORC Moravsky Berou 70.30 42 P P 09 38 25.6 -0.2
MORC pmax pmax
comp=Z,184nm,1.1s
JAVC Velka Javorina 70.38 43⇓iP P 09 38 27.1 +0.8
JAVC eS S 09 47 42.5 +5.3
JAVC e 09 55 44.1
JAVC ePKPPKP P'P'df 10 06 21.1 -9.4
SIT Sitka 70.45 326 P P 09 38 25.7 -0.8
SIT IAmb IAmb 09 38 43.9
comp=Z,271nm,1.0s
SIT Sitka 70.45 326 P P 09 38 25.7 -0.8
SIT pmax pmax
comp=Z,271nm,1.0s
SIT MLR MLR
comp=Z,38μm,19.0s
WHY Whitehorse 70.49 330 P P 09 38 26.9 +0.1
WHY IAMs_20 IAMs_20 10 13 44.1
comp=Z,19μm,20.0s
STON Ston 70.50 49⇓iP P 09 38 26.8 -0.3
STEI Steigen 70.65 23⇓iP P 09 38 27.5 0.0
STEI IVmB_BB 09 38 27.7
comp=Z,4μm,4.5s
STEI eS S 09 47 42.2 +2.8
STEI IVMs_BB IVMs_BB 10 02 07.8
comp=Z,4μm,22.2s
OKC Ostrava-Krasne 70.70 42 eP P 09 38 29.4 +1.2
OKC ex x 09 38 40.7
OKC eS S 09 47 38.6 -2.1
OKC AMS AMS 10 07 30.0
comp=Z,13μm,17.8s
OKC Ostrava-Krasne 70.70 42 eP P 09 38 29.4 +1.2
OKC eS S 09 47 38.6 -2.1
OKC MLR MLR
comp=Z,13μm,17.8s
SRO Srobarova 70.81 44 eP P 09 38 28.8 -0.1
SRO pmax pmax
comp=Z,350nm,1.7s
SRO Srobarova 70.81 44 eP P 09 38 28.8 -0.1
INK Inuvik 70.83 338 PKPPKP P'P'ab 10 06 22.4 -3.7
comp=Z,1.8nm,1.0s,baz=314,slow=4.9,SNR=8.1
INK LR LR 10 12 14.8
comp=Z,10μm,18.1s,baz=95,slow=38
INK Inuvik 70.83 338 P P 09 38 27.8 -0.8
INK Inuvik 70.83 338 P P 09 38 27.8 -0.8
INK pmax pmax
comp=Z,686nm,1.2s
INK MLR MLR
comp=Z,27μm,19.0s
KOLL Kolacno 70.87 43 eP P 09 38 29.6 +0.4
TREB Trebinje 70.98 50 eP P 09 38 30.0 -0.1
MORH Mrgy, Hungar 71.07 46⇓iP P 09 38 30.4 -0.1
HCY Herceg Novi 71.10 50 eP P 09 38 30.5 -0.3
BRY Bratogost 71.11 49 eP P 09 38 31.1 +0.1
VYHS Vyhne 71.16 43 eP P 09 38 30.9 -0.1
VYHS pmax pmax
comp=Z,301nm,1.6s
VYHS Vyhne 71.16 43 eP P 09 38 30.9 -0.1
VYHS eS S 09 47 47.0 +0.9
SCTE Santa Cesarea 71.21 52 P P 09 38 31.4 -0.1
SCTE IAmb IAmb 09 38 45.9
comp=Z,167nm,0.9s
HOPE Hope Point 71.24 166 P P 09 38 32.2 +1.2
HOPE Hope Point 71.24 166 IAMs_20 IAMs_20 10 10 32.2
comp=Z,22μm,21.0s
HOPE Hope Point 71.24 166 P P 09 38 32.3 +1.2
HOPE pmax pmax
comp=Z,175nm,1.1s
HOPE MLR MLR
comp=Z,22μm,21.0s
BUD Budapest 71.30 44 P P 09 38 32.4 +0.5
BUD pmax pmax
comp=Z,260nm,1.0s
HAPS Han Pijesak,Bl 71.36 48 eP P 09 38 31.9 -0.6
UPM Unac-Piva 71.37 49 eP P 09 38 33.0 +0.4
DRME Dracevica, Mon 71.63 50⇓iP P 09 38 34.9 +0.9
PDG Podgorica 71.67 50 ⇓P P 09 38 34.8 +0.6
PDG Podgorica 71.67 50⇓iP P 09 38 34.7 +0.6
PDG Podgorica 71.67 50 P P 09 38 33.2 -1.0
PDG IAmb IAmb 09 38 49.7
comp=Z,392nm,1.0s
PDG IAMs_20 IAMs_20 10 06 36.8
comp=Z,12μm,20.0s
RUDO Rudo 71.69 49 eP P 09 38 34.1 -0.2
BBLS Lazići 71.70 48⇓iP P 09 38 35.1 +0.6
TEKS Tekeris 71.75 48⇓iP P 09 38 35.4 +0.7
OJC Ojcow 71.76 42 eP P 09 38 34.9 +0.3
OJC eS S 09 47 55.8 +2.8
OJC eL L 10 07 01.5
comp=Z,28μm,18.1s
OJC Ojcow 71.76 42 P P 09 38 34.5 -0.1
OJC IAmb IAmb 09 38 49.3
comp=Z,267nm,1.2s
OJC Ojcow 71.76 42 eP P 09 38 34.9 +0.3
OJC eS S 09 47 55.8 +2.8
HYT Haines Junctio 71.78 330 P P 09 38 35.5 +0.8
HYT IAmb IAmb 09 38 52.5
comp=Z,423nm,1.2s
HYT IAMs_20 IAMs_20 10 09 49.4
comp=Z,18μm,22.0s
EPYK Eagle Plains 71.82 336 P P 09 38 33.9 -0.8
EPYK IAmb IAmb 09 38 50.9
comp=Z,290nm,1.2s
EPYK IAMs_20 IAMs_20 10 13 36.1
comp=Z,17μm,20.0s
EPYK Eagle Plains 71.82 336 P P 09 38 34.3 -0.4
baz=95
PSZ Piszkesteto 71.88 44 ⇓P P 09 38 35.5 0.0
PSZ Piszkesteto 71.88 44 P P 09 38 34.9 -0.5
PSZ IAMs_20 IAMs_20 10 07 28.3
comp=Z,13μm,18.0s
PSZ Piszkesteto 71.88 44 P P 09 38 34.9 -0.5
PSZ pmax pmax
comp=Z,144nm,1.1s
KLNR Kaliningrad 71.98 37 iP P 09 38 35.0 -0.8
KLNR pmax pmax
comp=Z,554nm,2.0s
KLNR MLR MLR
comp=Z,18μm,18.0s
DHAK Deception Hill 72.08 328 IAmb IAmb 09 38 53.9
comp=Z,288nm,1.2s
NIE Niedzica 72.10 42 eP P 09 38 37.7 +1.0
NIE eS S 09 48 02.5 +5.4
NIE eL L 10 05 32.3
comp=Z,5μm,23.4s
NIE Niedzica 72.10 42 eP P 09 38 37.7 +1.0
NIE eS S 09 48 02.5 +5.4
DIVS Divibare 72.11 48⇓iP P 09 38 37.3 +0.4
KBS Kingsbay 72.13 11⇓iP P 09 38 37.5 +1.2
KBS IVmB_BB 09 38 40.4
comp=Z,4μm,5.2s
KBS eS S 09 48 00.8 +4.5
KBS IVMsBB 10 08 10.2
comp=Z,5μm,20.5s
KBS Kingsbay 72.13 11 P P 09 38 37.1 +0.8
KBS IAmb IAmb 09 38 57.4
comp=Z,294nm,1.3s
KBS Kingsbay 72.13 11 IAMs_20 IAMs_20 10 08 21.4
comp=Z,13μm,20.0s
KBS Kingsbay 72.13 11 iP P 09 38 37.1 +0.8
KBS pmax pmax
comp=Z,1μm,1.5s
KBS MLR MLR

comp=Z,44µm,18.0s
TIR Tirane 72.19 51 P P 09 38 38.3 +1.0
TIR Tirane 72.19 51 P P 09 38 37.1 -0.2
TIR IAmb IAmb 09 39 01.9
comp=Z,262nm,1.0s
TIR IAMs_20 IAMs_20 10 04 53.5
comp=Z,17µm,22.0s
TIR Tirane 72.19 51 P P 09 38 37.1 -0.2
TIR pmax pmax
comp=Z,262nm,1.0s
TRO Tromso 72.20 21⇓iP P 09 38 37.4 +0.5
TRO IVmB_BB 09 38 39.1
comp=Z,6µm,1.8s
TRO eS S 09 48 00.2 +2.8
TRO eSS SS 09 52 36.7 +1.9
TRO IVMs_BB IVMs_BB 10 08 41.3
comp=Z,6µm,14.8s
KECS Kecovo 72.25 43 eP P 09 38 38.6 +1.0
KECS pmax pmax
comp=Z,54nm,1.2s
KECS Kecovo 72.25 43 eP P 09 38 38.6 +1.0
KEK Kerkira 72.25 53 P P 09 38 38.6 +0.8
BEL Belsk 72.35 40 eP P 09 38 38.2 +0.1
BEL eS S 09 47 52.2 -7.5
BEL eL L 10 05 56.8
comp=Z,26µm,19.1s
BEL Belsk 72.35 40 eP P 09 38 38.2 +0.1
BEL eS S 09 47 52.2 -7.5
TPE Tepelena 72.37 52 P P 09 38 39.3 +0.8
HSPB Hornsund (broa 72.39 13 eP P 09 38 40.1 +2.2
HSPB eS S 09 48 04.5 +5.1
HSPB eL L 10 02 17.1
comp=Z,15µm,27.2s
HSPB Hornsund (broa 72.39 13⇓iP P 09 38 38.8 +0.9
HSPB eS S 09 48 02.9 +3.5
HSPB IVMs_BB IVMs_BB 10 10 48.2
comp=Z,4µm,14.3s
HSPB Hornsund (broa 72.39 13 eP P 09 38 40.1 +2.2
HSPB eS S 09 48 04.5 +5.1
SRN Sarande 72.40 52 P P 09 38 39.2 +0.6
PHP Peshkopia 72.59 50 P P 09 38 40.8 +0.9
PHP Peshkopia 72.59 50 P P 09 38 40.7 +0.9
IGT Igoumenitsa 72.68 53 P P 09 38 41.2 +0.9
IGT Igoumenitsa 72.68 53 P P 09 38 42.6 +2.3
IGT pmax pmax
comp=Z,324nm,1.3s
STHS Stebnicka Huta 72.72 42 eP P 09 38 42.8 +2.4
STHS Stebnicka Huta 72.72 42 eP P 09 38 42.8 +2.4
DAWY Dawson 72.80 333 P P 09 38 41.0 +0.4
SPA0 Spitsbergen Ar 72.81 12⇓iP P 09 38 40.8 +0.4
SPA0 IVmB_BB 09 38 43.9
comp=Z,5µm,4.9s
SPA0 eS S 09 48 07.3 +3.1
SPA0 IVMs_BB IVMs_BB 10 08 49.6
comp=Z,5µm,15.8s
SPA0 Spitsbergen Ar 72.81 12 P P 09 38 41.0 +0.7
SPA0 IAmb IAmb 09 39 08.9
comp=Z,431nm,1.4s
SPITS Spitsbergen Ar 72.81 12 P P 09 38 41.2 +0.8
SPITS pmax pmax
comp=Z,12nm,0.5s
BJO1 Bjornoya 72.82 16 eP P 09 38 40.5 0.0
BJO1 eS SKiKP 09 48 08.9 -3.1
CRVS Cervenica-Dubn 72.88 43 eP P 09 38 42.2 +0.9
CRVS pmax pmax
comp=Z,615nm,1.9s
CRVS Cervenica-Dubn 72.88 43 eP P 09 38 42.2 +0.9
CRVS eS S 09 48 04.0 -2.0
OHR Ohrid 72.91 51 eP P 09 38 42.9 +1.2
OHR Ohrid 72.91 51 P P 09 38 44.2 +2.5
OHR pmax pmax
comp=Z,200nm,2.2s
PBUR Paburge 72.95 35 eP P 09 38 40.6 -1.0
FSK Fiskardo 72.95 54 P P 09 38 42.0 +0.1
LKD2 Lefkada island 73.00 54 P P 09 38 42.8 +0.6
VLS Valsamata 73.00 54 P P 09 38 42.3 0.0
JAN Janina 73.07 53 P P 09 38 43.7 +1.0
JAN Janina 73.07 53 P P 09 38 43.7 +1.0
PCA Pinnacle 73.13 329 IAmb IAmb 09 39 00.0
comp=Z,374nm,1.2s
SLIT Slitere, Latvi 73.13 34 eP P 09 38 41.5 -1.0
NEST Nestorio 73.15 52 P P 09 38 44.5 +1.3
SIRR Siria 73.16 46⇑P P 09 38 43.4 +0.4
BZS Buzias 73.17 46⇑P P 09 38 44.0 +0.8
MDVR Moldovita 73.30 47⇑P P 09 38 44.3 +0.4
SKO Skopje 73.31 50⇓iP P 09 38 44.5 +0.5
KOLS Kolonicke sedl 73.42 43 eP P 09 38 45.1 +0.6
KOLS pmax pmax
comp=Z,166nm,1.7s
KOLS Kolonicke sedl 73.42 43 eP P 09 38 45.1 +0.6
KOLS eS S 09 48 11.0 -1.0
KPRO Kipourio 73.43 52 P P 09 38 45.9 +1.0
UZH Uzhgorod 73.45 43 eP P 09 38 42.7 -1.9
UZH i 09 38 44.5
UZH e 09 39 05.8
UZH iS S 09 48 09.0 -3.3
UZH MLR MLR
comp=N,2µm,16.0s
UZH MLR MLR
comp=E,2µm,16.0s
UZH MLR MLR
comp=Z,1µm,16.0s
EGAK Eagle 73.58 334 P P 09 38 45.1 0.0
EGAK IAmb IAmb 09 39 02.9
comp=Z,252nm,1.1s
TRPA Tarpa 73.64 44⇓P P 09 38 46.0 +0.2
CTGM Chitina Glacie 73.66 330 IAmb IAmb 09 39 03.6
comp=Z,486nm,1.2s
CTGM IAMs_20 IAMs_20 10 11 02.0
comp=Z,16µm,22.0s
KWP Kalwaria Pacla 73.66 42 eP P 09 38 47.0 +1.1
KWP eS S 09 48 15.3 +0.6
KWP eL L 10 05 01.1
comp=Z,9µm,22.7s
KWP Kalwaria Pacla 73.66 42 P P 09 38 46.8 +0.9
KWP IAmb IAmb 09 39 02.1
comp=Z,536nm,1.1s
KWP Kalwaria Pacla 73.66 42 eP P 09 38 47.0 +1.1
KWP eS S 09 48 15.3 +0.6
KTK1 Kautokeino 73.69 22⇓iP P 09 38 45.7 0.0
KTK1 IVmB_BB 09 38 49.0
comp=Z,4µm,4.5s
KTK1 eS S 09 48 17.0 +2.6
PVO Paravola 73.69 54 P P 09 38 47.4 +1.1
RLS Riolos of Patr 73.70 54 P P 09 38 47.1 +0.8
KZN Kozani 73.71 52 P P 09 38 46.7 +0.2
KZN Kozani 73.71 52 P P 09 38 46.9 +0.4
SUW Suwalki 73.73 38 eP P 09 38 46.0 -0.2
SUW eS S 09 48 16.3 +1.0
SUW eL L 10 07 32.3
comp=Z,43µm,20.7s
SUW Suwalki 73.73 38 P P 09 38 45.8 -0.4
SUW IAmb IAmb 09 39 00.3
comp=Z,307nm,1.2s
SUW Suwalki 73.73 38 eP P 09 38 46.0 -0.2
SUW eS S 09 48 16.3 +1.0
BARN Barnard Glacie 73.81 330 P P 09 38 48.0 +1.2
DRGR 73.85 45⇑P P 09 38 47.2 0.0
DRGR 73.85 45 eP P 09 38 47.2 0.0
DRGR 73.85 45 P P 09 38 46.8 -0.4
DRGR pmax pmax
comp=Z,105nm,2.0s
EVR Evrytania 73.88 53 P P 09 38 48.6 +1.1
HAMF Hammerfest 73.90 20⇓iP P 09 38 47.1 +0.2
HAMF IVmB_BB 09 38 49.4
comp=Z,6µm,2.4s
HAMF eS S 09 48 18.6 +2.0
HAMF IVMs_BB IVMs_BB 10 08 57.4
comp=Z,6µm,14.0s
DRO Drossia 73.90 54 P P 09 38 48.5 +0.9
AMT Artemida-Makis 73.95 55 P P 09 38 48.2 +0.3
THL Klokotos Trika 73.97 53 P P 09 38 48.2 +0.3
ANX Ano Chora 74.00 54 P P 09 38 49.6 +1.4
PYL PYLOS 74.04 55 P P 09 38 48.7 +0.3
DEV Deva 74.05 46⇓P P 09 38 52.2 +3.9
DEV Deva 74.05 46 P P 09 38 52.2 +3.9
PABE Paberze 74.12 36 eP P 09 38 48.3 -0.1
SERG Sergoula 74.12 54 P P 09 38 49.9 +1.0
GRG Griva 74.13 51 P P 09 38 49.3 +0.4
GRG Griva 74.13 51 P P 09 38 49.5 +0.6
TRIZ Trizonia 74.14 54 P P 09 38 49.9 +1.0
BALM Baldy 74.15 330 IAmb IAmb 09 39 13.8
comp=Z,263nm,1.2s
BALM IAMs_20 IAMs_20 10 17 48.0
comp=Z,17µm,18.0s
ITM Ithomi 74.16 55 P P 09 38 49.6 +0.5
ITM Ithomi 74.16 55 IAmb IAmb 09 39 09.2
comp=Z,321nm,1.1s
ITM IAMs_20 IAMs_20 10 12 23.0
comp=Z,11µm,19.0s
KALE Kalithea 74.19 54 P P 09 38 49.9 +0.6
PUNG Punghina 74.21 48⇓P P 09 38 49.4 +0.2
VAY Valandovo 74.22 51 eP P 09 38 50.4 +1.1
VAY Valandovo 74.22 51⇓iP P 09 38 50.0 +0.7
VAY Valandovo 74.22 51 P P 09 38 53.2 +3.9
VAY pmax pmax
comp=Z,457nm,1.5s
KLV Kalavryta, Ach 74.24 54 P P 09 38 50.5 +0.9
AGG Agios Georgios 74.27 53 P P 09 38 50.4 +0.7
AGG Agios Georgios 74.27 53 P P 09 38 48.4 -1.4
AGG Agios Georgios 74.27 53 P P 09 38 48.4 -1.4
AGG pmax pmax
comp=Z,215nm,1.2s
KLMT Kalamata 74.28 55 P P 09 38 50.6 +0.9
LIT Litokhoron 74.28 52 P P 09 38 49.4 -0.4
LIT Litokhoron 74.28 52 P P 09 38 49.4 -0.4
LIT Litokhoron 74.28 52 P P 09 38 49.4 -0.4
LIT pmax pmax
comp=Z,140nm,1.2s
BMR Baia Mare 74.31 44⇑P P 09 38 50.4 +0.6
SRE Strehaia 74.37 47⇓P P 09 38 51.1 +1.0
SRE Strehaia 74.37 47 P P 09 38 51.1 +1.0
MCARA McCarthy VSAT 74.47 330 IAMs_20 IAMs_20 10 17 14.3
comp=Z,14µm,20.0s
KNT Kendrikon 74.48 51 P P 09 38 51.6 +0.7
KNT Kendrikon 74.48 51 P P 09 38 51.6 +0.7
VLX Vlachokerasia 74.49 55 P P 09 38 52.4 +1.2
HOPEN Hopen 74.50 14 eP P 09 38 50.4 +0.1
HOPEN IVmB_BB 09 38 52.8
comp=Z,4µm,2.6s
HOPEN eS S 09 48 25.9 +2.7
HOPEN IVMs_BB IVMs_BB 10 03 23.1
comp=Z,5µm,15.0s
ARCES ARCESS Array B 74.50 21 P P 09 38 50.1 -0.3
comp=Z,69nm,0.9s,baz=276,slow=5.2,SNR=85
ARCES LR LR 10 07 22.7
comp=Z,8µm,18.1s,baz=271,slow=32
ARE0 ARCESS Array S 74.50 21⇓iP P 09 38 50.6 +0.1
ARE0 IVmBBB 09 38 52.5
comp=Z,5µm,2.3s
ARE0 eS S 09 48 27.0 +3.5
ARE0 IVMs_BB IVMs_BB 10 09 10.2
comp=Z,6µm,19.0s
ARE0 ARCESS Array S 74.50 21 P P 09 38 50.3 -0.2
LVV L'vov 74.50 42 eP P 09 38 51.4 +0.6
LVV e 09 39 04.6
LVV eS S 09 48 23.8 -0.4
DYR Agios Nikonas 74.53 55 P P 09 38 51.6 +0.3
KKB Krupnik 74.55 50 eP P 09 38 52.4 +1.1
VTS Vitosha 74.58 49⇓P P 09 38 52.3 +0.6
VTS Vitosha 74.58 49 eP P 09 38 52.6 +0.9
VTS Vitosha 74.58 49 P P 09 38 52.1 +0.5
VTS IAMs_20 IAMs_20 10 10 31.9
comp=Z,11µm,19.0s
VTS Vitosha 74.58 49 P P 09 38 52.1 +0.5
VTS pmax pmax
comp=Z,108nm,1.0s
THE Thessaloniki 74.59 51 P P 09 38 51.4 -0.1
HORT Hortiatis 74.69 51 P P 09 38 52.4 +0.2
LOT Lotru 74.69 46⇓P P 09 38 52.0 -0.2
MENT Mentasta 74.74 332 IAMs_20 IAMs_20 10 12 46.4
comp=Z,14µm,20.0s
PROD Prodromos 74.80 54 P P 09 38 53.1 +0.3
SCRK Sand Creek 74.82 333 P P 09 38 52.1 -0.5
LKR Lokris 74.83 53 P P 09 38 53.1 +0.2
GLB Gilahina Butte 74.84 330 IAmb IAmb 09 39 09.9
comp=Z,336nm,1.1s
GLB IAMs_20 IAMs_20 10 17 25.3
comp=Z,17µm,20.0s
SOH Sokhos 74.86 51 P P 09 38 54.1 +0.9
SOH Sokhos 74.86 51 P P 09 38 54.0 +0.9
DOT Dot Lake 74.87 333 IAMs_20 IAMs_20 10 13 42.8
comp=Z,21µm,21.0s
LTK Loutraki 74.88 54 P P 09 38 53.2 -0.1
LOUT Loutraki 74.89 54 P P 09 38 53.6 +0.3
XOR Xorichti 74.90 53 P P 09 38 53.1 -0.3
NEO Neokhori 74.93 53 P P 09 38 53.3 -0.2
FINES FINESS Array B 74.94 30 P P 09 38 52.9 -0.3
comp=Z,29nm,0.6s,baz=256,slow=3.7,SNR=81
FINES LR LR 10 07 39.4
comp=Z,16µm,21.2s,baz=274,slow=32
FIA1 FINESS Array S 74.94 30 P P 09 38 52.6 -0.5
FIA1 IAmb IAmb 09 38 54.9
comp=Z,735nm,1.7s
SRS Serrai 75.01 51 P P 09 38 54.5 +0.6
SRS Serrai 75.01 51 P P 09 38 55.3 +1.4
SRS pmax pmax
comp=Z,368nm,0.8s
VLI Veliai 75.02 55 P P 09 38 54.6 +0.6
KEV Kevo 75.03 21 P P 09 38 53.3 -0.1
KEV IAmb IAmb 09 38 55.5
comp=Z,609nm,1.7s
KEV IAMs_20 IAMs_20 10 09 28.3
comp=Z,12µm,18.0s
KEV Kevo 75.03 21 P P 09 38 53.3 -0.1
KEV pmax pmax
comp=Z,609nm,1.7s
MMB Musomiste 75.06 50 eP P 09 38 55.5 +1.3
KRND KRANIDI 75.10 55 P P 09 38 54.4 -0.1
KTHR Kythira 75.13 56 P P 09 38 55.8 +1.1
SKIA Skiathos 75.13 53 P P 09 38 54.7 0.0
VILL Villia 75.13 54 P P 09 38 54.4 -0.4
DID Didima 75.16 55 P P 09 38 54.4 -0.5
KTHA Kythira Island 75.17 56 P P 09 38 55.6 +0.6
NVR Nevrokopi 75.18 51 P P 09 38 55.5 +0.5
PAIG Paliouri 75.21 52 P P 09 38 55.4 +0.3
PAIG Paliouri 75.21 52 P P 09 38 55.3 +0.2
RIDG Independent Ri 75.21 333 P P 09 38 54.7 0.0
FYU Fort Yukon 75.24 336 P P 09 38 54.6 -0.2
FYU IAmb IAmb 09 38 56.7
comp=Z,762nm,1.7s
FYU IAMs_20 IAMs_20 10 16 02.4
comp=Z,17µm,20.0s
MRKA Markates 75.28 53 P P 09 38 55.9 +0.3
ARR Arges 75.31 46⇓P P 09 38 56.0 +0.3
ISAL Salakas 75.34 36 eP P 09 38 55.4 -0.1
ISAL IAmb IAmb 09 39 11.2
comp=Z,103nm,1.2s
OUR Ouranopolis 75.39 52 P P 09 38 56.8 +0.7
OUR Ouranopolis 75.39 52 P P 09 38 56.9 +0.8
IZAR Zarasai 75.39 36 eP P 09 38 55.4 -0.4
IZAR IAmb IAmb 09 39 11.5
comp=Z,85nm,1.0s
PRP Porcupine Dome 75.41 335 P P 09 38 55.8 -0.1
PRP IAMs_20 IAMs_20 10 18 34.0
comp=Z,17µm,20.0s
IIGN Ignalina 75.41 36 eP P 09 38 55.4 -0.6
IIGN IAmb IAmb 09 39 11.7
comp=Z,156nm,1.3s
ANKY Antikythira Is 75.42 56 P P 09 38 57.3 +0.9
AOS Alonnisos 75.45 53 P P 09 38 56.1 -0.4
VSU Vasula 75.45 33 eP P 09 38 55.4 -0.7
VSU Vasula 75.45 33ceP P 09 38 55.4 -0.7
VSU pmax pmax
comp=Z,1µm,1.6s
BUR08 Bucovina Ar. S 75.47 44 P P 09 38 57.4 +0.8
BUR08 IAmb IAmb 09 39 12.5
comp=Z,588nm,1.1s
ATH Athens Observa 75.47 54 P P 09 38 57.0 +0.4
ATH Athens Observa 75.47 54 P P 09 38 57.0 +0.4
BURAR Bucovina Array 75.48 44⇑P P 09 38 58.0 +1.3
BURAR Bucovina Array 75.48 44 P P 09 38 57.9 +1.3
PLVB Pleven 75.51 48⇓P P 09 38 57.0 +0.2
ATHU Athens Univers 75.53 54 P P 09 38 57.3 +0.3
PAX Paxson 75.54 332 P P 09 38 55.8 -0.8
PAX IAmb IAmb 09 39 13.1
comp=Z,322nm,1.2s
PAX IAMs_20 IAMs_20 10 15 03.5
comp=Z,16µm,20.0s
PAX Paxson 75.54 332 P P 09 38 55.8 -0.8
PAX pmax pmax
comp=Z,322nm,1.2s
PAX MLR MLR
comp=Z,16µm,20.0s
VLY Voula,Athens 75.55 54 P P 09 38 57.2 +0.1
PTL Penteli 75.58 54 P P 09 38 57.6 +0.3
VOIR 75.59 46⇓P P 09 38 57.2 -0.1
VOIR 75.59 46 P P 09 38 57.2 -0.1
MTUR Matau 75.62 47⇑P P 09 38 57.7 +0.2
HUMR Humele 75.64 47⇓P P 09 38 57.7 +0.2
KAVA Kavala 75.71 51 P P 09 38 58.2 +0.2
PLD Plovdiv 75.72 50 eP P 09 38 58.8 +0.8
PLD Plovdiv 75.72 50 P P 09 38 58.8 +0.8
PLD pmax pmax
comp=Z,508nm,2.2s
NACGM Naroch 75.77 36 eP P 09 38 56.0 -2.0
NACGM eP P 09 38 56.0 -2.0
NACGM PM 09 39 12.0
comp=Z,0.5nm,1.0s
NACGM ePcP PcP 09 39 16.0 +5.4
NACGM ePP PP 09 42 10.0 +22
NACGM ePPP PPP 09 43 52.0
NACGM eS S 09 48 38.0 0.0
NACGM ePS PnS 09 49 25.0 +8.3
NACGM eSS SS 09 53 20.0 -10
NACGM eSSS SSS 09 56 55.0
NACGM eLQ LQ 10 01 33.0
NACGM eLR LR 10 05 32.0
NACGM LRM MLR 10 10 44.0
comp=E,37nm,19.0s
NACGM LRM MLR 10 10 56.0
comp=Z,54nm,19.0s
DOPR Dopca 75.77 46⇓P P 09 38 58.4 +0.1
RZN Rozhen 75.78 50 eP P 09 38 59.6 +1.0
EYAK Cordova Ski Ar 75.84 329 IAmb IAmb 09 39 15.6
comp=Z,338nm,1.2s
COPA Copaceanca 75.86 48⇑P P 09 38 58.4 -0.3
THAS Thassos island 75.92 51 P P 09 38 59.5 +0.4
SKY Skiros Island 76.01 53 P P 09 39 00.4 +0.7
IMMV Iera Moni Meta 76.02 57 P P 09 39 00.2 +0.4
KARY Karystos 76.03 54 P P 09 38 59.2 -0.6
OZUR 76.03 46⇑P P 09 38 59.9 +0.1
IL31 76.03 334 P P 09 38 58.8 -0.5
IL31 IAmb IAmb 09 39 15.5
comp=Z,312nm,1.1s
ILAR Eielson Array 76.03 334 P P 09 38 58.7 -0.6
comp=Z,62nm,1.0s,baz=99,slow=3.0,SNR=176
ILAR LR LR 10 13 51.9
comp=Z,15µm,20.8s,baz=101,slow=37
PVL Pavlikeni 76.05 49 eP P 09 38 59.4 -0.4
CHAN Chania 76.06 57 P P 09 39 01.0 +1.0
HDA Harding Lake 76.09 333 IAmb IAmb 09 39 15.8
comp=Z,442nm,1.6s
HDA Harding Lake 76.09 333 P P 09 38 59.2 -0.5
baz=85
FID Port Fidalgo 76.18 330 P P 09 39 00.8 +0.6
FID IAmb IAmb 09 39 17.2
comp=Z,386nm,1.1s
MHLO Agia Marina, M 76.19 55 P P 09 39 00.6 -0.1
SERI Serifos 76.19 55 P P 09 39 00.4 -0.4
GVD Gavdhos 76.19 57 P P 09 39 00.9 +0.1
GVDS Gavdos 76.19 57 P P 09 39 00.9 +0.1
VAM Vamos 76.20 57 P P 09 39 01.5 +0.6
VAM Vamos 76.20 57 P P 09 39 01.8 +0.9
MLR Muntele Rosu 76.21 46 LR LR 10 10 17.6
comp=Z,8µm,18.7s,baz=263,slow=34
MLR Muntele Rosu 76.21 46⇓P P 09 39 01.4 +0.5
MLR Muntele Rosu 76.21 46 P P 09 39 01.0 +0.1
MLR IAMs_20 IAMs_20 10 12 19.1
comp=Z,13µm,19.0s
MLR Muntele Rosu 76.21 46 P P 09 39 01.0 +0.1
MLR pmax pmax
comp=Z,811nm,1.1s
HIN Hinchinbrook I 76.23 329 IAmb IAmb 09 39 17.3
comp=Z,394nm,1.1s
POKR Poker Plat Res 76.24 334 P P 09 39 00.7 +0.2
baz=85
KDZ Kurdzhali 76.31 50 eP P 09 39 01.4 0.0
DHY Denali Highway 76.39 332 IAmb IAmb 09 39 18.0
comp=Z,412nm,1.8s
DHY IAMs_20 IAMs_20 10 12 06.1
comp=Z,15µm,21.0s
COLA College 76.44 334 P P 09 39 00.9 -0.7
COLA IAmb IAmb 09 39 18.0
comp=Z,486nm,1.2s
COLA College 76.44 334 IAMs_20 IAMs_20 10 17 52.3
comp=Z,21µm,20.0s
COLA College 76.44 334 P P 09 39 00.9 -0.7
COLA pmax pmax
comp=Z,486nm,1.2s
CCB Clear Creek Bu 76.44 334 IAMs_20 IAMs_20 10 19 02.2
comp=Z,20µm,20.0s
TCOL CIGO, UAF Yank 76.44 334 P P 09 39 01.6 0.0
baz=85
MICGM Minsk 76.44 37⇓iP P 09 39 01.0 -0.8
MICGM PM 09 39 03.0
comp=Z,2.2nm,1.0s
MICGM PM 09 39 03.0
comp=Z,14nm,2.0s
MICGM PM 09 39 04.0
comp=E,1.8nm,1.0s
MICGM PM 09 39 05.0
comp=N,1.1nm,1.0s
MICGM ePcP pwP 09 39 20.0 +5.7
MICGM ePP PP 09 42 06.0 +12
MICGM ePPP PPP 09 44 06.0
MICGM ePsP 09 45 08.0
MICGM eS S 09 48 45.0 -0.5
MICGM SM 09 48 48.0
comp=E,4.8nm,6.0s
MICGM eScS SKSac 09 49 06.0 -5.4
MICGM ePS PnS 09 49 30.0 +4.6
MICGM eSS SS 09 53 42.0 +2.1
MICGM eSSS SSS 09 57 08.0
MICGM eLQ LQ 10 04 40.0
MICGM eLR LR 10 05 56.0
MICGM LRM MLR 10 09 12.0
comp=N,22nm,18.0s
MICGM LRM MLR 10 09 12.0
comp=N,24nm,18.0s
MICGM LRM MLR 10 09 20.0
comp=Z,64nm,18.0s
MICGM LRM MLR 10 09 22.0
comp=Z,68nm,18.0s
MICGM LRM MLR 10 09 26.0
comp=E,30nm,18.0s
MICGM LRM MLR 10 09 28.0
comp=E,39nm,18.0s
MNK Minsk 76.44 37 eP P 09 39 01.0 -0.8
RDO Rodhopi 76.46 51 P P 09 39 02.1 -0.1
GLI Glacier Island 76.47 330 IAmb IAmb 09 39 18.3
comp=Z,350nm,1.0s
GLI IAMs_20 IAMs_20 10 12 42.3
comp=Z,19µm,22.0s
SZH Strazhica 76.48 48 eP P 09 39 01.2 -1.1
ELND Elena 76.48 49⇑P P 09 39 02.8 +0.5
SCM Sheep Creek Mo 76.49 331 P P 09 39 02.4 +0.3
SCM IAMs_20 IAMs_20 10 17 04.8
comp=Z,20µm,21.0s
SCM Sheep Creek Mo 76.49 331 P P 09 39 02.4 +0.3
SCM pmax pmax
comp=Z,863nm,1.6s
SCM MLR MLR
comp=Z,20µm,21.0s
SMTH Samothraki Isl 76.55 51 P P 09 39 02.7 0.0
TESR Tescani 76.58 45⇓P P 09 39 02.9 +0.2
WRH Wood River Hil 76.58 334 P P 09 39 01.8 -0.6
WRH IAmb IAmb 09 39 18.6
comp=Z,222nm,1.0s
MDM Murphy Dome 76.59 334 P P 09 39 02.0 -0.5
MDM IAMs_20 IAMs_20 10 17 57.2
comp=Z,19µm,20.0s
PLOR Plostina 76.66 46⇓P P 09 39 02.7 -0.7
PLOR Plostina 76.66 46 P P 09 39 02.6 -0.7
ISR Istrita 76.68 46⇓P P 09 39 02.9 -0.5
ISR Istrita 76.68 46 P P 09 39 02.9 -0.5
VRI Vrincioaia 76.71 46⇑P P 09 39 03.2 -0.4
VRI Vrincioaia 76.71 46 P P 09 39 03.1 -0.4
BISRR Bisoca 76.74 46⇑P P 09 39 07.5 +3.7
TOLK Toolik Lake Re 76.74 338 IAMs_20 IAMs_20 10 15 00.1
comp=Z,22µm,21.0s
TOLK Toolik Lake Re 76.74 338 P P 09 39 03.7 +0.3
baz=84
SIVA Sivas 76.75 57 P P 09 39 04.5 +0.5
IDI Anoyia 76.78 57 LR LR 10 10 22.2
comp=Z,6µm,20.9s,baz=276,slow=34
RAZG Razgrad 76.85 48⇑P P 09 39 04.5 +0.1
ALN Alexandroupoli 76.88 51 P P 09 39 04.7 +0.2
ALN Alexandroupoli 76.88 51 P P 09 39 04.8 +0.2
IOSP Ios island 76.89 55 P P 09 39 04.4 -0.3

GRER 76.94 46 ⇓P P 09 39 05.8 +0.9
SML Sawmill 76.97 331 IAMs_20 IAMs_20 10 17 18.4
comp=Z,20µm,21.0s
SIGR SIGRI 76.97 53 P P 09 39 05.5 +0.4
NEA Nenana 76.99 334 IAMs_20 IAMs_20 10 14 09.7
comp=Z,23µm,22.0s
MCK McKinley 77.02 333 IAmb IAmb 09 39 21.2
comp=Z,267nm,1.2s
RND Reindeer 77.03 332 IAmb IAmb 09 39 21.9
comp=Z,472nm,1.3s
SAP1 Santorini-Akro 77.03 56 P P 09 39 05.2 -0.3
APE Apeiranthos 77.03 55 P P 09 39 05.0 -0.6
APE Apeiranthos 77.03 55 ⇓P P 09 39 05.6 0.0
JMB Yambol 77.06 49 eP P 09 39 05.8 +0.2
KNK Knik Glacier 77.07 330 IAmb IAmb 09 39 22.1
comp=Z,265nm,1.2s
SANT Santorini 77.07 56 P P 09 39 05.2 -0.6
SANT Santorini 77.07 56 ⇓P P 09 39 05.6 -0.2
SANT Santorini 77.07 56 P P 09 39 05.6 -0.2
SANT IAmb IAmb 09 39 21.1
comp=Z,274nm,1.0s
COLD Coldfoot 77.14 336 IAmb IAmb 09 39 22.7
comp=Z,709nm,2.0s
PUL Pulkovo 77.17 31ceP P 09 39 05.4 -0.4
PUL pmax pmax
comp=Z,694nm,2.5s
CHOS Chios island 77.24 53 P P 09 39 07.0 +0.2
GHO Glory Hole Cre 77.25 331 P P 09 39 05.8 -0.6
GHO IAmb IAmb 09 39 23.0
comp=Z,223nm,1.0s
GHO IAMs_20 IAMs_20 10 17 25.9
comp=Z,15µm,21.0s
LAST Lasithi 77.28 57 P P 09 39 07.3 +0.3
PRK Paraskevi 77.28 52 P P 09 39 07.9 +1.0
AMGA Amorgos Island 77.35 55 P P 09 39 07.1 -0.2
NPS Neapolis 77.37 57 P P 09 39 07.5 0.0
NPS Neapolis 77.37 57 P P 09 39 07.3 -0.2
PMR Palmer 77.37 331 IAmb IAmb 09 39 23.6
comp=Z,282nm,1.3s
NEF NEVSHA 77.45 48 eP P 09 39 07.9 +0.1
SORM Soroca 77.51 43 ⇑P P 09 39 07.0 -1.0
SORM Soroca 77.51 43 P P 09 39 07.0 -1.0
APA Apatity 77.53 23⇓iP P 09 39 07.2 -0.5
APA i 09 39 25.1
APA iS S 09 48 59.0 +2.1
APA i 09 49 27.0
APA iPS 09 49 57.0
APA pmax pmax
comp=Z,57nm,1.4s
PRD Provadia 77.55 48 eP P 09 39 08.7 +0.4
MLY Manley 77.64 334 P P 09 39 08.0 -0.5
MLY IAMs_20 IAMs_20 10 19 51.0
comp=Z,16µm,20.0s
LEOM Leova 77.67 45 ⇓P P 09 39 08.2 -0.7
LEOM Leova 77.67 45 P P 09 39 08.2 -0.7
ICOR Ion Corvin 77.70 47 ⇓P P 09 39 09.3 +0.2
HARR Harsova 77.71 47 ⇑P P 09 39 08.5 -0.6
HARR Harsova 77.71 47 P P 09 39 08.5 -0.6
KIEV Kiev 77.71 41 P P 09 39 08.0 -1.0
SEW Seward 77.72 329 P P 09 39 08.7 -0.1
SEW IAmb IAmb 09 39 25.4
comp=Z,405nm,1.2s
AKASG Malin Array Be 77.72 41 P P 09 39 08.4 -0.7
comp=Z,47nm,1.1s,baz=272,slow=4.4,SNR=77
AKASG LR LR 10 09 07.7
comp=Z,23µm,20.4s,baz=290,slow=32
AKASG Malin Array Be 77.72 41 iP P 09 39 08.3 -0.8
AKASG pmax pmax
comp=Z,46nm,1.0s
RC01 Rabbit Creek A 77.73 330 P P 09 39 09.2 +0.2
RC01 IAmb IAmb 09 39 26.9
comp=Z,336nm,1.3s
RC01 IAMs_20 IAMs_20 10 17 57.5
comp=Z,17µm,20.0s
CFR Carcaliu 77.78 46 ⇓P P 09 39 09.2 -0.4
CFR Carcaliu 77.78 46 P P 09 39 09.1 -0.4
BPAW Bear Paw Mtn. 77.88 333 IAmb IAmb 09 39 25.8
comp=Z,402nm,1.0s
ZKR Zakros 77.88 57 P P 09 39 10.5 +0.2
KTH Kantishna Hill 77.93 333 P P 09 39 09.9 -0.2
LVZ Lovozero 77.96 23 P P 09 39 11.0 +0.9
LVZ Lovozero 77.96 23ceP P 09 39 09.9 -0.2
LVZ pmax pmax
comp=Z,191nm,1.7s
SMG Samos 77.96 54 P P 09 39 10.8 +0.1
KIS Kishinev 77.99 44⇑iP P 09 39 10.0 -0.7
comp=Z,800nm,2.0s
KIS Kishinev 77.99 44 ePP PP 09 42 15.0 +8.3
KIS Kishinev 77.99 44 ePcS 09 43 42.0
KIS iS S 09 49 01.0 -1.5
comp=Z,2µm,15.0s
KIS Kishinev 77.99 44 iPS PnS 09 49 38.0 -7.3
KIS iSS SS 09 54 05.0 +1.4
KIS iSSS SSS 09 56 14.0
KIS LRM MLR 10 21 48.0
comp=Z,12µm,16.0s
KIS Kishinev 77.99 44⇑iP P 09 39 10.0 -0.7
KIS e 09 42 15.0
KIS iS S 09 49 01.0 -1.5
KIS iPS 09 49 38.0
KIS iSS SS 09 54 05.0 +1.4
KIS pmax pmax
comp=Z,800nm,2.0s
KIS pmax pmax
comp=Z,2µm,24.0s
KIS smax smax
comp=N,2µm,15.0s
TOPG Topolog 78.00 47 ⇑P P 09 39 09.9 -0.9
PSN Preselentsi 78.04 48 eP P 09 39 11.0 0.0
TIRR Tirgusor 78.09 47 ⇓P P 09 39 11.0 -0.2
TIRR Tirgusor 78.09 47 eP P 09 39 11.0 -0.2
TIRR Tirgusor 78.09 47 P P 09 39 12.0 +0.8
SUA Susitna One 78.16 331 P P 09 39 11.1 -0.3
SUA IAmb IAmb 09 39 28.3
comp=Z,531nm,2.0s
SUA IAMs_20 IAMs_20 10 19 27.8
comp=Z,17µm,20.0s
EFOR EFORIE 78.30 47 ⇑P P 09 39 13.1 +0.6
MANR Mangalia 78.31 48 ⇓P P 09 39 13.2 +0.7
NISR Nisiros 78.36 55 P P 09 39 11.9 -1.1
SKT Skwentna 78.44 331 P P 09 39 12.5 -0.5
SKT IAMs_20 IAMs_20 10 14 01.4
comp=Z,12µm,20.0s
KARP Karpathos 78.57 56 P P 09 39 13.9 -0.3
KARP Karpathos 78.57 56 P P 09 39 13.2 -1.0
PPLA Purkeypile 78.60 332 P P 09 39 13.4 -0.5
PPLA IAmb IAmb 09 39 31.1
comp=Z,342nm,1.2s
CNPM China Poot 78.70 329 IAmb IAmb 09 39 31.4
comp=Z,272nm,1.2s
CNPM IAMs_20 IAMs_20 10 16 51.3
comp=Z,20µm,21.0s
PMSA Palmer Station 79.22 182 LR LR 10 18 11.9
comp=Z,16µm,19.9s,baz=11,slow=39
PMSA Palmer Station 79.22 182 eP P 09 39 18.8 +2.0
PMSA Palmer Station 79.22 182 P P 09 39 17.1 +0.2
PMSA IAmb IAmb 09 39 21.2
comp=Z,369nm,1.2s
ARG Arkhangelos 79.22 55 P P 09 39 17.1 -0.6
ARG Arkhangelos 79.22 55 P P 09 39 17.3 -0.4
KDAK Kodiak Island 79.70 327 P P 09 39 20.4 +0.6
KDAK IAmb IAmb 09 39 37.1
comp=Z,301nm,1.0s
KDAK Kodiak Island 79.70 327 P P 09 39 20.5 +0.6
KDAK pmax pmax
comp=Z,301nm,1.0s
KDAK MLR MLR
comp=Z,28µm,22.0s
PTCN Pitcairn Islan 79.72 241 IAMs_20 IAMs_20 10 11 33.7
comp=Z,15µm,22.0s
TMCR Tamitsa 80.02 26 eP P 09 39 19.3 -2.1
TMCR eS S 09 49 19.6 -3.9
TMCR pmax pmax
comp=Z,252nm,1.5s
OHAK Old Harbor 80.18 327 P P 09 39 23.4 +0.9
OHAK IAmb IAmb 09 39 39.8
comp=Z,410nm,1.1s
KSL Kastellorizon 80.40 55 P P 09 39 39.7 +16
SVW2 Sparrevohn 80.52 331 IAMs_20 IAMs_20 10 22 10.7
comp=Z,17µm,20.0s
ELL Elmali 80.54 54 P P 09 39 25.9 +0.9
ELL Elmali 80.54 54 P P 09 39 25.9 +0.9
ELL pmax pmax
comp=Z,1µm,1.0s

MDUB Mudurnu 80.81 51 P P 09 39 25.9 -0.5
OBN Obninsk 81.30 35 PKPPKP P'P'df 10 06 09.6 -1.1
comp=Z,2.9nm,0.4s,baz=170,slow=7.9,SNR=3.5
OBN LR LR 10 11 29.8
comp=Z,3µm,20.4s,baz=273,slow=33
OBN Obninsk 81.30 35 P P 09 39 28.5 0.0
OBN Obninsk 81.30 35 IAMs_20 IAMs_20 10 11 16.9
comp=Z,16µm,21.0s
OBN Obninsk 81.30 35deP P 09 39 28.7 +0.3
OBN e 09 42 28.9
OBN ePPP PPP 09 44 25.3
OBN iS S 09 49 36.4 -0.8
OBN eSSS SSS 09 58 22.0
OBN pmax pmax
comp=Z,874nm,1.7s
OBN MLR MLR
comp=Z,12µm,17.0s
KLMR Klimovskoe 81.47 29d iP P 09 39 28.8 -0.4
KLMR S S 09 49 38.9 +0.2
KLMR SS SS 09 54 56.0 +1.2
KLMR pmax pmax
comp=Z,627nm,1.6s
KLMR pmax pmax
comp=Z,2µm,2.1s
KLMR Klimovskoe 81.47 29⇓iP P 09 39 28.9 -0.3
KLMR ⇑iP P 09 39 28.9 -0.3
KLMR ⇓iP P 09 39 28.9 -0.3
KLMR AMP 09 39 30.6
comp=Z,2µm,2.1s
KLMR AMP 09 39 31.8
comp=Z,627nm,1.6s
KLMR S S 09 49 39.0 +0.2
KLMR S S 09 49 39.0 +0.2
KLMR SS SS 09 54 56.1 +1.2
KLMR SS SS 09 54 56.1 +1.2
KLMR LQ LQ 10 01 14.4
KLMR LQ LQ 10 01 14.4
KLMR LR LR 10 05 24.1
KLMR AMP 10 12 19.8
comp=Z,12µm,18.9s
RDOG Red Dog Mine 81.70 338 P P 09 39 31.0 +0.6
RDOG IAmb IAmb 09 39 47.4
comp=Z,375nm,1.0s
MOS Moscow 81.74 35 eP P 09 39 27.0 -3.8
MOS eS S 09 49 39.4 -2.4
MOS e 09 50 33.0
MOS pmax pmax
comp=Z,3µm,2.9s
MOS pmax pmax
comp=Z,683nm,1.9s
MOS MLR MLR
comp=E,22µm,19.0s
MOS MLR MLR
comp=Z,23µm,18.0s
CHIR Chirikof Islan 81.75 326 P P 09 39 31.8 +0.9
SEVA Sevastopol 81.78 46 ⇓P P 09 39 28.9 -2.3
SIM Simferopol' 81.99 46d iP P 09 39 33.0 +0.6
SIM iS S 09 49 47.3 +2.5
SIM eSS SS 09 55 07.0 +3.4
SIM pmax pmax
comp=Z,500nm,7.2s
SIM pmax pmax
comp=Z,148nm,0.8s
BR231 Keskin MP Arra 82.12 51 P P 09 39 32.7 -0.6
ANTO Ankara 82.13 51 P P 09 39 34.2 +0.9
ANTO Ankara 82.13 51 P P 09 39 34.2 +0.9
ANTO pmax pmax
comp=Z,170nm,1.0s
ANTO MLR MLR
comp=Z,7µm,19.0s
TSUM Tsumeb 82.48 112 iP P 09 39 36.5 +1.0
TSUM Tsumeb 82.48 112 iP P 09 39 36.5 +1.0
TSUM Tsumeb 82.48 112 P P 09 39 35.3 -0.2
TSUM IAmb IAmb 09 39 51.5
comp=Z,201nm,0.9s
BR131 Keskin Array S 82.80 51d iP P 09 39 36.2 -0.7
BRTR Keskin Array B 82.80 51 P P 09 39 36.7 -0.2
comp=Z,22nm,0.9s,baz=260,slow=5.3,SNR=42
BRTR PKKPbc PKKPbc 09 58 02.7 +1.5
comp=Z,3.7nm,0.9s,baz=142,slow=4.2,SNR=9.8
BRTR PKPPKP 10 06 10.8
comp=Z,1.2nm,1.0s,baz=142,slow=3.3,SNR=4.4
BRTR LR LR 10 11 25.4
comp=Z,5µm,21.9s,baz=274,slow=32
CHGN Chignik 83.14 326 IAmb IAmb 09 39 56.5
comp=Z,262nm,1.0s
LPSR Galich'ya Gora 83.27 37 eP P 09 39 38.5 -0.3
LPSR e 09 39 39.1
LPSR eS S 09 49 54.6 -2.9
LPSR pmax pmax
comp=Z,510nm,1.6s
LPSR smax smax
comp=N,3µm,8.4s
DIKM Dikmen 83.55 49 ⇓P P 09 39 41.0 +0.5
VORR Voronezh 83.68 38 eP P 09 39 39.0 -1.9
VORR pmax pmax
comp=Z,650nm,2.0s
VSR Storozhevoye 83.77 39 eP P 09 39 40.6 -0.8
VSR e 09 39 41.6
VSR eS SKSac 09 49 56.8 -5.7
VSR pmax pmax
comp=Z,400nm,1.8s
VSR smax smax
comp=N,3µm,9.4s
TAOE Nuku Hiva Isla 83.77 259 eP P 09 39 43.9 +1.6
comp=N,965nm,1.5s
TAOE Nuku Hiva Isla 83.77 259 eS S 09 50 06.4 +2.3
comp=N,13µm,24.2s
TAOE Nuku Hiva Isla 83.77 259 eLQ LQ 10 02 30.6
comp=N,14µm,26.7s
TAOE eLR LR 10 06 09.4
comp=N,15µm,25.1s
ANM Nome 83.81 335 IAMs_20 IAMs_20 10 20 31.0
comp=Z,17µm,20.0s
VORD Divnogorie 83.92 39 eP P 09 39 41.4 -0.8
VORD eS SKSac 09 49 58.7 -4.7
VORD pmax pmax
comp=Z,180nm,1.6s
VORD smax smax
comp=N,1µm,8.3s
PRGR Permogore 84.06 28⇓iP P 09 39 42.9 +0.2
PRGR pmax pmax
comp=Z,772nm,1.4s
CNBA Chernabura Isl 84.20 325 IAmb IAmb 09 40 04.4
comp=Z,514nm,1.8s
ANN Anapa 84.32 45 eP P 09 39 41.0 -3.4
ANN e 09 42 56.0
ANN eS SKSac 09 50 02.8 -3.4
ANN eSS SS 09 55 36.1 -1.9
ANN pmax pmax
comp=N,683nm,4.9s
ANN pmax pmax
comp=Z,2µm,4.9s
ANN pmax pmax
comp=E,512nm,4.9s
ANN pmax pmax
comp=Z,388nm,1.0s
ANN pmax pmax
comp=N,54nm,1.0s
ANN pmax pmax
comp=E,35nm,1.0s
ANN smax smax
comp=E,13µm,15.9s
ANN smax smax
comp=N,3µm,7.9s
ANN MLR MLR
comp=Z,12µm,18.0s
ANN MLR MLR
comp=E,5µm,18.0s
ANN MLR MLR
comp=N,10µm,18.0s
SDPT Sand Point 84.53 326 P P 09 39 45.7 +0.5
VRH Novokhopyorsk 85.32 38 eP P 09 39 48.9 -0.3
VRH eS SKSac 09 50 08.2 -4.2
VRH pmax pmax
comp=Z,370nm,1.6s
VRH pmax pmax
comp=Z,1µm,2.0s
VRH smax smax
comp=N,3µm,9.7s
BHL Bhannes 85.75 56 eP P 09 39 52.1 +0.2
HWQ Hawqa 85.89 56 eP P 09 39 53.2 +0.5
SHBL Chebaa 85.96 57 eP P 09 39 53.8 +0.7
GAZ Gaziantep 86.14 53 P P 09 39 53.7 -0.1
GAZ IAmb IAmb 09 42 35.3

comp=Z,133nm,0.8s
SOC Sochi 86.23 46d iP P 09 39 54.4 +0.4
SOC e 09 43 14.2
SOC iS SKSac 09 50 17.4 -1.0
SOC pmax pmax
comp=Z,279nm,1.0s
SOC MLR MLR
comp=Z,8µm,18.0s
EIL Elat 86.23 60 PKPPKP P'P'df 10 06 01.7 -0.4
comp=Z,2.0nm,0.6s,baz=99,slow=2.7,SNR=6.1
EIL LR LR 10 19 13.1
comp=Z,12µm,18.4s,baz=284,slow=36
GAMB Gambell 86.67 336 P P 09 39 55.7 +0.1
GAMB IAmb IAmb 09 40 13.4
comp=Z,409nm,1.4s
GAMB IAMs_20 IAMs_20 10 20 19.7
comp=Z,16µm,21.0s
KIRV Kirov 86.94 30 PKPPKP P'P'df 10 05 58.4 -1.7
comp=Z,9.8nm,0.5s,baz=43,slow=2.6,SNR=3.9
KIRV LR LR 10 15 59.2
comp=Z,19µm,19.3s,baz=294,slow=34
ASF Jabal al Asfar 87.21 58 LR LR 10 18 59.6
comp=Z,1µm,19.8s,baz=229,slow=36
AKUT Akutan 87.83 326 P P 09 40 02.0 +0.5
GOF Gofitskoye 88.06 44⇓iP P 09 40 03.1 +0.3
GOF eS S 09 50 49.8 +4.8
GOF pmax pmax
comp=Z,347nm,1.8s
KIV Kislovodsk 88.17 45 eP P 09 40 03.7 +0.2
KIV e 09 43 30.5
KIV e 09 50 31.0
KIV eSS SS 09 56 36.9 +2.2
KIV pmax pmax
comp=Z,167nm,1.1s
KIV pmax pmax
comp=Z,3µm,3.9s
BCA Borcka 88.21 48 ⇓P P 09 40 03.5 -0.1
SHA1 Shidzhatmaz 88.22 45d iP P 09 40 03.8 -0.1
UNV Unalaska Valle 88.34 326 P P 09 40 04.7 +0.7
UNV IAMs_20 IAMs_20 10 27 11.6
comp=Z,11µm,20.0s
KBZ Khabaz 88.39 45 P P 09 40 05.5 +1.1
comp=Z,14nm,0.8s,baz=287,slow=5.1,SNR=49
KBZ PKKP PKKPbc 09 57 48.4 +0.5
comp=Z,2.8nm,0.9s,baz=133,slow=2.5,SNR=4.0
KBZ LR LR 10 16 46.6
comp=Z,8µm,20.9s,baz=311,slow=34
KBZ Khabaz 88.39 45 iP P 09 40 04.1 -0.3
KBZ pmax pmax
comp=Z,173nm,1.1s
KBZ MLR MLR
comp=Z,8µm,18.0s
NEY Neytrino 88.42 46d iP P 09 40 05.7 +0.9
NEY pmax pmax
comp=Z,35nm,1.3s
NCK Nalchik 88.94 45 iP P 09 40 07.5 +0.4
NCK pmax pmax
comp=Z,62nm,0.9s
NCK MLR MLR
comp=Z,5µm,18.0s
ITZ Itezhi-Tezhi 89.20 106 iP P 09 40 08.2 -0.7
ITZ iZ 09 50 52.7
ITZ Itezhi-Tezhi 89.20 106 iP P 09 40 05.1 -3.7
ITZ iS PP 09 43 26.2 -13
ITZ Itezhi-Tezhi 89.20 106⇓iP P 09 40 09.7 +0.9
ITZ Itezhi-Tezhi 89.20 106 iP P 09 40 05.1 -3.7
ITZ iS PP 09 43 26.2 -13
SUR Sutherland 89.32 124 P P 09 40 10.0 +0.8
SUR IAmb IAmb 09 40 15.4
comp=Z,375nm,1.9s
ZEI Tsey 89.39 46 eP P 09 40 05.9 -3.5
ZEI pmax pmax
comp=Z,85nm,1.1s
AKH Akhalkalaki 89.55 47 ⇑P P 09 40 24.3 +14
MBAR Mbarara 89.87 91 P P 09 40 15.0 +2.9
MBAR pmax pmax
comp=Z,215nm,1.6s
NIKH Nikolski High 89.98 325 IAMs_20 IAMs_20 10 26 11.9
comp=Z,12µm,20.0s
GROC Groznyy 90.55 45 eP P 09 40 14.7 +0.2
GROC S SKSac 09 50 45.6 +1.3
GROC pmax pmax
comp=Z,85nm,1.4s
GNI Garni 90.86 48 P P 09 40 16.7 +0.5
GNI IAmb IAmb 09 41 02.1
comp=Z,436nm,1.6s
GNI Garni 90.86 48ceP P 09 40 16.8 +0.5
GNI pmax pmax
comp=Z,719nm,1.7s
GNI MLR MLR
comp=Z,15µm,17.0s
LSZ Lusaka 91.10 105 P P 09 40 18.3 +0.6
LSZ IAmb IAmb 09 40 21.2
comp=Z,238nm,1.4s
LSZ Lusaka 91.10 105 IAMs_20 IAMs_20 10 16 50.4
comp=Z,10µm,20.0s
LSZ Lusaka 91.10 105 P P 09 40 18.3 +0.6
LSZ pmax pmax
comp=Z,238nm,1.4s
LBTB Lobatse 91.27 115 P P 09 40 17.8 -0.5
LBTB IAmb IAmb 09 40 38.8
comp=Z,140nm,1.1s
LBTB Lobatse 91.27 115 P P 09 40 17.8 -0.5
LBTB pmax pmax
comp=Z,140nm,1.1s
KHU Kahuku 91.36 290 IAMs_20 IAMs_20 10 19 29.7
comp=Z,10µm,22.0s
BILL Bilibino 91.40 345 P P 09 40 17.7 -0.2
BILL Bilibino 91.40 345ceP P 09 40 17.9 0.0
BILL pmax pmax
comp=Z,352nm,1.7s
KHLU Kahalu`u 91.52 291 IAMs_20 IAMs_20 10 22 35.4
comp=Z,8µm,20.0s
KHLH Kahului Airpor 91.64 292 IAMs_20 IAMs_20 10 22 14.9
comp=Z,8µm,21.0s
MAK Makhachkala 91.81 45 eP P 09 40 19.1 -1.2
MAK e 09 43 57.3
MAK e 09 50 48.8
MAK eSS SS 09 57 27.1 0.0
MAK pmax pmax
comp=Z,215nm,1.0s
MAK pmax pmax
comp=Z,1µm,2.6s
MAK MLR MLR
comp=Z,9µm,18.0s
MAK MLR MLR
comp=N,11µm,20.0s
MAK MLR MLR
comp=E,10µm,18.0s
VNA3 Neumayer Olymp 91.88 166 P P 09 40 21.6 +1.6
BOSA Boshof 91.93 119 iP P 09 40 23.5 +2.1
BOSA Boshof 91.93 119 P P 09 40 21.4 +0.1
comp=E,17nm,1.0s,baz=280,slow=4.3,SNR=14
BOSA LR LR 10 16 29.1
comp=E,22µm,18.6s,baz=278,slow=32
BOSA Boshof 91.93 119 iP P 09 40 23.5 +2.1
BOSA Boshof 91.93 119 P P 09 40 21.6 +0.3
BOSA IAmb IAmb 09 40 24.1
comp=Z,358nm,1.8s
VNA2 Neumayer--Watz 92.22 165 P P 09 40 23.2 +1.7
ARU Arti 92.32 30 LR LR 10 16 47.5
comp=Z,15µm,21.9s,baz=296,slow=32
ARU Arti 92.32 30 P P 09 40 21.9 -0.5
ARU IAMs_20 IAMs_20 10 16 44.8
comp=Z,16µm,21.0s
ARU Arti 92.32 30ceP P 09 40 22.6 +0.2
ARU pmax pmax
comp=Z,285nm,1.8s
ARU MLR MLR
comp=Z,9µm,18.0s
AKT Akhty 92.51 46 eP P 09 40 24.1 +0.3
AKT e 09 44 07.7
AKT pmax pmax
comp=Z,73nm,1.3s
MATP Matopo 92.68 110 iP P 09 40 26.2 +1.3
MATP Matopo 92.68 110 iP P 09 40 26.2 +1.3
SVE Sverdlovsk 93.08 29ceP P 09 40 26.1 +0.1
SVE e 09 44 06.4
SVE ePPP PPP 09 46 06.2
SVE eS SKSac 09 50 58.4 +0.3
SVE eSS SS 09 57 42.1 -2.4
SVE pmax pmax
comp=Z,248nm,1.5s
SVE MLR MLR
comp=Z,12µm,19.0s

ATKA Atka Island 93.24 326 IAMs_20 IAMs_20 10 30 27.1
MEH Mehetia 93.55 253 eP P 09 40 30.2 +1.4
comp=Z,12μm,20.0s
comp=Z,54nm,1.2s
TIXI Tiksi 93.80 358 LR LR 10 22 05.1
comp=Z,8μm,20.3s,baz=16,slow=35
TIXI Tiksi 93.80 358 eP P 09 40 29.0 +0.1
TIXI IAmb IAmb 09 40 44.6
comp=Z,177nm,1.2s
TIXI IAMs_20 IAMs_20 10 25 00.4
comp=Z,12μm,20.0s
TIXI Tiksi 93.80 358ceP P 09 40 28.5 -0.4
TIXI pmax pmax
comp=Z,191nm,1.3s
TIXI MLR MLR
comp=Z,11μm,19.0s
SNAA Sanae 93.83 165 P P 09 40 30.2 +1.2
SNAA Sanae 93.83 165 P P 09 40 29.4 +0.4
SNAA IAMs_20 IAMs_20 10 21 29.6
comp=Z,15μm,22.0s
SNAA Sanae 93.83 165 P P 09 40 29.4 +0.4
SNAA pmax pmax
comp=Z,60nm,1.2s
SNAA MLR MLR
comp=Z,15μm,22.0s
PPT Papeete 94.87 253 P P 09 40 36.2 +1.2
comp=Z,60nm,1.1s,baz=156,slow=12,SNR=2.7
PPT LR LR 10 19 43.9
comp=Z,5μm,18.2s,baz=79,slow=33
PPT2 Papeete2 94.87 253 eP P 09 40 36.4 +1.4
comp=Z,115nm,1.4s
PPT2 Papeete2 94.87 253 ePP PP 09 44 24.3 0.0
comp=Z,2μm,29.8s
PPT2 eS S 09 51 47.2 -0.6
comp=Z,9μm,26.2s
PPT2 eSS SS 09 58 13.9 +0.8
comp=Z,11μm,25.0s
PPT2 Papeete2 94.87 253 eLR LR 10 11 13.7
comp=Z,12μm,25.2s
PAE Paea 94.89 253 eP P 09 40 36.3 +1.3
comp=Z,28nm,1.4s
AKTO Aktyubinsk 95.07 35 LR LR 10 19 22.4
comp=Z,10μm,21.9s,baz=303,slow=33
AAE Adis Abeba 95.15 79 eP P 09 40 43.9 +7.2
AAE Adis Abeba 95.15 79 eP P 09 40 43.9 +7.2
TBI Tubuai 96.10 248 ePP PP 09 44 31.6 -2.0
comp=Z,1μm,35.2s
TBI eS S 09 51 58.0 -0.1
comp=Z,7μm,27.0s
TBI Tubuai 96.10 248 eLQ LQ 10 07 42.7
comp=Z,9μm,37.2s
TBI eLR LR 10 11 48.2
comp=Z,26μm,35.0s,baz=72
KMBO Kilima Mbogo 96.31 90 P P 09 40 43.1 +1.2
comp=Z,5.1nm,0.2s,baz=276,slow=5.7,SNR=16
KMBO PP PP 09 44 38.5 +2.8
comp=Z,5.1nm,0.8s,baz=258,slow=11,SNR=4.0
KMBO LR LR 10 24 28.4
comp=Z,12μm,18.1s,baz=282,slow=36
KMBO Kilima Mbogo 96.31 90 P P 09 40 41.7 -0.2
KMBO Kilima Mbogo 96.31 90 P P 09 40 41.7 -0.2
KMBO pmax pmax
comp=Z,39nm,1.2s
KMBO MLR MLR
comp=Z,20μm,18.0s
ABKAR Akbulak array 96.75 35 P P 09 40 42.9 0.0
ABKAR IAmb IAmb 09 41 03.2
comp=Z,118nm,1.4s
RAYN Ar Rayn 97.05 64 P P 09 40 42.6 -2.3
RAYN Ar Rayn 97.05 64 P P 09 40 42.6 -2.3
RAYN pmax pmax
comp=Z,43nm,2.0s
RAYN MLR MLR
comp=Z,22μm,19.0s
NVL N'lazarevskaya 97.52 162 eP Pdif 09 40 46.6 +0.8
NVL e 09 44 42.0
NVL eS SKSac 09 51 18.2 -2.5
NVL eSS SS 09 58 45.2 -2.8
NVL pmax pmax
comp=Z,45nm,1.1s
XMAS Kiritimati 97.68 274 IAMs_20 IAMs_20 10 25 14.0
comp=Z,9μm,22.0s
SEY Seymchan 98.95 346 LR LR 10 28 38.7
comp=Z,21μm,19.0s,baz=39,slow=37
SEY Seymchan 98.95 346 iP P 09 40 51.7 -0.8
BRVK Borovoye 99.79 28 Pdif 09 40 55.5 -1.0
BRVK Borovoye 99.79 28ceP Pdif 09 40 55.8 -0.7
BRVK pmax pmax
comp=Z,31nm,1.7s
GEYT Alibeck 101.26 46 P Pdif 09 41 03.5 +0.1
comp=Z,0.5nm,0.3s,baz=270,slow=4.3,SNR=4.3
GEYT PP PP 09 45 17.1 +4.8
comp=Z,9.7nm,1.2s,baz=274,slow=8.6,SNR=4.7
GEYT PKKPbc PKKPbc 09 57 16.4 +2.6
comp=Z,2.8nm,0.7s,baz=205,slow=3.1,SNR=4.8
ASHT Ashkhabad 101.44 46 IAMs_20 IAMs_20 10 29 42.8
comp=Z,6μm,19.0s
MA2 Magadan 102.25 345 iP Pdif 09 41 06.3 -1.0
MA2 pmax pmax
comp=Z,31nm,1.8s
BRZS Berezniki 102.95 30⇑iP Pdif 09 41 09.2 -1.5
BRZS eLR LR 10 32 57.6
BRZS Berezniki 102.95 30c iP Pdif 09 41 09.1 -1.5
YAK Yakutsk 103.32 356 IAMs_20 IAMs_20 10 30 43.7
comp=Z,8μm,20.0s
YAK Yakutsk 103.32 356 eP Pdif 09 41 12.5 +0.6
YAK e 09 45 24.6
YAK eS SKSac 09 51 48.9 -0.8
YAK ePS PS 09 54 28.4 -7.8
YAK eSP SP 09 54 39.5 +7.5
YAK eSS SS 10 00 10.7 +3.3
YAK pmax pmax
comp=Z,20nm,1.1s
YAK pmax pmax
comp=N,16nm,1.6s
YAK pmax pmax
comp=E,7.0nm,1.6s
YAK pmax pmax
comp=Z,881nm,6.2s
YAK pmax pmax
comp=E,199nm,4.1s
YAK pmax pmax
comp=N,392nm,3.9s
YAK smax smax
comp=N,532nm,5.4s
YAK smax smax
comp=E,215nm,3.4s
YAK MLR MLR
comp=Z,12μm,25.0s
YAK MLR MLR
comp=E,3μm,22.0s
YAK MLR MLR
comp=N,11μm,22.0s
QSPA South Pole Qui 104.57 180 PKKPbc PKKPbc 09 57 02.3 -3.5
comp=N,8.5nm,1.1s,baz=307,slow=1.1,SNR=12
QSPA South Pole Qui 104.57 180 Pdif Pdif 09 41 19.4 +2.0
QSPA PKKPbc 09 57 02.8 -2.9
QSPA South Pole Qui 104.57 180 IAMs_20 IAMs_20 10 31 11.3
comp=Z,12μm,21.0s
JOHN Johnston Islan 104.72 292 IAMs_20 IAMs_20 10 28 46.0
comp=Z,9μm,22.0s
ZAA0 Zalesovo Array 105.06 21 IAMs_20 IAMs_20 10 29 16.1
comp=Z,10μm,20.0s
ZALV Zalesovo Beam 105.06 21 Pdiff Pdif 09 41 22.6 +2.8
comp=Z,0.8nm,0.4s,baz=322,slow=8.2,SNR=3.5
PEA0B Petropavlovsk- 105.57 338 IAMs_20 IAMs_20 10 31 25.0
comp=Z,12μm,21.0s
SYO Syowa Base 106.59 158⇑eX Pdif 09 41 34.6 +8.4
SYO Syowa Base 106.59 158⇓eX PKiKP 09 45 35.2 -1.4
IUG Iuzhnay 106.60 37 ePP PP 09 45 51.0 -0.8
BTLS Baital 106.96 33 ePP PP 09 45 49.9 -4.3
BOD Bodaibo 107.62 4 eP Pdif 09 41 30.7 -0.5
BOD pmax pmax
comp=Z,26nm,1.9s
SGDS Sogindy 108.34 34 ePP PP 09 46 03.4 -1.0
AAK Ala-Archa 108.81 34 PKKPbc PKKPbc 09 56 51.9 +0.6
comp=Z,2.0nm,0.6s,baz=151,slow=4.6,SNR=5.2
TDK Taldyqorghan 109.20 31 ePP PP 09 46 11.0 +0.5
TDK eLR LR 10 35 58.1
MKAR Makanchi Array 109.69 27 Pdiff Pdif 09 41 45.3 +4.6
comp=Z,0.4nm,0.7s,baz=308,slow=5.3,SNR=5.4
MKAR PP PP 09 46 10.1 -3.8
comp=Z,3.3nm,0.9s,baz=316,slow=6.0,SNR=2.6
MKAR PKKPbc PKKPbc 09 56 47.1 -1.4
comp=Z,6.7nm,0.8s,baz=122,slow=4.6,SNR=17
MDOK Medeo 109.82 33 ePP PP 09 46 11.6 -3.6

MDOK eSS SS 10 01 42.5 +5.2
MDOK eLR LR 10 34 18.2
ZSN Zaisan 110.28 25 ePP PP 09 46 16.8 -1.4
KBL Kabul 110.54 44 IAMs_20 IAMs_20 10 34 22.0
comp=Z,7μm,21.0s
ZEA Zeya 111.73 356 eP Pdif 09 41 47.0 -2.6
ZEA pmax pmax
comp=Z,63nm,2.0s
ZEA pmax pmax
comp=Z,500nm,10.0s
KSH Kashi 111.74 36 PKP PKiKP 09 45 37.8 -10
KSH sPKP 09 46 01.9
KSH PP PP 09 46 27.9 -1.2
KSH PKS 09 49 14.6
KSH SKS SKSdf 09 52 47.0 -11
KSH Kashi 111.74 36 SS SS 10 02 03.6 +0.5
TLY Talaya 112.29 12 i PKIKP PKiKP 09 45 47.5 -0.6
TLY pmax pmax
comp=Z,4.0nm,0.9s
TLY MLR MLR
comp=Z,14μm,21.0s
NIL Nilore 113.86 42 IAMs_20 IAMs_20 10 34 36.2
comp=Z,11μm,21.0s
WMQ Urumqi 114.37 26 ePKP PKiKP 09 45 51.4 -0.9
WMQ PP PP 09 46 48.0 +0.5
WMQ SKS SKSdf 09 52 54.8 -8.0
WMQ SKKS SKKSac 09 53 46.8 -1.6
WMQ AMB AMB
comp=Z,440nm,5.1s
WMQ LR LR
comp=Z,5μm,21.5s
WMQ LR LR
comp=Z,5μm,18.1s
WMQ LR LR
comp=Z,9μm,21.5s
CRZF Crozet Islands 114.77 135 IAMs_20 IAMs_20 10 29 02.7
comp=Z,10μm,19.0s
KUR Kuril'sk 115.67 339 i PKIKP PKPdf 09 45 55.4 +0.8
KUR e 09 46 55.8
KUR i SS SS 10 02 53.6 -0.2
YSS Yuzh-Sakhalins 115.70 344 i PKIKP PKiKP 09 45 53.6 -1.1
YSS e 09 46 56.7
YSS ePPP PPP 09 49 25.0
YSS e 09 52 45.9
YSS ePS PKKPab 09 56 31.6 -2.6
KLR Kul'dur 115.75 352 i PKIKP PKiKP 09 45 54.1 -0.6
KLR pmax pmax
comp=Z,6.0nm,1.0s
KLR MLR MLR
comp=Z,11μm,19.0s
SONM Songino Array 116.49 11 PKP PKiKP 09 45 55.7 -0.7
comp=Z,1.6nm,0.7s,baz=324,slow=1.0,SNR=3.9
SONM PP PP 09 46 59.4 -2.7
comp=Z,3.7nm,0.9s,baz=275,slow=2.9,SNR=2.6
SONM PKKPbc PKKPbc 09 56 24.9 -1.0
comp=Z,2.3nm,0.7s,baz=173,slow=4.8,SNR=5.5
DHRM DHARAMSHALA 116.73 42 eP PKPdf 09 45 55.7 -1.7
DHRM i x x 09 46 58.4
BHUJ Bhuj 117.23 54 ex PP 09 47 06.8 -1.6
BHUJ IAmb IAmb 09 47 12.3
comp=Z,25nm,0.4s
USA0B Ussuriysk Arra 120.64 351 PKiKP 09 46 04.6 +0.2
USA0B IAMs_20 IAMs_20 10 42 23.9
comp=Z,7μm,21.0s
USA0B Ussuriysk Arra 120.64 351 PKIKP PKiKP 09 46 04.6 +0.2
USRK Ussuriysk Ar. 120.64 351 PKP PKPdf 09 46 04.0 -0.3
comp=Z,12nm,1.0s,baz=350,slow=2.6,SNR=13
USRK PP PP 09 47 30.8 +0.2
comp=Z,16nm,1.0s,baz=12,slow=4.7,SNR=11
USRK PKKPbc PKKPbc 09 56 11.5 +0.9
comp=Z,2.7nm,0.8s,baz=183,slow=3.8,SNR=7.5
USRK Ussuriysk Ar. 120.64 351 PKIKP PKPdf 09 46 04.0 -0.3
CN2 Changchun 121.75 356 ePKP PKPdf 09 46 06.0 -0.4
CN2 eSS SS 10 04 15.6 +3.6
CN2 LR LR
comp=Z,9μm,20.0s
CN2 LR LR
comp=Z,5μm,20.0s
CN2 LR LR
comp=Z,9μm,20.0s
GTA Gaotai 122.74 19 ⇓PKP PKPdf 09 46 08.3 -0.4
GTA PP PP 09 47 52.3 +7.0
GTA SKS SKSdf 09 53 10.8 -8.2
GTA SS SS 10 04 29.3 +3.9
GTA AMB AMB
comp=Z,690nm,7.0s
GTA LR LR
comp=Z,12μm,19.6s
GTA LR LR
comp=Z,4μm,21.6s
GTA LR LR
comp=Z,18μm,19.9s
POO Poona 123.04 56 eP PKPdf 09 46 07.5 -2.1
WAKE Wake Island 123.87 306 IAMs_20 IAMs_20 10 46 42.5
comp=Z,7μm,20.0s
DANN Dangsing 124.11 40 eP PKPdf 09 46 11.6 -0.2
comp=Z,281nm,0.9s
BTO Baotou 124.14 10 ePKP PKPdf 09 46 06.5 -4.8
HHC Hu-ho-hao-te 124.14 9 ePKP PKPdf 09 46 11.3 0.0
HHC LR LR
comp=Z,6μm,19.9s
HHC LR LR
comp=Z,4μm,19.9s
HHC LR LR
comp=Z,7μm,18.0s
GOA Goa 124.59 59 eP PKPdf 09 46 10.6 -1.9
GOA i x x 09 47 58.6
MXZ Matakaoa Point 124.60 234 IAMs_20 IAMs_20 10 40 54.8
comp=Z,7μm,20.0s
GKN Gorkha 124.90 40 eP PKPdf 09 46 12.7 -0.4
MSVF Nonsavu 125.31 258 PKPdf PKiKP 09 46 16.0 +1.6
MSVF Nonsavu 125.31 258 PKIKP PKPdf 09 46 16.0 +1.6
URZ Urewera 125.43 233 PKP PKPdf 09 46 13.1 -0.4
comp=Z,53nm,1.0s,baz=351,slow=3.3,SNR=12
URZ Urewera 125.43 233 PKiKP 09 46 14.1 +0.2
URZ IAMs_20 IAMs_20 10 40 31.6
comp=Z,6μm,20.0s
KKN Kakani 125.45 39 eP PKPdf 09 46 13.8 -0.5
BJI Beijing 125.46 5 PKP PKPdf 09 46 13.4 -0.2
BJI SKS SKSdf 09 53 20.4 -3.4
BJI SS SS 10 05 06.8 +7.9
BJI AMB AMB
comp=Z,1μm,6.1s
BJI LR LR
comp=Z,9μm,19.4s
BJI LR LR
comp=Z,6μm,21.2s
BJI LR LR
comp=Z,8μm,21.1s
DMN Daman 125.47 40 eP PKPdf 09 46 13.9 -0.5
KLRI Killari 125.48 55 ePKPdf PKPdf 09 46 13.5 -0.8
KLRI IVMs_BB IVMs_BB 10 44 59.6
comp=Z,4μm,18.1s
PKIN Phulchoki 125.67 40 eP PKPdf 09 46 13.9 -0.9
PKI Pulchoki 125.69 40 eP PKPdf 09 46 14.0 -0.9
comp=Z,237nm,1.3s
GUN Gumba 125.73 39 eP PKPdf 09 46 14.6 -0.4
BKZ Black Stump Fm 125.75 232 PKPdf 09 46 15.5 +0.9
BKZ IAMs_20 IAMs_20 10 38 25.9
comp=Z,8μm,22.0s
JIRN Jiri 126.10 39 eP PKPdf 09 46 15.1 -0.6
SRSP Sriramsagar 126.36 53 ePKPdf PKPdf 09 46 15.0 -0.9
SRSP IVMs_BB IVMs_BB 10 42 52.3
comp=Z,1μm,18.8s
MJB9 Matsu-Tunnel 126.61 343 PKPdf 09 46 15.8 -0.2
MAJO Matsushiro 126.61 343 PKPdf 09 46 15.9 -0.1
MAJO Matsushiro 126.61 343 PKIKP PKPdf 09 46 15.9 -0.1
MAJO MLR MLR
comp=Z,10μm,22.0s
MAT Matsushiro 126.61 343 PKP PKPdf 09 46 15.1 -0.9
MJAR Matsushiro Arr 126.61 343 PKP PKPdf 09 46 15.3 -0.7
comp=Z,35nm,1.0s,baz=330,slow=0.9,SNR=43
MJAR PP PP 09 48 10.4 -0.5
comp=Z,14nm,1.1s,baz=3.9,slow=5.5,SNR=4.6
SNZO South Karori 126.63 229 IAMs_20 IAMs_20 10 34 49.1
comp=Z,7μm,22.0s
DL2 Dalian 126.78 359 ePdif Pdif 09 42 52.6 -4.2
DL2 PKP PKPdf 09 46 11.0 -5.2
DL2 PP PP 09 48 09.0 -2.8
DL2 Dalian 126.78 359 PKP PKPdf 09 46 11.0 -5.2
DL2 SS SS 10 05 14.4 -1.0
DL2 AMB AMB
comp=Z,2μm,8.2s
DL2 LR LR
comp=Z,2μm,16.9s

DL2 LR LR
comp=Z,10μm,19.9s
DL2 LR LR
comp=Z,9μm,17.7s
RAMN Ramite 126.86 39 eP PKPdf 09 46 16.5 -0.5
comp=Z,272nm,0.9s
LZH Lanzhou 127.04 17 ⇓PKP PKiKP 09 46 17.8 +0.3
LZH PP PP 09 48 12.5 -1.5
LZH SKKS 09 55 10.8
LZH AMB AMB
comp=Z,820nm,4.9s
LZH LR LR
comp=Z,6μm,17.6s
LZH LR LR
comp=Z,6μm,17.7s
LZH LR LR
comp=Z,7μm,20.4s
HIZ Hauiti 127.13 233 IAMs_20 IAMs_20 10 40 07.4
comp=Z,6μm,22.0s
RPR Rampur 127.14 52 ePKPdf PKPdf 09 46 17.0 -0.3
RPR IVMs_BB IVMs_BB 10 45 02.2
comp=Z,1μm,18.7s
BSWZ Blackbirch Sta 127.14 228 PKiKP 09 46 18.2 +1.0
KHZ Kahutara 127.20 228 IAMs_20 IAMs_20 10 34 48.4
comp=Z,9μm,22.0s
TAPN Taplejung 127.24 38 eP PKPdf 09 46 17.4 -0.4
TIY Taiyuan 127.35 9 ePKP PKPdf 09 46 17.6 +0.2
TIY PP PP 09 48 16.5 +0.7
TIY SS SS 10 05 21.6 -1.2
TIY AMB AMB
comp=Z,1μm,5.7s
TIY LR LR
comp=Z,4μm,16.4s
TIY LR LR
comp=Z,2μm,12.8s
TIY LR LR
comp=Z,10μm,21.4s
LSA Lhasa 127.37 33 PKP PKPdf 09 46 18.4 +0.2
LSA LR LR
comp=Z,12μm,23.5s
LSA LR LR
comp=Z,19μm,30.3s
LSA LR LR
comp=Z,10μm,29.9s
HYBB Hyderabad (bro 127.39 54 ePKPdf PKPdf 09 46 17.2 -0.7
HYBB IVMs_BB IVMs_BB 10 45 11.7
comp=Z,3μm,18.7s
HYB Hyderabad 127.39 54 i PKP PKPdf 09 46 16.0 -2.0
HYB ePP PP 09 48 20.0 +2.5
HYB eLR LR
comp=Z,6.7nm,16.0s
HYB Hyderabad 127.39 54⇓iP PKPdf 09 46 13.2 -4.7
HYB ex x 09 46 30.9
HYB i x x 09 48 07.6
ODAN Odare 127.41 39 eP PKPdf 09 46 17.7 -0.4
MQZ McQueen's Vall 127.47 226 IAMs_20 IAMs_20 10 35 09.2
comp=Z,7μm,22.0s
URV Uravakonda 127.70 58 ePKPdf PKPdf 09 46 17.7 -0.9
URV IVMs_BB IVMs_BB 10 48 04.7
comp=Z,4μm,18.9s
KS19 Wonju Array Si 127.78 353 PKPdf 09 46 17.8 -0.4
GTK Tadong 127.79 37⇓iP PKPdf 09 46 17.1 -1.5
GTK IAmb IAmb 09 46 21.2
comp=Z,72nm,0.9s
GTK i x x 09 48 15.8
KSRS Korea Array 127.82 353 PKP PKPdf 09 46 18.0 -0.2
comp=Z,25nm,1.1s,baz=11,slow=1.4,SNR=42
KSRS PP PP 09 48 16.1 -2.6
comp=Z,11nm,1.2s,baz=360,slow=5.9,SNR=4.4
THZ Tophouse 127.83 228 PKPdf 09 46 18.2 0.0
CASY Casey 127.89 175 PKiKP 09 46 18.5 +0.6
INCN Inchon 127.93 354 IAMs_20 IAMs_20 10 52 06.9
comp=Z,8μm,19.0s
LTZ Lake Taylor 128.00 227 PKiKP 09 46 19.6 +0.6
INU Inuyama 128.07 343 PKPdf 09 46 17.5 -1.2
INU IAMs_20 IAMs_20 10 45 40.8
comp=Z,8μm,22.0s
QRZ Quartz Range 128.35 229 IAMs_20 IAMs_20 10 38 32.5
comp=Z,7μm,20.0s
SRLM Srisailam 128.40 55 ePKPdf PKPdf 09 46 18.9 -0.9
SRLM IVMs_BB IVMs_BB 10 44 06.3
comp=Z,2μm,19.0s
ODZ Otahua Downs 128.41 224 IAMs_20 IAMs_20 10 39 42.1
comp=Z,8μm,21.0s
GGR Gangavaram 128.44 53 ePKPdf PKPdf 09 46 19.3 -0.6
GGR IVMs_BB IVMs_BB 10 46 08.8
comp=Z,2μm,17.9s
NJS Nagarjunasagar 128.47 55 ePKPdf PKPdf 09 46 19.5 -0.5
NJS IVMs_BB IVMs_BB 10 44 36.2
comp=Z,2μm,19.0s
RPZ Rata Peaks 128.57 225 PKP PKiKP 09 46 20.7 +0.6
comp=Z,66nm,0.9s,baz=18,slow=1.6,SNR=18
RPZ Rata Peaks 128.57 225 PKiKP 09 46 20.4 +0.4
BOK Bokaro 128.66 42⇓iP PKPdf 09 46 20.3 +0.1
BOK IAmb IAmb 09 46 26.6
comp=Z,99nm,1.1s
BOK ex x 09 46 34.1
TJN Taejon 128.95 353c iPKIKP PKiKP 09 46 21.3 +0.2
TIA Tai'an 129.34 4 PKP PKiKP 09 46 24.4 +2.5
TIA AMB AMB
comp=Z,1μm,4.7s
TIA LR LR
comp=Z,6μm,17.1s
TIA LR LR
comp=Z,6μm,18.5s
TIA LR LR
comp=Z,11μm,17.8s
ADKI Addanki 129.40 55 ePKPdf PKPdf 09 46 21.4 -0.3
ADKI IVMs_BB IVMs_BB 10 45 42.9
comp=Z,2μm,19.0s
MYLAV Mylavaram 129.40 53 ePKPdf PKPdf 09 46 21.9 +0.2
MYLAV IVMs_BB IVMs_BB 10 49 25.8
comp=Z,2μm,17.6s
FOZ Fox Glacier 129.48 225 IAMs_20 IAMs_20 10 39 24.4
comp=Z,7μm,22.0s
PVM Polavaram 129.87 52 ePKPdf PKPdf 09 46 22.5 -0.1
PVM IVMs_BB IVMs_BB 10 50 04.2
comp=Z,2μm,18.4s
WHZ Wether Hill Ro 129.87 222 PKPdf PKiKP 09 46 23.2 +0.6
MLZ Mavora Lakes 129.96 222 PKiKP 09 46 22.4 -0.4
KAAM Kaadhehdhoo 130.18 77 PKPdf PKiKP 09 46 23.8 -0.3
KAAM Kaadhehdhoo 130.18 77 PKiKP PKiKP 09 46 24.1 0.0
SNR=6.1
H08N3 Diego Garcia H 130.21 86 PKP PKiKP 09 46 25.5 +1.7
baz=256,slow=5.7,SNR=4.1
H08N2 Diego Garcia H 130.21 86 PKP PKiKP 09 46 26.1 +2.3
baz=256,slow=5.7,SNR=4.8
H08N1 Diego Carcia H 130.23 86 PKP PKiKP 09 46 25.0 +1.2
baz=256,slow=5.7,SNR=5.0
XAN Xi'an 130.28 13 PKP PKPdf 09 46 22.6 -0.5
XAN LR LR
comp=Z,10μm,21.1s
XAN LR LR
comp=Z,4μm,21.1s
XAN LR LR
comp=Z,11μm,21.7s
SKHT Srikalahasti 130.35 57 ePKPdf PKPdf 09 46 23.2 -0.3
SKHT IVMs_BB IVMs_BB 10 51 47.2
comp=Z,1μm,17.5s
PYZ Puysegur Point 130.57 221 IAMs_20 IAMs_20 10 33 18.5
comp=Z,8μm,22.0s
TEZP TEZPUR 130.69 34⇓iP PKPdf 09 46 21.2 -2.8
TEZP ex x 09 48 31.1
ITAN ITANAGAR 130.76 33 i P PKPdf 09 46 22.1 -2.0
ITAN IAmb IAmb 09 46 26.6
comp=Z,67nm,0.6s
CHLP Challavanipeta 130.92 49 ePKPdf PKPdf 09 46 24.5 -0.1
CHLP IVMs_BB IVMs_BB 10 47 45.6
comp=Z,2μm,17.6s
SHL Shillong 131.01 36 PKPdf PKPdf 09 46 24.2 -0.7
SHL Shillong 131.01 36 PKiKP PKPdf 09 46 25.2 +0.4
SNR=50
SHL Shillong 131.01 36 PKIKP PKPdf 09 46 24.2 -0.7
MDRS Chennai 131.15 58 eP PKPdf 09 46 23.3 -1.8
MDRS IAmb IAmb 09 46 27.4
comp=Z,88nm,1.1s
MDRS i x x 09 46 38.8
JNU Nakatsue 131.63 349 PKPdf 09 46 24.2 -1.4
LKP Lekhapani 131.69 30 eP PKPdf 09 46 26.0 +0.1
LKP IAmb IAmb 09 46 29.0
comp=Z,312nm,1.4s
CD2 Chengdu 131.80 20 PKP PKPdf 09 46 26.1 0.0
CD2 sPKP 09 46 33.0
CD2 SKS SKSdf 09 53 32.8 -3.2
CD2 SKKS SKKSac 09 55 38.4 -2.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CD2				SS	SS	10 06 18.0	-0.1
CD2				LR	LR		
	comp=Z,9µm,22.8s						
CD2				LR	LR		
	comp=Z,7µm,19.9s						
CD2				LR	LR		
	comp=Z,13µm,21.4s						
DGAR	Diego Garcia	131.86	87	PKPdf	PKiKP	09 46 27.6	+0.1
DGAR	Diego Garcia	131.86	87	PKIKP	PKiKP	09 46 27.6	+0.1
DGAR				MLR	MLR		
	comp=Z,11µm,19.0s						
AGT	Agartala	131.94	38	eP	PKiKP	09 46 27.5	+0.1
AGT				ix	x	09 49 52.3	
BELO	BELONIA	132.54	38	iP	PKPdf	09 46 27.8	+0.3
NJ2	Nanjing	133.57	3	⇓PKP	PKPdf	09 46 29.0	-0.3
NJ2				PKS		09 49 58.5	
NJ2				SKKS		09 55 45.5	
NJ2				SS	SS	10 06 41.9	+3.0
NJ2				AMB	AMB		
	comp=Z,2µm,5.2s						
NJ2				LR	LR		
	comp=Z,9µm,22.3s						
NJ2				LR	LR		
	comp=Z,5µm,19.4s						
NJ2				LR	LR		
	comp=Z,9µm,22.6s						
PALK	Pallekele	134.49	64		PKPdf	09 46 31.5	0.0
PALK	Pallekele	134.49	64	PKiKP	PKPdf	09 46 31.7	+0.1
PALK	Pallekele	134.49	64	PKIKP	PKPdf	09 46 31.5	0.0
SSE	Sheshan	134.57	360	PKP	PKPdf	09 46 31.8	+0.6
SSE				SS	SS	10 06 54.8	+3.8
SSE				AMB	AMB		
	comp=Z,730nm,6.5s						
SSE				LR	LR		
	comp=Z,4µm,20.3s						
WHN	Wuhan	134.66	8	PKP	PKPdf	09 46 32.0	+0.6
WHN				PP	PP	09 49 03.1	+0.1
WHN				PKS		09 50 01.6	
WHN				SKKS		09 55 56.9	
WHN				AMB	AMB		
	comp=Z,2µm,4.8s						
WHN				LR	LR		
	comp=Z,13µm,16.0s						
WHN				LR	LR		
	comp=Z,6µm,15.8s						
WHN				LR	LR		
	comp=Z,25µm,21.3s						
SIMRM	Sittwe	135.76	39	IAMs_20	IAMs_20	10 55 38.5	
	comp=Z,5µm,18.0s						
DZM	Mont Dzumac	136.38	253	PKhKP	PKiKP	09 46 37.4	+0.9
	comp=Z,44nm,1.0s,baz=51,slow=5.5,SNR=15						
NOUC	Port Laguerre	136.51	253		PKPdf	09 46 35.0	+0.1
KMI	Kunming	136.68	24	PKP	PKPdf	09 46 35.3	-0.3
KMI				PP	PP	09 49 22.0	+5.9
KMI				SKKS		09 56 08.1	
KMI				AMB	AMB		
	comp=Z,1µm,6.7s						
KMI				LR	LR		
	comp=Z,10µm,21.4s						
KMI				LR	LR		
	comp=Z,5µm,19.1s						
KMI				LR	LR		
	comp=Z,11µm,22.1s						
GYA	Guiyang	136.87	19⇑	iPKP	PKPdf	09 46 36.3	+0.5
GYA				PP	PP	09 49 24.1	+6.8
GYA				PKS		09 50 07.9	
GYA				SKKS		09 56 10.1	
GYA				SS	SS	10 07 23.6	+4.3
GYA				LR	LR		
	comp=Z,7µm,19.2s						
GYA				LR	LR		
	comp=Z,6µm,19.9s						
GYA				LR	LR		
	comp=Z,11µm,16.4s						
JOW	Kunigami	138.22	350	IAMs_20	IAMs_20	10 56 32.3	
	comp=Z,5µm,20.0s						
CHTO	Chiang Mai	140.31	34	PKPdf	PKPdf	09 46 41.6	-0.5
CHTO	Chiang Mai	140.31	34	IAMs_20	IAMs_20	11 03 08.6	
	comp=Z,4µm,20.0s						
CHTO	Chiang Mai	140.31	34	PKIKP	PKPdf	09 46 41.6	-0.5
SLVN	Son La	140.53	26		PKPdf	09 46 41.6	-0.9
SLVN				IAMs_20	IAMs_20	10 56 31.9	
	comp=Z,7µm,21.0s						
CM31	Chiang Mai Arr	140.60	34	PKPdf	PKPdf	09 46 36.7	-6.0
	SNR=30						
CMAR	Chiang Mai Arr	140.60	34	PKhKP	PKPpre	09 46 34.1	
	comp=Z,4.2nm,0.8s,baz=314,slow=5.1,SNR=20						
CMAR				PKP	PKPdf	09 46 43.2	+0.6
	comp=Z,22nm,0.9s,baz=305,slow=3.1,SNR=28						
CMAR				PP	PP	09 49 34.2	-6.5
	comp=Z,1.9nm,0.3s,baz=232,slow=47,SNR=3.9						
QZH	Quanzhou	140.63	3⇑	iPKP	PKPdf	09 46 35.8	-6.7
QZH				PP	PP	09 49 44.9	+4.8
QZH				LR	LR		
	comp=Z,6µm,21.3s						
QZH				LR	LR		
	comp=Z,6µm,19.9s						
TATO	Taipei	140.67	359	IAMs_20	IAMs_20	10 49 36.9	
	comp=Z,7µm,21.0s						
ANA2	Anatahan	140.77	321	IAMs_20	IAMs_20	10 44 40.7	
	comp=Z,7µm,22.0s						
YOJ	Yonaguni jima	141.13	357	IAMs_20	IAMs_20	10 55 02.1	
	comp=Z,6µm,20.0s						
HNR	Honiara	141.62	273	PKhKP	PKPpre	09 46 39.0	
	comp=Z,83nm,0.9s,baz=359,slow=12,SNR=2.2						
HNR	Honiara	141.62	273	IAMs_20	IAMs_20	10 45 42.0	
	comp=Z,7µm,22.0s						
GZH	Guangzhou	141.80	11	PKP	PKPdf	09 46 37.6	-7.0
GZH				LR	LR		
	comp=Z,6µm,18.0s						
GZH				LR	LR		
	comp=Z,7µm,21.5s						
SSLB	Suanglung	141.85	0	IAMs_20	IAMs_20	10 54 15.3	
	comp=Z,7µm,21.0s						
YULB	Yu-li	142.24	360	IAMs_20	IAMs_20	10 53 49.7	
	comp=Z,6µm,21.0s						
TPUB	Ta-pu	142.34	1		PKPdf	09 46 45.6	-0.1
TPUB				IAMs_20	IAMs_20	10 56 22.1	
	comp=Z,7µm,21.0s						
GUMO	Guam	143.38	319	IAMs_20	IAMs_20	10 48 23.4	
	comp=Z,7µm,20.0s						
TAU	Tasmania Unive	143.86	213		PKPdf	09 46 46.8	-0.8
TAU	Tasmania Unive	143.86	213	PKIKP	PKPdf	09 46 46.8	-0.8
QIZ	Qiongzhong	144.82	19	PKP	PKPab	09 46 49.0	0.0
QIZ				pPKP	pPKPdf	09 46 56.5	-1.8
QIZ				PP	PP	09 50 04.8	-0.9
QIZ				SS	SS	10 08 55.4	+3.5
QIZ				AMB	AMB		
	comp=Z,2µm,5.7s						
QIZ				LR	LR		
	comp=Z,6µm,17.6s						
QIZ				LR	LR		
	comp=Z,4µm,16.7s						
QIZ				LR	LR		
	comp=Z,8µm,18.6s						
BBP	Basco	145.17	358	eP	PKPbc	09 46 48.4	-1.7
UBPT	Khong Chiam	146.57	28		PKPdf	09 46 53.3	+0.2
SGCP	Mt. Cagua	147.35	358	eP	PKPbc	09 46 55.8	-0.9
CAN	Canberra	147.50	226		PKPdf	09 46 54.2	0.0
CAN				IAMs_20	IAMs_20	10 51 19.4	
	comp=Z,6µm,21.0s						
CAN	Canberra	147.50	226	PKIKP	PKPdf	09 46 54.2	0.0
CAN				MLR	MLR		
	comp=Z,6µm,21.0s						
SIPP	Brgy, Tapao	147.68	1⇑	eP	PKPbc	09 46 57.9	+0.3
APYP	Conner	147.75	360	eP	PKPbc	09 46 56.1	+1.1
ARMA	Armidale	147.78	236	PKPbc	PKPbc	09 46 56.5	-1.2
ARMA				IAMs_20	IAMs_20	11 04 29.9	
	comp=Z,6µm,22.0s						
KRVT	Keravat (AS076	147.81	285	PKPbc	PKPdf	09 46 56.4	+1.2
	comp=Z,172nm,0.7s,baz=153,slow=4.5,SNR=3.6						
ABRA	Dolores	147.96	1	eP	PKPdf	09 46 56.8	+1.5
SZP	Santa	148.05	1	IAMs_20	IAMs_20	11 05 43.5	
	comp=Z,5µm,19.0s						
TOO	Toolangi	148.46	219		PKPdf	09 46 56.6	+0.9
TOO	Toolangi	148.46	219	PKIKP	PKPdf	09 46 56.6	+0.9
CAUP	Cauayan	148.65	359	eP	PKPbc	09 47 00.9	+0.7
LHMI	Lhok Sumawe	149.05	52		PKPdf	09 46 58.2	+1.0
BOLP	Bolinao	149.20	2	eP	PKPbc	09 47 01.4	-0.2
SMPP	San Manuel, Pa	149.45	1	eP	PKPbc	09 46 56.9	-0.9
SCZP	Santa Cruz	149.80	2	eP	PKPbc	09 47 03.0	-0.2
BALP	Baler	149.85	359	eP	PKPbc	09 47 02.2	-1.1
EIDS	Eidsvold	149.86	244		PKPdf	09 46 56.8	-1.5
EIDS				PKPbc	PKPbc	09 47 03.5	+0.4
EIDS				IAMs_20	IAMs_20	11 08 28.7	
	comp=Z,5µm,21.0s						
SNSI	Sinabang, Aceh	150.26	57	PKP	PKPdf	09 47 00.2	+1.0
SNSI				PKP	PKPdf	09 47 00.2	+1.0
SNSI				PKP	PKPbc	09 47 01.0	-3.4
SNSI				PKP	PKPbc	09 47 01.0	-3.4
SNSI				PKP	PKiKP	09 47 04.7	-0.5
TPTI		150.45	55	PKP	PKPdf	09 47 00.9	+1.4
DLV	T Lat	150.85	26		PKPdf	09 47 00.1	-0.3
DLV				PKPbc	PKPbc	09 47 05.9	-0.1
MANU	Manus Island	151.16	293		PKPdf	09 46 59.7	-1.0
MANU				PKPbc	PKPbc	09 47 06.7	+0.2
TGY	Tagaytay City	151.49	0	PKP	PKPdf	09 47 01.4	+0.2
	comp=Z,118nm,0.4s						
TGY				PKPbc	PKPbc	09 47 08.8	+1.5
KULM	Kulim	151.74	47		PKPdf	09 47 01.5	0.0
KULM				PKPbc	PKiKP	09 47 08.4	+0.2
PVCP	Virac	151.82	354	eP	PKPdf	09 47 02.5	+0.9
LUBP	Lubang	151.84	2	eP	PKPdf	09 47 00.1	-1.5
PSI	Prapat	152.10	53	PKP	PKPdf	09 47 01.7	-0.5
	comp=Z,35nm,1.1s,baz=261,slow=3.8,SNR=27						
PSI				PKPbc	PKPbc	09 47 08.8	0.0
	comp=Z,248nm,1.0s,baz=244,slow=6.2,SNR=40						
PSI				PKPab	PKPab	09 47 19.9	+1.6
	comp=Z,449nm,1.0s,baz=289,slow=2.5,SNR=14						
PSI				PP	PP	09 50 47.0	-2.7
	comp=Z,6.1nm,0.9s,baz=201,slow=8.8,SNR=1.5						
BOAC	Boac	152.11	358	eP	PKiKP	09 47 09.5	+0.6
RPSI	Rantau Prapat	152.17	54		PKPdf	09 47 01.5	-0.7
RPSI				PKPbc	PKPbc	09 47 08.4	-0.4
RPSI	Rantau Prapat	152.17	54		PKPdf	09 47 01.7	-0.4
RPSI					PKPbc	09 47 08.8	0.0
RPSI					PKPab	09 47 19.9	+1.5
RPSI					PP	09 50 47.0	-2.9
IPM	Ipoh	152.57	48		PKPdf	09 47 03.4	+0.6
IPM				PKPbc	PKiKP	09 47 10.2	+0.2
CNP	Catarman	152.83	352	eP	PKiKP	09 47 10.9	+0.5
SJMP	San Jose	153.12	360	eP	PKPbc	09 47 10.9	0.0
OTRP	Odiongan	153.20	358	eP	PKPdf	09 47 04.0	+0.4
BUSP	Coron	153.56	2	eP	PKPdf	09 47 06.0	+1.9
PMG	Port Moresby	153.94	278	PKP	PKPdf	09 47 05.2	+0.5
	comp=Z,29nm,1.0s,baz=22,slow=6.7,SNR=11						
PMG				PKPbc	PKPbc	09 47 14.0	+1.4
	comp=Z,24nm,0.9s,baz=50,slow=11,SNR=6.0						
PMG				PKPab	PKPab	09 47 27.9	+2.0
	comp=Z,108nm,1.1s,baz=45,slow=6.4,SNR=7.8						
PMG				PP	PP	09 50 59.5	-1.2
	comp=Z,8.1nm,0.7s,baz=22,slow=23,SNR=2.3						
PMG	Port Moresby	153.94	278		PKPdf	09 47 03.9	-0.8
PMG					PP	09 51 00.7	0.0
PMG	Port Moresby	153.94	278	IAMs_20	IAMs_20	10 53 58.1	
	comp=Z,5µm,21.0s						
PMG	Port Moresby	153.94	278	PKIKP	PKPdf	09 47 03.9	-0.8
PMG						09 51 00.7	
RCP	Roxas	153.96	356⇑	eP	PKPdf	09 47 06.3	+1.6
OCLP	Ormoc	154.27	352	eP	PKPdf	09 47 07.9	+2.7
ENPP	El Nido	154.32	4	eP	PKPdf	09 47 06.3	+1.1
STKA	Stephens Creek	154.52	224	PKP	PKPdf	09 47 05.6	+0.6
	comp=Z,28nm,0.9s,baz=86,slow=1.3,SNR=29						
STKA				PKPab	PKPab	09 47 28.4	+0.4
	comp=Z,82nm,0.9s,baz=143,slow=5.9,SNR=12						
STKA				PP	PP	09 51 03.3	+0.4
	comp=Z,3.6nm,0.8s,baz=302,slow=20,SNR=1.4						
STKA	Stephens Creek	154.52	224		PKPdf	09 47 04.7	-0.3
STKA				PKPbc	PKPbc	09 47 15.7	+2.3
STKA				PKPab	PKPab	09 47 27.7	-0.2
STKA					PP	09 51 04.4	+1.5
GUIM	Jordan	154.89	356	eP	PKPdf	09 47 06.0	0.0
MSLP	Maasin	155.14	351	eP	PKPdf	09 47 07.4	+1.0
BKNI	Bangkinang	155.28	55	PKP	PKPdf	09 47 16.7	+10
CTA	Charters Tower	155.32	254	PKP	PKPdf	09 47 07.0	+0.5
	comp=Z,28nm,1.1s,baz=339,slow=1.6,SNR=14						
CTA				PKPab	PKPab	09 47 32.8	+1.0
	comp=Z,74nm,1.1s,baz=93,slow=3.9,SNR=11						
CTA				PP	PP	09 51 09.2	+0.8
	comp=Z,3.8nm,0.7s,baz=146,slow=11,SNR=2.0						
CTA	Charters Tower	155.32	254	PKIKP	PKPdf	09 47 07.0	+0.5
CTAO	Charters Tower	155.32	254	IAMs_20	IAMs_20	11 10 39.1	
	comp=Z,7µm,22.0s						
COCO	West Island	156.35	87		PKPdf	09 47 06.4	-1.5
COCO				PKPab	PKPab	09 47 35.3	-0.9
COCO	West Island	156.35	87	PKIKP	PKPdf	09 47 06.4	-1.5
COCO						09 47 35.3	
BATP	Bataraza	156.54	8	eP	PKPdf	09 47 08.8	+0.6
JAY	Jayapura	157.17	300	PKP	PKPdf	09 47 09.2	+0.1
	comp=Z,23nm,0.9s,baz=309,slow=4.4,SNR=6.8						
JAY				PP	PP	09 51 24.0	+5.7
	comp=Z,12nm,0.9s,baz=157,slow=12,SNR=2.6						
BBOO	Buckleboo	157.29	214		PKPdf	09 47 08.5	-0.2
BBOO				PKPab	PKPab	09 47 41.6	+1.9
PAGZ	Pagadian	157.58	354	eP	PKPdf	09 47 09.1	-0.4
DAV	Davao City (W)	158.01	348	PKP	PKPdf	09 47 10.3	+0.2
	comp=Z,165nm,0.4s						
DAV				PKPab	PKPab	09 47 43.6	+0.5
	comp=Z,143nm,0.5s,baz=46,slow=2.1,SNR=5.3						
DAV				PP	PP	09 51 23.9	+2.8
	comp=Z,141nm,0.4s,baz=87,slow=8.9,SNR=2.5						
DAV	Davao City (W)	158.01	348		PKPab	09 47 43.0	-0.1
DAV					PP	09 51 23.6	+2.6
COEN	Coen	158.53	269		PKPdf	09 47 11.2	+0.5
COEN					PKPab	09 47 46.2	+0.5
DDMP	Don Marcelino,	158.92	347	eP	PKPdf	09 47 10.2	-1.0
KKM	Kota Kinabalu	158.94	13		PKPdf	09 47 10.8	-0.6
KKM				PKPab	PKPab	09 47 46.3	-0.9
KSM	Kuching	160.83	34		PKPdf	09 47 11.9	-1.5
KSM				PKPab	PKPab	09 47 54.7	-0.7
SBUM	Sibu	160.95	28		PKPdf	09 47 13.3	-0.2
SBUM				PKPab	PKPab	09 47 53.5	-2.4
KLSI		161.17	60	PKP	PKPdf	09 47 13.2	-0.5
NWAO	Narrogin (SRO)	161.43	170	PKP	PKPdf	09 47 12.9	-0.6
	comp=Z,10nm,0.9s,baz=200,slow=1.8,SNR=10						
NWAO				PKPab	PKPab	09 47 58.1	+0.6
	comp=Z,16nm,1.0s,baz=165,slow=6.4,SNR=4.4						
NWAO				PP	PP	09 51 44.6	+5.0
	comp=Z,5.6nm,0.9s,baz=179,slow=11,SNR=3.2						
NWAO	Narrogin (SRO)	161.43	170		PKPdf	09 47 12.6	-0.8
NWAO				PKPab	PKPab	09 47 58.2	+0.7
NWAO	Narrogin (SRO)	161.43	170	PKPab	PKPab	09 47 57.8	+0.3
TPI	Tanjungpandan	162.32	50	PKP	PKPdf	09 47 16.8	+1.9
FORT	Forrest	162.65	201		PKPdf	09 47 12.8	-2.0
FORT					PKPab	09 48 01.9	-1.0
SIJI	Sorong	163.02	323	PP	PP	09 51 48.2	-0.7
	comp=Z,8.2nm,0.6s,baz=349,slow=6.5,SNR=4.7						
DBJI	Dramaga	163.86	62	PKP	PKPdf	09 47 17.6	+1.2
CNJI	Cibinong	164.56	64	PKP	PKPdf	09 47 18.0	+1.0
LEM	Lembang	164.74	61	PKP	PKPdf	09 47 17.0	-0.3
	comp=Z,51nm,0.8s,baz=328,slow=1.0,SNR=14						
AS31	Alice Springs	164.86	231		PKPdf	09 47 15.9	-1.2
ASAR	Alice Springs	164.86	231	PKP	PKPdf	09 47 16.6	-0.5
	comp=Z,34nm,1.0s,baz=124,slow=0.9,SNR=93						
ASAR				PKPab	PKPab	09 48 13.0	-0.1
	comp=Z,6.8nm,0.8s,baz=116,slow=3.9,SNR=4.7						
ASAR				PP	PP	09 52 00.8	+1.6
	comp=Z,20nm,1.2s,baz=106,slow=7.9,SNR=5.3						
MORW	Morawa	164.88	163		PKPdf	09 47 16.0	-0.8
CISI	Cisompet, Garu	165.27	63	PKP	PKPdf	09 47 18.2	+0.5
CISI	Cisompet, Garu	165.27	63		PKPdf	09 47 15.2	-2.5
CISI				PKPab	PKPab	09 48 13.6	-1.6
WRAB	Tennant Creek	166.22	245		PKPdf	09 47 17.6	-0.6
WRAB				PKPab	PKPab	09 48 19.5	+0.3
WRAB	Tennant Creek	166.22	245	PKIKP	PKPdf	09 47 17.6	-0.6
WRAB						09 48 19.5	
WRA	Warramunga Arr	166.22	245	PKP	PKPdf	09 47 17.5	-0.8
	comp=Z,49nm,1.0s,baz=61,slow=0.6,SNR=77						
WRA				PKPab	PKPab	09 48 20.6	+1.4
	comp=Z,11nm,0.8s,baz=113,slow=4.2,SNR=9.0						
WRA				PP	PP	09 52 07.8	+0.9
	comp=Z,32nm,1.3s,baz=126,slow=3.8,SNR=8.8						
LUWI	Luwuk	166.42	353	PKP	PKPdf	09 47 20.7	+2.1
LUWI	Luwuk	166.42	353		PKPdf	09 47 17.7	-0.8
LUWI				PKPab	PKPab	09 48 17.4	-2.5
UGM	Wanagama	167.75	58		PKPdf	09 47 18.3	-1.2
UGM				PKPab	PKPab	09 48 22.9	-3.2
KAPI	Kappang	170.40	8	PKP	PKPdf	09 47 20.6	-0.6
	comp=Z,21nm,1.0s,baz=275,slow=2.4,SNR=9.5						
KAPI				PKPab	PKPab	09 48 36.5	-0.9
	comp=Z,50nm,1.0s,baz=20,slow=1.6,SNR=8.5						
KAPI				PP	PP	09 52 26.0	0.0
	comp=Z,74nm,1.1s,baz=285,slow=5.4,SNR=14						
KAPI	Kappang	170.40	8		PKPdf	09 47 20.1	-1.1
KAPI					PKPab	09 48 36.6	-0.8
KAPI					PP	09 52 28.0	+2.0
KAPI	Kappang	170.40	8	PKIKP	PKPdf	09 47 20.1	-1.1
KAPI						09 48 36.7	
KAPI						09 52 28.0	
JAGI	Jajag, Banyuwa	170.92	49	PKP	PKPdf	09 47 21.7	+0.2
JAGI	Jajag, Banyuwa	170.92	49		PKPdf	09 47 19.2	-2.3
JAGI				PKPab	PKPab	09 48 38.3	-1.7
KNRA	Kununurra	172.45	261		PKPdf	09 47 21.7	-0.4
KNRA				PKPab	PKPab	09 48 42.3	-4.6
PSA00	Pilbara Seismi	172.97	171		PKPdf	09 47 21.6	-0.6
PSA00				PKPab	PKPab	09 48 48.4	-0.3
MMRI	Maumere	173.96	349	PKPdf	PKPdf	09 47 21.2	-1.6
MMRI					PKPab	09 48 52.0	-1.3
FITZ	Fitzroy Crossi	174.37	231	PKP	PKPdf	09 47 22.2	-0.6
	comp=Z,33nm,1.0s,baz=276,slow=1.6,SNR=15						
FITZ				PKPab	PKPab	09 48 56.9	+1.7
	comp=Z,34nm,0.8s,baz=180,slow=7.5,SNR=8.0						
FITZ				PP	PP	09 52 48.0	+1.0
	comp=Z,21nm,1.2s,baz=121,slow=6.9,SNR=5.5						
FITZ	Fitzroy Crossi	174.37	231		PKPdf	09 47 21.7	-1.1
FITZ					PKPab	09 48 54.6	-0.6

DDA 18 09:47:39.2, 40°.80N×31°.50E, h7km±1km, ML1.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YIGI	Dzce	0.17	347	iP	Pg	09 47 43.1	+0.5
YIGI				IAML		09 47 45.0	
	comp=E,51nm,0.4s						
YIGI				iS	Sg	09 47 45.5	+0.5
YIGI				IAML		09 47 46.0	
	comp=N,37nm,0.3s						
BCAM	Yenicaga	0.43	88	iP	Pg	09 47 47.6	0.0
BCAM				iS	Sg	09 47 53.4	+0.2
BCAM				IAML		09 47 54.0	
	comp=N,15nm,0.6s						
BCAM				IAML		09 47 54.0	
	comp=E,17nm,0.2s						
KIBS	BOLU	0.47	145	iP	Pg	09 47 48.6	+0.4
KIBS				iS	Sg	09 47 55.5	+1.2
SAHE	Sakarya_HENDEK	0.49	276	iP	Pg	09 47 49.2	+0.5
SAHE				iS	Sg	09 47 56.4	+1.2
SAHE				IAML		09 47 57.0	
	comp=E,28nm,0.3s						
SAHE				IAML		09 47 58.0	
	comp=N,35nm,0.3s						

IDC 18 09:57:18.3±2.2, 8°.19S×130°.65E, h0km, mb3.7/1, mb1 3.8/4, mb1mx3.4/59, mbtmp3.6/4, ML3.4/3, Error ellipse: s-maj=75.9km s-min=27.3km az=78.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.98	206	Pn	Pn	09 59 56.8	0.0
	0.2nm,0.3s,baz=25,slow=14,SNR=4.5						
FITZ				Sn	Sn	10 01 53.6	-6.9
	0.3nm,0.3s,baz=333,slow=15,SNR=3.5						
WRA	Warramunga Arr	12.21	163	Pn	Pn	10 00 14.3	+0.6
	0.2nm,0.3s,baz=347,slow=13,SNR=15						
WRA				Sn	Sn	10 02 26.6	-4.1
	0.4nm,0.3s,baz=346,slow=24,SNR=8.8						
ASAR	Alice Springs	15.70	169	Pn	Pn	10 01 01.1	+0.1
	0.1nm,0.3s,baz=344,slow=8.6,SNR=8.1						
ASAR				Sn	Sn	10 03 54.8	-1.0
	0.1nm,0.3s,baz=359,slow=22,SNR=4.7						
MKAR	Makanchi Array	69.57	327	P	P	10 08 29.2	0.0
	0.4nm,0.4s,baz=121,slow=8.2,SNR=4.4						

NEIC 18 09:59:52.3±3.0, 34°.70S±0°.10×179°.3W±0°.1, h10km±1km, mb4.8/16, Error ellipse: s-maj=19.0km s-min=11.0km az=144.0

WEL 18 09:59:55.8±0.9, 35°S±8°×17°9W±1°0, h140km±19km, M4.1/49, mB4.7/25, MLv4.7/49, Mw(mB)3.9/25

IDC 18 09:59:59.1±5.0, 34°.83S×179°.37W, h52km±41km, mb4.1/8, mb1 4.3/9, mb1mx4.0/37, mbtmp4.4/9, ML4.4/1, Error ellipse: s-maj=29.1km s-min=21.3km az=50.0

ISC 18 09:59:56.8±0.5, 35°.12S±0°.07×179°.08W±0°.09, h42km, n149, σ2s.25/168, mb4.7/15, 2C, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.23	220	Pn	Pn	10 00 46.3	+1.3
MXZ				Sn	Sn	10 01 26.0	+3.9
WMGZ	Waiomatatini S	3.37	216	P	Pn	10 00 49.0	+2.1
WMGZ				S	Sn	10 01 31.5	+5.9
PKGZ	Pakihiroa	3.59	219	P	Pn	10 00 51.6	+1.5
PKGZ				S	Sn	10 01 35.6	+4.4
PUZ	Puketiti	3.65	215	P	Pn	10 00 52.4	+1.6
HAZ	Te Kaha	3.65	223	P	Pn	10 00 52.6	+1.8
HAZ				S	Sn	10 01 38.8	+6.2
RUGZ	Raukumara Rang	3.86	222	P	Pn	10 00 55.8	+2.0
MWZ	Matawai	4.21	219	P	Pn	10 00 59.9	+1.4
MWZ				S	Sn	10 01 50.2	+3.7
URZ	Urewera	4.38	223	P	Pn	10 01 02.3	+1.4
	19nm,0.3s,baz=264,slow=3.4,SNR=116						
URZ				S	Sn	10 01 55.2	+4.6
	17nm,0.3s,baz=148,slow=20,SNR=15						
URZ	Urewera	4.38	223		Pn	10 01 01.8	+1.0
URZ				Sn	Sn	10 01 56.1	+5.5
URZ	Urewera	4.38	223	P	Pn	10 01 02.2	+1.3
RAGZ	Rawiri	4.39	219	P	Pn	10 01 03.0	+1.9
OPRZ	Ohinepanea	4.45	231	P	Pn	10 01 03.0	+1.3
MARZ	Manawahe	4.46	229	P	Pn	10 01 03.7	+1.7
EDRZ	Edgecumbe	4.50	227	P	Pn	10 01 06.1	+3.6
PRGZ	Paritu Road	4.51	212	P	Pn	10 01 03.5	+0.9
PRGZ				S	Sn	10 01 56.2	+2.4
KNZ	Kokohu	4.68	213	P	Pn	10 01 05.0	+0.1
MHGZ	Mahia Peninsul	4.69	210	P	Pn	10 01 06.6	+1.5
RTZ	Ruatahuna	4.71	221	P	Pn	10 01 07.4	+2.0
TARZ	Mount Tarawera	4.72	227	P	Pn	10 01 08.2	+2.6
OMRZ	Omania	4.72	229	P	Pn	10 01 07.8	+2.2
MUGZ	Murupara	4.73	224	P	Pn	10 01 07.0	+1.5
KARZ	Kaharoa	4.75	231	P	Pn	10 01 07.6	+1.7
RRRZ	Republican Roa	4.78	226	P	Pn	10 01 08.1	+1.7
HLRZ	Highlands Stat	4.82	228	P	Pn	10 01 08.8	+1.8
KMRZ	Kaimai	4.85	234	P	Pn	10 01 09.7	+2.4
RAHZ	Arahi	4.88	218	P	Pn	10 01 10.4	+2.7
WHHZ	Waihua	4.93	216	P	Pn	10 01 10.6	+2.3
HRRZ	Handcock Road	4.95	227	P	Pn	10 01 11.1	+2.4
MTHZ	Maungataniwha	4.96	220	P	Pn	10 01 10.3	+1.5
PRRZ	Plateau Road	4.96	226	P	Pn	10 01 10.5	+1.7
ALRZ	Allen Road	5.03	226	P	Pn	10 01 11.8	+2.0
WPRZ	Whakapapatarin	5.11	227	P	Pn	10 01 12.6	+1.7
NMHZ	Naumai	5.16	218	P	Pn	10 01 12.9	+1.4
MRHZ	Matea Rd	5.17	223	P	Pn	10 01 13.1	+1.3
ARHZ	Aropaoanui	5.19	216	P	Pn	10 01 13.2	+1.3
BKZ	Black Stump Fm	5.37	220		Pn	10 01 14.7	+0.2
BKZ				Sn	Sn	10 02 19.8	+4.7
BKZ	Black Stump Fm	5.37	220	P	Pn	10 01 15.3	+0.8
TLZ	Tolley Road	5.38	232	P	Pn	10 01 17.2	+2.6
CKHZ	Cape Kidnapper	5.47	213	P	Pn	10 01 16.3	+0.5
MCHZ	McNeill Hill	5.48	217	P	Pn	10 01 17.4	+1.6
WATZ	Wairara	5.49	228	P	Pn	10 01 17.6	+1.5
RATZ	Rangitukua	5.57	226	P	Pn	10 01 18.8	+1.6
RITZ	Rihia Road	5.59	225	P	Pn	10 01 19.0	+1.6
KWHZ	Kaweka Forest	5.60	219	P	Pn	10 01 18.4	+0.8
KAHZ	Kahuranaki	5.67	213	P	Pn	10 01 17.7	-0.9
KATZ	Kakaramea	5.68	226	P	Pn	10 01 21.4	+2.6
KRHZ	Kereru	5.79	217	P	Pn	10 01 20.9	+0.6
KRVZ	Karewarewa	5.79	225	P	Pn	10 01 21.6	+1.3
BHHZ	Black Hill Sta	5.83	220	P	Pn	10 01 21.7	+0.9
WTVZ	West Tongariro	5.84	225	P	Pn	10 01 22.4	+1.5
PXZ	Pawanui	5.87	212	P	Pn	10 01 22.9	+1.7
NGZ	Ngauruhoe	5.87	225	P	Pn	10 01 23.3	+1.9
TUVZ	Tukino	5.90	224	P	Pn	10 01 23.3	+1.4
HIZ	Hauiti	5.93	233		Pn	10 01 21.7	-0.4
HIZ	Hauiti	5.93	233	P	Pn	10 01 24.4	+2.3
FWVZ	Far West T-bar	5.95	224	P	Pn	10 01 24.4	+1.8
PNHZ	Pukenui	6.08	217	P	Pn	10 01 24.4	+0.1
WPHZ	Waipukurau	6.09	214	P	Pn	10 01 24.8	+0.6
PKVZ	Pokaka	6.09	225	P	Pn	10 01 26.1	+1.7
PRHZ	Porangahau	6.16	212	P	Pn	10 01 25.5	+0.2
TSZ	Takapari Road	6.31	217	P	Pn	10 01 26.8	-0.5
VRZ	Vera Road	6.34	229	P	Pn	10 01 29.4	+1.7
ANWZ	Angora Road	6.39	212	P	Pn	10 01 30.0	+1.6
ANWZ	Angora Road	6.39	212	P	Sn	10 02 42.0	+1.9
DVHZ	Dannevirke	6.40	215	P	Pn	10 01 28.6	+0.1
WAZ	Wanganui	6.61	224	P	Pn	10 01 33.0	+1.5
POWZ	Post Office Ro	6.66	216	P	Pn	10 01 32.7	+0.5
POWZ	Post Office Ro	6.66	216	P	Sn	10 02 49.3	+2.6
BFZ	Birch Farm	6.67	212	P	Pn	10 01 30.7	-1.5

BFZ Birch Farm 6.67 212 P Sn 10 02 47.8 +0.8
PRWZ Pori Road 6.69 214 P Pn 10 01 32.2 -0.4
PRWZ Pori Road 6.69 214 P Sn 10 02 48.9 +1.4
CPWZ Castlepoint 6.88 211 P Sn 10 02 54.5 +2.5
TIWZ Tintock 6.91 214 P Sn 10 02 53.9 +1.0
KHEZ Kahui Hut 6.91 231 P Pn 10 01 38.9 +3.3
MRZ Mangatainoka R 6.96 216 P Pn 10 01 34.9 -1.3
MRZ Mangatainoka R 6.96 216 P Sn 10 02 54.2 +0.1
TMWZ Te Maipa 7.17 212 P Sn 10 02 54.8 -4.5
HOWZ Holdsworth Sta 7.18 215 P Sn 10 02 58.6 -0.8
MTW Mount Morrison 7.39 214 P Sn 10 03 01.6 -2.9
KIW Kapiti Island 7.44 218 P Sn 10 03 05.4 -0.5
CAW Cannon Point 7.55 216 P Sn 10 03 08.6 0.0
MSWZ Moikau Station 7.71 214 Pn Pn 10 01 45.1 -1.4
MSWZ Sn Sn 10 03 10.4 -2.0
PLWZ Palliser 7.83 213 Pn Pn 10 01 46.3 -1.9
PLWZ Sn Sn 10 03 14.8 -0.6
PLWZ Palliser 7.83 213 P Sn 10 03 11.5 -3.9
BHW Baring Head 7.88 215 Pn Pn 10 01 45.8 -3.0
BHW Sn Sn 10 03 15.5 -1.1
SNZO South Karori 7.88 217 Pn Pn 10 01 48.5 -0.3
SNZO Sn Sn 10 03 15.1 -1.6
BSWZ Blackbirch Sta 8.60 218 Pn Pn 10 01 56.8 -1.9
BSWZ Sn Sn 10 03 32.8 -1.5
QRZ Quartz Range 8.74 227 Pn Pn 10 01 58.1 -2.5
QRZ Sn Sn 10 03 35.4 -2.3
THZ Tophouse 9.14 221 Pn Pn 10 02 03.6 -2.5
THZ Sn 10 03 45.6 -2.1
KHZ Kahutara 9.29 216 Pn Pn 10 02 05.6 -2.5
KHZ Sn 10 03 47.1 -4.1
LTZ Lake Taylor 10.19 219 Pn Pn 10 02 19.3 -1.2
LTZ Lake Taylor 10.19 219 P Pn 10 02 19.5 -1.0
MQZ McQueen's Vall 10.69 214 Pn Pn 10 02 25.6 -1.7
MQZ Sn 10 04 19.0 -6.6
MQZ McQueen's Vall 10.69 214 P Pn 10 02 25.0 -2.3
OXZ Oxford 10.70 217 P Pn 10 02 25.0 -2.5
RPZ Rata Peaks 11.48 219 P Pn 10 02 34.9 -3.2
1.3nm,0.3s,baz=94,slow=2.7,SNR=8.4
RPZ S Sn 10 04 39.2 -5.7
1.8nm,0.3s,baz=354,slow=21,SNR=11
RPZ Rata Peaks 11.48 219 Pn Pn 10 02 35.0 -3.1
RPZ Sn 10 04 38.4 -6.5
RPZ Rata Peaks 11.48 219 P Pn 10 02 35.9 -2.2
ODZ Otahua Downs 12.65 215 Pn Pn 10 02 50.1 -4.0
MLZ Mavora Lakes 14.14 220 Pn Pn 10 03 12.6 -1.8
WHZ Wether Hill Ro 14.58 219 Pn Pn 10 03 18.6 -1.7
DZM Mont Dzumac 18.15 312 P Pn 10 04 06.2 +0.3
0.1nm,0.3s,baz=132,slow=13,SNR=3.7
SANVU Saraoutou 23.14 324 P P 10 04 51.1 -8.4
SANVU IAmb IAmb 10 05 05.5
comp=Z,24nm,0.7s
EIDS Eidsvold 27.46 283 P P 10 05 30.8 -8.2
STKA Stephens Creek 32.81 264 P P 10 06 27.1 +0.9
comp=Z,3.1nm,0.8s,baz=112,slow=12,SNR=4.9
CTA Charters Tower 33.98 287 P P 10 06 36.5 -0.1
comp=Z,7.3nm,0.7s,baz=123,slow=12,SNR=7.9
AS31 Alice Springs 42.18 273 P P 10 07 45.0 -0.6
ASAR Alice Springs 42.18 273 P P 10 07 44.6 -1.0
comp=Z,8.5nm,0.8s,baz=115,slow=7.8,SNR=69
WR0 Warramunga Arr 43.42 278 P P 10 07 54.8 -0.9
WB2 Warramunga Arr 43.59 278 P P 10 07 55.9 -1.1
WRAB Tennant Creek 43.59 278 P P 10 07 55.8 -1.2
WRAB IAmb IAmb 10 07 56.6
comp=Z,11nm,0.8s
WRA Warramunga Arr 43.59 278 P P 10 07 55.6 -1.5
comp=Z,8.3nm,0.7s,baz=120,slow=7.3,SNR=41
WB0 Warramunga Arr 43.64 278 P P 10 07 56.0 -1.5
WB0 IAmb IAmb 10 07 57.0
comp=Z,14nm,0.8s
FORT Forrest 44.15 260 P P 10 07 60.0 -1.4
KNRA Kununurra 50.34 279 P P 10 08 48.5 -1.3
KNRA IAmb IAmb 10 08 59.9
comp=Z,14nm,0.9s
CASY Casey 50.58 210 P P 10 08 53.3 +2.5
FITZ Fitzroy Crossi 51.62 274 P P 10 08 58.4 -0.9
FITZ IAmb IAmb 10 09 07.5
comp=Z,20nm,1.4s
NWAO Narrogin (SRO) 52.02 253 P P 10 08 59.3 -2.9
PSA00 Pilbara Seismi 54.66 267 P P 10 09 21.8 0.0
PSA00 IAmb IAmb 10 09 35.8
comp=Z,18nm,1.4s
PSAD1 Pilbara Seismi 54.73 267 P P 10 09 21.5 -0.8
PSAD1 IAmb IAmb 10 09 23.8
comp=Z,7.8nm,0.9s
QSPA South Pole Qui 55.01 180 P P 10 09 27.1 +3.4
comp=Z,2.8nm,0.9s,baz=227,slow=1.6,SNR=13
QSPA South Pole Qui 55.01 180 P P 10 09 28.1 +4.3
QSPA IAmb IAmb 10 09 44.4
comp=Z,9.4nm,1.0s
TNTI Ternate 61.36 294 P P 10 10 07.7 -1.0
SYO Syowa Base 72.33 194 eP P 10 11 17.0 -0.6
SYO Syowa Base 72.33 194 esP P 10 11 23.0 +5.4
NJ2 Nanjing 88.64 311 eP P 10 12 47.3 +1.8
PETK Petropavlovsk- 90.16 346 P P 10 12 51.8 -0.3
comp=Z,10nm,0.9s,baz=119,slow=7.6,SNR=7.8
NVAR Mina Array Bea 92.30 43 P P 10 13 05.0 +2.4
comp=Z,0.2nm,0.4s,baz=254,slow=2.6,SNR=2.4
TXAR Lajitas Array 95.67 58 P P 10 13 19.0 +0.8
comp=Z,0.3nm,0.9s,baz=116,slow=8.5,SNR=4.0
CD2 Chengdu 97.83 302 P Pdif 10 13 28.8 +0.9
HHC Hu-ho-hao-te 98.85 314 eP Pdif 10 13 34.5 +2.2
LZH Lanzhou 100.80 307 eP Pdif 10 13 43.9 +2.7
LZH pP pPdif 10 13 48.3 -4.0
LZH sP pP 10 13 50.6 -1.7
LZH PP PP 10 17 45.6 -4.1
MKAR Makanchi Array 120.04 308 PKP PKPdf 10 18 41.5 -1.0
comp=Z,0.6nm,0.7s,baz=201,slow=1.8,SNR=6.2
KURK Kurchatov 123.58 312 PKPdf 10 18 48.7 -0.5
KURBB Kurchatov Arra 123.61 312 PKP PKPdf 10 18 48.4 -0.8
comp=Z,1.3nm,0.7s,baz=116,slow=2.0,SNR=13
BVAR Borovoye Array 129.06 313 PKP PKPdf 10 18 59.6 +0.1
comp=Z,1.0nm,0.6s,baz=109,slow=3.6,SNR=6.5
ARCES ARCESS Array B 142.97 346 PKP PKPdf 10 19 23.0 -1.9
comp=Z,0.8nm,0.5s,baz=45,slow=1.4,SNR=3.7
KBZ Khabaz 146.75 298 PKPbc PKPbc 10 19 33.4 -0.5
comp=Z,4.0nm,1.0s,baz=172,slow=4.8,SNR=4.9
OBN Obninsk 148.37 320 PKPbc PKPbc 10 19 37.6 -0.4
comp=Z,4.4nm,0.4s,baz=274,slow=24,SNR=4.0
FINES FINESS Array B 149.18 337 PKPbc PKPbc 10 19 39.3 -0.6
comp=Z,6.3nm,0.8s,baz=35,slow=4.7,SNR=15
EIL Elat 150.85 269 PKPbc PKiKP 10 19 45.4 -0.2
comp=Z,3.5nm,0.8s,baz=48,slow=5.1,SNR=4.6
DBIC Dimbokro 151.19 168 PKPbc PKiKP 10 19 48.6 +2.0
comp=Z,1.7nm,0.5s,baz=152,slow=2.2,SNR=5.0
DBIC Dimbokro 151.19 168 PKiKP 10 19 48.1 +1.5
NB2 NORSAR Subarra 153.23 349 PKPdf PKPbc 10 19 48.5 -0.9
comp=Z,1.2nm,0.9s,baz=27,slow=1.8
NOA NORSAR Array B 153.23 349 PKPbc PKiKP 10 19 51.1 +1.6
comp=Z,1.3nm,0.9s,baz=26,slow=1.9,SNR=4.1
NOA PKPab PKPab 10 20 00.0 -1.3
comp=Z,2.2nm,1.0s,baz=27,slow=3.1,SNR=4.3
BRTR Keskin Array B 153.70 290 PKPbc PKPbc 10 19 50.9 -0.3
comp=Z,1.1nm,0.7s,baz=147,slow=7.0,SNR=4.9
BRTR PKPab PKPab 10 20 03.0 -1.2
comp=Z,2.5nm,0.8s,baz=145,slow=3.9,SNR=6.8
AKASG Malin Array Be 154.28 316 PKPbc PKPbc 10 19 51.3 -0.6
comp=Z,1.2nm,0.5s,baz=59,slow=2.8,SNR=6.1
AKASG PKPab PKPab 10 20 04.3 -1.7
comp=Z,0.4nm,0.3s,baz=63,slow=2.1,SNR=5.1
TORD Torodi Ar. Bea 158.12 182 PKPab PKPab 10 20 25.1 +1.9
comp=Z,0.7nm,0.6s,baz=164,slow=3.5,SNR=4.7

BJI **18** 10:12:09.7±0.0, 4°.73S×154°.19E, h80km, mB5.7/51, mb5.6/71, Ms6.0/54, Ms7 5.8/53
MOS **18** 10:12:12.5±0.8, 4°.86S×153°.79E, h94km, mb5.7/56, Error ellipse: s-maj=6.1km s-min=5.1km az=109.3
IDC **18** 10:12:14.9±0.8, 4°.97S×153°.76E, h104km±7km, mb5.1/35, mb1 5.1/38, mb1mx5.1/39, mbtmp5.4/38, MS5.1/11, Ms1 5.1/11, ms1mx4.6/36, Error ellipse: s-maj=7.4km s-min=6.2km az=56.0
GCMT **18** 10:12:14.6±0.2, 5°.03S±0°.02×153°.75E±0°.02, h91km±1km, MW5.8/133, Moment Tensor Solution. s64,c89; s133,c224; Duration: 1s9 Moment tensor: Scale 10^{17} Nm; M_{rr}4.50±.14; $M_{\theta\theta}$-1.60±.15; $M_{\phi\phi}$-2.91±.16; $M_{r\theta}$-1.71±.10; $M_{\theta\phi}$3.05±.16; $M_{\phi r}$2.80±.10; Best double couple: $M_0$5.93200×10^{17} NP1:ϕ_s135.00000°, δ29.00000°, λ80.00000°. NP2:ϕ_s326.00000°, δ62.00000°, λ95.00000°. Principal axes: T 5.5120, Plg73.0000°, Azm248.0000°; N 0.8300, Plg5.0000°, Azm143.0000°; P -6.3520, Plg17.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function
NEIC **18** 10:12:14, 5°.05S×153°.76E, h92km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}4.85; $M_{\theta\theta}$-1.20; $M_{\phi\phi}$-3.65; $M_{r\theta}$-1.73; $M_{\theta\phi}$2.33; $M_{\phi r}$2.84; Fault plane solution: $M_0$5.97000×10^{17} NP1:ϕ_s149.00000°, δ28.00000°, λ90.00000°. NP2:ϕ_s329.00000°, δ62.00000°, λ90.00000°. Principal axes: T 5.8627, Plg73.0000°, Azm238.0000°; N 0.2074, Plg0.0000°, Azm329.0000°; P -6.0701, Plg17.0000°, Azm59.0000°;
NEIC **18** 10:12:15.6±1.8, 4°.92S±0°.06×153°.78E±0°.05, h112km±4km, mb5.5/223, Mwc5.8(GCMT) Error ellipse: s-maj=8.9km s-min=7.2km az=206.0
DJA **18** 10:12:17.7±0.6, 5°S±4°×15°4E±°, h140km±6km, M5.7/73, mb5.6/73, mB6.0/48, Mw(mB)5.7/48, Mwp5.8/2
KLM **18** 10:12:20.0, 5°.02S×153°.84E, h148km, mb5.6
ISC 18 10:12:15.1±0.4, **4°.91S**±0°.03×**153°.84E**±0°.03, **h108**km±3km, **h108**km**:pP-P, n932,** σ1s**21**/1018, **mb5.5**/260, **14C-8D, New Ireland region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

RABL Rabaul 1.82 293 Pn Pn 10 12 43.5 -2.3
RABL Sn Sn 10 13 05.5 -3.7
KRVT Keravat (AS076 1.91 288 P Pn 10 12 44.5 -2.4
638nm,0.3s,baz=138,slow=0.9,SNR=165
KRVT S Sn 10 13 09.2 -1.9
2μm,0.3s,baz=159,slow=23,SNR=24
KRVT LR LR 10 13 41.0
comp=Z,37μm,19.1s,baz=211,slow=46
HNR Honiara 7.54 127 P Pn 10 14 01.9 -0.5
33nm,0.3s,baz=175,slow=7.7,SNR=13
HNR S Sn 10 15 24.9 -1.4
76nm,0.3s,baz=324,slow=21,SNR=6.7
HNR Honiara 7.54 127 eP Pn 10 14 04.0 +1.6
HNR iS Sn 10 15 29.0 +2.7
HNR Honiara 7.54 127 Pn 10 14 02.1 -0.3
HNR Sn 10 15 28.6 +2.3
PMG Port Moresby 8.00 236 P Pn 10 14 08.5 -0.1
394nm,0.3s,baz=46,slow=5.6,SNR=201
PMG S Sn 10 15 36.0 -1.4
36nm,0.3s,baz=18,slow=19,SNR=2.4
PMG LR LR 10 17 26.6
comp=Z,6μm,19.8s,baz=48,slow=40
PMG Port Moresby 8.00 236 Pn 10 14 08.2 -0.4
PMG Sn Sn 10 15 37.0 -0.4
PMG Port Moresby 8.00 236 deP Pn 10 14 08.4 -0.2
PMG pmax pmax
comp=Z,6μm,0.7s
PATS Pohnpei 12.49 21 P Pn 10 15 07.2 -2.0
baz=13,SNR=3.7
PATS Pohnpei 12.49 21 Pn 10 15 07.8 -1.4
PATS Sn Sn 10 17 18.9 -7.8
JAY Jayapura 13.32 280 P Pn 10 15 21.2 +1.0
comp=Z,0.8nm,0.3s,baz=126,slow=17,SNR=3.0
JAY S Sn 10 17 48.0 +1.0
comp=Z,0.6nm,0.3s,baz=82,slow=20,SNR=2.3
JAY Jayapura 13.32 280 P P 10 15 24.7 -1.1
comp=Z,2μmcomp=Z,76nm,0.9s
COEN Coen 13.83 229 P Pn 10 15 27.6 +0.9
baz=14,SNR=24
COEN Coen 13.83 229 Pn 10 15 26.1 -0.6
GENI Genyem 13.84 279 P P 10 15 30.6 -0.9
comp=Z,7μmcomp=Z,404nm,1.4s
SMPI Sarmi 15.38 280 P P 10 15 50.4 +1.8
comp=Z,7μmcomp=Z,359nm,1.3s
MTSU Mount Surprise 16.11 215 P P 10 15 57.5 +0.8
baz=16,SNR=62
SANVU Saraoutou 16.80 130 Pn P 10 16 04.3 +0.1
SANVU Pn 10 16 04.6 +0.7
CTA Charters Tower 16.80 205 P P 10 16 06.1 +1.8
comp=Z,0.9nm,0.3s,baz=25,slow=13,SNR=17
CTA S S 10 19 12.0 -2.1
comp=Z,0.1nm,0.3s,baz=40,slow=15,SNR=1.9
CTAO Charters Tower 16.80 205 P P 10 16 05.7 +1.4
KWAJ Kwajalein Atol 19.34 45 P P 10 16 32.6 +0.4
KWAJ Kwajalein Atol 19.34 45 P P 10 16 32.6 +0.4
KWAJ pmax pmax
comp=Z,2μm,1.4s
RKPI Ransiki, Papua 19.92 279 P pP 10 16 58.7 +0.3
GUMO Guam 20.43 334 P P 10 16 45.5 +1.6
comp=Z,409nm,0.9s,baz=180,slow=8.0,SNR=11
GUMO Guam 20.43 334 P P 10 16 45.0 +1.1
EIDS Eidsvold 20.52 187 P P 10 16 45.8 +1.0
baz=20,SNR=98
EIDS Eidsvold 20.52 187 P P 10 16 45.3 +0.5
EIDS IAmb IAmb 10 16 47.5
comp=Z,392nm,1.1s
QIS Mount Isa 20.82 220 P P 10 16 48.6 +0.4
baz=21,SNR=112
NOUC Port Laguerre 20.92 146 P P 10 16 48.5 -0.7
NOUC IAmb IAmb 10 17 23.0
comp=Z,365nm,1.5s
DZM Mont Dzumac 20.97 146 P P 10 16 50.4 +0.5
comp=Z,34nm,0.4s,baz=265,slow=6.2,SNR=99
DZM S S 10 20 36.5 -1.2
comp=Z,7.9nm,0.9s,baz=140,slow=10.0,SNR=3.1
FAKI Fak Fak 21.63 274 P P 10 16 57.9 +0.9
comp=Z,111nm,1.0s
FAKI Fak Fak 21.63 274 P P 10 16 55.6 -1.4
FAKI IAmb IAmb 10 17 29.6
comp=Z,768nm,1.9s
RMQ Roma 22.00 192 P P 10 17 01.5 +0.8
baz=22,SNR=259
KDU Kakadu 22.47 248 P P 10 17 04.3 -1.4
baz=22,SNR=108
ANA2 Anatahan 22.60 339 P P 10 17 06.1 -0.8
ANA2 IAmb IAmb 10 17 08.3
comp=Z,263nm,0.7s
SAUI Saumlaki 22.61 261 P P 10 17 08.2 +1.1
comp=Z,22μmcomp=Z,1μm,1.8s
SAUI Saumlaki 22.61 261 P P 10 17 06.6 -0.4
SIJI Sorong 22.90 279 P P 10 17 09.2 -0.8
comp=Z,61nm,0.5s,baz=129,slow=6.6,SNR=24
SIJI S S 10 21 12.0 +0.3
comp=Z,6.8nm,0.6s,baz=117,slow=24,SNR=1.9
SWI Sorong 22.91 279 P P 10 17 11.3 +1.3
comp=Z,5μmcomp=Z,203nm,0.8s
SWI Sorong 22.91 279 P P 10 17 10.1 +0.1
SWI pmax pmax
comp=Z,200nm,0.8s
QLP Quilpie 23.43 202 P P 10 17 14.8 +0.1
baz=23,SNR=304
WR0 Warramunga Arr 24.02 230 P P 10 17 20.1 -0.1
WR0 IAmb IAmb 10 17 22.8
comp=Z,344nm,1.1s
WB0 Warramunga Arr 24.02 230 P P 10 17 19.9 -0.3
WB0 IAmb IAmb 10 17 22.8
comp=Z,392nm,1.2s
WRAB Tennant Creek 24.15 230 P P 10 17 21.2 -0.2
WRAB IAmb IAmb 10 17 24.0
comp=Z,221nm,1.0s
WRAB Tennant Creek 24.15 230 ceP P 10 17 21.0 -0.4
WRAB pmax pmax
comp=Z,328nm,1.3s
WB2 Warramunga Arr 24.15 230 P P 10 17 21.6 +0.2
WB2 IAmb IAmb 10 17 24.2
comp=Z,203nm,1.0s
WRA Warramunga Arr 24.16 230 P P 10 17 20.3 -1.2
comp=Z,182nm,1.1s,baz=56,slow=10,SNR=97
WRA S S 10 21 32.1 +0.1
comp=Z,15nm,1.3s,baz=64,slow=15,SNR=2.8
WRA LR LR 10 27 36.3
comp=Z,3μm,19.0s,baz=35,slow=38
MSAI Masohi 24.90 273 P P 10 17 29.3 +1.1
comp=Z,565nmcomp=Z,30nm,0.9s
FUNA Funafuti 25.43 99 P P 10 17 33.6 +0.6
ARMA Armidale 25.46 184 P P 10 17 34.1 +0.8
baz=26,SNR=108
ARMA Armidale 25.46 184 P P 10 17 34.2 +1.0
ARMA IAmb IAmb 10 17 35.5
comp=Z,215nm,0.8s
AAI Ambon 25.61 272 P P 10 17 34.5 -0.2
comp=Z,4μmcomp=Z,192nm,0.9s
AAI Ambon 25.61 272 P P 10 17 34.9 +0.2
AAI pmax pmax
comp=Z,194nm,1.0s
H11S3 WAKE ISLAND Hy 26.48 28 T T 10 46 15.3
baz=208,slow=76,SNR=96
H11S2 WAKE ISLAND Hy 26.48 28 T T 10 46 27.8
baz=208,slow=76,SNR=160
H11S1 WAKE ISLAND Hy 26.50 28 T T 10 46 16.1
baz=208,slow=76,SNR=126
LBMI Labuha 26.65 278 P P 10 17 46.0 +1.9
comp=Z,4μmcomp=Z,163nm,1.0s
NLAI Namlea 26.73 273 P P 10 17 44.9 +0.1
comp=Z,320μmcomp=Z,5μmcomp=Z,94nm,1.1s
AS31 Alice Springs 26.78 224 P P 10 17 44.6 -0.6
ASAR Alice Springs 26.78 224 P P 10 17 44.8 -0.4
comp=Z,108nm,1.0s,baz=55,slow=8.7,SNR=300
ASAR PcP PcP 10 21 06.2 +0.5
comp=Z,7.5nm,0.6s,baz=78,slow=2.5,SNR=6.0
ASAR S S 10 22 11.2 -2.3
comp=Z,5.0nm,0.9s,baz=41,slow=8.3,SNR=2.4
ASAR ScP ScP 10 24 38.2 +2.0
comp=Z,3.0nm,0.7s,baz=59,slow=2.4,SNR=4.2
ASAR LR LR 10 28 49.5
comp=Z,4μm,20.8s,baz=78,slow=37
KNRA Kununurra 26.86 245 P P 10 17 45.5 -0.5
baz=27,SNR=20
KNRA Kununurra 26.86 245 P P 10 17 45.4 -0.5
KNRA IAmb IAmb 10 18 18.3
comp=Z,217nm,0.9s
MSVF Nonsavu 26.89 120 P P 10 17 46.9 +0.6
MSVF Nonsavu 26.89 120 iP P 10 17 47.0 +0.7
MSVF pmax pmax
comp=Z,31nm,0.8s
LHI Lord Howe Isla 26.92 170 P P 10 17 46.0 -0.2
baz=27,SNR=3.3
LHI Lord Howe Isla 26.92 170 P P 10 17 46.4 +0.1
LHI IAmb IAmb 10 18 20.9
comp=Z,158nm,1.2s
CMSA Cobar Meteorol 27.57 195 P P 10 17 52.0 -0.1
baz=28,SNR=159
H11N1 WAKE ISLAND Hy 27.63 27 T T 10 47 44.7
baz=184,slow=74,SNR=7.1
H11N3 WAKE ISLAND Hy 27.64 27 T T 10 47 16.2
baz=328,slow=74,SNR=9.9
H11N2 WAKE ISLAND Hy 27.65 27 T T 10 47 57.3
SANI Sanana 27.95 275 P P 10 17 56.1 +0.4
comp=Z,2μmcomp=Z,78nm,0.9s
RIV Riverview 28.88 185 P P 10 18 04.8 +1.1
baz=29,SNR=11
RIV Riverview 28.88 185 P P 10 18 05.2 +1.5
RIV pmax pmax
comp=Z,259nm,1.1s
STKA Stephens Creek 29.18 202 P P 10 18 06.1 -0.3
baz=29,SNR=54
STKA Stephens Creek 29.18 202 P P 10 18 06.0 -0.3
comp=Z,117nm,0.8s,baz=8.8,slow=9.1,SNR=142
STKA LR LR 10 29 19.7
comp=Z,2μm,21.1s,baz=26,slow=35
STKA Stephens Creek 29.18 202 P P 10 18 06.2 -0.3
STKA Stephens Creek 29.18 202 P P 10 18 06.2 -0.2
STKA pmax pmax
comp=Z,31nm,0.9s
MNI Manado 29.66 282 P P 10 18 11.0 +0.1
MNI pmax pmax
comp=Z,227nm,1.0s
YNG Young 29.68 189 P P 10 18 11.4 +0.6
baz=30,SNR=12
SOEI Soe 29.72 259 P P 10 18 13.6 +2.1
comp=Z,4μmcomp=Z,124nm,1.0s
SOEI Soe 29.72 259 P P 10 18 11.2 -0.3
KMSI Cibinong 30.32 280 P P 10 18 18.3 +1.6
comp=Z,3μmcomp=Z,297nm,0.9s
FITZ Fitzroy Crossi 30.52 242 P P 10 18 17.5 -0.9
baz=30,SNR=67
FITZ Fitzroy Crossi 30.52 242 P P 10 18 17.1 -1.3
CNB Canberra Magne 30.54 187 P P 10 18 19.6 +1.1
baz=31,SNR=14
CAN Canberra 30.59 188 P P 10 18 19.5 +0.6
CAN IAmb IAmb 10 18 21.0
comp=Z,122nm,1.0s
CAN Canberra 30.59 188 P P 10 18 19.5 +0.6
CAN pmax pmax
comp=Z,122nm,1.0s
LUWI Luwuk 31.26 276 P P 10 18 26.2 +1.2
comp=Z,4μmcomp=Z,258nm,1.1s
LUWI Luwuk 31.26 276 P P 10 18 24.9 -0.1
MMRI Maumere 31.59 262 P P 10 18 28.3 +0.4
comp=Z,6μmcomp=Z,354nm,1.1s
MMRI Maumere 31.59 262 P P 10 18 27.4 -0.5
HTT Hallett 31.60 204 P P 10 18 27.8 0.0
baz=32,SNR=138
WRKA Warakurna 31.65 228 P P 10 18 27.2 -1.2
baz=32,SNR=94
MILA Mila 32.28 187 P P 10 18 35.0 +1.3
baz=32,SNR=9.5
MRSI Marisa 32.31 279 P P 10 18 34.0 -0.2
comp=Z,1μmcomp=Z,58nm,1.1s
BBOO Buckleboo 32.35 209 P P 10 18 34.1 -0.1
baz=32,SNR=15
BBOO Buckleboo 32.35 209 P P 10 18 32.7 -1.6
APSI Ampana 32.39 276 P P 10 18 35.6 +0.7
comp=Z,2μmcomp=Z,164nm,1.1s
TOO Toolangi 33.39 192 P P 10 18 44.0 +0.6
baz=33,SNR=18
TOO Toolangi 33.39 192 P P 10 18 43.9 +0.6
TOO Toolangi 33.39 192 P P 10 18 43.9 +0.6
TOO pmax pmax
comp=Z,310nm,1.9s
BKSI Bulukumba 33.59 268 P P 10 18 46.5 +1.2
comp=Z,50nm,0.9s
WSI Waingapu 33.59 260 P P 10 18 45.8 +0.4
comp=Z,20μmcomp=Z,2μm,1.1s
BNSI Bone 33.63 269 P P 10 18 46.5 +0.8
comp=Z,132nm,0.9s
KAPI Kappang 33.96 268 P P 10 18 47.8 -0.8
KAPI IAmb IAmb 10 18 50.9
comp=Z,92nm,0.9s
KAPI Kappang 33.96 268 P P 10 18 47.8 -0.8
KAPI pmax pmax
comp=Z,92nm,0.9s
SPSI Sidrap Palu 33.98 270 P P 10 18 48.5 -0.3
comp=Z,81nm,0.9s
TTSI Tana Toraja 33.99 272 P P 10 18 50.4 +1.6
comp=Z,36nm,1.2s
MPSI Mapaga 34.30 278 P P 10 18 51.0 -0.5
comp=Z,3μmcomp=Z,132nm,1.0s
AFI Afiamalu 35.03 107 P P 10 18 59.4 +1.5
comp=Z,22nm,0.6s,baz=151,slow=3.0,SNR=5.6
AFI Afiamalu 35.03 107 P P 10 18 58.9 +1.0
AFI IAmb IAmb 10 19 15.1
comp=Z,79nm,1.3s
FORT Forrest 35.37 220 P P 10 19 00.3 -0.2
baz=35,SNR=95
FORT Forrest 35.37 220 P P 10 18 59.7 -0.8
PLAI Plampang 36.01 262 P P 10 19 04.4 -1.8
comp=Z,324nm,0.8s
SMKI Samarinda 36.85 276 P P 10 19 16.0 +2.6
comp=Z,10μmcomp=Z,235nm,0.8s
PSA00 Pilbara Seismi 36.87 240 P P 10 19 12.4 -1.1
MOO Moorlands 37.84 188 P P 10 19 22.8 +1.6
baz=38,SNR=19
NIUE Niue 38.02 115 P P 10 19 24.3 +1.2
baz=38,SNR=3.7
NIUE Niue 38.02 115 P P 10 19 23.7 +0.5
NIUE IAmb IAmb 10 20 49.5
comp=Z,101nm,1.0s
TAU Tasmania Unive 38.28 188 P P 10 19 25.8 +0.8
TAU Tasmania Unive 38.28 188 P P 10 19 25.8 +0.8
TAU pmax pmax
comp=Z,308nm,1.3s
SRBI Singaraja 38.50 263 P P 10 19 26.2 -1.0
comp=Z,2μmcomp=Z,106nm,1.3s
HIZ Hauiti 38.52 153 P P 10 19 27.8 +0.7
IGBI Denpasar 38.60 262 P P 10 19 27.4 -0.7
comp=Z,176nm,1.0s
KKM Kota Kinabalu 39.12 286 P P 10 19 31.4 -1.1
KKM IAmb IAmb 10 19 33.8
comp=Z,106nm,1.0s
URZ Urewera 39.37 151 P P 10 19 35.8 +1.6
comp=Z,21nm,0.7s,baz=314,slow=0.9,SNR=17
URZ Urewera 39.37 151 P P 10 19 34.8 +0.6
URZ IAmb IAmb 10 19 56.6
comp=Z,65nm,1.2s
QRZ Quartz Range 39.50 158 P P 10 19 34.9 -0.3
QRZ IAmb IAmb 10 19 37.4
comp=Z,115nm,1.2s
JAGI Jajag, Banyuwa 39.57 263 P P 10 19 35.3 -0.8
comp=Z,242nm,1.0s
JAGI Jajag, Banyuwa 39.57 263 P P 10 19 33.9 -2.3
BKZ Black Stump Fm 39.80 152 P P 10 19 38.0 +0.2
KMBL Kambalda 39.90 225 P P 10 19 38.1 -0.6
baz=40,SNR=63
MEEK Meekatharra 39.97 233 P P 10 19 38.6 -0.7
baz=40,SNR=122
JOW Kunigami 40.10 323 P P 10 19 42.0 +1.6
comp=Z,7.7nm,0.6s,baz=156,slow=12,SNR=19
JOW Kunigami 40.10 323 P P 10 19 40.9 +0.5

JOW IAmb IAmb 10 20 10.5
comp=Z,82nm,1.1s
THZ Tophouse 40.45 158 P **P 10 19 43.0 -0.1**
THZ IAmb IAmb 10 19 44.6
comp=Z,96nm,0.8s
TUWZ Tuamarina 40.56 157 P **P 10 19 43.9 -0.1**
BSWZ Blackbirch Sta 40.78 157 P **P 10 19 45.7 -0.1**
BHW Baring Head 40.92 156 P **P 10 19 46.0 -0.9**
FOZ Fox Glacier 40.97 162 P **P 10 19 47.3 0.0**
FOZ IAmb IAmb 10 19 48.5
comp=Z,138nm,0.9s
MSWZ Moikau Station 41.08 155 P **P 10 19 47.2 -1.1**
LTZ Lake Taylor 41.11 159 P **P 10 19 48.8 +0.3**
LTZ IAmb IAmb 10 19 50.6
comp=Z,104nm,0.7s
PLWZ Palliser 41.21 155 P **P 10 19 48.3 -1.1**
KHZ Kahutara 41.25 158 P **P 10 19 48.5 -1.0**
KHZ IAmb IAmb 10 19 50.1
comp=Z,97nm,1.0s
RPZ Rata Peaks 41.52 161 P **P 10 19 52.3 +0.5**
comp=Z,165nm,0.6s,baz=320,slow=2.1,SNR=112
RPZ Rata Peaks 41.52 161 P **P 10 19 52.1 +0.2**
YOJ Yonaguni jima 41.87 316 P **P 10 19 55.8 +0.9**
YOJ Yonaguni jima 41.87 316 P **P 10 19 55.8 +0.9**
YOJ pmax pmax
comp=Z,665nm,1.6s
PWJI Pagerwojo 41.87 263 P **P 10 19 53.8 -1.3**
comp=Z,260nm,1.1s
MQZ McQueen's Vall 42.05 160 P **P 10 19 55.6 -0.5**
JOHN Johnston Islan 42.11 58 P **P 10 19 58.7 +1.8**
GIRL Giralia 42.12 241 P **P 10 19 56.0 -1.0**
baz=42,SNR=9.6
GIRL Giralia 42.12 241 P **P 10 19 57.8 +0.8**
PBKI Pangkalan Bun 42.13 271 P **P 10 19 59.1 +1.9**
comp=Z,5µmcomp=Z,488nm,1.0s
MLZ Mavora Lakes 42.18 165 P **P 10 19 56.9 -0.3**
SBUM Sibu 42.22 279 P **P 10 19 58.1 +0.2**
SBUM Sibu 42.22 279 P **P 10 20 00.0 +2.0**
YULB Yu-li 42.43 313 P **P 10 19 59.4 0.0**
PCJI Pacitan 42.50 263 P **P 10 19 59.4 -0.8**
comp=Z,5µmcomp=Z,579nm,0.9s
PYZ Puysegur Point 42.58 167 P **P 10 20 00.8 +0.4**
ODZ Otahua Downs 42.59 162 P **P 10 19 59.9 -0.6**
STKI Sintang 42.60 275 P **P 10 20 02.5 +1.5**
WHZ Wether Hill Ro 42.63 165 P **P 10 20 00.3 -0.4**
WHZ IAmb IAmb 10 20 01.2
comp=Z,126nm,0.8s
NACB Ninganchiao 42.69 314 P **P 10 19 59.4 -2.2**
NACB IAmb IAmb 10 20 03.5
comp=Z,125nm,1.0s
UWJI Ujung Watu 42.70 266 P **P 10 20 03.3 +1.4**
comp=Z,2µmcomp=Z,136nm,1.1s
TPUB Ta-pu 42.86 312 P **P 10 20 02.7 -0.3**
TPUB IAmb IAmb 10 20 05.0
comp=Z,55nm,0.9s
SSLB Suanglung 42.92 313 P **P 10 20 03.8 +0.4**
SSLB IAmb IAmb 10 20 04.9
comp=Z,57nm,1.2s
KLBR Kellerberrin 42.99 227 P **P 10 20 02.7 -1.2**
baz=43,SNR=36
INU Inuyama 43.06 340 P **P 10 20 03.4 -1.0**
MORW Morawa 43.09 232 P **P 10 20 04.1 -0.6**
baz=43,SNR=23
MORW Morawa 43.09 232 P **P 10 20 04.2 -0.6**
UGM Wanagama 43.14 264 P **P 10 20 05.5 +0.1**
comp=Z,286nm,1.1s
UGM Wanagama 43.14 264 P **P 10 20 05.0 -0.4**
YHNB Yeheng 43.16 314 P **P 10 20 05.6 +0.2**
SMRI Semarang 43.21 265 P **P 10 20 07.5 +1.6**
comp=Z,192nm,0.9s
SMRI Semarang 43.21 265 P **P 10 20 06.0 +0.1**
BLDU Ballidu 43.29 229 P **P 10 20 05.4 -1.0**
baz=43,SNR=32
JNU Nakatsue 43.65 332 P **P 10 20 09.6 +0.4**
comp=Z,114nm,0.8s,baz=114,slow=3.8,SNR=30
JNU Nakatsue 43.65 332 P **P 10 20 09.6 +0.4**
JNU IAmb IAmb 10 20 11.2
comp=Z,106nm,0.8s
MJAR Matsushiro Arr 43.75 342 P **P 10 20 08.7 -1.2**
comp=Z,17nm,1.0s,baz=160,slow=6.3,SNR=12
MJAR PcP **PcP 10 21 55.3 +0.3**
comp=Z,5.1nm,0.8s,baz=148,slow=4.5,SNR=5.3
MAJO Matsushiro 43.76 342 P **P 10 20 08.9 -1.0**
MAJO Matsushiro 43.76 342 *i* P **P 10 20 09.6 -0.3**
MAJO pmax pmax
comp=Z,30nm,1.2s
MAT Matsushiro 43.76 342 P **P 10 20 08.5 -1.4**
MJB9 Matsu-Tunnel 43.76 342 P **P 10 20 09.0 -1.0**
KSM Kuching 43.95 277 P **P 10 20 11.6 -0.3**
KSM IAmb IAmb 10 20 13.6
comp=Z,106nm,0.9s
KSM Kuching 43.95 277 P **P 10 20 12.0 +0.1**
NWAO Narrogin (SRO) 44.06 226 P **P 10 20 12.0 -0.4**
baz=44,SNR=13
NWAO Narrogin (SRO) 44.06 226 P **P 10 20 11.6 -0.9**
NWAO IAmb IAmb 10 20 13.2
comp=Z,158nm,1.1s
NWAO Narrogin (SRO) 44.06 226 P **P 10 20 11.5 -1.0**
NWAO IAmb IAmb 10 20 13.1
comp=Z,127nm,1.1s
NWAO Narrogin (SRO) 44.06 226 P **P 10 20 11.6 -0.9**
NWAO pmax pmax
comp=Z,158nm,1.2s
MUN Mundaring 44.33 228 P **P 10 20 14.1 -0.5**
baz=44,SNR=18
KPJI Karang Pucung 44.71 265 P **P 10 20 17.9 0.0**
comp=Z,3µmcomp=Z,403nm,0.9s
RKGY Rocky Gully 45.12 224 P **P 10 20 19.8 -1.1**
baz=45,SNR=12
QZH Quanzhou 45.33 313⇑*i* P **P 10 20 23.4 +0.8**
QZH sP **pP 10 20 49.5 +2.9**
QZH S **S 10 27 00.5 +5.0**
QZH pmax pmax
comp=Z,68nm,0.9s
CISI Cisompet, Garu 45.82 264 P **P 10 20 25.5 -1.2**
comp=Z,10µmcomp=Z,1µm,0.8s
CISI Cisompet, Garu 45.82 264 P **P 10 20 25.1 -1.6**
CISI **S 10 27 03.6 +0.6**
LEM Lembang 46.01 265 P **P 10 20 28.9 +0.5**
LEM pmax pmax
comp=Z,289nm,0.8s
TPI Tanjungpandan 46.13 271 P **P 10 20 30.2 +1.1**
comp=Z,2µmcomp=Z,121nm,1.3s
CNJI Cibinong 46.49 265 P **P 10 20 31.0 -1.0**
comp=Z,14µmcomp=Z,2µm,0.9s
CBJI Citeko 46.78 266 P **P 10 20 33.0 -1.2**
comp=Z,391nm,0.8s
DBJI Dramaga 46.88 266 P **P 10 20 34.8 -0.2**
comp=Z,152nm,0.9s
HKPS Hong Kong Po S 47.31 306 P **P 10 20 37.2 -1.0**
RAR Rarotonga 47.78 114 P **P 10 20 41.7 -0.2**
RAR IAmb IAmb 10 20 44.7
comp=Z,49nm,0.8s
RAR Rarotonga 47.78 114 P **P 10 20 41.7 -0.2**
RAR pmax pmax
comp=Z,49nm,0.8s
TJN Taejon 47.97 331*ce*P **P 10 20 43.2 +0.2**
XMIS Christmas Isla 48.04 260 P **P 10 20 43.8 -0.2**
XMIS IAmb IAmb 10 21 05.8
comp=Z,86nm,0.9s
DLV T Lat 48.11 291 P **P 10 20 45.6 +0.8**
KSRS Korea Array 48.57 332 P **P 10 20 48.2 +0.6**
comp=Z,24nm,0.9s,baz=148,slow=9.0,SNR=47
KSRS PcP **PcP 10 22 12.7 +0.9**
comp=Z,2.0nm,0.7s,baz=153,slow=3.6,SNR=4.3
KS19 Wonju Array Si 48.64 332 P **P 10 20 49.1 +0.9**
KS19 IAmb IAmb 10 21 13.0
comp=Z,127nm,1.8s
KLSI 48.93 268 P **P 10 20 50.0 -0.9**
comp=Z,32nm,1.6s
KASI Kota Agung 49.14 267 P **P 10 20 50.5 -1.9**
comp=Z,3µmcomp=Z,256nm,1.2s
INCN Inchon 49.20 331 P **P 10 20 53.1 +0.6**
INCN Inchon 49.20 331 P **P 10 20 53.1 +0.6**
INCN pmax pmax
comp=Z,141nm,0.9s
QIZ Qiongzhong 49.42 300 P **P 10 20 54.8 +0.3**
QIZ S **S 10 27 47.4 -6.3**
MDSI Maura Dua 49.49 268 P **P 10 20 53.7 -1.4**
comp=Z,2µmcomp=Z,181nm,1.3s
LWLI Liwa 49.59 268 P **P 10 20 56.0 0.0**
comp=Z,76nm,0.5s
NJ2 Nanjing 49.59 320 ⇑P **P 10 20 56.6 +1.1**
NJ2 pP **pP 10 21 16.3 -3.5**
NJ2 sP **pwP 10 21 23.3 -1.9**
NJ2 S **S 10 28 02.4 +6.8**
NJ2 pmax pmax
comp=Z,42nm,1.1s
NJ2 pmax pmax
comp=Z,370nm,4.3s
NJ2 LR LR
comp=Z,3µm,17.5s
NJ2 LR LR
comp=Z,4µm,18.5s
NJ2 LR LR
comp=Z,8µm,22.7s
MCQ Macquarie Isla 49.61 176 P **P 10 20 55.5 +0.2**
baz=50,SNR=8.7
MCQ Macquarie Isla 49.61 176 P **P 10 20 56.3 +1.0**
MCQ Macquarie Isla 49.61 176 P **P 10 20 56.3 +1.0**
MCQ pmax pmax
comp=Z,415nm,1.0s
JKA Kamikawa-asahi 49.84 349 P **P 10 20 56.4 -0.8**
ASAJ Asahikawa 49.84 349 P **P 10 20 56.4 -0.8**
comp=Z,37nm,0.8s,baz=225,slow=14,SNR=13
KUR Kuril'sk 50.20 355 P P 10 21 04.8 +4.9
KUR *e* 10 22 16.1
KUR *e*S **S 10 28 02.2 -1.5**
KUR MLR MLR
comp=N,8µm,22.0s
MYKOM Kota Tinggi 50.39 276 P **P 10 21 01.8 -0.1**
MYKOM Kota Tinggi 50.39 276 P **P 10 21 03.0 +1.1**
KSI Kapahiang 51.11 269 P **P 10 21 08.8 +1.4**
comp=N,71nm,0.7s
KSI Kapahiang 51.11 269 P **P 10 21 06.1 -1.3**
KSI pmax pmax
comp=Z,71nm,0.7s
WHN Wuhan 51.66 316 P **P 10 21 11.9 +0.8**
WHN pmax pmax
comp=Z,120nm,0.8s
VLA Vladivostok 51.78 340 *i* P **P 10 21 12.0 +0.3**
VLA pmax pmax
comp=Z,27nm,0.8s
JRMM Jerantut 52.05 279 P **P 10 21 15.0 +0.7**
KRJI Kerinci 52.35 271 P **P 10 21 16.6 0.0**
comp=Z,17µmcomp=Z,691nm,0.9s
SDSI Sungai Dareh 52.48 273 P **P 10 21 17.1 -0.4**
comp=Z,3µmcomp=Z,363nm,0.9s
YSS Yuzh-Sakhalins 52.56 350 *e*P **P 10 21 18.1 +0.6**
YSS pmax pmax
comp=Z,30nm,0.8s
USA0B Ussuriysk Arra 52.70 340 P **P 10 21 18.6 +0.1**
USA0B IAmb IAmb 10 21 48.0
comp=Z,31nm,0.9s
USA0B Ussuriysk Arra 52.70 340 *i* P **P 10 21 18.8 +0.3**
USRK Ussuriysk Ar. 52.70 340 P **P 10 21 18.4 -0.1**
comp=Z,21nm,0.8s,baz=168,slow=7.5,SNR=35
DL2 Dalian 52.80 329⇓*i*P **P 10 21 20.1 +0.7**
DL2 pmax pmax
comp=Z,71nm,1.0s
BKNI Bangkinang 53.00 274 P **P 10 21 21.6 +0.3**
comp=Z,389nm,0.9s
BKNI Bangkinang 53.00 274 P **P 10 21 21.4 +0.1**
TIA Tai'an 53.42 323 P **P 10 21 24.0 0.0**
TIA pmax pmax
comp=Z,39nm,0.8s
PDSI Padang 53.45 272 P **P 10 21 22.7 -1.9**
comp=Z,221nm,0.8s
IPM Ipoh 53.58 279 P **P 10 21 25.9 +0.3**
PPSI Pulau Pagai 53.74 270 P **P 10 21 26.7 -0.1**
comp=Z,4µmcomp=Z,141nm,1.1s
KIP Kipapa 53.94 59 P **P 10 21 30.4 +2.3**
KIP Kipapa 53.94 59 P **P 10 21 30.4 +2.3**
KIP pmax pmax
comp=Z,280nm,1.4s
KULM Kulim 54.08 280 P **P 10 21 29.1 -0.1**
SISI Saibi 54.77 272 P **P 10 21 33.7 -0.6**
comp=Z,2µmcomp=Z,187nm,1.1s
CN2 Changchun 54.83 335 *e*P **P 10 21 34.0 -0.1**
CN2 *e*S **S 10 29 07.8 +0.9**
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 pmax pmax
comp=Z,1µm,10.0s
CN2 LR LR
comp=Z,6µm,21.0s
CN2 LR LR
comp=Z,5µm,21.0s
CN2 LR LR
comp=Z,10µm,21.0s
ENH Enshi 54.99 312 P **P 10 21 36.5 +0.9**
KHU Kahuku 55.22 63 P **P 10 21 39.4 +1.7**
KHU Kahuku 55.22 63 P **P 10 21 39.4 +1.7**
KHU pmax pmax
comp=Z,159nm,1.0s
GYA Guiyang 55.29 307⇑*i*P **P 10 21 39.3 +1.4**
GYA sP pwP 10 22 08.8 +0.7
GYA PP **PP 10 23 42.8 +0.1**
GYA S **S 10 29 19.4 +5.5**
GYA sS sS 10 29 52.6 -5.3
GYA pmax pmax
comp=Z,50nm,0.9s
GYA pmax pmax
comp=Z,400nm,4.8s
GYA LR LR
comp=Z,3µm,19.2s
GYA LR LR
comp=Z,3µm,18.7s
GYA LR LR
comp=Z,4µm,19.2s
RPSI Rantau Prapat 55.39 277 P **P 10 21 37.8 -0.9**
PSI Prapat 55.40 277 P **P 10 21 37.8 -1.1**
PSI pmax pmax
comp=Z,223nm,1.5s
SLVN Son La 55.45 300 P **P 10 21 40.2 +1.1**
SLVN IAmb IAmb 10 22 11.0
comp=Z,125nm,2.0s
HMH Humu'ula Sheep 55.46 62 P **P 10 21 41.4 +2.0**
PBSI Pulau Batu 55.70 273 P **P 10 21 40.1 -0.8**
comp=Z,3µmcomp=Z,125nm,0.9s
TYV Tymovskoe 56.38 352 *e*P **P 10 21 45.9 +0.9**
TYV pmax pmax
comp=Z,41nm,0.7s
TYV pmax pmax
comp=Z,300nm,8.2s
PBKT Sadao Pong 56.45 293 P **P 10 21 47.6 +1.4**
PBKT IAmb IAmb 10 21 48.9
comp=Z,84nm,1.3s
BJI Beijing 56.56 326 P **P 10 21 46.8 +0.3**
BJI pmax pmax
comp=Z,18nm,0.8s
BJI LR LR
comp=Z,9µm,19.8s
BJI LR LR
comp=Z,6µm,21.0s
BJI LR LR
comp=Z,8µm,20.1s
KCSI Kotacane, Aceh 56.64 277 P **P 10 21 45.8 -1.8**
comp=Z,3µmcomp=Z,176nm,1.2s
PPT Papeete 56.70 108 P **P 10 21 50.3 +2.4**
comp=Z,63nm,0.8s,baz=92,slow=3.3,SNR=12
PPT Papeete 56.70 108 P **P 10 21 48.9 +1.0**
PPT2 Papeete2 56.70 108 *e*P **P 10 21 48.9 +0.9**
comp=Z,121nm,1.3s
PAE Paea 56.71 108 *e*P **P 10 21 48.8 +0.8**
comp=Z,7.1nm,0.7s
PPTF Pamatai, Papee 56.71 108 P **P 10 21 49.6 +1.5**
COCO West Island 56.75 259 P **P 10 21 49.3 +1.0**
COCO West Island 56.75 259 P **P 10 21 49.3 +1.0**
COCO pmax pmax
comp=Z,303nm,1.2s
TIAR Tiarei 56.92 108 *e*P **P 10 21 50.2 +0.7**
comp=Z,38nm,0.7s
TPTI 57.19 277 P **P 10 21 49.9 -1.6**
comp=Z,44nm,0.9s
KLR Kul'dur 57.25 343 P **P 10 21 51.8 +0.5**
comp=Z,28nm,1.0s,baz=172,slow=3.1,SNR=55
KLR Kul'dur 57.25 343 *e*P **P 10 21 51.7 +0.5**
KLR pmax pmax
comp=Z,36nm,0.9s
TIY Taiyuan 57.26 321 *e*P **P 10 21 52.4 +0.8**
XAN Xi'an 57.42 316 P **P 10 21 52.6 -0.2**
XAN PP **PP 10 24 05.5 +4.0**
XAN S **S 10 29 44.8 +3.1**
XAN pmax pmax
comp=Z,140nm,1.0s
XAN pmax pmax
comp=Z,810nm,5.1s
XAN LR LR
comp=Z,6µm,23.0s
XAN LR LR
comp=Z,5µm,20.1s
XAN LR LR
comp=Z,10µm,26.5s
XAN Xi'an 57.42 316 P **P 10 21 52.5 -0.2**
XAN Xi'an 57.42 316 P **P 10 21 52.5 -0.2**
XAN pmax pmax
comp=Z,106nm,0.8s
GRNR Gornyy 57.45 347⇓*i*P **P 10 21 49.7 -2.9**
GRNR *e*S **S 10 29 36.3 -5.1**
GRNR smax smax
comp=N,3.0nm,1.2s
LHMI Lhok Sumawe 57.71 279 P **P 10 21 55.8 +0.7**
comp=N,5µmcomp=N,425nm,0.9s
LHMI Lhok Sumawe 57.71 279 P **P 10 21 54.5 -0.6**
PET Petropavlovsk 57.86 3 P **P 10 21 55.9 +0.5**
PET Petropavlovsk 57.86 3 *e*P **P 10 21 55.9 +0.5**
PET pmax pmax
comp=Z,78nm,0.8s
PEA0B Petropavlovsk- 57.89 3 P **P 10 21 56.8 +1.2**
PEA0B Petropavlovsk- 57.89 3 *i* P **P 10 21 57.2 +1.6**
PETK Petropavlovsk- 57.89 3 P **P 10 21 57.2 +1.6**
comp=Z,81nm,0.9s,baz=170,slow=7.8,SNR=39
KMI Kunming 57.91 304 P **P 10 21 58.3 +1.7**
KMI pP pP 10 22 15.3 -6.2
KMI sP pwP 10 22 25.0 -2.2
KMI PP **PP 10 24 10.5 +4.3**
KMI S **S 10 29 46.8 -1.9**
KMI sS pS 10 30 24.4 +6.9
KMI SS **SS 10 33 44.1 +2.6**
KMI pmax pmax
comp=Z,59nm,1.0s
KMI pmax pmax
comp=Z,780nm,4.7s
KMI LR LR
comp=Z,6µm,23.9s
KMI LR LR
comp=Z,2µm,23.4s
KMI LR LR
comp=Z,8µm,26.9s
SNSI Sinabang, Aceh 57.92 276 P **P 10 21 56.8 +0.2**
comp=Z,118nm,1.0s
MLSI Meulaboh, Aceh 58.10 278 P **P 10 21 56.5 -1.3**
comp=Z,6µmcomp=Z,798nm,0.9s
MEH Mehetia 58.16 108 *e*P **P 10 21 58.7 +0.5**
comp=Z,34nm,0.7s
CM31 Chiang Mai Arr 58.87 295 P **P 10 22 04.2 +1.1**
CM31 IAmb IAmb 10 22 05.9
comp=Z,65nm,1.0s
CMAR Chiang Mai Arr 58.87 295 P **P 10 22 04.7 +1.6**
comp=Z,27nm,0.8s,baz=115,slow=5.1,SNR=133
CMAR PKPPKP **P'P'df 10 51 40.1 +1.6**
comp=Z,0.5nm,0.4s,baz=284,slow=4.6,SNR=5.2
CMAR Chiang Mai Arr 58.87 295*ce*P **P 10 22 04.6 +1.5**
CMAR pmax pmax
comp=Z,29nm,0.8s
CHTO Chiang Mai 58.97 295 P **P 10 22 05.0 +1.2**
CHTO IAmb IAmb 10 22 06.4
comp=Z,70nm,1.3s
CHTO Chiang Mai 58.97 295 P **P 10 22 05.0 +1.2**
CHTO pmax pmax
comp=Z,70nm,1.3s
CD2 Chengdu 59.60 310 P **P 10 22 08.4 +0.4**
CD2 S **S 10 30 13.3 +3.2**
CD2 pmax pmax
comp=Z,390nm,0.8s
CD2 LR LR
comp=Z,11µm,20.6s
CD2 LR LR
comp=Z,10µm,24.5s
CD2 LR LR
comp=Z,11µm,21.6s
HHC Hu-ho-hao-te 59.75 324 *e*P **P 10 22 09.3 +0.4**
HHC pmax pmax
comp=Z,210nm,5.3s
BTO Baotou 60.52 323 *e*P **P 10 22 14.1 0.0**
HIA Hailar 61.56 335 P **P 10 22 21.6 +0.7**
HIA IAmb IAmb 10 22 24.4
comp=Z,39nm,1.0s
HIA Hailar 61.56 335 P **P 10 22 21.6 +0.7**
HIA pmax pmax
comp=Z,39nm,1.0s
LZH Lanzhou 62.04 315 ⇑P **P 10 22 25.6 +1.1**
LZH pP pP 10 22 46.1 -3.6
LZH sP pwP 10 22 53.9 -1.5
LZH PP **PP 10 24 41.9 -0.5**
LZH pmax pmax
comp=Z,290nm,1.1s
LZH pmax pmax
comp=Z,1µm,5.4s
LZH LR LR
comp=Z,9µm,16.3s
LZH LR LR
comp=Z,7µm,15.7s
LZH LR LR
comp=Z,8µm,17.4s
ZEA Zeya 62.56 343 *e*P **P 10 22 28.1 +0.7**
ZEA pmax pmax
comp=N,30nm,1.0s
ZEA pmax pmax
comp=Z,46nm,1.0s
DGPR DIGLIPUR 63.09 287 *ex* **P 10 22 30.0 -1.7**
DGPR IAmb IAmb 10 22 35.3
comp=Z,71nm,0.5s
MA2 Magadan 64.33 358 P **P 10 22 39.9 +0.9**
comp=Z,117nm,0.7s,baz=156,slow=5.7,SNR=68
MA2 Magadan 64.33 358 P **P 10 22 39.5 +0.4**
MA2 Magadan 64.33 358*ce*P **P 10 22 39.4 +0.4**
MA2 pmax pmax
comp=Z,110nm,0.7s
SAIH SAIHA 65.39 297 *e*P **P 10 22 47.6 +0.8**
SAIH IAmb IAmb 10 22 51.4
comp=Z,66nm,0.8s
KOHI KOHIMA 65.40 301 *e*P **P 10 22 46.8 0.0**
KOHI IAmb IAmb 10 22 49.7
comp=Z,83nm,0.9s
TAOE Nuku Hiva Isla 65.58 97 *e*P **P 10 22 48.7 +0.6**
comp=Z,276nm,0.9s
GTA Gaotai 66.44 317 P **P 10 22 54.3 +1.1**
GTA pP pP 10 23 13.9 -4.8
GTA sP PcP 10 23 21.3 -0.8
GTA pmax pmax
comp=Z,130nm,1.2s
ULN Ulaanbaatar 66.64 328 P **P 10 22 55.0 +0.7**
ULN IAmb IAmb 10 22 58.1
comp=Z,57nm,0.9s
ULN Ulaanbaatar 66.64 328 P **P 10 22 55.1 +0.7**
ULN pmax pmax
comp=Z,57nm,0.9s
TEZP TEZPUR 66.80 302 *e*P **P 10 22 55.6 0.0**
TEZP IAmb IAmb 10 22 59.1
comp=Z,176nm,1.4s
TEZP *i* x x 10 23 23.3
SONM Songino Array 66.97 327 P **P 10 22 57.0 +0.5**
comp=Z,41nm,1.0s,baz=133,slow=5.3,SNR=109
SONM PcP **PcP 10 23 23.7 -0.4**
comp=Z,12nm,0.7s,baz=145,slow=5.0,SNR=8.2
SEY Seymchan 67.66 359 P **P 10 23 01.4 +1.1**
comp=Z,26nm,0.8s,baz=173,slow=6.2,SNR=53
SEY PcP **PcP 10 23 27.2 +0.8**
comp=Z,24nm,1.1s,baz=186,slow=6.8,SNR=9.4
SEY Seymchan 67.66 359⇓*i*P **P 10 23 01.2 +0.9**
CASY Casey 68.22 197 P **P 10 23 03.5 -0.2**
CASY IAmb IAmb 10 23 04.4
comp=Z,51nm,1.0s
LSA Lhasa 69.16 304 P **P 10 23 12.1 +1.2**
LSA IAmb IAmb 10 23 13.7
comp=Z,84nm,0.9s
LSA Lhasa 69.16 304 P **P 10 23 12.1 +1.2**
LSA pmax pmax
comp=Z,84nm,0.9s
YAK Yakutsk 69.29 348 P **P 10 23 11.3 +0.9**
comp=Z,51nm,0.8s,baz=148,slow=1.8,SNR=30
YAK Yakutsk 69.29 348 P **P 10 23 10.4 +0.1**
YAK IAmb IAmb 10 23 13.0
comp=Z,75nm,0.8s
YAK Yakutsk 69.29 348 *e*P **P 10 23 10.1 -0.3**
YAK *e*'PP **pP 10 23 35.1 -1.0**
YAK *e*S **S 10 32 09.1 +1.1**
YAK pmax pmax
comp=Z,97nm,1.0s
YAK pmax pmax
comp=N,14nm,0.9s
YAK pmax pmax
comp=E,16nm,1.3s
YAK smax smax
comp=E,27nm,1.4s

YAK smax smax
comp=N,22nm,1.5s
ZAK Zakamensk 70.13 328 eP **P 10 23 16.4 +0.4**
ZAK e 10 23 38.5
ZAK pmax pmax
comp=Z,68nm,1.0s
ZAK pmax pmax
comp=Z,13nm,1.1s
BOD Bodaibo 70.27 339 eP **P 10 23 16.2 -0.3**
BOD pmax pmax
comp=Z,33nm,1.0s
GTK Tadong 70.58 301 eP **P 10 23 20.5 +1.2**
GTK IAmb IAmb 10 23 22.4
comp=Z,72nm,0.8s
TLY Talaya 70.70 330 P **P 10 23 19.9 +0.6**
TLY Talaya 70.70 330c iP **P 10 23 19.7 +0.4**
TLY pmax pmax
comp=Z,35nm,1.2s
IRK Irkutsk 70.72 330 eP **P 10 23 18.9 -0.5**
IRK pmax pmax
comp=Z,57nm,1.1s
SDPT Sand Point 70.86 26 P **P 10 23 20.8 +0.6**
SDPT IAmb IAmb 10 23 22.7
comp=Z,70nm,0.6s
TAPN Taplejung 71.35 301 eP **P 10 23 25.2 +1.1**
comp=Z,498nm,0.9s
ODAN Odare 71.50 300 eP **P 10 23 25.9 +1.0**
comp=Z,778nm,0.8s
BOK Bokaro 72.04 297 eP **P 10 23 29.1 +1.2**
BOK IAmb IAmb 10 23 31.9
comp=Z,43nm,0.7s
BOK i pP **pP 10 23 56.1 +2.4**
MOY Mondy 72.05 329 eP **P 10 23 28.1 +0.6**
MOY pmax pmax
comp=Z,77nm,1.2s
RAMN Ramite 72.20 300 eP **P 10 23 29.7 +0.6**
comp=Z,147nm,0.7s
CHGN Chignik 72.37 26 P **P 10 23 29.6 +0.5**
CHGN IAmb IAmb 10 23 31.6
comp=Z,51nm,1.0s
CHLP Challavanipeta 72.55 291 eP **P 10 23 31.9 +0.9**
CHLP IAmb IAmb 10 23 33.4
comp=Z,124nm,1.0s
CHLP epP **pP 10 23 59.1 +2.3**
CHLP eS **S 10 32 46.9 -0.4**
VNDA Vanda 72.69 178 P **P 10 23 31.4 +0.7**
comp=Z,40nm,1.0s,baz=331,slow=6.9,SNR=13
JIRN Jiri 72.74 301 eP **P 10 23 33.4 +0.9**
comp=Z,403nm,0.8s
GUN Gumba 73.07 301 eP **P 10 23 34.8 +0.4**
comp=Z,675nm,0.8s
GAMB Gambell 73.21 15 P **P 10 23 34.5 +0.6**
GAMB IAmb IAmb 10 24 04.9
comp=Z,66nm,1.2s
BILL Bilibino 73.31 5 P **P 10 23 35.2 +0.7**
BILL IAmb IAmb 10 23 37.5
comp=Z,65nm,0.7s
BILL Bilibino 73.31 5⇑iP **P 10 23 35.6 +1.1**
BILL e*PP **pP 10 24 03.4 +2.7**
BILL e 10 26 16.4
BILL pmax pmax
comp=Z,58nm,0.7s
PKI Pulchoki 73.38 301 eP **P 10 23 36.2 0.0**
PKIN Phulchoki 73.40 301 eP **P 10 23 36.6 +0.4**
KKN Kakani 73.55 301 eP **P 10 23 37.3 +0.2**
comp=Z,348nm,0.9s
DMN Daman 73.65 300 eP **P 10 23 38.1 +0.4**
comp=Z,718nm,1.0s
PALK Pallekele 73.98 279 P **P 10 23 39.9 +0.3**
PALK IAmb IAmb 10 24 10.0
comp=Z,159nm,1.6s
PALK Pallekele 73.98 279 P **P 10 23 39.9 +0.3**
PALK pmax pmax
comp=Z,159nm,1.6s
GKN Gorkha 74.16 301 eP **P 10 23 41.3 +0.8**
comp=Z,787nm,1.0s
SII Sitkinak Islan 74.39 27 P **P 10 23 42.4 +1.3**
PVM Polavaram 74.59 289 eP **P 10 23 42.9 -0.1**
PVM IAmb IAmb 10 23 44.5
comp=Z,45nm,0.9s
PVM epP **pP 10 24 09.9 +1.0**
PVM eS **S 10 33 10.3 -0.1**
DANN Dangsing 74.99 301 eP **P 10 23 45.4 -0.1**
comp=Z,413nm,0.9s
MYLAV Mylavaram 75.44 289 eP **P 10 23 47.9 0.0**
MYLAV IAmb IAmb 10 23 49.5
comp=Z,37nm,0.9s
MYLAV epP **pP 10 24 16.1 +2.2**
MYLAV eS **S 10 33 18.1 -1.7**
ANM Nome 75.58 17 P **P 10 23 49.5 +1.8**
ANM IAmb IAmb 10 24 19.6
comp=Z,114nm,1.4s
ANM Nome 75.58 17 P **P 10 23 49.5 +1.8**
KDAK Kodiak Island 75.81 26 P **P 10 23 50.4 +1.3**
comp=Z,27nm,0.7s,baz=292,slow=7.2,SNR=15
KDAK LR LR 10 54 51.0
comp=Z,1μm,18.7s,baz=229,slow=34
KDAK Kodiak Island 75.81 26 P **P 10 23 50.2 +1.1**
SKHT Srikalahasti 75.84 285 eP **P 10 23 50.1 -0.1**
SKHT IAmb IAmb 10 23 51.6
comp=Z,35nm,1.0s
SKHT epP **pP 10 24 17.7 +1.5**
ADKI Addanki 75.92 288 eP **P 10 23 50.6 0.0**
ADKI IAmb IAmb 10 23 53.4
comp=Z,98nm,3.5s
ADKI epP **pP 10 24 18.2 +1.6**
ADKI eS **S 10 33 25.1 -0.1**
GGR Gangavaram 76.03 290 eP **P 10 23 50.4 -0.9**
GGR IAmb IAmb 10 23 52.5
comp=Z,49nm,1.0s
GGR epP **pP 10 24 18.1 +0.8**
SVW2 Sparrevohn 76.52 23 P **P 10 23 54.7 +1.6**
SVW2 IAmb IAmb 10 24 25.5
comp=Z,80nm,1.4s
WMQ Urumqi 76.53 317 P **P 10 23 54.8 +1.1**
WMQ pP pP 10 24 18.1 -1.6
WMQ sP pwP 10 24 22.5 -3.1
WMQ pmax pmax
comp=Z,51nm,1.5s
WMQ pmax pmax
comp=Z,78nm,4.5s
WMQ LR LR
comp=Z,3μm,15.5s
WMQ LR LR
comp=Z,4μm,17.7s
WMQ LR LR
comp=Z,6μm,19.9s
WMQ Urumqi 76.53 317 P **P 10 23 54.3 +0.7**
WMQ Urumqi 76.53 317 P **P 10 23 54.3 +0.7**
WMQ pmax pmax
comp=Z,271nm,1.7s
NJS Nagarjunasagar 76.66 288 eP **P 10 23 54.1 -0.7**
NJS IAmb IAmb 10 23 55.9
comp=Z,56nm,1.0s
NJS epP **pP 10 24 21.8 +1.0**
NJS eS **S 10 33 29.6 -3.7**
SRLM Srisailam 76.98 288 eP **P 10 23 56.2 -0.5**
SRLM IAmb IAmb 10 23 57.7
comp=Z,76nm,1.0s
SRLM epP **pP 10 24 23.7 +0.9**
SRLM eS **S 10 33 32.9 -4.0**
RPR Rampur 77.05 291 eP **P 10 23 57.0 0.0**
RPR IAmb IAmb 10 23 58.2
comp=Z,42nm,0.9s
RPR epP **pP 10 24 23.9 +0.9**
RPR eS **S 10 33 33.7 -3.7**
RSO Redoubt South 77.26 24 P **P 10 23 58.1 +0.5**
HOM Homer 77.27 25 P **P 10 23 57.6 +0.3**
CNPM China Poot 77.37 25 P **P 10 23 58.8 +0.9**
TTA Tatalina 77.50 21 P **P 10 23 59.1 +0.5**
TTA Tatalina 77.50 21 P **P 10 23 59.1 +0.5**
HYBB Hyderabad (bro 77.51 289 eP **P 10 23 58.9 -0.7**
HYBB IAmb IAmb 10 24 00.5
comp=Z,53nm,1.0s
HYBB epP **pP 10 24 26.5 +0.8**
HYBB eS **S 10 33 40.0 -2.5**
NGP Nagpur 77.68 293 eP **P 10 24 00.2 -0.3**
NGP IAmb IAmb 10 24 02.3
comp=Z,53nm,0.9s
SRSP Sriramsagar 77.95 290 eP **P 10 24 01.3 -0.8**
SRSP IAmb IAmb 10 24 02.9
comp=Z,68nm,1.0s
SRSP epP **pP 10 24 28.7 +0.6**
SRSP eS **S 10 33 44.8 -2.4**

TIXI Tiksi 78.14 352 P **P 10 24 02.4 +0.4**
comp=Z,15nm,0.8s,baz=123,slow=6.0,SNR=37
TIXI Tiksi 78.14 352 P **P 10 24 01.6 -0.3**
TIXI Tiksi 78.14 352 eP **P 10 24 02.0 +0.1**
TIXI pmax pmax
comp=Z,23nm,0.9s
URV Uravakonda 78.37 286 eP **P 10 24 03.7 -0.7**
URV IAmb IAmb 10 24 05.6
comp=Z,110nm,1.0s
URV epP **pP 10 24 31.6 +1.1**
URV eS **S 10 33 48.5 -3.3**
SEW Seward 78.44 25 P **P 10 24 05.0 +1.3**
SEW IAmb IAmb 10 24 05.6
comp=Z,49nm,1.0s
SKT Skwentna 78.61 23 P **P 10 24 04.3 -0.4**
SUA Susitna One 78.64 24 P **P 10 24 05.2 +0.2**
SUA IAmb IAmb 10 24 07.3
comp=Z,37nm,0.7s
RDOG Red Dog Mine 78.81 15 P **P 10 24 07.2 +1.4**
RDOG IAmb IAmb 10 24 37.7
comp=Z,114nm,1.2s
RC01 Rabbit Creek A 78.84 24 P **P 10 24 07.8 +1.8**
RC01 IAmb IAmb 10 24 38.4
comp=Z,128nm,1.4s
PPLA Purkeypile 78.88 22 P **P 10 24 07.4 +1.0**
PPLA IAmb IAmb 10 24 37.3
comp=Z,132nm,1.6s
PMR Palmer 79.36 24 P **P 10 24 09.1 +0.3**
PMR IAmb IAmb 10 24 39.0
comp=Z,96nm,1.4s
PMR Palmer 79.36 24 P **P 10 24 09.1 +0.3**
PMR pmax pmax
comp=Z,97nm,1.4s
KLRI Killari 79.45 289 eP **P 10 24 09.8 -0.6**
KLRI IAmb IAmb 10 24 10.3
comp=Z,32nm,1.0s
KLRI epP **pP 10 24 38.9 +2.4**
KLRI eS **S 10 33 59.8 -3.5**
GHO Glory Hole Cre 79.54 24 P **P 10 24 10.3 +0.5**
GHO IAmb IAmb 10 24 45.0
comp=Z,72nm,1.4s
KNK Knik Glacier 79.54 24 P **P 10 24 10.5 +0.7**
KNK IAmb IAmb 10 24 41.3
comp=Z,100nm,1.5s
KTH Kantishna Hill 79.72 22 P **P 10 24 10.4 -0.5**
SML Sawmill 79.80 24 P **P 10 24 12.3 +1.0**
SML IAmb IAmb 10 24 42.6
comp=Z,156nm,1.3s
TRF Thorofare Moun 79.91 22 P **P 10 24 11.7 -0.3**
BPAW Bear Paw Mtn. 80.01 21 P **P 10 24 12.1 -0.3**
FID Port Fidalgo 80.04 25 P **P 10 24 12.7 +0.2**
FID IAmb IAmb 10 24 51.2
comp=Z,142nm,1.5s
SCM Sheep Creek Mo 80.22 24 P **P 10 24 13.6 0.0**
SCM IAmb IAmb 10 24 46.1
comp=Z,212nm,1.8s
SCM Sheep Creek Mo 80.22 24 P **P 10 24 13.6 0.0**
SCM pmax pmax
comp=Z,212nm,1.8s
RND Reindeer 80.43 23 P **P 10 24 14.8 +0.2**
RND IAmb IAmb 10 24 16.9
comp=Z,39nm,0.8s
RND Reindeer 80.43 23 P **P 10 24 14.8 +0.2**
RND pmax pmax
comp=Z,39nm,0.8s
MCK McKinley 80.57 22 P **P 10 24 15.5 +0.2**
MCK IAmb IAmb 10 24 17.2
comp=Z,77nm,0.8s
MCK McKinley 80.57 22 P **P 10 24 15.5 +0.2**
MCK pmax pmax
comp=Z,77nm,0.8s
BWN Browne 80.60 22 P **P 10 24 15.9 +0.4**
BWN IAmb IAmb 10 24 46.4
comp=Z,184nm,1.4s
MLY Manley 80.61 21 P **P 10 24 16.1 +0.5**
MLY IAmb IAmb 10 24 18.1
comp=Z,35nm,0.7s
DHY Denali Highway 80.83 23 P **P 10 24 17.3 +0.4**
DHY IAmb IAmb 10 24 48.1
comp=Z,94nm,1.6s
MK31 Makanchi Array 81.09 319 P **P 10 24 18.6 0.0**
MK31 Makanchi Array 81.09 319 i P **P 10 24 18.5 0.0**
MKAR Makanchi Array 81.09 319 P **P 10 24 18.7 +0.2**
comp=Z,43nm,0.9s,baz=103,slow=5.4,SNR=176
MKAR PKKPbc **PKKPbc 10 42 54.3 -2.4**
comp=Z,0.8nm,0.7s,baz=316,slow=1.2,SNR=7.6
MKAR PKPPKP **P'P'df 10 51 04.2 +5.2**
comp=Z,0.2nm,0.5s,baz=270,slow=1.2,SNR=4.4
SMLA Simla 81.19 302 eP **P 10 24 19.6 +0.3**
SMLA IAmb IAmb 10 24 20.8
comp=Z,164nm,0.7s
SMLA i pP **pP 10 24 47.7 +2.1**
WRH Wood River Hil 81.27 22 P **P 10 24 18.8 -0.2**
MAKZ Makanchi 81.30 319 P **P 10 24 19.8 +0.2**
MAKZ IAmb IAmb 10 24 21.5
comp=Z,89nm,1.1s
MAKZ Makanchi 81.30 319 P **P 10 24 19.8 +0.2**
MAKZ pmax pmax
comp=Z,89nm,1.1s
CCB Clear Creek Bu 81.47 22 P **P 10 24 19.6 -0.5**
MDM Murphy Dome 81.47 21 P **P 10 24 19.7 -0.4**
GLB Gilahina Butte 81.51 25 P **P 10 24 21.3 +0.9**
GLB IAmb IAmb 10 24 52.8
comp=Z,194nm,1.8s
PAX Paxson 81.53 24 P **P 10 24 21.2 +0.7**
PAX Paxson 81.53 24 P **P 10 24 21.2 +0.7**
PAX pmax pmax
comp=Z,52nm,1.6s
TCOL CIGO, UAF Yank 81.56 22 P **P 10 24 20.7 +0.2**
baz=239
COLA College 81.57 22 P **P 10 24 20.2 -0.3**
COLA IAmb IAmb 10 24 21.6
comp=Z,44nm,0.8s
COLA College 81.57 22 P **P 10 24 20.2 -0.3**
COLA pmax pmax
comp=Z,44nm,0.9s
HDA Harding Lake 81.67 22 P **P 10 24 21.0 -0.1**
HDA Harding Lake 81.67 22 P **P 10 24 21.0 -0.1**
baz=240
MCARA McCarthy VSAT 81.82 26 P **P 10 24 22.9 +1.0**
ZAA0 Zalesovo Array 81.82 326 P **P 10 24 21.5 -0.6**
ZALV Zalesovo Beam 81.82 326 P **P 10 24 21.4 -0.7**
comp=Z,22nm,0.7s,baz=110,slow=5.1,SNR=75
POKR Poker Flat Res 81.85 21 P **P 10 24 21.9 -0.2**
baz=239
IL31 81.87 22 P **P 10 24 21.3 -0.8**
ILAR Eielson Array 81.87 22 P **P 10 24 21.6 -0.5**
comp=Z,21nm,0.8s,baz=253,slow=5.1,SNR=114
ILAR LR LR 10 53 54.2
comp=Z,1μm,21.2s,baz=194,slow=30
BHK Bhakra 81.88 303 ex **P 10 24 23.2 +0.2**
BALM Baldy 81.97 26 P **P 10 24 24.0 +1.1**
COLD Coldfoot 82.02 19 P **P 10 24 24.2 +1.3**
POO Poona 82.10 289 eP **P 10 24 21.5 -2.9**
POO eP **P 10 24 24.3 -0.2**
POO IAmb IAmb 10 24 25.2
comp=Z,95nm,0.7s
DHRM DHARAMSHALA 82.13 303⇑iP **P 10 24 24.4 -0.1**
RIDG Independent Ri 82.15 23 P **P 10 24 24.0 +0.2**
RIDG IAmb IAmb 10 24 54.9
comp=Z,139nm,1.6s
MENT Mentasta 82.23 24 P **P 10 24 24.4 +0.3**
BARN Barnard Glacie 82.28 26 P **P 10 24 25.6 +1.0**
CTGM Chitina Glacie 82.38 26 P **P 10 24 26.1 +1.0**
CTGM IAmb IAmb 10 24 57.0
comp=Z,173nm,1.9s
DOT Dot Lake 82.41 23 P **P 10 24 25.5 +0.4**
PCA Pinnacle 82.51 27 P **P 10 24 26.9 +1.1**
PCA IAmb IAmb 10 24 57.6
comp=Z,132nm,1.7s
AJM Ajmer 82.55 297⇑iP **P 10 24 26.0 -0.6**
SCRK Sand Creek 82.59 23 P **P 10 24 26.9 +0.7**
SCRK IAmb IAmb 10 24 56.6
comp=Z,82nm,1.7s
TOLK Toolik Lake Re 83.00 18 P **P 10 24 29.0 +1.0**
TOLK Toolik Lake Re 83.00 18 P **P 10 24 29.2 +1.1**
baz=237
FYU Fort Yukon 83.35 21 P **P 10 24 30.6 +0.8**
FYU IAmb IAmb 10 25 01.4
comp=Z,56nm,1.4s
KDJ Kajisay 83.45 313 P **P 10 24 32.0 +0.9**
KDJ Kajisay 83.45 313 P **P 10 24 32.0 +0.9**
KDJ pmax pmax
comp=Z,119nm,1.0s

KSH Kashi 83.80 310 P **P 10 24 35.8 +2.9**
KSH pP pP 10 24 51.8 -7.5
KSH sP pwP 10 25 02.6 -2.6
KSH S **S 10 34 51.4 +3.9**
KSH sS pS 10 35 29.0 +6.8
KSH SS **SS 10 40 23.1 +5.8**
KSH pmax pmax
comp=Z,110nm,1.1s
KSH pmax pmax
comp=Z,1μm,7.7s
KSH LR LR
comp=Z,1μm,14.6s
KSH LR LR
comp=Z,780nm,14.4s
KSH LR LR
comp=Z,7μm,18.6s
EGAK Eagle 84.05 23 P **P 10 24 34.3 +0.9**
HYT Haines Junctio 84.05 27 P **P 10 24 35.5 +1.8**
HYT IAmb IAmb 10 25 06.9
comp=Z,73nm,1.2s
ULHL Ulahol 84.15 313 P **P 10 24 35.5 +0.8**
SNR=71
NRN Naryn 84.16 312 P **P 10 24 35.9 +1.0**
NRN IAmb IAmb 10 24 37.5
comp=Z,87nm,1.4s
NRN Naryn 84.16 312 P **P 10 24 35.9 +1.0**
NRN pmax pmax
comp=Z,87nm,1.4s
H02N1 VAN INLET T-PH 84.21 35 T T 11 58 10.2
H02S1 DAWSON INLET T 84.23 35 T T 11 58 21.8
SNR=5.2
BOOM Boomskoye usch 84.42 313 P **P 10 24 36.5 +0.4**
BOOM IAmb IAmb 10 24 38.6
comp=Z,96nm,0.9s
BOOM Boomskoye usch 84.42 313 P **P 10 24 36.5 +0.4**
BOOM pmax pmax
comp=Z,95nm,1.0s
DAWY Dawson 84.46 24 P **P 10 24 36.8 +1.2**
KURK Kurchatov 84.50 322 P **P 10 24 35.5 -0.4**
KURK IAmb IAmb 10 24 37.4
comp=Z,126nm,1.1s
KURK Kurchatov 84.50 322ceP **P 10 24 36.0 +0.1**
KURK pmax pmax
comp=Z,152nm,1.3s
KURBB Kurchatov Arra 84.53 322 P **P 10 24 35.5 -0.6**
BESE Bessie Mountai 84.55 30 P **P 10 24 36.9 +0.7**
BESE IAmb IAmb 10 25 08.4
comp=Z,110nm,1.6s
SKAG Skagway 84.61 29 P **P 10 24 37.6 +1.3**
SKAG IAmb IAmb 10 25 08.7
comp=Z,57nm,1.5s
KZA Kyzart 84.84 313 P **P 10 24 39.6 +1.2**
SNR=120
NIL Nilore 84.90 304 P **P 10 24 38.2 -0.2**
NIL Nilore 84.90 304 P **P 10 24 38.2 -0.2**
NIL pmax pmax
comp=Z,174nm,0.9s
QSPA South Pole Qui 85.05 180 P **P 10 24 38.2 -0.5**
KBK Karagaybulak 85.17 313 P **P 10 24 41.0 +1.2**
SNR=48
WHY Whitehorse 85.21 28 P **P 10 24 40.1 +0.7**
CHMS Chumysh 85.38 314 P **P 10 24 41.1 +0.5**
SNR=50
CHMS Chumysh 85.38 314 i P **P 10 24 40.7 +0.1**
CHMS pmax pmax
comp=Z,152nm,1.1s
UCH Uchtor 85.41 313 P **P 10 24 43.0 +1.7**
SNR=113
FRU1 Bishkek 85.43 314 P **P 10 24 41.9 +1.0**
FRU1 IAmb IAmb 10 24 43.2
comp=Z,108nm,1.1s
FRU1 Bishkek 85.43 314 P **P 10 24 41.9 +1.0**
FRU1 pmax pmax
comp=Z,108nm,1.1s
AAK Ala-Archa 85.50 313 P **P 10 24 41.9 +0.5**
SNR=60
AAK Ala-Archa 85.50 313 P **P 10 24 41.6 +0.1**
AAK IAmb IAmb 10 24 43.7
comp=Z,72nm,1.1s
AAK Ala-Archa 85.50 313 i P **P 10 24 41.5 +0.1**
AAK pmax pmax
comp=Z,82nm,1.1s
USP Ospenovka 85.61 314 P **P 10 24 42.2 +0.4**
SNR=72
MAW Mawson 85.87 203 P **P 10 24 41.3 -1.1**
baz=86,SNR=36
MAW Mawson 85.87 203 P **P 10 24 42.3 -0.2**
comp=Z,147nm,0.7s,baz=98,slow=5.7,SNR=65
MAW Mawson 85.87 203 P **P 10 24 42.6 +0.1**
MAW IAmb IAmb 10 24 43.8
comp=Z,40nm,0.8s
MAW Mawson 85.87 203 P **P 10 24 42.6 +0.1**
MAW pmax pmax
comp=Z,40nm,0.9s
AML Almayashu 85.99 313 P **P 10 24 45.0 +0.9**
SNR=157
EKS2 Erkin-Say 86.02 313 P **P 10 24 44.6 +0.7**
SNR=45
EPYK Eagle Plains 86.37 22 P **P 10 24 45.2 +0.2**
EPYK IAmb IAmb 10 24 47.4
comp=Z,91nm,1.1s
EPYK Eagle Plains 86.37 22 P **P 10 24 46.0 +1.0**
baz=249
ARSB Arslanbob 86.37 312 P **P 10 24 46.2 +0.5**
ARSB Arslanbob 86.37 312 P **P 10 24 46.2 +0.5**
DLBC Dease Lake 86.94 31 P **P 10 24 49.4 +1.3**
comp=Z,13nm,1.0s,baz=250,slow=7.0,SNR=5.5
DLBC Dease Lake 86.94 31 P **P 10 24 49.2 +1.3**
O02D Mt. Diablo Mer 88.08 50 P **P 10 24 55.7 +1.8**
baz=262
INK Inuvik 88.19 21 P **P 10 24 53.5 -0.1**
comp=Z,17nm,1.0s,baz=240,slow=4.1,SNR=42
INK PKKPbc **PKKPbc 10 42 38.2 -2.5**
comp=Z,2.4nm,0.9s,baz=86,slow=3.7,SNR=7.0
INK Inuvik 88.19 21 P **P 10 24 53.6 0.0**
INK IAmb IAmb 10 25 23.7
comp=Z,65nm,1.6s
INK Inuvik 88.19 21 P **P 10 24 53.6 0.0**
INK pmax pmax
comp=Z,65nm,1.6s
M02C Callahan 88.20 48 P **P 10 24 55.8 +1.4**
baz=262
N02D Trinity Center 88.25 49 P **P 10 24 56.5 +1.9**
baz=262
WDC Whiskeytown Da 88.32 49 P **P 10 24 56.7 +1.8**
WDC Whiskeytown Da 88.32 49 P **P 10 24 56.7 +1.8**
WDC pmax pmax
comp=Z,33nm,1.8s
YBH Yreka Blue Hor 88.35 48 LR LR 10 56 50.9
comp=Z,1μm,21.0s,baz=266,slow=30
KK31 Karatay Array 88.46 313 P **P 10 24 54.7 -0.8**
KK31 Karatay Array 88.46 313 i P **P 10 24 54.5 -1.0**
KKAR Karatay Array 88.46 313 P **P 10 24 55.1 -0.4**
KKAR Karatay Array 88.46 313 P **P 10 24 55.1 -0.4**
KKAR pmax pmax
comp=Z,23nm,1.0s
KBL Kabul 88.48 305 P **P 10 24 54.5 -1.6**
KBL IAmb IAmb 10 24 56.5
comp=Z,28nm,1.1s
KBL Kabul 88.48 305 P **P 10 24 54.5 -1.6**
KBL pmax pmax
comp=Z,28nm,1.1s
O03E Paynes Creek 88.84 50 P **P 10 25 00.6 +3.1**
baz=263
M04C Macdoel 89.01 48 P **P 10 25 00.3 +2.1**
baz=263
AFDM Forest Hills D 89.31 51 P **P 10 25 00.2 +0.5**
B05A Bryant 89.68 42 P **P 10 25 00.8 -0.2**
baz=262
I05D Terrebonne, OR 89.69 46 P **P 10 25 02.2 +0.9**
baz=263
PKM Mcpherson Peak 89.78 55 P **P 10 25 01.6 -0.5**
baz=264
G05D Wamic, OR 89.82 45 P **P 10 25 03.6 +1.7**
baz=263
BEKR Beckworth 89.89 50 P **P 10 25 03.1 +0.6**
BRVK Borovoye 90.02 323 P **P 10 25 01.5 -1.0**
BRVK IAmb IAmb 10 25 03.1
comp=Z,64nm,0.9s
BRVK Borovoye 90.02 323 i P **P 10 25 01.2 -1.3**
BRVK pmax pmax
comp=Z,77nm,1.0s
VCNR Virginia City 90.37 51 P **P 10 25 05.4 +0.6**
PNTR Pine Nut 90.39 51 P **P 10 25 05.5 +0.6**
PNTR IAmb IAmb 10 25 09.5
comp=Z,14nm,0.6s

VES Vestal, Richgr 90.47 54 P P 10 25 06.3 +1.3
baz=264
PAHR Pah Rah Range 90.62 50 P P 10 25 06.5 +0.7
YERR Yerington 90.66 51 P P 10 25 07.5 +1.4
YERR IAmb IAmb 10 25 34.4
comp=Z,46nm,1.8s
ISA Isabella, Lake 90.95 54 P P 10 25 08.6 +1.2
baz=265
MWC Mount Wilson 91.16 56 P P 10 25 08.7 +0.1
MWC IAmb IAmb 10 25 36.2
comp=Z,55nm,1.6s
MWC Mount Wilson 91.16 56 P P 10 25 08.7 +0.1
MWC pmax pmax
comp=Z,55nm,1.6s
RYN Ryan 91.18 52 P P 10 25 08.8 +0.2
RYN IAmb IAmb 10 25 36.0
comp=Z,29nm,1.6s
EDW2 Edwards Air Fo 91.27 55 P P 10 25 10.8 +1.9
baz=265
CWC Cottonwood Cre 91.33 54 P P 10 25 09.8 +0.5
baz=265
NVAR Mina Array Bea 91.33 52 P P 10 25 10.0 +0.7
comp=Z,5.4nm,0.6s,baz=252,slow=6.6,SNR=44
NVAR LR LR 10 57 43.9
comp=Z,1µm,21.2s,baz=299,slow=30
PNT Penticton 91.43 41 P P 10 25 05.5 -3.7
PNT pmax pmax
comp=Z,14nm,0.6s
NV11 Mina Array Sit 91.45 52 P P 10 25 10.3 +0.5
NV11 IAmb IAmb 10 25 37.3
comp=Z,34nm,1.5s
G08A Pilot Rock 91.48 45 P P 10 25 09.6 -0.1
B08A Colville Reser 91.52 42 P P 10 25 09.6 -0.1
E08A Dider Farm, El 91.52 44 P P 10 25 09.8 +0.1
E08A IAmb IAmb 10 25 13.3
comp=Z,42nm,1.6s
KVN Kaiserville 91.55 51 P P 10 25 10.1 -0.2
KVN Kaiserville 91.55 51 P P 10 25 10.1 -0.2
KVN pmax pmax
comp=Z,18nm,1.4s
LRMC Laurel Mtn Rad 91.57 55 P P 10 25 11.2 +0.8
baz=265
J08A Circle Bar Ran 91.65 47 P P 10 25 11.2 +0.7
J08A IAmb IAmb 10 25 43.3
comp=Z,26nm,1.6s
C36M Paulatuk 91.77 21 P P 10 25 09.7 -0.6
C36M Paulatuk 91.77 21 P P 10 25 10.2 -0.1
baz=261
MPMC Manual Prospec 91.78 54 P P 10 25 11.9 +0.5
baz=265
BBRC Big Bear Solar 92.10 56 P P 10 25 14.7 +1.7
baz=266
E09A Wood Farm, Sta 92.16 44 P P 10 25 13.2 +0.6
E09A IAmb IAmb 10 25 14.1
comp=Z,22nm,1.4s
C09A Chrisman Ranch 92.18 42 P P 10 25 12.3 -0.4
C09A IAmb IAmb 10 25 39.2
comp=Z,28nm,1.7s
GSC Goldstone, Bar 92.27 55 P P 10 25 14.9 +1.4
baz=266
FURC Furnace Creek, 92.32 54 P P 10 25 14.9 +1.3
baz=266
MONP2 Monument Peak 92.41 57 P P 10 25 16.3 +2.0
baz=266
PFO Pinyon Flats O 92.43 57 P P 10 25 15.9 +1.5
PFO Pinyon Flats O 92.43 57 P P 10 25 15.9 +1.5
PFO pmax pmax
comp=Z,18nm,1.5s
PFO Pinyon Flats O 92.43 57 P P 10 25 16.4 +2.1
baz=266
TPFO Pinon Flats 92.44 57 P P 10 25 16.2 +1.8
baz=266
XPFO Pion Flat 92.44 57 P P 10 25 15.9 +1.5
BMO Blue Mountains 92.61 45 P P 10 25 15.2 +0.3
BMO Blue Mountains 92.61 45 P P 10 25 15.2 +0.3
BMO pmax pmax
comp=Z,16nm,1.4s
F10A Beach Ranch, E 92.75 44 P P 10 25 16.0 +0.5
SHOC Shoshone, Teco 92.75 54 P P 10 25 17.6 +2.0
baz=266
TPNV Topopah Spring 92.84 53 P P 10 25 17.0 +0.7
TPNV IAmb IAmb 10 25 44.6
comp=Z,40nm,1.6s
TPNV Topopah Spring 92.84 53 P P 10 25 17.0 +0.7
TPNV pmax pmax
comp=Z,40nm,1.7s
TPNV Topopah Spring 92.84 53 P P 10 25 17.3 +1.0
baz=266
BELC Belle Mtn. Jos 92.84 56 P P 10 25 17.5 +1.3
baz=266
NEW Newport 92.98 42 LR LR 11 00 37.8
comp=Z,1µm,21.4s,baz=260,slow=31
NEW Newport 92.98 42 P P 10 25 16.8 +0.3
NEW Newport 92.98 42 P P 10 25 16.8 +0.3
NEW pmax pmax
comp=Z,8.0nm,1.0s
NEW Newport 92.98 42 P P 10 25 16.8 +0.3
baz=266
TUQ Turquoise Moun 93.00 55 P P 10 25 18.3 +1.3
baz=266
GMRC Granite Mounta 93.17 56 P P 10 25 19.6 +1.8
baz=266
BC3 Big Chuckawall 93.27 57 P P 10 25 19.3 +1.0
baz=266
R11A Troy Canyon, C 93.46 52 P P 10 25 19.4 +0.3
R11A IAmb IAmb 10 25 47.4
comp=Z,20nm,1.5s
R11A Troy Canyon, C 93.46 52 P P 10 25 20.1 +1.0
baz=267
IRM Iron Mountain 93.56 56 P P 10 25 20.0 +0.6
baz=267
MFID Camas Ranch 93.58 47 P P 10 25 19.5 +0.1
SHPR Sheep Range 93.69 54 P P 10 25 21.0 +0.9
SHPR IAmb IAmb 10 25 48.1
comp=Z,28nm,1.6s
ELK Elko 93.86 50 P P 10 25 20.9 -0.1
ELK Elko 93.86 50 P P 10 25 20.9 -0.1
ELK pmax pmax
comp=Z,8.0nm,1.4s
SYO Syowa Base 93.91 199⇓iP P 10 25 18.4 -1.8
SYO Syowa Base 93.91 199⇓iPcP P 10 25 20.0 -0.2
Y12C Blythe 94.05 57 P P 10 25 21.6 -0.1
Y12C IAmb IAmb 10 25 50.0
comp=Z,40nm,1.9s
Y12C Blythe 94.05 57 P P 10 25 23.6 +1.9
baz=267
HRA Herat 94.06 304 P P 10 25 21.7 -0.3
HRA IAmb IAmb 10 25 22.7
comp=Z,45nm,1.2s
W13A Hualapai Mount 94.65 55 P P 10 25 27.1 +2.4
PSUT Pine Spring 94.83 52 P P 10 25 24.6 -0.8
YKA Yellowknife Ar 95.04 28 P P 10 25 25.6 +0.2
comp=Z,11nm,1.0s,baz=269,slow=4.8,SNR=80
YKA PKiKP PKiKP 10 30 06.4 0.0
comp=Z,0.5nm,0.6s,baz=266,slow=1.4,SNR=8.5
YKA LR LR 11 03 57.9
comp=Z,1µm,21.4s,baz=0.0,slow=33
WALA Waterton Lakes 95.15 41 P P 10 25 26.4 -0.1
WALA IAmb IAmb 10 25 57.2
comp=Z,62nm,1.9s
CCUT Cedar City 95.17 53 P P 10 25 28.5 +1.5
LCMT Little Creek M 95.25 53 P P 10 25 27.3 +0.1
SZCU Shurtz Canyon 95.39 53 P P 10 25 29.1 +1.1
214A Organ Pipe Nat 95.41 58 P P 10 25 29.2 +1.3
baz=268
KNB Kanab 95.59 53 P P 10 25 30.2 +1.4
KNB Kanab 95.59 53 P P 10 25 30.2 +1.4
KNB pmax pmax
comp=Z,24nm,1.5s
SVE Sverdlovsk 95.83 327 eP P 10 25 28.4 -0.9
U15A North Rim 95.99 54 P P 10 25 30.6 -0.3
U15A IAmb IAmb 10 25 59.1
comp=Z,24nm,1.6s
ABKAR Akbulak array 96.24 319 P P 10 25 29.4 -1.9
ABKAR IAmb IAmb 10 26 05.0
comp=Z,19nm,0.6s
ARU Arti 96.99 326 P P 10 25 32.4 -2.1
ARU IAmb IAmb 10 25 33.9
comp=Z,15nm,0.8s
ARU Arti 96.99 326 eP P 10 25 33.1 -1.4
ARU pmax pmax
comp=Z,18nm,0.9s
AKTO Aktyubinsk 97.47 320 iP P 10 25 34.0 -2.8
AKTO pmax pmax
comp=Z,12nm,1.0s
GEYT Alibeck 97.51 307 P Pdif 10 25 37.5 +0.1
comp=Z,10nm,1.0s,baz=146,slow=1.1,SNR=17
GEYT PP PP 10 29 35.1 -0.9
comp=Z,5.9nm,0.8s,baz=72,slow=4.8,SNR=5.9
PD31 Pinedale Array 98.15 48 P P 10 25 39.5 -0.9
PDAR Pinedale Array 98.15 48 P P 10 25 40.2 -0.2
comp=Z,0.9nm,0.5s,baz=176,slow=1.8,SNR=13
PDAR PKKPbc PKKPbc 10 42 12.1 -1.9
comp=Z,0.3nm,0.5s,baz=103,slow=5.1,SNR=3.9
PDAR LR LR 11 05 56.8
comp=Z,1µm,18.7s,baz=318,slow=33
RDMU Red Mountain 98.17 50 P P 10 25 40.3 -0.2
MVCO Mesa Verde 99.04 53 P Pdif 10 25 45.5 +1.0
MVCO IAmb IAmb 10 27 21.8
comp=Z,27nm,2.0s
RES Resolute Bay 100.25 15 P Pdif 10 25 48.0 -0.7
comp=Z,4.5nm,0.3s,baz=308,slow=20,SNR=35
RES Resolute Bay 100.25 15 Pdif 10 25 46.6 -2.1
S22A 4UR Ranch, Cre 100.36 53 P Pdif 10 25 51.3 +0.8
baz=272
LAO LASA Array 100.37 44 P Pdif 10 25 51.0 +1.0
baz=274
SDCO Great Sand Dun 101.41 53 P Pdif 10 25 57.0 +1.9
baz=273
SNAA Sanae 102.05 187 P Pdif 10 25 56.6 -0.4
SNAA Sanae 102.05 187 P Pdif 10 25 56.7 -0.2
comp=Z,1.8nm,0.6s,baz=19,slow=19,SNR=5.8
SNAA Sanae 102.05 187 Pdif 10 25 55.7 -1.2
RSSD Black Hills 102.10 46 Pdif Pdif 10 25 58.4 +0.5
RSSD Black Hills 102.10 46 P Pdif 10 25 58.4 +0.5
PRGR Permogore 102.91 332 eP Pdif 10 25 58.5 -2.3
PRGR pmax pmax
comp=Z,25nm,0.9s
VNA3 Neumayer Olymp 103.22 185 P Pdif 10 26 02.3 +0.2
TXAR Lajitas Array 103.27 61 Pdiff Pdif 10 26 06.6 +3.3
comp=Z,0.2nm,0.8s,baz=222,slow=1.7,SNR=2.9
TXAR PKiKP PKiKP 10 30 21.4 -0.8
comp=Z,1.6nm,1.0s,baz=226,slow=3.3,SNR=3.7
TXAR PKKPbc PKKPbc 10 41 59.2 +0.7
comp=Z,1.6nm,0.6s,baz=109,slow=4.3,SNR=20
TMCR Tamitsa 105.46 336 eP Pdif 10 26 11.0 -1.0
APA Apatity 105.80 340⇑iP Pdif 10 26 11.7 -1.8
APA pmax pmax
comp=Z,4.0nm,0.7s
KLMR Klimovskoe 105.97 332 eP Pdif 10 26 11.1 -3.3
KLMR pmax pmax
comp=Z,17nm,1.1s
KLMR Klimovskoe 105.97 332 eP Pdif 10 26 11.2 -3.2
KLMR AMP 10 26 14.3
comp=Z,17nm,1.1s
ULM Lac du Bonnet 106.67 39 PKiKP PKiKP 10 30 27.9 +0.1
comp=Z,1.3nm,0.6s,baz=270,slow=2.6,SNR=4.8
ARCES ARCESS Array B 107.28 343 PKiKP PKiKP 10 30 27.9 -0.5
comp=Z,1.9nm,0.7s,baz=64,slow=2.8,SNR=6.8
ARCES PKKPbc PKKPbc 10 41 44.3 -3.4
comp=Z,6.3nm,0.9s,baz=349,slow=4.9,SNR=6.5
FINES FINESS Array B 111.58 336 Pdiff Pdif 10 26 39.7 +0.3
comp=Z,1.6nm,0.7s,baz=65,slow=5.0,SNR=5.8
FINES PKiKP PKiKP 10 30 36.8 +0.1
comp=Z,2.3nm,0.9s,baz=101,slow=2.8,SNR=3.0
FINES PKKPbc PKKPbc 10 41 31.9 -1.7
comp=Z,1.7nm,0.8s,baz=112,slow=2.1,SNR=6.5
U40A Yellville 111.61 53 P PKiKP 10 30 36.6 -0.9
baz=280
E46A Sault Ste Mari 115.18 41 PKiKP 10 30 43.0 -1.0
AKASG Malin Array Be 115.19 325 PKP PKiKP 10 30 43.0 -0.8
comp=Z,1.9nm,0.5s,baz=57,slow=2.2,SNR=9.8
AKASG PP PP 10 31 44.4 -0.8
comp=Z,1.3nm,0.5s,baz=56,slow=6.9,SNR=5.8
AKASG PKKPbc PKKPbc 10 41 17.8 -3.3
comp=Z,0.9nm,0.5s,baz=261,slow=3.8,SNR=6.6
D47A Chapleau 115.70 39 P PKiKP 10 30 44.0 -1.0
baz=292
E47A Iron Bridge 115.81 40 P PKPdf 10 30 44.3 -0.9
baz=292
G47A Hillman 115.89 42 P PKPdf 10 30 44.2 -1.2
baz=291
K47A Vermontville 115.95 45 P PKPdf 10 30 45.1 -0.5
baz=289
N47A Urbana 116.00 47 P PKPdf 10 30 44.7 -1.0
baz=287
L47A Sherwood 116.03 45 P PKPdf 10 30 45.2 -0.6
baz=288
BRTR Keskin Array B 116.15 312 PKP PKPdf 10 30 45.6 -0.6
comp=Z,1.0nm,0.6s,baz=112,slow=2.3,SNR=5.2
BRTR PP PP 10 31 52.6 0.0
comp=Z,6.5nm,1.0s,baz=104,slow=7.0,SNR=11
WCI Wyandotte Cave 116.30 50 PKPdf 10 30 45.5 -0.9
WCI Wyandotte Cave 116.30 50 PKIKP PKPdf 10 30 45.5 -0.9
WCI Wyandotte Cave 116.30 50 P PKPdf 10 30 45.4 -0.9
baz=286
H48A Harrisville 116.41 42 P PKiKP 10 30 47.3 +0.9
baz=291
D48A Paudash Townsh 116.47 39 P PKiKP 10 30 47.1 +0.7
baz=293
F48A Evansville 116.47 41 P PKPdf 10 30 45.7 -0.8
baz=292
N48A Decatur 116.49 47 P PKPdf 10 30 45.7 -0.9
baz=288
E48A Lockeyer 116.51 40 P PKPdf 10 30 45.5 -1.1
baz=293
K48A Perry 116.52 44 P PKPdf 10 30 45.7 -1.0
baz=289
Q48A North Vernon 116.54 49 P PKPdf 10 30 45.6 -1.2
baz=286
O48A Farmland 116.58 47 P PKPdf 10 30 46.0 -0.9
baz=287
L48A N Adams 116.58 45 P PKPdf 10 30 46.5 -0.4
baz=289
J48A Bridge Port 116.59 44 P PKPdf 10 30 46.2 -0.5
baz=290
P48A Milroy 116.61 48 P PKiKP 10 30 47.2 +0.2
baz=287
CLTN Cedars of Leba 116.82 52 PKPdf 10 30 46.6 -0.9
F49A Sandfield 116.87 41 P PKPdf 10 30 46.3 -0.9
baz=292
LRAL Lakeview Retre 117.00 55 P PKPdf 10 30 47.0 -0.8
baz=283
L49A Milan 117.00 45 P PKPdf 10 30 47.2 -0.5
baz=289
I49A Point Hope 117.02 43 P PKPdf 10 30 46.9 -0.7
baz=291
M49A Liberty Center 117.06 46 P PKPdf 10 30 47.2 -0.5
baz=289
N49A Columbus Grove 117.08 46 P PKPdf 10 30 47.3 -0.5
baz=288
W49A Belvidere 117.11 53 P PKPdf 10 30 46.6 -1.5
baz=284
P49A Miami Univ. Ec 117.12 48 P PKPdf 10 30 47.0 -0.9
baz=287
U49A Red Boiling Sp 117.15 51 P PKPdf 10 30 47.2 -0.9
baz=285
T49A Edmonton 117.18 51 P PKPdf 10 30 47.4 -0.7
baz=286
S49A Springfield 117.19 50 P PKPdf 10 30 47.3 -0.9
baz=286
O49A Covington 117.20 47 P PKPdf 10 30 47.3 -0.8
baz=288
V49A McMinnville 117.24 52 P PKPdf 10 30 47.0 -1.3
baz=285
NB2 NORSAR Subarra117.37 341 PKPdf PKPdf 10 30 43.9 -3.9
comp=Z,0.9nm,0.5s,baz=39,slow=1.9
NOA NORSAR Array B 117.37 341 PKP PKPdf 10 30 47.0 -0.8
comp=Z,0.7nm,0.5s,baz=45,slow=1.8,SNR=4.2
NOA NORSAR Array B 117.37 341 PKIKP PKPdf 10 30 47.0 -0.8
K50A Casco 117.57 44 P PKiKP 10 30 48.8 +0.1
baz=291
L50A Kingsville 117.69 45 P PKPdf 10 30 48.4 -0.6
baz=290
D50A G1974 Best Tow 117.70 38 P PKPdf 10 30 48.3 -0.5
baz=295
O50A Cable 117.73 47 P PKPdf 10 30 48.5 -0.7
baz=288
T50A Nancy 117.74 51 P PKPdf 10 30 48.2 -1.0
baz=286
M50A Fremont 117.74 45 P PKPdf 10 30 48.6 -0.4
baz=290
R50A Paris 117.78 49 P PKPdf 10 30 48.4 -0.9
baz=287
Z50A Ashland 117.83 55 P PKPdf 10 30 48.3 -1.2
baz=283
MATQ Matagami 117.85 35 P PKiKP 10 30 49.4 +0.3
baz=298
W50A Signal Mountai 117.85 53 P PKPdf 10 30 48.4 -1.2
baz=285
N50A Nevada 117.88 46 P PKPdf 10 30 48.7 -0.7
baz=289
S50A Richmond 117.89 50 P PKPdf 10 30 48.4 -1.1
baz=287
V50A Pikevile 117.90 52 P PKPdf 10 30 48.4 -1.2
baz=285
U50A Jamestown 117.90 51 P PKPdf 10 30 48.4 -1.2
baz=286
D51A Lot 18 Range I 118.02 38 P PKPdf 10 30 48.6 -0.8
baz=295
F51A Arnstein 118.17 40 P PKPdf 10 30 48.7 -1.0
baz=294
ACSO Alum Creek Sta 118.17 47 PKPdf 10 30 49.2 -0.7
ACSO Alum Creek Sta 118.17 47 P PKPdf 10 30 49.2 -0.7
baz=289
E51A G1948 Merrick 118.18 39 P PKPdf 10 30 49.0 -0.7
baz=295
N51A Ashland 118.38 46 P PKPdf 10 30 49.9 -0.5
baz=290
Z51A Franklin 118.42 55 PKPdf 10 30 49.1 -1.5
T51A Gray 118.44 50 P PKPdf 10 30 49.7 -0.9
baz=287
O51A Pataskala 118.47 47 P PKPdf 10 30 49.8 -0.7
baz=289
S51A Beattyville 118.52 50 P PKPdf 10 30 50.0 -0.7
baz=287
LSQQ Lebel-sur-Quev 118.56 35 P PKPdf 10 30 49.1 -1.3
baz=299
F52A Sundridge 118.60 40 P PKPdf 10 30 50.1 -0.5
baz=295
H52A Wyevale 118.70 41 P PKPdf 10 30 50.3 -0.5
baz=294
VLDQ Val d'Or 118.73 37 PKPdf 10 30 48.7 -2.0
TZTN Tazewell 118.87 51 P PKPdf 10 30 51.1 -0.4
baz=287
N52A McGinn's Farm, 118.91 46 P PKPdf 10 30 50.6 -0.7
baz=290
152A Waverly Hall 118.95 55 PKPdf 10 30 50.0 -1.6
W52A Murphy 118.97 52 P PKPdf 10 30 51.2 -0.5
baz=286
P52A Corning 118.98 47 P PKPdf 10 30 50.2 -1.3
baz=289
V52A Sevierville 119.03 52 P PKPdf 10 30 51.1 -0.6
baz=286
D53A Lac Vacive, Po 119.05 38 P PKPdf 10 30 50.7 -0.7
baz=297
PLCA Paso Flores 119.06 143 PKP PKPdf 10 30 51.2 -0.6
comp=Z,3.5nm,0.5s,baz=260,slow=1.7,SNR=27
PLCA Paso Flores 119.06 143 PKPdf 10 30 50.8 -1.0
Q52A Bidwell 119.10 48 P PKPdf 10 30 51.0 -0.7
baz=289
X52A Dahlonega 119.13 53 P PKPdf 10 30 51.6 -0.4
baz=285
Y52A Lilburn 119.19 54 P PKPdf 10 30 51.7 -0.3
baz=285
G53A Haliburton 119.33 40 P PKPdf 10 30 51.5 -0.6
baz=295
ALGO Algonquin Park 119.33 39 P PKPdf 10 30 51.4 -0.6
baz=296
E53A Dumoine, Ponti 119.39 38 P PKPdf 10 30 51.1 -0.9
baz=297
M53A WI Miller and 119.40 45 P PKPdf 10 30 51.4 -0.8
baz=292
O53A New Philadelph 119.44 46 P PKPdf 10 30 51.6 -0.7
baz=290
N53A Lisbon 119.51 45 PKPdf 10 30 51.6 -0.9
N53A Lisbon 119.51 45 P PKPdf 10 30 52.2 -0.3
baz=291
T53A Wise 119.52 50 P PKPdf 10 30 52.2 -0.5
baz=288
G54A Lake Saint Pet 119.55 40 P PKPdf 10 30 51.6 -0.8
baz=296
W53A Cullowhee 119.56 52 P PKPdf 10 30 52.7 -0.2
baz=286
P53A Whipple 119.57 47 PKPdf 10 30 51.7 -0.9
P53A Whipple 119.57 47 P PKPdf 10 30 52.1 -0.6
baz=290
Y53A Monroe 119.57 54 P PKPdf 10 30 52.3 -0.5
baz=285
H53A Bobcaygeon 119.58 41 P PKPdf 10 30 52.1 -0.4
baz=295
S53A Williamson 119.61 49 P PKPdf 10 30 52.4 -0.5
baz=288
D54A Lac Fusel, La 119.65 37 P PKPdf 10 30 51.3 -1.3
baz=298
E54A Lac Daplat, Po 119.66 38 P PKPdf 10 30 51.5 -1.1
baz=297
U53A Fall Branch 119.67 51 P PKPdf 10 30 52.5 -0.5
baz=287
Q53A Leroy 119.68 48 P PKPdf 10 30 52.1 -0.8
baz=290
V53A Saluda 119.69 52 P PKPdf 10 30 52.5 -0.6
baz=287
GOGA Godfrey 119.78 54 P PKPdf 10 30 52.5 -0.7
baz=285
KOLS Kolonicke sedl 119.99 325 ePKIKP PKiKP 10 30 53.7 +0.4
KOLS Kolonicke sedl 119.99 325 ePKP PKiKP 10 30 53.7 +0.4
L54A Sinclairville 120.04 43 P PKPdf 10 30 52.5 -1.0
baz=293
N54A Moraine State 120.06 45 P PKPdf 10 30 53.0 -0.6
baz=292
O54A Avella 120.06 46 PKPdf 10 30 53.1 -0.5
O54A Avella 120.06 46 P PKPdf 10 30 53.2 -0.3
baz=291
M54A Oil Creek Stat 120.08 44 P PKPdf 10 30 53.2 -0.4
baz=292
UZH Uzhgorod 120.14 325⇓iPKIKP PKiKP 10 30 59.8 +6.3
Q54A Coxs Mills 120.15 47 PKPdf 10 30 52.6 -1.2
Q54A Coxs Mills 120.15 47 P PKPdf 10 30 53.2 -0.6
baz=290
TIGA Tifton 120.17 56 P PKPdf 10 30 53.8 -0.3
baz=284
S54A Dingess, Beckl 120.19 49 P PKPdf 10 30 53.3 -0.6
baz=289
P54A Burton 120.19 47 P PKPdf 10 30 53.4 -0.4
baz=291
T54A Tazewell 120.22 50 P PKPdf 10 30 53.3 -0.7
baz=288
Y54A Tignall 120.29 54 P PKPdf 10 30 53.8 -0.3
baz=286
R54A Victor 120.30 48 P PKPdf 10 30 53.0 -1.1
baz=290
K54A Basiliko Farm, 120.32 43 P PKiKP 10 30 54.5 +0.4
baz=294
V54A Nebo 120.33 51 P PKPdf 10 30 54.0 -0.3
baz=288
W54A Cherokee Point 120.35 52 P PKPdf 10 30 54.1 -0.2
baz=287
BOSA Boshof 120.39 233 PKP PKPdf 10 30 54.5 -0.2
comp=Z,4.2nm,0.6s,baz=127,slow=3.1,SNR=11
BOSA Boshof 120.39 233 PKPdf 10 30 53.5 -1.3
D55A Sainte-Anne-du 120.42 37 P PKPdf 10 30 53.5 -0.6
baz=299
SCHQ Schefferville 120.43 26 PKP PKPdf 10 30 53.8 -0.1
comp=Z,2.4nm,0.8s,baz=193,slow=2.0,SNR=5.4
SCHQ PKKPbc PKKPab 10 41 02.0 -0.1
comp=Z,6.2nm,0.9s,baz=148,slow=3.9,SNR=9.4
SCHQ Schefferville 120.43 26 PKPdf 10 30 53.4 -0.5
G55A Calabogie 120.48 39 P PKPdf 10 30 53.8 -0.4
baz=297
H55A Tweed 120.50 40 P PKPdf 10 30 53.4 -0.9
baz=296
HODGE Hodges 120.53 53 PKPdf 10 30 53.7 -0.9
MCWV Mont Chateau 120.63 46 P PKPdf 10 30 54.3 -0.4
baz=291
J55A Hilton 120.63 42 P PKPdf 10 30 54.3 -0.2
baz=295
L55A Hinsdale 120.66 43 P PKPdf 10 30 53.8 -0.9
baz=294
K55A Perry 120.69 42 P PKPdf 10 30 54.4 -0.4
baz=294
Q55A Buckhannon 120.70 47 P PKPdf 10 30 54.3 -0.6
baz=291
P55A Reedsville 120.70 46 P PKPdf 10 30 53.9 -0.9
baz=291
M55A Ridgway 120.72 44 P PKPdf 10 30 54.5 -0.4
baz=293
U55A TA2, Sparta 120.80 50 P PKPdf 10 30 54.6 -0.6
baz=288
T55A Pulaski 120.81 49 P PKPdf 10 30 54.6 -0.6
baz=289
O55A Ligonier 120.82 46 P PKPdf 10 30 54.6 -0.4
baz=292
N55A Marion Center 120.83 45 P PKPdf 10 30 54.3 -0.8
baz=292
D56A ZEC Mazanza, M 120.84 37 P PKPdf 10 30 54.3 -0.6
baz=300
V55A Taylorsville 120.88 51 P PKPdf 10 30 54.8 -0.5
baz=288
R55A Marlinton 120.92 48 PKPdf 10 30 54.5 -0.9
R55A Marlinton 120.92 48 P PKPdf 10 30 54.5 -0.9

baz=290
E56A St. Veronique 120.92 37 P PKPdf 10 30 53.7 -1.3
baz=299
Y55A Saluda 120.93 53 P PKPdf 10 30 55.1 -0.3
baz=286
X55A Gracelyn & Ava 120.96 53 P PKPdf 10 30 55.2 -0.2
baz=287
KMSC Kings Mountain 121.00 52 P PKPdf 10 30 55.1 -0.5
baz=288
BLA Blacksburg 121.05 49 P PKPdf 10 30 54.9 -0.7
baz=289
M56A Emporium 121.11 44 PKPdf 10 30 55.3 -0.3
M56A Emporium 121.11 44 P PKPdf 10 30 54.9 -0.7
baz=294
N56A West Decatur 121.26 44 P PKPdf 10 30 55.3 -0.6
baz=293
L56A Greenwood 121.28 43 P PKPdf 10 30 55.4 -0.6
baz=294
O56A Blue Knob Stat 121.32 45 P PKPdf 10 30 55.6 -0.5
baz=293
Q56A Snyder Ridge, 121.33 47 P PKPdf 10 30 55.4 -0.7
baz=291
D57A Chemin Vers le 121.37 36 P PKPdf 10 30 55.5 -0.4
baz=300
R56A Bull Pasture M 121.40 48 P PKPdf 10 30 55.7 -0.6
baz=291
T56A Rocky Mt 121.40 49 P PKPdf 10 30 55.7 -0.6
baz=290
P56A Dayton Farm, R 121.41 46 P PKPdf 10 30 55.8 -0.4
baz=292
X56A White Oak 121.43 52 P PKPdf 10 30 56.2 -0.2
baz=287
V56A Mocksville 121.44 51 P PKPdf 10 30 56.3 -0.1
baz=288
Z56A Williston 121.50 54 P PKPdf 10 30 56.4 -0.1
baz=286
E57A Chemin Saint G 121.52 37 P PKPdf 10 30 55.5 -0.7
baz=300
S56A Natural Bridge 121.53 48 P PKPdf 10 30 55.9 -0.6
baz=290
W56A Indian Trail 121.59 51 P PKPdf 10 30 55.9 -0.8
baz=288
G57A Newington 121.64 39 P PKPdf 10 30 55.5 -0.9
baz=298
H57A Richville 121.68 40 P PKPdf 10 30 56.2 -0.3
baz=298
L57A Andrews Acres 121.81 43 P PKPdf 10 30 56.5 -0.4
baz=295
N57A Milroy 121.84 44 P PKPdf 10 30 56.3 -0.7
baz=294
Q57A Strasburg 121.89 46 P PKPdf 10 30 56.3 -0.9
baz=292
M57A Sunshine Farm, 121.90 44 PKPdf 10 30 56.7 -0.4
M57A Sunshine Farm, 121.90 44 P PKPdf 10 30 56.7 -0.4
baz=294
D58A Chemin du LacG 121.92 36 P PKiKP 10 30 57.1 0.0
baz=301
V57A Coltrane Farms 121.97 50 P PKPdf 10 30 57.0 -0.4
baz=289
T57A Hurt 122.00 49 P PKPdf 10 30 56.6 -0.8
baz=290
W57A Gilead 122.04 51 P PKPdf 10 30 57.2 -0.3
baz=288
E58A La Victoria 122.06 37 P PKPdf 10 30 56.9 -0.3
baz=301
U57A Blanch 122.13 50 P PKPdf 10 30 57.1 -0.6
baz=290
VYHS Vyhne 122.16 326 ePKIKP PKiKP 10 30 57.5 0.0
VYHS Vyhne 122.16 326 ePKP PKiKP 10 30 57.5 0.0
G58A Ormstown 122.19 38 P PKPdf 10 30 56.4 -1.0
baz=299
J58A Remsen 122.25 41 P PKPdf 10 30 57.3 -0.4
baz=297
BINY Binghamton 122.31 42 P PKPdf 10 30 57.3 -0.6
baz=296
M58A Price's Panora 122.34 43 P PKPdf 10 30 57.4 -0.6
baz=295
N58A Sunbury 122.39 44 PKPdf 10 30 57.4 -0.6
N58A Sunbury 122.39 44 P PKPdf 10 30 57.4 -0.6
baz=294
Q58A Fox Den Farm, 122.46 46 P PKPdf 10 30 57.7 -0.5
baz=293
H58A Gabriels 122.47 39 P PKPdf 10 30 57.1 -1.0
baz=299
P58A Pank, Wackersv 122.52 46 P PKPdf 10 30 57.6 -0.7
baz=293
O58A Lewisberry 122.53 45 P PKPdf 10 30 57.8 -0.5
baz=294
T58A Grand View Acr 122.56 49 P PKPdf 10 30 58.1 -0.4
baz=291
LSZ Lusaka 122.57 249 PKPdf 10 30 59.0 -0.2
LSZ Lusaka 122.57 249 PKIKP PKPdf 10 30 59.0 -0.2
D59A Saint-Raymond 122.58 36 P PKPdf 10 30 57.8 -0.4
baz=302
H59A Cadyville 122.67 39 P PKiKP 10 30 58.6 0.0
baz=299
W58A Raeford 122.67 51 P PKPdf 10 30 58.1 -0.6
baz=289
R58B Mineral 122.68 47 P PKPdf 10 30 57.8 -0.9
baz=292
Y58A Scranton 122.68 53 P PKiKP 10 30 59.2 +0.3
baz=288
J59A Piesco 122.71 40 P PKPdf 10 30 58.0 -0.6
baz=298
U58A Oxford 122.74 49 P PKPdf 10 30 58.1 -0.7
baz=290
X58A Rowland 122.74 52 P PKPdf 10 30 58.6 -0.2
baz=289
DWPF Disney Wildern 122.77 60 P PKPdf 10 30 58.8 -0.2
baz=283
G59A Clarenceville 122.77 38 P PKPdf 10 30 58.3 -0.3
baz=300
K59A Cooperstown 122.80 41 P PKPdf 10 30 58.4 -0.4
baz=297
L59A Walton 122.94 42 P PKPdf 10 30 58.8 -0.3
baz=297
CBN Corbin Frederi 122.96 47 P PKPdf 10 30 58.6 -0.6
baz=292
I59A Olmsteadville 122.96 40 P PKPdf 10 30 58.3 -0.7
baz=299
M59A Waymart 122.97 43 P PKPdf 10 30 58.6 -0.5
baz=296
O59A Robesonia 122.97 44 P PKPdf 10 30 58.6 -0.6
baz=295
MVL Millersville 122.99 45 PKPdf 10 30 58.4 -0.7
N59A State Game Lan 123.01 43 P PKPdf 10 30 58.8 -0.4
baz=295
F60A Warwick 123.06 37 P PKPdf 10 30 58.8 -0.4
baz=302
P59A Jarrettsville 123.09 45 P PKPdf 10 30 58.7 -0.7
baz=294
E60A Ste Agathe de 123.14 36 P PKPdf 10 30 58.8 -0.5
baz=302
D60A Saint Jean D'O 123.15 35 P PKPdf 10 30 58.5 -0.7
baz=303
V59A Middlesex 123.19 50 P PKPdf 10 30 59.4 -0.3
baz=290
ROC1 El Roble 123.20 135 *i* P PKPdf 10 30 59.3 -0.9
BRG Berggiesshubel 123.28 331 *i* PKP PKPdf 10 30 59.0 -0.4
comp=Z,6.6nm,0.8s
BRG Berggiesshubel 123.28 331 *i* PKIKP PKPdf 10 30 59.0 -0.4
BRG pmax pmax
comp=Z,7.0nm,0.8s
T59A Double "B" Far 123.28 48 P PKPdf 10 30 59.5 -0.4
baz=292
I60A Shoreham 123.31 39 P PKPdf 10 30 59.4 -0.2
baz=299
D61A St Aubert, Com 123.41 35 P PKPdf 10 30 59.5 -0.3
baz=304
CLL Collm 123.44 332 *i* PKPdf PKiKP 10 31 00.3 +0.3
comp=Z,7.0nm,0.8s
CLL *i* 10 31 03.0
CLL Collm 123.44 332 *i* PKIKP PKiKP 10 31 00.3 +0.3
CLL pmax pmax
comp=Z,7.0nm,0.8s
N60A Cedar Hill Far 123.48 43 P PKPdf 10 30 59.6 -0.5
baz=296
O60A Telford 123.51 44 P PKPdf 10 30 59.9 -0.3
baz=295
P60A Greenville 123.56 45 P PKPdf 10 30 59.6 -0.7
baz=295
M60A Port Jervis 123.61 43 P PKiKP 10 31 00.7 +0.1
baz=297
F61A St Evariste 123.62 36 P PKPdf 10 30 59.9 -0.3
baz=303
PSUB Penn St. - Bra 123.64 44 PKPdf 10 30 59.6 -0.9
E61A Lac Etchemin 123.67 36 P PKPdf 10 30 59.9 -0.4
baz=303

G61A St-Isidore-de- 123.67 37 P PKiKP 10 31 00.9 +0.3
baz=302
U60A Pendleton 123.76 49 P PKPdf 10 31 00.4 -0.3
baz=292
X60A Albert Glenn T 123.80 51 P PKPdf 10 31 00.8 -0.1
baz=290
T60A Surry 123.83 48 P PKPdf 10 31 00.7 -0.2
baz=292
W60A Pink Hill 123.84 51 P PKPdf 10 31 00.9 0.0
baz=290
K61A Williamstown 123.89 41 P PKPdf 10 31 00.6 -0.3
baz=299
LIT Litokhoron 124.02 316 PKPdf PKPdf 10 31 00.2 -1.0
LIT Litokhoron 124.02 316 PKIKP PKPdf 10 31 00.2 -1.0
CONA Conrad Observa 124.11 327 *e*PKiKP PKPdf 10 31 01.1 -0.1
comp=Z,3.6nm,0.7s
D62A Allapoint, All 124.12 34 P PKPdf 10 31 00.9 -0.2
baz=305
M61A Granite Spring 124.19 42 P PKPdf 10 31 01.4 -0.1
baz=297
G62A West of Eustis 124.30 37 P PKPdf 10 31 01.5 0.0
baz=303
L61B Northampton 124.37 41 P PKPdf 10 31 01.7 -0.1
baz=299
KHC Kasperske Hory 124.57 329 *e*PKPDF PKPdf 10 31 01.7 -0.3
KHC *ex* x 10 31 04.5
KHC Kasperske Hory 124.57 329 *e*PKIKP PKPdf 10 31 01.7 -0.3
AAGR Agrelo 124.67 136 *i* P PKPdf 10 31 02.4 -0.4
GEC2 GERESS Array S 124.69 329 PKPdf 10 31 01.9 -0.4
GERES GERESS Array B 124.69 329 PKP PKPdf 10 31 01.7 -0.6
comp=Z,2.6nm,0.5s,baz=75,slow=1.5,SNR=20
ARCO CERRO ARCO 124.73 136 *i* P PKPdf 10 31 02.4 -0.6
GO04 Tololo Observa 124.85 132 *i* P PKPdf 10 31 02.3 -1.1
E63A Oxbow 124.85 35 P PKPdf 10 31 02.4 -0.2
baz=305
F63A Nahmakanta, Br 124.87 36 P PKPdf 10 31 02.6 0.0
baz=304
G63A Kingsbury 124.90 36 P PKPdf 10 31 02.6 -0.1
baz=304
ASAL Salagasta 124.94 136 *i* P PKPdf 10 31 02.9 -0.5
PKME Peaks-Kenny Pk 125.01 36 P PKiKP 10 31 03.4 +0.1
baz=304
RTLS Leoncito 125.06 135 *i* P PKPdf 10 31 03.3 -0.5
HRV Adam Dziewonsk 125.07 40 P PKPdf 10 31 03.2 +0.1
baz=300
F64A Sherman 125.22 35 P PKPdf 10 31 03.0 -0.3
baz=305
SOKA Soboth 125.31 326 PKiKP PKPdf 10 31 03.3 -0.2
comp=Z,3.1nm,0.8s
G64A Maxfield 125.33 36 P PKPdf 10 31 03.4 -0.1
baz=304
L63A North Scituate 125.35 41 P PKPdf 10 31 03.6 -0.1
baz=300
H64A Troy 125.39 37 P PKPdf 10 31 03.5 -0.2
baz=304
RTCV Cerro Valdivia 125.56 135 *i* P PKPdf 10 31 03.5 -1.0
M64A Tiverton 125.77 41 P PKPdf 10 31 04.4 -0.1
baz=300
L64A Middleborough 125.82 40 P PKPdf 10 31 04.0 -0.5
baz=300
AROD Rodeo 125.82 133 *i* P PKPdf 10 31 05.2 -0.2
ACCO Cerro Coronel 125.89 134 *i* P PKPdf 10 31 05.0 -0.5
RTLL Cerro Villicun 125.91 135 *i* P PKPdf 10 31 04.2 -1.0
RTLL IAML 10 31 05.0
comp=Z,5.8nm,0.5s
CFA Coronel Fontan 125.92 135⇓*i* P PKPdf 10 31 04.1 -1.0
KBA Koelnbreinsper 125.98 328 *e*PKiKP PKPdf 10 31 04.2 -0.8
comp=Z,3.3nm,1.0s
ACDV Cuesta del Vie 126.08 133 *i* P PKPdf 10 31 05.5 -0.2
ACDV IAML 10 31 06.3
comp=Z,12nm,0.5s
AMOG MOGNA 126.11 134 *i* P PKPdf 10 31 05.3 -0.3
ACAN Cantantal 126.26 136 *i* P PKPdf 10 31 05.3 -0.5
ABTA Abfaltersbach 126.63 328 *e*PKiKP PKPdf 10 31 05.7 -0.4
comp=Z,5.9nm,0.9s
WATA Walderalm 126.75 329 *i* PKiKP PKPdf 10 31 06.4 +0.1
comp=Z,7.3nm,1.1s
WTTA Wattenberg 126.76 329 *e*PKiKP PKPdf 10 31 06.7 +0.2
comp=Z,9.6nm,0.8s
STAL STALIGIAL 126.83 327 PKPdf 10 31 06.0 -0.4
AGUA GUANDACOL 126.91 133 *i* P PKPdf 10 31 07.2 0.0
MOTA Moosalm 126.99 329 *i* PKiKP PKPdf 10 31 06.5 -0.3
comp=Z,7.9nm,0.8s
SQTA Sankt Quirin 127.01 329 *i* PKiKP PKPdf 10 31 06.4 -0.4
comp=Z,11nm,1.0s
FETA Feichten 127.39 329 *i* PKiKP PKiKP 10 31 08.1 -0.1
comp=Z,7.1nm,0.9s
VCA Vinchina 127.52 132 *i* P PKPdf 10 31 08.3 -0.2
DAVA Damuels 127.65 330 *i* PKiKP PKPdf 10 31 07.9 -0.2
comp=Z,7.5nm,0.8s
GO02 Mina Guanaco 128.29 127 PKPdf 10 31 09.7 -0.5
PB11 IPOC Station P 130.70 121 PKPdf 10 31 14.0 -0.7
TSUM Tsumeb 130.73 240 PKPdf 10 31 14.7 0.0
GO01 Chusmiza 131.13 121 PKPdf 10 31 15.5 -0.4
ROSC El Rosal 132.02 88 PKP PKPdf 10 31 17.6 -0.1
comp=Z,13nm,0.5s,baz=152,slow=12,SNR=4.7
LPAZ La Paz 133.45 118 PKP PKPdf 10 31 20.6 +0.1
comp=Z,7.9nm,0.6s,baz=6.7,slow=5.3,SNR=5.5
LPAZ La Paz 133.45 118 PKPdf 10 31 20.4 -0.1
SDV Santo Domingo 135.69 82 PKPdf 10 31 23.5 -0.7
CPUP Villa Florida 136.68 137 PKP PKPdf 10 31 25.0 -0.6
comp=Z,6.2nm,0.8s,baz=352,slow=1.1,SNR=10
CPUP Villa Florida 136.68 137 PKIKP PKPdf 10 31 25.0 -0.6
OBIP Obispado Ponce 138.38 68 PKPdf 10 31 27.5 -1.3
HUMP Col San Antoni 139.06 68 PKPdf 10 31 28.6 -1.4
ESDC Sonseca Array 140.00 333 PKhKP PKPpre 10 31 24.3
comp=Z,0.2nm,0.3s,baz=30,slow=3.1,SNR=3.8
ESDC PP PP 10 34 27.1 -1.0
comp=Z,2.7nm,0.8s,baz=31,slow=6.4,SNR=6.9
LIJA Lijar 142.91 332 *i* P PKPdf 10 31 32.8 -3.9
TAM Tamanrasset 144.61 303 PKPdf 10 31 40.0 -0.1
TAM Tamanrasset 144.61 303 PKIKP PKPdf 10 31 40.0 -0.1
TOSP Speyside 145.40 77 PKPdf 10 31 41.3 -0.2
BDFB Brasilia 150.25 134 PKP PKPdf 10 31 49.4 -0.2
comp=Z,28nm,0.5s,baz=242,slow=0.7,SNR=30
BDFB PKPbc PKPbc 10 31 54.3 -0.5
comp=Z,15nm,0.7s,baz=17,slow=0.8,SNR=6.6
BDFB Brasilia 150.25 134 PKPdf 10 31 49.5 -0.1
BDFB PKPbc PKPbc 10 31 54.0 -0.8
BDFB PKPab PKPab 10 32 00.1 -1.1
SHEL Horse Pasture 151.05 224 PKPab 10 32 05.3 +0.9
TOA0 Torodi Ar. Sit 151.33 288 PKPbc PKPbc 10 31 56.5 -0.7
TOA0 PKPab PKPab 10 32 05.8 +0.1
TORD Torodi Ar. Bea 151.33 288 PKP PKPdf 10 31 50.2 -1.0
comp=Z,2.2nm,0.7s,baz=41,slow=1.7,SNR=12
TORD PKPbc PKPbc 10 31 56.6 -0.6
comp=Z,35nm,0.8s,baz=44,slow=3.3,SNR=94
TORD PKPab PKPab 10 32 06.0 +0.4
comp=Z,65nm,1.0s,baz=70,slow=2.9,SNR=33
TORD PP PP 10 35 36.4 -0.5
comp=Z,10.0nm,0.9s,baz=46,slow=4.5,SNR=7.2
KIC Kosan Boka 158.64 275 *e*PKP1 PKPdf 10 32 00.0 -1.2
comp=Z,29nm,1.4s
KIC Kosan Boka 158.64 275 *e*PKP2 PKPab 10 32 36.8 -0.2
comp=Z,93nm,0.8s
KIC Kosan Boka 158.64 275 PKPdf 10 32 00.0 -1.2
KIC PKPab 10 32 36.8 -0.2
DBIC Dimbokro 158.74 276 PKP PKPdf 10 31 59.2 -2.0
comp=Z,2.3nm,0.9s,baz=182,slow=2.6,SNR=2.5
DBIC PKPab PKPab 10 32 37.6 +0.2
comp=Z,34nm,0.8s,baz=79,slow=5.5,SNR=23
DBIC PP PP 10 36 17.3 -1.2
comp=Z,6.1nm,0.9s,baz=90,slow=12,SNR=4.9
DBIC Dimbokro 158.74 276 PKPab 10 32 37.2 -0.2
TIC Toumodi 158.90 276 *e*PKP1 PKPdf 10 31 59.0 -2.5
TIC Toumodi 158.90 276 *e*PKP2 PKPab 10 32 37.8 -0.3
comp=Z,82nm,0.8s
TIC Toumodi 158.90 276 PKPab 10 32 37.8 -0.3
TIC Toumodi 158.90 276 PKP2 PKPab 10 32 37.8 -0.3
LIC Lamto 158.93 275 *e*PKP1 PKPdf 10 32 00.3 -1.2
comp=Z,21nm,0.9s
LIC Lamto 158.93 275 *e*PKP2 PKPab 10 32 38.0 -0.2
comp=Z,111nm,0.8s
LIC Lamto 158.93 275 PKPdf 10 32 00.3 -1.2
LIC PKPab 10 32 38.0 -0.2

NNC **18** *10:14:07.0±4.3, 41°10N×71°06E, h0km, mb2.9, mpv2.8,*
Error ellipse: s-maj=35.1km s-min=17.4km az=23.0
SOME **18** *10:14:08.2, 41°27N×71°10E, h0km*
KRNET **18** *10:14:12.3±0.1, 41°06N×71°54E, h1km, mb2.4*
ISC 18 10:14:09.0±1.3, 41°28N±0°04×71°16E±0°03, h12km±11km, n20, σ1§75/38, 13C-11D, Kyrgyzstan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ARK Arkit 0.79 49⇑*i*P Pn 10 14 27.6 +1.4
baz=25
ARK ⇑*i*S Sn 10 14 38.8 +0.7
baz=25
IUG Iuzhnay 1.21 316 *e*P Pn 10 14 30.4 -1.6
1.1nm,0.2s
IUG *e*S Sb 10 14 46.5 -1.2
23nm,0.3s
IUG Iuzhnay 1.21 316 P Pn 10 14 30.0 -1.9
1.3nm,0.5s
IUG S Sb 10 14 45.4 -2.3
24nm,0.6s
JBG Jabagly 1.23 338 P Pg 10 14 34.7 +1.9
4.7nm,0.3s
JBG S Sn 10 14 53.7 +4.7
6.8nm,0.4s
BTK Batken 1.25 192⇓*i*P Pg 10 14 34.0 +1.0
baz=9.0
BTK ⇓*i*S Sn 10 14 50.4 +1.2
baz=9.0
ARSB Arslanbob 1.37 87⇓*i*P Pb 10 14 33.7 -1.0
baz=76
ARSB ⇓*i*S Sb 10 14 49.3 -3.0
baz=76
KK31 Karatay Array 1.89 345 ⇑Pn Pg 10 14 44.1 -1.1
3.1nm,0.3s,baz=175,slow=18,SNR=42
KK31 ⇑Sn Sg 10 15 10.1 +0.4
12nm,0.5s,baz=167,slow=33,SNR=22
BRLS Boroldai 2.01 331 *e*P Pn 10 14 43.2 +0.4
6.3nm,0.4s
BRLS *e*S Sb 10 15 09.0 -1.5
13nm,0.5s
BRLS Boroldai 2.01 331 P Pn 10 14 43.2 +0.4
6.3nm,0.4s
BRLS S Sn 10 15 08.2 +0.3
13nm,0.5s
AML Almayashu 2.08 65⇑*e*P Pg 10 14 47.4 -1.5
baz=56
AML ⇑*e*S Sg 10 15 17.5 +1.6
baz=56
MRKS Merke 2.12 46 *e*P Pg 10 14 49.8 0.0
2.3nm,0.1s
MRKS *e*S Sg 10 15 20.4 +3.1
3.1nm,0.2s
EKS2 Erkin-Say 2.39 54⇑*e*P Pb 10 14 50.6 -1.5
baz=45
EKS2 ⇑*i*S Sb 10 15 22.9 +1.3
baz=45
ARLS Aral 2.44 75⇓*e*P Pb 10 14 53.2 +0.2
baz=68
ARLS ⇓*i*S Sb 10 15 22.4 -0.7
baz=68
UCH Uchtor 2.68 68⇓*e*P Pb 10 14 55.8 -1.4
baz=61
UCH ⇓*i*S Sb 10 15 32.1 +1.8
baz=61
AAK Ala-Archa 2.83 60⇑*e*P Pb 10 14 57.3 -2.3
baz=53
AAK ⇑*i*S Sb 10 15 34.5 +0.2
baz=53
AAK Ala-Archa 2.83 60 ⇑Pg Pb 10 15 00.3 +0.6
2.6nm,0.6s
AAK ⇓Lg Lg 10 15 39.2
1.4nm,0.5s
KZA Kyzart 3.16 74⇓*i*P Pb 10 15 03.2 -2.2
baz=69
KZA ⇓*i*S Sb 10 15 44.4 +0.3
baz=69
CHMS Chumysh 3.17 56 ⇑Pg Pb 10 15 06.3 +0.9
1.1nm,0.6s
CHMS ⇑Lg Lg 10 15 50.0
1.9nm,0.7s
KST Kastek 3.98 62 *e*P Pg 10 15 23.3 -1.9
0.4nm,0.1s
KST *e*S Sg 10 16 17.6 +0.8
1.7nm,0.2s
KRBS Karabastau 4.12 53 *e*P Pg 10 15 25.6 -2.3
0.1nm,0.1s
KRBS *e*S Sg 10 16 21.2 -0.1
0.3nm,0.1s

KRSC **18** *10:27:07.0±1.5, 49°17N×157°15E, h16km±29km, ML4.6*
SKHL **18** *10:27:08.4±0.8, 48°99N×156°63E, h48km±5km, mb4.5/3*
MOS **18** *10:27:08.5±1.1, 49°12N×157°35E, h18km, mb4.5/5, Error ellipse: s-maj=14.1km s-min=4.5km az=79.3*
IDC **18** *10:27:12.3±3.0, 49°29N×156°21E, h50km±24km, mb3.7/15, mb1 3.9/19, mb1mx3.6/50, mbtmp4.0/19, ML4.4/3, Error ellipse: s-maj=31.2km s-min=16.3km az=148.0*
NEIC **18** *10:27:12.6±2.0, 49°3N±0°1×156°1E±0°1, h49km±9km, mb4.2/16, Error ellipse: s-maj=19.6km s-min=8.1km az=139.0*
ISC 18 10:27:09.8±2.6, 49°18N±0°09×156°36E±0°09, h31km±16km, n110, σ1§30/130, mb4.2/31, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SKR Severo-Kuril's 1.51 354 *e*P Pn 10 27 35.3 +0.6
SKR *e*S Sb 10 27 56.1 +0.1
SKR Severo-Kuril's 1.51 354 *e*P Pn 10 27 35.6 +0.9
SKR AMB AMB 10 27 36.5
260nm,0.6s
SKR *e*rx rx 10 27 38.4
SKR *e*S Sb 10 27 56.0 +0.1
SKR A A 10 27 59.0
1μm,0.4s
SKR A A 10 27 59.0
1μm,0.4s
SKR Severo-Kuril's 1.51 354 *e*PN Pn 10 27 35.6 +0.9
SKR *e*S Sb 10 27 56.0 +0.1
SKR pmax pmax
comp=Z,261nm,0.6s
SKR smax smax
comp=E,1μm,0.3s
SKR smax smax
comp=N,1μm,0.4s
PAU Pauzhetka 2.31 7 *e*P Pn 10 27 46.3 +0.6
PAU *e*S Sn 10 28 14.7 +1.7
PAU Pauzhetka 2.31 7 *e*P Pn 10 27 46.7 +1.0
PAU *e*S Sn 10 28 14.1 +1.1
PAU Pauzhetka 2.31 7 PN Pn 10 27 46.3 +0.6
PAU S Sn 10 28 14.7 +1.7
KDTR Khodutka, Kamc 2.85 22 *e*P Pn 10 27 52.8 -0.4
KDTR *e*S Sn 10 28 26.2 -0.2
KDTR Khodutka, Kamc 2.85 22 PN Pn 10 27 52.8 -0.4
KDTR S Sn 10 28 26.2 -0.2
ASAK Asacha 3.35 16 *e*P Pn 10 28 00.7 +0.6
ASAK Asacha 3.35 16 PN Pn 10 28 00.7 +0.6
MTVR Mutnovka 3.50 19 *e*P Pn 10 28 02.5 +0.2
MTVR Mutnovka 3.50 19 PN Pn 10 28 02.5 +0.2
RUS Russkaya 3.53 22 *e*P Pn 10 28 02.2 -0.3
RUS *e*S Sn 10 28 42.9 -0.3
RUS Russkaya 3.53 22 *e*P Pn 10 28 02.2 -0.3
RUS Russkaya 3.53 22 PN Pn 10 28 02.2 -0.3
RUS S Sn 10 28 42.9 -0.3
GRL Gorelyy 3.55 17 *e*P Pn 10 28 03.2 +0.4
GRL *e*S Sn 10 28 44.7 +1.0
GRL Gorelyy 3.55 17 PN Pn 10 28 03.2 +0.4
GRL S Sn 10 28 44.7 +1.0
APC Apacha 3.78 7 *e*P Pn 10 28 08.1 +2.1
APC Apacha 3.78 7 PN Pn 10 28 08.1 +2.1
KRMR Karymshinskiy 3.82 16 *e*P Pn 10 28 07.0 +0.5
KRMR *e*S Sn 10 28 50.5 +0.2
KRMR Karymshinskiy 3.82 16 PN Pn 10 28 07.0 +0.5
KRMR S Sn 10 28 50.5 +0.2
PEA0B Petropavlovsk- 4.02 12 Pn Pn 10 28 10.7 +1.4
PEA0B Petropavlovsk- 4.02 12 PN Pn 10 28 10.7 +1.4
PETK Petropavlovsk- 4.02 12 P Pn 10 28 10.9 +1.6
comp=N,3.6nm,0.3s,baz=282,slow=13,SNR=64
PETK S Sb 10 29 06.3 -1.7
baz=150,slow=19,SNR=2.2
PET Petropavlovsk 4.11 20 *e*P Pn 10 28 10.6 +0.1
PET *e*S Sn 10 28 57.8 +0.4
PET Petropavlovsk 4.11 20 *e*P Pn 10 28 10.5 +0.1
PET P Pb 10 28 15.5 -5.9
comp=N,55nm,0.5s
PET *e*S Sn 10 28 59.3 +1.9
PET A A 10 29 11.4
comp=N,240nm,0.6s
PET A A 10 29 11.4
comp=N,210nm,0.6s
PET Petropavlovsk 4.11 20 Pn 10 28 10.6 +0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PET				Sn	Sn	10 28 58.0	+0.6
PET	Petropavlovsk	4.11	20	ePN	Pn	10 28 10.5	+0.1
PET				eS	Sn	10 28 59.3	+1.9
PET				pmax	pmax		
	comp=Z,55nm,0.5s						
PET				smax	smax		
	comp=E,208nm,0.6s						
PET				smax	smax		
	comp=N,244nm,0.6s						
DALK	Dalny	4.14	20	eP	Pn	10 28 11.3	+0.4
DALK				eS	Sn	10 28 58.7	+0.5
DALK	Dalny	4.14	20	PN	Pn	10 28 11.3	+0.4
AVH	Avacha	4.36	19	eP	Pn	10 28 15.7	+1.8
AVH				eS	Sn	10 29 06.6	+3.0
AVH	Avacha	4.36	19	eP	Pn	10 28 15.7	+1.8
AVH	Avacha	4.36	19	PN	Pn	10 28 15.7	+1.8
AVH				S	Sn	10 29 06.6	+3.0
KOK	Koryaka	4.36	18	eP	Pn	10 28 15.4	+1.4
KOK	Koryaka	4.36	18	eP	Pn	10 28 15.4	+1.4
KOK	Koryaka	4.36	18	PN	Pn	10 28 15.4	+1.4
KRER	Koryakskii	4.39	19	eP	Pn	10 28 15.6	+1.0
KRER				eS	Sn	10 29 06.4	+1.7
KRER	Koryakskii	4.39	19	PN	Pn	10 28 15.6	+1.0
KRER				S	Sn	10 29 06.4	+1.7
KRX	Arik	4.42	18	eP	Pn	10 28 16.5	+1.6
KRX	Arik	4.42	18	PN	Pn	10 28 16.5	+1.6
KZV	Kizimen	6.42	21	eP	Pn	10 28 43.0	+0.7
KZV	Kizimen	6.42	21	PN	Pn	10 28 43.0	+0.7
KUR	Kuril'sk	7.00	239	eP	Pn	10 28 49.2	-1.0
KUR				AMB	AMB	10 28 56.2	
	comp=N,51nm,1.0s						
KUR				eS	Sn	10 30 08.4	-0.2
KUR	Kuril'sk	7.00	239	PN	Pn	10 28 49.1	-1.1
KUR				pmax	pmax		
	comp=Z,51nm,1.0s						
KBTR	Krutoberegovo	8.06	27	eP	Pn	10 29 03.6	-1.0
KBTR	Krutoberegovo	8.06	27	PN	Pn	10 29 03.6	-1.0
JKA	Kamikawa-asahi	10.72	247	eP	Pn	10 29 41.6	+0.4
JKA	Kamikawa-asahi	10.72	247	eP	Pn	10 29 41.6	+0.4
ASAJ	Asahikawa	10.72	247	P	Pn	10 29 41.6	+0.4
	comp=Z,2.2nm,0.3s,baz=61,slow=16,SNR=11						
MA2	Magadan	10.91	345	P	Pn	10 29 45.6	+1.9
	comp=Z,0.7nm,0.3s,baz=176,slow=18,SNR=3.4						
MA2	Magadan	10.91	345	P	Pn	10 29 42.3	-1.3
ERM	Erimo	11.69	237	Pn	Pn	10 29 54.8	+0.5
ERM	Erimo	11.69	237	PN	Pn	10 29 54.8	+0.5
EKMR	Ekimchan	15.18	294	eP	Pn	10 30 42.8	+1.0
EKMR				AMB	AMB	10 30 59.0	
	comp=Z,8.0nm,0.9s						
KLR	Kul'dur	16.07	280	P	P	10 30 55.2	-1.2
	comp=Z,0.3nm,0.3s,baz=69,slow=11,SNR=5.8						
MJAR	Matsushiro Arr	18.29	233	P	Pn	10 31 25.5	+4.5
	comp=Z,0.1nm,0.3s,baz=41,slow=13,SNR=4.3						
KSRS	Korea Array	23.63	251	P	P	10 32 18.9	+0.9
	comp=Z,2.2nm,0.9s,baz=57,slow=9.1,SNR=5.1						
KSRS	Korea Array	23.63	251	eP	P	10 32 19.0	+0.9
KSRS	Korea Array	23.63	251	P	P	10 32 19.0	+0.9
ANM	Nome	25.43	39	P	P	10 32 34.7	+0.3
ANM				IAmb	IAmb	10 32 49.4	
	comp=Z,10nm,1.4s						
ANM	Nome	25.43	39	P	P	10 32 34.7	+0.3
ANM				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TIK	Tiksi	25.81	340	eP	P	10 32 35.6	-2.2
TIXI	Tiksi	25.82	340	P	P	10 32 35.3	-2.6
	comp=Z,2.7nm,0.7s,baz=131,slow=8.4,SNR=5.3						
TIXI	Tiksi	25.82	340	P	P	10 32 35.6	-2.3
TIXI	Tiksi	25.82	340	P	P	10 32 35.6	-2.3
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
H11N1	WAKE ISLAND Hy	30.59	160	T	T	11 06 24.3	
	baz=348,slow=74,SNR=2.8						
H11N3	WAKE ISLAND Hy	30.59	160	T	T	11 06 50.0	
	baz=165,slow=74,SNR=5.4						
H11S1	WAKE ISLAND Hy	31.72	161	T	T	11 07 54.8	
	baz=347,slow=76,SNR=25						
H11S3	WAKE ISLAND Hy	31.73	161	T	T	11 07 44.4	
	baz=347,slow=76,SNR=38						
H11S2	WAKE ISLAND Hy	31.74	161	T	T	11 07 49.3	
	baz=347,slow=76,SNR=27						
TOLK	Toolik Lake Re	32.52	33	P	P	10 33 38.4	+0.9
TOLK				IAmb	IAmb	10 33 39.3	
	comp=Z,4.1nm,1.3s						
CCB	Clear Creek Bu	32.89	41	P	P	10 33 41.3	+0.6
CCB				IAmb	IAmb	10 33 44.0	
	comp=Z,3.9nm,1.3s						
HDA	Harding Lake	33.26	41	P	P	10 33 42.2	-1.7
HDA				IAmb	IAmb	10 33 59.3	
	comp=Z,2.2nm,0.8s						
IL31		33.28	41	P	P	10 33 45.5	+1.5
IL31				IAmb	IAmb	10 33 57.2	
	comp=Z,5.2nm,1.4s						
ILAR	Eielson Array	33.28	41	P	P	10 33 47.7	+3.6
	comp=Z,0.2nm,0.5s,baz=265,slow=6.8,SNR=8.3						
EGAK	Eagle	35.74	41	P	P	10 34 05.8	+0.5
EGAK				IAmb	IAmb	10 34 15.1	
	comp=Z,8.1nm,1.4s						
BARN	Barnard Glacie	35.98	47	P	P	10 34 07.8	+0.1
CTGM	Chitina Glacie	36.15	47	P	P	10 34 10.5	+1.4
INK	Inuvik	38.42	34	P	P	10 34 26.1	-1.9
	comp=Z,3.5nm,1.1s,baz=229,slow=6.8,SNR=5.7						
INK	Inuvik	38.42	34	P	P	10 34 29.4	+1.4
INK				IAmb	IAmb	10 34 31.5	
	comp=Z,4.0nm,1.2s						
INK	Inuvik	38.42	34	P	P	10 34 29.4	+1.4
INK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
C36M	Paulatuk	41.61	32	P	P	10 34 55.8	+1.3
C36M				IAmb	IAmb	10 34 58.4	
	comp=Z,7.6nm,1.4s						
YKA	Yellowknife Ar	47.67	39	P	P	10 35 43.6	+0.8
	comp=Z,0.3nm,0.9s,baz=299,slow=8.0,SNR=4.2						
MK31	Makanchi Array	47.77	297	P	P	10 35 43.5	-0.4
MK31	Makanchi Array	47.77	297	P	P	10 35 43.5	-0.4
MK31				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MKAR	Makanchi Array	47.77	297	P	P	10 35 41.3	-2.6
	comp=Z,0.9nm,0.7s,baz=57,slow=4.5,SNR=3.8						
KURK	Kurchatov	47.85	303	eP	P	10 35 43.3	-1.1
KURK	Kurchatov	47.85	303	P	P	10 35 43.3	-1.1
KURK	Kurchatov	47.85	303	P	P	10 35 43.3	-1.1
KURK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KURBB	Kurchatov Arra	47.94	303	P	P	10 35 43.0	-2.1
	comp=Z,3.4nm,0.9s,baz=64,slow=8.1,SNR=7.6						
ARU	Arti	54.69	318	eP	P	10 36 33.7	-1.9
ARU	Arti	54.69	318	P	P	10 36 33.7	-1.9
ARU	Arti	54.69	318	P	P	10 36 33.7	-1.9
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CMAR	Chiang Mai Arr	55.05	257	P	P	10 36 38.1	-0.5
	comp=Z,0.6nm,0.3s,baz=37,slow=7.0,SNR=6.8						
FINES	FINESS Array B	62.74	336	P	P	10 37 30.8	-0.7
	comp=Z,2.8nm,1.0s,baz=54,slow=7.1,SNR=3.5						
HFS	Hagfors	66.91	341	P	P	10 37 57.5	-1.1
	comp=Z,4.1nm,1.0s,baz=46,slow=4.3,SNR=6.4						
AKASG	Malin Array Be	70.70	328	P	P	10 38 21.9	-0.5
	comp=Z,0.3nm,0.3s,baz=34,slow=6.5,SNR=3.5						
KBZ	Khabaz	70.70	315	P	P	10 38 23.5	+1.1
	comp=Z,1.8nm,0.8s,baz=170,slow=11,SNR=5.1						
TX32	Lajitas Array	74.42	63	P	P	10 38 45.6	+0.6
TXAR	Lajitas Array	74.42	63	P	P	10 38 45.4	+0.4
	comp=Z,0.2nm,0.4s,baz=306,slow=5.1,SNR=7.1						
EKA	Eskdalemuir Ar	74.45	348	P	P	10 38 44.7	+0.2
	comp=Z,0.3nm,0.3s,baz=23,slow=5.6,SNR=3.5						
BUR08	Bucovina Ar. S	74.70	328	P	P	10 38 45.1	-1.1
CLL	Collm	75.11	337	eP	P	10 38 49.0	+0.6
GERES	GERESS Array B	77.18	336	P	P	10 39 00.8	+0.4
	comp=Z,0.6nm,0.6s,baz=10,slow=6.0,SNR=3.9						
BRTR	Keskin Array B	78.06	318	P	P	10 39 05.7	+0.1
	comp=Z,2.2nm,0.9s,baz=28,slow=2.9,SNR=8.6						
SOKA	Soboth	78.78	334	eP	P	10 39 10.2	+0.8
	comp=Z,6.9nm,1.3s						
KBA	Koelnbreinsper	78.89	335	iP	P	10 39 11.5	+1.5
	comp=Z,14nm,1.1s						
WTTA	Wattenberg	79.18	336	iP	P	10 39 12.8	+1.1
	comp=Z,6.7nm,1.0s						
MOTA	Moosalm	79.25	337	iP	P	10 39 12.9	+1.0
	comp=Z,8.2nm,1.0s						
ABTA	Abfaltersbach	79.42	336	iP	P	10 39 13.6	+0.7
	comp=Z,3.1nm,0.7s						

IDC 18 10:44:11.3±2.3,10.94S×123.96E,h0km,mb3.2/1, mb1 3.5/3,mb1mx3.3/32,mbtmp3.3/3,ML3.4/2,Error ellipse: s-maj=213.9km s-min=32.7km az=52.0,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.42	133	Pn	Pn	10 47 22.8	-0.5
	0.2nm,0.3s,baz=306,slow=11,SNR=11						
WRA				Sn	Sn	10 49 46.8	-6.5
	0.2nm,0.3s,baz=285,slow=22,SNR=5.3						
ASAR	Alice Springs	15.81	144	Pn	Pn	10 47 56.1	+0.6
	0.1nm,0.3s,baz=319,slow=12,SNR=7.9						
ASAR				Sn	Sn	10 50 44.6	-7.0
	0.1nm,0.3s,baz=311,slow=20,SNR=4.9						
MKAR	Makanchi Array	68.46	331	P	P	10 55 15.3	0.0
	0.1nm,0.5s,baz=143,slow=5.0,SNR=2.6						

NEIC 18 10:59:49.0±2.1,53.23N±0.03×163.81W±0.04,h1km±6km, Error ellipse: s-maj=5.6km s-min=1.9km az=216.0
AEIC 18 10:59:52±2.0,53.26N±0.03×163.87W±0.05,h32km±6km, ML3.3/22,mb3.5/2(NEIC),Error ellipse: s-maj=4.9km s-min=3.9km az=137.0
IDC 18 10:59:53.4±1.5,53.93N×164.08W,h0km,mb3.6/7, mb1 3.7/8,mb1mx3.4/61,mbtmp3.7/8,ML3.2/1,Error ellipse: s-maj=44.9km s-min=17.3km az=171.0
ISC 18 10:59:50.8±2.2,53.34N±0.09×163.87W±0.04,h8km±12km, n60,σ1.52/73,mb3.9/6,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WESE	West Dahl East	1.21	340		Pn	11 00 14.8	+0.6
WESP	Westdahl Peak	1.26	337		Pn	11 00 15.9	+1.1
WESP					Sn	11 00 33.3	+1.3
AKSA	Akutan Strait	1.35	307		Pn	11 00 15.9	0.0
AKSA					Sn	11 00 34.6	+0.6
AKUT	Akutan	1.39	306		Pg	11 00 16.7	-0.7
AKUT				Sn	Sn	11 00 35.4	+0.5
AHB	Akutan Harbor	1.40	305		Pb	11 00 16.8	-0.3
AKBBA	Akutan Broad B	1.45	303		Pb	11 00 17.5	-0.4
SSBA	Shishaldin	1.45	354		Pb	11 00 18.0	0.0
SSBA					Sg	11 00 38.5	+1.2
ZRO	Akutan Zero	1.47	302		Pb	11 00 17.8	-0.5
AKMO	Akutan Morgan	1.48	301		Pb	11 00 18.1	-0.5
AKMO					Sn	11 00 37.5	+0.3
HSB	Akutan Spr's B	1.48	306		Pb	11 00 18.1	-0.5
AKLV	Akutan Long Va	1.49	305		Pb	11 00 18.1	+0.1
AKLV					Sg	11 00 39.3	+0.5
AKGG	Akutan Green G	1.53	305		Pb	11 00 18.9	-0.4
AKRB	Akutan Reef Bi	1.53	302		Pb	11 00 18.8	-0.6
FALS	False Pass	1.54	10		Pb	11 00 19.4	-0.2
FALS				Sn	Sn	11 00 39.4	+0.6
UNV	Unalaska Valle	1.65	289		Pn	11 00 20.2	+0.1
UNV				Sn	Sn	11 00 40.8	-0.7
UNV	Unalaska Valle	1.65	289		Sn	11 00 41.3	-0.2
MNAT	Makushin Natee	1.77	289		Pn	11 00 22.1	+0.5
MREP	Makushin Rep't	1.78	287		Pn	11 00 21.9	0.0
MTBL	Makushin Table	1.79	292		Pb	11 00 22.8	-1.1
MSW	Makushin Switc	1.83	290		Pn	11 00 23.1	+0.5
MSW					Sn	11 00 46.2	+0.3
MGOD	Makushin Gods	1.85	286		Pb	11 00 23.6	-1.3
MGOD					Sb	11 00 48.2	0.0
MCIR	Makushin Cirqu	1.90	290		Pb	11 00 24.6	-1.2
DT1	Dutton Round H	2.00	27		Pn	11 00 26.0	+1.1
OKFG	Magazine Ridge	2.42	273		Pn	11 00 31.1	+0.4
OKSP	Okmok Steeple	2.66	270		Pn	11 00 33.9	0.0
SDPT	Sand Point	2.83	43		Pn	11 00 37.5	+1.2
CNBA	Chernabura Isl	2.92	58	Pn	Pn	11 00 38.0	+0.4
CNBA				Sn	Sn	11 01 11.8	-1.1
NIKH	Nikolski High	3.03	265	Pn	Pn	11 00 37.6	-1.3
NIKH				Sn	Sn	11 01 12.5	-2.9
CHGN	Chignik	4.33	45	Pn	Pn	11 00 56.1	-0.7
CHGN				Sn	Sn	11 01 46.3	-1.2
CHIR	Chirikof Islan	5.40	59		Pn	11 01 12.0	+0.4
CHIR				Sn	Sn	11 02 09.4	-4.5
ATKA	Atka Island	6.37	264	Pn	Pn	11 01 23.0	-1.9
ATKA				Sn	Sn	11 02 37.0	-0.7
SII	Sitkinak Islan	6.44	56	Pn	Pn	11 01 26.7	+0.8
SII				Sn	Sn	11 02 36.8	-2.7
OHAK	Old Harbor	7.18	53	Pn	Pn	11 01 35.9	-0.2
OHAK				Sn	Sn	11 02 51.6	-6.1
KDAK	Kodiak Island	7.79	51	Pn	Pn	11 01 44.2	-0.1
	0.4nm,0.3s,baz=173,slow=5.9,SNR=12						
KDAK				Sn	Sn	11 03 07.6	-5.0
	baz=339,slow=20,SNR=7.3						
KDAK	Kodiak Island	7.79	51		Pn	11 01 44.6	+0.3
ADK	Adak	7.94	265	Pn	Pn	11 01 47.5	+1.1
ADK				Sn	Sn	11 03 13.8	-2.5
SVW2	Sparrevohn	8.98	27	Pn	Pn	11 01 59.5	-1.1
CNPM	China Poot	9.34	43	Pn	Pn	11 02 06.6	+1.0
SEW	Seward	10.41	44	Pn	Pn	11 02 20.9	+0.8
SUA	Susitna One	10.77	36	Pn	Pn	11 02 24.7	-0.5
SKT	Skwentna	10.87	32	Pn	Pn	11 02 26.0	-0.6
BALM	Baldy	13.93	48	Pn	Pn	11 03 09.2	+0.8
RIDG	Independent Ri	14.33	36	Pn	Pn	11 03 12.6	-1.2
IL31		14.34	30	Pn	Pn	11 03 13.7	-0.2
ILAR	Eielson Array	14.34	30	Pn	Pn	11 03 15.3	+1.4
	0.0nm,0.3s,baz=225,slow=12,SNR=3.0						
SCRK	Sand Creek	14.77	36	Pn	Pn	11 03 19.6	-0.3
DAWY	Dawson	16.52	40	Pn	Pn	11 03 40.8	-1.8
DAWY				IAmb	IAmb	11 03 58.9	
	comp=Z,4.6nm,1.2s						
INK	Inuvik	20.72	32	P	P	11 04 30.8	-0.5
	comp=Z,0.2nm,0.3s,baz=217,slow=15,SNR=6.6						
INK	Inuvik	20.72	32	P	P	11 04 29.4	-1.8
INK				IAmb	IAmb	11 04 41.9	
	comp=Z,3.5nm,1.3s						
PETK	Petropavlovsk-	22.83	285	P	P	11 04 55.8	+1.8
	comp=Z,3.0nm,0.8s,baz=86,slow=13,SNR=6.6						
YKA	Yellowknife Ar	27.07	51	P	P	11 05 35.7	+2.3
	comp=Z,0.3nm,0.7s,baz=270,slow=9.0,SNR=6.4						
H11N3	WAKE ISLAND Hy	40.42	225	T	T	11 51 13.2	
	baz=27,slow=74,SNR=8.2						
H11N1	WAKE ISLAND Hy	40.42	225	T	T	11 51 08.9	
	baz=126,slow=74,SNR=3.5						
H11S1	WAKE ISLAND Hy	41.58	225	T	T	11 52 44.6	
	baz=26,slow=76,SNR=15						
H11S2	WAKE ISLAND Hy	41.59	225	T	T	11 52 38.5	
	baz=26,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	41.59	225	T	T	11 52 39.5	
	baz=26,slow=76,SNR=8.2						
KSRS	Korea Array	48.57	280	P	P	11 08 36.2	+1.9
	comp=Z,0.5nm,0.4s,baz=57,slow=7.4,SNR=4.1						
TXAR	Lajitas Array	49.44	94	P	P	11 08 46.3	+5.0
	comp=Z,0.1nm,0.6s,baz=300,slow=5.8,SNR=3.6						
SONM	Songino Array	53.62	303	P	P	11 09 13.0	+0.7
	comp=Z,2.0nm,1.0s,baz=47,slow=7.0,SNR=9.7						
AKTO	Aktyubinsk	70.75	333	P	P	11 11 06.4	-0.6
	comp=Z,2.1nm,0.9s,baz=68,slow=6.2,SNR=6.0						

ISK 18 11:07:24.0,39.72N×30.69E,h4km,ML2.1/5,Suspected Mining explosion.,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESKT	Eskisehir	0.23	147	PG	Pg	11 07 29.4	+0.9
ESKT				SG	Sg	11 07 33.2	+1.7
BORA	Eskisehir	0.24	313	PG	Pg	11 07 29.5	+0.7
SRCK	Saricakaya, Es	0.33	352	PG	Pg	11 07 31.1	+0.7
SRCK				SG	Sb	11 07 36.6	-1.6
SVRH	Sivrihisar-ESK	0.70	112	PG	Pg	11 07 38.1	+0.7
SVRH				SG	Sb	11 07 48.7	-0.1
AUSIV	SIVRIHISAR	0.71	112	PG	Pb	11 07 38.4	-0.7
AUSIV				SG	Sb	11 07 48.5	-0.7
GULT	Gulveren	0.73	350	PG	Pb	11 07 38.7	-0.6
CAVI	Cavuskoy	0.81	307	PG	Pb	11 07 40.5	-0.2
MDUB	Mudurnu	0.85	27	PG	Pb	11 07 41.2	-0.2
TVSB	Tavsanli	0.98	255	PG	Pb	11 07 43.7	0.0
YLV	Yalova	1.32	311	PN	Pb	11 07 49.9	+0.5

DDA 18 11:08:13.2,40.75N×31.92E,h7km±2km,ML1.2,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCAM	Yenicaga	0.13	58	iP	Pg	11 08 15.9	-0.2
BCAM					IAML	11 08 18.0	
	comp=N,93nm,0.4s						
BCAM					IAML	11 08 18.0	
	comp=E,64nm,0.2s						
BCAM				iS	Sg	11 08 18.1	+0.1
KIBS	BOLU	0.33	189	iP	Pg	11 08 20.4	+0.7
KIBS				iS	Sg	11 08 25.1	+0.9
KIBS					IAML	11 08 26.0	
	comp=E,38nm,0.6s						
KIBS					IAML	11 08 26.0	
	comp=N,30nm,0.7s						
CMDR	Camlidere-ANKA	0.49	121	iP	Pb	11 08 23.6	-0.7
CMDR				iS	Sg	11 08 30.4	+1.2
CMDR					IAML	11 08 31.0	
	comp=N,18nm,0.7s						
CMDR					IAML	11 08 31.0	
	comp=E,21nm,0.6s						

TIR 18 11:24:27.6,41.64N×19.82E,h18km,Md3.0/4
PDG 18 11:24:27.3±0.4,41.63N×19.84E,h20km,ML2.8/11,Error ellipse: s-maj=0.7km s-min=0.8km az=0.0
SKO 18 11:24:28.7,41.65N×19.93E,h14km
BEO 18 11:24:28.5±0.3,41.63N×19.94E,h14km±2km,ML2.5/13
ISC 18 11:24:28.2±0.9,41.65N±0.02×19.85E±0.02,h16km±7km, n48,σ0.89/90,6C-3D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.30	178	ePg	Pg	11 24 33.8	-0.8
TIR				eSg	Sb	11 24 40.7	+0.7
TIR	Tirane	0.30	178	iPG	Pg	11 24 34.2	-0.4
TIR				iSG	Sg	11 24 39.9	+0.9
TIR	Tirane	0.30	178	⇑P	Pg	11 24 33.5	-1.1
TIR				⇑S	Sg	11 24 39.9	+0.9
PUK	Puka	0.39	5	iPG	Pg	11 24 36.0	-0.2
PUK				iSG	Sg	11 24 42.2	+0.5
PHP	Peshkopia	0.44	86	iPG	Pg	11 24 36.7	-0.4
PHP				iSG	Sb	11 24 44.5	+0.4
ULC	Ulcinj	0.55	305	ePg	Pb	11 24 37.8	-1.7
ULC				eSg	Sb	11 24 47.3	+0.2
DRME	Dracevica, Mon	0.73	317	ePg	Pb	11 24 41.3	-1.2
DRME				eSg	Sg	11 24 53.6	+1.5
BCI	Bajram Curri	0.73	13	iPG	Pb	11 24 41.9	-0.7
BCI				iSG	Sn	11 24 53.5	-1.3
PDG	Podgorica	0.89	330	ePg	Pn	11 24 45.8	+0.5
PDG				eSg	Sn	11 24 59.6	+0.8
PDG	Podgorica	0.89	330	⇓P	Pb	11 24 44.0	-1.4
PDG				⇑S	Sn	11 24 59.5	+0.8
TTG	Podgorica	0.89	330	ePg	Pb	11 24 44.5	-0.8
TTG				eSg	Sn	11 24 59.1	+0.4
OHR	Ohrid	0.90	127	iPg	Pb	11 24 44.2	-1.2
OHR				iSg	Sn	11 24 58.8	0.0
OHR				eLg	Lg	11 24 59.9	
	comp=N,190nm,0.7s						
OHR				eLg	Lg	11 25 01.4	
	comp=E,162nm,0.8s						
PVY	Plav	0.94	5	ePg	Pb	11 24 45.3	-1.0
PVY				eSg	Sn	11 25 00.4	+0.2
CEME	Cevo	1.13	322	ePg	Pn	11 24 48.2	-1.3
CEME				eSg	Sg	11 25 06.0	+1.2
IVA	Berane	1.22	1	ePg	Pn	11 24 50.6	-0.1
IVA				eSg	Sg	11 25 09.4	+1.8
KOME	Kolasin	1.22	348	ePg	Pn	11 24 50.5	-0.2
KOME				eSg	Sg	11 25 09.5	+1.8
SKO	Skopje	1.23	74	iPg	Pn	11 24 51.6	-0.3
SKO				iSg	Sn	11 25 08.3	+0.3
HCY	Herceg Novi	1.28	309	ePg	Pn	11 24 50.7	-0.8
HCY				eSg	Sn	11 25 10.0	+0.3
NKME	Niksic	1.30	329	ePg	Pn	11 24 51.3	-0.4
NKME				eSg	Sn	11 25 10.3	+0.2
TREB	Trebinje	1.54	314	ePn	Pn	11 24 55.8	+0.8
TREB				eSn	Sb	11 25 16.3	+0.7
BRY	Bratogost	1.58	322	ePn	Pn	11 24 55.6	-0.1
BRY				eSn	Sb	11 25 17.8	+0.8
SJES	Sjenica	1.61	3	ePg	Pb	11 24 58.1	+0.5
SJES				eSg	Sg	11 25 19.6	-0.5
DBRK	Dubrovnik	1.62	309	ePn	Pn	11 24 56.0	-0.1
DBRK				Sn	Sb	11 25 18.2	+0.2
UPM	Unac-Piva	1.70	336	ePn	Pn	11 24 57.1	-0.3
UPM				eSn	Sb	11 25 21.1	+0.7
PLE	Pljevlja	1.71	349	ePn	Pn	11 24 57.6	+0.1
PLE				iSn	Sb	11 25 21.2	+0.5
STIP	Stip	1.75	88	iPn	Pb	11 25 00.2	+0.2
STIP				iSg	Sb	11 25 26.3	+1.8
SRN	Sarande	1.77	176	iPN	Pb	11 25 00.9	+0.6
SELS	Selova	1.83	31	ePn	Pn	11 24 58.4	-0.6
SELS				eSn	Sn	11 25 23.0	-0.9
BARS	Barje	1.87	51	ePn	Pn	11 24 59.4	-0.1
BARS				eSn	Sn	11 25 22.9	+0.1
IVAS	Ivanjica	1.94	7	ePn	Pn	11 25 00.3	-0.2
IVAS				eSn	Sb	11 25 26.3	-0.8
STON	Ston	2.01	308	ePn	Pn	11 25 00.9	-0.5
STON				Sn	Sn	11 25 27.4	+1.2
STON	Ston	2.01	308	ePn	Pb	11 25 03.5	-0.8
STON				eSn	Sn	11 25 28.8	-0.2
VAY	Valandovo	2.07	98	iPn	Pn	11 25 02.2	-0.1
VAY				eSg	Sn	11 25 28.6	+0.8
VAY				eLg	Lg	11 25 28.9	
	comp=N,26nm,0.7s						
VAY				eLg	Lg	11 25 29.0	
	comp=E,29nm,0.7s						
BOSS	Bosilegrad	2.13	66	ePn	Pn	11 25 03.6	+0.4
BOSS				eSn	Sn	11 25 28.7	-0.6
BBLS	Lazići	2.24	352	ePn	Pb	11 25 06.6	-1.7
BBLS				eSn	Sn	11 25 33.1	+1.1
GRUS	Gruza	2.32	16	ePn	Pn	11 25 06.7	+0.9
BOVS	Bovan	2.41	34	ePn	Pn	11 25 07.4	+0.5
BOVS				eSn	Sn	11 25 35.7	-0.4
DIVS	Divibare	2.45	2	ePn	Pn	11 25 09.2	+1.6
DIVS				eSn	Sn	11 25 38.4	+1.2
TRUS	Trudelj	2.60	9	ePn	Pn	11 25 10.2	+0.6
ZAPS	Zavoj	2.62	51	ePn	Pn	11 25 10.3	+0.4
ZAPS				eSn	Sn	11 25 41.5	+0.1
VTS	Vitosha	2.70	68	⇓P	Pn	11 25 11.9	+0.9
VTS				⇓S	Sb	11 25 45.7	-3.4
ZAGS	Zajecar	2.78	38	ePn	Pn	11 25 12.0	-0.1
ZAGS				eSn	Sn	11 25 45.6	+0.3
MDVR	Moldovita	3.41	23	⇑P	Pn	11 25 21.2	+0.4
KIJV	Kijevo	3.46	314	ePn	Pn	11 25 21.9	+0.5
KIJV				Sn	Sn	11 26 02.5	+0.5
ZIRJ	Zirje	3.69	304	ePn	Pn	11 25 23.8	-0.8
ZIRJ				Sn	Sn	11 26 07.0	-0.7
MORI	Morici	3.77	307	ePn	Pn	11 25 25.6	0.0
MORI				Sn	Sn	11 26 10.0	+0.4
BZS	Buzias	4.17	17	⇑P	Pn	11 25 31.4	+0.3
DRGR		5.53	21	⇑P	Pn	11 25 50.7	+0.7

GCG 18 11:40:05.1±0.9,13.21N×91.13W,h15km±6km,MD3.8
SNET 18 11:40:09.6±0.7,13.31N×90.58W,h20km±5km,ML3.3
ISC 18 11:40:02.5±3.4,13.1N±0.1×90.85W±0.08,h7km±14km,n12, σ1.79/17,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	1.16	20	eP	Pg	11 40 25.9	+1.1
PCG	Pacaya	1.33	10	eP	Pg	11 40 28.2	+0.1
PCG				eS	Sg	11 40 46.5	+1.2
FUG	Fuego 3	1.36	0	eP	Pn	11 40 28.5	+0.3
CEVE	Cerro Verde	1.41	58	eP	Pn	11 40 29.7	+0.9
CEVE				eS	Sg	11 40 45.1	-2.7
CEVE					IAML	11 40 59.5	
	comp=Z,667nm,0.3s						
SBLS	San Blas	1.41	57	eP	Pn	11 40 29.1	+0.2
SBLS				eS	Sg	11 40 44.6	-3.4
RTR	El Retiro	1.43	55	eP	Pn	11 40 29.7	+0.7
NBG	Las Nubes	1.58	18	eP	Pg	11 40 33.8	+0.9
NBG				eS	Sb	11 40 54.5	+1.9
STG3	Santiaguito 3,	1.77	337	eP	Pn	11 40 32.2	-1.7
LFU	La Fuente	1.81	68	eP	Pn	11 40 35.3	+1.0
LFU				eS	Sn	11 40 55.3	-2.4
MTO3	Montecristo	1.95	48	eP	Pn	11 40 37.4	+1.1
PAVA	Las Pavas	1.96	71	eP	Pn	11 40 37.5	+1.1
TECA	Tecapa	2.32	79	eP	Pn	11 40 43.0	+1.7

NEIC 18 11:53:51.0±1.2,35.81N±0.04×97.45W±0.04,h7km±5km, Error ellipse: s-maj=5.7km s-min=4.2km az=205.0
ANF 18 11:53:51.2±0.3,35.75N×97.45W,h5km,ML4.6/16,Error ellipse: s-maj=4.8km s-min=3.4km az=156.0
TUL 18 11:53:51.1±2.0,35.78N±0.03×97.47W±0.04,h5km±5km, ML3.4,Error ellipse: s-maj=5.3km s-min=4.2km az=134.0
IDC 18 11:53:54.1±1.1,36.03N×97.98W,h0km,mb1 3.5/5, mb1mx3.3/62,mbtmp3.2/5,ML3.0/5,Error ellipse:

s-maj=17.6km s-min=13.5km az=132.0

ISC 18 11:53:50.5±1.2, 35.85N±0.03×97.46W±0.03, h5km±9km, n92, σ1.12/110, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.21	161	Pg	Pg	11 53 54.4	-0.1
ADOK				Sg	Sg	11 53 56.9	-0.3
OK009	Oakdale Elemen	0.27	174	Pg	Pg	11 53 55.3	-0.3
OK009				Sg	Sg	11 53 58.6	-0.6
OK001	Jones High Sch	0.32	155	Pg	Pg	11 53 56.5	-0.1
OK001				Sg	Sg	11 54 00.6	-0.2
OKCFA	Oklahoma City	0.43	180		Pg	11 53 58.2	-0.6
OKCFA				Sg	Sg	11 54 03.6	-0.8
OKCSW	OKLAHOMA CITY	0.44	178		Pg	11 53 58.5	-0.5
OKCSW				Sg	Sg	11 54 04.2	-0.6
FNO	Franklin	0.59	176	Pg	Pg	11 54 01.8	-0.1
W35A	Tecumseh	0.84	146		Pg	11 54 06.0	-0.6
W35A				Sg	Sg	11 54 16.9	-0.6
X34A	Smith Ranch, M	1.28	194	Pg	Pg	11 54 14.1	-1.0
X34A				Sg	Sg	11 54 31.1	-0.5
TUL1	Leonard	1.35	87	Pn	Pn	11 54 15.7	-0.3
TUL1				Sg	Sb	11 54 33.9	0.0
TUL1	Leonard	1.35	87	P	Pn	11 54 15.9	-0.1
	baz=265						
TUL1				S	Sg	11 54 34.6	+0.7
	baz=265						
U32A	Winter Ranch,	1.36	293		Pn	11 54 16.5	+0.3
WMOK	Wichita Mounta	1.55	225	Pn	Pn	11 54 18.2	-0.6
WMOK	Wichita Mounta	1.55	225	P	Pn	11 54 18.4	-0.4
	baz=46						
WMOK				S	Sn	11 54 37.8	-1.5
	baz=46						
HHAR	Hobbs	2.88	80		Pn	11 54 38.3	+1.3
W39A	Magazine	3.06	101		Pn	11 54 40.7	+1.1
W39A	Magazine	3.06	101	P	Pn	11 54 40.8	+1.3
	baz=282						
W39A				S	Sn	11 55 17.4	+0.8
	baz=282						
KSU1	Kansas State U	3.32	11	P	Pn	11 54 45.3	+2.3
	baz=192						
KSU1				Sb	Sg	11 55 35.9	-1.1
	baz=192						
MIAR	Mount Ida	3.43	111		Pn	11 54 46.2	+1.6
MIAR	Mount Ida	3.43	111	P	Pn	11 54 45.6	+1.0
	baz=292						
MIAR				S	Sn	11 55 26.6	+0.9
	baz=292						
CBKS	Cedar Bluff	3.48	329		Pn	11 54 47.6	+2.4
CBKS	Cedar Bluff	3.48	329	P	Pn	11 54 47.4	+2.1
	baz=148						
AMTX	Amarillo	3.58	256		Pn	11 54 47.0	+0.2
AMTX	Amarillo	3.58	256	P	Pn	11 54 47.8	+1.0
	baz=74						
ABTX	Abilene, Hawle	3.69	210	Pn	Pn	11 54 49.0	+0.8
ABTX	Abilene, Hawle	3.69	210	P	Pn	11 54 47.4	-0.8
	baz=29						
ABTX				S	Sn	11 55 31.8	-0.3
	baz=29						
U40A	Yellville	3.76	81		Pn	11 54 49.8	+0.6
U40A	Yellville	3.76	81	P	Pn	11 54 49.7	+0.6
	baz=262						
WHTX	Lake Whitney,	3.85	180		Pn	11 54 50.5	+0.2
WHTX	Lake Whitney,	3.85	180	P	Pn	11 54 50.0	-0.3
	baz=0.1						
X40A	Basin Creek Fa	4.02	108		Pn	11 54 53.8	+1.1
X40A	Basin Creek Fa	4.02	108	P	Pn	11 54 54.3	+1.6
	baz=290						
237A	Washetta, Mont	4.07	160		Pn	11 54 52.0	-1.5
WLAR	White Oak Lake	4.17	120		Pn	11 54 55.4	+0.5
WHAR	Wooly Hollow	4.25	96		Pn	11 54 57.4	+1.6
W41B	Gary Mavity, V	4.30	97		Pn	11 54 57.8	+1.2
W41B	Gary Mavity, V	4.30	97	P	Pn	11 54 57.1	+0.6
	baz=280						
W41B				S	Sn	11 55 47.1	0.0
	baz=280						
MGMO	Mountain Grove	4.38	71		Pn	11 54 59.5	+1.9
Z41A	Richland Creek	4.63	123	Pn	Pn	11 55 01.0	0.0
Z41A	Richland Creek	4.63	123	P	Pn	11 55 01.7	+0.7
	baz=305						
Z41A				S	Sn	11 55 55.1	-0.1
	baz=305						
NATX	Nacogdoches	4.69	150	Pn	Pn	11 55 01.2	-0.8
MSTX	Muleshoe	4.75	248	Pn	Pn	11 55 03.5	+0.5
MSTX	Muleshoe	4.75	248	P	Pn	11 55 03.4	+0.5
	baz=66						
435B	Jarrell	5.05	181	Pn	Pn	11 55 05.0	-1.9
435B	Jarrell	5.05	181	P	Pn	11 55 07.3	+0.3
	baz=1.3						
435B				Sb	Sb	11 56 23.4	+2.9
	baz=1.3						
CCAR	Cane Creek	5.05	111	Pn	Pn	11 55 07.1	+0.2
LCAR	Lake Charles	5.12	86		Pn	11 55 07.3	-0.5
KSCO	Kaye Shedlock'	5.19	309	Pn	Pn	11 55 10.8	+1.9
KSCO	Kaye Shedlock'	5.19	309	P	Pn	11 55 10.6	+1.8
	baz=126						
CCM	Cathedral Cave	5.44	64		Pn	11 55 12.6	+0.4
CCM	Cathedral Cave	5.44	64	P	Pn	11 55 13.8	+1.6
	baz=247						
X43A	Marvell	5.54	102	P	Pn	11 55 14.4	+0.8
	baz=285						
BGNE	Belgrade	5.58	355	Pn	Pn	11 55 15.1	+0.9
BGNE	Belgrade	5.58	355	P	Pn	11 55 15.4	+1.2
	baz=174						
JCT	Junction City	5.70	201		Pn	11 55 15.2	-0.7
JCT	Junction City	5.70	201	P	Pn	11 55 16.6	+0.7
	baz=20						
T25A	Trinidad	5.75	285		Pn	11 55 17.6	+0.8
T25A	Trinidad	5.75	285	P	Pn	11 55 17.5	+0.8
	baz=102						
143A	Socs Landing,	5.91	120	Pn	Pn	11 55 18.4	-0.3
OGNE	Ogallala	6.23	326	P	Pn	11 55 26.4	+3.3
	baz=144						
LNXT	Lenox	6.46	85	Pn	Pn	11 55 26.0	-0.3
OXF	Oxford	6.72	99	Pn	Pn	11 55 30.1	+0.3
OXF	Oxford	6.72	99	P	Pn	11 55 30.7	+0.8
	baz=283						
SDCO	Great Sand Dun	6.73	289		Pn	11 55 29.3	-0.9
S44A	Carbondale	6.83	72		Pn	11 55 31.6	+0.2
N41A	Harden Midland	7.10	45	Pn	Pn	11 55 37.4	+2.3
P43A	Skaggs, Pawnee	7.34	57		Pn	11 55 38.4	+0.1
ANMO	Albuquerque	7.41	266	Pn	Pn	11 55 36.6	-2.8
	0.1nm,0.3s,baz=163,slow=9.2,SNR=3.1						
ANMO				Pg	Pb	11 56 01.6	+2.0
	0.4nm,0.3s,baz=82,slow=17,SNR=13						
ANMO				Lg	Lg	11 57 42.1	
	1.1nm,0.3s,baz=24,slow=8.6,SNR=4.8						
ISCO	Idaho Springs	7.56	304		Pn	11 55 42.9	+1.2
833A	Chaparral WMA,	7.68	193	Pn	Pn	11 55 43.1	+0.1
PLAL	Pickwick Lake	7.71	94	Pn	Pn	11 55 43.5	+0.2
MNTX	Cornudas Mount	7.79	240		Pn	11 55 44.1	-0.4
WVT	Waverly	7.81	85	Pn	Pn	11 55 45.0	+0.3
L40A	Anamosa	7.88	36	Pn	Pn	11 55 46.5	+0.8
ECSD	EROS Data Cent	7.90	4		Pn	11 55 46.3	+0.3
HDIL	Hopedale	7.96	51		Pn	11 55 47.0	+0.2
Y22D	IRIS PASSCAL I	7.97	260	Pn	Pn	11 55 47.1	-0.1
TX31	Lajitas Ar. Si	8.34	221	Pn	Pn	11 55 53.5	+1.3
TX32	Lajitas Array	8.34	221	Pn	Pn	11 55 53.5	+1.3
TXAR	Lajitas Array	8.34	221	Pn	Pn	11 55 53.0	+0.8
	0.1nm,0.3s,baz=46,slow=13,SNR=6.5						
TXAR				Pg	Pb	11 56 22.3	+6.8
	0.9nm,0.3s,baz=45,slow=15,SNR=14						
TXAR				Lg	Lg	11 58 11.2	
	2.6nm,0.3s,baz=32,slow=20,SNR=5.1						
N23A	Red Feather La	8.36	310	Pn	Pn	11 55 53.9	+1.4
L42A	Oliver, Polo	8.63	42	Pn	Pn	11 55 56.0	-0.1
JFWS	Jewell Farm	8.99	36	Pn	Pn	11 56 01.9	+1.0
Y49A	Blount Mountai	9.29	99	Pn	Pn	11 56 05.2	+0.1
RSSD	Black Hills	9.68	331		Pn	11 56 11.7	+1.1
T49A	Edmonton	9.68	79	Pn	Pn	11 56 10.8	+0.3
Z50A	Ashland	9.86	102	Pn	Pn	11 56 12.8	-0.1
TKL	Tuckaleechee C	11.12	87	Pn	Pn	11 56 39.2	+9.1
	0.4nm,0.3s,baz=257,slow=18,SNR=4.2						
TKL				Lg	Lg	11 59 41.8	
	1.2nm,0.3s,baz=139,slow=22,SNR=5.6						
TKL	Tuckaleechee C	11.12	87	Pn	Pn	11 56 30.1	0.0
S51A	Beattyville	11.27	77	Pn	Pn	11 56 33.4	+1.3
PDAR	Pinedale Array	11.64	310	Pn	Pn	11 56 37.1	-0.3
	0.1nm,0.3s,baz=108,slow=25,SNR=3.4						
PDAR				Lg	Lg	11 59 50.4	
	0.2nm,0.3s,baz=112,slow=19,SNR=3.8						
MCWV	Mont Chateau	14.44	69		Pn	11 57 15.7	+0.2
ULM	Lac du Bonnet	14.44	4	Pn	Pn	11 57 12.6	-2.8
	0.1nm,0.3s,baz=185,slow=12,SNR=1.9						
ULM				Sn	Sn	11 59 53.8	-2.1
	0.2nm,0.3s,baz=327,slow=16,SNR=2.0						
ULM				Lg	Lg	12 01 20.8	
	0.3nm,0.3s,baz=284,slow=22,SNR=5.2						

IDC 18 11:58:13.9±2.5, 36.56N×71.42E, h149km±22km, mb3.6/21, mb1 3.8/28, mb1mx3.6/72, mbtmp4.2/28, Error ellipse: s-maj=16.9km s-min=10.2km az=7.0

MOS 18 11:58:14.8±0.9, 36.67N×71.44E, h165km, mb4.2/18, Error ellipse: s-maj=8.1km s-min=4.9km az=87.3

BJI 18 11:58:16.3±0.0, 36.95N×71.34E, h167km, mB4.6/8, mb4.3/14

NEIC 18 11:58:17.0±2.9, 36.77N±0.05×71.35E±0.08, h178km±5km, mb4.3/20, Error ellipse: s-maj=9.3km s-min=7.3km az=89.0

NNC 18 11:58:19.1±2.2, 37.03N×71.25E, h180km±23km, mb3.7, mpv4.6, Error ellipse: s-maj=20.7km s-min=11.8km az=165.0

ISC 18 11:58:15.2±0.4, 36.79N±0.04×71.35E±0.04, h150km, n158, σ1.89/185, mb4.1/42, 10C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.92	221		Pn	11 59 04.4	+2.6
KBL				Sn	Sn	11 59 40.4	+2.6
KBL	Kabul	2.92	221	PN	Pn	11 59 04.4	+2.6
KBL						11 59 40.4	
CEP	Cherat	2.99	171	P	Pn	11 59 05.3	+2.7
CEP				S	Sn	11 59 42.0	+2.7
BTK	Batken	3.29	353		Pn	11 59 10.7	+4.4
BTK				Sn	Sn	11 59 48.3	+2.2
BTK	Batken	3.29	353	PN	Pn	11 59 10.7	+4.4
CHCP	Chirah Chowk	3.49	153	P	Pn	11 59 11.9	+3.0
NIL	Nilore	3.50	153		Pn	11 59 11.8	+2.8
NIL				Sn	Sn	11 59 52.6	+2.0
NIL	Nilore	3.50	153	PN	Pn	11 59 12.3	+3.3
NIL				S	Sn	11 59 51.3	+0.7
THW	Thamme Wali	4.00	175	P	Pn	11 59 17.4	+1.9
KSH	Kashi	4.55	52	⇓iP	Pn	11 59 21.1	-1.7
KSH				S	Sn	12 00 07.4	-8.0
KSH				smax	smax		
	comp=N,5µm,0.4s						
KSH				smax	smax		
	comp=E,6µm,0.5s						
ARSB	Arslanbob	4.71	15		Pn	11 59 27.1	+2.4
ARSB				Sn	Sn	12 00 16.9	-2.2
ARSB	Arslanbob	4.71	15	PN	Pn	11 59 27.2	+2.4
TAS	Tashkent	4.80	341	Pn	Pn	11 59 27.4	+1.4
TAS	Tashkent	4.80	341	PN	Pn	11 59 27.4	+1.4
SARP	Sargodha	4.97	167	P	Pn	11 59 29.1	+0.8
JMU	Jammu	5.00	143	ex	Sn	12 00 22.0	-3.9
AML	Almayashu	5.64	18	P	Pn	11 59 39.6	+2.2
	SNR=590						
THN	Thein Dam	5.64	139	eP	Pn	11 59 39.0	+1.9
THN				eS	Sn	12 00 40.0	-1.1
CHM	Chimkent	5.69	347	PN	Pn	11 59 53.2	+16
NRN	Naryn	5.88	37		Pn	11 59 41.7	+1.1
NRN				Sn	Sn	12 00 44.9	-2.5
NRN	Naryn	5.88	37	PN	Pn	11 59 41.7	+1.1
UCH	Uchtor	5.96	23	P	Pn	11 59 43.6	+1.9
	SNR=134						
KZA	Kyzart	6.09	29	P	Pn	11 59 45.0	+1.6
	SNR=33						
DHRM	DHARAMSHALA	6.10	136	eP	Pn	11 59 45.7	+2.3
DHRM				eS	Sn	12 00 50.1	-2.3
DHRM				IAML		12 00 52.8	
	comp=E,709nm,0.4s						
DHRM				IAML		12 00 52.8	
	comp=N,590nm,0.1s						
EKS2	Erkin-Say	6.16	17	P	Pn	11 59 46.5	+2.5
	SNR=38						
AAK	Ala-Archa	6.33	22	P	Pn	11 59 48.8	+2.5
	comp=N,15nm,0.3s,baz=148,slow=3.5,SNR=123						
AAK				S	Sn	12 00 57.8	+0.2
	comp=N,13nm,0.3s,baz=11,slow=20,SNR=18						
AAK	Ala-Archa	6.33	22	P	Pn	11 59 48.9	+2.5
	SNR=42						
AAK	Ala-Archa	6.33	22	⇓P	Pn	11 59 48.9	+2.6
	comp=N,12nm,0.3s						
AAK				⇓S	Sn	12 00 59.3	+1.6
	comp=N,114nm,0.7s						
AAK	Ala-Archa	6.33	22		Pn	11 59 48.8	+2.5
AAK				Sn	Sn	12 00 58.5	+0.8
AAK	Ala-Archa	6.33	22	i PN	Pn	11 59 48.7	+2.5
AAK				pmax	pmax		
	comp=Z,12nm,0.3s						
KK31	Karatay Array	6.34	354	⇓P	Pn	11 59 49.1	+2.7
	comp=Z,28nm,0.3s,baz=175,slow=12,SNR=533						
KK31				⇑S	Sn	12 00 57.7	-0.1
	comp=Z,73nm,0.5s,baz=175,slow=22,SNR=8.7						
KK31	Karatay Array	6.34	354		Pn	11 59 49.0	+2.6
KK31				Sn	Sn	12 00 57.1	-0.7
KK31	Karatay Array	6.34	354	PN	Pn	11 59 49.0	+2.6
KKAR	Karatay Array	6.34	354		Pn	11 59 48.9	+2.5
KKAR				Sn	Sn	12 00 57.9	0.0
KBK	Karagaybulak	6.49	24	P	Pn	11 59 51.4	+2.9
	SNR=18						
FRU1	Bishkek	6.53	22	PN	Pn	11 59 47.6	-1.3
ULHL	Ulahol	6.63	33	P	Pn	11 59 52.5	+2.0
	SNR=29						
CHMS	Chumysh	6.73	22	P	Pn	11 59 53.8	+2.1
	SNR=28						
CHMS	Chumysh	6.73	22	⇑P	Pn	11 59 53.3	+1.6
	comp=Z,28nm,0.7s						
CHMS				⇑S	Sn	12 01 05.2	-2.0
	comp=Z,54nm,0.8s						
CHMS	Chumysh	6.73	22	i PN	Pn	11 59 53.2	+1.6
CHMS				pmax	pmax		
	comp=Z,28nm,0.6s						
USP	Ospenovka	6.91	20	P	Pn	11 59 55.7	+1.7
	SNR=19						
KDJ	Kajisay	6.99	38		Pn	11 59 56.7	+1.5
KDJ				Sn	Sn	12 01 11.6	-2.0
KDJ	Kajisay	6.99	38	PN	Pn	11 59 56.7	+1.5
SMLA	Simla	7.43	138	eP	Pn	12 00 01.5	+0.6
SMLA				eS	Sn	12 01 19.8	-4.2
SMLA				IAML		12 01 24.3	
	comp=N,185nm,0.3s						
SMLA				IAML		12 01 24.7	
	comp=E,266nm,0.5s						
MDOK	Medeo	7.73	33	⇑P	Pn	12 00 06.0	+1.0
	comp=E,29nm,0.8s						
MDOK	Medeo	7.73	33	PN	Pn	12 00 06.0	+1.0
HRA	Herat	7.79	255	Pn	Pn	12 00 08.2	+2.2
PRZ	Przheval'sk	7.87	42		Pn	12 00 09.6	+2.6
PRZ				Sn	Sn	12 01 35.8	+1.0
PRZ	Przheval'sk	7.87	42	PN	Pn	12 00 09.6	+2.6
PDGK	Podgornoye	9.03	41	P	Pn	12 00 22.7	+0.2
	comp=E,23nm,0.7s						
PDGK	Podgornoye	9.03	41	P	Pn	12 00 22.6	+0.2
JOSI	Joshimath	9.24	130	eP	Pn	12 00 26.3	+0.9
JOSI				eS	Sn	12 02 02.1	-5.8
JOSI				IAML		12 02 06.4	
	comp=E,118nm,0.3s						
JOSI				IAML		12 02 09.4	
	comp=N,155nm,0.7s						
GEYT	Alibeck	10.59	280	P	Pn	12 00 42.5	-0.5
	comp=N,1.7nm,0.3s,baz=116,slow=10,SNR=8.7						
GEYT				S	Sn	12 02 33.5	-6.7
	comp=N,0.4nm,0.3s,baz=90,slow=20,SNR=2.3						
GYA0B	ALIBECK ARRAY	10.59	280	P	Pn	12 00 44.7	+1.7
GYA0B				S	Sn	12 02 39.7	-0.5
GYA0B	ALIBECK ARRAY	10.59	280	Pn	Pn	12 00 42.4	-0.6
GYA0B				Sn	Sn	12 02 38.6	-1.6
MAKZ	Makanchi	12.76	35	P	Pn	12 01 10.3	-0.9
	comp=N,12nm,0.5s						
MAKZ	Makanchi	12.76	35		Pn	12 01 11.2	0.0
MAKZ	Makanchi	12.76	35	P	Pn	12 01 11.2	0.0
MK31	Makanchi Array	12.89	36	P	Pn	12 01 13.2	+0.3
	comp=N,5.1nm,0.6s,baz=217,slow=11,SNR=69						
MK31	Makanchi Array	12.89	36		Pn	12 01 13.0	+0.1
MK31	Makanchi Array	12.89	36	i P	Pn	12 01 13.2	+0.3
MKAR	Makanchi Array	12.89	36	P	Pn	12 01 13.9	+0.9
	comp=N,1.4nm,0.3s,baz=214,slow=14,SNR=49						
MKAR	Makanchi Array	12.89	36	i P	Pn	12 01 13.8	+0.9
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
DANN	Dangsing	13.42	125	eP	Pn	12 01 19.3	-0.7
	comp=Z,18nm,0.3s						
GKN	Gorkha	14.23	124	eP	Pn	12 01 30.4	+0.3
	comp=Z,31nm,0.3s						
WMQ	Urumqi	14.30	56	eP	Pn	12 01 31.1	+0.2
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				LR	LR		
	comp=Z,360nm,15.3s						
WMQ				LR	LR		
	comp=Z,510nm,20.7s						
WMQ				LR	LR		
	comp=Z,220nm,18.1s						
BHPL	Bhopal	14.48	157	eP	P	12 01 36.8	+1.1
KURBB	Kurchatov Arra	14.76	18	P	Pn	12 01 39.2	+2.8
	comp=Z,1.1nm,0.3s,baz=207,slow=10,SNR=79						
KURBB	Kurchatov Arra	14.76	18	⇓P	Pn	12 01 38.5	+2.0
	comp=Z,25nm,0.5s						
KKN	Kakani	14.80	123	eP	Pn	12 01 36.7	-0.6
	comp=Z,38nm,0.6s						
DMN	Daman	14.80	124	eP	Pn	12 01 36.7	-0.7
	comp=Z,18nm,0.4s						
KURK	Kurchatov	14.87	18	⇓P	Pn	12 01 38.9	+1.1
	comp=Z,18nm,0.8s						
KURK	Kurchatov	14.87	18		Pn	12 01 36.8	-1.0
KURK	Kurchatov	14.87	18	ceP	Pn	12 01 37.9	+0.1
KURK				pmax	pmax		
	comp=Z,30nm,1.3s						
AB31	Akbulak array	14.97	330	P	Pn	12 01 40.6	+1.5
	comp=Z,3.6nm,0.6s,baz=146,slow=9.2,SNR=66						
AB31				⇑S	Sn	12 04 19.6	-5.6
	comp=Z,7.2nm,0.7s,baz=160,slow=20,SNR=8.7						
AB31	Akbulak array	14.97	330	i P	Pn	12 01 39.3	+0.2
PKIN	Phulchoki	15.01	124	eP	Pn	12 01 40.6	+0.5
	comp=Z,32nm,0.4s						
PKI	Pulchoki	15.03	124	eP	Pn	12 01 40.2	-0.1
	comp=Z,56nm,0.6s						
GUN	Gumba	15.12	122	eP	Pn	12 01 41.6	+0.1
	comp=Z,19nm,0.3s						
JIRN	Jiri	15.49	122	eP	Pn	12 01 45.8	-0.3
	comp=Z,45nm,0.4s						
RAMN	Ramite	16.23	123	eP	Pn	12 01 53.6	-1.4
	comp=Z,23nm,0.4s						
BVAR	Borovoye Array	16.25	358	P	Pn	12 01 55.5	+0.7
	comp=Z,1.5nm,0.3s,baz=163,slow=11,SNR=29						
BVAR				S	S	12 04 52.9	-2.3
	comp=Z,0.5nm,0.3s,baz=164,slow=23,SNR=5.9						
BRVK	Borovoye	16.29	358	⇑P	Pn	12 01 55.7	+0.5
	comp=Z,7.4nm,0.9s						
BRVK	Borovoye	16.29	358		Pn	12 01 55.7	+0.5
BRVK				IAmb	IAmb	12 01 59.6	
	comp=Z,6.9nm,0.6s						
BRVK	Borovoye	16.29	358	i P	Pn	12 01 55.7	+0.5
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AKTO	Aktyubinsk	16.68	329	P	P	12 02 01.5	+1.8
	comp=Z,1.4nm,0.3s,baz=141,slow=11,SNR=23						
AKTO				S	S	12 05 04.1	-1.0
	comp=Z,0.5nm,0.3s,baz=329,slow=22,SNR=9.5						
AKTO	Aktyubinsk	16.68	329	P	P	12 02 00.9	+1.2
	comp=Z,10nm,1.1s						
AKTO				⇑S	S	12 05 00.2	-4.9
	comp=Z,8.3nm,0.7s						
TAPN	Taplejung	16.74	120	eP	P	12 02 01.0	0.0
	comp=Z,26nm,0.6s						
ODAN	Odare	16.83	121	eP	P	12 02 02.3	+0.5
	comp=Z,22nm,0.7s						
ZAA0	Zalesovo Array	19.54	24	P	P	12 02 30.4	-0.5
	comp=Z,4.8nm,1.0s						
ZAA0	Zalesovo Array	19.54	24	P	P	12 02 31.3	+0.4
ZALV	Zalesovo Beam	19.54	24	P	P	12 02 31.5	+0.6
	comp=Z,4.9nm,0.3s,baz=224,slow=11,SNR=90						
SHL	Shillong	20.78	117	P	P	12 02 46.6	+1.9
SHL				pmax	pmax		
	comp=Z,22nm,1.5s						
GNI	Garni	21.07	287	P	P	12 02 49.1	+1.4
	comp=Z,1.9nm,0.3s,baz=0.8,slow=14,SNR=3.2						
GNI	Garni	21.07	287	i P	P	12 02 49.5	+1.8
GNI				pmax	pmax		
	comp=Z,37nm,1.7s						
ARU	Arti	21.45	340	P	P	12 02 52.5	+1.1
	comp=Z,1.6nm,0.4s,baz=164,slow=6.4,SNR=7.4						
ARU	Arti	21.45	340	P	P	12 02 52.0	+0.6
ARU				IAmb	IAmb	12 02 53.2	
	comp=Z,6.9nm,0.9s						
ARU	Arti	21.45	340	i P	P	12 02 52.3	+0.9
ARU				pmax	pmax		
	comp=Z,14nm,1.4s						
AKH	Akhalkalaki	22.06	291	P	P	12 02 57.8	-0.3
AKH				IAmb	IAmb	12 03 03.2	
	comp=Z,6.9nm,0.9s						
AKH	Akhalkalaki	22.06	291	P	P	12 02 57.8	-0.3
AKH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA	Gaotai	22.52	75	eP	P	12 03 03.6	+1.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	Khabaz	22.72	297	P	P	12 03 04.7	+0.5
	comp=Z,1.4nm,0.6s,baz=133,slow=10.0,SNR=4.3						
RAYN	Ar Rayn	25.87	247	P	P	12 03 32.0	-1.1
RAYN				IAmb	IAmb	12 03 34.1	
	comp=Z,7.5nm,1.1s						
RAYN	Ar Rayn	25.87	247	P	P	12 03 32.0	-1.1
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
LZH	Lanzhou	26.09	82	eP	P	12 03 36.8	+1.7
LZH				pP	pP	12 04 13.9	+6.4
LZH				PP	sP	12 04 28.5	+3.1
LZH				sP	PP	12 04 35.0	-1.9
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,63nm,4.8s						
LZH				LR	LR		
	comp=Z,480nm,14.1s						
LZH				LR	LR		
	comp=Z,400nm,16.8s						
LZH				LR	LR		
	comp=Z,500nm,17.2s						
SONM	Songino Array	27.94	56	P	P	12 03 52.5	+1.0
	comp=Z,1.0nm,0.7s,baz=264,slow=9.0,SNR=6.7						
BR131	Keskin Array S	29.61	287	P	P	12 04 08.0	+1.6
BR131	Keskin Array S	29.61	287	P	P	12 04 08.0	+1.6
BR131				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	Keskin Array B	29.61	287	P	P	12 04 07.5	+1.1
	comp=Z,1.4nm,0.7s,baz=105,slow=10,SNR=6.8						
CMAR	Chiang Mai Arr	30.35	120	P	P	12 04 11.2	-1.6
	comp=Z,0.7nm,0.4s,baz=302,slow=8.9,SNR=6.4						
CMAR	Chiang Mai Arr	30.35	120	ceP	P	12 04 12.1	-0.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
HHC	Hu-ho-hao-te	31.40	70	eP	P	12 04 26.8	+4.7
HHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,46nm,5.1s						
AKASG	Malin Array Be	32.98	308	P	P	12 04 36.4	+0.8
	comp=Z,1.8nm,0.4s,baz=80,slow=7.3,SNR=8.3						
AKBB	Malin Array Si	32.98	308	P	P	12 04 35.6	+0.1
AKBB	Malin Array Si	32.98	308	P	P	12 04 35.7	+0.1
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ELL	Elmali	33.01	283	P	P	12 04 34.7	-1.5
ELL	Elmali	33.01	283	P	P	12 04 34.7	-1.5
ELL				pmax	pmax		
	comp=Z,12nm,0.6s						
PBKT	Sadao Pong	33.05	120	P	P	12 04 37.1	+0.6
PBKT				IAmb	IAmb	12 04 37.8	
	comp=Z,3.9nm,0.6s						
MLR	Muntele Rosu	34.89	299	P	P	12 04 54.0	+1.8
	comp=Z,6.6nm,0.8s,baz=188,slow=5.9,SNR=8.1						
MLR	Muntele Rosu	34.89	299	P	P	12 04 50.4	-1.9
MLR				IAmb	IAmb	12 04 56.3	
	comp=Z,8.4nm,0.9s						
BUR08	Bucovina Ar. S	35.38	303	P	P	12 04 56.3	-0.1
VOIR		35.52	299	P	P	12 04 58.6	+1.0
VOIR				pmax	pmax		
	comp=Z,3.0nm,1.8s						
ATD	Arta Tunnel	35.92	233	P	P	12 05 00.0	-1.3
ATD				IAmb	IAmb	12 05 05.9	
	comp=Z,17nm,1.2s						
KWP	Kalwaria Pacla	37.07	306	P	P	12 05 12.4	+1.8
KWP				pmax	pmax		
	comp=Z,16nm,3.0s						
DRGR		37.09	301	P	P	12 05 12.4	+1.5
DRGR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FINES	FINESS Array B	37.40	326	P	P	12 05 14.0	+0.8
	comp=Z,1.0nm,0.4s,baz=117,slow=7.8,SNR=8.4						

SUF Sumiainen 37.83 328 P P 12 05 17.0 +0.2
SUF pmax pmax
comp=Z,12nm,1.3s
BZS Buzias 37.91 299 P P 12 05 19.6 +1.8
BZS pmax pmax
comp=Z,6.0nm,1.1s
NIE Niedzica 38.63 306 P P 12 05 25.6 +1.8
NIE pmax pmax
comp=Z,3.0nm,1.8s
ARCES ARCESS Array B 40.99 337 P P 12 05 43.8 +0.9
comp=Z,1.3nm,0.5s,baz=114,slow=7.6,SNR=12
HFS Hagfors 43.01 322 P P 12 05 59.9 +0.5
comp=Z,3.2nm,0.5s,baz=106,slow=11,SNR=16
NORES NORESS Array B 44.13 322 P P 12 06 08.8 +0.4
NORES pmax pmax
comp=Z,1.0nm,0.3s
NC303 NORSAR Array S 44.26 323 P P 12 06 10.2 +0.8
NB2 NORSAR Subarra 44.32 323 P P 12 06 09.9 0.0
comp=Z,1.5nm,0.6s,baz=95,slow=7.9
NOA NORSAR Array B 44.32 323 P P 12 06 10.1 +0.1
comp=Z,1.1nm,0.5s,baz=96,slow=7.7,SNR=11
NBO00 NORSAR Array S 44.53 323 P P 12 06 11.7 +0.1
NC204 NORSAR Array S 44.56 323 P P 12 06 11.6 -0.3
KLR Kul'dur 44.75 54 P P 12 06 12.9 -0.5
comp=Z,0.7nm,0.5s,baz=300,slow=6.7,SNR=3.5
TIXI Tiksi 45.40 22 P P 12 06 18.6 +0.4
TIXI Tiksi 45.40 22 eP P 12 06 18.2 0.0
TIXI pmax pmax
comp=Z,3.0nm,0.8s
DAVOX Davos/Dischmat 45.84 303 P P 12 06 22.0 -0.3
comp=Z,2.4nm,0.7s,baz=95,slow=11,SNR=3.7
DAVOX Davos/Dischmat 45.84 303 P P 12 06 22.0 -0.3
KEST Kesra 49.21 288 P P 12 06 47.2 -1.1
comp=Z,1.8nm,0.5s,baz=14,slow=7.3,SNR=4.1
NOR Nord 53.57 349 P P 12 07 21.0 +1.0
DAG Danmarks Havn 54.53 344 P P 12 07 27.2 +0.2
ESDC Sonseca Array 57.57 298 P P 12 07 49.5 +0.3
comp=Z,0.5nm,0.4s,baz=59,slow=7.7,SNR=4.0
SKR Severo-Kuril's 59.56 47 eP P 12 08 03.6 +0.9
TOA0 Torodi Ar. Sit 66.00 269 P P 12 08 43.5 -2.4
TOA0 IAmb IAmb 12 08 44.1
comp=Z,3.7nm,0.8s
TORD Torodi Ar. Bea 66.00 269 P P 12 08 43.5 -2.3
comp=Z,3.6nm,0.7s,baz=40,slow=5.8,SNR=22
INK Inuvik 73.58 9 P P 12 09 31.8 +0.5
comp=Z,0.5nm,0.6s,baz=323,slow=1.4,SNR=4.3
INK Inuvik 73.58 9 P P 12 09 31.5 +0.3
YKA Yellowknife Ar 80.95 3 P P 12 10 12.2 -0.2
comp=Z,0.4nm,0.6s,baz=347,slow=5.2,SNR=9.4
WRA Warramunga Arr 81.91 122 P P 12 10 15.5 -2.6
comp=Z,1.1nm,0.8s,baz=326,slow=4.9,SNR=5.7
WRAB Tennant Creek 81.91 122 P P 12 10 15.9 -2.2
WRAB Tennant Creek 81.91 122 P P 12 10 15.9 -2.2
WRAB pmax pmax
comp=Z,20nm,1.5s
WB2 Warramunga Arr 81.91 122 P P 12 10 15.6 -2.6
WB2 IAmb IAmb 12 10 18.1
comp=Z,11nm,1.3s
WR0 Warramunga Arr 82.06 122 P P 12 10 16.6 -2.3
WR0 IAmb IAmb 12 10 16.7
comp=Z,7.9nm,1.2s
ASAR Alice Springs 84.19 125 P P 12 10 27.3 -2.5
comp=Z,1.0nm,0.6s,baz=309,slow=5.2,SNR=17

IDC 18 12:03:31.0±1.7,35°.95N×139°.95E,h54km±16km,mb3.3/8, mb1 3.5/10,mb1mx3.3/74,mbtmp3.6/10,ML3.5/2,MS3.7/1, Ms1 3.7/1,ms1mx3.1/28,Error ellipse: s-maj=19.4km s-min=7.8km az=61.0
JMA 18 12:03:31.2±0.1,36°.07N×139°.92E,h46km±1km,M3.7 Broadband fault plane solution: P waves. NP1: φs239.00000°,δ13.00000°,λ102.00000°. NP2: φs47.00000°,δ77.00000°,λ87.00000°. Principal axes: T Plg58.0000°, Azm313.0000°; N Plg3.0000°, Azm47.0000°; P Plg32.0000°, Azm139.0000°;
JMA Felt II J1.
ISC 18 12:03:30.7±0.9,36°.02N±0°.05×139°.97E±0°.06,h50km±8km, n25,σ0°.90/25,mb3.7/8,1C-3D,Eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JYT Yasato 0.28 41 ⇑P Pn 12 03 39.8 +0.2
JYT S Sn 12 03 45.8 -0.2
JAG Ashikaga 0.58 315 ⇓P Pn 12 03 42.6 -0.4
JAG eS Sn 12 03 50.6 -1.2
JRY Ryogami san 0.86 270 ⇓P Pn 12 03 46.3 -0.3
JRY S Sn 12 03 57.3 -1.0
JKT Katashina 0.95 322 ⇓P Pn 12 03 47.2 -0.6
JOD2 Odawara 2 1.04 224 P Pn 12 03 50.2 +1.3
JOD2 S Sn 12 04 02.9 +0.5
JYN Shimob 1.27 246 P Pn 12 03 53.4 +1.3
MJAR Matsushiro Arr 1.52 291 P Pn 12 03 55.6 +0.2
4.0nm,0.3s,baz=91,slow=10,SNR=275
MJAR S Sn 12 04 14.2 +0.1
3.2nm,0.3s,baz=89,slow=32,SNR=10
MAT Matsushiro 1.52 291 P Pn 12 03 55.7 +0.3
MAT S Sn 12 04 14.7 +0.6
JHJ Hachijo jima 2 2.89 183 P Pn 12 04 14.8 +0.5
38nm,0.3s,baz=90,slow=20,SNR=27
JHJ S Sn 12 04 46.3 -1.5
36nm,0.3s,baz=54,slow=19,SNR=6.1
ASAJ Asahikawa 8.34 13 P Pn 12 05 30.3 +1.4
0.5nm,0.3s,baz=260,slow=8.0,SNR=6.2
KLR Kul'dur 14.51 338 LR LR 12 11 53.0
comp=Z,279nm,19.5s,baz=340,slow=34
SONM Songino Array 27.41 306 P P 12 09 12.1 +0.4
0.3nm,0.5s,baz=114,slow=8.6,SNR=2.8
H11N2 WAKE ISLAND Hy 28.67 117 T T 12 39 25.3
baz=302
H11N1 WAKE ISLAND Hy 28.68 117 T T 12 39 05.8
baz=302
H11N3 WAKE ISLAND Hy 28.69 117 T T 12 39 24.5
baz=302
H11S1 WAKE ISLAND Hy 29.33 119 T T 12 40 26.1
baz=312
H11S3 WAKE ISLAND Hy 29.33 119 T T 12 40 24.8
baz=312
H11S2 WAKE ISLAND Hy 29.35 119 T T 12 40 26.4
baz=312
ZALV Zalesovo Beam 41.75 313 P P 12 11 13.1 -1.6
1.5nm,0.6s,baz=95,slow=6.8,SNR=5.9
MKAR Makanchi Array 43.68 303 P P 12 11 29.8 -0.8
0.3nm,0.5s,baz=86,slow=9.1,SNR=5.8
KURBB Kurchatov Arra 45.72 309 P P 12 11 46.1 -0.5
1.1nm,0.4s,baz=84,slow=8.0,SNR=7.7
ILAR Eielson Array 50.97 32 P P 12 12 27.7 +0.8
1.6nm,1.2s,baz=283,slow=5.5,SNR=4.1
INK Inuvik 55.82 27 P P 12 13 02.2 -0.1
0.6nm,0.8s,baz=202,slow=5.4,SNR=2.4
WRA Warramunga Arr 55.91 186 P P 12 13 04.4 +0.9
0.5nm,0.7s,baz=22,slow=7.2,SNR=5.2
ASAR Alice Springs 59.63 186 P P 12 13 29.8 +0.2
0.2nm,0.7s,baz=19,slow=12,SNR=2.7

WEL 18 12:04:33.9±0.6,33°S±8°×17°9W±1°9,h33km,M4.3/9, mB4.7/3,ML4.5/9,MLv4.3/9,Mw(mB)4.0/3,South of Kermadec Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GLKZ Green Lake 4.20 14 S Sn 12 06 22.7 -0.9
WMGZ Waiomatatini S 4.90 204 P Pn 12 05 45.9 +0.8
HAZ Te Kaha 5.08 210 P Pn 12 05 48.8 +1.1
HAZ S Sn 12 06 44.0 -1.3
PUZ Puketiti 5.18 204 P Pn 12 05 48.9 -0.1
PUZ S Sn 12 06 49.7 +2.0
RUGZ Raukumara Rang 5.31 209 P Pn 12 05 51.5 +0.6
RUGZ S Sn 12 06 50.9 0.0
URZ Urewera 5.79 211 P Pn 12 05 57.3 -0.1
URZ S Sn 12 06 59.4 -3.3
TOZ Tahuroa Road 6.22 224 P Pn 12 06 06.7 +3.4
MTHZ Maungataniwha 6.41 210 P Pn 12 06 04.3 -1.6
WHHZ Waihua 6.44 207 P Pn 12 06 07.3 +0.9
NMHZ Naumai 6.63 209 P Pn 12 06 09.5 +0.5
BKZ Black Stump Fm 6.81 211 P Pn 12 06 11.3 -0.3
HIZ Hauiti 7.13 222 P Pn 12 06 18.7 +2.9

TRN 18 12:13:33.5,14°50N×59°37W,h10km,MD3.7,Windward Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BBGH Gun Hill 1.36 188 eP Pg 12 13 59.5 -0.2
BBGH Gun Hill 1.36 188 e Sb 12 14 15.2 -1.4
BBGH eS Sg 12 14 20.0 +2.5
BCHC Barbados, Cave 1.38 191 eP Pb 12 13 59.6 +0.2
BCHC eS Sg 12 14 20.1 +2.0
MPOM Morne Pois Mar 1.45 268 eP Pg 12 14 01.5 +0.2
ILAM Ilet Lapin Mar 1.48 281 eP Pb 12 14 01.5 +0.3
LPMF Morne Lapointe 1.55 273 eP Pb 12 14 02.6 +0.3
SLAC Saint Lucia, A 1.60 248 eP Pn 12 14 02.4 +0.5
SLAC eS Sg 12 14 25.2 +0.2
ZAM Aeronautique 1.61 273 eP Pb 12 14 03.5 +0.1
SLBI Saint Lucia, B 1.63 253 eP Pb 12 14 03.6 -0.1
SLBI eS Sg 12 14 25.3 -0.6
TRMF Trois Ilets 1.63 271 eP Pb 12 14 04.0 +0.3
BIM Bigot 1.65 271 eP Pg 12 14 04.7 -0.6
MCLT Moule a Chique 1.72 243 eP Pb 12 14 04.6 -0.6
MCLT eS Sb 12 14 27.2 +0.3
FDF Fort de France 1.74 278 eP Pb 12 14 05.3 -0.3
FDF eS Sb 12 14 27.5 -0.1
BAMF Morne Balai 1.75 280 eP Pb 12 14 05.5 -0.3
SLB Belfond 1.76 248 eP Pb 12 14 05.2 -0.6
SLB eS Sb 12 14 28.3 +0.3
GBMF Grand Be 1.77 280 eP Pb 12 14 06.1 +0.1
CXM Morne La Croix 1.77 280 eP Pb 12 14 06.6 +0.4
SVN Savane Anatole 1.78 281 eP Pb 12 14 05.8 -0.4
PML Morne Lenard 1.78 279 eP Pb 12 14 06.2 -0.1
PCM Pelee Case Pet 1.81 280 eP Pb 12 14 06.3 -0.5
DSHT Scott's Head 2.07 290 eS Sg 12 14 40.2 +0.2
SFAN Fancy Village 2.08 238 eP Pn 12 14 09.8 +1.4
SFAN eS Sb 12 14 36.0 -1.2
SVCV St. Vincent, C 2.12 235 eP Pb 12 14 10.7 -1.2
SVCV eS Sb 12 14 37.8 -0.5
MDN Morne-Daniel 2.12 293 eP Pb 12 14 12.0 0.0
MDN eS Sg 12 14 40.7 -1.1
SSV Crater Summit 2.12 237 eP Pn 12 14 10.4 +1.3
SSV eS Sb 12 14 37.5 -1.1
SVV Soufriere Volc 2.15 237 eP Pn 12 14 10.8 +1.5
SVV eS Sn 12 14 37.6 +1.5
DWS Wesley 2.16 300 eP Pb 12 14 11.1 -1.6
DWS eS Sb 12 14 38.3 -1.2
SVB Belmont 2.20 237 eP Pn 12 14 11.3 +1.2
SVB eS Sb 12 14 39.6 -1.2
MDPO Dominica; Chan 2.28 298 eP Pn 12 14 12.9 +1.7
MDPO eS Sb 12 14 41.6 -1.4
DEG La Desirade 2.43 318 eP Pn 12 14 13.2 -0.1
DEG La Desirade 2.43 318 e Sn 12 14 42.4 -0.8
TDBA Terre de Bas, 2.57 302 eP Pn 12 14 16.4 +1.3
CBE Ff, Capester 2.67 306 eP Pn 12 14 17.9 +1.4
GRSS Sisters 3.09 225 eP Pn 12 14 24.1 +1.7
GRSS eS Sn 12 15 00.6 +1.2
GRHS Sauteurs 3.17 225 eP Pn 12 14 25.0 +1.7
GRHS eS Sn 12 15 02.3 +1.0
GRGR Grenville 3.24 224 eP Pn 12 14 26.4 +1.9
GRGR eS Sn 12 15 05.3 +2.2
TOSP Speyside 3.38 200 eP Pn 12 14 27.6 +1.3
TOSP eS Sn 12 15 08.4 +1.9
BPA Boggy Peak 3.49 317 eP Pn 12 14 29.6 +1.8
MLYT Lee's Yard 3.50 309 eP Pn 12 14 29.8 +1.8
MLYT eS Sn 12 15 11.4 +1.8
ANWB Willy Bob 3.91 324 eP Pn 12 14 35.1 +1.5
ANWB eS Sn 12 15 20.1 +0.4
NEV Hard Times 4.05 311 eP Pn 12 14 37.4 +1.8
NEV Hard Times 4.05 311 eS Sn 12 15 24.3 +1.4
NVBH Bath Hotel, Ne 4.07 310 eP Pn 12 14 37.6 +1.9
NVBH Bath Hotel, Ne 4.07 310 eS Sn 12 15 24.6 +1.2
NVRH Round Hill, Ne 4.10 311 eP Pn 12 14 37.5 +1.3
NVRH Round Hill, Ne 4.10 311 eS Sn 12 15 24.9 +0.6
SKOC St. Kitts, UWI 4.26 311 eP Pn 12 14 40.3 +1.8
SKOC St. Kitts, UWI 4.26 311 eS Sn 12 15 29.6 +1.3
SKOC St. Kitts, UWI 4.26 311 eS Sn 12 15 30.8 +2.5
SKI Saint Kitts 4.30 311 eP Pn 12 14 41.0 +2.0
SKI Saint Kitts 4.30 311 eS Sn 12 15 30.4 +1.2
TRN Trinidad (W) 4.32 208 eP Pn 12 14 40.6 +1.4
TRN Trinidad (W) 4.32 208 eS Sn 12 15 30.4 +0.8
TPP Pointe-a-Pierr 4.63 206 eP Pn 12 14 45.4 +1.9
TPP Pointe-a-Pierr 4.63 206 eS Sn 12 15 39.1 +1.7
GUIV Guiria 4.74 216 eP Pn 12 14 47.9 +2.8
GUIV Guiria 4.74 216 e Sn 12 15 38.2 -1.8
GUIV eS Sn 12 15 41.0 +0.9
SMRT St. Maarten 5.01 315 eP Pn 12 14 50.9 +2.1
SMRT St. Maarten 5.01 315 eS Sn 12 15 47.7 +0.8
BAUV El Baul 10.13 238 eP Pn 12 16 00.7 +1.6
BAUV El Baul 10.13 238 eS Sn 12 17 48.7 -4.1

NEIC 18 12:13:57.9±1.0,16°.0S±0°.2×176°.4W±0°.1,h366km±9km, mb4.1/16,Error ellipse: s-maj=24.5km s-min=12.3km az=150.0
IDC 18 12:13:58.7±1.6,16°.21S×176°.24W,h380km±71km,mb3.3/3, mb1 3.6/4,mb1mx3.1/43,mbtmp4.1/4,Error ellipse: s-maj=281.0km s-min=24.1km az=144.0
ISC 18 12:13:59.3±0.6,16°.0S±0°.1×176°.3W±0°.1,h382km,n22, σ1°.08/24,mb4.1/11,Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AFI Afiamalu 4.81 65 P Pn 12 15 18.2 -0.5
2.8nm,0.3s,baz=164,slow=18,SNR=5.2
AFI S S 12 16 24.2 +1.2
0.6nm,0.3s,baz=307,slow=20,SNR=3.0
AFI Afiamalu 4.81 65 Pn 12 15 17.8 -0.9
AFI S 12 16 20.7 -2.3
MSVF Nonsavu 5.70 251 Pn Pn 12 15 29.4 +1.3
URZ Urewera 22.94 193 P P 12 18 30.0 -1.7
QRZ Quartz Range 26.59 199 P P 12 19 04.0 -0.2
WHZ Wether Hill Ro 32.61 201 P P 12 19 56.6 -0.3
WHZ IAmb IAmb 12 20 04.4
comp=Z,19nm,1.2s
BBOO Buckleboo 46.12 240 P P 12 21 47.0 -0.3
BBOO IAmb IAmb 12 21 53.0
comp=Z,25nm,1.4s
WR0 Warramunga Arr 46.82 257 P P 12 21 52.0 -0.9
WR0 IAmb IAmb 12 21 54.9
comp=Z,16nm,1.5s
WB0 Warramunga Arr 46.97 258 P P 12 21 52.5 -1.5
WB2 Warramunga Arr 47.00 257 P P 12 21 53.3 -0.9
WB2 IAmb IAmb 12 22 06.4
comp=Z,11nm,1.4s
WRAB Tennant Creek 47.00 257 P P 12 21 53.3 -1.0
WRA Warramunga Arr 47.01 257 P P 12 21 53.2 -1.1
comp=Z,1.4nm,0.7s,baz=95,slow=7.5,SNR=30
AS31 Alice Springs 47.29 252 P P 12 21 56.1 -0.4
ASAR Alice Springs 47.29 252 P P 12 21 56.0 -0.5
comp=Z,4.6nm,0.4s,baz=89,slow=7.8,SNR=242
PSA00 Pilbara Seismi 60.38 254 P P 12 23 29.9 -0.2
PSA00 IAmb IAmb 12 23 45.7
comp=Z,12nm,1.3s
MAJO Matsushiro 67.64 322 P P 12 24 15.8 -0.6
MJB9 Matsu-Tunnel 67.64 322 P P 12 24 15.9 -0.6
QSPA South Pole Qui 74.06 180 P P 12 24 56.0 +1.6
BAR Barrett 74.73 49 P P 12 25 00.1 +1.4
BAR IAmb IAmb 12 25 01.6
comp=Z,3.1nm,0.8s
TX31 Lajitas Ar. Si 83.25 57 P P 12 25 45.0 +0.5
TX31 IAmb IAmb 12 26 02.5
comp=Z,1.9nm,0.6s
TX32 Lajitas Array 83.25 57 P P 12 25 44.9 +0.4
TX32 IAmb IAmb 12 26 02.5
comp=Z,1.9nm,0.6s
ILAR Eielson Array 83.58 12 P P 12 25 45.7 +0.5
comp=Z,0.4nm,0.8s,baz=212,slow=6.2,SNR=3.7

ANF 18 12:16:43.8±0.4,35°.76N×97°.45W,h5km,ML3.9/8,Error ellipse: s-maj=7.3km s-min=4.4km az=141.0
TUL 18 12:16:44.0±2.0,35°.77N±0°.03×97°.46W±0°.03,h5km±4km, ML3.2,Error ellipse: s-maj=4.8km s-min=2.7km az=154.0
NEIC 18 12:16:44.1±1.5,35°.79N±0°.04×97°.46W±0°.03,h8km±5km, Error ellipse: s-maj=5.1km s-min=3.7km az=170.0
ISC 18 12:16:44.8±0.9,35°.74N±0°.03×97°.44W±0°.02,h10km±6km, n50,σ0°.95/82,Oklahoma

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ADOK Arcadia Dam 0.11 146 Pg 12 16 47.1 -0.4
ADOK Sg Sg 12 16 49.5 -0.1
OK009 Oakdale Elemen 0.16 174 Pg 12 16 48.2 -0.2
OK009 Sg Sg 12 16 51.2 +0.4
OK001 Jones High Sch 0.22 145 Pg Pg 12 16 49.2 -0.1
OK001 Sg Sg 12 16 53.2 +0.7
OKCFA Oklahoma City 0.33 181 Pg 12 16 51.0 -0.3
OKCFA Sg Sg 12 16 56.4 +0.8
OKCSW OKLAHOMA CITY 0.34 179 Pg 12 16 51.3 -0.2
OKCSW Sg Sg 12 16 56.6 +0.7
FNO Franklin 0.48 176 Pg 12 16 54.5 +0.3
FNO Sg Sb 12 17 02.2 -0.3
W35A Tecumseh 0.75 141 Pg 12 16 58.4 -0.8
W35A Sg Sg 12 17 09.6 +0.6
X34A Smith Ranch, M 1.18 196 Pb 12 17 06.8 -0.4
X34A Sg Sn 12 17 24.3 +0.8
TUL1 Leonard 1.35 82 Pn 12 17 08.6 -1.1
TUL1 Sg Sb 12 17 27.3 -0.2
TUL1 Leonard 1.35 82 P Pn 12 17 08.7 -1.0
baz=266
TUL1 S Sb 12 17 27.2 -0.3
baz=266
U32A Winter Ranch, 1.41 297 Pn 12 17 09.6 -1.0
U32A Sn Sn 12 17 28.7 -0.6
WMOK Wichita Mounta 1.48 228 Pn 12 17 10.9 -0.6
WMOK Sn Sn 12 17 30.9 0.0
WMOK Sb 12 17 31.1 -0.2
WMOK Wichita Mounta 1.48 228 P Pn 12 17 11.3 -0.2
baz=45
WMOK S Sn 12 17 30.9 0.0
baz=45
HHAR Hobbs 2.89 78 Pn Pn 12 17 30.9 0.0
HHAR Sg Sb 12 18 12.3 +0.5
W39A Magazine 3.04 99 Pn Pn 12 17 33.6 +0.8
W39A Sn Sn 12 18 08.7 -0.5
W39A Magazine 3.04 99 P Pn 12 17 33.6 +0.8
baz=282
W39A S Sn 12 18 10.9 +1.7
baz=282
MIAR Mount Ida 3.39 110 Pn 12 17 39.0 +1.3
MIAR Mount Ida 3.39 110 P Pn 12 17 38.7 +1.0
baz=293
MIAR S Sn 12 18 19.7 +1.8
baz=293
KSU1 Kansas State U 3.42 11 P Pn 12 17 38.0 -0.1
baz=192
KSU1 Sb Sb 12 18 28.4 +1.4
baz=192
AMTX Amarillo 3.57 257 Pn Pn 12 17 39.3 -1.0
AMTX Sn Sn 12 18 20.9 -1.6
AMTX Amarillo 3.57 257 P Pn 12 17 40.9 +0.6
baz=74
AMTX Sb Sb 12 18 34.3 +2.9
baz=74
CBKS Cedar Bluff 3.57 330 Pn Pn 12 17 40.6 +0.4
CBKS Sn Sn 12 18 21.5 -1.0
CBKS Cedar Bluff 3.57 330 P Pn 12 17 39.9 -0.3
baz=148
CBKS Sb Sb 12 18 32.9 +1.4
baz=148
ABTX Abilene, Hawle 3.60 211 Pn Pn 12 17 40.1 -0.6
ABTX Sn Sn 12 18 22.4 -0.9
ABTX Abilene, Hawle 3.60 211 P Pn 12 17 42.3 +1.6
baz=29
ABTX S Sn 12 18 24.9 +1.6
baz=29
WHTX Lake Whitney, 3.74 180 Pn Pn 12 17 43.7 +1.2
U40A Yellville 3.77 79 Pn 12 17 43.0 +0.1
U40A Sn Sn 12 18 28.3 +1.0
237A Washetta, Mont 3.97 160 Pn Pn 12 17 45.9 +0.2
X40A Basin Creek Fa 3.98 107 Pn 12 17 47.4 +1.5
X40A Sn Sn 12 18 30.6 -1.9
WLAR White Oak Lake 4.11 119 Pn Pn 12 17 46.3 -1.4
WLAR Sn Sn 12 18 34.7 -1.1
WHAR Wooly Hollow 4.23 95 Pn 12 17 50.1 +0.8
WHAR Sn Sn 12 18 38.0 -0.6
W41B Gary Mavity, V 4.28 96 Pn 12 17 50.5 +0.6
W41B Sn Sn 12 18 39.5 -0.3
MGMO Mountain Grove 4.40 70 Pn Pn 12 17 50.6 -1.0
MGMO Sn Sn 12 18 44.4 +1.4
MSTX Muleshoe 4.72 250 Pn Pn 12 17 54.9 -1.3
MSTX Sn Sn 12 18 50.4 -0.6
CCAR Cane Creek 5.01 110 Pn Pn 12 18 00.3 +0.4
LCAR Lake Charles 5.12 84 Pn Pn 12 18 01.0 -0.4
KSCO Kaye Shedlock' 5.26 310 Pn Pn 12 18 03.1 -0.5
CCM Cathedral Cave 5.48 63 Pn Pn 12 18 05.3 -1.1
BGNE Belgrade 5.69 355 Pn 12 18 08.5 -0.7
OGNE Ogallala 6.32 327 Pn Pn 12 18 18.5 +0.4
OXF Oxford 6.70 98 Pn 12 18 22.7 -0.4
SDCO Great Sand Dun 6.77 290 Pn 12 18 24.4 0.0
S44A Carbondale 6.86 71 Pn Pn 12 18 25.0 -0.4
Q24A Divide 6.93 300 Pn Pn 12 18 25.6 -1.0
N41A Harden Midland 7.17 44 Pn Pn 12 18 30.4 +0.7
P43A Skaggs, Pawnee 7.39 56 Pn Pn 12 18 33.4 +0.8
ISCO Idaho Springs 7.63 304 Pn 12 18 35.7 -0.6
MNTX Cornudas Mount 7.74 241 Pn 12 18 37.2 -0.3
ECSD EROS Data Cent 8.01 4 Pn 12 18 39.1 -2.0
Z50A Ashland 9.83 101 Pn Pn 12 19 06.2 +0.1

IDC 18 12:35:54.3±0.4,18°.14N×119°.99E,h0km,mb4.6/27, mb1 4.7/29,mb1mx4.6/53,mbtmp4.6/29,ML3.5/2,MS4.0/9, Ms1 4.0/9,ms1mx3.6/34,Error ellipse: s-maj=16.0km s-min=9.6km az=76.0
BJI 18 12:35:54.1±0.0,18°.08N×120°.03E,h10km,mB4.9/49, mb4.5/58,Ms4.7/49,Ms7 4.3/44
MAN 18 12:35:55.0,18°.18N×119°.65E,h15km,MS4.8
MOS 18 12:35:55.1±1.0,18°.10N×119°.95E,h17km,mb5.1/78,Error ellipse: s-maj=8.0km s-min=4.4km az=113.5
NEIC 18 12:35:57.3±1.8,18°.15N±0°.05×119°.84E±0°.06,h19km±3km, mb5.0/109,Error ellipse: s-maj=8.9km s-min=6.3km az=58.0
ISC 18 12:35:57.3±0.6,18°.14N±0°.03×119°.93E±0°.03,h17km±3km, h17km:pP-P,n355,σ1°.52/391,mb4.9/155,MS4.3/15, 18C-10D,Philippine Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIPP Brgy, Tapao 0.54 113⇑eP Pn 12 36 09.0 -1.3
SIPP iS Sn 12 36 20.2 +1.2
SZP Santa 0.77 140 Pg Pn 12 36 12.8 -0.7
ABRA Dolores 0.89 123 eP Pn 12 36 14.2 -0.8
ABRA eS Sn 12 36 27.3 -0.2
APYP Conner 1.28 102 eP Pg 12 36 21.1 -0.9
APYP eS Sg 12 36 43.2 +4.6
BOLP Bolinao 1.75 181 eP Pn 12 36 26.1 -0.9
BOLP eS Sn 12 36 48.5 -0.3
SMPP San Manuel, Pa 2.10 160 eP Pn 12 36 32.2 +0.4
SMPP eS Sb 12 37 00.2 -0.7
CAUP Cauayan 2.16 123 eP Pb 12 36 36.6 +0.6
PCPH Palayan 2.80 156⇑eP Pb 12 36 46.9 +0.1
BALP Baler 2.86 146 eP Pn 12 36 44.3 +2.1
BALP eS Sn 12 37 11.5 -4.7
BBP Basco 2.98 40 eP Pn 12 36 44.6 +0.7
BBP eS Sg 12 37 31.7 -1.6
TGY Tagaytay City 4.13 166 Pn Pn 12 36 58.4 -1.4
64nm,0.3s,baz=117,slow=4.5,SNR=2.3
TGY Lg Lg 12 38 05.2
baz=224,slow=20,SNR=3.1
TGY Tagaytay City 4.13 166⇓eP Pn 12 37 01.2 +1.5
LQP Lukban 4.29 159⇓eP Pn 12 37 05.9 +3.8
TWG Pinlang 4.78 13 Pn 12 37 07.4 -1.1
TWG Sn Sn 12 38 00.0 -3.5
TPUB Ta-pu 5.17 7 Pn 12 37 12.4 -1.7
TPUB Sn Sn 12 38 10.8 -2.6
YULB Yu-li 5.38 13 Pn 12 37 15.6 -1.2
YULB Sn Sn 12 38 17.0 -1.4
SSLB Suanglung 5.70 9 Pn 12 37 21.1 -0.1
SSLB Sn Sn 12 38 22.4 -4.1
NACB Ninganchiao 6.20 14 Pn 12 37 27.6 -0.5
NACB Sn Sn 12 38 39.0 +0.4
KNMB Chin-men Tao 6.45 347 Pn Pn 12 37 28.9 -2.7
YHNB Yeheng 6.63 11 Pn 12 37 34.3 +0.1
YHNB Sn Sn 12 38 48.5 -1.0
HKPS Hong Kong Po S 6.82 308 Pn Pn 12 37 34.1 -2.5
QZH Quanzhou 6.88 350 ePn Pn 12 37 41.0 +3.5
QZH eSn Sn 12 38 59.4 +4.0
QZH LR LR
comp=N,780nm,14.1s
QZH LR LR
comp=E,2μm,13.0s
QZH LR LR
comp=Z,2μm,11.8s
QIZ Qiongzhong 9.61 277 P Pn 12 38 11.0 -4.0
QIZ S Sn 12 40 00.0 -2.7
QIZ Qiongzhong 9.61 277 Pn Pn 12 38 11.2 -3.8
QIZ Sn Sn 12 39 56.4 -6.3

JOW Kunigami 11.58 40 Pn Pn 12 38 41.3 -0.7
0.3nm,0.3s,baz=185,slow=13,SNR=4.6
JOW Kunigami 11.58 40 Pn Pn 12 38 41.5 -0.5
WHN Wuhan 13.35 339 P P 12 39 24.3 +8.7
WHN S Sn 12 41 45.8 +12
NJ2 Nanjing 13.88 356 eP Pn 12 39 13.9 +0.5
NJ2 pmax pmax
comp=Z,21nm,1.3s
NJ2 LR LR
comp=N,630nm,12.3s
NJ2 LR LR
comp=E,1µm,14.2s
NJ2 LR LR
comp=Z,730nm,11.4s
GYA Guiyang 14.80 306⇑iP Pn 12 39 25.8 -0.3
GYA PP PnPn 12 39 36.8 +2.7
GYA S Sn 12 42 11.9 +2.1
GYA SS S 12 42 33.4 +5.2
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,80nm,3.9s
GYA LR LR
comp=N,1µm,11.4s
GYA LR LR
comp=E,870nm,11.9s
GYA LR LR
comp=Z,990nm,13.2s
SLVN Son La 15.42 285 Pn Pn 12 39 32.8 -1.5
SBUM Sibu 17.33 207 Pn Pn 12 39 57.6 -1.0
KMI Kunming 17.42 296 P Pn 12 40 00.0 +0.1
KMI pP P 12 40 02.4 +1.3
KMI sP pP 12 40 04.9 -0.2
KMI PP pwP 12 40 11.8 +3.2
KMI S Sn 12 43 13.5 -0.2
KMI sS S 12 43 21.3 -0.6
KMI SS SnSn 12 43 32.6 +5.4
KMI pmax pmax
comp=Z,7.0nm,0.5s
KMI pmax pmax
comp=Z,150nm,3.9s
KMI LR LR
comp=N,740nm,10.2s
KMI LR LR
comp=E,1µm,11.5s
KMI LR LR
comp=Z,1µm,11.6s
MRSI Marisa 17.66 173 P P 12 40 04.8 +1.2
20nm,0.7s
MPSI Mapaga 17.69 180 P P 12 40 05.5 +1.6
17nm,1.0s
JNU Nakatsue 17.86 31 P Pn 12 40 03.3 -1.8
PBKT Sadao Pong 18.17 268 P Pn 12 40 07.0 -2.0
XAN Xi'an 18.64 330 P Pn 12 40 17.0 +2.3
XAN S Sn 12 43 42.4 -0.5
XAN pmax pmax
comp=Z,18nm,1.6s
XAN pmax pmax
comp=Z,290nm,8.8s
XAN LR LR
comp=N,1µm,13.0s
XAN LR LR
comp=E,1µm,13.0s
XAN LR LR
comp=Z,1µm,11.2s
XAN Xi'an 18.64 330 P P 12 40 13.2 -1.2
XAN Xi'an 18.64 330 P P 12 40 13.2 -1.2
XAN pmax pmax
comp=Z,10.0nm,0.9s
KSM Kuching 19.07 211 P P 12 40 17.0 -2.1
CD2 Chengdu 19.42 314 P Pn 12 40 24.6 +0.5
CD2 PP pwP 12 40 37.0 +6.1
CD2 S Sn 12 44 01.6 0.0
CD2 sS sS 12 44 05.5 -2.6
CD2 SS SnSn 12 44 20.5 +4.5
CD2 pmax pmax
comp=Z,50nm,1.1s
CD2 pmax pmax
comp=Z,540nm,13.3s
CD2 LR LR
comp=Z,2µm,14.2s
CD2 LR LR
comp=Z,2µm,13.5s
CD2 LR LR
comp=Z,2µm,11.4s
STKI Sintang 19.79 206 P Pn 12 40 28.9 +0.3
CHTO Chiang Mai 19.92 275 P P 12 40 27.6 -0.9
CHTO Chiang Mai 19.92 275 P P 12 40 27.6 -0.9
CHTO pmax pmax
comp=Z,28nm,1.4s
CM31 Chiang Mai Arr 19.93 274 P P 12 40 27.7 -0.9
CMAR Chiang Mai Arr 19.93 274 P Pn 12 40 30.1 -0.1
comp=Z,0.2nm,0.3s,baz=95,slow=9.3,SNR=29
CMAR LR LR 12 48 55.7
comp=Z,266nm,18.4s,baz=96,slow=39
KSRS Korea Array 20.48 18 P P 12 40 34.6 +0.3
comp=Z,41nm,1.1s,baz=199,slow=11,SNR=46
KSRS LR LR 12 49 53.8
comp=Z,176nm,20.8s,baz=210,slow=41
KS19 Wonju Array Si 20.51 18 P P 12 40 34.7 0.0
KS19 IAmb IAmb 12 40 36.4
comp=Z,67nm,1.3s
SANI Sanana 20.93 163 P P 12 40 37.2 -2.2
comp=Z,44nm,1.1s
TTSI Tana Toraja 21.05 180 P P 12 40 58.2 +18
SPSI Sidrap Palu 21.97 180 P P 12 40 53.2 +2.7
comp=Z,65nm,1.1s
BJT Baijiatuau 22.04 352 P P 12 40 51.9 +0.8
BJT IAmb IAmb 12 41 03.2
comp=Z,43nm,1.2s
BJT Baijiatuau 22.04 352 P P 12 40 51.9 +0.8
BJT pmax pmax
comp=Z,43nm,1.2s
BJI Beijing 22.06 352 P P 12 40 51.8 +0.5
BJI pmax pmax
comp=Z,25nm,1.6s
BJI LR LR
comp=Z,180nm,4.9s
BJI LR LR
comp=Z,380nm,9.4s
BNSI Bone 22.40 180 P P 12 41 04.9 +10
LZH Lanzhou 22.85 325 ⇑P P 12 41 00.0 +0.1
LZH sP pwP 12 41 07.3 -0.8
LZH S S 12 45 10.3 +1.4
LZH pmax pmax
comp=Z,28nm,1.2s
LZH pmax pmax
comp=Z,210nm,4.3s
LZH LR LR
comp=Z,1µm,14.6s
LZH LR LR
comp=Z,1µm,13.6s
LZH LR LR
comp=Z,1µm,12.5s
INU Inuyama 22.88 38 P P 12 40 59.2 -1.0
INU IAmb IAmb 12 41 02.7
comp=Z,39nm,0.9s
KAPI Kappang 23.01 180 P P 12 41 01.5 -0.1
comp=Z,45nm,0.9s,baz=350,slow=12,SNR=17
KAPI Kappang 23.01 180 P P 12 41 01.5 -0.1
KAPI Kappang 23.01 180 P P 12 41 01.5 -0.1
KAPI pmax pmax
comp=Z,74nm,1.0s
BKSI Bulukumba 23.32 180 P P 12 41 05.9 +1.2
comp=Z,38nm,0.9s
HHC Hu-ho-hao-te 23.75 344 eP P 12 41 08.9 0.0
HHC pmax pmax
comp=Z,5.0nm,0.9s
HHC pmax pmax
comp=Z,66nm,4.7s
BTO Baotou 23.96 341 eP P 12 41 11.6 +0.7
MAJO Matsushiro 24.41 38 iP P 12 41 13.5 -1.5
MAJO pmax pmax
comp=Z,8.0nm,1.0s
MAT Matsushiro 24.41 38 P P 12 41 13.5 -1.5
MAT S S 12 45 39.2 +5.1
MJAR Matsushiro Arr 24.41 38 P P 12 41 14.1 -0.9
comp=Z,6.6nm,1.1s,baz=236,slow=8.8,SNR=9.5
MJB9 Matsu-Tunnel 24.41 38 P P 12 41 14.6 -0.4
MJB9 IAmb IAmb 12 41 24.7
comp=Z,31nm,1.3s
PSI Prapat 25.62 236 P P 12 41 27.4 +1.1
comp=Z,7.1nm,0.8s,baz=349,slow=3.6,SNR=3.9
PSI Prapat 25.62 236 P P 12 41 27.4 +1.1
PSI pmax pmax

comp=Z,13nm,1.0s
RPSI Rantau Prapat 25.69 236 P P 12 41 27.4 +0.6
RPSI Rantau Prapat 25.69 236 P P 12 41 26.5 -0.2
RPSI IAmb IAmb 12 41 36.3
comp=Z,12nm,1.0s
KCSI Kotacane, Aceh 26.12 239 P P 12 41 30.3 -0.4
comp=Z,478nmcomp=Z,11nm,1.0s
PDSI Padang 26.94 227 P P 12 41 44.8 +6.7
comp=Z,11nm,1.1s
SHL Shillong 27.02 291 P P 12 41 38.4 -0.6
SHL IAmb IAmb 12 41 47.3
comp=Z,28nm,1.1s
SHL Shillong 27.02 291 P P 12 41 38.4 -0.6
SHL pmax pmax
comp=Z,28nm,1.1s
KLSI 27.20 215 P P 12 41 42.1 +1.8
comp=Z,294nmcomp=Z,15nm,1.8s
MDSI Maura Dua 27.33 216 P P 12 41 43.6 +2.0
GTA Gaotai 27.45 325 ⇓P P 12 41 43.5 +0.9
GTA pP sP 12 41 47.9 -0.6
GTA sP pwP 12 41 50.5 -0.5
GTA pmax pmax
comp=Z,6.0nm,1.2s
GTA pmax pmax
comp=Z,94nm,5.2s
GTA LR LR
comp=Z,500nm,11.7s
GTA LR LR
comp=Z,700nm,11.3s
GTA LR LR
comp=Z,940nm,11.7s
KSI Kapahiang 27.59 220 P P 12 41 44.4 +0.4
MDJ Mudanjiang 27.61 15 P P 12 41 44.0 +0.2
MDJ pmax pmax
comp=Z,17nm,1.1s
MDJ pmax pmax
comp=Z,360nm,5.6s
MDJ Mudanjiang 27.61 15 P P 12 41 44.0 +0.2
MDJ IAmb IAmb 12 41 45.8
comp=Z,26nm,1.1s
USRK Ussuriysk Ar. 27.89 19 P P 12 41 46.7 +0.4
comp=Z,5.7nm,0.9s,baz=198,slow=7.0,SNR=5.1
SISI Saibi 28.20 229 P P 12 41 52.7 +3.4
comp=Z,24nm,1.3s
LSA Lhasa 28.64 299 P P 12 41 55.4 +1.7
LSA Lhasa 28.64 299 P P 12 41 55.4 +1.7
LSA pmax pmax
comp=Z,15nm,1.3s
JAY Jayapura 28.98 133 LR LR 12 52 01.2
comp=Z,197nm,21.2s,baz=0.5,slow=33
ULN Ulaanbaatar 31.46 343 P P 12 42 18.0 -0.1
ULN Ulaanbaatar 31.46 343 P P 12 42 18.0 -0.1
ULN pmax pmax
comp=Z,12nm,1.3s
SONM Songino Array 31.62 342 P P 12 42 19.9 +0.4
comp=Z,1.2nm,0.6s,baz=164,slow=9.7,SNR=11
SONM PcP PcP 12 45 10.9 -0.7
comp=Z,0.4nm,0.5s,baz=167,slow=3.3,SNR=4.8
SONM LR LR 12 56 58.1
comp=Z,221nm,18.9s,baz=240,slow=40
KLR Kul'dur 32.45 14 eP P 12 42 27.7 +1.1
KLR pmax pmax
comp=Z,21nm,1.0s
YSS Yuzh-Sakhalins 34.32 28⇓eP P 12 42 43.6 +0.7
YSS e 12 42 52.2
YSS pmax pmax
comp=Z,30nm,1.1s
ZAK Zakamensk 34.82 341 eP P 12 42 46.9 -0.4
ZAK pmax pmax
comp=Z,5.0nm,1.4s
TLY Talaya 35.86 343 eP P 12 42 58.2 +2.0
TLY pmax pmax
comp=Z,39nm,1.5s
TLY MLR MLR
comp=Z,879nm,16.0s
ZEA Zeya 35.98 7 eP P 12 42 57.5 +0.4
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=Z,29nm,1.0s
ZEA MLR MLR
comp=N,400nm,14.0s
ZEA MLR MLR
comp=Z,500nm,14.0s
FITZ Fitzroy Crossi 36.45 171 P P 12 43 00.5 -1.0
MOY Mondy 36.65 340 eP P 12 43 04.1 +1.0
MOY pmax pmax
comp=Z,31nm,2.9s
WMQ Urumqi 37.28 320 eP P 12 43 10.0 +1.6
WMQ sP pwP 12 43 17.9 +1.1
WMQ pmax pmax
comp=Z,10.0nm,0.9s
WMQ pmax pmax
comp=Z,130nm,3.8s
WMQ LR LR
comp=Z,430nm,14.5s
WMQ LR LR
comp=Z,460nm,12.3s
WMQ LR LR
comp=Z,420nm,12.3s
TYV Tymovskoe 37.32 24 eP P 12 43 12.7 +4.1
TYV pmax pmax
comp=Z,7.0nm,0.9s
PSA00 Pilbara Seismi 39.47 180 P P 12 43 26.4 -0.5
PSA00 IAmb IAmb 12 43 38.3
comp=Z,27nm,1.2s
WB0 Warramunga Arr 40.26 159 P P 12 43 32.2 -1.3
WRAB Tennant Creek 40.40 159 ⇓P P 12 43 32.2 -2.5
WRAB Tennant Creek 40.40 159 iP P 12 43 33.5 -1.2
WRAB pmax pmax
comp=Z,16nm,0.9s
WRA Warramunga Arr 40.40 159 P P 12 43 32.3 -2.5
comp=Z,11nm,0.8s,baz=340,slow=9.0,SNR=40
WRA PcP PcP 12 45 37.6 -0.2
comp=Z,5.8nm,0.9s,baz=341,slow=3.3,SNR=10
WB2 Warramunga Arr 40.41 159 P P 12 43 33.2 -1.6
WB2 IAmb IAmb 12 43 34.1
comp=Z,15nm,0.8s
WR0 Warramunga Arr 40.49 159 P P 12 43 34.1 -1.4
MK31 Makanchi Array 42.08 321 P P 12 43 47.6 -0.8
MK31 Makanchi Array 42.08 321 P P 12 43 47.6 -0.8
MK31 pmax pmax
comp=Z,18nm,1.2s
MKAR Makanchi Array 42.08 321 P P 12 43 48.8 +0.5
comp=Z,6.4nm,0.8s,baz=117,slow=8.2,SNR=55
MKAR PcP PcP 12 45 43.1 +0.1
comp=Z,2.4nm,0.9s,baz=116,slow=5.5,SNR=4.1
MKAR LR LR 13 00 25.0
comp=Z,252nm,18.9s,baz=60,slow=35
MAKZ Makanchi 42.27 321 P P 12 43 48.8 -1.2
MAKZ Makanchi 42.27 321 P P 12 43 48.8 -1.2
MAKZ pmax pmax
comp=Z,18nm,1.2s
KDJ Kajisay 43.43 313 P P 12 43 59.0 -0.6
KDJ Kajisay 43.43 313 P P 12 43 59.0 -0.6
KDJ pmax pmax
comp=Z,15nm,1.2s
KSH Kashi 43.48 309 P P 12 44 03.6 +3.6
KSH sP pwP 12 44 10.8 +2.4
KSH S S 12 50 33.5 +5.4
KSH pmax pmax
comp=Z,23nm,2.0s
KSH pmax pmax
comp=Z,100nm,7.5s
KSH LR LR
comp=Z,400nm,12.0s
KSH LR LR
comp=Z,180nm,5.3s
KSH LR LR
comp=Z,120nm,10.9s
AS31 Alice Springs 43.73 161 P P 12 44 00.8 -1.1
ASAR Alice Springs 43.73 161 P P 12 44 00.8 -1.1
comp=Z,16nm,0.8s,baz=340,slow=7.1,SNR=106
ASAR PcP PcP 12 45 48.7 -0.1
comp=Z,2.0nm,0.8s,baz=337,slow=2.3,SNR=5.0
ULHL Ulahol 44.12 313 P P 12 44 06.9 +1.7
SNR=10
NIL Nilore 44.37 300 P P 12 44 07.3 +0.2
NIL pmax pmax
comp=Z,41nm,1.0s
YAK Yakutsk 44.38 7 P P 12 44 05.5 -1.1
YAK IAmb IAmb 12 44 08.5
comp=Z,13nm,0.8s
YAK Yakutsk 44.38 7 eP P 12 44 05.7 -0.9
YAK pmax pmax
comp=Z,17nm,1.4s

YAK pmax pmax
comp=N,13nm,1.6s
YAK pmax pmax
comp=E,3.0nm,1.8s
KZA Kyzart 44.77 312 P P 12 44 12.3 +1.7
SNR=9.5
ZAA0 Zalesovo Array 44.81 331 P P 12 44 09.9 -0.3
ZALV Zalesovo Beam 44.81 331 P P 12 44 10.4 +0.2
comp=E,4.0nm,0.8s,baz=123,slow=7.1,SNR=19
ZALV PcP PcP 12 45 51.9 -0.1
comp=E,0.8nm,0.6s,baz=93,slow=5.8,SNR=2.5
ZALV LR LR 13 05 52.0
comp=E,142nm,18.5s,baz=140,slow=40
KBK Karagaybulak 45.16 313 P P 12 44 15.6 +2.1
SNR=7.3
UCH Uchtor 45.34 312 P P 12 44 16.9 +1.7
SNR=18
AAK Ala-Archa 45.48 312 P P 12 44 16.4 +0.5
AAK IAmb IAmb 12 44 25.5
comp=Z,13nm,1.1s
AAK Ala-Archa 45.48 312ceP P 12 44 17.5 +1.6
AAK pmax pmax
comp=Z,11nm,2.5s
PETK Petropavlovsk- 45.56 31 P P 12 44 16.3 0.0
comp=Z,5.8nm,0.8s,baz=199,slow=8.6,SNR=3.8
USP Ospenovka 45.67 313 P P 12 44 18.7 +1.4
SNR=5.7
AML Almayashu 45.89 312 P P 12 44 21.0 +1.5
SNR=11
CTA Charters Tower 45.94 145 P P 12 44 19.0 -0.6
comp=Z,6.2nm,1.0s,baz=338,slow=10,SNR=6.6
CTAO Charters Tower 45.94 145 P P 12 44 18.5 -1.1
CTAO pmax pmax
comp=Z,10.0nm,1.4s
EKS2 Erkin-Say 45.99 312 P P 12 44 21.7 +1.8
SNR=6.7
KURK Kurchatov 46.14 324 P P 12 44 21.4 +0.7
KURK IAmb IAmb 12 44 30.2
comp=Z,20nm,0.9s
KURK Kurchatov 46.14 324 iP P 12 44 21.1 +0.3
KURK pmax pmax
comp=Z,27nm,1.1s
ARSB Arslanbob 46.17 310 P P 12 44 20.7 -0.7
ARSB IAmb IAmb 12 44 31.2
comp=Z,14nm,0.9s
ARSB Arslanbob 46.17 310 P P 12 44 20.7 -0.7
ARSB pmax pmax
comp=Z,14nm,1.0s
MA2 Magadan 47.00 21 P P 12 44 27.3 -0.2
MA2 IAmb IAmb 12 44 31.0
comp=Z,23nm,1.2s
MA2 Magadan 47.00 21ceP P 12 44 29.5 +2.1
MA2 pmax pmax
comp=Z,30nm,1.7s
MORW Morawa 47.08 185 P P 12 44 28.3 -0.1
MORW IAmb IAmb 12 44 28.7
comp=Z,18nm,0.8s
BTK Batken 47.46 308 P P 12 44 30.6 -0.9
BTK IAmb IAmb 12 44 41.1
comp=Z,29nm,1.5s
BTK Batken 47.46 308 P P 12 44 30.6 -0.9
BTK pmax pmax
comp=Z,29nm,1.5s
KBL Kabul 47.95 300 P P 12 44 35.7 +0.3
KBL Kabul 47.95 300 P P 12 44 35.7 +0.3
KBL pmax pmax
comp=Z,30nm,1.2s
KK31 Karatay Array 48.41 312 P P 12 44 39.0 +0.3
KK31 IAmb IAmb 12 44 48.1
comp=Z,21nm,1.1s
KK31 Karatay Array 48.41 312 P P 12 44 39.0 +0.3
KK31 pmax pmax
comp=Z,21nm,1.1s
KKAR Karatay Array 48.41 312 P P 12 44 38.4 -0.3
KKAR IAmb IAmb 12 44 48.1
comp=Z,21nm,1.1s
KKAR Karatay Array 48.41 312 P P 12 44 38.4 -0.3
KKAR pmax pmax
comp=Z,21nm,1.1s
FORT Forrest 49.26 171 P P 12 44 44.5 -0.6
SEY Seymchan 50.04 19 iP P 12 44 51.9 +1.2
NWAO Narrogin (SRO) 50.84 183 P P 12 44 57.3 +0.1
NWAO Narrogin (SRO) 50.84 183 P P 12 44 56.5 -0.7
NWAO IAmb IAmb 12 44 57.6
comp=Z,19nm,0.9s
NWAO Narrogin (SRO) 50.84 183 P P 12 44 56.5 -0.7
NWAO pmax pmax
comp=Z,19nm,0.9s
BRVK Borovoye 51.80 324 P P 12 45 03.6 -0.6
BRVK IAmb IAmb 12 45 13.8
comp=Z,19nm,0.9s
BRVK Borovoye 51.80 324ceP P 12 45 05.3 +1.1
BRVK pmax pmax
comp=Z,43nm,2.5s
EIDS Eidsvold 52.82 144 P P 12 45 11.5 -0.5
BBOO Buckleboo 52.96 163 P P 12 45 11.6 -1.4
TIXI Tiksi 53.77 3 P P 12 45 15.8 -2.5
TIXI Tiksi 53.77 3 eP P 12 45 17.6 -0.8
TIXI pmax pmax
comp=Z,21nm,2.5s
STKA Stephens Creek 53.90 157 P P 12 45 19.2 -0.6
comp=Z,17nm,0.9s,baz=338,slow=7.9,SNR=23
STKA Stephens Creek 53.90 157 P P 12 45 19.4 -0.5
STKA Stephens Creek 53.90 157 P P 12 45 19.4 -0.5
STKA pmax pmax
comp=Z,3.0nm,0.8s
GEYT Alibeck 57.00 304 P P 12 45 42.7 +0.3
comp=Z,2.4nm,0.7s,baz=151,slow=3.4,SNR=7.7
GEYT LR LR 13 11 43.4
comp=Z,208nm,19.8s,baz=20,slow=38
GYA0B ALIBECK ARRAY 57.00 304 P P 12 45 41.1 -1.3
GYA0B IAmb IAmb 12 45 52.2
comp=Z,23nm,1.2s
BILL Bilibino 57.74 19 P P 12 45 46.6 -0.3
BILL IAmb IAmb 12 45 48.0
comp=Z,7.8nm,0.7s
BILL Bilibino 57.74 19 eP P 12 45 46.7 -0.3
BILL pmax pmax
comp=Z,9.0nm,0.8s
SVE Sverdlovsk 58.30 326⇑eP P 12 45 51.6 +0.5
SVE pmax pmax
comp=Z,22nm,1.1s
ARU Arti 59.31 325 P P 12 45 57.6 -0.5
ARU IAmb IAmb 12 46 09.2
comp=Z,15nm,1.1s
ARU Arti 59.31 325diP P 12 45 57.8 -0.3
ARU 12 46 48.2
ARU 12 48 05.6
ARU S S 12 54 08.1 +2.4
ARU SS SS 12 58 01.1 +0.9
ARU pmax pmax
comp=Z,14nm,1.1s
TOO Toolangi 60.41 157 P P 12 46 05.6 -0.3
TOO Toolangi 60.41 157 P P 12 46 05.6 -0.3
TOO pmax pmax
comp=Z,20nm,1.1s
GAMB Gambell 64.34 27 P P 12 46 33.0 +1.2
GAMB IAmb IAmb 12 46 33.9
comp=Z,12nm,1.0s
KIRV Kirov 64.55 327 iP P 12 46 33.4 +0.1
PRGR Permogore 66.75 330 eP P 12 46 45.9 -1.5
PRGR pmax pmax
comp=Z,12nm,0.9s
ANM Nome 67.20 27 P P 12 46 50.9 +0.6
ANM IAmb IAmb 12 46 52.7
comp=Z,13nm,1.0s
ANM Nome 67.20 27 P P 12 46 50.9 +0.6
ANM pmax pmax
comp=Z,13nm,1.0s
GNI Garni 67.35 307 P P 12 46 51.9 0.0
GNI IAmb IAmb 12 47 03.3
comp=Z,22nm,1.4s
GNI Garni 67.35 307 P P 12 46 51.9 0.0
GNI pmax pmax
comp=Z,22nm,1.4s
MSVF Nonsavu 67.36 119 P P 12 46 51.1 -1.0
MSVF Nonsavu 67.36 119 P P 12 46 51.1 -1.0
MSVF pmax pmax
comp=Z,33nm,1.1s
ZEI Tsey 67.76 309 eP P 12 46 51.2 -3.3
ZEI pmax pmax
comp=Z,4.0nm,0.9s
KBZ Khabaz 68.42 311 P P 12 46 58.7 +0.4
comp=Z,2.2nm,0.8s,baz=177,slow=8.9,SNR=4.6
KBZ Khabaz 68.42 311 iP P 12 46 58.9 +0.6

KBZ pmax pmax
comp=Z,4.0nm,1.0s
RDOG Red Dog Mine 68.52 23 P P 12 46 59.4 +0.9
RDOG IAmb IAmb 12 47 00.6
comp=Z,8.1nm,0.9s
KIV Kislovodsk 68.55 311 P P 12 46 58.5 -0.8
KIV IAmb IAmb 12 47 08.2
comp=Z,9.7nm,0.8s
KIV Kislovodsk 68.55 311 eP P 12 46 59.2 -0.1
KIV pmax pmax
comp=Z,35nm,1.0s
KIV MLR MLR
comp=Z,316nm,17.0s
VRH Novokhopyorsk 68.73 319 eP P 12 46 59.8 -0.3
VRH pmax pmax
comp=Z,10.0nm,0.6s
RAYN Ar Rayn 69.08 289 P P 12 47 00.8 -2.1
RAYN IAmb IAmb 12 47 11.4
comp=Z,16nm,1.2s
RAYN Ar Rayn 69.08 289 P P 12 47 00.8 -2.1
RAYN pmax pmax
comp=Z,16nm,1.2s
KLMR Klimovskoe 69.67 329 eP P 12 47 02.6 -3.2
KLMR pmax pmax
comp=Z,36nm,1.7s
KLMR Klimovskoe 69.67 329 eP P 12 47 02.7 -3.1
KLMR AMP 12 47 14.2
comp=Z,36nm,1.7s
VORD Divnogorie 70.27 318 eP P 12 47 07.9 -1.8
VORD pmax pmax
comp=Z,3.0nm,0.6s
TMCR Tamitsa 70.31 333 eP P 12 47 08.8 -0.8
VSR Storozhevoye 70.33 319 eP P 12 47 08.1 -1.9
VSR pmax pmax
comp=Z,10.0nm,1.3s
LPSR Galich'ya Gora 70.37 320 eP P 12 47 07.2 -3.0
LPSR pmax pmax
comp=Z,10.0nm,0.5s
TTA Tatalina 71.32 29 P P 12 47 15.8 -0.2
TTA IAmb IAmb 12 47 17.9
comp=Z,11nm,0.8s
TTA Tatalina 71.32 29 P P 12 47 15.8 -0.2
TTA pmax pmax
comp=Z,11nm,0.8s
OBN Obninsk 71.55 323⇑eP P 12 47 19.8 +2.5
OBN e 12 47 36.2
OBN e 12 49 52.6
OBN eS SKiKP 12 57 02.5 +6.4
OBN pmax pmax
comp=Z,8.0nm,1.0s
SVW2 Sparrevohn 71.64 31 P P 12 47 17.8 -0.1
SVW2 IAmb IAmb 12 47 27.9
comp=Z,17nm,1.1s
PPLA Purkeypile 73.07 29 P P 12 47 26.4 0.0
PPLA IAmb IAmb 12 47 37.0
comp=Z,23nm,1.4s
OHAK Old Harbor 73.22 35 P P 12 47 27.3 +0.1
OHAK IAmb IAmb 12 47 28.4
comp=Z,17nm,0.8s
JOF Joensuu 73.40 331 P P 12 47 27.8 -0.5
MLY Manley 73.44 26 P P 12 47 29.2 +0.7
BPAW Bear Paw Mtn. 73.46 27 P P 12 47 29.7 +1.0
KDAK Kodiak Island 73.52 34 P P 12 47 27.8 -1.2
comp=Z,17nm,0.7s,baz=249,slow=4.9,SNR=7.0
KDAK Kodiak Island 73.52 34 P P 12 47 28.3 -0.7
KDAK Kodiak Island 73.52 34 P P 12 47 28.3 -0.7
KDAK pmax pmax
comp=Z,48nm,1.1s
KTH Kantishna Hill 73.56 28 P P 12 47 28.9 -0.4
KTH IAmb IAmb 12 47 30.8
comp=Z,14nm,1.0s
GAZ Gaziantep 73.60 304 P P 12 47 29.3 -0.7
GAZ IAmb IAmb 12 47 31.5
comp=Z,8.7nm,0.6s
MSF Maaselka 73.97 335 P P 12 47 31.3 -0.3
MSF pmax pmax
comp=Z,24nm,2.3s
BWN Browne 74.11 27 P P 12 47 32.1 -0.3
MCK McKinley 74.41 28 P P 12 47 33.4 -0.8
MCK McKinley 74.41 28 P P 12 47 33.4 -0.8
MCK pmax pmax
comp=Z,32nm,1.0s
RND Reindeer 74.50 28 P P 12 47 34.6 -0.2
RND Reindeer 74.50 28 P P 12 47 34.6 -0.2
RND pmax pmax
comp=Z,28nm,0.8s
MDM Murphy Dome 74.51 26 P P 12 47 34.6 -0.1
WRH Wood River Hil 74.65 27 P P 12 47 36.1 +0.6
WRH IAmb IAmb 12 47 37.6
comp=Z,13nm,0.8s
PMR Palmer 74.67 30 P P 12 47 35.7 0.0
PMR IAmb IAmb 12 47 36.5
comp=Z,16nm,0.8s
PMR Palmer 74.67 30 P P 12 47 35.7 0.0
PMR pmax pmax
comp=Z,17nm,0.8s
TCOL CIGO, UAF Yank 74.68 26 P P 12 47 36.2 +0.5
baz=280
COLA College 74.68 26 P P 12 47 36.3 +0.6
COLA pmax pmax
comp=Z,11nm,0.9s
ARCES ARCESS Array B 74.70 339 P P 12 47 35.3 -0.5
comp=Z,3.2nm,0.8s,baz=81,slow=8.3,SNR=6.2
SGF Sodankyl 74.71 336 P P 12 47 36.1 +0.3
SGF pmax pmax
comp=Z,30nm,1.8s
CCB Clear Creek Bu 74.74 26 P P 12 47 35.3 -0.7
POKR Poker Plat Res 74.81 26 P P 12 47 34.7 -1.8
baz=280
ASF Jabal al Asfar 74.83 299 P P 12 47 38.6 +1.3
ASF pmax pmax
comp=Z,5.0nm,1.9s
SML Sawmill 75.01 29 P P 12 47 38.4 +0.6
KNK Knik Glacier 75.02 30 P P 12 47 38.0 +0.2
IL31 75.11 26 P P 12 47 37.4 -0.7
IL31 IAmb IAmb 12 47 51.1
comp=Z,13nm,1.4s
ILAR Eielson Array 75.11 26 P P 12 47 37.2 -1.0
comp=Z,3.5nm,0.8s,baz=277,slow=6.2,SNR=20
HDA Harding Lake 75.15 27 P P 12 47 38.5 0.0
HDA IAmb IAmb 12 47 38.7
comp=Z,12nm,0.9s
HDA Harding Lake 75.15 27 P P 12 47 37.8 -0.7
baz=281
OUL Oulu 75.41 334 P P 12 47 39.6 -0.2
SCM Sheep Creek Mo 75.47 29 P P 12 47 41.3 +0.9
SCM Sheep Creek Mo 75.47 29 P P 12 47 41.3 +0.9
SCM pmax pmax
comp=Z,39nm,0.9s
SUF Sumiainen 75.77 332 P P 12 47 40.8 -1.2
SUF pmax pmax
comp=Z,14nm,1.3s
FIA1 FINESS Array S 76.07 330 P P 12 47 42.9 -0.9
FIA1 IAmb IAmb 12 47 51.8
comp=Z,15nm,1.0s
FINES FINESS Array B 76.07 330 P P 12 47 42.6 -1.1
comp=Z,5.5nm,0.7s,baz=51,slow=5.6,SNR=14
RIDG Independent Ri 76.19 27 P P 12 47 43.6 -0.9
SCRK Sand Creek 76.51 27 P P 12 47 46.5 +0.2
SCRK IAmb IAmb 12 47 47.4
comp=Z,14nm,1.3s
DOT Dot Lake 76.55 27 P P 12 47 46.7 +0.2
DOT IAmb IAmb 12 47 48.1
comp=Z,10nm,0.9s
AKASG Malin Array Be 76.62 319 P P 12 47 45.9 -1.2
comp=Z,3.7nm,0.7s,baz=63,slow=6.3,SNR=7.2
AKBB Malin Array Si 76.62 319 P P 12 47 46.3 -0.8
AKBB Malin Array Si 76.62 319 P P 12 47 46.3 -0.8
AKBB pmax pmax
comp=Z,6.0nm,0.9s
MENT Mentasta 76.87 28 P P 12 47 49.0 +0.7
MENT IAmb IAmb 12 47 50.2
comp=Z,17nm,1.2s
THZ Tophouse 77.11 142 P P 12 47 50.8 +0.8
THZ IAmb IAmb 12 48 02.5
comp=Z,19nm,1.2s
GLB Gilahina Butte 77.20 29 P P 12 47 49.3 -0.9
GLB IAmb IAmb 12 47 51.9
comp=Z,21nm,1.0s
VAF Ylistaro 77.25 332 P P 12 47 50.0 -0.4
VAF pmax pmax
comp=Z,19nm,1.1s
RPZ Rata Peaks 77.31 145 P P 12 47 52.2 +1.2
comp=Z,7.7nm,0.9s,baz=243,slow=2.3,SNR=3.3
EGAK Eagle 77.49 26 P P 12 47 51.5 -0.2
EGAK IAmb IAmb 12 47 53.0
comp=Z,12nm,1.0s
MCARA McCarthy VSAT 77.58 29 P P 12 47 52.4 +0.2
URZ Urewera 77.59 137 P P 12 47 53.4 +0.8
comp=Z,7.3nm,0.9s,baz=256,slow=8.9,SNR=3.3
CRQM Cirque 77.68 30 P P 12 47 53.4 +0.3
BALM Baldy 77.98 30 P P 12 47 54.1 -0.6
BALM IAmb IAmb 12 47 56.4
comp=Z,13nm,1.0s
DAWY Dawson 78.43 26 P P 12 47 57.5 +0.5
DAWY IAmb IAmb 12 47 59.2
comp=Z,16nm,1.1s
CTGM Chitina Glacie 78.48 29 P P 12 47 58.3 +0.8
TOPG Topolog 78.51 314 ⇑P P 12 47 58.2 +0.5
TIRR Tirgusor 78.58 313 ⇑P P 12 47 58.4 +0.2
CFR Carcaliu 78.60 314 ⇑P P 12 47 58.6 +0.4
CFR Carcaliu 78.60 314 P P 12 47 58.2 0.0
CFR pmax pmax
comp=Z,8.0nm,1.3s
EPYK Eagle Plains 78.77 24 P P 12 47 58.5 -0.4
EPYK IAmb IAmb 12 47 59.8
comp=Z,13nm,0.9s
EPYK Eagle Plains 78.77 24 P P 12 47 58.6 -0.2
baz=289
INK Inuvik 79.24 21 P P 12 48 01.2 0.0
comp=Z,8.8nm,1.1s,baz=280,slow=7.7,SNR=14
INK Inuvik 79.24 21 P P 12 48 01.3 0.0
INK IAmb IAmb 12 48 02.4
comp=Z,18nm,1.2s
INK Inuvik 79.24 21 P P 12 48 01.3 0.0
INK pmax pmax
comp=Z,18nm,1.3s
TESR Tescani 79.27 315 ⇑P P 12 48 02.3 +0.4
VRI Vrincioaia 79.38 315 P P 12 48 02.7 +0.1
VRI pmax pmax
comp=Z,20nm,1.1s
ELL Elmali 79.40 305 P P 12 48 01.6 -1.4
ELL Elmali 79.40 305 P P 12 48 01.6 -1.4
ELL pmax pmax
comp=Z,74nm,1.2s
PLOR Plostina 79.44 315 ⇓P P 12 48 03.3 +0.4
MCQ Macquarie Isla 79.66 158 P P 12 48 03.6 0.0
MCQ Macquarie Isla 79.66 158 P P 12 48 03.6 0.0
BURAR Bucovina Array 79.92 317 ⇓P P 12 48 06.5 +0.9
BUR08 Bucovina Ar. S 79.92 317 P P 12 48 05.0 -0.6
MLR Muntele Rosu 80.01 315 ⇑P P 12 48 06.2 0.0
MLR Muntele Rosu 80.01 315 P P 12 48 05.3 -0.9
MLR Muntele Rosu 80.01 315 P P 12 48 05.3 -0.9
MLR pmax pmax
comp=Z,38nm,1.5s
DOPR Dopca 80.26 315 ⇓P P 12 48 07.7 +0.3
HYT Haines Junctio 80.30 29 P P 12 48 07.7 +0.3
HYT IAmb IAmb 12 48 09.8
comp=Z,24nm,1.2s
VOIR 80.63 315 P P 12 48 07.8 -1.6
VOIR pmax pmax
comp=Z,5.0nm,1.4s
HUMR Humele 80.94 314 ⇑P P 12 48 11.4 +0.4
KWP Kalwaria Pacla 80.95 319 P P 12 48 10.8 -0.1
KWP pmax pmax
comp=Z,27nm,1.3s
UZH Uzhgorod 81.51 318 eP P 12 48 13.8 -0.1
UZH i 12 48 20.2
WHY Whitehorse 81.57 29 P P 12 48 15.4 +1.3
WHY IAmb IAmb 12 48 16.4
comp=Z,13nm,0.9s
DRGR 81.80 316 ⇓P P 12 48 16.0 +0.4
DRGR 81.80 316 P P 12 48 15.6 0.0
DRGR pmax pmax
comp=Z,22nm,1.2s
C36M Paulatuk 81.87 19 P P 12 48 13.9 -1.5
baz=300
CRVS Cervenica-Dubn 81.95 319 eP P 12 48 17.2 +0.9
CRVS Cervenica-Dubn 81.95 319 eP P 12 48 17.2 +0.9
DAG Danmarks Havn 82.13 351 P P 12 48 15.6 -1.1
DAG pmax pmax
comp=Z,8.0nm,1.5s
NIE Niedzica 82.50 320 P P 12 48 19.0 -0.2
NIE pmax pmax
comp=Z,5.0nm,1.2s
OJC Ojcow 82.55 320 P P 12 48 17.8 -1.6
OJC IAmb IAmb 12 48 27.8
comp=Z,12nm,0.8s
OJC Ojcow 82.55 320 P P 12 48 17.8 -1.6
OJC pmax pmax
comp=Z,12nm,0.8s
SIRR Siria 82.65 316 ⇑P P 12 48 20.5 +0.5
VTS Vitosha 82.71 312 ⇑P P 12 48 20.5 -0.1
VTS Vitosha 82.71 312 P P 12 48 19.9 -0.7
VTS pmax pmax
comp=Z,15nm,1.8s
NC405 NORSAR Array S 82.75 332 P P 12 48 19.2 -1.0
NB2 NORSAR Subarra 83.00 332 P P 12 48 20.2 -1.3
comp=Z,2.1nm,0.7s,baz=66,slow=5.6
NOA NORSAR Array B 83.00 332 P P 12 48 20.2 -1.3
comp=Z,4.7nm,0.8s,baz=65,slow=5.2,SNR=16
NOA LR LR 13 27 40.9
comp=Z,132nm,18.1s,baz=245,slow=37
MDVR Moldovita 83.08 315 ⇑P P 12 48 22.9 +0.6
NC204 NORSAR Array S 83.10 333 P P 12 48 20.6 -1.4
PAIG Paliouri 83.21 310 P P 12 48 22.1 -0.9
PAIG pmax pmax
comp=Z,12nm,1.6s
KMBO Kilima Mbogo 83.39 267 P P 12 48 24.9 +0.3
comp=Z,0.9nm,0.4s,baz=43,slow=9.2,SNR=5.1
KMBO Kilima Mbogo 83.39 267 P P 12 48 26.1 +1.4
KMBO pmax pmax
comp=Z,6.0nm,1.0s
VYHS Vyhne 83.72 319 eP P 12 48 26.0 +0.5
VYHS pmax pmax
comp=Z,15nm,1.5s
VYHS Vyhne 83.72 319 eP P 12 48 26.0 +0.5
GRG Griva 83.82 311 P P 12 48 24.2 -2.0
GRG pmax pmax
comp=Z,9.0nm,0.9s
MORC Moravsky Berou 84.07 320 eP P 12 48 27.5 +0.2
MORC e 12 48 35.1
JAVC Velka Javorina 84.32 320 eP P 12 48 30.0 +1.4
JAVC e 12 48 37.8
KSP Ksiaz 84.42 322 P P 12 48 29.3 +0.3
KSP pmax pmax
comp=Z,18nm,1.9s
DPC Dobruska-Polom 84.59 321 eP P 12 48 30.8 +0.9
DPC epP pwP 12 48 37.8 -0.7
DPC Dobruska-Polom 84.59 321 P P 12 48 30.5 +0.6
RES Resolute Bay 84.78 9 P P 12 48 29.3 -1.0
RES IAmb IAmb 12 48 31.4
comp=Z,8.6nm,1.4s
RES Resolute Bay 84.78 9 P P 12 48 29.3 -1.0
RES pmax pmax
comp=Z,9.0nm,1.5s
VRAC Vranov 84.81 320 eP P 12 48 31.6 +0.6
VRAC e 12 48 39.2
VRAC Vranov 84.81 320 ⇓P P 12 48 32.0 +1.0
VRAC Vranov 84.81 320 P P 12 48 31.6 +0.6
VRAC pmax pmax
comp=Z,15nm,0.9s
KRUC Moravsky 85.03 320 eP P 12 48 32.4 +0.3
KRUC e 12 48 40.2
KRUC Moravsky 85.03 320 P P 12 48 32.7 +0.6
KRUC pmax pmax
comp=Z,8.0nm,1.7s
PVCC Panska Ves 85.56 322 P P 12 48 35.3 +0.6
PVCC pmax pmax
comp=Z,7.0nm,1.2s
GOPC GO Pecny, Ondr 85.67 321 eP P 12 48 35.8 +0.5
GOPC GO Pecny, Ondr 85.67 321 eP P 12 48 35.8 +0.5
CONA Conrad Observa 85.78 319 ePcP P 12 48 36.7 +0.7
comp=Z,7.7nm,1.1s
BRG Berggiesshubel 85.79 322 eP P 12 48 35.7 -0.1
comp=Z,14nm,1.0s
BRG e 12 48 43.4
comp=Z,13nm,1.1s
BRG Berggiesshubel 85.79 322 eP P 12 48 35.7 -0.1
BRG e 12 48 43.4
BRG pmax pmax
comp=Z,14nm,1.0s
BRG pmax pmax
comp=Z,13nm,1.1s
PRU Pruhonice 85.79 321 eP P 12 48 36.2 +0.4
PRU epP pwP 12 48 43.1 -1.4
PRU Pruhonice 85.79 321 eP P 12 48 36.2 +0.4
PRU e 12 48 43.1
CLL Collm 86.15 323 i P P 12 48 37.6 0.0
comp=Z,13nm,1.1s
CLL i sP pwP 12 48 45.8 -0.4
comp=Z,16nm,1.1s
CLL Collm 86.15 323 i P P 12 48 37.6 0.0
CLL i 12 48 45.8
CLL pmax pmax
comp=Z,13nm,1.1s
ARSA Arzberg 86.25 319 ePcP P 12 48 38.7 +0.4
comp=Z,7.5nm,0.9s
KHC Kasperske Hory 86.70 321 eP P 12 48 40.6 +0.2
KHC epP pwP 12 48 47.9 -1.2
KHC Kasperske Hory 86.70 321 eP P 12 48 40.6 +0.2
KHC e 12 48 47.9
GEC2 GERESS Array S 86.75 321 P P 12 48 39.5 -1.2
GEC2 IAmb IAmb 12 48 49.1
comp=Z,9.8nm,1.1s
GERES GERESS Array B 86.75 321 P P 12 48 40.0 -0.8
comp=Z,1.8nm,0.7s,baz=56,slow=5.0,SNR=13
GERES GERESS Array B 86.75 321 P P 12 48 40.0 -0.8
SOKA Soboth 86.79 318 i PcP P 12 48 41.3 +0.3
comp=Z,5.1nm,0.8s
MOA Molln 86.80 319 i PcP P 12 48 41.7 +0.8
comp=Z,15nm,1.1s
OBKA Obir 87.16 318 ePcP P 12 48 42.7 -0.1
comp=Z,9.4nm,1.5s
KBA Koelnbreinsper 87.69 319 ePcP P 12 48 44.4 -1.0
comp=Z,6.8nm,1.1s
ABTA Abfaltersbach 88.34 319 ePcP P 12 48 47.6 -0.8
comp=Z,9.8nm,1.5s
WTTA Wattenberg 88.67 320 ePcP P 12 48 50.0 0.0
comp=Z,13nm,1.0s
SQTA Sankt Quirin 88.95 320 ePcP P 12 48 51.3 0.0
comp=Z,6.5nm,0.8s
MOTA Moosalm 88.96 320 ePcP P 12 48 51.2 -0.2
comp=Z,4.9nm,0.6s
YKA Yellowknife Ar 88.97 22 P P 12 48 51.0 +0.1
comp=Z,4.2nm,0.8s,baz=312,slow=4.6,SNR=81
YKA Yellowknife Ar 88.97 22 i P P 12 48 51.1 +0.2
YKA pmax pmax
comp=Z,4.0nm,0.8s
RETA Reutte 89.10 320 i PcP P 12 48 51.8 -0.2
comp=Z,2.6nm,0.7s
FETA Feichten 89.33 320 ePcP P 12 48 53.4 +0.2
comp=Z,8.2nm,0.9s
FUORN Ofenpass-Fuorn 89.79 320 P P 12 48 54.0 -1.4
PPT Papeete 95.77 107 LR LR 13 27 43.0
comp=Z,50nm,19.0s,baz=24,slow=32
NVAR Mina Array Bea 101.63 43 P Pdif 12 49 50.1 +0.6
comp=Z,0.8nm,0.9s,baz=256,slow=4.9,SNR=5.0
TXAR Lajitas Array 116.77 42 PKP PKPdf 12 54 40.9 -0.8
comp=Z,1.2nm,0.8s,baz=275,slow=0.7,SNR=18
U40A Yellville 117.56 30 PKPdf PKPdf 12 54 41.3 -1.5
WVT Waverly 119.97 26 PKPdf 12 54 47.0 -0.4
WVT Waverly 119.97 26 PKIKP PKPdf 12 54 47.0 -0.4
GO09 Cerro Castillo 145.54 166 PKPab 12 55 36.2 +1.3
SDV Santo Domingo 151.19 22 PKPbc 12 55 49.7 -1.3

*NORS **18** 12:37:19.7±0.0, 43°.15N×45°.83E, h14km, MPVA3.8*
ISC 18 12:37:19.1±3.9, 43°.4N±0°.2×45°.88E±0°.10, h7km±17km, n6, σ0§26/11, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GROC	Groznyy	0.20	197	i Pg	Pg	12 37 23.3	+0.2
GROC				eSg	Sg	12 37 25.6	-0.2
BTLR	Botlikh	0.77	161	ePg	Pg	12 37 34.0	0.0
BTLR				eSg	Sg	12 37 43.6	-0.4
LACR	Lac	1.29	245	ePg	Pb	12 37 43.6	-0.1
LACR				eSg	Sb	12 38 00.5	0.0
ZEI	Tsey	1.57	248	ePg	Pb	12 37 48.4	-0.1
ZEI				eSg	Sn	12 38 08.2	+0.1
LGD	Lagodekhi	1.58	170	P	Pg	12 37 49.8	+0.5
DIGR	Digorskoe uzhe	1.75	254	ePg	Pb	12 37 51.5	-0.2
DIGR				eSg	Sb	12 38 13.8	-0.1

*BJI **18** 12:41:55.6±0.0, 12°.05S×165°.20E, h7km, mB5.1/6, mb4.6/20, Ms4.7/2, Ms7 4.4/2*
*IDC **18** 12:41:56.2±0.8, 11°.97S×165°.17E, h0km, mb4.3/13, mb1 4.5/16, mb1mx4.4/35, mbtmp4.3/16, ML4.2/3, MS3.7/1, Ms1 3.6/1, ms1mx2.9/35, Error ellipse: s-maj=26.0km s-min=17.3km az=136.0*
*NEIC **18** 12:41:57.9±1.5, 12°.04S±0°.08×165°.15E±0°.10, h11km±3km, mb4.8/40, Error ellipse: s-maj=15.4km s-min=9.1km az=53.0*
ISC 18 12:41:57.6±0.5, 12°.05S±0°.06×165°.14E±0°.07, h10km, n69, σ1§24/76, mb4.7/34, Santa Cruz Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 3.93 150 Pn 12 42 59.3 +1.3
HNR Honiara 5.72 297 Pn Pn 12 43 23.8 +1.0
28nm,0.3s,baz=133,slow=7.6,SNR=11
HNR Sn Sn 12 44 25.4 -3.2
44nm,0.3s,baz=177,slow=13,SNR=5.6
HNR Honiara 5.72 297 eP Pn 12 43 24.0 +1.2
HNR Honiara 5.72 297 Pn 12 43 24.1 +1.3
HNR Sn 12 44 26.4 -2.1
DZM Mont Dzumac 10.04 173 Pn Pn 12 44 24.3 +2.2
1.8nm,0.3s,baz=303,slow=14,SNR=39
DZM Sn Sn 12 46 10.0 -5.1
0.2nm,0.3s,baz=348,slow=20,SNR=2.0
NOUC Port Laguerre 10.06 174 Pn 12 44 25.2 +2.9
NOUC Sn Sn 12 46 14.7 -0.6
MSVF Nonsavu 13.70 116 Pn Pn 12 45 11.5 -0.7
EIDS Eidsvold 18.76 223 P P 12 46 16.6 -0.4
CTA Charters Tower 19.82 244 P P 12 46 29.5 +0.9
0.2nm,0.3s,baz=81,slow=14,SNR=7.6
COEN Coen 21.48 263 P P 12 46 47.1 +0.4
COEN IAmb IAmb 12 47 03.9
comp=Z,32nm,1.4s
ARMA Armidale 22.16 212 P P 12 46 54.4 +0.5
URZ Urewera 28.21 160 P P 12 47 51.3 +0.7
URZ IAmb IAmb 12 48 00.2
comp=Z,25nm,1.3s
BKZ Black Stump Fm 28.83 161 P P 12 47 55.3 -0.9
STKA Stephens Creek 29.31 224 P P 12 48 01.6 +1.0
comp=Z,3.1nm,0.7s,baz=49,slow=9.2,SNR=4.2
STKA LR LR 12 59 09.9
comp=Z,149nm,20.1s,baz=359,slow=35
WB0 Warramunga Arr 30.51 252 P P 12 48 10.6 -0.7
WRAB Tennant Creek 30.58 251 P P 12 48 10.4 -1.5
WRAB IAmb IAmb 12 48 16.7
comp=Z,16nm,1.4s
WB2 Warramunga Arr 30.58 251 P P 12 48 12.3 +0.4
WRA Warramunga Arr 30.59 251 P P 12 48 12.4 +0.4
comp=Z,2.7nm,0.7s,baz=82,slow=8.9,SNR=10
WRA PcP PcP 12 51 10.6 -0.1
comp=Z,1.5nm,0.9s,baz=78,slow=2.3,SNR=4.9
AS31 Alice Springs 31.82 244 P P 12 48 23.4 +0.5
ASAR Alice Springs 31.82 244 P P 12 48 22.6 -0.3
comp=Z,1.8nm,0.8s,baz=68,slow=9.7,SNR=14
ASAR PcP PcP 12 51 13.2 -0.7
comp=Z,0.8nm,0.8s,baz=66,slow=2.1,SNR=6.3
KNRA Kununurra 35.47 260 P P 12 48 55.1 +0.5
KNRA IAmb IAmb 12 48 58.5
comp=Z,27nm,1.1s
FITZ Fitzroy Crossi 38.55 256 P P 12 49 21.3 +0.4
FITZ IAmb IAmb 12 49 24.3
comp=Z,12nm,0.8s
MJAR Matsushiro Arr 54.59 333 P P 12 51 24.8 -1.5
comp=Z,2.3nm,0.7s,baz=164,slow=8.3,SNR=5.5
KSRS Korea Array 60.37 326 P P 12 52 07.7 +0.6
comp=Z,1.0nm,0.7s,baz=153,slow=8.3,SNR=3.1
NJ2 Nanjing 62.32 316 eP P 12 52 22.1 +1.7
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
XAN Xi'an 70.36 313 P P 12 53 12.4 +0.4
CM31 Chiang Mai Arr 71.97 294 P P 12 53 21.5 -0.5
CM31 IAmb IAmb 12 53 24.5
comp=Z,4.8nm,0.8s
CMAR Chiang Mai Arr 71.97 294 P P 12 53 22.7 +0.7
comp=Z,2.8nm,0.7s,baz=127,slow=4.8,SNR=15
CHTO Chiang Mai 72.09 294 P P 12 53 22.6 -0.1
HHC Hu-ho-hao-te 72.21 320 eP P 12 53 26.3 +3.1
LZH Lanzhou 74.99 313 eP P 12 53 38.3 -1.4
LZH pP sP 12 53 42.4 +0.3
LZH sP pwP 12 53 46.3 -1.4
LZH PP PP 12 56 26.6 -1.1
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,51nm,4.7s

LZH				LR	LR		
	comp=Z,140nm,15.4s						
LZH				LR	LR		
	comp=Z,130nm,15.2s						
LZH				LR	LR		
	comp=Z,220nm,18.1s						
QSPA	South Pole Qui	77.96	180	P	P	12 53 56.2	+0.2
ULN	Ulaanbaatar	78.76	324	P	P	12 54 00.4	-0.3
SONM	Songino Array	79.12	324	P	P	12 54 02.9	+0.3
	comp=Z,1.3nm,0.8s,baz=141,slow=7.4,SNR=11						
GTA	Gaotai	79.32	314	P	P	12 54 05.8	+1.9
GTA				pP	pwP	12 54 10.3	-1.7
GTA				sP	PcP	12 54 12.8	+0.7
BILL	Bilibino	79.88	0	P	P	12 54 06.5	+0.4
BILL				IAmb	IAmb	12 54 07.2	
	comp=Z,8.4nm,1.0s						
WAX	Waxell Ridge	83.20	23	P	P	12 54 24.8	+0.8
GLB	Gilahina Butte	83.48	22	P	P	12 54 25.9	+0.6
GLB				IAmb	IAmb	12 54 26.6	
	comp=Z,11nm,0.8s						
MCARA	McCarthy VSAT	83.73	22	P	P	12 54 26.9	+0.3
BALM	Baldy	83.77	23	P	P	12 54 26.9	0.0
KMRM	Mail Ridge	83.77	47	P	P	12 54 27.6	+0.3
BARN	Barnard Glacie	84.04	23	P	P	12 54 29.2	+0.7
WRH	Wood River Hil	84.06	19	P	P	12 54 28.1	-0.1
WRH				IAmb	IAmb	12 54 29.1	
	comp=Z,5.9nm,0.9s						
CTGM	Chitina Glacie	84.11	23	P	P	12 54 29.0	+0.3
CCB	Clear Creek Bu	84.28	18	P	P	12 54 29.1	-0.2
CCB				IAmb	IAmb	12 54 30.2	
	comp=Z,4.6nm,0.7s						
MDM	Murphy Dome	84.36	18	P	P	12 54 29.9	+0.1
MDM				IAmb	IAmb	12 54 30.8	
	comp=Z,5.1nm,0.7s						
HDA	Harding Lake	84.38	19	P	P	12 54 30.4	+0.6
HDA				IAmb	IAmb	12 54 31.3	
	comp=Z,9.1nm,0.7s						
COLA	College	84.42	18	P	P	12 54 29.5	-0.5
MENT	Mentasta	84.47	21	P	P	12 54 30.0	-0.4
MENT				IAmb	IAmb	12 54 32.0	
	comp=Z,12nm,1.0s						
IL31		84.65	19	P	P	12 54 30.6	-0.5
IL31				IAmb	IAmb	12 54 35.4	
	comp=Z,4.0nm,1.0s						
ILAR	Eielson Array	84.65	19	P	P	12 54 30.8	-0.4
	comp=Z,3.9nm,0.7s,baz=245,slow=5.0,SNR=34						
DOT	Dot Lake	84.82	20	P	P	12 54 32.8	+0.7
YBH	Yreka Blue Hor	85.02	46	P	P	12 54 34.8	+1.1
	comp=Z,1.0nm,0.7s,baz=104,slow=15,SNR=7.0						
YBH	Yreka Blue Hor	85.02	46	P	P	12 54 32.1	-1.6
YBH				IAmb	IAmb	12 54 35.3	
	comp=Z,18nm,1.5s						
SCRK	Sand Creek	85.06	20	P	P	12 54 33.5	+0.1
AFDM	Forest Hills D	85.31	49	P	P	12 54 35.5	+0.3
AFDM				IAmb	IAmb	12 54 36.4	
	comp=Z,4.4nm,0.9s						
WAKR	Walker	86.30	50	P	P	12 54 40.3	0.0
WAKR				IAmb	IAmb	12 54 44.7	
	comp=Z,10nm,1.4s						
EGAK	Eagle	86.52	20	P	P	12 54 41.1	+0.6
EGAK				IAmb	IAmb	12 54 42.3	
	comp=Z,12nm,0.8s						
DAWY	Dawson	86.70	21	P	P	12 54 41.6	+0.1
DAWY				IAmb	IAmb	12 54 43.2	
	comp=Z,5.9nm,0.9s						
PAHR	Pah Rah Range	86.72	48	P	P	12 54 42.0	-0.2
PAHR				IAmb	IAmb	12 54 43.6	
	comp=Z,4.7nm,1.0s						
NVAR	Mina Array Bea	87.12	50	P	P	12 54 44.1	-0.3
	comp=Z,1.9nm,0.8s,baz=229,slow=7.7,SNR=13						
WMQ	Urumqi	89.38	315	eP	P	12 54 55.8	+1.1
WMQ				pP	pwP	12 55 00.6	-2.2
F10A	Beach Ranch, E	90.15	43	P	P	12 54 59.1	+0.8
MK31	Makanchi Array	93.84	317	P	P	12 55 15.0	-0.4
MKAR	Makanchi Array	93.84	317	P	P	12 55 15.8	+0.5
	comp=Z,1.6nm,0.7s,baz=100,slow=6.0,SNR=22						
ZALV	Zalesovo Beam	94.02	324	P	P	12 55 15.3	-0.6
	comp=Z,1.1nm,0.7s,baz=127,slow=4.7,SNR=5.5						
YKA	Yellowknife Ar	96.13	27	P	P	12 55 24.1	-1.2
	comp=Z,1.9nm,0.7s,baz=256,slow=4.9,SNR=32						
VTS	Vitosha	135.09	320		PKPdf	13 01 14.7	-3.1
ESDC	Sonseca Array	150.84	343	PKPbc	PKPbc	13 01 50.3	-0.6
	comp=Z,0.3nm,0.5s,baz=30,slow=3.4,SNR=6.9						

IDC 18 13:26:47.8±382.0,53.82N×43.63E,h0km,Error ellipse: s-maj=158.3km s-min=100.6km az=135.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.68	311	i		13 55 00.0	
	baz=125,slow=296,SNR=0.8						
I31KZ	AKTYUBINSK INF	9.50	105	i		14 24 40.0	
	baz=297,slow=324,SNR=2.7						
I34MN	SONGINO INFRAS	38.96	72	i		17 27 50.0	
	baz=295,slow=332,SNR=0.4						

NEIC 18 13:35:40.6±1.7, 15.9N±0.2×97.5W±0.1, h16km±9km, mb4.5/1, Md3.9/23(MEX), Error ellipse: s-maj=30.2km s-min=3.9km az=219.0
MEX 18 13:35:42.7±0.5, 15.83N×97.63W, h17km±10km, MD4.5
ISC 18 13:35:40.3±1.6, 15.81N±0.08×97.64W±0.05, h17km±9km, n18, σ1§54/29, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEIG	Puerto Escondi	0.51	68	iP	Pg	13 35 50.9	+0.3
PEIG				iS	Sg	13 35 57.4	0.0
PNIG	Pinotepa	0.75	321		Pb	13 35 54.6	-0.3
PNIG					Sg	13 36 03.5	-1.4
PNIG	Pinotepa	0.75	321	iP	Pb	13 35 54.6	-0.3
PNIG				iS	Sg	13 36 03.5	-1.4
YOIG	Yosondua	1.04	5	iP	Pb	13 35 58.9	-1.2
YOIG				iS	Sb	13 36 11.4	-2.2
HUIG	Huatulco	1.48	91		Pn	13 36 05.4	-0.7
HUIG	Huatulco	1.48	91	eP	Pn	13 36 05.4	-0.7
VHO	Vista Hermosa	1.53	35	eP	Pn	13 36 05.8	-1.2
VHO				iS	Sn	13 36 24.0	-2.5
TLIG	Tlapa	1.96	333		Pn	13 36 14.5	+1.7
TLIG	Tlapa	1.96	333		Pn	13 36 12.4	-0.4
TLIG					Sn	13 36 35.5	-1.5
TLIG	Tlapa	1.96	333	eP	Pn	13 36 12.4	-0.4
TLIG				eS	Sn	13 36 35.5	-1.5
HLIG	Huajuapan de L	2.02	356	iP	Pn	13 36 12.6	-1.1
HLIG				iS	Sb	13 36 44.3	+2.8
FTIG	Fresnillo de T	2.14	347	iP	Pn	13 36 16.9	+1.5
FTIG				iS	Sb	13 36 47.1	+2.1
TOIG	Toxpalan	2.34	14	eP	Pn	13 36 18.9	+0.8
TOIG				iS	Sb	13 36 53.2	+2.5
CMIG	Matias Romero	2.94	64		Pn	13 36 25.7	-0.5
CMIG					Lg	13 37 16.3	
CMIG	Matias Romero	2.94	64	eP	Pn	13 36 25.7	-0.5
CMIG				iS	Sg	13 37 16.3	+1.6
CCIG	Comitan	5.31	84	Pn	Pn	13 36 57.8	-1.2
ESPN	Las Esperanzas	13.43	104	Pn	Pn	13 38 51.4	+1.2
U32A	Winter Ranch,	20.52	357	Pn	P	13 40 19.5	+1.8
U32A				IAmb	IAmb	13 40 20.6	
	comp=Z,20nm,0.9s						

IDC 18 13:39:00.5±6.2, 13.67N×124.47E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/39, mbtmp3.5/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/32, Error ellipse: s-maj=367.9km s-min=32.2km az=91.0
ISC 18 13:39:03.3±2.4, 13.6N±0.2×124.9E±0.7, h10km, n5, σ2§25/5, mb3.5/3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	Tagbilaran	4.07	195	⇑iP	Sb	13 41 06.7	+2.3
TBP				iS	Sg	13 41 12.0	-2.1
JNU	Nakatsue	20.13	15	LR	LR	13 52 27.5	
	comp=Z,30nm,18.4s,baz=4.5,slow=40						
WRA	Warramunga Arr	34.63	164	P	P	13 45 53.3	+0.4
	0.9nm,1.1s,baz=344,slow=9.5,SNR=3.0						
ASAR	Alice Springs	38.10	167	P	P	13 46 22.1	-0.5
	0.5nm,0.9s,baz=342,slow=6.7,SNR=4.7						
ILAR	Eielson Array	76.99	26	P	P	13 50 56.0	-0.1
	0.3nm,0.7s,baz=261,slow=4.6,SNR=4.7						

IDC 18 13:39:10.4±0.7, 6.82N×73.07W, h159km±14km, mb3.0/5, mb1 3.3/7, mb1mx3.1/35, mbtmp3.5/7, Error ellipse: s-maj=38.4km s-min=7.7km az=132.0
RSNC 18 13:39:12.1±1.2, 6.82N×73.13W, h146km±5km, ML3.5, Mw3.6
ISC 18 13:39:10.4±0.8, 6.85N±0.03×73.11W±0.04, h158km±5km, n37, σ1§32/67, mb3.0/5, 4C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.26	196	⇑eP	Pn	13 39 32.0	0.0
BARC				eS	Sn	13 39 46.5	-2.1
PAMC	Pamplona, Colo	0.64	40	⇓iP	Pn	13 39 34.8	+0.9
PAMC				eS	Sn	13 39 52.0	+0.1
PAMC				i		13 39 53.5	
	comp=Z,190nm,0.9s						
BRRC	Barranca, Sant	0.65	294	⇓iP	Pn	13 39 34.4	+1.0
BRRC				eS	Sn	13 39 50.8	-0.2
BRRC				i		13 39 54.2	
	comp=Z,444nm,0.1s						
RUSC	La Rusia	0.95	178	⇑iP	Pn	13 39 35.9	-0.2
RUSC				eS	Sn	13 39 54.1	-1.6
RUSC				i		13 39 55.7	
	comp=Z,388nm,0.4s						
RUSC				i		13 39 55.8	
	comp=Z,366nm,0.5s						
PTBC	PUERTO BERRIO,	1.37	257	⇓iP	Pn	13 39 38.5	-0.8
PTBC				eS	Sn	13 39 59.9	-1.5
PTBC				i		13 40 00.9	
	comp=Z,435nm,0.5s						
PTBC				i		13 40 01.6	
	comp=Z,386nm,0.1s						
TAMC	Tame, Arauca	1.37	107	⇑iP	Pn	13 39 40.3	+1.1
TAMC				eS	Sn	13 40 01.5	0.0
TAMC				i		13 40 11.1	
	comp=Z,116nm,0.5s						
OCAC	Ocana	1.40	352	eP	Pn	13 39 40.3	+0.6
OCAC				eS	Sn	13 40 01.6	-0.6
OCAC				i		13 40 05.3	
	comp=Z,573nm,0.2s						
OCAC				i		13 40 06.8	
	comp=Z,678nm,0.2s						
SPBC	San Pablo de B	1.52	219	⇑iP	Pn	13 39 41.0	+0.1
SPBC				eS	Sn	13 40 02.6	-1.7
SPBC				i		13 40 08.7	
	comp=Z,549nm,0.2s						
ZARC	Zaragoza, Cauc	1.85	290	eP	Pn	13 39 44.6	+0.3
ZARC				eS	Sn	13 40 09.6	-0.8
ZARC				i		13 40 20.2	
	comp=Z,371nm,0.2s						
NORC	Norcasia	2.16	234	eP	Pn	13 39 48.0	+0.1
NORC				eS	Sn	13 40 16.4	-0.5
NORC				i		13 40 17.9	
	comp=Z,410nm,0.2s						
NORC				i		13 40 20.9	
	comp=Z,330nm,0.6s						
SMLC	San Martn de	2.16	334	eP	Pn	13 39 48.6	+0.7
SMLC				eS	Sn	13 40 16.6	-0.3
SMLC				i		13 40 27.6	
	comp=Z,402nm,0.1s						
CHIC	Chingaza	2.29	196	eP	Pn	13 39 50.0	+0.3
CHIC				eS	Sn	13 40 20.4	+0.3
CHIC				i		13 40 25.2	
	comp=Z,131nm,0.3s						
ROSC	El Rosal	2.33	211	P	Pn	13 39 52.0	+1.8
	comp=Z,70nm,0.3s,baz=3.8,slow=15,SNR=81						
ROSC				S	Sn	13 40 21.2	+0.3
	comp=Z,103nm,0.3s,baz=56,slow=3.6,SNR=12						
ROSC	El Rosal	2.33	211	eP	Pn	13 39 51.8	+1.6
ROSC				eS	Sn	13 40 22.6	+1.7
ROSC				i		13 40 29.9	
	comp=Z,224nm,0.6s						
ROSC				i		13 40 30.3	
	comp=Z,199nm,0.5s						
HELC	Santa Helena	2.49	255	eP	Pn	13 39 52.9	+0.8
HELC				eS	Sn	13 40 24.0	-0.2
HELC				i		13 40 30.4	
	comp=Z,252nm,0.3s						
HELC				i		13 40 30.5	
	comp=Z,290nm,0.3s						
CVER	Cruz Verde, Cu	2.50	203	eP	Pn	13 39 55.4	+3.0
UREC	San Jos de Ur	2.57	291	eP	Pn	13 39 52.1	-0.6
UREC				eS	Sn	13 40 24.5	-0.9
UREC				i		13 40 35.1	
	comp=Z,238nm,0.2s						
GUY2C	Guyana, Caldas	2.76	234	eP	Pn	13 39 56.1	+0.5
GUY2C				eS	Sn	13 40 31.1	+0.7
GUY2C				i		13 40 35.9	
	comp=Z,204nm,0.6s						
GUY2C				i		13 40 36.4	
	comp=Z,206nm,0.3s						
PTGC	Puerto Gaitan,	2.80	160	eP	Pn	13 39 55.1	-0.5
PTGC				eS	Sn	13 40 28.5	-2.2
PTGC				i		13 40 30.4	
	comp=Z,132nm,0.3s						
PTGC				i		13 40 30.5	
	comp=Z,129nm,0.3s						
CBOC	Ciudad Bolivar	3.04	251	eP	Pn	13 39 59.6	+0.9
CBOC				eS	Sn	13 40 36.0	-0.2
CBOC				i		13 40 46.6	
	comp=Z,88nm,0.5s						
DBBC	Dabeiba	3.08	273	⇓eP	Pn	13 39 59.6	+0.5
DBBC				eS	Sn	13 40 35.5	-1.5
DBBC				i		13 40 40.0	
	comp=Z,176nm,0.4s						
CODC	Agustn Codazz	3.09	354	eP	Pn	13 39 59.6	+0.4
CODC				eS	Sn	13 40 33.9	-3.1
CODC				i		13 40 45.7	
	comp=Z,50nm,0.4s						
CODC				i		13 40 49.4	
	comp=Z,58nm,0.8s						
SDV	Santo Domingo	3.18	50	P	Pn	13 40 01.6	+1.1
	comp=Z,4.4nm,0.3s,baz=231,slow=22,SNR=37						
SDV				S	Sn	13 40 39.0	-0.5
	comp=Z,10.0nm,0.3s,baz=300,slow=20,SNR=29						
SDV	Santo Domingo	3.18	50	eP	Pn	13 40 01.5	+1.0
SDV				eS	Sn	13 40 38.6	-0.8
SDV				i		13 40 41.2	
	comp=Z,27nm,0.4s						
SDV				i		13 40 44.8	
	comp=Z,24nm,0.7s						
ARGC	Ariguani, Magd	3.20	340	eP	Pn	13 40 02.3	+1.8
ARGC				eS	Sn	13 40 38.0	-1.5
ARGC				i		13 40 51.1	
	comp=Z,80nm,0.2s						
PRAC	Prado	3.58	210	eP	Pn	13 40 05.2	-0.3
PRAC				eS	Sn	13 40 48.2	-0.1
PRAC				i		13 40 52.6	
	comp=Z,148nm,0.6s						
PRAC				i		13 40 54.6	
	comp=Z,165nm,0.3s						
ORTC	Ortega, Tolima	3.61	216	eP	Pn	13 40 06.0	+0.1
ORTC				eS	Sn	13 40 49.0	0.0
ORTC				i		13 40 55.5	
	comp=Z,142nm,0.9s						
ORTC				i		13 40 56.0	
	comp=Z,143nm,0.4s						
SJCC	San Jacinto, C	3.66	326	eP	Pn	13 40 06.2	-0.3
SJCC				eS	Sn	13 40 47.5	-2.6
SJCC				i		13 41 01.6	
	comp=Z,90nm,0.7s						
PLMC	San Jos del P	3.70	239	eP	Pn	13 40 07.6	+0.6
PLMC				eS	Sn	13 40 51.5	+0.4
PLMC				i		13 40 57.0	
	comp=Z,135nm,0.2s						
SMRC	Santa Marta, M	4.43	346	eP	Pn	13 40 17.2	+0.7
SMRC				eS	Sn	13 41 05.3	-2.7
SMRC				i		13 41 06.8	
	comp=Z,28nm,0.9s						
MACC	Macarena, Meta	4.73	189	eP	Pn	13 40 19.0	-1.4
MACC				eS	Sn	13 41 10.2	-4.8
MACC				i		13 41 15.6	
	comp=Z,33nm,0.3s						
MACC				i		13 41 17.8	
	comp=Z,23nm,0.4s						
TXAR	Lajitas Array	36.45	312	P	P	13 46 01.1	+0.8
	comp=Z,0.1nm,0.4s,baz=125,slow=7.9,SNR=4.1						
ULM	Lac du Bonnet	47.27	340	P	P	13 47 28.8	+1.2
	comp=Z,1.1nm,0.5s,baz=159,slow=12,SNR=3.0						
PDAR	Pinedale Array	48.06	324	P	P	13 47 34.5	+0.3
	comp=Z,0.1nm,0.4s,baz=157,slow=9.4,SNR=2.6						
NVAR	Mina Array Bea	51.47	315	P	P	13 47 58.7	-1.4
	comp=Z,0.2nm,0.6s,baz=143,slow=9.1,SNR=2.3						
YKA	Yellowknife Ar	63.24	340	P	P	13 49 22.0	+0.2
	comp=Z,0.3nm,0.5s,baz=133,slow=6.5,SNR=13						
WRA	Warramunga Arr	150.36	241	PKPbc	PKPbc	13 58 43.5	-0.6
	comp=Z,0.4nm,0.4s,baz=105,slow=2.8,SNR=3.2						

IDC 18 13:42:21.9±5.7, 10.78S×111.25E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/41, mbtmp3.6/5, Error ellipse: s-maj=303.3km s-min=20.8km az=47.0
NEIC 18 13:42:22.9±1.5, 10.9S±0.2×111.2E±0.2, h10km±1km, mb4.4/11, Error ellipse: s-maj=40.2km s-min=18.9km az=239.0
DJA 18 13:42:25.3±0.8, 11°S±6°×11°1E±°, h10km, M4.4/9, mB4.8/1, mb4.5/2, MLv4.3/9, Mw(mB)4.0/1
ISC 18 13:42:22.2±0.8, 10.96S±0.08×110.97E±0.08, h10km, n27, σ1§32/26, mb4.3/12, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	Pacitan	2.76	4	P	Pn	13 43 07.0	+0.5
PCJI				S	Sn	13 43 39.4	-0.5
PWJI	Pagerwojo	3.04	16	P	Sn	13 43 44.7	-2.0
UGM	Wanagama	3.06	352	P	Pn	13 43 11.9	+1.2
UGM				S	Sn	13 43 46.1	-1.4
JAGI	Jajag, Banyuwa	4.00	52	P	Pn	13 43 25.1	+1.6
JAGI				S	Sn	13 43 54.6	-16
KPJI	Karang Pucung	4.13	331	P	Pn	13 43 25.7	+0.3
CISI	Cisompet, Garu	4.60	317	P	Pn	13 43 32.0	+0.1
IGBI	Denpasar	4.63	63	P	Pb	13 43 35.7	-7.9
SRBI	Singaraja	5.07	56	P	Pn	13 43 39.7	+1.5
	0.3nm898nm44nm,0.7s						
GIRL	Giralia	12.03	165	Pn	Pn	13 45 09.4	-4.4
GIRL					Sn	13 47 07.8	-20
FITZ	Fitzroy Crossi	15.87	118	Pn	Pn	13 46 03.0	-2.8
RPSI	Rantau Prapat	18.11	318	P	Pn	13 46 33.6	-0.4
WB0	Warramunga Arr	24.20	114	P	P	13 47 37.3	-1.9
WB0				IAmb	IAmb	13 48 05.2	
	comp=Z,9.7nm,1.3s						
WRA	Warramunga Arr	24.20	114	P	P	13 47 38.9	-0.3
	comp=Z,0.6nm,0.5s,baz=288,slow=11,SNR=6.5						
WRAB	Tennant Creek	24.21	114	P	P	13 47 38.2	-1.0
WRAB				IAmb	IAmb	13 48 34.8	
	comp=Z,15nm,1.4s						
WB2	Warramunga Arr	24.21	114	P	P	13 47 38.2	-1.1
WB2				IAmb	IAmb	13 48 21.5	
	comp=Z,16nm,1.3s						
WR0	Warramunga Arr	24.39	114	P	P	13 47 40.3	-0.6
WR0				IAmb	IAmb	13 48 19.0	
	comp=Z,19nm,1.6s						
ASAR	Alice Springs	25.23	123	P	P	13 47 49.0	+0.6
	comp=Z,0.8nm,0.8s,baz=291,slow=8.5,SNR=13						
AS31	Alice Springs	25.23	123	P	P	13 47 48.0	-0.5
PBA	Port Blair	28.86	321	P	P	13 48 22.6	+1.5
PBKT	Sadao Pong	29.09	340	P	P	13 48 24.0	+0.9
PBKT				IAmb	IAmb	13 48 32.2	
	comp=Z,3.8nm,1.1s						
CMAR	Chiang Mai Arr	31.55	338	P	P	13 48 46.6	+1.7
	comp=Z,0.4nm,0.5s,baz=175,slow=7.5,SNR=6.6						
MKAR	Makanchi Array	62.96	338	P	P	13 52 50.3	+1.3
	comp=Z,0.4nm,0.5s,baz=143,slow=7.6,SNR=5.7						
KURK	Kurchatov	67.57	338	P	P	13 53 19.5	+0.8
KURK				IAmb	IAmb	13 54 17.4	
	comp=Z,13nm,2.0s						
ZAA0	Zalesovo Array	68.37	344	P	P	13 53 23.9	+0.1
ZAA0				IAmb	IAmb	13 53 25.2	
	comp=Z,2.1nm,0.9s						
ZALV	Zalesovo Beam	68.37	344	P	P	13 53 23.6	-0.1
	comp=Z,1.5nm,0.6s,baz=155,slow=5.2,SNR=5.6						
VNDA	Vanda	71.39	170	P	P	13 53 43.6	+1.6
TXAR	Lajitas Array	142.90	55	PKP	PKPdf	14 01 54.9	-2.1
	comp=Z,0.1nm,0.5s,baz=248,slow=1.0,SNR=2.7						

NEIC 18 13:48:01.3±2.0, 6.65S±0.08×127.3E±0.1, h396km±7km, mb4.6/45, Error ellipse: s-maj=14.6km s-min=11.6km az=77.0
DJA 18 13:48:02.4±0.4, 7°S±5°×12°7E±°, h410km±7km, M4.5/12, mb4.4/10, mB4.8/5, MLv4.7/12, Mw(mB)4.0/5
IDC 18 13:48:02.5±1.2, 6.73S×127.28E, h412km±13km, mb3.8/13, mb1 3.8/20, mb1mx3.6/49, mbtmp4.6/20, Error ellipse: s-maj=16.9km s-min=7.9km az=76.0
ISC 18 13:48:02.2±0.3, 6.68S±0.05×127.36E±0.06, h408km, n106, σ1§14/112, mb4.5/30, 1C-2D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	3.08	16	P	P	13 49 08.1	+1.4
BNDI	Bandanaira	3.32	50	P	P	13 49 08.8	+0.2
NLAI	Namlea	3.43	356	P	P	13 49 11.5	+2.0
MSAI	Masohi	3.66	25	P	P	13 49 11.4	-0.2
SAUI	Saumlaki	4.12	109	P	P	13 49 16.5	+0.8
SOEI	Soe	4.33	225	P	P	13 49 17.4	-0.4
SANI	Sanana	4.80	343	P	P	13 49 22.4	0.0
BBSI	Bau Bau	4.91	284	P	P	13 49 25.0	+1.5
LBMI	Labuha	6.00	1	P	P	13 49 36.6	+1.7
	0.3nm64nm,0.6s						
FAKI	Fak Fak	6.14	53	P	P	13 49 36.3	-0.1
	0.6nm143nm,0.8s						
SIJI	Sorong	6.96	34	P	P	13 49 45.5	-0.7
	4.5nm,0.3s,baz=172,slow=9.1,SNR=17						
SIJI				S	S	13 51 05.5	-4.8
	2.2nm,0.3s,baz=292,slow=20,SNR=7.9						
SWI	Sorong	6.96	34	P	P	13 49 47.6	+1.4
	0.2nm49nm,0.8s						
BKSI	Bulukumba	7.32	280	P	P	13 49 49.9	-0.2
	0.1nm870nm32nm,0.6s						
WSI	Waingapu	7.59	246	P	P	13 49 53.1	0.0
	5.0nm280nm,0.6s						
KAPI	Kappang	7.75	282	P	P	13 49 54.4	-0.4
	1.4nm,0.3s,baz=135,slow=7.7,SNR=7.4						
KAPI	Kappang	7.75	282	P	P	13 49 55.0	+0.3
RKPI	Ransiki, Papua	8.52	53	P	P	13 50 04.6	+1.3
	6μm86nm,0.7s						
MRSI	Marisa	8.93	323	P	P	13 50 08.7	+0.9
	21nm,0.5s						
KNRA	Kununurra	9.05	171	P	P	13 50 09.2	+0.1
FITZ	Fitzroy Crossi	11.47	188	P	P	13 50 35.6	-0.3
	1.4nm,0.3s,baz=21,slow=10,SNR=15						
JAGI	Jajag, Banyuwa	13.21	261	P	P	13 50 54.8	-0.3
	752nm39nm,1.1s						
SKMP	Bagumbayan, Su	13.41	348	eP	P	13 50 57.1	-0.1
MATI	Mati	13.58	355	eP	P	13 51 00.2	+1.1
KCP	Kidapawan	13.78	351	⇑iP	P	13 51 02.3	+0.9
JAY	Jayapura	13.93	73	P	P	13 51 05.0	+2.0
	4.1nm,0.3s,baz=218,slow=9.7,SNR=17						
BUKP	Musuan	14.64	351	eP	P	13 51 11.4	+0.8
WB0	Warramunga Arr	14.70	153	P	P	13 51 11.0	-0.1
WB0					S	13 53 45.7	-1.9
WRAB	Tennant Creek	14.82	153	P	P	13 51 12.4	-0.1
WRA	Warramunga Arr	14.83	153	P	P	13 51 12.5	-0.1
	2.5nm,0.3s,baz=327,slow=11,SNR=138						
WRA				S	S	13 53 47.4	-2.8
	0.7nm,0.3s,baz=316,slow=15,SNR=13						
WB2	Warramunga Arr	14.83	153	P	P	13 51 12.5	-0.2
WR0	Warramunga Arr	14.93	153	P	P	13 51 13.5	-0.2
PAGZ	Pagadian	14.96	345	eP	P	13 51 14.3	+0.2
PSA00	Pilbara Seismi	16.49	205	P	P	13 51 29.4	-1.1
PSA00				IAmb	IAmb	13 51 33.6	
	comp=Z,22nm,0.6s						
KKM	Kota Kinabalu	16.83	318	P	P	13 51 34.6	+0.3
KKM				IAmb	IAmb	13 51 47.9	
	comp=Z,21nm,0.8s						
COEN	Coen	17.15	116	P	P	13 51 38.1	+0.5
COEN				IAmb	IAmb	13 52 09.9	
	comp=Z,66nm,1.9s						
AS31	Alice Springs	18.02	160	P	P	13 51 46.7	-0.1
AS31					S	13 54 51.7	-0.6
ASAR	Alice Springs	18.03	160	P	P	13 51 47.0	+0.2
	comp=Z,3.7nm,0.3s,baz=353,slow=12,SNR=196						
ASAR				S	S	13 54 51.4	-0.9
	comp=Z,0.5nm,0.3s,baz=341,slow=21,SNR=11						
ASAR				ScP	ScP	13 58 55.4	-0.6
	comp=Z,0.1nm,0.3s,baz=333,slow=2.3,SNR=4.4						
KPJI	Karang Pucung	18.30	267	P	P	13 51 51.0	+1.3
	comp=Z,47nm,0.6s						
KSM	Kuching	18.85	295	P	P	13 51 56.7	+1.3
CISI	Cisompet, Garu	19.41	266	P	P	13 52 00.0	-0.9
PMG	Port Moresby	19.79	99	P	P	13 52 06.1	+1.8
	comp=Z,0.9nm,0.3s,baz=280,slow=6.1,SNR=2.6						
PMG	Port Moresby	19.79	99	P	P	13 52 06.1	+1.8
PMG				IAmb	IAmb	13 52 11.3	
	comp=Z,23nm,0.9s						
GIRL	Giralia	20.30	217	P	P	13 52 08.8	0.0
FORT	Forrest	23.99	179	P	P	13 52 42.0	-0.2
MORW	Morawa	24.70	204	P	P	13 52 48.0	-0.7

MORW IAmb IAmb 13 52 52.6
comp=Z,19nm,1.2s
BBOO Buckleboo 27.23 164 P P 13 53 11.2 +0.2
BBOO IAmb IAmb 13 53 11.8
comp=Z,13nm,0.7s
NWAO Narrogin (SRO) 27.76 199 P P 13 53 15.5 -0.2
comp=Z,6.2nm,0.4s,baz=48,slow=6.8,SNR=5.3
NWAO Narrogin (SRO) 27.76 199 P P 13 53 15.1 -0.7
NWAO IAmb IAmb 13 54 15.2
comp=Z,25nm,1.4s
NWAO Narrogin (SRO) 27.76 199 P P 13 53 14.9 -0.8
NWAO IAmb IAmb 13 53 16.6
comp=Z,8.2nm,0.8s
STKA Stephens Creek 28.38 154 P P 13 53 21.6 +0.5
comp=Z,6.9nm,0.5s,baz=330,slow=9.0,SNR=32
STKA ScP ScP 13 59 22.6 -1.0
comp=Z,2.0nm,0.9s,baz=302,slow=1.8,SNR=3.5
STKA Stephens Creek 28.38 154 P P 13 53 21.7 +0.5
STKA pP 13 54 32.6 -2.1
KULM Kulim 29.19 293 P P 13 53 28.9 +0.3
RPSI Rantau Prapat 29.87 287 P P 13 53 35.0 +0.5
YULB Yu-li 30.47 349 P P 13 53 36.5 -3.1
TPUB Ta-pu 30.51 348 P P 13 53 38.1 -1.8
SSLB Suanglung 30.92 349 P P 13 53 41.0 -2.5
SSLB IAmb IAmb 13 54 45.6
comp=Z,44nm,1.4s
YHNB Yeheng 31.70 350 P P 13 53 49.0 -1.3
YHNB IAmb IAmb 13 54 22.4
comp=Z,98nm,1.5s
CAN Canberra 34.76 148 P P 13 54 18.4 +2.0
CAN IAmb IAmb 13 55 41.1
comp=Z,38nm,1.6s
TOO Toolangi 34.90 154 P P 13 54 19.7 +2.3
TOO IAmb IAmb 13 55 16.7
comp=Z,60nm,1.9s
NJ2 Nanjing 39.36 349 eP P 13 54 54.8 +0.5
KMI Kunming 39.66 324 P P 13 54 56.9 -0.4
JNU Nakatsue 39.72 5 P P 13 54 57.4 +0.1
comp=Z,9.3nm,0.9s,baz=132,slow=5.4,SNR=3.2
JNU Nakatsue 39.72 5 P P 13 54 57.7 +0.3
JNU IAmb IAmb 13 55 05.2
comp=Z,74nm,1.4s
INU Inuyama 42.78 12 P P 13 55 22.4 +0.6
INU IAmb IAmb 13 56 57.9
comp=Z,27nm,1.2s
KSRS Korea Array 43.91 1 P P 13 55 31.3 +0.7
comp=Z,5.1nm,0.8s,baz=183,slow=9.5,SNR=14
KS19 Wonju Array Si 43.95 1 P P 13 55 31.3 +0.3
KS19 IAmb IAmb 13 56 19.1
comp=Z,98nm,1.9s
XAN Xi'an 44.10 338 P P 13 55 31.1 -1.2
MAJO Matsushiro 44.18 13 P P 13 55 32.5 -0.3
MAJO IAmb IAmb 13 55 33.2
comp=Z,23nm,1.1s
MAT Matsushiro 44.18 13 P P 13 55 32.2 -0.6
MJAR Matsushiro Arr 44.18 13 P P 13 55 32.3 -0.5
comp=Z,15nm,0.7s,baz=185,slow=8.2,SNR=34
MJB9 Matsu-Tunnel 44.18 13 P P 13 55 32.5 -0.4
MJB9 IAmb IAmb 13 55 33.2
comp=Z,24nm,1.1s
WAKE Wake Island 46.51 56 P P 13 55 50.6 -0.5
LZH Lanzhou 47.93 334 eP P 13 56 06.9 +5.0
LZH pP pP 13 57 21.4 -0.2
LZH sP sP 13 58 03.3 -4.3
HHC Hu-ho-hao-te 49.47 344 eP P 13 56 14.9 +1.6
USA0B Ussuriysk Arra 50.81 4 P P 13 56 23.6 +0.6
USRK Ussuriysk Ar. 50.81 4 P P 13 56 23.6 +0.6
comp=Z,9.1nm,0.6s,baz=191,slow=7.2,SNR=27
WHZ Wether Hill Ro 52.45 145 P P 13 56 35.4 +0.4
GTA Gaotai 52.46 333 ⇓P P 13 56 35.4 +0.1
GTA pP pwP 13 58 01.5 -1.0
GTA sP sP 13 58 45.8 +4.0
QRZ Quartz Range 52.65 137 P P 13 56 38.4 +1.8
QRZ IAmb IAmb 13 57 56.5
comp=Z,81nm,1.5s
RPZ Rata Peaks 53.11 141 P P 13 56 40.9 +1.1
RPZ IAmb IAmb 13 56 51.5
comp=Z,74nm,1.7s
BHW Baring Head 54.49 137 pP pP 13 58 10.7 -2.3
YSS Yuzh-Sakhalins 55.12 13 P P 13 56 54.1 +0.1
ULN Ulaanbaatar 57.19 344 P P 13 57 07.6 -1.0
SONM Songino Array 57.34 343 P P 13 57 10.1 +0.5
comp=Z,3.1nm,0.8s,baz=166,slow=7.8,SNR=20
WMQ Urumqi 61.72 328 eP P 13 57 40.3 +1.2
PEA0B Petropavlovsk- 64.87 20 P P 13 58 00.7 +1.5
PETK Petropavlovsk- 64.87 20 P P 13 58 00.9 +1.6
comp=Z,12nm,0.8s,baz=183,slow=4.9,SNR=13
MK31 Makanchi Array 66.54 328 P P 13 58 10.1 +0.1
MKAR Makanchi Array 66.54 328 P P 13 58 10.1 +0.1
comp=Z,1.9nm,0.5s,baz=124,slow=8.0,SNR=27
JOHN Johnston Islan 66.59 69 P P 13 58 12.2 +1.5
KDJ Kajisay 66.67 322 P P 13 58 11.8 +0.8
YAK Yakutsk 68.53 1 P P 13 58 22.1 +0.3
YAK IAmb IAmb 13 58 22.9
comp=Z,20nm,0.7s
AAK Ala-Archa 68.62 321 P P 13 58 23.4 +0.4
comp=Z,0.6nm,0.5s,baz=163,slow=14,SNR=3.2
AAK Ala-Archa 68.62 321 P P 13 58 22.8 -0.3
MA2 Magadan 68.62 13 P P 13 58 23.6 +1.1
MA2 IAmb IAmb 13 58 40.4
comp=Z,16nm,1.2s
ZAA0 Zalesovo Array 70.16 335 P P 13 58 30.7 -1.2
ZAA0 IAmb IAmb 13 58 32.1
comp=Z,7.5nm,0.8s
ZALV Zalesovo Beam 70.16 335 P P 13 58 31.3 -0.6
comp=Z,6.1nm,0.6s,baz=134,slow=5.4,SNR=28
KURK Kurchatov 70.90 330 P P 13 58 36.6 +0.2
SBA Scott Base 74.01 172 P P 13 58 55.1 +1.0
XMAS Kiritimati 75.55 86 P P 13 59 03.3 -0.7
BVAR Borovoye Array 76.41 329 P P 13 59 07.5 -0.5
comp=Z,0.8nm,0.5s,baz=151,slow=3.3,SNR=6.8
TIXI Tiksi 78.17 0 P P 13 59 16.8 -0.5
TIXI IAmb IAmb 13 59 18.0
comp=Z,5.4nm,0.6s
BILL Bilibino 79.42 14 P P 13 59 23.9 -0.2
BILL IAmb IAmb 14 01 29.0
comp=Z,15nm,2.0s
SYO Syowa Base 83.01 201⇓eX P 13 59 41.4 -1.3
ILAR Eielson Array 94.18 25 P P 14 00 33.9 -1.6
comp=Z,0.3nm,0.5s,baz=250,slow=5.1,SNR=7.4
GO02 Mina Guanaco 144.31 153 PKPdf 14 06 51.5 -0.2

IDC 18 14:02:22.6±4.7, 19.°62S×175.°14W, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.8/20, mbtmp4.3/3, Error ellipse: s-maj=182.8km s-min=93.6km az=160.0
NEIC 18 14:02:47.5±0.7, 20.°3S±0.°2×175.°8W±0.°2, h172km±11km, mb4.7/15, Error ellipse: s-maj=31.5km s-min=24.0km az=85.0
ISC 18 14:02:49.5±1.7, 20.°2S±0.°2×175.°7W±0.°2, h204km, n18, σ0.°60/19, mb4.5/8, Tonga Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 16.96 284 P P 14 06 32.9 -0.8
SANVU IAmb IAmb 14 07 10.0
comp=Z,50nm,1.6s
KNTN Kanton 17.78 13 P Pn 14 06 44.5 -0.3
MXZ Matakaoa Point 18.04 196 P P 14 06 44.3 -1.0
EIDS Eidsvold 31.00 254 P P 14 08 47.8 -0.2
EIDS IAmb IAmb 14 09 27.8
comp=Z,27nm,1.9s
COEN Coen 39.73 272 P P 14 10 02.4 -0.1
COEN IAmb IAmb 14 11 26.8
comp=Z,42nm,1.6s
STKA Stephens Creek 39.85 244 P P 14 10 03.7 +0.3
comp=Z,1.6nm,0.8s,baz=78,slow=10,SNR=4.2
BBOO Buckleboo 44.60 243 P P 14 10 42.6 +1.0
WR0 Warramunga Arr 46.59 261 P P 14 10 56.7 -0.7
WR0 IAmb IAmb 14 12 36.6
comp=Z,46nm,2.0s
AS31 Alice Springs 46.68 256 P P 14 10 58.5 +0.4
ASAR Alice Springs 46.68 256 P P 14 10 59.0 +0.8
comp=Z,3.9nm,0.7s,baz=88,slow=8.5,SNR=107
ASAR PcP PcP 14 12 29.3 +0.9
comp=Z,0.5nm,0.7s,baz=98,slow=4.2,SNR=4.3
WB0 Warramunga Arr 46.76 262 P P 14 10 58.7 0.0
WB2 Warramunga Arr 46.77 261 P P 14 10 58.5 -0.3
WB2 IAmb IAmb 14 12 08.8
comp=Z,45nm,2.0s
WRAB Tennant Creek 46.77 261 P P 14 10 58.7 0.0
WRA Warramunga Arr 46.78 261 P P 14 10 59.0 +0.1
comp=Z,1.5nm,0.3s,baz=98,slow=8.4,SNR=47
FORT Forrest 51.38 246 P P 14 11 34.1 +0.5
KNRA Kununurra 52.83 265 P P 14 11 44.6 +0.2
KNRA IAmb IAmb 14 13 44.2
comp=Z,29nm,1.2s
FITZ Fitzroy Crossi 55.20 262 P P 14 12 02.0 +0.4
PSA00 Pilbara Seismi 59.83 256 P P 14 12 33.6 -0.3

IDC 18 14:12:15.5±2.1, 7.°48S×126.°49E, h0km, mb3.4/1, mb1 3.8/3, mb1mx3.4/32, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=220.4km s-min=32.3km az=62.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 14.54 149 Pn Pn 14 15 41.8 -0.9
0.3nm,0.3s,baz=322,slow=13,SNR=13
WRA Sn Sn 14 18 08.4 -16
0.7nm,0.3s,baz=332,slow=21,SNR=11
ASAR Alice Springs 17.60 157 P Pn 14 16 22.9 +0.5
0.2nm,0.3s,baz=336,slow=12,SNR=22
ASAR S Sn 14 19 25.8 -13
0.1nm,0.3s,baz=332,slow=18,SNR=3.3
MKAR Makanchi Array 66.77 329 P P 14 23 08.9 0.0
0.3nm,0.6s,baz=118,slow=6.0,SNR=3.5

IDC 18 14:16:12.6±0.5, 5.°57S×148.°30E, h0km, mb4.8/17, mb1 4.9/23, mb1mx4.8/33, mbtmp4.8/23, ML4.5/5, MS4.2/14, Ms1 4.2/14, ms1mx4.1/18, Error ellipse: s-maj=15.8km s-min=11.5km az=85.0
GCMT 18 14:16:16.7±0.2, 5.°55S±0.°01×148.°27E±0.°01, h17km±1km, MW5.1/102, Moment Tensor Solution. s18,c19; s102,c146; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr1.21±.16; Mθθ2.52±.11; Mφφ-3.73±.15; Mrθ2.01±.42; Mrφ2.55±.12; Mθφ1.84±.42; Best double couple: Mo4.97400×10^{16} NP1:φs120.00000°, δ58.00000°, λ17.00000°. NP2:φs21.00000°, δ75.00000°, λ147.00000°. Principal axes: T 5.0990, Plg34.0000°, Azm336.0000°; N -0.2490, Plg54.0000°, Azm180.0000°; P -4.8500, Plg11.0000°, Azm74.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
MOS 18 14:16:16.8±1.1, 5.°62S×148.°23E, h43km, mb5.2/31 Error ellipse: s-maj=10.1km s-min=6.9km az=102.9
BJI 18 14:16:17.6±0.0, 5.°57S×148.°24E, h48km, mB5.1/43, mb4.8/59, Ms4.8/27, Ms7 4.5/18
NEIC 18 14:16:18.7±1.5, 5.°64S±0.°06×148.°24E±0.°07, h51km±6km, mb5.0/89, Error ellipse: s-maj=10.9km s-min=8.6km az=99.0
DJA 18 14:16:22.0±0.7, 6.°S±4.°×14.°8E±.°, h53km±8km, M5.1/14, mb5.0/14, mB5.4/7, MLv5.4/1, Mw(mB)4.8/7
ISC 18 14:16:17.5±0.3, 5.°60S±0.°04×148.°28E±0.°05, h35km, n235, σ1.°44/240, mb5.0/88, MS4.3/24, 11C-1D, New Britain region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MANU Manus Island 3.65 345 Pn 14 17 12.4 +0.9
PMG Port Moresby 3.94 196 Pn Pn 14 17 16.4 +0.8
17nm,0.3s,baz=25,slow=8.4,SNR=46
PMG Sn Sn 14 18 04.3 +3.7
24nm,0.3s,baz=8.3,slow=19,SNR=3.2
PMG LR LR 14 19 07.5
comp=Z,5μm,20.0s,baz=8.0,slow=44
PMG Port Moresby 3.94 196 P Pn 14 17 16.0 +0.4
PMG Port Moresby 3.94 196 ceP Pn 14 17 18.5 +2.9
PMG pmax pmax
comp=Z,1μm,1.0s
KRVT Keravat (AS076 3.94 71 Pn Pn 14 17 12.3 -3.2
comp=Z,30nm,0.3s,baz=333,slow=2.3,SNR=9.3
KRVT LR LR 14 18 44.7
comp=Z,9μm,18.7s,baz=214,slow=39
JAY Jayapura 8.16 292 Pn Pn 14 18 14.0 +0.5
comp=Z,0.8nm,0.3s,baz=110,slow=22,SNR=3.6
JAY LR LR 14 21 49.2
comp=Z,3μm,18.1s,baz=28,slow=41
COEN Coen 9.71 211 P Pn 14 18 34.7 -0.1
baz=9.6,SNR=15
COEN Coen 9.71 211 Pn 14 18 36.1 +1.3
HNR Honiara 12.17 109 Pn Pn 14 19 09.4 +0.8
comp=Z,3.5nm,0.3s,baz=247,slow=7.8,SNR=6.5
HNR LR LR 14 22 50.4
comp=Z,814nm,20.1s,baz=272,slow=33
HNR Honiara 12.17 109 P Pn 14 19 08.0 -0.6
HNR Honiara 12.17 109 Pn Pn 14 19 08.5 -0.1
MTSU Mount Surprise 13.05 197 P Pn 14 19 21.8 +1.3
baz=13,SNR=7.6
CTA Charters Tower 14.54 188 Pn P 14 19 44.6 -2.3
comp=Z,0.6nm,0.3s,baz=352,slow=14,SNR=8.6
PATS Pohnpei 15.90 39 P P 14 20 02.4 +0.3
baz=16,SNR=3.8
PATS Pohnpei 15.90 39 P P 14 20 04.7 +2.7
PATS IAmb IAmb 14 20 13.0
comp=Z,120nm,1.0s
QIS Mount Isa 17.09 209 P Pn 14 20 14.6 +0.7
baz=17,SNR=48
KDU Kakadu 17.12 245 P Pn 14 20 12.4 -1.7
baz=17,SNR=19
SIJI Sorong 17.62 285 Pn Pn 14 20 21.2 +0.7
comp=Z,2.9nm,0.3s,baz=89,slow=11,SNR=10
SWI Sorong 17.63 285 P P 14 20 24.5 +3.2
comp=Z,85nm,0.7s
WB0 Warramunga Arr 19.52 223 P P 14 20 40.9 -1.1
WB0 IAmb IAmb 14 20 50.2
comp=Z,84nm,0.9s
WR0 Warramunga Arr 19.55 222 P P 14 20 40.7 -1.7
WR0 IAmb IAmb 14 20 50.6
comp=Z,74nm,0.8s
WRAB Tennant Creek 19.66 222 P P 14 20 41.6 -2.0
WRAB IAmb IAmb 14 20 51.7
comp=Z,72nm,0.8s
WRAB Tennant Creek 19.66 222 ceP P 14 20 44.8 +1.2
WRAB pmax pmax
comp=Z,77nm,0.8s
WB2 Warramunga Arr 19.67 222 P P 14 20 41.8 -1.9
WB2 IAmb IAmb 14 20 51.9
comp=Z,72nm,0.7s
WRA Warramunga Arr 19.68 222 P P 14 20 42.6 -1.1
comp=Z,3.5nm,0.3s,baz=49,slow=11,SNR=32
WRA S Sn 14 24 24.8 -0.7
baz=42,slow=21,SNR=12
EIDS Eidsvold 19.84 173 P Pn 14 20 48.5 +1.3
baz=20,SNR=11
EIDS Eidsvold 19.84 173 P P 14 20 44.6 -0.9
RMQ Roma 20.77 179 P P 14 20 57.4 +1.8
baz=21,SNR=17
SANVU Saraoutou 21.00 119 P P 14 20 58.4 +0.3
QLP Quilpie 21.22 190 P P 14 21 02.2 +1.8
baz=21,SNR=40
KNRA Kununurra 21.62 241 P P 14 21 03.6 -1.2
baz=21,SNR=26
KNRA Kununurra 21.62 241 P P 14 21 02.7 -2.0
KNRA IAmb IAmb 14 21 22.3
comp=Z,56nm,0.8s
AS31 Alice Springs 22.68 216 P P 14 21 15.1 -1.1
AS31 IAmb IAmb 14 21 23.8
comp=Z,32nm,0.6s
ASAR Alice Springs 22.68 216 P P 14 21 15.3 -0.9
comp=Z,25nm,0.6s,baz=55,slow=9.2,SNR=126
ASAR S S 14 25 24.2 +2.0
comp=Z,11nm,1.1s,baz=33,slow=21,SNR=8.5
ASAR LR LR 14 31 30.2
comp=Z,1μm,18.4s,baz=46,slow=40
NOUC Port Laguerre 23.93 135 P P 14 21 27.5 -1.0
NOUC IAmb IAmb 14 21 32.0
comp=Z,78nm,1.1s
DZM Mont Dzumac 24.01 135 P P 14 21 30.1 +0.7
comp=Z,144nm,1.0s,baz=353,slow=9.9,SNR=35
SOEI Soe 24.15 259 P P 14 21 32.8 +2.0
comp=Z,2μmcomp=Z,64nm,0.8s
ARMA Armidale 24.89 173 P P 14 21 38.6 +1.3
baz=25,SNR=16
ARMA Armidale 24.89 173 P P 14 21 35.9 -1.4
ARMA IAmb IAmb 14 21 44.8
comp=Z,49nm,1.0s
FITZ Fitzroy Crossi 25.36 239 P P 14 21 40.7 -0.8
baz=25,SNR=40
FITZ Fitzroy Crossi 25.36 239 P P 14 21 40.8 -0.8
comp=Z,49nm,0.6s,baz=63,slow=10,SNR=39
FITZ Fitzroy Crossi 25.36 239 P P 14 21 40.4 -1.2
LUWI Luwuk 25.86 279 P P 14 21 49.2 +3.0
comp=Z,2μmcomp=Z,51nm,0.8s
CMSA Cobar Meteorol 25.92 185 P P 14 21 48.5 +2.0
baz=26,SNR=17
SKMP Bagumbayan, Su 26.58 297 eP P 14 21 52.5 -0.2
BUKP Musuan 26.75 300 eP P 14 21 56.0 +1.8
STKA Stephens Creek 26.88 193 P P 14 21 57.5 +2.3
baz=27,SNR=32
STKA Stephens Creek 26.88 193 P P 14 21 56.5 +1.4
comp=Z,36nm,0.7s,baz=12,slow=10,SNR=32
STKA LR LR 14 32 57.7
comp=Z,1μm,20.0s,baz=13,slow=37
STKA Stephens Creek 26.88 193 P P 14 21 54.9 -0.3
WRKA Warakurna 27.22 223 P P 14 21 59.2 +0.8
baz=27,SNR=15
PAGZ Pagadian 28.20 298 eP P 14 22 07.9 +0.7
YNG Young 28.56 180 P P 14 22 12.6 +2.5
baz=29,SNR=6.6
HTT Hallett 29.03 196 P P 14 22 14.8 +0.4
baz=29,SNR=8.9
BBOO Buckleboo 29.38 201 P P 14 22 16.7 -0.8
BBOO IAmb IAmb 14 22 57.9
comp=Z,28nm,0.9s
CAN Canberra 29.58 179 P P 14 22 19.2 -0.1
CAN Canberra 29.58 179 P P 14 22 19.2 -0.1
CAN pmax pmax
comp=Z,20nm,1.1s
FUNA Funafuti 30.81 97 P P 14 22 30.5 +0.1
FUNA IAmb IAmb 14 22 38.8
comp=Z,28nm,0.8s
FORT Forrest 31.44 215 P P 14 22 34.6 -1.2
MSVF Nonsavu 31.49 115 P P 14 22 37.1 +0.7
MSVF IAmb IAmb 14 23 04.6
comp=Z,24nm,0.9s
MSVF Nonsavu 31.49 115 P P 14 22 37.1 +0.7
MSVF pmax pmax
comp=Z,24nm,1.0s
PSA00 Pilbara Seismi 31.78 237 P P 14 22 36.7 -2.1
PSA00 IAmb IAmb 14 22 48.2
comp=Z,26nm,0.8s
TOO Toolangi 31.93 184 P P 14 22 41.1 +1.2
baz=32,SNR=4.8
TOO Toolangi 31.93 184 P P 14 22 38.9 -1.1
TOO Toolangi 31.93 184 P P 14 22 38.9 -1.1
TOO pmax pmax
comp=Z,14nm,1.0s
MEEK Meekatharra 35.19 230 P P 14 23 07.9 -0.6
baz=35,SNR=21
KMBL Kambalda 35.63 221 P P 14 23 11.8 -0.5
baz=36,SNR=4.5
MOO Moorlands 36.70 181 P P 14 23 23.6 +2.5
baz=37,SNR=5.6
MORW Morawa 38.39 229 P P 14 23 35.6 -0.2
baz=38,SNR=4.6
MORW Morawa 38.39 229 P P 14 23 34.4 -1.3
KLBR Kellerberrin 38.54 224 P P 14 23 35.7 -1.3
baz=38,SNR=9.9
YULB Yu-li 39.05 319 P P 14 23 39.6 -1.6
YULB IAmb IAmb 14 23 58.3
comp=Z,37nm,1.1s
TPUB Ta-pu 39.43 318 P P 14 23 42.5 -1.9
TPUB IAmb IAmb 14 23 57.2
comp=Z,33nm,0.9s
SSLB Suanglung 39.55 319 P P 14 23 44.6 -0.9
SSLB IAmb IAmb 14 24 36.8
comp=Z,25nm,1.1s
NWAO Narrogin (SRO) 39.68 223 P P 14 23 48.4 +1.9
comp=Z,6.1nm,0.6s,baz=60,slow=9.4,SNR=5.5
NWAO Narrogin (SRO) 39.68 223 P P 14 23 44.6 -1.8
NWAO Narrogin (SRO) 39.68 223 P P 14 23 44.6 -1.8
NWAO IAmb IAmb 14 24 10.7
comp=Z,20nm,0.9s
MUN Mundaring 39.84 225 P P 14 23 48.7 +0.9
baz=40,SNR=7.5
YHNB Yeheng 39.89 320 P P 14 23 47.5 -0.8
QRZ Quartz Range 41.25 152 P P 14 23 58.3 -1.0
QRZ IAmb IAmb 14 24 05.6
comp=Z,30nm,1.2s
KNMB Chin-men Tao 41.72 317 P P 14 24 03.4 0.0
URZ Urewera 41.74 145 P P 14 24 03.5 +0.2
comp=Z,3.6nm,0.4s,baz=249,slow=8.3,SNR=9.3
URZ Urewera 41.74 145 P P 14 24 03.3 0.0
JNU Nakatsue 41.90 338 P P 14 24 04.7 0.0
BKZ Black Stump Fm 42.03 147 P P 14 24 05.7 -0.1
INU Inuyama 42.09 346 P P 14 24 06.4 +0.2
THZ Tophouse 42.16 152 P P 14 24 06.4 -0.5
THZ IAmb IAmb 14 24 22.2
comp=Z,28nm,0.9s
TUWZ Tuamarina 42.40 151 P P 14 24 08.5 -0.1
LTZ Lake Taylor 42.69 154 P P 14 24 11.6 +0.6
LTZ IAmb IAmb 14 24 17.8
comp=Z,28nm,1.1s
BHW Baring Head 42.83 150 P P 14 24 11.4 -0.7
RPZ Rata Peaks 42.93 156 P P 14 24 12.9 -0.1
comp=Z,33nm,1.3s,baz=335,slow=4.0,SNR=4.3
RPZ Rata Peaks 42.93 156 P P 14 24 12.9 -0.1
KHZ Kahutara 42.97 152 P P 14 24 12.7 -0.5
KHZ IAmb IAmb 14 24 33.2
comp=Z,38nm,1.2s
MJAR Matsushiro Arr 42.97 348 P P 14 24 13.5 +0.2
comp=Z,10.0nm,1.1s,baz=167,slow=8.0,SNR=8.7
MAJO Matsushiro 42.97 348 P P 14 24 14.0 +0.7
MAJO IAmb IAmb 14 24 24.3
comp=Z,24nm,0.9s
MAJO Matsushiro 42.97 348 P P 14 24 14.0 +0.7
MAJO pmax pmax
comp=Z,24nm,1.0s
MAT Matsushiro 42.97 348 P P 14 24 12.3 -1.1
MAT S S 14 30 36.2 -0.2
MJB9 Matsu-Tunnel 42.97 348 P P 14 24 14.3 +0.9
MJB9 IAmb IAmb 14 24 24.3
comp=Z,24nm,0.9s
MSWZ Moikau Station 43.02 150 P P 14 24 13.2 -0.5
PLWZ Palliser 43.14 150 P P 14 24 12.2 -2.5
QIZ Qiongzhong 45.08 304 P P 14 24 27.3 -3.3
QIZ S S 14 31 04.0 -3.7
QIZ LR LR
comp=Z,460nm,22.3s
NJ2 Nanjing 46.77 325 eP P 14 24 44.1 +0.4
NJ2 pmax pmax
comp=Z,13nm,0.5s
KSRS Korea Array 46.85 338 P P 14 24 45.0 +0.8
comp=Z,3.3nm,0.9s,baz=153,slow=8.6,SNR=7.8
KSRS Korea Array 46.85 338 P P 14 24 45.0 +0.8
WHN Wuhan 48.44 320 P P 14 25 04.3 +7.7
GYA Guiyang 51.39 310 eP P 14 25 19.3 0.0
GYA pmax pmax
comp=Z,10.0nm,0.8s
USRK Ussuriysk Ar. 51.70 345 P P 14 25 22.0 +0.9
comp=Z,4.7nm,0.7s,baz=191,slow=5.5,SNR=9.7
KMI Kunming 53.77 307 P P 14 25 39.3 +2.2
KMI pP sP 14 25 51.6 -0.1
KMI sP pP 14 25 58.0 +10
KMI pmax pmax
comp=Z,14nm,0.8s
KMI pmax pmax
comp=Z,94nm,3.6s
BJI Beijing 54.19 330 P P 14 25 40.1 +0.5
BJI pmax pmax
comp=Z,4.0nm,0.7s
BJI LR LR
comp=Z,270nm,12.6s
BJI LR LR
comp=Z,140nm,15.2s
BJI LR LR
comp=Z,260nm,11.3s
CMAR Chiang Mai Arr 54.19 297 P P 14 25 41.6 +1.6
comp=Z,2.1nm,0.8s,baz=125,slow=6.2,SNR=12
CMAR LR LR 14 49 42.9
comp=Z,61nm,19.8s,baz=110,slow=37
CMAR Chiang Mai Arr 54.19 297 ceP P 14 25 43.4 +3.4
CMAR pmax pmax
comp=Z,2.0nm,0.7s
XAN Xi'an 54.20 320 P P 14 25 40.3 +0.4
XAN S S 14 33 14.8 0.0
XAN SS SKiKP 14 36 52.8 +3.7
XAN pmax pmax
comp=Z,24nm,1.6s
XAN pmax pmax
comp=Z,170nm,3.9s
XAN LR LR
comp=Z,180nm,18.4s
XAN LR LR
comp=Z,260nm,17.4s
CD2 Chengdu 55.92 313 P P 14 25 53.4 +1.0
CD2 S S 14 33 36.9 -1.2
CD2 pmax pmax
comp=Z,20nm,0.6s

CD2 LR LR
comp=Z,410nm,16.7s
CD2 LR LR
comp=Z,350nm,16.2s
CD2 LR LR
comp=Z,420nm,14.7s
KLR Kul'dur 56.48 347 *i* P **P 14 25 57.3 +1.4**
KLR pmax pmax
comp=Z,14nm,1.0s
GRNR Gornyy 57.07 351 *e*P P 14 26 05.9 +5.8
GRNR MLR MLR
comp=Z,150nm,16.0s
HHC Hu-ho-hao-te 57.18 327 *e*P **P 14 26 01.8 +0.6**
HHC S **S 14 33 50.3 -4.2**
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,51nm,5.2s
HHC LR LR
comp=Z,280nm,20.8s
HHC LR LR
comp=Z,200nm,17.1s
HHC LR LR
comp=Z,260nm,18.0s
LZH Lanzhou 58.75 318 ⇑P **P 14 26 12.3 -0.1**
LZH pP pP 14 26 25.6 +2.9
LZH sP sP 14 26 33.6 +6.9
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,69nm,4.3s
LZH LR LR
comp=Z,210nm,15.7s
LZH LR LR
comp=Z,280nm,15.4s
LZH LR LR
comp=Z,350nm,16.4s
PETK Petropavlovsk- 59.03 7 P **P 14 26 15.0 +1.3**
comp=Z,7.5nm,0.5s,baz=167,slow=7.3,SNR=34
PETK LR LR 14 48 39.0
comp=Z,150nm,21.8s,baz=239,slow=33
ZEA Zeya 61.71 346 *e*P **P 14 26 34.2 +2.1**
ZEA pmax pmax
comp=N,30nm,1.0s
ZEA pmax pmax
comp=Z,35nm,1.0s
PPT2 Papeete2 61.79 107 *e*S **S 14 34 50.8 -3.9**
comp=Z,76nm,24.8s
PPT2 *e*LQ LQ 14 42 29.8
comp=Z,697nm,34.5s
PPT2 *e*LR LR 14 45 01.1
comp=Z,168nm,25.2s
TBI Tubuai 62.35 113 *e*LR LR 14 45 17.6
comp=Z,208nm,31.8s
SHL Shillong 62.88 302 P **P 14 26 39.8 -0.9**
SHL Shillong 62.88 302 P **P 14 26 39.8 -0.9**
SHL pmax pmax
comp=Z,22nm,1.0s
GTA Gaotai 63.26 320 P **P 14 26 44.4 +1.5**
GTA pP sP 14 27 00.0 +2.4
GTA pmax pmax
comp=Z,6.0nm,0.9s
GTA pmax pmax
comp=Z,160nm,6.0s
GTA LR LR
comp=Z,110nm,20.3s
GTA LR LR
comp=Z,110nm,19.9s
ULN Ulaanbaatar 64.38 331 P **P 14 26 49.1 -1.0**
ULN IAmb IAmb 14 26 58.0
comp=Z,19nm,1.1s
ULN Ulaanbaatar 64.38 331 P **P 14 26 49.2 -1.0**
ULN pmax pmax
comp=Z,19nm,1.1s
SONM Songino Array 64.69 330 P **P 14 26 52.8 +0.7**
comp=Z,5.7nm,0.8s,baz=144,slow=4.5,SNR=23
TAPN Taplejung 67.00 303 *e*P **P 14 27 09.0 +1.3**
comp=Z,25nm,0.8s
ODAN Odare 67.11 302 *e*P **P 14 27 09.4 +1.1**
comp=Z,24nm,0.8s
RAMN Ramite 67.81 302 *e*P **P 14 27 13.3 +0.6**
comp=Z,8.5nm,0.5s
ZAK Zakamensk 67.91 331 *e*P **P 14 27 13.7 +1.0**
ZAK pmax pmax
comp=Z,23nm,1.1s
JIRN Jiri 68.38 303 *e*P **P 14 27 17.4 +1.0**
comp=Z,22nm,0.6s
SEY Seymchan 68.41 2 *i* P **P 14 27 16.9 +1.5**
TLY Talaya 68.59 332 *e*P **P 14 27 17.9 +1.1**
TLY pmax pmax
comp=Z,49nm,1.4s
TLY MLR MLR
comp=Z,207nm,14.0s
IRK Irkutsk 68.67 333 *e*P **P 14 27 17.1 -0.2**
IRK pmax pmax
comp=Z,49nm,3.1s
GUN Gumba 68.72 303 *e*P **P 14 27 18.7 +0.2**
comp=Z,41nm,0.9s
YAK Yakutsk 68.95 351 P **P 14 27 18.7 -0.1**
YAK Yakutsk 68.95 351 *e*P **P 14 27 20.4 +1.7**
YAK pmax pmax
comp=Z,18nm,1.5s
YAK pmax pmax
comp=N,15nm,1.5s
BOD Bodaibo 69.01 341 *e*P **P 14 27 21.0 +1.8**
BOD pmax pmax
comp=Z,23nm,1.3s
PKI Pulchoki 69.01 302 *e*P **P 14 27 20.6 +0.3**
comp=Z,13nm,0.8s
PKIN Phulchoki 69.02 302 *e*P **P 14 27 20.9 +0.6**
comp=Z,7.2nm,0.6s
KKN Kakani 69.19 302 *e*P **P 14 27 22.1 +0.8**
comp=Z,21nm,0.8s
DMN Daman 69.28 302 *e*P **P 14 27 23.2 +1.3**
GKN Gorkha 69.79 302 *e*P **P 14 27 25.7 +0.7**
comp=Z,24nm,0.7s
MOY Mondy 69.84 331 *e*P **P 14 27 26.7 +2.0**
MOY pmax pmax
comp=Z,54nm,2.0s
DANN Dangsing 70.64 303 *e*P **P 14 27 30.8 +0.5**
comp=Z,22nm,0.7s
WMQ Urumqi 73.33 319 *e*P **P 14 27 46.4 +0.6**
WMQ pP sP 14 28 00.8 +0.2
WMQ pmax pmax
comp=Z,9.0nm,1.1s
WMQ pmax pmax
comp=Z,96nm,3.7s
WMQ LR LR
comp=Z,360nm,29.1s
WMQ LR LR
comp=Z,1µm,29.0s
BILL Bilibino 74.56 7 P **P 14 27 51.8 -0.6**
BILL IAmb IAmb 14 28 00.1
comp=Z,32nm,1.1s
BILL Bilibino 74.56 7*d**e*P **P 14 27 54.5 +2.1**
BILL *e* 14 28 06.3
BILL *e* 14 30 44.4
BILL *e*S **SKSac 14 37 53.2 -4.4**
BILL pmax pmax
comp=Z,39nm,1.2s
BILL MLR MLR
comp=Z,71nm,16.0s
DGAR Diego Garcia 75.28 264 P **P 14 27 58.4 +0.7**
DGAR pmax pmax
comp=Z,30nm,1.6s
GAMB Gambell 75.41 17 P **P 14 27 58.4 +1.1**
CHGN Chignik 75.46 27 P **P 14 27 55.3 -2.5**
ANM Nome 77.92 19 P **P 14 28 12.0 +0.5**
ANM IAmb IAmb 14 28 19.9
comp=Z,15nm,1.0s
ANM Nome 77.92 19 P **P 14 28 12.0 +0.5**
ANM pmax pmax
comp=Z,15nm,1.0s
MK31 Makanchi Array 78.01 320 P **P 14 28 11.2 -1.3**
MK31 Makanchi Array 78.01 320 P **P 14 28 11.2 -1.3**
MK31 pmax pmax
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 78.01 320 P **P 14 28 12.0 -0.5**
comp=Z,4.5nm,0.9s,baz=99,slow=6.6,SNR=27
MKAR LR LR 15 02 45.6
comp=Z,64nm,20.2s,baz=72,slow=36
TIXI Tiksi 78.15 354 P **P 14 28 11.6 -1.1**
TIXI IAmb IAmb 14 28 17.9
comp=Z,14nm,1.1s
TIXI Tiksi 78.15 354*c**e*P **P 14 28 15.2 +2.5**
TIXI pmax pmax

comp=Z,11nm,1.0s
MAKZ Makanchi 78.21 320 P **P 14 28 13.0 -0.6**
MAKZ Makanchi 78.21 320 P **P 14 28 13.0 -0.6**
MAKZ pmax pmax
comp=Z,9.0nm,1.0s
OHAK Old Harbor 78.34 28 P **P 14 28 14.1 +0.1**
PRZ Przheval'sk 79.16 315 P **P 14 28 18.3 -0.9**
PRZ IAmb IAmb 14 28 29.0
comp=Z,24nm,1.1s
PRZ Przheval'sk 79.16 315 P **P 14 28 18.3 -0.9**
PRZ pmax pmax
comp=Z,24nm,1.1s
SVW2 Sparrevohn 79.36 24 P **P 14 28 21.2 +1.6**
SVW2 IAmb IAmb 14 28 29.6
comp=Z,18nm,1.0s
ZAA0 Zalesovo Array 79.36 327 P **P 14 28 19.3 -0.4**
ZALV Zalesovo Beam 79.36 327 P **P 14 28 18.6 -1.1**
comp=Z,5.2nm,0.7s,baz=107,slow=5.3,SNR=19
ZALV LR LR 15 02 54.3
comp=Z,276nm,20.8s,baz=117,slow=35
ZALV Zalesovo Beam 79.36 327 *i* P **P 14 28 19.5 -0.2**
ZALV pmax pmax
comp=Z,5.0nm,0.6s
KDJ Kajisay 79.92 314 P **P 14 28 22.3 -1.0**
KDJ Kajisay 79.92 314 P **P 14 28 22.3 -1.0**
KDJ pmax pmax
comp=Z,11nm,1.0s
KSH Kashi 80.07 312 P **P 14 28 27.4 +3.3**
KSH pmax pmax
comp=Z,13nm,1.2s
KSH pmax pmax
comp=Z,75nm,6.5s
CNPM China Poot 80.41 27 P **P 14 28 25.9 +0.6**
NIL Nilore 80.74 305 P **P 14 28 25.9 -1.8**
NIL IAmb IAmb 14 28 33.5
comp=Z,14nm,0.8s
NIL Nilore 80.74 305 P **P 14 28 25.9 -1.8**
NIL pmax pmax
comp=Z,14nm,0.8s
BOOM Boomskoye usch 80.91 314 P **P 14 28 27.5 -1.1**
BOOM Boomskoye usch 80.91 314 P **P 14 28 27.5 -1.1**
KURK Kurchatov 81.66 323 P **P 14 28 29.9 -2.2**
KURK Kurchatov 81.66 323*c**e*P **P 14 28 32.7 +0.6**
KURK pmax pmax
comp=Z,13nm,1.3s
AAK Ala-Archa 81.97 314 P **P 14 28 31.6 -2.6**
AAK Ala-Archa 81.97 314*c**e*P **P 14 28 35.8 +1.6**
AAK pmax pmax
comp=Z,5.0nm,1.3s
KTH Kantishna Hill 82.48 23 P **P 14 28 36.3 0.0**
KTH IAmb IAmb 14 28 43.7
comp=Z,17nm,1.0s
TRF Thorofare Moun 82.69 23 P **P 14 28 36.2 -1.2**
BPAW Bear Paw Mtn. 82.72 23 P **P 14 28 35.9 -1.5**
RND Reindeer 83.24 24 P **P 14 28 39.0 -1.2**
RND IAmb IAmb 14 28 45.8
comp=Z,20nm,0.8s
RND Reindeer 83.24 24 P **P 14 28 39.0 -1.2**
RND pmax pmax
comp=Z,20nm,0.8s
MLY Manley 83.27 22 P **P 14 28 39.4 -0.9**
MCK McKinley 83.35 23 P **P 14 28 40.4 -0.3**
MCK McKinley 83.35 23 P **P 14 28 40.4 -0.3**
MCK pmax pmax
comp=Z,28nm,1.0s
DHY Denali Highway 83.69 24 P **P 14 28 42.6 0.0**
DHY IAmb IAmb 14 28 51.3
comp=Z,15nm,0.8s
WRH Wood River Hil 84.02 23 P **P 14 28 44.3 +0.3**
WRH IAmb IAmb 14 28 54.0
comp=Z,17nm,1.0s
CCB Clear Creek Bu 84.21 23 P **P 14 28 44.8 -0.3**
CCB IAmb IAmb 14 28 54.2
comp=Z,15nm,1.2s
TCOL CIGO, UAF Yank 84.28 23 P **P 14 28 45.5 +0.1**
baz=244
COLA College 84.29 23 P **P 14 28 45.1 -0.3**
COLA IAmb IAmb 14 28 55.2
comp=Z,14nm,0.9s
COLA College 84.29 23 P **P 14 28 45.1 -0.3**
COLA pmax pmax
comp=Z,14nm,1.0s
QSPA South Pole Qui 84.36 180 P **P 14 28 44.8 -1.2**
QSPA IAmb IAmb 14 28 59.6
comp=Z,16nm,0.9s
HDA Harding Lake 84.44 23 P **P 14 28 45.8 -0.4**
HDA Harding Lake 84.44 23 P **P 14 28 46.6 +0.4**
baz=245
COLD Coldfoot 84.52 20 P **P 14 28 46.5 0.0**
POKR Poker Plat Res 84.56 23 P **P 14 28 46.7 -0.1**
baz=244
IL31 84.62 23 P **P 14 28 46.6 -0.4**
IL31 IAmb IAmb 14 28 49.6
comp=Z,9.0nm,0.8s
ILAR Eielson Array 84.62 23 P **P 14 28 47.1 0.0**
comp=Z,10nm,0.9s,baz=252,slow=3.4,SNR=58
ILAR LR LR 15 03 46.8
comp=Z,64nm,20.2s,baz=258,slow=34
KK31 Karatay Array 84.93 314 P **P 14 28 47.6 -1.6**
KK31 IAmb IAmb 14 29 13.7
comp=Z,14nm,1.1s
KK31 Karatay Array 84.93 314 P **P 14 28 47.6 -1.6**
KK31 pmax pmax
comp=Z,14nm,1.2s
KKAR Karatay Array 84.93 314 P **P 14 28 47.5 -1.6**
KKAR IAmb IAmb 14 29 13.7
comp=Z,14nm,1.1s
KKAR Karatay Array 84.93 314 P **P 14 28 47.6 -1.6**
KKAR pmax pmax
comp=Z,14nm,1.2s
RIDG Independent Ri 85.00 24 P **P 14 28 48.6 -0.5**
MENT Mentasta 85.16 25 P **P 14 28 48.0 -1.9**
MENT IAmb IAmb 14 29 00.4
comp=Z,10nm,0.8s
DOT Dot Lake 85.29 24 P **P 14 28 49.0 -1.6**
BARN Barnard Glacie 85.39 27 P **P 14 28 50.5 -0.8**
BARN IAmb IAmb 14 28 58.6
comp=Z,14nm,0.8s
CTGM Chitina Glacie 85.50 27 P **P 14 28 51.2 -0.7**
CTGM IAmb IAmb 14 29 02.6
comp=Z,16nm,1.0s
FYU Fort Yukon 85.99 22 P **P 14 28 54.5 +0.7**
EGAK Eagle 86.88 24 P **P 14 28 59.1 +0.7**
HYT Haines Junctio 87.24 28 P **P 14 29 01.1 +0.7**
BRVK Borovoye 87.27 324 P **P 14 28 58.8 -1.7**
BRVK Borovoye 87.27 324*c**e*P **P 14 29 01.1 +0.6**
BRVK pmax pmax
comp=Z,10.0nm,1.7s
DAWY Dawson 87.37 25 P **P 14 29 00.9 +0.1**
SKAG Skagway 87.92 30 P **P 14 29 03.1 -0.3**
WHY Whitehorse 88.44 29 P **P 14 29 05.7 -0.3**
WHY IAmb IAmb 14 29 10.0
comp=Z,10nm,1.1s
EPYK Eagle Plains 89.13 23 P **P 14 29 09.5 +0.4**
EPYK Eagle Plains 89.13 23 P **P 14 29 09.4 +0.3**
baz=254
INK Inuvik 90.82 21 P **P 14 29 16.9 +0.1**
INK Inuvik 90.82 21 P **P 14 29 16.9 +0.1**
INK pmax pmax
comp=Z,20nm,1.1s
SYO Syowa Base 91.40 200⇑*e*pP pP 14 29 35.0 +4.2
GEYT Alibeck 93.53 308 LR LR 15 13 11.9
comp=Z,88nm,21.2s,baz=30,slow=37
C36M Paulatuk 94.37 21 P **P 14 29 33.1 -0.1**
C36M IAmb IAmb 14 29 38.9
comp=Z,4.3nm,0.9s
ARU Arti 94.47 326*c* *i*P **P 14 29 34.4 +0.4**
ARU *PP **sP 14 29 51.1 +2.2**
ARU 14 33 22.2
ARU S **SKSac 14 40 02.7 -3.8**
ARU pmax pmax
comp=Z,10.0nm,1.4s
NVAR Mina Array Bea 96.12 52 LR LR 15 10 32.3
comp=Z,105nm,18.1s,baz=310,slow=34
YKA Yellowknife Ar 98.22 28 P **P 14 29 51.0 +0.2**
comp=Z,0.6nm,0.6s,baz=274,slow=4.8,SNR=8.1
YKA PKKPbc **PKKPbc 14 46 20.8 -4.5**
comp=Z,0.3nm,0.5s,baz=89,slow=2.7,SNR=9.5
YKA LR LR 15 11 56.0
comp=Z,31nm,20.1s,baz=0.0,slow=34
YKA Yellowknife Ar 98.22 28⇑*e*P Pdif 14 29 55.2 +4.3
YKA pmax pmax
comp=Z,3.0nm,1.0s
CLL Collm 121.29 329 *e*PKPdf **PKPdf 14 35 05.0 -2.0**
CLL Lm MLR 15 29 00.0

comp=Z,200nm,19.0s
CLL Collm 121.29 329 *e*PKIKP **PKPdf 14 35 05.0 -2.0**
SAML Samuel 145.46 115 **PKPdf 14 35 51.4 -1.6**
SAML Samuel 145.46 115 PKP2 **PKPdf 14 35 51.4 -1.6**
TORD Torodi Ar. Bea 146.22 285 PKPbc **PKPdf 14 35 53.6 -0.7**
comp=Z,1.1nm,0.4s,baz=57,slow=4.1,SNR=14
DBIC Dimbokro 153.27 274 PKPbc **PKPbc 14 36 13.7 +0.7**
comp=Z,2.7nm,1.0s,baz=295,slow=19,SNR=2.7
BDFB Brasilia 153.43 143 PKPbc **PKPbc 14 36 12.9 -0.5**
comp=Z,2.4nm,0.5s,baz=143,slow=7.4,SNR=4.0

BER 18 14:26:41.3±1.2, 67.91N×12.90E, h1km±4km, ML1.1, Confirmed Earthquake, Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOF	**Lofoten**	**0.33**	**47**	*e*P	Pg	14 26 46.8	-0.8
LOF				*e*S	Sg	14 26 51.3	-0.6
LOF				IAML		14 26 51.5	
	comp=Z,16nm,0.5s						
STEI	**Steigen**	**0.89**	**87**	*e*P	Pg	14 26 57.3	-1.0
STEI				*e*S	Sg	14 27 09.2	-0.4
STEI				IAML		14 27 11.4	
	comp=Z,4.5nm,0.4s						
KONS	**Konsvik**	**1.42**	**176**	*e*P	Pn	14 27 05.6	-2.5
KONS				*e*S	Sg	14 27 24.0	-2.7
KONS				IAML		14 27 31.2	
	comp=Z,15nm,1.1s						
MOR8	**Moi Rana**	**1.85**	**160**	*e*P	Pn	14 27 11.4	-2.6
MOR8				*e*S	Sn	14 27 33.9	-4.0
MOR8				IAML		14 27 36.6	
	comp=Z,2.0nm,0.6s						

HEL 18 14:27:14.4±0.5, 60.44N×26.34E, h0km, ML1.3, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVF	**Pernaja**	**0.26**	**293**	PG	Pg	14 27 19.0	-0.3
	baz=111						
PVF				SG	Sg	14 27 22.6	0.0
VJF	**Virojoki**	**0.61**	**80**	PG	Pg	14 27 25.3	-0.7
	baz=269						
VJF				SG	Sb	14 27 36.5	-0.4
NUR	**Nurmijrvi**	**0.84**	**275**	PB	Pg	14 27 30.4	-0.1
	baz=81						
FIA0	**FINESS Array S**	**1.01**	**353**	PN	Pb	14 27 34.4	-0.4
FIA0				SB	Sg	14 27 46.8	-0.1
KAF	**Kangasniemi**	**1.68**	**359**	SG	Sn	14 28 06.0	-1.1
KEF	**Keuruu**	**1.87**	**338**	MSG		14 28 10.1	
	comp=Z,1.6nm,0.2s						
KEF				SG	Sb	14 28 12.6	-0.7
SUF	**Sumiainen**	**2.29**	**358**	MSG		14 28 22.0	
	comp=Z,0.6nm,0.2s						
SUF				SG	Sb	14 28 24.5	-0.7
RAF	**Rauma**	**2.32**	**286**	MSG		14 28 23.1	
	comp=Z,1.8nm,0.2s						
RAF				SG	Sb	14 28 26.3	+0.1

NAO 18 14:28:39.2±1.5, 67.67N×33.79E, ML1.9, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APZ9	**Apatity**	**0.18**	**236**	Pg	Pg	14 28 42.9	+0.3
APZ9				Lg	Lg	14 28 45.8	
APZ9	**Apatity**	**0.18**	**236**	Pg	Pg	14 28 42.9	+0.3
APZ9				Sg	Sg	14 28 45.8	+0.9
APA0	**Apatity Array**	**0.31**	**259**	Pg	Pg	14 28 45.1	0.0
	baz=78,slow=16						
APA0				Lg	Lg	14 28 49.0	
	baz=84,slow=22						
APA0				Rg	Rg	14 28 51.0	
	baz=74,slow=56						
APA0	**Apatity Array**	**0.31**	**259**	Pg	Pg	14 28 45.1	0.0
	baz=78,slow=16						
APA0				Sg	Sg	14 28 49.0	-0.2
	baz=84,slow=22						
APA0				Rg	Rg	14 28 51.0	
	baz=74,slow=56						
KEV	**Kevo**	**3.24**	**313**	Pn	Pn	14 29 30.7	-0.5
KEV				Sn	Sn	14 30 10.9	+0.5
KEV				Lg	Lg	14 30 20.9	
KEV	**Kevo**	**3.24**	**313**	Pn	Pn	14 29 30.7	-0.5
KEV				Sn	Sn	14 30 10.9	+0.5
KEV				Sg	Sg	14 30 20.9	-2.3
ARA0	**ARCESS Array S**	**3.57**	**305**	Pn	Pn	14 29 36.0	+0.3
	baz=123,slow=16						
ARA0				Sn	Sn	14 30 17.9	-0.6
	baz=123,slow=28						
ARA0				Lg	Lg	14 30 28.8	
	baz=108,slow=37						
ARE0	**ARCESS Array S**	**3.57**	**305**	*e*P	Pn	14 29 34.4	-1.3
ARE0				*e*S	Sn	14 30 17.6	-1.0
ARE0				IAML		14 30 46.5	
	comp=Z,4.9nm,0.8s						

MAN 18 14:39:53.2, 18.63N×120.23E, h29km, MS3.7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.73**	**163**	⇓*i*P	Pn	14 40 07.9	+0.3
SIPP				*e*S	Sn	14 40 18.3	+0.5
ABRA	**Dolores**	**1.08**	**155**	*e*P	Pn	14 40 12.4	+0.1
ABRA				*e*S	Sn	14 40 25.9	-0.4
APYP	**Conner**	**1.23**	**128**	*e*P	Pn	14 40 13.7	-0.7
APYP				*e*S	Sn	14 40 27.7	-2.4
SGCP	**Mt. Cagua**	**1.77**	**102**	*e*P	Pn	14 40 22.6	+0.8
SGCP				*e*S	Sn	14 40 44.5	+1.1
CAUP	**Cauayan**	**2.26**	**138**	*e*P	Pn	14 40 29.6	+1.0
CAUP				*e*S	Sb	14 40 59.8	-1.1
SMPP	**San Manuel, Pa**	**2.50**	**170**	*e*P	Pn	14 40 32.3	+0.4
SMPP				*e*S	Sn	14 41 03.0	+1.5
BALP	**Baler**	**3.15**	**156**	*e*P	Pb	14 40 45.1	-3.3
BALP				*e*S	Sn	14 40 54.6	-23

*IDC **18** 14:41:34.3±0.7, 44.28S×38.37E, h0km, mb4.1/7, mb1 4.2/9, mb1mx3.9/29, mbtmp4.1/9, ML3.5/2, MS3.8/8, Ms1 3.8/8, ms1mx3.5/33, Error ellipse: s-maj=41.9km s-min=17.4km az=46.0*
*NEIC **18** 14:41:36.2±1.1, 44.27S±0.06×38.2E±0.2, h14km±4km, mb4.6/12, Error ellipse: s-maj=18.6km s-min=5.2km az=112.0*
ISC 18 14:41:35.8±0.6, 44.35S±0.1×38.2E±0.2, h10km, n30, σ1§34/24, mb4.3/9, MS3.8/6, 2C, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**18.09**	**305**	P	**Pn**	**14 45 48.8**	**+1.4**
	0.2nm,0.3s,baz=172,slow=12,SNR=4.2						
SUR				LR	LR	14 52 19.1	
	comp=Z,161nm,18.1s,baz=142,slow=36						
SUR	**Sutherland**	**18.09**	**305**	P	**Pn**	**14 45 46.5**	**-0.9**
SUR				IAmb	IAmb	14 46 30.1	
	comp=Z,70nm,1.6s						
BOSA	**Boshof**	**18.80**	**322**	P	**P**	**14 45 55.3**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=150,slow=7.4,SNR=3.1						
BOSA				LR	LR	14 51 41.7	
	comp=Z,228nm,19.9s,baz=149,slow=32						
BOSA	**Boshof**	**18.80**	**322**	P	**P**	**14 45 53.3**	**-2.2**
BOSA				IAmb	IAmb	14 46 06.8	
	comp=Z,59nm,1.9s						
LBTB	**Lobatse**	**21.85**	**328**	P	**P**	**14 46 27.4**	**-1.2**
	comp=Z,4.2nm,0.8s,baz=159,slow=9.1,SNR=6.8						
LBTB				LR	LR	14 53 24.1	
	comp=Z,222nm,18.7s,baz=146,slow=32						
LBTB	**Lobatse**	**21.85**	**328**	P	**P**	**14 46 26.9**	**-1.7**
SYO	**Syowa Base**	**24.74**	**179**	⇑*e*P	**P**	**14 46 54.3**	**-2.7**
SYO	**Syowa Base**	**24.74**	**179**	⇑*e*pP	pP	14 47 01.3	+2.3
LSZ	**Lusaka**	**30.20**	**340**	LR	LR	14 58 27.1	
	comp=Z,148nm,19.7s,baz=165,slow=34						
TSUM	**Tsumeb**	**30.42**	**319**	LR	LR	14 58 54.4	
	comp=Z,138nm,20.3s,baz=150,slow=34						
TSUM	**Tsumeb**	**30.42**	**319**	P	**P**	**14 47 48.0**	**-0.5**
TSUM				IAmb	IAmb	14 47 49.2	
	comp=Z,14nm,1.3s						
SNAA	**Sanae**	**33.70**	**202**	P	**P**	**14 48 16.8**	**+0.1**
QSPA	**South Pole Qui**	**45.87**	**180**	P	**P**	**14 49 57.8**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=231,slow=2.7,SNR=15						

QSPA	**South Pole Qui**	**45.87**	**180**	IAmb	IAmb	14 49 59.1	
	comp=Z,23nm,1.8s						
VNDA	**Vanda**	**53.60**	**167**	LR	LR	15 12 36.8	
	comp=Z,124nm,18.0s,baz=257,slow=35						
VNDA	**Vanda**	**53.60**	**167**	P	**P**	**14 50 56.5**	**0.0**
SBA	**Scott Base**	**54.12**	**168**	P	**P**	**14 51 01.0**	**+0.7**
DBIC	**Dimbokro**	**63.88**	**311**	P	**P**	**14 52 08.9**	**+0.2**
	comp=Z,2.8nm,0.9s,baz=151,slow=8.9,SNR=3.6						
DBIC	**Dimbokro**	**63.88**	**311**	IAmb	IAmb	14 52 09.7	
	comp=Z,7.1nm,1.1s						
TORD	**Torodi Ar. Bea**	**66.16**	**321**	P	**P**	**14 52 23.9**	**+0.4**
	comp=Z,1.3nm,0.9s,baz=162,slow=5.8,SNR=6.5						
RPSI	**Rantau Prapat**	**71.44**	**67**	P	**P**	**14 52 56.0**	**-0.5**
RPSI				IAmb	IAmb	14 52 56.6	
	comp=Z,5.2nm,1.1s						
STKA	**Stephens Creek**	**77.00**	**122**	P	**P**	**14 53 29.2**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=358,slow=2.5,SNR=5.4						
STKA				LR	LR	15 20 10.1	
	comp=Z,54nm,18.6s,baz=207,slow=30						
ASAR	**Alice Springs**	**77.71**	**111**	P	**P**	**14 53 33.0**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=224,slow=5.3,SNR=20						
AS31	**Alice Springs**	**77.71**	**111**	P	**P**	**14 53 33.1**	**+0.1**
WRA	**Warramunga Arr**	**80.55**	**109**	P	**P**	**14 53 47.7**	**-0.8**
	comp=Z,1.1nm,1.0s,baz=228,slow=4.2,SNR=4.9						
KEST	**Kesra**	**83.90**	**337**	LR	LR	15 32 47.0	
	comp=Z,123nm,18.3s,baz=324,slow=37						
TXAR	**Lajitas Array**	**146.35**	**257**	PKPbc	**PKPdf**	**15 01 17.6**	**+2.0**
	comp=Z,1.5nm,0.8s,baz=144,slow=5.6,SNR=14						
ULM	**Lac du Bonnet**	**148.72**	**297**	PKPbc	**PKPdf**	**15 01 22.1**	**+3.4**
	comp=Z,1.2nm,0.6s,baz=148,slow=4.0,SNR=3.7						
ANMO	**Albuquerque**	**151.42**	**263**	PKPbc	**PKPbc**	**15 01 29.9**	**0.0**
ANMO					**PKPab**	**15 01 37.7**	**-0.5**
MCMT	**McKenzie Canyo**	**159.43**	**282**		**PKPab**	**15 02 12.7**	**+0.4**

KRNET ***18*** *14:45:45.2±0.1, 41.68N×72.59E, h12km, mb2.1*
SOME ***18*** *14:45:46.2, 41.55N×72.67E, h15km*
NNC ***18*** *14:45:48.9±1.0, 41.78N×72.66E, h0km, mb2.3, mpv2.6, Error ellipse: s-maj=10.7km s-min=3.3km az=170.0*
ISC 18 14:45:45.7±1.1**, 41.66N**±0.03×**72.65E**±0.02**, h8**km±11km**, n24,** σ0.99/43**, 15C-13D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.42**	**144**	⇓iP	**Pg**	**14 45 54.2**	**+0.2**
	baz=40						
ARSB				⇓iS	**Sg**	**14 46 00.6**	**+1.1**
	baz=40						
ARK	**Arkit**	**0.53**	**285**	⇑iP	**Pg**	**14 45 54.5**	**-1.6**
	baz=83						
ARK				⇑iS	**Sg**	**14 46 01.3**	**-1.8**
	baz=83						
AML	**Almayashu**	**0.91**	**59**	⇑iP	**Pg**	**14 46 03.2**	**0.0**
	baz=61						
AML				⇑iS	**Sb**	**14 46 16.0**	**-0.4**
	baz=61						
MRKS	**Merke**	**1.16**	**21**	eP	**Pg**	**14 46 08.4**	**+0.3**
	0.8nm,0.0s						
MRKS				eS	**Sn**	**14 46 24.3**	**-0.2**
	2.7nm,0.1s						
MRKS	**Merke**	**1.16**	**21**	P	**Pg**	**14 46 08.4**	**+0.3**
	0.8nm,0.0s						
MRKS				S	**Sn**	**14 46 24.5**	**0.0**
	2.7nm,0.1s						
ARLS	**Aral**	**1.27**	**80**	⇑iP	**Pn**	**14 46 09.8**	**-0.1**
	baz=81						
ARLS				⇑iS	**Sg**	**14 46 28.4**	**+1.9**
	baz=81						
UCH	**Uchtor**	**1.50**	**67**	⇓iP	**Pb**	**14 46 14.3**	**+0.2**
	baz=68						
UCH				⇓iS	**Sg**	**14 46 35.3**	**+1.3**
	baz=68						
AAK	**Ala-Archa**	**1.68**	**54**	⇑iP	**Pb**	**14 46 17.3**	**+0.3**
	baz=55						
AAK				⇑iS	**Sg**	**14 46 40.2**	**+0.5**
	baz=55						
AAK	**Ala-Archa**	**1.68**	**54**	⇓P	**Pg**	**14 46 18.7**	**+0.7**
	0.8nm,0.4s						
AAK				⇑S	**Sg**	**14 46 40.3**	**+0.5**
	0.8nm,0.3s						
JBG	**Jabagly**	**1.74**	**297**	P	**Pg**	**14 46 20.2**	**+1.0**
	1.0nm,0.0s						
JBG				S	**Sg**	**14 46 44.4**	**+2.6**
	9.2nm,0.2s						
KBK	**Karagaybulak**	**1.98**	**59**	⇑iP	**Pb**	**14 46 22.4**	**+0.4**
	baz=60						
KBK				⇑iS	**Sg**	**14 46 49.2**	**0.0**
	baz=60						
KZA	**Kyzart**	**1.98**	**77**	⇓iP	**Pg**	**14 46 23.3**	**-0.5**
	baz=78						
KZA				⇓iS	**Sg**	**14 46 50.3**	**+0.8**
	baz=78						
IUG	**Iuzhnay**	**2.02**	**285**	eP	**Pg**	**14 46 24.2**	**-0.2**
	0.2nm,0.1s						
IUG				eS	**Sg**	**14 46 51.2**	**+0.7**
	7.3nm,0.1s						
IUG	**Iuzhnay**	**2.02**	**285**	Pg	**Pg**	**14 46 24.2**	**-0.2**
	0.2nm,0.1s						
IUG				Lg	Lg	14 46 51.2	
	7.3nm,0.1s						
CHMS	**Chumysh**	**2.05**	**49**	⇓Pn	**Pg**	**14 46 24.6**	**-0.4**
	1.1nm,0.6s						
CHMS				⇓Sn	**Sb**	**14 46 49.4**	**+0.5**
	1.6nm,0.3s						
USP	**Ospenovka**	**2.11**	**40**	⇑eP	**Pb**	**14 46 24.0**	**-0.2**
	baz=41						
USP				⇑iS	**Sg**	**14 46 52.0**	**-1.4**
	baz=41						
BTK	**Batken**	**2.12**	**222**	⇓iP	**Pb**	**14 46 23.7**	**-0.8**
	baz=20						
BTK				⇓iS	**Sb**	**14 46 51.6**	**+0.6**
	baz=20						
KK31	**Karatay Array**	**2.14**	**313**	⇑Pn	**Pb**	**14 46 24.7**	**-0.1**
	0.2nm,0.3s,baz=127,slow=16,SNR=6.0						
KK31				⇑Lg	Lg	14 46 52.5	
	0.6nm,0.3s,baz=133,slow=29,SNR=9.7						
SGDS	**Sogindy**	**2.31**	**39**	Pg	**Pg**	**14 46 29.1**	**-0.9**
	0.4nm,0.1s						
SGDS				Lg	Lg	14 46 59.7	
	3.0nm,0.2s						
BRLS	**Borolday**	**2.49**	**304**	eP	**Pb**	**14 46 32.1**	**+1.3**
	0.2nm,0.1s						
BRLS				eS	**Sg**	**14 47 04.6**	**-1.2**
	0.7nm,0.1s						
BRLS	**Borolday**	**2.49**	**304**	Pg	**Pb**	**14 46 32.1**	**+1.3**
	0.2nm,0.1s						
BRLS				Lg	Lg	14 47 04.6	
	0.7nm,0.1s						
ULHL	**Ulahol**	**2.74**	**77**	⇓iP	**Pb**	**14 46 33.2**	**-1.9**
	baz=77						
ULHL				⇓iS	**Sb**	**14 47 08.0**	**-0.9**
	baz=77						
KST	**Kastek**	**2.81**	**60**	eP	**Pg**	**14 46 38.9**	**-0.7**
	0.4nm,0.1s						
KST				eS	**Sg**	**14 47 16.6**	**+0.4**
	3.0nm,0.3s						
KST	**Kastek**	**2.81**	**60**	Pg	**Pg**	**14 46 38.9**	**-0.7**
	0.4nm,0.1s						
KST				Lg	Lg	14 47 16.5	
	3.0nm,0.3s						

KRSC 18 14:52:38.6±1.2**, 50.56N×157.29E, h86**km±17km**, ML3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.76**	**280**	eP	Pn	14 52 56.2	+0.9
SKR				eS	Sn	14 53 08.6	+0.9
PAU	**Pauzhetka**	**0.96**	**342**	eP	Pn	14 52 59.2	+1.7
PAU				eS	Sn	14 53 14.1	+2.5
KDTR	**Khodutka, Kamc**	**1.35**	**21**	eS	Sn	14 53 22.5	+2.6
ASAK	**Asacha**	**1.87**	**11**	eP	Pn	14 53 11.1	+2.2
ASAK				eS	Sn	14 53 34.5	+2.5
MTVR	**Mutnovka**	**2.01**	**16**	eP	Pn	14 53 13.0	+2.2
RUS	**Russkaya**	**2.03**	**22**	eP	Pn	14 53 12.8	+1.9
RUS				eS	Sn	14 53 37.2	+1.6
GRL	**Gorelyy**	**2.06**	**13**	eP	Pn	14 53 14.1	+2.7
GRL				eS	Sn	14 53 39.8	+3.3
KRMR	**Karymshinskiy**	**2.33**	**13**	eP	Pn	14 53 16.2	+1.2
KRMR				eS	Sn	14 53 43.5	+0.6
APC	**Apacha**	**2.37**	**358**	eP	Pn	14 53 16.5	+1.0
PET	**Petropavlovsk**	**2.61**	**18**	eP	Pn	14 53 20.5	+1.8
PET				eS	Sn	14 53 50.3	+0.8
DALK	**Dalny**	**2.64**	**20**	eP	Pn	14 53 21.4	+2.3
DALK				eS	Sn	14 53 52.3	+2.1
UGLR	**Uglovaya**	**2.82**	**19**	eP	Pn	14 53 24.3	+2.7
AVH	**Avacha**	**2.85**	**18**	eP	Pn	14 53 24.7	+2.6
KOK	**Koryaka**	**2.86**	**16**	eP	Pn	14 53 25.1	+2.9
SMAR	**Somma**	**2.87**	**18**	eP	Pn	14 53 24.7	+2.4
KRER	**Koryakskii**	**2.89**	**18**	eP	Pn	14 53 25.3	+2.6
SDLR	**Sedlovina**	**2.90**	**19**	eP	Pn	14 53 24.7	+2.0
KRX	**Arik**	**2.93**	**16**	eP	Pn	14 53 25.7	+2.6
KRX				eS	Sn	14 54 00.6	+3.2
SPN	**Mys Shipunski**	**3.06**	**33**	eP	Pn	14 53 26.6	+1.9
SPN				eS	Sn	14 54 01.3	+1.1
TUMD	**Tumrok D**	**5.02**	**21**	eP	Pn	14 53 54.7	+3.4
TUMR	**Tumrok**	**5.04**	**19**	eP	Pn	14 53 54.0	+2.3
KMNR	**Kamenistaya**	**5.50**	**18**	eP	Pn	14 54 00.7	+2.7

IDC ***18*** *14:59:34.8±2.0, 0.27N×97.61E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.6/30, mbtmp3.7/6, ML4.4/1, Error ellipse: s-maj=84.4km s-min=20.9km az=60.0*
NEIC ***18*** *14:59:39.0±1.0, 0.3N±0.1×97.7E±0.2, h29km±7km, mb4.4/11, Error ellipse: s-maj=27.1km s-min=17.4km az=85.0*
DJA ***18*** *14:59:39.1±1.1, 0°N±3°×9°8E±°, h29km±11km, M4.1/10, mb4.4/3, MLv4.0/10, MLv4.0/6, Mwp5.5/1*
ISC 18 14:59:38.8±0.9**, 0.34N**±0.07×**97.6E**±0.1**, h29**km**, n33,** σ**0.67**/32**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**0.83**	**119**	P	**Pb**	**14 59 54.8**	**+0.2**
PBSI				S	**Sn**	**15 00 05.8**	**0.0**
SISI	**Saibi**	**2.26**	**137**	P	**Pn**	**15 00 14.5**	**+0.2**
RPSI	**Rantau Prapat**	**2.71**	**30**		**Pn**	**15 00 20.6**	**+0.1**
TPTI		**2.92**	**353**	P	**Pn**	**15 00 22.9**	**-0.5**
PDSI	**Padang**	**3.16**	**113**	P	**Pn**	**15 00 27.1**	**+0.4**
KCSI	**Kotacane, Aceh**	**3.17**	**4**	P	**Pn**	**15 00 26.3**	**-0.4**
BKNI	**Bangkinang**	**3.49**	**90**	P	**Pn**	**15 00 31.6**	**+0.5**
PPSI	**Pulau Pagai**	**3.94**	**142**	P	**Pn**	**15 00 37.0**	**-0.4**
IPM	**Ipoh**	**5.38**	**40**	Pn	**Pn**	**15 00 56.4**	**-0.7**
KULM	**Kulim**	**5.80**	**32**	P	**Pn**	**15 01 03.0**	**0.0**
KSI	**Kapahiang**	**6.41**	**128**	P	**Pn**	**15 01 11.8**	**+0.4**
	0.4nm55nm,0.7s						
MDSI	**Maura Dua**	**8.17**	**126**	P	**Pn**	**15 01 35.7**	**+0.1**
PBKT	**Sadao Pong**	**16.47**	**12**	P	**P**	**15 03 30.1**	**-0.3**
CMAR	**Chiang Mai Arr**	**18.05**	**4**	Pn	**Pn**	**15 03 46.8**	**-0.9**
	0.4nm,0.3s,baz=196,slow=11,SNR=9.3						
CHTO	**Chiang Mai**	**18.41**	**4**	P	**P**	**15 03 50.9**	**-1.0**
CHTO				IAmb	IAmb	15 03 53.1	
	comp=Z,8.4nm,1.7s						
SLVN	**Son La**	**21.77**	**16**	P	**P**	**15 04 28.4**	**0.0**
SLVN				IAmb	IAmb	15 04 53.5	
	comp=Z,18nm,1.5s						
H08S2	**Diego Garcia H**	**26.22**	**252**	T	T	15 32 31.1	
	baz=73,slow=76,SNR=213						
H08S3	**Diego Garcia H**	**26.22**	**252**	T	T	15 32 31.9	
	baz=73,slow=76,SNR=463						
H08S1	**Diego Garcia H**	**26.24**	**252**	T	T	15 32 30.9	
	baz=73,slow=76,SNR=288						
ENH	**Enshi**	**31.86**	**20**	P	**P**	**15 06 00.8**	**-0.7**
ENH				IAmb	IAmb	15 06 29.6	
	comp=Z,20nm,1.7s						
FITZ	**Fitzroy Crossi**	**33.15**	**125**	P	**P**	**15 06 12.2**	**-0.8**
WB0	**Warramunga Arr**	**41.26**	**121**	P	**P**	**15 07 21.2**	**-0.7**
WB0				IAmb	IAmb	15 07 45.4	
	comp=Z,20nm,1.4s						
WRA	**Warramunga Arr**	**41.29**	**121**	P	**P**	**15 07 21.0**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=304,slow=8.8,SNR=6.9						
WRAB	**Tennant Creek**	**41.29**	**121**	P	**P**	**15 07 21.4**	**-0.7**
WRAB				IAmb	IAmb	15 07 36.4	
	comp=Z,35nm,2.0s						
WB2	**Warramunga Arr**	**41.30**	**121**	P	**P**	**15 07 21.2**	**-0.9**
WB2				IAmb	IAmb	15 07 36.6	
	comp=Z,36nm,1.9s						
WR0	**Warramunga Arr**	**41.47**	**121**	P	**P**	**15 07 22.7**	**-0.8**
ASAR	**Alice Springs**	**42.60**	**127**	P	**P**	**15 07 32.8**	**0.0**
	comp=Z,0.6nm,0.5s,baz=297,slow=8.0,SNR=27						
AS31	**Alice Springs**	**42.60**	**127**	P	**P**	**15 07 32.5**	**-0.3**
SONM	**Songino Array**	**47.92**	**8**	P	**P**	**15 08 16.0**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=182,slow=9.8,SNR=3.2						
SONM				PcP	**PcP**	**15 09 43.6**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=186,slow=3.8,SNR=3.1						
MK31	**Makanchi Array**	**48.15**	**346**	P	**P**	**15 08 17.1**	**+0.7**
MK31				IAmb	IAmb	15 08 30.1	
	comp=Z,1.3nm,1.1s						
MKAR	**Makanchi Array**	**48.15**	**346**	P	**P**	**15 08 17.6**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=150,slow=9.4,SNR=6.5						
ZALV	**Zalesovo Beam**	**54.45**	**351**	P	**P**	**15 09 04.2**	**+0.8**
	comp=Z,1.3nm,0.4s,baz=163,slow=7.8,SNR=5.4						
CPUP	**Villa Florida**	**144.60**	**221**	PKP	**PKPdf**	**15 19 13.1**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=203,slow=13,SNR=3.6						

BEO ***18*** *15:04:37.2±0.6, 41.62N×23.81E, h5km, ML2.0/8*
ATH 18 15:04:35.8, 41.62N×23.80E, h12km±5km**, ML1.9/5, Error ellipse: s-maj=6.3km s-min=1.2km az=186.0, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVR	**Nevrokopi**	**0.28**	**170**	P	Pg	15 04 41.4	-0.1
NVR				S	Sg	15 04 45.7	+0.5
NVR				AML	AML	15 04 46.2	
	comp=E,621µm,0.3s						
NVR				AML	AML	15 04 46.4	
	comp=N,447µm,0.2s						
SRS	**Serrai**	**0.53**	**197**	ePg	Pg	15 04 46.3	+0.2
SRS				eSg	Sb	15 04 54.4	-0.2
SRS	**Serrai**	**0.53**	**197**	P	Pg	15 04 46.3	+0.2
SRS				S	Sg	15 04 53.5	+0.4
SRS				AML	AML	15 04 56.6	
	comp=E,334µm,0.3s						
SRS				AML	AML	15 04 57.0	
	comp=N,259µm,0.2s						
KVLA	**Kavala**	**0.81**	**147**	P	Pg	15 04 51.6	+0.1
KVLA				S	Sg	15 05 02.4	+0.3
KNT	**Kendrikon**	**0.82**	**236**	P	Pg	15 04 50.8	-0.9
KNT				S	Sg	15 05 02.6	+0.3
KNT				AML	AML	15 05 02.9	
	comp=N,166µm,0.3s						
KNT				AML	AML	15 05 04.2	
	comp=E,214µm,0.3s						
KAVA	**Kavala**	**0.82**	**139**	P	Pg	15 04 51.3	-0.4
KAVA				S	Sb	15 05 03.0	-0.1
KAVA				AML	AML	15 05 06.4	
	comp=E,149µm,0.2s						
KAVA				AML	AML	15 05 09.2	
	comp=N,269µm,0.3s						
SOH	**Sokhos**	**0.87**	**203**	P	Pg	15 04 52.4	-0.1
SOH				AML	AML	15 05 05.3	
	comp=E,233µm,0.3s						
SOH				AML	AML	15 05 09.6	
	comp=N,225µm,0.5s						
VAY	**Valandovo**	**0.97**	**252**	ePg	Pn	15 04 55.8	+0.5
VAY				eSg	Sn	15 05 08.9	-0.1
VAY	**Valandovo**	**0.97**	**252**	ePg	Pn	15 04 56.2	+0.9
VAY				iSg	Sn	15 05 10.8	+1.8
VTS	**Vitosha**	**1.08**	**337**	ePg	Pb	15 04 55.9	-0.7
VTS				eSg	Sb	15 05 11.2	+0.5
HORT	**Hortiatis**	**1.15**	**208**	P	Pb	15 04 57.6	-0.1
STIP	**Stip**	**1.21**	**274**	iPg	Pb	15 04 54.3	-4.3
STIP				iSg	Sb	15 05 08.8	-5.5
THAS	**Thassos island**	**1.23**	**145**	P	Pb	15 04 58.8	0.0
GRG	**Griva**	**1.25**	**238**	P	Pg	15 04 59.8	+0.1
OUR	**Ouranopolis**	**1.29**	**174**	P	Pb	15 05 00.1	+0.1
BOSS	**Bosilegrad**	**1.31**	**312**	ePg	Pb	15 05 00.6	+0.1
BOSS				eSg	Sg	15 05 18.8	+0.6
RDO	**Rodhopi**	**1.39**	**109**	P	Pb	15 05 01.8	0.0
ALN	**Alexandroupoli**	**1.84**	**112**	P	Pb	15 05 09.5	+0.1
ZAPS	**Zavoj**	**1.86**	**333**	ePg	Pg	15 05 11.2	-0.3
ZAPS				eSg	Sg	15 05 36.7	+1.0
BARS	**Barje**	**1.90**	**310**	ePg	Pg	15 05 11.9	-0.3
BARS				eSg	Sg	15 05 36.6	-0.2
ZAGS	**Zajecar**	**2.48**	**333**	ePn	Pb	15 05 18.4	-1.8
ZAGS				eSn	Sb	15 05 48.6	-2.1
BOVS	**Bovan**	**2.54**	**323**	ePn	Pb	15 05 19.7	-1.6
BOVS				eSn	Sb	15 05 50.7	-1.7
SELS	**Selova**	**2.55**	**310**	ePn	Pb	15 05 19.8	-1.7

JMA 18 15:16:06.3±0.1**, 24.12N×123.33E, h24**km±3km**, M1.8, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.42**	**60**	P	Pb	15 16 14.9	-0.3
IRIF				S	Sb	15 16 21.2	-0.1
HATJ	**Hateruma jima**	**0.44**	**98**	P	Pb	15 16 15.1	-0.3
HATJ				eS	Sb	15 16 21.6	-0.1
YOJ	**Yonaguni jima**	**0.45**	**319**	P	Pb	15 16 15.7	+0.1
YOJ				eS	Sb	15 16 21.9	0.0
JYNG	**Yonagunijimaku**	**0.48**	**313**	P	Pb	15 16 15.7	-0.5
JYNG				S	Sb	15 16 23.1	+0.2
JKRS	**Kuro-shima**	**0.63**	**79**	P	Pb	15 16 18.7	0.0
JKRS				S	Sb	15 16 27.3	+0.2
JIJ	**Ishigaki jima**	**0.78**	**72**	P	Pb	15 16 20.8	-0.4
JIJ				S	Sb	15 16 30.7	-0.7
JISG	**Ishigakijimahi**	**1.01**	**62**	P	Pn	15 16 24.5	-0.4
JISG				S	Sb	15 16 37.8	-0.1
JTJ	**Tarama**	**1.35**	**67**	P	Pn	15 16 30.2	+0.5
JTJ				S	Sb	15 16 47.8	-0.1

SNET ***18*** *15:16:33.5±0.8, 14.17N×91.84W, h38km±145km, ML3.4*
GCG ***18*** *15:16:34.3±0.7, 14.14N×91.80W, h45km±31km, MD3.8*
ISC 18 15:16:32.9±4.3**, 14.1N**±0.2×**91.9W**±0.3**, h35**km±11km**, n9,** σ**0.40**/14**, 1D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.51**	**44**	⇓eP	**Pb**	**15 16 43.8**	**0.0**
FUG	**Fuego 3**	**1.13**	**70**	eP	**Pn**	**15 16 51.9**	**-0.5**
PCG	**Pacaya**	**1.33**	**76**	eP	**Pn**	**15 16 55.0**	**-0.3**
PCG				eS	**Sn**	**15 17 11.8**	**-0.1**
IXG	**Ixpaco**	**1.46**	**86**	eP	**Pn**	**15 16 57.1**	**+0.2**
NBG	**Las Nubes**	**1.63**	**71**	eP	**Pn**	**15 17 00.0**	**+0.7**
CEVE	**Cerro Verde**	**2.26**	**96**	eP	**Pn**	**15 17 08.0**	**0.0**
CEVE				eS	**Sn**	**15 17 34.7**	**-0.2**
CEVE				IAML		15 17 45.2	
	comp=Z,753nm,0.3s						
SBLS	**San Blas**	**2.26**	**96**	eP	**Pn**	**15 17 07.7**	**-0.4**
SBLS				eS	**Sn**	**15 17 35.1**	**+0.3**
SNJE	**San Jose**	**2.28**	**95**	eP	**Pn**	**15 17 08.6**	**+0.4**
SNJE				eS	**Sn**	**15 17 35.6**	**+0.5**
COEG	**Centro de Oper**	**3.01**	**98**	eP	**Pn**	**15 17 18.1**	**0.0**
COEG				eS	**Sn**	**15 17 52.5**	**-0.5**

TAP 18 15:17:05.6, 24.45N×121.90E, h14km**, ML1.7, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.15**	**263**	P	Pg	15 17 09.4	+0.1
	baz=262						
ENA				S	Sg	15 17 11.9	0.0
	baz=262						
TWC	**Suao**	**0.17**	**344**	iP	Pg	15 17 09.7	0.0
	baz=354						
TWC				iS	Sg	15 17 12.6	+0.1
	baz=354						
EOS1	**EOS1**	**0.23**	**64**	P	Pg	15 17 10.9	+0.3
	baz=57						
EOS1				S	Sb	15 17 15.2	-0.3
	baz=57						
TWE	**Neicheng**	**0.35**	**322**	eP	Pg	15 17 12.6	-0.1
	baz=324						
TWE				eS	Sg	15 17 17.9	+0.4
	baz=324						
ENTT	**Nioudou**	**0.36**	**302**	P	Pg	15 17 13.2	+0.2
	baz=303						
ENTT				S	Sg	15 17 18.2	+0.2
	baz=303						
NDT	**Datong Townshi**	**0.39**	**294**	P	Pb	15 17 14.1	-0.1
	baz=294						
NDT				iS	Sg	15 17 19.1	+0.4
	baz=294						
NACB	**Ninganchiao**	**0.39**	**226**	eP	Pg	15 17 13.3	-0.1
	baz=227						
NACB				eS	Sg	15 17 18.9	+0.1
	baz=227						
SLBB	**Yuanshan**	**0.39**	**322**	P	Pb	15 17 14.3	0.0
	baz=322						
SLBB				S	Sb	15 17 20.4	+0.2
	baz=322						
ETLH	**Xiulin Townshi**	**0.45**	**238**	eP	Pg	15 17 15.2	-0.2
	baz=239						
ETLH				S	Sb	15 17 21.8	-0.1
	baz=239						
NNSH	**Datong**	**0.47**	**268**	eP	Pg	15 17 15.3	+0.3
	baz=268						
NNSH				eS	Sg	15 17 21.4	0.0
	baz=268						
NNS	**Nan Shan**	**0.48**	**269**	P	Pb	15 17 15.7	-0.1
	baz=269						
NNS				S	Sg	15 17 21.8	+0.1
	baz=269						
NWLT	**Wulai**	**0.49**	**312**	eS	Sg	15 17 21.7	-0.2
	baz=307						
YHNB	**Yeheng**	**0.53**	**295**	eP	Pb	15 17 16.6	0.0
	baz=300						
YHNB				eS	Sb	15 17 23.9	-0.3
	baz=300						
NSK	**Sanguang**	**0.55**	**295**	S	Sg	15 17 23.7	+0.1
	baz=295						
TWB1	**Santiao Chiao**	**0.56**	**8**	eP	Pg	15 17 16.4	-0.3

ATH ***18*** *15:18:44.8, 38.17N×20.42E, h13km±1km, ML2.9/6, Error ellipse: s-maj=1.8km s-min=1.0km az=251.0*
THE ***18*** *15:18:45.7, 38.18N×20.42E, h6km, ML2.7/13, Error ellipse: s-maj=0.8km s-min=0.5km az=254.0*
ISC 18 15:18:45.3±0.9**, 38.17N**±0.02×**20.43E**±0.03**, h10**km±4km**, n44,** σ**0.55**/72**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXRA	**Lixouri, Kepha**	**0.03**	**20**	P	**Pg**	**15 18 47.3**	**+0.1**
LXRA				S	**Sg**	**15 18 49.0**	**+0.5**
LXR1	**Lixouri, Cepha**	**0.03**	**21**	P	**Pg**	**15 18 47.3**	**+0.1**
LXR1				S	**Sg**	**15 18 47.5**	**-1.1**
CHV1	**Chavriata, Kef**	**0.04**	**289**	P	**Pg**	**15 18 47.1**	**-0.1**
CHV1				S	**Sg**	**15 18 48.1**	**-0.5**
ARGA	**Argostoli. Kep**	**0.04**	**83**	P	**Pg**	**15 18 47.2**	**0.0**
ARGA				S	**Sg**	**15 18 48.9**	**+0.2**
ARG2	**Argostoli**	**0.05**	**83**	P	**Pg**	**15 18 47.3**	**0.0**
ARG2				S	**Sg**	**15 18 48.8**	**0.0**
KEF2	**Argostoli. Kep**	**0.05**	**98**	P	**Pg**	**15 18 47.3**	**0.0**
KEF2				S	**Sg**	**15 18 48.7**	**-0.2**
KEF3	**Kipouria, Keph**	**0.07**	**297**	P	**Pg**	**15 18 47.4**	**-0.1**
KEF3				S	**Sg**	**15 18 49.4**	**+0.2**
AGT1	**Agia Thekli**	**0.09**	**338**	P	**Pg**	**15 18 47.7**	**0.0**
AGT1				S	**Sg**	**15 18 49.2**	**-0.3**
	20µm,0.2s						
KEF4	**Livadi, Kephal**	**0.09**	**360**	P	**Pg**	**15 18 47.8**	**0.0**
KEF4				S	**Sg**	**15 18 50.0**	**+0.5**
VLS	**Valsamata**	**0.13**	**88**	P	**Pg**	**15 18 48.2**	**-0.2**
VLS				S	**Sg**	**15 18 50.8**	**+0.2**
	14µm,0.1s						
VLS	**Valsamata**	**0.13**	**88**	P	**Pg**	**15 18 48.3**	**-0.2**
VLS				S	**Sg**	**15 18 50.7**	**+0.2**
VLS				AML	AML	15 18 50.9	
	comp=N,29716µm,0.2s						
VLS				AML	AML	15 18 51.6	
	comp=E,24967µm,0.1s						
VSK1	**VASILIKIADES**	**0.26**	**25**	P	**Pg**	**15 18 50.5**	**-0.1**
VSK1				S	**Sg**	**15 18 54.5**	**+0.3**
	comp=E,10µm,0.1s						
KONA	**Konidatara, Ke**	**0.28**	**24**	P	**Pg**	**15 18 50.8**	**-0.1**
KONA				S	**Sg**	**15 18 55.6**	**+0.9**
FSK	**Fiskardo**	**0.31**	**21**	P	**Pg**	**15 18 51.2**	**-0.3**
FSK				S	**Sg**	**15 18 56.3**	**+0.7**
	comp=E,3µm,0.3s						
FSK	**Fiskardo**	**0.31**	**21**	P	**Pg**	**15 18 51.1**	**-0.3**
FSK				S	**Sg**	**15 18 56.2**	**+0.7**
FSK				AML	AML	15 18 56.7	
	comp=N,5754µm,0.4s						
FSK				AML	AML	15 18 57.4	
	comp=E,6169µm,0.1s						
VLMS	**Volimes, Zakyn**	**0.35**	**147**	P	**Pg**	**15 18 51.9**	**-0.3**
VLMS				S	**Sg**	**15 18 57.7**	**+0.8**
VLMS				AML	AML	15 18 58.3	
	comp=N,12097µm,0.2s						
VLMS				AML	AML	15 18 58.8	
	comp=E,17526µm,0.2s						
EVGI	**Lefkada island**	**0.48**	**22**	P	**Pg**	**15 18 54.2**	**-0.5**
EVGI				S	**Sg**	**15 19 02.0**	**+0.8**
EVGI	**Lefkada island**	**0.48**	**22**	P	**Pg**	**15 18 54.2**	**-0.5**
MGNA	**Meganis**	**0.56**	**31**	P	**Pg**	**15 18 55.8**	**-0.5**
MGNA				S	**Sg**	**15 19 03.9**	**+0.3**
MGNA				AML	AML	15 19 05.0	

comp=E,1881µm,0.1s
MGNA AML AML 15 19 05.1
comp=N,2141µm,0.2s
KRI1 kERI 0.60 148 P Pg 15 18 56.4 -0.5
KRI1 S Sb 15 19 06.2 0.0
comp=N,2µm,0.2s
LKD2 Lefkada island 0.64 16 P Pg 15 18 57.2 -0.6
LKD2 S Sg 15 19 06.4 +0.2
comp=N,322nm,0.3s
LKD2 Lefkada island 0.64 16 P Pg 15 18 57.1 -0.6
VTN Vitineika 0.65 113 P Pg 15 18 57.6 -0.3
VTN Vitineika 0.65 113 P Pg 15 18 57.7 -0.3
TSLK Tsoukalades, L 0.68 15 P Pg 15 18 57.9 -0.5
TSLK S Sb 15 19 08.4 -0.2
comp=N,378nm,0.4s
TSLK Tsoukalades, L 0.68 15 P Pg 15 18 57.7 -0.7
PDO Prodromos 0.73 54 P Pg 15 18 59.0 -0.5
PDO S Sb 15 19 10.6 +0.4
comp=N,908nm,0.4s
RLS Riolos of Patr 0.83 98 P Pg 15 19 00.5 -0.8
RLS AML AML 15 19 16.0
comp=E,301µm,0.3s
RLS AML AML 15 19 20.7
comp=N,339µm,0.3s
PVO Paravola 0.97 62 P Pg 15 19 03.6 -0.4
PVO S Sn 15 19 18.2 -0.6
comp=N,1µm,0.3s
PVO Paravola 0.97 62 P Pg 15 19 03.6 -0.4
PVO AML AML 15 19 20.2
comp=E,2810µm,0.3s
PVO AML AML 15 19 20.3
comp=N,1337µm,0.2s
DRO Drossia 1.04 102 P Pg 15 19 04.4 -0.9
DRO S Sb 15 19 19.9 +0.9
comp=N,278nm,0.3s
DRO Drossia 1.04 102 P Pg 15 19 04.4 -0.9
AMT Artemida-Makis 1.20 122 P Pn 15 19 08.3 +0.2
AMT S Sn 15 19 26.3 +1.8
comp=N,182nm,0.5s
ANX Ano Chora 1.25 70 P Pn 15 19 08.7 -0.2
ANX Ano Chora 1.25 70 P Pn 15 19 08.0 -0.9
SERG Sergoula 1.31 79 P Pn 15 19 09.0 -0.6
SERG Sergoula 1.31 79 P Pn 15 19 08.7 -0.9
IGT Igoumenitsa 1.36 357 P Pb 15 19 11.0 +0.2
IGT S Sg 15 19 29.9 +0.8
comp=N,75nm,0.4s
IGT Igoumenitsa 1.36 357 P Pn 15 19 10.4 +0.1
KLV Kalavryta, Ach 1.37 95 P Pn 15 19 09.9 -0.6
KLV S Sg 15 19 30.4 +1.1
KALE Kalithea 1.37 80 P Pn 15 19 10.1 -0.4
KALE Kalithea 1.37 80 P Pn 15 19 10.3 -0.2
ITM Ithomi 1.55 129 P Pb 15 19 13.7 -0.4
ITM S Sg 15 19 35.3 +0.2
comp=N,62nm,0.4s
KEK Kerkira 1.61 343 P Pn 15 19 13.3 -0.5

NIED 18 15:29:00, 36.20N×139.80E, h56km, Mw3.9 Best double couple: M0 8.65000×10^14 NP1: φs40.00000°, δ61.00000°, λ69.00000°. NP2: φs259.00000°, δ35.00000°, λ123.00000°.
IDC 18 15:29:33.7±1.4, 36.07N×139.74E, h63km±12km, mb3.5/12, mb1 3.7/15, mb1mx3.5/45, mbtmp3.8/15, MS2.9/5, Ms1 2.9/5, ms1mx2.8/28, Error ellipse: s-maj=19.0km s-min=7.6km az=65.0
NEIC 18 15:29:33.2±1.0, 36.10N±0.05×139.80E±0.09, h62km±7km, mb4.6/10, Error ellipse: s-maj=12.3km s-min=2.9km az=56.0
JMA 18 15:29:34.1, 36.19N×139.81E, h55km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φs252.00000°, δ36.00000°, λ123.00000°. NP2: φs34.00000°, δ61.00000°, λ68.00000°. Principal axes: T Plg67.0000°, Azm262.0000°; N Plg19.0000°, Azm45.0000°; P Plg13.0000°, Azm139.0000°;
JMA Felt II J1.
ISC 18 15:29:33.4±0.8, 36.14N±0.04×139.83E±0.05, h62km±6km, n51, σ1.06/54, mb4.0/18, 1C-6D, Eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JYT Yasato 0.31 74 ⇑P Pn 15 29 43.9 +0.2
JYT S Sn 15 29 51.1 -0.1
JAG Ashikaga 0.42 313 ⇓P Pn 15 29 44.4 -0.3
JAG S Sn 15 29 51.6 -1.3
JRY Ryogami san 0.76 261 ⇓P Pn 15 29 48.8 +0.2
JRY S Sn 15 29 59.2 -0.5
JKT Katashina 0.78 323 ⇓P Pn 15 29 48.3 -0.6
JKT S Sn 15 29 58.9 -1.3
JOD2 Odawara 2 1.06 215 P Pn 15 29 53.6 +1.2
JOD2 S Sn 15 30 07.7 +1.2
JFY Yanaizu 1.27 355 ⇓P Pn 15 29 55.1 0.0
JHK Hiroka 1.28 330 ⇓P Pn 15 29 55.1 -0.2
JFNN Fujinakano 1.33 225 S Sn 15 30 14.2 +1.6
MJAR Matsushiro Arr 1.37 287 P Pn 15 29 55.7 -0.7
26nm,0.3s,baz=83,slow=10,SNR=2064
MJAR S Sn 15 30 12.3 -1.4
10nm,0.3s,baz=86,slow=16,SNR=11
MJAR LR LR 15 30 41.0
comp=Z,119nm,21.1s,baz=160,slow=52
MAJO Matsushiro 1.37 287 Pn 15 29 56.5 +0.1
MAT Matsushiro 1.37 287 P Pn 15 29 56.1 -0.4
MAT Matsushiro 1.37 287 P Pn 15 29 56.0 -0.4
MAT S Sn 15 30 13.7 0.0
MJB9 Matsu-Tunnel 1.37 288 Pn 15 29 56.6 +0.2
JFT Otama 1.43 16 ⇓P Pn 15 29 58.0 +0.7
JFT S Sn 15 30 15.4 +0.2
INU Inuyama 2.42 252 Pn 15 30 12.1 +1.4
JHJ Hachijo jima 2 3.02 181 P Pn 15 30 17.8 -1.0
75nm,0.3s,baz=145,slow=22,SNR=12
JHJ S Sn 15 30 52.8 -0.8
30nm,0.3s,baz=53,slow=17,SNR=4.5
JHJ LR LR 15 31 50.6
comp=Z,258nm,18.6s,baz=229,slow=46
JHJ2 Mitsune 3.02 180 Pn Pn 15 30 17.9 -0.9
JNU Nakatsue 7.97 250 LR LR 15 34 41.9
comp=Z,59nm,19.5s,baz=26,slow=39
JNU Nakatsue 7.97 250 Pn Pn 15 31 25.8 -0.8
ASAJ Asahikawa 8.24 14 P Pn 15 31 30.4 +0.1
0.3nm,0.3s,baz=243,slow=9.0,SNR=4.8
JKA Kamikawa-asahi 8.24 14 Pn 15 31 30.4 +0.1
KSRS Korea Array 9.64 281 P Pn 15 31 52.9 +3.5
0.7nm,0.3s,baz=93,slow=14,SNR=8.5
KSRS LR LR 15 35 15.7
comp=Z,53nm,20.1s,baz=124,slow=36
USRK Ussuriysk Ar. 10.03 326 P Pn 15 31 56.7 +2.0
baz=146,slow=13,SNR=8.4
USRK LR LR 15 35 11.0
comp=Z,82nm,18.1s,baz=227,slow=34
SONM Songino Array 27.25 306 P P 15 35 11.6 -0.2
0.3nm,0.5s,baz=103,slow=9.3,SNR=4.1
SONM LR LR 15 45 41.6
comp=Z,37nm,20.3s,baz=328,slow=36
H11N2 WAKE ISLAND Hy 28.83 117 T T 16 05 42.2
baz=312,slow=75,SNR=4.4
H11N1 WAKE ISLAND Hy 28.84 117 T T 16 05 35.5
baz=312,slow=75,SNR=5.7
H11N3 WAKE ISLAND Hy 28.85 117 T T 16 05 45.0
baz=312,slow=75,SNR=3.9
H11S1 WAKE ISLAND Hy 29.49 119 T T 16 06 31.4
baz=314,slow=74,SNR=4.6
H11S3 WAKE ISLAND Hy 29.49 119 T T 16 06 28.8
baz=314,slow=74,SNR=3.6
H11S2 WAKE ISLAND Hy 29.50 119 T T 16 06 28.2
baz=314
ZAA0 Zalesovo Array 41.58 313 P P 15 37 14.8 -0.1
ZALV Zalesovo Beam 41.58 313 P P 15 37 14.9 -0.1
2.5nm,0.6s,baz=93,slow=6.7,SNR=11
ZALV PcP PcP 15 39 10.7 -0.3
0.6nm,0.5s,baz=95,slow=3.3,SNR=3.1
MK31 Makanchi Array 43.52 303 P P 15 37 30.2 -0.6
MKAR Makanchi Array 43.52 303 P P 15 37 30.8 0.0
0.8nm,0.7s,baz=89,slow=8.4,SNR=8.2
KURK Kurchatov 45.48 309 P P 15 37 44.8 -1.6
KURK IAmb IAmb 15 37 49.4
comp=Z,3.1nm,0.7s
KDJ Kajisay 48.01 297 P P 15 38 05.8 -0.7
KDJ IAmb IAmb 15 38 18.4
comp=Z,6.9nm,1.7s
BOOM Boomskoye usch 48.80 298 P P 15 38 12.6 0.0
BRVK Borovoye 50.29 313 P P 15 38 23.0 -0.5
BRVK IAmb IAmb 15 39 26.8
comp=Z,8.2nm,1.8s
ILAR Eielson Array 50.93 32 P P 15 38 29.5 +1.4
comp=Z,0.8nm,1.0s,baz=262,slow=6.8,SNR=4.8
FITZ Fitzroy Crossi 55.59 196 P P 15 39 01.9 -0.9
comp=Z,1.9nm,0.7s,baz=8.1,slow=7.1,SNR=3.8
WB0 Warramunga Arr 55.84 186 P P 15 39 04.2 -0.3
WB0 IAmb IAmb 15 40 47.4
comp=Z,14nm,1.3s
WRAB Tennant Creek 56.01 186 P P 15 39 03.5 -2.3
WRAB IAmb IAmb 15 40 50.4
comp=Z,11nm,1.2s
WB2 Warramunga Arr 56.02 186 P P 15 39 03.4 -2.4
WR0 Warramunga Arr 56.02 186 P P 15 39 05.1 -0.7
WR0 IAmb IAmb 15 40 28.8
comp=Z,14nm,1.4s
WRA Warramunga Arr 56.02 186 P P 15 39 05.8 0.0
comp=Z,0.6nm,0.4s,baz=0.3,slow=7.5,SNR=24
ASAR Alice Springs 59.75 186 P P 15 39 31.8 -0.1
comp=Z,0.6nm,0.8s,baz=356,slow=5.3,SNR=6.7
YKA Yellowknife Ar 65.22 30 P P 15 40 08.6 +0.6
comp=Z,0.2nm,0.5s,baz=305,slow=6.8,SNR=5.0
FINES FINESS Array B 69.00 332 P P 15 40 31.6 -0.3
comp=Z,0.9nm,0.7s,baz=152,slow=8.6,SNR=3.8
KBZ Khabaz 70.51 310 P P 15 40 40.9 -0.6
comp=Z,2.4nm,0.9s,baz=96,slow=9.2,SNR=4.6
AKASG Malin Array Be 74.22 322 P P 15 41 03.4 -0.1
comp=Z,0.2nm,0.3s,baz=49,slow=6.2,SNR=4.4
NOA NORSAR Array B 74.51 337 P P 15 41 06.7 +1.6
comp=Z,0.9nm,0.8s,baz=42,slow=5.9,SNR=3.7

IDC 18 15:35:51.8±2.0, 2.75S×129.07E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.3/26, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=94.3km s-min=28.8km az=68.0, Seram

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 17.84 164 P P 15 40 03.6 +1.2
0.1nm,0.3s,baz=344,slow=14,SNR=3.6
ASAR Alice Springs 21.31 168 P P 15 40 40.1 -0.3
0.3nm,0.3s,baz=346,slow=12,SNR=9.2
MKAR Makanchi Array 64.20 326 P P 15 46 28.1 -0.4
0.1nm,0.3s,baz=110,slow=6.5,SNR=3.7

IDC 18 16:15:36.5±1.8, 5.36S×152.18E, h34km±12km, mb4.4/24, mb1 4.5/25, mb1mx4.3/46, mbtmp4.6/25, ML2.4/1, MS3.7/26, Ms1 3.7/26, ms1mx3.6/49, Error ellipse: s-maj=17.6km s-min=11.2km az=114.0
NEIC 18 16:15:38.8±1.8, 5.27S±0.05×152.16E±0.07, h53km±5km, mb5.1/95, Error ellipse: s-maj=11.0km s-min=7.6km az=98.0
BJI 18 16:15:39.3±0.0, 5.03S×152.06E, h60km, mB5.1/32, mb4.7/43, Ms4.9/9, Ms7 4.6/2
DJA 18 16:15:41.4±0.9, 5.S±6×15.2E±, h76km±9km, M4.8/9, mb4.7/9, mB4.7/3, MLv5.0/2, Mw(mB)3.9/3
ISC 18 16:15:38.1±0.4, 5.30S±0.05×152.16E±0.06, h45km, n193, σ0.95/188, mb5.0/78, MS3.8/28, 1C-1D, New Britain region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRVT Keravat (AS076 0.99 352 Pg Pn 16 15 56.2 +0.6
4µm,0.3s,baz=175,slow=1.5,SNR=881
KRVT LR LR 16 16 12.8
comp=Z,1µm,21.3s,baz=84,slow=34
KRVT Lg Lg 16 16 13.2
2µm,0.3s,baz=163,slow=19,SNR=20
RABL Rabaul 1.10 0 Pn Pn 16 15 57.4 +0.3
PMG Port Moresby 6.42 230 Pn Pn 16 17 09.6 -0.6
5.1nm,0.3s,baz=43,slow=9.5,SNR=17
PMG Sn Sn 16 18 24.1 +1.8
18nm,0.3s,baz=57,slow=17,SNR=8.4
PMG Port Moresby 6.42 230 Pn 16 17 11.9 +1.7
HNR Honiara 8.75 118 Pn Pn 16 17 42.3 +0.2
0.8nm,0.3s,baz=284,slow=8.3,SNR=2.6
HNR Honiara 8.75 118 P Pn 16 17 43.0 +0.9
COEN Coen 12.35 225 Pn Pn 16 18 30.9 -0.5
PATS Pohnpei 13.53 27 Pn Pn 16 18 47.2 -0.2
CTA Charters Tower 15.79 201 Pn P 16 19 21.1 +0.4
0.2nm,0.3s,baz=24,slow=11,SNR=6.9
CTAO Charters Tower 15.79 201 P P 16 19 20.6 -0.1
SANVU Saraoutou 17.89 125 P P 16 19 45.4 +1.4
EIDS Eidsvold 19.99 183 P P 16 20 06.0 -0.9
SIJI Sorong 21.32 281 P P 16 20 22.1 +0.7
11nm,0.8s,baz=79,slow=17,SNR=3.6
DZM Mont Dzumac 21.66 142 P P 16 20 24.6 -0.5
10nm,0.8s,baz=334,slow=13,SNR=8.4
DZM LR LR 16 28 06.6
comp=Z,291nm,18.9s,baz=304,slow=35
WB0 Warramunga Arr 22.49 229 P P 16 20 33.1 -0.9
WR0 Warramunga Arr 22.50 228 P P 16 20 33.6 -0.5
WRAB Tennant Creek 22.63 228 P P 16 20 35.1 -0.3
WB2 Warramunga Arr 22.63 228 P P 16 20 35.0 -0.4
WRA Warramunga Arr 22.64 228 P P 16 20 34.5 -1.0
8.3nm,0.7s,baz=52,slow=10,SNR=40
WRA PcP PcP 16 24 27.9 +0.6
3.7nm,0.8s,baz=46,slow=1.8,SNR=6.8
WRA LR LR 16 29 44.6
comp=Z,170nm,20.1s,baz=30,slow=38
KNRA Kununurra 25.18 244 P P 16 20 59.4 -0.2
KNRA IAmb IAmb 16 21 16.0
comp=Z,39nm,0.8s
AS31 Alice Springs 25.36 222 P P 16 21 00.2 -1.0
ASAR Alice Springs 25.36 222 P P 16 21 00.5 -0.7
comp=Z,1.9nm,0.6s,baz=56,slow=8.9,SNR=35
ASAR PcP PcP 16 24 33.6 +0.5
comp=Z,2.1nm,0.8s,baz=48,slow=2.7,SNR=5.8
ASAR LR LR 16 30 44.0
comp=Z,131nm,20.7s,baz=58,slow=36
STKA Stephens Creek 28.24 199 P P 16 21 25.9 -1.0
comp=Z,2.6nm,0.7s,baz=35,slow=12,SNR=3.4
STKA LR LR 16 32 19.1
comp=Z,200nm,20.2s,baz=12,slow=36
FITZ Fitzroy Crossi 28.86 242 P P 16 21 32.1 -0.5
comp=Z,5.9nm,0.5s,baz=47,slow=7.5,SNR=16
FITZ LR LR 16 33 37.4
comp=Z,86nm,21.4s,baz=84,slow=38
FITZ Fitzroy Crossi 28.86 242 P P 16 21 32.1 -0.5
DAV Davao City (W) 29.23 295 LR LR 16 32 49.4
comp=Z,229nm,19.2s,baz=60,slow=35
KAPI Kappang 32.28 269 LR LR 16 37 22.0
comp=Z,61nm,20.2s,baz=92,slow=40
MXZ Matakaoa Point 40.00 147 P P 16 23 09.5 +0.9
GIRL Giralia 40.47 241 P P 16 23 12.8 +0.1
RPZ Rata Peaks 41.73 159 LR LR 16 39 05.1
comp=Z,276nm,19.5s,baz=342,slow=34
JNU Nakatsue 43.21 334 P P 16 23 35.5 +0.5
comp=Z,10nm,0.8s,baz=135,slow=8.6,SNR=4.0
MJAR Matsushiro Arr 43.62 344 P P 16 23 39.0 +0.9
comp=Z,1.1nm,0.6s,baz=127,slow=8.7,SNR=3.4
MJAR PcP PcP 16 25 25.0 -0.1
comp=Z,2.4nm,0.7s,baz=162,slow=4.5,SNR=4.4
MJAR LR LR 16 40 14.2
comp=Z,63nm,21.7s,baz=155,slow=34
LEM Lembang 44.31 266 P P 16 23 43.5 -0.8
comp=Z,9.0nm,0.5s,baz=90,slow=19,SNR=3.7
LEM LR LR 16 45 39.2
comp=Z,46nm,19.2s,baz=82,slow=41
DLV T Lat 46.69 292 P P 16 24 02.7 -0.4
DLV IAmb IAmb 16 24 05.1
comp=Z,33nm,1.4s
KSRS Korea Array 48.16 334 P P 16 24 14.2 +0.3
comp=Z,2.2nm,1.0s,baz=147,slow=7.4,SNR=4.4
NJ2 Nanjing 48.83 322 eP P 16 24 20.1 +0.9
NJ2 pmax pmax
comp=Z,13nm,0.6s
WHN Wuhan 50.78 317 P P 16 24 45.6 +12
KULM Kulim 52.50 281 P P 16 24 44.8 -2.5
KULM IAmb IAmb 16 24 47.1
comp=Z,17nm,1.3s
RPSI Rantau Prapat 53.77 277 P P 16 24 54.9 -1.7
XAN Xi'an 56.54 317 P P 16 25 16.3 0.0
XAN pP sP 16 25 34.3 +0.4
XAN pmax pmax
comp=Z,7.0nm,0.6s
XAN pmax pmax
comp=Z,110nm,13.0s
KMI Kunming 56.74 305 P P 16 25 19.4 +1.4
KMI pP pP 16 25 30.4 -0.3
KMI sP sP 16 25 35.8 -0.1
KMI pmax pmax
comp=Z,11nm,0.7s
KMI pmax pmax
comp=Z,210nm,4.4s
MWH Moku'aweowe 56.99 63 P P 16 25 19.1 -1.1
MLOA Mauna Loa Obse 57.02 63 P P 16 25 19.0 -1.4
AIN Ainahou 57.07 63 P P 16 25 19.5 -0.9
KLR Kul'dur 57.14 344 LR LR 16 50 43.4
comp=Z,40nm,18.1s,baz=168,slow=37
CM31 Chiang Mai Arr 57.51 296 P P 16 25 23.8 +0.4
CMAR Chiang Mai Arr 57.51 296 P P 16 25 23.4 0.0
comp=Z,4.0nm,0.9s,baz=108,slow=5.4,SNR=24
CMAR PcP PcP 16 26 17.1 +0.6
comp=Z,0.8nm,0.6s,baz=119,slow=2.6,SNR=4.4
CMAR LR LR 16 48 03.2
comp=Z,25nm,21.9s,baz=117,slow=34
CHTO Chiang Mai 57.63 296 P P 16 25 24.2 +0.1
PPT Papeete 58.19 107 LR LR 16 47 41.5
comp=Z,25nm,19.1s,baz=257,slow=33
PETK Petropavlovsk- 58.37 4 P P 16 25 28.3 -0.4
comp=Z,2.1nm,0.7s,baz=185,slow=7.1,SNR=4.0
PETK LR LR 16 46 40.6
comp=Z,76nm,19.7s,baz=240,slow=32
CD2 Chengdu 58.58 311 P P 16 25 30.0 -0.7
CD2 pmax pmax
comp=Z,10.0nm,0.5s
LZH Lanzhou 61.14 316 eP P 16 25 49.5 +1.2
LZH pP sP 16 26 08.3 +2.2
LZH pmax pmax
comp=Z,14nm,1.2s
LZH pmax pmax
comp=Z,53nm,4.3s
GTA Gaotai 65.59 318 P P 16 26 17.8 +0.2
GTA pP pP 16 26 33.0 +2.3
GTA sP sP 16 26 40.3 +4.4
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,80nm,5.2s
GTA LR LR
comp=Z,84nm,17.2s
GTA LR LR
comp=Z,120nm,16.8s
SHL Shillong 66.01 301 P P 16 26 19.5 -1.1
SHL IAmb IAmb 16 26 22.2
comp=Z,17nm,0.8s
SONM Songino Array 66.41 328 P P 16 26 22.3 -0.4
comp=Z,2.2nm,0.6s,baz=144,slow=5.3,SNR=18
SONM LR LR 16 54 34.8
comp=Z,68nm,20.6s,baz=176,slow=35
TAPN Taplejung 70.12 301 eP P 16 26 46.4 -0.2
comp=Z,22nm,0.9s
TLY Talaya 70.19 330 LR LR 16 58 55.2
comp=Z,47nm,18.6s,baz=124,slow=37
ODAN Odare 70.25 301 eP P 16 26 46.9 -0.4
comp=Z,24nm,0.7s
RAMN Ramite 70.95 301 eP P 16 26 51.3 -0.3
JIRN Jiri 71.50 301 eP P 16 26 54.8 -0.3
comp=Z,21nm,0.8s
GUN Gumba 71.83 301 eP P 16 26 56.7 -0.4
comp=Z,31nm,0.7s
PKI Pulchoki 72.14 301 eP P 16 26 58.3 -0.6
comp=Z,19nm,1.0s
PKIN Phulchoki 72.15 301 eP P 16 26 58.3 -0.6
KKN Kakani 72.31 301 eP P 16 26 59.3 -0.5
comp=Z,18nm,0.8s
DMN Daman 72.41 301 eP P 16 27 00.2 -0.2
comp=Z,27nm,0.8s
GKN Gorkha 72.92 301 eP P 16 27 02.9 -0.4
DANN Dangsing 73.75 301 eP P 16 27 07.6 -0.8
comp=Z,22nm,0.8s
BILL Bilibino 73.84 5 P P 16 27 07.7 +0.1
SII Sitkinak Islan 75.50 27 P P 16 27 16.8 -0.7
WMQ Urumqi 75.67 318 eP P 16 27 19.6 +0.7
WMQ sP sP 16 27 43.8 +6.4
WMQ pmax pmax
comp=Z,5.0nm,1.5s
WMQ pmax pmax
comp=Z,97nm,5.1s
WMQ LR LR
comp=Z,510nm,29.2s
OHAK Old Harbor 76.28 27 P P 16 27 21.6 -0.2
ANM Nome 76.44 17 P P 16 27 22.9 +0.2
ANM IAmb IAmb 16 27 24.4
comp=Z,11nm,0.9s
KDAK Kodiak Island 76.90 27 P P 16 27 25.5 +0.1
comp=Z,12nm,1.0s,baz=347,slow=5.8,SNR=3.4
KDAK LR LR 16 54 10.4
comp=Z,111nm,20.4s,baz=272,slow=30
SVW2 Sparrevohn 77.53 23 P P 16 27 29.4 +0.5
SVW2 IAmb IAmb 16 27 32.3
comp=Z,13nm,0.8s
TIXI Tiksi 78.30 353 P P 16 27 32.4 -0.6
comp=Z,1.1nm,0.3s,baz=175,slow=5.1,SNR=5.2
TIXI LR LR 17 00 59.8
comp=Z,19nm,19.6s,baz=174,slow=35
HOM Homer 78.33 26 P P 16 27 33.5 +0.2
CNPM China Poot 78.44 26 P P 16 27 34.1 +0.1
TTA Tatalina 78.46 22 P P 16 27 34.7 +0.5
SEW Seward 79.51 26 P P 16 27 40.2 +0.4
SKT Skwentna 79.63 24 P P 16 27 39.5 -1.0
SKT IAmb IAmb 16 28 39.1
comp=Z,43nm,1.7s
RDOG Red Dog Mine 79.63 16 P P 16 27 40.2 -0.1
RDOG IAmb IAmb 16 27 42.1
comp=Z,18nm,0.8s
SUA Susitna One 79.67 24 P P 16 27 40.3 -0.6
SUA IAmb IAmb 16 27 41.4
comp=Z,31nm,0.8s
PPLA Purkeypile 79.87 23 P P 16 27 41.6 -0.3
PPLA IAmb IAmb 16 28 26.7
comp=Z,67nm,1.9s
RC01 Rabbit Creek A 79.89 25 P P 16 27 42.5 +0.6
RC01 IAmb IAmb 16 27 43.9
comp=Z,51nm,1.1s
MK31 Makanchi Array 80.28 319 P P 16 27 43.5 -0.8
MKAR Makanchi Array 80.28 319 P P 16 27 43.4 -1.0
comp=Z,3.5nm,0.9s,baz=107,slow=5.9,SNR=24
PMR Palmer 80.40 24 P P 16 27 44.1 -0.4
PMR IAmb IAmb 16 27 45.2
comp=Z,20nm,0.9s
MAKZ Makanchi 80.49 319 P P 16 27 44.9 -0.6
KTH Kantishna Hill 80.71 22 P P 16 27 45.6 -0.8
KTH IAmb IAmb 16 27 46.6
comp=Z,20nm,0.8s
TRF Thorofare Moun 80.90 23 P P 16 27 46.6 -0.9
TRF IAmb IAmb 16 27 49.4
comp=Z,19nm,0.7s
BPAW Bear Paw Mtn. 80.98 22 P P 16 27 46.7 -1.0
BPAW IAmb IAmb 16 27 48.1
comp=Z,12nm,1.0s
ZAA0 Zalesovo Array 81.21 326 P P 16 27 48.1 -1.0
ZALV Zalesovo Beam 81.21 326 P P 16 27 47.9 -1.2
comp=Z,3.0nm,0.6s,baz=112,slow=5.8,SNR=12
ZALV LR LR 17 02 46.7
comp=Z,50nm,21.3s,baz=52,slow=35
SCM Sheep Creek Mo 81.26 25 P P 16 27 48.9 -0.5
SCM IAmb IAmb 16 27 50.7
comp=Z,26nm,0.8s
RND Reindeer 81.43 23 P P 16 27 49.4 -0.7
MCK McKinley 81.56 23 P P 16 27 50.0 -0.8
MLY Manley 81.57 21 P P 16 27 50.0 0.0
BWN Browne 81.59 22 P P 16 27 50.7 -0.2
BWN IAmb IAmb 16 27 51.7
comp=Z,26nm,0.7s
PRZ Przheval'sk 81.70 314 P P 16 27 52.5 +0.2
DHY Denali Highway 81.84 24 P P 16 27 52.3 -0.2
DHY IAmb IAmb 16 27 54.0
comp=Z,20nm,0.8s
NEA Nenana 81.94 22 P P 16 27 51.8 -1.0
NEA IAmb IAmb 16 27 53.0
comp=Z,24nm,0.7s
WRH Wood River Hil 82.26 22 P P 16 27 53.3 -1.1
WRH IAmb IAmb 16 27 55.1
comp=Z,24nm,1.0s
CCB Clear Creek Bu 82.45 22 P P 16 27 54.3 -1.1
CCB IAmb IAmb 16 27 55.4
comp=Z,21nm,0.8s
KDJ Kajisay 82.49 314 P P 16 27 56.2 -0.2
TCOL CIGO, UAF Yank 82.54 22 P P 16 27 55.6 -0.3
baz=240
COLA College 82.55 22 P P 16 27 55.1 -0.7
PAX Paxson 82.56 24 P P 16 27 56.0 -0.2
PAX IAmb IAmb 16 27 57.2
comp=Z,20nm,1.2s
GLB Gilahina Butte 82.58 26 P P 16 27 56.5 +0.3
GLB IAmb IAmb 16 27 57.7
comp=Z,30nm,0.9s
HDA Harding Lake 82.66 22 P P 16 27 55.4 -1.1
HDA IAmb IAmb 16 27 56.6
comp=Z,8.7nm,0.7s

HDA Harding Lake 82.66 22 P P 16 27 55.8 -0.7
baz=241
TGL Tana Glacier 82.72 27 P P 16 27 56.3 -0.8
TGL IAmb IAmb 16 27 59.0
comp=Z,28nm,1.0s
KSH Kashi 82.77 311 P P 16 27 59.8 +2.0
KSH pP sP 16 28 15.8 -0.5
KSH sP pP 16 28 23.8 +13
KSH PP PP 16 31 14.5 +6.1
KSH S S 16 38 10.8 -2.1
KSH SS SS 16 43 38.6 +2.3
KSH pmax pmax
comp=Z,9.0nm,1.3s
KSH pmax pmax
comp=Z,150nm,5.3s
KSH LR LR
comp=Z,130nm,5.9s
KSH LR LR
comp=Z,150nm,5.2s
POKR Poker Plat Res 82.82 22 P P 16 27 56.7 -0.7
baz=241
IL31 82.86 22 P P 16 27 56.1 -1.3
IL31 IAmb IAmb 16 27 57.3
comp=Z,22nm,0.7s
ILAR Eielson Array 82.86 22 P P 16 27 56.1 -1.4
comp=Z,20nm,0.7s,baz=246,slow=5.6,SNR=255
COLD Coldfoot 82.93 19 P P 16 27 58.8 +0.9
BALM Baldy 83.05 26 P P 16 27 59.0 +0.2
BALM IAmb IAmb 16 28 00.2
comp=Z,23nm,0.8s
RIDG Independent Ri 83.16 24 P P 16 27 59.2 0.0
RIDG IAmb IAmb 16 28 00.2
comp=Z,20nm,0.8s
MENT Mentasta 83.27 24 P P 16 27 59.9 +0.2
MENT IAmb IAmb 16 28 01.6
comp=Z,15nm,0.9s
BARN Barnard Glacie 83.37 27 P P 16 28 00.9 +0.4
DOT Dot Lake 83.44 24 P P 16 28 00.6 0.0
BOOM Boomskoye usch 83.47 314 P P 16 28 01.4 0.0
CTGM Chitina Glacie 83.48 27 P P 16 28 01.6 +0.6
SCRK Sand Creek 83.61 23 P P 16 28 01.3 -0.3
SCRK IAmb IAmb 16 28 02.7
comp=Z,14nm,0.8s
PCA Pinnacle 83.63 28 P P 16 28 01.4 -0.3
PCA IAmb IAmb 16 28 03.3
comp=Z,24nm,0.7s
PRP Porcupine Dome 83.72 22 P P 16 27 59.7 -2.4
PRP IAmb IAmb 16 30 11.2
comp=Z,25nm,1.9s
NIL Nilore 83.73 305 P P 16 28 01.2 -1.6
NIL IAmb IAmb 16 28 03.9
comp=Z,9.0nm,0.8s
KURK Kurchatov 83.77 322 P P 16 28 00.1 -2.4
FYU Fort Yukon 84.31 21 P P 16 28 05.1 +0.2
FYU IAmb IAmb 16 28 06.4
comp=Z,16nm,0.8s
UCH Uchtor 84.44 313 P P 16 28 07.7 +0.9
SNR=8.0
AAK Ala-Archa 84.54 314 P P 16 28 07.4 +0.5
SNR=5.3
AAK Ala-Archa 84.54 314 P P 16 28 06.7 -0.2
USP Ospenovka 84.67 314 P P 16 28 07.7 +0.3
SNR=7.5
MAW Mawson 84.87 203 LR LR 17 03 32.4
comp=Z,73nm,19.8s,baz=65,slow=34
AML Almayashu 85.02 313 P P 16 28 10.2 +0.7
SNR=21
EGAK Eagle 85.06 23 P P 16 28 08.9 +0.1
EGAK IAmb IAmb 16 28 10.8
comp=Z,19nm,0.8s
EKS2 Erkin-Say 85.07 314 P P 16 28 10.4 +1.0
SNR=8.0
HYT Haines Junctio 85.17 28 P P 16 28 10.3 +0.8
ARSB Arslanbob 85.38 312 P P 16 28 11.0 -0.1
DAWY Dawson 85.50 24 P P 16 28 11.4 +0.3
DAWY IAmb IAmb 16 28 13.7
comp=Z,9.6nm,0.8s
WHY Whitehorse 86.33 28 P P 16 28 15.5 +0.2
WHY IAmb IAmb 16 28 17.3
comp=Z,13nm,0.9s
EPYK Eagle Plains 87.36 22 P P 16 28 20.6 +0.5
EPYK Eagle Plains 87.36 22 P P 16 28 20.7 +0.5
baz=251
BBB Bella Bella 87.87 37 LR LR 16 58 50.4
comp=Z,33nm,20.4s,baz=228,slow=30
INK Inuvik 89.14 21 P P 16 28 27.8 -0.6
comp=Z,11nm,1.0s,baz=225,slow=4.2,SNR=22
INK LR LR 17 07 36.9
comp=Z,49nm,18.1s,baz=100,slow=35
INK Inuvik 89.14 21 P P 16 28 28.2 -0.2
INK IAmb IAmb 16 28 29.4
comp=Z,16nm,1.2s
J01E Myrtle Point 89.15 47 P P 16 28 30.6 +1.6
baz=262
O02D Mt. Diablo Mer 89.60 50 P P 16 28 32.5 +1.1
baz=263
M02C Callahan 89.71 49 P P 16 28 32.9 +1.1
baz=263
N02D Trinity Center 89.77 49 P P 16 28 33.4 +1.3
baz=263
HUMO Hull Mountain 89.79 47 P P 16 28 32.4 +0.3
YBH Yreka Blue Hor 89.86 48 P P 16 28 33.4 +0.9
comp=Z,3.3nm,0.9s,baz=257,slow=7.1,SNR=4.6
YBH LR LR 17 00 40.7
comp=Z,86nm,21.6s,baz=278,slow=30
O03E Paynes Creek 90.37 50 P P 16 28 36.4 +1.4
baz=263
A04D Lummi Island 90.73 41 P P 16 28 37.7 +1.4
baz=263
J05D Fort Rock, OR 91.12 47 P P 16 28 39.2 +0.7
baz=264
I05D Terrebonne, OR 91.16 46 P P 16 28 39.2 +0.7
baz=264
PINE Pine Mountain 91.39 46 P P 16 28 40.4 +0.6
PINE IAmb IAmb 16 28 42.1
comp=Z,12nm,1.0s
PNTR Pine Nut 91.94 51 P P 16 28 43.1 +0.7
PNTR IAmb IAmb 16 28 44.7
comp=Z,4.9nm,0.7s
I07A Izee 92.45 46 P P 16 28 44.5 0.0
I07A IAmb IAmb 16 28 46.2
comp=Z,7.9nm,1.0s
C36M Paulatuk 92.72 21 P P 16 28 44.3 -0.7
C36M IAmb IAmb 16 28 45.5
comp=Z,9.4nm,0.7s
RYN Ryan 92.73 52 P P 16 28 46.5 +0.4
RYN IAmb IAmb 16 28 47.8
comp=Z,3.2nm,0.8s
EDW2 Edwards Air Fo 92.86 55 P P 16 28 47.4 +0.8
baz=266
NVAR Mina Array Bea 92.89 52 P P 16 28 47.4 +0.5
comp=Z,3.4nm,0.8s,baz=254,slow=6.7,SNR=19
NVAR LR LR 17 04 04.9
comp=Z,88nm,19.8s,baz=252,slow=31
SYO Syowa Base 92.99 199 eX P 16 28 42.0 -4.4
SYO Syowa Base 92.99 199 epP pP 16 29 02.4 +2.7
NV11 Mina Array Sit 93.01 52 P P 16 28 47.2 -0.1
NV11 IAmb IAmb 16 28 49.0
comp=Z,5.6nm,0.9s
KVN Kaiserville 93.10 51 P P 16 28 47.8 0.0
KVN IAmb IAmb 16 28 49.8
comp=Z,3.2nm,0.8s
J08A Circle Bar Ran 93.13 47 P P 16 28 48.4 +0.7
J08A IAmb IAmb 16 28 49.6
comp=Z,5.5nm,0.9s
MPMC Manual Prospec 93.36 54 P P 16 28 49.8 +0.8
baz=266
E09A Wood Farm, Sta 93.59 44 P P 16 28 50.2 +0.6
PFO Pinyon Flats O 94.04 57 LR LR 17 03 13.3
comp=Z,56nm,19.3s,baz=258,slow=30
BMO Blue Mountains 94.07 45 P P 16 28 51.7 -0.3
BMO IAmb IAmb 16 28 53.2
comp=Z,5.2nm,0.9s
F10A Beach Ranch, E 94.19 44 P P 16 28 52.4 -0.1
F10A IAmb IAmb 16 28 53.9
comp=Z,8.8nm,0.9s
HEC Hector,Ludlow 94.22 56 P P 16 28 54.1 +1.2
baz=266
NEW Newport 94.39 42 P P 16 28 52.8 -0.5
comp=Z,4.1nm,0.8s,baz=221,slow=6.5,SNR=4.6
NEW Newport 94.39 42 IAmb IAmb 16 28 54.9
comp=Z,5.7nm,1.0s
NEW Newport 94.39 42 P P 16 28 54.1 +0.8
baz=267
TPNV Topopah Spring 94.42 53 P P 16 28 55.0 +1.1
baz=267

R11A Troy Canyon, C 95.02 52 P P 16 28 57.8 +1.2
baz=267
IRM Iron Mountain 95.17 56 P P 16 28 58.9 +1.7
baz=267
YKA Yellowknife Ar 96.16 28 P P 16 29 01.3 +0.3
comp=Z,2.0nm,0.7s,baz=271,slow=5.0,SNR=31
WALA Waterton Lakes 96.54 41 P P 16 29 04.2 +1.0
W18A Petrified Fore 99.65 55 P Pdif 16 29 17.8 +0.3
baz=270
BW06 Boulder Array 99.65 48 P Pdif 16 29 17.4 0.0
baz=272
PDAR Pinedale Array 99.65 48 P Pdif 16 29 16.9 -0.6
comp=Z,1.4nm,0.8s,baz=222,slow=1.2,SNR=9.1
PDAR LR LR 17 08 05.3
comp=Z,76nm,21.0s,baz=238,slow=32
MVCO Mesa Verde 100.62 53 P Pdif 16 29 23.5 +1.6
baz=271
N23A Red Feather La 102.44 49 P Pdif 16 29 29.0 -1.0
baz=274
RSSD Black Hills 103.58 46 P Pdif 16 29 34.5 -0.4
baz=276
GERES GERESS Array B 124.14 328 PKP PKPdf 16 34 32.2 +0.2
comp=Z,1.2nm,0.6s,baz=82,slow=1.9,SNR=11
LPAZ La Paz 134.74 119 PKP PKPdf 16 34 53.7 0.0
comp=Z,1.0nm,0.7s,baz=58,slow=2.7,SNR=4.8
TOA0 Torodi Ar. Sit 149.85 287 PKPbc 16 35 23.6 -0.8
TORD Torodi Ar. Bea 149.85 287 PKPbc PKPbc 16 35 23.9 -0.5
comp=Z,14nm,0.8s,baz=68,slow=2.7,SNR=61
BDFB Brasilia 151.16 136 PKPbc PKPbc 16 35 27.4 -0.2
comp=Z,2.7nm,0.6s,baz=264,slow=3.5,SNR=3.4

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*IDC **18** 16:18:55.9±1.1, 18.48N×69.13W, h130km±11km, mb3.8/29, mb1 4.0/35, mb1mx3.9/50, mbtmp4.3/35, MS3.7/2, Ms1 3.7/2, ms1mx2.9/35, Error ellipse: s-maj=9.7km s-min=9.0km az=8.0*
*NEIC **18** 16:18:55.9±1.2, 18.43N±0.06×69.12W±0.05, h133km±5km, mb4.5/91, Error ellipse: s-maj=9.0km s-min=7.3km az=186.0*
*PMR **18** 16:18:56±5.1, 17.82N±0.07×69.22W±0.06, h107km±5km, Error ellipse: s-maj=10.1km s-min=7.5km az=192.0*
*OSPL **18** 16:18:58.5±4.2, 18.39N×69.17W, h131km±23km, ML4.4*
ISC 18 16:18:55.7±0.6, 18.40N±0.04×69.15W±0.03, h133km±5km, n269, σ1.67/286, mb4.4/66, Dominican Republic region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

DR12 Loma Pena Alta 0.44 331 Pn 16 19 14.0 -0.9
SDD Santo Domingo 0.72 275 iP Pn 16 19 16.5 -0.1
SDD eS Sn 16 19 32.3 -0.1
SDD Santo Domingo 0.72 275 iP Pn 16 19 16.5 -0.1
SDD eS Sn 16 19 32.3 -0.1
SDD Santo Domingo 0.72 275 Pn 16 19 16.4 -0.1
PCDR Punta Cana, DR 0.74 81 iP Pn 16 19 17.0 +0.3
PCDR eS Sn 16 19 33.6 +1.0
PCDR IAML 16 19 39.5
comp=Z,12μm,0.3s
PCDR Punta Cana, DR 0.74 81 iP Pn 16 19 17.0 +0.3
PCDR eS Sn 16 19 33.6 +1.0
PCDR IAML 16 19 39.6
comp=Z,12μm,0.3s
PCDR Punta Cana, DR 0.74 81 Pn 16 19 16.8 +0.1
PCDR Sn Sn 16 19 32.4 -0.2
BANI BANI 1.15 270 Pn 16 19 20.8 +0.3
BON1 Bonao 1.30 295 iP Pn 16 19 22.1 +0.2
BON1 eS Sn 16 19 40.9 -0.9
BON1 IAML 16 19 44.3
comp=Z,5μm,0.4s
SC01 Santiago de lo 1.81 305 iP Pn 16 19 27.9 +0.3
SC01 eS Sn 16 19 52.0 +0.1
SC01 IAML 16 19 55.8
comp=Z,4μm,0.4s
SC01 Santiago de lo 1.81 305 iP Pn 16 19 27.8 +0.2
SC01 eS Sn 16 19 52.3 +0.3
SC01 IAML 16 19 56.0
comp=Z,4μm,0.4s
SC01 Santiago de lo 1.81 305 Pn 16 19 27.4 -0.2
LOBA1 Barahona 1.85 261 iP Pn 16 19 27.8 -0.3
LOBA1 eS Sn 16 19 51.0 -1.9
LOBA1 IAML 16 19 54.0
comp=Z,4μm,0.6s
LOBA1 Barahona 1.85 261 iP Pn 16 19 27.8 -0.3
LOBA1 eS Sn 16 19 51.0 -1.9
LOBA1 IAML 16 19 54.0
comp=Z,4μm,0.6s
MPR Mayaguez 1.92 95 iP Pn 16 19 29.9 +1.0
MPR eS Sn 16 19 57.4 +3.1
MPR IAML 16 20 08.0
comp=Z,791nm,0.5s
MPR Mayaguez 1.92 95 iP Pn 16 19 29.9 +1.0
MPR eS Sn 16 19 52.5 -1.8
MPR IAML 16 20 08.0
comp=Z,791nm,0.5s
MPR Mayaguez 1.92 95 Pn 16 19 29.5 +0.6
AGPR Aguadilla, PR 1.94 88 iP Pn 16 19 29.7 +0.6
AGPR eS Sn 16 19 54.6 0.0
AGPR IAML 16 20 03.9
comp=Z,2μm,0.3s
AGPR Aguadilla, PR 1.94 88 iP Pn 16 19 29.7 +0.6
AGPR eS Sn 16 19 54.7 0.0
AGPR IAML 16 20 04.0
comp=Z,2μm,0.3s
AGPR Aguadilla, PR 1.94 88 Pn 16 19 29.3 +0.2
CRPR Cabo Rojo, PR 1.98 101 Pn 16 19 29.9 +0.2
MLPR Magueyes Islan 2.05 102 Pn 16 19 29.5 -0.9
SDDR Presa de Saban 2.11 286 eP Pn 16 19 31.6 +0.4
SDDR eS Sn 16 19 57.7 -0.6
SDDR Presa de Saban 2.11 286 iP Pn 16 19 31.7 +0.4
SDDR eS Sn 16 19 57.8 -0.6
SDDR IAML 16 20 07.8
comp=Z,1μm,0.3s
SDDR Presa de Saban 2.11 286 iP Pn 16 19 31.8 +0.6
SDDR eS Sn 16 19 58.1 -0.3
SDDR IAML 16 20 07.9
comp=Z,1μm,0.3s
SDDR Presa de Saban 2.11 286 Pn 16 19 31.5 +0.3
AOPR Arecibo Observ 2.28 91 Pn 16 19 33.1 -0.2
OBIP Obispado Ponce 2.45 98 Pn 16 19 34.7 -0.7
EMPR Esperanza - Ma 2.49 88 Pn 16 19 35.3 -0.6
LOPE2 Hotel El Peder 2.49 262 eS Sn 16 20 06.8 -0.1
LOPE2 IAML 16 20 16.3
comp=Z,1μm,0.5s
ICMP Isla Caja de M 2.55 101 Pn 16 19 36.5 -0.1
SJG San Juan 2.87 95 eP Pn 16 19 41.7 +1.0
SJG eS Sn 16 20 09.0 -6.4
SJG San Juan 2.87 95 P Pn 16 19 41.2 +0.5
comp=Z,129nm,0.3s,baz=300,slow=9.0,SNR=76
SJG S Sn 16 20 15.3 -0.1
comp=Z,144nm,0.3s,baz=278,slow=18,SNR=14
SJG San Juan 2.87 95 Pn 16 19 40.8 0.0
GCPR Guaynabo City 2.92 91 Pn 16 19 40.8 -0.6
IGPR InterUniversit 2.93 98 Pn 16 19 41.3 -0.2
PDPR Patillas Dam, 3.00 97 Pn 16 19 42.5 +0.1
CBYP Canovanas 3.13 92 Pn 16 19 42.9 -1.4
HUMP Col San Antoni 3.15 94 Pn 16 19 43.8 -0.6
LGNH Logne 3.28 273 eP Pn 16 19 47.6 +1.5
LGNH eS Sn 16 20 25.1 +0.1
LGNH IAML 16 20 32.1
comp=Z,133nm,0.8s
LGNH Logne 3.28 273 iP Pn 16 19 45.5 -0.6
LGNH IAML 16 20 32.2
comp=Z,133nm,0.8s
LGNH Logne 3.28 273 Pn 16 19 46.1 0.0
MTP Monte Pirata 3.43 94 Pn 16 19 47.1 -1.0
GRTK Grand Turk 3.62 329 Pn 16 19 47.7 -2.8
CUPR Culebra, Puert 3.68 91 Pn 16 19 49.5 -1.8
STVI Saint Thomas 3.99 90 Pn 16 19 53.7 -1.7
CDVI St. Croix 4.22 98 Pn 16 19 58.0 -0.5
SABA Saba 5.68 97 eP Pn 16 20 20.4 +2.4
SABA Saba 5.68 97 eS Sn 16 21 23.7 +1.6
SABA Saba 5.68 97 Pn Pn 16 20 17.1 -0.9
SMRT St. Maarten 5.79 92 eP Pn 16 20 18.9 -0.6
SMRT St. Maarten 5.79 92 eS Sn 16 21 18.2 -6.6
SMRT St. Maarten 5.79 92 Pn 16 20 17.9 -1.5
GTBY Guantanamo Bay 5.83 286 eP Pn 16 20 17.0 -3.1
GTBY eS Sn 16 21 22.5 -3.4
GTBY IAML 16 21 25.8
comp=Z,70nm,0.8s
GTBY Guantanamo Bay 5.83 286 iP Pn 16 20 16.6 -3.4
GTBY eS Sn 16 21 21.1 -4.8
GTBY IAML 16 21 25.8
comp=Z,70nm,0.8s

GTBY Guantanamo Bay 5.83 286 Pn Pn 16 20 16.1 -3.9
SKI Saint Kitts 6.20 99 eP Pn 16 20 19.6 -5.4
SKI Saint Kitts 6.20 99 eS Sn 16 21 33.6 -1.2
SKOC St. Kitts, UWI 6.21 99 eP Pn 16 20 18.2 -7.0
SKOC St. Kitts, UWI 6.21 99 eS Sn 16 21 32.5 -2.5
NVBH Bath Hotel, Ne 6.36 101 eP Pn 16 20 30.2 +3.1
NVBH Bath Hotel, Ne 6.36 101 eS Sn 16 21 39.1 +0.6
NVRH Round Hill, Ne 6.36 100 eP Pn 16 20 29.9 +2.7
NVRH Round Hill, Ne 6.36 100 eS Sn 16 21 39.4 +0.8
NEV Hard Times 6.39 100 eP Pn 16 20 30.6 +2.9
NEV Hard Times 6.39 100 eS Sn 16 21 41.8 +2.3
MLYT Lee's Yard 6.85 103 eP Pn 16 20 35.2 +1.5
MLYT Lee's Yard 6.85 103 eS Sn 16 21 50.8 +0.4
ANWB Willy Bob 7.05 95 eP Pn 16 20 30.9 -5.5
ANWB Willy Bob 7.05 95 eS Sn 16 21 45.5 -10
ANWB Willy Bob 7.05 95 Pn Pn 16 20 33.8 -2.5
BPA Boggy Peak 7.08 100 eP Pn 16 20 35.5 -1.4
BPA Boggy Peak 7.08 100 eS Sn 16 21 51.8 -4.3
URIC Uribia, Colomb 7.20 203 eP Pn 16 20 39.7 +1.2
URIC Uribia, Colomb 7.20 203 Pn Pn 16 20 39.8 +1.2
MDPO Dominica; Chan 7.88 110 eP Pn 16 20 48.2 +0.5
MDPO Dominica; Chan 7.88 110 eS Sn 16 22 14.8 -0.6
BBL Barber's Block 7.89 110 eP Pn 16 20 49.0 +1.3
BBL Barber's Block 7.89 110 eS Sn 16 22 14.4 -1.1
MTDJ Mount Denham 7.96 270 Pn Pn 16 20 48.2 -0.7
DWS Wesley 8.01 109 eS Sn 16 22 16.8 -1.7
DLPL La Plaine 8.16 111 eS Sn 16 22 20.9 -1.2
FDF Fort de France 8.49 114 eP Pn 16 20 57.0 +1.1
FDF Fort de France 8.49 114 eS Sn 16 22 27.1 -3.1
FDF Fort de France 8.49 114 Pn Pn 16 20 55.9 0.0
SLBI Saint Lucia, B 8.98 118 eP Pn 16 21 06.9 +4.5
SLBI Saint Lucia, B 8.98 118 eS Sn 16 22 42.5 +0.6
SLAC Saint Lucia, A 9.11 118 eP Pn 16 21 05.2 +1.0
SVB Belmont 9.15 123 eP Pn 16 21 06.9 +2.1
SVB Belmont 9.15 123 eS Sn 16 22 40.0 -6.1
SVB Belmont 9.15 123 Pn Pn 16 21 04.5 -0.2
SFAN Fancy Village 9.15 122 eP Pn 16 21 03.8 -1.0
SVV Soufriere Volc 9.15 122 eP Pn 16 21 07.3 +2.6
SVV Soufriere Volc 9.15 122 eS Sn 16 22 43.1 -3.1
MCLT Moule a Chique 9.17 119 eP Pn 16 21 19.7 +15
SSV Crater Summit 9.17 122 eP Pn 16 21 06.7 +1.7
SVCV St. Vincent, C 9.24 122 eP Pn 16 21 08.4 +2.5
SVCV St. Vincent, C 9.24 122 eS Sn 16 22 43.1 -5.1
PCRV Puerto La Cruz 9.27 151 P Pn 16 21 07.5 +1.2
comp=Z,0.7nm,0.3s,baz=350,slow=14,SNR=2.1
PCRV S Sn 16 22 45.0 -4.1
comp=Z,8.9nm,0.3s,baz=32,slow=14,SNR=9.9
PLCV Puerto La Cruz 9.30 151 Pn 16 21 07.5 +0.8
PLCV Sn 16 22 45.0 -4.9
CODC Agustn Codazz 9.38 207 eP Pn 16 21 08.7 +0.8
BAUV El Baul 9.46 173 eS Sn 16 22 53.0 -0.5
GRSS Sisters 9.47 129 eS Sn 16 22 49.6 -4.1
GRGR Grenville 9.54 130 eP Pn 16 21 09.6 -0.4
GRGR Grenville 9.54 130 eS Sn 16 22 50.5 -5.2
SDV Santo Domingo 9.56 189 P Pn 16 21 13.0 +2.6
comp=Z,12nm,0.3s,baz=34,slow=6.9,SNR=42
SDV S Sn 16 22 58.0 +1.6
comp=Z,2.8nm,0.3s,baz=179,slow=12,SNR=2.4
SDV Santo Domingo 9.56 189 Pn 16 21 12.3 +1.9
GUIV Guiria 10.21 138 eP Pn 16 21 24.1 +5.1
GUIV Guiria 10.21 138 eS Sn 16 23 05.0 -6.9
SMLC San Martn de 10.67 207 eP Pn 16 21 26.6 +1.6
TRN Trinidad (W) 10.75 135 eP Pn 16 21 36.3 +10
TRN Trinidad (W) 10.75 135 eS Sn 16 23 17.9 -6.9
TOSP Speyside 10.91 129 eP Pn 16 21 29.8 +1.5
PAMC Pamplona, Colo 11.52 198 eP Pn 16 21 39.8 +2.9
UREC San Jos de Ur 12.27 211 eP Pn 16 21 48.8 +2.7
BARC Barichara 12.37 199 eP Pn 16 21 49.6 +1.9
PTBC PUERTO BERRIO, 12.87 204 eP Pn 16 21 56.4 +2.4
RUSC La Rusia 13.01 198 eP Pn 16 21 59.2 +3.0
RUSC La Rusia 13.01 198 Pn 16 21 56.1 0.0
DBBC Dabeiba 13.34 212 eP P 16 22 02.3 -1.5
SPBC San Pablo de B 13.55 201 eP P 16 22 06.0 -1.2
HELC Santa Helena 13.63 208 eP P 16 22 08.8 +0.3
NORC Norcasia 13.92 204 eP P 16 22 10.1 -1.2
CBOC Ciudad Bolivar 14.14 209 eP Pn 16 22 11.5 +1.1
ROSC El Rosal 14.39 201 P Pn 16 22 14.8 +1.1
comp=Z,2.4nm,0.3s,baz=351,slow=19,SNR=4.7
ROSC S S 16 25 00.8 -3.1
comp=Z,1.6nm,0.3s,baz=37,slow=20,SNR=5.1
ROSC El Rosal 14.39 201 Pn 16 22 14.2 +0.4
CHIC Chingaza 14.40 199 eP P 16 22 17.0 0.0
GUY2C Guyana, Caldas 14.43 206 eP P 16 22 15.2 +0.9
BBSR BB Station 14.48 15 P P 16 22 16.1 -1.3
PRAC Prado 15.63 202 eP P 16 22 30.9 +0.5
MACC Macarena, Meta 16.80 196 eP Pn 16 22 47.8 +4.6
JTS Las Juntas de 17.29 244 P Pn 16 22 51.0 +1.8
baz=125,slow=8.7,SNR=3.6
BBAC Balboa, Cauca 18.11 207 eP Pn 16 22 59.6 +0.5
TEIG Tepich 18.14 279 P Pn 16 22 58.9 -0.4
comp=Z,1.5nm,0.3s,baz=34,slow=3.4,SNR=3.8
TEIG Tepich 18.14 279 Pn 16 22 59.1 -0.2
TEIG IAmb IAmb 16 23 49.2
comp=Z,58nm,1.6s
OTAV Otavalo 20.23 208 P Pn 16 23 23.3 -1.0
APG El Apazote 20.69 264 P P 16 23 27.2 +1.5
comp=Z,18nm,0.6s,baz=89,slow=15,SNR=11
Z50A Ashland 21.09 318 P P 16 23 29.9 +0.2
LRAL Lakeview Retre 21.65 316 P P 16 23 35.3 -0.4
CCIG Comitan 22.04 268 P P 16 23 40.2 +0.2
CCIG IAmb IAmb 16 23 42.4
comp=Z,60nm,1.5s
N59A State Game Lan 23.15 347 P P 16 23 50.2 -0.2
OXF Oxford 24.14 316 P P 16 23 59.7 +0.3
OXF IAmb IAmb 16 24 01.0
comp=Z,20nm,0.8s
WVT Waverly 24.16 321 P P 16 23 59.6 0.0
WVT IAmb IAmb 16 24 00.6
comp=Z,8.7nm,0.8s
CMIG Matias Romero 24.54 271 P P 16 24 03.1 -0.1
comp=Z,4.7nm,0.9s,baz=112,slow=7.2,SNR=3.9
X40A Basin Creek Fa 26.48 312 P P 16 24 21.1 +0.5
N47A Urbana 26.53 331 P P 16 24 20.9 -0.1
N47A IAmb IAmb 16 24 22.4
comp=Z,8.6nm,0.8s
CCM Cathedral Cave 27.49 320 P P 16 24 29.1 -0.4
CCM IAmb IAmb 16 24 30.7
comp=Z,7.9nm,1.1s
MGMO Mountain Grove 27.58 317 P P 16 24 30.5 +0.1
MGMO IAmb IAmb 16 25 18.8
comp=Z,17nm,1.6s
LMN Caledonia Moun 27.61 7 P P 16 24 30.9 +0.3
SAML Samuel 27.80 167 P P 16 24 32.7 +0.1
I49A Point Hope 27.94 339 P P 16 24 33.0 -0.6
I49A IAmb IAmb 16 24 58.2
comp=Z,25nm,1.3s
435B Jarrell 28.55 301 P P 16 24 40.1 +1.0
WHTX Lake Whitney, 28.86 303 P P 16 24 42.8 +1.0
WHTX IAmb IAmb 16 24 43.8
comp=Z,7.2nm,0.6s
LATQ La Tuque 29.06 355 P P 16 24 43.6 +0.3
LATQ IAmb IAmb 16 25 36.3
comp=Z,16nm,1.7s
TUL1 Leonard 29.29 312 P P 16 24 45.7 +0.1
TUL1 IAmb IAmb 16 24 46.8
comp=Z,13nm,0.8s
D53A Lac Vacive, Po 29.46 348 P P 16 24 46.8 -0.1
D53A IAmb IAmb 16 24 47.8
comp=Z,6.1nm,0.8s
L40A Anamosa 30.16 326 P P 16 24 52.6 -0.6
JFWS Jewell Farm 30.27 328 P P 16 24 54.1 -0.1
JCT Junction City 30.29 299 P P 16 24 55.0 +0.4
JCT IAmb IAmb 16 24 55.2
comp=Z,14nm,1.4s
I42A Draeger Farm, 30.37 331 P P 16 24 55.4 +0.4
VLDQ Val d'Or 30.40 349 P P 16 24 55.6 +0.4
ABTX Abilene, Hawle 30.82 303 P P 16 24 59.2 0.0
ABTX IAmb IAmb 16 25 00.5
comp=Z,14nm,0.8s
WMOK Wichita Mounta 30.94 308 P P 16 24 60.0 -0.3
WMOK IAmb IAmb 16 25 00.9
comp=Z,6.5nm,0.6s
I40A Norwalk 31.17 329 P P 16 25 02.1 0.0
D41A Chassel 32.73 335 P P 16 25 16.2 +0.5
D41A IAmb IAmb 16 25 18.1
comp=Z,8.3nm,0.8s
TXAR Lajitas Array 33.27 296 P P 16 25 21.4 +0.6
comp=Z,1.1nm,0.4s,baz=118,slow=8.8,SNR=17
TX31 Lajitas Ar. Si 33.27 296 P P 16 25 21.3 +0.6
TX32 Lajitas Array 33.27 296 P P 16 25 21.3 +0.5
CBKS Cedar Bluff 33.44 314 P P 16 25 22.9 +0.8
MSTX Muleshoe 33.74 304 P P 16 25 24.6 -0.2

ECSD EROS Data Cent 34.23 324 P P 16 25 28.8 +0.1
LPAZ La Paz 34.48 178 P P 16 25 34.0 +2.1
comp=Z,1.1nm,0.6s,baz=322,slow=5.9,SNR=5.5
LPAZ La Paz 34.48 178 P P 16 25 33.6 +1.8
EYMN Ely 34.65 333 P P 16 25 32.2 -0.1
SIV San Ignacio 35.09 166 P P 16 25 36.8 +0.4
comp=Z,1.1nm,0.8s,baz=22,slow=10,SNR=5.2
MNTX Cornudas Mount 35.22 299 P P 16 25 37.7 +0.2
MNTX IAmb IAmb 16 25 39.1
comp=Z,4.3nm,0.8s
SCHQ Schefferville 36.41 2 P P 16 25 47.6 +0.4
comp=Z,9.5nm,0.7s,baz=197,slow=7.0,SNR=24
SCHQ Schefferville 36.41 2 P P 16 25 47.4 +0.1
SCHQ IAmb IAmb 16 25 48.1
comp=Z,9.3nm,0.7s
D32A Dogwood Acres, 36.65 328 P P 16 25 48.2 -1.2
AGMN Agassiz Nation 36.88 330 P P 16 25 50.0 -1.2
AGMN IAmb IAmb 16 25 51.4
comp=Z,7.0nm,0.5s
ANMO Albuquerque 36.93 304 P P 16 25 52.7 +0.5
SDCO Great Sand Dun 37.11 309 P P 16 25 54.2 +0.5
GO01 Chusmiza 37.83 180 P P 16 25 59.4 -0.7
GO01 IAmb IAmb 16 25 59.6
comp=Z,14nm,1.6s
S22A 4UR Ranch, Cre 38.10 308 P P 16 26 02.8 +0.7
ULM Lac du Bonnet 38.28 332 P P 16 26 01.5 -1.6
comp=Z,1.4nm,0.4s,baz=127,slow=7.3,SNR=5.4
ULM Lac du Bonnet 38.28 332 P P 16 26 01.9 -1.2
ULM IAmb IAmb 16 26 12.8
comp=Z,6.9nm,1.2s
319A Douglas 38.42 297 P P 16 26 04.1 -0.6
319A IAmb IAmb 16 26 06.6
comp=Z,8.4nm,1.0s
PHWY Pilot Hill 38.48 314 P P 16 26 03.7 -1.6
W18A Petrified Fore 39.57 303 P P 16 26 13.2 -1.1
W18A IAmb IAmb 16 27 08.4
comp=Z,7.9nm,1.4s
BDFB Brasilia 39.72 147 P P 16 26 18.0 +2.5
comp=Z,2.8nm,0.6s,baz=259,slow=16,SNR=3.1
LVC Limon Verde 40.76 180 P P 16 26 23.9 -0.4
comp=Z,3.4nm,0.7s,baz=6.9,slow=13,SNR=3.4
LVC Limon Verde 40.76 180 P P 16 26 23.5 -0.8
DGMT Dagmar 41.28 325 P P 16 26 28.6 +0.7
DGMT IAmb IAmb 16 27 21.6
comp=Z,9.4nm,0.5s
SRU San Rafael Swe 41.28 309 P P 16 26 28.9 +0.6
214A Organ Pipe Nat 41.48 298 P P 16 26 30.4 +0.6
214A IAmb IAmb 16 26 32.0
comp=Z,17nm,1.9s
P17A Butcher Ranch, 41.55 309 P P 16 26 31.7 +1.2
TMUT Trail Mountain 41.85 309 P P 16 26 33.6 +0.5
PDAR Pinedale Array 41.87 314 P P 16 26 32.3 -0.8
comp=Z,0.3nm,0.3s,baz=116,slow=11,SNR=5.7
PDAR PcP PcP 16 28 26.1 -0.4
comp=Z,0.6nm,0.6s,baz=112,slow=4.7,SNR=5.4
MTPU Mount Pierson 42.22 307 P P 16 26 36.8 +0.6
MSU Marysvale 42.34 307 P P 16 26 38.4 +1.4
RLMT Red Lodge 42.64 318 P P 16 26 39.6 +0.4
RLMT IAmb IAmb 16 28 03.5
comp=Z,27nm,1.9s
LCMT Little Creek M 42.78 305 P P 16 26 40.1 -0.4
CCUT Cedar City 43.00 306 P P 16 26 42.5 +0.1
MOOW Moose Ponds 43.05 315 P P 16 26 42.7 +0.2
FXWY Fox Creek 43.19 315 P P 16 26 44.1 +0.3
FXWY IAmb IAmb 16 27 36.0
comp=Z,14nm,1.9s
DUG Dugway, Tooele 43.29 310 P P 16 26 45.4 +0.8
PSUT Pine Spring 43.62 307 P P 16 26 48.9 +1.6
BGU Big Grassy Mou 43.67 310 P P 16 26 47.4 -0.1
FFC Flin Flon 44.08 333 P P 16 26 48.4 -2.0
R11A Troy Canyon, C 44.90 306 P P 16 26 58.6 +1.2
TPNV Topopah Spring 45.12 304 P P 16 27 00.6 +1.4
TPNV IAmb IAmb 16 27 03.0
comp=Z,8.3nm,0.8s
FRB Frobisher Bay 45.31 0 P P 16 26 59.8 -0.2
comp=Z,3.0nm,0.4s,baz=194,slow=8.9,SNR=8.6
CPUP Villa Florida 45.92 165 P P 16 27 05.5 +0.3
comp=Z,1.4nm,0.8s,baz=13,slow=14,SNR=2.9
NV11 Mina Array Sit 46.89 306 P P 16 27 14.0 +1.0
NV11 IAmb IAmb 16 27 15.8
comp=Z,8.9nm,0.8s
KVN Kaiserville 46.97 307 P P 16 27 14.8 +1.2
NVAR Mina Array Bea 47.00 306 P P 16 27 15.1 +1.1
comp=Z,3.1nm,0.7s,baz=79,slow=6.8,SNR=25
RYN Ryan 47.21 306 P P 16 27 16.7 +1.2
RYN IAmb IAmb 16 27 17.8
comp=Z,5.5nm,0.8s
OMMB Old Mammoth Mi 47.40 304 P P 16 27 18.6 +1.5
WVOR Wild Horse Val 48.12 311 P P 16 27 22.6 +0.2
WVOR IAmb IAmb 16 29 06.5
comp=Z,16nm,1.7s
J08A Circle Bar Ran 48.24 312 P P 16 27 23.7 +0.4
GO04 Tololo Observa 48.31 182 P P 16 27 23.9 -0.2
NEW Newport 48.84 319 P P 16 27 27.6 -0.1
comp=Z,1.9nm,0.6s,baz=132,slow=5.3,SNR=7.1
NEW Newport 48.84 319 P P 16 27 27.4 -0.3
NEW IAmb IAmb 16 27 28.6
comp=Z,5.0nm,0.8s
I07A Izee 49.15 313 P P 16 27 29.9 -0.3
YBH Yreka Blue Hor 50.94 309 P P 16 27 43.0 -0.7
comp=Z,1.8nm,0.7s,baz=111,slow=7.3,SNR=5.3
ILULI Ilulissat 52.02 8 P P 16 27 51.0 -0.2
YKA Yellowknife Ar 54.05 336 P P 16 28 05.2 -1.0
comp=Z,3.2nm,0.8s,baz=115,slow=7.2,SNR=26
BORG Borgarnes 56.16 23 LR LR 16 48 18.1
comp=Z,42nm,19.8s,baz=191,slow=31
SUMG Summit 56.97 11 iP P 16 28 27.8 +0.5
comp=Z,24nm,0.7s
SUMG Summit 56.97 11 P P 16 28 27.5 +0.1
RES Resolute Bay 58.01 352 P P 16 28 34.1 0.0
comp=Z,1.1nm,0.4s,baz=148,slow=7.9,SNR=4.0
RES Resolute Bay 58.01 352 P P 16 28 34.3 +0.2
TULEG Thule 58.17 0 P P 16 28 35.0 -0.2
TULEG IAmb IAmb 16 28 35.8
comp=Z,5.8nm,0.7s
PLCA Paso Flores 58.84 181 P P 16 28 40.5 +0.1
comp=Z,1.4nm,0.7s,baz=24,slow=5.8,SNR=5.6
PLCA Paso Flores 58.84 181 P P 16 28 40.4 0.0
ESDC Sonseca Array 59.54 24 P P 16 28 45.6 +0.2
comp=Z,1.9nm,0.7s,baz=274,slow=7.2,SNR=8.8
TIC Toumodi 63.41 92 eP P 16 29 11.3 -0.4
TIC Toumodi 63.41 92 P P 16 29 11.3 -0.4
LIC Lamto 63.53 92 eP P 16 29 11.8 -0.7
comp=Z,26nm,0.9s
LIC Lamto 63.53 92 P P 16 29 11.8 -0.7
DBIC Dimbokro 63.56 92 P P 16 29 12.9 +0.3
comp=Z,1.3nm,0.5s,baz=269,slow=6.8,SNR=5.9
DBIC Dimbokro 63.56 92 P P 16 29 12.8 +0.1
DBIC IAmb IAmb 16 29 13.8
comp=Z,8.1nm,0.9s
DAG Danmarks Havn 63.62 11 iP P 16 29 11.7 -0.3
comp=Z,6.6nm,0.8s
KIC Kosan Boka 63.76 92 eP P 16 29 13.5 -0.5
comp=Z,8.9nm,0.4s
KIC Kosan Boka 63.76 92 P P 16 29 13.5 -0.5
SCRK Sand Creek 66.98 332 P P 16 29 34.6 +0.6
SCRK IAmb IAmb 16 30 45.4
comp=Z,23nm,1.8s
FID Port Fidalgo 67.94 329 P P 16 29 41.2 +1.2
TOA0 Torodi Ar. Sit 68.02 83 P P 16 29 41.0 -0.2
TOA0 IAmb IAmb 16 29 42.0
comp=Z,4.4nm,0.9s
TORD Torodi Ar. Bea 68.02 83 P P 16 29 41.4 +0.1
comp=Z,3.1nm,0.8s,baz=289,slow=6.2,SNR=12
ILAR Eielson Array 68.29 333 P P 16 29 42.0 -0.1
comp=Z,0.7nm,0.6s,baz=105,slow=4.6,SNR=4.6
CCB Clear Creek Bu 68.68 333 P P 16 29 43.7 -0.8
CCB IAmb IAmb 16 30 40.8
comp=Z,21nm,1.8s
RND Reindeer 69.11 332 P P 16 29 47.7 +0.4
NB2 NORSAR Subarra 69.43 31 P P 16 29 50.2 +0.9
comp=Z,1.6nm,0.8s,baz=272,slow=6.5
NOA NORSAR Array B 69.43 31 P P 16 29 50.0 +0.7
comp=Z,1.7nm,0.9s,baz=270,slow=6.2,SNR=4.1
FUORN Ofenpass-Fuorn 69.67 46 P P 16 29 51.7 +0.4
FUORN IAmb IAmb 16 29 52.8
comp=Z,5.6nm,0.8s
TRF Thorofare Moun 69.76 332 P P 16 29 51.8 +0.4
KEST Kesra 70.34 58 P P 16 29 56.3 +0.9
comp=Z,7.2nm,0.8s,baz=335,slow=3.7,SNR=4.9
KHC Kasperske Hory 71.61 43 P P 16 30 03.4 +0.6
GERES GERESS Array B 71.73 44 P P 16 30 03.5 0.0
comp=Z,1.1nm,0.8s,baz=268,slow=3.7,SNR=9.1
ARCES ARCESS Array B 74.54 21 P P 16 30 19.9 +0.3
comp=Z,2.4nm,0.6s,baz=280,slow=3.6,SNR=12
FINES FINESS Array B 76.50 29 P P 16 30 30.9 +0.1
comp=Z,3.1nm,0.8s,baz=253,slow=5.2,SNR=5.3
MLR Muntele Rosu 80.58 45 P P 16 30 54.6 +0.8
MLR IAmb IAmb 16 30 56.1
comp=Z,7.8nm,0.9s
ELL Elmali 86.17 53 P P 16 31 22.7 +0.2
BRTR Keskin Array B 87.85 49 P P 16 31 30.7 +0.1
comp=Z,2.0nm,0.8s,baz=274,slow=3.6,SNR=13
TIXI Tiksi 89.34 354 P P 16 31 36.9 +0.2
comp=Z,0.4nm,0.2s,baz=31,slow=3.5,SNR=2.8
ARU Arti 93.55 26 LR LR 17 11 42.7
comp=Z,73nm,21.1s,baz=26,slow=34
LZH Lanzhou 125.41 7 ePKP PKiKP 16 37 44.8 +2.8
LZH pPKP pPKPdf 16 38 13.3 -4.0
LZH sPKP 16 38 27.8
WRA Warramunga Arr 157.76 262 PKPab PKPab 16 39 10.5 -0.1
comp=Z,0.9nm,0.7s,baz=91,slow=3.5,SNR=5.0
ASAR Alice Springs 157.86 252 PKPab PKPab 16 39 10.7 -0.2
comp=Z,2.7nm,0.7s,baz=103,slow=4.7,SNR=20

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*TAP **18** 16:19:26.1, 24.44N, 121.91E, h14km, ML4.0, B*
*JMA **18** 16:19:26.1±0.1, 24.44N, 121.90E, h17km, M3.5*
*ASIES **18** 16:19:26.1, 24.44N, 121.89E, h29km, MW3.2*
ISC 18 16:19:25.9±0.8, 24.44N±0.01, 121.93E±0.02, h15km±5km, n132, σ0.78/218, 23C-18D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	Nanau	0.17	267	⇓iP	Pg	16 19 30.1	0.0
	baz=264						
ENA				iS	Sg	16 19 32.5	-0.4
	baz=264						
TWC	Suao	0.19	337	⇑iP	Pg	16 19 30.4	0.0
	baz=350						
TWC				iS	Sg	16 19 32.9	-0.5
	baz=350						
EOS1	EOS1	0.21	58	⇓P	Pg	16 19 31.5	+0.8
	baz=55						
EOS1				S	Sg	16 19 35.4	+1.4
	baz=55						
ILA	Ilan	0.37	333	⇑iP	Pb	16 19 34.0	-0.1
	baz=335						
ILA				S	Sb	16 19 39.5	-0.1
	baz=335						
TWE	Neicheng	0.37	320	⇑iP	Pb	16 19 33.7	-0.5
	baz=322						
TWE				S	Sg	16 19 38.1	-0.5
	baz=322						
ENTT	Nioudou	0.39	301	⇑iP	Pb	16 19 34.1	-0.4
	baz=302						
ENTT				eS	Sg	16 19 38.9	-0.3
	baz=302						
NACB	Ninganchiao	0.40	229	⇓P	Pg	16 19 34.0	-0.1
	baz=228						
NACB				S	Sg	16 19 39.6	+0.1
	baz=228						
NDT	Datong Townshi	0.41	293	⇓P	Pb	16 19 34.7	-0.2
	baz=294						
NDT				S	Sg	16 19 39.8	-0.2
	baz=294						
SLBB	Yuanshan	0.41	320	⇑iP	Pb	16 19 34.8	-0.1
	baz=321						
SLBB				eS	Sb	16 19 40.4	-0.7
	baz=321						
NTC	Toucheng	0.42	348	⇑P	Pb	16 19 34.9	-0.2
	baz=349						
NTC				eS	Sb	16 19 40.9	-0.4
	baz=349						
ETLH	Xiulin Townshi	0.47	241	⇓P	Pg	16 19 35.2	-0.1
	baz=240						
ETLH				S	Sb	16 19 42.2	-0.4
	baz=240						
TWD	Chiawan	0.47	221	⇓iP	Pg	16 19 35.1	-0.1
	baz=219						
TWD				iS	Sg	16 19 41.7	+0.1
	baz=219						
NNSB	Datong	0.50	269	⇓P	Pb	16 19 36.0	-0.4
	baz=269						
NNSB				S	Sb	16 19 42.5	-1.0
	baz=269						
NNSH	Datong	0.50	269	⇓iP	Pb	16 19 36.0	-0.5
	baz=269						
NNSH				eS	Sg	16 19 42.4	-0.2
	baz=269						
NNS	Nan Shan	0.51	270	⇓iP	Pb	16 19 36.1	-0.4
	baz=270						
NNS				S	Sg	16 19 42.5	-0.4
	baz=270						
NWLT	Wulai	0.52	311	⇑iP	Pb	16 19 36.6	-0.1
	baz=306						
NWLT				eS	Sg	16 19 42.9	-0.2
	baz=306						
TIPB	Shuangxi	0.54	350	⇑iP	Pg	16 19 36.9	+0.3
	baz=350						
TIPB				S	Sg	16 19 43.6	-0.2
	baz=350						
HWA	Hwalien	0.55	213	eP	Pb	16 19 37.5	+0.4
	baz=219						
HWA				eS	Sb	16 19 45.4	+0.6
	baz=219						
YHNB	Yeheng	0.56	295	⇑P	Pb	16 19 37.4	0.0
	baz=300						
YHNB				S	Sg	16 19 43.8	-0.5
	baz=300						
TWB1	Santiao Chiao	0.57	5	⇑iP	Pg	16 19 37.3	+0.1
	baz=357						
TWB1				eS	Sg	16 19 44.2	-0.6
	baz=357						
NSK	Sanguang	0.57	295	⇑iP	Pb	16 19 37.6	-0.1
	baz=295						
NSK				S	Sg	16 19 44.3	-0.6
	baz=295						
ENLB	Shoufeng	0.61	210	P	Pb	16 19 38.2	-0.1
	baz=216						
ENLB				eS	Sn	16 19 48.8	-0.8
	baz=216						
TWA	Mucha	0.63	330	⇑iP	Pb	16 19 38.8	+0.3
	baz=331						
TWA				eS	Sb	16 19 46.6	-0.6
	baz=331						
NHDH	Xindian Distri	0.64	325	⇑iP	Pb	16 19 39.2	+0.4
	baz=316						
NHDH				S	Sb	16 19 47.1	-0.5
	baz=316						
NWF	Wu-fen Shan	0.65	348	⇑iP	Pb	16 19 39.2	+0.3
	baz=339						
NWF				S	Sb	16 19 47.6	-0.2
	baz=339						
WFSB	Wu-fen Shan	0.65	348	⇑P	Pb	16 19 39.2	+0.3
	baz=339						
WFSB				S	Sb	16 19 47.4	-0.3
	baz=339						
TATO	Taipei	0.67	323	⇑P	Pb	16 19 39.4	+0.2
	baz=316						
WHF	Hehuan Shan	0.67	245	⇓iP	Pg	16 19 39.1	-0.1
	baz=244						
WHF				S	Sb	16 19 48.2	-0.6
	baz=244						
TWT	Tachien	0.71	255	⇓iP	Pb	16 19 40.3	+0.2
	baz=255						
TWT				eS	Sb	16 19 49.5	-0.2
	baz=255						
TAP	Taipei	0.71	327	eP	Pn	16 19 40.7	-0.7
	baz=318						
TAP				S	Sb	16 19 49.5	-0.1
	baz=318						
TDCB	Techi	0.73	256	⇓P	Pb	16 19 40.4	0.0
	baz=249						
TDCB				S	Sg	16 19 49.0	-0.7
	baz=249						
WLTB	Daxi	0.74	304	P	Pn	16 19 41.5	-0.3
	baz=296						
WLTB				S	Sb	16 19 50.9	+0.4
	baz=296						
ESL	Shilin	0.77	216	⇓P	Pb	16 19 40.4	-0.5
	baz=221						
ESL				S	Sg	16 19 51.1	+0.1
	baz=221						
YM01	YM01	0.78	335	⇑P	Pn	16 19 42.0	-0.4
	baz=335						
YM01				eS	Sn	16 19 53.0	-0.8
	baz=335						
CHGB	Renai	0.79	242	⇓P	Pg	16 19 41.2	0.0
	baz=251						
CHGB				S	Sb	16 19 51.9	0.0
	baz=251						
YM10	YM10	0.79	335	⇑iP	Pn	16 19 42.2	-0.3
	baz=335						
YM10				eS	Sn	16 19 53.1	-1.0
	baz=335						
YM11	YM11	0.79	336	⇑iP	Pn	16 19 42.2	-0.4
	baz=336						
YM11				S	Sn	16 19 53.5	-0.8
	baz=336						
YM04	YM04	0.80	333	⇑P	Pn	16 19 42.2	-0.4
	baz=333						
YM04				eS	Sn	16 19 53.0	-1.3
	baz=333						
TWS1	Kuangyinshan	0.81	325	P	Pn	16 19 42.8	+0.1
	baz=318						
TWS1				eS	Sn	16 19 53.4	-1.1
	baz=318						
ANP	Anpu	0.83	334	P	Pn	16 19 42.8	-0.4
	baz=341						
ANP				S	Sg	16 19 53.8	+0.7
	baz=341						
OWD	Renai	0.84	235	⇓eP	Pb	16 19 42.0	-0.2
	baz=229						
OWD				S	Sg	16 19 53.2	-0.1
	baz=229						
NTST	Danshui	0.85	329	eP	Pn	16 19 43.8	+0.6
	baz=329						
LIOB	Emei	0.86	284	⇑P	Pn	16 19 43.5	+0.1
	baz=284						
LIOB				S	Sg	16 19 54.1	+0.2
	baz=284						
NCU	National Centr	0.86	308	eP	Pn	16 19 43.9	+0.5
	baz=317						
NCU				S	Sn	16 19 55.4	-0.3
	baz=317						
NCUH	Zhongli	0.86	308	eP	Pn	16 19 44.0	+0.5
	baz=317						
NCUH				eS	Sn	16 19 55.7	-0.1
	baz=317						
NSTT	Nanjuang	0.87	283	P	Pn	16 19 43.3	-0.3
	baz=272						
NSTT				S	Sg	16 19 53.8	-0.4
	baz=272						
TWY	Chenhua	0.89	340	⇑iP	Pn	16 19 44.0	+0.2
	baz=340						
TWY				eS	Sn	16 19 56.0	-0.4
	baz=340						
EGFH	Guangfu	0.89	211	eP	Pg	16 19 43.2	0.0
	baz=228						
EGFH				eS	Sn	16 19 56.0	-0.5
	baz=228						
WHP	Taichung City	0.91	260	⇓P	Pn	16 19 44.2	0.0
	baz=260						
WHP				S	Sg	16 19 55.5	-0.1
	baz=260						
JYNG	Yonagunijimaku	0.93	89	P	Pb	16 19 43.8	+0.2
JYNG				eS	Sb	16 19 56.0	+0.3
SBCB	Hsinchu	0.93	293	eP	Pn	16 19 45.5	+1.1
	baz=287						
SBCB				S	Sn	16 19 58.2	+0.8
	baz=287						
HSN	Hsinchu	0.95	293	P	Pn	16 19 45.2	+0.5
	baz=295						
HSN				iS	Sn	16 19 57.9	0.0
	baz=295						
YOJ	Yonaguni jima	0.98	88	P	Pb	16 19 44.4	-0.2
	baz=88						
YOJ	Yonaguni jima	0.98	88	P	Pb	16 19 44.4	-0.2
YOJ				eS	Sb	16 19 57.4	0.0
VWDT	VWDT	0.99	227	⇓P	Pb	16 19 44.7	0.0
	baz=227						
VWDT				eS	Sn	16 19 58.9	-0.1
	baz=227						
DPDB	Guoxing	1.00	247	eP	Pn	16 19 45.5	+0.1
	baz=246						
DPDB				S	Sg	16 19 58.2	-0.2
	baz=246						
NMLH	Miaoli	1.04	276	eP	Pg	16 19 47.2	+1.2
	baz=275						
NMLH				eS	Sn	16 20 00.3	+0.1
	baz=275						
HGSD	Ruisui	1.05	206	eP	Pg	16 19 46.8	+0.7
	baz=207						
TWQ1	Liyutan	1.06	265	⇑P	Pg	16 19 47.2	+0.9
	baz=265						
TWQ1				eS	Sn	16 20 01.2	+0.5
	baz=265						
NSY	Sanyi	1.07	269	P	Pg	16 19 47.5	+1.0
	baz=269						
NSY				eS	Sn	16 20 01.0	+0.2
	baz=269						
EHY	Hungye	1.08	211	eP	Pb	16 19 46.0	-0.3
	baz=223						
EHY				eS	Sg	16 20 01.0	0.0
	baz=223						
SMLT	Sun Moon Lake	1.09	240	eP	Pg	16 19 46.9	-0.1
	baz=247						
SMLT				S	Sn	16 20 01.6	+0.1
	baz=247						
SSLB	Suanglung	1.10	234	⇓P	Pn	16 19 46.7	-0.1
	baz=241						
SSLB				S	Sb	16 20 00.1	-0.7
	baz=241						
TYC	Yuchr	1.11	242	eP	Pg	16 19 47.1	-0.3
	baz=249						
TYC				eS	Sg	16 20 02.1	+0.2
	baz=249						
PTSB	Yuanli	1.12	271	eP	Pg	16 19 48.4	+0.9
	baz=270						
PTSB				eS	Sg	16 20 03.0	+1.0
	baz=270						
TCU	Taichung	1.18	256	eP	Pg	16 19 49.8	+1.1
	baz=264						
TCU				eS	Sg	16 20 06.8	+2.8
	baz=264						
WDJ	Dajia District	1.18	266	eP	Pg	16 19 49.9	+1.2
	baz=266						
WDJ				eS	Sg	16 20 06.0	+2.0
	baz=266						
YULB	Yu-li	1.19	209	eP	Pb	16 19 48.1	-0.1
	baz=221						
YULB				eS	Sg	16 20 04.7	+0.3
	baz=221						
PCYT	Pengchaiyu	1.19	6	eP	Pn	16 19 47.9	-0.1
	baz=6.0						
TWF1	Yuli	1.23	208	eP	Pn	16 19 48.2	-0.3
	baz=224						
WHYT	Xinyi Township	1.23	233	eP	Pg	16 19 49.2	-0.4
	baz=233						
WNT	Mingjian	1.27	244	eP	Pg	16 19 51.2	+0.9
	baz=258						
WNT				eS	Sg	16 20 09.3	+2.5
	baz=258						
YUS	Yu-Shan	1.30	224	P	Pg	16 19 50.5	-0.5
	baz=225						
YUS				S	Sg	16 20 08.9	+0.8
	baz=225						
WCHH	Zhanghua	1.30	254	eP	Pg	16 19 51.5	+0.6
	baz=255						
WCHH				eS	Sg	16 20 09.6	+1.7
	baz=255						
FULB	Fuli	1.36	205	eP	Pb	16 19 51.0	-0.1
	baz=223						
ALS	Alishan	1.38	228	eP	Pg	16 19 52.4	-0.2
	baz=217						
ALS				eS	Sg	16 20 11.8	+1.2
	baz=217						
CHN5	Tsauling	1.42	234	eP	Pg	16 19 53.5	+0.3
	baz=237						
CHN5				eS	Sg	16 20 13.6	+1.9
	baz=237						
CHKT	Chengkung	1.43	201	eP	Pn	16 19 51.5	+0.3
	baz=186						
WGK	Gukeng	1.46	239	eP	Pg	16 19 54.3	+0.4
	baz=241						
WGK				eS	Sg	16 20 14.9	+2.0
	baz=241						
WDLH	Douliu	1.48	240	eP	Pg	16 19 54.5	+0.2
	baz=253						
WDLH				eS	Sg	16 20 15.5	+2.1
	baz=253						
ELDTW	Lidau	1.50	214	eP	Pn	16 19 52.7	+0.4
	baz=217						
ELDTW				eS	Sg	16 20 13.1	-1.1
	baz=217						
RLNB	Erlin	1.53	250	eP	Pg	16 19 54.6	-0.8
	baz=262						
RLNB				eS	Sg	16 20 15.2	-0.2
	baz=262						
CHN2	Minshiung	1.61	236	eP	Pg	16 19 56.8	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=223						
WTCT	Ta-ch'eng	1.61	250	eP	Pg	16 19 56.4	-0.5
	baz=250						
TPUB	Ta-pu	1.64	227	eP	Pg	16 19 57.0	-0.5
	baz=229						
TPUB				eS	Sg	16 20 18.1	-0.7
	baz=229						
IRIF	Iriomote-Funau	1.64	93	P	Pn	16 19 53.8	-0.4
IRIF				eS	Sn	16 20 14.7	-0.4
STYT	Tauyuan	1.66	221	eP	Pb	16 19 56.5	+0.3
	baz=222						
CHY	Chiayi	1.67	236	eP	Pg	16 19 57.4	-0.5
	baz=238						
CHY				eS	Sg	16 20 20.6	+1.0
	baz=238						
WTP	Ta-pu	1.69	226	eP	Pb	16 19 57.0	+0.3
	baz=229						
WTP				eS	Sg	16 20 21.1	+0.7
	baz=229						
HATJ	Hateruma jima	1.75	102	P	Pn	16 19 56.5	+0.8
HATJ				eS	Sn	16 20 19.2	+1.5
WSF	Szhu	1.75	243	eP	Pb	16 19 58.0	+0.3
	baz=244						
TWK	Hsinying	1.76	229	eP	Pg	16 19 58.8	-1.0
	baz=230						
TWH	Lutao	1.77	194	eP	Pn	16 19 55.8	-0.2
	baz=184						
TWH				eS	Sn	16 20 18.5	+0.3
	baz=184						
WLGB	Puzi	1.77	238	eP	Pb	16 19 57.4	-0.6
	baz=240						
WLGB				eS	Sg	16 20 24.1	+1.1
	baz=240						
SNST	Tainan City	1.79	228	eP	Pg	16 19 59.8	-0.4
	baz=230						
CHN1	Nanshi	1.79	226	eP	Pg	16 19 59.3	-1.0
	baz=229						
TWG	Pinlang	1.79	206	eP	Pn	16 19 55.4	-0.8
	baz=208						
TWGBT	Beinan	1.79	206	eP	Pn	16 19 56.5	+0.2
	baz=208						
SGST	Jiashian	1.83	223	eP	Pb	16 19 58.6	-0.4
	baz=226						
SGST				eS	Sg	16 20 23.3	-1.5
	baz=226						
SLGT	Liugui	1.86	220	eP	Pb	16 20 00.1	+0.6
	baz=222						
JKRS	Kuro-shima	1.91	96	P	Pn	16 19 58.1	+0.3
JKRS				S	Sn	16 20 21.5	-0.1
CHN8	Yiju	1.91	236	eP	Pb	16 20 01.1	+0.6
	baz=237						
CHN3	Shinhua	1.97	227	eP	Pg	16 20 03.1	-0.7
	baz=229						
JIJ	Ishigaki jima	2.02	92	P	Pn	16 19 59.2	-0.2
JIJ				S	Sn	16 20 22.6	-1.7
ECL	Taimali	2.04	206	eP	Pn	16 20 00.2	+0.5
	baz=196						
SSD	Sandimen	2.06	216	eP	Pb	16 20 03.0	0.0
	baz=219						
TWM1	Shoushan	2.12	221	eP	Pg	16 20 05.9	-0.7
	baz=221						
JISG	Ishigakijimahi	2.17	86	P	Pn	16 20 01.0	-0.5
JISG				eS	Sn	16 20 27.2	-0.9
MASBT	Mashibuluo	2.17	214	eP	Pb	16 20 03.9	-1.0
	baz=216						
PTTC	Pingtan	2.23	299	eP	Pn	16 20 02.8	+0.5
	baz=297						
EAST	Anshuo	2.27	206	eP	Pn	16 20 03.4	+0.5
	baz=198						
SSPT	Xinbi	2.31	213	eP	Pb	16 20 06.1	-1.1
	baz=200						
VWUC	VWUC	2.32	284	eP	Pn	16 20 04.2	+0.6
	baz=282						
PHUB	P'eng-hu	2.34	247	eP	Pb	16 20 05.9	-2.0
	baz=248						
SCZT	Fangliau	2.38	211	eP	Pb	16 20 07.7	-0.8
	baz=198						
LAY	Lan-yu	2.41	188	eP	Pn	16 20 04.9	0.0
	baz=191						
MATB	Ma-tsu	2.48	314	eP	Pn	16 20 06.1	+0.4
	baz=312						
JTJ	Tarama	2.53	85	P	Pn	16 20 06.9	+0.5
JTJ				eS	Sn	16 20 37.6	+0.6
VCHM	Qimei	2.60	242	eP	Pb	16 20 09.7	-2.4
	baz=244						
PTMZ	Houxiangcun	2.62	284	eP	Pn	16 20 09.3	+1.6
	baz=282						
TWK1	Hengchun	2.69	203	eP	Pn	16 20 09.6	+1.0
	baz=194						
TWKBT	Hengchun	2.69	203	eP	Pn	16 20 10.0	+1.4
	baz=194						
TSEB	Hengchuen, Pin	2.70	201	eP	Pb	16 20 11.8	-2.0
	baz=194						
LYJJ	Jianjiangzhen	2.88	317	eP	Pn	16 20 09.7	-1.5
	baz=316						
XPSS	Dashiqiu	2.94	328	eP	Pn	16 20 12.1	+0.1
	baz=327						
QZH	Quanzhou	3.08	280	Pn	Pn	16 20 15.6	+1.7
QZH				Sn	Sn	16 20 50.4	-0.1
JMJ	Miyako jima 2	3.08	82	eP	Pn	16 20 15.3	+1.3
	baz=82						
MHZQ	Yeshan	3.10	303	eP	Pn	16 20 15.5	+1.2
	baz=301						
KNM	Kinmen	3.19	270	eP	Pn	16 20 18.0	+2.6
	baz=268						
KNMB	Chin-men Tao	3.23	271	eP	Pn	16 20 16.6	+0.6
	baz=269						
AXDP	Jialang	3.63	278	eP	Pn	16 20 22.7	+1.1
	baz=276						
ZPLA	Ao Xicun	3.85	263	eP	Pn	16 20 25.5	+0.9
	baz=262						

*TAP **18** 16:22:53.1,24.44N×121.91E,h13km,ML2.8,C*
*JMA **18** 16:22:53.1±0.1,24.43N×121.93E,h9km*
ISC 18 16:22:52.8±0.9,**24.44N**±0.02×**121.93E**±0.02,**h14km**±6km, **n57**,σ**0.38**/108,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
ENA	Nanau	0.17	267	iP	Pg	16 22 57.0	0.0
	baz=265						
ENA				iS	Sg	16 22 59.5	-0.3
	baz=265						
TWC	Suao	0.19	336	iP	Pg	16 22 57.3	+0.1
	baz=350						
TWC				S	Sg	16 22 59.8	-0.3
	baz=350						
EOS1	EOS1	0.21	58	P	Pb	16 22 58.5	+0.1
	baz=55						
EOS1				eS	Sb	16 23 02.8	+0.6
	baz=55						
ILA	Ilan	0.37	333	P	Pb	16 23 00.9	-0.1
	baz=336						
ILA				S	Sb	16 23 07.0	+0.3
	baz=336						
TWE	Neicheng	0.37	320	P	Pb	16 23 00.8	-0.4
	baz=323						
TWE				S	Sg	16 23 05.8	+0.3
	baz=323						
ENTT	Nioudou	0.39	301	iP	Pg	16 23 01.0	+0.3
	baz=303						
ENTT				S	Sg	16 23 05.8	-0.3
	baz=303						
NACB	Ninganchiao	0.40	230	P	Pg	16 23 01.0	+0.1
	baz=228						
NACB				S	Sg	16 23 06.5	+0.1
	baz=228						
SLBB	Yuanshan	0.41	320	P	Pb	16 23 01.8	-0.1
	baz=321						
SLBB				S	Sb	16 23 08.2	+0.1
	baz=321						
NDT	Datong Townshi	0.41	293	iP	Pb	16 23 01.6	-0.3
	baz=294						
NDT				S	Sg	16 23 06.7	-0.2
	baz=294						
NTC	Toucheng	0.42	347	eP	Pb	16 23 01.9	-0.2
	baz=349						
NTC				eS	Sb	16 23 08.0	-0.3
	baz=349						
TWD	Chiawan	0.47	221	P	Pg	16 23 02.2	+0.1
	baz=219						
TWD				S	Sg	16 23 08.8	+0.3
	baz=219						
ETLH	Xiulin Townshi	0.47	241	iP	Pg	16 23 01.7	-0.5
	baz=240						
ETLH				S	Sb	16 23 09.1	-0.6
	baz=240						
NNSB	Datong	0.50	269	iP	Pg	16 23 02.9	+0.2
	baz=269						
NNSB				S	Sg	16 23 09.5	0.0
	baz=269						
NNSH	Datong	0.50	269	P	Pg	16 23 02.9	+0.1
	baz=269						
NNSH				S	Sg	16 23 09.2	-0.3
	baz=269						
NNS	Nan Shan	0.51	270	iP	Pg	16 23 03.0	+0.1
	baz=270						
NNS				S	Sg	16 23 09.5	-0.2
	baz=270						
NWLT	Wulai	0.52	311	P	Pb	16 23 03.5	-0.2
	baz=307						
NWLT				S	Sg	16 23 10.2	+0.2
	baz=307						
TIPB	Shuangxi	0.54	350	eP	Pg	16 23 03.0	-0.5
	baz=350						
TIPB				eS	Sg	16 23 11.2	+0.4
	baz=350						
YHNB	Yeheng	0.56	295	P	Pb	16 23 04.3	-0.1
	baz=301						
YHNB				S	Sg	16 23 11.2	-0.1
	baz=301						
TWB1	Santiao Chiao	0.57	5	iP	Pg	16 23 04.2	+0.1
	baz=357						
TWB1				iS	Sg	16 23 12.1	+0.4
	baz=357						
NSK	Sanguang	0.57	295	P	Pb	16 23 04.4	-0.3
	baz=295						
NSK				S	Sg	16 23 11.4	-0.4
	baz=295						
TWA	Mucha	0.63	330	P	Pb	16 23 05.8	+0.3
	baz=319						
TWA				eS	Sb	16 23 14.3	+0.2
	baz=319						
NHDH	Xindian Distri	0.64	325	P	Pb	16 23 06.2	+0.5
	baz=314						
NHDH				eS	Sb	16 23 14.7	+0.1
	baz=314						
NWF	Wu-fen Shan	0.65	348	P	Pb	16 23 06.0	+0.1
	baz=339						
NWF				S	Sb	16 23 15.2	+0.4
	baz=339						
WFSB	Wu-fen Shan	0.65	348	eP	Pb	16 23 06.1	+0.3
	baz=339						
WFSB				eS	Sb	16 23 15.1	+0.4
	baz=339						
TATO	Taipei	0.67	323	eP	Pb	16 23 06.7	+0.4
	baz=313						
TATO				eS	Sb	16 23 15.0	-0.4
	baz=313						
WHF	Hehuan Shan	0.67	245	P	Pg	16 23 06.1	0.0
	baz=244						
WHF				S	Sg	16 23 15.2	+0.1
	baz=244						
TAP	Taipei	0.71	327	eP	Pn	16 23 07.8	-0.7
	baz=318						
TAP				eS	Sb	16 23 17.0	+0.4
	baz=318						
TWT	Tachien	0.71	255	P	Pg	16 23 06.7	-0.1
	baz=255						
TWT				S	Sb	16 23 17.0	+0.2
	baz=255						
TDCB	Techi	0.73	256	P	Pb	16 23 07.4	0.0
	baz=249						
TDCB				S	Sg	16 23 16.6	-0.1
	baz=249						
WLTB	Daxi	0.74	304	eP	Pb	16 23 07.9	+0.4
	baz=296						
WLTB				eS	Sb	16 23 17.4	-0.1
	baz=296						
ESL	Shilin	0.77	216	iP	Pg	16 23 07.5	-0.3
	baz=221						
ESL				iS	Sg	16 23 17.3	-0.6
	baz=221						
YM01	YM01	0.78	335	P	Pn	16 23 09.1	-0.3
	baz=343						
YM01				S	Sn	16 23 20.4	-0.4
	baz=343						
CHGB	Renai	0.79	242	P	Pb	16 23 08.3	0.0
	baz=241						
CHGB				S	Sb	16 23 19.4	+0.5
	baz=241						
YM10	YM10	0.79	335	eP	Pn	16 23 09.4	-0.2
	baz=335						
YM10				eS	Sb	16 23 19.6	+0.7
	baz=335						
YM11	YM11	0.80	336	eP	Pn	16 23 09.3	-0.4
	baz=336						
YM11				eS	Sb	16 23 19.4	+0.4
	baz=336						
YM04	YM04	0.80	333	P	Pn	16 23 09.5	-0.1
	baz=333						
YM04				eS	Sb	16 23 19.5	+0.4
	baz=333						
TWS1	Kuangyinshan	0.81	325	eP	Pn	16 23 09.4	-0.4
	baz=325						
ANP	Anpu	0.83	333	eP	Pn	16 23 10.0	-0.2
	baz=334						
ANP				eS	Sb	16 23 21.6	-0.8
	baz=334						
OWD	Renai	0.84	235	P	Pg	16 23 08.9	-0.2
	baz=229						
OWD				S	Sb	16 23 21.1	+0.7
	baz=229						
NTST	Danshui	0.85	329	eP	Pn	16 23 10.8	+0.5
	baz=329						
NTST				eS	Sn	16 23 21.6	-0.9
	baz=329						
LIOB	Emei	0.86	284	P	Pn	16 23 10.9	+0.5
	baz=284						
LIOB				eS	Sb	16 23 21.5	+0.6
	baz=284						
NSTT	Nanjuang	0.87	283	P	Pn	16 23 10.8	+0.2
	baz=273						
NSTT				S	Sb	16 23 21.1	0.0
	baz=273						
TWY	Chenhua	0.89	340	eP	Pn	16 23 11.7	+0.9
	baz=340						
TWY				eS	Sb	16 23 22.1	+0.4
	baz=340						
EGFH	Guangfu	0.89	211	P	Pb	16 23 10.1	+0.1
	baz=227						
EGFH				eS	Sn	16 23 23.4	-0.2
	baz=227						
WHP	Taichung City	0.91	260	P	Pn	16 23 11.2	0.0
	baz=260						
WHP				S	Sb	16 23 22.8	+0.3
	baz=260						
YOJ	Yonaguni jima	0.98	88	P	Pb	16 23 11.6	0.0
VWDT	VWDT	0.99	227	eP	Pb	16 23 11.5	-0.2
	baz=227						
VWDT				eS	Sg	16 23 25.0	0.0
	baz=227						
DPDB	Guoxing	1.00	247	P	Pn	16 23 13.0	+0.5
	baz=246						
DPDB				S	Sg	16 23 25.2	-0.1
	baz=246						
HGSD	Ruisui	1.05	206	eP	Pn	16 23 14.3	+1.3
	baz=207						
TWQ1	Liyutan	1.06	265	eP	Pn	16 23 13.8	+0.6
	baz=265						
TWQ1				eS	Sg	16 23 27.3	+0.1
	baz=265						
EHY	Hungye	1.08	211	P	Pb	16 23 13.3	0.0
	baz=223						
EHY				eS	Sn	16 23 28.5	+0.2
	baz=223						
SSLB	Suanglung	1.10	234	P	Pb	16 23 13.7	+0.1
	baz=241						
SSLB				eS	Sb	16 23 27.9	0.0
	baz=241						
YULB	Yu-li	1.19	209	eP	Pn	16 23 14.3	-0.7
	baz=220						
YULB				eS	Sg	16 23 31.4	+0.1
	baz=220						
IRIF	Iriomote-Funau	1.64	93	P	Pn	16 23 21.3	+0.1
IRIF				eS	Sn	16 23 42.4	+0.3
JKRS	Kuro-shima	1.91	96	eS	Sn	16 23 48.5	-0.1
JIJ	Ishigaki jima	2.02	92	eS	Sb	16 23 53.3	-0.9
JISG	Ishigakijimahi	2.17	86	P	Pn	16 23 28.3	-0.2

*IDC **18** 16:45:48.3±1.6,51.60N×152.45E,h434km±19km,mb2.8/8, mb1 3.0/11,mb1mx2.7/62,mbtmp3.6/11,Error ellipse: s-maj=18.9km s-min=15.4km az=142.0*

ISC 18 16:45:49.3±0.9,**51.6N**±0.2×**152.6E**±0.1,**h450km**,**n11**, σ**1.09**/11,**mb3.2**/8,**Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
PETK	Petropavlovsk-	3.48	63	P	P	16 46 57.6	-2.3
	1.6nm,0.3s,baz=226,slow=6.4,SNR=45						
SEY	Seymchan	11.35	360	P	P	16 48 21.0	+0.3
	0.1nm,0.3s,baz=167,slow=11,SNR=5.5						
KLR	Kul'dur	13.49	268	P	P	16 48 44.3	+0.2
	0.2nm,0.3s,baz=81,slow=8.5,SNR=5.0						
ILAR	Eielson Array	33.09	43	P	P	16 51 46.6	+0.8
	0.1nm,0.6s,baz=280,slow=5.4,SNR=3.5						
MKAR	Makanchi Array	44.55	293	P	P	16 53 18.6	-0.9
	0.4nm,0.3s,baz=60,slow=6.8,SNR=4.2						
KURBB	Kurchatov Arra	44.61	299	P	P	16 53 19.8	+0.1
	0.7nm,0.6s,baz=63,slow=5.8,SNR=3.4						
YKA	Yellowknife Ar	47.29	39	P	P	16 53 40.7	+0.6
	0.2nm,0.5s,baz=301,slow=7.2,SNR=3.5						
FINES	FINESS Array B	59.50	333	P	P	16 55 06.6	-0.6
	2.7nm,1.0s,baz=13,slow=8.8,SNR=3.3						
WRA	Warramunga Arr	73.02	198	P	P	16 56 31.8	-0.4
	0.3nm,0.5s,baz=12,slow=6.3,SNR=2.8						
TXAR	Lajitas Array	75.43	61	P	P	16 56 47.1	+1.1
	0.2nm,0.4s,baz=307,slow=5.7,SNR=5.2						
ASAR	Alice Springs	76.73	198	P	P	16 56 53.9	+0.9
	0.5nm,0.7s,baz=7.6,slow=6.0,SNR=7.5						

*NIED **18** 16:49:00,33.80N×136.00E, h44km,Mw3.9 Best double couple: M0 7.08000×10^14 NP1:φs152.00000°,δ84.00000°, λ-106.00000°. NP2:φs42.00000°,δ17.00000°, λ-21.00000°.*
*NEIC **18** 16:49:46.0±0.9,33.76N±0.09×135.91E±0.02, h42km±11km, mb4.8/2, Error ellipse: s-maj=13.6km s-min=1.5km az=175.0*
*IDC **18** 16:49:46.2±1.9,33.77N×135.97E,h41km±17km,mb3.5/7, mb1 3.7/12,mb1mx3.4/57,mbtmp3.8/12,ML3.9/4,MS2.9/5, Ms1 3.0/5,ms1mx2.7/39,Error ellipse: s-maj=16.3km s-min=13.6km az=8.0*
*JMA **18** 16:49:46.4,33.79N×135.93E,h47km,M4.0 Broadband fault plane solution: P waves. NP1:φs23.00000°, δ23.00000°,λ-45.00000°. NP2:φs156.00000°,δ74.00000°, λ-107.00000°. Principal axes: T Plg27.0000°, Azm259.0000°; N Plg16.0000°, Azm161.0000°; P Plg58.0000°, Azm43.0000°;*
JMA Felt II J1.

ISC 18 16:49:46.1±0.8,**33.80N**±0.04×**135.93E**±0.03,**h36km**±1km, **n39**,σ**0.94**/43,**mb3.7**/8,**5C-5D**,**Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
JMMH	Miemihama	0.09	76	⇑P	Pn	16 49 53.7	+1.5
JMMH				S	Sn	16 49 58.7	+2.4
JTNC	Tanabenakahech	0.26	275	⇓P	Pn	16 49 54.9	+0.8
JTNC				S	Sn	16 50 01.1	+0.3
JWKM	Wakayamakushim	0.38	202	⇓P	Pn	16 49 55.8	+1.0
JWKM				S	Sn	16 50 02.7	+1.4
JWM	Minabe	0.48	276	⇓P	Pn	16 49 57.3	+0.9
JWM				S	Sn	16 50 05.1	+1.5
JWY	Kouya	0.50	327	⇓P	Pn	16 49 57.9	+1.1
JWY				S	Sn	16 50 05.8	+1.5
JKN2	Miekihoku	0.53	33	⇑P	Pn	16 49 57.6	+0.5
JKN2				S	Sn	16 50 05.5	+0.7
TTO1	TONANKAI O.B.S	0.74	104	⇑P	Pn	16 50 00.4	+0.7
JHE	Heguri	0.88	347	⇓P	Pn	16 50 02.6	+0.7
JHE				S	Sn	16 50 14.2	+0.7
JIE	Ise	0.88	47	⇑P	Pn	16 50 02.4	+0.5
JIE				S	Sn	16 50 13.6	+0.1
TTO2	TONANKAI O.B.S	0.92	94	⇑P	Pn	16 50 02.8	+0.6
INU	Inuyama	1.79	30		Pn	16 50 14.8	+0.3
JHJ	Hachijo jima 2	3.29	101	P	Pn	16 50 35.6	+0.4
	113nm,0.3s,baz=329,slow=18,SNR=17						
JHJ				S	Sn	16 51 12.9	-0.1
	38nm,0.3s,baz=257,slow=19,SNR=3.1						
MAJO	Matsushiro	3.31	34		Pn	16 50 36.0	+0.6
MAT	Matsushiro	3.31	34	P	Pn	16 50 35.8	+0.4
MAT				S	Sn	16 51 14.3	+0.7
MJAR	Matsushiro Arr	3.31	34	P	Pn	16 50 36.2	+0.7
	0.6nm,0.3s,baz=207,slow=17,SNR=37						
MJAR				S	Sn	16 51 14.1	+0.5
	5.1nm,0.3s,baz=209,slow=13,SNR=17						
MJAR				LR	LR	16 51 58.4	
	comp=Z,98nm,20.0s,baz=155,slow=40						
MJB9	Matsu-Tunnel	3.32	34		Pn	16 50 36.0	+0.5
JHJ2	Mitsune	3.32	101	Pn	Pn	16 50 35.5	0.0
JNU	Nakatsue	4.27	262	P	Pn	16 50 48.9	+0.3
	11nm,0.3s,baz=84,slow=4.3,SNR=103						
JNU				S	Sn	16 51 35.5	-1.8
	4.7nm,0.3s,baz=32,slow=21,SNR=8.4						
KSRS	Korea Array	7.47	302	P	Pn	16 51 33.8	+1.4
	0.6nm,0.3s,baz=120,slow=14,SNR=6.5						
KSRS				S	Sn	16 52 55.9	0.0
	0.3nm,0.3s,baz=116,slow=23,SNR=4.1						
KSRS				LR	LR	16 54 48.0	
	comp=Z,30nm,21.0s,baz=135,slow=40						
KS19	Wonju Array Si	7.53	302	Pn	Pn	16 51 33.3	0.0
INCN	Inchon	8.41	299	Pn	Pn	16 51 45.1	-0.3
ASAJ	Asahikawa	11.53	25	LR	LR	16 56 52.1	
	comp=Z,96nm,18.4s,baz=170,slow=37						
KLR	Kul'dur	15.73	350	P	Pn	16 53 26.4	+1.6
	0.1nm,0.3s,baz=135,slow=9.4,SNR=4.1						
PETK	Petropavlovsk-	24.77	32	P	P	16 55 04.9	+0.6
	6.8nm,0.9s,baz=176,slow=8.2,SNR=3.8						
SONM	Songino Array	26.19	311	P	P	16 55 16.5	-0.9
	0.3nm,0.6s,baz=131,slow=12,SNR=3.0						
H11N2	WAKE ISLAND Hy	30.86	109	T	T	17 28 30.2	
	baz=303,slow=75,SNR=82						
H11N1	WAKE ISLAND Hy	30.87	109	T	T	17 28 30.5	
	baz=303,slow=75,SNR=54						
H11N3	WAKE ISLAND Hy	30.88	109	T	T	17 28 31.5	
	baz=303,slow=75,SNR=57						
SEY	Seymchan	30.94	15	P	P	16 55 59.1	-0.2
	1.4nm,0.9s,baz=244,slow=22,SNR=4.4						
H11S3	WAKE ISLAND Hy	31.39	111	T	T	17 29 11.0	
	baz=305,slow=75,SNR=109						
H11S1	WAKE ISLAND Hy	31.39	111	T	T	17 29 08.1	
	baz=305,slow=75,SNR=100						
H11S2	WAKE ISLAND Hy	31.41	111	T	T	17 29 09.6	
	baz=305,slow=75,SNR=66						
CMAR	Chiang Mai Arr	36.33	255	LR	LR	17 11 50.8	
	comp=Z,20nm,18.6s,baz=15,slow=36						
ILAR	Eielson Array	54.59	31	P	P	16 59 09.2	-1.3
	0.5nm,0.9s,baz=279,slow=5.9,SNR=4.3						
C36M	Paulatuk	62.20	23	P	P	17 00 03.0	-0.4
C36M				IAmb	IAmb	17 00 50.2	
	comp=Z,15nm,1.9s						
RES	Resolute Bay	66.80	13	P	P	17 00 32.8	-0.7
	comp=Z,1.5nm,0.8s,baz=305,slow=6.0,SNR=4.5						
YKA	Yellowknife Ar	68.81	28	P	P	17 00 46.0	-0.3
	comp=Z,0.3nm,0.4s,baz=300,slow=6.4,SNR=4.9						
NVAR	Mina Array Bea	80.50	50	P	P	17 01 54.9	0.0
	comp=Z,0.3nm,0.6s,baz=297,slow=6.0,SNR=2.8						
TXAR	Lajitas Array	95.63	49	LR	LR	17 46 21.1	
	comp=Z,12nm,18.6s,baz=0.0,slow=36						

*IDC **18** 16:54:59.0±1.3,45.90N×106.68W,h0km,mb1 3.4/3, mb1mx3.1/55,mbtmp3.1/3,ML2.8/3,Error ellipse: s-maj=42.8km s-min=9.0km az=131.0*
*NEIC **18** 16:55:01.8±2.4,45.89N±0.03×106.65W±0.07,h0km±2km, ML3.1/40,Error ellipse: s-maj=8.8km s-min=3.1km az=117.0*

ISC 18 16:54:59.9±0.9,**45.90N**±0.04×**106.46W**±0.06,**h0km**,**n33**, σ**1.95**/33,**Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
LAO	LASA Array	0.81	12		Pb	16 55 18.0	+1.1
LAO				IAML		16 55 34.2	
	506nm,0.5s						
RLMT	Red Lodge	2.12	250	Pn	Pn	16 55 35.7	-1.1
RLMT				Sn	Sn	16 56 02.2	-1.7
RLMT				IAML		16 56 08.6	
	181nm,0.5s						
RLMT				IAML		16 56 10.5	
	105nm,0.4s						
GCMT	Greycliff	2.24	268	Pn	Pn	16 55 40.1	+1.7
RSSD	Black Hills	2.47	135		Pb	16 55 46.0	+0.6
RSSD				IAML		16 56 23.1	
	99nm,0.5s						
RSSD				IAML		16 56 27.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
	112nm,0.5s						
YMP	Mirror Lake Pl	2.85	247		Pn	16 55 47.9	+1.0
DGMT	Dagmar	3.00	30	Pn	Pb	16 55 53.1	-1.2
LKWY	Lake	3.08	246		Pn	16 55 53.2	+3.1
LKWY				IAML		16 56 44.3	
	36nm,1.4s						
LKWY				IAML		16 56 47.7	
	59nm,1.4s						
EGMT	Eagleton	3.10	315	Pn	Pn	16 55 50.9	+0.8
YNR	Norris Junctio	3.20	250		Pn	16 55 53.7	+2.0
K22A	Casper	3.25	181		Pn	16 55 53.3	+1.0
K22A				IAML		16 56 35.1	
	comp=E,70nm,0.6s						
H17A	Grant Village	3.28	244		Pn	16 55 54.8	+2.0
YHH	Holmes Hill	3.29	252		Pn	16 55 54.8	+1.8
YMR	Madison River	3.41	250	Pn	Pn	16 55 57.3	+2.7
YHL	Hebgen Lake	3.49	254		Pn	16 55 59.2	+3.5
FLWY	Flagg Ranch	3.51	240		Pn	16 55 58.5	+2.6
FLWY				IAML		16 56 54.4	
	comp=E,49nm,2.0s						
FLWY				IAML		16 57 03.9	
	comp=E,43nm,1.1s						
YHB	Horse Butte	3.53	253		Pn	16 55 59.9	+3.6
MOOW	Moose Ponds	3.73	236		Pn	16 56 00.8	+1.9
BW06	Boulder Array	3.84	216	Pn	Pn	16 56 00.8	+0.4
BW06				IAML		16 57 00.5	
	comp=E,30nm,0.5s						
BW06				IAML		16 57 00.9	
	comp=N,28nm,0.5s						
PD31	Pinedale Array	3.84	216		Pn	16 56 01.0	+0.5
PDAR	Pinedale Array	3.84	216	Pn	Pn	16 56 01.4	+0.9
	comp=N,0.7nm,0.3s,baz=47,slow=12,SNR=26						
PDAR				Pg	Pb	16 56 08.3	-0.3
	comp=N,1.9nm,0.3s,baz=41,slow=18,SNR=28						
PDAR				Lg	Lg	16 56 55.9	
	comp=N,4.1nm,0.3s,baz=40,slow=27,SNR=14						
FXWY	Fox Creek	3.96	237		Pn	16 56 05.0	+2.9
REDW	Red Top Meadow	4.03	233	Pn	Pn	16 56 04.8	+1.7
REDW				IAML		16 57 43.9	
	comp=N,21nm,4.0s						
REDW				IAML		16 58 15.1	
	comp=N,22nm,4.5s						
MCMT	McKenzie Canyo	4.63	259	Pn	Pn	16 56 13.5	+2.2
N23A	Red Feather La	5.02	176	Pn	Pn	16 56 17.0	+0.4
JTMT	Jette	5.68	292	Pn	Pn	16 56 25.4	-0.2
TCUT	Toone Canyon	5.98	219	Pn	Pn	16 56 28.8	-1.1
SPUT	South Promonto	6.32	226		Pn	16 56 34.4	0.0
F10A	Beach Ranch, E	7.51	274		Pn	16 56 49.7	-1.0
NEW	Newport	7.65	292	Lg	Lg	16 58 55.7	
	comp=N,0.5nm,0.3s,baz=129,slow=14,SNR=3.5						
I10CA	LAC DU BONNET	8.21	55	i		17 46 30.0	
	baz=235,slow=313,SNR=2.2						
ULM	Lac du Bonnet	8.32	55	Pn	Pn	16 57 01.4	-0.3
	comp=N,0.4nm,0.3s,baz=246,slow=14,SNR=5.1						
ULM				Lg	Lg	16 59 17.1	
	comp=N,0.6nm,0.3s,baz=322,slow=19,SNR=2.7						
ULM	Lac du Bonnet	8.32	55		Pn	16 57 04.4	+2.7
YKA	Yellowknife Ar	17.27	347	P	Pn	16 58 59.1	-3.2
	comp=N,0.0nm,0.3s,baz=162,slow=13,SNR=3.0						

BJI 18 17:06:13.0±0.0, 41.°23N×84.°40E, h7km, mb3.7/2, ML3.7/10, Ms3.5/3, Ms7 3.5/1
SOME 18 17:06:16.2, 41.°58N×84.°37E, h0km
NNC 18 17:06:23.3±4.3, 41.°69N×83.°91E, h26km±20km, mb3.8, mpv3.4, Error ellipse: s-maj=31.0km s-min=17.1km az=146.0
ISC 18 17:06:12.3±2.1, 41.°0N±0.°1×84.°17E±0.°06, h10km, n16, σ2.°90/23, 4C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	3.82	42	ePn	Pn	17 07 10.8	-0.4
WMQ				Sn	Sn	17 07 54.8	-1.3
WMQ				smax	smax		
	comp=N,110nm,1.1s						
WMQ				smax	smax		
	comp=E,100nm,1.1s						
WMQ				LR	LR		
	comp=N,480nm,5.3s						
SHLS	Shalkode	4.09	303	eP	Pb	17 07 24.4	-0.1
	11nm,0.1s						
SHLS				eS	Sb	17 08 13.5	-0.5
	150nm,0.2s						
PDGK	Podgornoye	4.16	305	Pg	Pg	17 07 29.7	-2.3
	5.6nm,0.6s						
PDGK				Lg	Lg	17 08 16.1	
	27nm,1.3s						
PDGK	Podgornoye	4.16	305	⇓Pn	Pn	17 07 18.9	+2.9
	6.5nm,0.8s						
PDGK				⇑Pg	Pg	17 07 30.9	-1.0
	16nm,0.6s						
PDGK				⇓Lg	Lg	17 08 22.5	
	129nm,0.9s						
UZB	Uzynbulak	4.37	301	eP	Pg	17 07 34.4	-1.5
	6.0nm,0.2s						
UZB				eS	Sg	17 08 30.5	-2.1
	90nm,0.4s						
DJR	Jarkent	4.61	317	eP	Pb	17 07 37.1	+3.9
	7.1nm,0.3s						
DJR				eS	Sg	17 08 35.0	-5.2
	22nm,0.4s						
DJR	Jarkent	4.61	317	Pg	Pb	17 07 36.9	+3.7
DJR				Lg	Lg	17 08 28.6	
	12nm,0.7s						
KAPS	Kapalarasan	5.51	322	eP	Pb	17 07 52.2	+3.6
	9.5nm,0.3s						
KAPS				eS	Sb	17 09 00.8	+6.0
	20nm,0.4s						
KAPS	Kapalarasan	5.51	322	Pg	Pb	17 07 47.4	-1.2
	8.8nm,1.0s						
KAPS				Lg	Lg	17 08 47.0	
	14nm,0.9s						
ARXS	Arharly	5.65	306	Pg	Pb	17 07 45.7	-5.3
	2.6nm,0.6s						
ARXS				Lg	Lg	17 08 43.4	
	8.9nm,1.3s						
MDOK	Medeo	5.70	294	Pg	Pb	17 07 53.3	+1.3
MDOK				Lg	Lg	17 08 56.6	
	8.6nm,0.9s						
TNSS	Tian-Shan	5.73	293	Pg	Pb	17 07 53.9	+1.3
	2.2nm,0.5s						
TNSS				Lg	Lg	17 08 57.6	
	9.5nm,1.5s						
MK31	Makanchi Array	5.91	347	⇓Pn	Pn	17 07 39.1	-0.8
	0.2nm,0.3s,baz=155,slow=14,SNR=23						
MK31				⇑Pg	Pb	17 07 58.6	+3.2
	3.1nm,0.6s,baz=162,slow=17,SNR=7.3						
MK31				⇑Lg	Lg	17 09 15.6	
	17nm,0.7s,baz=158,slow=28,SNR=5.5						
MAKZ	Makanchi	5.98	345	⇑Pn	Pn	17 07 40.3	-0.6
	1.3nm,0.6s						
MAKZ				⇓Pg	Pb	17 07 59.1	+2.5
	4.5nm,0.7s						
MAKZ				⇓Lg	Lg	17 09 13.9	
	25nm,1.1s						
KST	Kastek	6.43	291	Pg	Pb	17 08 07.4	+3.1
	5.6nm,0.8s						
KST				Lg	Lg	17 09 20.5	
	6.3nm,0.8s						
KUU	Kurty	6.45	299	Pg	Pg	17 08 13.0	-2.8
	1.6nm,0.1s						
KUU				Lg	Lg	17 09 30.4	
	6.0nm,0.8s						

IDC 18 17:11:26.0±1.2, 4.°47N×127.°45E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/39, mbtmp3.6/6, ML3.3/1, Error ellipse: s-maj=101.0km s-min=18.0km az=65.0
ISC 18 17:11:27.6±1.0, 4.°6N±0.°2×127.°6E±0.°3, h10km, n8, σ0.°86/9, mb3.5/5, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KCP	Kidapawan	3.48	314	iS	Sg	17 13 19.9	+0.5
SKMP	Bagumbayan, Su	3.60	303	eP	Pn	17 12 23.7	+0.2
SIJI	Sorong	6.53	146	Pn	Pn	17 13 03.6	-0.2
	0.6nm,0.3s,baz=319,slow=18,SNR=3.5						
SIJI				Sn	Sn	17 14 20.0	+1.6
	0.2nm,0.3s,baz=288,slow=20,SNR=2.1						
WRA	Warramunga Arr	25.24	165	P	P	17 16 53.2	-0.8
	0.2nm,0.3s,baz=344,slow=9.5,SNR=7.5						
ASAR	Alice Springs	28.73	168	P	P	17 17 24.5	-0.9
	0.3nm,0.5s,baz=353,slow=7.1,SNR=8.9						
STKA	Stephens Creek	38.61	161	P	P	17 18 51.1	0.0
	1.8nm,0.5s,baz=326,slow=11,SNR=4.0						
SONM	Songino Array	46.80	340	P	P	17 19 57.2	-0.3
	0.2nm,0.5s,baz=162,slow=8.8,SNR=3.0						
MKAR	Makanchi Array	57.37	325	P	P	17 21 16.4	+0.2
	0.5nm,0.4s,baz=117,slow=7.8,SNR=12						

IDC 18 17:33:36.7±2.8, 5.°42S×133.°33E, h0km, mb4.1/1, mb1 4.1/5, mb1mx3.7/25, mbtmp3.9/5, ML3.5/4, Error ellipse: s-maj=117.7km s-min=24.9km az=81.0
NEIC 18 17:33:37.5±1.6, 5.°33S±0.°09×133.°6E±0.°1, h18km±8km, mb4.2/7, Error ellipse: s-maj=19.7km s-min=13.0km az=88.0
DJA 18 17:33:46.1±0.4, 5.°S±3.°×13.°3E±.°, h10km, M4.3/10, mB4.4/1, mb4.7/2, MLv4.1/10, Mw(mB)3.5/1
ISC 18 17:33:35.4±0.7, 5.°15S±0.°05×133.°78E±0.°07, h10km, n27, σ3.°02/30, mb4.3/6, Aru Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMPI	Kaimana, Papua	1.48	357	P	Pn	17 34 03.0	+1.0
KMPI				S	Sn	17 34 16.2	-5.2
FAKI	Fak Fak	2.69	325	P	Pn	17 34 21.3	+2.6
FAKI				S	Sn	17 34 45.4	-5.9
RKPI	Ransiki, Papua	3.63	6	P	Pn	17 34 35.5	+3.8
SAUI	Saumlaki	3.74	221	P	Pg	17 34 48.4	+1.2
BNDI	Bandanaira	3.91	279	P	Pn	17 34 39.9	+4.4
SIJI	Sorong	4.93	329	Pn	Pn	17 34 52.4	+2.8
	5.3nm,0.3s,baz=148,slow=13,SNR=45						
SIJI				Sn	Sn	17 35 43.7	-3.1
	13nm,0.3s,baz=197,slow=23,SNR=12						
SWI	Sorong	4.94	329	P	Pn	17 34 49.7	0.0
MSAI	Masohi	5.16	290	P	Pn	17 34 54.4	+1.7
AAI	Ambon	5.75	284	P	Pn	17 35 03.5	+2.6
	0.4nm96nm,0.7s						
KNRA	Kununurra	11.57	205	Pn	Pn	17 36 19.3	-1.4
COEN	Coen	12.74	134	Pn	Pn	17 36 36.6	-0.1
WB0	Warramunga Arr	14.55	178	Pn	Pn	17 36 58.1	-3.4
WRAB	Tennant Creek	14.71	178	Pn	Pn	17 37 03.5	-0.2
WB2	Warramunga Arr	14.72	178	Pn	Pn	17 37 00.5	-3.3
WRA	Warramunga Arr	14.72	178	Pn	Pn	17 37 01.3	-2.6
	0.1nm,0.3s,baz=351,slow=11,SNR=5.3						
WRA				Sn	Sn	17 39 33.4	-14
	0.0nm,0.3s,baz=347,slow=20,SNR=2.7						
WR0	Warramunga Arr	14.74	177	Pn	Pn	17 37 02.5	-1.7
FITZ	Fitzroy Crossi	15.13	211	Pn	Pn	17 37 07.2	-2.2
	0.2nm,0.3s,baz=27,slow=12,SNR=4.7						
FITZ				Sn	Sn	17 39 42.6	-15
	0.3nm,0.3s,baz=64,slow=12,SNR=3.5						
FITZ	Fitzroy Crossi	15.13	211		Pn	17 37 07.0	-2.4
FITZ					Sn	17 39 44.5	-13
AS31	Alice Springs	18.41	180	P	P	17 37 52.0	+1.1
ASAR	Alice Springs	18.41	180	P	Pn	17 37 50.4	-0.6
	0.2nm,0.3s,baz=4.6,slow=11,SNR=21						
PSA00	Pilbara Seismi	21.19	218	P	P	17 38 14.5	-6.7
PSA00				IAmb	IAmb	17 38 35.3	
	comp=Z,21nm,1.4s						
KULM	Kulim	34.67	287	P	P	17 40 25.3	-0.2
KULM				IAmb	IAmb	17 40 44.9	
	comp=Z,12nm,1.4s						
JNU	Nakatsue	38.16	356	P	P	17 40 57.7	+2.7
MK31	Makanchi Array	68.81	325	P	P	17 44 41.3	+1.3
MK31				IAmb	IAmb	17 44 43.4	
	comp=Z,0.9nm,0.7s						
MKAR	Makanchi Array	68.81	325	P	P	17 44 42.7	+2.8
	comp=Z,1.3nm,0.6s,baz=118,slow=8.1,SNR=16						
MAKZ	Makanchi	69.00	325	P	P	17 44 43.6	+2.5
MAKZ				IAmb	IAmb	17 44 44.5	
	comp=Z,1.4nm,0.8s						
BRVK	Borovoye	78.62	327	P	P	17 45 38.5	+1.1
BRVK				IAmb	IAmb	17 45 40.3	
	comp=Z,1.4nm,0.8s						

MAN 18 17:41:59.6, 17.°90N×120.°27E, h24km, mb4.1, ML2.9, MS2.6, 1D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.18	82	⇓eP	Pn	17 42 06.2	-0.7
SIPP				eS	Sb	17 42 11.1	+2.5
ABRA	Dolores	0.49	121	eP	Pn	17 42 10.6	-0.5
ABRA				eS	Sn	17 42 19.6	+0.7
APYP	Conner	0.93	92	eP	Pb	17 42 16.5	-0.5
APYP				eS	Sn	17 42 30.4	+0.7
SMPP	San Manuel, Pa	1.78	167	eP	Pn	17 42 28.6	-0.4
SMPP				eS	Sb	17 42 52.3	-1.3

GRAL 18 17:44:01.2±0.3, 33.°21N×35.°30E, h8km±22km, MD2.6
GII 18 17:44:02.3±0.0, 33.°24N×35.°42E, h5km, MD1.4/3
ISC 18 17:44:00.2±1.4, 33.°37N±0.°06×35.°38E±0.°05, h16km±8km, n14, σ0.°66/26, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSDI	Kefar Szold	0.29	126	Pg	Pb	17 44 07.2	+0.1
KSDI				Sg	Sg	17 44 10.2	-0.4
SHBL	Chebaa	0.31	93	eP	Pb	17 44 08.4	+1.0
SHBL				eS	Sb	17 44 13.8	+1.5
QRWL	Qaraoun	0.31	54	eP	Pn	17 44 09.6	-0.6
QRWL				eS	Sn	17 44 15.9	-0.7
NATI	Neve Ativ	0.32	109	Pg	Pb	17 44 08.0	+0.5
NATI				Sg	Sb	17 44 13.1	+0.7
HNTI	Hanita	0.33	211	Pg	Pb	17 44 08.2	+0.5
HNTI				Sg	Sg	17 44 12.2	+0.5
MMA0B	Mount Meron ar	0.35	176	Pg	Pg	17 44 07.3	-0.1
MMA0B				Sg	Sg	17 44 11.4	-1.0
DQRL	Deir Qamar	0.38	25	eP	Pn	17 44 11.0	-0.1
RCY	Rachaya	0.41	71	eP	Pn	17 44 10.8	-0.7
RCY				eS	Sn	17 44 17.9	-1.0
KSHT	Keshet	0.53	136	Pg	Pg	17 44 10.9	+0.2
BLGI	Bet Lehem HaGe	0.65	194	Pg	Pb	17 44 13.6	+0.4
BLGI				Sg	Sg	17 44 21.4	-0.1
OFRI	`Ofer	0.81	204	Pg	Pg	17 44 15.7	-0.3
OFRI				Sg	Sb	17 44 27.5	+0.8
MMLI	Mount Malkishu	0.93	178	Pg	Pb	17 44 18.1	+0.2
MMLI				Sg	Sb	17 44 29.4	-0.6
HMDT	Nahal Hemdat	1.12	174	Pg	Pn	17 44 21.4	+0.2
HMDT				Sg	Sb	17 44 35.6	+0.2
SLTI	Sal'it	1.16	194	Pg	Pg	17 44 22.5	0.0
SLTI				Sg	Sn	17 44 37.1	-0.2

NNC 18 17:46:16.3±10.0, 43.°91N×87.°80E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=89.4km s-min=84.5km az=16.0
ASRS 18 17:46:03.2±0.6, 47.°N±2.°×9.°0E±.°, h1km, MLh3.1/10, 5C-3D, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DGZ	Jazzator, Alta	3.42	332	Pg	Pg	17 47 08.7	0.0
DGZ				Sg	Sg	17 47 56.2	+3.2
CUR	Chagan-Uzun	3.55	344	Pg	Pb	17 47 04.6	-2.3
CUR				Sg	Sg	17 48 01.8	+4.6
AKAR	Aktash	3.92	338	Pg	Pg	17 47 20.2	+1.8
AKAR				Sg	Sg	17 48 12.2	+3.1
CHBI	Chibit, Altay	3.94	337	Pg	Pg	17 47 20.3	+1.6
CHBI				Sg	Sg	17 48 12.7	+2.8
ULGR	Ulagan, Altay	4.12	343	Pg	Pg	17 47 21.3	-1.0
ULGR				Sg	Sg	17 48 18.3	+2.6
TUNR	Tungur	4.19	327	Pg	Pg	17 47 27.5	+4.0
TUNR				Sg	Sg	17 48 21.0	+3.6
TEL	Teeli	4.33	3	Pg	Pg	17 47 33.0	+6.9
TEL				Sg	Sg	17 48 28.0	+5.9
ELDR	Elanda	5.16	332	Pg	Pg	17 47 45.4	+3.3
ELDR				Sg	Sg	17 48 51.5	+2.6
MK31	Makanchi Array	5.22	274	⇑Pn	Pb	17 47 31.0	-4.2
	0.3nm,0.5s,baz=87,slow=15,SNR=16						
MK31				⇓Pg	Pg	17 47 43.6	+0.3
	0.6nm,0.6s,baz=90,slow=19,SNR=7.1						
MK31				⇓Lg	Lg	17 48 50.7	
	1.5nm,0.4s,baz=88,slow=29,SNR=5.2						
MKAR	Makanchi Array	5.22	274	Pn	Pn	17 47 24.1	+1.7
MKAR				Pg	Pg	17 47 44.0	+0.8
MKAR				Sg	Sg	17 48 50.4	-0.4
ARTR	Artybash	5.38	342	Pg	Pg	17 47 43.7	-2.5
ARTR				Sg	Sg	17 49 01.0	+5.2
MAKZ	Makanchi	5.43	274	Pg	Pg	17 47 46.2	-1.1
MAKZ	Makanchi	5.43	274	⇑Pn	Pb	17 47 33.0	-5.9
	0.2nm,0.3s						
MAKZ				⇑Pg	Pg	17 47 48.7	+1.4
	0.3nm,0.3s						
MAKZ				⇑Lg	Lg	17 48 57.3	
	1.2nm,0.6s						
KZLR	Kyzyl	5.83	29	Pg	Pg	17 47 54.3	-0.7
KZLR				Sg	Sg	17 49 14.7	+4.2
GALT	Gorno-Altaysk,	5.86	335	Sg	Sg	17 49 18.7	+7.5
DJO	Djoy, Khakassi	6.15	8	Sg	Sg	17 49 22.5	+1.9
TASR	Tashtagol	6.20	349	Sg	Sg	17 49 27.8	+5.5
VEH	Verkhnyaya Baz	6.56	2	Sg	Sg	17 49 40.3	+6.4
ELT	Eltsovka	6.97	342	Sg	Sg	17 49 51.8	+4.8
PDGK	Podgornoye	8.10	249	⇓Pg	Pn	17 48 05.5	+3.5
	1.2nm,1.0s						
PDGK				⇑Lg	Lg	17 49 24.6	
	1.8nm,0.4s						
KHAR	Kharino, NSO,	8.87	336	Sg	Pn	17 48 11.0	-1.4

IDC 18 18:03:03.0±1.1, 67.°15N×21.°16E, h0km, mb1 2.9/3, mb1mx2.8/38, mbtmp2.8/3, ML1.9/3, Error ellipse: s-maj=19.2km s-min=7.7km az=112.0
UPP 18 18:03:02.8±0.1, 67.°06N×20.°93E, h1km, ML1.7, Explosion
HEL 18 18:03:03.3±0.0, 67.°06N×20.°91E, h0km, ML1.8, ML1.7(UPP), Explosion
ISC 18 18:03:02.5±0.8, 67.°06N±0.°03×20.°94E±0.°03, h0km, n29, σ0.°78/34, Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DUNU	Dundret	0.16	293	P	Pg	18 03 06.0	+0.5
DUNU				S	Sg	18 03 07.8	+0.3
DUNU	Dundret	0.16	293	iP	Pg	18 03 06.0	+0.5
DUNU				iS	Sg	18 03 07.8	+0.3
MASU	Masugnsbyn	0.57	45	P	Pg	18 03 13.8	+0.4
MASU	Masugnsbyn	0.57	45	iP	Pg	18 03 13.8	+0.4
ERTU	Ertsjaerv	0.71	135	P	Pg	18 03 16.1	0.0
ERTU	Ertsjaerv	0.71	135	iP	Pg	18 03 16.1	0.0
PAJU	Pajala	0.85	92	P	Pg	18 03 18.6	-0.2
PAJU	Pajala	0.85	92	iP	Pg	18 03 18.6	-0.2
HARU	Harads	0.90	179	P	Pg	18 03 19.6	-0.2
HARU	Harads	0.90	179	eP	Pg	18 03 19.6	-0.2
RATU	Laukkuluspa	0.93	326	P	Pg	18 03 19.7	-0.5
RATU	Laukkuluspa	0.93	326	eP	Pg	18 03 19.7	-0.5
KUA	Kurravaara	0.93	346	P	Pg	18 03 19.7	-0.5
KUA	Kurravaara	0.93	346	eP	Pg	18 03 19.7	-0.5
LANU	Lannavaara	1.07	22	P	Pg	18 03 22.2	-0.8
LANU	Lannavaara	1.07	22	eP	Pg	18 03 22.5	-0.5
SJUU	Sjulsmark	1.58	170	P	Pn	18 03 31.6	-0.1
SJUU	Sjulsmark	1.58	170	eP	Pn	18 03 31.6	-0.1
TOF	Tornio	1.67	125	eP	Pn	18 03 32.9	0.0
TOF				eS	Sg	18 03 56.4	+0.2
HEF	Hetta	1.70	36	eP	Pn	18 03 32.9	-0.5
HEF				eS	Sb	18 03 55.9	-0.7
HEF				MSG		18 03 59.6	
	comp=Z,5.7nm,0.1s						
HEF	Hetta	1.70	36	eP	Pb	18 03 34.0	-0.7
KIF	Kilpisjarvi	1.95	359	eP	Pb	18 03 38.5	-0.4
KIF				eS	Sg	18 04 06.5	+1.3
KIF				MSG		18 04 08.7	
	comp=Z,12nm,0.1s						
RNF	Rovaniemi	2.06	100	eP	Pb	18 03 39.5	-1.1
ARCES	ARCESS Array B	3.01	32	Pn	Pn	18 03 51.9	+0.6
	comp=Z,0.3nm,0.3s,baz=214,slow=14,SNR=34						
ARCES				Lg	Lg	18 04 31.9	
	comp=Z,1.1nm,0.3s,baz=214,slow=26,SNR=12						
OUF	Merijarvi	3.13	148	MSG		18 04 40.2	
	comp=Z,1.4nm,0.1s						
KEV	Kevo	3.51	37	eP	Pn	18 04 00.4	+2.1
VAF	Ylistaro	4.10	169	MSG		18 04 57.3	
	comp=Z,1.2nm,0.1s						
FINES	FINESS Array B	6.07	156	Pn	Pn	18 04 34.6	+1.4
	comp=Z,0.1nm,0.3s,baz=347,slow=14,SNR=9.0						
FINES				Sn	Sn	18 05 45.0	+1.6
	comp=Z,0.2nm,0.3s,baz=344,slow=23,SNR=4.2						
NOA	NORSAR Array B	7.39	220	Pn	Pn	18 04 51.6	+0.1
	comp=Z,0.0nm,0.3s,baz=26,slow=11,SNR=2.9						
NOA				Sn	Sn	18 06 14.6	-1.4
	comp=Z,0.0nm,0.3s,baz=20,slow=20,SNR=2.4						

IDC 18 18:05:28.8±2.8, 6.°97S×129.°95E, h109km±38km, mb3.5/1, mb1 3.4/5, mb1mx3.2/33, mbtmp3.7/5, MS3.1/1, Ms1 3.1/1, ms1mx2.4/21, Error ellipse: s-maj=75.3km s-min=21.5km az=90.0
ISC 18 18:05:27.1±0.8, 7.°01S±0.°05×130.°02E±0.°09, h104km, n12, σ3.°48/14, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	4.64	29	P	Pn	18 07 23.9	-3.9
KMPI	Kaimana, Papua	4.96	48	P	Pn	18 07 32.9	-2.6
SIJI	Sorong	6.23	12	P	Pn	18 06 58.1	+1.5
	1.5nm,0.3s,baz=212,slow=19,SNR=22						
SIJI				S	Sn	18 08 01.1	-5.4
	1.4nm,0.3s,baz=217,slow=20,SNR=4.2						
SANI	Sanana	6.36	321	P	Pn	18 07 21.0	+23
LBMI	Labuha	6.81	338	P	Pn	18 07 02.4	-2.1
RKPI	Ransiki, Papua	6.86	37	P	Pn	18 07 08.0	+2.8
APSI	Ampana	10.31	306	P	Pn	18 07 52.7	+0.6
FITZ	Fitzroy Crossi	11.81	201	P	Pn	18 08 14.3	+2.0
	0.6nm,0.3s,baz=28,slow=13,SNR=13						
FITZ				S	Sn	18 10 17.3	-4.9
	0.2nm,0.3s,baz=47,slow=19,SNR=2.8						
WRA	Warramunga Arr	13.52	162	P	Pn	18 08 35.6	+0.9
	0.5nm,0.3s,baz=340,slow=14,SNR=26						
WRA				S	Sn	18 10 58.5	-5.1
	0.7nm,0.3s,baz=335,slow=25,SNR=11						
ASAR	Alice Springs	16.97	168	P	P	18 09 21.2	+2.7
	0.2nm,0.3s,baz=340,slow=9.8,SNR=14						
ASAR				S	Sn	18 12 24.9	-2.1
	0.2nm,0.3s,baz=352,slow=26,SNR=5.6						
NWAO	Narrogin (SRO)	28.39	203	LR	LR	18 23 10.1	
	comp=Z,36nm,18.1s,baz=112,slow=37						
MKAR	Makanchi Array	68.25	327	P	P	18 16 17.4	+0.7
	0.5nm,0.5s,baz=134,slow=5.8,SNR=7.7						

TAP 18 18:36:56.1, 24.°79N×122.°83E, h145km, ML3.0, D
JMA 18 18:36:56.9±0.3, 24.°71N×122.°87E, h132km±3km, M2.5
ISC 18 18:36:57.7±2.1, 24.°73N±0.°08×122.°88E±0.°03, h125km±15km, n35, σ0.°80/67, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.71	256	P	Pn	18 37 17.4	-0.1
	baz=245						
EOS1				S	Sn	18 37 33.5	+1.1
	baz=245						
IRIF	Iriomote-Funau	0.87	117	P	Pn	18 37 19.0	+0.2
IRIF				S	Sn	18 37 35.3	+0.5
TIPB	Shuangxi	0.99	284	eP	Pn	18 37 20.1	+0.1
	baz=278						
TIPB				eS	Sn	18 37 36.6	-0.3
	baz=278						
HATJ	Hateruma jima	1.07	128	eS	Sn	18 37 39.1	+0.8
ENA	Nanau	1.08	254	eP	Pn	18 37 21.1	+0.2
	baz=253						
ENA				S	Sn	18 37 39.0	+0.6
	baz=253						
TWE	Neicheng	1.10	270	eP	Pn	18 37 21.4	+0.3
	baz=263						
TWE				eS	Sn	18 37 39.1	+0.3
	baz=263						
JKRS	Kuro-shima	1.14	115	P	Pn	18 37 22.1	+0.7
JKRS				S	Sn	18 37 40.2	+0.7
ENTT	Nioudou	1.20	266	eP	Pn	18 37 22.7	+0.6
	baz=267						
ENTT				eS	Sn	18 37 39.3	-1.3
	baz=267						
JIJ	Ishigaki jima	1.21	107	P	Pn	18 37 22.1	0.0
JIJ				S	Sn	18 37 40.2	-0.5
TWA	Mucha	1.21	282	eP	Pn	18 37 23.0	+0.8
	baz=280						
NACB	Ninganchiao	1.30	245	eP	Pn	18 37 22.5	-0.6
	baz=246						
NACB				eS	Sn	18 37 42.1	-0.3
	baz=246						
JISG	Ishigakijimahi	1.31	96	P	Pn	18 37 22.9	-0.3
JISG				S	Sn	18 37 42.0	-0.6
YHNB	Yeheng	1.37	268	P	Pn	18 37 23.9	-0.1
	baz=271						
YHNB				S	Sn	18 37 43.2	-0.8
	baz=271						
ETLH	Xiulin Townshi	1.38	248	P	Pn	18 37 23.6	-0.5

baz=246
ETLH S Sn 18 37 43.4 -0.7
baz=246
NSK Sanguang 1.39 268 eP Pn 18 37 24.3 +0.1
baz=270
NSK eS Sn 18 37 43.8 -0.5
baz=270
NNSB Datong 1.40 258 eP Pn 18 37 24.3 0.0
baz=256
NNSB eS Sn 18 37 44.1 -0.5
baz=256
NNSH Datong 1.40 258 eP Pn 18 37 24.8 +0.5
baz=254
NNS Nan Shan 1.40 259 eP Pn 18 37 24.4 0.0
baz=257
NNS eS Sn 18 37 44.1 -0.6
baz=257
ESL Shilin 1.60 236 i P Pn 18 37 25.8 -0.8
baz=231
ESL S Sn 18 37 47.3 -1.3
baz=231
TWT Tachien 1.62 253 P Pn 18 37 28.6 +1.6
baz=247
TWT S Sn 18 37 49.6 +0.2
baz=247
TDCB Techi 1.64 254 eP Pn 18 37 27.6 +0.4
baz=247
TDCB eS Sn 18 37 49.0 -0.6
baz=247
JTJ Tarama 1.66 93 P Pn 18 37 27.1 -0.1
JTJ S Sn 18 37 49.2 -0.5
CHGB Renai 1.69 247 eP Pn 18 37 28.2 +0.4
baz=243
CHGB eS Sn 18 37 50.5 -0.4
baz=243
LIOB Emei 1.70 268 eP Pn 18 37 27.6 -0.1
baz=266
LIOB eS Sn 18 37 48.9 -1.8
baz=266
NSTT Nanjuang 1.71 267 eP Pn 18 37 27.3 -0.6
baz=266
NSTT eS Sn 18 37 49.5 -1.4
baz=266
VWDT VWDT 1.86 239 P Pn 18 37 30.1 +0.4
baz=238
VWDT S Sn 18 37 54.3 +0.2
baz=238
EHY Hungye 1.87 230 P Pn 18 37 29.3 -0.5
baz=237
EHY S Sn 18 37 53.2 -1.2
baz=237
DPDB Guoxing 1.91 249 eP Pn 18 37 31.5 +1.1
baz=248
DPDB eS Sn 18 37 56.0 +0.7
baz=248
YULB Yu-li 1.97 228 eP Pn 18 37 30.6 -0.3
baz=236
YULB eS Sn 18 37 55.0 -1.4
baz=236
SSLB Suanglung 1.99 242 eP Pn 18 37 32.4 +1.1
baz=241
SSLB eS Sn 18 37 57.9 +0.8
baz=241
SMLT Sun Moon Lake 1.99 245 eP Pn 18 37 33.2 +1.8
baz=240
SMLT eS Sn 18 37 58.5 +1.3
baz=240
TYC Yuchr 2.02 246 eP Pn 18 37 32.7 +1.1
baz=247
TYC eS Sn 18 37 58.9 +1.3
baz=247
FULB Fuli 2.10 224 eP Pn 18 37 32.4 -0.3
baz=219
FULB eS Sn 18 37 58.9 -0.6
baz=219
ELDTW Lidau 2.29 228 eP Pn 18 37 34.7 -0.4
baz=223
ELDTW eS Sn 18 38 03.5 -0.3
baz=223
CHN5 Tsauling 2.31 241 eP Pn 18 37 35.7 +0.4
baz=233
CHN5 eS Sn 18 38 05.6 +1.5
baz=233

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*IDC **18** 19:20:38.0±3.6, 8.77N×126.13E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/37, mbtmp3.4/3, MS3.1/1, Ms1 3.3/1, ms1mx2.5/19, Error ellipse: s-maj=297.0km s-min=28.8km az=65.0*

*MAN **18** 19:20:45.0, 8.68N×125.63E, h26km, MS3.4*

ISC 18 19:20:45.3±1.0, 8.63N±0.03×125.68E±0.06, h46km±11km, n19, σ1°82/28, mb3.3/3, 5C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	Butuan	0.35	350	eP	Pn	19 20 53.4	-1.1
BUTP				eS	Sn	19 21 02.4	+1.2
BUKP	Musuan	0.96	220	eP	Pn	19 21 02.5	+0.1
CGP	Cagayan de Oro	0.99	260	⇑iP	Pn	19 21 01.7	-1.1
CGP				i S	Sn	19 21 15.4	-0.3
SCPH	Surigao	1.17	351	⇑iP	Pn	19 21 06.7	+1.6
KCP	Kidapawan	1.71	200	⇓iP	Pn	19 21 13.6	+0.9
KCP				i S	Sn	19 21 35.3	+1.9
MATI	Mati	1.76	161	eP	Pn	19 21 14.9	+1.5
MATI				eS	Sn	19 21 38.5	+3.8
TBP	Tagbilaran	2.08	301	⇑eP	Pn	19 21 17.6	-0.2
DCPH	Dipolog City	2.30	269	⇑eP	Pn	19 21 21.6	+0.8
SKMP	Bagumbayan, Su	2.38	208	eP	Pn	19 21 23.1	+1.3
SKMP				eS	Sn	19 21 48.5	-1.3
LLP	Lapu-Lapu	2.38	315	eP	Pn	19 21 21.9	-0.1
LLP				i S	Sn	19 21 50.3	+0.3
PAGZ	Pagadian	2.40	251	eP	Pn	19 21 24.1	+2.0
PAGZ				eS	Sn	19 21 54.3	+3.9
DDMP	Don Marcelino,	2.50	179	eP	Pn	19 21 22.6	-1.0
DDMP				eS	Sn	19 21 51.3	-1.6
SNPH	Sibulan	2.52	287	eP	Pn	19 21 24.2	+0.5
SNPH				eS	Sn	19 21 53.1	-0.2
GSPH	General Santos	2.62	196	⇑iP	Pn	19 21 51.4	-4.6
OCLP	Ormoc	2.63	336	eP	Pn	19 21 24.6	-0.7
OCLP				eS	Sn	19 21 56.8	+0.8
CMAR	Chiang Mai Arr	27.73	293	LR	LR	19 39 59.0	
	comp=Z,33nm,18.1s,baz=212,slow=41						
WRA	Warramunga Arr	29.64	163	P	P	19 26 45.4	-1.2
	0.4nm,0.7s,baz=346,slow=9.3,SNR=1.6						
ASAR	Alice Springs	33.09	166	P	P	19 27 16.1	-0.8
	0.3nm,0.7s,baz=342,slow=7.2,SNR=5.4						
MKAR	Makanchi Array	52.99	324	P	P	19 29 57.5	+0.1
	0.3nm,0.7s,baz=121,slow=8.0,SNR=4.5						

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*IDC **18** 19:24:47.7±1.5, 11.28S×165.08E, h0km, mb3.8/7, mb1 4.0/9, mb1mx3.9/34, mbtmp3.9/9, ML4.3/2, MS3.2/4, Ms1 3.2/4, ms1mx2.8/30, Error ellipse: s-maj=38.3km s-min=26.5km az=122.0*

*NEIC **18** 19:24:52.5±2.2, 11.29S±0.10×165.07E±0.10, h33km±6km, mb4.8/13, Error ellipse: s-maj=16.3km s-min=10.5km az=224.0*

ISC 18 19:24:53.0±0.7, 11.28S±0.09×165.05E±0.08, h34km, n35, σ0°99/28, mb4.6/13, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	4.64	153	Pn	Pn	19 26 00.6	-0.1
HNR	Honiara	5.35	290	Pn	Pn	19 26 10.1	-0.4
	13nm,0.3s,baz=129,slow=4.2,SNR=5.0						
HNR				Sn	Sn	19 27 10.0	-0.9
	10nm,0.3s,baz=232,slow=21,SNR=8.1						
HNR				LR	LR	19 28 19.7	
	comp=Z,129nm,19.8s,baz=117,slow=40						
HNR	Honiara	5.35	290		Pn	19 26 09.8	-0.6
HNR					Sn	19 27 09.0	-1.9
DZM	Mont Dzumac	10.81	173	Pn	Pn	19 27 25.3	-0.3
	1.6nm,0.3s,baz=342,slow=12,SNR=23						
NOUC	Port Laguerre	10.83	174	Pn	Pn	19 27 25.5	-0.2
RABL	Rabaul	14.58	298	P	P	19 28 23.6	+0.6
PMG	Port Moresby	17.70	274	LR	LR	19 34 58.3	
	comp=Z,92nm,19.1s,baz=183,slow=34						
CTA	Charters Tower	20.09	242	P	Pn	19 29 25.3	-0.5
	7.3nm,1.1s,baz=62,slow=15,SNR=2.6						
COEN	Coen	21.51	261	P	P	19 29 41.4	+2.1
KNTN	Kanton	24.54	72	P	P	19 30 08.4	-1.3
BKZ	Black Stump Fm	29.58	162	P	P	19 30 55.2	+0.4
BKZ				IAmb	IAmb	19 31 08.6	
	comp=Z,22nm,1.4s						
H11S2	WAKE ISLAND Hy	29.63	3	T	T	20 02 07.8	
	baz=183,slow=76,SNR=3.2						
H11S3	WAKE ISLAND Hy	29.63	3	T	T	20 02 05.2	
	baz=183,slow=76,SNR=3.1						
H11S1	WAKE ISLAND Hy	29.64	3	T	T	20 02 08.5	
	baz=183,slow=76,SNR=2.7						
STKA	Stephens Creek	29.80	223	LR	LR	19 41 46.9	
	comp=Z,62nm,19.3s,baz=27,slow=34						
STKA	Stephens Creek	29.80	223	P	P	19 30 58.2	+1.3
WAKE	Wake Island	30.41	3	P	P	19 31 03.3	+1.1
WR0	Warramunga Arr	30.58	250	P	P	19 31 04.7	+0.8
WR0				IAmb	IAmb	19 31 37.8	
	comp=Z,25nm,1.8s						
WB0	Warramunga Arr	30.68	250	P	P	19 31 04.5	-0.2
WRAB	Tennant Creek	30.75	250	P	P	19 31 04.4	-1.0
WRAB				IAmb	IAmb	19 31 25.2	
	comp=Z,19nm,1.7s						
WB2	Warramunga Arr	30.75	250	P	P	19 31 05.1	-0.3
WB2				IAmb	IAmb	19 31 35.4	
	comp=Z,29nm,1.8s						
WRA	Warramunga Arr	30.76	250	P	P	19 31 04.6	-0.9
	comp=Z,0.6nm,0.6s,baz=80,slow=9.0,SNR=5.4						
H11N1	WAKE ISLAND Hy	30.85	3	T	T	20 03 38.4	
	baz=190						
H11N3	WAKE ISLAND Hy	30.86	3	T	T	20 03 39.1	
	baz=190						
H11N2	WAKE ISLAND Hy	30.87	3	T	T	20 03 42.8	
	baz=190						
ASAR	Alice Springs	32.08	243	P	P	19 31 15.4	-1.7
	comp=Z,0.7nm,0.8s,baz=62,slow=10,SNR=6.9						
ASAR				LR	LR	19 42 23.2	
	comp=Z,36nm,21.2s,baz=118,slow=33						
BBOO	Buckleboo	34.17	227	P	P	19 31 34.9	-0.3
BBOO				IAmb	IAmb	19 32 03.4	
	comp=Z,26nm,1.3s						
KNRA	Kununurra	35.53	259	P	P	19 31 46.6	-0.5
FITZ	Fitzroy Crossi	38.66	255	P	P	19 32 12.9	-0.8
FITZ				IAmb	IAmb	19 32 42.0	
	comp=Z,31nm,1.8s						
CMAR	Chiang Mai Arr	71.58	294	P	P	19 36 12.4	+1.0
	comp=Z,0.6nm,0.3s,baz=133,slow=6.4,SNR=4.3						
SONM	Songino Array	78.45	324	P	P	19 36 51.0	+0.4
	comp=Z,0.3nm,0.6s,baz=131,slow=6.6,SNR=3.3						
QSPA	South Pole Qui	78.72	180	P	P	19 36 50.7	-1.1
SML	Sawmill	81.43	20	P	P	19 37 05.3	-1.0
SML				IAmb	IAmb	19 37 27.8	
	comp=Z,27nm,1.3s						
ILAR	Eielson Array	83.95	19	P	P	19 37 19.1	-0.2
	comp=Z,0.4nm,0.6s,baz=240,slow=5.9,SNR=5.3						
MKAR	Makanchi Array	93.23	317	P	P	19 38 04.1	0.0
	comp=Z,0.7nm,0.8s,baz=90,slow=7.3,SNR=7.6						

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*NIED **18** 20:02:00, 38.40N×142.20E, h35km, Mw4.2 Best double couple: M0 2.10000×10^15 NP1:φs 3.00000°, δ49.00000°, λ-99.00000°. NP2:φs 196.00000°, δ42.00000°, λ-80.00000°.*

*BJI **18** 20:02:30.1±0.0, 38.19N×142.28E, h49km, mB4.9/19, mb4.4/27, Ms4.3/6, Ms7 3.9/3*

*JMA **18** 20:02:30.4±0.1, 38.40N×142.25E, h36km±2km, M4.2 JMA Felt II J1.*

*MOS **18** 20:02:31.1±1.1, 38.44N×142.26E, h48km, mb4.7/15, Error ellipse: s-maj=7.9km s-min=5.2km az=95.6*

*IDC **18** 20:02:32.4±1.9, 38.36N×142.20E, h41km±17km, mb3.9/29, mb1 4.1/36, mb1mx4.1/50, mbtmp4.1/36, ML3.1/6, MS3.3/9, Ms1 3.3/9, ms1mx3.0/42, Error ellipse: s-maj=14.2km s-min=9.6km az=99.0*

*NEIC **18** 20:02:32.4±1.9, 38.33N±0.03×142.37E±0.08, h48km±5km, mb4.7/77, Error ellipse: s-maj=8.9km s-min=4.6km az=74.0*

ISC 18 20:02:27.9±1.8, 38.33N±0.03×142.34E±0.04, h14km±10km, n224, σ1°29/238, mb4.6/85, MS3.6/5, 5C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.69	269	P	Pn	20 02 42.5	-0.8
JIKH				S	Sb	20 02 50.8	-0.3
JIO	Ouri	0.79	280	P	Pn	20 02 44.1	-0.6
JIO				S	Sb	20 02 53.5	-0.5
JKMT	Kesennumamotoy	0.83	306	P	Pn	20 02 44.5	-0.8
JKMT				S	Sb	20 02 54.2	-1.1
OFUJ	Ofunato	0.92	325	P	Pb	20 02 45.5	-0.1
OFUJ				S	Sg	20 02 56.0	-1.7
JMK	Ichinoseki	1.08	306	P	Pn	20 02 48.1	-0.5
JMM	Marumori	1.31	250	P	Pn	20 02 51.6	-0.2
JMM				eS	Sb	20 03 06.6	-2.3
JOU	Okura	1.32	272	P	Pb	20 02 52.2	-0.3
JOU				S	Sb	20 03 08.1	-1.2
JOM	Ohasama	1.41	325	P	Pn	20 02 53.0	-0.2
JOM				S	Sn	20 03 09.5	-2.0
JFK	Kawauchi	1.51	231	P	Pn	20 02 54.3	-0.3
JFK				S	Sn	20 03 11.3	-2.7
JYK	Kaneyama	1.66	291	P	Pn	20 02 56.9	+0.2
JRG	Rokugo	1.71	309	P	Pn	20 02 57.4	+0.1
JFT	Otama	1.78	244	P	Pb	20 02 59.1	-1.2
JFT				eS	Sn	20 03 20.0	-0.8
JYS	Shirataka	1.79	267	P	Pn	20 02 59.0	+0.5
ERM	Erimo	3.74	9	Pn	Pn	20 03 26.2	+1.1
ERM	Erimo	3.74	9	i P	Pn	20 03 26.1	+0.9
MJAR	Matsushiro Arr	3.74	243	P	Pn	20 03 27.0	+1.7
	1.0nm,0.3s,baz=35,slow=51						
MJAR				S	Sb	20 04 15.6	-3.5
	1.4nm,0.3s,baz=81,slow=33,SNR=5.3						
MJAR				LR	LR	20 04 54.2	
	comp=Z,261nm,18.2s,baz=55,slow=39						
MJAR	Matsushiro Arr	3.74	243	P	Pn	20 03 27.0	+1.7
MAJO	Matsushiro	3.74	243		Pn	20 03 27.7	+2.4
MAJO	Matsushiro	3.74	243	i P	Pn	20 03 27.3	+2.0
MAT	Matsushiro	3.74	243	P	Pn	20 03 27.3	+2.0
MAT				S	Sb	20 04 15.5	-3.5
MJB9	Matsu-Tunnel	3.74	243		Pn	20 03 27.6	+2.3
INU	Inuyama	5.20	237		Pn	20 03 47.7	+2.4
JHJ2	Mitsune	5.59	202	Pn	Pn	20 03 51.5	+0.8
JHJ	Hachijo jima 2	5.60	203	P	Pn	20 03 51.9	+1.1
	35nm,0.3s,baz=61,slow=8.4,SNR=5.3						
JHJ				S	Sn	20 04 53.4	-1.5
	47nm,0.3s,baz=253,slow=23,SNR=5.9						
JHJ				LR	LR	20 06 30.7	
	comp=Z,205nm,18.2s,baz=61,slow=43						
NMR	Nemuro--Hokkai	5.65	26	⇓iP	Pn	20 03 50.5	-1.0
NMR				i S	Sn	20 04 50.3	-5.9
ASAJ	Asahikawa	5.79	2	P	Pn	20 03 55.3	+2.0
	2.3nm,0.3s,baz=197,slow=11,SNR=5.5						
ASAJ				S	Sn	20 04 59.4	-0.2
	2.5nm,0.3s,baz=58,slow=19,SNR=2.8						
ASAJ				LR	LR	20 06 37.7	
	comp=Z,183nm,18.0s,baz=170,slow=43						
JKA	Kamikawa-asahi	5.79	2		Pn	20 03 55.3	+2.0
JKA					Sn	20 04 59.4	-0.1
YUK	Yuzh-Kuril'sk	6.29	24	eP	Pn	20 03 59.1	-1.1
YUK				eS	Sn	20 05 07.1	-4.8
YUK				smax	smax		
	comp=N,376nm,0.4s						
YUK				smax	smax		
	comp=E,325nm,0.3s						
KUR	Kuril'sk	8.04	29	eP	Pn	20 04 24.0	-0.2
KUR				i S	Sn	20 05 50.1	-4.8
KUR				pmax	pmax		
	comp=Z,46nm,0.6s						
KUR				smax	smax		
	comp=E,63nm,0.4s						
KUR				smax	smax		
	comp=N,48nm,0.3s						
USA0B	Ussuriysk Arra	9.75	310	Pn	Pn	20 04 48.7	+1.0
USA0B	Ussuriysk Arra	9.75	310	i P	Pn	20 04 48.7	+1.0
USRK	Ussuriysk Ar.	9.75	310	P	Pn	20 04 48.4	+0.6
	baz=258,slow=31,SNR=16						
USRK				LR	LR	20 08 17.6	
	comp=N,174nm,19.6s,baz=151,slow=36						
JNU	Nakatsue	10.66	244	P	Pn	20 05 04.7	+4.3
	comp=N,0.4nm,0.3s,baz=90,slow=10,SNR=3.4						
JNU				LR	LR	20 09 32.6	
	comp=N,284nm,19.1s,baz=34,slow=40						
KSRS	Korea Array	11.43	270	P	Pn	20 05 12.2	+1.5
	comp=N,0.1nm,0.3s,baz=80,slow=14,SNR=3.0						
KSRS				LR	LR	20 09 08.1	
	comp=N,120nm,20.0s,baz=63,slow=35						
KS19	Wonju Array Si	11.47	270	Pn	Pn	20 05 14.5	+3.2
KLR	Kul'dur	13.30	328	P	Pn	20 05 35.8	-0.5
	comp=N,0.1nm,0.3s,baz=183,slow=19,SNR=2.1						
KLR				LR	LR	20 10 32.0	
	comp=N,126nm,18.2s,baz=146,slow=36						
PETK	Petropavlovsk-	18.20	31	P	P	20 06 42.2	+1.9
	comp=N,0.1nm,0.3s,baz=262,slow=17,SNR=2.4						
ZEA	Zeya	18.57	331	eP	Pn	20 06 44.9	+0.3
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SARN	Sarigan	21.76	171	P	P	20 07 18.7	-0.5
SARN				IAmb	IAmb	20 07 43.0	
	comp=Z,79nm,1.0s						
MA2	Magadan	21.94	12	P	P	20 07 21.3	+0.5
	comp=Z,2.6nm,0.3s,baz=184,slow=13,SNR=2.1						
MA2	Magadan	21.94	12	P	P	20 07 21.1	+0.3
YHNB	Yeheng	22.40	239	P	P	20 07 24.9	-1.2
NACB	Ninganchiao	22.59	237	P	P	20 07 26.2	-1.9
NACB				IAmb	IAmb	20 07 50.1	
	comp=Z,19nm,0.9s						
SSLB	Suanglung	23.28	238	P	P	20 07 33.0	-2.3
SSLB				IAmb	IAmb	20 07 51.4	
	comp=Z,31nm,1.4s						
YULB	Yu-li	23.33	236	P	P	20 07 34.8	-1.0
YULB				IAmb	IAmb	20 07 44.8	
	comp=Z,75nm,1.7s						
HHC	Hu-ho-hao-te	23.79	286	eP	P	20 07 40.4	+0.1
HHC				pmax	pmax		
	comp=Z,63nm,5.1s						
TPUB	Ta-pu	23.84	237	P	P	20 07 39.5	-1.2
TPUB				IAmb	IAmb	20 08 07.6	
	comp=Z,78nm,1.6s						
GUMO	Guam	24.74	174	P	P	20 07 50.3	+1.2
	comp=Z,41nm,0.4s,baz=11,slow=19,SNR=2.2						
YAK	Yakutsk	24.98	346	eP	P	20 07 54.2	+3.4
YAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.6s						
YAK				pmax	pmax		
	comp=E,1.0nm,1.1s						
SEY	Seymchan	25.38	11	P	P	20 07 56.3	+1.8
	comp=E,6.1nm,0.7s,baz=184,slow=8.3,SNR=15						
SEY	Seymchan	25.38	11	i P	P	20 07 54.9	+0.4
XAN	Xi'an	27.23	271	P	P	20 08 11.8	+0.3
XAN				pmax	pmax		
	comp=E,8.0nm,0.6s						
XAN				LR	LR		
	comp=E,110nm,13.0s						
XAN				LR	LR		
	comp=E,110nm,17.3s						
XAN				LR	LR		
	comp=E,120nm,15.2s						
SONM	Songino Array	27.70	302	P	P	20 08 14.6	-1.2
	comp=E,0.5nm,0.4s,baz=107,slow=13,SNR=3.6						
H11N2	WAKE ISLAND Hy	28.22	124	T	T	20 38 27.9	
	baz=316,slow=75,SNR=1668						
H11N1	WAKE ISLAND Hy	28.23	124	T	T	20 38 30.4	
	baz=316,slow=75,SNR=1267						
H11N3	WAKE ISLAND Hy	28.24	124	T	T	20 38 30.1	
	baz=316,slow=75,SNR=1357						
H11S1	WAKE ISLAND Hy	28.98	126	T	T	20 39 37.8	
	baz=318,slow=76,SNR=276						
H11S3	WAKE ISLAND Hy	28.98	126	T	T	20 39 37.9	
	baz=318,slow=76,SNR=436						
H11S2	WAKE ISLAND Hy	29.00	126	T	T	20 39 39.1	
	baz=318,slow=76,SNR=250						
TLY	Talaya	30.07	309	P	P	20 08 37.6	+1.0
	comp=E,1.7nm,0.6s,baz=360,slow=3.7,SNR=3.2						
TLY	Talaya	30.07	309	P	P	20 08 37.1	+0.5
TLY	Talaya	30.07	309	ceP	P	20 08 39.0	+2.4
TLY				pmax	pmax		
	comp=Z,11nm,2.5s						
LZH	Lanzhou	30.60	278	eP	P	20 08 48.5	+6.9
LZH				pP	sP	20 08 56.3	+9.2
LZH				sP	pP	20 08 59.9	+14
CD2	Chengdu	32.42	269	eP	P	20 08 57.0	-0.6
BILL	Bilibino	32.58	16	i P	P	20 08 58.6	+0.1
BILL				pmax	pmax		
	comp=Z,9.0nm,1.9s						
GTA	Gaotai	32.91	285	P	P	20 09 02.8	+0.9
GTA				pP	sP	20 09 19.1	+12
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,100nm,5.0s						
GTA				LR	LR		
	comp=Z,110nm,16.1s						
GTA				LR	LR		
	comp=Z,140nm,14.1s						
GTA				LR	LR		
	comp=Z,170nm,15.1s						
TIXI	Tiksi	34.10	352	P	P	20 09 11.2	-0.5
	comp=Z,2.3nm,0.6s,baz=360,slow=3.4,SNR=8.1						
TIXI	Tiksi	34.10	352	P	P	20 09 11.4	-0.3
TIXI	Tiksi	34.10	352	i P	P	20 09 11.4	-0.3
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KMI	Kunming	35.90	260	P	P	20 09 28.0	0.0
KMI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SIJI	Sorong	40.32	197	P	P	20 10 06.4	+1.4
	comp=Z,5.8nm,0.8s,baz=0.0,slow=20,SNR=2.0						
WMQ	Urumqi	40.93	296	eP	P	20 10 11.4	+1.5
WMQ				pmax	pmax		
	comp=Z,45nm,3.8s						
WMQ				LR	LR		
	comp=Z,500nm,29.1s						
WMQ				LR	LR		
	comp=Z,930nm,29.0s						
ZAA0	Zalesovo Array	41.60	311	P	P	20 10 15.7	+0.5
ZALV	Zalesovo Beam	41.60	311	P	P	20 10 15.3	+0.1
	comp=Z,1.6nm,0.4s,baz=96,slow=7.0,SNR=7.9						
ZALV				PcP	PcP	20 12 11.9	-0.2
	comp=Z,1.5nm,0.5s,baz=114,slow=3.2,SNR=4.3						
CHTO	Chiang Mai	42.33	255	P	P	20 10 20.5	-1.1
CHTO	Chiang Mai	42.33	255	P	P	20 10 20.5	-1.1
CHTO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CM31	Chiang Mai Arr	42.54	255	P	P	20 10 23.5	+0.2
CMAR	Chiang Mai Arr	42.54	255	P	P	20 10 23.8	+0.4
	comp=Z,0.9nm,0.7s,baz=44,slow=7.5,SNR=6.6						
CMAR	Chiang Mai Arr	42.54	255	i P	P	20 10 23.5	+0.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SVW2	Sparrevohn	44.05	38	P	P	20 10 37.2	+2.2
SVW2				IAmb	IAmb	20 10 38.8	
	comp=Z,24nm,1.7s						
SVW2				PP	PP	20 12 12.2	-5.2
MK31	Makanchi Array	44.07	301	P	P	20 10 35.0	-0.3
MK31	Makanchi Array	44.07	301	P	P	20 10 35.1	-0.3
MK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	44.07	301	P	P	20 10 35.4	0.0
	comp=Z,1.9nm,0.6s,baz=66,slow=10,SNR=19						
SHL	Shillong	44.17	269	P	P	20 10 35.9	-0.7
SHL				IAmb	IAmb	20 10 42.8	
	comp=Z,5.4nm,0.8s						
SHL	Shillong	44.17	269	P	P	20 10 35.9	-0.7
SHL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAKZ	Makanchi	44.28	301	P	P	20 10 37.1	+0.1
MAKZ	Makanchi	44.28	301	P	P	20 10 37.2	+0.1
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OHAK	Old Harbor	45.31	44	P	P	20 10 46.1	+1.1
KDAK	Kodiak Island	45.65	43	P	P	20 10 47.5	-0.2
KDAK	Kodiak Island	45.65	43	P	P	20 10 47.5	-0.2
KDAK				pmax	pmax		
	comp=Z,127nm,1.8s						
KURK	Kurchatov	45.73	307	P	P	20 10 48.2	-0.2
KURK				IAmb	IAmb	20 10 58.2	
	comp=Z,7.8nm,0.8s						
KURK	Kurchatov	45.73	307	ceP	P	20 10 48.8	+0.3
KURK				pmax	pmax		
	comp=Z,40nm,0.7s						
BPAW	Bear Paw Mtn.	46.24	34	P	P	20 10 54.1	+1.8
BPAW				IAmb	IAmb	20 11 01.4	
	comp=Z,16nm,1.3s						
MLY	Manley	46.36	33	P	P	20 10 54.0	+0.7
MLY				IAmb	IAmb	20 11 02.7	
	comp=Z,13nm,1.8s						
SUA	Susitna One	46.38	38	P	P	20 10 53.8	+0.1
TAPN	Taplejung	46.59	273	eP	P	20 10 56.2	+0.2
	comp=Z,12nm,0.8s						
TOLK	Toolik Lake Re	46.98	28	P	P	20 10 59.0	+0.8
TOLK				IAmb	IAmb	20 11 20.4	
	comp=Z,10nm,1.6s						
TOLK				PcP	PcP	20 12 32.1	+1.8
NEA	Nenana	47.07	33	P	P	20 10 59.2	+0.3
NEA				IAmb	IAmb	20 11 07.0	

	comp=Z,25nm,1.7s						
ODAN	**Odare**	**47.08**	**273**	eP	**P**	**20 10 59.9**	**+0.2**
	comp=Z,11nm,0.7s						
RND	**Reindeer**	**47.20**	**35**	P	**P**	**20 10 59.6**	**-0.3**
RND				IAmb	IAmb	20 11 21.0	
	comp=Z,16nm,1.6s						
RND	**Reindeer**	**47.20**	**35**	P	**P**	**20 10 59.6**	**-0.3**
RND				pmax	pmax		
	comp=Z,16nm,1.6s						
KNK	**Knik Glacier**	**47.48**	**38**	P	**P**	**20 11 01.8**	**-0.4**
JIRN	**Jiri**	**47.64**	**275**	eP	**P**	**20 11 04.7**	**+0.5**
RAMN	**Ramite**	**47.65**	**273**	eP	**P**	**20 11 04.4**	**+0.2**
	comp=Z,20nm,0.7s						
GUN	**Gumba**	**47.77**	**275**	eP	**P**	**20 11 05.5**	**+0.3**
	comp=Z,15nm,0.4s						
ILAR	**Eielson Array**	**48.01**	**33**	P	**P**	**20 11 07.0**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=264,slow=6.7,SNR=10						
KKN	**Kakani**	**48.30**	**275**	eP	**P**	**20 11 09.5**	**+0.4**
	comp=Z,16nm,0.7s						
PKI	**Pulchoki**	**48.30**	**275**	eP	**P**	**20 11 08.9**	**-0.4**
	comp=Z,3.7nm,0.3s						
PKIN	**Phulchoki**	**48.30**	**275**	eP	**P**	**20 11 09.0**	**-0.2**
	comp=Z,5.5nm,0.4s						
DMN	**Daman**	**48.52**	**275**	eP	**P**	**20 11 10.9**	**0.0**
GKN	**Gorkha**	**48.70**	**276**	eP	**P**	**20 11 12.3**	**+0.1**
	comp=Z,10nm,0.4s						
KDJ	**Kajisay**	**48.81**	**296**	P	**P**	**20 11 13.4**	**+0.5**
KDJ				IAmb	IAmb	20 11 41.3	
	comp=Z,7.0nm,1.6s						
KDJ	**Kajisay**	**48.81**	**296**	P	**P**	**20 11 13.4**	**+0.5**
KDJ				pmax	pmax		
	comp=Z,7.0nm,1.7s						
DANN	**Dangsing**	**49.22**	**277**	eP	**P**	**20 11 16.8**	**+0.5**
	comp=Z,52nm,0.7s						
DOT	**Dot Lake**	**49.32**	**34**	P	**P**	**20 11 16.9**	**+0.6**
DOT				IAmb	IAmb	20 11 43.1	
	comp=Z,18nm,1.8s						
SCRK	**Sand Creek**	**49.32**	**34**	P	**P**	**20 11 17.7**	**+1.3**
SCRK				IAmb	IAmb	20 11 28.7	
	comp=Z,11nm,1.7s						
BOOM	**Boomskoye usch**	**49.57**	**297**	P	**P**	**20 11 19.9**	**+1.2**
BOOM				IAmb	IAmb	20 11 30.0	
	comp=Z,2.4nm,0.6s						
BOOM	**Boomskoye usch**	**49.57**	**297**	P	**P**	**20 11 19.9**	**+1.2**
BOOM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GLB	**Gilahina Butte**	**49.70**	**37**	P	**P**	**20 11 17.4**	**-1.9**
GLB				IAmb	IAmb	20 11 37.0	
	comp=Z,29nm,1.7s						
MCARA	**McCarthy VSAT**	**50.09**	**37**	P	**P**	**20 11 23.2**	**+1.1**
TGL	**Tana Glacier**	**50.28**	**38**	P	**P**	**20 11 25.5**	**+1.8**
BRVK	**Borovoye**	**50.31**	**312**	P	**P**	**20 11 24.5**	**+0.6**
BRVK	**Borovoye**	**50.31**	**312**	ceP	**P**	**20 11 25.1**	**+1.2**
BRVK				pmax	pmax		
	comp=Z,11nm,1.7s						
AAK	**Ala-Archa**	**50.53**	**298**	P	**P**	**20 11 26.0**	**0.0**
AAK	**Ala-Archa**	**50.53**	**298**	P	**P**	**20 11 26.0**	**0.0**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CTGM	**Chitina Glacie**	**50.96**	**38**	P	**P**	**20 11 30.1**	**+1.2**
CTGM				IAmb	IAmb	20 11 53.2	
	comp=Z,34nm,1.8s						
PCA	**Pinnacle**	**51.65**	**39**	P	**P**	**20 11 35.0**	**+1.0**
KEKH	**Kekaha**	**51.88**	**91**	P	**P**	**20 11 33.0**	**-3.1**
COEN	**Coen**	**52.01**	**179**	P	**P**	**20 11 39.0**	**+2.0**
COEN				IAmb	IAmb	20 11 56.9	
	comp=Z,17nm,1.1s						
ARSB	**Arslanbob**	**52.04**	**297**	P	**P**	**20 11 37.4**	**+0.1**
ARSB	**Arslanbob**	**52.04**	**297**	P	**P**	**20 11 37.4**	**+0.1**
HYT	**Haines Junctio**	**52.82**	**37**	P	**P**	**20 11 42.4**	**-0.4**
HYT				IAmb	IAmb	20 11 58.9	
	comp=Z,9.7nm,1.4s						
INK	**Inuvik**	**52.90**	**28**	P	**P**	**20 11 43.6**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=284,slow=8.0,SNR=4.1						
INK	**Inuvik**	**52.90**	**28**	P	**P**	**20 11 43.5**	**+0.5**
INK				IAmb	IAmb	20 12 00.3	
	comp=Z,9.2nm,1.8s						
KK31	**Karatay Array**	**53.12**	**300**	P	**P**	**20 11 45.2**	**+0.1**
KK31				IAmb	IAmb	20 11 46.0	
	comp=Z,7.3nm,1.6s						
KK31	**Karatay Array**	**53.12**	**300**	P	**P**	**20 11 45.2**	**+0.1**
KK31				pmax	pmax		
	comp=Z,7.0nm,1.6s						
KKAR	**Karatay Array**	**53.12**	**300**	P	**P**	**20 11 45.2**	**+0.1**
KKAR				IAmb	IAmb	20 11 46.0	
	comp=Z,7.3nm,1.6s						
KKAR	**Karatay Array**	**53.12**	**300**	P	**P**	**20 11 45.2**	**+0.1**
KKAR				pmax	pmax		
	comp=Z,7.0nm,1.6s						
WHY	**Whitehorse**	**54.11**	**37**	P	**P**	**20 11 53.9**	**+1.7**
WHY				IAmb	IAmb	20 11 55.5	
	comp=Z,12nm,1.4s						
NIL	**Nilore**	**54.92**	**288**	P	**P**	**20 11 58.8**	**+0.4**
NIL				IAmb	IAmb	20 12 00.1	
	comp=Z,5.9nm,0.7s						
NIL	**Nilore**	**54.92**	**288**	P	**P**	**20 11 58.8**	**+0.4**
NIL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KNRA	**Kununurra**	**55.21**	**196**	P	**P**	**20 11 60.0**	**-0.4**
ARU	**Arti**	**55.88**	**318**	P	**P**	**20 12 04.6**	**-0.3**
ARU				IAmb	IAmb	20 12 05.8	
	comp=Z,4.4nm,0.8s						
ARU	**Arti**	**55.88**	**318c**	iP	**P**	**20 12 04.5**	**-0.4**
ARU				S	**S**	**20 19 50.4**	**-1.4**
ARU				SS	**SS**	**20 23 36.4**	**-0.6**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KBL	**Kabul**	**57.65**	**291**	P	**P**	**20 12 17.5**	**-0.5**
KBL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CTA	**Charters Tower**	**58.22**	**176**	P	**P**	**20 12 23.0**	**+1.2**
	comp=Z,7.1nm,1.1s,baz=20,slow=12,SNR=2.9						
CTA	**Charters Tower**	**58.22**	**176**	P	**P**	**20 12 23.0**	**+1.2**
WB0	**Warramunga Arr**	**58.27**	**189**	P	**P**	**20 12 22.1**	**0.0**
WB0				IAmb	IAmb	20 12 22.8	
	comp=Z,10nm,0.7s						
FITZ	**Fitzroy Crossi**	**58.28**	**199**	P	**P**	**20 12 22.6**	**+0.4**
	comp=Z,5.9nm,0.9s,baz=22,slow=4.4,SNR=6.0						
FITZ	**Fitzroy Crossi**	**58.28**	**199**	P	**P**	**20 12 22.5**	**+0.3**
WRAB	**Tennant Creek**	**58.44**	**189**	P	**P**	**20 12 23.5**	**+0.2**
WRAB				IAmb	IAmb	20 12 24.4	
	comp=Z,9.1nm,0.9s						
WRAB	**Tennant Creek**	**58.44**	**189c**	eP	**P**	**20 12 24.6**	**+1.3**
WRAB				pmax	pmax		
	comp=Z,18nm,2.5s						
WR0	**Warramunga Arr**	**58.44**	**189**	P	**P**	**20 12 23.6**	**+0.3**
WR0				IAmb	IAmb	20 12 24.4	
	comp=Z,7.5nm,0.8s						
WR0				PcP	**PcP**	**20 13 11.7**	**-2.2**
WB2	**Warramunga Arr**	**58.44**	**189**	P	**P**	**20 12 23.5**	**+0.2**
WB2				IAmb	IAmb	20 12 24.5	
	comp=Z,13nm,0.9s						
WRA	**Warramunga Arr**	**58.45**	**189**	P	**P**	**20 12 23.4**	**0.0**
	comp=Z,8.0nm,0.7s,baz=9.1,slow=4.8,SNR=43						
WRA	**Warramunga Arr**	**58.45**	**189**	iP	**P**	**20 12 23.2**	**-0.2**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KIRV	**Kirov**	**59.66**	**323**	iP	**P**	**20 12 32.0**	**+0.6**
NOR	**Nord**	**59.81**	**357**	P	**P**	**20 12 32.1**	**0.0**
RES	**Resolute Bay**	**61.16**	**15**	P	**P**	**20 12 41.7**	**+0.2**
RES				IAmb	IAmb	20 13 02.9	
	comp=Z,8.5nm,1.6s						
RES	**Resolute Bay**	**61.16**	**15**	P	**P**	**20 12 41.7**	**+0.2**
RES				pmax	pmax		
	comp=Z,8.0nm,1.6s						
AS31	**Alice Springs**	**62.17**	**189**	P	**P**	**20 12 49.0**	**+0.1**
ASAR	**Alice Springs**	**62.17**	**189**	P	**P**	**20 12 49.4**	**+0.6**
	comp=Z,4.1nm,0.7s,baz=9.1,slow=5.4,SNR=44						
YKA	**Yellowknife Ar**	**62.32**	**31**	P	**P**	**20 12 50.0**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=302,slow=6.6,SNR=12						
HRA	**Herat**	**62.67**	**294**	P	**P**	**20 12 53.2**	**+0.6**
ARCES	**ARCESS Array B**	**63.05**	**339**	P	**P**	**20 12 54.0**	**-0.2**
	comp=Z,5.2nm,1.0s,baz=77,slow=13,SNR=7.6						
PSA00	**Pilbara Seismi**	**63.22**	**204**	P	**P**	**20 12 55.9**	**+0.1**
PSA00				IAmb	IAmb	20 13 10.3	
	comp=Z,19nm,1.3s						
GEYT	**Alibeck**	**63.86**	**299**	P	**P**	**20 12 59.0**	**-1.1**
	comp=Z,2.0nm,0.7s,baz=69,slow=8.3,SNR=5.9						
EIDS	**Eidsvold**	**63.89**	**171**	P	**P**	**20 13 01.5**	**+1.3**
EIDS				IAmb	IAmb	20 13 14.1	
	comp=Z,14nm,1.4s						
SGF	**Sodankyl**	**64.05**	**337**	P	**P**	**20 13 00.9**	**+0.1**
SGF				pmax	pmax		
	comp=Z,23nm,1.8s						
MSF	**Maaselka**	**64.18**	**335**	P	**P**	**20 13 02.0**	**+0.3**
MSF				pmax	pmax		
	comp=Z,18nm,1.8s						
DAG	**Danmarks Havn**	**64.55**	**355**	P	**P**	**20 13 04.2**	**+0.3**
SUF	**Sumiainen**	**67.16**	**333**	P	**P**	**20 13 20.8**	**-0.1**
OBN	**Obninsk**	**67.50**	**323**	iP	**P**	**20 13 21.7**	**-1.5**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FIA1	**FINESS Array S**	**68.01**	**332**	P	**P**	**20 13 26.2**	**-0.2**
FIA1				IAmb	IAmb	20 13 43.7	
	comp=Z,18nm,1.2s						
FINES	**FINESS Array B**	**68.01**	**332**	P	**P**	**20 13 26.3**	**-0.1**
	comp=Z,4.8nm,0.7s,baz=54,slow=9.7,SNR=15						
FINES	**FINESS Array B**	**68.01**	**332**	iP	**P**	**20 13 26.6**	**+0.2**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SUMG	**Summit**	**69.39**	**0**	P	**P**	**20 13 36.1**	**+0.8**
SUMG	**Summit**	**69.39**	**0**	P	**P**	**20 13 36.1**	**+0.8**
SUMG				pmax	pmax		
	comp=Z,4.0nm,1.3s						
STKA	**Stephens Creek**	**69.85**	**181**	P	**P**	**20 13 38.8**	**+0.8**
	comp=Z,2.5nm,0.7s,baz=344,slow=6.8,SNR=6.0						
STKA	**Stephens Creek**	**69.85**	**181**	P	**P**	**20 13 38.9**	**+0.8**
STKA	**Stephens Creek**	**69.85**	**181**	P	**P**	**20 13 38.9**	**+0.9**
STKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BMO	**Blue Mountains**	**70.51**	**48**	P	**P**	**20 13 42.5**	**+0.2**
BMO	**Blue Mountains**	**70.51**	**48**	P	**P**	**20 13 42.5**	**+0.2**
BMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
JTMT	**Jette**	**70.55**	**44**	P	**P**	**20 13 42.6**	**+0.1**
JTMT				IAmb	IAmb	20 13 48.7	
	comp=Z,8.9nm,1.3s						
KIV	**Kislovodsk**	**70.62**	**311**	P	**P**	**20 13 42.7**	**-0.2**
KIV				IAmb	IAmb	20 13 46.6	
	comp=Z,8.3nm,1.1s						
KIV	**Kislovodsk**	**70.62**	**311**	eP	**P**	**20 13 43.5**	**+0.6**
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
KBZ	**Khabaz**	**70.62**	**311**	P	**P**	**20 13 43.2**	**+0.4**
	comp=Z,2.9nm,0.9s,baz=39,slow=3.3,SNR=5.6						
KBZ	**Khabaz**	**70.62**	**311**	iP	**P**	**20 13 43.5**	**+0.7**
BBOO	**Buckleboo**	**71.02**	**186**	P	**P**	**20 13 46.0**	**+0.9**
UOSS	**Minazif**	**72.11**	**288**	P	**P**	**20 13 51.4**	**-0.8**
UOSS				IAmb	IAmb	20 14 07.0	
	comp=Z,25nm,1.6s						
FFC	**Flin Flon**	**72.22**	**33**	P	**P**	**20 13 52.7**	**+0.4**
NIUE	**Niue**	**72.56**	**133**	P	**P**	**20 13 53.1**	**-1.6**
NC405	**NORSAR Array S**	**73.07**	**337**	P	**P**	**20 13 57.4**	**+0.1**
NC303	**NORSAR Array S**	**73.08**	**338**	P	**P**	**20 13 57.4**	**0.0**
NC204	**NORSAR Array S**	**73.23**	**338**	P	**P**	**20 13 57.7**	**-0.5**
NB201	**NORSAR Array S**	**73.25**	**337**	P	**P**	**20 13 58.0**	**-0.3**
NB2	**NORSAR Subarra**	**73.28**	**337**	P	**P**	**20 13 58.7**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=37,slow=6.2						
NOA	**NORSAR Array B**	**73.28**	**337**	P	**P**	**20 13 58.8**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=38,slow=6.0,SNR=10						
NOA				LR	LR	20 51 54.5	
	comp=Z,28nm,18.9s,baz=300,slow=40						
NBO00	**NORSAR Array S**	**73.42**	**338**	P	**P**	**20 13 59.6**	**+0.3**
NVAR	**Mina Array Bea**	**73.63**	**54**	P	**P**	**20 14 02.6**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=289,slow=7.3,SNR=4.9						
AKASG	**Malin Array Be**	**73.72**	**322**	P	**P**	**20 14 01.0**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=44,slow=6.1,SNR=18						
AKASG	**Malin Array Be**	**73.72**	**322**	iP	**P**	**20 14 01.0**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KONO	**Kongsberg**	**74.87**	**337**	P	**P**	**20 14 08.9**	**+1.1**
KONO	**Kongsberg**	**74.87**	**337**	P	**P**	**20 14 08.9**	**+1.1**
KONO				pmax	pmax		
	comp=Z,44nm,1.5s						
FRB	**Frobisher Bay**	**75.35**	**14**	LR	LR	20 50 49.5	
	comp=Z,32nm,20.4s,baz=188,slow=38						
DUG	**Dugway, Tooele**	**75.95**	**50**	P	**P**	**20 14 16.3**	**+1.7**
BW06	**Boulder Array**	**76.24**	**46**	P	**P**	**20 14 16.6**	**+0.3**
PD31	**Pinedale Array**	**76.24**	**46**	P	**P**	**20 14 16.3**	**+0.1**
PDAR	**Pinedale Array**	**76.24**	**46**	P	**P**	**20 14 17.1**	**+0.9**
	comp=Z,1.5nm,0.5s,baz=288,slow=1.1,SNR=22						
BUR08	**Bucovina Ar. S**	**77.74**	**322**	P	**P**	**20 14 24.8**	**+0.3**
ULM	**Lac du Bonnet**	**78.02**	**34**	P	**P**	**20 14 25.9**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=300,slow=6.4,SNR=4.3						
ULM	**Lac du Bonnet**	**78.02**	**34**	IAmb	IAmb	20 14 31.3	
	comp=Z,14nm,1.6s						
VRI	**Vrincioaia**	**78.22**	**320**	P	**P**	**20 14 28.0**	**+1.0**
BRTR	**Keskin Array B**	**78.54**	**312**	P	**P**	**20 14 29.4**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=78,slow=4.8,SNR=4.0						
NIE	**Niedzica**	**78.74**	**326**	P	**P**	**20 14 30.5**	**+0.6**
PSZ	**Piszkesteto**	**80.03**	**325**	P	**P**	**20 14 37.0**	**0.0**
VYHS	**Vyhne**	**80.08**	**326**	eP	**P**	**20 14 37.8**	**+0.7**
VYHS	**Vyhne**	**80.08**	**326**	eP	**P**	**20 14 37.8**	**+0.7**
RAYN	**Ar Rayn**	**80.84**	**293**	P	**P**	**20 14 41.3**	**-0.4**
RAYN	**Ar Rayn**	**80.84**	**293**	P	**P**	**20 14 41.3**	**-0.4**
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GERES	**GERESS Array B**	**82.00**	**329**	P	**P**	**20 14 46.8**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=346,slow=2.8,SNR=3.4						
TXAR	**Lajitas Array**	**88.75**	**53**	P	**P**	**20 15 22.6**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=302,slow=3.1,SNR=14						
LPAZ	**La Paz**	**145.40**	**59**	PKPbc	**PKPdf**	**20 22 06.9**	**+0.2**
	comp=Z,2.3nm,0.5s,baz=320,slow=1.5,SNR=11						
LPAZ	**La Paz**	**145.40**	**59**		**PKPbc**	**20 22 05.0**	**-1.5**

WEL 18 20:12:34.0±0.8**, 34°S**±11°×**17°9W**±2°2**, h33**km**, M4.2**/12**, mB4.5**/2**, ML4.3**/12**, MLv4.2**/12**, Mw(mB)3.6**/2**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**4.51**	**202**	P	Pn	20 13 40.9	+0.9
WMGZ				S	Sn	20 14 33.2	+1.9
HAZ	**Te Kaha**	**4.68**	**208**	P	Pn	20 13 42.4	+0.1
HAZ				S	Sn	20 14 38.6	+3.2
PKGZ	**Pakihiroa**	**4.69**	**205**	P	Pn	20 13 43.2	+0.7
PUZ	**Puketiti**	**4.79**	**203**	P	Pn	20 13 44.7	+0.8
PUZ				S	Sn	20 14 38.0	-0.3
RUGZ	**Raukumara Rang**	**4.91**	**208**	P	Pn	20 13 45.6	+0.1
RUGZ				S	Sn	20 14 43.1	+2.0
MWZ	**Matawai**	**5.28**	**207**	P	Pn	20 13 50.3	-0.4
MWZ				S	Sn	20 14 48.9	-1.4
URZ	**Urewera**	**5.39**	**211**	P	Pn	20 13 52.2	+0.2
URZ				S	Sn	20 14 52.3	-0.5
RIGZ	**Rimuhau**	**5.53**	**204**	P	Pn	20 13 54.4	+0.4
PRGZ	**Paritu Road**	**5.69**	**202**	P	Pn	20 13 56.5	+0.3
RTZ	**Ruatahuna**	**5.74**	**210**	P	Pn	20 13 56.5	-0.5
KNZ	**Kokohu**	**5.85**	**203**	P	Pn	20 13 57.8	-0.5
MTHZ	**Maungataniwha**	**6.00**	**209**	P	Pn	20 14 00.2	-0.3
ARHZ	**Aropaoanui**	**6.30**	**206**	P	Pn	20 14 03.9	-0.7
BKZ	**Black Stump Fm**	**6.41**	**210**	P	Pn	20 14 04.9	-1.3
KAHZ	**Kahuranaki**	**6.81**	**205**	P	Pn	20 14 10.2	-1.4
WAZ	**Wanganui**	**7.57**	**215**	P	Pn	20 14 23.5	+1.6
NBEZ	**Newall Road No**	**7.79**	**222**	P	Pn	20 14 26.2	+1.3

*IDC **18** 20:23:12.5±1.2, 34°64N×23°77E, h0km, mb3.8/7, mb1 3.7/12, mb1mx3.5/45, mbtmp3.6/12, ML3.6/5, MS2.9/3, Ms1 2.9/3, ms1mx2.4/58, Error ellipse: s-maj=24.8km s-min=12.7km az=156.0*
*ATH **18** 20:23:12.9, 34°76N×23°60E, h12km±3km, ML3.4/5, Error ellipse: s-maj=4.5km s-min=1.9km az=36.0*
*ISK **18** 20:23:13.4, 34°75N×23°64E, h19km, ML3.6/12*
*DDA **18** 20:23:14.0, 34°63N×23°68E, h11km±44km, MW3.7*
*THE **18** 20:23:14.6, 34°83N×23°64E, h15km±1km, ML3.3/9, Error ellipse: s-maj=2.1km s-min=1.0km az=225.0*
ISC 18 20:23:15.2±1.3**, 34°83N**±0°04×**23°73E**±0°04**, h17**km±7km**, n70, σ1°59**/90**, mb3.6**/6**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.30**	**87**	P	**Pg**	**20 23 21.5**	**-0.1**
GVD				S	**Sb**	**20 23 28.2**	**+1.5**
	14µm,0.3s						
GVD	**Gavdhos**	**0.30**	**87**	P	**Pg**	**20 23 21.5**	**-0.1**
GVD				S	**Sb**	**20 23 27.8**	**+1.2**
GVD				AML	AML	20 23 28.4	
	comp=E,23431µm,0.3s						
GVD				AML	AML	20 23 29.2	
	comp=N,33203µm,0.3s						
GVD	**Gavdhos**	**0.30**	**87**	PG	**Pb**	**20 23 21.7**	**-0.3**
GVD				SG	**Sb**	**20 23 27.9**	**+1.2**
GVDS	**Gavdos**	**0.30**	**86**	P	**Pg**	**20 23 21.2**	**-0.4**
GVDS				S	**Sb**	**20 23 27.2**	**+0.5**
	comp=N,9µm,0.2s						
GVDS	**Gavdos**	**0.30**	**86**	PG	**Pg**	**20 23 21.2**	**-0.4**
GVDS				SG	**Sb**	**20 23 27.2**	**+0.5**
IMMV	**Iera Moni Meta**	**0.67**	**18**	P	**Pg**	**20 23 27.2**	**-1.1**
IMMV				S	**Sb**	**20 23 38.0**	**+0.6**
	comp=N,3µm,0.4s						
IMMV	**Iera Moni Meta**	**0.67**	**18**	P	**Pg**	**20 23 27.3**	**-1.1**
IMMV				S	**Sb**	**20 23 38.4**	**+1.0**
IMMV				AML	AML	20 23 41.0	
	comp=E,6304µm,0.4s						
IMMV				AML	AML	20 23 46.3	
	comp=N,4370µm,0.4s						
IMMV	**Iera Moni Meta**	**0.67**	**18**	PG	**Pg**	**20 23 27.9**	**-0.4**
IMMV				SG	**Sn**	**20 23 39.9**	**-0.1**
VAM	**Vamos**	**0.70**	**34**	P	**Pg**	**20 23 28.0**	**-0.9**
VAM				S	**Sb**	**20 23 39.9**	**+1.7**
	comp=N,3µm,0.4s						
VAM	**Vamos**	**0.70**	**34**	P	**Pg**	**20 23 28.0**	**-0.9**
VAM				S	**Sb**	**20 23 40.0**	**+1.7**
VAM				AML	AML	20 23 44.3	
	comp=E,5912µm,0.4s						
VAM				AML	AML	20 23 49.6	
	comp=N,4273µm,0.6s						
RODP	**Rodopos**	**0.73**	**2**	P	**Pg**	**20 23 29.5**	**-0.1**
RODP				S	**Sb**	**20 23 39.8**	**+0.5**
RODP	**Rodopos**	**0.73**	**2**	PG	**Pb**	**20 23 29.7**	**+0.2**
RODP				SG	**Sn**	**20 23 41.7**	**+0.1**
CHAN	**Chania**	**0.74**	**20**	P	**Pg**	**20 23 28.9**	**-0.7**
CHAN				S	**Sg**	**20 23 39.7**	**+0.2**
	comp=N,1µm,0.9s						
PRNS	**Prines Rethymn**	**0.83**	**49**	P	**Pb**	**20 23 29.7**	**-1.5**
PRNS				S	**Sb**	**20 23 41.0**	**-1.1**
TMBK	**Timbaki Herakl**	**0.89**	**74**	P	**Pb**	**20 23 32.2**	**+0.1**
TMBK				S	**Sn**	**20 23 46.4**	**+1.0**
	comp=N,860nm,0.7s						
SIVA	**Sivas**	**0.91**	**77**	P	**Pb**	**20 23 32.4**	**-0.1**
SIVA				S	**Sn**	**20 23 46.2**	**+0.3**
	comp=N,4µm,0.6s						
SIVA	**Sivas**	**0.91**	**77**	P	**Pb**	**20 23 32.6**	**+0.1**
SIVA				S	**Sn**	**20 23 46.8**	**+0.9**
SIVA				AML	AML	20 23 59.9	
	comp=E,8869µm,0.7s						
SIVA				AML	AML	20 24 00.9	
	comp=N,8843µm,0.6s						
IDI	**Anoyia**	**1.06**	**64**	Pg	**Pb**	**20 23 34.4**	**-0.7**
	comp=N,12nm,0.3s,baz=236,slow=15,SNR=203						
IDI				Lg	Lg	20 23 50.9	
	comp=N,55nm,0.3s,baz=156,slow=19,SNR=17						
IDI	**Anoyia**	**1.06**	**64**	P	**Pb**	**20 23 34.4**	**-0.7**
IDI				S	**Sn**	**20 23 51.9**	**+2.1**
IDI				AML	AML	20 23 54.3	
	comp=N,1681µm,0.6s						
IDI				AML	AML	20 24 02.8	
	comp=E,1376µm,0.8s						
IDI	**Anoyia**	**1.06**	**64**	PN	**Pb**	**20 23 34.4**	**-0.7**
IDI				SN	**Sn**	**20 23 51.2**	**+1.5**
ANKY	**Antikythira Is**	**1.10**	**342**	P	**Pb**	**20 23 34.9**	**-0.8**
ANKY				S	**Sb**	**20 23 48.4**	**-1.3**
	comp=E,590nm,0.7s						
ANKY	**Antikythira Is**	**1.10**	**342**	P	**Pb**	**20 23 34.7**	**-1.0**
HRKL	**Herakleio**	**1.23**	**66**	PN	**Pn**	**20 23 37.6**	**0.0**
LAST	**Lasithi**	**1.48**	**76**	P	**Pn**	**20 23 41.5**	**+0.4**
LAST				S	**Sn**	**20 23 59.9**	**-0.1**
	comp=E,358nm,1.3s						
LAST	**Lasithi**	**1.48**	**76**	P	**Pb**	**20 23 42.2**	**0.0**
KTHA	**Kythira Island**	**1.53**	**339**	P	**Pb**	**20 23 42.7**	**-0.3**
KTHA	**Kythira Island**	**1.53**	**339**	P	**Pb**	**20 23 42.8**	**-0.3**
KTHA	**Kythira Island**	**1.53**	**339**	PN	**Pn**	**20 23 41.4**	**-0.3**
KTHR	**Kythira**	**1.55**	**338**	P	**Pn**	**20 23 41.7**	**-0.3**
NPS	**Neapolis**	**1.61**	**74**	P	**Pb**	**20 23 44.9**	**+0.5**
ZKR	**Zakros**	**2.06**	**81**	P	**Pn**	**20 23 52.1**	**-0.2**
ZKR	**Zakros**	**2.06**	**81**	PN	**Pn**	**20 23 49.6**	**+0.5**
SANT	**Santorini**	**2.09**	**42**	iP	**Pb**	**20 23 51.5**	**-1.2**
IOSP	**Ios island**	**2.28**	**33**	P	**Pb**	**20 23 54.2**	**-1.7**
APE	**Apeiranthos**	**2.67**	**33**	PN	**Pn**	**20 23 58.4**	**+0.9**
APE	**Apeiranthos**	**2.67**	**33**	iP	**Pn**	**20 23 59.1**	**+1.6**
KARP	**Karpathos**	**2.90**	**75**	PN	**Pn**	**20 24 01.6**	**+0.9**
DAT	**Datca**	**3.66**	**58**	PN	**Pn**	**20 24 12.4**	**+1.3**
ARG	**Arkhangelos**	**3.85**	**68**	PN	**Pn**	**20 24 15.0**	**+1.4**
URLA	**Izmir**	**4.22**	**32**	iP	**Pn**	**20 24 25.5**	**-3.4**
AGG	**Agios Georgios**	**4.34**	**345**	iP	**Pn**	**20 24 22.8**	**+2.5**
YER	**Yerkesik**	**4.35**	**57**	PN	**Pn**	**20 24 22.3**	**+1.7**
AYDN	**Tasoluk**	**4.39**	**49**	iP	**Pn**	**20 24 18.3**	**-2.8**
TURN	**Turunc**	**4.46**	**61**	PN	**Pn**	**20 24 19.3**	**-2.6**
DALY	**Dalyan (Mula)**	**4.47**	**62**	PN	**Pn**	**20 24 23.9**	**+1.8**
FETY	**Fethiye**	**4.72**	**66**	PN	**Pn**	**20 24 27.4**	**+1.8**
TAVA	**DENIZLI_Tavas**	**4.96**	**56**	iP	**Pn**	**20 24 31.1**	**+2.2**
AKAS	**Kas**	**4.99**	**72**	PN	**Pn**	**20 24 31.1**	**+1.6**
AKAS	**Kas**	**4.99**	**72**	iP	**Pn**	**20 24 29.6**	**+0.1**
AKUM	**Antalya-Kumluc**	**5.59**	**73**	iP	**Pn**	**20 24 38.5**	**+0.9**
AKUM				iS	**Sn**	**20 25 45.1**	**+3.6**
AKUM				IAML		20 26 48.0	
	comp=N,28nm,3.4s						
KHAL	**Karahalli**	**5.83**	**51**	iP	**Pn**	**20 24 43.8**	**+2.8**
KEPZ	**Antalya-Kepez**	**6.72**	**70**	iP	**Pn**	**20 24 55.3**	**+2.1**
BRTR	**Keskin Array B**	**9.29**	**55**	Pn	**Pn**	**20 25 30.3**	**+1.9**
	comp=N,0.1nm,0.3s,baz=233,slow=12,SNR=4.7						
MMAI	**Mount Meron Ar**	**9.87**	**97**	Pn	**Pn**	**20 25 34.7**	**-1.7**
	comp=N,1.3nm,0.3s,baz=283,slow=11,SNR=5.5						
MMAI				Sn	**Sn**	**20 27 22.8**	**-4.0**
	comp=N,0.4nm,0.3s,baz=287,slow=16,SNR=2.7						
MLR	**Muntele Rosu**	**10.79**	**8**	Pn	Pn	20 25 56.0	+7.0
	comp=N,0.1nm,0.3s,baz=262,slow=23,SNR=3.2						
EIL	**Elat**	**10.80**	**115**	Pn	**Pn**	**20 25 46.6**	**-2.4**
	comp=N,0.3nm,0.3s,baz=347,slow=14,SNR=4.3						
EIL				Sn	**Sn**	**20 27 42.3**	**-7.2**
	comp=N,0.1nm,0.3s,baz=22,slow=16,SNR=2.0						
GERES	**GERESS Array B**	**15.86**	**335**	Pn	**P**	**20 27 02.4**	**+1.1**
	comp=N,0.1nm,0.3s,baz=143,slow=11,SNR=6.2						
KHC	**Kasperske Hory**	**16.14**	**335**	eP	**P**	**20 27 04.5**	**+0.1**
AKASG	**Malin Array Be**	**16.36**	**12**	Pn	**Pn**	**20 27 04.2**	**+0.3**
	comp=N,0.4nm,0.3s,baz=211,slow=11,SNR=2.8						
KBZ	**Khabaz**	**17.27**	**53**	P	**P**	**20 27 18.4**	**+1.6**
	comp=N,0.1nm,0.3s,baz=228,slow=9.3,SNR=5.2						
GNI	**Garni**	**17.49**	**66**	LR	LR	20 34 00.2	
	comp=N,16nm,20.1s,baz=299,slow=37						
HFS	**Hagfors**	**26.15**	**349**	P	**P**	**20 28 48.8**	**+0.5**
	comp=N,1.2nm,0.7s,baz=138,slow=9.1,SNR=4.0						
EKA	**Eskdalemuir Ar**	**27.65**	**326**	P	**P**	**20 29 03.1**	**+1.3**
	comp=N,0.6nm,0.6s,baz=125,slow=8.7,SNR=3.3						
GEYT	**Alibeck**	**27.77**	**73**	LR	LR	20 42 32.3	
	comp=N,18nm,20.8s,baz=320,slow=42						
TORD	**Torodi Ar. Bea**	**29.38**	**228**	P	**P**	**20 29 17.7**	**+0.1**
	comp=N,0.5nm,0.8s,baz=39,slow=9.3,SNR=2.5						
JMIC	**Jan Mayen**	**40.08**	**344**	LR	LR	20 47 07.4	
	comp=N,58nm,21.2s,baz=58,slow=36						
MKAR	**Makanchi Array**	**44.94**	**56**	P	**P**	**20 31 29.5**	**+0.3**
	comp=N,0.8nm,0.4s,baz=268,slow=7.6,SNR=43						
ZALV	**Zalesovo Beam**	**46.08**	**46**	P	**P**	**20 31 37.2**	**-0.9**
	comp=N,0.7nm,0.5s,baz=282,slow=7.2,SNR=3.0						
SONM	**Songino Array**	**60.60**	**50**	P	**P**	**20 33 25.3**	**+0.3**
	comp=N,0.2nm,0.6s,baz=310,slow=11,SNR=2.5						
TXAR	**Lajitas Array**	**99.16**	**315**	P	**Pdif**	**20 36 58.5**	**+2.4**
	comp=N,0.2nm,0.9s,baz=111,slow=4.9,SNR=3.2						

*DDA **18** 20:30:58.7, 42°26N×24°90E, h4km±3km, ML2.6*
*THE **18** 20:30:59.7, 42°07N×24°89E, h4km±1km, ML2.6/10, Error ellipse: s-maj=1.7km s-min=0.8km az=192.0*
*ISK **18** 20:30:59.2, 42°04N×24°84E, h6km, ML2.7/14*
*ATH **18** 20:31:00.2, 42°03N×24°88E, h22km±1km, ML2.6/9, Error ellipse: s-maj=2.7km s-min=1.2km az=193.0*
*BEO **18** 20:31:01.1±0.7, 42°00N×24°91E, h5km, ML2.7/10*
ISC 18 20:30:59.8±1.1**, 42°04N**±0°02×**24°88E**±0°02**, h4**km±9km**, n78, σ0°99**/117**, 10C-8D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLD	**Plovdiv**	**0.14**	**295**	PG	**Pg**	**20 31 02.2**	**-0.5**
KDZ	**Kurdzhali**	**0.56**	**134**	PG	**Pg**	**20 31 10.4**	**-0.2**
KDZ				SG	**Sg**	**20 31 18.4**	**+0.5**
RDO	**Rodhopi**	**1.02**	**151**	P	**Pg**	**20 31 19.3**	**-0.1**
RDO				S	**Sb**	**20 31 33.7**	**-0.1**
	645nm,0.2s						
RDO	**Rodhopi**	**1.02**	**151**	P	**Pg**	**20 31 19.4**	**-0.1**
RDO				S	**Sb**	**20 31 33.6**	**-0.1**
RDO				AML	AML	20 31 37.5	
	comp=E,1190µm,0.2s						
RDO				AML	AML	20 31 38.2	
	comp=N,1363µm,0.2s						
RDO	**Rodhopi**	**1.02**	**151**	PG	**Pg**	**20 31 19.4**	**-0.1**
RDO				SG	**Sb**	**20 31 34.1**	**+0.3**
NVR	**Nevrokopi**	**1.03**	**228**	P	**Pg**	**20 31 19.1**	**-0.4**
NVR				S	**Sn**	**20 31 35.3**	**-0.6**
	comp=N,212nm,0.3s						
NVR	**Nevrokopi**	**1.03**	**228**	P	**Pg**	**20 31 19.2**	**-0.4**

NVR				S	Sb	20 31 34.2	+0.1
NVR				AML	AML	20 31 38.0	
	comp=E,437μm,0.3s						
NVR				AML	AML	20 31 38.1	
	comp=N,411μm,0.4s						
KAVA	Kavala	1.08	195	P	Pb	20 31 20.8	-0.2
KAVA				S	Sb	20 31 35.7	+0.2
	comp=N,570nm,0.2s						
KAVA	Kavala	1.08	195	P	Pb	20 31 20.8	-0.2
KAVA				S	Sb	20 31 35.7	+0.2
KAVA				AML	AML	20 31 39.2	
	comp=E,1019μm,0.3s						
KAVA				AML	AML	20 31 39.9	
	comp=N,1228μm,0.2s						
ELND	Elena	1.15	39	⇓P	Pg	20 31 21.5	-0.4
ELND				⇓S	Sg	20 31 36.5	-0.4
KVLA	Kavala	1.17	199	P	Pg	20 31 22.1	0.0
KVLA				S	Sb	20 31 38.2	+0.3
KVLA				AML	AML	20 31 41.0	
	comp=E,930μm,0.3s						
KVLA				AML	AML	20 31 41.9	
	comp=N,693μm,0.5s						
SRS	Serrai	1.34	227	P	Pn	20 31 24.9	-0.3
SRS				S	Sn	20 31 44.4	+0.9
	comp=N,210nm,0.5s						
SRS	Serrai	1.34	227	P	Pg	20 31 25.4	-0.1
SRS				S	Sn	20 31 44.1	+0.6
SRS				AML	AML	20 31 46.6	
	comp=E,423μm,0.5s						
SRS				AML	AML	20 31 46.7	
	comp=N,293μm,0.5s						
VTS	Vitosha	1.35	296	P	Pn	20 31 23.4	-2.1
VTS				S	Sg	20 31 43.1	-0.1
VTS	Vitosha	1.35	296	ePg	Pn	20 31 25.4	-0.1
VTS				eSg	Sn	20 31 44.0	+0.1
VTS	Vitosha	1.35	296	⇑P	Pn	20 31 23.7	-1.8
VTS				⇑S	Sg	20 31 42.2	-0.9
PLVB	Pleven	1.36	352	⇑P	Pn	20 31 25.3	-0.2
PLVB				⇓S	Sb	20 31 43.2	-0.2
EDRB	Edirne	1.41	97	P	Pn	20 31 25.7	-0.5
EDRB				S	Sn	20 31 45.0	-0.1
EDRB	Edirne	1.41	97	PN	Pb	20 31 26.2	-0.4
THAS	Thassos island	1.44	185	P	Pb	20 31 25.9	-0.7
THAS				S	Sg	20 31 46.3	+0.2
	comp=N,282nm,0.2s						
THAS	Thassos island	1.44	185	P	Pb	20 31 27.1	-0.1
THAS				S	Sg	20 31 45.8	-0.3
THAS				AML	AML	20 31 48.8	
	comp=E,557μm,0.3s						
THAS				AML	AML	20 31 49.3	
	comp=N,571μm,0.3s						
ALN	Alexandroupoli	1.44	142	P	Pb	20 31 26.9	-0.3
ALN				S	Sg	20 31 46.3	+0.2
	comp=N,85nm,0.4s						
ALN	Alexandroupoli	1.44	142	P	Pb	20 31 26.9	-0.3
ALN				S	Sg	20 31 45.9	-0.2
ALN				AML	AML	20 31 49.7	
	comp=E,158μm,0.4s						
ALN				AML	AML	20 31 50.6	
	comp=N,144μm,0.4s						
ALN	Alexandroupoli	1.44	142	PN	Pb	20 31 26.7	-0.5
ALN				SN	Sg	20 31 46.6	+0.5
UKOP	Uzunkopru-Edir	1.60	124	PN	Pb	20 31 29.1	-0.8
ENEZ	Enez	1.62	143	PN	Pn	20 31 29.1	0.0
SMTH	Samothraki Isl	1.65	162	P	Pb	20 31 30.0	-0.6
SMTH				S	Sb	20 31 51.1	-0.7
	comp=N,68nm,0.5s						
SMTH	Samothraki Isl	1.65	162	P	Pb	20 31 30.1	-0.6
SMTH				S	Sb	20 31 51.7	-0.1
SMTH				AML	AML	20 31 55.7	
	comp=E,149μm,0.3s						
SMTH				AML	AML	20 31 59.3	
	comp=N,195μm,0.4s						
SOH	Sokhos	1.68	224	P	Pn	20 31 29.9	0.0
SOH				S	Sb	20 31 52.2	-0.4
	comp=N,100nm,0.4s						
SOH	Sokhos	1.68	224	P	Pn	20 31 30.2	+0.2
KIRK	Kirklareli	1.68	98	*i* P	Pn	20 31 29.6	-0.3
KIRK				*i* S	Sn	20 31 50.5	-1.3
KIRK				IAML		20 31 57.0	
	comp=N,29nm,0.5s						
ENZZ	Sultanice-Enez	1.72	146	PN	Pn	20 31 30.5	0.0
KNT	Kendrikon	1.73	240	P	Pn	20 31 30.7	+0.1
KNT				S	Sb	20 31 54.2	+0.1
	comp=N,105nm,0.3s						
KNT	Kendrikon	1.73	240	P	Pn	20 31 31.2	+0.6
KNT				S	Sb	20 31 53.7	-0.4
KNT				AML	AML	20 31 57.2	
	comp=E,222μm,0.2s						
KNT				AML	AML	20 31 58.7	
	comp=N,192μm,0.3s						
KESN	Edirne-Kesan	1.82	131	*i* P	Pn	20 31 31.9	-0.3
KESN				*i* S	Sg	20 31 58.6	+0.3
KESN				IAML		20 31 59.0	
	comp=N,136nm,0.4s						
OUR	Ouranopolis	1.84	202	P	Pn	20 31 32.0	-0.1
OUR				S	Sb	20 31 57.2	0.0
	comp=N,185nm,0.3s						
OUR	Ouranopolis	1.84	202	P	Pn	20 31 32.2	+0.1
BOSS	Bosilegrad	1.84	285	ePn	Pn	20 31 32.8	+0.7
BOSS				eSn	Sb	20 31 58.0	+0.7
ERIK	Erikli-Kesan	1.84	138	PN	Pn	20 31 32.6	+0.5
VAY	Valandovo	1.87	248	ePg	Pb	20 31 35.1	+0.5
VAY				eSg	Sg	20 32 01.0	+1.0
VAY	Valandovo	1.87	248	*i* Pn	Pb	20 31 34.2	-0.3
VAY				eSn	Sg	20 32 00.5	+0.5
RAZG	Razgrad	1.94	38	⇑P	Pb	20 31 36.1	+0.4
VLAD	Vladila	1.98	350	⇓P	Pb	20 31 35.3	-1.2
GELI	Tayfur-Gelibol	2.04	143	PN	Pn	20 31 35.1	+0.3
STIP	Stip	2.04	261	*i* Pn	Pn	20 31 33.1	-1.8
STIP				eSn	Sn	20 31 57.9	-2.9
ZAPS	Zavoj	2.06	307	ePn	Pb	20 31 36.9	-0.9
ZAPS				eSn	Sb	20 32 03.9	+0.1
COPA	Copaceanca	2.10	7	⇓P	Pn	20 31 36.5	+0.8
GRG	Griva	2.15	241	P	Pb	20 31 38.3	-1.1
LPK	Lapseki	2.19	139	PN	Pn	20 31 37.5	+0.5
RKY	Sarkoy-Tekirda	2.20	127	PN	Pn	20 31 37.8	+0.7
SART	Tekirdag	2.20	127	*i* P	Pb	20 31 40.1	0.0
BLKB	Belogradchik	2.26	315	⇑S	Sb	20 32 09.3	-0.3
PAIG	Paliouri	2.30	204	P	Pn	20 31 38.2	-0.3
BOZC	Bozcaada	2.37	158	PN	Pn	20 31 39.8	+0.3
BOZC	Bozcaada	2.37	158	*i* P	Pb	20 31 43.5	+0.4
BOZC				*i* S	Sb	20 32 12.9	+0.3
BARS	Barje	2.40	290	ePn	Pn	20 31 40.9	+1.1
BARS	Barje	2.40	290	ePn	Pg	20 31 49.5	+3.7
BARS				eSn	Sb	20 32 12.2	-1.2
KRBG	Karabiga-Canak	2.46	131	PN	Pn	20 31 41.4	+0.8
EZN	Ezine	2.47	153	PN	Pn	20 31 41.6	+0.8
HUMR	Humele	2.48	2	⇑P	Pn	20 31 42.2	+1.2
MRMT	Marmara Adasi	2.50	124	PN	Pn	20 31 41.9	+0.6
BAYC	CANAKKALE_Bayr	2.62	151	*i* P	Pn	20 31 44.0	+1.1
SLVT	Silivri	2.62	107	PN	Pn	20 31 43.7	+0.8
ZAGS	Zajecar	2.63	313	ePn	Pn	20 31 44.0	+1.0
ZAGS				eSn	Sb	20 32 18.1	-1.9
BOVS	Bovan	2.83	305	ePn	Pn	20 31 46.7	+1.0
BOVS				eSn	Sb	20 32 23.2	-2.5
CTKS	Kestanelik-??a	2.83	105	PN	Pn	20 31 46.6	+0.8
SELS	Selova	3.01	294	ePn	Pn	20 31 50.7	+2.4
ARR	Arges	3.33	357	⇓P	Pn	20 31 53.0	+0.4
KUBS	Kucevo	3.33	316	ePn	Pn	20 31 54.0	+1.3
VOIR		3.40	2	⇑P	Pn	20 31 55.3	+1.7
MLR	Muntele Rosu	3.53	12	⇑P	Pn	20 31 58.5	+3.0
GRUS	Gruza	3.57	303	ePn	Pn	20 31 58.2	+2.3
GZR	Gura Zlata	3.68	336	⇑P	Pn	20 31 57.9	+0.4
IVAS	Ivanjica	3.80	295	ePn	Pn	20 32 00.4	+1.2
CFR	Carcaliu	3.93	36	⇓P	Pg	20 32 14.1	-1.0
TRUS	Trudelj	3.93	305	ePn	Pn	20 32 03.2	+2.3
VRI	Vrincioaia	4.05	19	⇓P	Pn	20 32 04.9	+2.4
BZS	Buzias	4.28	328	⇑P	Pn	20 32 06.3	+0.6

IDC 18 20:34:55.3±6.3, 50.20N×113.79W, h0km, mb1 4.0/1, mb1mx3.0/58, mbtmp3.7/1, ML3.5/1, Error ellipse: s-maj=98.1km s-min=50.7km az=67.0, Alberta

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I56US	NEWPORT INFRAS	2.92	230	*i*		20 53 55.0	
	baz=42,slow=329,SNR=5.4						
I10CA	LAC DU BONNET	11.39	83	*i*		21 42 00.0	
	baz=273,slow=314,SNR=3.9						
YKA	Yellowknife Ar	12.33	358	Pn	Pn	20 37 47.8	-4.1
	0.3nm,0.3s,baz=178,slow=13,SNR=21						
YKA				Sn	Sn	20 39 58.1	-12
	0.1nm,0.3s,baz=176,slow=22,SNR=5.0						
YKA				Lg	Lg	20 41 19.2	
	0.1nm,0.3s,baz=171,slow=27,SNR=4.7						

IDC 18 20:42:15.0±15.0, 15.80S×176.39W, h361km±156km, mb3.0/5, mb1 3.3/5, mb1mx3.0/48, mbtmp3.7/5, Error ellipse: s-maj=138.1km s-min=32.1km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.95	257	P	P	20 50 11.1	-0.2
	0.4nm,0.6s,baz=96,slow=8.3,SNR=14						
ASAR	Alice Springs	47.25	252	P	P	20 50 13.4	-0.1
	1.5nm,0.5s,baz=89,slow=7.9,SNR=26						
NVAR	Mina Array Bea	76.57	43	P	P	20 53 27.1	+0.3
	0.2nm,0.6s,baz=229,slow=8.2,SNR=2.7						
ILAR	Eielson Array	83.42	12	P	P	20 54 02.1	0.0
	0.3nm,0.4s,baz=216,slow=5.4,SNR=9.8						
PDAR	Pinedale Array	84.50	43	P	P	20 54 07.6	-0.8
	0.2nm,0.6s,baz=232,slow=4.4,SNR=2.4						
BRTR	Keskin Array B	144.59	318	PKP	PKPbc	21 01 08.9	-0.2
	0.5nm,0.8s,baz=56,slow=3.6,SNR=3.0						

JMA 18 20:44:52.3±0.8, 46.14N×152.39E, h30km, M4.5
MOS 18 20:44:54.5±1.2, 45.18N×152.77E, h45km, mb4.1/1, Error ellipse: s-maj=21.8km s-min=10.6km az=147.4
SKHL 18 20:44:55.1±0.5, 45.20N×152.55E, h45km±5km, mb4.4/5
IDC 18 20:44:57.1±3.7, 46.01N×152.13E, h46km±36km, mb3.3/12, mb1 3.6/14, mb1mx3.5/49, mbtmp3.6/14, ML3.2/2, MS2.7/1, Ms1 2.7/1, ms1mx2.3/24, Error ellipse: s-maj=24.5km s-min=17.5km az=138.0
ISC 18 20:44:54.6±0.7, 45.6N±0.1×152.48E±0.07, h35km, n57, σ1.59/65, mb3.7/12, 2C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.27	266	*i* P	Pn	20 45 44.0	+0.7
KUR				AMB	AMB	20 45 47.0	
	42nm,0.4s						
KUR				*i* S	Sn	20 46 21.0	+0.1
KUR				A	A	20 46 32.0	
	199nm,0.4s						
KUR				A	A	20 46 32.0	
	83nm,0.4s						
KUR	Kuril'sk	3.27	266c	*i*PN	Pn	20 45 44.4	+1.1
KUR				*i* S	Sn	20 46 21.9	+1.0
KUR				pmax	pmax		
	comp=N,61nm,0.4s						
KUR				pmax	pmax		
	comp=Z,85nm,0.4s						
KUR				pmax	pmax		
	comp=E,53nm,0.2s						
KUR				smax	smax		
	comp=N,199nm,0.4s						
KUR				smax	smax		
	comp=E,83nm,0.3s						
SHO	Shikotan	4.37	249	*i* P	Pn	20 45 58.0	-0.3
SHO				AMB	AMB	20 46 01.0	
	comp=E,21nm,0.3s						
SHO				*i* S	Sn	20 46 47.0	-1.0
SHO				A	A	20 46 58.0	
	comp=E,46nm,0.4s						
SHO				A	A	20 46 58.0	
	comp=E,64nm,0.4s						
SHO	Shikotan	4.37	249c	*i*PN	Pn	20 45 58.1	-0.3
SHO				pmax	pmax		
	comp=Z,42nm,0.3s						
YUK	Yuzh-Kuril'sk	4.95	255	eP	Pn	20 46 08.0	+1.6
YUK				AMB	AMB	20 46 09.0	
	comp=Z,17nm,0.3s						
YUK				eS	Sn	20 47 02.3	-0.1
YUK				A	A	20 47 07.0	
	comp=Z,152nm,0.5s						
YUK				A	A	20 47 07.0	
	comp=Z,172nm,0.5s						
YUK	Yuzh-Kuril'sk	4.95	255	ePN	Pn	20 46 08.2	+1.8
YUK				eS	Sn	20 47 04.3	+1.9
YUK				pmax	pmax		
	comp=E,114nm,0.2s						
YUK				pmax	pmax		
	comp=Z,171nm,0.2s						
YUK				pmax	pmax		
	comp=N,75nm,0.1s						
YUK				smax	smax		
	comp=N,152nm,0.4s						
YUK				smax	smax		
	comp=E,172nm,0.5s						
GRPR	Tuman	5.03	254	eP	Pn	20 46 09.0	+1.6
GRPR				AMB	AMB	20 46 09.0	
	comp=E,22nm,0.3s						
GRPR				eS	Sn	20 47 06.0	+1.8
GRPR				A	A	20 47 09.0	
	comp=E,110nm,0.5s						
GRPR				A	A	20 47 09.0	
	comp=E,71nm,0.5s						
GRPR	Tuman	5.03	254	ePN	Pn	20 46 09.0	+1.6
GRPR				eS	Sn	20 47 06.1	+1.8
GRPR				smax	smax		
	comp=E,71nm,0.4s						
GRPR				smax	smax		
	comp=N,110nm,0.5s						
GLVR	Golovnino	5.29	252	eP	Pn	20 46 11.0	0.0
GLVR				eS	Sn	20 47 10.0	-0.7
GLVR	Golovnino	5.29	252	ePN	Pn	20 46 11.7	+0.7
NEM2	Nemuro 2	5.30	248	P	Pn	20 46 11.0	-0.1
NEM2				eS	Sn	20 47 09.5	-1.4
NMR	Nemuro--Hokkai	5.30	248	*i* P	Pn	20 46 11.0	-0.2
NMR				eS	Sn	20 47 08.0	-3.1
NMR	Nemuro--Hokkai	5.30	248	⇓*i*PN	Pn	20 46 11.0	-0.2
JAK	Akkeshi	6.14	248	P	Pn	20 46 22.6	-0.2
JAK				eS	Sn	20 47 29.3	-2.5
JTKR	Abashiri--Toko	6.31	259	P	Pn	20 46 26.6	+1.6
JAR	Ashorobuto	6.63	253	P	Pn	20 46 30.8	+1.3
JAR				eS	Sn	20 47 44.3	+0.5
JMP	Maruseppu	6.67	260	P	Pn	20 46 32.2	+2.1
JOB	Onbets	6.75	250	P	Pn	20 46 32.0	+0.9
JOB				eS	Sn	20 47 45.7	-1.1
JKK2	Kamakawa 2	7.14	260	P	Pn	20 46 38.5	+2.1
JKA	Kamikawa-asahi	7.17	262	eP	Pn	20 46 37.5	+0.6
ASAJ	Asahikawa	7.17	262	P	Pn	20 46 37.5	+0.6
	comp=N,1.1nm,0.3s,baz=278,slow=15,SNR=4.3						
JCH	Churui	7.19	249	P	Pn	20 46 37.1	-0.1
JCH				eS	Sn	20 47 54.5	-3.1
JNBK	Urakawa-nobuka	7.75	248	P	Pn	20 46 44.5	-0.3
JNB	Noboribetsu	8.80	254	P	Pn	20 46 59.4	+0.1
JANG	Nango	9.56	241	P	Pn	20 47 07.7	-1.9
MA2	Magadan	14.09	356	LR	LR	20 54 09.7	
	comp=N,30nm,18.2s,baz=159,slow=41						
USRK	Ussuriysk Ar.	14.59	272	P	Pn	20 48 17.3	-1.1
	baz=74,slow=13,SNR=3.2						
EKMR	Ekimchan	14.77	308	eP	P	20 48 23.9	-2.3
EKMR				AMB	AMB	20 48 28.8	
	comp=N,4.0nm,0.7s						
KROS	Kirovskiy	18.57	308	eP	Pn	20 49 13.1	+4.4
KROS				AMB	AMB	20 49 19.8	
	comp=N,5.0nm,0.4s						
H11N2	WAKE ISLAND Hy	28.37	150	T	T	21 21 07.2	
	baz=339,slow=75,SNR=131						
H11N1	WAKE ISLAND Hy	28.39	150	T	T	21 21 11.3	
	baz=339,slow=75,SNR=95						
H11N3	WAKE ISLAND Hy	28.39	150	T	T	21 21 04.4	
	baz=339,slow=75,SNR=100						
H11S1	WAKE ISLAND Hy	29.44	152	T	T	21 22 27.5	
	baz=339,slow=76,SNR=145						
H11S3	WAKE ISLAND Hy	29.45	152	T	T	21 22 36.2	
	baz=339,slow=76,SNR=106						
H11S2	WAKE ISLAND Hy	29.46	152	T	T	21 22 25.8	
	baz=339,slow=76,SNR=104						
ILAR	Eielson Array	37.76	38	P	P	20 52 04.7	-2.1
	comp=N,0.2nm,0.6s,baz=266,slow=7.7,SNR=3.3						
ZALV	Zalesovo Beam	42.97	307	PcP	PcP	20 54 39.3	-0.5
	comp=N,0.6nm,0.5s,baz=354,slow=4.5,SNR=3.7						
MKAR	Makanchi Array	47.11	298	P	P	20 53 20.9	-2.1
	comp=N,0.4nm,0.7s,baz=72,slow=7.7,SNR=5.4						
MKAR				PcP	PcP	20 54 54.2	-0.1
	comp=N,0.4nm,0.7s,baz=75,slow=4.7,SNR=5.1						
CMAR	Chiang Mai Arr	51.66	257	P	P	20 53 59.5	+1.5
	comp=N,0.8nm,0.8s,baz=40,slow=8.5,SNR=4.0						
YKA	Yellowknife Ar	52.15	36	P	P	20 54 00.7	-0.4
	comp=N,0.2nm,0.6s,baz=298,slow=7.1,SNR=3.3						
TAPN	Taplejung	53.73	274	eP	P	20 54 14.6	+1.0
	comp=N,6.6nm,0.8s						
JIRN	Jiri	54.61	275	eP	P	20 54 20.2	+0.1
	comp=N,6.8nm,0.4s						
GUN	Gumba	54.67	275	eP	P	20 54 20.5	0.0
	comp=N,3.6nm,0.4s						
RAMN	Ramite	54.76	274	eP	P	20 54 20.8	-0.2
	comp=N,8.9nm,0.4s						
KKN	Kakani	55.17	276	eP	P	20 54 24.3	+0.4
	comp=N,5.1nm,0.6s						
DMN	Daman	55.40	276	eP	P	20 54 25.9	+0.3
	comp=N,3.6nm,0.4s						
GKN	Gorkha	55.48	276	eP	P	20 54 26.1	0.0
DANN	Dangsing	55.88	277	eP	P	20 54 29.5	+0.3
	comp=N,9.5nm,0.6s						
NVAR	Mina Array Bea	63.38	61	P	P	20 55 22.8	+2.2
	comp=N,0.7nm,0.9s,baz=286,slow=8.3,SNR=3.3						
FINES	FINESS Array B	64.94	335	P	P	20 55 27.4	-2.6
	comp=N,1.0nm,0.5s,baz=26,slow=5.3,SNR=6.4						
PDAR	Pinedale Array	65.81	53	P	P	20 55 37.8	+1.4
	comp=N,0.2nm,0.6s,baz=298,slow=1.9,SNR=3.1						
WRA	Warramunga Arr	67.24	199	P	P	20 55 47.8	+2.6
	comp=N,0.7nm,0.9s,baz=358,slow=6.8,SNR=4.9						
NB2	NORSAR Subarra	69.22	341	P	P	20 55 55.5	-1.9
	comp=Z,0.5nm,0.6s,baz=27,slow=6.5						
NOA	NORSAR Array B	69.22	341	P	P	20 55 55.3	-2.0
	comp=Z,0.6nm,0.5s,baz=28,slow=6.3,SNR=5.1						
ASAR	Alice Springs	70.93	198	P	P	20 56 11.5	+3.3
	comp=Z,0.3nm,0.5s,baz=15,slow=6.8,SNR=3.9						
AKASG	Malin Array Be	72.30	326	P	P	20 56 14.0	-2.1
	comp=Z,0.3nm,0.3s,baz=34,slow=6.3,SNR=3.7						
TXAR	Lajitas Array	78.47	60	P	P	20 56 53.5	+1.4
	comp=Z,0.7nm,0.7s,baz=302,slow=3.2,SNR=7.9						

SJA 18 20:45:15.9±0.4, 32.99S×71.18W, h150km±23km, ML2.2, MW2.7
ISC 18 20:45:19.1±3.5, 32.99S±0.08×71.3W±0.2, h35km, n11, σ2.36/13, 2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROCH	El Roble	0.21	86	⇑*i*P	Pn	20 45 22.6	-3.8
ROCH				*i* S	Sn	20 45 27.3	-4.0
ROCH				IAML		20 45 28.0	
	comp=N,121nm,0.3s						
MT03	Universidad Ad	0.81	129	⇓*i*P	Pn	20 45 34.1	0.0
MT03				*i* S	Sn	20 45 47.8	+2.8
MT03				IAML		20 45 48.8	
	comp=E,226nm,0.3s						
FCH	Farellones	0.89	113	⇑*i*P	Pn	20 45 33.6	-1.8
ARCO	CERRO ARCO	1.97	86	eP	Pn	20 45 50.7	+0.6
ARCO				IAML		20 45 53.6	
	comp=Z,16nm,0.3s						
RTLS	Leoncito	2.04	55	IAML		20 45 50.6	
	comp=Z,13nm,0.2s						
RTLS				eS	Sn	20 46 19.4	+3.6
AAGR	Agrelo	2.05	93	eP	Pn	20 45 51.6	+0.4
ASAL	Salagasta	2.09	80	eP	Pn	20 45 52.3	+0.6
RTCV	Cerro Valdivia	2.56	65	eP	Pn	20 45 57.8	-0.4
ACCO	Cerro Coronel	3.04	39	eP	Pn	20 46 04.7	-0.4
AMOG	MOGNA	3.12	50	eP	Pn	20 46 05.2	-0.7
AROD	Rodeo	3.20	29	eP	Pn	20 46 07.3	0.0

IDC 18 20:46:31.7±2.1, 1.34N×126.08E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/39, mbtmp3.4/3, Error ellipse: s-maj=194.7km s-min=26.2km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.65	159	P	P	20 51 34.3	-0.4
	1.0nm,0.5s,baz=338,slow=11,SNR=15						
ASAR	Alice Springs	26.00	163	P	P	20 52 06.9	+0.4
	0.4nm,0.5s,baz=346,slow=11,SNR=5.1						
MKAR	Makanchi Array	59.15	326	P	P	20 56 34.3	-0.1
	0.2nm,0.5s,baz=121,slow=8.0,SNR=4.9						

IDC 18 21:04:12.1±6.5, 9.02N×91.58E, h0km, mb3.7/4, mb1 3.7/5, mb1mx3.5/36, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=127.8km s-min=46.5km az=158.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.79	37	Pn	Pn	21 07 01.9	+0.2
	0.1nm,0.3s,baz=233,slow=15,SNR=8.3						
H08S3	Diego Garcia H	25.21	230	T	T	21 35 50.6	
	baz=51,slow=75,SNR=152						
H08S2	Diego Garcia H	25.21	230	T	T	21 35 51.0	
	baz=51,slow=75,SNR=43						
H08S1	Diego Garcia H	25.23	230	T	T	21 35 52.6	
	baz=51,slow=75,SNR=24						
MKAR	Makanchi Array	38.47	350	P	P	21 11 36.7	+0.9
	0.9nm,0.5s,baz=165,slow=9.0,SNR=19						
SONM	Songino Array	40.67	15	P	P	21 11 52.9	-1.4
	0.7nm,0.7s,baz=194,slow=8.0,SNR=5.6						
ZALV	Zalesovo Beam	45.13	354	P	P	21 12 30.3	+0.1
	0.9nm,0.6s,baz=178,slow=9.5,SNR=5.0						
BRTR	Keskin Array B	59.77	311	P	P	21 14 18.8	-0.5
	0.4nm,0.7s,baz=137,slow=9.1,SNR=2.8						

WEL 18 21:11:25.3±0.4, 33°S±7°×18°0W±1°8, h140km±17km, M4.2/25, mB4.7/14, ML4.6/8, MLv4.7/25, Mw(mB)4.0/14
IDC 18 21:11:27.3±8.3, 33.15S×179.83E, h269km±90km, mb3.1/2, mb1 3.4/3, mb1mx3.2/28, mbtmp3.9/3, Error ellipse: s-maj=100.6km s-min=42.2km az=3.0
ISC 18 21:11:20.7±1.3, 32.93S±0.10×179.4W±0.2, h250km, n37, σ2.92/42, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.88	20	S	S	21 13 09.6	-3.0
MXZ	Matakaoa Point	4.98	201	P	Pn	21 12 41.1	+5.0
MXZ				S	S	21 13 32.9	-3.5
WMGZ	Waiomatatini S	5.19	199	P	Pn	21 12 41.6	+3.0
WMGZ				S	S	21 13 39.9	-1.0
HAZ	Te Kaha	5.33	205	P	Pn	21 12 42.6	+2.2
HAZ				S	S	21 13 39.9	-4.2
PKGZ	Pakihiroa	5.35	202	P	Pn	21 12 42.7	+2.0
PKGZ				S	S	21 13 43.0	-1.7
PUZ	Puketiti	5.47	200	P	Pn	21 12 43.5	+1.3
RUGZ	Raukumara Rang	5.55	204	P	Pn	21 12 46.8	+3.5
RUGZ				S	S	21 13 44.7	-4.6
OPRZ	Ohinepanea	5.90	213	P	Pn	21 12 51.1	+3.6
MWZ	Matawai	5.94	204	P	Pn	21 12 51.5	+3.6
URZ	Urewera	6.02	207	P	Pn	21 12 51.9	+2.9
	5.5nm,0.3s,baz=288,slow=3.8,SNR=47						
URZ				S	S	21 13 55.8	-3.8
	8.0nm,0.3s,baz=80,slow=23,SNR=14						
URZ	Urewera	6.02	207	P	Pn	21 12 51.8	+2.9
RAGZ	Rawiri	6.12	204	P	Pn	21 12 53.6	+3.3
RIGZ	Rimuhau	6.20	201	P	Pn	21 12 54.9	+3.7
MUGZ	Murupara	6.34	208	P	Pn	21 12 55.6	+2.6
PRGZ	Paritu Road	6.37	199	P	Pn	21 12 58.0	+4.6
RTZ	Ruatahuna	6.38	206	P	Pn	21 12 55.7	+2.1
SNGZ	Shannon Statio	6.40	203	P	Pn	21 12 57.0	+3.2
KNZ	Kokohu	6.52	200	P	Pn	21 12 57.8	+2.6
MHGZ	Mahia Peninsul	6.58	198	P	Pn	21 13 00.4	+4.5
ALRZ	Allen Road	6.59	210	P	Pn	21 12 58.8	+2.7
MTHZ	Maungataniwha	6.64	206	P	Pn	21 12 58.9	+2.2
WHHZ	Waihua	6.70	203	P	Pn	21 13 01.1	+3.6
NMHZ	Naumai	6.87	205	P	Pn	21 13 02.9	+3.2
ARHZ	Aropaoanui	6.95	204	P	Pn	21 13 03.6	+3.0
BKZ	Black Stump Fm	7.05	207	P	Pn	21 13 04.1	+2.2
MCHZ	McNeill Hill	7.22	205	P	Pn	21 13 06.1	+2.1
HIZ	Hauiti	7.26	218	P	Pn	21 13 08.5	+4.0
KWHZ	Kaweka Forest	7.30	206	P	Pn	21 13 05.5	+0.4
NGZ	Ngauruhoe	7.42	211	P	Pn	21 13 09.1	+2.4
KAHZ	Kahuranaki	7.47	202	P	Pn	21 13 09.6	+2.4
KRHZ	Kereru	7.51	206	P	Pn	21 13 09.0	+1.3
PNHZ	Pukenui	7.81	206	P	Pn	21 13 12.6	+1.1
PRHZ	Porangahau	7.98	202	P	Pn	21 13 14.7	+1.1
ANWZ	Angora Road	8.20	202	P	Pn	21 13 17.7	+1.3
ASAR	Alice Springs	41.83	270	P	P	21 18 46.5	0.0
	0.6nm,0.5s,baz=108,slow=7.6,SNR=9.1						
WRA	Warramunga Arr	43.05	276	P	P	21 18 56.2	-0.1
	0.7nm,0.5s,baz=113,slow=8.0,SNR=19						
FINES	FINESS Array B	147.06	338	PKPbc	PKiKP	21 30 36.5	+1.1
	0.6nm,0.5s,baz=59,slow=6.7,SNR=7.4						

ISK 18 21:37:10.8, 37.41N×30.01E, h102km, ML2.9/12
NIC 18 21:37:11.7±0.0, 37.09N×30.10E, h109km±1km, Ml3.6/3
DDA 18 21:37:12.2, 37.38N×30.05E, h52km±6km, ML2.8
GII 18 21:37:14.7±0.4, 37.07N×30.45E, h40km
ISC 18 21:37:09.1±1.3, 37.36N±0.03×30.11E±0.03, h120km±7km, n64, σ1.63/102, 3C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDR	BURDUR-Merkez	0.34	353	iP	Pn	21 37 25.6	-0.7
BRDR				iS	Sn	21 37 37.5	-1.8
BCK	Bucak	0.39	74	PG	Pn	21 37 27.1	+0.6
BCK				SG	Sn	21 37 39.0	-0.6
GOLH	Golhisar	0.46	255	iP	Pn	21 37 27.4	+0.5
GOLH				iS	Sn	21 37 39.0	-1.3
BASM	Basmaki-Afyon	0.57	355	PG	Pn	21 37 27.5	0.0
BASM				SG	Sn	21 37 39.5	-2.0
ISP	Isparta	0.57	35	PG	Pn	21 37 27.9	+0.3
ISP				SG	Sn	21 37 40.5	-1.0
ISP	Isparta	0.57	35	Pg	Pn	21 37 27.8	+0.2
ELL	Elmali	0.63	195	PG	Pn	21 37 28.7	+0.7
ELL	Elmali	0.63	195	P	Pn	21 37 28.9	+0.9
ELL				S	Sn	21 37 40.4	-1.9
KEMT	Kemer-ANTALYA	0.83	155	PG	Pn	21 37 31.2	+1.7
KEMT				SG	Sn	21 37 46.1	+1.3
BAGO	Egridir - ISPA	0.83	40	iP	Pn	21 37 30.3	+0.7
KZIL	AFYON_Kizioren	0.90	1	iP	Pn	21 37 30.5	+0.2
KZIL				iS	Sn	21 37 45.5	-0.8
DENT	Denizli	0.95	295	PG	Pn	21 37 30.5	-0.1
DENT				SG	Sn	21 37 44.9	-2.0
TAVA	DENIZLI_Tavas	0.96	277	iP	Pn	21 37 30.9	+0.1
TAVA				iS	Sn	21 37 45.5	-1.7
TAVA				IAML		21 37 46.0	
	comp=N,252nm,0.6s						
AKUM	Antalya-Kumluc	1.05	170	iP	Pn	21 37 32.9	+1.3
AKUM				iS	Sn	21 37 49.3	+0.8
AKUM				IAML		21 37 52.0	
	comp=E,188nm,0.2s						
FETY	Fethiye	1.09	229	PG	Pn	21 37 32.9	+0.8
FETY				SG	Sn	21 37 48.9	-0.5
FETY	Fethiye	1.09	229	iP	Pn	21 37 32.7	+0.6
FETY				iS	Sn	21 37 48.2	-1.2
KHAL	Karahalli	1.13	334	iP	Pn	21 37 32.6	+0.1
KHAL				iS	Sn	21 37 48.3	-1.9
AKAS	Kas	1.19	200	PN	Pn	21 37 34.6	+1.4
AKAS				SN	Sn	21 37 51.9	+0.4
AKAS	Kas	1.19	200	iP	Pn	21 37 34.0	+0.8
KEPZ	Antalya-Kepez	1.27	110	iP	Pn	21 37 35.5	+1.5
KEPZ				iS	Sn	21 37 54.0	+1.1
DALY	Dalyan (Mula)	1.28	246	PN	Pn	21 37 34.8	+0.7
DALY				SN	Sn	21 37 51.8	-1.1
DALY	Dalyan (Mula)	1.28	246	iP	Pn	21 37 34.7	+0.7
DALY				iS	Sn	21 37 51.9	-1.1
DALY				IAML		21 37 52.0	
	comp=N,139nm,0.2s						
TURN	Turunc	1.30	249	PN	Pn	21 37 38.6	+4.4
TURN	Turunc	1.30	249	iP	Pn	21 37 38.5	+4.3
TURN				iS	Sn	21 37 59.0	+5.8
DOGA	KONYA_Doganhis	1.44	58	iP	Pn	21 37 37.8	+1.8
DOGA				iS	Sn	21 37 57.3	+0.8
YER	Yerkesik	1.48	262	PN	Pn	21 37 36.8	+0.5
BOLV	Bolvadin	1.51	26	iP	Pn	21 37 38.4	+1.6
USAK	Uak-Merkez	1.61	328	iP	Pn	21 37 38.7	+0.9
USAK				iS	Sn	21 37 59.0	-0.7
MRSB	Marmaris-Mugla	1.66	248	PN	Pn	21 37 39.4	+1.0
MANT	Manisa	1.67	313	iP	Pn	21 37 39.3	+0.5
GDZ	Gediz	1.80	344	iP	Pn	21 37 41.1	+0.9
GDZ				iS	Sn	21 38 02.7	-1.2
AYDN	Tasoluk	1.80	280	iP	Pn	21 37 40.9	+0.8
AYDN				iS	Sn	21 38 02.1	-1.7
KMER	Konya-Meram	1.84	76	iP	Pn	21 37 42.8	+2.2
KMER				iS	Sn	21 38 06.5	+1.8
KMER				IAML		21 38 09.0	
	comp=E,64nm,1.1s						
KONT	Konya--Tatoy	1.88	71	iP	Pn	21 37 36.2	-4.8
ARG	Arkhangelos	1.96	235	iP	Pn	21 37 42.9	+0.9
ARG				S	Sn	21 38 07.1	0.0
DEMI	Demirci	2.01	327	iP	Pn	21 37 43.5	+0.8
GAZI	Gazipasa	2.09	122	iP	Pn	21 37 46.3	+2.6
GAZI				iS	Sn	21 38 11.7	+1.5
DAT	Datca	2.12	254	iP	Pn	21 37 45.5	+1.4
GCAM	G?zelcaml?	2.31	279	iP	Pn	21 37 47.4	+0.9
ERMK	Ermenek	2.35	107	iP	Pn	21 37 49.8	+2.6
AKMS	Akamas	2.94	142	⇑P	Pn	21 37 55.4	+0.8
AKMS				S	Sn	21 38 28.8	-1.0
AKMS				AML	AML	21 38 30.6	
	comp=E,0.4nm,0.2s						
AKMS				AML	AML	21 38 30.6	
	comp=E,0.4nm,0.2s						
AKMS				AML	AML	21 38 30.6	
	comp=E,0.5nm,0.2s						
AKMS				AML	AML	21 38 30.6	
	comp=E,0.5nm,0.2s						
ALFC	Alefka	2.98	137	P	Pn	21 37 55.2	+0.1
ALFC				S	Sn	21 38 30.2	-0.3
ALFC				AML	AML	21 38 30.8	
	comp=E,0.5nm,0.2s						
ALFC				AML	AML	21 38 30.8	
	comp=E,0.5nm,0.2s						
ALFC				AML	AML	21 38 31.5	
	comp=E,0.5nm,0.2s						
ALFC				AML	AML	21 38 31.5	
	comp=E,0.5nm,0.2s						
KARP	Karpathos	2.99	234	P	Pn	21 37 56.0	+0.8
KARP				S	Sn	21 38 30.5	-0.3
NATA	Nata	3.25	142	⇑P	Pn	21 37 59.4	+0.7
NATA				S	Sn	21 38 36.3	-0.7
NATA				AML	AML	21 38 38.3	
	comp=E,0.4nm,0.2s						
NATA				AML	AML	21 38 38.3	
	comp=E,0.4nm,0.2s						
NATA				AML	AML	21 38 38.7	
	comp=E,1.0nm,0.2s						
NATA				AML	AML	21 38 38.7	
	comp=E,1.0nm,0.2s						
SZAC	Souni	3.43	138	⇓P	Pn	21 38 01.9	+0.8
SZAC				S	Sn	21 38 41.3	+0.1
CSS	Mathiatis	3.53	132	P	Pn	21 38 03.2	+0.8
CSS	Mathiatis	3.53	132	Pn	Pn	21 38 02.3	-0.1
ASGA	Asgata	3.61	134	⇑P	Pn	21 38 04.4	+1.0
ASGA				S	Sn	21 38 45.2	-0.2
OSC2	CSNet OBS 4	4.62	157	P	Pn	21 38 17.6	+0.7
HWQ	Hawqa	5.65	121	eP	Pn	21 38 32.5	+1.6
BHL	Bhannes	5.68	126	eP	Pn	21 38 31.5	+0.3
DQRL	Deir Qamar	5.75	128	eP	Pn	21 38 32.1	-0.1
QRWL	Qaraoun	5.92	128	eP	Pn	21 38 35.5	+0.9
MMA0B	Mount Meron ar	6.12	133	Pn	Pn	21 38 37.6	+0.3
NATI	Neve Ativ	6.15	130	Pn	Pn	21 38 38.3	+0.8
NATI				Sn	Sn	21 39 41.3	-2.6
KSDI	Kefar Szold	6.15	131	Pn	Pn	21 38 37.9	+0.4
KSDI				Sn	Sn	21 39 43.1	-3.4
OFRI	`Ofer	6.19	138	Pn	Pn	21 38 38.5	+0.4
OFRI				Sn	Sn	21 39 43.9	-3.6
KSHT	Keshet	6.39	131	Pn	Pn	21 38 42.2	+1.4
MMLI	Mount Malkishu	6.56	137	Pn	Pn	21 38 43.7	+0.5
MMLI				Sn	Sn	21 39 53.1	-3.5
HMDT	Nahal Hemdat	6.76	137	Pn	Pn	21 38 47.0	+1.2
HMDT				Sn	Sn	21 39 57.4	-4.0
DSI	Dead Sea	7.22	141	Pn	Pn	21 38 53.4	+1.3
DSI				Sn	Sn	21 40 10.2	-2.4
KZIT	Kziot	7.35	150	Pn	Pn	21 38 53.9	+0.2
KZIT				Sn	Sn	21 40 12.2	-3.4
MBRI	Mt Berech	8.54	151	Pn	Pn	21 39 11.5	+1.6
EIL	Elat	8.66	151	Pn	Pn	21 39 12.6	+1.1

IDC 18 21:51:32.9±0.5, 38.72N×43.53E, h0km, mb4.3/29, mb1 4.3/38, mb1mx4.3/51, mbtmp4.2/38, ML3.4/10, MS3.5/11, Ms1 3.5/11, ms1mx3.3/40, Error ellipse: s-maj=9.3km s-min=7.4km az=142.0
MOS 18 21:51:33.5±1.3, 38.61N×43.60E, h11km, mb4.6/28, Error ellipse: s-maj=4.6km s-min=2.9km az=99.2
NSSP 18 21:51:33.0, 38.90N×43.47E, h12km, Ms4.4
THR 18 21:51:34.7±0.4, 38.78N×43.57E, h14km±9km, ML4.2
TEH 18 21:51:34.7, 38.84N×43.53E, h12km, ML4.4
NEIC 18 21:51:34.1±2.0, 38.81N±0.04×43.55E±0.03, h4km±4km, Error ellipse: s-maj=5.2km s-min=3.1km az=181.0
DDA 18 21:51:35.1, 38.84N×43.56E, h12km±1km, MW4.6
BJI 18 21:51:37.5±0.0, 38.70N×43.60E, h40km, mB4.9/29, mb4.7/43, Ms4.6/12, Ms7 4.3/7
GII 18 21:51:38.6±0.0, 38.70N×43.60E, h15km
ISC 18 21:51:36.0±0.6, 38.84N±0.01×43.56E±0.02, h14km±3km, n450, σ1.80/487, mb4.5/93, MS3.8/14, 28C-30D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.15	3	⇓iP	Pg	21 51 37.9	-2.1
VMUR				iS	Sg	21 51 41.3	-1.4
VANB	Van	0.28	209		Pg	21 51 41.3	-0.7
VANB	Van	0.28	209	ePg	Pg	21 51 41.8	-0.2
TVAN	Van	0.34	201	⇓iP	Pg	21 51 41.8	-1.2
TVAN				iS	Sb	21 51 49.0	-0.1
TVAN				IAML		21 51 53.0	
	comp=E,97μm,1.0s						
CLDR	Caldiran	0.41	42		Pg	21 51 41.8	-2.5
CLDR	Caldiran	0.41	42	⇓iP	Pg	21 51 42.5	-1.8
CLDR				iS	Sg	21 51 49.4	-0.5
CLDR				IAML		21 51 51.0	
	comp=E,45μm,0.7s						
CLDR	Caldiran	0.41	42	ePg	Pg	21 51 42.5	-1.8
ADCV	BITLIS_Adilcev	0.66	267	⇑iP	Pg	21 51 47.3	-1.6
ADCV				iS	Sg	21 51 57.4	-0.2
ADCV				IAML		21 51 59.0	
	comp=N,18μm,0.4s						
GEVA	Gevas	0.66	217	⇓iP	Pg	21 51 46.8	-2.2
GEVA				iS	Sg	21 51 57.5	-0.2
GEVA				IAML		21 52 03.0	
	comp=E,10μm,0.6s						
AKDM	Akdamar-Van	0.69	222		Pg	21 51 46.8	-2.6
AKDM	Akdamar-Van	0.69	222	ePg	Pg	21 51 47.4	-2.0
DYDN	Diyadin	0.71	8	⇓iP	Pg	21 51 47.4	-2.5
DYDN				iS	Sg	21 51 58.2	-1.1
DYDN				IAML		21 52 02.0	
	comp=E,12μm,0.7s						
TUTA	Tutak	0.81	314	⇓iP	Pg	21 51 49.1	-2.6
TUTA				iS	Sg	21 52 01.3	-1.1
MLAZ	Malazgirt-MUS	0.84	291		Pg	21 51 49.8	-2.6
MLAZ	Malazgirt-MUS	0.84	291	ePg	Pg	21 51 50.9	-1.5
AGRB	Hanur-Agry	0.86	329		Pg	21 51 49.7	-3.0
BASK	Baskale_VAN	0.86	156	⇓iP	Pg	21 51 50.7	-2.0
BASK				iS	Sn	21 52 06.0	-0.2
BASK				IAML		21 52 07.0	
	comp=N,10μm,0.8s						
MAKU	Maku	1.01	59	ePg	Pg	21 51 54.2	-1.3
MAKU				eSg	Sb	21 52 08.6	0.0
MAKU				IAML		21 52 12.1	
	comp=N,6μm,0.5s						
IGDI	IGDIR	1.10	21	⇓iP	Pb	21 51 54.9	-1.9
IGDI				iS	Sn	21 52 12.6	+0.6
BLIS	Bitlis-Merkez	1.21	250	⇑iP	Pn	21 51 56.4	-2.2
BLIS				iS	Sb	21 52 13.8	-0.5
BLIS				IAML		21 52 17.0	
	comp=N,6μm,0.4s						
BLIS				IAML		21 52 21.0	
	comp=E,5μm,0.5s						
GURO	Guroymak-BITLI	1.23	257		Pn	21 51 56.1	-2.8
GURO	Guroymak-BITLI	1.23	257	ePg	Pn	21 51 57.0	-1.9
EKAR	Karacoban	1.24	290	iP	Pn	21 51 58.2	-0.9
EKAR				iS	Sn	21 52 17.7	+2.0
EKAR				IAML		21 52 32.0	
	comp=E,19μm,1.2s						
TASB	TASBURUN-IGDIR	1.26	24		Pn	21 51 57.4	-1.7
TASB	TASBURUN-IGDIR	1.26	24	ePg	Pn	21 51 58.0	-1.1
VNNZ	Vanand	1.28	9	eP	Pn	21 51 58.6	-0.9
HAKT	HAKKARI	1.29	175	⇓iP	Pn	21 51 57.8	-1.9
HAKT				iS	Sg	21 52 19.9	+2.3
EATA	Eleskirt	1.31	321	⇓iP	Pn	21 51 58.4	-1.8
EATA				iS	Sn	21 52 17.9	+0.2
HYR	Heyderabad	1.33	48	ePn	Pb	21 52 00.9	+0.2
METS	Metsamor	1.37	17	eP	Pb	21 52 01.6	+0.2
METS				eS	Sg	21 52 22.6	+2.5
ARUZ	Aruch	1.50	16	eP	Pn	21 52 02.1	-0.4
ARUZ				eS	Sg	21 52 24.1	-0.2
NAX	Nakhchivan	1.54	77	P	Pb	21 52 03.8	-0.5
NAX	Nakhchivan	1.54	77	ePn	Pb	21 52 03.8	-0.5
SRTM	Siirt_Merkez	1.54	237	⇑iP	Pn	21 52 03.1	0.0
SRTM				iS	Sb	21 52 23.5	-0.3
SRTM				IAML		21 52 35.0	
	comp=N,5μm,0.9s						
DIGO	Kars	1.58	355	⇓iP	Pn	21 52 04.0	+0.3
DIGO				iS	Sg	21 52 29.4	+2.5
DIGO	Kars	1.58	355	ePn	Pn	21 52 04.2	+0.4
CUKT	Cukurca	1.59	179		Pn	21 52 03.0	-0.8
CUKT	Cukurca	1.59	179	⇓iP	Pn	21 52 03.6	-0.3
CUKT				iS	Sg	21 52 29.7	+2.5
CUKT	Cukurca	1.59	179	ePg	Pn	21 52 03.5	-0.3
GNI	Garni	1.59	35	Pg	Pn	21 52 04.1	+0.2
	comp=N,257nm,0.3s,baz=248,slow=3.4,SNR=552						
GNI				Lg	Lg	21 52 27.5	
	comp=N,300nm,0.3s,baz=84,slow=23,SNR=30						
GNI				LR	LR	21 52 47.9	
	comp=N,2μm,20.9s,baz=200,slow=44						
GNI	Garni	1.59	35	⇓iP	Pn	21 52 03.9	0.0
GNI				⇓iS	Sg	21 52 26.8	-0.6
GNI	Garni	1.59	35		Pn	21 52 04.2	+0.2
GNI					Sn	21 52 24.1	-0.3
GNI	Garni	1.59	35	deP	Pn	21 52 03.9	0.0
GNI				pmax	pmax		
	comp=Z,4μm,0.6s						
GNI	Garni	1.59	35	ePn	Pn	21 52 04.1	+0.2
SIRT	Sirnak	1.60	214		Pn	21 52 03.5	-0.4
SIRT	Sirnak	1.60	214	ePn	Pb	21 52 04.7	-0.7
MUSM	Mu-Merkez	1.61	266	⇑iP	Pn	21 52 02.4	-1.6
MUSM				iS	Sg	21 52 28.5	+0.7
SIRN	Sırnak	1.62	214	⇓iP	Pn	21 52 03.7	-0.4
SIRN				iS	Sg	21 52 28.8	+0.6
SBZ	Shahbuz	1.65	70	ePn	Pb	21 52 05.2	-0.9
VRTB	Varto-Mus	1.67	282		Pn	21 52 04.9	0.0
VRTB	Varto-Mus	1.67	282	⇓iP	Pn	21 52 05.0	+0.1
VRTB				iS	Sg	21 52 30.4	+0.5
VRTB	Varto-Mus	1.67	282	ePn	Pn	21 52 05.7	+0.8
KAPZ	Kaputan	1.72	30	eP	Pn	21 52 06.2	+0.6
KAPZ				eS	Sg	21 52 30.5	-1.0
KOPR	Koprukoy-ERZUR	1.75	311		Pn	21 52 06.2	+0.1
KOPR	Koprukoy-ERZUR	1.75	311	ePn	Pn	21 52 06.8	+0.7
HOMI	Horasan	1.76	314	iP	Pb	21 52 07.5	-0.7
HOMI				iS	Sg	21 52 35.3	+2.7
EAK	Akyaka	1.84	1	⇓iP	Pn	21 52 08.2	+0.9
EAK				iS	Sg	21 52 38.9	+3.5
BNGL	BINGOL	1.89	274	⇓iP	Pn	21 52 08.8	+0.9
BNGL				iS	Sg	21 52 37.7	+1.0
ORD	Ordubad	1.90	87	ePn	Pn	21 52 08.5	+0.5
SENK	Senkaya-Erzuru	1.96	332	ePn	Pn	21 52 09.7	+0.8
GMRZ	Gyumri	1.98	6	eP	Pg	21 52 13.0	-1.0
GMRZ				S	Sg	21 52 40.0	+0.4
SVAN	Silvan-Diyarba	1.98	250		Pn	21 52 09.2	+0.1
SVAN	Silvan-Diyarba	1.98	250	iP	Pb	21 52 10.7	-1.1
SVAN				iS	Sg	21 52 39.2	-0.4
SVAN	Silvan-Diyarba	1.98	250	ePn	Pn	21 52 10.2	+1.1
BTMN	Batman	2.04	243	iP	Pn	21 52 10.6	+0.7
BTMN				iS	Sg	21 52 40.6	-0.9
ITBZ	Tabriz	2.12	106	ePn	Pn	21 52 11.7	+0.6
ITBZ				e		21 52 20.1	
AKDA	Akdag	2.12	307	⇓iP	Pn	21 52 11.5	+0.4
AKDA				iS	Sg	21 52 42.3	-1.8
ECAT	Cat-ERZURUM	2.15	292	⇓iP	Pn	21 52 12.1	+0.5
ECAT				iS	Sg	21 52 45.2	+0.1
STE	Stepanavan	2.24	16	⇓eP	Pn	21 52 11.5	-1.3
STE				⇓eS	Sb	21 52 43.0	-1.0
TABZ	Tabriz	2.31	109	ePn	Pb	21 52 15.4	-2.0
TABZ				e		21 52 58.8	
EMRE	Erzurum,Aziziy	2.33	301	⇓iP	Pb	21 52 16.6	-1.2
EMRE				iS	Sb	21 52 46.8	+0.2
BINT	Bingol	2.40	272	ePn	Pn	21 52 14.1	-0.8
BGD	Bogdanovka	2.42	1	P	Pb	21 52 18.1	-1.4
BGD	Bogdanovka	2.42	1	P	Pb	21 52 18.0	-1.4
BGD	Bogdanovka	2.42	1	ePn	Pb	21 52 18.0	-1.4
YEDI	Yedisu-Bingol	2.42	285	ePn	Pn	21 52 16.8	+1.5
TVRZ	Varzaqan	2.45	97	ePn	Pn	21 52 16.8	+1.1
TVRZ				e		21 53 01.1	
DDEM	Demirkent	2.48	326	iP	Pb	21 52 20.0	-0.3
DDEM				iS	Sg	21 52 54.1	-1.6
GDB	GEDABAY	2.52	41	ePn	Pn	21 52 17.8	+1.1
AKH	Akhalkalaki	2.57	359	P	Pb	21 52 19.8	-2.1
AKH	Akhalkalaki	2.57	359		Pn	21 52 18.1	+0.8
AKH	Akhalkalaki	2.57	359	P	Pn	21 52 18.1	+0.8
DBAD	Bademkaya	2.61	327	iP	Pn	21 52 20.1	+2.4
KZRT	Kazreti	2.62	14	P	Pb	21 52 21.2	-1.5
KZRT				S	Sg	21 52 58.7	-1.5
KZRT	Kazreti	2.62	14	iP	Pb	21 52 21.5	-1.2
KZRT				iS	Sb	21 52 56.7	+1.9
KOPT	Kop Dagi	2.65	297	iP	Pb	21 52 23.1	-0.3
MARD	Mardin	2.67	236	iP	Pn	21 52 18.4	-0.2
MARD				iS	Sb	21 52 55.4	-1.0
MAHB	Mahabad	2.68	140	ePn	Pn	21 52 20.4	+1.7
MAHB				e		21 53 11.8	
TRLG	Trialeti	2.73	9	P	Pb	21 52 23.1	-1.6
TRLG				S	Sb	21 53 00.6	+2.7
TRLG	Trialeti	2.73	9	P	Pb	21 52 23.0	-1.6
AHAR	Ahar	2.75	96	ePn	Pn	21 52 20.3	+0.5
AHAR				e		21 52 37.2	
IHRS	Heris	2.78	100	ePn	Pn	21 52 21.1	+0.9
IHRS				e		21 52 37.2	
GANJ	Ganja	2.79	49	P	Pn	21 52 21.3	+1.1
DIYA	Diyarbakir	2.86	252	iP	Pn	21 52 22.9	+1.7
DBOC	Borcka	2.89	330	iP	Pb	21 52 24.6	-2.7
BAYB	BAYBURT	2.92	300	iP	Pb	21 52 27.3	-0.7
IHSH	Hashtrud	2.95	99	ePn	Pb	21 52 29.3	+0.8
IHSH				e		21 52 41.6	
BTNK	Botanikuri	2.99	18	P	Pn	21 52 23.7	+0.7
BTNK				S	Sg	21 53 11.2	-0.9
BTNK	Botanikuri	2.99	18	P	Pn	21 52 23.7	+0.7
TBLG	Delisi	3.02	17	P	Pn	21 52 24.4	+0.9
TBLG				S	Sg	21 53 11.9	-1.2
TBLG	Delisi	3.02	17		Pn	21 52 24.5	+1.1
TBLG	Delisi	3.02	17	iP	Pb	21 52 26.5	-3.0
TBLG	Delisi	3.02	17	P	Pn	21 52 24.5	+1.1
SEAG	Tbilisi Sea	3.07	18	P	Pn	21 52 26.6	+2.5
SEAG				S	Sb	21 53 10.6	+2.9
SEAG	Tbilisi Sea	3.07	18	P	Pn	21 52 26.5	+2.5
BATM	Batumi	3.11	333	P	Pn	21 52 26.5	+2.0
TNCL	Tunceli-Merkez	3.15	276	iP	Pb	21 52 31.4	-0.3
DDFL	Dedoflistskaro	3.26	36	P	Pb	21 52 30.1	-3.5
MNGR	Mingechevir, A	3.33	53	P	Pn	21 52 29.1	+1.5
GRMI	Germi	3.38	89	ePn	Pn	21 52 29.3	+0.9
TKB	Tkibuli	3.53	353	P	Pn	21 52 33.4	+3.0
TKB				S	Sg	21 53 28.8	-0.7
TKB	Tkibuli	3.53	353	P	Pn	21 52 33.4	+3.0
LGD	Lagodekhi	3.62	34	P	Pn	21 52 34.6	+3.0
LGD	Lagodekhi	3.62	34	P	Pn	21 52 34.6	+3.0
SEKA	Sheki	3.66	49	P	Pn	21 52 34.0	+1.8
GUDG	Gudauri	3.69	11	P	Pn	21 52 36.0	+3.2
GUDG	Gudauri	3.69	11	P	Pn	21 52 35.9	+3.2
ONI	Oni	3.75	359	P	Pb	21 52 38.2	-3.7
ONI	Oni	3.75	359	P	Pb	21 52 38.2	-3.7
ZEI	Tsey	3.95	4	eP	Pn	21 52 38.3	+2.0
ZEI				pmax	pmax		
	comp=Z,92nm,0.6s						
LKRN	Lenkeran, Azer	4.08	90	P	Pn	21 52 39.3	+1.4
AKT	Akhty	4.14	49	iP	Pn	21 52 40.6	+1.8
NEY	Neytrino	4.45	352	iP	Pn	21 52 45.8	+2.7
ZNJK	Zanjan	4.60	117	ePn	Pn	21 52 45.4	+0.1
NCK	Nalchik	4.65	0	iP	Pn	21 52 49.1	+3.3
GROC	Groznyy	4.67	20	eP	Pn	21 52 50.4	+4.4
GROC				e		21 53 46.0	
GROC				pmax	pmax		
	comp=Z,29nm,0.8s						
GROC				smax	smax		
	comp=N,137nm,1.2s						
GROC				smax	smax		
	comp=E,121nm,1.1s						
GROC				smax	smax		
	comp=N,337nm,1.2s						
GROC				MLR	MLR		
	comp=Z,622nm,7.0s						
IDHR	Dehrash	4.71	150	ePn	Pn	21 52 48.3	+1.5
IDHR				e		21 54 29.4	
ILIN	Lien	4.77	144	ePn	Pn	21 52 48.8	+1.2
ILIN				e		21 54 30.0	
SNGE	Sanandaj	4.81	140	ePn	Pn	21 52 48.3	+0.1
KBZ	Khabaz	4.91	354	Pn	Pn	21 52 53.6	+4.4
	comp=Z,0.2nm,0.3s,baz=162,slow=7.6,SNR=11						
KBZ				Sn	Sn	21 53 51.2	+5.4
	comp=Z,0.3nm,0.3s,baz=326,slow=3.6,SNR=1.8						
KBZ				LR	LR	21 55 24.5	
	comp=Z,231nm,18.6s,baz=244,slow=46						
SHA1	Shidzhatmaz	4.94	352	iP	Pn	21 52 54.7	+4.8
IVIS	Veis	5.05	147	ePn	Pn	21 52 52.7	+1.3
IVIS				e		21 54 35.8	
MAK	Makhachkala	5.08	35	eP	Pn	21 52 55.8	+4.1
MAK				eS	Sn	21 53 54.7	+4.6
MAK				pmax	pmax		
	comp=Z,270nm,1.6s						
MAK				MLR	MLR		
	comp=Z,1μm,14.0s						
IGHG	Ghaleghazi	5.11	151	ePn	Pn	21 52 54.4	+2.1
IGHG				e		21 54 37.2	
KIV	Kislovodsk	5.15	353		Pn	21 52 54.3	+1.6
KIV	Kislovodsk	5.15	353	eP	Pn	21 52 57.5	+4.8
KIV				pmax	pmax		
	comp=Z,61nm,1.1s						
KIV				MLR	MLR		
	comp=Z,264nm,9.0s						
KVAR	Kislovodsk Arr	5.15	353	Pn	Pn	21 52 57.3	+4.6
	baz=273,slow=19,SNR=6.6						
KVAR				Lg	Lg	21 54 20.4	
	baz=38,slow=19,SNR=2.1						
GAZ	Gaziantep	5.29	254		Pn	21 52 55.1	+0.6
IALM	Almabolaq	5.42	136	ePn	Pn	21 52 59.6	+3.0
SOC	Sochi	5.55	330	eP	Pn	21 53 01.3	+3.2
SOC				e		21 54 07.0	
SOC				pmax	pmax		
	comp=Z,58nm,0.8s						
SOC				MLR	MLR		
	comp=Z,239nm,8.0s						
QABG	Abgarm-Qazvin	5.73	121	ePn	Pn	21 53 01.9	+1.1
GUZR	Guzeripl'	5.76	334	iP	Pn	21 53 04.1	+3.0
IGZV	Ghazvin	5.82	113	e		21 53 32.1	
IGZV				ePn	Pn	21 53 04.1	+2.0
HAGD	Aghdareh	6.01	130	ePn	Pn	21 53 06.8	+2.2
QALM	Alamut, Qazvin	6.11	111	e		21 53 48.2	
QALM				ePn	Pn	21 53 08.8	+2.7
IRAZ	Razeghan	6.13	122	ePn	Pn	21 53 07.6	+1.3
HSAM	Samen	6.15	137	ePn	Pn	21 53 09.0	+2.4
GOF	Gofitskoye	6.22	357	⇑eP	Pn	21 53 13.9	+6.6
IDOB	Doab	6.27	142	e		21 53 55.8	
IDOB				ePn	Pn	21 53 09.4	+1.2
IKFM	Kafar-mosalman	6.34	146	ePn	Pn	21 53 10.6	+1.7
BDRS	Dareh Seyedi	6.49	137	ePn	Pn	21 53 13.3	+2.0
IKMR	Kamar-syah	6.59	142	ePn	Pn	21 53 14.1	+1.8
IKMR				e		21 53 52.3	
BMDN	Meydan	6.68	139	ePn	Pn	21 53 16.3	+2.5
IPRN	Peran	7.44	108	ePn	Pn	21 53 26.2	+2.0
ANN	Anapa	7.51	324	eP	Pn	21 53 27.7	+2.8
ANN				eS	Sn	21 54 54.9	+5.1
ANN				pmax	pmax		
	comp=Z,40nm,1.5s						
ANN				MLR	MLR		
	comp=Z,357nm,14.0s						
GHVR	GHOM	7.58	123	ePn	Pn	21 53 26.3	+0.2
HWQ	Hawqa	7.63	236	eP	Pn	21 53 27.9	+1.1
BR131	Keskin Array S	7.75	280		Pn	21 53 28.0	-0.4
BR131	Keskin Array S	7.75	280	P	Pn	21 53 28.0	-0.4
BRTR	Keskin Array B	7.75	280	Pn	Pn	21 53 29.5	+1.1
	comp=Z,0.1nm,0.3s,baz=104,slow=10,SNR=2.7						
BRTR				LR	LR	21 57 04.2	
	comp=Z,305nm,19.8s,baz=78,slow=43						
IFIR	Firoozkooh	8.00	111	ePn	Pn	21 53 36.5	+4.6
BHL	Bhannes	8.06	235	eP	Pn	21 53 38.7	+6.1
DQRL	Deir Qamar	8.24	234	eP	Pn	21 53 37.6	+2.5
QRWL	Qaraoun	8.27	233	eP	Pn	21 53 38.1	+2.5
NATI	Neve Ativ	8.43	231	Pn	Pn	21 53 39.6	+1.9
IGLO	Ghaloghah	8.47	103	ePn	Pn	21 53 39.6	+1.2
KSDI	Kefar Szold	8.53	231	Pn	Pn	21 53 41.1	+2.1
IPIR	Pirpir	8.55	134	ePn	Pn	21 53 41.2	+1.6
ASF	Jabal al Asfar	8.59	221	Pn	Pn	21 53 41.3	+1.4
	comp=Z,0.5nm,0.3s,baz=342,slow=8.5,SNR=19						
ASF				Lg	Lg	21 55 57.4	
	comp=Z,0.2nm,0.3s,baz=330,slow=20,SNR=2.4						
MMA0B	Mount Meron ar	8.80	231	Pn	Pn	21 53 44.7	+1.8
MMAI	Mount Meron Ar	8.80	231	Pn	Pn	21 53 45.4	+2.5
	comp=Z,1.8nm,0.3s,baz=72,slow=16,SNR=11						
MMAI				Lg	Lg	21 56 10.3	
	comp=Z,0.7nm,0.3s,baz=87,slow=29,SNR=2.6						
MMAI				LR	LR	21 57 34.6	
	comp=Z,627nm,19.0s,baz=45,slow=42						
IANJ	Anjilo	8.92	109	ePn	Pn	21 53 48.3	+3.7
CSS	Mathiatis	9.06	248	Pn	Pn	21 53 48.1	+1.8
BLGI	Bet Lehem HaGe	9.13	231	Pn	Pn	21 53 49.6	+2.4
MMLI	Mount Malkishu	9.20	228	Pn	Pn	21 53 50.5	+2.2
HMDT	Nahal Hemdat	9.28	227	Pn	Pn	21 53 51.3	+2.1
OFRI	`Ofer	9.33	231	Pn	Pn	21 53 52.0	+2.0

SLTI Sal'it 9.57 229 Pn Pn 21 53 54.7 +1.5
ANAR Anarak 9.98 121 ePn Pn 21 54 00.9 +1.9
IRAM Ramesheh 10.05 132 ePn Pn 21 54 02.2 +2.1
KZIT Kziot 10.92 226 Pn Pn 21 54 14.0 +2.3
ELL Elmali 11.01 263 Pn 21 54 14.2 +1.2
ELL Elmali 11.01 263 P Pn 21 54 14.2 +1.2
PRNI Paran 11.01 222 Pn Pn 21 54 14.4 +1.3
HRFI Mount Harif 11.25 221 Pn Pn 21 54 18.6 +2.3
GEYT Alibeck 11.46 90 Pn Pn 21 54 18.0 -1.2
comp=Z,0.3nm,0.3s,baz=294,slow=14,SNR=9.7
GYA0B ALIBECK ARRAY 11.46 90 Pn 21 54 17.1 -2.1
ISFR Sfrayin 11.54 94 ePn Pn 21 54 21.4 +0.9
EIL Elat 11.59 220 Pn Pn 21 54 18.4 -2.5
comp=Z,0.2nm,0.3s,baz=42,slow=15,SNR=3.2
EIL Lg Lg 21 57 36.1
comp=Z,0.1nm,0.3s,baz=42,slow=18,SNR=2.2
ASHT Ashkhabad 11.67 90 Pn Pn 21 54 21.9 -0.1
ASHT Ashkhabad 11.67 90 P Pn 21 54 21.9 -0.1
IEMG Emamgholi 11.97 92 ePn Pn 21 54 25.9 -0.5
IAKL Akhelmad 12.24 96 ePn Pn 21 54 30.7 +0.6
VRH Novokhopyorsk 12.43 355 eP Pn 21 54 36.3 +4.0
VRH pmax pmax
comp=Z,10.0nm,0.8s
VORD Divnogorie 12.49 347 eP Pn 21 54 37.1 +3.9
VORD pmax pmax
comp=Z,10.0nm,1.0s
TIRR Tirgusor 12.64 301 Pn 21 54 36.0 +0.8
TIRR Tirgusor 12.64 301 P Pn 21 54 36.0 +0.8
VSR Storozhevoye 12.76 347 eP Pn 21 54 40.8 +4.0
VSR pmax pmax
comp=Z,10.0nm,0.7s
HARR Harsova 13.04 302 ⇑P P 21 54 46.1 -5.0
HARR Harsova 13.04 302 P P 21 54 46.0 -5.1
KARP Karpathos 13.48 261 Pn 21 54 45.2 -1.7
ELND Elena 13.99 293 ⇑P P 21 55 02.3 +0.7
LPSR Galich'ya Gora 14.13 348 eP Pn 21 54 56.0 +0.5
LPSR pmax pmax
comp=Z,10.0nm,0.8s
VRI Vrincioaia 14.28 305 ⇓P P 21 55 01.0 +3.4
PLOR Plostina 14.32 305 ⇑P P 21 55 03.3 -2.1
PLOR Plostina 14.32 305 P P 21 55 03.2 -2.1
SORM Soroca 14.41 315 ⇑P Pn 21 54 59.8 +0.5
TESC Tescani 14.60 307 ⇑P P 21 55 05.3 -3.0
MLR Muntele Rosu 14.64 303 Pn Pn 21 55 02.4 -0.3
comp=Z,0.0nm,0.3s,baz=180,slow=20,SNR=2.2
MLR Muntele Rosu 14.64 303 ⇑P P 21 55 07.3 -1.7
OZUR 14.97 305 ⇑P P 21 55 11.0 -1.6
PLVB Pleven 14.98 294 ⇑P P 21 55 14.8 +2.2
HUMR Humele 14.99 298 ⇑P P 21 55 13.6 +0.9
DOPR Dopca 15.18 304 ⇑P P 21 55 14.8 0.0
VOIR 15.22 302 ⇓P P 21 55 15.2 -0.2
VOIR 15.22 302 P Pn 21 55 12.0 +1.6
IDI Anoyia 15.32 262 Pn Pn 21 55 11.7 -0.1
comp=Z,0.4nm,0.3s,baz=56,slow=14,SNR=3.7
RAYN Ar Rayn 15.36 173 Pn 21 55 08.1 -4.2
RAYN IAmb IAmb 21 55 13.9
comp=Z,24nm,0.8s
RAYN Ar Rayn 15.36 173 P Pn 21 55 08.1 -4.2
RAYN pmax pmax
comp=Z,24nm,0.8s
NHDN Nehbandan 15.39 114 ePn Pn 21 55 14.7 +1.9
AKTO Aktyubinsk 15.46 37 Pn Pn 21 55 11.7 -1.8
comp=Z,0.3nm,0.3s,baz=222,slow=13,SNR=21
SRS Serrai 15.48 285 P P 21 55 19.8 +1.6
GENO Geno 15.53 134 ePn Pn 21 55 12.9 -1.8
AKASG Malin Array Be 15.60 324 Pn Pn 21 55 14.7 -0.5
comp=Z,0.2nm,0.3s,baz=137,slow=11,SNR=6.6
AKASG Malin Array Be 15.60 324 i P P 21 55 19.1 -0.3
AKASG pmax pmax
comp=Z,8.0nm,0.9s
AKBB Malin Array Si 15.60 324 P Pn 21 55 15.0 -0.2
AKBB Malin Array Si 15.60 324 P Pn 21 55 15.0 -0.2
AKBB pmax pmax
comp=Z,15nm,1.1s
HRA Herat 15.64 101 P Pn 21 55 14.8 -1.4
KMPD K-Podol'skiy 15.70 314 P P 21 55 20.0 -0.5
VTS Vitosha 15.86 290 ⇑P P 21 55 25.1 +2.5
VTS Vitosha 15.86 290 Pn 21 55 18.7 -0.1
VTS Vitosha 15.86 290 P Pn 21 55 18.7 -0.1
VTS pmax pmax
comp=Z,10.0nm,0.9s
BURAR Bucovina Array 15.96 309 ⇑P P 21 55 24.1 +0.5
BURAR Bucovina Array 15.96 309 P P 21 55 24.0 +0.5
BUR08 Bucovina Ar. S 15.98 309 P Pn 21 55 21.3 +1.0
KNT Kendrikon 16.00 285 P P 21 55 25.8 +1.8
KNT pmax pmax
comp=Z,6.0nm,1.9s
ARCR ARCALIA 16.27 307 ⇑P P 21 55 27.7 +0.8
AGG Agios Georgios 16.52 277 P P 21 55 31.5 +1.7
AGG Agios Georgios 16.52 277 P P 21 55 34.4 +4.6
AGG pmax pmax
comp=Z,16nm,1.4s
GZR Gura Zlata 16.73 300 ⇑P P 21 55 33.8 +1.7
OBN Obninsk 16.95 346 P Pn 21 55 32.8 +0.4
comp=Z,0.3nm,0.3s,baz=130,slow=18,SNR=2.9
OBN Obninsk 16.95 346 P Pn 21 55 31.5 -0.9
OBN IAmb IAmb 21 55 38.6
comp=Z,31nm,0.8s
OBN Obninsk 16.95 346⇑eP P 21 55 35.1 +0.8
OBN eS Sn 21 58 43.9 +3.5
OBN pmax pmax
comp=Z,33nm,0.8s
OBN MLR MLR
comp=Z,97nm,14.0s
ITM Ithomi 17.13 271 Pn 21 55 34.5 -0.4
DRGR 17.20 304 ⇑P P 21 55 40.4 +3.0
MOS Moscow 17.37 349 eP Pn 21 55 38.3 +0.6
MOS eS S 21 58 57.3 -1.7
MOS pmax pmax
comp=Z,36nm,1.1s
UOSS Minazif 17.50 139 P Pn 21 55 39.6 0.0
UOSS IAmb IAmb 21 55 44.8
comp=Z,19nm,0.8s
UOSS Minazif 17.50 139 P Pn 21 55 38.9 -0.7
HATD Hatta, Dubai 17.56 139 P P 21 55 41.7 +0.4
BZS Buzias 17.58 300 ⇑P P 21 55 42.0 +0.6
BZS Buzias 17.58 300 P P 21 55 41.8 +0.4
BZS pmax pmax
comp=Z,7.0nm,1.2s
TRPA Tarpa 17.81 308 ⇓P P 21 55 45.8 +1.9
KOLS Kolonicke sedl 18.31 310 eP P 21 55 52.4 +3.0
KOLS Kolonicke sedl 18.31 310 ePN P 21 55 52.4 +3.0
SOHO SOHO 18.34 139 P Pn 21 55 48.9 -0.9
KWP Kalwaria Pacla 18.37 313 eP P 21 55 54.6 +4.6
KWP Kalwaria Pacla 18.37 313 P Pn 21 55 49.7 -0.4
KWP Kalwaria Pacla 18.37 313 P P 21 55 53.2 +3.1
KWP pmax pmax
comp=Z,19nm,1.0s
CRVS Cervenica-Dubn 18.78 310 eP Pn 21 55 58.7 +3.6
CRVS Cervenica-Dubn 18.78 310 ePN Pn 21 55 58.7 +3.6
ARQ Araqi 18.99 141 P P 21 55 55.9 -1.2
HOQ Hoqain 19.19 138 P Pn 21 56 00.2 0.0
PSZ Piszkesteto 19.39 306 ⇓P Pn 21 56 06.5 +4.0
PSZ Piszkesteto 19.39 306 P Pn 21 56 02.6 +0.1
PSZ Piszkesteto 19.39 306 P Pn 21 56 02.6 +0.1
PSZ pmax pmax
comp=Z,22nm,1.3s
NIE Niedzica 19.69 310 eP Pn 21 56 05.7 -0.3
NIE Niedzica 19.69 310 eP Pn 21 56 05.7 -0.3
TAS Tashkent 19.82 75 P Pn 21 56 06.9 -0.8
TAS Tashkent 19.82 75 P Pn 21 56 06.9 -0.8
TAS pmax pmax
comp=Z,74nm,1.1s
BSY Bisya 19.83 140 P P 21 56 05.0 -1.2
SNR=5.4
SMDO Samad 20.00 138 P P 21 56 07.5 -0.8
SNR=12
KIRV Kirov 20.12 9 i P Pn 21 56 11.5 +0.5
WSAR Wadi Sarin 20.17 136 P P 21 56 09.3 -0.6
comp=Z,6.5nm,0.8s,baz=344,slow=7.5,SNR=5.9
ARU Arti 20.21 25 P P 21 56 09.8 -0.4
comp=Z,12nm,0.7s,baz=217,slow=7.0,SNR=67
ARU Arti 20.21 25 P P 21 56 10.3 +0.1
ARU Arti 20.21 25 d i P P 21 56 10.6 +0.4
ARU 21 56 26.7
ARU S S 21 59 56.9 +0.5
ARU pmax pmax
comp=Z,46nm,0.8s
VYHS Vyhne 20.25 306 eP Pn 21 56 12.8 +0.2
VYHS Vyhne 20.25 306 ePN Pn 21 56 12.8 +0.2
OJC Ojcow 20.31 312 P P 21 56 11.1 -0.3
OJC Ojcow 20.31 312 P P 21 56 11.1 -0.3
OJC pmax pmax
comp=Z,6.0nm,0.8s
SUW Suwalki 20.57 324 eP Pn 21 56 16.0 -0.3
SUW Suwalki 20.57 324 eP Pn 21 56 16.0 -0.3
JMDO Jabal Madar 20.60 139 P P 21 56 13.3 -1.3
SNR=7.7
KK31 Karatay Array 20.75 70 IAmb IAmb 21 56 21.8
comp=Z,34nm,0.8s
KKAR Karatay Array 20.75 70 IAmb IAmb 21 56 21.8
comp=Z,34nm,0.8s
TIP Timpagrande 20.81 279 ⇓P P 21 56 16.7 -0.2
TIP Timpagrande 20.81 279 P P 21 56 16.4 -0.5
TIP IAmb IAmb 21 56 22.8
comp=Z,13nm,0.9s
BTK Batken 21.06 78 IAmb IAmb 21 56 21.3
comp=Z,26nm,1.0s
SMOL Smolenice 21.14 306 eP P 21 56 24.5 +4.2
SMOL Smolenice 21.14 306 ePN P 21 56 24.5 +4.2
MODS Modra-Piesok 21.19 305 eP P 21 56 28.5 +7.6
MODS Modra-Piesok 21.19 305 ePN P 21 56 28.5 +7.6
SVE Sverdlovsk 21.23 26⇑eP P 21 56 21.8 +0.6
SVE pmax pmax
comp=Z,28nm,1.0s
ACER Acerenza 21.27 284 P P 21 56 23.4 +1.5
ACER IAmb IAmb 21 56 34.8
comp=Z,18nm,1.0s
MHTO MHTO 21.69 141 P P 21 56 24.8 -1.5
VRAC Vranov 21.91 307 eP P 21 56 30.0 +1.4
VRAC Vranov 21.91 307 P P 21 56 27.9 -0.7
comp=Z,6.2nm,0.7s,baz=103,slow=8.8,SNR=11
VRAC Vranov 21.91 307 P P 21 56 31.7 +3.1
VRAC pmax pmax
comp=Z,11nm,1.1s
KRUC Moravsky 21.96 307 eP P 21 56 30.2 +1.1
KRUC Moravsky 21.96 307 P P 21 56 32.2 +3.1
KRUC pmax pmax
comp=Z,14nm,2.1s
CONA Conrad Observa 21.99 303 eP P 21 56 31.7 +2.2
comp=Z,4.6nm,0.9s
KRLC Kraliky 22.05 309 eP P 21 56 32.2 +2.1
KRLC ex x 21 56 38.2
KRLC Kraliky 22.05 309 eP P 21 56 32.2 +2.1
KRLC e 21 56 38.2
ARSA Arzberg 22.06 301 epP P 21 56 33.3 +3.1
comp=Z,5.4nm,1.1s
KLMR Klimovskoe 22.18 355 eP P 21 56 30.7 -0.6
KLMR pmax pmax
comp=Z,69nm,1.4s
KLMR Klimovskoe 22.18 355 eP P 21 56 30.8 -0.6
KLMR AMP 21 56 44.8
comp=Z,69nm,1.4s
DQM DQM 22.39 143 P P 21 56 32.1 -1.8
SNR=8.0
DPC Dobruska-Polom 22.42 310 eP P 21 56 36.4 +2.3
DPC epP sP 21 56 43.1 +2.3
DPC Dobruska-Polom 22.42 310 eP P 21 56 36.4 +2.3
DPC e 21 56 43.1
VSU Vasula 22.44 337ceP P 21 56 36.5 +2.4
VSU pmax pmax
comp=Z,33nm,0.9s
TREC Trest 22.59 307 P P 21 56 38.1 +2.2
TREC pmax pmax
comp=Z,4.0nm,1.4s
KSP Ksiaz 22.61 311 eP P 21 56 38.2 +2.1
KSP Ksiaz 22.61 311 eP P 21 56 38.2 +2.1
CHVC Chvalec 22.66 310 eP P 21 56 38.2 +1.5
CHVC ex x 21 56 41.2
WHFO Wadi Hawf 22.67 154 P P 21 56 34.9 -2.0
SNR=8.8
WHFO S S 22 00 48.4 +3.7
PRGR Permogore 22.86 3 eP P 21 56 36.3 -2.2
PRGR pmax pmax
comp=Z,13nm,0.8s
MOA Molln 23.02 303 eP P 21 56 39.7 -0.7
comp=Z,6.0nm,1.1s
ABTO Aybut 23.04 156 P P 21 56 38.6 -2.2
AML Almayashu 23.09 72 P P 21 56 43.4 +1.8
SNR=20
EKS2 Erkin-Say 23.14 71 P P 21 56 42.9 +1.0
SNR=32
BRVK Borovoye 23.22 44 P P 21 56 42.4 0.0
BRVK IAmb IAmb 21 56 54.5
comp=Z,10.0nm,1.0s
BRVK Borovoye 23.22 44 i P P 21 56 43.9 +1.6
BRVK pmax pmax
comp=Z,6.0nm,0.8s
BVAR Borovoye Array 23.26 44 P P 21 56 42.8 +0.1
comp=Z,2.6nm,0.7s,baz=258,slow=7.3,SNR=15
DMTO DMTO 23.27 152 P P 21 56 41.3 -1.9
PRU Pruhonice 23.39 308 P P 21 56 44.8 +0.7
PRU pmax pmax
comp=Z,2.0nm,2.1s
KBA Koelnbreinsper 23.48 300 eP P 21 56 46.4 +1.1
comp=Z,4.8nm,1.0s
KBA Koelnbreinsper 23.48 300 P P 21 56 46.7 +1.4
KBA pmax pmax
comp=Z,14nm,1.1s
GEC2 GERESS Array S 23.61 305 P P 21 56 46.3 -0.1
GEC2 IAmb IAmb 21 56 54.0
comp=Z,16nm,1.4s
GEC2 GERESS Array S 23.61 305 P P 21 56 47.7 +1.3
GERES GERESS Array B 23.61 305 P P 21 56 46.6 +0.3
comp=Z,1.8nm,0.5s,baz=100,slow=9.2,SNR=20
GERES LR LR 22 06 50.2
comp=Z,56nm,18.1s,baz=117,slow=39
USP Ospenovka 23.67 69 P P 21 56 48.0 +1.0
SNR=8.2
AAK Ala-Archa 23.67 71 P P 21 56 48.0 +0.9
comp=Z,5.4nm,0.8s,baz=241,slow=7.5,SNR=28
AAK Ala-Archa 23.67 71 P P 21 56 48.4 +1.3
SNR=9.3
AAK Ala-Archa 23.67 71 P P 21 56 47.8 +0.7
AAK IAmb IAmb 21 56 58.2
comp=Z,12nm,0.9s
AAK Ala-Archa 23.67 71ceP P 21 56 48.4 +1.3
AAK pmax pmax
comp=Z,27nm,1.7s
UCH Uchtor 23.70 72 P P 21 56 49.4 +1.6
SNR=9.2
KHC Kasperske Hory 23.76 305 eP P 21 56 48.5 +0.8
KHC ex x 21 56 52.9
KHC Kasperske Hory 23.76 305 i P P 21 56 48.3 +0.6
KHC pmax pmax
comp=Z,46nm,1.6s
CHMS Chumysh 23.86 70 P P 21 56 50.0 +1.2
SNR=15
KBK Karagaybulak 24.01 71 P P 21 56 51.7 +1.3
SNR=25
WET Wettzell 24.20 305 P P 21 56 52.1 +0.1
WET pmax pmax
comp=Z,9.0nm,1.6s
KZA Kyzart 24.25 72 P P 21 56 54.5 +1.6
SNR=13
NIL Nilore 24.44 93 P P 21 56 53.9 -0.3
NIL Nilore 24.44 93 P P 21 56 53.9 -0.3
NIL pmax pmax
comp=Z,6.0nm,0.8s
WTTA Wattenberg 24.66 300 eP P 21 56 55.1 -1.2
comp=Z,3.6nm,0.6s
WATA Walderalm 24.71 300 eP P 21 56 56.0 -0.7
comp=Z,6.2nm,1.0s
CLL Collm 24.72 310 eP P 21 56 57.0 +0.4
comp=Z,6.0nm,1.0s
CLL i sP pP 21 57 01.5 0.0
CLL e 21 57 13.0
CLL ePPP PPP 21 57 36.0
CLL Collm 24.72 310 eP P 21 56 57.0 +0.4
CLL i 21 57 01.5
CLL pmax pmax
comp=Z,6.0nm,1.0s
NKC Novy Kostel 24.75 308 P P 21 56 57.4 +0.5
NKC pmax pmax
comp=Z,4.0nm,0.9s
SQTA Sankt Quirin 24.95 300 eP P 21 56 57.8 -1.1
comp=Z,4.4nm,0.6s
ULHL Ulahol 24.98 72 P P 21 57 01.2 +2.0
SNR=66
MOTA Moosalm 25.04 300 eP P 21 56 58.8 -0.8
comp=Z,9.8nm,0.8s
GRB1 Grafenberg Arr 25.04 305 P P 21 57 00.2 +0.7
GRB1 pmax pmax
comp=Z,32nm,1.9s
KSH Kashi 25.06 78 P P 21 56 59.4 -0.6
KSH pP sP 21 57 11.9 +5.0
KSH sP pP 21 57 18.3 +13
KSH PP PnPn 21 57 37.0 +3.6
KSH S S 22 01 14.6 -9.3
KSH sS sS 22 01 35.5 +3.3
KSH pmax pmax
comp=Z,33nm,0.8s
KSH pmax pmax
comp=Z,350nm,4.8s
KSH LR LR
comp=Z,320nm,7.1s
KSH LR LR
comp=Z,450nm,5.5s
KSH LR LR
comp=Z,400nm,5.9s
FIA1 FINESS Array S 25.09 340 P P 21 56 59.3 -0.4
FINES FINESS Array B 25.09 340 P P 21 56 59.3 -0.4
comp=Z,9.6nm,1.1s,baz=149,slow=10.0,SNR=7.8
FINES FINESS Array B 25.09 340 i P P 21 57 02.2 +2.5
FINES pmax pmax
comp=Z,8.0nm,0.9s
JOF Joensuu 25.23 347 P P 21 57 00.9 -0.1
JOF pmax pmax
comp=Z,20nm,1.5s
FETA Feichten 25.25 300 eP P 21 57 01.5 -0.1
comp=Z,7.1nm,1.4s
RETA Reutte 25.28 301 eP P 21 57 01.6 -0.2
comp=Z,3.2nm,0.7s
FUORN Ofenpass-Fuorn 25.52 299 P P 21 57 04.9 +0.7
FUORN IAmb IAmb 21 57 14.7
comp=Z,5.1nm,0.7s
TMCR Tamitsa 25.57 354 eP P 21 57 06.2 +2.1
TMCR eS S 22 01 37.3 +6.1
TMCR pmax pmax
comp=Z,13nm,0.6s
KDJ Kajisay 25.68 72 IAmb IAmb 21 57 10.4
comp=Z,12nm,0.9s
DAVOX Davos/Dischmat 25.80 299 P P 21 57 05.9 -0.8
comp=Z,5.4nm,0.6s,baz=105,slow=6.1,SNR=12
DAVA Damuels 25.85 300 eP P 21 57 06.3 -0.8
comp=Z,13nm,1.0s
PRZ Przheval'sk 26.56 71 P P 21 57 12.6 -1.0
PRZ IAmb IAmb 21 57 16.5
comp=Z,13nm,1.1s
PRZ Przheval'sk 26.56 71 P P 21 57 12.6 -1.0
PRZ pmax pmax
comp=Z,13nm,1.1s
KURBB Kurchatov Arra 27.23 53 P P 21 57 20.3 +1.0
comp=Z,14nm,0.7s,baz=263,slow=9.0,SNR=85
KURK Kurchatov 27.31 53 P P 21 57 19.7 -0.2
KURK Kurchatov 27.31 53ceP P 21 57 21.1 +1.1
KURK pmax pmax
comp=Z,30nm,1.3s
SENIN Lac Senin/Sane 27.54 298 P P 21 57 20.8 -1.6
SENIN IAmb IAmb 21 57 35.4
comp=Z,11nm,1.4s
BNI Bardonecchia 27.95 295 P P 21 57 26.2 +0.2
BNI Bardonecchia 27.95 295 P P 21 57 26.2 +0.2
BNI pmax pmax
comp=Z,25nm,1.5s
HFS Hagfors 28.39 328 P P 21 57 29.3 -0.3
comp=Z,9.8nm,0.8s,baz=132,slow=10,SNR=13
MAKZ Makanchi 29.04 62 P P 21 57 36.3 +0.8
MAKZ IAmb IAmb 21 57 36.9
comp=Z,4.5nm,0.8s
MAKZ Makanchi 29.04 62 P P 21 57 36.3 +0.8
MAKZ pmax pmax
comp=Z,5.0nm,0.9s
MK31 Makanchi Array 29.26 62 i P P 21 57 38.3 +0.8
MKAR Makanchi Array 29.26 62 P P 21 57 38.2 +0.8
comp=Z,4.2nm,0.7s,baz=270,slow=6.8,SNR=59
MKAR LR LR 22 11 10.1
comp=Z,122nm,19.9s,baz=266,slow=40
NC602 NORSAR Array S 29.62 328 P P 21 57 40.2 -0.2
NC602 IAmb IAmb 21 57 54.6
comp=Z,6.6nm,1.0s
NC405 NORSAR Array S 29.76 329 P P 21 57 40.8 -0.9
NB2 NORSAR Subarra 29.92 329 P P 21 57 41.9 -1.2
comp=Z,0.7nm,0.6s,baz=125,slow=9.3
NOA NORSAR Array B 29.92 329 P P 21 57 42.1 -1.0
comp=Z,1.7nm,0.8s,baz=125,slow=8.8,SNR=7.0
NOA LR LR 22 11 22.4
comp=Z,63nm,21.1s,baz=135,slow=40
ZAA0 Zalesovo Array 31.70 48 P P 21 57 59.2 +0.3
ZAA0 IAmb IAmb 21 57 59.8
comp=Z,14nm,1.4s
ZALV Zalesovo Beam 31.70 48 P P 21 57 58.8 -0.1
comp=Z,3.6nm,0.6s,baz=258,slow=10,SNR=20
ZALV LR LR 22 12 29.6
comp=Z,85nm,19.4s,baz=251,slow=40
ARCES ARCESS Array B 32.24 348 P P 21 58 03.1 -0.4
comp=Z,5.5nm,0.8s,baz=140,slow=9.6,SNR=12
ARCES LR LR 22 12 08.3
comp=Z,119nm,18.7s,baz=159,slow=38
WMQ Urumqi 33.21 67 eP P 21 58 13.8 +1.5
WMQ sP sP 21 58 29.0 +10
WMQ pmax pmax
comp=Z,16nm,1.1s
WMQ LR LR
comp=Z,210nm,28.9s
WMQ LR LR
comp=Z,1μm,28.1s
DANN Dangsing 34.83 95 eP P 21 58 27.5 +0.7
comp=Z,83nm,0.9s
GKN Gorkha 35.68 95 eP P 21 58 34.2 +0.2
comp=Z,34nm,0.8s
TAM Tamanrasset 36.08 255 P P 21 58 37.1 -0.3
TAM IAmb IAmb 21 58 42.9
comp=Z,10nm,0.9s
TAM Tamanrasset 36.08 255 P P 21 58 37.1 -0.3
TAM pmax pmax
comp=Z,10.0nm,0.9s
DMN Daman 36.23 95 eP P 21 58 39.2 +0.4
comp=Z,55nm,1.1s
KKN Kakani 36.28 95 eP P 21 58 39.3 +0.1
ESDC Sonseca Array 36.47 287 P P 21 58 39.4 -1.1
comp=Z,2.4nm,0.5s,baz=67,slow=8.8,SNR=28
PKIN Phulchoki 36.47 95 eP P 21 58 41.0 +0.1
comp=Z,42nm,1.1s
PKI Pulchoki 36.49 95 eP P 21 58 41.1 0.0
comp=Z,52nm,1.1s
GUN Gumba 36.69 94 eP P 21 58 43.0 +0.2
comp=Z,81nm,1.1s
JIRN Jiri 37.05 94 eP P 21 58 46.4 +0.5
comp=Z,68nm,0.9s
RAMN Ramite 37.71 95 eP P 21 58 51.6 +0.2
comp=Z,41nm,0.7s
ODAN Odare 38.37 95 eP P 21 58 57.5 +0.5
comp=Z,105nm,1.2s
TAPN Taplejung 38.38 94 eP P 21 58 57.3 +0.2
MOY Mondy 41.37 53 eP P 21 59 23.1 +1.7
MOY pmax pmax
comp=Z,21nm,2.1s
KBS Kingsbay 42.15 351ceP P 21 59 29.3 +1.9
KBS pmax pmax
comp=Z,72nm,1.1s
SHL Shillong 42.51 93 P P 21 59 30.4 -0.8
SHL IAmb IAmb 21 59 30.9
comp=Z,9.9nm,0.8s
SHL Shillong 42.51 93 P P 21 59 30.4 -0.8
SHL pmax pmax
comp=Z,10.0nm,0.8s
ZAK Zakamensk 42.95 54 eP P 21 59 34.4 0.0
ZAK pmax pmax
comp=Z,4.0nm,0.9s
TLY Talaya 43.01 52 eP P 21 59 36.6 +1.9
TLY pmax pmax
comp=Z,22nm,1.4s
TLY MLR MLR
comp=Z,180nm,11.0s
GTA Gaotai 43.02 71 P P 21 59 35.9 +0.8
GTA pP sP 21 59 49.9 +7.6
GTA sP pP 21 59 53.9 +14
GTA pmax pmax
comp=Z,5.0nm,1.2s
GTA pmax pmax
comp=Z,87nm,5.6s
GTA LR LR
comp=Z,130nm,13.7s
GTA LR LR
comp=Z,180nm,17.2s
TOA0 Torodi Ar. Sit 44.95 247 P P 21 59 49.6 -1.0
TORD Torodi Ar. Bea 44.95 247 P P 21 59 48.8 -1.9
comp=Z,8.6nm,1.0s,baz=56,slow=8.9,SNR=16
SONM Songino Array 45.43 57 P P 21 59 54.4 +0.1
comp=Z,0.6nm,0.7s,baz=275,slow=8.4,SNR=6.3
SONM PcP PcP 22 01 32.4 -0.8
comp=Z,1.0nm,0.7s,baz=264,slow=3.3,SNR=6.8
SONM LR LR 22 20 30.4

comp=Z,63nm,20.1s,baz=10,slow=38
LZH Lanzhou 47.17 74 ⇑P P 22 00 09.3 +1.2
LZH sP sP 22 00 19.0 +3.7
LZH sP pP 22 00 24.8 +12
LZH PP PP 22 01 58.3 -0.6
LZH pmax pmax
comp=Z,15nm,1.1s
LZH pmax pmax
comp=Z,65nm,5.4s
LZH LR LR
comp=Z,200nm,16.3s
LZH LR LR
comp=Z,210nm,15.0s
LZH LR LR
comp=Z,310nm,17.4s
BOD Bodaibo 48.12 43 eP P 22 00 14.7 -0.3
BOD pmax pmax
comp=Z,7.0nm,1.3s
HHC Hu-ho-hao-te 51.03 65 eP P 22 00 38.3 +0.7
HHC pmax pmax
comp=Z,3.0nm,0.8s
HHC pmax pmax
comp=Z,50nm,5.6s
KMI Kunming 51.21 87 P P 22 00 37.1 -2.2
KMI pP sP 22 00 50.3 +3.9
KMI sP pP 22 00 55.3 +11
KMI pmax pmax
comp=Z,8.0nm,1.4s
KMI pmax pmax
comp=Z,110nm,4.1s
CHTO Chiang Mai 51.65 96 P P 22 00 41.6 -0.8
CHTO IAmb IAmb 22 00 42.1
comp=Z,4.3nm,0.7s
CHTO Chiang Mai 51.65 96 P P 22 00 41.6 -0.8
CHTO pmax pmax
comp=Z,4.0nm,0.7s
XAN Xi'an 51.80 74 P P 22 00 43.4 0.0
XAN pP sP 22 00 58.9 +8.3
XAN pmax pmax
comp=Z,19nm,1.0s
XAN LR LR
comp=Z,150nm,13.0s
XAN LR LR
comp=Z,150nm,16.3s
XAN LR LR
comp=Z,140nm,14.1s
CMAR Chiang Mai Arr 51.85 97 P P 22 00 43.1 -0.7
comp=Z,3.1nm,0.8s,baz=299,slow=8.3,SNR=21
CMAR LR LR 22 26 38.9
comp=Z,38nm,19.7s,baz=282,slow=41
TIXI Tiksi 52.22 24 eP P 22 00 46.6 +0.8
TIXI pmax pmax
comp=Z,8.0nm,1.7s
DBIC Dimbokro 54.06 247 P P 22 00 58.1 -2.0
comp=Z,6.4nm,0.9s,baz=11,slow=8.5,SNR=7.7
DBIC Dimbokro 54.06 247 IAmb IAmb 22 01 03.5
comp=Z,17nm,1.3s
KIC Kosan Boka 54.19 246 ePKP1 P 22 00 59.2 -2.0
comp=Z,101nm,1.6s
TIC Toumodi 54.20 247 ePKP1 P 22 00 59.9 -1.3
LIC Lamto 54.49 246 ePKP1 P 22 00 59.9 -3.4
comp=Z,11nm,0.5s
PBKT Sadao Pong 54.52 97 P P 22 01 03.6 +0.1
PBKT IAmb IAmb 22 01 04.2
comp=Z,5.6nm,0.9s
BJI Beijing 54.59 64 P P 22 01 02.0 -1.8
BJI pmax pmax
comp=Z,3.0nm,0.6s
SFJD Kangerlussuaq 56.50 332 LR LR 22 25 29.2
comp=Z,830nm,19.9s,baz=291,slow=36
WHN Wuhan 57.48 75 P P 22 01 24.9 +0.3
NJ2 Nanjing 60.12 71 eP P 22 01 42.4 -0.5
NJ2 pmax pmax
comp=Z,12nm,0.5s
KLR Kul'dur 60.80 49 eP P 22 01 47.6 +0.3
KLR pmax pmax
comp=Z,3.0nm,0.9s
USRK Ussuriysk Ar. 63.30 54 P P 22 02 02.8 -1.3
comp=Z,2.4nm,0.9s,baz=339,slow=7.7,SNR=4.5
SEY Seymchan 63.88 29 iP P 22 02 08.9 +1.2
KSRS Korea Array 63.94 62 P P 22 02 08.3 -0.1
comp=Z,4.5nm,0.8s,baz=286,slow=6.4,SNR=13
FRB Frobisher Bay 64.61 333 P P 22 02 12.6 +0.1
comp=Z,4.9nm,0.7s,baz=47,slow=7.3,SNR=9.7
BILL Bilibino 65.17 20 eP P 22 02 16.5 +0.5
BILL pmax pmax
comp=Z,8.0nm,1.5s
BOSA Boshof 69.25 197 P P 22 02 42.1 -0.4
comp=Z,1.4nm,0.6s,baz=35,slow=1.8,SNR=4.8
BOSA Boshof 69.25 197 IAmb IAmb 22 02 51.0
comp=Z,2.1nm,0.6s
SCHQ Schefferville 69.39 325 P P 22 02 43.4 +0.4
comp=Z,1.1nm,0.7s,baz=82,slow=15,SNR=3.9
MJAR Matsushiro Arr 71.38 58 P P 22 02 55.4 -0.2
comp=Z,3.6nm,1.0s,baz=309,slow=6.0,SNR=4.6
MJAR LR LR 22 36 56.0
comp=Z,90nm,18.4s,baz=210,slow=38
C36M Paulatuk 71.74 355 P P 22 02 56.9 -0.2
C36M IAmb IAmb 22 02 57.4
comp=Z,6.2nm,0.8s
TOLK Toolik Lake Re 72.39 5 IAmb IAmb 22 03 02.5
comp=Z,5.7nm,0.8s
INK Inuvik 73.15 359 P P 22 03 04.6 -0.9
comp=Z,4.6nm,1.2s,baz=314,slow=13,SNR=5.6
INK Inuvik 73.15 359 P P 22 03 05.0 -0.5
INK IAmb IAmb 22 03 11.0
comp=Z,8.7nm,1.4s
COLD Coldfoot 73.74 6 P P 22 03 09.4 +0.4
COLD IAmb IAmb 22 03 10.2
comp=Z,3.2nm,0.9s
MLY Manley 75.86 6 IAmb IAmb 22 03 22.7
comp=Z,5.8nm,1.0s
ILAR Eielson Array 76.40 5 P P 22 03 24.0 -0.4
comp=Z,0.5nm,0.6s,baz=328,slow=4.2,SNR=5.5
DAWY Dawson 77.41 1 P P 22 03 30.4 +0.2
DAWY IAmb IAmb 22 03 35.5
comp=Z,5.4nm,1.1s
YKA Yellowknife Ar 77.49 350 P P 22 03 29.9 -0.7
comp=Z,1.2nm,0.6s,baz=16,slow=6.2,SNR=15
HYT Haines Junctio 80.68 1 P P 22 03 48.9 +0.6
TKL Tuckaleechee C 91.33 320 P P 22 04 40.6 -0.7
comp=Z,2.0nm,0.8s,baz=117,slow=4.5,SNR=2.7

IDC 18 21:58:24.0±0.8, 43.72N×105.27W, h0km, mb4.0/7, mb1 4.0/14, mb1mx3.8/40, mbtmp3.8/14, ML3.4/6, MS2.8/2, Ms1 2.8/2, ms1mx2.4/51, Error ellipse: s-maj=14.7km s-min=8.3km az=146.0
NEIC 18 21:58:24.5±1.9, 43.79N±0.04×105.21W±0.06, h0km±1km, ML3.6/71, Error ellipse: s-maj=8.4km s-min=6.6km az=125.0
ISC 18 21:58:24.3±0.6, 43.78N±0.05×105.18W±0.05, h0km, n58, σ1.11/60, mb4.2/7, Wyoming

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RSSD Black Hills 0.90 67 Pb 21 58 43.7 +0.8
K22A Casper 1.50 221 Pn 21 58 50.9 -1.7
K22A Sg 21 59 11.9 -0.4
K22A IAML 21 59 17.1
comp=N,706nm,0.5s
PHWY Pilot Hill 2.49 185 Pn 21 59 06.8 +0.5
RWWY Rawlins 2.57 216 Pn 21 59 07.7 +0.3
RWWY IAML 21 59 45.3
comp=N,393nm,0.6s
RWWY IAML 21 59 45.5
comp=N,415nm,1.0s
N23A Red Feather La 2.94 191 Pn 21 59 13.7 +1.2
N23A IAML 21 59 57.8
comp=N,234nm,0.7s
N23A IAML 21 59 58.1
comp=E,177nm,0.7s
LAO LASA Array 3.00 346 Pn 21 59 13.1 0.0
LAO IAML 21 59 58.8
comp=E,283nm,0.9s
RLMT Red Lodge 3.22 296 Pn 21 59 16.2 0.0
RLMT IAML 22 00 06.4
comp=E,114nm,0.3s
RLMT IAML 22 00 14.2
comp=E,132nm,0.7s
BW06 Boulder Array 3.35 254 Pn 21 59 18.2 +0.1
BW06 Sn 21 59 57.0 -1.8
BW06 IAML 22 00 09.4
comp=N,84nm,0.5s
PD31 Pinedale Array 3.35 254 Pn 21 59 17.9 -0.2
PDAR Pinedale Array 3.35 254 Pn Pn 21 59 19.0 +0.9
comp=N,12nm,0.3s,baz=66,slow=16,SNR=236
PDAR Sn Sn 22 00 00.3 +1.6
comp=N,11nm,0.3s,baz=68,slow=10.0,SNR=4.4
PDAR LR LR 22 00 59.2
comp=N,84nm,19.1s,baz=154,slow=47
OGNE Ogallala 3.67 139 Pn 21 59 24.0 +1.6
OGNE Pg Pg 21 59 34.5 -0.1
YMP Mirror Lake Pl 3.70 287 Pn Pn 21 59 23.3 +0.4
GCMT Greycliff 3.77 304 Pn 21 59 24.0 +0.2
LKWY Lake 3.83 284 Pn 21 59 25.4 +0.6
LKWY IAML 21 59 56.4
comp=N,145nm,0.6s
LKWY IAML 22 00 39.1
comp=N,64nm,0.9s
H17A Grant Village 3.93 281 Pn 21 59 26.8 +0.7
H17A IAML 22 00 31.0
comp=N,75nm,0.5s
YUF Upper Falls 3.94 286 Pn 21 59 26.1 -0.2
ISCO Idaho Springs 3.99 185 Pn 21 59 28.0 +1.0
FLWY Flagg Ranch 4.00 276 Pn 21 59 27.1 +0.1
FLWY IAML 22 00 41.5
comp=N,88nm,1.7s
YNR Norris Junctio 4.06 285 Pn 21 59 26.6 -1.3
SNOW Snow King Moun 4.06 267 Pn 21 59 27.9 0.0
SNOW IAML 22 00 33.0
comp=N,101nm,1.5s
SNOW IAML 22 01 07.7
comp=N,75nm,1.0s
YPP Pitchstone Pla 4.08 279 Pn 21 59 28.0 -0.2
REDW Red Top Meadow 4.14 266 Pn 21 59 29.6 +0.7
REDW IAML 22 00 36.0
comp=N,113nm,1.1s
REDW IAML 22 00 39.3
comp=N,89nm,0.8s
YHH Holmes Hill 4.19 286 Pn 21 59 29.2 -0.5
O20A White River Ci 4.30 213 Pn 21 59 31.1 0.0
O20A IAML 22 00 57.8
comp=E,81nm,0.8s
YHB Horse Butte 4.42 285 Pn 21 59 32.2 -0.6
AHID Auburn Hatcher 4.44 259 Pn 21 59 32.9 -0.2
AHID IAML 22 00 56.1
comp=E,77nm,0.9s
SUSD Miller 4.53 79 Pn 21 59 35.3 +1.2
DGMT Dagmar 4.74 8 Pn 21 59 39.2 +2.2
SMCO Snowmass 4.79 197 IAML 22 01 04.6
comp=E,53nm,1.1s
SMCO IAML 22 01 05.7
comp=E,45nm,1.5s
EGMT Eagleton 5.31 325 Pn 21 59 44.8 -0.1
JLU Jordanelle 5.63 238 Pn 21 59 47.9 -1.6
BGNE Belgrade 5.71 112 Pn 21 59 48.8 -1.6
CTU Camp Tracy 5.77 240 Pn 21 59 50.3 -1.0
ECSD EROS Data Cent 6.21 87 Pn 21 59 59.2 +2.0
CBKS Cedar Bluff 6.44 139 Pn Pn 22 00 01.0 +0.7
CBKS Pg 22 00 25.5 -2.1
CBKS Sn Sn 22 01 12.7 -1.8
AGMN Agassiz Nation 7.90 52 Pn 22 00 20.7 +0.4
AGMN Pg Pg 22 00 50.3 -5.3
ANMO Albuquerque 8.88 187 Pg Pg 22 01 06.2 -8.1
comp=E,0.2nm,0.3s,baz=347,slow=14,SNR=2.2
ANMO Albuquerque 8.88 187 Pn Pn 22 00 34.0 0.0
I10CA LAC DU BONNET 8.96 41 i 22 54 40.0
baz=221,slow=313,SNR=3.7
ULM Lac du Bonnet 9.07 41 Pn Pn 22 00 34.8 -1.6
comp=E,3.2nm,0.3s,baz=231,slow=11,SNR=26
ULM Lg Lg 22 03 05.9
comp=E,0.9nm,0.3s,baz=135,slow=19,SNR=2.0
NEW Newport 9.44 303 Pn Pn 22 00 41.1 -0.3
comp=E,0.2nm,0.3s,baz=105,slow=16,SNR=3.3
NEW Lg Lg 22 03 13.2
comp=E,0.3nm,0.3s,baz=65,slow=19,SNR=2.4
R11A Troy Canyon, C 9.54 239 Pn 22 00 43.9 +0.8
X16A Lo Mia Camp, P 10.53 210 Pn 22 00 56.0 -0.7
KVN Kaiserville 10.79 248 Pn 22 00 59.8 -0.4
FFC Flin Flon 11.15 10 Pn 22 01 03.5 -1.4
NVAR Mina Array Bea 11.24 246 Pn Pn 22 01 07.7 +1.3
comp=E,0.3nm,0.3s,baz=50,slow=12,SNR=13
D41A Chassel 12.13 69 Pn 22 01 16.7 -1.6
YBH Yreka Blue Hor 13.04 267 Pn Pn 22 01 34.3 +3.4
comp=E,0.2nm,0.3s,baz=64,slow=9.5,SNR=5.1
TXAR Lajitas Array 14.47 175 Pn Pn 22 01 51.6 +1.2
comp=E,0.0nm,0.3s,baz=354,slow=7.3,SNR=2.8
TXAR Pg P 22 02 53.2 +56
comp=E,0.1nm,0.3s,baz=358,slow=14,SNR=6.0
TXAR Lg Lg 22 05 57.7
comp=E,0.1nm,0.3s,baz=1.5,slow=33,SNR=4.3
YKA Yellowknife Ar 19.54 347 P P 22 02 52.1 -1.0
comp=E,0.2nm,0.3s,baz=164,slow=13,SNR=12
YKA Lg Lg 22 08 33.6
comp=E,0.0nm,0.3s,baz=157,slow=28,SNR=3.9
TEIG Tepich 27.41 144 LR LR 22 16 08.9
comp=E,40nm,21.8s,baz=152,slow=39
ILAR Eielson Array 31.27 327 P P 22 04 46.8 +1.3
comp=E,0.2nm,0.6s,baz=103,slow=7.5,SNR=3.8
ARCES ARCESS Array B 61.36 18 P P 22 08 40.9 -0.5
comp=E,1.8nm,0.6s,baz=327,slow=6.0,SNR=9.0
FINES FINESS Array B 67.97 23 P P 22 09 24.6 0.0
comp=E,1.3nm,0.9s,baz=338,slow=14,SNR=3.2
AKASG Malin Array Be 77.89 28 P P 22 10 23.1 -0.5
comp=E,0.4nm,0.4s,baz=328,slow=5.3,SNR=3.1
ZALV Zalesovo Beam 82.27 354 P P 22 10 46.8 -0.4
comp=E,1.4nm,0.6s,baz=349,slow=4.9,SNR=8.2
SONM Songino Array 84.62 339 P P 22 10 59.6 0.0
comp=E,0.5nm,0.5s,baz=4.1,slow=4.1,SNR=4.6
MKAR Makanchi Array 89.57 355 P P 22 11 23.6 +0.1
comp=E,1.1nm,0.6s,baz=16,slow=4.7,SNR=17

ANF 18 22:04:56.8±0.1, 34.48N×116.34W, h9km±1km, ML2.5/20, Error ellipse: s-maj=0.9km s-min=0.7km az=57.0
NEIC 18 22:04:57.5±1.0, 34.49N±0.01×116.32W±0.02, h14km±4km, Error ellipse: s-maj=2.2km s-min=1.5km az=96.0
PAS 18 22:04:57.8±1.5, 34.485N±0.007×116.325W±0.010, h3km±5km, ML2.4/114, Error ellipse: s-maj=1.5km s-min=0.4km az=131.0
SCEDC 18 22:04:57.8, 34.49N×116.33W, h3km
ISC 18 22:04:57.6±0.9, 34.48N±0.01×116.33W±0.02, h10km±8km, n81, σ0.49/121, Southern California

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GTM Goat Mountain 0.19 187 Pg 22 05 01.6 0.0
HEC Hector,Ludlow 0.35 359 Pg 22 05 04.5 0.0
HEC Sg 22 05 09.5 +0.2
HEC Hector,Ludlow 0.35 359 P Pg 22 05 04.6 0.0
baz=179,SNR=86
HEC S Sg 22 05 09.3 +0.1
baz=179
BLAC Blackrock camp 0.41 187 Pg 22 05 05.9 +0.1
BLAC Sg 22 05 12.1 +0.8
SIL Silver Peak 0.43 252 Pg 22 05 06.2 +0.1
TPC Twentynine Pal 0.44 148 Pg 22 05 06.4 +0.2
BBRC Big Bear Solar 0.54 246 Pg 22 05 07.8 -0.3
BBRC Sg 22 05 15.6 +0.4
BBRC Big Bear Solar 0.54 246 P Pg 22 05 08.3 +0.2
baz=66,SNR=7.7
BBRC S Sg 22 05 15.3 +0.1
baz=66
EW2 E Wide Canyon 0.54 187 Sg 22 05 15.8 +0.4
BELC Belle Mtn. Jos 0.55 150 Pg 22 05 08.3 0.0
BELC Belle Mtn. Jos 0.55 150 P Pg 22 05 08.4 +0.1
baz=331,SNR=36
BELC S Sg 22 05 15.8 +0.1
baz=331
BTL Butler Peak 0.60 248 Pg 22 05 09.4 0.0
GMRC Granite Mounta 0.63 61 Pg 22 05 09.4 -0.4
GMRC Sg 22 05 17.8 -0.2
GMRC Granite Mounta 0.63 61 P Pg 22 05 09.4 -0.4
baz=242,SNR=21
GMRC S Sg 22 05 17.9 -0.2
baz=242
ALV Alvord Mountai 0.63 337 Pg 22 05 09.6 -0.3
DSCC Desert Studies 0.69 15 Pg 22 05 10.6 -0.3
DSCC Sg 22 05 19.9 0.0
SVD Seven Oaks Dam 0.74 240 Pg 22 05 11.7 -0.2
DANC Danby, Needles 0.80 78 Pg 22 05 12.8 -0.2
VTV Victorville 0.83 276 Sg 22 05 24.5 0.0
CTCC Cactus City 0.87 161 Pg 22 05 13.9 -0.4
CTCC Sg 22 05 26.3 +0.6
CSP Cedar Springs 0.87 258 Pg 22 05 13.8 -0.6
PFO Pinyon Flats O 0.87 187 Pg 22 05 14.1 -0.3
PFO Sg Sg 22 05 25.8 0.0
PFO Pinyon Flats O 0.87 187 Pg 22 05 14.0 -0.5
PFO Sg 22 05 25.4 -0.5
PFO Pinyon Flats O 0.87 187 P Pg 22 05 14.0 -0.5
baz=7.2,SNR=24
PFO S Sg 22 05 25.3 -0.5
baz=7.2
XPFO Pion Flat 0.87 187 Pg 22 05 13.9 -0.6
XPFO Sg 22 05 25.4 -0.4
PEC Perris 0.91 230 Pg 22 05 14.7 -0.4
PEC Sg 22 05 26.5 -0.3
GSC Goldstone, Bar 0.91 334 Pg Pg 22 05 14.8 -0.4
GSC Pb 22 05 14.9 -0.6
GSC Sg 22 05 27.5 +0.5
GSC Goldstone, Bar 0.91 334 P Pg 22 05 14.7 -0.4
baz=154,SNR=22
GSC S Sg 22 05 27.2 +0.2
baz=154
POB Polly Butte 0.93 212 Pg 22 05 15.2 -0.4
DNR Dunn Ranch,Anz 0.95 196 Pg 22 05 15.8 -0.1
DNR Sg 22 05 28.2 +0.1
HMTC Hemet 0.95 216 Pg 22 05 15.5 -0.5
SNDA J Saunders Pla 0.96 194 Pg 22 05 16.0 -0.1
SNDA Sg 22 05 28.7 +0.2
CRY Cary Ranch 0.97 201 Pg 22 05 16.0 -0.4
CRY Sg 22 05 28.7 -0.3
RVR Riverside 0.99 241 Sg 22 05 29.8 +0.1
DGR Domenigoni Val 1.00 215 Pg 22 05 16.4 -0.5
DGR Sg 22 05 29.6 -0.4
SS2 San Sevaine 1.01 255 Pg 22 05 16.7 -0.3
FRD Ford Ranch, An 1.01 193 Pg 22 05 16.4 -0.6
FRD Ford Ranch, An 1.01 193 Pg 22 05 16.5 -0.6
TUQ Turquoise Moun 1.01 19 Pg 22 05 16.5 -0.6
TUQ Sg 22 05 29.9 -0.3
TUQ Turquoise Moun 1.01 19 P Pg 22 05 16.4 -0.7
baz=199,SNR=15
TUQ S Sg 22 05 30.0 -0.2
baz=199
BZNA Buzz No.'s Pla 1.03 196 Pg 22 05 16.8 -0.6
BZNA Sg 22 05 30.2 -0.5
IRM Iron Mountain 1.03 108 Pg 22 05 16.6 -0.9
IRM Iron Mountain 1.03 108 P Pg 22 05 17.0 -0.4
baz=289,SNR=18
IRM S Sg 22 05 30.8 0.0
baz=289
BACC Bachelor Mtn. 1.05 215 Pg 22 05 17.1 -0.6
BACC Sg 22 05 31.1 -0.3
SME Santa Rosa Min 1.08 233 Pg 22 05 17.4 -0.8
HYS Haystack Butte 1.09 291 Pg 22 05 18.0 -0.6
BC3 Big Chuckawall 1.10 138 P Pg 22 05 18.7 0.0
baz=319,SNR=16
BC3 S Sb 22 05 33.7 +0.5
baz=319
BFSC Mount Baldy Ra 1.13 258 Pg 22 05 18.5 -0.8
BFSC Sg 22 05 33.7 -0.3
BFSC Mount Baldy Ra 1.13 258 P Pg 22 05 18.5 -0.8
baz=77
BFSC S Sg 22 05 33.5 -0.4
baz=77
MURC Murrieta 1.14 220 Pg 22 05 18.6 -0.8
MURC Sg 22 05 33.8 -0.5
MURC Murrieta 1.14 220 P Pg 22 05 18.6 -0.8
baz=39,SNR=15
MURC S Sg 22 05 33.7 -0.5
baz=39
MTPC Mountain Pass 1.19 32 Pg 22 05 19.5 -1.0
PLM Palomar 1.21 202 Pb 22 05 20.2 -0.5
PLM Sg 22 05 36.1 -0.5
SBB Saddle Back Bu 1.25 280 Pn 22 05 20.9 -0.4
HOLC Holcomb Ridge 1.25 269 Pn 22 05 21.0 -0.3
SHOC Shoshone, Teco 1.42 2 S Sn 22 05 42.8 +0.6
baz=182
EDW2 Edwards Air Fo 1.43 287 Pg Pn 22 05 24.1 +0.4
baz=106
EDW2 S Sn 22 05 42.5 -0.1
baz=106
NEE2 Needles Airpor 1.44 78 P Pn 22 05 23.2 -0.5
baz=259
NEE2 Sb Sg 22 05 43.7 -0.2
baz=259
MWC Mount Wilson 1.46 260 Pn 22 05 24.0 -0.1
MWC Sn 22 05 43.5 +0.2
LRMC Laurel Mtn Rad 1.49 312 Pg Pb 22 05 25.5 0.0
baz=131
LRMC Sb Sb 22 05 45.4 +0.7
baz=131
QSM Queen of Sheba 1.55 344 Pb 22 05 26.5 +0.1
MONP2 Monument Peak 1.59 183 P Pn 22 05 25.2 -0.8
baz=2.9
MONP2 Sb Sb 22 05 47.7 +0.3
baz=2.9
Y12C Blythe 1.66 115 Pn Pb 22 05 28.1 -0.2
Y12C Blythe 1.66 115 P Pn 22 05 26.1 -0.8
baz=297
DECC Green Verdugo 1.68 263 Sg Sb 22 05 52.0 +0.5
baz=82
109C Camp Elliot, M 1.71 202 S Sn 22 05 49.9 +0.4
baz=22
BAR Barrett 1.82 189 Pn Pn 22 05 30.3 +1.3
IKP In-Ko-Pah, Jac 1.83 174 Sb Sb 22 05 55.3 +0.9
baz=354
MPMC Manual Prospec 1.84 329 P Pn 22 05 28.7 -0.7
baz=148
MPMC Sb Sb 22 05 55.7 +1.1
baz=148
GLA Glamis 1.90 138 Pn Pb 22 05 31.6 -0.7
GLA Sg 22 05 59.3 +0.8
GLA Glamis 1.90 138 Sg Sg 22 05 59.3 +0.8
baz=319
AMDNV Amargosa 1.97 1 Pb 22 05 33.6 0.0
CIS Catalina Islan 2.04 239 Sb Sb 22 06 00.9 +0.6
baz=57
DAC Darwin (Calif) 2.07 330 Pn Pb 22 05 34.9 -0.5
W13A Hualapai Mount 2.10 72 Pn Pn 22 05 32.7 -0.4
ISA Isabella, Lake 2.12 304 Pn 22 05 33.8 +0.6
SHPR Sheep Range 2.23 25 Pn Pn 22 05 34.7 -0.1
SHPR LR 22 06 08.6
TPNV Topopah Spring 2.46 1 Pn Pn 22 05 38.2 +0.2
KNB Kanab 3.81 47 Pn Pn 22 05 56.9 +0.3
U15A North Rim 3.83 58 Pn Pn 22 05 57.3 +0.5
MDPB Devils Postpil 3.85 325 Pn Pn 22 05 57.4 +0.2

ATH 18 22:06:03.3, 38.21N×20.38E, h10km±1km, ML2.6/10, Error ellipse: s-maj=1.7km s-min=0.8km az=258.0
THE 18 22:06:03.5, 38.21N×20.40E, h9km, ML2.5/15, Error ellipse: s-maj=0.6km s-min=0.2km az=252.0
ISC 18 22:06:03.4±0.9, 38.20N±0.02×20.40E±0.03, h10km±4km, n48, σ0.36/86, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.02 216 P Pg 22 06 05.1 0.0
CHV1 S Sg 22 06 06.4 0.0
LXRA Lixouri, Kepha 0.03 86 P Pg 22 06 05.2 0.0
LXRA S Sg 22 06 06.6 +0.1
LXR1 Lixouri, Cepha 0.03 85 P Pg 22 06 05.2 0.0
LXR1 S Sg 22 06 06.7 +0.1
KEF3 Kipouria, Keph 0.04 278 P Pg 22 06 05.3 0.0
KEF3 S Sg 22 06 06.6 0.0
AGT1 Agia Thekli 0.05 351 P Pg 22 06 05.3 -0.1
AGT1 S Sg 22 06 06.7 -0.2
KEF4 Livadi, Kephal 0.06 21 P Pg 22 06 05.5 -0.1
KEF4 S Sg 22 06 07.1 0.0
ARGA Argostoli. Kep 0.07 108 P Pg 22 06 05.6 +0.1
ARGA S Sg 22 06 07.2 +0.1
ARG2 Argostoli 0.08 105 P Pg 22 06 05.7 +0.1
ARG2 S Sg 22 06 07.4 +0.1
KEF2 Argostoli. Kep 0.08 114 P Pg 22 06 05.8 +0.1
KEF1 Kardakata, Kep 0.10 37 P Pg 22 06 05.9 -0.1
KEF1 S Sg 22 06 07.6 -0.3
VLS Valsamata 0.15 98 P Pg 22 06 06.8 -0.1
VLS S Sg 22 06 09.0 -0.2
5μm,0.1s
VLS Valsamata 0.15 98 P Pg 22 06 06.7 -0.1
VLS S Sg 22 06 09.2 0.0
VSK1 VASILIKIADES 0.25 32 P Pg 22 06 08.5 0.0
VSK1 S Sg 22 06 12.0 +0.1
FSK Fiskardo 0.29 27 P Pg 22 06 09.1 -0.2
FSK S Sg 22 06 13.3 +0.1
2μm,0.1s
FSK Fiskardo 0.29 27 P Pg 22 06 09.1 -0.2
FSK S Sg 22 06 13.6 +0.4
FSK AML AML 22 06 14.0
comp=N,2859μm,0.2s

FSK AML AML 22 06 14.3
comp=E,6138µm,0.2s
KFL Anninata 0.32 106 P Pg 22 06 09.8 0.0
KFL S Sg 22 06 14.6 +0.5
KFL Anninata 0.32 106 P Pg 22 06 09.7 0.0
VLMS Volimes, Zakyn 0.38 147 P Pg 22 06 11.0 0.0
VLMS S Sb 22 06 17.5 -0.8
VLMS AML AML 22 06 20.1
comp=E,4758µm,0.3s
VLMS AML AML 22 06 21.3
comp=N,4915µm,0.4s
MGNA Meganis 0.55 34 P Pg 22 06 13.7 -0.5
MGNA S Sg 22 06 22.0 +0.5
MGNA AML AML 22 06 23.0
comp=E,2015µm,0.1s
MGNA AML AML 22 06 23.4
comp=N,2207µm,0.2s
LKD2 Lefkada island 0.62 19 P Pg 22 06 15.0 -0.5
LKD2 S Sg 22 06 23.9 +0.2
comp=N,238nm,0.3s
LKD2 Lefkada island 0.62 19 P Pg 22 06 15.1 -0.4
LKD2 S Sg 22 06 23.4 -0.3
LKD2 AML AML 22 06 32.2
comp=E,442µm,0.3s
LKD2 AML AML 22 06 32.3
comp=N,495µm,0.4s
KRI1 kERI 0.63 148 P Pg 22 06 15.2 -0.4
KRI1 S Sb 22 06 25.2 -0.1
TSLK Tsoukalades, L 0.66 18 P Pg 22 06 15.7 -0.4
TSLK S Sb 22 06 25.6 -0.6
comp=N,278nm,0.3s
TSLK Tsoukalades, L 0.66 18 P Pg 22 06 15.8 -0.3
TSLK S Sg 22 06 25.3 +0.5
TSLK AML AML 22 06 33.5
comp=E,466µm,0.3s
TSLK AML AML 22 06 34.5
comp=N,644µm,0.4s
VTN Vitineika 0.68 114 P Pg 22 06 16.5 -0.1
VTN S Sg 22 06 26.0 +0.4
VTN Vitineika 0.68 114 P Pg 22 06 16.5 -0.1
PDO Prodromos 0.74 57 P Pg 22 06 17.7 +0.1
PDO S Sg 22 06 27.8 +0.5
comp=N,845nm,0.4s
PDO Prodromos 0.74 57 P Pg 22 06 17.5 -0.1
PDO S Sg 22 06 27.8 +0.5
PDO AML AML 22 06 29.4
comp=N,1432µm,0.5s
PDO AML AML 22 06 36.4
comp=E,1119µm,0.3s
RLS Riolos of Patr 0.86 99 P Pg 22 06 19.2 -0.6
RLS S Sb 22 06 32.4 +0.5
comp=E,242nm,0.3s
RLS Riolos of Patr 0.86 99 P Pg 22 06 19.3 -0.6
RLS AML AML 22 06 36.0
comp=N,384µm,0.4s
RLS AML AML 22 06 36.7
comp=E,580µm,0.3s
PVO Paravola 0.98 64 P Pg 22 06 21.7 -0.6
PVO S Sb 22 06 36.0 +0.5
comp=E,572nm,0.5s
PVO Paravola 0.98 64 P Pg 22 06 22.0 -0.3
PVO S Sg 22 06 35.0 -0.1
PVO AML AML 22 06 43.4
comp=E,1238µm,0.6s
PVO AML AML 22 06 44.4
comp=N,1039µm,0.3s
DRO Drossia 1.07 103 P Pg 22 06 23.2 -0.7
DRO S Sb 22 06 38.6 +0.7
comp=N,512nm,0.4s
DRO Drossia 1.07 103 P Pg 22 06 23.3 -0.6
DRO S Sn 22 06 39.1 -0.2
DRO AML AML 22 06 43.6
comp=E,1212µm,0.4s
DRO AML AML 22 06 48.2
comp=N,1067µm,0.5s
AMT Artemida-Makis 1.23 122 P Pn 22 06 26.0 -0.7
AMT S Sn 22 06 44.1 +0.7
comp=N,232nm,0.5s
AMT Artemida-Makis 1.23 122 P Pn 22 06 26.7 0.0
AMT AML AML 22 06 51.8
comp=N,495µm,0.5s
AMT AML AML 22 06 54.4
comp=E,372µm,0.5s
ANX Ano Chora 1.26 71 P Pn 22 06 27.0 -0.2
ANX S Sn 22 06 44.5 +0.3
comp=E,285nm,0.6s
ANX Ano Chora 1.26 71 P Pn 22 06 26.9 -0.2
SERG Sergoula 1.32 80 P Pn 22 06 27.4 -0.6
SERG S Sg 22 06 46.2 +0.2
comp=E,188nm,0.4s
TRIZ Trizonia 1.33 82 P Pn 22 06 27.3 -0.7
TRIZ S Sn 22 06 45.9 +0.1
comp=E,240nm,0.3s
IGT Igoumenitsa 1.33 358 P Pn 22 06 28.2 +0.1
IGT S Sg 22 06 46.3 0.0
comp=E,88nm,0.3s
IGT Igoumenitsa 1.33 358 P Pn 22 06 29.7 +0.7
ALIK Aliki, Aigiali 1.35 87 P Pn 22 06 28.2 -0.1
ALIK S Sg 22 06 47.3 +0.4
KALE Kalithea 1.39 81 P Pn 22 06 28.1 -0.7
KLV Kalavryta, Ach 1.39 96 P Pn 22 06 28.9 0.0
KLV S Sb 22 06 47.3 -0.1
comp=E,85nm,0.6s
KLV Kalavryta, Ach 1.39 96 P Pn 22 06 29.2 +0.3
ITM Ithomi 1.58 129 P Pn 22 06 31.7 +0.2
ITM S Sb 22 06 53.1 +0.3
comp=E,62nm,0.5s
PYL PYLOS 1.68 140 P Pn 22 06 32.9 0.0

IDC 18 22:26:21.7±12.0, 12.11S×166.48E, h251km±142km, mb3.3/3, mb1 3.4/4, mb1mx3.1/32, mbtmp3.8/4, Error ellipse: s-maj=105.1km s-min=54.7km az=153.0, Santa Cruz Islands
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DZM Mont Dzumac 9.90 180 P Pn 22 28 39.3 +0.2
0.4nm,0.3s,baz=114,slow=19,SNR=2.0
DZM S S 22 30 30.7 +0.1
0.2nm,0.3s,baz=324,slow=19,SNR=2.5
WRA Warramunga Arr 31.81 252 P P 22 32 23.1 -0.2
0.5nm,0.5s,baz=84,slow=9.6,SNR=2.1
ASAR Alice Springs 32.98 245 P P 22 32 33.5 +0.1
0.6nm,0.7s,baz=71,slow=9.9,SNR=3.8
MKAR Makanchi Array 94.79 317 P P 22 39 14.6 -0.2
0.6nm,0.5s,baz=84,slow=6.0,SNR=9.8

NEIC 18 22:29:53.6±0.8, 32.97S±0.03×70.3W±0.2, h119km±7km, Error ellipse: s-maj=30.1km s-min=4.4km az=86.0
GUC 18 22:29:54.8±0.6, 32.98S×70.28W, h115km±2km, ML4.1
SJA 18 22:29:55.1±0.4, 32.97S×70.02W, h126km±3km, ML3.5, MW3.5
ISC 18 22:29:53.0±1.3, 33.01S±0.04×70.28W±0.04, h124km±8km, n34, σ1.03/59, 9C-2D, Chile-Argentina border region
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FCH Farellones 0.31 182 ⇓iP Pn 22 30 10.8 0.0
FCH iS Sn 22 30 23.5 -0.8
FCH IAML 22 30 23.9
comp=E,8µm,0.3s
PEL Peldehue 0.37 249 eP Pn 22 30 10.6 -0.2
PEL iS Sn 22 30 23.1 -1.0
PEL IAML 22 30 23.9
comp=E,7µm,0.2s
PEL Peldehue 0.37 249 Pn 22 30 10.8 +0.1
PEL Sn 22 30 23.5 -0.6
CLCH Cerro Calan 0.44 210 ⇑iP Pn 22 30 11.6 +0.4
CLCH iS Sn 22 30 24.4 -0.4
CLCH IAML 22 30 25.3
comp=E,11µm,0.3s
FSR Penalolen 0.51 204 eP Pn 22 30 12.9 +1.4
FSR iS Sn 22 30 26.3 +0.8
MT03 Universidad Ad 0.52 202 ⇑iP Pn 22 30 12.1 +0.5
MT03 iS Sn 22 30 25.3 -0.4
MT03 IAML 22 30 25.9
comp=N,37µm,0.2s
STL Santa Lucia 0.52 216 ⇑iP Pn 22 30 12.0 +0.5
STL iS Sn 22 30 25.1 -0.4
ROCH El Roble 0.62 274 ⇑iP Pn 22 30 12.9 +0.5
ROCH iS Sn 22 30 26.5 -0.6
ROCH IAML 22 30 27.9
comp=N,9µm,0.3s
ROC1 El Roble 0.62 273 Pn 22 30 12.5 +0.1
ROC1 Sn 22 30 27.0 -0.1
ANTU Antumapu 0.63 208 ⇑iP Pn 22 30 13.8 +1.6
ANTU iS Sn 22 30 27.6 +0.7
ANTU IAML 22 30 28.3
comp=N,7µm,0.7s
RCDM Rinconada Maip 0.65 223 eP Pn 22 30 13.5 +1.2
RCDM eS Sn 22 30 26.7 -0.4
MT02 Curacav 0.76 251 ⇑iP Pn 22 30 13.7 +0.5
MT02 iS Sn 22 30 28.1 -0.4
LMEL Las Melosas 0.83 176 ⇓iP Pn 22 30 14.6 +0.6
LMEL IAML 22 30 37.7
comp=N,3µm,0.1s
CO04 Los Peladeros 1.13 328 ⇑iP Pn 22 30 17.6 +0.6
CO04 iS Sn 22 30 35.0 -0.2
CO04 IAML 22 30 38.0
comp=E,3µm,0.1s
ARCO CERRO ARCO 1.14 82 eP Pn 22 30 17.6 +0.6
ARCO IAML 22 30 18.2
comp=Z,958nm,0.2s
ARCO eS Sn 22 30 34.6 -0.5
VA01 Torpederas 1.15 269 eP Pn 22 30 17.6 +0.8
VA01 iS Sn 22 30 34.9 0.0
VA01 IAML 22 30 36.8
comp=N,3µm,0.1s
MT01 Popeta 1.18 224 ⇑iP Pn 22 30 17.5 +0.4
MT01 iS Sn 22 30 35.1 -0.3
MT01 IAML 22 30 35.5
comp=N,2µm,0.2s
AAGR Agrelo 1.22 94 eP Pn 22 30 18.8 +1.1
AAGR eS Sn 22 30 36.0 -0.4
ASAL Salagasta 1.29 71 eP Pn 22 30 19.1 +0.7
RTLS Leoncito 1.47 35 eP Pn 22 30 22.4 +1.7
RTLS eS Sn 22 30 42.7 +1.1
RTLS IAML 22 30 44.9
comp=Z,347nm,0.5s
BO02 Sierra Bellavi 1.82 193 eP Pn 22 30 26.4 +1.8
BO02 iS Sn 22 30 50.2 +1.5
RTCV Cerro Valdivia 1.86 52 eP Pn 22 30 25.9 +0.8
CO03 El Pedregal 2.20 351 eP Pn 22 30 30.8 +1.5
CO03 eS Sn 22 30 57.0 0.0
CFA Coronel Fontan 2.23 51 eP Pn 22 30 30.1 +0.6
CFA eS Sn 22 30 56.1 -1.4
GO05 Huala 2.42 214 eP Pn 22 30 32.1 +0.2
GO05 Huala 2.42 214 Pn 22 30 32.7 +0.8
GO05 Sn Sn 22 30 59.2 -2.6
AMOG MOGNA 2.56 37 eP Pn 22 30 35.1 +1.2
ACCO Cerro Coronel 2.63 23 eP Pn 22 30 36.7 +1.7
ACAN Cantantal 2.71 75 eP Pn 22 30 36.1 +0.4
ACAN eS Sn 22 31 06.2 -2.3
GO04 Tololo Observa 2.87 351 ⇑iP Pn 22 30 38.9 +0.9
GO04 iS Sn 22 31 12.4 -0.1
GO04 Tololo Observa 2.87 351 Pn 22 30 39.0 +1.0
GO04 Sn 22 31 10.2 -2.3
AGUA GUANDACOL 3.83 24 eP Pn 22 30 52.3 +1.7
GO03 Copiap 5.40 0 Pn Pn 22 31 10.6 -0.9
GO01 Chusmiza 13.33 4 Pn Pn 22 32 58.0 +0.2

ROM 18 22:31:28.4±0.1, 43.439N±0.003×12.496E±0.004, h7km±1km, ML0.8/3, 1C, Error ellipse: s-maj=0.3km s-min=0.1km az=128.0, Central Italy
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ATPI Pietralunga - 0.07 280 P Pg 22 31 30.4 +0.2
ATPI S Sg 22 31 31.9 +0.3
ATPI Pietralunga - 0.07 280 S Sg 22 31 31.9 +0.4
ATVO AVT- Monte Val 0.09 229 ⇑P Pg 22 31 30.7 +0.2
ATVO S Sg 22 31 32.4 +0.5
ATVO AVT- Monte Val 0.09 229 P Pg 22 31 30.6 +0.2
ATVO S Sg 22 31 32.4 +0.5
ATVO AVT- Monte Val 0.09 229 S Sg 22 31 32.4 +0.5
ATFO Monte Foce - G 0.09 143 P Pg 22 31 30.7 +0.2
ATFO S Sg 22 31 32.4 +0.4
ATFO Monte Foce - G 0.09 143 S Sg 22 31 32.5 +0.5
PIEI Pieia 0.10 16 P Pg 22 31 31.2 +0.5
PIEI S Sg 22 31 33.4 +1.0
PIEI AML AML
comp=E,98µm,0.1s
PIEI AML AML
comp=N,60µm,0.3s
PIEI AML AML
comp=N,60µm,0.3s
PIEI AML AML
comp=E,98µm,0.1s
PIEI Pieia 0.10 16 P Pg 22 31 31.2 +0.5
PIEI S Sg 22 31 33.5 +1.1
PIEI AML AML
comp=E,98µm,0.1s
PIEI AML AML
comp=N,60µm,0.3s
PIEI AML AML
comp=E,98µm,0.1s
PIEI AML AML
comp=N,60µm,0.3s
PIEI AML AML
comp=E,98µm,0.1s
PIEI AML AML
comp=N,60µm,0.3s
PIEI AML AML
comp=E,98µm,0.1s
PIEI AML AML
comp=N,60µm,0.3s
PIEI Pieia 0.10 16 S Sg 22 31 33.5 +1.1
MURB Monte Urbino 0.18 173 P Pg 22 31 32.6 +0.6
MURB S Sg 22 31 36.0 +1.6
MURB AML AML
comp=N,79µm,1.6s
MURB AML AML
comp=E,82µm,1.5s
MURB AML AML
comp=N,80µm,1.6s
MURB Monte Urbino 0.18 173 P Pg 22 31 32.5 +0.6
MURB S Sg 22 31 35.9 +1.5
MURB AML AML
comp=E,82µm,1.5s
MURB AML AML
comp=N,79µm,1.6s
MURB AML AML
comp=E,82µm,1.5s
MURB AML AML
comp=N,80µm,1.6s
MURB AML AML
comp=N,80µm,1.6s
MURB AML AML
comp=E,82µm,1.5s
MURB AML AML
comp=N,79µm,1.6s
MURB AML AML
comp=E,82µm,1.5s
NARO Abbazia di Nar 0.18 20 P Pg 22 31 32.5 +0.4
NARO S Sg 22 31 35.6 +1.0
NARO AML AML
comp=E,36µm,1.4s
NARO AML AML
comp=N,38µm,1.6s
NARO AML AML
comp=N,38µm,1.6s
NARO Abbazia di Nar 0.18 20 P Pg 22 31 32.5 +0.4
NARO S Sg 22 31 35.7 +1.1
NARO AML AML
comp=E,36µm,1.4s
NARO AML AML
comp=N,38µm,1.6s
NARO AML AML
comp=E,36µm,1.4s
NARO AML AML
comp=N,38µm,1.6s
NARO AML AML
comp=E,36µm,1.4s
NARO AML AML
comp=N,38µm,1.6s
NARO AML AML
comp=E,36µm,1.4s
NARO AML AML
comp=N,38µm,1.6s
NARO Abbazia di Nar 0.18 20 S Sg 22 31 35.7 +1.1
FRON Frontone 0.18 65 P Pg 22 31 32.6 +0.5
FRON S Sg 22 31 35.9 +1.3
FRON Frontone 0.18 65 P Pg 22 31 32.6 +0.4
FRON S Sg 22 31 36.0 +1.3
FRON Frontone 0.18 65 S Sg 22 31 36.0 +1.3
BADI Badiali 0.20 291 P Pg 22 31 33.0 +0.6
BADI S Sg 22 31 36.4 +1.3
BADI Badiali 0.20 291 P Pg 22 31 32.9 +0.6
BADI S Sg 22 31 36.3 +1.3

DRS 18 22:50:35.7±0.0, 42.89N×45.57E, h12km
NORS 18 22:50:35.0±0.0, 42.73N×45.68E, h8km, MPVA3.5, Felt I=II MSK at Shatoy
MOS 18 22:50:35.8±0.0, 42.81N×45.70E, h14km, MPVA3.6
TIF 18 22:50:36.1, 42.87N×45.77E, h18km±3km
ISC 18 22:50:38.1±1.0, 42.83N±0.02×45.69E±0.02, h13km±9km, n48, σ1.14/87, Eastern Caucasus
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GROC Groznyy 0.38 12 iPg Pg 22 50 45.2 -0.6
GROC eSg Sb 22 50 52.6 -0.1
BTLR Botlikh 0.42 113 iPg Pg 22 50 45.2 -1.4
BTLR eSg Sg 22 50 52.1 -0.1
KMGR Komgaron 0.65 291 iPg Pg 22 50 50.4 -0.4
KMGR eSg Sn 22 51 01.2 -2.1
DLMR Dylym 0.73 70 ePg Pb 22 50 50.5 -2.2
XNZR Khunzakh 0.80 111 ePg Pn 22 50 55.1 -0.2
XNZR eSg Sn 22 51 06.6 -0.7
UNCR Uncukul 0.82 98 ePg Pb 22 50 53.5 -0.8
UNCR eSg Sg 22 51 06.0 +1.2
DBC Dubki 0.86 77 iPg Pb 22 50 53.7 -1.3
GUDG Gudauri 0.97 248 P Pb 22 50 53.7 -3.2
GUDG S Sb 22 51 06.0 -3.6
ARKR Arakani 0.99 103 ePg Pb 22 50 58.0 +0.8
ARKR eSg Sn 22 51 12.0 +0.3
BTKR Batakoyurt 1.00 303 ePg Pg 22 50 57.5 +0.1
BTKR eSg Sn 22 51 14.1 +2.1
LACR Lac 1.02 270 ePg Pb 22 50 55.0 -2.8
LACR eSg Sb 22 51 10.8 -0.5
GNBR Gunib 1.04 115 ePg Pb 22 50 56.7 -1.3
GNBR eSg Sb 22 51 11.5 -0.1
BUJR Buynaksk 1.04 90 ePg Pg 22 50 58.6 +0.4
BUJR eSg Sn 22 51 12.9 -0.1
LGD Lagodekhi 1.07 157 P Pb 22 50 58.1 -0.5
LGD S Sb 22 51 12.4 -0.1
LGD Lagodekhi 1.07 157 ePg Pb 22 50 58.1 -0.5
LGD eSg Sb 22 51 12.4 -0.1
TRKR Terskaya 1.14 322 iPg Pg 22 51 00.0 0.0
KORR Kora 1.22 283 ePg Pb 22 51 00.9 -0.1
KORR eSg Sg 22 51 19.4 +1.9
SEAG Tbilisi Sea 1.25 212 P Pb 22 51 01.5 -0.1
SEAG S Sg 22 51 20.0 +1.6
SEAG Tbilisi Sea 1.25 212 ePg Pb 22 51 01.5 -0.1
SEAG eSg Sg 22 51 20.0 +1.6
KMKR Kumukh 1.25 123 ePg Pb 22 51 02.0 +0.2
KMKR eSg Sn 22 51 18.0 -0.4
TBLG Delisi 1.30 213 P Pn 22 51 01.8 -0.3
TBLG S Sg 22 51 20.3 +0.1
TBLG Delisi 1.30 213 ePg Pn 22 51 01.8 -0.3
TBLG eSg Sg 22 51 20.3 +0.1
STDR Stavd-Durt 1.31 295 ePg Pb 22 51 02.5 -0.1
ZEI Tsey 1.32 269 ePg Pn 22 51 01.1 -1.4
ZEI eSg Sg 22 51 20.3 -0.3
BTNK Botanikuri 1.32 210 P Pn 22 51 02.0 -0.3
BTNK S Sg 22 51 21.0 +0.3
BTNK Botanikuri 1.32 210 ePg Pn 22 51 02.0 -0.3
BTNK eSg Sg 22 51 21.0 +0.3
MAK Makhachkala 1.34 84 ePg Pn 22 51 01.2 -1.3
MAK eSg Sg 22 51 23.2 +1.9
PRTR Priterechnaya 1.38 312 ePg Pb 22 51 03.6 -0.2
PRTR eSg Sg 22 51 24.6 +2.0
DDFL Dedoflistskaro 1.42 167 P Pg 22 51 06.1 +0.7
LSNR Lesken 1.44 289 ePg Pb 22 51 04.5 -0.3
LSNR eSg Sg 22 51 25.5 +1.1
DIGR Digorskoe uzhe 1.55 273 ePg Pn 22 51 05.2 -0.5
DIGR eSg Sb 22 51 26.4 -0.1
ONI Oni 1.67 263 P Pn 22 51 07.3 +0.2
ONI S Sb 22 51 30.7 +1.1
ONI Oni 1.67 263 ePg Pn 22 51 07.3 +0.2
ONI eSg Sb 22 51 30.7 +1.1
NCK Nalchik 1.67 294 ePg Pb 22 51 09.2 +0.4
KZRT Kazreti 1.73 214 P Pn 22 51 08.5 +0.5
KZRT S Sb 22 51 32.1 +0.6
KZRT Kazreti 1.73 214 ePg Pn 22 51 08.5 +0.5
KZRT eSg Sb 22 51 32.1 +0.6
TRLG Trialeti 1.75 223 P Pn 22 51 09.1 +0.7
TRLG S Sb 22 51 33.2 +1.2
TRLG Trialeti 1.75 223 ePg Pn 22 51 09.1 +0.7
TRLG eSg Sb 22 51 33.2 +1.2
AKT Akhty 2.03 131 ePg Pb 22 51 13.9 -1.0
AKT eSg Sb 22 51 41.7 +1.6
TKB Tkibuli 2.05 257 P Pb 22 51 14.2 -1.0
TKB S Sb 22 51 40.9 +0.3
TKB Tkibuli 2.05 257 ePg Pb 22 51 14.2 -1.0
TKB eSg Sb 22 51 40.9 +0.3
DRN Derbent 2.11 111 ePg Pn 22 51 13.5 +0.4
NEY Neytrino 2.22 282 ePg Pn 22 51 15.2 +0.4
NEY eSg Sb 22 51 44.9 -0.8
KBZ Khabaz 2.23 295 ePg Pn 22 51 14.9 +0.2
KBZ eSg Sb 22 51 45.6 -0.1
SHA1 Shidzhatmaz 2.39 293 ePn Pn 22 51 17.3 0.0
SHA1 eSn Sn 22 51 48.1 -2.7
KIV Kislovodsk 2.46 298 ePn Pn 22 51 19.2 +1.1
GNI Garni 2.77 195 ePn Pb 22 51 25.4 -2.2
GOF Gofitskoye 2.94 320 ePn Pn 22 51 25.1 +0.6
GOF eSn Sn 22 52 01.2 +1.6

THE 18 22:52:32.9, 38.24N×20.38E, h6km, ML2.5/13, Error ellipse: s-maj=0.7km s-min=0.3km az=257.0
ATH 18 22:52:33.1, 38.26N×20.41E, h4km, ML2.6/8, Error ellipse: s-maj=1.2km s-min=0.6km az=258.0
ISC 18 22:52:32.7±0.8, 38.25N±0.02×20.41E±0.03, h7km±4km, n45, σ0.63/84, Greece
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.02 45 P Pg 22 52 33.8 -0.1
KEF4 S Sg 22 52 34.4 -0.4
AGT1 Agia Thekli 0.02 283 P Pg 22 52 33.9 0.0
AGT1 S Sg 22 52 34.6 -0.3
LXR1 Lixouri, Cepha 0.05 153 P Pg 22 52 34.7 +0.5
LXR1 S Sg 22 52 36.1 +0.8
LXRA Lixouri, Kepha 0.05 154 P Pg 22 52 34.7 +0.5
LXRA S Sg 22 52 36.1 +0.8
KEF1 Kardakata, Kep 0.06 57 P Pg 22 52 34.4 +0.1
KEF1 S Sg 22 52 35.3 -0.2
KEF3 Kipouria, Keph 0.06 228 P Pg 22 52 34.8 +0.5
KEF3 S Sg 22 52 36.3 +0.7
CHV1 Chavriata, Kef 0.07 199 P Pg 22 52 34.9 +0.5
CHV1 S Sg 22 52 35.8 +0.2
ARGA Argostoli. Kep 0.09 141 P Pg 22 52 35.2 +0.5
ARGA S Sg 22 52 37.0 +0.9
ARG2 Argostoli 0.09 137 P Pg 22 52 35.3 +0.5
ARG2 S Sg 22 52 36.8 +0.6
KEF2 Argostoli. Kep 0.10 143 P Pg 22 52 35.5 +0.6
KEF2 S Sg 22 52 37.2 +0.7
VLS Valsamata 0.16 116 P Pg 22 52 36.3 +0.4
VLS S Sg 22 52 39.0 +0.8
VLS Valsamata 0.16 116 P Pg 22 52 36.3 +0.4
VLS S Sg 22 52 38.9 +0.8
VSK1 VASILIKIADES 0.20 37 P Pg 22 52 37.2 +0.5
VSK1 S Sg 22 52 40.6 +1.1
KFL Anninata 0.33 114 P Pg 22 52 39.5 +0.4
KFL S Sb 22 52 45.0 -1.3
KFL Anninata 0.33 114 P Pg 22 52 39.5 +0.4
VLMS Volimes, Zakyn 0.42 151 P Pg 22 52 41.2 +0.4
VLMS S Sb 22 52 48.0 -0.9
VLMS AML AML 22 52 51.2
comp=E,3805µm,0.2s
VLMS AML AML 22 52 57.1
comp=N,4788µm,0.4s
MGNA Meganis 0.51 36 P Pg 22 52 42.5 0.0
MGNA S Sg 22 52 50.2 +1.1
MGNA AML AML 22 52 51.1
comp=N,1326µm,0.3s
MGNA AML AML 22 52 52.2
comp=E,915µm,0.2s
LKD2 Lefkada island 0.58 20 P Pg 22 52 43.7 -0.1
LKD2 S Sb 22 52 53.1 -0.4
comp=E,382nm,0.6s
LKD2 Lefkada island 0.58 20 P Pg 22 52 43.6 -0.1
LKD2 S Sg 22 52 52.1 +0.8

LKD2 AML AML 22 52 57.4
comp=N,823μm,0.8s
LKD2 AML AML 22 52 58.5
comp=E,726μm,0.4s
ZAK2 Zakynthos 0.60 140 P Pb 22 52 44.9 -0.5
ZAK2 S Sb 22 52 53.1 -1.0
TSLK Tsoukalades, L 0.61 18 P Pg 22 52 44.4 0.0
TSLK S Sb 22 52 54.3 -0.2
comp=E,380nm,0.6s
TSLK Tsoukalades, L 0.61 18 P Pg 22 52 44.4 0.0
TSLK S Sg 22 52 52.9 +0.5
TSLK AML AML 22 53 00.7
comp=E,781μm,0.6s
TSLK AML AML 22 53 02.2
comp=N,754μm,0.4s
AST1 Astakos 0.61 61 P Pg 22 52 44.8 +0.4
AST1 S Sb 22 52 53.9 -0.5
KRI1 kERI 0.67 151 P Pg 22 52 45.4 -0.1
KRI1 S Sb 22 52 55.8 -0.2
VTN Vitineika 0.69 118 P Pb 22 52 46.3 -0.7
VTN Vitineika 0.69 118 P Pb 22 52 46.4 -0.7
PDO Prodromos 0.70 60 P Pg 22 52 46.1 -0.1
PDO S Sb 22 52 57.7 +0.6
comp=N,1μm,0.5s
RLS Riolos of Patr 0.85 102 P Pg 22 52 48.9 -0.2
RLS S Sn 22 53 02.5 -1.3
comp=N,175nm,0.4s
RLS Riolos of Patr 0.85 102 P Pg 22 52 49.0 0.0
RLS S Sb 22 53 01.5 +0.1
RLS AML AML 22 53 08.5
comp=E,314μm,0.4s
RLS AML AML 22 53 11.5
comp=N,548μm,0.5s
PVO Paravola 0.95 67 P Pg 22 52 51.0 +0.1
PVO S Sn 22 53 05.4 -0.9
comp=N,495nm,0.4s
PVO Paravola 0.95 67 P Pb 22 52 51.2 -0.2
PVO S Sb 22 53 04.3 0.0
PVO AML AML 22 53 14.5
comp=E,938μm,0.4s
PVO AML AML 22 53 14.8
comp=N,820μm,0.6s
DRO Drossia 1.07 106 P Pb 22 52 53.1 -0.4
DRO S Sn 22 53 09.6 +0.4
comp=N,402nm,0.6s
DRO Drossia 1.07 106 P Pb 22 52 53.3 -0.1
DRO S Sn 22 53 09.3 +0.1
DRO AML AML 22 53 15.9
comp=E,911μm,0.6s
DRO AML AML 22 53 24.6
comp=N,829μm,0.5s
ANX Ano Chora 1.24 73 P Pb 22 52 56.0 -0.4
ANX S Sn 22 53 15.3 +1.8
comp=N,565nm,0.6s
ANX Ano Chora 1.24 73 P Pg 22 52 56.5 +0.1
ANX S Sn 22 53 13.4 -0.1
ANX AML AML 22 53 20.4
comp=E,1062μm,0.5s
ANX AML AML 22 53 21.3
comp=N,1252μm,0.6s
AMT Artemida-Makis 1.25 124 P Pg 22 52 56.9 +0.3
AMT S Sn 22 53 15.0 +1.3
comp=N,195nm,0.7s
IGT Igoumenitsa 1.29 357 P Pb 22 52 57.2 0.0
IGT S Sn 22 53 15.8 +1.2
comp=N,115nm,0.6s
IGT Igoumenitsa 1.29 357 P Pb 22 52 57.4 +0.2
SERG Sergoula 1.31 82 P Pn 22 52 57.0 -0.3
SERG S Sn 22 53 15.8 +0.7
comp=N,232nm,0.4s
TRIZ Trizonia 1.31 84 P Pn 22 52 56.7 -0.7
ALIK Aliki, Aigiali 1.34 89 P Pn 22 52 57.4 -0.4
ALIK S Sg 22 53 16.7 +1.0
KALE Kalithea 1.37 83 P Pn 22 52 57.5 -0.7
KALE S Sg 22 53 17.8 +1.1
comp=N,168nm,0.7s
KLV Kalavryta, Ach 1.39 98 P Pn 22 52 58.2 -0.3
KLV S Sg 22 53 17.7 +0.4
comp=N,122nm,0.5s
KLV Kalavryta, Ach 1.39 98 P Pn 22 52 58.3 -0.2
MAKR Makrakomi, Fth 1.55 60 P Pb 22 53 01.3 -0.4
MAKR S Sg 22 53 22.5 0.0
comp=N,188nm,0.6s

ARE 18 23:35:51±4.3, 14.°56S±0.°05×75.°13W±0.°04, h44km±3km, Error ellipse: s-maj=0.0km s-min=0.0km az=82.0
VAO 18 23:35:52.3±0.4, 14.°15S×75.°73W, h10km, mb5.7
MOS 18 23:35:56.1±0.9, 14.°12S×75.°68W, h47km, mb6.1/60, MS5.5/19, Error ellipse: s-maj=7.0km s-min=5.2km az=76.7
BJI 18 23:35:56.0±0.0, 14.°20S×75.°70W, h45km, mB5.8/59, Ms5.9/62, Ms7 5.7/60
NEIC 18 23:35:58.3±1.3, 14.°17S±0.°06×75.°60W±0.°07, h57km±1km, mb5.7/617, Mwb6.0/57, Mwc5.9/72, Mww5.9, ML5.6(ARE), Mwc6.0(GCMT), Error ellipse: s-maj=10.9km s-min=7.3km az=56.0, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr1.00; Mθθ-0.58; Mφφ-0.42; Mrθ-0.30; Mθφ0.36; Mφr0.92; Fault plane solution: M0 1.35000×10^18 NP1: φs117.75000°, δ25.40000°, λ59.71000°. NP2: φs330.64000°, δ68.26000°, λ103.47000°. Principal axes: T 1.4571, Plg64.0000°, Azm263.0000°; N -0.2495, Plg12.0000°, Azm146.0000°; P -1.2075, Plg22.0000°, Azm50.0000°;
NEIC 18 23:35:59, 14.°27S×75.°51W, h70km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr5.48; Mθθ-4.05; Mφφ-1.43; Mrθ-1.79; Mθφ2.68; Mφr7.73; Fault plane solution: M0 9.71000×10^17 NP1: φs104.00000°, δ24.00000°, λ42.00000°. NP2: φs335.00000°, δ74.00000°, λ109.00000°. Principal axes: T 10.4884, Plg57.0000°, Azm270.0000°; N -1.8072, Plg18.0000°, Azm150.0000°; P -8.6813, Plg27.0000°, Azm50.0000°;
IDC 18 23:35:59.0±0.5, 14.°14S×75.°64W, h61km±4km, mb5.3/41, mb1 5.4/46, mb1mx5.4/46, mbtmp5.6/46, MS5.3/30, Ms1 5.3/30, ms1mx5.2/37 Error ellipse: s-maj=9.4km s-min=5.1km az=64.0
GCMT 18 23:36:01.3±0.1, 14.°18S±0.°01×75.°69W±0.°01, h76km, MW5.9/157, Moment Tensor Solution. s157, c341; s155, c441; Duration: 2s2 Moment tensor: Scale 10^18 Nm; Mrr0.49±.01; Mθθ-0.46±.01; Mφφ-0.03±.01; Mrθ-0.14±.01; Mθφ0.39±.01; Mφr0.72±.01; Best double couple: M0 0.94900×10^18 NP1: φs93.00000°, δ32.00000°, λ33.00000°. NP2: φs334.00000°, δ73.00000°, λ118.00000°. Principal axes: T 1.0010, Plg54.0000°, Azm278.0000°; N -0.1050, Plg27.0000°, Azm145.0000°; P -0.8960, Plg23.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function
NEIC 18 23:36:12.2, 13.°90S×75.°56W, h56km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr5.43; Mθθ-5.40; Mφφ-0.04; Mrθ-2.28; Mθφ3.30; Mφr6.51; Fault plane solution: M0 9.34000×10^17 NP1: φs325.52000°, δ70.79000°, λ115.86000°. NP2: φs89.70000°, δ31.81000°, λ38.63000°. Principal axes: T 9.7623, Plg56.0000°, Azm269.0000°; N -0.8372, Plg24.0000°, Azm136.0000°; P -8.9250, Plg22.0000°, Azm36.0000°;
ISC 18 23:35:58.2±0.4, 14.°21S±0.°03×75.°66W±0.°04, h59km±3km, h59km:pP-P, n1702, σ1§47/1520, mb5.8/406, MS6.6/65, 41C-6D, Near coast of Peru

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NNA Nana 2.49 332 P Pn 23 36 36.8 +0.4
940nm,0.3s,baz=158,slow=13,SNR=238
NNA S Sn 23 37 05.7 +0.1
11μm,0.3s,baz=277,slow=17,SNR=18
NNA LR LR 23 37 25.5
comp=Z,46μm,20.9s,baz=200,slow=35
NNA Nana 2.49 332 Pn 23 36 36.2 -0.1
NNA Sn Sn 23 37 04.9 -0.7
NNA Nana 2.49 332 c iP Pn 23 36 35.0 -1.3
NNA pmax pmax
comp=Z,9μm,0.9s
AP01 Chacalluta 6.58 130 eP Pn 23 37 32.1 -0.2
PB16 IPOC Station P 7.20 126 ⇑iP Pn 23 37 42.0 +0.7
ATAH Atahualpa 7.52 339 P Pn 23 37 47.1 +1.4
comp=Z,16nm,0.3s,baz=180,slow=4.1,SNR=94
ATAH S Sn 23 39 09.9 +0.1
comp=Z,66nm,0.3s,baz=152,slow=14,SNR=4.4
PSGCX Pisagua 7.54 136 ⇑iP Pn 23 37 44.4 -1.2
PSGCX iS Sn 23 39 06.9 -2.9
LPAZ La Paz 7.56 107 ⇑iP Pn 23 37 49.8 +3.4
LPAZ iS Sn 23 39 15.3 +4.3
LPAZ La Paz 7.56 107 P Pn 23 37 49.0 +2.7
comp=Z,15nm,0.3s,baz=300,slow=12,SNR=246
LPAZ S Sn 23 39 11.8 +0.9
baz=278,slow=14,SNR=1.7
LPAZ La Paz 7.56 107 eP Pn 23 37 51.3 +4.9
LPAZ La Paz 7.56 107 Pn 23 37 49.4 +3.1
MNMC Minye Minye 7.60 131 Pn Pn 23 37 46.6 0.0
MNMCX Minye Minye 7.60 131 eP Pn 23 37 46.0 -0.6
PB11 IPOC Station P 7.97 135 ⇑iP Pn 23 37 50.1 -1.5
PB11 IPOC Station P 7.97 135 Pn 23 37 51.5 -0.1
GO01 Chusmiza 8.23 132 Pn 23 37 55.2 -0.3
PB08 IPOC Station P 8.57 134 ⇓iP Pn 23 37 59.4 -0.7
PB02 IPOC Station P 8.96 143 ⇓iP Pn 23 38 04.1 -0.9
PB01 IPOC Station P 8.99 140 ⇑iP Pn 23 38 05.0 -0.5
PB01 IPOC Station P 8.99 140 Pn 23 38 05.9 +0.4
PB03 IPOC Station P 9.61 145 ⇓iP Pn 23 38 13.2 -0.8
PB03 iS Sn 23 39 56.2 -4.4
PB04 IPOC Station P 9.63 148 Pn 23 38 14.2 -0.1
PB05 IPOC Station P 10.04 150 eP Pn 23 38 18.5 -1.3
PB10 IPOC Station P 10.44 153 Pn 23 38 24.3 -0.9
LVC Limon Verde 10.53 144 P Pn 23 38 28.1 +1.4
comp=Z,63nm,0.3s,baz=327,slow=9.4,SNR=249
LVC S Sn 23 40 23.9 +0.5
comp=Z,35nm,0.3s,baz=86,slow=19,SNR=7.0
LVC LR LR 23 42 50.0
comp=Z,4μm,18.3s,baz=314,slow=39
LVC Limon Verde 10.53 144 eP Pn 23 38 24.1 -2.6
LVC Limon Verde 10.53 144 Pn 23 38 27.5 +0.7
GO02 Mina Guanaco 12.31 153 Pn 23 38 50.8 -0.1
SAML Samuel 13.29 68 eP Pn 23 39 01.2 -2.9
SAML Samuel 13.29 68 Pn 23 39 01.2 -2.9
SAML Samuel 13.29 68 P Pn 23 39 01.3 -2.9
SIV San Ignacio 14.20 99 P Pn 23 39 13.6 -2.8
comp=Z,1.8nm,0.3s,baz=285,slow=14,SNR=71
SIV S Sn 23 41 55.6 +3.0
comp=Z,3.3nm,0.3s,baz=37,slow=20,SNR=1.8
SIV LR LR 23 45 19.6
comp=Z,73μm,19.9s,baz=294,slow=40
GO03 Copiap 14.25 160 Pn 23 39 17.5 +0.5
PTLC Puerto Leguiza 14.31 4 eP Pn 23 39 09.2 -8.7
OTAV Otavalo 14.61 349 eP P 23 39 26.0 -1.1
OTAV Otavalo 14.61 349 Pn 23 39 23.9 +1.7
OTAV Otavalo 14.61 349 P Pn 23 39 23.9 +1.7
CMBC Cumbal 15.20 352 eP Pn 23 39 34.3 +0.6
CPAS1 Pasto 15.38 354 eP P 23 39 35.4 -0.3
CPAS2 Pasto 15.41 354 eP P 23 39 38.6 +2.7
GCUF Volcan Galeras 15.42 354 eP Pn 23 39 33.3 +0.6
CCUFI Cufio, Nario 15.42 354 eP P 23 39 34.7 -1.6
FLOC Florencia 15.69 0 Pn 23 39 35.8 +0.2
BBAC Balboa, Cauca 16.20 354 eP Pn 23 39 41.8 -0.5
TUMC Tumaco 16.21 349 eP P 23 39 45.6 +1.1
TUMC Tumaco 16.21 349 Pn Pn 23 39 42.1 -0.2
MACC Macarena, Meta 16.34 6 eP Pn 23 39 44.8 +0.8
GO04 Tololo Obserba 16.51 165 eP Pn 23 39 47.0 +0.8
GO04 IAmb IAmb 23 39 51.9
comp=Z,2μm,1.6s
GO04 Tololo Obserba 16.51 165 Pn Pn 23 39 46.8 +0.5
POPC Popayan, Colom 16.67 356 eP Pn 23 39 47.9 -0.4
GUVC San Jose del G 16.91 10 eP P 23 39 52.7 +0.5
GR1C Gorgona, Isla 17.28 352 eP P 23 39 58.8 +2.5
PRAC Prado 17.82 3 eP Pn 23 40 01.6 -0.6
ORTC Ortega, Tolima 18.00 1 eP Pn 23 40 09.8 +5.4
YOTC Yotoco, Valle 18.08 358 eP Pn 23 40 13.2 +7.7
YOTC Yotoco, Valle 18.08 358 eP Pn 23 40 08.6 +3.0
CFA Coronel Fontan 18.61 160 P Pn 23 40 12.7 +1.0
comp=Z,6.4nm,0.3s,baz=338,slow=10,SNR=228
CFA S S 23 43 41.3 +1.5
comp=Z,0.5nm,0.3s,baz=258,slow=14,SNR=1.8
CFA LR LR 23 46 29.1
comp=Z,9μm,20.4s,baz=334,slow=34
PTGC Puerto Gaitan, 18.62 11 eP Pn 23 40 11.9 +0.1
CVER Cruz Verde, Cu 18.67 5 eP Pn 23 40 15.5 +2.5
CHIC Chingaza 18.81 6 eP Pn 23 40 16.4 +1.8
ROSC El Rosal 18.97 4 P Pn 23 40 18.3 +1.8
comp=Z,9.3nm,0.3s,baz=161,slow=11,SNR=24
ROSC S Sn 23 43 49.3 +0.8
comp=Z,4.0nm,0.3s,baz=163,slow=18,SNR=2.8
ROSC LR LR 23 48 57.3
comp=Z,13μm,18.2s,baz=218,slow=41
ROSC El Rosal 18.97 4 eP Pn 23 40 17.9 +1.4
ROSC El Rosal 18.97 4 P Pn 23 40 18.1 +1.7
PLMC San Jos del P 19.00 358 eP Pn 23 40 18.2 +1.7
PIZC Pizarro, Choco 19.12 355 eP Pn 23 40 18.9 +1.0
CTAB Cerro Tablazo, 19.15 4 eP Pn 23 40 22.4 +3.8
ROC1 El Roble 19.16 168 P Pn 23 40 17.8 +0.7
CTAU Tausa, Cundina 19.35 5 eP Pn 23 40 33.0 +12
SALV Santo Antonio 19.36 98 eP P 23 40 19.3 +0.2
PEL Peldehue 19.39 167 ⇑iP Pn 23 40 21.1 0.0
PEL IAmb IAmb 23 40 27.7
comp=Z,2μm,1.2s
PEL Peldehue 19.39 167 P P 23 40 19.6 +0.2
PEL IAmb IAmb 23 40 26.9
comp=Z,810nm,1.1s
PEL Peldehue 19.39 167 P P 23 40 19.6 +0.2
PEL pmax pmax
comp=Z,810nm,1.1s
FCH Farellones 19.65 167 ⇑iP Pn 23 40 24.9 +0.5
FCH IAmb IAmb 23 40 27.6
comp=Z,345nm,0.8s
NORC Norcasia 19.66 2 eP Pn 23 40 24.4 +0.1
CLDB Colider 19.67 83 eP P 23 40 21.4 -1.2
PAYG Puerto Ayora 19.75 312 P P 23 40 23.9 +0.5
SPBC San Pablo de B 19.79 5 eP Pn 23 40 26.3 +0.4
CBOC Ciudad Bolivar 19.94 359 eP Pn 23 40 27.1 -0.7
AQDB Aquidauana 20.04 111 eP Pn 23 40 28.4 -0.3
RUSC La Rusia 20.13 7 eP Pn 23 40 29.6 -0.8
LMEL Las Melosas 20.17 167 ⇑iP Pn 23 40 30.4 0.0
LMEL IAmb IAmb 23 40 32.1
comp=Z,815nm,1.0s
HELC Santa Helena 20.26 0 eP Pn 23 40 32.8 +1.0
PP1B Ponte de Pedra 20.27 102 eP P 23 40 29.5 +0.4
SOLC Bahia Solano 20.37 355 eP Pn 23 40 35.4 +2.7
PTBC PUERTO BERRIO, 20.64 3 eP P 23 40 33.3 +0.2
TAMC Tame, Arauca 20.86 11 eP Pn 23 40 37.3 -1.2
CPUP Villa Florida 20.98 128 P P 23 40 37.4 +0.8
comp=Z,176nm,1.0s,baz=307,slow=11,SNR=118
CPUP S S 23 44 27.8 +0.7
comp=Z,11nm,1.0s,baz=0.0,slow=20,SNR=1.7
CPUP Villa Florida 20.98 128 eP P 23 40 38.0 +1.4
CPUP Villa Florida 20.98 128 P P 23 40 36.3 -0.3
GO05 Huala 20.99 171 P P 23 40 37.7 +1.0
GO05 IAmb IAmb 23 40 39.4
comp=Z,620nm,1.1s
DBBC Dabeiba 21.09 358 eP P 23 40 36.1 -1.9
BRRC Barranca, Sant 21.26 5 eP P 23 40 39.6 -0.1
PTAC Punta Ardita, 21.32 354 eP P 23 40 39.8 -0.5
ZARC Zaragoza, Cauc 21.57 2 eP P 23 40 43.8 +0.8
PAMC Pamplona, Colo 21.61 8 eP P 23 40 46.4 +2.4
UREC San Jos de Ur 21.82 0 eP P 23 40 48.8 +3.2
ELOV Elorza 21.94 17 eP P 23 40 46.6 -0.4
AZU Azuero 22.33 348 eP P 23 40 51.5 +0.4
C2SB Chapadao do Su 22.34 105 eP P 23 40 52.4 +1.1
OCAC Ocana 22.42 6 eP P 23 40 51.6 -0.7
SMLC San Martn de 22.91 4 eP P 23 40 57.4 +0.1
LCBC Los crdobas, 22.92 358 eP P 23 40 58.9 +1.4
TRCB Terra Rica 23.43 115 eP P 23 41 02.0 -0.4
SDV Santo Domingo 23.48 13 P P 23 41 04.1 +1.0
comp=Z,260nm,0.9s,baz=192,slow=7.5,SNR=102
SDV S S 23 45 12.3 -0.3
comp=Z,42nm,0.9s,baz=292,slow=18,SNR=2.3
SDV LR LR 23 51 11.4
comp=Z,22μm,20.9s,baz=202,slow=39
SDV Santo Domingo 23.48 13 eP P 23 41 03.9 +0.9
SDV Santo Domingo 23.48 13 eP P 23 41 03.6 +0.6
SDV Santo Domingo 23.48 13 P P 23 41 03.3 +0.3
BCIP Isla Barro Col 23.59 350 eP P 23 41 05.1 +1.3
BCIP Isla Barro Col 23.59 350 IAmb IAmb 23 41 19.9
comp=Z,192nm,1.0s
ARGC Ariguani, Magd 23.95 3 eP P 23 41 07.9 +0.8
SJCC San Jacinto, C 23.95 1 eP P 23 41 07.8 +0.6
CODC Agustn Codazz 24.09 5 eP P 23 41 07.1 -1.2
PCMB Pacaembu 24.34 111 eP P 23 41 11.3 +0.6
PTGB Pitanga 24.54 119 eP P 23 41 13.1 +0.5
ITRB Iturama 24.80 106 eP P 23 41 16.4 +1.5
SMRC Santa Marta, M 25.25 3 eP P 23 41 18.8 -0.1
DABV Dabajuro 25.46 12 eP P 23 41 25.3 +4.4
ITAB Concordia 25.48 124 eP P 23 41 20.9 -0.1
URIC Uribia, Colomb 26.00 8 eP P 23 41 29.8 +4.1
URIC Uribia, Colomb 26.00 8 eP P 23 41 24.3 -1.4
JTS Las Juntas de 26.02 339 P P 23 41 28.1 +2.1
comp=Z,96nm,1.1s,baz=241,slow=3.8,SNR=35
JTS S S 23 45 50.8 -2.1
comp=Z,13nm,1.1s,baz=190,slow=15,SNR=1.4
JTS LR LR 23 50 20.4
comp=Z,4μm,21.4s,baz=216,slow=33
JTS Las Juntas de 26.02 339 P P 23 41 27.2 +1.2
JTS Las Juntas de 26.02 339 iP P 23 41 27.8 +1.8
JTS pmax pmax
comp=Z,466nm,1.6s
CPSB Cacapava Do Su 26.05 132 eP P 23 41 25.6 -0.5
LPA La Plata 26.09 145 eP P 23 41 18.2 -8.2
LPA pP pP 23 41 38.0 -3.0
LPA S S 23 45 51.5 -2.1
LPA SS SnSn 23 46 53.7 -3.2
LPA SSS SSS 23 47 08.1
LPA PKIKP PKiKP 23 52 31.9 -0.4
LPA SKIKP 23 55 55.9
FRTB Fartura 26.29 114 eP P 23 41 30.0 +1.5
PCRV Puerto La Cruz 26.58 25 P P 23 41 31.7 +0.7
comp=Z,108nm,0.9s,baz=188,slow=5.7,SNR=13
PCRV S S 23 46 00.5 -1.2
comp=Z,21nm,0.9s,baz=218,slow=19,SNR=2.2
PCRV LR LR 23 52 51.0
comp=Z,27μm,20.3s,slow=38
PLCV Puerto La Cruz 26.59 25 S 23 46 00.5 -1.3
IPMB Ipameri, GO 26.63 102 eP P 23 41 31.1 -0.5
PLTB Pedras Altas 26.70 135 eP P 23 41 30.3 -1.7
BB19B Bebedouro 26.72 109 eP P 23 41 33.0 +0.7
BDFB Brasilia 26.75 97 P P 23 41 32.8 0.0
comp=Z,50nm,0.9s,baz=261,slow=9.2,SNR=43
BDFB LR LR 23 52 51.6
comp=Z,27μm,20.8s,baz=276,slow=38
BDFB Brasilia 26.75 97 P P 23 41 32.3 -0.4
PLCA Paso Flores 26.80 171 P P 23 41 33.3 +0.4
comp=Z,170nm,1.0s,baz=7.7,slow=9.8,SNR=155
PLCA PcP PcP 23 44 54.9 +0.3
comp=Z,19nm,0.8s,baz=3.3,slow=4.7,SNR=3.1
PLCA S S 23 46 03.0 -1.9
comp=Z,6.7nm,0.9s,baz=176,slow=19,SNR=1.2
PLCA LR LR 23 50 17.4
comp=Z,5μm,20.6s,baz=6.0,slow=32
PLCA Paso Flores 26.80 171 eP P 23 41 33.2 +0.3
PLCA Paso Flores 26.80 171 P P 23 41 33.0 +0.1
PLCA IAmb IAmb 23 41 34.7
comp=Z,322nm,1.1s
TIJ01 Guaruva-PR 27.36 118 eP P 23 41 39.0 +0.9
CNLB Canela 27.43 127 eP P 23 41 38.5 -0.1
OGAUY Aigu 27.58 140 eP P 23 41 39.9 +0.1
ACON Acoyapa 27.66 340 P P 23 41 40.7 0.0
ACON IAmb IAmb 23 41 43.1
comp=Z,215nm,1.1s
ACON PcP 23 44 56.9 +0.1
RCLB Rio Claro- Sao 27.89 111 eP P 23 41 43.6 +0.8
SMTB Santa Maria do 28.00 82 eP P 23 41 44.1 +0.2
GUIV Guiria 28.06 29 eP P 23 41 45.9 +1.7
GUIV Guiria 28.06 29 e P 23 41 53.6 +9.4
TPP Pointe-a-Pierr 28.15 31 eP P 23 41 48.6 +3.6
TPP Pointe-a-Pierr 28.15 31 e P 23 41 58.4 +13
SPB Sao Paulo 28.25 114 eP P 23 41 47.4 +1.5
TER01 Tubaro-SC 28.44 124 eP P 23 41 49.5 +1.9
TRN Trinidad (W) 28.45 31 eP P 23 41 49.2 +1.4
TBH Brigand Hill 28.48 31 eP P 23 42 00.2 +12
VAO Valinhos 28.53 112 eP P 23 41 50.7 +2.2
TOSP Speyside 29.45 31 eP P 23 41 58.4 +1.9
TOSP Speyside 29.45 31 e P 23 42 14.6 +18
TOSP Speyside 29.45 31 P P 23 41 55.1 -1.5
TOSP IAmb IAmb 23 42 10.2
comp=Z,149nm,1.1s
GRGR Grenville 29.62 29 eP P 23 41 58.3 +0.1
GRGR Grenville 29.62 29 e P 23 42 10.7 +13
GRGR Grenville 29.62 29 P P 23 41 58.3 +0.1
GRHS Sauteurs 29.71 29 eP P 23 41 59.0 +0.1
GRHS Sauteurs 29.71 29 e P 23 42 11.3 +12
GRSS Sisters 29.79 29 eP P 23 41 56.7 -2.9
GRSS Sisters 29.79 29 e P 23 42 14.8 +15
PARB Paraibuna 29.81 112 eP P 23 42 01.6 +1.7
MDP Montagnes des 29.82 52 P P 23 42 00.2 +0.2
comp=Z,33nm,0.9s,baz=198,slow=3.2,SNR=4.5
MDP S S 23 46 49.4 -3.5
comp=Z,19nm,0.8s,baz=92,slow=18,SNR=1.8
BSCB Bom Sucesso 30.17 107 eP P 23 42 03.7 +0.6
JANB Januaria 30.34 96 eP P 23 42 04.1 -0.5
SNET Serv Nac Est T 30.80 334 P P 23 42 09.9 +1.3
SVB Belmont 30.81 28 eP P 23 42 07.0 -1.7
SVB Belmont 30.81 28 e P 23 42 21.8 +13
SVB Belmont 30.81 28 P P 23 42 07.0 -1.7
SVB Belmont 30.81 28 IAmb IAmb 23 42 22.5
comp=Z,248nm,1.0s
SVCV St. Vincent, C 30.86 28 eP P 23 42 05.1 -3.9
SVCV St. Vincent, C 30.86 28 e P 23 42 22.2 +13
SVV Soufriere Volc 30.86 28 eP P 23 42 08.7 -0.4
SVV Soufriere Volc 30.86 28 e P 23 42 22.4 +13
SSV Crater Summit 30.88 28 eP P 23 42 05.4 -3.9
SSV Crater Summit 30.88 28 e P 23 42 22.3 +13
SLB Belfond 31.39 28 eP P 23 42 14.9 +1.1
SLB Belfond 31.39 28 e P 23 42 27.6 +14
BBGH Gun Hill 31.51 31 eP P 23 42 21.1 +6.3
VAS01 Vassouras-RJ 31.59 109 eP P 23 42 15.7 +0.2
FDF Fort de France 32.14 27 eP P 23 42 18.1 -2.3
FDF eS pP 23 42 33.4 -2.4
APG El Apazote 32.51 333 P P 23 42 25.6 +1.8
comp=Z,47nm,0.8s,baz=172,slow=7.4,SNR=50
APG PcP PcP 23 45 09.8 +0.1
comp=Z,24nm,0.7s,baz=175,slow=8.7,SNR=4.1
MDN Morne-Daniel 32.55 26 eP P 23 42 23.2 -0.7
MDPO Dominica; Chan 32.76 26 eP P 23 42 23.7 -2.0
MDPO Dominica; Chan 32.76 26 e P 23 42 40.2 +15
SDD Santo Domingo 32.95 10 P P 23 42 27.6 +0.3
MLPR Magueyes Islan 33.08 15 P P 23 42 27.6 -0.9
MLPR IAmb IAmb 23 42 31.2
comp=Z,188nm,0.8s
SJMB Sao Joao De Ma 33.33 102 eP P 23 42 31.4 +0.6
PDPR Patillas Dam, 33.40 17 IAmb IAmb 23 42 36.1
comp=Z,117nm,0.8s
SJG San Juan 33.45 17 P P 23 42 31.9 +0.2
comp=Z,126nm,0.9s,baz=211,slow=3.6,SNR=28
SJG LR LR 23 57 27.8
comp=Z,7μm,19.4s,baz=160,slow=39
SJG San Juan 33.45 17 P P 23 42 31.1 -0.7
SJG IAmb IAmb 23 42 42.5
comp=Z,147nm,0.8s
MLYT Lee's Yard 33.49 24 eP P 23 42 31.6 -0.5
MLYT Lee's Yard 33.49 24 e P 23 42 46.4 +14
HUMP Col San Antoni 33.57 17 IAmb IAmb 23 42 47.1
comp=Z,68nm,0.8s
MTP Monte Pirata 33.61 18 IAmb IAmb 23 42 47.6
comp=Z,106nm,0.9s
BSFB Barra de Sao F 33.66 103 eP P 23 42 33.9 +0.2
GCPR Guaynabo City 33.66 17 IAmb IAmb 23 42 50.4
comp=Z,168nm,1.0s
CBYP Canovanas 33.69 17 P P 23 42 33.8 -0.1
FSCY Frank Sound, G 33.75 351 P P 23 42 34.8 +0.5
SKI Saint Kitts 33.84 23 eP P 23 42 35.9 +0.8
SKI Saint Kitts 33.84 23 e P 23 42 50.0 +15
SKI Saint Kitts 33.84 23 P P 23 42 35.9 +0.8
SKI Saint Kitts 33.84 23 P P 23 42 35.9 +0.8
SKI pmax pmax
comp=Z,537nm,1.1s
SEUS St. Eustatius 33.89 22 eP P 23 42 37.1 +1.5
RPN Rapa Nui 33.91 242 P P 23 42 37.2 +1.4
comp=Z,261nm,1.0s,baz=73,slow=5.2,SNR=12
RPN Rapa Nui 33.91 242 P P 23 42 37.1 +1.4
BPA Boggy Peak 33.91 24 eP P 23 42 35.7 -0.1
BPA Boggy Peak 33.91 24 e P 23 42 49.4 +14
SABA Saba 33.91 22 eP P 23 42 36.8 +1.0
GTBY Guantanamo Bay 33.92 1 IAmb IAmb 23 42 41.5
comp=Z,118nm,1.1s
I13CL EASTER ISLAND 33.93 242 i 03 02 40.0
baz=74,slow=337,SNR=1.2
CBCY The Bluff, Cay 33.97 353 P P 23 42 36.3 +0.1
SMRT St. Maarten 34.37 22 eP P 23 42 38.4 -1.3
SMRT St. Maarten 34.37 22 P P 23 42 38.4 -1.3
CCIG Comitan 34.39 331 IAmb IAmb 23 42 54.2
comp=Z,84nm,1.0s
ANWB Willy Bob 34.50 24 eP P 23 42 39.3 -1.6
ANWB Willy Bob 34.50 24 e P 23 42 53.5 +13
ANWB Willy Bob 34.50 24 P P 23 42 39.3 -1.6
NBPN Ponto Novo - B 34.76 89 eP P 23 42 42.7 -0.6
NBIT Itapeh - BA 35.05 96 eP P 23 42 46.0 +0.3

NBPS Pedro II - PI 35.10 77 eP P 23 42 45.8 -0.4
TEIG Tepich 36.40 340 P P 23 42 57.8 +0.7
comp=Z,417nm,1.2s,baz=139,slow=4.0,SNR=45
TEIG Tepich 36.40 340 P P 23 42 57.3 +0.2
CMIG Matias Romero 36.43 328 P P 23 42 58.5 +1.1
comp=Z,55nm,0.9s,baz=139,slow=5.4,SNR=55
CMIG PcP PcP 23 45 21.1 +0.4
comp=Z,26nm,0.8s,baz=84,slow=1.3,SNR=4.2
NBPB Pedra_Branca-C 36.53 80 eP P 23 42 58.8 +0.4
NBMO Morrinhos-CE 36.77 76 eP P 23 43 00.3 -0.1
NBMA Muriti-CE 36.84 83 eP P 23 43 01.4 +0.2
GO09 Cerro Castillo 37.07 177 P P 23 43 03.5 +0.9
NBLA Lagarto - SE 37.07 89 eP P 23 43 01.8 -1.2
NBTA Tacaratu-PE 37.14 86 eP P 23 43 03.6 0.0
NBCL Cascavel-CE 38.14 79 eP P 23 43 12.4 +0.4
NBLI Livramento-PB 38.59 84 eP P 23 43 15.9 -0.1
NBAN Anadia - AL 38.77 88 eP P 23 43 16.8 -0.6
TLIG Tlapa 38.82 324 P P 23 43 18.8 +1.0
NBPA Parau_RN 38.84 81 eP P 23 43 18.4 +0.5
GO10 Punta Arenas 39.03 176 IAmb IAmb 23 43 32.5
comp=Z,153nm,1.1s
EFI East Falkland 39.97 163 P P 23 43 27.4 +0.6
EFI IAmb IAmb 23 43 28.0
comp=Z,165nm,1.0s
EFI East Falkland 39.97 163 i P P 23 43 27.1 +0.3
EFI pmax pmax
comp=Z,216nm,1.2s
RCBR Riachuelo 39.98 82 P P 23 43 28.0 +0.5
comp=Z,23nm,0.9s,baz=249,slow=10,SNR=8.7
RCBR Riachuelo 39.98 82 eP P 23 43 28.0 +0.5
RCBR Riachuelo 39.98 82 P P 23 43 27.1 -0.4
NBRF Rio Formoso - 40.07 87 eP P 23 43 27.9 -0.3
061Z Ochoppi 40.16 353 IAmb IAmb 23 43 33.2
comp=Z,160nm,1.1s
NBPV Pedro Velho 40.41 83 eP P 23 43 31.6 +0.5
USHA Ushuaia 40.93 174 P P 23 43 35.8 +1.1
comp=Z,152nm,0.9s,baz=292,slow=2.5,SNR=38
DWPF Disney Wildern 42.44 352 P P 23 43 46.9 -0.4
DWPF Disney Wildern 42.44 352 P P 23 43 46.7 -0.6
baz=172
656A Willston 43.82 351 IAmb IAmb 23 43 58.9
comp=Z,109nm,1.0s
456A Hilliard 45.09 352 IAmb IAmb 23 44 09.9
comp=Z,162nm,1.1s
ZAIG Zacatecas 45.22 324 P P 23 44 10.9 +0.8
451A Vernon 45.61 348 IAmb IAmb 23 44 16.5
comp=Z,120nm,1.1s
TIGA Tifton 46.02 351 IAmb IAmb 23 44 16.1
comp=Z,97nm,1.1s
TIGA Tifton 46.02 351 P P 23 44 15.1 -0.8
baz=169,SNR=6.4
TIGA S S 23 50 55.4 -1.5
baz=169
257A Skidaway Islan 46.20 354 IAmb IAmb 23 44 24.3
comp=Z,148nm,1.1s
352A Blakely 46.28 349 IAmb IAmb 23 44 30.9
comp=Z,110nm,1.1s
BRAL Brewton 46.42 346 IAmb IAmb 23 44 28.1
comp=Z,156nm,1.1s
BRAL Brewton 46.42 346 P P 23 44 19.0 -0.1
baz=165,SNR=7.3
KVTX Kingsville 46.77 333 P P 23 44 23.0 +1.1
158A Hollywood 46.88 355 P P 23 44 22.5 -0.1
baz=174
157A Early Branch 46.90 354 P P 23 44 22.5 -0.2
baz=173,SNR=6.6
250A Grady 47.03 348 IAmb IAmb 23 44 40.0
comp=Z,69nm,1.0s
346A Big Creek Wild 47.23 344 IAmb IAmb 23 44 29.7
comp=Z,90nm,0.9s
NHSC New Hope 47.24 355 IAmb IAmb 23 44 26.4
comp=Z,181nm,1.1s
NHSC New Hope 47.24 355 P P 23 44 25.6 +0.1
baz=174,SNR=14
Z59A Georgetown, SC 47.30 356 P P 23 44 26.1 +0.1
baz=175,SNR=7.1
152A Waverly Hall 47.41 350 IAmb IAmb 23 44 39.3
comp=Z,78nm,1.1s
Z58A St. Stephen 47.44 355 P P 23 44 26.9 -0.1
baz=174,SNR=12
Z57A Bowman 47.48 354 P P 23 44 27.0 -0.3
baz=173,SNR=10
BBSR BB Station 47.49 13 P P 23 44 27.3 -0.1
BBSR IAmb IAmb 23 44 33.7
comp=Z,90nm,1.1s
Z56A Williston 47.58 354 IAmb IAmb 23 44 33.1
comp=Z,132nm,1.1s
Z56A Williston 47.58 354 P P 23 44 27.8 -0.2
baz=172
H06S1 SOCORRO T 47.76 312 P P 23 44 30.9 +1.2
H06E1 SOCORRO T-PHAS 47.76 312 P P 23 44 31.0 +1.2
H06N1 SOCORRO T-PHAS 47.86 312 P P 23 44 31.1 +0.6
GOGA Godfrey 47.93 351 IAmb IAmb 23 44 30.9
comp=Z,101nm,1.1s
GOGA Godfrey 47.93 351 P P 23 44 30.0 -0.8
baz=170
Y58A Scranton 47.99 356 P P 23 44 30.8 -0.4
baz=175,SNR=12
Y60A Bolivia 48.00 357 P P 23 44 31.2 -0.1
baz=177,SNR=7.3
HKT Hockley 48.01 336 P P 23 44 31.6 +0.3
HKT Hockley 48.01 336 i P P 23 44 31.7 +0.3
HKT pmax pmax
comp=Z,402nm,1.7s
Y59A Loris 48.02 356 IAmb IAmb 23 44 32.1
comp=Z,88nm,1.1s
Y59A Loris 48.02 356 P P 23 44 31.1 -0.4
baz=176
Y56A Pelion 48.03 354 P P 23 44 31.0 -0.6
baz=173
833A Chaparral WMA, 48.12 332 IAmb IAmb 23 44 40.3
comp=Z,91nm,1.1s
833A Chaparral WMA, 48.12 332 P P 23 44 33.0 +0.7
baz=148,SNR=22
Y57A Sumter 48.16 355 P P 23 44 32.3 -0.3
baz=174,SNR=11
Z50A Ashland 48.20 348 IAmb IAmb 23 44 32.9
comp=Z,108nm,1.1s
Z50A Ashland 48.20 348 P P 23 44 32.2 -0.7
baz=167,SNR=6.8
LRAL Lakeview Retre 48.21 347 IAmb IAmb 23 44 49.7
comp=Z,72nm,1.0s
LRAL Lakeview Retre 48.21 347 P P 23 44 32.1 -0.8
baz=165,SNR=52
Y55A Saluda 48.24 353 P P 23 44 32.8 -0.3
baz=172,SNR=42
VBMS Vicksburg 48.30 343 P P 23 44 33.8 +0.1
VBMS IAmb IAmb 23 44 38.3
comp=Z,137nm,1.1s
VBMS PcP 23 46 00.2 +0.5
VBMS Vicksburg 48.30 343 P P 23 44 33.5 -0.2
baz=161,SNR=6.3
Y52A Lilburn 48.47 351 P P 23 44 34.1 -0.8
baz=169,SNR=17
X60A Albert Glenn T 48.56 357 P P 23 44 35.4 -0.2
baz=177
HODGE Hodges 48.57 353 IAmb IAmb 23 44 36.0
comp=Z,74nm,1.1s
X57A Johnson Farm, 48.58 355 P P 23 44 35.4 -0.4
baz=174
X59A McDuffie Farm, 48.59 357 P P 23 44 35.6 -0.2
baz=176,SNR=5.7
X58A Rowland 48.62 356 IAmb IAmb 23 44 36.6
comp=Z,88nm,1.0s
X58A Rowland 48.62 356 P P 23 44 35.5 -0.5
baz=175,SNR=8.9
X56A White Oak 48.70 354 P P 23 44 36.1 -0.5
baz=173,SNR=35
X55A Gracelyn & Ava 48.74 353 P P 23 44 36.6 -0.4
baz=172,SNR=24
BIRD Birdtown, Kers 48.79 355 IAmb IAmb 23 44 37.9
comp=Z,98nm,1.0s
X54A Belton 48.90 353 P P 23 44 37.8 -0.4
baz=171,SNR=30
X53A Estanollee 48.98 352 P P 23 44 38.2 -0.7
baz=170,SNR=23
143A Socs Landing, 49.01 342 IAmb IAmb 23 44 57.1
comp=Z,77nm,1.1s
W60A Pink Hill 49.02 358 P P 23 44 38.4 -0.7
baz=177,SNR=6.5
W58A Raeford 49.07 356 P P 23 44 39.3 -0.2
baz=175,SNR=31
PAULI Pauline 49.10 353 IAmb IAmb 23 44 40.2
comp=Z,100nm,1.0s
W61A Ground Anchor 49.13 359 P P 23 44 40.2 +0.3
baz=178,SNR=7.5
X52A Dahlonega 49.16 351 P P 23 44 39.6 -0.7
baz=169,SNR=32
W59A Clinton 49.17 357 P P 23 44 40.1 -0.2
baz=176,SNR=8.3
NATX Nacogdoches 49.20 339 P P 23 44 41.7 +1.1
baz=155,SNR=5.2
CNNC Cliffs of the 49.22 358 IAmb IAmb 23 44 46.5
comp=Z,108nm,1.1s
CNNC Cliffs of the 49.22 358 P P 23 44 40.3 -0.3
baz=177,SNR=7.6
W57A Gilead 49.26 355 P P 23 44 40.7 -0.3
baz=174,SNR=34
X51A Calhoun 49.28 350 IAmb IAmb 23 44 58.3
comp=Z,64nm,1.1s
X51A Calhoun 49.28 350 P P 23 44 40.5 -0.7
baz=168,SNR=18
W56A Indian Trail 49.29 355 P P 23 44 40.7 -0.5
baz=174,SNR=26
KMSC Kings Mountain 49.37 354 IAmb IAmb 23 44 42.3
comp=Z,124nm,1.1s
KMSC Kings Mountain 49.37 354 P P 23 44 41.5 -0.3
baz=173,SNR=37
W54A Cherokee Point 49.41 353 P P 23 44 41.8 -0.3
baz=172,SNR=32
BG3 Lake Jocassee 49.41 352 P P 23 44 41.6 -0.5
435B Jarrell 49.45 335 IAmb IAmb 23 44 43.7
comp=Z,136nm,1.1s
435B Jarrell 49.45 335 P P 23 44 43.0 +0.5
baz=152,SNR=7.4
X48A Hartselle 49.58 348 IAmb IAmb 23 44 55.3
comp=Z,66nm,1.1s
W53A Cullowhee 49.62 352 P P 23 44 43.2 -0.7
baz=170,SNR=43
W52A Murphy 49.65 351 IAmb IAmb 23 44 44.2
comp=Z,95nm,1.1s
W52A Murphy 49.65 351 P P 23 44 43.0 -1.0
baz=169,SNR=16
V60A Jim Taylor Roa 49.72 358 IAmb IAmb 23 45 03.9
comp=Z,97nm,1.1s
V60A Jim Taylor Roa 49.72 358 P P 23 44 44.3 -0.2
baz=178,SNR=6.7
V61A Roper 49.73 359 IAmb IAmb 23 44 49.6
comp=Z,114nm,1.1s
V61A Roper 49.73 359 P P 23 44 44.6 +0.1
baz=179,SNR=5.8
V59A Middlesex 49.76 357 P P 23 44 44.7 -0.1
baz=177,SNR=20
V58A Windy Hill, Pi 49.83 356 IAmb IAmb 23 44 45.7
comp=Z,114nm,1.1s
V58A Windy Hill, Pi 49.83 356 P P 23 44 44.9 -0.4
baz=176,SNR=34
W51A Cleveland 49.85 350 P P 23 44 44.8 -0.7
baz=168,SNR=31
V56A Mocksville 49.95 355 P P 23 44 45.8 -0.4
baz=174,SNR=47
Z41A Richland Creek 49.95 341 IAmb IAmb 23 44 49.9
comp=Z,97nm,0.9s
Z41A Richland Creek 49.95 341 P P 23 44 46.9 +0.6
baz=158,SNR=23
V57A Coltrane Farms 49.97 356 P P 23 44 45.9 -0.5
baz=175,SNR=21
W50A Signal Mountai 49.98 350 IAmb IAmb 23 44 46.4
comp=Z,96nm,1.0s
W50A Signal Mountai 49.98 350 P P 23 44 45.6 -0.9
baz=168,SNR=31
V55A Taylorsville 50.06 355 P P 23 44 46.5 -0.5
baz=173,SNR=19
V53A Saluda 50.06 352 P P 23 44 46.1 -1.1
baz=171,SNR=18
V54A Nebo 50.06 353 P P 23 44 46.6 -0.6
baz=172,SNR=41
W49A Belvidere 50.07 349 P P 23 44 45.6 -1.6
baz=166,SNR=32
CPCT Cooper Cave 50.09 351 P P 23 44 46.6 -0.7
CPCT IAmb IAmb 23 44 47.3
comp=Z,71nm,1.1s
JCT Junction City 50.14 333 IAmb IAmb 23 44 51.4
comp=Z,89nm,1.1s
JCT Junction City 50.14 333 P P 23 44 47.9 +0.1
baz=149,SNR=33
OXF Oxford 50.18 345 IAmb IAmb 23 45 00.8
comp=Z,132nm,1.1s
OXF Oxford 50.18 345 P P 23 44 46.5 -1.5
baz=162
CCAR Cane Creek 50.26 343 IAmb IAmb 23 45 00.9
comp=Z,64nm,1.0s
U61A Possum Corner 50.27 359 IAmb IAmb 23 45 02.8
comp=Z,106nm,1.1s
U61A Possum Corner 50.27 359 P P 23 44 48.7 +0.1
baz=179,SNR=8.1
U59A Littleton 50.32 358 IAmb IAmb 23 44 54.6
comp=Z,57nm,1.1s
U59A Littleton 50.32 358 P P 23 44 48.9 -0.2
baz=177,SNR=14
HOPE Hope Point 50.33 151 P P 23 44 49.7 +0.8
HOPE Hope Point 50.33 151 P P 23 44 49.7 +0.8
HOPE pmax pmax
comp=Z,231nm,1.0s
V52A Sevierville 50.34 352 P P 23 44 48.3 -0.9
baz=170,SNR=45
U58A Oxford 50.40 357 P P 23 44 49.2 -0.4
baz=176,SNR=18
V50A Pikeville 50.40 350 P P 23 44 48.7 -1.0
baz=168,SNR=26
V51A Loudon 50.41 351 IAmb IAmb 23 44 49.6
comp=Z,103nm,1.1s
V51A Loudon 50.41 351 P P 23 44 48.7 -1.0
baz=169,SNR=25
U60A Pendleton 50.42 358 P P 23 44 49.7 0.0
baz=178,SNR=7.7
WHTX Lake Whitney, 50.46 336 P P 23 44 50.3 +0.2
baz=152,SNR=62
U56A King 50.48 355 IAmb IAmb 23 44 51.0
comp=Z,140nm,1.1s
U56A King 50.48 355 P P 23 44 50.2 0.0
baz=174,SNR=23
U57A Blanch 50.48 356 P P 23 44 49.9 -0.3
baz=175,SNR=27
X43A Marvell 50.57 344 IAmb IAmb 23 45 03.9
comp=Z,89nm,1.1s
X43A Marvell 50.57 344 P P 23 44 50.7 -0.2
baz=161,SNR=12
V49A McMinnville 50.63 349 P P 23 44 50.1 -1.4
baz=167,SNR=26
U55A TA2, Sparta 50.69 354 P P 23 44 51.5 -0.4
baz=173,SNR=13
U53A Fall Branch 50.72 353 P P 23 44 51.0 -1.0
baz=171,SNR=21
V48A Smith Brothers 50.78 348 IAmb IAmb 23 44 52.2
comp=Z,129nm,1.1s
U54A Nelsons Funny 50.78 354 IAmb IAmb 23 44 52.8
comp=Z,104nm,1.1s
U54A Nelsons Funny 50.78 354 P P 23 44 51.8 -0.8
baz=172,SNR=23
U52A Thorn Hill 50.85 352 P P 23 44 52.0 -1.0
baz=170,SNR=24
MET Memphis--Engin 50.89 345 P P 23 44 52.9 -0.5
U51A La Follette 50.92 351 P P 23 44 52.5 -1.1
baz=170,SNR=16
T59A Double "B" Far 50.93 358 IAmb IAmb 23 44 54.4
comp=Z,86nm,1.0s
T59A Double "B" Far 50.93 358 P P 23 44 53.7 +0.1
baz=178,SNR=24
LPIG La Paz 50.94 318 P P 23 44 54.3 +0.4
comp=Z,18nm,0.3s,baz=114,slow=1.3,SNR=14
T58A Grand View Acr 50.95 357 P P 23 44 53.4 -0.3
baz=176,SNR=36
TZTN Tazewell 51.02 352 IAmb IAmb 23 44 54.2
comp=Z,85nm,1.1s
TZTN Tazewell 51.02 352 P P 23 44 53.3 -1.0
baz=170,SNR=18
TXAR Lajitas Array 51.04 328 P P 23 44 55.3 +0.6
comp=Z,76nm,1.0s,baz=149,slow=7.0,SNR=309
TXAR LR LR 00 05 37.1
comp=Z,994nm,19.5s,baz=0.0,slow=35
TXAR PKPPKP P'P'df 00 15 28.2 -7.2
comp=Z,1.2nm,1.1s,baz=323,slow=1.9,SNR=5.2
TXAR PKP2bc 00 15 56.5
comp=Z,0.7nm,1.0s,baz=319,slow=3.6,SNR=5.1
TXAR PKP2ab 00 16 21.1
comp=Z,1.2nm,1.1s,baz=222,slow=1.7,SNR=3.9
TX31 Lajitas Ar. Si 51.04 328 IAmb IAmb 23 44 55.9
comp=Z,115nm,1.1s
TX32 Lajitas Array 51.04 328 IAmb IAmb 23 44 55.9
comp=Z,117nm,1.1s
T57A Hurt 51.04 356 P P 23 44 54.3 -0.2
baz=176,SNR=54
T60A Surry 51.08 359 IAmb IAmb 23 45 01.8
comp=Z,115nm,1.0s
T60A Surry 51.08 359 P P 23 44 54.7 0.0
baz=179,SNR=7.1
U50A Jamestown 51.09 350 P P 23 44 53.6 -1.2
baz=168,SNR=30
X40A Basin Creek Fa 51.10 342 P P 23 44 54.6 -0.4
baz=158,SNR=14
T56A Rocky Mt 51.12 356 P P 23 44 55.2 +0.2
baz=174,SNR=28
PMSA Palmer Station 51.14 174 P P 23 44 56.3 +1.4
comp=Z,184nm,1.1s,baz=352,slow=5.6,SNR=10
PMSA pP pP 23 45 12.2 +1.8
comp=Z,136nm,1.1s,baz=352,slow=7.5,SNR=4.6
PMSA Palmer Station 51.14 174 eP P 23 44 56.2 +1.4
PMSA Palmer Station 51.14 174 P P 23 44 55.9 +1.1
UALR University of 51.22 342 IAmb IAmb 23 45 01.4
comp=Z,78nm,1.1s
T55A Pulaski 51.27 355 P P 23 44 56.1 -0.1
baz=174,SNR=26
T54A Tazewell 51.29 354 P P 23 44 55.6 -0.8
baz=173,SNR=22
T53A Wise 51.32 353 P P 23 44 55.7 -0.9
baz=171,SNR=16
BLA Blacksburg 51.34 355 IAmb IAmb 23 45 00.9
comp=Z,79nm,0.9s
BLA Blacksburg 51.34 355 P P 23 44 56.4 -0.3
baz=174,SNR=17
U49A Red Boiling Sp 51.34 350 P P 23 44 55.3 -1.4
baz=167,SNR=14
WVT Waverly 51.37 347 P P 23 44 55.0 -1.9
WVT Waverly 51.37 347 P P 23 44 55.0 -1.9
WVT pmax pmax
comp=Z,42nm,1.0s
WVT Waverly 51.37 347 P P 23 44 55.0 -1.9
baz=165
MIAR Mount Ida 51.39 341 IAmb IAmb 23 45 01.0
comp=Z,64nm,1.1s
MIAR Mount Ida 51.39 341 P P 23 44 57.0 -0.1
baz=158,SNR=58
T51A Gray 51.49 352 P P 23 44 57.0 -0.9
baz=170,SNR=51
T52A Hallie 51.50 353 IAmb IAmb 23 44 57.8
comp=Z,97nm,1.0s
T52A Hallie 51.50 353 P P 23 44 57.0 -0.9
baz=171,SNR=25
W41B Gary Mavity, V 51.57 343 IAmb IAmb 23 45 10.7
comp=Z,60nm,1.1s
W41B Gary Mavity, V 51.57 343 P P 23 44 58.2 -0.2
baz=159,SNR=63
S58A Poland Farm, P 51.59 358 IAmb IAmb 23 44 59.2
comp=Z,71nm,1.0s
S58A Poland Farm, P 51.59 358 P P 23 44 58.4 -0.1
baz=177,SNR=14
S61A Accomac 51.61 360 P P 23 44 59.6 +1.0
baz=180
S60A Water View 51.64 359 P P 23 44 59.0 +0.1
baz=179
T50A Nancy 51.68 351 P P 23 44 58.1 -1.1
baz=169,SNR=16
WHAR Wooly Hollow 51.69 343 IAmb IAmb 23 45 12.0
comp=Z,84nm,1.0s
GNAR Gosnell 51.71 345 IAmb IAmb 23 45 18.9
comp=Z,125nm,1.1s
S59A Mechanicsville 51.71 358 P P 23 44 59.5 +0.1
baz=178,SNR=5.9
LNXT Lenox 51.71 346 P P 23 44 58.7 -0.8
LNXT PcP 23 46 12.7 +0.5
S56A Natural Bridge 51.73 356 P P 23 44 59.3 -0.3
baz=175,SNR=16
S57A Dark Hollow, R 51.78 357 IAmb IAmb 23 45 04.2
comp=Z,102nm,0.9s
S57A Dark Hollow, R 51.78 357 P P 23 44 59.6 -0.4
baz=176,SNR=35
PEBM Pemiscot Bayo 51.81 345 IAmb IAmb 23 45 12.9
comp=Z,141nm,1.1s
T49A Edmonton 51.88 350 IAmb IAmb 23 45 03.6
comp=Z,140nm,1.1s
T49A Edmonton 51.88 350 P P 23 44 59.6 -1.1
baz=168,SNR=43
S55A Lewisburg 51.90 355 P P 23 45 00.5 -0.4
baz=174,SNR=33
ABTX Abilene, Hawle 51.91 334 P P 23 45 01.4 +0.3
baz=150,SNR=119
R58B Mineral 51.93 358 IAmb IAmb 23 45 02.2
comp=Z,118nm,1.1s
R58B Mineral 51.93 358 P P 23 45 01.2 +0.1
baz=177,SNR=34
S53A Williamson 51.97 353 P P 23 45 00.4 -1.0
baz=172,SNR=11
S54A Dingess, Beckl 52.00 354 IAmb IAmb 23 45 01.8
comp=Z,108nm,1.0s
S54A Dingess, Beckl 52.00 354 P P 23 45 01.0 -0.7
baz=173,SNR=19
W39A Magazine 52.05 341 IAmb IAmb 23 45 06.0
comp=Z,74nm,1.1s
W39A Magazine 52.05 341 P P 23 45 02.1 +0.1
baz=158,SNR=56
HICK Hickman 52.07 346 P P 23 45 02.1 0.0
S52A Salyersville 52.08 353 P P 23 45 01.2 -1.0
baz=171
LCAR Lake Charles 52.10 344 IAmb IAmb 23 45 05.6
comp=Z,77nm,1.2s
S51A Beattyville 52.10 352 IAmb IAmb 23 45 02.2
comp=Z,76nm,1.1s
S51A Beattyville 52.10 352 P P 23 45 01.2 -1.2
baz=170,SNR=18
R59A King George, V 52.15 359 P P 23 45 03.0 +0.3
baz=178,SNR=8.9
CBN Corbin Frederi 52.16 358 P P 23 45 02.6 -0.1
baz=178,SNR=5.2
R60A Leonardtown, M 52.20 359 P P 23 45 03.4 +0.3
baz=179,SNR=5.7
S50A Richmond 52.26 351 P P 23 45 02.7 -0.8
baz=169,SNR=59
R61A Willards 52.26 0 P P 23 45 04.0 +0.5
baz=180
R58A Rapidan 52.27 358 P P 23 45 03.8 +0.2
baz=177,SNR=26
R57A Stanardsville 52.29 357 P P 23 45 04.1 +0.3
baz=176,SNR=17
R54A Victor 52.35 355 P P 23 45 03.5 -0.7
baz=173,SNR=16
R55A Marlinton 52.38 356 IAmb IAmb 23 45 21.9
comp=Z,87nm,1.1s
R55A Marlinton 52.38 356 P P 23 45 04.3 -0.1
baz=174,SNR=15
R56A Bull Pasture M 52.45 356 P P 23 45 05.0 0.0
baz=175,SNR=9.9
S49A Springfield 52.50 350 P P 23 45 04.1 -1.2
baz=168,SNR=36
PBMO Poplar Bluff 52.59 345 IAmb IAmb 23 45 05.7
comp=Z,98nm,1.1s
R53A Hurricane 52.59 354 IAmb IAmb 23 45 23.9
comp=Z,58nm,1.0s
R53A Hurricane 52.59 354 P P 23 45 05.0 -0.9
baz=172,SNR=9.5
R52A Catlettsburg 52.67 353 P P 23 45 05.5 -1.1
baz=171
R51A Hillsboro 52.75 352 P P 23 45 06.2 -0.9
baz=170,SNR=26
Q59A Harwood 52.80 359 P P 23 45 07.8 +0.3
baz=179,SNR=8.1
Q61A Milford 52.81 0 P P 23 45 08.1 +0.6
baz=180
R50A Paris 52.84 351 IAmb IAmb 23 45 07.7
comp=Z,115nm,1.1s
R50A Paris 52.84 351 P P 23 45 06.6 -1.2
baz=169,SNR=31
U40A Yellville 52.84 343 IAmb IAmb 23 45 08.3
comp=Z,124nm,1.1s
U40A Yellville 52.84 343 P P 23 45 07.5 -0.4
baz=159,SNR=64
Q58A Fox Den Farm, 52.90 358 P P 23 45 08.3 +0.1
baz=178,SNR=21
Q60A Greensboro 52.93 360 IAmb IAmb 23 45 14.6
comp=Z,156nm,1.1s
Q60A Greensboro 52.93 360 P P 23 45 09.0 +0.6
baz=180
R49A Shelbyville 52.98 351 IAmb IAmb 23 45 25.7
comp=Z,111nm,1.1s
R49A Shelbyville 52.98 351 P P 23 45 07.5 -1.3
baz=168,SNR=35
Q57A Strasburg 53.02 357 P P 23 45 09.3 +0.2
baz=177,SNR=28
Q53A Leroy 53.07 354 P P 23 45 08.4 -1.1
baz=173,SNR=29
Q55A Buckhannon 53.08 356 P P 23 45 09.7 0.0
baz=175,SNR=16
WCI Wyandotte Cave 53.10 350 P P 23 45 08.6 -1.1

WCI	Wyandotte Cave	53.10	350	P	P	23 45 08.6	-1.1
WCI				pmax	pmax		
	comp=Z,295nm,1.2s						
WCI	Wyandotte Cave	53.10	350	P	P	23 45 08.5	-1.1
	baz=167						
Q54A	Coxs Mills	53.13	355	IAmb	IAmb	23 45 13.4	
	comp=Z,69nm,0.9s						
Q54A	Coxs Mills	53.13	355	P	P	23 45 09.1	-0.8
	baz=174,SNR=20						
S44A	Carbondale	53.18	347	IAmb	IAmb	23 45 10.1	
	comp=Z,113nm,1.0s						
Q52A	Bidwell	53.25	354	P	P	23 45 10.0	-0.8
	baz=172,SNR=14						
Q50A	Georgetown	53.34	352	P	P	23 45 10.1	-1.4
	baz=170,SNR=12						
SDMD	Soldier's Deli	53.35	359	P	P	23 45 12.2	+0.7
TUL1	Leonard	53.36	340	P	P	23 45 11.5	-0.2
	baz=155,SNR=60						
WMOK	Wichita Mounta	53.40	336	P	P	23 45 11.2	-0.9
	baz=152,SNR=65						
MGMO	Mountain Grove	53.42	343	IAmb	IAmb	23 45 29.3	
	comp=Z,107nm,1.1s						
P58A	Pank, Wackersv	53.44	358	P	P	23 45 12.3	+0.1
	baz=178,SNR=18						
Q51A	Peebles	53.44	353	IAmb	IAmb	23 45 11.9	
	comp=Z,63nm,0.9s						
Q51A	Peebles	53.44	353	P	P	23 45 11.0	-1.2
	baz=171,SNR=14						
P57A	Homestead Farm	53.45	358	P	P	23 45 12.6	+0.3
	baz=177,SNR=9.5						
OKCFA	Oklahoma City	53.50	338	P	P	23 45 12.2	-0.6
P56A	Dayton Farm, R	53.51	357	P	P	23 45 12.8	+0.1
	baz=176,SNR=16						
P59A	Jarrettsville	53.54	359	P	P	23 45 13.5	+0.6
	baz=179,SNR=10						
P55A	Reedsville	53.57	356	P	P	23 45 12.9	-0.3
	baz=175,SNR=7.3						
P61A	Hammonton	53.60	1	P	P	23 45 12.8	-0.6
	baz=181,SNR=6.0						
Q49A	Aurora	53.63	351	P	P	23 45 12.1	-1.5
	baz=169,SNR=26						
P53A	Whipple	53.68	354	IAmb	IAmb	23 45 30.6	
	comp=Z,68nm,1.0s						
P53A	Whipple	53.68	354	P	P	23 45 12.7	-1.3
	baz=173,SNR=14						
Q48A	North Vernon	53.69	350	P	P	23 45 12.7	-1.3
	baz=168,SNR=38						
P54A	Burton	53.72	355	P	P	23 45 13.3	-1.0
	baz=174,SNR=23						
MCWV	Mont Chateau	53.73	356	P	P	23 45 13.9	-0.4
	baz=175,SNR=6.6						
P60A	Greenville	53.74	0	IAmb	IAmb	23 45 20.2	
	comp=Z,64nm,1.1s						
P60A	Greenville	53.74	0	P	P	23 45 14.3	0.0
	baz=180,SNR=10						
MNTX	Cornudas Mount	53.81	328	P	P	23 45 14.7	-0.4
	baz=144,SNR=110						
P51A	Williamsport	53.85	353	IAmb	IAmb	23 45 14.7	
	comp=Z,85nm,1.1s						
P51A	Williamsport	53.85	353	P	P	23 45 13.7	-1.5
	baz=171,SNR=8.6						
PSUB	Penn St. - Bra	53.85	0	P	P	23 45 15.0	-0.2
PSUB				IAmb	IAmb	23 45 29.8	
	comp=Z,61nm,1.0s						
P52A	Corning	53.90	354	P	P	23 45 14.2	-1.4
	baz=172,SNR=12						
MVL	Millersville	53.93	359	IAmb	IAmb	23 45 28.8	
	comp=Z,110nm,1.2s						
CCM	Cathedral Cave	54.00	345	P	P	23 45 15.2	-1.1
CCM	Cathedral Cave	54.00	345	P	P	23 45 15.2	-1.1
CCM				pmax	pmax		
	comp=Z,48nm,1.0s						
CCM	Cathedral Cave	54.00	345	P	P	23 45 15.3	-1.0
	baz=161						
O61A	Allentown	54.03	1	P	P	23 45 16.9	+0.5
	baz=181						
BLO	Bloomington	54.06	350	IAmb	IAmb	23 45 16.3	
	comp=Z,97nm,0.9s						
O58A	Lewisberry	54.06	359	P	P	23 45 17.3	+0.5
	baz=178,SNR=16						
P50A	Jamestown	54.07	352	P	P	23 45 15.4	-1.4
	baz=170,SNR=27						
P49A	Miami Univ. Ec	54.12	351	P	P	23 45 15.3	-1.8
	baz=169,SNR=31						
P48A	Milroy	54.16	351	IAmb	IAmb	23 45 16.5	
	comp=Z,86nm,1.0s						
P48A	Milroy	54.16	351	P	P	23 45 15.6	-1.9
	baz=168,SNR=23						
PAGS	Pennsylvania G	54.16	359	IAmb	IAmb	23 45 35.5	
	comp=Z,84nm,1.2s						
O57A	Amberson	54.17	358	P	P	23 45 17.9	+0.4
	baz=178,SNR=28						
O55A	Ligonier	54.24	357	P	P	23 45 17.8	-0.3
	baz=176,SNR=13						
O59A	Robesonia	54.24	360	P	P	23 45 18.7	+0.7
	baz=179,SNR=16						
O60A	Telford	54.24	0	P	P	23 45 18.4	+0.3
	baz=180,SNR=11						
O56A	Blue Knob Stat	54.26	357	IAmb	IAmb	23 45 22.8	
	comp=Z,64nm,0.9s						
O56A	Blue Knob Stat	54.26	357	P	P	23 45 18.2	-0.1
	baz=176,SNR=18						
O54A	Avella	54.28	356	P	P	23 45 17.1	-1.3
	baz=174,SNR=5.4						
SLM	Saint Louis	54.31	346	IAmb	IAmb	23 45 18.4	
	comp=Z,114nm,1.1s						
O52A	Adamsville	54.34	354	IAmb	IAmb	23 45 22.1	
	comp=Z,54nm,0.9s						
O52A	Adamsville	54.34	354	P	P	23 45 17.4	-1.4
	baz=173,SNR=16						
O53A	New Philadelph	54.42	355	P	P	23 45 18.1	-1.3
	baz=173,SNR=8.8						
MSTX	Muleshoe	54.42	332	IAmb	IAmb	23 45 23.5	
	comp=Z,99nm,1.1s						
MSTX	Muleshoe	54.42	332	P	P	23 45 19.4	-0.3
	baz=147						
SRIG	Santa Rosalia	54.44	319	P	P	23 45 20.0	+0.3
SRIG				IAmb	IAmb	23 45 21.4	
	comp=Z,85nm,1.0s						
O51A	Pataskala	54.46	353	P	P	23 45 18.1	-1.5
	baz=172,SNR=19						
O50A	Cable	54.58	353	P	P	23 45 19.1	-1.4
	baz=170,SNR=30						
ACSO	Alum Creek Sta	54.58	353	IAmb	IAmb	23 45 23.8	
	comp=Z,111nm,0.9s						
ACSO	Alum Creek Sta	54.58	353	P	P	23 45 19.1	-1.4
	baz=171,SNR=30						
SSPA	Standing Stone	54.60	358	P	P	23 45 20.5	-0.1
SSPA	Standing Stone	54.60	358	P	P	23 45 20.6	0.0
	baz=177						
BRNJ	Basking Ridge	54.62	1	IAmb	IAmb	23 45 36.3	
	comp=Z,71nm,1.0s						
N61A	South Mountain	54.69	1	P	P	23 45 21.8	+0.6
	baz=182,SNR=5.5						
N57A	Milroy	54.71	358	P	P	23 45 21.5	+0.1
	baz=178,SNR=11						
O49A	Covington	54.71	352	IAmb	IAmb	23 45 24.9	
	comp=Z,106nm,1.1s						
O49A	Covington	54.71	352	P	P	23 45 20.2	-1.3
	baz=170,SNR=14						
AMTX	Amarillo	54.71	334	P	P	23 45 21.2	-0.5
AMTX	Amarillo	54.71	334	P	P	23 45 21.1	-0.6
	baz=149						
CPNY	Central Park	54.74	2	IAmb	IAmb	23 45 27.1	
	comp=Z,72nm,1.1s						
N58A	Sunbury	54.77	359	IAmb	IAmb	23 45 37.8	
	comp=Z,58nm,1.0s						
N58A	Sunbury	54.77	359	P	P	23 45 22.4	+0.6
	baz=179,SNR=13						
N55A	Marion Center	54.79	357	P	P	23 45 21.9	-0.2
	baz=176,SNR=21						
N60A	Cedar Hill Far	54.80	1	P	P	23 45 22.4	+0.3
	baz=181,SNR=5.6						
N59A	State Game Lan	54.84	360	IAmb	IAmb	23 45 37.5	
	comp=Z,121nm,1.1s						
N59A	State Game Lan	54.84	360	P	P	23 45 23.1	+0.7
	baz=180,SNR=15						
N62A	Caumsett State	54.89	2	P	P	23 45 23.1	+0.3
	baz=182						
N56A	West Decatur	54.90	358	P	P	23 45 22.4	-0.4
	baz=177,SNR=15						
O48A	Farmland	54.90	351	P	P	23 45 21.2	-1.6
	baz=169,SNR=53						
U32A	Winter Ranch,	54.93	337	IAmb	IAmb	23 45 35.6	
	comp=Z,80nm,0.8s						
N53A	Lisbon	54.94	355	IAmb	IAmb	23 45 26.1	
	comp=Z,58nm,1.1s						
N53A	Lisbon	54.94	355	P	P	23 45 22.1	-1.0

	baz=174,SNR=12						
PAL	Palisades	54.95	2	IAmb	IAmb	23 45 29.2	
	comp=Z,77nm,1.1s						
PAL	Palisades	54.95	2	P	P	23 45 22.9	-0.2
	baz=182,SNR=6.5						
N52A	McGinn's Farm,	55.02	354	P	P	23 45 22.3	-1.4
	baz=173,SNR=9.8						
N54A	Moraine State	55.03	356	IAmb	IAmb	23 45 27.2	
	comp=Z,73nm,1.1s						
N54A	Moraine State	55.03	356	P	P	23 45 23.2	-0.6
	baz=175,SNR=14						
N50A	Nevada	55.13	353	P	P	23 45 23.2	-1.3
	baz=171,SNR=21						
N51A	Ashland	55.19	354	IAmb	IAmb	23 45 27.9	
	comp=Z,69nm,0.9s						
N51A	Ashland	55.19	354	P	P	23 45 23.7	-1.3
	baz=172,SNR=12						
M60A	Port Jervis	55.26	1	P	P	23 45 25.9	+0.6
	baz=181						
M61A	Granite Spring	55.26	2	P	P	23 45 25.5	+0.1
	baz=182						
M57A	Sunshine Farm,	55.28	359	P	P	23 45 25.9	+0.4
M57A				IAmb	IAmb	23 45 35.7	
	comp=Z,87nm,1.1s						
M57A	Sunshine Farm,	55.28	359	P	P	23 45 25.7	+0.2
	baz=178,SNR=19						
M58A	Price's Panora	55.30	359	P	P	23 45 26.2	+0.5
	baz=179,SNR=15						
SFIN	Lafayette	55.33	349	IAmb	IAmb	23 45 26.7	
	comp=Z,88nm,1.1s						
SFIN	Lafayette	55.33	349	P	P	23 45 23.9	-2.1
	baz=166,SNR=28						
N49A	Columbus Grove	55.41	352	IAmb	IAmb	23 45 26.0	
	comp=Z,149nm,1.1s						
N49A	Columbus Grove	55.41	352	P	P	23 45 25.1	-1.4
	baz=170,SNR=38						
M62A	Hamden	55.42	3	P	P	23 45 25.2	-1.4
	baz=183,SNR=10						
M63A	Gales Ferry	55.43	3	P	P	23 45 27.1	+0.6
	baz=184						
M56A	Emporium	55.46	358	IAmb	IAmb	23 45 34.6	
	comp=Z,60nm,1.0s						
M56A	Emporium	55.46	358	P	P	23 45 26.4	-0.4
	baz=177,SNR=14						
M59A	Waymart	55.47	0	P	P	23 45 27.1	+0.2
	baz=180,SNR=23						
M55A	Ridgway	55.47	357	IAmb	IAmb	23 45 30.4	
	comp=Z,78nm,1.1s						
M55A	Ridgway	55.47	357	P	P	23 45 26.5	-0.4
	baz=176,SNR=14						
N48A	Decatur	55.47	351	P	P	23 45 25.2	-1.7
	baz=169,SNR=12						
M54A	Oil Creek Stat	55.55	356	IAmb	IAmb	23 45 31.3	
	comp=Z,96nm,1.0s						
M54A	Oil Creek Stat	55.55	356	P	P	23 45 26.6	-0.9
	baz=175,SNR=18						
M53A	Wl Miller and	55.56	355	P	P	23 45 26.5	-1.0
	baz=174,SNR=16						
M51A	Elyria	55.58	354	P	P	23 45 26.0	-1.7
	baz=172,SNR=15						
N47A	Urbana	55.59	351	IAmb	IAmb	23 45 26.7	
	comp=Z,147nm,1.1s						
N47A	Urbana	55.59	351	P	P	23 45 25.9	-1.8
	baz=168,SNR=38						
M52A	Chesterland	55.71	355	P	P	23 45 27.6	-1.0
M52A				IAmb	IAmb	23 45 31.4	
	comp=Z,64nm,1.1s						
M52A	Chesterland	55.71	355	P	P	23 45 27.3	-1.4
	baz=173,SNR=8.8						
121A	Cookes Peak, D	55.72	327	P	P	23 45 30.0	+0.9
	baz=141,SNR=78						
ALLY	Alegheny Colle	55.73	356	IAmb	IAmb	23 45 28.6	
	comp=Z,78nm,1.1s						
M50A	Fremont	55.75	353	P	P	23 45 27.4	-1.5
	baz=171,SNR=16						
L63A	North Scituate	55.91	4	P	P	23 45 29.9	-0.1
	baz=185						
L60A	Shokan	55.93	1	P	P	23 45 29.8	-0.4
	baz=182,SNR=13						
M49A	Liberty Center	55.93	352	P	P	23 45 28.9	-1.2
	baz=170,SNR=26						
HDIL	Hopedale	55.93	347	IAmb	IAmb	23 45 29.3	
	comp=Z,97nm,1.1s						
HDIL	Hopedale	55.93	347	P	P	23 45 28.5	-1.7
	baz=164,SNR=9.7						
L57A	Andrews Acres	55.93	359	P	P	23 45 30.4	+0.2
	baz=179,SNR=12						
L58A	Harry Jones Me	55.97	360	P	P	23 45 31.0	+0.5
	baz=180,SNR=23						
BRYW	Bryant College	55.97	4	IAmb	IAmb	23 45 40.4	
	comp=Z,108nm,1.2s						
L62A	Suffield	56.02	3	P	P	23 45 30.7	-0.1
	baz=183						
L64A	Middleborough	56.04	4	P	P	23 45 30.2	-0.7
	baz=186						
M48A	Edgerton	56.04	352	P	P	23 45 29.3	-1.7
	baz=169						
L53A	Girard	56.04	356	P	P	23 45 29.9	-1.0
	baz=175,SNR=16						
M47A	Cromwell	56.05	351	P	P	23 45 29.3	-1.7
	baz=168,SNR=6.5						
L56A	Greenwood	56.09	358	IAmb	IAmb	23 45 43.0	
	comp=Z,68nm,1.1s						
L56A	Greenwood	56.09	358	P	P	23 45 31.3	-0.1
	baz=178,SNR=14						
L59A	Walton	56.12	1	P	P	23 45 31.9	+0.3
L59A	Walton	56.12	1	P	P	23 45 32.2	+0.6
	baz=181,SNR=34						
BINY	Binghamton	56.12	360	IAmb	IAmb	23 45 46.7	
	comp=Z,51nm,0.8s						
BINY	Binghamton	56.12	360	P	P	23 45 31.7	+0.1
	baz=180,SNR=20						
L61A	Hillsdale 1, H	56.15	2	P	P	23 45 32.1	+0.3
	baz=182,SNR=6.9						
L55A	Hinsdale	56.16	358	P	P	23 45 31.4	-0.5
	baz=177,SNR=18						
ERPA	Erie	56.18	356	IAmb	IAmb	23 45 35.6	
	comp=Z,123nm,1.1s						
ERPA	Erie	56.18	356	P	P	23 45 30.7	-1.2
	baz=175,SNR=14						
L54A	Sinclairville	56.26	357	P	P	23 45 32.0	-0.6
	baz=176,SNR=25						
L50A	Kingsville	56.35	354	P	P	23 45 31.5	-1.7
	baz=172,SNR=12						
WVNY	West Valley, N	56.39	357	IAmb	IAmb	23 45 45.2	
	comp=Z,128nm,1.1s						
N41A	Harden Midland	56.42	346	IAmb	IAmb	23 45 33.0	
	comp=Z,136nm,1.1s						
L61B	Northampton	56.44	3	P	P	23 45 34.0	+0.2
	baz=183,SNR=8.6						
WES	Weston	56.45	4	IAmb	IAmb	23 45 37.4	
	comp=Z,96nm,1.2s						
L48A	N Adams	56.45	352	P	P	23 45 32.3	-1.6
	baz=170,SNR=20						
Y22D	IRIS PASSCAL I	56.48	329	IAmb	IAmb	23 45 39.1	
	comp=Z,108nm,1.1s						
Y22D	IRIS PASSCAL I	56.48	329	P	P	23 45 35.3	+0.8
	baz=143						
M44A	Midewin, Midew	56.49	349	P	P	23 45 32.5	-1.7
KSU1	Kansas State U	56.52	341	P	P	23 45 33.4	-1.0
	baz=156,SNR=12						
L49A	Milan	56.53	353	P	P	23 45 33.2	-1.2
	baz=170,SNR=23						
HRV	Adam Dziewonsk	56.55	4	P	P	23 45 35.1	+0.4
	baz=185						
K60A	Five Rivers En	56.56	2	P	P	23 45 35.1	+0.5
	baz=182,SNR=9.7						
L47A	Sherwood	56.59	351	P	P	23 45 32.9	-1.9
	baz=169,SNR=20						
K54A	Basiliko Farm,	56.60	357	P	P	23 45 34.6	-0.4
	baz=176,SNR=21						
K61A	Williamstown	56.63	2	P	P	23 45 35.3	+0.1
	baz=183,SNR=9.4						
K56A	Middlesex	56.64	359	P	P	23 45 34.9	-0.4
	baz=178,SNR=9.3						
K57A	Scipio Center	56.66	359	P	P	23 45 35.3	-0.1
	baz=179,SNR=19						
K62A	Royalston	56.67	3	P	P	23 45 35.9	+0.4
	baz=184						
K58A	Earlville	56.69	0	IAmb	IAmb	23 45 51.1	
	comp=Z,107nm,1.1s						
K58A	Earlville	56.69	0	P	P	23 45 35.9	+0.3
	baz=180,SNR=19						
K55A	Perry	56.69	358	P	P	23 45 35.2	-0.5
	baz=177,SNR=10						
K59A	Cooperstown	56.70	1	P	P	23 45 35.9	+0.2
	baz=181,SNR=40						
AAM	Ann Arbor	56.70	353	IAmb	IAmb	23 45 35.1	

	comp=Z,63nm,1.1s						
AAM	Ann Arbor	56.70	353	P	P	23 45 34.2	-1.4
	baz=171						
L46A	Eue Claire	56.79	351	P	P	23 45 34.0	-2.3
	baz=168,SNR=9.6						
K52A	Tillsonburg	56.89	356	P	P	23 45 35.7	-1.3
	baz=174,SNR=10						
K51A	Iona Station	56.90	355	P	P	23 45 35.7	-1.3
	baz=173						
ANMO	Albuquerque	56.95	330	LR	LR	00 08 14.7	
	comp=Z,1μm,21.5s,baz=123,slow=34						
ANMO				PKPPKP	P'P'bc	00 15 33.5	-5.7
	comp=Z,5.2nm,0.5s,baz=238,slow=15,SNR=11						
ANMO				PKP2ab		00 15 58.1	
	comp=Z,6.2nm,0.9s,baz=322,slow=9.8,SNR=5.8						
ANMO	Albuquerque	56.95	330	P	P	23 45 37.9	0.0
ANMO				IAmb	IAmb	23 45 39.1	
	comp=Z,115nm,1.1s						
ANMO	Albuquerque	56.95	330*ce*	P	P	23 45 38.1	+0.3
ANMO				pmax	pmax		
	comp=Z,192nm,1.5s						
ANMO	Albuquerque	56.95	330	P	P	23 45 38.1	+0.3
	baz=144						
K50A	Casco	57.06	354	IAmb	IAmb	23 45 41.1	
	comp=Z,77nm,0.8s						
K50A	Casco	57.06	354	P	P	23 45 36.4	-1.8
	baz=172,SNR=8.4						
MEDO	Medina	57.14	358	IAmb	IAmb	23 45 58.2	
	comp=Z,50nm,1.0s						
K49A	Clarkson	57.16	353	P	P	23 45 37.3	-1.6
	baz=171						
TUC	Tucson	57.18	325	P	P	23 45 39.9	+0.5
TUC				IAmb	IAmb	23 45 40.8	
	comp=Z,104nm,1.1s						
TUC	Tucson	57.18	325	P	P	23 45 39.9	+0.5
TUC				pmax	pmax		
	comp=Z,104nm,1.1s						
TUC	Tucson	57.18	325	P	P	23 45 39.9	+0.5
	baz=138						
J60A	Lant Hill Farm	57.20	2	P	P	23 45 40.0	+0.8
	baz=182,SNR=13						
J56A	Wolcott	57.21	359	IAmb	IAmb	23 45 39.6	
	comp=Z,127nm,1.1s						
J56A	Wolcott	57.21	359	P	P	23 45 38.8	-0.4
	baz=179,SNR=9.6						
J55A	Hilton	57.22	358	IAmb	IAmb	23 45 51.3	
	comp=Z,101nm,1.1s						
J55A	Hilton	57.22	358	P	P	23 45 38.3	-1.0
	baz=178,SNR=7.5						
L44A	Lake County Fo	57.23	349	P	P	23 45 38.0	-1.3
L44A				IAmb	IAmb	23 45 39.7	
	comp=Z,112nm,1.1s						
L44A					PcP	23 46 33.0	-0.2
L44A	Lake County Fo	57.23	349	P	P	23 45 37.2	-2.1
	baz=166,SNR=7.5						
K47A	Vermontville	57.24	352	P	P	23 45 37.7	-1.8
	baz=169,SNR=21						
K48A	Perry	57.26	353	P	P	23 45 37.9	-1.7
	baz=170,SNR=23						
J62A	Henniker	57.26	3	P	P	23 45 38.8	-0.8
	baz=184						
J54A	Appleton	57.26	357	P	P	23 45 38.5	-1.1
	baz=176						
J58A	Remsen	57.28	0	P	P	23 45 39.7	-0.1
	baz=180,SNR=7.3						
J52A	Paris	57.33	356	P	P	23 45 38.9	-1.2
	baz=174,SNR=35						
J57A	Williamstown	57.33	360	IAmb	IAmb	23 45 55.2	
	comp=Z,91nm,1.0s						
J57A	Williamstown	57.33	360	P	P	23 45 39.6	-0.5
	baz=180,SNR=11						
ACCN	Adirondack Com	57.34	2	IAmb	IAmb	23 45 55.3	
	comp=Z,74nm,1.0s						
J61A	Chester	57.34	3	P	P	23 45 40.7	+0.6
	baz=184,SNR=11						
CBKS	Cedar Bluff	57.35	338	P	P	23 45 40.3	-0.1
	baz=152,SNR=37						
K46A	Dorr	57.37	351	P	P	23 45 38.1	-2.2
	baz=168,SNR=11						
J59A	Piesco	57.40	1	IAmb	IAmb	23 45 55.5	
	comp=Z,80nm,0.9s						
J59A	Piesco	57.40	1	P	P	23 45 40.6	0.0
	baz=181,SNR=21						
L42A	Oliver, Polo	57.40	348	IAmb	IAmb	23 45 41.7	
	comp=Z,65nm,1.1s						
FFD	Franklin Falls	57.51	3	P	P	23 45 41.6	+0.3
FFD				IAmb	IAmb	23 45 47.8	
	comp=Z,40nm,0.9s						
I58A	Old Forge	57.62	1	P	P	23 45 42.0	-0.1
	baz=181,SNR=16						
J49A	Marlette	57.69	354	P	P	23 45 40.6	-2.0
	baz=171,SNR=12						
J48A	Bridge Port	57.70	353	P	P	23 45 40.9	-1.8
	baz=171,SNR=27						
I59A	Olmsteadville	57.74	2	P	P	23 45 43.3	+0.3
	baz=182,SNR=37						
J47A	Sunmer	57.77	352	P	P	23 45 41.4	-1.8
	baz=170,SNR=27						
L40A	Anamosa	57.80	346	IAmb	IAmb	23 45 47.0	
	comp=Z,46nm,1.0s						
T25A	Trinidad	57.80	333	IAmb	IAmb	23 45 45.0	
	comp=Z,116nm,1.1s						
T25A	Trinidad	57.80	333	P	P	23 45 44.3	+0.5
	baz=147,SNR=70						
I60A	Shoreham	57.81	2	P	P	23 45 44.0	+0.6
	baz=183,SNR=18						
I53A	Kortright Cn E	57.86	357	P	P	23 45 42.7	-1.1
	baz=176						
NCB	Newcomb	57.91	1	IAmb	IAmb	23 45 55.0	
	comp=Z,56nm,1.1s						
I62A	Tamworth	57.93	4	P	P	23 45 44.7	+0.5
	baz=185						
I51A	Listowel	57.93	355	P	P	23 45 42.9	-1.5
	baz=174,SNR=17						
I61A	Oroboro, Fairl	57.94	3	P	P	23 45 45.2	+0.8
	baz=184,SNR=12						
J46A	Howard City	58.00	351	P	P	23 45 42.9	-1.9
	baz=168						
214A	Organ Pipe Nat	58.09	323	IAmb	IAmb	23 45 49.0	
	comp=Z,92nm,1.1s						
214A	Organ Pipe Nat	58.09	323	P	P	23 45 46.8	+1.1
	baz=136,SNR=138						
I64A	Boothbay	58.10	5	P	P	23 45 46.4	+0.9
	baz=187						
SCIA	State Center	58.13	345	IAmb	IAmb	23 45 51.5	
	comp=Z,40nm,0.9s						
SCIA	State Center	58.13	345	P	P	23 45 44.7	-1.1
	baz=160,SNR=5.4						
I52A	Shelburne	58.14	356	P	P	23 45 44.5	-1.2
	baz=175,SNR=10						
I63A	Otisfield	58.16	4	P	P	23 45 46.1	+0.2
	baz=186						
I55A	Frankford	58.17	358	P	P	23 45 45.1	-0.9
	baz=178,SNR=10						
J45A	Montague	58.19	351	P	P	23 45 43.8	-2.4
	baz=168						
I49A	Point Hope	58.23	354	P	P	23 45 44.7	-1.7
	baz=172,SNR=14						
LBNH	Lisbon	58.26	3	P	P	23 45 46.6	0.0
LBNH				IAmb	IAmb	23 45 58.3	
	comp=Z,48nm,1.0s						
LBNH	Lisbon	58.26	3	P	P	23 45 46.6	0.0
LBNH				pmax	pmax		
	comp=Z,48nm,1.0s						
LBNH	Lisbon	58.26	3	P	P	23 45 45.6	-1.0
	baz=184						
H58A	Gabriels	58.35	1	P	P	23 45 47.2	-0.1
	baz=182,SNR=21						
H57A	Richville	58.38	0	P	P	23 45 47.0	-0.4
	baz=180,SNR=23						
JFWS	Jewell Farm	58.39	347	P	P	23 45 46.1	-1.5
	baz=163,SNR=16						
DELO	Deloro Mine	58.47	358	IAmb	IAmb	23 46 02.7	
	comp=Z,69nm,1.0s						
H55A	Tweed	58.49	359	P	P	23 45 47.9	-0.3
	baz=178,SNR=8.4						
I47A	Gladwin	58.50	353	IAmb	IAmb	23 45 47.4	
	comp=Z,82nm,1.0s						
I47A	Gladwin	58.50	353	P	P	23 45 46.8	-1.4
	baz=170,SNR=14						
H56A	Elgin	58.52	360	P	P	23 45 48.3	-0.1
	baz=179,SNR=19						
H60A	Morristown	58.54	2	P	P	23 45 49.3	+0.7
	baz=183,SNR=6.1						
I46A	Reed City	58.55	352	P	P	23 45 46.6	-2.0
	baz=169,SNR=12						
LONY	Lake Ozonia	58.55	1	IAmb	IAmb	23 46 04.0	
	comp=Z,91nm,1.1s						

LONY Lake Ozonia 58.55 1 P P 23 45 48.7 +0.1
baz=181
H61A Lyndonville 58.55 3 P P 23 45 49.1 +0.4
baz=184,SNR=10.0
H53A Bobcaygeon 58.56 358 P P 23 45 47.8 -0.9
baz=177,SNR=11
I48A Sherman Twp 58.57 353 P P 23 45 47.3 -1.4
baz=171,SNR=15
H59A Cadyville 58.59 2 P P 23 45 49.4 +0.5
baz=182,SNR=22
KSCO Kaye Shedlock' 58.63 336 IAmb IAmb 23 45 55.5
comp=Z,109nm,1.1s
KSCO Kaye Shedlock' 58.63 336 P P 23 45 49.5 +0.1
baz=149,SNR=22
H62A Milan 58.64 4 P P 23 45 50.3 +1.0
baz=185
H52A Wyevale 58.69 356 P P 23 45 48.3 -1.3
baz=175,SNR=12
W18A Petrified Fore 58.74 328 P P 23 45 51.3 +0.9
W18A IAmb IAmb 23 45 57.4
comp=Z,102nm,1.1s
W18A Petrified Fore 58.74 328 P P 23 45 51.1 +0.7
baz=141,SNR=54
I45A Fountain 58.76 351 P P 23 45 47.8 -2.2
baz=168
SADO Sadowa 58.78 357 PKP2bc P'P'bc 00 15 34.6 +1.1
comp=Z,3.8nm,0.8s,baz=84,slow=5.5,SNR=3.3
SADO Sadowa 58.78 357 IAmb IAmb 23 46 06.8
comp=Z,48nm,0.9s
FRNY Flat Rock 58.79 2 IAmb IAmb 23 46 05.8
comp=Z,117nm,1.1s
SDCO Great Sand Dun 58.79 333 P P 23 45 51.6 +0.8
baz=146
H63A New Sharon 58.81 5 P P 23 45 51.3 +0.9
baz=186,SNR=10
H64A Troy 58.86 5 P P 23 45 51.1 +0.3
baz=187,SNR=6.2
PLVO Plevna 58.98 359 IAmb IAmb 23 46 08.6
comp=Z,66nm,1.1s
H65A Eastbrook 59.01 6 P P 23 45 52.1 +0.3
baz=188,SNR=5.2
G57A Newington 59.03 1 P P 23 45 52.1 +0.2
baz=181,SNR=32
H47A Mio 59.04 353 P P 23 45 50.3 -1.7
baz=170
H48A Harrisville 59.04 354 IAmb IAmb 23 45 54.3
comp=Z,123nm,1.1s
H48A Harrisville 59.04 354 P P 23 45 50.3 -1.7
baz=171,SNR=12
G59A Clarenceville 59.05 2 P P 23 45 51.9 -0.1
baz=183,SNR=10
I42A Draeger Farm, 59.07 349 IAmb IAmb 23 45 55.8
comp=Z,56nm,0.9s
G58A Ormstown 59.09 1 P P 23 45 52.5 +0.2
baz=182,SNR=22
G60A Masonville 59.10 3 P P 23 45 52.6 +0.2
baz=184,SNR=9.4
H46A Fife Lake 59.10 352 P P 23 45 50.8 -1.7
baz=169
EMMW East Machias 59.10 7 IAmb IAmb 23 45 58.5
comp=Z,48nm,1.1s
G53A Haliburton 59.10 358 P P 23 45 51.6 -0.9
baz=177,SNR=20
BGNE Belgrade 59.11 340 P P 23 45 52.0 -0.6
baz=154,SNR=25
G55A Calabogie 59.18 359 P P 23 45 52.7 -0.3
baz=179,SNR=22
H66A Whiting 59.20 7 P P 23 45 53.6 +0.6
baz=189,SNR=7.3
113A Mohawk Valley, 59.23 323 IAmb IAmb 23 45 55.1
comp=Z,79nm,1.1s
G63A Kingsbury 59.29 5 P P 23 45 54.3 +0.5
baz=187,SNR=6.2
H45A Beulah 59.30 351 P P 23 45 51.8 -2.0
baz=168,SNR=6.9
GLMI Grayling 59.31 353 IAmb IAmb 23 46 00.4
comp=Z,93nm,1.1s
GLMI Grayling 59.31 353 P P 23 45 52.3 -1.6
baz=170
G61A St-Isidore-de- 59.32 3 P P 23 45 54.8 +0.8
baz=185,SNR=20
G62A West of Eustis 59.32 4 P P 23 45 54.4 +0.4
G62A IAmb IAmb 23 46 10.0
comp=Z,106nm,1.1s
G62A West of Eustis 59.32 4 P P 23 45 52.8 -1.2
baz=186,SNR=14
G54A Lake Saint Pet 59.36 358 P P 23 45 53.3 -0.9
baz=177,SNR=14
S22A 4UR Ranch, Cre 59.39 332 P P 23 45 55.2 +0.2
baz=144,SNR=78
I40A Norwalk 59.41 347 IAmb IAmb 23 46 08.9
comp=Z,63nm,1.1s
H43A Windswept, Lux 59.42 350 IAmb IAmb 23 45 57.9
comp=Z,82nm,0.9s
PKME Peaks-Kenny Pk 59.47 5 P P 23 45 55.5 +0.6
baz=187
G64A Maxfield 59.51 6 P P 23 45 55.8 +0.6
baz=188,SNR=7.6
G47A Hillman 59.56 353 P P 23 45 53.8 -1.8
baz=171,SNR=21
G65A Princeton 59.58 7 IAmb IAmb 23 46 05.9
comp=Z,61nm,1.1s
G65A Princeton 59.58 7 P P 23 45 56.5 +0.8
baz=189,SNR=8.6
GGN Saint George 59.58 7 IAmb IAmb 23 46 16.3
comp=Z,56nm,1.1s
HAL Halifax 59.58 10 P P 23 45 56.2 +0.5
HAL IAmb IAmb 23 46 12.4
comp=Z,51nm,1.2s
HAL Halifax 59.58 10 P P 23 45 56.2 +0.5
HAL pmax pmax
comp=Z,51nm,1.2s
Q24A Divide 59.64 334 IAmb IAmb 23 46 15.5
comp=Z,51nm,1.0s
Q24A Divide 59.64 334 P P 23 45 56.9 +0.3
baz=146
G45A Suttons Bay 59.66 352 IAmb IAmb 23 46 02.7
comp=Z,39nm,0.8s
G45A Suttons Bay 59.66 352 P P 23 45 54.6 -1.7
baz=169,SNR=8.0
MVCO Mesa Verde 59.75 330 IAmb IAmb 23 46 16.9
comp=Z,63nm,1.1s
MVCO Mesa Verde 59.75 330 P P 23 45 57.8 +0.4
baz=143
F55A Otter Lake 59.76 359 P P 23 45 56.1 -0.9
baz=179,SNR=8.5
F52A Sundridge 59.81 357 P P 23 45 56.2 -1.1
baz=176,SNR=11
F58A St-Lin Laurent 59.81 1 P P 23 45 57.0 -0.3
baz=182
G46A Petoskey 59.82 353 P P 23 45 55.7 -1.6
baz=170,SNR=11
F59A Saint Guilaume 59.83 2 P P 23 45 57.7 +0.3
baz=183,SNR=12
H10S3 ASCENSION HYDR 59.85 92 P P 23 45 58.2 +0.2
H10S2 ASCENSION HYDR 59.87 92 P P 23 45 58.3 +0.2
WUAZ Wupatki 59.91 327 P P 23 45 59.3 +0.9
baz=139
ALGO Algonquin Park 59.91 358 P P 23 45 57.2 -0.8
baz=177,SNR=14
F63A Nahmakanta, Br 59.92 5 P P 23 45 58.5 +0.4
baz=187,SNR=6.3
F49A Sandfield 59.96 355 P P 23 45 56.2 -2.1
baz=173,SNR=20
F51A Arnstein 59.97 357 P P 23 45 56.8 -1.6
baz=175,SNR=12
F60A Warwick 59.98 3 P P 23 45 58.3 -0.2
baz=184,SNR=8.0
F61A St Evariste 60.05 4 P P 23 45 58.9 0.0
baz=185
GLA Glamis 60.06 322 P P 23 46 00.0 +0.7
baz=135,SNR=15
OGNE Ogallala 60.07 337 P P 23 45 59.4 +0.2
baz=150
F48A Evansville 60.08 354 P P 23 45 57.4 -1.8
baz=172,SNR=28
F64A Sherman 60.15 6 P P 23 46 00.1 +0.5
baz=188,SNR=13
TRQ Mont Tremblant 60.15 1 P P 23 45 59.4 -0.3
E52A Mattawa 60.27 358 P P 23 45 59.1 -1.3
baz=177,SNR=13
F45A CMU Biological 60.27 352 P P 23 45 58.8 -1.6
baz=169,SNR=16
E53A Dumoine, Ponti 60.33 358 P P 23 45 60.0 -0.9
baz=178,SNR=12
E58A La Victoria 60.33 2 P P 23 46 01.0 +0.2
baz=183,SNR=15
E57A Chemin Saint G 60.35 1 P P 23 46 00.7 -0.3
baz=182,SNR=39
H09W1 TRISTAN DA CUN 60.36 125 P P 23 46 01.4 0.0
E54A Lac Daplat, Po 60.37 359 P P 23 46 00.2 -1.0
baz=178,SNR=29
Y12C Blythe 60.37 323 P P 23 46 02.4 +1.0
baz=136,SNR=44
E55A Montcerf-Lytto 60.38 360 P P 23 46 01.0 -0.2
baz=180
E60A Ste Agathe de 60.41 3 P P 23 46 01.3 -0.1
baz=185,SNR=6.2
E56A St. Veronique 60.47 0 P P 23 46 01.7 -0.1
baz=181,SNR=53
E59A St. Maurice 60.47 3 P P 23 46 02.0 +0.3
baz=183
E61A Lac Etchemin 60.53 4 P P 23 46 02.6 +0.3
baz=186,SNR=14
ISCO Idaho Springs 60.53 334 IAmb IAmb 23 46 15.2
comp=Z,59nm,1.1s
ISCO Idaho Springs 60.53 334 P P 23 46 03.1 +0.3
baz=146
IKP In-Ko-Pah, Jac 60.55 321 P P 23 46 03.7 +1.0
baz=134,SNR=10
PDMCI Parker Dam,Lak 60.55 324 P P 23 46 03.3 +0.7
baz=136,SNR=26
E51A G1948 Merrick 60.55 357 P P 23 46 01.2 -1.2
baz=176,SNR=25
SWSC Sam W. Stewart 60.56 322 P P 23 46 03.3 +0.5
baz=134,SNR=11
LMN Caledonia Moun 60.58 9 IAmb IAmb 23 46 22.8
comp=Z,53nm,0.8s
SMCO Snowmass 60.62 332 IAmb IAmb 23 46 22.7
comp=Z,60nm,1.0s
E48A Lockeyer 60.69 355 P P 23 46 01.7 -1.5
baz=173,SNR=25
E63A Oxbow 60.70 6 IAmb IAmb 23 46 14.2
comp=Z,62nm,1.1s
E63A Oxbow 60.70 6 P P 23 46 04.0 +0.7
baz=188,SNR=7.7
GBN Guysborough 60.70 11 IAmb IAmb 23 46 21.4
comp=Z,55nm,1.1s
F42A Maple Grove Fa 60.74 350 P P 23 46 03.0 -0.6
F42A IAmb IAmb 23 46 07.1
comp=Z,59nm,1.1s
E64A Bridgewater 60.75 6 P P 23 46 04.2 +0.5
baz=189,SNR=9.7
ECSD EROS Data Cent 60.76 343 P P 23 46 03.0 -0.9
baz=157
E47A Iron Bridge 60.77 354 P P 23 46 02.0 -1.8
baz=172,SNR=41
BC3 Big Chuckawall 60.85 322 P P 23 46 05.7 +0.9
baz=135,SNR=66
MONP2 Monument Peak 60.91 321 P P 23 46 06.1 +0.8
baz=134,SNR=16
BAR Barrett 60.91 321 IAmb IAmb 23 46 09.8
comp=Z,72nm,1.1s
D55A Sainte-Anne-du 60.94 0 P P 23 46 04.6 -0.4
baz=180,SNR=33
D57A Chemin Vers le 60.96 1 P P 23 46 05.4 +0.3
baz=182,SNR=31
D56A ZEC Mazanza, M 60.98 1 P P 23 46 05.0 -0.2
baz=181,SNR=22
PQI Presque Isle 60.98 6 IAmb IAmb 23 46 11.8
comp=Z,72nm,1.1s
D60A Saint Jean D'O 60.98 4 P P 23 46 05.5 +0.3
baz=185,SNR=15
IRM Iron Mountain 61.02 323 P P 23 46 06.8 +0.9
baz=135,SNR=153
D59A Saint-Raymond 61.03 3 P P 23 46 05.9 +0.4
baz=184,SNR=8.8
D53A Lac Vacive, Po 61.03 358 P P 23 46 05.1 -0.5
baz=178,SNR=30
D58A Chemin du LacG 61.07 2 P P 23 46 06.0 +0.1
baz=183,SNR=39
D54A Lac Fusel, La 61.08 359 P P 23 46 05.2 -0.8
baz=179,SNR=18
U15A North Rim 61.08 327 IAmb IAmb 23 46 12.9
comp=Z,50nm,1.1s
D51A Lot 18 Range I 61.10 357 P P 23 46 04.9 -1.2
baz=176,SNR=9.3
NEE2 Needles Airpor 61.16 324 P P 23 46 07.7 +0.9
baz=136,SNR=5.1
E43A Lone Tree Farm 61.16 351 P P 23 46 05.5 -1.0
E43A IAmb IAmb 23 46 09.6
comp=Z,41nm,0.9s
SPMN Marine on St. 61.16 346 IAmb IAmb 23 46 08.4
comp=Z,90nm,0.9s
SPMN Marine on St. 61.16 346 P P 23 46 05.7 -0.8
baz=161,SNR=37
D50A G1974 Best Tow 61.20 357 P P 23 46 05.7 -1.1
baz=175,SNR=17
E44A Grand Marais A 61.24 352 P P 23 46 06.0 -1.1
baz=169,SNR=8.3
D46A Sault St. Mari 61.28 353 P P 23 46 05.4 -1.9
baz=171,SNR=18
D62A Allapoint, All 61.29 5 IAmb IAmb 23 46 12.6
comp=Z,54nm,0.9s
D62A Allapoint, All 61.29 5 P P 23 46 07.9 +0.6
baz=187,SNR=26
109C Camp Elliot, M 61.32 321 P P 23 46 08.7 +0.9
baz=133,SNR=6.4
D61A St Aubert, Com 61.32 4 P P 23 46 08.3 +0.7
baz=186,SNR=18
D63A Stockholm 61.34 6 P P 23 46 08.1 +0.5
baz=188,SNR=18
D47A Chapleau 61.34 354 P P 23 46 05.8 -1.9
baz=172,SNR=32
D48A Paudash Townsh 61.34 355 P P 23 46 06.0 -1.8
baz=173,SNR=22
LATQ La Tuque 61.36 2 P P 23 46 07.7 -0.1
baz=183
D49A Beulah Townshi 61.41 356 P P 23 46 06.8 -1.3
baz=174
BELC Belle Mtn. Jos 61.42 322 P P 23 46 10.0 +1.3
baz=134,SNR=68
PFO Pinyon Flats O 61.42 322 LR LR 00 08 57.5
comp=Z,1µm,21.0s,baz=135,slow=32
PFO PKP2bc P'P'bc 00 15 27.5 -1.7
comp=Z,2.4nm,0.9s,baz=155,slow=4.5,SNR=4.2
PFO PKP2ab 00 15 35.9
comp=Z,2.4nm,0.9s,baz=308,slow=2.4,SNR=5.0
PFO Pinyon Flats O 61.42 322 P P 23 46 09.3 +0.6
PFO IAmb IAmb 23 46 12.2
comp=Z,71nm,1.1s
PFO Pinyon Flats O 61.42 322 *c* *i*P P 23 46 09.0 +0.3
PFO pmax pmax
comp=Z,354nm,1.3s
PFO Pinyon Flats O 61.42 322 P P 23 46 09.9 +1.2
baz=134,SNR=78
N23A Red Feather La 61.59 334 IAmb IAmb 23 46 13.0
comp=Z,46nm,1.1s
N23A Red Feather La 61.59 334 P P 23 46 09.9 +0.1
baz=146,SNR=21
GMRC Granite Mounta 61.77 323 P P 23 46 12.1 +1.1
baz=135,SNR=48
BATG Bathurst New B 61.80 7 IAmb IAmb 23 46 21.5
comp=Z,71nm,1.2s
MURC Murrieta 61.86 321 P P 23 46 12.6 +1.0
baz=133,SNR=28
O20A White River Ci 61.97 332 P P 23 46 12.9 +0.6
baz=144,SNR=60
LCMT Little Creek M 62.03 326 P P 23 46 13.5 +0.7
SUSD Miller 62.10 341 P P 23 46 11.9 -1.0
baz=154,SNR=5.6
BBRC Big Bear Solar 62.15 322 P P 23 46 15.0 +1.3
baz=134,SNR=9.8
HEC Hector,Ludlow 62.20 323 P P 23 46 15.1 +1.3
baz=134,SNR=48
SCI2 San Clemente I 62.28 320 P P 23 46 15.4 +1.0
baz=132,SNR=6.3
TUQ Turquoise Moun 62.38 323 P P 23 46 15.9 +0.8
baz=135,SNR=36
CIS Catalina Islan 62.48 320 P P 23 46 16.6 +0.9
baz=132,SNR=17
BFSC Mount Baldy Ra 62.58 321 P P 23 46 17.4 +0.9
baz=133,SNR=51
MSU Marysvale 62.60 328 P P 23 46 16.8 +0.2
MSU Marysvale 62.60 328 P P 23 46 16.8 +0.2
FMP Fort Macarthur 62.61 321 P P 23 46 17.6 +1.1
baz=132
RRX Edison Barstow 62.62 322 P P 23 46 18.0 +1.4
baz=134
GSC Goldstone, Bar 62.80 323 IAmb IAmb 23 46 19.8
comp=Z,82nm,1.1s
GSC Goldstone, Bar 62.80 323 P P 23 46 18.9 +1.0
baz=134,SNR=36
MWC Mount Wilson 62.81 321 IAmb IAmb 23 46 23.5
comp=Z,74nm,1.1s
PASC Pasadena Art C 62.85 321 P P 23 46 18.6 +0.5
SHOC Shoshone, Teco 62.91 324 P P 23 46 19.4 +0.9
baz=135
LSQQ Lebel-sur-Quev 62.99 359 P P 23 46 18.2 -0.5
baz=178
DECC Green Verdugo 63.00 321 P P 23 46 20.2 +1.0
baz=132,SNR=6.5
SNCC San Nicolas Is 63.07 319 P P 23 46 20.5 +0.9
baz=131
EDW2 Edwards Air Fo 63.22 322 P P 23 46 21.1 +0.5
baz=133,SNR=53
TAOE Nuku Hiva Isla 63.25 267 *e*S S 23 54 49.5 +0.2
comp=Z,2µm,27.6s
TAOE *e*LQ LQ 00 02 38.7
comp=Z,4µm,29.7s
TAOE *e*LR LR 00 05 20.3
comp=Z,20µm,27.0s,baz=108
TAOE Nuku Hiva Isla 63.25 267 *e*T T 00 54 04.9
comp=Z,66nm,0.2s
K22A Casper 63.28 335 IAmb IAmb 23 46 22.0
comp=Z,141nm,1.1s
K22A Casper 63.28 335 P P 23 46 21.2 +0.1
baz=146,SNR=38
BLG Laguna Peak, P 63.35 320 P P 23 46 22.5 +1.0
baz=132,SNR=8.3
LRMC Laurel Mtn Rad 63.44 322 P P 23 46 23.1 +1.0
baz=134,SNR=40
EYMN Ely 63.46 348 IAmb IAmb 23 46 25.5
comp=Z,80nm,1.1s
EYMN Ely 63.46 348 P P 23 46 21.0 -0.9
baz=163
OSI Osito Audit: C 63.48 321 IAmb IAmb 23 46 24.0
comp=Z,105nm,1.1s
OSI Osito Audit: C 63.48 321 P P 23 46 23.0 +0.7
baz=132,SNR=5.1
RSSD Black Hills 63.55 338 P P 23 46 22.8 0.0
RSSD Black Hills 63.55 338 P P 23 46 22.8 0.0
RSSD pmax pmax
comp=Z,44nm,1.1s
RSSD Black Hills 63.55 338 P P 23 46 23.0 +0.1
baz=149
SCZ2 Santa Cruz Isl 63.63 320 P P 23 46 24.0 +0.7
baz=131,SNR=6.0
TPNV Topopah Spring 63.64 324 IAmb IAmb 23 46 25.6
comp=Z,143nm,1.1s
TPNV Topopah Spring 63.64 324 P P 23 46 24.8 +1.3
baz=135
FURC Furnace Creek, 63.65 324 P P 23 46 24.6 +1.3
baz=135,SNR=49
MATQ Matagami 63.71 359 P P 23 46 22.8 -0.6
baz=178
MPMC Manual Prospec 63.73 323 P P 23 46 24.7 +0.6
baz=134,SNR=62
ARVC Arvin 63.89 321 P P 23 46 25.9 +1.0
baz=132
SBC Santa Barbara 63.97 320 P P 23 46 25.9 +0.4
baz=131
ISA Isabella, Lake 64.04 322 IAmb IAmb 23 46 28.6
comp=Z,103nm,1.1s
ISA Isabella, Lake 64.04 322 P P 23 46 27.1 +1.1
baz=133,SNR=50
DUG Dugway, Tooele 64.19 329 P P 23 46 27.5 +0.5
DUG Dugway, Tooele 64.19 329 P P 23 46 27.5 +0.5
DUG pmax pmax
comp=Z,227nm,1.1s
DUG Dugway, Tooele 64.19 329 P P 23 46 28.2 +1.2
baz=140
R11A Troy Canyon, C 64.27 326 IAmb IAmb 23 46 29.7
comp=Z,114nm,1.1s
R11A Troy Canyon, C 64.27 326 P P 23 46 29.0 +1.4
baz=136
GRAC Grapevine Rang 64.31 324 P P 23 46 28.8 +1.1
baz=134,SNR=11
PKM Mcpherson Peak 64.33 321 P P 23 46 29.2 +1.1
baz=132
CWC Cottonwood Cre 64.33 323 P P 23 46 29.1 +1.1
baz=134
VES Vestal, Richgr 64.52 322 P P 23 46 30.0 +0.9
baz=132,SNR=30
BW06 Boulder Array 64.67 333 P P 23 46 29.9 -0.3
baz=143
PDAR Pinedale Array 64.67 333 P P 23 46 29.8 -0.5
comp=Z,47nm,1.1s,baz=142,slow=7.4,SNR=136
PDAR PKPPKP P'P'df 00 15 09.2 -5.4
comp=Z,1.2nm,1.1s,baz=346,slow=3.1,SNR=4.7
PDAR PKP2bc 00 15 20.5
comp=Z,2.6nm,1.1s,baz=236,slow=1.1,SNR=7.0
PDAR PKP2ab 00 15 29.2
comp=Z,4.4nm,1.2s,baz=342,slow=2.3,SNR=5.9
PDAR LR LR 00 15 56.7
comp=Z,850nm,21.9s,baz=145,slow=37
PDAR P4KPbc 00 23 23.6
comp=Z,0.7nm,0.9s,baz=144,slow=3.3,SNR=5.6
SMMC Simmler 64.72 321 P P 23 46 31.7 +1.3
baz=132
AGMN Agassiz Nation 64.77 345 IAmb IAmb 23 46 30.8
comp=Z,140nm,1.1s
AGMN Agassiz Nation 64.77 345 P P 23 46 30.1 -0.3
baz=158
TIN Tinemaha, Big 64.84 323 P P 23 46 32.3 +1.0
baz=134
VOG Valley Oaks Go 65.02 322 P P 23 46 32.1 -0.2
baz=132
MDND Maddock 65.37 343 P P 23 46 33.9 -0.5
MDND Maddock 65.37 343 P P 23 46 34.7 +0.4
baz=154
MLAC Mammoth, Mammo 65.59 323 P P 23 46 37.5 +1.2
baz=133
MDPB Devils Postpil 65.73 323 IAmb IAmb 23 46 39.6
comp=Z,172nm,1.2s
PMPB Monarch Peak 65.81 321 IAmb IAmb 23 46 42.1
comp=Z,142nm,1.2s
ELK Elko 65.83 328 IAmb IAmb 23 46 39.2
comp=Z,101nm,1.1s
NVAR Mina Array Bea 65.83 324 P P 23 46 38.8 +1.0
comp=Z,50nm,1.0s,baz=143,slow=6.4,SNR=202
NVAR LR LR 00 11 09.3
comp=Z,1µm,21.0s,baz=133,slow=32
NVAR PKPPKP P'P'df 00 15 05.6 -7.6
comp=Z,0.6nm,0.9s,baz=237,slow=5.1,SNR=3.6
NVAR PKP2bc 00 15 17.8
comp=Z,7.7nm,1.1s,baz=264,slow=2.3,SNR=5.8
NVAR PKP2ab 00 15 23.6
comp=Z,4.8nm,1.0s,baz=261,slow=3.3,SNR=10
NVAR P4KPbc 00 23 31.0
comp=Z,0.1nm,0.3s,baz=126,slow=7.5,SNR=4.8
FXWY Fox Creek 66.02 333 IAmb IAmb 23 46 41.4
comp=Z,73nm,1.1s
RYN Ryan 66.10 324 P P 23 46 40.3 +0.8
H17A Grant Village 66.42 333 P P 23 46 42.5 +1.0
baz=143
RLMT Red Lodge 66.44 335 P P 23 46 41.8 +0.2
baz=144
WAKR Walker 66.53 324 IAmb IAmb 23 46 44.5
comp=Z,127nm,1.2s
LAO LASA Array 66.55 338 P P 23 46 42.0 0.0
baz=148
ULM Lac du Bonnet 66.59 346 P P 23 46 41.3 -0.8
comp=Z,168nm,1.1s,baz=158,slow=6.2,SNR=142
ULM PKPPKP P'P'df 00 15 10.2 -0.1
comp=Z,8.1nm,1.1s,baz=346,slow=4.7,SNR=5.3
ULM PKP2ab 00 15 20.6
comp=Z,5.3nm,1.0s,baz=327,slow=3.5,SNR=3.8
ULM LR LR 00 19 39.1
comp=Z,2µm,18.9s,baz=143,slow=39
ULM Lac du Bonnet 66.59 346 IAmb IAmb 23 46 59.0
comp=Z,110nm,1.1s
ULM Lac du Bonnet 66.59 346 *c* *i*P P 23 46 41.0 -1.1
YNE Yellowstone No 66.66 334 P P 23 46 43.2 +0.2
YERR Yerington 66.75 324 IAmb IAmb 23 46 45.6
comp=Z,161nm,1.2s
PNTR Pine Nut 67.02 324 IAmb IAmb 23 46 47.6
comp=Z,154nm,1.1s
SHEL Horse Pasture 67.23 102 P P 23 46 47.6 +0.6
SHEL IAmb IAmb 23 46 53.2
comp=Z,86nm,0.9s
SHEL Horse Pasture 67.23 102 P P 23 46 47.6 +0.6
SHEL pmax pmax
comp=Z,86nm,1.0s
RUBR Rubicon Trail 67.31 324 IAmb IAmb 23 46 53.1
comp=Z,86nm,1.2s
DGMT Dagmar 67.36 340 IAmb IAmb 23 46 53.0
comp=Z,99nm,0.9s
DGMT Dagmar 67.36 340 P P 23 46 47.8 +0.8
baz=150
DLMT Dillon 68.06 333 P P 23 46 52.6 +0.8
EGMT Eagleton 69.00 336 P P 23 46 57.7 +0.3
baz=144
VNA3 Neumayer Olymp 69.00 162 P P 23 46 58.3 +1.2

O03E Paynes Creek 69.09 324 P P 23 46 58.0 -0.2
baz=132
SCHQ Schefferville 69.17 5 P P 23 46 58.1 -0.1
comp=Z,85nm,1.1s,baz=193,slow=4.6,SNR=46
SCHQ PKP2bc 00 15 07.7
comp=Z,13nm,1.3s,baz=49,slow=13,SNR=6.1
SCHQ LR LR 00 17 05.3
comp=Z,2µm,21.9s,baz=215,slow=36
SCHQ Schefferville 69.17 5 P P 23 46 58.0 -0.3
VNA1 Neumayer--Stat 69.26 161 P P 23 47 00.3 +1.6
MEH Mehetia 69.29 256 eP P 23 46 59.3 -0.5
comp=Z,56nm,1.4s
MEH Mehetia 69.29 256 eT T 01 01 34.7
comp=Z,19nm,0.3s
O02D Mt. Diablo Mer 69.58 323 P P 23 47 01.4 +0.1
baz=131
VNA2 Neumayer--Watz 69.61 161 P P 23 47 01.8 +0.9
baz=285,slow=5.9
KCPM Cahto Peak 69.73 322 IAmb IAmb 23 47 04.5
comp=Z,172nm,1.2s
MSO Missoula 69.79 333 P P 23 47 03.3 +1.0
baz=140
TBI Tubuai 69.83 250 eP P 23 47 03.0 0.0
comp=Z,619nm,1.3s
TBI eS S 23 56 09.8 +1.3
comp=Z,1µm,26.0s
TBI eLQ LQ 00 05 26.8
comp=Z,2µm,36.8s
TBI eLR LR 00 08 26.3
comp=Z,12µm,27.8s,baz=92
TBI Tubuai 69.83 250 eT T 01 02 12.7
comp=Z,66nm,0.3s
N02D Trinity Center 70.05 324 P P 23 47 03.8 -0.3
baz=131
M04C Macdoel 70.10 325 P P 23 47 05.0 +0.6
baz=132
KMRM Mail Ridge 70.15 323 IAmb IAmb 23 47 09.3
comp=Z,76nm,1.0s
M02C Callahan 70.41 324 P P 23 47 06.5 +0.2
baz=133
I07A Izee 70.42 328 P P 23 47 07.0 +0.6
I07A IAmb IAmb 23 47 26.2
comp=Z,81nm,1.2s
TIAR Tiarei 70.55 256 eP P 23 47 07.4 -0.1
comp=Z,21nm,1.2s
TIAR Tiarei 70.55 256 eT T 01 03 08.8
comp=Z,8.3nm,0.2s
YBH Yreka Blue Hor 70.56 324 P P 23 47 06.5 -0.7
comp=Z,40nm,1.0s,baz=134,slow=4.6,SNR=32
KHMM Horse Mountain 70.58 323 IAmb IAmb 23 47 09.4
comp=Z,120nm,1.2s
K04D Chiloquin, OR 70.62 326 P P 23 47 08.2 +0.6
baz=132
L04D Klamath Falls 70.65 325 P P 23 47 08.0 +0.2
baz=132
F10A Beach Ranch, E 70.65 331 IAmb IAmb 23 47 09.3
comp=Z,75nm,1.1s
JCC Jacoby Creek, 70.72 323 IAmb IAmb 23 47 10.1
comp=Z,131nm,1.1s
PPTF Pamatai, Papee 70.75 256 P P 23 47 10.6 +1.8
PAE Paea 70.75 256 eP P 23 47 08.3 -0.4
comp=Z,36nm,1.4s
PPT2 Papeete2 70.76 256 eP P 23 47 08.8 -0.1
comp=Z,191nm,1.5s
PPT2 eS S 23 56 19.8 +0.2
comp=Z,2µm,27.0s
PPT2 eLQ LQ 00 05 50.8
comp=Z,2µm,26.8s
PPT2 eLR LR 00 08 47.0
comp=Z,9µm,28.5s,baz=104
PPT Papeete 70.76 256 P P 23 47 10.4 +1.6
comp=Z,45nm,0.9s,baz=86,slow=12,SNR=8.3
PPT LR LR 00 12 05.0
comp=Z,474nm,19.9s,baz=122,slow=31
J05D Fort Rock, OR 70.78 326 P P 23 47 09.4 +0.8
baz=133
PINE Pine Mountain 70.97 327 IAmb IAmb 23 47 11.8
comp=Z,143nm,1.1s
G08A Pilot Rock 71.00 329 IAmb IAmb 23 47 11.4
comp=Z,88nm,1.2s
KRMB Red Mountain 71.10 324 IAmb IAmb 23 47 12.4
comp=Z,140nm,1.2s
MACI Morro de la Ar 71.10 53 P P 23 47 11.4 +0.6
SNAA Sanae 71.22 161 P P 23 47 11.7 +1.0
SNAA Sanae 71.22 161 P P 23 47 11.0 +0.2
SNAA Sanae 71.22 161 d iP P 23 47 09.8 -0.9
J04D Umpqua Nationa 71.22 326 P P 23 47 11.8 +0.5
baz=132
L02E Cave Junction 71.34 324 P P 23 47 12.8 +1.1
baz=131
E09A Wood Farm, Sta 71.48 331 IAmb IAmb 23 47 13.7
comp=Z,88nm,1.1s
I05D Terrebonne, OR 71.56 327 P P 23 47 14.3 +1.2
baz=133
K02D Willamette Mer 71.72 325 P P 23 47 15.3 +1.1
baz=131
I04A Tendick Farm, 71.76 326 P P 23 47 14.7 +0.4
baz=132
F07A Phinny Hill Vi 71.91 329 IAmb IAmb 23 47 17.4
comp=Z,148nm,1.2s
G05D Wamic, OR 72.16 328 P P 23 47 18.4 +1.7
baz=133
J01E Myrtle Point 72.17 325 P P 23 47 17.9 +1.1
baz=131
I03D Drain, OR 72.20 326 P P 23 47 17.9 +1.0
baz=131
FFC Flin Flon 72.20 344 P P 23 47 15.9 -0.7
FFC Flin Flon 72.20 344 P P 23 47 15.9 -0.7
FFC pmax pmax
comp=Z,40nm,1.2s
KEBM Edson Butte 72.21 325 IAmb IAmb 23 47 38.3
comp=Z,155nm,1.1s
D08A Wollman Farm, 72.25 331 P P 23 47 17.2 +0.1
NEW Newport 72.29 332 P P 23 47 17.8 +0.4
comp=Z,43nm,1.1s,baz=135,slow=6.3,SNR=36
E07A Sunnyside 72.34 330 IAmb IAmb 23 47 19.8
comp=Z,173nm,1.2s
H04D Lebanon 72.42 327 P P 23 47 18.5 +0.3
baz=132
F05D White Salmon 72.67 328 P P 23 47 20.8 +1.1
baz=133
I02D Swisshome 72.74 326 P P 23 47 21.5 +1.4
baz=131
COR Corvallis 72.76 326 P P 23 47 21.7 +1.5
COR pmax pmax
comp=Z,1µm,2.0s
PMOZ Porto Moniz, M 72.81 49 eLR LR 00 11 14.4
comp=Z,2µm,24.0s
LIC Lamto 72.94 79 eP P 23 47 21.4 -0.5
comp=Z,207nm,1.7s
LIC Lamto 72.94 79 P P 23 47 21.4 -0.5
TIC Toumodi 73.06 78 eP P 23 47 22.5 -0.2
G03D McMinnville, O 73.16 327 P P 23 47 24.0 +1.5
baz=132
DBIC Dimbokro 73.23 78 P P 23 47 23.7 +0.1
comp=Z,39nm,1.0s,baz=206,slow=5.4,SNR=32
DBIC LR LR 00 17 23.8
comp=Z,8µm,21.7s,baz=230,slow=34
KIC Kosan Boka 73.25 79 eP P 23 47 23.7 -0.1
comp=Z,218nm,1.2s
KIC Kosan Boka 73.25 79 P P 23 47 23.7 -0.1
B08A Colville Reser 73.37 331 IAmb IAmb 23 47 25.1
comp=Z,90nm,1.1s
F04D Rainier, OR 73.61 328 P P 23 47 26.4 +1.3
baz=132
E04D Cinebar 73.69 328 P P 23 47 26.8 +1.1
baz=132
C06D Leavenworth 73.80 330 P P 23 47 27.1 +0.7
baz=134
D05A Enumclaw 73.83 329 IAmb IAmb 23 47 28.0
comp=Z,156nm,1.1s
D04E Lakebay 74.22 329 P P 23 47 29.6 +0.9
baz=132
D03D Eldon 74.62 329 P P 23 47 32.2 +1.2
baz=132
B05A Bryant 74.62 330 P P 23 47 31.4 +0.3
baz=133
NLWA Neilton Lookou 74.92 328 IAmb IAmb 23 47 35.1
comp=Z,178nm,1.1s
A04D Lummi Island 75.23 330 P P 23 47 35.5 +1.0
baz=133
NVL N'lazarevskaya 75.87 160 eP P 23 47 37.0 -0.9
NVL eS S 23 57 12.8 -2.8
NVL eSS SS 00 02 11.9 +3.7
NVL pmax pmax
comp=Z,342nm,1.4s
QSPA South Pole Qui 75.94 180 P P 23 47 39.1 +0.5
TTIG Tnine Tigouga, 78.43 54 P P 23 47 56.0 +2.8
SNR=23
TTIG P P 23 47 56.0 +2.8
SNR=23
NRS Narsarsuaq 78.88 14 iP P 23 47 54.2 -0.5
NRS Narsarsuaq 78.88 14 P P 23 47 53.8 -0.9
NRS IAmb IAmb 23 47 55.9
comp=Z,118nm,1.1s
NRS Narsarsuaq 78.88 14 eP P 23 47 54.2 -0.5
OUK Oukaimeden 79.15 54 P P 23 47 60.0 +2.6
SNR=20
OUK P P 23 47 60.0 +2.6
SNR=20
RAR Rarotonga 79.60 251 P P 23 48 01.2 +1.6
RAR Rarotonga 79.60 251 P P 23 48 01.2 +1.6
BBB Bella Bella 80.11 330 P P 23 48 01.4 -0.2
comp=Z,107nm,1.2s,baz=157,slow=4.6,SNR=5.8
AVE Averroes 80.34 52 P P 23 48 06.0 +2.6
SNR=15
AVE Averroes 80.34 52 Pdif pP 23 48 23.7 +3.7
AVE eS S 23 58 09.1 +4.3
ZGR Zagora 80.50 56 P P 23 48 06.1 +1.7
SNR=27
ZGR P P 23 48 06.1 +1.7
SNR=27
TZRR Tazzarine 80.79 55 P P 23 48 08.1 +2.1
SNR=29
TZRR P P 23 48 08.1 +2.1
SNR=29
PFVI Vila Bisbo 80.89 48 eP P 23 48 08.5 +2.3
comp=Z,220nm,1.5s
PFVI Vila Bisbo 80.89 48 IAmb IAmb 23 48 10.1
comp=Z,113nm,1.0s
MORF Marmelete 81.09 48 eP P 23 48 08.1 +0.8
MORF AMb AMB 23 48 11.6
comp=Z,214nm,1.1s
MORF eS S 23 58 14.1 +1.5
MORF Marmelete 81.09 48 eP P 23 48 09.7 +2.4
comp=Z,214nm,1.3s
MORF Marmelete 81.09 48 eP P 23 48 08.1 +0.8
MORF eS S 23 58 14.1 +1.5
PTEO Sao Teotonio 81.14 48 eP P 23 48 09.7 +2.2
comp=Z,292nm,1.9s
TOA0 Torodi Ar. Sit 81.28 74 P P 23 48 08.9 +0.2
TORD Torodi Ar. Bea 81.28 74 P P 23 48 09.4 +0.7
comp=Z,256nm,1.0s,baz=263,slow=4.2,SNR=308
TORD PKKPbc PKKPbc 00 06 45.0 +1.4
comp=Z,2.6nm,1.1s,baz=56,slow=2.4,SNR=6.9
TORD PKPPKP P'P'df 00 14 40.5 -8.6
comp=Z,1.1nm,1.1s,baz=33,slow=1.5,SNR=4.7
TORD LR LR 00 23 18.8
comp=Z,3µm,20.8s,baz=275,slow=35
LIS Lisbon 81.35 47 eP P 23 48 09.3 +0.8
LIS AMb AMB 23 48 13.5
comp=Z,225nm,2.0s
LIS eS S 23 58 16.6 +1.6
LIS Lisbon 81.35 47 eP P 23 48 09.3 +0.8
LIS eS S 23 58 16.6 +1.6
PMAFR Mafra 81.36 46 eP P 23 48 10.8 +2.2
comp=Z,267nm,1.6s
PNCL Nicolau / Gran 81.52 47 eP P 23 48 12.0 +2.5
comp=Z,132nm,1.5s
PBDV Barranco-do-Ve 81.59 48 eP P 23 48 12.3 +2.4
comp=Z,147nm,1.6s
PCVE Castro Verde 81.67 48 eP P 23 48 12.5 +2.2
comp=Z,187nm,1.9s
SBA Scott Base 81.77 191 P P 23 48 11.9 +1.7
SBA Scott Base 81.77 191 P P 23 48 11.9 +1.7
SBA pmax pmax
comp=Z,271nm,1.2s
PVAQ Vaqueiros 81.81 48 eP P 23 48 13.2 +2.2
comp=Z,136nm,1.7s
PVAQ Vaqueiros 81.81 48 eS S 23 58 23.6 +3.7
PVAQ Vaqueiros 81.81 48 eLR LR 00 15 06.7
comp=Z,2µm,22.0s
PBEJ Beja 81.96 48 eP P 23 48 13.9 +2.1
comp=Z,191nm,1.7s
EVO Evora 82.07 47 eP P 23 48 14.0 +1.6
comp=Z,159nm,1.7s
EVO Evora 82.07 47 Pdif pP 23 48 33.7 +4.3
EVO eS SKSac 23 58 33.3 +5.4
PMTG Montargil 82.15 47 eP P 23 48 14.6 +1.8
comp=Z,348nm,1.7s
IFR Ifrane 82.19 53 Pdif pP 23 48 30.7 +0.7
IFR eS SKSac 23 58 27.0 -2.3
PTOM Tomar 82.25 46 eP P 23 48 14.9 +1.6
comp=Z,347nm,1.3s
YKA Yellowknife Ar 82.28 343 P P 23 48 12.8 -0.2
comp=Z,91nm,1.1s,baz=139,slow=5.2,SNR=98
YKA PKKPbc PKKPbc 00 06 40.8 -2.9
comp=Z,3.9nm,1.1s,baz=313,slow=2.5,SNR=10
YKA PKPPKP P'P'df 00 14 41.3 -1.6
comp=Z,0.9nm,1.0s,baz=301,slow=2.3,SNR=6.0
YKA LR LR 00 29 26.1
comp=Z,1µm,19.0s,baz=0.0,slow=39
MDT Midelt 82.32 53 P P 23 48 15.8 +1.8
comp=Z,27nm,1.1s,baz=256,slow=4.9,SNR=15
MDT Midelt 82.32 53 P P 23 48 15.8 +1.8
SNR=14
PCAS Casmilo, Conde 82.38 46 eP P 23 48 16.0 +2.0
comp=Z,242nm,1.8s
PCAS Casmilo, Conde 82.38 46 eS SKSac 23 58 31.3 +1.3
PESTR Estremoz 82.51 47 P P 23 48 16.8 +2.1
SNR=14
PESTR P P 23 48 16.8 +2.1
SNR=14
SFS San Fernando 82.53 50 Pdif pP 23 48 32.1 +0.6
XMAS Kiritimati 82.54 274 P P 23 48 16.4 +1.0
XMAS IAmb IAmb 23 48 34.9
comp=Z,174nm,1.1s
CHEFC Chefchaouen 82.64 51 P P 23 48 19.0 +3.4
SNR=10
SMIR Smir Dam 82.83 51 P P 23 48 19.2 +2.8
SNR=9.8
SMIR P P 23 48 19.2 +2.8
SNR=9.8
VNDA Vanda 82.84 191 P P 23 48 17.0 +1.3
comp=Z,70nm,1.1s,baz=129,slow=4.9,SNR=27
VNDA pP pP 23 48 33.8 +1.3
comp=Z,98nm,1.0s,baz=143,slow=4.9,SNR=14
VNDA PKKPbc PKKPbc 00 06 39.5 -2.1
comp=Z,2.6nm,0.8s,baz=47,slow=1.8,SNR=9.3
VNDA LR LR 00 18 08.4
comp=Z,3µm,20.7s,baz=124,slow=30
VNDA Vanda 82.84 191 P P 23 48 17.1 +1.3
VNDA Vanda 82.84 191 P P 23 48 17.1 +1.3
VNDA pmax pmax
comp=Z,192nm,1.1s
PMRV Marv??o 82.89 46 eP P 23 48 17.6 +0.9
comp=Z,105nm,1.4s
PMRV Marv??o 82.89 46 eS SKSac 23 58 34.1 +0.7
PMRV Marv??o 82.89 46 eLR LR 00 15 15.6
comp=Z,5µm,22.0s
H02N1 VAN INLET T-PH 82.91 330 P P 23 48 16.0 -0.5
CEU Ceuta 82.92 50 Pdif pP 23 48 35.1 +1.5
CEU eS S 23 58 38.6 +7.3
PCBR Castelo Branco 83.00 46 eP P 23 48 18.4 +1.2
comp=Z,178nm,1.5s
SFJD Kangerlussuaq 83.04 10 iP P 23 48 16.1 -0.7
SFJD Kangerlussuaq 83.04 10 P P 23 48 16.6 -0.2
SFJD Kangerlussuaq 83.04 10 iP P 23 48 16.1 -0.7
PVIS Viseu 83.08 45 eP P 23 48 19.1 +1.4
comp=Z,321nm,1.4s
MTE Manteigas 83.19 46 eP P 23 48 19.3 +1.0
comp=Z,234nm,1.3s
MTE Manteigas 83.19 46 eS S 23 58 34.6 +0.6
MTE Manteigas 83.19 46 eLR LR 00 15 50.3
comp=Z,6µm,22.0s
MTE Manteigas 83.19 46 IAmb IAmb 23 48 21.3
comp=Z,142nm,1.1s
REAL Reales 83.27 50 Pdif P 23 48 20.0 +1.1
LIJA Lijar 83.30 49 Pdif pP 23 48 42.4 +6.7
PCAB Cabril 83.42 44 eP P 23 48 20.3 +0.9
comp=Z,271nm,1.4s
PVRL Vila Real 83.44 45 eP P 23 48 20.7 +1.2
comp=Z,185nm,1.8s
PVLZ Peæn de 83.45 51 Pdif pP 23 48 37.4 +1.0
PVLZ eS SKSac 23 58 43.0 +5.8
PALE Palemas 83.74 51 P P 23 48 24.0 +2.8
SNR=9.5
PALE P P 23 48 24.0 +2.8
SNR=9.5
HORN Hornachuelos 83.77 49 P P 23 48 22.9 +1.7
SNR=37
MVO Moncorvo 83.86 45 eP P 23 48 23.0 +1.3
comp=Z,228nm,1.4s
MVO Moncorvo 83.86 45 eS S 23 58 42.6 +1.8
MVO Moncorvo 83.86 45 eLR LR 00 15 51.3
comp=Z,4µm,20.0s
EMAL Malaga-Limoner 83.96 50 Pdif pP 23 48 39.9 +0.9
EMAL eS S 23 58 52.0 +10
PBRG Braganca 84.33 45 eP P 23 48 25.6 +1.6
comp=Z,157nm,1.7s
TDRA Tendrara 84.42 54 P P 23 48 27.1 +2.2
SNR=14
TDRA P P 23 48 27.1 +2.2
SNR=14
MELI Melilla 84.53 52 Pdif pP 23 48 42.4 +0.5
FIGM Figuig 84.71 55 P P 23 48 28.0 +1.7
SNR=54
FIGM P P 23 48 28.0 +1.7
SNR=54
DLBC Dease Lake 84.85 335 P P 23 48 27.2 +0.9
comp=Z,122nm,1.1s,baz=129,slow=3.9,SNR=38
DLBC PKKPbc PKKPbc 00 06 36.9 -0.7
comp=Z,6.5nm,0.7s,baz=70,slow=2.7,SNR=4.5
DLBC Dease Lake 84.85 335 IAmb IAmb 23 48 35.1
comp=Z,68nm,1.1s
ILULI Ilulissat 85.00 9 iP P 23 48 26.2 -0.5
comp=Z,284nm,1.4s
ILULI Ilulissat 85.00 9 IAmb IAmb 23 48 27.0
comp=Z,57nm,1.0s
ILULI Ilulissat 85.00 9 iP P 23 48 26.2 -0.5
ILULI pmax pmax
comp=Z,280nm,1.4s
PAB San Pablo 85.09 47 P P 23 48 28.6 +0.6
PAB IAmb IAmb 23 48 31.8
comp=Z,72nm,1.1s
PAB San Pablo 85.09 47 P P 23 48 28.6 +0.6
PAB pmax pmax
comp=Z,72nm,1.2s
HATHI Halema'uma'u T 85.14 291 P P 23 48 28.7 0.0
HATHI IAmb IAmb 23 48 45.2
comp=Z,130nm,1.1s
NPH North Pit 85.16 291 IAmb IAmb 23 48 36.5
comp=Z,128nm,1.1s
AIN Ainahou 85.31 291 P P 23 48 30.5 +0.9
HMH Humu'ula Sheep 85.40 291 IAmb IAmb 23 48 35.0
comp=Z,132nm,1.2s
ESDC Sonseca Array 85.41 47 P P 23 48 30.4 +0.9
comp=Z,3.8nm,0.5s,baz=259,slow=4.5,SNR=46
ESDC LR LR 00 23 52.0
comp=Z,3µm,19.8s,baz=250,slow=34
MLOA Mauna Loa Obse 85.46 291 P P 23 48 31.7 +1.0
MLOA IAmb IAmb 23 48 43.2
comp=Z,36nm,0.8s
SYO Syowa Base 85.50 161⇑eP P 23 48 26.0 -3.4
SYO Syowa Base 85.50 161⇓iPcP P 23 48 28.6 -0.8
SYO Syowa Base 85.50 161⇑ipP pP 23 48 43.8 -2.3
GUD Guadarrama 85.65 46 P P 23 48 31.4 +0.6
GUD pmax pmax
comp=Z,34nm,2.5s
KHLU Kahalu`u 85.76 291 P P 23 48 31.8 +0.1
SESP Santiago Espad 85.86 49 P P 23 48 32.9 +1.0
SNR=7.7
UCM Universidad Co 86.17 47 Pdif pP 23 48 45.3 -4.8
UCM eS S 23 59 05.5 +2.0
SIT Sitka 86.36 332 P P 23 48 34.2 +0.5
SIT Sitka 86.36 332 P P 23 48 34.2 +0.5
SIT pmax pmax
comp=Z,28nm,1.1s
CART Cartagena 86.81 50 Pdif pP 23 48 56.7 +3.5
CART eS SKSac 23 59 02.6 +4.2
TAM Tamanrasset 87.52 66 P P 23 48 41.4 +1.0
TAM Tamanrasset 87.52 66 P P 23 48 41.4 +1.0
TAM pmax pmax
comp=Z,117nm,1.1s
SKAG Skagway 87.68 334 IAmb IAmb 23 48 52.8
comp=Z,72nm,1.2s
SUR Sutherland 87.86 123 P P 23 48 42.4 +0.5
comp=Z,31nm,1.1s,baz=39,slow=3.6,SNR=4.8
SUR Sutherland 87.86 123 P P 23 48 42.1 +0.2
WHY Whitehorse 88.15 335 IAmb IAmb 23 48 47.4
comp=Z,40nm,1.1s
KIP Kipapa 88.18 292 P P 23 48 44.9 +1.6
KIP pmax pmax
comp=Z,1µm,3.7s
TSUM Tsumeb 88.41 109 P P 23 48 45.1 +0.5
comp=Z,33nm,1.0s,baz=250,slow=4.7,SNR=25
TSUM Tsumeb 88.41 109 P P 23 48 44.8 +0.1
TSUM IAmb IAmb 23 49 02.4
comp=Z,43nm,1.0s
SJPF Ste Jean 88.60 45 eP P 23 48 45.3 +0.5
SJPF pmax pmax
comp=Z,118nm,1.4s
BORG Borgarnes 88.72 20 P P 23 48 45.4 +0.5
comp=Z,111nm,1.1s,baz=233,slow=2.1,SNR=8.4
BORG Borgarnes 88.72 20 P P 23 48 45.8 +0.9
BORG IAmb IAmb 23 49 02.5
comp=Z,87nm,1.1s
BORG Borgarnes 88.72 20 P P 23 48 45.8 +0.9
BORG pmax pmax
comp=Z,87nm,1.2s
HYT Haines Junctio 89.33 334 IAmb IAmb 23 48 56.9
comp=Z,28nm,0.9s
KULLO Kullorsuaq 89.36 5⇑iP P 23 48 48.0 +0.3
comp=Z,413nm,1.4s
KULLO Kullorsuaq 89.36 5⇑iP P 23 48 48.0 +0.3
KULLO pmax pmax
comp=Z,410nm,1.4s
NIUE Niue 89.37 251 P P 23 48 50.2 +1.2
NIUE IAmb IAmb 23 49 08.7
comp=Z,41nm,0.8s
RES Resolute Bay 89.53 355 LR LR 00 30 58.7
comp=Z,576nm,21.4s,baz=144,slow=37
SGMF Saint Gilles 89.60 40 eP P 23 48 49.0 -0.4
SGMF pmax pmax
comp=Z,116nm,1.5s
EPF Esparros 89.64 45 eP P 23 48 50.2 +0.4
EPF pmax pmax
comp=Z,87nm,1.4s
C36M Paulatuk 89.98 345 P P 23 48 49.5 -1.1
baz=134
SUMG Summit 89.99 10 iP P 23 48 51.8 +0.6
comp=Z,1µm,1.3s
SUMG Summit 89.99 10 P P 23 48 51.6 +0.5
SUMG Summit 89.99 10 iP P 23 48 51.8 +0.6
MFF Saint Martin d 90.54 42 eP P 23 48 53.7 -0.1
MFF pmax pmax
comp=Z,100nm,1.4s
LFF La Frestale 90.56 44 eP P 23 48 53.7 -0.2
LFF pmax pmax
comp=Z,58nm,1.2s
TULEG Thule 90.66 2 P P 23 48 54.0 +0.3
TULEG IAmb IAmb 23 49 04.5
comp=Z,47nm,1.1s
GRR Gorron 90.71 40 eP P 23 48 54.1 -0.4
GRR pmax pmax
comp=Z,86nm,1.3s
MTLF Montolieu 91.04 46 eP P 23 48 56.0 -0.3
MTLF pmax pmax
comp=Z,63nm,1.3s
FLN La Foliniere 91.07 40 eP P 23 48 57.0 +0.8
FLN pmax pmax
comp=Z,85nm,1.2s
RJF Les Rejaudoux 91.20 43 eP P 23 48 56.7 -0.2
RJF pmax pmax
comp=Z,108nm,1.4s
BARN Barnard Glacie 91.21 334 IAmb IAmb 23 49 14.5
comp=Z,38nm,1.2s
LDF La Druitiere 91.24 40 eP P 23 48 56.7 -0.3
LDF pmax pmax
comp=Z,79nm,1.2s
CAF Calviac 91.44 44 eP P 23 48 57.9 -0.2
CAF pmax pmax
comp=Z,63nm,1.2s
MAHO Mahon 91.45 49 Pdif pP 23 49 15.9 +0.7
MAHO eSKS SKSac 23 59 29.9 +4.2
ESK Eskdalemuir 91.89 33 P P 23 48 59.6 -0.3
ESK Eskdalemuir 91.89 33 P P 23 48 59.6 -0.3
ESK pmax pmax
comp=Z,11nm,1.0s
EPYK Eagle Plains 91.95 339 IAmb IAmb 23 49 15.8
comp=Z,26nm,1.1s
EPYK Eagle Plains 91.95 339 P P 23 48 60.0 0.0
baz=122
TCF Toulx Ste Croi 91.97 43 eP P 23 49 00.1 -0.4
TCF pmax pmax
comp=Z,65nm,1.3s
INK Inuvik 91.98 342 P P 23 48 59.9 -0.1
comp=Z,114nm,1.1s,baz=106,slow=4.7,SNR=143
INK PKKPbc PKKPdf 00 06 17.9 +0.6

	comp=Z,2.7nm,0.9s,baz=324,slow=0.7,SNR=6.8					
INK				LR	LR	00 34 40.2
	comp=Z,1µm,19.8s,baz=112,slow=38					
SCO	Scoresbysund	92.11	16	⇑iP	P	23 49 01.3 +0.8
	comp=Z,101nm,1.2s					
SCO	Scoresbysund	92.11	16	⇑iP	P	23 49 01.3 +0.8
SCO				pmax	pmax	
	comp=Z,100nm,1.2s					
AFI	Afiamalu	92.41	255	P	P	23 49 04.2 +0.9
AFI	Afiamalu	92.41	255	P	P	23 49 04.2 +0.9
AFI				pmax	pmax	
	comp=Z,60nm,1.1s					
BGF	Bois d'Agland	92.47	43	eP	P	23 49 02.5 -0.3
BGF				pmax	pmax	
	comp=Z,101nm,1.2s					
CLF	Chambon-Foret	92.55	41	IAmb	IAmb	23 49 21.8
	comp=Z,29nm,1.1s					
BOSA	Boshof	92.60	120	P	P	23 49 04.3 +0.2
	comp=Z,20nm,1.0s,baz=258,slow=4.6,SNR=16					
BOSA				PKKPbc	PKKPbc	00 06 17.0 +0.5
	comp=Z,3.0nm,0.9s,baz=161,slow=5.6,SNR=3.4					
BOSA				LR	LR	00 29 16.5
	comp=Z,2µm,19.8s,baz=268,slow=34					
BOSA	Boshof	92.60	120	P	P	23 49 03.6 -0.4
BOSA				IAmb	IAmb	23 49 20.9
	comp=Z,27nm,1.0s					
AVF	Avril sur Loir	92.88	42	eP	P	23 49 04.1 -0.5
AVF				pmax	pmax	
	comp=Z,80nm,1.4s					
MAW	Mawson	93.05	165	P	P	23 49 05.8 +0.7
	comp=Z,108nm,1.1s,baz=232,slow=6.1,SNR=16					
MAW				LR	LR	00 28 24.5
	comp=Z,4µm,21.2s,baz=232,slow=34					
MAW	Mawson	93.05	165	P	P	23 49 05.8 +0.7
MAW				IAmb	IAmb	23 49 07.0
	comp=Z,36nm,1.1s					
SSF	Saint Saulge	93.06	42	eP	P	23 49 04.8 -0.7
SSF				pmax	pmax	
	comp=Z,53nm,1.3s					
SMF	Signal de Mont	93.15	43	eP	P	23 49 05.6 -0.4
SMF				pmax	pmax	
	comp=Z,125nm,1.4s					
VIVF	Saint-Julien-l	93.19	45	eP	P	23 49 06.5 +0.3
VIVF				pmax	pmax	
	comp=Z,79nm,1.4s					
SSB	Saint Sauveur	93.22	44	P	P	23 49 07.4 +1.1
LOR	Lormes	93.35	42	eP	P	23 49 06.2 -0.7
LOR				pmax	pmax	
	comp=Z,65nm,1.4s					
SCRK	Sand Creek	93.49	336	IAmb	IAmb	23 49 07.7
	comp=Z,48nm,1.1s					
LBTB	Lobatse	93.97	117	P	P	23 49 10.1 -0.3
LBTB	Lobatse	93.97	117	P	P	23 49 10.1 -0.3
LBTB				pmax	pmax	
	comp=Z,16nm,1.0s					
SCM	Sheep Creek Mo	94.01	333	IAmb	IAmb	23 49 23.2
	comp=Z,65nm,1.2s					
ORIF	Oris-en-Rattie	94.03	45	eP	P	23 49 10.7 +0.6
ORIF				pmax	pmax	
	comp=Z,65nm,1.3s					
FRF	La Foret Royal	94.19	46	eP	P	23 49 10.9 +0.1
FRF				pmax	pmax	
	comp=Z,93nm,1.5s					
KEST	Kesra	94.19	54	P	P	23 49 12.4 +1.3
	comp=Z,9.0nm,0.9s,baz=268,slow=5.3,SNR=4.6					
KEST				LR	LR	00 32 09.8
	comp=Z,2µm,19.7s,baz=210,slow=36					
KEST	Kesra	94.19	54	P	P	23 49 11.6 +0.5
SEW	Seward	94.33	331	IAmb	IAmb	23 49 10.9
	comp=Z,50nm,1.1s					
BAIF	Baives	94.39	40	eP	P	23 49 11.3 -0.2
BAIF				pmax	pmax	
	comp=Z,47nm,1.6s					
BKZ	Black Stump Fm	94.45	228	P	P	23 49 13.8 +1.5
DHY	Denali Highway	94.51	334	IAmb	IAmb	23 49 17.1
	comp=Z,57nm,1.2s					
MBDF	Montbardon	94.59	45	eP	P	23 49 13.2 +0.4
MBDF				pmax	pmax	
	comp=Z,46nm,1.4s					
BNI	Bardonecchia	94.61	45	P	P	23 49 12.9 0.0
BNI	Bardonecchia	94.61	45	P	P	23 49 12.9 0.0
CABF	La Chapelle	94.63	43	eP	P	23 49 12.7 -0.1
CABF				pmax	pmax	
	comp=Z,71nm,1.5s					
DOU	Dourbes	94.64	40	P	P	23 49 13.1 +0.4
	comp=Z,30nm,1.8s					
DOU				x	x	23 49 53.1
DOU	Dourbes	94.64	40	P	P	23 49 13.6 +1.0
GHO	Glory Hole Cre	94.69	333	IAmb	IAmb	23 49 14.3
	comp=Z,37nm,1.1s					
UCC	Uccle	94.69	39	P	P	23 49 12.5 -0.4
	comp=Z,25nm,1.5s					
UCC				x	x	23 49 52.6
PMR	Palmer	94.72	333	IAmb	IAmb	23 49 15.2
	comp=Z,23nm,1.1s					
LPL	La Plagne	94.77	44	eP	P	23 49 14.3 +0.6
LPL				pmax	pmax	
	comp=Z,56nm,1.2s					
LPG	La Plagne	94.78	44	eP	P	23 49 14.5 +0.7
LPG				pmax	pmax	
	comp=Z,89nm,1.3s					
GIVF	Givet	94.78	40	eP	P	23 49 13.3 0.0
GIVF				pmax	pmax	
	comp=Z,140nm,1.6s					
BMRD	Maredsous	94.80	39	P	P	23 49 13.9 +0.5
	comp=Z,36nm,2.1s					
BMRD				x	x	23 49 53.7
RC01	Rabbit Creek A	94.81	332	IAmb	IAmb	23 49 18.6
	comp=Z,50nm,1.1s					
HDA	Harding Lake	94.85	336	IAmb	IAmb	23 49 14.1
	comp=Z,46nm,1.2s					
HDA	Harding Lake	94.85	336	P	P	23 49 12.6 -0.7
	baz=113					
IL31		94.97	336	P	P	23 49 13.1 -0.7
IL31				IAmb	IAmb	23 49 14.0
	comp=Z,28nm,1.1s					
ILAR	Eielson Array	94.97	336	P	P	23 49 12.9 -1.0
	comp=Z,11nm,0.9s,baz=148,slow=3.7,SNR=23					
ILAR				pP	pP	23 49 30.6 -0.2
	comp=Z,9.0nm,0.9s,baz=142,slow=3.7,SNR=6.8					
ILAR				PP	PP	23 53 01.1 -2.7
	comp=Z,4.2nm,1.0s,baz=98,slow=7.0,SNR=4.1					
ILAR				LR	LR	00 36 44.5
	comp=Z,816nm,19.1s,baz=112,slow=38					
BGES	Gesves	95.02	39	P	P	23 49 14.8 +0.4
	comp=Z,32nm,2.4s					
BGES				x	x	23 49 54.8
RCHB	Rochefort	95.05	40	P	P	23 49 14.0 -0.5
RCHB				x	x	23 49 54.4
KDAK	Kodiak Island	95.07	328	P	P	23 49 13.2 -1.2
	comp=Z,19nm,1.1s,baz=84,slow=10,SNR=2.9					
KDAK	Kodiak Island	95.07	328	IAmb	IAmb	23 49 14.8
	comp=Z,29nm,1.1s					
BCLA	Clavier	95.16	39	P	P	23 49 16.0 +1.0
	comp=Z,36nm,2.4s					
BCLA				x	x	23 49 55.9
HAU	Haudompre	95.17	42	eP	P	23 49 14.9 -0.3
HAU				pmax	pmax	
	comp=Z,57nm,1.4s					
KHZ	Kahutara	95.23	224	P	P	23 49 16.6 +0.9
KHZ				IAmb	IAmb	23 49 23.0
	comp=Z,24nm,1.1s					
OHAK	Old Harbor	95.25	328	IAmb	IAmb	23 49 19.5
	comp=Z,38nm,1.2s					
CCB	Clear Creek Bu	95.28	336	IAmb	IAmb	23 49 16.1
	comp=Z,48nm,1.0s					
POKR	Poker Plat Res	95.31	336	P	P	23 49 15.3 -0.2
	baz=112					
LOMF	Lomont	95.31	43	P	P	23 49 17.3 +1.4
WRH	Wood River Hil	95.33	335	IAmb	IAmb	23 49 16.4
	comp=Z,52nm,1.0s					
BSTI	Sart Tilman	95.37	39	P	P	23 49 16.2 +0.2
BSTI				x	x	23 49 57.1
DIX	Grande Dixence	95.37	44	P	P	23 49 17.8 +1.3
COLA	College	95.39	336	P	P	23 49 15.5 -0.2
COLA	College	95.39	336	P	P	23 49 15.5 -0.2
COLA				pmax	pmax	
	comp=Z,110nm,1.1s					
TCOL	CIGO, UAF Yank	95.39	336	P	P	23 49 15.4 -0.3
	baz=112					
SUA	Susitna One	95.39	332	IAmb	IAmb	23 49 19.9
	comp=Z,42nm,1.1s					
MCK	McKinley	95.40	335	IAmb	IAmb	23 49 16.3
	comp=Z,45nm,1.1s					
HINF	Hinteralfeld	95.45	42	eP	P	23 49 16.1 -0.4
HINF				pmax	pmax	

	comp=Z,62nm,1.4s					
WLF	Walferdange	95.49	40	ePdiff	P	23 49 17.5 +0.9
WLF	Walferdange	95.49	40	P	P	23 49 17.4 +0.9
	comp=Z,55nm,1.4s					
WLF				x	x	23 49 57.4
WLF	Walferdange	95.49	40	P	P	23 49 16.6 0.0
WLF	Walferdange	95.49	40	P	P	23 49 16.6 0.0
WLF				pmax	pmax	
	comp=Z,19nm,1.1s					
BEBN	Eben Emael	95.50	39	P	P	23 49 17.3 +0.7
BEBN				x	x	23 49 57.8
MOF	Molkenrain	95.64	42	P	P	23 49 17.9 +0.5
MEM	Membach	95.65	39	P	P	23 49 17.6 +0.3
	comp=Z,21nm,1.6s					
MEM				x	x	23 49 57.7
MEM	Membach	95.65	39	P	P	23 49 18.2 +0.9
ECH	Echery	95.75	42	P	P	23 49 17.5 -0.3
ECH	Echery	95.75	42	P	P	23 49 17.5 -0.3
ECH				pmax	pmax	
	comp=Z,17nm,1.1s					
TRF	Thorofare Moun	95.87	334	IAmb	IAmb	23 49 36.4
	comp=Z,47nm,1.1s					
CDF	Champ du Feu	95.88	42	eP	P	23 49 18.1 -0.4
CDF				pmax	pmax	
	comp=Z,54nm,1.2s					
LTZ	Lake Taylor	95.92	223	IAmb	IAmb	23 49 40.6
	comp=Z,28nm,1.1s					
THZ	Tophouse	95.93	224	P	P	23 49 19.7 +0.7
THZ				IAmb	IAmb	23 49 23.6
	comp=Z,25nm,1.0s					
KTH	Kantishna Hill	96.17	334	IAmb	IAmb	23 49 20.9
	comp=Z,47nm,1.1s					
AHRW	Bad Neuenahr-A	96.29	40	ePdiff	P	23 49 21.2 +1.0
RPZ	Rata Peaks	96.32	222	P	P	23 49 21.4 +0.8
RPZ				IAmb	IAmb	23 49 23.1
	comp=Z,41nm,1.1s					
LANF	Langenberg	96.36	41	P	P	23 49 21.6 +1.0
ZUR	Degenried	96.47	43	P	P	23 49 22.2 +1.0
PPLA	Purkeypile	96.50	333	IAmb	IAmb	23 49 28.9
	comp=Z,52nm,1.2s					
SLE	Schleitheim	96.51	42	P	P	23 49 22.0 +0.7
BFO	Black Forest	96.54	42	ePdiff	P	23 49 21.5 0.0
BFO	Black Forest	96.54	42	P	P	23 49 21.4 0.0
BFO	Black Forest	96.54	42	P	P	23 49 21.4 0.0
BFO				pmax	pmax	
	comp=Z,14nm,1.1s					
MLY	Manley	96.59	336	IAmb	IAmb	23 49 21.9
	comp=Z,44nm,1.1s					
KTD	Kalmit	96.62	41	P	P	23 49 22.8 +1.0
BUG	Bochum--Univer	96.63	39	ePdiff	P	23 49 22.4 +0.7
DAG	Danmarks Havn	96.64	11	i P	P	23 49 20.0 -1.2
	comp=Z,48nm,1.5s					
DAG	Danmarks Havn	96.64	11	i P	P	23 49 20.0 -1.2
DAG				pmax	pmax	
	comp=Z,48nm,1.5s					
TUE	Stuetta	96.77	44	P	P	23 49 22.7 -0.1
TUE				IAmb	IAmb	23 49 37.2
	comp=Z,31nm,1.1s					
TNS	Taunus Mts	97.06	40	ePdiff	Pdif	23 49 24.6 +0.7
TNS	Taunus Mts	97.06	40	P	Pdif	23 49 24.8 +0.9
COLD	Coldfoot	97.12	338	IAmb	IAmb	23 49 24.8
	comp=Z,22nm,1.1s					
IBBN	Ibbenburen	97.14	38	ePdiff	Pdif	23 49 24.7 +0.7
DAVOX	Davos/Dischmat	97.20	44	P	Pdif	23 49 25.4 +0.7
STU	Stuttgart	97.20	42	ePdiff	Pdif	23 49 24.9 +0.5
STU	Stuttgart	97.20	42	P	Pdif	23 49 24.8 +0.3
STU				pmax	pmax	
	comp=Z,51nm,1.2s					
DAVA	Damuels	97.31	43	ePcP	Pdif	23 49 25.8 +0.6
	comp=Z,70nm,1.2s,SNR=14					
DAVA				P'P'df	P'P'df	00 14 17.2 +0.2
	comp=Z,14nm,1.4s					
TOLK	Toolik Lake Re	97.38	339	P	P	23 49 24.4 -0.4
	baz=110					
SALO	Salr	97.38	45	IAmb	IAmb	23 49 29.1
	comp=Z,28nm,1.0s					
ZCCA	Zocca	97.42	46	IAmb	IAmb	23 49 30.4
	comp=Z,31nm,1.1s					
FUORN	Ofenpass-Fuorn	97.42	44	P	Pdif	23 49 26.0 +0.2
FUORN				IAmb	IAmb	23 49 26.8
	comp=Z,23nm,1.1s					
UBR	Ueberruh	97.55	43	ePdiff	Pdif	23 49 27.1 +0.9
FETA	Feichten	97.82	44	ePcP	Pdif	23 49 28.0 +0.5
	comp=Z,59nm,1.3s,SNR=20					
FETA				eP'P'df	P'P'df	00 14 16.2 0.0
	comp=Z,7.8nm,1.3s					
RETA	Reutte	97.94	43	ePcP	Pdif	23 49 28.3 +0.5
	comp=Z,68nm,1.3s,SNR=18					
MOTA	Moosalm	98.14	43	ePcP	Pdif	23 49 29.2 +0.3
	comp=Z,97nm,1.1s,SNR=22					
MOTA				eP'P'df	P'P'df	00 14 14.3 -1.2
	comp=Z,7.4nm,1.2s					
UBBA	Unterbreizbach	98.16	40	ePdiff	Pdif	23 49 29.5 +1.0
SQTA	Sankt Quirin	98.18	43	ePcP	Pdif	23 49 29.6 +0.5
	comp=Z,144nm,1.2s,SNR=35					
SQTA				eP'P'df	P'P'df	00 14 14.2 -1.2
	comp=Z,14nm,1.5s					
RETH	Rethem/Aller,	98.19	38	ePdiff	Pdif	23 49 29.9 +1.2
CTI	Castel Tesino	98.24	45	IAmb	IAmb	23 49 36.1
	comp=Z,40nm,1.1s					
GTTG	Gottingen	98.30	39	ePdiff	Pdif	23 49 30.3 +1.1
FUR	Furstenfeldbru	98.42	43	ePdiff	Pdif	23 49 30.9 +0.9
FUR	Furstenfeldbru	98.42	43	P	Pdif	23 49 31.0 +1.1
WATA	Walderalm	98.45	43	ePdiff	Pdif	23 49 30.6 +0.4
	comp=Z,86nm,1.2s,SNR=34					
WATA				eP'P'df	P'P'df	00 14 14.4 -0.5
	comp=Z,8.0nm,1.1s					
WTTA	Wattenberg	98.48	43	ePdiff	Pdif	23 49 30.9 +0.5
	comp=Z,133nm,1.2s,SNR=45					
WTTA				i P'P'df	P'P'df	00 14 12.7 -2.2
CLZ	Clausthal	98.61	39	ePdiff	Pdif	23 49 31.7 +1.0
GRA1	Grafenberg Arr	98.70	41	P	Pdif	23 49 31.8 +0.7
GRA1				IAmb	IAmb	23 49 34.5
	comp=Z,26nm,1.1s					
GRF	Grafenberg Arr	98.70	41	ePdiff	Pdif	23 49 32.3 +1.2
GRF				eL	L	00 30 55.9
	comp=Z,1µm,21.1s					
GRF	Grafenberg Arr	98.70	41	P	Pdif	23 49 31.8 +0.7
GRF				pmax	pmax	
	comp=Z,26nm,1.1s					
AQU	L'Aquila	98.74	49	P	Pdif	23 49 33.1 +1.6
AQU				pmax	pmax	
	comp=Z,43nm,1.1s					
GRC1	Grafenberg Arr	98.75	42	P	Pdif	23 49 32.2 +0.8
ASSE	Asse, Remlinge	98.85	39	ePdiff	Pdif	23 49 32.9 +1.3
ABTA	Abfaltersbach	98.96	44	ePdiff	Pdif	23 49 32.7 +0.2
	comp=Z,76nm,1.2s,SNR=19					
ABTA				eP'P'df	P'P'df	00 14 12.9 -1.0
	comp=Z,8.4nm,1.5s					
BSEG	Bad Segeberg	99.00	37	ePdiff	Pdif	23 49 33.2 +0.9
STAL	STALIGIAL	99.00	45	IAmb	IAmb	23 49 34.0
	comp=Z,37nm,1.1s					
GOET	G??ttrup	99.03	33	i P	Pdif	23 49 33.1 +0.8
INTR	Introdacqua	99.04	49	IAmb	IAmb	23 49 50.2
	comp=Z,24nm,1.1s					
MOX	Moxa	99.13	40	ePdiff	Pdif	23 49 34.0 +1.0
MOX				eL	L	00 31 53.4
	comp=Z,1µm,20.7s					
MANZ	Manzenberg	99.32	41	ePdiff	Pdif	23 49 35.3 +1.4
ROTZ	Rotzenmuhle	99.34	41	ePdiff	Pdif	23 49 35.2 +1.2
NEUB	Neuenburg	99.34	40	ePdiff	Pdif	23 49 35.2 +1.3
RJOB	Jochberg	99.34	43	ePdiff	Pdif	23 49 35.0 +0.9
PLN	Plauen	99.44	40	ePdiff	Pdif	23 49 35.6 +1.2
GUNZ	Gunzen	99.53	40	ePdiff	Pdif	23 49 36.1 +1.3
WERN	Wernitzgruen	99.54	41	ePdiff	Pdif	23 49 36.3 +1.4
NKC	Novy Kostel	99.58	41	ePDIFF	Pdif	23 49 36.1 +1.1
NKC				eSKS		23 59 55.8
NKC				AMS	AMS	00 29 10.0
	comp=Z,2µm,21.7s					
NKC	Novy Kostel	99.58	41	eP	Pdif	23 49 36.1 +1.1
NKC				MLR	MLR	
	comp=Z,2µm,21.7s					
KBA	Koelnbreinsper	99.59	44	ePdiff	Pdif	23 49 35.6 +0.3
	comp=Z,34nm,1.5s,SNR=13					
KBA	Koelnbreinsper	99.59	44	P	Pdif	23 49 35.6 +0.3
TANN	Tannenbergstha	99.62	40	ePdiff	Pdif	23 49 36.5 +1.2
WET	Wettzell	99.65	42	ePdiff	Pdif	23 49 36.5 +1.1
WET	Wettzell	99.65	42	P	Pdif	23 49 36.2 +0.8
MYKA	Terra Mystica	99.71	44	ePdiff	Pdif	23 49 36.1 +0.4
	comp=Z,36nm,1.5s,SNR=9.7					
KONO	Kongsberg	99.75	31c	eP	Pdif	23 49 36.3 +0.8
KONO				pmax	pmax	
	comp=Z,20nm,1.2s					
KHC	Kasperske Hory	100.10	42	ePDIFF	Pdif	23 49 37.7 +0.3
KHC				ex	x	23 50 17.5

KHC				eSKS		00 00 12.4
KHC				ePKPPKP		00 14 09.5
KHC				AMS	AMS	00 33 00.0
	comp=Z,2µm,20.8s					
KHC	Kasperske Hory	100.10	42c	iP	Pdif	23 49 37.4 0.0
KHC				pmax	pmax	
	comp=Z,64nm,1.3s					
CLL	Collm	100.12	40	ePdiff	Pdif	23 49 39.4 +2.1
CLL	Collm	100.12	40	ePdif	Pdif	23 49 37.0 -0.3
	comp=Z,29nm,1.6s					
CLL				e		23 50 17.0
	comp=Z,28nm,1.4s					
CLL				ePP	PP	23 53 45.0 +1.4
CLL				epPP		23 53 55.0
CLL				ePPP	PPP	23 55 47.0
CLL				esPPP		23 56 18.0
CLL				eSKSac	SKSac	00 00 12.0 +1.0
CLL				eSdif	Sdif	00 01 06.0 -1.7
CLL				e(sSdiff)		00 01 48.0
CLL				eSP	SP	00 02 33.0 -3.3
CLL				ePPS	PPS	00 03 32.0
CLL				eSS	SS	00 08 05.0 +2.2
CLL				eSSS	SSS	00 11 48.0
CLL	Collm	100.12	40	eP	Pdif	23 49 37.0 -0.3
CLL				eS	Sdif	00 01 06.0 -1.7
CLL				pmax	pmax	
	comp=Z,29nm,1.6s					
GEC2	GERESS Array S	100.14	42	ePdiff	Pdif	23 49 38.5 +0.8
GEC2	GERESS Array S	100.14	42		Pdif	23 49 38.4 +0.8
GERES	GERESS Array B	100.14	42	P	Pdif	23 49 38.3 +0.7
	comp=Z,13nm,1.0s,baz=247,slow=2.8,SNR=59					
GERES				PKKP	PKKPdf	00 06 03.8 +1.6
	comp=Z,0.2nm,0.4s,baz=48,slow=2.0,SNR=3.9					
GERES				PKPPKP		00 14 09.5
	comp=Z,0.4nm,0.7s,baz=79,slow=5.1,SNR=3.6					
LJU	Ljubljana	100.21	45	ePdiff	Pdif	23 49 39.1 +1.2
LJU				eSKSac	SKSac	00 00 12.8 +1.1
LJU				eSdiff	Sdif	00 01 09.5 +0.8
LJU				eSP	SP	00 02 37.9 +0.4
FBE	Freiberg	100.27	40	ePdiff	Pdif	23 49 39.4 +1.4
OBKA	Obir	100.30	45	ePdiff	Pdif	23 49 39.3 +0.8
	comp=Z,21nm,1.6s					
MOA	Molln	100.34	43	ePdiff	Pdif	23 49 38.9 +0.5
	comp=Z,56nm,1.3s,SNR=23					
PBCC	Pribram	100.47	41	ePDIFF	Pdif	23 49 40.3 +1.3
PBCC				ex	x	23 50 19.4
NC204	NORSAR Array S	100.62	29		Pdif	23 49 41.0 +1.5
BRG	Berggiesshubel	100.63	40	ePDIFF	Pdif	23 49 40.5 +0.9
	comp=Z,46nm,1.4s					
BRG				pPDIFF		23 49 57.0
BRG				ePP	PP	23 53 46.8 -0.8
	comp=Z,31nm,2.0s					
BRG				SKS		00 00 15.0
BRG				SDIFF	Sdif	00 01 12.0 0.0
BRG				SS	SS	00 08 06.0 -3.9
BRG				ePKPPKP	P'P'df	00 14 12.4 +2.1
	comp=Z,44nm,2.2s					
BRG	Berggiesshubel	100.63	40	ePdiff	Pdif	23 49 41.0 +1.3
BRG	Berggiesshubel	100.63	40	eP	Pdif	23 49 40.5 +0.9
BRG				e		23 53 46.8
BRG						00 00 15.0
BRG				S	Sdif	00 01 12.0 0.0
BRG				SS	SS	00 08 06.0 -3.9
BRG				pmax	pmax	
	comp=Z,46nm,1.5s					
BRG				pmax	pmax	
	comp=Z,31nm,2.0s					
BRG				pmax	pmax	
	comp=Z,44nm,2.3s					
BRG				MLR	MLR	
	comp=N,998nm,25.4s					
BRG				MLR	MLR	
	comp=E,2µm,24.7s					
BRG				MLR	MLR	
	comp=Z,2µm,22.0s					
SOKA	Soboth	100.66	44	ePdiff	Pdif	23 49 40.0 0.0
	comp=Z,14nm,1.3s,SNR=5.2					
SOKA				eP'P'df	P'P'df	00 14 09.9 -0.9
	comp=Z,9.2nm,1.6s					
RUE	Ruedersdorf	100.79	39	ePdiff	Pdif	23 49 41.2 +1.0
NB2	NORSAR Subarra	100.80	30	P	Pdif	23 49 41.0 +0.8
	comp=Z,2.2nm,1.0s,baz=261,slow=4.6					
NOA	NORSAR Array B	100.80	30	P	Pdif	23 49 40.9 +0.8
	comp=Z,8.5nm,1.1s,baz=258,slow=4.6,SNR=9.1					
NOA				PKKPbc	PKKPbc	00 05 53.1 -2.6
	comp=Z,1.4nm,0.8s,baz=256,slow=3.1,SNR=5.1					
NOA				PKPPKP	P'P'df	00 14 10.5 +1.2
	comp=Z,2.9nm,1.3s,baz=82,slow=1.9,SNR=2.9					
PRA	Prague	100.81	41	ePDIFF	Pdif	23 49 42.5 +2.1
PRA				ex	x	23 50 20.7
PRA				AMS	AMS	00 31 00.0
	comp=Z,2µm,25.3s					
PRA	Prague	100.81	41	eP	Pdif	23 49 42.5 +2.1
PRA				MLR	MLR	
	comp=Z,2µm,25.3s					
CRES	Cresnjev	100.81	45	ePdiff	Pdif	23 49 41.7 +1.1
PRU	Pruhonice	100.86	41	ePDIFF	Pdif	23 49 41.9 +1.2
PRU				ex	x	23 50 21.0
PRU				eSKS		00 00 19.4
PRU				AMS	AMS	00 34 10.0
	comp=Z,2µm,19.4s					
PRU	Pruhonice	100.86	41	eP	Pdif	23 49 41.9 +1.2
PRU				e		00 00 19.4
PRU				MLR	MLR	
	comp=Z,2µm,19.4s					
PVCC	Panska Ves	100.97	41	ePDIFF	Pdif	23 49 43.0 +1.9
PVCC				ex	x	23 50 21.4
PVCC				AMS	AMS	00 32 30.0
	comp=Z,2µm,20.4s					
PVCC	Panska Ves	100.97	41	eP	Pdif	23 49 43.0 +1.9
PVCC				MLR	MLR	
	comp=Z,2µm,20.4s					
GOPC	GO Pecny, Ondr	101.01	41	ePDIFF	Pdif	23 49 43.3 +1.9
GOPC				ex	x	23 50 22.1
GOPC				eSKS		00 00 10.0
GOPC				AMS	AMS	00 34 10.0
	comp=Z,2µm,19.6s					
GOPC	GO Pecny, Ondr	101.01	41	eP	Pdif	23 49 43.3 +1.9
GOPC				e		00 00 10.0
GOPC				MLR	MLR	
	comp=Z,2µm,19.6s					
ARSA	Arzberg	101.08	44	ePdiff	Pdif	23 49 41.2 -0.6
	comp=Z,23nm,1.3s,SNR=6.8					
TREC	Trest	101.37	42	ePDIFF	Pdif	23 49 43.5 +0.5
TREC				ex	x	23 50 23.3
TREC				AMS	AMS	00 33 50.0
	comp=Z,2µm,18.4s					
TREC	Trest	101.37	42	eP	Pdif	23 49 43.5 +0.5
TREC				MLR	MLR	
	comp=Z,2µm,18.4s					
CONA	Conrad Observa	101.41	43	ePdiff	Pdif	23 49 44.2 +0.9
	comp=Z,35nm,1.3s,SNR=17					
UPC	Upice	101.87	41	ePDIFF	Pdif	23 49 46.5 +1.3
UPC				ex	x	23 50 26.2
UPC				eSKS		00 00 12.4
UPC				AMS	AMS	00 35 00.0
	comp=Z,2µm,21.5s					
UPC	Upice	101.87	41	eP	Pdif	23 49 46.5 +1.3
UPC				e		00 00 12.4
UPC				MLR	MLR	
	comp=Z,2µm,21.5s					
CHVC	Chvalec	101.91	41	ePDIFF	Pdif	23 49 46.1 +0.7
CHVC				ex	x	23 50 26.4
CHVC				AMS	AMS	00 35 50.0
	comp=Z,1µm,17.0s					
KRUC	Moravsky	101.92	42	ePDIFF	Pdif	23 49 46.1 +0.7
KRUC				e		23 50 26.6
OSTC	Ostas	102.01	41	ePDIFF	Pdif	23 49 46.7 +0.9
OSTC				ex	x	23 50 26.4
OSTC				eSKS		00 00 19.5
OSTC				AMS	AMS	00 35 10.0
	comp=Z,2µm,23.9s					
DPC	Dobruska-Polom	102.05	41	ePDIFF	Pdif	23 49 46.8 +0.8
DPC				ex	x	23 50 26.8
DPC				eSKS		00 00 12.4
DPC				AMS	AMS	00 34 50.0
	comp=Z,2µm,20.2s					
DPC	Dobruska-Polom	102.05	41	eP	Pdif	23 49 46.8 +0.8
DPC				MLR	MLR	
	comp=Z,2µm,20.2s					
VRAC	Vranov	102.08	42	ePDIFF	Pdif	23 49 47.0 +0.8
VRAC				e		23 50 27.0
KSP	Ksiaz	102.10	40	eP	Pdif	23 49 47.9 +1.7
KSP				eL	L	00 26 38.7

comp=Z,3µm,33.8s
KSP ePP sPdif 23 50 28.6 +19
KSP Ksiaz 102.10 40 eP Pdif 23 49 47.9 +1.7
ZST Bratislava 102.27 43 eP Pdif 23 49 46.9 -0.1
ZST Bratislava 102.27 43 ePDIFF Pdif 23 49 46.9 -0.1
ZST e 23 50 27.1
KRLC Kraliky 102.31 41 ePDIFF Pdif 23 49 48.7 +1.5
KRLC ex x 23 50 28.0
KRLC eSKS 00 00 17.3
KRLC AMS AMS 00 36 00.0
comp=Z,2µm,18.6s
KRLC Kraliky 102.31 41 eP Pdif 23 49 48.7 +1.5
KRLC e 00 00 17.3
KRLC MLR MLR
comp=Z,2µm,18.6s
MODS Modra-Piesok 102.41 43 eP Pdif 23 49 48.3 +0.6
MODS Modra-Piesok 102.41 43 ePDIFF Pdif 23 49 48.3 +0.6
MODS e 23 50 28.1
SMOL Smolenice 102.53 43 eP Pdif 23 49 49.7 +1.5
SMOL Smolenice 102.53 43 ePDIFF Pdif 23 49 49.7 +1.5
JAVC Velka Javorina 102.73 43 ePDIFF Pdif 23 49 51.0 +1.9
MORC Moravsky Berou 102.76 42 ePDIFF Pdif 23 49 50.6 +1.4
MORC e 23 50 31.7
OKC Ostrava-Krasne 103.15 42 ePDIFF Pdif 23 49 52.3 +1.4
OKC ex x 23 50 32.7
OKC eSKS 00 00 19.5
OKC AMS AMS 00 34 50.0
comp=Z,1µm,21.2s
OKC Ostrava-Krasne 103.15 42 eP Pdif 23 49 52.3 +1.4
OKC e 00 00 19.5
OKC MLR MLR
comp=Z,1µm,21.2s
VYHS Vyhne 103.45 43 eP Pdif 23 49 53.2 +0.9
VYHS Vyhne 103.45 43 ePDIFF Pdif 23 49 53.2 +0.9
VYHS e 23 50 33.8
OJC Ojcow 104.25 41 eP Pdif 23 49 57.6 +1.8
OJC eL L 00 27 23.3
comp=Z,2µm,32.7s
OJC epP sPdif 23 50 38.7 +19
OJC Ojcow 104.25 41 eP Pdif 23 49 57.6 +1.8
NIE Niedzica 104.50 42 eP Pdif 23 49 57.5 +0.5
NIE eL L 00 34 28.5
comp=Z,2µm,22.0s
NIE epP sPdif 23 50 40.6 +20
NIE Niedzica 104.50 42 eP Pdif 23 49 57.5 +0.5
UZH Uzhgorod 105.75 43 eP Pdif 23 50 13.2 +11
UZH i 23 54 26.6
ARCES ARCESS Array B 107.12 21 PKKPbc PKKPbc 00 05 35.4 -1.4
comp=Z,8.1nm,0.9s,baz=41,slow=9.8,SNR=5.0
ARCES PKKPab PKKPdf 00 05 52.7 +3.2
comp=Z,4.9nm,0.7s,baz=65,slow=6.0,SNR=5.2
FINES FINESS Array B 107.98 30 PP PP 23 54 38.9 -2.8
comp=Z,7.1nm,1.1s,baz=205,slow=12,SNR=4.1
FINES PKKPbc PKKPbc 00 05 32.1 -1.7
comp=Z,3.5nm,0.8s,baz=57,slow=7.0,SNR=11
FINES PKKPab PKKPdf 00 05 50.3 +2.6
comp=Z,3.9nm,0.8s,baz=19,slow=6.5,SNR=4.4
MLR Muntele Rosu 108.09 46 PKKPbc PKKPbc 00 05 32.4 -0.8
comp=Z,1.7nm,0.7s,baz=158,slow=4.6,SNR=5.1
MLR PKKPab PKKPab 00 05 45.9 +1.1
comp=Z,5.8nm,1.0s,baz=36,slow=3.4,SNR=7.7
FETY Fethiye 110.09 56 eP PKiKP 23 54 23.5 -0.1
AKASG Malin Array Be 110.28 41 PKiKP PKiKP 23 54 23.1 -0.4
comp=Z,2.9nm,0.8s,baz=267,slow=2.5,SNR=11
AKASG PKKPbc PKKPbc 00 05 25.0 -1.1
comp=Z,0.9nm,0.6s,baz=68,slow=3.2,SNR=7.2
AKASG PKKPab PKKPab 00 05 35.4 +0.7
comp=Z,1.7nm,0.7s,baz=73,slow=4.5,SNR=9.3
AKASG PKKP PKKPdf 00 05 42.7 -0.4
comp=Z,1.7nm,0.7s,baz=68,slow=3.1,SNR=5.7
AKASG PKPPKP 00 13 54.4
comp=Z,0.2nm,0.3s,baz=75,slow=2.4,SNR=4.1
APA Apatity 110.29 23⇑i PKIKP PKiKP 23 54 19.0 -4.0
APA pmax pmax
comp=Z,8.0nm,1.1s
ELL Elmali 110.75 56 eP PKiKP 23 54 25.4 +0.4
KMBO Kilima Mbogo 111.89 97 PKKPbc PKKPbc 00 05 21.9 +1.8
comp=Z,0.5nm,0.3s,baz=35,slow=6.1,SNR=4.0
KMBO PKKPab PKKPab 00 05 30.2 +0.4
comp=Z,0.6nm,0.3s,baz=51,slow=7.7,SNR=4.3
KONT Konya--Tatoy 112.74 55 eP PKiKP 23 54 29.3 +0.7
AFSR Afar-Bala (An 113.16 53 eP PKiKP 23 54 29.7 0.0
BERE Bereket-Mersin 113.41 56 eP PKiKP 23 54 29.9 -0.2
BILL Bilibino 113.43 339⇑i PKIKP PKiKP 23 54 28.6 -0.4
BILL e 23 55 21.5
BILL ePPP PPP 23 57 46.2
BILL pmax pmax
comp=Z,18nm,2.5s
TEVE Tevekalti-Mers 113.59 56 eP PKiKP 23 54 29.8 -0.5
BR131 Keskin Array S 113.73 53 i PKIKP PKiKP 23 54 30.4 -0.2
BRTR Keskin Array B 113.73 53 PKiKP PKiKP 23 54 30.8 +0.2
comp=Z,7.2nm,1.0s,baz=204,slow=2.7,SNR=24
BRTR PP PP 23 55 22.4 -1.6
comp=Z,2.5nm,0.9s,baz=188,slow=6.2,SNR=4.7
BRTR PKKPbc PKKPbc 00 05 13.4 -1.1
comp=Z,0.4nm,0.8s,baz=133,slow=5.4,SNR=4.1
BRTR PKKPab PKKPab 00 05 21.4 +1.4
comp=Z,2.7nm,0.9s,baz=135,slow=6.7,SNR=10
BRTR PKKP PKKPdf 00 05 38.0 +1.5
comp=Z,4.5nm,1.0s,baz=130,slow=3.9,SNR=10
OBN Obninsk 114.23 36 PKKPbc PKKPbc 00 05 12.7 -0.4
comp=Z,1.3nm,0.4s,baz=66,slow=21,SNR=3.6
OBN PKKPab PKKPab 00 05 19.1 +2.0
comp=Z,1.1nm,0.4s,baz=122,slow=15,SNR=4.7
OBN PKKP PKKPdf 00 05 30.0 -5.7
comp=Z,1.9nm,0.8s,baz=79,slow=8.3,SNR=4.1
OBN Obninsk 114.23 36⇑i PKIKP PKPdf 23 54 30.7 -0.1
OBN e 23 55 25.7
OBN i SS SS 00 11 10.2 -3.4
OBN pmax pmax
comp=Z,41nm,1.7s
OBN MLR MLR
comp=Z,943nm,17.0s
CORM Corum 114.48 52 eP PKPdf 23 54 31.4 -0.6
KLMR Klimovskoe 114.50 29 ePKIKP PKPdf 23 54 29.3 -1.9
KLMR SP SP 00 04 53.3 -6.2
KLMR pmax pmax
comp=Z,40nm,1.3s
KLMR Klimovskoe 114.50 29 ePKPdf PKPdf 23 54 29.3 -1.9
KLMR AMP 23 54 33.0
comp=Z,40nm,1.3s
KLMR PP PP 23 55 25.1 -3.4
KLMR SKKSac SKKSac 00 02 25.8 +1.1
KLMR SP SP 00 04 53.4 -6.1
KLMR SS SS 00 10 42.4 -34
KLMR SS SS 00 10 42.4 -34
KLMR LR LR 00 34 35.7
KLMR AMP 00 37 49.3
comp=Z,3µm,24.8s
EIL Elat 114.66 64 PKKPab PKKPab 00 05 18.4 +2.3
comp=Z,6.5nm,0.9s,baz=41,slow=4.6,SNR=4.6
MOS Moscow 114.70 35 i PKIKP PKiKP 23 54 29.5 -2.2
MOS e 23 55 36.5
MOS eS SKiKP 23 58 01.6 -0.8
MOS pmax pmax
comp=Z,30nm,1.4s
MOS MLR MLR
comp=Z,1µm,19.0s
YOZ Yozgat 115.03 53 eP PKPdf 23 54 32.7 -0.4
MMAI Mount Meron Ar 115.16 60 PKKPab PKKPab 00 05 17.0 +3.1
comp=Z,7.4nm,1.1s,baz=100,slow=4.7,SNR=11
MMAI PKKP PKKPdf 00 05 33.6 0.0
comp=Z,6.9nm,1.1s,baz=54,slow=12,SNR=6.8
BNN Bunyan 115.47 54 eP PKPdf 23 54 33.5 -0.5
KOZT Kozan 115.49 55 eP PKPdf 23 54 33.8 -0.1
SARI SarD1z-Kayseri 115.93 54 eP PKPdf 23 54 34.7 -0.2
LPSR Galich'ya Gora 116.06 38 i PKIKP PKPdf 23 54 34.2 -0.2
LPSR pmax pmax
comp=Z,30nm,1.0s
ANN Anapa 116.24 47 i PKIKP PKiKP 23 54 35.4 +0.4
ANN e 00 01 20.2
ANN ePS PKKPab 00 05 09.7 +1.1
ANN pmax pmax
comp=Z,38nm,0.8s
ANN MLR MLR
comp=Z,2µm,22.0s
KMRS Kahramanmaras 116.34 55 eP PKPdf 23 54 35.5 -0.1
ASF Jabal al Asfar 116.41 61 PKKPab PKKPab 00 05 11.1 +2.6
comp=Z,6.7nm,1.0s,baz=140,slow=1.9,SNR=9.0
ASF PKKP PKKPdf 00 05 28.9 -2.3
comp=Z,4.9nm,1.1s,baz=181,slow=1.7,SNR=7.0
VSR Storozhevoye 116.47 40 i PKIKP PKPdf 23 54 34.7 -0.6
VSR pmax pmax
comp=Z,20nm,1.1s

DARE Darende-Malaty 116.76 54 eP PKiKP 23 54 36.9 +0.5
PRGR Permogore 117.05 27 ePKIKP PKPdf 23 54 35.6 -0.5
PRGR e 23 54 49.3
PRGR eSP SP 00 05 16.9 -5.7
PRGR pmax pmax
comp=Z,33nm,1.1s
SOC Sochi 118.01 48 i PKIKP PKPdf 23 54 36.6 -1.9
SOC ePPP PPP 23 58 23.4
SOC ePS PKKPdf 00 05 42.9 +15
SOC MLR MLR
comp=Z,578nm,21.0s
VRH Novokhopyorsk 118.05 39 i PKIKP PKPdf 23 54 37.9 -0.4
VRH pmax pmax
comp=Z,30nm,1.0s
GUZR Guzeripl' 118.24 48 i PKIKP PKiKP 23 54 40.0 +0.9
YEDI Yedisu-Bingol 119.08 53 eP PKiKP 23 54 41.5 +0.5
BNGB Bingl 119.22 53 eP PKiKP 23 54 41.5 +0.3
SVAN Silvan-Diyarba 119.70 54 eP PKPdf 23 54 41.4 -0.6
KIRV Kirov 119.98 30 i PKIKP PKPdf 23 54 41.2 -0.6
KIV Kislovodsk 120.08 47 i P PKiKP 23 54 42.7 +0.1
SNR=5.8
KIV Kislovodsk 120.08 47 PKiKP 23 54 42.8 +0.1
KIV Kislovodsk 120.08 47 i PKIKP PKiKP 23 54 43.1 +0.4
KIV e 23 56 08.3
KIV ePS PS 00 05 59.0 0.0
KIV eSS SS 00 12 34.3 +3.6
KIV pmax pmax
comp=Z,52nm,1.1s
SHA1 Shidzhatmaz 120.10 48 i PKIKP PKiKP 23 54 43.4 +0.5
ATD Arta Tunnel 120.14 85 PKiKP 23 54 44.2 +0.6
GOF Gofitskoye 120.14 46⇑ePKIKP PKiKP 23 54 43.1 +0.4
GOF pmax pmax
comp=Z,48nm,1.0s
H11N3 WAKE ISLAND Hy120.17 285 T T 02 05 54.5
baz=96,slow=74,SNR=586
H11N2 WAKE ISLAND Hy120.19 285 T T 02 05 58.3
baz=96,slow=74,SNR=1300
H11N1 WAKE ISLAND Hy120.19 285 T T 02 05 52.5
baz=96,slow=74,SNR=466
NEY Neytrino 120.22 48 i PKIKP PKiKP 23 54 44.0 +0.9
H11S2 WAKE ISLAND Hy120.25 283 T T 02 05 55.9
baz=97,slow=75,SNR=291
H11S1 WAKE ISLAND Hy120.25 283 T T 02 06 04.4
baz=97,slow=75,SNR=228
H11S3 WAKE ISLAND Hy120.26 283 T T 02 06 04.1
baz=97,slow=75,SNR=200
KBZ Khabaz 120.27 47 PKP PKiKP 23 54 43.3 +0.4
comp=Z,24nm,1.0s,baz=246,slow=1.5,SNR=24
KBZ Khabaz 120.27 47 i PKIKP PKiKP 23 54 42.9 0.0
SENK Senkaya-Erzuru 120.33 51 eP PKPdf 23 54 43.4 0.0
TIXI Tiksi 120.71 351 PKPdf 23 54 41.9 -0.9
TIXI Tiksi 120.71 351 i PKIKP PKPdf 23 54 42.0 -0.9
TIXI pmax pmax
comp=Z,26nm,2.5s
SIRT Sirnak 120.74 55 eP PKPdf 23 54 44.1 0.0
NCK Nalchik 120.81 48 i PKIKP PKiKP 23 54 44.9 +0.8
SEY Seymchan 120.89 337 PKP PKiKP 23 54 44.0 +0.4
comp=Z,41nm,1.1s,baz=98,slow=1.7,SNR=28
SEY PKKPbc PKKPab 00 04 48.3 +0.7
comp=Z,4.6nm,0.8s,baz=232,slow=12,SNR=6.0
SEY Seymchan 120.89 337 i PKIKP PKiKP 23 54 43.8 +0.2
AGRB Hanur-Agry 120.94 52 eP PKiKP 23 54 44.8 +0.1
AKH Akhalkalaki 121.07 50 PKPdf 23 54 44.4 -0.3
AKH Akhalkalaki 121.07 50 PKIKP PKPdf 23 54 44.4 -0.3
ZEI Tsey 121.15 48 i PKIKP PKPdf 23 54 42.5 -2.4
ZEI pmax pmax
comp=Z,20nm,1.2s
CUKT Cukurca 121.69 55 eP PKPdf 23 54 45.3 -0.7
CLDR Caldiran 121.71 53 eP PKiKP 23 54 46.3 +0.1
TASB TASBURUN-IGDIR121.84 52 eP PKiKP 23 54 46.3 +0.1
STKA Stephens Creek 121.91 217 PKP PKiKP 23 54 46.8 +0.1
comp=Z,14nm,0.8s,baz=93,slow=2.1,SNR=16
STKA Stephens Creek 121.91 217 PKiKP 23 54 47.0 +0.4
STKA Stephens Creek 121.91 217 PKIKP PKiKP 23 54 47.0 +0.4
GNI Garni 122.20 51 i P PKiKP 23 54 47.3 +0.2
SNR=7.6
GNI Garni 122.20 51 PKiKP 23 54 47.6 +0.5
GNI Garni 122.20 51c i PKIKP PKiKP 23 54 47.8 +0.7
GNI pmax pmax
comp=Z,144nm,1.7s
PETK Petropavlovsk- 122.92 325 PKP PKiKP 23 54 47.9 0.0
comp=Z,23nm,1.0s,baz=119,slow=5.2,SNR=11
MA2 Magadan 123.37 334 PKP PKPdf 23 54 48.1 -0.2
comp=Z,14nm,0.8s,baz=140,slow=5.8,SNR=5.0
MA2 Magadan 123.37 334c i PKIKP PKiKP 23 54 48.5 -0.1
MA2 pmax pmax
comp=Z,52nm,1.7s
MAK Makhachkala 123.72 48 i P Pdif 23 51 21.9 -0.6
MAK e 23 56 33.8
MAK ePPP PPP 23 59 11.1
MAK e 00 01 47.7
MAK pmax pmax
comp=Z,134nm,1.1s
MAK MLR MLR
comp=Z,1µm,20.0s
RAYN Ar Rayn 123.88 71 i P PKiKP 23 54 50.7 0.0
SNR=34
RAYN Ar Rayn 123.88 71 PKiKP 23 54 50.9 +0.2
RAYN Ar Rayn 123.88 71 PKIKP PKiKP 23 54 50.9 +0.2
ARU Arti 125.35 29 PKPdf 23 54 52.3 +0.1
ARU Arti 125.35 29c i PKIKP PKPdf 23 54 51.8 -0.4
ARU pmax pmax
comp=Z,54nm,1.3s
ARU MLR MLR
comp=Z,2µm,19.0s
SVE Sverdlovsk 126.10 28d i PKIKP PKiKP 23 54 53.9 -0.1
SVE pmax pmax
comp=Z,33nm,1.4s
SVE MLR MLR
comp=Z,2µm,19.0s
CTA Charters Tower 126.52 231 PKP PKiKP 23 54 56.1 +0.1
comp=Z,24nm,0.9s,baz=264,slow=1.1,SNR=12
AKTO Aktyubinsk 128.01 36 SKKPbc SKKPbc 00 08 10.9 +1.0
comp=Z,18nm,1.2s,baz=143,slow=5.5,SNR=5.0
MSEY Mahe Island 128.04 108 P PKiKP 23 55 00.1 +0.8
MSEY Mahe Island 128.04 108 PKPdf 23 54 58.7 0.0
MSEY Mahe Island 128.04 108 PKIKP PKPdf 23 54 58.7 0.0
YAK Yakutsk 128.92 345 PKP PKPdf 23 54 59.1 +0.3
comp=Z,11nm,0.3s,baz=345,slow=1.0,SNR=8.1
YAK Yakutsk 128.92 345 PKPdf 23 54 58.9 +0.1
YAK Yakutsk 128.92 345 ePKIKP PKPdf 23 54 57.9 -0.9
YAK e 23 55 11.4
YAK e 00 02 03.6
YAK ePS PS 00 07 04.3 -11
YAK pmax pmax
comp=N,11nm,1.3s
YAK pmax pmax
comp=Z,116nm,1.3s
YAK pmax pmax
comp=E,7.0nm,1.5s
YAK MLR MLR
comp=Z,2µm,26.0s
YAK MLR MLR
comp=N,1µm,24.0s
YAK MLR MLR
comp=E,333nm,19.0s
KRVT Keravat (AS076 129.26 252 PKP PKPdf 23 55 01.3 +0.3
comp=E,56nm,0.4s,baz=289,slow=6.9,SNR=4.3
ABKAR Akbulak array 129.66 37 PKiKP 23 55 01.4 0.0
FORT Forrest 129.79 207 PKPdf 23 55 01.6 +0.1
SOCY Socotra 131.01 86 PKiKP 23 55 05.3 0.0
PMG Port Moresby 131.47 244 PKP PKPdf 23 55 05.6 +0.4
comp=E,36nm,1.0s,baz=51,slow=11,SNR=6.4
PMG Port Moresby 131.47 244c i PKIKP PKiKP 23 55 05.9 -0.2
PMG pmax pmax
comp=Z,454nm,1.7s
NWAO Narrogin (SRO) 131.54 195 PKP PKPdf 23 55 04.8 0.0
baz=134,slow=4.0
NWAO Narrogin (SRO) 131.54 195 PKPdf 23 55 05.1 +0.3
NWAO Narrogin (SRO) 131.54 195 PKIKP PKPdf 23 55 05.1 +0.3
AS31 Alice Springs 132.54 218 PKPdf 23 55 07.2 +0.2
ASAR Alice Springs 132.54 218 PKhKP PKPpre 23 54 48.9
comp=Z,1.7nm,0.8s,baz=134,slow=1.7,SNR=5.1
ASAR PKP PKPdf 23 55 06.8 -0.2
comp=Z,42nm,0.9s,baz=140,slow=2.3,SNR=74
ASAR pPKP pPKPdf 23 55 23.8 -0.7
comp=Z,55nm,1.2s,baz=136,slow=2.4,SNR=8.0
ASAR SKP 23 58 36.2
comp=Z,2.5nm,0.9s,baz=163,slow=6.6,SNR=5.9
BRVK Borovoye 132.80 27 PKiKP 23 55 07.3 -0.3
BRVK Borovoye 132.80 27c i PKIKP PKiKP 23 55 07.3 -0.3
BRVK pmax pmax
comp=Z,60nm,1.3s
GEYT Alibeck 132.83 51 PKP PKPdf 23 55 07.2 +0.1
comp=Z,9.4nm,1.1s,baz=243,slow=4.8,SNR=28

NAZ Nazwa, Dubai 133.12 69 P PKiKP 23 55 09.6 +0.4
SHAO Shalim 133.15 79 i P PKPdf 23 55 08.1 -0.1
SNR=7.6
ALNE Al Ain 133.26 70 i P PKPdf 23 55 08.6 +0.4
SNR=7.9
MSFE Esma-Masafi 133.55 68 i P PKPdf 23 55 08.8 0.0
SNR=5.0
HATD Hatta, Dubai 133.56 69 i P PKPdf 23 55 08.1 -0.7
SNR=5.8
UOSS Minazif 133.62 69 PKPdf 23 55 08.5 -0.4
YSS Yuzh-Sakhalins 134.28 324 PKPdf 23 55 10.0 +0.6
YSS Yuzh-Sakhalins 134.28 324 ePKHKP PKPpre 23 55 01.5
YSS i 23 55 10.2
YSS e 23 55 27.5
YSS e 23 57 44.4
WRA Warramunga Arr 135.03 222 PKhKP PKPpre 23 54 56.1
comp=Z,2.1nm,0.8s,baz=140,slow=2.7,SNR=6.7
WRA PKP PKPdf 23 55 12.1 +0.3
comp=Z,42nm,0.9s,baz=144,slow=1.6,SNR=70
WRA pPKP pPKPdf 23 55 29.2 0.0
comp=Z,26nm,0.8s,baz=136,slow=1.9,SNR=7.2
WRAB Tennant Creek 135.03 222c i PKIKP PKPdf 23 55 12.0 +0.3
WRAB pmax pmax
comp=Z,186nm,1.7s
MORW Morawa 135.52 195 PKPdf 23 55 12.6 +0.2
BOD Bodaibo 135.86 353 ePKIKP PKPdf 23 55 10.3 -1.8
BOD pmax pmax
comp=Z,47nm,1.9s
ASAJ Asahikawa 135.86 320 PKP PKPdf 23 55 12.7 +0.2
comp=Z,25nm,0.7s,baz=289,slow=9.9,SNR=9.0
BRZS Berezniki 135.98 29 ePKP PKPdf 23 55 12.8 +0.2
BRZS ePP PP 23 57 53.0 +1.2
BRZS Berezniki 135.98 29 ePKIKP PKPdf 23 55 12.8 +0.2
BRZS e 23 57 52.9
ZEA Zeya 136.62 340 ePKHKP PKPpre 23 55 06.4
ZALV Zalesovo Beam 137.48 17 PKhKP PKPpre 23 55 03.1
comp=Z,1.6nm,0.7s,baz=329,slow=5.2,SNR=9.7
ZALV PKP PKPdf 23 55 15.1 -0.1
comp=Z,98nm,1.0s,baz=304,slow=2.7,SNR=87
KURK Kurchatov 138.05 24 PKPdf PKPdf 23 55 17.2 +0.8
KURK Kurchatov 138.05 24 i PKIKP PKPdf 23 55 16.4 +0.1
KLR Kul'dur 138.46 333 PKhKP PKPpre 23 55 05.8
comp=Z,7.9nm,1.1s,baz=17,slow=5.2,SNR=7.7
KLR PKP PKPdf 23 55 17.6 +0.4
comp=Z,29nm,1.0s,baz=47,slow=3.5,SNR=25
KLR Kul'dur 138.46 333 ePKIKP PKPdf 23 55 17.1 -0.1
KLR pmax pmax
comp=Z,32nm,1.0s
TEY Ternei 138.89 325⇑ePKIKP PKPdf 23 55 18.7 +0.7
TEY pmax pmax
comp=Z,50nm,1.3s
KK31 Karatay Array 139.12 39 PKPdf 23 55 18.7 +0.1
KK31 Karatay Array 139.12 39 PKIKP PKPdf 23 55 18.7 +0.1
KKAR Karatay Array 139.12 39 PKPdf 23 55 19.0 +0.4
KKAR Karatay Array 139.12 39 PKIKP PKPdf 23 55 19.0 +0.4
IUG Iuzhnay 139.36 40 ePKP PKPdf 23 55 17.5 -1.7
IUG ePP PP 23 58 11.0 -2.3
IUG Iuzhnay 139.36 40 ePKIKP PKPdf 23 55 17.4 -1.7
IUG e 23 58 11.0
JBG Jabagly 139.52 39 ePKIKP PKPdf 23 55 20.1 +0.6
JBG e 23 58 14.2
BTLS Baital 139.97 34 ePKP PKPdf 23 55 19.7 -0.3
BTLS Baital 139.97 34 ePKIKP PKPdf 23 55 19.7 -0.3
SGDS Sogindy 141.31 35 ePKP PKPdf 23 55 20.4 -2.3
EKS2 Erkin-Say 141.32 37 P PKPdf 23 55 17.0 -5.8
SNR=7.5
USP Ospenovka 141.36 36 P PKiKP 23 55 24.6 -0.9
SNR=9.1
AML Almayashu 141.59 38 P PKPdf 23 55 20.0 -3.6
SNR=12
FITZ Fitzroy Crossi 141.64 214 PKhKP PKPdf 23 55 17.4 -6.4
comp=Z,24nm,0.9s,baz=167,slow=4.4,SNR=14
AAK Ala-Archa 141.75 36 P PKPdf 23 55 19.2 -4.4
SNR=16
AAK Ala-Archa 141.75 36 i P PKPdf 23 55 19.2 -4.4
SNR=38
AAK Ala-Archa 141.75 36 PKPdf PKPdf 23 55 20.4 -3.1
AAK Ala-Archa 141.75 36 i PKIKP PKPdf 23 55 24.8 +1.2
DGAR Diego Garcia 141.76 122 PKPdf 23 55 23.2 -1.0
DGAR Diego Garcia 141.76 122 PKIKP PKPdf 23 55 23.2 -1.0
USA0B Ussuriysk Arra 141.93 327 i PKIKP PKPdf 23 55 24.1 +0.5
USRK Ussuriysk Ar. 141.93 327 PKhKP PKPdf 23 55 18.9 -4.7
comp=Z,28nm,0.8s,baz=43,slow=3.1,SNR=51
KUU Kurty 141.96 33 ePKP PKPdf 23 55 18.2 -5.5
KUU ePP PP 23 58 29.6 +0.8
KBK Karagaybulak 142.00 36 P PKPdf 23 55 20.1 -4.0
SNR=14
UCH Uchtor 142.02 37 P PKPdf 23 55 20.9 -3.6
SNR=26
IRK Irkutsk 142.06 0 ePKHKP PKPdf 23 55 17.0 -6.6
KBL Kabul 142.28 51 PKPdf PKPdf 23 55 21.6 -3.3
KBL Kabul 142.28 51 PKIKP PKPdf 23 55 21.6 -3.3
CHKK Chushkaly 142.33 33 ePKP PKPdf 23 55 23.6 -0.8
CHKK Chushkaly 142.33 33 ePKIKP PKPdf 23 55 23.6 -0.8
MJAR Matsushiro Arr 142.47 313 PKhKP PKPdf 23 55 20.1 -4.7
comp=Z,35nm,1.0s,baz=27,slow=1.1,SNR=33
MAJO Matsushiro 142.47 313 PKPdf PKPdf 23 55 21.0 -3.9
MAJO Matsushiro 142.47 313 PKIKP PKPdf 23 55 21.0 -3.9
MAT Matsushiro 142.47 313 PKP PKPdf 23 55 20.3 -4.5
JCJ Chichijima 142.48 296 PKhKP PKPdf 23 55 21.0 -4.1
comp=Z,102nm,0.9s,baz=180,slow=4.4,SNR=3.6
MAKZ Makanchi 142.49 25 PKPdf PKPdf 23 55 20.2 -4.4
MAKZ Makanchi 142.49 25 PKHKP PKPdf 23 55 20.2 -4.4
MOY Mondy 142.54 3 ePKIKP PKPdf 23 55 20.6 -4.0
MOY pmax pmax
comp=Z,121nm,2.3s
TLY Talaya 142.62 1 PKhKP PKPdf 23 55 21.0 -3.7
comp=Z,17nm,0.9s,baz=315,slow=3.0,SNR=4.4
TLY Talaya 142.62 1 PKPdf PKPdf 23 55 21.7 -2.9
TLY Talaya 142.62 1 ePKHKP PKPdf 23 55 18.4 -6.2
TLY e 23 58 31.2
MK31 Makanchi Array 142.63 25 PKPdf PKPdf 23 55 21.3 -3.5
MK31 Makanchi Array 142.63 25 PKIKP PKPdf 23 55 21.3 -3.5
MKAR Makanchi Array 142.63 25 PKhKP PKPdf 23 55 20.6 -4.2
comp=Z,18nm,0.8s,baz=321,slow=3.3,SNR=34
MKAR SKKPbc SKKPbc 00 07 12.7 -2.1
comp=Z,5.0nm,1.0s,baz=141,slow=7.8,SNR=6.0
AAA Alma-Ata 142.73 34 ePKIKP PKPdf 23 55 21.7 -3.5
AAA pmax pmax
comp=Z,600nm,4.7s
MDOK Medeo 142.83 34 ePKP PKPdf 23 55 21.8 -3.7
MDOK ePP PP 23 58 35.4 +1.1
MDOK Medeo 142.83 34 ePKIKP PKPdf 23 55 21.7 -3.7
MDOK e 23 58 35.3
MDJ Mudanjiang 142.85 330 PKP PKPdf 23 55 20.9 -4.3
TNSS Tian-Shan 142.86 34 ePKP PKPdf 23 55 24.3 -1.6
TNSS Tian-Shan 142.86 34 ePKIKP PKPdf 23 55 24.2 -1.6
ULHL Ulahol 143.00 36 P PKPdf 23 55 22.8 -3.0
SNR=19
ZSN Zaisan 143.10 22 ePKP PKPab 23 55 21.8 +0.7
ZSN ePP PP 23 58 33.2 -2.1
ZSN Zaisan 143.10 22 ePKHKP PKPab 23 55 21.7 +0.6
ZSN e 23 58 33.2
KPKS Kokpek 143.48 32 ePKP PKPbc 23 55 23.5 -0.4
KPKS ePP PP 23 58 36.2 -1.8
KPKS Kokpek 143.48 32 ePKIKP PKPbc 23 55 23.4 -0.5
KPKS e 23 58 36.2
ZHN Zhinishke 143.56 33 ePKP PKPbc 23 55 23.9 -0.2
ZHN Zhinishke 143.56 33 ePKIKP PKPbc 23 55 23.9 -0.3
UZB Uzynbulak 143.88 32 ePKP PKPbc 23 55 25.2 +0.1
UZB ePP PP 23 58 38.9 -1.6
UZB Uzynbulak 143.88 32 ePKIKP PKPbc 23 55 25.2 +0.1
UZB e 23 58 38.9
ZAK Zakamensk 143.91 1 ePKIKP PKPbc 23 55 24.9 0.0
ZAK pmax pmax
comp=Z,114nm,1.3s
SHLS Shalkode 144.10 32 ePKP PKPbc 23 55 26.5 +0.7
SHLS ePP PP 23 58 42.9 +1.1
SHLS Shalkode 144.10 32 ePKIKP PKPbc 23 55 26.4 +0.6
SHLS e 23 58 42.8
KSH Kashi 144.55 39 PKP PKPdf 23 55 28.4 -0.2
KSH pPKP PKiKP 23 55 39.1 +6.9
KSH PP PP 23 58 45.8 +1.0
KSH PKS 23 59 04.1
KSH SKS SKSdf 00 02 30.8 -2.4
KSH SKKS SKKSac 00 05 33.5 +0.7
KSH SS SS 00 17 32.3 +4.7
KSH AMB AMB
comp=Z,210nm,5.9s
KSH LR LR
comp=Z,160nm,9.0s
KSH LR LR
comp=Z,230nm,6.8s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH				LR	LR		
	comp=Z,2µm,17.0s						
CN2	**Changchun**	**145.41**	**333**	*e*PKPbc	**PKiKP**	**23 55 32.8**	**-0.9**
CN2				LR	LR		
	comp=Z,780nm,17.3s						
CN2				LR	LR		
	comp=Z,640nm,17.3s						
CN2				LR	LR		
	comp=Z,860nm,20.0s						
NIL	**Nilore**	**145.82**	**50**		**PKPab**	**23 55 32.1**	**+0.3**
NIL	**Nilore**	**145.82**	**50**	PKP2	**PKPab**	**23 55 32.1**	**+0.3**
KMPI	**Kaimana, Papua**	**145.90**	**241**	PKP	**PKiKP**	**23 55 34.4**	**-1.2**
BHUJ	**Bhuj**	**146.02**	**69**	*e*P	**PKPab**	**23 55 32.9**	**+0.1**
BHUJ				*e*pP	pPKPab	23 55 50.8	+0.7
ULN	**Ulaanbaatar**	**146.36**	**357**		**PKPbc**	**23 55 32.2**	**-0.5**
ULN	**Ulaanbaatar**	**146.36**	**357**	PKP2	**PKPbc**	**23 55 32.2**	**-0.5**
SONM	**Songino Array**	**146.43**	**357**	PKPbc	**PKPbc**	**23 55 32.5**	**-0.4**
	comp=Z,295nm,1.0s,baz=325,slow=1.4,SNR=285						
SONM				PP	**PP**	**23 58 55.1**	**+0.1**
	comp=Z,21nm,1.2s,baz=345,slow=5.1,SNR=5.6						
WMQ	**Urumqi**	**147.23**	**23**	PKPbc	**PKPdf**	**23 55 32.4**	**-0.5**
WMQ				PKPab	**PKPab**	**23 55 36.4**	**-0.6**
WMQ				sPKP		23 55 54.8	
WMQ				SKKS		00 05 44.8	
WMQ				AMB	AMB		
	comp=Z,430nm,9.1s						
WMQ				LR	LR		
	comp=Z,2µm,28.9s						
WMQ				LR	LR		
	comp=Z,2µm,29.1s						
WMQ				LR	LR		
	comp=Z,2µm,29.2s						
SNY	**Shenyang**	**147.82**	**332**	⇑PKPbc	**PKPbc**	**23 55 36.8**	**+0.1**
SNY				PP	**PP**	**23 59 05.5**	**+2.1**
SNY				AMB	AMB		
	comp=Z,570nm,8.0s						
SNY				LR	LR		
	comp=Z,890nm,25.1s						
SNY				LR	LR		
	comp=Z,780nm,20.8s						
SNY				LR	LR		
	comp=Z,2µm,26.0s						
DHRM	**DHARAMSHALA**	**148.74**	**50**	⇑*i*P	**PKPdf**	**23 55 36.4**	**+0.5**
KSRS	**Korea Array**	**148.76**	**322**	PKP	**PKPdf**	**23 55 37.1**	**+1.6**
	comp=Z,248nm,1.0s,baz=65,slow=1.3,SNR=76						
KSRS				PKPbc	**PKPbc**	**23 55 39.7**	**+0.4**
	comp=Z,241nm,1.0s,baz=34,slow=0.9,SNR=72						
KS19	**Wonju Array Si**	**148.76**	**322**		**PKPdf**	**23 55 35.6**	**0.0**
KS19				PKPbc	**PKPbc**	**23 55 40.1**	**+0.7**
JNU	**Nakatsue**	**149.40**	**313**	PKPbc	**PKPbc**	**23 55 40.6**	**-0.6**
	comp=Z,145nm,1.0s,baz=62,slow=3.5,SNR=24						
JNU	**Nakatsue**	**149.40**	**313**		**PKPbc**	**23 55 40.7**	**-0.5**
SIJI	**Sorong**	**149.42**	**243**	PKP	**PKPdf**	**23 55 38.0**	**+0.7**
	comp=Z,44nm,0.8s,baz=58,slow=2.8,SNR=12						
SIJI				PKPbc	**PKiKP**	**23 55 42.5**	**-0.4**
	comp=Z,49nm,0.7s,baz=114,slow=2.1,SNR=24						
INCN	**Inchon**	**149.49**	**324**		**PKPbc**	**23 55 40.9**	**-0.3**
INCN	**Inchon**	**149.49**	**324**	PKP2	**PKPbc**	**23 55 40.9**	**-0.3**
SMLA	**Simla**	**149.92**	**51**	⇑*i*P	**PKPdf**	**23 55 37.5**	**-0.1**
MSAI	**Masohi**	**150.02**	**236**	PKP	**PKPbc**	**23 55 42.4**	**-0.8**
POO	**Poona**	**150.45**	**77**	⇑*i*P	**PKPdf**	**23 55 38.6**	**-0.1**
GOA	**Goa**	**150.49**	**84**	*e*P	**PKPdf**	**23 55 38.0**	**-0.8**
DDI	**Dehra Dun**	**150.97**	**52**	*e*P	**PKPdf**	**23 55 39.5**	**+0.2**
DL2	**Dalian**	**151.05**	**331**	⇑PKPbc	**PKPdf**	**23 55 39.0**	**-0.1**
DL2				sPKP		23 55 58.1	
DL2				PP	**PP**	**23 59 24.5**	**+2.3**
DL2				AMB	AMB		
	comp=Z,470nm,6.3s						
DL2				LR	LR		
	comp=Z,500nm,21.6s						
DL2				LR	LR		
	comp=Z,580nm,21.0s						
DL2				LR	LR		
	comp=Z,1µm,25.3s						
BJI	**Beijing**	**152.25**	**340**	PKPbc	**PKPdf**	**23 55 41.3**	**+0.5**
BJI				pPKP	**PKPab**	**23 55 56.9**	**-0.5**
BJI				PP	**PP**	**23 59 28.3**	**-0.4**
BJI				AMB	AMB		
	comp=Z,500nm,5.9s						
BJI				LR	LR		
	comp=Z,1µm,23.9s						
BJI				LR	LR		
	comp=Z,650nm,20.4s						
BJI				LR	LR		
	comp=Z,2µm,25.0s						
HHC	**Hu-ho-hao-te**	**152.72**	**348**	*e*PKPbc	**PKPdf**	**23 55 42.8**	**+1.1**
HHC				PP	**PP**	**23 59 31.6**	**+0.2**
HHC				SS	SS	00 18 58.0	+0.5
HHC				AMB	AMB		
	comp=Z,180nm,5.5s						
HHC				LR	LR		
	comp=Z,530nm,22.6s						
HHC				LR	LR		
	comp=Z,400nm,20.8s						
HHC				LR	LR		
	comp=Z,830nm,24.5s						
LBMI	**Labuha**	**152.73**	**239**	PKP	**PKPdf**	**23 55 44.0**	**+1.6**
BHPL	**Bhopal**	**153.01**	**67**	*e*P	**PKPdf**	**23 55 42.9**	**+0.3**
BHPL				*i* x	x	23 59 48.5	
KLRI	**Killari**	**153.09**	**78**	*e*PKiKP	**PKPdf**	**23 55 42.6**	**-0.2**
BTO	**Baotou**	**153.23**	**350**	*e*PKPbc	**PKPdf**	**23 55 41.6**	**-0.8**
PLAI	**Plampang**	**153.51**	**211**	PKP	**PKPdf**	**23 55 43.8**	**+0.3**
URV	**Uravakonda**	**153.79**	**85**	*e*PKiKP	**PKPdf**	**23 55 43.7**	**-0.1**
GTA	**Gaotai**	**154.58**	**8**	⇑PKPbc	**PKPdf**	**23 55 45.1**	**+0.7**
GTA				pPKP	pPKPdf	23 55 58.0	-4.1
GTA				sPKP		23 56 03.8	
GTA				PP	**PP**	**23 59 46.9**	**+5.0**
GTA				SS	SS	00 19 17.3	-0.4
GTA				AMB	AMB		
	comp=Z,220nm,6.5s						
GTA				LR	LR		
	comp=Z,870nm,20.3s						
GTA				LR	LR		
	comp=Z,1µm,23.4s						
GTA				LR	LR		
	comp=Z,1µm,21.6s						
SRSP	**Sriramsagar**	**154.66**	**76**	*e*PKPbc	**PKPdf**	**23 55 44.4**	**-0.5**
IGBI	**Denpasar**	**154.74**	**206**	PKP	**PKPdf**	**23 55 45.3**	**+0.1**
HYBB	**Hyderabad (bro**	**154.99**	**79**	*e*PKPbc	**PKPdf**	**23 55 44.9**	**-0.6**
HYB	**Hyderabad**	**154.99**	**79**	*i* PKP	**PKPdf**	**23 55 44.0**	**-1.5**
HYB				*e*sPKP		23 56 04.0	
HYB	**Hyderabad**	**154.99**	**79**	*e*P	**PKPdf**	**23 55 43.5**	**-1.9**
HYB				*i* x	x	23 59 56.9	
TIA	**Tai'an**	**155.27**	**335**	PKP	**PKPdf**	**23 55 45.8**	**+0.5**
SRLM	**Srisailam**	**155.37**	**82**	*e*PKPbc	**PKPdf**	**23 55 45.8**	**-0.2**
TIY	**Taiyuan**	**155.50**	**344**	*e*PKP	**PKPdf**	**23 55 46.3**	**+0.6**
TIY				PKPab	**PKPab**	**23 56 11.3**	**-0.1**
TIY				PP	**PP**	**23 59 52.5**	**+5.4**
TIY				SS	SS	00 19 31.3	+3.4
TIY				AMB	AMB		
	comp=Z,410nm,5.0s						
TIY				LR	LR		
	comp=Z,1µm,28.4s						
TIY				LR	LR		
	comp=Z,920nm,25.0s						
TIY				LR	LR		
	comp=Z,1µm,25.5s						
KAPI	**Kappang**	**155.54**	**220**	PKP	**PKPdf**	**23 55 47.0**	**+0.7**
	comp=Z,55nm,1.2s,baz=48,slow=1.1,SNR=12						
KAPI				PKPab	**PKPab**	**23 56 13.6**	**+1.4**
	comp=Z,100nm,1.2s,baz=317,slow=5.5,SNR=10						
KAPI	**Kappang**	**155.54**	**220**	PKPdf	**PKPdf**	**23 55 46.9**	**+0.6**
KAPI	**Kappang**	**155.54**	**220**	PKIKP	**PKPdf**	**23 55 47.0**	**+0.7**
RPR	**Rampur**	**155.56**	**76**	*e*PKPdf	**PKPdf**	**23 55 45.6**	**-0.5**
NJS	**Nagarjunasagar**	**155.76**	**81**	*e*PKPdf	**PKPdf**	**23 55 45.7**	**-0.7**
PALK	**Pallekele**	**155.79**	**104**	P	**PKPdf**	**23 55 46.5**	**-0.2**
SKHT	**Srikalahasti**	**156.10**	**88**	*e*PKPdf	**PKPdf**	**23 55 46.2**	**-0.7**
DANN	**Dangsing**	**156.27**	**50**	*e*P	**PKPdf**	**23 55 47.3**	**+0.1**
	comp=Z,451nm,1.4s						
LUWI	**Luwuk**	**156.28**	**232**	PKP	**PKPdf**	**23 55 48.9**	**+1.6**
ADKI	**Addanki**	**156.41**	**83**	*e*PKPdf	**PKPdf**	**23 55 47.4**	**+0.1**
GGR	**Gangavaram**	**156.53**	**78**	*e*PKPdf	**PKPdf**	**23 55 46.8**	**-0.7**
MDRS	**Chennai**	**156.56**	**90**	*e*P	**PKPdf**	**23 55 47.8**	**+0.3**
MYLAV	**Mylavaram**	**157.02**	**81**	*e*PKPdf	**PKPdf**	**23 55 47.2**	**-0.9**
GKN	**Gorkha**	**157.11**	**50**	*e*P	**PKPdf**	**23 55 48.0**	**-0.2**
	comp=Z,279nm,1.4s						
MATI	**Mati**	**157.29**	**254**	*e*P	**PKPdf**	**23 55 49.1**	**+0.6**
DDMP	**Don Marcelino,**	**157.49**	**251**	*e*P	**PKPab**	**23 56 20.1**	**-0.6**
DMN	**Daman**	**157.67**	**50**	*e*P	**PKPdf**	**23 55 49.0**	**0.0**
KKN	**Kakani**	**157.70**	**50**	*e*P	**PKPdf**	**23 55 48.8**	**-0.2**
	comp=Z,190nm,1.4s						
NJ2	**Nanjing**	**157.82**	**326**	⇑PKP	**PKPdf**	**23 55 48.6**	**-0.1**
NJ2				PKPab	**PKPab**	**23 56 20.5**	**-1.0**
NJ2				PP	**PP**	**00 00 01.3**	**+0.9**
NJ2				SS	SS	00 19 56.5	+2.9
NJ2				AMB	AMB		
	comp=Z,580nm,6.2s						
NJ2				LR	LR		
	comp=Z,990nm,19.4s						
NJ2				LR	LR		
	comp=Z,590nm,15.6s						
NJ2				LR	LR		
	comp=Z,760nm,21.3s						
PKIN	**Phulchoki**	**157.90**	**50**	*e*P	**PKPdf**	**23 55 48.7**	**-0.6**
PKI	**Pulchoki**	**157.91**	**50**	*e*P	**PKPdf**	**23 55 48.7**	**-0.7**
	comp=Z,187nm,1.4s						
PVM	**Polavaram**	**157.93**	**79**	*e*PKPdf	**PKPdf**	**23 55 48.4**	**-0.8**
DAV	**Davao City (W)**	**157.97**	**253**	PKPab	**PKPab**	**23 56 22.5**	**-0.3**
	comp=Z,120nm,0.3s,baz=111,slow=5.6,SNR=7.0						
GUN	**Gumba**	**158.07**	**49**	*e*P	**PKPdf**	**23 55 49.3**	**-0.3**
LZH	**Lanzhou**	**158.21**	**1**	⇑PKP	**PKPdf**	**23 55 50.3**	**+1.0**
LZH				pPKP	pPKPdf	23 56 02.6	-4.4
LZH				sPKP		23 56 08.0	
LZH				PKPab	**PKPab**	**23 56 23.5**	**+0.3**
LZH				PP	**PP**	**00 00 01.8**	**-0.1**
LZH				SKKS		00 06 49.1	
LZH				AMB	AMB		
	comp=Z,530nm,6.0s						
LZH				LR	LR		
	comp=Z,1µm,19.1s						
LZH				LR	LR		
	comp=Z,1µm,17.9s						
LZH				LR	LR		
	comp=Z,1µm,20.6s						
KCP	**Kidapawan**	**158.40**	**253**	⇑*i*P	**PKPdf**	**23 55 50.0**	**0.0**
JIRN	**Jiri**	**158.44**	**49**	*e*P	**PKPdf**	**23 55 49.7**	**-0.4**
	comp=Z,176nm,1.4s						
BUKP	**Musuan**	**158.72**	**255**	*e*P	**PKPdf**	**23 55 50.7**	**+0.4**
LEM	**Lembang**	**158.85**	**189**	PKP	**PKPdf**	**23 55 51.6**	**+0.9**
	comp=Z,24nm,0.7s,baz=180,slow=5.5,SNR=11						
LEM				PKPab	**PKPab**	**23 56 24.1**	**-2.4**
	comp=Z,88nm,1.0s,baz=200,slow=9.5,SNR=4.9						
LEM				PP	**PP**	**00 00 09.6**	**+4.1**
	comp=Z,44nm,0.8s,baz=169,slow=4.4,SNR=7.0						
KBKI	**Kotabaru**	**159.02**	**215**	PKP	**PKPdf**	**23 55 52.1**	**+1.4**
RAMN	**Ramite**	**159.14**	**50**	*e*P	**PKPdf**	**23 55 50.8**	**0.0**
MSLP	**Maasin**	**159.54**	**261**	*e*P	**PKPdf**	**23 55 51.6**	**+0.4**
TAPN	**Taplejung**	**159.72**	**47**	*e*P	**PKPdf**	**23 55 50.6**	**-0.9**
	comp=Z,380nm,1.8s						
ODAN	**Odare**	**159.77**	**49**	*e*P	**PKPdf**	**23 55 51.4**	**-0.1**
XAN	**Xi'an**	**159.82**	**349**	PKP	**PKPdf**	**23 55 51.3**	**+0.2**
XAN				pPKP	pPKPdf	23 56 00.8	-7.9
XAN				sPKP		23 56 08.3	
XAN				PKPab	**PKPab**	**23 56 29.4**	**-0.7**
XAN				PP	**PP**	**00 00 09.0**	**-1.7**
XAN				AMB	AMB		
	comp=Z,440nm,5.7s						
XAN				LR	LR		
	comp=Z,800nm,22.8s						
XAN				LR	LR		
	comp=Z,660nm,24.9s						
XAN				LR	LR		
	comp=Z,990nm,30.4s						
OCLP	**Ormoc**	**159.97**	**263**	*e*P	**PKPab**	**23 56 32.2**	**+0.8**
CHLP	**Challavanipeta**	**160.08**	**75**	*e*PKPdf	**PKPdf**	**23 55 51.3**	**-0.4**
BOK	**Bokaro**	**160.14**	**59**	*e*P	**PKPdf**	**23 55 50.6**	**-1.1**
BOK				*i* x	x	00 00 29.3	
PAGZ	**Pagadian**	**160.28**	**253**	*e*P	**PKPdf**	**23 55 51.0**	**-1.1**
GTK	**Tadong**	**160.36**	**46**	⇑*i*P	**PKPdf**	**23 55 51.3**	**-0.7**
PVCP	**Virac**	**160.75**	**271**	*e*P	**PKPdf**	**23 55 53.4**	**+0.9**
BWNR	**Bhubaneshwar**	**161.30**	**69**	*e*P	**PKPdf**	**23 55 53.0**	**0.0**
BWNR				*i* x	x	23 56 09.6	
WHN	**Wuhan**	**161.31**	**332**	PKP	**PKPdf**	**23 55 53.8**	**+1.1**
WHN				PKPab	**PKPab**	**23 56 36.1**	**-0.5**
WHN				PP	**PP**	**00 00 19.9**	**+0.9**
WHN				SS	SS	00 20 29.4	-0.5
WHN				AMB	AMB		
	comp=Z,1µm,6.2s						
WHN				LR	LR		
	comp=Z,470nm,12.0s						
WHN				LR	LR		
	comp=Z,1µm,15.5s						
WHN				LR	LR		
	comp=Z,5µm,24.4s						
MDSI	**Maura Dua**	**161.43**	**180**	PKP	**PKPdf**	**23 55 52.8**	**-0.5**
YULB	**Yu-li**	**161.54**	**302**		**PKPdf**	**23 55 53.0**	**-0.2**
OTRP	**Odiongan**	**162.69**	**266**	*e*P	**PKPdf**	**23 55 55.0**	**+0.4**
TPI	**Tanjungpandan**	**162.83**	**191**	PKP	**PKPdf**	**23 55 54.8**	**0.0**
QZH	**Quanzhou**	**162.85**	**311**	*i* PKP	**PKPdf**	**23 55 55.3**	**+0.9**
QZH				sPKP		23 56 13.3	
QZH				PKPab	**PKPab**	**23 56 42.5**	**-1.2**
QZH				PP	**PP**	**00 00 27.0**	**-1.2**
QZH				LR	LR		
	comp=Z,1µm,23.2s						
BALP	**Baler**	**163.27**	**277**	*e*P	**PKPdf**	**23 55 56.8**	**+1.8**
CD2	**Chengdu**	**163.37**	**2**	PKP	**PKPdf**	**23 55 55.9**	**+1.0**
CD2				sPKP		23 56 13.4	
CD2				SKKS		00 07 16.0	
CD2				AMB	AMB		
	comp=Z,870nm,7.1s						
CD2				LR	LR		
	comp=Z,800nm,21.4s						
CD2				LR	LR		
	comp=Z,970nm,24.2s						
CD2				LR	LR		
	comp=Z,1µm,27.0s						
SJMP	**San Jose**	**163.58**	**266**	*e*P	**PKPab**	**23 56 48.5**	**+1.3**
TEZP	**TEZPUR**	**163.60**	**39**	*e*P	**PKPdf**	**23 55 58.1**	**+2.9**
ABRA	**Dolores**	**163.88**	**284**	*e*P	**PKPdf**	**23 55 55.9**	**+0.3**
TGY	**Tagaytay City**	**163.90**	**272**	PKPab	**PKPab**	**23 56 47.9**	**-0.9**
	comp=Z,164nm,0.3s,baz=277,slow=3.4,SNR=5.1						
SMPP	**San Manuel, Pa**	**164.11**	**279**	*e*P	**PKPdf**	**23 55 55.6**	**-0.3**
BUSP	**Coron**	**164.40**	**264**	*e*P	**PKPdf**	**23 55 57.3**	**+1.1**
LUBP	**Lubang**	**164.55**	**270**	*e*P	**PKPab**	**23 56 49.0**	**-2.6**
ENPP	**El Nido**	**164.98**	**260**	*e*P	**PKPdf**	**23 55 57.9**	**+1.3**
KKM	**Kota Kinabalu**	**165.78**	**236**		**PKPdf**	**23 55 57.7**	**+0.1**
KKM					**PKPab**	**23 56 56.5**	**-0.5**
SBUM	**Sibu**	**165.96**	**214**		**PKPdf**	**23 55 57.9**	**+0.4**
KSM	**Kuching**	**166.04**	**206**		**PKPdf**	**23 55 57.3**	**-0.3**
RPSI	**Rantau Prapat**	**167.38**	**154**		**PKPdf**	**23 55 58.2**	**-0.4**
PSI	**Prapat**	**167.47**	**154**	PKP	**PKPdf**	**23 55 58.2**	**-0.6**
	comp=Z,26nm,1.0s,baz=239,slow=5.9,SNR=10						
PSI				PKPab	**PKPab**	**23 57 04.7**	**+0.4**
	comp=Z,39nm,1.1s,baz=179,slow=3.5,SNR=6.6						
PSI				PP	**PP**	**00 00 53.1**	**+1.7**
	comp=Z,5.5nm,0.5s,baz=203,slow=6.7,SNR=6.0						
GYA	**Guiyang**	**167.62**	**350**	*i* PKP	**PKPdf**	**23 55 59.1**	**+0.5**
GYA				pPKP	pPKPdf	23 56 11.3	-4.9
GYA				PKPab	**PKPab**	**23 57 04.0**	**-0.6**
GYA				PP	**PP**	**00 00 56.3**	**+4.6**
GYA				AMB	AMB		
	comp=Z,290nm,6.2s						
GYA				LR	LR		
	comp=Z,850nm,20.1s						
GYA				LR	LR		
	comp=Z,680nm,20.3s						
GYA				LR	LR		
	comp=Z,1µm,23.5s						
DGPR	**DIGLIPUR**	**168.87**	**94**	*e*P	**PKPdf**	**23 55 58.7**	**-0.9**
KMI	**Kunming**	**169.03**	**8**	PKP	**PKPdf**	**23 56 00.4**	**+0.7**
KMI				pPKP	pPKPdf	23 56 18.6	-0.5
IPM	**Ipoh**	**169.80**	**161**		**PKPdf**	**23 55 60.0**	**-0.3**
KULM	**Kulim**	**170.43**	**157**		**PKPdf**	**23 56 00.0**	**-0.6**
KULM					**PKPab**	**23 57 17.5**	**+0.3**
QIZ	**Qiongzhong**	**172.87**	**313**	PKP	**PKPdf**	**23 56 01.9**	**+0.3**
QIZ				pPKP	**pPKPdf**	**23 56 16.3**	**-2.9**
QIZ				AMB	AMB		
	comp=Z,780nm,5.5s						
QIZ				LR	LR		
	comp=Z,680nm,22.6s						
QIZ				LR	LR		
	comp=Z,680nm,30.4s						
QIZ				LR	LR		
	comp=Z,1µm,27.5s						
CHTO	**Chiang Mai**	**173.09**	**48**		**PKPdf**	**23 56 01.5**	**-0.2**
CHTO	**Chiang Mai**	**173.09**	**48**	PKIKP	**PKPdf**	**23 56 01.5**	**-0.2**
CM31	**Chiang Mai Arr**	**173.31**	**50**		**PKPdf**	**23 56 01.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**173.31**	**50**	PKP	**PKPdf**	**23 56 01.9**	**+0.2**
	comp=Z,29nm,1.1s,baz=286,slow=1.7,SNR=86						
CMAR				PKPab	**PKPab**	**23 57 31.0**	**+0.9**
	comp=Z,3.7nm,0.9s,baz=300,slow=5.0,SNR=4.1						
CMAR				PP	**PP**	**00 01 25.8**	**+4.3**
	comp=Z,15nm,1.2s,baz=298,slow=6.1,SNR=9.7						
CMAR	**Chiang Mai Arr**	**173.31**	**50**	PKIKP	**PKPdf**	**23 56 02.0**	**+0.2**
DLV	**T Lat**	**175.37**	**241**		**PKPdf**	**23 56 02.3**	**-0.5**
DLV					**PKPab**	**23 57 40.8**	**+1.2**
PBKT	**Sadao Pong**	**175.99**	**54**		**PKPdf**	**23 56 02.8**	**+0.2**

IDC 18 23:55:51.3±4.4,**4°.62S**×**147°.44E**,**h0**km,**mb4.2**/2, **mb1 4.4**/3,**mb1mx3.7**/55,**mbtmp4.1**/3,**ML4.3**/1,**MS3.6**/1, **Ms1 3.6**/1,**ms1mx2.9**/42,**Error ellipse: s-maj=123.8km s-min=51.7km az=108.0,Bismarck Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.76**	**183**	Sn	Sn	23 58 03.4	+3.0
	5.9nm,0.3s,baz=205,slow=23,SNR=5.6						
PMG				LR	LR	23 59 21.2	
	comp=Z,628nm,18.2s,baz=194,slow=44						
WRA	**Warramunga Arr**	**19.87**	**219**	P	P	00 00 24.8	+0.5
	1.0nm,0.3s,baz=44,slow=10,SNR=30						
ASAR	**Alice Springs**	**23.00**	**213**	P	P	00 00 57.5	-0.6
	1.7nm,0.6s,baz=43,slow=7.0,SNR=5.7						
FITZ	**Fitzroy Crossi**	**25.18**	**236**	P	P	00 01 18.7	0.0
	8.5nm,0.4s,baz=48,slow=12,SNR=28						
TORD	**Torodi Ar. Bea**	**145.16**	**286**	PKPbc	PKPbc	00 15 30.9	-0.6
	0.2nm,0.4s,baz=73,slow=3.4,SNR=1.1						

JMA 19 00:28:47.0±0.2,**28°.40N**×**140°.61E**,**h394**km,**M3.7**,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.91**	**133**	P	Pn	00 29 42.0	+0.1
CBIJ				*e*S	S	00 30 25.1	-1.0
JHH2	**Haha-jima-NKT2**	**2.24**	**141**	P	Pn	00 29 44.1	0.0
JHH2				*e*S	S	00 30 29.5	-0.6
BSO1	**Boso 1**	**6.24**	**3**	P	Pn	00 30 23.7	+2.4
BSO3	**Boso 3**	**6.38**	**359**	P	Pn	00 30 24.9	+1.7
BSO4	**Boso 4**	**6.57**	**358**	P	P	00 30 27.0	+0.8
JKN2	**Miekihoku**	**6.90**	**329**	P	P	00 30 30.2	+0.2
JRY	**Ryogami san**	**7.73**	**350**	P	P	00 30 39.4	+0.1
JAG	**Ashikaga**	**8.06**	**353**	P	Pn	00 30 42.5	+0.1

IDC 19 00:34:44.5±1.2,**3°.95N**×**121°.50E**,**h0**km,**mb3.8**/4, **mb1 3.9**/4,**mb1mx3.5**/53,**mbtmp3.8**/4,**MS3.7**/1,**Ms1 3.7**/1, **ms1mx3.0**/34,**Error ellipse: s-maj=176.3km s-min=21.3km az=65.0,Celebes Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**22.57**	**268**	LR	LR	00 50 57.9	
	comp=Z,178nm,18.2s,baz=263,slow=43						
WRA	**Warramunga Arr**	**26.89**	**152**	P	P	00 40 26.9	-0.5
	0.5nm,0.4s,baz=333,slow=9.0,SNR=8.4						
ASAR	**Alice Springs**	**30.00**	**157**	P	P	00 40 55.6	+0.5
	0.4nm,0.3s,baz=338,slow=8.7,SNR=6.4						
SONM	**Songino Array**	**45.61**	**346**	P	P	00 43 07.1	+0.4
	0.3nm,0.5s,baz=154,slow=7.6,SNR=3.2						
MKAR	**Makanchi Array**	**54.49**	**328**	P	P	00 44 13.7	-0.4
	0.9nm,0.3s,baz=124,slow=7.7,SNR=30						

IDC 19 00:38:55.6±2.0,**15°.10S**×**175°.04W**,**h0**km,**mb3.6**/6, **mb1 4.0**/6,**mb1mx3.8**/52,**mbtmp3.6**/6,**Error ellipse: s-maj=133.7km s-min=23.5km az=150.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.37**	**257**	P	P	00 47 39.9	+0.2
	0.5nm,0.7s,baz=98,slow=6.3,SNR=3.1						
ASAR	**Alice Springs**	**48.70**	**252**	P	P	00 47 41.8	-0.4
	1.4nm,0.6s,baz=87,slow=8.3,SNR=16						
NVAR	**Mina Array Bea**	**75.18**	**43**	P	P	00 50 41.2	+0.9
	0.2nm,0.5s,baz=234,slow=8.5,SNR=3.4						
TXAR	**Lajitas Array**	**81.77**	**57**	P	P	00 51 16.5	-0.3
	0.1nm,0.5s,baz=244,slow=7.9,SNR=2.5						
ILAR	**Eielson Array**	**82.47**	**12**	P	P	00 51 19.2	-0.3
	0.2nm,0.5s,baz=212,slow=5.3,SNR=5.3						
PDAR	**Pinedale Array**	**83.11**	**42**	P	P	00 51 23.4	-0.3
	0.4nm,0.6s,baz=226,slow=3.7,SNR=4.9						

*TEH **19** 01:03:59.2,26°.57N×57°.90E,h14km,ML3.8*
*DSN **19** 01:04:00.6±2.5,26°.63N×57°.94E,h10km,ML3.9/7,Error ellipse: s-maj=37.1km s-min=15.0km az=177.0*
*OMAN **19** 01:04:01.4±0.5,26°.62N×57°.91E,h13km,ml3.5/12,Error ellipse: s-maj=34.5km s-min=8.3km az=234.0*
*IDC **19** 01:04:02.1±2.8,26°.69N×57°.43E,h0km,mb3.6/7, mb1 3.7/7,mb1mx3.5/29,mbtmp3.6/7,Error ellipse: s-maj=60.2km s-min=27.7km az=158.0*
ISC 19 01:04:01.8±0.7,**26°.53N**±0°.04×**57°.77E**±0°.06,**h10**km,**n59**, σ**1s.45**/66,**mb3.5**/7,**Southern Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**0.89**	**180**	*e*Pg	**Pg**	**01 04 16.3**	**-2.7**
NIAN	**Nian**	**1.32**	**321**	*e*Pg	**Pn**	**01 04 25.5**	**-0.9**
NIAN				*e*		01 04 48.5	
KHNJ	**Kahnooj**	**1.41**	**358**	*e*Pg	**Pn**	**01 04 24.6**	**-3.1**
IBND	**Bandar-abas**	**1.43**	**310**	*e*Pg	**Pn**	**01 04 28.1**	**+0.3**
BANOM	**Banah**	**1.45**	**246**	*e*P	**Pb**	**01 04 29.1**	**+0.1**
	SNR=723						
BANOM				S	**Sg**	**01 04 51.3**	**+2.7**
BANOM	**Banah**	**1.45**	**246**	P	**Pb**	**01 04 29.1**	**+0.1**
	SNR=723						
BANOM				S	**Sg**	**01 04 50.9**	**+2.3**
BANOM	**Banah**	**1.45**	**246**	*e*Pn	**Pb**	**01 04 29.0**	**+0.1**
SHME	**Shamm**	**1.54**	**252**	*e*P	**Pb**	**01 04 30.9**	**+0.5**
	SNR=46						
SHME	**Shamm**	**1.54**	**252**	*e*Pn	**Pb**	**01 04 31.0**	**+0.5**
GENO	**Geno**	**1.67**	**302**	*e*Pn	**Pn**	**01 04 31.0**	**-0.3**
GENO				*e*Sg	**Sg**	**01 04 55.5**	**0.0**
GENO				*e*		01 04 59.8	
MDH	**Madha**	**1.80**	**227**	*e*P	**Pn**	**01 04 33.0**	**0.0**
	SNR=20						
MDH	**Madha**	**1.80**	**227**	P	**Pn**	**01 04 33.1**	**0.0**
	SNR=20						
MDH	**Madha**	**1.80**	**227**	*e*Pn	**Pn**	**01 04 32.9**	**-0.1**
MSFE	**Esma-Masafi**	**1.86**	**232**	*e*P	**Pn**	**01 04 34.0**	**+0.2**
	SNR=12						
MSFE	**Esma-Masafi**	**1.86**	**232**	*e*Pn	**Pn**	**01 04 33.8**	**0.0**
UOSS	**Minazif**	**2.12**	**222**	*e*P	**Pn**	**01 04 37.1**	**-0.2**
	SNR=11						
UOSS	**Minazif**	**2.12**	**222**	P	**Pn**	**01 04 37.1**	**-0.2**
UOSS	**Minazif**	**2.12**	**222**	*e*Pn	**Pn**	**01 04 37.2**	**-0.1**
HATD	**Hatta, Dubai**	**2.25**	**221**	*e*P	**Pn**	**01 04 39.3**	**+0.1**
	SNR=11						
HATD	**Hatta, Dubai**	**2.25**	**221**	*e*Pn	**Pn**	**01 04 39.4**	**+0.3**
ASHO	**Ashiyiah**	**2.40**	**220**	*e*P	**Pn**	**01 04 43.2**	**+1.9**
	SNR=25						
ASHO	**Ashiyiah**	**2.40**	**220**	P	**Pn**	**01 04 42.5**	**+1.3**
	SNR=24						
ASHO	**Ashiyiah**	**2.40**	**220**	*e*Pn	**Pn**	**01 04 42.0**	**+0.8**
NAZ	**Nazwa, Dubai**	**2.44**	**232**	*e*P	**Pb**	**01 04 44.6**	**-1.3**
	SNR=14						
NAZ	**Nazwa, Dubai**	**2.44**	**232**	*e*Pn	**Pn**	**01 04 43.5**	**+1.7**
SOHO	**SOHO**	**2.63**	**205**	P	**Pn**	**01 04 44.4**	**0.0**
	SNR=35						
SOHO	**SOHO**	**2.63**	**205**	*e*Pn	**Pn**	**01 04 44.4**	**0.0**
FAQ	**Al Faqa, Dubai**	**2.65**	**228**	*e*Pn	**Pn**	**01 04 44.2**	**-0.4**
HOQ	**Hoqain**	**2.96**	**188**	P	**Pn**	**01 04 49.7**	**+0.7**
	SNR=31						
HOQ				S	**Sn**	**01 05 26.4**	**+1.8**
BIDO	**Bidbid**	**3.01**	**174**	P	**Pn**	**01 04 51.0**	**+1.4**
	SNR=6.9						
ALNE	**Al Ain**	**3.06**	**217**	*i* P	**Pn**	**01 04 53.3**	**+2.9**
	SNR=9.4						
ALNE	**Al Ain**	**3.06**	**217**	*e*Pn	**Pn**	**01 04 53.5**	**+3.1**
LAR1	**LAR**	**3.23**	**291**	*e*Pn	**Pn**	**01 04 52.5**	**-0.2**
NGRK	**Negar Kerman**	**3.23**	**344**	*e*Pn	**Pn**	**01 04 52.9**	**-0.1**
NGRK				*e*		01 05 49.2	
CHMN	**Cheshme madani**	**3.33**	**357**	*e*Pn	**Pn**	**01 04 56.5**	**+2.2**
CHMN				*e*		01 05 59.1	
ARQ	**Araqi**	**3.37**	**200**	P	**Pn**	**01 04 58.1**	**+3.5**
	SNR=51						
ARQ				S	**Sb**	**01 05 40.9**	**-2.0**
SMDO	**Samad**	**3.46**	**176**	P	**Pn**	**01 04 58.1**	**+2.1**
	SNR=17						
SMDO				S	**Sn**	**01 05 39.6**	**+2.5**
TVBK	**TV Kerman**	**3.56**	**346**	*e*Pn	**Pn**	**01 04 57.7**	**+0.3**
TVBK				*e*		01 05 09.4	
KHGB	**Koh Gabri**	**4.00**	**344**	*e*Pn	**Pn**	**01 05 04.0**	**+0.6**
KHGB				*e*		01 06 13.0	
WBK	**Wadi Bani Khal**	**4.05**	**164**	P	**Pn**	**01 05 05.4**	**+1.4**
	SNR=78						
WBK				S	**Sn**	**01 05 51.4**	**-0.2**
UMZA	**Um Al Zommool**	**4.48**	**213**	*e*Pn	**Pn**	**01 05 11.3**	**+1.5**
ISRV	**Sarvestan**	**5.00**	**306**	*e*Pn	**Pn**	**01 05 16.7**	**-0.6**

NHDN	Nehbandan	5.24	22	ePn	Pn	01 05 20.2	-0.2
IMEH	Mehriz	5.58	331	ePn	Pn	01 05 24.0	-1.1
ITEG	Tejag	6.40	7	ePn	Pn	01 05 36.6	+0.2
TPRV	Parvadeh(Tabas	6.54	352	ePn	Pn	01 05 39.9	+1.6
KLNJ	Kolanjah	7.02	311	ePn	Pn	01 05 43.5	-1.5
IRAM	Ramesheh	7.06	319	ePn	Pn	01 05 44.2	-1.3
TKDS	Koohdasht(Taba	7.08	356	ePn	Pn	01 05 47.6	+1.9
TNSJ	Nastanj	7.48	353	ePn	Pn	01 05 52.4	+1.3
SHAO	Shalim	8.70	194	P	Pn	01 06 08.6	+0.9
	SNR=6.5						
WHFO	Wadi Hawf	9.33	204	P	Pn	01 06 16.2	-0.4
	SNR=11						
BRTR	Keskin Array B	24.02	309	P	P	01 09 17.1	0.0
	0.9nm,0.7s,baz=127,slow=11,SNR=7.6						
MKAR	Makanchi Array	28.02	37	P	P	01 09 56.3	+3.2
	0.2nm,0.5s,baz=227,slow=7.7,SNR=4.3						
AKASG	Malin Array Be	32.51	326	P	P	01 10 31.2	-1.4
	0.2nm,0.3s,baz=130,slow=8.0,SNR=4.7						
ZALV	Zalesovo Beam	33.90	29	P	P	01 10 46.0	+1.2
	0.4nm,0.3s,baz=246,slow=9.0,SNR=2.9						
GERES	GERESS Array B	40.64	315	P	P	01 11 40.9	-1.3
	0.4nm,0.6s,baz=110,slow=8.8,SNR=3.8						
FINES	FINESS Array B	40.90	337	P	P	01 11 42.9	-1.0
	1.6nm,0.9s,baz=123,slow=10,SNR=3.7						
TORD	Torodi Ar. Bea	54.02	267	P	P	01 13 26.2	-0.5
	0.7nm,0.6s,baz=58,slow=7.2,SNR=7.7						

ATH 19 01:14:44.4, 38°.09N×20°.36E, h17km±1km, ML2.2/6, Error ellipse: s-maj=1.6km s-min=0.9km az=59.0
THE 19 01:14:45.1, 38°.09N×20°.36E, h13km, ML2.5/12, Error ellipse: s-maj=1.1km s-min=0.5km az=258.0
ISC 19 01:14:43.9±1.2, 38°.08N±0°.03×20°.32E±0°.05, h18km±2km, n40, σ0.43/70, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.12	25	P	Pg	01 14 48.1	+0.3
CHV1				S	Sg	01 14 50.4	0.0
KEF3	Kipouria, Keph	0.13	10	P	Pg	01 14 48.4	+0.4
KEF3				S	Sg	01 14 50.6	0.0
LXRA	Lixouri, Kepha	0.15	37	P	Pg	01 14 48.4	+0.2
LXR1	Lixouri, Cepha	0.15	37	P	Pg	01 14 48.5	+0.3
LXR1				S	Sg	01 14 51.2	0.0
	8µm,0.3s						
KEF2	Argostoli. Kep	0.16	56	P	Pg	01 14 48.2	-0.1
KEF2				S	Sb	01 14 50.4	+0.4
ARGA	Argostoli. Kep	0.16	51	P	Pg	01 14 48.2	-0.1
ARGA				S	Sb	01 14 50.3	+0.2
ARG2	Argostoli	0.17	52	P	Pg	01 14 48.3	-0.1
ARG2				S	Sb	01 14 50.5	+0.2
	12µm,0.1s						
AGT1	Agia Thekli	0.18	16	P	Pg	01 14 49.0	+0.4
AGT1				S	Sg	01 14 52.0	+0.2
	7µm,0.1s						
KEF4	Livadi, Kephal	0.20	24	P	Pg	01 14 48.7	-0.1
KEF4				S	Sg	01 14 52.4	+0.2
KEF1	Kardakata, Kep	0.23	31	P	Pb	01 14 49.4	0.0
KEF1				S	Sg	01 14 52.7	-0.4
VLS	Valsamata	0.23	65	P	Pg	01 14 49.1	-0.3
VLS				S	Sg	01 14 52.3	-0.9
VLS	Valsamata	0.23	65	P	Pg	01 14 49.1	-0.3
VLS				S	Sg	01 14 52.2	-1.0
VLS				AML	AML	01 14 52.3	
	comp=N,4888µm,0.1s						
VLS				AML	AML	01 14 52.6	
	comp=E,4061µm,0.1s						
VLMS	Volimes, Zakyn	0.34	126	P	Pb	01 14 51.4	-0.1
VLMS				S	Sg	01 14 55.4	-0.6
VLMS				AML	AML	01 14 57.4	
	comp=E,2186µm,0.1s						
VLMS				AML	AML	01 14 59.1	
	comp=N,2109µm,0.2s						
VSK1	VASILIKIADES	0.38	30	P	Pg	01 14 51.9	0.0
VSK1				S	Sg	01 14 57.6	+0.2
	comp=N,3µm,0.1s						
KONA	Konidatara, Ke	0.40	30	P	Pg	01 14 52.2	0.0
KONA				S	Sg	01 14 58.0	+0.2
FSK	Fiskardo	0.43	26	P	Pg	01 14 52.5	-0.2
FSK	Fiskardo	0.43	26	P	Pg	01 14 52.6	-0.2
FSK				S	Sg	01 14 58.2	-0.4
FSK				AML	AML	01 14 59.3	
	comp=E,3122µm,0.1s						
FSK				AML	AML	01 15 00.1	
	comp=N,1138µm,0.2s						
ZAK2	Zakynthos	0.54	122	P	Pb	01 14 55.1	+0.3
ZAK2				S	Sb	01 15 03.2	+1.0
	comp=N,1µm,0.2s						
KRI1	kERI	0.57	136	P	Pb	01 14 55.5	+0.2
KRI1				S	Sn	01 15 04.8	-1.2
	comp=N,700nm,0.2s						
MGNA	Meganis	0.69	32	P	Pb	01 14 56.9	-0.5
MGNA				S	Sg	01 15 06.7	+0.1
VTN	Vitineika	0.70	103	P	Pb	01 14 57.5	-0.1
VTN				S	Sb	01 15 07.2	+0.3
LKD2	Lefkada island	0.76	20	P	Pg	01 14 58.9	+0.1
LKD2				S	Sn	01 15 10.3	-0.5
	comp=N,112nm,0.2s						
LKD2	Lefkada island	0.76	20	P	Pb	01 14 58.3	-0.3
LKD2				S	Sg	01 15 09.2	+0.3
LKD2				AML	AML	01 15 15.7	
	comp=N,198µm,0.3s						
LKD2				AML	AML	01 15 15.8	
	comp=E,256µm,0.2s						
AST1	Astakos	0.76	52	P	Pb	01 14 58.7	+0.1
AST1				S	Sg	01 15 09.8	+0.8
	comp=E,268nm,0.2s						
TSLK	Tsoukalades, L	0.79	19	P	Pg	01 14 59.2	-0.2
TSLK				S	Sn	01 15 11.4	-0.2
	comp=E,185nm,0.4s						
TSLK	Tsoukalades, L	0.79	19	P	Pn	01 14 59.1	-0.1
TSLK				S	Sg	01 15 10.1	+0.2
PDO	Prodromos	0.86	52	P	Pb	01 15 00.2	-0.2
RLS	Riolos of Patr	0.91	91	P	Pg	01 15 01.5	0.0
RLS				S	Sn	01 15 14.8	+0.5
	comp=E,58nm,0.4s						
RLS	Riolos of Patr	0.91	91	P	Pb	01 15 01.2	+0.1
RLS				S	Sb	01 15 13.4	+0.6
RLS				AML	AML	01 15 17.0	
	comp=N,137µm,0.3s						
RLS				AML	AML	01 15 20.6	
	comp=E,94µm,0.5s						
PVO	Paravola	1.09	60	P	Pg	01 15 04.8	-0.3
PVO				S	Sg	01 15 19.6	+0.2
	comp=E,82nm,0.6s						
PVO	Paravola	1.09	60	P	Pb	01 15 04.6	+0.3
DRO	Drossia	1.10	96	P	Pb	01 15 04.9	+0.4
DRO				S	Sg	01 15 20.9	+1.1
	comp=E,128nm,0.2s						
DRO	Drossia	1.10	96	P	Pb	01 15 04.6	+0.1
DRO				S	Sg	01 15 20.0	+0.1
AMT	Artemida-Makis	1.23	116	P	Pb	01 15 07.1	+0.5
TRIZ	Trizonia	1.41	78	P	Pb	01 15 09.8	+0.1
TRIZ				S	Sg	01 15 28.9	-0.6
EVR	Evrytania	1.44	54	P	Pb	01 15 10.3	0.0
KLV	Kalavryta, Ach	1.45	91	P	Pb	01 15 10.8	+0.5
KLV				AML	AML	01 15 34.6	
	comp=N,52µm,0.3s						
KLV				AML	AML	01 15 34.9	
	comp=E,43µm,0.3s						
IGT	Igoumenitsa	1.45	0	P	Pg	01 15 11.1	-0.9
ITM	Ithomi	1.56	125	P	Pg	01 15 13.2	-0.7
KEK	Kerkira	1.68	346	P	Pb	01 15 14.6	+0.3

IDC 19 01:51:33.2±1.4, 24°.15S×66°.79W, h181km±10km, mb3.3/6, mb1 3.6/11, mb1mx3.3/8, mbtmp3.8/11, Error ellipse: s-maj=21.0km s-min=16.5km az=31.0
SJA 19 01:51:33.2±0.8, 24°.17S×66°.94W, h203km±6km, ML3.3, MW3.4
GUC 19 01:51:35.3±0.5, 24°.13S×67°.32W, h227km±7km, ML4.2
ISC 19 01:51:33.6±0.7, 24°.18S±0°.05×66°.99W±0°.04, h192km±7km, n43, σ1.34/66, mb3.4/6, 13C-2D, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.46	112	iP	Pn	01 52 07.6	+1.1
SLA				⇓eS	S	01 52 31.9	+0.1
SLA				IAML		01 52 33.8	
	comp=Z,154nm,0.8s						
AZAP	Zapla	1.76	92	iP	Pn	01 52 09.8	+0.4
AZAP				eS	S	01 52 37.1	+0.1
LVC	Limon Verde	2.36	311	⇓iP	Pn	01 52 16.9	+1.1
LVC				iS	S	01 52 49.3	+0.8
LVC	Limon Verde	2.36	311	P	Pn	01 52 16.9	+1.1
	comp=Z,20nm,0.3s,baz=164,slow=6.7,SNR=383						
LVC				S	S	01 52 49.4	+0.8
	comp=Z,17nm,0.3s,baz=306,slow=20,SNR=18						
LVC	Limon Verde	2.36	311	⇑iP	Pn	01 52 17.0	+1.1
LVC				eS	S	01 52 49.2	+0.6
YJA	Yavi	2.42	35	iP	Pn	01 52 17.6	+0.9
PB15	IPOC Station P	2.47	293	⇑iP	Pn	01 52 18.2	+1.2
PB15				iS	S	01 52 49.9	-0.6
PB15	IPOC Station P	2.47	293	iP	Pn	01 52 18.1	+1.2
PB15				eS	S	01 52 52.1	+1.5
GO02	Mina Guanaco	2.56	247	⇑iP	Pn	01 52 19.4	+1.4
GO02				iS	S	01 52 53.2	+0.8
GO02				IAML		01 52 56.0	
	comp=E,986nm,0.3s						
PB06	IPOC Station P	2.79	301	⇑iP	Pn	01 52 21.6	+1.0
PB06				iS	S	01 52 56.2	-0.8
PB06				IAML		01 52 59.0	
	comp=E,374nm,0.5s						
PB06	IPOC Station P	2.79	301	iP	Pn	01 52 21.6	+1.0
AHML	Horco Molle	2.99	150	iP	Pn	01 52 23.9	+1.1
PB14	IPOC Station P	3.14	261	⇑iP	Pn	01 52 25.9	+1.1
PB14				iS	S	01 53 03.4	-1.3
PB14				IAML		01 53 05.9	
	comp=E,244nm,0.3s						
PB09	IPOC Station P	3.15	318	⇑iP	Pn	01 52 25.9	+1.0
PB09				iS	S	01 53 05.0	+0.2
PB09	IPOC Station P	3.15	318	iP	Pn	01 52 26.0	+1.1
PB05	IPOC Station P	3.23	294	⇑iP	Pn	01 52 26.2	+0.5
PB05				iS	S	01 53 04.5	-1.9
PB05				IAML		01 53 08.7	
	comp=E,143nm,0.4s						
PB05	IPOC Station P	3.23	294	iP	Pn	01 52 26.5	+0.8
PB03	IPOC Station P	3.31	309	iP	Pn	01 52 27.3	+0.5
PB03				iS	S	01 53 06.8	-1.5
PB03				IAML		01 53 08.7	
	comp=E,196nm,0.4s						
PB10	IPOC Station P	3.33	281	⇑iP	Pn	01 52 27.2	+0.4
PB10				iS	S	01 53 06.3	-2.1
PB10				IAML		01 53 09.0	
	comp=E,151nm,0.5s						
PB10	IPOC Station P	3.33	281	iP	Pn	01 52 27.8	+1.0
PB04	IPOC Station P	3.44	302	⇑iP	Pn	01 52 28.6	+0.3
PB04				iS	S	01 53 09.2	-1.9
PB04				IAML		01 53 15.4	
	comp=N,259nm,0.5s						
PB04	IPOC Station P	3.44	302	iP	Pn	01 52 29.0	+0.7
PB07	IPOC Station P	3.62	312	⇑iP	Pn	01 52 30.8	+0.2
PB07				iS	S	01 53 13.4	-1.7
PB07				IAML		01 53 14.9	
	comp=E,178nm,0.3s						
PB01	IPOC Station P	3.88	323	iP	Pn	01 52 33.5	-0.3
PB01				iS	S	01 53 19.6	-1.3
PB01				IAML		01 53 20.1	
	comp=E,204nm,0.3s						
PB02	IPOC Station P	3.91	316	⇑iP	Pn	01 52 33.8	-0.3
PB02				iS	S	01 53 19.6	-1.9
PB02				IAML		01 53 28.1	
	comp=E,155nm,0.2s						
PATCX	Punta Patache	4.44	318	⇑iP	Pn	01 52 40.1	-0.7
PATCX				iS	S	01 53 30.9	-2.6
GO03	Copiap	4.48	220	⇑iP	Pn	01 52 41.1	-0.1
GO03				iS	S	01 53 33.0	-1.3
GO03				IAML		01 53 36.6	
	comp=E,114nm,0.3s						
PB08	IPOC Station P	4.49	333	⇑iP	Pn	01 52 42.1	+0.4
PB08				eS	S	01 53 35.0	-0.2
PB08				IAML		01 53 38.6	
	comp=E,85nm,0.5s						
CFA	Coronel Fontan	7.47	188	P	Pn	01 53 19.8	-0.2
	comp=E,1.8nm,0.3s,baz=26,slow=16,SNR=28						
CFA				S	S	01 54 40.0	-4.5
	comp=E,2.6nm,0.3s,baz=174,slow=17,SNR=16						
CFA	Coronel Fontan	7.47	188	iP	Pn	01 53 19.9	-0.1
LPAZ	La Paz	7.93	352	P	Pn	01 53 26.6	+0.1
	comp=E,0.8nm,0.3s,baz=159,slow=9.1,SNR=20						
LPAZ				S	S	01 54 52.9	-3.3
	comp=E,0.2nm,0.3s,baz=313,slow=21,SNR=7.8						
LPAZ	La Paz	7.93	352	iP	Pn	01 53 26.7	+0.1
SIV	San Ignacio	9.87	35	P	Pn	01 53 49.3	-2.0
	comp=E,0.4nm,0.3s,baz=240,slow=12,SNR=9.5						
BDFB	Brasilia	19.75	68	P	P	01 55 47.9	-1.2
	comp=E,0.4nm,0.3s,baz=230,slow=5.9,SNR=4.6						
TXAR	Lajitas Array	63.83	324	P	P	02 01 47.0	+1.3
	comp=E,0.4nm,0.7s,baz=157,slow=6.8,SNR=5.6						
TORD	Torodi Ar. Bea	76.63	69	P	P	02 03 03.1	-0.4
	comp=E,0.3nm,0.5s,baz=248,slow=5.2,SNR=7.1						
PDAR	Pinedale Array	77.31	329	P	P	02 03 07.9	+0.9
	comp=E,0.2nm,0.5s,baz=140,slow=7.9,SNR=3.5						
ULM	Lac du Bonnet	78.40	342	P	P	02 03 12.6	+0.1
	comp=E,0.7nm,0.4s,baz=155,slow=8.0,SNR=6.9						
NVAR	Mina Array Bea	78.68	321	P	P	02 03 16.8	+2.1
	comp=E,0.3nm,0.4s,baz=127,slow=5.7,SNR=2.1						
YKA	Yellowknife Ar	94.30	340	P	P	02 04 31.7	+1.2
	comp=E,0.5nm,0.5s,baz=134,slow=4.4,SNR=19						
WRA	Warramunga Arr	131.47	207	PKP	PKiKP	02 10 25.5	+0.5
	comp=E,0.2nm,0.4s,baz=159,slow=1.5,SNR=4.8						
ZALV	Zalesovo Beam	143.55	28	PKP	PKPdf	02 10 43.7	-1.3
	comp=E,0.7nm,0.4s,baz=318,slow=5.0,SNR=3.8						
MKAR	Makanchi Array	146.66	40	PKPbc	PKPab	02 10 52.0	-2.1
	comp=E,1.7nm,0.6s,baz=311,slow=1.5,SNR=23						

UCR 19 02:17:11.1±1.6, 9°.36N×84°.70W, h17km±6km, MD3.9, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRA1	San Ramn	0.75	17	eS	Sb	02 17 36.5	+0.5
LCR2	La Lucha 2	0.79	61	eP	Pb	02 17 24.9	-1.6
EDDO	Dominical	0.83	97	eP	Pb	02 17 27.0	-0.1
EDDO				eS	Sg	02 17 38.6	+0.2
HDC	Heredia	0.86	42	eP	Pb	02 17 25.7	-2.0
HDC				eS	Sg	02 17 39.5	+0.2
JTS	Las Juntas de	0.96	345	eP	Pb	02 17 27.6	-1.7
CASO	Castillo	1.07	358	iP	Pb	02 17 30.6	-0.6
ARE1	Arenal 1	1.09	359	eP	Pb	02 17 30.7	-1.0
FORC	Fortuna	1.10	2	iP	Pb	02 17 30.6	-1.1
CVTR	Volcan Turrial	1.14	55	eP	Pb	02 17 32.1	-0.5
GUAI	GUAI	1.21	319	iP	Pn	02 17 32.4	-0.8
AMAS	Alto Masis	1.27	347	iS	Sb	02 17 50.8	-0.2
ACAL	Aguas Claras	1.32	345	iP	Pn	02 17 34.4	-0.4
CUI	Cuipilapa	1.37	341	iP	Pn	02 17 34.9	-0.7
HORNC	Hornillas	1.42	341	iP	Pn	02 17 36.0	-0.3
LIM1	Limonal	1.44	338	iP	Pn	02 17 35.9	-0.6
MESS	Mesas	1.45	341	iP	Pn	02 17 35.7	-1.1
NY14	Universidad de	1.52	327	iP	Pn	02 17 36.9	-0.7
BUEV	Buena Vista	1.59	334	eP	Pn	02 17 38.4	-0.2
GBS3	Finca Las Img	1.59	332	iP	Pn	02 17 38.6	-0.1
ACON	Acoyapa	2.63	350	eP	Pn	02 17 54.7	+1.8

IDC 19 02:19:04.1±2.1, 14°.18S×75°.67W, h65km±19km, mb3.2/3, mb1 3.6/9, mb1mx3.4/35, mbtmp3.7/9, Error ellipse: s-maj=48.0km s-min=17.1km az=50.0
ISC 19 02:19:02.0±1.1, 14°.5S±0°.1×75°.9W±0°.2, h50km, n13, σ2.78/13, mb3.4/3, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.69	340	P	Pn	02 19 41.8	-1.2
	57nm,0.3s,baz=149,slow=12,SNR=62						
NNA				S	Sn	02 20 15.8	+1.4
	247nm,0.3s,baz=224,slow=16,SNR=14						
LPAZ	La Paz	7.68	104	P	Pn	02 20 54.2	+2.3
	0.5nm,0.3s,baz=280,slow=8.8,SNR=13						
ATAH	Atahualpa	7.75	341	P	Pn	02 20 51.1	-1.6
	0.3nm,0.3s,baz=40,slow=7.9,SNR=5.9						
ATAH				S	Sn	02 22 25.5	+6.1
	1.6nm,0.3s,baz=321,slow=20,SNR=3.5						
LVC	Limon Verde	10.40	142	P	Pn	02 21 31.8	+2.9
	0.6nm,0.3s,baz=18,slow=4.9,SNR=7.5						
LVC				S	Sn	02 23 23.4	-0.9
	0.4nm,0.3s,baz=93,slow=19,SNR=3.2						
SIV	San Ignacio	14.37	98	P	Pn	02 22 21.9	-0.8
	0.1nm,0.3s,baz=320,slow=14,SNR=3.2						
CFA	Coronel Fontan	18.38	159	P	Pn	02 23 16.5	+3.1
	0.3nm,0.3s,baz=343,slow=13,SNR=6.9						
TXAR	Lajitas Array	51.20	329	P	P	02 27 60.0	-0.7
	0.2nm,0.5s,baz=157,slow=7.6,SNR=4.3						
TORD	Torodi Ar. Bea	81.57	74	P	P	02 31 13.2	-1.9
	1.0nm,0.9s,baz=261,slow=5.4,SNR=6.7						
YKA	Yellowknife Ar	82.53	343	P	P	02 31 16.8	-2.2
	0.3nm,0.8s,baz=136,slow=5.9,SNR=4.2						
H11N3	WAKE ISLAND Hy	120.05	285	T	T	04 49 24.4	
	baz=99						
H11N2	WAKE ISLAND Hy	120.06	285	T	T	04 49 26.2	
	baz=99						
H11N1	WAKE ISLAND Hy	120.06	285	T	T	04 49 23.7	
	baz=99						
SONM	Songino Array	146.74	357	PKPbc	PKPbc	02 38 38.8	+0.1
	0.3nm,0.5s,baz=345,slow=1.6,SNR=5.9						

IDC 19 02:24:47.3±4.1, 15°.52S×70°.68W, h204km±54km, mb3.3/2, mb1 3.3/5, mb1mx3.0/33, mbtmp3.7/5, Error ellipse: s-maj=72.5km s-min=33.3km az=120.0, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	2.57	108	P	Pn	02 25 33.4	+0.4
	3.6nm,0.3s,baz=292,slow=9.5,SNR=53						
LPAZ				S	S	02 26 08.9	+1.0
	1.6nm,0.3s,baz=200,slow=22,SNR=22						
LVC	Limon Verde	7.25	167	P	Pn	02 26 30.8	-0.4
	1.6nm,0.3s,baz=0.0,slow=12,SNR=14						
LVC				S	S	02 27 48.0	-5.7
	1.0nm,0.3s,baz=169,slow=23,SNR=11						
SIV	San Ignacio	9.27	94	P	Pn	02 26 57.2	0.0
	0.2nm,0.3s,baz=297,slow=14,SNR=3.1						
ULM	Lac du Bonnet	69.14	343	P	P	02 35 30.6	-0.7
	0.9nm,0.4s,baz=180,slow=7.1,SNR=3.0						
YKA	Yellowknife Ar	85.01	341	P	P	02 36 60.0	+0.6
	0.2nm,0.4s,baz=134,slow=5.0,SNR=8.9						

IDC 19 03:02:39.7±2.5, 28°.29N×141°.86E, h0km, mb3.7/3, mb1 3.9/13, mb1mx3.3/34, mbtmp3.7/3, Error ellipse: s-maj=146.5km s-min=22.9km az=74.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	1.22	166	Pn	Pn	03 03 04.2	+0.1
	63nm,0.3s,baz=283,slow=19,SNR=6.0						
JCJ				Sn	Sn	03 03 21.9	+0.6
	243nm,0.3s,baz=108,slow=20,SNR=12						
H11N2	WAKE ISLAND Hy	24.37	105	T	T	03 32 56.7	
	baz=297,slow=75,SNR=26						
H11N1	WAKE ISLAND Hy	24.37	105	T	T	03 32 57.1	
	baz=297,slow=75,SNR=20						
H11N3	WAKE ISLAND Hy	24.39	105	T	T	03 33 02.7	
	baz=297,slow=75,SNR=21						
H11S3	WAKE ISLAND Hy	24.74	108	T	T	03 33 35.3	
	baz=296,SNR=4.2						
H11S1	WAKE ISLAND Hy	24.75	108	T	T	03 33 37.2	
	baz=296						
H11S2	WAKE ISLAND Hy	24.76	108	T	T	03 33 43.4	
	baz=296						
WRA	Warramunga Arr	48.50	189	P	P	03 11 23.5	-0.9
	0.6nm,0.5s,baz=10,slow=8.4,SNR=3.3						
ASAR	Alice Springs	52.22	189	P	P	03 11 53.4	+0.8
	0.3nm,0.8s,baz=13,slow=8.6,SNR=1.7						
FINES	FINESS Array B	76.75	334	P	P	03 14 32.6	-0.1
	2.0nm,1.1s,baz=43,slow=6.3,SNR=1.4						

DNK 19 03:25:53.8±1.5, 51°.39N×15°.39E, h15km±70km, ML1.8, Hypocentre not reviewed by the ISC
VIE 19 03:25:57.9±1.6, 51°.28N×16°.27E, h0km, mb2.1/4, ml2.5/6, Error ellipse: s-maj=19.9km s-min=13.3km az=123.0 55 km WNW of Wroclaw Suspected Mining induced.
ISC 19 03:25:53.8±0.9, 51°.59N±0°.04×16°.24E±0°.03, h0km, n29, σ0.96/60, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.75	177	ePg	Pg	03 26 08.3	+0.2
KSP				iSg	Sg	03 26 17.6	-0.3
CHVC	Chvalec	1.01	187	ePG	Pg	03 26 13.3	+0.2
CHVC				eSG	Sg	03 26 26.1	-0.1
	comp=Z,39nm,0.4s						
OSTC	Ostas	1.04	181	ePG	Pg	03 26 14.0	+0.4
OSTC				eSG	Sg	03 26 27.1	+0.1
	comp=Z,35nm,0.2s						
UPC	Upice	1.09	188	ePG	Pg	03 26 14.5	-0.2
UPC				eSG	Sg	03 26 28.0	-0.9
DPC	Dobruska-Polom	1.24	178	ePG	Pg	03 26 17.2	-0.4
DPC				eSG	Sg	03 26 33.0	-0.7
	comp=Z,38nm,0.2s						
PVCC	Panska Ves	1.50	225	ePG	Pn	03 26 21.7	-0.2
PVCC				eSG	Sg	03 26 40.9	-1.0
	comp=Z,136nm,0.2s						
KRLC	Kraliky	1.56	167	ePG	Pn	03 26 22.5	-0.3
KRLC				eSG	Sg	03 26 42.9	-0.8
	comp=Z,27nm,0.4s						
BRG	Berggiesshubel	1.61	244	PN	Pn	03 26 23.5	0.0
BRG				PG	Pb	03 26 24.1	-0.3
BRG				SG	Sn	03 26 44.8	-0.2
	62nm,0.3s						
PRA	Prague	1.91	218	eSG	Sn	03 26 52.7	+0.5
	comp=Z,12nm,0.6s						
GOPC	GO Pecny, Ondr	1.92	209	ePG	Pb	03 26 29.2	-0.4
PRU	Pruhonice	1.93	215	ePN	Pn	03 26 27.1	-0.8
PRU				ePG	Pb	03 26 29.3	-0.6
PRU				eSG	Sn	03 26 53.6	+0.7
	comp=Z,38nm,0.3s						
MORC	Moravsky Berou	2.00	155	ePN	Pn	03 26 28.6	-0.2
MORC				eSG	Sg	03 26 56.7	-1.2
CLL	Collm	2.05	263	ePn	Pn	03 26 29.0	-0.4
CLL				ePg	Pb	03 26 34.0	+1.0
CLL				eSg	Sb	03 26 59.0	+1.2
	comp=Z,16nm,0.6s						
OKC	Ostrava-Krasne	2.13	145	eSG	Sg	03 27 01.0	-1.3
	comp=Z,14nm,0.4s						
VRAC	Vranov	2.30	174	ePN	Pn	03 26 33.1	+0.2
VRAC				eSG	Sb	03 27 04.9	-0.1
TREC	Trest	2.35	192	ePN	Pn	03 26 33.7	+0.1
TREC				ePG	Pb	03 26 36.9	-0.1
TREC				eSG	Sb	03 27 07.2	+0.7
PBCC	Pribram	2.38	218	eSG	Sb	03 27 07.2	-0.3
KRUC	Moravsky	2.54	178	ePN	Pn	03 26 36.7	+0.5
KRUC				eSG	Sb	03 27 13.3	+1.5
OJC	Ojcow	2.64	120	ePg	Pg	03 26 43.5	-0.8
OJC				eSg	Sg	03 27 19.1	+0.7
NKC	Novy Kostel	2.76	242	ePN	Pn	03 26 39.4	+0.1
NKC				ePG	Pb	03 26 45.4	+1.4
NKC				eSG	Sb	03 27 21.5	-0.9
	comp=Z,33nm,0.3s						
KHC	Kasperske Hory	3.00	216	ePN	Pn	03 26 43.0	+0.5
KHC				ePG	Pb	03 26 48.3	+0.3
KHC				eSN	Sn	03 27 17.1	-2.1
KHC				eSG	Sb	03 27 26.2	+1.1
	comp=Z,9.4nm,0.3s						
SMOL	Smolenice	3.17	166	ePG	Pg	03 26 54.5	-0.1
SMOL				eSG	Sg	03 27 37.2	+1.5
MODS	Modra-Piesok	3.29	168	eSG	Sg	03 27 38.4	-1.0
VYHS	Vyhne	3.52	151	ePN	Pn	03 26 49.6	-0.2
VYHS				ePG	Pg	03 27 02.4	+1.1
VYHS				eSG	Sg	03 27 48.4	+1.5
BSD	Bornholm Skovb	3.62	348	iP	Pn	03 26 51.1	+0.1
BSD				eS	Sn	03 27 32.7	-1.6
BSD	Bornholm Skovb	3.62	348	e		03 26 50.6	
	baz=181,slow=11						
BSD				iP		03 26 51.1	
BSD				eS		03 27 32.7	
BSD				IAML		03 27 42.7	
	comp=Z,1.0nm,0.4s						
CONA	Conrad Observa	3.68	184	ePn	Pn	03 26 52.6	+0.7
	comp=Z,0.5nm,0.2s						
CONA				Sg	Sg	03 27 49.3	-2.5
	comp=Z,5.0nm,0.4s						
MOA	Molln	3.96	200	ePn	Pn	03 26 55.6	-0.1
	comp=Z,1.0nm,0.4s						
MOA				Sg	Sg	03 27 57.9	-3.0
	comp=Z,2.4nm,0.2s						
ARSA	Arzberg	4.37	186	ePn	Pn	03 27 02.9	+1.4
	comp=Z,0.5nm,0.2s						
ARSA				Sg	Sg	03 28 13.8	-0.3
	comp=Z,5.7nm,0.6s						
KBA	Koelnbreinsper	4.90	204	ePn	Pn	03 27 10.0	+1.2
	comp=Z,0.5nm,0.3s						

IDC 19 03:50:04.7±0.8, 4°.16S×142°.93E, h66km±7km, mb3.6/9, mb1 3.9/13, mb1mx3.8/40, mbtmp4.1/13, MS3.2/4, Ms1 3.2/4, ms1mx2.8/28, Error ellipse: s-maj=19.4km

s-min=11.8km az=68.0
NEIC **19** 03:50:05.1±1.8, 4˚.13S±0˚.09×142˚.9E±0˚.1, h89km±5km, mb4.4/13, Error ellipse: s-maj=16.9km s-min=11.1km az=54.0
ISC 19 03:50:03.3±0.6, **4˚.13S**±0˚.06×**142˚.90E**±0˚.08, **h50km**, **n31**, σ1˚61/35, **mb4.2**/13, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.72**	**306**	P	**Pn**	**03 50 46.6**	**+2.1**
	25nm,0.3s,baz=167,slow=9.7,SNR=55						
JAY				S	Sn	03 51 27.5	+11
	49nm,0.3s,baz=83,slow=23,SNR=6.2						
JAY				LR	LR	03 52 08.5	
	comp=Z,231nm,20.0s,baz=226,slow=45						
PMG	**Port Moresby**	**6.73**	**141**	P	**Pn**	**03 51 42.3**	**+2.6**
	7.0nm,0.3s,baz=356,slow=6.2,SNR=6.0						
PMG				S	**Sn**	**03 52 55.5**	**+0.5**
	6.8nm,0.3s,baz=153,slow=22,SNR=7.2						
PMG	**Port Moresby**	**6.73**	**141**		**Pn**	**03 51 42.0**	**+2.3**
PMG					**Sn**	**03 52 55.3**	**+0.3**
COEN	**Coen**	**9.77**	**178**	Pn	**Pn**	**03 52 22.6**	**+1.3**
COEN				Sn	**Sn**	**03 54 09.6**	**-0.1**
SIJI	**Sorong**	**12.07**	**285**	P	**Pn**	**03 52 52.2**	**-0.5**
	1.0nm,0.3s,baz=229,slow=19,SNR=1.9						
WB0	**Warramunga Arr**	**17.62**	**207**	P	**Pn**	**03 54 03.9**	**-1.5**
WB0				IAmb	IAmb	03 54 07.8	
	comp=Z,14nm,0.9s						
WR0	**Warramunga Arr**	**17.72**	**207**	P	**Pn**	**03 54 05.8**	**-0.8**
WR0				IAmb	IAmb	03 54 19.9	
	comp=Z,33nm,0.8s						
WB2	**Warramunga Arr**	**17.79**	**207**	P	**Pn**	**03 54 06.6**	**-0.9**
WB2				IAmb	IAmb	03 54 13.8	
	comp=Z,25nm,0.6s						
WRA	**Warramunga Arr**	**17.80**	**207**	P	**Pn**	**03 54 07.2**	**-0.3**
	comp=Z,1.8nm,0.3s,baz=27,slow=13,SNR=28						
WRA				LR	LR	04 01 30.5	
	comp=Z,78nm,21.2s,baz=15,slow=39						
KNRA	**Kununurra**	**18.03**	**229**	P	**P**	**03 54 09.9**	**-0.4**
ANA2	**Anatahan**	**20.53**	**8**	P	**P**	**03 54 36.3**	**-1.3**
AS31	**Alice Springs**	**21.27**	**203**	P	**P**	**03 54 45.4**	**-0.3**
ASAR	**Alice Springs**	**21.28**	**203**	P	**P**	**03 54 45.1**	**-0.6**
	comp=Z,2.8nm,0.6s,baz=28,slow=12,SNR=26						
ASAR				pP	**pP**	**03 55 00.2**	**+2.8**
	comp=Z,18nm,0.8s,baz=36,slow=12,SNR=21						
ASAR				LR	LR	04 03 39.0	
	comp=Z,104nm,18.5s,baz=20,slow=38						
FITZ	**Fitzroy Crossi**	**21.87**	**229**	P	**P**	**03 54 51.0**	**-1.0**
	comp=Z,2.9nm,0.8s,baz=42,slow=12,SNR=5.3						
FITZ	**Fitzroy Crossi**	**21.87**	**229**	P	**P**	**03 54 50.9**	**-1.2**
STKA	**Stephens Creek**	**27.63**	**182**	P	**P**	**03 55 46.5**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=330,slow=20,SNR=3.4						
NOUC	**Port Laguerre**	**28.87**	**130**	P	**P**	**03 55 56.5**	**-1.0**
NOUC				IAmb	IAmb	03 56 08.8	
	comp=Z,4.1nm,0.7s						
DZM	**Mont Dzumac**	**28.96**	**130**	P	**P**	**03 55 58.3**	**-0.1**
	comp=Z,6.0nm,0.6s,baz=177,slow=21,SNR=15						
NWAO	**Narrogin (SRO)**	**37.37**	**217**	LR	LR	04 13 32.1	
	comp=Z,44nm,19.0s,baz=87,slow=38						
KSRS	**Korea Array**	**43.66**	**343**	P	**P**	**03 58 04.3**	**+1.2**
	comp=Z,1.1nm,0.7s,baz=164,slow=10,SNR=4.8						
THZ	**Tophouse**	**46.08**	**149**	P	**P**	**03 58 20.1**	**-2.4**
THZ				IAmb	IAmb	03 58 37.4	
	comp=Z,7.1nm,1.2s						
BKZ	**Black Stump Fm**	**46.30**	**143**	P	**P**	**03 58 23.4**	**-0.9**
BKZ				IAmb	IAmb	03 58 34.1	
	comp=Z,6.7nm,1.1s						
KHZ	**Kahutara**	**46.87**	**149**	P	**P**	**03 58 25.9**	**-2.7**
KHZ				IAmb	IAmb	03 58 35.9	
	comp=Z,7.9nm,0.9s						
USRK	**Ussuriysk Ar.**	**49.10**	**350**	P	**P**	**03 58 45.3**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=166,slow=4.6,SNR=4.5						
SONM	**Songino Array**	**60.84**	**333**	P	**P**	**04 00 11.4**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=141,slow=9.3,SNR=2.5						
MK31	**Makanchi Array**	**73.48**	**321**	P	**P**	**04 01 28.2**	**-2.5**
MKAR	**Makanchi Array**	**73.48**	**321**	P	**P**	**04 01 30.7**	**0.0**
	comp=Z,0.3nm,0.6s,baz=101,slow=7.5,SNR=5.4						
MKAR				pP	**PcP**	**04 01 49.2**	**+2.5**
	comp=Z,1.4nm,0.7s,baz=102,slow=5.3,SNR=10.0						
ILAR	**Eielson Array**	**85.41**	**24**	P	**P**	**04 02 32.9**	**-2.3**
	comp=Z,0.5nm,0.7s,baz=256,slow=4.8,SNR=11						
ILAR				pP	**pP**	**04 02 51.6**	**+1.9**
	comp=Z,0.6nm,0.6s,baz=261,slow=4.8,SNR=3.8						
OMMB	**Old Mammoth Mi**	**98.92**	**53**	P	P	04 03 35.0	-4.1
DBIC	**Dimbokro**	**147.81**	**276**	PKPbc	**PKPdf**	**04 09 43.1**	**+2.2**
	comp=Z,1.0nm,0.5s,baz=201,slow=4.2,SNR=4.4						
DBIC	**Dimbokro**	**147.81**	**276**	PKPdf	**PKPdf**	**04 09 38.7**	**-2.2**

PAS **19** 04:00:02.8±2.6, 31˚.58N±0˚.03×115˚.50W±0˚.05, h10km±2km, Error ellipse: s-maj=8.1km s-min=3.1km az=241.0
SCEDC **19** 04:00:02.8, 31˚.58N×115˚.50W, h10km
ANF **19** 04:00:02.6±0.8, 31˚.65N×115˚.50W, h3km±4km, ML3.4/20, Error ellipse: s-maj=5.2km s-min=3.1km az=14.0
ECX **19** 04:00:03.6±0.5, 31˚.54N×115˚.48W, h6km±3km, MD3.5, ML3.7, Fault plane solution: NP1:ϕs357.86000°, δ60.00000°, λ-90.00000°.
MEX **19** 04:00:05.2±0.6, 31˚.45N×115˚.50W, h13km±5km, MD4.0
ISC 19 04:00:02.4±1.0, **31˚.56N**±0˚.02×**115˚.50W**±0˚.02, **h6km**±9km, **n77**, σ0˚91/110, **8C-1D**, **Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBX	**El Chinero**	**0.40**	**103**	⇑eP	**Pg**	**04 00 10.6**	**+0.5**
ECBX				eS	**Sg**	**04 00 15.6**	**+0.4**
SPIG	**San Pedro Mart**	**0.52**	**177**	⇑eP	**Pg**	**04 00 12.8**	**+0.4**
SPIG				eS	**Sg**	**04 00 19.6**	**+0.5**
SPIG	**San Pedro Mart**	**0.52**	**177**		**Pg**	**04 00 12.8**	**+0.4**
SPIG					**Sg**	**04 00 18.9**	**-0.2**
SPIG	**San Pedro Mart**	**0.52**	**177**	i P	**Pg**	**04 00 12.8**	**+0.4**
SPIG				i S	**Sg**	**04 00 18.9**	**-0.2**
SPX	**San Pedro Mart**	**0.53**	**177**	⇑eP	**Pg**	**04 00 12.8**	**+0.2**
SPX					IAML	04 00 20.2	
	comp=N,4μm,0.5s						
SPX	**San Pedro Mart**	**0.53**	**177**		**Pg**	**04 00 12.8**	**+0.2**
SPX					**Sg**	**04 00 19.4**	**0.0**
SPX	**San Pedro Mart**	**0.53**	**177**		**Pg**	**04 00 12.5**	**-0.1**
SPX					**Sg**	**04 00 18.3**	**-1.2**
SPX	**San Pedro Mart**	**0.53**	**177**	i P	**Pg**	**04 00 12.5**	**-0.1**
SPX				i S	**Sg**	**04 00 18.3**	**-1.2**
ESJX	**Sierra Juarez**	**0.58**	**319**	⇑eP	**Pg**	**04 00 13.3**	**-0.4**
ESJX				eS	**Sg**	**04 00 21.5**	**+0.2**
ESJX	**Sierra Juarez**	**0.58**	**319**		**Pg**	**04 00 13.3**	**-0.4**
ESJX					**Sg**	**04 00 21.5**	**+0.2**
SVX	**San Vicente**	**0.68**	**250**	⇑eP	**Pg**	**04 00 15.8**	**+0.3**
SVX				eS	**Sg**	**04 00 25.0**	**+0.6**
SFX	**San Felipe**	**0.77**	**133**		**Pg**	**04 00 17.1**	**0.0**
SFX					**Sg**	**04 00 27.2**	**+0.2**
MBIG	**Mexicali**	**0.88**	**17**		**Pn**	**04 00 20.8**	**-0.5**
MBIG					**Sn**	**04 00 33.7**	**-0.8**
MBIG	**Mexicali**	**0.88**	**17**	eP	**Pn**	**04 00 20.8**	**-0.5**
MBIG				eS	**Sn**	**04 00 33.7**	**-0.8**
SQX	**San Quintin**	**1.03**	**198**	⇑eP	**Pg**	**04 00 21.5**	**-0.7**
SQX				eS	**Sg**	**04 00 34.8**	**-0.9**
CCX	**Cicese**	**1.04**	**287**		**Pg**	**04 00 22.3**	**0.0**
ERMX	**Rumorosa**	**1.08**	**336**	⇑eP	**Pg**	**04 00 23.2**	**0.0**
ERMX				eS	**Sb**	**04 00 38.0**	**-0.1**
ERMX				⇓e		04 00 40.0	
ERMX					IAML	04 00 40.0	
	comp=N,887nm,0.2s						
RMX	**La Rumorosa**	**1.15**	**335**		**Pg**	**04 00 23.2**	**-1.2**
IKP	**In-Ko-Pah, Jac**	**1.20**	**335**		**Pg**	**04 00 24.8**	**-0.6**
IKP					**Sb**	**04 00 41.5**	**+0.1**
IKP	**In-Ko-Pah, Jac**	**1.20**	**335**	P	**Pg**	**04 00 24.9**	**-0.6**
	baz=154,SNR=158						
IKP				S	**Sg**	**04 00 40.6**	**-0.4**
	baz=154						
CBX	**Cerro Bola**	**1.24**	**307**	⇑eP	**Pb**	**04 00 26.0**	**-0.3**
CBX				eS	**Sg**	**04 00 42.3**	**0.0**
CBX				e		04 00 43.7	
CBX					IAML	04 00 43.7	
	comp=N,2μm,0.3s						
CBX	**Cerro Bola**	**1.24**	**307**		**Pb**	**04 00 26.0**	**-0.3**
CBX					**Sb**	**04 00 41.0**	**-1.3**
CBX	**Cerro Bola**	**1.24**	**307**	i P	**Pb**	**04 00 26.0**	**-0.3**
CBX				eS	**Sb**	**04 00 41.0**	**-1.3**
TJIG	**Tijuana**	**1.32**	**311**		**Pn**	**04 00 27.0**	**-0.4**
TJIG					**Sb**	**04 00 43.8**	**-1.0**
TJIG	**Tijuana**	**1.32**	**311**	eP	**Pn**	**04 00 27.0**	**-0.4**
TJIG				eS	**Sb**	**04 00 43.8**	**-1.0**
SWSC	**Sam W. Stewart**	**1.40**	**350**	P	**Pn**	**04 00 27.2**	**-1.3**
	baz=170,SNR=49						
BAR	**Barrett**	**1.49**	**319**		**Pn**	**04 00 29.6**	**-0.2**
MONP2	**Monument Peak**	**1.54**	**330**	P	**Pn**	**04 00 30.1**	**-0.5**
	baz=149,SNR=128						
MONP2				S	**Sn**	**04 00 50.9**	**-0.1**
	baz=149						
GLA	**Glamis**	**1.59**	**21**		**Pn**	**04 00 29.7**	**-1.5**
GLA	**Glamis**	**1.59**	**21**	P	**Pn**	**04 00 29.5**	**-1.6**
	baz=201,SNR=66						
GLA				Sg	**Sb**	**04 00 53.0**	**+0.4**
	baz=201						
SDRC	**San Diego Road**	**1.69**	**314**		**Pn**	**04 00 33.0**	**+0.6**
SDRC					**Sn**	**04 00 54.5**	**+0.1**
EML	**El Monte Cty P**	**1.75**	**320**		**Pb**	**04 00 34.0**	**-0.8**
EML					**Sb**	**04 00 56.4**	**-0.6**
DPP	**Dos Picos Cty**	**1.88**	**320**		**Pb**	**04 00 36.5**	**-0.7**
109C	**Camp Elliot, M**	**1.90**	**315**		**Pn**	**04 00 36.0**	**+0.7**
109C	**Camp Elliot, M**	**1.90**	**315**	P	**Pn**	**04 00 35.3**	**0.0**
	baz=134						
109C				S	**Sb**	**04 01 00.7**	**-0.7**
	baz=134						
HWB	**Hans Werner Br**	**1.91**	**320**		**Pb**	**04 00 37.2**	**-0.5**
BC3	**Big Chuckawall**	**2.09**	**1**	P	**Pn**	**04 00 37.0**	**-1.1**
	baz=181						
PLM	**Palomar**	**2.12**	**328**		**Pb**	**04 00 41.7**	**+0.3**
GORC	**Green Oak Ranc**	**2.16**	**318**		**Pb**	**04 00 41.3**	**-0.6**
PFO	**Pinyon Flats O**	**2.20**	**339**		**Pn**	**04 00 39.0**	**-0.6**
PFO	**Pinyon Flats O**	**2.20**	**339**	P	**Pn**	**04 00 38.7**	**-0.8**
	baz=158						
214A	**Organ Pipe Nat**	**2.33**	**80**		**Pn**	**04 00 40.1**	**-1.1**
214A	**Organ Pipe Nat**	**2.33**	**80**	eP	**Pn**	**04 00 39.6**	**-1.6**
214A				i S	**Sn**	**04 01 08.1**	**-2.1**
214A	**Organ Pipe Nat**	**2.33**	**80**	P	**Pn**	**04 00 39.8**	**-1.5**
	baz=261						
Y12C	**Blythe**	**2.33**	**20**		**Pn**	**04 00 42.7**	**+1.4**
Y12C	**Blythe**	**2.33**	**20**	Pg	**Pb**	**04 00 45.9**	**+1.1**
	baz=201						
BELC	**Belle Mtn. Jos**	**2.47**	**350**	P	**Pn**	**04 00 43.0**	**-0.3**
	baz=170						
MURC	**Murrieta**	**2.48**	**325**	Pb	**Pb**	**04 00 46.7**	**-0.8**
	baz=144						
MURC				Sb	**Sb**	**04 01 18.9**	**+0.5**
	baz=144						
HMTC	**Hemet**	**2.49**	**330**		**Pb**	**04 00 48.7**	**+1.2**
IRM	**Iron Mountain**	**2.60**	**7**	P	**Pn**	**04 00 44.8**	**-0.3**
	baz=187,SNR=28						
SCI2	**San Clemente I**	**2.94**	**300**	P	**Pn**	**04 00 50.0**	**+0.3**
	baz=118						
SCI2				S	**Sn**	**04 01 26.4**	**+1.1**
	baz=118						
BBRC	**Big Bear Solar**	**2.94**	**336**	P	**Pn**	**04 00 49.6**	**-0.4**
	baz=156,SNR=14						
CIS	**Catalina Islan**	**3.07**	**307**	P	**Pn**	**04 00 51.4**	**-0.1**
	baz=126						
CIS				Sb	**Sb**	**04 01 36.9**	**+1.8**
	baz=126						
Y14A	**Wickenburg**	**3.17**	**41**		**Pn**	**04 00 52.6**	**-0.3**
BFSC	**Mount Baldy Ra**	**3.23**	**326**	Pb	**Pb**	**04 00 59.2**	**-1.0**
	baz=145						
BFSC				Sb	**Sb**	**04 01 40.7**	**+0.9**
	baz=145						
VTV	**Victorville**	**3.36**	**333**		**Pb**	**04 01 02.1**	**-0.3**
MWC	**Mount Wilson**	**3.42**	**322**		**Pn**	**04 00 58.9**	**+2.5**
DECC	**Green Verdugo**	**3.59**	**319**	Sb	**Sb**	**04 01 51.7**	**+1.6**
	baz=138						
W13A	**Hualapai Mount**	**3.78**	**21**		**Pn**	**04 01 02.1**	**+0.7**
GSC	**Goldstone, Bar**	**3.88**	**344**		**Pn**	**04 01 04.2**	**+1.4**
EDW2	**Edwards Air Fo**	**3.91**	**328**	Sb	**Sb**	**04 02 02.0**	**+2.5**
	baz=147						
TUC	**Tucson**	**4.08**	**78**		**Pn**	**04 01 04.9**	**-0.5**
TUC	**Tucson**	**4.08**	**78**	P	**Pn**	**04 01 04.9**	**-0.5**
	baz=261						
X16A	**Lo Mia Camp, P**	**4.44**	**49**		**Pn**	**04 01 10.9**	**+0.4**
ISA	**Isabella, Lake**	**4.78**	**330**	Pn	**Pn**	**04 01 17.4**	**+2.4**
WUAZ	**Wupatki**	**5.24**	**40**		**Pn**	**04 01 22.5**	**+1.0**
WUAZ	**Wupatki**	**5.24**	**40**	P	**Pn**	**04 01 22.4**	**+1.0**
	baz=222						
319A	**Douglas**	**5.32**	**90**		**Pn**	**04 01 23.2**	**+0.7**
TPNV	**Topopah Spring**	**5.41**	**354**	Pn	**Pn**	**04 01 25.0**	**+1.2**
X18A	**Snowflake**	**5.52**	**56**		**Pn**	**04 01 26.2**	**+0.9**
U15A	**North Rim**	**5.54**	**28**		**Pn**	**04 01 26.4**	**+0.8**
LCMT	**Little Creek M**	**5.75**	**18**		**Pn**	**04 01 29.3**	**+0.9**
KNB	**Kanab**	**5.87**	**21**		**Pn**	**04 01 31.6**	**+1.4**
W18A	**Petrified Fore**	**5.99**	**52**	P	**Pn**	**04 01 32.6**	**+0.9**
	baz=235						
CCUT	**Cedar City**	**6.23**	**16**		**Pn**	**04 01 36.4**	**+1.3**
121A	**Cookes Peak, D**	**6.62**	**80**		**Pn**	**04 01 41.2**	**+0.7**
121A				Sn	**Sn**	**04 02 55.7**	**-0.7**
121A	**Cookes Peak, D**	**6.62**	**80**	P	**Pn**	**04 01 41.1**	**+0.7**
	baz=264						

ANF **19** 04:09:15.8±0.7, 31˚.69N×115˚.39W, h13km±4km, ML3.3/20, Error ellipse: s-maj=8.1km s-min=2.2km az=23.0
ECX **19** 04:09:15.9±0.5, 31˚.53N×115˚.49W, h12km±4km, MD3.3, ML3.5, Fault plane solution: NP1:ϕs30.00000°, δ90.00000°, λ0.00000°.
SCEDC **19** 04:09:15.1, 31˚.57N×115˚.52W, h10km
PAS **19** 04:09:15.1±2.3, 31˚.57N±0˚.03×115˚.52W±0˚.04, h10km±2km, Error ellipse: s-maj=6.3km s-min=3.1km az=234.0
MEX **19** 04:09:16.9±0.4, 31˚.49N×115˚.46W, h5km±9km, MD3.8
ISC 19 04:09:14.3±1.0, **31˚.57N**±0˚.02×**115˚.46W**±0˚.02, **h10km**±9km, **n89**, σ1˚09/122, **8C-9D**, **Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBX	**El Chinero**	**0.36**	**105**	⇑eP	**Pb**	**04 09 22.9**	**0.0**
ECBX				eS	**Sb**	**04 09 28.3**	**-0.3**
SPIG	**San Pedro Mart**	**0.52**	**180**	⇑eP	**Pg**	**04 09 24.9**	**+0.6**
SPIG				eS	**Sg**	**04 09 31.7**	**+0.4**
SPIG	**San Pedro Mart**	**0.52**	**180**		**Pg**	**04 09 25.0**	**+0.6**
SPIG					**Sg**	**04 09 31.7**	**+0.4**
SPIG	**San Pedro Mart**	**0.52**	**180**	i P	**Pg**	**04 09 25.0**	**+0.6**
SPIG				i S	**Sg**	**04 09 31.7**	**+0.4**
SPX	**San Pedro Mart**	**0.53**	**180**	⇑eP	**Pg**	**04 09 25.0**	**+0.4**
SPX				eS	**Sg**	**04 09 31.8**	**+0.2**
SPX	**San Pedro Mart**	**0.53**	**180**		**Pg**	**04 09 25.0**	**+0.4**
SPX					**Sg**	**04 09 31.8**	**+0.2**
SPX	**San Pedro Mart**	**0.53**	**180**		**Pg**	**04 09 25.0**	**+0.4**
SPX					**Sg**	**04 09 31.6**	**0.0**
SPX	**San Pedro Mart**	**0.53**	**180**	i P	**Pg**	**04 09 25.0**	**+0.4**
SPX				i S	**Sg**	**04 09 31.6**	**0.0**
ESJX	**Sierra Juarez**	**0.60**	**317**	⇓eP	**Pg**	**04 09 25.5**	**-0.5**
ESJX				eS	**Sg**	**04 09 33.7**	**-0.2**
ESJX					IAML	04 09 33.9	
	comp=N,4μm,0.1s						
ESJX				⇓e		04 09 33.9	
ESJX	**Sierra Juarez**	**0.60**	**317**		**Pg**	**04 09 25.5**	**-0.5**
ESJX					**Sg**	**04 09 33.6**	**-0.3**
SVX	**San Vicente**	**0.71**	**251**	⇑eP	**Pg**	**04 09 28.0**	**-0.1**
SVX				eS	**Sg**	**04 09 37.0**	**-0.4**
SFX	**San Felipe**	**0.74**	**135**	⇓eP	**Pb**	**04 09 29.6**	**+0.3**
SFX				eS	**Sb**	**04 09 39.7**	**+0.2**
SFX	**San Felipe**	**0.74**	**135**		**Pb**	**04 09 29.5**	**+0.2**
SFX					**Sb**	**04 09 39.5**	**0.0**
CPBX	**Cerro Prieto**	**0.86**	**9**	⇓eP	**Pb**	**04 09 31.6**	**+0.2**
CPBX	**Cerro Prieto**	**0.86**	**9**		**Pb**	**04 09 31.3**	**-0.1**
MBIG	**Mexicali**	**0.87**	**15**		**Pn**	**04 09 32.9**	**+0.3**
MBIG					**Sn**	**04 09 45.3**	**-0.1**
MBIG	**Mexicali**	**0.87**	**15**	eP	**Pn**	**04 09 32.9**	**+0.3**
MBIG				i S	**Sn**	**04 09 45.3**	**-0.1**
SQX	**San Quintin**	**1.05**	**200**	⇑eP	**Pg**	**04 09 33.7**	**-0.7**
SQX				eS	**Sg**	**04 09 47.0**	**-1.0**
SQX				⇓e		04 09 48.5	
SQX					IAML	04 09 48.5	
	comp=N,2μm,0.4s						
UABX	**UABC, Campus M**	**1.06**	**1**	⇓eP	**Pn**	**04 09 35.5**	**+0.2**
UABX	**UABC, Campus M**	**1.06**	**1**		**Sn**	**04 09 50.8**	**+0.6**
CCX	**Cicese**	**1.07**	**287**	⇑eP	**Pg**	**04 09 34.5**	**-0.3**
CCX				eS	**Sg**	**04 09 48.4**	**-0.3**
CCX	**Cicese**	**1.07**	**287**		**Pg**	**04 09 34.5**	**-0.3**
CCX					**Sg**	**04 09 48.1**	**-0.6**
ERMX	**Rumorosa**	**1.10**	**334**	⇓eP	**Pb**	**04 09 35.5**	**0.0**
ERMX				eS	**Sb**	**04 09 50.1**	**+0.2**
ERMX				⇓e		04 09 56.2	
ERMX					IAML	04 09 56.2	
	comp=E,757nm,0.4s						
ERMX					IAML	04 09 56.6	
	comp=N,715nm,0.4s						
ERMX				⇑e		04 09 56.6	
RMX	**La Rumorosa**	**1.16**	**333**		**Pg**	**04 09 35.3**	**-1.2**
WESC	**Westside Schoo**	**1.21**	**349**		**Pn**	**04 09 38.6**	**+1.3**
IKP	**In-Ko-Pah, Jac**	**1.21**	**333**	⇓eP	**Pg**	**04 09 37.2**	**-0.3**
IKP	**In-Ko-Pah, Jac**	**1.21**	**333**		**Pb**	**04 09 37.1**	**-0.3**
IKP	**In-Ko-Pah, Jac**	**1.21**	**333**	P	**Pb**	**04 09 37.0**	**-0.4**
	baz=155						
IKP				S	**Sg**	**04 09 53.0**	**-0.3**
	baz=155						
CBX	**Cerro Bola**	**1.26**	**306**	⇑eP	**Pn**	**04 09 38.3**	**+0.1**
CBX				eS	**Sb**	**04 09 54.8**	**+0.1**
CBX					IAML	04 09 55.4	
	comp=E,1μm,0.1s						
CBX	**Cerro Bola**	**1.26**	**306**		**Pn**	**04 09 38.2**	**+0.1**
CBX	**Cerro Bola**	**1.26**	**306**		**Pn**	**04 09 38.3**	**+0.1**
CBX					**Sb**	**04 09 54.9**	**+0.2**
CBX	**Cerro Bola**	**1.26**	**306**	eP	**Pn**	**04 09 38.3**	**+0.1**
CBX				i S	**Sb**	**04 09 54.9**	**+0.2**
COK2	**Cook Ranch 2**	**1.30**	**350**		**Pg**	**04 09 40.8**	**+1.5**
TJIG	**Tijuana**	**1.34**	**310**		**Pn**	**04 09 39.2**	**0.0**
TJIG					**Sb**	**04 09 56.2**	**-0.7**
TJIG	**Tijuana**	**1.34**	**310**	eP	**Pn**	**04 09 39.2**	**0.0**
TJIG				i S	**Sb**	**04 09 56.2**	**-0.7**
CRR	**Carrizo Plain**	**1.39**	**342**		**Pg**	**04 09 41.4**	**+0.5**
TKX	**Tecate**	**1.40**	**316**	eP	**Pn**	**04 09 40.0**	**+0.1**
TKX				eS	**Sb**	**04 09 58.1**	**-0.2**
TKX	**Tecate**	**1.40**	**316**		**Pb**	**04 09 40.8**	**+0.3**
SWSC	**Sam W. Stewart**	**1.41**	**348**	P	**Pn**	**04 09 39.4**	**-0.6**
	baz=170						
CBKC	**Canebrake**	**1.49**	**334**		**Pg**	**04 09 43.0**	**+0.2**
BAR	**Barrett**	**1.51**	**318**		**Pn**	**04 09 41.9**	**+0.4**
MONP2	**Monument Peak**	**1.55**	**329**		**Pn**	**04 09 42.7**	**+0.5**
MONP2	**Monument Peak**	**1.55**	**329**	P	**Pn**	**04 09 42.3**	**+0.1**
	baz=150						
MONP2				S	**Sn**	**04 10 02.6**	**0.0**
	baz=150						
GLA	**Glamis**	**1.58**	**20**		**Pg**	**04 09 44.3**	**-0.3**
GLA	**Glamis**	**1.58**	**20**	P	**Pn**	**04 09 41.8**	**-0.6**
	baz=202,SNR=40						
GLA				S	**Sn**	**04 10 01.4**	**-1.5**
	baz=202						
OLP	**Otay Lakes Par**	**1.62**	**310**		**Pb**	**04 09 44.3**	**0.0**
SDRC	**San Diego Road**	**1.71**	**313**		**Pb**	**04 09 45.9**	**0.0**
EML	**El Monte Cty P**	**1.77**	**319**		**Pb**	**04 09 46.4**	**-0.4**
113A	**Mohawk Valley,**	**1.87**	**50**		**Pn**	**04 09 46.3**	**-0.1**
DPP	**Dos Picos Cty**	**1.90**	**319**		**Pb**	**04 09 48.8**	**-0.3**
109C	**Camp Elliot, M**	**1.92**	**314**		**Pb**	**04 09 48.4**	**-0.9**
109C	**Camp Elliot, M**	**1.92**	**314**	P	**Pn**	**04 09 47.8**	**+0.8**
	baz=134						
109C				S	**Sb**	**04 10 12.7**	**-0.7**
	baz=134						
HWB	**Hans Werner Br**	**1.93**	**319**		**Pb**	**04 09 49.7**	**+0.1**
BC3	**Big Chuckawall**	**2.08**	**0**	P	**Pn**	**04 09 49.0**	**-0.5**
	baz=182						
HAY	**Hayfield**	**2.14**	**355**		**Pg**	**04 09 56.1**	**+0.7**
BZNA	**Buzz No.'s Pla**	**2.17**	**332**		**Pg**	**04 09 55.9**	**-0.1**
PFO	**Pinyon Flats O**	**2.21**	**338**		**Pn**	**04 09 52.6**	**+1.4**
PFO	**Pinyon Flats O**	**2.21**	**338**	Pg	**Pg**	**04 09 55.8**	**-0.8**
	baz=158						
214A	**Organ Pipe Nat**	**2.29**	**80**		**Pn**	**04 09 52.0**	**-0.3**
214A	**Organ Pipe Nat**	**2.29**	**80**	P	**Pn**	**04 09 51.9**	**-0.3**
	baz=261						
214A				S	**Sn**	**04 10 19.9**	**-0.7**
	baz=261						
Y12C	**Blythe**	**2.32**	**20**		**Pn**	**04 09 54.2**	**+1.6**
BELC	**Belle Mtn. Jos**	**2.47**	**350**	P	**Pn**	**04 09 55.1**	**+0.3**
	baz=170						
MURC	**Murrieta**	**2.50**	**325**	Sb	**Sb**	**04 10 31.0**	**+0.8**
	baz=145						
SCI2	**San Clemente I**	**2.97**	**299**	S	**Sn**	**04 10 39.0**	**+1.8**
	baz=118						
CIS	**Catalina Islan**	**3.10**	**307**	Sb	**Sg**	**04 10 50.9**	**-2.8**
	baz=126						
Y14A	**Wickenburg**	**3.15**	**41**		**Pn**	**04 10 04.9**	**+1.0**
BFSC	**Mount Baldy Ra**	**3.24**	**326**	Pb	**Pb**	**04 10 13.1**	**+1.1**
	baz=146						
BFSC				Sb	**Sb**	**04 10 53.8**	**+2.1**
	baz=146						
MWC	**Mount Wilson**	**3.43**	**321**	Pn	**Pn**	**04 10 08.4**	**+0.4**
PASC	**Pasadena Art C**	**3.46**	**319**		**Sb**	**04 10 59.6**	**+1.6**
RRX	**Edison Barstow**	**3.54**	**339**	S	**Sn**	**04 10 51.8**	**+0.4**
	baz=159						
W13A	**Hualapai Mount**	**3.76**	**20**	Pn	**Pn**	**04 10 14.4**	**+1.8**
GSC	**Goldstone, Bar**	**3.89**	**344**	Pn	**Pn**	**04 10 16.5**	**+2.2**
EDW2	**Edwards Air Fo**	**3.93**	**328**	Sb	**Sb**	**04 11 14.3**	**+3.0**
	baz=147						
BLG	**Laguna Peak, P**	**3.95**	**311**	Sb	**Sb**	**04 11 15.0**	**+3.0**
	baz=129						
TUC	**Tucson**	**4.05**	**78**		**Pn**	**04 10 16.1**	**-0.3**
TUC	**Tucson**	**4.05**	**78**	P	**Pn**	**04 10 16.0**	**-0.3**
	baz=261						
TUC				S	**Sn**	**04 11 03.1**	**-0.8**
	baz=261						
OSI	**Osito Audit: C**	**4.09**	**319**	Sb	**Sb**	**04 11 19.6**	**+3.6**
	baz=138						
X16A	**Lo Mia Camp, P**	**4.42**	**49**		**Pn**	**04 10 22.6**	**+1.0**
ARVC	**Arvin**	**4.53**	**322**	Sb	**Sb**	**04 11 33.2**	**+4.5**
	baz=141						
ISA	**Isabella, Lake**	**4.80**	**329**	Pn	**Pn**	**04 10 28.2**	**+1.5**
WUAZ	**Wupatki**	**5.21**	**40**		**Pn**	**04 10 34.2**	**+1.7**
WUAZ	**Wupatki**	**5.21**	**40**	P	**Pn**	**04 10 34.7**	**+2.1**
	baz=222						
U15A	**North Rim**	**5.52**	**28**		**Pn**	**04 10 39.0**	**+2.1**
KNB	**Kanab**	**5.86**	**21**		**Pn**	**04 10 43.1**	**+1.6**
W18A	**Petrified Fore**	**5.96**	**52**	P	**Pn**	**04 10 44.4**	**+1.6**
	baz=235						
121A	**Cookes Peak, D**	**6.59**	**80**		**Pn**	**04 10 52.7**	**+1.2**
121A					Lg	04 12 52.0	
121A	**Cookes Peak, D**	**6.59**	**80**	P	**Pn**	**04 10 53.0**	**+1.5**
	baz=264						
YHB	**Horse Butte**	**13.58**	**13**		**Pn**	**04 12 26.7**	**-0.5**
F10A	**Beach Ranch, E**	**14.45**	**355**		**Pn**	**04 12 36.3**	**-2.6**
F10A					**Sn**	**04 15 19.3**	**0.0**

PAS **19** 04:12:50.0±1.9, 31˚.57N±0˚.02×115˚.50W±0˚.03, h10km±2km, Error ellipse: s-maj=4.8km s-min=3.0km az=234.0
ANF **19** 04:12:50.7±1.0, 31˚.76N×115˚.36W, h4km±5km, ML3.2/17, Error ellipse: s-maj=9.2km s-min=3.5km az=38.0
SCEDC **19** 04:12:50.0, 31˚.57N×115˚.50W, h10km
ECX **19** 04:12:51.0±0.5, 31˚.53N×115˚.50W, h11km±5km, MD3.1, ML3.3, Fault plane solution: NP1:ϕs123.23000°, δ75.52000°, λ-26.57000°.
MEX **19** 04:12:52.4±0.3, 31˚.45N×115˚.46W, h11km±2km, MD3.9
ISC 19 04:12:49.3±1.0, **31˚.56N**±0˚.02×**115˚.47W**±0˚.03, **h6km**±10km, **n70**, σ0˚91/100, **5C**, **Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBX	**El Chinero**	**0.36**	**104**	⇑eP	**Pb**	**04 12 57.8**	**-0.3**
ECBX				eS	**Sb**	**04 13 03.3**	**-0.8**
SPIG	**San Pedro Mart**	**0.52**	**180**	⇑eP	**Pg**	**04 12 59.9**	**+0.6**
SPIG				eS	**Sg**	**04 13 06.9**	**+0.8**
SPIG	**San Pedro Mart**	**0.52**	**180**		**Pg**	**04 12 60.0**	**+0.6**
SPIG					**Sg**	**04 13 05.9**	**-0.2**
SPIG	**San Pedro Mart**	**0.52**	**180**	eP	**Pg**	**04 12 60.0**	**+0.6**
SPIG				i S	**Sg**	**04 13 05.9**	**-0.2**
SPX	**San Pedro Mart**	**0.53**	**180**	⇑eP	**Pg**	**04 12 59.9**	**+0.4**
SPX				eS	**Sg**	**04 13 06.8**	**+0.4**
SPX	**San Pedro Mart**	**0.53**	**180**		**Pg**	**04 12 59.9**	**+0.4**
SPX					**Sg**	**04 13 06.8**	**+0.4**
SPX	**San Pedro Mart**	**0.53**	**180**		**Pg**	**04 12 59.9**	**+0.4**
SPX					**Sg**	**04 13 05.6**	**-0.8**
SPX	**San Pedro Mart**	**0.53**	**180**	eP	**Pg**	**04 12 59.9**	**+0.4**
SPX				eS	**Sg**	**04 13 05.6**	**-0.8**
ESJX	**Sierra Juarez**	**0.60**	**317**	eP	**Pg**	**04 13 00.6**	**-0.3**
ESJX				eS	**Sg**	**04 13 08.8**	**0.0**
ESJX	**Sierra Juarez**	**0.60**	**317**		**Pg**	**04 13 00.7**	**-0.3**
ESJX					**Sg**	**04 13 08.8**	**0.0**
SVX	**San Vicente**	**0.71**	**251**	⇑eP	**Pg**	**04 13 03.0**	**0.0**
SVX				eS	**Sg**	**04 13 11.9**	**-0.3**
SFX	**San Felipe**	**0.74**	**135**	eP	**Pb**	**04 13 04.3**	**-0.3**
SFX				eS	**Sb**	**04 13 14.4**	**-0.5**
SFX	**San Felipe**	**0.74**	**135**		**Pb**	**04 13 04.3**	**-0.3**
SFX					**Sb**	**04 13 14.3**	**-0.6**
CPBX	**Cerro Prieto**	**0.86**	**9**	eP	**Pb**	**04 13 06.6**	**-0.1**
CPBX	**Cerro Prieto**	**0.86**	**9**		**Pb**	**04 13 06.7**	**-0.1**
CPBX					**Sn**	**04 13 19.8**	**-1.1**
MBIG	**Mexicali**	**0.87**	**15**		**Pn**	**04 13 08.3**	**+0.3**
MBIG					**Sn**	**04 13 20.3**	**-0.7**
MBIG	**Mexicali**	**0.87**	**15**	i P	**Pn**	**04 13 08.3**	**+0.3**
MBIG				eS	**Sn**	**04 13 20.3**	**-0.7**
SQX	**San Quintin**	**1.05**	**200**	eP	**Pg**	**04 13 08.6**	**-0.8**
SQX				eS	**Sg**	**04 13 21.9**	**-1.0**
CCX	**Cicese**	**1.07**	**287**	eP	**Pg**	**04 13 09.3**	**-0.5**
CCX				eS	**Sg**	**04 13 23.5**	**-0.2**
CCX	**Cicese**	**1.07**	**287**		**Pg**	**04 13 09.6**	**-0.1**

ERMX	Rumorosa	1.10	334	eP	Pb	04 13 10.5	-0.2
ERMX				eS	Sb	04 13 25.3	0.0
ERMX					IAML	04 13 27.2	
	comp=E,581nm,0.1s						
ERMX				⇑e		04 13 27.2	
RMX	La Rumorosa	1.16	333		Pg	04 13 10.5	-1.0
IKP	In-Ko-Pah, Jac	1.21	333		Pb	04 13 12.2	-0.5
IKP	In-Ko-Pah, Jac	1.21	333	P	Pb	04 13 11.9	-0.8
	baz=154,SNR=38						
IKP				Sb	Sg	04 13 28.2	-0.2
	baz=154						
WESC	Westside Schoo	1.21	349		Pg	04 13 14.3	+1.7
CBX	Cerro Bola	1.26	307	eP	Pg	04 13 13.4	-0.1
CBX				eS	Sg	04 13 29.9	-0.2
CBX					IAML	04 13 30.3	
	comp=E,1μm,0.2s						
CBX	Cerro Bola	1.26	307		Pg	04 13 13.4	-0.1
CBX	Cerro Bola	1.26	307		Pg	04 13 13.5	-0.1
CBX					Sg	04 13 29.8	-0.2
CBX	Cerro Bola	1.26	307	eP	Pg	04 13 13.5	-0.1
CBX				eS	Sg	04 13 29.8	-0.2
TJIG	Tijuana	1.34	310		Pn	04 13 14.4	-0.2
TJIG					Sb	04 13 31.7	-0.7
TJIG	Tijuana	1.34	310	eP	Pn	04 13 14.4	-0.2
TJIG				iS	Sb	04 13 31.7	-0.7
CRR	Carrizo Plain	1.39	342		Pg	04 13 16.6	+0.7
TKX	Tecate	1.40	316	eP	Pn	04 13 14.9	-0.4
TKX				eS	Sb	04 13 33.4	-0.4
SWSC	Sam W. Stewart	1.41	348	P	Pn	04 13 14.5	-0.9
	baz=169						
SWSC				S	Sb	04 13 32.0	-2.2
	baz=169						
CBKC	Canebrake	1.49	334		Pg	04 13 18.2	+0.3
BAR	Barrett	1.51	318		Pb	04 13 17.2	-0.6
MONP2	Monument Peak	1.55	329		Pg	04 13 18.9	-0.2
MONP2	Monument Peak	1.55	329	P	Pb	04 13 18.4	-0.2
	baz=149						
MONP2				S	Sb	04 13 38.1	-0.4
	baz=149						
GLA	Glamis	1.58	20		Pb	04 13 18.5	-0.4
GLA	Glamis	1.58	20	P	Pn	04 13 17.1	-0.8
	baz=201,SNR=20						
OLP	Otay Lakes Par	1.62	310		Pb	04 13 19.5	-0.1
EML	El Monte Cty P	1.77	319		Pg	04 13 22.6	-0.6
113A	Mohawk Valley,	1.88	50		Pn	04 13 21.6	-0.3
BORC	Borrego Spring	1.88	335		Pb	04 13 24.1	0.0
DPP	Dos Picos Cty	1.90	319		Pb	04 13 24.8	+0.4
109C	Camp Elliot, M	1.92	314		Pn	04 13 22.9	+0.5
109C	Camp Elliot, M	1.92	314	P	Pb	04 13 23.6	-1.0
	baz=134						
109C				S	Sb	04 13 47.9	-0.9
	baz=134						
BC3	Big Chuckawall	2.09	0	P	Pn	04 13 24.5	-0.4
	baz=181,SNR=10						
PFO	Pinyon Flats O	2.21	338	Pn	Pn	04 13 25.6	-1.0
PFO	Pinyon Flats O	2.21	338	P	Pn	04 13 25.6	-1.0
	baz=158						
PFO				Sg	Sg	04 13 59.2	-1.0
	baz=158						
214A	Organ Pipe Nat	2.29	79		Pn	04 13 27.4	-0.3
214A	Organ Pipe Nat	2.29	79	P	Pn	04 13 27.1	-0.6
	baz=261						
Y12C	Blythe	2.32	20		Pn	04 13 29.1	+1.1
Y12C	Blythe	2.32	20	Sg	Sg	04 14 02.2	-1.7
	baz=201						
MURC	Murrieta	2.50	325	Sb	Sb	04 14 06.5	+0.8
	baz=144						
BBRC	Big Bear Solar	2.96	336	S	Sn	04 14 13.5	+0.6
	baz=156						
Y14A	Wickenburg	3.15	41		Pn	04 13 39.3	-0.1
BFSC	Mount Baldy Ra	3.24	326	Sb	Sb	04 14 27.6	+0.4
	baz=145						
MWC	Mount Wilson	3.43	321	Pn	Pn	04 13 44.2	+0.7
W13A	Hualapai Mount	3.77	20	Pn	Pn	04 13 48.5	+0.4
GSC	Goldstone, Bar	3.89	344	Pn	Pn	04 13 51.0	+1.3
EDW2	Edwards Air Fo	3.93	328	Sb	Sb	04 14 49.0	+2.2
	baz=147						
BLG	Laguna Peak, P	3.95	311	Sb	Sb	04 14 50.7	+3.3
	baz=129						
TUC	Tucson	4.05	78	P	Pn	04 13 52.0	+0.1
	baz=261						
X16A	Lo Mia Camp, P	4.42	49		Pn	04 13 58.2	+1.1
ARVC	Arvin	4.53	323	Sb	Sb	04 15 07.9	+3.7
	baz=141						
WUAZ	Wupatki	5.22	40	P	Pn	04 14 09.4	+1.4
	baz=222						
U15A	North Rim	5.52	28	Pn	Pn	04 14 14.7	+2.4
W18A	Petrified Fore	5.96	52	Pn	Pn	04 14 19.7	+1.4
121A	Cookes Peak, D	6.59	80	P	Pn	04 14 28.1	+1.2
	baz=264						

GCG 19 04:15:25.8±0.5, 13°.87N×91°.04W, h84km±37km, MD3.8
SNET 19 04:15:29.0±0.5, 14°.02N×90°.95W, h63km±24km, ML3.5
UCR 19 04:15:29.5±0.7, 14°.05N×90°.90W, h70km±25km, ML3.4
ISC 19 04:15:27.0±2.0, 13°.9N±0°.1×91°.12W±0°.09, h73km, n26, σ0s.44/31, 2C-2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	Fuego 3	0.65	24	eP	Pn	04 15 41.7	-0.2
IXG	Ixpaco	0.73	64	⇑eP	Pn	04 15 41.8	-0.9
ERG	Entre ros, C	0.73	323	eP	Pn	04 15 42.5	0.0
PCG	Pacaya	0.73	43	eP	Pn	04 15 42.8	0.0
STG3	Santiaguito 3,	0.96	333	eP	Pn	04 15 45.5	+0.1
NBG	Las Nubes	1.05	45	⇑eP	Pn	04 15 47.9	+1.3
NBG				eS	Sn	04 16 01.5	+0.4
RTR	El Retiro	1.43	88	eP	Pn	04 15 51.8	+0.4
RTR	El Retiro	1.43	88	eP	Pn	04 15 51.8	+0.4
CEVE	Cerro Verde	1.45	91	eP	Pn	04 15 51.8	+0.1
CEVE				eS	Sn	04 16 10.1	-0.2
CEVE	Cerro Verde	1.45	91	eP	Pn	04 15 51.8	+0.1
CEVE				eS	Sn	04 16 10.1	-0.2
SBLS	San Blas	1.45	90	eP	Pn	04 15 51.7	0.0
SBLS				eS	Sn	04 16 09.7	-0.6
SBLS	San Blas	1.45	90	eP	Pn	04 15 51.7	0.0
SBLS				eS	Sn	04 16 09.7	-0.6
SNJE	San Jose	1.47	89	eP	Pn	04 15 52.0	+0.1
SNJE	San Jose	1.47	89	eP	Pn	04 15 52.0	+0.1
BOQS	Boqueron	1.79	93	eP	Pn	04 15 56.5	+0.4
MTO3	Montecristo	1.79	72	⇓eP	Pn	04 15 55.7	-0.4
MTO3	Montecristo	1.79	72	⇓eP	Pn	04 15 55.7	-0.4
SNET	Serv Nac Est T	1.84	95	eP	Pn	04 15 56.9	+0.2
SNET					IAML	04 16 27.3	
	comp=Z,496nm,0.3s						
SNET	Serv Nac Est T	1.84	95	eP	Pn	04 15 56.9	+0.2
SNET					IAML	04 16 27.3	
	comp=Z,496nm,0.3s						
LFRS	El Faro	2.01	96	eP	Pn	04 15 59.4	+0.3
PAVA	Las Pavas	2.12	93	eP	Pn	04 16 00.6	+0.1
PAVA	Las Pavas	2.12	93	eP	Pn	04 16 00.6	+0.1
COEG	Centro de Oper	2.19	96	eP	Pn	04 16 01.8	+0.4
COEG	Centro de Oper	2.19	96	eP	Pn	04 16 01.8	+0.4
COEB	Comit de Eme	2.54	98	eP	Pn	04 16 06.7	+0.5
COEB	Comit de Eme	2.54	98	eP	Pn	04 16 06.7	+0.5

IDC 19 04:22:12.2±6.8, 21°.98S×176°.02W, h29km±47km, mb4.1/12, mb1 4.3/15, mb1mx4.1/36, mbtmp4.3/15, ML4.0/3, MS2.8/4, Ms1 2.8/4, ms1mx2.6/38, Error ellipse: s-maj=25.7km s-min=15.9km az=136.0
NEIC 19 04:22:12.0±1.7, 22°.04S±0°.10×175°.96W±0°.09, h30km±3km, mb4.5/25, Error ellipse: s-maj=14.6km s-min=11.7km az=157.0
ISC 19 04:22:12.6±0.5, 22°.15S±0°.08×175°.89W±0°.08, h35km, n74, σ1s.57/62, mb4.5/22, MS3.0/4, 1D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	6.37	62		Pn	04 23 43.8	-0.2
NIUE					Sn	04 24 45.7	-10
MSVF	Nonsavu	7.20	307		Pn	04 24 01.9	+6.5
AFI	Afiamalu	9.08	26	Pn	Pn	04 24 19.2	-2.1
	3.9nm,0.3s,baz=134,slow=7.9,SNR=4.6						
AFI				Sn	Sn	04 25 48.3	-14
	6.6nm,0.3s,baz=207,slow=22,SNR=2.2						
AFI				LR	LR	04 27 21.4	
	comp=Z,41nm,18.2s,baz=124,slow=34						
AFI	Afiamalu	9.08	26		Pn	04 24 20.3	-0.9
RAR	Rarotonga	15.01	89	Pn	Pn	04 25 42.4	+0.2
	0.8nm,0.3s,baz=266,slow=15,SNR=2.3						
RAR				Sn	Sn	04 28 14.6	-13
	1.7nm,0.3s,baz=102,slow=15,SNR=2.6						
RAR				LR	LR	04 31 13.3	
	comp=Z,27nm,19.6s,baz=264,slow=36						
RAR	Rarotonga	15.01	89		Pn	04 25 42.4	+0.2
DZM	Mont Dzumac	16.37	267	Pn	P	04 26 07.9	+5.4
	0.9nm,0.3s,baz=85,slow=16,SNR=14						
NOUC	Port Laguerre	16.50	267	P	Pn	04 25 59.4	-2.1
URZ	Urewera	17.14	199	P	P	04 26 10.7	0.0
	2.1nm,0.3s,baz=277,slow=1.3,SNR=12						
URZ				S	Sn	04 29 11.4	-7.5
	1.1nm,0.3s,baz=183,slow=21,SNR=6.1						
URZ	Urewera	17.14	199	P	P	04 26 11.2	+0.4
SANVU	Saraoutou	17.33	290		Pn	04 26 09.9	-1.9
SANVU				IAmb	IAmb	04 26 23.0	
	comp=Z,52nm,0.8s						
BKZ	Black Stump Fm	18.17	199	P	P	04 26 21.9	-0.2
MSWZ	Moikau Station	20.61	199	P	P	04 26 47.9	-0.8
QRZ	Quartz Range	21.04	205	P	P	04 26 54.4	+1.1
QRZ				IAmb	IAmb	04 27 02.0	
	comp=Z,22nm,1.1s						
THZ	Tophouse	21.70	203	P	P	04 27 01.1	+0.5
THZ				IAmb	IAmb	04 27 10.9	
	comp=Z,7.9nm,0.6s						
KHZ	Kahutara	22.06	201	P	P	04 27 05.0	+0.7
KHZ				IAmb	IAmb	04 27 13.8	
	comp=Z,10nm,0.9s						
LTZ	Lake Taylor	22.82	203	P	P	04 27 14.4	+2.0
LTZ				IAmb	IAmb	04 27 20.9	
	comp=Z,10nm,0.6s						
RPZ	Rata Peaks	24.07	204	P	P	04 27 25.4	+0.8
	comp=Z,8.1nm,0.5s,baz=360,slow=3.2,SNR=9.7						
RPZ	Rata Peaks	24.07	204	P	P	04 27 25.5	+0.8
RPZ				IAmb	IAmb	04 27 30.9	
	comp=Z,9.4nm,0.6s						
TBI	Tubuai	24.39	98	eLR	LR	04 33 14.9	
	comp=Z,136nm,35.2s						
TBI	Tubuai	24.39	98	eT	T	04 51 44.8	
	comp=Z,12nm,0.4s						
PAE	Paea	25.12	84	eT	T	04 52 42.3	
	comp=Z,21nm,0.3s						
PPT2	Papeete2	25.14	84	eLR	LR	04 33 47.0	
	comp=Z,75nm,28.8s						
PPT2	Papeete2	25.14	84	eT	T	04 52 44.4	
	comp=Z,24nm,0.4s						
PPT	Papeete	25.15	84	LR	LR	04 35 40.6	
	comp=Z,18nm,21.9s,baz=260,slow=32						
HNR	Honiara	26.42	295	LR	LR	04 37 10.3	
	comp=Z,46nm,20.4s,baz=281,slow=34						
MEH	Mehetia	26.47	86	eT	T	04 54 22.7	
	comp=Z,25nm,0.3s						
ARMA	Armidale	30.18	247	P	P	04 28 18.9	-0.9
ARMA				IAmb	IAmb	04 28 37.7	
	comp=Z,11nm,1.1s						
EIDS	Eidsvold	30.36	257	P	P	04 28 23.2	+1.9
EIDS				IAmb	IAmb	04 28 24.7	
	comp=Z,4.8nm,0.7s						
TOO	Toolangi	36.57	236	P	P	04 29 15.2	-0.1
TOO				IAmb	IAmb	04 29 30.3	
	comp=Z,7.6nm,1.1s						
STKA	Stephens Creek	38.89	246	P	P	04 29 35.3	+0.4
	comp=Z,4.6nm,0.5s,baz=90,slow=10.0,SNR=15						
STKA	Stephens Creek	38.89	246	P	P	04 29 36.0	+1.1
COEN	Coen	39.66	275	P	P	04 29 42.4	+0.9
COEN				IAmb	IAmb	04 29 43.0	
	comp=Z,14nm,1.1s						
BBOO	Buckleboo	43.61	245	P	P	04 30 13.8	+0.2
AS31	Alice Springs	46.08	258	P	P	04 30 34.2	+0.8
AS31				IAmb	IAmb	04 30 36.7	
	comp=Z,2.5nm,0.7s						
ASAR	Alice Springs	46.08	258	P	P	04 30 33.9	+0.4
	comp=Z,11nm,0.8s,baz=94,slow=7.8,SNR=54						
ASAR				PcP	PcP	04 32 09.9	+0.4
	comp=Z,1.0nm,0.6s,baz=104,slow=3.7,SNR=3.9						
WR0	Warramunga Arr	46.15	263	P	P	04 30 33.7	-0.4
WR0				IAmb	IAmb	04 30 42.1	
	comp=Z,5.8nm,1.1s						
WB0	Warramunga Arr	46.33	263	P	P	04 30 35.2	-0.2
WRA	Warramunga Arr	46.34	263	P	P	04 30 35.1	-0.5
	comp=Z,4.2nm,0.6s,baz=101,slow=8.7,SNR=15						
FORT	Forrest	50.47	248	P	P	04 31 07.3	0.0
KNRA	Kununurra	52.52	267	P	P	04 31 22.4	-0.3
FITZ	Fitzroy Crossi	54.77	263	P	P	04 31 39.4	+0.2
QSPA	South Pole Qui	67.93	180	P	P	04 33 09.3	+1.7
QSPA				IAmb	IAmb	04 33 14.6	
	comp=Z,4.3nm,1.1s						
MJAR	Matsushiro Arr	72.70	323	P	P	04 33 36.1	-0.9
	comp=Z,2.3nm,0.5s,baz=139,slow=6.1,SNR=6.3						
JKA	Kamikawa-asahi	76.12	331	P	P	04 33 56.6	-0.1
ASAJ	Asahikawa	76.12	331	P	P	04 33 56.6	-0.1
	comp=Z,5.4nm,0.6s,baz=124,slow=7.3,SNR=3.1						
MAW	Mawson	80.67	199	P	P	04 34 22.7	+1.2
	comp=Z,4.2nm,0.6s,baz=135,slow=7.1,SNR=3.7						
MAW	Mawson	80.67	199	P	P	04 34 22.8	+1.2
NVAR	Mina Array Bea	80.89	42	P	P	04 34 24.7	+1.3
	comp=Z,0.5nm,0.6s,baz=223,slow=8.0,SNR=6.2						
SYO	Syowa Base	85.54	192	⇓eX	P	04 34 41.0	-5.7
TXAR	Lajitas Array	86.31	56	P	P	04 34 52.6	+1.3
	comp=Z,0.6nm,0.7s,baz=218,slow=8.0,SNR=8.0						
PDAR	Pinedale Array	88.83	42	P	P	04 35 04.2	+0.9
	comp=Z,0.2nm,0.6s,baz=232,slow=8.7,SNR=2.3						
ILAR	Eielson Array	89.50	12	P	P	04 35 04.8	-0.7
	comp=Z,0.3nm,0.5s,baz=210,slow=5.3,SNR=9.0						
YKA	Yellowknife Ar	97.19	24	P	Pdif	04 35 40.8	-0.3
	comp=Z,0.1nm,0.5s,baz=242,slow=4.3,SNR=3.5						
MKAR	Makanchi Array	113.76	313	PKiKP	PKiKP	04 40 46.2	-1.2
	comp=Z,0.3nm,0.4s,baz=100,slow=0.3,SNR=7.5						
ARU	Arti	127.67	325	PKP	PKPdf	04 41 13.2	-0.6
	comp=Z,2.0nm,0.2s,baz=214,slow=3.2,SNR=3.2						
ARCES	ARCESS Array B	130.88	350	PKP	PKPdf	04 41 18.3	-1.2
	comp=Z,1.3nm,0.6s,baz=354,slow=2.7,SNR=3.8						
FINES	FINESS Array B	137.89	344	PKP	PKiKP	04 41 33.8	-1.1
	comp=Z,0.8nm,0.6s,baz=27,slow=4.7,SNR=4.6						
HFS	Hagfors	141.45	352	PKhKP	PKPpre	04 41 30.8	
	comp=Z,0.7nm,0.4s,baz=140,slow=4.8,SNR=4.4						
H10N3	ASCENSION HYDR	145.05	146	T	T	07 24 30.4	
	baz=206,slow=75,SNR=4.2						
H10N1	ASCENSION HYDR	145.06	147	T	T	07 24 29.3	
	baz=206,slow=75,SNR=5.2						
H10N2	ASCENSION HYDR	145.07	147	T	T	07 24 29.5	
	baz=206,slow=75,SNR=4.2						
AKASG	Malin Array Be	145.40	332	PKPbc	PKPbc	04 41 45.4	-1.1
	comp=Z,6.1nm,0.5s,baz=41,slow=4.4,SNR=44						
EKA	Eskdalemuir Ar	146.42	8	PKPbc	PKPab	04 41 50.0	-0.5
	comp=Z,1.2nm,0.7s,baz=348,slow=3.2,SNR=3.1						
ASF	Jabal al Asfar	149.27	296	PKPbc	PKPbc	04 41 58.3	-0.9
	comp=Z,1.2nm,0.4s,baz=76,slow=4.2,SNR=3.2						
BRTR	Keskin Array B	149.40	312	PKPbc	PKPbc	04 41 57.7	-0.6
	comp=Z,1.4nm,0.6s,baz=124,slow=3.9,SNR=9.1						
CLL	Collm	150.09	349	ePKPbc	PKiKP	04 42 00.0	-0.2
BRG	Berggiesshubel	150.32	347	ePKP	PKiKP	04 42 00.3	-0.4
	comp=Z,6.4nm,1.1s						
MMAI	Mount Meron Ar	150.33	298	PKPbc	PKPbc	04 41 59.1	-1.5
	comp=Z,3.1nm,0.5s,baz=86,slow=5.9,SNR=7.7						
MLR	Muntele Rosu	150.67	328	PKPbc	PKPbc	04 41 59.9	-1.2
	comp=Z,1.8nm,0.6s,baz=268,slow=4.1,SNR=5.6						
MLR	Muntele Rosu	150.67	328		PKPbc	04 42 00.3	-0.8
KHC	Kasperske Hory	152.05	347	ePKP	PKiKP	04 42 03.5	-0.9
GERES	GERESS Array B	152.29	346	PKPbc	PKPbc	04 42 04.4	-0.6
	comp=Z,1.1nm,0.8s,baz=2.5,slow=2.3,SNR=7.1						
TORD	Torodi Ar. Bea	170.75	165	PKP	PKPdf	04 42 16.6	-1.3
	comp=Z,0.4nm,0.9s,baz=158,slow=4.2,SNR=2.6						
TORD				PKPab	PKPab	04 43 37.7	+2.1
	comp=Z,0.3nm,0.7s,baz=178,slow=4.1,SNR=5.0						

AEIC 19 04:40:02±2.0, 64°.77N±0°.02×140°.60W±0°.05, h14km±4km, Error ellipse: s-maj=3.8km s-min=2.4km az=47.0
PGC 19 04:40:03.3±0.0, 64°.74N×140°.69W, h1km, ML3.2/12, 97km Wnw of Dawson, Yt Southern Yukon Territory, Canada
ISC 19 04:40:02.1±1.0, 64°.78N±0°.03×140°.57W±0°.03, h14km±7km, n81, σ2s.56/126, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGAK	Eagle	0.25	270		Pg	04 40 08.2	+0.7
EGAK					Sg	04 40 11.5	+0.3
DAWY	Dawson	0.88	144	P	Pg	04 40 19.6	+0.5
DAWY				S	Sg	04 40 30.9	+0.2
DAWY	Dawson	0.88	144		Pg	04 40 19.6	+0.5
DAWY					Sg	04 40 30.9	+0.2
SCRK	Sand Creek	1.69	243		Pb	04 40 33.1	+0.1
SCRK					Sn	04 40 53.8	+1.2
BC03		1.80	198		Pn	04 40 34.4	+1.7
DOT	Dot Lake	1.90	235	Pn	Pb	04 40 36.4	-0.1
DOT				Sg	Sb	04 40 59.8	-0.3
DOT	Dot Lake	1.90	235	Pn	Pb	04 40 36.4	-0.1
DOT					Sb	04 40 59.8	-0.3
RIDG	Independent Ri	2.14	243		Pb	04 40 39.7	-0.9
RIDG					Sb	04 41 07.3	+0.4
PRP	Porcupine Dome	2.22	292		Pn	04 40 39.7	+1.2
EPYK	Eagle Plains	2.26	43		Pn	04 40 40.2	+1.2
EPYK					Sn	04 41 09.8	+3.1
EPYK	Eagle Plains	2.26	43	P	Pn	04 40 41.4	+2.3
	baz=227						
MENT	Mentasta	2.31	218		Pn	04 40 40.7	+1.0
BVCY	Beaver Creek	2.38	183	Pn	Pn	04 40 41.8	+1.2
BVCY				Pg	Pb	04 40 46.3	+1.6
BVCY				Sn	Sn	04 41 10.8	+1.2
BVCY				Sg	Sb	04 41 15.3	+1.5
BVCY	Beaver Creek	2.38	183		Pn	04 40 42.0	+1.4
FYU	Fort Yukon	2.63	315		Sn	04 41 18.5	+2.7
FYU	Fort Yukon	2.63	315	Pn	Pn	04 40 45.3	+1.2
YUK1	Sand Pete Hill	2.64	180	Pn	Pn	04 40 46.3	+2.0
YUK1				Pg	Pb	04 40 50.5	+1.4
YUK1				Sg	Sb	04 41 23.6	+2.3
YUK1	Sand Pete Hill	2.64	180		Pn	04 40 46.5	+2.3
PS10	TAPS Pump St10	2.66	242		Pn	04 40 47.2	+2.8
PS08	TAPS Pump Stn8	2.70	268		Pn	04 40 46.3	+1.4
IL31		2.70	273		Pn	04 40 45.6	+0.6
HDA	Harding Lake	2.77	265	Pn	Pn	04 40 48.6	+2.6
HDA	Harding Lake	2.77	265	Pb	Pb	04 40 52.8	+1.5
	baz=80						
PAX	Paxson	2.83	232	Sg	Sb	04 41 27.6	+0.9
PAX	Paxson	2.83	232		Pn	04 40 48.3	+1.5
PAX	Paxson	2.83	232	Sg	Sb	04 41 27.6	+0.9
POKR	Poker Plat Res	2.94	280		Pn	04 40 50.5	+2.2
POKR	Poker Plat Res	2.94	280	Pb	Pb	04 40 55.3	+1.2
	baz=94						
YUK2	White River	3.01	182	Pn	Pn	04 40 50.6	+1.3
YUK2				Sg	Sb	04 41 34.7	+2.8
YUK2	White River	3.01	182	Pn	Pn	04 40 50.6	+1.3
YUK2				Sg	Sb	04 41 34.7	+2.8
YUK3	Moose Creek	3.02	179	Pn	Pn	04 40 51.2	+1.6
YUK3				Sg	Sb	04 41 35.9	+3.5
YUK3	Moose Creek	3.02	179		Pn	04 40 51.4	+1.8
CCB	Clear Creek Bu	3.11	271		Pn	04 40 51.6	+1.0
COLA	College	3.11	275		Pn	04 40 52.5	+1.9
BM03	Burnt Mountain	3.12	330		Pn	04 40 52.6	+1.8
WRH	Wood River Hil	3.25	268		Pn	04 40 52.6	+0.1
MDM	Murphy Dome	3.27	277		Pn	04 40 53.1	+0.2
DHY	Denali Highway	3.46	243		Pn	04 40 56.6	+1.1
YUK4	Talbot Arm	3.56	165	Pn	Pn	04 40 57.9	+0.9
YUK4				Sg	Sb	04 41 50.1	+2.3
YUK4	Talbot Arm	3.56	165	Pn	Pn	04 40 57.9	+0.9
YUK4				Sg	Sb	04 41 50.1	+2.3
MCARA	McCarthy VSAT	3.58	199	Pn	Pn	04 40 58.8	+1.6
MCARA				Sg	Sb	04 41 51.4	+2.9
NEA	Nenana	3.66	271		Sb	04 41 53.5	+2.9
PTPK	Patty Peak	3.71	194	Pn	Pn	04 41 00.9	+1.9
PTPK				Sg	Sg	04 41 58.0	-3.0
PTPK	Patty Peak	3.71	194	Pn	Pn	04 41 00.9	+1.9
PTPK				Sg	Sg	04 41 58.0	-3.0
BARN	Barnard Glacie	3.77	188		Pn	04 41 01.4	+1.6
MCK	McKinley	3.80	258	Pn	Pn	04 41 02.0	+2.0
MCK					Pg	04 41 13.3	-1.4
VRDI	Verde Repeater	3.80	202		Pn	04 41 01.2	+1.0
BALM	Baldy	3.84	193	Pn	Pn	04 41 02.9	+2.1
BALM				Sg	Sg	04 42 01.0	-4.4
BALM	Baldy	3.84	193	Pn	Pn	04 41 02.9	+2.1
BALM				Sg	Sg	04 42 01.0	-4.4
CTGM	Chitina Glacie	3.84	186	Pn	Pn	04 41 03.2	+2.4
CTGM				Sg	Sb	04 42 00.5	+4.4
CTGM	Chitina Glacie	3.84	186	Pn	Pn	04 41 03.2	+2.4
CTGM				Sg	Sb	04 42 00.5	+4.4
YUK5	Granite Creek	3.87	160	Pn	Pn	04 41 02.8	+1.6
YUK5				Sg	Sb	04 42 00.8	+4.2
YUK5	Granite Creek	3.87	160		Pn	04 41 02.9	+1.8
RND	Reindeer	3.89	253		Pn	04 41 02.7	+1.3
KIAG	Kiagna River	3.96	193	Pn	Pn	04 41 04.2	+1.8
KIAG				Sg	Sb	04 42 04.2	+4.9
KIAG	Kiagna River	3.96	193	Pn	Pn	04 41 04.2	+1.8
KIAG				Sg	Sb	04 42 04.2	+4.9
YUK6	Outpost Mounta	3.98	164	Pn	Pn	04 41 05.0	+2.2
YUK6				Sg	Sg	04 42 05.6	-4.2
YUK6	Outpost Mounta	3.98	164	Pn	Pn	04 41 05.0	+2.2
YUK6				Sg	Sg	04 42 05.6	-4.2
WAT1	Susitna Watana	4.04	245		Pn	04 41 05.0	+1.6
TGL	Tana Glacier	4.17	195		Pn	04 41 07.6	+2.3
HYT	Haines Junctio	4.21	159	Pn	Pn	04 41 08.0	+2.1
HYT				Sg	Sg	04 42 13.2	-3.9
HYT	Haines Junctio	4.21	159		Pn	04 41 07.9	+2.1
HYT	Haines Junctio	4.21	159	Pn	Pn	04 41 08.0	+2.1
HYT				Sg	Sg	04 42 13.2	-3.9
MLY	Manley	4.34	278	Pn	Pn	04 41 08.6	+1.1
YUK7	Dusty Glacier	4.41	164	Pn	Pn	04 41 11.0	+2.3
YUK7				Sg	Sg	04 42 18.8	-4.7
YUK7	Dusty Glacier	4.41	164	Pn	Pn	04 41 11.0	+2.3
YUK7				Sg	Sg	04 42 18.8	-4.7
INK	Inuvik	4.53	35	Pn	Pn	04 41 12.4	+2.4
INK				Sn	Sn	04 42 03.0	+0.8
INK	Inuvik	4.53	35	Pn	Pn	04 41 12.4	+2.4
BPAW	Bear Paw Mtn.	4.56	266		Pn	04 41 11.1	+0.5
COLD	Coldfoot	4.63	306	Pn	Pn	04 41 13.0	+1.5
COLD				Sn	Sn	04 42 05.4	+0.3
COLD				Sg	Sg	04 42 25.8	-4.9
COLD	Coldfoot	4.63	306	Pn	Pn	04 41 13.0	+1.5
COLD				Sn	Sn	04 42 05.4	+0.3
COLD				Sg	Sg	04 42 25.8	-4.9
WHY	Whitehorse	4.89	145	Pn	Pn	04 41 16.5	+1.3
WHY				Sg	Sg	04 42 34.7	-4.3
WHY	Whitehorse	4.89	145	Pn	Pn	04 41 16.5	+1.3
WHY				Sg	Sg	04 42 34.7	-4.3
TOLK	Toolik Lake Re	5.27	321		Pn	04 41 22.9	+2.6
TOLK	Toolik Lake Re	5.27	321	P	Pn	04 41 23.6	+3.3
	baz=134						
PLBC	Pleasant Camp	5.69	158	Sg	Sg	04 42 59.2	-5.4
PLBC	Pleasant Camp	5.69	158	Sg	Sg	04 42 59.2	-5.4
C36M	Paulatuk	7.89	47	P	Pn	04 41 56.4	+0.3
	baz=242						
DHRN	Dharma Camp	8.89	66	Pn	Pn	04 42 09.4	-0.5
DHRN				Sn	Sn	04 43 45.0	-4.7
DHRN	Dharma Camp	8.89	66	Pn	Pn	04 42 09.4	-0.5
DHRN				Sn	Sn	04 43 45.0	-4.7
YKW3	Yellowknife Ar	11.70	89	Pn	Pn	04 42 49.3	+1.0
YKW3				Sn	Sn	04 44 52.5	-6.0

MOS 19 04:44:17.6±1.2, 48°.66N×156°.53E, h40km, mb3.9/5, Error ellipse: s-maj=18.1km s-min=4.2km az=74.3
KRSC 19 04:44:27.2±1.5, 48°.85N×156°.40E, h30km±20km, ML4.3
IDC 19 04:44:27.9±5.0, 48°.94N×154°.95E, h64km±45km, mb3.4/16, mb1 3.7/18, mb1mx3.5/50, mbtmp3.8/18, ML3.2/2, Error ellipse: s-maj=23.2km s-min=14.5km az=134.0
ISC 19 04:44:24.7±0.6, 48°.80N±0°.08×155°.26E±0°.08, h35km, n87, σ2s.75/96, mb3.7/19, 6C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.97	16	eP	Pn	04 44 57.1	+1.6
SKR				eS	Sn	04 45 20.4	+1.5
SKR	Severo-Kuril's	1.97	16	ePN	Pn	04 44 58.6	+3.1
SKR				pmax	pmax		
	comp=Z,98nm,0.7s						
ALID	Alaid	2.08	5	eP	Pn	04 45 00.0	+2.8
ALID	Alaid	2.08	5	PN	Pn	04 45 00.0	+2.8
PAU	Pauzhetka	2.85	20	eP	Pn	04 45 10.7	+3.0
PAU				eS	Sn	04 45 43.3	+2.6
PAU	Pauzhetka	2.85	20	PN	Pn	04 45 10.7	+3.0
ASAK	Asacha	3.96	24	eP	Pn	04 45 26.5	+3.5
ASAK				eS	Sn	04 46 09.0	+0.7
ASAK	Asacha	3.96	24	PN	Pn	04 45 26.5	+3.5
MTVR	Mutnovka	4.13	26	eP	Pn	04 45 28.7	+3.3
MTVR	Mutnovka	4.13	26	PN	Pn	04 45 28.7	+3.3
GRL	Gorelyy	4.16	24	eP	Pn	04 45 29.5	+3.7
GRL				eS	Sn	04 46 15.2	+2.0
GRL	Gorelyy	4.16	24	PN	Pn	04 45 29.5	+3.7
RUS	Russkaya	4.19	28	eP	Pn	04 45 28.0	+2.0
RUS				eS	Sn	04 46 14.1	+0.5
RUS	Russkaya	4.19	28	PN	Pn	04 45 28.0	+2.0
APC	Apacha	4.30	15	eP	Pn	04 45 32.3	+4.7
APC	Apacha	4.30	15	PN	Pn	04 45 32.3	+4.7
KRMR	Karymshinskiy	4.43	23	eP	Pn	04 45 32.4	+3.1
KRMR				eS	Sn	04 46 21.0	+1.4
KRMR	Karymshinskiy	4.43	23	PN	Pn	04 45 32.4	+3.1
PEA0B	Petropavlovsk-	4.58	19	dePN	Pn	04 45 36.0	+4.6
PETK	Petropavlovsk-	4.58	19	P	Pn	04 45 36.2	+4.7

comp=Z,3.2nm,0.3s,baz=171,slow=14,SNR=23
PETK S Sn 04 46 34.8 +11
comp=Z,0.4nm,0.3s,baz=215,slow=9.3,SNR=2.8
PET Petropavlovsk 4.75 26 ePN Pn 04 45 37.1 +3.5
PET pmax pmax
comp=Z,24nm,0.9s
DALK Dalny 4.78 26 eP Pn 04 45 36.9 +2.8
DALK eS Sn 04 46 28.8 +0.6
DALK Dalny 4.78 26 PN Pn 04 45 36.9 +2.8
UGLR Uglovaya 4.96 26 eP Pn 04 45 40.5 +3.8
UGLR Uglovaya 4.96 26 PN Pn 04 45 40.5 +3.8
KOK Koryaka 4.98 24 eP Pn 04 45 41.5 +4.5
KOK Koryaka 4.98 24 PN Pn 04 45 41.5 +4.5
AVH Avacha 4.98 25 eP Pn 04 45 41.0 +4.0
AVH Avacha 4.98 25 PN Pn 04 45 41.0 +4.0
SMAR Somma 5.00 25 eP Pn 04 45 41.1 +3.8
SMAR Somma 5.00 25 PN Pn 04 45 41.1 +3.8
KRER Koryakskii 5.02 25 eP Pn 04 45 40.6 +3.0
KRER Koryakskii 5.02 25 PN Pn 04 45 40.6 +3.0
SDLR Sedlovina 5.04 26 eP Pn 04 45 40.8 +3.0
SDLR eS Sn 04 46 35.1 +0.4
SDLR Sedlovina 5.04 26 PN Pn 04 45 40.8 +3.0
KRX Arik 5.04 24 eP Pn 04 45 41.6 +3.7
KRX Arik 5.04 24 PN Pn 04 45 41.6 +3.7
NLC Nalytchevo 5.08 29 eP Pn 04 45 40.3 +2.0
NLC eS Sn 04 46 34.1 -1.5
NLC Nalytchevo 5.08 29 PN Pn 04 45 40.3 +2.0
SPN Mys Shipunski 5.25 33 eP Pn 04 45 42.5 +1.9
SPN Mys Shipunski 5.25 33 PN Pn 04 45 42.5 +1.9
KZV Kizimen 7.05 24 eP Pn 04 46 09.2 +3.8
KZV Kizimen 7.05 24 PN Pn 04 46 09.2 +3.8
TUMR Tumrok 7.16 23 eP Pn 04 46 10.8 +3.9
TUMR Tumrok 7.16 23 PN Pn 04 46 10.8 +3.9
KMNR Kamenistaya 7.61 22 eP Pn 04 46 17.7 +4.7
KMNR Kamenistaya 7.61 22 PN Pn 04 46 17.7 +4.7
KBTR Krutoberegovo 8.73 29 eP Pn 04 46 30.3 +2.0
KBTR eS Sn 04 48 02.5 -2.9
KBTR Krutoberegovo 8.73 29 PN Pn 04 46 30.3 +2.0
ASAJ Asahikawa 9.91 247 P Pn 04 46 48.5 +4.0
comp=Z,2.4nm,0.3s,baz=71,slow=17,SNR=14
ASAJ S Sn 04 48 24.8 -10
comp=Z,1.6nm,0.3s,baz=0.0,slow=17,SNR=2.0
SEY Seymchan 14.26 355 P Pn 04 47 43.9 +0.1
comp=Z,0.8nm,0.3s,baz=165,slow=20,SNR=3.5
KLR Kul'dur 15.42 280 P P 04 48 04.0 +0.3
comp=Z,0.3nm,0.3s,baz=81,slow=9.5,SNR=9.9
KLR Kul'dur 15.42 280⇓eP Pn 04 48 01.1 +1.7
USRK Ussuriysk Ar. 16.65 263 P Pn 04 48 13.9 -1.2
baz=56,slow=13,SNR=2.5
MAJO Matsushiro 17.48 232⇑eP P 04 48 29.5 +3.0
YAK Yakutsk 19.48 322⇑eP P 04 48 46.8 -1.4
BILL Bilibino 20.08 12⇓iP P 04 48 54.8 +0.1
BILL pmax pmax
comp=Z,4.0nm,1.3s
KSRS Korea Array 22.82 250 P P 04 49 24.9 +0.5
comp=Z,1.6nm,0.7s,baz=48,slow=9.9,SNR=6.2
KSRS Korea Array 22.82 250 eP P 04 49 25.7 +1.3
KSRS pmax pmax
comp=Z,2.0nm,0.7s
TJN Taejon 23.85 249⇑eP P 04 49 34.2 -0.3
TIXI Tiksi 25.95 341⇑eP P 04 49 51.7 -1.6
TIXI pmax pmax
comp=Z,3.0nm,1.4s
H11S1 WAKE ISLAND Hy 31.60 159 T T 05 24 19.0
baz=346,slow=76,SNR=636
H11S3 WAKE ISLAND Hy 31.61 159 T T 05 24 24.4
baz=346,slow=76,SNR=678
H11S2 WAKE ISLAND Hy 31.62 159 T T 05 24 27.0
baz=346,slow=76,SNR=543
ILAR Eielson Array 34.05 40 P P 04 51 05.4 +0.3
comp=Z,0.5nm,0.8s,baz=278,slow=11,SNR=6.4
ILAR pP sP 04 51 18.6 -0.5
comp=Z,0.4nm,0.6s,baz=255,slow=5.4,SNR=8.6
ILAR Eielson Array 34.05 40 eP P 04 51 05.9 +0.9
ILAR pmax pmax
comp=Z,1.0nm,1.0s
NRIK Noril'sk 37.78 328⇑eP P 04 51 33.6 -3.3
MKAR Makanchi Array 47.30 297 P P 04 52 52.3 -2.2
comp=Z,0.2nm,0.4s,baz=66,slow=8.7,SNR=3.7
MKAR Makanchi Array 47.30 297 eP P 04 52 52.6 -1.9
KURK Kurchatov 47.45 303⇑eP P 04 52 51.7 -3.9
KURK pmax pmax
comp=Z,5.0nm,1.7s
YKA Yellowknife Ar 48.42 38 P P 04 53 03.3 +0.5
comp=Z,0.9nm,0.9s,baz=299,slow=7.4,SNR=11
YKA pP sP 04 53 17.2 0.0
comp=Z,0.6nm,0.8s,baz=299,slow=7.7,SNR=6.2
BRVK Borovoye 50.72 309⇓eP P 04 53 19.9 -0.7
BRVK pmax pmax
comp=Z,1.0nm,1.3s
CMAR Chiang Mai Arr 54.26 257 P P 04 53 47.0 -0.2
comp=Z,1.4nm,0.3s,baz=34,slow=7.3,SNR=4.6
CMAR Chiang Mai Arr 54.26 257 eP P 04 53 48.2 +1.0
CMAR pmax pmax
comp=Z,1.0nm,0.3s
NVAR Mina Array Bea 60.22 65 P P 04 54 30.2 +0.8
comp=Z,0.2nm,0.5s,baz=288,slow=6.3,SNR=2.2
FINES FINESS Array B 62.80 335 P P 04 54 44.0 -2.0
comp=Z,1.1nm,0.9s,baz=32,slow=8.4,SNR=5.7
NOA NORSAR Array B 66.75 342 P P 04 55 09.9 -2.0
comp=Z,0.7nm,0.9s,baz=26,slow=6.4,SNR=2.7
AKASG Malin Array Be 70.64 327 P P 04 55 34.8 -1.3
comp=Z,0.1nm,0.3s,baz=32,slow=6.3,SNR=3.0
SCHQ Schefferville 70.85 24 P P 04 55 37.1 -0.4
comp=Z,2.3nm,0.9s,baz=293,slow=3.3,SNR=6.4
WRA Warramunga Arr 70.93 201 P P 04 55 37.9 -0.3
comp=Z,0.6nm,0.7s,baz=14,slow=6.1,SNR=2.7
FITZ Fitzroy Crossi 71.63 210 P P 04 55 42.1 -0.3
comp=Z,1.3nm,0.7s,baz=18,slow=9.6,SNR=2.2
ASAR Alice Springs 74.62 200 P P 04 56 00.3 +0.2
comp=Z,0.6nm,0.5s,baz=12,slow=5.7,SNR=8.8
TXAR Lajitas Array 75.24 62 P P 04 56 05.4 +1.4
comp=Z,0.5nm,0.7s,baz=313,slow=4.0,SNR=7.5
GERES GERESS Array B 77.23 335 P P 04 56 13.9 -1.0
comp=Z,0.2nm,0.3s,baz=34,slow=7.1,SNR=2.8
BRTR Keskin Array B 77.87 318 P P 04 56 18.1 -0.6
comp=Z,0.5nm,0.9s,baz=60,slow=5.4,SNR=3.1
CPUP Villa Florida 146.19 60 PKPbc PKPdf 05 04 00.0 0.0
comp=Z,0.9nm,0.6s,baz=297,slow=2.3,SNR=3.0
PLCA Paso Flores 146.92 93 PKPbc PKPbc 05 04 02.0 -0.9
comp=Z,1.8nm,1.0s,baz=263,slow=8.1,SNR=2.9

SKHL 19 04:46:24.7±0.5, 44.43N×148.40E, h60km±4km, mb4.3/4
JMA 19 04:46:24.6±0.4, 44.08N×148.06E, h0km, M4.3
MOS 19 04:46:24.5±1.8, 44.43N×148.20E, h57km, mb3.9/3, Error ellipse: s-maj=11.9km s-min=8.7km az=65.0
IDC 19 04:46:28.6±4.3, 44.56N×148.09E, h90km±39km, mb3.2/9, mb1 3.5/10, mb1mx3.2/49, mbtmp3.5/10, MS2.8/1, Ms1 2.8/1, ms1mx2.2/19, Error ellipse: s-maj=28.5km s-min=22.8km az=124.0
ISC 19 04:46:24.8±1.4, 44.38N±0.07×148.35E±0.09, h50km±13km, n52, σ1.75/65, mb3.5/12, 7C-6D, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KUR Kuril'sk 0.93 338 eP Pn 04 46 40.0 -1.5
KUR AMB AMB 04 46 41.2
62nm,0.2s
KUR iS Sn 04 46 51.4 -2.3
KUR A A 04 46 53.1
2μm,0.5s
KUR A A 04 46 53.1
278nm,0.5s
KUR Kuril'sk 0.93 338 d iPN Pn 04 46 40.0 -1.5
KUR iS Sn 04 46 51.4 -2.3
KUR pmax pmax
comp=N,319nm,0.3s
KUR pmax pmax
comp=Z,621nm,0.3s
KUR pmax pmax
comp=E,314nm,0.2s
KUR smax smax
comp=E,3μm,0.2s
KUR smax smax
comp=N,2μm,0.3s
SHO Shikotan 1.21 246 iP Pn 04 46 44.4 -0.8
SHO AMB AMB 04 46 44.8
comp=N,126nm,0.3s
SHO iS Sn 04 46 58.4 -2.0
SHO A A 04 47 00.9
comp=N,405nm,0.4s
SHO A A 04 47 00.9
comp=N,1μm,0.4s
SHO Shikotan 1.21 246 d iPN Pn 04 46 44.4 -0.8
SHO iS Sn 04 46 58.4 -2.0
SHO pmax pmax
comp=N,43nm,0.3s
SHO pmax pmax
comp=E,49nm,0.3s
SHO pmax pmax
comp=Z,126nm,0.3s
SHO smax smax
comp=N,405nm,0.2s
SHO smax smax
comp=E,1μm,0.2s
YUK Yuzh-Kuril'sk 1.82 260 iP Pn 04 46 54.0 +0.4
YUK AMB AMB 04 46 55.7
comp=E,40nm,0.2s
YUK iS Sn 04 47 16.1 +0.6
YUK A A 04 47 16.4
comp=E,494nm,0.4s
YUK A A 04 47 16.4
comp=E,635nm,0.4s
YUK Yuzh-Kuril'sk 1.82 260 c iPN Pn 04 46 54.0 +0.4
YUK iS Sn 04 47 16.1 +0.6
YUK pmax pmax
comp=E,60nm,0.2s
YUK pmax pmax
comp=Z,398nm,0.2s
YUK pmax pmax
comp=N,107nm,0.1s
YUK smax smax
comp=N,494nm,0.4s
YUK smax smax
comp=E,635nm,0.3s
GRPR Tuman 1.89 259 iP Pn 04 46 54.5 -0.1
GRPR AMB AMB 04 46 57.0
comp=E,234nm,0.4s
GRPR eS Sn 04 47 17.0 -0.3
GRPR A A 04 47 19.0
comp=E,94nm,0.3s
GRPR A A 04 47 19.0
comp=E,765nm,0.3s
GRPR Tuman 1.89 259⇑iPN Pn 04 46 54.5 -0.1
GRPR eS Sn 04 47 17.6 +0.3
GRPR pmax pmax
comp=Z,234nm,0.2s
GRPR pmax pmax
comp=E,103nm,0.1s
GRPR smax smax
comp=E,765nm,0.3s
GRPR smax smax
comp=N,944nm,0.2s
NEM2 Nemuro 2 2.14 243 P Pn 04 46 57.3 -0.7
NEM2 eS Sn 04 47 21.0 -2.3
NMR Nemuro--Hokkai 2.15 243 iP Pn 04 46 57.3 -0.8
NMR iS Sn 04 47 22.2 -1.3
NMR Nemuro--Hokkai 2.15 243⇓iPN Pn 04 46 57.3 -0.8
NMR iS Sn 04 47 22.2 -1.3
JRA Rausu 2.36 260 P Pn 04 47 01.9 +0.9
JNSB Nemuroshibetsu 2.48 257 P Pn 04 47 03.7 +1.0
JNSB eS Sn 04 47 33.0 +1.2
JNK Nakash 2.74 255 P Pn 04 47 06.9 +0.7
JNK eS Sn 04 47 37.8 -0.2
JAR Ashorobuto 3.48 254 P Pn 04 47 17.9 +1.5
JAR eS Sn 04 47 57.8 +1.4
JCH Churui 4.03 246 P Pn 04 47 26.6 +2.7
JKA Kamikawa-asahi 4.14 268 eP Pn 04 47 27.2 +1.8
ASAJ Asahikawa 4.14 268 P Pn 04 47 27.1 +1.7
comp=N,1.9nm,0.3s,baz=67,slow=14,SNR=2.4
ERM Erimo 4.47 240 c eP N Pn 04 47 32.2 +2.3
JNBK Urakawa-nobuka 4.59 245 P Pn 04 47 32.6 +1.0
YSS Yuzh-Sakhalins 4.69 305 eP Pn 04 47 30.4 -2.6
YSS AMB AMB 04 47 31.7
comp=N,10.0nm,1.0s
YSS Yuzh-Sakhalins 4.69 305 ePN Pn 04 47 30.4 -2.6
YSS pmax pmax
comp=Z,10.0nm,1.0s
YSS MLR MLR
comp=Z,100nm,16.0s
JKB Kayabe 5.90 248 P Pn 04 47 50.5 +0.9
JKB eS Sn 04 48 54.9 -0.9
JOT Ohata 6.14 243 P Pn 04 47 53.2 +0.3
JOT eS Sn 04 48 59.3 -2.4
SKR Severo-Kuril's 8.21 37⇑ePN Pn 04 48 25.1 +4.0
MAJO Matsushiro 10.99 228⇑ePN Pn 04 49 03.5 +4.2
KLR Kul'dur 12.36 299 eP Pn 04 49 18.1 +0.2
KLR Kul'dur 12.36 299⇑ePN Pn 04 49 18.1 +0.2
MA2 Magadan 15.30 5⇑eP P 04 49 59.8 -1.4
KSRS Korea Array 16.89 253 LR LR 04 57 02.3
comp=Z,27nm,18.3s,baz=350,slow=38
SEY Seymchan 18.74 6 eP Pn 04 50 39.9 -0.1
SEY Seymchan 18.74 6⇓eP Pn 04 50 39.9 -0.1
BILL Bilibino 25.52 16 eP P 04 51 50.4 +2.2
BILL Bilibino 25.52 16 eP P 04 51 51.1 +2.9
TIXI Tiksi 28.93 347 eP P 04 52 22.0 +3.3
TIXI Tiksi 28.93 347⇓eP P 04 52 22.0 +3.3
TIXI pmax pmax
comp=Z,1.0nm,1.2s
H11N2 WAKE ISLAND Hy 29.03 142 T T 05 23 06.0
baz=333,slow=76
H11N1 WAKE ISLAND Hy 29.05 142 T T 05 23 11.9
baz=333,slow=76
H11N3 WAKE ISLAND Hy 29.05 142 T T 05 23 10.1
baz=333,slow=76
MKAR Makanchi Array 45.06 297 P P 04 54 33.4 -2.2
comp=Z,0.1nm,0.4s,baz=87,slow=8.0,SNR=2.3
MKAR PcP PcP 04 56 13.7 -1.9
comp=Z,0.4nm,0.6s,baz=71,slow=4.1,SNR=4.1
KURK Kurchatov 45.90 304 eP P 04 54 44.0 +1.9
KURK Kurchatov 45.90 304 iP P 04 54 44.0 +1.9
KURK pmax pmax
comp=Z,1.0nm,1.3s
AAK Ala-Archa 51.87 296 eP P 04 55 26.8 -1.3
AAK Ala-Archa 51.87 296⇓eP P 04 55 26.8 -1.3
AAK pmax pmax
comp=Z,1.0nm,1.0s
YKA Yellowknife Ar 54.80 34 P P 04 55 48.3 -0.9
comp=Z,0.3nm,0.6s,baz=301,slow=7.1,SNR=5.4
FINES FINESS Array B 64.71 333 P P 04 56 55.0 -2.1
comp=Z,1.2nm,0.7s,baz=57,slow=7.0,SNR=4.3
WRA Warramunga Arr 65.27 195 P P 04 57 01.3 -0.1
comp=Z,0.4nm,0.7s,baz=13,slow=6.4,SNR=1.5
NVAR Mina Array Bea 66.51 59 P P 04 57 09.4 -0.1
comp=Z,0.3nm,0.6s,baz=280,slow=7.2,SNR=3.0
PDAR Pinedale Array 68.84 51 P P 04 57 23.4 -0.8
comp=Z,0.2nm,0.6s,baz=274,slow=2.5,SNR=2.0
ASAR Alice Springs 68.99 194 P P 04 57 25.1 +0.3
comp=Z,0.3nm,0.5s,baz=27,slow=6.3,SNR=1.4
NOA NORSAR Array B 69.33 339 P P 04 57 23.7 -2.9
comp=Z,0.3nm,0.5s,baz=31,slow=6.7,SNR=3.8
TXAR Lajitas Array 81.58 57 P P 04 58 37.1 -0.3
comp=Z,0.3nm,0.5s,baz=288,slow=4.1,SNR=7.3

ISC 19 04:52:36.9±2.0, 51.60N±0.09×16.30E±0.07, h0km, n10, σ0.75/21, Poland

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSP Ksiaz 0.76 180 ePg Pb 04 52 52.5 -0.4
KSP eSG Sg 04 53 01.6 +0.4
CHVC Chvalec 1.02 189 ePG Pb 04 52 57.3 -0.2
CHVC eSG Sg 04 53 09.6 -0.1
OSTC Ostas 1.04 183 ePG Pb 04 52 58.0 +0.2
OSTC eSG Sg 04 53 11.0 +0.6
UPC Upice 1.11 189 ePG Pb 04 52 58.6 -0.3
UPC eSG Sg 04 53 12.2 -0.2
GOPC GO Pecny, Ondr 1.94 210 ePG Pb 04 53 13.1 0.0
MORC Moravsky Berou 1.99 156 ePN Pb 04 53 12.8 -1.1
MORC eSG Sg 04 53 41.2 +0.5
CLL Collm 2.08 263 ePn Pn 04 53 13.0 0.0
CLL ePg Pg 04 53 17.0 +0.3
CLL eSg Sb 04 53 43.0 +1.1
comp=Z,6.0nm,0.8s
VRAC Vranov 2.30 175 eSG Sb 04 53 49.1 +0.9
NKC Novy Kostel 2.79 242 ePN Pn 04 53 23.2 +0.4
NKC ePG Pg 04 53 29.8 -0.6
NKC eSG Sg 04 54 05.3 -1.2
KHC Kasperske Hory 3.02 216 ePN Pn 04 53 25.7 -0.3
KHC ePG Pb 04 53 32.2 +0.7
KHC eSG Sg 04 54 12.2 -1.7

SJA 19 05:05:43.8±0.7, 30.40S×69.36W, h18km±3km, ML3.1, MW3.3
IDC 19 05:05:44.9±3.0, 30.33S×69.07W, h27km±20km, mb3.7/3, mb1 3.8/5, mb1mx3.6/22, mbtmp3.7/5, ML3.6/2, Error ellipse: s-maj=41.3km s-min=17.9km az=73.0
GUC 19 05:05:46.5±0.5, 30.32S×69.56W, h13km±3km, ML3.7
ISC 19 05:05:44.6±0.7, 30.36S±0.03×69.31W±0.03, h24km±5km, n22, σ1.35/34, mb3.6/3, 1C-4D, Chile-Argentina border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AROD Rodeo 0.24 323 eP Pb 05 05 50.6 -0.4
AROD eS Sb 05 05 55.5 +0.2
ACDV Cuesta del Vie 0.25 41 eP Pb 05 05 50.7 -0.3
ACDV eS Sb 05 05 56.7 +1.5
ACCO Cerro Coronel 0.31 138 eP Pb 05 05 51.8 -0.1
AMOG MOGNA 0.91 130 eP Pb 05 06 01.2 -0.6
AMOG eS Sn 05 06 15.2 +0.7
RTLL Cerro Villicun 1.20 144⇓iP Pn 05 06 06.0 -0.1
RTLL iS Sb 05 06 20.9 -1.0
RTLL IAML 05 06 23.0
comp=N,4μm,0.4s
CO03 El Pedregal 1.29 248⇓iP Pn 05 06 07.7 +0.5
CO03 iS Sb 05 06 24.3 -0.1
CO03 IAML 05 06 25.2
comp=N,4μm,0.3s
GO04 Tololo Observa 1.31 278 eP Pn 05 06 07.8 +0.2
GO04 iS Sn 05 06 23.9 -0.5
GO04 IAML 05 06 26.6
comp=N,4μm,0.5s
RTLS Leoncito 1.44 180 eP Pb 05 06 10.4 -0.5
RTLS eS Sb 05 06 31.1 +2.2
RTLS IAML 05 06 38.7
comp=Z,312nm,0.4s
CFA Coronel Fontan 1.54 144 Pg Pb 05 06 11.8 -0.7
comp=Z,97nm,0.3s,baz=332,slow=15,SNR=112
CFA Lg Lg 05 06 31.9
comp=Z,365nm,0.3s,baz=304,slow=2.6,SNR=31
CFA LR LR 05 07 05.0
comp=Z,117nm,21.6s,baz=324,slow=55
RTCV Cerro Valdivia 1.64 157 eP Pb 05 06 13.7 -0.4
RTCV eS Sb 05 06 36.0 +1.6
AC05 El Transito 1.74 331⇓iP Pb 05 06 16.1 +0.2
AC05 iS Sb 05 06 38.7 +1.4
AC05 IAML 05 06 44.3
comp=N,870nm,0.6s
VCA Vinchina 1.88 31⇑iP Pb 05 06 18.5 +0.1
VCA iS Sb 05 06 43.9 +2.5
VCA IAML 05 06 49.7
comp=N,1μm,0.3s
CO04 Los Peladeros 2.21 220⇓iP Pb 05 06 23.2 -0.8
CO04 iS Sb 05 06 52.9 +1.9
CO04 IAML 05 06 56.3
comp=E,873nm,0.3s
ROCH El Roble 2.98 209 eP Pn 05 06 33.7 +3.0
MT03 Universidad Ad 3.29 198 eP Pn 05 06 38.7 +3.9
LVC Limon Verde 7.72 3 Pn Pn 05 07 36.4 +0.4
comp=E,0.3nm,0.3s,baz=180,slow=9.1,SNR=2.3
LVC Sn Sn 05 09 03.1 +0.1
comp=E,0.2nm,0.3s,baz=223,slow=21,SNR=1.3
LVC Lg Lg 05 09 48.4
comp=E,1.7nm,0.3s,baz=107,slow=22,SNR=4.5
PLCA Paso Flores 10.40 185 Lg Lg 05 11 18.4
comp=E,0.1nm,0.3s,baz=144,slow=12,SNR=2.4
CPUP Villa Florida 11.29 72 Pn Pn 05 08 20.7 -3.8
comp=E,0.2nm,0.3s,baz=244,slow=10,SNR=2.0
CPUP Lg Lg 05 11 31.7
comp=E,0.0nm,0.3s,baz=152,slow=18,SNR=1.2
TXAR Lajitas Array 67.80 328 P P 05 16 41.0 +0.2
comp=E,0.3nm,0.6s,baz=153,slow=7.2,SNR=4.0
TXAR pP sP 05 16 51.1 -1.1
comp=E,0.3nm,0.7s,baz=151,slow=8.8,SNR=3.3
DBIC Dimbokro 71.80 71 P P 05 17 04.3 -1.3
comp=E,4.6nm,1.1s,baz=225,slow=8.6,SNR=2.4
TORD Torodi Ar. Bea 80.77 69 P P 05 17 56.0 -0.6
comp=E,0.6nm,0.9s,baz=248,slow=5.7,SNR=2.5
MKAR Makanchi Array 152.59 45 PKPbc PKPbc 05 25 37.8 -1.2
comp=E,0.2nm,0.6s,baz=318,slow=1.9,SNR=1.9
MKAR PKPab pPKPbc 05 25 47.6 0.0
comp=E,0.2nm,0.7s,baz=300,slow=3.4,SNR=3.0

IDC 19 05:18:03.8±2.2, 51.83N×176.48W, h0km, mb3.3/3, mb1 3.7/5, mb1mx3.4/34, mbtmp3.4/5, ML3.5/2, Error ellipse: s-maj=68.3km s-min=26.5km az=178.0
AEIC 19 05:18:12.3±2.9, 51.68N±0.04×175.66W±0.05, h19km±4km, ML3.3/29, Error ellipse: s-maj=5.6km s-min=4.5km az=160.0
NEIC 19 05:18:13.2±1.3, 51.7N±0.1×175.72W±0.07, h42km±12km, Error ellipse: s-maj=19.2km s-min=5.5km az=168.0
ISC 19 05:18:12.7±1.5, 51.7N±0.1×175.62W±0.04, h31km±10km, n32, σ0.94/32, mb3.5/3, Andreanof Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GSIG Igitkin Island 0.32 324 Pb 05 18 20.8 +0.2
GSMY Great Sitkin M 0.42 320 Pb 05 18 22.1 +0.1
GSCK Great Sitkin C 0.44 311 Pb 05 18 22.4 0.0
GSCK Sn 05 18 29.6 -0.4
GSTD Great Sitkin T 0.47 316 Pb 05 18 22.7 0.0
GSTD Sn 05 18 30.2 -0.4
ETKA Kagalaska Isla 0.51 286 Pb 05 18 23.2 -0.2
ETKA Sb 05 18 30.6 0.0
ADAG Mount Adagdak 0.66 293 Pb 05 18 25.9 +0.1
ADK Adak 0.68 284 Sb 05 18 34.0 -1.2
KIKV Kanaga Island 0.98 280 Pn 05 18 30.2 -0.1
KICM Kanaga Island 1.00 282 Pn 05 18 30.8 +0.2
ATKA Atka Island 1.00 61 Pn 05 18 30.2 -0.4
ATKA Sn 05 18 43.9 +0.2
KIMD Kanaga Island 1.01 273 Pn 05 18 30.4 -0.4
KOKL Mount Kliuchef 1.06 55 Pn 05 18 31.7 +0.1
KOFP Korovin Flat P 1.09 59 Pn 05 18 31.9 -0.1
KONW Korovin Northw 1.10 52 Pn 05 18 32.5 +0.5
KONW Sn 05 18 47.1 +0.8
KONE Korovin Northe 1.14 54 Pn 05 18 33.2 +0.6
TAPA Tanaga Point A 1.37 275 Pn 05 18 36.0 +0.3
TAPA Sn 05 18 53.9 +1.1
TAFP Tanaga Falls P 1.48 278 Pn 05 18 37.6 +0.4
TAFP Sn 05 18 56.2 +0.6
TASE Tanaga Southea 1.51 275 Pn 05 18 38.2 +0.5
GAEA Gareloi East 1.95 273 Pn 05 18 44.4 +0.7
UNV Unalaska Valle 5.92 65 Pn Pn 05 19 40.7 +2.4
SVW2 Sparrevohn 14.47 42 Pn Pn 05 21 37.6 +2.5
KDAK Kodiak Island 14.57 56 Pn Pn 05 21 34.2 -2.4
0.2nm,0.3s,baz=259,slow=12,SNR=3.6
ILAR Eielson Array 19.74 38 P P 05 22 38.8 -0.9
0.1nm,0.3s,baz=224,slow=11,SNR=7.4
H11N2 WAKE ISLAND Hy 34.75 210 T T 06 01 49.8
baz=19,slow=76,SNR=78
H11N3 WAKE ISLAND Hy 34.76 210 T T 06 01 50.4
baz=19,slow=76,SNR=61
H11N1 WAKE ISLAND Hy 34.77 210 T T 06 01 51.2
baz=19,slow=76,SNR=47
H11S1 WAKE ISLAND Hy 35.96 209 T T 06 03 23.0
baz=19,slow=76,SNR=38
H11S2 WAKE ISLAND Hy 35.98 209 T T 06 03 26.4
baz=19,slow=76,SNR=19
H11S3 WAKE ISLAND Hy 35.98 209 T T 06 03 23.6
baz=19,slow=76,SNR=14
PDAR Pinedale Array 44.31 74 P P 05 26 19.4 -0.4
0.4nm,0.6s,baz=341,slow=2.3,SNR=7.2
SONM Songino Array 48.25 298 P P 05 26 41.9 -8.7
0.2nm,0.4s,baz=83,slow=5.0,SNR=3.3
TXAR Lajitas Array 56.64 84 P P 05 27 52.5 -0.4
0.2nm,0.6s,baz=297,slow=4.0,SNR=3.5

IDC 19 05:34:46.1±7.3, 4.96S×139.68E, h0km, mb3.5/1, mb1 3.6/3, mb1mx3.4/19, mbtmp3.4/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/19, Error ellipse: s-maj=286.6km s-min=34.9km az=89.0, Irian Jaya

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 15.78 199 Pn Pn 05 38 29.8 -0.1
0.1nm,0.3s,baz=14,slow=13,SNR=2.1
WRA Sn Sn 05 41 09.4 -16
0.1nm,0.3s,baz=11,slow=29,SNR=1.7
ASAR Alice Springs 19.42 196 P P 05 39 14.2 0.0
0.1nm,0.3s,baz=28,slow=10,SNR=2.8
PSI Prapat 41.44 280 LR LR 06 03 32.2
comp=Z,42nm,19.4s,baz=288,slow=42
MKAR Makanchi Array 72.15 323 P P 05 46 12.8 +0.1
0.2nm,0.4s,baz=100,slow=7.7,SNR=6.5

IDC 19 05:37:59.0±1.1, 31°.89S×68°.12W, h0km, mb3.9/4, mb1 3.9/6, mb1mx3.7/27, mbtmp3.8/6, ML3.8/2, MS2.5/1, Ms1 2.5/1, ms1mx2.4/27, Error ellipse: s-maj=30.6km s-min=6.8km az=65.0

ISC 19 05:38:01.7±0.8, 31°.6S±0°.1×68°.05W±0°.10, h10km, n9, σ1°.88/9, mb4.1/4, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFA	**Coronel Fontan**	**0.17**	**284**	Pg	**Pg**	**05 38 05.1**	**-0.3**
	187nm,0.3s,baz=198,slow=16,SNR=360						
CFA				LR	LR	05 38 06.8	
	comp=Z,72nm,21.1s,baz=239,slow=26						
CFA				Lg	Lg	05 38 08.8	
	1μm,0.3s,baz=204,slow=18,SNR=244						
LVC	**Limon Verde**	**9.03**	**355**	Pn	**Pn**	**05 40 12.8**	**+0.3**
	0.6nm,0.3s,baz=183,slow=8.4,SNR=5.3						
PLCA	**Paso Flores**	**9.29**	**192**	Pn	**Pn**	**05 40 16.8**	**+1.0**
	0.1nm,0.3s,baz=19,slow=11,SNR=1.6						
PLCA				Lg	Lg	05 42 45.2	
	0.2nm,0.3s,baz=308,slow=8.7,SNR=3.0						
PLCA				LR	LR	05 44 00.8	
	comp=Z,30nm,18.5s,baz=119,slow=40						
CPUP	**Villa Florida**	**10.77**	**63**	Pn	**Pn**	**05 40 35.6**	**-0.4**
	0.2nm,0.3s,baz=239,slow=12,SNR=1.7						
CPUP				Lg	Lg	05 43 46.2	
	0.3nm,0.3s,baz=137,slow=19,SNR=2.0						
SNAA	**Sanae**	**52.52**	**159**	P	**P**	**05 47 12.5**	**-2.3**
	0.9nm,0.4s,baz=269,slow=9.7,SNR=7.7						
TXAR	**Lajitas Array**	**69.46**	**327**	P	**P**	**05 49 09.1**	**-1.2**
	0.1nm,0.5s,baz=150,slow=7.3,SNR=1.4						
DBIC	**Dimbokro**	**71.22**	**69**	P	**P**	**05 49 21.9**	**+0.6**
	2.4nm,0.8s,baz=216,slow=8.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**80.23**	**68**	P	**P**	**05 50 12.9**	**0.0**
	1.6nm,0.8s,baz=198,slow=4.1,SNR=10						
ZALV	**Zalesovo Beam**	**150.43**	**33**	PKPbc	**PKPdf**	**05 57 51.2**	**+3.6**
	0.3nm,0.3s,baz=323,slow=2.2,SNR=2.2						

ANF 19 05:38:38.5±0.2, 33°.16N×115°.66W, h12km±2km, ML2.0/12, Error ellipse: s-maj=1.7km s-min=1.4km az=135.0
SCEDC 19 05:38:39.3, 33°.16N×115°.64W, h4km

ISC 19 05:38:38.8±1.0, 33°.16N±0°.03×115°.65W±0°.03, h14km±10km, n13, σ0°.49/23, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWSC	**Sam W. Stewart**	**0.25**	**210**	P	**Pg**	**05 38 44.4**	**+0.3**
	baz=33,SNR=27						
SWSC				S	**Sg**	**05 38 46.9**	**-0.8**
	baz=33						
BC3	**Big Chuckawall**	**0.52**	**19**	P	**Pg**	**05 38 49.3**	**+0.2**
	baz=197,SNR=19						
BC3				S	**Sg**	**05 38 56.6**	**+0.5**
	baz=197						
IKP	**In-Ko-Pah, Jac**	**0.64**	**217**	P	**Pg**	**05 38 51.5**	**+0.3**
	baz=38,SNR=7.9						
IKP				S	**Sg**	**05 38 59.8**	**+0.1**
	baz=38						
MONP2	**Monument Peak**	**0.70**	**248**	P	**Pg**	**05 38 52.6**	**+0.1**
	baz=68,SNR=11						
MONP2				S	**Sg**	**05 39 02.2**	**+0.5**
	baz=68						
GLA	**Glamis**	**0.70**	**99**	P	**Pg**	**05 38 52.1**	**-0.4**
	baz=279						
GLA				S	**Sg**	**05 39 01.9**	**+0.2**
	baz=279						
PFO	**Pinyon Flats O**	**0.81**	**304**	P	**Pg**	**05 38 54.4**	**-0.2**
	baz=123,SNR=13						
PFO				S	**Sg**	**05 39 05.4**	**+0.1**
	baz=123						
BELC	**Belle Mtn. Jos**	**0.89**	**341**	P	**Pg**	**05 38 55.7**	**-0.4**
	baz=160						
BELC				S	**Sb**	**05 39 08.2**	**+0.3**
	baz=160						
IRM	**Iron Mountain**	**1.08**	**23**	P	**Pg**	**05 38 59.3**	**-0.4**
	baz=202,SNR=25						
IRM				S	**Sb**	**05 39 14.3**	**+0.9**
	baz=202						
Y12C	**Blythe**	**1.11**	**58**	P	**Pg**	**05 38 60.0**	**-0.3**
	baz=238						
Y12C				S	**Sb**	**05 39 15.1**	**+0.9**
	baz=238						
109C	**Camp Elliot, M**	**1.25**	**258**	P	**Pn**	**05 39 01.2**	**-0.7**
	baz=77						
109C				S	**Sb**	**05 39 18.1**	**0.0**
	baz=77						
MURC	**Murrieta**	**1.36**	**289**	S	**Sb**	**05 39 22.2**	**+0.7**
	baz=108						
GMRC	**Granite Mounta**	**1.62**	**360**	Pg	**Pg**	**05 39 09.7**	**-0.2**
	baz=179						
TUQ	**Turquoise Moun**	**2.28**	**354**	Pg	**Pg**	**05 39 22.4**	**-0.1**
	baz=174						

ECX 19 05:39:00.3±0.3, 31°.53N×115°.48W, h9km±9km, MD1.4, ML1.6, 1C-1D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBX	**El Chinero**	**0.37**	**99**	eP	Pg	05 39 07.2	-0.4
ECBX				eS	Sg	05 39 12.3	-0.2
SPIG	**San Pedro Mart**	**0.48**	**179**	eP	Pg	05 39 09.4	-0.4
SPIG				eS	Sg	05 39 16.1	-0.1
SPX	**San Pedro Mart**	**0.49**	**179**	eP	Pg	05 39 09.2	-0.8
SPX				eS	Sg	05 39 16.2	-0.3
ESJX	**Sierra Juarez**	**0.62**	**320**	eP	Pg	05 39 10.3	-2.0
ESJX				eS	Sg	05 39 18.9	-1.6
ESJX				⇑e		05 39 19.0	
ESJX				IAML		05 39 19.0	
	comp=E,37nm,0.1s						
ESJX				IAML		05 39 19.8	
	comp=N,34nm,0.1s						
ESJX				⇓e		05 39 19.8	
SQX	**San Quintin**	**1.01**	**200**	eP	Pg	05 39 17.9	-1.8
SQX				eS	Sg	05 39 31.2	-1.6

IDC 19 05:45:22.6±2.0, 44°.35N×28°.43W, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.3/45, mbtmp3.5/4, ML3.8/1, MS3.5/8, Ms1 3.5/8, ms1mx3.1/43, Error ellipse: s-maj=66.0km s-min=30.0km az=45.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**18.74**	**96**	P	Pn	05 49 44.5	+1.3
	0.1nm,0.3s,baz=296,slow=12,SNR=1.8						
AKASG	**Malin Array Be**	**38.58**	**59**	LR	LR	06 08 17.5	
	comp=Z,40nm,19.2s,baz=345,slow=36						
TORD	**Torodi Ar. Bea**	**40.36**	**131**	P	P	05 53 01.5	-0.6
	1.7nm,0.8s,baz=326,slow=8.1,SNR=8.8						
TORD				LR	LR	06 08 36.7	
	comp=Z,117nm,18.4s,baz=25,slow=34						
IDI	**Anoyia**	**41.30**	**84**	LR	LR	06 09 35.2	
	comp=Z,30nm,18.7s,baz=127,slow=35						
ULM	**Lac du Bonnet**	**44.70**	**303**	LR	LR	06 10 47.3	
	comp=Z,92nm,18.3s,baz=106,slow=34						
BRTR	**Keskin Array B**	**45.36**	**73**	LR	LR	06 12 51.7	
	comp=Z,28nm,19.0s,baz=322,slow=36						
MMAI	**Mount Meron Ar**	**49.94**	**80**	LR	LR	06 15 31.0	
	comp=Z,34nm,19.7s,baz=250,slow=36						
YKA	**Yellowknife Ar**	**50.27**	**323**	P	P	05 54 20.2	0.0
	0.3nm,0.8s,baz=60,slow=7.6,SNR=1.9						
PDAR	**Pinedale Array**	**56.45**	**299**	LR	LR	06 17 38.2	
	comp=Z,70nm,18.8s,baz=60,slow=36						
TXAR	**Lajitas Array**	**60.06**	**283**	LR	LR	06 21 19.3	
	comp=Z,27nm,19.2s,baz=0.0,slow=36						
MKAR	**Makanchi Array**	**70.62**	**43**	P	P	05 56 39.5	-0.1
	0.4nm,0.7s,baz=302,slow=7.0,SNR=6.1						

IDC 19 05:50:27.4±2.2, 26°.69N×127°.19E, h118km±28km, mb3.6/5, mb1 3.6/6, mb1mx3.2/9, mbtmp3.9/6, Error ellipse: s-maj=57.1km s-min=46.4km az=68.0
JMA 19 05:50:28.4±0.3, 26°.81N×127°.01E, h97km±3km, M3.9

ISC 19 05:50:27.4±0.9, 26°.8N±0°.1×127°.01E±0°.08, h106km±10km, n16, σ0°.99/24, mb3.8/5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGN	**Aguni-jima**	**0.29**	**133**	P	**Pn**	**05 50 42.9**	**+0.3**
JAGN				S	**Sn**	**05 50 53.9**	**-0.1**
JKE	**Kume jima 2**	**0.50**	**203**	P	**Pn**	**05 50 44.0**	**+0.2**
JKE				S	**Sn**	**05 50 55.8**	**-0.3**
JIH	**Iheya**	**0.89**	**74**	P	**Pn**	**05 50 47.8**	**+0.6**
JIH				S	**Sn**	**05 51 01.8**	**-0.2**
JJT3	**Tamagusuku3**	**0.95**	**132**	P	**Pn**	**05 50 49.0**	**+1.3**
JNTH	**Nagotoyohara**	**0.95**	**106**	P	**Pn**	**05 50 48.4**	**+0.7**
JNTH				S	**Sn**	**05 51 02.9**	**-0.1**
JOW	**Kunigami**	**1.13**	**87**	P	**Pn**	**05 50 50.3**	**+0.6**
JOW				S	**Sn**	**05 51 05.9**	**-0.7**
JOW	**Kunigami**	**1.13**	**87**	P	**Pn**	**05 50 50.4**	**+0.6**
	41nm,0.3s,baz=143,slow=13,SNR=566						
JOW				S	**Sn**	**05 51 05.7**	**-0.9**
	193nm,0.3s,baz=109,slow=15,SNR=61						
JYRO	**Yoronjima**	**1.31**	**79**	P	**Pn**	**05 50 52.1**	**+0.4**
JYRO				S	**Sn**	**05 51 09.2**	**-0.9**
JOKE	**Okinoerabujima**	**1.51**	**67**	P	**Pn**	**05 50 54.5**	**+0.4**
JTK	**Tokunoshima**	**2.00**	**60**	P	**Pn**	**05 51 00.2**	**0.0**
JNU	**Nakatsue**	**7.15**	**27**	P	**Pn**	**05 52 10.7**	**+1.3**
	1.6nm,0.3s,baz=203,slow=12,SNR=11						
SONM	**Songino Array**	**26.50**	**328**	P	**P**	**05 55 57.1**	**+2.2**
	1.0nm,0.3s,baz=142,slow=11,SNR=13						
MKAR	**Makanchi Array**	**40.35**	**312**	P	**P**	**05 57 53.7**	**-1.0**
	0.7nm,0.5s,baz=92,slow=9.9,SNR=21						
MKAR				PcP	**PcP**	**05 59 57.3**	**+1.3**
	0.1nm,0.3s,baz=76,slow=3.5,SNR=2.4						
ZALV	**Zalesovo Beam**	**41.14**	**323**	P	**P**	**05 58 00.8**	**-0.2**
	0.8nm,0.4s,baz=94,slow=8.0,SNR=3.8						
FINES	**FINESS Array B**	**71.84**	**330**	P	**P**	**06 01 36.8**	**-1.6**
	1.5nm,0.7s,baz=48,slow=4.3,SNR=5.8						
NOA	**NORSAR Array B**	**78.33**	**333**	P	**P**	**06 02 14.4**	**-1.3**
	0.5nm,0.6s,baz=55,slow=5.5,SNR=2.8						

TRN 19 05:55:24.6, 14°.55N×59°.29W, h10km, MD3.8, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBGH	**Gun Hill**	**1.42**	**190**	eP	Pb	05 55 51.3	+0.1
BBGH				eS	Sg	05 56 12.7	+2.4
BCHC	**Barbados, Cave**	**1.44**	**193**	eP	Pb	05 55 51.9	+0.3
BCHC				eS	Sg	05 56 13.2	+2.3
BBSP	**Saint Philip**	**1.44**	**186**	eP	Pb	05 55 51.8	+0.2
BBSP				eS	Sg	05 56 12.8	+1.7
MPOM	**Morne Pois Mar**	**1.52**	**266**	eP	Pg	05 55 53.7	0.0
LPMF	**Morne Lapointe**	**1.62**	**271**	eP	Pb	05 55 54.9	+0.3
ZAM	**Aeronautique**	**1.68**	**271**	eP	Pb	05 55 55.9	+0.3
SLAC	**Saint Lucia, A**	**1.68**	**248**	eP	Pb	05 55 55.4	-0.3
SLAC				eS	Sg	05 56 18.0	-0.7
TRMF	**Trois Ilets**	**1.70**	**270**	eP	Pb	05 55 56.4	+0.4
BIM	**Bigot**	**1.72**	**269**	eP	Pb	05 55 56.8	+0.5
MCLT	**Moule a Chique**	**1.80**	**243**	eP	Pb	05 55 57.2	-0.5
MCLT				eS	Sb	05 56 20.7	+0.3
FDF	**Fort de France**	**1.81**	**276**	eP	Pb	05 55 57.3	-0.5
FDF				eS	Sb	05 56 21.1	+0.6
BAMF	**Morne Balai**	**1.81**	**279**	eP	Pb	05 55 57.9	-0.1
GBMF	**Grand Be**	**1.83**	**278**	eP	Pb	05 55 58.4	+0.2
CXM	**Morne La Croix**	**1.83**	**279**	eP	Pb	05 55 58.8	+0.4
SVN	**Savane Anatole**	**1.84**	**279**	eP	Pb	05 55 58.1	-0.3
SLB	**Belfond**	**1.84**	**247**	eP	Pb	05 55 57.6	-0.8
SLB				eS	Sb	05 56 21.2	-0.3
PML	**Morne Lenard**	**1.84**	**278**	eP	Pb	05 55 58.4	0.0
PCM	**Pelee Case Pet**	**1.87**	**278**	eP	Pb	05 55 58.7	-0.3
SFAN	**Fancy Village**	**2.16**	**238**	eP	Pn	05 56 01.2	+0.5
SFAN				eS	Sb	05 56 30.1	-0.5
DWS	**Wesley**	**2.20**	**298**	eP	Pb	05 56 03.2	-1.2
DWS				eS	Sb	05 56 30.4	-1.4
SVCV	**St. Vincent, C**	**2.20**	**235**	eP	Pn	05 56 02.3	+1.1
SVCV				eS	Sb	05 56 30.3	-1.5
SSV	**Crater Summit**	**2.21**	**237**	eP	Pn	05 56 02.9	+1.5
SSV				eS	Sb	05 56 30.9	-1.2
SVV	**Soufriere Volc**	**2.23**	**237**	eP	Pn	05 56 02.6	+1.0
SVV				eS	Sn	05 56 30.3	+1.0
SVB	**Belmont**	**2.28**	**237**	eP	Pn	05 56 03.9	+1.5
SVB				eS	Sn	05 56 32.3	+1.7
MDPO	**Dominica; Chan**	**2.32**	**296**	eP	Pn	05 56 04.4	+1.5
MDPO				eS	Sn	05 56 33.4	+1.9
DEG	**La Desirade**	**2.45**	**316**	eP	Pn	05 56 05.3	+0.6
DEG				eS	Sb	05 56 37.0	-2.0
TDBA	**Terre de Bas,**	**2.61**	**300**	eP	Pn	05 56 08.6	+1.7
CBE	**Ff, Capester**	**2.70**	**304**	eP	Pn	05 56 10.1	+1.9
GRSS	**Sisters**	**3.17**	**226**	eS	Sn	05 56 53.9	+1.3
GRHS	**Sauteurs**	**3.25**	**225**	eS	Sn	05 56 56.0	+1.6
GRGR	**Grenville**	**3.32**	**224**	eP	Pn	05 56 17.6	+1.0
GRGR				eS	Sn	05 56 58.5	+2.2
TOSP	**Speyside**	**3.45**	**201**	eP	Pn	05 56 19.9	+1.5
TOSP				eS	Sn	05 57 01.8	+2.5
BPA	**Boggy Peak**	**3.50**	**316**	e	Pn	05 56 21.4	+2.2
BPA				eS	Sn	05 57 02.2	+1.4
MLYT	**Lee's Yard**	**3.53**	**308**	eP	Pn	05 56 21.7	+2.1
MLYT				eS	Sn	05 57 03.2	+1.7
ANWB	**Willy Bob**	**3.92**	**323**	eP	Pn	05 56 26.3	+1.4
ANWB	**Willy Bob**	**3.92**	**323**	eS	Sn	05 57 12.8	+1.8
NEV	**Hard Times**	**4.07**	**310**	eS	Sn	05 57 15.8	+1.0
NVBH	**Bath Hotel, Ne**	**4.09**	**309**	eP	Pn	05 56 29.2	+1.9
NVBH	**Bath Hotel, Ne**	**4.09**	**309**	eS	Sn	05 57 16.6	+1.2
NVRH	**Round Hill, Ne**	**4.12**	**310**	eP	Pn	05 56 28.9	+1.2
NVRH	**Round Hill, Ne**	**4.12**	**310**	eS	Sn	05 57 16.8	+0.8
SKOC	**St. Kitts, UWI**	**4.29**	**310**	e	Pn	05 56 32.1	+2.2
SKOC	**St. Kitts, UWI**	**4.29**	**310**	e	Sn	05 57 21.3	+1.2
SKI	**Saint Kitts**	**4.32**	**310**	e	Pn	05 56 32.5	+2.1
SKI	**Saint Kitts**	**4.32**	**310**	e	Sn	05 57 23.0	+2.1
TRN	**Trinidad (W)**	**4.39**	**208**	eP	Pn	05 56 32.8	+1.4
TRN	**Trinidad (W)**	**4.39**	**208**	eS	Sn	05 57 23.2	+0.6
GUIV	**Guiria**	**4.82**	**217**	eP	Pn	05 56 39.5	+2.2
GUIV	**Guiria**	**4.82**	**217**	eS	Sn	05 57 33.7	+0.5
BAUV	**El Baul**	**10.21**	**238**	eP	Pn	05 57 53.4	+2.0
BAUV	**El Baul**	**10.21**	**238**	eS	Sn	05 59 42.3	-3.8

IDC 19 05:56:58.6±0.6, 6°.29N×125°.65E, h159km±4km, mb3.8/10, mb1 3.9/11, mb1mx3.5/53, mbtmp4.3/11, MS3.1/1, Ms1 3.1/1, ms1mx2.4/37, Error ellipse: s-maj=35.1km s-min=10.3km az=79.0
NEIC 19 05:56:58.9±1.8, 6°.30N±0°.10×125°.7E±0°.2, h165km±6km, mb4.5/13, Error ellipse: s-maj=29.4km s-min=11.5km az=72.0
MAN 19 05:56:58.5, 6°.26N×125°.78E, h150km, MS3.3
DJA 19 05:56:59.2±0.7, 6°N±6°×12°6E±°, h144km±6km, M4.8/6, mB5.4/6, mb4.8/6, MLv4.8/6, Mw(mB)4.8/6

ISC 19 05:56:58.4±0.6, 6°.25N±0°.05×125°.83E±0°.06, h156km±5km, n46, σ1°.20/57, mb4.3/16, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.19**	**219**	eP	**Pn**	**05 57 19.4**	**0.0**
DDMP				eS	**Sn**	**05 57 34.9**	**-0.5**
MATI	**Mati**	**0.81**	**32**	eP	**Pn**	**05 57 22.6**	**+0.4**
MATI				eS	**Sn**	**05 57 41.0**	**+0.4**
DAV	**Davao City (W)**	**0.85**	**343**	P	**Pn**	**05 57 23.0**	**+0.4**
	190nm,0.3s,baz=236,slow=7.2,SNR=10						
DAV				LR	LR	05 57 38.6	
	comp=Z,33nm,19.2s,baz=354,slow=51						
DAV				S	**Sn**	**05 57 41.8**	**+0.6**
	998nm,0.3s,baz=311,slow=23,SNR=9.3						
DMPH	**Davao City--Mi**	**0.89**	**339**	⇓iP	**Pn**	**05 57 22.8**	**-0.1**
DMPH				iS	**Sn**	**05 57 41.5**	**-0.1**
GSPH	**General Santos**	**0.89**	**260**	⇑iP	**Pn**	**05 57 22.4**	**-0.5**
GSPH				iS	**Sn**	**05 57 39.9**	**-1.9**
KCP	**Kidapawan**	**1.05**	**316**	⇑eP	**Pn**	**05 57 25.9**	**+1.7**
KCP				iS	**Sn**	**05 57 46.4**	**+2.3**
SKMP	**Bagumbayan, Su**	**1.31**	**282**	eP	**Pn**	**05 57 25.3**	**-1.2**
SKMP				eS	**Sn**	**05 57 46.9**	**-1.1**
BUKP	**Musuan**	**1.79**	**335**	eP	**Pn**	**05 57 32.1**	**+0.6**
BUKP				eS	**Sn**	**05 57 57.5**	**+0.4**
BIPH	**Bislig**	**1.99**	**15**	⇑iP	**Pn**	**05 57 34.0**	**+0.2**
BIPH				iS	**Sn**	**05 58 00.8**	**-0.3**
CGP	**Cagayan de Oro**	**2.46**	**333**	⇓eP	**Pn**	**05 57 39.7**	**+0.4**
CGP				eS	**Sn**	**05 58 10.4**	**-0.7**
BUTP	**Butuan**	**2.71**	**356**	eP	**Pn**	**05 57 43.5**	**+1.1**
BUTP				eS	**Sn**	**05 58 16.7**	**+0.2**
PAGZ	**Pagadian**	**2.90**	**303**	eP	**Pn**	**05 57 44.8**	**+0.1**
PAGZ				eS	Sn	05 58 10.7	-10
MSLP	**Maasin**	**3.98**	**346**	eP	**Pn**	**05 57 58.1**	**-0.4**
MSLP				eS	**Sn**	**05 58 45.7**	**+0.4**
TNTI	**Ternate**	**5.65**	**164**	P	**Pn**	**05 58 21.2**	**+0.6**
	1.7nm6μm342nm,1.0s						
MRSI	**Marisa**	**6.92**	**214**	P	**Pn**	**05 58 39.5**	**+2.0**
	0.6nm46nm,0.6s						
LBMI	**Labuha**	**7.04**	**166**	P	**Pn**	**05 58 38.9**	**-0.2**
	15μm106nm,0.8s						
SANI	**Sanana**	**8.25**	**179**	P	**Pn**	**05 58 52.8**	**-2.3**
SIJI	**Sorong**	**8.91**	**142**	P	**Pn**	**05 59 05.0**	**+1.0**
	3.8nm,0.3s,baz=214,slow=22,SNR=4.4						
SIJI				S	**Sn**	**06 00 40.1**	**-3.0**
	0.3nm,0.3s,baz=318,slow=8.2,SNR=3.6						
TGY	**Tagaytay City**	**9.17**	**329**	LR	LR	06 03 31.3	
	comp=Z,99nm,18.6s,baz=262,slow=43						
NLAI	**Namlea**	**9.51**	**172**	P	**Pn**	**05 59 11.1**	**-0.8**
	7μm251nm,0.8s						
TPUB	**Ta-pu**	**17.68**	**334**		**P**	**06 00 53.2**	**-0.5**
TPUB				IAmb	IAmb	06 00 57.9	
	comp=Z,65nm,1.4s						
KPJI	**Karang Pucung**	**21.59**	**232**	P	**P**	**06 01 38.8**	**+2.7**
	comp=Z,41nm,0.9s						
KNRA	**Kununurra**	**21.98**	**172**	P	**P**	**06 01 41.1**	**+1.1**
KNRA				IAmb	IAmb	06 01 49.3	
	comp=Z,18nm,1.1s						
KLSI		**23.70**	**243**	P	**P**	**06 01 58.3**	**+2.1**
MDSI	**Maura Dua**	**24.11**	**244**	P	**P**	**06 02 02.2**	**+2.3**
FITZ	**Fitzroy Crossi**	**24.19**	**180**	P	**P**	**06 02 01.8**	**+1.2**
	comp=Z,5.6nm,0.3s,baz=344,slow=5.7,SNR=36						
FITZ	**Fitzroy Crossi**	**24.19**	**180**	IAmb	IAmb	06 02 04.1	
	comp=Z,5.6nm,0.8s						
JNU	**Nakatsue**	**27.15**	**9**	P	**P**	**06 02 26.9**	**-0.3**
	comp=Z,6.7nm,0.6s,baz=288,slow=3.2,SNR=3.4						
JNU	**Nakatsue**	**27.15**	**9**	IAmb	IAmb	06 02 32.8	
	comp=Z,104nm,1.5s						
WB0	**Warramunga Arr**	**27.19**	**162**	P	**P**	**06 02 27.8**	**+0.2**
WB0				IAmb	IAmb	06 02 32.8	
	comp=Z,17nm,1.5s						
WRA	**Warramunga Arr**	**27.34**	**162**	P	**P**	**06 02 29.2**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=343,slow=9.0,SNR=23						
WB2	**Warramunga Arr**	**27.34**	**162**	P	**P**	**06 02 29.9**	**+0.9**
WB2				IAmb	IAmb	06 02 36.2	
	comp=Z,15nm,1.4s						
WR0	**Warramunga Arr**	**27.42**	**162**	P	**P**	**06 02 29.4**	**-0.2**
WR0				IAmb	IAmb	06 02 32.5	
	comp=Z,13nm,1.4s						
AS31	**Alice Springs**	**30.76**	**165**	P	**P**	**06 02 58.9**	**-0.3**
ASAR	**Alice Springs**	**30.76**	**165**	P	**P**	**06 03 00.1**	**+0.9**
	comp=Z,2.6nm,0.5s,baz=343,slow=7.2,SNR=51						
ASAR				PcP	**PcP**	**06 05 53.0**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=357,slow=3.5,SNR=4.9						
KSRS	**Korea Array**	**31.12**	**3**	P	**P**	**06 03 02.2**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=188,slow=10,SNR=5.3						
FORT	**Forrest**	**36.88**	**177**	P	**P**	**06 03 53.2**	**+1.3**
USRK	**Ussuriysk Ar.**	**38.18**	**7**	P	**P**	**06 04 03.4**	**+0.7**
	comp=Z,3.6nm,0.7s,baz=198,slow=8.5,SNR=7.8						
NWAO	**Narrogin (SRO)**	**39.81**	**191**	P	**P**	**06 04 16.9**	**+0.5**
NWAO				IAmb	IAmb	06 04 18.2	
	comp=Z,16nm,0.8s						
BBOO	**Buckleboo**	**40.04**	**167**	P	**P**	**06 04 20.0**	**+1.7**
STKA	**Stephens Creek**	**40.79**	**159**	P	**P**	**06 04 24.7**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=343,slow=7.3,SNR=6.3						
MK31	**Makanchi Array**	**54.99**	**325**	P	**P**	**06 06 11.8**	**-1.7**
MKAR	**Makanchi Array**	**54.99**	**325**	P	**P**	**06 06 12.1**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=119,slow=7.1,SNR=23						
ILAR	**Eielson Array**	**83.23**	**26**	P	**P**	**06 09 06.6**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=246,slow=4.9,SNR=8.5						
FINES	**FINESS Array B**	**89.20**	**332**	P	**P**	**06 09 35.0**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=1.4,slow=7.6,SNR=4.0						
TORD	**Torodi Ar. Bea**	**121.26**	**289**	PKP	**PKPdf**	**06 15 32.2**	**-1.7**
	comp=Z,0.8nm,0.7s,baz=97,slow=1.7,SNR=3.9						

IDC 19 06:08:00.4±2.3, 38°.48N×20°.54E, h0km, mb3.4/6, mb1 3.5/9, mb1mx3.4/50, mbtmp3.4/9, ML3.4/2, MS2.7/1, Ms1 2.7/1, ms1mx2.2/37, Error ellipse: s-maj=43.0km s-min=17.3km az=46.0
BEO 19 06:08:00.6±0.8, 38°.11N×20°.07E, h15km±3km, ML3.5/8
ATH 19 06:08:02.2, 38°.28N×20°.41E, h18km, ML3.3/9, Error ellipse: s-maj=1.6km s-min=0.7km az=265.0
THE 19 06:08:02.1, 38°.30N×20°.34E, h16km, ML3.3/6, Error ellipse: s-maj=1.1km s-min=0.5km az=270.0
PDG 19 06:08:02.2±0.2, 38°.45N×20°.27E, h4km±1km, ML3.8/11, Error ellipse: s-maj=1.6km s-min=0.7km az=90.0

ISC 19 06:08:01.9±0.7, 38°.30N±0°.02×20°.36E±0°.03, h17km±4km, n102, σ1°.33/146, mb3.5/6, 4C-2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT1	**Agia Thekli**	**0.06**	**160**	P	**Pg**	**06 08 05.4**	**+0.3**
AGT1				S	**Sg**	**06 08 07.5**	**+0.3**
KEF4	**Livadi, Kephal**	**0.07**	**131**	P	**Pg**	**06 08 05.3**	**+0.1**
KEF4				S	**Sg**	**06 08 07.7**	**+0.3**
KEF1	**Kardakata, Kep**	**0.09**	**106**	P	**Pg**	**06 08 05.3**	**0.0**
KEF1				S	**Sg**	**06 08 07.3**	**-0.4**
KEF3	**Kipouria, Keph**	**0.10**	**185**	P	**Pg**	**06 08 05.8**	**+0.4**
KEF3				S	**Sg**	**06 08 08.3**	**+0.5**
LXR1	**Lixouri, Cepha**	**0.12**	**149**	P	**Pg**	**06 08 05.8**	**+0.1**
LXR1				S	**Sg**	**06 08 08.4**	**+0.2**
LXRA	**Lixouri, Kepha**	**0.12**	**149**	P	**Pg**	**06 08 05.8**	**+0.1**
LXRA				S	**Sg**	**06 08 08.3**	**+0.1**
CHV1	**Chavriata, Kef**	**0.12**	**172**	P	**Pg**	**06 08 05.9**	**+0.2**
CHV1				S	**Sg**	**06 08 08.5**	**+0.3**
ARGA	**Argostoli. Kep**	**0.16**	**143**	P	**Pg**	**06 08 06.0**	**-0.1**
ARGA				S	**Sg**	**06 08 08.6**	**-0.3**
ARG2	**Argostoli**	**0.16**	**141**	P	**Pg**	**06 08 06.0**	**-0.2**
ARG2				S	**Sg**	**06 08 08.9**	**-0.1**
KEF2	**Argostoli. Kep**	**0.17**	**144**	P	**Pg**	**06 08 06.1**	**-0.2**
KEF2				S	**Sg**	**06 08 08.8**	**-0.5**
VSK1	**VASILIKIADES**	**0.19**	**56**	P	**Pb**	**06 08 06.9**	**-0.1**
VSK1				S	**Sb**	**06 08 10.6**	**+0.2**
VLS	**Valsamata**	**0.22**	**125**	P	**Pg**	**06 08 06.6**	**-0.5**
VLS	**Valsamata**	**0.22**	**125**	P	**Pg**	**06 08 06.6**	**-0.5**
VLS				S	**Sg**	**06 08 09.6**	**-1.0**
VLS				AML	AML	06 08 10.4	
	comp=N,39144μm,0.3s						
VLS				AML	AML	06 08 10.7	
	comp=E,34130μm,0.1s						
FSK	**Fiskardo**	**0.22**	**45**	P	**Pb**	**06 08 07.4**	**-0.1**
FSK				S	**Sb**	**06 08 11.3**	**0.0**
	comp=E,15μm,0.3s						
FSK	**Fiskardo**	**0.22**	**45**	P	**Pb**	**06 08 07.4**	**-0.1**
FSK				S	**Sb**	**06 08 11.3**	**0.0**
FSK				AML	AML	06 08 11.6	
	comp=N,23160μm,0.3s						
FSK				AML	AML	06 08 11.7	
	comp=E,30034μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.49**	**151**	P	**Pg**	**06 08 11.1**	**-0.6**
VLMS				S	**Sg**	**06 08 18.1**	**-0.3**
VLMS				AML	AML	06 08 19.3	
	comp=E,11425μm,0.3s						
VLMS				AML	AML	06 08 23.4	
	comp=N,18388μm,0.5s						
MGNA	**Meganis**	**0.49**	**44**	P	**Pb**	**06 08 11.8**	**-0.2**
MGNA				S	**Sb**	**06 08 19.3**	**+0.4**
MGNA				AML	AML	06 08 24.7	
	comp=N,4745μm,0.5s						
MGNA				AML	AML	06 08 26.9	
	comp=E,4748μm,0.7s						
LKD2	**Lefkada island**	**0.54**	**26**	P	**Pb**	**06 08 13.1**	**+0.2**
LKD2	**Lefkada island**	**0.54**	**26**	P	**Pb**	**06 08 12.9**	**-0.1**
LKD2				S	**Sb**	**06 08 21.4**	**+1.0**
LKD2				AML	AML	06 08 28.6	
	comp=E,5745μm,0.3s						
LKD2				AML	AML	06 08 29.0	
	comp=N,4455μm,0.3s						
TSLK	**Tsoukalades, L**	**0.57**	**24**	P	**Pb**	**06 08 13.4**	**0.0**
TSLK	**Tsoukalades, L**	**0.57**	**24**	P	**Pb**	**06 08 13.5**	**0.0**
ZAK2	**Zakynthos**	**0.67**	**140**	P	**Pg**	**06 08 15.0**	**0.0**
ZAK2				S	**Sg**	**06 08 25.9**	**+1.2**
ZAK2				S	**Sn**	**06 08 25.8**	**-0.8**
PDO	**Prodromos**	**0.71**	**65**	P	**Pg**	**06 08 15.7**	**-0.2**
PDO	**Prodromos**	**0.71**	**65**	P	**Pg**	**06 08 15.8**	**0.0**
PDO				S	**Sg**	**06 08 25.5**	**+0.2**
PDO				AML	AML	06 08 31.2	
	comp=N,4525μm,0.5s						
PDO				AML	AML	06 08 35.4	
	comp=E,3995μm,0.7s						
KRI1	**kERI**	**0.73**	**150**	P	**Pb**	**06 08 15.7**	**-0.5**
KRI1				S	**Sg**	**06 08 26.7**	**+0.7**
	comp=E,5μm,0.4s						
VTN	**Vitineika**	**0.76**	**120**	P	**Pg**	**06 08 16.7**	**0.0**
VTN				S	**Sn**	**06 08 28.6**	**-0.2**
VTN	**Vitineika**	**0.76**	**120**	P	**Pg**	**06 08 16.5**	**-0.2**
PVO	**Paravola**	**0.97**	**71**	P	**Pg**	**06 08 20.6**	**-0.1**
PVO	**Paravola**	**0.97**	**71**	P	**Pg**	**06 08 20.5**	**-0.1**
PVO				AML	AML	06 08 41.2	
	comp=N,2230μm,0.4s						
PVO				AML	AML	06 08 42.5	
	comp=E,2426μm,0.4s						
DRO	**Drossia**	**1.12**	**108**	P	**Pg**	**06 08 23.0**	**-0.6**
DRO				S	**Sg**	**06 08 38.7**	**+0.4**
	comp=E,1μm,0.5s						
DRO	**Drossia**	**1.12**	**108**	P	**Pg**	**06 08 23.4**	**-0.2**
DRO				AML	AML	06 08 53.5	

comp=E,2930µm,0.5s
DRO AML AML 06 08 53.8
comp=N,2700µm,0.5s
IGT Igoumenitsa 1.23 359 ePg Pg 06 08 25.9 +0.3
IGT eSg Sg 06 08 46.1 +4.4
IGT Igoumenitsa 1.23 359 P Pg 06 08 25.9 +0.3
ANX Ano Chora 1.26 76 P Pb 06 08 24.9 -0.3
ANX S Sg 06 08 42.6 -0.1
comp=N,1µm,0.5s
ANX Ano Chora 1.26 76 P Pb 06 08 25.2 -0.1
ANX AML AML 06 08 54.9
comp=N,2989µm,0.5s
ANX AML AML 06 08 56.8
comp=E,1848µm,0.6s
AMT Artemida-Makis 1.31 125 P Pg 06 08 27.1 -0.2
SERG Sergoula 1.34 85 P Pn 06 08 25.6 -0.2
SERG S Sg 06 08 44.0 -1.2
comp=E,672nm,0.7s
SERG Sergoula 1.34 85 P Pb 06 08 26.1 -0.4
TRIZ Trizonia 1.35 87 P Pb 06 08 26.1 -0.6
TRIZ S Sg 06 08 44.6 -0.9
comp=E,535nm,0.6s
TRIZ Trizonia 1.35 87 P Pb 06 08 26.1 -0.6
ALIK Aliki, Aigiali 1.38 91 P Pb 06 08 26.9 -0.3
KALE Kalithea 1.40 86 P Pb 06 08 27.3 -0.4
KALE Kalithea 1.40 86 P Pb 06 08 27.3 -0.4
KLV Kalavryta, Ach 1.44 100 P Pb 06 08 27.8 -0.4
KEK Kerkira 1.48 343 P Pg 06 08 29.6 -0.8
KASA Kassiopi 1.48 347 P Pg 06 08 30.6 +0.2
MAKR Makrakomi, Fth 1.56 62 P Pb 06 08 31.7 -0.2
ITM Ithomi 1.67 132 P Pb 06 08 32.5 +0.2
VIL2 Platees 2.29 91 P Pb 06 08 41.4 -1.4
OHR Ohrid 2.83 7 iPn Pb 06 08 49.4 -2.5
TIR Tirane 3.06 353 ePn Pn 06 08 50.6 +1.1
VAY Valandovo 3.46 29 iPn Pb 06 08 58.8 -4.0
STIP Stip 3.67 22 iPn Pb 06 09 00.7 +2.9
MATE Matera 3.67 311 ⇓P Pb 06 09 04.5 -1.8
MATE ⇑S Sg 06 10 01.8 +1.9
ULC Ulcinj 3.75 347 ePn Pn 06 08 59.7 +0.7
ULC eSn Sn 06 09 44.2 +1.4
DRME Dracevica, Mon 3.98 347 ePn Pn 06 09 03.1 +1.0
DRME eSn Sn 06 09 49.6 +1.2
PDG Podgorica 4.21 349 ePn Pn 06 09 06.5 +1.3
PDG eSn Sn 06 09 55.6 +1.7
PDG Podgorica 4.21 349 ⇑P Pn 06 09 00.2 -5.0
PDG ⇑S Sn 06 09 54.0 0.0
TTG Podgorica 4.21 349 ePn Pn 06 09 05.9 +0.7
TTG eSn Sn 06 09 55.0 +1.1
PVY Plav 4.30 356 ⇑iPn Pn 06 09 08.0 +1.4
PVY eSn Sn 06 09 57.9 +1.5
HCY Herceg Novi 4.38 342 ePn Pn 06 09 07.9 +0.3
HCY eSn Sn 06 09 59.6 +1.4
CEME Cevo 4.38 346 ePn Pn 06 09 08.4 +0.7
CEME iSn Sn 06 09 59.0 +0.7
BOSS Bosilegrad 4.49 20 ePn Pn 06 09 10.5 +1.4
IVA Berane 4.58 356 ePn Pn 06 09 11.2 +0.8
IVA eSn Sn 06 10 04.4 +1.2
NKME Niksic 4.59 347 ePn Pn 06 09 11.4 +0.9
NKME eSn Sn 06 10 04.4 +1.0
KOME Kolasin 4.59 352 ⇓iPn Pn 06 09 12.0 +1.4
KOME eSn Sn 06 10 04.2 +0.7
BARS Barje 4.64 13 ePn Pn 06 09 13.0 +1.8
IDI Anoyia 4.72 128 Pn Pn 06 09 11.5 -0.9
comp=E,0.1nm,0.3s,baz=315,slow=11,SNR=1.0
IDI Sn Sn 06 10 08.9 +2.2
comp=E,1.6nm,0.3s,baz=183,slow=23,SNR=7.8
VAE Valguarnera 4.78 262 Sn Sn 06 10 06.0 -2.1
comp=E,2.9nm,0.3s,baz=9.5,slow=13,SNR=1.9
BRY Bratogost 4.80 344 ePn Pn 06 09 14.5 +1.0
BRY eSn Sn 06 10 09.4 +0.7
SELS Selova 4.95 6 ePn Pn 06 09 16.7 +1.3
SJES Sjenica 4.96 357 ePg Pn 06 09 17.4 +1.7
SJES Sjenica 4.96 357 ePn Pg 06 09 33.3 -3.6
STON Ston 4.99 337 ePn Pn 06 09 16.0 0.0
STON eSn Sn 06 10 12.0 -1.3
UPM Unac-Piva 5.02 348 ePn Pn 06 09 17.6 +1.1
UPM eSn Sn 06 10 15.2 +1.0
ZAPS Zavoj 5.26 18 eSn Sn 06 10 22.7 +2.8
IVAS Ivanjica 5.27 358 ePn Pn 06 09 21.2 +1.3
IVAS eSn Sn 06 10 20.7 +0.4
BOVS Bovan 5.42 10 ePn Pn 06 09 23.4 +1.5
BOVS eSn Sn 06 10 26.8 +2.9
GRUS Gruza 5.59 3 ePn Pn 06 09 25.4 +1.2
DIVS Divibare 5.80 357 ePn Pn 06 09 28.0 +0.9
DIVS eSn Sn 06 10 33.0 -0.2
TRUS Trudelj 5.92 0 ePn Pn 06 09 29.8 +1.1
TRUS eSn Sn 06 10 37.9 +1.9
MLR Muntele Rosu 8.30 28 Pn Pn 06 10 00.7 -0.8
comp=E,0.1nm,0.3s,baz=193,slow=18,SNR=1.8
SOKA Soboth 9.25 337 ePn Pn 06 10 15.1 +0.6
comp=E,2.4nm,0.3s
OBKA Obir 9.26 334 ePn Pn 06 10 16.1 +1.5
comp=E,2.7nm,0.5s
MOA Molln 10.53 337 ePn Pn 06 10 33.1 +1.2
comp=E,1.7nm,0.2s
NIE Niedzica 11.11 360 ePg Pn 06 10 56.6 +17
NIE eSg 06 11 15.4
VRAC Vranov 11.33 347 LR LR 06 15 17.7
comp=E,38nm,19.4s,baz=319,slow=39
DAVOX Davos/Dischmat 11.46 321 Pn Pn 06 10 49.4 +4.5
comp=E,0.2nm,0.3s,baz=145,slow=18,SNR=3.7
DAVOX Sn Sn 06 12 49.0 -3.5
comp=E,0.4nm,0.3s,baz=298,slow=15,SNR=2.8
GERES GERESS Array B 11.59 338 Pn Pn 06 10 46.6 +0.1
comp=E,0.3nm,0.3s,baz=158,slow=14,SNR=5.2
GERES Sn Sn 06 12 50.6 -4.8
comp=E,0.3nm,0.3s,baz=161,slow=30,SNR=3.2
OKC Ostrava-Krasne 11.64 353 ePG Pn 06 10 36.8 -10
OKC eSG 06 10 39.9
comp=E,95nm,0.5s
MORC Moravsky Berou 11.65 351 ePG Pn 06 10 44.1 -3.2
MORC eSG 06 10 52.0
OJC Ojcow 11.92 358 ePg Pn 06 10 50.1 -0.9
OJC eSg 06 11 03.2
KRLC Kraliky 12.04 349 ePG Pn 06 10 52.4 -0.3
KRLC eSG 06 11 07.9
comp=E,12nm,0.6s
DPC Dobruska-Polom 12.38 348 ePG Pn 06 10 59.6 +2.3
DPC eSG 06 11 19.3
comp=E,4.9nm,0.3s
OSTC Ostas 12.60 348 ePG Pn 06 11 02.0 +1.7
OSTC eSG 06 11 23.9
CHVC Chvalec 12.66 347 ePG Pn 06 11 03.8 +2.7
CHVC eSG 06 11 27.2
HFS Hagfors 22.26 351 P P 06 12 57.8 0.0
comp=E,2.3nm,0.9s,baz=160,slow=9.0,SNR=2.7
EKA Eskdalemuir Ar 23.25 325 P P 06 13 09.0 +0.8
comp=E,2.2nm,0.9s,baz=118,slow=11,SNR=3.8
FINES FINESS Array B 23.44 7 P P 06 13 08.6 -1.4
comp=E,0.7nm,0.6s,baz=205,slow=9.2,SNR=1.5
NOA NORSAR Array B 23.47 349 P P 06 13 10.9 +0.5
comp=E,0.4nm,0.7s,baz=160,slow=9.0,SNR=2.4
MKAR Makanchi Array 45.34 58 P P 06 16 18.6 -0.4
comp=E,0.2nm,0.5s,baz=274,slow=6.1,SNR=5.7
ZALV Zalesovo Beam 45.70 48 P P 06 16 20.8 -0.8
comp=E,0.6nm,0.3s,baz=280,slow=8.6,SNR=1.7

NIED 19 06:20:00, 37.20N×141.20E, h29km, Mw3.5 Best double couple: M0 1.77000×10^14 NP1:φs 222.00000°, δ80.00000°, λ-113.00000°. NP2:φs 110.00000°, δ25.00000°, λ-24.00000°.
IDC 19 06:20:02.8±3.3, 37.16N×141.69E, h0km, mb3.6/4, mb1 3.6/6, mb1mx3.4/47, mbtmp3.7/6, ML2.5/1, Error ellipse: s-maj=55.6km s-min=32.8km az=107.0
JMA 19 06:20:10.9±0.1, 37.25N×141.14E, h35km±1km, M3.8
JMA Felt II J1.
ISC 19 06:20:05.9±1.7, 37.17N±0.05×141.34E±0.07, h12km±10km, n23, σ0.94/29, mb3.5/4, Near east coast of eastern Honshu
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ONAJ Iwakimizuishiy 0.44 261 P Pn 06 20 18.6 +0.5
ONAJ S Sb 06 20 23.8 +1.6
JFFD Fukushimafurud 0.63 263 P Pn 06 20 21.0 +0.3
JFFD S Sb 06 20 27.9 +0.3
JMST Minamisoumatoc 0.66 327 P Pn 06 20 21.2 +0.1
JMST S Sb 06 20 28.5 0.0
JMM Marumori 0.82 328 P Pn 06 20 23.6 +0.4
JMM S Sb 06 20 32.9 -0.1
JHO Hitachi 0.84 228 P Pn 06 20 24.7 +1.2
JHO S Sn 06 20 34.7 -1.0
JFT Otama 0.87 294 P Pn 06 20 24.6 +0.6
JFT S Sb 06 20 34.2 -0.4
JSB Shiboa 1.16 260 P Pg 06 20 29.8 +1.7
JSB S Sn 06 20 43.6 -0.1
JIO Ouri 1.28 0 P Pg 06 20 31.3 +0.8
JIO S Sg 06 20 46.2 -0.9
JOU Okura 1.31 336 P Pg 06 20 31.6 +0.6
JOU S Sg 06 20 47.5 -0.5
JFY Yanaizu 1.33 281 P Pg 06 20 31.4 0.0
JFY S Sb 06 20 46.7 -1.0
MJAR Matsushiro Arr 2.59 257 Pn Pb 06 20 50.3 -2.0
0.8nm,0.3s,baz=84,slow=16,SNR=15
MJAR Sn Sb 06 21 24.1 0.0
1.2nm,0.3s,baz=260,slow=28,SNR=4.7
MAT Matsushiro 2.59 257 P Pb 06 20 51.7 -0.6
MAT S Sb 06 21 22.2 -1.9
JHJ Hachijo jima 2 4.24 198 Pn Pn 06 21 09.4 -0.9
baz=23,slow=7.7,SNR=2.6
SONM Songino Array 27.66 304 P P 06 25 54.1 +0.5
0.5nm,0.6s,baz=100,slow=9.0,SNR=3.8
H11N2 WAKE ISLAND Hy 28.27 121 T T 06 55 59.6
baz=314,slow=75,SNR=18
H11N1 WAKE ISLAND Hy 28.28 121 T T 06 56 00.2
baz=314,slow=75,SNR=28
H11N3 WAKE ISLAND Hy 28.29 121 T T 06 56 00.9
baz=314,slow=75,SNR=22
H11S1 WAKE ISLAND Hy 28.98 123 T T 06 56 55.4
baz=315,slow=76,SNR=17
H11S3 WAKE ISLAND Hy 28.98 123 T T 06 56 47.7
baz=315,slow=76,SNR=9.8
H11S2 WAKE ISLAND Hy 29.00 123 T T 06 56 59.8
baz=315,slow=76,SNR=8.5
ZALV Zalesovo Beam 41.78 312 P P 06 27 55.7 +0.7
0.6nm,0.5s,baz=107,slow=7.7,SNR=3.1
MKAR Makanchi Array 44.00 302 P P 06 28 13.8 +0.7
0.5nm,0.8s,baz=83,slow=10.0,SNR=5.3
KURBB Kurchatov Arra 45.87 308 P P 06 28 28.4 +0.5
0.8nm,0.7s,baz=85,slow=8.2,SNR=7.3

JMA 19 06:20:56.9±0.1, 24.73N×123.45E, h12km±3km, M3.6
IDC 19 06:20:58.7±1.2, 24.22N×123.50E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.4/48, mbtmp3.6/4, Error ellipse: s-maj=66.7km s-min=26.1km az=71.0
ISC 19 06:20:56.6±1.5, 24.74N±0.09×123.46E±0.03, h13km±11km, n12, σ0.19/18, mb3.6/4, Southwestern Ryukyu Islands
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
IRIF Iriomote-Funau 0.47 149 P Pg 06 21 06.1 +0.2
IRIF S Sg 06 21 12.2 0.0
YOJ Yonaguni jima 0.49 236 P Pg 06 21 06.4 0.0
YOJ S Sg 06 21 12.9 -0.1
JYNG Yonagunijimaku 0.55 239 P Pg 06 21 07.4 0.0
JYNG S Sg 06 21 14.9 +0.2
JKRS Kuro-shima 0.71 135 P Pg 06 21 10.6 +0.2
JKRS S Sg 06 21 19.9 +0.2
JIJ Ishigaki jima 0.72 121 P Pg 06 21 10.6 -0.1
JIJ S Sg 06 21 20.1 -0.2
HATJ Hateruma jima 0.75 155 P Pg 06 21 11.1 -0.1
HATJ S Sg 06 21 20.6 -0.4
JISG Ishigakijimahi 0.79 101 P Pg 06 21 11.8 -0.1
JISG eS Sg 06 21 22.4 +0.1
JTJ Tarama 1.13 95 P Pb 06 21 18.0 -0.1
JTJ S Sb 06 21 33.0 +0.3
MKAR Makanchi Array 39.41 315 P P 06 28 33.4 +7.2
0.2nm,0.5s,baz=102,slow=8.8,SNR=4.6
WRA Warramunga Arr 45.66 166 P P 06 29 17.0 -0.2
1.5nm,0.7s,baz=348,slow=8.6,SNR=5.8
ASAR Alice Springs 49.17 167 P P 06 29 44.6 +0.1
0.6nm,0.7s,baz=351,slow=6.8,SNR=5.7
YKA Yellowknife Ar 81.65 23 P P 06 33 20.9 +6.6
0.3nm,0.7s,baz=309,slow=4.7,SNR=5.4

TAP 19 06:21:13.0, 24.45N×121.93E, h11km, ML2.1, C
ISC 19 06:21:13.3±1.2, 24.45N±0.05×121.93E±0.06, h15km±9km, n11, σ0.36/16, Taiwan
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ENA Nanau 0.17 263 P Pb 06 21 18.0 -0.3
baz=260
ENA iS Sg 06 21 20.9 +0.4
baz=260
TWC Suao 0.18 335 iP Pb 06 21 17.6 -0.7
baz=336
TWC eS Sg 06 21 20.0 -0.5
baz=336
EOS1 EOS1 0.21 61 eP Pg 06 21 18.0 -0.1
baz=61
EOS1 eS Sg 06 21 21.7 +0.4
baz=61
ENTT Nioudou 0.38 300 eP Pb 06 21 22.0 +0.2
baz=299
ENTT iS Sb 06 21 27.4 -0.1
baz=299
NACB Ninganchiao 0.41 228 eP Pb 06 21 22.0 -0.3
baz=228
ETLH Xiulin Townshi 0.47 240 iP Pb 06 21 23.3 -0.2
baz=239
ETLH eS Sb 06 21 30.5 +0.2
baz=239
NNSB Datong 0.50 268 eP Pb 06 21 24.0 +0.1
baz=267
NNSH Datong 0.50 268 eP Pb 06 21 24.1 +0.2
baz=267
NWLT Wulai 0.51 310 eP Pb 06 21 24.1 +0.2
baz=309
TIPB Shuangxi 0.53 350 eP Pb 06 21 24.8 +0.4
baz=349
YHNB Yeheng 0.55 294 eP Pb 06 21 24.9 +0.2
baz=292

IDC 19 06:24:01.8±0.7, 26.21N×141.76E, h0km, mb4.0/15, mb1 4.1/15, mb1mx3.9/46, mbtmp4.0/15, MS3.1/6, Ms1 3.2/6, ms1mx2.8/40, Error ellipse: s-maj=25.5km s-min=14.3km az=92.0
NEIC 19 06:24:06.9±1.4, 26.27N±0.09×141.9E±0.2, h35km±7km, mb4.5/3, Error ellipse: s-maj=25.1km s-min=11.3km az=108.0
JMA 19 06:24:07.2, 26.27N×141.88E, h38km, M4.5
JMA Felt II J1.
ISC 19 06:24:07.4±0.7, 26.27N±0.07×142.0E±0.1, h40km, n36, σ1.00/30, mb4.1/17, MS3.1/4, Bonin Islands region
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JHH2 Haha-jima-NKT2 0.41 27 P Pn 06 24 16.9 -0.1
JHH2 S Sn 06 24 23.9 +0.2
CBIJ Chichi jima 0.85 13 P Pn 06 24 23.0 +0.1
CBIJ eS Sn 06 24 34.5 +0.3
JCJ Chichijima 0.85 13 Pn Pn 06 24 22.8 -0.1
254nm,0.3s,baz=285,slow=18,SNR=39
JCJ Sn Sn 06 24 33.2 -1.0
674nm,0.3s,baz=273,slow=22,SNR=11
BSO3 Boso 3 8.60 352 P Pn 06 26 09.6 +0.5
BSO3 eS Sn 06 27 45.8 +1.1
BSO4 Boso 4 8.81 351 P Pn 06 26 14.4 +2.3
BSO4 eS Sn 06 27 50.7 +0.7
JHU Hanno 9.83 347 eS Sn 06 28 13.9 -1.3
JHO Hitachi 10.38 354 eS Sn 06 28 26.3 -2.5
JNU Nakatsue 11.81 308 LR LR 06 31 14.7
comp=Z,40nm,18.0s,baz=170,slow=37
KSRS Korea Array 16.31 317 LR LR 06 33 45.9
comp=Z,44nm,18.9s,baz=136,slow=36
TGY Tagaytay City 23.11 243 LR LR 06 37 06.2
comp=Z,90nm,19.1s,baz=188,slow=34
H11N2 WAKE ISLAND Hy 23.83 101 T T 06 53 49.8
baz=291,slow=75,SNR=14
H11N1 WAKE ISLAND Hy 23.83 101 T T 06 53 45.5
baz=291,slow=75,SNR=15
H11N3 WAKE ISLAND Hy 23.84 101 T T 06 53 56.1
baz=291,slow=75,SNR=14
H11S3 WAKE ISLAND Hy 24.10 104 T T 06 54 15.5
baz=294,slow=75,SNR=23
H11S1 WAKE ISLAND Hy 24.11 104 T T 06 54 16.0
baz=294,slow=75,SNR=16
H11S2 WAKE ISLAND Hy 24.12 104 T T 06 54 16.9
baz=294,slow=75,SNR=24
KLR Kul'dur 24.26 344 P P 06 29 22.3 +1.6
2.2nm,0.6s,baz=176,slow=4.8,SNR=11
PETK Petropavlovsk- 29.28 20 LR LR 06 40 22.1
comp=Z,18nm,20.9s,baz=62,slow=33
SONM Songino Array 35.18 317 P P 06 30 56.6 -1.0
0.2nm,0.5s,baz=131,slow=7.9,SNR=3.5
CMAR Chiang Mai Arr 40.40 268 LR LR 06 48 46.7
comp=Z,22nm,18.1s,baz=135,slow=37
TIXI Tiksi 46.01 354 P P 06 32 27.0 +0.5
1.0nm,0.4s,baz=127,slow=7.0,SNR=4.3
WB0 Warramunga Arr 46.35 190 P P 06 32 29.3 -0.4
WB0 IAmb IAmb 06 32 38.7
comp=Z,10nm,1.2s
WR0 Warramunga Arr 46.51 190 P P 06 32 30.4 -0.5
WR0 IAmb IAmb 06 32 34.9
comp=Z,10nm,1.3s
WRA Warramunga Arr 46.53 190 P P 06 32 30.9 -0.2
comp=Z,2.4nm,0.3s,baz=10,slow=8.7,SNR=24
ASAR Alice Springs 50.25 190 P P 06 32 59.1 -0.6
comp=Z,0.3nm,0.5s,baz=17,slow=6.8,SNR=3.2
NRIK Noril'sk 53.35 339 P P 06 33 22.6 +0.2
comp=Z,2.3nm,0.6s,baz=123,slow=11,SNR=4.7
KURBB Kurchatov Arra 53.48 315 P P 06 33 22.5 -1.1
comp=Z,0.7nm,0.5s,baz=92,slow=8.2,SNR=4.4
STKA Stephens Creek 57.82 180 P P 06 33 54.6 -0.1
comp=Z,1.1nm,0.5s,baz=0.0,slow=5.1,SNR=2.9
BVAR Borovoye Array 58.52 318 P P 06 33 59.3 -0.3
comp=Z,1.4nm,0.4s,baz=85,slow=6.3,SNR=11
GEYT Alibeck 69.79 303 P P 06 35 13.0 -0.9
comp=Z,0.7nm,0.5s,baz=57,slow=5.3,SNR=2.3
YKA Yellowknife Ar 72.96 28 P P 06 35 33.1 +0.7
comp=Z,0.4nm,0.5s,baz=295,slow=6.2,SNR=8.8
ARCES ARCESS Array B 74.26 341 P P 06 35 40.8 +0.8
comp=Z,3.2nm,0.9s,baz=74,slow=6.9,SNR=3.5
FINES FINESS Array B 78.61 334 P P 06 36 05.0 +0.3
comp=Z,2.7nm,0.4s,baz=69,slow=5.0,SNR=43
NVAR Mina Array Bea 81.18 52 P P 06 36 20.6 +1.2
comp=Z,0.2nm,0.4s,baz=305,slow=3.2,SNR=3.1
NVAR LR LR 07 06 44.8
comp=Z,49nm,19.3s,baz=220,slow=32
NB2 NORSAR Subarra 84.31 338 PKPdf P 06 36 34.2 -0.7
comp=Z,0.4nm,0.5s,baz=28,slow=1.7
NOA NORSAR Array B 84.31 338 P P 06 36 34.3 -0.7
comp=Z,1.1nm,0.8s,baz=46,slow=4.9,SNR=4.2

NNC 19 06:31:04.7±2.8, 54.15N×86.58E, h0km, mb3.1, mpv2.9, 6C-5D, Error ellipse: s-maj=28.6km s-min=13.2km az=6.0, Suspected Mining explosion., Southwestern Siberia
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ZAA0 Zalesovo Array 1.05 260 ⇑P Pg 06 31 24.5 -0.4
0.6nm,0.5s
ZAA0 ⇑S Sb 06 31 39.5 -0.6
11nm,1.2s
KURK Kurchatov 5.96 238 ⇓Pn Pn 06 32 35.2 +1.2
4.6nm,1.3s
KURK ⇑Sn Sn 06 33 42.9 0.0
0.9nm,0.5s
KURK ⇑Lg Lg 06 34 12.4
5.4nm,0.9s
KURBB Kurchatov Arra 6.06 238 ⇑Pn Pn 06 32 37.0 +1.6
1.7nm,0.4s
KURBB ⇓Sn Sn 06 33 46.3 +0.9
6.8nm,0.8s
KURBB ⇓Lg Lg 06 34 16.4
8.2nm,0.7s
MK31 Makanchi Array 7.85 202 ⇓Pn Pn 06 33 02.2 +2.1
0.6nm,0.5s,baz=27,slow=14,SNR=52
MK31 ⇓Sn Sn 06 34 31.3 +1.7
0.5nm,0.5s,baz=25,slow=28,SNR=5.7
MK31 ⇑Lg Lg 06 35 12.2
4.2nm,1.0s,baz=25,slow=27,SNR=5.0
MK31 Makanchi Array 7.85 202 P Pn 06 33 02.7 +2.6
MK31 IAmb IAmb 06 33 04.8
comp=Z,2.1nm,1.2s

IDC 19 06:32:00.9±3.0, 9.66S×119.82E, h0km, mb3.4/1, mb1 3.4/3, mb1mx3.2/32, mbtmp3.2/3, ML3.5/2, Error ellipse: s-maj=253.9km s-min=29.5km az=50.0, Sumba region
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 17.35 128 P P 06 36 06.2 0.0
0.2nm,0.3s,baz=310,slow=15,SNR=7.7
WRA S Sn 06 39 02.0 -17
0.1nm,0.3s,baz=289,slow=22,SNR=3.2
ASAR Alice Springs 19.37 138 P P 06 36 27.6 -0.8
0.1nm,0.3s,baz=307,slow=12,SNR=5.9
MKAR Makanchi Array 65.41 333 P P 06 42 45.5 0.0
0.2nm,0.4s,baz=148,slow=6.8,SNR=5.2

SJA 19 06:35:02.9±0.6, 21.29S×68.82W, h129km±4km, ML2.6, MW3.0
GUC 19 06:35:03.6±0.6, 21.26S×68.73W, h123km±3km, ML3.7
ISC 19 06:35:03.4±1.4, 21.26S±0.03×68.86W±0.05, h129km±10km, n29, σ0.57/56, 12C-9D, Chile-Bolivia border region
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PB01 IPOC Station P 0.63 290 ⇑iP Pn 06 35 23.0 -0.3
PB01 iS Sn 06 35 37.7 -0.6
PB01 IAML 06 35 38.9
comp=E,2µm,0.1s
PB09 IPOC Station P 0.64 214 ⇓eP Pn 06 35 23.6 +0.1
PB09 iS Sn 06 35 38.4 -0.3
PB09 IPOC Station P 0.64 214 iP Pn 06 35 23.7 +0.2
PB09 eS Sn 06 35 38.9 +0.2
PB02 IPOC Station P 0.97 267 ⇑iP Pn 06 35 26.4 +0.3
PB02 iS Sn 06 35 43.5 +0.2
PB02 IAML 06 35 45.5
comp=E,3µm,0.2s
PB07 IPOC Station P 1.06 244 ⇑iP Pn 06 35 27.3 +0.3
PB07 iS Sn 06 35 45.3 +0.3
PB07 IAML 06 35 47.5
comp=N,969nm,0.2s
PB03 IPOC Station P 1.14 227 ⇑iP Pn 06 35 28.1 +0.3
PB03 iS Sn 06 35 46.4 +0.1
PB03 IAML 06 35 47.1
comp=E,1µm,0.1s
PB08 IPOC Station P 1.15 346 ⇓iP Pn 06 35 27.9 -0.3
PB08 iS Sn 06 35 46.4 -0.5
PB08 IAML 06 35 49.1
comp=N,654nm,0.1s
PATCX Punta Patache 1.29 290 ⇑iP Pn 06 35 29.7 +0.5
PATCX iS Sn 06 35 49.1 +0.2
PATCX IAML 06 35 51.5
comp=E,3µm,0.2s
LVC Limon Verde 1.34 182 ⇑iP Pn 06 35 29.9 -0.2
LVC iS Sn 06 35 50.0 -0.3
LVC Limon Verde 1.34 182 ⇓iP Pn 06 35 29.9 -0.2
LVC eS Sn 06 35 49.8 -0.5
LVC IAML 06 35 54.2
comp=Z,107nm,0.5s
TA01 Diego Aracena 1.42 299 ⇑iP Pn 06 35 30.6 +0.1
TA01 iS Sn 06 35 51.4 +0.2
TA01 IAML 06 35 53.0
comp=E,2µm,0.3s
PB06 IPOC Station P 1.58 205 ⇓iP Pn 06 35 32.8 +0.3
PB06 iS Sn 06 35 55.1 +0.3
PB06 IAML 06 35 55.5
comp=E,841nm,0.4s
PB06 IPOC Station P 1.58 205 iP Pn 06 35 32.7 +0.1
PB06 eS Sn 06 35 55.0 +0.3
PB04 IPOC Station P 1.60 228 ⇑iP Pn 06 35 33.0 +0.2
PB04 iS Sn 06 35 55.6 +0.4
PB04 IAML 06 36 02.3
comp=N,576nm,0.2s
PB04 IPOC Station P 1.60 228 iP Pn 06 35 33.4 +0.5
PB04 eS Sn 06 35 55.6 +0.4
GO01 Chusmiza 1.62 349 ⇓iP Pn 06 35 32.9 -0.5
GO01 iS Sn 06 35 55.9 -0.1
GO01 IAML 06 35 58.1
comp=E,1µm,0.1s
PB11 IPOC Station P 1.67 333 ⇓iP Pn 06 35 33.1 -0.5
PB11 iS Sn 06 35 56.4 -0.2
PB11 IAML 06 35 57.9
comp=E,1µm,0.1s
PB05 IPOC Station P 2.02 218 ⇑iP Pn 06 35 37.8 +0.2
PB05 iS Sn 06 36 03.9 0.0
PB05 IAML 06 36 06.5

comp=E,199nm,0.6s
PB05 IPOC Station P 2.02 218 iP Pn 06 35 38.1 +0.4
PB05 eS Sn 06 36 04.3 +0.4
PB15 IPOC Station P 2.02 196⇑iP Pn 06 35 38.1 +0.3
PB15 iS Sn 06 36 00.5 +0.9
PB15 IPOC Station P 2.02 196 iP Pn 06 35 38.2 +0.5
PB15 eS Sn 06 36 04.3 +0.2
PSGC Pisagua 2.04 324⇓iP Pn 06 35 37.2 -0.7
PSGC iS Sn 06 36 03.7 -0.7
PSGC IAML 06 36 05.5
comp=E,348nm,0.4s
MNMC Minye Minye 2.23 342⇓iP Pn 06 35 40.2 -0.3
MNMC iS Sn 06 36 09.0 +0.1
PB10 IPOC Station P 2.73 215⇑iP Pn 06 35 46.5 0.0
PB10 iS Sn 06 36 17.4 -2.5
PB10 IPOC Station P 2.73 215 iP Pn 06 35 46.8 +0.2
PB16 IPOC Station P 2.98 348⇓iP Pn 06 35 50.3 +0.1
PB16 iS Sn 06 36 27.2 +0.9
HJA Humahuaca 3.73 122 iP Pn 06 36 00.6 +0.6
HJA IAML 06 36 02.0
comp=Z,5.9nm,0.5s
HJA eS Sn 06 36 43.5 -0.3
GO02 Mina Guanaco 3.94 190⇑iP Pn 06 36 02.1 -0.5
GO02 iS Sn 06 36 47.1 -1.4
LPAZ La Paz 5.00 8 iP Pn 06 36 18.1 +1.0

IDC 19 07:15:39.3±3.3, 45.44N×149.89E, h0km, mb3.7/9, mb1 3.9/9, mb1mx3.6/51, mbtmp3.7/9, MS2.7/1, Ms1 2.7/1, ms1mx2.2/46, Error ellipse: s-maj=89.3km s-min=24.2km az=174.0
MOS 19 07:15:47.6±1.9, 45.44N×149.90E, h95km, mb3.9/4, Error ellipse: s-maj=15.6km s-min=7.9km az=62.9
SKHL 19 07:15:54.3±0.6, 45.39N×149.83E, h129km±7km, mb4.8/4, msh5.4/5
ISC 19 07:15:49.7±0.9, 46.1N±0.1×150.1E±0.1, h61km, n43, σ2s43/42, mb3.7/11, 9C-2D, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KUR Kuril'sk 1.77 243 iP Pn 07 16 22.5 +4.5
KUR AMB AMB 07 16 23.3
150nm,0.3s
KUR iS Sn 07 16 44.2 +4.7
KUR A A 07 16 45.0
450nm,0.3s
KUR A A 07 16 45.0
330nm,0.3s
KUR Kuril'sk 1.77 243c iPN Pn 07 16 22.5 +4.5
KUR iS Sn 07 16 44.2 +4.7
KUR pmax pmax
comp=N,45nm,0.1s
KUR pmax pmax
comp=E,27nm,0.1s
KUR pmax pmax
comp=Z,150nm,0.1s
KUR smax smax
comp=N,545nm,0.2s
KUR smax smax
comp=E,334nm,0.2s
SHO Shikotan 3.19 228 eP Pn 07 16 38.3 +0.9
SHO AMB AMB 07 16 39.3
comp=E,30nm,0.3s
SHO eS Sn 07 17 09.3 -4.9
SHO A A 07 17 09.6
comp=E,129nm,0.3s
SHO A A 07 17 09.6
comp=E,212nm,0.3s
SHO Shikotan 3.19 228 PN Pn 07 16 36.3 -1.1
SHO pmax pmax
comp=Z,30nm,0.1s
YUK Yuzh-Kuril'sk 3.62 237 eP Pn 07 16 45.0 +1.8
YUK AMB AMB 07 16 46.0
comp=Z,123nm,0.2s
YUK eS Sn 07 17 23.0 -1.7
YUK A A 07 17 25.0
comp=Z,144nm,0.3s
YUK A A 07 17 25.0
comp=Z,105nm,0.3s
YUK Yuzh-Kuril'sk 3.62 237 ePN Pn 07 16 45.1 +1.8
YUK pmax pmax
comp=N,20nm,0.2s
YUK pmax pmax
comp=Z,123nm,0.2s
YUK pmax pmax
comp=E,48nm,0.1s
GRPR Tuman 3.70 237 eP Pn 07 16 45.0 +0.7
GRPR AMB AMB 07 16 47.0
comp=E,57nm,0.3s
GRPR eS Sn 07 17 25.0 -1.6
GRPR A A 07 17 26.0
comp=E,160nm,0.4s
GRPR A A 07 17 26.0
comp=E,122nm,0.4s
GRPR Tuman 3.70 237 ePN Pn 07 16 45.9 +1.6
GRPR pmax pmax
comp=Z,57nm,0.1s
GLVR Golovnino 4.00 236 eP Pn 07 16 49.0 +0.6
GLVR eS Sn 07 17 30.0 -3.9
GLVR A A 07 17 35.0
comp=Z,170nm,0.3s
GLVR A A 07 17 35.0
comp=Z,208nm,0.3s
GLVR Golovnino 4.00 236 ePN Pn 07 16 49.3 +0.9
NMR Nemuro--Hokkai 4.12 231 iP Pn 07 16 49.0 -1.0
NMR Nemuro--Hokkai 4.12 231⇓iPN Pn 07 16 49.0 -1.0
SKR Severo-Kuril's 6.12 39⇓ePN Pn 07 17 13.9 -3.4
PEA0B Petropavlovsk- 8.60 32⇑ePN Pn 07 17 50.0 -1.4
PET Petropavlovsk 8.91 36⇑ePN Pn 07 17 52.7 -2.8
KLR Kul'dur 12.76 291 LR LR 07 24 20.8
comp=Z,28nm,18.1s,baz=259,slow=40
KLR Kul'dur 12.76 291⇓ePN Pn 07 18 45.1 -3.0
YAK Yakutsk 19.83 331 eP P 07 20 14.8 -0.3
YAK Yakutsk 19.83 331⇑eP P 07 20 14.8 -0.3
YAK pmax pmax
comp=Z,10.0nm,0.6s
TIXI Tiksi 27.57 346⇑eP P 07 21 27.3 -3.1
H11N2 WAKE ISLAND Hy 29.69 147 T T 07 52 48.8
baz=331
H11N1 WAKE ISLAND Hy 29.71 147 T T 07 52 50.2
baz=331,slow=74
H11N3 WAKE ISLAND Hy 29.71 147 T T 07 52 52.3
baz=331,slow=74
H11S1 WAKE ISLAND Hy 30.73 148 T T 07 54 01.9
baz=336
H11S3 WAKE ISLAND Hy 30.74 148 T T 07 54 06.4
baz=336,slow=74
H11S2 WAKE ISLAND Hy 30.75 148 T T 07 54 03.3
baz=336,slow=74
ILAR Eielson Array 38.38 38 P P 07 23 07.0 +2.5
comp=Z,0.5nm,0.7s,baz=272,slow=7.8,SNR=6.5
ILAR Eielson Array 38.38 38 eP P 07 23 07.5 +3.0
ILAR pmax pmax
comp=Z,1.0nm,0.7s
INK Inuvik 43.34 32 P P 07 23 48.5 +3.3
comp=Z,0.4nm,0.3s,baz=308,slow=9.0,SNR=8.8
MK31 Makanchi Array 45.38 297⇑eP P 07 24 02.5 +0.6
MKAR Makanchi Array 45.38 297 P P 07 24 01.9 0.0
comp=Z,0.6nm,0.6s,baz=75,slow=8.3,SNR=6.9
MKAR Makanchi Array 45.38 297 eP P 07 24 03.1 +1.2
MKAR Makanchi Array 45.38 297 eP P 07 24 03.1 +1.2
MKAR pmax pmax
comp=Z,1.0nm,0.6s
KURK Kurchatov 45.99 303 eP P 07 24 06.1 -0.4
KURK Kurchatov 45.99 303⇑eP P 07 24 06.1 -0.4
KURK pmax pmax
comp=Z,1.0nm,1.0s
KURBB Kurchatov Arra 46.08 303 P P 07 24 06.5 -0.8
comp=Z,0.6nm,0.5s,baz=74,slow=7.9,SNR=6.3
AAK Ala-Archa 52.24 295 eP P 07 24 56.8 +2.1
AAK Ala-Archa 52.24 295⇑eP P 07 24 56.8 +2.1
AAK pmax pmax
comp=Z,1.0nm,1.0s
YKA Yellowknife Ar 52.70 36 P P 07 24 59.3 +1.8
comp=Z,0.5nm,0.7s,baz=296,slow=7.0,SNR=1.1
FINES FINESS Array B 63.74 334 P P 07 26 14.7 +0.2
comp=Z,1.2nm,0.8s,baz=60,slow=11,SNR=3.6
NOA NORSAR Array B 68.17 340 P P 07 26 43.3 +0.3
comp=Z,0.2nm,0.4s,baz=25,slow=6.9,SNR=2.5
AKASG Malin Array Be 70.92 325 P P 07 27 00.5 +0.4
comp=Z,0.5nm,0.4s,baz=38,slow=6.3,SNR=3.3
TXAR Lajitas Array 79.64 58 P P 07 27 50.8 +0.1
comp=Z,0.2nm,0.5s,baz=296,slow=4.8,SNR=6.3

IDC 19 07:30:53.9±0.5, 57.31S×23.71W, h0km, mb4.5/13, mb1 4.5/14, mb1mx4.4/29, mbtmp4.5/14, ML4.4/1, MS3.6/3, Ms1 3.6/3, ms1mx3.1/17, Error ellipse: s-maj=19.0km s-min=16.2km az=13.0
NEIC 19 07:30:58.8±1.1, 57.4S±0.1×23.7W±0.1, h31km±4km, mb4.7/16, Error ellipse: s-maj=20.7km s-min=10.3km az=186.0
ISC 19 07:30:55.4±0.4, 57.33S±0.09×23.64W±0.09, h10km, n59, σ0s77/59, mb4.5/17, MS3.6/3, South Sandwich Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HOPE Hope Point 7.86 287 Pn Pn 07 32 50.9 +1.3
VNA1 Neumayer--Stat 14.89 160 P Pn 07 34 26.0 +0.4
VNA3 Neumayer Olymp 15.15 163 P Pn 07 34 28.6 -0.6
VNA2 Neumayer--Watz 15.29 160 P Pn 07 34 30.1 -0.8
baz=326,slow=15
SNAA Sanae 16.79 157 P P 07 34 52.1 -0.4
SNAA Sanae 16.79 157 Pn Pn 07 34 50.9 +0.7
1.4nm,0.3s,baz=329,slow=16,SNR=34
SNAA Sn Sn 07 37 41.1 -15
0.2nm,0.3s,baz=53,slow=13,SNR=1.5
SNAA Sanae 16.79 157 P P 07 34 52.1 -0.4
PMSA Palmer Station 20.60 232 P P 07 35 33.8 -0.3
31nm,0.9s,baz=2.2,slow=6.1,SNR=3.5
PMSA Palmer Station 20.60 232 IAmb IAmb 07 35 42.6
comp=Z,48nm,1.0s
EFI East Falkland 20.62 271 P P 07 35 34.9 +0.4
EFI IAmb IAmb 07 35 41.7
comp=Z,45nm,1.0s
QSPA South Pole Qui 32.92 180 P P 07 37 30.4 +0.9
comp=Z,2.8nm,0.5s,baz=186,slow=1.4,SNR=33
QSPA PcP PcP 07 40 13.9 +0.5
comp=Z,4.7nm,1.1s,baz=270,slow=2.0,SNR=4.7
QSPA South Pole Qui 32.92 180 P P 07 37 30.6 +1.0
PLCA Paso Flores 34.14 279 P P 07 37 38.8 -1.5
comp=Z,3.8nm,1.0s,baz=173,slow=11,SNR=4.4
PLCA PcP PcP 07 40 17.6 +0.3
comp=Z,2.3nm,0.9s,baz=124,slow=2.5,SNR=3.0
PLCA LR LR 07 50 07.1
comp=Z,89nm,21.6s,baz=154,slow=34
PLCA Paso Flores 34.14 279 IAmb IAmb 07 37 51.5
comp=Z,13nm,1.4s
CPUP Villa Florida 39.14 308 P P 07 38 22.4 -0.5
comp=Z,4.9nm,0.8s,baz=146,slow=8.1,SNR=9.4
CPUP Villa Florida 39.14 308 P P 07 38 23.0 +0.1
CFA Coronel Fontan 39.86 291 P P 07 38 26.6 -2.4
comp=Z,2.9nm,0.8s,baz=150,slow=6.1,SNR=9.6
CFA PcP PcP 07 40 35.5 +0.8
comp=Z,2.2nm,0.6s,baz=124,slow=3.4,SNR=5.7
BOSA Boshof 44.45 71 P P 07 39 06.7 +0.2
comp=Z,4.7nm,1.0s,baz=193,slow=7.2,SNR=4.0
BOSA LR LR 07 53 36.9
comp=Z,111nm,18.1s,baz=174,slow=31
BOSA Boshof 44.45 71 IAmb IAmb 07 39 19.3
comp=Z,7.9nm,1.0s
LBTB Lobatse 47.57 69 P P 07 39 30.4 -0.8
comp=Z,4.8nm,0.9s,baz=216,slow=10.0,SNR=3.4
GO01 Chusmiza 50.28 299 P P 07 39 52.5 +0.1
GO01 IAmb IAmb 07 39 58.9
comp=Z,4.2nm,0.8s
PB11 IPOC Station P 50.43 298 P P 07 39 54.0 +0.9
MNMC Minye Minye 50.94 299 P P 07 39 57.7 +0.6
MNMC IAmb IAmb 07 40 05.1
comp=Z,6.7nm,0.7s
LPAZ La Paz 52.72 302 P P 07 40 12.3 +1.5
comp=Z,7.6nm,0.6s,baz=128,slow=4.8,SNR=41
LPAZ La Paz 52.72 302 P P 07 40 12.2 +1.4
SAML Samuel 57.11 311 P P 07 40 42.7 +0.8
SAML IAmb IAmb 07 40 43.3
comp=Z,5.5nm,0.8s
DBIC Dimbokro 65.60 21 P P 07 41 39.1 -0.1
comp=Z,2.6nm,0.7s,baz=157,slow=14,SNR=3.5
TOA0 Torodi Ar. Sit 73.28 26 P P 07 42 27.4 +0.7
TOA0 IAmb IAmb 07 42 28.6
comp=Z,11nm,1.4s
TORD Torodi Ar. Bea 73.28 26 P P 07 42 27.6 +0.9
comp=Z,3.8nm,0.8s,baz=200,slow=6.1,SNR=16
PRAC Prado 73.46 306 eP P 07 42 29.0 +1.1
CHIC Chingaza 73.77 307 eP P 07 42 36.6 +6.4
ORTC Ortega, Tolima 73.79 305 eP P 07 42 31.1 +1.2
ROSC El Rosal 74.22 307 P P 07 42 33.0 +0.3
comp=Z,5.7nm,0.4s,baz=10,slow=21,SNR=4.8
ROSC LR LR 08 17 58.1
comp=Z,27nm,18.2s,baz=123,slow=38
RUSC La Rusia 74.63 308 eP P 07 42 35.7 +0.5
RUSC La Rusia 74.63 308 P P 07 42 35.3 +0.1
SPBC San Pablo de B 74.83 307 eP P 07 42 35.3 -0.7
NORC Norcasia 75.10 307 eP P 07 42 36.6 -0.8
PTBC PUERTO BERRIO, 75.80 307 eP P 07 42 40.1 -1.3
CBOC Ciudad Bolivar 75.87 306 eP P 07 42 41.8 -0.2
HELC Santa Helena 75.95 306 eP P 07 42 43.1 +0.4
SDV Santo Domingo 76.31 312 P P 07 42 44.7 +0.1
SDV IAmb IAmb 07 42 46.7
comp=Z,7.5nm,0.8s
SMLC San Martn de 77.66 309 eP P 07 42 51.6 -0.2
STKA Stephens Creek 90.27 167 P P 07 43 55.9 -0.3
comp=Z,3.8nm,1.0s,baz=180,slow=9.1,SNR=3.1
ASAR Alice Springs 97.14 159 P P 07 44 27.7 -0.2
comp=Z,0.9nm,0.7s,baz=185,slow=4.6,SNR=8.3
ULM Lac du Bonnet 122.54 314 PKP PKPdf 07 49 48.5 -1.3
comp=Z,1.2nm,0.6s,baz=143,slow=3.4,SNR=5.5
PDAR Pinedale Array 122.68 299 PKP PKPdf 07 49 50.3 -0.4
comp=Z,0.5nm,0.5s,baz=149,slow=5.8,SNR=6.8
CMAR Chiang Mai Arr 122.79 108 PKP PKPdf 07 49 51.0 -0.3
comp=Z,1.4nm,0.3s,baz=212,slow=3.2,SNR=5.8
NVAR Mina Array Bea 123.69 290 PKP PKiKP 07 49 52.9 -0.1
comp=Z,0.9nm,0.6s,baz=120,slow=2.7,SNR=10
FINES FINESS Array B 124.63 26 PKP PKPdf 07 49 53.1 -0.3
comp=Z,1.8nm,0.6s,baz=194,slow=2.9,SNR=8.4
ARCES ARCESS Array B 131.43 21 PKP PKPdf 07 50 06.3 +0.1
comp=Z,1.3nm,0.5s,baz=209,slow=2.9,SNR=12
YKA Yellowknife Ar 138.45 316 PKhKP PKPpre 07 50 10.0
comp=Z,0.2nm,0.6s,baz=122,slow=2.6,SNR=5.8
YKA PKP PKPdf 07 50 19.4 -0.1
comp=Z,3.7nm,0.8s,baz=128,slow=2.3,SNR=40
YKA PP PP 07 53 10.0 -0.7
comp=Z,0.8nm,0.9s,baz=122,slow=6.8,SNR=7.2
INK Inuvik 148.05 319 PKPbc 07 50 39.3 -0.1
NRIK Noril'sk 148.76 40 PKPbc PKPbc 07 50 40.7 -0.5
comp=Z,1.5nm,0.5s,baz=28,slow=4.0,SNR=5.3
SONM Songino Array 148.85 86 PKPbc PKPbc 07 50 42.5 +0.2
comp=Z,2.7nm,0.7s,baz=223,slow=3.0,SNR=19
TLY Talaya 149.54 78 PKPbc PKPbc 07 50 43.9 +0.1
comp=Z,2.2nm,0.5s,baz=255,slow=8.3,SNR=3.0
SCRK Sand Creek 151.03 308 PKiKP 07 50 48.2 +0.6
RIDG Independent Ri 151.34 308 PKPdf PKiKP 07 50 42.5 +0.8
ILAR Eielson Array 152.44 309 PKPbc PKiKP 07 50 50.5 +0.1
comp=Z,6.5nm,0.7s,baz=129,slow=2.4,SNR=64
KDAK Kodiak Island 153.13 293 PKPbc PKiKP 07 50 52.1 +0.2
comp=Z,8.6nm,1.0s,baz=293,slow=3.3,SNR=5.1

IDC 19 07:31:56.4±3.1, 34.06N×83.89E, h0km, mb3.3/2, mb1 3.5/4, mb1mx3.2/57, mbtmp3.3/4, ML2.7/2, Error ellipse: s-maj=90.4km s-min=29.2km az=78.0, Xizang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MKAR Makanchi Array 12.78 355 Pn Pn 07 34 58.4 -1.0
0.1nm,0.3s,baz=169,slow=15,SNR=5.6
ZALV Zalesovo Beam 19.89 2 P P 07 36 29.8 +0.5
0.1nm,0.3s,baz=192,slow=13,SNR=2.5
SONM Songino Array 21.77 44 P P 07 36 50.0 +0.2
0.3nm,0.4s,baz=232,slow=9.4,SNR=2.9
WRA Warramunga Arr 72.04 130 P P 07 43 22.4 0.0
0.4nm,0.8s,baz=328,slow=6.4,SNR=2.9

SNET 19 07:33:28.3±0.6, 13.34N×90.10W, h34km±7km, ML3.4
GCG 19 07:33:31.3±0.5, 13.45N×90.16W, h25km±2km, MD3.9
ISC 19 07:33:30.2±1.8, 13.40N±0.10×89.98W±0.05, h35km, n22, σ1s92/26, 1C-6D, El Salvador

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FAME Alcaldia de Sa 0.44 356⇓iP Pn 07 33 30.5 -10
FAME eS Sn 07 33 38.8 -8.1
CEVE Cerro Verde 0.55 39⇓iP Pn 07 33 42.2 +0.4
CEVE eS Sn 07 33 53.1 +3.2
SBLS San Blas 0.56 39⇓iP Pn 07 33 42.3 +0.4
RTR El Retiro 0.59 33⇓eP Pn 07 33 42.8 +0.4
SNJE San Jose 0.59 38⇓iP Pn 07 33 42.7 +0.3
UNIC Universidad Ca 0.72 36 eP Pn 07 33 44.0 +0.1
UNIC IAML 07 33 44.4
comp=Z,842nm,0.1s
SNET Serv Nac Est T 0.79 68 eP Pn 07 33 44.7 -0.1
SNET IAML 07 33 46.1
comp=Z,2μm,0.3s
UEES Universidad Ev 0.79 66 eP Pn 07 33 44.9 0.0
OPAM Oficina de Pla 0.82 68 eP Pn 07 33 45.5 +0.1
IXG Ixpaco 0.89 330⇑eP Pn 07 33 46.4 0.0
LFU La Fuente 0.92 67 eP Pn 07 33 46.9 +0.3
PAVA Las Pavas 1.06 73 eP Pn 07 33 49.0 +0.3
PAVA IAML 07 34 08.6
comp=Z,577nm,0.2s
COEG Centro de Oper 1.09 78 eP Pn 07 33 49.1 0.0
PCG Pacaya 1.16 329 eP Pn 07 33 50.7 +0.5
PCG eS Sn 07 34 05.6 +0.7
MTO3 Montecristo 1.16 31⇓iP Pn 07 33 50.0 -0.1
NBG Las Nubes 1.23 343 eP Pn 07 33 52.5 +1.3
NBG eS Sn 07 34 09.0 +2.2
FUG Fuego 3 1.34 321 eP Pn 07 33 52.6 +0.1
FUG eS Sn 07 34 09.8 +0.7
ALJI Alcalda de J 1.38 93 eP Pn 07 33 53.1 +0.2
ALJI IAML 07 34 15.6
comp=Z,402nm,0.3s
COEB Comit de Eme 1.42 86 eP Pn 07 33 53.6 0.0
COEB IAML 07 34 14.5
comp=Z,455nm,0.4s
JUCU Jucuarņn 1.69 95 eP Pn 07 33 57.0 -0.3
JUCU IAML 07 34 29.8
comp=Z,361nm,0.4s
STG3 Santiaguito 3, 2.02 310 eP Pn 07 34 02.0 +0.1
LCND La Caada 2.04 92 eP Pn 07 34 01.9 -0.1

IDC 19 07:35:49.9±0.7, 49.66N×159.29E, h0km, mb4.0/23, mb1 4.2/26, mb1mx4.0/62, mbtmp4.0/26, ML3.4/3, MS2.9/4, Ms1 2.9/4, ms1mx2.5/45, Error ellipse: s-maj=17.4km s-min=12.7km az=167.0
KRSC 19 07:35:51.9±1.5, 49.81N×159.32E, h61km±27km, ML4.3
NEIC 19 07:35:54.4±1.2, 49.66N±0.06×159.2E±0.1, h30km±5km, mb4.5/16, Error ellipse: s-maj=13.5km s-min=8.7km az=70.0
MOS 19 07:35:56.9±0.8, 50.03N×159.18E, h56km, mb4.3/2, Error ellipse: s-maj=13.6km s-min=3.8km az=95.3
ISC 19 07:35:52.4±4.3, 49.81N±0.06×159.25E±0.05, h13km±27km, n113, σ1s00/136, mb4.2/30, East of Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KDTR Khodutka, Kamc 2.14 340 eP Pn 07 36 28.2 +0.4
KDTR eS Sn 07 36 54.4 +0.2
KDTR Khodutka, Kamc 2.14 340 PN Pn 07 36 28.2 +0.4
KDTR S Sn 07 36 54.4 +0.2
SKR Severo-Kuril's 2.19 295 eS Sn 07 36 54.7 -0.7
SKR Severo-Kuril's 2.19 295 ePN Pn 07 36 28.3 -0.2
SKR iS Sn 07 36 54.8 -0.7
SKR pmax pmax
comp=Z,125nm,0.5s
SKR smax smax
comp=E,981nm,0.4s
SKR smax smax
comp=N,485nm,0.3s
PAU Pauzhetka 2.27 318 eP Pn 07 36 30.3 +0.7
PAU eS Sn 07 36 57.4 -0.1
PAU Pauzhetka 2.27 318 PN Pn 07 36 30.3 +0.7
PAU S Sn 07 36 57.4 -0.1
ALID Alaid 2.60 296 eP Pn 07 36 34.9 +0.7
ALID eS Sn 07 37 06.2 +0.5
ALID Alaid 2.60 296 PN Pn 07 36 34.9 +0.7
ALID S Sn 07 37 06.2 +0.5
RUS Russkaya 2.67 350 eP Pn 07 36 35.1 0.0
RUS eS Sn 07 37 06.0 -1.3
RUS Russkaya 2.67 350 PN Pn 07 36 35.1 0.0
RUS S Sn 07 37 06.0 -1.3
ASAK Asacha 2.72 342 eP Pn 07 36 36.5 +0.7
ASAK eS Sn 07 37 09.1 +0.5
ASAK Asacha 2.72 342 PN Pn 07 36 36.5 +0.7
ASAK S Sn 07 37 09.1 +0.5
MTVR Mutnovka 2.76 346 eP Pn 07 36 37.0 +0.5
MTVR Mutnovka 2.76 346 PN Pn 07 36 37.0 +0.5
GRL Gorelyy 2.85 345 eP Pn 07 36 38.9 +1.3
GRL eS Sn 07 37 12.7 +0.8
GRL Gorelyy 2.85 345 PN Pn 07 36 38.9 +1.3
GRL S Sn 07 37 12.7 +0.8
KRMR Karymshinskiy 3.11 347 eP Pn 07 36 41.9 +0.8
KRMR eS Sn 07 37 18.4 +0.3
KRMR Karymshinskiy 3.11 347 PN Pn 07 36 41.9 +0.8
KRMR S Sn 07 37 18.4 +0.3
DALK Dalny 3.25 355 eP Pn 07 36 42.8 -0.2
DALK eS Sn 07 37 20.4 -1.0
DALK Dalny 3.25 355 PN Pn 07 36 42.8 -0.2
DALK S Sn 07 37 20.4 -1.0
PET Petropavlovsk 3.25 354 Pn Pn 07 36 43.3 +0.4
PET Petropavlovsk 3.25 354 ePN Pn 07 36 44.4 +1.5
PET eS Sn 07 37 19.6 -1.8
PET smax smax
comp=E,129nm,0.6s
PET smax smax
comp=N,153nm,0.5s
SPN Mys Shipunski 3.33 8 eP Pn 07 36 43.8 -0.4
SPN eS Sn 07 37 22.2 -1.4
SPN Mys Shipunski 3.33 8 PN Pn 07 36 43.8 -0.4
SPN S Sn 07 37 22.2 -1.4
NLC Nalytchevo 3.37 1 eP Pn 07 36 45.3 +0.6
NLC eS Sn 07 37 23.9 -0.6
NLC Nalytchevo 3.37 1 PN Pn 07 36 45.3 +0.6
NLC S Sn 07 37 23.9 -0.6
APC Apacha 3.39 338 eP Pn 07 36 46.2 +1.3
APC eS Sn 07 37 25.8 +0.9
APC Apacha 3.39 338 PN Pn 07 36 46.2 +1.3
APC S Sn 07 37 25.8 +0.9
UGLR Uglovaya 3.42 356 eP Pn 07 36 45.6 +0.1
UGLR Uglovaya 3.42 356 PN Pn 07 36 45.6 +0.1
PEA0B Petropavlovsk- 3.45 344 Pn Pn 07 36 47.7 +1.9
PEA0B Petropavlovsk- 3.45 344 PN Pn 07 36 47.7 +1.9
PETK Petropavlovsk- 3.45 344 Pn Pn 07 36 47.0 +1.3
comp=N,4.7nm,0.3s,baz=136,slow=16,SNR=53
PETK Sn Sb 07 37 30.9 -4.2
comp=N,5.2nm,0.3s,baz=173,slow=15,SNR=7.0
PETK LR LR 07 38 16.9
comp=N,127nm,20.2s,baz=240,slow=41
SMAR Somma 3.47 356 eP Pn 07 36 47.3 +1.0
SMAR Somma 3.47 356 PN Pn 07 36 47.3 +1.0
AVH Avacha 3.48 355 eP Pn 07 36 47.0 +0.7
AVH Avacha 3.48 355 PN Pn 07 36 47.0 +0.7
SDLR Sedlovina 3.48 356 eP Pn 07 36 46.1 -0.3
SDLR Sedlovina 3.48 356 PN Pn 07 36 46.1 -0.3
KOK Koryaka 3.51 354 eP Pn 07 36 47.0 +0.3
KOK Koryaka 3.51 354 PN Pn 07 36 47.0 +0.3
KRER Koryakskii 3.52 355 eP Pn 07 36 45.9 -1.0
KRER Koryakskii 3.52 355 PN Pn 07 36 45.9 -1.0
KRX Arik 3.58 354 eP Pn 07 36 47.6 -0.1
KRX Arik 3.58 354 PN Pn 07 36 47.6 -0.1
KZV Kizimen 5.36 6 eP Pn 07 37 13.5 +1.4
KZV eS Sn 07 38 13.7 0.0
KZV Kizimen 5.36 6 PN Pn 07 37 13.5 +1.4
KZV S Sn 07 38 13.7 0.0
TUMD Tumrok D 5.45 7 eP Pn 07 37 13.9 +0.6
TUMR Tumrok 5.51 5 eP Pn 07 37 15.9 +1.7
TUMR eS Sn 07 38 18.1 +0.5
TUMR Tumrok 5.51 5 PN Pn 07 37 15.9 +1.7
TUMR S Sn 07 38 18.1 +0.5
KMNR Kamenistaya 5.99 5 eP Pn 07 37 23.1 +2.3
KMNR Kamenistaya 5.99 5 PN Pn 07 37 23.1 +2.3
ESO Esso 6.14 357 eP Pn 07 37 23.8 +1.1
ESO Esso 6.14 357 PN Pn 07 37 23.8 +1.1
ZLN Zelenaya 6.29 8 eP Pn 07 37 25.7 +0.8
ZLN Zelenaya 6.29 8 PN Pn 07 37 25.7 +0.8
SRDR Sredinnyy 6.53 2 eP Pn 07 37 29.1 +1.0
SRDR Sredinnyy 6.53 2 PN Pn 07 37 29.1 +1.0
KBTR Krutoberegovo 6.77 17 eP Pn 07 37 31.6 +0.3
KBTR Krutoberegovo 6.77 17 PN Pn 07 37 31.6 +0.3
SRKR Sorokina 6.96 9 eP Pn 07 37 34.7 +0.7
SRKR Sorokina 6.96 9 PN Pn 07 37 34.7 +0.7
MA2 Magadan 10.94 337 LR LR 07 42 27.7
comp=N,43nm,21.1s,baz=135,slow=36
JKA Kamikawa-asahi 12.71 250 Pn 07 38 51.8 -0.9
ASAJ Asahikawa 12.71 250 Pn Pn 07 38 51.8 -0.9
comp=N,1.0nm,0.3s,baz=94,slow=15,SNR=4.4
KLR Kul'dur 17.83 279 P P 07 40 01.8 +1.1

	comp=N,0.0nm,0.3s,baz=58,slow=19,SNR=2.3						
KLR				LR	LR	07 46 04.5	
	comp=N,33nm,21.5s,baz=9.0,slow=34						
TIXI	Tiksi	25.90	338	P	P	07 41 24.7	+1.1
	comp=N,9.3nm,0.7s,baz=130,slow=9.5,SNR=24						
TIXI	Tiksi	25.90	338	P	P	07 41 25.2	+1.6
TIXI				IAmb	IAmb	07 41 26.4	
	comp=Z,8.7nm,0.7s						
BWN	Browne	30.43	42	P	P	07 42 06.0	+1.8
H11N2	WAKE ISLAND Hy	30.62	166	T	T	08 14 03.1	
	baz=351,slow=76,SNR=15						
H11N3	WAKE ISLAND Hy	30.64	166	T	T	08 14 05.5	
	baz=351,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	30.64	166	T	T	08 14 05.6	
	baz=351,slow=76,SNR=14						
CCB	Clear Creek Bu	31.18	42	P	P	07 42 12.2	+1.5
ILAR	Eielson Array	31.58	41	P	P	07 42 14.1	-0.2
	comp=Z,1.0nm,0.7s,baz=248,slow=7.6,SNR=29						
H11S1	WAKE ISLAND Hy	31.79	166	T	T	08 15 35.4	
	baz=351,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	31.80	167	T	T	08 15 34.5	
	baz=351,slow=76,SNR=16						
H11S2	WAKE ISLAND Hy	31.81	166	T	T	08 15 34.4	
	baz=351,slow=76,SNR=12						
EGAK	Eagle	34.03	41	P	P	07 42 35.4	-0.3
EGAK				IAmb	IAmb	07 42 39.4	
	comp=Z,3.4nm,0.9s						
BARN	Barnard Glacie	34.17	48	P	P	07 42 37.9	+0.7
BARN				IAmb	IAmb	07 42 38.5	
	comp=Z,10nm,1.1s						
SONM	Songino Array	34.26	287	P	P	07 42 37.7	-0.3
	comp=Z,0.3nm,0.7s,baz=69,slow=7.9,SNR=2.3						
CTGM	Chitina Glacie	34.34	48	P	P	07 42 39.5	+0.9
INK	Inuvik	36.84	35	P	P	07 43 00.3	+0.6
	comp=Z,0.6nm,0.6s,baz=288,slow=6.3,SNR=4.0						
SKAG	Skagway	37.58	50	P	P	07 43 08.2	+2.1
SKAG				IAmb	IAmb	07 43 08.7	
	comp=Z,5.7nm,0.8s						
YKA	Yellowknife Ar	45.99	40	P	P	07 44 15.5	+0.7
	comp=Z,1.3nm,0.8s,baz=293,slow=7.5,SNR=14						
YKA				PcP	PcP	07 45 51.0	-0.2
	comp=Z,0.3nm,0.7s,baz=302,slow=3.7,SNR=4.1						
KURK	Kurchatov	49.07	304	P	P	07 44 40.5	+1.5
MKAR	Makanchi Array	49.16	298	P	P	07 44 39.9	+0.1
	comp=Z,0.5nm,0.4s,baz=65,slow=6.8,SNR=13						
MKAR				LR	LR	08 06 39.1	
	comp=Z,31nm,18.8s,baz=6.5,slow=38						
KURBB	Kurchatov Arra	49.17	304	P	P	07 44 40.5	+0.8
	comp=Z,2.1nm,0.7s,baz=61,slow=7.8,SNR=11						
BVAR	Borovoye Array	52.06	310	P	P	07 45 02.3	+0.8
	comp=Z,2.1nm,0.5s,baz=55,slow=8.2,SNR=17						
BRVK	Borovoye	52.09	310	P	P	07 45 02.3	+0.6
BRVK				IAmb	IAmb	07 45 03.1	
	comp=Z,3.2nm,0.6s						
BRVK	Borovoye	52.09	310	P	P	07 45 02.3	+0.6
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MOD	Modoc Plateau	54.05	65	P	P	07 45 18.0	+1.5
MOD				IAmb	IAmb	07 45 18.1	
	comp=Z,5.6nm,0.8s						
ARU	Arti	55.48	319	P	P	07 45 26.8	+0.3
	comp=Z,2.8nm,0.2s,baz=49,slow=7.7,SNR=5.1						
AAK	Ala-Archa	56.09	298	P	P	07 45 31.6	+0.3
	comp=Z,1.8nm,0.7s,baz=26,slow=20,SNR=5.7						
AAK	Ala-Archa	56.09	298	P	P	07 45 32.4	+1.1
ARCES	ARCESS Array B	56.26	342	P	P	07 45 32.0	+0.2
	comp=Z,4.2nm,0.9s,baz=37,slow=7.9,SNR=3.5						
CMAR	Chiang Mai Arr	57.02	259	P	P	07 45 37.2	-0.7
	comp=Z,1.3nm,0.3s,baz=30,slow=7.3,SNR=5.1						
NVAR	Mina Array Bea	57.43	68	P	P	07 45 41.4	+0.5
	comp=Z,1.2nm,0.7s,baz=293,slow=7.6,SNR=12						
PDAR	Pinedale Array	59.64	59	P	P	07 45 56.3	0.0
	comp=Z,1.4nm,0.9s,baz=311,slow=3.2,SNR=8.3						
AKTO	Aktyubinsk	59.67	313	P	P	07 45 56.3	+0.2
	comp=Z,1.2nm,0.6s,baz=74,slow=7.3,SNR=4.2						
FINES	FINESS Array B	62.93	337	P	P	07 46 17.9	0.0
	comp=Z,1.1nm,0.6s,baz=32,slow=9.0,SNR=6.3						
ECSD	EROS Data Cent	65.80	50	P	P	07 46 36.8	-0.2
ECSD				IAmb	IAmb	07 46 37.1	
	comp=Z,2.2nm,0.8s						
NOA	NORSAR Array B	66.55	344	P	P	07 46 41.6	0.0
	comp=Z,0.4nm,0.5s,baz=26,slow=6.8,SNR=2.9						
GEYT	Alibeck	68.45	303	P	P	07 46 54.6	+0.6
	comp=Z,0.8nm,0.5s,baz=46,slow=6.2,SNR=2.6						
SCHQ	Schefferville	68.82	27	P	P	07 46 55.8	-0.2
	comp=Z,1.8nm,0.9s,baz=275,slow=12,SNR=2.5						
AKASG	Malin Array Be	71.16	329	P	P	07 47 09.8	-0.6
	comp=Z,0.4nm,0.3s,baz=30,slow=6.3,SNR=3.5						
TX31	Lajitas Ar. Si	72.45	65	P	P	07 47 18.6	-0.1
TX32	Lajitas Array	72.45	65	P	P	07 47 18.4	-0.3
TXAR	Lajitas Array	72.46	65	P	P	07 47 18.4	-0.3
	comp=Z,0.6nm,0.4s,baz=302,slow=5.5,SNR=27						
WB0	Warramunga Arr	72.69	204	P	P	07 47 17.7	-2.1
WB0				IAmb	IAmb	07 47 32.8	
	comp=Z,6.4nm,1.3s						
WRA	Warramunga Arr	72.87	204	P	P	07 47 19.1	-1.8
	comp=Z,1.8nm,0.6s,baz=19,slow=6.1,SNR=5.2						
FITZ	Fitzroy Crossi	73.86	213	P	P	07 47 25.6	-1.1
L56A	Greenwood	75.80	40	P	P	07 47 37.6	-0.3
ASAR	Alice Springs	76.53	204	P	P	07 47 41.1	-1.0
	comp=Z,1.1nm,0.7s,baz=16,slow=5.6,SNR=8.7						

IDC 19 07:39:51.8±0.7, 8°.33S×157°.08E, h0km, mb4.1/10, mb1 4.3/12, mb1mx4.1/41, mbtmp4.1/12, ML3.6/2, MS3.4/4, Ms1 3.4/4, ms1mx2.8/38, Error ellipse: s-maj=24.4km s-min=20.5km az=133.0
NEIC 19 07:39:55.7±1.4, 8°.45S±0°.1×157°.11E±0°.08, h26km±4km, mb4.5/3, Error ellipse: s-maj=22.8km s-min=7.1km az=204.0
ISC 19 07:39:54.5±0.6, 8°.5S±0°.1×157°.26E±0°.07, h19km, n24, σ1§11/24, mb4.2/13, MS3.1/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	2.83	110	Pn	Pn	07 40 39.6	+1.0
	17nm,0.3s,baz=248,slow=5.4,SNR=4.4						
HNR				Sn	Sg	07 41 24.5	-0.9
	124nm,0.3s,baz=217,slow=13,SNR=10						
HNR	Honiara	2.83	110	eP	Pn	07 40 39.0	+0.4
HNR				iS	Sg	07 41 27.0	+1.6
HNR	Honiara	2.83	110		Sg	07 41 24.3	-1.1
PMG	Port Moresby	10.02	264	LR	LR	07 45 56.0	
	comp=Z,294nm,19.7s,baz=98,slow=37						
CTA	Charters Tower	15.71	221	Pn	P	07 43 40.4	+1.5
	0.2nm,0.3s,baz=37,slow=13,SNR=3.3						
DZM	Mont Dzumac	16.16	148	Pn	P	07 43 43.3	-0.6
	0.1nm,0.3s,baz=269,slow=13,SNR=3.4						
DZM				Sn	Sn	07 46 37.3	-2.3
	0.1nm,0.3s,baz=17,slow=12,SNR=6.7						
WR0	Warramunga Arr	24.77	240	P	P	07 45 15.8	+0.5
WR0				IAmb	IAmb	07 45 18.9	
	comp=Z,14nm,1.2s						
WB0	Warramunga Arr	24.82	241	P	P	07 45 15.1	-0.6
WB0				IAmb	IAmb	07 45 19.4	
	comp=Z,15nm,1.1s						
WRA	Warramunga Arr	24.93	240	P	P	07 45 16.0	-0.8
	comp=Z,7.2nm,0.9s,baz=65,slow=9.8,SNR=8.4						
WRA				PcP	PcP	07 48 52.4	+0.2
	comp=Z,1.0nm,0.7s,baz=73,slow=2.6,SNR=6.2						
WRA				LR	LR	07 54 31.1	
	comp=Z,124nm,19.8s,baz=30,slow=35						
ASAR	Alice Springs	26.99	233	P	P	07 45 34.2	-1.2
	comp=Z,2.4nm,0.9s,baz=66,slow=8.8,SNR=13						
ASAR				PcP	PcP	07 48 56.8	-0.2
	comp=Z,0.6nm,0.8s,baz=75,slow=2.3,SNR=3.7						
ASAR				LR	LR	07 55 35.4	
	comp=Z,62nm,20.9s,baz=72,slow=35						
STKA	Stephens Creek	27.47	210	P	P	07 45 41.0	+1.5
	comp=Z,3.5nm,0.7s,baz=50,slow=15,SNR=7.5						
STKA				LR	LR	07 55 17.2	
	comp=Z,53nm,19.8s,baz=28,slow=34						
H11S3	WAKE ISLAND Hy	28.36	19	T	T	08 14 12.2	
	baz=200,slow=76,SNR=25						
H11S2	WAKE ISLAND Hy	28.36	19	T	T	08 14 17.9	
	baz=200,slow=76,SNR=27						
H11S1	WAKE ISLAND Hy	28.38	19	T	T	08 14 12.9	
	baz=200,slow=76,SNR=13						
CMAR	Chiang Mai Arr	63.44	295	P	P	07 50 22.5	-1.0
	comp=Z,0.4nm,0.4s,baz=108,slow=5.8,SNR=3.0						
SONM	Songino Array	71.78	327	P	P	07 51 15.6	-0.3
	comp=Z,1.1nm,0.8s,baz=134,slow=3.7,SNR=2.8						
ILAR	Eielson Array	83.93	21	P	P	07 52 22.6	-0.3
	comp=Z,0.5nm,0.9s,baz=259,slow=5.1,SNR=4.3						
MK31	Makanchi Array	85.98	318	P	P	07 52 33.3	-0.4
MK31				IAmb	IAmb	07 52 38.3	
	comp=Z,4.1nm,1.2s						
MKAR	Makanchi Array	85.98	318	P	P	07 52 33.2	-0.4
	comp=Z,1.8nm,0.6s,baz=97,slow=6.1,SNR=18						
ZALV	Zalesovo Beam	86.65	326	P	P	07 52 35.5	-1.3
	comp=Z,0.5nm,0.4s,baz=98,slow=4.4,SNR=3.0						
NVAR	Mina Array Bea	90.88	51	P	P	07 52 59.1	+1.7
	comp=Z,1.3nm,1.1s,baz=261,slow=7.0,SNR=5.2						
YKA	Yellowknife Ar	96.58	28	P	P	07 53 22.4	-0.4
	comp=Z,0.5nm,0.7s,baz=260,slow=5.0,SNR=6.0						
BDFB	Brasilia	145.35	134	PKPbc	PKPab	07 59 33.3	+1.1
	comp=Z,5.0nm,0.8s,baz=215,slow=1.6,SNR=5.5						
TORD	Torodi Ar. Bea	155.56	283	PKPbc	PKPbc	07 59 57.2	
	comp=Z,0.4nm,0.8s,baz=96,slow=1.4,SNR=2.1						

IDC 19 07:57:00.9±0.7, 34°.77N×137°.12E, h324km±10km, mb3.1/6, mb1 3.2/11, mb1mx3.0/48, mbtmp3.9/11, Error ellipse: s-maj=22.4km s-min=13.0km az=69.0
NIED 19 07:57:00, 34°.90N×137°.10E, h340km, Mw3.8 Best double couple: Mo5.36000×10^14 NP1:φs342.00000°, δ63.00000°, λ45.00000°. NP2:φs227.00000°, δ51.00000°, λ144.00000°.
JMA 19 07:57:00.0±0.4, 34°.88N×137°.08E, h347km±4km, M3.5
ISC 19 07:57:01.1±0.7, 34°.83N±0°.07×137°.09E±0°.06, h330km±6km, n29, σ0§91/39, mb3.4/6, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAA	Atsumi	0.20	167	P	Pn	07 57 43.7	+1.0
JIE	Ise	0.54	216	P	Pn	07 57 44.3	+1.0
JYTA	Yamagatataniai	0.82	339	P	Pn	07 57 44.7	+0.8
TK02	Tokai 2	1.04	148	P	Pn	07 57 46.3	+1.6
TTO1	TONANKAI O.B.S	1.23	192	P	Pn	07 57 47.1	+1.6
JYN	Shimob	1.37	60	P	Pn	07 57 47.4	+0.9
JWT	Wachi	1.46	289	P	Pn	07 57 47.6	+0.6
JWT				eS	S	07 58 22.3	-1.3
JKG	Kaga	1.57	337	P	Pn	07 57 47.8	+0.2
JOD2	Odawara 2	1.70	75	P	Pn	07 57 49.4	+0.9
JRY	Ryogami san	1.90	51	P	Pn	07 57 50.9	+1.1
JRY				eS	S	07 58 29.9	+1.1
MAT	Matsushiro	1.94	28	P	Pn	07 57 50.7	+0.6
MAT				eS	S	07 58 29.3	0.0
MAT	Matsushiro	1.94	28	P	Pn	07 57 50.7	+0.6
MAT				S	S	07 58 29.1	-0.2
MJAR	Matsushiro Arr	1.94	28	P	Pn	07 57 50.5	+0.4
	3.7nm,0.3s,baz=202,slow=7.0,SNR=180						
MJAR				S	S	07 58 28.8	-0.5
	baz=225,slow=41,SNR=1.1						
JAI	Aioi	2.42	245	P	Pn	07 57 54.0	+0.1
JAI				eS	S	07 58 35.0	-1.1
JAG	Ashikaga	2.50	50	P	Pn	07 57 54.1	-0.4
JAG				eS	S	07 58 35.9	-1.3
JSZ	Suzu	2.62	5	P	Pn	07 57 55.7	+0.2
BSO1	Boso 1	3.21	92	P	Pn	07 58 00.7	+0.4
BSO1				S	S	07 58 47.5	-0.4
JHS	Saijyo	3.27	274	P	Pn	07 58 01.7	+0.1
JHS				eS	S	07 58 50.3	+0.2
JNU	Nakatsue	5.43	253	P	Pn	07 58 24.4	-0.4
	1.4nm,0.3s,baz=124,slow=0.4,SNR=8.3						
KSRS	Korea Array	7.86	292	P	Pn	07 58 53.7	+0.4
	0.6nm,0.3s,baz=108,slow=12,SNR=10						
JCJ	Chichijima	8.86	149	P	Pn	07 59 03.4	-2.0
	34nm,0.3s,baz=311,slow=22,SNR=7.5						
ASAJ	Asahikawa	10.20	23	P	P	07 59 21.7	-1.8
	0.7nm,0.3s,baz=241,slow=18,SNR=2.2						
KLR	Kul'dur	14.92	346	P	P	08 00 15.0	-0.6
	0.2nm,0.3s,baz=180,slow=11,SNR=2.2						
SONM	Songino Array	26.27	309	P	P	08 02 08.3	+1.1
	0.7nm,0.6s,baz=120,slow=11,SNR=5.4						
MKAR	Makanchi Array	42.36	304	P	P	08 04 24.0	+0.2
	0.2nm,0.4s,baz=83,slow=10,SNR=1.3						
BVAR	Borovoye Array	49.48	313	P	P	08 05 19.5	+0.8
	0.2nm,0.5s,baz=94,slow=9.2,SNR=1.2						
BVAR				PcP	PcP	08 06 35.7	+0.5
	0.4nm,0.4s,baz=103,slow=4.6,SNR=2.6						
WRA	Warramunga Arr	54.53	183	P	P	08 05 55.7	-0.3
	1.7nm,0.4s,baz=1.0,slow=7.6,SNR=13						
ASAR	Alice Springs	58.25	183	P	P	08 06 22.1	+0.1
	0.6nm,0.3s,baz=357,slow=5.7,SNR=20						
FINES	FINESS Array B	69.09	331	P	P	08 07 32.1	+0.4
	0.4nm,0.4s,baz=79,slow=7.5,SNR=1.5						

KRAR 19 07:59:50.8±0.1, 53°.57N×87°.75E, M2.3, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)
NNC 19 07:59:43.2±2.6, 53°.82N×87°.88E, h0km, mb3.5, mpv3.2, 3C-3D, Error ellipse: s-maj=22.1km s-min=15.4km az=60.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.82	275	⇓Pn	Pn	08 00 14.8	-1.0
	1.5nm,0.6s						
ZAA0				⇑Lg	Lg	08 00 41.6	
	5.5nm,0.8s						
KURK	Kurchatov	6.48	245	Pn	Pn	08 01 23.4	+3.6
	1.9nm,0.6s						
KURK				Lg	Lg	08 03 09.5	
	7.0nm,1.1s						
KURBB	Kurchatov Arra	6.58	245	⇑Pn	Pn	08 01 22.1	+1.0
	3.6nm,0.5s						
KURBB				⇑Sn	Sn	08 02 38.1	+1.3
	4.2nm,0.6s						
KURBB				Lg	Lg	08 03 10.4	
	13nm,0.9s						
MK31	Makanchi Array	7.89	209	⇓Pn	Pn	08 01 40.0	+0.8
	0.8nm,0.6s,baz=28,slow=12,SNR=25						
MK31				Sn	Sn	08 03 08.3	-0.9
	0.5nm,0.5s,baz=31,slow=26,SNR=6.2						
MK31				Lg	Lg	08 03 53.3	
	2.2nm,0.7s,baz=39,slow=29,SNR=7.5						
MAKZ	Makanchi	7.97	211	⇓Pn	Pn	08 01 41.4	+1.1
	1.4nm,0.6s						
MAKZ				Sn	Sn	08 03 11.0	-0.2
	1.4nm,0.8s						
MAKZ				Lg	Lg	08 03 56.3	
	2.1nm,0.8s						

IDC 19 08:11:59.5±2.9, 44°.82N×149°.70E, h0km, mb3.3/4, mb1 3.7/4, mb1mx3.3/55, mbtmp3.3/4, MS2.6/2, Ms1 2.6/2, ms1mx2.3/30, Error ellipse: s-maj=100.3km s-min=34.1km az=168.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	Asahikawa	5.13	265	LR	LR	08 15 31.1	
	comp=Z,68nm,18.4s,baz=78,slow=41						
KSRS	Korea Array	17.95	253	LR	LR	08 22 24.1	
	comp=Z,18nm,19.8s,baz=335,slow=35						
H11N2	WAKE ISLAND Hy	28.81	145	T	T	08 48 47.6	
	baz=335,slow=76,SNR=214						
H11N1	WAKE ISLAND Hy	28.82	145	T	T	08 48 43.2	
	baz=335,slow=76,SNR=133						
H11N3	WAKE ISLAND Hy	28.83	145	T	T	08 48 47.1	
	baz=335,slow=76,SNR=138						
H11S1	WAKE ISLAND Hy	29.83	146	T	T	08 49 58.9	
	baz=336,slow=76,SNR=228						
H11S3	WAKE ISLAND Hy	29.84	146	T	T	08 50 06.4	
	baz=336,slow=76,SNR=174						
H11S2	WAKE ISLAND Hy	29.85	146	T	T	08 49 59.9	
	baz=336,slow=76,SNR=159						
ILAR	Eielson Array	39.54	37	P	P	08 19 31.6	-0.1
	0.1nm,0.5s,baz=272,slow=7.9,SNR=4.8						
MKAR	Makanchi Array	45.71	298	P	P	08 20 22.2	0.0
	0.2nm,0.7s,baz=71,slow=9.6,SNR=2.3						
MKAR				PcP	PcP	08 21 59.5	-0.6
	0.2nm,0.5s,baz=64,slow=2.6,SNR=3.6						
YKA	Yellowknife Ar	53.89	35	P	P	08 21 23.8	-0.3
	0.3nm,0.8s,baz=297,slow=6.9,SNR=4.0						
TXAR	Lajitas Array	80.53	58	P	P	08 24 14.1	+0.2
	0.3nm,0.6s,baz=296,slow=4.0,SNR=7.5						

IDC 19 08:12:20.6±1.6, 3°.59S×145°.68E, h0km, mb4.0/6, mb1 4.3/7, mb1mx3.9/46, mbtmp4.1/7, ML4.3/1, MS3.3/14, Ms1 3.3/14, ms1mx3.1/35, Error ellipse: s-maj=50.7km s-min=22.0km az=111.0
NEIC 19 08:12:27.7±1.9, 3°.6S±0°.1×145°.6E±0°.2, h49km±9km, mb4.4/9, Error ellipse: s-maj=25.5km s-min=12.3km az=127.0
ISC 19 08:12:24.7±0.8, 3°.7S±0°.1×145°.6E±0°.2, h23km, n27, σ1§27/17, mb4.3/6, MS3.4/10, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	Manus Island	2.42	47	Pn	Pn	08 13 03.8	+0.9
JAY	Jayapura	5.01	283	LR	LR	08 15 12.7	
	comp=Z,155nm,21.1s,baz=208,slow=34						
KRVT	Keravat (AS076	6.45	96	LR	LR	08 16 02.6	
	comp=Z,224nm,18.9s,baz=260,slow=35						
COEN	Coen	10.47	193	Pn	Pn	08 14 59.3	+5.9
HNR	Honiara	15.36	112	LR	LR	08 21 12.7	
	comp=Z,26nm,20.8s,baz=278,slow=35						
WB0	Warramunga Arr	19.35	213	P	Pn	08 16 50.4	+0.5
WB0				IAmb	IAmb	08 16 55.0	
	comp=Z,15nm,1.1s						
WR0	Warramunga Arr	19.42	213	P	Pn	08 16 51.1	+0.4
WR0				IAmb	IAmb	08 16 54.5	
	comp=Z,16nm,0.8s						
WRAB	Tennant Creek	19.50	213	P	Pn	08 16 52.6	+0.8
WRAB				IAmb	IAmb	08 16 56.3	
	comp=Z,33nm,1.5s						
WRA	Warramunga Arr	19.52	213	P	Pn	08 16 51.8	-0.2
	comp=Z,1.0nm,0.3s,baz=37,slow=11,SNR=9.8						
WRA				LR	LR	08 25 17.2	
	comp=Z,155nm,18.1s,baz=40,slow=40						
KNRA	Kununurra	20.39	233	P	P	08 16 59.8	-0.2
KNRA				IAmb	IAmb	08 17 13.5	
	comp=Z,26nm,1.1s						
AS31	Alice Springs	22.83	209	P	P	08 17 28.7	+2.3
ASAR	Alice Springs	22.83	209	P	P	08 17 28.0	+1.6
	comp=Z,2.5nm,0.6s,baz=33,slow=10,SNR=34						
ASAR				LR	LR	08 26 48.7	
	comp=Z,78nm,19.2s,baz=34,slow=38						
FITZ	Fitzroy Crossi	24.21	232	P	P	08 17 39.0	-0.9
	comp=Z,5.0nm,0.6s,baz=48,slow=14,SNR=5.9						
FITZ				LR	LR	08 28 35.2	
	comp=Z,66nm,18.7s,baz=42,slow=40						
FITZ	Fitzroy Crossi	24.21	232	P	P	08 17 39.1	-0.7
FITZ				IAmb	IAmb	08 17 55.2	
	comp=Z,17nm,1.2s						
KAPI	Kappang	25.79	266	LR	LR	08 30 54.3	
	comp=Z,26nm,18.1s,baz=90,slow=43						
DZM	Mont Dzumac	27.26	134	LR	LR	08 28 03.4	
	comp=Z,101nm,18.7s,baz=218,slow=35						
STKA	Stephens Creek	28.28	187	P	P	08 18 14.3	-2.1
FORT	Forrest	31.61	210	P	P	08 18 47.7	+1.8
KSRS	Korea Array	44.12	340	LR	LR	08 36 25.9	
	comp=Z,40nm,20.1s,baz=166,slow=33						
CMAR	Chiang Mai Arr	50.94	297	P	P	08 21 24.4	-0.3
	comp=Z,1.2nm,0.2s,baz=125,slow=4.5,SNR=4.2						
CMAR				LR	LR	08 45 05.1	
	comp=Z,9.5nm,18.2s,baz=300,slow=38						
SONM	Songino Array	61.72	331	P	P	08 22 42.2	+0.8
	comp=Z,0.2nm,0.3s,baz=148,slow=6.8,SNR=2.5						
SONM				LR	LR	08 49 11.9	
	comp=Z,37nm,19.5s,baz=210,slow=36						
VNDA	Vanda	74.28	176	LR	LR	08 56 31.5	
	comp=Z,40nm,20.6s,baz=236,slow=36						
ZALV	Zalesovo Beam	76.33	328	LR	LR	08 57 56.7	
	comp=Z,36nm,19.1s,baz=60,slow=36						
ILAR	Eielson Array	83.94	23	P	P	08 24 51.0	-1.6
	comp=Z,2.2nm,0.8s,baz=248,slow=4.9,SNR=24						
BVAR	Borovoye Array	84.09	324	P	P	08 24 53.0	-0.6
	comp=Z,0.9nm,0.6s,baz=97,slow=6.1,SNR=5.6						
DAWY	Dawson	86.80	25	P	P	08 25 07.1	+0.1
NVAR	Mina Array Bea	97.07	52	LR	LR	09 00 27.2	
	comp=Z,33nm,21.6s,baz=292,slow=30						

IDC 19 08:28:15.4±5.4, 38°.38N×73°.29E, h106km±37km, mb3.4/4, mb1 3.4/10, mb1mx3.1/50, mbtmp3.6/10, MS3.6/1, Ms1 3.6/1, ms1mx2.4/31, Error ellipse: s-maj=50.8km s-min=32.5km az=144.0
NNC 19 08:28:16.7±2.9, 39°.20N×74°.24E, h0km, mb3.6, mpv3.1, Error ellipse: s-maj=20.7km s-min=12.6km az=161.0
ISC 19 08:28:13.6±0.9, 38°.23N±0°.08×73°.4E±0°.1, h100km, n25, σ1§68/26, mb3.5/4, 2C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	3.90	4	P	Pn	08 29 12.8	+1.0
	SNR=79						
UCH	Uchtor	4.08	12	P	Pn	08 29 15.6	+1.3
	SNR=31						
KZA	Kyzart	4.10	20	P	Pn	08 29 15.3	+0.8
	SNR=5.9						
EKS2	Erkin-Say	4.43	4	P	Pn	08 29 21.3	+2.6
	SNR=20						
AAK	Ala-Archa	4.48	11	P	Pn	08 29 20.4	+1.0
	1.9nm,0.3s,baz=171,slow=6.1,SNR=8.4						
AAK				S	Sn	08 30 09.6	-0.9
	2.5nm,0.3s,baz=337,slow=13,SNR=16						
AAK	Ala-Archa	4.48	11	⇑Pg	Pn	08 29 21.2	+1.8
	1.9nm,0.3s						
AAK					Lg	08 30 09.8	
	27nm,0.9s						
ULHL	Ulahol	4.57	28	P	Pn	08 29 22.0	+1.4
	SNR=17						
IUG	Iuzhnay	4.67	328	Pg	Pn	08 29 24.0	+2.2
	0.8nm,0.2s						
IUG				Lg	Lg	08 30 12.5	
	33nm,0.3s						
CHMS	Chumysh	4.88	12	⇓Pg	Pn	08 29 26.0	+1.4
	1.1nm,0.5s						
CHMS				⇓Lg	Lg	08 30 18.3	
	15nm,1.1s						
KST	Kastek	5.20	22	Pg	Pn	08 29 30.4	+1.3
	6.6nm,0.5s						
KST				Lg	Lg	08 30 24.8	
	21nm,0.5s						
KK31	Karatay Array	5.33	337	⇓Pn	Pn	08 29 31.4	+0.7
	1.1nm,0.3s,baz=138,slow=12,SNR=39						
KK31				⇓Sn	Sn	08 30 27.3	-3.4
	10.0nm,0.5s,baz=145,slow=25,SNR=2.8						
KK31				⇑Lg	Lg	08 30 49.1	
	1.4nm,0.3s						
DGS	Degeres	5.33	19	Pg	Pn	08 29 32.1	+1.3
	3.0nm,0.4s						
DGS				Lg	Lg	08 30 28.1	
	4.6nm,0.4s						
IZV	Izvestkoviy	5.40	26	Pg	Pn	08 29 33.8	+2.0
	1.5nm,0.2s						
IZV				Lg	Lg	08 30 31.0	
	7.7nm,0.6s						
KRBS	Karabastau	5.73	17	Pg	Pn	08 29 39.7	+3.5
	0.7nm,0.6s						
KRBS				Lg	Lg	08 30 41.4	
	1.0nm,0.3s						
THN	Thein Dam	6.10	161	ePG	Sn	08 30 48.0	-1.5
THN				eSG		08 30 52.5	
MKAR	Makanchi Array	10.79	35	P	Pn	08 30 44.8	-0.1
	0.0nm,0.3s,baz=221,slow=15,SNR=3.5						
KURBB	Kurchatov Arra	12.92	15	P	Pn	08 31 15.1	+1.9
	0.0nm,0.3s,baz=203,slow=12,SNR=2.4						
BVAR	Borovoye Array	14.94	353	P	Pn	08 31 38.4	-0.9
	0.1nm,0.3s,baz=153,slow=16,SNR=2.2						
AKTO	Aktyubinsk	16.37	323	P	Pn	08 31 56.5	-0.8
	0.4nm,0.3s,baz=124,slow=11,SNR=6.9						
ZALV	Zalesovo Beam	17.57	23	P	P	08 32 10.3	-1.2
	0.4nm,0.3s,baz=224,slow=10,SNR=10						
ARCES	ARCESS Array B	40.29	336	P	P	08 35 40.6	+0.1
	3.5nm,0.9s,baz=90,slow=9.7,SNR=6.2						
KEST	Kesra	50.28	288	LR	LR	09 01 50.8	
	comp=Z,54nm,18.3s,baz=333,slow=40						
TORD	Torodi Ar. Bea	67.63	269	P	P	08 39 00.5	+0.5
	0.2nm,0.4s,baz=45,slow=6.0,SNR=3.5						
INK	Inuvik	71.88	10	P	P	08 39 25.6	+0.4
	0.5nm,0.5s,baz=306,slow=5.8,SNR=4.9						
YKA	Yellowknife Ar	79.41	4	P	P	08 40 08.9	+0.7
	0.2nm,0.5s,baz=350,slow=5.4,SNR=7.5						

IDC 19 09:12:53.7±1.7, 2°.84N×126°.70E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.6/24, mbtmp3.7/4, Error ellipse: s-maj=176.2km s-min=21.1km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.86	162	P	P	09 18 08.4	-0.5
	0.4nm,0.3s,baz=341,slow=11,SNR=5.5						

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
ASAR	Alice Springs	27.27	165	P	P	09 18 41.0	+1.0
	0.6nm,0.8s,baz=341,slow=11,SNR=7.7						
MKAR	Makanchi Array	58.26	326	P	P	09 22 50.4	+0.3
	1.4nm,0.7s,baz=124,slow=8.8,SNR=15						
ZALV	Zalesovo Beam	61.36	333	P	P	09 23 10.1	-1.1
	0.9nm,0.6s,baz=123,slow=7.4,SNR=4.1						

ATH 19 09:21:28.9, 41°.44N×19°.87E, h32km±1km, ML2.9/1, Error ellipse: s-maj=6.2km s-min=1.3km az=341.0
SKO 19 09:21:29.1, 41°.29N×19°.98E, h34km
TIR 19 09:21:30.5, 41°.41N×20°.00E, h19km, Md2.7/4
THE 19 09:21:30.5, 41°.56N×19°.81E, h7km±12km, ML2.3/1, Error ellipse: s-maj=12.8km s-min=0.4km az=141.0
PDG 19 09:21:30.6±0.2, 41°.33N×19°.70E, h16km, ML2.6/10, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0
BEO 19 09:21:31.6±0.5, 41°.42N×20°.13E, h0km, ML2.2/8
ISC 19 09:21:30.0±0.8, 41°.42N±0°.02×20°.09E±0°.02, h17km±6km, n39, σ1s46/67, 1C-1D, Albania

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
TIR	Tirane	0.18	247	P	Pg	09 21 34.8	+0.2
TIR				S	Sg	09 21 38.1	+0.4
	1μm,0.1s						
TIR	Tirane	0.18	247	ePg	Pg	09 21 34.8	+0.2
TIR				eSg	Sb	09 21 38.8	+0.6
TIR	Tirane	0.18	247	iPG	Pg	09 21 34.8	+0.2
TIR				iSG	Sg	09 21 37.7	-0.1
TIR	Tirane	0.18	247	P	Pg	09 21 34.8	+0.2
TIR				S	Sg	09 21 38.2	+0.4
TIR				AML	AML	09 21 38.9	
	comp=N,7014μm,0.1s						
TIR				AML	AML	09 21 39.1	
	comp=E,6651μm,0.1s						
PHP	Peshkopia	0.37	45	P	Pn	09 21 39.7	-0.9
PHP				S	Sn	09 21 47.0	-0.4
PHP	Peshkopia	0.37	45	iPG	Pn	09 21 39.7	-0.9
PHP				iSG	Sn	09 21 46.6	-0.8
OHR	Ohrid	0.62	120	iPg	Pg	09 21 41.5	-0.7
OHR				iSg	Sn	09 21 54.9	+1.4
OHR				eLg	Lg	09 21 55.4	
	comp=N,204nm,0.9s						
PUK	Puka	0.64	347	iPG	Pb	09 21 43.3	+0.6
PUK				iSG	Sn	09 21 53.2	-0.8
ULC	Ulcinj	0.83	311	ePg	Pg	09 21 45.3	-0.9
ULC				eSg	Sg	09 21 55.9	-1.4
BCI	Bajram Curri	0.94	359	iPG	Pn	09 21 49.1	+0.7
BCI				iSG	Sn	09 22 03.2	+1.6
DRME	Dracevica, Mon	1.02	319	ePg	Pb	09 21 48.2	-1.0
DRME				iSg	Sg	09 22 03.1	-0.1
PVY	Plav	1.18	355	ePg	Pg	09 21 54.1	+1.4
PVY				iSg	Sn	09 22 14.0	+6.6
PDG	Podgorica	1.19	329	ePg	Pg	09 21 52.5	-0.4
PDG				eSg	Sg	09 22 09.6	+1.2
TTG	Podgorica	1.19	329	ePg	Pb	09 21 52.1	+0.2
TTG				eSg	Sg	09 22 10.3	+1.9
NEST	Nestorio	1.24	144	P	Pn	09 21 52.9	+0.3
CEME	Cevo	1.42	322	ePg	Pn	09 21 55.6	+0.5
CEME				eSg	Sg	09 22 15.6	-0.4
IVA	Berane	1.46	354	ePg	Pg	09 21 58.1	+0.1
IVA				eSg	Sg	09 22 20.7	+3.7
KOME	Kolasin	1.49	343	ePg	Pg	09 21 58.0	-0.7
KOME				eSg	Sg	09 22 20.0	+1.9
HCY	Herceg Novi	1.57	311	⇓iPg	Pn	09 21 56.9	-0.1
HCY				eSg	Sb	09 22 18.1	0.0
NKME	Niksic	1.59	328	⇑iPg	Pb	09 21 58.8	-0.1
NKME				iSg	Sg	09 22 20.5	-0.7
STIP	Stip	1.60	79	iPg	Pg	09 22 03.0	+2.3
KEK	Kerkira	1.72	188	P	Pn	09 21 59.2	+0.1
KPRO	Kipourio	1.76	146	P	Pn	09 22 01.1	+1.5
GRG	Griva	1.80	104	P	Pb	09 22 02.1	-0.5
SJES	Sjenica	1.84	357	ePn	Pg	09 22 04.9	-0.4
SJES				eSn	Sg	09 22 28.5	-0.8
VAY	Valandovo	1.87	92	ePg	Pb	09 22 04.0	+0.5
VAY				iSg	Sg	09 22 30.5	+0.4
VAY				eLg	Lg	09 22 30.6	
	comp=E,4.8nm,0.4s						
BRY	Bratogost	1.88	323	ePn	Pn	09 22 02.4	+1.0
BRY				eSn	Sb	09 22 26.6	-0.4
SELS	Selova	1.95	23	ePn	Pg	09 22 05.9	-1.5
PLE	Pljevlja	1.98	345	ePn	Pb	09 22 04.8	-0.7
PLE				eSn	Sg	09 22 31.6	-2.0
KNT	Kendrikon	2.13	96	P	Pb	09 22 06.8	-1.3
IVAS	Ivanjica	2.15	1	ePn	Pb	09 22 09.2	+0.7
IVAS				eSn	Sb	09 22 36.4	+1.5
BBLS	Lazići	2.50	349	ePn	Pb	09 22 14.3	0.0
BBLS				eSn	Sb	09 22 44.8	0.0
BOVS	Bovan	2.51	28	eSn	Sb	09 22 44.8	-0.4
ZAPS	Zavoj	2.64	45	ePn	Pb	09 22 15.3	-1.5
ZAPS				eSn	Sb	09 22 47.6	-1.3
LKD2	Lefkada island	2.67	170	P	Pn	09 22 12.5	+0.4
DIVS	Divibare	2.68	358	ePn	Pb	09 22 15.6	-1.8
DIVS				eSn	Sb	09 22 49.1	-0.9
ZAGS	Zajecar	2.87	33	ePn	Pb	09 22 17.8	-2.8
ZAGS				eSn	Sb	09 22 53.2	-2.1
TIP	Timpagrande	3.39	230	P	Pn	09 22 19.7	-2.4
CUC	Castrocucco	3.55	248	P	Pn	09 22 22.3	-2.0

ROM 19 09:22:55.5±0.0, 43°.402N±0°.003×12°.494E±0°.004, h8km, ML2.0/26, 11C-3D, Error ellipse: s-maj=0.2km s-min=0.2km az=252.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
ATFO	Monte Foce - G	0.07	122	⇑P	Pg	09 22 57.7	+0.2
ATFO				S	Sg	09 22 59.1	+0.2
ATFO				AML	AML		
	comp=N,4190μm,1.1s						
ATFO				AML	AML		
	comp=E,4145μm,0.2s						
ATVO	AVT- Monte Val	0.07	253	P	Pg	09 22 57.7	+0.2
ATVO				S	Sg	09 22 59.0	+0.1
ATVO				AML	AML		
	comp=N,4825μm,0.2s						
ATVO				AML	AML		
	comp=E,2875μm,0.9s						
ATPI	Pietralunga -	0.08	306	P	Pg	09 22 58.0	+0.3
ATPI				S	Sg	09 22 59.8	+0.5
ATPI				AML	AML		
	comp=E,1630μm,0.4s						
ATPI				AML	AML		
	comp=N,2545μm,0.4s						
PIEI	Pieia	0.14	13	P	Pg	09 22 59.1	+0.5
PIEI				S	Sg	09 23 02.0	+1.4
PIEI				AML	AML		
	comp=N,3040μm,0.3s						
PIEI				AML	AML		
	comp=E,2620μm,0.2s						
MURB	Monte Urbino	0.14	171	⇑P	Pg	09 22 59.2	+0.6
MURB				S	Sg	09 23 01.9	+1.2
MURB				AML	AML		
	comp=N,2030μm,0.5s						
MURB				AML	AML		
	comp=N,2175μm,0.7s						
MURB				AML	AML		
	comp=N,2025μm,0.5s						
MURB				AML	AML		
	comp=N,2025μm,0.5s						
MURB				AML	AML		
	comp=E,2625μm,0.3s						
MURB				AML	AML		
	comp=E,2560μm,0.4s						
CDCA	Citt' di Caste	0.20	287	P	Pg	09 23 00.9	+1.4
CDCA				AML	AML		
	comp=E,1680μm,1.4s						
CDCA				AML	AML		
	comp=N,1730μm,0.4s						
CDCA				AML	AML		
	comp=E,1682μm,1.4s						
CDCA				AML	AML		
	comp=N,1730μm,0.4s						
BADI	Badiali	0.21	301	⇑P	Pg	09 23 00.5	+0.7
BADI				S	Sg	09 23 04.3	+1.6
BADI				AML	AML		
	comp=E,842μm,1.1s						
BADI				AML	AML		
	comp=N,1110μm,1.0s						
BADI				AML	AML		
	comp=N,1110μm,1.0s						
BADI				AML	AML		
	comp=E,846μm,1.1s						
SSFR	Montelago di S	0.21	81	P	Pg	09 23 00.4	+0.6
SSFR				AML	AML		
	comp=E,1575μm,0.7s						
SSFR				AML	AML		
	comp=N,1470μm,0.1s						
SSFR				AML	AML		
	comp=N,1345μm,0.2s						
SSFR				AML	AML		
	comp=E,1660μm,0.7s						
SSFR				AML	AML		
	comp=N,1340μm,0.2s						
SSFR				AML	AML		
	comp=E,1665μm,0.7s						
SSFR				AML	AML		
	comp=N,1465μm,0.2s						
SSFR				AML	AML		
	comp=E,1570μm,0.7s						
NARO	Abbazia di Nar	0.22	17	P	Pg	09 23 00.4	+0.5
NARO				S	Sg	09 23 04.1	+1.2
NARO				AML	AML		
	comp=E,592μm,0.2s						
NARO				AML	AML		
	comp=N,433μm,0.1s						
NARO				AML	AML		
	comp=N,434μm,0.1s						
FOSV	Fossato di Vic	0.22	119	⇓P	Pg	09 23 00.5	+0.5
FOSV				S	Sg	09 23 04.8	+1.8
FOSV				AML	AML		
	comp=E,184μm,0.7s						
FOSV				AML	AML		
	comp=N,318μm,0.4s						
FOSV				AML	AML		
	comp=E,184μm,0.7s						
ATTE	AVT- Monte Tez	0.23	207	P	Pg	09 23 00.7	+0.6
ATTE				S	Sg	09 23 04.5	+1.3
ATTE				AML	AML		
	comp=N,326μm,1.3s						
ATTE				AML	AML		
	comp=E,372μm,0.2s						
ATCC	AVT- Casa Cast	0.24	154	P	Pg	09 23 01.1	+0.8
ATCC				S	Sg	09 23 05.6	+2.0
ATCC				AML	AML		
	comp=E,1022μm,0.4s						
ATCC				AML	AML		
	comp=N,747μm,0.3s						
ATCC				AML	AML		
	comp=E,1019μm,0.4s						
ATCC				AML	AML		
	comp=N,748μm,0.3s						
PE3	Peglio	0.29	0	P	Pb	09 23 02.3	-0.7
PE3				AML	AML		
	comp=N,588μm,0.4s						
PE3				AML	AML		
	comp=E,382μm,1.0s						
MPAG	Monte Paganucc	0.30	40	⇑P	Pg	09 23 02.0	+0.5
MPAG				AML	AML		
	comp=E,176μm,1.5s						
MPAG				AML	AML		
	comp=N,136μm,1.1s						
MPAG				AML	AML		
	comp=N,135μm,1.1s						
MPAG				AML	AML		
	comp=E,175μm,1.5s						
PARC	Parchiule	0.31	323	⇓P	Pg	09 23 02.4	+0.7
PARC				S	Sb	09 23 07.8	-0.7
PARC				AML	AML		
	comp=E,260μm,0.3s						
PARC				AML	AML		
	comp=N,214μm,0.7s						
PARC				AML	AML		
	comp=E,261μm,0.3s						
ARVD	Arcevia	0.34	73	⇑P	Pg	09 23 02.7	+0.5
ARVD				S	Sb	09 23 08.7	-0.7
ARVD				AML	AML		
	comp=E,142μm,0.7s						
ARVD				AML	AML		
	comp=E,142μm,0.7s						
ARVD				AML	AML		
	comp=N,144μm,1.0s						
FSSB	Fossombrone	0.36	35	⇑P	Pg	09 23 03.0	+0.5
FSSB				S	Sb	09 23 09.5	-0.4
FSSB				AML	AML		
	comp=N,332μm,0.2s						
FSSB				AML	AML		
	comp=N,332μm,0.2s						
FSSB				AML	AML		
	comp=E,288μm,0.3s						
SNTG	Esanatoglia	0.36	114	⇑P	Pg	09 23 02.9	+0.4
SNTG				S	Sb	09 23 09.1	-0.8
SNTG				AML	AML		
	comp=N,243μm,0.6s						
SNTG				AML	AML		
	comp=E,195μm,0.2s						
ASSB	Assisi San Ben	0.38	161	⇓P	Pg	09 23 03.3	+0.4
ASSB				S	Sb	09 23 09.6	-0.9
ASSB				AML	AML		
	comp=E,178μm,1.5s						
ASSB				AML	AML		
	comp=N,239μm,0.3s						
CAFI	Castiglion Fio	0.39	259	P	Pg	09 23 03.7	+0.5
CAFI				AML	AML		
	comp=E,186μm,0.8s						
CAFI				AML	AML		
	comp=N,134μm,0.1s						
CAFI				AML	AML		
	comp=N,135μm,0.1s						
EL6	Elcito	0.45	99	⇑P	Pg	09 23 04.6	+0.4
EL6				S	Sb	09 23 12.3	-0.3
CRE	Caprese Michel	0.45	299	P	Pg	09 23 04.9	+0.6
CRE				S	Sb	09 23 11.9	-0.8
CRE				AML	AML		
	comp=E,174μm,0.3s						
CRE				AML	AML		
	comp=N,198μm,0.3s						
CRE				AML	AML		
	comp=E,174μm,0.3s						
CESI	CESI - Serrava	0.50	143	P	Pg	09 23 05.7	+0.5
CESI				S	Sb	09 23 13.3	-0.6
CESI				AML	AML		
	comp=E,19μm,1.6s						
CESI				AML	AML		
	comp=N,53μm,1.3s						
CESI				AML	AML		
	comp=E,19μm,1.6s						
CESI				AML	AML		
	comp=N,53μm,1.3s						
CING	Cingoli	0.51	93	P	Pg	09 23 05.9	+0.5
CING				S	Sb	09 23 14.3	0.0
CING				AML	AML		
	comp=E,99μm,1.2s						
CING				AML	AML		
	comp=N,104μm,0.8s						
MGAB	Montegabbione	0.56	210	⇑P	Pg	09 23 06.8	+0.4
MGAB				S	Sb	09 23 15.9	+0.1
MGAB				AML	AML		
	comp=E,308μm,1.0s						
MGAB				AML	AML		
	comp=N,484μm,0.3s						
MGAB				AML	AML		
	comp=E,308μm,1.0s						
MGAB				AML	AML		
	comp=E,308μm,1.0s						
MGAB				AML	AML		
	comp=N,475μm,0.8s						
FDMO	Fiordimonte	0.57	130	⇑P	Pg	09 23 06.8	+0.4
FDMO				S	Sb	09 23 16.0	+0.1
FDMO				AML	AML		
	comp=N,132μm,1.6s						
FDMO				AML	AML		
	comp=N,131μm,1.6s						
FDMO				AML	AML		
	comp=E,87μm,0.2s						
CSP1	Cessapalombo	0.60	121	⇑P	Pg	09 23 07.4	+0.2
ASQU	Asqua	0.65	308	P	Pb	09 23 08.8	-0.3
ASQU				AML	AML		
	comp=E,47μm,1.5s						
ASQU				AML	AML		
	comp=N,62μm,1.5s						

DDA 19 09:23:23.6, 38°.95N×29°.23E, h7km±4km, ML1.0, Turkey

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
GDZ	Gediz	0.24	55	iP	Pg	09 23 28.0	-0.4
GDZ				iS	Sg	09 23 32.8	+1.1
GDZ				IAML		09 23 33.0	
	comp=E,22nm,0.4s						
USAK	Uak-Merkez	0.29	215	iP	Pg	09 23 29.5	+0.2
USAK				iS	Sb	09 23 35.0	-1.1
USAK				IAML		09 23 35.0	
	comp=N,52nm,0.2s						
USAK				IAML		09 23 35.0	
	comp=E,22nm,0.2s						
MANT	Manisa	0.70	229	iP	Pg	09 23 35.1	-1.9
MANT				iS	Sg	09 23 43.7	-2.4
MANT				IAML		09 23 46.0	
	comp=N,9.7nm,0.3s						
MANT				IAML		09 23 46.0	
	comp=E,7.8nm,0.2s						

MEX 19 09:50:21.3±1.4, 16°.93N×95°.31W, h106km±12km, MD4.1
ISC 19 09:50:20.2±0.9, 16°.92N±0°.05×95°.30W±0°.03, h104km±8km, n32, σ1s01/50, mb3.8/3, Oaxaca

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.43	68		Pn	09 50 36.3	+0.4
CMIG					Sn	09 50 47.8	0.0
CMIG	Matias Romero	0.43	68	iP	Pn	09 50 36.3	+0.4
CMIG				iS	Sn	09 50 47.8	0.0
VHO	Vista Hermosa	1.38	276	eP	Pn	09 50 46.6	+1.3
VHO				iS	Sn	09 51 06.6	+2.2
HUIG	Huatulco	1.38	214		Pn	09 50 45.1	-0.2
HUIG					Sn	09 51 05.2	+0.9
HUIG	Huatulco	1.38	214	iP	Pn	09 50 45.1	-0.2
HUIG				eS	Sn	09 51 05.2	+0.9
PEIG	Puerto Escondi	1.99	243	iP	Pn	09 50 51.9	-0.9
PEIG				iS	Sn	09 51 17.4	-0.4
TOIG	Toxpalan	2.04	305	eP	Pn	09 50 54.6	+1.0
TOIG				eS	Sn	09 51 19.0	-0.1
TGIG		2.10	94		Pn	09 50 54.7	+0.5
TGIG					Sn	09 51 19.5	-0.7
TGIG		2.10	94	eP	Pn	09 50 54.7	+0.5
TGIG				eS	Sn	09 51 19.5	-0.7
YOIG	Yosondua	2.15	269	eP	Pn	09 50 55.5	+0.5
YOIG				iS	Sn	09 51 22.2	+0.5
PCIG		2.34	121		Pn	09 50 58.5	+1.2
PCIG					Sn	09 51 28.0	+2.2
PCIG		2.34	121	eP	Pn	09 50 58.5	+1.2
PCIG				iS	Sn	09 51 28.0	+2.2
HLIG	Huajuapan de L	2.55	291	iP	Pn	09 51 01.5	+1.2
PNIG	Pinotepa	2.76	259		Pn	09 51 02.1	-0.7
PNIG					Sn	09 51 35.2	-0.4
PNIG	Pinotepa	2.76	259	eP	Pn	09 51 02.1	-0.7
PNIG				iS	Sn	09 51 35.2	-0.4
FTIG	Fresnillo de T	2.87	290	eP	Pn	09 51 06.0	+1.5
FTIG				iS	Sn	09 51 38.6	+0.1
CCIG	Comitan	3.10	101		Pn	09 51 08.8	+1.2
TLIG	Tlapa	3.18	282		Pn	09 51 09.7	+1.1
TLIG	Tlapa	3.18	282		Pn	09 51 09.4	+0.9
TLIG					Sn	09 51 44.8	-1.1
TLIG	Tlapa	3.18	282	eP	Pn	09 51 09.4	+0.9
TLIG				eS	Sn	09 51 44.8	-1.1
TEIG	Tepich	7.43	63	Pn	Pn	09 52 05.5	-0.4
TEIG				Sn	Sn	09 53 27.3	-1.3
FCAR	Ozark Folk Cen	19.10	8	P	P	09 54 35.2	+0.4
HHAR	Hobbs	19.32	3	P	P	09 54 37.3	+0.1
LCAR	Lake Charles	19.42	10	P	P	09 54 38.3	0.0
LCAR				IAmb	IAmb	09 54 38.4	
	comp=Z,3.4nm,1.1s						
U40A	Yellville	19.48	6	P	P	09 54 39.3	+0.4
U40A				IAmb	IAmb	09 54 39.6	
	comp=Z,3.5nm,0.7s						
GOGA	Godfrey	19.57	31	P	P	09 54 38.9	-1.1
GOGA				IAmb	IAmb	09 54 42.4	
	comp=Z,7.0nm,1.4s						
PBMO	Poplar Bluff	20.24	11	P	P	09 54 47.0	-0.1
PBMO				IAmb	IAmb	09 54 47.7	
	comp=Z,8.7nm,1.2s						
BG3	Lake Jocassee	21.12	29	P	P	09 54 55.5	-1.1
BG3				IAmb	IAmb	09 55 11.5	
	comp=Z,3.0nm,0.7s						
V55A	Taylorsville	22.64	31	P	P	09 55 11.0	-1.6
V55A				IAmb	IAmb	09 55 28.9	
	comp=Z,2.8nm,0.9s						
BLO	Bloomington	23.45	17	P	P	09 55 20.2	-0.1
BLO				IAmb	IAmb	09 55 36.9	
	comp=Z,3.3nm,0.8s						
N47A	Urbana	25.28	17	P	P	09 55 36.5	-0.3
N53A	Lisbon	26.88	25	P	P	09 55 49.8	-1.5

JMA 19 10:08:20.4, 40°.05N×140°.54E, h9km±2km, M3.4
IDC 19 10:08:25.8±2.1, 40°.06N×140°.43E, h46km±28km, mb3.1/2, mb1 3.4/6, mb1mx3.1/35, mbtmp3.4/6, ML2.9/4, MS2.4/2, Ms1 2.4/2, ms1mx2.1/16, Error ellipse: s-maj=32.5km s-min=17.0km az=110.0
ISC 19 10:08:21.0±1.1, 40°.06N±0°.04×140°.57E±0°.03, h8km±8km, n17, σ1s11/23, 1C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
JAH	Hinai	0.14	23	⇓P	Pg	10 08 23.8	-0.2
JAH				S	Sg	10 08 26.4	+0.4
JNTW	Noshirotokiwa	0.37	304	⇓P	Pg	10 08 28.0	-0.4
JNTW				S	Sg	10 08 33.9	+0.6
JKZ	Kuzumaki	0.59	97	⇓P	Pg	10 08 32.1	-0.4
JKZ				S	Sg	10 08 40.1	-0.1
JRG	Rokugo	0.67	176	P	Pg	10 08 33.2	-0.7
JIW	Iwasaki	0.68	321	P	Pg	10 08 33.1	-1.1
JIW				S	Sg	10 08 42.4	-0.6
JANG	Nango	0.79	67	⇓P	Pg	10 08 35.6	-0.6
JANG				S	Sg	10 08 46.1	-0.4
JOM	Ohasama	0.81	136	⇑P	Pg	10 08 35.9	-0.8
JTM	Tenmabayashi	0.82	28	P	Pg	10 08 36.3	-0.5
JTM				S	Sg	10 08 46.9	-0.5
MAT	Matsushiro	3.97	209	P	Pn	10 09 23.3	+1.0
MAT				S	Sn	10 10 08.7	-0.4
MJAR	Matsushiro Arr	3.97	209	P	Pn	10 09 23.1	+0.7
	0.2nm,0.3s,baz=11,slow=16,SNR=5.7						
MJAR				S	Sn	10 10 08.8	-0.3
	0.1nm,0.3s,baz=37,slow=22,SNR=4.2						
ASAJ	Asahikawa	4.32	20	P	Pn	10 09 30.1	+3.1
	0.9nm,0.3s,baz=134,slow=2.6,SNR=7.1						
USRK	Ussuriysk Ar.	7.60	306	P	Pn	10 10 11.2	-0.8
	baz=109,slow=16,SNR=8.3						
KSRS	Korea Array	10.21	259	P	Pn	10 10 50.0	+2.2
	0.7nm,0.3s,baz=64,slow=14,SNR=14						
JNU	Nakatsue	10.42	231	LR	LR	10 14 52.4	
	comp=Z,26nm,21.9s,baz=27,slow=37						
KLR	Kul'dur	11.10	329	LR	LR	10 15 08.1	
	comp=Z,21nm,19.8s,baz=50,slow=36						
MKAR	Makanchi Array	42.01	299	P	P	10 16 11.3	-1.4
	0.5nm,1.0s,baz=65,slow=6.8,SNR=2.9						
ILAR	Eielson Array	47.32	34	P	P	10 16 55.0	+0.2
	0.3nm,0.6s,baz=270,slow=7.2,SNR=4.8						

NIED 19 10:29:00, 26°.20N×128°.40E, h23km, Mw4.5 Best double couple: $M_0$6.97000×10^{15} NP1: ϕ_s41.00000°, δ68.00000°, λ81.00000°. NP2: ϕ_s243.00000°, δ24.00000°, λ111.00000°.
BJI 19 10:29:46.3±0.0, 25°.93N×128°.49E, h10km, mB4.8/43, mb4.4/51, Ms4.4/39, Ms7 4.1/34
MOS 19 10:29:51.6±1.0, 26°.28N×128°.31E, h24km, mb4.8/40, Error ellipse: s-maj=8.5km s-min=5.5km az=103.9
NEIC 19 10:29:53.6±1.3, 26°.20N±0°.06×128°.23E±0°.03, h27km±5km, mb4.8/56, Error ellipse: s-maj=9.2km s-min=2.1km az=159.0
JMA 19 10:29:53.8±0.3, 26°.23N×128°.38E, h26km±4km, M4.3
JMA Felt I J1.
IDC 19 10:29:54.3±3.7, 26°.30N×128°.25E, h30km±26km, mb4.1/22, mb1 4.2/26, mb1mx4.2/38, mbtmp4.2/26, ML3.4/4, MS3.7/16, Ms1 3.8/16, ms1mx3.5/38, Error ellipse: s-maj=17.3km s-min=11.9km az=101.0
ISC 19 10:29:53.1±1.1, 26°.18N±0°.04×128°.39E±0°.03, h26km±7km, n204, σ1s50/218, mb4.6/87, MS4.0/20, 12C-6D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
JNTH	Nagotoyohara	0.47	316	P	Pb	10 30 02.5	-0.3
JNTH				S	Sb	10 30 08.8	-0.6
JJT3	Tamagusuku3	0.54	266	P	Pn	10 30 04.8	-0.3
JJT3				eS	Sn	10 30 13.3	-0.1
JOW	Kunigami	0.66	351	P	Pb	10 30 05.8	-0.2

JOW				S	Sb	10 30 14.3	-0.4
JOW	Kunigami	0.66	351	Pn	Pb	10 30 05.7	-0.3
	771nm,0.3s,baz=155,slow=13,SNR=2552						
JOW				Sn	Sb	10 30 13.9	-0.9
	586nm,0.3s,baz=88,slow=17,SNR=51						
JOW	Kunigami	0.66	351		Pn	10 30 06.2	-0.5
JOW				Sg	Sn	10 30 15.0	-1.2
JYRO	Yoronjima	0.84	4	P	Pb	10 30 08.4	-0.7
JYRO				S	Sb	10 30 19.4	-0.6
JIH	Iheya	0.93	336	P	Pn	10 30 10.4	0.0
JIH				S	Sn	10 30 23.6	+0.7
JAGN	Aguni-jima	1.10	292	P	Pb	10 30 13.3	-0.2
JAGN				eS	Sn	10 30 27.6	+0.4
JOKE	Okinoerabujima	1.19	8	P	Pn	10 30 13.6	-0.4
JOKE				eS	Sn	10 30 27.7	-1.6
JKE	Kume jima 2	1.44	276	P	Pn	10 30 17.2	-0.3
JKE				eS	Sb	10 30 36.0	-1.3
JMZ	Minamidaito 2	2.58	97	P	Pn	10 30 31.1	-2.0
JMZ				S	Sn	10 30 58.6	-5.0
JKDJ	Kitadaitoujima	2.63	94	P	Pn	10 30 31.7	-2.1
JKDJ				S	Sn	10 31 00.5	-4.4
NACB	Ninganchiao	6.47	253	Pn	Pn	10 31 25.1	-1.6
YHNB	Yeheng	6.51	258	Pn	Pn	10 31 27.6	+0.3
YULB	Yu-li	7.01	248		Pn	10 31 30.7	-3.4
SSLB	Suanglung	7.15	252		Pn	10 31 34.1	-2.0
SSLB				Sn	Sn	10 32 56.6	+0.1
JNU	Nakatsue	7.25	17	Pn	Pn	10 31 38.1	+0.8
	2.8nm,0.3s,baz=187,slow=3.6,SNR=23						
JNU				Sn	Sn	10 32 58.7	-0.1
	baz=329,slow=18,SNR=1.4						
JNU				LR	LR	10 34 42.8	
	comp=Z,360nm,22.0s,baz=202,slow=40						
JNU	Nakatsue	7.25	17		Pn	10 31 38.0	+0.6
TWG	Pinlang	7.45	245	Pn	Pn	10 31 36.4	-3.8
TPUB	Ta-pu	7.61	250		Pn	10 31 40.9	-1.5
NJ2	Nanjing	10.18	307	eP	Pn	10 32 16.9	-0.6
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				LR	LR		
	comp=N,700nm,12.8s						
NJ2				LR	LR		
	comp=E,800nm,9.9s						
NJ2				LR	LR		
	comp=Z,1μm,11.4s						
KSRS	Korea Array	11.24	358	Pn	Pn	10 32 32.7	+0.6
	0.1nm,0.3s,baz=181,slow=14,SNR=5.0						
KSRS				LR	LR	10 37 03.6	
	comp=Z,329nm,20.3s,baz=176,slow=39						
INU	Inuyama	11.77	37	Pn	Pn	10 32 42.8	+3.6
JCJ	Chichijima	12.38	83	LR	LR	10 36 41.5	
	comp=Z,246nm,18.7s,baz=214,slow=33						
WHN	Wuhan	13.10	293	⇑P	P	10 33 09.0	+1.6
MJAR	Matsushiro Arr	13.30	37	Pn	Pn	10 33 00.6	+0.5
	0.0nm,0.3s,baz=221,slow=8.1,SNR=2.9						
MJAR				LR	LR	10 37 56.7	
	comp=Z,118nm,22.0s,baz=230,slow=36						
TGY	Tagaytay City	13.90	212	Pn	Pn	10 33 10.8	+2.3
	60nm,0.3s,baz=283,slow=1.0,SNR=3.5						
BJT	Baijiatuau	17.16	327	P	P	10 33 53.6	+1.2
BJT	Baijiatuau	17.16	327	P	P	10 33 53.6	+1.2
BJT				pmax	pmax		
	comp=Z,13nm,0.6s						
BJI	Beijing	17.17	327	P	P	10 33 52.8	+0.3
BJI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BJI				LR	LR		
	comp=Z,540nm,14.1s						
BJI				LR	LR		
	comp=Z,250nm,12.7s						
BJI				LR	LR		
	comp=Z,380nm,17.7s						
CN2	Changchun	17.74	353	eP	P	10 33 59.6	+0.8
CN2				eS	Sn	10 37 16.0	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,600nm,12.0s						
CN2				LR	LR		
	comp=Z,300nm,12.0s						
CN2				LR	LR		
	comp=Z,600nm,14.0s						
USRK	Ussuriysk Ar.	18.21	8	P	P	10 34 04.8	+0.7
	baz=184,slow=8.1,SNR=8.9						
USRK				LR	LR	10 41 17.5	
	comp=Z,169nm,18.6s,baz=174,slow=38						
QIZ	Qiongzhong	18.53	251	P	P	10 34 03.9	-3.8
QIZ				S	Sn	10 37 34.4	-0.1
QIZ				LR	LR		
	comp=Z,620nm,16.7s						
QIZ				LR	LR		
	comp=Z,340nm,22.1s						
XAN	Xi'an	18.55	300	P	Pn	10 34 09.4	+1.1
XAN				S	Sn	10 37 28.6	-6.3
XAN				pmax	pmax		
	comp=Z,16nm,0.6s						
XAN				pmax	pmax		
	comp=Z,190nm,4.3s						
XAN				LR	LR		
	comp=Z,430nm,14.1s						
XAN				LR	LR		
	comp=Z,390nm,15.2s						
XAN				LR	LR		
	comp=Z,470nm,15.7s						
XAN	Xi'an	18.55	300	P	Pn	10 34 09.0	+0.7
XAN	Xi'an	18.55	300	P	Pn	10 34 09.0	+0.7
XAN				pmax	pmax		
	comp=Z,16nm,0.5s						
GYA	Guiyang	19.47	276	eP	Pn	10 34 24.9	+5.4
GYA				PP	PnPn	10 34 43.9	+11
GYA				S	Sn	10 38 09.8	+12
GYA				SS	SnSn	10 38 31.6	+20
HHC	Hu-ho-hao-te	20.21	321	eP	Pn	10 34 27.4	-0.7
HHC				PP	PnPn	10 34 47.4	+4.4
HHC				S	S	10 38 10.0	-1.7
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,55nm,7.5s						
HHC				LR	LR		
	comp=Z,230nm,15.3s						
HHC				LR	LR		
	comp=Z,180nm,15.5s						
ASAJ	Asahikawa	21.28	29	P	P	10 34 37.2	-0.2
	comp=Z,5.4nm,0.5s,baz=226,slow=12,SNR=6.0						
JKA	Kamikawa-asahi	21.28	29	P	P	10 34 37.2	-0.2
CD2	Chengdu	22.12	288	P	P	10 34 45.0	-1.7
CD2				S	S	10 38 47.5	-1.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CD2				LR	LR		
	comp=Z,960nm,16.7s						
CD2				LR	LR		
	comp=Z,960nm,16.2s						
CD2				LR	LR		
	comp=Z,930nm,13.7s						
KMI	Kunming	23.13	273	P	P	10 34 57.8	+0.2
KMI				pP	pP	10 35 02.3	-2.3
KMI				sP	sP	10 35 06.0	-1.7
KMI				S	S	10 39 01.0	-6.7
KMI				sS	pS	10 39 12.3	-3.7
KMI				SS	SnSn	10 39 48.8	+7.2
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KMI				pmax	pmax		
	comp=Z,90nm,4.8s						
KMI				LR	LR		
	comp=Z,460nm,20.7s						
KMI				LR	LR		
	comp=Z,300nm,14.7s						
KMI				LR	LR		
	comp=Z,410nm,12.9s						
LZH	Lanzhou	23.16	301	⇑P	P	10 34 57.3	-0.4
LZH				pP	pP	10 35 02.1	-2.7
LZH				sP	sP	10 35 05.8	-1.9
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
LZH				pmax	pmax		
	comp=Z,50nm,4.8s						
LZH				LR	LR		
	comp=Z,390nm,14.6s						
LZH				LR	LR		
	comp=Z,350nm,14.1s						
LZH				LR	LR		

	comp=Z,430nm,15.7s						
KLR	Kul'dur	23.16	6	P	P	10 34 55.6	-1.7
	comp=Z,1.1nm,0.5s,baz=191,slow=5.2,SNR=6.8						
KLR	Kul'dur	23.16	6	⇑iP	P	10 34 56.0	-1.4
YSS	Yuzh-Sakhalins	23.65	25	P	P	10 35 02.5	+0.3
YSS	Yuzh-Sakhalins	23.65	25	iP	P	10 35 03.2	+1.0
YSS				pmax	pmax		
	comp=Z,84nm,1.2s						
TNTI	Ternate	25.28	182	P	P	10 35 29.1	+12
	comp=Z,32nm,1.0s						
GRNR	Gornyy	25.31	12	⇑iP	P	10 35 14.7	-2.7
GRNR				i		10 46 17.9	
GRNR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KMSI	Cibinong	25.81	190	P	P	10 35 33.2	+11
	comp=Z,68nm,0.4s						
LBMI	Labuha	26.68	182	P	P	10 35 41.9	+12
	comp=Z,422μmcomp=Z,27nm,0.6s						
TYV	Tymovskoe	26.96	20	eP	P	10 35 31.7	-0.6
TYV				pmax	pmax		
	comp=Z,200nm,3.4s						
TYV				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA	Gaotai	27.27	306	P	P	10 35 34.4	-1.1
GTA				pP	pP	10 35 40.0	-2.8
GTA				sP	sP	10 35 43.3	-2.5
GTA				pmax	pmax		
	comp=Z,39nm,0.8s						
GTA				pmax	pmax		
	comp=Z,91nm,4.9s						
GTA				LR	LR		
	comp=Z,170nm,13.4s						
GTA				LR	LR		
	comp=Z,320nm,16.1s						
GTA				LR	LR		
	comp=Z,420nm,16.8s						
SONM	Songino Array	27.67	327	P	P	10 35 37.4	-1.5
	comp=Z,5.6nm,0.5s,baz=144,slow=9.4,SNR=64						
SONM				LR	LR	10 47 57.4	
	comp=Z,273nm,19.7s,baz=72,slow=39						
CHTO	Chiang Mai	28.13	261	P	P	10 35 44.1	+1.0
CHTO				IAmb	IAmb	10 35 45.8	
	comp=Z,7.6nm,0.6s						
CHTO	Chiang Mai	28.13	261	P	P	10 35 44.2	+1.0
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CMAR	Chiang Mai Arr	28.25	260	P	P	10 35 44.9	+0.6
	comp=Z,2.4nm,0.7s,baz=52,slow=7.8,SNR=14						
CMAR				PcP	PcP	10 38 58.8	+1.4
	comp=Z,0.8nm,0.3s,baz=45,slow=2.2,SNR=4.2						
CMAR				LR	LR	10 46 43.0	
	comp=Z,87nm,20.5s,baz=78,slow=36						
CMAR	Chiang Mai Arr	28.25	260	ceP	P	10 35 46.4	+2.1
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SHL	Shillong	32.78	277	P	P	10 36 24.3	-0.1
SHL				IAmb	IAmb	10 36 25.0	
	comp=Z,15nm,1.0s						
SHL	Shillong	32.78	277	P	P	10 36 24.3	-0.1
SHL				pmax	pmax		
	comp=Z,15nm,1.0s						
LSA	Lhasa	32.99	285	P	P	10 36 25.6	-1.0
LSA				IAmb	IAmb	10 36 38.1	
	comp=Z,4.1nm,0.4s						
LSA	Lhasa	32.99	285	P	P	10 36 25.6	-1.0
LSA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
PETK	Petropavlovsk-	34.67	31	P	P	10 36 41.4	+1.1
	comp=Z,1.3nm,0.6s,baz=226,slow=5.7,SNR=5.2						
PETK				LR	LR	10 50 47.5	
	comp=Z,74nm,21.9s,baz=241,slow=36						
YAK	Yakutsk	35.85	1	P	P	10 36 49.9	-0.4
YAK	Yakutsk	35.85	1	iP	P	10 36 50.0	-0.4
YAK				pmax	pmax		
	comp=Z,13nm,0.8s						
TAPN	Taplejung	36.22	281	eP	P	10 36 54.6	+0.2
	comp=Z,18nm,0.7s						
ODAN	Odare	36.58	280	eP	P	10 36 57.4	+0.1
	comp=Z,41nm,0.6s						
WMQ	Urumqi	37.25	309	eP	P	10 37 02.3	-0.4
WMQ				pP	pP	10 37 07.6	-2.6
WMQ				sP	sP	10 37 15.8	+2.6
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,62nm,5.1s						
WMQ				LR	LR		
	comp=Z,730nm,28.8s						
WMQ				LR	LR		
	comp=Z,960nm,29.2s						
WMQ	Urumqi	37.25	309	P	P	10 36 59.7	-2.9
WMQ				IAmb	IAmb	10 37 02.9	
	comp=Z,10nm,0.9s						
WMQ	Urumqi	37.25	309	P	P	10 36 59.7	-2.9
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RAMN	Ramite	37.26	281	eP	P	10 37 03.6	+0.5
	comp=Z,11nm,0.5s						
JIRN	Jiri	37.52	282	eP	P	10 37 06.2	+0.7
	comp=Z,20nm,0.6s						
GUN	Gumba	37.76	282	eP	P	10 37 07.8	+0.3
	comp=Z,23nm,0.4s						
PKI	Pulchoki	38.22	282	eP	P	10 37 10.7	-0.6
	comp=Z,26nm,0.5s						
PKIN	Phulchoki	38.23	282	eP	P	10 37 11.3	0.0
	comp=Z,21nm,0.5s						
MDSI	Maura Dua	38.47	221	P	P	10 37 24.6	+12
DMN	Daman	38.48	282	eP	P	10 37 13.1	-0.3
	comp=Z,32nm,0.9s						
GKN	Gorkha	38.84	283	eP	P	10 37 16.4	+0.1
	comp=Z,44nm,0.5s						
DANN	Dangsing	39.56	284	eP	P	10 37 22.4	-0.1
	comp=Z,55nm,0.6s						
SEY	Seymchan	40.02	17	P	P	10 37 26.4	+0.9
	comp=Z,2.4nm,0.7s,baz=207,slow=6.9,SNR=27						
SEY	Seymchan	40.02	17	⇓iP	P	10 37 25.9	+0.4
MK31	Makanchi Array	41.67	312	P	P	10 37 38.7	-0.7
MK31	Makanchi Array	41.67	312	P	P	10 37 38.7	-0.7
MK31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MKAR	Makanchi Array	41.67	312	P	P	10 37 38.7	-0.7
	comp=Z,7.3nm,0.6s,baz=100,slow=10,SNR=136						
MKAR				PcP	PcP	10 39 35.9	0.0
	comp=Z,1.4nm,0.8s,baz=62,slow=4.0,SNR=3.9						
MKAR	Makanchi Array	41.67	312	ceP	P	10 37 38.9	-0.5
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MAKZ	Makanchi	41.88	312	P	P	10 37 40.1	-1.0
MAKZ	Makanchi	41.88	312	P	P	10 37 40.1	-1.0
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZAA0	Zalesovo Array	42.37	323	P	P	10 37 43.3	-1.7
ZALV	Zalesovo Beam	42.37	323	P	P	10 37 43.6	-1.3
	comp=Z,3.6nm,0.5s,baz=111,slow=8.6,SNR=17						
ZALV				LR	LR	10 57 07.6	
	comp=Z,160nm,19.4s,baz=130,slow=39						
KDJ	Kajisay	44.60	304	P	P	10 38 02.5	-0.8
KDJ				IAmb	IAmb	10 38 14.3	
	comp=Z,8.2nm,0.8s						
KDJ	Kajisay	44.60	304	P	P	10 38 02.5	-0.8
KDJ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURK	Kurchatov	44.95	317	P	P	10 38 04.8	-0.9
KURK				IAmb	IAmb	10 38 06.5	
	comp=Z,9.4nm,1.2s						
KURK	Kurchatov	44.95	317	d iP	P	10 38 05.1	-0.6
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KSH	Kashi	45.41	301	P	P	10 38 13.3	+3.6
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,170nm,7.2s						
KSH				LR	LR		
	comp=Z,170nm,5.6s						
KSH				LR	LR		
	comp=Z,100nm,5.1s						
KSH				LR	LR		
	comp=Z,520nm,6.4s						
NRN	Naryn	45.44	303	P	P	10 38 10.3	+0.1
NRN				IAmb	IAmb	10 38 21.8	
	comp=Z,5.0nm,0.6s						
NRN	Naryn	45.44	303	P	P	10 38 10.3	+0.1
NRN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TIXI	Tiksi	45.50	0	LR	LR	10 59 24.9	

	comp=Z,118nm,18.3s,baz=197,slow=39						
TIXI	Tiksi	45.50	0	P	P	10 38 09.9	+0.1
TIXI	Tiksi	45.50	0	deP	P	10 38 09.6	-0.2
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WB0	Warramunga Arr	46.05	172		P	10 38 05.7	-9.0
WB0				IAmb	IAmb	10 38 24.3	
	comp=Z,9.8nm,0.8s						
WRAB	Tennant Creek	46.20	172	P	P	10 38 16.5	+0.5
WRAB				IAmb	IAmb	10 38 26.0	
	comp=Z,6.8nm,0.8s						
WRAB	Tennant Creek	46.20	172	⇑eP	P	10 38 16.0	+0.1
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WRA	Warramunga Arr	46.21	172	P	P	10 38 16.7	+0.6
	comp=Z,2.7nm,0.8s,baz=353,slow=8.4,SNR=12						
WB2	Warramunga Arr	46.21	172		P	10 38 07.0	-9.0
WB2				IAmb	IAmb	10 38 26.1	
	comp=Z,7.4nm,0.7s						
WR0	Warramunga Arr	46.25	172		P	10 38 07.7	-8.6
AAK	Ala-Archa	46.61	305	P	P	10 38 19.5	+0.2
AAK	Ala-Archa	46.61	305	⇑eP	P	10 38 19.3	+0.1
AAK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
BILL	Bilibino	47.67	18	P	P	10 38 27.1	+0.2
BILL				IAmb	IAmb	10 38 45.6	
	comp=Z,20nm,1.5s						
BILL	Bilibino	47.67	18	⇓eP	P	10 38 27.3	+0.4
BILL				e		10 39 51.9	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,118nm,18.0s						
NIL	Nilore	47.89	293	P	P	10 38 28.8	-0.4
NIL	Nilore	47.89	293	P	P	10 38 28.8	-0.4
NIL				pmax	pmax		
	comp=Z,17nm,0.5s						
PSAB2	Pilbara Seismi	48.17	191	P	P	10 38 31.9	+0.7
PSAB2				IAmb	IAmb	10 38 45.5	
	comp=Z,16nm,1.3s						
NRIK	Noril'sk	49.34	342	LR	LR	11 00 52.5	
	comp=Z,108nm,18.2s,baz=122,slow=38						
KK31	Karatay Array	49.55	305	P	P	10 38 41.3	-0.5
KK31	Karatay Array	49.55	305	P	P	10 38 41.3	-0.5
KK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KKAR	Karatay Array	49.55	305	P	P	10 38 41.2	-0.6
KKAR	Karatay Array	49.55	305	P	P	10 38 41.2	-0.6
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AS31	Alice Springs	49.84	173	P	P	10 38 44.9	+0.8
ASAR	Alice Springs	49.84	173	P	P	10 38 45.3	+1.3
	comp=Z,2.2nm,0.6s,baz=0.9,slow=7.6,SNR=20						
BRVK	Borovoye	50.47	318	P	P	10 38 48.2	-0.3
BRVK	Borovoye	50.47	318	deP	P	10 38 48.4	-0.1
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KBL	Kabul	51.25	294	P	P	10 38 54.3	-0.7
KBL	Kabul	51.25	294	P	P	10 38 54.3	-0.7
KBL				pmax	pmax		
	comp=Z,17nm,0.7s						
ANM	Nome	56.48	28	P	P	10 39 34.0	+1.5
ANM				IAmb	IAmb	10 39 38.8	
	comp=Z,4.8nm,0.6s						
ANM	Nome	56.48	28	P	P	10 39 34.0	+1.5
ANM				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ABKAR	Akbulak array	56.78	313	P	P	10 39 35.3	+0.5
ARU	Arti	57.52	322	P	P	10 39 39.6	-0.3
ARU				IAmb	IAmb	10 39 40.3	
	comp=Z,6.8nm,1.0s						
ARU	Arti	57.52	322	d iP	P	10 39 40.0	+0.1
ARU				S	S	10 47 38.1	+2.4
ARU				SS	SS	10 51 25.0	-0.4
ARU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARU				MLR	MLR		
	comp=Z,325nm,19.0s						
GEYT	Alibeck	59.44	300	P	P	10 39 54.0	+0.3
	comp=Z,2.9nm,0.7s,baz=72,slow=1.9,SNR=6.1						
GEYT				LR	LR	11 09 29.2	
	comp=Z,126nm,18.5s,baz=115,slow=40						
KDAK	Kodiak Island	62.47	36	P	P	10 40 15.3	+1.4
KDAK	Kodiak Island	62.47	36	P	P	10 40 15.3	+1.4
KDAK				pmax	pmax		
	comp=Z,32nm,1.3s						
RND	Reindeer	63.72	30	P	P	10 40 22.9	+0.7
RND				IAmb	IAmb	10 40 29.0	
	comp=Z,6.4nm,0.7s						
RND	Reindeer	63.72	30	P	P	10 40 22.9	+0.7
RND				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PMR	Palmer	63.79	32	P	P	10 40 23.8	+1.2
PMR				IAmb	IAmb	10 40 38.6	
	comp=Z,5.1nm,1.1s						
PMR	Palmer	63.79	32	P	P	10 40 23.8	+1.2
PMR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ILAR	Eielson Array	64.41	28	P	P	10 40 26.4	-0.2
	comp=Z,0.6nm,0.9s,baz=253,slow=4.2,SNR=5.4						
GLB	Gilahina Butte	66.33	32	P	P	10 40 40.6	+1.4
GLB				IAmb	IAmb	10 40 57.1	
	comp=Z,10nm,1.4s						
WAX	Waxell Ridge	67.00	33	P	P	10 40 44.6	+1.1
EPYK	Eagle Plains	68.24	26	P	P	10 40 52.2	+1.0
EPYK				IAmb	IAmb	10 41 00.1	
	comp=Z,17nm,1.4s						
INK	Inuvik	68.88	23	LR	LR	11 14 30.2	
	comp=Z,43nm,18.1s,baz=55,slow=39						
INK	Inuvik	68.88	23	P	P	10 40 56.2	+1.2
INK				IAmb	IAmb	10 40 56.7	
	comp=Z,7.1nm,1.4s						
INK	Inuvik	68.88	23	P	P	10 40 56.2	+1.2
INK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KBZ	Khabaz	69.30	309	P	P	10 40 57.8	-0.3
	comp=Z,5.7nm,0.8s,baz=14,slow=0.9,SNR=9.3						
KBZ				LR	LR	11 16 24.8	
	comp=Z,82nm,18.1s,baz=124,slow=40						
KBZ	Khabaz	69.30	309	ceP	P	10 40 58.3	+0.2
KIV	Kislovodsk	69.38	310	eP	P	10 40 57.5	-1.2
KIV				pmax	pmax		
	comp=Z,26nm,1.0s						
KIV				MLR	MLR		
	comp=Z,218nm,17.0s						
OBN	Obninsk	69.95	322	iP	P	10 41 00.3	-1.6
OBN				i		10 41 21.1	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARCES	ARCESS Array B	70.10	339	P	P	10 41 01.4	-1.2
	comp=Z,3.6nm,1.0s,baz=73,slow=7.0,SNR=4.6						
ARCES				LR	LR	11 17 57.6	
	comp=Z,106nm,18.2s,baz=318,slow=41						
JOF	Joensuu	70.15	331	P	P	10 41 02.7	-0.3
SOCY	Socotra	70.83	274	P	P	10 41 07.7	-0.4
NOR	Nord	70.99	355	P	P	10 41 07.9	0.0
OUL	Oulu	71.63	334	P	P	10 41 11.5	-0.4
C36M	Paulatuk	71.69	21	P	P	10 41 13.2	+1.0
SUF	Sumiainen	72.44	332	P	P	10 41 16.1	-0.7
FIA1	FINESS Array S	72.97	331	P	P	10 41 20.0	0.0
FIA1				IAmb	IAmb	10 41 22.8	
	comp=Z,17nm,1.3s						
FINES	FINESS Array B	72.97	331	P	P	10 41 19.8	-0.2
	comp=Z,5.8nm,0.5s,baz=67,slow=6.0,SNR=39						
VAF	Ylistaro	73.76	333	P	P	10 41 24.6	0.0
DLBC	Dease Lake	73.84	32	P	P	10 41 25.8	+0.5
DLBC				IAmb	IAmb	10 41 26.6	
	comp=Z,10nm,1.1s						
VSU	Vasula	73.86	328	⇑eP	P	10 41 24.0	-1.3
VSU				pmax	pmax		
	comp=Z,20nm,0.8s						
RAYN	Ar Rayn	73.96	289	P	P	10 41 25.6	-1.0
RAYN	Ar Rayn	73.96	289	P	P	10 41 25.6	-1.0
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DAG	Danmarks Havn	75.32	353	iP	P	10 41 33.0	-0.5
	comp=Z,1.8nm,0.7s						
DAG	Danmarks Havn	75.32	353	iP	P	10 41 33.0	-0.5
DAG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
RES	Resolute Bay	75.57	11	P	P	10 41 35.4	+0.5
RES				IAmb	IAmb	10 41 39.5	
	comp=Z,7.4nm,0.8s						
RES	Resolute Bay	75.57	11	P	P	10 41 35.4	+0.5
RES				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,7.0nm,0.9s						
AKASG	Malin Array Be	75.66	320	P	P	10 41 35.5	-0.4
	comp=Z,2.3nm,0.3s,baz=60,slow=6.6,SNR=5.2						
AKBB	Malin Array Si	75.66	320	P	P	10 41 35.3	-0.6
AKBB				IAmb	IAmb	10 41 35.9	
	comp=Z,6.4nm,0.6s						
AKBB	Malin Array Si	75.66	320	*c**e*P	P	10 41 35.3	-0.6
TULEG	Thule	76.97	4	P	P	10 41 43.0	+0.1
TULEG				IAmb	IAmb	10 41 46.7	
	comp=Z,5.7nm,0.7s						
BR131	Keskin Array S	77.17	308	P	P	10 41 43.8	-1.1
BR131	Keskin Array S	77.17	308	P	P	10 41 43.8	-1.1
BR131				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRTR	Keskin Array B	77.17	308	P	P	10 41 44.6	-0.2
	comp=Z,2.7nm,0.7s,baz=85,slow=4.2,SNR=12						
SUW	Suwalki	77.57	324	P	P	10 41 46.8	+0.2
SUW	Suwalki	77.57	324	P	P	10 41 46.8	+0.2
SUW				pmax	pmax		
	comp=Z,26nm,1.0s						
ASF	Jabal al Asfar	77.72	300	P	P	10 41 49.2	+1.2
ASF				pmax	pmax		
	comp=Z,4.0nm,1.3s						
YKA	Yellowknife Ar	78.51	25	P	P	10 41 52.5	+0.8
	comp=Z,0.9nm,0.5s,baz=303,slow=5.8,SNR=22						
NC405	NORSAR Array S	79.18	334	P	P	10 41 55.2	-0.2
VRI	Vrincioaia	79.22	316	P	P	10 41 55.8	-0.1
VRI				pmax	pmax		
	comp=Z,13nm,1.2s						
CSS	Mathiatis	79.32	304	P	P	10 41 56.0	-0.7
CSS				IAmb	IAmb	10 41 59.9	
	comp=Z,8.0nm,0.7s						
BUR08	Bucovina Ar. S	79.36	318	P	P	10 41 56.3	-0.4
NB2	NORSAR Subarra	79.42	334	P	P	10 41 56.2	-0.5
	comp=Z,1.5nm,0.5s,baz=53,slow=5.6						
NOA	NORSAR Array B	79.42	334	P	P	10 41 56.3	-0.5
	comp=Z,2.7nm,0.6s,baz=52,slow=5.6,SNR=15						
NOA				LR	LR	11 22 07.8	
	comp=Z,90nm,18.6s,baz=280,slow=40						
KWP	Kalwaria Pacla	79.89	321	P	P	10 41 59.4	-0.1
KWP				IAmb	IAmb	10 42 01.2	
	comp=Z,10nm,0.7s						
KWP	Kalwaria Pacla	79.89	321	P	P	10 41 59.4	-0.1
KWP				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ELL	Elmali	81.08	306	P	P	10 42 05.2	-1.1
ELL	Elmali	81.08	306	P	P	10 42 05.2	-1.1
ELL				pmax	pmax		
	comp=Z,25nm,0.7s						
SUMG	Summit	81.09	356	*i* P	P	10 42 07.3	+1.3
SUMG	Summit	81.09	356	P	P	10 42 06.1	+0.1
SUMG				IAmb	IAmb	10 42 20.8	
	comp=Z,8.2nm,0.8s						
SUMG	Summit	81.09	356	*i* P	P	10 42 07.3	+1.3
DRGR		81.25	318	P	P	10 42 07.6	+0.6
DRGR				pmax	pmax		
	comp=Z,17nm,0.8s						
ALN	Alexandroupoli	81.92	312	P	P	10 42 10.7	+0.3
ALN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VYHS	Vyhne	82.67	321	*e*P	P	10 42 15.4	+1.1
VYHS	Vyhne	82.67	321	*e*P	P	10 42 15.4	+1.1
MORC	Moravsky Berou	82.71	322	P	P	10 42 15.5	+1.0
MORC				pmax	pmax		
	comp=Z,7.0nm,2.9s						
KSP	Ksiaz	82.81	324	P	P	10 42 15.8	+0.8
KSP				pmax	pmax		
	comp=Z,9.0nm,0.7s						
VTS	Vitosha	82.95	314	P	P	10 42 17.2	+1.2
VTS				IAmb	IAmb	10 42 18.4	
	comp=Z,4.3nm,0.7s						
VTS	Vitosha	82.95	314	P	P	10 42 17.2	+1.2
VTS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CLL	Collm	84.27	325	*e*P	P	10 42 24.0	+1.6
	comp=Z,5.0nm,0.7s						
CLL				LmV		11 23 00.0	
	comp=Z,200nm,19.2s						
CLL	Collm	84.27	325	*e*P	P	10 42 24.0	+1.6
CLL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KHC	Kasperske Hory	85.22	323	⇑*e*P	P	10 42 27.3	0.0
KHC				pmax	pmax		
	comp=Z,17nm,1.4s						
GERES	GERESS Array B	85.32	323	P	P	10 42 28.0	+0.1
	comp=Z,0.9nm,0.5s,baz=44,slow=4.1,SNR=7.1						
ITM	Ithomi	86.52	310	P	P	10 42 33.4	-0.5
FFC	Flin Flon	88.57	27	P	P	10 42 43.8	+0.4
FFC				pmax	pmax		
	comp=Z,10.0nm,2.9s						
NVAR	Mina Array Bea	90.44	46	P	P	10 42 54.3	+1.4
	comp=Z,0.3nm,0.6s,baz=316,slow=5.0,SNR=3.0						
PDAR	Pinedale Array	93.11	39	P	P	10 43 05.6	+0.4
	comp=Z,0.3nm,0.8s,baz=26,slow=2.3,SNR=3.1						

IDC 19 10:43:29.6±12.0,**17.38S×176.99W,h0km,mb4.0**/3, **mb1 4.3**/3,**mb1mx3.7**/36,**mbtmp4.0**/3,**MS3.6**/9,**Ms1 3.6**/9, **ms1mx3.4**/36,**Error ellipse: s-maj=559.8km s-min=35.9km az=142.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	11.85	184	LR	LR	10 50 04.9	
	comp=Z,51nm,21.5s,baz=50,slow=33						
DZM	Mont Dzumac	16.27	251	LR	LR	10 52 25.4	
	comp=Z,161nm,18.7s,baz=39,slow=33						
RAR	Rarotonga	16.70	106	LR	LR	10 52 52.9	
	comp=Z,121nm,18.9s,baz=266,slow=34						
URZ	Urewera	21.43	193	LR	LR	10 55 46.7	
	comp=Z,225nm,19.5s,baz=57,slow=34						
HNR	Honiara	23.76	286	LR	LR	10 56 02.6	
	comp=Z,556nm,21.2s,baz=104,slow=32						
PPT	Papeete	26.15	95	LR	LR	10 57 07.4	
	comp=Z,78nm,20.5s,baz=273,slow=31						
WRA	Warramunga Arr	46.05	259	P	P	10 51 55.5	-0.1
	0.9nm,0.9s,baz=84,slow=6.8,SNR=3.0						
WRA				LR	LR	11 10 01.4	
	comp=Z,57nm,18.8s,baz=100,slow=35						
ASAR	Alice Springs	46.23	254	P	P	10 51 56.3	-0.7
	4.2nm,0.7s,baz=87,slow=8.2,SNR=37						
ASAR				LR	LR	11 09 49.6	
	comp=Z,167nm,20.3s,baz=94,slow=34						
KSRS	Korea Array	75.22	318	LR	LR	11 21 08.2	
	comp=Z,39nm,21.3s,baz=168,slow=30						
ILAR	Eielson Array	85.08	12	P	P	10 56 06.0	-0.9
	0.8nm,0.8s,baz=217,slow=7.4,SNR=6.7						
BRTR	Keskin Array B	145.35	316	PKPbc	PKPdf	11 03 10.7	+0.7
	0.4nm,0.8s,baz=110,slow=1.7,SNR=2.2						

IDC 19 10:53:00.9±8.2,**26.03S×28.80E,h0km,mb1 2.6**/1, **mb1mx2.6**/27,**mbtmp2.7**/1,**ML2.2**/1,**Error ellipse: s-maj=91.4km s-min=57.3km az=140.0,South Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOSA	Boshof	4.07	230	Pn	Pn	10 54 05.5	+1.0
	0.1nm,0.3s,baz=51,slow=6.5,SNR=2.0						
BOSA				Pg	Pb	10 54 13.7	+0.2
	0.3nm,0.3s,baz=50,slow=15,SNR=5.6						
BOSA				Lg	Lg	10 55 10.4	
	0.4nm,0.3s,baz=144,slow=9.3,SNR=3.1						
I47ZA	BOSHOF INFRASO	4.08	230	*i*		11 20 20.0	
	baz=52,slow=304,SNR=0.9						
I35NA	TSUMEB INFRASO	12.39	301	*i*		12 09 10.0	
	baz=124,slow=320,SNR=0.4						

*YARS **19** 10:55:14.5±0.0,67.61N×142.81E,h15km,ML3.5/6*
*IDC **19** 10:55:16.1±1.0,67.82N×142.74E,h0km,mb3.6/7, mb1 3.8/9,mb1mx3.6/40,mbtmp3.6/9,ML3.0/1,MS3.5/4, Ms1 3.5/4,ms1mx2.8/51,Error ellipse: s-maj=25.8km s-min=16.5km az=5.0*
ISC 19 10:55:16.1±0.6,**67.58N**±0.03×**142.61E**±0.04,**h10km,n23,** σ**2.42**/28,**mb3.6**/7,**Eastern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MOMR	Moma	1.15	168	*e*Pg	Pb	10 55 36.0	-1.9
	501nm,1.1s						
MOMR				*e*Sg	Sb	10 55 50.9	-2.0
	312nm,0.2s						
YBGR	Belaya Gora	1.65	53	*e*Pg	Pn	10 55 42.4	-2.7
	444nm,1.2s						
YBGR				*e*Sg	Sn	10 56 04.3	-1.9
	83nm,0.7s						
DEPR	Deputatskiy	2.07	332	*e*Pg	Pb	10 55 52.6	-1.2
	154nm,1.0s						
DEPR				*e*Sg	Sb	10 56 20.3	+0.7
	946nm,0.8s						
UNR	Ust'-Nera	3.04	175	*e*Pg	Pb	10 56 10.7	+0.5
	7.3nm,1.0s						
UNR				*e*Sg	Sb	10 56 49.8	+2.5
	31nm,1.0s						
BTGS	Batagay	3.05	275	*e*Pg	Pb	10 56 10.7	+0.3
	52nm,0.6s						
BTGS				*e*Sg	Sg	10 56 52.4	-1.6
	335nm,0.3s						
SEY	Seymchan	6.21	134	Pn	Pn	10 56 50.5	+2.9
	0.3nm,0.3s,baz=343,slow=19,SNR=2.7						
SEY				Lg	Lg	10 58 29.4	
	0.6nm,0.3s,baz=20,slow=23,SNR=7.1						
TIXI	Tiksi	6.29	317	Pn	Pn	10 56 50.0	+1.2
	1.1nm,0.3s,baz=126,slow=15,SNR=10						
TIXI				Sn	Sn	10 57 59.2	-1.4
	3.3nm,0.3s,baz=1.4,slow=18,SNR=5.6						
TIXI				Lg	Lg	10 58 30.2	
	3.0nm,0.3s,baz=36,slow=17,SNR=7.8						
TIXI	Tiksi	6.29	317	*e*Pn	Pn	10 56 48.6	-0.2
TIXI				*e*Pg	Pb	10 57 08.9	+3.3
	9.3nm,0.5s						
TIXI				*e*Sn	Sn	10 57 58.5	-2.1
TIXI				*e*Sg	Sg	10 58 33.0	-4.8
	63nm,0.6s						
YAK	Yakutsk	7.83	231	Lg	Lg	10 59 27.3	
	0.1nm,0.3s,baz=17,slow=17,SNR=2.8						
YAK	Yakutsk	7.83	231	*e*Sg	Sg	10 59 22.6	-4.3
TBGR	Tabaga	8.01	230	*e*Pn	Pn	10 57 12.6	+0.3
TBGR				*e*Pg	Pb	10 57 39.8	+5.1
	16nm,0.5s						
TBGR				*e*Sn	Sn	10 58 41.5	-1.2
TBGR				*e*Sg	Sg	10 59 26.9	-5.7
	106nm,0.9s						
MA2	Magadan	8.81	152	Lg	Lg	10 59 55.8	
	0.2nm,0.3s,baz=112,slow=16,SNR=2.5						
KLR	Kul'dur	19.21	202	LR	LR	11 06 44.0	
	comp=Z,51nm,18.8s,baz=7.5,slow=35						
TLY	Talaya	24.72	249	LR	LR	11 09 38.8	
	comp=Z,27nm,18.8s,baz=21,slow=35						
SONM	Songino Array	27.01	241	P	P	11 01 01.6	+3.5
	0.8nm,1.0s,baz=57,slow=5.5,SNR=4.4						
ILAR	Eielson Array	27.22	62	P	P	11 00 59.4	-0.2
	1.3nm,0.8s,baz=298,slow=7.9,SNR=16						
MKAR	Makanchi Array	36.73	267	P	P	11 02 23.9	+0.8
	0.6nm,0.6s,baz=33,slow=6.1,SNR=5.2						
YKA	Yellowknife Ar	38.87	46	P	P	11 02 40.9	0.0
	0.4nm,0.7s,baz=321,slow=8.1,SNR=8.2						
AKASG	Malin Array Be	51.98	312	P	P	11 04 25.4	+0.5
	1.0nm,0.6s,baz=27,slow=8.3,SNR=1.9						
GUMO	Guam	53.97	177	LR	LR	11 23 34.4	
	comp=Z,106nm,21.3s,baz=120,slow=31						
PDAR	Pinedale Array	57.43	56	P	P	11 05 04.8	0.0
	0.7nm,0.8s,baz=333,slow=7.1,SNR=6.7						
TXAR	Lajitas Array	71.61	57	P	P	11 06 38.4	+0.8
	0.2nm,0.7s,baz=11,slow=5.5,SNR=2.8						
PMG	Port Moresby	76.86	175	LR	LR	11 40 43.2	
	comp=Z,192nm,20.2s,baz=13,slow=35						

IDC 19 11:06:00.1±1.6,**6.90S×128.58E,h0km,mb3.9**/2, **mb1 4.1**/4,**mb1mx3.8**/22,**mbtmp4.0**/4,**ML4.1**/2,**Error ellipse: s-maj=109.2km s-min=28.6km az=69.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.12	157	Pn	Pn	11 09 20.3	-1.2
	1.0nm,0.3s,baz=336,slow=13,SNR=32						
WRA				Sn	Sn	11 11 45.8	-13
	1.6nm,0.3s,baz=331,slow=22,SNR=9.4						
ASAR	Alice Springs	17.44	164	P	P	11 10 06.0	-0.3
	0.7nm,0.3s,baz=344,slow=10.0,SNR=43						
ASAR				S	Sn	11 13 10.0	-10
	0.4nm,0.3s,baz=351,slow=26,SNR=6.5						
SONM	Songino Array	57.91	343	P	P	11 15 54.9	+0.8
	0.1nm,0.3s,baz=152,slow=6.5,SNR=4.8						
MKAR	Makanchi Array	67.38	327	P	P	11 16 56.7	-0.5
	1.6nm,0.4s,baz=116,slow=8.2,SNR=42						

ATH 19 11:07:57.7,38.28N×20.40E,h15km±1km,**ML2.0**/2,**Error ellipse: s-maj=2.3km s-min=1.1km az=261.0,Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.03	136	P	Pg	11 08 00.5	+0.1
KEF4				S	Sg	11 08 02.4	+0.3
KEF1	Kardakata, Kep	0.06	93	P	Pg	11 08 00.4	-0.2
KEF1				S	Sg	11 08 02.4	0.0
KEF3	Kipouria, Keph	0.09	206	P	Pg	11 08 00.9	+0.1
KEF3				S	Sg	11 08 03.2	+0.3
LXRA	Lixouri, Kepha	0.09	158	P	Pg	11 08 01.0	+0.2
LXRA				S	Sg	11 08 03.1	+0.2
ARGA	Argostoli. Kep	0.12	148	P	Pg	11 08 01.1	-0.1
ARGA				S	Sg	11 08 03.2	-0.4
KEF2	Argostoli. Kep	0.14	148	P	Pg	11 08 01.3	-0.1
KEF2				S	Sg	11 08 03.7	-0.1
VLS	Valsamata	0.18	124	P	Pg	11 08 01.9	-0.2
VLS				S	Sg	11 08 04.7	-0.4
VLS				AML	AML	11 08 05.3	
	comp=E,2288µm,0.1s						
VLS				AML	AML	11 08 05.4	
	comp=N,1431µm,0.1s						
KONA	Konidatara, Ke	0.20	44	P	Pg	11 08 02.3	-0.1
KONA				S	Sg	11 08 05.3	-0.1
FSK	Fiskardo	0.22	36	P	Pg	11 08 02.6	0.0
FSK				S	Sg	11 08 05.9	-0.1
FSK				AML	AML	11 08 06.7	
	comp=N,477µm,0.4s						
FSK				AML	AML	11 08 06.8	
	comp=E,1360µm,0.2s						
VLMS	Volimes, Zakyn	0.46	152	P	Pg	11 08 06.3	-0.5
VLMS				S	Sb	11 08 13.7	-0.2
LKD2	Lefkada island	0.55	22	P	Pg	11 08 08.2	-0.3

*IDC **19** 11:10:10.2±0.3, 9.66N×69.69W, h0km, mb5.2/25, mb1 5.4/30, mb1mx5.3/34, mbtmp5.2/30, ML5.0/5, MS4.6/33, Ms1 4.6/33, ms1mx4.6/37, Error ellipse: s-maj=10.3km s-min=8.6km az=125.0*
*VAO **19** 11:10:10.8±0.2, 9.81N×69.77W, h10km, mb5.3*
*MOS **19** 11:10:10.8±0.9, 9.65N×69.73W, h10km, mb5.5/84, Error ellipse: s-maj=5.8km s-min=4.3km az=107.7*
*BJI **19** 11:10:11.0±0.0, 9.60N×69.80W, h10km, mB5.7/22, Ms5.5/28, Ms7 5.1/24*
*NEIC **19** 11:10:12.5±1.6, 9.61N±0.04×69.67W±0.05, h10km±1km, mb5.5/494, Mwb5.3/48, Mww5.3/12, Mwc5.4(GCMT), Mwr5.2(CAR), Error ellipse: s-maj=8.2km s-min=6.8km az=123.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.50; $M_{\theta\theta}$0.32; $M_{\phi\phi}$-0.82; $M_{r\theta}$-0.68; $M_{\theta\phi}$-0.25; $M_{\phi r}$-0.22; Fault plane solution: $M_0$1.05000×10^{17} NP1:ϕ_s339.71000°, δ42.81000°, λ29.14000°. NP2: ϕ_s227.47000°, δ70.68000°, λ128.97000°. Principal axes: T 1.0985, Plg49.0000°, Azm180.0000°; N -0.1163, Plg36.0000°, Azm32.0000°; P -0.9822, Plg17.0000°, Azm290.0000°;*
*NEIC **19** 11:10:13, 9.65N×69.75W, h13km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.49; $M_{\theta\theta}$0.38; $M_{\phi\phi}$-0.88; $M_{r\theta}$-0.60; $M_{\theta\phi}$-0.53; $M_{\phi r}$0.08; Fault plane solution: $M_0$1.11000×10^{17} NP1:ϕ_s236.00000°, δ65.00000°, λ143.00000°. NP2:ϕ_s344.00000°, δ57.00000°, λ30.00000°. Principal axes: T 1.1307, Plg43.0000°, Azm197.0000°; N -0.0460, Plg46.0000°, Azm28.0000°; P -1.0846, Plg5.0000°, Azm292.0000°;*
*CAR **19** 11:10:13.3±1.7, 9.70N±0.04×69.68W±0.05, h3km±2km Error ellipse: s-maj=6.8km s-min=5.7km az=132.0*
*GCMT **19** 11:10:14.5±0.1, 9.67N±0.01×69.77W±0.01, h13km, MW5.3/134, Moment Tensor Solution. s98,c143; s134,c231; Duration: 1.1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.50±.02; $M_{\theta\theta}$0.51±.01; $M_{\phi\phi}$-1.00±.02; $M_{r\theta}$-0.44±.04; $M_{\theta\phi}$-0.68±.01; $M_{\phi r}$0.22±.03; Best double couple: $M_0$1.19900×10^{17} NP1:ϕ_s240.00000°, δ63.00000°, λ153.00000°. NP2:ϕ_s343.00000°, δ66.00000°, λ29.00000°. Principal axes: T 1.1360, Plg37.0000°, Azm202.0000°; N 0.1290, Plg53.0000°, Azm18.0000°; P -1.2620, Plg2.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **19** 11:10:16, 9.69N×69.78W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.55; $M_{\theta\theta}$0.52; $M_{\phi\phi}$-1.07; $M_{r\theta}$-0.41; $M_{\theta\phi}$-0.74; $M_{\phi r}$0.28; Fault plane solution: $M_0$1.29000×10^{17} NP1:ϕ_s343.00000°, δ67.00000°, λ31.00000°. NP2:ϕ_s240.00000°, δ62.00000°, λ154.00000°. Principal axes: T 1.1864, Plg38.0000°, Azm203.0000°; N 0.1803, Plg52.0000°, Azm16.0000°; P -1.3668, Plg4.0000°, Azm111.0000°;*
*OSPL **19** 11:10:22.6±3.8, 10.20N×69.48W, h120km±711km, ML5.3*
*BGR **19** 11:10:24.9±0.0, 10.43N×68.19W, h33km, mb5.1, mB_BB5.8, Ms4.6*
ISC 19 11:10:13.6±0.7,**9.67N**±0.03×**69.75W**±0.04,**h20**km±3km, **h20km:pP-P,n1522,**σ**1.38**/1557,**mb5.5**/350,**MS4.7**/40, **42C-17D,Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SDV	Santo Domingo	1.17	228	Pg	Pn	11 10 33.7	-1.3
	2µm,0.3s,baz=54,slow=13,SNR=1811						
SDV				Lg	Lg	11 10 49.8	
	4µm,0.3s,baz=203,slow=15,SNR=15						
SDV	Santo Domingo	1.17	228	*e*P	Pn	11 10 33.7	-1.3
SDV	Santo Domingo	1.17	228		Pn	11 10 34.3	-0.8
URIC	Uribia, Colomb	2.98	313	*e*P	Pn	11 11 00.5	+0.7
URIC	Uribia, Colomb	2.98	313		Pn	11 11 00.7	+0.8
URIC				Sn	Sn	11 11 37.5	+2.4
CODC	Agustn Codazz	3.65	274	*e*P	Pn	11 11 11.1	+2.2
PAMC	Pamplona, Colo	3.72	232	*e*P	Pn	11 11 12.9	+2.4
OCAC	Ocana	3.80	248	*e*P	Pn	11 11 12.7	+1.5
SMLC	San Martn de	4.35	259	*e*P	Pn	11 11 20.4	+1.7
ARGC	Ariguani, Magd	4.43	273	*e*P	Pn	11 11 21.2	+1.5
BARC	Barichara	4.57	228	*e*P	Pn	11 11 24.4	+2.5
RUSC	La Rusia	5.00	222	*e*P	Pn	11 11 30.0	+2.0
RUSC	La Rusia	5.00	222		Pn	11 11 29.4	+1.4
PCRV	Puerto La Cruz	5.07	84	Pn	Pn	11 11 29.3	+0.7
	125nm,0.3s,baz=257,slow=3.1,SNR=119						
PCRV				Sn	Sn	11 12 28.2	+1.6
	289nm,0.3s,baz=192,slow=15,SNR=13						
PLCV	Puerto La Cruz	5.11	84		Pn	11 11 29.3	+0.2
PLCV					Sn	11 12 28.2	+0.6
SJCC	San Jacinto, C	5.35	273	*e*P	Pn	11 11 35.7	+3.2
ZARC	Zaragoza, Cauc	5.49	247	*e*P	Pn	11 11 35.3	+0.9
PTBC	PUERTO BERRIO,	5.60	237	*e*P	Pn	11 11 36.0	+0.2
SPBC	San Pablo de B	5.86	227	*e*P	Pn	11 11 41.9	+2.4
PTGC	Puerto Gaitan,	5.93	204	*e*P	Pn	11 11 40.4	0.0
UREC	San Jos de Ur	6.02	252	*e*P	Pn	11 11 44.4	+2.8
ORIV	Oritupano	6.29	95	*e*P	Pn	11 11 44.5	-0.8
ORIV	Oritupano	6.29	95	*e*	Sn	11 13 00.1	+3.4
ORIV				*e*S	Sg	11 13 40.0	+4.4
CHIC	Chingaza	6.38	218	*e*P	Pn	11 11 47.5	+0.6
NORC	Norcasia	6.51	232	*e*P	Pn	11 11 49.2	+0.7
LCBC	Los crdobas,	6.58	263	*e*P	Pn	11 11 50.4	+1.1
ROSC	El Rosal	6.60	224	Pn	Pn	11 11 52.5	+2.6
	257nm,0.3s,baz=84,slow=11,SNR=382						
ROSC				Sn	Sn	11 13 06.5	+1.5
	63nm,0.3s,baz=180,slow=20,SNR=2.3						
ROSC				LR	LR	11 14 39.8	
	comp=Z,20µm,19.0s,baz=24,slow=41						
ROSC	El Rosal	6.60	224	*e*P	Pn	11 11 53.5	+3.6
ROSC	El Rosal	6.60	224		Pn	11 11 52.7	+2.7
ROSC					Sn	11 13 07.5	+2.6
CVER	Cruz Verde, Cu	6.68	220	*e*P	Pn	11 11 55.8	+4.8
HELC	Santa Helena	6.69	239	*e*P	Pn	11 11 53.7	+2.6
DBBC	Dabeiba	6.91	248	*e*P	Pn	11 11 56.5	+2.5
GUY2C	Guyana, Caldas	7.11	232	*e*P	Pn	11 11 59.0	+2.0
CBOC	Ciudad Bolivar	7.26	239	*e*P	Pn	11 12 01.1	+2.2
GUIV	Guiria	7.48	82	*e*P	Pn	11 12 02.6	+0.9
GUIV	Guiria	7.48	82	*e*	Sn	11 13 25.7	-0.2
GUIV	Guiria	7.48	82	*e*S	Sg	11 14 28.1	+15
GUVC	San Jose del G	7.64	202	*e*P	Pn	11 12 03.2	-0.7
PRAC	Prado	7.81	221	*e*P	Pn	11 12 07.2	+0.9
ORTC	Ortega, Tolima	7.91	224	*e*P	Pn	11 12 08.1	+0.5
PLMC	San Jos del P	8.02	234	*e*P	Pn	11 12 11.4	+2.2
TPP	Pointe-a-Pierr	8.20	85	*e*P	Pn	11 12 15.8	+4.2
TRN	Trinidad (W)	8.28	83	*e*P	Pn	11 12 12.9	+0.3
TRN	Trinidad (W)	8.28	83	*e*S	Sn	11 13 45.4	-0.3
SOLC	Bahia Solano	8.32	246	*e*P	Pn	11 12 14.2	+1.0
GRGR	Grenville	8.32	72	*e*P	Pn	11 12 14.9	+1.6
GRGR	Grenville	8.32	72	*e*S	Sn	11 13 56.4	+10
GRGR	Grenville	8.32	72		Pn	11 12 12.4	-0.9
PTAC	Punta Ardita,	8.35	253	*e*P	Pn	11 12 14.3	+0.6
MACC	Macarena, Meta	8.52	209	*e*P	Pn	11 12 14.9	-1.1
TBH	Brigand Hill	8.59	84	*e*P	Pn	11 12 21.0	+4.0
TBH	Brigand Hill	8.59	84	*e*S	Sn	11 13 55.6	+2.2
YOTC	Yotoco, Valle	8.65	230	*e*P	Pn	11 12 18.3	+0.5
MLPR	Magueyes Islan	8.65	17		Pn	11 12 15.5	-2.3
CRPR	Cabo Rojo, PR	8.67	17		Pn	11 12 16.4	-1.6
BANI	BANI	8.69	356		Pn	11 12 19.5	+1.1
SDD	Santo Domingo	8.73	359	*i* P	Pn	11 12 19.2	+0.3
SDD				*e*S	Sn	11 13 50.2	-6.6
SDD	Santo Domingo	8.73	359		Pn	11 12 20.1	+1.2
ICMP	Isla Caja de M	8.74	21		Pn	11 12 18.2	-0.8
MPR	Mayaguez	8.86	16	*i* P	Pn	11 12 19.1	-1.4
MPR				*e*S	Sn	11 13 53.3	-6.5
MPR	Mayaguez	8.86	16		Pn	11 12 18.8	-1.8
OBIP	Obispado Ponce	8.86	20		Pn	11 12 18.6	-2.1
PIZC	Pizarro, Choco	8.88	239	*e*P	Pn	11 12 23.2	+2.4
PCDR	Punta Cana, DR	8.89	8	*i* P	Pn	11 12 20.9	-0.1
PCDR				*e*S	Sn	11 13 53.5	-7.1
PCDR				IAML		11 14 22.2	
	comp=Z,188nm,0.6s						
PCDR	Punta Cana, DR	8.89	8		Pn	11 12 20.7	-0.2
IGPR	InterUniversit	8.97	23		Pn	11 12 21.6	-0.5
PDPR	Patillas Dam,	9.05	23		Pn	11 12 21.0	-2.3
DR12	Loma Pena Alta	9.07	2		Pn	11 12 23.3	-0.2
SVB	Belmont	9.07	66	*e*P	Pn	11 12 21.4	-2.2
SVB	Belmont	9.07	66	*e*S	Sn	11 14 04.3	-0.8
SVB	Belmont	9.07	66		Pn	11 12 21.3	-2.2
SJG	San Juan	9.09	22	Pn	Pn	11 12 21.7	-2.0
	comp=Z,43nm,0.3s,baz=204,slow=11,SNR=29						
SJG				Sn	Sn	11 13 55.5	-10
	comp=Z,46nm,0.3s,baz=343,slow=17,SNR=5.7						
SJG				LR	LR	11 16 03.2	
	comp=Z,6µm,20.7s,baz=170,slow=39						
AOPR	Arecibo Observ	9.10	18		Pn	11 12 22.5	-1.4
AGPR	Aguadilla, PR	9.11	16	*i* P	Pn	11 12 21.1	-3.0
AGPR				*e*S	Sn	11 13 57.8	-8.3
AGPR				IAML		11 14 28.5	
	comp=Z,100nm,0.7s						
AGPR	Aguadilla, PR	9.11	16		Pn	11 12 24.2	+0.2
SVV	Soufriere Volc	9.12	66	*e*P	Pn	11 12 22.1	-2.0
SSV	Crater Summit	9.14	66	*e*P	Pn	11 12 23.7	-0.9
SVCV	St. Vincent, C	9.16	66	*e*P	Pn	11 12 23.0	-1.8
LGNH	Logne	9.21	343	*i* P	Pn	11 12 27.8	+2.4
LGNH				*e*S	Sn	11 14 02.1	-6.4
LGNH				IAML		11 14 16.8	
	comp=Z,136nm,0.7s						
LGNH	Logne	9.21	343	Pn	Pn	11 12 25.6	+0.2
TOSP	Speyside	9.21	79	*e*P	Pn	11 12 31.2	+5.8
TOSP	Speyside	9.21	79	*e*S	Sn	11 14 12.7	+4.2
HUMP	Col San Antoni	9.23	24		Pn	11 12 23.4	-2.3
EMPR	Esperanza - Ma	9.29	19		Pn	11 12 26.9	+0.4
GCPR	Guaynabo City	9.29	22		Pn	11 12 25.9	-0.6
MTP	Monte Pirata	9.31	26		Pn	11 12 26.2	-0.7
CBYP	Canovanas	9.35	23		Pn	11 12 25.5	-1.8
SDDR	Presa de Saban	9.37	351	*i* P	Pn	11 12 29.8	+2.1
SDDR				*e*S	Sn	11 14 08.2	-4.4
SDDR				IAML		11 14 30.2	
	comp=Z,142nm,0.6s						
SDDR	Presa de Saban	9.37	351		Pn	11 12 29.2	+1.5
CDVI	St. Croix	9.38	31		Pn	11 12 27.9	+0.2
CUPR	Culebra, Puert	9.62	26		Pn	11 12 31.1	+0.2
SC01	Santiago de lo	9.74	355	*i* P	Pn	11 12 35.6	+2.9
SC01				*e*S	Sn	11 14 18.0	-3.6
SC01				IAML		11 14 39.1	
	comp=Z,365nm,0.7s						
SC01	Santiago de lo	9.74	355		Pn	11 12 35.5	+2.8
FDF	Fort de France	9.80	58		Pn	11 12 32.3	-1.2
FDF	Fort de France	9.80	58	P	Pn	11 12 32.5	-1.0
FDF				pmax	pmax		
	comp=Z,739nm,1.1s						
STVI	Saint Thomas	9.80	28		Pn	11 12 32.8	-0.7
FLOC	Florencia	9.95	216	*e*P	Pn	11 12 35.1	-0.5
FLOC	Florencia	9.95	216		Pn	11 12 35.6	-0.1
BCIP	Isla Barro Col	9.96	268	*e*P	Pn	11 12 35.4	-0.3
BCIP	Isla Barro Col	9.96	268		Pn	11 12 36.7	+0.9
BCIP	Isla Barro Col	9.96	268	P	Pn	11 12 36.7	+0.9

MDPO Dominica; Chan 10.00 53 eP Pn 11 12 32.4 -3.9
MDPO Dominica; Chan 10.00 53 eS Sn 11 14 17.7 -10
BBAC Balboa, Cauca 10.64 225 eP Pn 11 12 45.3 0.0
PTLC Puerto Leguiza 10.69 208 eP Pn 11 12 49.3 +3.5
HOJ Hope 10.71 321 iP Pn 11 12 47.2 +1.3
PCJ Portland Cotta 10.77 319 iP Pn 11 12 49.1 +2.4
CRUC La Cruz 10.77 222 eP Pn 11 12 48.0 +0.8
STH Stony Hill 10.80 321 ⇓iP Pn 11 12 48.1 +0.9
ANWB Willy Bob 11.09 43 Pn 11 12 53.6 +2.4
MCJ Malvern 11.25 318 iP Pn 11 13 03.8 +10
MCJ iS Sn 11 14 55.1 -3.6
BBJ Bamboo Saint A 11.31 321 iP Pn 11 12 58.2 +3.8
MTDJ Mount Denham 11.37 319 Pn 11 12 55.2 +0.1
GTBY Guantanamo Bay 11.43 334 iP Pn 11 12 56.7 +0.9
GTBY IAML 11 14 59.9
comp=Z,57nm,0.6s
GTBY Guantanamo Bay 11.43 334 Pn 11 12 55.9 +0.1
OTAV Otavalo 12.76 223 eP Pn 11 13 13.6 -0.9
OTAV Otavalo 12.76 223 Pn 11 13 13.9 -0.6
OTAV Otavalo 12.76 223 P Pn 11 13 13.9 -0.6
EDBA Buenos Aires 13.35 269 eP Pn 11 13 24.0 +1.9
EDLM Las Mercedes 13.65 269 eP Pn 11 13 27.7 +1.4
EDDO Dominical 13.93 269 eP Pn 11 13 31.2 +1.2
HDC Heredia 14.15 273 Pn 11 13 34.7 +1.4
ESPN Las Esperanzas 14.50 281 Pn 11 13 37.9 +0.1
FSCY Frank Sound, G 14.63 312 Sn 11 16 22.6 +1.3
JTS Las Juntas de 14.98 274 Pn Pn 11 13 44.2 -0.2
comp=Z,1.8nm,0.3s,baz=144,slow=5.7,SNR=17
JTS Sn Sn 11 16 24.3 -5.7
comp=Z,2.6nm,0.3s,baz=18,slow=20,SNR=3.6
JTS LR LR 11 21 36.1
comp=Z,4μm,18.2s,baz=150,slow=46
JTS Las Juntas de 14.98 274 Pn 11 13 45.3 +0.8
JTS IAmb IAmb 11 13 54.5
comp=Z,194nm,1.0s
JTS Las Juntas de 14.98 274 d iP Pn 11 13 45.2 +0.8
JTS Las Juntas de 14.98 274 eP Pn 11 13 44.9 +0.4
ACON Acoyapa 15.32 280 Pn 11 13 50.9 +2.0
BUEV Buena Vista 15.45 276 eP Pn 11 13 52.6 +2.0
MASN Masaya 16.27 280 eP P 11 14 03.2 -0.9
ESTN Estel 16.64 283 P P 11 14 07.3 -1.0
CRIN San Cristobal 17.23 282 eP P 11 14 17.9 +3.0
MDP Montagnes des 17.56 104 P Pn 11 14 15.1 -2.4
comp=Z,6.7nm,0.3s,baz=287,slow=10,SNR=12
MDP S Sn 11 17 19.7 -13
comp=Z,1.9nm,0.3s,baz=197,slow=19,SNR=4.3
MDP Lg Lg 11 19 18.6
comp=Z,1.7nm,0.3s,baz=18,slow=24,SNR=3.9
MDP LR LR 11 20 59.2
comp=Z,4μm,20.8s,baz=288,slow=37
TGUH Tegucigalpa,Un 17.69 286 P P 11 14 19.8 -0.1
TGUH IAmb IAmb 11 14 27.4
comp=Z,845nm,1.4s
ATAH Atahualpa 18.79 208 P P 11 14 32.3 0.0
comp=Z,2.6nm,0.3s,baz=25,slow=7.4,SNR=63
ATAH Lg Lg 11 19 42.9
comp=Z,0.5nm,0.3s,baz=194,slow=11,SNR=4.4
ATAH LR LR 11 23 14.1
comp=Z,7μm,18.1s,baz=2.1,slow=42
061Z Ochoppi 19.27 328 P Pn 11 14 38.6 +0.5
061Z IAmb IAmb 11 14 43.3
comp=Z,240nm,0.9s
SNET Serv Nac Est T 19.48 284 P P 11 14 40.2 +0.6
SAML Samuel 19.62 160 eP P 11 14 40.4 -0.7
SAML Samuel 19.62 160 P P 11 14 41.8 +0.7
SAML IAmb IAmb 11 14 44.8
comp=Z,366nm,0.9s
SAML Samuel 19.62 160 P P 11 14 41.8 +0.7
SAML pmax pmax
comp=Z,366nm,1.0s
TEIG Tepich 20.72 303 P P 11 14 54.0 +1.0
comp=Z,136nm,0.6s,baz=139,slow=2.2,SNR=54
TEIG LR LR 11 24 42.2
comp=Z,2μm,19.2s,baz=320,slow=42
TEIG Tepich 20.72 303 P Pn 11 14 54.8 -0.6
TEIG IAmb IAmb 11 14 58.5
comp=Z,178nm,0.8s
APG El Apazote 20.91 287 P Pn 11 14 56.7 -1.2
comp=Z,138nm,0.7s,baz=66,slow=3.2,SNR=81
APG LR LR 11 23 47.2
comp=Z,2μm,19.3s,baz=85,slow=39
DWPF Disney Wildern 21.38 331 P P 11 15 01.5 +1.5
DWPF IAmb IAmb 11 15 05.4
comp=Z,248nm,1.1s
DWPF Disney Wildern 21.38 331 P P 11 14 60.0 0.0
baz=147
DWPF S Sn 11 19 00.9 -3.7
baz=147
NNA Nana 22.64 198 P P 11 15 13.6 -0.2
comp=Z,188nm,0.8s,baz=359,slow=9.1,SNR=42
NNA Nana 22.64 198 P P 11 15 13.7 0.0
NNA Nana 22.64 198 c iP P 11 15 13.4 -0.3
NNA pmax pmax
comp=Z,379nm,1.0s
NNA MLR MLR
comp=Z,4μm,14.0s
CCIG Comitan 22.77 289 P P 11 15 15.7 +0.5
PAYG Puerto Ayora 22.88 244 P P 11 15 17.9 +1.7
656A Willston 22.96 330 P P 11 15 18.9 +2.1
656A IAmb IAmb 11 15 27.4
comp=Z,111nm,0.9s
BBSR BB Station 23.07 11 P P 11 15 17.9 -0.1
BBSR IAmb IAmb 11 15 23.6
comp=Z,390nm,1.8s
257A Skidaway Islan 24.53 336 P P 11 15 33.7 +1.8
257A IAmb IAmb 11 15 42.8
comp=Z,90nm,0.9s
CLDB Colider 24.69 145 eP P 11 15 32.9 -0.6
158A Hollywood 24.89 339 P P 11 15 35.7 +0.5
baz=155
Z59A Georgetown, SC 25.04 341 P P 11 15 37.5 +0.9
baz=157
CSU Charleston Sou 25.08 339 P P 11 15 37.9 +1.0
255A Hazlehurst 25.09 334 P P 11 15 38.6 +1.6
157A Early Branch 25.14 337 P P 11 15 38.4 +0.9
baz=153
TIGA Tifton 25.18 331 P P 11 15 39.2 +1.3
TIGA IAmb IAmb 11 15 49.6
comp=Z,76nm,0.9s
TIGA Tifton 25.18 331 P P 11 15 39.2 +1.3
baz=146,SNR=9.0
NHSC New Hope 25.22 339 P P 11 15 39.1 +0.9
NHSC New Hope 25.22 339 P P 11 15 39.4 +1.2
baz=155
Z58A St. Stephen 25.31 340 P P 11 15 39.9 +1.0
baz=156
Y60A Bolivia 25.43 343 P P 11 15 41.2 +1.1
baz=160
CMIG Matias Romero 25.51 289 P P 11 15 37.5 -3.6
comp=Z,11nm,0.7s,baz=85,slow=8.1,SNR=17
CMIG LR LR 11 26 27.7
comp=Z,3μm,20.8s,baz=80,slow=38
Z57A Bowman 25.58 338 P P 11 15 42.7 +1.2
baz=154,SNR=8.3
Y59A Loris 25.61 342 P P 11 15 44.2 +2.5
Y59A IAmb IAmb 11 15 47.5
comp=Z,118nm,0.8s
Y59A Loris 25.61 342 P P 11 15 42.4 +0.7
baz=159,SNR=7.9
Y58A Scranton 25.78 341 P P 11 15 43.6 +0.3
Y58A IAmb IAmb 11 15 49.7
comp=Z,104nm,0.8s
Y58A Scranton 25.78 341 P P 11 15 43.4 +0.2
baz=157
LPAZ La Paz 25.84 176 P P 11 15 45.0 +0.3
comp=Z,66nm,1.0s,baz=7.1,slow=10,SNR=57
LPAZ LR LR 11 27 28.8
comp=Z,2μm,18.0s,baz=336,slow=40
LPAZ La Paz 25.84 176 eP P 11 15 44.9 +0.2
LPAZ La Paz 25.84 176 P P 11 15 45.3 +0.6
LPAZ IAmb IAmb 11 15 48.8
comp=Z,169nm,1.2s
LPAZ La Paz 25.84 176 P P 11 15 45.3 +0.6
LPAZ pmax pmax
comp=Z,169nm,1.3s
Z56A Williston 25.86 337 P P 11 15 44.7 +0.7
Z56A IAmb IAmb 11 15 59.5
comp=Z,76nm,0.8s
Z56A Williston 25.86 337 P P 11 15 43.8 -0.2
baz=153
352A Blakely 25.87 329 P P 11 15 45.9 +1.8
352A IAmb IAmb 11 15 59.8
comp=Z,118nm,1.0s
X60A Albert Glenn T 25.91 344 P P 11 15 44.8 +0.4
baz=161
154A Montrose 25.95 334 P P 11 15 46.0 +1.2
154A IAmb IAmb 11 16 23.9
comp=Z,159nm,1.1s
X59A McDuffie Farm, 26.07 343 P P 11 15 47.1 +1.2
baz=160
Y57A Sumter 26.12 340 P P 11 15 47.2 +0.9
Y57A IAmb IAmb 11 16 00.9
comp=Z,162nm,1.4s
Y57A Sumter 26.12 340 P P 11 15 46.9 +0.5
baz=156
W61A Ground Anchor 26.23 346 P P 11 15 49.0 +1.6
baz=164
Y56A Pelion 26.25 338 P P 11 15 48.4 +0.9
baz=153
X58A Rowland 26.27 342 P P 11 15 48.0 +0.3
baz=158
W60A Pink Hill 26.29 345 P P 11 15 48.9 +1.1
baz=162,SNR=5.2
V62A Hyde County Ai 26.38 349 P P 11 15 49.5 +0.8
baz=166
X57A Johnson Farm, 26.43 341 P P 11 15 49.7 +0.5
baz=156
CNNC Cliffs of the 26.51 345 P P 11 15 52.2 +2.3
CNNC Cliffs of the 26.51 345 P P 11 15 50.4 +0.5
baz=162
Y55A Saluda 26.59 337 P P 11 15 51.2 +0.6
baz=152
W59A Clinton 26.59 344 P P 11 15 51.3 +0.7
baz=160
JSC Jenkinsville 26.67 338 P P 11 15 52.9 +1.6
JSC Jenkinsville 26.67 338 P P 11 15 52.9 +1.6
JSC pmax pmax
comp=Z,87nm,1.8s
W58A Raeford 26.68 342 P P 11 15 51.6 +0.3
baz=159
BIRD Birdtown, Kers 26.72 340 P P 11 15 52.2 +0.4
BIRD IAmb IAmb 11 15 59.9
comp=Z,94nm,1.4s
V61A Roper 26.73 348 P P 11 15 52.9 +1.1
V61A IAmb IAmb 11 16 32.5
comp=Z,185nm,1.3s
V61A Roper 26.73 348 P P 11 15 52.0 +0.2
baz=165
152A Waverly Hall 26.73 331 P P 11 15 53.8 +1.9
152A IAmb IAmb 11 16 10.4
comp=Z,103nm,1.2s
BRAL Brewton 26.76 326 P P 11 15 52.9 +0.7
baz=139
X56A White Oak 26.78 339 P P 11 15 52.5 +0.3
baz=155
GOGA Godfrey 26.79 334 P P 11 15 53.6 +1.2
GOGA Godfrey 26.79 334 P P 11 15 53.6 +1.2
GOGA pmax pmax
comp=Z,44nm,1.2s
GOGA Godfrey 26.79 334 P P 11 15 53.6 +1.2
baz=149,SNR=13
V60A Jim Taylor Roa 26.86 346 P P 11 15 53.8 +0.8
V60A Jim Taylor Roa 26.86 346 P P 11 15 53.6 +0.6
baz=163
SIV San Ignacio 26.91 161 P P 11 15 53.8 +0.1
comp=Z,31nm,1.0s,baz=360,slow=9.2,SNR=63
SIV LR LR 11 28 28.3
comp=Z,1μm,19.1s,baz=352,slow=41
250A Grady 26.96 328 P P 11 15 55.3 +1.4
250A IAmb IAmb 11 16 27.7
comp=Z,110nm,1.1s
X55A Gracelyn & Ava 26.98 338 P P 11 15 54.9 +0.8
baz=153
HODGE Hodges 27.00 337 P P 11 15 55.7 +1.4
W57A Gilead 27.03 341 P P 11 15 55.1 +0.6
W57A Gilead 27.03 341 P P 11 15 54.5 -0.1
baz=157
V59A Middlesex 27.10 345 P P 11 15 55.3 +0.2
baz=161
W56A Indian Trail 27.21 340 P P 11 15 56.6 +0.5
baz=156
U61A Possum Corner 27.23 348 P P 11 15 57.3 +1.1
U61A IAmb IAmb 11 16 07.2
comp=Z,160nm,1.2s
U61A Possum Corner 27.23 348 P P 11 15 56.8 +0.5
baz=165
X54A Belton 27.32 337 P P 11 15 57.8 +0.6
baz=152
PAULI Pauline 27.35 338 P P 11 15 59.5 +2.0
V58A Windy Hill, Pi 27.36 343 P P 11 15 58.0 +0.4
V58A Windy Hill, Pi 27.36 343 P P 11 15 58.2 +0.6
baz=160
Y52A Lilburn 27.43 333 P P 11 16 00.1 +1.9
Y52A Lilburn 27.43 333 P P 11 15 58.9 +0.7
baz=148
KMSC Kings Mountain 27.47 339 P P 11 15 59.0 +0.4
KMSC Kings Mountain 27.47 339 P P 11 15 59.2 +0.7
baz=154
Z51A Franklin 27.48 331 P P 11 16 00.3 +1.6
U60A Pendleton 27.51 347 P P 11 15 59.0 +0.2
baz=164
U59A Littleton 27.54 346 P P 11 15 59.3 +0.2
baz=162
V57A Coltrane Farms 27.64 342 P P 11 15 59.8 -0.3
baz=158
X53A Estanollee 27.66 335 P P 11 16 00.1 -0.1
baz=150
W54A Cherokee Point 27.73 338 P P 11 16 01.3 +0.5
baz=153
U58A Oxford 27.77 345 P P 11 16 01.9 +0.7
baz=161,SNR=6.5
V56A Mocksville 27.80 341 P P 11 16 02.4 +0.9
baz=157
Z50A Ashland 27.80 330 P P 11 16 03.1 +1.6
Z50A Ashland 27.80 330 P P 11 16 02.8 +1.3
baz=144,SNR=12
BG3 Lake Jocassee 27.93 336 P P 11 16 03.8 +1.1
X52A Dahlonega 27.99 335 P P 11 16 04.2 +1.0
baz=149,SNR=5.4
U57A Blanch 28.02 343 P P 11 16 03.6 +0.2
baz=159
T60A Surry 28.06 348 P P 11 16 03.6 -0.2
baz=165
V55A Taylorsville 28.07 340 P P 11 16 05.4 +1.5
V55A Taylorsville 28.07 340 P P 11 16 05.1 +1.2
baz=155,SNR=5.3
T59A Double "B" Far 28.08 347 P P 11 16 04.7 +0.8
T59A IAmb IAmb 11 16 09.4
comp=Z,167nm,1.9s
T59A Double "B" Far 28.08 347 P P 11 16 04.7 +0.8
baz=163
LRAL Lakeview Retre 28.17 328 P P 11 16 06.7 +1.9
LRAL Lakeview Retre 28.17 328 P P 11 16 06.1 +1.3
baz=142,SNR=16
W53A Cullowhee 28.18 336 P P 11 16 05.9 +0.9
baz=151
U56A King 28.25 342 P P 11 16 07.4 +1.9
U56A IAmb IAmb 11 16 11.5
comp=Z,119nm,1.8s
U56A King 28.25 342 P P 11 16 06.3 +0.8
baz=157
V54A Nebo 28.26 339 P P 11 16 06.2 +0.6
baz=154
T58A Grand View Acr 28.29 345 P P 11 16 06.2 +0.4
baz=161
346A Big Creek Wild 28.32 323 P P 11 16 08.2 +2.1
346A IAmb IAmb 11 16 09.2
comp=Z,77nm,0.8s
X51A Calhoun 28.38 333 P P 11 16 07.5 +0.9
X51A Calhoun 28.38 333 P P 11 16 07.4 +0.8
baz=147
S61A Accomac 28.39 350 P P 11 16 07.1 +0.4
baz=168
W52A Murphy 28.42 335 P P 11 16 07.7 +0.7
baz=150
V53A Saluda 28.48 337 P P 11 16 10.2 +2.6
V53A Saluda 28.48 337 P P 11 16 08.1 +0.5
baz=152
Y49A Blount Mountai 28.52 330 P P 11 16 09.3 +1.3
T57A Hurt 28.53 344 P P 11 16 08.8 +0.8
T57A IAmb IAmb 11 16 13.4
comp=Z,132nm,1.9s
T57A Hurt 28.53 344 P P 11 16 08.5 +0.5
baz=160,SNR=7.4
S60A Water View 28.59 349 P P 11 16 08.9 +0.4
baz=166
U55A TA2, Sparta 28.61 341 P P 11 16 09.6 +0.9
baz=156
MNMC Minye Minye 28.62 180 P P 11 16 07.8 -1.4
MNMC IAmb IAmb 11 16 35.0
comp=Z,74nm,0.7s
FPAL Fort Paine 28.70 332 P P 11 16 10.7 +1.1
T56A Rocky Mt 28.78 343 P P 11 16 10.8 +0.6
baz=158
S59A Mechanicsville 28.78 348 P P 11 16 10.7 +0.5
baz=164
S58A Poland Farm, P 28.81 346 P P 11 16 12.3 +1.9
S58A Poland Farm, P 28.81 346 P P 11 16 11.8 +1.4
baz=163
W51A Cleveland 28.83 334 P P 11 16 11.8 +1.1
baz=148,SNR=11
TKL Tuckaleechee C 28.85 336 P P 11 16 11.7 +0.9
comp=Z,7.6nm,0.7s,baz=152,slow=12,SNR=9.1
TKL LR LR 11 28 06.1
comp=Z,892nm,20.0s,baz=142,slow=37
TKL Tuckaleechee C 28.85 336 P P 11 16 11.0 +0.2
TKL IAmb IAmb 11 16 26.2
comp=Z,135nm,1.8s
U54A Nelsons Funny 28.88 340 P P 11 16 12.4 +1.1
U54A Nelsons Funny 28.88 340 P P 11 16 12.3 +1.1
baz=155
V52A Sevierville 28.94 336 P P 11 16 12.6 +0.9
baz=151
SALV Santo Antonio 28.98 151 eP P 11 16 11.5 -0.6
CPCT Cooper Cave 28.98 335 P P 11 16 13.2 +1.2
TLIG Tlapa 29.05 289 P P 11 16 14.1 +1.1
BLA Blacksburg 29.06 342 P P 11 16 13.9 +1.2
BLA Blacksburg 29.06 342 P P 11 16 14.0 +1.2
BLA pmax pmax
comp=Z,32nm,0.9s
BLA Blacksburg 29.06 342 P P 11 16 13.5 +0.7
baz=158
T55A Pulaski 29.09 342 P P 11 16 13.8 +0.8
baz=157
R58B Mineral 29.10 347 P P 11 16 14.8 +1.8
R58B Mineral 29.10 347 P P 11 16 13.5 +0.5
baz=163
W50A Signal Mountai 29.11 333 P P 11 16 14.8 +1.6
W50A Signal Mountai 29.11 333 P P 11 16 14.9 +1.6
baz=147,SNR=11
R60A Leonardtown, M 29.12 349 P P 11 16 12.8 -0.4
baz=166
344A Westbrook Farm 29.14 321 P P 11 16 15.4 +2.0
344A IAmb IAmb 11 16 16.7
comp=Z,77nm,0.8s
GO01 Chusmiza 29.16 179 P P 11 16 13.4 -0.8
R59A King George, V 29.16 348 P P 11 16 13.9 +0.3
baz=165
S57A Dark Hollow, R 29.17 345 P P 11 16 16.1 +2.5
V51A Loudon 29.21 335 P P 11 16 15.6 +1.5
V51A IAmb IAmb 11 16 29.1
comp=Z,52nm,1.0s
V51A Loudon 29.21 335 P P 11 16 15.1 +1.0
baz=149,SNR=10
CBN Corbin Frederi 29.22 348 P P 11 16 16.4 +2.3
CBN IAmb IAmb 11 16 19.8
comp=Z,92nm,1.4s
CBN Corbin Frederi 29.22 348 P P 11 16 14.6 +0.5
baz=164
PB11 IPOC Station P 29.25 180 P P 11 16 13.1 -1.6
S56A Natural Bridge 29.25 344 P P 11 16 14.5 +0.1
baz=160
T54A Tazewell 29.29 340 P P 11 16 15.4 +0.6
baz=156
X48A Hartselle 29.31 330 P P 11 16 16.0 +1.1
U52A Thorn Hill 29.33 337 P P 11 16 16.1 +0.9
baz=152
V50A Pikevile 29.41 334 P P 11 16 16.4 +0.5
baz=148
R58A Rapidan 29.45 347 P P 11 16 16.5 +0.4
baz=163
W49A Belvidere 29.48 332 P P 11 16 17.5 +1.1
baz=145,SNR=6.5
TZTN Tazewell 29.53 337 P P 11 16 17.8 +0.9
TZTN Tazewell 29.53 337 P P 11 16 18.1 +1.2
baz=151,SNR=6.6
VBMS Vicksburg 29.54 322 P P 11 16 18.7 +1.7
VBMS IAmb IAmb 11 16 19.9
comp=Z,81nm,0.8s
VBMS Vicksburg 29.54 322 P P 11 16 17.7 +0.7
baz=135,SNR=13
T53A Wise 29.55 339 P P 11 16 18.0 +0.9
baz=154
R57A Stanardsville 29.57 346 P P 11 16 18.0 +0.8
baz=162
U51A La Follette 29.57 336 P P 11 16 18.2 +0.9
baz=150
S55A Lewisburg 29.61 343 P P 11 16 18.7 +1.1
baz=158
Q60A Greensboro 29.71 350 P P 11 16 19.2 +0.9
baz=168
Q59A Harwood 29.72 349 P P 11 16 19.0 +0.5
baz=166
T52A Hallie 29.82 338 P P 11 16 21.1 +1.7
T52A Hallie 29.82 338 P P 11 16 19.9 +0.5
baz=153
V49A McMinnville 29.85 333 P P 11 16 20.3 +0.6
baz=146,SNR=9.6
S54A Dingess, Beckl 29.88 341 P P 11 16 21.2 +1.2
S54A Dingess, Beckl 29.88 341 P P 11 16 21.0 +1.0
baz=156
R56A Bull Pasture M 29.89 345 P P 11 16 20.8 +0.6
baz=160
U50A Jamestown 29.94 335 P P 11 16 21.4 +0.9
baz=149,SNR=12
R55A Marlinton 29.97 344 P P 11 16 22.7 +1.8
R55A Marlinton 29.97 344 P P 11 16 21.3 +0.5
baz=159
Q58A Fox Den Farm, 30.00 348 P P 11 16 21.7 +0.8
baz=164,SNR=7.1
S53A Williamson 30.04 340 P P 11 16 21.7 +0.3
baz=155
T51A Gray 30.05 337 P P 11 16 22.7 +1.2
baz=151,SNR=11
342A Flagon Creek P 30.09 319 P P 11 16 23.8 +1.9
342A IAmb IAmb 11 16 24.8
comp=Z,66nm,0.9s
R54A Victor 30.13 342 P P 11 16 22.6 +0.4
baz=157
P61A Hammonton 30.21 352 P P 11 16 23.1 +0.3
baz=170
V48A Smith Brothers 30.25 332 P P 11 16 24.7 +1.5
PLAL Pickwick Lake 30.25 329 P P 11 16 24.2 +1.0
441A DeRidder 30.26 317 P P 11 16 25.1 +1.7
CLTN Cedars of Leba 30.31 333 P P 11 16 25.0 +1.2
S52A Salyersville 30.36 339 P P 11 16 24.8 +0.5
baz=153
P59A Jarrettsville 30.40 350 P P 11 16 25.1 +0.6
baz=167
143A Socs Landing, 30.41 322 P P 11 16 26.5 +1.9
143A IAmb IAmb 11 16 44.1
comp=Z,43nm,0.9s
U49A Red Boiling Sp 30.42 334 P P 11 16 25.6 +0.9
baz=147,SNR=8.4
Q56A Snyder Ridge, 30.44 345 P P 11 16 27.1 +2.2
Q56A IAmb IAmb 11 16 31.3
comp=Z,129nm,1.8s
P58A Pank, Wackersv 30.45 348 P P 11 16 26.3 +1.4
baz=165
T50A Nancy 30.45 336 P P 11 16 26.3 +1.3
baz=150,SNR=13
S51A Beattyville 30.51 338 P P 11 16 26.4 +0.8
baz=152
PB01 IPOC Station P 30.53 180 P P 11 16 24.8 -1.1
PB01 IAmb IAmb 11 16 25.6
comp=Z,78nm,0.9s
R53A Hurricane 30.57 341 P P 11 16 27.7 +1.7
R53A IAmb IAmb 11 16 40.4
comp=Z,166nm,1.9s
R53A Hurricane 30.57 341 P P 11 16 27.0 +1.0
baz=156
OXF Oxford 30.58 327 P P 11 16 27.2 +1.0
OXF IAmb IAmb 11 16 60.0
comp=Z,72nm,0.9s
OXF Oxford 30.58 327 P P 11 16 27.2 +1.0
OXF pmax pmax
comp=Z,72nm,0.9s
OXF Oxford 30.58 327 P P 11 16 26.4 +0.2
baz=139
P57A Homestead Farm 30.59 347 P P 11 16 28.9 +2.7
P57A IAmb IAmb 11 16 32.6
comp=Z,65nm,1.4s
P57A Homestead Farm 30.59 347 P P 11 16 27.4 +1.2
baz=164
O61A Allentown 30.59 353 P P 11 16 27.0 +0.9
baz=170
Q55A Buckhannon 30.63 344 P P 11 16 27.5 +0.9
baz=160

MVL	**Millersville**	**30.77 350**	P	**P**	**11 16 29.1 +1.4**
MVL			IAmb	IAmb	11 16 40.9
	comp=Z,111nm,1.7s				
P56A	**Dayton Farm, R**	**30.79 346**	P	**P**	**11 16 29.2 +1.2**
	baz=162,SNR=8.4				
R52A	**Catlettsburg**	**30.80 340**	P	**P**	**11 16 29.0 +1.0**
	baz=154				
T49A	**Edmonton**	**30.81 335**	P	**P**	**11 16 29.7 +1.5**
T49A	**Edmonton**	**30.81 335**	P	**P**	**11 16 29.3 +1.0**
	baz=148				
Q54A	**Coxs Mills**	**30.83 343**	P	**P**	**11 16 29.7 +1.4**
Q54A			IAmb	IAmb	11 16 33.8
	comp=Z,52nm,1.2s				
Q54A	**Coxs Mills**	**30.83 343**	P	**P**	**11 16 29.2 +0.9**
	baz=158				
PP1B	**Ponte de Pedra**	**30.83 151**	eP	**P**	**11 16 29.0 +0.4**
ARAG	**Araguaiana, MT**	**30.85 145**	eP	**P**	**11 16 29.2 +0.5**
S50A	**Richmond**	**30.85 337**	P	**P**	**11 16 29.7 +1.2**
	baz=151				
Q53A	**Leroy**	**30.92 342**	P	**P**	**11 16 30.1 +1.0**
	baz=157				
O60A	**Telford**	**30.93 352**	P	**P**	**11 16 30.1 +1.0**
	baz=169				
O58A	**Lewisberry**	**30.99 349**	P	**P**	**11 16 30.9 +1.2**
	baz=166				
WVT	**Waverly**	**31.04 331**	P	**P**	**11 16 31.2 +1.0**
WVT	**Waverly**	**31.04 331**	P	**P**	**11 16 31.2 +1.0**
WVT			pmax	pmax	
	comp=Z,35nm,1.1s				
WVT	**Waverly**	**31.04 331**	P	**P**	**11 16 31.1 +1.0**
	baz=144				
P55A	**Reedsville**	**31.04 345**	P	**P**	**11 16 31.5 +1.3**
	baz=160				
O59A	**Robesonia**	**31.04 350**	P	**P**	**11 16 31.0 +0.8**
	baz=168				
PAGS	**Pennsylvania G**	**31.05 350**	P	**P**	**11 16 31.3 +1.1**
R51A	**Hillsboro**	**31.09 339**	P	**P**	**11 16 32.0 +1.3**
	baz=153				
MCWV	**Mont Chateau**	**31.19 345**	P	**P**	**11 16 32.9 +1.4**
	baz=160				
LUPA	**Lehigh Univers**	**31.20 352**	P	**P**	**11 16 33.0 +1.4**
O57A	**Amberson**	**31.21 348**	P	**P**	**11 16 32.9 +1.2**
	baz=165				
N61A	**South Mountain**	**31.21 353**	P	**P**	**11 16 32.8 +1.2**
	baz=171				
Q52A	**Bidwell**	**31.24 341**	P	**P**	**11 16 33.0 +1.0**
	baz=156				
S49A	**Springfield**	**31.29 336**	P	**P**	**11 16 33.6 +1.2**
	baz=149,SNR=12				
P54A	**Burton**	**31.30 344**	P	**P**	**11 16 33.7 +1.2**
	baz=159				
R50A	**Paris**	**31.35 338**	P	**P**	**11 16 34.5 +1.6**
R50A			IAmb	IAmb	11 16 48.4
	comp=Z,108nm,1.3s				
R50A	**Paris**	**31.35 338**	P	**P**	**11 16 34.5 +1.6**
	baz=151,SNR=8.9				
X43A	**Marvell**	**31.40 325**	P	**P**	**11 16 34.9 +1.6**
X43A	**Marvell**	**31.40 325**	P	**P**	**11 16 34.8 +1.4**
	baz=137,SNR=10				
T47A	**Sharon Grove**	**31.40 333**	P	**P**	**11 16 34.2 +0.8**
PAL	**Palisades**	**31.42 354**	P	**P**	**11 16 34.9 +1.4**
	baz=172				
N60A	**Cedar Hill Far**	**31.43 352**	P	**P**	**11 16 34.8 +1.2**
	baz=170				
P53A	**Whipple**	**31.45 343**	P	**P**	**11 16 35.1 +1.2**
P53A			IAmb	IAmb	11 16 40.0
	comp=Z,144nm,1.8s				
P53A	**Whipple**	**31.45 343**	P	**P**	**11 16 35.0 +1.2**
	baz=158				
O56A	**Blue Knob Stat**	**31.46 347**	P	**P**	**11 16 35.8 +1.8**
O56A			IAmb	IAmb	11 16 40.3
	comp=Z,110nm,1.7s				
O56A				**PcP**	**11 19 27.8 +0.8**
O56A	**Blue Knob Stat**	**31.46 347**	P	**P**	**11 16 34.6 +0.7**
	baz=163				
CCAR	**Cane Creek**	**31.48 323**	P	**P**	**11 16 36.1 +2.0**
N59A	**State Game Lan**	**31.57 351**	P	**P**	**11 16 36.2 +1.4**
	baz=168				
O55A	**Ligonier**	**31.57 346**	P	**P**	**11 16 35.2 +0.3**
	baz=162				
HKT	**Hockley**	**31.62 313**	P	**P**	**11 16 36.9 +1.5**
HKT	**Hockley**	**31.62 313**	*i* P	**P**	**11 16 36.5 +1.2**
HKT			pmax	pmax	
	comp=Z,27nm,1.0s				
Z41A	**Richland Creek**	**31.64 321**	P	**P**	**11 16 36.9 +1.3**
Z41A	**Richland Creek**	**31.64 321**	P	**P**	**11 16 36.9 +1.3**
	baz=133,SNR=16				
N58A	**Sunbury**	**31.65 350**	P	**P**	**11 16 36.8 +1.4**
N58A	**Sunbury**	**31.65 350**	P	**P**	**11 16 36.9 +1.4**
	baz=167				
Q51A	**Peebles**	**31.66 340**	P	**P**	**11 16 37.2 +1.6**
Q51A			IAmb	IAmb	11 16 51.0
	comp=Z,75nm,0.9s				
Q51A	**Peebles**	**31.66 340**	P	**P**	**11 16 37.3 +1.6**
	baz=154,SNR=13				
M63A	**Gales Ferry**	**31.67 357**	P	**P**	**11 16 36.2 +0.5**
	baz=176				
SSPA	**Standing Stone**	**31.67 348**	P	**P**	**11 16 37.1 +1.4**
	baz=164				
R49A	**Shelbyville**	**31.68 337**	P	**P**	**11 16 37.5 +1.6**
R49A	**Shelbyville**	**31.68 337**	P	**P**	**11 16 37.1 +1.2**
	baz=150				
M61A	**Granite Spring**	**31.71 354**	P	**P**	**11 16 36.8 +0.7**
	baz=172				
N57A	**Milroy**	**31.72 349**	P	**P**	**11 16 36.6 +0.5**
	baz=165				
Q50A	**Georgetown**	**31.72 339**	P	**P**	**11 16 37.8 +1.6**
	baz=152				
M62A	**Hamden**	**31.76 356**	P	**P**	**11 16 37.9 +1.4**
	baz=174				
M64A	**Tiverton**	**31.77 358**	P	**P**	**11 16 37.3 +0.7**
	baz=177				
PB04	**IPOC Station P**	**31.81 181**	P	**P**	**11 16 36.0 -1.3**
P52A	**Corning**	**31.81 342**	P	**P**	**11 16 38.0 +1.0**
	baz=156				
M60A	**Port Jervis**	**31.82 353**	P	**P**	**11 16 37.8 +0.8**
	baz=171				
O54A	**Avella**	**31.82 344**	P	**P**	**11 16 38.1 +1.1**
O54A			IAmb	IAmb	11 16 43.3
	comp=Z,150nm,1.8s				
O54A	**Avella**	**31.82 344**	P	**P**	**11 16 38.2 +1.1**
	baz=160				
LNXT	**Lenox**	**31.84 329**	P	**P**	**11 16 38.2 +1.0**
GLAT	**Glass**	**31.87 329**	P	**P**	**11 16 38.8 +1.3**
GLAT			IAmb	IAmb	11 16 44.2
	comp=Z,54nm,0.7s				
NATX	**Nacogdoches**	**31.87 317**	P	**P**	**11 16 39.4 +1.7**
NATX	**Nacogdoches**	**31.87 317**	P	**P**	**11 16 39.1 +1.5**
	baz=128,SNR=13				
LPAR	**Lepanto**	**31.88 327**	P	**P**	**11 16 39.2 +1.6**
LPAR			IAmb	IAmb	11 17 19.3
	comp=Z,57nm,0.8s				
MOIG	**Morelia**	**31.94 292**	P	**P**	**11 16 39.4 +0.7**
MOIG			IAmb	IAmb	11 16 40.7
	comp=Z,62nm,0.9s				
P51A	**Williamsport**	**31.97 340**	P	**P**	**11 16 39.8 +1.4**
P51A			IAmb	IAmb	11 16 53.4
	comp=Z,76nm,1.2s				
P51A	**Williamsport**	**31.97 340**	P	**P**	**11 16 39.8 +1.4**
	baz=154				
GNAR	**Gosnell**	**32.01 328**	P	**P**	**11 16 40.4 +1.7**
GNAR			IAmb	IAmb	11 16 41.0
	comp=Z,74nm,0.8s				
N56A	**West Decatur**	**32.02 348**	P	**P**	**11 16 39.8 +0.9**
	baz=164				
HBAR	**Harrisburg**	**32.04 327**	P	**P**	**11 16 40.4 +1.4**
PEBM	**Pemiscott Bayo**	**32.04 328**	P	**P**	**11 16 40.0 +1.0**
N55A	**Marion Center**	**32.04 347**	P	**P**	**11 16 40.0 +0.9**
	baz=162				
WCI	**Wyandotte Cave**	**32.09 335**	P	**P**	**11 16 40.6 +1.2**
WCI			IAmb	IAmb	11 16 47.3
	comp=Z,34nm,0.8s				
WCI	**Wyandotte Cave**	**32.09 335**	P	**P**	**11 16 40.6 +1.2**
WCI			pmax	pmax	
	comp=Z,34nm,0.8s				
WCI	**Wyandotte Cave**	**32.09 335**	P	**P**	**11 16 40.6 +1.2**
	baz=148				
LVC	**Limon Verde**	**32.09 179**	eP	**P**	**11 16 39.5 -0.5**
LVC	**Limon Verde**	**32.09 179**	P	**P**	**11 16 39.5 -0.5**
LVC			IAmb	IAmb	11 16 40.2
	comp=Z,70nm,0.8s				
LVC	**Limon Verde**	**32.09 179**	P	**P**	**11 16 39.5 -0.5**
LVC			pmax	pmax	
	comp=Z,70nm,0.9s				
O53A	**New Philadelph**	**32.11 343**	P	**P**	**11 16 40.5 +1.0**
	baz=158				
M58A	**Price's Panora**	**32.12 350**	P	**P**	**11 16 41.0 +1.3**
	baz=167				
WLAR	**White Oak Lake**	**32.13 322**	P	**P**	**11 16 41.8 +2.0**
O52A	**Adamsville**	**32.17 342**	P	**P**	**11 16 41.8 +1.7**
O52A	**Adamsville**	**32.17 342**	P	**P**	**11 16 41.2 +1.1**
	baz=157				
PENMO	**Penman**	**32.18 329**	P	**P**	**11 16 41.4 +1.1**
PVMO	**Portageville**	**32.19 329**	P	**P**	**11 16 42.0 +1.7**
Q49A	**Aurora**	**32.20 338**	P	**P**	**11 16 41.6 +1.2**
	baz=151				
M57A	**Sunshine Farm,**	**32.20 350**	P	**P**	**11 16 42.8 +2.4**
M57A			IAmb	IAmb	11 16 46.7
	comp=Z,65nm,1.2s				
M57A	**Sunshine Farm,**	**32.20 350**	P	**P**	**11 16 41.9 +1.5**
	baz=166				
HENM	**Henderson Moun**	**32.31 330**	P	**P**	**11 16 42.6 +1.3**
HENM			IAmb	IAmb	11 16 43.1
	comp=Z,74nm,0.8s				
P50A	**Jamestown**	**32.34 339**	P	**P**	**11 16 42.7 +1.1**
	baz=153				
PARMO	**Parma**	**32.41 329**	P	**P**	**11 16 43.1 +0.9**
PARMO			IAmb	IAmb	11 17 00.6
	comp=Z,70nm,0.8s				
UALR	**University of**	**32.42 324**	P	**P**	**11 16 43.4 +1.0**
UALR			IAmb	IAmb	11 16 44.6
	comp=Z,59nm,1.1s				
L60A	**Shokan**	**32.43 354**	P	**P**	**11 16 43.1 +0.8**
	baz=172				
O51A	**Pataskala**	**32.43 341**	P	**P**	**11 16 43.7 +1.3**
	baz=156				
N54A	**Moraine State**	**32.45 345**	P	**P**	**11 16 44.1 +1.5**
N54A	**Moraine State**	**32.45 345**	P	**P**	**11 16 44.0 +1.4**
	baz=161,SNR=6.7				
Q48A	**North Vernon**	**32.46 336**	P	**P**	**11 16 43.6 +0.9**
	baz=150,SNR=10				
USIN	**University of**	**32.46 333**	P	**P**	**11 16 43.6 +1.0**
X40A	**Basin Creek Fa**	**32.51 323**	P	**P**	**11 16 44.7 +1.6**
X40A			IAmb	IAmb	11 16 45.2
	comp=Z,63nm,1.5s				
X40A	**Basin Creek Fa**	**32.51 323**	P	**P**	**11 16 43.9 +0.8**
	baz=134,SNR=15				
N53A	**Lisbon**	**32.52 344**	P	**P**	**11 16 44.0 +0.8**
	baz=159				
M56A	**Emporium**	**32.54 348**	P	**P**	**11 16 44.9 +1.5**
M56A			IAmb	IAmb	11 16 49.5
	comp=Z,165nm,1.8s				
M56A	**Emporium**	**32.54 348**	P	**P**	**11 16 44.4 +0.9**
	baz=164				
L61A	**Hillsdale 1, H**	**32.56 355**	P	**P**	**11 16 44.7 +1.2**
	baz=173				
P49A	**Miami Univ. Ec**	**32.60 338**	P	**P**	**11 16 44.9 +1.1**
	baz=152				
ACSO	**Alum Creek Sta**	**32.63 341**	P	**P**	**11 16 46.0 +1.8**
ACSO			IAmb	IAmb	11 16 58.5
	comp=Z,38nm,0.9s				
ACSO	**Alum Creek Sta**	**32.63 341**	P	**P**	**11 16 45.5 +1.4**
	baz=155,SNR=12				
W41B	**Gary Mavity, V**	**32.65 324**	P	**P**	**11 16 46.0 +1.7**
W41B			IAmb	IAmb	11 16 46.8
	comp=Z,92nm,1.0s				
W41B	**Gary Mavity, V**	**32.65 324**	P	**P**	**11 16 45.6 +1.3**
	baz=136,SNR=43				
M55A	**Ridgway**	**32.65 347**	P	**P**	**11 16 46.5 +2.2**
M55A	**Ridgway**	**32.65 347**	P	**P**	**11 16 45.5 +1.2**
	baz=163				
L58A	**Harry Jones Me**	**32.69 352**	P	**P**	**11 16 46.0 +1.4**
	baz=169				
LCAR	**Lake Charles**	**32.69 327**	P	**P**	**11 16 46.3 +1.6**
LCAR			IAmb	IAmb	11 16 50.5
	comp=Z,171nm,2.0s				
L59A	**Walton**	**32.72 353**	P	**P**	**11 16 46.3 +1.3**
	baz=170				
HRV	**Adam Dziewonsk**	**32.74 358**	P	**P**	**11 16 46.2 +1.1**
	baz=176				
L61B	**Northampton**	**32.75 356**	P	**P**	**11 16 46.2 +1.0**
	baz=174				
WHAR	**Wooly Hollow**	**32.75 325**	P	**P**	**11 16 46.7 +1.4**
O50A	**Cable**	**32.76 340**	P	**P**	**11 16 46.7 +1.4**
	baz=154				
N52A	**McGinn's Farm,**	**32.77 343**	P	**P**	**11 16 47.0 +1.6**
	baz=158				
237A	**Washetta, Mont**	**32.79 316**	P	**P**	**11 16 48.1 +2.4**
P48A	**Milroy**	**32.80 337**	P	**P**	**11 16 47.1 +1.5**
P48A			IAmb	IAmb	11 16 59.8
	comp=Z,74nm,1.4s				
P48A	**Milroy**	**32.80 337**	P	**P**	**11 16 46.2 +0.5**
	baz=150				
L57A	**Andrews Acres**	**32.80 350**	P	**P**	**11 16 46.4 +0.7**
	baz=167				
C2SB	**Chapadao do Su**	**32.82 149**	eP	**P**	**11 16 46.5 +0.5**
PBMO	**Poplar Bluff**	**32.84 328**	P	**P**	**11 16 47.5 +1.4**
PBMO			IAmb	IAmb	11 16 48.8
	comp=Z,51nm,0.7s				
BINY	**Binghamton**	**32.86 351**	P	**P**	**11 16 47.3 +1.1**
	baz=168				
M54A	**Oil Creek Stat**	**32.89 346**	P	**P**	**11 16 48.4 +1.9**
M54A	**Oil Creek Stat**	**32.89 346**	P	**P**	**11 16 47.1 +0.7**
	baz=162,SNR=9.4				
K62A	**Royalston**	**32.93 357**	P	**P**	**11 16 47.5 +0.7**
	baz=175				
MIAR	**Mount Ida**	**32.99 322**	P	**P**	**11 16 48.4 +1.0**
MIAR			IAmb	IAmb	11 16 49.1
	comp=Z,66nm,0.9s				
MIAR	**Mount Ida**	**32.99 322**	P	**P**	**11 16 48.4 +1.0**
MIAR			pmax	pmax	
	comp=Z,66nm,1.0s				
MIAR	**Mount Ida**	**32.99 322**	P	**P**	**11 16 48.0 +0.6**
	baz=133,SNR=47				
PB10	**IPOC Station P**	**32.99 181**	P	**P**	**11 16 46.2 -1.3**
PB10			IAmb	IAmb	11 16 48.0
	comp=Z,94nm,1.2s				
AQDB	**Aquidauana**	**33.00 155**	eP	**P**	**11 16 47.6 +0.1**
O49A	**Covington**	**33.04 339**	P	**P**	**11 16 49.9 +2.1**
O49A	**Covington**	**33.04 339**	P	**P**	**11 16 49.0 +1.3**
	baz=153,SNR=7.5				
L56A	**Greenwood**	**33.05 349**	P	**P**	**11 16 49.5 +1.6**
L56A			IAmb	IAmb	11 16 53.8
	comp=Z,134nm,1.6s				
L56A	**Greenwood**	**33.05 349**	P	**P**	**11 16 48.6 +0.7**
	baz=166				
N51A	**Ashland**	**33.06 342**	P	**P**	**11 16 49.5 +1.5**
N51A	**Ashland**	**33.06 342**	P	**P**	**11 16 49.0 +1.1**
	baz=157				
M53A	**WI Miller and**	**33.08 345**	P	**P**	**11 16 49.0 +1.0**
	baz=160				
FCAR	**Ozark Folk Cen**	**33.09 326**	P	**P**	**11 16 49.2 +1.0**
FCAR			IAmb	IAmb	11 16 52.8
	comp=Z,43nm,0.7s				
BDFB	**Brasilia**	**33.11 139**	P	**P**	**11 16 49.7 +0.9**
	comp=Z,23nm,0.9s,baz=304,slow=8.9,SNR=16				
BDFB			PcP	**PcP**	**11 19 30.6 -1.3**
	comp=Z,14nm,0.9s,baz=298,slow=5.4,SNR=3.4				
BDFB			LR	LR	11 30 42.1
	comp=Z,1µm,18.9s,baz=306,slow=37				
BDFB	**Brasilia**	**33.11 139**	P	**P**	**11 16 49.8 +1.1**
BDFB			IAmb	IAmb	11 16 51.4
	comp=Z,60nm,1.3s				
BDFB	**Brasilia**	**33.11 139**	P	**P**	**11 16 49.8 +1.1**
BDFB			pmax	pmax	
	comp=Z,60nm,1.3s				
ALLY	**Alegheny Colle**	**33.14 346**	P	**P**	**11 16 49.3 +0.7**
N50A	**Nevada**	**33.17 341**	P	**P**	**11 16 50.0 +1.2**
	baz=155				
L55A	**Hinsdale**	**33.27 348**	P	**P**	**11 16 51.3 +1.6**
	baz=164				
K59A	**Cooperstown**	**33.27 353**	P	**P**	**11 16 51.1 +1.3**
	baz=171				
OLIL	**Olney**	**33.28 333**	P	**P**	**11 16 50.9 +1.1**
OLIL			IAmb	IAmb	11 16 56.0
	comp=Z,59nm,0.8s				
435B	**Jarrell**	**33.34 313**	P	**P**	**11 16 51.9 +1.4**
435B	**Jarrell**	**33.34 313**	P	**P**	**11 16 51.6 +1.1**
	baz=123,SNR=14				
M52A	**Chesterland**	**33.35 344**	P	**P**	**11 16 51.3 +0.8**
	baz=159				
K58A	**Earlville**	**33.36 352**	P	**P**	**11 16 52.0 +1.4**
K58A			IAmb	IAmb	11 16 56.5
	comp=Z,52nm,1.1s				
K58A	**Earlville**	**33.36 352**	P	**P**	**11 16 51.3 +0.7**
	baz=169				
M51A	**Elyria**	**33.39 343**	P	**P**	**11 16 51.8 +1.1**
	baz=157				
O48A	**Farmland**	**33.39 338**	P	**P**	**11 16 51.6 +0.8**
	baz=152,SNR=16				
L53A	**Girard**	**33.46 346**	P	**P**	**11 16 52.3 +1.0**
	baz=161				
833A	**Chaparral WMA,**	**33.46 308**	P	**P**	**11 16 52.1 +0.5**
833A			IAmb	IAmb	11 16 54.9
	comp=Z,44nm,0.7s				
833A	**Chaparral WMA,**	**33.46 308**	P	**P**	**11 16 51.9 +0.3**
	baz=118,SNR=23				
K57A	**Scipio Center**	**33.46 351**	P	**P**	**11 16 51.9 +0.5**
	baz=168				
J62A	**Henniker**	**33.47 357**	P	**P**	**11 16 52.2 +0.8**
	baz=176				
J63A	**Strafford**	**33.50 358**	P	**P**	**11 16 52.8 +1.1**
	baz=177				
L54A	**Sinclairville**	**33.50 347**	P	**P**	**11 16 52.8 +1.0**
	baz=163,SNR=6.8				
WVNY	**West Valley, N**	**33.52 348**	P	**P**	**11 16 53.8 +1.8**
ERPA	**Erie**	**33.55 346**	P	**P**	**11 16 54.0 +1.9**
ERPA			IAmb	IAmb	11 16 58.0
	comp=Z,159nm,1.8s				
ERPA	**Erie**	**33.55 346**	P	**P**	**11 16 53.5 +1.4**
	baz=161				
W39A	**Magazine**	**33.56 323**	P	**P**	**11 16 53.8 +1.4**
W39A	**Magazine**	**33.56 323**	P	**P**	**11 16 53.8 +1.4**
	baz=133,SNR=92				
J61A	**Chester**	**33.63 356**	P	**P**	**11 16 53.9 +1.0**
	baz=175				
P46A	**Rosedale**	**33.64 335**	P	**P**	**11 16 54.5 +1.5**
P46A			IAmb	IAmb	11 17 00.5
	comp=Z,56nm,0.8s				
N49A	**Columbus Grove**	**33.64 340**	P	**P**	**11 16 54.2 +1.2**
N49A			IAmb	IAmb	11 17 08.5
	comp=Z,86nm,1.4s				
N49A	**Columbus Grove**	**33.64 340**	P	**P**	**11 16 53.7 +0.7**
	baz=154,SNR=7.3				
M50A	**Fremont**	**33.71 342**	P	**P**	**11 16 54.7 +1.2**
M50A			IAmb	IAmb	11 17 00.2
	comp=Z,38nm,0.9s				
M50A	**Fremont**	**33.71 342**	P	**P**	**11 16 54.5 +1.0**
	baz=156				
K55A	**Perry**	**33.72 349**	P	**P**	**11 16 54.2 +0.6**
	baz=165				
K54A	**Basiliko Farm,**	**33.73 348**	P	**P**	**11 16 54.1 +0.3**
	baz=164				
ACCN	**Adirondack Com**	**33.76 355**	P	**P**	**11 16 55.6 +1.7**
ACCN			IAmb	IAmb	11 17 14.9
	comp=Z,53nm,1.2s				
U40A	**Yellville**	**33.84 325**	P	**P**	**11 16 55.6 +0.9**
U40A			IAmb	IAmb	11 17 02.0
	comp=Z,43nm,0.8s				
U40A	**Yellville**	**33.84 325**	P	**P**	**11 16 55.6 +0.9**
	baz=136,SNR=40				
N48A	**Decatur**	**33.88 339**	P	**P**	**11 16 55.8 +0.8**
	baz=152,SNR=14				
J58A	**Remsen**	**33.90 353**	P	**P**	**11 16 56.5 +1.3**
J58A			IAmb	IAmb	11 17 01.2
	comp=Z,101nm,1.4s				
J58A	**Remsen**	**33.90 353**	P	**P**	**11 16 55.9 +0.7**
	baz=170				
J59A	**Piesco**	**33.92 354**	P	**P**	**11 16 57.2 +1.8**
J59A			IAmb	IAmb	11 17 00.4
	comp=Z,129nm,1.7s				
J59A	**Piesco**	**33.92 354**	P	**P**	**11 16 55.8 +0.5**
	baz=171				
WHTX	**Lake Whitney,**	**33.92 315**	P	**P**	**11 16 56.5 +0.9**
WHTX			IAmb	IAmb	11 16 57.7
	comp=Z,57nm,0.9s				
WHTX	**Lake Whitney,**	**33.92 315**	P	**P**	**11 16 56.0 +0.5**
	baz=125,SNR=22				
ZAIG	**Zacatecas**	**33.99 297**	P	**P**	**11 16 58.0 +1.3**
AZAP	**Zapla**	**34.00 172**	*i* P	**P**	**11 16 55.5 -1.1**
J56A	**Wolcott**	**34.04 351**	P	**P**	**11 16 56.6 +0.2**
	baz=167				
J57A	**Williamstown**	**34.05 352**	P	**P**	**11 16 57.5 +1.0**
J57A			IAmb	IAmb	11 17 01.1
	comp=Z,145nm,1.8s				
J57A	**Williamstown**	**34.05 352**	P	**P**	**11 16 57.1 +0.7**
	baz=169				
M49A	**Liberty Center**	**34.07 341**	P	**P**	**11 16 57.9 +1.2**
	baz=154				
MGMO	**Mountain Grove**	**34.09 327**	P	**P**	**11 16 57.9 +0.9**
MGMO			IAmb	IAmb	11 17 01.6
	comp=Z,30nm,0.8s				
I64A	**Boothbay**	**34.12 0**	P	**P**	**11 16 58.0 +1.0**
	baz=180				
N47A	**Urbana**	**34.14 338**	P	**P**	**11 16 58.5 +1.2**
N47A	**Urbana**	**34.14 338**	P	**P**	**11 16 58.2 +0.9**
	baz=151,SNR=18				
I60A	**Shoreham**	**34.18 355**	P	**P**	**11 16 58.7 +1.1**
	baz=174				
I59A	**Olmsteadville**	**34.18 355**	P	**P**	**11 16 59.0 +1.3**
	baz=173				
I58A	**Old Forge**	**34.19 353**	P	**P**	**11 16 59.1 +1.3**
	baz=171				
SLM	**Saint Louis**	**34.19 331**	P	**P**	**11 16 58.2 +0.4**
SLM			IAmb	IAmb	11 17 15.1
	comp=Z,106nm,1.4s				
SLM	**Saint Louis**	**34.19 331**	P	**P**	**11 16 58.2 +0.4**
SLM			pmax	pmax	
	comp=Z,106nm,1.4s				
J55A	**Hilton**	**34.20 349**	P	**P**	**11 16 58.6 +0.8**
	baz=166				
L50A	**Kingsville**	**34.23 343**	P	**P**	**11 16 58.7 +0.7**
	baz=157				
CCM	**Cathedral Cave**	**34.24 329**	P	**P**	**11 16 58.9 +0.7**
CCM			IAmb	IAmb	11 16 60.0
	comp=Z,61nm,1.0s				
CCM	**Cathedral Cave**	**34.24 329**	P	**P**	**11 16 58.9 +0.7**
CCM			pmax	pmax	
	comp=Z,61nm,1.0s				
CCM	**Cathedral Cave**	**34.24 329**	P	**P**	**11 16 58.8 +0.7**
	baz=140				
SFIN	**Lafayette**	**34.24 336**	P	**P**	**11 16 59.7 +1.5**
SFIN	**Lafayette**	**34.24 336**	P	**P**	**11 16 59.1 +0.9**
	baz=148,SNR=12				
M48A	**Edgerton**	**34.33 340**	P	**P**	**11 16 60.0 +1.1**
M48A			IAmb	IAmb	11 17 05.4
	comp=Z,66nm,0.8s				
M48A	**Edgerton**	**34.33 340**	P	**P**	**11 16 59.9 +0.9**
	baz=153				
K52A	**Tillsonburg**	**34.35 346**	P	**P**	**11 16 59.9 +0.8**
	baz=160				
NCB	**Newcomb**	**34.39 354**	P	**P**	**11 17 00.8 +1.3**
NCB			IAmb	IAmb	11 17 05.4
	comp=Z,146nm,1.7s				
HHAR	**Hobbs**	**34.40 324**	P	**P**	**11 17 00.3 +0.6**
HHAR			IAmb	IAmb	11 17 01.2
	comp=Z,37nm,0.8s				
LBNH	**Lisbon**	**34.49 357**	P	**P**	**11 17 01.3 +1.0**
	baz=176				
K51A	**Iona Station**	**34.49 345**	P	**P**	**11 17 01.1 +0.7**
	baz=159				
M47A	**Cromwell**	**34.53 339**	P	**P**	**11 17 01.8 +1.1**
	baz=152,SNR=7.9				
L49A	**Milan**	**34.58 341**	P	**P**	**11 17 01.9 +0.8**
	baz=155				
GO02	**Mina Guanaco**	**34.63 180**	P	**P**	**11 17 01.1 -0.9**
L48A	**N Adams**	**34.64 341**	P	**P**	**11 17 02.4 +0.8**
	baz=154,SNR=8.3				
P43A	**Skaggs, Pawnee**	**34.66 333**	P	**P**	**11 17 02.5 +0.7**
P43A			IAmb	IAmb	11 17 07.5
	comp=Z,52nm,0.8s				
AAM	**Ann Arbor**	**34.72 342**	P	**P**	**11 17 03.0 +0.7**
	baz=155				
J52A	**Paris**	**34.72 346**	P	**P**	**11 17 02.8 +0.5**
	baz=161				
IPMB	**Ipameri, GO**	**34.75 142**	eP	**P**	**11 17 03.3 +0.3**
H61A	**Lyndonville**	**34.78 357**	P	**P**	**11 17 03.3 +0.4**
	baz=176				
JCT	**Junction City**	**34.81 311**	P	**P**	**11 17 04.2 +0.9**
JCT	**Junction City**	**34.81 311**	P	**P**	**11 17 04.2 +0.9**
JCT			pmax	pmax	
	comp=Z,44nm,1.1s				
JCT	**Junction City**	**34.81 311**	P	**P**	**11 17 04.0 +0.6**
	baz=120,SNR=12				
H58A	**Gabriels**	**34.83 354**	P	**P**	**11 17 03.9 +0.6**
	baz=172				
K50A	**Casco**	**34.84 343**	P	**P**	**11 17 04.2 +0.8**
K50A			IAmb	IAmb	11 17 09.9
	comp=Z,42nm,0.8s				
K50A	**Casco**	**34.84 343**	P	**P**	**11 17 04.1 +0.8**
	baz=157				
H60A	**Morristown**	**34.85 356**	P	**P**	**11 17 04.1 +0.6**
	baz=175				
ITRB	**Iturama**	**34.89 147**	eP	**P**	**11 17 04.3 +0.2**
L47A	**Sherwood**	**34.93 340**	P	**P**	**11 17 04.8 +0.7**
	baz=153,SNR=18				
H57A	**Richville**	**35.00 353**	P	**P**	**11 17 05.4 +0.7**
	baz=170				
I55A	**Frankford**	**35.09 350**	P	**P**	**11 17 06.2 +0.7**

	baz=166				
K49A	Clarkson	35.09 342	P	P	11 17 06.5 +0.9
	baz=156				
H56A	Elgin	35.24 352	P	P	11 17 07.4 +0.6
	baz=169,SNR=11				
TUL1	Leonard	35.25 322	P	P	11 17 07.5 +0.5
TUL1	Leonard	35.25 322	P	P	11 17 07.2 +0.2
	baz=131,SNR=38				
HDIL	Hopedale	35.30 334	P	P	11 17 07.9 +0.6
HDIL			IAmb	IAmb	11 17 12.5
	comp=Z,39nm,0.7s				
HDIL	Hopedale	35.30 334	P	P	11 17 07.8 +0.5
	baz=145				
G63A	Kingsbury	35.31 0	P	P	11 17 08.6 +1.3
	baz=180				
K48A	Perry	35.32 342	P	P	11 17 08.4 +0.9
	baz=155,SNR=12				
H55A	Tweed	35.34 351	P	P	11 17 07.9 +0.3
	baz=167				
L46A	Eue Claire	35.34 338	P	P	11 17 08.5 +0.8
L46A	Eue Claire	35.34 338	P	P	11 17 08.0 +0.3
	baz=151				
G60A	Masonville	35.37 357	P	P	11 17 08.1 +0.2
	baz=175				
DELO	Deloro Mine	35.38 350	P	P	11 17 10.0 +2.1
DELO			IAmb	IAmb	11 17 13.3
	comp=Z,71nm,1.4s				
I51A	Listowel	35.39 346	P	P	11 17 08.4 +0.3
	baz=160,SNR=9.4				
G59A	Clarenceville	35.40 356	P	P	11 17 08.9 +0.8
	baz=174				
G62A	West of Eustis	35.42 359	P	P	11 17 08.3 0.0
	baz=178				
W35A	Tecumseh	35.43 320	P	P	11 17 09.2 +0.6
G65A	Princeton	35.45 3	P	P	11 17 08.9 +0.4
	baz=184				
G64A	Maxfield	35.46 1	P	P	11 17 09.1 +0.5
	baz=182				
PKME	Peaks-Kenny Pk	35.46 1	P	P	11 17 09.3 +0.6
	baz=181				
M44A	Midewin, Midew	35.48 336	P	P	11 17 10.2 +1.4
K47A	Vermontville	35.48 340	P	P	11 17 09.4 +0.6
	baz=153,SNR=18				
G61A	St-Isidore-de-	35.51 358	P	P	11 17 10.4 +1.3
	baz=177				
J49A	Marlette	35.53 343	P	P	11 17 09.9 +0.6
	baz=157,SNR=5.8				
G58A	Ormstown	35.54 355	P	P	11 17 10.2 +0.9
	baz=172				
G57A	Newington	35.59 354	P	P	11 17 10.9 +1.2
	baz=171				
H53A	Bobcaygeon	35.60 349	P	P	11 17 10.2 +0.3
	baz=165				
J48A	Bridge Port	35.66 342	P	P	11 17 11.6 +1.2
J48A			IAmb	IAmb	11 17 16.4
	comp=Z,60nm,0.8s				
J48A	Bridge Port	35.66 342	P	P	11 17 11.1 +0.7
	baz=156,SNR=13				
X34A	Smith Ranch, M	35.71 318	P	P	11 17 12.6 +1.6
K46A	Dorr	35.76 340	P	P	11 17 11.9 +0.7
	baz=152,SNR=10				
PLVO	Plevna	35.80 351	P	P	11 17 12.4 +0.8
ABTX	Abilene, Hawle	35.81 314	P	P	11 17 13.2 +1.3
ABTX	Abilene, Hawle	35.81 314	P	P	11 17 13.1 +1.2
	baz=123,SNR=152				
FNO	Franklin	35.83 320	P	P	11 17 12.9 +0.9
SADO	Sadowa	35.90 349	P	P	11 17 13.8 +1.4
SADO			IAmb	IAmb	11 17 25.3
	comp=Z,134nm,1.8s				
F63A	Nahmakanta, Br	35.90 1	P	P	11 17 13.3 +0.8
	baz=181				
H52A	Wyevale	35.93 348	P	P	11 17 13.4 +0.7
	baz=163				
J47A	Sunmer	35.93 341	P	P	11 17 13.8 +1.1
J47A	Sunmer	35.93 341	P	P	11 17 13.6 +0.9
	baz=154,SNR=17				
G55A	Calabogie	35.95 352	P	P	11 17 13.5 +0.6
	baz=168				
I49A	Point Hope	35.98 344	P	P	11 17 14.2 +1.1
I49A			IAmb	IAmb	11 17 17.9
	comp=Z,96nm,1.1s				
I49A	Point Hope	35.98 344	P	P	11 17 13.9 +0.8
	baz=158				
PCMB	Pacaembu	36.00 150	eP	P	11 17 13.8 +0.2
L44A	Lake County Fo	36.09 337	P	P	11 17 15.3 +1.1
	baz=148				
N41A	Harden Midland	36.12 332	P	P	11 17 14.9 +0.4
N41A			IAmb	IAmb	11 17 31.3
	comp=Z,64nm,1.1s				
G53A	Haliburton	36.14 349	P	P	11 17 14.9 +0.5
	baz=165				
F59A	Saint Guilaume	36.14 356	P	P	11 17 14.9 +0.5
	baz=175				
F60A	Warwick	36.22 357	P	P	11 17 15.8 +0.7
	baz=176				
J46A	Howard City	36.30 340	P	P	11 17 16.6 +0.7
	baz=153				
LMN	Caledonia Moun	36.30 6	P	P	11 17 17.2 +1.4
LMN			IAmb	IAmb	11 17 20.6
	comp=Z,143nm,1.5s				
G54A	Lake Saint Pet	36.31 350	P	P	11 17 16.5 +0.5
	baz=166,SNR=8.3				
TRCB	Terra Rica	36.37 153	eP	P	11 17 16.9 +0.2
WMOK	Wichita Mounta	36.42 318	P	P	11 17 17.9 +0.8
WMOK			IAmb	IAmb	11 17 18.4
	comp=Z,89nm,0.8s				
WMOK	Wichita Mounta	36.42 318	P	P	11 17 17.9 +0.8
WMOK			pmax	pmax	
	comp=Z,89nm,0.8s				
WMOK	Wichita Mounta	36.42 318	P	P	11 17 16.8 -0.3
	baz=126,SNR=31				
I48A	Sherman Twp	36.45 343	P	P	11 17 17.5 +0.3
	baz=156				
F55A	Otter Lake	36.47 352	P	P	11 17 18.0 +0.7
	baz=169				
AHML	Horco Molle	36.49 173	iP	P	11 17 16.6 -1.2
I47A	Gladwin	36.54 342	P	P	11 17 19.5 +1.6
I47A	Gladwin	36.54 342	P	P	11 17 18.6 +0.7
	baz=155				
J45A	Montague	36.63 340	P	P	11 17 19.6 +0.9
J45A			IAmb	IAmb	11 17 20.4
	comp=Z,65nm,0.7s				
J45A	Montague	36.63 340	P	P	11 17 19.6 +0.9
	baz=152				
E61A	Lac Etchemin	36.63 359	P	P	11 17 19.1 +0.4
	baz=179				
E63A	Oxbow	36.64 2	P	P	11 17 19.3 +0.6
	baz=182				
E64A	Bridgewater	36.65 2	P	P	11 17 19.4 +0.6
	baz=183				
L42A	Oliver, Polo	36.66 335	P	P	11 17 19.0 0.0
L42A			IAmb	IAmb	11 17 24.0
	comp=Z,45nm,0.7s				
E58A	La Victoria	36.69 356	P	P	11 17 20.1 +0.9
	baz=174				
K43A	Burlington	36.70 337	P	P	11 17 19.5 +0.1
K43A			IAmb	IAmb	11 17 25.2
	comp=Z,93nm,0.8s				
I46A	Reed City	36.76 341	P	P	11 17 20.1 +0.3
	baz=154,SNR=6.2				
E57A	Chemin Saint G	36.80 355	P	P	11 17 21.2 +1.1
	baz=173				
H48A	Harrisville	36.82 344	P	P	11 17 20.6 +0.3
H48A			IAmb	IAmb	11 17 29.6
	comp=Z,138nm,1.7s				
H48A	Harrisville	36.82 344	P	P	11 17 20.6 +0.3
	baz=157				
ALGO	Algonquin Park	36.84 350	P	P	11 17 20.8 +0.3
	baz=166,SNR=9.0				
F52A	Sundridge	36.92 349	P	P	11 17 21.6 +0.4
	baz=164,SNR=12				
H47A	Mio	36.98 343	P	P	11 17 22.3 +0.7
	baz=156				
BB19B	Bebedouro	36.99 146	eP	P	11 17 21.8 -0.3
E56A	St. Veronique	37.02 354	P	P	11 17 22.2 +0.3
	baz=171				
E55A	Montcerf-Lytto	37.05 353	P	P	11 17 22.4 +0.3
	baz=170				
GO03	Copiap	37.05 181	P	P	11 17 21.5 -1.0
RCBR	Riachuelo	37.08 113	eP	P	11 17 20.9 -2.0
RCBR	Riachuelo	37.08 113	P	P	11 17 21.7 -1.2
RCBR	Riachuelo	37.08 113	P	P	11 17 21.7 -1.2
RCBR			pmax	pmax	
	comp=Z,62nm,1.4s				
I45A	Fountain	37.10 340	P	P	11 17 23.5 +0.8
D60A	Saint Jean D'O	37.12 359	P	P	11 17 23.3 +0.5
	baz=178				
F51A	Arnstein	37.16 348	P	P	11 17 23.5 +0.3
	baz=163,SNR=11				
E54A	Lac Daplat, Po	37.18 351	P	P	11 17 23.2 -0.1
	baz=168				
E53A	Dumoine, Ponti	37.20 351	P	P	11 17 23.5 +0.1
	baz=167				
D59A	Saint-Raymond	37.25 358	P	P	11 17 25.0 +1.1
	baz=176				
D63A	Stockholm	37.26 2	P	P	11 17 24.2 +0.2
	baz=182				
TXAR	Lajitas Array	37.27 306	P	P	11 17 25.0 +0.6
	comp=Z,16nm,0.9s,baz=124,slow=7.7,SNR=130				
TXAR			PcP	PcP	11 19 44.0 0.0
	comp=Z,9.1nm,1.0s,baz=133,slow=7.5,SNR=3.7				
TXAR			LR	LR	11 34 55.5
	comp=Z,238nm,21.6s,baz=0.0,slow=40				
TXAR			P3KPbc		11 47 48.2
	comp=Z,0.2nm,0.6s,baz=276,slow=2.6,SNR=3.4				
TX31	Lajitas Ar. Si	37.27 306	P	P	11 17 25.4 +1.0
TX32	Lajitas Array	37.27 306	P	P	11 17 25.4 +1.0
E52A	Mattawa	37.27 350	P	P	11 17 24.4 +0.3
	baz=165				
D62A	Allapoint, All	37.28 1	P	P	11 17 25.5 +1.3
D62A			IAmb	IAmb	11 17 30.1
	comp=Z,175nm,1.9s				
D62A	Allapoint, All	37.28 1	P	P	11 17 24.8 +0.6
	baz=181				
GLMI	Grayling	37.30 342	P	P	11 17 25.6 +1.2
GLMI			IAmb	IAmb	11 17 38.3
	comp=Z,123nm,1.4s				
GLMI	Grayling	37.30 342	P	P	11 17 24.9 +0.5
	baz=155				
L40A	Anamosa	37.37 333	P	P	11 17 24.8 -0.2
L40A			IAmb	IAmb	11 17 30.1
	comp=Z,48nm,0.8s				
D57A	Chemin Vers le	37.38 355	P	P	11 17 25.7 +0.7
	baz=173				
D58A	Chemin du LacG	37.39 356	P	P	11 17 25.3 +0.2
	baz=175				
G47A	Hillman	37.40 344	P	P	11 17 25.8 +0.6
	baz=157,SNR=15				
D61A	St Aubert, Com	37.40 360	P	P	11 17 25.8 +0.6
	baz=179				
F49A	Sandfield	37.48 346	P	P	11 17 26.0 +0.1
	baz=160,SNR=9.6				
D56A	ZEC Mazanza, M	37.49 354	P	P	11 17 26.5 +0.5
	baz=172,SNR=7.9				
D55A	Sainte-Anne-du	37.53 354	P	P	11 17 26.9 +0.5
	baz=171,SNR=17				
U32A	Winter Ranch,	37.55 320	P	P	11 17 26.6 -0.1
U32A			IAmb	IAmb	11 17 27.8
	comp=Z,123nm,0.9s				
H45A	Beulah	37.56 341	P	P	11 17 27.2 +0.6
	baz=153,SNR=9.9				
JFWS	Jewell Farm	37.65 335	P	P	11 17 27.4 0.0
JFWS			IAmb	IAmb	11 17 32.8
	comp=Z,100nm,0.8s				
JFWS	Jewell Farm	37.65 335	P	P	11 17 27.4 0.0
JFWS			pmax	pmax	
	comp=Z,100nm,0.8s				
JFWS	Jewell Farm	37.65 335	P	P	11 17 27.8 +0.4
	baz=146,SNR=40				
E51A	G1948 Merrick	37.66 349	P	P	11 17 28.1 +0.7
	baz=164,SNR=13				
LATQ	La Tuque	37.67 357	P	P	11 17 27.7 +0.2
	baz=175				
F48A	Evansville	37.68 345	P	P	11 17 28.0 +0.5
	baz=159,SNR=10				
CPUP	Villa Florida	37.77 162	P	P	11 17 27.3 -1.3
	comp=Z,34nm,1.1s,baz=332,slow=7.6,SNR=27				
CPUP			PcP	PcP	11 19 44.5 -0.8
	comp=Z,12nm,0.9s,baz=288,slow=2.0,SNR=3.6				
CPUP			LR	LR	11 32 56.5
	comp=Z,892nm,20.1s,baz=340,slow=36				
CPUP	Villa Florida	37.77 162	eP	P	11 17 27.7 -0.8
CPUP	Villa Florida	37.77 162	P	P	11 17 27.7 -0.8
CPUP			IAmb	IAmb	11 17 28.9
	comp=Z,131nm,1.4s				
CPUP	Villa Florida	37.77 162	P	P	11 17 27.7 -0.8
CPUP			pmax	pmax	
	comp=Z,131nm,1.4s				
D54A	Lac Fusel, La	37.81 352	P	P	11 17 28.8 +0.2
	baz=169,SNR=10				
G45A	Suttons Bay	37.81 342	P	P	11 17 29.8 +1.1
G45A			IAmb	IAmb	11 17 35.2
	comp=Z,90nm,0.8s				
G45A	Suttons Bay	37.81 342	P	P	11 17 29.5 +0.8
	baz=154,SNR=32				
G46A	Petoskey	37.82 343	P	P	11 17 29.5 +0.7
	baz=155				
KSU1	Kansas State U	37.88 325	P	P	11 17 29.2 -0.2
	baz=134,SNR=9.6				
D53A	Lac Vacive, Po	37.88 351	P	P	11 17 30.0 +0.7
D53A	Lac Vacive, Po	37.88 351	P	P	11 17 29.8 +0.5
	baz=167				
I42A	Draeger Farm,	37.94 337	P	P	11 17 30.2 +0.4
HPIG		37.99 302	P	P	11 17 31.2 +0.4
H43A	Windswept, Lux	38.01 339	P	P	11 17 30.7 +0.3
H43A			IAmb	IAmb	11 17 31.9
	comp=Z,56nm,0.8s				
CYA	Choya	38.08 174	iP	P	11 17 29.7 -1.5
SCIA	State Center	38.16 331	P	P	11 17 32.5 +0.7
SCIA			IAmb	IAmb	11 17 37.2
	comp=Z,87nm,0.9s				
SCIA	State Center	38.16 331	P	P	11 17 32.1 +0.3
	baz=140,SNR=7.4				
D51A	Lot 18 Range I	38.17 349	P	P	11 17 32.1 +0.3
	baz=164,SNR=11				
E48A	Lockeyer	38.18 346	P	P	11 17 32.3 +0.5
	baz=160,SNR=10				
VCA	Vinchina	38.21 178	iP	P	11 17 32.2 -0.3
PTGB	Pitanga	38.29 154	eP	P	11 17 32.8 -0.3
FRTB	Fartura	38.30 149	eP	P	11 17 33.7 +0.6
D50A	G1974 Best Tow	38.34 349	P	P	11 17 33.4 +0.3
	baz=164				
F45A	CMU Biological	38.35 342	P	P	11 17 34.3 +1.1
	baz=154,SNR=37				
E47A	Iron Bridge	38.43 345	P	P	11 17 34.9 +1.0
	baz=158,SNR=20				
AMTX	Amarillo	38.46 316	P	P	11 17 35.2 +0.6
AMTX			IAmb	IAmb	11 17 36.2
	comp=Z,129nm,0.9s				
AMTX	Amarillo	38.46 316	P	P	11 17 35.1 +0.6
	baz=123				
I40A	Norwalk	38.61 336	P	P	11 17 35.9 +0.4
I40A			IAmb	IAmb	11 17 41.3
	comp=Z,54nm,0.8s				
E46A	Sault Ste Mari	38.62 344	P	P	11 17 36.7 +1.2
E46A			IAmb	IAmb	11 17 40.4
	comp=Z,83nm,1.2s				
RCLB	Rio Claro- Sao	38.62 146	eP	P	11 17 35.6 -0.3
D49A	Beulah Townshi	38.74 347	P	P	11 17 37.3 +0.8
	baz=161,SNR=11				
MSTX	Muleshoe	38.75 314	P	P	11 17 37.7 +0.8
MSTX	Muleshoe	38.75 314	P	P	11 17 37.7 +0.8
	baz=121				
D48A	Paudash Townsh	38.75 347	P	P	11 17 37.2 +0.6
	baz=161,SNR=14				
VLDQ	Val d'Or	38.86 352	P	P	11 17 38.0 +0.6
VLDQ			IAmb	IAmb	11 17 42.6
	comp=Z,105nm,1.5s				
D47A	Chapleau	38.95 345	P	P	11 17 38.8 +0.5
	baz=159,SNR=12				
AGUA	GUANDACOL	38.95 178	iP	P	11 17 38.1 -0.5
D46A	Sault St. Mari	39.03 344	P	P	11 17 39.6 +0.7
	baz=157,SNR=10				
BSCB	Bom Sucesso	39.14 141	eP	P	11 17 39.7 -0.5
F42A	Maple Grove Fa	39.26 340	P	P	11 17 41.6 +0.7
F42A			IAmb	IAmb	11 17 45.9
	comp=Z,252nm,2.0s				
E44A	Grand Marais A	39.31 342	P	P	11 17 42.5 +1.2
E44A			IAmb	IAmb	11 17 43.8
	comp=Z,111nm,0.8s				
E44A	Grand Marais A	39.31 342	P	P	11 17 42.5 +1.2
	baz=154,SNR=30				
VAO	Valinhos	39.40 146	eP	P	11 17 42.1 -0.3
E43A	Lone Tree Farm	39.43 341	P	P	11 17 42.7 +0.4
CBKS	Cedar Bluff	39.52 322	P	P	11 17 43.7 +0.5
CBKS			IAmb	IAmb	11 17 44.5
	comp=Z,96nm,0.9s				
CBKS	Cedar Bluff	39.52 322	P	P	11 17 43.7 +0.5
CBKS			pmax	pmax	
	comp=Z,96nm,0.9s				
CBKS	Cedar Bluff	39.52 322	P	P	11 17 43.3 +0.1
	baz=129,SNR=31				
G40A	Rib Lake	39.59 337	P	P	11 17 44.4 +0.7
MNTX	Cornudas Mount	39.61 309	P	P	11 17 45.4 +1.5
MNTX			IAmb	IAmb	11 17 46.5
	comp=Z,183nm,1.4s				
MNTX	Cornudas Mount	39.61 309	P	P	11 17 45.1 +1.1
	baz=116,SNR=128				
SPB	Sao Paulo	39.62 147	eP	P	11 17 43.8 -0.3
GO04	Tololo Observa	39.63 181	P	P	11 17 43.9 -0.5
LSQQ	Lebel-sur-Quev	39.72 353	P	P	11 17 45.3 +0.7
	baz=169				
SJMB	Sao Joao De Ma	39.87 135	eP	P	11 17 45.6 -0.6
COWI	Conover	39.91 339	P	P	11 17 46.6 +0.3
BSFB	Barra de Sao F	40.19 135	eP	P	11 17 48.4 -0.5
TIJ01	Guaruva-PR	40.23 150	eP	P	11 17 48.6 -0.7
BGNE	Belgrade	40.32 326	P	P	11 17 49.9 0.0
BGNE	Belgrade	40.32 326	P	P	11 17 49.7 -0.2
	baz=134,SNR=23				
AMOG	MOGNA	40.40 178	iP	P	11 17 49.4 -1.2
PARB	Paraibuna	40.42 145	eP	P	11 17 50.5 -0.4
ITAB	Concordia	40.48 155	eP	P	11 17 50.6 -0.5
MATQ	Matagami	40.49 352	P	P	11 17 51.5 +0.5
	baz=168				
D41A	Chassel	40.54 340	P	P	11 17 51.8 +0.3
SPMN	Marine on St.	40.60 335	P	P	11 17 52.5 +0.5
SPMN			IAmb	IAmb	11 17 57.2
	comp=Z,286nm,1.9s				
SPMN	Marine on St.	40.60 335	P	P	11 17 52.2 +0.2
	baz=144,SNR=19				
DRLN	Deer Lake	40.76 12	P	P	11 17 53.7 +0.4
RTLL	Cerro Villicun	40.79 178	iP	P	11 17 52.7 -1.1
ESAR	Angra dos Reis	40.87 143	eP	P	11 17 54.5 0.0
VAS01	Vassouras-RJ	40.91 141	eP	P	11 17 53.8 -1.1
ZON	Zonda	41.00 179	iP	P	11 17 54.9 -0.6
CFA	Coronel Fontan	41.07 178	iP	P	11 17 55.1 -0.9
ITQB	Itaqui	41.11 163	eP	P	11 17 55.7 -0.7
ECSD	EROS Data Cent	41.18 330	P	P	11 17 56.3 -0.6
ECSD	EROS Data Cent	41.18 330	P	P	11 17 56.7 -0.2
	baz=137,SNR=9.3				
E38A	The Farm, Brul	41.23 337	P	P	11 17 58.1 +0.9
E38A			IAmb	IAmb	11 17 58.5
	comp=Z,60nm,0.7s				
RTLS	Leoncito	41.24 179	iP	P	11 17 57.3 -0.5
RTCV	Cerro Valdivia	41.32 178	iP	P	11 17 57.3 -0.8
KSCO	Kaye Shedlock'	41.43 320	P	P	11 18 00.0 +0.9
KSCO	Kaye Shedlock'	41.43 320	P	P	11 17 59.1 0.0
	baz=126,SNR=9.8				
T25A	Trinidad	41.54 317	P	P	11 18 02.6 +2.4
T25A			IAmb	IAmb	11 18 03.0
	comp=Z,65nm,0.8s				
T25A	Trinidad	41.54 317	P	P	11 18 01.7 +1.6
	baz=122,SNR=52				
ACAN	Cantantal	41.78 177	iP	P	11 18 01.1 -0.8
121A	Cookes Peak, D	41.81 309	P	P	11 18 04.6 +2.2
121A			IAmb	IAmb	11 18 05.6
	comp=Z,75nm,1.1s				
121A	Cookes Peak, D	41.81 309	P	P	11 18 04.2 +1.8
	baz=114,SNR=45				
Y22D	IRIS PASSCAL I	41.82 311	P	P	11 18 04.6 +2.2
Y22D	IRIS PASSCAL I	41.82 311	P	P	11 18 03.9 +1.4
	baz=117				
ANMO	Albuquerque	41.88 313	P	P	11 18 04.9 +1.9
ANMO	Albuquerque	41.88 313c	iP	P	11 18 04.5 +1.6
ANMO			pmax	pmax	
	comp=Z,45nm,1.0s				
ANMO	Albuquerque	41.88 313	P	P	11 18 04.1 +1.2
	baz=118				
ASAL	Salagasta	42.04 179	iP	P	11 18 03.6 -0.4
OGNE	Ogallala	42.23 323	P	P	11 18 06.7 +1.1
OGNE			IAmb	IAmb	11 18 07.0
	comp=Z,53nm,0.8s				
OGNE	Ogallala	42.23 323	P	P	11 18 06.0 +0.3
	baz=128,SNR=15				
ARCO	CERRO ARCO	42.28 179	iP	P	11 18 05.5 -0.6
EYMN	Ely	42.33 338	P	P	11 18 06.6 +0.5
EYMN	Ely	42.33 338	P	P	11 18 05.8 -0.4
	baz=147,SNR=44				
ROC1	El Roble	42.43 182	P	P	11 18 07.1 -0.3
ROC1	El Roble	42.43 182	iP	P	11 18 06.5 -0.9
319A	Douglas	42.53 306	P	P	11 18 10.5 +2.3
319A			IAmb	IAmb	11 18 11.1
	comp=Z,59nm,0.8s				
AAGR	Agrelo	42.53 179	iP	P	11 18 07.5 -0.6
PEL	Peldehue	42.59 181	P	P	11 18 08.5 0.0
PEL	Peldehue	42.59 181	P	P	11 18 08.5 0.0
SDCO	Great Sand Dun	42.60 317	P	P	11 18 10.7 +1.8
SDCO			IAmb	IAmb	11 18 11.5
	comp=Z,74nm,0.8s				
SDCO	Great Sand Dun	42.60 317	P	P	11 18 10.3 +1.4
	baz=122,SNR=138				
CPSB	Cacapava Do Su	42.82 159	eP	P	11 18 08.9 -1.5
CNLB	Canela	42.83 155	eP	P	11 18 09.4 -1.2
SUSD	Miller	42.86 329	P	P	11 18 11.2 +0.6
SUSD			IAmb	IAmb	11 18 15.4
	comp=Z,100nm,0.9s				
SUSD	Miller	42.86 329	P	P	11 18 09.7 -0.9
	baz=135,SNR=8.2				
Q24A	Divide	43.02 319	P	P	11 18 13.9 +1.6
Q24A	Divide	43.02 319	P	P	11 18 12.6 +0.3
	baz=123,SNR=15				
HSIG		43.08 302	P	P	11 18 13.3 +0.7
S22A	4UR Ranch, Cre	43.50 316	P	P	11 18 18.2 +2.0
S22A			IAmb	IAmb	11 18 19.9
	comp=Z,87nm,0.8s				
S22A	4UR Ranch, Cre	43.50 316	P	P	11 18 17.9 +1.6
	baz=120,SNR=145				
SRIG	Santa Rosalia	43.69 300	P	P	11 18 19.4 +1.9
SRIG			IAmb	IAmb	11 18 20.0
	comp=Z,76nm,1.0s				
ISCO	Idaho Springs	43.78 319	P	P	11 18 19.9 +1.5
ISCO			IAmb	IAmb	11 18 20.7
	comp=Z,40nm,0.8s				
ISCO	Idaho Springs	43.78 319	P	P	11 18 19.9 +1.5
ISCO			pmax	pmax	
	comp=Z,40nm,0.8s				
ISCO	Idaho Springs	43.78 319	P	P	11 18 19.5 +1.1
	baz=123,SNR=56				
PLTB	Pedras Altas	44.01 160	eP	P	11 18 18.6 -1.4
TUC	Tucson	44.06 307	P	P	11 18 22.2 +1.7
TUC	Tucson	44.06 307	P	P	11 18 22.2 +1.7
TUC			pmax	pmax	
	comp=Z,24nm,1.0s				
TUC	Tucson	44.06 307	P	P	11 18 21.7 +1.2
	baz=112				
X18A	Snowflake	44.28 310	P	P	11 18 25.1 +2.8
AGMN	Agassiz Nation	44.32 335	P	P	11 18 23.0 +0.8
AGMN	Agassiz Nation	44.32 335	P	P	11 18 22.5 +0.3
	baz=142,SNR=137				
SMCO	Snowmass	44.33 318	P	P	11 18 25.1 +2.1
W18A	Petrified Fore	44.36 311	P	P	11 18 25.4 +2.4
W18A	Petrified Fore	44.36 311	P	P	11 18 24.8 +1.8
	baz=115,SNR=62				
MVCO	Mesa Verde	44.40 314	P	P	11 18 25.5 +2.2
MVCO			IAmb	IAmb	11 18 28.3
	comp=Z,54nm,0.7s				
MVCO	Mesa Verde	44.40 314	P	P	11 18 25.0 +1.7
	baz=118,SNR=52				
GO05	Huala	44.49 183	P	P	11 18 23.3 -0.4
PHWY	Pilot Hill	44.52 321	P	P	11 18 25.6 +1.3
N23A	Red Feather La	44.59 320	P	P	11 18 26.5 +1.6
N23A	Red Feather La	44.59 320	P	P	11 18 25.6 +0.7
	baz=124,SNR=22				
SCHQ	Schefferville	45.10 2	P	P	11 18 28.8 +0.4
	comp=Z,15nm,0.6s,baz=189,slow=6.1,SNR=77				
SCHQ			LR	LR	11 37 26.4
	comp=Z,603nm,19.6s,baz=202,slow=36				
SCHQ	Schefferville	45.10 2	P	P	11 18 29.2 +0.9
X16A	Lo Mia Camp, P	45.36 309	P	P	11 18 33.2 +2.2
RSSD	Black Hills	45.37 325	P	P	11 18 32.7 +1.8
RSSD			IAmb	IAmb	11 18 35.3
	comp=Z,72nm,1.5s				
RSSD	Black Hills	45.37 325	P	P	11 18 32.7 +1.8
RSSD			pmax	pmax	
	comp=Z,72nm,1.5s				
RSSD	Black Hills	45.37 325	P	P	11 18 30.8 -0.1
	baz=129				
214A	Organ Pipe Nat	45.55 306	P	P	11 18 33.8 +1.4
214A	Organ Pipe Nat	45.55 306	P	P	11 18 33.5 +1.1
	baz=110,SNR=35				
MDND	Maddock	45.62 332	P	P	11 18 33.4 +0.8
MDND	Maddock	45.62 332	P	P	11 18 32.6 0.0
	baz=137,SNR=31				
O20A	White River Ci	45.66 318	P	P	11 18 35.5 +2.2
O20A			IAmb	IAmb	11 18 57.4
	comp=Z,59nm,0.9s				
O20A	White River Ci	45.66 318	P	P	11 18 34.9 +1.5

baz=121,SNR=51
WUAZ Wupatki 45.74 311 P P 11 18 36.3 +2.3
WUAZ Wupatki 45.74 311 P P 11 18 35.8 +1.8
baz=114,SNR=86
RWWY Rawlins 45.83 321 P P 11 18 36.4 +1.7
RWWY IAmb IAmb 11 18 37.0
comp=Z,58nm,0.9s
ULM Lac du Bonnet 45.87 337 P P 11 18 34.0 -0.5
comp=Z,63nm,0.8s,baz=142,slow=8.3,SNR=121
ULM PcP PcP 11 20 11.2 -0.3
comp=Z,21nm,0.8s,baz=125,slow=2.7,SNR=3.9
ULM Lac du Bonnet 45.87 337 P P 11 18 34.4 -0.1
ULM IAmb IAmb 11 18 35.0
comp=Z,57nm,0.8s
ULM Lac du Bonnet 45.87 337c iP P 11 18 33.7 -0.8
K22A Casper 45.94 322 P P 11 18 36.6 +1.2
K22A IAmb IAmb 11 18 37.4
comp=Z,68nm,0.9s
K22A Casper 45.94 322 P P 11 18 36.1 +0.6
baz=125,SNR=30
Y14A Wickenburg 46.38 308 P P 11 18 40.9 +2.0
Y14A IAmb IAmb 11 18 41.6
comp=Z,39nm,0.9s
113A Mohawk Valley, 46.58 306 P P 11 18 41.8 +1.4
SRU San Rafael Swe 46.70 316 P P 11 18 43.7 +2.2
SRU San Rafael Swe 46.70 316 P P 11 18 43.7 +2.2
SRU pmax pmax
comp=Z,73nm,0.8s
U15A North Rim 46.79 312 P P 11 18 44.5 +2.1
P17A Butcher Ranch, 47.02 316 P P 11 18 46.2 +2.3
Q16A Castle Valley 47.06 315 P P 11 18 46.3 +1.9
PKCU Pink Cliffs 47.23 313 P P 11 18 47.9 +2.1
TMUT Trail Mountain 47.26 316 P P 11 18 48.0 +2.0
MTPU Mount Pierson 47.39 314 P P 11 18 49.7 +2.6
PDMCI Parker Dam,Lak 47.40 308 P P 11 18 47.9 +1.1
baz=110,SNR=20
KNB Kanab 47.42 312 P P 11 18 49.4 +2.2
KNB Kanab 47.42 312 P P 11 18 49.4 +2.2
KNB pmax pmax
comp=Z,162nm,0.8s
W13A Hualapai Mount 47.48 309 P P 11 18 49.9 +2.2
W13A IAmb IAmb 11 18 50.7
comp=Z,31nm,0.9s
Y12C Blythe 47.50 307 P P 11 18 48.8 +1.2
baz=110,SNR=11
GLA Glamis 47.51 306 P P 11 18 50.6 +2.8
GLA IAmb IAmb 11 18 55.5
comp=Z,27nm,0.9s
GLA Glamis 47.51 306 P P 11 18 50.6 +2.8
GLA pmax pmax
comp=Z,27nm,0.9s
GLA Glamis 47.51 306 P P 11 18 49.0 +1.2
baz=109,SNR=10.0
MSU Marysvale 47.58 314 P P 11 18 50.8 +2.3
MSU Marysvale 47.58 314 P P 11 18 50.8 +2.3
LCMT Little Creek M 47.73 312 P P 11 18 51.8 +2.3
SZCU Shurtz Canyon 47.85 313 P P 11 18 52.0 +1.5
BW06 Boulder Array 47.88 321 P P 11 18 51.8 +1.1
BW06 Boulder Array 47.88 321 P P 11 18 51.4 +0.7
baz=122,SNR=48
PD31 Pinedale Array 47.88 321 P P 11 18 52.0 +1.4
PDAR Pinedale Array 47.88 321 P P 11 18 51.4 +0.7
comp=Z,21nm,0.6s,baz=118,slow=10,SNR=250
PDAR PcP PcP 11 20 18.0 -1.2
comp=Z,17nm,1.0s,baz=116,slow=6.1,SNR=3.9
PDAR LR LR 11 40 40.9
comp=Z,401nm,20.7s,baz=122,slow=38
NEE2 Needles Airpor 47.93 309 P P 11 18 51.3 +0.4
baz=110
JLU Jordanelle 48.03 317 P P 11 18 54.0 +2.2
CCUT Cedar City 48.03 312 P P 11 18 53.7 +1.8
TRQA Tornquist 48.03 172 eP P 11 18 51.2 -0.3
IRM Iron Mountain 48.13 308 P P 11 18 53.7 +1.2
baz=110,SNR=70
NLU North Lily Min 48.15 316 P P 11 18 54.5 +1.6
LAO LASA Array 48.17 327 P P 11 18 53.1 +0.5
LAO IAmb IAmb 11 18 54.0
comp=Z,49nm,0.9s
LAO LASA Array 48.17 327 P P 11 18 52.8 +0.1
baz=128,SNR=24
BC3 Big Chuckawall 48.20 307 P P 11 18 53.9 +0.7
baz=109,SNR=17
TCUT Toone Canyon 48.24 318 P P 11 18 55.0 +1.5
SWSC Sam W. Stewart 48.26 306 P P 11 18 54.4 +0.9
baz=108,SNR=11
DGMT Dagmar 48.26 330 P P 11 18 54.2 +0.9
DGMT Dagmar 48.26 330 P P 11 18 54.2 +0.9
baz=132,SNR=21
CTU Camp Tracy 48.27 317 P P 11 18 55.3 +1.6
IKP In-Ko-Pah, Jac 48.41 305 P P 11 18 55.9 +1.1
baz=108
HWUT Hardware Ranch 48.58 318 P P 11 18 57.0 +0.9
HWUT IAmb IAmb 11 19 05.7
comp=Z,75nm,1.1s
GMRC Granite Mounta 48.74 308 P P 11 18 58.6 +1.2
baz=110,SNR=20
MONP2 Monument Peak 48.74 305 P P 11 18 58.5 +1.1
baz=108,SNR=7.1
BELC Belle Mtn. Jos 48.74 307 P P 11 18 58.3 +0.9
baz=109,SNR=27
DUG Dugway, Tooele 48.77 316 P P 11 18 58.9 +1.4
DUG IAmb IAmb 11 19 03.2
comp=Z,52nm,0.9s
DUG Dugway, Tooele 48.77 316 P P 11 18 58.9 +1.4
DUG pmax pmax
comp=Z,52nm,1.0s
DUG Dugway, Tooele 48.77 316 P P 11 18 59.1 +1.6
baz=116,SNR=59
PSUT Pine Spring 48.79 313 P P 11 18 59.5 +1.8
AHID Auburn Hatcher 48.85 320 P P 11 18 59.0 +0.9
AHID IAmb IAmb 11 19 07.8
comp=Z,54nm,1.0s
SHPR Sheep Range 48.96 310 P P 11 19 00.7 +1.7
SHPR IAmb IAmb 11 19 07.4
comp=Z,45nm,1.0s
RLMT Red Lodge 48.97 323 P P 11 18 59.9 +0.8
RLMT IAmb IAmb 11 19 04.9
comp=Z,60nm,0.8s
RLMT Red Lodge 48.97 323 P P 11 19 00.1 +1.0
baz=124,SNR=5.4
SNOW Snow King Moun 48.99 321 P P 11 19 00.5 +1.2
PFO Pinyon Flats O 48.99 306 P P 11 19 00.0 +0.8
PFO Pinyon Flats O 48.99 306 eP P 11 18 59.6 +0.3
PFO pmax pmax
comp=Z,29nm,1.2s
PFO Pinyon Flats O 48.99 306 P P 11 19 00.1 +0.8
baz=108,SNR=10
REDW Red Top Meadow 48.99 321 P P 11 19 00.7 +1.4
SPUT South Promonto 49.03 317 P P 11 19 00.5 +1.0
MOOW Moose Ponds 49.13 321 P P 11 19 01.1 +0.8
MOOW IAmb IAmb 11 19 02.4
comp=Z,42nm,0.9s
TUQ Turquoise Moun 49.16 309 P P 11 19 01.7 +1.1
baz=110,SNR=39
BGU Big Grassy Mou 49.24 317 P P 11 19 02.3 +1.2
FXWY Fox Creek 49.25 321 P P 11 19 02.2 +1.0
FXWY IAmb IAmb 11 19 03.3
comp=Z,55nm,0.8s
FLWY Flagg Ranch 49.27 321 P P 11 19 02.9 +1.5
FLWY IAmb IAmb 11 19 18.7
comp=Z,61nm,1.0s
HEC Hector,Ludlow 49.28 308 P P 11 19 02.9 +1.5
baz=109,SNR=35
109C Camp Elliot, M 49.29 305 P P 11 19 02.5 +1.1
109C Camp Elliot, M 49.29 305 P P 11 19 01.9 +0.5
baz=107
YMP Mirror Lake Pl 49.29 322 P P 11 19 03.4 +1.8
LKWY Lake 49.34 322 P P 11 19 04.1 +2.1
LKWY IAmb IAmb 11 19 23.0
comp=Z,58nm,1.2s
LKWY Lake 49.34 322 P P 11 19 04.1 +2.1
LKWY pmax pmax
comp=Z,58nm,1.2s
H17A Grant Village 49.36 322 P P 11 19 03.8 +1.6
H17A Grant Village 49.36 322 P P 11 19 03.6 +1.5
baz=122,SNR=19
YPP Pitchstone Pla 49.44 322 P P 11 19 04.0 +1.3
HVU Hansel Valley 49.46 318 P P 11 19 03.8 +1.0
HVU Hansel Valley 49.46 318 P P 11 19 03.8 +1.0
HVU pmax pmax
comp=Z,35nm,0.8s
YUF Upper Falls 49.49 322 P P 11 19 05.1 +2.0
BBRC Big Bear Solar 49.55 307 P P 11 19 05.1 +1.4
baz=108,SNR=15
MURC Murrieta 49.57 306 P P 11 19 04.4 +0.8
baz=108,SNR=11
GCMT Greycliff 49.58 324 P P 11 19 04.4 +0.8
SHOC Shoshone, Teco 49.59 309 P P 11 19 05.1 +1.4
baz=110,SNR=17
YNR Norris Junctio 49.59 322 P P 11 19 05.4 +1.5
YHH Holmes Hill 49.74 322 P P 11 19 06.6 +1.6
YMR Madison River 49.74 322 P P 11 19 07.0 +2.1
GSC Goldstone, Bar 49.80 308 P P 11 19 06.3 +1.0
GSC IAmb IAmb 11 19 08.0
comp=Z,62nm,1.2s
GSC Goldstone, Bar 49.80 308 P P 11 19 06.3 +1.0
GSC pmax pmax
comp=Z,62nm,1.3s
GSC Goldstone, Bar 49.80 308 P P 11 19 06.5 +1.2
baz=109,SNR=28
YHB Horse Butte 49.92 322 P P 11 19 08.3 +1.9
TPNV Topopah Spring 49.93 311 P P 11 19 08.3 +1.9
TPNV IAmb IAmb 11 19 09.6
comp=Z,66nm,0.8s
TPNV Topopah Spring 49.93 311 P P 11 19 08.4 +1.9
TPNV pmax pmax
comp=Z,65nm,0.9s
TPNV Topopah Spring 49.93 311 P P 11 19 08.2 +1.7
baz=111,SNR=71
R11A Troy Canyon, C 49.96 313 P P 11 19 08.4 +1.7
R11A IAmb IAmb 11 19 09.6
comp=Z,33nm,0.9s
R11A Troy Canyon, C 49.96 313 P P 11 19 08.2 +1.5
baz=112,SNR=73
YHL Hebgen Lake 49.97 322 P P 11 19 09.1 +2.4
QLMT Earthquake Lak 50.11 322 P P 11 19 09.9 +2.1
BFSC Mount Baldy Ra 50.13 307 P P 11 19 08.6 +0.6
baz=108,SNR=6.3
PLCA Paso Flores 50.16 181 P P 11 19 07.3 -0.7
comp=Z,58nm,0.8s,baz=21,slow=8.6,SNR=143
PLCA Paso Flores 50.16 181 eP P 11 19 07.2 -0.7
PLCA Paso Flores 50.16 181 P P 11 19 07.2 -0.7
PLCA IAmb IAmb 11 19 07.9
comp=Z,58nm,0.8s
FURC Furnace Creek, 50.23 310 P P 11 19 09.9 +1.5
baz=110,SNR=43
MWC Mount Wilson 50.44 307 P P 11 19 11.5 +1.1
MWC Mount Wilson 50.44 307 P P 11 19 11.5 +1.1
MWC pmax pmax
comp=Z,48nm,1.5s
SCI2 San Clemente I 50.48 305 P P 11 19 11.2 +0.7
baz=106
CIS Catalina Islan 50.49 306 P P 11 19 11.6 +1.1
baz=106,SNR=10
PASC Pasadena Art C 50.52 307 P P 11 19 12.2 +1.4
PASC IAmb IAmb 11 19 13.1
comp=Z,108nm,1.9s
LRMC Laurel Mtn Rad 50.53 308 P P 11 19 12.1 +1.1
baz=109,SNR=14
MPMC Manual Prospec 50.57 309 P P 11 19 12.3 +0.9
baz=109,SNR=15
EDW2 Edwards Air Fo 50.59 307 P P 11 19 12.0 +0.7
baz=108,SNR=13
ELK Elko 50.67 316 P P 11 19 13.3 +1.2
ELK Elko 50.67 316 P P 11 19 13.3 +1.2
ELK pmax pmax
comp=Z,21nm,0.7s
GRAC Grapevine Rang 50.79 310 P P 11 19 14.5 +1.7
baz=110,SNR=7.1
EGMT Eagleton 50.89 326 P P 11 19 14.5 +1.0
EGMT IAmb IAmb 11 19 18.0
comp=Z,65nm,0.9s
EGMT Eagleton 50.89 326 P P 11 19 14.1 +0.6
baz=125,SNR=25
MCMT McKenzie Canyo 50.98 321 P P 11 19 16.1 +1.8
DLMT Dillon 51.09 322 P P 11 19 16.4 +1.4
DLMT IAmb IAmb 11 19 20.4
comp=Z,78nm,1.1s
CWC Cottonwood Cre 51.14 309 P P 11 19 16.2 +0.6
baz=109
ISA Isabella, Lake 51.20 308 P P 11 19 17.1 +1.1
ISA Isabella, Lake 51.20 308 P P 11 19 17.1 +1.1
ISA pmax pmax
comp=Z,16nm,1.0s
ISA Isabella, Lake 51.20 308 P P 11 19 17.0 +1.1
baz=108,SNR=10
BLG Laguna Peak, P 51.21 306 P P 11 19 16.7 +0.7
baz=106
ARVC Arvin 51.31 307 P P 11 19 17.7 +1.0
baz=107,SNR=9.6
SCZ2 Santa Cruz Isl 51.63 306 P P 11 19 20.1 +0.9
baz=106,SNR=7.3
FFC Flin Flon 51.70 337 P P 11 19 19.0 -0.2
FFC Flin Flon 51.70 337 P P 11 19 19.0 -0.2
FFC pmax pmax
comp=Z,93nm,0.8s
VES Vestal, Richgr 51.73 308 P P 11 19 21.1 +1.3
baz=108,SNR=33
NV11 Mina Array Sit 51.87 312 P P 11 19 22.4 +1.3
NVAR Mina Array Bea 51.98 312 P P 11 19 23.2 +1.3
comp=Z,25nm,0.7s,baz=119,slow=7.0,SNR=193
NVAR PcP PcP 11 20 34.9 +0.6
comp=Z,3.7nm,0.7s,baz=126,slow=3.8,SNR=2.1
NVAR LR LR 11 45 11.5
comp=Z,665nm,20.1s,baz=124,slow=40
PKM Mcpherson Peak 52.02 307 P P 11 19 22.9 +0.7
baz=106
KVN Kaiserville 52.05 312 P P 11 19 23.7 +1.3
KVN IAmb IAmb 11 19 24.8
comp=Z,76nm,1.0s
KVN Kaiserville 52.05 312 P P 11 19 23.7 +1.3
KVN pmax pmax
comp=Z,76nm,1.0s
RYN Ryan 52.21 312 P P 11 19 24.9 +1.3
MFID Camas Ranch 52.21 318 P P 11 19 24.6 +1.1
MFID IAmb IAmb 11 19 25.7
comp=Z,53nm,0.8s
OMMB Old Mammoth Mi 52.22 310 P P 11 19 25.7 +1.8
SMMC Simmler 52.28 307 P P 11 19 25.2 +1.2
baz=107,SNR=10
MDPB Devils Postpil 52.29 310 P P 11 19 25.6 +1.3
MDPB IAmb IAmb 11 19 27.0
comp=Z,51nm,1.1s
FCC Fort Churchill 52.36 344 P P 11 19 23.2 -0.9
FCC IAmb IAmb 11 19 24.2
comp=Z,61nm,1.1s
FCC Fort Churchill 52.36 344 P P 11 19 23.2 -0.9
FCC pmax pmax
comp=Z,61nm,1.1s
PAGB Antelope Grade 52.60 308 P P 11 19 27.7 +1.4
PAGB IAmb IAmb 11 19 28.5
comp=Z,52nm,1.1s
MSO Missoula 52.64 323 P P 11 19 27.8 +1.2
MSO IAmb IAmb 11 19 32.3
comp=Z,98nm,1.9s
MSO Missoula 52.64 323 P P 11 19 27.3 +0.7
baz=120,SNR=7.9
WAKR Walker 52.84 311 P P 11 19 30.1 +1.8
WAKR IAmb IAmb 11 19 31.1
comp=Z,151nm,1.8s
YERR Yerington 52.86 312 P P 11 19 29.9 +1.6
PNTR Pine Nut 53.16 312 P P 11 19 32.4 +1.8
VCNR Virginia City 53.26 312 P P 11 19 33.2 +1.8
JTMT Jette 53.30 324 P P 11 19 31.9 +0.4
CMB Columbia Colle 53.40 310 P P 11 19 33.2 +1.1
CMB Columbia Colle 53.40 310 P P 11 19 33.3 +1.1
CMB pmax pmax
comp=Z,13nm,1.0s
PMOZ Porto Moniz, M 53.50 56 eP P 11 19 35.2 +2.1
WALA Waterton Lakes 53.77 325 P P 11 19 34.6 -0.2
BMO Blue Mountains 53.80 319 P P 11 19 35.7 +0.6
BMO Blue Mountains 53.80 319 P P 11 19 35.7 +0.6
BMO pmax pmax
comp=Z,23nm,1.0s
J08A Circle Bar Ran 53.94 317 P P 11 19 36.9 +0.7
J08A IAmb IAmb 11 19 39.5
comp=Z,51nm,1.3s
BEKR Beckworth 53.97 313 P P 11 19 37.3 +0.8
AFDM Forest Hills D 54.12 311 P P 11 19 38.4 +0.9
F10A Beach Ranch, E 54.24 321 P P 11 19 38.8 +0.5
MOD Modoc Plateau 54.64 315 P P 11 19 41.9 +0.5
ORV Oroville 54.70 312 P P 11 19 43.2 +1.5
ORV Oroville 54.70 312 P P 11 19 43.2 +1.5
ORV pmax pmax
comp=Z,24nm,0.9s
I07A Izee 54.91 318 P P 11 19 44.6 +1.4
I07A IAmb IAmb 11 19 45.5
comp=Z,36nm,0.8s
G08A Pilot Rock 55.04 319 P P 11 19 45.0 +0.9
G08A IAmb IAmb 11 19 46.4
comp=Z,88nm,1.5s
E09A Wood Farm, Sta 55.05 321 P P 11 19 44.6 +0.6
E09A IAmb IAmb 11 19 45.8
comp=Z,57nm,1.1s
O03E Paynes Creek 55.16 313 P P 11 19 45.3 +0.3
baz=109,SNR=37
NEW Newport 55.22 323 P P 11 19 45.2 -0.1
NEW IAmb IAmb 11 19 46.5
comp=Z,32nm,1.1s
NEW Newport 55.22 323 P P 11 19 45.2 -0.1
NEW pmax pmax
comp=Z,32nm,1.1s
NEW Newport 55.22 323 P P 11 19 45.3 -0.1
baz=118,SNR=14
E08A Dider Farm, El 55.61 321 P P 11 19 48.8 +0.8
M04C Macdoel 55.67 314 P P 11 19 49.6 +0.8
baz=110,SNR=16
C09A Chrisman Ranch 55.70 322 P P 11 19 49.3 +0.6
C09A IAmb IAmb 11 19 51.3
comp=Z,47nm,0.7s
PINE Pine Mountain 55.76 317 P P 11 19 51.0 +1.6
J05D Fort Rock, OR 55.77 316 P P 11 19 50.8 +1.3
baz=111,SNR=32
WDC Whiskeytown Da 55.78 313 P P 11 19 48.2 -1.2
WDC Whiskeytown Da 55.78 313 P P 11 19 48.2 -1.2
WDC pmax pmax
comp=Z,12nm,0.8s
O02D Mt. Diablo Mer 55.84 312 P P 11 19 49.8 -0.1
baz=108,SNR=7.1
HAWA Hanford 55.86 320 P P 11 19 50.6 +0.7
K04D Chiloquin, OR 55.90 315 P P 11 19 51.2 +0.8
baz=110,SNR=18
F07A Phinny Hill Vi 55.91 320 P P 11 19 51.4 +1.2
F07A IAmb IAmb 11 19 52.2
comp=Z,32nm,0.8s
N02D Trinity Center 56.02 313 P P 11 19 50.5 -0.8
baz=108
G06A Carlson Farm, 56.10 319 P P 11 19 53.6 +1.9
E07A Sunnyside 56.13 320 P P 11 19 52.6 +0.7
E07A IAmb IAmb 11 19 53.9
comp=Z,29nm,0.8s
L04D Klamath Falls 56.14 315 P P 11 19 52.6 +0.5
baz=110,SNR=18
I05D Terrebonne, OR 56.23 317 P P 11 19 53.2 +0.6
baz=112
M02C Callahan 56.26 314 P P 11 19 52.5 -0.4
baz=108,SNR=7.2
YBH Yreka Blue Hor 56.27 314 P P 11 19 52.5 -0.5
YBH Yreka Blue Hor 56.27 314 P P 11 19 52.5 -0.5
YBH pmax pmax
comp=Z,26nm,0.9s
KCPM Cahto Peak 56.27 311 P P 11 19 54.9 +1.8
J04D Umpqua Nationa 56.36 316 P P 11 19 54.4 +0.6
baz=110,SNR=11
KMRM Mail Ridge 56.52 312 P P 11 19 56.6 +1.8
G05D Wamic, OR 56.55 318 P P 11 19 55.8 +0.9
baz=112
B08A Colville Reser 56.58 323 P P 11 19 54.6 -0.4
B08A IAmb IAmb 11 19 56.3
comp=Z,38nm,1.0s
HUMO Hull Mountain 56.73 315 P P 11 19 56.1 0.0
HUMO IAmb IAmb 11 19 59.9
comp=Z,78nm,1.8s
KHMM Horse Mountain 56.73 313 P P 11 19 57.8 +1.4
KHMM IAmb IAmb 11 19 58.8
comp=Z,59nm,0.9s
I04A Tendick Farm, 56.75 316 P P 11 19 56.5 +0.2
baz=110
F05D White Salmon 56.89 319 P P 11 19 58.1 +0.8
baz=112,SNR=7.9
LTY Liberty 56.93 321 P P 11 19 58.3 +0.7
LTY IAmb IAmb 11 19 59.7
comp=Z,50nm,1.0s
JCC Jacoby Creek, 56.93 313 P P 11 19 59.7 +2.1
L02E Cave Junction 57.04 314 P P 11 19 58.5 +0.1
baz=108
KRMB Red Mountain 57.06 314 P P 11 19 59.9 +1.3
H04D Lebanon 57.23 317 P P 11 19 59.7 0.0
baz=111
K02D Willamette Mer 57.25 315 P P 11 20 00.0 +0.1
baz=109
I03D Drain, OR 57.36 316 P P 11 20 00.6 0.0
baz=110
LON Longmire 57.45 320 P P 11 20 02.5 +1.3
LON IAmb IAmb 11 20 10.2
comp=Z,28nm,0.9s
LON Longmire 57.45 320 P P 11 20 02.5 +1.3
LON pmax pmax
comp=Z,28nm,0.9s
KBO Bosley Butte 57.49 314 P P 11 20 03.8 +2.1
J01E Myrtle Point 57.59 315 P P 11 20 02.5 +0.3
baz=109
COR Corvallis 57.63 317 P P 11 20 04.6 +2.1
COR Corvallis 57.63 317 P P 11 20 04.6 +2.1
COR pmax pmax
comp=Z,575nm,1.9s
D05A Enumclaw 57.73 320 P P 11 20 04.8 +1.7
KEBM Edson Butte 57.77 315 P P 11 20 06.0 +2.4
G03D McMinnville, O 57.82 318 P P 11 20 04.3 +0.5
baz=110
I02D Swisshome 57.84 316 P P 11 20 05.2 +1.3
baz=109
E04D Cinebar 57.85 320 P P 11 20 04.1 0.0
baz=112
B05A Bryant 58.22 322 P P 11 20 06.5 0.0
baz=113
F03A Seaside 58.27 319 P P 11 20 08.9 +2.0
D03D Eldon 58.55 320 P P 11 20 08.9 0.0
baz=112
NLWA Neilton Lookou 58.99 320 P P 11 20 13.7 +1.7
LLLB Lillooet 59.05 324 P P 11 20 12.4 +0.1
LLLB IAmb IAmb 11 20 13.6
comp=Z,32nm,1.0s
ILULI Ilulissat 60.70 8 P P 11 20 22.6 -0.6
ILULI IAmb IAmb 11 20 26.9
comp=Z,55nm,1.2s
ILULI Ilulissat 60.70 8 P P 11 20 22.7 -0.6
ILULI pmax pmax
comp=Z,55nm,1.2s
GO09 Cerro Castillo 60.73 182 P P 11 20 24.0 +0.2
MORF Marmelete 61.27 53 eP P 11 20 27.1 -0.8
MORF AMb AMB 11 20 31.5
comp=Z,96nm,1.5s
MORF Marmelete 61.27 53 eP P 11 20 27.1 -0.8
PNCL Nicolau / Gran 61.51 52 eP P 11 20 30.7 +1.3
comp=Z,102nm,2.3s
PCVE Castro Verde 61.81 52 eP P 11 20 33.5 +2.1
comp=Z,66nm,1.9s
YKA Yellowknife Ar 61.81 338 P P 11 20 30.5 -0.4
comp=Z,62nm,0.8s,baz=122,slow=7.0,SNR=700
YKA LR LR 11 48 22.7
comp=Z,575nm,18.8s,baz=0.0,slow=37
YKA PKPPKP P'P'df 11 49 42.2 -1.2
comp=Z,0.6nm,1.0s,baz=325,slow=2.5,SNR=4.9
PCAS Casmilo, Conde 61.90 50 eP P 11 20 32.8 +0.8
comp=Z,93nm,2.2s
PMTG Montargil 61.92 51 eP P 11 20 35.6 +3.5
comp=Z,57nm,1.8s
EFI East Falkland 61.93 172 P P 11 20 31.5 -0.3
EFI East Falkland 61.93 172c iP P 11 20 31.6 -0.2
EFI pmax pmax
comp=Z,93nm,0.9s
EVO Evora 61.98 51 eP P 11 20 33.9 +1.3
comp=Z,37nm,3.2s
PBEJ Beja 62.01 52 eP P 11 20 36.9 +4.1
comp=Z,38nm,1.6s
PVAQ Vaqueiros 62.02 53 eP P 11 20 37.3 +4.5
comp=Z,87nm,2.4s
PVIS Viseu 62.49 49 eP P 11 20 36.4 +0.4
comp=Z,43nm,1.6s
PMRV Marv??o 62.62 51 eP P 11 20 40.0 +3.1
comp=Z,54nm,1.6s
MTE Manteigas 62.69 49 eP P 11 20 41.9 +4.6
MVO Moncorvo 63.22 49 eP P 11 20 41.8 +1.0
TIC Toumodi 64.07 87 eP P 11 20 45.4 -1.5
LIC Lamto 64.12 88 eP P 11 20 45.9 -1.3
comp=Z,84nm,1.2s
DBIC Dimbokro 64.23 87 P P 11 20 47.2 -0.7
comp=Z,18nm,0.8s,baz=261,slow=7.5,SNR=13
DBIC LR LR 11 46 59.5
comp=Z,292nm,20.4s,baz=244,slow=34
DBIC PKP2bc 11 49 40.9
comp=Z,4.0nm,1.1s,baz=127,slow=4.9,SNR=3.5
DBIC Dimbokro 64.23 87 P P 11 20 47.4 -0.5
DBIC IAmb IAmb 11 20 51.1
comp=Z,22nm,0.9s

DBIC Dimbokro 64.23 87 P P 11 20 47.4 -0.5
DBIC pmax pmax
comp=Z,22nm,1.0s
KIC Kosan Boka 64.39 88 eP P 11 20 48.3 -0.6
comp=Z,82nm,1.0s
PAB San Pablo 64.97 51 P P 11 20 52.9 +0.5
PAB IAmb IAmb 11 22 00.5
comp=Z,62nm,1.8s
PAB San Pablo 64.97 51 P P 11 20 52.9 +0.5
PAB pmax pmax
comp=Z,62nm,1.8s
KULLO Kullorsuaq 65.27 4 i P P 11 20 53.1 -0.5
comp=Z,22nm,0.8s
KULLO Kullorsuaq 65.27 4 i P P 11 20 53.1 -0.5
KULLO pmax pmax
comp=Z,22nm,0.8s
ESDC Sonseca Array 65.28 51 P P 11 20 53.9 -0.5
comp=Z,4.0nm,0.6s,baz=260,slow=7.0,SNR=12
ESDC LR LR 11 44 37.7
comp=Z,434nm,20.4s,baz=260,slow=32
ESDC PKPPKP P'P'df 11 49 34.1 -4.8
comp=Z,0.1nm,0.3s,baz=84,slow=25,SNR=2.6
ESDC PKP2bc 11 49 38.6
comp=Z,1.3nm,0.7s,baz=55,slow=6.2
ESDC PKP2ab 11 49 45.2
comp=Z,0.1nm,0.3s,baz=54,slow=3.6,SNR=4.4
ESBB Sonseca Array 65.28 51 P P 11 20 55.2 +0.8
ESBB IAmb IAmb 11 21 18.5
comp=Z,39nm,1.6s
SUMG Summit 65.61 10 i P P 11 20 56.5 +0.2
comp=Z,100nm,0.9s
SUMG Summit 65.61 10 P P 11 20 56.0 -0.2
SUMG IAmb IAmb 11 20 57.6
comp=Z,52nm,1.0s
SUMG Summit 65.61 10 i P P 11 20 56.5 +0.2
SUMG pmax pmax
comp=Z,100nm,0.9s
DLBC Dease Lake 66.47 330 P P 11 21 03.1 +1.3
DLBC IAmb IAmb 11 21 04.0
comp=Z,42nm,0.9s
RES Resolute Bay 66.54 353 P P 11 21 01.1 -0.6
RES Resolute Bay 66.54 353 P P 11 21 01.1 -0.6
RES pmax pmax
comp=Z,18nm,1.1s
TULEG Thule 66.84 0 P P 11 21 03.7 0.0
TULEG IAmb IAmb 11 21 04.7
comp=Z,54nm,1.1s
SCO Scoresbysund 67.68 16 i P P 11 21 10.4 +1.4
SCO Scoresbysund 67.68 16 i P P 11 21 10.4 +1.4
YLL Llanberis 67.74 36 eP P 11 21 09.1 -0.6
GAL1 Galloway 67.87 34 eP P 11 21 10.5 0.0
GAL1 IAmb IAmb 11 21 12.0
comp=Z,44nm,0.9s
LLW Llanwychllyn 67.97 37 eP P 11 21 11.2 0.0
LLW IAmb IAmb 11 21 12.0
comp=Z,11nm,1.0s
MCH1 Michaelchurch 68.17 38 eP P 11 21 12.5 -0.1
HLM1 Long Mynd 68.36 37 eP P 11 21 13.7 0.0
HLM1 IAmb IAmb 11 21 15.6
comp=Z,31nm,1.1s
JIS Juneau Island 68.59 329 P P 11 21 16.1 +1.1
ESK Eskdalemuir 68.82 34 eP P 11 21 16.5 0.0
ESK IAmb IAmb 11 21 19.1
comp=Z,126nm,1.8s
ESK Eskdalemuir 68.82 34 P P 11 21 17.3 +0.8
ESK Eskdalemuir 68.82 34 P P 11 21 17.3 +0.8
ESK pmax pmax
comp=Z,93nm,1.7s
EKA Eskdalemuir Ar 68.85 34 P P 11 21 15.9 -0.8
EKA pmax pmax
comp=Z,3.0nm,0.9s
EBL Broad Law 69.02 34 eP P 11 21 17.2 -0.5
LBWR Ladybower, Pea 69.23 36 eP P 11 21 18.9 -0.2
LBWR IAmb IAmb 11 21 20.4
comp=Z,60nm,0.9s
ESY Stoneypath 69.29 34 eP P 11 21 19.0 -0.4
SKAG Skagway 69.41 330 P P 11 21 22.4 +2.3
SKAG IAmb IAmb 11 21 25.2
comp=Z,46nm,1.3s
WHY Whitehorse 69.54 332 P P 11 21 22.2 +1.2
WHY IAmb IAmb 11 21 22.9
comp=Z,32nm,0.9s
TOA0 Torodi Ar. Sit 69.92 80 P P 11 21 24.1 +0.1
TORD Torodi Ar. Bea 69.92 80 P P 11 21 23.5 -0.6
comp=Z,21nm,0.7s,baz=282,slow=5.4,SNR=108
TORD PKPPKP P'P'df 11 49 26.5 -4.7
comp=Z,3.8nm,1.2s,baz=123,slow=3.0,SNR=7.2
TORD LR LR 11 50 22.5
comp=Z,474nm,21.7s,baz=295,slow=34
GDLE Glaisdale, N Y 69.97 35 eP P 11 21 24.0 +0.4
GDLE IAmb IAmb 11 21 25.2
comp=Z,52nm,0.9s
HYT Haines Junctio 70.82 331 P P 11 21 31.2 +2.3
HYT IAmb IAmb 11 21 31.9
comp=Z,44nm,1.0s
CLF Chambon-Foret 70.84 43 P P 11 21 31.1 +2.0
CLF IAmb IAmb 11 22 06.4
comp=Z,62nm,1.2s
INK Inuvik 71.52 339 P P 11 21 32.9 +0.1
INK IAmb IAmb 11 21 33.7
comp=Z,40nm,0.8s
INK Inuvik 71.52 339 P P 11 21 32.9 +0.1
INK pmax pmax
comp=Z,40nm,0.8s
PCA Pinnacle 71.98 330 P P 11 21 38.4 +2.6
EPYK Eagle Plains 72.04 337 P P 11 21 37.0 +0.9
EPYK Eagle Plains 72.04 337 P P 11 21 36.8 +0.7
baz=107,SNR=50
DAG Danmarks Havn 72.24 11 i P P 11 21 36.2 -0.8
comp=Z,17nm,0.8s
DAG Danmarks Havn 72.24 11 i P P 11 21 36.2 -0.8
DAG pmax pmax
comp=Z,17nm,0.8s
DAWY Dawson 72.49 334 P P 11 21 39.1 +0.3
DOU Dourbes 72.60 41 P P 11 21 39.8 +0.2
DOU PcP PcP 11 22 04.9 +7.8
CTGM Chitina Glacie 72.68 331 P P 11 21 41.8 +1.7
CTGM IAmb IAmb 11 21 43.2
comp=Z,52nm,1.0s
BMRD Maredsous 72.73 40 P P 11 21 40.8 +0.4
comp=Z,16nm,0.9s
BMRD PcP PcP 11 22 01.4 +3.7
TAM Tamanrasset 72.81 69 P P 11 21 43.3 +1.7
TAM Tamanrasset 72.81 69 P P 11 21 43.3 +1.7
TAM pmax pmax
comp=Z,16nm,1.1s
BARN Barnard Glacie 72.85 331 P P 11 21 43.0 +1.8
BARN IAmb IAmb 11 21 48.2
comp=Z,75nm,1.4s
BCLA Clavier 73.08 40 ⇑P P 11 21 42.6 +0.1
BCLA pP pP 11 21 46.5 -2.8
BCLA PcP PcP 11 22 08.0 +8.8
BALM Baldy 73.18 331 P P 11 21 44.7 +1.7
BSTI Sart Tilman 73.27 40 PcP PcP 11 22 12.8 +13
EGAK Eagle 73.41 335 P P 11 21 44.7 +0.6
EGAK IAmb IAmb 11 21 46.0
comp=Z,63nm,0.9s
CRQM Cirque 73.51 331 P P 11 21 46.4 +1.4
CRQM IAmb IAmb 11 21 47.6
comp=Z,51nm,1.0s
BHOU Houvegnez 73.53 40 ⇑P P 11 21 45.9 +0.8
comp=Z,24nm,0.8s
MEM Membach 73.55 40 P P 11 21 45.4 +0.2
WLF Walferdange 73.57 41 eP P 11 21 46.4 +1.0
comp=Z,32nm,1.0s,baz=268,slow=5.8
WLF Walferdange 73.57 41 P P 11 21 45.9 +0.6
comp=Z,25nm,1.1s
WLF PcP PcP 11 22 05.3 +4.1
WLF Walferdange 73.57 41 P P 11 21 46.0 +0.6
WLF IAmb IAmb 11 21 46.9
comp=Z,30nm,0.9s
WLF Walferdange 73.57 41 P P 11 21 46.0 +0.6
WLF pmax pmax
comp=Z,30nm,0.9s
BNI Bardonecchia 73.64 46 P P 11 21 47.4 +1.3
BNI IAmb IAmb 11 22 02.8
comp=Z,99nm,1.9s
BNI Bardonecchia 73.64 46 P P 11 21 47.4 +1.3
BNI pmax pmax
comp=Z,99nm,1.9s
VRDI Verde Repeater 73.74 331 P P 11 21 47.6 +1.3
VRDI IAmb IAmb 11 21 51.3
comp=Z,44nm,1.0s
GLB Gilahina Butte 73.94 331 P P 11 21 48.7 +1.3
GLB IAmb IAmb 11 21 50.2
comp=Z,43nm,1.0s
ECH Echery 74.13 43 P P 11 21 48.8 0.0
ECH Echery 74.13 43 P P 11 21 48.8 0.0
ECH pmax pmax
comp=Z,18nm,0.9s
SENIN Lac Senin/Sane 74.13 45 P P 11 21 49.7 +0.7
MENT Mentasta 74.16 333 P P 11 21 49.5 +0.9
MENT IAmb IAmb 11 21 53.7
comp=Z,103nm,1.6s
RAGM Ragged Mountai 74.20 330 P P 11 21 50.6 +1.7
PMSA Palmer Station 74.36 177 LR LR 11 56 59.8
comp=Z,421nm,19.0s,baz=340,slow=38
PMSA Palmer Station 74.36 177 eP P 11 21 49.4 -0.1
PMSA Palmer Station 74.36 177 P P 11 21 49.5 0.0
PMSA IAmb IAmb 11 21 50.4
comp=Z,53nm,0.8s
BUG Bochum--Univer 74.41 39 eP P 11 21 51.1 +0.9
comp=Z,31nm,1.1s,baz=268,slow=5.8
DOT Dot Lake 74.43 334 P P 11 21 51.2 +1.0
DOT IAmb IAmb 11 21 55.1
comp=Z,47nm,1.1s
SCRK Sand Creek 74.45 334 P P 11 21 51.3 +0.9
SCRK IAmb IAmb 11 21 52.4
comp=Z,48nm,0.8s
BLS5 Blasjo 74.71 31 eP P 11 21 52.9 +1.0
EYAK Cordova Ski Ar 74.75 330 P P 11 21 53.2 +1.2
IBBN Ibbenburen 74.77 38 eP P 11 21 53.2 +0.9
comp=Z,29nm,0.8s,baz=268,slow=5.8
RIDG Independent Ri 74.79 334 P P 11 21 53.1 +0.8
RIDG IAmb IAmb 11 21 54.3
comp=Z,46nm,0.8s
BFO Black Forest 74.92 43 eP P 11 21 53.4 +0.1
comp=Z,12nm,1.3s,baz=268,slow=5.8
BFO Black Forest 74.92 43 P P 11 21 53.4 +0.1
BFO Black Forest 74.92 43 P P 11 21 53.4 +0.1
BFO pmax pmax
comp=Z,10.0nm,1.1s
PAX Paxson 74.95 333 P P 11 21 53.9 +0.6
PAX IAmb IAmb 11 21 55.2
comp=Z,37nm,1.2s
PAX Paxson 74.95 333 P P 11 21 53.9 +0.6
PAX pmax pmax
comp=Z,37nm,1.2s
TNS Taunus Mts 75.08 41 eP P 11 21 55.0 +0.8
comp=Z,29nm,0.9s,baz=268,slow=5.8
FID Port Fidalgo 75.13 330 P P 11 21 56.0 +1.8
FID IAmb IAmb 11 21 56.7
comp=Z,47nm,0.9s
AKN Aaknes 75.32 28 eP P 11 21 56.2 +0.9
PRP Porcupine Dome 75.36 335 P P 11 21 55.9 +0.2
PRP IAmb IAmb 11 21 56.9
comp=Z,42nm,0.8s
NOR Nord 75.39 7 i P P 11 21 54.9 -0.5
comp=Z,24nm,0.8s
NOR Nord 75.39 7 i P P 11 21 54.9 -0.5
NOR pmax pmax
comp=Z,24nm,0.8s
FYU Fort Yukon 75.41 336 P P 11 21 56.1 +0.4
FYU IAmb IAmb 11 21 57.4
comp=Z,43nm,1.0s
STU Stuttgart 75.51 42 eP P 11 21 57.1 +0.4
comp=Z,23nm,0.8s,baz=268,slow=5.8
STU Stuttgart 75.51 42 P P 11 21 57.5 +0.8
KEST Kesra 75.60 56 P P 11 21 57.6 +0.1
comp=Z,14nm,0.9s,baz=226,slow=3.0,SNR=13
KEST Kesra 75.60 56 P P 11 21 58.6 +1.1
HOMB Homborsund 75.66 32 eP P 11 21 58.4 +1.1
SCM Sheep Creek Mo 75.66 331 P P 11 21 58.7 +1.3
SCM Sheep Creek Mo 75.66 331 P P 11 21 58.7 +1.3
SCM pmax pmax
comp=Z,108nm,0.9s
RETH Rethem/Aller, 75.77 38 eP P 11 21 59.3 +1.2
comp=Z,22nm,0.9s,baz=268,slow=5.8
SKAR Skarslia 75.77 30 eP P 11 21 58.9 +0.8
HDA Harding Lake 75.80 334 P P 11 21 58.0 -0.1
HDA Harding Lake 75.80 334 P P 11 21 57.9 -0.1
baz=97,SNR=18
IL31 75.82 334 P P 11 21 58.0 -0.1
ILAR Eielson Array 75.82 334 P P 11 21 58.0 -0.1
comp=Z,14nm,0.8s,baz=106,slow=4.5,SNR=126
ILAR LR LR 11 57 14.8
comp=Z,524nm,19.7s,baz=104,slow=37
DHY Denali Highway 75.83 333 P P 11 21 58.8 +0.4
MUD Monsted U'grnd 75.88 34 i P P 11 21 58.8 +0.2
comp=Z,41nm,0.9s
MUD Monsted U'grnd 75.88 34 i P P 11 21 58.8 +0.2
MUD pmax pmax
comp=Z,41nm,0.9s
DAVA Damuels 75.93 44 eP P 11 22 00.1 +0.7
comp=Z,17nm,0.7s,SNR=8.2
GOET G??ttrup 75.95 34 i P P 11 21 57.5 -1.4
comp=Z,197nm,1.1s
POKR Poker Plat Res 76.10 335 P P 11 22 00.0 +0.3
baz=97,SNR=15
KNK Knik Glacier 76.16 331 P P 11 22 01.4 +1.3
KNK IAmb IAmb 11 22 02.6
comp=Z,69nm,1.1s
CCB Clear Creek Bu 76.20 334 P P 11 21 60.0 -0.3
NRDL Niedersach Rie 76.22 38 eP P 11 22 01.8 +1.3
comp=Z,16nm,1.0s,baz=268,slow=5.8
COLA College 76.24 335 P P 11 21 60.0 -0.5
COLA College 76.24 335 P P 11 22 00.0 -0.5
COLA pmax pmax
comp=Z,20nm,0.9s
TCOL CIGO, UAF Yank 76.25 335 P P 11 22 00.3 -0.2
baz=97,SNR=6.7
DOMB Dombas 76.27 28 eP P 11 22 02.0 +1.2
WRH Wood River Hil 76.30 334 P P 11 22 01.0 +0.1
KONO Kongsberg 76.33 31⇑eP P 11 22 01.1 0.0
KONO pmax pmax
comp=Z,16nm,1.2s
CLZ Clausthal 76.36 39 eP P 11 22 02.4 +0.9
comp=Z,17nm,0.9s,baz=268,slow=5.8
BSEG Bad Segeberg 76.40 37 eP P 11 22 02.6 +1.0
comp=Z,16nm,0.8s,baz=268,slow=5.8
GHO Glory Hole Cre 76.41 331 P P 11 22 02.8 +1.2
MDM Murphy Dome 76.41 335 P P 11 22 02.2 +0.7
MDM IAmb IAmb 11 22 03.0
comp=Z,36nm,0.9s
PMR Palmer 76.49 331 P P 11 22 02.8 +0.8
PMR IAmb IAmb 11 22 06.4
comp=Z,37nm,0.8s
PMR Palmer 76.49 331 P P 11 22 02.8 +0.8
PMR pmax pmax
comp=Z,37nm,0.8s
FETA Feichten 76.51 44 eP P 11 22 03.2 +0.6
comp=Z,37nm,0.9s,SNR=13
RND Reindeer 76.53 333 P P 11 22 03.4 +1.1
RND Reindeer 76.53 333 P P 11 22 03.4 +1.1
RND pmax pmax
comp=Z,242nm,1.5s
RETA Reutte 76.53 43 eP P 11 22 03.2 +0.6
comp=Z,14nm,0.9s
SEW Seward 76.54 330 P P 11 22 02.4 +0.2
SEW IAmb IAmb 11 22 03.5
comp=Z,42nm,1.0s
ASSE Asse, Remlinge 76.55 39 eP P 11 22 03.6 +1.2
comp=Z,21nm,1.1s,baz=268,slow=5.8
MCK McKinley 76.59 333 P P 11 22 03.1 +0.5
MCK McKinley 76.59 333 P P 11 22 03.1 +0.5
MCK pmax pmax
comp=Z,154nm,1.8s
NEA Nenana 76.73 334 P P 11 22 04.0 +0.7
NEA IAmb IAmb 11 22 04.7
comp=Z,50nm,0.8s
RC01 Rabbit Creek A 76.75 331 P P 11 22 06.0 +2.6
MOTA Moosalm 76.77 44 i P P 11 22 04.3 +0.2
comp=Z,18nm,0.8s
SQTA Sankt Quirin 76.84 44 eP P 11 22 04.8 +0.4
comp=Z,25nm,0.8s,SNR=8.1
GRF Grafenberg Arr 76.86 41 eL L 11 49 51.2
comp=Z,256nm,21.8s
BWN Browne 76.87 334 P P 11 22 04.7 +0.6
BWN IAmb IAmb 11 22 05.4
comp=Z,52nm,0.8s
TBLU Trondheim 76.92 27 eP P 11 22 05.9 +1.5
NBO00 NORSAR Array S 77.01 30 P P 11 22 06.4 +1.4
NC204 NORSAR Array S 77.02 29 P P 11 22 06.3 +1.2
NAO01 NORSAR Array S 77.05 30 P P 11 22 06.6 +1.4
WATA Walderalm 77.09 44 eP P 11 22 06.0 +0.1
comp=Z,11nm,0.8s
MOX Moxa 77.12 40 eP P 11 22 06.4 +0.6
comp=Z,7.3nm,1.1s,baz=268,slow=5.8
MOX eL L 11 51 01.8
comp=Z,445nm,21.1s
WTTA Wattenberg 77.13 44 eP P 11 22 06.4 +0.3
comp=Z,20nm,0.8s,SNR=7.1
CTI Castel Tesino 77.15 45 P P 11 22 06.2 0.0
CTI IAmb IAmb 11 22 07.2
comp=Z,24nm,0.8s
CTI Castel Tesino 77.15 45 P P 11 22 06.2 0.0
CTI pmax pmax
comp=Z,24nm,0.8s
TRF Thorofare Moun 77.17 333 P P 11 22 06.9 +0.8
NB2 NORSAR Subarra 77.22 30 P P 11 22 06.9 +0.7
comp=Z,66nm,1.4s,baz=268,slow=5.9
NB2 NORSAR Subarra 77.22 30 P P 11 22 06.9 +0.7
baz=268,slow=5.9
NOA NORSAR Array B 77.22 30 P P 11 22 06.8 +0.6
comp=Z,18nm,0.8s,baz=269,slow=5.7,SNR=60
NOA LR LR 11 52 19.2
comp=Z,181nm,20.7s,baz=265,slow=33
BRLK Bradley Lake 77.24 329 P P 11 22 07.2 +0.9
BRLK IAmb IAmb 11 22 16.6
comp=Z,51nm,0.9s
SUA Susitna One 77.26 331 P P 11 22 07.7 +1.3
NB201 NORSAR Array S 77.26 30 P P 11 22 08.0 +1.6
NC303 NORSAR Array S 77.31 29 P P 11 22 07.9 +1.3
NC303 IAmb IAmb 11 22 08.3
comp=Z,75nm,1.2s
TOLK Toolik Lake Re 77.34 338 P P 11 22 06.8 +0.1
TOLK IAmb IAmb 11 22 07.8
comp=Z,21nm,0.8s
TOLK Toolik Lake Re 77.34 338 P P 11 22 06.9 +0.1
baz=96,SNR=22
NC602 NORSAR Array S 77.37 30 eP P 11 22 08.0 +1.0
NC602 NORSAR Array S 77.37 30 P P 11 22 08.2 +1.3
NC602 IAmb IAmb 11 22 09.6
comp=Z,53nm,0.9s
NORES NORESS Array B 77.37 30 P P 11 22 08.1 +1.2
NORES pmax pmax
comp=Z,34nm,0.8s
CNPM China Poot 77.40 329 P P 11 22 08.5 +1.3
CNPM IAmb IAmb 11 22 10.3
comp=Z,50nm,0.8s
MANZ Manzenberg 77.43 41 eP P 11 22 08.8 +1.2
comp=Z,27nm,0.9s,baz=268,slow=5.8
COLD Coldfoot 77.44 337 P P 11 22 08.2 +0.9
KTH Kantishna Hill 77.46 333 P P 11 22 08.3 +0.8
PLN Plauen 77.46 40 eP P 11 22 08.6 +0.9
comp=Z,13nm,1.0s,baz=268,slow=5.8
NC405 NORSAR Array S 77.47 29 P P 11 22 08.7 +1.2
NC405 IAmb IAmb 11 22 09.8
comp=Z,53nm,0.9s
MLY Manley 77.48 335 P P 11 22 07.8 +0.2
MLY IAmb IAmb 11 22 09.3
comp=Z,115nm,1.8s
ROTZ Rotzenmuhle 77.50 41 eP P 11 22 08.9 +1.0
comp=Z,8.9nm,1.0s,baz=268,slow=5.8
BPAW Bear Paw Mtn. 77.53 334 P P 11 22 08.4 +0.5
WERN Wernitzgruen 77.60 41 eP P 11 22 09.5 +1.0
comp=Z,14nm,1.1s,baz=268,slow=5.8
NKC Novy Kostel 77.65 41 eP P 11 22 09.4 +0.6
NKC Novy Kostel 77.65 41 eP P 11 22 09.4 +0.6
SKT Skwentna 77.66 331 P P 11 22 09.8 +1.2
SKT IAmb IAmb 11 22 10.0
comp=Z,35nm,0.9s
TANN Tannenbergstha 77.66 40 eP P 11 22 09.8 +1.0
comp=Z,33nm,1.0s,baz=268,slow=5.8
ABTA Abfaltersbach 77.73 44 eP P 11 22 09.7 +0.3
comp=Z,20nm,0.8s,SNR=7.6
NSS Namsos 77.77 26 eP P 11 22 10.1 +1.0
STAL STALIGIAL 77.88 45 P P 11 22 11.2 +1.0
STAL IAmb IAmb 11 22 18.3
comp=Z,38nm,1.3s
RJOB Jochberg 77.91 43 eP P 11 22 11.2 +0.8
comp=Z,7.5nm,0.8s,baz=268,slow=5.8
WET Wettzell 77.94 42 eP P 11 22 11.2 +0.8
comp=Z,12nm,0.9s,baz=268,slow=5.8
WET Wettzell 77.94 42 P P 11 22 11.2 +0.8
CLL Collm 78.00 40 eP P 11 22 12.6 +2.0
comp=Z,17nm,0.9s,baz=268,slow=5.8
CLL Collm 78.00 40⇑iP P 11 22 12.0 +1.4
comp=Z,17nm,1.0s
CLL i pP pP 11 22 14.9 -2.7
comp=Z,76nm,1.9s
CLL epPcP 11 22 24.0
CLL eS S 11 32 06.0 +2.7
CLL ePS PnS 11 32 42.0 -3.0
CLL eSSS SSS 11 40 24.0
CLL LmV 11 54 00.0
comp=Z,400nm,19.9s
CLL Collm 78.00 40 P P 11 22 12.5 +1.8
CLL IAmb IAmb 11 22 15.9
comp=Z,91nm,1.9s
CLL Collm 78.00 40⇑iP P 11 22 12.0 +1.4
CLL i 11 22 14.9
CLL e 11 22 24.0
CLL pmax pmax
comp=Z,17nm,1.0s
CLL MLR MLR
comp=Z,400nm,19.9s
PPLA Purkeypile 78.00 332 P P 11 22 11.2 +0.6
RSO Redoubt South 78.20 330 P P 11 22 12.6 +0.8
FBE Freiberg 78.22 40 eP P 11 22 13.1 +1.2
comp=Z,18nm,0.9s,baz=268,slow=5.8
KBA Koelnbreinsper 78.30 44 eP P 11 22 12.9 +0.2
comp=Z,19nm,0.9s,SNR=7.6
KBA Koelnbreinsper 78.30 44 P P 11 22 12.8 +0.2
STOK Stokkvaagen 78.30 24 eP P 11 22 13.7 +1.7
KONS Konsvik 78.35 24 eP P 11 22 13.6 +1.3
KHC Kasperske Hory 78.40 42 eP P 11 22 13.2 +0.2
KHC epP pP 11 22 19.0 -0.9
KHC AMS AMS 11 51 10.0
comp=Z,600nm,21.0s
KHC Kasperske Hory 78.40 42 P P 11 22 13.3 +0.3
KHC Kasperske Hory 78.40 42ceP P 11 22 13.6 +0.6
KHC pmax pmax
comp=Z,37nm,0.9s
OHAK Old Harbor 78.43 327 P P 11 22 13.2 +0.3
GEC2 GERESS Array S 78.49 42 eP P 11 22 14.3 +0.7
comp=Z,20nm,0.9s,baz=268,slow=5.8
GEC2 GERESS Array S 78.49 42 P P 11 22 13.9 +0.3
GERES GERESS Array B 78.49 42 P P 11 22 13.8 +0.3
comp=Z,13nm,0.7s,baz=262,slow=4.0,SNR=84
GERES LR LR 11 51 26.9
comp=Z,260nm,21.5s,baz=267,slow=32
MYKA Terra Mystica 78.51 44 i P P 11 22 14.0 +0.3
comp=Z,9.7nm,0.7s
LOF Lofoten 78.58 22 eP P 11 22 14.3 +0.7
BRG Berggiesshubel 78.59 40 eP P 11 22 14.7 +0.7
comp=Z,16nm,0.9s
BRG Berggiesshubel 78.59 40 eP P 11 22 15.0 +1.0
comp=Z,18nm,0.9s,baz=268,slow=5.8
BRG Berggiesshubel 78.59 40 eP P 11 22 14.7 +0.7
BRG pmax pmax
comp=Z,16nm,0.9s
BRG MLR MLR
comp=N,272nm,20.3s
BRG MLR MLR
comp=E,479nm,19.9s
BRG MLR MLR
comp=Z,686nm,19.5s
CADS Cadrg 78.59 45 i P P 11 22 14.4 +0.3
PBCC Pribram 78.66 41 eP P 11 22 15.8 +1.4
JAVS Javornik 78.83 45 i P P 11 22 16.2 +0.6
MOR8 Moi Rana 78.87 24 eP P 11 22 16.8 +1.6
MOA Molln 78.90 43 eP P 11 22 16.0 +0.2
comp=Z,11nm,0.7s
KBS Kingsbay 78.97 11 eP P 11 22 16.8 +1.2
KBS Kingsbay 78.97 11⇑eP P 11 22 16.9 +1.4
PRU Pruhonice 79.00 41 eP P 11 22 17.3 +1.1
PRU Pruhonice 79.00 41 eP P 11 22 17.3 +1.1
PVCC Panska Ves 79.00 40 eP P 11 22 17.3 +1.1
PVCC Panska Ves 79.00 40 eP P 11 22 17.3 +1.1
OBKA Obir 79.14 44 eP P 11 22 17.3 +0.1
comp=Z,7.1nm,0.8s
LJU Ljubljana 79.15 45 i P P 11 22 17.9 +0.7
GOPC GO Pecny, Ondr 79.16 41 eP P 11 22 18.1 +0.9
GOPC GO Pecny, Ondr 79.16 41 eP P 11 22 18.1 +0.9
STEI Steigen 79.22 23 eP P 11 22 17.8 +0.8
SOKA Soboth 79.47 44 eP P 11 22 18.7 -0.3
comp=Z,5.9nm,0.8s
HSPB Hornsund (broa 79.57 13 eP P 11 22 20.2 +1.3
SVW2 Sparrevohn 79.58 330 P P 11 22 19.5 +0.3
SVW2 IAmb IAmb 11 22 20.4
comp=Z,35nm,0.8s
TTA Tatalina 79.75 332 P P 11 22 20.5 +0.3
TTA Tatalina 79.75 332 P P 11 22 20.5 +0.3
ARSA Arzberg 79.77 44 eP P 11 22 20.8 +0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,6.3nm,0.7s						
SPA0	**Spitsbergen Ar**	**79.80**	**12**	*e*P	**P**	**11 22 20.4**	**+0.3**
SPA0	**Spitsbergen Ar**	**79.80**	**12**	P	**P**	**11 22 20.9**	**+0.8**
SPITS	**Spitsbergen Ar**	**79.80**	**12**	P	**P**	**11 22 20.9**	**+0.8**
SPITS				pmax	pmax		
	comp=Z,25nm,0.8s						
UPC	**Upice**	**79.92**	**40**	*e*P	**P**	**11 22 22.2**	**+0.9**
UPC	**Upice**	**79.92**	**40**	*e*P	**P**	**11 22 22.2**	**+0.9**
CHVC	**Chvalec**	**79.95**	**40**	*e*P	**P**	**11 22 22.5**	**+1.1**
CONA	**Conrad Observa**	**79.97**	**43**	*e*P	**P**	**11 22 22.6**	**+1.0**
	comp=Z,14nm,1.0s,SNR=7.5						
OSTC	**Ostas**	**80.05**	**40**	*e*P	**P**	**11 22 23.1**	**+1.1**
KSP	**Ksiaz**	**80.08**	**40**	*e*P	**P**	**11 22 22.9**	**+0.8**
KSP	**Ksiaz**	**80.08**	**40**	*e*P	**P**	**11 22 22.9**	**+0.8**
DPC	**Dobruska-Polom**	**80.13**	**40**	*e*P	**P**	**11 22 23.3**	**+0.9**
DPC	**Dobruska-Polom**	**80.13**	**40**	*e*P	**P**	**11 22 23.3**	**+0.9**
KRUC	**Moravsky**	**80.25**	**42**	*e*P	**P**	**11 22 23.4**	**+0.3**
VRAC	**Vranov**	**80.37**	**41**	*e*P	**P**	**11 22 24.2**	**+0.5**
VRAC	**Vranov**	**80.37**	**41**	⇑P	**P**	**11 22 24.5**	**+0.8**
KRLC	**Kraliky**	**80.44**	**41**	*e*P	**P**	**11 22 25.4**	**+1.3**
KRLC	**Kraliky**	**80.44**	**41**	*e*P	**P**	**11 22 25.4**	**+1.3**
TRO	**Tromso**	**80.54**	**21**	*e*P	**P**	**11 22 24.9**	**+0.7**
ZST	**Bratislava**	**80.78**	**43**	*e*P	**P**	**11 22 25.6**	**-0.3**
ZST	**Bratislava**	**80.78**	**43**	*e*P	**P**	**11 22 25.6**	**-0.3**
MODS	**Modra-Piesok**	**80.88**	**42**	*e*P	**P**	**11 22 26.6**	**+0.1**
MODS	**Modra-Piesok**	**80.88**	**42**	*e*P	**P**	**11 22 26.6**	**+0.1**
MORC	**Moravsky Berou**	**80.95**	**41**	*e*P	**P**	**11 22 27.8**	**+0.9**
MORC	**Moravsky Berou**	**80.95**	**41**	⇑P	**P**	**11 22 27.2**	**+0.3**
MORC	**Moravsky Berou**	**80.95**	**41**	P	**P**	**11 22 27.6**	**+0.7**
MORC	**Moravsky Berou**	**80.95**	**41**	P	**P**	**11 22 27.6**	**+0.7**
MORC				pmax	pmax		
	comp=Z,18nm,1.3s						
JAVC	**Velka Javorina**	**81.11**	**42**	*e*P	**P**	**11 22 28.8**	**+1.1**
CHGN	**Chignik**	**81.29**	**326**	P	**P**	**11 22 28.6**	**+0.2**
CHGN				IAmb	IAmb	11 22 34.7	
	comp=Z,38nm,0.8s						
VYHS	**Vyhne**	**81.91**	**42**	*e*P	**P**	**11 22 32.8**	**+0.9**
VYHS	**Vyhne**	**81.91**	**42**	*e*P	**P**	**11 22 32.8**	**+0.9**
HAMF	**Hammerfest**	**82.09**	**20**	*e*P	**P**	**11 22 33.5**	**+1.2**
KTK1	**Kautokeino**	**82.11**	**21**	*e*P	**P**	**11 22 33.1**	**+0.6**
RDOG	**Red Dog Mine**	**82.28**	**338**	P	**P**	**11 22 34.4**	**+1.0**
OJC	**Ojcow**	**82.36**	**40**	*e*P	**P**	**11 22 35.1**	**+0.8**
OJC	**Ojcow**	**82.36**	**40**	P	**P**	**11 22 35.4**	**+1.1**
OJC	**Ojcow**	**82.36**	**40**	*e*P	**P**	**11 22 35.1**	**+0.8**
NIE	**Niedzica**	**82.77**	**41**	*e*P	**P**	**11 22 38.4**	**+2.0**
NIE	**Niedzica**	**82.77**	**41**	*e*P	**P**	**11 22 38.4**	**+2.0**
ARCES	**ARCESS Array B**	**82.85**	**21**	P	**P**	**11 22 36.3**	**-0.1**
	comp=Z,14nm,0.8s,baz=283,slow=4.2,SNR=25						
ARCES				LR	LR	11 54 05.2	
	comp=Z,233nm,21.8s,baz=320,slow=32						
ARE0	**ARCESS Array S**	**82.85**	**21**	*e*P	**P**	**11 22 36.8**	**+0.4**
PBUR	**Paburge**	**83.00**	**34**	*e*P	**P**	**11 22 37.5**	**+0.1**
SLIT	**Slitere, Latvi**	**83.00**	**33**	*e*P	**P**	**11 22 37.0**	**-0.4**
SLIT				IAmb	IAmb	11 22 38.1	
	comp=Z,189nm,0.8s						
PPT	**Papeete**	**83.33**	**251**	LR	LR	11 51 58.9	
	comp=Z,488nm,19.8s,baz=30,slow=30						
PPT2	**Papeete2**	**83.34**	**251**	*e*S	**S**	**11 32 55.2**	**-5.3**
	comp=Z,130nm,27.2s						
PPT2	**Papeete2**	**83.34**	**251**	*e*LQ	LQ	11 45 21.4	
	comp=Z,2µm,34.2s						
PPT2				*e*LR	LR	11 48 46.9	
	comp=Z,1µm,26.0s,baz=78						
CRVS	**Cervenica-Dubn**	**83.59**	**42**	*e*P	**P**	**11 22 42.3**	**+1.6**
CRVS	**Cervenica-Dubn**	**83.59**	**42**	*e*P	**P**	**11 22 42.3**	**+1.6**
ANM	**Nome**	**83.75**	**334**	P	**P**	**11 22 42.4**	**+1.3**
ANM	**Nome**	**83.75**	**334**	P	**P**	**11 22 42.4**	**+1.3**
ANM				pmax	pmax		
	comp=Z,11nm,0.8s						
BZS	**Buzias**	**84.12**	**45**	⇑P	**P**	**11 22 44.5**	**+1.1**
BZS	**Buzias**	**84.12**	**45**	P	**P**	**11 22 44.3**	**+0.9**
BZS				pmax	pmax		
	comp=Z,31nm,2.4s						
UZH	**Uzhgorod**	**84.17**	**42**	*e*P	**P**	**11 22 43.0**	**-0.6**
UZH				*e*		11 22 46.3	
PABE	**Paberze**	**84.21**	**35**	*e*P	**P**	**11 22 44.1**	**+0.5**
KWP	**Kalwaria Pacla**	**84.30**	**41**	*e*P	**P**	**11 22 46.0**	**+1.7**
KWP	**Kalwaria Pacla**	**84.30**	**41**	P	**P**	**11 22 46.2**	**+1.9**
KWP				IAmb	IAmb	11 22 55.1	
	comp=Z,32nm,1.0s						
KWP	**Kalwaria Pacla**	**84.30**	**41**	*e*P	**P**	**11 22 46.0**	**+1.7**
MDVR	**Moldovita**	**84.31**	**46**	⇑P	**P**	**11 22 43.6**	**-0.8**
FIA1	**FINESS Array S**	**84.36**	**29**	P	**P**	**11 22 45.2**	**+0.9**
FINES	**FINESS Array B**	**84.36**	**29**	P	**P**	**11 22 44.7**	**+0.5**
	comp=Z,16nm,0.8s,baz=270,slow=1.9,SNR=46						
FINES				LR	LR	11 57 58.2	
	comp=Z,228nm,19.9s,baz=277,slow=34						
TRPA	**Tarpa**	**84.40**	**42**	⇓P	**P**	**11 22 45.6**	**+0.8**
TBI	**Tubuai**	**84.48**	**245**	*e*LQ	LQ	11 45 44.2	
	comp=Z,805nm,36.2s						
TBI				*e*LR	LR	11 49 19.5	
	comp=Z,432nm,24.5s,baz=74						
DRGR		**84.71**	**44**	⇑P	**P**	**11 22 47.4**	**+1.0**
DRGR		**84.71**	**44**	P	**P**	**11 22 47.1**	**+0.6**
DRGR				pmax	pmax		
	comp=Z,15nm,0.8s						
GZR	**Gura Zlata**	**84.96**	**45**	⇑P	**P**	**11 22 48.9**	**+1.1**
VSU	**Vasula**	**85.21**	**32**	*e*P	**P**	**11 22 48.8**	**+0.2**
VSU	**Vasula**	**85.21**	**32**	*ce*P	**P**	**11 22 48.6**	**0.0**
VSU				pmax	pmax		
	comp=Z,64nm,0.8s						
IIGN	**Ignalina**	**85.50**	**35**	*e*P	**P**	**11 22 51.1**	**+1.0**
IIGN				IAmb	IAmb	11 22 52.2	
	comp=Z,11nm,0.7s						
ITM	**Ithomi**	**85.56**	**53**	P	**P**	**11 22 52.3**	**+1.4**
AGG	**Agios Georgios**	**85.60**	**51**	P	**P**	**11 22 52.2**	**+1.2**
AGG				IAmb	IAmb	11 23 15.8	
	comp=Z,73nm,1.5s						
AGG	**Agios Georgios**	**85.60**	**51**	P	**P**	**11 22 52.2**	**+1.2**
AGG				pmax	pmax		
	comp=Z,73nm,1.5s						
VTS	**Vitosha**	**85.72**	**48**	⇑P	**P**	**11 22 52.8**	**+1.0**
VTS	**Vitosha**	**85.72**	**48**	P	**P**	**11 22 53.6**	**+1.9**
VTS				IAmb	IAmb	11 23 08.2	
	comp=Z,41nm,1.5s						
VTS	**Vitosha**	**85.72**	**48**	P	**P**	**11 22 53.6**	**+1.9**
VTS				pmax	pmax		
	comp=Z,41nm,1.5s						
ARCR	**ARCALIA**	**85.78**	**43**	⇑P	**P**	**11 22 53.3**	**+1.6**
APA	**Apatity**	**86.10**	**22**	⇓*i*P	**P**	**11 22 53.0**	**+0.1**
APA				pmax	pmax		
	comp=Z,13nm,1.0s						
UNV	**Unalaska Valle**	**86.23**	**324**	P	**P**	**11 22 54.3**	**+0.6**
UNV				IAmb	IAmb	11 22 55.1	
	comp=Z,47nm,1.0s						
BUR08	**Bucovina Ar. S**	**86.25**	**42**	P	**P**	**11 22 55.7**	**+1.5**
ARR	**Arges**	**86.26**	**45**	⇑P	**P**	**11 22 55.2**	**+1.0**
BURAR	**Bucovina Array**	**86.27**	**42**	⇑P	**P**	**11 22 55.6**	**+1.3**
LVZ	**Lovozero**	**86.46**	**22**	P	**P**	**11 22 55.6**	**+0.9**
LVZ	**Lovozero**	**86.46**	**22**	⇑*e*P	**P**	**11 22 54.4**	**-0.3**
LVZ				pmax	pmax		
	comp=Z,53nm,0.8s						
PAIG	**Paliouri**	**86.48**	**50**	P	**P**	**11 22 56.3**	**+1.0**
VOIR		**86.54**	**45**	⇑P	**P**	**11 22 56.4**	**+0.8**
MTUR	**Matau**	**86.58**	**45**	⇑P	**P**	**11 22 57.2**	**+1.3**
MICGM	**Minsk**	**86.61**	**35**	*e*	P	11 22 50.0	-5.6
MNK	**Minsk**	**86.61**	**35**	*e*P	P	11 22 50.0	-5.6
GAMB	**Gambell**	**86.62**	**334**	P	**P**	**11 22 57.0**	**+1.6**
DOPR	**Dopca**	**86.67**	**44**	⇑P	**P**	**11 22 56.9**	**+0.7**
OZUR		**86.92**	**44**	⇑P	**P**	**11 23 00.0**	**+2.6**
MLR	**Muntele Rosu**	**87.15**	**44**	⇑P	**P**	**11 22 59.6**	**+1.0**
MLR	**Muntele Rosu**	**87.15**	**44**	P	**P**	**11 23 00.1**	**+1.4**
MLR	**Muntele Rosu**	**87.15**	**44**	P	**P**	**11 23 00.1**	**+1.4**
MLR				pmax	pmax		
	comp=Z,52nm,1.1s						
PLOR	**Plostina**	**87.56**	**44**	⇓P	**P**	**11 23 02.1**	**+1.5**
VRI	**Vrincioaia**	**87.61**	**44**	⇓P	**P**	**11 23 02.5**	**+1.8**
VRI	**Vrincioaia**	**87.61**	**44**	⇓P	**P**	**11 23 03.8**	**+3.1**
BISRR	**Bisoca**	**87.66**	**44**	⇑P	**P**	**11 22 59.2**	**-1.9**
AKASG	**Malin Array Be**	**88.22**	**39**	P	**P**	**11 23 02.5**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=270,slow=5.2,SNR=9.2						
AKASG				LR	LR	12 01 47.6	
	comp=Z,134nm,18.8s,baz=315,slow=35						
AKASG	**Malin Array Be**	**88.22**	**39**	*i*P	**P**	**11 23 03.2**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	**Malin Array Si**	**88.22**	**39**	⇓*e*P	**P**	**11 23 03.6**	**+0.1**
SORM	**Soroca**	**88.23**	**42**	⇑P	**P**	**11 23 03.6**	**0.0**
ICOR	**Ion Corvin**	**88.71**	**46**	⇓P	**P**	**11 23 06.9**	**+1.0**
TMCR	**Tamitsa**	**88.96**	**25**	*e*P	**P**	**11 23 06.6**	**-0.1**
TMCR				pmax	pmax		
	comp=Z,27nm,0.8s						
VNA3	**Neumayer Olymp**	**89.94**	**164**	P	**P**	**11 23 11.2**	**+0.1**
VNA1	**Neumayer--Stat**	**90.03**	**163**	P	**P**	**11 23 11.6**	**+0.1**
VNA2	**Neumayer--Watz**	**90.42**	**163**	P	**P**	**11 23 13.3**	**0.0**
	baz=304,slow=5.3						
TSUM	**Tsumeb**	**90.65**	**109**	P	**P**	**11 23 15.7**	**0.0**
KLMR	**Klimovskoe**	**90.79**	**28**	*e*P	**P**	**11 23 10.8**	**-4.5**
KLMR				pmax	pmax		
	comp=Z,42nm,1.4s						
KLMR	**Klimovskoe**	**90.79**	**28**	*e*P	**P**	**11 23 10.9**	**-4.4**
KLMR				AMP		11 23 23.4	
	comp=Z,42nm,1.4s						
OBN	**Obninsk**	**91.29**	**33**	*i*P	**P**	**11 23 17.4**	**-0.3**
OBN				*i*		11 23 23.2	
OBN				pmax	pmax		
	comp=Z,13nm,0.8s						
ELL	**Elmali**	**91.92**	**52**	P	**P**	**11 23 22.5**	**+1.2**
ELL	**Elmali**	**91.92**	**52**	P	**P**	**11 23 22.5**	**+1.2**
ELL				pmax	pmax		
	comp=Z,44nm,0.9s						
SNAA	**Sanae**	**92.07**	**163**	P	**P**	**11 23 20.5**	**-0.5**
SNAA	**Sanae**	**92.07**	**163**	P	**P**	**11 23 20.1**	**-0.9**
SNAA				IAmb	IAmb	11 23 22.0	
	comp=Z,55nm,1.7s						
SNAA	**Sanae**	**92.07**	**163**	⇓*e*P	**P**	**11 23 21.2**	**+0.2**
BILL	**Bilibino**	**93.01**	**342**	P	**P**	**11 23 26.0**	**+0.6**
BILL				IAmb	IAmb	11 23 29.9	
	comp=Z,24nm,1.0s						
BILL	**Bilibino**	**93.01**	**342**	*ce*P	**P**	**11 23 25.7**	**+0.2**
BILL				*i*		11 23 28.2	
BILL				*e*S	**SKSac**	**11 33 56.1**	**-2.2**
BILL				pmax	pmax		
	comp=Z,19nm,1.0s						
PRGR	**Permogore**	**93.16**	**26**	*e*P	**P**	**11 23 26.3**	**+0.1**
PRGR				pmax	pmax		
	comp=Z,27nm,0.7s						
BR131	**Keskin Array S**	**94.01**	**49**	P	**P**	**11 23 31.3**	**+0.4**
BR131	**Keskin Array S**	**94.01**	**49**	*ce*P	**P**	**11 23 30.3**	**-0.6**
BRTR	**Keskin Array B**	**94.01**	**49**	P	**P**	**11 23 30.0**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=252,slow=4.4,SNR=7.0						
BRTR				PKKP	**PKKPdf**	**11 40 32.5**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=134,slow=4.2,SNR=4.6						
BRTR				LR	LR	12 02 14.6	
	comp=Z,232nm,21.0s,baz=268,slow=33						
BRTR	**Keskin Array B**	**94.01**	**49**	*i*P	**P**	**11 23 30.7**	**-0.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TIXI	**Tiksi**	**97.91**	**354**	LR	LR	12 07 29.5	
	comp=Z,311nm,21.6s,baz=17,slow=35						
TIXI	**Tiksi**	**97.91**	**354**	P	**P**	**11 23 47.7**	**0.0**
TIXI				IAmb	IAmb	11 23 48.3	
	comp=Z,6.2nm,0.8s						
TIXI	**Tiksi**	**97.91**	**354**	*de*P	**P**	**11 23 47.4**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TIXI				MLR	MLR		
	comp=Z,316nm,21.0s						
BOSA	**Boshof**	**98.93**	**118**	LR	LR	12 04 48.2	
	comp=Z,524nm,21.0s,baz=256,slow=33						
NRIK	**Noril'sk**	**99.60**	**8**	LR	LR	12 08 35.3	
	comp=Z,278nm,21.8s,baz=350,slow=35						
NRIK	**Noril'sk**	**99.60**	**8**	⇑*e*P	**Pdif**	**11 23 55.8**	**+0.5**
NCK	**Nalchik**	**99.78**	**43**	⇓*e*P	**Pdif**	**11 23 57.4**	**+0.7**
NCK				pmax	pmax		
	comp=Z,13nm,0.6s						
SEY	**Seymchan**	**100.72**	**342**	⇑*e*P	**Pdif**	**11 24 00.9**	**+0.5**
SYO	**Syowa Base**	**105.87**	**159**	⇓*i*Pdiff	**Pdif**	**11 24 21.4**	**-1.7**
SYO	**Syowa Base**	**105.87**	**159**	⇑*e*PP	**PKiKP**	**11 28 42.0**	**+6.5**
BRVK	**Borovoye**	**108.84**	**24**	*de*P	**Pdif**	**11 24 38.3**	**+1.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZALV	**Zalesovo Beam**	**113.06**	**16**	PKiKP	**PKiKP**	**11 28 48.2**	**-1.3**
	comp=Z,2.3nm,0.8s,baz=307,slow=2.9,SNR=8.2						
KURK	**Kurchatov**	**113.88**	**21**	*di*PKIKP	**PKiKP**	**11 28 50.4**	**-0.8**
MSVF	**Nonsavu**	**113.92**	**255**	⇑*i*PKIKP	**PKiKP**	**11 28 52.1**	**-0.1**
MAKZ	**Makanchi**	**118.37**	**22**		**PKPdf**	**11 28 59.5**	**-0.5**
MAKZ	**Makanchi**	**118.37**	**22**	PKIKP	**PKPdf**	**11 28 59.5**	**-0.5**
KLR	**Kul'dur**	**118.38**	**344**	⇓*i*PKIKP	**PKPdf**	**11 28 58.8**	**-1.1**
MK31	**Makanchi Array**	**118.49**	**21**		**PKPdf**	**11 28 59.4**	**-0.8**
MK31	**Makanchi Array**	**118.49**	**21**	PKIKP	**PKPdf**	**11 28 59.4**	**-0.8**
MKAR	**Makanchi Array**	**118.49**	**21**	PKP	**PKPdf**	**11 28 58.4**	**-1.9**
	comp=Z,1.3nm,0.7s,baz=15,slow=2.7,SNR=9.5						
MKAR				PKKPbc	**PKKPbc**	**11 39 14.6**	**-4.2**
	comp=Z,0.5nm,0.8s,baz=137,slow=6.3,SNR=4.9						
AAK	**Ala-Archa**	**118.54**	**29**		**PKiKP**	**11 29 01.1**	**+0.5**
AAK	**Ala-Archa**	**118.54**	**29**	*di*PKIKP	**PKPdf**	**11 29 00.7**	**+0.1**
NRN	**Naryn**	**120.18**	**29**		**PKPdf**	**11 29 04.1**	**+0.1**
NRN	**Naryn**	**120.18**	**29**	PKIKP	**PKPdf**	**11 29 04.1**	**+0.1**
KSH	**Kashi**	**121.63**	**31**	PKP	**PKiKP**	**11 29 07.1**	**+0.3**
KSH				PP	**PP**	**11 30 39.0**	**+0.9**
KSH				SKKS		11 37 28.3	
KSH				AMB	AMB		
	comp=Z,88nm,3.9s						
KSH				LR	LR		
	comp=Z,170nm,7.1s						
KSH				LR	LR		
	comp=Z,130nm,7.5s						
KSH				LR	LR		
	comp=Z,510nm,9.5s						
SONM	**Songino Array**	**122.64**	**3**	PKP	**PKPdf**	**11 29 07.4**	**-0.9**
	comp=Z,3.7nm,1.0s,baz=310,slow=1.0,SNR=19						
SONM				PP	**PP**	**11 30 48.8**	**+4.5**
	comp=Z,2.2nm,1.1s,baz=350,slow=4.5,SNR=4.0						
SONM				PKKPbc	**PKKPbc**	**11 38 59.8**	**-3.7**
	comp=Z,1.4nm,0.8s,baz=182,slow=3.9,SNR=9.7						
USA0B	**Ussuriysk Arra**	**122.87**	**342**	*di*PKIKP	**PKPdf**	**11 29 08.1**	**-0.6**
USRK	**Ussuriysk Ar.**	**122.87**	**342**	PKP	**PKPdf**	**11 29 07.7**	**-1.0**
	comp=Z,8.3nm,0.8s,baz=279,slow=2.1,SNR=10						
WMQ	**Urumqi**	**122.95**	**19**	*e*PKP	**PKPdf**	**11 29 08.8**	**-0.2**
MDJ	**Mudanjiang**	**123.20**	**344**	PKP	**PKPdf**	**11 29 09.0**	**-0.3**
MJB9	**Matsu-Tunnel**	**127.04**	**332**		**PKPdf**	**11 29 16.5**	**-0.5**
MJAR	**Matsushiro Arr**	**127.04**	**332**	PKP	**PKPdf**	**11 29 16.1**	**-0.8**
	comp=Z,13nm,0.8s,baz=68,slow=0.5,SNR=31						
MAJO	**Matsushiro**	**127.04**	**332**		**PKPdf**	**11 29 16.9**	**0.0**
MAJO	**Matsushiro**	**127.04**	**332**	*ci*PKIKP	**PKPdf**	**11 29 15.9**	**-1.0**
MAT	**Matsushiro**	**127.04**	**332**	PKP	**PKPdf**	**11 29 15.9**	**-1.0**
INU	**Inuyama**	**128.57**	**332**		**PKPdf**	**11 29 19.8**	**-0.1**
HHC	**Hu-ho-hao-te**	**129.72**	**359**	*e*PKP	**PKPdf**	**11 29 17.8**	**-4.2**
HHC				PP	**PP**	**11 31 30.9**	**-0.4**
HHC				LR	LR		
	comp=Z,260nm,18.4s						
HHC				LR	LR		
	comp=Z,250nm,19.0s						
BTO	**Baotou**	**129.97**	**0**	*e*PKP	**PKPdf**	**11 29 20.8**	**-1.7**
GTA	**Gaotai**	**130.21**	**11**	⇑PKP	**PKPdf**	**11 29 22.5**	**-0.6**
GTA				PP	**PP**	**11 31 42.0**	**+7.3**
GTA				AMB	AMB		
	comp=Z,120nm,6.2s						
GTA				LR	LR		
	comp=Z,310nm,21.0s						
GTA				LR	LR		
	comp=Z,310nm,20.6s						
GTA				LR	LR		
	comp=Z,390nm,22.0s						
BJI	**Beijing**	**130.23**	**354**	PKP	**PKPdf**	**11 29 22.6**	**-0.3**
BJI				LR	LR		
	comp=Z,300nm,20.4s						
BJI				LR	LR		
	comp=Z,150nm,16.5s						
KS19	**Wonju Array Si**	**130.25**	**342**		**PKPdf**	**11 29 22.8**	**-0.2**
KSRS	**Korea Array**	**130.28**	**342**	PKP	**PKPdf**	**11 29 22.2**	**-0.8**
	comp=Z,13nm,0.9s,baz=18,slow=1.1,SNR=40						
KSRS				SKPbc	**SKPbc**	**11 32 45.8**	**+0.5**
	comp=Z,7.8nm,1.1s,baz=16,slow=3.9,SNR=11						
LZH	**Lanzhou**	**134.09**	**7**	*e*PKP	**PKPdf**	**11 29 23.8**	**-6.7**
LZH				pPKP	pPKPdf	11 29 36.3	-1.2
LZH				sPKP		11 29 41.8	
DANN	**Dangsing**	**134.34**	**33**	*e*P	**PKPdf**	**11 29 31.3**	**-0.1**
	comp=Z,50nm,0.8s						
GKN	**Gorkha**	**135.09**	**33**	*e*P	**PKPdf**	**11 29 32.2**	**-0.4**
GUN	**Gumba**	**135.81**	**32**	*e*P	**PKPdf**	**11 29 33.4**	**-0.8**
	comp=Z,21nm,0.8s						
PKI	**Pulchoki**	**135.84**	**32**	*e*P	**PKPdf**	**11 29 33.2**	**-1.0**
XAN	**Xi'an**	**136.51**	**2**	PKP	**PKPdf**	**11 29 34.3**	**-0.6**
XAN				PKS	**SKPbc**	**11 33 06.4**	**-0.1**
XAN				LR	LR		
	comp=Z,280nm,22.8s						
XAN				LR	LR		
	comp=Z,360nm,23.8s						
XAN				LR	LR		
	comp=Z,290nm,23.9s						
RAMN	**Ramite**	**136.97**	**32**	*e*P	**PKPdf**	**11 29 35.3**	**-0.9**
	comp=Z,19nm,0.7s						
TAPN	**Taplejung**	**137.20**	**30**	*e*P	**PKPdf**	**11 29 35.9**	**-0.8**
ODAN	**Odare**	**137.44**	**31**	*e*P	**PKPdf**	**11 29 36.3**	**-0.8**
NJ2	**Nanjing**	**137.70**	**349**	*e*PKP	**PKPdf**	**11 29 36.4**	**-0.7**
CD2	**Chengdu**	**139.17**	**9**	PKP	**PKPdf**	**11 29 38.3**	**-1.6**
CD2				PP	**PP**	**11 32 30.8**	**-0.5**
CD2				AMB	AMB		
	comp=Z,230nm,7.8s						
CD2				LR	LR		
	comp=Z,540nm,33.3s						
CD2				LR	LR		
	comp=Z,490nm,21.6s						
CD2				LR	LR		
	comp=Z,370nm,19.6s						
WHN	**Wuhan**	**139.82**	**355**	PKP	**PKPdf**	**11 29 34.8**	**-6.2**
STKA	**Stephens Creek**	**143.53**	**228**	PKhKP	PKPpre	11 29 43.5	
	comp=Z,9.1nm,0.8s,baz=55,slow=1.7,SNR=6.9						
PMG	**Port Moresby**	**143.61**	**267**	PKhKP	PKPpre	11 29 44.3	
	comp=Z,17nm,0.7s,baz=113,slow=3.7,SNR=4.7						
CTA	**Charters Tower**	**143.77**	**249**	PKhKP	PKPpre	11 29 44.5	
	comp=Z,34nm,0.9s,baz=153,slow=1.7,SNR=18						
GYA	**Guiyang**	**143.91**	**5**	⇑*i*PKP	PKPab	11 29 45.9	+0.2
GYA				PP	**PP**	**11 33 00.4**	**+0.2**
GYA				SKKS		11 39 56.3	
GYA				AMB	AMB		
	comp=Z,200nm,5.5s						
NACB	**Ninganchiao**	**144.58**	**342**		PKPbc	11 29 48.6	+0.3
KMI	**Kunming**	**144.65**	**12**	PKP	**PKPab**	**11 29 47.9**	**-0.7**
KMI				pPKP	PKPdf	11 29 51.0	+0.9
KMI				sPKP		11 29 53.1	
KMI				LR	LR		
	comp=Z,250nm,25.5s						
KMI				LR	LR		
	comp=Z,320nm,24.1s						
SSLB	**Suanglung**	**145.13**	**343**		**PKPbc**	**11 29 50.1**	**0.0**
TPUB	**Ta-pu**	**145.69**	**343**		**PKPab**	**11 29 52.7**	**+0.5**
PALK	**Pallekele**	**146.09**	**61**	*ci*PKP2	**PKPbc**	**11 29 53.1**	**-0.4**
COEN	**Coen**	**147.51**	**259**		**PKPdf**	**11 29 53.7**	**-1.1**
COEN				PKPbc	**PKPbc**	**11 29 57.7**	**+0.3**
SLVN	**Son La**	**148.56**	**11**		**PKPdf**	**11 29 55.4**	**-1.1**
SLVN				PKPbc	**PKPbc**	**11 30 00.9**	**+0.7**
CHTO	**Chiang Mai**	**149.58**	**22**		**PKPdf**	**11 29 57.2**	**-0.9**
CHTO					**PKPbc**	**11 30 02.2**	**-0.5**
CM31	**Chiang Mai Arr**	**149.90**	**22**	PKPdf	**PKPdf**	**11 29 58.4**	**-0.3**
CM31					**PKPbc**	**11 30 03.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**149.90**	**22**	PKP	**PKPdf**	**11 29 58.4**	**-0.3**
	comp=Z,28nm,0.9s,baz=314,slow=2.5,SNR=54						
CMAR				PKPbc	**PKPbc**	**11 30 03.0**	**-0.5**
	comp=Z,28nm,0.9s,baz=319,slow=3.5,SNR=85						
QIZ	**Qiongzhong**	**151.47**	**1**	PKPbc	**PKPdf**	**11 30 00.6**	**-0.5**
QIZ				PP	**PP**	**11 33 44.8**	**+0.4**
QIZ				SS	SS	11 53 09.6	+2.4
QIZ				LR	LR		
	comp=Z,410nm,21.1s						
PBKT	**Sadao Pong**	**152.36**	**19**		**PKPdf**	**11 30 01.2**	**-1.2**
PBKT				PKPbc	**PKPbc**	**11 30 09.2**	**0.0**
AS31	**Alice Springs**	**153.47**	**235**		**PKPdf**	**11 30 02.9**	**-1.1**
AS31				PKPbc	**pPKPdf**	**11 30 10.6**	**-0.4**
ASAR	**Alice Springs**	**153.47**	**235**	PKP	**PKPdf**	**11 30 03.1**	**-0.9**
	comp=Z,9.4nm,0.9s,baz=122,slow=1.7,SNR=54						
ASAR				PKPbc	**pPKPdf**	**11 30 10.2**	**-0.8**
	comp=Z,29nm,0.9s,baz=116,slow=2.4,SNR=84						
WR0	**Warramunga Arr**	**154.42**	**244**		**PKPdf**	**11 30 04.5**	**-0.8**
WR0				PKPbc	**PKPbc**	**11 30 13.3**	**-0.4**
WRAB	**Tennant Creek**	**154.60**	**244**		**PKPdf**	**11 30 04.7**	**-0.9**
WRAB				PKPbc	**PKPbc**	**11 30 13.3**	**-0.8**
WRAB	**Tennant Creek**	**154.60**	**244**	*ce*PKIKP	**PKPdf**	**11 30 04.6**	**-1.0**
WRA	**Warramunga Arr**	**154.60**	**244**	PKP	**PKPdf**	**11 30 04.8**	**-0.9**
	comp=Z,16nm,1.0s,baz=102,slow=1.1,SNR=35						
WRA				PKPbc	**PKPbc**	**11 30 13.0**	**-1.1**
	comp=Z,34nm,0.8s,baz=108,slow=2.2,SNR=73						
WB0	**Warramunga Arr**	**154.62**	**244**		**PKPdf**	**11 30 04.6**	**-1.1**
WB0				PKPbc	**pPKPdf**	**11 30 13.2**	**+0.5**
WB0				PKPab	**PKPab**	**11 30 28.7**	**-0.1**
SBUM	**Sibu**	**167.80**	**351**		**PKPdf**	**11 30 19.5**	**-0.3**
SBUM				PKPab	**PKPab**	**11 31 26.1**	**+0.1**

*BJI **19** 11:14:09.7±0.0, 6°.14N×125°.98E, h133km, mB4.8/24, mb4.5/35*
*MAN **19** 11:14:10.6, 6°.05N×125°.92E, h144km, MS4.7*
*DJA **19** 11:14:11.0±0.4, 6°N±3°×12°6E±°, h129km±5km, M5.0/16, mb4.9/16, mB5.3/6, MLv5.3/7, Mw(mB)4.7/6, Mwp6.4/1*
*KLM **19** 11:14:11.0, 6°.18N×126°.09E, h116km, mb4.8*
*NEIC **19** 11:14:11.1±2.1, 6°.09N±0°.08×126°.2E±0°.1, h140km±6km, mb4.6/42, Error ellipse: s-maj=16.7km s-min=9.1km az=64.0*
*IDC **19** 11:14:11.1±0.5, 6°.10N×126°.11E, h142km±4km, mb4.1/17, mb1 4.3/19, mb1mx4.0/40, mbtmp4.5/19, MS3.0/3, Ms1 3.1/3, ms1mx2.7/34, Error ellipse: s-maj=17.4km s-min=8.0km az=72.0*
ISC 19 11:14:10.5±0.6, **6°.04N**±0°.04×**126°.13E**±0°.05, **h136**km±5km, **n135, σ1s.55**/157, **mb4.5**/44, **4C-6D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.42**	**279**	*e*P	**Pn**	**11 14 28.9**	**-0.9**
DDMP				*e*S	**Sn**	**11 14 42.1**	**-2.2**
DAV	**Davao City (W)**	**1.16**	**332**	P	**Pn**	**11 14 35.6**	**+0.2**
	215nm,0.3s,baz=148,slow=1.1,SNR=36						
DAV				LR	LR	11 14 42.9	
	comp=Z,97nm,21.8s,baz=186,slow=29						
DAV				S	**Sn**	**11 14 55.4**	**+0.9**
	867nm,0.3s,baz=127,slow=20,SNR=23						
DAV	**Davao City (W)**	**1.16**	**332**	⇓*e*P	**Pn**	**11 14 31.0**	**-4.5**
DAV	**Davao City (W)**	**1.16**	**332**		**Pn**	**11 14 36.0**	**+0.6**
DAV					Pn	11 14 37.7	+2.2
DAV				Sn	**Sn**	**11 14 56.4**	**+1.9**
DAV					Sn	11 14 56.5	+2.1
GSPH	**General Santos**	**1.17**	**273**	⇑*e*P	**Pn**	**11 14 33.6**	**-2.1**
GSPH				*i*S	**Sn**	**11 14 52.2**	**-2.6**
DMPH	**Davao City--Mi**	**1.21**	**329**	⇓*i*P	**Pn**	**11 14 35.7**	**-0.2**
DMPH				*i*S	**Sn**	**11 14 55.2**	**-0.1**
KCP	**Kidapawan**	**1.41**	**313**	⇓*i*P	**Pn**	**11 14 38.0**	**-0.1**
KCP				*i*S	**Sn**	**11 14 59.7**	**+0.5**
SKMP	**Bagumbayan, Su**	**1.65**	**287**	*e*P	**Pn**	**11 14 39.2**	**-1.4**
SKMP				*e*S	**Sn**	**11 15 01.6**	**-2.0**
BUKP	**Musuan**	**2.12**	**330**	*e*P	**Pn**	**11 14 45.9**	**-0.3**
BUKP				*e*S	**Sn**	**11 15 13.8**	**+0.2**
BIPH	**Bislig**	**2.15**	**6**	⇑*i*P	**Pn**	**11 14 46.0**	**-0.5**
BIPH				*i*S	**Sn**	**11 15 13.8**	**-0.5**
CGP	**Cagayan de Oro**	**2.79**	**329**	⇓*e*P	**Pn**	**11 14 54.5**	**-0.2**
CGP				*e*S	**Sn**	**11 15 30.4**	**+1.7**
BUTP	**Butuan**	**2.96**	**350**	*e*P	**Pn**	**11 14 56.4**	**-0.4**
BUTP				*e*S	**Sn**	**11 15 37.6**	**+5.2**
PAGZ	**Pagadian**	**3.27**	**304**	*e*P	**Pn**	**11 15 00.2**	**-0.5**
PAGZ				*e*S	**Sn**	**11 15 36.2**	**-3.4**
MSLP	**Maasin**	**4.26**	**343**	*e*P	**Pn**	**11 15 13.3**	**-0.5**
MSLP				*e*S	**Sn**	**11 16 02.6**	**-0.5**
TBP	**Tagbilaran**	**4.27**	**328**	⇑*e*P	**Pn**	**11 15 13.7**	**-0.2**
SNPH	**Sibulan**	**4.36**	**319**	*e*P	**Pn**	**11 15 15.6**	**+0.4**
LLP	**Lapu-Lapu**	**4.76**	**333**	⇓*e*P	**Pn**	**11 15 20.6**	**+0.1**
LLP				*e*S	**Sn**	**11 16 12.7**	**-2.3**
TNTI	**Ternate**	**5.37**	**167**	P	**Pn**	**11 15 28.3**	**-0.4**
	4.3nm16µm940nm,0.7s						
TNTI				S	**Sn**	**11 16 27.3**	**-2.4**
	4.3nm16µm940nm,0.7s						
GUIM	**Jordan**	**5.75**	**323**	*e*P	**Pn**	**11 15 33.0**	**-0.7**
GUIM				*e*S	Sn	11 16 22.0	-17
KMSI	**Cibinong**	**5.83**	**202**	P	**Pn**	**11 15 36.3**	**+1.5**
	1.2nm218nm,0.7s						
KMSI				S	**Sn**	**11 16 44.0**	**+3.3**
	1.2nm218nm,0.7s						
RCP	**Roxas**	**6.43**	**329**	⇓*e*P	**Pn**	**11 15 43.5**	**+0.7**
LBMI	**Labuha**	**6.77**	**168**	P	**Pn**	**11 15 47.6**	**+0.2**
	1.6nm5µm189nm,0.7s						
MRSI	**Marisa**	**6.92**	**217**	P	**Pn**	**11 15 50.7**	**+1.2**
	0.7nm2µm132nm,0.8s						
LUWI	**Luwuk**	**7.79**	**206**	P	**Pn**	**11 16 03.7**	**+2.6**
	1.0nm2µm110nm,0.8s						
SANI	**Sanana**	**8.03**	**181**	P	**Pn**	**11 16 01.4**	**-3.0**
APSI	**Ampana**	**8.22**	**213**	P	**Pn**	**11 16 09.6**	**+2.6**
	40nm,1.0s						
MPSI	**Mapaga**	**8.41**	**228**	P	**Pn**	**11 16 12.6**	**+3.2**
	21nm,0.8s						
SWI	**Sorong**	**8.56**	**143**	P	**Pn**	**11 16 11.1**	**-0.3**
	84nm,0.5s						
SIJI	**Sorong**	**8.56**	**143**	P	**Pn**	**11 16 11.4**	**-0.2**
	16nm,0.3s,baz=345,slow=13,SNR=32						
SIJI				S	**Sn**	**11 17 43.4**	**-3.4**
	1.4nm,0.3s,baz=180,slow=20,SNR=4.7						
SIJI				LR	LR	11 19 48.2	
	comp=Z,72nm,20.9s,baz=32,slow=39						
FAKI	**Fak Fak**	**10.79**	**145**	P	**Pn**	**11 16 41.3**	**-0.1**
	68nm,0.8s						
TTSI	**Tana Toraja**	**11.00**	**215**	P	**Pn**	**11 16 46.1**	**+2.0**
	65nm,1.5s						

BNSI Bone 11.98 210 P Pn 11 16 58.7 +1.6
38nm,0.7s
KAPI Kappang 12.69 210 P Pn 11 17 06.4 +0.2
1.6nm,0.3s,baz=84,slow=6.0,SNR=4.4
KAPI Kappang 12.69 210 Pn 11 17 07.8 +1.5
KBKI Kotabaru 13.60 227 P P 11 17 20.4 -1.8
17nm,0.7s
SBUM Sibu 14.32 256 P P 11 17 31.9 +1.7
STKI Sintang 15.78 248 P P 11 17 47.8 +1.3
KSM Kuching 16.42 255 P P 11 17 55.4 +1.9
KSM IAmb IAmb 11 17 57.9
comp=Z,21nm,0.8s
KSM Kuching 16.42 255 P P 11 17 56.0 +2.5
PLAI Plampang 16.95 209 P Pn 11 17 59.8 +0.1
comp=Z,925nmcomp=Z,103nm,0.7s
TWG Pinlang 17.39 344 P P 11 18 03.0 -1.1
YULB Yu-li 17.87 345 P P 11 18 07.9 -1.6
TPUB Ta-pu 17.96 343 P P 11 18 09.4 -1.0
TPUB IAmb IAmb 11 18 12.6
comp=Z,38nm,1.2s
DLV T Lat 18.38 290 P Pn 11 18 17.4 +0.4
DLV IAmb IAmb 11 18 17.9
comp=Z,42nm,0.7s
JAGI Jajag, Banyuwa 18.71 220 P P 11 18 19.7 +1.0
comp=Z,58nm,0.4s
WOJI Wonogiri, Jawa 20.49 228 P P 11 18 38.7 +0.8
KNRA Kununurra 21.73 173 P P 11 18 52.1 +1.0
LEM Lembang 22.46 236 P P 11 18 59.6 +0.9
comp=Z,110nm,0.9s,baz=46,slow=9.0,SNR=17
MYKOM Kota Tinggi 22.62 260 P P 11 19 01.1 +0.9
MYKOM IAmb IAmb 11 19 02.2
comp=Z,28nm,0.7s
MYKOM Kota Tinggi 22.62 260 P P 11 19 01.0 +0.9
JRMM Jerantut 23.66 266 P P 11 19 11.0 +1.2
FITZ Fitzroy Crossi 23.99 181 P P 11 19 12.9 +0.3
comp=Z,9.2nm,0.4s,baz=8.1,slow=8.6,SNR=32
FITZ Fitzroy Crossi 23.99 181 P P 11 19 13.3 +0.7
FITZ IAmb IAmb 11 19 13.9
comp=Z,15nm,1.1s
IPM Ipoh 25.04 268 P P 11 19 22.6 +0.2
IPM IAmb IAmb 11 19 24.7
comp=Z,13nm,0.8s
IPM Ipoh 25.04 268 P P 11 19 23.0 +0.6
KULM Kulim 25.36 270 P P 11 19 25.8 +0.5
KULM Kulim 25.36 270 P P 11 19 26.0 +0.7
PMG Port Moresby 25.97 126 P P 11 19 30.8 +0.1
comp=Z,19nm,0.6s,baz=34,slow=4.6,SNR=6.2
PMG Port Moresby 25.97 126 P P 11 19 31.4 +0.7
COEN Coen 26.09 140 P P 11 19 32.6 +0.8
COEN IAmb IAmb 11 19 36.5
comp=Z,26nm,0.9s
NJ2 Nanjing 26.76 346 eP P 11 19 37.6 0.0
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
PBKT Sadao Pong 26.76 295 P P 11 19 41.0 +3.2
WB0 Warramunga Arr 26.90 163 P P 11 19 38.9 -0.1
WRAB Tennant Creek 27.04 163 P P 11 19 40.6 +0.4
WRAB IAmb IAmb 11 19 52.4
comp=Z,12nm,0.5s
WRA Warramunga Arr 27.05 163 P P 11 19 40.3 -0.1
comp=Z,2.0nm,0.4s,baz=340,slow=9.1,SNR=37
WRA PcP PcP 11 22 57.6 -0.7
comp=Z,0.9nm,0.5s,baz=329,slow=3.0,SNR=3.1
WRA S S 11 24 05.5 -2.9
comp=Z,1.0nm,0.6s,baz=340,slow=14,SNR=3.4
WB2 Warramunga Arr 27.05 163 P P 11 19 40.3 -0.1
WB2 IAmb IAmb 11 19 50.9
comp=Z,11nm,0.8s
WR0 Warramunga Arr 27.13 162 P P 11 19 41.2 +0.2
WR0 IAmb IAmb 11 19 51.8
comp=Z,8.7nm,0.7s
PSAD1 Pilbara Seismi 28.01 193 P P 11 19 49.0 +0.1
PSA00 Pilbara Seismi 28.12 192 P P 11 19 49.7 -0.2
CMAR Chiang Mai Arr 29.24 297 P P 11 20 00.8 +1.0
comp=Z,1.0nm,0.5s,baz=103,slow=6.9,SNR=6.9
CMAR PcP PcP 11 23 04.7 +0.9
comp=Z,0.9nm,0.4s,baz=119,slow=2.9,SNR=5.9
CMAR ScP ScP 11 26 32.6 -0.4
comp=Z,3.7nm,0.9s,baz=136,slow=1.9,SNR=16
CMAR LR LR 11 32 25.4
comp=Z,38nm,18.5s,baz=114,slow=38
KMI Kunming 29.36 313 P P 11 19 58.9 -2.2
KMI pP pP 11 20 30.5 +0.3
KMI pmax pmax
comp=Z,5.0nm,2.0s
AS31 Alice Springs 30.48 166 P P 11 20 11.3 +0.5
ASAR Alice Springs 30.48 166 P P 11 20 11.2 +0.4
comp=Z,12nm,0.4s,baz=338,slow=7.0,SNR=201
ASAR PcP PcP 11 23 06.8 -0.2
comp=Z,2.6nm,0.6s,baz=341,slow=2.1,SNR=7.0
ASAR S S 11 25 00.7 -1.5
comp=Z,1.0nm,0.9s,baz=349,slow=19,SNR=4.4
ASAR ScP ScP 11 26 36.9 -0.1
comp=Z,0.8nm,0.8s,baz=354,slow=3.7,SNR=4.2
GIRL Giralia 30.79 202 P P 11 20 14.1 +0.8
KSRS Korea Array 31.32 3 P P 11 20 18.4 +0.6
comp=Z,5.0nm,0.6s,baz=208,slow=40,SNR=15
KS19 Wonju Array Si 31.36 3 P P 11 20 18.6 +0.3
KS19 IAmb IAmb 11 20 19.5
comp=Z,14nm,0.7s
XAN Xi'an 32.10 332 P P 11 20 28.8 +3.9
XAN pmax pmax
comp=Z,8.0nm,1.0s
XAN LR LR
comp=Z,140nm,13.0s
XAN LR LR
comp=Z,230nm,15.2s
XAN LR LR
comp=Z,170nm,14.1s
CTA Charters Tower 32.65 143 P P 11 20 31.5 +1.7
comp=Z,3.2nm,0.5s,baz=331,slow=8.3,SNR=5.9
BJI Beijing 35.02 347 eP P 11 20 49.5 -0.5
BJI pmax pmax
comp=Z,7.0nm,0.6s
MORW Morawa 36.23 195 P P 11 21 00.6 +0.1
LZH Lanzhou 36.23 329 eP P 11 21 01.3 +0.7
LZH pP pP 11 21 31.1 +1.2
LZH sP sP 11 21 49.6 +4.3
LZH pmax pmax
comp=Z,16nm,1.2s
LZH pmax pmax
comp=Z,59nm,4.3s
FORT Forrest 36.65 177 P P 11 21 04.8 +0.8
HHC Hu-ho-hao-te 37.03 342 eP P 11 21 08.4 +1.1
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,56nm,7.8s
HNR Honiara 37.04 114 LR LR 11 34 33.5
comp=Z,24nm,18.7s,baz=185,slow=33
MDJ Mudanjiang 38.55 4 P P 11 21 21.6 +1.8
MDJ pmax pmax
comp=Z,8.0nm,1.1s
MDJ pmax pmax
comp=Z,100nm,3.9s
NWAO Narrogin (SRO) 39.66 192 P P 11 21 29.8 +0.6
comp=Z,35nm,0.4s,baz=26,slow=8.1,SNR=59
NWAO Narrogin (SRO) 39.66 192 P P 11 21 30.0 +0.8
NWAO Narrogin (SRO) 39.66 192 P P 11 21 30.0 +0.8
BBOO Buckleboo 39.77 167 P P 11 21 31.4 +1.3
STKA Stephens Creek 40.48 160 P P 11 21 36.7 +0.7
comp=Z,11nm,0.7s,baz=343,slow=9.2,SNR=12
STKA Stephens Creek 40.48 160 P P 11 21 37.3 +1.3
GTA Gaotai 40.83 328 eP P 11 21 41.6 +2.6
GTA pP pP 11 22 11.4 +2.6
GTA sP sP 11 22 28.1 +4.1
H11S3 WAKE ISLAND Hy 41.41 69 T T 12 06 00.0
baz=258,slow=70
H11S1 WAKE ISLAND Hy 41.43 69 T T 12 06 07.4
baz=258,slow=70
H11S2 WAKE ISLAND Hy 41.43 69 T T 12 06 11.9
baz=258,slow=70
H11N1 WAKE ISLAND Hy 41.87 67 T T 12 06 44.1
baz=260
H11N2 WAKE ISLAND Hy 41.88 67 T T 12 06 22.8
baz=260
H11N3 WAKE ISLAND Hy 41.89 67 T T 12 06 32.8
baz=260
TAPN Taplejung 42.20 305 eP P 11 21 49.4 -1.1
comp=Z,5.6nm,0.4s
ODAN Odare 42.27 304 eP P 11 21 51.0 -0.1
comp=Z,12nm,0.5s
RAMN Ramite 42.96 304 eP P 11 21 56.7 +0.1
comp=Z,14nm,0.7s
JIRN Jiri 43.56 304 eP P 11 22 01.2 -0.4
comp=Z,21nm,0.6s
ARMA Armidale 43.72 147 P P 11 22 04.4 +2.0
ARMA IAmb IAmb 11 22 13.3
comp=Z,7.9nm,0.7s
GUN Gumba 43.91 304 eP P 11 22 04.1 -0.3
comp=Z,19nm,0.6s
PKI Pulchoki 44.17 304 eP P 11 22 05.6 -0.9
SONM Songino Array 44.94 341 P P 11 22 10.9 -1.1
comp=Z,0.3nm,0.3s,baz=157,slow=9.1,SNR=6.4
SONM PcP PcP 11 23 50.9 -0.1
comp=Z,0.8nm,0.6s,baz=153,slow=4.6,SNR=5.1
SONM ScP ScP 11 27 30.7 -0.3
comp=Z,0.6nm,0.8s,baz=138,slow=3.9,SNR=4.0
DANN Dangsing 45.81 304 eP P 11 22 18.9 -0.5
comp=Z,26nm,0.6s
WMQ Urumqi 50.51 324 eP P 11 22 56.0 +1.1
WMQ pmax pmax
comp=Z,8.0nm,0.7s
WMQ pmax pmax
comp=Z,23nm,4.1s
WMQ LR LR
comp=Z,330nm,27.1s
WMQ LR LR
comp=Z,420nm,29.2s
WMQ LR LR
comp=Z,90nm,29.3s
PETK Petropavlovsk- 53.55 23 P P 11 23 17.1 0.0
comp=Z,3.0nm,0.9s,baz=197,slow=4.5,SNR=2.7
MK31 Makanchi Array 55.34 325 P P 11 23 29.0 -1.2
MKAR Makanchi Array 55.34 325 P P 11 23 28.7 -1.5
comp=Z,1.8nm,0.5s,baz=118,slow=7.7,SNR=30
MKAR PcP PcP 11 24 27.3 -1.8
comp=Z,1.3nm,0.5s,baz=124,slow=4.1,SNR=5.3
MKAR ScP ScP 11 28 13.8 -1.7
comp=Z,0.9nm,0.8s,baz=121,slow=4.1,SNR=5.7
KDJ Kajisay 56.24 318 P P 11 23 36.2 -0.7
ZALV Zalesovo Beam 58.27 333 P P 11 23 48.7 -2.0
comp=Z,0.8nm,0.4s,baz=117,slow=7.4,SNR=3.7
KURK Kurchatov 59.49 327 P P 11 23 57.9 -1.3
KURK IAmb IAmb 11 23 59.8
comp=Z,2.8nm,0.6s
BKZ Black Stump Fm 64.69 139 P P 11 24 35.0 +0.8
BKZ IAmb IAmb 11 24 45.8
comp=Z,14nm,1.3s
RAYN Ar Rayn 79.04 293 P P 11 25 58.4 -1.8
RAYN IAmb IAmb 11 25 60.0
comp=Z,5.2nm,0.8s
PPLA Purkeypile 80.87 27 P P 11 26 11.1 +1.7
PPLA IAmb IAmb 11 26 16.6
comp=Z,21nm,1.5s
BRLK Bradley Lake 81.28 31 P P 11 26 12.1 +0.6
BRLK IAmb IAmb 11 26 27.4
comp=Z,21nm,1.2s
MLY Manley 81.66 25 P P 11 26 15.0 +1.6
SEW Seward 82.02 30 P P 11 26 16.6 +1.3
SEW IAmb IAmb 11 26 33.3
comp=Z,28nm,1.4s
TOLK Toolik Lake Re 82.33 22 P P 11 26 19.0 +2.1
TOLK IAmb IAmb 11 26 19.4
comp=Z,5.4nm,0.8s
HDA Harding Lake 83.27 26 P P 11 26 22.1 +0.4
HDA IAmb IAmb 11 26 23.4
comp=Z,4.7nm,0.8s
ILAR Eielson Array 83.29 26 P P 11 26 21.1 -0.8
comp=Z,2.2nm,0.8s,baz=239,slow=5.5,SNR=11
EGAK Eagle 85.75 25 P P 11 26 34.9 +0.8
BARN Barnard Glacie 85.84 29 P P 11 26 36.7 +1.8
BARN IAmb IAmb 11 26 38.8
comp=Z,19nm,1.5s
ARCES ARCESS Array B 88.09 340 P P 11 26 44.2 -1.2
comp=Z,8.4nm,0.9s,baz=61,slow=6.6,SNR=8.8
BRTR Keskin Array B 88.10 310 P P 11 26 43.9 -2.3
comp=Z,0.8nm,0.7s,baz=110,slow=6.3,SNR=4.4
FINES FINESS Array B 89.53 332 P P 11 26 50.3 -1.9
comp=Z,1.0nm,0.5s,baz=57,slow=5.1,SNR=4.5
SYO Syowa Base 94.35 201 eP P 11 27 18.0 +3.7
YKA Yellowknife Ar 97.66 24 P P 11 27 29.4 -0.1
comp=Z,0.7nm,0.7s,baz=300,slow=4.6,SNR=6.1
YKA PKiKP PKiKP 11 32 02.1 -0.9
comp=Z,0.1nm,0.5s,baz=293,slow=2.1,SNR=3.8
YKA PKKPbc PKKPbc 11 44 02.9 -4.7
comp=Z,0.2nm,0.5s,baz=122,slow=3.1,SNR=4.6
TXAR Lajitas Array 120.64 51 PKP PKPdf 11 32 47.1 0.0
comp=Z,0.2nm,0.6s,baz=270,slow=0.6,SNR=3.2
TORD Torodi Ar. Bea 121.61 289 PKP PKPdf 11 32 48.4 -0.8
comp=Z,2.9nm,0.6s,baz=53,slow=2.0,SNR=15
DBIC Dimbokro 129.48 284 PKP PKPdf 11 33 04.2 -0.1
comp=Z,2.5nm,0.6s,baz=41,slow=4.4,SNR=4.1
PLCA Paso Flores 142.36 159 PKhKP PKPpre 11 33 24.4
comp=Z,1.7nm,0.9s,baz=300,slow=1.9,SNR=4.7
PLCA Paso Flores 142.36 159 PKPdf 11 33 25.1 -2.4

SKO 19 11:20:38.5, 41.46N×23.57E, h1km, Greece-Bulgaria border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VAY Valandovo 0.77 260 ePg Pg 11 20 51.0 -2.2
VAY iSg Sg 11 21 03.9 +0.8
VAY eLg Lg 11 21 06.5
comp=N,2.9nm,0.2s
STIP Stip 1.06 283 iPg Pg 11 20 54.5 -4.4
STIP iSg Sg 11 21 06.8 -5.9
STIP eLg Lg 11 21 10.0
comp=N,6.4nm,0.3s

THE 19 11:26:26.4, 38.29N×20.34E, h2km±2km, ML2.1/5, Error ellipse: s-maj=2.8km s-min=0.6km az=62.0
ATH 19 11:26:26.1, 38.28N×20.39E, h17km±1km, ML2.8/2, Error ellipse: s-maj=2.5km s-min=1.2km az=258.0
ISC 19 11:26:26.8±1.0, 38.29N±0.03×20.40E±0.05, h13km±5km, n23, σ0.54/39, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.04 142 P Pg 11 26 29.2 0.0
KEF4 S Sg 11 26 30.9 +0.1
KEF1 Kardakata, Kep 0.06 99 P Pg 11 26 29.2 -0.2
KEF1 S Sg 11 26 31.4 +0.2
KEF3 Kipouria, Keph 0.09 204 P Pg 11 26 29.5 -0.2
KEF3 S Sg 11 26 31.1 -0.7
LXRA Lixouri, Kepha 0.09 159 P Pg 11 26 29.6 -0.1
LXRA S Sg 11 26 31.9 +0.2
ARGA Argostoli. Kep 0.13 149 P Pg 11 26 29.9 -0.3
ARGA S Sg 11 26 32.1 -0.4
KEF2 Argostoli. Kep 0.14 149 P Pg 11 26 30.1 -0.3
KEF2 S Sg 11 26 32.4 -0.4
VLS Valsamata 0.19 126 P Pg 11 26 30.6 -0.6
VLS S Sg 11 26 33.6 -0.4
VLS Valsamata 0.19 126 P Pg 11 26 30.6 -0.6
VLS S Sg 11 26 33.1 -0.9
VLS AML AML 11 26 34.0
comp=N,8191μm,0.1s
VLS AML AML 11 26 34.5
comp=E,13692μm,0.1s
KONA Konidatara, Ke 0.20 45 P Pg 11 26 30.9 -0.3
KONA S Sg 11 26 34.2 0.0
FSK Fiskardo 0.22 37 P Pg 11 26 31.2 -0.3
FSK S Sg 11 26 34.5 -0.3
VLMS Volimes, Zakyn 0.46 153 P Pg 11 26 35.0 -0.9
VLMS S Sg 11 26 41.3 -0.7
VLMS AML AML 11 26 43.7
comp=E,1804μm,0.2s
VLMS AML AML 11 26 44.5
comp=N,2092μm,0.1s
MGNA Meganis 0.48 40 P Pg 11 26 35.2 -1.1
LKD2 Lefkada island 0.54 22 P Pg 11 26 36.7 -0.8
LKD2 S Sg 11 26 44.6 -0.1
comp=N,220nm,0.3s
LKD2 Lefkada island 0.54 22 P Pg 11 26 36.7 -0.8
PDO Prodromos 0.69 63 P Pg 11 26 40.0 -0.3
PDO S Sb 11 26 50.9 +0.8
comp=N,212nm,0.5s
RLS Riolos of Patr 0.87 105 P Pb 11 26 43.8 0.0
PVO Paravola 0.95 69 P Pg 11 26 44.6 -0.5
PVO S Sn 11 26 59.5 +0.4
comp=N,152nm,0.3s
DRO Drossia 1.09 107 P Pb 11 26 47.6 +0.1
DRO S Sn 11 27 03.8 +1.2
comp=N,110nm,0.5s
ANX Ano Chora 1.24 75 P Pn 11 26 49.7 -0.1
IGT Igoumenitsa 1.25 358 P Pn 11 26 49.3 -0.6
IGT S Sn 11 27 07.3 +0.8
comp=N,42nm,0.2s
AMT Artemida-Makis 1.28 126 P Pg 11 26 51.5 0.0
KLV Kalavryta, Ach 1.40 99 P Pn 11 26 52.0 -0.1
KEK Kerkira 1.50 342 P Pn 11 26 53.6 +0.3

MEX 19 11:32:43.8±1.0, 17.49N×95.68W, h42km±8km, MD4.0
ISC 19 11:32:41.0±1.1, 17.39N±0.06×95.69W±0.04, h103km, n24, σ2.47/29, Oaxaca

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CMIG Matias Romero 0.83 111 Pn 11 32 57.8 -2.1
CMIG Sn 11 33 09.1 -5.1
CMIG Matias Romero 0.83 111 eP Pn 11 32 57.8 -2.1
CMIG eS Sn 11 33 09.1 -5.1
VHO Vista Hermosa 1.04 252 iP Pn 11 33 01.2 -1.2
VHO eS Sn 11 33 14.5 -3.9
TOIG Toxpalan 1.48 298 eP Pn 11 33 06.2 -1.1
HUIG Huatulco 1.67 194 Pn 11 33 09.0 -0.5
HUIG Huatulco 1.67 194 iP Pn 11 33 09.2 -0.2
HUIG iS Sn 11 33 30.1 -1.0
YOIG Yosondua 1.85 253 eP Pn 11 33 12.6 +0.5
TPIG Tehuac#an 1.89 303 Pn 11 33 12.1 -0.3
TPIG Tehuac#an 1.89 303 eP Pn 11 33 12.1 -0.3
PEIG Puerto Escondi 1.97 225 eP Pn 11 33 12.8 -0.5
HLIG Huajuapan de L 2.06 282 eP Pn 11 33 15.0 +0.4
HLIG eS Sn 11 33 38.5 -1.8
FTIG Fresnillo de T 2.38 283 eP Pn 11 33 19.6 +0.9
PNIG Pinotepa 2.53 247 Pn 11 33 20.0 -0.7
PNIG Pinotepa 2.53 247 eP Pn 11 33 20.0 -0.7
TLIG Tlapa 2.75 274 Pn 11 33 25.5 +1.9
TLIG Tlapa 2.75 274 Pn 11 33 25.1 +1.5
TLIG Tlapa 2.75 274 eP Pn 11 33 25.1 +1.5
PCIG 2.91 125 Pn 11 33 27.0 +1.4
PCIG 2.91 125 eP Pn 11 33 27.0 +1.4
CCIG Comitan 3.58 107 Pn Pn 11 33 37.5 +2.7
CCIG Sn 11 34 17.9 +1.5
TEIG Tepich 7.57 67 Pn Pn 11 34 28.1 -0.5
TEIG Sn Sn 11 35 47.2 -5.6
YNE Yellowstone No 30.03 339 P P 11 38 45.5 +5.1
LONY Lake Ozonia 32.42 29 P P 11 39 08.3 +7.2
EGMT Eagleton 32.65 342 P P 11 39 07.5 +4.3

IDC 19 11:41:48.9±1.9, 1.99S×128.45E, h45km±20km, mb4.1/14, mb1 4.2/19, mb1mx4.0/42, mbtmp4.3/19, ML4.3/5, MS3.1/4, Ms1 3.1/4, ms1mx2.8/38, Error ellipse: s-maj=16.2km s-min=12.3km az=106.0
DJA 19 11:41:48.4±1.1, 2°S±2°×12°8E±°, h29km±11km, M4.5/15, mb4.7/14, mB5.2/6, MLv4.5/15, Mw(mB)4.5/6
NEIC 19 11:41:49.2±1.8, 2.01S±0.09×128.46E±0.04, h49km±8km, mb4.5/25, Error ellipse: s-maj=14.2km s-min=2.9km az=160.0
ISC 19 11:41:48.0±0.4, 2.01S±0.04×128.43E±0.05, h34km, n75, σ2.00/80, mb4.5/25, Ceram Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSAI Masohi 1.42 159 P Pb 11 42 14.2 +0.2
MSAI S Sb 11 42 34.1 +2.3
LBMI Labuha 1.64 326 P Pn 11 42 13.7 -0.8
LBMI S Sn 11 42 32.7 -1.7
AAI Ambon 1.69 188 P Pb 11 42 17.4 -1.0
NLAI Namlea 1.81 227 P Pn 11 42 17.1 +0.4
SANI Sanana 2.44 269 P Pn 11 42 22.2 -3.2
BNDI Bandanaira 2.90 149 P Pn 11 42 33.3 +1.5
TNTI Ternate 2.96 339 P Pn 11 42 32.5 0.0
SWI Sorong 3.05 68 P Pn 11 42 34.6 +0.8
SIJI Sorong 3.06 68 P Pn 11 42 34.0 +0.1
18nm,0.3s,baz=58,slow=17,SNR=80
SIJI S Sn 11 43 09.6 +0.3
57nm,0.3s,baz=356,slow=21,SNR=39
SIJI LR LR 11 44 06.5
comp=Z,451nm,18.0s,baz=5.5,slow=45
FAKI Fak Fak 3.93 103 P Pn 11 42 46.4 +0.5
KMSI Cibinong 5.13 300 P Pn 11 43 01.4 -1.1
1.9nm3μm92nm,0.5s
LUWI Luwuk 5.73 280 P Pn 11 43 10.5 -0.2
0.7nm2μm66nm,0.7s
RKPI Ransiki, Papua 5.77 85 P Pn 11 43 13.4 +2.2
1.5nm43nm,1.0s
APSI Ampana 6.86 279 P Pn 11 43 25.4 -0.9
0.6nm2μm122nm,0.6s
MRSI Marisa 6.94 291 P Pn 11 43 27.7 +0.4
0.2nm35nm,0.5s
BNSI Bone 8.64 254 P Pn 11 43 52.7 +2.0
39nm,0.7s
MPSI Mapaga 8.84 285 P Pn 11 43 53.0 -0.4
501nm18nm,0.7s
SPSI Sidrap Palu 8.86 257 P Pn 11 43 56.2 +2.5
91nm,0.8s
BKSI Bulukumba 8.92 248 P Pn 11 43 57.5 +3.0
2μm131nm,0.8s
KAPI Kappang 9.16 251 P Pn 11 43 59.8 +2.0
5.0nm,0.3s,baz=130,slow=10,SNR=5.4
KAPI LR LR 11 47 38.2
comp=Z,95nm,19.0s,baz=88,slow=38
KAPI Kappang 9.16 251 Pn 11 44 01.2 +3.4
JAY Jayapura 12.28 93 P Pn 11 44 41.9 +1.3
1.2nm,0.3s,baz=317,slow=18,SNR=3.1
JAY LR LR 11 50 56.6
comp=Z,80nm,19.1s,baz=220,slow=45
KNRA Kununurra 13.59 179 Pn Pn 11 44 59.7 +1.3
FITZ Fitzroy Crossi 16.23 190 P P 11 45 35.1 -1.1
0.6nm,0.3s,baz=30,slow=12,SNR=9.3
FITZ LR LR 11 52 20.6
comp=Z,66nm,18.3s,baz=350,slow=39
FITZ Fitzroy Crossi 16.23 190 P P 11 45 34.0 +0.6
PCJI Pacitan 18.24 250 P Pn 11 46 04.6 +6.0
WB0 Warramunga Arr 18.59 162 P P 11 46 01.2 -1.3
WB0 IAmb IAmb 11 46 04.3
comp=Z,27nm,1.3s
WRAB Tennant Creek 18.74 162 P P 11 46 02.9 -1.1
WRA Warramunga Arr 18.74 162 P P 11 46 02.4 -1.6
comp=Z,1.5nm,0.3s,baz=343,slow=13,SNR=62
WRA S Sn 11 49 25.2 -8.3
comp=Z,0.3nm,0.3s,baz=339,slow=19,SNR=2.8
WB2 Warramunga Arr 18.75 162 P P 11 46 02.6 -1.6
COEN Coen 18.80 130 P Pn 11 46 05.8 +0.4
COEN IAmb IAmb 11 46 18.2
comp=Z,43nm,1.5s
WR0 Warramunga Arr 18.82 162 P P 11 46 03.5 -1.4
KPJI Karang Pucung 20.13 254 P Pn 11 46 22.4 +1.1
comp=Z,26nm,1.3s
PSA00 Pilbara Seismi 21.17 203 P P 11 46 29.2 -1.2
AS31 Alice Springs 22.18 167 P P 11 46 40.9 -0.4
AS31 IAmb IAmb 11 46 44.5
comp=Z,9.2nm,0.5s
ASAR Alice Springs 22.18 167 P P 11 46 40.6 -0.7
comp=Z,13nm,0.4s,baz=347,slow=11,SNR=215
ASAR S S 11 50 34.6 -9.2
comp=Z,1.2nm,0.7s,baz=347,slow=21,SNR=7.2
KLSI 23.80 263 P P 11 46 59.5 +1.5
comp=Z,5.5nm,1.0s
MDSI Maura Dua 24.33 264 P P 11 47 03.8 +0.9
CTA Charters Tower 25.03 137 P P 11 47 10.2 +1.1
comp=Z,4.5nm,0.8s,baz=316,slow=12,SNR=6.2
FORT Forrest 28.62 181 P P 11 47 37.8 -3.6
BBOO Buckleboo 31.47 168 P P 11 48 06.5 0.0
BBOO IAmb IAmb 11 48 24.3
comp=Z,15nm,1.1s
STKA Stephens Creek 32.20 159 P P 11 48 13.1 +0.1
comp=Z,4.6nm,0.8s,baz=338,slow=11,SNR=5.5
STKA Stephens Creek 32.20 159 P P 11 48 13.4 +0.4
NWAO Narrogin (SRO) 32.51 198 P P 11 48 16.0 +0.4
CMAR Chiang Mai Arr 35.43 306 P P 11 48 41.3 0.0
comp=Z,0.4nm,0.3s,baz=125,slow=7.8,SNR=6.1
TOO Toolangi 38.72 158 P P 11 49 10.8 +1.9
KSRS Korea Array 39.26 359 P P 11 49 14.8 +2.0
comp=Z,3.3nm,0.7s,baz=179,slow=10,SNR=14
MJAR Matsushiro Arr 39.42 12 P P 11 49 14.0 -0.7
comp=Z,3.5nm,0.8s,baz=191,slow=10,SNR=8.7
USRK Ussuriysk Ar. 46.11 4 P P 11 50 09.1 +0.2
comp=Z,3.2nm,0.6s,baz=186,slow=6.4,SNR=7.0
TAPN Taplejung 48.86 310 eP P 11 50 30.8 -0.2
comp=Z,7.7nm,0.5s
ODAN Odare 48.87 309 eP P 11 50 31.0 +0.1
RAMN Ramite 49.53 309 eP P 11 50 36.0 0.0
comp=Z,27nm,0.6s
JIRN Jiri 50.19 309 eP P 11 50 41.1 -0.1
comp=Z,18nm,0.8s
GUN Gumba 50.55 309 eP P 11 50 43.6 -0.3
comp=Z,17nm,0.7s

DANN	Dangsing	52.41	309	eP	P	11 50 57.5	-0.2
	comp=Z,23nm,0.7s						
SONM	Songino Array	53.24	342	P	P	11 51 02.8	-0.5
	comp=Z,1.6nm,1.0s,baz=161,slow=7.9,SNR=9.0						
SONM				PcP	PcP	11 52 10.8	-0.1
	comp=Z,1.3nm,0.7s,baz=146,slow=3.1,SNR=7.1						
WHZ	Wether Hill Ro	55.72	147	P	P	11 51 22.5	+1.3
WHZ				IAmb	IAmb	11 51 26.2	
	comp=Z,14nm,1.4s						
PETK	Petropavlovsk-	60.14	20	P	P	11 51 53.0	+0.9
	comp=Z,3.7nm,0.6s,baz=187,slow=4.8,SNR=12						
MK31	Makanchi Array	63.22	326	P	P	11 52 12.6	-0.4
MK31				IAmb	IAmb	11 52 13.2	
	comp=Z,4.3nm,0.8s						
MKAR	Makanchi Array	63.22	326	P	P	11 52 12.4	-0.6
	comp=Z,6.6nm,0.7s,baz=124,slow=8.2,SNR=60						
MKAR				PcP	PcP	11 52 50.0	-0.2
	comp=Z,0.9nm,0.7s,baz=120,slow=6.0,SNR=3.7						
MAKZ	Makanchi	63.40	326	P	P	11 52 13.9	-0.3
KDJ	Kajisay	63.76	320	P	P	11 52 17.4	+0.5
KDJ				IAmb	IAmb	11 52 17.5	
	comp=Z,5.2nm,0.9s						
YAK	Yakutsk	63.87	1	P	P	11 52 17.8	+0.9
AAK	Ala-Archa	65.75	319	P	P	11 52 29.4	-0.4
	comp=Z,1.6nm,0.8s,baz=169,slow=7.9,SNR=5.1						
AAK	Ala-Archa	65.75	319	IAmb	IAmb	11 52 37.0	
	comp=Z,3.4nm,1.2s						
ZALV	Zalesovo Beam	66.44	334	P	P	11 52 32.2	-1.6
	comp=Z,1.0nm,0.3s,baz=106,slow=4.8,SNR=5.1						
KURK	Kurchatov	67.47	328	P	P	11 52 39.9	-0.5
BRVK	Borovoye	73.10	328	P	P	11 53 14.3	-0.5
BRVK				IAmb	IAmb	11 53 14.9	
	comp=Z,6.4nm,0.9s						
TIXI	Tiksi	73.53	0	P	P	11 53 17.2	+0.3
TIXI				IAmb	IAmb	11 53 17.9	
	comp=Z,3.7nm,1.2s						
NRIK	Noril'sk	76.37	346	P	P	11 53 31.7	-1.7
	comp=Z,1.8nm,0.3s,baz=141,slow=5.5,SNR=6.2						
QSPA	South Pole Qui	87.94	180	P	P	11 54 35.2	+1.0
QSPA				IAmb	IAmb	11 54 37.9	
	comp=Z,2.7nm,0.8s						
WRH	Wood River Hil	88.98	26	P	P	11 54 38.3	-0.6
WRH				IAmb	IAmb	11 54 38.7	
	comp=Z,2.0nm,0.9s						
DHY	Denali Highway	89.14	27	P	P	11 54 40.5	+0.5
DHY				IAmb	IAmb	11 54 49.4	
	comp=Z,4.1nm,1.2s						
ILAR	Eielson Array	89.53	25	P	P	11 54 40.0	-1.6
	comp=Z,0.6nm,0.6s,baz=245,slow=5.2,SNR=12						
TORD	Torodi Ar. Bea	126.16	285	PKP	PKPdf	12 00 47.0	-0.9
	comp=Z,0.8nm,0.8s,baz=41,slow=1.4,SNR=3.0						

DDA 19 11:42:22.5, 35°.45N×27°.53E, h43km±5km, MW3.5
NIC 19 11:42:23.3±0.0, 35°.44N×27°.63E, h16km±4km, Ml3.6/2
ATH 19 11:42:24.9, 35°.68N×27°.38E, h33km±1km, ML3.3/13, Error ellipse: s-maj=2.6km s-min=0.9km az=140.0
HLW 19 11:42:24.8, 35°.23N×27°.61E, h10km±22km, Md3.7, Ml3.7
ISK 19 11:42:25.2, 35°.64N×27°.43E, h28km, ML3.3/20
THE 19 11:42:26.4, 35°.69N×27°.42E, h16km±1km, ML3.3/7, Error ellipse: s-maj=2.1km s-min=0.8km az=148.0
ISC 19 11:42:24.0±1.1, 35°.52N±0°.03×27°.53E±0°.03, h33km±3km, n102, σ1s39/133, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.30	276	P	Pb	11 42 31.8	-0.1
KARP				S	Sb	11 42 37.0	-0.3
	19µm,0.3s						
KARP	Karpathos	0.30	276	P	Pb	11 42 31.8	-0.1
KARP				S	Sb	11 42 37.0	-0.3
KARP				AML	AML	11 42 37.8	
	comp=N,40949µm,0.2s						
KARP				AML	AML	11 42 38.7	
	comp=E,35570µm,0.4s						
KARP	Karpathos	0.30	276	PG	Pb	11 42 31.9	-0.1
KARP				SG	Sb	11 42 37.1	-0.3
KARP	Karpathos	0.30	276	P	Pb	11 42 31.8	-0.1
KARP				S	Sb	11 42 37.2	-0.1
KARP				AML	AML	11 42 37.3	
	comp=E,41nm,0.2s						
KARP				AML	AML	11 42 37.3	
	comp=E,41nm,0.2s						
KARP				AML	AML	11 42 38.3	
	comp=E,32nm,0.3s						
KARP				AML	AML	11 42 38.3	
	comp=E,32nm,0.3s						
ARG	Arkhangelos	0.85	34	P	Pb	11 42 40.8	+0.4
ARG				S	Sn	11 42 52.3	+1.4
	comp=E,2µm,0.6s						
ARG	Arkhangelos	0.85	34	P	Pb	11 42 40.7	+0.4
ARG				S	Sn	11 42 52.5	+1.6
ARG				AML	AML	11 42 58.9	
	comp=N,3423µm,0.6s						
ARG				AML	AML	11 43 01.5	
	comp=E,3168µm,0.8s						
ARG	Arkhangelos	0.85	34	PG	Pb	11 42 40.8	+0.4
ARG				SG	Sn	11 42 52.4	+1.5
ARG	Arkhangelos	0.85	34	P	Pb	11 42 40.7	+0.4
ARG				S	Sn	11 42 52.5	+1.6
NISR	Nisiros	1.14	343	P	Pn	11 42 43.3	-0.4
NISR				AML	AML	11 43 07.5	
	comp=E,1371µm,0.3s						
NISR				AML	AML	11 43 11.6	
	comp=N,976µm,0.5s						
ZKR	Zakros	1.15	250	P	Pn	11 42 44.9	+1.2
ZKR				S	Sb	11 43 02.4	+2.4
	comp=N,1µm,0.5s						
ZKR	Zakros	1.15	250	P	Pn	11 42 45.2	+1.5
ZKR				S	Sb	11 43 00.9	+0.9
ZKR				AML	AML	11 43 07.9	
	comp=E,3468µm,0.7s						
ZKR				AML	AML	11 43 08.5	
	comp=N,2268µm,0.4s						
ZKR	Zakros	1.15	250	PN	Pb	11 42 45.3	-0.1
ZKR	Zakros	1.15	250	P	Pb	11 42 45.3	-0.1
ZKR				S	Sb	11 43 02.6	+2.7
ZKR				AML	AML	11 43 07.6	
	comp=N,3.5nm,0.7s						
ZKR				AML	AML	11 43 07.6	
	comp=N,3.5nm,0.7s						
ZKR				AML	AML	11 43 08.3	
	comp=N,2.3nm,0.4s						
ZKR				AML	AML	11 43 08.3	
	comp=N,2.3nm,0.4s						
DAT	Datca	1.21	2	PN	Pn	11 42 45.1	+0.4
DAT	Datca	1.21	2	iP	Pn	11 42 44.8	0.0
DAT				iS	Sb	11 43 02.4	+0.5
STIA	Sitia Lasithi	1.22	256	P	Pn	11 42 46.4	-0.2
STIA				S	Sb	11 43 02.5	+0.5
DATC	Datca-Mugla	1.25	5	PN	Pn	11 42 45.5	+0.4
MRSB	Marmaris-Mugla	1.31	24	PN	Pn	11 42 47.1	-1.1
BODT	Bodrum	1.56	353	P	Pn	11 42 49.3	-0.1
BODT	Bodrum	1.56	353	PN	Pn	11 42 49.6	+0.2
DALY	Dalyan (Mula)	1.58	35	PN	Pb	11 42 51.4	-1.3
DALY	Dalyan (Mula)	1.58	35	iP	Pb	11 42 50.7	+0.9
DALY				iS	Sb	11 43 15.4	+3.0
DALY				IAML		11 43 20.0	
	comp=N,256nm,0.8s						
DALY				IAML		11 43 21.0	
	comp=E,178nm,1.0s						
NPS	Neapolis	1.59	261	P	Pb	11 42 52.3	-0.5
NPS	Neapolis	1.59	261	P	Pb	11 42 52.3	-0.5
NPS				S	Sb	11 43 10.0	+0.8
NPS				AML	AML	11 43 20.6	
	comp=E,2347µm,0.4s						
NPS				AML	AML	11 43 22.0	
	comp=N,2328µm,0.5s						
TURN	Turunc	1.61	32	PN	Pn	11 42 48.5	-1.6
TURN	Turunc	1.61	32	iP	Pn	11 42 49.4	-0.6
TURN				iS	Sn	11 43 09.2	-0.4
TURN				IAML		11 43 12.0	
	comp=E,201nm,0.6s						
TURN				IAML		11 43 15.0	
	comp=N,178nm,0.7s						
FETY	Fethiye	1.68	48	PN	Pb	11 42 53.2	-1.2
FETY	Fethiye	1.68	48	iP	Pb	11 42 52.4	+1.3
LAST	Lasithi	1.72	259	P	Pn	11 42 54.6	-0.4
LAST	Lasithi	1.72	259	P	Pn	11 42 53.8	+2.2
LAST				AML	AML	11 43 23.4	
	comp=E,1249µm,0.6s						
LAST				AML	AML	11 43 31.1	
	comp=N,974µm,0.6s						
YER	Yerkesik	1.73	20	P	Pb	11 42 53.5	-1.7
YER	Yerkesik	1.73	20	PN	Pb	11 42 53.2	-2.0
AKAS	Kas	1.83	66	PN	Pb	11 42 55.9	-1.1
AKAS	Kas	1.83	66	iP	Pn	11 42 54.1	+0.8
AKAS				iS	Sn	11 43 16.9	+1.6
AKAS				IAML		11 43 21.0	
	comp=N,105nm,0.5s						
AMGA	Amorgos Island	1.87	315	P	Pn	11 42 53.6	-0.1
AMGA				S	Sn	11 43 14.8	-1.3
	comp=N,800nm,0.9s						
AMGA	Amorgos Island	1.87	315	P	Pn	11 42 53.6	-0.1
AMGA				S	Sn	11 43 15.1	-1.0
AMGA				AML	AML	11 43 26.3	
	comp=E,1785µm,0.6s						
AMGA				AML	AML	11 43 26.4	
	comp=N,1279µm,0.5s						
SANT	Santorini	1.89	298	P	Pn	11 42 54.5	+0.6
SANT	Santorini	1.89	298	P	Pn	11 42 54.1	+0.1
SANT				AML	AML	11 43 26.5	
	comp=E,1454µm,0.4s						
SANT				AML	AML	11 43 27.8	
	comp=N,543µm,0.5s						
SANT	Santorini	1.89	298	PN	Pn	11 42 54.6	+0.6
THT1	Athinios (Pele	1.92	298	P	Pn	11 42 54.6	+0.4
THR6	Thira Island,	1.93	296	P	Pn	11 42 55.1	+0.7
THR6	Thira Island,	1.93	296	P	Pn	11 42 55.4	+1.0
SAP1	Santorini-Akro	1.93	296	P	Pn	11 42 55.3	+0.8
SAP1				S	Sn	11 43 17.6	+0.1
	comp=N,2µm,0.6s						
SAP1	Santorini-Akro	1.93	296	P	Pn	11 42 55.4	+1.0
SAP1				S	Sn	11 43 17.2	-0.3
THR3	Thira Island,	1.95	298	P	Pn	11 42 55.2	+0.5
THR3	Thira Island,	1.95	298	P	Pn	11 42 55.1	+0.4
THR5	Thira Island,	1.99	298	P	Pn	11 42 55.9	+0.6
THR5	Thira Island,	1.99	298	P	Pn	11 42 55.5	+0.2
AYDN	Tasoluk	2.16	7	iP	Pn	11 42 58.6	+0.9
AYDN				iS	Sb	11 43 26.1	-2.8
IDI	Anoyia	2.17	265	P	Pn	11 42 59.3	+1.4
IDI				AML	AML	11 43 34.3	
	comp=N,738µm,0.4s						
IDI				AML	AML	11 43 34.5	
	comp=E,942µm,0.5s						
IDI	Anoyia	2.17	265	PN	Pn	11 42 59.6	+1.7
IOSP	Ios island	2.18	304	P	Pn	11 42 57.9	-0.1
IOSP				S	Sn	11 43 22.6	-1.2
	comp=E,445nm,0.3s						
IOSP	Ios island	2.18	304	P	Pn	11 42 57.8	-0.1
IOSP				S	Sn	11 43 21.9	-1.9
IOSP				AML	AML	11 43 24.2	
	comp=N,1009µm,0.4s						
IOSP				AML	AML	11 43 29.0	
	comp=E,782µm,0.6s						
APE	Apeiranthos	2.24	314	P	Pn	11 42 59.0	+0.2
APE				S	Sn	11 43 24.4	-1.0
	comp=E,382nm,0.5s						
APE	Apeiranthos	2.24	314	P	Pn	11 42 59.0	+0.2
APE				S	Sn	11 43 24.3	-1.0
APE				AML	AML	11 43 26.3	
	comp=N,926µm,0.5s						
APE				AML	AML	11 43 26.6	
	comp=E,587µm,0.5s						
APE	Apeiranthos	2.24	314	PN	Pn	11 42 59.1	+0.2
TAVA	DENIZLI_Tavas	2.24	29	iP	Pn	11 42 60.0	+1.1
TAVA				IAML		11 43 35.0	
	comp=E,100nm,1.1s						
TAVA				IAML		11 43 35.0	
	comp=N,139nm,0.8s						
SMG	Samos	2.26	346	P	Pn	11 42 58.8	-0.3
ELL	Elmali	2.28	57	PN	Pn	11 43 02.0	+2.5
SIVA	Sivas	2.28	258	P	Pn	11 43 01.3	+2.0
SIVA				AML	AML	11 43 36.2	
	comp=N,759µm,0.6s						
SIVA				AML	AML	11 43 47.2	
	comp=E,1483µm,0.6s						
GOLH	Golhisar	2.37	43	iP	Pn	11 43 02.6	+1.9
GOLH				IAML		11 43 42.0	
	comp=N,142nm,0.7s						
GOLH				IAML		11 44 32.0	
	comp=E,92nm,2.9s						
AKUM	Antalya-Kumluc	2.42	70	iP	Pn	11 43 02.3	+1.1
AKUM				iS	Sn	11 43 30.6	+0.9
AYDB	Zeytinkoy-Aydi	2.44	7	PN	Pn	11 43 02.7	+1.0
VAM	Vamos	2.72	269	P	Pn	11 43 07.3	+1.9
BLCB	Balcova	2.89	352	PN	Pn	11 43 08.8	+1.1
IMMV	Iera Moni Meta	2.90	270	P	Pn	11 43 09.8	+1.9
IMMV	Iera Moni Meta	2.90	270	P	Pn	11 43 09.7	+1.9
IMMV	Iera Moni Meta	2.90	270	PN	Pn	11 43 09.7	+1.9
GVD	Gavdhos	2.90	258	P	Pn	11 43 10.0	+2.2
GVD	Gavdhos	2.90	258	PN	Pn	11 43 10.2	+2.3
URLA	Izmir	2.94	345	PN	Pn	11 43 09.3	+0.9
RODP	Rodopos	3.08	272	P	Pn	11 43 12.8	+2.5
MANT	Manisa	3.08	15	iP	Pn	11 43 11.9	+1.4
CHOS	Chios island	3.10	338	P	Pn	11 43 11.4	+0.8
CHOS	Chios island	3.10	338	PN	Pn	11 43 11.6	+0.9
KHAL	Karahalli	3.25	28	iP	Pn	11 43 13.7	+0.9
KHAL				IAML		11 43 59.0	
	comp=N,23nm,0.8s						
KHAL				IAML		11 43 59.0	
	comp=E,28nm,0.9s						
ANKY	Antikythira Is	3.46	277	P	Pn	11 43 17.1	+1.5
KARY	Karystos	3.53	316	P	Pn	11 43 17.7	+1.1
KEPZ	Antalya-Kepez	3.57	66	iP	Pn	11 43 18.6	+1.5
KEPZ				iS	Sn	11 44 00.6	+2.4
KEPZ				IAML		11 44 03.0	
	comp=N,21nm,0.5s						
KEPZ				IAML		11 44 03.0	
	comp=E,26nm,0.6s						
KTHA	Kythira Island	3.71	283	P	Pn	11 43 20.2	+1.2
KTHA	Kythira Island	3.71	283	PN	Pn	11 43 20.8	+1.9
VLI	Veliai	3.91	289	P	Pn	11 43 23.5	+1.8
VLI				AML	AML	11 44 11.9	
	comp=E,183µm,0.5s						
VLI				AML	AML	11 44 14.9	
	comp=N,220µm,0.5s						
GAZI	Gazipasa	3.95	78	iP	Pn	11 43 22.1	-0.2
GAZI				IAML		11 44 07.0	
	comp=E,31nm,0.8s						
GAZI				IAML		11 44 08.0	
	comp=N,42nm,0.5s						
DID	Didima	3.99	301	P	Pn	11 43 24.5	+1.6
ALFC	Alefka	4.16	93	P	Pn	11 43 24.7	-0.5
VIL2	Platees	4.35	309	P	Pn	11 43 29.2	+1.4
DYR	Agios Nikonas	4.39	288	P	Pn	11 43 30.4	+2.1
SLUM	Salum	4.46	206	P	Pn	11 43 29.5	+0.3
	baz=209						
SLUM				S	Sn	11 44 14.1	-5.8
	baz=209						
MRKA	Markates	4.48	316	P	Pn	11 43 30.5	+0.9
OSC2	CSNet OBS 4	4.61	120	P	Pn	11 43 32.2	+0.8
OSC2				S	Sn	11 44 24.6	+0.9
PYL	PYLOS	4.88	288	P	Pn	11 43 37.2	+2.1
HNAT	Natroun	6.42	155	P	Pn	11 43 56.5	+0.3
	baz=154						
SWA2		6.50	196	P	Pn	11 43 57.6	+0.3
	baz=198						
KOT	Kottamia	6.64	146	P	Pn	11 43 57.8	-1.6
	baz=144						
HSAF	As Saff	6.79	149	P	Pn	11 44 01.1	-0.2
	baz=148						
GLL	Jalalah	6.89	148	P	Pn	11 44 02.4	-0.4
	baz=147						
RSH		6.89	129	P	Pn	11 44 01.9	-0.8
	baz=128						
SUZ	Suez	7.21	140	P	Pn	11 44 06.9	-0.1
	baz=139						
NBNS	Bani Suef	7.58	154	P	Pn	11 44 11.1	-1.0
	baz=153						
NBNS				S	Sn	11 45 31.9	-5.0
	baz=153						
HFRF	Wahat Farafira	8.37	175	P	Pn	11 44 22.3	-0.7
	baz=175						
HFRF				AMP		11 45 00.0	
	baz=175						
HFRF				S	Sn	11 45 48.9	-7.4
	baz=175						
HKAT	Jabal Katrina	8.87	140	P	Pn	11 44 28.6	-1.4
	baz=139						
HKAT				AMP		11 46 00.0	
	baz=139						
HKAT				S	Sn	11 46 00.9	-8.0
	baz=139						
HHRG	Al Ghardaqah	9.74	146	P	Pn	11 44 42.9	+1.0
	baz=146						

SKHL 19 11:53:35.6±2.4, 47°.97N×155°.30E, h40km±5km, mb4.6/9
KRSC 19 11:53:35.8±1.8, 48°.28N×156°.29E, h6km±52km, ML4.4
MOS 19 11:53:35.6±1.4, 48°.02N×155°.11E, h44km, mb4.4/14, Error ellipse: s-maj=8.6km s-min=5.8km az=67.5
NEIC 19 11:53:37.5±2.0, 48°.17N±0°.06×155°.0E±0°.2, h35km±1km, mb4.2/15, Error ellipse: s-maj=19.0km s-min=9.3km az=288.0
IDC 19 11:53:38.9±2.6, 48°.27N×154°.92E, h47km±24km, mb3.6/17, mb1 3.8/20, mb1mx3.7/38, mbtmp3.9/20, ML3.6/3, MS3.3/3, Ms1 3.3/3, ms1mx2.9/34, Error ellipse: s-maj=22.9km s-min=13.7km az=143.0
ISC 19 11:53:36.2±0.6, 48°.08N±0°.06×155°.24E±0°.07, h33km, n126, σ1s59/128, mb4.1/29, 6C-7D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.67	12	P	Pn	11 54 16.6	-0.2
SKR				S	Sn	11 54 47.6	-0.5
SKR	Severo-Kuril's	2.67	12	iP	Pn	11 54 16.8	0.0
SKR				AMB	AMB	11 54 23.3	
	162nm,0.7s						
SKR				eS	Sn	11 54 47.5	-0.5
SKR				A	A	11 54 59.0	
	374nm,0.7s						
SKR				A	A	11 54 59.0	
	261nm,0.7s						
SKR	Severo-Kuril's	2.67	12⇓	iPN	Pn	11 54 19.6	+2.8
SKR				eS	Sb	11 54 53.0	-2.6
SKR				pmax	pmax		
	comp=Z,163nm,0.7s						
SKR				smax	smax		
	comp=E,262nm,0.6s						
SKR				smax	smax		
	comp=N,374nm,0.9s						
SKR				MLR	MLR		
	comp=Z,500nm,12.0s						
SKR				MLR	MLR		
	comp=N,1µm,15.0s						
SKR				MLR	MLR		
	comp=E,900nm,16.0s						
SKR				MLR	MLR		
	comp=Z,200nm,14.0s						
SKR				MLR	MLR		
	comp=N,400nm,16.0s						
SKR				MLR	MLR		
	comp=E,400nm,13.0s						
ALID	Alaid	2.80	4	P	Pn	11 54 19.6	+0.8
PAU	Pauzhetka	3.54	16	eP	Pn	11 54 29.6	+0.8
PAU				eS	Sn	11 55 08.6	-1.0
PAU	Pauzhetka	3.54	16	eP	Pn	11 54 30.1	+1.3
PAU				eS	Sn	11 55 10.2	+0.6
KDTR	Khodutka, Kamc	4.16	25	S	Sn	11 55 21.4	-3.4
ASAK	Asacha	4.64	21	eP	Pn	11 54 44.4	+0.5
MTVR	Mutnovka	4.80	22	eP	Pn	11 54 45.9	-0.3
GRL	Gorelyy	4.84	21	eP	Pn	11 54 47.2	+0.5
RUS	Russkaya	4.84	24	P	Pn	11 54 46.5	-0.1
RUS				S	Sn	11 55 39.6	-1.9
APC	Apacha	5.01	13	P	Pn	11 54 51.0	+2.1
KRMR	Karymshinskiy	5.11	20	P	Pn	11 54 51.4	+1.1
PEA0B	Petropavlovsk-	5.28	16	Pn	Pn	11 54 53.8	+1.2
PEA0B	Petropavlovsk-	5.28	16c	ePN	Pn	11 54 54.5	+1.9
PETK	Petropavlovsk-	5.28	16	P	Pn	11 54 53.5	+0.9
	comp=E,1.5nm,0.3s,baz=179,slow=13,SNR=34						
PETK				LR	LR	11 57 08.0	
	comp=E,224nm,21.0s,baz=247,slow=41						
PET	Petropavlovsk	5.41	22	eP	Pn	11 54 56.4	+1.9
PET				AMB	AMB	11 55 00.6	
	comp=E,40nm,0.8s						
PET				eS	Sn	11 55 55.0	-0.5
PET				A	A	11 56 17.0	
	comp=E,110nm,0.7s						
PET				A	A	11 56 17.0	
	comp=E,90nm,0.7s						
PET	Petropavlovsk	5.41	22	Pn	Pn	11 54 55.2	+0.7
PET	Petropavlovsk	5.41	22	ePN	Pn	11 54 59.6	+5.2
DALK	Dalny	5.44	23	eP	Pn	11 54 54.8	-0.1
UGLR	Uglovaya	5.62	23	P	Pn	11 54 59.4	+1.9
AVH	Avacha	5.65	22	eP	Pn	11 54 59.9	+2.0
KOK	Koryaka	5.65	21	P	Pn	11 54 59.4	+1.5
SMAR	Somma	5.67	22	P	Pn	11 55 00.1	+1.9
SDLR	Sedlovina	5.70	23	eP	Pn	11 54 58.8	+0.2
KRX	Arik	5.72	21	P	Pn	11 55 00.5	+1.7
KUR	Kuril'sk	5.81	243	iP	Pn	11 55 01.7	+1.7
KUR				AMB	AMB	11 55 02.2	
	comp=E,117nm,0.5s						
KUR				eS	Sn	11 56 06.5	+1.0
KUR				A	A	11 56 32.1	
	comp=E,92nm,0.6s						
KUR				A	A	11 56 32.1	
	comp=E,29nm,0.6s						
KUR	Kuril'sk	5.81	243c	iPN	Pn	11 55 01.7	+1.7
KUR				eS	Sn	11 56 06.5	+1.0
KUR				pmax	pmax		
	comp=Z,117nm,0.5s						
KUR				pmax	pmax		
	comp=N,41nm,0.3s						
KUR				pmax	pmax		
	comp=E,9.0nm,0.3s						
KUR				smax	smax		
	comp=N,92nm,0.6s						
KUR				smax	smax		
	comp=E,29nm,0.6s						
SHO	Shikotan	7.21	237	iP	Pn	11 55 16.0	-3.2
SHO				AMB	AMB	11 55 17.0	
	comp=E,5.0nm,0.4s						
SHO				AMB	AMB	11 55 17.0	
	comp=E,18nm,0.4s						
SHO	Shikotan	7.21	237⇓	iPN	Pn	11 55 16.9	-2.3
SHO				pmax	pmax		
	comp=Z,36nm,0.4s						
SHO				pmax	pmax		
	comp=N,5.0nm,0.3s						
YUK	Yuzh-Kuril'sk	7.67	242	eP	Pn	11 55 25.3	-0.2
YUK				AMB	AMB	11 55 28.0	
	comp=N,22nm,0.3s						
YUK	Yuzh-Kuril'sk	7.67	242	ePN	Pn	11 55 25.8	+0.3
YUK				pmax	pmax		
	comp=N,45nm,0.2s						
YUK				pmax	pmax		
	comp=Z,219nm,0.2s						
GRPR	Tuman	7.75	242	eP	Pn	11 55 26.0	-0.5
GRPR				AMB	AMB	11 55 29.0	
	comp=Z,38nm,0.5s						
GRPR	Tuman	7.75	242	ePN	Pn	11 55 26.7	+0.2
GRPR				pmax	pmax		
	comp=Z,79nm,0.5s						
GRPR				pmax	pmax		
	comp=N,74nm,0.3s						
GRPR				pmax	pmax		
	comp=E,61nm,0.3s						
GLVR	Golovnino	8.04	241	eP	Pn	11 55 30.0	-0.5
GLVR	Golovnino	8.04	241	ePN	Pn	11 55 30.1	-0.5
NMR	Nemuro--Hokkai	8.15	238	iP	Pn	11 55 29.0	-3.0
NMR				eS	Sn	11 56 57.0	-5.9
NMR	Nemuro--Hokkai	8.15	238⇑	iPN	Pn	11 55 29.9	-2.1
YSS	Yuzh-Sakhalins	8.53	267	eP	Pn	11 55 40.1	+2.9
YSS				AMB	AMB	11 55 41.0	
	comp=E,20nm,0.8s						
YSS	Yuzh-Sakhalins	8.53	267	ePN	Pn	11 55 40.1	+2.9
YSS				eS	Sn	11 57 14.6	+2.5
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,200nm,13.0s						
YSS				MLR	MLR		
	comp=E,100nm,12.0s						
TYV	Tymovskoe	8.65	293	eP	Pn	11 55 41.4	+2.4
TYV				AMB	AMB	11 55 42.3	
	comp=E,6.0nm,0.9s						
TYV	Tymovskoe	8.65	293	ePN	Pn	11 55 41.4	+2.4
TYV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
UGL	Uglegorsk	8.79	281	eP	Pn	11 55 43.2	+2.4
UGL				AMB	AMB	11 55 45.0	
	comp=Z,30nm,0.5s						
UGL	Uglegorsk	8.79	281	ePN	Pn	11 55 33.5	-7.3
UGL				pmax	pmax		
	comp=Z,35nm,0.5s						
OKH	Okha	9.52	310	erx	rx	11 55 43.7	
JKA	Kamikawa-asahi	9.63	250	eP	Pn	11 55 54.5	+2.1
JKA	Kamikawa-asahi	9.63	250		Pn	11 55 54.5	+2.1
ASAJ	Asahikawa	9.63	250	P	Pn	11 55 54.5	+2.1
	comp=Z,3.6nm,0.3s,baz=68,slow=13,SNR=33						
ERM	Erimo	10.47	239	Pn	Pn	11 56 03.9	0.0

ERM Erimo 10.47 239 PN Pn 11 56 03.9 0.0
MA2 Magadan 11.82 349 Pn Pn 11 56 22.9 +0.8
MA2 Magadan 11.82 349 PN Pn 11 56 23.0 +0.8
SEY Seymchan 14.98 355 eP P 11 57 07.8 -2.5
SEY Seymchan 14.98 355⇑eP P 11 57 07.8 -2.5
KLR Kul'dur 15.55 283 P P 11 57 14.8 -2.0
comp=Z,0.1nm,0.3s,baz=104,slow=12,SNR=2.9
USA0B Ussuriysk Arra 16.55 265 iP Pn 11 57 27.0 +1.4
USRK Ussuriysk Ar. 16.55 265 P Pn 11 57 25.8 +0.1
baz=68,slow=14,SNR=6.5
MJA0 Matsu Arr-Jizo 17.01 234 eP Pn 11 57 28.5 -2.9
MJAR Matsushiro Arr 17.03 234 P Pn 11 57 28.5 -3.2
comp=Z,0.1nm,0.3s,baz=29,slow=13,SNR=5.2
MJAR LR LR 12 04 32.5
comp=Z,82nm,18.6s,baz=280,slow=38
MJB9 Matsu-Tunnel 17.03 234 Pn 11 57 32.5 +0.8
MJB9 IAmb IAmb 11 57 46.0
comp=Z,9.7nm,0.9s
MAJO Matsushiro 17.03 234 Pn 11 57 32.5 +0.8
MAJO Matsushiro 17.03 234⇓eP Pn 11 57 31.6 -0.1
YAK Yakutsk 20.05 324 eP Pn 11 58 07.5 -0.5
YAK Yakutsk 20.05 324⇓eP Pn 11 58 07.5 -0.5
BILL Bilibino 20.79 12⇑eP P 11 58 13.1 -1.0
BILL e 11 58 36.0
BILL pmax pmax
comp=Z,2.0nm,0.9s
KSRS Korea Array 22.57 252 P P 11 58 33.5 -0.1
comp=Z,4.1nm,0.5s,baz=49,slow=10.0,SNR=20
KSRS Korea Array 22.57 252 eP P 11 58 33.6 +0.1
KSRS Korea Array 22.57 252 eP P 11 58 33.6 +0.1
KSRS pmax pmax
comp=Z,4.0nm,0.5s
KS19 Wonju Array Si 22.58 252 P P 11 58 36.7 +3.1
KS19 IAmb IAmb 11 58 37.3
comp=Z,14nm,1.2s
JNU Nakatsue 23.64 240 LR LR 12 08 04.8
comp=Z,92nm,18.3s,baz=118,slow=37
TIXI Tiksi 26.63 342 P P 11 59 09.3 -1.9
comp=Z,0.6nm,0.4s,baz=122,slow=8.7,SNR=4.3
TIXI Tiksi 26.63 342 P P 11 59 07.9 -3.3
TIXI Tiksi 26.63 342⇓eP P 11 59 10.2 -1.0
TIXI pmax pmax
comp=Z,2.0nm,0.8s
H11N2 WAKE ISLAND Hy 29.81 157 T T 12 31 21.9
baz=340
H11N1 WAKE ISLAND Hy 29.83 158 T T 12 31 22.5
baz=340,slow=74
H11N3 WAKE ISLAND Hy 29.83 157 T T 12 31 22.3
baz=340,slow=74
H11S1 WAKE ISLAND Hy 30.94 158 T T 12 32 46.8
baz=344,slow=76
H11S3 WAKE ISLAND Hy 30.95 159 T T 12 32 42.8
baz=344,slow=76
H11S2 WAKE ISLAND Hy 30.95 158 T T 12 32 56.4
baz=344,slow=76
SONM Songino Array 32.27 288 P P 12 00 00.1 -1.6
comp=Z,0.3nm,0.4s,baz=81,slow=8.9,SNR=2.6
TLY Talaya 32.87 296 eP P 12 00 06.3 -0.5
TLY Talaya 32.87 296⇑eP P 12 00 06.3 -0.5
TLY pmax pmax
comp=Z,2.0nm,0.9s
ILAR Eielson Array 34.61 40 P P 12 00 21.9 +0.2
comp=Z,0.5nm,1.1s,baz=260,slow=9.1,SNR=2.7
INK Inuvik 39.75 33 P P 12 01 05.4 +0.3
comp=Z,0.6nm,0.9s,baz=288,slow=6.4,SNR=2.4
INK Inuvik 39.75 33 P P 12 01 05.5 +0.3
INK IAmb IAmb 12 01 24.2
comp=Z,5.2nm,1.4s
INK Inuvik 39.75 33 P P 12 01 05.5 +0.3
INK pmax pmax
comp=Z,5.0nm,1.5s
ZALV Zalesovo Beam 43.01 305 P P 12 01 30.2 -1.9
comp=Z,1.2nm,0.5s,baz=58,slow=7.8,SNR=4.2
ZALV Zalesovo Beam 43.01 305 eP P 12 01 31.4 -0.7
ZALV pmax pmax
comp=Z,1.0nm,0.5s
MK31 Makanchi Array 47.62 297 P P 12 02 06.8 -2.0
MK31 IAmb IAmb 12 02 08.0
comp=Z,2.4nm,0.7s
MK31 Makanchi Array 47.62 297 P P 12 02 06.8 -2.0
MK31 pmax pmax
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 47.62 297 P P 12 02 07.2 -1.5
comp=Z,2.5nm,0.6s,baz=68,slow=8.0,SNR=33
MAKZ Makanchi 47.79 297 P P 12 02 09.2 -0.8
MAKZ IAmb IAmb 12 02 10.4
comp=Z,1.0nm,0.6s
MAKZ Makanchi 47.79 297 P P 12 02 09.3 -0.8
MAKZ pmax pmax
comp=Z,1.0nm,0.6s
KURK Kurchatov 47.83 303 eP P 12 02 08.9 -1.4
KURK Kurchatov 47.83 303 P P 12 02 09.2 -1.1
KURK Kurchatov 47.83 303 diP P 12 02 08.9 -1.4
KURK pmax pmax
comp=Z,4.0nm,0.8s
YKA Yellowknife Ar 48.99 38 P P 12 02 20.2 +1.1
comp=Z,0.4nm,0.7s,baz=297,slow=7.6,SNR=6.1
BRVK Borovoye 51.17 309 eP P 12 02 34.4 -1.3
BRVK Borovoye 51.17 309 P P 12 02 34.8 -0.9
BRVK IAmb IAmb 12 02 35.0
comp=Z,2.1nm,0.6s
BRVK Borovoye 51.17 309⇓eP P 12 02 34.4 -1.3
BRVK pmax pmax
comp=Z,1.0nm,0.8s
CMAR Chiang Mai Arr 54.08 257 P P 12 02 58.5 +0.8
comp=Z,0.4nm,0.3s,baz=36,slow=7.8,SNR=5.6
CMAR Chiang Mai Arr 54.08 257 eP P 12 02 58.8 +1.1
SUMG Summit 59.27 5 iP P 12 03 35.2 +0.9
comp=Z,5.1nm,0.4s
SUMG Summit 59.27 5 P P 12 03 35.5 +1.2
SUMG Summit 59.27 5 P P 12 03 35.5 +1.2
SUMG pmax pmax
comp=Z,5.0nm,0.8s
FINES FINESS Array B 63.45 335 P P 12 04 01.4 -0.7
comp=Z,0.8nm,0.5s,baz=46,slow=8.0,SNR=7.5
FINES FINESS Array B 63.45 335 iP P 12 04 02.0 -0.1
FINES pmax pmax
comp=Z,1.0nm,0.3s
NC405 NORSAR Array S 67.25 342 P P 12 04 27.2 +0.3
NB2 NORSAR Subarra 67.43 342 P P 12 04 27.2 -0.8
comp=Z,0.3nm,0.5s,baz=26,slow=6.5
NOA NORSAR Array B 67.43 342 P P 12 04 27.7 -0.2
comp=Z,16nm,0.4s,baz=25,slow=6.3,SNR=4.2
WRA Warramunga Arr 70.25 201 P P 12 04 47.3 +1.4
comp=Z,0.9nm,1.0s,baz=18,slow=6.3,SNR=3.0
AKASG Malin Array Be 71.23 327 P P 12 04 50.5 -1.1
comp=Z,0.4nm,0.3s,baz=37,slow=6.0,SNR=5.2
SCHQ Schefferville 71.52 24 P P 12 04 55.5 +2.3
comp=Z,1.2nm,0.5s,baz=318,slow=4.5,SNR=6.9
ASAR Alice Springs 73.94 200 P P 12 05 09.2 +1.3
comp=Z,0.6nm,1.0s,baz=14,slow=6.1,SNR=3.2
OJC Ojcow 74.84 332 P P 12 05 13.7 +0.7
OJC Ojcow 74.84 332 P P 12 05 13.7 +0.7
OJC pmax pmax
comp=Z,12nm,1.4s
BUR08 Bucovina Ar. S 75.24 328 P P 12 05 15.8 +0.3
BUR08 IAmb IAmb 12 05 16.1
comp=Z,2.2nm,0.7s
TX32 Lajitas Array 75.59 62 P P 12 05 19.8 +2.0
TXAR Lajitas Array 75.59 62 P P 12 05 19.2 +1.4
comp=Z,0.4nm,0.6s,baz=302,slow=4.4,SNR=8.4
CLL Collm 75.84 337 iP P 12 05 19.8 +1.2
comp=Z,5.0nm,0.8s
CLL epP PcP 12 05 31.0 -0.1
CLL Collm 75.84 337 iP P 12 05 19.8 +1.2
CLL e 12 05 31.0
CLL pmax pmax
comp=Z,5.0nm,0.8s
MLR Muntele Rosu 76.79 326 P P 12 05 25.2 +0.8
MLR IAmb IAmb 12 05 26.1
comp=Z,3.7nm,0.6s
MLR Muntele Rosu 76.79 326 P P 12 05 25.2 +0.8
MLR pmax pmax
comp=Z,4.0nm,0.6s
GERES GERESS Array B 77.88 335 P P 12 05 30.6 +0.3
comp=Z,0.8nm,0.4s,baz=44,slow=4.1,SNR=9.2
BRTR Keskin Array B 78.39 318 P P 12 05 33.5 +0.1
comp=Z,2.3nm,1.0s,baz=62,slow=3.1,SNR=6.9
BRTR Keskin Array B 78.39 318 eP P 12 05 34.0 +0.6
BRTR pmax pmax
comp=Z,6.0nm,1.2s

MEX 19 12:03:33.0±1.0, 17.86N×99.73W, h57km±6km, MD4.0
ISC 19 12:03:31.6±1.0, 17.86N±0.03×99.74W±0.03, h54km±7km, n37, σ0.78/55, Guerrero

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MEIG Mezcala 0.13 62 Pn 12 03 40.1 -0.2
MEIG Sn 12 03 46.2 -0.1
MEIG Mezcala 0.13 62 eP Pn 12 03 40.0 -0.2
MEIG iS Sn 12 03 46.3 -0.1
PLIG Platanillo 0.57 23 Pn 12 03 44.2 0.0
PLIG Platanillo 0.57 23 iP Pn 12 03 44.2 0.0
PLIG iS Sn 12 03 53.1 -0.2
ARIG Puente Sto Nin 0.71 306 Pn 12 03 46.1 +0.4
ARIG Sn 12 03 56.3 +0.3
ARIG Puente Sto Nin 0.71 306 iP Pn 12 03 46.1 +0.4
ARIG eS Sn 12 03 56.3 +0.3
CAIG El Cayaco 0.95 212 Pn 12 03 48.6 -0.2
CAIG El Cayaco 0.95 212 iP Pn 12 03 48.6 -0.2
CAIG iS Sn 12 04 01.5 -0.1
ACP2 Acapulco 0.99 188 Pn 12 03 49.0 -0.4
ACP2 Sn 12 04 02.0 -0.4
ACP2 Acapulco 0.99 188 eP Pn 12 03 49.0 -0.4
ACP2 eS Sn 12 04 02.0 -0.4
MAVM Malinalco, Edo 1.11 12 Pn 12 03 50.8 -0.5
MAVM Sn 12 04 04.3 -1.4
MAVM Malinalco, Edo 1.11 12 eP Pn 12 03 50.8 -0.5
MAVM eS Sn 12 04 04.3 -1.4
HMTT Tlapaneco 1.13 93 iP Pn 12 03 49.4 -1.9
HMTT iS Sn 12 04 05.1 -0.8
TLIG Tlapa 1.16 105 Pn 12 03 52.3 +0.5
TLIG Sn Sn 12 04 06.8 0.0
TLIG Tlapa 1.16 105 Pn 12 03 52.1 +0.3
TLIG Tlapa 1.16 105 eP Pn 12 03 52.1 +0.3
YAIG Yautepec 1.18 33 Pn 12 03 51.4 -0.7
YAIG Yautepec 1.18 33 eP Pn 12 03 51.4 -0.7
FTIG Fresnillo de T 1.54 88 eP Pn 12 03 57.2 +0.4
FTIG iS Sn 12 04 15.7 0.0
UNM Universidad Na 1.56 20 Pn Pn 12 03 57.3 +0.1
AMVM AMECAMECA 1.56 36 eP Pn 12 03 57.0 -0.3
AMVM eS Sn 12 04 16.5 0.0
PPM Popocatepetl 1.60 41 eP Pn 12 03 57.7 -0.4
PPM iS Sn 12 04 17.7 -0.2
ZIIG Zihuatanejo 1.66 261 Pn 12 03 57.3 -1.1
ZIIG Zihuatanejo 1.66 261 eP Pn 12 03 57.3 -1.1
ZIIG iS Sn 12 04 18.0 -0.6
AZVM Cuida Lopez Ma 1.77 14 eP Pn 12 04 00.4 +0.2
PTVM Pico Tres Padr 1.82 19 eP Pn 12 04 00.5 -0.4
ATVM ATLACOMULCO 1.89 357 iP Pn 12 04 02.3 +0.4
ACIG Acambay 2.11 357 eP Pn 12 04 04.0 -0.8
ACIG iS Sn 12 04 21.4 -8.5
PNIG Pinotepa 2.13 133 Pn 12 04 05.1 +0.3
PNIG Pinotepa 2.13 133 eP Pn 12 04 05.1 +0.3
PNIG iS Sn 12 04 27.9 -2.2
MOIG Morelia 2.27 323 Pn 12 04 08.3 +1.4
YOIG Yosondua 2.33 115 eP Pn 12 04 09.0 +1.3
YOIG iS Sn 12 04 35.1 -0.2
TPIG Tehuac#an 2.33 76 eP Pn 12 04 08.9 +1.1
DEIG Demacu 2.52 15 eP Pn 12 04 08.3 -2.0
MSTX Muleshoe 16.27 351 Pn Pn 12 07 16.8 +0.1
MSTX IAmb IAmb 12 07 36.6
comp=Z,18nm,1.8s
CPCT Cooper Cave 22.13 35 P P 12 08 23.0 +0.3
CPCT IAmb IAmb 12 08 24.3
comp=Z,22nm,1.8s
TCUT Toone Canyon 25.25 339 P P 12 08 53.8 +0.8

KRSC 19 12:26:43.7±1.5, 50.12N×156.64E, h59km±20km, ML3.9, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SKR Severo-Kuril's 0.65 329 eP Pn 12 26 57.9 +0.6
SKR eS Sn 12 27 07.8 +0.5
ALID Alaid 1.02 317 eP Pn 12 27 02.9 +0.8
ALID eS Sn 12 27 16.9 +1.2
PAU Pauzhetka 1.35 4 eP Pn 12 27 08.4 +2.1
PAU eS Sn 12 27 26.1 +2.8
KDTR Khodutka, Kamc 1.92 28 eP Pn 12 27 15.6 +1.7
KDTR eS Sn 12 27 39.6 +2.7
ASAK Asacha 2.40 19 eP Pn 12 27 23.3 +2.7
ASAK eS Sn 12 27 52.3 +3.5
MTVR Mutnovka 2.55 22 eP Pn 12 27 25.4 +2.6
GRL Gorelyy 2.59 20 eP Pn 12 27 26.1 +2.8
GRL eS Sn 12 27 58.2 +4.5
RUS Russkaya 2.59 26 eP Pn 12 27 24.9 +1.7
RUS eS Sn 12 27 55.6 +2.1
APC Apacha 2.83 6 eP Pn 12 27 29.4 +3.1
APC eS Sn 12 28 03.7 +4.6
KRMR Karymshinskiy 2.87 18 eP Pn 12 27 29.1 +2.2
KRMR eS Sn 12 28 02.6 +2.5
DALK Dalny 3.20 24 eP Pn 12 27 34.3 +2.9
DALK eS Sn 12 28 11.9 +3.7
UGLR Uglovaya 3.38 23 eP Pn 12 27 37.6 +3.6
UGLR eS Sn 12 28 17.5 +4.7
AVH Avacha 3.41 22 eP Pn 12 27 39.0 +4.6
KOK Koryaka 3.41 21 eP Pn 12 27 38.6 +4.2
SMAR Somma 3.42 22 eP Pn 12 27 38.6 +3.9
KRER Koryakskii 3.44 22 eP Pn 12 27 38.5 +3.5
SDLR Sedlovina 3.45 23 eP Pn 12 27 38.0 +3.0
KRX Arik 3.47 20 eP Pn 12 27 39.5 +4.2
NLC Nalytchevo 3.49 28 eS Sn 12 28 18.3 +3.0
SPN Mys Shipunski 3.65 34 eP Pn 12 27 40.1 +2.5
SPN eS Sn 12 28 22.0 +2.7
KZV Kizimen 5.47 23 eP Pn 12 28 05.7 +3.0
TUMR Tumrok 5.59 21 eP Pn 12 28 09.6 +5.3
KMNR Kamenistaya 6.05 20 eP Pn 12 28 13.9 +3.4
KBTR Krutoberegovo 7.13 29 eP Pn 12 28 27.9 +2.6

IDC 19 12:40:45.2±0.8, 43.20N×83.52E, h0km, mb3.8/8, mb1 3.9/14, mb1mx3.7/47, mbtmp3.7/14, ML3.2/6, MS3.0/1, Ms1 3.0/1, ms1mx2.4/61, Error ellipse: s-maj=17.4km s-min=10.1km az=63.0
SOME 19 12:40:46.7, 43.77N×83.42E, h10km
BJI 19 12:40:49.5±0.0, 43.28N×83.49E, h9km, mb3.8/5, ML3.8/11, Ms3.5/1, Ms7 3.3/1
NNC 19 12:40:50.8±1.0, 43.46N×83.22E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=9.3km s-min=4.1km az=136.0
ISC 19 12:40:47.4±0.6, 43.67N±0.04×83.45E±0.03, h10km, n61, σ3.18/76, mb3.9/8, 9C-17D, Northern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KTMS Ketmen 2.26 265 eP Pb 12 41 28.5 +0.1
70nm,0.1s
KTMS eS Sg 12 41 59.8 -0.3
704nm,0.2s
KTMS Ketmen 2.26 265 Pg Pb 12 41 28.5 +0.1
27nm,0.2s
KTMS Lg Lg 12 41 59.8
704nm,0.2s
DJR Jarkent 2.72 285 eP Pg 12 41 36.8 -2.8
8.2nm,0.2s
DJR eS Sg 12 42 13.4 -1.4
191nm,0.4s
DJR Jarkent 2.72 285 Pg Pg 12 41 36.8 -2.8
7.4nm,0.4s
DJR Lg Lg 12 42 13.4
188nm,0.3s
PDGK Podgornoye 2.90 265 Pg Pb 12 41 39.4 +0.1
8.5nm,0.2s
PDGK Lg Lg 12 42 18.0
212nm,0.4s
PDGK Podgornoye 2.90 265 ⇓Pn Pb 12 41 36.0 -3.3
19nm,0.3s
PDGK ⇓Lg Lg 12 42 15.8
258nm,0.5s
SHLS Shalkode 2.95 261 eP Pn 12 41 35.7 +1.3
140nm,0.2s
SHLS eS Sn 12 42 11.7 +1.8
1μm,0.4s
SHLS Shalkode 2.95 261 Pg Pn 12 41 35.7 +1.3
65nm,0.2s
SHLS Lg Lg 12 42 11.7
1μm,0.4s
WMQ Urumqi 3.08 86 ePn Pb 12 41 39.0 -3.3
WMQ Sg Sb 12 42 22.6 +2.6
WMQ smax smax
comp=N,110nm,0.7s
WMQ smax smax
comp=E,99nm,0.7s
MK31 Makanchi Array 3.23 346 ⇓Pn Pg 12 41 45.9 -3.4
5.3nm,0.5s,baz=154,slow=13,SNR=916
MK31 ⇑Pg Pb 12 41 53.1 +8.2
6.7nm,0.3s,baz=157,slow=15,SNR=17
MK31 ⇓Lg Lg 12 42 39.4
87nm,0.5s,baz=160,slow=28,SNR=4.3
MKAR Makanchi Array 3.23 346 Pn Pg 12 41 45.9 -3.5
1.9nm,0.3s,baz=156,slow=14,SNR=159
MKAR Pg Pb 12 41 52.8 +7.9
12nm,0.3s,baz=164,slow=17,SNR=87
MKAR Sn Sg 12 42 30.3 -0.8
20nm,0.3s,baz=178,slow=31,SNR=9.5
MKAR Lg Lg 12 42 44.7
47nm,0.3s,baz=171,slow=25,SNR=15
MKAR LR LR 12 43 14.1
comp=Z,210nm,19.1s,baz=1.5,slow=40
UZB Uzynbulak 3.27 262 eP Pb 12 41 45.8 +0.3
16nm,0.4s
UZB eS Sg 12 42 28.6 -3.8
180nm,0.3s
UZB Uzynbulak 3.27 262 Pg Pb 12 41 45.8 +0.3
16nm,0.4s
UZB Lg Lg 12 42 28.6
181nm,0.3s
MAKZ Makanchi 3.31 342 ⇑Pn Pg 12 41 46.7 -4.1
4.4nm,0.7s
MAKZ ⇑Pg Pb 12 41 54.1 +8.0
17nm,0.5s
MAKZ ⇑Lg Lg 12 42 39.2
131nm,1.2s
KAPS Kapalarasan 3.35 300 eP Pb 12 41 46.3 -0.5
8.3nm,0.2s
KAPS eS Sg 12 42 28.9 -5.9
106nm,0.4s
KPKS Kokpek 3.47 268 eP Pg 12 41 50.8 -3.1
31nm,0.3s
KPKS eS Sg 12 42 36.8 -2.1
444nm,0.4s
MNBS Baschi 3.67 278 eP Pb 12 41 52.5 +0.1
20nm,0.2s
MNBS eS Sg 12 42 39.7 -5.7
110nm,0.3s
TDK Taldyqorghan 3.86 292 eP Pg 12 41 56.9 -4.4
114nm,0.6s
TDK eS Sg 12 42 46.7 -4.5
104nm,0.5s
ZSN Zaisan 3.91 14 eP Pb 12 41 55.9 -0.5
13nm,0.3s
ZSN ⇑iS Sg 12 42 46.9 -6.1
236nm,0.4s
ZSN Zaisan 3.91 14 Pg Pb 12 41 55.9 -0.5
8.9nm,0.2s
ZSN Lg Lg 12 42 46.9
236nm,0.4s
KOTS Kotyrbulak 4.63 267 eP Pb 12 42 11.4 +2.5
31nm,0.2s
KOTS eS Sg 12 43 12.3 -3.8
202nm,0.4s
KOTS Kotyrbulak 4.63 267 Pg Pg 12 42 11.5 -4.6
29nm,0.2s
KOTS Lg Lg 12 43 12.3
202nm,0.5s
CHKK Chushkaly 4.69 275 eP Pb 12 42 12.0 +2.4
6.3nm,0.2s
CHKK eS Sg 12 43 13.2 -4.5
52nm,0.5s
CHKK Chushkaly 4.69 275 Pg Pg 12 42 13.7 -3.4
6.3nm,0.2s
CHKK Lg Lg 12 43 16.5
52nm,0.5s
MDOK Medeo 4.69 266 eP Pb 12 42 12.1 +2.3
9.7nm,0.4s
MDOK eS Sg 12 43 13.6 -4.4
84nm,0.5s
MDOK Medeo 4.69 266 ⇓Pn Pn 12 42 00.7 +2.3
5.7nm,0.6s
MDOK Pg Pg 12 42 12.8 -4.5
16nm,0.6s
MDOK ⇑Lg Lg 12 43 13.8
77nm,0.6s
MDOK Medeo 4.69 266 Pg Pg 12 42 14.2 -3.0
6.5nm,0.3s
MDOK Lg Lg 12 43 17.0
84nm,0.5s
KNDC Almaty 4.74 267 ⇑Pg Pb 12 42 11.7 +1.0
21nm,0.5s
KNDC ⇓Lg Lg 12 43 17.0
134nm,0.7s
AAA Alma-Ata 4.78 267 eP Pg 12 42 15.1 -3.8
18nm,0.1s
AAA eS Sg 12 43 18.1 -2.7
70nm,0.4s
AAA Alma-Ata 4.78 267 Pg Pg 12 42 15.1 -3.8
18nm,0.1s
AAA Lg Lg 12 43 18.1
70nm,0.4s
KTBS Karatobe 4.91 273 eP Pb 12 42 16.1 +2.6
7.3nm,0.4s
KTBS eS Sg 12 43 20.8 -4.1
117nm,0.5s
KTBS Karatobe 4.91 273 Pg Pg 12 42 18.2 -3.2
7.3nm,0.4s
KTBS Lg Lg 12 43 23.8
117nm,0.5s
IZV Izvestkoviy 5.03 265 eP Pg 12 42 19.2 -4.4
15nm,0.6s
IZV eS Sg 12 43 25.5 -3.2
93nm,0.6s
IZV Izvestkoviy 5.03 265 Pg Pg 12 42 20.8 -2.8
15nm,0.6s
IZV Lg Lg 12 43 28.2
93nm,0.6s
MTBS Maitube 5.14 266⇓iP Pb 12 42 19.6 +2.1
12nm,0.4s
MTBS ⇓iS Sg 12 43 26.5 -6.0
40nm,0.5s
KUU Kurty 5.15 275 eP Pg 12 42 21.8 -4.3
2.9nm,0.3s
KUU eS Sg 12 43 30.1 -2.7
52nm,0.4s
KUU Kurty 5.15 275 Pg Pg 12 42 21.8 -4.3
2.9nm,0.3s
KUU Lg Lg 12 43 30.1
52nm,0.4s
KST Kastek 5.50 266 eP Pg 12 42 28.9 -3.7
7.0nm,0.5s
KST eS Sg 12 43 42.7 -1.1
58nm,0.8s
KST Kastek 5.50 266 Pg Pg 12 42 28.9 -3.7
7.0nm,0.5s
KST Lg Lg 12 43 42.7
58nm,0.8s
KRBS Karabastau 5.64 273 eP Pg 12 42 31.6 -3.8
6.5nm,0.3s
KRBS eS Sg 12 43 46.4 -2.0
18nm,0.4s
CHMS Chumysh 6.38 267 ⇓Pn Pn 12 42 23.5 +2.0
2.1nm,0.4s
CHMS ⇓Pg Pg 12 42 43.1 -6.4
3.1nm,0.6s
CHMS ⇓Lg Lg 12 44 06.4
17nm,0.7s
AAK Ala-Archa 6.63 264 Pn Pn 12 42 27.3 +2.3
0.6nm,0.3s,baz=90,slow=7.2,SNR=8.1
AAK Lg Lg 12 44 16.8
1.4nm,0.3s,baz=266,slow=18,SNR=7.6
AAK Ala-Archa 6.63 264 ⇑Pg Pg 12 42 48.2 -6.1
5.4nm,0.6s
AAK ⇓Lg Lg 12 44 14.2
23nm,0.8s
MRKS Merke 7.53 266 eP Pg 12 43 05.6 -5.9
3.2nm,0.4s
MRKS ⇓iS Sg 12 44 45.8 -3.1
10nm,0.5s
KURBB Kurchatov Arra 7.72 336 Pn Pn 12 42 45.2 +5.4
0.2nm,0.3s,baz=161,slow=13,SNR=3.7
KURBB Sn Sb 12 44 19.4 -14
0.6nm,0.3s,baz=137,slow=30,SNR=5.7
KURBB Lg Lg 12 45 04.6
0.8nm,0.3s,baz=161,slow=32,SNR=10
KURBB Kurchatov Arra 7.72 336 ⇓Sn Sn 12 44 15.9 +8.6
16nm,0.7s
KURBB ⇓Lg Lg 12 44 59.8
65nm,0.8s
KURK Kurchatov 7.78 337 ⇑Pn Pn 12 42 48.6 +8.0
1.9nm,0.6s
KURK ⇓Sn Sn 12 44 17.3 +8.7
6.5nm,0.5s
KURK ⇓Lg Lg 12 45 03.9
49nm,0.7s

ZALV Zalesovo Beam 10.33 5 Pn Pn 12 43 20.4 +4.9
0.6nm,0.3s,baz=185,slow=14,SNR=11
ZALV Sn **Sn** **12 45 16.9 +5.6**
1.6nm,0.3s,baz=189,slow=25,SNR=10
BVAR Borovoye Array 12.75 322 Pn Pn 12 43 52.8 +4.2
0.2nm,0.3s,baz=143,slow=13,SNR=5.0
BVAR Sn **Sn** **12 46 14.0 +3.4**
0.4nm,0.3s,baz=128,slow=21,SNR=7.1
BVAR Lg Lg 12 47 41.3
0.3nm,0.3s,baz=130,slow=29,SNR=5.8
GTA Gaotai 12.97 104 eP **Pn** **12 43 53.4 +1.5**
GTA pP 12 44 03.0
GTA sP 12 44 07.3
GTA pmax pmax
comp=Z,1.0nm,1.0s
SONM Songino Array 16.53 67 Pn **P** **12 44 41.1 -0.8**
0.1nm,0.3s,baz=258,slow=13,SNR=8.9
ARU Arti 20.32 318 P Pn 12 45 28.3 +3.0
0.8nm,0.4s,baz=128,slow=17,SNR=4.1
FINES FINESS Array B 37.68 319 P P 12 48 06.3 +3.8
0.6nm,0.6s,baz=63,slow=9.9,SNR=2.5
ARCES ARCESS Array B 38.78 332 P P 12 48 15.0 +3.3
3.7nm,0.9s,baz=90,slow=8.5,SNR=7.5
NB2 NORSAR Subarra 44.86 319 P **P** **12 49 04.1 +2.6**
comp=Z,0.3nm,0.4s,baz=79,slow=7.9
NOA NORSAR Array B 44.86 319 P **P** **12 49 04.2 +2.7**
comp=Z,20nm,0.5s,baz=80,slow=7.7,SNR=3.2
ILAR Eielson Array 64.97 21 P **P** **12 51 28.4 +1.5**
comp=Z,0.5nm,0.7s,baz=317,slow=5.2,SNR=6.6
YKA Yellowknife Ar 73.20 9 P **P** **12 52 18.8 +0.9**
comp=Z,0.4nm,0.6s,baz=343,slow=5.6,SNR=8.9
TORD Torodi Ar. Bea 75.11 274 P **P** **12 52 28.8 -1.1**
comp=Z,0.4nm,0.4s,baz=42,slow=5.2,SNR=6.9
WRA Warramunga Arr 78.62 132 P **P** **12 52 47.7 -1.7**
comp=Z,0.7nm,0.4s,baz=330,slow=5.0,SNR=3.4
ASAR Alice Springs 81.43 134 P **P** **12 53 02.8 -1.8**
comp=Z,1.1nm,0.7s,baz=324,slow=5.1,SNR=20

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*BJI **19** 12:49:00.0±0.0, 52.°32N×143.°84E, h5km, mB5.0/57, mb4.8/73, Ms5.0/72, Ms7 4.9/71*
*SKHL **19** 12:49:04.5±0.9, 52.°18N×142.°58E, h11km±2km, mb5.6/4, Ms4.9/8, msh5.7/1*
SKHL Felt (II)at Oha, Nysh, Argi-Pagi ;(II-III) at Tungor; (III-IV) at Nogliki, Goryachie Kluchi, Katangli ;(IV) at Val.
*IDC **19** 12:49:04.1±0.4, 52.°25N×143.°48E, h0km, mb4.4/38, mb1 4.6/47, mb1mx4.5/56, mbtmp4.5/47, ML4.2/8, MS4.0/30, Ms1 4.0/30, ms1mx3.8/55, Error ellipse: s-maj=10.5km s-min=8.0km az=129.0*
*MOS **19** 12:49:04.8±1.0, 52.°16N×143.°48E, h18km, mb5.2/93, MS4.3/16, Error ellipse: s-maj=6.0km s-min=3.6km az=95.8*
MOS Felt (IV) at Val; (III-IV) at Goryachiye Klyuchi, Katangli, Nogliki; (II-III) at Tungor; (II) at Argi-Pagi, Hysh, Okha.
*NEIC **19** 12:49:06.3±1.3, 52.°19N±0.°06×143.°5E±0.°1, h15km±3km, mb5.1/243, Error ellipse: s-maj=10.4km s-min=8.3km az=136.0*
*GCMT **19** 12:49:08.3±0.2, 52.°36N±0.°02×143.°33E±0.°03, h18km, MW4.9/97, Moment Tensor Solution. s38,c47; s97,c143; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.80±.13; $M_{\theta\theta}$-0.83±.09; $M_{\phi\phi}$-1.97±.09; $M_{r\theta}$-1.79±.25; $M_{r\phi}$1.15±.06; $M_{\theta\phi}$0.26±.19; Best double couple: $M_0$3.24600×10^{16} NP1:ϕ_s165.00000°, δ36.00000°, λ123.00000°. NP2: ϕ_s306.00000°, δ60.00000°, λ68.00000°. Principal axes: T 3.5410, Plg67.0000°, Azm175.0000°; N -0.5900, Plg19.0000°, Azm317.0000°; P -2.9510, Plg13.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **19** 12:49:10.5±0.0, 52.°55N×143.°49E, h24km, mb4.9, Ms4.3*
ISC 19 12:49:06.7±0.5, 52.°15N±0.°02×143.°51E±0.°03, h17km±2km, h17km:pP-P, n866, σ1§18/918, mb5.1/256, MS4.5/48, 43C-12D, Sakhalin Island

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

TYV Tymovskoe 1.40 203 ePg **Pn** **12 49 30.1 -1.3**
TYV AMB AMB 12 49 31.2
1μm,0.3s
TYV eSg **Sn** **12 49 48.4 -1.0**
TYV A A 12 49 49.7
11μm,0.8s
TYV A A 12 49 49.7
19μm,0.8s
TYV AMS AMS 12 50 07.9
35μm,10.0s
TYV Tymovskoe 1.40 203 ePN **Pn** **12 49 31.0 -0.4**
TYV eS **Sn** **12 49 48.5 -1.0**
TYV pmax pmax
comp=Z,2μm,1.1s
TYV pmax pmax
comp=Z,1μm,0.7s
TYV smax smax
comp=E,26μm,1.0s
TYV smax smax
comp=E,15μm,1.0s
OKH Okha 1.44 346 eP **Pn** **12 49 31.8 -0.1**
OKH P **Pb** **12 49 33.0 0.0**
comp=E,2μm,0.4s
OKH ePg **Pg** **12 49 34.8 +0.4**
OKH AMB AMB 12 49 35.1
comp=E,1μm,0.2s
OKH eSg **Sg** **12 49 55.3 +2.1**
OKH A A 12 49 55.9
comp=E,22μm,0.8s
OKH A A 12 49 55.9
comp=E,24μm,0.8s
OKH A A 12 50 04.5
comp=E,82μm,2.0s
OKH A A 12 50 04.5
comp=E,115μm,2.0s
OKH AMS AMS 12 50 30.7
comp=E,58μm,12.0s
OKH AMS AMS 12 50 30.7
comp=E,65μm,12.0s
OKH AMS AMS 12 50 30.7
comp=E,42μm,12.0s
OKH Okha 1.44 346⇑iPN **Pn** **12 49 31.0 -0.8**
OKH iS **Sn** **12 49 49.3 -1.1**
OKH pmax pmax
comp=Z,2μm,0.4s
OKH smax smax
comp=N,23μm,0.6s
OKH smax smax
comp=E,21μm,0.7s
NKL Nikolayevsk 1.99 301 i Pg **Pn** **12 49 37.5 -2.0**
NKL AMB AMB 12 49 43.9
comp=E,11μm,0.8s
NKL eSg **Sn** **12 50 02.3 -1.7**
NKL A A 12 50 03.4
comp=E,16μm,0.8s
NKL Nikolayevsk 1.99 301 c iPN **Pn** **12 49 37.7 -1.8**
NKL eS **Sn** **12 50 00.4 -3.6**
NKL pmax pmax
comp=Z,3μm,0.4s
NKL pmax pmax
comp=N,31nm,0.3s
NKL pmax pmax
comp=E,1μm,0.3s
NKL smax smax
comp=N,36nm,0.4s
NKL smax smax
comp=E,3μm,0.4s
UGL Uglegorsk 3.21 197 eP **Pn** **12 49 54.4 -1.9**
UGL AMB AMB 12 49 56.9
comp=E,140nm,0.9s
UGL eP **Pb** **12 50 01.5 -1.7**
UGL P Pg 12 50 02.9 -5.3
comp=E,300nm,0.8s
UGL ePg Pg 12 50 06.5 -1.7
UGL AMB AMB 12 50 07.8
comp=E,570nm,0.8s
UGL AMB AMB 12 50 10.3
comp=E,4μm,2.0s
UGL eSg **Sg** **12 50 50.2 +0.3**
UGL A A 12 50 50.9
comp=E,1μm,0.8s
UGL A A 12 50 50.9
comp=E,2μm,0.8s
UGL A A 12 50 56.9
comp=E,7μm,3.0s
UGL A A 12 50 56.9
comp=E,13μm,3.0s
UGL AMS AMS 12 51 23.0
comp=E,22μm,14.0s
UGL AMS AMS 12 51 23.0
comp=E,11μm,14.0s
UGL AMS AMS 12 51 23.0
comp=E,11μm,14.0s
UGL Uglegorsk 3.21 197 ePN **Pn** **12 49 56.1 -0.2**
UGL S **Sn** **12 50 33.3 -0.9**
UGL pmax pmax
comp=Z,292nm,0.8s
UGL smax smax
comp=E,4μm,2.3s
UGL smax smax
comp=N,2μm,0.8s
UGL MLR MLR
comp=Z,8μm,7.0s
UGL MLR MLR
comp=N,18μm,7.0s
GRNR Gornyy 4.65 255⇑iPN **Pn** **12 50 16.0 0.0**
GRNR eS **Sn** **12 51 11.8 +2.3**
GRNR pmax pmax
comp=Z,130nm,0.6s
GRNR smax smax
comp=N,300nm,0.6s
GRNR MLR MLR
comp=Z,6μm,11.0s
KHLM Kholmsk 5.19 191 eP **Pn** **12 50 23.9 +0.4**
KHLM AMB AMB 12 50 25.8
comp=Z,160nm,1.0s
YSS Yuzh-Sakhalins 5.23 186 eP **Pn** **12 50 24.6 +0.6**
YSS AMB AMB 12 50 26.2
comp=Z,40nm,0.8s
YSS eS **Sn** **12 51 24.0 +0.2**
YSS AMS AMS 12 52 55.5
comp=Z,6μm,13.0s
YSS AMS AMS 12 52 55.5
comp=Z,2μm,13.0s
YSS AMS AMS 12 52 55.5
comp=Z,9μm,13.0s
YSS Yuzh-Sakhalins 5.23 186 **Pn** **12 50 24.9 +0.9**
YSS Yuzh-Sakhalins 5.23 186 ePN **Pn** **12 50 23.7 -0.3**
YSS pmax pmax
comp=Z,40nm,0.8s
YSS MLR MLR
comp=Z,9μm,13.0s
YSS MLR MLR
comp=N,6μm,11.0s
EKMR Ekimchan 6.50 282 eP **Pn** **12 50 39.8 -1.7**
EKMR ePg **Pg** **12 51 08.0 -3.0**
EKMR AMB AMB 12 51 12.2
comp=N,150nm,0.6s
EKMR eS Sn 12 51 41.8 -13
EKMR eSg **Sb** **12 52 20.9 +4.4**
EKMR A A 12 52 48.5
comp=N,820nm,0.9s
KUR Kuril'sk 7.50 156 ePN **Pn** **12 50 53.5 -1.6**
KUR pmax pmax
comp=Z,43nm,0.7s
KUR pmax pmax
comp=E,20nm,0.8s
KUR MLR MLR
comp=Z,3μm,14.0s
KUR MLR MLR
comp=N,2μm,12.0s
SKR Severo-Kuril's 8.02 96 ePN Pn 12 51 12.4 +10
SKR eS Sb 12 52 46.6 -13
SKR pmax pmax
comp=Z,45nm,0.9s
SKR MLR MLR
comp=Z,2μm,13.0s
SKR MLR MLR
comp=N,2μm,14.0s
SKR MLR MLR
comp=E,1μm,14.0s
SKR MLR MLR
comp=Z,2μm,12.0s
SKR MLR MLR
comp=N,1μm,13.0s
SKR MLR MLR
comp=E,700nm,14.0s
KLR Kul'dur 8.02 253 Pn **Pn** **12 51 03.0 +0.6**
comp=E,2.8nm,0.3s,baz=69,slow=13,SNR=61
KLR Lg Lg 12 53 16.5
comp=E,6.3nm,0.3s,baz=152,slow=14,SNR=5.0
KLR Kul'dur 8.02 253⇑ePN **Pn** **12 51 02.7 +0.4**
ASAJ Asahikawa 8.07 185 Pn **Pn** **12 51 04.1 +1.2**
comp=E,3.6nm,0.3s,baz=28,slow=10,SNR=43
ASAJ Lg Lg 12 53 21.2
baz=241,slow=21,SNR=2.0
ASAJ LR LR 12 54 40.9
comp=E,2μm,18.9s,baz=29,slow=41
JKA Kamikawa-asahi 8.07 185 **Pn** **12 51 04.1 +1.2**
YUK Yuzh-Kuril'sk 8.28 168 PN **Pn** **12 51 04.9 -0.9**
TEY Ternei 8.46 215 ePg Pb 12 52 27.7 +55
TEY AMB AMB 12 52 28.1
comp=E,50nm,0.9s
TEY eSg Sb 12 53 38.5 +26
TEY A A 12 53 42.6
comp=E,220nm,1.0s
TEY A A 12 53 42.6
comp=E,220nm,1.0s
TEY AMS AMS 12 54 48.9
comp=E,3μm,13.0s
TEY AMS AMS 12 54 48.9
comp=E,3μm,13.0s
TEY AMS AMS 12 54 48.9
comp=E,4μm,13.0s
MA2 Magadan 8.48 26 Pn **Pn** **12 51 08.9 +0.4**
comp=E,1.3nm,0.3s,baz=200,slow=10.0,SNR=12
MA2 Lg Lg 12 53 38.4
baz=300,slow=14,SNR=1.9
MA2 LR LR 12 54 36.8
comp=E,538nm,21.3s,baz=234,slow=40
MA2 Magadan 8.48 26 **Pn** **12 51 07.9 -0.6**
MA2 Magadan 8.48 26 cePN **Pn** **12 51 07.3 -1.2**
MA2 pmax pmax
comp=Z,68nm,0.7s
SHO Shikotan 8.58 164 ePN **Pn** **12 51 10.5 +0.5**
SHO pmax pmax
comp=Z,20nm,0.2s
PEA0B Petropavlovsk- 8.68 78 **Pn** **12 51 10.9 -0.5**
PEA0B Petropavlovsk- 8.68 78 dePN **Pn** **12 51 11.0 -0.4**
PETK Petropavlovsk- 8.68 78 Pn **Pn** **12 51 11.2 -0.2**
comp=Z,12nm,0.3s,baz=283,slow=10,SNR=359
PETK Sn **Sn** **12 52 46.1 -2.7**
comp=Z,1.7nm,0.3s,baz=336,slow=9.3,SNR=2.9
PETK LR LR 12 54 57.9
comp=Z,320nm,18.7s,baz=227,slow=41
NMR Nemuro--Hokkai 8.91 170 eP **Pn** **12 51 18.0 +3.5**
NMR AMB AMB 12 51 21.4
comp=Z,60nm,1.0s
NMR Nemuro--Hokkai 8.91 170 ePN **Pn** **12 51 14.7 +0.2**
BMKR Bomnak 9.12 292 eP Pn 12 51 11.0 -6.4
BMKR ePg 12 51 25.3
BMKR AMB AMB 12 51 26.9
comp=Z,11nm,0.4s
AKK Akkeshi 9.19 174 eP **Pn** **12 51 19.7 +1.4**
AKK AMB AMB 12 51 20.1
comp=Z,100nm,0.9s
AKK AMB AMB 12 51 21.0
comp=Z,330nm,2.0s
PET Petropavlovsk 9.26 79 **Pn** **12 51 19.7 +0.5**
PET Petropavlovsk 9.26 79 ePN **Pn** **12 51 20.2 +1.0**
PET pmax pmax
comp=Z,91nm,0.6s
PET MLR MLR
comp=Z,2μm,13.0s
PET MLR MLR
comp=Z,3μm,13.0s
ZEA Zeya 9.95 286 eP **Pn** **12 51 29.4 +0.8**
ZEA AMB AMB 12 51 36.6
comp=Z,1μm,0.5s
ZEA Zeya 9.95 286 ePN **Pn** **12 51 29.4 +0.8**
ZEA eS Sn 12 53 30.4 +11
ZEA pmax pmax
comp=N,43nm,1.2s
ZEA pmax pmax
comp=E,110nm,1.4s
ZEA pmax pmax
comp=Z,150nm,1.4s
ZEA smax smax
comp=N,50nm,1.2s
ZEA MLR MLR
comp=Z,6μm,12.0s
ZEA MLR MLR
comp=E,4μm,13.0s
ZEA MLR MLR
comp=N,1μm,8.0s
ERM Erimo 10.15 182 **Pn** **12 51 31.9 +0.5**
ERM Erimo 10.15 182⇑ePN **Pn** **12 51 34.7 +3.3**
KROS Kirovskiy 10.16 289 eP **Pn** **12 51 31.0 -0.6**
KROS AMB AMB 12 51 35.0
comp=N,14nm,0.4s
USA0B Ussuriysk Arra 11.06 229 **Pn** **12 51 44.1 +0.1**
USA0B Ussuriysk Arra 11.06 229⇑ePN **Pn** **12 51 44.0 +0.1**
USRK Ussuriysk Ar. 11.06 229 Pn **Pn** **12 51 44.1 +0.2**
baz=34,slow=15,SNR=18
USRK Lg Lg 12 54 59.4
baz=45,slow=27,SNR=9.1
SEY Seymchan 11.79 20 Pn **Pn** **12 51 55.1 +1.3**
comp=N,0.7nm,0.3s,baz=194,slow=10,SNR=24
SEY Seymchan 11.79 20⇑ePN **Pn** **12 51 55.4 +1.5**
MDJ Mudanjiang 11.93 236 P **Pn** **12 51 56.6 +0.9**
MDJ PP **PnPn** **12 52 04.4 +1.1**
MDJ S **Sn** **12 54 10.3 +2.0**
MDJ SS **SnSn** **12 54 24.6 +4.7**
MDJ pmax pmax
comp=N,5.0nm,0.5s
MDJ pmax pmax
comp=N,350nm,5.4s
MDJ LR LR
comp=N,5μm,8.4s
MDJ LR LR
comp=N,4μm,10.8s
MDJ LR LR
comp=N,7μm,10.4s
MDJ Mudanjiang 11.93 236 Pn **Pn** **12 51 55.2 -0.6**
YAK Yakutsk 12.40 328 Pn **Pn** **12 52 02.1 0.0**
comp=N,0.1nm,0.3s,baz=325,slow=7.4,SNR=11
YAK Lg Lg 12 55 35.3
comp=N,0.1nm,0.3s,baz=76,slow=20,SNR=3.7
YAK Yakutsk 12.40 328 **Pn** **12 52 00.9 -1.3**
YAK Yakutsk 12.40 328 ePN **Pn** **12 52 02.2 0.0**
YAK pmax pmax
comp=Z,28nm,1.0s
YAK pmax pmax
comp=E,11nm,1.0s
YAK pmax pmax
comp=N,22nm,1.0s
YAK MLR MLR
comp=Z,2μm,13.0s
YAK MLR MLR
comp=N,2μm,12.0s
YAK MLR MLR
comp=E,2μm,12.0s
CN2 Changchun 14.67 242 eP **Pn** **12 52 33.4 +0.1**
CN2 pmax pmax
comp=E,10.0nm,1.0s
CN2 pmax pmax
comp=E,200nm,3.0s
CN2 LR LR
comp=E,1μm,12.0s
CN2 LR LR
comp=E,2μm,12.0s
CN2 LR LR
comp=E,3μm,12.0s
HIA Hailar 15.31 269 Pn **Pn** **12 52 41.8 -0.1**
HIA Hailar 15.31 269 P **Pn** **12 52 41.8 -0.1**
HIA pmax pmax
comp=Z,47nm,1.1s
MJB9 Matsu-Tunnel 16.05 196 P **P** **12 52 53.9 -0.9**
MAJO Matsushiro 16.05 196 P **P** **12 52 53.9 -0.9**
MAJO Matsushiro 16.05 196 ceP **P** **12 52 53.7 -1.1**
MAT Matsushiro 16.05 196 P **P** **12 52 54.0 -0.8**
MAT eS **S** **12 55 58.0 -4.5**
MJAR Matsushiro Arr 16.06 196 Pn **P** **12 52 54.0 -0.8**
comp=Z,0.1nm,0.3s,baz=13,slow=12,SNR=40
MJAR LR LR 12 59 17.8
comp=Z,420nm,18.7s,baz=20,slow=38
MJAR Matsushiro Arr 16.06 196 P **P** **12 52 54.0 -0.8**
SNY Shenyang 17.02 241 ⇑P **P** **12 53 07.4 +2.0**
SNY S **S** **12 56 23.4 +1.3**
SNY pmax pmax
comp=Z,28nm,1.0s
SNY pmax pmax
comp=Z,490nm,7.1s
SNY LR LR
comp=Z,4μm,11.2s
SNY LR LR
comp=Z,4μm,10.2s
SNY LR LR
comp=Z,7μm,11.4s
INU Inuyama 17.43 198 P **P** **12 53 09.9 -0.1**
BOD Bodaibo 17.76 300 eP **Pn** **12 53 10.5 -2.3**
BOD pmax pmax
comp=Z,36nm,1.4s
KS19 Wonju Array Si 18.32 223 P **Pn** **12 53 20.0 +0.2**
KSRS Korea Array 18.34 223 P **Pn** **12 53 20.9 +0.9**
comp=Z,0.4nm,0.3s,baz=10,slow=10,SNR=51
KSRS PcP **PcP** **12 57 50.9 0.0**
comp=Z,0.1nm,0.3s,baz=58,slow=1.0,SNR=8.3
KSRS LR LR 13 00 03.3
comp=Z,551nm,18.2s,baz=45,slow=36
INCN Inchon 18.86 226 P **P** **12 53 26.1 +0.2**
INCN Inchon 18.86 226 P **P** **12 53 26.1 +0.2**
INCN pmax pmax
comp=Z,30nm,1.0s
JHJ Hachijo jima 2 19.22 190 LR LR 13 00 59.8
comp=Z,420nm,19.9s,baz=86,slow=37
BILL Bilibino 19.35 26 P **Pn** **12 53 31.4 -0.6**
BILL Bilibino 19.35 26 ceP **Pn** **12 53 33.3 +1.3**
BILL pmax pmax
comp=Z,36nm,1.3s
BILL MLR MLR
comp=Z,729nm,13.0s
TJN Taejon 19.49 222 ceP **P** **12 53 33.3 +0.7**
DL2 Dalian 20.16 238 P Pn 12 53 41.9 +0.1
DL2 S Sn 12 57 27.6 -0.6
DL2 pmax pmax
comp=Z,63nm,1.5s
DL2 pmax pmax
comp=Z,280nm,6.7s
DL2 LR LR
comp=Z,2μm,11.5s
DL2 LR LR
comp=Z,3μm,10.5s
DL2 LR LR
comp=Z,4μm,11.2s
TIXI Tiksi 20.62 347 P **P** **12 53 44.5 -0.2**
comp=Z,4.4nm,0.6s,baz=142,slow=10,SNR=12
TIXI Lg Lg 13 00 09.1
comp=Z,1.2nm,0.3s,baz=152,slow=3.1,SNR=2.8
TIXI Tiksi 20.62 347 P **P** **12 53 43.5 -1.2**
TIXI Tiksi 20.62 347⇑eP **P** **12 53 43.8 -0.9**
TIXI pmax pmax
comp=Z,24nm,1.7s
TIXI MLR MLR
comp=Z,1μm,15.0s
JNU Nakatsue 21.11 211 P **P** **12 53 52.4 +2.1**
comp=Z,37nm,0.8s,baz=69,slow=6.2,SNR=16
JNU LR LR 13 01 39.7
comp=Z,456nm,19.1s,baz=29,slow=36
JNU Nakatsue 21.11 211 P **P** **12 53 52.7 +2.3**
BJI Beijing 22.35 248 P **P** **12 54 02.9 -0.6**
BJI sP **pP** **12 54 08.0 -0.3**
BJI S **S** **12 58 08.4 +0.1**
BJI pmax pmax
comp=Z,16nm,1.1s
BJI pmax pmax
comp=Z,200nm,3.5s
BJI LR LR
comp=Z,2μm,10.5s
BJI LR LR
comp=Z,1μm,9.0s
BJI LR LR
comp=Z,580nm,13.2s
BJT Baijiatuau 22.37 248 P **P** **12 54 03.1 -0.6**
BJT Baijiatuau 22.37 248 P **P** **12 54 03.1 -0.6**
BJT pmax pmax
comp=Z,35nm,1.0s
ULN Ulaanbaatar 23.65 274 P **P** **12 54 16.2 -0.9**
ULN IAmb IAmb 12 54 24.9
comp=Z,54nm,0.9s
ULN Ulaanbaatar 23.65 274 P **P** **12 54 16.2 -0.9**
ULN pmax pmax
comp=Z,54nm,0.9s
IRK Irkutsk 23.86 286 eP **P** **12 54 18.0 -0.8**
IRK pmax pmax
comp=Z,269nm,2.1s
SONM Songino Array 24.07 275 P **P** **12 54 20.4 -0.6**
comp=Z,2.6nm,0.7s,baz=62,slow=9.6,SNR=14

SONM PcP PcP 12 58 00.9 -1.1
comp=Z,2.6nm,0.8s,baz=112,slow=1.3,SNR=6.0
SONM Lg Lg 13 01 50.4
comp=Z,2.4nm,0.9s,baz=74,slow=33,SNR=5.4
SONM LR LR 13 05 37.8
comp=Z,128nm,19.4s,baz=30,slow=41
TLY Talaya 24.39 285 P P 12 54 22.9 -0.8
comp=Z,19nm,1.0s,baz=66,slow=6.8,SNR=34
TLY PcP PcP 12 58 02.4 0.0
comp=Z,2.5nm,0.6s,baz=278,slow=4.1,SNR=5.0
TLY Lg Lg 13 02 04.4
comp=Z,0.6nm,0.3s,baz=347,slow=21,SNR=4.5
TLY Talaya 24.39 285 P P 12 54 23.6 -0.2
TLY Talaya 24.39 285 c iP P 12 54 23.8 +0.1
TLY pmax pmax
comp=Z,281nm,1.0s
TLY MLR MLR
comp=Z,4µm,12.0s
HHC Hu-ho-hao-te 24.52 255 eP P 12 54 24.9 -0.3
HHC PP PnPn 12 55 00.4 +4.3
HHC S S 12 58 43.8 -1.1
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,160nm,7.6s
HHC LR LR
comp=Z,1µm,8.7s
HHC LR LR
comp=Z,920nm,9.6s
HHC LR LR
comp=Z,2µm,9.5s
TIA Tai'an 24.55 240 P P 12 54 24.4 -0.9
TIA S S 12 58 54.3 +9.2
TIA pmax pmax
comp=Z,26nm,1.2s
TIA pmax pmax
comp=Z,350nm,3.9s
TIA LR LR
comp=Z,800nm,11.5s
TIA LR LR
comp=Z,760nm,10.8s
TIA LR LR
comp=Z,1µm,10.8s
ZAK Zakamensk 25.01 282 eP P 12 54 29.5 0.0
ZAK pmax pmax
comp=Z,66nm,1.2s
BTO Baotou 25.60 257 eP P 12 54 34.0 -0.9
BTO S S 12 59 08.8 +6.7
GAMB Gambell 25.85 46 P P 12 54 38.5 +1.7
MOY Mondy 25.96 286 eP P 12 54 38.3 +0.1
MOY pmax pmax
comp=Z,61nm,1.9s
SSE Sheshan 26.66 227 P P 12 54 45.5 +1.1
SSE IAmb IAmb 12 54 47.2
comp=Z,55nm,0.9s
NJ2 Nanjing 26.94 231 eP P 12 54 48.3 +1.3
NJ2 S S 12 59 26.5 +3.3
NJ2 pmax pmax
comp=Z,13nm,0.8s
NJ2 pmax pmax
comp=Z,240nm,3.7s
NJ2 LR LR
comp=Z,2µm,14.7s
NJ2 LR LR
comp=Z,860nm,10.9s
NJ2 LR LR
comp=Z,2µm,11.8s
ANM Nome 28.66 44 P P 12 55 04.3 +2.2
ANM IAmb IAmb 12 55 11.4
comp=Z,32nm,1.0s
ANM Nome 28.66 44 P P 12 55 04.3 +2.2
ANM pmax pmax
comp=Z,31nm,1.0s
RDOG Red Dog Mine 29.84 37 P P 12 55 13.0 +0.5
WHN Wuhan 30.41 236 ⇑P P 12 55 17.3 -0.5
WHN S S 13 00 13.6 -4.1
WHN pmax pmax
comp=Z,46nm,0.9s
WHN LR LR
comp=Z,2µm,13.7s
WHN LR LR
comp=Z,3µm,11.6s
WHN LR LR
comp=Z,4µm,12.2s
XAN Xi'an 30.68 248 P P 12 55 18.8 -1.5
XAN ScS ScS 13 05 49.3 -6.7
XAN pmax pmax
comp=Z,6.0nm,1.8s
XAN LR LR
comp=Z,1µm,11.8s
XAN LR LR
comp=Z,860nm,13.2s
XAN LR LR
comp=Z,1µm,10.3s
XAN Xi'an 30.68 248 P P 12 55 19.4 -0.9
XAN Xi'an 30.68 248 P P 12 55 19.4 -0.9
XAN pmax pmax
comp=Z,9.0nm,1.2s
NRIK Noril'sk 30.82 325 P P 12 55 21.2 +0.1
comp=Z,1.2nm,0.3s,baz=69,slow=5.3,SNR=3.6
NRIK LR LR 13 08 26.3
comp=Z,236nm,19.0s,baz=93,slow=38
NRIK Noril'sk 30.82 325 eP P 12 55 20.4 -0.7
LZH Lanzhou 32.22 256 ⇑P P 12 55 34.0 +0.1
LZH pP sP 12 55 40.8 -0.5
LZH S S 13 00 53.4 +7.1
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,68nm,4.9s
LZH LR LR
comp=Z,1µm,13.0s
LZH LR LR
comp=Z,1µm,11.4s
LZH LR LR
comp=Z,2µm,12.5s
GTA Gaotai 32.53 264 ⇑P P 12 55 36.6 0.0
GTA pP pP 12 55 40.6 -1.2
GTA sP sP 12 55 43.3 -0.6
GTA PcP PcP 12 58 23.8 +0.9
GTA sS sS 13 01 00.8 +1.2
GTA SS SnSn 13 02 49.8 +5.1
GTA pmax pmax
comp=Z,8.0nm,1.1s
GTA pmax pmax
comp=Z,72nm,5.5s
GTA LR LR
comp=Z,640nm,10.7s
GTA LR LR
comp=Z,1µm,11.7s
GTA LR LR
comp=Z,1µm,10.7s
ENH Enshi 33.20 242 P P 12 55 41.6 -0.8
ENH IAmb IAmb 12 55 42.6
comp=Z,31nm,0.8s
SVW2 Sparrevohn 33.49 50 P P 12 55 46.0 +1.4
SVW2 IAmb IAmb 12 55 53.4
comp=Z,27nm,0.9s
ZAA0 Zalesovo Array 34.46 297 P P 12 55 51.6 -1.4
ZALV Zalesovo Beam 34.46 297 P P 12 55 52.3 -0.8
comp=Z,1.6nm,0.6s,baz=57,slow=8.0,SNR=9.6
ZALV PcP PcP 12 58 27.7 -0.2
comp=Z,4.1nm,0.9s,baz=124,slow=2.7,SNR=6.4
ZALV LR LR 13 10 50.2
comp=Z,394nm,21.3s,baz=50,slow=38
TOLK Toolik Lake Re 34.77 36 P P 12 55 56.8 +1.0
TOLK IAmb IAmb 12 56 04.1
comp=Z,38nm,1.0s
TOLK Toolik Lake Re 34.77 36 P P 12 55 56.2 +0.4
baz=277
MLY Manley 34.85 43 P P 12 55 57.9 +1.4
MLY IAmb IAmb 12 56 05.2
comp=Z,37nm,1.0s
BPAW Bear Paw Mtn. 34.93 44 P P 12 55 57.2 +0.1
BPAW IAmb IAmb 12 56 05.3
comp=Z,31nm,1.1s
KTH Kantishna Hill 35.07 45 P P 12 55 59.4 +1.0
KTH IAmb IAmb 12 56 06.9
comp=Z,39nm,1.3s
TRF Thorofare Moun 35.37 45 P P 12 56 02.0 +0.9
TRF IAmb IAmb 12 56 09.9
comp=Z,37nm,1.0s
SUA Susitna One 35.66 49 P P 12 56 03.9 +0.4
SUA IAmb IAmb 12 56 13.4
comp=Z,20nm,1.0s
KDAK Kodiak Island 35.88 55 P P 12 56 06.1 +0.9
KDAK IAmb IAmb 12 56 12.3
comp=Z,38nm,1.1s
KDAK Kodiak Island 35.88 55 P P 12 56 06.1 +0.9
KDAK pmax pmax
comp=Z,38nm,1.1s
MCK McKinley 35.90 45 P P 12 56 05.6 +0.2
MCK McKinley 35.90 45 P P 12 56 05.6 +0.2
MCK pmax pmax
comp=Z,67nm,1.1s
CD2 Chengdu 35.93 249 P P 12 56 05.3 -0.8
CD2 S S 13 01 43.1 -0.4
CD2 pmax pmax
comp=Z,30nm,0.8s
CD2 pmax pmax
comp=Z,260nm,4.9s
CD2 LR LR
comp=Z,800nm,11.8s
CD2 LR LR
comp=Z,800nm,12.3s
CD2 LR LR
comp=Z,1µm,13.7s
RND Reindeer 36.01 45 P P 12 56 06.9 +0.4
RND Reindeer 36.01 45 P P 12 56 06.9 +0.4
RND pmax pmax
comp=Z,22nm,1.2s
WRH Wood River Hil 36.08 43 P P 12 56 07.8 +0.8
BRLK Bradley Lake 36.08 51 P P 12 56 08.6 +1.6
BRLK IAmb IAmb 12 56 14.1
comp=Z,42nm,1.0s
TCOL CIGO, UAF Yank 36.09 42 P P 12 56 06.4 -0.6
baz=283,SNR=9.7
COLA College 36.09 42 P P 12 56 09.1 +2.1
COLA IAmb IAmb 12 56 15.1
comp=Z,37nm,1.0s
COLA College 36.09 42 P P 12 56 09.1 +2.1
COLA pmax pmax
comp=Z,37nm,1.0s
CCB Clear Creek Bu 36.16 43 P P 12 56 07.8 +0.2
CCB IAmb IAmb 12 56 16.1
comp=Z,44nm,1.1s
POKR Poker Flat Res 36.21 42 P P 12 56 07.7 -0.3
baz=283,SNR=9.3
GHO Glory Hole Cre 36.41 48 P P 12 56 10.9 +1.0
GHO IAmb IAmb 12 56 18.3
comp=Z,38nm,1.0s
IL31 36.52 42 P P 12 56 11.2 +0.6
ILAR Eielson Array 36.52 42 P P 12 56 11.3 +0.7
comp=Z,4.1nm,0.8s,baz=302,slow=7.8,SNR=40
ILAR LR LR 13 13 40.6
comp=Z,129nm,20.5s,baz=266,slow=40
HDA Harding Lake 36.58 43 P P 12 56 11.7 +0.6
HDA Harding Lake 36.58 43 P P 12 56 11.0 -0.2
baz=285,SNR=36
KNK Knik Glacier 36.73 48 P P 12 56 13.6 +1.1
DHY Denali Highway 36.74 45 P P 12 56 13.6 +0.8
DHY IAmb IAmb 12 56 20.3
comp=Z,32nm,1.1s
FYU Fort Yukon 36.76 39 P P 12 56 13.8 +1.1
WMQ Urumqi 37.44 280 eP P 12 56 19.3 +0.5
WMQ pP sP 12 56 25.3 -0.9
WMQ S S 13 02 05.1 -1.2
WMQ ScP ScP 13 02 26.0 +2.7
WMQ LR LR
comp=Z,710nm,15.9s
WMQ LR LR
comp=Z,710nm,12.5s
WMQ LR LR
comp=Z,230nm,16.1s
RIDG Independent Ri 37.65 44 P P 12 56 20.6 +0.2
GYA Guiyang 37.72 241 ⇑iP P 12 56 20.9 -0.5
GYA PP PnPn 12 57 49.8 +1.2
GYA S S 13 02 10.0 -1.0
GYA SS SnSn 13 04 46.1 -4.7
GYA pmax pmax
comp=Z,40nm,0.8s
GYA pmax pmax
comp=Z,280nm,4.1s
GYA LR LR
comp=Z,510nm,10.3s
GYA LR LR
comp=Z,350nm,10.3s
GYA LR LR
comp=Z,780nm,10.7s
SCRK Sand Creek 37.94 43 P P 12 56 22.9 0.0
SCRK IAmb IAmb 12 56 29.7
comp=Z,26nm,1.0s
DOT Dot Lake 38.01 44 P P 12 56 23.9 +0.5
EGAK Eagle 38.87 41 P P 12 56 31.3 +0.7
EGAK IAmb IAmb 12 56 37.9
comp=Z,48nm,0.9s
VRDI Verde Repeater 39.08 47 P P 12 56 33.8 +1.3
VRDI IAmb IAmb 12 56 40.9
comp=Z,33nm,1.0s
MK31 Makanchi Array 39.10 287 P P 12 56 32.2 -0.5
MK31 Makanchi Array 39.10 287 P P 12 56 32.2 -0.5
MK31 pmax pmax
comp=Z,12nm,0.9s
MKAR Makanchi Array 39.10 287 P P 12 56 31.8 -0.9
comp=Z,4.6nm,0.7s,baz=62,slow=8.1,SNR=45
MKAR PcP PcP 12 58 42.0 -0.2
comp=Z,2.5nm,0.8s,baz=66,slow=5.0,SNR=5.4
MKAR LR LR 13 12 12.4
comp=Z,217nm,21.0s,baz=49,slow=36
MCARA McCarthy VSAT 39.21 47 P P 12 56 35.8 +2.4
KURK Kurchatov 39.27 295 P P 12 56 33.0 -1.0
KURK IAmb IAmb 12 56 40.7
comp=Z,90nm,1.4s
KURK Kurchatov 39.27 295 c iP P 12 56 33.0 -1.0
KURK pmax pmax
comp=Z,32nm,1.3s
MAKZ Makanchi 39.27 287 P P 12 56 33.1 -1.0
MAKZ Makanchi 39.27 287 P P 12 56 33.1 -1.0
MAKZ pmax pmax
comp=Z,11nm,1.0s
BALM Baldy 39.65 47 P P 12 56 39.0 +1.8
DAWY Dawson 39.83 42 P P 12 56 40.6 +2.0
EPYK Eagle Plains 40.10 38 P P 12 56 41.9 +1.1
EPYK IAmb IAmb 12 56 48.7
comp=Z,31nm,0.9s
EPYK Eagle Plains 40.10 38 P P 12 56 41.7 +0.9
baz=290,SNR=9.6
CTGM Chitina Glacie 40.13 47 P P 12 56 43.2 +2.0
CTGM IAmb IAmb 12 56 50.3
comp=Z,40nm,1.0s
BALP Baler 40.30 214 eP P 12 56 41.5 -1.3
INK Inuvik 40.60 35 P P 12 56 44.8 0.0
INK Inuvik 40.60 35 P P 12 56 44.8 0.0
INK pmax pmax
comp=Z,24nm,0.9s
KMI Kunming 40.93 245 P P 12 56 48.0 -0.3
KMI pP pP 12 56 53.1 -0.5
KMI sP sP 12 56 55.3 -0.4
KMI S S 13 02 59.0 -0.4
KMI sS sS 13 03 10.3 +2.2
KMI SS SS 13 05 54.5 -6.6
KMI pmax pmax
comp=Z,29nm,1.5s
KMI pmax pmax
comp=Z,160nm,3.5s
KMI LR LR
comp=Z,640nm,11.6s
KMI LR LR
comp=Z,460nm,12.3s
KMI LR LR
comp=Z,700nm,12.6s
HYT Haines Junctio 41.90 46 P P 12 56 57.8 +2.0
QIZ Qiongzhong 42.24 231 P P 12 56 58.9 +0.1
QIZ S S 13 03 23.0 +4.6
QIZ LR LR
comp=Z,840nm,15.2s
QIZ LR LR
comp=Z,750nm,10.8s
QIZ LR LR
comp=Z,1µm,12.8s
BRVK Borovoye 42.67 301 P P 12 57 01.2 -0.7
BRVK Borovoye 42.67 301 deP P 12 57 01.6 -0.4
BRVK pmax pmax
comp=Z,10.0nm,0.8s
WHY Whitehorse 43.13 45 P P 12 57 06.7 +0.9
OTRP Odiongan 43.31 211 eP P 12 57 08.1 +0.6
SLVN Son La 43.33 240 P P 12 57 07.7 0.0
C36M Paulatuk 43.35 31 P P 12 57 07.4 +0.1
C36M IAmb IAmb 12 57 14.8
comp=Z,27nm,1.0s
C36M Paulatuk 43.35 31 P P 12 57 07.4 +0.1
baz=296
OCLP Ormoc 43.76 207 eP P 12 57 17.0 +5.8
BUSP Coron 44.25 214 eP P 12 57 14.6 -0.4
KDJ Kajisay 44.73 285 P P 12 57 18.6 -0.4
KDJ IAmb IAmb 12 57 25.6
comp=Z,25nm,1.1s
KDJ Kajisay 44.73 285 P P 12 57 18.6 -0.4
KDJ pmax pmax
comp=Z,25nm,1.1s
CUYO Cuyo Island 45.05 212 eP P 12 57 17.3 -4.2
ULHL Ulahol 45.22 285 P P 12 57 28.9 +6.0
SNR=5.5
ENPP El Nido 45.26 214 eP P 12 57 22.2 -0.8
SVE Sverdlovsk 45.58 310 ⇑eP P 12 57 25.4 +0.2
SVE pmax pmax
comp=Z,53nm,0.9s
SVE MLR MLR
comp=Z,487nm,14.0s
USP Ospenovka 45.64 287 P P 12 57 25.9 -0.1
SNR=16
KBK Karagaybulak 45.74 287 P P 12 57 26.9 -0.1
SNR=5.8
NRN Naryn 45.86 284 P P 12 57 29.6 +1.5
NRN Naryn 45.86 284 P P 12 57 29.6 +1.5
NRN pmax pmax
comp=Z,6.0nm,1.0s
KZA Kyzart 45.91 286 P P 12 57 29.4 +0.8
SNR=12
AAK Ala-Archa 46.02 287 P P 12 57 28.3 -0.8
comp=Z,7.3nm,1.0s,baz=90,slow=10,SNR=10
AAK LR LR 13 17 03.2
comp=Z,538nm,20.4s,baz=30,slow=36
AAK Ala-Archa 46.02 287 P P 12 57 28.8 -0.4
SNR=8.2
AAK Ala-Archa 46.02 287 P P 12 57 29.1 -0.1
AAK IAmb IAmb 12 57 36.3
comp=Z,16nm,1.0s
AAK Ala-Archa 46.02 287 eP P 12 57 28.7 -0.4
AAK pmax pmax
comp=Z,12nm,1.2s
KBS Kingsbay 46.07 348 deP P 12 57 26.1 -2.8
KBS pmax pmax
comp=Z,150nm,1.7s
EKS2 Erkin-Say 46.43 287 P P 12 57 32.2 -0.2
SNR=9.9
BUKP Musuan 46.67 206 eP P 12 57 35.0 +0.8
ARU Arti 46.76 311 P P 12 57 34.5 0.0
ARU Arti 46.76 311 c iP P 12 57 33.7 -0.8
ARU *PP pP 12 57 39.9 0.0
ARU 12 59 01.0
ARU 12 59 24.6
ARU S S 13 04 23.1 -0.3
ARU SS SS 13 07 44.7 -4.5
ARU pmax pmax
comp=Z,26nm,0.9s
ARU MLR MLR
comp=Z,300nm,14.0s
SHL Shillong 46.88 256 P P 12 57 35.7 -0.4
SHL Shillong 46.88 256 P P 12 57 35.7 -0.4
SHL pmax pmax
comp=Z,55nm,0.8s
KSH Kashi 47.06 282 P P 12 57 41.3 +4.0
KSH sP sP 12 57 48.6 +3.9
KSH PcP PcP 12 59 11.9 +2.8
KSH PP PP 12 59 30.4 +2.7
KSH S S 13 04 33.8 +5.4
KSH SS SS 13 07 54.9 0.0
KSH pmax pmax
comp=Z,93nm,1.7s
KSH pmax pmax
comp=Z,150nm,5.2s
KSH LR LR
comp=Z,1µm,12.8s
KSH LR LR
comp=Z,1µm,12.2s
KSH LR LR
comp=Z,1µm,10.3s
PAGZ Pagadian 47.16 208 eP P 12 57 36.5 -1.6
KCP Kidapawan 47.49 205 ⇑iP P 12 57 41.3 +0.6
UBPT Khong Chiam 47.58 234 P P 12 57 41.8 +0.5
RES Resolute Bay 47.66 18 P P 12 57 41.8 +0.5
RES Resolute Bay 47.66 18 P P 12 57 41.8 +0.5
RES pmax pmax
comp=Z,30nm,1.1s
BATP Bataraza 48.06 215 eP P 12 57 45.9 +0.8
CHTO Chiang Mai 48.07 243 P P 12 57 45.0 -0.2
CHTO IAmb IAmb 12 57 46.1
comp=Z,18nm,0.8s
CHTO Chiang Mai 48.07 243 P P 12 57 45.0 -0.2
CHTO pmax pmax
comp=Z,18nm,0.8s
KK31 Karatay Array 48.07 290 P P 12 57 44.5 -0.5
KK31 Karatay Array 48.07 290 P P 12 57 44.5 -0.5
KK31 pmax pmax
comp=Z,14nm,1.2s
KKAR Karatay Array 48.07 290 P P 12 57 44.5 -0.5
KKAR Karatay Array 48.07 290 P P 12 57 44.5 -0.5
KKAR pmax pmax
comp=Z,14nm,1.2s
TAPN Taplejung 48.09 261 eP P 12 57 45.4 -0.2
comp=Z,27nm,0.5s
SKMP Bagumbayan, Su 48.10 206 eP P 12 57 45.1 -0.3
DDMP Don Marcelino, 48.20 204 eP P 12 57 42.4 -3.7
CM31 Chiang Mai Arr 48.36 243 P P 12 57 47.6 +0.2
CMAR Chiang Mai Arr 48.36 243 P P 12 57 47.6 +0.3
comp=Z,5.2nm,0.9s,baz=21,slow=7.3,SNR=34
CMAR PcP PcP 12 59 14.2 +0.3
comp=Z,4.1nm,0.7s,baz=10.0,slow=2.5,SNR=11
ODAN Odare 48.64 261 eP P 12 57 49.6 -0.2
comp=Z,26nm,0.6s
JIRN Jiri 48.79 263 eP P 12 57 50.6 -0.5
comp=Z,56nm,0.9s
GUN Gumba 48.80 263 eP P 12 57 50.2 -1.0
comp=Z,22nm,0.7s
PBKT Sadao Pong 48.81 240 P P 12 57 50.8 0.0
PBKT IAmb IAmb 12 57 52.0
comp=Z,16nm,0.8s
RAMN Ramite 49.06 262 eP P 12 57 52.2 -0.8
comp=Z,50nm,0.5s
BRDH Bariadhala 49.21 254 P P 12 57 54.7 +0.8
comp=Z,77nm,0.3s,baz=200,slow=2.3,SNR=6.9
KKN Kakani 49.26 264 eP P 12 57 54.1 -0.4
comp=Z,22nm,0.7s
PRGR Permogore 49.33 321 eP P 12 57 52.6 -1.7
PRGR e 12 59 46.6
PRGR pmax pmax
comp=Z,21nm,0.8s
PKI Pulchoki 49.34 264 eP P 12 57 54.3 -0.9
PKIN Phulchoki 49.34 264 eP P 12 57 54.5 -0.7
DMN Daman 49.49 264 eP P 12 57 55.8 -0.6
comp=Z,27nm,0.9s
GKN Gorkha 49.50 265 eP P 12 57 56.1 -0.2
KIRV Kirov 49.62 317 P P 12 57 56.9 +0.4
comp=Z,9.3nm,0.7s,baz=332,slow=5.5,SNR=3.3
KIRV Kirov 49.62 317 eP P 12 57 57.2 +0.7
APA Apatity 49.75 332 ⇓iP P 12 58 05.0 +7.5
APA pmax pmax
comp=Z,9.0nm,0.9s
APA MLR MLR
comp=Z,800nm,16.0s
DANN Dangsing 49.79 266 eP P 12 57 58.6 0.0
comp=Z,62nm,0.7s
BTK Batken 49.79 286 P P 12 57 57.8 -0.5
BTK IAmb IAmb 12 58 04.7
comp=Z,16nm,0.8s
BTK Batken 49.79 286 P P 12 57 57.8 -0.5
BTK pmax pmax
comp=Z,16nm,0.9s
YKA Yellowknife Ar 50.30 36 P P 12 58 01.9 +0.3
comp=Z,3.8nm,0.8s,baz=307,slow=7.2,SNR=46
YKA PcP PcP 12 59 20.1 -0.1
comp=Z,0.9nm,1.0s,baz=306,slow=7.4,SNR=2.7
YKA LR LR 13 20 37.0
comp=Z,108nm,18.4s,baz=0.0,slow=38
YKA Yellowknife Ar 50.30 36 P P 12 58 02.0 +0.3
AKTO Aktyubinsk 50.47 304 P P 12 58 03.3 +0.1
comp=Z,2.8nm,1.0s,baz=38,slow=12
TMCR Tamitsa 50.51 327 eP P 12 58 02.9 -0.3
ARCES ARCESS Array B 50.54 336 P P 12 58 03.4 0.0
comp=Z,3.6nm,0.8s,baz=64,slow=8.1,SNR=3.2
ARCES LR LR 13 25 02.8
comp=Z,274nm,19.0s,baz=347,slow=43
DAG Danmarks Havn 50.84 355 / P P 12 58 10.3 +4.7
DAG Danmarks Havn 50.84 355 P P 12 58 10.3 +4.7
KLMR Klimovskoe 52.13 323 eP P 12 58 12.7 -2.7

KLMR pmax pmax
comp=Z,40nm,1.4s
KLMR Klimovskoe 52.13 323 eP P 12 58 12.8 -2.7
KLMR AMP 12 58 22.0
comp=Z,40nm,1.4s
NIL Nilore 52.56 279 P P 12 58 19.3 +0.2
NIL Nilore 52.56 279 P P 12 58 19.3 +0.2
NIL pmax pmax
comp=Z,63nm,0.8s
SMPI Sarmi 54.10 186 P P 12 58 30.9 +0.5
comp=Z,103nm,1.2s
KBL Kabul 54.50 282 P P 12 58 32.0 -1.5
KBL Kabul 54.50 282 P P 12 58 32.0 -1.5
KBL pmax pmax
comp=Z,16nm,1.2s
MRSI Marisa 54.59 207 P P 12 58 33.5 -0.5
comp=Z,29nm,1.2s
LLLB Lillooet 54.86 51 P P 12 58 36.6 +0.9
LLLB IAmb IAmb 12 58 43.9
comp=Z,24nm,1.3s
MPSI Mapaga 55.31 209 P P 12 58 37.6 -1.6
comp=Z,346nmcomp=Z,16nm,1.1s
SUF Sumiainen 55.35 330 P P 12 58 38.2 -0.8
SUF pmax pmax
comp=Z,25nm,2.7s
SUMG Summit 55.56 1 iP P 12 58 41.4 +0.6
SUMG Summit 55.56 1 eP P 12 58 41.4 +0.6
SBUM Sibu 55.98 219 P P 12 58 44.7 +0.7
SBUM IAmb IAmb 12 58 46.5
comp=Z,25nm,0.9s
APSI Ampana 55.99 207 P P 12 58 44.1 0.0
comp=Z,20nm,0.9s
PUL Pulkovo 56.18 326deP P 12 58 44.5 -0.4
PUL pmax pmax
comp=Z,102nm,0.4s
B05A Bryant 56.32 53 P P 12 58 48.0 +1.8
baz=313
FIA1 FINESS Array S 56.33 329 P P 12 58 45.9 -0.1
FINES FINESS Array B 56.33 329 P P 12 58 45.6 -0.4
comp=Z,4.7nm,0.7s,baz=46,slow=8.2,SNR=13
FINES LR LR 13 26 01.2
comp=Z,480nm,18.2s,baz=26,slow=39
MOS Moscow 56.34 319 eP P 12 58 44.2 -2.0
MOS e 12 58 51.2
MOS pmax pmax
comp=Z,37nm,0.8s
MLH Mauna Loa 57.17 101 S S 13 06 47.7 +0.1
OBN Obninsk 57.21 319deP P 12 58 51.6 -0.7
OBN i 12 58 57.1
OBN i 13 01 00.8
OBN pmax pmax
comp=Z,23nm,1.3s
OBN MLR MLR
comp=Z,219nm,14.0s
B08A Colville Reser 57.61 52 P P 12 58 56.0 +0.6
B08A IAmb IAmb 12 59 03.2
comp=Z,21nm,1.2s
KSM Kuching 57.62 220 P P 12 58 56.3 +0.5
KSM IAmb IAmb 12 58 57.6
comp=Z,24nm,0.9s
VRH Novokhopyorsk 57.79 313 eP P 12 58 54.9 -1.6
VRH pmax pmax
comp=Z,30nm,1.1s
LPSR Galich'ya Gora 58.02 316 eP P 12 58 56.0 -2.1
LPSR pmax pmax
comp=Z,20nm,0.6s
VSU Vasula 58.39 327 eP P 12 59 01.6 +1.0
VSU Vasula 58.39 327⇓eP P 12 58 59.2 -1.3
VSU pmax pmax
comp=Z,45nm,1.0s
STKI Sintang 58.45 218 P P 12 59 02.8 +1.3
comp=Z,56nm,0.8s
H04D Lebanon 58.56 57 P P 12 59 02.2 +0.2
baz=314
GEYT Alibeck 58.58 293 P P 12 59 01.8 -0.5
comp=Z,2.1nm,0.7s,baz=279,slow=2.9,SNR=5.4
GEYT LR LR 13 24 28.7
comp=Z,139nm,18.3s,baz=40,slow=36
NEW Newport 58.73 50 P P 12 59 04.5 +1.3
baz=315
VSR Storozhevoye 58.91 315 eP P 12 59 03.0 -1.3
VSR pmax pmax
comp=Z,40nm,1.6s
VORD Divnogorie 59.04 314 eP P 12 59 03.0 -2.2
VORD pmax pmax
comp=Z,20nm,1.2s
IPM Ipoh 59.06 232 P P 12 59 05.7 -0.1
IPM IAmb IAmb 12 59 07.5
comp=Z,13nm,0.8s
WALA Waterton Lakes 59.67 48 P P 12 59 09.8 0.0
BNSI Bone 59.75 207 P P 12 59 10.6 +0.1
comp=Z,37nm,1.4s
J04D Umpqua Nationa 59.78 57 P P 12 59 11.8 +1.0
baz=315
FCC Fort Churchill 59.99 31 P P 12 59 11.4 -0.1
FCC Fort Churchill 59.99 31 P P 12 59 11.5 -0.1
FCC pmax pmax
comp=Z,47nm,1.5s
J05D Fort Rock, OR 60.20 57 P P 12 59 15.5 +1.9
baz=315
FFC Flin Flon 60.44 37 P P 12 59 14.6 -0.2
FFC Flin Flon 60.44 37 P P 12 59 14.6 -0.2
SLIT Slitere, Latvi 60.52 328 eP P 12 59 17.6 +2.3
SLIT IAmb IAmb 12 59 24.3
comp=Z,279nm,1.3s
IZAR Zarasai 60.65 325 eP P 12 59 16.8 +0.6
IZAR IAmb IAmb 12 59 25.2
comp=Z,15nm,0.7s
M02C Callahan 60.70 59 P P 12 59 18.1 +1.2
baz=315
NC405 NORSAR Array S 60.71 335 P P 12 59 16.4 -0.2
NC204 NORSAR Array S 60.81 336 P P 12 59 17.0 -0.3
MAK Makhachkala 60.82 303 eP P 12 59 13.3 -4.3
MAK eS S 13 07 28.7 -5.3
MAK pmax pmax
comp=Z,169nm,1.4s
MAK MLR MLR
comp=Z,412nm,14.0s
ISAL Salakas 60.84 325 eP P 12 59 17.4 -0.1
NB2 NORSAR Subarra 60.90 336 P P 12 59 17.2 -0.7
comp=Z,12nm,0.8s,baz=32,slow=6.9
NOA NORSAR Array B 60.90 336 P P 12 59 17.9 0.0
comp=Z,4.9nm,0.8s,baz=32,slow=6.9,SNR=15
NOA LR LR 13 29 54.1
comp=Z,184nm,19.1s,baz=35,slow=40
M04C Macdoel 60.95 59 P P 12 59 20.3 +1.6
baz=316
IIGN Ignalina 60.97 325 eP P 12 59 18.2 -0.2
NBO00 NORSAR Array S 61.02 336 P P 12 59 18.6 -0.1
HFS Hagfors 61.02 334 P P 12 59 18.3 -0.4
comp=Z,5.3nm,0.7s,baz=28,slow=6.5,SNR=2.8
MICGM Minsk 61.03 323 e P 12 59 18.0 -0.8
MNK Minsk 61.03 323 eP P 12 59 18.0 -0.8
N02D Trinity Center 61.07 60 P P 12 59 20.2 +0.8
baz=316
BMO Blue Mountains 61.07 53 P P 12 59 19.3 -0.1
BMO Blue Mountains 61.07 53 P P 12 59 19.3 -0.1
BMO pmax pmax
comp=Z,13nm,1.2s
MSO Missoula 61.27 50 P P 12 59 21.1 +0.4
MSO IAmb IAmb 12 59 29.3
comp=Z,23nm,1.1s
MSO Missoula 61.27 50 P P 12 59 21.7 +1.0
baz=317
PSI Prapat 61.54 233 P P 12 59 23.2 +0.3
comp=Z,14nm,0.8s,baz=21,slow=2.1,SNR=11
PSI LR LR 13 30 06.7
comp=Z,123nm,18.9s,baz=2.0,slow=40
PSI Prapat 61.54 233 P P 12 59 23.2 +0.3
PSI pmax pmax
comp=Z,15nm,0.8s
GOF Gofitskoye 61.56 308⇑eP P 12 59 22.1 -0.4
J08A Circle Bar Ran 61.56 55 P P 12 59 23.0 +0.2
O02D Mt. Diablo Mer 61.59 60 P P 12 59 24.1 +1.1
baz=316
RPSI Rantau Prapat 61.64 233 P P 12 59 23.0 -0.3
RPSI IAmb IAmb 12 59 24.7
comp=Z,15nm,0.8s
RPSI Rantau Prapat 61.64 233 P P 12 59 23.2 -0.2
PABE Paberze 61.65 326 eP P 12 59 22.3 -0.6
PABE IAmb IAmb 12 59 31.9
comp=Z,36nm,1.0s
FRB Frobisher Bay 61.75 16 P P 12 59 22.2 -1.3
FRB pmax pmax
comp=Z,17nm,1.0s
O03E Paynes Creek 62.04 60 P P 12 59 27.1 +1.1
baz=316
LGD Lagodekhi 62.28 303 P P 12 59 29.3 +1.8
EGMT Eagleton 62.31 47 P P 12 59 27.7 0.0
baz=318
NCK Nalchik 62.42 306⇓eP P 12 59 28.5 +0.1
NCK pmax pmax
comp=Z,28nm,1.1s
KIV Kislovodsk 62.53 307 ⇑P P 12 59 30.2 +1.0
KIV Kislovodsk 62.53 307 P P 12 59 28.8 -0.4
KIV Kislovodsk 62.53 307 eP P 12 59 29.7 +0.5
KIV pmax pmax
comp=Z,119nm,1.1s
KIV MLR MLR
comp=Z,942nm,17.0s
KBZ Khabaz 62.59 307 P P 12 59 28.4 -1.1
comp=Z,4.4nm,0.9s,baz=63,slow=5.8,SNR=6.4
KBZ LR LR 13 30 51.1
comp=Z,421nm,18.4s,baz=44,slow=40
KBZ Khabaz 62.59 307deP P 12 59 29.7 +0.2
DDFL Dedoflistskaro 62.63 303 P P 12 59 32.9 +3.0
GUDG Gudauri 62.73 305 P P 12 59 30.8 +0.1
ZEI Tsey 62.78 305 eP P 12 59 28.8 -2.3
ZEI pmax pmax
comp=Z,10.0nm,1.0s
MFID Camas Ranch 62.85 54 P P 12 59 32.6 +1.3
MFID IAmb IAmb 12 59 39.5
comp=Z,17nm,1.2s
DLMT Dillon 62.98 50 P P 12 59 33.4 +1.1
NEY Neytrino 63.03 306⇑eP P 12 59 34.4 +1.7
NEY pmax pmax
comp=Z,4.0nm,1.0s
SUW Suwalki 63.11 325 P P 12 59 32.4 -0.4
SUW Suwalki 63.11 325 P P 12 59 32.4 -0.4
SUW pmax pmax
comp=Z,40nm,1.0s
TBLG Delisi 63.13 304 P P 12 59 33.3 +0.1
TBLG Delisi 63.13 304 P P 12 59 33.3 +0.1
TBLG pmax pmax
comp=Z,47nm,1.2s
ONI Oni 63.15 305 P P 12 59 34.9 +1.6
AKASG Malin Array Be 63.47 320 P P 12 59 34.0 -1.2
comp=Z,3.7nm,0.7s,baz=35,slow=6.8,SNR=25
AKASG LR LR 13 28 48.2
comp=Z,179nm,18.1s,baz=60,slow=38
AKASG Malin Array Be 63.47 320 iP P 12 59 34.0 -1.2
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKBB Malin Array Si 63.47 320 P P 12 59 34.0 -1.2
AKBB IAmb IAmb 12 59 43.2
comp=Z,23nm,1.1s
AKBB Malin Array Si 63.47 320⇑eP P 12 59 33.6 -1.6
KZRT Kazreti 63.55 304 P P 12 59 37.2 +1.2
KLNR Kaliningrad 63.65 327⇓eP P 12 59 35.6 -0.7
KLNR pmax pmax
comp=Z,35nm,1.2s
AKH Akhalkalaki 64.00 304 P P 12 59 40.0 +0.9
AKH IAmb IAmb 12 59 47.4
comp=Z,28nm,1.3s
AKH Akhalkalaki 64.00 304 P P 12 59 40.0 +0.9
AKH pmax pmax
comp=Z,28nm,1.3s
PDSI Padang 64.04 229 P P 12 59 38.2 -1.2
comp=Z,14nm,0.8s
YHH Holmes Hill 64.23 50 P P 12 59 40.6 -0.1
GNI Garni 64.29 303 P P 12 59 40.2 -0.8
comp=Z,3.7nm,0.4s,baz=112,slow=0.8,SNR=3.8
GNI Garni 64.29 303 IAmb IAmb 12 59 50.3
comp=Z,16nm,0.9s
GNI Garni 64.29 303deP P 12 59 41.3 +0.3
GNI pmax pmax
comp=Z,40nm,1.3s
DGMT Dagmar 64.38 43 P P 12 59 41.6 +0.3
DGMT Dagmar 64.38 43 P P 12 59 41.2 -0.1
baz=321,SNR=6.1
CMB Columbia Colle 64.43 61 P P 12 59 42.7 +0.9
CMB IAmb IAmb 12 59 50.2
comp=Z,13nm,1.1s
CMB Columbia Colle 64.43 61 P P 12 59 42.7 +0.9
CMB pmax pmax
comp=Z,13nm,1.2s
KRJI Kerinci 64.62 228 P P 12 59 43.6 +0.3
comp=Z,203nm,0.8s
PLAI Plampang 64.63 208 P P 12 59 42.3 -0.9
comp=Z,47nm,0.9s
H17A Grant Village 64.65 50 P P 12 59 44.1 +0.7
H17A IAmb IAmb 12 59 53.8
comp=Z,25nm,1.1s
H17A Grant Village 64.65 50 P P 12 59 43.5 +0.1
baz=319
RLMT Red Lodge 64.71 48 P P 12 59 42.0 -1.8
baz=320
LAO LASA Array 64.89 45 P P 12 59 44.9 +0.2
baz=321,SNR=6.0
KVN Kaiserville 64.90 58 P P 12 59 45.8 +0.7
KVN IAmb IAmb 12 59 54.0
comp=Z,11nm,1.0s
KVN Kaiserville 64.90 58 P P 12 59 45.8 +0.7
KVN pmax pmax
comp=Z,11nm,1.0s
RYN Ryan 64.99 59 P P 12 59 46.3 +0.8
ELK Elko 65.11 55 P P 12 59 46.3 -0.2
ELK Elko 65.11 55 P P 12 59 46.3 -0.2
ELK pmax pmax
comp=Z,7.0nm,1.0s
NVAR Mina Array Bea 65.25 59 P P 12 59 46.2 -1.1
comp=Z,0.8nm,0.7s,baz=309,slow=6.6,SNR=6.0
NVAR LR LR 13 25 07.7
comp=Z,53nm,21.6s,baz=322,slow=33
NV11 Mina Array Sit 65.33 59 P P 12 59 48.2 +0.5
NV11 IAmb IAmb 12 59 56.1
comp=Z,18nm,1.3s
KLSI 65.50 223 P P 12 59 49.0 +0.1
comp=Z,21μmcomp=Z,316nmcomp=Z,9.6nm,1.1s
MDSI Maura Dua 65.55 224 P P 12 59 48.6 -0.6
comp=Z,792nmcomp=Z,12nm,0.8s
SORM Soroca 65.84 318 ⇑P P 12 59 50.0 -0.7
SORM Soroca 65.84 318 P P 12 59 50.0 -0.7
KPJI Karang Pucung 66.22 218 P P 12 59 52.6 -0.8
comp=Z,34nm,1.4s
ULM Lac du Bonnet 66.27 37 P P 12 59 52.8 -0.6
comp=Z,7.0nm,0.8s,baz=312,slow=6.8,SNR=15
ULM LR LR 13 31 48.5
comp=Z,167nm,20.3s,baz=322,slow=39
ULM Lac du Bonnet 66.27 37 P P 12 59 52.7 -0.8
ULM Lac du Bonnet 66.27 37⇑eP P 12 59 52.6 -0.8
HWUT Hardware Ranch 66.29 52 P P 12 59 54.5 +0.5
HWUT IAmb IAmb 13 00 02.8
comp=Z,16nm,1.1s
BW06 Boulder Array 66.37 50 P P 12 59 55.0 +0.4
BW06 IAmb IAmb 13 00 02.9
comp=Z,25nm,1.1s
BW06 Boulder Array 66.37 50 P P 12 59 54.8 +0.3
baz=320,SNR=9.3
PD31 Pinedale Array 66.37 50 P P 12 59 54.7 +0.1
PD31 IAmb IAmb 13 00 02.9
comp=Z,21nm,1.1s
PDAR Pinedale Array 66.37 50 P P 12 59 54.4 -0.2
comp=Z,2.5nm,0.9s,baz=13,slow=0.9,SNR=16
PDAR LR LR 13 32 47.4
comp=Z,22nm,18.2s,baz=354,slow=40
KIS Kishinev 66.54 317 eP P 13 00 02.0 +6.8
KIS LRM MLR 13 30 54.0
comp=Z,300nm,15.0s
KIS Kishinev 66.54 317 eP P 13 00 02.0 +6.8
KIS e 13 09 12.0
KIS MLR MLR
comp=Z,500nm,16.0s
KIS MLR MLR
comp=N,300nm,15.0s
SMMC Simmler 66.65 62 P P 12 59 57.2 +1.0
baz=318
R11A Troy Canyon, C 66.73 57 P P 12 59 57.5 +0.7
R11A Troy Canyon, C 66.73 57 P P 12 59 57.1 +0.2
baz=319
DUG Dugway, Tooele 66.75 54 P P 12 59 57.0 +0.1
DUG IAmb IAmb 13 00 05.8
comp=Z,18nm,1.2s
DUG Dugway, Tooele 66.75 54 P P 12 59 57.0 +0.1
DUG pmax pmax
comp=Z,18nm,1.2s
DUG Dugway, Tooele 66.75 54 P P 12 59 57.2 +0.4
baz=320,SNR=7.5
VES Vestal, Richgr 66.75 61 P P 12 59 57.8 +1.0
baz=319,SNR=5.2
MDND Maddock 66.76 41 P P 12 59 57.0 +0.3
MDND Maddock 66.76 41 P P 12 59 55.9 -0.8
baz=324
KWP Kalwaria Pacla 66.84 323 eP P 12 59 57.5 +0.3
KWP Kalwaria Pacla 66.84 323 P P 12 59 57.3 +0.1
KWP Kalwaria Pacla 66.84 323 eP P 12 59 57.5 +0.3
CWC Cottonwood Cre 66.85 60 P P 12 59 57.9 +0.3
baz=319
OJC Ojcow 67.42 325 eP P 13 00 00.8 0.0
OJC Ojcow 67.42 325 P P 13 00 00.5 -0.3
OJC IAmb IAmb 13 00 09.9
comp=Z,17nm,0.9s
OJC Ojcow 67.42 325 eP P 13 00 00.8 0.0
TPNV Topopah Spring 67.44 59 P P 13 00 01.5 +0.2
TPNV Topopah Spring 67.44 59 P P 13 00 01.5 +0.2
TPNV pmax pmax
comp=Z,6.0nm,0.8s
TPNV Topopah Spring 67.44 59 P P 13 00 01.3 0.0
baz=319
MPMC Manual Prospec 67.45 60 P P 13 00 02.3 +0.8
baz=319,SNR=6.6
FURC Furnace Creek, 67.47 59 P P 13 00 02.4 +1.1
baz=319,SNR=6.6
PSUT Pine Spring 67.48 56 P P 13 00 01.8 +0.1
BUR08 Bucovina Ar. S 67.50 320 P P 13 00 00.8 -0.7
BURAR Bucovina Array 67.52 320 ⇑P P 13 00 00.4 -1.2
BURAR Bucovina Array 67.52 320 P P 13 00 00.3 -1.2
UZH Uzhgorod 67.82 322 eP P 13 00 05.5 +2.2
UZH e 13 00 10.6
UZH e 13 00 33.6
TESR Tescani 67.83 318 ⇑P P 13 00 02.7 -0.7
RSSD Black Hills 67.85 46 P P 13 00 03.5 -0.4
RSSD IAmb IAmb 13 00 11.2
comp=Z,26nm,1.2s
RSSD Black Hills 67.85 46 P P 13 00 03.5 -0.4
RSSD pmax pmax
comp=Z,26nm,1.3s
RSSD Black Hills 67.85 46 P P 13 00 03.6 -0.4
baz=322
AGMN Agassiz Nation 67.87 38 P P 13 00 02.7 -0.9
AGMN Agassiz Nation 67.87 38 P P 13 00 03.2 -0.4
baz=325
K22A Casper 67.88 48 P P 13 00 04.1 0.0
baz=322
NIE Niedzica 67.91 324 eP P 13 00 04.4 +0.5
NIE Niedzica 67.91 324 eP P 13 00 04.4 +0.5
KVT Kavak 67.93 309 P P 13 00 06.2 +2.0
EDW2 Edwards Air Fo 68.06 61 P P 13 00 05.3 +0.1
baz=319,SNR=5.8
KSP Ksiaz 68.11 327 eP P 13 00 04.8 -0.3
KSP Ksiaz 68.11 327 eP P 13 00 04.8 -0.3
TRPA Tarpa 68.14 322 ⇑P P 13 00 05.0 -0.3
CFR Carcaliu 68.28 317 ⇑P P 13 00 06.3 +0.1
CFR Carcaliu 68.28 317 P P 13 00 06.0 -0.2
CFR pmax pmax
comp=Z,13nm,1.1s
VRI Vrincioaia 68.32 318 P P 13 00 07.0 +0.5
VRI pmax pmax
comp=Z,13nm,1.4s
SHPR Sheep Range 68.34 58 P P 13 00 07.1 0.0
MSU Marysvale 68.35 55 P P 13 00 07.2 +0.1
MSU Marysvale 68.35 55 P P 13 00 07.2 +0.1
PLOR Plostina 68.36 318 ⇑P P 13 00 07.2 +0.3
GSC Goldstone, Bar 68.38 60 P P 13 00 07.2 0.0
baz=320
DPC Dobruska-Polom 68.52 327 eP P 13 00 08.2 +0.5
DPC epP sP 13 00 14.4 -1.0
DPC Dobruska-Polom 68.52 327 eP P 13 00 08.2 +0.5
DPC e 13 00 14.4
OZUR 68.52 319 ⇑P P 13 00 07.8 0.0
MORC Moravsky Berou 68.59 326 eP P 13 00 08.0 -0.2
MORC Moravsky Berou 68.59 326 P P 13 00 07.8 -0.3
MORC IAmb IAmb 13 00 17.6
comp=Z,22nm,1.0s
MORC Moravsky Berou 68.59 326 P P 13 00 07.9 -0.2
MORC pmax pmax
comp=Z,22nm,1.0s
KRLC Kraliky 68.59 326 AMS AMS 13 37 00.0
comp=Z,500nm,19.0s
MTPU Mount Pierson 68.70 55 P P 13 00 10.4 +0.9
BFSC Mount Baldy Ra 68.73 61 P P 13 00 10.1 +0.7
baz=320
KNRA Kununurra 68.75 195 P P 13 00 09.4 0.0
CLL Collm 68.78 329 iP P 13 00 09.5 +0.2
comp=Z,29nm,1.5s
CLL isP pP 13 00 15.6 +0.8
CLL i 13 00 17.2
comp=Z,22nm,0.8s
CLL Collm 68.78 329 P P 13 00 09.1 -0.2
CLL Collm 68.78 329 iP P 13 00 09.5 +0.2
CLL i 13 00 15.6
CLL i 13 00 17.2
CLL pmax pmax
comp=Z,29nm,1.5s
BRG Berggiesshubel 68.86 328 eP P 13 00 16.9 +7.1
comp=Z,3.6nm,0.8s
BRG Berggiesshubel 68.86 328 eP P 13 00 16.9 +7.1
BRG pmax pmax
comp=Z,4.0nm,0.8s
MLR Muntele Rosu 68.94 318 ⇑P P 13 00 11.1 +0.5
MLR Muntele Rosu 68.94 318 P P 13 00 10.1 -0.5
MLR IAmb IAmb 13 00 20.4
comp=Z,18nm,1.1s
MLR Muntele Rosu 68.94 318 P P 13 00 10.1 -0.5
MLR pmax pmax
comp=Z,18nm,1.1s
CIS Catalina Islan 68.95 63 P P 13 00 10.4 -0.3
baz=319
LCMT Little Creek M 68.95 57 P P 13 00 10.6 -0.2
HEC Hector,Ludlow 68.99 60 P P 13 00 11.2 +0.2
baz=320,SNR=7.2
ISR Istrita 69.00 317 P P 13 00 11.5 +0.7
ISR pmax pmax
comp=Z,71nm,1.1s
O20A White River Ci 69.03 51 P P 13 00 11.2 -0.1
O20A IAmb IAmb 13 00 18.9
comp=Z,23nm,1.1s
O20A White River Ci 69.03 51 P P 13 00 11.2 -0.1
baz=321,SNR=5.6
ILGA Ilgaz 69.05 310 P P 13 00 11.9 +0.4
BBRC Big Bear Solar 69.11 61 P P 13 00 12.2 +0.3
baz=320
DRGR 69.17 321 ⇑P P 13 00 11.7 -0.3
DRGR 69.17 321 P P 13 00 12.0 +0.1
DRGR pmax pmax
comp=Z,32nm,1.2s
VYHS Vyhne 69.21 324 eP P 13 00 12.1 +0.1
VYHS Vyhne 69.21 324 eP P 13 00 12.1 +0.1
PSZ Piszkesteto 69.31 323 P P 13 00 13.4 +0.7
PSZ pmax pmax
comp=Z,17nm,1.2s
VRAC Vranov 69.31 326 eP P 13 00 12.5 -0.2
VRAC Vranov 69.31 326 P P 13 00 13.6 +0.9
comp=Z,1.8nm,0.4s,baz=19,slow=6.4,SNR=4.2
JAVC Velka Javorina 69.32 325 eP P 13 00 13.3 +0.5
VOIR 69.35 319 ⇑P P 13 00 13.2 +0.2
VOIR 69.35 319 P P 13 00 13.6 +0.5
VOIR pmax pmax
comp=Z,17nm,1.0s
EKA Eskdalemuir Ar 69.37 340 P P 13 00 13.7 +0.7
comp=Z,3.2nm,0.8s,baz=27,slow=5.6,SNR=5.9
GMRC Granite Mounta 69.39 60 P P 13 00 13.6 +0.1
baz=320,SNR=7.6
PRU Pruhonice 69.42 328 P P 13 00 13.3 0.0
PRU pmax pmax
comp=Z,6.0nm,1.1s
N23A Red Feather La 69.53 49 P P 13 00 14.9 +0.5
N23A IAmb IAmb 13 00 23.8
comp=Z,22nm,1.4s
N23A Red Feather La 69.53 49 P P 13 00 13.7 -0.8
baz=322
KRUC Moravsky 69.59 326 eP P 13 00 14.4 0.0
KRUC Moravsky 69.59 326 P P 13 00 15.0 +0.6
KRUC pmax pmax
comp=Z,14nm,1.2s
SUSD Miller 69.78 42 P P 13 00 15.8 +0.2
EYMN Ely 69.78 36 P P 13 00 14.3 -1.3
EYMN IAmb IAmb 13 00 21.8
comp=Z,25nm,1.1s
EYMN Ely 69.78 36 P P 13 00 14.7 -0.9
baz=328
MOX Moxa 69.79 330 P P 13 00 15.9 +0.3
MOX pmax pmax
comp=Z,10.0nm,1.1s
BELC Belle Mtn. Jos 69.80 61 P P 13 00 16.5 +0.4

	baz=320						
PFO	Pinyon Flats O	69.85	61	P	P	13 00 16.0	-0.4
	baz=320						
U15A	North Rim	69.89	56	P	P	13 00 17.4	+0.6
U15A				IAmb	IAmb	13 00 25.0	
	comp=Z,18nm,1.2s						
W13A	Hualapai Mount	70.08	58	P	P	13 00 18.4	+0.5
BR131	Keskin Array S	70.13	310	P	P	13 00 17.5	-0.6
BR131				IAmb	IAmb	13 00 24.7	
	comp=Z,9.4nm,0.8s						
BR131	Keskin Array S	70.13	310	c iP	P	13 00 17.4	-0.6
BRTR	Keskin Array B	70.13	310	P	P	13 00 17.4	-0.6
	comp=Z,5.2nm,0.9s,baz=78,slow=2.9,SNR=24						
BRTR				PP	PP	13 02 51.9	-0.8
	comp=Z,1.1nm,0.9s,baz=39,slow=9.9,SNR=3.9						
BRTR	Keskin Array B	70.13	310	i P	P	13 00 18.0	0.0
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
IRM	Iron Mountain	70.14	60	P	P	13 00 18.3	+0.2
	baz=320,SNR=6.7						
GZR	Gura Zlata	70.30	320	⇑P	P	13 00 18.7	-0.3
GZR	Gura Zlata	70.30	320	P	P	13 00 18.6	-0.3
BC3	Big Chuckawall	70.36	60	P	P	13 00 19.2	-0.3
	baz=320,SNR=5.1						
MONP2	Monument Peak	70.42	62	P	P	13 00 20.1	+0.2
	baz=320						
SCHQ	Schefferville	70.44	18	P	P	13 00 20.1	+0.6
	comp=Z,1.7nm,0.7s,baz=328,slow=9.5,SNR=2.8						
SCHQ				LR	LR	13 34 41.3	
	comp=Z,118nm,18.1s,baz=30,slow=39						
SCHQ	Schefferville	70.44	18	P	P	13 00 19.7	+0.2
BAR	Barrett	70.44	62	P	P	13 00 20.1	+0.2
BR231	Keskin MP Arra	70.45	310	P	P	13 00 20.2	+0.3
BR231				IAmb	IAmb	13 00 27.0	
	comp=Z,19nm,0.9s						
KHC	Kasperske Hory	70.48	328	eP	P	13 00 20.1	+0.2
KHC				epP	pP	13 00 26.1	+0.7
KHC	Kasperske Hory	70.48	328	P	P	13 00 19.6	-0.3
KHC	Kasperske Hory	70.48	328	⇓eP	P	13 00 20.1	+0.2
KHC				pmax	pmax		
	comp=Z,26nm,1.4s						
ISCO	Idaho Springs	70.55	50	P	P	13 00 21.4	+0.6
ISCO				IAmb	IAmb	13 00 28.8	
	comp=Z,14nm,1.3s						
ISCO	Idaho Springs	70.55	50	P	P	13 00 21.4	+0.6
ISCO				pmax	pmax		
	comp=Z,14nm,1.3s						
ISCO	Idaho Springs	70.55	50	P	P	13 00 20.9	+0.1
	baz=323						
PDMCI	Parker Dam,Lak	70.56	59	P	P	13 00 21.1	+0.6
	baz=321						
BZS	Buzias	70.57	321	⇑P	P	13 00 20.4	0.0
BZS	Buzias	70.57	321	P	P	13 00 20.3	-0.1
BZS				pmax	pmax		
	comp=Z,21nm,1.3s						
MDUB	Mudurnu	70.68	312	P	P	13 00 21.0	-0.4
GERES	GERESS Array B	70.69	327	P	P	13 00 21.1	-0.2
	comp=Z,0.4nm,0.2s,baz=18,slow=0.4,SNR=4.5						
GERES				LR	LR	13 35 04.2	
	comp=Z,258nm,18.2s,baz=40,slow=39						
WET	Wettzell	70.70	328	P	P	13 00 21.0	-0.2
WET				pmax	pmax		
	comp=Z,11nm,0.9s						
SWSC	Sam W. Stewart	70.72	61	P	P	13 00 22.2	+0.6
	baz=320						
CONA	Conrad Observa	70.74	326	i pP	P	13 00 22.0	+0.5
	comp=Z,9.7nm,1.5s						
GRF	Grafenberg Arr	70.75	329	eP	P	13 00 20.9	-0.6
	comp=Z,14nm,1.4s,baz=26,slow=5.3						
GRF				epP	pP	13 00 27.9	+0.8
	baz=27,slow=5.3						
GRF				eL	L	13 34 35.9	
	comp=Z,178nm,19.5s						
IKP	In-Ko-Pah, Jac	70.77	62	P	P	13 00 23.0	+1.0
	baz=320						
Y12C	Blythe	70.78	60	P	P	13 00 22.3	+0.4
	baz=321						
E38A	The Farm, Brul	70.89	37	P	P	13 00 21.2	-1.2
WUAZ	Wupatki	71.06	56	P	P	13 00 24.3	+0.5
	baz=321						
MVCO	Mesa Verde	71.19	53	P	P	13 00 24.8	+0.1
MVCO	Mesa Verde	71.19	53	P	P	13 00 24.6	-0.1
	baz=322,SNR=6.0						
OGNE	Ogallala	71.28	47	P	P	13 00 25.0	+0.1
OGNE	Ogallala	71.28	47	P	P	13 00 25.0	+0.1
	baz=324						
ECSD	EROS Data Cent	71.33	42	P	P	13 00 24.4	-0.7
ECSD				IAmb	IAmb	13 00 31.7	
	comp=Z,21nm,0.9s						
ECSD	EROS Data Cent	71.33	42	P	P	13 00 24.8	-0.3
	baz=326						
MOA	Molln	71.36	327	i pP	P	13 00 25.9	+0.7
	comp=Z,7.4nm,1.6s						
Q24A	Divide	71.43	50	P	P	13 00 26.1	-0.1
	baz=323						
Y14A	Wickenburg	71.44	59	P	P	13 00 27.0	+1.0
Y14A				IAmb	IAmb	13 00 34.0	
	comp=Z,16nm,1.3s						
ARSA	Arzberg	71.44	326	i pP	P	13 00 26.8	+1.1
	comp=Z,12nm,1.6s						
S22A	4UR Ranch, Cre	71.59	52	P	P	13 00 28.0	+0.9
S22A	4UR Ranch, Cre	71.59	52	P	P	13 00 27.7	+0.6
	baz=322,SNR=5.8						
SPMN	Marine on St.	71.59	38	P	P	13 00 26.0	-0.6
	baz=328						
FITZ	Fitzroy Crossi	71.67	198	P	P	13 00 27.6	+0.4
FITZ				IAmb	IAmb	13 00 28.8	
	comp=Z,25nm,1.0s						
X16A	Lo Mia Camp, P	71.88	57	P	P	13 00 29.8	+1.0
113A	Mohawk Valley,	71.94	60	P	P	13 00 28.8	-0.1
CTAO	Charters Tower	71.97	177	P	P	13 00 29.1	+0.1
CTAO	Charters Tower	71.97	177	P	P	13 00 29.1	+0.1
WB0	Warramunga Arr	72.06	189	P	P	13 00 28.6	-1.0
WB0				IAmb	IAmb	13 00 30.4	
	comp=Z,25nm,0.9s						
SOKA	Soboth	72.11	326	epP	P	13 00 31.2	+1.4
	comp=Z,14nm,1.6s						
COWI	Conover	72.20	36	P	P	13 00 29.0	-1.3
WRAB	Tennant Creek	72.22	189	P	P	13 00 30.3	-0.3
WRAB				IAmb	IAmb	13 00 31.4	
	comp=Z,29nm,1.1s						
WRAB	Tennant Creek	72.22	189	c iP	P	13 00 30.3	-0.3
WRAB				pmax	pmax		
	comp=Z,26nm,1.3s						
SDCO	Great Sand Dun	72.23	51	P	P	13 00 31.0	0.0
SDCO	Great Sand Dun	72.23	51	P	P	13 00 31.2	+0.3
	baz=323,SNR=5.6						
WR0	Warramunga Arr	72.23	189	P	P	13 00 30.5	-0.1
WR0				IAmb	IAmb	13 00 31.5	
	comp=Z,22nm,0.9s						
WB2	Warramunga Arr	72.23	189	P	P	13 00 30.5	-0.1
WB2				IAmb	IAmb	13 00 31.6	
	comp=Z,27nm,1.1s						
WRA	Warramunga Arr	72.23	189	P	P	13 00 30.4	-0.3
	comp=Z,14nm,0.9s,baz=7.6,slow=6.4,SNR=45						
KBA	Koelnbreinsper	72.34	327	i pP	P	13 00 32.5	+1.2
	comp=Z,20nm,1.6s						
VTS	Vitosha	72.42	318	⇑P	P	13 00 32.3	+0.5
VTS	Vitosha	72.42	318	P	P	13 00 31.7	-0.1
VTS				IAmb	IAmb	13 00 41.1	
	comp=Z,27nm,1.0s						
VTS	Vitosha	72.42	318	P	P	13 00 31.7	-0.1
VTS				pmax	pmax		
	comp=Z,27nm,1.0s						
G40A	Rib Lake	72.53	37	P	P	13 00 31.6	-0.7
BGNE	Belgrade	72.60	44	P	P	13 00 32.7	-0.1
	baz=326						
MATQ	Matagami	72.62	27	P	P	13 00 32.1	-0.6
	baz=335						
ALN	Alexandroupoli	72.65	315	P	P	13 00 33.2	+0.2
ALN				pmax	pmax		
	comp=Z,12nm,1.2s						
E43A	Lone Tree Farm	72.72	34	P	P	13 00 32.6	-0.8
E43A				IAmb	IAmb	13 00 39.5	
	comp=Z,14nm,0.8s						
WTTA	Wattenberg	72.75	328	i pP	P	13 00 34.1	+0.4
	comp=Z,15nm,1.2s						
E44A	Grand Marais A	72.87	33	P	P	13 00 33.9	-0.3
E44A				IAmb	IAmb	13 00 40.1	
	comp=Z,15nm,0.8s						
E44A	Grand Marais A	72.87	33	P	P	13 00 34.0	-0.2
	baz=331						
ABTA	Abfaltersbach	72.91	327	epP	P	13 00 35.0	+0.4
	comp=Z,11nm,1.4s						
SQTA	Sankt Quirin	72.92	328	i pP	P	13 00 35.7	+1.0
	comp=Z,16nm,1.3s						

214A	Organ Pipe Nat	73.08	60	P	P	13 00 36.8	+1.0
214A	Organ Pipe Nat	73.08	60	P	P	13 00 36.3	+0.6
	baz=322						
T25A	Trinidad	73.23	51	P	P	13 00 36.5	-0.3
T25A				IAmb	IAmb	13 00 44.8	
	comp=Z,22nm,1.4s						
T25A	Trinidad	73.23	51	P	P	13 00 36.3	-0.6
	baz=324						
FETA	Feichten	73.25	328	P	P	13 00 35.0	-1.7
	comp=Z,8.8nm,1.3s						
D46A	Sault St. Mari	73.26	32	P	P	13 00 35.2	-1.4
	baz=332						
ECH	Echery	73.30	331	P	P	13 00 36.1	-0.7
ECH				IAmb	IAmb	13 00 36.6	
	comp=Z,23nm,1.5s						
ECH	Echery	73.30	331	P	P	13 00 36.1	-0.7
ECH				pmax	pmax		
	comp=Z,23nm,1.5s						
D47A	Chapleau	73.42	31	P	P	13 00 36.3	-1.2
	baz=332						
LSQQ	Lebel-sur-Quev	73.44	26	P	P	13 00 36.6	-1.0
	baz=336						
MANT	Manisa	73.49	312	P	P	13 00 38.6	+0.3
SRS	Serrai	73.51	317	P	P	13 00 38.2	0.0
SRS				pmax	pmax		
	comp=Z,33nm,1.2s						
E46A	Sault Ste Mari	73.63	32	P	P	13 00 38.6	-0.1
E46A				IAmb	IAmb	13 00 44.7	
	comp=Z,15nm,1.0s						
D48A	Paudash Townsh	73.72	30	P	P	13 00 38.1	-1.2
	baz=333						
DAVOX	Davos/Dischmat	73.74	329	P	P	13 00 39.0	-0.6
	comp=Z,0.6nm,0.3s,baz=164,slow=23,SNR=1.9						
DAVOX				LR	LR	13 36 41.5	
	comp=Z,227nm,19.0s,baz=334,slow=39						
DAVOX	Davos/Dischmat	73.74	329	P	P	13 00 39.0	-0.6
KNT	Kendrikon	73.77	317	P	P	13 00 39.9	+0.3
KNT				pmax	pmax		
	comp=Z,10.0nm,1.6s						
D49A	Beulah Townshi	73.77	30	P	P	13 00 38.6	-1.0
	baz=333						
F45A	CMU Biological	73.83	33	P	P	13 00 39.2	-0.6
	baz=331						
TUC	Tucson	73.87	58	P	P	13 00 41.0	+0.5
TUC	Tucson	73.87	58	P	P	13 00 41.0	+0.5
TUC				pmax	pmax		
	comp=Z,11nm,1.4s						
TUC	Tucson	73.87	58	P	P	13 00 40.0	-0.5
	baz=322						
E47A	Iron Bridge	73.89	32	P	P	13 00 39.4	-0.9
	baz=332						
ANMO	Albuquerque	73.99	53	P	P	13 00 42.1	+0.8
ANMO	Albuquerque	73.99	53	P	P	13 00 42.1	+0.8
ANMO				pmax	pmax		
	comp=Z,11nm,1.4s						
ANMO	Albuquerque	73.99	53	P	P	13 00 40.5	-0.8
	baz=323						
CBKS	Cedar Bluff	74.03	47	P	P	13 00 40.6	-0.7
	baz=325						
CSS	Mathiatis	74.05	307	P	P	13 00 40.5	-0.9
CSS				IAmb	IAmb	13 00 41.8	
	comp=Z,18nm,1.1s						
GRG	Griva	74.14	318	P	P	13 00 41.7	-0.2
GRG				pmax	pmax		
	comp=Z,26nm,1.1s						
VLDQ	Val d'Or	74.17	27	P	P	13 00 40.0	-1.8
VLDQ				IAmb	IAmb	13 00 47.4	
	comp=Z,27nm,1.1s						
I42A	Draeger Farm,	74.18	37	P	P	13 00 42.0	0.0
I42A				IAmb	IAmb	13 00 48.8	
	comp=Z,24nm,1.1s						
E48A	Lockeyer	74.22	31	P	P	13 00 41.5	-0.7
	baz=333						
SCIA	State Center	74.23	40	P	P	13 00 42.0	-0.3
SCIA	State Center	74.23	40	P	P	13 00 41.6	-0.7
	baz=328						
ELL	Elmali	74.27	310	P	P	13 00 42.1	-0.7
ELL	Elmali	74.27	310	P	P	13 00 42.1	-0.7
ELL				pmax	pmax		
	comp=Z,54nm,1.1s						
D50A	G1974 Best Tow	74.33	29	P	P	13 00 41.2	-1.6
	baz=334						
G45A	Suttons Bay	74.34	34	P	P	13 00 41.6	-1.3
	baz=331						
G46A	Petoskey	74.37	33	P	P	13 00 42.0	-1.1
	baz=332						
ASF	Jabal al Asfar	74.46	302	P	P	13 00 43.5	-0.5
	comp=Z,1.9nm,0.5s,baz=243,slow=3.0,SNR=7.5						
PAIG	Paliouri	74.46	316	P	P	13 00 43.4	-0.3
PAIG				pmax	pmax		
	comp=Z,15nm,1.3s						
JFWS	Jewell Farm	74.53	38	P	P	13 00 42.6	-1.5
	baz=329						
D51A	Lot 18 Range I	74.53	29	P	P	13 00 42.8	-1.2
	baz=334						
F48A	Evansville	74.66	32	P	P	13 00 43.0	-1.8
	baz=333						
G47A	Hillman	74.83	33	P	P	13 00 44.9	-0.9
	baz=332						
F49A	Sandfield	74.90	31	P	P	13 00 45.0	-1.1
	baz=333						
E51A	G1948 Merrick	75.00	29	P	P	13 00 46.0	-0.7
	baz=334						
D53A	Lac Vacive, Po	75.03	28	P	P	13 00 46.8	-0.1
D53A				IAmb	IAmb	13 00 53.5	
	comp=Z,25nm,1.1s						
LOR	Lormes	75.11	333	P	P	13 00 46.5	-0.9
LOR				pmax	pmax		
	comp=Z,16nm,2.7s						
KSU1	Kansas State U	75.17	44	P	P	13 00 47.1	-0.7
	baz=327						
H47A	Mio	75.22	33	P	P	13 00 47.4	-0.7
	baz=332						
121A	Cookes Peak, D	75.25	56	P	P	13 00 49.1	+0.5
121A	Cookes Peak, D	75.25	56	P	P	13 00 48.4	-0.2
	baz=323						
D54A	Lac Fusel, La	75.26	27	P	P	13 00 46.8	-1.4
	baz=336						
319A	Douglas	75.39	58	P	P	13 00 50.1	+0.7
319A				IAmb	IAmb	13 00 57.6	
	comp=Z,19nm,1.0s						
F51A	Arnstein	75.42	30	P	P	13 00 47.6	-1.5
	baz=334						
K43A	Burlington	75.42	37	P	P	13 00 48.4	-0.8
H48A	Harrisville	75.43	33	P	P	13 00 48.8	-0.4
	baz=332						
E52A	Mattawa	75.47	29	P	P	13 00 48.9	-0.5
	baz=335						
L42A	Oliver, Polo	75.53	38	P	P	13 00 49.0	-0.8
L42A				IAmb	IAmb	13 00 55.8	
	comp=Z,18nm,0.8s						
E53A	Dumoine, Ponti	75.68	28	P	P	13 00 49.5	-1.2
	baz=335						
D55A	Sainte-Anne-du	75.71	26	P	P	13 00 50.0	-0.8
	baz=337						
F52A	Sundridge	75.72	29	P	P	13 00 49.7	-1.2
	baz=335						
I48A	Sherman Twp	75.76	33	P	P	13 00 49.8	-1.3
	baz=332						
E54A	Lac Daplat, Po	75.77	28	P	P	13 00 49.7	-1.4
	baz=336						
D56A	ZEC Mazanza, M	75.88	26	P	P	13 00 51.2	-0.6
	baz=337						
ALGO	Algonquin Park	75.95	28	P	P	13 00 51.2	-0.9
	baz=335						
AS31	Alice Springs	75.96	189	P	P	13 00 52.7	+0.4
ASAR	Alice Springs	75.96	189	P	P	13 00 52.9	+0.5
	comp=Z,16nm,0.8s,baz=3.6,slow=5.1,SNR=92						
ASAR				PKKPbc	PKKPbc	13 20 07.2	-0.8
	comp=Z,0.4nm,1.1s,baz=162,slow=1.1,SNR=4.5						
ASAR				LR	LR	13 34 34.3	
	comp=Z,46nm,19.6s,baz=329,slow=36						
L44A	Lake County Fo	76.03	37	P	P	13 00 52.0	-0.7
L44A	Lake County Fo	76.03	37	P	P	13 00 52.4	-0.3
	baz=330						
D57A	Chemin Vers le	76.14	25	P	P	13 00 52.5	-0.8
	baz=338						
N41A	Harden Midland	76.18	40	P	P	13 00 53.3	-0.3
N41A				IAmb	IAmb	13 00 59.9	
	comp=Z,30nm,1.1s						
J47A	Sumner	76.21	34	P	P	13 00 51.4	-2.3
J47A	Sumner	76.21	34	P	P	13 00 53.3	-0.4
	baz=332						
I49A	Point Hope	76.27	33	P	P	13 00 53.4	-0.6
	baz=333						
E56A	St. Veronique	76.27	26	P	P	13 00 52.8	-1.2
	baz=337						

PSA00	Pilbara Seismi	76.27	203	P	P	13 00 54.0	-0.1
PSA00				IAmb	IAmb	13 00 55.1	
	comp=Z,24nm,0.9s						
AMTX	Amarillo	76.35	50	P	P	13 00 54.5	-0.3
AMTX				IAmb	IAmb	13 01 02.1	
	comp=Z,35nm,1.4s						
AMTX	Amarillo	76.35	50	P	P	13 00 54.6	-0.2
	baz=325						
K46A	Dorr	76.36	35	P	P	13 00 54.0	-0.6
	baz=332						
U32A	Winter Ranch,	76.37	47	P	P	13 00 53.6	-1.2
U32A				IAmb	IAmb	13 01 01.8	
	comp=Z,16nm,0.9s						
G54A	Lake Saint Pet	76.45	29	P	P	13 00 53.4	-1.6
	baz=335						
RAYN	Ar Rayn	76.48	291	P	P	13 00 54.7	-0.9
RAYN				IAmb	IAmb	13 00 56.0	
	comp=Z,22nm,1.1s						
RAYN	Ar Rayn	76.48	291	P	P	13 00 54.7	-0.9
RAYN				pmax	pmax		
	comp=Z,22nm,1.2s						
J48A	Bridge Port	76.51	33	P	P	13 00 55.5	0.0
	baz=332						
G53A	Haliburton	76.54	29	P	P	13 00 54.8	-0.7
	baz=335						
MSTX	Muleshoe	76.58	51	P	P	13 00 55.4	-0.7
	baz=325						
E57A	Chemin Saint G	76.63	26	P	P	13 00 55.5	-0.6
	baz=337						
M44A	Midewin, Midew	76.67	37	P	P	13 00 56.2	-0.2
J49A	Marlette	76.68	33	P	P	13 00 56.4	0.0
	baz=333						
L46A	Eue Claire	76.77	36	P	P	13 00 56.4	-0.4
L46A	Eue Claire	76.77	36	P	P	13 00 56.3	-0.6
	baz=331						
K48A	Perry	76.84	34	P	P	13 00 56.4	-0.8
	baz=332						
D61A	St Aubert, Com	76.90	23	P	P	13 00 56.5	-1.0
	baz=340						
HDIL	Hopedale	76.92	39	P	P	13 00 57.6	-0.2
HDIL	Hopedale	76.92	39	P	P	13 00 57.2	-0.5
	baz=330						
I51A	Listowel	76.98	31	P	P	13 00 57.3	-0.8
	baz=334						
G55A	Calabogie	76.98	28	P	P	13 00 57.3	-0.7
	baz=336						
MNTX	Cornudas Mount	77.13	55	P	P	13 00 59.1	0.0
MNTX				IAmb	IAmb	13 01 07.2	
	comp=Z,16nm,1.2s						
MNTX	Cornudas Mount	77.13	55	P	P	13 00 59.4	+0.3
	baz=324						
L47A	Sherwood	77.19	35	P	P	13 00 58.7	-0.6
	baz=332						
EIL	Elat	77.45	302	P	P	13 01 01.2	+0.2
	comp=Z,12nm,0.9s,baz=340,slow=6.5,SNR=6.0						
EIDS	Eidsvold	77.47	173	P	P	13 01 00.5	-0.3
EIDS				IAmb	IAmb	13 01 03.2	
	comp=Z,19nm,0.9s						
H55A	Tweed	77.48	29	P	P	13 01 00.4	-0.5
	baz=336						
L48A	N Adams	77.49	35	P	P	13 01 00.5	-0.4
	baz=332						
F59A	Saint Guilaume	77.51	25	P	P	13 01 00.2	-0.7
	baz=338						
L49A	Milan	77.57	34	P	P	13 01 01.7	+0.3
	baz=333						
M47A	Cromwell	77.58	36	P	P	13 01 01.1	-0.4
	baz=332						
I55A	Frankford	77.64	29	P	P	13 01 01.5	-0.2
	baz=336						
ADOK	Arcadia Dam	77.71	47	P	P	13 01 01.9	-0.4
M48A	Edgerton	77.79	35	P	P	13 01 02.6	0.0
G58A	Ormstown	77.82	26	P	P	13 01 02.0	-0.7
	baz=338						
WMOK	Wichita Mounta	77.83	48	P	P	13 01 02.9	-0.1
WMOK	Wichita Mounta	77.83	48	P	P	13 01 02.9	-0.1
WMOK				pmax	pmax		
	comp=Z,14nm,1.2s						
WMOK	Wichita Mounta	77.83	48	P	P	13 01 03.1	+0.1
	baz=326						
TIP	Timpagrande	77.93	320	P	P	13 01 02.4	-1.2
TIP				IAmb	IAmb	13 01 14.1	
	comp=Z,28nm,1.2s						
L50A	Kingsville	77.96	33	P	P	13 01 02.7	-0.8
	baz=333						
N47A	Urbana	77.98	36	P	P	13 01 03.4	-0.3
N47A	Urbana	77.98	36	P	P	13 01 03.3	-0.3
	baz=332						
M49A	Liberty Center	78.06	34	P	P	13 01 03.8	-0.4
	baz=332						
H57A	Richville	78.08	27	P	P	13 01 03.3	-0.9
	baz=337						
TUL1	Leonard	78.19	45	P	P	13 01 04.6	-0.3
	baz=328						
N48A	Decatur	78.23	35	P	P	13 01 04.7	-0.3
	baz=332						
CCM	Cathedral Cave	78.30	41	P	P	13 01 04.9	-0.6
CCM				IAmb	IAmb	13 01 12.0	
	comp=Z,16nm,1.1s						
CCM	Cathedral Cave	78.30	41	P	P	13 01 04.9	-0.6
CCM				pmax	pmax		
	comp=Z,16nm,1.1s						
CCM	Cathedral Cave	78.30	41	P	P	13 01 05.3	-0.2
	baz=329						
G60A	Masonville	78.33	25	P	P	13 01 04.8	-0.8
	baz=339						
H59A	Cadyville	78.39	26	P	P	13 01 05.4	-0.5
	baz=338						
M50A	Fremont	78.45	34	P	P	13 01 05.2	-1.0
	baz=333						
H58A	Gabriels	78.46	27	P	P	13 01 05.4	-1.0
	baz=338						
N49A	Columbus Grove	78.48	35	P	P	13 01 06.1	-0.3
N49A				IAmb	IAmb	13 01 13.2	
	comp=Z,27nm,1.1s						
N49A	Columbus Grove	78.48	35	P	P	13 01 05.7	-0.8
	baz=332						
MGMO	Mountain Grove	78.65	42	P	P	13 01 06.8	-0.6
MGMO				IAmb	IAmb	13 01 13.9	
	comp=Z,28nm,1.5s						
HHAR	Hobbs	78.68	44	P	P	13 01 07.3	-0.4
HHAR				IAmb	IAmb	13 01 14.2	
	comp=Z,17nm,1.0s						
O48A	Farmland	78.72	36	P	P	13 01 07.2	-0.6
	baz=332						
K54A	Basiliko Farm,	78.79	30	P	P	13 01 07.4	-0.8
	baz=335						
ERPA	Erie	78.83	31	P	P	13 01 07.7	-0.6
	baz=335						
K55A	Perry	78.88	30	P	P	13 01 08.2	-0.5
	baz=336						
L53A	Girard	78.89	32	P	P	13 01 08.5	-0.2
	baz=334						
M52A	Chesterland	78.90	33	P	P	13 01 08.6	-0.1
M52A	Chesterland	78.90	33	P	P	13 01 07.9	-0.9
	baz=334						
N50A	Nevada	78.97	34	P	P	13 01 09.0	-0.2
	baz=333						
O49A	Covington	79.07	35	P	P	13 01 09.4	-0.4
	baz=332						
U40A	Yellville	79.08	43	P	P	13 01 08.8	-1.1
U40A	Yellville	79.08	43	P	P	13 01 09.4	-0.4
	baz=329						
N51A	Ashland	79.11	34	P	P	13 01 10.0	0.0
	baz=333						
J58A	Remsen	79.12	28	P	P	13 01 09.9	-0.1
	baz=337						
K56A	Middlesex	79.13	29	P	P	13 01 09.5	-0.5
	baz=336						
M53A	WI Miller and	79.21	32	P	P	13 01 09.8	-0.6
	baz=334						
J59A	Piesco	79.25	27	P	P	13 01 10.4	-0.3
	baz=338						
P48A	Milroy	79.32	36	P	P	13 01 10.7	-0.4
P48A				IAmb	IAmb	13 01 17.7	
	comp=Z,18nm,0.9s						
P48A	Milroy	79.32	36	P	P	13 01 10.6	-0.5
	baz=332						
O50A	Cable	79.36	35	P	P	13 01 10.1	-1.2
	baz=333						
S44A	Carbondale	79.40	40	P	P	13 01 10.9	-0.7
S44A				IAmb	IAmb	13 01 18.3	
	comp=Z,31nm,1.3s						
M54A	Oil Creek Stat	79.48	32	P	P	13 01 10.8	-1.1
	baz=335						
ACSO	Alum Creek Sta	79.51	34	P	P	13 01 11.5	-0.7
ACSO				IAmb	IAmb	13 01 18.9	

comp=Z,24nm,1.1s
ACSO Alum Creek Sta 79.51 34 P P 13 01 10.9 -1.2
P49A Miami Univ. Ec 79.52 36 P P 13 01 10.9 -1.2
baz=332
W39A Magazine 79.67 44 P P 13 01 11.8 -1.2
baz=328
Q48A North Vernon 79.68 37 P P 13 01 12.0 -1.1
baz=332
PBMO Poplar Bluff 79.72 41 P P 13 01 12.7 -0.7
PBMO IAmb IAmb 13 01 20.2
comp=Z,22nm,1.1s
N53A Lisbon 79.73 33 P P 13 01 12.6 -0.7
N53A IAmb IAmb 13 01 30.6
comp=Z,27nm,0.9s
P50A Jamestown 79.78 35 P P 13 01 12.8 -0.8
baz=333
FCAR Ozark Folk Cen 79.78 43 P P 13 01 12.7 -0.9
FCAR IAmb IAmb 13 01 20.9
comp=Z,36nm,1.5s
USIN University of 79.79 39 P P 13 01 13.8 +0.2
USIN IAmb IAmb 13 01 20.5
comp=Z,30nm,0.9s
M55A Ridgway 79.80 31 P P 13 01 13.3 -0.5
baz=335
TX31 Lajitas Ar. Si 79.91 55 P P 13 01 15.4 +0.8
TX31 IAmb IAmb 13 01 22.7
comp=Z,19nm,1.2s
TX32 Lajitas Array 79.91 55 P P 13 01 15.4 +0.8
TXAR Lajitas Array 79.91 55 P P 13 01 14.9 +0.4
comp=Z,2.6nm,0.8s,baz=299,slow=4.4,SNR=32
L57A Andrews Acres 79.91 29 P P 13 01 13.6 -0.7
baz=336
BINY Binghamton 79.99 29 P P 13 01 13.9 -0.8
baz=337
O52A Adamsville 80.01 34 P P 13 01 14.6 -0.3
O52A IAmb IAmb 13 01 32.0
comp=Z,25nm,0.9s
LCAR Lake Charles 80.03 42 P P 13 01 14.9 -0.1
WCI Wyandotte Cave 80.08 38 P P 13 01 15.1 -0.1
WCI IAmb IAmb 13 01 22.2
comp=Z,32nm,0.9s
WCI Wyandotte Cave 80.08 38 P P 13 01 15.1 -0.1
WCI pmax pmax
comp=Z,32nm,1.0s
WCI Wyandotte Cave 80.08 38 P P 13 01 15.4 +0.2
baz=332
L58A Harry Jones Me 80.17 29 P P 13 01 15.0 -0.7
baz=337
WHAR Wooly Hollow 80.23 43 P P 13 01 15.7 -0.4
WHAR IAmb IAmb 13 01 23.0
comp=Z,34nm,1.2s
L59A Walton 80.27 28 P P 13 01 15.7 -0.5
baz=337
MIAR Mount Ida 80.31 45 P P 13 01 15.5 -1.0
baz=329
W41B Gary Mavity, V 80.34 43 P P 13 01 16.3 -0.4
W41B IAmb IAmb 13 01 28.4
comp=Z,21nm,1.2s
W41B Gary Mavity, V 80.34 43 P P 13 01 16.1 -0.6
baz=329
N55A Marion Center 80.36 31 P P 13 01 15.8 -0.9
baz=335
Q50A Georgetown 80.39 36 P P 13 01 15.9 -1.0
baz=333
M57A Sunshine Farm, 80.43 30 P P 13 01 16.0 -1.1
baz=336
R49A Shelbyville 80.44 37 P P 13 01 16.6 -0.6
R49A IAmb IAmb 13 01 25.4
comp=Z,14nm,0.9s
R49A Shelbyville 80.44 37 P P 13 01 16.9 -0.3
baz=332
Q51A Peebles 80.46 35 P P 13 01 17.1 -0.1
Q51A Peebles 80.46 35 P P 13 01 16.3 -1.0
baz=333
M58A Price's Panora 80.60 29 P P 13 01 17.5 -0.5
baz=336
X40A Basin Creek Fa 80.68 44 P P 13 01 17.7 -0.8
baz=329
WHTX Lake Whitney, 80.72 49 P P 13 01 18.6 -0.2
baz=327
P53A Whipple 80.72 34 P P 13 01 18.4 -0.3
P53A IAmb IAmb 13 01 36.0
comp=Z,30nm,1.1s
P53A Whipple 80.72 34 P P 13 01 17.7 -1.0
baz=334
R50A Paris 80.76 36 P P 13 01 18.4 -0.5
baz=333
HPIG 80.83 58 P P 13 01 18.6 -1.1
N57A Milroy 80.83 30 P P 13 01 18.2 -1.1
baz=336
S49A Springfield 80.85 37 P P 13 01 19.5 +0.1
baz=332
T47A Sharon Grove 80.86 39 P P 13 01 19.0 -0.4
T47A IAmb IAmb 13 01 26.4
comp=Z,26nm,0.9s
JCT Junction City 80.87 51 P P 13 01 19.5 -0.2
JCT Junction City 80.87 51 P P 13 01 19.5 -0.2
JCT pmax pmax
comp=Z,15nm,1.2s
JCT Junction City 80.87 51 P P 13 01 19.0 -0.7
baz=326
Q52A Bidwell 80.89 34 P P 13 01 18.1 -1.4
baz=334
P54A Burton 80.93 33 P P 13 01 18.7 -1.1
baz=334
R51A Hillsboro 81.02 36 P P 13 01 19.4 -0.8
baz=333
P55A Reedsville 81.23 32 P P 13 01 20.7 -0.7
baz=335
Q53A Leroy 81.24 34 P P 13 01 20.9 -0.6
baz=334
S50A Richmond 81.27 37 P P 13 01 20.9 -0.7
baz=333
O57A Amberson 81.30 31 P P 13 01 20.4 -1.3
baz=336
R52A Catlettsburg 81.32 35 P P 13 01 20.9 -1.0
baz=334
WVT Waverly 81.33 40 P P 13 01 21.6 -0.3
WVT IAmb IAmb 13 01 29.0
comp=Z,26nm,1.1s
WVT Waverly 81.33 40 P P 13 01 21.6 -0.3
WVT pmax pmax
comp=Z,26nm,1.2s
WVT Waverly 81.33 40 P P 13 01 21.7 -0.3
baz=331
T49A Edmonton 81.36 38 P P 13 01 21.6 -0.5
T49A IAmb IAmb 13 01 28.7
comp=Z,14nm,0.8s
T49A Edmonton 81.36 38 P P 13 01 22.0 -0.1
baz=332
Q54A Coxs Mills 81.37 33 P P 13 01 21.7 -0.4
baz=334
P56A Dayton Farm, R 81.56 32 P P 13 01 22.9 -0.2
baz=335
R53A Hurricane 81.57 35 P P 13 01 22.8 -0.3
baz=334
S51A Beattyville 81.60 36 P P 13 01 24.1 +0.8
S51A IAmb IAmb 13 01 40.7
comp=Z,16nm,1.0s
S51A Beattyville 81.60 36 P P 13 01 22.8 -0.5
baz=333
T50A Nancy 81.69 37 P P 13 01 23.8 -0.1
baz=332
U49A Red Boiling Sp 81.78 38 P P 13 01 24.3 0.0
baz=332
CLTN Cedars of Leba 81.94 39 P P 13 01 23.5 -1.7
CLTN IAmb IAmb 13 01 32.1
comp=Z,17nm,0.9s
V48A Smith Brothers 82.06 39 P P 13 01 25.4 -0.5
V48A IAmb IAmb 13 01 32.5
comp=Z,14nm,0.9s
P58A Pank, Wackersv 82.06 31 P P 13 01 24.9 -0.8
baz=336
T51A Gray 82.07 37 P P 13 01 25.3 -0.6
baz=333
OXF Oxford 82.10 42 P P 13 01 25.2 -0.8
baz=330
Q57A Strasburg 82.12 32 P P 13 01 25.6 -0.5
baz=336
NATX Nacogdoches 82.19 47 P P 13 01 27.0 +0.5
U50A Jamestown 82.22 37 P P 13 01 26.0 -0.8
baz=332
P59A Jarrettsville 82.22 30 P P 13 01 26.2 -0.4
baz=337
PLAL Pickwick Lake 82.23 40 P P 13 01 26.2 -0.5
PLAL IAmb IAmb 13 01 33.4

comp=Z,20nm,1.0s
R55A Marlinton 82.24 33 P P 13 01 25.7 -1.1
baz=335
R56A Bull Pasture M 82.37 33 P P 13 01 27.0 -0.5
baz=335
V49A McMinnville 82.39 39 P P 13 01 27.3 -0.3
baz=332
Q58A Fox Den Farm, 82.44 31 P P 13 01 27.2 -0.6
baz=336
U51A La Follette 82.56 37 P P 13 01 27.9 -0.5
baz=333
TZTN Tazewell 82.59 36 P P 13 01 28.1 -0.5
baz=333
R57A Stanardsville 82.76 32 P P 13 01 29.3 -0.2
baz=336
V50A Pikevile 82.78 38 P P 13 01 28.9 -0.7
baz=332
U52A Thorn Hill 82.79 36 P P 13 01 29.1 -0.5
baz=333
W49A Belvidere 82.82 39 P P 13 01 29.4 -0.5
baz=332
T54A Tazewell 82.84 35 P P 13 01 29.5 -0.4
baz=334
833A Chaparral WMA, 82.85 52 P P 13 01 30.3 +0.3
baz=327
V51A Loudon 82.95 37 P P 13 01 30.2 -0.3
baz=333
S56A Natural Bridge 82.97 33 P P 13 01 30.4 -0.2
baz=335
T55A Pulaski 83.06 34 P P 13 01 30.7 -0.4
baz=334
S57A Dark Hollow, R 83.10 33 P P 13 01 30.9 -0.4
baz=335
U53A Fall Branch 83.10 36 P P 13 01 30.5 -0.8
baz=334
X48A Hartselle 83.10 40 P P 13 01 30.5 -0.7
X48A IAmb IAmb 13 01 37.8
comp=Z,23nm,1.2s
W50A Signal Mountai 83.12 38 P P 13 01 30.4 -1.0
baz=332
V52A Sevierville 83.20 37 P P 13 01 31.0 -0.7
baz=333
CPCT Cooper Cave 83.20 38 P P 13 01 30.7 -1.0
CPCT IAmb IAmb 13 01 38.5
comp=Z,17nm,1.0s
R58B Mineral 83.27 32 P P 13 01 32.3 +0.3
R58B IAmb IAmb 13 01 40.5
comp=Z,11nm,0.9s
R58B Mineral 83.27 32 P P 13 01 31.9 -0.1
baz=336
TKL Tuckaleechee C 83.29 37 P P 13 01 31.4 -0.9
TKL IAmb IAmb 13 01 49.6
comp=Z,16nm,0.9s
TKL Tuckaleechee C 83.29 37 P P 13 01 31.4 -0.9
TKL pmax pmax
comp=Z,16nm,1.0s
W51A Cleveland 83.36 38 P P 13 01 31.9 -0.7
baz=333
U55A TA2, Sparta 83.52 35 P P 13 01 32.4 -1.1
baz=334
V53A Saluda 83.64 36 P P 13 01 32.6 -1.5
baz=334
FORT Forrest 83.68 193 P P 13 01 34.3 +0.3
STKA Stephens Creek 83.69 182 P P 13 01 35.1 +1.2
comp=Z,1.6nm,0.9s,baz=327,slow=21,SNR=2.8
STKA LR LR 13 42 00.1
comp=Z,31nm,19.9s,baz=17,slow=38
STKA Stephens Creek 83.69 182 P P 13 01 33.6 -0.3
STKA Stephens Creek 83.69 182 P P 13 01 33.7 -0.3
STKA pmax pmax
comp=Z,1.0nm,1.1s
KEST Kesra 83.76 324 LR LR 13 42 30.3
comp=Z,191nm,19.4s,baz=297,slow=38
V54A Nebo 83.85 36 P P 13 01 34.2 -1.0
baz=334
Y49A Blount Mountai 83.87 40 P P 13 01 34.1 -1.2
Y49A IAmb IAmb 13 01 41.8
comp=Z,13nm,0.9s
W53A Cullowhee 83.95 37 P P 13 01 34.9 -0.9
baz=333
T58A Grand View Acr 83.98 33 P P 13 01 34.7 -1.0
baz=336
V55A Taylorsville 84.05 35 P P 13 01 35.0 -1.1
baz=334
U57A Blanch 84.18 33 P P 13 01 36.0 -0.8
baz=335
X52A Dahlonega 84.19 38 P P 13 01 36.6 -0.3
baz=333
ESDC Sonseca Array 84.27 335 P P 13 01 37.2 -0.1
comp=Z,0.7nm,0.5s,baz=28,slow=5.3,SNR=7.5
V56A Mocksville 84.34 35 P P 13 01 36.8 -0.8
baz=335
LRAL Lakeview Retre 84.36 41 P P 13 01 36.5 -1.3
baz=332
W54A Cherokee Point 84.39 36 P P 13 01 36.9 -0.9
baz=334
T60A Surry 84.39 31 P P 13 01 36.7 -1.1
baz=337
U58A Oxford 84.48 33 P P 13 01 36.9 -1.3
baz=336
X53A Estanollee 84.50 37 P P 13 01 37.3 -1.1
baz=333
V57A Coltrane Farms 84.52 34 P P 13 01 37.3 -1.2
baz=335
Z50A Ashland 84.60 40 P P 13 01 38.3 -0.7
Z50A Ashland 84.60 40 P P 13 01 37.9 -1.1
baz=332
KMSC Kings Mountain 84.64 35 P P 13 01 38.2 -1.0
baz=334
U59A Littleton 84.77 32 P P 13 01 38.7 -1.0
baz=336
Y52A Lilburn 84.78 38 P P 13 01 39.4 -0.5
baz=333
X54A Belton 84.80 37 P P 13 01 39.0 -0.9
baz=334
V58A Windy Hill, Pi 84.83 34 P P 13 01 39.5 -0.6
V58A IAmb IAmb 13 01 57.2
comp=Z,16nm,0.9s
V58A Windy Hill, Pi 84.83 34 P P 13 01 39.3 -0.8
baz=335
Z51A Franklin 84.83 39 P P 13 01 39.4 -0.8
Z51A IAmb IAmb 13 01 46.7
comp=Z,16nm,0.9s
W56A Indian Trail 84.92 35 P P 13 01 39.6 -1.0
baz=335
W57A Gilead 85.11 34 P P 13 01 41.0 -0.5
W57A Gilead 85.11 34 P P 13 01 41.2 -0.3
baz=335
HODGE Hodges 85.12 37 P P 13 01 41.2 -0.3
HODGE IAmb IAmb 13 01 59.1
comp=Z,15nm,1.0s
X55A Gracelyn & Ava 85.14 36 P P 13 01 40.7 -0.9
baz=334
V59A Middlesex 85.15 33 P P 13 01 41.2 -0.5
baz=336
X56A White Oak 85.33 36 P P 13 01 41.9 -0.7
baz=334
GOGA Godfrey 85.41 38 P P 13 01 42.1 -0.9
baz=333
W58A Raeford 85.49 34 P P 13 01 42.6 -0.7
baz=335
Y55A Saluda 85.53 36 P P 13 01 43.1 -0.6
baz=334
NWAO Narrogin (SRO) 87.80 202 P P 13 01 54.0 -0.2
NWAO Narrogin (SRO) 87.80 202 P P 13 01 54.2 -0.1
NWAO IAmb IAmb 13 01 55.2
comp=Z,32nm,0.9s
NWAO Narrogin (SRO) 87.80 202 P P 13 01 54.1 -0.2
NWAO pmax pmax
comp=Z,26nm,1.0s
MDT Midelt 90.90 334 P P 13 02 10.1 +0.7
comp=Z,2.5nm,0.9s,baz=77,slow=17,SNR=3.7
TORD Torodi Ar. Bea 107.08 321 PP PP 13 07 47.0 -1.2
comp=Z,1.3nm,1.1s,baz=20,slow=4.8,SNR=3.3
LPAZ La Paz 136.32 47 PKP PKPdf 13 08 28.4 +0.3
comp=Z,1.9nm,0.9s,baz=199,slow=1.1,SNR=5.2
LPAZ La Paz 136.32 47 PKPdf PKPdf 13 08 27.0 -1.1
LPAZ La Paz 136.32 47 PKIKP PKPdf 13 08 27.0 -1.1
SYO Syowa Base 142.01 215⇑eX Pdif 13 05 52.3 -4.0
GO04 Tololo Observa 146.57 62 PKPdf 13 08 44.8 -0.7
GO04 PKPbc PKPbc 13 08 47.4 +0.3
CPUP Villa Florida 149.79 39 PKPbc PKPbc 13 08 55.6 +0.2
comp=Z,5.7nm,0.9s,baz=345,slow=2.7,SNR=7.0
CPUP PKPab pPKPbc 13 09 01.6 +0.5
comp=Z,2.8nm,0.6s,baz=318,slow=3.0,SNR=7.6
CPUP Villa Florida 149.79 39 PKPdf 13 08 49.5 -1.1
CPUP PKPbc PKPbc 13 08 55.5 +0.2

CPUP PKPab pPKPbc 13 09 01.8 +0.6
NVL N'lazarevskaya 151.51 211 ePKIKP PKPbc 13 08 57.7 -0.3
NVL pmax pmax
comp=Z,17nm,0.8s
PLCA Paso Flores 154.14 77 PKPbc PKPbc 13 09 04.9 0.0
comp=Z,3.4nm,0.9s,baz=302,slow=3.7,SNR=4.6
PLCA PKPab PKPab 13 09 18.4 -0.4
comp=Z,1.9nm,0.8s,baz=9.8,slow=3.2,SNR=3.4
PLCA Paso Flores 154.14 77 PKPdf 13 08 57.5 +0.7
PLCA Paso Flores 154.14 77 PKIKP PKPdf 13 08 57.5 +0.7
SNAA Sanae 155.43 205 PKPab 13 09 24.2 +0.8
SNAA Sanae 155.43 205 PKP2 PKPab 13 09 24.2 +0.8

MEX 19 12:49:31.7±0.4, 27°.89N×105°.67W, h5km, MD4.0
NEIC 19 12:49:31.1±0.8, 27°.80N±0°.03×105°.90W±0°.09, h10km±2km, ML2.8/8, Md4.0/4(MEX), Error ellipse: s-maj=13.8km s-min=4.7km az=272.0
ISC 19 12:49:30.8±1.3, 27°.77N±0°.07×105°.9W±0°.1, h10km, n8, σ0s.28/11, Northern Mexico

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HPIG 0.86 164 Pb 12 49 48.2 +0.2
HPIG Sb 12 49 59.7 0.0
HPIG 0.86 164 Pb 12 49 48.3 +0.3
HPIG Sg Sg 12 49 58.4 -0.3
HPIG IAML 12 50 04.3
comp=E,233nm,0.2s
HPIG IAML 12 50 06.0
comp=N,157nm,0.2s
HPIG 0.86 164 iP Pb 12 49 48.2 +0.2
baz=359,slow=12
HPIG eS Sb 12 49 59.7 0.0
TX31 Lajitas Ar. Si 2.53 51 Pn 12 50 12.1 +0.1
TX32 Lajitas Array 2.53 51 Pn 12 50 11.8 -0.2
MNTX Cornudas Mount 3.94 7 Pn 12 50 31.1 -0.3
319A Douglas 4.63 322 Pn Pn 12 50 40.6 -0.3
121A Cookes Peak, D 5.01 342 Pn Pn 12 50 46.7 +0.4
121A IAML 12 51 26.2
comp=N,8.9nm,4.0s
121A IAML 12 53 22.6
comp=E,10nm,4.3s

IDC 19 12:55:02.2±5.7, 6°.43S×130°.69E, h211km±63km, mb3.6/1, mb1 3.0/3, mb1mx2.8/44, mbtmp3.6/3, Error ellipse: s-maj=142.7km s-min=21.0km az=74.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 13.89 166 P Pn 12 58 10.0 -0.5
0.3nm,0.3s,baz=349,slow=14,SNR=5.1
WRA S S 13 00 36.5 -8.1
0.5nm,0.3s,baz=2.3,slow=6.4,SNR=12
ASAR Alice Springs 17.41 170 P P 12 58 51.7 +0.6
0.1nm,0.3s,baz=349,slow=11,SNR=8.0
ASAR S S 13 02 01.1 -0.1
0.0nm,0.3s,baz=14,slow=4.0,SNR=2.4
MKAR Makanchi Array 68.13 326 P P 13 05 39.5 0.0
0.9nm,0.4s,baz=114,slow=8.6,SNR=20

SJA 19 13:42:05.8±0.8, 32°.24S×69°.46W, h114km±4km, ML3.1, MW3.1
GUC 19 13:42:05.8±0.7, 32°.28S×69°.71W, h153km±4km, ML3.3
ISC 19 13:42:06.3±1.8, 32°.25S±0°.04×69°.48W±0°.05, h117km±14km, n23, σ0s.64/42, 1C-7D, Mendoza Province

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RTLS Leoncito 0.47 19 iP Pn 13 42 23.7 -0.6
RTLS eS Sn 13 42 37.5 -0.1
RTLS IAML 13 42 37.6
comp=Z,912nm,0.2s
RTCV Cerro Valdivia 0.88 64 iP Pn 13 42 26.9 -0.1
ZON Zonda 0.97 44 iP Pn 13 42 27.8 -0.1
ZON eS Sn 13 42 44.2 -0.1
ZON IAML 13 42 46.8
comp=Z,174nm,0.4s
AAGR Agrelo 1.00 147 eP Pn 13 42 28.4 +0.2
AAGR eS Sn 13 42 45.1 +0.3
CFA Coronel Fontan 1.23 59 eP Pn 13 42 30.2 -0.4
CFA eS Sn 13 42 48.4 -0.6
RTLL Cerro Villicun 1.25 43⇓iP Pn 13 42 30.6 -0.3
RTLL iS Sn 13 42 48.5 -0.9
RTLL IAML 13 42 51.3
comp=N,543nm,0.3s
RTLL Cerro Villicun 1.25 43 iP Pn 13 42 30.5 -0.3
RTLL eS Sn 13 42 49.7 +0.3
RTLL IAML 13 42 51.8
comp=Z,206nm,0.2s
FCH Farellones 1.28 212⇓iP Pn 13 42 32.0 +0.7
FCH iS Sn 13 42 52.1 +1.8
FCH IAML 13 42 52.8
comp=N,403nm,0.4s
PEL Peldehue 1.36 228⇓iP Pn 13 42 31.8 -0.1
PEL iS Sn 13 42 51.6 +0.1
PEL IAML 13 42 53.9
comp=E,218nm,0.2s
PEL Peldehue 1.36 228 iP Pn 13 42 31.8 -0.1
PEL iP 13 42 32.0
PEL eS Sn 13 42 51.9 +0.5
CLCH Cerro Calan 1.45 218 eP Pn 13 42 33.6 +0.5
CLCH eS Sn 13 42 54.3 +0.8
CLCH IAML 13 42 57.4
comp=E,365nm,0.4s
ROCH El Roble 1.48 240⇓iP Pn 13 42 33.2 -0.4
ROCH iS Sn 13 42 54.3 -0.1
ROCH IAML 13 42 58.0
comp=N,417nm,0.3s
MT03 Universidad Ad 1.52 215 eP Pn 13 42 34.4 +0.5
MT03 eS Sn 13 42 55.1 +0.3
AMOG MOGNA 1.55 33 eP Pn 13 42 34.3 0.0
AMOG eS Sn 13 42 55.2 -0.3
LMEL Las Melosas 1.71 201⇑iP Pn 13 42 36.2 0.0
LMEL iS Sn 13 42 59.8 +0.7
LMEL IAML 13 43 08.2
comp=N,194nm,0.4s
MT02 Curacav 1.73 234⇓iP Pn 13 42 35.3 -0.9
MT02 iS Sn 13 42 58.4 -0.7
CO03 El Pedregal 1.75 323 eP Pn 13 42 36.8 +0.1
CO03 iS Sn 13 43 00.3 +0.6
CO03 IAML 13 43 07.7
comp=E,307nm,0.1s
ACAN Cantantal 1.94 91 eP Pn 13 42 38.8 -0.1
AROD Rodeo 2.07 0 iP Pn 13 42 41.9 +0.9
ACDV Cuesta del Vie 2.09 8 eP Pn 13 42 41.7 +0.7
ACDV eS Sn 13 43 07.9 +0.4
MT01 Popeta 2.20 222⇓iP Pn 13 42 40.8 -1.3
MT01 iS Sn 13 43 08.0 -1.5
MT01 IAML 13 43 08.9
comp=N,159nm,0.2s
GO04 Tololo Observa 2.36 331⇓iP Pn 13 42 44.2 -0.3
GO04 iS Sn 13 43 13.4 -0.3
GO04 IAML 13 43 17.1
comp=E,359nm,0.5s
VCA Vinchina 3.67 18 iP Pn 13 43 01.9 +0.3

WEL 19 14:40:54.7±0.9, 35°S±17°×17°9W±2°0, h33km, M3.7/13, mB4.1/1, ML4.0/4, ML4.1/12, MLv3.8/13, MLv3.7/10, Mw(mB)3.1/1, South of Kermadec Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WMGZ Waiomatatini S 3.60 215 P Pn 14 41 49.4 +1.2
PKGZ Pakihiroa 3.82 218 P Pn 14 41 51.1 -0.1
HAZ Te Kaha 3.88 222 P Pn 14 41 52.6 +0.7
HAZ S Sn 14 42 39.2 +2.9
PUZ Puketiti 3.88 214 P Pn 14 41 51.7 -0.3
PUZ S Sn 14 42 36.8 +0.3
RUGZ Raukumara Rang 4.09 220 P Pn 14 41 55.1 +0.1
TKGZ Te Karaka 4.37 215 P Pn 14 41 59.2 +0.5
MWZ Matawai 4.44 218 P Pn 14 41 58.9 -0.9
URZ Urewera 4.61 222 P Pn 14 42 01.6 -0.4
URZ S Sn 14 42 53.5 -0.8
RIGZ Rimuhau 4.62 214 P Pn 14 42 02.2 -0.1
OPRZ Ohinepanea 4.66 229 P Pn 14 42 02.7 -0.1
SNGZ Shannon Statio 4.88 216 P Pn 14 42 06.0 +0.2
RTZ Ruatahuna 4.94 220 P Pn 14 42 06.3 -0.3
MTHZ Maungataniwha 5.18 219 P Pn 14 42 10.5 +0.5
KWHZ Kaweka Forest 5.83 218 P Pn 14 42 18.0 -0.8

IDC 19 15:02:05.5±0.8, 13.78N×92.78E, h0km, mb4.0/10, mb1 4.0/11, mb1mx3.8/43, mbtmp3.9/11, ML3.8/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/47, Error ellipse: s-maj=36.8km s-min=15.4km az=57.0
NEIC 19 15:02:09.6±1.0, 13.82N±0.06×92.87E±0.05, h27km±5km, mb4.4/19, Error ellipse: s-maj=10.4km s-min=4.3km az=218.0
NDI 19 15:02:15.1±2.8, 13.93N×93.13E, h10km±999km, ML3.2, mb4.4(NEIC)
ISC 19 15:02:10.4±0.5, 13.99N±0.05×92.90E±0.08, h32km, n45, σ1.36/46, mb4.2/20, Andaman Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DGPR DIGLIPUR 0.81 178 eP Pb 15 02 27.1 +1.1
DGPR eS Sb 15 02 39.3 +2.7
PBA Port Blair 2.32 184 eP Pb 15 02 54.8 +3.1
PBA eS Sb 15 03 20.4 +0.5
PBA IAML 15 03 26.3
comp=N,132nm,0.5s
PBA IAML 15 03 26.4
comp=E,210nm,0.5s
PBA Port Blair 2.32 184 Pn Pn 15 02 43.4 -3.1
CM31 Chiang Mai Arr 7.31 52 Pn Pn 15 03 56.8 +1.8
CMAR Chiang Mai Arr 7.31 52 Pn Pn 15 03 56.2 +1.2
comp=E,0.4nm,0.3s,baz=239,slow=15,SNR=8.3
CMAR Sn Sn 15 05 14.9 -2.0
comp=E,1.1nm,0.3s,baz=241,slow=27,SNR=13
CHTO Chiang Mai 7.52 50 Pn 15 03 58.5 +0.5
PBKT Sadao Pong 8.20 71 Pn 15 04 07.8 +0.5
RPSI Rantau Prapat 12.70 152 Pn Pn 15 05 07.3 -1.6
ODAN Odare 13.81 339 eP Pn 15 05 23.2 -1.0
comp=E,6.5nm,0.3s
RAMN Ramite 14.18 336 eP Pn 15 05 26.2 -3.1
comp=E,14nm,0.5s
JIRN Jiri 14.97 336 eP Pn 15 05 39.2 -1.0
PKI Pulchoki 15.22 334 eP Pn 15 05 42.2 -1.2
comp=E,9.8nm,0.6s
PKIN Phulchoki 15.23 334 eP Pn 15 05 42.3 -1.2
comp=E,6.3nm,0.3s
DMN Daman 15.38 333 eP Pn 15 05 43.8 -1.7
LSA Lhasa 15.72 354 Pn Pn 15 05 52.0 +1.9
GKN Gorkha 15.93 332 eP Pn 15 05 52.3 -0.2
comp=E,16nm,0.2s
KBL Kabul 29.73 318 P P 15 08 12.8 -1.3
BTK Batken 32.40 327 P P 15 08 40.0 +2.6
BTK IAmb IAmb 15 08 40.9
comp=Z,3.9nm,1.1s
LUWI Luwuk 33.14 114 P P 15 08 43.4 -0.8
LUWI IAmb IAmb 15 08 45.7
comp=Z,13nm,0.8s
MK31 Makanchi Array 33.90 347 P P 15 08 51.4 +1.1
MK31 IAmb IAmb 15 08 52.7
comp=Z,1.9nm,0.8s
MKAR Makanchi Array 33.90 347 P P 15 08 51.8 +1.5
comp=Z,2.3nm,0.7s,baz=164,slow=9.1,SNR=22
MAKZ Makanchi 33.98 347 P P 15 08 52.0 +0.9
MAKZ IAmb IAmb 15 08 53.3
comp=Z,2.1nm,0.8s
KK31 Karatay Array 34.83 331 P P 15 08 59.7 +1.3
KKAR Karatay Array 34.83 331 P P 15 08 59.6 +1.2
SONM Songino Array 35.56 16 P P 15 09 06.9 +2.0
comp=Z,0.6nm,0.7s,baz=200,slow=8.5,SNR=4.8
SOCY Socotra 37.92 272 P P 15 09 22.7 -2.6
KURK Kurchatov 38.42 345 P P 15 09 29.4 +0.4
KURK IAmb IAmb 15 09 31.1
comp=Z,4.1nm,1.1s
JNU Nakatsue 39.40 54 P P 15 09 36.8 -0.6
ZALV Zalesovo Beam 40.37 353 P P 15 09 46.4 +1.2
comp=Z,2.0nm,0.7s,baz=188,slow=9.0,SNR=9.4
FITZ Fitzroy Crossi 45.37 134 P P 15 10 24.8 -1.3
GUMO Guam 50.38 84 LR LR 15 28 16.2
comp=Z,52nm,21.6s,baz=103,slow=31
WB0 Warramunga Arr 52.84 128 P P 15 11 22.5 -0.8
WB0 IAmb IAmb 15 11 56.2
comp=Z,19nm,1.6s
WRA Warramunga Arr 52.90 129 P P 15 11 23.4 -0.4
comp=Z,0.8nm,0.5s,baz=296,slow=9.5,SNR=15
WRA PcP PcP 15 12 33.2 +0.6
comp=Z,0.4nm,0.4s,baz=323,slow=3.1,SNR=5.9
WRAB Tennant Creek 52.90 129 P P 15 11 23.0 -0.8
WRAB IAmb IAmb 15 13 02.2
comp=Z,21nm,1.5s
WB2 Warramunga Arr 52.91 129 P P 15 11 23.0 -0.8
WB2 IAmb IAmb 15 11 47.6
comp=Z,30nm,1.8s
WR0 Warramunga Arr 53.06 129 P P 15 11 24.3 -0.7
WR0 IAmb IAmb 15 13 15.8
comp=Z,10nm,1.3s
AS31 Alice Springs 54.84 133 P P 15 11 37.3 -0.7
AS31 IAmb IAmb 15 12 23.2
comp=Z,2.0nm,1.4s
ASAR Alice Springs 54.84 133 P P 15 11 37.5 -0.4
comp=Z,1.4nm,0.5s,baz=311,slow=7.2,SNR=47
ASAR PcP PcP 15 12 40.3 +0.3
comp=Z,0.4nm,0.7s,baz=324,slow=4.6,SNR=3.0
BR131 Keskin Array S 57.62 308 P P 15 11 57.5 -0.3
BR131 IAmb IAmb 15 11 58.9
comp=Z,1.8nm,0.8s
BRTR Keskin Array B 57.62 308 P P 15 11 58.2 +0.4
comp=Z,1.2nm,0.8s,baz=125,slow=7.7,SNR=6.8
KARP Karpathos 62.34 303 P P 15 12 30.6 +0.5
STKA Stephens Creek 65.23 135 P P 15 12 47.7 -1.4
comp=Z,2.3nm,0.9s,baz=340,slow=12,SNR=3.1
FINES FINESS Array B 66.78 331 P P 15 12 59.3 +0.7
comp=Z,0.9nm,0.8s,baz=106,slow=12,SNR=4.1
ARCES ARCESS Array B 69.14 340 P P 15 13 14.5 +1.2
comp=Z,2.3nm,0.9s,baz=86,slow=7.3,SNR=4.2
NOA NORSAR Array B 73.85 330 P P 15 13 42.2 +0.3
comp=Z,0.3nm,0.5s,baz=95,slow=5.5,SNR=2.6

IDC 19 15:15:37.7±3.8, 48.35N×155.02E, h66km±33km, mb3.0/3, mb1 3.3/5, mb1mx3.0/43, mbtmp3.5/5, ML3.2/2, Error ellipse: s-maj=56.9km s-min=22.3km az=151.0, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PETK Petropavlovsk- 5.06 19 P Pn 15 16 51.1 +0.2
0.7nm,0.3s,baz=176,slow=14,SNR=20
ASAJ Asahikawa 9.60 248 P Pn 15 17 52.3 -0.6
0.5nm,0.3s,baz=73,slow=11,SNR=8.4
KSRS Korea Array 22.53 251 P P 15 20 32.7 +0.8
0.5nm,0.5s,baz=44,slow=10,SNR=4.2
H11S1 WAKE ISLAND Hy 31.25 158 T T 15 54 42.5
baz=345,slow=76,SNR=17
H11S3 WAKE ISLAND Hy 31.25 158 T T 15 54 45.5
baz=345,slow=76,SNR=16
H11S2 WAKE ISLAND Hy 31.26 158 T T 15 54 46.3
baz=345,slow=76,SNR=13
MKAR Makanchi Array 47.36 297 P P 15 24 04.6 -0.2
0.4nm,0.7s,baz=65,slow=7.9,SNR=5.5
TXAR Lajitas Array 75.59 62 P P 15 27 15.4 0.0
0.2nm,0.6s,baz=300,slow=3.8,SNR=2.7

IDC 19 15:16:03.4±1.2, 23.61S×179.81W, h492km±12km, mb3.9/13, mb1 4.2/16, mb1mx3.9/35, mbtmp4.8/16, Error ellipse: s-maj=16.9km s-min=10.4km az=134.0
NEIC 19 15:16:03.7±1.4, 23.7S±0.1×179.8W±0.1, h501km±5km, mb4.7/118, Error ellipse: s-maj=16.9km s-min=12.8km az=138.0
ISC 19 15:16:06.2±0.4, 23.84S±0.05×179.65W±0.07, h550km, n225, σ2.28/217, mb4.7/68, 7C-8D, South of Fiji Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RIZ Raoul Island 5.60 164 P P 15 17 40.4 -0.7
RAO Raoul Island 5.61 164 P P 15 17 39.0 -2.2
196nm,0.3s,baz=325,slow=22,SNR=7.0
RAO Raoul Island 5.61 164 P P 15 17 40.1 -1.1
GLKZ Green Lake 5.62 164 P P 15 17 40.1 -1.2
GLKZ S S 15 18 53.0 -6.0
MSVF Nonsavu 6.44 340 P P 15 17 44.7 -4.4
NIUE Niue 10.21 64 P P 15 18 23.4 -3.0
AFI Afiamalu 12.36 38 P P 15 18 43.6 -5.1
13nm,0.3s,baz=278,slow=4.5,SNR=15
AFI S S 15 20 49.7 -13
10nm,0.3s,baz=40,slow=22,SNR=9.0
AFI Afiamalu 12.36 38 P P 15 18 42.5 -6.2
DZM Mont Dzumac 12.94 275 P P 15 18 54.4 -0.2
1.7nm,0.3s,baz=209,slow=18,SNR=26
NOUC Port Laguerre 13.06 275 P P 15 18 53.5 -2.3
KUZ Kuaotunu 13.47 196 P P 15 18 59.6 -0.1
ETAZ East Tamaki Re 13.88 198 P P 15 19 04.6 +0.6
MKAZ Moumakai 13.96 197 P P 15 19 04.8 0.0
HAZ Te Kaha 14.05 188 P P 15 19 05.4 -0.3
HAZ S S 15 21 33.9 +0.5
AWAZ Awhitu Peninsu 14.07 199 P P 15 19 06.1 +0.1
RUGZ Raukumara Rang 14.27 189 P P 15 19 08.7 +0.6
PUZ Puketiti 14.30 187 P P 15 19 09.6 +1.2
PUZ S S 15 21 40.3 +1.9
URZ Urewera 14.64 190 P P 15 19 09.8 -2.0
3.6nm,0.3s,baz=261,slow=4.6,SNR=25
URZ S S 15 21 42.4 -2.3
1.0nm,0.3s,baz=39,slow=22,SNR=7.0
URZ Urewera 14.64 190 P P 15 19 08.7 -3.1
URZ Urewera 14.64 190 P P 15 19 08.9 -2.8
URZ S S 15 21 42.7 -2.1
MWZ Matawai 14.65 189 P P 15 19 10.4 -1.6
MWZ S S 15 21 42.4 -2.6
TKGZ Te Karaka 14.71 188 P P 15 19 14.7 +2.2
RAGZ Rawiri 14.83 189 P P 15 19 13.3 -0.5
MUGZ Murupara 14.91 191 P P 15 19 15.0 +0.5
SANVU Saraoutou 14.93 302 P P 15 19 11.1 -4.0
RIGZ Rimuhau 14.99 188 P P 15 19 15.4 0.0
SNGZ Shannon Statio 15.12 189 P P 15 19 15.7 -1.0
MTHZ Maungataniwha 15.27 190 P P 15 19 17.8 -0.4
KNZ Kokohu 15.31 188 P P 15 19 18.8 +0.1
MRHZ Matea Rd 15.32 192 P P 15 19 18.5 -0.3
HIZ Hauiti 15.36 196 P P 15 19 18.6 -0.6
BKZ Black Stump Fm 15.63 191 P P 15 19 18.3 -3.7
BKZ IAmb IAmb 15 19 26.8
comp=Z,66nm,1.8s
MSWZ Moikau Station 18.04 192 P P 15 19 41.7 -2.6
SNZO South Karori 18.05 194 P P 15 19 42.6 -1.7
BHW Baring Head 18.11 193 P P 15 19 42.6 -2.3
QRZ Quartz Range 18.17 199 P P 15 19 45.8 +0.4
PLWZ Palliser 18.19 192 P P 15 19 43.0 -2.6
TUWZ Tuamarina 18.34 195 P P 15 19 45.5 -1.6
CMWZ Cape Campbell 18.58 195 P P 15 19 49.9 +0.7
BSWZ Blackbirch Sta 18.63 195 P P 15 19 49.5 -0.2
THZ Tophouse 18.93 197 P P 15 19 51.9 -0.5
THZ IAmb IAmb 15 19 55.1
comp=Z,15nm,0.5s
KHZ Kahutara 19.38 195 P P 15 19 55.4 -1.0
KHZ IAmb IAmb 15 19 56.7
comp=Z,19nm,0.9s
LTZ Lake Taylor 20.05 198 P P 15 20 01.4 -1.2
LTZ IAmb IAmb 15 20 05.5
comp=Z,24nm,0.6s
LHI Lord Howe Isla 20.33 243 P P 15 20 04.9 -0.3
MQZ McQueen's Vall 20.81 196 P P 15 20 09.2 -0.2
MQZ IAmb IAmb 15 20 14.5
comp=Z,12nm,0.7s
RPZ Rata Peaks 21.25 199 P P 15 20 14.9 +1.4
comp=Z,11nm,0.7s,baz=238,slow=1.3,SNR=12
RPZ Rata Peaks 21.25 199 P P 15 20 13.9 +0.5
RPZ IAmb IAmb 15 20 17.9
comp=Z,11nm,0.7s
FOZ Fox Glacier 21.48 201 P P 15 20 14.6 -0.8
FOZ IAmb IAmb 15 20 19.3
comp=Z,16nm,0.7s
KNTN Kanton 22.30 21 P P 15 20 21.4 -1.7
MLZ Mavora Lakes 23.67 202 P P 15 20 35.2 +0.2
MLZ IAmb IAmb 15 20 39.1
comp=Z,14nm,0.8s
WHZ Wether Hill Ro 24.19 201 P P 15 20 39.9 +0.3
WHZ IAmb IAmb 15 20 41.4
comp=Z,69nm,1.5s
ARMA Armidale 26.35 249 P P 15 21 00.2 +1.2
ARMA IAmb 15 21 01.2
comp=Z,34nm,0.7s
EIDS Eidsvold 26.64 261 P P 15 21 01.8 +0.3
CAN Canberra 29.45 240 P P 15 21 27.1 +1.1
CAN IAmb IAmb 15 21 28.2
comp=Z,40nm,0.8s
CTAO Charters Tower 31.80 270 P P 15 21 46.5 +0.2
TOO Toolangi 32.76 237 P P 15 21 55.2 +1.0
TOO IAmb IAmb 15 21 55.7
comp=Z,23nm,0.7s
XMAS Kiritimati 33.59 43 P P 15 22 02.4 +1.0
PMG Port Moresby 34.78 289 P P 15 22 10.7 -0.7
STKA Stephens Creek 35.05 248 P P 15 22 13.9 +0.5
comp=Z,22nm,0.9s,baz=90,slow=10,SNR=20
STKA Stephens Creek 35.05 248 P P 15 22 13.8 +0.3
COEN Coen 36.43 279 P P 15 22 25.0 -0.1
COEN IAmb IAmb 15 22 26.6
comp=Z,21nm,0.9s
BBOO Buckleboo 39.77 247 P P 15 22 51.9 -0.1
BBOO IAmb IAmb 15 22 52.4
comp=Z,28nm,0.7s
AS31 Alice Springs 42.37 260 P P 15 23 12.8 0.0
AS31 IAmb IAmb 15 23 14.2
comp=Z,11nm,0.5s
ASAR Alice Springs 42.37 260 P P 15 23 12.8 +0.1
comp=Z,40nm,0.8s,baz=97,slow=7.2,SNR=448
ASAR ScP ScP 15 28 00.3 +8.3
comp=Z,4.6nm,0.9s,baz=106,slow=4.0,SNR=16
WR0 Warramunga Arr 42.55 266 P P 15 23 13.9 -0.3
WR0 IAmb IAmb 15 23 14.5
comp=Z,27nm,0.8s
WB2 Warramunga Arr 42.72 266 P P 15 23 15.3 -0.2
WRAB Tennant Creek 42.73 266 P P 15 23 14.9 -0.7
WB0 Warramunga Arr 42.73 266 P P 15 23 15.2 -0.4
WRA Warramunga Arr 42.73 266 P P 15 23 15.2 -0.5
comp=Z,44nm,0.6s,baz=104,slow=8.5,SNR=223
WRA ScP ScP 15 28 01.1 +7.6
comp=Z,4.2nm,1.0s,baz=104,slow=4.1,SNR=7.3
FORT Forrest 46.64 249 P P 15 23 45.5 0.0
KHLU Kahalu`u 48.98 30 P P 15 24 03.7 +0.6
KHLU IAmb IAmb 15 24 04.8
comp=Z,44nm,0.7s
KNRA Kununurra 49.01 270 P P 15 24 03.6 +0.2
KNRA IAmb IAmb 15 24 04.5
comp=Z,57nm,0.9s
HUH Hualalai 49.09 30 P P 15 24 05.4 +1.2
MLH Mauna Loa 49.14 31 P P 15 24 04.9 +0.4
HMH Humu`ula Sheep 49.19 31 P P 15 24 06.0 +1.1
HPAH Hawaii Prepara 49.46 30 P P 15 24 07.5 +0.9
KEKH Kekaha 49.50 25 P P 15 24 08.0 +1.2
HON Honolulu 49.59 27 P P 15 24 09.0 +1.5
HLK Haleakala 49.84 29 P P 15 24 10.7 +1.0
FAKI Fak Fak 50.88 287 P P 15 24 17.0 -0.1
FAKI IAmb IAmb 15 25 42.3
comp=Z,86nm,1.3s
FITZ Fitzroy Crossi 51.16 265 P P 15 24 19.6 +0.5
FITZ IAmb IAmb 15 24 20.8
comp=Z,22nm,0.8s
SWI Sorong 52.73 288 P P 15 24 30.6 +0.2
comp=Z,106nm,0.8s
SOEI Soe 55.16 275 P P 15 24 48.9 +1.2
comp=Z,86nm,1.1s
SOEI Soe 55.16 275 P P 15 24 49.0 +1.2
SOEI IAmb IAmb 15 24 50.5
comp=Z,83nm,1.0s
PSA00 Pilbara Seismi 55.49 259 P P 15 24 49.8 0.0
PSA00 IAmb IAmb 15 24 50.8
comp=Z,48nm,1.5s
NWAO Narrogin (SRO) 55.56 245 P P 15 24 50.3 +0.2
SANI Sanana 56.81 284 P P 15 25 00.6 +1.6
comp=Z,14nm,0.6s
MORW Morawa 57.20 250 P P 15 25 02.1 +0.6
MORW IAmb IAmb 15 25 02.9
comp=Z,34nm,1.1s
GIRL Giralia 60.25 257 P P 15 25 23.6 +1.6
PLAI Plampang 61.44 273 P P 15 25 30.9 +0.9
comp=Z,78nm,0.8s
MPSI Mapaga 63.31 283 P P 15 25 41.8 -0.3
comp=Z,33nm,0.7s
JAGI Jajag, Banyuwa 64.89 272 P P 15 25 52.0 -0.2
JAGI IAmb IAmb 15 26 00.6
comp=Z,55nm,1.3s
QSPA South Pole Qui 66.25 180 P P 15 26 03.4 +3.5
comp=Z,7.2nm,1.0s,baz=15,slow=1.4,SNR=22
QSPA South Pole Qui 66.25 180 P P 15 26 02.8 +3.0
GRJI Gresik 67.02 273 P P 15 26 06.9 +1.6
comp=Z,1μmcomp=Z,124nm,0.8s
PCJI Pacitan 67.72 271 P P 15 26 10.2 +0.6
comp=Z,98nm,0.6s
UGM Wanagama 68.43 271 P P 15 26 14.3 +0.3
KKM Kota Kinabalu 69.20 287 P P 15 26 19.3 +0.7
KKM IAmb IAmb 15 28 47.1
comp=Z,37nm,1.2s
KSM Kuching 72.42 280 P P 15 26 37.5 0.0
KSM IAmb IAmb 15 26 39.3
comp=Z,16nm,0.7s
KASI Kota Agung 74.86 271 P P 15 26 51.2 -0.2
comp=Z,24nm,1.1s
ADK Adak 75.44 2 P P 15 26 54.0 +0.4
MDSI Maura Dua 75.56 271 P P 15 26 55.4 +0.1
comp=Z,9.8nm,1.1s
NIKH Nikolski High 77.06 7 P P 15 27 03.6 +1.1
UNV Unalaska Valle 78.19 8 P P 15 27 09.2 +0.6
AKUT Akutan 78.57 8 P P 15 27 11.7 +1.0
PET Petropavlovsk 78.83 347 P P 15 27 13.0 +0.9
PEA0B Petropavlovsk- 79.11 346 P P 15 27 14.6 +1.0
PEA0B IAmb IAmb 15 29 19.5
comp=Z,78nm,1.4s
PETK Petropavlovsk- 79.11 346 P P 15 27 15.0 +1.4
comp=Z,12nm,0.9s,baz=132,slow=7.3,SNR=18
NJ2 Nanjing 80.86 311 eP P 15 27 26.1 +2.8
IPM Ipoh 82.08 278 P P 15 27 31.0 +1.0
IPM IAmb IAmb 15 27 32.0
comp=Z,10nm,0.6s
ISA Isabella, Lake 82.74 46 P P 15 27 35.2 +2.3
ISA IAmb IAmb 15 27 36.6
comp=Z,14nm,0.9s
CMB Columbia Colle 82.93 43 P P 15 27 35.9 +2.2
AFDM Forest Hills D 83.13 42 P P 15 27 36.9 +2.2
SYO Syowa Base 83.15 193 eP P 15 27 36.0 +1.8
ORV Oroville 83.18 41 P P 15 27 37.4 +2.5
WDC Whiskeytown Da 83.20 40 P P 15 27 37.4 +2.4
GLA Glamis 83.74 50 P P 15 27 40.7 +2.8
GLA IAmb IAmb 15 27 42.3
comp=Z,17nm,1.0s
WAKR Walker 83.81 43 P P 15 27 41.0 +2.7
WAKR IAmb IAmb 15 27 42.2
comp=Z,16nm,1.1s
YBH Yreka Blue Hor 83.83 39 P P 15 27 41.1 +2.9
comp=Z,4.2nm,0.8s,baz=193,slow=0.6,SNR=9.3
YBH Yreka Blue Hor 83.83 39 IAmb IAmb 15 27 57.0
comp=Z,44nm,1.9s
BEKR Beckworth 84.06 42 P P 15 27 41.7 +2.2
YERR Yerington 84.22 43 P P 15 27 42.5 +2.1
113A Mohawk Valley, 84.33 51 P P 15 27 43.4 +2.7
NVAR Mina Array Bea 84.48 44 P P 15 27 44.4 +2.8
comp=Z,2.2nm,0.7s,baz=215,slow=6.8,SNR=11
PAHR Pah Rah Range 84.57 42 P P 15 27 43.8 +1.9
TPNV Topopah Spring 84.95 46 P P 15 27 46.1 +2.2
MOD Modoc Plateau 85.34 40 P P 15 27 47.7 +2.1
MOD IAmb IAmb 15 27 49.4
comp=Z,21nm,1.5s
SHPR Sheep Range 85.42 47 P P 15 27 48.6 +2.5
W13A Hualapai Mount 85.51 49 P P 15 27 48.9 +2.2
R11A Troy Canyon, C 86.18 45 P P 15 27 51.3 +1.5
TUC Tucson 86.22 52 P P 15 27 52.8 +2.8
TUC IAmb IAmb 15 27 54.7
comp=Z,12nm,0.8s
WVOR Wild Horse Val 86.65 40 pP 15 29 41.3 -10
X16A Lo Mia Camp, P 86.85 50 P P 15 27 55.4 +2.4
LCMT Little Creek M 86.99 47 P P 15 27 55.9 +2.4
I07A Izee 87.14 39 P P 15 27 56.8 +2.8
I07A IAmb IAmb 15 27 58.0
comp=Z,15nm,1.0s
CCUT Cedar City 87.20 47 P P 15 27 57.0 +2.3
KNB Kanab 87.27 47 P P 15 27 57.3 +2.4
J08A Circle Bar Ran 87.30 40 P P 15 27 57.6 +2.8
J08A IAmb IAmb 15 27 58.4
comp=Z,12nm,1.1s
U15A North Rim 87.32 48 P P 15 27 58.1 +2.8
U15A IAmb IAmb 15 27 59.5
comp=Z,11nm,0.9s
SZCU Shurtz Canyon 87.41 47 P P 15 27 58.5 +2.9
PSUT Pine Spring 87.41 46 P P 15 27 57.8 +2.2
WUAZ Wupatki 87.47 49 P P 15 27 57.5 +1.6
ELK Elko 87.75 43 P P 15 27 58.8 +1.6
X18A Snowflake 87.96 51 P P 15 28 00.2 +2.0
RC01 Rabbit Creek A 88.02 14 P P 15 27 59.8 +2.2
RC01 IAmb IAmb 15 28 01.2
comp=Z,16nm,1.0s
SUA Susitna One 88.14 13 P P 15 27 59.2 +0.9
SUA IAmb IAmb 15 28 00.2
comp=Z,13nm,0.7s
G08A Pilot Rock 88.18 38 P P 15 28 00.8 +1.9
G08A IAmb IAmb 15 28 02.6
comp=Z,12nm,1.0s
E07A Sunnyside 88.45 37 P P 15 28 02.2 +2.3
E07A IAmb IAmb 15 28 03.8
comp=Z,10.0nm,0.9s
TTA Tatalina 88.48 11 P P 15 28 01.4 +1.6
MSU Marysvale 88.51 46 P P 15 28 01.7 +1.0
121A Cookes Peak, D 88.53 53 P P 15 28 03.2 +2.3
PMR Palmer 88.61 14 P P 15 28 01.6 +1.3
GHO Glory Hole Cre 88.81 14 P P 15 28 02.6 +1.3
GHO IAmb IAmb 15 28 03.7
comp=Z,19nm,0.8s
BMO Blue Mountains 88.86 39 P P 15 28 04.1 +2.1
MFID Camas Ranch 88.90 41 P P 15 28 04.4 +2.1
MFID IAmb IAmb 15 28 05.9
comp=Z,11nm,0.9s
SEY Seymchan 89.28 348 P P 15 28 05.0 +1.7
comp=Z,4.5nm,0.6s,baz=166,slow=4.4,SNR=8.0
TMUT Trail Mountain 89.56 46 P P 15 28 08.6 +2.9
CMAR Chiang Mai Arr 89.81 290 P P 15 28 10.2 +3.2
comp=Z,2.0nm,0.9s,baz=137,slow=3.1,SNR=16
MNTX Cornudas Mount 89.91 55 P P 15 28 09.7 +2.6
MNTX IAmb IAmb 15 28 11.1
comp=Z,5.3nm,0.8s
SRU San Rafael Swe 89.92 47 P P 15 28 09.4 +2.1
P17A Butcher Ranch, 89.96 46 P P 15 28 09.2 +1.8
KTH Kantishna Hill 89.99 12 P P 15 28 07.5 +0.8
KTH IAmb IAmb 15 28 08.8
comp=Z,7.3nm,0.9s
BARN Barnard Glacie 90.00 17 P P 15 28 09.3 +2.2
TRF Thorofare Moun 90.02 13 P P 15 28 07.7 +0.6
TRF IAmb IAmb 15 28 09.8
comp=Z,11nm,0.9s
TX31 Lajitas Ar. Si 90.12 58 P P 15 28 10.0 +1.7
TX31 IAmb IAmb 15 28 12.5
comp=Z,5.7nm,0.8s
TX32 Lajitas Array 90.12 58 P P 15 28 09.8 +1.5
TX32 IAmb IAmb 15 28 12.5
comp=Z,5.8nm,0.8s
TXAR Lajitas Array 90.12 58 P P 15 28 10.9 +2.7
comp=Z,4.3nm,0.7s,baz=213,slow=6.6,SNR=52
RND Reindeer 90.28 13 P P 15 28 09.2 +1.1
RND IAmb IAmb 15 28 10.2
comp=Z,8.6nm,1.0s
TCUT Toone Canyon 90.39 45 P P 15 28 10.5 +1.1
HWUT Hardware Ranch 90.54 44 P P 15 28 11.9 +1.9
HWUT IAmb IAmb 15 28 13.0
comp=Z,5.0nm,0.7s
HHC Hu-ho-hao-te 90.60 315 eP P 15 28 11.4 +1.2
ANMO Albuquerque 90.66 52 P P 15 28 12.7 +2.0
NEA Nenana 91.27 13 P P 15 28 11.3 -1.3
WRH Wood River Hil 91.38 13 P P 15 28 13.6 +0.5
WRH IAmb IAmb 15 28 48.1
comp=Z,14nm,1.6s
HDA Harding Lake 91.56 14 P P 15 28 14.6 +0.6
CCB Clear Creek Bu 91.59 13 P P 15 28 14.5 +0.5
S22A 4UR Ranch, Cre 91.75 49 P P 15 28 18.0 +2.2
ILAR Eielson Array 91.89 13 P P 15 28 15.9 +0.4
comp=Z,0.9nm,0.8s,baz=233,slow=5.6,SNR=11
REDW Red Top Meadow 91.91 43 P P 15 28 17.9 +1.5
REDW IAmb IAmb 15 28 20.5
comp=Z,6.7nm,1.1s
BILL Bilibino 92.19 355 P P 15 28 18.1 +1.3
BILL IAmb IAmb 15 28 19.2
comp=Z,3.9nm,0.8s
PD31 Pinedale Array 92.42 44 P P 15 28 19.8 +1.0
PDAR Pinedale Array 92.42 44 P P 15 28 20.7 +2.0
comp=Z,2.0nm,0.7s,baz=219,slow=3.8,SNR=20
SDCO Great Sand Dun 92.67 50 P P 15 28 21.8 +1.7
EGAK Eagle 93.21 15 P P 15 28 22.9 +1.5
EGAK IAmb IAmb 15 28 23.4
comp=Z,3.8nm,0.8s
LZH Lanzhou 93.59 308 eP P 15 28 21.8 -2.4
LZH pP pP 15 30 20.3 -3.6
LZH sP sP 15 30 58.8 -20
LZH PP PP 15 32 17.1 -1.8
YKA Yellowknife Ar 100.17 25 P Pdif 15 28 54.4 +1.6
comp=Z,0.2nm,0.6s,baz=236,slow=5.3,SNR=3.6
YKA PP PP 15 33 05.3 -2.5
comp=Z,0.7nm,0.9s,baz=243,slow=7.5,SNR=6.7
KSH Kashi 115.51 304 PKP PKiKP 15 33 44.1 -2.1
KSH PP PP 15 35 04.8 +6.1
KSH sPKP 15 36 43.3
KSH PKS PKSdf 15 37 14.1 -8.9
KSH SKS SKSdf 15 40 04.1 -2.3

KSH SKKS SKKSac 15 41 02.5 +0.2
ARCES ARCESS Array B 131.89 348 PKP PKiKP 15 34 17.9 +0.3
comp=Z,4.0nm,0.9s,baz=45,slow=1.9,SNR=7.7
FINES FINESS Array B 138.49 342 PKP PKiKP 15 34 32.0 +0.8
comp=Z,1.6nm,0.8s,baz=19,slow=2.8,SNR=4.6
FINES SKPbc SKPab 15 37 17.7 -4.3
comp=Z,3.6nm,0.7s,baz=66,slow=4.8,SNR=12
NB2 NORSAR Subarra 142.07 351 PKP PKPdf 15 34 33.3 -2.2
comp=Z,1.1nm,0.7s,baz=16,slow=3.2
NOA NORSAR Array B 142.07 351 PKhKP PKPpre 15 34 33.4
comp=Z,2.2nm,0.8s,baz=16,slow=4.6,SNR=9.3
KONO Kongsberg 143.63 352 PKiKP 15 34 38.2 -3.6
AKASG Malin Array Be 145.09 328 PKP PKiKP 15 34 42.8 -2.3
comp=Z,3.3nm,0.7s,baz=41,slow=4.3,SNR=13
AKASG SKPbc SKiKP 15 37 34.5 +5.3
comp=Z,1.7nm,0.6s,baz=43,slow=2.8,SNR=5.2
AKBB Malin Array Si 145.09 328 PKiKP 15 34 42.4 -2.7
SORM Soroca 147.14 325 ⇓P PKPab 15 34 49.2 -1.9
BRTR Keskin Array B 147.80 307 PKPbc PKPab 15 34 51.2 -3.1
comp=Z,0.6nm,0.6s,baz=126,slow=3.4,SNR=3.3
KWP Kalwaria Pacla 148.87 331 ePKP PKPab 15 34 54.2 -4.0
KWP Kalwaria Pacla 148.87 331 PKPab 15 34 54.2 -4.0
TESR Tescani 149.05 323 ⇓P PKiKP 15 34 53.3 -0.1
BURAR Bucovina Array 149.10 326 ⇓P PKPab 15 34 56.3 -3.0
KOLS Kolonicke sedl 149.58 331 ePKP PKPab 15 34 56.2 -4.9
KOLS e 15 35 02.6
OJC Ojcow 149.62 335 ePKP PKPab 15 34 55.5 -5.7
CRVS Cervenica-Dubn 149.96 332 ePKP PKPab 15 34 56.9 -5.8
TRPA Tarpa 150.04 330 ⇓P PKiKP 15 34 56.6 +1.3
NIE Niedzica 150.05 333 ePKP PKPab 15 34 57.8 -5.3
DOPR Dopca 150.07 324 ⇓P PKPab 15 34 57.6 -5.7
KSP Ksiaz 150.34 339 ePKP PKPab 15 34 58.1 -6.2
VOIR 150.59 323 ⇓P PKiKP 15 34 57.9 +1.2
LANS Liptovska Anna 150.60 334 ePKP PKPab 15 34 59.2 -6.2
OSTC Ostas 150.62 339⇑ePKP PKPab 15 34 58.9 -6.5
DPC Dobruska-Polom 150.76 339⇑ePKP PKPab 15 34 58.9 +2.0
MORC Moravsky Berou 150.82 337 PKiKP 15 34 58.5 +1.5
KRLC Kraliky 150.84 338⇑ePKP PKiKP 15 34 58.7 +1.7
KRLC ePKPAB PKPab 15 35 08.4 +2.0
CLL Collm 150.89 344 iPKPbc PKPab 15 34 59.4 -7.0
comp=Z,12nm,0.8s
CLL iPKPab PKiKP 15 35 08.3 +11
comp=Z,8.0nm,1.0s
CLL Collm 150.89 344 PKPab 15 34 59.5 -7.0
BRG Berggiesshubel 151.03 342 iPKP PKiKP 15 34 59.0 +1.7
comp=Z,7.4nm,0.7s
PVCC Panska Ves 151.15 341⇑ePKP PKiKP 15 34 59.6 +2.0
VYHS Vyhne 151.37 334 ePKP PKiKP 15 35 00.0 +1.8
VYHS e 15 35 10.9
SIRR Siria 151.80 328 ⇑P PKiKP 15 35 00.7 +1.6
GZR Gura Zlata 151.84 325 ⇓P PKiKP 15 35 00.7 +1.5
MODS Modra-Piesok 152.08 336 ePKP PKiKP 15 35 01.1 +1.5
BZS Buzias 152.28 327 ⇓P PKiKP 15 35 00.1 +0.1
KHC Kasperske Hory 152.69 341⇑ePKP PKiKP 15 35 02.7 +1.8
GERES GERESS Array B 152.91 340 PKPbc PKiKP 15 35 03.4 +2.0
comp=Z,1.2nm,0.8s,baz=29,slow=3.0,SNR=4.8
GERES PKPab PKPab 15 35 14.4 -0.8
comp=Z,0.2nm,0.3s,baz=232,slow=6.6,SNR=2.5
FUORN Ofenpass-Fuorn 155.91 343 PKPab 15 35 30.2 +1.8

ISC 19 15:22:46.1±1.3, 50.15N±0.07×19.10E±0.05, h0km, n5, σ0.68/10, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.46	81	ePg	Pg	15 22 54.8	0.0
OJC				eSg	Sg	15 23 00.5	-0.2
LANS	Liptovska Anna	1.03	166	ePG	Pg	15 23 06.2	+0.5
LANS				eSG	Sg	15 23 18.4	-0.6
LANS				eLG	Lg	15 23 19.7	
MORC	Moravsky Berou	1.07	250	ePG	Pb	15 23 07.8	+0.3
MORC				eSG	Sb	15 23 22.6	+0.6
NIE	Niedzica	1.07	133	ePg	Pb	15 23 08.0	+0.5
NIE				eSg	Sb	15 23 22.8	+0.8
VYHS	Vyhne	1.66	186	ePN	Pn	15 23 15.9	-0.6
VYHS				eSN	Sn	15 23 37.6	-0.9

IDC 19 15:32:22.3±2.4, 7.12S×127.66E, h0km, mb3.9/1, mb1 3.7/3, mb1mx3.4/30, mbtmp3.6/3, ML3.8/2, Error ellipse: s-maj=304.4km s-min=30.8km az=64.0
NEIC 19 15:32:33.6±2.2, 6.55S±0.08×130.0E±0.1, h176km±16km, mb4.5/3, Error ellipse: s-maj=15.8km s-min=11.5km az=76.0

ISC 19 15:32:33.2±0.8, 6.73S±0.07×129.93E±0.09, h146km, n19, σ2.24/23, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.84	132	Pn	Pn	15 33 10.2	+4.0
FAKI	Fak Fak	4.44	32	Pn	Pn	15 33 37.9	-1.3
SOEI	Soe	6.36	241	Pn	Pn	15 34 08.2	+3.4
TNTI	Ternate	7.88	341	Pn	Pn	15 34 23.5	-1.6
KNRA	Kununurra	8.96	187	Pn	Pn	15 34 41.0	+1.5
KAPI	Kappang	10.26	279	Pn	Pn	15 34 56.1	-0.7
FITZ	Fitzroy Crossi	12.05	200	Pn	Pn	15 35 20.4	+0.1
WB0	Warramunga Arr	13.66	162	Pn	Pn	15 35 41.7	+0.6
WRA	Warramunga Arr	13.81	162	Pn	Pn	15 35 44.7	+1.7
	0.6nm,0.3s,baz=330,slow=13,SNR=34						
WRA				Sn	Sn	15 38 12.7	-3.3
	0.7nm,0.3s,baz=342,slow=21,SNR=10						
WRA	Warramunga Arr	13.81	162		Pn	15 35 44.7	+1.7
WRA					Sn	15 38 12.7	-3.3
WB2	Warramunga Arr	13.82	162		P	15 35 46.0	-0.6
WR0	Warramunga Arr	13.89	162		P	15 35 46.7	-0.7
COEN	Coen	14.87	120		P	15 35 59.8	+1.4
JAGI	Jajag, Banyuwa	15.73	263		P	15 36 07.8	-0.1
JAGI				IAmb	IAmb	15 37 02.9	
	comp=Z,54nm,1.5s						
AS31	Alice Springs	17.27	168	Pn	Pn	15 36 26.5	+0.9
AS31				IAmb	IAmb	15 36 34.9	
	comp=Z,1.5nm,1.1s						
ASAR	Alice Springs	17.27	168	P	Pn	15 36 29.1	+3.5
	comp=Z,0.2nm,0.3s,baz=338,slow=8.9,SNR=23						
ASAR				S	S	15 39 35.6	-1.8
	comp=Z,0.2nm,0.3s,baz=356,slow=26,SNR=7.6						
ASAR	Alice Springs	17.27	168	P	Pn	15 36 29.1	+3.5
ASAR					S	15 39 35.6	-1.8
NWAO	Narrogin (SRO)	28.61	203	P	P	15 38 14.3	-1.5
NWAO				IAmb	IAmb	15 38 52.8	
	comp=Z,69nm,1.8s						
MKAR	Makanchi Array	67.96	327	P	P	15 43 17.6	+1.1
	comp=Z,0.8nm,0.6s,baz=119,slow=8.1,SNR=7.8						

NIED 19 15:42:00, 35.70N×140.80E, h50km, Mw4.0 Best double couple: Mo1.23000×10^15 NP1:ϕs359.00000°, δ64.00000°, λ92.00000°. NP2:ϕs175.00000°, δ26.00000°, λ87.00000°.
JMA 19 15:42:12.7±0.2, 35.74N×140.68E, h50km±2km, M3.6 Broadband fault plane solution: P waves. NP1: ϕs195.00000°, δ7.00000°, λ94.00000°. NP2:ϕs11.00000°, δ83.00000°, λ90.00000°. Principal axes: T Plg52.0000°, Azm280.0000°; N Plg0.0000°, Azm11.0000°; P Plg38.0000°, Azm101.0000°;
JMA Felt II J1.
IDC 19 15:42:13.2±1.5, 35.71N×140.68E, h49km±13km, mb3.6/11, mb1 3.7/16, mb1mx3.5/59, mbtmp3.8/16, ML3.5/4, MS3.0/6, Ms1 3.0/6, ms1mx2.8/48 Error ellipse: s-maj=16.6km s-min=7.7km az=74.0
NEIC 19 15:42:13.1±2.2, 35.70N±0.05×140.69E±0.10, h53km±8km, mb4.6/16, Error ellipse: s-maj=11.4km s-min=8.0km az=93.0

ISC 19 15:42:13.0±0.8, 35.72N±0.04×140.73E±0.06, h51km±6km, n58, σ1.06/58, mb4.1/19, 1C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.11	101	⇑P	Pn	15 42 20.7	-0.2
JSMT	Sammumatsuo	0.24	251	⇓P	Pn	15 42 21.5	-0.2
JSMT				S	Sn	15 42 28.6	+0.8
JIHU	Itakohorinouch	0.29	326	⇓P	Pn	15 42 22.1	0.0
JIHU				S	Sn	15 42 29.3	+0.7
JCN	Nagara	0.53	235	⇓P	Pn	15 42 24.8	+0.2
JCN				eS	Sn	15 42 33.8	+0.9
JYT	Yasato	0.66	319	⇓P	Pn	15 42 25.5	-0.8
JYT				S	Sn	15 42 34.6	-1.3
BSO4	Boso 4	0.80	204	P	Pn	15 42 28.0	+0.1
JHO	Hitachi	0.90	352	⇓P	Pn	15 42 29.2	-0.1
BSO3	Boso 3	0.94	191	P	Pn	15 42 29.5	-0.1
BSO1	Boso 1	1.09	169	P	Pn	15 42 31.7	+0.3
MJAR	Matsushiro Arr	2.20	293	P	Pn	15 42 47.1	0.0
	4.3nm,0.3s,baz=97,slow=14,SNR=126						
MJAR				S	Sn	15 43 12.5	-0.6
	2.1nm,0.3s,baz=220,slow=19,SNR=7.3						
MJAR				LR	LR	15 43 46.5	
	comp=Z,237nm,18.9s,baz=145,slow=44						
MAJO	Matsushiro	2.20	293		Pn	15 42 47.3	+0.2
MAT	Matsushiro	2.20	293	P	Pn	15 42 48.0	+1.0
MAT				eS	Sn	15 43 15.7	+2.6
MJB9	Matsu-Tunnel	2.20	293		Pn	15 42 47.2	+0.1
JHJ2	Mitsune	2.71	196	Pn	Pn	15 42 53.0	-1.1
JHJ	Hachijo jima 2	2.71	197	P	Pn	15 42 53.5	-0.6
	43nm,0.3s,baz=328,slow=20,SNR=9.9						
JHJ				S	Sn	15 43 26.0	+0.3
	108nm,0.3s,baz=270,slow=23,SNR=8.1						
INU	Inuyama	3.05	264		Pn	15 42 58.5	-0.1
ERM	Erimo	6.56	16	Pn	Pn	15 43 47.3	+0.5
ASAJ	Asahikawa	8.51	9	P	Pn	15 44 12.5	-1.0
	0.9nm,0.3s,baz=214,slow=11,SNR=18						
ASAJ				S	Sn	15 45 46.9	-1.1
	0.4nm,0.3s,baz=117,slow=30,SNR=2.4						
JKA	Kamikawa-asahi	8.51	9		Pn	15 44 12.5	-1.0
JKA					Sn	15 45 46.9	-1.1
JNU	Nakatsue	8.54	255	LR	LR	15 47 51.8	
	comp=Z,166nm,18.4s,baz=52,slow=40						
KSRS	Korea Array	10.44	283	P	Pn	15 44 41.7	+1.8
	0.1nm,0.3s,baz=97,slow=14,SNR=4.3						
KSRS				LR	LR	15 47 54.7	
	comp=Z,35nm,21.9s,baz=98,slow=33						
USRK	Ussuriysk Ar.	10.79	324	P	Pn	15 44 43.7	-1.0
	baz=149,slow=42,SNR=3.3						
KLR	Kul'dur	15.02	337	LR	LR	15 50 59.3	
	comp=Z,21nm,19.6s,baz=160,slow=35						
MA2	Magadan	24.75	12	P	P	15 47 31.8	+2.3
MA2				IAmb	IAmb	15 47 43.2	
	comp=Z,31nm,1.6s						
XAN	Xi'an	26.09	276	P	P	15 47 40.6	-1.4
ENH	Enshi	26.69	267	P	P	15 47 46.2	-1.2
ENH				IAmb	IAmb	15 47 46.8	
	comp=Z,8.6nm,0.6s						
H11N2	WAKE ISLAND Hy	27.99	118	T	T	16 17 15.2	
	baz=309,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	28.00	118	T	T	16 17 29.0	
	baz=309,slow=75,SNR=15						
H11N3	WAKE ISLAND Hy	28.01	118	T	T	16 17 13.3	
	baz=309,slow=75,SNR=9.8						
SONM	Songino Array	28.08	306	P	P	15 47 59.5	-0.4
	comp=Z,0.7nm,0.7s,baz=108,slow=9.0,SNR=4.7						
SONM				LR	LR	15 58 54.2	
	comp=Z,31nm,18.2s,baz=318,slow=36						
H11S1	WAKE ISLAND Hy	28.65	120	T	T	16 17 59.6	
	baz=312,slow=75,SNR=24						
H11S3	WAKE ISLAND Hy	28.65	120	T	T	16 17 55.2	
	baz=312,slow=75,SNR=17						
H11S2	WAKE ISLAND Hy	28.67	120	T	T	16 18 00.8	
	baz=312,slow=75,SNR=18						
FAKI	Fak Fak	39.25	193	P	P	15 49 37.1	+0.5
PBKT	Sadao Pong	40.12	252	P	P	15 49 42.5	-1.5
PBKT				IAmb	IAmb	15 51 11.5	
	comp=Z,6.9nm,1.3s						
ZALV	Zalesovo Beam	42.40	313	P	P	15 50 03.0	+0.7
	comp=Z,0.5nm,0.3s,baz=99,slow=9.2,SNR=4.3						
MK31	Makanchi Array	44.36	303	P	P	15 50 18.0	-0.2
MKAR	Makanchi Array	44.36	303	P	P	15 50 18.6	+0.4
	comp=Z,1.1nm,0.6s,baz=89,slow=9.5,SNR=18						
MAKZ	Makanchi	44.57	303	P	P	15 50 20.1	+0.2
KURK	Kurchatov	46.31	309	P	P	15 50 33.5	-0.1
KURK				IAmb	IAmb	15 50 35.0	
	comp=Z,4.4nm,0.9s						
ILAR	Eielson Array	50.90	32	P	P	15 51 10.2	+1.7
	comp=Z,0.8nm,0.9s,baz=269,slow=5.9,SNR=7.8						
FITZ	Fitzroy Crossi	55.40	198	P	P	15 51 41.2	-0.9
	comp=Z,1.8nm,0.8s,baz=32,slow=9.3,SNR=5.1						
FITZ	Fitzroy Crossi	55.40	198	P	P	15 51 39.9	-2.2
FITZ				IAmb	IAmb	15 52 28.8	
	comp=Z,20nm,1.5s						
WRAB	Tennant Creek	55.68	187	P	P	15 51 43.0	-1.1
WR0	Warramunga Arr	55.69	187	P	P	15 51 42.9	-1.2
WR0				IAmb	IAmb	15 51 49.7	
	comp=Z,26nm,1.7s						
WB2	Warramunga Arr	55.69	187	P	P	15 51 41.8	-2.4
WRA	Warramunga Arr	55.69	187	P	P	15 51 43.7	-0.5
	comp=Z,1.2nm,0.6s,baz=0.7,slow=7.5,SNR=19						
INK	Inuvik	55.80	27	P	P	15 51 44.3	-0.2
ARU	Arti	56.98	319	P	P	15 51 52.9	-0.2
ARU				IAmb	IAmb	15 51 54.2	
	comp=Z,5.2nm,1.0s						
AS31	Alice Springs	59.42	187	P	P	15 52 09.5	-0.9
ASAR	Alice Springs	59.42	187	P	P	15 52 10.6	+0.1
	comp=Z,0.6nm,0.5s,baz=15,slow=11,SNR=21						
RES	Resolute Bay	64.00	14	P	P	15 52 41.9	+1.3
RES				IAmb	IAmb	15 53 20.5	
	comp=Z,3.0nm,0.6s						
FINES	FINESS Array B	69.71	332	P	P	15 53 17.5	+0.4
	comp=Z,1.0nm,0.7s,baz=58,slow=8.9,SNR=4.5						
AKASG	Malin Array Be	74.99	322	P	P	15 53 49.3	+0.6
	comp=Z,0.5nm,0.5s,baz=57,slow=5.5,SNR=3.1						
NOA	NORSAR Array B	75.18	337	P	P	15 53 50.1	+0.4
	comp=Z,17nm,0.5s,baz=38,slow=5.8,SNR=3.7						
BRTR	Keskin Array B	79.30	311	P	P	15 54 12.1	-1.3
	comp=Z,0.5nm,0.7s,baz=123,slow=4.6,SNR=3.9						
TXAR	Lajitas Array	91.36	52	P	P	15 55 15.7	+2.0
	comp=Z,0.1nm,0.4s,baz=316,slow=5.0,SNR=2.6						
TKL	Tuckaleechee C	97.77	35	LR	LR	16 39 45.9	
	comp=Z,53nm,21.7s,baz=128,slow=35						

LSZ 19 15:45:37.6±0.3, 14.72S×26.62E, h10km, MD1.8, Zambia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITZ	Itezhi-Tezhi	1.17	210	iP	Pb	15 45 58.3	-1.8
ITZ				i		15 45 58.4	
	baz=2.1,slow=7.9						
ITZ				iS	Sb	15 46 13.6	-1.8
ITZ	Itezhi-Tezhi	1.17	210	iP	Pb	15 45 58.6	-1.5
ITZ				iS	Sb	15 46 13.8	-1.6
ITZ	Itezhi-Tezhi	1.17	210	iP	Pb	15 45 58.3	-1.7
ITZ				i		15 45 58.5	
	baz=28,slow=18						
ITZ				iS	Sb	15 46 13.5	-2.0
ITZ	Itezhi-Tezhi	1.17	210	iP	Pb	15 45 58.5	-1.6
ITZ				i		15 45 58.5	
	baz=24,slow=28						
ITZ				iS	Sb	15 46 13.4	-2.0
ITZ	Itezhi-Tezhi	1.17	210	iP	Pb	15 45 58.0	-2.1
ITZ				i		15 45 58.6	
	baz=31,slow=18						
ITZ				iS	Sb	15 46 13.8	-1.6
ITZ	Itezhi-Tezhi	1.17	210	iP	Pb	15 45 58.4	-1.7
ITZ				i		15 45 58.5	
	baz=11,slow=16						
ITZ				iS	Sb	15 46 13.7	-1.8
ITZ	Itezhi-Tezhi	1.17	210	iP	Pb	15 45 58.3	-1.7
ITZ				i		15 45 58.5	
	baz=28,slow=18						
ITZ				iS	Sb	15 46 13.5	-2.0
ITZ	Itezhi-Tezhi	1.17	210	iP	Pb	15 45 58.3	-1.8
ITZ				i		15 45 58.4	
	baz=2.1,slow=7.9						
ITZ				iS	Sb	15 46 13.6	-1.8
ITZ	Itezhi-Tezhi	1.17	210	iP	Pb	15 45 58.4	-1.7
ITZ				i		15 45 58.6	
	baz=19,slow=18						
ITZ				iS	Sb	15 46 13.5	-1.9
MATP	Matopo	5.95	163	i	Pn	15 46 59.4	-6.6
	baz=190,slow=12						
MATP				iP	Pn	15 46 59.4	-6.6
MATP				iS	Sn	15 48 10.4	-3.9
MATP	Matopo	5.95	163	iP	Pn	15 46 59.4	-6.6
MATP				iS	Sn	15 48 10.4	-3.9

TAP 19 15:47:20.6, 22.76N×120.73E, h32km, ML3.5, B
JMA 19 15:47:20.1, 22.68N×120.71E, h40km±2km, M3.5
IASPEI 19 15:47:21.4±0.9, 22.75N±0.02×120.72E±0.02, h32km±5km, Error ellipse: s-maj=2.9km s-min=2.3km az=86.0, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009

ISC 19 15:47:21.8±0.8, 22.75N±0.02×120.72E±0.02, h33km±6km, n117, σ0.93/199, 14C-12D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSD	Sandimen	0.08	266	⇑iP	Pb	15 47 26.7	-0.7
	baz=258						
SSD				iS	Sb	15 47 30.8	-0.4
	baz=258						
MASBT	Mashibuluo	0.16	210	⇑P	Pn	15 47 27.3	-0.7
	baz=210						
MASBT				S	Sn	15 47 31.7	0.0
	baz=210						
SGLT	Jiouru	0.21	263	⇑iP	Pn	15 47 28.7	+0.1
	baz=260						
SGLT				eS	Sb	15 47 34.5	+1.6
	baz=260						
SLGT	Liugui	0.25	345	⇑iP	Pn	15 47 28.2	-1.0
	baz=348						
SLGT				S	Sn	15 47 33.8	-0.2
	baz=348						
ECL	Taimali	0.27	125	⇓iP	Pn	15 47 28.4	-1.0
	baz=127						
ECL				S	Sn	15 47 33.4	-1.0
	baz=127						
TWM1	Shoushan	0.28	285	⇑iP	Pn	15 47 29.4	-0.2
	baz=282						
TWM1				eS	Sb	15 47 36.0	+1.7
	baz=282						
SSPT	Xinbi	0.30	208	⇑iP	Pb	15 47 29.2	-0.2
	baz=204						
SSPT				eS	Sn	15 47 35.3	+0.1
	baz=204						
TWG	Pinlang	0.33	78	⇓iP	Pb	15 47 29.6	-0.3
	baz=76						
TWG				S	Sn	15 47 35.4	-0.7
	baz=76						
TWGBT	Beinan	0.34	79	⇓P	Pb	15 47 29.6	-0.4
	baz=76						
TWGBT				S	Sn	15 47 35.3	-0.9
	baz=76						
SGST	Jiashian	0.35	339	⇑iP	Pb	15 47 28.9	-1.3
	baz=339						
SGST				eS	Sn	15 47 35.6	-0.9
	baz=339						
SNJT	Kaohsiung City	0.35	270	eP	Pb	15 47 30.6	+0.5
	baz=268						
SNJT				S	Sb	15 47 38.5	+2.6
	baz=268						
EAST	Anshuo	0.39	162	⇓iP	Pb	15 47 29.9	-0.7
	baz=159						
EAST				S	Sb	15 47 36.1	-0.6
	baz=159						
SCZT	Fangliau	0.39	194	⇓iP	Pb	15 47 30.1	-0.6
	baz=197						
SCZT				S	Sb	15 47 36.5	-0.2
	baz=197						
TTN	Taitung	0.40	90	eP	Pb	15 47 30.7	-0.1
	baz=85						
TTN				S	Sb	15 47 38.1	+1.2
	baz=85						
STYT	Tauyuan	0.41	5	⇑iP	Pb	15 47 30.5	-0.6
	baz=12						
STYT				S	Sb	15 47 37.4	0.0
	baz=12						
KAU	Kaohsiung	0.42	244	P	Pb	15 47 31.7	+0.6
	baz=242						
KAU				eS	Sn	15 47 40.6	+2.4
	baz=242						
TAW	Tawu	0.42	157	⇓iP	Pb	15 47 30.5	-0.7
	baz=157						
TAW				S	Sb	15 47 37.0	-0.6
	baz=157						
WSSB	Gushan	0.44	256	P	Pb	15 47 32.0	+0.6
	baz=253						
WSSB				eS	Sb	15 47 38.6	+0.6
	baz=253						
CHN3	Shinhua	0.46	315	P	Pb	15 47 32.1	+0.5
	baz=314						
CHN3				S	Sn	15 47 41.2	+2.1
	baz=314						
CHN1	Nanshi	0.47	338	⇑iP	Pb	15 47 31.5	-0.3
	baz=346						
CHN1				S	Sb	15 47 39.4	+0.6
	baz=346						
WTP	Ta-pu	0.50	349	⇑iP	Pb	15 47 31.8	-0.6
	baz=350						
WTP				eS	Sb	15 47 40.0	+0.3
	baz=350						
WLCH	Liuqiu	0.51	218	eP	Pb	15 47 33.8	+1.4
	baz=218						
SNST	Tainan City	0.51	336	P	Pb	15 47 32.2	-0.3
	baz=335						
SNST				S	Sb	15 47 40.6	+0.8
	baz=335						
ELDTW	Lidau	0.52	32	⇓iP	Pb	15 47 31.9	-0.8
	baz=34						
ELDTW				eS	Sb	15 47 39.8	-0.3
	baz=34						
TWP	Hsiaoliuchiu	0.52	219	eP	Pb	15 47 33.6	+0.6
	baz=219						
TAI1	Yung-k'ang	0.54	303	eP	Pn	15 47 32.5	-0.6
	baz=302						
TAI1				eS	Sn	15 47 41.4	+0.9
	baz=302						
TPUB	Ta-pu	0.55	352	P	Pn	15 47 32.4	-1.0
	baz=351						
TPUB				eS	Sb	15 47 41.0	-0.1
	baz=351						
TWK	Hsinying	0.56	338	⇓eP	Pn	15 47 32.4	-1.1
	baz=338						
TWK				eS	Sb	15 47 40.7	-0.5
	baz=338						
CHN4	Tsaushan	0.61	349	⇓P	Pn	15 47 33.2	-0.9
	baz=349						
CHN4				S	Sn	15 47 42.8	-0.1
	baz=349						
SCLT	Jiali	0.64	311	eP	Pn	15 47 33.8	-0.8
	baz=311						
SCLT				S	Sn	15 47 44.1	+0.5
	baz=311						
CHKT	Chengkung	0.69	60	eP	Pn	15 47 34.1	-1.1
	baz=69						
CHKT				eS	Sn	15 47 44.7	-0.2
	baz=69						
FULB	Fuli	0.69	50	⇑P	Pn	15 47 35.1	-0.3
	baz=46						
FULB				eS	Sn	15 47 45.1	+0.2
	baz=46						
TWH	Lutao	0.70	93	eP	Pn	15 47 34.5	-0.9
	baz=97						
TWH				eS	Sn	15 47 44.9	-0.3
	baz=97						
HEN	Hengchun	0.74	179	eP	Pn	15 47 35.5	-0.4
	baz=178						
HEN				eS	Sn	15 47 46.2	+0.1
	baz=178						
CHN8	Yiju	0.75	322	eP	Pn	15 47 35.6	-0.5
	baz=323						
CHN8				eS	Sn	15 47 46.0	-0.4
	baz=323						
ALS	Alishan	0.76	6	⇓P	Pn	15 47 35.9	-0.6
	baz=7.0						
ALS				S	Sn	15 47 47.4	+0.3
	baz=7.0						
YUS	Yu-Shan	0.77	16	eP	Pn	15 47 35.9	-0.9
	baz=18						
YUS				eS	Sn	15 47 46.8	-0.6
	baz=18						
CHY	Chiayi	0.79	340	eP	Pn	15 47 35.8	-0.8
	baz=341						
CHY				eS	Sn	15 47 47.8	+0.5
	baz=341						
TWF1	Yuli	0.80	42	⇑P	Pn	15 47 36.2	-0.6
	baz=43						
TWF1				S	Sn	15 47 47.2	-0.4
	baz=43						
CHN2	Minshiung	0.81	344	eP	Pn	15 47 36.6	-0.3
	baz=345						
CHN2				eS	Sn	15 47 48.4	+0.6
	baz=345						
TWK1	Hengchun	0.81	174	⇑eP	Pn	15 47 36.2	-0.7
	baz=173						
TWK1				eS	Sn	15 47 48.1	+0.3
	baz=173						
TWKBT	Hengchun	0.81	174	P	Pn	15 47 36.2	-0.7
	baz=173						
TWKBT				eS	Sn	15 47 47.2	-0.6
	baz=173						

WLGB	**Puzi**	**0.82**	**332**	*e*P	**Pn**	**15 47 36.0**	**-1.0**
	baz=333						
WLGB				*e*S	**Sn**	**15 47 47.9**	**-0.1**
	baz=333						
YULB	**Yu-li**	**0.83**	**40**	⇑*e*P	**Pn**	**15 47 36.7**	**-0.6**
	baz=41						
YULB				S	**Sn**	**15 47 47.5**	**-0.9**
	baz=41						
CHN5	**Tsauling**	**0.84**	**357**	*e*P	**Pn**	**15 47 36.7**	**-0.8**
	baz=359						
CHN5				*e*S	**Sn**	**15 47 49.1**	**+0.3**
	baz=359						
TSEB	**Hengchuen, Pin**	**0.86**	**169**	*e*P	**Pn**	**15 47 38.0**	**+0.3**
	baz=181						
TSEB				*e*S	**Sn**	**15 47 49.6**	**+0.5**
	baz=181						
EHY	**Hungye**	**0.93**	**36**	*e*P	**Pn**	**15 47 38.6**	**-0.1**
	baz=39						
EHY				*e*S	**Sn**	**15 47 50.1**	**-0.8**
	baz=39						
WGK	**Gukeng**	**0.94**	**351**	*e*P	**Pn**	**15 47 38.0**	**-0.7**
	baz=354						
WGK				*e*S	**Sn**	**15 47 51.6**	**+0.5**
	baz=354						
WDLH	**Douliu**	**0.95**	**350**	*e*P	**Pn**	**15 47 38.0**	**-0.8**
	baz=351						
WDLH				*e*S	**Sn**	**15 47 52.2**	**+0.9**
	baz=351						
WHYT	**Xinyi Township**	**0.95**	**7**	*e*P	**Pn**	**15 47 38.4**	**-0.5**
	baz=358						
WHYT				*e*S	**Sn**	**15 47 51.9**	**+0.6**
	baz=358						
HGSD	**Ruisui**	**0.98**	**41**	*e*P	**Pn**	**15 47 39.4**	**+0.2**
	baz=31						
HGSD				*e*S	**Sn**	**15 47 53.8**	**+1.7**
	baz=31						
WSF	**Szhu**	**0.99**	**333**	*e*P	**Pn**	**15 47 38.3**	**-1.1**
	baz=335						
WSF				S	**Sn**	**15 47 51.7**	**-0.7**
	baz=335						
LAY	**Lan-yu**	**1.05**	**132**	*e*P	**Pn**	**15 47 38.8**	**-1.4**
	baz=132						
LAY				*e*S	**Sn**	**15 47 53.1**	**-0.7**
	baz=132						
SSLB	**Suanglung**	**1.05**	**12**	*e*P	**Pn**	**15 47 39.9**	**-0.4**
	baz=14						
SSLB				*e*S	**Sn**	**15 47 53.9**	**0.0**
	baz=14						
WJS	**Zhushan**	**1.06**	**0**	*e*P	**Pn**	**15 47 39.4**	**-1.1**
	baz=349						
WJS				*e*S	**Sn**	**15 47 54.1**	**-0.1**
	baz=349						
WDGT	**Dungji**	**1.10**	**298**	*e*P	**Pn**	**15 47 39.1**	**-1.7**
	baz=296						
WDGT				*e*S	**Sn**	**15 47 53.1**	**-1.9**
	baz=296						
EGFH	**Guangfu**	**1.12**	**35**	*e*P	**Pn**	**15 47 42.1**	**+0.9**
	baz=37						
WNT	**Mingjian**	**1.12**	**358**	*e*P	**Pn**	**15 47 40.3**	**-0.9**
	baz=348						
SMLT	**Sun Moon Lake**	**1.14**	**8**	⇓P	**Pn**	**15 47 41.0**	**-0.5**
	baz=12						
SMLT				*e*S	**Sn**	**15 47 56.1**	**0.0**
	baz=12						
TYC	**Yuchr**	**1.15**	**6**	⇓*e*P	**Pn**	**15 47 41.2**	**-0.4**
	baz=10.0						
TYC				*e*S	**Sn**	**15 47 56.9**	**+0.5**
	baz=10.0						
RLNB	**Erlin**	**1.18**	**344**	*e*P	**Pn**	**15 47 41.2**	**-0.8**
	baz=335						
RLNB				*e*S	**Sn**	**15 47 56.7**	**-0.3**
	baz=335						
ESL	**Shilin**	**1.25**	**32**	*e*P	**Pn**	**15 47 42.9**	**0.0**
	baz=44						
ESL				*e*S	**Sn**	**15 47 58.6**	**0.0**
	baz=44						
OWD	**Renai**	**1.27**	**19**	*e*P	**Pn**	**15 47 43.1**	**-0.2**
	baz=11						
OWD				*e*S	**Sn**	**15 47 59.1**	**-0.3**
	baz=11						
VCHM	**Qimei**	**1.27**	**291**	*e*P	**Pn**	**15 47 41.4**	**-1.8**
	baz=277						
VCHM				*e*S	**Sn**	**15 47 57.2**	**-2.0**
	baz=277						
DPDB	**Guoxing**	**1.29**	**8**	*e*P	**Pn**	**15 47 43.1**	**-0.5**
	baz=12						
DPDB				*e*S	**Sn**	**15 48 00.3**	**+0.5**
	baz=12						
PHUB	**P'eng-hu**	**1.30**	**306**	P	**Pn**	**15 47 41.7**	**-1.9**
	baz=306						
PHUB				*e*S	**Sn**	**15 47 57.1**	**-2.8**
	baz=306						
WCHH	**Zhanghua**	**1.33**	**354**	*e*P	**Pn**	**15 47 43.7**	**-0.4**
	baz=356						
WCHH				*e*S	**Sn**	**15 48 00.6**	**-0.1**
	baz=356						
PNG	**Penghu**	**1.34**	**307**	*e*P	**Pn**	**15 47 42.5**	**-1.8**
	baz=308						
CHGB	**Renai**	**1.37**	**18**	*e*P	**Pn**	**15 47 43.6**	**-1.2**
	baz=8.0						
CHGB				*e*S	**Sn**	**15 48 01.9**	**0.0**
	baz=8.0						
TCU	**Taichung**	**1.39**	**358**	*e*P	**Pn**	**15 47 44.5**	**-0.4**
	baz=348						
WHF	**Hehuan Shan**	**1.48**	**20**	*e*P	**Pn**	**15 47 46.4**	**-0.1**
	baz=9.0						
WHP	**Taichung City**	**1.53**	**8**	*e*P	**Pn**	**15 47 46.8**	**-0.2**
	baz=12						
WHP				*e*S	**Sn**	**15 48 06.5**	**+0.7**
	baz=12						
TDCB	**Techi**	**1.55**	**15**	*e*P	**Pn**	**15 47 47.0**	**-0.3**
	baz=18						
TDCB				*e*S	**Sn**	**15 48 06.2**	**-0.1**
	baz=18						
TWD	**Chiawan**	**1.55**	**31**	*e*P	**Pn**	**15 47 47.2**	**+0.1**
	baz=36						
TWD				*e*S	**Sn**	**15 48 06.6**	**+0.5**
	baz=36						
TWT	**Tachien**	**1.55**	**16**	*e*P	**Pn**	**15 47 47.1**	**-0.2**
	baz=19						
TWT				*e*S	**Sn**	**15 48 06.7**	**+0.3**
	baz=19						
TWQ1	**Liyutan**	**1.59**	**2**	*e*P	**Pn**	**15 47 47.7**	**0.0**
	baz=7.0						
TWQ1				*e*S	**Sn**	**15 48 07.7**	**+0.5**
	baz=7.0						
WDJ	**Dajia District**	**1.59**	**357**	*e*P	**Pn**	**15 47 47.2**	**-0.5**
	baz=352						
WDJ				*e*S	**Sn**	**15 48 08.7**	**+1.6**
	baz=352						
ETLH	**Xiulin Townshi**	**1.61**	**26**	P	**Pn**	**15 47 48.6**	**+0.6**
	baz=31						
ETLH				*e*S	**Sn**	**15 48 09.9**	**+2.2**
	baz=31						
NACB	**Ninganchiao**	**1.63**	**29**	*e*P	**Pn**	**15 47 48.1**	**-0.1**
	baz=45						
NSY	**Sanyi**	**1.66**	**1**	*e*P	**Pn**	**15 47 48.1**	**-0.5**
	baz=350						
NNSB	**Datong**	**1.78**	**20**	*e*P	**Pn**	**15 47 50.9**	**+0.6**
	baz=7.0						
NNSH	**Datong**	**1.78**	**20**	P	**Pn**	**15 47 50.8**	**+0.4**
	baz=25						
NNSH				*e*S	**Sn**	**15 48 12.6**	**+0.7**
	baz=25						
NNS	**Nan Shan**	**1.79**	**20**	*e*P	**Pn**	**15 47 51.1**	**+0.6**
	baz=25						
NNS				*e*S	**Sn**	**15 48 13.4**	**+1.3**
	baz=25						
NSTT	**Nanjuang**	**1.89**	**8**	*e*P	**Pn**	**15 47 51.6**	**-0.2**
	baz=357						
LIOB	**Emei**	**1.91**	**8**	*e*P	**Pn**	**15 47 51.3**	**-0.7**
	baz=357						
ENA	**Nanau**	**1.91**	**29**	*e*P	**Pn**	**15 47 52.7**	**+0.6**
	baz=31						
NDT	**Datong Townshi**	**1.98**	**21**	*e*P	**Pn**	**15 47 54.1**	**+1.1**
	baz=13						
NDT				*e*S	**Sn**	**15 48 18.8**	**+2.0**
	baz=13						
YHNB	**Yeheng**	**2.00**	**17**	P	**Pn**	**15 47 53.7**	**+0.3**
	baz=23						
YHNB				*e*S	**Sn**	**15 48 18.7**	**+1.3**
	baz=23						
NSK	**Sanguang**	**2.00**	**17**	*e*P	**Pn**	**15 47 54.0**	**+0.5**
	baz=23						
NSK				*e*S	**Sn**	**15 48 18.4**	**+1.0**
	baz=23						
ENTT	**Nioudou**	**2.03**	**22**	*e*P	**Pn**	**15 47 54.7**	**+0.9**
	baz=15						
ENTT				*e*S	**Sn**	**15 48 20.2**	**+2.1**
	baz=15						
TWE	**Neicheng**	**2.15**	**24**	*e*P	**Pn**	**15 47 57.1**	**+1.8**
	baz=40						
SLBB	**Yuanshan**	**2.16**	**23**	*e*P	**Pn**	**15 47 57.0**	**+1.4**
	baz=40						
EOS1	**EOS1**	**2.21**	**36**	*e*P	**Pn**	**15 47 57.9**	**+1.8**
	baz=49						
NHDH	**Xindian Distri**	**2.32**	**18**	*e*P	**Pn**	**15 47 59.3**	**+1.6**
	baz=6.0						
TIPB	**Shuangxi**	**2.43**	**24**	*e*P	**Pn**	**15 47 59.9**	**+0.7**
	baz=38						
NWF	**Wu-fen Shan**	**2.50**	**23**	*e*P	**Pn**	**15 48 02.5**	**+2.2**
	baz=38						
VWUC	**VWUC**	**2.51**	**333**	*e*P	**Pn**	**15 47 59.4**	**-1.0**
	baz=336						
YM10	**YM10**	**2.51**	**18**	*e*P	**Pn**	**15 48 00.1**	**-0.3**
	baz=6.0						
KNM	**Kinmen**	**2.67**	**309**	*e*P	**Pn**	**15 48 03.1**	**+0.6**
	baz=306						
PTMZ	**Houxiangcun**	**2.71**	**328**	*e*P	**Pn**	**15 48 01.8**	**-1.2**
	baz=342						
KNMB	**Chin-men Tao**	**2.73**	**309**	*e*P	**Pn**	**15 48 02.2**	**-1.2**
	baz=311						
PTTC	**Pingtan**	**2.87**	**343**	*e*P	**Pn**	**15 48 04.1**	**-1.2**
	baz=346						
ZPLA	**Ao Xicun**	**2.97**	**294**	*e*P	**Pn**	**15 48 05.4**	**-1.2**
	baz=292						
HATJ	**Hateruma jima**	**3.12**	**65**	P	**Pn**	**15 48 09.0**	**+0.3**
HATJ				S	**Sn**	**15 48 45.0**	**+0.2**
IRIF	**Iriomote-Funau**	**3.18**	**60**	P	**Pn**	**15 48 10.3**	**+0.8**
IRIF				*e*S	**Sn**	**15 48 47.8**	**+1.4**
AXDP	**Jialang**	**3.30**	**311**	*e*P	**Pn**	**15 48 09.8**	**-1.3**
	baz=313						
ZZJH	**Jiuhuzhen**	**3.31**	**302**	*e*P	**Pn**	**15 48 10.4**	**-0.9**
	baz=300						
JKRS	**Kuro-shima**	**3.36**	**63**	P	**Pn**	**15 48 12.8**	**+0.8**
JKRS				S	**Sn**	**15 48 52.0**	**+1.1**
MATB	**Ma-tsu**	**3.46**	**348**	*e*P	**Pn**	**15 48 11.7**	**-1.6**
	baz=352						
JIJ	**Ishigaki jima**	**3.53**	**62**	P	**Pn**	**15 48 14.1**	**-0.2**
JIJ				S	**Sn**	**15 48 54.4**	**-0.5**
MHZQ	**Yeshan**	**3.67**	**336**	*e*P	**Pn**	**15 48 15.5**	**-0.8**
	baz=340						
JISG	**Ishigakijimahi**	**3.77**	**60**	P	**Pn**	**15 48 18.5**	**+0.9**
JISG				*e*S	**Sn**	**15 49 00.6**	**-0.2**
LYJJ	**Jianjiangzhen**	**3.88**	**347**	*e*P	Pn	15 48 15.8	-3.3
	baz=351						
JTJ	**Tarama**	**4.11**	**62**	P	**Pn**	**15 48 23.1**	**+0.8**
JTJ				*e*S	**Sn**	**15 49 10.1**	**+0.9**
XPSS	**Dashiqiu**	**4.19**	**354**	*e*P	**Pn**	**15 48 21.9**	**-1.4**
	baz=357						
JMJ2	**Miyako jima3**	**4.66**	**64**	P	**Pn**	**15 48 30.2**	**+0.3**
JMJ2				*e*S	**Sn**	**15 49 23.2**	**+0.2**
JMJ	**Miyako jima 2**	**4.67**	**63**	*e*P	**Pn**	**15 48 30.5**	**+0.6**
	baz=60						

THE 19 15:58:10.9, 38.24N×20.39E, h6km±2km, ML2.0/2, Error ellipse: s-maj=2.3km s-min=0.5km az=233.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT1	**Agia Thekli**	**0.01**	**348**	P	Pg	15 58 12.0	0.0
CHV1	**Chavriata, Kef**	**0.05**	**185**	P	Pg	15 58 12.5	+0.1
LXR1	**Lixouri, Cepha**	**0.05**	**132**	P	Pg	15 58 12.5	+0.1
ARG2	**Argostoli**	**0.10**	**126**	P	Pg	15 58 13.2	+0.2
VLS	**Valsamata**	**0.17**	**110**	P	Pg	15 58 14.2	-0.1
VLS				S	Sg	15 58 16.9	+0.3
	2μm,0.1s						
FSK	**Fiskardo**	**0.26**	**32**	P	Pg	15 58 16.2	+0.2
LKD2	**Lefkada island**	**0.59**	**21**	P	Pg	15 58 21.8	-0.5
LKD2				S	Sg	15 58 30.8	+0.8
	72nm,0.2s						
PVO	**Paravola**	**0.97**	**67**	P	Pg	15 58 29.4	-0.1

ATH 19 15:58:57.5, 38.73N×22.78E, h16km±2km, ML2.5/17, Error ellipse: s-maj=2.1km s-min=0.7km az=269.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AXAR	**Agios Charalam**	**0.11**	**293**	P	Pg	15 59 00.9	-0.1
AXAR				S	Sg	15 59 03.1	-0.2
AXAR				AML	AML	15 59 05.3	
	comp=E,22492μm,0.4s						
AXAR				AML	AML	15 59 05.7	
	comp=N,20301μm,0.3s						
LKR	**Lokris**	**0.18**	**114**	P	Pg	15 59 01.6	-0.4
LKR				S	Sg	15 59 04.7	-0.3
LKR				AML	AML	15 59 06.1	
	comp=E,8381μm,0.2s						
LKR				AML	AML	15 59 06.2	
	comp=N,8567μm,0.2s						
DLFA	**Delphi**	**0.34**	**223**	P	Pg	15 59 04.1	-0.3
DLFA				S	Sg	15 59 08.9	-0.4
DLFA				AML	AML	15 59 09.8	
	comp=E,6504μm,0.3s						
DLFA				AML	AML	15 59 10.1	
	comp=N,4146μm,0.3s						
AGG	**Agios Georgios**	**0.46**	**310**	P	Pg	15 59 06.9	+0.2
AGG				S	Sg	15 59 13.0	0.0
AGG				AML	AML	15 59 16.2	
	comp=E,1126μm,0.3s						
AGG				AML	AML	15 59 16.9	
	comp=N,892μm,0.4s						
PROD	**Prodromos**	**0.47**	**169**	P	Pg	15 59 06.4	-0.6
PROD				S	Sb	15 59 14.1	-0.1
PROD				AML	AML	15 59 16.0	
	comp=E,3086μm,0.2s						
PROD				AML	AML	15 59 17.8	
	comp=N,2285μm,0.3s						
MAKR	**Makrakomi, Fth**	**0.58**	**300**	P	Pb	15 59 09.5	+0.2
MAKR				S	Sb	15 59 17.7	+0.3
MAKR				AML	AML	15 59 19.4	
	comp=N,741μm,0.8s						
MAKR				AML	AML	15 59 20.5	
	comp=E,1004μm,0.3s						
KALE	**Kalithea**	**0.61**	**237**	P	Pb	15 59 08.8	-0.7
KALE				S	Sb	15 59 18.3	+0.2
KALE				AML	AML	15 59 20.4	
	comp=N,2135μm,0.3s						
KALE				AML	AML	15 59 21.0	
	comp=E,1853μm,0.4s						
MRKA	**Markates**	**0.63**	**92**	P	Pb	15 59 10.2	+0.1
MRKA				S	Sb	15 59 19.5	+0.8
VIL2	**Platees**	**0.64**	**143**	P	Pb	15 59 10.9	+0.7
VIL2				S	Sn	15 59 21.4	-0.3
VIL2				AML	AML	15 59 23.7	
	comp=N,1003μm,0.3s						
VIL2				AML	AML	15 59 28.3	
	comp=E,1200μm,0.4s						
SERG	**Sergoula**	**0.65**	**242**	P	Pg	15 59 09.6	-0.7
SERG				S	Sb	15 59 19.4	+0.1
SERG				AML	AML	15 59 20.6	
	comp=N,1920μm,0.4s						
SERG				AML	AML	15 59 21.2	
	comp=E,1192μm,0.4s						
TRIZ	**Trizonia**	**0.66**	**237**	P	Pb	15 59 09.7	-0.7
TRIZ				S	Sb	15 59 20.3	+0.7
NEO	**Neokhori**	**0.67**	**30**	P	Pg	15 59 10.4	-0.3
NEO				S	Sb	15 59 20.4	+0.4
NEO				AML	AML	15 59 23.4	
	comp=N,1199μm,0.3s						
NEO				AML	AML	15 59 25.3	
	comp=E,886μm,0.5s						
ANX	**Ano Chora**	**0.69**	**259**	P	Pg	15 59 10.6	-0.4
ANX				S	Sb	15 59 21.2	+0.7
ANX				AML	AML	15 59 22.1	
	comp=N,1385μm,0.4s						
ANX				AML	AML	15 59 22.8	
	comp=E,941μm,0.2s						
SKIA	**Skiathos**	**0.69**	**50**	P	Pb	15 59 11.3	+0.1
SKIA				S	Sb	15 59 21.1	+0.7
SKIA				AML	AML	15 59 23.1	
	comp=E,414μm,0.4s						
SKIA				AML	AML	15 59 23.7	
	comp=N,336μm,0.2s						
XOR	**Xorichti**	**0.71**	**26**	P	Pg	15 59 11.5	0.0
XOR				S	Sg	15 59 20.8	-0.1
XOR				AML	AML	15 59 25.3	
	comp=E,687μm,0.3s						
XOR				AML	AML	15 59 25.6	
	comp=N,820μm,0.3s						
LTK	**Loutraki**	**0.72**	**168**	P	Pg	15 59 11.0	-0.5
LTK				S	Sb	15 59 21.9	+0.7
LTK				AML	AML	15 59 24.5	
	comp=N,892μm,0.4s						
LTK				AML	AML	15 59 27.0	
	comp=E,836μm,0.3s						
LOUT	**Loutraki**	**0.75**	**168**	P	Pg	15 59 11.5	-0.6
LOUT				S	Sb	15 59 22.6	+0.4
LOUT				AML	AML	15 59 26.6	
	comp=N,167μm,0.3s						
LOUT				AML	AML	15 59 27.5	
	comp=E,149μm,0.3s						
EVR	**Evrytania**	**0.79**	**284**	P	Pn	15 59 13.9	-0.1
KLV	**Kalavryta, Ach**	**0.84**	**216**	P	Pb	15 59 13.3	-0.5
AOS	**Alonnisos**	**0.96**	**62**	P	Pb	15 59 15.5	-0.3
AOS				S	Sg	15 59 29.0	+0.2
AOS				AML	AML	15 59 32.0	
	comp=N,191μm,0.4s						
AOS				AML	AML	15 59 32.6	
	comp=E,210μm,0.4s						
THL	**Klokotos Trika**	**1.03**	**325**	P	Pb	15 59 16.9	0.0
ATH	**Athens Observa**	**1.05**	**135**	P	Pg	15 59 18.4	+0.6
PTL	**Penteli**	**1.08**	**128**	P	Pg	15 59 18.5	0.0
ATHU	**Athens Univers**	**1.09**	**134**	P	Pg	15 59 18.7	+0.1
DRO	**Drossia**	**1.14**	**228**	P	Pn	15 59 18.6	-0.2
VLY	**Voula,Athens**	**1.18**	**137**	P	Pg	15 59 20.1	-0.1
VLY				S	Sg	15 59 35.4	-0.2
VLY				AML	AML	15 59 37.4	
	comp=N,305μm,0.3s						
VLY				AML	AML	15 59 40.6	
	comp=E,329μm,0.4s						
RLS	**Riolos of Patr**	**1.23**	**238**	P	Pg	15 59 21.0	-0.2
DID	**Didima**	**1.27**	**164**	P	Pb	15 59 21.0	0.0
KRND	**KRANIDI**	**1.37**	**168**	P	Pb	15 59 23.0	+0.3
PAIG	**Paliouri**	**1.39**	**30**	P	Pb	15 59 22.7	-0.3
VLX	**Vlachokerasia**	**1.39**	**193**	P	Pg	15 59 23.8	-0.5
LIT	**Litokhoron**	**1.39**	**351**	P	Pg	15 59 23.8	-0.5
AMT	**Artemida-Makis**	**1.46**	**216**	P	Pg	15 59 25.9	+0.3
KARY	**Karystos**	**1.47**	**118**	P	Pb	15 59 24.3	-0.1
ITM	**Ithomi**	**1.69**	**204**	P	Pb	15 59 28.9	+0.8
OUR	**Ouranopolis**	**1.85**	**30**	P	Pn	15 59 29.7	+1.1

IDC ***19*** *16:10:02.5±2.3, 6.63S×130.24E, h0km, mb3.8/1, mb1 4.2/3, mb1mx3.6/33, mbtmp4.0/3, ML4.2/2, MS4.7/1, Ms1 4.7/1, ms1mx2.8/26, Error ellipse: s-maj=146.8km s-min=31.0km az=70.0*

NEIC ***19*** *16:10:03.9±2.1, 5.94S±0.07×132.6E±0.1, h75km±12km, mb4.5/6, Error ellipse: s-maj=17.1km s-min=9.8km az=97.0*

DJA ***19*** *16:10:06.2±0.5, 6°S±4°×13°2E±°, h117km±18km, M4.6/11, mB5.4/4, mb4.6/5, MLv4.6/11, Mw(mB)4.8/4*

ISC 19 16:10:06.7±0.6**, 6.01S**±0.06×**132.40E**±0.07**, h100**km**, n41, σ1§71**/37**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.25**	**209**	P	**Pn**	**16 10 43.1**	**+0.5**
SAUI	**Saumlaki**	**2.25**	**209**		**Pn**	**16 10 43.1**	**+0.5**
KMPI	**Kaimana, Papua**	**2.67**	**29**	P	**Pn**	**16 10 46.8**	**-1.3**
BNDI	**Bandanaira**	**2.89**	**301**	P	**Pn**	**16 10 49.8**	**-1.2**
FAKI	**Fak Fak**	**3.07**	**357**	P	**Pn**	**16 10 51.7**	**-1.8**
FAKI	**Fak Fak**	**3.07**	**357**		**Pn**	**16 10 51.2**	**-2.2**
MSAI	**Masohi**	**4.35**	**307**	P	**Pn**	**16 11 08.3**	**-2.4**
AAI	**Ambon**	**4.78**	**299**	P	**Pn**	**16 11 14.5**	**-2.0**
RKPI	**Ransiki, Papua**	**4.80**	**22**	P	**Pn**	**16 11 16.8**	**-0.1**
SWI	**Sorong**	**5.23**	**347**	P	**Pn**	**16 11 20.7**	**-2.0**
	1.8nm8μm36nm,0.6s						
LBMI	**Labuha**	**7.23**	**317**	P	**Sn**	**16 13 10.2**	**-0.3**
SANI	**Sanana**	**7.50**	**301**	P	**Pn**	**16 11 51.0**	**-2.6**
	0.2nm820nm44nm,0.5s						
MMPI	**Merauke**	**8.29**	**108**	P	**Sn**	**16 13 35.5**	**-0.8**
SOEI	**Soe**	**8.87**	**245**	P	**Pn**	**16 12 11.4**	**-0.9**
	30nm,0.8s						
SOEI	**Soe**	**8.87**	**245**		**Pn**	**16 12 10.8**	**-1.5**
KNRA	**Kununurra**	**10.25**	**200**		**Pn**	**16 12 29.4**	**-1.6**
LUWI	**Luwuk**	**10.80**	**297**	Pn	**Pn**	**16 12 36.4**	**-2.0**
COEN	**Coen**	**13.23**	**127**		**Pn**	**16 13 10.4**	**-0.3**
FITZ	**Fitzroy Crossi**	**13.71**	**208**		**Pn**	**16 13 13.8**	**-3.3**
WRAB	**Tennant Creek**	**13.97**	**172**	Pn	**Pn**	**16 13 19.1**	**-1.3**
WRA	**Warramunga Arr**	**13.98**	**172**	Pn	**Pn**	**16 13 18.9**	**-1.6**
	1.3nm,0.3s,baz=350,slow=13,SNR=41						
WRA				Sn	Sn	16 15 43.1	-11
	2.8nm,0.3s,baz=348,slow=24,SNR=11						
WRA	**Warramunga Arr**	**13.98**	**172**		**Pn**	**16 13 18.9**	**-1.6**
WRA					Sn	16 15 43.1	-11
WB2	**Warramunga Arr**	**13.98**	**172**	Pn	**Pn**	**16 13 19.2**	**-1.4**
WR0	**Warramunga Arr**	**14.03**	**172**	Pn	**Pn**	**16 13 20.0**	**-1.1**
AS31	**Alice Springs**	**17.62**	**175**		**P**	**16 14 04.0**	**-1.6**
AS31				IAmb	IAmb	16 14 20.4	
	comp=Z,3.0nm,0.3s						
ASAR	**Alice Springs**	**17.62**	**175**	P	**Pn**	**16 14 06.4**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=352,slow=14,SNR=43						
ASAR				S	Sn	16 17 13.1	-9.3
	comp=Z,1.1nm,0.3s,baz=356,slow=25,SNR=12						
ASAR	**Alice Springs**	**17.62**	**175**	P	**Pn**	**16 14 06.4**	**+0.4**
ASAR					Sn	16 17 13.1	-9.3
PSA00	**Pilbara Seismi**	**19.68**	**217**	Pn	**Pn**	**16 14 30.6**	**+0.2**
PSA00				IAmb	IAmb	16 14 32.2	
	comp=Z,14nm,1.0s						
KKM	**Kota Kinabalu**	**20.11**	**306**	P	**Pn**	**16 14 33.1**	**-2.5**
KKM				IAmb	IAmb	16 15 11.1	
	comp=Z,51nm,1.5s						
SBUM	**Sibu**	**21.83**	**292**	P	**P**	**16 14 52.2**	**+0.9**
NWAO	**Narrogin (SRO)**	**30.28**	**206**	P	**P**	**16 16 09.2**	**+0.7**
NWAO				IAmb	IAmb	16 16 36.2	
	comp=Z,63nm,1.7s						
TOO	**Toolangi**	**33.61**	**161**	P	**P**	**16 16 36.6**	**-1.0**
NJ2	**Nanjing**	**39.99**	**342**	*e*P	**P**	**16 17 34.1**	**+2.4**
KMI	**Kunming**	**42.30**	**318**	P	**P**	**16 17 52.9**	**+1.8**
LZH	**Lanzhou**	**49.71**	**329**	*e*P	P	16 18 52.8	+3.8
LZH				pP	pP	16 19 12.6	-0.2
LZH				sP	sP	16 19 21.0	-3.0
LZH				PP	**PP**	**16 20 43.0**	**-1.6**
HHC	**Hu-ho-hao-te**	**50.40**	**340**	*e*P	**P**	**16 18 57.3**	**+3.2**
RAO	**Raoul Island**	**52.20**	**123**	LR	LR	16 41 27.0	
	comp=Z,697nm,19.5s,baz=69,slow=35						
WMQ	**Urumqi**	**63.90**	**325**	*e*P	**P**	**16 20 30.8**	**+1.7**
MKAR	**Makanchi Array**	**68.73**	**326**	P	P	16 21 04.0	+4.2
	comp=Z,0.4nm,0.4s,baz=114,slow=8.0,SNR=9.1						
MKAR	**Makanchi Array**	**68.73**	**326**	P	P	16 21 04.0	+4.2
KSH	**Kashi**	**68.92**	**316**	P	P	16 21 10.1	+8.8

ASRS 19 16:16:03.7±0.3**, 51°N**±2°×**97.8E**±1.0**, h5**km**, MLh3.9**/16**, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TDJR	**Todzha**	**1.86**	**325**	Pg	Pg	16 16 41.9	+2.5
TDJR				Sg	Sg	16 17 07.5	+4.1
ORL	**Orlik**	**2.07**	**36**	Pg	Pg	16 16 44.5	+1.1
ORL				Sg	Sg	16 17 12.2	+2.0
MOY	**Mondy**	**2.14**	**67**	Pg	Pg	16 16 46.7	+1.9
MOY				Sg	Sg	16 17 13.2	+0.7
KZLR	**Kyzyl**	**2.27**	**293**	Pg	Pg	16 16 48.6	+1.5
KZLR				Sg	Sg	16 17 17.6	+1.0
ZAK	**Zakamensk**	**3.51**	**96**	Pg	Pg	16 17 10.9	-0.1
ZAK				Sg	Sg	16 17 57.9	+1.4
TLY	**Talaya**	**3.74**	**75**	Pg	Pg	16 17 16.6	+1.2
TLY				Sg	Sg	16 18 06.3	+2.4
IRK	**Irkutsk**	**4.25**	**69**	Sg	Sg	16 18 21.0	+0.9
DJOS	**Djoyskaya Sosn**	**4.42**	**298**	Pg	Pg	16 17 28.5	+0.1
DJOS				Sg	Sg	16 18 28.4	+2.9
CERR	**Cheremushki**	**4.43**	**299**	Pg	Pg	16 17 30.8	+2.2
CERR				Sg	Sg	16 18 31.7	+5.7
ORY	**Orie**	**4.44**	**339**	Pg	Pg	16 17 26.8	-2.0
ORY				Sg	Sg	16 18 28.9	+2.6
DJO	**Djoy, Khakassi**	**4.51**	**297**	Pg	Pg	16 17 29.2	-0.9
MINR	**Mina**	**4.58**	**333**	Pg	Pg	16 17 33.0	+1.5
MINR				Sg	Sg	16 18 29.8	-1.0
TEL	**Teeli**	**4.82**	**275**	Pg	Pg	16 17 35.7	-0.3
TEL				Sg	Sg	16 18 37.0	-1.4
VEH	**Verkhnyaya Baz**	**5.20**	**300**	Pg	Pg	16 17 43.7	+0.4
VEH				Sg	Sg	16 18 49.4	-1.2
TRG	**Tyrgan**	**5.61**	**67**	Pg	Pg	16 17 52.5	+1.3
TRG				Sg	Sg	16 18 59.6	-4.3
SHTK	**Zheleznogorsk-**	**6.01**	**337**	Pg	Pg	16 17 58.2	-0.5
SHTK				Sg	Sg	16 19 20.0	+3.6
GZLN	**Zheleznogorsk**	**6.01**	**338**	Pg	Pg	16 18 00.0	+1.2
GZLN				Sg	Sg	16 19 24.8	+8.3

ULGR Ulagan, Altay 6.26 271 Pg Pg 16 18 03.1 -0.5
ULGR Sg Sg 16 19 30.0 +5.3
TASR Tashtagol 6.44 291 Pg Pg 16 18 07.1 0.0
TASR Sg Sg 16 19 35.7 +5.3
AKAR Aktash 6.52 269 Pg Pg 16 18 08.7 +0.2
AKAR Sg Sg 16 19 39.1 +6.2

SNET 19 16:31:12.9±1.1, 12.91N×89.67W, h13km±7km, ML3.5
UCR 19 16:31:12.9±1.1, 12.90N×89.67W, h13km±7km, ML3.5
GCG 19 16:31:14.0±0.3, 12.84N×90.01W, h18km±45km, MD3.9
ISC 19 16:31:11.9±1.5, 12.85N±0.08×89.69W±0.05, h22km±10km, n49, σ0.54/81, Off coast of central America

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
SNET Serv Nac Est T 0.95 28 eP Pb 16 31 29.6 -0.1
SNET eS Sb 16 31 41.9 0.0
SNET IAML 16 31 48.6
comp=Z,1μm,0.2s
SNET Serv Nac Est T 0.95 28 eP Pb 16 31 29.6 -0.1
SNET eS Sb 16 31 41.9 0.0
SNET IAML 16 31 48.6
comp=Z,1μm,0.2s
BOQS Boqueron 0.97 24 eP Pn 16 31 29.9 -0.5
BOQS eS Sb 16 31 43.5 +0.8
UEES Universidad Ev 0.97 27 eP Pb 16 31 30.1 0.0
UEES Universidad Ev 0.97 27 eP Pb 16 31 30.1 0.0
CEVE Cerro Verde 0.98 4 eP Pn 16 31 30.0 -0.6
CEVE eS Sb 16 31 43.3 +0.4
CEVE Cerro Verde 0.98 4 eP Pn 16 31 30.0 -0.6
CEVE eS Sb 16 31 43.3 +0.4
OPAM Oficina de Pla 0.99 29 eP Pb 16 31 30.4 0.0
OPAM eS Sb 16 31 43.0 0.0
OPAM IAML 16 31 45.5
comp=Z,2μm,0.3s
OPAM Oficina de Pla 0.99 29 eP Pb 16 31 30.4 0.0
OPAM eS Sb 16 31 43.0 0.0
OPAM IAML 16 31 45.5
comp=Z,2μm,0.3s
SBLS San Blas 0.99 4 eP Pn 16 31 30.1 -0.6
SBLS eS Sb 16 31 43.7 +0.5
SBLS San Blas 0.99 4 eP Pn 16 31 30.1 -0.6
SBLS eS Sb 16 31 43.7 +0.5
CUSC Alcaldia de Cu 1.01 29 eP Pb 16 31 30.7 0.0
CUSC eS Sb 16 31 44.3 +0.7
CUSC IAML 16 31 47.9
comp=Z,2μm,0.2s
CUSC Alcaldia de Cu 1.01 29 eP Pb 16 31 30.7 0.0
CUSC eS Sb 16 31 44.3 +0.7
CUSC IAML 16 31 47.9
comp=Z,2μm,0.2s
SNJE San Jose 1.02 5 eP Pn 16 31 30.6 -0.5
SNJE eS Sb 16 31 44.4 +0.3
SNJE San Jose 1.02 5 eP Pn 16 31 30.6 -0.5
SNJE eS Sb 16 31 44.4 +0.3
FAME Alcaldia de Sa 1.04 342 eP Pn 16 31 20.8 -10
FAME eS Sn 16 31 34.7 -10
FAME Alcaldia de Sa 1.04 342 eP Pn 16 31 20.8 -10
FAME eS Sn 16 31 34.7 -10
RTR El Retiro 1.05 2 eP Pn 16 31 31.1 -0.3
RTR El Retiro 1.05 2 eP Pn 16 31 31.1 -0.3
LFU La Fuente 1.06 32 eP Pb 16 31 31.4 -0.2
LFU eS Sb 16 31 45.1 0.0
LFU La Fuente 1.06 32 eP Pb 16 31 31.4 -0.2
LFU eS Sb 16 31 45.1 0.0
LBRS Las Brisas 1.09 35 eP Pb 16 31 32.0 -0.1
LBRS eS Sb 16 31 45.7 -0.2
COEG Centro de Oper 1.10 46 eP Pb 16 31 31.9 -0.4
COEG IAML 16 31 52.6
comp=Z,1μm,0.3s
COEG Centro de Oper 1.10 46 eP Pb 16 31 31.9 -0.4
COEG IAML 16 31 52.6
comp=Z,1μm,0.3s
PAVA Las Pavas 1.13 40 eP Pb 16 31 32.8 -0.1
PAVA eS Sb 16 31 48.1 +0.9
PAVA Las Pavas 1.13 40 eP Pb 16 31 32.8 -0.1
PAVA eS Sb 16 31 48.1 +0.9
UESV Universidad de 1.18 48 eP Pn 16 31 32.8 -0.3
UESV eS Sb 16 31 48.8 +0.3
UESV Universidad de 1.18 48 eP Pn 16 31 32.8 -0.3
UESV eS Sb 16 31 48.8 +0.3
ALJI Alcalda de J 1.19 66 eP Pb 16 31 33.5 -0.3
ALJI Alcalda de J 1.19 66 eP Pb 16 31 33.5 -0.3
COEB Comit de Eme 1.30 60 eP Pn 16 31 34.9 0.0
COEB eS Sb 16 31 52.4 +0.3
COEB Comit de Eme 1.30 60 eP Pn 16 31 34.9 0.0
COEB eS Sb 16 31 52.4 +0.3
TECA Tecapa 1.32 61 eP Pb 16 31 35.5 -0.8
TECA eS Sb 16 31 53.7 +0.9
TECA Tecapa 1.32 61 eP Pb 16 31 35.5 -0.8
TECA eS Sb 16 31 53.7 +0.9
JUCU Jucuar¡n 1.46 74 eP Pb 16 31 37.7 -0.8
JUCU eS Sb 16 31 57.5 +0.9
JUCU IAML 16 32 01.4
comp=Z,502nm,0.2s
JUCU Jucuar¡n 1.46 74 eP Pb 16 31 37.7 -0.8
JUCU eS Sb 16 31 57.5 +0.9
JUCU IAML 16 32 01.4
comp=Z,502nm,0.2s
PACA Pacayal 1.47 65 eP Pb 16 31 37.5 -1.1
PACA eS Sb 16 31 57.5 +0.6
PACA Pacayal 1.47 65 eP Pb 16 31 37.5 -1.1
PACA eS Sb 16 31 57.5 +0.6
LLGN La Laguna 1.50 29 eP Pb 16 31 38.5 -0.5
LLGN La Laguna 1.50 29 eP Pb 16 31 38.5 -0.5
IXG Ixpaco 1.51 331 eP Pn 16 31 37.7 -0.1
PCG Pacaya 1.78 330 eP Pn 16 31 42.7 +1.1
PCG eS Sb 16 32 05.3 -0.7
LCND La Caada 1.81 75 eP Pn 16 31 42.6 +0.7
LCND eS Sb 16 32 06.9 +0.2
LCND La Caada 1.81 75 eP Pn 16 31 42.6 +0.7
LCND eS Sb 16 32 06.9 +0.2
NBG Las Nubes 1.84 340 eP Pn 16 31 44.5 -0.6
CNCH Conchagua 1.86 76 eP Pb 16 31 44.5 -0.8
CNCH eS Sb 16 32 08.1 -0.1
CNCH Conchagua 1.86 76 eP Pb 16 31 44.5 -0.8
CNCH eS Sb 16 32 08.1 -0.1
FUG Fuego 3 1.95 325 eP Pn 16 31 44.4 +0.6
FUG eS Sn 16 32 08.1 +0.4
STG3 Santiaguito 3, 2.60 316 eP Pn 16 31 53.1 +0.2

IDC 19 16:33:24.4±6.6, 6.19S×147.36E, h100km±67km, mb3.2/3, mb1 3.4/5, mb1mx3.1/33, mbtmp3.5/5, ML3.6/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/14, Error ellipse: s-maj=73.0km s-min=32.9km az=139.0
ISC 19 16:33:21.9±1.4, 6.0S±0.1×147.3E±0.3, h77km, n7, σ0.80/7, mb3.2/3, Eastern New Guinea region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
PMG Port Moresby 3.38 182 P Pn 16 34 13.4 +0.9
7.0nm,0.3s,baz=351,slow=4.9,SNR=25
PMG S Sn 16 34 50.6 -0.9
8.7nm,0.3s,baz=228,slow=18,SNR=6.8
WRA Warramunga Arr 18.70 221 P P 16 37 33.6 -0.7
0.2nm,0.3s,baz=43,slow=12,SNR=13
GUMO Guam 19.61 353 LR LR 16 44 55.2
comp=Z,57nm,20.5s,baz=254,slow=35
ASAR Alice Springs 21.76 215 P P 16 38 07.2 -0.3
0.4nm,0.4s,baz=51,slow=8.6,SNR=16
FITZ Fitzroy Crossi 24.28 238 P P 16 38 32.8 +0.6
3.2nm,0.7s,baz=61,slow=8.0,SNR=9.1
ILAR Eielson Array 85.39 23 P P 16 45 50.2 -0.3
0.2nm,0.7s,baz=257,slow=5.5,SNR=2.3
TORD Torodi Ar. Bea 145.34 284 PKPbc PKPdf 16 52 51.9 -0.1
0.4nm,0.5s,baz=66,slow=4.7,SNR=2.9

IDC 19 16:35:35.2±2.2, 17.13S×167.76E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.7/37, mbtmp3.7/4, ML3.8/1, MS3.0/4, Ms1 3.0/4, ms1mx2.8/29, Error ellipse: s-maj=59.3km s-min=36.1km az=126.0
NEIC 19 16:35:38.8±1.0, 17.23S±0.09×168.0E±0.2, h40km±22km, mb4.7/6, Error ellipse: s-maj=27.0km s-min=4.6km az=62.0
ISC 19 16:35:36.3±1.2, 17.26S±0.08×167.9E±0.2, h21km, n16, σ2.44/14, mb4.6/7, Vanuatu Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
SANVU Saraoutou 1.92 340 Pb 16 36 09.0 -1.5
DZM Mont Dzumac 4.97 196 Pn Pn 16 36 52.0 +2.2
3.7nm,0.3s,baz=89,slow=10,SNR=39
DZM Sn Sn 16 37 44.6 -2.2
5.8nm,0.3s,baz=147,slow=19,SNR=8.6
DZM LR LR 16 38 26.5
comp=Z,90nm,18.9s,baz=92,slow=34
NOUC Port Laguerre 5.04 197 Pn 16 36 52.4 +1.8
AFI Afiamalu 19.88 83 LR LR 16 46 25.5
comp=Z,21nm,19.7s,baz=262,slow=33
KRVT Keravat (AS076 20.18 308 LR LR 16 46 03.7
comp=Z,69nm,19.1s,baz=161,slow=31
BKZ Black Stump Fm 23.08 163 P P 16 40 42.0 +1.4
BKZ IAmb IAmb 16 41 12.0
comp=Z,31nm,1.6s
TUWZ Tuamarina 24.64 169 P P 16 40 52.6 -2.8
SNZO South Karori 24.68 168 P P 16 40 52.0 -3.7
SNZO IAmb IAmb 16 41 16.5
comp=Z,20nm,1.0s
THZ Tophouse 24.80 171 P P 16 40 53.0 -3.8
THZ IAmb IAmb 16 41 02.5
comp=Z,42nm,1.9s
WB2 Warramunga Arr 31.86 260 P P 16 42 01.0 +0.9
WB2 IAmb IAmb 16 43 07.6
comp=Z,25nm,1.6s
WRA Warramunga Arr 31.87 260 P P 16 42 00.9 +0.6
comp=Z,0.9nm,1.1s,baz=88,slow=8.0,SNR=2.5
AS31 Alice Springs 32.40 253 P P 16 42 06.5 +1.5
ASAR Alice Springs 32.41 253 P P 16 42 07.0 +2.0
comp=Z,0.5nm,0.5s,baz=77,slow=8.3,SNR=15
NWAO Narrogin (SRO) 48.00 241 P P 16 44 13.1 -0.9
TLY Talaya 88.41 326 LR LR 17 23 17.5
comp=Z,13nm,20.4s,baz=341,slow=32
ILAR Eielson Array 88.75 18 P P 16 48 30.0 +2.1
comp=Z,0.5nm,1.0s,baz=222,slow=3.5,SNR=3.1

IDC 19 16:41:19.2±1.9, 21.02S×178.52W, h550km±22km, mb3.3/9, mb1 3.6/11, mb1mx3.4/27, mbtmp4.3/11, Error ellipse: s-maj=27.1km s-min=13.4km az=143.0
NEIC 19 16:41:19.8±2.0, 21.0S±0.1×178.4W±0.1, h565km±8km, mb4.8/25, Error ellipse: s-maj=21.3km s-min=15.3km az=127.0
ISC 19 16:41:21.4±0.6, 20.9S±0.1×178.4W±0.1, h579km, n79, σ1.38/78, mb4.5/20, 13D, Fiji Islands region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
MSVF Nonsavu 4.59 313 P P 16 42 51.3 +1.4
AFI Afiamalu 9.44 43 P P 16 43 33.9 -0.5
2.5nm,0.3s,baz=186,slow=3.3,SNR=6.5
AFI S S 16 45 19.6 -3.8
1.5nm,0.3s,baz=119,slow=21,SNR=4.7
FUNA Funafuti 12.53 349 P P 16 44 05.5 -0.1
DZM Mont Dzumac 14.12 263 P P 16 44 22.9 +1.0
0.3nm,0.3s,baz=118,slow=15,SNR=6.8
NOUC Port Laguerre 14.25 263 P P 16 44 23.8 +0.7
SANVU Saraoutou 14.68 289 P P 16 44 25.6 -1.7
WIAZ Waiheke Island 16.78 198 P P 16 44 48.4 +1.7
MBAZ Motutapu North 16.82 199 P P 16 44 49.4 +2.4
WMGZ Waiomatatini S 17.06 189 P P 16 44 50.1 +0.9
MKAZ Moumakai 17.06 198 P P 16 44 50.7 +1.5
WTAZ Waiatarua 17.07 199 P P 16 44 51.4 +2.0
HAZ Te Kaha 17.09 190 P P 16 44 49.9 +0.4
PKGZ Pakihiroa 17.18 189 P P 16 44 50.9 +0.6
RUGZ Raukumara Rang 17.31 190 P P 16 44 52.2 +0.5
MWZ Matawai 17.70 190 P P 16 44 53.2 -1.9
URZ Urewera 17.70 192 P P 16 44 52.4 -2.6
2.1nm,0.3s,baz=274,slow=3.3,SNR=11
URZ Urewera 17.70 192 IAmb IAmb 16 45 49.7
comp=Z,50nm,1.6s
URZ Urewera 17.70 192 P P 16 44 53.2 -1.9
RIGZ Rimuhau 18.02 190 P P 16 44 58.0 -0.1
RTZ Ruatahuna 18.07 192 P P 16 44 50.6 -7.9
TLZ Tolley Road 18.11 195 P P 16 45 01.5 +2.7
BKZ Black Stump Fm 18.70 192 P P 16 45 01.4 -2.8
BKZ IAmb IAmb 16 45 27.1
comp=Z,36nm,1.5s
BKZ Black Stump Fm 18.70 192 P P 16 45 01.9 -2.3
MSWZ Moikau Station 21.12 193 P P 16 45 24.6 -1.4
BHW Baring Head 21.20 194 P P 16 45 24.8 -1.9
PLWZ Palliser 21.27 193 P P 16 45 25.4 -2.0
QRZ Quartz Range 21.28 199 P P 16 45 26.9 -0.5
QRZ IAmb IAmb 16 45 27.8
comp=Z,45nm,1.7s
TUWZ Tuamarina 21.44 196 P P 16 45 26.8 -2.0
CMWZ Cape Campbell 21.67 195 P P 16 45 29.7 -1.3
THZ Tophouse 22.03 197 P P 16 45 32.4 -1.8
THZ IAmb IAmb 16 45 37.3
comp=Z,16nm,1.3s
KHZ Kahutara 22.47 196 P P 16 45 36.5 -1.5
KHZ IAmb IAmb 16 46 28.6
comp=Z,66nm,1.9s
LTZ Lake Taylor 23.15 198 P P 16 45 41.7 -2.4
LTZ IAmb IAmb 16 45 45.2
comp=Z,46nm,1.9s
RPZ Rata Peaks 24.36 199 P P 16 45 52.8 -2.1
FOZ Fox Glacier 24.59 201 P P 16 45 54.9 -1.8
FOZ IAmb IAmb 16 46 00.6
comp=Z,48nm,1.5s
MLZ Mavora Lakes 26.78 201 P P 16 46 15.9 -0.2
MLZ IAmb IAmb 16 46 30.3
comp=Z,40nm,1.7s
WHZ Wether Hill Ro 27.30 201 P P 16 46 21.0 +0.4
WHZ IAmb IAmb 16 46 21.7
comp=Z,28nm,1.2s
BBOO Buckleboo 41.99 244 P P 16 48 22.1 -0.8
WR0 Warramunga Arr 43.95 263 P P 16 48 36.6 -1.8
AS31 Alice Springs 44.02 257 P P 16 48 37.8 -1.2
ASAR Alice Springs 44.02 257 P P 16 48 38.1 -0.8
comp=Z,2.9nm,0.5s,baz=93,slow=7.9,SNR=94
ASAR PcP PcP 16 50 11.6 0.0
comp=Z,1.0nm,0.6s,baz=101,slow=4.0,SNR=12
WB0 Warramunga Arr 44.12 263 P P 16 48 38.3 -1.4
WB0 IAmb IAmb 16 48 39.4
comp=Z,32nm,1.7s
WB2 Warramunga Arr 44.12 263 P P 16 48 38.3 -1.4
WRAB Tennant Creek 44.13 263 P P 16 48 37.8 -1.9
WRA Warramunga Arr 44.13 263 P P 16 48 38.4 -1.5
comp=Z,1.1nm,0.3s,baz=97,slow=7.5,SNR=83
KNRA Kununurra 50.22 267 P P 16 49 24.7 -0.8
FITZ Fitzroy Crossi 52.56 263 P P 16 49 41.9 -0.4
comp=Z,3.1nm,0.8s,baz=86,slow=4.2,SNR=9.5
SOEI Soe 56.10 272 P P 16 50 08.3 +1.0
PSA00 Pilbara Seismi 57.17 257 P P 16 50 13.4 -1.0
PSA00 IAmb IAmb 16 51 19.1
comp=Z,79nm,2.0s
MJAR Matsushiro Arr 70.31 324 P P 16 51 37.5 0.0
comp=Z,1.2nm,0.6s,baz=150,slow=5.3,SNR=3.8
TPUB Ta-pu 73.86 303 P P 16 51 57.1 -1.2
SSLB Suanglung 73.86 304 P P 16 51 57.4 -0.9
UNV Unalaska Valle 75.17 7 P P 16 52 05.1 +0.2
UNV IAmb IAmb 16 53 46.0
comp=Z,46nm,1.3s
PETK Petropavlovsk- 76.57 345 P P 16 52 13.3 +0.6
comp=Z,2.6nm,0.9s,baz=138,slow=5.6,SNR=6.2
TRF Thorofare Moun 86.95 12 P P 16 53 05.7 +0.3
TRF IAmb IAmb 16 55 03.4
comp=Z,30nm,2.0s
RND Reindeer 87.20 13 P P 16 53 07.0 +0.5
TXAR Lajitas Array 87.63 57 P P 16 53 12.1 +2.8
comp=Z,1.1nm,0.8s,baz=198,slow=7.5,SNR=4.5
ILAR Eielson Array 88.81 13 P P 16 53 14.3 +0.5
comp=Z,0.8nm,0.6s,baz=224,slow=5.7,SNR=13
PDAR Pinedale Array 89.55 43 P P 16 53 19.9 +1.8
comp=Z,1.0nm,0.6s,baz=238,slow=4.5,SNR=7.1
CMAR Chiang Mai Arr 89.87 290 P P 16 53 20.6 +0.7
comp=Z,1.7nm,1.0s,baz=128,slow=3.0,SNR=9.2
ARCES ARCESS Array B 129.26 349 PKP PKPdf 16 59 23.9 0.0
comp=Z,4.1nm,1.0s,baz=358,slow=1.4,SNR=7.8
FINES FINESS Array B 136.06 343 PKP PKPdf 16 59 36.0 -0.8
comp=Z,0.9nm,0.6s,baz=65,slow=3.5,SNR=6.3
AKASG Malin Array Be 143.18 330 PKP PKPab 16 59 47.9 -0.1
comp=Z,2.3nm,0.5s,baz=42,slow=4.3,SNR=30
SORM Soroca 145.34 328 ⇓P PKPbc 16 59 55.1 0.0
BR131 Keskin Array S 146.81 312 PKPbc 16 59 59.6 -0.1
BRTR Keskin Array B 146.81 312 PKPbc PKPbc 16 59 59.5 -0.1
comp=Z,1.7nm,0.6s,baz=142,slow=5.2,SNR=12
BURAR Bucovina Array 147.22 330 ⇓P PKiKP 17 00 02.1 -0.1
TESR Tescani 147.30 327 ⇓P PKPbc 17 00 01.1 +0.5
CFR Carcaliu 147.38 324 ⇓P PKPbc 17 00 00.4 -0.4
DOPR Dopca 148.31 328 ⇓P PKiKP 17 00 04.2 -0.1
MLR Muntele Rosu 148.35 326 ⇓P PKiKP 17 00 04.2 -0.3
CLL Collm 148.38 346 i PKPbc PKiKP 17 00 04.7 +0.5
comp=Z,7.0nm,1.1s
LEF Lefka 149.09 304 ⇓P PKPbc 17 00 05.5 +0.2
ARR Arges 149.10 327 ⇓P PKiKP 17 00 07.1 +1.0
SIRR Siria 149.85 332 ⇓P PKiKP 17 00 07.5 0.0
GZR Gura Zlata 150.00 329 ⇓P PKPbc 17 00 07.4 +0.2
BZS Buzias 150.37 331 ⇓P PKPbc 17 00 08.5 -0.1
PLVB Pleven 150.47 325 ⇓P PKPbc 17 00 08.2 -0.2
GERES GERESS Array B 150.49 344 PKPbc PKPbc 17 00 08.4 +0.1
comp=Z,0.9nm,0.6s,baz=8.1,slow=2.8,SNR=8.9
MDVR Moldovita 150.95 330 ⇓P PKPbc 17 00 09.6 +0.1

IDC 19 17:12:32.5±7.7, 24.07N×93.94E, h59km±45km, mb3.3/2, mb1 3.5/4, mb1mx2.9/58, mbtmp3.4/4, ML3.3/2, MS3.4/2, Ms1 3.4/2, ms1mx2.5/28, Error ellipse: s-maj=107.7km s-min=25.3km az=173.0, Myanmar-India border region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
BRDH Bariadhala 2.53 237 P Pn 17 13 11.4 +0.3
16nm,0.3s,baz=278,slow=17,SNR=1.3
BRDH S Sn 17 13 41.4 +0.6
28nm,0.3s,baz=295,slow=23,SNR=9.9
CMAR Chiang Mai Arr 7.28 139 P Pn 17 14 16.4 +0.1
0.1nm,0.3s,baz=317,slow=13,SNR=2.2
KSRS Korea Array 31.92 57 LR LR 17 32 20.3
comp=Z,44nm,20.5s,baz=39,slow=37
KLR Kul'dur 38.77 40 LR LR 17 37 06.5
comp=Z,77nm,20.8s,baz=187,slow=38
WRA Warramunga Arr 58.85 135 P P 17 22 25.1 -0.3
0.5nm,0.8s,baz=322,slow=7.4,SNR=8.0
ASAR Alice Springs 61.29 138 P P 17 22 42.2 +0.1
0.4nm,0.5s,baz=318,slow=6.7,SNR=14

UPA 19 17:32:06.9±2.3, 7.76N×82.38W, h24km±14km, MW3.9
UCR 19 17:32:06.3±1.6, 7.77N×82.37W, h16km±6km
ISC 19 17:32:03.7±2.4, 7.64N±0.09×82.45W±0.06, h13km±15km, n15, σ1.43/25, 1C, South of Panama

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
DVD David 0.79 360 eS Sb 17 32 29.6 -0.2
PVID3 Puerto Vidal, 0.92 64 eP Pb 17 32 21.7 +0.3
PVID3 eS Sb 17 32 31.4 -2.3
NANC3 Nancito, Chiri 0.92 50 eP Pb 17 32 21.3 -0.3
NANC3 eS Sb 17 32 31.9 -1.8
BCO2 Palmira 1.07 356 eP Pb 17 32 24.2 0.0
BCO2 eS Sb 17 32 37.1 -1.1
PIRO Carate, Puerto 1.16 311 eP Pn 17 32 25.8 +0.2
BRU2 Volcan 1.17 348 eP Pn 17 32 25.4 -0.5
BRU2 eS Sb 17 32 39.5 -1.4
BRU2 Volcan 1.17 348 ⇑iP Pn 17 32 25.5 -0.3
BRU2 eS Sb 17 32 40.2 -0.7
GMAL Guarumal, Vera 1.21 84 eP Pn 17 32 25.5 -0.7
STIA3 Santiago, Vera 1.53 73 eS Sn 17 32 50.3 -0.1
SFRA3 San Francisco, 1.58 67 eP Pn 17 32 32.3 +1.0
SFRA3 eS Sn 17 32 50.8 -0.8
CACAO El Cacao, Vera 1.60 101 eP Pn 17 32 31.6 +0.1
CACAO eS Sn 17 32 50.7 -1.4
AZU Azuero 2.16 86 eP Pn 17 32 41.2 +1.9
AZU eS Sn 17 33 05.7 -0.2
AZU Azuero 2.16 86 eP Pn 17 32 40.4 +1.1
AZU eS Sn 17 33 06.5 +0.7
LCR2 La Lucha 2 2.59 324 eP Pn 17 32 46.3 +0.8
BCIP Isla Barro Col 2.99 59 eP Pg 17 33 01.3 +0.2
BCIP eS Sn 17 33 31.0 +4.5

IDC 19 17:43:06.7±48.0, 16.39S×175.87W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.6/36, mbtmp4.0/3, Error ellipse: s-maj=896.2km s-min=183.2km az=78.0, Tonga Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
STKA Stephens Creek 41.48 240 P P 17 50 55.9 +0.2
3.1nm,0.9s,baz=86,slow=13,SNR=3.2
WRA Warramunga Arr 47.31 258 P P 17 51 41.7 -0.8
0.5nm,0.7s,baz=96,slow=7.6,SNR=5.0
ASAR Alice Springs 47.55 253 P P 17 51 44.5 +0.1
3.6nm,0.6s,baz=87,slow=8.1,SNR=68

SJA 19 17:54:37.9±0.4, 21.06S×68.94W, h122km±3km, ML3.2, MW3.4
GUC 19 17:54:39.4±0.6, 21.06S×68.87W, h112km±3km, ML3.3
ISC 19 17:54:39.0±1.4, 21.06S±0.03×68.99W±0.06, h118km±10km, n28, σ0.67/49, 8C-3D, Chile-Bolivia border region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
PB01 IPOC Station P 0.47 272 ⇑iP Pn 17 54 56.2 -0.5
PB01 i S Sn 17 55 09.3 -0.7
PB01 IAML 17 55 09.6
comp=N,1μm,0.2s
PB09 IPOC Station P 0.77 198 ⇑iP Pn 17 54 58.8 -0.1
PB09 eS Sn 17 55 14.1 +0.1
PB09 IAML 17 55 16.9
comp=E,611nm,0.2s
PB09 IPOC Station P 0.77 198 i P Pn 17 54 58.8 -0.1
PB09 i Sg Sn 17 55 14.8 +0.8
PB09 IAML 17 55 16.7
comp=Z,454nm,0.4s
PB02 IPOC Station P 0.89 253 ⇑iP Pn 17 55 00.3 +0.4
PB02 i S Sn 17 55 16.2 +0.4
PB02 IAML 17 55 17.7
comp=E,2μm,0.3s
PB08 IPOC Station P 0.93 350 ⇓iP Pn 17 55 00.4 -0.3
PB08 eS Sn 17 55 16.4 -0.5
PB08 IAML 17 55 17.7
comp=E,720nm,0.2s
PB07 IPOC Station P 1.07 232 eP Pn 17 55 01.9 +0.2
PB07 eS Sn 17 55 19.4 +0.4
PB07 IAML 17 55 23.9
comp=E,432nm,0.1s
PATCX Punta Patache 1.12 282 eP Pn 17 55 02.3 +0.2
PATCX eS Sn 17 55 20.2 +0.5
TA01 Diego Aracena 1.22 294 eP Pn 17 55 03.1 -0.1
TA01 eS Sn 17 55 21.8 +0.4
TA01 IAML 17 55 23.7
comp=E,1μm,0.5s
GO01 Chusmiza 1.40 352 eP Pn 17 55 03.9 -1.7
GO01 eS Sn 17 55 25.8 -0.1
PB11 IPOC Station P 1.44 334 ⇓iP Pn 17 55 05.6 -0.2
PB11 i S Sn 17 55 26.1 0.0
PB11 IAML 17 55 27.9
comp=E,1μm,0.4s
PB11 IPOC Station P 1.44 334 i Sg Sn 17 55 26.7 +0.6
PB11 IAML 17 55 27.7
comp=Z,350nm,0.2s
LVC Limon Verde 1.54 177 eP Pn 17 55 07.3 +0.1
LVC eS Sn 17 55 28.8 +0.1
LVC Limon Verde 1.54 177 i P Pn 17 55 07.3 +0.1
LVC i Sg Sn 17 55 29.1 +0.4
LVC IAML 17 55 32.8
comp=Z,81nm,0.2s
PB04 IPOC Station P 1.67 220 eP Pn 17 55 08.7 +0.2
PB04 IAML 17 55 33.8
comp=E,298nm,0.2s
PB04 IPOC Station P 1.67 220 i P Pn 17 55 08.8 +0.4
PB06 IPOC Station P 1.73 198 ⇑iP Pn 17 55 09.3 +0.2
PB06 eS Sn 17 55 32.6 +0.4
PB06 IAML 17 55 33.2
comp=E,650nm,0.4s
PB06 IPOC Station P 1.73 198 i P Pn 17 55 09.7 +0.5
PB06 i Sg Sn 17 55 32.6 +0.4
PB06 IAML 17 55 33.6
comp=Z,351nm,0.5s
PSGC Pisagua 1.81 324 ⇓iP Pn 17 55 09.7 -0.4
PSGC eS Sn 17 55 33.6 -0.1
PSGC IAML 17 55 35.7
comp=E,227nm,0.5s
MNMC Minye Minye 2.00 343 eP Pn 17 55 12.7 0.0
MNMC eS Sn 17 55 38.9 +0.5
MNMC IAML 17 55 41.9
comp=E,464nm,0.2s
PB05 IPOC Station P 2.11 212 ⇑iP Pn 17 55 14.2 +0.4
PB05 eS Sn 17 55 40.5 -0.1
PB05 IAML 17 55 48.8
comp=E,141nm,0.3s

PB05 IPOC Station P 2.11 212 i P Pn 17 55 14.5 +0.6
PB05 IAML 17 55 48.9
comp=Z,69nm,0.5s
PB15 IPOC Station P 2.18 192 ⇑iP Pn 17 55 15.6 +0.7
PB15 i S Sn 17 55 42.9 +0.5
PB15 IPOC Station P 2.18 192 i P Pn 17 55 15.1 +0.2
PB16 IPOC Station P 2.75 350 ⇑iP Pn 17 55 23.6 +1.0
PB16 i S Sn 17 55 56.8 +0.7
PB10 IPOC Station P 2.84 210 eP Pn 17 55 22.9 -0.2
PB10 i S Sn 17 55 54.6 -2.5
PB10 IAML 17 56 03.5
comp=N,45nm,0.4s
YJA Yavi 3.42 110 i P Pn 17 55 31.5 +0.4
GO02 Mina Guanaco 4.12 188 ⇑iP Pn 17 55 40.1 -0.3
GO02 i S Sn 17 56 26.1 -1.8
AZAP Zapla 4.80 132 i P Pn 17 55 49.5 +0.1

IDC 19 17:57:49.6±1.0, 21.22S×67.59W, h140km±12km, mb3.7/2, mb1 3.6/5, mb1mx3.3/26, mbtmp3.9/5, Error ellipse: s-maj=31.9km s-min=12.7km az=125.0
NEIC 19 17:57:50.0±2.0, 21.22S±0.07×67.9W±0.1, h157km±8km, mb4.3/3, Error ellipse: s-maj=17.8km s-min=9.9km az=93.0
SJA 19 17:57:49.9±0.4, 21.26S×67.95W, h167km±3km, ML2.7, MW2.8
GUC 19 17:57:51.5±0.7, 21.18S×68.07W, h168km±5km, ML3.7
ISC 19 17:57:50.1±0.8, 21.15S±0.04×67.95W±0.05, h158km±7km, n50, σ1.46/69, 9C-5D, Chile-Bolivia border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PB09 IPOC Station P 1.37 242 ⇓iP Pn 17 58 20.0 +0.9
PB09 i S Sn 17 58 41.9 +0.5
PB09 IPOC Station P 1.37 242 i P Pn 17 58 19.7 +0.6
PB09 i Sg Sn 17 58 41.8 +0.4
PB01 IPOC Station P 1.44 274 ⇑eP Pn 17 58 19.9 +0.2
PB01 eS Sn 17 58 42.1 -0.5
PB01 IAML 17 58 43.8
comp=N,515nm,0.2s
PB01 IPOC Station P 1.44 274 Pn 17 58 20.0 +0.2
PB08 IPOC Station P 1.51 311 ⇑iP Pn 17 58 22.1 +1.3
PB08 i S Sn 17 58 45.6 +1.2
PB08 IAML 17 58 46.6
comp=N,633nm,0.4s
LVC Limon Verde 1.71 211 ⇑eP Pn 17 58 23.3 +0.5
LVC i S Sn 17 58 48.3 +0.3
LVC Limon Verde 1.71 211 P Pn 17 58 23.3 +0.5
comp=N,31nm,0.3s,baz=26,slow=6.9,SNR=26
LVC S Sn 17 58 48.1 +0.1
comp=N,22nm,0.3s,baz=132,slow=23,SNR=16
LVC Limon Verde 1.71 211 i P Pn 17 58 23.0 +0.1
PB02 IPOC Station P 1.83 264 ⇓iP Pn 17 58 24.2 +0.3
PB02 eS Sn 17 58 48.8 -1.0
PB02 IAML 17 58 51.3
comp=N,882nm,0.5s
GO01 Chusmiza 1.88 321 ⇑eP Pn 17 58 25.8 +0.9
GO01 eS Sn 17 58 52.9 +1.2
GO01 IAML 17 58 57.3
comp=N,634nm,0.1s
GO01 Chusmiza 1.88 321 Pn 17 58 26.0 +1.1
PB07 IPOC Station P 1.90 252 ⇓iP Pn 17 58 24.9 +0.2
PB07 i S Sn 17 58 50.2 -1.1
PB07 IAML 17 58 52.4
comp=N,496nm,0.2s
PATCX Punta Patache 2.09 279 eP Pn 17 58 26.6 -0.2
PATCX IAML 17 58 59.0
comp=N,426nm,0.3s
PB11 IPOC Station P 2.12 310 ⇑iP Pn 17 58 27.6 +0.4
PB11 i S Sn 17 58 55.4 -0.5
PB11 IPOC Station P 2.12 310 Pn 17 58 27.6 +0.4
PB06 IPOC Station P 2.16 224 ⇓iP Pn 17 58 27.9 +0.2
PB06 eS Sn 17 58 56.1 -0.7
PB06 IAML 17 58 57.1
comp=E,476nm,0.5s
PB06 IPOC Station P 2.16 224 i P Pn 17 58 28.2 +0.4
PB06 i Sg Sn 17 58 55.9 -0.9
TA01 Diego Aracena 2.17 285 ⇑eP Pn 17 58 27.4 -0.3
TA01 eS Sn 17 58 55.0 -1.6
TA01 IAML 17 58 56.5
comp=E,394nm,0.2s
PB04 IPOC Station P 2.36 240 eP Pn 17 58 29.9 -0.2
PB04 IAML 17 59 02.4
comp=N,180nm,0.1s
PB04 IPOC Station P 2.36 240 Pn 17 58 30.1 -0.1
PB04 IPOC Station P 2.36 240 i P Pn 17 58 30.5 +0.3
YJA Yavi 2.48 115 i P Pn 17 58 33.1 +1.3
YJA IAML 17 58 33.6
comp=Z,22nm,0.3s
PB15 IPOC Station P 2.49 214 eP Pn 17 58 32.7 +1.0
PB15 i S Sn 17 59 03.8 0.0
PB15 IPOC Station P 2.49 214 i P Pn 17 58 31.6 -0.1
PB15 i Sg Sn 17 59 02.8 -1.1
MNMC Minye Minye 2.54 322 ⇑eP Pn 17 58 33.4 +1.0
MNMC Minye Minye 2.54 322 Pn 17 58 33.4 +1.0
PSGC Pisagua 2.56 307 eP Pn 17 58 32.0 -0.5
PSGC IAML 17 59 08.0
comp=E,219nm,0.4s
PB05 IPOC Station P 2.69 231 ⇑iP Pn 17 58 34.1 +0.1
PB05 i S Sn 17 59 06.0 -2.2
PB05 IAML 17 59 08.1
comp=N,140nm,0.5s
PB05 IPOC Station P 2.69 231 i P Pn 17 58 34.2 +0.1
PB16 IPOC Station P 3.16 332 ⇓iP Pn 17 58 42.1 +1.7
PB16 i S Sn 17 59 20.2 +0.9
PB16 IAML 17 59 21.8
comp=N,123nm,0.5s
PB10 IPOC Station P 3.37 225 ⇑iP Pn 17 58 41.3 -1.2
PB10 i S Sn 17 59 20.7 -2.5
PB10 IAML 17 59 22.1
comp=E,75nm,0.5s
PB10 IPOC Station P 3.37 225 Pn Pn 17 58 41.6 -0.8
PB10 IPOC Station P 3.37 225 i P Pn 17 58 42.2 -0.2
AZAP Zapla 4.05 140 i P Pn 17 58 51.7 +0.2
AZAP i Sg Sn 17 59 37.4 -2.0
AZAP IAML 17 59 42.7
comp=Z,12nm,0.4s
PB14 IPOC Station P 4.14 213 i P Pn 17 58 52.2 -0.4
GO02 Mina Guanaco 4.27 200 Pn 17 58 53.5 -0.9
LPAZ La Paz 4.84 358 P Pn 17 59 04.4 +2.2
comp=Z,1.4nm,0.3s,baz=147,slow=4.8,SNR=20
LPAZ La Paz 4.84 358 Pn 17 59 04.0 +1.8
LPAZ La Paz 4.84 358 i P Pn 17 59 04.5 +2.3
SIV San Ignacio 8.29 53 P Pn 17 59 45.1 -2.4
comp=Z,1.1nm,0.3s,baz=264,slow=7.8,SNR=17
SIV S Sn 18 01 11.8 -8.2
comp=Z,0.2nm,0.3s,baz=321,slow=21,SNR=8.1
ACCO Cerro Coronel 9.45 186 i P Pb 18 00 02.6 -0.5
CFA Coronel Fontan 10.42 181 S Sn 18 02 00.7 -10
comp=Z,0.5nm,0.3s,baz=215,slow=13,SNR=2.0
ACAN Cantantal 11.10 177 i P Pn 18 00 23.8 -0.7
PLCA Paso Flores 19.65 186 P P 18 02 08.1 +1.4
comp=Z,0.3nm,0.3s,baz=27,slow=10,SNR=8.7
PLCA Paso Flores 19.65 186 P P 18 02 07.6 +0.9
PLCA IAmb IAmb 18 02 40.4
comp=Z,23nm,1.9s
HHAR Hobbs 62.19 336 P P 18 07 54.5 -0.3
ALLY Alegheny Colle 63.49 350 P P 18 08 02.7 -0.5
TORD Torodi Ar. Bea 76.39 70 P P 18 09 22.4 -0.2
comp=Z,1.0nm,0.6s,baz=252,slow=5.5,SNR=5.2
YKA Yellowknife Ar 91.16 340 P P 18 10 37.9 +1.4
comp=Z,0.6nm,0.6s,baz=134,slow=4.5,SNR=8.9
MKAR Makanchi Array 144.82 36 PKP PKPdf 18 17 09.3 +1.1
comp=Z,0.4nm,0.4s,baz=318,slow=2.9,SNR=7.9

IDC 19 18:08:38.5±8.1, 1.15S×101.23E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/34, mbtmp3.4/3, Error ellipse: s-maj=448.7km s-min=27.2km az=53.0
DJA 19 18:08:39.1±0.3, 2°S±3°×10°0E±°, h10km, M3.6/7, MLv3.6/7
ISC 19 18:08:39.7±0.9, 1.70S±0.05×100.17E±0.04, h33km, n11, σ1.84/15, mb3.4/3, Southern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PDSI Padang 0.83 20 P Pb 18 08 55.1 -0.7
PDSI S Sb 18 09 07.4 +0.7
PPSI Pulau Pagai 1.07 189 P Pb 18 08 58.2 -1.6
SISI Saibi 1.15 289 P Pb 18 09 00.3 -0.7
SISI S Sb 18 09 17.8 +2.2
KRJI Kerinci 1.34 107 P Pb 18 09 03.0 -1.5
KRJI S Sb 18 09 21.8 +0.4
SDSI Sungai Dareh 1.47 59 P Pb 18 09 05.5 -0.9
SDSI S Sb 18 09 26.2 +1.5
BKNI Bangkinang 2.19 23 P Pb 18 09 16.2 -2.5
PBSI Pulau Batu 2.50 311 P Pb 18 09 20.8 -3.2
MNAI Manna 3.83 134 P Pn 18 09 37.8 +1.3
WRA Warramunga Arr 38.00 121 P P 18 15 52.9 -2.1
0.4nm,0.7s,baz=305,slow=9.4,SNR=2.5
ASAR Alice Springs 39.29 126 P P 18 16 05.2 -0.6
0.3nm,0.5s,baz=302,slow=8.1,SNR=8.1
MKAR Makanchi Array 50.79 344 P P 18 17 38.8 +1.9
0.2nm,0.4s,baz=159,slow=8.7,SNR=10

GCG 19 18:26:28.5±0.8, 13.35N×91.19W, h38km±88km, MD3.5
SNET 19 18:26:30.3±0.9, 13.41N×90.90W, h15km±4km, ML3.1
ISC 19 18:26:27.5±3.9, 13.3N±0.2×91.13W±0.09, h27km±19km, n11, σ0.70/18, Near coast of Guatemala

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
IXG Ixpaco 1.09 38 eP Pn 18 26 47.5 +0.2
FUG Fuego 3 1.17 14 eP Pn 18 26 48.7 +0.4
FUG eS Sb 18 27 05.5 +1.4
PCG Pacaya 1.19 25 eP Pn 18 26 49.2 +0.5
PCG eS Sb 18 27 03.9 -0.9
FAME Alcaldia de Sa 1.21 63 eP Pn 18 26 38.6 -10
FAME eS Sn 18 26 52.8 -11
STG3 Santiaguito 3, 1.46 343 eP Pn 18 26 52.3 -0.1
STG3 eS Sn 18 27 10.7 -0.1
NBG Las Nubes 1.48 31 eP Pb 18 26 54.2 -0.4
NBG eS Sb 18 27 13.1 0.0
CEVE Cerro Verde 1.55 70 eP Pn 18 26 54.0 +0.4
CEVE eS Sn 18 27 12.6 -0.4
CEVE IAML 18 27 18.5
comp=Z,347nm,0.3s
RTR El Retiro 1.56 68 eP Pn 18 26 54.3 +0.7
RTR eS Sn 18 27 12.3 -0.7
SBLS San Blas 1.56 70 eP Pn 18 26 53.7 0.0
SBLS eS Sn 18 27 12.4 -0.7
SNJE San Jose 1.58 69 eP Pn 18 26 54.6 +0.6
MTO3 Montecristo 2.03 57 eP Pn 18 27 01.3 +1.1
MTO3 eS Sn 18 27 24.9 0.0

IDC 19 18:33:12.9±1.0, 13.50N×146.51E, h0km, mb3.8/11, mb1 4.0/11, mb1mx3.7/51, mbtmp3.8/11, MS3.0/2, Ms1 3.0/2, ms1mx2.6/45, Error ellipse: s-maj=23.2km s-min=20.1km az=118.0
NEIC 19 18:33:19.0±1.9, 13.49N±0.09×146.39E±0.09, h40km±8km, mb4.5/6, Error ellipse: s-maj=17.4km s-min=6.6km az=223.0
ISC 19 18:33:17.1±0.9, 13.5N±0.1×146.44E±0.09, h26km, n20, σ0.68/20, mb4.1/15, South of Mariana Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GUMO Guam 1.53 274 Pn Pn 18 33 42.5 -0.2
80nm,0.3s,baz=123,slow=9.0,SNR=19
GUMO Sn Sb 18 34 03.6 -0.2
71nm,0.3s,baz=359,slow=21,SNR=9.4
GUMO Guam 1.53 274 Pn 18 33 43.0 +0.2
MJAR Matsushiro Arr 24.13 344 LR LR 18 47 27.3
comp=Z,37nm,19.7s,baz=180,slow=36
KSRS Korea Array 29.04 329 P P 18 39 14.5 -0.6
0.9nm,0.5s,baz=146,slow=9.3,SNR=5.0
WRA Warramunga Arr 35.28 200 P P 18 40 09.5 -0.5
0.7nm,0.7s,baz=21,slow=9.3,SNR=5.2
SBUM Sibu 35.56 255 P P 18 40 12.6 0.0
ASAR Alice Springs 38.90 198 P P 18 40 40.8 +0.1
0.3nm,0.6s,baz=21,slow=10,SNR=6.5
CMAR Chiang Mai Arr 45.83 283 P P 18 41 38.0 +0.6
0.9nm,0.8s,baz=88,slow=5.8,SNR=6.3
SONM Songino Array 47.71 324 P P 18 41 52.2 +0.5
0.4nm,0.6s,baz=132,slow=6.9,SNR=3.7
ZALV Zalesovo Beam 62.61 324 P P 18 43 37.8 -1.1
0.6nm,0.4s,baz=109,slow=7.6,SNR=4.2
ZALV LR LR 19 11 11.7
comp=Z,13nm,18.5s,baz=90,slow=36
MK31 Makanchi Array 62.63 316 P 18 43 40.2 +0.8
MK31 IAmb IAmb 18 43 42.2
comp=Z,1.1nm,0.5s
MKAR Makanchi Array 62.63 316 P P 18 43 40.1 +0.7
comp=Z,0.8nm,0.3s,baz=89,slow=8.6,SNR=27
MAKZ Makanchi 62.85 316 P P 18 43 41.6 +0.8
MAKZ IAmb IAmb 18 43 42.3
comp=Z,1.7nm,0.8s
KURK Kurchatov 65.66 320 P P 18 43 58.2 -0.8
KURK IAmb IAmb 18 43 59.8
comp=Z,3.3nm,0.6s
MLY Manley 66.53 24 P P 18 44 05.3 +0.8
MLY IAmb IAmb 18 44 52.3
comp=Z,16nm,1.9s
ILAR Eielson Array 68.02 25 P P 18 44 13.1 -0.8
comp=Z,0.3nm,0.5s,baz=242,slow=7.3,SNR=4.4
MESA MESA 69.27 30 P P 18 44 21.8 -0.2
YKA Yellowknife Ar 82.25 28 P P 18 45 36.5 +0.5
comp=Z,0.3nm,0.5s,baz=284,slow=5.1,SNR=5.4
ARCES ARCESS Array B 87.66 342 P P 18 46 03.3 +0.3
comp=Z,3.5nm,0.9s,baz=54,slow=7.9,SNR=3.6
FINES FINESS Array B 91.90 335 P P 18 46 22.0 -1.0
comp=Z,0.6nm,0.6s,baz=76,slow=8.0,SNR=5.3

SJA 19 18:43:37.5±0.8, 33.10S×70.44W, h104km±16km, ML2.6, MW2.9
GUC 19 18:43:38.5±0.6, 33.08S×70.51W, h78km±2km, ML3.6
ISC 19 18:43:39.1±1.4, 33.08S±0.04×70.54W±0.04, h71km±8km, n26, σ0.53/45, 4C-5D, Chile-Argentina border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PEL Peldehue 0.14 243 eP Pn 18 43 49.1 -0.6
PEL eS Sn 18 43 57.7 +0.3
PEL IAML 18 43 58.3
comp=N,5µm,0.2s
CLCH Cerro Calan 0.31 179 ⇓iP Pn 18 43 50.1 -0.5
CLCH eS Sn 18 43 59.2 +0.2
FCH Farellones 0.32 139 eP Pn 18 43 50.4 -0.6
FCH eS Sn 18 43 59.1 -0.6
STL Santa Lucia 0.36 193 eP Pn 18 43 50.4 -0.6
STL eS Sn 18 43 59.8 +0.3
STL IAML 18 44 00.4
comp=N,5µm,0.3s
FSR Penalolen 0.40 178 eP Pn 18 43 50.6 -0.7
FSR i S Sn 18 44 00.5 +0.4
ROCH El Roble 0.41 285 ⇓iP Pn 18 43 51.4 -0.1
ROCH i S Sn 18 44 01.4 +0.9
ROCH IAML 18 44 02.5
comp=N,7µm,0.2s
MT03 Universidad Ad 0.41 176 ⇓eP Pn 18 43 51.0 -0.4
MT03 eS Sn 18 44 01.1 +0.7
MT03 IAML 18 44 04.4
comp=N,6µm,0.1s
ANTU Antumapu 0.49 189 ⇑eP Pn 18 43 52.3 +0.3
ANTU i S Sn 18 44 01.9 +0.4
ANTU IAML 18 44 04.0
comp=E,2µm,0.2s
MT02 Curacav 0.53 250 ⇑iP Pn 18 43 52.2 -0.1
MT02 eS Sn 18 44 02.8 +0.8
LMEL Las Melosas 0.81 160 ⇑iP Pn 18 43 55.2 -0.5
LMEL i S Sn 18 44 08.6 +0.8
LMEL IAML 18 44 11.1
comp=N,4µm,0.1s
VA01 Torpederas 0.93 273 eP Pn 18 43 56.7 0.0
VA01 eS Sn 18 44 10.7 +0.8
VA01 IAML 18 44 15.0
comp=N,2µm,0.1s
MT01 Popeta 0.98 217 ⇑iP Pn 18 43 57.0 -0.5
MT01 i S Sn 18 44 11.0 -0.1
MT01 IAML 18 44 11.5
comp=E,2µm,0.2s
CO04 Los Peladeros 1.10 340 ⇓iP Pn 18 43 58.8 -0.4
CO04 eS Sn 18 44 14.7 +0.5
CO04 IAML 18 44 15.6
comp=N,2µm,0.1s
ARCO CERRO ARCO 1.38 80 eP Pn 18 44 02.9 +0.3
ARCO eS Sn 18 44 21.0 +0.7
ARCO IAML 18 44 22.7
comp=Z,79nm,0.5s
AAGR Agrelo 1.44 91 eP Pn 18 44 03.2 -0.3
ASAL Salagasta 1.52 72 eP Pn 18 44 04.7 +0.2
ASAL eS Sn 18 44 24.3 +0.7
RTLS Leoncito 1.66 40 eP Pn 18 44 07.3 +0.8
RTLS IAML 18 44 07.6
comp=Z,60nm,0.6s
BO02 Sierra Bellavi 1.72 187 eP Pn 18 44 06.9 -0.2
BO02 eS Sn 18 44 28.6 +0.4
RTCV Cerro Valdivia 2.08 55 eP Pn 18 44 11.9 -0.1
RTCV eS Sn 18 44 37.2 +0.2
CO03 El Pedregal 2.24 357 ⇓iP Pn 18 44 14.1 -0.1
CO03 i S Sn 18 44 41.1 +0.2
CO03 IAML 18 44 44.0
comp=E,355nm,0.3s
AMOG MOGNA 2.76 40 eP Pn 18 44 21.1 0.0
AMOG eS Sn 18 44 53.0 -0.3
ACCO Cerro Coronel 2.79 27 eP Pn 18 44 21.5 -0.3
GO04 Tololo Observa 2.91 356 eP Pn 18 44 22.2 -1.2
GO04 i S Sn 18 44 56.7 -0.6
ACAN Cantantal 2.94 75 eP Pn 18 44 22.6 -1.0
AGUA GUACDACOL 3.99 27 eP Pn 18 44 37.8 -0.2
VCA Vinchina 4.77 25 eP Pn 18 44 48.7 0.0

IDC 19 19:03:27.4±1.1, 52.03N×171.91W, h0km, mb3.8/10, mb1 4.0/11, mb1mx3.7/62, mbtmp3.8/11, ML3.8/1, Error ellipse: s-maj=29.2km s-min=20.3km az=169.0
NEIC 19 19:03:32.6±3.3, 51.9N±0.2×171.7W±0.1, h43km±14km, Error ellipse: s-maj=23.9km s-min=9.3km az=169.0
AEIC 19 19:03:34±2.8, 52.1N±0.2×171.8W±0.1, h42km±8km, ML3.3/4, Error ellipse: s-maj=30.2km s-min=9.4km az=162.0
ISC 19 19:03:34.2±0.9, 52.1N±0.2×171.85W±0.07, h50km, n69, σ1.56/65, mb3.9/11, Fox Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ATKA Atka Island 1.45 276 Pn 19 03 58.5 +0.5
NIKH Nikolski High 2.04 63 Pn 19 04 04.7 -1.2
GSTR Great Sitkin T 2.60 272 Pn 19 04 12.9 -0.8
GSTR LR 19 04 51.8
KIWB Kanaga Island 3.29 268 Pn 19 04 22.7 -0.4
UNV Unalaska Valle 3.68 59 Pn 19 04 28.7 +0.2
AKUT Akutan 4.20 58 Pn 19 04 35.0 -0.6
FALS False Pass 5.75 58 Pn Pn 19 04 54.4 -2.4
SDPT Sand Point 7.50 60 Pn Pn 19 05 17.1 -3.7
CNBA Chernabura Isl 7.82 65 Pn Pn 19 05 24.3 -0.8
CHGN Chignik 8.94 56 Pn Pn 19 05 40.4 0.0
OHAK Old Harbor 11.90 57 Pn Pn 19 06 17.9 -3.1
KDAK Kodiak Island 12.44 55 Pn Pn 19 06 25.9 -2.4
0.3nm,0.3s,baz=14,slow=18,SNR=2.4
KDAK Kodiak Island 12.44 55 Pn Pn 19 06 25.1 -3.2
SVW2 Sparrevohn 12.69 38 Pn Pn 19 06 32.8 +1.1
CNPM China Poot 13.74 49 Pn Pn 19 06 44.6 -1.4
BRLK Bradley Lake 14.00 48 Pn Pn 19 06 47.5 -2.1
SKT Skwentna 14.78 40 Pn Pn 19 06 54.8 -5.1
SEW Seward 14.80 48 Pn Pn 19 06 58.0 -2.0
SUA Susitna One 14.83 42 Pn Pn 19 06 55.1 -5.5
PPLA Purkeypile 15.06 36 P P 19 07 09.3 +1.3
GHO Glory Hole Cre 15.74 43 Pn Pn 19 07 10.7 -1.7
KNK Knik Glacier 15.78 45 Pn Pn 19 07 09.5 -3.3
KTH Kantishna Hill 15.91 36 Pn Pn 19 07 13.5 -1.0
SML Sawmill 16.01 43 Pn Pn 19 07 14.6 -1.1
TRF Thorofare Moun 16.08 37 P P 19 07 18.8 -0.5
BPAW Bear Paw Mtn. 16.22 34 P P 19 07 21.4 +0.7
HIN Hinchinbrook I 16.27 49 Pn Pn 19 07 15.0 -4.0
FID Port Fidalgo 16.41 48 Pn Pn 19 07 16.5 -4.2
SCM Sheep Creek Mo 16.45 44 Pn Pn 19 07 18.0 -3.4
MLY Manley 16.90 32 P P 19 07 30.0 +1.8
RAGM Ragged Mountai 17.13 50 Pn Pn 19 07 28.7 -1.0
HMT Hamilton 17.32 51 P 19 07 32.0 -0.9
WRH Wood River Hil 17.46 36 Pn Pn 19 07 31.9 -1.9
SUCK Suckling Hills 17.48 52 Pn Pn 19 07 32.7 -1.3
CCB Clear Creek Bu 17.66 35 P 19 07 35.2 -1.1
HDA Harding Lake 17.84 37 P P 19 07 38.8 +0.1
GLB Gilahina Butte 17.86 47 Pn Pn 19 07 37.0 -1.8
VRDI Verde Repeater 17.96 48 P 19 07 39.9 -0.2
WAX Waxell Ridge 18.02 51 P 19 07 39.1 -1.6
IL31 18.06 36 P Pn 19 07 40.7 -0.4
ILAR Eielson Array 18.06 36 P P 19 07 39.8 -1.3
0.3nm,0.3s,baz=226,slow=9.7,SNR=15
TGL Tana Glacier 18.11 50 Pn 19 07 41.9 0.0
MCARA McCarthy VSAT 18.20 48 Pn 19 07 43.8 +1.0
RIDG Independent Ri 18.32 40 P P 19 07 43.2 -0.8
MESA MESA 18.39 52 Pn 19 07 46.3 +0.9
BALM Baldy 18.41 49 P Pn 19 07 45.0 -0.6
BARN Barnard Glacie 18.74 50 P Pn 19 07 49.0 -0.6
SCRK Sand Creek 18.77 40 P P 19 07 48.6 -0.3
CTGM Chitina Glacie 18.87 50 P Pn 19 07 51.0 -0.1
PCA Pinnacle 19.20 53 P Pn 19 07 55.8 +0.8
TOLK Toolik Lake Re 19.72 24 P P 19 07 59.4 +0.2
EGAK Eagle 20.22 39 P Pn 19 08 05.6 -1.2
DAWY Dawson 20.66 42 P P 19 08 09.9 +0.5
HYT Haines Junctio 20.68 52 P Pn 19 08 11.3 -1.1
SKAG Skagway 21.60 56 P P 19 08 19.1 -0.3
DLBC Dease Lake 24.34 58 P P 19 08 48.4 +1.4
INK Inuvik 24.43 34 P P 19 08 48.2 +0.6
1.9nm,0.4s,baz=236,slow=6.9,SNR=18
INK Inuvik 24.43 34 P P 19 08 47.8 +0.2
YKA Yellowknife Ar 31.58 48 P P 19 09 52.3 +0.8
1.0nm,0.5s,baz=272,slow=7.7,SNR=28
BGU Big Grassy Mou 40.92 82 P P 19 11 11.1 -0.5
PDAR Pinedale Array 41.96 77 P P 19 11 20.2 +0.1
0.4nm,0.5s,baz=339,slow=1.5,SNR=7.0
SPITS Spitsbergen Ar 49.91 358 P P 19 12 22.5 +0.5
6.1nm,1.0s,baz=104,slow=2.7,SNR=6.3
TXAR Lajitas Array 54.28 87 P P 19 12 55.1 -0.1
0.6nm,0.6s,baz=288,slow=4.8,SNR=6.1
ARCES ARCESS Array B 58.03 353 P P 19 13 21.5 +0.2
2.1nm,0.9s,baz=14,slow=7.0,SNR=6.8
MKAR Makanchi Array 62.88 312 P P 19 13 55.2 +0.6
0.3nm,0.4s,baz=44,slow=6.4,SNR=15
FINES FINESS Array B 65.92 351 P P 19 14 14.1 -0.2
0.4nm,0.4s,baz=2.3,slow=9.5,SNR=5.0
NOA NORSAR Array B 67.20 358 P P 19 14 22.8 +0.3
21nm,0.5s,baz=360,slow=6.7,SNR=1.8
CMAR Chiang Mai Arr 75.18 281 P P 19 15 11.8 +0.4
0.5nm,0.9s,baz=26,slow=7.0,SNR=2.8
ASAR Alice Springs 89.05 228 P P 19 16 23.9 +0.3
0.5nm,0.6s,baz=28,slow=5.2,SNR=9.9

IDC 19 19:12:05.0±3.4, 31.57S×175.50E, h0km, mb3.8/3, mb1 4.1/5, mb1mx3.8/37, mbtmp4.0/5, ML4.1/2, Error ellipse: s-maj=66.7km s-min=25.6km az=63.0
NEIC 19 19:12:04.9±2.3, 32.1S±0.3×179.2W±0.6, h398km±46km, mb4.0/6, Error ellipse: s-maj=74.7km s-min=25.3km az=113.0
WEL 19 19:12:10.0±0.5, 32°S±7°×17°9W±1°5, h327km±10km, M4.3/40, mB4.7/22, ML4.7/8, MLv4.9/40, MLv4.9/31, Mw(mB)4.0/22
ISC 19 19:12:08.3±1.2, 31.92S±0.09×179.0E±0.1, h300km, n80, σ2.61/80, Kermadec Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GLKZ Green Lake 3.76 46 P Pn 19 13 08.4 -3.6
MXZ Matakaoa Point 5.65 185 P Pn 19 13 36.9 +3.5
WMGZ Waiomatatini S 5.90 184 P Pn 19 13 38.4 +2.1
HAZ Te Kaha 5.90 189 P Pn 19 13 39.8 +3.5
PKGZ Pakihiroa 6.00 187 P Pn 19 13 42.6 +5.0
RUGZ Raukumara Rang 6.12 190 P Pn 19 13 41.4 +2.3
PUZ Puketiti 6.16 185 P Pn 19 13 43.8 +4.4
PUZ S S 19 14 53.5 +0.5
URZ Urewera 6.50 193 Pn Pn 19 13 45.7 +2.2
2.7nm,0.3s,baz=270,slow=3.7,SNR=58
URZ Sn S 19 15 02.6 +2.2
8.8nm,0.3s,baz=73,slow=23,SNR=18
URZ Urewera 6.50 193 Pn 19 13 47.3 +3.8
URZ Urewera 6.50 193 P Pn 19 13 46.9 +3.4
URZ S S 19 15 02.7 +2.2
MWZ Matawai 6.51 190 P Pn 19 13 46.3 +2.7
MWZ S S 19 15 03.4 +2.9
MUGZ Murupara 6.78 195 P Pn 19 13 51.5 +4.5
RIGZ Rimuhau 6.84 188 P Pn 19 13 50.7 +3.0
RTZ Ruatahuna 6.87 193 P Pn 19 13 51.4 +3.3
TLZ Tolley Road 6.99 203 P Pn 19 13 57.4 +7.9
MTHZ Maungataniwha 7.13 194 P Pn 19 13 54.8 +3.6
RAHZ Arahi 7.15 192 P Pn 19 13 53.5 +2.1
KNZ Kokohu 7.16 188 P Pn 19 13 52.9 +1.4
MRHZ Matea Rd 7.21 196 P Pn 19 13 55.6 +3.5
MHGZ Mahia Peninsul 7.27 187 P Pn 19 13 56.1 +3.3
WHHZ Waihua 7.28 191 P Pn 19 13 56.7 +3.8
NMHZ Naumai 7.37 193 P Pn 19 13 58.4 +4.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HIZ	Hauiti	7.39	206	P	Pn	19 14 01.5	+7.2
HIZ	Hauiti	7.39	206	P	Pn	19 14 03.4	+9.1
ARHZ	Aropaoanui	7.50	192	P	Pn	19 13 58.8	+3.2
BKZ	Black Stump Fm	7.50	195	P	Pn	19 13 57.9	+2.1
BKZ	Black Stump Fm	7.50	195	P	Pn	19 13 58.6	+2.8
KRVZ	Karewarewa	7.66	200	P	Pn	19 14 02.4	+4.8
TWVZ	Taurewa	7.69	201	P	Pn	19 14 02.9	+4.8
MCHZ	McNeill Hill	7.73	193	P	Pn	19 14 01.9	+3.4
TUVZ	Tukino	7.81	199	P	Pn	19 14 03.3	+3.7
FWVZ	Far West T-bar	7.83	200	P	Pn	19 14 03.8	+3.9
CKHZ	Cape Kidnapper	7.87	191	P	Pn	19 14 03.1	+2.9
TRVZ	Turoa	7.87	200	P	Pn	19 14 04.4	+3.9
MOVZ	Moawhango	7.92	198	P	Pn	19 14 03.6	+2.8
PKVZ	Pokaka	7.92	201	P	Pn	19 14 04.7	+3.8
VRZ	Vera Road	7.97	204	P	Pn	19 14 06.8	+6.8
KRHZ	Kereru	7.99	195	P	Pn	19 14 03.4	+1.7
KAHZ	Kahuranaki	8.04	192	P	Pn	19 14 03.8	+1.5
DREZ	Durham Road	8.23	207	P	Pn	19 14 09.0	+4.4
PXZ	Pawanui	8.27	191	P	Pn	19 14 06.9	+1.9
PNHZ	Pukenui	8.29	195	P	Pn	19 14 06.9	+1.6
PKE	Pukeiti	8.32	208	P	Pn	19 14 14.1	+8.4
KHEZ	Kahui Hut	8.39	207	P	Pn	19 14 15.0	+8.4
TSZ	Takapari Road	8.48	196	P	Pn	19 14 08.9	+1.2
PRHZ	Porangahau	8.54	192	P	Pn	19 14 10.3	+1.9
DVHZ	Dannevirke	8.66	194	P	Pn	19 14 11.2	+1.3
ANWZ	Angora Road	8.76	193	P	Pn	19 14 12.7	+1.7
POWZ	Post Office Ro	8.84	196	P	Pn	19 14 13.7	+1.7
BFZ	Birch Farm	9.01	193	P	Pn	19 14 15.0	+0.8
TIWZ	Tintock	9.18	195	P	Pn	19 14 17.4	+1.1
CPWZ	Castlepoint	9.24	193	P	Pn	19 14 18.5	+1.6
HOWZ	Holdsworth Sta	9.38	196	P	Pn	19 14 19.1	+0.4
OGWZ	Otaki Gorge	9.39	198	P	Pn	19 14 19.2	+0.4
MSWZ	Moikau Station	9.94	196	P	Pn	19 14 25.6	+0.1
MSWZ					S	19 16 12.8	-4.7
SNZO	South Karori	9.98	199	P	Pn	19 14 25.8	-0.2
SNZO					S	19 16 15.6	-2.7
BHW	Baring Head	10.02	198	P	Pn	19 14 26.0	-0.6
PLWZ	Palliser	10.08	196	P	Pn	19 14 27.4	+0.1
QRZ	Quartz Range	10.29	209	P	P	19 14 32.0	-1.1
TUWZ	Tuamarina	10.31	202	P	Pn	19 14 30.5	+0.4
CMWZ	Cape Campbell	10.52	200		Pn	19 14 30.1	-2.6
BSWZ	Blackbirch Sta	10.59	201	P	Pn	19 14 33.3	-0.3
THZ	Tophouse	10.96	205	P	Pn	19 14 39.0	+1.0
THZ					S	19 16 39.1	-1.6
KHZ	Kahutara	11.33	201	P	Pn	19 14 42.3	-0.2
LTZ	Lake Taylor	12.08	204	P	Pn	19 14 51.2	-0.5
MQZ	McQueen's Vall	12.78	201	P	Pn	19 14 58.8	-1.3
RPZ	Rata Peaks	13.33	206	Pn	Pn	19 15 06.7	0.0
	1.2nm,0.3s,baz=90,slow=2.1,SNR=6.5						
RPZ				Sn	S	19 17 29.1	-4.8
	1.3nm,0.3s,baz=110,slow=16,SNR=7.3						
RPZ	Rata Peaks	13.33	206	P	Pn	19 15 04.5	-2.2
FOZ	Fox Glacier	13.66	209	P	Pn	19 15 10.8	+0.1
ODZ	Otahua Downs	14.62	204	P	P	19 15 17.6	-3.5
STKA	Stephens Creek	31.64	260	P	P	19 18 06.3	+2.2
	1.0nm,0.5s,baz=123,slow=8.2,SNR=4.2						
STKA	Stephens Creek	31.64	260	P	P	19 18 06.3	+2.2
STKA				IAmb	IAmb	19 18 47.3	
	comp=Z,1.7nm,1.1s						
AS31	Alice Springs	40.48	270	P	P	19 19 17.4	-1.3
ASAR	Alice Springs	40.48	270	P	P	19 19 20.3	+1.6
	comp=Z,0.5nm,0.3s,baz=107,slow=7.4,SNR=15						
ASAR	Alice Springs	40.48	270	P	P	19 19 20.3	+1.6
WR0	Warramunga Arr	41.44	276	P	P	19 19 27.0	+0.5
WR0				IAmb	IAmb	19 20 34.0	
	comp=Z,27nm,1.8s						
WB2	Warramunga Arr	41.61	276	P	P	19 19 28.8	+0.9
WB2				IAmb	IAmb	19 19 35.6	
	comp=Z,13nm,1.3s						
WRA	Warramunga Arr	41.62	276	P	P	19 19 29.1	+1.2
	comp=Z,0.7nm,0.4s,baz=114,slow=7.9,SNR=11						
WRA	Warramunga Arr	41.62	276	P	P	19 19 29.1	+1.2
WB0	Warramunga Arr	41.65	276	P	P	19 19 29.2	+1.0
WB0				IAmb	IAmb	19 20 50.5	
	comp=Z,17nm,1.4s						

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*IDC **19** 19:13:20.3±4.8, 46.°63N×152.°85E, h103km±56km, mb3.2/6, mb1 3.4/7, mb1mx3.1/44, mbtmp3.5/7, Error ellipse: s-maj=68.8km s-min=28.0km az=2.0*

ISC 19 19:13:16.2±1.7, **47.°1N**±0.°3×**153.°0E**±0.°2, **h40km, n15,** σ**1s41**/9, **mb3.4**/7, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	7.85	252	P	Pn	19 15 08.7	+0.9
	0.5nm,0.3s,baz=84,slow=21,SNR=5.4						
H11N2	WAKE ISLAND Hy	29.56	153	T	T	19 50 31.4	
	baz=340,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	29.58	153	T	T	19 50 28.6	
	baz=340,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	29.58	153	T	T	19 50 34.5	
	baz=340,slow=75,SNR=10						
H11S1	WAKE ISLAND Hy	30.65	154	T	T	19 51 37.5	
	baz=341,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	30.66	154	T	T	19 51 53.1	
	baz=341,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	30.67	154	T	T	19 52 06.8	
	baz=341,slow=76,SNR=14						
ILAR	Eielson Array	36.35	39	P	P	19 20 18.5	+2.6
	0.3nm,0.9s,baz=276,slow=9.0,SNR=2.3						
MKAR	Makanchi Array	46.70	297	P	P	19 21 39.7	-1.1
	0.1nm,0.5s,baz=71,slow=5.6,SNR=2.4						
YKA	Yellowknife Ar	50.72	37	P	P	19 22 10.4	-1.0
	0.1nm,0.6s,baz=293,slow=7.1,SNR=2.2						
ARCES	ARCESS Array B	57.50	341	P	P	19 23 00.6	-0.1
	3.3nm,0.9s,baz=27,slow=7.1,SNR=1.6						
FINES	FINESS Array B	63.69	335	P	P	19 23 42.3	-0.7
	0.5nm,0.4s,baz=35,slow=7.0,SNR=4.6						
NB2	NORSAR Subarra	67.88	341	P	P	19 24 10.3	+0.3
	comp=Z,0.4nm,0.6s,baz=26,slow=6.5						
NOA	NORSAR Array B	67.88	341	P	P	19 24 10.0	0.0
	comp=Z,0.6nm,0.7s,baz=28,slow=6.5,SNR=4.5						
TXAR	Lajitas Array	77.42	61	P	P	19 25 05.9	-1.3
	comp=Z,0.2nm,0.5s,baz=311,slow=5.6,SNR=3.2						

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*IDC **19** 19:40:42.9±1.4, 4.°43S×38.°59E, h0km, mb3.6/2, mb1 4.1/5, mb1mx3.5/33, mbtmp4.0/5, ML4.3/3, MS3.2/4, Ms1 3.2/4, ms1mx2.8/34, Error ellipse: s-maj=24.7km s-min=17.8km az=46.0*

ISC 19 19:40:43.9±1.0, **4.°28S**±0.°09×**38.°62E**±0.°08, **h10km, n11,** σ**2s01**/10, **MS3.2**/3, **Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	3.42	336	Pn	Pb	19 41 43.1	-1.6
	8.3nm,0.3s,baz=202,slow=21,SNR=29						
KMBO				Pg	Pg	19 41 47.8	-1.7
	19nm,0.3s,baz=210,slow=22,SNR=45						
KMBO				Lg	Lg	19 42 34.7	
	163nm,0.3s,baz=247,slow=23,SNR=21						
MBAR	Mbarara	8.68	295	Pn	Pn	19 42 51.7	+1.9
	7.0nm,0.3s,baz=299,slow=5.9,SNR=18						
MBAR				Sn	Sn	19 44 30.8	+2.8
	8.3nm,0.3s,baz=250,slow=23,SNR=3.8						
MBAR				Lg	Lg	19 45 19.5	
	14nm,0.3s,baz=38,slow=24,SNR=11						
MBAR				LR	LR	19 46 05.6	
	comp=Z,102nm,20.4s,baz=114,slow=37						
MBAR	Mbarara	8.68	295	eP	Sn	19 44 28.8	+0.8
MBAR				eS	Sg	19 45 21.7	-1.1
LSZ	Lusaka	14.99	223	Pn	Pn	19 44 15.2	-0.9
	0.3nm,0.3s,baz=30,slow=10,SNR=4.1						
LSZ				Lg	Lg	19 48 32.8	
	0.4nm,0.3s,baz=145,slow=22,SNR=9.1						
OPO	Ambohidratompo	16.49	150	Pn	Pn	19 44 33.5	-2.1
	0.5nm,0.3s,baz=302,slow=19,SNR=2.4						
MATP	Matopo	18.83	211	Lg	Lg	19 50 28.6	
	0.2nm,0.3s,baz=304,slow=15,SNR=3.6						
TSUM	Tsumeb	25.33	232	LR	LR	19 55 40.9	
	comp=Z,69nm,18.0s,baz=180,slow=36						
CMAR	Chiang Mai Arr	63.55	67	P	P	19 51 16.8	+1.6
	0.5nm,0.5s,baz=259,slow=7.9,SNR=5.6						
MKAR	Makanchi Array	63.78	32	P	P	19 51 17.6	+1.4
	0.5nm,0.6s,baz=232,slow=8.5,SNR=6.9						
FINES	FINESS Array B	66.25	353	LR	LR	20 20 56.0	
	comp=Z,22nm,18.8s,baz=200,slow=36						
LEM	Lembang	68.67	96	LR	LR	20 15 46.9	
	comp=Z,14nm,18.4s,baz=114,slow=31						

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*IDC **19** 19:57:47.4±2.2, 8.°06S×119.°64E, h199km±20km, mb3.1/5, mb1 3.2/8, mb1mx3.0/38, mbtmp3.6/8, Error ellipse: s-maj=46.6km s-min=12.7km az=58.0*

ISC 19 19:57:47.3±1.3, **8.°1S**±0.°2×**119.°6E**±0.°3, **h200km, n9,** σ**0s87**/9, **mb3.6**/5, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	3.05	3	P	Pn	19 58 37.8	+0.2
	7.0nm,0.3s,baz=173,slow=12,SNR=12						
FITZ	Fitzroy Crossi	11.56	150	P	Pn	20 00 25.9	-0.7
	0.1nm,0.3s,baz=336,slow=10,SNR=8.9						
FITZ				S	Sn	20 02 26.7	-8.9
	0.2nm,0.3s,baz=179,slow=18,SNR=8.2						
WRA	Warramunga Arr	18.52	131	P	P	20 01 48.4	-0.4
	0.2nm,0.3s,baz=307,slow=10,SNR=17						
ASAR	Alice Springs	20.69	140	P	P	20 02 12.1	-0.1
	0.8nm,0.6s,baz=316,slow=9.3,SNR=11						
PMG	Port Moresby	27.27	95	P	P	20 03 13.6	+0.2
	7.6nm,0.3s,baz=294,slow=10.0,SNR=5.5						
STKA	Stephens Creek	31.30	142	P	P	20 03 49.9	+1.2
	1.4nm,0.7s,baz=322,slow=11,SNR=2.5						
SONM	Songino Array	56.89	349	P	P	20 07 10.1	-1.2
	0.2nm,0.4s,baz=158,slow=7.2,SNR=5.7						
MKAR	Makanchi Array	63.92	332	P	P	20 07 59.8	+0.9
	0.6nm,0.6s,baz=148,slow=6.6,SNR=11						
ZALV	Zalesovo Beam	68.40	339	P	P	20 08 27.2	+0.1
	0.5nm,0.4s,baz=134,slow=6.2,SNR=2.7						

IDC 19 20:00:29.9±1.5, **2.°92S×130.°41E, h0km, mb3.7**/2, **mb1 3.8**/4, **mb1mx3.5**/37, **mbtmp3.6**/4, **ML3.3**/2, **Error ellipse: s-maj=51.3km s-min=21.5km az=94.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.21	23	Pn	Pn	20 01 08.3	+0.3
	3.0nm,0.3s,baz=180,slow=12,SNR=25						
SIJI				Sn	Sn	20 01 35.8	-0.2
	6.1nm,0.3s,baz=246,slow=22,SNR=9.7						
WRA	Warramunga Arr	17.35	168	P	Pn	20 04 34.0	+0.3
	0.2nm,0.3s,baz=347,slow=11,SNR=7.0						
WRA				S	Sn	20 07 32.7	-15
	0.0nm,0.3s,baz=346,slow=21,SNR=2.7						
ASAR	Alice Springs	20.90	171	P	P	20 05 13.8	-0.2
	5.4nm,0.5s,baz=350,slow=10,SNR=84						
MKAR	Makanchi Array	65.08	326	P	P	20 11 12.5	+0.1
	0.1nm,0.3s,baz=117,slow=8.1,SNR=4.5						

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*IDC **19** 20:09:16.4±2.8, 5.°04S×35.°69E, h0km, mb3.2/2, mb1 3.3/3, mb1mx3.1/38, mbtmp3.3/3, ML3.6/1, Error ellipse: s-maj=61.9km s-min=24.8km az=129.0*

ISC 19 20:09:18.3±1.8, **5.°1S**±0.°1×**35.°77E**±0.°08, **h10km, n5,** σ**1s26**/9, **Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	4.20	21	Pn	Pn	20 10 22.2	-0.4
	3.4nm,0.3s,baz=192,slow=17,SNR=21						
KMBO				Pg	Pb	20 10 33.1	+0.7
	2.4nm,0.3s,baz=193,slow=18,SNR=7.3						
KMBO				Sn	Sn	20 11 12.8	+0.8
	5.9nm,0.3s,baz=234,slow=20,SNR=7.5						
KMBO				Lg	Lg	20 11 29.4	
	11nm,0.3s,baz=91,slow=22,SNR=12						
TEBE	Entebbe	6.07	327	eP	Sn	20 11 58.0	0.0
TEBE				eS	Sg	20 12 32.6	-0.9
MBAR	Mbarara	6.71	311	eP	Pn	20 10 59.3	+2.2
MBAR				eS	Sn	20 12 12.7	-1.0
TORD	Torodi Ar. Bea	38.38	298	P	P	20 16 38.8	-1.3
	0.1nm,0.5s,baz=126,slow=7.4,SNR=1.2						
MKAR	Makanchi Array	65.98	33	P	P	20 20 04.9	-0.1
	0.3nm,0.8s,baz=231,slow=5.6,SNR=3.9						

IDC 19 20:30:55.5±14.0, **3.°83S×126.°73E, h390km**±187km, **mb2.3**/2, **mb1 2.5**/3, **mb1mx2.3**/24, **mbtmp3.1**/3, **Error ellipse: s-maj=221.6km s-min=53.9km az=69.0, Buru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.65	156	P	P	20 34 36.7	-0.2
	0.1nm,0.3s,baz=334,slow=10,SNR=3.8						
ASAR	Alice Springs	20.91	161	P	P	20 35 09.2	+0.2
	0.2nm,0.4s,baz=340,slow=10,SNR=4.4						
MKAR	Makanchi Array	63.81	328	P	P	20 40 47.5	0.0
	0.1nm,0.5s,baz=115,slow=9.2,SNR=3.4						

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*LJU **19** 20:36:08.4, 45.°30N×14.°95E, h7km, ML2.6*
*RHSSO **19** 20:36:09.7±0.3, 45.°32N×14.°91E, h5km±3km, ML3.2/11*
*PRU **19** 20:36:09.5±0.0, 45.°31N×15.°13E, h1km*
*BEO **19** 20:36:10.5±0.3, 45.°41N×14.°90E, h5km, ML3.1/7*
*LDG **19** 20:36:11.7±0.2, 45.°56N×14.°93E, h5km, Ml3.2/29, Error ellipse: s-maj=6.0km s-min=3.8km az=168.0*
*BGR **19** 20:36:13.0±0.4, 45.°40N×14.°98E, h10km, ML3.4/15, Error ellipse: s-maj=6.7km s-min=5.6km az=166.0*

ISC 19 20:36:09.3±0.9, **45.°35N**±0.°01×**14.°92E**±0.°01, **h11km**±7km, **n148,** σ**1s67**/262, **5C-13D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOJS	Bojanci	0.28	56	ePg	Pg	20 36 14.2	-0.9
BOJS				eSg	Sg	20 36 18.1	-0.8
BOJS	Bojanci	0.28	56	iPg	Pg	20 36 14.5	-0.6
BOJS				iSg	Sg	20 36 18.6	-0.3
	comp=Z,478nm,0.1s						
RIY	Rijeka	0.31	266	iPg	Pg	20 36 15.2	-0.4
RIY				Sg	Sg	20 36 20.7	+1.0
RIY	Rijeka	0.31	266	ePg	Pg	20 36 15.1	-0.4
RIY				eSg	Sg	20 36 20.5	+0.8
RIY	Rijeka	0.31	266	⇑iPg	Pg	20 36 14.9	-0.7
RIY				eSg	Sg	20 36 20.5	+0.8
KNDS	Knezji Dol	0.42	296	iPg	Pg	20 36 17.3	-0.3
KNDS				eSg	Sg	20 36 24.4	+1.2
VISS	Visnje	0.46	353	⇓iPg	Pg	20 36 18.2	-0.2
VISS				eSg	Sg	20 36 25.3	+0.8
	comp=Z,297nm,0.2s						
OZLJ	Ozalj	0.47	55	ePg	Pg	20 36 18.0	-0.5
OZLJ				Sg	Sg	20 36 25.1	+0.4
CRES	Cresnjev	0.61	38	iPg	Pg	20 36 20.9	-0.3
CRES				eSg	Sg	20 36 29.2	0.0
	comp=Z,383nm,0.3s						
CRES	Cresnjev	0.61	38	⇓iPg	Pg	20 36 20.9	-0.3
CRES				eSg	Sg	20 36 29.9	+0.7
LEGS	Legarje	0.66	25	iPg	Pg	20 36 22.0	-0.2
LEGS				eSg	Sg	20 36 31.1	+0.2
SKDS	Skadanscina	0.67	288	iPg	Pg	20 36 21.3	-1.0
SKDS				eSg	Sb	20 36 32.1	-0.3
	comp=Z,208nm,0.3s						
GBAS	Gorenja Brezov	0.68	330	iPg	Pg	20 36 22.2	-0.3
PDKS	Podkum	0.72	4	iPg	Pg	20 36 23.1	-0.1
PDKS				eSg	Sb	20 36 34.6	+0.8
	comp=Z,17nm,0.1s						
GCIS	Gornji Cirnik	0.72	43	iPg	Pg	20 36 22.9	-0.3
GCIS				eSg	Sb	20 36 33.4	-0.5
CESS	Cesta pri Krsk	0.73	31	iPg	Pg	20 36 23.4	-0.1
CESS				eSg	Sb	20 36 35.4	+1.1
	comp=Z,217nm,0.3s						
LJU	Ljubljana	0.75	339	ePg	Pg	20 36 23.9	0.0
LJU				eSg	Sg	20 36 33.6	0.0
LJU	Ljubljana	0.75	339	iPg	Pg	20 36 23.8	0.0
LJU	Ljubljana	0.75	339	⇓iPg	Pg	20 36 23.3	-0.5
LJU				eSg	Sb	20 36 34.3	-0.4
VNDS	Vrh nad Dolski	0.77	349	iPg	Pg	20 36 24.1	-0.1
VNDS				eSg	Sb	20 36 36.7	+1.3
	comp=Z,254nm,0.4s						
NVLJ	Novalja	0.78	183	iPg	Pg	20 36 22.6	-1.8
NVLJ				Sg	Sg	20 36 34.1	-0.5
JAVS	Javornik	0.81	313	iPg	Pg	20 36 24.2	-0.8
JAVS				eSg	Sb	20 36 37.3	+0.7
	comp=Z,138nm,0.2s						
GOLS	Golise	0.83	36	iPg	Pg	20 36 25.4	+0.1
GOLS				eSg	Sb	20 36 37.7	+0.7
	comp=Z,255nm,0.3s						
CRNS	Crni Vrh	0.87	328	iPg	Pg	20 36 26.2	+0.1
DOBS	Dobrina	0.89	25	ePg	Pg	20 36 26.0	-0.5
ZAG	Zagreb	0.89	57	ePg	Pb	20 36 27.2	+0.4
ZAG				Sg	Sn	20 36 40.7	0.0
ZAG	Zagreb	0.89	57	ePg	Pb	20 36 26.6	+0.1
ZAG				eSg	Sb	20 36 39.0	+0.3
PTJ	Puntijarka	0.92	52	iPg	Pg	20 36 26.9	-0.3
PTJ				Sg	Sg	20 36 40.6	+0.8
MOZS	Mozjanca	1.00	341	ePg	Pg	20 36 28.5	-0.2
UDBI	Udbina	1.01	143	ePg	Pg	20 36 27.9	-1.0
UDBI				Sg	Sg	20 36 41.1	-1.0
GORS	Gorjuse	1.17	327	ePg	Pb	20 36 31.8	+0.2
GORS				eSg	Sn	20 36 49.5	+1.8
	comp=Z,146nm,0.3s						
GROS	Grobnik	1.19	20	ePg	Pb	20 36 31.5	-0.5
	comp=Z,115nm,0.3s						
OBKA	Obir	1.19	348	ePn	Pn	20 36 31.9	-0.2
OBKA				eSg	Sn	20 36 50.9	+2.5
OBKA	Obir	1.19	348	iPn	Pn	20 36 31.7	-0.3
	comp=Z,5.8nm,0.2s,SNR=34						
OBKA				eSn	Sb	20 36 46.9	-0.6
	comp=Z,605nm,0.6s						
CADS	Cadrg	1.21	317	ePg	Pb	20 36 32.2	-0.1
CADS				eSg	Sn	20 36 50.3	+1.6
	comp=Z,152nm,0.4s						
PERS	Pernice	1.30	6	ePg	Pn	20 36 33.7	+0.2
PERS				eSg	Sn	20 36 52.5	+1.6
BISS	Bistriski jare	1.31	6	ePg	Pn	20 36 34.0	+0.3
MOSL	Moslavina	1.32	78	iPg	Pn	20 36 33.8	0.0
MOSL				Sg	Sb	20 36 51.3	+0.2
KALN	Kalnik	1.33	53	iPg	Pb	20 36 34.5	+0.2
KALN				Sg	Sg	20 36 54.0	+1.8
ROBS	Robic	1.33	313	ePg	Pg	20 36 35.4	+0.4
SOKA	Soboth	1.33	3	ePn	Pn	20 36 34.3	+0.3
	comp=Z,72nm,0.3s,SNR=42						
SOKA				eSn	Sg	20 36 52.9	+0.6
	comp=Z,0.7nm,0.1s						
DUGI	Dugi Otok	1.36	176	ePg	Pn	20 36 34.8	+0.5
DUGI				Sg	Sg	20 36 53.6	+0.5
MYKA	Terra Mystica	1.56	326	ePg	Pb	20 36 39.0	+0.6
	comp=Z,23nm,0.3s,SNR=12						
MYKA				eSn	Sg	20 36 59.5	-0.1
	comp=Z,64nm,0.3s						
MORI	Morici	1.58	159	ePn	Pn	20 36 38.3	+0.9
MORI				Sn	Sb	20 37 00.1	+1.4
KIJV	Kijevo	1.71	141	ePn	Pn	20 36 40.7	-0.1
KIJV				Sn	Sg	20 37 05.1	+0.8
BLY	Banja Luka	1.71	110	ePn	Pb	20 36 40.7	-0.1
BLY				eSn	Sg	20 37 04.6	+0.2
BLY	Banja Luka	1.71	110	⇓P	Pn	20 36 39.1	0.0
BLY				⇓S	Sb	20 37 02.6	+0.3
BLY	Banja Luka	1.71	110	⇓iPn	Pn	20 36 40.2	+1.1
BLY				eSn	Sn	20 37 01.5	+0.5
BEHE	Becsehely	1.71	48	ePn	Pb	20 36 40.4	-0.5
BEHE				eSg	Sg	20 37 05.3	+0.8
ZIRJ	Zirje	1.77	163	iPn	Pn	20 36 41.3	+1.4
ZIRJ				Sn	Sg	20 37 06.0	-0.2
MGRS	Mrkonjic Grad	1.80	120	ePn	Pn	20 36 41.3	+0.9
MGRS				eSn	Sn	20 37 03.7	+0.5
ARSA	Arzberg	1.95	12	ePn	Pn	20 36 43.0	+0.5
ARSA				eSg	Sg	20 37 11.2	-0.8
ARSA	Arzberg	1.95	12	Pn	Pn	20 36 42.7	+0.2
	comp=Z,1.9nm,0.3s						
ARSA				iPg	Pb	20 36 45.7	+0.8
	comp=Z,32nm,0.3s,SNR=17						
ARSA				eSg	Sg	20 37 11.0	-1.0
	comp=Z,24nm,0.4s						
KBA	Koelnbreinsper	2.05	328	ePn	Pn	20 36 45.6	+1.7
KBA				eSg	Sg	20 37 15.9	+0.7
KBA	Koelnbreinsper	2.05	328	Pg	Pn	20 36 45.7	+1.7
	comp=Z,14nm,0.4s						
KBA				eSn	Sn	20 37 09.4	-0.2
	comp=Z,4.2nm,0.2s						
ABTA	Abfaltersbach	2.19	311	ePg	Pb	20 36 47.8	-1.2
	comp=Z,16nm,0.3s,SNR=9.3						
ABTA				eSg	Sg	20 37 20.0	+0.5
	comp=Z,237nm,0.8s						
DOB	Doboj	2.34	104	ePn	Pn	20 36 49.4	+1.7
DOB	Doboj	2.34	104	ePn	Pn	20 36 48.2	+0.5
MOA	Molln	2.54	350	ePn	Pb	20 36 53.2	-1.9
MOA	Molln	2.54	350	Pn	Pn	20 36 52.4	+1.8
	comp=Z,2.3nm,0.2s						
CONA	Conrad Observa	2.66	14	ePn	Pn	20 36 53.5	+1.2
	comp=Z,2.6nm,0.2s						
CONA				eSn	Sn	20 37 23.8	-0.8
	comp=Z,10nm,0.4s						
MORH	Mrgy, Hungar	2.75	70	ePn	Pn	20 36 54.9	+1.6
MORH				eSn	Sn	20 37 29.0	+2.5
RJOB	Jochberg	2.81	329	ePn	Pn	20 36 57.0	+2.8
WTTA	Wattenberg	2.98	311	ePn	Pb	20 37 00.6	-1.9
WTTA	Wattenberg	2.98	311	ePn	Pb	20 37 00.6	-1.9
	comp=Z,7.8nm,0.4s						
WTTA				iSg	Sg	20 37 42.3	-2.6
	comp=Z,43nm,0.8s						
WATA	Walderalm	3.05	312	Pn	Pn	20 36 59.4	+1.7
	comp=Z,4.8nm,0.3s						
WATA				eSn	Sb	20 37 41.4	+0.3
	comp=Z,16nm,0.4s						
HAPS	Han Pijesak,BI	3.14	112	ePn	Pn	20 36 59.7	+0.8
HAPS				eSn	Sn	20 37 37.4	+1.0
SQTA	Sankt Quirin	3.18	307	iPn	Pn	20 37 03.1	+3.6
	comp=Z,3.9nm,0.3s						
SQTA				iSn	Sb	20 37 44.2	-0.6
	comp=Z,11nm,0.3s						
STON	Ston	3.18	140	ePn	Pn	20 37 02.1	+2.8
STON				Sn	Sn	20 37 40.4	+3.1
STON	Ston	3.18	140	ePn	Pn	20 37 02.5	+3.2
STON				eSn	Sn	20 37 41.2	+3.9
STON	Ston	3.18	140	ePn	Pn	20 37 00.3	+1.0
STON				eSn	Sn	20 37 38.0	+0.7
AQU	L'Aquila	3.19	201	eSn	Sn	20 37 37.8	+0.3
ZST	Bratislava	3.22	27	ePN	Pn	20 36 59.0	-0.9
ZST				eSG	Sg	20 37 54.8	+2.1
ZST				eLG	Lg	20 38 02.6	
MOTA	Moosalm	3.31	308	iPn	Pn	20 37 04.2	+2.9
	comp=Z,0.7nm,0.1s,SNR=6.1						
MOTA				Sn	Sn	20 37 41.1	+0.4
	comp=Z,14nm,0.5s						
FETA	Feichten	3.36	301	iPn	Pn	20 37 05.5	+3.6
	comp=Z,2.1nm,0.3s						
FETA				ePg	Pg	20 37 13.0	-0.7
	comp=Z,11nm,0.4s						
FETA				Sg	Sg	20 37 57.6	+0.4
	comp=Z,28nm,0.6s						
TEKS	Tekeris	3.37	102	ePn	Pn	20 37 04.7	+2.8
MODS	Modra-Piesok	3.43	27	ePN	Pn	20 37 01.3	-1.5
MODS				eSG	Sg	20 38 00.3	+0.8
MODS				eLG	Lg	20 38 07.9	
FRGS	Fruska Gora	3.46	91	ePn	Pn	20 37 06.2	+3.0
FRGS				eSn	Sn	20 37 46.7	+2.5
BBLS	Lazići	3.53	113	ePn	Pn	20 37 05.2	+1.0
BBLS				eSn	Sn	20 37 45.7	-0.3
DBRK	Dubrovnik	3.55	138	ePn	Pn	20 37 05.2	+0.8
DBRK				Sn	Sn	20 37 50.6	+4.3
RETA	Reutte	3.58	308	ePn	Pn	20 37 07.5	+2.5
	comp=Z,1.7nm,0.2s						
GEC2	GERESS Array S	3.60	347	ePn	Pn	20 37 06.1	+0.9
GEC2				eSg	Sg	20 38 04.3	-0.6
TREB	Trebinje	3.61	136	ePn	Pn	20 37 07.5	+2.3
TREB				eSn	Sn	20 37 50.9	+3.1
TREB	Trebinje	3.61	136	ePn	Pn	20 37 05.5	+0.3
TREB				eSn	Sn	20 37 48.4	+0.6
DIVS	Divibare	3.82	107	eSn	Sn	20 37 53.6	+0.3
KRUC	Moravsky	3.85	15	ePN	Pn	20 37 09.0	+0.5
KRUC				eSN	Sn	20 37 52.2	-1.6
KHC	Kasperske Hory	3.90	347	ePN	Pn	20 37 10.7	+1.5
KHC				eSN	Sn	20 37 57.5	+2.6
TREC	Trest	3.97	5	ePN	Pn	20 37 12.1	+1.9
JAVC	Velka Javorina	3.98	27	ePN	Pn	20 37 11.5	+1.1
DAVA	Damuels	4.00	301	ePn	Pn	20 37 11.9	+1.2
DAVA				ePg	Pg	20 37 29.4	+3.5
DAVA	Damuels	4.00	301	Pg	Pg	20 37 26.0	+0.1
	comp=Z,7.2nm,0.4s						
DAVA				Sg	Sg	20 38 20.0	+2.4
	comp=Z,25nm,0.5s						
WET	Wettzell	4.04	341	ePn	Pn	20 37 12.2	+0.9
WET				eSn	Sn	20 37 58.6	0.0
UBR	Ueberruh	4.06	307	ePn	Pn	20 37 13.7	+2.2
UBR				ePg	Pg	20 37 28.3	+1.2
TRUS	Trudelj	4.06	104	ePn	Pn	20 37 13.2	+1.7
VRAC	Vranov	4.12	15	ePN	Pn	20 37 13.1	+0.8
VRAC	Vranov	4.12	15	⇓P	Pn	20 37 13.2	+0.9
VYHS	Vyhne	4.14	39	ePN	Pn	20 37 13.6	+1.1
VYHS				eSN	Sn	20 38 00.8	0.0
VYHS				eSG	Sg	20 38 36.3	+14
PLONS	Plons/SG	4.21	296	ePn	Pn	20 37 17.6	+4.1
PLONS				eSg	Sg	20 38 26.2	+1.9
PSZ	Piszkesteto	4.28	51	⇑P	Pb	20 37 21.2	-3.6
PSZ				⇓S	Sn	20 38 04.5	-0.1
GRUS	Gruza	4.39	107	ePn	Pn	20 37 18.0	+2.1
DRME	Dracevica, Mon	4.42	134	ePn	Pn	20 37 17.5	+1.2

GOPC	GO Pecny, Ondr	4.57	359	ePN	Pn	20 37 19.9	+1.4
WILA	Wila	4.65	299	ePn	Pn	20 37 22.9	+3.4
WILA				eSg	Sg	20 38 40.1	+1.6
PRU	Pruhonice	4.65	357	ePN	Pn	20 37 20.0	+0.5
WALHA	Wallhausen, DE	4.67	303	ePn	Pn	20 37 21.8	+2.1
WALHA				eSg	Sg	20 38 41.2	+2.1
BZS	Buzias	4.72	84	⇓P	Pg	20 37 36.8	-2.9
BZS				⇓S	Sg	20 38 40.1	-0.7
MORC	Moravsky Berou	4.77	21	ePn	Pn	20 37 22.3	+1.0
MORC				eSN	Sn	20 38 14.6	-2.0
MORC	Moravsky Berou	4.77	21	⇓P	Pn	20 37 22.5	+1.3
MORC				⇑S	Sn	20 38 16.2	-0.5
ROTZ	Rotzenmuhle	4.79	338	ePn	Pn	20 37 23.0	+1.5
ROTZ				eSn	Sn	20 38 15.5	-1.4
ROTZ				eSg	Sg	20 38 45.3	+2.3
SIRR	Siria	4.80	77	⇑P	Pb	20 37 35.8	+2.3
MDVR	Moldovita	4.84	94	⇑P	Pg	20 37 39.0	-3.2
KRLC	Kraliky	4.89	14	ePN	Pn	20 37 24.6	+1.7
EMING	Emmingen-Lipti	4.90	303	ePn	Pn	20 37 25.1	+2.1
EMING				eSg	Sg	20 38 48.5	+1.9
OKC	Ostrava-Krasne	5.00	25	eSN	Sn	20 38 21.4	-0.6
GRF	Grafenberg Arr	5.02	331	eSg	Sg	20 38 51.9	+1.6
SLE	Schleitheim	5.05	301	ePn	Pn	20 37 26.5	+1.5
SLE				eSg	Sg	20 38 53.1	+1.7
PGF	Pioggiola	5.11	239	ePn	Pn	20 37 25.8	-0.1
PGF				eSn	Sn	20 38 23.4	-1.6
	comp=Z,4.2nm,0.4s						
OSTC	Ostas	5.29	9	ePN	Pn	20 37 29.9	+1.6
BERGE	Lenzkirch (DE)	5.29	301	ePn	Pn	20 37 29.4	+1.1
BERGE				eSg	Sg	20 38 59.1	+0.1
BFO	Black Forest	5.42	306	ePn	Pn	20 37 31.7	+1.6
GZR	Gura Zlata	5.54	87	⇓P	Pb	20 37 48.5	+2.5
SBF	Sospel	5.55	257	ePn	Pn	20 37 32.4	+0.5
SBF				eSn	Sn	20 38 33.9	-1.8
	comp=Z,18nm,0.6s						
BRG	Berggiesshubel	5.57	354	PG	Pg	20 37 54.2	-1.7
BRG				SG	Sg	20 39 02.1	-5.9
	comp=Z,8.3nm,0.9s						
MOX	Moxa	5.75	338	ePn	Pn	20 37 35.6	+1.1
LPG	La Plagne	5.75	274	ePn	Pn	20 37 36.5	+1.6
LPG				eSn	Sn	20 38 39.0	-2.1
	comp=Z,11nm,0.6s						
LPL	La Plagne	5.76	275	ePn	Pn	20 37 36.5	+1.4
LPL				eSn	Sn	20 38 39.5	-1.8
	comp=Z,9.8nm,0.6s						
LPL				eSg	Sg	20 39 13.3	-1.1
	comp=Z,3.5nm,0.5s						
MBDF	Montbardon	5.81	267	ePn	Pn	20 37 35.5	-0.1
MBDF				eSn	Sn	20 38 40.1	-2.2
	comp=Z,9.4nm,0.6s						
MBDF				eSg	Sg	20 39 14.4	-1.3
	comp=Z,8.8nm,0.8s						
CDF	Champ du Feu	6.07	303	ePn	Pn	20 37 40.0	+0.9
CDF				eSg	Sg	20 39 22.2	-1.9
	comp=Z,21nm,0.9s						
HINF	Hinteralfeld	6.08	297	ePn	Pn	20 37 40.1	+0.8
HINF				eSn	Sn	20 38 46.7	-2.2
	comp=Z,6.1nm,0.5s						
HINF				eSg	Sg	20 39 22.8	-1.8
	comp=Z,4.7nm,0.6s						
CLL	Collm	6.10	349	ePn	Pn	20 37 43.0	+3.6
CLL				e		20 39 06.0	
CLL				eSg	Sg	20 39 22.0	-3.0
	comp=Z,17nm,1.2s						
FRF	La Foret Royal	6.18	256	ePn	Pn	20 37 40.8	+0.2
FRF				eSn	Sn	20 38 49.2	-2.1
	comp=Z,32nm,1.0s						
CABF	La Chapelle	6.28	285	ePn	Pn	20 37 42.6	+0.5
CABF				eSn	Sn	20 38 51.4	-2.5
	comp=Z,1.3nm,0.2s						
CABF				eSg	Sg	20 39 29.1	-1.9
	comp=Z,2.7nm,0.5s						
LMR	La Mourre	6.36	255	ePn	Pn	20 37 43.1	+0.1
LMR				eSn	Sn	20 38 53.2	-2.4
	comp=Z,58nm,1.4s						
ORIF	Oris-en-Rattie	6.41	269	ePn	Pn	20 37 45.0	+1.2
ORIF				eSn	Sn	20 38 54.9	-2.1
	comp=Z,21nm,0.9s						
HAU	Haudompre	6.47	297	ePn	Pn	20 37 45.3	+0.8
HAU				eSn	Sn	20 38 56.0	-2.3
	comp=Z,2.2nm,0.3s						
SMRF	Simiane la Rot	6.80	262	eP	Pn	20 37 54.3	+5.1
SMRF				eSn	Sn	20 39 03.3	-3.3
	comp=Z,1.8nm,0.5s						
PAGF	Fort de Pagny	7.06	300	eP	Pn	20 37 57.7	+5.0
VIVF	Saint-Julien-l	7.27	270	ePn	Pn	20 37 56.0	+0.5
VIVF				eSn	Sn	20 39 15.0	-3.1
	comp=Z,15nm,1.1s						
SFTF	Sexfontaines	7.36	296	ePn	Pn	20 37 57.3	+0.5
SFTF				eSn	Sn	20 39 16.8	-3.5
SFTF				eSg	Sg	20 40 02.3	-3.2
	comp=Z,1.7nm,0.3s						
SMF	Signal de Mont	7.83	283	ePn	Pn	20 38 03.8	+0.7
SMF				eSn	Sn	20 39 28.4	-3.3
	comp=Z,6.6nm,0.6s						
LOR	Lormes	7.90	288	ePn	Pn	20 38 05.0	+0.9
	baz=109						
LOR				eSn	Sn	20 39 30.0	-3.5
	comp=Z,2.8nm,0.4s						
LASF	Ste Croix	7.98	265	ePn	Pn	20 38 04.6	-0.7
LASF				eSn	Sn	20 39 32.0	-3.6
	comp=Z,14nm,0.9s						
SSF	Saint Saulge	8.10	286	ePn	Pn	20 38 06.7	-0.2
SSF				eSn	Sn	20 39 34.8	-3.7
	comp=Z,3.8nm,0.7s						
AVF	Avril sur Loir	8.17	284	ePn	Pn	20 38 08.2	+0.3
AVF				eSn	Sn	20 39 36.7	-3.5
	comp=Z,3.7nm,0.8s						
PLOR	Plostina	8.24	82	⇓S	Sb	20 39 58.7	-12
BGF	Bois d'Agland	8.50	282	ePn	Pn	20 38 13.4	+1.0
BGF				eSn	Sn	20 39 44.2	-4.1
	comp=Z,6.7nm,0.6s						
HYF	Humbligny	8.72	287	ePn	Pn	20 38 16.3	+0.9
TCF	Toulx Ste Croi	8.93	281	ePn	Pn	20 38 18.9	+0.6
TCF				eSn	Sn	20 39 54.7	-4.1
	comp=Z,1.3nm,0.4s						

LJU **19** *20:44:13.2, 45.32N×14.92E, h12km, ML2.7*
RHSSO **19** *20:44:14.4±0.3, 45.34N×14.89E, h5km±2km, ML3.3/13*
PRU **19** *20:44:14.0±0.5, 45.31N×15.08E, h1km*
BEO **19** *20:44:15.0±0.2, 45.37N×14.92E, h0km, ML3.3/9*
LDG **19** *20:44:15.8±0.1, 45.55N×14.89E, h5km, Ml3.2/26, Error ellipse: s-maj=4.6km s-min=3.1km az=176.0*
BGR **19** *20:44:18.0±0.5, 45.43N×14.98E, h10km, ML3.4/12, Error ellipse: s-maj=5.6km s-min=5.6km az=175.0*
ISC 19 20:44:14.2±0.8, **45.35N**±0.02×**14.89E**±0.01, **h15**km±5km, **n158**, σ2.24/267, **5C-8D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIY	Rijeka	0.28	265	ePg	Pg	20 44 20.2	0.0
RIY				Sg	Sg	20 44 25.5	+1.1
RIY	Rijeka	0.28	265	ePg	Pg	20 44 19.7	-0.6
RIY				eSg	Sg	20 44 24.8	+0.4
RIY	Rijeka	0.28	265	⇑iPg	Pg	20 44 19.5	-0.8
RIY				eSg	Sg	20 44 24.9	+0.5
BOJS	Bojanci	0.30	59	ePg	Pg	20 44 19.2	-1.4
BOJS				eSg	Sg	20 44 23.2	-1.7
BOJS	Bojanci	0.30	59	ePg	Pg	20 44 18.9	-1.7
BOJS				iSg	Sg	20 44 23.4	-1.5
	comp=Z,2µm,0.3s						
KNDS	Knezji Dol	0.40	297	iPg	Pg	20 44 21.7	-0.6
KNDS				eSg	Sb	20 44 28.9	0.0
	comp=Z,3µm,1.3s						
VISS	Visnje	0.45	356	iPg	Pg	20 44 22.8	-0.5
VISS				eSg	Sb	20 44 29.9	-0.6
	comp=Z,182nm,0.2s						
OZLJ	Ozalj	0.49	57	ePg	Pg	20 44 24.3	+0.4
OZLJ				Sg	Sg	20 44 30.5	0.0
CRES	Cresnjev	0.62	40	iPg	Pg	20 44 25.8	-0.7
CRES				eSg	Sg	20 44 33.7	-1.0
	comp=Z,670nm,0.5s						
CRES	Cresnjev	0.62	40	⇓iPg	Pg	20 44 25.7	-0.7
CRES				eSg	Sg	20 44 34.6	-0.1
SKDS	Skadanscina	0.64	288	ePg	Pg	20 44 26.0	-0.8
SKDS				eSg	Sb	20 44 36.8	+0.8
	comp=Z,121nm,0.2s						
GBAS	Gorenja Brezov	0.66	332	ePg	Pg	20 44 26.8	-0.4
GBAS				eSg	Sb	20 44 38.2	+1.7
LEGS	Legarje	0.67	27	ePg	Pg	20 44 26.4	-0.9
LEGS				eSg	Sb	20 44 36.5	-0.2
PDKS	Podkum	0.71	6	iPg	Pg	20 44 27.7	-0.5
PDKS				eSg	Sb	20 44 39.1	+1.1
GCIS	Gornji Cirnik	0.73	45	iPg	Pg	20 44 27.7	-0.9
GCIS				eSg	Sg	20 44 37.7	-0.5
	comp=Z,339nm,0.5s						
LJU	Ljubljana	0.74	340	ePg	Pg	20 44 28.3	-0.3
LJU				eSg	Sb	20 44 39.2	+0.6
LJU	Ljubljana	0.74	340	iPg	Pg	20 44 28.4	-0.2
LJU				eSg	Sn	20 44 41.0	0.0
LJU	Ljubljana	0.74	340	⇓iPg	Pg	20 44 28.3	-0.3
LJU				eSg	Sb	20 44 38.3	-0.3
CESS	Cesta pri Krsk	0.74	33	iPg	Pb	20 44 29.1	+0.3
	comp=Z,368nm,0.4s						
VNDS	Vrh nad Dolski	0.76	350	iPg	Pg	20 44 28.8	-0.3
	comp=Z,237nm,0.4s						
NVLJ	Novalja	0.79	181	iPg	Pg	20 44 27.5	-2.0
NVLJ				Sg	Sg	20 44 39.0	-0.8
JAVS	Javornik	0.79	314	iPg	Pg	20 44 28.9	-0.7
JAVS				eSg	Sb	20 44 42.4	+2.2
	comp=Z,203nm,0.4s						
GOLS	Golise	0.84	38	iPg	Pg	20 44 30.1	-0.4
GOLS				eSg	Sb	20 44 42.3	+0.8
	comp=Z,743nm,0.7s						
CRNS	Crni Vrh	0.85	329	iPg	Pb	20 44 30.8	+0.1
DOBS	Dobrina	0.90	27	iPg	Pg	20 44 31.0	-0.6
DOBS				eSg	Sn	20 44 45.7	+0.8
ZAG	Zagreb	0.91	58	ePg	Pb	20 44 32.1	+0.5
ZAG				Sg	Sn	20 44 45.9	+0.8
ZAG	Zagreb	0.91	58	ePg	Pg	20 44 31.1	-0.7
ZAG				eSg	Sg	20 44 43.7	-0.1
PTJ	Puntijarka	0.94	53	ePg	Pg	20 44 31.6	-0.9
PTJ				Sg	Sb	20 44 45.4	+0.9
MOZS	Mozjanca	0.99	342	ePg	Pg	20 44 33.1	-0.3
	comp=Z,220nm,0.0s						
UDBI	Udbina	1.03	142	iPg	Pg	20 44 32.5	-1.6
GORS	Gorjuse	1.15	328	ePg	Pb	20 44 36.4	+0.6
GORS				eSg	Sn	20 44 53.7	+2.4
	comp=Z,166nm,0.4s						
OBKA	Obir	1.18	349	ePn	Pg	20 44 36.4	-0.7
OBKA				eSg	Sn	20 44 55.7	+3.6
OBKA	Obir	1.18	349	Pn	Pg	20 44 36.5	-0.5
	comp=Z,116nm,0.5s,SNR=51						
OBKA				iSn	Sn	20 44 55.5	+3.4
	comp=Z,510nm,0.6s						
CADS	Cadrg	1.19	318	iPg	Pn	20 44 37.7	+1.4
CADS				eSg	Sn	20 44 55.6	+3.4
	comp=Z,208nm,0.5s						
GROS	Grobnik	1.19	21	ePg	Pg	20 44 36.8	-0.4
PERS	Pernice	1.30	7	ePg	Pn	20 44 39.0	+1.2
ROBS	Robic	1.31	313	iPg	Pn	20 44 39.0	+1.1
ROBS				Sg	Sn	20 44 59.0	+3.8
	comp=Z,57nm,0.2s						
SOKA	Soboth	1.33	4	ePg	Pn	20 44 38.9	+0.6
	comp=Z,89nm,0.3s,SNR=41						
SOKA				iSn	Sn	20 44 58.3	+2.5
	comp=Z,78nm,0.5s						
MOSL	Moslavina	1.34	78	iPg	Pn	20 44 38.9	+0.5
MOSL				Sg	Sg	20 44 56.0	-1.5
KALN	Kalnik	1.35	54	iPg	Pn	20 44 39.5	+1.0
KALN				Sg	Sn	20 44 58.4	+2.3
DUGI	Dugi Otok	1.36	175	ePg	Pn	20 44 38.2	-0.4
DUGI				Sg	Sb	20 44 57.1	+0.5
KOGS	Kog	1.45	40	iPg	Pn	20 44 40.8	+0.9
KOGS				Sg	Sg	20 45 02.3	+1.2
	comp=Z,217nm,0.5s						
MYKA	Terra Mystica	1.55	326	Pn	Pb	20 44 43.1	+0.6
	comp=Z,36nm,0.3s,SNR=37						
MYKA				eSg	Sg	20 45 05.2	+1.1
	comp=Z,113nm,0.7s						
MORI	Morici	1.60	158	iPg	Pn	20 44 43.1	+1.3
MORI				Sg	Sn	20 45 04.9	+2.8
KIJV	Kijevo	1.73	141	ePn	Pn	20 44 44.7	+1.0
KIJV				Sn	Sn	20 45 07.1	+1.7
BEHE	Becsehely	1.73	49	ePn	Pn	20 44 45.2	+1.5
BEHE				eSn	Sb	20 45 07.8	+0.6
BLY	Banja Luka	1.74	109	ePg	Pn	20 44 45.2	+1.4
BLY				eSg	Sn	20 45 08.6	+3.0
BLY	Banja Luka	1.74	109	⇓P	Pn	20 44 44.1	+0.3
BLY				⇑S	Sn	20 45 06.7	+1.1
BLY	Banja Luka	1.74	109	⇓iPn	Pn	20 44 44.9	+1.1
BLY				eSg	Sb	20 45 09.1	+1.8
ZIRJ	Zirje	1.78	162	ePn	Pn	20 44 45.7	+1.3
ZIRJ				Sn	Sn	20 45 09.9	+3.3
MGRS	Mrkonjic Grad	1.82	120	⇓iPn	Pn	20 44 46.0	+1.1
MGRS				eSn	Sn	20 45 09.3	+1.6
ARSA	Arzberg	1.95	13	ePn	Pn	20 44 48.2	+1.4
ARSA				eSg	Sg	20 45 16.1	-0.9
ARSA	Arzberg	1.95	13	Pn	Pn	20 44 48.3	+1.6
	comp=Z,35nm,0.3s,SNR=56						
ARSA				Sn	Sg	20 45 15.5	-1.5
	comp=Z,22nm,0.3s						
KBA	Koelnbreinsper	2.03	329	ePn	Pn	20 44 50.1	+2.1
KBA				eSg	Sg	20 45 20.6	+1.0
KBA	Koelnbreinsper	2.03	329	Pn	Pn	20 44 50.3	+2.3
	comp=Z,7.7nm,0.4s,SNR=23						
KBA				eSg	Sg	20 45 20.6	+1.0
	comp=Z,32nm,0.7s						
ABTA	Abfaltersbach	2.16	311	Pn	Pb	20 44 52.6	-0.5
	comp=Z,6.3nm,0.4s,SNR=20						
ABTA				eSg	Sg	20 45 24.7	+0.9
	comp=Z,190nm,0.8s						
DOB	Doboj	2.36	104	ePn	Pn	20 44 55.2	+2.9
DOB	Doboj	2.36	104	ePn	Pn	20 44 54.3	+2.0
DOB				eSn	Sn	20 45 23.4	+2.4
MOA	Molln	2.54	351	ePn	Pn	20 44 56.9	+2.2
MOA				ePg	Pg	20 45 04.5	+1.7
MOA	Molln	2.54	351	Pn	Pn	20 44 57.2	+2.4
	comp=Z,5.0nm,0.3s,SNR=12						
MAKA	Makarska	2.57	143	ePg	Pb	20 45 00.0	+0.1
MAKA				Sn	Sn	20 45 29.9	+3.8
CONA	Conrad Observa	2.67	14	Pn	Pn	20 44 58.9	+2.2
	comp=Z,3.7nm,0.2s,SNR=12						
CONA				Sn	Sn	20 45 30.5	+1.9
	comp=Z,20nm,0.5s						
MORH	Mrgy, Hungar	2.77	70	eSn	Sn	20 45 33.2	+2.2
RJOB	Jochberg	2.79	330	ePn	Pn	20 45 01.7	+3.4
WTTA	Wattenberg	2.96	312	ePn	Pb	20 45 05.2	-1.4
WTTA	Wattenberg	2.96	312	ePn	Pb	20 45 05.3	-1.4
	comp=Z,9.9nm,0.5s						
WTTA				Sn	Sg	20 45 46.9	-2.2
	comp=Z,87nm,0.9s						
WATA	Walderalm	3.03	312	ePn	Pn	20 45 05.5	+3.8
	comp=Z,2.4nm,0.2s,SNR=8.9						
WATA				eSn	Sb	20 45 46.7	+1.9
	comp=Z,11nm,0.4s						
HAPS	Han Pijesak,Bl	3.16	112	ePn	Pn	20 45 05.3	+1.8
HAPS	Han Pijesak,Bl	3.16	112	ePn	Pn	20 45 03.9	+0.4
SQTA	Sankt Quirin	3.16	308	ePn	Pb	20 45 08.1	-2.0
	comp=Z,4.5nm,0.3s,SNR=7.8						
SQTA				eSg	Sg	20 45 57.6	+1.9
	comp=Z,55nm,0.5s						
AQU	L'Aquila	3.18	200	eSn	Sn	20 45 42.3	+1.0
STON	Ston	3.20	140	ePn	Pn	20 45 06.9	+3.1
STON				Sn	Sn	20 45 46.2	+4.5
STON	Ston	3.20	140	ePn	Pn	20 45 06.9	+3.1
STON				eSn	Sn	20 45 44.7	+3.0
STON	Ston	3.20	140	ePn	Pn	20 45 05.7	+1.8
STON				eSn	Sn	20 45 42.6	+0.9
ZST	Bratislava	3.23	27	ePN	Pn	20 45 05.0	+0.7
ZST				eSG	Sg	20 45 56.4	-1.5
MOTA	Moosalm	3.29	309	ePn	Pn	20 45 09.1	+3.8
	comp=Z,7.8nm,0.3s,SNR=11						
MOTA				Sg	Sg	20 46 02.6	+2.7
	comp=Z,44nm,0.7s						
FETA	Feichten	3.34	302	iPn	Pb	20 45 10.6	-2.5
	comp=Z,1.9nm,0.3s,SNR=5.7						
FETA				iSn	Sb	20 45 55.9	+2.4
	comp=Z,39nm,0.7s						
MODS	Modra-Piesok	3.44	28	ePN	Pn	20 45 07.6	+0.4
MODS				eSG	Sg	20 46 02.5	-2.2
MODS				eLG	Lg	20 46 12.6	
FRGS	Fruska Gora	3.48	91	ePn	Pn	20 45 10.9	+3.1
FRGS				eSn	Sn	20 45 51.6	+2.9
BBLS	Lazići	3.55	113	ePn	Pn	20 45 11.6	+2.8
BBLS	Lazići	3.55	113	ePn	Pn	20 45 10.2	+1.4
BBLS				eSn	Sn	20 45 52.0	+1.5
RETA	Reutte	3.56	308	ePn	Pn	20 45 12.7	+3.7
	comp=Z,1.6nm,0.3s,SNR=5.4						
RETA				eSn	Sn	20 45 55.0	+4.2
	comp=Z,3µm,0.0s						
DBRK	Dubrovnik	3.57	138	ePn	Pn	20 45 11.5	+2.6
DBRK				Sn	Sn	20 45 54.2	+3.5
GEC2	GERESS Array S	3.59	347	ePn	Pn	20 45 11.5	+2.2
GEC2				eSg	Sg	20 46 09.1	-0.3
TREB	Trebinje	3.63	135	ePn	Pn	20 45 12.6	+2.8
TREB				eSn	Sn	20 45 56.1	+3.8
TREB	Trebinje	3.63	135	ePn	Pn	20 45 10.8	+1.0
TREB				eSn	Sn	20 45 53.0	+0.7
RUDO	Rudo	3.65	117	ePn	Pn	20 45 11.6	+1.6
DIVS	Divibare	3.85	107	ePn	Pn	20 45 15.7	+2.8
DIVS	Divibare	3.85	107	ePn	Pn	20 45 14.0	+1.1
DIVS				eSn	Sn	20 45 58.1	+0.3
KRUC	Moravsky	3.85	15	ePN	Pn	20 45 13.8	+0.9
KRUC				eSN	Sn	20 45 57.1	-0.7
KHC	Kasperske Hory	3.89	347	ePN	Pn	20 45 15.1	+1.8
KHC				ePG	Pg	20 45 26.0	-2.6
KHC				eSN	Sn	20 46 01.8	+3.1
KHC				eSG	Sg	20 46 19.7	+0.8
	comp=Z,14nm,0.8s						
DAVA	Damuels	3.97	301	ePn	Pn	20 45 18.5	+3.8
DAVA				eSg	Sg	20 46 24.5	+2.8
JAVC	Velka Javorina	3.99	27	ePN	Pn	20 45 16.5	+1.7
WET	Wettzell	4.03	341	ePn	Pn	20 45 17.6	+2.2
UBR	Ueberruh	4.04	307	ePn	Pn	20 45 18.5	+3.0
UBR				eSg	Sg	20 46 25.3	+1.5
TRUS	Trudelj	4.09	104	ePn	Pn	20 45 17.7	+1.6
VRAC	Vranov	4.13	16	ePN	Pn	20 45 17.7	+1.1
VRAC				eSN	Sn	20 46 03.4	-1.2
VRAC	Vranov	4.13	16	⇑P	Pn	20 45 18.0	+1.4
VYHS	Vyhne	4.15	39	ePN	Pn	20 45 18.3	+1.4
VYHS				eSN	Sn	20 46 05.4	+0.3
IVAS	Ivanjica	4.17	113	ePn	Pn	20 45 18.8	+1.6
IVAS				eSn	Sn	20 46 07.7	+2.1
PLONS	Plons/SG	4.18	296	ePn	Pn	20 45 22.1	+4.6
SJES	Sjenica	4.21	118	ePn	Pn	20 45 19.4	+1.6
PDG	Podgorica	4.30	131	ePn	Pn	20 45 22.1	+3.1
PDG				eSn	Sn	20 46 11.4	+2.6
PDG	Podgorica	4.30	131	⇑S	Sn	20 46 13.3	+4.4
PBCC	Pribram	4.38	352	ePN	Pn	20 45 21.9	+1.8
GRUS	Gruza	4.41	107	ePn	Pn	20 45 21.6	+1.1
DRME	Dracevica, Mon	4.44	134	ePn	Pn	20 45 21.7	+0.8
WILA	Wila	4.62	299	ePn	Pn	20 45 27.6	+4.1
WILA				eSg	Sg	20 46 44.6	+2.1
PRU	Pruhonice	4.65	357	ePN	Pn	20 45 24.8	+1.1
BZS	Buzias	4.74	84	ePn	Pn	20 45 27.3	+2.2
BZS	Buzias	4.74	84	⇓P	Pg	20 45 41.9	-3.0
ROTZ	Rotzenmuhle	4.78	339	ePn	Pn	20 45 27.8	+2.3
ROTZ				eSg	Sg	20 46 49.9	+2.5
MORC	Moravsky Berou	4.78	21	ePN	Pn	20 45 27.1	+1.5
MORC				eSN	Sn	20 46 18.9	-1.8
MORC	Moravsky Berou	4.78	21	⇓P	Pn	20 45 27.4	+1.8
MORC				⇓S	Sn	20 46 19.7	-1.0
MDVR	Moldovita	4.87	94	⇑P	Pb	20 45 43.6	+4.4
EMING	Emmingen-Lipti	4.88	304	ePn	Pn	20 45 30.2	+3.2
EMING				eSg	Sg	20 46 52.7	+1.9
LANS	Liptovska Anna	4.92	38	ePN	Pn	20 45 29.2	+1.7
SELS	Selova	4.96	113	ePn	Pn	20 45 28.8	+0.8
GRF	Grafenberg Arr	5.00	332	ePn	Pn	20 45 28.9	+0.3
GRF				eSg	Sg	20 46 57.2	+2.5
SLE	Schleitheim	5.03	301	ePn	Pn	20 45 31.7	+2.7
SLE				eSg	Sg	20 46 57.7	+2.2
PGF	Pioggiola	5.09	239	ePn	Pn	20 45 30.6	+0.7
PGF				eSn	Sn	20 46 26.0	-2.4
	comp=Z,2.9nm,0.4s						
SULZ	Cheisacher	5.16	297	eSg	Sg	20 47 00.9	+1.1
BOVS	Bovan	5.17	107	ePn	Pn	20 45 32.2	+1.2
BFO	Black Forest	5.39	306	ePn	Pn	20 45 36.3	+2.3
ZAGS	Zajecar	5.47	104	ePn	Pn	20 45 36.4	+1.4
SBF	Sospel	5.52	257	ePn	Pn	20 45 37.0	+1.1
SBF				eSn	Sn	20 46 34.8	-4.3
	comp=Z,7.8nm,0.4s						
BRG	Berggiesshubel	5.56	354	SG	Sg	20 47 07.1	-5.5
	comp=Z,12nm,1.1s						
BARS	Barje	5.60	114	ePn	Pn	20 45 38.3	+1.5
LPG	La Plagne	5.73	274	ePn	Pn	20 45 40.6	+1.7
LPG				eSn	Sn	20 46 41.1	-3.3
	comp=Z,15nm,0.7s						
MOX	Moxa	5.73	339	ePn	Pn	20 45 40.4	+1.7
MOX				eSg	Sg	20 47 16.6	-1.5
LPL	La Plagne	5.74	275	ePn	Pn	20 45 40.6	+1.6
LPL	La Plagne	5.74	275	eP	Pn	20 45 44.4	+5.4
LPL				eSn	Sn	20 46 41.4	-3.3
	comp=Z,12nm,0.6s						
MBDF	Montbardon	5.78	267	ePn	Pn	20 45 39.2	-0.3
MBDF				eSn	Sn	20 46 42.0	-3.6
	comp=Z,11nm,0.6s						
ZAPS	Zavoj	5.93	108	ePn	Pn	20 45 42.6	+1.1
CDF	Champ du Feu	6.05	303	eP	Pn	20 45 45.1	+2.0
CDF				eSg	Sg	20 47 24.8	-3.4
	comp=Z,20nm,0.9s						
HINF	Hinteralfeld	6.06	297	ePn	Pn	20 45 45.4	+2.2
HINF				eSn	Sn	20 46 48.8	-3.5
	comp=Z,8.0nm,0.6s						
CLL	Collm	6.09	349	ePn	Pn	20 45 48.0	+4.4
CLL				e		20 47 08.0	
CLL				eSg	Sg	20 47 27.0	-2.6
	comp=Z,33nm,1.6s						
FRF	La Foret Royal	6.16	256	ePn	Pn	20 45 44.9	+0.3
FRF				eSn	Sn	20 46 51.2	-3.5
	comp=Z,3.8nm,0.3s						
CABF	La Chapelle	6.26	285	ePn	Pn	20 45 48.0	+2.0
CABF				eSn	Sn	20 46 53.5	-3.7
	comp=Z,5.0nm,0.7s						
LMR	La Mourre	6.34	254	ePn	Pn	20 45 46.8	-0.1
LMR				eSn	Sn	20 46 55.3	-3.7
	comp=Z,1.1nm,0.2s						
ORIF	Oris-en-Rattie	6.38	269	ePn	Pn	20 45 49.4	+1.7
ORIF				eSn	Sn	20 46 56.5	-3.9
	comp=Z,6.1nm,0.5s						
HAU	Haudompre	6.45	297	eP	Pn	20 45 52.1	+3.6
HAU				eSn	Sn	20 46 59.1	-2.6
	comp=Z,9.7nm,0.6s						
SMRF	Simiane la Rot	6.78	262	ePn	Pn	20 45 54.1	+1.0
SMRF	Simiane la Rot	6.78	262	eP	Pn	20 45 59.1	+6.0
PAGF	Fort de Pagny	7.04	300	ePn	Pn	20 45 59.0	+2.4
PAGF	Fort de Pagny	7.04	300	eP	Pn	20 46 02.9	+6.3
PAGF				eSn	Sn	20 47 12.4	-3.9
	comp=Z,2.2nm,0.4s						
VIVF	Saint-Julien-l	7.25	270	ePn	Pn	20 46 00.1	+0.6
VIVF				eSn	Sn	20 47 16.9	-4.5
	comp=Z,1.3nm,0.2s						
SFTF	Sexfontaines	7.34	296	ePn	Pn	20 46 01.9	+1.2
SFTF				eSn	Sn	20 47 19.5	-4.2
	comp=Z,0.8nm,0.2s						
SMF	Signal de Mont	7.80	283	ePn	Pn	20 46 09.0	+1.9
SMF				eSn	Sn	20 47 30.1	-4.9
	comp=Z,8.0nm,0.7s						
LOR	Lormes	7.87	288	ePn	Pn	20 46 09.5	+1.4
	baz=108						
LOR				eSn	Sn	20 47 31.5	-5.3
	comp=Z,7.6nm,0.5s						
LASF	Ste Croix	7.96	265	ePn	Pn	20 46 08.4	-0.9
LASF				eSn	Sn	20 47 34.0	-5.0
	comp=Z,2.1nm,0.3s						
SSF	Saint Saulge	8.08	286	ePn	Pn	20 46 11.0	+0.1
SSF				eSn	Sn	20 47 37.9	-3.9
	comp=Z,3.5nm,0.7s						
AVF	Avril sur Loir	8.15	284	ePn	Pn	20 46 13.0	+1.2
AVF				eSn	Sn	20 47 38.6	-5.0
	comp=Z,2.0nm,0.5s						
BGF	Bois d'Agland	8.48	282	ePn	Pn	20 46 17.0	+0.7
BGF				eSn	Sn	20 47 46.7	-4.9
	comp=Z,3.1nm,0.4s						
BAIF	Baives	8.60	307	ePn	Pn	20 46 19.3	+1.3
HYF	Humbligny	8.69	287	ePn	Pn	20 46 21.5	+2.2
TCF	Toulx Ste Croi	8.90	281	ePn	Pn	20 46 23.7	+1.5
TCF				eSn	Sn	20 47 56.9	-5.3
	comp=Z,1.8nm,0.5s						
RJF	Les Rejaudoux	9.42	274	eSn	Sn	20 48 08.7	-6.1
	comp=Z,1.6nm,0.3s						

IDC 19 21:14:45.5±3.2, **2.48N**×**129.43E**, **h161**km±48km, **mb3.1**/3, **mb1 3.3**/4, **mb1mx2.9**/60, **mbtmp3.6**/4, **Error ellipse: s-maj=177.7km s-min=21.9km az=70.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	3.80	151	P	Pn	21 15 42.6	-1.0
	6.4nm,0.3s,baz=324,slow=19,SNR=30						
SIJI				S	Sn	21 16 28.6	-0.2
	2.6nm,0.3s,baz=310,slow=22,SNR=9.9						
WRA	Warramunga Arr	22.80	168	P	P	21 19 35.2	+0.6
	0.7nm,0.5s,baz=341,slow=9.0,SNR=9.3						
ASAR	Alice Springs	26.35	171	P	P	21 20 07.7	+0.9
	0.4nm,0.6s,baz=353,slow=7.8,SNR=4.8						
MKAR	Makanchi Array	60.12	324	P	P	21 24 35.8	-0.3

	0.4nm,0.5s,baz=113,slow=8.3,SNR=14						

IDC 19 21:17:02.7±14.0,12.34S×167.25E,h231km±136km, mb3.3/6,mb1 3.5/6,mb1mx3.2/48,mbtmp3.8/6,Error ellipse: s-maj=142.0km s-min=48.1km az=144.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	21.57	246	P	P	21 21 34.8	+0.4
	2.7nm,0.8s,baz=61,slow=13,SNR=2.7						
WRA	Warramunga Arr	32.46	252	P	P	21 23 11.5	-0.2
	0.5nm,0.5s,baz=85,slow=9.0,SNR=2.7						
ASAR	Alice Springs	33.57	246	P	P	21 23 21.0	-0.4
	0.4nm,0.7s,baz=67,slow=8.9,SNR=4.5						
ILAR	Eielson Array	84.27	18	P	P	21 29 08.2	0.0
	1.4nm,0.6s,baz=234,slow=4.4,SNR=27						
YKA	Yellowknife Ar	95.44	27	P	P	21 30 00.5	-0.3
	0.1nm,0.5s,baz=265,slow=4.8,SNR=3.3						
MKAR	Makanchi Array	95.47	317	P	P	21 30 01.2	-0.1
	0.3nm,0.6s,baz=92,slow=5.6,SNR=4.1						
ARCES	ARCESS Array B	117.95	346	PKP	PKiKP	21 35 21.4	0.0
	2.8nm,0.8s,baz=62,slow=2.1,SNR=6.8						

TEH 19 21:48:11.2,28.34N×53.21E,h12km,ML3.4
IDC 19 21:48:13.9±3.9,28.22N×53.11E,h39km±38km,mb3.4/10, mb1 3.4/12,mb1mx3.2/44,mbtmp3.6/12,ML3.5/2,Error ellipse: s-maj=25.1km s-min=19.9km az=165.0
OMAN 19 21:48:15.8±2.2,27.93N×52.90E,h33km±91km,ml3.2/7, Error ellipse: s-maj=117.3km s-min=10.0km az=6.0
ISC 19 21:48:10.3±0.6,28.25N±0.04×53.12E±0.05,h14km,n48, σ1§61/59,mb3.5/10,Southern Iran

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHRM	Jahrom	0.48	58	ePg	Pg	21 48 17.7	-2.2
JHRM				eSg	Sg	21 48 24.2	-2.1
JHRM				e		21 48 27.3	
LMD1	Lamerd	0.91	177	ePg	Pn	21 48 29.9	+1.3
LMD1				e		21 48 51.5	
ISRV	Sarvestan	1.13	360	ePg	Pb	21 48 31.6	-0.2
ISRV				e		21 48 37.5	
LAR1	LAR	1.25	117	ePg	Pg	21 48 35.5	+1.1
SHI	Shiraz	1.49	339	ePg	Pb	21 48 38.2	+0.4
IKAZ	Kazeroun	1.89	324	ePn	Pb	21 48 44.7	-0.1
IKAZ				e		21 49 17.5	
KLNJ	Kolanjah	3.06	335	ePn	Pn	21 48 58.2	-0.3
NIAN	Nian	3.36	101	ePn	Pn	21 49 03.8	+1.4
IMEH	Mehriz	3.39	22	ePn	Pn	21 49 05.4	+2.4
NGRK	Negar Kerman	3.46	65	ePn	Pn	21 49 05.4	+1.3
IRAM	Ramesheh	3.61	350	ePn	Pn	21 49 07.3	+1.3
KHGB	Koh Gabri	3.62	53	ePn	Pn	21 49 07.7	+1.5
TVBK	TV Kerman	3.63	61	e		21 49 22.2	
TVBK				ePn	Pn	21 49 08.2	+1.8
BANOM	Banah	3.66	128	P	Pn	21 49 10.0	+3.5
	SNR=8.9						
BANOM				S	Sb	21 49 55.9	-3.2
ISAD	Sadrabad	3.69	8	ePn	Pn	21 49 09.3	+2.2
IBAF	Bafgh	3.95	32	ePn	Pn	21 49 12.4	+1.7
NAZ	Nazwa, Dubai	3.96	144	S	Sn	21 49 57.5	+0.4
MDH	Madha	4.09	135	P	Pn	21 49 14.6	+2.2
ICHK	Chekchek	4.14	15	ePn	Pn	21 49 15.3	+2.0
IGAR	Gharneh	4.25	348	ePn	Pn	21 49 16.1	+1.3
UOSS	Minazif	4.30	139	P	Pn	21 49 17.3	+2.1
UOSS				S	Sn	21 50 05.6	+0.4
ASHO	Ashiyiah	4.42	143	P	Pn	21 49 19.4	+2.4
ASHO				S	Sn	21 50 08.8	+0.5
IZEF	Zefreh	4.68	352	ePn	Pn	21 49 21.8	+1.0
IPIR	Pirpir	4.82	337	ePn	Pn	21 49 23.8	+1.1
ANAR	Anarak	4.96	6	ePn	Pn	21 49 25.1	+0.7
SOHO	SOHO	5.12	142	P	Pn	21 49 28.5	+1.9
	SNR=9.2						
SOHO				S	Sn	21 50 26.7	+1.2
IKLH	Kolahrood	5.23	346	ePn	Pn	21 49 29.2	+0.9
TPRV	Parvadeh(Tabas	5.67	32	ePn	Pn	21 49 35.8	+1.6
ARQ	Araqi	5.77	147	P	Pn	21 49 37.0	+1.4
	SNR=9.5						
ARQ				S	Sn	21 50 42.7	+1.1
HOQ	Hoqain	5.99	140	P	Pn	21 49 40.4	+1.9
	SNR=6.6						
BSY	Bisya	6.61	145	P	Pn	21 49 48.7	+1.7
WSAR	Wadi Sarin	7.04	134	Pn	Pn	21 49 54.5	+1.5
	0.7nm,0.3s,baz=316,slow=9.1,SNR=16						
WSAR				Sn	Sn	21 51 11.7	-1.2
	0.3nm,0.3s,baz=306,slow=21,SNR=2.1						
WSAR	Wadi Sarin	7.04	134	P	Pn	21 49 54.5	+1.5
	SNR=12						
WBK	Wadi Bani Khal	7.71	135	P	Pn	21 50 03.0	+0.8
	SNR=11						
MHTO	MHTO	8.47	148	P	Pn	21 50 13.7	+1.1
MHTO				S	Sn	21 51 45.5	-2.5
	SNR=5.7						
WHFO	Wadi Hawf	10.30	177	P	Pn	21 50 38.0	+0.2
	SNR=19						
WHFO				S	Sn	21 52 28.1	-5.0
ABTO	Aybut	10.84	179	P	Pn	21 50 45.0	-0.2
	SNR=17						
BRTR	Keskin Array B	19.75	310	P	Pn	21 52 41.1	-0.3
	0.2nm,0.3s,baz=128,slow=14,SNR=6.1						
AKTO	Aktyubinsk	22.47	8	P	P	21 53 09.9	+0.9
	1.1nm,0.4s,baz=178,slow=12,SNR=5.0						
AAK	Ala-Archa	22.49	45	P	P	21 53 10.1	+0.6
	0.3nm,0.3s,baz=210,slow=14,SNR=2.1						
IDI	Anoyia	24.95	293	P	P	21 53 34.2	+0.9
	4.7nm,1.1s,baz=112,slow=23,SNR=3.0						
BVAR	Borovoye Array	27.86	23	P	P	21 53 59.2	-0.1
	0.3nm,0.4s,baz=212,slow=7.0,SNR=4.4						
BVAR				PcP	PcP	21 57 15.1	+0.1
	0.2nm,0.4s,baz=224,slow=4.0,SNR=4.6						
MKAR	Makanchi Array	29.39	43	P	P	21 54 14.2	+1.2
	0.1nm,0.6s,baz=243,slow=6.3,SNR=3.0						
MKAR				PcP	PcP	21 57 17.8	-1.1
	0.2nm,0.5s,baz=252,slow=3.6,SNR=3.7						
KURBB	Kurchatov Arra	29.48	34	P	P	21 54 14.7	+0.9
	0.4nm,0.8s,baz=234,slow=8.4,SNR=3.7						
ZALV	Zalesovo Beam	34.57	33	P	P	21 54 59.0	+0.6
	1.2nm,0.3s,baz=240,slow=10,SNR=6.6						
FINES	FINESS Array B	37.77	339	P	P	21 55 25.2	-0.4
	0.5nm,0.5s,baz=132,slow=11,SNR=6.1						
TORD	Torodi Ar. Bea	50.03	264	P	P	21 57 04.5	-0.2
	0.7nm,0.6s,baz=70,slow=7.6,SNR=5.8						
YKA	Yellowknife Ar	89.04	354	P	P	22 01 04.8	+0.2
	0.1nm,0.4s,baz=6.3,slow=4.9,SNR=2.6						

IDC 19 21:55:28.6±0.6,41.05S×44.02E,h0km,mb4.1/16, mb1 4.2/16,mb1mx4.0/30,mbtmp4.1/16,MS3.5/6, Ms1 3.5/6,ms1mx3.2/26,Error ellipse: s-maj=23.0km s-min=16.1km az=55.0
NEIC 19 21:55:30.1±1.0,41.1S±0.1×44.1E±0.2,h10km±1km, mb4.3/7,Error ellipse: s-maj=26.6km s-min=12.5km az=238.0
ISC 19 21:55:30.2±0.5,41.1S±0.1×44.1E±0.1,h10km,n45, σ0§91/40,mb4.1/17,MS3.4/5,Crozet Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CRZF	Crozet Islands	7.77	136	Pn	Pn	21 57 21.1	-2.2
BOSA	Boshof	19.78	303	P	P	22 00 04.5	+2.3
	0.4nm,0.3s,baz=150,slow=8.5,SNR=10						
BOSA				LR	LR	22 06 12.7	
	comp=Z,109nm,19.4s,baz=151,slow=33						
BOSA	Boshof	19.78	303	P	P	21 59 59.1	-1.6
BOSA				IAmb	IAmb	22 00 14.3	
	comp=Z,24nm,1.4s						
LBTB	Lobatse	22.21	310	P	P	22 00 27.1	+0.1
	comp=Z,2.9nm,0.9s,baz=151,slow=6.6,SNR=4.1						
LBTB				LR	LR	22 06 48.4	
	comp=Z,122nm,18.7s,baz=128,slow=31						
LBTB	Lobatse	22.21	310	P	P	22 00 25.0	-1.9
LBTB				IAmb	IAmb	22 00 34.9	
	comp=Z,7.9nm,1.0s						
MATP	Matopo	24.48	323	P	P	22 00 47.6	-2.1
	comp=Z,3.3nm,0.6s,baz=150,slow=8.7,SNR=13						
MATP				LR	LR	22 08 31.0	
	comp=Z,121nm,19.8s,baz=144,slow=32						
MAW	Mawson	28.49	165	LR	LR	22 10 53.1	
	comp=Z,102nm,18.1s,baz=48,slow=32						
LSZ	Lusaka	29.18	327	P	P	22 01 31.9	0.0
	comp=Z,0.6nm,0.4s,baz=146,slow=7.3,SNR=3.2						
LSZ				LR	LR	22 12 21.3	
	comp=Z,137nm,18.4s,baz=178,slow=35						
SNAA	Sanae	38.34	202	P	P	22 02 50.9	0.0
	comp=Z,1.2nm,0.6s,baz=72,slow=6.4,SNR=7.4						
SNAA	Sanae	38.34	202	IAmb	IAmb	22 03 52.9	
	comp=Z,10.0nm,1.4s						
QSPA	South Pole Qui	49.12	180	P	P	22 04 17.8	0.0
	comp=Z,3.7nm,1.0s,baz=256,slow=4.0,SNR=4.6						
QSPA	South Pole Qui	49.12	180	IAmb	IAmb	22 04 25.0	
	comp=Z,15nm,1.4s						
H01W2	Cape Leeuwin H	54.22	108	T	T	23 03 26.9	
	baz=241,slow=75,SNR=15						
H01W3	Cape Leeuwin H	54.22	108	T	T	23 03 27.6	
	baz=241,slow=75,SNR=13						
H01W1	Cape Leeuwin H	54.23	108	T	T	23 03 28.2	
	baz=241,slow=75,SNR=14						
DBIC	Dimbokro	65.30	304	P	P	22 06 12.6	0.0
	comp=Z,2.4nm,0.8s,baz=144,slow=9.4,SNR=3.1						
TOA0	Torodi Ar. Sit	66.67	314	P	P	22 06 20.9	-0.4
TOA0				IAmb	IAmb	22 06 22.1	
	comp=Z,2.0nm,0.8s						
TORD	Torodi Ar. Bea	66.67	314	P	P	22 06 21.3	0.0
	comp=Z,1.7nm,0.7s,baz=146,slow=6.0,SNR=13						
ASAR	Alice Springs	74.73	108	P	P	22 07 10.6	+0.1
	comp=Z,0.6nm,0.7s,baz=225,slow=5.5,SNR=6.0						
STKA	Stephens Creek	74.94	119	P	P	22 07 12.2	+0.7
	comp=Z,9.1nm,1.2s,baz=191,slow=5.7,SNR=5.0						
STKA	Stephens Creek	74.94	119	P	P	22 07 11.0	-0.6
WRA	Warramunga Arr	77.37	105	P	P	22 07 25.5	-0.1
	comp=Z,1.2nm,0.9s,baz=234,slow=5.4,SNR=3.9						
CMAR	Chiang Mai Arr	78.06	53	P	P	22 07 29.8	+0.5
	comp=Z,1.1nm,0.7s,baz=232,slow=7.4,SNR=6.6						
CMAR				LR	LR	22 39 47.1	
	comp=Z,16nm,18.0s,baz=212,slow=34						
DMN	Daman	78.21	37	eP	P	22 07 30.0	-0.2
DANN	Dangsing	78.26	35	eP	P	22 07 30.3	-0.2
PKIN	Phulchoki	78.31	37	eP	P	22 07 30.4	-0.4
PKI	Pulchoki	78.32	37	eP	P	22 07 30.4	-0.5
RAMN	Ramite	78.33	38	eP	P	22 07 31.2	+0.3
	comp=Z,22nm,1.0s						
GKN	Gorkha	78.34	36	eP	P	22 07 30.6	-0.2
KKN	Kakani	78.44	37	eP	P	22 07 31.0	-0.5
ODAN	Odare	78.63	39	eP	P	22 07 32.6	+0.1
	comp=Z,21nm,0.7s						
GUN	Gumba	78.82	37	eP	P	22 07 33.8	+0.1
	comp=Z,22nm,0.9s						
TAPN	Taplejung	79.19	39	eP	P	22 07 35.6	-0.1
	comp=Z,7.7nm,0.7s						
PLCA	Paso Flores	79.27	225	P	P	22 07 35.5	-0.4
	comp=Z,3.8nm,1.1s,baz=163,slow=11,SNR=3.4						
PLCA	Paso Flores	79.27	225	P	P	22 07 35.2	-0.7
BRTR	Keskin Array B	80.98	352	P	P	22 07 44.6	-0.3
	comp=Z,1.1nm,0.8s,baz=159,slow=6.4,SNR=8.6						
CPUP	Villa Florida	81.10	243	P	P	22 07 45.6	-0.3
	comp=Z,1.8nm,0.8s,baz=113,slow=6.1,SNR=3.7						
ESDC	Sonseca Array	91.50	325	P	P	22 08 36.4	-0.2
	comp=Z,0.3nm,0.5s,baz=152,slow=8.4,SNR=3.5						
AKASG	Malin Array Be	92.32	351	P	P	22 08 39.8	-0.2
	comp=Z,0.1nm,0.3s,baz=147,slow=5.4,SNR=4.1						
EYMN	Ely	147.94	298		PKPdf	22 15 11.2	-0.9
EYMN				PKPbc	pPKPdf	22 15 15.2	+0.9
ULM	Lac du Bonnet	150.86	302	PKPbc	PKPbc	22 15 22.0	-0.3
	comp=Z,4.8nm,0.7s,baz=82,slow=2.6,SNR=12						
ULM	Lac du Bonnet	150.86	302		PKPdf	22 15 17.3	+0.6
ECSD	EROS Data Cent	151.04	288		PKPbc	22 15 22.8	-0.2
TXAR	Lajitas Array	151.31	256	PKP	PKPdf	22 15 18.8	+0.6
	comp=Z,0.6nm,0.9s,baz=151,slow=2.1,SNR=5.0						
TXAR				PKPbc	sPKPdf	22 15 24.3	+3.1
	comp=Z,2.8nm,0.8s,baz=135,slow=5.1,SNR=24						
YKA	Yellowknife Ar	155.06	336	PKPbc		22 15 30.1	
	comp=Z,0.4nm,0.7s,baz=52,slow=2.0,SNR=6.5						
YKA				PKPab	PKPab	22 15 46.5	-0.4
	comp=Z,0.9nm,0.7s,baz=37,slow=4.7,SNR=17						

JMA 19 22:09:14.5±0.3,37.35N×144.38E,h48km,M3.5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.50	293	P	Pn	22 09 54.2	+1.6
JIKH				eS	Sn	22 10 23.3	+1.4
JIO	Ouri	2.64	296	P	Pn	22 09 56.0	+1.4
JIO				eS	Sn	22 10 26.9	+1.6
JKMT	Kesennumamotoy	2.72	303	P	Pn	22 09 56.9	+1.3
JKMT				eS	Sn	22 10 28.7	+1.4
JMST	Minamisoumatoc	2.80	279	P	Pn	22 09 58.0	+1.2
ONAJ	Iwakimizuishiy	2.87	266	P	Pn	22 09 59.0	+1.2
ONAJ				eS	Sn	22 10 31.8	+0.7
JMK	Ichinoseki	2.96	304	P	Pn	22 10 00.5	+1.5
JOM	Ohasama	3.22	312	P	Pn	22 10 04.2	+1.6
JOM				eS	Sn	22 10 41.4	+1.7
JFT	Otama	3.22	274	P	Pn	22 10 05.1	+2.5
JFT				eS	Sn	22 10 42.3	+2.6
JYK	Kaneyama	3.54	298	P	Pn	22 10 09.4	+2.5
JAG	Ashikaga	4.06	258	P	Pn	22 10 15.6	+1.6
JAG				eS	Sn	22 11 01.2	+1.0
JRY	Ryogami san	4.60	255	P	Pn	22 10 22.7	+1.2
JRY				eS	Sn	22 11 12.6	-1.1
JOD2	Odawara 2	4.75	246	eS	Sn	22 11 16.5	-1.0
JOT	Ohata	4.78	328	P	Pn	22 10 25.5	+1.5
JOT				eS	Sn	22 11 17.1	-1.0
JKB	Kayabe	5.22	331	P	Pn	22 10 31.7	+1.8
JKB				eS	Sn	22 11 27.5	-1.2
JCH	Churui	5.32	352	eS	Sn	22 11 28.0	-3.2
JTKR	Abashiri--Toko	6.62	357	P	Pn	22 10 47.7	-1.5
JTKR				eS	Sn	22 11 57.8	-5.5

GCMT 19 22:12:47.0±0.4, 18.03S±0.04×13.64W±0.03, h23km±1km, MW4.9/65, Moment Tensor Solution. s22,c25; s65,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.01±.20; $M_{\theta\theta}$0.63±.13; $M_{\phi\phi}$1.38±.13; $M_{r\theta}$-1.49±.19; $M_{\theta\phi}$-0.76±.07; $M_{\phi r}$-1.17±.17; Best double couple: $M_0$2.49000×10^{16} NP1:ϕ_s127.00000°,δ46.00000°,λ-132.00000°. NP2: ϕ_s360.00000°,δ58.00000°,λ-55.00000°. Principal axes: T 1.8750, Plg6.0000°, Azm65.0000°; N 1.2310, Plg29.0000°, Azm159.0000°; P -3.1050, Plg60.0000°, Azm324.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function
IDC 19 22:12:37.9±6.8,18.18S×14.15W,h0km,mb3.9/3, mb1 3.9/3,mb1mx3.5/24,mbtmp3.9/3,MS3.8/14, Ms1 3.8/14,ms1mx3.6/26 Error ellipse: s-maj=398.0km s-min=138.5km az=112.0,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	9.18	357	T	T	22 23 49.8	
	baz=175,slow=74,SNR=54						
H10S3	ASCENSION HYDR	9.18	357	T	T	22 23 49.8	
	baz=45,slow=74,SNR=29						
H10N1	ASCENSION HYDR	10.28	358	T	T	22 25 09.6	
H10N3	ASCENSION HYDR	10.28	358	T	T	22 25 09.3	
	baz=276,slow=74,SNR=13						
H10N2	ASCENSION HYDR	10.29	358	T	T	22 25 11.1	
	baz=179,slow=74,SNR=5.2						
DBIC	Dimbokro	26.34	21	LR	LR	22 25 55.3	
	comp=Z,183nm,19.4s,baz=166,slow=30						
BDFB	Brasilia	32.48	269	LR	LR	22 29 58.7	
	comp=Z,206nm,21.7s,baz=114,slow=32						
TORD	Torodi Ar. Bea	34.83	28	P	P	22 19 30.8	-0.1
	0.8nm,0.8s,baz=206,slow=9.6,SNR=3.3						
TORD				LR	LR	22 30 51.7	
	comp=Z,228nm,21.6s,baz=240,slow=31						
BOSA	Boshof	37.48	113	LR	LR	22 33 05.1	
	comp=Z,76nm,18.3s,baz=272,slow=33						
LPAZ	La Paz	51.44	263	LR	LR	22 42 42.1	
	comp=Z,136nm,18.5s,baz=88,slow=35						
PLCA	Paso Flores	53.03	232	LR	LR	22 41 29.9	
	comp=Z,141nm,20.8s,baz=116,slow=33						
KMBO	Kilima Mbogo	53.20	77	LR	LR	22 42 02.6	
	comp=Z,100nm,20.0s,baz=267,slow=33						
KEST	Kesra	58.05	22	LR	LR	22 45 23.9	
	comp=Z,89nm,19.9s,baz=288,slow=34						
ROSC	El Rosal	63.56	285	LR	LR	22 50 20.4	
	comp=Z,179nm,18.1s,baz=142,slow=36						
GERES	GERESS Array B	71.19	19	LR	LR	22 54 48.3	
	comp=Z,75nm,18.0s,baz=266,slow=36						
BRTR	Keskin Array B	72.83	37	P	P	22 24 08.8	+0.1
	1.0nm,0.9s,baz=215,slow=9.3,SNR=5.6						
AKASG	Malin Array Be	78.45	26	P	P	22 24 40.5	0.0
	0.4nm,0.4s,baz=218,slow=4.9,SNR=6.8						
NOA	NORSAR Array B	81.53	12	LR	LR	23 00 37.8	
	comp=Z,18nm,19.3s,baz=200,slow=35						
VNDA	Vanda	84.47	179	LR	LR	22 57 42.5	
	comp=Z,51nm,20.0s,baz=257,slow=32						
GEYT	Alibeck	87.75	49	LR	LR	23 02 34.6	
	comp=Z,43nm,19.3s,baz=5.0,slow=34						
ARCES	ARCESS Array B	91.88	13	LR	LR	23 06 19.3	
	comp=Z,42nm,18.1s,baz=234,slow=35						

CNRM 19 22:15:05.7±1.0,35.48N×2.82W,h7km±5km,Error ellipse: s-maj=6.8km s-min=4.3km az=80.0
INMG 19 22:15:05.5±1.5,35.43N×2.72W,h20km±4km,ML2.0,Error ellipse: s-maj=9.3km s-min=4.5km az=113.0
SFS 19 22:15:05.0,35.37N×3.10W,h25km,ML2.5,NADOR (MARRUECOS)
MDD 19 22:15:06.2±0.6,35.41N×2.81W,h20km±4km,mbLg2.3/11, Error ellipse: s-maj=10.0km s-min=5.3km az=100.0, PRXIMO
ISC 19 22:15:05.5±0.9,35.51N±0.02×2.86W±0.04,h16km±7km, n47,σ1§22/80,2C-1D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMEL	Melilla	0.22	201	⇑P	Pg	22 15 10.4	-0.1
	221nm,0.1s,SNR=18						
EMEL				S	Sb	22 15 14.3	-0.6
	1μm,0.2s,SNR=7.9						
MELI	Melilla	0.22	196	P	Pg	22 15 10.1	-0.4
MELI				S	Sg	22 15 14.0	+0.1
MELI	Melilla	0.22	196	⇑iP	Pg	22 15 10.1	-0.4
MELI				iS	Sg	22 15 14.0	+0.1
GOG	Mont Gurugu	0.30	202	P	Pg	22 15 12.0	0.0
GOG				S	Sg	22 15 16.6	+0.1
EALB	Alboran	0.46	342	⇓P	Pn	22 15 17.0	-0.5
	61nm,0.1s,SNR=18						
EALB				S	Sb	22 15 23.9	+2.1
	90nm,0.2s						
PALE	Palemas	0.93	252	P	Pn	22 15 25.0	+1.0
PALE				S	Sn	22 15 37.6	+0.6
JBK	JBK	1.19	168	P	Pb	22 15 27.9	0.0
JBK				S	Sg	22 15 44.7	+0.5
EBER	Berja	1.39	359	P	Pn	22 15 30.0	-0.5
	0.4nm,0.2s,SNR=9.1						
EBER				S	Sn	22 15 47.3	-1.3
	23nm,0.3s,SNR=10						
ELGU	Los Guajares,	1.50	336	P	Pn	22 15 30.8	-1.0
	0.5nm,0.1s,SNR=7.9						
ELGU				S	Sn	22 15 51.6	+0.5
	15nm,0.2s,SNR=7.9						
ENIJ	Nijar	1.56	20	S	Sn	22 15 51.8	-0.7
	23nm,0.3s,SNR=7.9						
EMAL	Malaga-Limoner	1.79	315	eP	Pn	22 15 35.6	-0.1
EMAL				eS	Sn	22 15 58.2	+0.1
EMIJ	Mijas	1.88	305	P	Pn	22 15 36.6	-0.4
	0.7nm,0.2s,SNR=6.3						
EMIJ				S	Sn	22 15 58.8	-1.6
	5.0nm,0.2s						
EGOR	Sierra Gorda,	1.89	328	P	Pn	22 15 37.4	0.0
	0.1nm,0.1s,SNR=7.9						
EQES	Quesada	2.30	356	P	Pn	22 15 44.7	+1.8
	1.8nm,0.2s,SNR=28						
EQES				S	Sn	22 16 12.7	+1.7
	11nm,0.6s,SNR=4.5						
SICH	Sidi Chahed	2.46	236	P	Pn	22 15 44.7	-0.3
SICH				S	Sb	22 16 18.0	-1.4
TDRA	Tendrara	2.55	164	P	Pn	22 15 47.4	+0.9
TDRA				S	Sb	22 16 22.5	+0.1
SESP	Santiago Espad	2.62	5	P	Pn	22 15 48.6	+1.2
	1.0nm,0.1s,SNR=7.9						
SESP				S	Sn	22 16 20.3	+1.3
	3.7nm,0.2s,SNR=7.9						
SESP	Santiago Espad	2.62	5	P	Pn	22 15 49.0	+1.6
SESP				S	Sb	22 16 22.4	-1.9
EMUR	La Murta	2.67	29	S	Sn	22 16 16.1	-3.9
	7.3nm,0.5s,SNR=7.9						
IFR	Ifrane	2.73	224	eP	Pn	22 15 49.8	+0.9
IFR				eS	Sn	22 16 19.8	-1.8
EADA	Adamuz	2.99	333	P	Pn	22 15 53.7	+1.3
	0.5nm,0.2s,SNR=7.9						
EADA				S	Sn	22 16 28.6	+0.7
	2.0nm,0.3s,SNR=7.9						
HORN	Hornachuelos	3.03	321	P	Pn	22 15 54.3	+1.5
HORN				S	Sb	22 16 35.5	-0.3
MDT	Midelt	3.05	209	P	Pn	22 15 55.3	+2.1
MDT				S	Sb	22 16 33.1	-3.4
MD31	MD31	3.07	211	P	Pn	22 15 54.7	+1.2
MD31				S	Sn	22 16 31.1	+1.2
ECAB	El Cabril	3.29	322	S	Sn	22 16 33.7	-1.4
	0.9nm,0.3s,SNR=7.9						
ETOB	Tobarra	3.31	18	P	Pn	22 15 58.5	+1.8
	0.4nm,0.2s,SNR=7.9						
ETOB				S	Sn	22 16 33.7	-2.0
	0.9nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.81	307	P	Pn	22 16 03.1	-0.4
	0.1nm,0.1s,SNR=7.8						
EMIN				S	Sn	22 16 47.6	-0.4
	0.5nm,0.3s						
PAB	San Pablo	4.20	344	P	Pn	22 16 11.1	+2.0
	1.5nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	4.25	348	P	Pn	22 16 11.8	+2.1
	0.4nm,0.2s,baz=172,slow=12,SNR=11						
PVAQ	Vaqueiros	4.35	297	eP	Pn	22 16 11.6	+0.6
PVAQ				eS	Sn	22 17 00.9	-0.5
PVAQ				A	A	22 17 04.7	
	1.8nm,0.5s						
PVAQ	Vaqueiros	4.35	297	P	Pn	22 16 11.6	+0.6
PVAQ				S	Sn	22 17 00.9	-0.5
	1.8nm,0.5s						
PVAQ	Vaqueiros	4.35	297	P	Pn	22 16 11.8	+0.8
PVAQ				S	Sn	22 17 02.7	+1.3
PBDV	Barranco-do-Ve	4.44	294	eP	Pn	22 16 12.9	+0.6
PBDV				eS	Sn	22 17 04.5	+0.8
PBDV				A	A	22 17 08.2	
	2.2nm,0.7s						
PBDV	Barranco-do-Ve	4.44	294	P	Pn	22 16 12.9	+0.6
PBDV				S	Sn	22 17 04.5	+0.8
	2.2nm,0.7s						
EBAD	Badajoz	4.64	316	P	Pn	22 16 16.0	+1.0
	0.6nm,0.1s,SNR=4.7						
PCVE	Castro Verde	4.68	299	eP	Pn	22 16 16.5	+1.0
PCVE	Castro Verde	4.68	299	P	Pn	22 16 16.5	+1.0
PESTR	Estremoz	5.05	313	eP	Pn	22 16 21.9	+1.2
EVO	Evora	5.11	308	eP	Pn	22 16 22.8	+1.3
EVO				eS	Sn	22 17 19.8	-0.3
EVO				A	A	22 17 34.6	
	2.0nm,0.4s						
EVO	Evora	5.11	308	P	Pn	22 16 22.0	+0.6
EVO				S	Sn	22 17 19.1	-1.0
EVO	Evora	5.11	308	eP	Pn	22 16 22.0	+0.6
EVO				eS	Sn	22 17 19.1	-1.0
PNCL	Nicolau / Gran	5.24	301	eP	Pn	22 16 24.6	+1.4
PNCL				eS	Sn	22 17 23.4	+0.1
PNCL	Nicolau / Gran	5.24	301	P	Pg	22 16 24.6	+1.4
PNCL				S	Sn	22 17 23.4	+0.1
PMRV	Marv??o	5.32	319	eP	Pn	22 16 24.6	+0.2
PMRV	Marv??o	5.32	319	P	Pn	22 16 24.6	+0.2
PMTG	Montargil	5.56	311	eP	Pn	22 16 28.8	+1.1
PMTG	Montargil	5.56	311	P	Pn	22 16 28.8	+1.1

IDC 19 22:21:36.1±1.3,8.85S×160.29E,h78km±7km,mb3.4/5, mb1 3.7/5,mb1mx3.4/35,mbtmp3.7/5,Error ellipse: s-maj=50.7km s-min=13.3km az=113.0
ISC 19 22:21:35.8±2.0,9.1S±0.3×160.4E±0.1,h100km,n13, σ2§55/12,mb3.6/5,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	0.60	232	P	Pn	22 21 51.8	-0.5
	910nm,0.3s,baz=227,slow=3.1,SNR=446						
HNR				S	Sn	22 22 04.2	-0.5
	2μm,0.3s,baz=217,slow=20,SNR=40						
HNR	Honiara	0.60	232	iP	Pn	22 21 51.0	-1.4
HNR				iS	Sn	22 22 04.0	-0.7
WRA	Warramunga Arr	27.43	244	P	P	22 27 14.4	+2.0
	1.2nm,0.6s,baz=221,slow=9.0,SNR=7.7						
H11S2	WAKE ISLAND Hy	28.07	13	T	T	22 55 55.9	
	baz=194,slow=76,SNR=568						
H11S3	WAKE ISLAND Hy	28.07	13	T	T	22 55 55.9	
	baz=194,slow=76,SNR=370						
H11S1	WAKE ISLAND Hy	28.09	13	T	T	22 55 57.1	
	baz=194,slow=76,SNR=300						
ASAR	Alice Springs	29.22	237	P	P	22 27 30.0	+1.6
	0.6nm,0.4s,baz=61,slow=10,SNR=8.0						
H11N1	WAKE ISLAND Hy	29.30	13	T	T	22 57 29.3	
	baz=193,slow=76,SNR=256						

H11N3 WAKE ISLAND Hy 29.30 13 T T 22 57 39.7
baz=193,slow=76,SNR=282
H11N2 WAKE ISLAND Hy 29.32 13 T T 22 57 37.9
baz=193,slow=76,SNR=253
SONM Songino Array 74.02 325 P P 22 33 02.2 +2.3
0.6nm,0.7s,baz=135,slow=6.0,SNR=5.2
SONM pP pP 22 33 22.9 -3.0
1.0nm,0.8s,baz=124,slow=4.4,SNR=6.2
ILAR Eielson Array 83.39 20 P P 22 33 53.5 +1.9
0.4nm,0.8s,baz=258,slow=5.3,SNR=6.1
ILAR pP pP 22 34 14.8 -2.5
0.4nm,0.8s,baz=253,slow=5.2,SNR=2.5
MKAR Makanchi Array 88.52 318 P P 22 34 19.0 +1.7
0.1nm,0.5s,baz=100,slow=5.4,SNR=4.1
MKAR pP pP 22 34 38.9 -4.6
0.3nm,0.5s,baz=94,slow=5.7,SNR=2.7

TEH 19 22:24:29.5, 26.74N×57.89E, h8km, ML2.9
OMAN 19 22:24:34.6±0.4, 26.32N×57.67E, h15km, ml2.5/7, Error ellipse: s-maj=16.4km s-min=7.0km az=287.0
ISC 19 22:24:28.5±1.0, 26.68N±0.05×57.88E±0.05, h10km, n15, σ1.65/20, Southern Iran

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KHNJ Kahnooj 1.27 353 ePg Pb 22 24 52.6 +0.1
KHNJ eSg Sn 22 25 10.4 +0.9
NIAN Nian 1.27 314 ePg Pg 22 24 53.6 +0.6
NIAN e 22 25 15.7
IBND Bandar-abas 1.42 303 ePg Pg 22 24 57.0 +1.3
IBND e 22 25 21.0
BANOM Banah 1.60 242 P Pn 22 24 57.8 +0.9
SNR=29
BANOM S Sn 22 25 19.6 +1.8
GENO Geno 1.68 296 ePn Pb 22 25 00.0 +0.4
GENO e 22 25 02.4
MDH Madha 1.98 226 P Pn 22 25 01.1 -0.9
MDH S Sn 22 25 24.3 -2.6
SOHO SOHO 2.81 206 P Pn 22 25 12.1 -1.4
SNR=8.1
NGRK Negar Kerman 3.12 341 ePn Pb 22 25 21.5 -2.8
HOQ Hoqain 3.13 190 P Pn 22 25 17.4 -0.4
SNR=12
BIDO Bidbid 3.15 176 P Pn 22 25 19.7 +1.4
BIDO S Sn 22 25 56.8 +0.8
TVBK TV Kerman 3.44 344 ePn Pb 22 25 27.5 -2.1
TVBK e 22 25 38.0
WSAR Wadi Sarin 3.50 169 P Pn 22 25 24.3 +1.4
WSAR S Sn 22 26 03.1 -1.3
SZD1 Zahaedan-tmp 3.84 43 ePn Pb 22 25 35.2 -1.3
WBK Wadi Bani Khal 4.17 166 P Pn 22 25 35.0 +2.7
SNR=7.7
WBK S Sn 22 26 19.8 -1.3
NHDN Nehbandan 5.07 22 ePn Pb 22 25 51.3 -6.0

IDC 19 22:47:49.0±9.8, 18.97N×145.60E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.4/43, mbtmp3.6/3, MS3.3/1, Ms1 3.3/1, ms1mx2.3/41, Error ellipse: s-maj=358.6km s-min=29.6km az=77.0, Mariana Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JHJ Hachijo jima 2 15.03 341 LR LR 22 55 59.1
comp=Z,134nm,21.8s,baz=298,slow=33
WRA Warramunga Arr 40.22 197 P P 22 55 27.8 +0.2
3.2nm,0.6s,baz=19,slow=9.1,SNR=16
ASAR Alice Springs 43.88 196 P P 22 55 57.0 -0.5
0.4nm,0.4s,baz=13,slow=7.2,SNR=8.6
MKAR Makanchi Array 58.21 314 P P 22 57 45.1 -0.1
0.1nm,0.6s,baz=91,slow=7.6,SNR=2.7

MDD 19 22:50:54.0±0.5, 35.41N×2.73W, h17km±4km, mbLg2.6/20, Error ellipse: s-maj=6.6km s-min=5.0km az=130.0, PRXIMO
SFS 19 22:50:54.0, 35.39N×2.73W, h20km, ML2.5, ALBORAN SUR
INMG 19 22:50:54.0±1.5, 35.41N×2.73W, h19km±4km, ML2.3, Error ellipse: s-maj=5.5km s-min=3.9km az=140.0
CNRM 19 22:50:56.1±0.9, 35.65N×2.95W, h10km, Error ellipse: s-maj=8.3km s-min=5.6km az=72.0
ISC 19 22:50:52.3±0.9, 35.54N±0.02×2.78W±0.03, h14km±7km, n72, σ1.84/133, 1C-4D, Strait of Gibraltar

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MELI Melilla 0.28 208 P Pg 22 50 58.4 +0.2
MELI S Sg 22 51 01.7 -0.4
MELI Melilla 0.28 208 ⇓iP Pg 22 50 58.4 +0.2
MELI eS Sg 22 51 01.7 -0.4
EMEL Melilla 0.28 212 ⇑P Pg 22 50 58.7 +0.5
991nm,0.1s,SNR=18
EMEL S Sg 22 51 02.5 +0.3
3μm,0.1s,SNR=7.9
GOG Mont Gurugu 0.36 210 P Pg 22 51 00.2 +0.5
GOG S Sg 22 51 05.6 +0.9
EALB Alboran 0.45 332 ⇓P Pn 22 51 05.3 +0.9
575nm,0.2s,SNR=18
EALB S Sn 22 51 12.5 +0.1
392nm,0.3s,SNR=5.0
PALE Palemas 1.00 252 P Pn 22 51 12.5 +0.4
PALE S Sn 22 51 27.2 +1.2
EBER Berja 1.36 356 P Pg 22 51 18.8 +0.2
2.2nm,0.3s,SNR=18
EBER S Sb 22 51 34.9 -0.1
61nm,0.2s,SNR=13
ELGU Los Guajares, 1.49 333 P Pn 22 51 19.4 +0.5
2.1nm,0.2s,SNR=7.9
ELGU S Sn 22 51 36.5 -1.8
36nm,0.2s,SNR=7.9
ENIJ Nijar 1.50 18 ⇓P Pn 22 51 19.5 +0.6
5.7nm,0.2s,SNR=18
ENIJ S Sg 22 51 39.8 -0.9
71nm,0.3s,SNR=7.9
EMAL Malaga-Limoner 1.81 313 eP Pn 22 51 23.6 +0.5
EMAL eS Sn 22 51 46.1 +0.2
EGOR Sierra Gorda, 1.90 326 P Pn 22 51 25.9 +1.3
3.1nm,0.3s,SNR=7.9
EGOR S Sb 22 51 50.6 0.0
9.1nm,0.3s,SNR=7.9
EMIJ Mijas 1.91 303 P Pn 22 51 25.0 +0.4
1.6nm,0.1s,SNR=11
EMIJ S Sn 22 51 47.2 -1.3
17nm,0.3s,SNR=5.0
GORA Gorafe 1.95 354 P Pb 22 51 26.7 -1.0
2.5nm,0.1s,SNR=7.9
GORA S Sb 22 51 50.3 +0.8
35nm,0.4s,SNR=7.9
SMIR Smir Dam 2.13 275 P Pb 22 51 30.7 0.0
SMIR S Sb 22 51 55.7 +2.0
CHEFC Chefchaouen 2.14 259 P Pb 22 51 29.7 -1.3
CHEFC S Sb 22 51 57.5 +0.1
CEU Ceuta 2.14 280 P Pn 22 51 26.1 -1.6
CEU S Sn 22 51 50.1 -4.0
CEU Ceuta 2.14 280 eP Pn 22 51 26.1 -1.6
CEU eS Sn 22 51 50.1 -4.0
ECEU Ceuta 2.15 280 P Pn 22 51 28.6 +0.8
1.6nm,0.1s,SNR=4.8
ECEU S Sn 22 51 51.8 -2.4
12nm,0.4s
EQES Quesada 2.27 354 P Pb 22 51 32.8 -0.4
4.3nm,0.2s,SNR=73
EQES S Sb 22 52 00.6 -0.6
39nm,0.6s
SICH Sidi Chahed 2.53 236 P Pb 22 51 38.6 +1.0
SICH S Sb 22 52 09.1 +0.5
TDRA Tendrara 2.57 166 P Pb 22 51 40.4 -1.2
TDRA S Sg 22 52 15.8 +0.9
RSA Sarsar 2.58 256 P Pb 22 51 37.6 -0.8
RSA S Sb 22 52 08.4 -1.5
SESP Santiago Espad 2.58 4 ⇓P Pb 22 51 37.3 -1.2
5.6nm,0.2s,SNR=18
SESP S Sb 22 52 08.1 -2.1
27nm,0.3s,SNR=7.9
SESP Santiago Espad 2.58 4 P Pb 22 51 37.5 -1.1
SNR=7.9
SESP S Sb 22 52 08.1 -2.1
EMUR La Murta 2.61 28 P Pn 22 51 34.9 +0.8
0.8nm,0.2s,SNR=8.5
EMUR S Sn 22 52 03.9 -1.8
14nm,0.3s,SNR=7.9
IFR Ifrane 2.80 225 ePn Pn 22 51 37.0 +0.1
IFR Ifrane 2.80 225 ePg Pg 22 51 45.8 -0.2
IFR eS Sn 22 52 07.7 -2.8
OKGL Djebel Kef Gue 2.83 79 P Pn 22 51 39.1 +2.0
11nm,0.1s,SNR=7.9
EADA Adamuz 2.99 332 P Pn 22 51 41.9 +2.4
1.3nm,0.3s,SNR=12
EADA S Sn 22 52 16.5 +1.3
3.9nm,0.2s,SNR=7.9
HORN Hornachuelos 3.05 320 P Pn 22 51 42.1 +2.0
SNR=20
HORN S Sn 22 52 18.0 +1.6
MDT Midelt 3.11 210 P Pn 22 51 41.9 +0.8
SNR=13
MDT S Sb 22 52 26.0 +0.6
MD31 MD31 3.13 212 P Pn 22 51 42.5 +1.1
MD31 S Sb 22 52 24.7 -1.2
ETOB Tobarra 3.25 17 P Pn 22 51 45.6 +2.5
0.9nm,0.1s,SNR=15
ETOB S Sn 22 52 22.0 +0.4
4.7nm,0.2s
ECAB El Cabril 3.30 321 P Pn 22 51 45.7 +2.0
0.3nm,0.2s,SNR=6.6
ECAB S Sn 22 52 24.5 +1.8
4.4nm,0.4s,SNR=7.9
FIGM Figuig 3.62 159 P Pb 22 51 55.4 -0.9
FIGM S Sb 22 52 42.2 +2.0
EBEN2 Beniarda presa 3.75 33 S Sn 22 52 32.6 -1.3
7.7nm,0.3s,SNR=7.9
ZHG ZHG 3.81 238 P Pb 22 51 57.4 -2.1
EMIN Mina Concepcio 3.84 307 P Pn 22 51 52.5 +1.4
1.0nm,0.2s,SNR=11
EMIN S Sn 22 52 35.3 -0.7
2.1nm,0.2s
PAB San Pablo 4.19 343 P Pn 22 51 58.3 +2.3
3.1nm,0.2s,SNR=7.9
ESDC Sonseca Array 4.23 348 P Pn 22 51 59.9 +3.4
0.7nm,0.2s,baz=172,slow=12,SNR=42
ESDC S Sn 22 52 45.7 -0.1
0.7nm,0.2s,baz=175,slow=30,SNR=4.3
ARF Arif 4.27 197 P Pb 22 52 03.5 -3.8
ARF S Sb 22 52 55.7 -3.1
EGRO El Granado 4.28 299 P Pn 22 51 58.5 +1.4
2.5nm,0.1s,SNR=15
EGRO S Sn 22 52 47.4 +0.6
5.1nm,0.3s
PVAQ Vaqueiros 4.39 296 ePn Pn 22 51 59.7 +1.0
PVAQ eSn Sn 22 52 49.3 -0.4
PVAQ A A 22 52 51.2
5.0nm,0.4s
PVAQ Vaqueiros 4.39 296 P Pn 22 51 59.7 +1.0
PVAQ S Sn 22 52 49.3 -0.4
5.0nm,0.4s
PVAQ Vaqueiros 4.39 296 P Pn 22 51 59.6 +1.0
SNR=19
PVAQ S Sn 22 52 48.1 -1.5
PBDV Barranco-do-Ve 4.49 294 ePn Pn 22 52 01.0 +1.0
PBDV eSn Sn 22 52 51.7 -0.4
PBDV A A 22 52 56.4
4.8nm,0.7s
PBDV Barranco-do-Ve 4.49 294 P Pn 22 52 01.0 +1.0
PBDV S Sn 22 52 51.7 -0.4
4.8nm,0.7s
EBAD Badajoz 4.66 315 P Pn 22 52 04.3 +2.0
1.3nm,0.1s,SNR=13
EBAD S Sn 22 52 55.6 -0.7
4.7nm,0.2s
PCVE Castro Verde 4.72 298 ePn Pn 22 52 05.1 +1.9
PCVE eSn Sn 22 52 58.3 +0.6
PCVE A A 22 53 02.6
5.4nm,0.6s
PCVE Castro Verde 4.72 298 P Pn 22 52 05.1 +1.9
PCVE S Sn 22 52 58.3 +0.6
5.4nm,0.6s
PBEJ Beja 4.78 303 ePn Pn 22 52 06.0 +2.0
PBEJ eSn Sn 22 53 00.3 +1.1
PBEJ Beja 4.78 303 P Pn 22 52 06.0 +2.0
PBEJ S Sn 22 53 00.3 +1.1
EIBI Ibiza 4.79 42 P Pn 22 52 05.3 +1.3
7.3nm,0.5s,SNR=7.9
MORF Marmelete 5.05 292 ePn Pn 22 52 09.8 +2.0
MORF eSn Sn 22 53 06.4 +0.4
MORF Marmelete 5.05 292 P Pn 22 52 09.8 +2.0
MORF S Sn 22 53 06.4 +0.4
PESTR Estremoz 5.08 312 ePn Pn 22 52 10.3 +2.2
PESTR eSn Sn 22 53 05.9 -0.7
PESTR A A 22 53 14.7
3.3nm,0.6s
PFVI Vila Bisbo 5.14 290 P Pn 22 52 10.7 +1.8
PFVI Vila Bisbo 5.14 290 S Sn 22 53 07.2 -0.8
5.0nm,0.4s,SNR=7.9
EVO Evora 5.14 307 ePn Pn 22 52 11.0 +2.1
EVO eSn Sn 22 53 08.3 +0.2
EVO A A 22 53 10.1
2.4nm,0.4s
EVO Evora 5.14 307 P Pn 22 52 11.0 +2.1
EVO S Sn 22 53 06.3 -1.8
EVO Evora 5.14 307 eP Pn 22 52 11.0 +2.1
EVO eS Sn 22 53 06.3 -1.8
PTEO Sao Teotonio 5.19 294 ePn Pn 22 52 12.5 +2.9
PTEO eSn Sn 22 53 09.8 +0.5
PTEO Sao Teotonio 5.19 294 P Pn 22 52 12.5 +2.9
PTEO S Sn 22 53 09.8 +0.5
GUD Guadarrama 5.21 348 P Pn 22 52 12.4 +2.4
1.0nm,0.2s,SNR=8.1
PNCL Nicolau / Gran 5.28 301 ePn Pn 22 52 12.3 +1.5
PNCL eSn Sn 22 53 10.9 -0.6
PNCL A A 22 53 18.8
1.8nm,0.8s
PNCL Nicolau / Gran 5.28 301 P Pn 22 52 12.3 +1.5
PNCL S Sn 22 53 10.9 -0.6
1.8nm,0.8s
TZRR Tazzarine 5.29 207 P Pb 22 52 18.4 -6.2
TZRR S Sn 22 53 20.0 +8.1
PMRV Marv??o 5.34 318 ePn Pn 22 52 13.9 +2.2
PMRV eSn Sn 22 53 12.8 -0.2
PMRV A A 22 53 16.9
1.7nm,0.4s
PMRV Marv??o 5.34 318 P Pn 22 52 13.9 +2.2
PMRV S Sn 22 53 12.8 -0.2
1.7nm,0.4s
PMTG Montargil 5.59 311 ePn Pn 22 52 16.8 +1.7
PMTG eSn Sn 22 53 18.6 -0.6
PMTG A A 22 53 26.8
2.0nm,0.5s
PMTG Montargil 5.59 311 P Pn 22 52 16.8 +1.7
PMTG S Sn 22 53 18.6 -0.6
2.0nm,0.5s
ZGR Zagora 5.91 205 P Pn 22 52 25.6 +6.0
ZGR S Sn 22 53 35.8 +8.5

IDC 19 22:59:47.9±0.7, 29.42S×60.95E, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.7/55, mbtmp4.0/8, ML3.8/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/35, Error ellipse: s-maj=30.2km s-min=21.7km az=24.0
ISC 19 22:59:49.8±0.8, 29.4S±0.2×60.9E±0.2, h14km, n14, σ0.69/13, mb4.1/7, Southwest Indian Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
OPO Ambohidratompo 16.51 308 Pn P 23 03 43.6 -0.2
0.3nm,0.3s,baz=119,slow=13,SNR=2.9
OPO Sn Sn 23 06 31.0 -13
0.9nm,0.3s,baz=75,slow=20,SNR=5.2
OPO LR LR 23 08 24.5
comp=Z,85nm,19.2s,baz=5.5,slow=31
BOSA Boshof 31.13 263 P P 23 06 08.1 -0.2
0.9nm,0.6s,baz=90,slow=7.1,SNR=3.5
KMBO Kilima Mbogo 36.02 317 LR LR 23 19 17.1
comp=Z,56nm,18.7s,baz=93,slow=32
QSPA South Pole Qui 60.78 180 P P 23 10 00.9 -0.2
3.7nm,1.1s,baz=302,slow=2.9,SNR=6.9
ASAR Alice Springs 64.60 104 P P 23 10 26.9 -0.3
1.3nm,0.7s,baz=250,slow=6.4,SNR=9.3
WRA Warramunga Arr 66.44 100 P P 23 10 40.0 +0.9
1.4nm,0.9s,baz=246,slow=5.8,SNR=3.7
TORD Torodi Ar. Bea 71.05 298 P P 23 11 08.8 +1.0
1.1nm,0.8s,baz=120,slow=4.9,SNR=7.8
MKAR Makanchi Array 78.23 15 P P 23 11 48.6 -0.2
0.6nm,0.8s,baz=193,slow=5.0,SNR=7.5
ZALV Zalesovo Beam 85.52 14 P P 23 12 27.1 +0.1
0.8nm,0.5s,baz=212,slow=5.1,SNR=3.6
INK Inuvik 140.11 8 PKP PKiKP 23 19 19.3 -0.3
1.5nm,0.8s,baz=18,slow=5.7,SNR=5.1
ILAR Eielson Array 140.51 18 PKP PKiKP 23 19 19.8 -0.7
0.7nm,0.8s,baz=309,slow=3.4,SNR=6.2
YKA Yellowknife Ar 146.74 356 PKPbc PKPab 23 19 30.9 -0.9
5.8nm,0.7s,baz=352,slow=3.0,SNR=86
ULM Lac du Bonnet 152.77 326 PKPbc PKPbc 23 19 45.5 -0.5
1.6nm,0.6s,baz=9.9,slow=4.7,SNR=3.9
PDAR Pinedale Array 164.59 333 PKP PKPdf 23 19 54.4 +1.0
0.9nm,1.0s,baz=92,slow=4.6,SNR=3.7

IDC 19 23:02:28.5±3.3, 18.80S×169.10E, h162km±27km, mb3.6/7, mb1 3.7/8, mb1mx3.5/38, mbtmp4.0/8, Error ellipse: s-maj=27.5km s-min=23.3km az=62.0
NEIC 19 23:02:30.2±2.3, 18.84S±0.07×169.0E±0.1, h180km±6km, mb4.2/10, Error ellipse: s-maj=18.2km s-min=9.6km az=102.0
ISC 19 23:02:26.5±0.7, 18.76S±0.07×169.1E±0.1, h147km, n34, σ1.64/33, mb3.9/11, Vanuatu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 3.78 330 Pn 23 03 26.6 +2.7
DZM Mont Dzumac 4.15 217 P Pn 23 03 31.5 +2.8
5.5nm,0.3s,baz=55,slow=19,SNR=49
DZM S Sn 23 04 18.6 +1.4
11nm,0.3s,baz=137,slow=21,SNR=9.6
NOUC Port Laguerre 4.26 218 Pn 23 03 33.1 +3.1
NOUC Sn 23 04 15.0 -4.4
HNR Honiara 12.86 315 Pn Pn 23 05 21.9 -2.2
HIZ Hauiti 20.30 167 P P 23 06 47.7 -3.0
HIZ IAmb 23 06 56.4
comp=Z,5.9nm,0.7s
MXZ Matakaoa Point 20.38 159 P P 23 06 50.1 -1.5
LTZ Lake Taylor 24.09 174 P P 23 07 29.9 +1.6
LTZ IAmb IAmb 23 07 30.3
comp=Z,7.3nm,0.7s
FOZ Fox Glacier 24.70 179 P P 23 07 35.6 +1.8
FOZ IAmb IAmb 23 07 36.6
comp=Z,8.8nm,1.0s
RPZ Rata Peaks 24.93 177 P P 23 07 36.9 +0.9
comp=Z,4.9nm,0.6s,baz=321,slow=3.1,SNR=5.2
RPZ Rata Peaks 24.93 177 IAmb IAmb 23 07 41.9
comp=Z,9.6nm,1.1s
STKA Stephens Creek 28.02 237 P P 23 08 04.5 +0.6
comp=Z,1.5nm,0.7s,baz=115,slow=8.4,SNR=3.5
STKA Stephens Creek 28.02 237 P P 23 08 02.9 -1.0
WB0 Warramunga Arr 32.79 262 P P 23 08 46.3 +0.3
WB0 IAmb IAmb 23 08 46.8
comp=Z,4.9nm,1.1s
WRA Warramunga Arr 32.82 262 P P 23 08 46.0 -0.3
comp=Z,0.6nm,0.8s,baz=80,slow=6.0,SNR=3.4
ASAR Alice Springs 33.16 255 P P 23 08 49.2 0.0
comp=Z,1.3nm,0.5s,baz=84,slow=8.8,SNR=18
KNRA Kununurra 38.64 268 P P 23 09 35.6 -0.2
FAKI Fak Fak 39.38 289 P P 23 09 41.3 -0.7
FITZ Fitzroy Crossi 41.20 264 P P 23 09 56.2 -0.8
FITZ IAmb IAmb 23 10 00.2
comp=Z,5.0nm,1.1s
QSPA South Pole Qui 71.29 180 P P 23 13 29.8 0.0
comp=Z,2.2nm,0.9s,baz=11,slow=1.1,SNR=7.5
QSPA South Pole Qui 71.29 180 P P 23 13 29.3 -0.5
SONM Songino Array 86.78 323 P P 23 14 55.2 +1.0
comp=Z,1.1nm,0.7s,baz=154,slow=6.5,SNR=8.8
ILAR Eielson Array 89.81 17 P P 23 15 07.2 -0.8
comp=Z,0.5nm,0.7s,baz=235,slow=4.8,SNR=7.7
YKA Yellowknife Ar 100.29 27 P Pdif 23 15 56.8 +1.1
comp=Z,0.3nm,0.6s,baz=259,slow=4.9,SNR=5.2
MKAR Makanchi Array 101.33 316 P Pdif 23 16 02.6 +1.8
comp=Z,0.3nm,0.5s,baz=101,slow=5.3,SNR=5.6
ARCES ARCESS Array B 124.58 345 PKP PKPdf 23 21 06.8 -1.0
comp=Z,3.3nm,1.0s,baz=17,slow=4.5,SNR=3.8
GERES GERESS Array B 144.03 332 PKP PKPab 23 21 43.0 +0.6
comp=Z,1.0nm,0.7s,baz=27,slow=3.3,SNR=7.2
MOA Molln 144.50 330 i PKPdf PKPbc 23 21 44.9 +0.5
comp=Z,2.6nm,0.5s
SOKA Soboth 144.96 328 i PKPdf PKPbc 23 21 46.2 +0.3
comp=Z,3.2nm,0.6s
OBKA Obir 145.32 329 ePKPab PKPab 23 21 47.8 +0.4
comp=Z,2.6nm,0.6s
KBA Koelnbreinsper 145.49 330 i PKiKP PKPab 23 21 49.0 +0.9
comp=Z,1.8nm,0.5s
SQTA Sankt Quirin 146.35 332 ePKPbc PKPdf 23 21 48.7 0.0
comp=Z,1.0nm,0.3s
FETA Feichten 146.72 333 i PKPab PKPbc 23 21 51.5 +0.2
comp=Z,1.2nm,0.5s
DAVOX Davos/Dischmat 147.27 333 PKPbc PKPbc 23 21 52.7 -0.2
TORD Torodi Ar. Bea 166.70 247 PKP PKPdf 23 22 15.2 -0.1
comp=Z,0.6nm,0.9s,baz=175,slow=1.7,SNR=3.3

MOS 19 23:08:09.5±1.3, 38.22N×20.24E, h12km, mb4.4/14, Error ellipse: s-maj=6.1km s-min=3.3km az=66.4
IDC 19 23:08:09.8±0.6, 38.34N×20.39E, h0km, mb4.1/21, mb1 4.1/34, mb1mx3.9/69, mbtmp4.0/34, ML3.7/11, MS3.1/5, Ms1 3.1/5, ms1mx2.7/51, Error ellipse: s-maj=12.8km s-min=11.1km az=178.0
ATH 19 23:08:11.7, 38.29N×20.36E, h16km, ML3.9/16, Error ellipse: s-maj=1.5km s-min=0.7km az=266.0
PDG 19 23:08:11.5±0.3, 38.29N×20.35E, h22km, ML4.1/13, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0
BEO 19 23:08:12.9±0.6, 38.24N×20.15E, h29km±4km, ML3.8/12
NEIC 19 23:08:12.2±2.2, 38.28N±0.04×20.37E±0.04, h14km±4km, Error ellipse: s-maj=6.2km s-min=4.0km az=194.0
THE 19 23:08:12.7, 38.29N×20.42E, h12km, ML3.8/7, Error ellipse: s-maj=0.6km s-min=0.2km az=260.0
HLW 19 23:08:23.1, 37.14N×20.30E, h10km±20km, Md4.5, Ml4.5
ISC 19 23:08:12.0±0.6, 38.29N±0.02×20.36E±0.02, h15km±3km, n349, σ1.50/416, mb4.2/41, MS3.2/4, 25C-19D, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.06 122 P Pg 23 08 14.5 -0.3
KEF4 S Sg 23 08 16.2 -0.4
KEF1 Kardakata, Kep 0.09 97 P Pg 23 08 14.7 -0.3
KEF1 S Sg 23 08 16.7 -0.4
KEF3 Kipouria, Keph 0.09 188 P Pg 23 08 14.9 -0.2
KEF3 S Sg 23 08 16.8 -0.2
LXRA Lixouri, Kepha 0.10 146 P Pg 23 08 15.3 0.0
LXRA S Sg 23 08 17.7 +0.3
ARGA Argostoli. Kep 0.14 140 P Pg 23 08 15.7 -0.1
ARGA S Sg 23 08 18.3 +0.1
ARG2 Argostoli 0.15 138 P Pg 23 08 15.8 0.0
ARG2 S Sg 23 08 18.2 -0.1
ARG2 Argostoli 0.15 138 Pg 23 08 15.8 0.0
ARG2 Sg 23 08 18.2 -0.1
KEF2 Argostoli. Kep 0.16 141 P Pg 23 08 15.9 -0.1
KEF2 S Sg 23 08 18.5 0.0
VLS Valsamata 0.21 122 P Pg 23 08 16.6 -0.2
VLS S Sg 23 08 19.8 -0.2
VLS Valsamata 0.21 122 P Pg 23 08 16.5 -0.2
VLS S Sg 23 08 20.0 0.0
VLS AML AML 23 08 20.1
VLS AML AML 23 08 20.1
VLS Valsamata 0.21 122 Pg 23 08 16.1 -0.6
VLS Valsamata 0.21 122 Sg 23 08 19.8 -0.2
KONA Konidatara, Ke 0.21 50 P Pg 23 08 16.7 -0.1
KONA S Sg 23 08 20.0 -0.1
FSK Fiskardo 0.23 42 P Pg 23 08 17.1 -0.1
FSK S Sg 23 08 20.7 +0.1
29μm,0.4s
FSK Fiskardo 0.23 42 P Pg 23 08 17.0 -0.1
FSK S Sg 23 08 20.6 +0.1
FSK AML AML 23 08 21.2
comp=E,60636μm,0.3s
FSK AML AML 23 08 21.4
comp=N,55393μm,0.4s
FSK Fiskardo 0.23 42 Pg 23 08 17.1 -0.1
FSK Sg 23 08 20.7 +0.1
VLMS Volimes, Zakyn 0.47 150 P Pg 23 08 21.1 -0.3
VLMS S Sg 23 08 28.2 +0.4
VLMS AML AML 23 08 29.5
VLMS AML AML 23 08 32.5
LKD Levkas 0.48 28 Pb 23 08 22.3 +0.2
MGNA Meganis 0.50 42 P Pb 23 08 21.5 -0.3
MGNA Meganis 0.50 42 Pb 23 08 22.9 +0.4
LKD2 Lefkada island 0.55 25 P Pg 23 08 22.7 -0.2
LKD2 S Sb 23 08 31.0 -0.2
LKD2 Lefkada island 0.55 25 P Pg 23 08 22.5 -0.3
LKD2 S Sg 23 08 30.1 -0.1
LKD2 AML AML 23 08 32.5
comp=N,10009μm,0.4s
LKD2 AML AML 23 08 41.7
comp=E,6906μm,0.3s

LKD2	Lefkada island	0.55	25		Pg	23 08 22.7	-0.2
LKD2					Sb	23 08 31.0	-0.2
AST1	Astakos	0.62	66	P	Pg	23 08 23.9	-0.3
AST1	Astakos	0.62	66		Pg	23 08 23.9	-0.3
PDO	Prodromos	0.71	64	P	Pg	23 08 25.7	-0.2
PDO				S	Sg	23 08 35.4	0.0
	comp=E,13μm,0.6s						
PDO	Prodromos	0.71	64	P	Pg	23 08 25.4	-0.6
PDO				AML	AML	23 08 41.9	
	comp=N,19036μm,0.5s						
PDO				AML	AML	23 08 43.0	
	comp=E,16324μm,0.7s						
PDO	Prodromos	0.71	64	P	Pg	23 08 25.7	-0.2
PDO					Sg	23 08 35.4	0.0
VTN	Vitineika	0.75	119	P	Pg	23 08 26.1	-0.4
VTN	Vitineika	0.75	119	P	Pg	23 08 25.9	-0.6
VTN	Vitineika	0.75	119		Pg	23 08 26.1	-0.4
AXS	Araxos	0.80	96	P	Pg	23 08 26.6	-1.0
RLS	Riolos of Patr	0.90	104	P	Pb	23 08 28.6	-0.7
RLS				S	Sg	23 08 41.3	+0.1
	comp=E,5μm,0.8s						
RLS	Riolos of Patr	0.90	104	P	Pb	23 08 28.4	-0.9
RLS				AML	AML	23 08 48.0	
	comp=E,9763μm,0.7s						
RLS				AML	AML	23 08 51.3	
	comp=N,11091μm,0.9s						
RLS	Riolos of Patr	0.90	104		Pb	23 08 28.1	-1.2
PVO	Paravola	0.97	70	P	Pb	23 08 30.6	+0.1
PVO				S	Sg	23 08 43.5	0.0
	comp=N,10μm,0.5s						
PVO	Paravola	0.97	70	P	Pb	23 08 30.3	-0.3
PVO				AML	AML	23 08 50.6	
	comp=E,23110μm,0.5s						
PVO				AML	AML	23 08 53.9	
	comp=N,18465μm,0.5s						
DRO	Drossia	1.11	107	P	Pb	23 08 32.5	-0.5
DRO				S	Sg	23 08 47.9	-0.1
DRO	Drossia	1.11	107	P	Pb	23 08 32.5	-0.5
DRO				AML	AML	23 08 55.8	
	comp=E,26479μm,0.8s						
DRO				AML	AML	23 09 00.3	
	comp=N,16162μm,0.7s						
UPR	University Cam	1.12	90	P	Pb	23 08 33.2	+0.1
IGT	Igoumenitsa	1.24	359	P	Pb	23 08 35.4	+0.2
IGT				S	Sg	23 08 52.5	+0.3
IGT	Igoumenitsa	1.24	359	ePg	Pg	23 08 37.0	+1.0
IGT				eSg	Sg	23 08 54.3	+2.1
IGT	Igoumenitsa	1.24	359	P	Pb	23 08 35.5	+0.3
IGT				AML	AML	23 08 56.3	
	comp=E,3177μm,0.7s						
IGT				AML	AML	23 09 04.5	
	comp=N,3097μm,0.9s						
IGT	Igoumenitsa	1.24	359		Pb	23 08 35.3	+0.2
IGT	Igoumenitsa	1.24	359	P	Pb	23 08 35.3	+0.1
ANX	Ano Chora	1.26	76	P	Pn	23 08 35.1	-0.1
ANX	Ano Chora	1.26	76	P	Pn	23 08 35.1	-0.1
ANX				AML	AML	23 08 59.9	
	comp=E,21950μm,0.6s						
ANX				AML	AML	23 09 00.1	
	comp=N,24757μm,0.6s						
ANX	Ano Chora	1.26	76		Pb	23 08 35.8	+0.2
LAKA	Lakka	1.27	92	P	Pn	23 08 34.9	-0.4
LAKA	Lakka	1.27	92	P	Pn	23 08 35.0	-0.3
LAKA				AML	AML	23 09 00.1	
	comp=N,7784μm,0.7s						
LAKA				AML	AML	23 09 03.5	
	comp=E,5970μm,0.6s						
LAKA	Lakka	1.27	92		Pb	23 08 35.8	+0.1
EVR	Evrytania	1.29	61	P	Pn	23 08 36.0	+0.3
AMT	Artemida-Makis	1.30	125	P	Pn	23 08 35.9	+0.2
AMT	Artemida-Makis	1.30	125	P	Pb	23 08 36.2	-0.1
AMT				AML	AML	23 09 04.3	
	comp=E,11109μm,0.8s						
AMT				AML	AML	23 09 09.5	
	comp=N,12967μm,0.6s						
AMT	Artemida-Makis	1.30	125		Pb	23 08 36.4	+0.2
SERG	Sergoula	1.34	84	P	Pn	23 08 35.9	-0.3
SERG				S	Sb	23 08 54.1	+0.3
	comp=N,5μm,0.6s						
SERG	Sergoula	1.34	84	P	Pn	23 08 36.2	0.0
TRIZ	Trizonia	1.35	86	P	Pn	23 08 36.0	-0.3
TRIZ				S	Sb	23 08 54.5	+0.5
	comp=N,4μm,0.5s						
TRIZ	Trizonia	1.35	86	P	Pn	23 08 35.9	-0.3
KALE	Kalithea	1.40	85	P	Pn	23 08 36.9	-0.2
KALE				S	Sn	23 08 55.3	-0.1
	comp=N,3μm,0.6s						
KALE	Kalithea	1.40	85	P	Pn	23 08 36.7	-0.4
KALE				AML	AML	23 09 08.7	
	comp=N,7604μm,0.6s						
KALE				AML	AML	23 09 09.9	
	comp=E,5390μm,0.5s						
JAN	Janina	1.42	15	P	Pg	23 08 39.5	+0.2
JAN	Janina	1.42	15	P	Pg	23 08 39.0	-0.3
KLV	Kalavryta, Ach	1.43	99	P	Pn	23 08 37.5	0.0
KLV	Kalavryta, Ach	1.43	99	P	Pn	23 08 37.8	+0.3
KLV				AML	AML	23 09 06.7	
	comp=E,3869μm,0.6s						
KLV				AML	AML	23 09 15.6	
	comp=N,4658μm,1.0s						
KEK	Kerkira	1.49	343	P	Pb	23 08 39.2	-0.2
KEK				S	Sg	23 08 59.4	-0.6
KEK	Kerkira	1.49	343	P	Pb	23 08 39.1	-0.3
MAKR	Makrakomi, Fth	1.56	62	P	Pb	23 08 40.5	-0.2
ITM	Ithomi	1.66	131	P	Pb	23 08 42.2	-0.1
ITM	Ithomi	1.66	131		Pb	23 08 41.9	-0.4
ITM					Sn	23 09 00.3	-1.4
AGG	Agios Georgios	1.71	64	P	Pg	23 08 44.1	-0.7
AGG				AML	AML	23 09 10.7	
	comp=N,4685μm,0.9s						
AGG				AML	AML	23 09 18.1	
	comp=E,7277μm,0.8s						
AGG	Agios Georgios	1.71	64		Pb	23 08 43.4	+0.3
AGG	Agios Georgios	1.71	64	P	Pb	23 08 43.4	+0.3
PYL	PYLOS	1.77	141	P	Pn	23 08 43.1	+1.0
THL	Klokotos Trika	1.81	45	P	Pb	23 08 45.6	+0.7
KPRO	Kipourio	1.84	25	P	Pb	23 08 45.6	+0.2
AXAR	Agios Charalam	1.86	74	P	Pb	23 08 46.4	+0.6
PROD	Prodromos	2.00	90	P	Pb	23 08 47.3	-0.8
PROD				AML	AML	23 09 23.8	
	comp=N,3098μm,1.0s						
PROD				AML	AML	23 09 25.9	
	comp=E,5718μm,0.7s						
LOUT	Loutraki	2.08	97	P	Pb	23 08 48.2	-1.3
LKR	Lokris	2.10	79	P	Pb	23 08 48.6	-1.2
DYR	Agios Nikonas	2.19	134	P	Pb	23 08 50.1	-1.2
VIL2	Platees	2.29	91	P	Pb	23 08 51.7	-1.3
KZN	Kozani	2.29	28	P	Pb	23 08 52.2	-0.9
SCTE	Santa Cesarea	2.31	321		Pn	23 08 50.4	+0.8
LIT	Litokhoron	2.45	42		Pb	23 08 53.9	-1.9
LIT	Litokhoron	2.45	42	P	Pb	23 08 53.9	-1.9
MRKA	Markates	2.56	80	P	Pn	23 08 54.5	+1.4
ATH	Athens Observa	2.66	96	P	Pn	23 08 56.6	+2.2
VLY	Voula,Athens	2.74	98	P	Pn	23 08 57.1	+1.6
OHR	Ohrid	2.84	7	iPn	Pn	23 08 59.0	+2.1
OHR	Ohrid	2.84	7	P	Pn	23 08 59.7	+2.8
TIP	Timpagrande	2.96	289	⇓P	Pn	23 08 59.9	+1.4
TIP				⇓S	Sn	23 09 35.5	+1.8
TIP	Timpagrande	2.96	289		Pn	23 08 59.7	+1.2
TIP					Sn	23 09 30.4	-3.4
PAIG	Paliouri	3.06	57	P	Pn	23 09 01.6	+1.8
TIR	Tirane	3.08	353	ePn	Pn	23 09 01.2	+1.1
TIR				eSn	Sn	23 09 36.3	-0.4
TIR	Tirane	3.08	353	⇑P	Pn	23 09 02.1	+2.0
TIR				⇑S	Sn	23 09 39.3	+2.6
TIR	Tirane	3.08	353		Pn	23 09 01.7	+1.6
TIR	Tirane	3.08	353	P	Pn	23 09 01.7	+1.6
THE	Thessaloniki	3.09	40	P	Pn	23 09 02.6	+2.4
GRG	Griva	3.10	30	P	Pn	23 09 02.6	+2.2
SOH	Sokhos	3.43	41	P	Pn	23 09 07.4	+2.4
OUR	Ouranopolis	3.47	53	P	Pn	23 09 08.1	+2.6
KNT	Kendrikon	3.47	33	P	Pn	23 09 07.3	+1.8
VAY	Valandovo	3.47	29	iPn	Pn	23 09 06.9	+1.4
CEL	Celeste	3.52	271		Pn	23 09 06.3	+0.1
STIP	Stip	3.68	22	iPn	Pn	23 09 11.4	+3.0
MATE	Matera	3.69	311	⇓P	Pn	23 09 09.8	+1.3
SRS	Serrai	3.77	40	ePn	Pn	23 09 10.8	+1.2
SRS				eSn	Sn	23 09 55.4	+1.7
SRS	Serrai	3.77	40	P	Pn	23 09 11.2	+1.6
ULC	Ulcinj	3.77	347	ePn	Pn	23 09 09.2	-0.4
ULC				eSn	Sn	23 09 53.4	-0.4
SKO	Skopje	3.77	12	ePn	Pn	23 09 09.2	-0.4

SKO	Skopje	3.77	12	iPn	Pn	23 09 08.3	-1.4
SKO	Skopje	3.77	12	P	Pn	23 09 11.6	+2.0
SG1	Sgolgore (BA)	3.82	313	ePn	Pn	23 09 12.7	+2.4
BAI	Bari	3.89	317	ePn	Pn	23 09 11.9	+0.6
BAI				Sn	Sn	23 09 57.6	+0.9
DRME	Dracevica, Mon	4.00	347	ePn	Pn	23 09 12.5	-0.2
DRME	Dracevica, Mon	4.00	347	ePn	Pn	23 09 12.9	+0.2
DRME				eSn	Sn	23 09 59.3	0.0
MMB	Musomiste	4.19	37	eP	Pn	23 09 20.3	+4.9
PDG	Podgorica	4.22	349	ePn	Pn	23 09 16.6	+0.8
PDG				eSn	Sn	23 10 03.6	-1.3
PDG	Podgorica	4.22	349	⇓P	Pn	23 09 17.5	+1.6
PDG				⇑S	Sn	23 10 04.3	-0.5
PDG	Podgorica	4.22	349	ePn	Pn	23 09 15.0	-0.8
PDG	Podgorica	4.22	349	Pn	Pn	23 09 16.3	+0.5
PDG					Sn	23 10 03.8	-1.0
TTG	Podgorica	4.22	349	ePn	Pn	23 09 15.8	0.0
TTG				eSn	Sn	23 10 04.1	-0.8
ACER	Acerenza	4.23	308		Pn	23 09 17.2	+1.2
APE	Apeiranthos	4.28	105	⇓eP	Pn	23 09 17.2	+0.6
PVY	Plav	4.31	356	ePn	Pn	23 09 17.1	-0.1
PVY				eSn	Sn	23 10 07.2	-0.1
HCY	Herceg Novi	4.39	342	ePn	Pn	23 09 17.9	-0.3
HCY				eSn	Sn	23 10 08.2	-0.9
CEME	Cevo	4.39	346	⇑iPn	Pn	23 09 17.9	-0.4
CEME				eSn	Sn	23 10 08.4	-0.8
BOSS	Bosilegrad	4.50	20	ePn	Pn	23 09 21.1	+1.4
IVA	Berane	4.59	356	ePn	Pn	23 09 21.0	0.0
IVA				eSn	Sn	23 10 13.7	-0.4
NKME	Niksic	4.60	347	ePn	Pn	23 09 20.4	-0.7
NKME				eSn	Sn	23 10 13.4	-0.9
KOME	Kolasin	4.60	352	⇓iPn	Pn	23 09 21.7	+0.6
KOME				eSn	Sn	23 10 13.9	-0.5
NKY	Niksic	4.64	347	ePn	Pn	23 09 21.2	-0.6
NKY				eSn	Sn	23 10 14.0	-1.3
BARS	Barje	4.66	13	ePn	Pn	23 09 22.7	+0.9
TREB	Trebinje	4.68	342	ePn	Pn	23 09 21.7	-0.5
TREB				eSn	Sn	23 10 13.8	-2.4
TREB	Trebinje	4.68	342	ePn	Pn	23 09 20.1	-2.1
IDI	Anoyia	4.71	128	Pn	Pn	23 09 23.7	+1.1
	comp=E,0.8nm,0.3s,baz=319,slow=6.9,SNR=14						
IDI				Sn	Sn	23 10 19.2	+2.3
	comp=E,5.6nm,0.3s,baz=155,slow=22,SNR=7.2						
RZN	Rozhen	4.76	43	eP	Pb	23 09 31.0	-4.3
VAE	Valguarnera	4.78	262	Pn	Pn	23 09 24.4	+0.9
	comp=E,1.2nm,0.3s,baz=156,slow=12,SNR=6.1						
VAE				Sn	Sn	23 10 19.5	+0.8
	comp=E,4.6nm,0.3s,baz=346,slow=8.3,SNR=4.0						
BRY	Bratogost	4.81	344	ePn	Pn	23 09 24.2	+0.1
BRY				eSn	Sn	23 10 18.6	-1.1
VTS	Vitosha	4.85	26	ePn	Pn	23 09 25.8	+1.2
VTS	Vitosha	4.85	26	⇑P	Pn	23 09 26.2	+1.6
VTS	Vitosha	4.85	26	eP	Pn	23 09 29.8	+5.2
VTS	Vitosha	4.85	26		Pn	23 09 26.3	+1.7
VTS					Sn	23 10 21.3	+2.6
VTS	Vitosha	4.85	26	P	Pn	23 09 26.1	+1.6
SGRT	San Giovanni R	4.96	316		Pn	23 09 26.7	+0.8
SGRT					Sn	23 10 20.1	-2.9
SELS	Selova	4.96	6	ePn	Pn	23 09 25.5	-0.5
SJES	Sjenica	4.98	357	ePn	Pn	23 09 26.8	+0.5
SJES				eSn	Sn	23 10 21.8	-1.8
STON	Ston	5.01	337	ePn	Pn	23 09 26.3	-0.3
STON				eSn	Sn	23 10 21.0	-3.2
STON	Ston	5.01	337	ePn	Pn	23 09 25.1	-1.5
UPM	Unac-Piva	5.03	348	ePn	Pn	23 09 27.0	-0.1
UPM				eSn	Sn	23 10 24.1	-1.0
PLD	Plovdiv	5.06	40	P	Pn	23 09 31.3	+4.0
PLE	Pljevlja	5.09	352	ePn	Pn	23 09 28.6	+0.7
PLE				eSn	Sn	23 10 25.5	-1.0
ALN	Alexandroupoli	5.10	58	Pn	Pn	23 09 29.9	+2.0
ALN	Alexandroupoli	5.10	58	P	Pn	23 09 29.9	+2.0
PAOL	Paolisi	5.25	303		Pn	23 09 31.8	+1.8
ZAPS	Zavoj	5.27	18	ePn	Pn	23 09 31.0	+0.7
WDD	Wied Dalam	5.27	244	Pn	Pn	23 09 30.4	+0.2
WDD					Sn	23 10 29.7	-1.1
IVAS	Ivanjica	5.29	358	ePn	Pn	23 09 30.1	-0.4
IVAS				eSn	Sn	23 10 30.0	-1.2
RUDO	Rudo	5.38	352	ePn	Pn	23 09 30.6	-1.1
BOVS	Bovan	5.44	10	ePn	Pn	23 09 32.7	+0.2
BOVS				eSn	Sn	23 10 33.2	-1.6
CORL	Corleone	5.58	268		Pn	23 09 34.8	+0.2
GRUS	Gruza	5.60	3	ePn	Pn	23 09 35.2	+0.4
BBLS	Lazići	5.62	353	ePn	Pn	23 09 34.6	-0.5
BBLS				eSn	Sn	23 10 36.6	-2.8
BBLS	Lazići	5.62	353	ePn	Pn	23 09 34.4	-0.7
CLTB	Caltabellotta	5.69	265		Pn	23 09 38.3	+2.2
ZAGS	Zajecar	5.70	14	ePn	Pn	23 09 36.2	+0.1
ZAGS				eSn	Sn	23 10 39.8	-1.4
DIVS	Divibare	5.81	357	ePn	Pn	23 09 37.4	-0.3
DIVS				eSn	Sn	23 10 41.9	-2.3
DIVS	Divibare	5.81	357	ePn	Pn	23 09 36.4	-1.3
HAPS	Han Pijesak,Bl	5.89	350	ePn	Pn	23 09 37.1	-1.7
TRUS	Trudelj	5.93	0	ePn	Pn	23 09 39.1	-0.2
KARP	Karpathos	6.09	115	Pn	Pn	23 09 43.4	+1.8
ELND	Elena	6.25	40	⇑P	Pn	23 09 45.1	+1.4
MGRS	Mrkonjic Grad	6.60	339	ePn	Pn	23 09 46.7	-1.8
AQU	L'Aquila	6.69	310	ePn	Pn	23 09 51.8	+2.0
AQU	L'Aquila	6.69	310	P	Pn	23 09 52.6	+2.8
AQU				pmax	pmax		
	comp=Z,54nm,0.7s						
FRGS	Fruska Gora	6.88	357	ePn	Pn	23 09 47.8	-4.5
FRGS				eSn	Sn	23 11 01.1	-9.2
BLY	Banja Luka	6.88	341	⇓P	Pn	23 09 53.0	+0.6
BLY	Banja Luka	6.88	341	ePn	Pn	23 09 51.9	-0.4
BLY	Banja Luka	6.88	341	Pn	Pn	23 09 52.8	+0.5
NRCA	Norcia	7.14	312		Pn	23 09 57.8	+1.7
GZR	Gura Zlata	7.33	13	⇑P	Pn	23 09 59.0	+0.5
GZR	Gura Zlata	7.33	13	P	Pn	23 09 58.9	+0.5
BZS	Buzias	7.38	7	⇑P	Pn	23 09 59.6	+0.4
BZS	Buzias	7.38	7	P	Pn	23 10 00.8	+1.6
BZS				pmax	pmax		
	comp=Z,11nm,1.5s						
ELL	Elmali	7.74	99		Pn	23 10 10.3	+6.0
ARR	Arges	7.76	23	⇑P	Pn	23 10 05.9	+1.5
LATE	Laterza	7.83	306	Pn	Pn	23 10 09.3	+4.0
SLUM	Salum	7.86	148	P	Pn	23 10 05.5	-0.3
	baz=142						
SLUM				AMP		23 11 00.0	
	baz=142						
SLUM				S	Sn	23 11 19.3	-15
	baz=142						
VOIR		7.95	25	⇓P	Pn	23 10 09.1	+2.0
VOIR		7.95	25	P	Pn	23 10 09.1	+2.0
VOIR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MORH	Mrgy, Hungar	8.02	351	ePn	Pn	23 10 06.4	-1.6
SIRR	Siria	8.03	6	⇑P	Pn	23 10 09.2	+1.1
RIY	Rijeka	8.29	330	ePn	Pn	23 10 10.6	-1.0
MLR	Muntele Rosu	8.31	28	Pn	Pn	23 10 13.9	+1.9
	comp=Z,0.4nm,0.3s,baz=207,slow=4.2,SNR=20						
MLR	Muntele Rosu	8.31	28	⇑P	Pn	23 10 14.9	+2.8
MLR	Muntele Rosu	8.31	28		Pn	23 10 17.2	+5.1
CRES	Cresnjev	8.37	336	ePn	Pn	23 10 12.3	-0.4
DOPR	Dopca	8.53	24	⇑P	Pn	23 10 16.9	+1.9
BISRR	Bisoca	8.66	31	⇑P	Pn	23 10 19.4	+2.6
OSSC	Osservatorio P	8.66	310	Pn	Pn	23 10 20.2	+3.5
MDUB	Mudurnu	8.67	72		Pn	23 10 19.0	+2.0
OZUR		8.78	26	⇓P	Pn	23 10 20.6	+2.2
LJU	Ljubljana	8.88	333	ePn	Pn	23 10 19.2	-0.5
PLOR	Plostina	8.88	30	⇑P	Pn	23 10 21.7	+1.8
PLOR	Plostina	8.88	30	P	Pn	23 10 21.6	+1.8
TRI	Trieste	8.89	329	Pn	Pn	23 10 20.2	+0.3
TRI	Trieste	8.89	329	P	Pn	23 10 20.2	+0.3
VRI	Vrincioaia	8.93	30	⇑P	Pn	23 10 23.0	+2.6
VRI	Vrincioaia	8.93	30	P	Pn	23 10 20.3	-0.1
VRI				pmax	pmax		
	comp=Z,11nm,0.7s						
MATC	Matruh	8.93	139	P	Pn	23 10 21.8	+1.3
	baz=133						
KEST	Kesra	9.17	257	Pn	Pn	23 10 23.7	-0.2
	comp=Z,0.5nm,0.3s,baz=41,slow=8.8,SNR=5.8						
KEST				Sn	Sn	23 12 06.3	-0.6
	comp=Z,0.4nm,0.3s,baz=16,slow=19,SNR=4.1						
SOKA	Soboth	9.26	337	ePn	Pn	23 10 24.4	-0.6
	comp=Z,6.8nm,0.3s,SNR=11						
SOKA				eSn	Sn	23 12 00.9	-8.0
	comp=Z,6.4nm,0.8s						
OBKA	Obir	9.27	334	ePn	Pn	23 10 25.8	+0.6
	comp=Z,0.8nm,0.1s,SNR=4.3						
OBKA				iSn	Sn	23 12 05.3	-3.9
	comp=Z,19nm,0.8s						

TEOL	Teolo	9.59	320	Pn	Pn	23 10 29.3	-0.1
PSZ	Piszkesteto	9.63	358	Pn	Pn	23 10 31.3	+1.2
PSZ	Piszkesteto	9.63	358	P	Pn	23 10 31.3	+1.2
ARSA	Arzberg	9.64	340	iPn	Pn	23 10 29.7	-0.4
	comp=Z,2.7nm,0.4s						
PRMA	PARMA	9.93	314	Pn	Pn	23 10 35.1	+1.1
SWA2		9.96	153	P	Pn	23 10 33.0	-1.6
	baz=149						
SWA2				S	Sn	23 12 08.7	-18
	baz=149						
CTI	Castel Tesino	10.09	323		Pn	23 10 36.2	-0.3
CTI	Castel Tesino	10.09	323	P	Pn	23 10 36.2	-0.3
MSSA	Maissana	10.14	310	Pn	Pn	23 10 40.0	+3.0
CONA	Conrad Observa	10.18	343	ePn	Pn	23 10 43.9	+6.3
	comp=Z,1.9nm,0.5s						
KBA	Koelnbreinsper	10.19	332	ePn	Pn	23 10 38.1	+0.3
	comp=Z,2.6nm,0.5s						
KBA				iSn	Sn	23 12 27.5	-4.4
	comp=Z,8.4nm,0.8s						
ABTA	Abfaltersbach	10.24	328	ePn	Pn	23 10 38.5	0.0
	comp=Z,2.6nm,0.4s						
ABTA				eSn	Sn	23 12 28.9	-4.2
	comp=Z,18nm,0.8s						
VYHS	Vyhne	10.26	354	eP	Pn	23 10 38.5	-0.2
VYHS				e		23 12 30.8	
VYHS	Vyhne	10.26	354	ePN	Pn	23 10 38.5	-0.2
VYHS				eSN	Sn	23 12 30.8	-2.6
BR131	Keskin Array S	10.43	78	Pn	Pn	23 10 44.3	+3.1
BR131	Keskin Array S	10.43	78	P	Pn	23 10 44.3	+3.1
BRTR	Keskin Array B	10.43	78	Pn	Pn	23 10 45.1	+4.0
	comp=Z,0.2nm,0.3s,baz=255,slow=12,SNR=8.1						
BRTR				LR	LR	23 15 01.8	
	comp=Z,43nm,19.8s,baz=230,slow=40						
MOA	Molln	10.54	337	ePn	Pn	23 10 42.6	+0.1
	comp=Z,3.1nm,0.3s						
MOA				iSn	Sn	23 12 36.4	-3.9
	comp=Z,3.8nm,0.4s						
KOLS	Kolonicke sedl	10.73	7	eP	Pn	23 10 52.3	+7.2
KOLS	Kolonicke sedl	10.73	7	ePN	Pn	23 10 52.3	+7.2
CSS	Mathiatis	10.94	104		Pn	23 10 48.3	+0.3
WTTA	Wattenberg	11.02	327	ePn	Pn	23 10 50.2	+1.0
	comp=Z,4.1nm,0.5s,SNR=4.1						
WTTA				eSn	Sn	23 12 50.5	-1.7
	comp=Z,9.4nm,0.7s						
WATA	Walderalm	11.10	327	ePn	Pn	23 10 51.7	+1.4
	comp=Z,1.3nm,0.2s,SNR=6.1						
WATA				eSn	Sn	23 12 52.1	-2.1
FUORN	Ofenpass-Fuorn	11.17	321		Pn	23 10 51.9	+0.5
MOTA	Moosalm	11.31	326	ePn	Pn	23 10 54.7	+1.5
	comp=Z,3.4nm,0.6s,SNR=5.4						
MOTA				eSn	Sn	23 12 56.6	-2.8
	comp=Z,11nm,1.1s						
VRAC	Vranov	11.35	347	LR	LR	23 16 37.7	
	comp=Z,73nm,20.1s,baz=168,slow=45						
GEC2	GERESS Array S	11.60	338	Pn	Pn	23 10 58.9	+1.8
GERES	GERESS Array B	11.60	338	Pn	Pn	23 10 56.3	-0.8
	comp=Z,0.3nm,0.3s,baz=158,slow=14,SNR=10						
GERES				Sn	Sn	23 12 59.6	-6.7
	comp=Z,0.2nm,0.3s,baz=158,slow=24,SNR=3.7						
DAVA	Damuels	11.83	323	Pn	Pn	23 11 03.9	+3.7
	comp=Z,0.6nm,0.2s						
KHC	Kasperske Hory	11.89	338	ePN	Pn	23 11 00.3	-0.7
KHC				ex	x	23 11 23.3	
KHC				eSN	Sn	23 13 06.2	-7.2
KHC	Kasperske Hory	11.89	338	Pn	Pn	23 11 01.0	0.0
KHC	Kasperske Hory	11.89	338	⇑eP	Pn	23 11 01.5	+0.5
MMAI	Mount Meron Ar	13.31	109	Pn	Pn	23 11 20.6	+0.1
	comp=Z,0.8nm,0.3s,baz=309,slow=11,SNR=5.5						
AKASG	Malin Array Be	13.91	24	Pn	Pn	23 11 27.8	-0.8
	comp=Z,0.3nm,0.3s,baz=212,slow=12,SNR=3.4						
CLL	Collm	14.02	341	iP	Pn	23 11 31.8	+1.9
CLL				iPP	PnPn	23 11 40.8	+2.9
CLL	Collm	14.02	341	iP	Pn	23 11 23.1	-6.8
ASF	Jabal al Asfar	14.82	109	Pn	Pn	23 11 42.3	+1.2
	comp=Z,0.1nm,0.3s,baz=269,slow=7.0,SNR=2.8						
EIL	Elat	14.83	121	Pn	Pn	23 11 42.5	+1.3
	comp=Z,0.3nm,0.3s,baz=337,slow=7.7,SNR=3.4						
SUW	Suwalki	15.85	6	P	Pn	23 11 54.3	-0.1
SUW				IAmb	IAmb	23 11 58.6	
	comp=Z,20nm,0.8s						
SUW	Suwalki	15.85	6	P	Pn	23 11 54.3	-0.1
SUW				pmax	pmax		
	comp=Z,20nm,0.8s						
KLNR	Kaliningrad	16.32	360	⇑eP	Pn	23 12 01.7	+1.2
SHA1	Shidzhatmaz	17.66	65	⇑eP	P	23 12 20.0	+1.4
KIV	Kislovodsk	17.73	64	P	P	23 12 20.6	+1.5
KIV	Kislovodsk	17.73	64	eP	P	23 12 20.6	+1.5
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KBZ	Khabaz	17.83	65	P	P	23 12 20.3	+0.2
	comp=Z,0.1nm,0.3s,baz=286,slow=7.8,SNR=12						
KBZ	Khabaz	17.83	65	⇑eP	P	23 12 22.0	+1.8
AKH	Akhalkalaki	18.02	73	P	P	23 12 22.5	0.0
AKH	Akhalkalaki	18.02	73	P	P	23 12 22.5	0.0
AKH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PYA1	Pyatigorsk	18.04	64	⇓eP	P	23 12 24.2	+1.7
ONI	Oni	18.08	69	P	P	23 12 27.7	+4.7
NCK	Nalchik	18.30	66	⇓eP	P	23 12 25.6	+0.3
VSR	Storozhevoye	18.52	40	eP	P	23 12 26.7	-0.9
VSR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ESDC	Sonseca Array	18.95	282	P	Pn	23 12 33.5	+0.2
	comp=Z,0.1nm,0.3s,baz=77,slow=11,SNR=4.1						
GNI	Garni	18.97	77	P	Pn	23 12 33.7	+0.1
	comp=Z,0.6nm,0.3s,baz=351,slow=2.3,SNR=24						
GNI	Garni	18.97	77	P	Pn	23 12 35.1	+1.5
GNI				IAmb	IAmb	23 12 35.9	
	comp=Z,20nm,0.8s						
GNI	Garni	18.97	77	d iP	Pn	23 12 34.5	+0.9
GNI				pmax	pmax		
	comp=Z,128nm,1.7s						
LPSR	Galich'ya Gora	19.27	36	eP	P	23 12 36.3	+0.4
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
NAX	Nakhchivan	19.61	80	P	P	23 12 41.1	-0.2
VRH	Novokhopyorsk	19.83	42	eP	P	23 12 42.0	0.0
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
OBN	Obninsk	20.08	28	P	P	23 12 43.9	-0.8
	comp=Z,1.6nm,0.4s,baz=13,slow=20,SNR=3.0						
OBN	Obninsk	20.08	28	iP	P	23 12 43.0	-1.7
OBN				i		23 13 01.6	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,98nm,16.0s						
GANJ	Ganja	20.16	75	P	Pn	23 12 46.8	-0.9
VSU	Vasula	20.61	10	d eP	P	23 12 50.8	+0.4
VSU				pmax	pmax		
	comp=Z,227nm,1.7s						
MNGR	Mingechevir, A	20.73	75	P	P	23 12 52.9	+1.0
SEKA	Sheki	20.81	73	P	Pn	23 12 54.4	-0.9
MOS	Moscow	20.95	28	eP	P	23 12 53.6	-0.5
MOS				pmax	pmax		
	comp=Z,26nm,0.8s						
MAK	Makhachkala	21.08	69	⇓eP	P	23 12 57.1	+1.4
MAK				pmax	pmax		
	comp=Z,57nm,1.2s						
IBDR	Badra	21.37	96	ePg	P	23 12 57.0	-1.8
	baz=323						
IBDR				eSg	pP	23 13 03.0	0.0
IBDR				AML	AML	23 13 08.9	
	comp=E,176nm,0.4s						
IBDR				AML	AML	23 13 09.6	
	comp=N,9.1nm,0.6s						
LKRN	Lenkeran, Azer	22.21	80	P	P	23 13 09.2	+1.3
HFS	Hagfors	22.27	351	P	P	23 13 07.7	-0.7
	comp=N,8.1nm,0.8s,baz=158,slow=9.6,SNR=24						
PUL	Pulkovo	22.42	13	d eP	P	23 13 09.1	-0.8
PUL				pmax	pmax		
	comp=Z,45nm,0.8s						
KONO	Kongsberg	22.46	346	⇑eP	P	23 13 12.5	+2.2
KONO				pmax	pmax		
	comp=Z,50nm,1.9s						
NC602	NORSAR Array S	23.15	349	P	P	23 13 16.4	-1.1
NC602				IAmb	IAmb	23 13 19.6	
	comp=Z,8.7nm,0.9s						
NORES	NORESS Array B	23.15	349	P	P	23 13 18.4	+0.9
EKA	Eskdalemuir Ar	23.27	325	P	P	23 13 18.8	0.0
	comp=Z,2.3nm,0.7s,baz=114,slow=10,SNR=3.6						
NAO01	NORSAR Array S	23.35	348	P	P	23 13 20.2	+0.6
FINES	FINESS Array B	23.45	7	P	P	23 13 19.2	-1.3
	comp=Z,5.6nm,0.7s,baz=169,slow=9.4,SNR=32						
FINES				LR	LR	23 24 39.9	

	comp=Z,83nm,19.6s,baz=194,slow=42						
FIA1	FINESS Array S	23.45	7	P	P	23 13 19.7	-0.9
FIA1				IAmb	IAmb	23 13 21.6	
	comp=Z,8.8nm,0.8s						
NC405	NORSAR Array S	23.48	349	P	P	23 13 20.9	0.0
NB201	NORSAR Array S	23.48	349	P	P	23 13 20.9	0.0
NB2	NORSAR Subarra	23.49	349	P	P	23 13 20.8	-0.2
	comp=Z,4.0nm,0.9s,baz=162,slow=9.3						
NOA	NORSAR Array B	23.49	349	P	P	23 13 21.2	+0.2
	comp=Z,1.9nm,0.8s,baz=159,slow=9.3,SNR=15						
NOA				LR	LR	23 24 12.7	
	comp=Z,28nm,19.6s,baz=160,slow=41						
NBO00	NORSAR Array S	23.55	348	P	P	23 13 21.2	-0.3
NC204	NORSAR Array S	23.78	348	P	P	23 13 23.6	-0.2
NC204				IAmb	IAmb	23 13 24.8	
	comp=Z,21nm,1.4s						
KLMR	Klimovskoe	25.58	22	eP	P	23 13 38.9	-1.3
KLMR				pmax	pmax		
	comp=Z,20nm,1.5s						
KLMR	Klimovskoe	25.58	22	eP	P	23 13 39.0	-1.3
KLMR				AMP		23 13 41.7	
	comp=Z,20nm,1.5s						
KIRV	Kirov	27.63	33	iP	P	23 13 57.4	-1.3
PRGR	Permogore	28.12	26	eP	P	23 14 00.8	-2.2
PRGR				e		23 14 48.4	
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKTO	Aktyubinsk	29.21	53	P	P	23 14 11.8	-1.2
	comp=Z,1.1nm,0.6s,baz=277,slow=11,SNR=4.1						
GEYT	Alibeck	29.58	79	P	P	23 14 16.6	+0.2
	comp=Z,2.6nm,0.7s,baz=281,slow=9.8,SNR=6.1						
TOA0	Torodi Ar. Sit	30.04	219	P	P	23 14 21.5	+1.0
TOA0				IAmb	IAmb	23 14 24.8	
	comp=Z,5.6nm,1.1s						
TORD	Torodi Ar. Bea	30.04	219	P	P	23 14 21.1	+0.6
	comp=Z,2.9nm,0.8s,baz=30,slow=9.5,SNR=16						
ARU	Arti	31.06	42	P	P	23 14 28.3	-0.9
	comp=Z,0.8nm,0.5s,baz=238,slow=13						
ARU	Arti	31.06	42	IAmb	IAmb	23 14 40.3	
	comp=Z,8.0nm,1.4s						
ARU	Arti	31.06	42	P	P	23 14 28.3	-0.9
ARU				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ARCES	ARCESS Array B	31.43	3	P	P	23 14 31.3	-1.0
	comp=Z,3.3nm,0.9s,baz=347,slow=5.0,SNR=7.0						
BRVK	Borovoye	37.08	50⇓	eP	P	23 15 21.4	0.0
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
KK31	Karatay Array	37.87	66	P	P	23 15 28.2	0.0
KK31				IAmb	IAmb	23 15 33.3	
	comp=Z,3.3nm,0.8s						
KK31	Karatay Array	37.87	66	P	P	23 15 28.2	0.0
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	Karatay Array	37.87	66	P	P	23 15 28.2	0.0
KKAR				IAmb	IAmb	23 15 33.3	
	comp=Z,3.3nm,0.8s						
KKAR	Karatay Array	37.87	66	P	P	23 15 28.2	0.0
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DBIC	Dimbokro	38.89	222	P	P	23 15 37.9	+0.8
	comp=Z,2.2nm,0.9s,baz=2.0,slow=11,SNR=4.0						
DBIC	Dimbokro	38.89	222	IAmb	IAmb	23 15 49.3	
	comp=Z,7.6nm,1.2s						
DBIC	Dimbokro	38.89	222	P	P	23 15 37.9	+0.8
DBIC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
AAK	Ala-Archa	40.83	66	P	P	23 15 53.5	+0.3
AAK	Ala-Archa	40.83	66⇑	eP	P	23 15 53.8	+0.6
AAK				pmax	pmax		
	comp=Z,6.0nm,2.5s						
KURK	Kurchatov	42.31	53⇑	eP	P	23 16 05.1	+0.1
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MK31	Makanchi Array	45.35	58	P	P	23 16 28.7	-0.8
MK31	Makanchi Array	45.35	58	P	P	23 16 28.7	-0.8
MK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	45.35	58	P	P	23 16 28.9	-0.6
	comp=Z,1.4nm,0.4s,baz=273,slow=7.3,SNR=46						
MKAR				PcP	PcP	23 18 08.8	0.0
	comp=Z,1.0nm,0.9s,baz=262,slow=4.8,SNR=3.5						
ZAA0	Zalesovo Array	45.71	48	P	P	23 16 31.6	-0.6
ZALV	Zalesovo Beam	45.71	48	P	P	23 16 31.0	-1.2
	comp=Z,7.6nm,0.5s,baz=272,slow=8.7,SNR=33						
WMQ	Urumqi	49.81	61	eP	P	23 17 08.8	+4.5
FRB	Frobisher Bay	55.99	328	P	P	23 17 50.0	+0.6
	comp=Z,1.5nm,0.7s,baz=64,slow=9.4,SNR=5.0						
TLY	Talaya	57.30	47⇑	eP	P	23 18 00.5	+1.4
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SCHQ	Schefferville	58.30	317	P	P	23 18 06.3	+0.4
	comp=Z,1.1nm,0.5s,baz=74,slow=5.3,SNR=9.1						
TIXI	Tiksi	59.59	20⇑	eP	P	23 18 13.6	-1.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.7s						
GTA	Gaotai	59.88	62	eP	P	23 18 16.5	-0.9
GTA				pP	pP	23 18 21.6	-0.3
GTA				sP	sP	23 18 24.8	+1.2
SONM	Songino Array	60.48	51	P	P	23 18 21.2	-0.2
	comp=Z,1.2nm,0.9s,baz=290,slow=8.1,SNR=8.7						
SONM				LR	LR	23 44 45.2	
	comp=Z,37nm,20.2s,baz=337,slow=36						
LZH	Lanzhou	64.26	63	eP	P	23 18 47.3	+0.4
LZH				pP	pP	23 18 51.8	+0.4
LZH				sP	sP	23 18 56.0	+2.9
LZH				PP	PP	23 21 06.3	-1.6
HHC	Hu-ho-hao-te	67.08	55	eP	P	23 19 05.8	+0.9
CMAR	Chiang Mai Arr	70.00	82	P	P	23 19 22.1	-1.3
	comp=Z,0.8nm,0.3s,baz=303,slow=6.7,SNR=7.5						
BILL	Bilibino	70.94	13⇓	eP	P	23 19 28.6	+0.4
BILL				pmax	pmax		
	comp=Z,3.0nm,1.7s						
YKA	Yellowknife Ar	73.24	340⇑	eP	P	23 19 39.7	-2.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KLR	Kul'dur	73.87	39d	eP	P	23 19 46.6	+0.5
KLR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULM	Lac du Bonnet	75.54	324	P	P	23 19 55.6	-0.1
	comp=Z,1.8nm,0.6s,baz=67,slow=2.8,SNR=5.0						
ULM	Lac du Bonnet	75.54	324	IAmb	IAmb	23 19 57.6	
	comp=Z,1.4nm,0.7s						
ULM	Lac du Bonnet	75.54	324⇓	eP	P	23 19 56.3	+0.6
ILAR	Eielson Array	76.79	354	P	P	23 20 03.3	+0.7
	comp=Z,0.4nm,0.8s,baz=2.3,slow=9.1,SNR=4.9						
USRK	Ussuriysk Ar.	77.28	43	P	P	23 20 05.6	-0.1
	comp=Z,0.9nm,0.6s,baz=299,slow=2.1,SNR=6.7						
YSS	Yuzh-Sakhalins	80.75	36	eP	P	23 20 25.2	+0.6
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
MJAR	Matsushiro Arr	86.00	46	P	P	23 20 51.3	-0.6
	comp=Z,2.3nm,1.0s,baz=355,slow=4.2,SNR=4.0						
MJA0	Matsu Arr-Jizo	86.02	46	eP	P	23 20 54.6	+2.5
TXAR	Lajitas Array	94.81	313	P	P	23 21 34.7	+1.2
	comp=Z,0.3nm,0.7s,baz=69,slow=6.9,SNR=4.0						
ASAR	Alice Springs	122.31	96	PKP	PKPdf	23 27 05.9	-0.8
	comp=Z,0.2nm,0.3s,baz=285,slow=1.2,SNR=2.9						

IDC ***19*** *23:15:18.6±0.9, 67.24N×21.23E, h0km, mb1 2.9/3, mb1mx2.7/54, mbtmp2.9/3, ML2.3/4, Error ellipse: s-maj=15.9km s-min=6.9km az=113.0*
UPP ***19*** *23:15:18.2±0.1, 67.17N×20.61E, h0km, ML2.4, Explosion*
HEL ***19*** *23:15:18.9±0.1, 67.17N×20.63E, h0km, ML2.1, ML2.4(UPP), Explosion*
ISC 19 23:15:18.3±0.8**, 67.16N**±0.02×**20.59E**±0.03**, h0km, n37, σ1s12**/57**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	Dundret	0.04	189	P	Pg	23 15 19.4	+0.4
DUNU	Dundret	0.04	189	iP	Pg	23 15 19.4	+0.4
MASU	Masugnsbyn	0.62	61	P	Pg	23 15 29.8	-0.4
MASU				S	Sg	23 15 37.5	-0.8
MASU	Masugnsbyn	0.62	61	iP	Pg	23 15 29.8	-0.4
MASU				iS	Sg	23 15 37.5	-0.8
RATU	Laukkuluspa	0.77	331	P	Pg	23 15 32.7	-0.4
RATU				S	Sg	23 15 42.9	-0.1
RATU	Laukkuluspa	0.77	331	iP	Pg	23 15 32.7	-0.4
RATU				iS	Sg	23 15 42.9	-0.1
KUA	Kurravaara	0.80	353	P	Pg	23 15 32.8	-0.9
KUA				S	Sg	23 15 43.5	-0.6
KUA	Kurravaara	0.80	353	iP	Pg	23 15 32.8	-0.9
KUA				iS	Sg	23 15 43.5	-0.6
ERTU	Ertsjaerv	0.88	133	P	Pg	23 15 34.6	-0.6
ERTU				S	Sg	23 15 46.5	0.0
ERTU	Ertsjaerv	0.88	133	eP	Pg	23 15 34.5	-0.6
	baz=310						
HARU	Harads	1.01	171	P	Pg	23 15 37.5	-0.2
HARU	Harads	1.01	171	eP	Pg	23 15 37.5	-0.2
LANU	Lannavaara	1.04	30	eP	Pg	23 15 37.4	-0.8
LANU				eS	Sg	23 15 50.4	-1.3
HEF	Hetta	1.71	42	eP	Pn	23 15 47.8	-1.6
	baz=223						
HEF				MSG		23 16 10.0	
	comp=Z,9.7nm,0.2s						
HEF				eSG	Sn	23 16 11.3	-0.6
HEF	Hetta	1.71	42	eP	Pg	23 15 53.5	+2.4
KALU	Kalix	1.71	138	P	Pn	23 15 49.5	+0.1
KALU	Kalix	1.71	138	eP	Pn	23 15 49.3	0.0
KALU				eSN	Sg	23 16 13.3	0.0
TOF	Tornio	1.84	124	eP	Pn	23 15 51.0	-0.1
TOF				MSG		23 16 13.9	
	comp=Z,23nm,0.2s						
TOF				eSN	Sb	23 16 16.3	-0.1
KIF	Kilpisjarvi	1.85	2	eP	Pn	23 15 51.7	+0.4
	baz=179						
KIF				MSG		23 16 14.4	
	comp=Z,16nm,0.2s						
KIF				eSG	Sb	23 16 17.1	+0.4
KIF	Kilpisjarvi	1.85	2	eP	Pg	23 15 55.0	+1.2
RNF	Rovaniemi	2.21	102	ePB	Pn	23 15 57.0	+0.8
RNF				eSG	Sb	23 16 26.5	-0.5
SGF	Sodankyl	2.32	80	eP	Pn	23 15 58.5	+0.8
SGF				eSG	Sb	23 16 29.4	-0.8
BURU	Burvik	2.61	172	eP	Pn	23 16 02.8	+1.2
OUL	Oulu	3.00	131	eP	Pn	23 16 09.0	+1.9
ARCES	ARCESS Array B	3.00	35	Pn	Pn	23 16 06.6	-0.5
	comp=Z,0.9nm,0.3s,baz=214,slow=13,SNR=18						
ARCES				Lg	Lg	23 16 43.6	
	comp=Z,1.4nm,0.3s,baz=213,slow=24,SNR=9.3						
ARE0	ARCESS Array S	3.00	35	ePG	Pb	23 16 12.2	-0.4
	baz=217						
ARE0				eSB	Sn	23 16 46.2	+2.5
OUF	Merijarvi	3.29	147	eP	Pn	23 16 11.7	+0.8
UMAU	Umeaa	3.29	179	eP	Pn	23 16 12.4	+1.3
KEV	Kevo	3.52	39	ePG	Pb	23 16 22.0	+0.6
	baz=230						
KEV				eS	Sn	23 16 55.7	-0.7
VRF	Varrio	3.53	76	eP	Pn	23 16 14.3	0.0
MSF	Maaselka	3.61	106	ePG	Pb	23 16 23.6	+0.7
MSF				eSG	Sb	23 17 08.9	+1.8
HUSU	Husum	3.88	189	eP	Pn	23 16 20.5	+1.5
	baz=8.0						
HUSU				eSG	Sg	23 17 19.7	-3.0
KU6	Riekki	3.88	103	eP	Pn	23 16 19.6	+0.4
VAF	Ylistaro	4.23	167	eP	Pn	23 16 25.4	+1.5
FINES	FINESS Array B	6.21	155	Pn	Pn	23 16 52.3	+1.1
	comp=Z,0.4nm,0.3s,baz=348,slow=14,SNR=14						
FINES				Sn	Sn	23 18 01.5	-1.3
	comp=Z,0.3nm,0.3s,baz=340,slow=22,SNR=3.7						
FINES				Lg	Lg	23 18 33.6	
	comp=Z,0.6nm,0.3s,baz=343,slow=28,SNR=8.3						
NOA	NORSAR Array B	7.38	218	Pn	Pn	23 17 09.7	+2.5
	comp=Z,0.0nm,0.3s,baz=28,slow=11,SNR=3.2						
HFS	Hagfors	7.69	207	Pn	Pn	23 17 11.2	-0.1
	comp=Z,0.2nm,0.3s,baz=27,slow=13,SNR=6.4						
HFS				Sn	Sn	23 18 36.4	-2.6
	comp=Z,0.4nm,0.3s,baz=17,slow=22,SNR=8.0						

IDC ***19*** *23:17:41.7±2.7, 54.43N×161.46W, h0km, mb3.8/8, mb1 3.8/11, mb1mx3.5/56, mbtmp3.7/11, ML3.5/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/42, Error ellipse: s-maj=69.4km s-min=20.2km az=160.0*
NEIC ***19*** *23:17:48.4±1.6, 54.67N±0.08×161.07W±0.07, h21km±9km, Error ellipse: s-maj=12.3km s-min=4.2km az=161.0*
AEIC ***19*** *23:17:49.4±2.0, 54.65N±0.04×161.12W±0.05, h28km±7km, ML3.4/37, Error ellipse: s-maj=5.9km s-min=3.5km az=144.0*
ISC 19 23:17:46.9±0.8**, 54.63N**±0.09×**160.97W**±0.04**, h22km, n76, σ1s60**/80**, mb3.8**/9**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOL	Dolgoi Island	0.73	316		Pb	23 18 01.9	+0.9
SDPT	Sand Point	0.78	21		Pn	23 18 04.0	+1.5
SDPT	Sand Point	0.78	21		Sn	23 18 14.7	+1.2
CNBA	Chernabura Isl	0.83	76		Pn	23 18 04.8	+1.6
CNBA	Chernabura Isl	0.83	76		Sb	23 18 15.5	+2.3
HAG	Hague Volcano	0.88	323		Pn	23 18 04.4	+0.4
PVV	Pavlof Volcano	0.89	328		Pn	23 18 04.4	+0.4
DT1	Dutton Round H	0.90	303		Pb	23 18 03.9	+0.2
PS1A	Pavlof South-1	0.91	331		Pn	23 18 04.9	+0.5
PN6	Pavlof North-6	0.99	327		Pn	23 18 06.6	+1.0
BALA	Baldy Mountain	1.19	299		Pb	23 18 09.1	+0.4
BLHA	Black Hill	1.25	330		Pb	23 18 09.9	+0.2
FALS	False Pass	1.44	280		Pn	23 18 11.8	+0.3
FALS					Sn	23 18 29.8	+0.1
VNWF	Veniaminof 8	1.73	27		Pb	23 18 18.1	+0.1
SSLW	Shishaldin Wes	1.83	276		Pn	23 18 18.2	+1.2
SSBA	Shishaldin	1.83	276		Pn	23 18 18.3	+1.2
VNFG	Fog Glacier, M	1.85	25		Pb	23 18 20.6	+0.6
WESE	West Dahl East	2.11	267		Pn	23 18 22.3	+1.4
WESP	Westdahl Peak	2.19	268		Pn	23 18 24.2	+2.3
WEBT	Westdahl Beart	2.20	271		Pn	23 18 24.4	+2.3
CHGN	Chignik	2.22	40		Pb	23 18 25.7	-0.6
AKUT	Akutan	2.85	262		Pn	23 18 32.4	+1.5
AKBBA	Akutan Broad B	2.95	262		Pn	23 18 34.5	+2.2
AKLV	Akutan Long Va	2.95	263		Pn	23 18 34.2	+1.8
AKLV					Sn	23 19 08.0	+0.9
CHIR	Chirikof Islan	3.29	66		Pn	23 18 40.1	+3.0
UNV	Unalaska Valle	3.34	259		Pn	23 18 39.0	+1.3
UNV					Sn	23 19 18.4	+1.8
MTBL	Makushin Table	3.41	261		Pn	23 18 40.9	+2.2
MNAT	Makushin Natee	3.43	260		Pn	23 18 40.4	+1.4
MNAT					Sn	23 19 21.8	+2.9
MSW	Makushin Switc	3.48	261		Pn	23 18 41.2	+1.5
MREP	Makushin Rep't	3.49	259		Pn	23 18 40.9	+1.1
PLK1	Peulik 1	4.01	36		Pn	23 18 50.1	+3.2
SII	Sitkinak Islan	4.31	61	Pn	Pn	23 18 53.0	+1.9
OHAK	Old Harbor	5.04	56		Pn	23 19 02.8	+1.6
KDAK	Kodiak Island	5.65	53	Pn	Pn	23 19 11.2	+1.7
	0.8nm,0.3s,baz=230,slow=15,SNR=15						
KDAK				Sn	Sn	23 20 12.5	-1.1
	0.7nm,0.3s,baz=70,slow=12,SNR=2.9						
KDAK	Kodiak Island	5.65	53	Pn	Pn	23 19 09.6	+0.2
SVW2	Sparrevohn	7.10	22	Pn	Pn	23 19 31.7	+2.4
BRLK	Bradley Lake	7.51	43	Pn	Pn	23 19 36.2	+1.2
SUA	Susitna One	8.73	34	Pn	Pn	23 19 54.5	+2.7
RC01	Rabbit Creek A	8.81	38	Pn	Pn	23 19 55.7	+2.9
PPLA	Purkeypile	9.46	25	Pn	Pn	23 20 05.1	+3.4
HIN	Hinchinbrook I	9.69	48	Pn	Pn	23 20 05.5	+0.7
SCM	Sheep Creek Mo	10.18	39	Pn	Pn	23 20 13.4	+1.9
ANM	Nome	10.21	349	Pn	Pn	23 20 13.1	+1.2
TRF	Thorofare Moun	10.40	27	Pn	Pn	23 20 15.8	+1.1
RAGM	Ragged Mountai	10.48	50	Pn	Pn	23 20 17.8	+2.1
HMT	Hamilton	10.64	51	Pn	Pn	23 20 19.6	+1.7
RND	Reindeer	10.77	30	Pn	Pn	23 20 20.4	+0.7
WAX	Waxell Ridge	11.33	52	Pn	Pn	23 20 28.6	+1.3
GLB	Gilahina Butte	11.35	46	Pn	Pn	23 20 28.9	+1.4
VRDI	Verde Repeater	11.40	47	Pn	Pn	23 20 30.7	+2.3
PAX	Paxson	11.57	38	Pn	Pn	23 20 31.2	+0.6
MLY	Manley	11.62	22	Pn	Pn	23 20 33.3	+2.1
BALM	Baldy	11.80	50	Pn	Pn	23 20 35.4	+1.7
WRH	Wood River Hil	11.81	28	Pn	Pn	23 20 32.7	-1.1
RIDG	Independent Ri	12.28	36	Pn	Pn	23 20 42.0	+1.7
IL31		12.38	29	Pn	Pn	23 20 40.2	-1.2
ILAR	Eielson Array	12.38	29	Pn	Pn	23 20 39.5	-2.0
	0.1nm,0.3s,baz=223,slow=14,SNR=7.4						
ILAR				LR	LR	23 24 57.9	
	comp=Z,22nm,19.6s,baz=110,slow=34						
SCRK	Sand Creek	12.73	36	Pn	Pn	23 20 46.4	-0.1
INK	Inuvik	18.72	32	P	Pn	23 22 06.0	+1.9
	0.2nm,0.3s,baz=223,slow=8.2,SNR=5.7						
PETK	Petropavlovsk-	24.17	284	P	P	23 22 58.7	-2.5
	1.7nm,0.4s,baz=87,slow=12,SNR=7.1						
YKA	Yellowknife Ar	24.93	53	P	P	23 23 09.8	+1.8
	0.3nm,0.7s,baz=276,slow=9.4,SNR=5.3						
FRB	Frobisher Bay	44.13	40	P	P	23 25 53.2	+0.1
	0.8nm,0.4s,baz=338,slow=7.3,SNR=6.6						
FINES	FINESS Array B	64.14	356	P	P	23 28 16.9	-1.9
	1.2nm,0.7s,baz=23,slow=6.2,SNR=8.1						
NOA	NORSAR Array B	64.51	4	P	P	23 28 20.4	-1.0
	0.4nm,0.7s,baz=356,slow=6.6,SNR=3.5						
MKAR	Makanchi Array	65.71	318	P	P	23 28 27.8	-1.6
	0.5nm,0.7s,baz=47,slow=6.0,SNR=9.2						
AKASG	Malin Array Be	74.70	353	P	P	23 29 22.5	-1.8
	1.1nm,0.4s,baz=9.0,slow=5.8,SNR=6.4						
TAPN	Taplejung	79.41	303	eP	P	23 29 50.7	-0.9
	12nm,1.0s						
JIRN	Jiri	79.89	304	eP	P	23 29 53.6	-0.7
	17nm,0.5s						
KKN	Kakani	80.22	305	eP	P	23 29 55.6	-0.3
RAMN	Ramite	80.29	303	eP	P	23 29 55.0	-1.3
	6.0nm,0.6s						
PKIN	Phulchoki	80.34	304	eP	P	23 29 55.3	-1.3
	2.7nm,0.5s						
DMN	Daman	80.45	305	eP	P	23 29 56.4	-0.8
DANN	Dangsing	80.47	306	eP	P	23 29 56.6	-0.7
	17nm,0.7s						
ESDC	Sonseca Array	84.02	18	P	P	23 30 15.4	0.0
	0.1nm,0.3s,baz=349,slow=6.0,SNR=4.1						
BRTR	Keskin Array B	85.19	349	P	P	23 30 21.0	-0.4
	0.3nm,0.5s,baz=45,slow=6.3,SNR=3.1						
ATAH	Atahualpa	91.48	100	LR	LR	00 09 40.9	
	comp=Z,18nm,19.3s,baz=92,slow=34						

JMA ***19*** *23:33:19.4±0.2, 33.07N×138.24E, h320km, M3.5*
IDC ***19*** *23:33:20.6±1.4, 33.00N×138.34E, h325km±10km, mb3.2/7, mb1 3.2/11, mb1mx3.0/37, mbtmp3.9/11, Error ellipse: s-maj=43.3km s-min=27.5km az=24.0*
ISC 19 23:33:20.3±0.9**, 33.1N**±0.1×**138.23E**±0.07**, h320km, n36, σ1s05**/39**, mb3.4**/8**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK02	Tokai 2	0.94	335	P	Pn	23 34 02.2	0.0
TTO2	TONANKAI O.B.S	1.19	303	P	Pn	23 34 03.4	+0.1
JHJ	Hachijo jima 2	1.30	89	P	Pn	23 34 04.5	+0.3
	20nm,0.3s,baz=79,slow=18,SNR=7.0						
JHJ				S	S	23 34 40.4	+1.0
	2.9nm,0.3s,baz=73,slow=19,SNR=2.9						
TTO1	TONANKAI O.B.S	1.32	294	P	Pn	23 34 03.6	-0.4
JKO	Kozu shima	1.32	35	P	Pn	23 34 04.6	+0.3
JHJ2	Mitsune	1.33	89	P	Pn	23 34 03.7	-0.7
JMKN	Mikurajimanish	1.39	55	P	Pn	23 34 04.0	-0.7
JIE	Ise	1.81	316	P	Pn	23 34 07.1	-0.3
JOD2	Odawara 2	2.27	18	P	Pn	23 34 11.5	+0.4
JTNC	Tanabenakahech	2.31	289	P	Pn	23 34 09.9	-1.3
JWY	Kouya	2.47	298	P	Pn	23 34 12.2	-0.5
BSO1	Boso 1	2.76	55	P	Pn	23 34 12.9	-1.6
BSO1				eS	S	23 34 55.9	-2.2
JWT	Wachi	3.20	314	P	Pn	23 34 19.4	+0.1
JAI	Aioi	3.23	283	P	Pn	23 34 18.6	-1.1
MJAR	Matsushiro Arr	3.44	360	P	Pn	23 34 22.6	+1.0
	0.1nm,0.3s,baz=179,slow=11,SNR=11						
JAG	Ashikaga	3.47	17	P	Pn	23 34 21.4	-0.5
JAG				eS	S	23 35 08.7	-2.7
JHS	Saijyo	4.65	295	P	Pn	23 34 34.1	-0.5
KSRS	Korea Array	9.48	300	P	P	23 35 33.4	-1.7
	0.3nm,0.3s,baz=112,slow=12,SNR=10						
USRK	Ussuriysk Ar.	12.11	338	P	P	23 36 05.5	+1.3
	baz=155,slow=11,SNR=5.6						
KLR	Kul'dur	16.83	345	P	Pn	23 36 57.1	-2.0
	0.4nm,0.3s,baz=157,slow=9.6,SNR=11						
SONM	Songino Array	28.11	311	P	P	23 38 45.0	+1.5
	1.6nm,0.7s,baz=121,slow=9.8,SNR=11						
ZALV	Zalesovo Beam	42.77	316	P	P	23 40 47.8	+0.9
	0.4nm,0.4s,baz=67,slow=5.0,SNR=3.8						
TAPN	Taplejung	43.69	276	eP	P	23 40 54.6	-0.4
	3.0nm,0.3s						
MKAR	Makanchi Array	44.12	305	P	P	23 40 58.4	+0.7
	0.6nm,0.3s,baz=88,slow=8.5,SNR=30						
ODAN	Odare	44.13	276	eP	P	23 40 57.5	-0.8
	4.6nm,0.5s						
RAMN	Ramite	44.76	276	eP	P	23 41 02.6	-0.7
	12nm,0.6s						
JIRN	Jiri	44.85	277	eP	P	23 41 04.1	-0.1
	30nm,0.4s						
GUN	Gumba	45.02	278	eP	P	23 41 05.5	0.0
	12nm,0.6s						
PKI	Pulchoki	45.53	278	eP	P	23 41 08.5	-0.9
	5.2nm,0.5s						
PKIN	Phulchoki	45.54	278	eP	P	23 41 08.7	-0.7
	3.7nm,0.5s						
NRIK	Noril'sk	45.82	337	P	P	23 41 11.1	+0.5
	0.7nm,0.4s,baz=23,slow=3.4,SNR=3.5						
DANN	Dangsing	46.63	279	eP	P	23 41 17.9	0.0
	13nm,0.6s						
ARCES	ARCESS Array B	66.75	339	P	P	23 43 38.4	+1.1
	1.7nm,0.7s,baz=73,slow=8.1,SNR=5.6						
FINES	FINESS Array B	71.06	332	P	P	23 44 04.9	+1.1
	0.5nm,0.6s,baz=38,slow=2.5,SNR=3.2						
AKASG	Malin Array Be	75.78	322	P	P	23 44 31.3	0.0
	0.2nm,0.4s,baz=49,slow=6.7,SNR=4.3						
NOA	NORSAR Array B	76.77	336	P	P	23 44 36.6	-0.1
	11nm,0.3s,baz=46,slow=5.5,SNR=3.0						

PAS ***19*** *23:52:27.9±1.2, 34.165N±0.010×117.48W±0.01, h9km±2km, ML2.1/114, Error ellipse: s-maj=1.4km s-min=1.4km az=74.0*
NEIC 19 23:52:27.0±0.8**, 34.16N**±0.01×**117.48W**±0.02**, h18km±1km, Error ellipse: s-maj=2.4km s-min=2.0km az=80.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SS2	San Sevaine	0.05	346		Pg	23 52 29.6	-0.7
FON	Fontana	0.07	147		Pg	23 52 31.2	+0.8
CSP	Cedar Springs	0.17	37		Pb	23 52 31.2	-0.4
SSK	Sunset Peak	0.18	287		Pg	23 52 31.8	0.0
RVR	Riverside	0.19	151		Pg	23 52 31.7	0.0
RVR					Sb	23 52 34.4	-0.5
HLNC	Highland	0.22	99		Pb	23 52 32.4	-0.1
PSRC	Puddingstone R	0.28	256		Pb	23 52 33.6	+0.2
PSRC					Sb	23 52 37.6	-0.1
PEM	Pine Mountain	0.32	272		Pb	23 52 34.3	+0.1
SVD	Seven Oaks Dam	0.32	99		Pb	23 52 34.2	-0.1
CFT	Crafton Hills	0.33	111		Pb	23 52 34.4	-0.1
XTL	Crystal Lake,	0.34	294		Pg	23 52 34.4	0.0
SME	Santa Rosa Min	0.35	162		Pg	23 52 34.5	+0.1
PEC	Perris	0.38	134		Pg	23 52 35.0	+0.1
PEC					Sg	23 52 40.1	-0.1
BTL	Butler Peak	0.41	76		Pg	23 52 35.8	+0.1
HOLC	Holcomb Ridge	0.42	315		Pg	23 52 35.8	0.0
BBRC	Big Bear Solar	0.48	77		Pg	23 52 36.9	+0.1
MWC	Mount Wilson	0.48	278	Pg	Pb	23 52 37.0	-0.1
CHFC	Chilao Flat St	0.48	292		Pg	23 52 36.6	-0.2
SIL	Silver Peak	0.58	71		Pg	23 52 38.6	0.0
LRRC	Littlerock Res	0.58	309		Pb	23 52 38.7	+0.1
PASC	Pasadena Art C	0.58	272	Pg	Pg	23 52 38.2	-0.4
HMTC	Hemet	0.60	138		Pg	23 52 38.7	-0.2
SBB	Saddle Back Bu	0.60	332		Sg	23 52 46.5	-0.5
MURC	Murrieta	0.61	157		Pg	23 52 39.0	0.0
DGR	Domenigoni Val	0.64	142		Pg	23 52 39.5	-0.2
DGR					Sg	23 52 47.8	-0.5
BACC	Bachelor Mtn.	0.66	146		Pb	23 52 39.7	-0.3
POB	Polly Butte	0.66	135		Pb	23 52 39.9	-0.2
HYS	Haystack Butte	0.71	354		Pb	23 52 40.7	-0.2
DECC	Green Verdugo	0.71	278		Pg	23 52 41.3	+0.3
IR2C	Iron Canyon	0.79	287		Pb	23 52 42.3	0.0
RRX	Edison Barstow	0.82	29		Pg	23 52 43.0	-0.1
CRY	Cary Ranch	0.86	133		Pb	23 52 43.4	-0.1
BLAC	Blackrock camp	0.91	95		Pg	23 52 44.9	0.0
BZNA	Buzz No.'s Pla	0.95	134		Pb	23 52 45.2	+0.2
FRD	Ford Ranch, An	0.99	132		Pb	23 52 45.8	+0.2
PFO	Pinyon Flats O	1.01	122		Pb	23 52 46.2	+0.1
PFO					Sb	23 52 58.9	-0.2
XPFO	Pion Flat	1.01	122	Pg	Pn	23 52 46.5	-0.1
XPFO					Sb	23 52 58.9	-0.3
GSC	Goldstone, Bar	1.27	26		Pn	23 52 49.4	-0.6
GSC					Sb	23 53 06.4	-0.2
BAR	Barrett	1.62	155	Pn	Pn	23 52 55.5	+0.7
ISA	Isabella, Lake	1.71	332	Pn	Pb	23 52 57.5	-0.4
DAC	Darwin (Calif)	2.12	358	Pn	Pn	23 53 01.8	+0.1
PAGB	Antelope Grade	2.76	305	Pn	Pn	23 53 11.0	+0.6
W13A	Hualapai Mount	3.11	71	Pn	Pn	23 53 15.6	+0.1

SJA ***19*** *23:57:43.1±0.6, 20.09S×69.34W, h121km±10km, ML2.5, MW2.9*
GUC ***19*** *23:57:43.9±0.6, 20.02S×69.15W, h96km±2km, ML3.5*
IDC ***19*** *23:57:44.9±1.1, 20.08S×68.83W, h115km±11km, mb3.3/3, mb1 3.5/7, mb1mx3.2/39, mbtmp3.7/7, MS3.1/1, Ms1 3.1/1,*

ms1mx2.3/12, Error ellipse: s-maj=32.9km s-min=8.5km az=98.0

ISC 19 23:57:43.2±0.8, 20.03S±0.03×69.25W±0.05, h95km±6km, n36, σ1.65/55, 9C-6D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.14	139	⇓iP	Pn	23 57 57.5	+0.3
PB08				iS	Sn	23 58 08.4	+0.9
PB08					IAML	23 58 10.4	
	comp=N,2μm,0.3s						
GO01	Chusmiza	0.37	9	eP	Pn	23 57 58.3	0.0
GO01				eS	Sn	23 58 10.0	+0.7
GO01					IAML	23 58 10.9	
	comp=N,4μm,0.2s						
PB11	IPOC Station P	0.47	306	⇓iP	Pn	23 57 58.9	+0.5
PB11				iS	Sn	23 58 11.2	+1.5
PB11					IAML	23 58 11.6	
	comp=E,5μm,0.2s						
PSGC	Pisagua	0.93	298	⇑iP	Pn	23 58 03.2	+0.6
PSGC				iS	Sn	23 58 18.4	+1.3
MNMC	Minye Minye	0.95	340	⇓iP	Pn	23 58 03.9	+0.8
MNMC				eS	Sn	23 58 19.6	+1.6
TA01	Diego Aracena	1.02	238	⇑iP	Pn	23 58 04.1	+0.6
TA01				iS	Sn	23 58 20.1	+1.4
TA01					IAML	23 58 21.0	
	comp=E,1μm,0.3s						
PB01	IPOC Station P	1.03	192	⇓iP	Pn	23 58 04.4	+0.7
PB01				iS	Sn	23 58 20.5	+1.4
PB01					IAML	23 58 22.3	
	comp=E,1μm,0.4s						
PATCX	Punta Patache	1.15	227	⇑iP	Pn	23 58 05.8	+0.6
PATCX				iS	Sn	23 58 23.3	+1.7
PATCX					IAML	23 58 32.3	
	comp=N,1μm,0.5s						
PB02	IPOC Station P	1.41	205	⇑iP	Pn	23 58 08.9	+0.6
PB02				eS	Sn	23 58 28.8	+1.6
PB02					IAML	23 58 36.0	
	comp=E,1μm,0.6s						
PB16	IPOC Station P	1.71	352	⇓iP	Pn	23 58 13.6	+1.1
PB16				eS	Sn	23 58 36.2	+1.8
PB09	IPOC Station P	1.75	180	⇑iP	Pn	23 58 13.7	+1.0
PB09				iS	Sn	23 58 36.6	+1.7
PB09	IPOC Station P	1.75	180	iP	Pn	23 58 14.1	+1.4
PB09				iSg	Sn	23 58 36.6	+1.7
PB07	IPOC Station P	1.79	199	⇑iP	Pn	23 58 13.9	+0.9
PB07				iS	Sn	23 58 36.9	+1.3
PB07					IAML	23 58 43.6	
	comp=E,522nm,0.5s						
AP01	Chacalluta	1.95	328	⇑eP	Pn	23 58 15.4	+0.5
AP01				iS	Sn	23 58 40.3	+1.2
PB03	IPOC Station P	2.06	193	eP	Pn	23 58 17.5	+0.9
PB04	IPOC Station P	2.44	200	eP	Pn	23 58 23.6	+2.1
PB04				iS	Sn	23 58 47.2	-3.7
LVC	Limon Verde	2.58	173	P	Pn	23 58 24.8	+1.2
	comp=E,5.5nm,0.3s,baz=360,slow=17.5,SNR=46						
LVC				S	Sn	23 58 56.4	+1.8
	comp=E,24nm,0.3s,baz=172,slow=17,SNR=15						
LVC	Limon Verde	2.58	173	iP	Pn	23 58 24.8	+1.2
PB06	IPOC Station P	2.68	186	⇑eP	Pn	23 58 25.7	+1.0
PB06				eS	Sn	23 58 57.5	+1.0
PB06					IAML	23 59 08.0	
	comp=N,210nm,0.2s						
PB06	IPOC Station P	2.68	186	iP	Pn	23 58 25.9	+1.2
PB05	IPOC Station P	2.94	197	⇑iP	Pn	23 58 28.7	+0.5
PB05				iS	Sn	23 59 04.0	+1.2
PB05					IAML	23 59 17.5	
	comp=E,162nm,0.5s						
PB05	IPOC Station P	2.94	197	iP	Pn	23 58 28.9	+0.7
PB15	IPOC Station P	3.17	184	eP	Pn	23 58 32.8	+1.4
PB15				iS	Sn	23 59 09.7	+1.4
PB15	IPOC Station P	3.17	184	iP	Pn	23 58 32.2	+0.9
LPAZ	La Paz	3.88	16	P	Pn	23 58 43.6	+2.4
	comp=E,1.0nm,0.3s,baz=196,slow=6.1,SNR=17						
LPAZ				S	Sn	23 59 27.8	+1.8
	comp=E,0.6nm,0.3s,baz=85,slow=9.4,SNR=5.1						
LPAZ	La Paz	3.88	16	iP	Pn	23 58 43.9	+2.6
YJA	Yavi	4.09	122	iP	Pn	23 58 46.8	+2.8
YJA					IAML	23 58 47.3	
	comp=Z,3.3nm,0.7s						
YJA				iSg	Sn	23 59 34.0	+2.9
AZAP	Zapla	5.70	138	⇓iP	Pn	23 59 06.5	+0.9
AZAP					IAML	23 59 11.3	
	comp=Z,3.3nm,0.5s						
SIV	San Ignacio	8.76	64	P	Pn	23 59 44.0	-3.2
	comp=Z,1.1nm,0.3s,baz=267,slow=12,SNR=28						
CPUP	Villa Florida	12.63	122	P	Pn	00 00 35.9	-3.4
	comp=Z,0.1nm,0.3s,baz=273,slow=12,SNR=3.7						
PLCA	Paso Flores	20.66	183	P	P	00 02 17.1	+1.6
	comp=Z,1.8nm,0.8s,baz=24,slow=15,SNR=3.1						
PLCA				LR	LR	00 12 03.0	
	comp=Z,52nm,18.1s,baz=99,slow=42						
TORD	Torodi Ar. Bea	77.17	71	P	P	00 09 24.4	-2.8
	comp=Z,0.2nm,0.4s,baz=254,slow=5.6,SNR=6.2						
TORD				pP	pP	00 09 52.2	-0.9
	comp=Z,0.5nm,0.8s,baz=258,slow=5.2,SNR=4.5						
YKA	Yellowknife Ar	89.70	341	P	P	00 10 29.9	-0.4
	comp=Z,0.6nm,0.7s,baz=136,slow=4.4,SNR=12						
H11S2	WAKE ISLAND Hy	127.36	278	T	T	02 36 19.3	
	baz=101,slow=74,SNR=13						
H11S1	WAKE ISLAND Hy	127.37	278	T	T	02 36 17.0	
	baz=101,slow=74,SNR=12						
H11S3	WAKE ISLAND Hy	127.38	278	T	T	02 36 19.4	
	baz=101,slow=74,SNR=8.2						

NCEDC 20 00:04:27.9±1.2, 40.40N±0.03×120.55W±0.03, h11km±5km, Md1.9, Error ellipse: s-maj=3.9km s-min=2.9km az=220.0

NEIC 20 00:04:27.2±1.3, 40.41N±0.03×120.54W±0.01, h7km±6km, Error ellipse: s-maj=3.9km s-min=0.9km az=200.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMRR	Black Mountain	0.36	147		Pg	00 04 34.7	+0.4
BEKR	Beckworth	0.56	165		Pg	00 04 38.2	+0.1
LRDM	Redding Peak	0.70	275		Pg	00 04 41.0	+0.2
MGL	Magalia	0.98	233		Pg	00 04 45.6	-0.4
ORV	Oroville	1.13	221		Pg	00 04 48.4	-0.4
ORV					Sg	00 05 02.6	-0.8
PAHR	Pah Rah Range	1.13	128		Pg	00 04 48.8	-0.2
PAHR					Sb	00 05 04.9	+0.7
LSHM	Sage Hen Hill	1.20	289		Pg	00 04 49.8	-0.5
VCNR	Virginia City	1.31	148		Pn	00 04 51.8	-0.3
AFDM	Forest Hills D	1.50	193	Pn	Pb	00 04 55.3	0.0
AFDM					Sn	00 05 14.0	-0.3
MOD	Modoc Plateau	1.50	7	Pn	Pb	00 04 55.2	-0.4
MOD					Sb	00 05 15.0	+0.1
PNTR	Pine Nut	1.50	151	Pn	Pb	00 04 55.8	+0.1
WDC	Whiskeytown Da	1.53	277	Pn	Pb	00 04 54.8	-0.3
YERR	Yerington	1.74	144	Pn	Pb	00 04 59.1	-0.5
LKVW	Lakeview	1.82	4		Pn	00 04 58.5	-0.6
WAKR	Walker	2.09	155	Pn	Pn	00 05 02.4	-0.4

AEIC 20 00:13:36.3±1.9, 51.2N±0.6×179.3W±0.4, h42km±9km, Error ellipse: s-maj=93.6km s-min=21.4km az=158.0

NEIC 20 00:13:36.2±1.8, 51.7N±0.1×179.46W±0.09, h87km±5km, mb4.7/113, ML4.2/21(AEIC), Error ellipse: s-maj=19.7km s-min=7.8km az=175.0

IDC 20 00:13:36.4±1.0, 51.82N×179.62W, h85km±7km, mb3.9/25, mb1 4.1/25, mb1mx3.9/44, mbtmp4.2/25, MS3.0/6, Ms1 3.1/6, ms1mx2.8/35, Error ellipse: s-maj=21.1km s-min=9.7km az=175.0

ISC 20 00:13:35.9±0.6, 51.6N±0.1×179.52W±0.04, h87km, n420, σ0.95/394, mb4.6/70, 3C, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAEA	Gareloi East	0.51	72		Pn	00 13 49.2	-1.2
TANO	Tanaga North	0.92	71		Pn	00 13 54.1	-0.3
TANO					Sn	00 14 07.2	-1.1
TASE	Tanaga Southea	0.94	77		Pn	00 13 54.3	-0.6
TAFP	Tanaga Falls P	0.99	73		Pn	00 13 54.3	-1.0
TAPA	Tanaga Point A	1.08	79		Pn	00 13 55.7	-0.7
KIMD	Kanaga Island	1.43	84		Pn	00 13 60.0	-0.6
KICM	Kanaga Island	1.47	78		Pn	00 14 01.0	-0.2
KIKV	Kanaga Island	1.48	79		Pn	00 14 00.9	-0.4
KIWB	Kanaga Island	1.49	80		Pn	00 14 00.6	-0.8
KIWB					Sn	00 14 17.5	-3.1
ADK	Adak	1.78	81		Pn	00 14 04.6	-0.5
ADK					Sn	00 14 24.6	-2.7
ADAG	Mount Adagdak	1.85	78		Pn	00 14 05.2	-0.8
GSTD	Great Sitkin T	2.14	77		Pn	00 14 09.2	-0.6
GSTD					Sn	00 14 34.9	-0.9
GSMY	Great Sitkin M	2.19	78		Pn	00 14 10.1	-0.4
GSTR	Great Sitkin T	2.20	76		Pn	00 14 10.3	-0.3
ATKA	Atka Island	3.35	78		Pn	00 14 25.9	-0.1
ATKA					Sn	00 15 04.8	+0.1
KOKL	Mount Kliuchef	3.36	76		Pn	00 14 26.4	+0.1
KOFP	Korovin Flat P	3.42	77		Pn	00 14 27.6	+0.5
SMY	Shemya	4.08	288	Pn	Pn	00 14 36.2	+0.3
NIKH	Nikolski High	6.68	74	Pn	Pn	00 15 11.9	+0.6
NIKH					Sn	00 16 21.8	-4.0
OKTU	Okmok Mt. Tuli	7.22	71		Pn	00 15 20.2	+1.4
UNV	Unalaska Valle	8.21	69		Pn	00 15 32.2	+0.2
AKUT	Akutan	8.69	68		Pn	00 15 39.3	+0.7
AKUT				Sn	Sn	00 17 16.6	+1.9
FALS	False Pass	10.18	65		Pn	00 16 00.2	+1.3
FALS				Sn	Sn	00 17 54.7	+3.6
SDPT	Sand Point	11.93	64	Pn	Pn	00 16 20.9	-1.8
CNBA	Chernabura Isl	12.36	67	Pn	Pn	00 16 26.5	-1.9
CHGN	Chignik	13.26	61	Pn	Pn	00 16 38.9	-1.4
PETK	Petropavlovsk-	13.99	285	LR	LR	00 22 05.9	
	comp=Z,34nm,18.4s,baz=63,slow=37						
CHIR	Chirikof Islan	14.73	64	Pn	Pn	00 16 56.8	-2.6
SII	Sitkinak Islan	15.62	62	Pn	Pn	00 17 09.3	-1.5
SII				IAmb	IAmb	00 17 16.5	
	comp=Z,102nm,1.2s						
OHAK	Old Harbor	16.20	60	P	Pn	00 17 14.7	-3.3
KDAK	Kodiak Island	16.67	58	P	Pn	00 17 21.3	-2.5
	comp=Z,5.0nm,0.3s,baz=264,slow=6.6,SNR=45						
KDAK	Kodiak Island	16.67	58	Pn	Pn	00 17 20.9	-2.9
TTA	Talatina	16.90	39	P	P	00 17 28.9	+1.5
BRLK	Bradley Lake	17.95	52	P	Pn	00 17 39.2	-0.3
SKT	Skwentna	18.34	45	IAmb	IAmb	00 17 48.6	
	comp=Z,29nm,0.8s						
SUA	Susitna One	18.51	47	P	Pn	00 17 45.3	-1.0
SEW	Seward	18.74	51	P	Pn	00 17 49.3	+0.5
COLD	Coldfoot	21.27	32	P	P	00 18 17.4	+2.5
ILAR	Eielson Array	21.33	39	P	P	00 18 15.6	+0.1
	comp=Z,2.1nm,0.6s,baz=238,slow=9.5,SNR=12						
ILAR				ScP	ScP	00 25 43.6	-1.2
	comp=Z,1.0nm,0.6s,baz=280,slow=3.7,SNR=13						
ILAR				LR	LR	00 26 12.9	
	comp=Z,29nm,18.5s,baz=137,slow=36						
TOLK	Toolik Lake Re	22.26	29	P	P	00 18 26.1	+0.7
TOLK	Toolik Lake Re	22.26	29	P	P	00 18 26.1	+0.7
	baz=235,SNR=16						
HYT	Haines Junctio	24.69	52	P	P	00 18 48.5	-0.1
JKA	Kamikawa-asahi	26.26	268	P	P	00 19 03.3	+0.5
ASAJ	Asahikawa	26.26	268	P	P	00 19 03.3	+0.5
	comp=Z,1.8nm,0.3s,baz=49,slow=4.6,SNR=4.7						
INK	Inuvik	27.51	35	P	P	00 19 13.7	0.0
	comp=Z,0.9nm,0.4s,baz=279,slow=6.0,SNR=7.9						
INK	Inuvik	27.51	35	P	P	00 19 13.9	+0.2
USRK	Ussuriysk Ar.	32.82	276	P	P	00 20 00.2	-0.6
	comp=Z,3.1nm,0.8s,baz=50,slow=7.6,SNR=4.6						
H11N2	WAKE ISLAND Hy	33.57	204	T	T	00 57 18.3	
	baz=18,slow=76,SNR=184						
H11N3	WAKE ISLAND Hy	33.58	204	T	T	00 57 24.2	
	baz=18,slow=76,SNR=177						
H11N1	WAKE ISLAND Hy	33.59	204	T	T	00 57 17.0	
	baz=18,slow=76,SNR=164						
H11S1	WAKE ISLAND Hy	34.80	203	T	T	00 58 15.7	
	baz=17,slow=76,SNR=197						
H11S2	WAKE ISLAND Hy	34.81	203	T	T	00 57 58.6	
	baz=17,slow=76,SNR=75						
H11S3	WAKE ISLAND Hy	34.81	203	T	T	00 58 22.0	
	baz=17,slow=76,SNR=109						
YKA	Yellowknife Ar	35.39	47	P	P	00 20 22.6	-0.2
	comp=Z,2.3nm,0.6s,baz=280,slow=7.8,SNR=42						
YKA				pP	pP	00 20 42.9	+0.7
	comp=Z,0.7nm,0.7s,baz=280,slow=8.0,SNR=3.2						
YKA				PcP	PcP	00 22 51.1	+0.5
	comp=Z,0.2nm,0.3s,baz=286,slow=3.2,SNR=4.1						
YKA				ScP	ScP	00 26 27.8	-0.6
	comp=Z,0.8nm,0.7s,baz=292,slow=3.1,SNR=14						
YKA				LR	LR	00 35 06.8	
	comp=Z,38nm,18.6s,baz=0.0,slow=37						
D03D	Eldon	36.04	74	P	P	00 20 30.8	+2.3
	baz=298						
B05A	Bryant	36.29	72	P	P	00 20 32.1	+1.4
	baz=298						
E04D	Cinebar	36.82	75	P	P	00 20 37.5	+2.3
	baz=299						
LON	Longmire	37.18	74	IAmb	IAmb	00 20 40.8	
	comp=Z,7.5nm,0.7s						
K02D	Willamette Mer	38.16	81	P	P	00 20 48.7	+2.0
	baz=304						
G05D	Wamic, OR	38.24	76	P	P	00 20 49.0	+1.8
	baz=301						
I04A	Tendick Farm,	38.34	79	P	P	00 20 49.9	+1.8
	baz=303						
L02E	Cave Junction	38.50	82	P	P	00 20 51.5	+2.1
	baz=304						
I05D	Terrebonne, OR	38.70	77	P	P	00 20 53.1	+2.0
	baz=302						
HAWA	Hanford	38.72	73	P	P	00 20 52.2	+1.0
HAWA				IAmb	IAmb	00 20 53.3	
	comp=Z,17nm,1.1s						
J04D	Umpqua Nationa	38.82	79	P	P	00 20 54.8	+2.4
	baz=303						
KSRS	Korea Array	39.19	270	P	P	00 20 56.3	+1.2
	comp=Z,2.1nm,0.8s,baz=51,slow=6.5,SNR=5.3						
KSRS				LR	LR	00 38 35.6	
	comp=Z,7.3nm,18.6s,baz=25,slow=38						
NEW	Newport	39.22	69	P	P	00 20 55.7	+0.3
NEW	Newport	39.22	69	P	P	00 20 56.2	+0.8
	baz=299						
L04D	Klamath Falls	39.27	81	P	P	00 20 57.9	+1.9
	baz=304						
YBH	Yreka Blue Hor	39.29	82	P	P	00 20 58.5	+2.4
	comp=Z,7.9nm,0.8s,baz=257,slow=7.4,SNR=16						
YBH	Yreka Blue Hor	39.29	82	P	P	00 20 56.0	-0.2
YBH				IAmb	IAmb	00 20 59.5	
	comp=Z,7.9nm,0.8s						
J05D	Fort Rock, OR	39.33	79	P	P	00 20 58.6	+2.0
	baz=303,SNR=5.9						
N02D	Trinity Center	39.73	83	P	P	00 21 02.0	+2.2
	baz=305						
M04C	Macdoel	39.80	81	P	P	00 21 02.5	+2.1
	baz=305,SNR=7.3						
I07A	Izee	39.95	76	P	P	00 21 03.1	+1.5
I07A				IAmb	IAmb	00 21 04.0	
	comp=Z,11nm,0.8s						
WDC	Whiskeytown Da	40.06	83	P	P	00 21 03.5	+1.2
WDC				IAmb	IAmb	00 21 05.2	
	comp=Z,6.5nm,0.9s						
O02D	Mt. Diablo Mer	40.14	84	P	P	00 21 05.4	+2.2
	baz=306						
MOD	Modoc Plateau	40.67	80	P	P	00 21 07.4	-0.2
MOD				IAmb	IAmb	00 21 09.9	
	comp=Z,5.4nm,0.6s						
O03E	Paynes Creek	40.68	83	P	P	00 21 09.0	+1.3
	baz=306						
BMO	Blue Mountains	40.86	74	P	P	00 21 09.7	+0.6
BMO				IAmb	IAmb	00 21 10.9	
	comp=Z,7.3nm,0.8s						
J08A	Circle Bar Ran	40.97	77	P	P	00 21 11.3	+1.3
J08A				IAmb	IAmb	00 21 12.2	
	comp=Z,7.8nm,0.8s						
ORV	Oroville	41.31	83	P	P	00 21 13.1	+0.4
MSO	Missoula	41.80	70	P	P	00 21 17.2	+0.4
	baz=302						
BEKR	Beckworth	41.83	82	P	P	00 21 18.4	+1.2
BEKR				IAmb	IAmb	00 21 18.9	
	comp=Z,5.0nm,0.6s						
PAHR	Pah Rah Range	42.52	82	P	P	00 21 23.2	+0.4
PAHR				IAmb	IAmb	00 21 25.1	
	comp=Z,14nm,1.1s						
PNTR	Pine Nut	42.76	83	P	P	00 21 25.6	+0.8
CMB	Columbia Colle	42.92	84	P	P	00 21 25.7	-0.1
YERR	Yerington	43.05	83	IAmb	IAmb	00 21 29.1	
	comp=Z,6.1nm,0.6s						
WAKR	Walker	43.22	83	IAmb	IAmb	00 21 31.1	
	comp=Z,6.9nm,0.8s						
RYN	Ryan	43.71	82	IAmb	IAmb	00 21 36.0	
	comp=Z,9.6nm,0.9s						
NVAR	Mina Array Bea	43.97	83	P	P	00 21 35.7	+1.2
	comp=Z,1.8nm,0.7s,baz=299,slow=11,SNR=4.2						
MDPB	Devils Postpil	43.98	84	IAmb	IAmb	00 21 37.3	
	comp=Z,9.0nm,0.9s						
ELK	Elko	44.45	78	P	P	00 21 38.9	+0.6
ELK				IAmb	IAmb	00 21 41.2	
	comp=Z,8.3nm,0.9s						
PAGB	Antelope Grade	44.46	87	IAmb	IAmb	00 21 40.3	
	comp=Z,9.9nm,0.6s						
H17A	Grant Village	45.11	71	IAmb	IAmb	00 21 46.2	
	comp=Z,7.8nm,0.7s						
H17A	Grant Village	45.11	71	P	P	00 21 45.4	+1.9
	baz=305,SNR=6.7						
CWC	Cottonwood Cre	45.35	85	P	P	00 21 46.7	+1.2
	baz=310						
RLMT	Red Lodge	45.46	69	IAmb	IAmb	00 21 49.1	
	comp=Z,6.8nm,0.8s						
RLMT	Red Lodge	45.46	69	P	P	00 21 46.6	+0.3
	baz=305,SNR=7.5						
ISA	Isabella, Lake	45.61	86	P	P	00 21 48.0	+0.6
	baz=310						
SBC	Santa Barbara	45.63	88	P	P	00 21 48.8	+1.4
	baz=311						
R11A	Troy Canyon, C	45.69	81	IAmb	IAmb	00 21 50.0	
	comp=Z,7.6nm,1.1s						
R11A	Troy Canyon, C	45.69	81	P	P	00 21 49.0	+0.8
	baz=309,SNR=12						
AHID	Auburn Hatcher	45.74	73	IAmb	IAmb	00 21 50.1	
	comp=Z,12nm,1.1s						
MPMC	Manual Prospec	45.96	85	P	P	00 21 51.4	+1.1
	baz=310,SNR=6.7						
FURC	Furnace Creek,	46.09	84	P	P	00 21 52.5	+1.5
	baz=310						
SONM	Songino Array	46.13	296	P	P	00 21 51.7	+0.3
	comp=Z,3.5nm,0.7s,baz=55,slow=8.4,SNR=22						
SONM				ScP	ScP	00 27 11.3	+0.2
	comp=Z,1.4nm,1.0s,baz=84,slow=2.2,SNR=7.7						
SONM				LR	LR	00 41 36.5	
	comp=Z,52nm,18.5s,baz=266,slow=36						
TPNV	Topopah Spring	46.16	83	P	P	00 21 53.0	+1.1
	baz=310,SNR=13						
LRMC	Laurel Mtn Rad	46.22	85	P	P	00 21 52.7	+0.5
	baz=311						
DUG	Dugway, Tooele	46.25	77	P	P	00 21 53.6	+1.2
	baz=308,SNR=17						
EDW2	Edwards Air Fo	46.41	86	P	P	00 21 54.5	+0.9
	baz=311						
CTU	Camp Tracy	46.59	76	P	P	00 21 54.8	-0.4
BW06	Boulder Array	46.66	72	IAmb	IAmb	00 21 57.0	
	comp=Z,12nm,0.7s						
BW06	Boulder Array	46.66	72	P	P	00 21 56.1	+0.3
	baz=306,SNR=12						
PD31	Pinedale Array	46.66	72	IAmb	IAmb	00 21 57.0	
	comp=Z,10nm,0.7s						
PDAR	Pinedale Array	46.66	72	P	P	00 21 56.2	+0.5
	comp=Z,8.3nm,0.6s,baz=310,slow=3.4,SNR=95						
PDAR				pP	pP	00 22 16.9	+0.2
	comp=Z,1.9nm,0.6s,baz=304,slow=3.4,SNR=3.0						
PDAR				LR	LR	00 40 02.1	
	comp=Z,26nm,18.6s,baz=352,slow=34						
SHOC	Shoshone, Teco	46.82	84	P	P	00 21 57.7	+1.0
	baz=310,SNR=5.6						
GSC	Goldstone, Bar	46.88	85	IAmb	IAmb	00 21 59.4	
	comp=Z,9.3nm,0.9s						
GSC	Goldstone, Bar	46.88	85	P	P	00 21 58.3	+1.0
	baz=311,SNR=7.2						
BFSC	Mount Baldy Ra	47.04	87	P	P	00 21 59.6	+0.9
	baz=312						
HHC	Hu-ho-hao-te	47.19	285	eP	P	00 21 59.4	-0.3
TUQ	Turquoise Moun	47.34	84	P	P	00 22 01.6	+0.7
	baz=311						
HEC	Hector,Ludlow	47.48	85	P	P	00 22 03.0	+1.0
	baz=311						
GMRC	Granite Mounta	47.92	85	P	P	00 22 06.4	+0.9
	baz=311,SNR=6.0						
PFO	Pinyon Flats O	48.20	86	P	P	00 22 08.7	+1.1
	comp=Z,1.4nm,0.6s,baz=333,slow=4.7,SNR=5.6						
PFO	Pinyon Flats O	48.20	86	IAmb	IAmb	00 22 10.5	
	comp=Z,4.0nm,0.9s						
PFO	Pinyon Flats O	48.20	86	P	P	00 22 08.7	+1.1
	baz=312						
BELC	Belle Mtn. Jos	48.23	86	P	P	00 22 08.5	+0.6
	baz=312						
NJ2	Nanjing	48.35	271	eP	P	00 22 07.4	-1.3
K22A	Casper	48.52	70	P	P	00 22 10.3	+0.3
	baz=307						
IRM	Iron Mountain	48.66	85	P	P	00 22 11.8	+0.8
	baz=312,SNR=5.3						
BAR	Barrett	48.69	87	IAmb	IAmb	00 22 13.1	
	comp=Z,7.5nm,0.8s						
MONP2	Monument Peak	48.71	87	P	P	00 22 12.4	+0.8
	baz=312						
BC3	Big Chuckawall	48.80	86	P	P	00 22 12.4	+0.2
	baz=312						
W13A	Hualapai Mount	48.82	83	IAmb	IAmb	00 22 14.1	
	comp=Z,5.4nm,0.8s						
O20A	White River Ci	49.05	74	P	P	00 22 14.5	+0.4
	baz=309,SNR=27						
IKP	In-Ko-Pah, Jac	49.06	87	P	P	00 22 15.0	+0.8
	baz=313						
PDMCI	Parker Dam,Lak	49.18	84	P	P	00 22 16.0	+1.0
	baz=312,SNR=7.1						
Y12C	Blythe	49.31	85	P	P	00 22 17.1	+1.1
	baz=312						
GLA	Glamis	49.59	86	IAmb	IAmb	00 22 19.9	
	comp=Z,9.7nm,0.8s						
GLA	Glamis	49.59	86	P	P	00 22 19.2	+1.0
	baz=312						
ULM	Lac du Bonnet	49.92	56	P	P	00 22 19.4	-0.9
	comp=Z,1.4nm,0.4s,baz=302,slow=8.4,SNR=6.0						
N23A	Red Feather La	49.94	72	P	P	00 22 21.6	+0.6
	baz=309						
Y14A	Wickenburg	50.13	83	IAmb	IAmb	00 22 25.0	
	comp=Z,5.7nm,0.9s						
MVCO	Mesa Verde	50.75	77	P	P	00 22 27.9	+0.8
	baz=311						
X16A	Lo Mia Camp, P	50.78	82	IAmb	IAmb	00 22 29.6	
	comp=Z,6.0nm,0.8s						
ISCO	Idaho Springs	50.83	73	IAmb	IAmb	00 22 30.0	
	comp=Z,5.8nm,0.8s						
ISCO	Idaho Springs	50.83	73	P	P	00 22 28.4	+0.7
	baz=310,SNR=8.0						
S22A	4UR Ranch, Cre	51.41	76	IAmb	IAmb	00 22 34.6	
	comp=Z,11nm,1.0s						
S22A	4UR Ranch, Cre	51.41	76	P	P	00 22 33.3	+1.2
	baz=311,SNR=9.6						
214A	Organ Pipe Nat	51.58	85	IAmb	IAmb	00 22 34.3	
	comp=Z,3.3nm,0.6s						
214A	Organ Pipe Nat	51.58	85	P	P	00 22 34.1	+1.0
	baz=313						
Q24A	Divide	51.64	73	P	P	00 22 34.6	+0.8
	baz=310						
WHN	Wuhan	52.19	273	⇑P	P	00 22 38.6	+1.0
SDCO	Great Sand Dun	52.21	75	IAmb	IAmb	00 22 40.1	
	comp=Z,7.3nm,0.8s						
SDCO	Great Sand Dun	52.21	75	P	P	00 22 38.9	+0.8
	baz=311,SNR=14						
TUC	Tucson	52.60	83	P	P	00 22 41.7	+1.0
	baz=313						
FRB	Frobisher Bay	53.05	31	P	P	00 22 43.0	-0.5
	comp=Z,4.3nm,0.5s,baz=317,slow=8.5,SNR=22						
T25A	Trinidad	53.27	75	P	P	00 22 46.8	+1.0
	baz=311,SNR=12						
ANMO	Albuquerque	53.48	78	P	P	00 22 47.6	+0.3
ANMO	Albuquerque	53.48	78	P	P	00 22 48.5	+1.1
	baz=312						
EYMN	Ely	53.61	57	P	P	00 22 47.2	-0.7
EYMN	Ely	53.61	57	P	P	00 22 47.1	-0.7
	baz=309						
319A	Douglas	54.17	83	IAmb	IAmb	00 22 54.7	
	comp=Z,6.4nm,0.9s						
121A	Cookes Peak, D	54.30	81	IAmb	IAmb	00 22 55.2	
	comp=Z,6.0nm,0.7s						
121A	Cookes Peak, D	54.30	81	P	P	00 22 54.4	+1.1
	baz=313						
E38A	The Farm, Brul	54.43	58	IAmb	IAmb	00 22 53.9	
	comp=Z,8.6nm,0.8s						
LZH	Lanzhou	54.88	286	eP	P	00 22 58.3	+0.8
LZH				pP	pP	00 23 18.3	-0.3
LZH				sP	sP	00 23 24.8	-3.3
LZH				PP	PP	00 25 01.1	+0.2
CBKS	Cedar Bluff	54.94	70	IAmb	IAmb	00 22 58.8	
	comp=Z,10nm,0.8s						
CBKS	Cedar Bluff	54.94	70	P	P	00 22 57.9	+0.3
	baz=312						
GTA	Gaotai	55.06	291	P	P	00 22 59.3	+0.7
GTA				pP	pP	00 23 18.0	-1.9
GTA				sP	sP	00 23 25.9	-3.6
MNTX	Cornudas Mount	56.35	80	IAmb	IAmb	00 23 11.0	
	comp=Z,6.9nm,0.8s						
MNTX	Cornudas Mount	56.35	80	P	P	00 23 08.6	+0.8
	baz=314,SNR=13						
MSTX	Muleshoe	56.38	76	P	P	00 23 08.6	+0.5
	baz=313						
AMTX	Amarillo	56.42	75	P	P	00 23 09.0	+0.6
	baz=313						
E44A	Grand Marais A	57.35	55	P	P	00 23 14.8	+0.2

baz=312
JFWS Jewell Farm 57.56 61 P P 00 23 15.3 -0.9
baz=312
ARCES ARCESS Array B 57.77 350 P P 00 23 16.8 -0.5
comp=Z,3.3nm,0.9s,baz=19,slow=8.6,SNR=3.5
WMOK Wichita Mounta 58.25 73 P P 00 23 21.7 +0.5
baz=314,SNR=13
D47A Chapleau 58.47 53 P P 00 23 22.1 -0.4
baz=314
CD2 Chengdu 58.48 281 eP P 00 23 21.0 -1.9
G45A Suttons Bay 58.55 56 P P 00 23 22.8 -0.3
baz=313
E47A Iron Bridge 58.79 53 P P 00 23 24.4 -0.3
baz=314
WMQ Urumqi 58.83 302 eP P 00 23 27.6 +2.5
D48A Paudash Townsh 59.03 52 P P 00 23 25.9 -0.5
baz=314
TX31 Lajitas Ar. Si 59.06 81 IAmb IAmb 00 23 28.4
comp=Z,3.6nm,0.7s
TX32 Lajitas Array 59.06 81 IAmb IAmb 00 23 28.4
comp=Z,3.8nm,0.7s
TXAR Lajitas Array 59.06 81 P P 00 23 27.6 +0.6
comp=Z,2.7nm,0.5s,baz=301,slow=4.9,SNR=44
D49A Beulah Townshi 59.18 52 P P 00 23 26.8 -0.6
baz=314
ABTX Abilene, Hawle 59.20 75 P P 00 23 28.6 +0.8
baz=315,SNR=7.0
TUL1 Leonard 59.21 70 P P 00 23 27.8 +0.1
baz=314
E48A Lockeyer 59.33 53 P P 00 23 28.0 -0.5
baz=314
MK31 Makanchi Array 59.52 308 P P 00 23 29.0 -0.9
MKAR Makanchi Array 59.52 308 P P 00 23 29.0 -0.9
comp=Z,0.7nm,0.5s,baz=52,slow=6.2,SNR=27
MKAR pP pP 00 23 49.6 -1.6
comp=Z,0.6nm,0.5s,baz=56,slow=8.0,SNR=4.2
F48A Evansville 59.56 54 P P 00 23 30.0 0.0
baz=314
HDIL Hopedale 59.70 62 P P 00 23 30.7 -0.3
baz=314
I47A Gladwin 59.85 56 P P 00 23 31.9 -0.1
baz=314
F49A Sandfield 59.89 53 P P 00 23 32.0 -0.3
baz=314
D50A G1974 Best Tow 59.99 51 P P 00 23 32.0 -1.0
baz=314
LSQQ Lebel-sur-Quev 60.00 48 P P 00 23 31.6 -1.4
baz=315
SCHQ Schefferville 60.09 38 P P 00 23 33.0 -0.5
comp=Z,2.0nm,0.8s,baz=305,slow=8.1,SNR=7.8
SCHQ Schefferville 60.09 38 IAmb IAmb 00 23 33.6
comp=Z,4.4nm,0.9s
D51A Lot 18 Range I 60.27 51 P P 00 23 34.0 -0.8
baz=315
L46A Eue Claire 60.31 59 P P 00 23 34.5 -0.7
baz=314
CCM Cathedral Cave 60.34 65 P P 00 23 34.4 -1.1
CCM IAmb IAmb 00 23 35.8
comp=Z,4.0nm,0.7s
CCM Cathedral Cave 60.34 65 P P 00 23 34.7 -0.8
baz=314
MGMO Mountain Grove 60.39 67 P P 00 23 34.5 -1.3
MGMO IAmb IAmb 00 23 35.4
comp=Z,5.3nm,0.9s
MGMO PcP PcP 00 24 20.2 +0.2
K47A Vermontville 60.54 58 P P 00 23 36.1 -0.6
baz=315
E51A G1948 Merrick 60.61 51 P P 00 23 36.3 -0.8
baz=315
U40A Yellville 60.61 68 P P 00 23 36.0 -1.3
baz=315,SNR=7.3
W39A Magazine 60.88 69 P P 00 23 39.1 -0.1
baz=315
K48A Perry 60.91 57 P P 00 23 39.0 -0.3
baz=315
L47A Sherwood 60.92 58 P P 00 23 38.7 -0.6
baz=315
SFIN Lafayette 61.02 61 P P 00 23 40.0 -0.1
baz=315
D53A Lac Vacive, Po 61.08 50 P P 00 23 39.3 -1.1
baz=316
E52A Mattawa 61.19 51 P P 00 23 39.9 -1.2
baz=316
F52A Sundridge 61.22 52 P P 00 23 40.6 -0.8
baz=316
K49A Clarkson 61.27 57 P P 00 23 41.8 +0.1
baz=315
L48A N Adams 61.35 58 P P 00 23 41.6 -0.7
baz=315
N47A Urbana 61.43 59 P P 00 23 41.8 -1.0
baz=315
MIAR Mount Ida 61.46 70 P P 00 23 43.3 +0.2
MIAR PcP PcP 00 24 25.3 +0.9
MIAR Mount Ida 61.46 70 P P 00 23 42.8 -0.3
baz=315,SNR=7.8
D54A Lac Fusel, La 61.52 49 P P 00 23 42.0 -1.4
baz=316
E53A Dumoine, Ponti 61.60 50 P P 00 23 43.1 -0.8
baz=316
PBMO Poplar Bluff 61.70 66 IAmb IAmb 00 23 44.5
comp=Z,7.6nm,0.8s
ALGO Algonquin Park 61.72 51 P P 00 23 44.4 -0.3
baz=316
H52A Wyevale 61.76 53 P P 00 23 44.6 -0.4
baz=316
W41B Gary Mavity, V 61.79 68 P P 00 23 44.5 -0.8
baz=315,SNR=6.5
E54A Lac Daplat, Po 61.79 50 P P 00 23 44.0 -1.2
baz=316
I51A Listowel 61.79 54 P P 00 23 45.5 +0.3
baz=316
N48A Decatur 61.80 59 P P 00 23 45.1 -0.2
baz=315
X40A Basin Creek Fa 61.93 69 P P 00 23 46.4 +0.2
baz=315
SADO Sadowa 62.04 52 P P 00 23 46.1 -0.7
comp=Z,2.7nm,0.7s,baz=296,slow=6.3,SNR=4.3
G53A Haliburton 62.04 52 P P 00 23 46.4 -0.5
baz=316
G54A Lake Saint Pet 62.10 51 P P 00 23 46.5 -0.9
baz=316
O48A Farmland 62.16 60 P P 00 23 46.7 -1.0
baz=316
D55A Sainte-Anne-du 62.18 49 P P 00 23 46.6 -1.1
baz=317
N49A Columbus Grove 62.20 59 P P 00 23 47.2 -0.8
baz=316
H53A Bobcaygeon 62.46 52 P P 00 23 49.2 -0.5
baz=316
J52A Paris 62.47 54 P P 00 23 49.5 -0.3
baz=316
D56A ZEC Mazanza, M 62.49 48 P P 00 23 48.5 -1.4
baz=317
P48A Milroy 62.58 60 P P 00 23 49.4 -1.2
baz=316,SNR=6.2
F55A Otter Lake 62.63 50 P P 00 23 49.4 -1.3
baz=317
E56A St. Veronique 62.73 49 P P 00 23 50.2 -1.3
baz=317
N50A Nevada 62.86 58 P P 00 23 51.8 -0.6
baz=316
G55A Calabogie 62.87 51 P P 00 23 51.3 -1.1
baz=317
P49A Miami Univ. Ec 62.91 60 P P 00 23 51.8 -1.0
baz=316
D57A Chemin Vers le 62.91 48 P P 00 23 51.4 -1.3
baz=318
WCI Wyandotte Cave 62.98 62 P P 00 23 52.8 -0.4
baz=316
O50A Cable 63.06 59 P P 00 23 53.2 -0.5
baz=316,SNR=5.5
LATQ La Tuque 63.15 47 P P 00 23 53.1 -1.1
baz=318
I55A Frankford 63.16 52 P P 00 23 53.9 -0.4
baz=317
H55A Tweed 63.16 52 P P 00 23 53.5 -0.8
baz=317
N51A Ashland 63.16 57 P P 00 23 53.8 -0.6
baz=316
Q49A Aurora 63.19 60 P P 00 23 54.0 -0.7
baz=316
E57A Chemin Saint G 63.24 48 P P 00 23 53.8 -1.1
baz=318
M52A Chesterland 63.25 56 P P 00 23 54.6 -0.4
baz=316
D58A Chemin du LacG 63.32 47 P P 00 23 54.0 -1.3
baz=318
ACSO Alum Creek Sta 63.34 58 P P 00 23 54.7 -0.8
baz=316
P50A Jamestown 63.35 59 P P 00 23 55.5 -0.2
baz=316
J54A Appleton 63.37 53 P P 00 23 55.3 -0.4
baz=317
H56A Elgin 63.58 51 P P 00 23 56.1 -0.9
baz=317
O51A Pataskala 63.60 58 P P 00 23 56.7 -0.6
baz=316
N52A McGinn's Farm, 63.60 57 P P 00 23 56.9 -0.4
baz=316
WVT Waverly 63.63 65 P P 00 23 57.1 -0.5
WVT Waverly 63.63 65 P P 00 23 57.3 -0.2
baz=316
M53A WI Miller and 63.67 56 P P 00 23 57.4 -0.4
baz=317
L54A Sinclairville 63.79 55 P P 00 23 58.3 -0.2
baz=317
G57A Newington 63.81 50 P P 00 23 57.1 -1.4
baz=318
K54A Basiliko Farm, 63.83 54 P P 00 23 58.6 -0.2
baz=317
P51A Williamsport 63.84 59 P P 00 23 58.0 -0.8
baz=316
S49A Springfield 63.85 62 P P 00 23 58.4 -0.6
baz=316
D59A Saint-Raymond 63.86 47 P P 00 23 58.1 -0.8
baz=319
OXF Oxford 63.90 67 P P 00 23 58.9 -0.3
baz=316
Q51A Peebles 64.01 59 P P 00 23 59.6 -0.4
baz=316,SNR=6.7
O52A Adamsville 64.03 58 P P 00 23 59.5 -0.6
baz=317
N53A Lisbon 64.05 57 P P 00 23 59.8 -0.4
baz=317
K55A Perry 64.06 53 P P 00 23 59.8 -0.5
baz=317
T49A Edmonton 64.21 62 P P 00 24 01.2 -0.1
baz=316
J56A Wolcott 64.26 52 P P 00 24 00.8 -0.7
baz=318
L55A Hinsdale 64.27 54 P P 00 24 01.5 -0.2
baz=317
F59A Saint Guilaume 64.29 48 P P 00 24 00.5 -1.2
baz=319
PLAL Pickwick Lake 64.32 66 IAmb IAmb 00 24 02.2
comp=Z,7.6nm,0.7s
D60A Saint Jean D'O 64.34 46 P P 00 24 01.0 -1.0
baz=319
N54A Moraine State 64.37 56 P P 00 24 02.1 -0.3
baz=317
R51A Hillsboro 64.41 60 P P 00 24 02.8 +0.2
baz=317
S50A Richmond 64.42 61 P P 00 24 02.6 -0.1
baz=317
D61A St Aubert, Com 64.45 45 P P 00 24 01.9 -0.8
baz=319
K56A Middlesex 64.45 53 P P 00 24 02.6 -0.2
baz=318
CLTN Cedars of Leba 64.50 64 IAmb IAmb 00 24 04.5
comp=Z,5.8nm,0.8s
U49A Red Boiling Sp 64.50 63 P P 00 24 02.8 -0.4
baz=317,SNR=5.0
M55A Ridgway 64.63 55 P P 00 24 03.8 -0.3
baz=317
Q52A Bidwell 64.64 59 P P 00 24 03.7 -0.4
baz=317
T50A Nancy 64.65 62 P P 00 24 04.2 -0.1
baz=317
P53A Whipple 64.72 58 P P 00 24 04.2 -0.5
baz=317
O54A Avella 64.74 57 P P 00 24 04.7 -0.1
baz=317
L56A Greenwood 64.75 54 P P 00 24 04.7 -0.2
baz=318,SNR=6.0
K57A Scipio Center 64.83 52 P P 00 24 04.9 -0.4
baz=318
S51A Beattyville 64.89 61 P P 00 24 05.1 -0.6
baz=317
R52A Catlettsburg 64.89 60 P P 00 24 05.4 -0.3
baz=317
M56A Emporium 64.92 54 P P 00 24 05.6 -0.3
baz=318
V49A McMinnville 64.97 64 P P 00 24 05.9 -0.4
baz=317
F61A St Evariste 65.02 47 P P 00 24 05.7 -0.8
baz=319
D62A Allapoint, All 65.05 45 P P 00 24 06.1 -0.5
baz=320
U50A Jamestown 65.09 62 P P 00 24 06.7 -0.4
baz=317
Q53A Leroy 65.11 58 P P 00 24 06.8 -0.3
baz=317,SNR=5.6
T51A Gray 65.18 61 P P 00 24 07.2 -0.4
baz=317
L57A Andrews Acres 65.20 53 P P 00 24 07.7 -0.1
baz=318
K58A Earlville 65.23 52 P P 00 24 07.4 -0.5
baz=318
W49A Belvidere 65.24 64 P P 00 24 07.7 -0.4
baz=317
J59A Piesco 65.27 51 P P 00 24 07.0 -1.1
baz=319
R53A Hurricane 65.27 59 P P 00 24 08.2 0.0
baz=317
G61A St-Isidore-de- 65.30 48 P P 00 24 07.6 -0.7
baz=319
I59A Olmsteadville 65.32 50 P P 00 24 07.6 -0.8
baz=319
Q54A Coxs Mills 65.38 58 P P 00 24 08.6 -0.3
baz=317
MCWV Mont Chateau 65.41 57 P P 00 24 08.2 -0.9
baz=318
FINES FINESS Array B 65.44 347 P P 00 24 08.3 -0.5
comp=Z,1.1nm,0.8s,baz=45,slow=6.1,SNR=3.5
BINY Binghamton 65.49 53 P P 00 24 09.1 -0.5
baz=318
V50A Pikevile 65.49 63 P P 00 24 09.0 -0.7
baz=317
D63A Stockholm 65.49 44 P P 00 24 08.9 -0.6
baz=320
P55A Reedsville 65.53 57 P P 00 24 09.4 -0.4
baz=318
M57A Sunshine Farm, 65.56 54 P P 00 24 09.6 -0.4
baz=318
SSPA Standing Stone 65.69 55 P P 00 24 10.5 -0.4
baz=318
TZTN Tazewell 65.71 61 P P 00 24 10.3 -0.8
baz=317
W50A Signal Mountai 65.72 64 P P 00 24 10.5 -0.7
baz=317
Q55A Buckhannon 65.77 57 P P 00 24 11.2 -0.3
baz=318
N57A Milroy 65.78 55 P P 00 24 10.8 -0.6
baz=318
G62A West of Eustis 65.81 47 P P 00 24 10.7 -0.8
baz=320
V51A Loudon 65.81 63 P P 00 24 11.2 -0.5
baz=317
E63A Oxbow 65.83 45 P P 00 24 10.3 -1.4
baz=320
M58A Price's Panora 65.87 53 P P 00 24 11.3 -0.7
baz=318
R54A Victor 65.89 59 P P 00 24 12.0 -0.3
baz=318
T53A Wise 65.94 61 P P 00 24 12.4 -0.2
baz=318
J60A Lant Hill Farm 65.95 50 P P 00 24 12.0 -0.5
baz=319
S54A Dingess, Beckl 66.00 59 P P 00 24 12.4 -0.6
baz=318
H62A Milan 66.01 48 P P 00 24 12.1 -0.7
baz=320
W51A Cleveland 66.05 63 P P 00 24 13.0 -0.3
baz=317
E64A Bridgewater 66.09 45 P P 00 24 12.2 -1.1
baz=321
O57A Amberson 66.14 55 P P 00 24 13.4 -0.4
baz=318
TKL Tuckaleechee C 66.23 62 P P 00 24 14.2 -0.3
comp=Z,3.2nm,0.8s,baz=324,slow=2.2,SNR=4.4
M59A Waymart 66.25 53 P P 00 24 14.1 -0.4
baz=319
F64A Sherman 66.29 45 P P 00 24 14.0 -0.6
baz=321
LRAL Lakeview Retre 66.34 66 P P 00 24 14.6 -0.6
baz=317
T54A Tazewell 66.40 60 P P 00 24 15.4 -0.2
baz=318
H63A New Sharon 66.46 47 P P 00 24 15.4 -0.3
baz=320
P57A Homestead Farm 66.48 56 P P 00 24 15.4 -0.6
baz=318
N59A State Game Lan 66.55 53 P P 00 24 16.2 -0.3
baz=319
R56A Bull Pasture M 66.56 57 P P 00 24 16.2 -0.4
baz=318
O58A Lewisberry 66.57 55 P P 00 24 16.1 -0.4
baz=319
U54A Nelsons Funny 66.67 60 P P 00 24 17.3 0.0
baz=318
J62A Henniker 66.73 49 P P 00 24 16.9 -0.6
baz=320
V53A Saluda 66.75 62 P P 00 24 17.7 -0.1
baz=318
Z50A Ashland 66.80 65 P P 00 24 16.9 -1.1
Z50A IAmb IAmb 00 24 18.0
comp=Z,6.5nm,0.8s
Z50A Ashland 66.80 65 P P 00 24 17.4 -0.7
baz=318
O59A Robesonia 66.80 54 P P 00 24 17.6 -0.4
baz=319
M60A Port Jervis 66.81 52 P P 00 24 17.5 -0.5
baz=319
BLA Blacksburg 66.91 59 P P 00 24 18.7 -0.1
baz=318
N60A Cedar Hill Far 66.92 53 P P 00 24 18.4 -0.4
baz=319
S56A Natural Bridge 67.02 58 P P 00 24 19.4 -0.1
baz=318
Q58A Fox Den Farm, 67.06 56 P P 00 24 19.0 -0.6
baz=319
U55A TA2, Sparta 67.10 60 P P 00 24 19.7 -0.3
baz=318
R57A Stanardsville 67.11 57 P P 00 24 19.6 -0.3
baz=318
V54A Nebo 67.15 61 P P 00 24 20.2 -0.1
baz=318
O60A Telford 67.19 54 P P 00 24 20.3 -0.1
baz=319
P59A Jarrettsville 67.20 55 P P 00 24 19.9 -0.6
baz=319
S57A Dark Hollow, R 67.28 58 P P 00 24 20.8 -0.2
baz=318
X53A Estanollee 67.35 63 P P 00 24 21.3 -0.2
baz=318
NOA NORSAR Array B 67.35 354 P P 00 24 21.1 -0.1
comp=Z,56nm,0.8s,baz=6.0,slow=6.0,SNR=3.6
R58A Rapidan 67.37 57 P P 00 24 21.4 -0.2
baz=319
Y52A Lilburn 67.39 64 P P 00 24 21.5 -0.4
baz=318
P60A Greenville 67.45 54 P P 00 24 21.3 -0.8
baz=319
V55A Taylorsville 67.49 60 P P 00 24 21.9 -0.6
baz=318
W54A Cherokee Point 67.53 62 P P 00 24 22.4 -0.3
baz=318
U56A King 67.57 60 P P 00 24 22.8 -0.1
baz=318
T57A Hurt 67.69 58 P P 00 24 23.2 -0.4
baz=319
X54A Belton 67.83 62 P P 00 24 24.6 +0.1
baz=318
V56A Mocksville 67.91 60 P P 00 24 24.7 -0.3
baz=318
KMSC Kings Mountain 67.95 61 IAmb IAmb 00 24 26.2
comp=Z,12nm,1.1s
KMSC Kings Mountain 67.95 61 P P 00 24 25.2 -0.1
baz=318
GOGA Godfrey 68.06 64 P P 00 24 25.5 -0.6
baz=318
U57A Blanch 68.07 59 P P 00 24 26.0 -0.1
baz=319
N63A Mattituck 68.10 51 P P 00 24 25.4 -0.7
baz=320
T58A Grand View Acr 68.11 58 P P 00 24 25.7 -0.6
baz=319
S59A Mechanicsville 68.15 57 P P 00 24 26.1 -0.4
baz=319
X55A Gracelyn & Ava 68.29 62 P P 00 24 27.3 -0.2
baz=318
W56A Indian Trail 68.37 61 P P 00 24 27.3 -0.6
baz=319
Y55A Saluda 68.56 62 P P 00 24 29.0 -0.2
baz=319
X56A White Oak 68.60 61 P P 00 24 29.0 -0.4
baz=319
T59A Double "B" Far 68.61 57 P P 00 24 29.2 -0.2
baz=319
V58A Windy Hill, Pi 68.67 59 P P 00 24 29.5 -0.2
baz=319
W57A Gilead 68.67 60 P P 00 24 29.7 -0.1
baz=319
X57A Johnson Farm, 69.14 61 P P 00 24 32.7 0.0
baz=319
V59A Middlesex 69.16 59 P P 00 24 32.8 0.0
baz=319
W58A Raeford 69.18 60 P P 00 24 32.8 -0.1
baz=319
U60A Pendleton 69.19 57 P P 00 24 33.1 +0.1
baz=320
Z56A Williston 69.29 62 P P 00 24 33.9 +0.3
baz=319
X58A Rowland 69.48 60 P P 00 24 34.7 0.0
baz=319
Z57A Bowman 69.68 62 P P 00 24 36.2 +0.1
baz=319
NHSC New Hope 70.11 62 P P 00 24 39.0 +0.3
baz=319
X60A Albert Glenn T 70.19 59 P P 00 24 38.9 -0.2
baz=320
CMAR Chiang Mai Arr 70.54 275 P P 00 24 41.8 +0.3
comp=Z,1.1nm,0.6s,baz=23,slow=6.8,SNR=5.3
TAPN Taplejung 70.70 290 eP P 00 24 43.2 +0.5
comp=Z,20nm,0.9s
ODAN Odare 71.25 290 eP P 00 24 46.3 +0.3
comp=Z,5.6nm,0.6s
GUN Gumba 71.34 291 eP P 00 24 47.3 +0.6
comp=Z,43nm,0.6s
JIRN Jiri 71.35 291 eP P 00 24 47.8 +1.0
comp=Z,35nm,0.7s
RAMN Ramite 71.65 290 eP P 00 24 48.7 +0.3
comp=Z,18nm,0.7s
KKN Kakani 71.78 292 eP P 00 24 49.8 +0.6
comp=Z,19nm,0.6s
PKI Pulchoki 71.87 292 eP P 00 24 50.2 +0.3
comp=Z,14nm,0.6s
PKIN Phulchoki 71.88 292 eP P 00 24 50.0 +0.2
comp=Z,10nm,0.6s
GKN Gorkha 71.99 292 eP P 00 24 50.8 +0.4
comp=Z,22nm,0.6s
DMN Daman 72.02 292 eP P 00 24 51.1 +0.4
comp=Z,12nm,0.7s
DANN Dangsing 72.24 293 eP P 00 24 52.6 +0.6
comp=Z,30nm,0.7s
CMIG Matias Romero 73.49 83 P P 00 25 00.2 +1.1
comp=Z,3.0nm,0.7s,baz=336,slow=3.3,SNR=6.9
AKASG Malin Array Be 75.17 342 P P 00 25 07.4 -1.0
comp=Z,0.6nm,0.5s,baz=23,slow=6.3,SNR=3.6
KBL Kabul 75.33 307 P P 00 25 09.5 -0.4
BURAR Bucovina Array 78.89 343 ⇑P P 00 25 29.7 +0.3
GERES GERESS Array B 79.27 351 P P 00 25 31.5 0.0
comp=Z,0.2nm,0.5s,baz=50,slow=5.2,SNR=3.1
GZR Gura Zlata 81.46 344 ⇑P P 00 25 43.4 +0.2
ASAR Alice Springs 85.37 222 P P 00 26 03.8 +0.5
comp=Z,0.3nm,0.6s,baz=18,slow=5.1,SNR=3.8
PCRV Puerto La Cruz 96.95 64 LR LR 01 08 55.2
comp=Z,159nm,22.0s,slow=34

*NEIC **20** 00:17:25.0±0.8, 63.26N±0.03×150.48W±0.07, h132km±6km, Error ellipse: s-maj=5.7km s-min=2.5km az=136.0*
*AEIC **20** 00:17:25.6±1.3, 63.27N±0.04×150.47W±0.08, h126km±3km, ML2.5/56, Error ellipse: s-maj=6.4km s-min=5.1km az=213.0*
ISC 20 00:17:24.9±1.4, **63.27N**±0.03×**150.48W**±0.04, **h131**km±8km, **n64**, σ0.70/74, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRF	Thorofare Moun	0.20	25		Pn	00 17 43.6	+0.6
TRF	Thorofare Moun	0.20	25		Sn	00 17 55.3	-1.6

KTH Kantishna Hill 0.35 326 Pn 00 17 44.0 +0.5
KTH Kantishna Hill 0.35 326 Sn 00 17 57.2 -0.3
HUR Hurricane 0.48 127 Pn 00 17 44.3 +0.3
CAST Castle Rocks 0.74 283 Pn Pn 00 17 46.0 +0.3
RND Reindeer 0.75 78 Pn 00 17 46.5 +0.5
RND Sn 00 18 01.8 +0.2
MCK McKinley 0.84 55 Pn 00 17 47.0 +0.5
MCK Sn 00 18 03.0 +0.1
PPLA Purkeypile 0.86 245 Pn 00 17 47.3 +0.5
BPAW Bear Paw Mtn. 0.87 345 Pn 00 17 46.9 +0.2
BPAW Bear Paw Mtn. 0.87 345 Sn 00 18 02.6 -0.7
WAT2 Susitna Watana 0.91 109 Pn 00 17 47.4 +0.2
WAT1 Susitna Watana 0.98 116 Pn 00 17 48.0 +0.3
WAT1 Sn 00 18 05.2 +0.1
BWN Browne 1.02 26 Pn 00 17 48.9 +1.0
CHUM Lake Minchumin 1.03 308 Pn 00 17 48.5 +0.4
CHUM Sn 00 18 05.4 -0.4
SKT Skwentna 1.38 201 Pn 00 17 51.9 +0.2
SKT Sn 00 18 11.6 -0.5
WAT6 Susitna Watana 1.43 118 Pn 00 17 52.3 -0.1
NEA Nenana 1.46 25 Pn 00 17 52.6 +0.2
WRH Wood River Hil 1.61 40 Pn 00 17 54.5 +0.3
GHO Glory Hole Cre 1.66 154 Sn 00 18 18.3 +0.4
GHO Glory Hole Cre 1.66 154 Pn Pn 00 17 55.5 +0.5
SML Sawmill 1.77 145 Pn 00 17 56.0 -0.2
SML Sn 00 18 20.6 +0.5
MLY Manley 1.78 356 Pn 00 17 56.4 +0.2
PMR Palmer 1.79 159 Pn Pn 00 17 56.1 -0.2
SUA Susitna One 1.81 184 Pn Pn 00 17 57.6 +0.8
SUA Sn 00 18 19.5 -1.6
CCB Clear Creek Bu 1.82 39 Pn 00 17 56.9 +0.2
CCB Clear Creek Bu 1.82 39 Sn 00 18 20.4 -0.6
HDA Harding Lake 1.94 52 Pn 00 17 58.3 +0.2
HDA Harding Lake 1.94 52 P Pn 00 17 58.2 0.0
baz=248,SNR=8.6
MDM Murphy Dome 1.97 29 Pn 00 17 58.8 +0.3
TCOL CIGO, UAF Yank 1.98 34 P Pn 00 17 58.8 +0.3
baz=246
COLA College 1.99 34 Pn 00 17 58.1 -0.5
SCM Sheep Creek Mo 2.05 133 Pn 00 17 59.4 -0.1
PS08 TAPS Pump Stn8 2.06 50 Pn 00 17 59.8 +0.1
KNK Knik Glacier 2.09 152 Pn 00 18 00.2 +0.3
PS10 TAPS Pump St10 2.13 84 Pn 00 18 00.9 +0.4
IL31 2.19 45 Pn 00 18 01.2 +0.1
RC01 Rabbit Creek A 2.21 171 Sn 00 18 30.2 +0.7
RC01 Rabbit Creek A 2.21 171 Pn 00 18 02.8 +1.3
POKR Poker Flat Res 2.29 34 Pn 00 18 02.9 +0.5
POKR Poker Flat Res 2.29 34 P Pn 00 18 02.7 +0.4
baz=246,SNR=9.3
PAX Paxson 2.30 95 Pn 00 18 03.2 +0.6
TTA Tatalina 2.54 265 Pn Pn 00 18 06.0 +0.4
RIDG Independent Ri 2.57 77 Pn 00 18 06.3 +0.4
RIDG Independent Ri 2.57 77 Sn 00 18 36.8 -0.9
PWL Port Wells 2.62 156 Pn 00 18 06.5 -0.1
SLKM Skilak Lake 2.77 177 Pn 00 18 08.8 +0.3
GLI Glacier Island 2.88 145 Pn Pn 00 18 09.7 -0.2
GLI Sn 00 18 42.9 -1.7
DOT Dot Lake 2.91 80 Pn 00 18 10.2 -0.1
SCRK Sand Creek 2.99 73 Pn 00 18 11.8 +0.4
SCRK Sn Sn 00 18 47.9 +0.6
RSO Redoubt South 3.01 202 Pn Pn 00 18 13.2 +1.4
MENT Mentasta 3.09 93 Pn 00 18 15.7 +3.0
PRP Porcupine Dome 3.12 41 Pn 00 18 12.9 -0.2
PRP Porcupine Dome 3.12 41 Sn 00 18 50.3 -0.1
SEW Seward 3.21 171 Pn Pn 00 18 14.1 0.0
SVW2 Sparrevohn 3.23 230 Pn Pn 00 18 14.6 +0.1
BRLK Bradley Lake 3.52 183 Pn 00 18 18.4 +0.2
BRSE Bradley Lake S 3.54 182 Pn 00 18 18.3 -0.3
GLB Gilahina Butte 3.61 117 Pn 00 18 19.5 +0.1
HOM Homer 3.66 189 Pn Pn 00 18 21.1 +1.0
VRDI Verde Repeater 3.87 119 Pn 00 18 22.8 -0.3
VRDI Sn 00 19 06.9 -1.2
BC03 3.95 89 Pn 00 18 23.6 -0.2
MCARA McCarthy VSAT 3.96 115 Pn Pn 00 18 25.1 +1.0
FYU Fort Yukon 4.00 32 Pn 00 18 24.8 +0.4

IDC 20 00:20:33.2±52.0, 16.89S×176.31W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/26, mbtmp4.0/3, Error ellipse: s-maj=968.6km s-min=179.2km az=79.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.87	241	P	P	00 28 16.9	-0.3
	1.6nm,0.8s,baz=77,slow=7.1,SNR=3.7						
WRA	Warramunga Arr	46.79	258	P	P	00 29 04.8	-0.2
	0.4nm,0.4s,baz=94,slow=7.0,SNR=5.2						
ASAR	Alice Springs	47.00	253	P	P	00 29 06.5	0.0
	4.6nm,0.6s,baz=87,slow=8.7,SNR=62						

IDC 20 00:32:03.2±2.0, 7.57S×126.24E, h0km, mb3.5/1, mb1 4.1/4, mb1mx3.7/29, mbtmp3.9/4, ML3.9/3, Error ellipse: s-maj=106.4km s-min=27.7km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.48	183	Pn	Pn	00 34 34.6	-0.3
	0.8nm,0.3s,baz=4.4,slow=10.0,SNR=14						
FITZ				Sn	Sn	00 36 23.0	-10
	0.4nm,0.3s,baz=78,slow=8.4,SNR=3.8						
WRA	Warramunga Arr	14.60	148	Pn	Pn	00 35 29.6	-1.6
	0.5nm,0.3s,baz=322,slow=14,SNR=12						
WRA				Sn	Sn	00 38 02.7	-11
	0.2nm,0.3s,baz=317,slow=25,SNR=3.6						
ASAR	Alice Springs	17.62	156	P	P	00 36 11.5	+0.1
	0.9nm,0.3s,baz=336,slow=12,SNR=69						
MKAR	Makanchi Array	66.71	329	P	P	00 42 56.1	0.0
	0.4nm,0.7s,baz=132,slow=6.9,SNR=4.6						

ANF 20 00:34:40.8±0.1, 35.32N×118.49W, h12km±1km, ML3.7/41, Error ellipse: s-maj=0.9km s-min=0.8km az=119.0
SCEDC 20 00:34:41.6, 35.31N×118.49W, h4km
NEIC 20 00:34:41.3±2.4, 35.31N±0.02×118.50W±0.04, h6km±6km, Error ellipse: s-maj=5.4km s-min=2.4km az=117.0
PAS 20 00:34:41.6±2.2, 35.31N±0.02×118.49W±0.04, h4km±6km, ML3.7/239, Error ellipse: s-maj=5.4km s-min=2.3km az=114.0
ISC 20 00:34:41.6±1.0, 35.31N±0.02×118.49W±0.02, h8km±8km, n117, σ0.99/147, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WOFM	Oak Flat	0.29	322		Pg	00 34 47.1	-0.3
ARVC	Arvin	0.33	237		Sg	00 34 52.7	+0.3
ARVC	Arvin	0.33	237	P	Pg	00 34 48.2	+0.1
	baz=57,SNR=236						
ARVC				S	Sg	00 34 52.7	+0.3
	baz=57						
TJR	Tejon Ranch	0.34	217		Pg	00 34 48.2	-0.2
ISA	Isabella, Lake	0.36	2		Pg	00 34 48.1	-0.5
ISA				Sg	Sg	00 34 53.2	-0.2
ISA	Isabella, Lake	0.36	2	P	Pg	00 34 48.2	-0.5
	baz=182,SNR=588						
ISA				S	Sg	00 34 52.7	-0.7
	baz=182						
MAGC	SCE Magundon P	0.36	279		Pg	00 34 48.9	+0.3
THC	Tehachapi Micr	0.42	200		Pg	00 34 49.5	-0.3
WASM	Alta Sierra Ca	0.43	353		Pg	00 34 49.8	-0.4
BAKC	Calstate	0.50	275		Pg	00 34 51.7	+0.4
DTP	Desert Tortois	0.53	94		Pg	00 34 51.5	-0.3
EDW2	Edwards Air Fo	0.59	136		Pg	00 34 52.4	-0.5
EDW2	Edwards Air Fo	0.59	136	P	Pg	00 34 52.4	-0.5
	baz=317,SNR=204						
EDW2				S	Sg	00 35 00.8	+0.1
	baz=317						
FOXC	Fox Airport	0.60	159		Pg	00 34 53.1	-0.1
BTPC	Burnt Peak	0.62	186		Pg	00 34 53.4	-0.3
ALPC	Antelope	0.64	166		Pg	00 34 53.6	-0.3
ALPC					Sg	00 35 02.2	0.0
LRMC	Laurel Mtn Rad	0.68	75	P	Pg	00 34 54.2	-0.6
	baz=256,SNR=408						
LRMC				S	Sg	00 35 03.4	-0.3
	baz=256						
OSI	Osito Audit: C	0.71	196	P	Pg	00 34 55.0	-0.4
	baz=15,SNR=48						
OSI				S	Sg	00 35 04.9	+0.3
	baz=15						
VES	Vestal, Richgr	0.72	318		Pg	00 34 54.8	-0.7
VES	Vestal, Richgr	0.72	318	P	Pg	00 34 54.8	-0.7
	baz=138,SNR=76						
VES				S	Sg	00 35 03.9	-1.0
	baz=138						
MPI	Mount Pinos, F	0.73	228		Pg	00 34 55.3	-0.3
PYR	Pyramid	0.76	196		Pg	00 34 55.8	-0.4
SBB	Saddle Back Bu	0.82	138		Pg	00 34 56.7	-0.7
BCW	Bitter Crk WRg	0.84	245		Pg	00 34 57.1	-0.6
VPEM	Volcano Peak E	0.85	40		Pg	00 34 57.2	-0.6
LRRC	Littlerock Res	0.87	154		Pg	00 34 57.6	-0.6
JRC2	Joshua Ridge	0.88	39		Pg	00 34 57.8	-0.7
JRC2					Sg	00 35 09.4	-0.5
HYS	Haystack Butte	0.88	120		Pg	00 34 57.6	-0.8
CLC	China Lake	0.89	55		Pg	00 34 57.7	-0.9
IR2C	Iron Canyon	0.92	175		Pg	00 34 58.5	-0.7
WCSM	Coso Springs S	0.93	39		Pg	00 34 58.8	-0.7
CCCA	Chr Cany lake	0.95	76		Pg	00 34 59.1	-0.6
MFS	McCloud Flat S	0.96	32		Pg	00 34 59.4	-0.7
OAT	Oat Mountain	0.96	186		Pg	00 35 00.1	0.0
HOLC	Holcomb Ridge	1.00	148		Pg	00 35 00.0	-0.7
CHFC	Chilao Flat St	1.04	158		Pg	00 35 00.7	-0.9
DECC	Green Verdugo	1.06	173		Pg	00 35 01.2	-0.7
DECC	Green Verdugo	1.06	173	P	Pg	00 35 01.1	-0.7
	baz=353,SNR=32						
DECC				S	Sg	00 35 16.1	+0.5
	baz=353						
CARC	Carrizo Plain	1.11	271		Pg	00 35 01.8	-1.0
MPMC	Manual Prospec	1.11	47		Pg	00 35 01.9	-1.0
MPMC	Manual Prospec	1.11	47	P	Pg	00 35 02.0	-1.0
	baz=228,SNR=262						
MPMC				S	Sg	00 35 16.3	-1.0
	baz=228						
XTL	Crystal Lake,	1.13	153		Pg	00 35 02.5	-0.8
MWC	Mount Wilson	1.14	162		Pg	00 35 02.4	-0.9
MWC	Mount Wilson	1.14	162		Pg	00 35 02.5	-0.9
ADO	Adelanto Recei	1.15	131		Pg	00 35 03.0	-0.7
PASC	Pasadena Art C	1.16	167	Pg	Pg	00 35 02.8	-1.1
PKM	Mcpherson Peak	1.16	249	P	Pg	00 35 03.2	-0.7
	baz=68,SNR=23						
PKM				S	Sg	00 35 18.3	-0.7
	baz=68						
CWC	Cottonwood Cre	1.18	16		Pg	00 35 03.0	-1.2
CWC	Cottonwood Cre	1.18	16	P	Pg	00 35 03.0	-1.2
	baz=196						
DAC	Darwin (Calif)	1.21	37		Pn	00 35 06.8	+1.7
SMMC	Simmler	1.23	271	P	Pg	00 35 03.5	-1.7
	baz=90,SNR=24						
SMMC				S	Sg	00 35 20.6	-0.5
	baz=90						
PEM	Pine Mountain	1.25	156		Pg	00 35 04.5	-1.0
VOG	Valley Oaks Go	1.25	325	P	Pg	00 35 03.9	-1.6
	baz=144,SNR=5.3						
VOG				S	Sg	00 35 20.3	-1.3
	baz=144						
BFSC	Mount Baldy Ra	1.27	147	P	Pg	00 35 04.7	-1.2
	baz=328,SNR=84						
BFSC				S	Sg	00 35 21.6	-0.7
	baz=328						
SSK	Sunset Peak	1.27	149		Pg	00 35 04.9	-1.2
BLG	Laguna Peak, P	1.28	202	P	Pn	00 35 05.2	-0.7
	baz=21,SNR=35						
BLG				S	Sg	00 35 22.8	0.0
	baz=21						
GVRC	Garvey Reservo	1.29	166		Pn	00 35 06.2	+0.3
RRX	Edison Barstow	1.30	109		Pn	00 35 05.1	-1.0
RRX	Edison Barstow	1.30	109	P	Pn	00 35 05.1	-1.0
	baz=290,SNR=40						
RRX				Sg	Sn	00 35 23.9	+0.3
	baz=290						
SBC	Santa Barbara	1.32	230	Pg	Pn	00 35 06.7	+0.4
	baz=49						
SBC				S	Sb	00 35 24.2	+0.4
	baz=49						
CGO	Cerro Gordo	1.36	24		Pn	00 35 06.5	-0.7
SS2	San Sevaine	1.37	143		Pn	00 35 06.4	-0.5
CSP	Cedar Springs	1.37	137		Pn	00 35 06.1	-1.1
GSC	Goldstone, Bar	1.38	90	Pn	Pn	00 35 06.1	-1.2
GSC	Goldstone, Bar	1.38	90	P	Pn	00 35 05.9	-1.4
	baz=271,SNR=404						
GSC				Sg	Sn	00 35 26.5	+0.8
	baz=271						
QSM	Queen of Sheba	1.48	63		Pb	00 35 09.4	+0.1
PAGB	Antelope Grade	1.50	287		Pn	00 35 07.5	-1.3
PAGB					Sn	00 35 28.8	+0.3
FMP	Fort Macarthur	1.60	174	P	Pn	00 35 09.7	-0.4
	baz=354						
FMP				S	Sn	00 35 31.1	+0.1
	baz=354						
SCZ2	Santa Cruz Isl	1.61	216	P	Pn	00 35 09.8	-0.6
	baz=35,SNR=7.3						
SCZ2				S	Sn	00 35 31.3	0.0
	baz=35						
BBRC	Big Bear Solar	1.66	128	P	Pn	00 35 10.1	-1.1
	baz=310,SNR=28						
BBRC				Sb	Sb	00 35 33.9	+0.2
	baz=310						
TIN	Tinemaha, Big	1.76	7	Pb	Pn	00 35 13.3	+0.8
	baz=187						
TIN				Sg	Sg	00 35 38.1	0.0
	baz=187						
FURC	Furnace Creek,	1.76	48	Pg	Pb	00 35 14.4	+0.3
	baz=229						
FURC				Sb	Sb	00 35 36.8	+0.5
	baz=229						
HEC	Hector,Ludlow	1.83	104	P	Pn	00 35 12.2	-1.2
	baz=286,SNR=40						
HEC				Sb	Sb	00 35 39.5	+1.0
	baz=286						
DPD	Davis Peak	1.88	268		Pn	00 35 11.4	-2.6
CIS	Catalina Islan	1.90	178	P	Pn	00 35 13.8	-0.5
	baz=358,SNR=18						
CIS				Sb	Sb	00 35 41.2	+0.8
	baz=358						
SHOC	Shoshone, Teco	1.90	71	P	Pn	00 35 13.5	-0.9
	baz=252						
SHOC				Sb	Sb	00 35 40.9	+0.5
	baz=252						
MURC	Murrieta	2.01	147	P	Pn	00 35 15.0	-0.9
	baz=328,SNR=29						
MURC				Sb	Sb	00 35 44.2	+0.6
	baz=328						
PMPB	Monarch Peak	2.09	296		Pn	00 35 16.5	-0.5
TUQ	Turquoise Moun	2.10	86	P	Pn	00 35 15.9	-1.3
	baz=267,SNR=40						
SNCC	San Nicolas Is	2.22	203		Pn	00 35 19.8	+1.0
SNCC	San Nicolas Is	2.22	203	Pb	Pb	00 35 21.0	-1.0
	baz=22						
MLAC	Mammoth, Mammo	2.34	353	Pb	Pb	00 35 23.3	-0.8
	baz=173						
GMRC	Granite Mounta	2.38	102	P	Pn	00 35 19.2	-1.8
	baz=284,SNR=17						
PFO	Pinyon Flats O	2.38	135		Pn	00 35 20.4	-0.7
PFO	Pinyon Flats O	2.38	135	P	Pn	00 35 20.3	-0.8
	baz=316,SNR=23						
XPFO	Pion Flat	2.38	135	Pn	Pn	00 35 20.1	-1.0
BELC	Belle Mtn. Jos	2.43	122	P	Pn	00 35 20.6	-1.2
	baz=303,SNR=23						
TPNV	Topopah Spring	2.45	47	P	Pn	00 35 20.7	-1.3
	baz=228						
109C	Camp Elliot, M	2.67	154		Pn	00 35 23.8	-1.1
109C	Camp Elliot, M	2.67	154	P	Pn	00 35 24.4	-0.5
	baz=335,SNR=5.8						
SAO	San Andreas Ge	2.80	302		Pn	00 35 26.8	+0.1
MONP2	Monument Peak	2.96	144	P	Pn	00 35 28.6	-0.4
	baz=325,SNR=15						
IRM	Iron Mountain	2.98	112	P	Pn	00 35 27.8	-1.4
	baz=294,SNR=9.7						
BC3	Big Chuckawall	3.00	122	P	Pn	00 35 28.2	-1.4
	baz=304,SNR=12						
BAR	Barrett	3.02	149		Pn	00 35 29.7	-0.1
NV11	Mina Array Sit	3.13	5		Pn	00 35 31.3	-0.1
NEE2	Needles Airpor	3.22	98	P	Pn	00 35 30.9	-1.6
	baz=281						
SWSC	Sam W. Stewart	3.24	136	P	Pn	00 35 31.1	-1.7
	baz=317,SNR=12						
WAKR	Walker	3.28	347		Pn	00 35 33.8	+0.3
IKP	In-Ko-Pah, Jac	3.31	143	P	Pn	00 35 32.8	-0.9
	baz=324						
RYN	Ryan	3.32	360		Pn	00 35 33.3	-0.6
Y12C	Blythe	3.62	114		Pn	00 35 36.3	-1.7
YERR	Yerington	3.72	351		Pn	00 35 40.9	+1.4
KVN	Kaiserville	3.75	5		Pn	00 35 41.2	+1.3
W13A	Hualapai Mount	3.78	92		Pn	00 35 39.3	-1.0
GLA	Glamis	3.78	125		Pn	00 35 39.0	-1.2
GLA	Glamis	3.78	125	P	Pn	00 35 38.6	-1.6
	baz=308						
R11A	Troy Canyon, C	3.83	37		Pn	00 35 41.9	+0.8
R11A				Pg	Pb	00 35 51.3	+1.8
ORV	Oroville	4.87	331		Pn	00 35 57.8	+2.6
KNB	Kanab	4.89	68	Pn	Pn	00 35 56.6	+1.0
U15A	North Rim	5.16	76	Pn	Pn	00 36 00.0	+0.7
MTPU	Mount Pierson	5.76	60	Pn	Pn	00 36 08.9	+1.2
X16A	Lo Mia Camp, P	5.86	97	Pn	Pn	00 36 08.0	-0.9
TMUT	Trail Mountain	7.04	53	Pn	Pn	00 36 27.3	+2.0
TMUT				Pg	Pb	00 36 48.2	+4.0
TUC	Tucson	7.08	113	Pn	Pn	00 36 24.0	-1.5
MFID	Camas Ranch	8.36	13		Pn	00 36 41.9	-1.3
LRM	Limekiln Ridge	11.46	22		Pn	00 37 42.2	+16

NNC 20 00:50:49.4±1.2, 39.02N×76.14E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=8.5km s-min=7.9km az=20.0
KRNET 20 00:50:54.9±0.1, 39.08N×76.30E, mb2.8
ISC 20 00:51:00.8±2.5, 39.4N±0.1×76.08E±0.06, h10km, n26, σ2.47/33, 16C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn	2.03	358	⇑iP	Pb	00 51 36.1	-1.9
	baz=54						
NRN				⇑iS	Sb	00 52 06.9	+3.4
	baz=54						
KZA	Kyzart	2.75	347	⇑iP	Pb	00 51 47.5	-2.8
	baz=45						
KZA				⇑iS	Sb	00 52 26.9	+2.7
	baz=45						
ARLS	Aral	2.80	332	⇑iP	Pb	00 51 48.4	-2.6
	baz=32						
ARLS				⇑iS	Sb	00 52 27.5	+2.1
	baz=32						
ULHL	Ulahol	2.84	2	⇑iP	Pn	00 51 47.7	+1.2
	baz=59						
ULHL				⇑iS	Sb	00 52 27.4	+0.6
	baz=59						
KDJ	Kajisay	2.85	17	⇓iP	Pb	00 51 47.6	-4.3
	baz=12						
KDJ				⇓iS	Sb	00 52 26.3	-0.6
	baz=12						
UCH	Uchtor	3.06	338	⇑iP	Pn	00 51 52.0	+2.3
	baz=37						
UCH				⇑iS	Sb	00 52 35.0	+1.7
	baz=37						
BOOM	Boomskoye usch	3.09	358	⇑iP	Pn	00 51 51.7	+1.9
	baz=56						
BOOM				⇑iS	Sn	00 52 32.9	+6.0
	baz=56						
AML	Almayashu	3.27	327	⇓iP	Pn	00 51 55.1	+2.5
	baz=28						
AML				⇓iS	Sb	00 52 40.4	+1.1
	baz=28						
AAK	Ala-Archa	3.45	340	⇑Pg	Pb	00 51 59.5	-2.6
	2.5nm,0.7s						
AAK				⇑Lg	Lg	00 52 51.6	
	8.6nm,1.0s						
KST	Kastek	3.64	359	Pg	Pb	00 52 03.3	-2.0
	2.4nm,0.5s						
KST				Lg	Lg	00 52 57.9	
	7.8nm,0.5s						
IZV	Izvestkoviy	3.65	6	Pg	Pb	00 52 01.9	-3.6
	3.7nm,0.5s						
IZV				Lg	Lg	00 52 55.5	
	5.7nm,0.3s						
TNSS	Tian-Shan	3.69	10	Pg	Pb	00 52 04.3	-2.1
	4.6nm,0.5s						
TNSS				Lg	Lg	00 52 59.5	
	5.2nm,0.3s						
MDOK	Medeo	3.83	11	Pg	Pb	00 52 06.7	-1.8
	3.1nm,0.7s						
MDOK				Lg	Lg	00 53 03.3	
	6.5nm,0.8s						
DGS	Degeres	3.84	357	Pg	Pb	00 52 06.1	-2.7
	4.2nm,0.5s						
DGS				Lg	Lg	00 53 02.3	
	4.4nm,0.4s						
KOTS	Kotyrbulak	3.91	11	Pg	Pb	00 52 08.7	-1.2
	6.7nm,0.5s						
KOTS				Lg	Lg	00 53 06.6	
	11nm,0.3s						
MRKS	Merke	3.98	328	Pg	Pb	00 52 07.8	-3.3
	2.3nm,0.3s						
MRKS				Lg	Lg	00 53 05.4	
	2.7nm,0.7s						
KRBS	Karabastau	4.30	356	Pg	Pb	00 52 15.7	-0.8
	1.4nm,0.4s						
KRBS				Lg	Lg	00 53 19.0	
	2.3nm,0.5s						
KTBS	Karatobe	4.33	6	Pg	Pb	00 52 16.2	-0.8
	1.9nm,0.6s						
KTBS				Lg	Lg	00 53 19.6	
	7.0nm,0.6s						
UZB	Uzynbulak	4.35	30	Pg	Pb	00 52 13.7	-3.7
	2.1nm,0.5s						
UZB				Lg	Lg	00 53 15.7	
	2.3nm,0.4s						
KUU	Kurty	4.49	2	Pg	Pb	00 52 18.6	-1.2
	2.4nm,0.4s						
KUU				Lg	Lg	00 53 24.1	
	9.7nm,0.5s						
SHLS	Shalkode	4.54	33	Pg	Pb	00 52 20.5	-0.1
	4.8nm,0.7s						
SHLS				Lg	Lg	00 53 27.1	
	4.7nm,0.8s						
PDGK	Podgornoye	4.69	32	Pg	Pb	00 52 20.2	-2.9
	1.1nm,0.4s						
PDGK				Lg	Lg	00 53 26.3	
	1.7nm,0.8s						
PDGK	Podgornoye	4.69	32	⇑Pn	Pn	00 52 04.5	-7.3
	0.5nm,0.6s						
PDGK				⇑Pg	Pb	00 52 20.9	-2.3
	1.5nm,0.5s						
PDGK				⇓Lg	Lg	00 53 29.7	
	4.5nm,0.7s						
ARXS	Arharly	4.98	15	Pg	Pb	00 52 27.5	-0.7
	4.4nm,0.5s						
ARXS				Lg	Lg	00 53 39.4	
	3.4nm,0.6s						
DJR	Jarkent	5.65	28	Pg	Pb	00 52 40.9	+1.3
	0.8nm,0.5s						
DJR				Lg	Lg	00 54 02.1	
	2.3nm,0.6s						
KAPS	Kapalarasan	6.36	21	Pg	Pb	00 52 51.8	+0.2
	1.0nm,0.6s						
KAPS				Lg	Lg	00 54 21.5	
	0.9nm,0.8s						

IDC 20 00:57:57.9±4.1, 12.94N×91.03W, h0km, mb3.3/3, mb1 3.9/6, mb1mx3.5/43, mbtmp3.6/6, ML3.7/3, Error ellipse: s-maj=58.3km s-min=34.6km az=149.0
GCG 20 00:57:58.7±0.8, 12.82N×91.24W, h50km±242km, MD4.0
SNET 20 00:58:00.3±0.3, 13.39N×91.61W, h100km±47km, ML3.0
ISC 20 00:58:02.0±3.0, 13.1N±0.1×91.18W±0.07, h14km±16km, n13, σ1.56/20, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	1.31	33	eP	Pn	00 58 24.8	-1.2
IXG				eS	Sg	00 58 44.6	+0.3
FUG	Fuego 3	1.41	14	eP	Pn	00 58 25.2	-2.2
FUG				eS	Sg	00 58 47.2	-0.2
ERG	Entre ros, C	1.41	345	eP	Pn	00 58 25.0	-2.2
ERG				eS	Sb	00 58 46.1	+0.2
PCG	Pacaya	1.42	23	eP	Pn	00 58 26.7	-1.0
PCG				eS	Sg	00 58 48.9	+0.9
RTR	El Retiro	1.70	61	eP	Pb	00 58 33.5	+0.2
NBG	Las Nubes	1.71	28	eP	Pn	00 58 32.0	+0.3
NBG				eS	Sn	00 58 53.5	0.0
APG	El Apazote	2.04	20	Pn	Pn	00 58 35.2	-0.9
	37nm,0.3s,baz=193,slow=14,SNR=158						
APG				Sn	Sn	00 59 02.3	+0.7
	12nm,0.3s,baz=344,slow=7.8,SNR=5.5						
MTO3	Montecristo	2.21	53	eP	Pn	00 58 39.3	+0.8
MTO3				IAML		00 59 15.3	
	comp=Z,44nm,0.6s						
CMIG	Matias Romero	5.36	319	Pn	Pn	00 59 21.4	-0.3
	comp=Z,0.5nm,0.3s,baz=144,slow=9.3,SNR=5.3						
CMIG				Sn	Sn	01 00 27.3	+4.1
	comp=Z,1.9nm,0.3s,baz=237,slow=20,SNR=5.7						
TEIG	Tepich	7.64	21	Pn	Pn	00 59 52.9	0.0
	comp=Z,2.9nm,0.3s,baz=141,slow=7.0,SNR=13						
TXAR	Lajitas Array	19.90	326	P	P	01 02 33.2	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,0.7nm,0.8s,baz=158,slow=14,SNR=7.6						
NVAR	Mina Array Bea	34.89	321	P	P	01 04 54.6	+1.2
	comp=Z,0.3nm,0.4s,baz=128,slow=8.6,SNR=3.2						
YKA	Yellowknife Ar	52.11	346	P	P	01 07 09.1	-2.4
	comp=Z,0.2nm,0.6s,baz=156,slow=7.3,SNR=5.1						

*UPP **20** 01:00:39.7±0.0, 67.84N×20.20E, h0km, ML1.6, Explosion*
*HEL **20** 01:00:40.3±0.1, 67.86N×20.20E, h0km, ML1.8, ML1.5(UPP), Explosion*
*IDC **20** 01:00:41.0±1.1, 67.86N×20.60E, h0km, mb1 2.8/3, mb1mx2.7/42, mbtmp2.8/3, ML2.0/3, Error ellipse: s-maj=18.3km s-min=6.7km az=118.0*
ISC 20 01:00:39.7±0.8, 67.84N±0.02×20.24E±0.03, h0km, n33, σ1§01/52, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	18	P	Pg	01 00 42.4	+0.3
KUA	Kurravaara	0.12	18	i P	Pg	01 00 42.4	+0.3
RATU	Laukkuluspa	0.24	267	P	Pg	01 00 44.4	0.0
RATU				S	Sg	01 00 47.3	-0.3
RATU	Laukkuluspa	0.24	267	i P	Pg	01 00 44.4	0.0
RATU				i S	Sg	01 00 47.3	-0.3
KOVU	Salmi	0.39	356	P	Pg	01 00 47.2	+0.1
KOVU				S	Sg	01 00 52.5	+0.3
KOVU	Salmi	0.39	356	i P	Pg	01 00 47.2	+0.1
KOVU				i S	Sg	01 00 52.5	+0.3
LANU	Lannavaara	0.70	71	eP	Pg	01 00 53.1	+0.1
LANU				eS	Sg	01 01 02.8	+0.7
DUNU	Dundret	0.73	170	P	Pg	01 00 53.5	-0.2
DUNU				S	Sg	01 01 03.5	+0.5
DUNU	Dundret	0.73	170	i P	Pg	01 00 53.5	-0.2
DUNU				i S	Sg	01 01 03.5	+0.5
MASU	Masugnsbyn	0.78	119	P	Pg	01 00 54.7	+0.2
MASU	Masugnsbyn	0.78	119	i P	Pg	01 00 54.7	+0.2
KIF	Kilpisjarvi	1.19	10	ePB	Pg	01 01 02.4	-0.1
KIF				MSG		01 01 17.2	
	comp=Z,14nm,0.2s						
KIF				eSB	Sg	01 01 18.5	+0.5
PAJU	Pajala	1.38	125	P	Pg	01 01 05.3	-0.8
PAJU				S	Sg	01 01 23.6	-0.3
PAJU	Pajala	1.38	125	eP	Pg	01 01 05.3	-0.8
PAJU				eS	Sg	01 01 23.6	-0.3
HEF	Hetta	1.41	64	ePG	Pn	01 01 05.9	-0.7
	baz=244						
HEF				MSG		01 01 22.6	
	comp=Z,4.1nm,0.2s						
ERTU	Ertsjaerv	1.50	148	P	Pn	01 01 07.5	-0.3
ERTU	Ertsjaerv	1.50	148	ePG	Pn	01 01 07.3	-0.5
ERTU				eSN	Sn	01 01 28.3	+0.3
HARU	Harads	1.71	170	P	Pn	01 01 10.8	+0.2
HARU	Harads	1.71	170	eP	Pn	01 01 10.8	+0.2
KALU	Kalix	2.34	147	ePB	Pn	01 01 20.7	+1.3
KALU				eSB	Sb	01 01 51.5	-0.5
TOF	Tornio	2.39	136	ePB	Pb	01 01 21.8	-1.7
	baz=314						
TOF				MSG		01 01 49.8	
	comp=Z,3.5nm,0.2s						
TOF				eSG	Sb	01 01 54.0	+0.6
SGF	Sodankyl	2.44	96	eP	Pn	01 01 21.9	+1.1
SGF				eSG	Sb	01 01 56.3	+1.4
RNF	Rovaniemi	2.56	116	ePB	Pn	01 01 24.2	+1.7
	baz=305						
RNF				eSB	Sb	01 01 58.3	-0.2
ARCES	ARCESS Array B	2.57	46	Pn	Pn	01 01 23.5	+0.9
	comp=Z,0.7nm,0.3s,baz=234,slow=13,SNR=27						
ARCES				Pg	Pb	01 01 24.3	-2.4
	comp=Z,0.7nm,0.3s,baz=225,slow=16,SNR=27						
ARCES				Lg	Lg	01 01 57.3	
	comp=Z,1.2nm,0.3s,baz=227,slow=26,SNR=11						
ARE0	ARCESS Array S	2.57	46	eP	Pn	01 01 23.4	+0.8
	baz=227						
ARE0				eSB	Sb	01 01 57.7	-1.1
KEV	Kevo	3.13	49	eP	Pn	01 01 32.4	+2.2
KEV				eS	Sn	01 02 08.0	-0.1
KEV				MSG		01 02 12.1	
	comp=Z,2.3nm,0.2s						
BURU	Burvik	3.30	171	eP	Pn	01 01 34.9	+2.4
MSF	Maaselka	3.98	115	eP	Pn	01 01 43.6	+1.7
	baz=298						
UMAU	Umeaa	3.98	177	eP	Pn	01 01 43.7	+1.9
KU6	Riekki	4.21	111	eP	Pn	01 01 47.5	+2.4
FINES	FINESS Array B	6.89	156	Pn	Pn	01 02 23.2	+1.4
	comp=Z,0.1nm,0.3s,baz=349,slow=16,SNR=4.7						
FINES				Sn	Sn	01 03 41.2	+0.4
	comp=Z,0.1nm,0.3s,baz=342,slow=22,SNR=2.8						
FINES				Lg	Lg	01 04 14.5	
	comp=Z,0.2nm,0.3s,baz=351,slow=25,SNR=5.7						
NOA	NORSAR Array B	7.85	214	Pn	Pn	01 02 35.6	+0.6
	comp=Z,0.0nm,0.3s,baz=25,slow=11,SNR=3.3						
NOA				Lg	Lg	01 04 47.6	
	comp=Z,0.0nm,0.3s,baz=51,slow=17,SNR=3.3						
HFS	Hagfors	8.24	203	Pn	Pn	01 02 40.9	+0.5
	baz=26,slow=13,SNR=2.4						
HFS				Lg	Lg	01 04 58.0	
	comp=Z,0.1nm,0.3s,baz=18,slow=26,SNR=3.2						

*IDC **20** 01:21:40.9±4.8, 12.70N×91.24W, h0km, mb3.3/4, mb1 3.9/7, mb1mx3.6/35, mbtmp3.6/7, ML3.7/3, Error ellipse: s-maj=79.6km s-min=40.4km az=156.0*
*GCG **20** 01:21:47.6±0.5, 13.14N×91.60W, h50km±105km, MD3.7*
*SNET **20** 01:21:48.6±1.3, 13.75N×91.56W, h20km±266km, ML3.0*
ISC 20 01:21:49.5±1.4, 13.2N±0.1×91.49W±0.05, h28km, n17, σ1§62/22, mb3.5/3, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	Entre ros, C	1.21	356	eP	Pn	01 22 09.5	-1.1
FUG	Fuego 3	1.37	27	eP	Pn	01 22 12.7	-0.4
IXG	Ixpaco	1.39	47	eP	Pn	01 22 13.0	-0.2
PCG	Pacaya	1.45	36	eP	Pn	01 22 14.2	+0.1
PCG				eS	Sn	01 22 34.8	+2.6
STG3	Santiaguito 3,	1.48	357	eP	Pn	01 22 13.6	-0.9
NBG	Las Nubes	1.75	39	eP	Pn	01 22 19.5	+1.1
CEVE	Cerro Verde	1.91	71	eS	Sb	01 22 47.8	+1.2
CEVE				IAML		01 22 56.7	
	comp=Z,393nm,0.2s						
SNJE	San Jose	1.94	70	eP	Pn	01 22 22.1	+1.2
APG	El Apazote	2.03	29	Pn	Pn	01 22 22.4	+0.2
	comp=Z,14nm,0.3s,baz=193,slow=12,SNR=78						
APG				Sn	Sn	01 22 48.9	+2.2
	comp=Z,17nm,0.3s,baz=109,slow=13,SNR=6.3						
MTO3	Montecristo	2.38	60	eP	Pn	01 22 27.9	+1.1
MTO3				eS	Sn	01 22 57.6	+2.4
MTO3				eS	Sb	01 22 58.0	-2.9
MTO3				IAML		01 23 06.7	
	comp=Z,32nm,0.6s						
PAVA	Las Pavas	2.53	79	eP	Pb	01 22 32.0	-2.4
CMIG	Matias Romero	5.05	320	Pn	Pn	01 23 04.0	+0.5
	comp=Z,0.6nm,0.3s,baz=140,slow=11,SNR=5.6						
CMIG				Sn	Sn	01 24 04.0	+3.0
	comp=Z,2.1nm,0.3s,baz=46,slow=16,SNR=5.9						
TEIG	Tepich	7.62	23	Pn	Pn	01 23 38.9	+0.2
	comp=Z,4.2nm,0.3s,baz=133,slow=6.2,SNR=20						
TXAR	Lajitas Array	19.62	327	P	P	01 26 17.4	-0.1
	comp=Z,0.7nm,0.8s,baz=148,slow=10,SNR=6.6						
NVAR	Mina Array Bea	34.59	321	P	P	01 28 37.4	+1.1
	comp=Z,1.0nm,0.9s,baz=129,slow=9.4,SNR=3.7						
YKA	Yellowknife Ar	51.89	347	P	P	01 30 54.3	-1.0
	comp=Z,0.2nm,0.4s,baz=141,slow=7.2,SNR=3.9						
ILAR	Eielson Array	63.75	337	P	P	01 32 18.2	-0.3
	comp=Z,0.3nm,0.8s,baz=170,slow=4.9,SNR=4.9						

*NIED **20** 01:32:00, 42.80N×132.70E, h620km, Mw4.7 Best double couple: M0 1.44000×10^16 NP1: φs 328.00000°, δ84.00000°, λ-11.00000°. NP2: φs 59.00000°, δ79.00000°, λ-173.00000°.*
*SKHL **20** 01:32:51.1±0.9, 42.83N×132.26E, h520km±9km, mb5.4/14*
*BJI **20** 01:32:51.8±0.0, 42.92N×132.08E, h525km, mB4.8/40, mb5.1/32*
*MOS **20** 01:32:51.2±0.9, 42.88N×132.16E, h521km, mb4.5/34, Error ellipse: s-maj=6.6km s-min=4.9km az=104.4*
*IDC **20** 01:32:52.5±0.3, 42.91N×132.06E, h516km±3km, mb3.9/49, mb1 4.0/57, mb1mx4.0/78, mbtmp4.9/57, Error ellipse: s-maj=5.8km s-min=5.4km az=73.0*
*NEIC **20** 01:32:52.3±1.1, 42.87N±0.05×132.2E±0.1, h519km±6km, mb4.5/167, Error ellipse: s-maj=11.9km s-min=7.4km az=73.0*
*JMA **20** 01:32:52.3±0.3, 42.78N×132.69E, h550km, M4.9*
ISC 20 01:32:51.7±0.3, 42.85N±0.04×132.20E±0.04, h513km±3km, h513km:pP-P, n631, σ1§50/652, mb4.5/159, 47C-36D, Primorye

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLA	Vladivostok	0.35	320	P	P	01 33 54.5	+1.4
VLA	Vladivostok	0.35	320	d iP	P	01 33 54.5	+1.4
MSHR	Mys Shultsa	0.81	251	c iP	P	01 33 55.4	+1.5
GRTR	Gornotajezhnoj	0.86	358	⇓iP	P	01 33 55.4	+1.5
GRTR				i S	S	01 34 45.3	+0.6
GRTR				A	A	01 34 46.1	
	319nm,0.8s						
GRTR				A	A	01 34 46.1	
	404nm,0.8s						
USRK	Ussuriysk Ar.	1.36	354	P	P	01 33 56.2	+1.0
	baz=102,slow=2.8,SNR=106						
USRK				S	S	01 34 47.8	+0.6
	baz=189,slow=3.6,SNR=11						
USA0B	Ussuriysk Arra	1.36	354	P	P	01 33 56.0	+0.8
USA0B				S	S	01 34 47.7	+0.5
USA0B	Ussuriysk Arra	1.36	354	c iP	P	01 33 56.1	+0.8
MDJ	Mudanjiang	2.59	314	P	P	01 34 02.5	+1.5
MDJ				S	S	01 34 59.4	+1.7
MDJ				pmax	pmax		
	comp=Z,120nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,190nm,4.3s						
TEY	Ternei	3.86	54	⇓iP	P	01 34 10.9	+1.1
TEY				AMB	AMB	01 34 11.1	
	510nm,0.6s						
TEY				eS	S	01 35 13.8	+0.2
TEY				A	A	01 35 14.6	
	330nm,0.9s						
TEY				A	A	01 35 14.6	
	220nm,0.9s						
TEY	Ternei	3.86	54	⇓iP	P	01 34 10.9	+1.1
TEY				eS	S	01 35 14.6	+1.0
TEY				pmax	pmax		
	comp=N,210nm,1.3s						
TEY				pmax	pmax		
	comp=E,200nm,1.3s						
TEY				pmax	pmax		
	comp=Z,510nm,1.3s						
TEY				smax	smax		
	comp=N,300nm,0.9s						
TEY				smax	smax		
	comp=E,220nm,1.2s						
CN2	Changchun	5.01	283	eP	P	01 34 20.3	+0.8
CN2				eS	S	01 35 30.0	-1.2
CN2				pmax	pmax		
	comp=E,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=E,200nm,3.0s						
JOSM	Okushiri--Mats	5.44	96	P	P	01 34 22.9	-0.4
JHST	Hiyamasetana	5.68	92	P	P	01 34 25.7	+0.2
JSH	Shimam	5.78	89	P	P	01 34 26.2	-0.3
KHBR	Khabarovsk	5.97	19	⇑iP	P	01 34 29.3	+1.2
KHBR				AMB	AMB	01 34 29.5	
	comp=E,275nm,0.4s						
KHBR				eS	S	01 35 46.7	-0.5
KS19	Wonju Array Si	6.28	213	P	P	01 34 31.6	+0.1
KS19				S	S	01 35 54.4	+1.5
KSRS	Korea Array	6.30	213	P	P	01 34 33.9	+2.3
	comp=E,26nm,0.3s,baz=24,slow=9.8,SNR=251						
KSRS				S	S	01 35 56.2	+3.0
	baz=22,slow=18,SNR=9.9						
KLR	Kul'dur	6.39	357	P	P	01 34 33.2	+1.1
	baz=179,slow=9.5						
KLR				S	S	01 35 54.3	-0.2
	baz=313,slow=19,SNR=15						
KLR	Kul'dur	6.39	357	eP	P	01 34 33.1	+1.0
KLR	Kul'dur	6.39	357	c iP	P	01 34 33.1	+1.0
SNY	Shenyang	6.47	264	⇓P	P	01 34 34.6	+1.6
SNY				S	S	01 35 49.8	-6.2
SNY				sP		01 35 57.4	
JOI	OKI	6.60	173	P	P	01 34 36.0	+1.5
JKB	Kayabe	6.62	95	P	P	01 34 33.6	-0.9
JSD	Sado	6.67	134	P	P	01 34 35.2	+0.1
JSD				eS	S	01 35 58.1	-1.6
JOT	Ohata	6.74	100	P	P	01 34 34.6	-1.2
JEW	Eniwo	6.80	87	P	P	01 34 36.1	-0.2
INCN	Inchon	6.84	220	P	P	01 34 38.5	+1.6
INCN				S	S	01 36 03.3	+0.4
JTM	Tenmabayashi	6.94	104	P	P	01 34 36.4	-1.3
JHR	Hokuryu	7.01	79	P	P	01 34 38.2	-0.1
JYA	Atsumi	7.12	124	P	P	01 34 39.0	-0.5
JWK2	Keihoku	7.41	67	P	P	01 34 43.0	+0.7
TJN	Taejon	7.46	212	c iP	P	01 34 45.1	+2.1
JOM	Ohasama	7.65	113	P	P	01 34 43.6	-1.2
ASAJ	Asahikawa	7.67	77	P	P	01 34 44.5	-0.5
ASAJ				eS	S	01 36 14.1	-3.8
ASAJ	Asahikawa	7.67	77	P	P	01 34 44.8	-0.2
	comp=E,61nm,0.3s,baz=264,slow=11,SNR=86						
ASAJ				S	S	01 36 14.3	-3.6
	baz=119,slow=19,SNR=3.0						
JKA	Kamikawa-asahi	7.67	77	P	P	01 34 44.8	-0.2
JKA					S	01 36 14.3	-3.7
JGN	Niukaw	7.71	147	P	P	01 34 46.2	+0.6
MJB9	Matsu-Tunnel	7.81	142	P	P	01 34 46.9	+0.3
MAJO	Matsushiro	7.82	142	P	P	01 34 46.1	-0.5
MAJO	Matsushiro	7.82	142	deP	P	01 34 46.4	-0.3
MAT	Matsushiro	7.82	142	P	P	01 34 47.0	+0.3
MAT	Matsushiro	7.82	142	P	P	01 34 46.7	0.0
MAT				eS	S	01 36 19.2	-1.7
MJAR	Matsushiro Arr	7.82	142	P	P	01 34 47.4	+0.7
	comp=E,0.5nm,0.3s,baz=324,slow=10,SNR=42						
MJAR				S	S	01 36 21.7	+0.8
	comp=E,0.3nm,0.3s,baz=295,slow=29,SNR=2.7						
JMK	Ichinoseki	7.86	117	P	P	01 34 45.4	-1.6
JMK				eS	S	01 36 16.0	-5.6
JHS	Saijyo	7.87	174	P	P	01 34 49.0	+1.7
JWT	Wachi	7.96	161	P	P	01 34 49.5	+1.4
JWT				eS	S	01 36 22.3	-1.1
JAD	Aida	8.04	168	P	P	01 34 50.5	+1.5
ERM	Erimo	8.15	92	P	P	01 34 49.1	-0.7
ERM	Erimo	8.15	92	ceP	P	01 34 49.0	-0.9
ERM				pmax	pmax		
	comp=Z,615nm,0.6s						
JEM	Erimo	8.15	92	P	P	01 34 48.9	-1.0
JEM				S	S	01 36 18.8	-8.1
JMP	Maruseppu	8.21	78	P	P	01 34 49.8	-0.7
JCH	Churui	8.22	88	P	P	01 34 48.6	-2.0
JCH				eS	S	01 36 21.4	-6.9
JMM	Marumori	8.23	124	P	P	01 34 49.1	-1.8
JGF	Kuroka	8.27	149	P	P	01 34 51.7	+0.4
INU	Inuyama	8.37	152	P	P	01 34 52.6	+0.3
GRNR	Gornyy	8.44	19	i P	P	01 34 53.2	+0.5
GRNR				AMB	AMB	01 34 53.6	
	comp=Z,60nm,0.7s						
GRNR				AMB	AMB	01 34 53.6	
	comp=Z,20nm,0.7s						
GRNR				AMB	AMB	01 34 53.6	
	comp=Z,90nm,0.7s						
GRNR				eS	S	01 36 29.6	-2.5
GRNR				A	A	01 36 31.2	
	comp=Z,40nm,1.0s						
GRNR	Gornyy	8.44	19	⇑iP	P	01 34 53.2	+0.5
GRNR				eS	S	01 36 29.6	-2.5
GRNR				pmax	pmax		
	comp=Z,90nm,0.7s						
GRNR				smax	smax		
	comp=E,40nm,1.0s						
YSS	Yuzh-Sakhalins	8.54	58	eP	P	01 34 54.2	+0.3
YSS				AMB	AMB	01 34 55.7	
	comp=E,110nm,0.5s						
YSS				eS	S	01 36 31.2	-3.0
YSS				A	A	01 36 32.5	
	comp=E,656nm,6.0s						
YSS				A	A	01 36 32.5	
	comp=E,566nm,6.0s						
YSS				A	A	01 36 36.1	
	comp=E,129nm,0.8s						
YSS				A	A	01 36 36.1	
	comp=E,83nm,0.8s						
YSS	Yuzh-Sakhalins	8.54	58	P	P	01 34 54.1	+0.3
YSS	Yuzh-Sakhalins	8.54	58	⇓iP	P	01 34 54.1	+0.3
YSS				eS	S	01 36 32.1	-2.1
YSS				pmax	pmax		
	comp=Z,110nm,0.5s						
YSS				smax	smax		
	comp=N,150nm,0.8s						
JTU	Tsushima	8.59	196	P	P	01 34 56.5	+1.9
JTKR	Abashiri--Toko	8.60	79	P	P	01 34 53.9	-0.6
DL2	Dalian	8.92	247	P	P	01 34 59.3	+1.4
DL2				S	S	01 36 42.6	+1.1
JYT	Yasato	9.04	134	S	S	01 36 36.5	-7.5
JIE	Ise	9.15	156	P	P	01 35 01.1	+0.7
JMN	Monobe	9.20	171	P	P	01 35 02.1	+1.1
UGL	Uglegorsk	9.27	44	eP	P	01 35 02.1	+0.8
UGL				AMB	AMB	01 35 03.0	
	comp=N,300nm,2.2s						
UGL				AMB	AMB	01 35 04.0	
	comp=N,138nm,0.9s						
UGL				eS	S	01 36 46.8	-1.1
UGL				A	A	01 36 49.0	
	comp=N,800nm,3.7s						
UGL				A	A	01 36 51.0	
	comp=N,124nm,1.0s						
UGL				A	A	01 36 51.0	
	comp=N,134nm,1.0s						
UGL	Uglegorsk	9.27	44	⇓eP	P	01 35 02.1	+0.8
UGL				eS	S	01 36 46.8	-1.1
UGL				pmax	pmax		
	comp=Z,300nm,2.2s						
UGL				pmax	pmax		
	comp=Z,139nm,0.9s						
UGL				smax	smax		
	comp=E,800nm,3.7s						
UGL				smax	smax		
	comp=N,125nm,1.0s						
UGL				smax	smax		
	comp=E,134nm,1.2s						
JOD2	Odawara 2	9.28	142	eS	S	01 36 40.9	-7.6
JTNC	Tanabenakahech	9.40	162	P	P	01 35 03.0	-0.1
GLVR	Golovnino	9.76	80	i P	P	01 35 06.9	+0.4
GLVR				AMB	AMB	01 35 07.2	
	comp=E,135nm,0.3s						
GLVR				eS	S	01 36 56.5	-0.9
GLVR	Golovnino	9.76	80	d iP	P	01 35 06.9	+0.4
GLVR				eS	S	01 36 56.5	-0.9
GLVR				pmax	pmax		
	comp=E,248nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,1μm,0.3s						
GLVR				pmax	pmax		
	comp=N,118nm,0.2s						
JNU	Nakatsue	9.77	187	P	P	01 35 08.2	+1.4
JNU	Nakatsue	9.77	187	P	P	01 35 08.3	+1.4
	comp=N,14nm,0.3s,baz=6.3,slow=3.3,SNR=58						
JNU	Nakatsue	9.77	187	P	P	01 35 08.4	+1.6
NMR	Nemuro--Hokkai	9.91	82	i P	P	01 35 06.4	-1.7
NMR	Nemuro--Hokkai	9.91	82	d iP	P	01 35 06.4	-1.7
NMR				i S	S	01 36 53.6	-6.8
NEM2	Nemuro 2	9.92	82	P	P	01 35 06.8	-1.5
NEM2				S	S	01 36 54.2	-6.4
GRPR	Tuman	9.95	79	i P	P	01 35 08.6	+0.1
GRPR				AMB	AMB	01 35 12.0	
	comp=N,66nm,0.3s						
GRPR				i S	S	01 37 02.6	+1.6
GRPR	Tuman	9.95	79	d iP	P	01 35 08.6	+0.1
GRPR				i S	S	01 37 02.6	+1.6
GRPR				pmax	pmax		
	comp=E,202nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,662nm,0.3s						
GRPR				pmax	pmax		
	comp=N,303nm,0.2s						
JTO	Tosashimizu	9.98	177	P	P	01 35 09.8	+0.7
YUK	Yuzh-Kuril'sk	10.01	79	⇑iP	P	01 35 09.9	+0.7
YUK				AMB	AMB	01 35 10.1	
	comp=N,165nm,0.3s						
YUK				AMB	AMB	01 35 14.9	
	comp=N,128nm,1.0s						
YUK				eS	S	01 36 59.9	-2.4
YUK	Yuzh-Kuril'sk	10.01	79	c iP	P	01 35 09.8	+0.6
YUK				S	S	01 36 59.9	-2.4
YUK				pmax	pmax		
	comp=Z,2μm,0.3s						
YUK				pmax	pmax		
	comp=E,213nm,0.4s						
YUK				pmax	pmax		
	comp=Z,1μm,1.2s						
EKMR	Ekimchan	10.24	3	⇑iP	P	01 35 11.2	-0.3
EKMR				AMB	AMB	01 35 13.0	
	comp=Z,150nm,0.6s						
JFU	Fukue jima 2	10.53	196	P	P	01 35 16.3	+1.4
SHO	Shikotan	10.71	80	i P	P	01 35 15.2	-1.3
SHO				AMB	AMB	01 35 19.8	
	comp=Z,56nm,1.0s						
SHO	Shikotan	10.71	80	d iP	P	01 35 15.2	-1.3
SHO				i S	S	01 37 10.6	-5.1
SHO				pmax	pmax		
	comp=E,119nm,0.2s						
SHO				pmax	pmax		
	comp=Z,304nm,0.2s						
SHO				pmax	pmax		
	comp=N,143nm,0.3s						
SHO				pmax	pmax		
	comp=Z,562nm,1.1s						
TYV	Tymovskoe	10.74	38	⇑iP	P	01 35 17.7	+1.0
TYV				AMB	AMB	01 35 18.6	
	comp=Z,50nm,0.8s						
TYV				erx	rx	01 37 09.2	
TYV				eS	S	01 37 15.8	-0.3
TYV				A	A	01 37 17.2	
	comp=Z,47nm,1.2s						
TYV				A	A	01 37 17.2	
	comp=Z,31nm,1.2s						
TYV	Tymovskoe	10.74	38	eP	P	01 35 18.2	+1.5
TYV				eS	S	01 37 15.4	-0.7
TYV				pmax	pmax		
	comp=Z,50nm,0.8s						
TYV				smax	smax		
	comp=E,31nm,1.1s						
ZEA	Zeya	11.38	345	⇑iP	P	01 35 23.8	+0.4
ZEA				AMB	AMB	01 35 24.6	
	comp=E,700nm,0.5s						
ZEA				eS	S	01 37 26.5	-1.9
ZEA				A	A	01 37 28.0	
	comp=E,500nm,2.0s						
ZEA	Zeya	11.38	345	c iP	P	01 35 23.8	+0.4
ZEA				eS	S	01 37 26.5	-1.9
ZEA				pmax	pmax		
	comp=N,340nm,0.8s						
ZEA				pmax	pmax		
	comp=E,150nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,700nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,800nm,1.0s						
ZEA				smax	smax		
	comp=E,500nm,2.0s						
JHJ	Hachijo jima 2	11.40	146	P	P	01 35 24.1	0.0
	comp=E,25nm,0.3s,baz=186,slow=10,SNR=4.1						
JHJ				S	S	01 37 27.3	-2.1
	comp=E,35nm,0.3s,baz=58,slow=19,SNR=4.6						
JHJ2	Mitsune	11.42	146	P	P	01 35 23.6	-0.6
KUR	Kuril'sk	11.53	73	eP	P	01 35 23.0	-2.1
KUR				AMB	AMB	01 35 26.0	
	comp=E,328nm,0.5s						
KUR				eS	S	01 37 28.6	-2.9
KUR	Kuril'sk	11.53	73	eP	P	01 35 23.9	-1.2
NKL	Nikolayevsk	11.76	26	⇑iP	P	01 35 27.6	+0.2
NKL				AMB	AMB	01 35 28.1	
	comp=E,1μm,0.8s						
NKL				erx	rx	01 36 41.2	
NKL				eS	S	01 37 33.8	-1.9
BMKR	Bomnak	12.07	351	⇑iP	P	01 35 29.9	-0.8
BMKR				AMB	AMB	01 35 30.6	
	comp=E,363nm,0.4s						
KROS	Kirovskiy	12.09	345	⇑iP	P	01 35 30.5	-0.4
KROS				AMB	AMB	01 35 31.8	
	comp=E,175nm,0.5s						
BJI	Beijing	12.35	262	P	P	01 35 34.3	+0.5
BJT	Baijiatuau	12.36	262	P	P	01 35 34.3	+0.3
BJT	Baijiatuau	12.36	262	P	P	01 35 34.3	+0.3
OKH	Okha	12.87	30	eP	P	01 35 41.5	+2.5
OKH	Okha	12.87	30	deP	P	01 35 41.5	+2.5
OKH				eS	S	01 37 56.1	-0.8
OKH				smax	smax		
	comp=N,300nm,13.7s						
TIA	Tai'an	13.38	245	P	P	01 35 45.3	+0.5
TIA				pmax	pmax		
	comp=N,82nm,0.9s						
NJ2	Nanjing	15.09	229	eP	P	01 36 03.0	+0.3
NJ2				S	S	01 38 40.6	+0.4
NJ2				PcP	PcP	01 40 32.8	-0.5

NJ2 pmax pmax
comp=N,18nm,0.5s
NJ2 pmax pmax
comp=N,460nm,4.2s
HHC Hu-ho-hao-te 15.50 270⇓iP P 01 36 06.8 -0.2
HHC pmax pmax
comp=N,44nm,0.7s
HHC pmax pmax
comp=N,65nm,5.2s
TIY Taiyuan 15.92 258 eP P 01 36 11.8 +0.5
TIY sP **sP 01 38 11.4 -6.6**
TIY S **S 01 38 45.3 -10**
JOW Kunigami 16.30 193 P P 01 36 15.7 +0.5
comp=N,1.2nm,0.3s,baz=111,slow=13,SNR=5.9
JOW S **S 01 38 57.8 -4.6**
comp=N,0.8nm,0.3s,baz=213,slow=17,SNR=3.3
BTO Baotou 16.70 270 eP P 01 36 19.3 0.0
JCJ Chichijima 17.70 149 P P 01 36 29.9 +1.1
comp=N,20nm,0.3s,baz=73,slow=19,SNR=6.4
JCJ S **S 01 39 25.1 -0.6**
comp=N,24nm,0.3s,baz=341,slow=23,SNR=4.8
SKR Severo-Kuril's 18.11 56 eP P 01 36 32.0 -0.1
SKR Severo-Kuril's 18.11 56⇓eP P 01 36 32.0 -0.1
ULN Ulaanbaatar 18.33 295 P P 01 36 34.4 0.0
ULN Ulaanbaatar 18.33 295 P P 01 36 34.4 0.0
ULN pmax pmax
comp=Z,58nm,0.6s
SONM Songino Array 18.77 294 P P 01 36 38.9 +0.5
comp=Z,8.1nm,0.3s,baz=101,slow=9.4,SNR=188
SONM ScP **ScP 01 43 25.0 -1.0**
comp=Z,0.3nm,0.3s,baz=138,slow=2.5,SNR=9.6
WHN Wuhan 18.81 235 ⇑P P 01 36 38.6 -0.2
BOD Bodaibo 18.86 329 eP P 01 36 37.5 -1.4
BOD e 01 39 41.6
BOD pmax pmax
comp=Z,22nm,1.7s
YAK Yakutsk 19.27 356 P P 01 36 42.3 -0.3
comp=Z,1.7nm,0.3s,baz=175,slow=3.7,SNR=78
YAK Yakutsk 19.27 356 eP P 01 36 41.9 -0.7
YAK Yakutsk 19.27 356 P P 01 36 42.6 +0.1
YAK Yakutsk 19.27 356 eP P 01 36 41.8 -0.8
YAK eS **S 01 39 46.4 -4.0**
YAK pmax pmax
comp=Z,277nm,0.8s
YAK pmax pmax
comp=N,170nm,1.1s
YAK pmax pmax
comp=E,12nm,0.7s
YAK smax smax
comp=E,60nm,1.1s
YAK smax smax
comp=N,58nm,1.3s
PETK Petropavlovsk- 19.82 50 P P 01 36 48.4 +0.7
comp=N,0.1nm,0.3s,baz=224,slow=7.4,SNR=2.6
XAN Xi'an 20.19 252 P P 01 36 51.5 0.0
XAN pmax pmax
comp=N,32nm,0.7s
XAN pmax pmax
comp=N,180nm,3.3s
XAN Xi'an 20.19 252 P P 01 36 51.4 0.0
XAN Xi'an 20.19 252 P P 01 36 51.4 0.0
XAN pmax pmax
comp=Z,24nm,0.6s
MA2 Magadan 20.27 28 P P 01 36 52.1 +0.4
comp=Z,32nm,0.3s,baz=217,slow=10.0,SNR=24
MA2 Magadan 20.27 28 eP P 01 36 51.8 +0.1
MA2 Magadan 20.27 28 P P 01 36 52.2 +0.4
MA2 Magadan 20.27 28c iP P 01 36 51.8 +0.1
MA2 pmax pmax
comp=Z,58nm,0.9s
ZAK Zakamensk 21.15 301 eP P 01 36 59.8 -0.1
ZAK pmax pmax
comp=Z,26nm,0.8s
TLY Talaya 21.18 305 P P 01 37 00.3 +0.2
comp=Z,4.7nm,0.4s,baz=127,slow=11,SNR=13
TLY Talaya 21.18 305 eP P 01 37 00.2 +0.1
TLY Talaya 21.18 305 P P 01 37 00.1 +0.1
TLY IAmb IAmb 01 37 01.5
comp=Z,8.0nm,0.8s
TLY Talaya 21.18 305d iP P 01 37 00.2 +0.1
TLY pmax pmax
comp=Z,9.0nm,0.9s
TPUB Ta-pu 21.73 210 P P 01 37 06.2 +0.7
TPUB IAmb IAmb 01 37 07.3
comp=Z,18nm,0.8s
ENH Enshi 22.06 243 P P 01 37 08.1 -0.2
LZH Lanzhou 22.84 262 ⇓P P 01 37 16.4 +1.0
LZH pmax pmax
comp=Z,26nm,1.1s
LZH pmax pmax
comp=Z,120nm,5.5s
SEY Seymchan 23.32 24 P P 01 37 20.3 +1.2
comp=Z,53nm,0.4s,baz=222,slow=7.0,SNR=39
SEY Seymchan 23.32 24 eP P 01 37 18.9 -0.2
SEY Seymchan 23.32 24⇓eP P 01 37 18.9 -0.2
GTA Gaotai 24.55 273 ⇓P P 01 37 31.3 +0.8
GTA sP sP 01 39 51.8 -1.2
GTA ScP **ScP 01 43 41.3 +0.3**
GTA ScS **ScS 01 47 29.5 -0.2**
GYA Guiyang 26.47 240⇓iP P 01 37 47.3 -0.3
GYA sP sP 01 40 19.6 +6.6
GYA S **S 01 41 49.8 +4.6**
GYA ScS **ScS 01 47 32.1 -6.3**
GYA pmax pmax
comp=Z,90nm,4.9s
TIXI Tiksi 28.92 358 P P 01 38 07.6 -0.8
comp=Z,18nm,0.5s,baz=154,slow=6.5,SNR=57
TIXI Tiksi 28.92 358 eP P 01 38 07.3 -1.0
TIXI Tiksi 28.92 358 P P 01 38 07.8 -0.5
TIXI IAmb IAmb 01 38 09.0
comp=Z,22nm,0.8s
TIXI Tiksi 28.92 358c iP P 01 38 07.3 -1.0
TIXI pmax pmax
comp=Z,21nm,0.7s
KMI Kunming 29.93 243 P P 01 38 18.1 +0.1
KMI pmax pmax
comp=Z,51nm,0.8s
KMI pmax pmax
comp=Z,75nm,3.1s
KMI Kunming 29.93 243 P P 01 38 17.5 -0.5
KMI Kunming 29.93 243 P P 01 38 17.5 -0.5
KMI pmax pmax
comp=Z,38nm,0.7s
BILL Bilibino 31.02 24 eP P 01 38 27.1 +0.6
BILL Bilibino 31.02 24 P P 01 38 27.3 +0.7
BILL Bilibino 31.02 24c iP P 01 38 27.1 +0.6
BILL pmax pmax
comp=Z,33nm,1.3s
SLVN Son La 31.92 237 P P 01 38 35.1 +0.2
SLVN IAmb IAmb 01 38 36.1
comp=Z,9.6nm,0.7s
WMQ Urumqi 32.09 287 eP P 01 38 37.5 +1.4
WMQ PP **pP 01 40 08.3 +4.6**
WMQ PcP **PcP 01 41 13.8 +3.8**
WMQ ScP **ScP 01 44 07.3 +2.7**
WMQ pmax pmax
comp=Z,17nm,0.9s
WMQ pmax pmax
comp=Z,47nm,3.7s
WMQ Urumqi 32.09 287 P P 01 38 36.2 +0.1
WMQ IAmb IAmb 01 38 39.2
comp=Z,17nm,0.7s
WMQ Urumqi 32.09 287 P P 01 38 36.2 +0.1
WMQ pmax pmax
comp=Z,17nm,0.7s
ZAA0 Zalesovo Array 32.76 307 P P 01 38 41.1 -0.5
ZAA0 IAmb IAmb 01 38 42.0
comp=Z,9.3nm,0.8s
ZALV Zalesovo Beam 32.76 307 P P 01 38 41.2 -0.4
comp=Z,6.6nm,0.4s,baz=76,slow=6.9,SNR=30
ZALV PcP **PcP 01 41 11.4 -0.2**
comp=Z,1.6nm,0.5s,baz=198,slow=2.8,SNR=4.0
ZALV ScP **ScP 01 44 05.6 -1.1**
comp=Z,2.3nm,0.5s,baz=66,slow=3.6,SNR=5.7
NRIK Noril'sk 34.99 334 P P 01 38 59.6 -0.5
comp=Z,5.9nm,0.4s,baz=112,slow=7.9,SNR=10
NRIK Noril'sk 34.99 334 iP P 01 38 59.2 -0.9
MK31 Makanchi Array 35.14 294 P P 01 39 01.9 +0.2
MK31 IAmb IAmb 01 39 02.2
comp=Z,15nm,0.6s
MK31 Makanchi Array 35.14 294 eP P 01 39 01.4 -0.3
MKAR Makanchi Array 35.14 294 P P 01 39 01.8 0.0
comp=Z,20nm,0.6s,baz=84,slow=10,SNR=174
MKAR S **S 01 43 56.4 -1.3**
comp=Z,0.8nm,0.8s,baz=83,slow=24,SNR=3.4

MKAR ScP **ScP 01 44 14.3 -1.0**
comp=Z,1.6nm,0.9s,baz=88,slow=4.1,SNR=4.5
LSA Lhasa 35.25 262 P P 01 39 04.5 +1.1
MAKZ Makanchi 35.34 294 P P 01 39 03.6 +0.1
MAKZ Makanchi 35.34 294 P P 01 39 01.5 -1.9
KURK Kurchatov 36.81 301 eP P 01 39 15.1 -0.3
KURK Kurchatov 36.81 301 P P 01 39 15.3 -0.1
KURK Kurchatov 36.81 301d iP P 01 39 15.1 -0.3
KURK pmax pmax
comp=Z,69nm,0.6s
KURBB Kurchatov Arra 36.88 301 P P 01 39 15.7 -0.3
comp=Z,85nm,0.6s,baz=80,slow=8.3,SNR=686
KURBB S **S 01 44 21.3 -2.2**
comp=Z,3.9nm,0.7s,baz=90,slow=16,SNR=13
KURBB Kurchatov Arra 36.88 301 P P 01 39 13.4 -2.6
CHTO Chiang Mai 36.89 240 P P 01 39 16.4 -0.2
CHTO Chiang Mai 36.89 240 P P 01 39 16.4 -0.2
CHTO pmax pmax
comp=Z,31nm,0.8s
SHL Shillong 37.12 256 P P 01 39 18.5 -0.1
SHL Shillong 37.12 256 P P 01 39 18.5 -0.1
SHL pmax pmax
comp=Z,49nm,0.8s
CMAR Chiang Mai Arr 37.16 240 P P 01 39 19.3 +0.6
comp=Z,9.7nm,0.7s,baz=32,slow=7.7,SNR=45
CMAR ScP **ScP 01 44 23.9 +0.6**
comp=Z,0.9nm,0.4s,baz=4.7,slow=3.1,SNR=5.6
PBKT Sadao Pong 37.33 235 P P 01 39 19.9 -0.2
PBKT IAmb IAmb 01 39 22.1
comp=Z,8.5nm,0.7s
GAMB Gambell 37.88 37 P P 01 39 24.7 +0.7
GAMB IAmb IAmb 01 39 25.1
comp=Z,7.7nm,0.6s
PDGK Podgornoye 37.96 289 iP P 01 39 23.9 -1.3
PDGK pmax pmax
comp=Z,18nm,0.6s
TAPN Taplejung 39.07 261 eP P 01 39 35.5 +0.9
comp=Z,80nm,0.3s
ODAN Odare 39.59 261 eP P 01 39 39.1 +0.4
comp=Z,44nm,0.4s
JIRN Jiri 40.00 263 eP P 01 39 42.7 +0.5
comp=Z,195nm,0.5s
GUN Gumba 40.09 264 eP P 01 39 43.2 +0.3
comp=Z,227nm,0.4s
RAMN Ramite 40.11 262 eP P 01 39 43.2 +0.3
ULHL Ulahol 40.57 289 P P 01 39 46.6 +0.2
SNR=20
KKN Kakani 40.60 264 eP P 01 39 47.1 +0.3
comp=Z,78nm,0.2s
PKI Pulchoki 40.62 264 eP P 01 39 47.2 +0.1
comp=Z,116nm,0.6s
PKIN Phulchoki 40.63 264 eP P 01 39 47.2 +0.1
comp=Z,55nm,0.4s
DMN Daman 40.83 264 eP P 01 39 48.9 +0.3
comp=Z,68nm,0.4s
GKN Gorkha 40.95 265 eP P 01 39 49.6 +0.1
comp=Z,243nm,0.5s
NRN Naryn 41.03 288 IAmb IAmb 01 39 51.4
comp=Z,14nm,0.7s
KZA Kyzart 41.32 289 P P 01 39 53.9 +1.3
SNR=52
KBK Karagaybulak 41.33 290 P P 01 39 53.0 +0.6
SNR=33
DANN Dangsing 41.40 266 eP P 01 39 54.1 +0.9
comp=Z,1μm,0.5s
BVAR Borovoye Array 41.42 306 P P 01 39 52.4 -0.2
comp=Z,12nm,0.5s,baz=81,slow=8.0,SNR=139
BVAR PcP **PcP 01 41 38.8 +0.3**
comp=Z,2.0nm,0.4s,baz=107,slow=4.0,SNR=5.8
BVAR ScP **ScP 01 44 37.6 -1.8**
comp=Z,0.6nm,0.4s,baz=51,slow=4.8,SNR=4.5
BVAR S **S 01 45 27.5 -2.6**
comp=Z,1.3nm,0.5s,baz=94,slow=14,SNR=6.8
USP Ospenovka 41.42 291 P P 01 39 53.1 +0.2
SNR=9.3
BRVK Borovoye 41.48 306 eP P 01 39 52.8 -0.3
BRVK Borovoye 41.48 306 P P 01 39 53.1 -0.1
BRVK IAmb IAmb 01 39 53.7
comp=Z,13nm,0.9s
BRVK Borovoye 41.48 306d iP P 01 39 52.8 -0.3
BRVK pmax pmax
comp=Z,14nm,0.9s
FRU1 Bishkek 41.49 290 P P 01 39 53.2 -0.3
FRU1 Bishkek 41.49 290 P P 01 39 53.2 -0.3
FRU1 pmax pmax
comp=Z,65nm,0.5s
AAK Ala-Archa 41.65 290 P P 01 39 54.9 +0.1
comp=Z,32nm,0.3s,baz=115,slow=6.5,SNR=208
AAK Ala-Archa 41.65 290 P P 01 39 55.2 +0.3
SNR=44
AAK Ala-Archa 41.65 290 eP P 01 39 55.0 +0.1
AAK Ala-Archa 41.65 290 P P 01 39 54.6 -0.3
AAK Ala-Archa 41.65 290d iP P 01 39 55.0 +0.1
AAK pmax pmax
comp=Z,21nm,0.9s
UCH Uchtor 41.78 290 P P 01 39 56.8 +0.6
SNR=19
KSH Kashi 41.78 285 P P 01 39 59.8 +3.9
KSH pP PcP 01 41 36.8 -3.3
KSH sP sP 01 42 32.8 +6.2
KSH S **S 01 45 41.8 +5.9**
KSH sS sS 01 48 32.6 +7.6
KSH SS **SS 01 49 04.4 +3.5**
KSH pmax pmax
comp=Z,10.0nm,0.8s
KSH pmax pmax
comp=Z,580nm,6.3s
RDOG Red Dog Mine 41.83 31 P P 01 39 55.7 +0.1
EKS2 Erkin-Say 42.13 290 P P 01 39 58.8 +0.1
SNR=16
AML Almayashu 42.38 290 P P 01 40 01.6 +0.7
SNR=73
SIJI Sorong 43.53 181 P P 01 40 10.9 +1.2
comp=Z,7.7nm,0.3s,baz=75,slow=17,SNR=3.6
TTA Tatalina 44.95 38 P P 01 40 21.2 +1.0
TTA Tatalina 44.95 38 P P 01 40 21.2 +1.0
TTA pmax pmax
comp=Z,5.0nm,0.9s
SVE Sverdlovsk 46.06 314 eP P 01 40 28.8 +0.2
SVE pmax pmax
comp=Z,13nm,0.8s
MSAI Masohi 46.08 185 P P 01 40 25.3 -4.0
comp=Z,2μmcomp=Z,34nm,0.4s
PPLA Purkeypile 46.68 38 P P 01 40 33.9 +0.4
PPLA IAmb IAmb 01 40 35.7
comp=Z,15nm,0.6s
COLD Coldfoot 46.72 31 IAmb IAmb 01 40 41.8
comp=Z,7.6nm,0.7s
TOLK Toolik Lake Re 46.73 30 IAmb IAmb 01 40 35.6
comp=Z,19nm,0.8s
TOLK Toolik Lake Re 46.73 30 P P 01 40 34.6 +1.0
baz=279,SNR=19
MLY Manley 46.89 35 IAmb IAmb 01 40 37.3
comp=Z,10nm,1.0s
RSO Redoubt South 46.95 41 P P 01 40 36.7 +1.0
BPAW Bear Paw Mtn. 46.97 36 IAmb IAmb 01 40 37.6
comp=Z,11nm,0.7s
SKT Skwentna 47.18 39 IAmb IAmb 01 40 39.7
comp=Z,7.0nm,0.7s
ARU Arti 47.27 313 P P 01 40 37.4 -0.4
comp=Z,3.8nm,0.3s,baz=69,slow=5.9,SNR=25
ARU Arti 47.27 313 eP P 01 40 37.5 -0.3
ARU Arti 47.27 313 P P 01 40 37.8 0.0
ARU IAmb IAmb 01 40 38.4
comp=Z,13nm,0.8s
ARU Arti 47.27 313d iP P 01 40 37.5 -0.3
ARU pmax pmax
comp=Z,10.0nm,0.6s
TRF Thorofare Moun 47.41 37 IAmb IAmb 01 40 47.2
comp=Z,16nm,1.2s
KDAK Kodiak Island 47.73 44 P P 01 40 41.7 +0.5
comp=Z,27nm,0.5s,baz=292,slow=3.0,SNR=46
KDAK Kodiak Island 47.73 44 P P 01 40 41.8 +0.6
MCK McKinley 47.93 36 IAmb IAmb 01 40 44.9
comp=Z,17nm,0.8s
MDM Murphy Dome 47.95 34 IAmb IAmb 01 40 45.0
comp=Z,20nm,0.8s
TCOL CIGO, UAF Yank 48.12 34 P P 01 40 45.4 +1.4
baz=284,SNR=10
COLA College 48.12 34 P P 01 40 44.8 +0.8
COLA College 48.12 34 P P 01 40 44.8 +0.8
COLA pmax pmax
comp=Z,43nm,0.8s
CCB Clear Creek Bu 48.20 35 IAmb IAmb 01 40 46.5
comp=Z,12nm,0.5s
POKR Poker Plat Res 48.24 34 P P 01 40 46.5 +1.5

baz=284,SNR=21
PMR Palmer 48.38 39 IAmb IAmb 01 40 47.4
comp=Z,17nm,1.0s
IL31 48.55 34 IAmb IAmb 01 40 49.5
comp=Z,18nm,0.5s
ILAR Eielson Array 48.55 34 P P 01 40 47.6 +0.4
comp=Z,13nm,0.5s,baz=289,slow=7.8,SNR=160
ILAR pP **pP 01 42 25.6 +1.5**
comp=Z,1.1nm,0.7s,baz=286,slow=7.2,SNR=3.8
ILAR S **S 01 47 10.8 +0.7**
comp=Z,0.3nm,0.9s,baz=276,slow=11,SNR=4.4
HDA Harding Lake 48.62 35 P P 01 40 48.0 +0.2
baz=285,SNR=27
SEW Seward 48.64 41 P P 01 40 48.7 +0.7
SEW IAmb IAmb 01 40 49.3
comp=Z,23nm,0.8s
KNK Knik Glacier 48.74 39 IAmb IAmb 01 40 50.5
comp=Z,23nm,0.7s
AB31 Akbulak array 48.79 304 iP P 01 40 48.1 -1.2
PRP Porcupine Dome 48.92 33 IAmb IAmb 01 40 52.6
comp=Z,28nm,0.9s
AKTO Aktyubinsk 49.52 306 P P 01 40 54.2 -0.5
comp=Z,4.5nm,0.5s,baz=76,slow=6.6,SNR=27
AKTO Aktyubinsk 49.52 306 iP P 01 40 52.2 -2.5
AKTO pmax pmax
comp=Z,6.0nm,0.6s
PAX Paxson 49.64 36 IAmb IAmb 01 40 56.8
comp=Z,6.3nm,0.4s
PSI Prapat 49.68 226 P P 01 40 56.8 +0.4
comp=Z,4.9nm,0.6s,baz=3.9,slow=5.0,SNR=4.1
RPSI Rantau Prapat 49.77 226 P P 01 40 56.8 -0.1
SCRK Sand Creek 49.98 35 P P 01 40 58.4 +0.4
SCRK IAmb IAmb 01 40 59.2
comp=Z,28nm,1.0s
DOT Dot Lake 50.05 35 IAmb IAmb 01 40 59.4
comp=Z,22nm,0.6s
GLB Gilahina Butte 50.86 38 IAmb IAmb 01 41 06.4
comp=Z,8.5nm,0.6s
EGAK Eagle 50.90 33 IAmb IAmb 01 41 06.2
comp=Z,22nm,0.7s
VRDI Verde Repeater 51.09 38 IAmb IAmb 01 41 08.1
comp=Z,17nm,0.5s
KIRV Kirov 51.27 318 P P 01 41 07.2 0.0
comp=Z,18nm,0.5s,baz=63,slow=6.9,SNR=14
KIRV Kirov 51.27 318 iP P 01 41 07.0 -0.3
CRQM Cirque 51.40 39 IAmb IAmb 01 41 10.7
comp=Z,24nm,0.7s
TGL Tana Glacier 51.54 39 IAmb IAmb 01 41 11.5
comp=Z,34nm,0.9s
BALM Baldy 51.66 38 P P 01 41 10.8 +0.4
BALM IAmb IAmb 01 41 12.4
comp=Z,13nm,0.7s
DAWY Dawson 51.86 34 IAmb IAmb 01 41 13.2
comp=Z,10.0nm,0.8s
PRGR Permogore 51.95 323 eP P 01 41 11.7 -0.5
PRGR pmax pmax
comp=Z,11nm,0.8s
BARN Barnard Glacie 51.97 38 P P 01 41 12.9 +0.3
BARN IAmb IAmb 01 41 14.8
comp=Z,28nm,0.6s
EPYK Eagle Plains 52.09 31 P P 01 41 14.2 +1.1
baz=291
CTGM Chitina Glacie 52.15 38 IAmb IAmb 01 41 16.1
comp=Z,29nm,0.7s
INK Inuvik 52.51 28 P P 01 41 17.0 +0.9
comp=Z,23nm,0.6s,baz=299,slow=7.2,SNR=137
INK Inuvik 52.51 28 IAmb IAmb 01 41 17.8
comp=Z,20nm,0.7s
INK Inuvik 52.51 28 P P 01 41 17.0 +0.9
SPA0 Spitsbergen Ar 53.35 347 eP P 01 41 22.1 +0.1
SPITS Spitsbergen Ar 53.35 347 P P 01 41 22.1 +0.1
comp=Z,1.7nm,0.3s,baz=115,slow=9.3,SNR=65
KBS Kingsbay 53.62 348 eP P 01 41 24.5 +0.7
HYT Haines Junctio 53.93 37 IAmb IAmb 01 41 29.4
comp=Z,22nm,0.9s
HSPB Hornsund (broa 54.17 346 eP P 01 41 28.4 +0.5
POO Poona 54.53 263 eP P 01 41 29.0 -2.3
NOR Nord 54.71 355⇑iP P 01 41 31.4 -0.2
comp=Z,14nm,0.6s
NOR Nord 54.71 355⇑iP P 01 41 31.4 -0.2
NOR pmax pmax
comp=Z,14nm,0.6s
GEYT Alibeck 54.95 292 P P 01 41 33.9 -0.1
comp=Z,25nm,0.9s,baz=101,slow=1.5,SNR=11
KLMR Klimovskoe 54.97 323 eP P 01 41 34.1 +0.5
KLMR pmax pmax
comp=Z,16nm,1.3s
KLMR Klimovskoe 54.97 323 eP P 01 41 34.2 +0.6
KLMR AMP 01 41 36.3
comp=Z,16nm,1.3s
C36M Paulatuk 55.14 25 P P 01 41 35.4 +0.8
baz=300
HAMF Hammerfest 55.88 338 eP P 01 41 38.9 -0.9
ARCES ARCESS Array B 55.94 336 P P 01 41 40.3 0.0
comp=Z,6.9nm,0.4s,baz=62,slow=8.2,SNR=106
ARE0 ARCESS Array S 55.94 336 eP P 01 41 40.4 +0.1
KTK1 Kautokeino 56.91 336 eP P 01 41 47.5 +0.6
PALK Pallekele 57.35 247⇑eP P 01 41 49.4 -1.5
PALK pmax pmax
comp=Z,34nm,1.3s
TRO Tromso 57.79 338 eP P 01 41 52.8 -0.1
VRH Novkhopyorsk 58.48 312 eP P 01 41 56.2 -1.7
VRH pmax pmax
comp=Z,10.0nm,0.6s
RES Resolute Bay 58.66 13 P P 01 41 59.0 +0.3
comp=Z,30nm,0.5s,baz=314,slow=6.5,SNR=146
OBN Obninsk 59.12 318 eP P 01 42 03.5 +1.3
OBN Obninsk 59.12 318deP P 01 42 03.1 +0.9
OBN i 01 42 42.2
OBN e*PP **pP 01 43 44.5 +0.1**
OBN *SP **sP 01 44 44.0 +4.2**
OBN pmax pmax
comp=Z,9.0nm,0.9s
DAG Danmarks Havn 59.24 352 iP P 01 42 02.0 -0.6
comp=Z,12nm,0.7s
DAG Danmarks Havn 59.24 352 iP P 01 42 02.0 -0.6
DAG pmax pmax
comp=Z,12nm,0.7s
PUL Pulkovo 59.48 325 eP P 01 42 05.4 +1.0
PUL Pulkovo 59.48 325⇓eP P 01 42 05.4 +1.0
PUL pmax pmax
comp=Z,57nm,0.5s
VSR Storozhevoye 59.84 313 eP P 01 42 05.7 -1.4
VSR pmax pmax
comp=Z,8.0nm,0.5s
STEI Steigen 59.91 337 eP P 01 42 07.2 0.0
TULEG Thule 60.14 6 IAmb IAmb 01 42 09.1
comp=Z,28nm,0.7s
FINES FINESS Array B 60.26 328 P P 01 42 09.5 -0.1
comp=Z,4.8nm,0.6s,baz=80,slow=6.3,SNR=39
FINES S **S 01 49 41.0 -2.5**
comp=Z,2.2nm,0.8s,baz=51,slow=15,SNR=5.4
FINES FINESS Array B 60.26 328 iP P 01 42 09.3 -0.3
FINES pmax pmax
comp=Z,5.0nm,0.5s
LOF Lofoten 60.26 338 eP P 01 42 08.7 -0.8
SEKA Sheki 60.46 300 P P 01 42 10.5 -0.9
LGD Lagodekhi 60.72 301 P P 01 42 13.3 +0.2
MNGR Mingechevir, A 60.76 300 P P 01 42 12.9 -0.4
LKRN Lenkeran, Azer 60.79 297 P P 01 42 13.3 -0.3
FITZ Fitzroy Crossi 60.94 187 P P 01 42 15.5 +0.9
comp=Z,3.8nm,0.6s,baz=7.3,slow=6.0,SNR=11
MOR8 Moi Rana 61.31 336 eP P 01 42 15.2 -1.4
GANJ Ganja 61.32 300 P P 01 42 16.6 -0.5
NCK Nalchik 61.46 304⇓eP P 01 42 17.7 -0.2
NCK pmax pmax
comp=Z,6.0nm,1.0s
GUDG Gudauri 61.48 303 P P 01 42 17.0 -1.3
VSU Vasula 61.74 325⇓eP P 01 42 21.3 +1.9
VSU pmax pmax
comp=Z,11nm,0.3s
KVAR Kislovodsk Arr 61.75 305 P P 01 42 20.2 +0.3
comp=Z,6.2nm,0.8s,baz=345,slow=12,SNR=9.5
KBZ Khabaz 61.75 305 P P 01 42 19.5 -0.3
comp=Z,3.2nm,0.7s,baz=27,slow=4.5,SNR=13
KBZ Khabaz 61.75 305 eP P 01 42 19.1 -0.7
KBZ Khabaz 61.75 305deP P 01 42 19.1 -0.7
KIV Kislovodsk 61.76 305 ⇑P P 01 42 20.1 +0.1
KIV Kislovodsk 61.76 305 eP P 01 42 19.6 -0.3
KIV Kislovodsk 61.76 305 P P 01 42 20.0 +0.1
KIV IAmb IAmb 01 42 22.8
comp=Z,21nm,1.0s
KIV Kislovodsk 61.76 305 eP P 01 42 19.6 -0.3
KIV pmax pmax
comp=Z,67nm,1.1s
NEY Neytrino 62.12 304⇑eP P 01 42 22.4 -0.1

NEY pmax pmax
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 62.25 29 P P 01 42 23.1 +0.4
comp=Z,12nm,0.6s,baz=310,slow=6.6,SNR=138
YKA PP PP 01 44 46.6 -0.8
comp=Z,0.6nm,0.7s,baz=310,slow=8.3,SNR=3.8
WB0 Warramunga Arr 62.33 178 P P 01 42 24.0 +0.2
WB0 IAmb IAmb 01 42 24.6
comp=Z,10nm,0.6s
WRAB Tennant Creek 62.50 178 eP P 01 42 25.0 +0.2
WRAB pmax pmax
comp=Z,7.0nm,0.7s
WRA Warramunga Arr 62.51 178 P P 01 42 25.2 +0.3
comp=Z,6.8nm,0.5s,baz=354,slow=7.1,SNR=14
WRA Warramunga Arr 62.51 178 iP P 01 42 25.0 +0.1
WRA pmax pmax
comp=Z,8.0nm,0.5s
WB2 Warramunga Arr 62.51 178 P P 01 42 24.5 -0.4
WB2 IAmb IAmb 01 42 26.1
comp=Z,8.0nm,0.7s
NAX Nakhchivan 62.66 299 P P 01 42 25.7 -0.2
AKH Akhalkalaki 62.68 302 P P 01 42 26.7 +0.6
BGD Bogdanovka 62.69 302 P P 01 42 27.0 +0.8
WSAR Wadi Sarin 62.79 277 P P 01 42 27.3 +0.4
comp=Z,3.2nm,0.5s,baz=132,slow=0.8,SNR=8.2
NSS Namsos 63.20 335 eP P 01 42 28.2 -0.6
CTA Charters Tower 63.95 165 P P 01 42 34.9 +0.8
comp=Z,4.1nm,0.9s,baz=343,slow=11,SNR=3.4
SUMG Summit 64.69 357 iP P 01 42 38.7 0.0
comp=Z,48nm,0.6s
SUMG Summit 64.69 357 P P 01 42 38.7 0.0
SUMG Summit 64.69 357 iP P 01 42 38.7 0.0
SUMG pmax pmax
comp=Z,48nm,0.6s
AKASG Malin Array Be 65.29 317 P P 01 42 41.6 -0.7
comp=Z,4.3nm,0.5s,baz=50,slow=6.7,SNR=25
AKBB Malin Array Si 65.29 317 P P 01 42 41.7 -0.6
AKBB IAmb IAmb 01 42 42.2
comp=Z,5.4nm,0.7s
AKBB Malin Array Si 65.29 317 deP P 01 42 41.5 -0.8
KIEV Kiev 65.31 317 P P 01 42 41.0 -1.4
NC405 NORSAR Array S 65.72 333 P P 01 42 45.0 +0.1
NC405 IAmb IAmb 01 42 45.0
comp=Z,12nm,0.5s
NB201 NORSAR Array S 65.91 333 P P 01 42 45.8 -0.2
NB201 IAmb IAmb 01 42 46.5
comp=Z,14nm,0.8s
DOMB Dombas 65.91 334 eP P 01 42 46.1 0.0
NB2 NORSAR Subarra 65.94 333 P P 01 42 45.7 -0.6
comp=Z,3.0nm,0.5s,baz=39,slow=6.5
NB2 NORSAR Subarra 65.94 333 P P 01 42 45.7 -0.6
baz=39,slow=6.5
NOA NORSAR Array B 65.94 333 P P 01 42 45.8 -0.4
comp=Z,0.4nm,0.3s,baz=29,slow=6.6,SNR=44
NOA PP PP 01 45 12.7 -6.6
comp=Z,0.4nm,0.6s,baz=40,slow=7.7,SNR=3.2
MOL Molde 65.99 335 eP P 01 42 46.8 +0.4
NC602 NORSAR Array S 66.05 332 eP P 01 42 46.2 -0.7
NORES NORESS Array B 66.05 332 P P 01 42 46.1 -0.8
NORES pmax pmax
comp=Z,2.0nm,0.3s
ASAR Alice Springs 66.20 178 P P 01 42 49.0 +0.7
comp=Z,3.6nm,0.5s,baz=359,slow=7.8,SNR=44
AKN Aaknes 66.45 335 eP P 01 42 49.8 +0.4
LLLB Lillooet 66.81 42 IAmb IAmb 01 42 53.9
comp=Z,12nm,0.9s
KLNR Kaliningrad 66.99 324 deP P 01 42 53.2 +0.4
KLNR pmax pmax
comp=Z,108nm,1.9s
SKAR Skarslia 67.17 334 eP P 01 42 54.2 +0.3
SORM Soroca 67.34 315 ⇑P P 01 42 54.3 -0.8
KVT Kavak 67.42 306 P P 01 42 58.7 +2.9
DIKM Dikmen 67.54 306 ⇓P P 01 42 56.9 +0.4
SUE Sulen 68.00 335 eP P 01 42 59.3 +0.5
B05A Bryant 68.22 44 P P 01 43 01.9 +1.4
baz=310
ODD1 Odda 68.30 334 eP P 01 43 00.8 +0.1
ASK Askoy 68.31 335 eP P 01 43 01.2 +0.5
BER Bergen 68.35 335 eP P 01 43 01.3 +0.3
LEOM Leova 68.46 314 ⇓P P 01 43 02.1 +0.2
BLS5 Blasjo 68.73 334 eP P 01 43 03.9 +0.5
BSD Bornholm Skovb 68.84 327 iP P 01 43 03.7 -0.3
BSD Bornholm Skovb 68.84 327 iP P 01 43 03.8 -0.3
BSD Bornholm Skovb 68.84 327 iP P 01 43 03.7 -0.3
C06D Leavenworth 69.05 44 P P 01 43 06.6 +1.1
baz=311
GIRR Girov 69.06 315 ⇑P P 01 43 05.7 +0.1
GHRR 69.17 314 ⇑P P 01 43 06.9 +0.7
TESR Tescani 69.27 315 ⇓P P 01 43 06.7 -0.2
BURAR Bucovina Array 69.29 316 ⇑P P 01 43 07.2 +0.1
CFR Carcaliu 69.35 313 ⇑P P 01 43 08.0 +0.7
VRI Vrincioaia 69.65 314 ⇑P P 01 43 09.4 +0.3
BR131 Keskin Array S 69.70 306 deP P 01 43 09.0 -0.7
BRTR Keskin Array B 69.70 306 P P 01 43 09.3 -0.4
comp=Z,2.3nm,0.7s,baz=58,slow=4.6,SNR=14
BRTR Keskin Array B 69.70 306 iP P 01 43 09.1 -0.7
BRTR pmax pmax
comp=Z,2.0nm,0.7s
PLOR Plostina 69.70 314 ⇑P P 01 43 09.7 +0.1
KOLS Kolonicke sedl 69.87 319 eP P 01 43 10.4 0.0
KOLS Kolonicke sedl 69.87 319 eP P 01 43 10.4 0.0
OZUR 70.00 315 ⇑P P 01 43 11.6 +0.3
BMR Baia Mare 70.12 317 ⇑P P 01 43 13.0 +1.1
OJC Ojcow 70.17 321 IAmb IAmb 01 43 16.1
comp=Z,6.9nm,0.5s
OJC Ojcow 70.17 321 P P 01 43 13.8 +1.7
TRPA Tarpa 70.28 318 ⇑P P 01 43 13.6 +0.7
DOPR Dopca 70.29 315 ⇑P P 01 43 13.2 +0.3
MLR Muntele Rosu 70.31 314 ⇑P P 01 43 13.9 +0.6
C09A Chrisman Ranch 70.45 42 IAmb IAmb 01 43 16.0
comp=Z,21nm,0.8s
E07A Sunnyside 70.49 44 IAmb IAmb 01 43 16.6
comp=Z,9.3nm,0.8s
D08A Wollman Farm, 70.62 43 IAmb IAmb 01 43 17.0
comp=Z,8.2nm,0.9s
NEW Newport 70.70 41 P P 01 43 16.4 +1.0
comp=Z,5.9nm,0.7s,baz=323,slow=4.8,SNR=14
NEW Newport 70.70 41 IAmb IAmb 01 43 17.4
comp=Z,6.6nm,0.7s
NEW Newport 70.70 41 P P 01 43 16.5 +1.1
baz=313,SNR=5.7
HAWA Hanford 70.76 44 IAmb IAmb 01 43 18.1
comp=Z,10nm,0.8s
VOIR 70.82 315 ⇑P P 01 43 16.5 +0.3
LANS Liptovska Anna 71.06 320 eP P 01 43 17.2 -0.3
LANS Liptovska Anna 71.06 320 eP P 01 43 17.2 -0.3
ARR Arges 71.08 315 ⇑P P 01 43 18.2 +0.5
I05D Terrebonne, OR 71.19 47 P P 01 43 19.8 +1.4
baz=312
J04D Umpqua Nationa 71.51 48 P P 01 43 22.2 +1.8
baz=312
MORC Moravsky Berou 71.52 322 ⇑P P 01 43 20.5 +0.3
KRLC Kraliky 71.65 322 eP P 01 43 21.5 +0.6
KRLC ex x 01 43 24.5
KRLC Kraliky 71.65 322 eP P 01 43 21.5 +0.6
WALA Waterton Lakes 71.67 39 IAmb IAmb 01 43 22.9
comp=Z,8.9nm,0.7s
FCC Fort Churchill 71.73 23 IAmb IAmb 01 43 22.4
comp=Z,19nm,0.9s
PINE Pine Mountain 71.77 47 IAmb IAmb 01 43 24.7
comp=Z,13nm,0.7s
VYHS Vyhne 71.82 320 eP P 01 43 22.4 +0.5
VYHS Vyhne 71.82 320 eP P 01 43 22.4 +0.5
DZM Mont Dzumac 71.90 147 P P 01 43 24.7 +2.0
comp=Z,3.1nm,0.8s,baz=349,slow=5.2,SNR=4.1
J05D Fort Rock, OR 71.95 47 P P 01 43 24.6 +1.7
baz=312
GZR Gura Zlata 72.03 316 ⇑P P 01 43 23.6 +0.3
GZR Gura Zlata 72.03 316 P P 01 43 26.6 +3.3
ELND Elena 72.06 312 ⇑P P 01 43 23.3 -0.1
RAYN Ar Rayn 72.07 286 P P 01 43 23.1 -0.7
RAYN Ar Rayn 72.07 286 P P 01 43 23.1 -0.7
RAYN pmax pmax
comp=Z,5.0nm,0.7s
L04D Klamath Falls 72.08 49 P P 01 43 25.4 +1.7
baz=312
M02C Callahan 72.33 50 P P 01 43 26.9 +1.8
baz=312
FFC Flin Flon 72.41 30 P P 01 43 25.6 +0.4
FFC IAmb IAmb 01 43 26.5
comp=Z,13nm,0.9s
FFC Flin Flon 72.41 30 P P 01 43 25.6 +0.4
FFC pmax pmax
comp=Z,13nm,1.0s
PLVB Pleven 72.43 313 ⇑P P 01 43 25.6 +0.1
ASF Jabal al Asfar 72.45 298 P P 01 43 25.7 -0.3
comp=Z,2.2nm,0.8s,baz=42,slow=6.6,SNR=6.6
BZS Buzias 72.47 316 ⇑P P 01 43 25.6 -0.1
M04C Macdoel 72.63 49 P P 01 43 28.7 +1.7
baz=312
N02D Trinity Center 72.69 50 P P 01 43 29.0 +1.8
baz=312
MMAI Mount Meron Ar 72.88 299 P P 01 43 28.3 -0.1
comp=Z,2.2nm,0.7s,baz=47,slow=5.1,SNR=7.2
CSS Mathiatis 72.94 302 IAmb IAmb 01 43 32.6
comp=Z,7.8nm,0.7s
O02D Mt. Diablo Mer 73.17 51 P P 01 43 31.6 +1.6
baz=312
MSO Missoula 73.24 41 P P 01 43 31.7 +1.4
baz=316,SNR=6.6
J08A Circle Bar Ran 73.38 46 IAmb IAmb 01 43 33.9
comp=Z,15nm,1.1s
CONA Conrad Observa 73.62 321 iP P 01 43 33.5 +1.1
comp=Z,1.5nm,0.6s
O03E Paynes Creek 73.65 50 P P 01 43 33.8 +1.0
baz=313
VTS Vitosha 73.69 313 ⇑P P 01 43 33.5 +0.5
VTS Vitosha 73.69 313 IAmb IAmb 01 43 34.1
comp=Z,6.9nm,0.7s
VTS Vitosha 73.69 313 P P 01 43 34.3 +1.3
VTS pmax pmax
comp=Z,9.0nm,0.8s
KHC Kasperske Hory 73.77 323 eP P 01 43 36.9 +3.8
KHC Kasperske Hory 73.77 323 eP P 01 43 36.9 +3.8
ELL Elmali 73.86 305 IAmb IAmb 01 43 44.1
comp=Z,25nm,1.2s
ELL Elmali 73.86 305 P P 01 43 36.0 +2.0
GERES GERESS Array B 73.92 323 P P 01 43 34.3 +0.1
comp=Z,0.5nm,0.5s,baz=36,slow=5.2,SNR=6.0
EGMT Eagleton 74.33 38 P P 01 43 37.4 +0.9
baz=318
MFID Camas Ranch 74.72 44 IAmb IAmb 01 43 41.2
comp=Z,12nm,0.8s
STKA Stephens Creek 74.86 172 P P 01 43 40.6 +1.3
comp=Z,3.2nm,0.4s,baz=1.1,slow=5.4,SNR=14
SOKA Soboth 74.92 321 eP P 01 43 40.6 +0.8
comp=Z,1.8nm,0.5s
EKA Eskdalemuir Ar 75.10 335 P P 01 43 40.3 -0.2
EIL Elat 75.34 297 P P 01 43 41.8 -0.6
comp=Z,4.3nm,0.8s,baz=342,slow=9.6,SNR=4.2
PNTR Pine Nut 75.72 50 IAmb IAmb 01 43 47.0
comp=Z,9.8nm,0.8s
RETA Reutte 76.24 323 iP P 01 43 47.7 +0.7
comp=Z,0.8nm,0.4s
DGMT Dagmar 76.42 35 IAmb IAmb 01 43 49.2
comp=Z,16nm,0.5s
DGMT Dagmar 76.42 35 P P 01 43 48.8 +0.8
baz=321
H17A Grant Village 76.63 41 IAmb IAmb 01 43 53.5
comp=Z,11nm,0.8s
H17A Grant Village 76.63 41 P P 01 43 52.7 +3.1
baz=318,SNR=12
RLMT Red Lodge 76.71 40 P P 01 43 51.7 +1.8
baz=318
NVAR Mina Array Bea 76.90 49 P P 01 43 52.4 +1.3
comp=Z,6.2nm,0.7s,baz=295,slow=5.1,SNR=31
ELK Elko 76.93 46 P P 01 43 51.3 +0.1
ELK Elko 76.93 46 P P 01 43 51.3 +0.1
ELK pmax pmax
comp=Z,2.0nm,0.6s
ULM Lac du Bonnet 78.23 29 P P 01 43 57.9 +1.0
comp=Z,9.2nm,0.6s,baz=324,slow=6.5,SNR=28
ULM Lac du Bonnet 78.23 29 IAmb IAmb 01 43 58.5
comp=Z,10nm,0.7s
ULM Lac du Bonnet 78.23 29 ⇑eP P 01 43 57.4 -0.3
BW06 Boulder Array 78.34 41 P P 01 43 59.5 +0.7
baz=319
PDAR Pinedale Array 78.34 41 P P 01 43 59.5 +0.7
comp=Z,4.6nm,0.8s,baz=50,slow=1.3,SNR=41
PDAR pP pP 01 45 50.3 +1.4
comp=Z,1.3nm,0.7s,baz=2.0,slow=1.5,SNR=7.4
R11A Troy Canyon, C 78.46 48 P P 01 44 00.8 +1.3
baz=316
DUG Dugway, Tooele 78.60 45 P P 01 44 00.3 +0.2
DUG Dugway, Tooele 78.60 45 P P 01 44 00.3 +0.2
DUG pmax pmax
comp=Z,3.0nm,0.7s
DUG Dugway, Tooele 78.60 45 P P 01 44 01.4 +1.3
baz=317
MDND Maddock 78.79 33 P P 01 44 01.8 +1.0
baz=324
MPMC Manual Prospec 79.04 51 P P 01 44 04.0 +1.4
baz=316
TPNV Topopah Spring 79.10 49 P P 01 44 04.5 +1.6
baz=316
AGMN Agassiz Nation 79.85 30 P P 01 44 06.7 +0.3
baz=326
RSSD Black Hills 79.88 37 P P 01 44 07.5 +0.6
RSSD Black Hills 79.88 37 P P 01 44 07.5 +0.6
RSSD pmax pmax
comp=Z,7.0nm,0.8s
RSSD Black Hills 79.88 37 P P 01 44 07.9 +1.0
baz=322
GSC Goldstone, Bar 79.96 51 P P 01 44 08.8 +1.4
baz=316
SHPR Sheep Range 80.03 49 P P 01 44 07.5 -0.2
TUQ Turquoise Moun 80.37 50 P P 01 44 11.1 +1.5
baz=316
HEC Hector,Ludlow 80.57 51 P P 01 44 12.1 +1.6
baz=316
SCI2 San Clemente I 80.61 54 P P 01 44 11.1 +0.5
baz=315
O20A White River Ci 80.97 42 P P 01 44 13.6 +0.9
baz=320
GMRC Granite Mounta 80.99 51 P P 01 44 14.2 +1.5
baz=316
SCHQ Schefferville 81.35 11 P P 01 44 14.3 +0.2
comp=Z,3.3nm,0.5s,baz=8.8,slow=4.5,SNR=19
SCHQ Schefferville 81.35 11 IAmb IAmb 01 44 15.3
comp=Z,10.0nm,1.1s
BELC Belle Mtn. Jos 81.36 51 P P 01 44 15.9 +1.2
baz=316
PFO Pinyon Flats O 81.38 52 P P 01 44 15.6 +0.9
comp=Z,3.3nm,0.8s,baz=323,slow=5.1,SNR=5.1
PFO Pinyon Flats O 81.38 52 P P 01 44 14.7 0.0
PFO Pinyon Flats O 81.38 52 ⇓eP P 01 44 15.2 +0.4
PFO pmax pmax
comp=Z,6.0nm,0.9s
PFO Pinyon Flats O 81.38 52 P P 01 44 16.0 +1.2
baz=316
TPFO Pinon Flats 81.38 52 P P 01 44 15.8 +1.0
baz=316
N23A Red Feather La 81.51 41 P P 01 44 16.6 +1.1
baz=321
U15A North Rim 81.65 47 IAmb IAmb 01 44 19.2
comp=Z,8.5nm,0.8s
EYMN Ely 81.72 28 P P 01 44 16.1 +0.1
EYMN IAmb IAmb 01 44 16.7
comp=Z,11nm,1.1s
EYMN Ely 81.72 28 P P 01 44 16.2 +0.1
baz=329
IRM Iron Mountain 81.73 51 P P 01 44 17.9 +1.5
baz=317
BC3 Big Chuckawall 81.92 51 P P 01 44 19.0 +1.5
baz=317
PDMCI Parker Dam,Lak 82.20 50 P P 01 44 20.3 +1.5
baz=317
IKP In-Ko-Pah, Jac 82.27 52 P P 01 44 21.0 +1.7
baz=317
Y12C Blythe 82.38 51 IAmb IAmb 01 44 21.8
comp=Z,5.7nm,0.7s
Y12C Blythe 82.38 51 P P 01 44 21.4 +1.6
baz=317
ISCO Idaho Springs 82.52 41 P P 01 44 21.8 +1.1
baz=321
GLA Glamis 82.72 51 P P 01 44 22.5 +1.0
baz=317
E38A The Farm, Brul 82.85 29 IAmb IAmb 01 44 22.6
comp=Z,9.6nm,0.8s
OGNE Ogallala 83.30 38 P P 01 44 25.0 +0.7
baz=323
ECSD EROS Data Cent 83.36 33 IAmb IAmb 01 44 25.6
comp=Z,9.9nm,0.6s
ECSD EROS Data Cent 83.36 33 P P 01 44 24.8 +0.3
baz=326,SNR=13
S22A 4UR Ranch, Cre 83.51 43 P P 01 44 26.6 +0.9
baz=321
SPMN Marine on St. 83.58 30 IAmb IAmb 01 44 26.9
comp=Z,8.0nm,0.6s
SPMN Marine on St. 83.58 30 P P 01 44 25.6 +0.1
baz=329
X16A Lo Mia Camp, P 83.61 48 P P 01 44 25.9 -0.2
X16A pP 01 46 18.6 +0.5
MATQ Matagami 84.14 19 P P 01 44 28.1 -0.2
baz=338
SDCO Great Sand Dun 84.17 42 P P 01 44 29.9 +0.9
baz=322
G40A Rib Lake 84.48 29 IAmb IAmb 01 44 31.2
comp=Z,13nm,0.6s
E43A Lone Tree Farm 84.59 26 IAmb IAmb 01 44 30.9
comp=Z,5.3nm,0.7s
BGNE Belgrade 84.64 36 P P 01 44 31.4 +0.5
baz=326
214A Organ Pipe Nat 84.68 51 P P 01 44 31.6 +0.4
baz=318
E44A Grand Marais A 84.72 25 P P 01 44 31.2 +0.1
baz=333
LSQQ Lebel-sur-Quev 84.95 19 P P 01 44 31.9 -0.3
baz=339
D46A Sault St. Mari 85.05 24 P P 01 44 32.4 -0.3
baz=334,SNR=6.9
D47A Chapleau 85.18 23 P P 01 44 33.1 -0.3
baz=335
T25A Trinidad 85.19 42 P P 01 44 34.3 +0.4
baz=322
D48A Paudash Townsh 85.44 23 P P 01 44 34.1 -0.5
baz=336
D49A Beulah Townshi 85.48 22 P P 01 44 35.0 +0.2
baz=336
E47A Iron Bridge 85.67 24 P P 01 44 35.7 0.0
baz=335
F45A CMU Biological 85.68 25 P P 01 44 35.9 +0.1
baz=333
VLDQ Val d'Or 85.72 19 IAmb IAmb 01 44 36.1
comp=Z,16nm,1.0s
E48A Lockeyer 85.97 23 P P 01 44 37.0 -0.2
baz=336
D50A G1974 Best Tow 85.99 21 P P 01 44 36.9 -0.3
baz=337
CBKS Cedar Bluff 86.06 38 P P 01 44 38.0 +0.2
baz=325
I42A Draeger Farm, 86.13 28 IAmb IAmb 01 44 39.6
comp=Z,8.1nm,0.7s
D51A Lot 18 Range I 86.18 21 P P 01 44 37.9 -0.3
baz=337
G45A Suttons Bay 86.21 26 P P 01 44 38.4 +0.1
baz=333
G46A Petoskey 86.21 25 P P 01 44 38.2 -0.1
baz=334
F48A Evansville 86.43 24 P P 01 44 39.3 0.0
baz=335
D53A Lac Vacive, Po 86.62 20 P P 01 44 40.4 +0.1
baz=338,SNR=6.8
G47A Hillman 86.65 25 P P 01 44 40.6 +0.2
baz=334
F49A Sandfield 86.66 23 P P 01 44 40.4 -0.1
baz=336,SNR=6.6
E51A G1948 Merrick 86.66 21 P P 01 44 40.0 -0.4
baz=337
D54A Lac Fusel, La 86.81 19 P P 01 44 40.7 -0.5
baz=339
L40A Anamosa 86.88 31 IAmb IAmb 01 44 42.7
comp=Z,12nm,0.8s
F51A Arnstein 87.11 22 P P 01 44 42.4 -0.2
baz=337
E52A Mattawa 87.11 21 P P 01 44 42.1 -0.4
baz=338
KSU1 Kansas State U 87.21 36 P P 01 44 43.6 +0.5
baz=326
D55A Sainte-Anne-du 87.22 19 P P 01 44 43.1 +0.1
baz=340
H48A Harrisville 87.24 25 P P 01 44 43.7 +0.5
baz=335,SNR=5.9
I46A Reed City 87.25 26 P P 01 44 43.7 +0.4
baz=333
E53A Dumoine, Ponti 87.28 20 P P 01 44 43.3 -0.1
baz=339
E54A Lac Daplat, Po 87.35 20 P P 01 44 43.6 -0.1
baz=339
D56A ZEC Mazanza, M 87.36 18 P P 01 44 44.0 +0.3
baz=341,SNR=6.3
F52A Sundridge 87.39 21 P P 01 44 43.7 -0.2
baz=337
ALGO Algonquin Park 87.58 21 P P 01 44 45.0 +0.3
baz=338
D57A Chemin Vers le 87.58 18 P P 01 44 44.7 -0.1
baz=341
I48A Sherman Twp 87.59 25 P P 01 44 45.7 +0.9
baz=334
E55A Montcerf-Lytto 87.61 19 P P 01 44 45.3 +0.4
baz=340
D58A Chemin du LacG 87.73 17 P P 01 44 45.4 0.0
baz=342
E56A St. Veronique 87.77 18 P P 01 44 46.0 +0.4
baz=340
L44A Lake County Fo 87.98 29 P P 01 44 47.4 +0.7
baz=332
I49A Point Hope 88.08 25 P P 01 44 47.7 +0.6
baz=335
J47A Sunmer 88.09 26 P P 01 44 47.8 +0.7
baz=334
E57A Chemin Saint G 88.10 18 P P 01 44 47.8 +0.6
baz=341
G53A Haliburton 88.20 21 P P 01 44 47.7 0.0
baz=338
K46A Dorr 88.26 27 P P 01 44 48.4 +0.4
baz=333
H52A Wyevale 88.30 22 P P 01 44 47.7 -0.4
baz=337
D60A Saint Jean D'O 88.30 16 P P 01 44 48.2 +0.2
baz=343
E58A La Victoria 88.33 17 P P 01 44 48.1 -0.1
baz=342
J48A Bridge Port 88.36 25 P P 01 44 49.1 +0.7
baz=334
D62A Allapoint, All 88.50 14 P P 01 44 49.7 +0.8
baz=345
K48A Perry 88.70 26 P P 01 44 51.0 +0.9
baz=334
E60A Ste Agathe de 88.72 16 P P 01 44 50.4 +0.4
baz=343
H53A Bobcaygeon 88.72 21 P P 01 44 50.5 +0.4
baz=338
I51A Listowel 88.74 23 P P 01 44 50.9 +0.6
baz=336
ESDC Sonseca Array 88.77 328 P P 01 44 50.4 -0.1
comp=Z,0.4nm,0.7s,baz=23,slow=4.6,SNR=3.1
F59A Saint Guilaume 88.93 17 P P 01 44 51.7 +0.7
baz=342
MNTX Cornudas Mount 88.96 46 P P 01 44 52.5 +1.0
baz=322
L47A Sherwood 89.09 27 P P 01 44 52.6 +0.7
baz=334,SNR=5.8
G58A Ormstown 89.31 18 P P 01 44 53.1 +0.3
baz=341
L48A N Adams 89.37 26 P P 01 44 54.3 +1.1
baz=334
J52A Paris 89.42 23 P P 01 44 54.5 +1.1
baz=337
L49A Milan 89.44 26 P P 01 44 54.4 +0.9
baz=334
M47A Cromwell 89.50 27 P P 01 44 54.6 +0.8
baz=333
L50A Kingsville 89.81 25 P P 01 44 55.1 -0.1
baz=335
WMOK Wichita Mounta 89.83 40 P P 01 44 56.1 +0.6
baz=325
SFIN Lafayette 89.86 29 P P 01 44 56.2 +0.8
baz=332
H59A Cadyville 89.87 18 P P 01 44 55.2 -0.2
baz=341
N47A Urbana 89.90 28 P P 01 44 56.2 +0.5
baz=333
M49A Liberty Center 89.95 26 P P 01 44 56.5 +0.7
baz=334
H58A Gabriels 89.97 19 P P 01 44 57.0 +1.0
baz=341
N48A Decatur 90.15 27 P P 01 44 57.6 +0.8
baz=334
TUL1 Leonard 90.22 37 P P 01 44 58.4 +1.2
baz=327
M50A Fremont 90.31 26 P P 01 44 58.8 +1.2
baz=335
CCM Cathedral Cave 90.32 33 P P 01 45 00.0 +2.4
CCM pmax pmax
comp=Z,10.0nm,1.2s
CCM Cathedral Cave 90.32 33 P P 01 44 58.7 +1.0
baz=330
H61A Lyndonville 90.37 17 P P 01 44 58.6 +0.8

baz=343
N49A Columbus Grove 90.38 27 P P 01 44 59.0 +1.1
baz=334
H62A Milan 90.49 16 P P 01 44 59.2 +0.9
baz=343
K54A Basiliko Farm, 90.51 22 P P 01 44 58.8 +0.3
baz=338
K55A Perry 90.57 22 P P 01 44 59.1 +0.3
baz=338
J59A Piesco 90.80 19 P P 01 45 00.1 +0.3
baz=341
N50A Nevada 90.85 26 P P 01 45 00.8 +0.7
baz=335
O49A Covington 90.98 27 P P 01 45 01.8 +1.1
baz=334
M53A WI Miller and 91.01 24 P P 01 45 01.8 +1.1
baz=337
I63A Otisfield 91.11 16 P P 01 45 02.3 +1.2
baz=344
U40A Yellville 91.12 35 P P 01 45 02.4 +1.0
baz=329
M54A Oil Creek Stat 91.25 23 P P 01 45 02.4 +0.6
baz=337
O50A Cable 91.26 27 P P 01 45 03.0 +1.1
baz=335
P48A Milroy 91.26 28 P P 01 45 03.2 +1.2
baz=333
ACSO Alum Creek Sta 91.39 26 P P 01 45 03.3 +0.7
baz=335
P49A Miami Univ. Ec 91.44 28 P P 01 45 03.5 +0.7
baz=334
N53A Lisbon 91.54 24 P P 01 45 04.2 +0.9
baz=336
M55A Ridgway 91.54 23 P P 01 45 03.9 +0.7
baz=338
Q48A North Vernon 91.63 29 P P 01 45 04.5 +0.9
baz=333
N54A Moraine State 91.65 24 P P 01 45 04.8 +1.0
baz=337
P50A Jamestown 91.68 27 P P 01 45 05.1 +1.2
baz=334
TXAR Lajitas Array 91.72 46 P P 01 45 05.6 +1.2
comp=Z,1.0nm,0.7s,baz=276,slow=2.8,SNR=12
TXAR pP pP 01 46 59.9 +1.4
comp=Z,0.9nm,1.0s,baz=286,slow=4.7,SNR=5.3
O52A Adamsville 91.86 25 P P 01 45 05.5 +0.8
baz=336
L59A Walton 91.86 20 P P 01 45 05.0 +0.3
baz=340
WCI Wyandotte Cave 92.05 29 P P 01 45 06.2 +0.6
baz=333
LCAR Lake Charles 92.07 34 IAmb IAmb 01 45 07.7
comp=Z,6.0nm,0.8s
N55A Marion Center 92.11 23 P P 01 45 06.3 +0.4
baz=338
M57A Sunshine Farm, 92.12 22 P P 01 45 06.7 +0.8
baz=339
MIAR Mount Ida 92.35 36 P P 01 45 08.5 +1.5
baz=328
Q51A Peebles 92.36 27 P P 01 45 08.3 +1.3
baz=335
W41B Gary Mavity, V 92.38 35 P P 01 45 08.3 +1.2
baz=329
X40A Basin Creek Fa 92.72 36 P P 01 45 09.8 +1.0
baz=329
U49A Red Boiling Sp 93.76 30 P P 01 45 14.4 +0.9
baz=333
W49A Belvidere 94.82 31 P P 01 45 19.0 +0.7
baz=333
V52A Sevierville 95.14 28 P P 01 45 19.8 0.0
baz=334
U60A Pendleton 96.64 23 P P 01 45 27.0 +0.6
baz=339
W57A Gilead 96.99 26 P P 01 45 28.0 0.0
baz=337
TORD Torodi Ar. Bea 108.19 309 PP PP 01 50 35.7 -19
comp=Z,0.4nm,0.7s,baz=33,slow=5.7,SNR=3.1
SAML Samuel 143.64 26 PKPab 01 51 26.4 -0.5
SAML Samuel 143.64 26 PKIKP PKPab 01 51 26.4 -0.5
SNAA Sanae 143.84 202 PKPab 01 51 26.4 +0.1
SNAA Sanae 143.84 202 PKIKP PKPab 01 51 26.4 +0.2
LPAZ La Paz 148.34 39 PKPbc PKPbc 01 51 41.4 +0.3
comp=Z,1.6nm,0.5s,baz=355,slow=2.7,SNR=7.6
LPAZ La Paz 148.34 39 PKPbc 01 51 39.4 -1.6

IDC 20 01:38:16.8±2.2, 35.66N×66.47E, h0km, mb3.6/3, mb1 3.8/10, mb1mx3.5/65, mbtmp3.8/10, ML3.6/6, Error ellipse: s-maj=46.5km s-min=17.5km az=149.0
ISC 20 01:38:23.3±1.8, 36.0N±0.2×66.28E±0.10, h35km, n10, σ0.64/12, Hindu Kush region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GEYT Alibeck 6.80 289 Pn Pn 01 40 00.3 -0.4
1.2nm,0.3s,baz=123,slow=11,SNR=14
GEYT Sn Sn 01 41 16.6 -0.2
1.6nm,0.3s,baz=120,slow=8.5,SNR=4.5
AAK Ala-Archa 9.16 41 Pn Pn 01 40 32.8 -0.3
2.4nm,0.3s,baz=188,slow=5.8,SNR=5.4
AAK Sn Sn 01 42 15.5 +0.4
0.5nm,0.3s,baz=343,slow=14,SNR=3.7
AKTO Aktyubinsk 15.59 340 Pn Pn 01 42 00.5 +0.2
0.3nm,0.3s,baz=162,slow=9.6,SNR=1.8
MKAR Makanchi Array 16.09 43 Pn Pn 01 42 05.5 -1.3
0.1nm,0.3s,baz=239,slow=12,SNR=2.2
KURBB Kurchatov Arra 17.06 27 P P 01 42 20.0 -0.4
0.0nm,0.3s,baz=217,slow=11,SNR=3.6
BVAR Borovoye Array 17.24 8 P P 01 42 22.3 -0.1
0.4nm,0.3s,baz=180,slow=14,SNR=3.7
GNI Garni 17.43 290 P P 01 42 25.6 +0.7
0.5nm,0.3s,baz=73,slow=17,SNR=4.7
ZALV Zalesovo Beam 22.08 30 P P 01 43 16.0 +0.8
4.2nm,0.6s,baz=229,slow=11,SNR=9.6
TORD Torodi Ar. Bea 61.88 266 P P 01 48 39.5 0.0
0.5nm,0.9s,baz=53,slow=5.3,SNR=2.5
YKA Yellowknife Ar 81.81 0 P P 01 50 38.6 +0.3
0.2nm,0.7s,baz=352,slow=3.7,SNR=3.2

ATH 20 01:54:34.5, 38.22N×20.42E, h16km±1km, ML2.6/10, Error ellipse: s-maj=1.8km s-min=0.9km az=250.0
THE 20 01:54:35.1, 38.22N×20.46E, h15km, ML2.4/5, Error ellipse: s-maj=0.7km s-min=0.3km az=249.0
ISC 20 01:54:35.0±0.9, 38.22N±0.03×20.46E±0.04, h15km±5km, n38, σ0.38/64, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LXRA Lixouri, Kepha 0.02 228 P Pg 01 54 37.7 +0.1
LXRA S Sg 01 54 39.5 +0.2
ARGA Argostoli. Kep 0.04 160 P Pg 01 54 37.6 0.0
ARGA S Sg 01 54 39.3 -0.3
ARG2 Argostoli 0.04 150 P Pg 01 54 37.6 0.0
ARG2 S Sg 01 54 39.5 +0.1
KEF4 Livadi, Kephal 0.05 326 P Pg 01 54 37.7 0.0
KEF4 S Sg 01 54 39.6 +0.1
KEF2 Argostoli. Kep 0.06 158 P Pg 01 54 37.7 0.0
KEF2 S Sg 01 54 39.4 -0.2
KEF1 Kardakata, Kep 0.06 8 P Pg 01 54 37.7 -0.1
KEF1 S Sg 01 54 39.3 -0.3
CHV1 Chavriata, Kef 0.07 242 P Pg 01 54 37.9 0.0
CHV1 S Sg 01 54 40.5 +0.7
KEF3 Kipouria, Keph 0.09 261 P Pg 01 54 38.0 -0.1
KEF3 S Sg 01 54 40.2 -0.1
VLS Valsamata 0.11 111 P Pg 01 54 38.2 -0.1
VLS S Sg 01 54 40.7 +0.2
VLS Valsamata 0.11 111 P Pg 01 54 38.2 -0.1
VLS S Sg 01 54 40.6 0.0
VLS AML AML 01 54 40.9
comp=E,84895µm,0.1s
VLS AML AML 01 54 41.0
comp=N,59316µm,0.1s
KONA Konidatara, Ke 0.23 23 P Pg 01 54 39.9 -0.1
FSK Fiskardo 0.26 18 P Pg 01 54 40.4 -0.1
FSK S Sg 01 54 44.5 +0.2
comp=N,4µm,0.1s
FSK Fiskardo 0.26 18 P Pg 01 54 40.3 -0.1
FSK S Sg 01 54 44.4 +0.2
FSK AML AML 01 54 45.0
comp=E,10112µm,0.2s
FSK AML AML 01 54 45.5
comp=N,4547µm,0.2s
VLMS Volimes, Zakyn 0.38 155 P Pg 01 54 42.5 0.0
VLMS S Sb 01 54 48.8 -0.2
VLMS AML AML 01 54 49.7
comp=E,4857µm,0.1s
VLMS AML AML 01 54 50.0
comp=N,4285µm,0.1s
MGNA Meganis 0.51 31 P Pg 01 54 44.7 -0.4
MGNA AML AML 01 54 53.0
comp=E,1320µm,0.2s
MGNA AML AML 01 54 53.3
comp=N,1050µm,0.1s
AST1 Astakos 0.59 57 P Pg 01 54 46.5 -0.1
LKD2 Lefkada island 0.59 15 P Pg 01 54 46.4 -0.2
LKD2 S Sb 01 54 55.4 +0.1
LKD2 Lefkada island 0.59 15 P Pg 01 54 46.1 -0.5
LKD2 AML AML 01 55 02.7
comp=E,636µm,0.2s
LKD2 AML AML 01 55 03.0
comp=N,606µm,0.3s
VTN Vitineika 0.65 117 P Pg 01 54 47.5 -0.1
VTN S Sb 01 54 57.2 +0.4
VTN Vitineika 0.65 117 P Pg 01 54 47.7 +0.1
VTN S Sb 01 54 57.4 +0.6
PDO Prodromos 0.68 56 P Pg 01 54 48.2 -0.1
PDO S Sb 01 54 58.6 +0.7
comp=N,670nm,0.6s
PDO Prodromos 0.68 56 P Pg 01 54 47.8 -0.5
PDO S Sb 01 54 58.8 +0.9
PDO AML AML 01 55 04.3
comp=N,1002µm,0.3s
PDO AML AML 01 55 04.3
comp=E,857µm,0.4s
AXS Araxos 0.72 91 P Pg 01 54 48.6 -0.4
AXS S Sb 01 54 59.4 +0.4
comp=E,158nm,0.4s
AXS Araxos 0.72 91 P Pg 01 54 48.5 -0.4
RLS Riolos of Patr 0.81 101 P Pb 01 54 50.0 -0.7
RLS Riolos of Patr 0.81 101 P Pb 01 54 50.1 -0.7
RLS S Sg 01 55 02.5 +1.2
RLS AML AML 01 55 12.3
comp=E,241µm,0.6s
RLS AML AML 01 55 13.8
comp=N,266µm,0.5s
PVO Paravola 0.93 64 P Pb 01 54 52.6 -0.1
PVO Paravola 0.93 64 P Pb 01 54 52.7 -0.1
PVO S Sn 01 55 06.4 -0.1
PVO AML AML 01 55 13.1
comp=N,858µm,0.6s
PVO AML AML 01 55 13.5
comp=E,905µm,0.5s
DRO Drossia 1.02 105 P Pb 01 54 54.0 -0.4
DRO S Sg 01 55 08.1 +0.1
comp=E,285nm,0.5s
DRO Drossia 1.02 105 P Pb 01 54 53.8 -0.6
DRO S Sn 01 55 09.7 +0.8
DRO AML AML 01 55 21.9
comp=N,544µm,0.7s
DRO AML AML 01 55 22.5
comp=E,583µm,0.4s
ANX Ano Chora 1.21 71 P Pn 01 54 57.3 -0.1
ANX S Sg 01 55 14.7 +0.7
ANX AML AML 01 55 21.0
comp=N,360µm,0.5s
ANX AML AML 01 55 26.4
comp=E,333µm,0.7s
EVR Evrytania 1.27 56 P Pn 01 54 58.3 0.0
SERG Sergoula 1.27 81 P Pn 01 54 58.0 -0.2
TRIZ Trizonia 1.28 83 P Pn 01 54 57.9 -0.4
ALIK Aliki, Aigiali 1.30 88 P Pn 01 54 58.4 -0.2
ALIK S Sb 01 55 15.7 +0.1
IGT Igoumenitsa 1.32 356 P Pb 01 54 59.4 0.0
KLV Kalavryta, Ach 1.34 97 P Pn 01 54 59.0 -0.3
KLV S Sn 01 55 17.0 +0.1
comp=E,42nm,0.8s
KLV Kalavryta, Ach 1.34 97 P Pb 01 54 59.7 -0.2

GCG 20 02:07:17.7±1.6, 13.04N×91.81W, h35km±383km, MD4.5
NEIC 20 02:07:22.3±1.1, 13.37N±0.06×91.51W±0.06, h35km±1km, mb4.5/124, Md4.6/16(MEX), Error ellipse: s-maj=11.9km s-min=6.8km az=221.0
UCR 20 02:07:24.2±0.9, 13.57N×91.46W, h20km±124km, ML3.9, mb4.5(NEIC)
SNET 20 02:07:24.1±0.9, 13.58N×91.42W, h13km±174km, ML4.1
ANF 20 02:07:24.1±0.9, 13.67N×91.18W, h30km, Error ellipse: s-maj=16.1km s-min=4.9km az=169.0
IDC 20 02:07:30.4±2.3, 13.59N×91.15W, h87km±17km, mb4.0/14, mb1 4.2/17, mb1mx3.9/46, mbtmp4.3/17, MS3.9/13, Ms1 3.9/13, ms1mx3.6/33, Error ellipse: s-maj=25.0km s-min=10.8km az=51.0
ISC 20 02:07:23.3±1.5, 13.47N±0.06×91.44W±0.05, h32km±10km, n392, σ1.35/372, mb4.5/56, MS3.9/13, Near coast of Guatemala

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ERG Entre ros, C 0.97 353 eP Pb 02 07 41.8 +0.1
FUG Fuego 3 1.14 31 eP Pb 02 07 45.2 +0.6
IXG Ixpaco 1.20 54 eP Pb 02 07 45.2 -0.4
PCG Pacaya 1.23 41 eP Pb 02 07 46.5 +0.4
STG3 Santiaguito 3, 1.24 354 eP Pn 02 07 44.6 -0.1
NBG Las Nubes 1.54 43 eP Pb 02 07 51.8 +0.4
THIG 1.64 331 Pn 02 07 49.2 -0.8
THIG Sb 02 08 10.4 -2.9
RTR El Retiro 1.80 76 eP Pb 02 07 54.4 -1.4
RTR El Retiro 1.80 76 eP Pb 02 07 54.4 -1.4
APG El Apazote 1.80 32 P Pb 02 07 55.0 -0.7
174nm,0.3s,baz=186,slow=8.2,SNR=1040
APG S Sb 02 08 18.0 -0.1
66nm,0.3s,baz=208,slow=20,SNR=6.6
CEVE Cerro Verde 1.80 78 eP Pn 02 07 54.0 +1.6
CEVE eS Sb 02 08 18.5 +0.3
CEVE IAML 02 08 30.2
comp=Z,5µm,0.5s
CEVE Cerro Verde 1.80 78 eP Pn 02 07 54.0 +1.6
CEVE eS Sb 02 08 18.5 +0.3
CEVE IAML 02 08 30.2
comp=Z,5µm,0.5s
SBLS San Blas 1.81 78 eP Pb 02 07 54.4 -1.5
SBLS San Blas 1.81 78 eP Pb 02 07 54.4 -1.5
SNJE San Jose 1.83 77 eP Pb 02 07 54.7 -1.6
SNJE eS Sb 02 08 18.7 -0.2
SNJE San Jose 1.83 77 eP Pb 02 07 54.7 -1.6
SNJE eS Sb 02 08 18.7 -0.2
BOQS Boqueron 2.12 83 eP Pn 02 07 58.9 +2.2
UEES Universidad Ev 2.15 83 IAML 02 08 41.2
comp=Z,1µm,0.3s
UEES Universidad Ev 2.15 83 IAML 02 08 41.2
comp=Z,1µm,0.3s
SNET Serv Nac Est T 2.16 84 eP Pn 02 07 59.6 +2.5
SNET eS Sb 02 08 26.9 -1.4
SNET IAML 02 08 34.8
comp=Z,1µm,0.3s
SNET Serv Nac Est T 2.16 84 Pn 02 07 57.7 +0.6
SNET Sn Sn 02 08 22.9 0.0
SNET Serv Nac Est T 2.16 84 eP Pn 02 07 59.6 +2.5
SNET eS Sb 02 08 26.9 -1.4
SNET IAML 02 08 34.8
comp=Z,1µm,0.3s
OPAM Oficina de Pla 2.19 83 eP Pb 02 08 00.5 -2.0
OPAM Oficina de Pla 2.19 83 eP Pb 02 08 00.5 -2.0
MTO3 Montecristo 2.22 65 eP Pb 02 08 00.5 -2.5
MTO3 eS Sb 02 08 28.5 -1.7
MTO3 Montecristo 2.22 65 eP Pb 02 08 00.5 -2.5
MTO3 eS Sb 02 08 28.5 -1.7
LFU La Fuente 2.28 83 eP Pn 02 08 00.9 +2.1
LFU La Fuente 2.28 83 eP Pn 02 08 00.9 +2.1
LFRS El Faro 2.32 86 eP Pn 02 08 01.8 +2.4
MRL Marmol 2.34 46 eP Pb 02 08 03.5 -1.6
MRL eS Sb 02 08 37.1 +3.5
LBRS Las Brisas 2.35 83 eP Pn 02 08 01.7 +1.9
PAVA Las Pavas 2.45 84 eP Pn 02 08 02.9 +1.7
PAVA IAML 02 08 53.7
comp=Z,646nm,0.5s
PAVA Las Pavas 2.45 84 eP Pn 02 08 02.9 +1.7
PAVA IAML 02 08 53.7
comp=Z,646nm,0.5s
COEG Centro de Oper 2.50 86 eP Pn 02 08 03.9 +2.1
COEG IAML 02 08 49.7
comp=Z,1µm,0.5s
COEG Centro de Oper 2.50 86 eP Pn 02 08 03.9 +2.1
COEG IAML 02 08 49.7
comp=Z,1µm,0.5s
PCIG 2.81 322 Pn 02 08 04.9 -1.2
COEB Comit de Eme 2.83 89 eP Pn 02 08 08.9 +2.5
COEB Comit de Eme 2.83 89 eP Pn 02 08 08.9 +2.5
CCIG Comitan 2.88 347 Pn 02 08 06.8 -0.3
CCIG Sn Sn 02 08 41.4 +0.5
LCND La Caada 3.46 92 eP Pn 02 08 17.1 +2.1
LCND La Caada 3.46 92 eP Pn 02 08 17.1 +2.1
CNCH Conchagua 3.52 93 eP Pn 02 08 18.1 +2.2
CNCH Conchagua 3.52 93 eP Pn 02 08 18.1 +2.2
TGIG 3.67 334 Pn 02 08 18.0 0.0
TGUH Tegucigalpa,Un 4.09 81 Pn Pn 02 08 23.9 +0.1
CMIG Matias Romero 4.90 318 P Pn 02 08 34.9 +0.1
comp=Z,7.8nm,0.3s,baz=129,slow=11,SNR=53
CMIG S Sn 02 09 36.4 +5.9
comp=Z,27nm,0.3s,baz=68,slow=14,SNR=4.9
CMIG Matias Romero 4.90 318 Pn 02 08 34.7 -0.2
ESTN Estel 4.95 94 Pn Pn 02 08 35.9 +0.3
HUIG Huatulco 5.06 297 Pn 02 08 35.2 -1.9
ACON Acoyapa 6.29 103 Pn Pn 02 08 53.8 -0.2
ESPN Las Esperanzas 7.08 99 Pn Pn 02 09 03.8 -1.0
JTS Las Juntas de 7.09 116 P Pn 02 09 09.1 +4.2
comp=Z,1.8nm,0.3s,baz=20,slow=11,SNR=6.6
JTS S Sn 02 10 23.9 -0.6
comp=Z,1.8nm,0.3s,baz=156,slow=18,SNR=1.8
JTS Las Juntas de 7.09 116 Pn Pn 02 09 04.1 -0.9
TEIG Tepich 7.37 24 P Pn 02 09 11.8 +3.0
comp=Z,38nm,0.3s,baz=137,slow=0.7,SNR=167
TEIG LR LR 02 12 14.6
comp=Z,957nm,20.5s,baz=60,slow=40
TEIG Tepich 7.37 24 Pn Pn 02 09 08.8 0.0
TLIG Tlapa 7.98 302 Pn Pn 02 09 16.3 -1.0
ZAIG Zacatecas 14.04 313 Pn 02 10 39.2 -1.2
PAYG Puerto Ayora 14.10 175 Pn Pn 02 10 37.3 -3.6
833A Chaparral WMA, 16.54 335 P 02 11 13.8 -1.4
833A IAmb IAmb 02 11 20.4
comp=Z,45nm,1.6s
833A Chaparral WMA, 16.54 335 P P 02 11 16.0 +0.9
baz=151
HKT Hockley 16.90 347 Pn Pn 02 11 17.4 0.0
CBOC Ciudad Bolivar 16.97 115 eP P 02 11 24.2 +3.8
441A DeRidder 17.28 355 Pn Pn 02 11 21.8 -0.4
441A IAmb IAmb 02 11 29.4
comp=Z,35nm,0.9s
GUY2C Guyana, Caldas 17.84 116 eP P 02 11 33.3 +3.0
342A Flagon Creek P 17.84 358 P 02 11 29.0 -0.6
553A Crawfordville 17.86 20 IAmb IAmb 02 11 37.5
comp=Z,46nm,1.0s
346A Big Creek Wild 17.93 5 P 02 11 30.1 -0.5
346A IAmb IAmb 02 11 37.5
comp=Z,49nm,1.0s
PTBC PUERTO BERRIO, 18.08 111 eP P 02 11 34.1 +1.7
NORC Norcasia 18.12 114 eP P 02 11 36.4 +3.4
435B Jarrell 18.14 343 P P 02 11 32.7 -0.2
NATX Nacogdoches 18.45 351 P P 02 11 35.5 -0.8
NATX IAmb IAmb 02 11 41.2
comp=Z,27nm,0.9s
ORTC Ortega, Tolima 18.60 119 eP Pn 02 11 42.4 +3.8
JCT Junction City 18.61 337 P P 02 11 36.6 -1.5
JCT Junction City 18.61 337 P Pn 02 11 39.6 +1.0
baz=153
VBMS Vicksburg 18.68 2 P Pn 02 11 39.6 +0.1
VBMS IAmb IAmb 02 11 54.7
comp=Z,21nm,0.8s
352A Blakely 18.90 17 IAmb IAmb 02 11 47.3
comp=Z,27nm,0.8s
ROSC El Rosal 18.94 115 P Pn 02 11 47.2 +4.2
comp=Z,0.1nm,0.3s,baz=96,slow=19,SNR=3.6
ROSC El Rosal 18.94 115 P P 02 11 40.7 -1.6
ROSC IAmb IAmb 02 12 00.5
comp=Z,52nm,1.4s
143A Socs Landing, 19.15 0 P P 02 11 43.4 -0.6
143A IAmb IAmb 02 12 09.9
comp=Z,26nm,1.0s
BARC Barichara 19.22 109 eP Pn 02 11 50.0 +3.6
WHTX Lake Whitney, 19.25 344 P P 02 11 44.4 -0.7
WHTX Lake Whitney, 19.25 344 P Pn 02 11 45.8 -0.5
baz=161
TIGA Tifton 19.29 21 P Pn 02 11 46.9 +0.2
baz=203
TX32 Lajitas Array 19.44 326 Pn Pn 02 11 48.0 -0.6
TXAR Lajitas Array 19.44 326 P Pn 02 11 49.9 +1.2
comp=Z,0.4nm,0.3s,baz=156,slow=13,SNR=90
CHIC Chingaza 19.55 115 eP Pn 02 11 53.2 +2.8
FLOC Florencia 19.58 126 eP Pn 02 11 54.5 +4.1
Z41A Richland Creek 19.74 357 IAmb IAmb 02 11 59.3
comp=Z,20nm,0.8s
LRAL Lakeview Retre 19.90 11 P Pn 02 11 53.1 -0.8
LRAL IAmb IAmb 02 12 01.2
comp=Z,30nm,1.1s
LRAL Lakeview Retre 19.90 11 P Pn 02 11 52.5 -1.4
baz=192,SNR=5.5
152A Waverly Hall 20.08 17 P P 02 11 54.3 +0.2
152A IAmb IAmb 02 12 01.1
comp=Z,23nm,0.8s
WLAR White Oak Lake 20.19 356 IAmb IAmb 02 12 07.9
comp=Z,20nm,0.9s
Z50A Ashland 20.33 13 P P 02 11 56.8 -0.1
Z50A Ashland 20.33 13 P P 02 11 56.8 -0.1
baz=195
ABTX Abilene, Hawle 20.49 340 IAmb IAmb 02 12 07.0
comp=Z,16nm,0.9s
ABTX Abilene, Hawle 20.49 340 P P 02 11 58.8 +0.1
baz=156,SNR=5.4
Z51A Franklin 20.57 15 IAmb IAmb 02 12 05.0
comp=Z,23nm,0.8s
MACC Macarena, Meta 20.72 121 eP P 02 12 03.2 +1.9
Y49A Blount Mountai 20.81 12 P P 02 12 01.8 -0.3
SDV Santo Domingo 20.91 100 P P 02 12 03.3 -0.3
comp=Z,2.5nm,0.4s,baz=296,slow=9.5,SNR=6.4
SDV Santo Domingo 20.91 100 P P 02 12 03.2 -0.3
X40A Basin Creek Fa 20.97 357 P P 02 12 03.1 -0.6
baz=176
OXF Oxford 21.03 5 IAmb IAmb 02 12 17.6
comp=Z,41nm,1.1s
OXF Oxford 21.03 5 P P 02 12 04.5 +0.1
baz=185
MIAR Mount Ida 21.07 355 P P 02 12 04.3 -0.6
MIAR Mount Ida 21.07 355 P P 02 12 04.9 -0.1
baz=174
GOGA Godfrey 21.14 19 P P 02 12 06.0 +0.4
GOGA Godfrey 21.14 19 P P 02 12 05.7 0.0
baz=201
UALR University of 21.23 358 P P 02 12 06.3 -0.3
UALR IAmb IAmb 02 12 09.8
comp=Z,23nm,0.7s
Y52A Lilburn 21.39 17 P P 02 12 08.6 +0.3
Y52A IAmb IAmb 02 12 13.6
comp=Z,12nm,0.8s
Y52A Lilburn 21.39 17 P P 02 12 08.8 +0.5
baz=199
W41B Gary Mavity, V 21.62 358 P P 02 12 10.8 0.0
W41B Gary Mavity, V 21.62 358 P P 02 12 10.6 -0.2
baz=177
PLAL Pickwick Lake 21.64 8 P P 02 12 11.1 +0.2
PLAL IAmb IAmb 02 12 20.2
comp=Z,22nm,1.4s
W39A Magazine 21.74 355 P P 02 12 12.3 +0.3
baz=173
WHAR Wooly Hollow 21.74 358 P P 02 12 12.5 +0.5
X34A Smith Ranch, M 21.82 346 IAmb IAmb 02 12 45.2
comp=Z,46nm,1.5s
W49A Belvidere 22.06 11 P P 02 12 14.7 -0.8
baz=193
WMOK Wichita Mounta 22.20 344 P P 02 12 16.6 -0.4
WMOK IAmb IAmb 02 13 05.3
comp=Z,22nm,1.5s
WMOK Wichita Mounta 22.20 344 P P 02 12 16.7 -0.3
baz=160
X53A Estanollee 22.20 18 P P 02 12 17.8 +0.7
baz=201
MNTX Cornudas Mount 22.21 327 P P 02 12 17.2 +0.1
MNTX IAmb IAmb 02 12 21.9
comp=Z,19nm,0.9s
MNTX Cornudas Mount 22.21 327 P P 02 12 18.7 +1.6
baz=141,SNR=28
HODGE Hodges 22.29 20 P P 02 12 18.4 +0.4
HODGE IAmb IAmb 02 12 45.2
comp=Z,16nm,1.1s
FCAR Ozark Folk Cen 22.34 359 P P 02 12 17.4 -1.1
FCAR IAmb IAmb 02 12 19.7
comp=Z,12nm,0.8s
W50A Signal Mountai 22.34 13 P P 02 12 18.0 -0.5
baz=195
W51A Cleveland 22.43 14 P P 02 12 18.9 -0.6
baz=197
LCAR Lake Charles 22.51 1 P P 02 12 19.2 -1.0
LCAR IAmb IAmb 02 12 21.1

comp=Z,16nm,0.7s
X54A Belton 22.54 20 P P 02 12 20.9 +0.2
baz=203
V48A Smith Brothers 22.57 10 P P 02 12 20.8 -0.1
W52A Murphy 22.58 16 P P 02 12 21.2 +0.1
baz=199
X55A Gracelyn & Ava 22.72 21 P P 02 12 22.6 +0.1
baz=205
V49A McMinnville 22.76 12 P P 02 12 22.7 -0.3
baz=193,SNR=6.0
Y57A Sumter 22.79 24 P P 02 12 23.4 +0.1
baz=208
WVT Waverly 22.80 8 P P 02 12 23.0 -0.4
WVT Waverly 22.80 8 P P 02 12 22.4 -0.9
baz=188
U40A Yellville 22.83 357 P P 02 12 22.7 -1.0
U40A IAmb IAmb 02 12 24.3
comp=Z,20nm,1.2s
U40A Yellville 22.83 357 P P 02 12 22.0 -1.6
baz=176,SNR=7.1
V50A Pikevile 22.84 13 P P 02 12 22.9 -0.9
baz=196
MSTX Muleshoe 22.86 335 IAmb IAmb 02 12 25.9
comp=Z,22nm,0.8s
MSTX Muleshoe 22.86 335 P P 02 12 24.4 +0.2
baz=150,SNR=16
X56A White Oak 22.96 22 P P 02 12 24.8 -0.3
baz=206
Y58A Scranton 22.99 26 P P 02 12 26.3 +0.9
baz=210
W54A Cherokee Point 23.09 20 P P 02 12 26.7 +0.2
baz=203
V51A Loudon 23.14 15 P P 02 12 26.6 -0.3
baz=197
TKL Tuckaleechee C 23.15 16 P P 02 12 27.2 +0.2
comp=Z,15nm,0.6s,baz=181,slow=11,SNR=37
TKL Tuckaleechee C 23.15 16 P P 02 12 26.9 -0.1
TKL IAmb IAmb 02 12 28.9
comp=Z,15nm,0.7s
PBMO Poplar Bluff 23.23 2 P P 02 12 26.3 -1.5
PBMO IAmb IAmb 02 12 28.5
comp=Z,14nm,0.8s
AMTX Amarillo 23.25 338 P P 02 12 27.9 -0.2
baz=153
V52A Sevierville 23.37 16 P P 02 12 29.0 -0.2
baz=199
KMSC Kings Mountain 23.43 21 IAmb IAmb 02 12 50.0
comp=Z,13nm,0.8s
KMSC Kings Mountain 23.43 21 P P 02 12 29.7 -0.1
baz=205
V53A Saluda 23.43 18 P P 02 12 29.4 -0.5
baz=201
U49A Red Boiling Sp 23.50 11 P P 02 12 29.6 -0.8
baz=193,SNR=8.5
MGMO Mountain Grove 23.60 358 P 02 12 31.2 -0.2
MGMO IAmb IAmb 02 12 31.6
comp=Z,25nm,1.2s
U50A Jamestown 23.61 13 P P 02 12 31.1 -0.4
baz=196,SNR=8.5
X58A Rowland 23.69 26 P P 02 12 31.9 -0.3
baz=210
W56A Indian Trail 23.70 23 P P 02 12 31.8 -0.5
baz=207
T47A Sharon Grove 23.74 9 P P 02 12 31.9 -0.9
T47A IAmb IAmb 02 12 55.9
comp=Z,15nm,0.7s
U51A La Follette 23.77 15 P P 02 12 32.4 -0.7
baz=198,SNR=5.8
V54A Nebo 23.80 19 P P 02 12 32.7 -0.6
baz=203
U52A Thorn Hill 23.95 16 P P 02 12 33.8 -1.0
baz=199
X59A McDuffie Farm, 24.02 27 P P 02 12 35.6 +0.3
baz=212
TZTN Tazewell 24.05 16 P P 02 12 35.5 -0.1
TZTN IAmb IAmb 02 13 04.0
comp=Z,14nm,0.8s
TZTN Tazewell 24.05 16 P P 02 12 34.8 -0.8
baz=199
V55A Taylorsville 24.12 21 P P 02 12 36.1 -0.2
V55A IAmb IAmb 02 12 37.4
comp=Z,10nm,0.8s
V55A Taylorsville 24.12 21 P P 02 12 35.7 -0.5
baz=204
T49A Edmonton 24.13 12 P P 02 12 35.9 -0.4
T49A Edmonton 24.13 12 P P 02 12 35.4 -0.9
baz=194
W58A Raeford 24.13 25 P P 02 12 36.1 -0.3
baz=210
U53A Fall Branch 24.15 18 P P 02 12 36.1 -0.5
baz=201
121A Cookes Peak, D 24.16 324 IAmb IAmb 02 12 42.1
comp=Z,18nm,1.0s
121A Cookes Peak, D 24.16 324 P P 02 12 39.2 +2.4
baz=137,SNR=19
T50A Nancy 24.19 13 P P 02 12 36.2 -0.7
baz=195
319A Douglas 24.22 320 P P 02 12 36.0 -1.5
319A IAmb IAmb 02 12 51.8
comp=Z,21nm,1.1s
V56A Mocksville 24.33 22 P P 02 12 37.9 -0.4
baz=206
T51A Gray 24.34 15 P P 02 12 37.8 -0.5
baz=197,SNR=5.1
CCM Cathedral Cave 24.49 0 P P 02 12 38.2 -1.4
CCM Cathedral Cave 24.49 0 P P 02 12 38.5 -1.1
baz=180
U54A Nelsons Funny 24.53 19 P P 02 12 39.6 -0.4
U54A IAmb IAmb 02 12 42.2
comp=Z,15nm,0.8s
U54A Nelsons Funny 24.53 19 P P 02 12 40.5 +0.5
baz=202
V57A Coltrane Farms 24.67 23 P P 02 12 41.1 -0.2
baz=208
T52A Hallie 24.73 16 P P 02 12 41.4 -0.4
baz=200
T53A Wise 24.74 17 P P 02 12 40.7 -1.3
baz=201
U55A TA2, Sparta 24.76 20 P P 02 12 41.9 -0.3
baz=204
S49A Springfield 24.83 12 P P 02 12 41.8 -1.0
baz=194
V58A Windy Hill, Pi 24.85 24 P P 02 12 42.7 -0.2
baz=209
U56A King 24.85 22 P P 02 12 42.8 -0.2
baz=206
S50A Richmond 24.92 13 P P 02 12 42.0 -1.5
baz=196
S51A Beattyville 25.07 15 P P 02 12 44.0 -0.9
baz=198
WCI Wyandotte Cave 25.08 10 P P 02 12 44.0 -1.1
WCI IAmb IAmb 02 13 20.1
comp=Z,15nm,0.8s
WCI Wyandotte Cave 25.08 10 P P 02 12 44.1 -0.9
baz=191
V59A Middlesex 25.18 26 P P 02 12 45.6 -0.3
baz=211
U57A Blanch 25.32 23 P P 02 12 46.8 -0.3
baz=208
ANMO Albuquerque 25.33 330 P P 02 12 49.3 +1.8
comp=Z,2.9nm,0.8s,baz=152,slow=12,SNR=9.7
ANMO Albuquerque 25.33 330 P P 02 12 47.4 -0.2
ANMO Albuquerque 25.33 330 P P 02 12 48.7 +1.1
baz=143
R49A Shelbyville 25.34 12 P P 02 12 46.1 -1.3
baz=194
R50A Paris 25.51 13 IAmb IAmb 02 13 22.7
comp=Z,12nm,1.1s
R50A Paris 25.51 13 P P 02 12 48.1 -0.8
baz=196
T56A Rocky Mt 25.59 22 P P 02 12 49.6 -0.1
baz=206
U58A Oxford 25.60 25 P P 02 12 49.0 -0.6
baz=210
R51A Hillsboro 25.70 14 P P 02 12 50.1 -0.5
baz=197
TUC Tucson 25.79 320 P P 02 12 54.0 +2.4
baz=132
S54A Dingess, Beckl 25.86 19 P P 02 12 51.4 -0.7
baz=203
T58A Grand View Acr 26.08 24 P P 02 12 54.0 0.0
baz=209
T25A Trinidad 26.27 336 P P 02 12 57.9 +1.9
baz=150,SNR=5.7
P48A Milroy 26.43 11 P P 02 12 56.2 -1.0
baz=193
Q51A Peebles 26.45 14 P P 02 12 56.8 -0.6
baz=197,SNR=6.8
T59A Double "B" Far 26.50 26 P P 02 12 57.7 -0.2
baz=211
Q52A Bidwell 26.66 16 P P 02 12 58.9 -0.4
baz=200
Q53A Leroy 26.77 17 P P 02 13 00.4 +0.1
baz=201
P51A Williamsport 26.95 14 P P 02 13 00.8 -1.0
baz=198
Q54A Coxs Mills 27.09 18 P P 02 13 02.7 -0.5
baz=203
R58B Mineral 27.22 24 P P 02 13 04.8 +0.5
baz=210
SDCO Great Sand Dun 27.23 335 P P 02 13 05.2 +0.4
baz=148
O49A Covington 27.34 12 P P 02 13 04.2 -1.2
baz=195
P53A Whipple 27.39 17 P P 02 13 05.8 -0.1
baz=201
O50A Cable 27.45 13 P P 02 13 05.6 -0.8
baz=196
R58A Rapidan 27.46 23 P P 02 13 06.6 +0.1
baz=209
ACSO Alum Creek Sta 27.68 14 P P 02 13 07.6 -0.9
baz=197
Q56A Snyder Ridge, 27.68 21 P P 02 13 08.6 +0.1
baz=206
O51A Pataskala 27.69 15 P P 02 13 07.7 -0.8
baz=198
N47A Urbana 27.77 9 P P 02 13 07.9 -1.4
baz=192
P54A Burton 27.77 18 P P 02 13 09.3 0.0
baz=203
O52A Adamsville 27.86 16 P P 02 13 09.5 -0.5
baz=200
N48A Decatur 27.86 10 P P 02 13 08.9 -1.1
baz=193
MVCO Mesa Verde 28.13 330 IAmb IAmb 02 13 15.8
comp=Z,9.2nm,0.9s
MVCO Mesa Verde 28.13 330 P P 02 13 14.4 +1.6
baz=142
O53A New Philadelph 28.15 17 P P 02 13 12.2 -0.5
baz=201
P57A Homestead Farm 28.50 22 P P 02 13 16.0 +0.3
baz=208
N52A McGinn's Farm, 28.55 16 P P 02 13 15.8 -0.4
baz=200
N53A Lisbon 28.77 17 P P 02 13 17.9 -0.3
baz=201
M50A Fremont 28.78 13 P P 02 13 17.7 -0.5
baz=197
GLA Glamis 28.89 316 P P 02 13 22.2 +2.8
baz=126
M51A Elyria 28.91 15 P P 02 13 18.8 -0.6
baz=198
L48A N Adams 29.02 11 P P 02 13 18.8 -1.6
baz=194
ISCO Idaho Springs 29.05 337 P P 02 13 21.3 +0.2
baz=150
N54A Moraine State 29.17 18 P P 02 13 20.6 -1.0
baz=203
PDMCI Parker Dam,Lak 29.22 319 P P 02 13 24.2 +2.0
baz=129
M52A Chesterland 29.32 16 P P 02 13 22.5 -0.5
baz=200
JFWS Jewell Farm 29.36 2 P P 02 13 22.3 -1.1
baz=182
M53A WI Miller and 29.41 17 P P 02 13 23.4 -0.4
baz=201
L50A Kingsville 29.44 13 P P 02 13 23.2 -0.9
baz=197
SSPA Standing Stone 29.56 21 P P 02 13 24.5 -0.6
baz=207
K47A Vermontville 29.63 10 P P 02 13 23.7 -2.0
baz=192
N56A West Decatur 29.67 20 P P 02 13 25.7 -0.5
baz=206
BC3 Big Chuckawall 29.67 317 P P 02 13 29.1 +2.7
baz=126
K48A Perry 29.91 11 P P 02 13 26.3 -1.9
baz=194
L53A Girard 30.00 17 P P 02 13 28.1 -1.0
baz=202
K49A Clarkson 30.02 12 P P 02 13 27.9 -1.3
baz=195
O20A White River Ci 30.39 334 P P 02 13 32.4 -0.4
baz=146
M57A Sunshine Farm, 30.45 22 P P 02 13 32.7 -0.3
baz=208
ECSD EROS Data Cent 30.49 353 P P 02 13 31.8 -1.6
baz=170
GMRC Granite Mounta 30.49 318 P P 02 13 36.2 +2.5
baz=128
L54A Sinclairville 30.53 18 P P 02 13 33.4 -0.3
baz=203
J49A Marlette 30.64 12 P P 02 13 33.0 -1.7
baz=196
K52A Tillsonburg 30.65 16 P P 02 13 34.1 -0.7
baz=200
L55A Hinsdale 30.76 19 P P 02 13 36.1 +0.3
baz=205
K54A Basiliko Farm, 31.07 18 P P 02 13 38.0 -0.5
baz=204
J52A Paris 31.14 16 P P 02 13 38.2 -0.9
baz=200
I49A Point Hope 31.25 12 P P 02 13 39.0 -1.1
baz=196
I51A Listowel 31.53 14 P P 02 13 40.9 -1.7
baz=199,SNR=5.3
SPMN Marine on St. 31.67 358 IAmb IAmb 02 13 43.9
comp=Z,7.1nm,0.7s
SPMN Marine on St. 31.67 358 P P 02 13 43.1 -0.7
baz=177
G45A Suttons Bay 31.85 8 P P 02 13 43.8 -1.5
baz=190
K22A Casper 31.87 339 P P 02 13 45.7 -0.1
baz=151
H48A Harrisville 31.89 11 P P 02 13 44.9 -0.8
baz=195
L59A Walton 31.96 23 P P 02 13 47.3 +0.9
baz=211
G47A Hillman 32.25 10 P P 02 13 47.6 -1.2
baz=194
MPMC Manual Prospec 32.45 318 P P 02 13 53.3 +2.4
baz=127
F45A CMU Biological 32.50 8 P P 02 13 49.5 -1.5
baz=190
COWI Conover 32.59 3 IAmb IAmb 02 13 51.1
comp=Z,6.9nm,0.6s
R11A Troy Canyon, C 32.76 324 P P 02 13 56.0 +2.4
baz=132
H53A Bobcaygeon 32.89 17 P P 02 13 53.5 -0.9
baz=203
E38A The Farm, Brul 33.03 360 IAmb IAmb 02 13 54.8
comp=Z,5.6nm,0.8s
F48A Evansville 33.11 11 P P 02 13 54.7 -1.7
baz=195
PDAR Pinedale Array 33.13 335 P P 02 13 57.5 +0.6
comp=Z,1.0nm,0.8s,baz=138,slow=9.2,SNR=9.5
PDAR PcP PcP 02 16 39.7 +0.2
comp=Z,0.3nm,0.5s,baz=131,slow=5.3,SNR=4.0
F49A Sandfield 33.16 12 P P 02 13 54.8 -2.0
baz=196
E44A Grand Marais A 33.37 7 P P 02 13 57.8 -0.8
baz=189
G53A Haliburton 33.38 17 P P 02 13 58.0 -0.8
baz=203
E47A Iron Bridge 33.59 10 P P 02 13 59.5 -1.0
baz=194
AHID Auburn Hatcher 33.78 334 IAmb IAmb 02 15 08.6
comp=Z,14nm,1.3s
G54A Lake Saint Pet 33.78 17 P P 02 14 01.5 -0.8
baz=203
F51A Arnstein 33.79 15 P P 02 14 01.6 -0.8
baz=200
F52A Sundridge 33.82 15 P P 02 14 01.5 -1.1
baz=201
E48A Lockeyer 33.83 12 P P 02 14 00.9 -1.7
baz=196
D46A Sault St. Mari 33.90 9 P P 02 14 01.5 -1.7
baz=193,SNR=9.4
G55A Calabogie 34.06 19 P P 02 14 03.9 -0.8
baz=206
D47A Chapleau 34.21 10 P P 02 14 04.3 -1.6
baz=194
ELK Elko 34.23 327 IAmb IAmb 02 14 10.3
comp=Z,5.7nm,0.9s
ALGO Algonquin Park 34.31 17 P P 02 14 06.0 -0.8
baz=203
EYMN Ely 34.38 360 P P 02 14 05.2 -2.1
baz=179
NVAR Mina Array Bea 34.42 321 P P 02 14 11.3 +3.1
comp=Z,6.7nm,0.8s,baz=131,slow=8.2,SNR=22
NVAR PcP PcP 02 16 43.9 +0.6
comp=Z,0.5nm,0.6s,baz=130,slow=4.6,SNR=3.5
NVAR LR LR 02 30 00.2
comp=Z,211nm,20.0s,baz=124,slow=39
E52A Mattawa 34.45 16 P P 02 14 07.3 -0.7
baz=202
E51A G1948 Merrick 34.46 15 P P 02 14 07.0 -1.1
baz=200
D48A Paudash Townsh 34.56 12 P P 02 14 07.1 -1.9
baz=196
KVN Kaiserville 34.70 322 IAmb IAmb 02 14 16.8
comp=Z,3.7nm,0.8s
D49A Beulah Townshi 34.74 12 P P 02 14 09.1 -1.5
baz=197
E53A Dumoine, Ponti 34.80 17 P P 02 14 10.1 -0.9
baz=204
AGMN Agassiz Nation 34.92 355 IAmb IAmb 02 14 11.9
comp=Z,4.0nm,0.9s
AGMN Agassiz Nation 34.92 355 P P 02 14 10.7 -1.4
baz=172
MDND Maddock 34.95 350 P P 02 14 11.0 -1.3
baz=166
D50A G1974 Best Tow 34.97 14 P P 02 14 10.9 -1.6
baz=200
E54A Lac Daplat, Po 34.99 17 P P 02 14 12.1 -0.5
baz=204
D51A Lot 18 Range I 35.01 14 P P 02 14 11.2 -1.6
baz=200
D53A Lac Vacive, Po 35.43 16 P P 02 14 15.9 -0.6
baz=203
E56A St. Veronique 35.75 19 P P 02 14 19.0 -0.2
baz=208
D54A Lac Fusel, La 35.79 17 P P 02 14 18.9 -0.7
baz=205
SAML Samuel 35.82 127 P P 02 14 18.7 -1.5
E57A Chemin Saint G 35.93 21 P P 02 14 19.4 -1.3
baz=209
F59A Saint Guilaume 35.93 22 P P 02 14 20.2 -0.5
baz=212
D55A Sainte-Anne-du 36.03 19 P P 02 14 20.3 -1.3
baz=207
E58A La Victoria 36.20 21 P P 02 14 22.5 -0.5
baz=210
D56A ZEC Mazanza, M 36.28 19 P P 02 14 22.9 -0.9
baz=208
F60A Warwick 36.34 23 P P 02 14 23.8 -0.5
baz=213
MFID Camas Ranch 36.47 330 IAmb IAmb 02 14 29.7
comp=Z,9.4nm,1.2s
D57A Chemin Vers le 36.54 20 P P 02 14 25.5 -0.4
baz=209
ULM Lac du Bonnet 36.86 355 P P 02 14 27.0 -1.6
comp=Z,3.9nm,0.7s,baz=168,slow=8.1,SNR=14
ULM PcP PcP 02 16 50.6 +0.6
comp=Z,1.2nm,0.5s,baz=187,slow=4.3,SNR=4.7
ULM LR LR 02 33 20.1
comp=Z,162nm,18.3s,baz=194,slow=42
ULM Lac du Bonnet 36.86 355 IAmb IAmb 02 14 27.5
comp=Z,5.3nm,0.8s
D58A Chemin du LacG 36.96 21 P P 02 14 28.5 -1.1
baz=211
WVOR Wild Horse Val 37.23 326 IAmb IAmb 02 14 36.7
comp=Z,6.3nm,0.9s
LATQ La Tuque 37.24 21 P P 02 14 30.8 -1.0
baz=211
LSQQ Lebel-sur-Quev 37.44 16 P P 02 14 32.2 -1.3
baz=203
O03E Paynes Creek 37.71 321 P P 02 14 37.6 +1.5
baz=126
MATQ Matagami 37.92 15 P P 02 14 36.2 -1.4
baz=202
D61A St Aubert, Com 38.05 24 P P 02 14 37.8 -0.9
baz=215
MSO Missoula 38.24 335 P P 02 14 41.1 +0.5
baz=143
BMO Blue Mountains 38.25 330 IAmb IAmb 02 14 42.5
comp=Z,5.6nm,1.0s
O02D Mt. Diablo Mer 38.25 320 P P 02 14 43.2 +2.5
baz=125
D62A Allapoint, All 38.40 25 P P 02 14 40.7 -1.0
baz=216
M04C Macdoel 38.63 323 P P 02 14 45.7 +1.8
baz=128
D63A Stockholm 38.76 26 P P 02 14 45.1 +0.3
baz=218
F10A Beach Ranch, E 39.04 331 IAmb IAmb 02 14 50.0
comp=Z,12nm,0.7s
L04D Klamath Falls 39.17 323 P P 02 14 50.6 +2.1
baz=127
PINE Pine Mountain 39.40 326 IAmb IAmb 02 14 53.8
comp=Z,12nm,0.9s
J04D Umpqua Nationa 39.69 324 P P 02 14 54.9 +2.0
baz=129
I05D Terrebonne, OR 39.97 326 P P 02 14 57.1 +2.1
baz=131
I04A Tendick Farm, 40.21 325 P P 02 14 58.1 +1.1
baz=129
G05D Wamic, OR 40.56 327 P P 02 15 02.5 +2.7
baz=131
I03D Drain, OR 40.69 324 P P 02 15 02.8 +2.0
baz=128
NEW Newport 40.71 334 P P 02 15 01.1 +0.1
baz=139
C09A Chrisman Ranch 40.87 332 P P 02 15 01.9 -0.4
C09A IAmb IAmb 02 15 04.4
comp=Z,10nm,1.0s
F05D White Salmon 41.06 328 P P 02 15 06.2 +2.3
baz=132
SIV San Ignacio 41.93 133 P P 02 15 12.5 +1.1
comp=Z,1.9nm,0.7s,baz=320,slow=9.4,SNR=12
SIV LR LR 02 33 04.0
comp=Z,101nm,19.9s,baz=287,slow=37
FFC Flin Flon 41.98 351 P P 02 15 10.1 -1.2
FFC IAmb IAmb 02 16 31.3
comp=Z,16nm,1.9s
C06D Leavenworth 42.18 330 P P 02 15 14.6 +1.5
baz=134
B05A Bryant 43.00 330 P P 02 15 20.5 +0.9
baz=133
D03D Eldon 43.00 329 P P 02 15 21.1 +1.4
baz=131
A04D Lummi Island 43.61 330 P P 02 15 26.0 +1.5
baz=133
SCHQ Schefferville 45.53 20 P P 02 15 38.4 -1.5
comp=Z,8.6nm,0.9s,baz=218,slow=8.5,SNR=17
SCHQ LR LR 02 35 39.5
comp=Z,378nm,19.9s,baz=276,slow=37
SCHQ Schefferville 45.53 20 P P 02 15 38.5 -1.4
SCHQ IAmb IAmb 02 15 39.1
comp=Z,12nm,1.1s
CPUP Villa Florida 51.63 140 LR LR 02 39 38.2
comp=Z,94nm,18.5s,baz=1.0,slow=37
YKA Yellowknife Ar 51.67 347 P P 02 16 26.7 -0.1
comp=Z,4.7nm,0.7s,baz=150,slow=7.6,SNR=64
YKA PcP PcP 02 17 40.2 +0.1
comp=Z,2.2nm,0.7s,baz=150,slow=4.0,SNR=18
BDFB Brasilia 51.78 123 LR LR 02 39 34.0
comp=Z,95nm,19.9s,baz=314,slow=37
TAOE Nuku Hiva Isla 53.20 248 eT T 03 13 36.5
comp=Z,141nm,0.3s
RKT Rikitea 56.01 230 eT T 03 17 07.4
comp=Z,5.3nm,0.3s
PRP Porcupine Dome 63.37 338 IAmb IAmb 02 17 51.2
comp=Z,4.7nm,0.9s
HDA Harding Lake 63.40 336 P P 02 17 50.2 +0.7
baz=116
KDAK Kodiak Island 63.45 328 P P 02 17 51.5 +1.6
comp=Z,11nm,0.9s,baz=113,slow=10,SNR=3.5
KDAK Kodiak Island 63.45 328 P P 02 17 49.8 -0.1
IL31 63.54 337 P P 02 17 50.5 +0.1
ILAR Eielson Array 63.54 337 P P 02 17 51.0 +0.6
comp=Z,5.4nm,0.9s,baz=172,slow=4.1,SNR=55
POKR Poker Plat Res 63.90 337 P P 02 17 53.3 +0.5
baz=116
TCOL CIGO, UAF Yank 63.96 337 P P 02 17 53.8 +0.7
baz=115
PPT Papeete 65.13 243 LR LR 02 38 53.9
comp=Z,83nm,19.9s,baz=304,slow=29
PPT2 Papeete2 65.14 243 eLR LR 02 37 30.2
comp=Z,110nm,24.5s
MLY Manley 65.14 336 P P 02 18 01.3 +0.3
TOLK Toolik Lake Re 66.20 340 P P 02 18 08.3 +0.6
baz=115
GO10 Punta Arenas 68.63 167 P P 02 18 20.8 -2.4

DAG Danmarks Havn 73.05 13 iP P 02 18 47.9 -1.8
BILL Bilibino 82.15 338 P P 02 19 39.4 -1.2
NB2 NORSAR Subarra 84.35 29 P P 02 19 51.5 -0.8
comp=Z,2.0nm,1.1s,baz=289,slow=5.3
NOA NORSAR Array B 84.35 29 P P 02 19 51.4 -0.8
comp=Z,16nm,0.4s,baz=287,slow=5.5,SNR=4.4
NOA LR LR 02 55 31.4
comp=Z,46nm,19.9s,baz=270,slow=34
TIC Toumodi 85.01 84 eP P 02 19 57.3 +0.9
TIC Toumodi 85.01 84 P P 02 19 57.3 +0.9
LIC Lamto 85.10 85 eP P 02 19 57.6 +0.8
comp=Z,2.9nm,0.3s
LIC Lamto 85.10 85 P P 02 19 57.6 +0.8
DBIC Dimbokro 85.17 84 P P 02 19 57.8 +0.7
comp=Z,3.0nm,0.8s,baz=268,slow=3.5,SNR=5.5
DBIC Dimbokro 85.17 84 P P 02 19 56.0 -1.2
KIC Kosan Boka 85.35 85 eP P 02 19 58.8 +0.7
comp=Z,9.8nm,0.9s
HFS Hagfors 85.80 29 P P 02 19 58.4 -1.0
comp=Z,1.1nm,0.7s,baz=251,slow=4.4,SNR=3.1
ARCES ARCESS Array B 86.47 18 P P 02 20 01.3 -1.3
comp=Z,0.8nm,0.6s,baz=25,slow=3.2,SNR=4.7
ARCES LR LR 02 59 03.4
comp=Z,70nm,18.5s,baz=331,slow=36
GERES GERESS Array B 89.67 40 LR LR 03 01 11.8
comp=Z,54nm,18.0s,baz=286,slow=36
TORD Torodi Ar. Bea 89.97 77 P P 02 20 18.7 -1.6
comp=Z,0.4nm,0.8s,baz=284,slow=6.5,SNR=2.7
FINES FINESS Array B 90.75 25 LR LR 03 01 00.7
comp=Z,45nm,18.8s,baz=334,slow=36
NRIK Noril'sk 97.41 0 LR LR 03 08 32.3
comp=Z,83nm,19.8s,baz=8.5,slow=38
SONM Songino Array 116.93 347 PKP PKiKP 02 26 07.0 +1.9
comp=Z,0.4nm,0.8s,baz=350,slow=1.6,SNR=3.3
MKAR Makanchi Array 119.75 5 PKP PKPdf 02 26 10.7 +0.2
comp=Z,0.3nm,0.7s,baz=18,slow=1.9,SNR=3.8
ASAR Alice Springs 136.00 250 PKP PKPdf 02 26 42.8 +0.8
comp=Z,0.5nm,0.8s,baz=72,slow=3.0,SNR=3.9
CHTO Chiang Mai 146.33 342 PKPdf 02 26 58.9 -1.7
CMAR Chiang Mai Arr 146.67 342 PKPbc PKPab 02 27 03.4 -0.4
comp=Z,6.4nm,0.8s,baz=343,slow=4.6,SNR=29

IDC 20 02:10:29.2±0.6, 27.93S×64.73E, h0km, mb4.1/14, mb1 4.2/14, mb1mx3.9/59, mbtmp4.1/14, MS3.5/7, Ms1 3.5/7, ms1mx3.2/32, Error ellipse: s-maj=21.5km s-min=16.6km az=142.0
NEIC 20 02:10:31.2±1.6, 28.0S±0.1×64.7E±0.1, h15km±4km, mb4.6/8, Error ellipse: s-maj=21.7km s-min=18.7km az=166.0
ISC 20 02:10:30.6±0.6, 27.9S±0.1×64.7E±0.1, h10km, n45, σ0.73/32, mb4.4/16, MS3.5/7, Southwest Indian Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
H08S1 Diego Garcia H 21.46 22 T T 02 37 26.9
baz=200
H08S2 Diego Garcia H 21.47 22 T T 02 37 30.4
baz=200,slow=74
H08S3 Diego Garcia H 21.48 22 T T 02 37 32.1
baz=200,slow=74
H08N3 Diego Garcia H 22.27 17 T T 02 38 30.5
baz=201
H08N1 Diego Garcia H 22.28 17 T T 02 38 29.4
baz=201
H08N2 Diego Garcia H 22.29 17 T T 02 38 35.6
baz=201
BOSA Boshof 34.63 259 P P 02 17 20.6 +0.3
3.5nm,0.8s,baz=91,slow=8.7,SNR=5.9
BOSA LR LR 02 28 45.3
comp=Z,96nm,19.8s,baz=118,slow=32
BOSA Boshof 34.63 259 P P 02 17 19.2 -1.1
BOSA IAmb IAmb 02 17 24.3
comp=Z,23nm,1.9s
SUR Sutherland 38.01 252 P P 02 17 50.1 +0.9
comp=Z,3.0nm,0.6s,baz=84,slow=10,SNR=7.0
SUR Sutherland 38.01 252 P P 02 17 48.7 -0.5
MAW Mawson 39.73 181 LR LR 02 32 31.6
comp=Z,69nm,18.9s,baz=55,slow=33
H01W2 Cape Leeuwin H 42.42 112 T T 03 03 37.1
baz=265
H01W3 Cape Leeuwin H 42.43 112 T T 03 03 33.5
baz=265
H01W1 Cape Leeuwin H 42.44 112 T T 03 03 35.5
baz=265
TSUM Tsumeb 43.82 271 P P 02 18 37.5 +0.3
comp=Z,2.9nm,0.8s,baz=90,slow=6.1,SNR=5.0
TSUM LR LR 02 34 28.0
comp=Z,38nm,21.1s,baz=160,slow=33
SNAA Sanae 56.72 200 P P 02 20 14.5 +0.4
comp=Z,3.5nm,0.9s,baz=63,slow=6.2,SNR=7.5
SNAA Sanae 56.72 200 P P 02 20 14.3 +0.3
SNAA IAmb IAmb 02 20 16.6
comp=Z,4.2nm,1.0s
CMAR Chiang Mai Arr 56.78 40 P P 02 20 15.9 +0.8
comp=Z,4.4nm,0.6s,baz=232,slow=7.4,SNR=17
CMAR LR LR 02 41 54.9
comp=Z,20nm,19.4s,baz=204,slow=33
RAMN Ramite 58.47 23 eP P 02 20 27.6 +0.5
comp=Z,8.5nm,0.6s
DMN Daman 58.58 21 eP P 02 20 27.9 0.0
comp=Z,10nm,0.6s
ODAN Odare 58.66 24 eP P 02 20 29.6 +1.1
comp=Z,7.1nm,0.6s
DANN Dangsing 58.85 20 eP P 02 20 29.6 -0.2
comp=Z,31nm,0.8s
JIRN Jiri 58.98 22 eP P 02 20 31.1 +0.3
comp=Z,24nm,0.6s
GUN Gumba 59.11 22 eP P 02 20 31.9 +0.2
comp=Z,19nm,0.7s
TAPN Taplejung 59.23 24 eP P 02 20 33.0 +0.6
comp=Z,17nm,0.9s
ASAR Alice Springs 61.72 103 P P 02 20 48.9 -0.6
comp=Z,1.9nm,0.7s,baz=248,slow=6.3,SNR=17
QSPA South Pole Qui 62.23 180 P P 02 20 52.8 +0.4
comp=Z,7.1nm,1.0s,baz=291,slow=4.3,SNR=9.0
LSA Lhasa 62.63 26 P P 02 20 55.0 -0.7
LSA IAmb IAmb 02 21 05.1
comp=Z,10nm,1.3s
WRA Warramunga Arr 63.42 100 P P 02 21 00.9 0.0
comp=Z,2.5nm,1.0s,baz=248,slow=6.5,SNR=2.4
WR0 Warramunga Arr 63.59 100 P P 02 21 00.6 -1.4
VNDA Vanda 64.50 166 LR LR 02 46 24.1
comp=Z,100nm,20.4s,baz=254,slow=33
AAK Ala-Archa 70.78 8 P P 02 21 47.0 -0.2
AAK IAmb IAmb 02 21 50.6
comp=Z,4.1nm,1.3s
TORD Torodi Ar. Bea 73.37 295 P P 02 22 02.8 -0.3
comp=Z,0.1nm,0.4s,baz=115,slow=5.9,SNR=3.2
KBZ Khabaz 74.04 344 LR LR 02 52 30.0
comp=Z,54nm,20.7s,baz=76,slow=36
MK31 Makanchi Array 76.04 12 P P 02 22 16.4 -1.5
MKAR Makanchi Array 76.04 12 P P 02 22 18.1 +0.2
comp=Z,1.0nm,0.7s,baz=193,slow=4.9,SNR=13
KURBB Kurchatov Arra 79.14 9 P P 02 22 35.5 +0.5
comp=Z,0.5nm,0.7s,baz=210,slow=6.3,SNR=5.1
KURK Kurchatov 79.25 9 P P 02 22 35.5 -0.1
BVAR Borovoye Array 80.75 3 P P 02 22 44.4 +0.6
comp=Z,0.5nm,0.7s,baz=160,slow=4.7,SNR=4.4
ZALV Zalesovo Beam 83.36 12 P P 02 22 58.4 +1.0
comp=Z,2.7nm,0.8s,baz=202,slow=5.1,SNR=8.5
SONM Songino Array 84.20 27 P P 02 23 02.3 +0.2
comp=Z,0.3nm,0.8s,baz=142,slow=4.9,SNR=2.5
KSRS Korea Array 87.98 45 LR LR 03 02 52.2
comp=Z,18nm,18.5s,baz=15,slow=36
YKA Yellowknife Ar 145.41 359 PKPbc PKPbc 02 30 07.9 -0.2
comp=Z,1.7nm,0.8s,baz=347,slow=3.3,SNR=20
ULM Lac du Bonnet 153.23 332 PKPbc PKPbc 02 30 27.4 -1.0
comp=Z,1.4nm,0.7s,baz=360,slow=4.0,SNR=4.0
ULM Lac du Bonnet 153.23 332 PKPbc 02 30 27.0 -1.4

NIED 20 02:12:00, 37.10N×139.40E, h11km, Mw3.5 Best double couple: M0 1.84000×10^14 NP1:φs47.00000°, δ57.00000°, λ118.00000°. NP2:φs183.00000°, δ43.00000°, λ54.00000°.
IDC 20 02:12:38.4±1.8, 37.32N×139.36E, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.3/56, mbtmp3.5/4, ML3.4/1, Error ellipse: s-maj=28.5km s-min=16.9km az=121.0
JMA 20 02:12:42.5, 37.07N×139.35E, h8km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φs173.00000°, δ50.00000°, λ48.00000°. NP2:φs47.00000°, δ55.00000°, λ129.00000°. Principal axes: T Plg59.0000°, Azm16.0000°; N Plg31.0000°, Azm203.0000°; P Plg3.0000°, Azm111.0000°;
JMA Felt III J1.
ISC 20 02:12:41.8±1.1, 37.08N±0.04×139.37E±0.04, h15km±9km, n11, σ0.57/15, mb3.5/3, 2C-2D, Eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JKT Katashina 0.33 198 ⇑P Pg 02 12 48.7 0.0
JKT S Sg 02 12 53.1 -0.3
JHK Hiroka 0.33 301 ⇓P Pg 02 12 49.0 +0.3
JFY Yanaizu 0.42 39 ⇑P Pb 02 12 51.1 +0.1
JFY S Sb 02 12 56.8 -0.3
JSB Shiboa 0.45 104 ⇓P Pb 02 12 51.9 +0.4
JSB S Sb 02 12 58.1 +0.1
JNS Sasagawa 0.74 357 P Pb 02 12 56.7 +0.3
JNS S Sb 02 13 06.6 +0.3
MJAR Matsushiro Arr 1.08 240 Pg Pg 02 13 02.4 -0.3
4.1nm,0.3s,baz=51,slow=13,SNR=79
MJAR Lg Lg 02 13 16.4
3.4nm,0.3s,baz=68,slow=31,SNR=14
MAT Matsushiro 1.08 241 P Pb 02 13 02.8 +0.6
MAT S Sg 02 13 16.0 -0.8
KSRS Korea Array 9.14 276 Pn Pn 02 14 53.3 +0.3
0.4nm,0.3s,baz=105,slow=17,SNR=3.2
MKAR Makanchi Array 42.71 302 P P 02 20 34.2 -3.9
0.1nm,0.6s,baz=97,slow=6.0,SNR=2.4
KURBB Kurchatov Arra 44.68 308 P P 02 20 52.7 -1.1
0.5nm,0.8s,baz=88,slow=8.1,SNR=3.5
WRA Warramunga Arr 56.91 186 P P 02 22 26.9 +0.7
0.6nm,0.6s,baz=0.5,slow=7.6,SNR=2.3

KRSC 20 02:19:45.5±0.8, 51.27N×157.56E, h90km±11km, ML3.7, FELT [II] at Paujetka., Near east coast of Kamchatka Peninsula

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PAU Pauzhetka 0.51 293 eP Pn 02 20 01.5 +1.3
KDTR Khodutka, Kamc 0.63 31 eP Pn 02 20 02.8 +1.5
KDTR eS Sn 02 20 14.7 +1.6
SKR Severo-Kuril's 1.08 238 eP Pn 02 20 07.3 +1.2
SKR eS Sn 02 20 22.7 +1.2
ASAK Asacha 1.14 11 eP Pn 02 20 08.4 +1.6
ASAK eS Sn 02 20 25.0 +2.2
MTVR Mutnovka 1.28 17 eP Pn 02 20 09.7 +1.1
RUS Russkaya 1.31 27 eP Pn 02 20 09.9 +1.1
RUS eS Sn 02 20 27.5 +1.1
GRL Gorelyy 1.32 14 eP Pn 02 20 10.8 +1.7
GRL eS Sn 02 20 28.8 +1.8
ALID Alaid 1.33 253 eP Pn 02 20 09.7 +0.5
KRMR Karymshinskiy 1.60 13 eP Pn 02 20 13.3 +0.8
KRMR eS Sn 02 20 33.3 +0.3
DALK Dalny 1.91 22 eP Pn 02 20 18.8 +2.3
DALK eS Sn 02 20 42.8 +2.7
UGLR Uglovaya 2.09 21 eP Pn 02 20 21.0 +2.0
UGLR eS Sn 02 20 46.6 +2.1
AVH Avacha 2.13 19 eP Pn 02 20 22.9 +3.5
KOK Koryaka 2.13 18 eP Pn 02 20 22.3 +2.8
SMAR Somma 2.14 20 eP Pn 02 20 22.6 +2.9
KRER Koryakskii 2.17 19 eP Pn 02 20 22.9 +2.9
SDLR Sedlovina 2.17 22 eP Pn 02 20 22.0 +2.0
KRX Arik 2.20 17 eP Pn 02 20 22.6 +2.2
NLC Nalytchevo 2.20 29 eP Pn 02 20 22.1 +1.9
NLC eS Sn 02 20 47.9 +1.1
KZV Kizimen 4.19 22 eP Pn 02 20 49.1 +2.0
TUMR Tumrok 4.31 20 eP Pn 02 20 51.9 +3.1
BKI Bering 6.41 49 eP Pn 02 21 18.2 +1.1

SFS 20 02:27:12.0, 38.40N×8.80W, h5km, ML3.0, TROIA (PORTUGAL)
CNRM 20 02:27:12.4±1.2, 38.27N×9.52W, h50km, Error ellipse: s-maj=9.5km s-min=6.2km az=123.0
LDG 20 02:27:13.1±0.1, 38.36N×8.86W, h10km, Ml3.6/9, Error ellipse: s-maj=2.2km s-min=1.4km az=73.0
IGIL 20 02:27:13.6, 38.34N×8.88W, h9km, ML3.8
INMG 20 02:27:13.4±1.7, 38.34N×8.88W, h11km±3km, MD3.3, ML3.6, Error ellipse: s-maj=3.1km s-min=1.6km az=75.0
MDD 20 02:27:13.0±0.3, 38.36N×8.84W, h11km, mbLg3.7/41, Error ellipse: s-maj=3.5km s-min=1.8km az=65.0, PRXIMO
ISC 20 02:27:12.8±0.9, 38.34N±0.02×8.85W±0.03, h21km±3km, n161, σ2.33/244, 7C-6D, Portugal

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PNCL Nicolau / Gran 0.34 132 ⇓iPg Pb 02 27 20.0 0.0
PNCL eSg Sb 02 27 25.0 0.0
PNCL A A 02 27 27.1
2μm,0.1s
PNCL Nicolau / Gran 0.34 132 Pg Pb 02 27 20.0 0.0
PNCL Lg Lg 02 27 25.0
2μm,0.1s
LIS Lisbon 0.44 328 eP Pb 02 27 21.4 -0.4
LIS eS Sb 02 27 27.3 -0.5
LIS AML AML 02 27 28.5
comp=N,5μm,0.4s
LIS Lisbon 0.44 328 ePg Pb 02 27 21.4 -0.4
LIS eSg Sb 02 27 27.5 -0.4
LIS A A 02 27 28.5
comp=N,2μm,0.3s
LIS Lisbon 0.44 328 Pg Pb 02 27 21.4 -0.4
LIS Lg Lg 02 27 27.5
comp=N,2μm,0.3s
INMG Instituto de M 0.48 333 ePg Pb 02 27 22.5 0.0
INMG eSg Sb 02 27 29.8 +0.7
INMG A A 02 27 34.7
comp=N,1μm,0.4s
INMG Instituto de M 0.48 333 Pg Pb 02 27 22.5 0.0
INMG Lg Lg 02 27 29.8
comp=N,747nm,0.4s
EVO Evora 0.68 74 ⇓eP Pn 02 27 25.9 -1.3
EVO eS Sn 02 27 34.8 -2.5
EVO A A 02 27 36.7
comp=N,1μm,0.3s
EVO Evora 0.68 74 Pg Pn 02 27 25.9 -1.3
EVO Lg Lg 02 27 34.8
comp=N,1μm,0.3s
EVO Evora 0.68 74 eP Pn 02 27 25.8 -1.3
EVO iS Sn 02 27 34.6 -2.6
PMAFR Mafra 0.70 331 ⇓eP Pb 02 27 25.9 -0.4
PMAFR eS Sb 02 27 35.2 -0.3
PMAFR A A 02 27 37.8
comp=N,2μm,0.3s
PMAFR Mafra 0.70 331 ⇓Pg Pb 02 27 25.9 -0.4
comp=N,24nm,0.1s,SNR=18
PMAFR Lg Lg 02 27 35.2
comp=N,4μm,0.3s,SNR=28
PTEO Sao Teotonio 0.80 173 eP Pb 02 27 28.3 +0.3
PTEO eS Sb 02 27 38.6 +0.3
PTEO A A 02 27 42.4
comp=N,2μm,0.3s
PTEO Sao Teotonio 0.80 173 Pg Pb 02 27 28.3 +0.3
PTEO Lg Lg 02 27 38.6
comp=N,950nm,0.3s
PBEJ Beja 0.84 112 eP Pb 02 27 28.4 -0.2
PBEJ eS Sn 02 27 40.6 -0.4
PBEJ A A 02 27 41.8
comp=N,716nm,0.4s
PBEJ Beja 0.84 112 Pg Pb 02 27 28.4 -0.2
PBEJ Lg Lg 02 27 40.6
comp=N,358nm,0.4s
PMTG Montargil 0.88 34 ⇑eP Pn 02 27 29.3 -0.6
PMTG eS Sn 02 27 40.5 -1.5
PMTG A A 02 27 43.2
comp=N,1μm,0.6s
PMTG Montargil 0.88 34 Pg Pn 02 27 29.3 -0.6
PMTG Lg Lg 02 27 40.5
comp=N,1μm,0.6s
PCVE Castro Verde 0.96 138 ⇓eP Pb 02 27 30.3 -0.3
PCVE eS Sb 02 27 43.7 +0.9
PCVE A A 02 27 45.9
comp=N,1μm,0.5s
PCVE Castro Verde 0.96 138 Pg Pb 02 27 30.3 -0.3
PCVE Lg Lg 02 27 43.7
comp=N,1μm,0.5s
MORF Marmelete 1.05 171 eP Pn 02 27 32.2 -0.1
MORF eS Sb 02 27 45.7 +0.3
MORF AML AML 02 27 48.0
comp=E,2μm,0.2s
MORF Marmelete 1.05 171 ⇑eP Pn 02 27 32.1 -0.1
MORF eS Sb 02 27 46.6 +1.2
MORF A A 02 27 47.4
comp=E,2μm,0.3s
MORF Marmelete 1.05 171 Pg Pn 02 27 32.1 -0.1
MORF Lg Lg 02 27 46.6
comp=E,2μm,0.3s
PESTR Estremoz 1.12 62 ⇑eP Pn 02 27 33.4 +0.2
PESTR eS Sn 02 27 47.7 -0.3
PESTR A A 02 27 49.6
comp=E,836nm,0.3s
PESTR Estremoz 1.12 62 P Pn 02 27 38.7 +5.5
SNR=243
PFVI Vila Bisbo 1.21 179 ⇑eP Pn 02 27 34.3 -0.2
PFVI eS Sn 02 27 50.8 +0.6
PFVI A A 02 27 52.6
comp=E,1μm,0.1s
PFVI Vila Bisbo 1.21 179 ⇑Pg Pn 02 27 34.2 -0.2
comp=E,19nm,0.1s,SNR=18
PFVI Lg Lg 02 27 50.4
comp=E,1μm,0.2s,SNR=29
PFVI Vila Bisbo 1.21 179 P Pn 02 27 32.9 -1.5
SNR=22
PFVI S Sn 02 27 51.1 +1.0
PVAQ Vaqueiros 1.30 136 ⇑eP Pn 02 27 35.7 +0.1
PVAQ eS Sb 02 27 53.3 +0.7
PVAQ A A 02 27 56.4
comp=E,768nm,0.3s
PVAQ Vaqueiros 1.30 136 Pg Pn 02 27 35.7 +0.1
PVAQ Lg Lg 02 27 53.3
comp=E,768nm,0.3s
PVAQ Vaqueiros 1.30 136 P Pb 02 27 39.5 +3.1
SNR=534
PVAQ S Sb 02 27 59.9 +7.3
PBDV Barranco-do-Ve 1.32 146 eP Pn 02 27 36.3 +0.3
PBDV eS Sb 02 27 54.0 +0.8
PBDV A A 02 27 58.1
comp=E,1μm,0.4s
PBDV Barranco-do-Ve 1.32 146 Pg Pn 02 27 36.3 +0.3
PBDV Lg Lg 02 27 54.0
comp=E,1μm,0.4s
PTOM Tomar 1.32 15 eP Pb 02 27 36.1 -0.7
PTOM eS Sn 02 27 53.8 +0.9
PTOM Tomar 1.32 15 Pg Pb 02 27 36.1 -0.7
PTOM Lg Lg 02 27 53.8
EGRO El Granado 1.35 126 Pn Pn 02 27 36.6 +0.2
comp=E,0.4nm,0.0s,SNR=7.9
EGRO Pg Pb 02 27 37.3 0.0
comp=E,61nm,0.2s,SNR=150
EGRO Sn Sn 02 27 52.7 -0.9
comp=E,68nm,0.1s,SNR=16
EGRO Lg Lg 02 27 56.3
comp=E,384nm,0.1s,SNR=7.9
PBAR Barrancos 1.44 96 eP Pb 02 27 39.3 +0.5
PBAR eSg Sb 02 27 58.4 +1.8
PBAR A A 02 28 01.1
comp=E,542nm,0.3s
PBAR Barrancos 1.44 96 Pg Pb 02 27 39.3 +0.5
PBAR Lg Lg 02 27 58.4
comp=E,542nm,0.3s
EBAD Badajoz 1.50 73 Pn Pn 02 27 37.9 -0.5
comp=E,2.0nm,0.0s,SNR=49
EBAD Pg Pb 02 27 40.0 +0.1
SNR=7.9
EBAD Sn Sb 02 27 57.3 -1.1
comp=E,56nm,0.1s,SNR=5.5
EBAD Lg Lg 02 27 59.4
comp=E,2μm,0.2s,SNR=11
PMRV Marv??o 1.57 46 ⇑ePn Pb 02 27 38.9 -0.6
PMRV Marv??o 1.57 46 ePg Pb 02 27 41.2 +0.1
PMRV eSn Sb 02 28 01.2 +0.6
PMRV A A 02 28 03.8
comp=E,439nm,0.6s
PMRV Marv??o 1.57 46 Pn Pb 02 27 38.9 -0.6
PMRV Pg Pb 02 27 41.2 +0.1
PMRV Sn Sb 02 28 01.2 +0.6
comp=E,439nm,0.6s
PCAS Casmilo, Conde 1.73 9 ePn Pn 02 27 41.3 -0.3
PCAS Casmilo, Conde 1.73 9 ePg Pb 02 27 44.6 +0.8
PCAS eSg Sb 02 28 07.5 +2.4
PCAS A A 02 28 10.1
comp=E,658nm,0.7s
PCAS Casmilo, Conde 1.73 9 Pn Pn 02 27 41.3 -0.3
PCAS Pg Pb 02 27 44.6 +0.8
PCAS Lg Lg 02 28 07.5
comp=E,658nm,0.7s
EMIN Mina Concepcio 1.81 108 ⇓Pn Pn 02 27 42.8 0.0
comp=E,0.9nm,0.1s,SNR=18
EMIN Pg Pb 02 27 45.1 -0.1
comp=E,14nm,0.1s,SNR=7.9
EMIN Sn Sn 02 28 05.5 +0.4
comp=E,16nm,0.1s,SNR=23
EMIN Lg Lg 02 28 09.2
comp=E,245nm,0.2s,SNR=7.9
PCBR Castelo Branco 1.84 35 ePn Pn 02 27 42.8 -0.3
PCBR Castelo Branco 1.84 35 ePg Pb 02 27 46.2 +0.6
PCBR eSg Sb 02 28 09.3 +1.1
PCBR A A 02 28 14.4
comp=E,291nm,0.5s
PCBR Castelo Branco 1.84 35 Pn Pn 02 27 42.8 -0.3
PCBR Pg Pb 02 27 46.2 +0.6
PCBR Lg Lg 02 28 09.3
comp=E,146nm,0.5s
COI Coimbra 1.89 10 ePg Pb 02 27 47.3 +0.7
COI eSg Sb 02 28 12.1 +2.3
COI A A 02 28 20.0
comp=E,363nm,0.5s
COI Coimbra 1.89 10 Pg Pb 02 27 47.3 +0.7
COI Lg Lg 02 28 12.1
comp=E,182nm,0.5s
MTE Manteigas 2.29 26 ePn Pn 02 27 48.8 -0.6
MTE Manteigas 2.29 26 ePg Pb 02 27 55.4 +2.0
MTE eSg Sb 02 28 25.5 +4.2
MTE A A 02 28 29.6
comp=E,336nm,0.7s
MTE Manteigas 2.29 26 Pn Pn 02 27 48.8 -0.6
MTE Pg Pb 02 27 55.4 +2.0
MTE Lg Lg 02 28 25.5
comp=E,168nm,0.7s
PVIS Viseu 2.48 17 ePn Pn 02 27 51.9 -0.1
PVIS Viseu 2.48 17 ePg Pb 02 27 58.6 +1.9
PVIS eSg Sb 02 28 31.0 +4.2
PVIS A A 02 28 31.9
comp=E,192nm,0.3s
PVIS Viseu 2.48 17 Pn Pn 02 27 51.9 -0.1
PVIS Pg Pb 02 27 58.6 +1.9
PVIS Lg Lg 02 28 31.0
comp=E,96nm,0.3s
ECAB El Cabril 2.72 95 Pn Pn 02 27 55.7 +0.5
comp=E,1.8nm,0.1s,SNR=8.0
ECAB Pg Pb 02 28 02.2 +1.6
comp=E,4.2nm,0.1s,SNR=7.0
ECAB Sn Sn 02 28 27.1 -0.4
comp=E,15nm,0.2s,SNR=5.6
ECAB Lg Lg 02 28 36.9
comp=E,376nm,0.4s,SNR=20
EPLA Plasencia 2.75 51 Pn Pn 02 27 55.6 -0.1
comp=E,0.3nm,0.0s,SNR=7.1
EPLA Pg Pb 02 28 01.8 +0.6
comp=E,3.5nm,0.1s,SNR=7.9
EPLA Sn Sn 02 28 27.7 -0.7
comp=E,7.4nm,0.1s,SNR=7.9
EPLA Lg Lg 02 28 38.8
comp=E,91nm,0.2s,SNR=16
HORN Hornachuelos 2.88 99 P Pb 02 28 03.7 +0.4
SNR=25
HORN S Sb 02 28 42.0 +3.9
CNIL Conil 2.97 131 eP Pb 02 28 03.5 -1.5
PVRL Vila Real 3.06 16 ePn Pn 02 27 59.6 -0.3
PVRL Vila Real 3.06 16 ePg Pb 02 28 09.5 +3.0
PVRL eSn Sn 02 28 34.3 -1.6
PVRL A A 02 28 50.7
comp=E,79nm,0.6s
PVRL Vila Real 3.06 16 Pn Pn 02 27 59.6 -0.3
PVRL Pg Pb 02 28 09.5 +3.0
PVRL Sn Sn 02 28 34.3 -1.6
comp=E,39nm,0.6s
LIJA Lijar 3.09 117 Pn Pn 02 28 00.0 -0.4
LIJA Sn Sb 02 28 44.0 -0.3
LIJA Lijar 3.09 117 eP Pn 02 28 00.0 -0.4
LIJA eS Sb 02 28 44.0 -0.3
MVO Moncorvo 3.15 26 ePn Pn 02 28 01.1 -0.1
MVO eSg Sb 02 28 53.9 +7.9
MVO A A 02 28 54.6
comp=E,133nm,0.6s
MVO Moncorvo 3.15 26 Pn Pn 02 28 01.1 -0.1
comp=E,1.6nm,0.1s,SNR=6.2
MVO Pg Pb 02 28 09.9 +1.9
comp=E,4.4nm,0.1s,SNR=7.9

MVO Sn Sn 02 28 37.6 -0.5
comp=E,7.4nm,0.1s,SNR=7.9
MVO Lg Lg 02 28 50.9
comp=E,182nm,0.4s,SNR=10
EADA Adamuz 3.37 92 Pn Pn 02 28 04.7 +0.6
comp=E,0.7nm,0.1s,SNR=7.9
EADA Pg **Pb 02 28 14.1 +2.4**
comp=E,1.2nm,0.1s,SNR=5.9
EADA Sn **Sn 02 28 42.6 -0.9**
comp=E,6.9nm,0.1s,SNR=6.2
EADA Lg Lg 02 28 57.2
comp=E,277nm,0.4s,SNR=44
PCAB Cabril 3.42 10 *e*Pn **Pn 02 28 04.6 -0.3**
PCAB *e*Sg **Sb 02 29 00.0 +6.2**
PCAB A A 02 29 08.2
comp=E,76nm,0.5s
PCAB Cabril 3.42 10 Pn **Pn 02 28 04.6 -0.3**
PCAB Lg Lg 02 29 00.0
comp=E,38nm,0.5s
ELOB Lobios 3.57 10 Pn **Pn 02 28 06.5 -0.6**
comp=E,2.2nm,0.1s,SNR=10
ELOB Sn **Sn 02 28 46.6 -2.1**
comp=E,4.2nm,0.1s,SNR=7.6
ELOB Lg Lg 02 29 03.8
comp=E,80nm,0.3s
CEU Ceuta 3.70 130 Pn **Pn 02 28 11.8 +3.2**
CEU Sn **Sn 02 28 53.8 +2.2**
CEU Ceuta 3.70 130 *e*P **Pn 02 28 11.8 +3.2**
CEU *e*S **Sn 02 28 53.8 +2.2**
EMIJ Mijas 3.70 117 Pn **Pn 02 28 09.2 +0.5**
comp=E,0.5nm,0.1s,SNR=14
EMIJ Sn **Sn 02 28 51.4 -0.3**
comp=E,3.1nm,0.2s,SNR=7.9
EMIJ Lg Lg 02 29 10.1
comp=E,46nm,0.4s
PAB San Pablo 3.71 70 Pn **Pn 02 28 09.3 +0.4**
comp=E,0.4nm,0.1s,SNR=7.9
PAB Sn **Sn 02 28 50.4 -1.6**
comp=E,1.9nm,0.1s,SNR=7.9
PAB Lg Lg 02 29 09.1
comp=E,48nm,0.2s,SNR=7.9
EZAM Zamans 3.80 2 Pn **Pn 02 28 09.9 -0.2**
comp=E,0.8nm,0.0s,SNR=7.9
EZAM Sn **Sn 02 28 50.8 -3.5**
comp=E,1.4nm,0.1s,SNR=7.9
EZAM Lg Lg 02 29 10.0
comp=E,58nm,0.3s,SNR=7.9
PBRG Braganca 3.82 24 *e*Pn **Pn 02 28 10.2 -0.2**
PBRG A A 02 29 01.3
comp=E,14nm,0.5s
PBRG *e*Sg Sb 02 29 13.7 +8.5
PBRG Braganca 3.82 24 Pn Pn 02 28 10.2 -0.2
PBRG Lg Lg 02 29 13.7
SMIR Smir Dam 3.84 133 P **Pn 02 28 13.5 +2.9**
SMIR S **Sb 02 29 02.6 -3.2**
EMAL Malaga-Limoner 3.85 113 *e*P **Pn 02 28 12.7 +2.0**
EMAL *e*S **Sb 02 29 03.0 -3.1**
ECAL Calabor 3.94 24 Pn **Pn 02 28 11.8 -0.3**
comp=E,0.8nm,0.1s,SNR=8.1
ECAL Pg **Pb 02 28 24.3 +2.8**
comp=E,4.4nm,0.2s,SNR=12
ECAL Sn **Sn 02 28 53.6 -4.1**
comp=E,7.9nm,0.3s,SNR=7.5
ECAL Lg Lg 02 29 16.3
comp=E,351nm,0.6s
EGOR Sierra Gorda, 3.96 107 Pn **Pn 02 28 13.3 +0.9**
comp=E,2.0nm,0.2s,SNR=7.9
EGOR Pg **Pb 02 28 25.9 +4.1**
comp=E,2.8nm,0.2s,SNR=7.9
EGOR Sn **Sn 02 28 56.1 -2.0**
comp=E,5.0nm,0.3s,SNR=7.9
EGOR Lg Lg 02 29 18.6
comp=E,45nm,0.3s,SNR=7.9
ESDC Sonseca Array 4.03 69 Pn **Pn 02 28 13.3 0.0**
comp=E,5.5nm,0.2s,baz=255,slow=13,SNR=10
ESDC Sn **Sn 02 28 57.6 -2.4**
comp=E,4.9nm,0.2s,baz=257,slow=23,SNR=8.3
ESDC Lg Lg 02 29 17.2
comp=E,20nm,0.3s,baz=259,slow=28,SNR=17
RSA Sarsar 4.22 144 P **Pn 02 28 18.0 +2.1**
RSA S **Sn 02 29 10.6 +5.9**
CHEFC Chefchaouen 4.29 138 P **Pn 02 28 19.9 +3.1**
CHEFC S **Sb 02 29 13.0 -5.7**
GUD Guadarrama 4.30 56 Pn **Pn 02 28 16.7 -0.4**
comp=E,0.2nm,0.1s,SNR=7.9
GUD Pg **Pb 02 28 30.9 +3.2**
comp=E,0.3nm,0.1s,SNR=7.9
GUD Sn **Sn 02 29 04.6 -2.0**
comp=E,7.2nm,0.3s,SNR=6.0
GUD Lg Lg 02 29 25.6
comp=E,182nm,0.7s,SNR=11
ELGU Los Guajares, 4.40 108 Pn **Pn 02 28 20.0 +1.6**
comp=E,0.7nm,0.1s,SNR=7.9
ELGU Sn **Sn 02 29 07.8 -1.3**
comp=E,5.7nm,0.2s,SNR=7.9
ELGU Lg Lg 02 29 32.0
comp=E,65nm,0.4s,SNR=7.9
EAGO Agolada(Pontev 4.49 7 Pn **Pn 02 28 18.9 -0.7**
comp=E,0.6nm,0.1s,SNR=7.9
EAGO Sn **Sn 02 29 07.1 -4.1**
comp=E,1.3nm,0.1s,SNR=7.9
EAGO Lg Lg 02 29 32.6
comp=E,27nm,0.4s,SNR=7.9
EQES Quesada 4.59 95 Pn **Pn 02 28 21.0 -0.1**
comp=E,0.3nm,0.2s,SNR=7.9
EQES Sn **Sn 02 29 11.3 -2.5**
comp=E,4.6nm,0.2s,SNR=7.9
EQES Lg Lg 02 29 38.0
comp=E,54nm,0.5s,SNR=5.2
EMAZ Mazaricos 4.60 359 Pn **Pn 02 28 20.7 -0.4**
comp=E,2.8nm,0.2s,SNR=7.9
EMAZ Sn **Sn 02 29 08.7 -5.2**
comp=E,4.4nm,0.1s,SNR=7.9
EMAZ Lg Lg 02 29 36.8
comp=E,47nm,0.5s,SNR=7.9
GORA Gorafe 4.67 99 Pn **Pn 02 28 22.1 0.0**
comp=E,0.5nm,0.1s,SNR=7.9
GORA Sn **Sn 02 29 14.9 -0.9**
comp=E,1.4nm,0.1s,SNR=7.9
GORA Lg Lg 02 29 40.2
comp=E,99nm,0.4s,SNR=7.9
UCM Universidad Co 4.77 64 *e*P **Pn 02 28 23.8 +0.4**
UCM *e*S **Sn 02 29 18.9 +0.8**
EBER Berja 4.95 105 Pn **Pn 02 28 27.3 +1.2**
comp=E,1.5nm,0.2s,SNR=7.9
EBER Sn **Sn 02 29 21.1 -1.6**
comp=E,1.4nm,0.2s,SNR=7.9
EBER Lg Lg 02 29 50.3
comp=E,139nm,0.8s,SNR=7.9
SESP Santiago Espad 4.97 91 Pn **Pn 02 28 27.2 +0.9**
comp=E,0.5nm,0.1s,SNR=7.9
SESP Sn **Sn 02 29 21.1 -2.1**
comp=E,4.8nm,0.2s,SNR=7.9
SESP Lg Lg 02 29 49.0
comp=E,168nm,0.5s,SNR=7.9
SESP Santiago Espad 4.97 91 P Pn 02 28 31.5 +5.2
SESP S **Sb 02 29 34.3 -4.2**
AVE Averroes 5.17 167 P **Pn 02 28 27.8 -1.1**
SNR=17
AVE S **Sn 02 29 29.0 +1.1**
AVE Averroes 5.17 167 *e*P **Pn 02 28 30.0 +1.1**
ENIJ Nijar 5.45 103 Pn **Pn 02 28 32.8 +0.1**
comp=E,0.2nm,0.2s,SNR=7.9
ENIJ Sn **Sn 02 29 31.8 -2.9**
comp=E,3.8nm,0.3s,SNR=7.9
ENIJ Lg Lg 02 30 05.8
comp=E,39nm,0.6s,SNR=4.0
EARI Arriondas 5.67 28 Pn **Pn 02 28 36.1 +0.3**
comp=E,0.1nm,0.1s,SNR=8.5
EARI Sn **Sn 02 29 36.8 -3.5**
comp=E,0.3nm,0.2s,SNR=7.9
EARI Lg Lg 02 30 11.2
comp=E,22nm,0.7s,SNR=4.8
IFR Ifrane 5.68 147 *e*P **Pn 02 28 36.3 +0.2**
IFR *e*S **Sn 02 29 45.6 +4.7**
TLOR Lorca, Murcia 5.70 95 Lg Lg 02 30 14.7
comp=E,313nm,0.7s,SNR=7.9
ETOB Tobarra 5.74 85 Pn **Pn 02 28 35.9 -0.9**
comp=E,0.7nm,0.1s,SNR=5.8
ETOB Sn **Sn 02 29 39.7 -2.3**
comp=E,1.1nm,0.2s,SNR=12
ETOB Lg Lg 02 30 14.2
comp=E,69nm,0.5s
SRHM Skhour des Reh 5.91 172 P **Pn 02 28 41.5 +2.4**
SRHM S **Sn 02 29 51.3 +5.1**
EMUR La Murta 6.02 92 Pn **Pn 02 28 41.2 +0.5**
comp=E,0.5nm,0.3s,SNR=7.9
EMUR Lg Lg 02 30 24.5
comp=E,63nm,0.6s,SNR=5.4
ECHE Chera 6.27 76 Pn **Pn 02 28 43.6 -0.5**
comp=E,0.2nm,0.0s,SNR=7.9
ECHE Sn **Sn 02 29 54.2 -0.8**
comp=E,0.8nm,0.2s,SNR=7.9
ECHE Lg Lg 02 30 27.9
comp=E,0.4nm,0.0s,SNR=7.9
ELAN Lanestosa 6.38 38 Pn **Pn 02 28 45.1 -0.5**
comp=E,1.5nm,0.2s,SNR=7.9
ELAN Sn **Sn 02 29 52.5 -5.3**
comp=E,0.6nm,0.3s,SNR=7.9
ELAN Lg Lg 02 30 33.8
comp=E,9.0nm,0.3s,SNR=7.9
MD31 MD31 6.40 147 P **Pn 02 28 46.4 +0.5**
MD31 S **Sn 02 29 56.7 -1.6**
MDT Midelt 6.51 147 P **Pn 02 28 48.9 +1.5**
SNR=62
MDT S **Sn 02 30 05.8 +4.7**
AFON Font Roja 6.53 85 Lg Lg 02 30 39.5
comp=E,77nm,0.7s,SNR=4.0
EMOS Mosqueruela 6.80 70 Pn **Pn 02 28 52.5 +1.1**
comp=E,0.2nm,0.2s,SNR=4.0
EMOS Sn **Sn 02 30 04.5 -3.7**
comp=E,0.3nm,0.2s,SNR=7.9
EMOS Lg Lg 02 30 49.1
comp=E,49nm,0.8s,SNR=7.9
EBEN2 Beniarda presa 6.80 85 Sn **Sn 02 30 03.6 -4.4**
comp=E,0.5nm,0.1s,SNR=4.0
EBEN2 Lg Lg 02 30 48.6
comp=E,49nm,0.5s,SNR=7.9
OUK Oukaimeden 7.16 173 P **Pn 02 28 55.1 -1.5**
OUK S **Sn 02 30 16.2 -1.4**
ESAC San Caprasio 7.26 60 Lg Lg 02 31 02.3
comp=E,56nm,0.4s,SNR=6.1
EORO Oroz-Betelu 7.32 49 Lg Lg 02 31 04.4
comp=E,33nm,0.5s,SNR=7.9
EALK Alkurruntz 7.40 47 Pn **Pn 02 28 58.8 -0.8**
comp=E,0.4nm,0.2s,SNR=7.9
EALK Sn **Sn 02 30 18.5 -4.4**
comp=E,1.7nm,0.3s,SNR=4.0
EALK Lg Lg 02 31 03.6
comp=E,72nm,0.8s,SNR=7.9
SJPF Ste Jean 7.50 48 *e*Pn **Pn 02 29 01.0 +0.1**
SJPF Ste Jean 7.50 48 *e*P Pn 02 29 05.9 +5.0
SJPF *e*Sn **Sn 02 30 20.9 -4.3**
comp=E,2.0nm,0.3s
SJPF *e*Sg Sb 02 31 06.2 +15
comp=E,26nm,0.8s
SJPF Ste Jean 7.50 48 Pn **Pn 02 29 01.0 +0.1**
SJPF Sn **Sn 02 30 20.9 -4.3**
comp=E,1.0nm,0.3s
SJPF Lg Lg 02 31 06.2
comp=E,13nm,0.8s
ERTA Horta de San J 7.55 67 Lg Lg 02 31 09.9
comp=E,12nm,0.4s,SNR=7.9
ETSF Etsaut 7.78 52 *e*Pn **Pn 02 29 04.1 -0.6**
ETSF *e*Sn **Sn 02 30 27.8 -4.3**
comp=E,2.7nm,0.4s
ETSF *e*Sg Sb 02 31 16.1 +17
comp=E,18nm,0.8s
ETSF Etsaut 7.78 52 Pn **Pn 02 29 04.1 -0.6**
ETSF Sn **Sn 02 30 27.8 -4.3**
comp=E,1.4nm,0.4s
ETSF Lg Lg 02 31 16.1
comp=E,8.9nm,0.8s
TTIG Tnine Tigouga, 7.78 177 P **Pn 02 29 02.0 -2.9**
TTIG S **Sn 02 30 31.2 -1.3**
ATE Arette 7.79 50 Pn **Pn 02 29 04.9 0.0**
comp=E,0.1nm,0.2s,SNR=7.9
ATE Sn **Sn 02 30 26.5 -6.0**
comp=E,0.5nm,0.3s,SNR=7.9
ATE Lg Lg 02 31 19.2
comp=E,14nm,0.5s,SNR=7.9
ARF Arif 7.87 150 P **Pn 02 29 07.7 +1.6**
ARF S **Sn 02 30 38.9 +4.3**
TZRR Tazzarine 8.01 159 P **Pn 02 29 08.5 +0.5**
TZRR S **Sn 02 30 40.4 +2.4**
ECHI Chisagues Biel 8.13 55 Pn **Pn 02 29 09.0 -0.6**
comp=E,0.3nm,0.1s,SNR=7.9
ECHI Sn **Sn 02 30 35.3 -5.7**
comp=E,0.4nm,0.1s,SNR=7.9
EPF Esparros 8.40 53 *e*Pn **Pn 02 29 13.5 +0.2**
EPF Esparros 8.40 53 *e*P Pn 02 29 18.2 +4.9
EPF *e*Sn **Sn 02 30 43.0 -4.6**
comp=E,6.2nm,0.4s
EPF *e*Sg Sb 02 31 35.4 +18
comp=E,11nm,0.5s
EPF Esparros 8.40 53 Pn **Pn 02 29 13.5 +0.2**
EPF Sn **Sn 02 30 43.0 -4.6**
comp=E,3.1nm,0.4s
EPF Lg Lg 02 31 35.4
comp=E,5.3nm,0.5s
EMIR Miracle 8.71 63 Pn **Pn 02 29 17.8 +0.3**
comp=E,1.8nm,0.3s,SNR=7.9
EMIR Sn **Sn 02 30 49.5 -5.6**
comp=E,2.7nm,0.4s,SNR=7.9
EMIR Lg Lg 02 31 49.6
comp=E,15nm,0.5s,SNR=7.9
CLLI Llivia 9.23 60 Pn **Pn 02 29 25.9 +1.2**
comp=E,0.1nm,0.2s,SNR=7.9
CLLI Sn **Sn 02 31 01.4 -6.6**
comp=E,0.1nm,0.2s,SNR=7.9
CFON Fontmartina 9.30 65 Pn **Pn 02 29 24.8 -0.8**
comp=E,0.2nm,0.1s,SNR=7.9
LFF La Frestale 9.74 44 *e*Pn **Pn 02 29 30.7 -0.9**
LFF La Frestale 9.74 44 *e*P Pn 02 29 37.1 +5.5
LFF La Frestale 9.74 44 Pn **Pn 02 29 30.7 -0.9**
RJF Les Rejaudoux 10.40 45 *e*Pn **Pn 02 29 38.9 -1.7**
RJF Les Rejaudoux 10.40 45 *e*P Pn 02 29 45.5 +4.9
RJF Les Rejaudoux 10.40 45 Pn **Pn 02 29 38.9 -1.7**
QUIF Quistinic 10.43 22 *e*P Pn 02 29 46.7 +5.7
QUIF Quistinic 10.43 22 Pn Pn 02 29 46.7 +5.7
MFF Saint Martin d 10.46 35 *e*P Pn 02 29 46.8 +5.4
MFF Saint Martin d 10.46 35 Pn Pn 02 29 46.8 +5.4
CAF Calviac 10.48 48 *e*Pn **Pn 02 29 40.6 -1.2**
CAF Calviac 10.48 48 *e*P Pn 02 29 46.6 +4.8
CAF Calviac 10.48 48 Pn **Pn 02 29 40.6 -1.2**
TCF Toulx Ste Croi 11.40 42 *e*Pn **Pn 02 29 52.8 -1.5**
TCF Toulx Ste Croi 11.40 42 *e*P Pn 02 29 59.6 +5.3
TCF Toulx Ste Croi 11.40 42 Pn **Pn 02 29 52.8 -1.5**
BGF Bois d'Agland 11.91 43 *e*P Pn 02 30 06.4 +5.2
BGF *e*Sn **Sn 02 32 06.5 -6.9**
comp=E,9.9nm,0.5s
VIVF Saint-Julien-l 12.03 53 *e*P Pn 02 30 07.6 +4.7
LDF La Druitiere 12.04 29 *e*Pn **Pn 02 30 02.5 -0.5**
LDF La Druitiere 12.04 29 *e*P Pn 02 30 08.8 +5.8
HYF Humbligny 12.27 40 *e*P P 02 30 11.6 -6.8
AVF Avril sur Loir 12.32 43 *e*P Pn 02 30 11.8 +4.9
AVF *e*Sn **Sn 02 32 15.9 -7.7**
comp=E,0.3nm,0.2s
SMF Signal de Mont 12.50 44 *e*Sn **Sn 02 32 20.3 -7.6**
comp=E,0.6nm,0.2s
SSF Saint Saulge 12.58 42 *e*P Pn 02 30 14.5 +4.1
ORIF Oris-en-Rattie 12.82 55 *e*P P 02 30 18.7 -5.9
LOR Lormes 12.89 42 *e*P Pn 02 30 19.2 +4.5
PAGF Fort de Pagny 14.68 41 *e*Pn **Pn 02 30 37.9 -1.2**
VYHS Vyhne 22.41 54 *e*PN **P 02 32 16.3 +6.4**

IDC **20** *02:34:18.4±1.2, 21°.21S×67°.05W, h188km±21km, mb3.1/1, mb1 3.0/4, mb1mx2.9/20, mbtmp3.4/4, MS3.9/1, Ms1 3.9/1, ms1mx2.6/13, Error ellipse: s-maj=38.5km s-min=13.1km az=107.0*
SJA **20** *02:34:18.7±0.8, 21°.25S×67°.21W, h202km±12km, ML2.5, MW2.7*
GUC **20** *02:34:20.2±0.6, 21°.21S×67°.43W, h221km±5km, ML3.4*
ISC 20 02:34:19.0±1.0, 21°.21S±0°.04×67°.27W±0°.05, h205km±9km, n32, σ0°.94/54, 11C-4D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	**Yavi**	**1.89**	**121**	*i* P	**Pn**	**02 34 57.3**	**0.0**
YJA				IAML		02 34 57.8	
	comp=Z,22nm,0.2s						
YJA				*e*S	**S**	**02 35 25.5**	**-1.1**
PB09	**IPOC Station P**	**1.93**	**252**	⇑ *i* P	**Pn**	**02 34 58.2**	**+0.9**
PB09				*i* S	**S**	**02 35 27.6**	**+0.9**
PB09	**IPOC Station P**	**1.93**	**252**	*i* P	**Pn**	**02 34 58.3**	**+0.9**
PB08	**IPOC Station P**	**2.06**	**301**	⇑ *i* P	**Pn**	**02 34 59.7**	**+0.8**
PB08				*i* S	**S**	**02 35 30.3**	**+0.9**
LVC	**Limon Verde**	**2.07**	**227**	⇑ *i* P	**Pn**	**02 34 59.7**	**+0.8**
LVC				*i* S	**S**	**02 35 30.5**	**+0.9**
LVC	**Limon Verde**	**2.07**	**227**	P	**Pn**	**02 34 59.5**	**+0.6**
	comp=Z,2.8nm,0.3s,baz=44,slow=8.3,SNR=58						
LVC				S	**S**	**02 35 30.1**	**+0.5**
	comp=Z,3.8nm,0.3s,baz=115,slow=20,SNR=15						
PB01	**IPOC Station P**	**2.08**	**274**	⇑ *i* P	**Pn**	**02 34 58.9**	**+0.1**
PB01				*i* S	**S**	**02 35 28.8**	**-0.4**
PB01				IAML		02 35 31.3	
	comp=E,65nm,0.3s						
GO01	**Chusmiza**	**2.37**	**310**	⇓ *i* P	**Pn**	**02 35 02.9**	**+0.7**
GO01				*e*S	**S**	**02 35 35.9**	**+0.6**
GO01				IAML		02 35 46.1	
	comp=N,149nm,0.1s						
PB02	**IPOC Station P**	**2.46**	**267**	⇑ *i* P	**Pn**	**02 35 02.9**	**+0.1**
PB02				*i* S	**S**	**02 35 35.1**	**-1.2**
PB02				IAML		02 35 38.1	
	comp=E,141nm,0.2s						
PB03	**IPOC Station P**	**2.46**	**250**	*e*P	**Pn**	**02 35 03.1**	**+0.2**
PB03				*i* S	**S**	**02 35 35.7**	**-0.9**
PB03				IAML		02 35 36.5	
	comp=E,78nm,0.2s						
PB07	**IPOC Station P**	**2.50**	**258**	⇑ *i* P	**Pn**	**02 35 03.4**	**+0.1**
PB07				*i* S	**S**	**02 35 36.4**	**-0.8**
PB07				IAML		02 35 36.9	
	comp=E,87nm,0.4s						
PB06	**IPOC Station P**	**2.61**	**235**	⇓ *i* P	**Pn**	**02 35 04.9**	**+0.4**
PB06				*i* S	**S**	**02 35 39.6**	**0.0**
PB06				IAML		02 35 41.1	
	comp=E,56nm,0.2s						
PB06	**IPOC Station P**	**2.61**	**235**	*i* P	**Pn**	**02 35 05.0**	**+0.4**
PB11	**IPOC Station P**	**2.66**	**302**	⇑ *i* P	**Pn**	**02 35 05.2**	**0.0**
PB11				*i* S	**S**	**02 35 39.5**	**-1.2**
PATCX	**Punta Patache**	**2.72**	**278**	⇑ *i* P	**Pn**	**02 35 05.9**	**+0.1**
PATCX				*i* S	**S**	**02 35 40.3**	**-1.5**
PATCX				IAML		02 35 42.8	
	comp=N,106nm,0.2s						
PB15	**IPOC Station P**	**2.85**	**225**	⇑ *i* P	**Pn**	**02 35 08.4**	**+1.1**
PB15				*i* S	**S**	**02 35 45.0**	**+0.3**
PB15	**IPOC Station P**	**2.85**	**225**	*i* P	**Pn**	**02 35 07.9**	**+0.5**
PB15				*e*S	**S**	**02 35 44.2**	**-0.5**
PB04	**IPOC Station P**	**2.91**	**247**	⇓ *i* P	**Pn**	**02 35 08.3**	**+0.3**
PB04				*i* S	**S**	**02 35 44.0**	**-1.6**
PB04				IAML		02 35 47.9	
	comp=N,52nm,0.4s						
PB04	**IPOC Station P**	**2.91**	**247**	*i* P	**Pn**	**02 35 08.3**	**+0.3**
PB04				*e*S	**S**	**02 35 44.7**	**-0.9**
MNMC	**Minye Minye**	**3.01**	**313**	*e*P	**Pn**	**02 35 09.9**	**+0.7**
MNMC				*i* S	**S**	**02 35 47.8**	**-0.2**
PSGC	**Pisagua**	**3.12**	**300**	⇓ *i* P	**Pn**	**02 35 09.6**	**-0.8**
PSGC				*i* S	**S**	**02 35 47.9**	**-2.2**
PSGC				IAML		02 35 50.2	
	comp=E,45nm,0.1s						
PB05	**IPOC Station P**	**3.18**	**238**	⇑ *i* P	**Pn**	**02 35 11.1**	**0.0**
PB05				*e*S	**S**	**02 35 49.9**	**-1.4**
PB05				IAML		02 35 52.1	
	comp=E,24nm,0.3s						
PB05	**IPOC Station P**	**3.18**	**238**	*i* P	**Pn**	**02 35 11.6**	**+0.5**
PB10	**IPOC Station P**	**3.81**	**232**	*e*P	**Pn**	**02 35 18.7**	**+0.1**
PB10				*e*S	**S**	**02 36 03.0**	**-2.0**
PB14	**IPOC Station P**	**4.47**	**220**	*i* P	**Pn**	**02 35 27.1**	**0.0**
GO02	**Mina Guanaco**	**4.48**	**208**	⇑ *i* P	**Pn**	**02 35 27.5**	**+0.3**
GO02				*i* S	**S**	**02 36 19.4**	**-1.2**
LPAZ	**La Paz**	**4.96**	**350**	P	**Pn**	**02 35 34.6**	**+0.9**
	comp=E,0.3nm,0.3s,baz=151,slow=13,SNR=9.4						
LPAZ				S	**S**	**02 36 31.6**	**-0.5**
	comp=E,0.1nm,0.3s,baz=223,slow=18,SNR=2.3						
LPAZ	**La Paz**	**4.96**	**350**	*i* P	**Pn**	**02 35 34.5**	**+0.9**
SIV	**San Ignacio**	**7.83**	**50**	P	**Pn**	**02 36 07.6**	**-2.6**
	comp=E,1.8nm,0.3s,baz=246,slow=11,SNR=34						
JTS	**Las Juntas de**	**35.80**	**329**	LR	LR	02 56 09.2	
	comp=E,157nm,18.8s,baz=194,slow=36						
TORD	**Torodi Ar. Bea**	**75.82**	**70**	P	**P**	**02 45 43.0**	**0.0**
	comp=E,0.3nm,0.5s,baz=254,slow=5.7,SNR=6.7						
MKAR	**Makanchi Array**	**144.49**	**37**	PKP	**PKPdf**	**02 53 32.2**	**+1.4**
	comp=E,0.2nm,0.6s,baz=347,slow=1.9,SNR=3.1						

IDC 20 02:48:02.2±3.6, 51°.90N×152°.64E, h378km±36km, mb2.8/4, mb1 2.9/5, mb1mx2.6/46, mbtmp3.5/5, Error ellipse: s-maj=133.2km s-min=23.1km az=165.0, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**3.32**	**67**	P	Pn	02 49 06.3	-0.1
	0.2nm,0.3s,baz=205,slow=6.4,SNR=3.9						
INK	**Inuvik**	**37.55**	**36**	P	P	02 54 41.5	+0.3
	0.4nm,0.3s,baz=290,slow=6.8,SNR=4.6						
MKAR	**Makanchi Array**	**44.48**	**293**	P	P	02 55 37.4	0.0
	0.3nm,0.3s,baz=57,slow=6.4,SNR=13						
YKA	**Yellowknife Ar**	**47.05**	**39**	P	P	02 55 56.6	-0.3
	0.2nm,0.6s,baz=301,slow=7.4,SNR=4.4						
FINES	**FINESS Array B**	**59.27**	**333**	P	P	02 57 24.6	-0.1
	0.5nm,0.4s,baz=38,slow=7.2,SNR=7.2						
NOA	**NORSAR Array B**	**63.26**	**340**	P	P	02 57 51.0	-0.3
	34nm,0.7s,baz=24,slow=6.4,SNR=2.7						

UPA **20** *02:52:24.9±1.7, 7°.38N×79°.97W, h1km±6km, MW4.2*
NEIC **20** *02:52:25.1±1.8, 7°.66N±0°.08×79°.67W±0°.05, h10km±2km, mb4.0/3, Mwr4.2(UPA), Error ellipse: s-maj=15.5km s-min=5.4km az=208.0*
IDC **20** *02:52:26.0±1.4, 8°.03N×79°.54W, h0km, mb3.6/4, mb1 4.0/7, mb1mx3.6/39, mbtmp3.8/7, ML2.9/3, MS3.1/8, Ms1 3.1/8, ms1mx2.8/35, Error ellipse: s-maj=48.0km s-min=21.5km az=33.0*
RSNC **20** *02:52:30.8±1.3, 7°.10N×79°.39W, h0km±18km, ML3.2, Mw3.5*
ISC 20 02:52:23.4±1.4, 7°.35N±0°.03×79°.91W±0°.03, h7km±10km, n71, σ2°.30/99, mb3.9/7, MS3.4/4, 7C-7D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AZU	**Azuero**	**0.57**	**321**	⇑ *i* P	**Pb**	**02 52 35.8**	**+0.1**
AZU				*e*S	**Sb**	**02 52 43.8**	**-0.2**
CACAO	**El Cacao, Vera**	**0.94**	**270**	⇓ *i* P	**Pb**	**02 52 41.5**	**-0.5**
CACAO				*i* S	**Sn**	**02 52 55.5**	**-1.2**
VTON	**El Valle, Cocl**	**1.27**	**351**	⇑ *i* P	**Pn**	**02 52 47.5**	**-0.2**
VTON				*e*S	**Sg**	**02 53 05.3**	**+0.9**
CALO3	**Calobre, Verag**	**1.33**	**317**	⇑ *i* P	**Pb**	**02 52 48.5**	**-0.3**
CALO3				*i* S	**Sg**	**02 53 05.5**	**-0.8**
GMAL	**Guarumal, Vera**	**1.37**	**288**	*e*P	**Pg**	**02 52 49.9**	**+0.2**
GMAL				*e*S	**Sg**	**02 53 08.4**	**+0.8**
CHOR3	**La Chorrera**	**1.55**	**5**	⇓ *i* P	**Pb**	**02 52 52.2**	**-0.2**
CHOR3				*i* S	**Sg**	**02 53 13.9**	**+0.6**
FLAM	**Flamenco Islan**	**1.60**	**13**	*e*P	**Pb**	**02 52 52.7**	**+0.6**
ZANG	**Zanguenga, Cho**	**1.60**	**2**	⇑ *i* P	**Pb**	**02 52 52.9**	**-0.5**
ZANG				*i* S	**Sg**	**02 53 14.7**	**-0.2**
UPA	**Univ. de Panam**	**1.67**	**13**	*e*P	**Pb**	**02 52 53.4**	**+0.3**
UPA				⇑ *i* P	**Pb**	**02 52 53.8**	**-0.7**
UPA				*e*S	**Sb**	**02 53 15.4**	**-0.3**
UPA				*e*S	**Sb**	**02 53 15.4**	**-0.3**
MFS3	**Miraflores**	**1.68**	**11**	*i* P	**Pb**	**02 52 53.9**	**-0.6**
MFS3				*i* S	**Sb**	**02 53 15.8**	**0.0**
PML3	**Paraiso**	**1.69**	**10**	*i* P	**Pn**	**02 52 54.1**	**+0.7**
BCIP	**Isla Barro Col**	**1.81**	**2**	⇑ *i* P	**Pb**	**02 52 56.4**	**-0.5**
BCIP				*e*S	**Sg**	**02 53 20.3**	**-1.4**
BCIP	**Isla Barro Col**	**1.81**	**2**		**Pn**	**02 52 53.2**	**-1.8**
BCIP				Sn	**Sn**	**02 53 11.7**	**-6.6**
FRIJ	**El Hiral**	**1.87**	**6**	⇓ *i* P	**Pb**	**02 52 57.4**	**-0.6**
FRIJ				*i* S	**Sg**	**02 53 22.3**	**-1.4**
MAD3	**Madden Dam**	**1.88**	**9**	*e*P	**Pb**	**02 52 57.7**	**-0.3**
MLIR	**Monte Lirio**	**1.88**	**2**	⇑ *i* P	**Pb**	**02 52 57.5**	**-0.7**
MLIR				*e*S	**Sg**	**02 53 22.8**	**-1.2**
PINA	**Piqa, Costa Ab**	**1.90**	**356**	⇓ *i* P	**Pb**	**02 52 57.8**	**-0.7**
SPIL	**Cristobal, Col**	**1.90**	**360**	*e*P	**Pb**	**02 52 58.1**	**-0.4**
CHPO	**Chepo, Panama**	**1.98**	**24**	*e*P	**Pn**	**02 52 58.4**	**+1.1**
CHPO				*e*S	**Sb**	**02 53 24.4**	**-0.2**
PTAC	**Punta Ardita,**	**2.10**	**95**	⇓ *e*P	**Pn**	**02 52 57.4**	**-1.6**
PTAC				*e*S	**Sn**	**02 53 19.9**	**-5.5**
PTAC				*i*		02 53 21.8	
	comp=Z,648nm,0.2s						
SOLC	**Bahia Solano**	**2.73**	**114**	⇓ *i* P	**Pn**	**02 53 05.8**	**-1.8**
SOLC				*e*S	**Sn**	**02 53 34.9**	**-5.9**
SOLC				*i*		02 53 38.5	
	comp=Z,223nm,0.5s						
SOLC				*i*		02 53 38.6	
	comp=Z,220nm,0.5s						
DVD	**David**	**2.74**	**293**	*e*P	**Pb**	**02 53 10.6**	**-2.1**
DVD				*i* S	**Sg**	**02 53 49.2**	**-2.2**
BCO2	**Palmira**	**2.93**	**298**	*e*P	**Pb**	**02 53 12.8**	**+2.3**
BCO2				*e*S	**Sb**	**02 53 49.7**	**-2.4**
BRU2	**Volcan**	**3.10**	**298**	*e*P	**Pb**	**02 53 14.7**	**+1.7**
BRU2				*e*S	**Sb**	**02 53 53.0**	**-4.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
CNI2	El Empalme, Bo	3.27	309	eP	Pn	02 53 17.2	+2.1
PIZC	Pizarro, Choco	3.47	133	eS	Sn	02 53 56.2	-3.0
DBBC	Dabeiba	3.69	95	⇓eP	Pn	02 53 21.6	+0.6
DBBC				eS	Sn	02 54 05.3	+0.5
DBBC				i		02 54 13.8	
	comp=Z,66nm,0.6s						
CBOC	Ciudad Bolivar	4.15	111	eP	Pn	02 53 26.4	-0.9
CBOC				eS	Sn	02 54 10.2	-6.0
CBOC				i		02 54 16.1	
	comp=Z,29nm,0.5s						
PLMC	San Jos del P	4.35	124	eP	Pn	02 53 28.3	-1.7
PLMC				eS	Sn	02 54 17.2	-3.8
PLMC				i		02 54 20.2	
	comp=Z,62nm,0.1s						
UREC	San Jos de Ur	4.36	84	eP	Pn	02 53 31.6	+1.4
UREC				eS	Sn	02 54 17.1	-4.2
UREC				i		02 54 23.0	
	comp=Z,23nm,0.8s						
HELC	Santa Helena	4.50	104	eP	Pn	02 53 33.3	+0.8
HELC				eS	Sn	02 54 24.4	+1.1
HELC				i		02 54 28.9	
	comp=Z,30nm,0.6s						
YOTC	Yotoco, Valle	4.88	133	eP	Pn	02 53 35.9	-1.4
HDC	Heredia	4.92	303	Pn	Pn	02 53 39.2	+1.3
HDC				Sn	Sn	02 54 35.2	0.0
GUY2C	Guyana, Caldas	4.99	115	eP	Pn	02 53 39.6	+0.4
GUY2C				eS	Sn	02 54 34.4	-3.0
GUY2C				i		02 54 42.1	
	comp=Z,22nm,0.8s						
ZARC	Zaragoza, Cauc	5.02	88	eP	Pn	02 53 40.8	+1.6
ZARC				eS	Sn	02 54 32.7	-4.7
ZARC				i		02 54 40.8	
	comp=Z,13nm,0.6s						
NORC	Norcasia	5.32	109	eP	Pn	02 53 45.5	+2.1
NORC				eS	Sn	02 54 45.5	+0.6
NORC				i		02 54 49.3	
	comp=Z,13nm,0.6s						
SJCC	San Jacinto, C	5.32	61	eP	Pn	02 53 47.5	+4.0
PTBC	PUERTO BERRIO,	5.48	98	eP	Pn	02 53 46.8	+1.3
PTBC				i		02 55 09.3	
	comp=Z,12nm,0.7s						
ORTC	Ortega, Tolima	5.76	126	eP	Pn	02 53 51.1	+1.6
ORTC				eS	Sn	02 54 58.8	+2.8
ORTC				i		02 55 03.3	
	comp=Z,24nm,0.5s						
JTS	Las Juntas de	5.78	301	Pn	Pn	02 53 53.8	+4.2
	comp=Z,0.5nm,0.3s,baz=162,slow=20,SNR=2.1						
JTS				Lg	Lg	02 55 21.1	
	comp=Z,0.4nm,0.3s,baz=177,slow=19,SNR=3.4						
JTS	Las Juntas de	5.78	301		Pn	02 53 52.3	+2.7
JTS				Sn	Sn	02 54 57.8	+1.6
SMLC	San Martn de	5.96	76	eP	Pn	02 53 55.3	+3.1
SPBC	San Pablo de B	6.04	106	eP	Pn	02 53 56.0	+2.6
ROSC	El Rosal	6.09	114	Pn	Pn	02 53 57.6	+3.3
	comp=Z,4.6nm,0.3s,baz=117,slow=2.3,SNR=20						
ROSC				Sn	Sn	02 55 09.4	+4.8
	comp=Z,0.8nm,0.3s,baz=98,slow=19,SNR=2.2						
ROSC	El Rosal	6.09	114	eP	Pn	02 53 57.3	+3.0
ROSC	El Rosal	6.09	114		Pn	02 53 55.0	+0.7
ROSC					Sn	02 55 03.5	-1.1
PRAC	Prado	6.17	126	eP	Pn	02 53 57.3	+2.3
PRAC				eS	Sn	02 55 08.2	+2.3
PRAC				i		02 55 12.2	
	comp=Z,26nm,0.5s						
ESPN	Las Esperanzas	6.47	318	Pn	Pn	02 53 59.6	+0.5
OCAC	Ocana	6.59	82	eP	Pn	02 54 03.0	+2.0
OCAC				i		02 55 25.6	
	comp=Z,9.4nm,0.5s						
CHIC	Chingaza	6.71	113	eP	Pn	02 54 05.9	+3.1
CHIC				i		02 54 16.9	
	comp=Z,8.8nm,0.3s						
BARC	Barichara	6.72	96	eP	Pn	02 54 04.8	+2.0
BARC				i		02 55 51.9	
	comp=Z,23nm,0.9s						
RUSC	La Rusia	6.94	102	eP	Pn	02 54 08.6	+2.6
FLOC	Florencia	7.13	143	eP	Pn	02 54 10.4	+2.2
PAMC	Pamplona, Colo	7.16	90	eP	Pn	02 54 11.1	+2.1
PAMC				i		02 55 42.2	
	comp=Z,8.1nm,0.8s						
TAMC	Tame, Arauca	8.12	96	eP	Pn	02 54 23.8	+2.0
SDV	Santo Domingo	9.31	80	Pn	Pn	02 54 35.7	-2.7
	comp=Z,0.9nm,0.3s,baz=261,slow=13,SNR=3.4						
SDV				LR	LR	02 58 45.6	
	comp=Z,83nm,19.7s,baz=56,slow=43						
APG	El Apazote	12.84	307	LR	LR	03 01 12.8	
	comp=Z,52nm,20.5s,baz=115,slow=41						
TEIG	Tepich	15.15	329	LR	LR	03 03 15.5	
	comp=Z,46nm,18.4s,baz=139,slow=44						
NNA	Nana	19.45	171	LR	LR	03 05 03.6	
	comp=Z,8.2nm,21.5s,baz=352,slow=38						
SAML	Samuel	23.24	134	P	P	02 57 32.7	+1.2
SAML				IAmb	IAmb	02 57 33.1	
	comp=Z,3.3nm,0.8s						
LRAL	Lakeview Retre	26.39	347	P	P	02 57 59.0	-1.6
LRAL				IAmb	IAmb	02 58 08.1	
	comp=Z,3.5nm,1.1s						
MDP	Montagnes des	27.20	93	LR	LR	03 09 22.2	
	comp=Z,49nm,18.7s,baz=246,slow=38						
MNMC	Minye Minye	28.21	159	P	P	02 58 21.2	+4.0
MNMC				IAmb	IAmb	02 58 25.4	
	comp=Z,7.5nm,1.0s						
TKL	Tuckaleechee C	28.40	353	LR	LR	03 09 31.9	
	comp=Z,51nm,18.1s,baz=108,slow=37						
PDAR	Pinedale Array	43.88	328	P	P	03 00 31.5	+0.6
	comp=Z,0.3nm,0.6s,baz=133,slow=9.2,SNR=3.6						
ULM	Lac du Bonnet	44.80	345	P	P	03 00 37.1	-0.7
	comp=Z,0.8nm,0.5s,baz=156,slow=12,SNR=2.9						
NVAR	Mina Array Bea	46.43	318	P	P	03 00 53.2	+1.9
	comp=Z,0.5nm,0.8s,baz=134,slow=8.9,SNR=3.0						
YKA	Yellowknife Ar	60.58	342	P	P	03 02 34.3	-0.2
	comp=Z,1.2nm,0.8s,baz=134,slow=7.2,SNR=17						
USHA	Ushuaia	62.69	173	LR	LR	03 29 05.8	
	comp=Z,51nm,19.0s,baz=243,slow=35						
PMSA	Palmer Station	72.90	173	LR	LR	03 33 07.6	
	comp=Z,52nm,18.6s,baz=143,slow=33						
WRA	Warramunga Arr	144.53	246	PKPbc	PKiKP	03 12 05.0	-0.3
	comp=Z,1.3nm,0.7s,baz=99,slow=3.3,SNR=5.9						

MDD **20** *02:54:05.6±0.8, 35.38N×2.71W, h17km±4km, mbLg2.5/17, Error ellipse: s-maj=8.6km s-min=5.5km az=127.0, PRXIMO*

INMG **20** *02:54:05.4±1.2, 35.36N×2.75W, h16km±5km, ML2.4, Error ellipse: s-maj=5.3km s-min=4.0km az=126.0*

SFS **20** *02:54:05.0, 35.30N×2.70W, h19km, ML2.2, ALBORAN SUR*

CNRM **20** *02:54:11.6±0.6, 35.53N×2.86W, h50km, Error ellipse: s-maj=5.9km s-min=3.6km az=66.0*

ISC 20 02:54:06.0±1.1, 35.53N±0.02×2.87W±0.03, h18km±4km, n65, σ1.75/114, 1C-1D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MELI	Melilla	0.24	192	P	Pg	02 54 10.2	-1.3
MELI				S	Sg	02 54 13.9	-1.4
MELI	Melilla	0.24	192	eP	Pg	02 54 10.2	-1.3
MELI				eS	Sg	02 54 13.9	-1.4
EALB	Alboran	0.43	342	⇓P	Pn	02 54 17.2	-0.2
	180nm,0.1s,SNR=18						
EALB				S	Sn	02 54 25.2	+0.5
	202nm,0.2s,SNR=7.9						
PALE	Palemas	0.92	251	P	Pn	02 54 27.8	+3.6
PALE				S	Sn	02 54 40.8	+3.8
JBK	JBK	1.22	168	P	Pg	02 54 32.6	+3.0
JBK				S	Sg	02 54 48.4	+2.9
PVLZ	Peæn de	1.22	254	P	Pn	02 54 24.6	-3.5
PVLZ	Peæn de	1.22	254	eP	Pn	02 54 24.6	-3.5
EBER	Berja	1.37	359	P	Pn	02 54 30.6	+0.2
	0.9nm,0.2s,SNR=7.9						
EBER				S	Sn	02 54 47.2	-1.0
	58nm,0.4s,SNR=7.9						
ELGU	Los Guajares,	1.47	336	P	Pn	02 54 31.4	-0.3
	1.7nm,0.2s,SNR=7.9						
ELGU				S	Sb	02 54 52.1	+0.8
	44nm,0.3s,SNR=7.9						
ENIJ	Nijar	1.54	20	P	Pn	02 54 31.4	-1.2
	4.3nm,0.2s,SNR=7.9						
ENIJ				S	Sn	02 54 51.2	-0.9
	94nm,0.4s,SNR=7.9						
EMAL	Malaga-Limoner	1.76	315	eP	Pn	02 54 35.4	-0.2
EMAL				eS	Sn	02 54 57.6	0.0
EMIJ	Mijas	1.85	304	P	Pn	02 54 36.8	-0.1
	1.8nm,0.2s,SNR=8.0						
EMIJ				S	Sn	02 54 59.7	-0.2
	32nm,0.5s,SNR=7.9						
EGOR	Sierra Gorda,	1.87	328	P	Pn	02 54 37.8	+0.6
	1.0nm,0.3s,SNR=7.9						
EGOR				S	Sb	02 55 03.4	+0.6
	8.0nm,0.4s,SNR=7.9						
GORA	Gorafe	1.95	356	P	Pn	02 54 39.7	+1.3
	1.4nm,0.2s,SNR=7.9						
GORA				S	Sn	02 55 03.8	+1.4
	24nm,0.4s,SNR=7.9						
SMIR	Smir Dam	2.05	275	P	Pb	02 54 43.7	+1.0
SMIR				S	Sb	02 55 10.0	+2.2
CHEFC	Chefchaouen	2.06	259	P	Pb	02 54 43.9	+1.0
CHEFC				S	Sb	02 55 08.5	+0.3
CEU	Ceuta	2.07	281	P	Pn	02 54 39.9	+0.1
CEU				S	Sn	02 55 02.0	-3.1
CEU	Ceuta	2.07	281	eP	Pn	02 54 39.9	+0.1
CEU				eS	Sn	02 55 02.0	-3.1
EQES	Quesada	2.28	356	P	Pb	02 54 45.1	-1.5
	6.2nm,0.2s,SNR=7.9						
EQES				S	Sn	02 55 12.2	+1.7
	4.0nm,0.2s,SNR=7.9						
LIJA	Lijar	2.47	305	P	Pb	02 54 49.0	-0.8
LIJA	Lijar	2.47	305	eP	Pb	02 54 49.0	-0.8
TDRA	Tendrara	2.58	164	P	Pb	02 54 51.3	-0.5
TDRA				S	Sb	02 55 22.5	-0.7
SESP	Santiago Espad	2.60	6	P	Pn	02 54 49.2	+1.9
	6.1nm,0.3s,SNR=7.9						
SESP				S	Sn	02 55 20.3	+1.7
	7.5nm,0.2s,SNR=7.9						
SESP	Santiago Espad	2.60	6	P	Pb	02 54 52.4	+0.2
	SNR=21						
SESP				S	Sb	02 55 23.7	-0.2
EMUR	La Murta	2.66	29	P	Pn	02 54 47.8	-0.2
	4.5nm,0.4s,SNR=7.9						
EMUR				S	Sn	02 55 16.1	-3.6
	15nm,0.4s,SNR=7.9						
IFR	Ifrane	2.73	223	ePg	Pg	02 54 57.7	-0.8
IFR				eS	Sn	02 55 18.9	-3.0
EADA	Adamuz	2.97	333	P	Pn	02 54 53.7	+1.4
	0.9nm,0.2s,SNR=7.9						
EADA				S	Sn	02 55 30.1	+2.7
	7.9nm,0.5s,SNR=7.9						
HORN	Hornachuelos	3.00	321	P	Pb	02 54 56.9	-2.1
	SNR=13						
HORN				S	Sn	02 55 32.3	+4.0
MDT	Midelt	3.06	208	P	Pb	02 54 57.6	-2.4
	SNR=33						
MDT				S	Sb	02 55 37.6	+0.4
MD31	MD31	3.08	211	P	Pb	02 54 59.7	-0.6
MD31				S	Sb	02 55 36.0	-1.6
ECAB	El Cabril	3.26	322	P	Pn	02 54 56.5	+0.2
	0.3nm,0.3s,SNR=5.6						
ECAB				S	Sn	02 55 37.0	+2.3
	5.6nm,0.4s,SNR=7.9						
ETOB	Tobarra	3.29	18	P	Pn	02 54 57.2	+0.5
	1.3nm,0.2s,SNR=11						
ETOB				S	Sn	02 55 34.2	-1.2
	7.8nm,0.5s,SNR=7.9						
FIGM	Figuig	3.64	158	P	Pb	02 55 05.1	-4.8
FIGM				S	Sn	02 55 47.2	+3.0
EMIN	Mina Concepcio	3.79	307	P	Pn	02 55 04.4	+1.0
	0.9nm,0.2s,SNR=13						
EMIN				S	Sn	02 55 47.4	-0.1
	1.7nm,0.3s,SNR=7.9						
PAB	San Pablo	4.18	344	⇑P	Pn	02 55 11.3	+2.3
	1.3nm,0.1s,SNR=18						
EGRO	El Granado	4.22	300	P	Pn	02 55 10.3	+1.0
	3.5nm,0.2s,SNR=7.9						
EGRO				S	Sn	02 55 57.7	-0.5
	5.2nm,0.3s,SNR=7.9						
ESDC	Sonseca Array	4.23	349	P	Pn	02 55 11.4	+1.8
	3.1nm,0.2s,baz=175,slow=13,SNR=4.3						
ARF	Arif	4.24	196	P	Pn	02 55 13.8	+4.1
ARF				S	Sn	02 56 01.9	+3.1
PVAQ	Vaqueiros	4.33	297	ePn	Pn	02 55 11.7	+0.8
PVAQ				eSn	Sn	02 56 01.4	+0.4
PVAQ				A	A	02 56 05.2	
	4.4nm,0.3s						
PVAQ	Vaqueiros	4.33	297	P	Pn	02 55 11.7	+0.8
PVAQ				S	Sn	02 56 01.4	+0.4
	4.4nm,0.3s						
PVAQ	Vaqueiros	4.33	297	P	Pn	02 55 15.1	+4.1
	SNR=20						
PVAQ				S	Sn	02 56 02.9	+1.9
PBDV	Barranco-do-Ve	4.42	294	ePn	Pn	02 55 12.8	+0.5
PBDV				eSn	Sn	02 56 02.8	-0.6
PBDV				A	A	02 56 21.1	
	3.1nm,0.4s						
PBDV	Barranco-do-Ve	4.42	294	P	Pn	02 55 12.8	+0.5
PBDV				S	Sn	02 56 02.8	-0.6
	3.1nm,0.4s						
EBAD	Badajoz	4.62	315	P	Pn	02 55 16.3	+1.4
	0.7nm,0.1s,SNR=33						
EBAD				S	Sn	02 56 07.6	-0.4
	3.9nm,0.2s,SNR=7.9						
PCVE	Castro Verde	4.66	298	ePn	Pn	02 55 16.7	+1.3
PCVE				eSn	Sn	02 56 10.3	+1.3
PCVE				A	A	02 56 14.5	
	5.3nm,0.6s						
PCVE	Castro Verde	4.66	298	P	Pn	02 55 16.7	+1.3
PCVE				S	Sn	02 56 10.3	+1.3
	5.3nm,0.6s						
PBEJ	Beja	4.72	303	ePn	Pn	02 55 18.3	+2.0
PBEJ				eSn	Sn	02 56 12.1	+1.5
PBEJ	Beja	4.72	303	P	Pn	02 55 18.3	+2.0
PBEJ				S	Sn	02 56 12.1	+1.5
MORF	Marmelete	4.99	293	ePn	Pn	02 55 21.5	+1.5
MORF				eSn	Sn	02 56 18.5	+1.3
MORF				A	A	02 56 40.9	
	2.1nm,0.8s						
MORF	Marmelete	4.99	293	P	Pn	02 55 21.5	+1.5
MORF				S	Sn	02 56 18.5	+1.3
	2.1nm,0.8s						
PESTR	Estremoz	5.03	313	ePn	Pn	02 55 22.5	+1.9
PFVI	Vila Bisbo	5.07	290	eSn	Sn	02 56 19.6	+0.5
EVO	Evora	5.09	308	ePn	Pn	02 55 23.0	+1.6
EVO				eSn	Sn	02 56 20.8	+1.1
EVO				A	A	02 56 25.3	
	2.5nm,0.4s						
EVO	Evora	5.09	308	P	Pn	02 55 23.0	+1.6
EVO				S	Sn	02 56 20.8	+1.1
	2.5nm,0.4s						
PTEO	Sao Teotonio	5.12	295	ePn	Pn	02 55 24.2	+2.4
PTEO				eSn	Sn	02 56 21.2	+0.7
PTEO	Sao Teotonio	5.12	295	P	Pn	02 55 24.2	+2.4
PTEO				S	Sn	02 56 21.2	+0.7
GUD	Guadarrama	5.21	349	P	Pn	02 55 24.8	+1.7
	0.5nm,0.2s,SNR=7.9						
PNCL	Nicolau / Gran	5.22	301	ePn	Pn	02 55 24.2	+1.1
PNCL				eSn	Sn	02 56 23.5	+0.6
PNCL				A	A	02 56 27.0	
	2.4nm,0.6s						
PNCL	Nicolau / Gran	5.22	301	P	Pn	02 55 24.2	+1.1
PNCL				Sn	Sn	02 56 23.5	+0.6
	2.4nm,0.6s						
PMRV	Marv??o	5.30	319	ePn	Pn	02 55 25.6	+1.3
PMRV	Marv??o	5.30	319	Pn	Pn	02 55 25.6	+1.3
PMTG	Montargil	5.54	311	ePn	Pn	02 55 28.9	+1.3
PMTG	Montargil	5.54	311	Pn	Pn	02 55 28.9	+1.3
PCBR	Castelo Branco	5.64	321	ePn	Pn	02 55 30.9	+1.9
PCBR	Castelo Branco	5.64	321	Pn	Pn	02 55 30.9	+1.9

IDC **20** *02:57:34.0±1.2, 61.99N×148.22W, h48km±16km, mb3.2/4, mb1 3.6/6, mb1mx3.2/49, mbtmp3.5/6, ML3.5/3, Error ellipse: s-maj=22.9km s-min=9.3km az=109.0*

AEIC **20** *02:57:34.9±1.6, 62.02N±0.02×147.72W±0.06, h24km±7km, ML3.4/101, Error ellipse: s-maj=4.1km s-min=2.7km az=95.0*

ISC 20 02:57:33.2±1.0, 62.00N±0.02×147.72W±0.03, h29km±9km, n107, σ1.16/117, mb3.4/4, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCM	Sheep Creek Mo	0.25	133		Pn	02 57 41.6	+0.5
SCM	Sheep Creek Mo	0.25	133		Sn	02 57 48.0	+1.8
SML	Sawmill	0.35	236		Pn	02 57 42.6	+0.2
SML	Sawmill	0.35	236		Sn	02 57 49.3	+0.8
WAT6	Susitna Watana	0.58	359		Pb	02 57 44.7	-0.3
WAT6					Sb	02 57 53.5	+0.4
GHO	Glory Hole Cre	0.62	248		Pb	02 57 45.9	+0.3
KNK	Knik Glacier	0.69	211		Pn	02 57 47.2	+0.1
KNK					Sn	02 57 57.4	+0.6
PMR	Palmer	0.79	239		Pb	02 57 48.0	-0.3
PMR					Sb	02 57 59.1	+0.5
WAT1	Susitna Watana	0.91	335		Pb	02 57 49.5	-1.0
WAT1					Sb	02 58 02.0	-0.4
WAT2	Susitna Watana	1.04	338		Pb	02 57 51.7	-0.3
WAT2					Sb	02 58 05.6	-0.5
PS11	TAPS Pump St11	1.06	85		Pb	02 57 53.0	+0.1
JPK	Jack Peak	1.09	150		Pn	02 57 52.1	-0.6
VMT	TAPS Tl Valdez	1.13	144		Pn	02 57 52.3	-0.7
GLI	Glacier Island	1.17	165		Pn	02 57 53.9	+0.3
PWL	Port Wells	1.19	195		Pn	02 57 54.5	+0.6
PWL					Sb	02 58 10.7	+0.6
HUR	Hurricane	1.32	319		Pn	02 57 56.0	+0.3
RC01	Rabbit Creek A	1.33	227		Pb	02 57 58.4	+0.8
PS12	TAPS Pump St12	1.34	112		Pn	02 57 55.9	-0.1
FID	Port Fidalgo	1.39	154		Pn	02 57 57.2	+0.5
PAX	Paxson	1.43	46		Pn	02 57 57.7	+0.4
FIS	Fire Island	1.47	235		Pb	02 57 59.7	-0.2
RND	Reindeer	1.50	340		Pn	02 57 58.8	+0.5
SUA	Susitna One	1.54	251		Pn	02 57 59.9	+1.0
PS10	TAPS Pump St10	1.69	31		Pn	02 58 02.2	+1.4
HIN	Hinchinbrook I	1.72	159		Pn	02 58 02.3	+1.1
EYAK	Cordova Ski Ar	1.74	146		Pn	02 58 02.4	+1.0
SKT	Skwentna	1.80	271		Pn	02 58 03.4	+1.1
MCK	McKinley	1.82	343		Pn	02 58 03.8	+1.2
TRF	Thorofare Moun	1.87	322		Pn	02 58 04.2	+0.8
SLKM	Skilak Lake	1.93	220		Pn	02 58 05.2	+1.1
GLB	Gilahina Butte	1.95	105		Pn	02 58 04.9	+0.5
GOAT	Goat Mountain	2.03	133		Pn	02 58 06.5	+1.0
MENT	Mentasta	2.08	61		Pn	02 58 07.3	+1.1
SEW	Seward	2.08	205		Pn	02 58 08.0	+1.8
KTH	Kantishna Hill	2.14	318		Pn	02 58 08.1	+1.1
SPCG	Spurr Capps Gl	2.17	253		Pn	02 58 09.4	+1.9
VRDI	Verde Repeater	2.18	109		Pn	02 58 08.3	+0.6
RIDG	Independent Ri	2.18	36		Pn	02 58 09.3	+1.7
RIDG					Sb	02 58 36.6	-2.1
RAGM	Ragged Mountai	2.19	136		Pn	02 58 08.7	+1.0
PPLA	Purkeypile	2.26	295		Pn	02 58 10.2	+1.4
BWN	Browne	2.32	341		Pn	02 58 10.2	+0.8
MCARA	McCarthy VSAT	2.32	103		Pn	02 58 10.6	+1.1
SPBG	Spurr Blockage	2.34	253		Pn	02 58 11.8	+2.0
DOT	Dot Lake	2.35	44		Pn	02 58 11.0	+1.0
HMT	Hamilton	2.37	133		Pn	02 58 11.0	+0.9
HDA	Harding Lake	2.44	8		Pn	02 58 13.0	+1.9
CAST	Castle Rocks	2.46	307		Pn	02 58 12.9	+1.6
WRH	Wood River Hil	2.48	356		Pn	02 58 12.3	+0.7
CRQM	Cirque	2.54	118		Pn	02 58 13.7	+1.1
NICHA	Nichawak Mount	2.54	133		Pn	02 58 13.1	+0.6
BPAW	Bear Paw Mtn.	2.58	326		Pn	02 58 13.6	+0.6
PS08	TAPS Pump Stn8	2.58	9		Pn	02 58 14.6	+1.6
SCRK	Sand Creek	2.61	39		Pn	02 58 14.3	+0.7
PTPK	Patty Peak	2.64	106		Pn	02 58 15.0	+1.0
CCB	Clear Creek Bu	2.65	359		Pn	02 58 14.7	+0.7
CCB					Sn	02 58 45.9	+0.8
NEA	Nenana	2.66	347		Pn	02 58 15.2	+1.2
TGL	Tana Glacier	2.67	116		Pn	02 58 14.8	+0.5
KHIT	Khitrov Hills	2.67	124		Pn	02 58 14.9	+0.5
BRSE	Bradley Lake S	2.71	214		Pn	02 58 15.7	+0.9
SUCK	Suckling Hills	2.73	134		Pn	02 58 16.0	+1.0
GRIN	Grindle Hills	2.75	127		Pn	02 58 15.9	+0.6
BALM	Baldy	2.75	108		Pn	02 58 16.2	+0.7
DFR	Drift River	2.78	242		Pn	02 58 17.3	+1.4
KIAG	Kiagna River	2.79	110		Pn	02 58 16.2	+0.1
IL31		2.80	7		Pn	02 58 17.8	+1.7
ILAR	Eielson Array	2.80	7	P	Pn	02 58 17.6	+1.5
	24nm,0.3s,baz=191,slow=14,SNR=1241						
ILAR				S	Sn	02 58 50.7	+1.8
	27nm,0.3s,baz=190,slow=25,SNR=20						
COLA	College	2.88	359		Pn	02 58 18.3	+1.2
TCOL	CIGO, UAF Yank	2.88	359		Pn	02 58 18.2	+1.1
RSO	Redoubt South	2.88	240		Pn	02 58 19.1	+1.7
RDWB	Redoubt West	2.90	241		Pn	02 58 19.0	+1.4
RED	Redoubt Volcan	2.92	239		Pn	02 58 19.1	+1.4
BC03		2.95	66		Pn	02 58 19.1	+1.1
MDM	Murphy Dome	2.98	356		Pn	02 58 19.1	+0.7
KULT	Kultieth River	3.00	124		Pn	02 58 19.3	+0.4
CNPM	China Poot	3.03	216		Pn	02 58 20.5	+1.3
BARN	Barnard Glacie	3.05	105		Pn	02 58 20.6	+1.0
POKR	Poker Plat Res	3.13	2		Pn	02 58 22.6	+1.6
CTGM	Chitina Glacie	3.24	106		Pn	02 58 23.1	+0.9
BVCY	Beaver Creek	3.24	80		Pn	02 58 23.7	+1.6
YUK2	White River	3.26	91		Pn	02 58 23.5	+1.0
MLY	Manley	3.33	337		Pn	02 58 24.1	+0.8
MESA	MESA	3.35	121		Pn	02 58 24.5	+0.7
YUK1	Sand Pete Hill	3.39	84		Pn	02 58 26.2	+2.0
YUK3	Moose Creek	3.44	91		Pn	02 58 26.1	+1.1
RKAV	Rock Avalanche	3.53	116		Pn	02 58 26.8	+0.6
PRP	Porcupine Dome	3.66	14		Pn	02 58 29.5	+1.5
SVW2	Sparrevohn	3.87	260		Pn	02 58 31.4	+0.7
TT01	Tatalina	3.96	287		Pn	02 58 32.4	+0.4
TTA	Tatalina	3.96	287		Pn	02 58 32.6	+0.6
EGAK	Eagle	4.06	44		Pn	02 58 34.3	+1.0
PCA	Pinnacle	4.10	114		Pn	02 58 36.6	+2.6
DAWY	Dawson	4.32	58		Pn	02 58 38.3	+1.4
FYU	Fort Yukon	4.71	12		Pn	02 58 43.5	+1.3
IM03		4.79	329		Pn	02 58 43.8	+0.4
KDAK	Kodiak Island	4.89	212	P	Pn	02 58 44.4	-0.3
	0.8nm,0.3s,baz=42,slow=13,SNR=37						
KDAK				S	Sn	02 59 36.7	-3.5
	2.8nm,0.3s,baz=219,slow=16,SNR=9.9						
PS05	TAPS Pump Stn5	4.99	346		Pn	02 58 48.0	+1.9
COLD	Coldfoot	5.35	350		Pn	02 58 52.8	+1.7
OHAK	Old Harbor	5.56	213		Pn	02 58 53.3	-0.7
BM03	Burnt Mountain	5.60	12		Pn	02 58 55.2	+0.7
TOLK	Toolik Lake Re	6.71	354		Pn	02 59 11.0	+1.3
INK	Inuvik	8.68	37	P	Pn	02 59 38.1	+1.5
	0.2nm,0.3s,baz=217,slow=14,SNR=14						
INK				S	Sn	03 01 12.4	-0.9
	0.5nm,0.3s,baz=278,slow=15,SNR=4.3						
C36M	Paulatuk	12.13	43		Pn	03 00 22.2	-1.6
YKA	Yellowknife Ar	15.34	74	P	Pn	03 01 06.2	-1.1
	0.1nm,0.3s,baz=282,slow=13,SNR=11						
PDAR	Pinedale Array	29.57	113	P	P	03 03 36.5	+0.9
	0.3nm,0.8s,baz=310,slow=7.0,SNR=3.0						
TXAR	Lajitas Array	43.46	118	P	P	03 05 34.2	+0.6
	0.6nm,0.6s,baz=326,slow=7.3,SNR=7.9						
MKAR	Makanchi Array	64.39	324	P	P	03 08 03.3	-2.7
	0.1nm,0.4s,baz=39,slow=7.2,SNR=4.2						
ESDC	Sonseca Array	74.52	28	P	P	03 09 07.8	-1.0
	0.3nm,0.5s,baz=336,slow=6.0,SNR=4.1						

UCR 20 02:58:01.7±1.0, 10.65N×84.86W, h136km±3km, MD3.8, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMAS	Alto Masis	0.13	254	iP	Pn	02 58 20.5	+0.2
AMAS				iS	Sn	02 58 34.6	+0.3
PTEN	Parque Tenorio	0.14	298	iP	Pn	02 58 20.8	+0.5
PTEN				iS	Sn	02 58 35.3	+1.0
CEDE	Laguna Cedeo	0.22	136	eP	Pn	02 58 20.8	+0.4
CUI	Cuipilapa	0.30	272	iP	Pn	02 58 20.7	+0.1
CUI				iS	Sn	02 58 35.2	+0.2
MESS	Mesas	0.34	286	iP	Pn	02 58 21.6	+0.8
MESS				iS	Sn	02 58 36.0	+0.7
JTS	Las Juntas de	0.37	194	eP	Pn	02 58 20.7	-0.2
JTS				eS	Sn	02 58 36.1	+0.6
LIM1	Limonal	0.39	277	iP	Pn	02 58 21.6	+0.6
BUEV	Buena Vista	0.56	286	eP	Pn	02 58 22.8	+0.9
BUEV				iS	Sn	02 58 37.7	+0.5
LAPC	Finca la Perla	0.57	282	iS	Sn	02 58 37.2	0.0
GBS3	Finca Las Img	0.60	283	iP	Pn	02 58 21.9	-0.2
GBS3				iS	Sn	02 58 37.7	+0.2
SRA1	San Ramn	0.68	146	eP	Pn	02 58 23.1	+0.3
SRA1				eS	Sn	02 58 39.5	+0.9
GUAI	GUAI	0.74	240	iP	Pn	02 58 23.0	0.0
LCR2	La Lucha 2	1.24	137	eP	Pn	02 58 28.0	+0.3
LCR2				eS	Sn	02 58 48.2	+0.8
CVTR	Volcan Turrial	1.25	120	eP	Pn	02 58 28.2	+0.1
ACON	Acoyapa	1.35	347	eP	Pn	02 58 28.1	-0.5
EDDO	Dominical	1.70	145	eP	Pn	02 58 29.9	-2.6
EDDO				eS	Sn	02 58 56.7	+0.6
EDLM	Las Mercedes	1.85	137	eP	Pn	02 58 35.2	+0.9
EDLM				eS	Sn	02 58 60.0	+0.7
DRK0	Durika	2.11	131	eP	Pn	02 58 37.6	+0.1
EDBA	Buenos Aires	2.15	133	eP	Pn	02 58 38.4	+0.5
EDBA				eS	Sn	02 59 04.8	-0.9

IDC 20 02:59:05.1±6.9, 15.88S×173.32W, h0km, mb4.1/2,

mb1 4.3/3, mb1mx3.7/40, mbtmp4.1/3, ML4.3/1, MS2.4/1, Ms1 2.4/1, ms1mx2.2/31, Error ellipse: s-maj=318.3km s-min=27.7km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.46**	**37**	Pn	Pn	02 59 46.6	+0.1
	69nm,0.3s,baz=212,slow=13,SNR=43						
AFI				Sn	Sn	03 00 10.5	-6.8
	164nm,0.3s,baz=38,slow=22,SNR=4.8						
AFI				LR	LR	03 00 44.0	
	comp=Z,79nm,19.1s,baz=274,slow=40						
WRA	**Warramunga Arr**	**49.81**	**257**	P	P	03 08 00.2	0.0
	0.7nm,0.7s,baz=92,slow=6.5,SNR=2.9						
ASAR	**Alice Springs**	**50.04**	**252**	P	P	03 08 01.7	-0.2
	3.5nm,0.6s,baz=86,slow=8.3,SNR=29						
BRTR	**Keskin Array B**	**146.58**	**321**	PKPbc	PKPdf	03 18 48.1	+0.5
	0.6nm,0.8s,baz=58,slow=3.1,SNR=3.8						

*JMA **20** 03:19:53.2±0.1, 35°.97N×140°.06E, h63km±1km, M3.2 Broadband fault plane solution: P waves. NP1: ϕs234.00000°, δ30.00000°, λ142.00000°. NP2: ϕs358.00000°, δ72.00000°, λ65.00000°. Principal axes: T Plg56.0000°, Azm236.0000°; N Plg24.0000°, Azm6.0000°; P Plg23.0000°, Azm107.0000°;*

JMA Felt I J1.

*IDC **20** 03:19:57.1±3.2, 36°.37N×139°.86E, h82km±19km, mb3.3/3, mb1 3.4/5, mb1mx3.1/34, mbtmp3.6/5 Error ellipse: s-maj=40.2km s-min=17.7km az=142.0*

ISC 20 03:19:52.8±1.0, 36°.00N±0°.05×140°.07E±0°.05, h64km±10km, n18, σ1§38/28, mb3.5/3, 2C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.25**	**24**	⇑P	**Pn**	**03 20 03.5**	**+0.6**
JYT				S	**Sn**	**03 20 11.1**	**+0.9**
JIHU	**Itakohorinouch**	**0.37**	**95**	⇑P	**Pn**	**03 20 04.7**	**+0.9**
JAG	**Ashikaga**	**0.66**	**310**	⇓P	**Pn**	**03 20 07.4**	**+0.7**
JAG				S	**Sn**	**03 20 17.9**	**+1.0**
JRY	**Ryogami san**	**0.95**	**271**	⇓P	**Pn**	**03 20 10.9**	**+0.6**
JRY				S	**Sn**	**03 20 24.0**	**+0.7**
JKT	**Katashina**	**1.01**	**319**	⇓P	**Pn**	**03 20 11.8**	**+0.6**
JKT				S	**Sn**	**03 20 26.7**	**+1.9**
JOD2	**Odawara 2**	**1.09**	**228**	P	**Pn**	**03 20 11.8**	**-0.3**
JOD2				S	**Sn**	**03 20 25.3**	**-1.2**
BSO3	**Boso 3**	**1.25**	**163**	P	**Pn**	**03 20 13.3**	**-0.6**
JYN	**Shimob**	**1.34**	**248**	⇓P	**Pn**	**03 20 15.9**	**+0.4**
JYN				S	**Sn**	**03 20 32.7**	**+0.2**
JIM2	**Oshima 3**	**1.38**	**202**	P	**Pn**	**03 20 14.9**	**-1.1**
JIM2				S	**Sn**	**03 20 31.4**	**-2.0**
JFNN	**Fujinakano**	**1.39**	**235**	P	**Pn**	**03 20 16.0**	**0.0**
MJAR	**Matsushiro Arr**	**1.60**	**290**	P	**Pn**	**03 20 19.7**	**+0.8**
	4.3nm,0.3s,baz=97,slow=9.7,SNR=238						
MJAR				S	**Sn**	**03 20 37.4**	**-1.2**
	1.6nm,0.3s,baz=91,slow=15,SNR=7.9						
MAT	**Matsushiro**	**1.60**	**290**	P	**Pn**	**03 20 20.0**	**+1.1**
MAT				S	**Sn**	**03 20 41.9**	**+3.3**
JHJ	**Hachijo jima 2**	**2.88**	**185**	P	**Pn**	**03 20 39.0**	**+2.7**
	13nm,0.3s,baz=246,slow=20,SNR=3.1						
JHJ				S	**Sn**	**03 21 10.0**	**+0.1**
	21nm,0.3s,baz=306,slow=14,SNR=4.2						
ASAJ	**Asahikawa**	**8.33**	**13**	P	**Pn**	**03 21 51.0**	**+0.2**
	0.7nm,0.3s,baz=203,slow=14,SNR=4.8						
ASAJ				S	**Sn**	**03 23 20.5**	**-2.8**
	0.2nm,0.3s,baz=226,slow=13,SNR=2.3						
USRK	**Ussuriysk Ar.**	**10.26**	**325**	P	**Pn**	**03 22 16.7**	**-0.4**
	baz=131,slow=14,SNR=4.9						
ZALV	**Zalesovo Beam**	**41.82**	**313**	P	**P**	**03 27 35.3**	**-0.7**
	0.7nm,0.4s,baz=75,slow=5.9,SNR=3.3						
MKAR	**Makanchi Array**	**43.76**	**303**	P	**P**	**03 27 51.5**	**-0.4**
	0.8nm,0.8s,baz=95,slow=9.0,SNR=7.3						
ILAR	**Eielson Array**	**50.94**	**32**	P	P	03 28 47.8	+0.4
	0.3nm,0.8s,baz=264,slow=6.8,SNR=4.3						

*GCG **20** 03:27:04.6±0.7, 14°.02N×90°.88W, h225km±8km, MD3.7*

*SNET **20** 03:27:10.4±1.8, 13°.70N×91°.11W, h20km±21km, ML3.3*

ISC 20 03:27:02.4±3.4, 12°.6N±0°.2×91°.2W±0°.1, h21km±7km, n8, σ1§64/14, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**1.78**	**25**	eP	**Pn**	**03 27 32.9**	**+0.8**
IXG				eS	**Sb**	**03 27 59.4**	**+3.1**
FUG	**Fuego 3**	**1.91**	**11**	eP	**Pn**	**03 27 35.3**	**+1.3**
FUG				eS	**Sb**	**03 27 59.7**	**-0.6**
PCG	**Pacaya**	**1.92**	**18**	eP	**Pb**	**03 27 35.5**	**-1.3**
CEVE	**Cerro Verde**	**2.01**	**51**	eP	**Pb**	**03 27 37.4**	**-1.0**
CEVE				eS	**Sn**	**03 27 58.7**	**-1.3**
CEVE				IAML		03 28 04.8	
	comp=Z,458nm,0.3s						
SBLS	**San Blas**	**2.01**	**51**	eP	**Pb**	**03 27 37.0**	**-1.5**
SBLS				eS	**Sn**	**03 27 59.9**	**-0.2**
STG3	**Santiaguito 3,**	**2.17**	**351**	eP	**Pn**	**03 27 38.2**	**+0.8**
STG3				eS	**Sn**	**03 28 03.5**	**-0.2**
NBG	**Las Nubes**	**2.19**	**23**	eP	**Pb**	**03 27 40.7**	**-0.8**
NBG				eS	**Sn**	**03 28 02.3**	**-2.2**
MTO3	**Montecristo**	**2.58**	**45**	eP	**Pn**	**03 27 44.5**	**+1.4**

*ARE **20** 03:45:19±1.7, 14°.1S±0°.1×75°.6W±0°.2, h40km±9km, ML4.2, mb3.9/1(NEIC), Error ellipse: s-maj=28.3km s-min=5.7km az=55.0*

NEIC 20 03:45:18.8±0.8, 14°.1S±0°.1×75°.49W±0°.09, h55km±24km, Error ellipse: s-maj=20.5km s-min=7.9km az=213.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.46**	**327**	Pn	Pn	03 45 56.6	+0.1
NNA				Sn	Sn	03 46 24.7	-0.7
LPAZ	**La Paz**	**7.44**	**108**	Pn	Pn	03 47 04.8	-0.4
MNMC	**Minye Minye**	**7.56**	**132**	Pn	Pn	03 47 06.6	-0.1
MNMC				Sn	Sn	03 48 31.1	0.0
PB11	**IPOC Station P**	**7.95**	**136**	Pn	Pn	03 47 10.7	-1.1
PB11				Sn	Sn	03 48 38.4	-2.0
GO01	**Chusmiza**	**8.20**	**134**	Pn	Pn	03 47 15.8	+0.2
GO01				Sn	Sn	03 48 47.4	+0.3
LVC	**Limon Verde**	**10.54**	**145**	Pn	Pn	03 47 47.5	0.0
SDV	**Santo Domingo**	**23.32**	**12**	P	P	03 50 23.8	+1.5
SDV				IAmb	IAmb	03 50 38.0	
	comp=Z,4.4nm,1.0s						

*NNC **20** 03:53:42.1±0.5, 43°.05N×76°.22E, h0km, mpv2.1, Error ellipse: s-maj=10.8km s-min=2.7km az=7.0*

*KRNET **20** 03:53:43.9±0.1, 42°.43N×75°.62E, h0km, mb1.2*

SOME 20 03:53:41.3, 43°.00N×76°.22E, h10km, 8C, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KST	**Kastek**	**0.19**	**283**	eP	Pg	03 53 45.6	+0.2
	8.1nm,0.1s						
KST				eS	Sg	03 53 48.8	+0.5
	6.4nm,0.5s						
KST	**Kastek**	**0.19**	**283**	P	Pg	03 53 45.7	+0.2
	8.1nm,0.1s						
KST				S	Sg	03 53 48.8	+0.5
	7.0nm,0.4s						
IZV	**Izvestkoviy**	**0.29**	**83**	eP	Pg	03 53 47.3	0.0
	0.6nm,0.1s						
IZV				eS	Sg	03 53 51.6	+0.3
	4.1nm,0.1s						
IZV	**Izvestkoviy**	**0.29**	**83**	P	Pg	03 53 47.7	+0.4
	0.6nm,0.1s						
IZV				S	Sg	03 53 52.3	+1.0
	4.1nm,0.1s						
DGS	**Degeres**	**0.41**	**307**	eP	Pg	03 53 49.4	+0.1
	0.5nm,0.1s						
DGS				eS	Sg	03 53 55.2	+0.5
	1.1nm,0.1s						
DGS	**Degeres**	**0.41**	**307**	P	Pg	03 53 49.4	+0.1
	0.6nm,0.1s						
DGS				S	Sg	03 53 55.2	+0.5
	1.6nm,0.2s						
BOOM	**Boomskoye usch**	**0.55**	**202**	⇑iP	Pg	03 53 47.8	-4.2
	baz=74						
BOOM				⇑iS	Sg	03 53 53.3	-6.0
	baz=74						
ULHL	**Ulahol**	**0.75**	**179**	⇑iP	Pg	03 53 53.6	-2.3
	baz=11						
ULHL				⇑iS	Sg	03 54 00.8	-4.9
	baz=11						
KBK	**Karagaybulak**	**0.99**	**250**	⇑iP	Pg	03 53 54.8	-5.7
	baz=95						
KBK				⇑iS	Sg	03 54 02.5	-11
	baz=95						
KZA	**Kyzart**	**1.17**	**218**	⇑iP	Pg	03 53 52.7	-11
	baz=18						
KZA				⇑iS	Sg	03 53 59.3	-20
	baz=18						

*NEIC **20** 04:09:56.0±1.6, 14°.17S±0°.07×14°.55W±0°.09, h10km±1km, mb5.3/88, Error ellipse: s-maj=16.8km s-min=10.1km az=241.0*

*IDC **20** 04:09:55.3±0.4, 14°.17S×14°.45W, h0km, mb4.7/40, mb1 4.7/40, mb1mx4.6/65, mbtmp4.6/40, MS4.3/21, Ms1 4.3/21, ms1mx4.3/23, Error ellipse: s-maj=15.0km s-min=10.3km az=158.0*

*MOS **20** 04:09:55.2±0.9, 14°.08S×14°.55W, h10km, mb5.2/62, MS4.7/7, Error ellipse: s-maj=10.1km s-min=4.9km az=65.3*

*BJI **20** 04:09:56.7±0.0, 14°.10S×14°.50W, h10km, mB5.7/4, mb5.6/2, Ms5.2/5, Ms7 4.9/6*

*BGR **20** 04:09:57.3±0.0, 14°.33S×12°.52W, h10km, mb5.3, Ms4.6*

*GCMT **20** 04:10:00.0±0.2, 14°.14S±0°.01×14°.31W±0°.01, h12km, MW5.1/115, Moment Tensor Solution. s59,c87; s115,c186; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-4.88±.11; Mθθ1.99±.11; Mϕϕ2.89±.10; Mrθ0.31±.36; Mrϕ-3.86±.09; Mθϕ-1.29±.33; Best double couple: M05.77700×10^16 NP1:ϕs128.00000°, δ40.00000°, λ-105.00000°. NP2:ϕs327.00000°, δ52.00000°, λ-78.00000°. Principal axes: T 6.4470, Plg6.0000°, Azm49.0000°; N -1.3400, Plg10.0000°, Azm140.0000°; P -5.1070, Plg79.0000°, Azm288.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 04:09:57.2±0.3, 14°.15S±0°.07×14°.59W±0°.06, h14km, n385, σ1§51/347, mb5.1/190, MS4.6/38, 28C-15D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**5.16**	**359**	T	T	04 16 35.8	
	baz=176,slow=74,SNR=2124						
H10S3	**ASCENSION HYDR**	**5.16**	**359**	T	T	04 16 36.4	
	baz=44,slow=74,SNR=2034						
H10N1	**ASCENSION HYDR**	**6.26**	**1**	T	T	04 18 06.0	
	baz=184,slow=71,SNR=57						
H10N3	**ASCENSION HYDR**	**6.27**	**1**	T	T	04 17 59.9	
	baz=184,slow=71,SNR=415						
H10N2	**ASCENSION HYDR**	**6.28**	**1**	T	T	04 17 59.6	
	baz=184,slow=71,SNR=78						
LIC	**Lamto**	**22.35**	**26**	eP	**P**	**04 14 55.0**	**0.0**
	187nm,1.6s						
RCBR	**Riachuelo**	**22.54**	**289**	P	**P**	**04 14 58.7**	**+1.6**
	37nm,0.9s,baz=101,slow=12,SNR=8.9						
RCBR	**Riachuelo**	**22.54**	**289**	eP	**P**	**04 14 54.9**	**-2.2**
RCBR	**Riachuelo**	**22.54**	**289**	P	**P**	**04 14 56.2**	**-0.9**
KIC	**Kosan Boka**	**22.60**	**26**	eP	**P**	**04 14 56.7**	**-0.9**
	385nm,1.9s						
TIC	**Toumodi**	**22.74**	**25**	eP	**P**	**04 14 58.9**	**-0.2**
	238nm,1.6s						
DBIC	**Dimbokro**	**22.83**	**26**	P	**P**	**04 14 58.8**	**-1.2**
	29nm,1.1s,baz=184,slow=12,SNR=17						
DBIC				LR	LR	04 21 42.7	
	comp=Z,1μm,19.4s,baz=180,slow=31						
DBIC	**Dimbokro**	**22.83**	**26**	P	**P**	**04 14 59.0**	**-0.9**
DBIC	**Dimbokro**	**22.83**	**26**	P	**P**	**04 14 59.1**	**-0.9**
DBIC				pmax	pmax		
	comp=Z,60nm,1.4s						
H09N1	**TRISTAN DA CUN**	**22.92**	**175**	T	T	04 40 09.2	
	SNR=131						
NBCP	**Cabaceiras do**	**23.97**	**271**	eP	**P**	**04 15 13.9**	**+2.4**
BSFB	**Barra de Sao F**	**25.59**	**256**	eP	**P**	**04 15 28.9**	**+2.7**
SJMB	**Sao Joao De Ma**	**25.90**	**256**	eP	**P**	**04 15 31.9**	**+2.9**
NBMO	**Morrinhos-CE**	**27.33**	**291**	eP	**P**	**04 15 36.3**	**-5.7**
VAS01	**Vassouras-RJ**	**28.54**	**249**	eP	**P**	**04 15 54.5**	**+1.8**
PARB	**Paraibuna**	**30.72**	**248**	eP	**P**	**04 16 13.9**	**+1.8**
TOA0	**Torodi Ar. Sit**	**31.55**	**31**	P	**P**	**04 16 18.6**	**-0.8**
TOA0				IAmb	IAmb	04 16 21.9	
	comp=Z,46nm,1.3s						
TORD	**Torodi Ar. Bea**	**31.55**	**31**	P	**P**	**04 16 18.4**	**-0.9**
	comp=Z,18nm,0.9s,baz=218,slow=9.0,SNR=55						
TORD				LR	LR	04 27 12.6	
	comp=Z,1μm,18.2s,baz=235,slow=33						
VAO	**Valinhos**	**31.87**	**249**	eP	**P**	**04 16 24.3**	**+2.1**
RCLB	**Rio Claro- Sao**	**32.29**	**250**	eP	**P**	**04 16 28.9**	**+3.0**
BDFB	**Brasilia**	**32.32**	**263**	P	**P**	**04 16 28.5**	**+2.2**
	comp=Z,9.4nm,0.9s,baz=91,slow=11,SNR=8.5						
BDFB				LR	LR	04 27 03.1	
	comp=Z,1μm,21.3s,baz=101,slow=32						
BDFB	**Brasilia**	**32.32**	**263**	P	**P**	**04 16 26.2**	**-0.1**
PET01	**Itanhaem-SP**	**32.40**	**247**	eP	**P**	**04 16 28.3**	**+1.5**
IPMB	**Ipameri, GO**	**32.51**	**259**	eP	**P**	**04 16 30.3**	**+2.4**
BB19B	**Bebedouro**	**33.02**	**253**	eP	**P**	**04 16 35.0**	**+2.6**
TIJ01	**Guaruva-PR**	**34.15**	**246**	eP	**P**	**04 16 45.1**	**+2.9**
FRTB	**Fartura**	**34.28**	**249**	eP	**P**	**04 16 46.1**	**+2.7**
PCMB	**Pacaembu**	**35.62**	**253**	eP	**P**	**04 16 56.4**	**+1.6**
ARAG	**Araguaiana, MT**	**35.97**	**263**	eP	**P**	**04 16 58.1**	**+0.2**
CNLB	**Canela**	**36.73**	**240**	eP	**P**	**04 17 05.1**	**+0.8**
PTGB	**Pitanga**	**36.76**	**248**	eP	**P**	**04 17 05.3**	**+0.6**
TRCB	**Terra Rica**	**37.01**	**251**	eP	**P**	**04 17 07.3**	**+0.6**
ITAB	**Concordia**	**37.31**	**244**	eP	**P**	**04 17 11.1**	**+2.0**
PP1B	**Ponte de Pedra**	**38.86**	**259**	eP	**P**	**04 17 22.3**	**-0.1**
LBTB	**Lobatse**	**39.24**	**112**	P	**P**	**04 17 24.1**	**-1.6**
	comp=Z,2.5nm,0.7s,baz=277,slow=14,SNR=3.9						
LBTB	**Lobatse**	**39.24**	**112**	P	**P**	**04 17 23.5**	**-2.2**
BOSA	**Boshof**	**39.60**	**118**	P	**P**	**04 17 27.7**	**-0.9**
	comp=Z,5.3nm,0.8s,baz=279,slow=7.9,SNR=7.7						
BOSA				LR	LR	04 31 29.0	
	comp=Z,302nm,18.1s,baz=327,slow=33						
BOSA	**Boshof**	**39.60**	**118**	P	**P**	**04 17 27.6**	**-1.1**
AQDB	**Aquidauana**	**39.67**	**255**	eP	**P**	**04 17 29.8**	**+0.7**
SALV	**Santo Antonio**	**39.69**	**262**	eP	**P**	**04 17 29.2**	**-0.2**
PLTB	**Pedras Altas**	**39.71**	**237**	eP	**P**	**04 17 30.1**	**+0.7**
CLDB	**Colider**	**40.32**	**270**	eP	**P**	**04 17 33.6**	**-1.1**
LSZ	**Lusaka**	**41.34**	**97**	P	**P**	**04 17 41.7**	**-1.4**
	comp=Z,11nm,1.0s,baz=285,slow=6.9,SNR=5.5						
LSZ	**Lusaka**	**41.34**	**97**	P	**P**	**04 17 42.7**	**-0.5**
LSZ	**Lusaka**	**41.34**	**97**	P	**P**	**04 17 42.7**	**-0.5**
LSZ				pmax	pmax		
	comp=Z,25nm,1.2s						
MATP	**Matopo**	**41.52**	**105**	P	**P**	**04 17 43.1**	**-1.5**
	comp=Z,4.0nm,0.7s,baz=283,slow=9.9,SNR=9.6						
TAM	**Tamanrasset**	**41.66**	**29**	P	**P**	**04 17 45.0**	**-0.6**
TAM	**Tamanrasset**	**41.66**	**29**	P	**P**	**04 17 45.1**	**-0.6**
TAM				pmax	pmax		
	comp=Z,12nm,1.3s						
CPUP	**Villa Florida**	**41.71**	**246**	P	**P**	**04 17 47.1**	**+1.2**
	comp=Z,9.4nm,0.9s,baz=67,slow=9.7,SNR=15						
CPUP				LR	LR	04 32 55.1	
	comp=Z,1μm,19.6s,baz=101,slow=33						
CPUP	**Villa Florida**	**41.71**	**246**	eP	**P**	**04 17 47.8**	**+1.9**
CPUP	**Villa Florida**	**41.71**	**246**	P	**P**	**04 17 46.5**	**+0.6**
CPUP	**Villa Florida**	**41.71**	**246**	P	**P**	**04 17 46.5**	**+0.6**
CPUP				pmax	pmax		
	comp=Z,19nm,1.1s						
SIV	**San Ignacio**	**44.85**	**261**	P	**P**	**04 18 13.2**	**+1.7**
	comp=Z,7.2nm,1.0s,baz=110,slow=12,SNR=16						
TZRR	**Tazzarine**	**45.51**	**11**	P	**P**	**04 18 19.1**	**+2.6**
	SNR=6.3						
TZRR				P	**P**	**04 18 19.1**	**+2.6**
	SNR=6.3						
ARF	**Arif**	**46.40**	**12**	P	**P**	**04 18 25.0**	**+1.5**
	SNR=9.2						
ARF				P	**P**	**04 18 25.0**	**+1.5**
	SNR=9.2						
MBAR	**Mbarara**	**46.80**	**77**	P	**P**	**04 18 27.2**	**+0.1**
MBAR				IAmb	IAmb	04 18 45.1	
	comp=Z,42nm,1.5s						
MBAR	**Mbarara**	**46.80**	**77**	⇑eP	**P**	**04 18 28.9**	**+1.8**
MBAR				pmax	pmax		
	comp=Z,31nm,1.5s						
MDT	**Midelt**	**47.66**	**11**	P	**P**	**04 18 35.4**	**+2.1**
	SNR=7.7						
FIGM	**Figuig**	**47.76**	**15**	P	**P**	**04 18 36.0**	**+1.9**
	SNR=8.9						
SAML	**Samuel**	**47.82**	**271**	eP	**P**	**04 18 32.3**	**-2.6**
TRQA	**Tornquist**	**48.12**	**231**	eP	**P**	**04 18 35.1**	**-1.8**
EFI	**East Falkland**	**51.07**	**213**	⇑eP	**P**	**04 19 00.2**	**+1.1**
EFI				pmax	pmax		
	comp=Z,14nm,0.8s						
LPAZ	**La Paz**	**51.59**	**260**	P	**P**	**04 19 05.3**	**+1.0**
	comp=Z,3.9nm,0.9s,baz=125,slow=7.5,SNR=10.0						
LPAZ				LR	LR	04 39 29.6	
	comp=Z,433nm,21.4s,baz=102,slow=34						
LPAZ	**La Paz**	**51.59**	**260**	eP	**P**	**04 19 02.5**	**-1.7**
LPAZ	**La Paz**	**51.59**	**260**	P	**P**	**04 19 02.7**	**-1.5**
PVAQ	**Vaqueiros**	**51.68**	**7**	eP	**P**	**04 19 05.0**	**+1.2**
	comp=Z,35nm,1.6s						
PTEO	**Sao Teotonio**	**51.71**	**6**	eP	**P**	**04 19 05.0**	**+1.0**
	comp=Z,63nm,1.5s						
CFA	**Coronel Fontan**	**51.88**	**241**	P	**P**	**04 19 06.2**	**+0.6**
	comp=Z,7.9nm,0.8s,baz=84,slow=7.3,SNR=11						
LVC	**Limon Verde**	**52.00**	**252**	eP	**P**	**04 19 05.1**	**-1.9**
PBEJ	**Beja**	**52.28**	**7**	eP	**P**	**04 19 08.2**	**0.0**
	comp=Z,32nm,1.5s						
PNCL	**Nicolau / Gran**	**52.29**	**6**	eP	**P**	**04 19 09.3**	**+1.0**
	comp=Z,28nm,1.8s						
HORN	**Hornachuelos**	**52.45**	**9**	P	**P**	**04 19 10.6**	**+1.0**
	SNR=6.6						
EVO	**Evora**	**52.76**	**6**	eP	**P**	**04 19 12.9**	**+1.1**
	comp=Z,34nm,1.4s						
MNMC	**Minye Minye**	**52.77**	**257**	P	**P**	**04 19 12.5**	**-0.1**
KMBO	**Kilima Mbogo**	**52.85**	**81**	P	**P**	**04 19 12.7**	**-0.5**
	comp=Z,8.4nm,1.1s,baz=104,slow=16,SNR=4.2						
KMBO				LR	LR	04 39 11.5	
	comp=Z,470nm,19.9s,baz=270,slow=33						
KMBO	**Kilima Mbogo**	**52.85**	**81**	P	**P**	**04 19 13.8**	**+0.6**
KMBO	**Kilima Mbogo**	**52.85**	**81**	iP	**P**	**04 19 16.0**	**+2.8**
KMBO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PESTR	**Estremoz**	**53.14**	**7**	eP	**P**	**04 19 14.4**	**-0.2**
GO03	**Copiap**	**53.29**	**246**	P	**P**	**04 19 15.7**	**-0.4**
GO03				IAmb	IAmb	04 19 20.7	
	comp=Z,32nm,1.0s						
PMRV	**Marv??o**	**53.72**	**7**	eP	**P**	**04 19 20.3**	**+1.5**
	comp=Z,39nm,1.8s						
PTOM	**Tomar**	**53.80**	**6**	eP	**P**	**04 19 20.9**	**+1.5**
	comp=Z,61nm,1.4s						
PCBR	**Castelo Branco**	**54.12**	**7**	eP	**P**	**04 19 22.6**	**+0.9**
	comp=Z,39nm,2.0s						
PEL	**Peldehue**	**54.12**	**239**	P	**P**	**04 19 22.1**	**0.0**
PEL				IAmb	IAmb	04 19 31.7	
	comp=Z,40nm,1.1s						
PEL	**Peldehue**	**54.12**	**239**	P	**P**	**04 19 22.1**	**0.0**
PEL				pmax	pmax		
	comp=Z,40nm,1.1s						
PCAS	**Casmilo, Conde**	**54.22**	**6**	eP	**P**	**04 19 24.3**	**+1.8**
	comp=Z,43nm,2.1s						
COI	**Coimbra**	**54.38**	**6**	eP	P	04 19 28.4	+4.8
	comp=Z,33nm,2.0s						
ESDC	**Sonseca Array**	**54.45**	**10**	P	**P**	**04 19 25.1**	**+0.9**
	comp=Z,2.6nm,0.7s,baz=187,slow=7.1,SNR=15						
ESDC				PcP	**PcP**	**04 20 29.1**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=192,slow=3.7,SNR=4.5						
ESDC				LR	LR	04 41 07.3	
	comp=Z,252nm,20.2s,baz=175,slow=34						
ESBB	**Sonseca Array**	**54.45**	**10**	P	**P**	**04 19 24.1**	**-0.2**
ESBB				IAmb	IAmb	04 19 26.2	
	comp=Z,30nm,1.6s						
KEST	**Kesra**	**54.54**	**24**	P	**P**	**04 19 26.3**	**+1.3**
	comp=Z,23nm,1.1s,baz=189,slow=7.0,SNR=7.3						
KEST	**Kesra**	**54.54**	**24**	P	**P**	**04 19 23.8**	**-1.2**
KEST				IAmb	IAmb	04 19 27.4	
	comp=Z,45nm,1.4s						
MTE	**Manteigas**	**54.66**	**7**	eP	**P**	**04 19 26.8**	**+1.1**
	comp=Z,44nm,1.5s						
MTE	**Manteigas**	**54.66**	**7**	P	**P**	**04 19 26.0**	**+0.2**
MTE				IAmb	IAmb	04 19 30.9	
	comp=Z,23nm,1.0s						
PVIS	**Viseu**	**54.94**	**6**	eP	**P**	**04 19 28.8**	**+1.1**
	comp=Z,28nm,1.7s						
PLCA	**Paso Flores**	**55.22**	**230**	LR	LR	04 39 49.3	
	comp=Z,589nm,21.4s,baz=109,slow=32						
PLCA	**Paso Flores**	**55.22**	**230**	eP	P	04 19 24.9	-5.0
PVRL	**Vila Real**	**55.51**	**6**	eP	**P**	**04 19 32.4**	**+0.6**
	comp=Z,37nm,1.3s						
VNA2	**Neumayer--Watz**	**56.92**	**177**	P	**P**	**04 19 42.1**	**+0.6**
	baz=335,slow=8.3						
SNAA	**Sanae**	**57.94**	**176**	P	**P**	**04 19 49.9**	**+1.2**
SNAA	**Sanae**	**57.94**	**176**	P	**P**	**04 19 49.4**	**+0.7**
	comp=Z,5.3nm,1.1s,baz=310,slow=4.7,SNR=7.0						
SNAA	**Sanae**	**57.94**	**176**	P	**P**	**04 19 49.2**	**+0.4**
ETSF	**Etsaut**	**58.21**	**12**	eP	**P**	**04 19 51.7**	**+0.7**
ETSF				pmax	pmax		
	comp=Z,13nm,1.1s						
SJPF	**Ste Jean**	**58.28**	**11**	eP	**P**	**04 19 52.4**	**+0.9**
SJPF				pmax	pmax		
	comp=Z,15nm,1.0s						
EPF	**Esparros**	**58.52**	**13**	eP	**P**	**04 19 56.4**	**+3.2**
EPF				pmax	pmax		
	comp=Z,30nm,1.6s						
NVL	**N'lazarevskaya**	**58.87**	**170**	eP	**P**	**04 19 56.6**	**+1.4**
NVL				eS	S	04 28 09.9	+10
NVL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MTLF	**Montolieu**	**59.24**	**14**	eP	**P**	**04 19 57.9**	**-0.2**
MTLF				pmax	pmax		
	comp=Z,11nm,1.1s						
CBYP	**Canovanas**	**59.93**	**301**	P	**P**	**04 20 03.3**	**-0.2**
SJG	**San Juan**	**60.10**	**301**	P	**P**	**04 20 05.5**	**+1.0**
	comp=Z,16nm,0.9s,baz=196,slow=5.4,SNR=3.1						
SJG	**San Juan**	**60.10**	**301**	IAmb	IAmb	04 20 06.0	
	comp=Z,78nm,1.6s						
GCPR	**Guaynabo City**	**60.14**	**301**	IAmb	IAmb	04 20 07.0	
	comp=Z,27nm,0.9s						
LFF	**La Frestale**	**60.43**	**12**	eP	**P**	**04 20 06.7**	**+0.5**
LFF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NNA	**Nana**	**60.53**	**264**	deP	**P**	**04 20 07.9**	**+0.3**
NNA				pmax	pmax		
	comp=Z,29nm,1.4s						
RJF	**Les Rejaudoux**	**60.95**	**13**	eP	**P**	**04 20 10.0**	**+0.2**
RJF				pmax	pmax		
	comp=Z,87nm,1.9s						
VIVF	**Saint-Julien-l**	**61.28**	**16**	eP	**P**	**04 20 12.5**	**+0.4**
VIVF				pmax	pmax		
	comp=Z,68nm,1.8s						
SSB	**Saint Sauveur**	**61.64**	**15**	IAmb	IAmb	04 20 15.9	
	comp=Z,22nm,1.3s						
ORIF	**Oris-en-Rattie**	**61.66**	**16**	eP	**P**	**04 20 15.4**	**+0.7**
ORIF				pmax	pmax		
	comp=Z,22nm,1.3s						
MBDF	**Montbardon**	**61.73**	**17**	eP	**P**	**04 20 16.1**	**+0.8**
MBDF				pmax	pmax		
	comp=Z,19nm,1.2s						
IDI	**Anoyia**	**61.78**	**36**	P	**P**	**04 20 16.2**	**+0.5**
	comp=Z,7.7nm,0.7s,baz=210,slow=9.5,SNR=13						
BNI	**Bardonecchia**	**62.00**	**17**	P	**P**	**04 20 18.6**	**+1.5**
BNI				pmax	pmax		
	comp=Z,14nm,2.3s						
TCF	**Toulx Ste Croi**	**62.03**	**13**	eP	**P**	**04 20 17.7**	**+0.6**
TCF				pmax	pmax		
	comp=Z,63nm,1.8s						
ROSC	**El Rosal**	**62.17**	**283**	LR	LR	04 45 55.1	
	comp=Z,661nm,21.8s,baz=138,slow=35						
LPG	**La Plagne**	**62.43**	**17**	eP	**P**	**04 20 20.8**	**+0.7**
LPG				pmax	pmax		
	comp=Z,36nm,1.6s						
LPL	**La Plagne**	**62.44**	**17**	eP	**P**	**04 20 20.8**	**+0.7**
LPL				pmax	pmax		
	comp=Z,31nm,1.3s						
SMF	**Signal de Mont**	**62.74**	**14**	eP	**P**	**04 20 22.1**	**+0.3**
SMF				pmax	pmax		
	comp=Z,37nm,1.6s						
AVF	**Avril sur Loir**	**62.76**	**14**	eP	**P**	**04 20 22.2**	**+0.3**
AVF				pmax	pmax		
	comp=Z,17nm,1.3s						
CABF	**La Chapelle**	**63.27**	**16**	eP	**P**	**04 20 25.4**	**-0.1**
CABF				pmax	pmax		
	comp=Z,35nm,1.4s						
LIT	**Litokhoron**	**64.04**	**31**	P	**P**	**04 20 30.5**	**-0.1**
SYO	**Syowa Base**	**64.46**	**161**	⇑iP	**P**	**04 20 33.0**	**+0.1**
HINF	**Hinteralfeld**	**64.59**	**16**	eP	**P**	**04 20 36.9**	**+2.9**
HINF				pmax	pmax		
	comp=Z,18nm,1.5s						
HAU	**Haudompre**	**64.63**	**15**	eP	**P**	**04 20 35.2**	**+0.9**
HAU				pmax	pmax		
	comp=Z,12nm,1.2s						
EIL	**Elat**	**64.64**	**47**	P	**P**	**04 20 34.8**	**0.0**
	comp=Z,19nm,1.1s,baz=90,slow=10.0,SNR=8.6						
DAVA	**Damuels**	**64.96**	**18**	iP	**P**	**04 20 36.2**	**-0.5**
	comp=Z,9.7nm,0.8s						
FETA	**Feichten**	**64.99**	**19**	iP	**P**	**04 20 36.7**	**-0.2**
	comp=Z,15nm,1.2s						

SLE Schleitheim 64.99 17 P P 04 20 36.4 -0.3
SLE pmax pmax
comp=Z,15nm,1.2s
CDF Champ du Feu 65.25 16 eP P 04 20 37.8 -0.6
CDF pmax pmax
comp=Z,28nm,1.5s
SQTA Sankt Quirin 65.32 19 iP P 04 20 39.2 +0.3
comp=Z,17nm,1.4s
ABTA Abfaltersbach 65.32 20 epP P 04 20 41.4 +2.5
comp=Z,10nm,1.5s
BLY Banja Luka 65.34 24 ⇑P P 04 20 38.8 -0.1
SRS Serrai 65.35 31 P P 04 20 39.5 +0.4
SRS pmax pmax
comp=Z,13nm,1.2s
UBR Ueberruh 65.39 18 eP P 04 20 39.5 +0.2
comp=Z,17nm,0.9s,baz=205,slow=6.3
RETA Reutte 65.41 19 iP P 04 20 38.7 -0.8
comp=Z,3.5nm,0.6s
BFO Black Forest 65.46 17 eP P 04 20 39.8 +0.1
comp=Z,28nm,1.4s,baz=205,slow=6.3
BFO Black Forest 65.46 17 P P 04 20 40.1 +0.4
BFO Black Forest 65.46 17 P P 04 20 40.1 +0.4
BFO pmax pmax
comp=Z,61nm,1.8s
WTTA Wattenberg 65.49 19 eP P 04 20 39.8 -0.3
comp=Z,12nm,1.0s
ELL Elmali 65.73 38 IAmb IAmb 04 20 51.2
comp=Z,17nm,0.9s
ELL Elmali 65.73 38 P P 04 20 44.6 +2.8
OBKA Obir 65.82 22 ipP P 04 20 44.1 +1.9
comp=Z,11nm,1.2s
BAIF Baives 66.03 13 eP P 04 20 43.0 -0.3
BAIF pmax pmax
comp=Z,28nm,1.5s
WLF Walferdange 66.12 15 eP P 04 20 44.6 +0.7
comp=Z,50nm,1.5s,baz=205,slow=6.3
WLF Walferdange 66.12 15 P P 04 20 44.5 +0.7
SOKA Soboth 66.14 22 iP P 04 20 45.1 +0.9
comp=Z,13nm,1.1s
DOU Dourbes 66.16 13 P P 04 20 45.0 +1.0
FUR Furstenfeldbru 66.17 19 eP P 04 20 44.3 0.0
comp=Z,12nm,0.8s,baz=205,slow=6.3
GIVF Givet 66.21 14 eP P 04 20 46.0 +1.5
GIVF pmax pmax
comp=Z,11nm,1.0s
RJOB Jochberg 66.28 20 eP P 04 20 44.5 -0.6
comp=Z,3.1nm,0.6s,baz=205,slow=6.3
VTS Vitosha 66.31 30 ⇑P P 04 20 46.2 +0.7
ARSA Arzberg 66.81 22 iP P 04 20 49.1 +0.8
comp=Z,12nm,1.0s
MOA Molln 66.88 21 iP P 04 20 48.4 -0.4
comp=Z,9.8nm,1.2s
MMAI Mount Meron Ar 66.91 44 P P 04 20 49.8 +0.4
comp=Z,3.7nm,0.8s,baz=163,slow=5.9,SNR=4.0
MEM Membach 66.96 14 P P 04 20 50.1 +0.8
AHRW Bad Neuenahr-A 67.16 15 eP P 04 20 51.5 +1.1
comp=Z,84nm,2.1s,baz=205,slow=6.3
TNS Taunus Mts 67.22 16 eP P 04 20 51.5 +0.6
comp=Z,18nm,1.3s,baz=205,slow=6.3
MDVR Moldovita 67.28 27 ⇓P P 04 20 51.9 +0.5
ASF Jabal al Asfar 67.44 46 P P 04 20 54.2 +1.4
comp=Z,6.6nm,0.9s,baz=157,slow=1.3,SNR=7.8
CONA Conrad Observa 67.50 22 iP P 04 20 53.6 +0.7
comp=Z,11nm,1.1s
GRF Grafenberg Arr 67.52 18 eL L 04 48 36.6
comp=Z,396nm,21.1s
WET Wettzell 67.54 19 eP P 04 20 53.1 +0.2
comp=Z,12nm,1.3s,baz=205,slow=6.3
WET Wettzell 67.54 19 P P 04 20 52.8 -0.2
WET pmax pmax
comp=Z,9.0nm,0.5s
GEC2 GERESS Array S 67.55 20 eP P 04 20 53.1 0.0
comp=Z,13nm,1.6s,baz=205,slow=6.3
GERES GERESS Array B 67.55 20 P P 04 20 52.6 -0.5
comp=Z,1.5nm,0.8s,baz=207,slow=4.9,SNR=11
GERES PP PP 04 23 22.4 +0.1
comp=Z,4.3nm,1.0s,baz=202,slow=10,SNR=9.6
GERES LR LR 04 49 29.2
comp=Z,583nm,19.9s,baz=239,slow=35
KHC Kasperske Hory 67.75 20 eP P 04 20 54.1 -0.3
KHC AMS AMS 04 48 20.0
comp=Z,600nm,17.9s
KHC Kasperske Hory 67.75 20⇓eP P 04 20 53.0 -1.4
KHC pmax pmax
comp=Z,18nm,1.8s
ROTZ Rotzenmuhle 67.88 18 eP P 04 20 55.2 +0.2
comp=Z,74nm,2.4s,baz=205,slow=6.3
BZS Buzias 67.89 27 ⇑P P 04 20 54.9 -0.3
BZS Buzias 67.89 27 P P 04 20 57.0 +1.8
BZS pmax pmax
comp=Z,14nm,1.3s
MANZ Manzenberg 68.04 18 eP P 04 20 56.3 +0.2
comp=Z,38nm,1.9s,baz=205,slow=6.3
UBBA Unterbreizbach 68.18 17 eP P 04 20 57.4 +0.7
comp=Z,23nm,1.8s,baz=205,slow=6.3
MODS Modra-Piesok 68.39 22 eP P 04 20 57.6 -0.7
MODS pmax pmax
comp=Z,28nm,1.4s
MODS Modra-Piesok 68.39 22 eP P 04 20 57.6 -0.7
WERN Wernitzgruen 68.39 18 eP P 04 20 58.7 +0.4
comp=Z,21nm,1.5s,baz=205,slow=6.3
SIRR Siria 68.42 26 ⇑P P 04 20 59.1 +0.6
GUNZ Gunzen 68.44 18 eP P 04 20 58.9 +0.2
comp=Z,19nm,1.5s,baz=205,slow=6.3
MOX Moxa 68.48 18 eP P 04 20 59.0 +0.1
comp=Z,24nm,1.7s,baz=205,slow=6.3
MOX eL L 04 48 41.3
comp=Z,436nm,21.3s
PLN Plauen 68.50 18 eP P 04 20 59.0 0.0
comp=Z,13nm,1.4s,baz=205,slow=6.3
TANN Tannenbergstha 68.53 18 eP P 04 20 59.4 +0.2
comp=Z,36nm,1.5s,baz=205,slow=6.3
TREC Trest 68.53 21 AMS AMS 04 48 10.0
comp=Z,600nm,21.4s
KRUC Moravsky 68.65 21 eP P 04 20 59.7 -0.2
PRU Pruhonice 68.81 20 eP P 04 21 00.8 -0.1
PRU AMS AMS 04 48 30.0
comp=Z,500nm,17.3s
PRU Pruhonice 68.81 20 eP P 04 21 00.8 -0.1
PRU MLR MLR
comp=Z,500nm,17.3s
GTTG Gottingen 68.82 16 eP P 04 21 02.1 +1.2
comp=Z,14nm,1.2s,baz=205,slow=6.3
PRA Prague 68.85 20 AMS AMS 04 49 20.0
comp=Z,700nm,21.5s
VRAC Vranov 68.93 21 eP P 04 21 01.3 -0.4
VRAC Vranov 68.93 21 P P 04 21 01.0 -0.7
comp=Z,1.9nm,0.5s,baz=227,slow=5.8,SNR=6.3
VRAC Vranov 68.93 21 P P 04 21 01.0 -0.7
JAVC Velka Javorina 68.94 22 eP P 04 21 01.7 -0.1
IBBN Ibbenburen 68.95 14 eP P 04 21 02.7 +1.0
comp=Z,104nm,2.1s,baz=205,slow=6.3
PSZ Piszkesteto 69.01 24 ⇑P P 04 21 01.5 -0.8
PSZ Piszkesteto 69.01 24 IAmb IAmb 04 21 03.9
comp=Z,43nm,1.7s
PSZ Piszkesteto 69.01 24 P P 04 21 03.0 +0.7
PSZ pmax pmax
comp=Z,24nm,0.8s
NEUB Neuenburg 69.03 17 eP P 04 21 02.7 +0.5
comp=Z,20nm,1.3s,baz=205,slow=6.3
ARR Arges 69.05 29 ⇓P P 04 21 02.6 0.0
VYHS Vyhne 69.07 23 eP P 04 21 02.7 +0.1
VYHS pmax pmax
comp=Z,20nm,1.3s
VYHS Vyhne 69.07 23 eP P 04 21 02.7 +0.1
CLZ Clausthal 69.20 16 eP P 04 21 04.0 +0.7
comp=Z,15nm,1.5s,baz=205,slow=6.3
FBE Freiberg 69.25 18 eP P 04 21 03.8 +0.2
comp=Z,18nm,1.5s,baz=205,slow=6.3
DRGR 69.28 26 ⇑P P 04 21 04.3 +0.3
DRGR 69.28 26 P P 04 21 04.6 +0.6
DRGR pmax pmax
comp=Z,24nm,1.1s
PVCC Panska Ves 69.29 19 AMS AMS 04 48 00.0
comp=Z,700nm,23.1s
VOIR 69.30 29 ⇓P P 04 21 03.3 -0.9
BRG Berggiesshubel 69.39 19 eP P 04 21 04.2 -0.3
comp=Z,16nm,1.5s
BRG Berggiesshubel 69.39 19 eP P 04 21 04.5 +0.1
comp=Z,16nm,1.5s,baz=205,slow=6.3
BRG Berggiesshubel 69.39 19 eP P 04 21 04.2 -0.3
BRG pmax pmax
comp=Z,16nm,1.5s
CLL Collm 69.48 18 eP P 04 21 06.0 +1.0
CLL eS S 04 30 12.0 0.0
CLL ePS PnS 04 30 42.0 +3.9
CLL eSS SS 04 34 30.0 -10
CLL eSSS SSS 04 38 00.0
CLL eSSSS 04 39 12.0
CLL Collm 69.48 18 eP P 04 21 06.0 +1.0
CLL eS S 04 30 12.0 0.0
ASSE Asse, Remlinge 69.54 16 eP P 04 21 06.1 +0.9
comp=Z,16nm,1.7s,baz=205,slow=6.3
KRLC Kraliky 69.64 21 eP P 04 21 05.6 -0.5
KRLC AMS AMS 04 49 00.0
comp=Z,400nm,23.8s
KRLC Kraliky 69.64 21 eP P 04 21 05.6 -0.5
KRLC MLR MLR
comp=Z,400nm,23.8s
MORC Moravsky Berou 69.66 22 eP P 04 21 06.4 +0.2
MORC Moravsky Berou 69.66 22 ⇑P P 04 21 04.5 -1.7
MORC Moravsky Berou 69.66 22 P P 04 21 07.0 +0.8
KECS Kecovo 69.70 24 eP P 04 21 06.5 0.0
KECS Kecovo 69.70 24 eP P 04 21 06.5 0.0
DPC Dobruska-Polom 69.72 21 eP P 04 21 06.1 -0.5
DPC AMS AMS 04 50 40.0
comp=Z,400nm,21.8s
DPC Dobruska-Polom 69.72 21 eP P 04 21 06.1 -0.5
DPC MLR MLR
comp=Z,400nm,21.8s
NRDL Niedersach Rie 69.72 16 eP P 04 21 08.0 +1.7
comp=Z,32nm,1.4s,baz=205,slow=6.3
RETH Rethem/Aller, 69.74 15 eP P 04 21 08.1 +1.5
comp=Z,164nm,2.7s,baz=205,slow=6.3
UPC Upice 69.74 20 eP P 04 21 06.5 -0.2
UPC AMS AMS 04 48 40.0
comp=Z,500nm,25.0s
UPC Upice 69.74 20 eP P 04 21 06.5 -0.2
UPC MLR MLR
comp=Z,500nm,25.0s
MLR Muntele Rosu 69.76 29 P P 04 21 06.7 -0.4
comp=Z,15nm,0.8s,baz=170,slow=5.5,SNR=20
MLR Muntele Rosu 69.76 29 ⇑P P 04 21 06.6 -0.4
MLR Muntele Rosu 69.76 29 IAmb IAmb 04 21 08.6
comp=Z,21nm,0.9s
CHVC Chvalec 69.83 20 eP P 04 21 05.4 -1.8
CHVC ex x 04 21 14.2
CHVC AMS AMS 04 49 40.0
comp=Z,500nm,20.9s
LANS Liptovska Anna 69.85 23 eP P 04 21 08.4 +1.0
LANS Liptovska Anna 69.85 23 eP P 04 21 08.4 +1.0
DOPR Dopca 69.85 29 ⇑P P 04 21 07.5 0.0
OSTC Ostas 69.85 20 eP P 04 21 07.7 +0.3
OSTC AMS AMS 04 49 00.0
comp=Z,500nm,24.4s
BR131 Keskin Array S 69.89 38 P P 04 21 07.5 -0.5
BR131 Keskin Array S 69.89 38deP P 04 21 08.3 +0.3
BRTR Keskin Array B 69.89 38 P P 04 21 08.5 +0.5
comp=Z,2.9nm,0.7s,baz=222,slow=5.8,SNR=18
BRTR LR LR 04 53 14.8
comp=Z,89nm,20.0s,baz=218,slow=37
OKC Ostrava-Krasne 69.93 22 AMS AMS 04 51 20.0
comp=Z,600nm,22.0s
KSP Ksiaz 70.12 20 eP P 04 21 09.3 +0.3
KSP Ksiaz 70.12 20 eP P 04 21 09.3 +0.3
OZUR 70.13 29 ⇑P P 04 21 09.6 +0.3
TRPA Tarpa 70.26 25 ⇑P P 04 21 09.4 -0.4
PLOR Plostina 70.36 29 ⇑P P 04 21 09.6 -1.0
NIE Niedzica 70.39 23 eP P 04 21 11.7 +1.0
NIE Niedzica 70.39 23 eP P 04 21 11.7 +1.0
VRI Vrincioaia 70.41 29 ⇓P P 04 21 10.0 -0.9
VRI Vrincioaia 70.41 29 P P 04 21 10.3 -0.6
VRI pmax pmax
comp=Z,11nm,2.4s
CRVS Cervenica-Dubn 70.43 24 eP P 04 21 11.5 +0.6
CRVS pmax pmax
comp=Z,41nm,1.4s
CRVS Cervenica-Dubn 70.43 24 eP P 04 21 11.5 +0.6
CRVS e 04 24 18.2
UZH Uzhgorod 70.55 25⇓iP P 04 21 11.0 -0.6
UZH i 04 21 18.9
UZH i 04 21 28.2
HLG Helgoland 70.71 14 eP P 04 21 13.7 +1.2
comp=Z,164nm,1.0s,baz=205,slow=6.3
RUE Ruedersdorf 70.74 18 eP P 04 21 13.3 +0.6
comp=Z,19nm,0.9s,baz=205,slow=6.3
KOLS Kolonicke sedl 70.78 25 eP P 04 21 13.5 +0.4
KOLS Kolonicke sedl 70.78 25 eP P 04 21 13.5 +0.4
OJC Ojcow 70.85 23 eP P 04 21 13.5 +0.1
OJC Ojcow 70.85 23 P P 04 21 12.7 -0.8
OJC IAmb IAmb 04 21 14.9
comp=Z,33nm,1.6s
OJC Ojcow 70.85 23 eP P 04 21 13.5 +0.1
BURAR Bucovina Array 71.01 27 ⇑P P 04 21 15.2 +0.5
BSEG Bad Segeberg 71.07 15 eP P 04 21 15.5 +0.8
comp=Z,45nm,1.7s,baz=205,slow=6.3
KWP Kalwaria Pacla 71.50 25 eP P 04 21 17.6 +0.2
KWP Kalwaria Pacla 71.50 25 eP P 04 21 17.6 +0.2
LVV L'vov 72.19 25 eP P 04 21 20.6 -0.9
LVV MLR MLR
comp=N,300nm,18.0s
LVV MLR MLR
comp=E,300nm,18.0s
LVV MLR MLR
comp=Z,400nm,18.0s
MAW Mawson 72.24 157 LR LR 04 45 09.4
comp=Z,131nm,19.7s,baz=298,slow=29
SORM Soroca 72.82 29 ⇑P P 04 21 23.2 -2.1
HAL Halifax 73.49 326 P P 04 21 28.9 -0.4
HAL Halifax 73.49 326 P P 04 21 28.9 -0.4
HAL pmax pmax
comp=Z,101nm,1.3s
JTS Las Juntas de 73.88 285⇓eP P 04 21 32.3 0.0
JTS pmax pmax
comp=Z,9.0nm,1.1s
KLNR Kaliningrad 74.58 20⇑eP P 04 21 35.3 -0.2
KLNR pmax pmax
comp=Z,66nm,1.0s
AKASG Malin Array Be 75.07 27 P P 04 21 37.7 -0.7
comp=Z,8.1nm,0.8s,baz=224,slow=5.8,SNR=42
AKASG LR LR 04 55 31.4
comp=Z,156nm,22.0s,baz=235,slow=36
AKBB Malin Array Si 75.07 27 IAmb IAmb 04 21 39.0
comp=Z,66nm,1.8s
AKBB Malin Array Si 75.07 27deP P 04 21 37.6 -0.8
SUW Suwalki 75.14 22 eP P 04 21 38.7 0.0
SUW Suwalki 75.14 22 IAmb IAmb 04 21 40.9
comp=Z,29nm,0.9s
SUW Suwalki 75.14 22 eP P 04 21 38.7 0.0
SOC Sochi 75.85 37 eP P 04 21 43.4 +0.3
SOC e 04 24 33.1
SOC ePPP PPP 04 26 22.7
SOC eS S 04 31 28.1 +3.0
SOC eSS SS 04 36 25.8 +8.0
SOC pmax pmax
comp=Z,20nm,0.7s
QSPA South Pole Qui 76.01 180 P P 04 21 43.7 -0.2
QSPA IAmb IAmb 04 22 01.0
comp=Z,50nm,1.7s
NACGM Naroch 77.17 23 e P 04 21 49.0 -1.3
TGUH Tegucigalpa,Un 77.20 288 IAmb IAmb 04 21 54.4
comp=Z,31nm,1.2s
NEY Neytrino 77.47 39⇑eP P 04 21 50.1 -2.4
NEY pmax pmax
comp=Z,1.0nm,1.0s
NB2 NORSAR Subarra 77.71 13 P P 04 21 53.7 +0.4
comp=Z,0.7nm,0.7s,baz=205,slow=6.2
NOA NORSAR Array B 77.71 13 P P 04 21 53.7 +0.4
comp=Z,15nm,0.4s,baz=204,slow=6.1,SNR=7.5
NOA LR LR 04 54 38.3
comp=Z,124nm,21.9s,baz=205,slow=34
KIV Kislovodsk 77.83 38 P P 04 21 53.2 -1.2
KIV Kislovodsk 77.83 38 eP P 04 21 54.7 +0.3
KIV pmax pmax
comp=Z,40nm,1.1s
KBZ Khabaz 77.84 39 P P 04 21 55.0 +0.8
comp=Z,4.6nm,0.9s,baz=54,slow=3.2,SNR=5.4
KBZ LR LR 04 57 28.0
comp=Z,51nm,20.5s,baz=243,slow=37
KBZ Khabaz 77.84 39⇑eP P 04 21 54.8 +0.5
U59A Littleton 77.89 313 IAmb IAmb 04 21 58.5
comp=Z,23nm,1.1s
NCK Nalchik 78.14 39⇑eP P 04 21 56.9 +1.3
NCK pmax pmax
comp=Z,10.0nm,1.0s
GOF Gofitskoye 78.65 38 eP P 04 21 59.5 +0.7
N58A Sunbury 79.29 317 IAmb IAmb 04 22 05.1
comp=Z,86nm,1.8s
VSU Vasula 79.85 21⇑eP P 04 22 04.9 -0.1
VSU pmax pmax
comp=Z,21nm,1.0s
VORD Divnogorie 80.01 31 eP P 04 22 05.7 -0.4
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 80.10 31⇓eP P 04 22 06.1 -0.4
VSR pmax pmax
comp=Z,21nm,1.0s
Q56A Snyder Ridge, 80.11 314 IAmb IAmb 04 22 17.4
comp=Z,44nm,1.3s
WSAR Wadi Sarin 80.66 63 P P 04 22 10.9 +0.7
comp=Z,43nm,0.8s,baz=254,slow=4.6,SNR=7.8
BG3 Lake Jocassee 81.07 309 IAmb IAmb 04 22 15.6
comp=Z,51nm,1.8s
V53A Saluda 81.25 310 IAmb IAmb 04 22 16.2
comp=Z,28nm,1.5s
OBN Obninsk 81.33 27⇑eP P 04 22 11.9 -1.1
OBN *PP pP 04 22 17.0 +0.5
OBN eS S 04 32 28.4 +5.2
OBN pmax pmax
comp=Z,5.0nm,1.1s
OBN MLR MLR
comp=Z,307nm,18.0s
VRH Novokhopyorsk 81.39 32 eP P 04 22 13.4 0.0
VRH pmax pmax
comp=Z,10.0nm,0.9s
Y52A Lilburn 81.47 308 IAmb IAmb 04 22 17.4
comp=Z,86nm,1.9s
152A Waverly Hall 81.51 307 IAmb IAmb 04 22 17.4
comp=Z,30nm,1.6s
SCHQ Schefferville 81.63 332 P P 04 22 16.0 +1.3
comp=Z,10nm,0.9s,baz=122,slow=3.6,SNR=25
SCHQ Schefferville 81.63 332 P P 04 22 14.2 -0.5
W52A Murphy 81.89 309 IAmb IAmb 04 22 19.2
comp=Z,48nm,1.6s
FINES FINESS Array B 81.92 18 P P 04 22 16.5 +0.5
comp=Z,3.0nm,0.6s,baz=198,slow=4.5,SNR=33
FINES LR LR 04 57 29.9
comp=Z,147nm,21.4s,baz=222,slow=35
FIA1 FINESS Array S 81.92 18 P P 04 22 15.2 -0.8
FIA1 IAmb IAmb 04 22 17.7
comp=Z,27nm,1.4s
ALLY Alegheny Colle 81.95 316 P P 04 22 15.6 -1.1
ALLY IAmb IAmb 04 22 20.1
comp=Z,40nm,1.1s
N53A Lisbon 82.04 315 IAmb IAmb 04 22 26.7
comp=Z,66nm,1.7s
MOS Moscow 82.19 27 eP P 04 22 16.5 -1.1
MOS pmax pmax
comp=Z,28nm,0.9s
MOS MLR MLR
comp=Z,700nm,21.0s
CCIG Comitan 82.34 289 IAmb IAmb 04 22 22.4
comp=Z,44nm,1.5s
Z50A Ashland 82.67 307 IAmb IAmb 04 22 23.1
comp=Z,34nm,1.8s
SADO Sadowa 82.74 320 P P 04 22 20.2 -0.5
comp=Z,6.2nm,0.9s,baz=109,slow=6.8,SNR=3.7
Q51A Peebles 83.02 313 IAmb IAmb 04 22 24.1
comp=Z,12nm,0.9s
M50A Fremont 83.80 315 IAmb IAmb 04 22 27.6
comp=Z,19nm,1.0s
V48A Smith Brothers 84.28 309 IAmb IAmb 04 22 30.9
comp=Z,37nm,1.6s
T47A Sharon Grove 84.96 310 IAmb IAmb 04 22 34.0
comp=Z,54nm,1.9s
PLAL Pickwick Lake 84.96 308 IAmb IAmb 04 22 34.0
comp=Z,25nm,1.5s
CMIG Matias Romero 85.10 289 P P 04 22 34.3 +1.0
comp=Z,1.2nm,0.7s,baz=43,slow=2.4,SNR=5.7
WVT Waverly 85.19 309 P P 04 22 31.2 -2.2
WVT IAmb IAmb 04 22 35.0
comp=Z,36nm,1.6s
WVT Waverly 85.19 309 P P 04 22 31.2 -2.2
WVT pmax pmax
comp=Z,36nm,1.6s
N47A Urbana 85.42 314 IAmb IAmb 04 22 35.9
comp=Z,50nm,1.8s
GEYT Alibeck 85.45 49 P P 04 22 33.9 -0.9
comp=Z,6.3nm,0.7s,baz=216,slow=14,SNR=3.9
GEYT LR LR 05 01 21.7
comp=Z,142nm,18.2s,baz=210,slow=36
KLMR Klimovskoe 86.18 23 eP P 04 22 35.8 -1.9
KLMR pmax pmax
comp=Z,21nm,1.2s
KLMR Klimovskoe 86.18 23 eP P 04 22 35.9 -1.8
KLMR AMP 04 22 38.9
comp=Z,21nm,1.2s
I45A Fountain 87.02 317 IAmb IAmb 04 22 43.7
comp=Z,23nm,0.8s
G45A Suttons Bay 87.03 318 P P 04 22 41.8 -0.5
TMCR Tamitsa 87.72 20 eP P 04 22 44.6 -0.6
E44A Grand Marais A 87.82 319 IAmb IAmb 04 23 06.3
comp=Z,26nm,1.6s
ARCES ARCESS Array B 88.07 13 P P 04 22 47.1 +0.3
comp=Z,2.5nm,0.8s,baz=298,slow=2.6,SNR=4.9
ARCES LR LR 05 02 27.5
comp=Z,146nm,19.0s,baz=203,slow=36
CCM Cathedral Cave 88.42 310 P P 04 22 48.5 -0.6
CCM Cathedral Cave 88.42 310 P P 04 22 48.5 -0.6
CCM pmax pmax
comp=Z,62nm,1.8s
VNDA Vanda 88.48 179 LR LR 04 57 38.2
comp=Z,140nm,18.0s,baz=177,slow=32
APA Apatity 88.58 17⇓iP P 04 22 44.9 -4.3
APA pmax pmax
comp=Z,8.0nm,1.0s
I42A Draeger Farm, 88.76 316 IAmb IAmb 04 22 51.6
comp=Z,8.6nm,0.7s
PRGR Permogore 89.04 24 eP P 04 22 51.0 -0.5
PRGR pmax pmax
comp=Z,21nm,0.9s
KIRV Kirov 89.09 28 P P 04 22 51.8 0.0
comp=Z,15nm,0.5s,baz=263,slow=8.9,SNR=4.8
KIRV Kirov 89.09 28⇑eP P 04 22 52.1 +0.3
JFWS Jewell Farm 89.33 315 IAmb IAmb 04 22 56.6
comp=Z,37nm,1.6s
W39A Magazine 89.45 306 IAmb IAmb 04 22 56.5
comp=Z,50nm,1.9s
HKT Hockley 89.57 301 eP P 04 22 56.0 +1.4
HKT pmax pmax
comp=Z,17nm,1.8s
AKTO Aktyubinsk 90.07 38 P P 04 22 56.5 -0.1
comp=Z,6.0nm,0.8s,baz=258,slow=4.0,SNR=17
DAG Danmarks Havn 90.77 359 iP P 04 23 01.0 +1.7
comp=Z,25nm,1.4s
DAG Danmarks Havn 90.77 359 iP P 04 23 01.0 +1.7
DAG pmax pmax
comp=Z,25nm,1.4s
W35A Tecumseh 91.86 306 P P 04 23 03.0 -2.3
ARU Arti 92.62 32 P P 04 23 08.6 +0.3
comp=Z,1.5nm,0.2s,baz=229,slow=7.5,SNR=6.0
ARU Arti 92.62 32 P P 04 23 06.3 -1.9
ARU Arti 92.62 32⇑iP P 04 23 09.0 +0.7
ARU pmax pmax
comp=Z,6.0nm,0.9s
ECSD EROS Data Cent 94.00 314 P P 04 23 14.3 -0.6
ECSD IAmb IAmb 04 23 16.4
comp=Z,31nm,1.9s
ULM Lac du Bonnet 95.27 320 P P 04 23 20.4 -0.2
comp=Z,0.8nm,0.4s,baz=122,slow=5.8,SNR=3.8
ULM LR LR 05 03 27.9
comp=Z,66nm,19.1s,baz=108,slow=34
ULM Lac du Bonnet 95.27 320⇑eP P 04 23 20.1 -0.5
TXAR Lajitas Array 96.01 299 P P 04 23 25.0 +0.4
comp=Z,0.9nm,0.9s,baz=126,slow=6.4,SNR=6.7
TXAR LR LR 05 06 10.9
comp=Z,13nm,19.8s,baz=0.0,slow=35
HPIG 97.22 296 IAmb IAmb 04 23 33.5
comp=Z,5.8nm,0.7s
BRVK Borovoye 98.12 37⇓eP P 04 23 32.8 -0.7
BRVK pmax pmax
comp=Z,1.0nm,0.7s
AAK Ala-Archa 98.77 48⇓eP Pdif 04 23 37.2 +0.3
AAK pmax pmax
comp=Z,1.0nm,0.9s
KSH Kashi 99.28 52 P Pdif 04 23 34.3 -4.9
KSH pP pP 04 23 43.3 +0.5
KSH sP pwP 04 23 48.5 +1.3
KSH PP PP 04 27 37.4 -4.9
KSH pmax pmax
comp=Z,9.0nm,0.5s
KSH LR LR
comp=Z,160nm,9.9s
KSH LR LR
comp=Z,360nm,5.8s
MKAR Makanchi Array 104.85 45 PP PKiKP 04 28 25.9 +7.0
comp=Z,0.8nm,0.9s,baz=255,slow=3.6,SNR=5.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YKA	**Yellowknife Ar**	**107.06**	**331**	Pdiff	**Pdif**	**04 24 13.1**	**0.0**
	comp=Z,0.1nm,0.7s,baz=75,slow=4.7,SNR=2.9						
WMQ	**Urumqi**	**108.48**	**48**	*e*Pdif	**Pdif**	**04 24 21.4**	**+1.5**
CMAR	**Chiang Mai Arr**	**116.36**	**76**	PKP	**PKPdf**	**04 28 41.1**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=268,slow=3.6,SNR=5.3						
ZAK	**Zakamensk**	**118.48**	**40**	*e*PKIKP	**PKPdf**	**04 28 43.3**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ILAR	**Eielson Array**	**119.95**	**339**	PKP	**PKPdf**	**04 28 46.4**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=341,slow=3.1,SNR=5.6						
SONM	**Songino Array**	**121.06**	**42**	PKP	**PKPdf**	**04 28 49.2**	**-0.6**
	comp=Z,1.3nm,1.0s,baz=271,slow=0.7,SNR=6.0						
LZH	**Lanzhou**	**121.10**	**56**	*e*PKP	**PKPdf**	**04 28 46.5**	**-3.7**
LZH				LR	LR		
	comp=Z,250nm,17.0s						
LZH				LR	LR		
	comp=Z,270nm,20.1s						
CD2	**Chengdu**	**121.33**	**62**	PKP	**PKPdf**	**04 28 50.5**	**-0.2**
BILL	**Bilibino**	**126.15**	**360**	⇑*i*PKIKP	**PKiKP**	**04 28 59.3**	**+0.2**
BILL				*e*		04 29 04.3	
BILL				pmax	pmax		
	comp=Z,12nm,1.8s						
BILL				MLR	MLR		
	comp=Z,61nm,16.0s						
HHC	**Hu-ho-hao-te**	**126.33**	**49**	*e*PKP	**PKiKP**	**04 29 01.9**	**+1.4**
SEY	**Seymchan**	**130.41**	**8**	⇑*i*PKIKP	**PKiKP**	**04 29 07.9**	**+0.1**
ASAR	**Alice Springs**	**131.40**	**140**	PKP	**PKPdf**	**04 29 09.4**	**-0.7**
	comp=Z,4.9nm,1.4s,baz=242,slow=4.5,SNR=5.8						
NJ2	**Nanjing**	**134.00**	**59**	*e*PKP	**PKPdf**	**04 29 14.3**	**-0.4**
KLR	**Kul'dur**	**135.46**	**31**	⇓*i*PKIKP	**PKiKP**	**04 29 18.1**	**-0.3**
MSVF	**Nonsavu**	**145.96**	**202**	PKiKP	**PKPdf**	**04 29 34.6**	**-2.2**
MSVF	**Nonsavu**	**145.96**	**202**	PKIKP	**PKPdf**	**04 29 34.6**	**-2.2**
INU	**Inuyama**	**146.88**	**45**		**PKPdf**	**04 29 36.8**	**-0.9**
MJB9	**Matsu-Tunnel**	**147.01**	**43**		**PKPdf**	**04 29 36.7**	**-1.3**
MAJO	**Matsushiro**	**147.01**	**43**		**PKPdf**	**04 29 36.0**	**-1.9**
MAJO	**Matsushiro**	**147.01**	**43**	PKIKP	**PKPdf**	**04 29 36.1**	**-1.9**
MAT	**Matsushiro**	**147.01**	**43**	PKP	**PKPbc**	**04 29 39.6**	**-0.4**
MJAR	**Matsushiro Arr**	**147.01**	**43**	PKPbc	**PKPbc**	**04 29 39.7**	**-0.3**
	comp=Z,15nm,1.1s,baz=304,slow=3.6,SNR=4.3						
KRVT	**Keravat (AS076**	**157.36**	**143**	PKPbc	PKPdf	04 30 03.0	+9.1
	comp=Z,718nm,0.7s,baz=14,slow=22,SNR=6.3						

*IDC **20** 04:14:43.9±1.6, 3.82N×71.29W, h0km, mb3.6/4, mb1 4.0/8, mb1mx3.7/42, mbtmp3.9/8, ML4.0/3, MS2.9/1, Ms1 2.9/1, ms1mx2.5/32, Error ellipse: s-maj=26.6km s-min=16.7km az=180.0*

*RSNC **20** 04:14:49.0±1.3, 3.89N×71.55W, h4km±9km, ML3.6, Mw3.6*

ISC 20 04:14:45.8±0.8, **3.92N**±0.04×**71.43W**±0.05, **h10km, n28, σ1s56**/42, **mb3.6**/4, **1C-1D, Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PTGC	**Puerto Gaitan,**	**0.76**	**292**	⇑*i*Pg	**Pg**	**04 14 59.6**	**-0.9**
PTGC				*e*Sg	**Sg**	**04 15 09.2**	**-1.3**
PTGC				*i*		04 15 34.9	
	comp=Z,1μm,0.4s						
GUVC	**San Jose del G**	**1.82**	**221**	*e*P	**Pb**	**04 15 17.3**	**-1.9**
GUVC				*e*S	**Sb**	**04 15 41.3**	**-0.8**
GUVC				*i*		04 15 43.4	
	comp=Z,871nm,0.2s						
GUVC				*i*		04 15 46.1	
	comp=Z,1μm,0.1s						
CHIC	**Chingaza**	**2.41**	**287**	⇓*i*P	**Pn**	**04 15 26.5**	**+0.8**
CHIC				*e*S	**Sn**	**04 15 56.9**	**+1.5**
CHIC				*i*		04 16 12.4	
	comp=Z,400nm,0.3s						
TAMC	**Tame, Arauca**	**2.53**	**352**	*e*P	**Pb**	**04 15 29.7**	**-1.7**
TAMC				*e*S	**Sb**	**04 16 02.2**	**-0.3**
TAMC				*i*		04 16 20.3	
	comp=Z,603nm,0.8s						
RUSC	**La Rusia**	**2.56**	**320**	*e*P	**Pb**	**04 15 29.8**	**-2.5**
RUSC				*e*S	**Sb**	**04 16 02.5**	**-1.5**
RUSC				*i*		04 16 16.7	
	comp=Z,261nm,0.9s						
MACC	**Macarena, Meta**	**2.99**	**234**	*e*P	**Pb**	**04 15 39.0**	**-0.3**
MACC				*e*S	**Sb**	**04 16 15.3**	**-0.6**
MACC				*i*		04 16 28.5	
	comp=Z,331nm,0.4s						
ROSC	**El Rosal**	**3.03**	**288**	Pn	**Pb**	**04 15 36.7**	**-3.4**
	comp=Z,8.4nm,0.3s,baz=44,slow=19,SNR=25						
ROSC				Pg	**Pg**	**04 15 44.1**	**+0.1**
	comp=Z,27nm,0.3s,baz=126,slow=14,SNR=27						
ROSC				Lg	Lg	04 16 25.1	
	comp=Z,24nm,0.3s,baz=271,slow=23,SNR=4.7						
ROSC	**El Rosal**	**3.03**	**288**	*e*P	**Pn**	**04 15 36.0**	**+1.8**
ROSC				*i*		04 16 48.6	
	comp=Z,111nm,1.4s						
SPBC	**San Pablo de B**	**3.15**	**303**	*e*P	**Pn**	**04 15 36.4**	**+0.8**
SPBC				*e*S	**Sb**	**04 16 22.1**	**+1.6**
SPBC				*i*		04 16 39.3	
	comp=Z,146nm,0.7s						
BARC	**Barichara**	**3.18**	**327**	*e*P	**Pn**	**04 15 37.1**	**+0.9**
BARC				*e*S	**Sb**	**04 16 24.4**	**+2.8**
BARC				*i*		04 16 47.1	
	comp=Z,894nm,1.3s						
PRAC	**Prado**	**3.46**	**267**	*e*P	**Pn**	**04 15 41.7**	**+1.9**
PRAC				*e*S	**Sg**	**04 16 35.6**	**-1.4**
PRAC				*i*		04 16 45.8	
	comp=Z,100nm,0.3s						
PAMC	**Pamplona, Colo**	**3.63**	**340**	*e*P	**Pn**	**04 15 44.6**	**+2.1**
PAMC				*e*S	**Sb**	**04 16 37.1**	**+2.4**
PAMC				*i*		04 16 48.3	
	comp=Z,180nm,0.3s						
PAMC				*i*		04 16 58.0	
	comp=Z,231nm,0.9s						
NORC	**Norcasia**	**3.80**	**296**	*e*P	**Pn**	**04 15 45.5**	**+0.9**
NORC				*i*		04 16 57.0	
	comp=Z,90nm,0.6s						
ORTC	**Ortega, Tolima**	**3.81**	**270**	*e*P	**Pn**	**04 15 45.6**	**+0.9**
ORTC				*e*S	**Sb**	**04 16 42.8**	**+3.2**
ORTC				*i*		04 16 56.6	
	comp=Z,190nm,0.7s						
PTBC	**PUERTO BERRIO,**	**3.98**	**311**	*e*P	**Pn**	**04 15 47.0**	**-0.1**
PTBC				*i*		04 17 04.2	
	comp=Z,70nm,1.1s						
GUY2C	**Guyana, Caldas**	**4.13**	**288**	*i* P	**Pn**	**04 15 51.2**	**+1.7**
GUY2C				*i*		04 17 03.7	
	comp=N,68nm,0.5s						
FLOC	**Florencia**	**4.82**	**241**	*e*P	**Pn**	**04 16 00.4**	**+1.9**
FLOC				*e*S	**Sb**	**04 17 09.4**	**+0.9**
FLOC				*i*		04 17 20.6	
	comp=Z,150nm,0.6s						
YOTC	**Yotoco, Valle**	**4.91**	**271**	*e*P	**Pn**	**04 15 60.0**	**+0.1**
YOTC				*i*		04 17 26.5	
	comp=Z,28nm,2.0s						
ZARC	**Zaragoza, Cauc**	**4.93**	**316**	*e*P	**Pn**	**04 16 01.5**	**+1.5**
ZARC				*i*		04 17 06.0	
	comp=Z,44nm,0.5s						
SDV	**Santo Domingo**	**5.00**	**9**	Pn	**Pn**	**04 16 01.4**	**+0.3**
	comp=Z,17nm,0.3s,baz=126,slow=11,SNR=42						
SDV				Sn	**Sn**	**04 17 01.8**	**+2.6**
	comp=Z,43nm,0.3s,baz=236,slow=20,SNR=11						
SDV				Lg	Lg	04 17 25.7	
	comp=Z,19nm,0.3s,baz=83,slow=22,SNR=6.2						
SDV				LR	LR	04 18 10.2	
	comp=Z,124nm,20.8s,baz=264,slow=41						
SMLC	**San Martn de**	**5.52**	**332**	*e*P	**Pn**	**04 16 07.8**	**-0.3**
SMLC				*i*		04 17 52.3	
	comp=Z,34nm,0.7s						
UREC	**San Jos de Ur**	**5.58**	**313**	*e*P	**Pn**	**04 16 09.2**	**+0.2**
UREC				*i*		04 17 27.8	
	comp=Z,17nm,0.6s						
PCRV	**Puerto La Cruz**	**9.17**	**47**	Pn	**Pn**	**04 16 58.3**	**0.0**
	comp=Z,4.5nm,0.3s,baz=215,slow=10,SNR=14						
SJG	**San Juan**	**15.02**	**20**	Pn	**Pn**	**04 18 18.8**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=232,slow=18,SNR=3.2						
TXAR	**Lajitas Array**	**39.65**	**313**	P	**P**	**04 22 18.7**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=128,slow=8.2,SNR=8.1						
SCHQ	**Schefferville**	**50.90**	**3**	P	**P**	**04 23 47.8**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=190,slow=6.9,SNR=6.6						
YKA	**Yellowknife Ar**	**66.55**	**340**	P	**P**	**04 25 34.8**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=131,slow=6.8,SNR=4.4						
TORD	**Torodi Ar. Bea**	**72.69**	**78**	P	**P**	**04 26 14.2**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=282,slow=5.5,SNR=5.1						

*IDC **20** 04:18:34.6±1.2, 32.72N×49.81E, h0km, mb4.0/16, mb1 4.1/22, mb1mx4.0/49, mbtmp4.1/22, ML4.1/6, MS3.4/7, Ms1 3.4/7, ms1mx3.0/52, Error ellipse: s-maj=26.0km s-min=14.1km az=168.0*

*TEH **20** 04:18:36.8, 32.66N×49.91E, h12km, ML4.5*

*NEIC **20** 04:18:36.3±2.0, 32.67N±0.05×49.90E±0.03, h16km±5km, Error ellipse: s-maj=7.6km s-min=3.0km az=202.0*

*THR **20** 04:18:37.6±0.4, 32.70N×49.93E, h18km±3km, ML4.3*

*MOS **20** 04:18:38.7±1.3, 33.26N×49.81E, h15km, mb4.6/14, Error ellipse: s-maj=11.7km s-min=5.0km az=116.9*

*OMAN **20** 04:18:42.4±0.5, 32.37N×50.15E, h35km±24km, ms3.0/6, Error ellipse: s-maj=36.7km s-min=3.8km az=313.0*

*DSN **20** 04:18:44.8±0.8, 32.30N×50.77E, h10km, ML4.4/7, Error ellipse: s-maj=33.4km s-min=6.3km az=47.0*

ISC 20 04:18:35.2±0.6, **32.58N**±0.03×**49.90E**±0.03, **h14km**±3km, **h14km:pP-P, n243, σ2s00**/254, **mb4.5**/44, **MS3.3**/4, **25C-3D, Western Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHBN	**Jahan bin**	**0.73**	**118**	Pg	**Pn**	**04 18 51.8**	**+0.4**
JHBN	**Jahan bin**	**0.73**	**118**	*e*Pg	**Pn**	**04 18 52.1**	**+0.7**
IPIR	**Pirpir**	**0.84**	**82**	Pg	**Pb**	**04 18 52.6**	**+0.8**
IPIR	**Pirpir**	**0.84**	**82**	*e*Pg	**Pb**	**04 18 52.6**	**+0.8**
ROKH	**ROKH**	**0.98**	**103**		**Pn**	**04 18 55.7**	**+0.9**
ROKH	**ROKH**	**0.98**	**103**	*e*Pg	**Pn**	**04 18 55.7**	**+0.9**
SHGR	**Shooshtar-Gavs**	**1.04**	**244**	*e*Pg	**Pn**	**04 18 58.6**	**+3.2**
SHGR				IAML		04 19 17.8	
	comp=N,6μm,0.3s						
SHGR	**Shooshtar-Gavs**	**1.04**	**244**		**Pn**	**04 18 58.0**	**+2.6**
SHGR	**Shooshtar-Gavs**	**1.04**	**244**	*e*Pg	**Pn**	**04 18 58.6**	**+3.2**
IBRJ	**Brojen**	**1.33**	**120**		**Pg**	**04 19 03.3**	**+2.5**
IBRJ	**Brojen**	**1.33**	**120**	*e*Pn	**Pg**	**04 19 03.3**	**+2.5**
IKMR	**Kamar-syah**	**1.59**	**307**	Pn	**Pb**	**04 19 04.6**	**+0.3**
IKMR	**Kamar-syah**	**1.59**	**307**	*e*		04 19 32.9	
IKMR				*e*Pn	**Pb**	**04 19 04.5**	**+0.3**
IKLH	**Kolahrood**	**1.59**	**62**	Pn	**Pb**	**04 19 05.0**	**+0.4**
IKLH	**Kolahrood**	**1.59**	**62**	*e*		04 19 34.1	
IKLH				*e*Pn	**Pb**	**04 19 04.9**	**+0.4**
AHWZ	**Ahwaz**	**1.64**	**221**	Pn	**Pg**	**04 19 08.7**	**+2.0**
AHWZ	**Ahwaz**	**1.64**	**221**	*e*		04 19 39.6	
AHWZ				*e*Pn	**Pg**	**04 19 08.3**	**+1.6**
QAM	**Ghamsar**	**1.75**	**47**	*e*Pn	**Pb**	**04 19 07.6**	**+0.4**
IGAR	**Gharneh**	**1.82**	**95**	*e*Pn	**Pg**	**04 19 10.1**	**0.0**
IGAR				*e*		04 19 13.5	
IDOB	**Doab**	**1.89**	**310**	*e*Pn	**Pb**	**04 19 09.8**	**+0.3**
HSAM	**Samen**	**1.96**	**327**	Pn	**Pb**	**04 19 10.6**	**-0.3**
HSAM	**Samen**	**1.96**	**327**	*e*Pn	**Pb**	**04 19 10.7**	**-0.2**
IKFM	**Kafar-mosalman**	**1.97**	**299**	*e*Pn	**Pb**	**04 19 11.3**	**+0.5**
ASAO	**Ashtian**	**1.97**	**3**	*e*Pn	**Pb**	**04 19 10.6**	**-0.4**
ASAO				*e*Sg	**Sb**	**04 19 36.1**	**+0.6**
ASAO	**Ashtian**	**1.97**	**3**	Pn	**Pn**	**04 19 10.0**	**+1.6**
ASAO				Sg	**Sb**	**04 19 36.0**	**+0.5**
ASAO	**Ashtian**	**1.97**	**3**	*e*Pn	**Pb**	**04 19 10.6**	**-0.4**
IZEF	**Zefreh**	**2.07**	**80**	*e*Pn	**Pb**	**04 19 13.8**	**+1.1**
KLNJ	**Kolanjah**	**2.12**	**137**	*e*Pn	**Pg**	**04 19 15.2**	**-0.8**
KLNJ				*e*		04 19 55.1	
GHVR	**GHOM**	**2.23**	**31**	*e*Sg	**Sb**	**04 19 43.5**	**+0.7**
GHVR				IAML		04 19 49.2	
	comp=N,2μm,0.4s						
GHVR				IAML		04 19 49.2	
	comp=E,2μm,0.4s						
GHVR	**GHOM**	**2.23**	**31**		**Sb**	**04 19 43.0**	**+0.2**
IRAM	**Ramesheh**	**2.24**	**109**	*e*Pn	**Pb**	**04 19 16.1**	**+0.6**
HAGD	**Aghdareh**	**2.33**	**344**	*e*Pn	**Pb**	**04 19 15.8**	**-1.3**
HAGD				*e*		04 19 52.8	
IQOM	**Qom**	**2.46**	**23**	*e*Pn	**Pb**	**04 19 18.6**	**-0.8**
IQOM				*e*		04 19 53.2	
IKOM	**Komasi**	**2.56**	**309**	*e*Pn	**Pb**	**04 19 19.2**	**-1.8**
IKOM				*e*		04 20 07.9	
IALM	**Almabolaq**	**2.70**	**328**	*e*Pn	**Pn**	**04 19 21.0**	**+2.5**
IRAZ	**Razeghan**	**2.82**	**0**	*e*Pn	**Pb**	**04 19 23.4**	**-2.1**
IVRN	**Varamin**	**2.85**	**32**	*e*Pn	**Pn**	**04 19 23.6**	**+3.2**
IVRN				*e*		04 19 28.4	
KCHF	**Cheshme Sefid,**	**2.93**	**306**	*e*Pn	**Pn**	**04 19 23.8**	**+2.2**
KCHF				*e*		04 20 17.3	
HSRG	**Sareghieh**	**2.98**	**334**	*e*Pn	**Pn**	**04 19 25.4**	**+3.0**
HSRG				*e*		04 20 13.4	
IHSB	**Hasanabad**	**3.08**	**21**	*e*Pn	**Pn**	**04 19 26.4**	**+2.9**
QABG	**Abgarm-Qazvin**	**3.14**	**355**	*e*Pn	**Pn**	**04 19 26.9**	**+2.5**
IMHD	**Mahdasht**	**3.17**	**11**	*e*Pn	**Pn**	**04 19 28.0**	**+3.3**
IMHD				*e*		04 19 34.0	
IVIS	**Veis**	**3.21**	**308**	*e*Pn	**Pn**	**04 19 27.3**	**+2.0**
IVIS				*e*		04 19 27.8	
IKAZ	**Kazeroun**	**3.24**	**149**	*e*Pn	**Pb**	**04 19 30.4**	**-2.4**
ISAD	**Sadrabad**	**3.27**	**101**	*e*Pn	**Pb**	**04 19 30.5**	**-2.7**
ANAR	**Anarak**	**3.28**	**78**	*e*Pn	**Pn**	**04 19 30.1**	**+3.8**
IGHG	**Ghaleghazi**	**3.29**	**303**	*e*Pn	**Pn**	**04 19 28.5**	**+1.9**
IGHG				*e*		04 20 46.6	
TEH	**Tehran**	**3.38**	**21**	*e*Pn	**Pn**	**04 19 30.8**	**+3.0**
ILIN	**Lien**	**3.38**	**314**	*e*Pn	**Pn**	**04 19 30.1**	**+2.2**
IDMV	**Damavand**	**3.48**	**30**	*e*Pn	**Pn**	**04 19 32.4**	**+3.2**
IDMV				*e*		04 20 48.1	
IDHR	**Dehrash**	**3.62**	**307**	*e*Pn	**Pn**	**04 19 32.8**	**+1.8**
IDHR				*e*		04 19 48.8	
ILAS	**Lasjerd**	**3.78**	**41**	*e*Pn	**Pn**	**04 19 36.6**	**+3.3**
IGZV	**Ghazvin**	**3.81**	**4**	*e*Pn	**Pn**	**04 19 36.3**	**+2.6**
IGZV				*e*		04 20 43.0	
ICHK	**Chekchek**	**3.83**	**94**	*e*Pn	**Pn**	**04 19 37.6**	**+3.7**
IFIR	**Firoozkooh**	**3.87**	**37**	*e*Pn	**Pn**	**04 19 38.2**	**+3.7**
IFIR				*e*		04 19 51.2	
QALM	**Alamut, Qazvin**	**3.90**	**9**	*e*Pn	**Pn**	**04 19 37.8**	**+2.9**
GHB	**Gharebagh**	**3.91**	**144**	*e*Pn	**Pn**	**04 19 38.8**	**+3.7**
YZKH	**Yazd**	**3.97**	**91**	*e*Pn	**Pn**	**04 19 39.5**	**+3.8**
YZKH	**Yazd**	**3.97**	**91**	Pn	**Pn**	**04 19 39.0**	**+3.3**
YZKH	**Yazd**	**3.97**	**91**	*e*Pn	**Pn**	**04 19 39.6**	**+3.8**
IMEH	**Mehriz**	**4.17**	**105**	*e*Pn	**Pn**	**04 19 42.4**	**+3.7**
IPRN	**Peran**	**4.17**	**28**	*e*Pn	**Pn**	**04 19 42.9**	**+4.3**
ZNJK	**Zanjan**	**4.21**	**347**	*e*Pn	**Pn**	**04 19 41.6**	**+2.4**
ZNJK	**Zanjan**	**4.21**	**347**	Pn	**Pn**	**04 19 41.0**	**+1.8**
ZNJK	**Zanjan**	**4.21**	**347**	*e*Pn	**Pn**	**04 19 41.6**	**+2.4**
ISRV	**Sarvestan**	**4.21**	**138**	*e*Pn	**Pn**	**04 19 43.7**	**+4.4**
ISHM	**Shahmirzad**	**4.28**	**40**	*e*Pn	**Pn**	**04 19 44.3**	**+4.2**
IANJ	**Anjilo**	**4.41**	**48**	*e*Pn	**Pn**	**04 19 45.8**	**+3.9**
IBAF	**Bafgh**	**4.91**	**100**	*e*Pn	**Pn**	**04 19 52.9**	**+4.2**
IGLO	**Ghaloghah**	**5.08**	**39**	*e*Pn	**Pn**	**04 19 54.7**	**+3.5**
MAHB	**Mahabad**	**5.42**	**322**	*e*Pn	**Pn**	**04 19 58.4**	**+2.6**
TPRV	**Parvadeh(Tabas**	**5.73**	**84**	*e*Pn	**Pn**	**04 20 04.0**	**+4.0**
TNSJ	**Nastanj**	**5.79**	**74**	*e*Pn	**Pn**	**04 20 04.8**	**+4.1**
KHGB	**Koh Gabri**	**6.03**	**110**	*e*Pn	**Pn**	**04 20 07.9**	**+3.7**
IHSH	**Hashtrud**	**6.11**	**340**	*e*Pn	Pn	04 19 55.1	-10
TKDS	**Koohdasht(Taba**	**6.15**	**78**	*e*Pn	**Pn**	**04 20 09.3**	**+3.6**
IHRS	**Heris**	**6.19**	**339**	*e*Pn	**Pn**	**04 20 07.7**	**+1.3**
NGRK	**Negar Kerman**	**6.54**	**115**	*e*Pn	**Pn**	**04 20 15.9**	**+4.5**
CHMN	**Cheshme madani**	**7.08**	**110**	*e*Pn	**Pn**	**04 20 22.4**	**+3.7**
ITEG	**Tejag**	**7.46**	**85**	*e*Pn	**Pn**	**04 20 27.6**	**+3.8**
GENO	**Geno**	**7.49**	**132**	*e*Pn	**Pn**	**04 20 27.1**	**+2.8**
IKOO	**Kooshah**	**7.69**	**89**	*e*Pn	**Pn**	**04 20 30.5**	**+3.5**
AFRZ	**Afriz**	**7.70**	**81**	*e*Pn	**Pn**	**04 20 30.5**	**+3.4**
ISFR	**Sfrayin**	**8.02**	**54**	*e*Pn	**Pn**	**04 20 35.7**	**+4.2**
IMON	**Monand**	**8.24**	**83**	*e*Pn	**Pn**	**04 20 39.2**	**+4.7**
IDAH	**Dahanechah**	**8.40**	**86**	*e*Pn	Pn	04 20 42.1	+5.2
SHME	**Shamm**	**8.48**	**138**	P	**Pn**	**04 20 38.9**	**+1.2**
SHME				S	**Sn**	**04 22 08.2**	**-5.1**
GEYT	**Alibeck**	**8.58**	**49**	Pn	**Pn**	**04 20 41.5**	**+2.5**
	comp=E,1.1nm,0.3s,baz=250,slow=12,SNR=9.4						
GEYT				LR	LR	04 24 30.5	
	comp=E,201nm,19.0s,baz=205,slow=42						
GYA0B	**ALIBECK ARRAY**	**8.58**	**49**		**Pn**	**04 20 38.2**	**-0.9**
GYA0B				Sn	**Sn**	**04 22 13.1**	**-2.6**
GNI	**Garni**	**8.63**	**333**	LR	LR	04 24 24.7	
	comp=E,194nm,19.6s,baz=148,slow=41						
GNI	**Garni**	**8.63**	**333**	*e*P	**Pn**	**04 20 36.6**	**-3.2**
BANOM	**Banah**	**8.67**	**138**	*i* P	**Pn**	**04 20 41.2**	**+0.9**
	SNR=25						
BANOM	**Banah**	**8.67**	**138**	P	**Pn**	**04 20 41.5**	**+1.2**
	SNR=34						
BANOM				S	**Sn**	**04 22 16.5**	**-1.4**
NHDN	**Nehbandan**	**8.70**	**95**	*e*Pn	**Pn**	**04 20 44.9**	**+4.1**
MSFE	**Esma-Masafi**	**9.04**	**141**	*i* P	**Pn**	**04 20 45.7**	**+0.4**
	SNR=9.4						
NAZ	**Nazwa, Dubai**	**9.09**	**145**	*i* P	**Pn**	**04 20 47.9**	**+1.9**
	SNR=8.7						
NAZ	**Nazwa, Dubai**	**9.09**	**145**	P	**Pn**	**04 20 49.1**	**+3.1**
	SNR=8.7						
NAZ				S	**Sn**	**04 22 26.5**	**-1.7**
MDH	**Madha**	**9.16**	**141**	*i* P	**Pn**	**04 20 47.8**	**+0.8**
	SNR=6.2						
MDH	**Madha**	**9.16**	**141**	P	**Pn**	**04 20 48.2**	**+1.2**
	SNR=6.1						
MDH				S	**Sn**	**04 22 27.9**	**-2.0**
FAQ	**Al Faqa, Dubai**	**9.26**	**146**	S	**Sn**	**04 22 30.2**	**-2.2**
UOSS	**Minazif**	**9.40**	**142**	P	**Pn**	**04 20 51.3**	**+1.1**
UOSS	**Minazif**	**9.40**	**142**		**Pn**	**04 20 51.2**	**+1.1**
UOSS	**Minazif**	**9.40**	**142**	P	**Pn**	**04 20 51.4**	**+1.1**
HATD	**Hatta, Dubai**	**9.46**	**143**	*i* P	**Pn**	**04 20 52.6**	**+1.5**
	SNR=7.4						
HATD	**Hatta, Dubai**	**9.46**	**143**	P	**Pn**	**04 20 53.0**	**+1.9**
	SNR=7.4						
HATD				S	**Sn**	**04 22 36.0**	**-1.3**
	SNR=8.5						
ASHO	**Ashiyiah**	**9.54**	**144**	*i* P	**Pn**	**04 20 53.5**	**+1.3**
	SNR=11						
ASHO	**Ashiyiah**	**9.54**	**144**	P	**Pn**	**04 20 52.7**	**+0.4**
	SNR=11						
ASHO				S	**Sn**	**04 22 37.7**	**-1.6**
	SNR=7.2						
RAYN	**Ar Rayn**	**9.82**	**204**		**Pn**	**04 20 57.6**	**+1.5**
RAYN				Sn	**Sn**	**04 22 47.3**	**+1.1**
ALNE	**Al Ain**	**9.93**	**147**	*i* P	**Pn**	**04 20 59.6**	**+2.1**
	SNR=5.6						
SOHO	**SOHO**	**10.24**	**144**	P	**Pn**	**04 21 02.9**	**+1.2**
	SNR=9.3						
SOHO				S	**Sn**	**04 22 54.3**	**-2.0**
MAK	**Makhachkala**	**10.54**	**350**	*e*P	**Pn**	**04 21 02.3**	**-3.5**
ARQ	**Araqi**	**10.90**	**146**	P	**Pn**	**04 21 12.0**	**+1.1**
	SNR=22						
ARQ				S	**Sn**	**04 23 10.4**	**-2.4**
ASF	**Jabal al Asfar**	**11.01**	**271**	Pn	**Pn**	**04 21 12.6**	**+0.3**
	comp=E,1.9nm,0.3s,baz=46,slow=11,SNR=15						
HOQ	**Hoqain**	**11.09**	**142**	P	**Pn**	**04 21 13.9**	**+0.5**
BIDO	**Bidbid**	**11.57**	**139**	P	**Pn**	**04 21 21.5**	**+1.4**
BSY	**Bisya**	**11.73**	**145**	P	**Pn**	**04 21 24.2**	**+2.0**
	SNR=15						
BSY				S	**Sn**	**04 23 28.5**	**-4.6**
SMDO	**Samad**	**11.90**	**141**	P	**Pn**	**04 21 25.6**	**+0.9**
	SNR=7.1						
NEY	**Neytrino**	**12.06**	**334**	⇑*e*P	**Pn**	**04 21 24.6**	**-2.2**
WSAR	**Wadi Sarin**	**12.08**	**138**	Pn	**Pn**	**04 21 29.0**	**+2.0**
	comp=E,4.9nm,0.3s,baz=322,slow=5.0,SNR=23						
WSAR				Sn	**Sn**	**04 23 37.6**	**-4.0**
	comp=E,1.5nm,0.3s,baz=156,slow=20,SNR=3.9						
WSAR				LR	LR	04 27 06.1	
	comp=E,82nm,19.8s,baz=326,slow=42						
WSAR	**Wadi Sarin**	**12.08**	**138**	P	**Pn**	**04 21 29.0**	**+2.0**
	SNR=16						
MMAI	**Mount Meron Ar**	**12.21**	**276**	Pn	**Pn**	**04 21 28.4**	**-0.4**
	comp=E,0.7nm,0.3s,baz=85,slow=18,SNR=2.2						
KBZ	**Khabaz**	**12.42**	**336**	LR	LR	04 26 52.6	
	comp=E,111nm,18.3s,baz=177,slow=41						
KBZ	**Khabaz**	**12.42**	**336**	⇑*e*P	**Pn**	**04 21 27.3**	**-4.2**
JMDO	**Jabal Madar**	**12.50**	**142**	P	**Pn**	**04 21 34.7**	**+2.0**
	SNR=6.5						
KIV	**Kislovodsk**	**12.69**	**336**	*e*P	Pn	04 21 30.6	-4.7
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV				MLR	MLR		
	comp=Z,117nm,11.0s						
WBK	**Wadi Bani Khal**	**12.77**	**139**	P	**Pn**	**04 21 36.2**	**-0.2**
	SNR=9.4						
EIL	**Elat**	**13.13**	**261**	Pn	**Pn**	**04 21 42.8**	**+1.4**
	comp=Z,0.9nm,0.3s,baz=153,slow=16,SNR=4.5						
SOC	**Sochi**	**13.59**	**327**	*e*SS	Sn	04 24 08.7	-10
SOC				pmax	pmax		
	comp=Z,20nm,0.7s						
SOC				MLR	MLR		
	comp=Z,89nm,10.5s						
MHTO	**MHTO**	**13.60**	**146**	P	**Pn**	**04 21 47.9**	**+0.2**
	SNR=11						
BR131	**Keskin Array S**	**14.94**	**303**		**Pn**	**04 22 07.2**	**+1.1**
BR131	**Keskin Array S**	**14.94**	**303**	P	**Pn**	**04 22 07.2**	**+1.1**
BRTR	**Keskin Array B**	**14.94**	**303**	Pn	**P**	**04 22 09.2**	**-2.5**
	comp=Z,0.6nm,0.3s,baz=125,slow=11,SNR=18						
ELL	**Elmali**	**16.96**	**290**	Pn	**Pn**	**04 22 31.8**	**-0.5**
ELL				IAmb	IAmb	04 22 50.1	
	comp=Z,31nm,1.0s						
ELL	**Elmali**	**16.96**	**290**	P	**Pn**	**04 22 31.8**	**-0.5**
ELL				pmax	pmax		
	comp=Z,31nm,1.0s						
VRH	**Novokhopyorsk**	**19.56**	**344**	*e*P	**P**	**04 23 02.2**	**-0.2**
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
NIL	**Nilore**	**19.59**	**81**	P	**P**	**04 23 03.7**	**+0.8**
NIL				IAmb	IAmb	04 23 07.4	
	comp=Z,10nm,0.8s						
NIL	**Nilore**	**19.59**	**81**	P	**P**	**04 23 03.7**	**+0.8**
NIL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VORD	**Divnogorie**	**19.97**	**340**	*e*P	**P**	**04 23 06.1**	**-0.8**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	**Storozhevoye**	**20.23**	**340**	*ce*P	**P**	**04 23 08.8**	**-0.9**
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
JURR	**Jurilovca**	**20.37**	**313**	⇑P	Pn	04 23 12.7	-0.7
TOPG	**Topolog**	**20.73**	**313**	⇓P	**P**	**04 23 16.8**	**+1.6**
IDI	**Anoyia**	**20.92**	**284**	P	**P**	**04 23 18.4**	**+1.0**
	comp=Z,13nm,0.5s,baz=337,slow=22,SNR=35						
HARR	**Harsova**	**20.92**	**312**	⇑P	**P**	**04 23 16.6**	**-0.8**
CFR	**Carcaliu**	**21.03**	**313**	⇑P	**P**	**04 23 18.4**	**0.0**
RAZG	**Razgrad**	**21.37**	**308**	⇑P	**P**	**04 23 23.6**	**+1.5**
LPSR	**Galich'ya Gora**	**21.54**	**342**	*e*P	**P**	**04 23 23.3**	**-0.5**
LPSR				pmax	pmax		
	comp=Z,70nm,0.6s						
ELND	**Elena**	**21.56**	**306**	⇑P	**P**	**04 23 25.7**	**+1.5**
GHRR		**21.91**	**314**	⇑P	**P**	**04 23 28.6**	**+0.7**
ISR	**Istrita**	**22.00**	**311**	P	**P**	**04 23 31.4**	**+2.5**
ISR				pmax	pmax		
	comp=Z,25nm,0.9s						
VRI	**Vrincioaia**	**22.23**	**313**	⇑P	**P**	**04 23 32.2**	**+0.8**
PLOR	**Plostina**	**22.27**	**313**	⇑P	**P**	**04 23 32.1**	**+0.2**
SORM	**Soroca**	**22.50**	**320**	⇑P	**P**	**04 23 33.1**	**-1.1**
MLR	**Muntele Rosu**	**22.54**	**312**	P	**P**	**04 23 36.1**	**+1.3**
	comp=Z,16nm,0.8s,baz=38,slow=0.5,SNR=20						
MLR				LR	LR	04 32 55.4	
	comp=Z,99nm,19.6s,baz=298,slow=38						
MLR	**Muntele Rosu**	**22.54**	**312**	⇑P	**P**	**04 23 35.7**	**+0.8**
MLR	**Muntele Rosu**	**22.54**	**312**	P	**P**	**04 23 34.7**	**-0.1**
TESR	**Tescani**	**22.59**	**315**	⇑P	**P**	**04 23 35.7**	**+0.4**
VOIR		**23.08**	**311**	⇑P	**P**	**04 23 41.8**	**+1.3**
DOPR	**Dopca**	**23.10**	**312**	⇑P	**P**	**04 23 40.1**	**-0.5**
AGG	**Agios Georgios**	**23.22**	**294**	P	**P**	**04 23 42.3**	**+0.4**
AGG				IAmb	IAmb	04 23 42.9	
	comp=Z,8.9nm,0.5s						
AGG	**Agios Georgios**	**23.22**	**294**	P	**P**	**04 23 42.3**	**+0.4**
AGG				pmax	pmax		
	comp=Z,9.0nm,0.5s						
LIT	**Litokhoron**	**23.26**	**297**	P	**P**	**04 23 43.5**	**+1.2**
LIT				IAmb	IAmb	04 23 45.1	
	comp=Z,5.0nm,0.6s						
LIT	**Litokhoron**	**23.26**	**297**	P	**P**	**04 23 43.5**	**+1.2**
LIT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARR	**Arges**	**23.32**	**311**	⇑P	**P**	**04 23 43.2**	**+0.3**
AKASG	**Malin Array Be**	**23.67**	**326**	P	**P**	**04 23 45.0**	**-1.2**
	comp=Z,2.3nm,0.4s,baz=138,slow=9.1,SNR=25						
AKASG	**Malin Array Be**	**23.67**	**326**	P	**P**	**04 23 45.0**	**-1.2**
AKBB	**Malin Array Si**	**23.67**	**326**	P	**P**	**04 23 45.0**	**-1.1**
AKBB				IAmb	IAmb	04 23 48.7	
	comp=Z,7.5nm,0.6s						
AKBB	**Malin Array Si**	**23.67**	**326**	⇓*e*P	**P**	**04 23 45.1**	**-1.1**
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LOT	**Lotru**	**23.91**	**310**	⇑P	**P**	**04 23 49.7**	**+1.0**
BURAR	**Bucovina Array**	**23.99**	**316**	⇑P	**P**	**04 23 50.8**	**+1.4**
BUR08	**Bucovina Ar. S**	**24.01**	**316**	P	**P**	**04 23 49.0**	**-0.7**
BUR08				IAmb	IAmb	04 24 00.7	
	comp=Z,5.3nm,1.0s						
OBN	**Obninsk**	**24.41**	**341**	P	**P**	**04 23 52.7**	**-0.3**
	comp=Z,3.5nm,0.3s,baz=14,slow=23,SNR=3.3						
OBN	**Obninsk**	**24.41**	**341**	*de*P	**P**	**04 23 54.0**	**+1.0**
OBN				*e**PP	**pP**	**04 23 56.0**	**-2.1**
OBN				*e**SP	**sP**	**04 23 59.1**	**-0.9**
OBN				*e*		04 24 19.9	
OBN				SS	S	04 28 52.0	+40
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,90nm,17.0s						
GZR	**Gura Zlata**	**24.53**	**309**	⇑P	**P**	**04 23 55.2**	**+0.8**
IGT	**Igoumenitsa**	**24.82**	**295**	P	**P**	**04 23 57.4**	**+0.4**
IGT				pmax	pmax		
	comp=Z,51nm,1.5s						
MDVR	**Moldovita**	**25.02**	**307**	⇑P	**P**	**04 24 00.4**	**+1.6**
DRGR		**25.13**	**312**	⇑P	**P**	**04 24 01.1**	**+1.3**
DRGR		**25.13**	**312**	P	**P**	**04 24 01.1**	**+1.3**
DRGR				pmax	pmax		
	comp=Z,18nm,0.9s						
BRVK	**Borovoye**	**25.18**	**30**	*e*P	**P**	**04 24 00.1**	**0.0**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BVAR	Borovoye Array	25.20	30	P	P	04 24 01.3	+1.0
	comp=Z,1.7nm,0.6s,baz=221,slow=7.1,SNR=9.5						
BZS	Buzias	25.38	309	⇑P	P	04 24 02.6	+0.8
BZS	Buzias	25.38	309	P	P	04 24 03.2	+1.3
BZS				pmax	pmax		
	comp=Z,13nm,1.2s						
TRPA	Tarpa	25.82	315	⇑P	P	04 24 06.0	+0.1
KIRV	Kirov	26.02	359	LR	LR	04 35 31.6	
	comp=Z,68nm,20.1s,baz=237,slow=39						
KIRV	Kirov	26.02	359	eP	P	04 24 05.1	-2.4
KOLS	Kolonicke sedl	26.35	316	eP	P	04 24 12.5	+1.8
KOLS				pmax	pmax		
	comp=Z,15nm,0.9s						
KOLS	Kolonicke sedl	26.35	316	eP	P	04 24 12.5	+1.8
KOLS	Kolonicke sedl	26.35	316	e	P	04 24 12.5	+1.8
KWP	Kalwaria Pacla	26.44	318	P	P	04 24 12.5	+1.0
KWP				IAmb	IAmb	04 24 14.7	
	comp=Z,9.3nm,0.9s						
KWP	Kalwaria Pacla	26.44	318	P	P	04 24 12.5	+1.0
KWP				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CRVS	Cervenica-Dubn	26.81	316	eP	P	04 24 18.8	+3.9
CRVS				pmax	pmax		
	comp=Z,15nm,1.0s						
CRVS	Cervenica-Dubn	26.81	316	eP	P	04 24 18.8	+3.9
KURBB	Kurchatov Arra	27.73	41	P	P	04 24 25.2	+2.1
	comp=Z,0.9nm,0.6s,baz=242,slow=9.5,SNR=7.9						
KURK	Kurchatov	27.83	41	P	P	04 24 23.7	-0.3
KURK	Kurchatov	27.83	41	P	P	04 24 25.3	+1.3
VYHS	Vyhne	28.21	313	eP	P	04 24 28.4	+0.9
VYHS	Vyhne	28.21	313	eP	P	04 24 28.4	+0.9
MK31	Makanchi Array	28.45	51	P	P	04 24 29.3	-0.4
MK31	Makanchi Array	28.45	51	P	P	04 24 29.3	-0.4
MK31				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MKAR	Makanchi Array	28.45	51	P	P	04 24 31.6	+2.0
	comp=Z,0.9nm,0.7s,baz=249,slow=7.4,SNR=11						
KOGS	Kog	29.18	308	iP	P	04 24 37.0	+0.9
BOJS	Bojanci	29.61	306	eP	P	04 24 41.1	+1.2
CONA	Conrad Observa	29.88	311	iP	P	04 24 43.1	+0.8
	comp=Z,1.4nm,0.5s						
KRLC	Kraliky	30.07	315	eP	P	04 24 44.1	+0.1
KRLC	Kraliky	30.07	315	eP	P	04 24 44.1	+0.1
CRNS	Crni Vrh	30.42	307	eP	P	04 24 48.4	+1.3
CHVC	Chvalec	30.70	316	eP	P	04 24 49.9	+0.4
CHVC				epP	sP	04 24 56.3	-0.2
MOA	Molln	30.88	310	iP	P	04 24 51.7	+0.6
	comp=Z,6.8nm,0.5s,SNR=10						
KBA	Koelnbreinsper	31.27	308	iP	P	04 24 55.6	+0.8
	comp=Z,12nm,0.6s,SNR=16						
KBA	Koelnbreinsper	31.27	308	P	P	04 24 55.9	+1.1
KBA				pmax	pmax		
	comp=Z,22nm,0.7s						
GERES	GERESS Array B	31.53	312	P	P	04 24 57.2	+0.3
	comp=Z,1.9nm,0.5s,baz=114,slow=8.7,SNR=22						
KHC	Kasperske Hory	31.70	312	eP	P	04 24 58.4	+0.1
KHC				epP	sP	04 25 05.3	0.0
KHC	Kasperske Hory	31.70	312	⇑eP	P	04 24 58.1	-0.2
KHC				pmax	pmax		
	comp=Z,11nm,1.3s						
ABTA	Abfaltersbach	31.75	307	iP	P	04 24 59.7	+0.8
	comp=Z,5.0nm,0.6s,SNR=7.2						
WET	Wettzell	32.14	312	P	P	04 25 02.5	+0.3
WET				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WTTA	Wattenberg	32.45	308	iP	P	04 25 05.3	+0.2
	comp=Z,12nm,0.4s,SNR=11						
WATA	Walderalm	32.51	308	iP	P	04 25 05.7	+0.1
	comp=Z,9.9nm,0.6s,SNR=4.7						
ZALV	Zalesovo Beam	32.71	39	P	P	04 25 08.2	+1.2
	comp=Z,1.1nm,0.4s,baz=279,slow=10,SNR=3.5						
SQTA	Sankt Quirin	32.73	308	iP	P	04 25 07.6	+0.1
	comp=Z,27nm,0.6s,SNR=19						
FINES	FINESS Array B	32.75	339	P	P	04 25 07.2	-0.1
	comp=Z,2.0nm,0.4s,baz=140,slow=9.7,SNR=26						
FINES	FINESS Array B	32.75	339	eP	P	04 25 07.0	-0.3
CLL	Collm	32.76	316	iP	P	04 25 09.0	+1.4
	comp=Z,5.0nm,0.9s						
CLL				esP	sP	04 25 15.0	+0.5
CLL				ePP	PnPn	04 26 17.0	+1.2
CLL	Collm	32.76	316	iP	P	04 25 09.0	+1.4
MOTA	Moosalm	32.82	308	iP	P	04 25 08.0	-0.4
	comp=Z,5.4nm,0.3s,SNR=13						
FETA	Feichten	33.01	307	iP	P	04 25 10.2	+0.2
	comp=Z,6.9nm,0.5s,SNR=24						
RETA	Reutte	33.08	308	iP	P	04 25 10.1	-0.5
	comp=Z,7.2nm,0.6s,SNR=11						
BSD	Bornholm Skovb	33.28	323	iP	P	04 25 10.5	-1.5
BSD	Bornholm Skovb	33.28	323	iP	P	04 25 10.5	-1.5
DAVA	Damuels	33.62	308	iP	P	04 25 15.2	-0.1
	comp=Z,21nm,0.6s,SNR=24						
NORES	NORESS Array B	37.63	330	P	P	04 25 49.5	+0.1
NB2	NORSAR Subarra	37.92	330	P	P	04 25 50.8	-1.1
	comp=Z,0.3nm,0.4s,baz=121,slow=8.6						
NOA	NORSAR Array B	37.92	330	P	P	04 25 50.9	-1.1
	comp=Z,12nm,0.3s,baz=122,slow=7.1,SNR=6.1						
ARCES	ARCESS Array B	39.46	347	P	P	04 26 04.4	-0.3
	comp=Z,2.4nm,0.9s,baz=153,slow=8.2,SNR=6.3						
ARCES	ARCESS Array B	39.46	347	eP	P	04 26 05.3	+0.6
EKA	Eskdalemuir Ar	43.14	318	P	P	04 26 34.8	-0.3
EKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ESDC	Sonseca Array	43.53	295	P	P	04 26 40.8	+2.3
	comp=Z,0.2nm,0.4s,baz=78,slow=8.2,SNR=4.1						
SPITS	Spitsbergen Ar	47.98	351	P	P	04 27 14.3	+1.3
TORD	Torodi Ar. Bea	47.99	258	P	P	04 27 14.9	+1.0
	comp=Z,1.1nm,0.6s,baz=56,slow=7.1,SNR=10						
TULEG	Thule	64.80	347	P	P	04 29 12.5	-0.4
TGY	Tagaytay City	66.67	88	LR	LR	05 01 27.1	
	comp=Z,107nm,20.8s,baz=62,slow=38						
YSS	Yuzh-Sakhalins	68.80	47	eP	P	04 29 36.6	-2.3
SCHQ	Schefferville	77.45	328	P	P	04 30 29.1	-0.8
	comp=Z,0.6nm,0.3s,baz=37,slow=5.5,SNR=5.6						
ILAR	Eielson Array	82.08	7	P	P	04 30 55.8	+0.9
	comp=Z,0.2nm,0.8s,baz=323,slow=3.6,SNR=2.8						
YKA	Yellowknife Ar	84.44	353	P	P	04 31 06.8	-0.2
	comp=Z,0.3nm,0.5s,baz=10,slow=5.4,SNR=8.1						

ATH 20 04:18:56.7,38°.14N×20°.39E,h15km±1km,ML2.4/5,Error ellipse: s-maj=1.8km s-min=1.0km az=251.0,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LXRA	Lixouri, Kepha	0.07	31	P	Pg	04 18 59.7	+0.1
LXRA				S	Sg	04 19 01.9	+0.3
KEF3	Kipouria, Keph	0.07	329	P	Pg	04 18 60.0	+0.3
KEF3				S	Sg	04 19 02.2	+0.6
ARGA	Argostoli. Kep	0.07	63	P	Pg	04 18 59.5	-0.2
ARGA				S	Sg	04 19 01.3	-0.4
KEF2	Argostoli. Kep	0.08	73	P	Pg	04 18 59.5	-0.2
KEF2				S	Sg	04 19 01.3	-0.4
KEF4	Livadi, Kephal	0.12	12	P	Pg	04 19 00.3	+0.1
KEF4				S	Sg	04 19 02.8	+0.3
KEF1	Kardakata, Kep	0.15	24	P	Pg	04 19 00.5	0.0
KEF1				S	Sg	04 19 03.1	0.0
VLS	Valsamata	0.16	78	P	Pg	04 19 00.4	-0.3
VLS				S	Sg	04 19 02.8	-0.6
VLS				AML	AML	04 19 03.0	
	comp=N,19732µm,0.1s						
VLS				AML	AML	04 19 03.2	
	comp=E,58806µm,0.1s						
KFL	Anninata	0.31	96	P	Pg	04 19 03.0	-0.2
KFL				S	Sg	04 19 07.6	-0.1
KONA	Konidatara, Ke	0.31	26	P	Pg	04 19 03.1	-0.1
KONA				S	Sg	04 19 08.1	+0.4
VLMS	Volimes, Zakyn	0.34	141	P	Pg	04 19 03.6	-0.1
VLMS				S	Sg	04 19 08.9	+0.5
VLMS				AML	AML	04 19 10.0	
	comp=N,2883µm,0.1s						
VLMS				AML	AML	04 19 10.0	
	comp=E,2458µm,0.1s						
FSK	Fiskardo	0.34	23	P	Pg	04 19 03.6	-0.2
FSK				S	Sg	04 19 08.8	+0.3
FSK				AML	AML	04 19 09.3	
	comp=N,1018µm,0.2s						
FSK				AML	AML	04 19 10.0	
	comp=E,2396µm,0.1s						
MGNA	Meganis	0.60	31	P	Pg	04 19 08.1	-0.4
MGNA				AML	AML	04 19 17.6	
	comp=N,474µm,0.1s						
MGNA				AML	AML	04 19 18.0	
	comp=E,555µm,0.2s						
VTN	Vitineika	0.66	110	P	Pg	04 19 09.6	-0.1
VTN				S	Sb	04 19 19.6	+0.6
LKD2	Lefkada island	0.68	18	P	Pg	04 19 09.6	-0.3
PDO	Prodromos	0.77	54	P	Pg	04 19 11.1	-0.6
PDO				S	Sb	04 19 22.8	+0.8
PDO				AML	AML	04 19 28.7	
	comp=E,326µm,0.4s						
PDO				AML	AML	04 19 29.1	
	comp=N,308µm,0.5s						
AXS	Araxos	0.78	86	P	Pg	04 19 11.2	-0.6
RLS	Riolos of Patr	0.85	95	P	Pb	04 19 12.3	-0.8
RLS				S	Sn	04 19 25.6	-0.6
PVO	Paravola	1.01	62	P	Pb	04 19 15.6	-0.2
ANX	Ano Chora	1.28	69	P	Pn	04 19 20.3	+0.1

*NEIC **20** 04:27:58.6±1.3,6°.73S±0°.10×155°.03E±0°.05,h39km±8km, mb4.3/13,Error ellipse: s-maj=13.9km s-min=7.5km az=181.0*

*IDC **20** 04:28:00.9±0.7,6°.42S×155°.04E,h39km±5km,mb3.9/11, mb1 4.1/14,mb1mx3.9/35,mbtmp4.1/14,ML3.4/3,MS3.1/8, Ms1 3.2/8,ms1mx2.9/35,Error ellipse: s-maj=19.6km s-min=15.7km az=109.0*

ISC 20 04:28:01.0±0.5,6°.64S±0°.07×155°.02E±0°.08,h56km,n41, σ1.84/44,mb4.1/17,MS3.1/4,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.74	310	Pn	Pn	04 28 54.8	-1.6
RABL				Sn	Sn	04 29 38.8	-0.4
KRVT	Keravat (AS076	3.77	308	Pn	Pn	04 29 01.1	+4.3
	9.9nm,0.3s,baz=196,slow=7.4,SNR=2.3						
KRVT				LR	LR	04 30 01.0	
	comp=Z,66nm,20.7s,baz=120,slow=33						
HNR	Honiara	5.61	120	LR	LR	04 31 37.4	
	comp=Z,231nm,18.9s,baz=322,slow=38						
PMG	Port Moresby	8.26	250	Pn	Pn	04 29 59.2	+1.0
	2.8nm,0.3s,baz=121,slow=3.5,SNR=3.1						
PMG				LR	LR	04 33 05.5	
	comp=Z,99nm,19.1s,baz=200,slow=36						
PMG	Port Moresby	8.26	250	Pn	Pn	04 29 55.8	-2.5
PATS	Pohnpei	13.78	14	Pn	Pn	04 31 12.8	-1.0
CTA	Charters Tower	15.85	212	Pn	P	04 31 43.9	+0.3
	0.2nm,0.3s,baz=8.1,slow=7.1,SNR=2.4						
DZM	Mont Dzumac	18.90	145	P	Pn	04 32 20.4	+2.1
	1.2nm,0.3s,baz=301,slow=12,SNR=18						
DZM				LR	LR	04 38 48.3	
	comp=Z,72nm,19.3s,baz=232,slow=34						
GUMO	Guam	22.48	333	LR	LR	04 40 57.9	
	comp=Z,40nm,18.6s,baz=144,slow=35						
WR0	Warramunga Arr	23.89	234	P	P	04 33 07.4	-2.4
WR0				IAmb	IAmb	04 33 25.1	
	comp=Z,5.8nm,0.8s						
WB0	Warramunga Arr	23.91	235	P	P	04 33 08.2	-1.7
WB0				IAmb	IAmb	04 33 14.2	
	comp=Z,3.9nm,0.5s						
WRA	Warramunga Arr	24.04	235	P	P	04 33 13.9	+2.8
	comp=Z,3.4nm,0.5s,baz=57,slow=9.8,SNR=24						
WRA				pP	pP	04 33 24.9	+1.6
	comp=Z,2.3nm,0.5s,baz=56,slow=9.7,SNR=5.7						
WRA				PcP	PcP	04 36 53.9	+2.0
	comp=Z,1.1nm,0.6s,baz=64,slow=2.2,SNR=4.9						
WRA				LR	LR	04 41 03.2	
	comp=Z,60nm,21.7s,baz=165,slow=32						
ASAR	Alice Springs	26.43	228	P	P	04 33 35.0	+2.2
	comp=Z,2.4nm,0.6s,baz=60,slow=8.8,SNR=25						
ASAR				PcP	PcP	04 36 58.5	+1.3
	comp=Z,1.1nm,0.7s,baz=67,slow=3.0,SNR=6.5						
H11S3	WAKE ISLAND Hy	27.50	25	T	T	05 02 01.7	
	baz=203,slow=75,SNR=33						
H11S2	WAKE ISLAND Hy	27.50	25	T	T	05 02 14.9	
	baz=203,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	27.51	25	T	T	05 01 55.7	
	baz=203,slow=75,SNR=17						
FITZ	Fitzroy Crossi	30.82	246	LR	LR	04 47 12.0	
	comp=Z,51nm,18.2s,baz=76,slow=37						
FITZ	Fitzroy Crossi	30.82	246	P	P	04 34 09.5	-2.4
FITZ				IAmb	IAmb	04 34 17.8	
	comp=Z,4.7nm,1.1s						
BBOO	Buckleboo	31.45	212	P	P	04 34 16.1	-1.3
BBOO				IAmb	IAmb	04 34 20.1	
	comp=Z,9.3nm,1.1s						
PSAB2	Pilbara Seismi	37.07	243	P	P	04 35 05.1	-1.0
BKZ	Black Stump Fm	37.73	152	P	P	04 35 09.4	-2.1
THZ	Tophouse	38.42	158	P	P	04 35 17.1	-0.2
LTZ	Lake Taylor	39.09	160	P	P	04 35 21.2	-1.6
LTZ				IAmb	IAmb	04 35 26.5	
	comp=Z,5.4nm,0.8s						
KHZ	Kahutara	39.22	158	P	P	04 35 22.3	-1.6
KHZ				IAmb	IAmb	04 35 25.9	
	comp=Z,4.9nm,0.6s						
RPZ	Rata Peaks	39.52	162	P	P	04 35 29.1	+2.7
	comp=Z,4.6nm,0.7s,baz=152,slow=18,SNR=3.9						
RPZ	Rata Peaks	39.52	162	P	P	04 35 24.8	-1.6
RPZ				IAmb	IAmb	04 35 40.4	
	comp=Z,8.1nm,1.1s						
JNU	Nakatsue	45.71	331	P	P	04 36 13.9	-2.8
KSRS	Korea Array	50.64	332	P	P	04 36 54.5	-0.1
	comp=Z,0.7nm,0.5s,baz=133,slow=6.8,SNR=3.2						
KS19	Wonju Array Si	50.70	332	P	P	04 36 54.2	-0.9
CMAR	Chiang Mai Arr	60.66	295	P	P	04 38 09.7	+2.8
	comp=Z,4.1nm,0.6s,baz=122,slow=5.4,SNR=9.8						
CMAR				pP	pP	04 38 20.9	-0.8
	comp=Z,2.3nm,0.5s,baz=110,slow=4.7,SNR=3.1						
SONM	Songino Array	69.05	327	P	P	04 39 02.1	+1.0
	comp=Z,1.3nm,0.9s,baz=154,slow=7.8,SNR=4.3						
IL31		83.03	22	P	P	04 40 20.2	+0.2
ILAR	Eielson Array	83.03	22	P	P	04 40 20.1	0.0
	comp=Z,0.4nm,0.6s,baz=240,slow=5.5,SNR=9.4						
ILAR				pP	pP	04 40 33.5	-2.6
	comp=Z,0.4nm,0.9s,baz=245,slow=6.1,SNR=1.9						
ILAR				LR	LR	05 19 23.4	
	comp=Z,34nm,18.2s,baz=64,slow=37						
MK31	Makanchi Array	83.16	319	P	P	04 40 20.0	-1.2
MKAR	Makanchi Array	83.16	319	P	P	04 40 21.9	+0.8
	comp=Z,0.5nm,0.5s,baz=106,slow=5.7,SNR=8.6						
MKAR				pP	pP	04 40 34.6	-2.3
	comp=Z,1.1nm,0.7s,baz=106,slow=5.3,SNR=6.7						
ZALV	Zalesovo Beam	83.90	326	P	P	04 40 24.3	-0.5
	comp=Z,0.5nm,0.4s,baz=59,slow=3.4,SNR=2.7						
NVAR	Mina Array Bea	91.48	52	P	P	04 41 03.4	+1.4
	comp=Z,0.6nm,0.7s,baz=257,slow=6.2,SNR=4.7						
YKA	Yellowknife Ar	96.01	28	P	P	04 41 23.1	+1.2
	comp=Z,1.2nm,0.7s,baz=266,slow=4.7,SNR=22						
YKA				pP	pP	04 41 35.0	-3.1
	comp=Z,0.7nm,0.8s,baz=266,slow=4.6,SNR=4.7						
BDFB	Brasilia	148.21	134	PKPbc	PKPab	04 47 45.7	+0.7
	comp=Z,2.7nm,0.7s,baz=141,slow=2.6,SNR=4.3						
BDFB	Brasilia	148.21	134		PKPbc	04 47 42.1	+0.1
TORD	Torodi Ar. Bea	152.96	286	PKPbc	PKiKP	04 47 53.8	+0.4
	comp=Z,1.8nm,0.7s,baz=69,slow=2.3,SNR=12						
TORD				pPKPbc	PKPab	04 48 06.1	+1.5
	comp=Z,1.6nm,0.7s,baz=65,slow=3.8,SNR=5.9						

*IDC **20** 04:42:01.2±4.1,0°.13N×123°.33E,h128km±42km,mb3.3/5, mb1 3.4/6,mb1mx3.2/40,mbtmp3.7/6,Error ellipse: s-maj=43.6km s-min=17.2km az=70.0*

*DJA **20** 04:42:02.7±0.4,0°N±4°×12°3E±°,h110km±8km,M4.1/8, mb4.2/2,MLv4.1/8*

ISC 20 04:42:02.5±0.8,0°.04S±0°.07×123°.30E±0°.05,h157km,n16, σ2.42/21,mb3.5/5,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	1.12	208	P	Pn	04 42 26.8	-2.2
LUWI				S	Sn	04 42 44.8	-4.6
MRSI	Marisa	1.45	291	P	Pn	04 42 30.2	-1.9
MRSI				S	Sn	04 42 50.2	-4.6
APSI	Ampana	1.86	242	P	Pn	04 42 35.1	-1.4
APSI				S	Sn	04 42 58.7	-3.9
SANI	Sanana	3.35	127	P	Pn	04 42 52.7	-1.9
MPSI	Mapaga	3.42	276	P	Pn	04 42 55.2	-0.3
MPSI				S	Sn	04 43 37.6	+1.0
TNTI	Ternate	4.15	79	P	Pn	04 42 59.2	-5.7
LBMI	Labuha	4.24	98	S	Sn	04 43 53.6	-2.1
TTSI	Tana Toraja	4.58	229	P	Pn	04 43 10.2	-0.4
NLAI	Namlea	4.95	130	P	Pn	04 43 15.5	+0.1
NLAI				S	Sn	04 44 10.1	-2.3
SPSI	Sidrap Palu	5.25	222	P	Pn	04 43 20.8	+1.4
KAPI	Kappang	6.08	216	P	Pn	04 43 30.6	+0.3
	2.1nm,0.3s,baz=34,slow=7.3,SNR=5.3						
WRA	Warramunga Arr	22.54	152	P	P	04 46 50.8	+1.3
	0.9nm,0.5s,baz=330,slow=10,SNR=8.8						
ASAR	Alice Springs	25.64	157	P	P	04 47 21.7	+3.9
	0.2nm,0.3s,baz=342,slow=14,SNR=3.1						
ASAR				PcP	PcP	04 50 46.0	+1.5
	0.6nm,0.5s,baz=335,slow=2.0,SNR=6.6						
MJAR	Matsushiro Arr	38.94	19	P	P	04 49 12.9	-0.4
	2.8nm,0.7s,baz=195,slow=9.1,SNR=6.5						
SONM	Songino Array	49.90	345	P	P	04 50 41.3	+1.2
	0.7nm,0.7s,baz=156,slow=8.6,SNR=6.9						
MKAR	Makanchi Array	58.80	328	P	P	04 51 44.9	+0.5
	0.2nm,0.3s,baz=126,slow=8.4,SNR=8.5						

IDC 20 04:52:01.3±2.6,13°.57N×140°.82E,h0km,mb3.6/3, mb1 3.9/3,mb1mx3.4/33,mbtmp3.6/3,Error ellipse: s-maj=326.9km s-min=28.9km az=107.0,West of Mariana Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	Guam	3.94	89	Sn	Sn	04 53 36.6	-13
	8.4nm,0.3s,baz=17,slow=19,SNR=4.9						
WRA	Warramunga Arr	33.91	191	P	P	04 58 46.0	-0.2
	1.0nm,0.5s,baz=12,slow=9.6,SNR=5.7						
ASAR	Alice Springs	37.62	190	P	P	04 59 18.1	0.0
	0.3nm,0.4s,baz=20,slow=11,SNR=5.6						
ILAR	Eielson Array	70.28	26	P	P	05 03 16.3	0.0
	0.2nm,0.5s,baz=255,slow=5.8,SNR=4.5						

*MDD **20** 05:17:41.6±0.5,42°.84N×1°.11W,h0km,mbLg0.6/1,Error ellipse: s-maj=6.0km s-min=2.5km az=175.0,PRXIMO*

LDG 20 05:17:39.5±0.1,43°.33N×0°.86W,h5km±1km,Md1.4/2, Ml1.3/3,Error ellipse: s-maj=3.6km s-min=2.2km az=155.0,Pyrenees

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATE	Arette	0.27	155	Pg	Pn	05 17 48.8	-1.4
	0.5nm,0.1s,SNR=7.9						
ATE				Lg	Lg	05 17 54.5	
	SNR=7.9						
SJPF	Ste Jean	0.35	231	ePg	Pg	05 17 46.5	+0.2
SJPF				eSg	Sg	05 17 51.0	+0.2
	4.8nm,0.3s						
SJPF	Ste Jean	0.35	231	Pg	Pg	05 17 46.5	+0.2
SJPF				Lg	Lg	05 17 51.0	
	2.4nm,0.3s						
ETSF	Etsaut	0.49	153	ePg	Pg	05 17 48.9	0.0
ETSF				eSg	Sg	05 17 55.1	-0.1
	1.6nm,0.3s						
ETSF	Etsaut	0.49	153	Pg	Pg	05 17 48.9	0.0
ETSF				Lg	Lg	05 17 55.1	
	0.8nm,0.3s						
EALK	Alkurruntz	0.49	257	Pg	Pb	05 17 50.3	-0.4
	0.2nm,0.1s,SNR=7.9						
EALK				Lg	Lg	05 17 56.9	
	1.5nm,0.2s,SNR=5.7						
EORO	Oroz-Betelu	0.55	217	Pg	Pg	05 17 44.5	-5.6
	0.5nm,0.1s,SNR=26						
EORO				Lg	Lg	05 17 46.9	
	SNR=7.9						
EPF	Esparros	0.93	109	ePg	Pg	05 17 56.9	-0.3
EPF				eSg	Sg	05 18 08.8	-0.4
	0.4nm,0.3s						
EPF	Esparros	0.93	109	Pg	Pg	05 17 56.9	-0.3
EPF				Lg	Lg	05 18 08.8	
	0.2nm,0.3s						
CSOR	Sort	1.75	123	Lg	Lg	05 18 29.8	
	SNR=7.9						
LFF	La Frestale	1.97	35	ePn	Pn	05 18 11.9	-1.7
MTLF	Montolieu	2.24	89	ePn	Pn	05 18 14.6	-2.7
MTLF				eSg	Sg	05 18 50.7	-0.8
	0.4nm,0.2s						
CAF	Calviac	2.64	52	ePn	Pn	05 18 21.1	-1.6
CAF	Calviac	2.64	52	ePg	Pb	05 18 28.1	+0.9
LASF	Ste Croix	3.50	76	ePn	Pn	05 18 32.2	-2.3
LASF	Ste Croix	3.50	76	ePg	Pg	05 18 44.6	-1.9

*BJI **20** 05:18:20.0±0.0,32°.50S×178°.70W,h30km,mB5.6/14, mb5.1/21,Ms5.0/5,Ms7 4.8/2*

*NEIC **20** 05:18:22.6±2.2,32°.30S±0°.06×178°.8W±0°.1,h35km±2km, mb5.2/112,Error ellipse: s-maj=14.4km s-min=7.1km az=109.0*

*MOS **20** 05:18:24.2±0.9,32°.15S×178°.74W,h51km,mb5.5/25, Error ellipse: s-maj=11.7km s-min=8.5km az=89.3*

*GCMT **20** 05:18:26.6±0.2,32°.19S±0°.02×178°.57W±0°.02,h50km, MW5.1/93,Moment Tensor Solution. s90,c117; s93,c138; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.67±.18; $M_{\theta\theta}$0.31±.15; $M_{\phi\phi}$-5.98±.12; $M_{r\theta}$0.57±.12; $M_{r\phi}$-1.97±.12; $M_{\theta\phi}$2.35±.11; Best double couple: $M_0$6.56900×10^{16} NP1:ϕ_s197.00000°,δ34.00000°, λ92.00000°. NP2:ϕ_s15.00000°,δ56.00000°,λ89.00000°. Principal axes: T 6.1320, Plg79.0000°, Azm280.0000°; N 0.8720, Plg1.0000°, Azm16.0000°; P -7.0070, Plg11.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **20** 05:18:29.4±2.5,32°.12S×178°.78W,h88km±21km,mb4.6/22, mb1 4.7/24,mb1mx4.6/34,mbtmp4.9/24,MS4.2/25, Ms1 4.2/25,ms1mx4.2/27 Error ellipse: s-maj=13.2km s-min=10.9km az=10.0*

ISC 20 05:18:23.6±0.5,32°.34S±0°.04×178°.56W±0°.05,h46km±4km, h46km:pP-P,n635,σ2.02/647,mb5.2/96,MS4.3/30, 31C-18D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.12	10	P	Pn	05 19 08.0	-2.3
GLKZ				S	Sn	05 19 40.8	-5.4
RAO	Raoul Island	3.13	10	P	Pn	05 19 08.4	-2.0
	281nm,0.3s,baz=205,slow=19,SNR=11						
RAO				S	Sn	05 19 42.0	-4.5
	536nm,0.3s,baz=290,slow=21,SNR=5.2						
RAO				LR	LR	05 20 25.5	
	comp=Z,5µm,20.1s,baz=181,slow=39						
RAO	Raoul Island	3.13	10		Pn	05 19 09.8	-0.6
RAO				Sn	Sn	05 19 44.1	-2.4
RAO	Raoul Island	3.13	10	P	Pn	05 19 09.8	-0.6
RAO						05 19 44.1	
RIZ	Raoul Island	3.13	10	P	Pn	05 19 10.4	-0.1
RIZ				S	Sn	05 19 42.5	-4.1
MXZ	Matakaoa Point	5.81	205		Pn	05 19 44.8	-2.5
MXZ				Sn	Sn	05 20 48.4	-4.1
MXZ	Matakaoa Point	5.81	205	P	Pn	05 19 47.0	-0.2
MXZ				S	Sn	05 20 52.3	-0.2
WMGZ	Waiomatatini S	6.00	204	P	Pn	05 19 49.5	-0.3
WMGZ				S	Sn	05 20 57.1	-0.2
HAZ	Te Kaha	6.18	208	P	Pn	05 19 52.6	+0.4
HAZ				S	Sn	05 21 06.0	+4.4
PKGZ	Pakihiroa	6.18	206	P	Pn	05 19 53.4	+1.0
PKGZ				S	Sn	05 21 01.2	-0.6
PUZ	Puketiti	6.29	204	P	Pn	05 19 52.7	-1.0
RUGZ	Raukumara Rang	6.40	208	P	Pn	05 19 54.2	-1.2
KUZ	Kuaotunu	6.45	225	P	Pn	05 19 58.9	+2.9
TKGZ	Te Karaka	6.76	205	P	Pn	05 19 58.6	-1.6
MWZ	Matawai	6.78	207	P	Pn	05 19 58.8	-1.8
OPRZ	Ohinepanea	6.80	215	P	Pn	05 20 02.3	+1.5
MARZ	Manawahe	6.85	213	P	Pn	05 20 03.7	+2.2
URZ	Urewera	6.88	210	P	Pn	05 20 00.5	-1.4
	12nm,0.3s,baz=290,slow=1.6,SNR=41						
URZ				S	Sn	05 21 20.2	+1.3
	71nm,0.3s,baz=101,slow=22,SNR=9.7						
URZ	Urewera	6.88	210	Pn	Pn	05 20 01.3	-0.6
URZ	Urewera	6.88	210	P	Pn	05 20 00.6	-1.4
EDRZ	Edgecumbe	6.92	212	P	Pn	05 20 05.6	+3.1
RAGZ	Rawiri	6.97	207	P	Pn	05 20 02.6	-0.5
LIRZ	Lichensteins R	7.00	215	P	Pn	05 20 05.5	+1.9
RIGZ	Rimuhau	7.02	204	P	Pn	05 20 02.0	-1.9
MKRZ	Makatiti	7.07	214	P	Pn	05 20 09.3	+4.7
KARZ	Kaharoa	7.09	215	P	Pn	05 20 08.2	+3.5
OMRZ	Omania	7.09	214	P	Pn	05 20 07.7	+2.9
TARZ	Mount Tarawera	7.13	213	P	Pn	05 20 08.6	+3.2
PRGZ	Paritu Road	7.18	203	P	Pn	05 20 04.6	-1.4
MUGZ	Murupara	7.21	211	P	Pn	05 20 05.3	-1.2
RRRZ	Republican Roa	7.21	213	P	Pn	05 20 07.7	+1.2
HLRZ	Highlands Stat	7.22	214	P	Pn	05 20 09.5	+3.0
RTZ	Ruatahuna	7.24	209	P	Pn	05 20 05.9	-1.0
SNGZ	Shannon Statio	7.24	206	P	Pn	05 20 06.9	0.0
KNZ	Kokohu	7.34	204	P	Pn	05 20 05.3	-2.9
HRRZ	Handcock Road	7.36	213	P	Pn	05 20 11.3	+2.8
MHGZ	Mahia Peninsul	7.38	202	P	Pn	05 20 07.1	-1.6

PRRZ Plateau Road 7.40 212 P Pn 05 20 10.9 +1.9
RAHZ Arahi 7.46 207 P Pn 05 20 09.3 -0.5
ALRZ Allen Road 7.47 212 P Pn 05 20 10.5 +0.5
MTHZ Maungataniwha 7.50 209 P Pn 05 20 09.9 -0.5
WPRZ Whakapapatarin 7.52 213 P Pn 05 20 13.6 +2.9
WHHZ Waihua 7.54 206 P Pn 05 20 10.5 -0.5
KUTZ Kaahu Road 7.66 215 P Pn 05 20 15.3 +2.7
MRHZ Matea Rd 7.66 211 P Pn 05 20 12.8 +0.1
TLZ Tolley Road 7.68 217 P Pn 05 20 16.1 +3.2
NMHZ Naumai 7.72 208 P Pn 05 20 11.9 -1.6
ARHZ Aropaoanui 7.79 206 P Pn 05 20 12.5 -1.9
WATZ Wairara 7.87 215 P Pn 05 20 17.4 +1.9
BKZ Black Stump Fm 7.91 209 Pn 05 20 14.3 -1.7
BKZ Black Stump Fm 7.91 209 P Pn 05 20 13.5 -2.5
RATZ Rangitukua 7.98 214 P Pn 05 20 18.2 +1.2
MCHZ McNeill Hill 8.07 207 P Pn 05 20 16.8 -1.3
KATZ Kakaramea 8.10 214 P Pn 05 20 20.5 +1.7
CKHZ Cape Kidnapper 8.11 205 P Pn 05 20 16.5 -2.3
KWHZ Kaweka Forest 8.16 209 P Pn 05 20 17.1 -2.4
HIZ Hauiti 8.17 219 Pn 05 20 20.3 +0.6
HIZ Hauiti 8.17 219 P Pn 05 20 23.6 +3.9
KRVZ Karewarewa 8.22 213 P Pn 05 20 20.9 +0.5
WTVZ West Tongariro 8.27 213 P Pn 05 20 21.6 +0.6
TWVZ Taurewa 8.30 214 P Pn 05 20 22.3 +0.9
KAHZ Kahuranaki 8.30 205 P Pn 05 20 18.2 -3.3
NGZ Ngauruhoe 8.31 213 P Pn 05 20 22.1 +0.5
TUVZ Tukino 8.36 213 P Pn 05 20 22.5 +0.2
BHHZ Black Hill Sta 8.36 210 P Pn 05 20 20.0 -2.3
KRHZ Kereru 8.37 208 P Pn 05 20 18.8 -3.5
FWVZ Far West T-bar 8.39 213 P Pn 05 20 23.4 +0.5
WHVZ Whangaehu Hut 8.40 213 P Pn 05 20 23.6 +0.6
MOVZ Moawhango 8.43 212 P Pn 05 20 21.0 -2.1
TRVZ Turoa 8.43 213 P Pn 05 20 23.6 +0.2
PXZ Pawanui 8.52 204 P Pn 05 20 23.0 -1.3
PNHZ Pukenui 8.66 208 P Pn 05 20 22.9 -3.5
VRZ Vera Road 8.68 217 P Pn 05 20 28.8 +2.2
WPHZ Waipukurau 8.70 206 P Pn 05 20 28.1 +1.3
TSZ Takapari Road 8.88 208 P Pn 05 20 25.5 -3.8
DVHZ Dannevirke 9.01 207 P Pn 05 20 28.9 -2.2
WAZ Wanganui 9.06 213 P Pn 05 20 31.5 -0.2
PKE Pukeiti 9.13 219 P Pn 05 20 35.1 +2.3
KHEZ Kahui Hut 9.19 219 P Pn 05 20 36.0 +2.4
POWZ Post Office Ro 9.24 208 P Pn 05 20 32.3 -1.9
PRWZ Pori Road 9.30 207 P Pn 05 20 33.2 -1.9
BFZ Birch Farm 9.31 205 P Pn 05 20 31.0 -4.3
TIWZ Tintock 9.53 206 P Pn 05 20 35.7 -2.5
CPWZ Castlepoint 9.53 205 P Pn 05 20 36.6 -1.6
MRZ Mangatainoka R 9.55 208 P Pn 05 20 34.5 -3.9
TMWZ Te Maipa 9.82 205 P Pn 05 20 38.8 -3.3
OGWZ Otaki Gorge 9.85 209 P Pn 05 20 38.4 -4.1
MTW Mount Morrison 10.01 207 P Pn 05 20 40.6 -4.1
TRWZ Traveller 10.14 205 P Pn 05 20 42.1 -4.5
PAWZ Paruwai Farm 10.23 206 P Pn 05 20 43.7 -4.0
MSWZ Moikau Station 10.32 207 Pn 05 20 45.6 -3.5
MSWZ Moikau Station 10.32 207 P Pn 05 20 44.8 -4.3
SNZO South Karori 10.45 209 Pn 05 20 45.7 -5.0
PLWZ Palliser 10.45 206 Pn 05 20 46.5 -4.4
PLWZ Sn 05 22 38.4 -8.2
BHW Baring Head 10.47 208 Pn 05 20 45.9 -5.1
TUWZ Tuamarina 10.87 211 Pn 05 20 52.8 -3.8
CMWZ Cape Campbell 11.02 210 Pn Pn 05 20 54.9 -3.7
CMWZ Cape Campbell 11.02 210 P Pn 05 20 56.2 -2.4
QRZ Quartz Range 11.09 218 Pn Pn 05 20 55.1 -4.4
QRZ Sn 05 22 58.3 -3.7
BSWZ Blackbirch Sta 11.13 211 Pn 05 20 56.5 -3.6
THZ Tophouse 11.61 213 Pn 05 21 01.9 -4.8
KHZ Kahutara 11.85 210 Pn 05 21 04.8 -5.2
NFK Norfolk Island 12.08 282 P Pn 05 21 12.9 -0.1
baz=12,SNR=7.3
LTZ Lake Taylor 12.70 212 Pn 05 21 15.8 -5.8
AMCZ Amberley 12.85 210 P Pn 05 21 20.4 -3.2
MQZ McQueen's Vall 13.28 209 Pn 05 21 22.6 -6.9
RPZ Rata Peaks 13.98 213 P Pn 05 21 33.8 -5.2
3.1nm,0.3s,baz=17,slow=2.7,SNR=9.8
RPZ S Sn 05 24 00.5 -12
6.4nm,0.3s,baz=314,slow=21,SNR=14
RPZ Rata Peaks 13.98 213 P Pn 05 21 34.5 -4.6
FOZ Fox Glacier 14.44 216 Pn 05 21 39.7 -5.4
MSVF Nonsavu 14.86 347 Pn 05 21 51.1 +0.2
MSVF Nonsavu 14.86 347 *c*eP Pn 05 21 51.6 +0.7
MSVF pmax pmax
comp=Z,81nm,0.8s
ODZ Otahua Downs 15.21 210 Pn 05 21 48.3 -7.0
MLZ Mavora Lakes 16.61 215 Pn 05 22 09.0 -4.1
DZM Mont Dzumac 16.71 304 P P 05 22 17.4 +0.1
comp=Z,0.2nm,0.3s,baz=112,slow=16,SNR=17
DZM LR LR 05 27 25.3
comp=Z,3μm,19.6s,baz=180,slow=32
NOUC Port Laguerre 16.87 303 P P 05 22 17.1 -1.0
WHZ Wether Hill Ro 17.08 214 Pn 05 22 14.9 -4.1
AFI Afiamalu 19.36 20 P P 05 22 46.0 +0.4
comp=Z,2.4nm,0.3s,baz=57,slow=13,SNR=4.5
AFI S S 05 26 08.7 -14
comp=Z,1.7nm,0.3s,baz=108,slow=20,SNR=4.2
AFI Afiamalu 19.36 20 P P 05 22 43.8 -1.8
RAR Rarotonga 20.07 61 P Pn 05 22 55.1 -0.2
comp=Z,31nm,0.9s,baz=290,slow=5.9,SNR=3.7
RAR LR LR 05 31 29.4
comp=Z,339nm,19.0s,baz=262,slow=39
RAR Rarotonga 20.07 61 P Pn 05 22 55.2 -0.1
RAR Rarotonga 20.07 61 P P 05 22 55.2 -0.1
RAR pmax pmax
comp=Z,48nm,1.0s
SANVU Saraoutou 21.23 319 P P 05 23 08.6 +2.9
MGCD Mangrove Creek 25.48 260 P P 05 23 50.0 +2.5
baz=26,SNR=8.9
ARMA Armidale 25.49 266 P P 05 23 50.5 +2.8
baz=26,SNR=4.1
ARMA Armidale 25.49 266 P P 05 23 51.2 +3.4
TBI Tubuai 27.18 78 *e*S S 05 28 33.7 -4.8
comp=Z,358nm,33.5s
TBI *e*LQ LQ 05 29 29.4
comp=Z,968nm,27.5s
TBI *e*LR LR 05 30 56.4
comp=Z,2μm,27.5s,baz=247
TBI Tubuai 27.18 78 *e*T T 05 52 06.1
comp=Z,135nm,0.4s
MCQ Macquarie Isla 27.30 209 P P 05 24 02.5 -1.1
MCQ IAmb IAmb 05 24 15.6
comp=Z,136nm,1.5s
MCQ Macquarie Isla 27.30 209 P P 05 24 02.5 -1.1
MCQ pmax pmax
comp=Z,136nm,1.5s
EIDS Eidsvold 27.42 277 P P 05 24 07.1 +2.0
baz=28,SNR=11
EIDS Eidsvold 27.42 277 P P 05 24 06.4 +1.3
TAU Tasmania Unive 28.83 239 P P 05 24 14.0 -3.5
TAU IAmb IAmb 05 24 15.9
comp=Z,87nm,1.4s
TAU Tasmania Unive 28.83 239 P P 05 24 14.0 -3.5
TAU pmax pmax
comp=Z,87nm,1.5s
RMQ Roma 28.99 273 P P 05 24 21.6 +2.5
baz=29,SNR=18
TOO Toolangi 29.80 250 P P 05 24 23.1 -3.1
TOO Toolangi 29.80 250 P P 05 24 23.1 -3.1
TOO pmax pmax
comp=Z,20nm,1.0s
PAE Paea 29.93 68 *e*T T 05 55 22.0
comp=Z,30nm,0.2s
PPT2 Papeete2 29.98 68 *e*S S 05 29 18.3 -4.5
comp=Z,265nm,28.5s
PPT2 *e*LQ LQ 05 30 16.0
comp=Z,1μm,31.0s
PPT2 *e*LR LR 05 32 16.0
comp=Z,2μm,26.8s,baz=218
PPT2 Papeete2 29.98 68 *e*T T 05 55 25.4
comp=Z,49nm,0.4s
PPT Papeete 29.99 68 LR LR 05 33 24.1
comp=Z,344nm,21.2s,baz=188,slow=30
KNTN Kanton 30.10 14 P P 05 24 27.6 -1.3
KNTN IAmb IAmb 05 24 28.9
comp=Z,65nm,1.1s
TIAR Tiarei 30.18 68 *e*T T 05 55 40.2
comp=Z,5.3nm,0.3s
HNR Honiara 30.25 314 P P 05 24 29.6 -0.7
comp=Z,134nm,0.8s,baz=240,slow=3.9,SNR=4.6
HNR LR LR 05 35 29.6
comp=Z,424nm,18.6s,baz=150,slow=34
HNR Honiara 30.25 314 P P 05 24 29.1 -1.3
CMSA Cobar Meteorol 30.26 262 P P 05 24 31.8 +1.5
baz=30,SNR=23
MEH Mehetia 31.01 70 *e*T T 05 56 44.0
comp=Z,39nm,0.3s
QLP Quilpie 32.78 270 P P 05 24 53.8 +1.3
baz=33,SNR=6.2
STKA Stephens Creek 33.62 260 P P 05 25 00.9 +1.1
baz=34,SNR=14
STKA Stephens Creek 33.62 260 P P 05 25 01.4 +1.6
comp=Z,6.5nm,0.6s,baz=95,slow=12,SNR=12
STKA LR LR 05 36 43.3
comp=Z,864nm,21.8s,baz=77,slow=33
STKA Stephens Creek 33.62 260 P P 05 24 57.0 -2.8
CTA Charters Tower 33.69 282 P P 05 25 01.4 +0.9
comp=Z,19nm,0.3s,baz=114,slow=11,SNR=40
CTA LR LR 05 37 37.5
comp=Z,610nm,21.7s,baz=113,slow=34
HTT Hallett 35.54 256 P P 05 25 17.2 +0.8
baz=36,SNR=15
MTSU Mount Surprise 36.24 284 P P 05 25 24.3 +1.8
baz=37,SNR=15
BBOO Buckleboo 38.02 257 P P 05 25 36.8 -0.7
baz=38,SNR=8.9
BBOO Buckleboo 38.02 257 P P 05 25 36.7 -0.7
BBOO IAmb IAmb 05 25 39.4
comp=Z,16nm,0.7s
QIS Mount Isa 39.02 277 P P 05 25 46.6 +0.5
baz=39,SNR=14
PMG Port Moresby 39.05 298 P P 05 25 45.6 -0.6
comp=Z,61nm,0.8s,baz=139,slow=4.8,SNR=13
PMG Port Moresby 39.05 298 P P 05 25 44.2 -2.0
PMG IAmb IAmb 05 25 47.7
comp=Z,71nm,0.9s
PMG Port Moresby 39.05 298 *c*eP P 05 25 46.6 +0.4
PMG pmax pmax
comp=Z,285nm,0.9s
KRVT Keravat (AS076 39.19 309 P P 05 25 46.7 -0.7
comp=Z,461nm,0.8s,baz=124,slow=0.5,SNR=6.6
COEN Coen 39.39 289 P P 05 25 49.6 +0.6
baz=40,SNR=43
COEN Coen 39.39 289 P P 05 25 47.0 -2.1
COEN IAmb IAmb 05 25 51.4
comp=Z,67nm,0.9s
RKT Rikitea 39.44 88 *e*S S 05 31 45.6 -2.6
comp=Z,257nm,30.2s
RKT *e*LR LR 05 36 41.2
comp=Z,2μm,28.5s
TAOE Nuku Hiva Isla 42.53 65 *e*S S 05 32 29.8 -4.7
comp=Z,279nm,27.5s
TAOE *e*LR LR 05 38 03.2
comp=Z,875nm,27.0s
AS31 Alice Springs 42.57 269 P P 05 26 14.4 -0.9
ASAR Alice Springs 42.57 269 P P 05 26 14.6 -0.6
comp=Z,54nm,0.8s,baz=108,slow=7.5,SNR=272
ASAR S S 05 32 31.4 -3.4
comp=Z,2.2nm,1.0s,baz=112,slow=15,SNR=7.3
ASAR PKiKP PKiKP 05 35 10.2 -1.5
comp=Z,0.6nm,0.5s,baz=90,slow=1.9,SNR=4.3
ASAR LR LR 05 43 49.3
comp=Z,460nm,18.4s,baz=118,slow=36
WR0 Warramunga Arr 43.55 275 P P 05 26 22.9 -0.4
WB2 Warramunga Arr 43.72 274 P P 05 26 24.1 -0.5
WRAB Tennant Creek 43.73 274 P P 05 26 23.9 -0.7
WRAB Tennant Creek 43.73 274 *d* *i*P P 05 26 23.7 -0.9
WRAB pmax pmax
comp=Z,75nm,0.8s
WRA Warramunga Arr 43.73 274 P P 05 26 23.7 -1.0
comp=Z,100nm,0.7s,baz=115,slow=7.6,SNR=274
WRA LR LR 05 42 50.5
comp=Z,669nm,21.9s,baz=105,slow=34
WB0 Warramunga Arr 43.76 275 P P 05 26 24.4 -0.5
FORT Forrest 45.12 257 P P 05 26 34.4 -1.2
baz=45,SNR=33
FORT Forrest 45.12 257 P P 05 26 34.5 -1.1
VNDA Vanda 46.12 186 P P 05 26 45.9 +3.0
comp=Z,3.8nm,0.7s,baz=14,slow=8.6,SNR=6.3
VNDA LR LR 05 42 40.9
comp=Z,143nm,19.8s,baz=28,slow=31
VNDA Vanda 46.12 186 P P 05 26 46.8 +3.9
WRKA Warakurna 46.79 265 P P 05 26 47.3 -1.6
baz=47,SNR=175
KDU Kakadu 48.81 282 P P 05 27 03.3 -1.3
baz=49,SNR=30
KMBL Kambalda 50.01 254 P P 05 27 11.5 -2.1
baz=50,SNR=7.9
SMPI Sarmi 50.22 298 P P 05 27 25.9 +11
KNRA Kununurra 50.41 276 P P 05 27 15.8 -0.8
baz=51,SNR=12
KNRA Kununurra 50.41 276 P P 05 27 15.9 -0.8
FITZ Fitzroy Crossi 51.91 272 P P 05 27 27.1 -0.9
baz=52,SNR=15
FITZ Fitzroy Crossi 51.91 272 P P 05 27 26.7 -1.2
comp=Z,7.8nm,0.3s,baz=137,slow=5.1,SNR=36
FITZ LR LR 05 48 19.3
comp=Z,675nm,20.9s,baz=118,slow=35
FITZ Fitzroy Crossi 51.91 272 P P 05 27 26.9 -1.1
FITZ IAmb IAmb 05 27 30.0
comp=Z,25nm,0.9s
CASY Casey 53.21 209 P P 05 27 37.3 +0.4
CASY IAmb IAmb 05 27 38.6
comp=Z,34nm,0.9s
NWAO Narrogin (SRO) 53.29 251 P P 05 27 36.4 -1.6
NWAO IAmb IAmb 05 27 53.6
comp=Z,40nm,1.4s
NWAO Narrogin (SRO) 53.29 251 P P 05 27 36.4 -1.6
NWAO pmax pmax
comp=Z,40nm,1.5s
KLBR Kellerberrin 53.29 253 P P 05 27 36.0 -2.0
baz=53,SNR=7.9
MEEK Meekatharra 54.31 259 P P 05 27 43.8 -1.8
baz=54,SNR=17
FAKI Fak Fak 54.59 292 P P 05 27 46.1 -1.6
comp=Z,50nm,0.9s
FAKI Fak Fak 54.59 292 P P 05 27 46.3 -1.4
FAKI IAmb IAmb 05 27 47.7
comp=Z,40nm,0.9s
PSAD2 Pilbara Seismi 55.17 265 P P 05 27 49.9 -2.0
PSAD2 IAmb IAmb 05 27 52.7
comp=Z,14nm,0.8s
PSAC2 Pilbara Seismi 55.25 265 P P 05 27 50.7 -1.7
PSAC2 IAmb IAmb 05 27 51.1
comp=Z,17nm,0.9s
PSAC2 PcP PcP 05 28 51.6 -1.4
PSAB3 Pilbara Seismi 55.27 265 P P 05 27 50.9 -1.7
PSAB3 IAmb IAmb 05 27 52.0
comp=Z,14nm,0.8s
PSAA3 Pilbara Seismi 55.28 265 P P 05 27 51.1 -1.6
PSAA3 IAmb IAmb 05 27 53.2
comp=Z,24nm,0.9s
PSAA3 PcP PcP 05 28 51.5 -1.5
PSA00 Pilbara Seismi 55.29 265 P P 05 27 50.9 -1.9
PSA00 IAmb IAmb 05 27 52.1
comp=Z,25nm,0.9s
MORW Morawa 55.54 255 P P 05 27 52.6 -1.8
baz=56,SNR=10.0
MORW Morawa 55.54 255 P P 05 27 52.9 -1.6
MORW IAmb IAmb 05 27 54.0
comp=Z,38nm,0.9s
KHLU Kahalu`u 56.01 26 P P 05 27 59.5 +1.6
PUH Pauahi 56.07 27 P P 05 28 00.6 +2.3
MLOA Mauna Loa Obse 56.08 26 P P 05 28 00.3 +1.6
MLH Mauna Loa 56.11 27 P P 05 28 00.6 +1.9
HUH Hualalai 56.12 26 P P 05 28 00.6 +1.8
HMH Humu'ula Sheep 56.17 26 P P 05 28 01.0 +1.8
HPAH Hawaii Prepara 56.49 26 P P 05 28 02.8 +1.6
SIJI Sorong 56.62 293 P P 05 28 02.2 -0.2
comp=Z,11nm,0.6s,baz=60,slow=4.0,SNR=6.8
HON Honolulu 56.87 23 P P 05 28 05.5 +1.7
HON Honolulu 56.87 23 P P 05 28 05.5 +1.7
HON pmax pmax
comp=Z,61nm,0.8s
KEKH Kekaha 56.95 21 P P 05 28 05.6 +1.3
KEKH IAmb IAmb 05 28 16.6
comp=Z,39nm,0.9s
SOEI Soe 57.18 280 P P 05 28 07.3 +0.8
comp=Z,95nm,0.9s
SOEI Soe 57.18 280 P P 05 28 07.2 +0.8
QSPA South Pole Qui 57.78 180 P P 05 28 13.1 +3.2
comp=Z,25nm,0.8s,baz=0.1,slow=0.7,SNR=90
QSPA South Pole Qui 57.78 180 P P 05 28 13.6 +3.7
GIRL Giralia 59.55 261 P P 05 28 22.4 -0.3
SANI Sanana 60.09 288 P P 05 28 23.7 -2.8
comp=Z,558nmcomp=Z,31nm,1.4s
PLAI Plampang 63.11 277 P P 05 28 44.4 -2.5
LUWI Luwuk 63.27 287 P P 05 28 46.3 -1.6
comp=Z,4μmcomp=Z,20nm,0.6s
BNSI Bone 63.55 282 P P 05 28 43.0 -6.8
SPSI Sidrap Palu 64.07 282 P P 05 28 51.4 -1.8
TTSI Tana Toraja 64.54 283 P P 05 28 47.6 -8.7
SRBI Singaraja 65.65 276 P P 05 29 02.9 -0.6
MPSI Mapaga 66.41 286 P P 05 29 05.0 -3.3
comp=Z,10nm,0.7s
GMJI Gumukmas 67.05 275 P P 05 29 09.8 -2.6
comp=Z,67nm,1.0s
PCJI Pacitan 69.00 274 P P 05 29 24.1 -0.6
comp=Z,112nm,1.2s
WOJI Wonogiri, Jawa 69.40 274 P P 05 29 24.0 -3.2
comp=Z,31nm,1.4s
MAW Mawson 70.33 201 P P 05 29 33.9 +1.9
comp=Z,9.7nm,0.7s,baz=149,slow=4.9,SNR=8.6
MAW LR LR 05 59 00.2
comp=Z,356nm,20.3s,baz=76,slow=34
MAW Mawson 70.33 201 P P 05 29 33.0 +1.0
SYO Syowa Base 75.12 193 ⇓ *i*P P 05 30 00.0 -0.4
SYO Syowa Base 75.12 193 ⇓ *i*pP pP 05 30 07.0 -5.6
KASI Kota Agung 76.04 272 P P 05 30 03.8 -2.8
comp=Z,19nm,0.8s
SNAA Sanae 76.24 179 P P 05 30 08.6 +1.8
SNAA Sanae 76.24 179 P P 05 30 08.7 +1.8
SNAA IAmb IAmb 05 30 14.6
comp=Z,28nm,0.9s
SNAA Sanae 76.24 179 P P 05 30 08.7 +1.8
SNAA pmax pmax
comp=Z,28nm,0.9s
KLSI 76.28 273 P P 05 30 05.2 -2.8
comp=Z,13nm,0.9s
VNA3 Neumayer Olymp 76.41 176 P P 05 30 09.4 +1.6
VNA2 Neumayer--Watz 76.83 177 P P 05 30 12.0 +1.8
baz=170,slow=4.0
NVL N'lazarevskaya 76.92 184 *e*P P 05 30 12.3 +1.7
NVL *e*S S 05 40 05.2 +10
NVL pmax pmax
comp=Z,17nm,0.9s
VNA1 Neumayer--Stat 77.07 177 P P 05 30 16.0 +4.5
MJAR Matsushiro Arr 79.57 326 P P 05 30 24.1 -1.6
comp=Z,2.5nm,0.6s,baz=145,slow=6.1,SNR=9.2
MJAR LR LR 06 01 09.9
comp=Z,92nm,20.8s,baz=130,slow=32
MAJO Matsushiro 79.57 326 ⇑ *e*P P 05 30 24.7 -1.0
MAJO pmax pmax
comp=Z,5.0nm,0.8s
MAT Matsushiro 79.57 326 P P 05 30 24.9 -0.8
MAT S S 05 40 23.6 -0.4
EFI East Falkland 81.43 147 P P 05 30 37.9 +2.3
EFI IAmb IAmb 05 30 49.5
comp=Z,62nm,1.3s
EFI East Falkland 81.43 147 P P 05 30 37.9 +2.3
EFI pmax pmax
comp=Z,62nm,1.3s
PLCA Paso Flores 81.54 133 P P 05 30 39.2 +2.7
comp=Z,7.6nm,0.9s,baz=259,slow=6.2,SNR=12
PLCA LR LR 05 58 02.5
comp=Z,150nm,21.9s,baz=266,slow=29
PLCA Paso Flores 81.54 133 P P 05 30 39.9 +3.4
TJN Taejon 85.04 319 ⇑ *e*P P 05 30 55.0 +0.8
KSRS Korea Array 85.52 320 P P 05 30 56.5 -0.1
comp=Z,2.8nm,0.7s,baz=136,slow=4.7,SNR=10.0
KSRS LR LR 06 06 59.3
comp=Z,87nm,18.4s,baz=134,slow=34
SNCC San Nicolas Is 85.73 46 P P 05 31 01.3 +3.5
baz=227
YSS Yuzh-Sakhalins 86.28 335 P P 05 31 04.3 +4.2
YSS Yuzh-Sakhalins 86.28 335 *e*P P 05 31 03.6 +3.5
YSS *e* 05 34 21.1
YSS *e*S S 05 41 35.9 +4.2
YSS pmax pmax
comp=Z,40nm,0.7s
PKM Mcpherson Peak 86.68 45 P P 05 31 06.5 +3.8
baz=226
BAR Barrett 87.12 48 P P 05 31 06.2 +1.6
BAR IAmb IAmb 05 31 08.4
comp=Z,16nm,1.3s
NJ2 Nanjing 87.14 311 *e*P P 05 31 07.5 +2.8
NJ2 pmax pmax
comp=Z,16nm,0.6s
MURC Murrieta 87.40 47 P P 05 31 08.8 +2.8
baz=228
MONP2 Monument Peak 87.41 48 P P 05 31 08.7 +2.4
baz=228,SNR=5.7
ARVC Arvin 87.43 45 P P 05 31 08.7 +2.6
baz=227
IKP In-Ko-Pah, Jac 87.45 48 P P 05 31 09.0 +2.6
baz=229,SNR=5.2
BFSC Mount Baldy Ra 87.54 46 P P 05 31 08.6 +1.8
baz=228,SNR=5.9
PEA0B Petropavlovsk- 87.57 346 P P 05 31 06.5 +0.2
PEA0B Petropavlovsk- 87.57 346 P P 05 31 06.5 +0.2
PEA0B pmax pmax
comp=Z,51nm,1.3s
PETK Petropavlovsk- 87.57 346 P P 05 31 06.2 0.0
comp=Z,6.1nm,0.7s,baz=157,slow=8.0,SNR=6.0
PETK LR LR 06 06 15.5
comp=Z,121nm,18.7s,baz=236,slow=33
HOPS Hopland Field 87.70 40 P P 05 31 09.9 +2.6
VES Vestal, Richgr 87.77 44 P P 05 31 09.6 +2.0
baz=227,SNR=8.5
EDW2 Edwards Air Fo 87.77 46 P P 05 31 10.0 +2.2
baz=228,SNR=7.0
SWSC Sam W. Stewart 87.84 48 P P 05 31 10.9 +2.9
baz=229
PFO Pinyon Flats O 87.87 48 P P 05 31 07.8 -0.6
PFO IAmb IAmb 05 31 12.3
comp=Z,14nm,1.0s
PFO Pinyon Flats O 87.87 48 P P 05 31 07.8 -0.6
PFO pmax pmax
comp=Z,14nm,1.0s
PFO Pinyon Flats O 87.87 48 P P 05 31 10.4 +2.0
baz=228,SNR=6.3
XPFO Pion Flat 87.87 48 P P 05 31 08.2 -0.2
XPFO IAmb IAmb 05 31 12.3
comp=Z,15nm,1.1s
ISA Isabella, Lake 88.01 45 P P 05 31 10.2 +1.3
ISA IAmb IAmb 05 31 12.7
comp=Z,22nm,0.9s
ISA Isabella, Lake 88.01 45 P P 05 31 10.2 +1.3
ISA pmax pmax
comp=Z,23nm,0.9s
ISA Isabella, Lake 88.01 45 P P 05 31 10.6 +1.7
baz=227,SNR=13
BBRC Big Bear Solar 88.01 47 P P 05 31 11.8 +2.6
baz=228
LRMC Laurel Mtn Rad 88.36 46 P P 05 31 12.7 +2.1
baz=228,SNR=12
RRX Edison Barstow 88.37 46 P P 05 31 12.9 +2.3
baz=228
BELC Belle Mtn. Jos 88.41 48 P P 05 31 13.4 +2.5
baz=229,SNR=11
CFA Coronel Fontan 88.47 127 LR LR 06 02 09.0
comp=Z,198nm,21.0s,baz=246,slow=30
USA0B Ussuriysk Arra 88.51 327 ⇑ *e*P P 05 31 11.2 +0.2
USRK Ussuriysk Ar. 88.51 327 P P 05 31 11.1 +0.1
comp=Z,3.5nm,0.8s,baz=153,slow=2.7,SNR=9.8
USRK LR LR 06 05 58.0
comp=Z,112nm,21.0s,baz=131,slow=32
CMB Columbia Colle 88.52 42 P P 05 31 10.9 -0.3
CMB IAmb IAmb 05 31 14.3
comp=Z,10nm,0.8s
CMB Columbia Colle 88.52 42 P P 05 31 10.9 -0.3
CMB pmax pmax
comp=Z,10.0nm,0.8s
BC3 Big Chuckawall 88.53 48 P P 05 31 13.7 +2.3
baz=229,SNR=11
GLA Glamis 88.53 49 P P 05 31 12.4 +1.0
GLA Glamis 88.53 49 P P 05 31 12.4 +1.0
GLA pmax pmax
comp=Z,23nm,0.9s
GLA Glamis 88.53 49 P P 05 31 14.1 +2.7
baz=229,SNR=7.0
HSIG 88.54 54 P P 05 31 14.4 +2.9
HSIG IAmb IAmb 05 31 26.7
comp=Z,7.4nm,0.7s
O02D Mt. Diablo Mer 88.70 39 P P 05 31 14.7 +2.7
baz=224,SNR=7.2
SDPT Sand Point 88.70 10 P P 05 31 12.8 +1.2
HEC Hector,Ludlow 88.75 47 P P 05 31 14.6 +2.1
baz=228,SNR=8.4
CWC Cottonwood Cre 88.77 45 P P 05 31 14.7 +2.1
baz=227
GSC Goldstone, Bar 88.77 46 P P 05 31 13.9 +1.4
GSC IAmb IAmb 05 31 16.3
comp=Z,19nm,1.0s
GSC Goldstone, Bar 88.77 46 P P 05 31 13.9 +1.4
GSC pmax pmax
comp=Z,19nm,1.0s
GSC Goldstone, Bar 88.77 46 P P 05 31 14.8 +2.2

baz=228,SNR=8.1
AFDM Forest Hills D 88.82 41 P P 05 31 13.7 +1.1
MPMC Manual Prospec 88.86 45 P P 05 31 15.2 +2.1
baz=228,SNR=8.1
MDPB Devils Postpil 88.99 43 P P 05 31 15.2 +1.4
OMMB Old Mammoth Mi 89.02 43 P P 05 31 15.5 +1.5
113A Mohawk Valley, 89.03 50 P P 05 31 14.7 +1.1
113A IAmb IAmb 05 31 17.8
comp=Z,16nm,1.3s
IRM Iron Mountain 89.05 48 P P 05 31 16.3 +2.5
baz=229,SNR=20
MLAC Mammoth, Mammo 89.13 43 P P 05 31 17.4 +3.0
baz=227
214A Organ Pipe Nat 89.13 51 P P 05 31 16.0 +1.7
214A Organ Pipe Nat 89.13 51 P P 05 31 16.6 +2.4
baz=230,SNR=5.3
WHN Wuhan 89.13 307 ⇑P P 05 31 12.3 -1.9
GMRC Granite Mounta 89.14 47 P P 05 31 17.2 +2.8
baz=229,SNR=8.7
Y12C Blythe 89.17 49 P P 05 31 17.4 +3.1
Y12C IAmb IAmb 05 31 18.6
comp=Z,18nm,0.9s
Y12C Blythe 89.17 49 P P 05 31 17.4 +3.1
baz=230,SNR=6.1
N02D Trinity Center 89.31 39 P P 05 31 17.5 +2.6
baz=224
O03E Paynes Creek 89.31 40 P P 05 31 17.1 +2.2
baz=225
WAKR Walker 89.38 42 P P 05 31 17.9 +2.4
WAKR IAmb IAmb 05 31 19.0
comp=Z,15nm,1.1s
TUQ Turquoise Moun 89.40 46 P P 05 31 18.2 +2.6
baz=229,SNR=6.2
SHOC Shoshone, Teco 89.49 46 P P 05 31 18.5 +2.7
baz=228
FURC Furnace Creek, 89.51 45 P P 05 31 18.5 +2.7
baz=228
M02C Callahan 89.53 38 P P 05 31 18.5 +2.6
baz=224
GRAC Grapevine Rang 89.56 45 P P 05 31 19.2 +3.0
baz=228
TYV Tymovskoe 89.64 337 eP P 05 31 17.0 +1.0
TYV eS S 05 42 08.1 +4.6
TYV pmax pmax
comp=Z,15nm,0.9s
TYV pmax pmax
comp=Z,300nm,7.0s
TYV smax smax
comp=N,800nm,10.1s
PNTR Pine Nut 89.69 42 P P 05 31 16.3 -0.7
PNTR IAmb IAmb 05 31 20.1
comp=Z,15nm,0.8s
NEE2 Needles Airpor 89.77 48 P P 05 31 19.8 +2.6
baz=230,SNR=5.7
PDMCI Parker Dam,Lak 89.77 48 P P 05 31 19.8 +2.6
baz=230,SNR=12
BEKR Beckworth 89.80 41 P P 05 31 18.3 +0.9
VCNR Virginia City 89.81 42 P P 05 31 18.2 +0.7
YERR Yerington 89.82 42 P P 05 31 17.9 +0.3
YERR IAmb IAmb 05 31 20.5
comp=Z,15nm,1.1s
YBH Yreka Blue Hor 89.85 38 P P 05 31 17.4 -0.1
YBH IAmb IAmb 05 31 20.8
comp=Z,17nm,1.4s
YBH Yreka Blue Hor 89.85 38 P P 05 31 17.4 -0.1
YBH pmax pmax
comp=Z,17nm,1.5s
NVAR Mina Array Bea 89.98 43 P P 05 31 20.1 +1.8
comp=Z,14nm,0.9s,baz=221,slow=7.6,SNR=59
NVAR LR LR 06 02 51.2
comp=Z,126nm,21.4s,baz=214,slow=30
RYN Ryan 89.99 43 P P 05 31 18.4 +0.1
K02D Willamette Mer 90.05 37 P P 05 31 20.9 +2.6
baz=224
NV11 Mina Array Sit 90.07 43 P P 05 31 20.1 +1.4
NV11 IAmb IAmb 05 31 21.8
comp=Z,8.9nm,0.9s
TPNV Topopah Spring 90.20 45 P P 05 31 21.2 +1.9
TPNV IAmb IAmb 05 31 23.0
comp=Z,11nm,0.8s
TPNV Topopah Spring 90.20 45 P P 05 31 21.2 +1.9
TPNV pmax pmax
comp=Z,11nm,0.8s
TPNV Topopah Spring 90.20 45 P P 05 31 21.7 +2.4
baz=228,SNR=5.1
PAHR Pah Rah Range 90.24 41 P P 05 31 19.8 +0.4
PAHR IAmb IAmb 05 31 22.4
comp=Z,9.6nm,1.1s
Y14A Wickenburg 90.26 49 P P 05 31 21.1 +1.6
Y14A IAmb IAmb 05 31 23.5
comp=Z,14nm,0.8s
M04C Macdoel 90.34 39 P P 05 31 22.3 +2.5
baz=225
L04D Klamath Falls 90.41 38 P P 05 31 22.9 +2.8
baz=225
W13A Hualapai Mount 90.45 48 P P 05 31 21.9 +1.4
W13A IAmb IAmb 05 31 24.6
comp=Z,9.6nm,0.8s
KVN Kaiserville 90.52 43 P P 05 31 21.9 +1.1
KVN IAmb IAmb 05 31 23.7
comp=Z,9.0nm,1.0s
KVN Kaiserville 90.52 43 P P 05 31 21.9 +1.1
KVN pmax pmax
comp=Z,9.0nm,1.0s
SHPR Sheep Range 90.57 46 P P 05 31 22.7 +1.7
SHPR IAmb IAmb 05 31 25.0
comp=Z,8.1nm,1.0s
TUC Tucson 90.69 52 P P 05 31 22.9 +1.3
TUC IAmb IAmb 05 31 26.1
comp=Z,11nm,0.8s
TUC Tucson 90.69 52 P P 05 31 22.9 +1.3
TUC pmax pmax
comp=Z,11nm,0.9s
TUC Tucson 90.69 52 P P 05 31 25.0 +3.4
baz=232
K04D Chiloquin, OR 90.98 38 P P 05 31 24.7 +1.9
baz=225
TLIG Tlapa 91.11 70 P P 05 31 25.2 +1.3
TLIG IAmb IAmb 05 31 28.9
comp=Z,15nm,1.3s
J04D Umpqua Nationa 91.23 38 P P 05 31 26.1 +2.1
baz=225
MOD Modoc Plateau 91.25 39 P P 05 31 24.3 +0.3
MOD IAmb IAmb 05 31 26.9
comp=Z,9.3nm,0.9s
CN2 Changchun 91.40 323 eP P 05 31 24.4 -0.1
CN2 pmax pmax
comp=Z,10.0nm,0.9s
I04A Tendick Farm, 91.47 37 P P 05 31 27.1 +2.2
baz=225
R11A Troy Canyon, C 91.52 44 P P 05 31 26.2 +0.8
R11A Troy Canyon, C 91.52 44 P P 05 31 27.2 +1.8
baz=229
J05D Fort Rock, OR 91.72 38 P P 05 31 28.3 +2.1
baz=226
LCMT Little Creek M 92.07 47 P P 05 31 28.8 +0.8
GYA Guiyang 92.10 300 eP P 05 31 34.8 +6.5
GYA PP PP 05 35 18.4 +9.3
GYA Guiyang 92.10 300 S S 05 42 36.9 +9.5
PINE Pine Mountain 92.22 38 P P 05 31 30.3 +1.7
U15A North Rim 92.29 48 P P 05 31 31.3 +2.1
U15A IAmb IAmb 05 31 33.2
comp=Z,14nm,0.8s
KNB Kanab 92.33 47 P P 05 31 31.2 +2.0
KNB Kanab 92.33 47 P P 05 31 31.2 +2.0
KNB pmax pmax
comp=Z,13nm,0.8s
CCUT Cedar City 92.34 46 P P 05 31 31.1 +1.8
I05D Terrebonne, OR 92.40 37 P P 05 31 31.3 +2.1
baz=226
KLR Kul'dur 92.47 330 P P 05 31 29.4 +0.1
comp=Z,1.7nm,0.8s,baz=122,slow=1.5,SNR=7.9
KLR Kul'dur 92.47 330⇑eP P 05 31 29.7 +0.4
KLR pmax pmax
comp=Z,3.0nm,0.9s
WVOR Wild Horse Val 92.51 40 P P 05 31 31.2 +1.4
WVOR IAmb IAmb 05 31 32.7
comp=Z,7.5nm,1.1s
WVOR Wild Horse Val 92.51 40 P P 05 31 31.3 +1.4
WVOR pmax pmax
comp=Z,7.0nm,1.1s
SZCU Shurtz Canyon 92.54 46 P P 05 31 32.6 +2.4
PSUT Pine Spring 92.67 45 P P 05 31 31.2 +0.5
G05D Wamic, OR 93.05 37 P P 05 31 34.2 +2.1
baz=226
W18A Petrified Fore 93.11 50 P P 05 31 34.1 +1.3

baz=232
I07A Izee 93.17 38 P P 05 31 33.6 +0.8
I07A IAmb IAmb 05 31 35.9
comp=Z,8.7nm,1.0s
J08A Circle Bar Ran 93.23 39 P P 05 31 34.8 +1.7
J08A IAmb IAmb 05 31 36.1
comp=Z,8.7nm,0.9s
ELK Elko 93.29 43 P P 05 31 34.9 +1.3
ELK IAmb IAmb 05 31 36.5
comp=Z,6.0nm,0.9s
ELK Elko 93.29 43 P P 05 31 34.9 +1.3
ELK pmax pmax
comp=Z,6.0nm,0.9s
MTPU Mount Pierson 93.37 46 P P 05 31 35.0 +0.8
LVC Limon Verde 93.41 119 LR LR 06 03 43.4
comp=Z,129nm,21.2s,baz=216,slow=29
CMAR Chiang Mai Arr 93.59 289 PP PP 05 35 19.6 -1.1
comp=Z,2.5nm,0.7s,baz=130,slow=5.6,SNR=12
TX31 Lajitas Ar. Si 93.83 58 P P 05 31 37.1 +0.9
TX32 Lajitas Array 93.83 58 P P 05 31 35.8 -0.4
TXAR Lajitas Array 93.83 58 P P 05 31 38.8 +2.6
comp=Z,1.5nm,1.0s,baz=205,slow=5.5,SNR=9.0
TXAR LR LR 06 08 53.7
comp=Z,85nm,18.6s,baz=0.0,slow=32
MNTX Cornudas Mount 93.99 55 P P 05 31 38.9 +2.1
baz=234
KMI Kunming 94.27 297 P P 05 31 38.5 0.0
KMI pmax pmax
comp=Z,6.0nm,1.4s
G08A Pilot Rock 94.28 38 P P 05 31 38.6 +0.7
G08A IAmb IAmb 05 31 40.8
comp=Z,14nm,1.4s
MFID Camas Ranch 94.70 41 P P 05 31 41.3 +1.4
MFID IAmb IAmb 05 31 42.6
comp=Z,8.7nm,0.8s
XAN Xi'an 94.90 307 P P 05 31 40.4 -0.6
XAN pmax pmax
comp=Z,5.0nm,1.6s
ANMO Albuquerque 95.16 52 P P 05 31 44.2 +1.9
baz=234
D08A Wollman Farm, 95.51 36 P P 05 31 44.6 +1.3
D08A IAmb IAmb 05 31 52.0
comp=Z,6.8nm,0.9s
GAMB Gambell 95.94 3 P P 05 31 45.1 +0.3
GAMB IAmb IAmb 05 31 46.5
comp=Z,6.0nm,1.0s
CD2 Chengdu 96.71 302 eP P 05 31 50.0 +0.7
MSTX Muleshoe 97.09 54 P Pdif 05 31 52.5 +1.4
baz=236
HHC Hu-ho-hao-te 97.23 314 eP Pdif 05 31 54.3 +2.7
HHC pmax pmax
comp=Z,5.0nm,0.9s
HHC pmax pmax
comp=Z,38nm,5.2s
SEY Seymchan 97.75 347⇑eP Pdif 05 31 55.2 +2.1
LPAZ La Paz 97.78 115 P Pdif 05 31 58.1 +2.8
comp=Z,2.0nm,1.0s,baz=243,slow=2.5,SNR=4.5
LPAZ LR LR 06 08 41.1
comp=Z,45nm,20.9s,baz=228,slow=31
LPAZ La Paz 97.78 115 P Pdif 05 31 56.0 +0.7
LPAZ IAmb IAmb 05 32 00.4
comp=Z,8.6nm,1.4s
LPAZ La Paz 97.78 115 P Pdif 05 31 56.0 +0.7
LPAZ pmax pmax
comp=Z,9.0nm,1.5s
BW06 Boulder Array 97.86 44 P Pdif 05 31 56.4 +2.0
baz=233
PD31 Pinedale Array 97.86 44 P Pdif 05 31 54.7 +0.2
PDAR Pinedale Array 97.86 44 P Pdif 05 31 55.6 +1.1
comp=Z,1.1nm,0.7s,baz=206,slow=4.3,SNR=14
PDAR PKKPbc PKKPbc 05 48 28.9 -0.7
comp=Z,0.7nm,0.8s,baz=92,slow=4.5,SNR=4.8
PDAR LR LR 06 08 06.0
comp=Z,113nm,21.5s,baz=232,slow=30
TRF Thorofare Moun 98.08 12 P Pdif 05 31 55.7 +0.9
TRF IAmb IAmb 05 31 58.5
comp=Z,5.3nm,0.8s
CPUP Villa Florida 99.15 129 LR LR 06 08 24.2
comp=Z,153nm,21.6s,baz=228,slow=30
WRH Wood River Hil 99.42 13 P Pdif 05 32 01.4 +0.9
LZH Lanzhou 99.49 307 eP Pdif 05 32 04.0 +2.2
LZH pP pP 05 32 14.1 -0.5
LZH pmax pmax
comp=Z,16nm,1.3s
LZH pmax pmax
comp=Z,59nm,4.9s
LZH LR LR
comp=Z,250nm,17.6s
LZH LR LR
comp=Z,230nm,19.7s
HDA Harding Lake 99.58 13 P Pdif 05 32 04.2 +2.9
baz=207
K22A Casper 99.60 45 P Pdif 05 32 03.9 +1.8
baz=235
TCOL CIGO, UAF Yank 99.82 13 P Pdif 05 32 05.3 +3.0
baz=206
ILAR Eielson Array 99.92 13 P Pdif 05 32 02.9 +0.1
comp=Z,1.2nm,1.0s,baz=221,slow=5.7,SNR=7.6
ILAR PKiKP PKiKP 05 36 32.7 +2.1
comp=Z,1.1nm,0.8s,baz=264,slow=2.1,SNR=7.1
ILAR PKKPbc PKKPbc 05 48 24.7 +0.4
comp=Z,0.2nm,0.6s,baz=29,slow=0.5,SNR=4.0
ILAR LR LR 06 10 06.4
comp=Z,60nm,20.6s,baz=185,slow=31
EPYK Eagle Plains 103.47 16 P Pdif 05 32 21.4 +2.8
baz=216
SONM Songino Array 104.25 318 PP PKiKP 05 36 41.6 +2.5
comp=Z,0.6nm,1.0s,baz=23,slow=4.8,SNR=3.8
SONM PKKPbc PKKPdf 05 48 18.2 -2.7
comp=Z,1.0nm,0.8s,baz=278,slow=3.2,SNR=5.7
YKA Yellowknife Ar 107.39 26 Pdiff Pdif 05 32 37.5 +1.5
comp=Z,0.1nm,0.3s,baz=239,slow=4.8,SNR=3.7
YKA PKiKP PKiKP 05 36 43.2 -1.1
comp=Z,0.7nm,0.7s,baz=249,slow=1.3,SNR=11
YKA PKKPbc PKKPbc 05 47 57.6 -4.0
comp=Z,1.7nm,0.9s,baz=44,slow=3.0,SNR=14
ULM Lac du Bonnet 109.81 43 PKiKP PKiKP 05 36 47.7 -1.5
comp=Z,1.2nm,0.7s,baz=149,slow=4.3,SNR=3.0
TIGA Tifton 109.82 65 P PKiKP 05 36 51.1 +1.3
baz=244
TIXI Tiksi 110.00 344 PKiKP PKiKP 05 36 46.7 -2.2
comp=Z,1.8nm,0.4s,baz=82,slow=1.9,SNR=6.0
TIXI Tiksi 110.00 344 PKiKP 05 36 47.4 -1.5
V53A Saluda 112.21 61 P PKiKP 05 36 56.3 +2.0
baz=245
158A Hollywood 112.97 65 P PKiKP 05 36 56.2 +0.5
baz=245
WMQ Urumqi 114.04 308 ePKP PKiKP 05 36 58.1 +0.5
WMQ LR LR
comp=Z,680nm,29.3s
BOSA Boshof 115.29 203 PKP PKPdf 05 37 01.9 +1.2
comp=Z,4.0nm,0.9s,baz=74,slow=3.5,SNR=3.2
P58A Pank, Wackersv 117.72 59 P PKiKP 05 37 05.5 +0.9
baz=250
MK31 Makanchi Array 118.64 309 PKPdf 05 37 04.7 -1.6
MK31 Makanchi Array 118.64 309 PKIKP PKPdf 05 37 04.7 -1.6
MKAR Makanchi Array 118.64 309 PKP PKPdf 05 37 04.6 -1.7
comp=Z,1.7nm,0.8s,baz=79,slow=2.6,SNR=13
MKAR PKKPbc PKKPab 05 47 24.8 +1.3
comp=Z,0.1nm,0.4s,baz=292,slow=3.5,SNR=4.3
MAKZ Makanchi 118.85 309 PKPdf 05 37 04.5 -2.1
MAKZ Makanchi 118.85 309 PKIKP PKPdf 05 37 04.6 -2.1
L57A Andrews Acres 118.88 56 P PKiKP 05 37 07.5 +0.5
baz=251
E52A Mattawa 118.98 51 P PKPdf 05 37 05.6 -1.3
baz=252
ZAA0 Zalesovo Array 119.15 318 PKPdf 05 37 05.6 -1.4
ZALV Zalesovo Beam 119.15 318 PKP PKPdf 05 37 05.5 -1.4
comp=Z,2.3nm,0.6s,baz=158,slow=1.6,SNR=9.0
RES Resolute Bay 119.23 18 PKPdf 05 37 06.5 -0.1
RES Resolute Bay 119.23 18 PKIKP PKPdf 05 37 06.5 -0.1
ALGO Algonquin Park 119.28 52 P PKiKP 05 37 07.9 +0.4
baz=253
L58A Harry Jones Me 119.60 57 P PKiKP 05 37 08.8 +0.5
baz=252
D53A Lac Vacive, Po 119.84 51 P PKiKP 05 37 08.7 +0.1
baz=254
E54A Lac Daplat, Po 120.00 52 P PKPdf 05 37 08.7 -0.1
baz=253
H56A Elgin 120.09 54 P PKiKP 05 37 09.2 +0.1
baz=253
D54A Lac Fusel, La 120.55 51 P PKPdf 05 37 09.5 -0.4
baz=254
MATQ Matagami 120.61 48 P PKiKP 05 37 10.2 +0.2
baz=255
H57A Richville 120.64 54 P PKPdf 05 37 10.0 -0.2
baz=253

E55A Montcerf-Lytto 120.75 52 P PKPdf 05 37 10.2 -0.1
baz=254
KSH Kashi 120.80 300 PKP PKiKP 05 37 18.5 +7.6
KSH PP PP 05 38 45.9 +5.8
KSH PKS PKSdf 05 40 50.8 +3.3
KSH SKS SKSdf 05 44 12.4 -6.7
KSH SKKS SKKSac 05 45 29.5 -6.0
KSH Kashi 120.80 300 SS SS 05 55 10.8 +2.5
LSQQ Lebel-sur-Quev 120.85 49 P PKPdf 05 37 10.3 -0.1
baz=255
NRIK Noril'sk 121.20 336 PKP PKPdf 05 37 09.6 -0.9
comp=Z,6.9nm,0.7s,baz=84,slow=3.5,SNR=9.5
NRIK Noril'sk 121.20 336 ePKIKP PKPdf 05 37 10.1 -0.4
D55A Sainte-Anne-du 121.29 51 P PKiKP 05 37 11.3 -0.1
baz=255
NRN Naryn 121.36 302 PKPdf 05 37 11.9 -0.1
NRN Naryn 121.36 302 PKIKP PKPdf 05 37 11.9 -0.1
BOOM Boomskoye usch121.71 303 PKPdf 05 37 12.3 -0.2
BOOM Boomskoye usch121.71 303 PKIKP PKPdf 05 37 12.3 -0.2
D56A ZEC Mazanza, M 121.77 51 P PKiKP 05 37 12.4 0.0
baz=255
KURK Kurchatov 122.03 313 PKPdf 05 37 11.5 -1.0
KURK Kurchatov 122.03 313c iPKIKP PKPdf 05 37 11.6 -1.0
KURK pmax pmax
comp=Z,48nm,0.6s
AAK Ala-Archa 122.78 303 PKP PKPdf 05 37 14.1 -0.4
comp=Z,3.1nm,0.9s,baz=205,slow=3.0,SNR=7.2
AAK Ala-Archa 122.78 303 PKPdf 05 37 13.7 -0.8
AAK Ala-Archa 122.78 303j iPKIKP PKPdf 05 37 14.2 -0.3
AAK pmax pmax
comp=Z,8.0nm,0.8s
D58A Chemin du LacG 123.03 52 P PKiKP 05 37 15.5 +0.7
baz=256
E60A Ste Agathe de 123.82 53 P PKiKP 05 37 17.5 +1.1
baz=257
F61A St Evariste 124.04 53 P PKiKP 05 37 17.5 +0.6
baz=257
D60A Saint Jean D'O 124.29 52 P PKiKP 05 37 18.2 +0.9
baz=258
E61A Lac Etchemin 124.48 53 P PKiKP 05 37 18.6 +0.9
baz=258
KBL Kabul 124.52 292 PKPdf 05 37 17.6 -0.6
KBL Kabul 124.52 292 PKIKP PKPdf 05 37 17.6 -0.6
BTK Batken 124.76 299 PKPdf 05 37 18.2 -0.1
BTK Batken 124.76 299 PKIKP PKPdf 05 37 18.2 -0.1
D61A St Aubert, Com 124.84 52 P PKiKP 05 37 19.2 +0.8
baz=258
G64A Maxfield 125.41 55 P PKiKP 05 37 20.2 +0.6
baz=258
D62A Allapoint, All 125.58 52 P PKiKP 05 37 20.4 +0.5
baz=259
KK31 Karatay Array 125.73 303 PKPdf 05 37 19.2 -0.8
KK31 Karatay Array 125.73 303 PKIKP PKPdf 05 37 19.2 -0.8
KKAR Karatay Array 125.73 303 PKPdf 05 37 18.9 -1.1
KKAR Karatay Array 125.73 303 PKIKP PKPdf 05 37 18.9 -1.1
E63A Oxbow 125.88 53 P PKiKP 05 37 21.0 +0.4
baz=259
LSZ Lusaka 126.17 213 PKiKP 05 37 22.2 -0.1
LSZ Lusaka 126.17 213 PKIKP PKiKP 05 37 22.2 -0.1
G65A Princeton 126.22 55 P PKiKP 05 37 21.5 +0.3
baz=258
E64A Bridgewater 126.28 53 P PKiKP 05 37 21.8 +0.5
baz=259
BVAR Borovoye Array 127.44 315 PKP PKPdf 05 37 22.3 -0.6
comp=Z,2.2nm,0.3s,baz=112,slow=2.0,SNR=8.9
BRVK Borovoye 127.51 315 PKPdf 05 37 22.5 -0.5
BRVK Borovoye 127.51 315 PKIKP PKPdf 05 37 22.5 -0.5
SCHQ Schefferville 127.99 43 PKP PKiKP 05 37 24.5 0.0
comp=Z,5.4nm,0.9s,baz=273,slow=2.1,SNR=9.1
SCHQ Schefferville 127.99 43 PKPdf 05 37 23.8 -0.2
NOR Nord 130.16 3 iP PKPdf 05 37 27.0 -0.4
NOR Nord 130.16 3 iPKIKP PKPdf 05 37 27.0 -0.4
SPA0 Spitsbergen Ar 133.60 356 ePKPdf PKiKP 05 37 34.9 -0.3
GEYT Alibeck 133.92 293 PKP PKiKP 05 37 37.5 +0.4
comp=Z,2.3nm,0.7s,baz=197,slow=1.5,SNR=4.0
ARU Arti 134.26 319 PKP PKPdf 05 37 36.1 +0.4
comp=Z,1.9nm,0.2s,baz=33,slow=1.6,SNR=11
ARU Arti 134.26 319 PKPdf 05 37 35.0 -0.8
ARU Arti 134.26 319 iPKIKP PKPdf 05 37 35.6 -0.1
DAG Danmarks Havn 134.52 6 iP PKPdf 05 37 34.0 -1.6
DAG Danmarks Havn 134.52 6 iPKIKP PKPdf 05 37 34.0 -1.6
SUMG Summit 134.69 16 iP PKiKP 05 37 40.1 +2.1
SUMG Summit 134.69 16 ePKIKP PKiKP 05 37 40.1 +2.1
AKTO Aktyubinsk 135.03 311 PKP PKPdf 05 37 37.8 +0.5
comp=Z,4.4nm,0.9s,baz=144,slow=1.2,SNR=13
KIRV Kirov 138.62 324 PKP PKiKP 05 37 44.9 -1.0
comp=Z,6.5nm,0.5s,baz=277,slow=3.7,SNR=4.0
PRGR Permogore 139.25 329 ePKIKP PKPdf 05 37 43.4 -1.4
PRGR pmax pmax
comp=Z,9.0nm,0.7s
HAMF Hammerfest 139.74 349 ePKPdf PKiKP 05 37 46.9 -1.0
ARCES ARCESS Array B 140.37 347 PKhKP PKPpre 05 37 40.1
comp=Z,1.9nm,0.4s,baz=50,slow=1.7,SNR=42
ARCES PKP PKPdf 05 37 46.5 -0.1
comp=Z,14nm,0.7s,baz=46,slow=2.6,SNR=17
ARE0 ARCESS Array S 140.37 347 ePKPdf PKiKP 05 37 49.0 -0.2
KTK1 Kautokeino 141.24 348 ePKPdf PKiKP 05 37 49.8 -1.2
TRO Tromso 141.38 350 ePKPdf PKiKP 05 37 49.8 -1.4
TRO ePKPdf PKiKP 05 37 49.8 -1.4
KLMR Klimovskoe 142.22 330 ePKHKP PKPpre 05 37 43.8
KLMR e 05 41 03.1
KLMR Klimovskoe 142.22 330 ePKPdf PKPdf 05 37 43.9 -6.3
KLMR AMP 05 37 50.7
comp=Z,13nm,1.1s
KLMR ePP PP 05 41 03.2 +6.1
STEI Steigen 143.47 351 e PKPbc 05 37 49.4 -0.1
LOF Lofoten 143.48 352 ePKPdf PKiKP 05 37 53.2 +1.0
GNI Garni 144.50 295⇑ePKIKP PKPdf 05 37 54.4 -0.7
ZEI Tsey 145.09 300 iPKIKP PKPbc 05 37 54.7 -0.9
ZEI pmax pmax
comp=Z,13nm,0.9s
KONS Konsvik 145.10 352 ePKPbc PKPbc 05 37 54.1 -0.5
MOR8 Moi Rana 145.24 351 ePKPbc PKPbc 05 37 53.6 -1.6
AKH Akhalkalaki 145.45 297 ⇑P PKPdf 05 37 56.4 -0.4
AKH Akhalkalaki 145.45 297 PKPdf 05 37 56.3 -0.4
AKH Akhalkalaki 145.45 297 PKIKP PKPdf 05 37 56.3 -0.4
GOF Gofitskoye 145.51 304⇑ePKIKP PKPdf 05 37 56.1 -0.3
GOF pmax pmax
comp=Z,45nm,0.6s
MOS Moscow 145.63 324 ePKHKP PKPpre 05 37 50.1
MOS e 05 37 55.0
KBZ Khabaz 145.75 301 PKPbc PKPdf 05 37 56.4 -0.5
comp=Z,23nm,0.9s,baz=89,slow=3.7,SNR=38
KBZ Khabaz 145.75 301dePKIKP PKPdf 05 37 56.9 0.0
KVAR Kislovodsk Arr 145.88 302 PKPbc PKPdf 05 37 57.5 +0.2
comp=Z,8.3nm,0.9s,baz=329,slow=5.9,SNR=4.8
KIV Kislovodsk 145.88 302 iPKP2 PKPbc 05 37 58.0 0.0
KIV pmax pmax
comp=Z,54nm,1.1s
KIV MLR MLR
comp=Z,194nm,24.0s
NEY Neytrino 145.92 301⇑ePKP2 PKPab 05 37 58.5 -0.3
LPSR Galich'ya Gora 146.26 318 ePKP2 PKPdf 05 37 57.6 +0.2
LPSR pmax pmax
comp=Z,60nm,0.8s
OBN Obninsk 146.46 323 PKPbc PKPdf 05 37 58.1 +0.5
comp=Z,13nm,0.6s,baz=115,slow=2.0,SNR=12
OBN Obninsk 146.46 323 PKPdf 05 37 58.0 +0.4
OBN PKPbc PKPab 05 37 59.8 -0.3
OBN Obninsk 146.46 323⇓ePKIKP PKPdf 05 37 57.8 +0.1
OBN e 05 38 08.2
OBN e 05 38 14.3
OBN 05 45 04.0
OBN SS SS 06 00 17.0 +0.5
OBN SSS SSS 06 05 48.0
OBN pmax pmax
comp=Z,58nm,0.7s
PUL Pulkovo 146.53 334⇑ePKP2 PKPbc 05 37 58.6 -0.6
VSR Storozhevoye 146.62 316 ePKP2 PKPbc 05 37 58.9 -0.8
VSR pmax pmax
comp=Z,50nm,0.7s
VORD Divnogorie 146.62 315 ePKP2 PKPbc 05 37 58.9 -0.8
VORD pmax pmax
comp=Z,40nm,0.7s
FIA1 FINESS Array S 146.78 339 PKPdf 05 37 58.7 +0.7
FINES FINESS Array B 146.78 339 PKPbc PKPdf 05 37 58.4 +0.3
comp=Z,57nm,0.7s,baz=64,slow=4.4,SNR=154
BCA Borcka 146.85 297 ⇑P PKPbc 05 38 00.6 -0.2
NSS Namsos 147.13 352 ePKPdf PKPbc 05 37 59.6 -1.2
TBLU Trondheim 148.57 352 epPKPdf PKPbc 05 38 04.4 -0.2
VSU Vasula 148.78 334 eP PKPbc 05 38 04.6 -0.7
VSU Vasula 148.78 334dePKIKP PKPbc 05 38 03.1 +1.7
MOL Molde 149.50 354 epPKPdf PKPbc 05 38 06.7 -0.3
DOMB Dombas 149.88 353 epPKPdf PKPbc 05 38 07.8 -0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKN	Aaknes	149.93	355	epPKPdf	PKPdf	05 38 07.9	-0.2
NC303	NORSAR Array S	150.38	350		PKPdf	05 38 04.3	+0.4
NC303				PKPbc	PKPbc	05 38 09.1	-0.1
NC204	NORSAR Array S	150.42	351		PKPbc	05 38 08.8	-0.6
NC405	NORSAR Array S	150.44	350	PKPdf	PKPdf	05 38 04.5	+0.5
NC405					PKPbc	05 38 08.9	-0.5
NB201	NORSAR Array S	150.56	350		PKPdf	05 38 04.3	0.0
NB201				PKPbc	PKPbc	05 38 09.3	-0.4
NB201				PKPab	PKPab	05 38 16.6	0.0
NB2	NORSAR Subarra	150.58	350	PKP	PKPbc	05 38 09.3	-0.5
	comp=Z,44nm,0.9s,baz=16,slow=2.6						
NB2	NORSAR Subarra	150.58	350	PKPdf	PKPbc	05 38 09.3	-0.5
	baz=16,slow=2.6						
NOA	NORSAR Array B	150.58	350	PKP	PKPdf	05 38 04.0	-0.3
	comp=Z,2.4nm,0.8s,baz=15,slow=4.2,SNR=21						
NOA				PKPbc	PKPbc	05 38 09.0	-0.8
	comp=Z,23nm,0.7s,baz=15,slow=4.2,SNR=95						
FOO	Floro	150.63	356	epPKPdf	PKPbc	05 38 09.5	-0.3
NBO00	NORSAR Array S	150.65	351		PKPdf	05 38 04.6	+0.2
NBO00				PKPbc	PKPbc	05 38 09.9	0.0
NAO01	NORSAR Array S	150.82	351		PKPbc	05 38 10.4	+0.1
NAO01				PKPab	pPKPdf	05 38 17.2	-0.3
NC602	NORSAR Array S	150.83	350	epPKPdf	PKPbc	05 38 09.0	-1.3
NC602	NORSAR Array S	150.83	350		PKPbc	05 38 09.6	-0.7
IZAR	Zarasai	150.88	331	eP	PKPbc	05 38 09.9	-0.6
MICGM	Minsk	150.99	328	e	PKPbc	05 38 11.0	+0.2
MNK	Minsk	150.99	328	ePKIKP	PKPbc	05 38 11.0	+0.2
HYA	Hoyanger	151.00	355	epPKPdf	PKPbc	05 38 10.2	-0.4
ISAL	Salakas	151.05	331	eP	PKPbc	05 38 10.3	-0.6
ISAL				IAmb	IAmb	05 38 12.8	
	comp=Z,15nm,0.9s						
IIGN	Ignalina	151.16	330	eP	PKPbc	05 38 10.6	-0.6
IIGN				IAmb	IAmb	05 38 12.6	
	comp=Z,25nm,0.9s						
SUE	Sulen	151.19	357	epPKPdf	PKPbc	05 38 11.0	-0.1
NACGM	Naroch	151.22	329	e	PKPbc	05 38 11.0	-0.4
SKAR	Skarslia	151.29	353	ePKPbc	PKPbc	05 38 11.6	-0.3
DIKM	Dikmen	151.59	299	⇑P	PKiKP	05 38 13.1	0.0
OSL	Oslo	151.71	350	ePKPbc	PKiKP	05 38 13.0	+0.3
ASK	Askoy	151.74	356	epPKPdf	PKPbc	05 38 11.7	-0.7
SIM	Simferopol'	151.74	306	d iPKIKP	PKiKP	05 38 14.4	+1.1
SIM				e		05 38 21.5	
SIM				pmax	pmax		
	comp=Z,27nm,0.9s						
BER	Bergen	151.83	356	epPKPdf	PKPbc	05 38 10.5	-2.1
PABE	Paberze	151.97	332	eP	PKPbc	05 38 12.6	-0.4
PABE				IAmb	IAmb	05 38 13.7	
	comp=Z,95nm,0.7s						
KONO	Kongsberg	152.15	351	ePKPbc	PKPbc	05 38 13.3	0.0
KONO	Kongsberg	152.15	351		PKiKP	05 38 13.4	-0.2
KONO	Kongsberg	152.15	351	PKIKP	PKiKP	05 38 13.5	-0.2
ODD1	Odda	152.21	354	ePKPbc	PKiKP	05 38 13.7	-0.1
PBUR	Paburge	152.34	335	eP	PKPbc	05 38 13.6	-0.3
BZK	Bozkurt	152.47	300	⇑P	PKiKP	05 38 15.6	+0.7
AKASG	Malin Array Be	152.51	320	PKPbc	PKPbc	05 38 13.7	-0.7
	comp=Z,10nm,0.8s,baz=45,slow=1.3,SNR=7.6						
AKASG				pPKPbc	pPKPab	05 38 34.9	-2.7
	comp=Z,9.6nm,0.7s,baz=54,slow=3.1,SNR=9.2						
AKBB	Malin Array Si	152.51	320		PKPdf	05 38 08.1	+0.6
AKBB				PKPbc	PKPbc	05 38 13.7	-0.8
AKBB	Malin Array Si	152.51	320	PKIKP	PKPdf	05 38 08.1	+0.6
BLS5	Blasjo	152.70	354	ePKPbc	PKiKP	05 38 15.4	+0.5
KMY	Karmoy	153.00	356	ePKPbc	PKPbc	05 38 15.1	-0.1
BR131	Keskin Array S	153.04	295		PKPdf	05 38 08.1	-0.7
BR131				PKPbc	PKPbc	05 38 15.8	-0.4
BR131				PKPab	sPKPdf	05 38 26.3	-0.2
BRTR	Keskin Array B	153.04	295	PKP	PKPdf	05 38 07.8	-1.0
	comp=Z,0.9nm,1.0s,baz=65,slow=5.9,SNR=4.3						
BRTR				PKPbc	PKPbc	05 38 15.3	-0.9
	comp=Z,3.2nm,0.5s,baz=143,slow=3.8,SNR=21						
LIC	Lamto	153.33	166	ePKIKP	PKPdf	05 38 11.2	+1.4
	comp=Z,19nm,0.8s						
SUW	Suwalki	153.36	331		PKiKP	05 38 16.4	+0.1
SUW	Suwalki	153.36	331	PKIKP	PKiKP	05 38 16.4	+0.1
KIC	Kosan Boka	153.52	166	ePKIKP	PKPdf	05 38 11.5	+1.4
	comp=Z,19nm,1.0s						
HOMB	Hornborsund	153.62	352	ePKPbc	PKPbc	05 38 16.4	-0.2
SNART	Snartemo	153.70	353	ePKPbc	PKiKP	05 38 16.8	-0.1
TIC	Toumodi	153.74	165	ePKIKP	PKPdf	05 38 11.8	+1.3
	comp=Z,1.6nm,0.2s						
DBIC	Dimbokro	153.79	166	PKP	PKPdf	05 38 10.9	+0.4
	comp=Z,5.2nm,0.8s,baz=134,slow=4.8,SNR=7.1						
DBIC				PKPbc	PKiKP	05 38 19.3	+0.8
	comp=Z,9.7nm,0.7s,baz=182,slow=2.2,SNR=14						
SORM	Soroca	154.28	316	⇓PKP	PKPdf	05 38 10.9	+0.8
SORM	Soroca	154.28	316	⇓PKIKP	PKPdf	05 38 10.9	+0.8
MDUB	Mudurnu	154.80	297	PKPdf	PKPdf	05 38 10.5	-0.8
MDUB					PKiKP	05 38 20.3	+0.4
BSD	Bornholm Skovb	155.32	341	i P	PKPdf	05 38 20.0	+8.7
BSD	Bornholm Skovb	155.32	341	i PKIKP	PKPdf	05 38 20.0	+8.7
TOPG	Topolog	155.63	309	⇑P	PKPab	05 38 38.1	-0.3
LVV	L'vov	155.76	323	ePKP2	PKPab	05 38 42.5	+3.7
TESR	Tescani	156.06	314	⇑P	PKPab	05 38 39.8	-0.4
VRI	Vrincioaia	156.30	312	⇑P	PKPab	05 38 42.4	+1.1
VRI	Vrincioaia	156.30	312	⇑PKP2	PKPab	05 38 42.4	+1.1
PLOR	Plostina	156.35	312	⇓P	PKPab	05 38 41.1	-0.5
PLOR	Plostina	156.35	312	⇓PKP2	PKPab	05 38 41.1	-0.5
BURAR	Bucovina Array	156.37	317	⇓P	PKPab	05 38 41.9	+0.3
BURAR	Bucovina Array	156.37	317	⇓PKP2	PKPab	05 38 41.9	+0.3
KWP	Kalwaria Pacla	156.55	324	PKPdf	PKPdf	05 38 12.9	-0.3
KWP					PKPab	05 38 41.7	-0.6
KWP	Kalwaria Pacla	156.55	324	PKIKP	PKPdf	05 38 12.9	-0.3
MLR	Muntele Rosu	156.96	312	⇓P	PKPab	05 38 38.9	-5.4
MLR	Muntele Rosu	156.96	312	⇓PKP2	PKPab	05 38 38.9	-5.4
DOPR	Dopca	157.09	313	⇑P	PKPab	05 38 44.9	+0.2
VOIR		157.54	312	⇑P	PKPab	05 38 40.3	-6.5
VOIR		157.54	312	⇑PKP2	PKPab	05 38 40.3	-6.5
TRPA	Tarpa	157.57	321	⇓P	PKPab	05 38 45.5	-1.1
ARR	Arges	157.84	313	⇑P	PKPab	05 38 48.3	+0.3
DRGR		158.25	318	⇑P	PKPab	05 38 49.3	-0.5
DRGR		158.25	318	⇑PKP2	PKPab	05 38 49.3	-0.5
MORC	Moravsky Berou	158.84	330	⇓P	PKPab	05 38 40.4	-12
KRLC	Kraliky	158.93	332	ePKPDF	PKPdf	05 38 17.1	+1.0
KRLC				ePKPAB	PKPab	05 38 51.6	-0.9
KRLC	Kraliky	158.93	332	ePKIKP	PKPdf	05 38 17.1	+1.0
KRLC				e		05 38 51.6	
VYHS	Vyhne	159.20	326	ePKP2	PKPab	05 38 53.7	0.0
VYHS	Vyhne	159.20	326	ePKP	PKPab	05 38 53.7	0.0
CLL	Collm	159.23	339	ePKPdf	PKPdf	05 38 19.0	+2.6
CLL				ePKPdiff	sPKPdf	05 38 37.0	+3.2
CLL				i PKPab	PKPab	05 38 53.2	-0.5
	comp=Z,9.0nm,1.0s						
CLL				i		05 38 56.7	
CLL	Collm	159.23	339	ePKIKP	PKPdf	05 38 19.0	+2.6
CLL				i		05 38 53.2	
CLL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BRG	Berggiesshubel	159.31	337	ePKP	PKPab	05 39 06.6	+13
	comp=Z,7.2nm,1.3s						
BZS	Buzias	159.53	316	⇑P	PKPdf	05 38 17.6	+0.7
BZS	Buzias	159.53	316	⇑PKIKP	PKPdf	05 38 17.6	+0.7
MDVR	Moldovita	159.92	314	⇑P	PKPab	05 38 56.7	-0.4
ZST	Bratislava	160.22	328	ePKIKP	PKPdf	05 38 22.6	+5.0
ZST	Bratislava	160.22	328	ePKP	PKPdf	05 38 22.6	+5.0
TOA0	Torodi Ar. Sit	160.90	181		PKPdf	05 38 19.3	-0.1
TOA0					PKPab	05 39 00.9	-0.9
TORD	Torodi Ar. Bea	160.90	181	PKP	PKPdf	05 38 19.9	+0.6
	comp=Z,3.6nm,0.9s,baz=294,slow=0.5,SNR=16						
TORD				PKPab	PKPab	05 39 02.2	+0.5
	comp=Z,8.1nm,0.8s,baz=161,slow=4.3,SNR=17						
KHC	Kasperske Hory	160.91	335	ePKPDF	PKPdf	05 38 18.9	+0.5
KHC				epPKP	pPKPdf	05 38 32.1	+0.8
KHC				ex	x	05 38 40.4	
KHC				ePKPAB	PKPab	05 39 00.8	-0.3
KHC	Kasperske Hory	160.91	335	ePKIKP	PKPdf	05 38 18.9	+0.5
KHC				e		05 38 32.1	
KHC				e		05 38 40.4	
KHC				e		05 39 00.8	
CONA	Conrad Observa	160.97	329	i PKPdf	PKPdf	05 38 18.0	-0.6
	comp=Z,5.1nm,1.3s						
GERES	GERESS Array B	161.10	334	PKP	PKPdf	05 38 19.0	+0.3
	comp=Z,2.5nm,1.1s,baz=70,slow=1.6,SNR=7.4						
GERES				PKPab	PKPab	05 39 01.7	-0.4
	comp=Z,1.0nm,0.8s,baz=40,slow=5.2,SNR=6.3						
SOKA	Soboth	162.29	328	i PKPdf	PKPdf	05 38 19.5	-0.5
	comp=Z,7.2nm,1.2s						
WATA	Walderalm	163.14	336	ePKPdf	PKPdf	05 38 21.1	+0.2
	comp=Z,6.6nm,0.9s						
WTTA	Wattenberg	163.18	335	i PKPdf	PKPdf	05 38 21.3	+0.3
	comp=Z,8.8nm,1.1s						
ABTA	Abfaltersbach	163.29	333	PKPdf	PKPdf	05 38 21.5	+0.5
	comp=Z,8.9nm,1.2s						
MOTA	Moosalm	163.30	337	ePKPdf	PKPdf	05 38 21.2	+0.1
	comp=Z,3.9nm,0.8s						
SQTA	Sankt Quirin	163.37	336	i PKPdf	PKPdf	05 38 21.5	+0.4
	comp=Z,1.0nm,0.4s						
FETA	Feichten	163.71	337	i PKPdf	PKPdf	05 38 22.1	+0.6
	comp=Z,5.9nm,0.9s						
FUORN	Ofenpass-Fuorn	164.21	337		PKPab	05 39 15.8	-0.2
TAM	Tamanrasset	169.82	202		PKPdf	05 38 28.6	+1.8
TAM	Tamanrasset	169.82	202	PKIKP	PKPdf	05 38 28.6	+1.8
ESDC	Sonseca Array	171.47	29	PKP	PKPdf	05 38 27.7	+0.6
	comp=Z,1.7nm,0.9s,baz=0.7,slow=2.5,SNR=7.8						
ESDC				PKPab	PKPab	05 39 48.0	0.0
	comp=Z,1.7nm,0.8s,baz=322,slow=3.7,SNR=7.5						

IDC 20 05:28:22.8±1.6,6°20S×152°18E,h0km,mb3.6/3, mb1 4.0/3,mb1mx3.5/45,mbtmp3.6/3,Error ellipse: s-maj=51.9km s-min=14.8km az=99.0,New Britain region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.89	355	Pn	Pb	05 28 58.0	0.0
	46nm,0.3s,baz=173,slow=4.1,SNR=7.2						
KRVT				Lg	Lg	05 29 22.4	
	155nm,0.3s,baz=129,slow=23,SNR=25						
WRA	Warramunga Arr	22.07	230	P	P	05 33 19.9	+0.4
	1.1nm,0.9s,baz=52,slow=11,SNR=2.0						
ASAR	Alice Springs	24.71	223	P	P	05 33 46.5	+0.5
	1.6nm,0.8s,baz=55,slow=9.7,SNR=6.2						
ILAR	Eielson Array	83.68	22	P	P	05 40 53.0	-0.1
	0.8nm,0.8s,baz=248,slow=5.4,SNR=7.3						
TORD	Torodi Ar. Bea	150.12	286	PKPbc	PKPbc	05 48 14.8	-1.9
	0.5nm,0.7s,baz=94,slow=2.0,SNR=4.4						

PRU 20 05:36:07.6±0.0,49°84N×18°52E,h0km,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.24	270	ePG	Pg	05 36 12.6	+0.4
OKC				eSG	Sg	05 36 15.7	+0.4
	comp=Z,28nm,0.5s						
MORC	Moravsky Berou	0.64	265	ePG	Pg	05 36 20.1	+0.3
MORC				eSG	Sg	05 36 27.7	-0.3
JAVC	Velka Javorina	1.13	210	ePG	Pb	05 36 29.6	-0.4
KRLC	Kraliky	1.15	283	ePG	Pg	05 36 28.5	-1.1
KRLC				eSG	Sg	05 36 44.4	0.0
	comp=Z,3.5nm,0.5s						
VRAC	Vranov	1.36	248	ePG	Pg	05 36 33.0	-0.7
VRAC				eSG	Sg	05 36 49.9	-1.4
DPC	Dobruska-Polom	1.50	291	ePG	Pn	05 36 34.9	-1.0
DPC				eSG	Sg	05 36 55.1	-0.8
	comp=Z,1.5nm,0.3s						
KRUC	Moravsky	1.59	241	eSG	Sn	05 36 56.9	-1.3
CHVC	Chvalec	1.75	296	ePG	Pn	05 36 39.3	0.0
CHVC				eSG	Sg	05 37 03.6	-0.3

ISC 20 06:05:22.4±0.9,50°23N±0°04×18°80E±0°03,h0km,n19, σ1§06/33,Poland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.58	227	ePG	Pg	06 05 34.1	+0.7
OKC				eSG	Sg	06 05 41.2	+0.3
	comp=Z,18nm,0.4s						
OJC	Ojcow	0.64	90	i Pg	Pg	06 05 34.3	-0.3
OJC				eSg	Sg	06 05 43.1	+0.2
MORC	Moravsky Berou	0.93	241	ePG	Pg	06 05 40.3	+0.1
MORC				eSG	Sg	06 05 53.0	+0.8
LANS	Liptovska Anna	1.16	158	ePG	Pb	06 05 45.1	-0.3
LANS				eSG	Sb	06 06 00.9	-0.1
LANS				eLG	Lg	06 06 01.4	
NIE	Niedzica	1.26	129	ePg	Pg	06 05 46.4	-0.2
NIE				eSg	Sb	06 06 04.2	+0.3
KRLC	Kraliky	1.31	264	ePG	Pg	06 05 46.3	-1.1
KRLC				eSG	Sg	06 06 03.6	-0.8
	comp=Z,16nm,0.6s						
JAVC	Velka Javorina	1.56	209	ePN	Pn	06 05 51.5	+0.1
DPC	Dobruska-Polom	1.60	275	ePG	Pn	06 05 51.8	-0.1
DPC				eSG	Sn	06 06 12.8	-0.4
	comp=Z,15nm,0.8s						
OSTC	Ostas	1.69	282	ePG	Pn	06 05 53.0	-0.1
OSTC				eSG	Sn	06 06 15.7	+0.2
	comp=Z,5.4nm,0.5s						
VRAC	Vranov	1.70	238	ePN	Pn	06 05 53.4	+0.1
VRAC				eSG	Sn	06 06 16.3	+0.5
KSP	Ksiaz	1.71	292	ePg	Pb	06 05 54.4	-0.4
KSP				eSg	Sb	06 06 17.0	+0.1
VYHS	Vyhne	1.74	179	ePN	Pg	06 05 55.9	+0.3
VYHS				eSN	Sn	06 06 16.0	-0.7
CHVC	Chvalec	1.79	283	ePG	Pn	06 05 55.3	+0.7
CHVC				eSG	Sb	06 06 19.1	-0.1
	comp=Z,4.5nm,0.3s						
UPC	Upice	1.81	280	ePG	Pn	06 05 55.2	+0.4
UPC				eSG	Sg	06 06 20.7	+0.3
	comp=Z,4.8nm,0.3s						
KRUC	Moravsky	1.95	234	ePN	Pn	06 05 56.8	0.0
KRUC				eSG	Sn	06 06 23.0	+1.0
PRU	Pruhonice	2.75	267	eSG	Sg	06 06 49.2	-1.6
	comp=Z,3.4nm,0.4s						
BRG	Berggiesshubel	3.17	284	SG	Sg	06 07 02.9	-1.1
	2.8nm,0.4s						
KHC	Kasperske Hory	3.57	254	eSG	Sg	06 07 15.0	-1.9
	comp=Z,3.9nm,0.5s						
CLL	Collm	3.84	289	eSg	Sg	06 07 30.0	+4.4

SJA 20 06:24:25.5±0.9,23°96S×66°82W,h191km±9km,ML2.3, MW2.5
GUC 20 06:24:25.8±0.6,23°89S×67°13W,h244km±26km,ML3.8
ISC 20 06:24:24.7±3.0,23°89S±0°07×66°81W±0°06, h207km±25km,n16,σ1§02/28,4C-2D,Jujuy Province

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HJA	Humahuaca	1.45	62	i P	Pn	06 24 59.5	+0.4
HJA				IAML		06 25 00.3	
	comp=Z,15nm,0.6s						
HJA				eS	S	06 25 25.5	+0.1
AZAP	Zapla	1.63	102	⇓i P	Pn	06 25 00.6	+0.2
AZAP				IAML		06 25 00.9	
	comp=Z,28nm,0.6s						
AZAP				eS	S	06 25 26.5	-1.4
YJA	Yavi	2.08	35	i P	Pn	06 25 06.1	+1.0
YJA				IAML		06 25 07.1	
	comp=Z,6.1nm,0.6s						
LVC	Limon Verde	2.31	303	i P	Pn	06 25 08.5	+1.1
PB15	IPOC Station P	2.54	285	⇑i P	Pn	06 25 10.6	+1.0
PB15				i S	S	06 25 44.6	+0.5
PB15	IPOC Station P	2.54	285	i P	Pn	06 25 10.9	+1.2
PB15				eS	S	06 25 42.9	-1.3
PB06	IPOC Station P	2.80	294	⇑i P	Pn	06 25 13.5	+0.9
PB06				i S	S	06 25 49.1	-0.4
PB06				IAML		06 25 51.1	
	comp=N,83nm,0.2s						
PB06	IPOC Station P	2.80	294	i P	Pn	06 25 13.5	+0.9
PB06				eS	S	06 25 48.5	-0.9
GO02	Mina Guanaco	2.83	243	⇑i P	Pn	06 25 13.9	+0.8
GO02				i S	S	06 25 50.8	+0.4
GO02				IAML		06 25 51.8	
	comp=N,135nm,0.5s						
PB09	IPOC Station P	3.06	312	i P	Pn	06 25 16.8	+1.1
PB09				eS	S	06 25 54.6	-0.4
PB14	IPOC Station P	3.36	257	i P	Pn	06 25 19.8	+0.5
PB14				eS	S	06 25 59.6	-1.9
PB04	IPOC Station P	3.44	296	i P	Pn	06 25 20.8	+0.7
PB04				i S	S	06 26 01.8	-1.3
PB04				IAML		06 26 07.0	
	comp=N,76nm,0.3s						
PB04	IPOC Station P	3.44	296	i P	Pn	06 25 20.6	+0.4
PB10	IPOC Station P	3.45	275	i P	Pn	06 25 20.8	+0.7
PB07	IPOC Station P	3.56	307	⇑i P	Pn	06 25 22.0	+0.4
PB07				i S	S	06 26 03.8	-2.0
PB07				IAML		06 26 04.9	
	comp=N,98nm,0.4s						
PB01	IPOC Station P	3.76	318	⇓i P	Pn	06 25 24.4	+0.4
PB01				eS	S	06 26 09.1	-0.9
PB01				IAML		06 26 11.6	
	comp=E,62nm,0.2s						

WEL 20 06:55:52.6,46°S±3°×16°7E±°,h83km±3km,M4.2/27, ML4.2/9,MLv4.2/27,Error ellipse: s-maj=0.0km s-min=0.0km az=59.5,Off west coast of South Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PYZ	Puysegur Point	0.28	217	P	Pn	06 56 05.8	+0.6
PYZ				S	Sn	06 56 15.1	+0.6
DCZ	Deep Cove	0.50	19	P	Pn	06 56 06.4	-0.3
DCZ				S	Sn	06 56 17.2	+0.1
WHZ	Wether Hill Ro	0.71	86	P	Pn	06 56 09.2	+0.6
WHZ				S	Sn	06 56 21.4	+0.8
MLZ	Mavora Lakes	1.02	56	P	Pn	06 56 12.4	+0.4
MLZ				S	Sn	06 56 26.9	+0.3
APZ	The Paps	1.16	141	P	Pn	06 56 14.9	+1.1
APZ				S	Sn	06 56 30.7	+1.1
MSZ	Milford Sound	1.45	29	P	Pn	06 56 17.2	-0.2
SYZ	Scrubby Hill	1.65	112	P	Pn	06 56 20.4	+0.4
EAZ	Earnscleugh	1.82	68	P	Pn	06 56 22.2	0.0
EAZ				S	Sn	06 56 43.5	-1.2
WKZ	Wanaka	1.85	54	P	Pn	06 56 22.9	+0.3
TUZ	Tuapeka	1.89	91	P	Pn	06 56 23.3	+0.2
JCZ	Jackson Bay	2.29	36	P	Pn	06 56 27.9	-0.6
HHSZ	Highcliff Hill	2.56	90	P	Pn	06 56 31.9	-0.2
ODZ	Otahua Downs	2.77	72	P	Pn	06 56 33.4	-1.4
LBZ	Lake Benmore	2.78	57	P	Pn	06 56 33.4	-1.6
FOZ	Fox Glacier	3.17	42	P	Pn	06 56 38.6	-1.6
RPZ	Rata Peaks	3.69	54	P	Pn	06 56 44.8	-2.5
WVZ	Waitaha Valley	3.96	45	P	Pn	06 56 49.0	-1.9
OXZ	Oxford	4.49	56	P	Pn	06 56 55.1	-3.1
INZ	Inchbonnie	4.57	47	P	Pn	06 56 56.8	-2.5
MQZ	McQueen's Vall	4.65	63	P	Pn	06 56 57.9	-2.5
AKCZ	Akaroa Harbour	4.73	66	P	Pn	06 56 59.5	-1.9
OKCZ	Okains Bay	4.89	65	P	Pn	06 57 02.3	-1.5
AMCZ	Amberley	4.94	58	P	Pn	06 57 02.3	-2.0
LTZ	Lake Taylor	4.97	52	P	Pn	06 57 01.7	-3.0
GVZ	Greta Valley S	5.29	58	P	Pn	06 57 06.5	-2.6
DSZ	Denniston Nort	5.48	42	P	Pn	06 57 08.9	-2.8
KHZ	Kahutara	5.92	56	P	Pn	06 57 14.7	-2.9
THZ	Tophouse	6.01	48	P	Pn	06 57 15.9	-3.1
QRZ	Quartz Range	6.54	41	P	Pn	06 57 23.2	-3.0
BSWZ	Blackbirch Sta	6.56	52	P	Pn	06 57 25.5	-1.0

ISU 20 07:49:02.0,41°60N×72°50E,h5km
KRNET 20 07:49:03.6±0.1,41°16N×73°61E,h13km,mb3.1
SOME 20 07:49:03.4,41°20N×73°58E,h5km
NNC 20 07:49:04.2±0.7,41°18N×73°60E,h0km,mb3.8,mpv3.5, Error ellipse: s-maj=5.4km s-min=2.9km az=177.0
KNET 20 07:49:05.3±0.4,41°25N×73°75E,h0km,ml2.5,Error ellipse: s-maj=3.7km s-min=2.6km az=70.0
ISC 20 07:49:02.6±1.2,41°14N±0°03×73°62E±0°02,h2km±11km, n66,σ1§43/107,37C-18D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.52	292	i P	Pg	07 49 13.1	+0.7
	baz=89						
ARSB				i S	Sg	07 49 20.6	+1.5
	baz=89						
ARSB	Arslanbob	0.52	292	eP	Pg	07 49 12.8	+0.4
ARSB				eS	Sg	07 49 20.2	+1.1
ARLS	Aral	0.90	36	⇓i P	Pg	07 49 20.0	+0.2
	baz=37						
ARLS				⇓i S	Sg	07 49 32.1	+0.7
	baz=37						
AML	Almayashu	1.00	3	⇑i P	Pg	07 49 22.1	+0.4
	baz=4.0						
AML				⇑i S	Sb	07 49 35.5	-1.1
	baz=4.0						
AML	Almayashu	1.00	3	P	Pg	07 49 22.1	+0.4
	27nm,0.1s,SNR=128						
AML				⇑S	Sb	07 49 35.8	-0.8
	61nm,0.2s						
UCH	Uchtor	1.28	31	⇑i P	Pn	07 49 27.3	-0.6
	baz=32						
UCH				⇑i S	Sn	07 49 44.8	-1.1
	baz=32						
UCH	Uchtor	1.28	31	⇑P	Pn	07 49 27.3	-0.6
	24nm,0.2s,SNR=40						
UCH				⇑S	Sn	07 49 44.8	-1.1
	88nm,0.3s						
ARK	Arkit	1.41	299	⇓i P	Pb	07 49 29.5	-0.2
	baz=97						
ARK				⇓i S	Sg	07 49 48.4	+0.6
	baz=97						
EKS2	Erkin-Say	1.53	4	⇑i P	Pb	07 49 31.8	+0.1
	baz=5.0						
EKS2				⇑i S	Sg	07 49 51.8	+0.1
	baz=5.0						
EKS2	Erkin-Say	1.53	4	⇑P	Pg	07 49 32.0	+0.1
	23nm,0.2s,SNR=40						
KZA	Kyzart	1.54	52	⇑i P	Pb	07 49 32.4	+0.2
	baz=53						
KZA				⇑i S	Sg	07 49 53.3	+1.1
	baz=53						
KZA	Kyzart	1.54	52	⇑P	Pb	07 49 31.8	-0.3
	13nm,0.1s,SNR=11						
MRKS	Merke	1.64	350	eP	Pb	07 49 33.6	+0.1
	48nm,0.2s						
MRKS				eS	Sg	07 49 55.0	-0.1
	138nm,0.3s						
MRKS	Merke	1.64	350	P	Pb	07 49 33.6	+0.1
	48nm,0.2s						
MRKS				S	Sg	07 49 55.0	-0.1
	78nm,0.3s						
AAK	Ala-Archa	1.64	23	⇓i P	Pb	07 49 33.7	+0.1
	baz=24						
AAK				⇓i S	Sg	07 49 55.5	+0.4
	baz=24						
AAK	Ala-Archa	1.64	23	⇑P	Pb	07 49 33.7	+0.1
	20nm,0.2s,SNR=19						
AAK				⇓S	Sg	07 49 55.6	+0.4
	22nm,0.2s						
AAK	Ala-Archa	1.64	23	⇓P	Pb	07 49 33.5	-0.1
	8.9nm,0.3s						
AAK				⇓S	Sg	07 49 55.1	-0.1
	22nm,0.5s						
KBK	Karagaybulak	1.82	33	⇓i P	Pb	07 49 36.5	-0.2
	baz=33						
KBK				⇓i S	Sg	07 50 00.9	0.0
	baz=33						
KBK	Karagaybulak	1.82	33	⇑P	Pb	07 49 37.1	+0.4
	17nm,0.1s,SNR=21						
KBK				⇓S	Sg	07 50 01.6	+0.7
	62nm,0.3s						
NRN	Naryn	1.82	80	⇑i P	Pb	07 49 36.8	0.0
	baz=81						
NRN				⇑i S	Sg	07 50 01.7	+0.7
	baz=81						
CHMS	Chumysh	2.04	24	⇑eP	Pb	07 49 40.6	+0.1
	baz=24						
CHMS				⇑i S	Sg	07 50 07.4	-0.8
	baz=24						
CHMS	Chumysh	2.04	24	⇑P	Pb	07 49 41.3	+0.8
	21nm,0.1s,SNR=26						
CHMS	Chumysh	2.04	24	⇓P	Pb	07 49 40.1	-0.4
	20nm,0.5s						
CHMS				⇑S	Sg	07 50 08.0	-0.3
	25nm,0.5s						
BOOM	Boomskoye usch	2.20	51	⇑i P	Pb	07 49 43.0	-0.2
	baz=52						
BOOM				⇑i S	Sb	07 50 11.3	+0.3
	baz=52						
USP	Ospenovka	2.23	17	⇑i P	Pb	07 49 43.1	-0.5
	baz=17						
USP				⇑i S	Sb	07 50 11.5	-0.2
	baz=17						
USP	Ospenovka	2.23	17	⇑P	Pb	07 49 44.1	+0.5
	12nm,0.1s,SNR=35						
USP				⇑S	Sg	07 50 15.3	+1.1
	31nm,0.2s						
ULHL	Ulahol	2.26	60	⇑i P	Pb	07 49 43.8	-0.4
	baz=60						
ULHL				⇑i S	Sb	07 50 13.2	+0.5
	baz=60						
ULHL	Ulahol	2.26	60	⇑P	Pb	07 49 44.6	+0.4
	6.0nm,0.1s,SNR=39						
BTK	Batken	2.39	244	⇓i P	Pb	07 49 44.8	-1.5
	baz=43						
BTK				⇓i S	Sg	07 50 15.7	-0.6
	baz=43						
BTK	Batken	2.39	244	eP	Pn	07 49 43.2	+0.4
BTK				eS	Sn	07 50 13.2	+0.5
SGDS	Sogindy	2.43	18	Pg	Pg	07 49 48.5	-0.7

	19nm,0.2s						
SGDS				Lg	Lg	07 50 20.4	
	23nm,0.5s						
KST	Kastek	2.58	42	eP	Pb	07 49 50.8	+1.1
	14nm,0.4s						
KST				eS	Sg	07 50 24.9	-0.7
	23nm,0.4s						
KST	Kastek	2.58	42	Pg	Pb	07 49 50.8	+1.1
	18nm,0.5s						
KST				Lg	Lg	07 50 24.9	
	23nm,0.4s						
JBG	Jabagly	2.63	300	Pg	Pg	07 49 52.0	-1.0
	17nm,0.2s						
JBG				Lg	Lg	07 50 27.3	
	51nm,0.4s						
DGS	Degeres	2.65	37	eP	Pg	07 49 52.4	-0.9
	17nm,0.4s						
DGS				eS	Sg	07 50 27.5	-0.1
	28nm,0.6s						
DGS	Degeres	2.65	37	Pg	Pg	07 49 52.4	-0.9
	17nm,0.4s						
DGS				Lg	Lg	07 50 27.5	
	28nm,0.6s						
KDJ	Kajisay	2.85	68	⇑iP	Pb	07 49 52.0	-2.3
	baz=69						
KDJ				⇑iS	Sb	07 50 27.6	-2.1
	baz=69						
MTBS	Maitube	2.89	45	eP	Pb	07 49 56.6	+1.7
	20nm,0.3s						
MTBS				eS	Sg	07 50 34.8	-0.5
	17nm,0.3s						
MTBS	Maitube	2.89	45	Pg	Pb	07 49 56.6	+1.7
	20nm,0.3s						
MTBS				Lg	Lg	07 50 34.8	
	17nm,0.3s						
IZV	Izvestkoviy	2.93	49	eP	Pb	07 49 56.9	+1.3
	9.3nm,0.3s						
IZV				eS	Sg	07 50 35.1	-1.6
	26nm,0.7s						
IZV	Izvestkoviy	2.93	49	Pg	Pg	07 49 58.4	-0.3
	9.3nm,0.3s						
IZV				Lg	Lg	07 50 38.1	
	26nm,0.7s						
KRBS	Karabastau	2.98	30	eP	Pb	07 49 57.6	+1.2
	6.9nm,0.3s						
KRBS				eS	Sg	07 50 36.7	-1.5
	9.8nm,0.4s						
KRBS	Karabastau	2.98	30	Pg	Pb	07 49 57.6	+1.2
	6.9nm,0.3s						
KRBS				Lg	Lg	07 50 36.7	
	9.8nm,0.4s						
KK31	Karatay Array	3.03	311	⇑Pg	Pb	07 49 57.2	-0.1
	1.9nm,0.3s,baz=135,slow=16,SNR=11						
KK31				⇑Lg	Lg	07 50 38.3	
	6.7nm,0.3s,baz=135,slow=22,SNR=10						
TNSS	Tian-Shan	3.12	51	eP	Pb	07 50 00.3	+1.2
	9.5nm,0.2s						
TNSS				eS	Sg	07 50 41.0	-1.9
	15nm,0.2s						
TNSS	Tian-Shan	3.12	51	Pg	Pg	07 50 02.1	-0.3
	9.5nm,0.2s						
TNSS				Lg	Lg	07 50 44.6	
	15nm,0.2s						
MDOK	Medeo	3.26	50	eP	Pb	07 50 02.7	+1.5
	6.8nm,0.7s						
MDOK				eS	Sg	07 50 45.6	-1.6
	21nm,0.9s						
MDOK	Medeo	3.26	50	⇓Pg	Pb	07 50 01.7	+0.5
	9.3nm,0.8s						
MDOK				⇑Lg	Lg	07 50 46.2	
	27nm,0.8s						
MDOK	Medeo	3.26	50	Pg	Pb	07 50 02.7	+1.5
	6.8nm,0.7s						
MDOK				Lg	Lg	07 50 45.6	
	21nm,0.9s						
KOTS	Kotyrbulak	3.34	50	eP	Pb	07 50 04.7	+2.1
	18nm,0.5s						
KOTS				eS	Sg	07 50 48.5	-1.2
	44nm,0.7s						
KOTS	Kotyrbulak	3.34	50	Pg	Pb	07 50 04.7	+2.1
	18nm,0.5s						
KOTS				Lg	Lg	07 50 48.5	
	44nm,0.7s						
BRLS	Borolday	3.39	305	eP	Pb	07 50 04.8	+1.4
	0.9nm,0.4s						
BRLS				eS	Sg	07 50 48.8	-2.7
	20nm,0.4s						
BRLS	Borolday	3.39	305	Pg	Pb	07 50 04.8	+1.4
	0.9nm,0.4s						
BRLS				Lg	Lg	07 50 48.8	
	20nm,0.4s						
KTBS	Karatobe	3.43	40	eP	Pb	07 50 05.9	+1.7
	4.1nm,0.3s						
KTBS				eS	Sg	07 50 50.8	-2.0
	19nm,0.6s						
KTBS	Karatobe	3.43	40	Pg	Pb	07 50 05.9	+1.7
	4.1nm,0.3s						
KTBS				Lg	Lg	07 50 50.8	
	19nm,0.6s						
ANVS	Anan'yevo	3.44	60	⇑iP	Pn	07 49 59.9	+2.5
	baz=60						
ANVS				⇑iS	Sn	07 50 40.7	+1.9
	baz=60						
CHKK	Chushkaly	3.69	41	eP	Pb	07 50 11.1	+2.6
	1.7nm,0.1s						
CHKK				eS	Sg	07 50 59.6	-1.4
	13nm,0.4s						
CHKK	Chushkaly	3.69	41	Pg	Pb	07 50 11.1	+2.6
	1.7nm,0.1s						
CHKK				Lg	Lg	07 50 59.6	
	13nm,0.4s						
BTLS	Baital	3.92	4	eP	Pb	07 50 14.4	+2.1
	1.1nm,0.3s						
BTLS				eS	Sg	07 51 05.0	-3.3
	11nm,0.8s						
BTLS	Baital	3.92	4	Pg	Pb	07 50 14.4	+2.1
	1.1nm,0.3s						
BTLS				Lg	Lg	07 51 05.0	
	11nm,0.8s						
UZB	Uzynbulak	4.49	62	eP	Pb	07 50 25.8	+3.5
	3.5nm,0.4s						
UZB				eS	Sg	07 51 24.8	-2.1
	5.9nm,0.3s						
UZB	Uzynbulak	4.49	62	Pg	Pb	07 50 25.8	+3.5
	3.5nm,0.4s						
UZB				Lg	Lg	07 51 24.8	
	5.9nm,0.3s						
SHLS	Shalkode	4.79	63	Pg	Pg	07 50 37.6	+3.3
	3.9nm,0.4s						
SHLS				Lg	Lg	07 51 44.8	
	12nm,0.4s						
PDGK	Podgornoye	4.88	61	Pg	Pg	07 50 33.3	-2.7
	1.2nm,0.7s						
PDGK				Lg	Lg	07 51 37.5	
	2.7nm,0.6s						
PDGK	Podgornoye	4.88	61	⇓Pg	Pb	07 50 31.9	+3.0
	1.2nm,0.4s						
PDGK				⇓Lg	Lg	07 51 37.4	
	5.9nm,0.8s						
DJR	Jarkent	5.55	53	Pg	Pg	07 50 45.3	-3.7
	0.7nm,0.3s						
DJR				Lg	Lg	07 51 57.9	
	3.4nm,0.5s						

NEIC 20 08:02:23.7±2.4, 54°.4S±0°.2×46°.2W±0°.1, h10km±1km, mb4.3/4, Error ellipse: s-maj=32.0km s-min=12.8km az=192.0

IDC 20 08:02:24.8±2.6, 54°.23S×45°.38W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.8/17, mbtmp3.8/3, MS3.1/2, Ms1 3.1/2, ms1mx2.9/14, Error ellipse: s-maj=88.3km s-min=35.3km az=21.0

ISC 20 08:02:25.5±0.9, 54°.4S±0°.2×45°.68W±0°.10, h10km, n17, σ2s.29/9, mb3.8/4, South Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	5.38	93	Pn	Pn	08 03 46.8	+1.1
HOPE				Sn	Sn	08 04 46.1	-1.6
EFI	East Falkland	7.93	285	Pn	Pn	08 04 17.1	-3.6
EFI				Sn	Sn	08 05 39.8	-11
GO09	Cerro Castillo	16.37	270	Pn	Pn	08 06 09.8	-5.3
GO09				IAmb	IAmb	08 06 24.8	
	comp=Z,33nm,1.3s						
PLCA	Paso Flores	21.47	299	P	P	08 07 16.3	+2.3
	comp=Z,2.0nm,0.7s,baz=162,slow=8.0,SNR=10						
PLCA				LR	LR	08 15 36.0	
	comp=Z,60nm,18.7s,baz=158,slow=37						
PLCA	Paso Flores	21.47	299	P	P	08 07 09.8	-4.1
SNAA	Sanae	25.20	150	P	P	08 07 49.1	-1.7
SNAA				IAmb	IAmb	08 08 06.4	
	comp=Z,9.1nm,1.4s						
CPUP	Villa Florida	29.28	338	P	P	08 08 27.6	-0.1
	comp=Z,1.7nm,0.9s,baz=161,slow=8.4,SNR=3.3						
QSPA	South Pole Qui	35.91	180	P	P	08 09 26.2	+0.6
LPAZ	La Paz	41.79	327	LR	LR	08 29 39.3	
	comp=Z,16nm,20.5s,baz=118,slow=39						
H10S3	ASCENSION HYDR	51.61	41	T	T	09 07 17.8	
	baz=17,slow=74,SNR=4.4						
H10S2	ASCENSION HYDR	51.61	41	T	T	09 07 16.2	
	baz=203,slow=74,SNR=5.7						
H10N3	ASCENSION HYDR	52.69	40	T	T	09 08 48.0	
	baz=204,slow=74,SNR=3.8						
H10N1	ASCENSION HYDR	52.69	40	T	T	09 08 44.4	
	baz=204,slow=74,SNR=4.7						
H10N2	ASCENSION HYDR	52.71	40	T	T	09 08 47.4	
	baz=204						
TORD	Torodi Ar. Bea	78.29	47	P	P	08 14 25.9	+0.4
	comp=Z,0.6nm,0.9s,baz=202,slow=4.8,SNR=3.6						
BVAR	Borovoye Array	143.28	65	PKP	PKPab	08 21 56.7	+2.1
	comp=Z,0.8nm,0.8s,baz=227,slow=5.7,SNR=4.1						
MKAR	Makanchi Array	146.78	81	PKPbc	PKPdf	08 22 06.4	+1.4
	comp=Z,0.4nm,0.8s,baz=236,slow=2.5,SNR=4.1						

NAO 20 08:05:34.6±0.7, 67°.13N×20°.88E, ML2.6

IDC 20 08:05:35.4±0.9, 67°.15N×21°.01E, h0km, mb1 3.0/3, mb1mx2.9/62, mbtmp3.1/3, ML2.4/4, Error ellipse: s-maj=15.6km s-min=7.7km az=112.0

HEL 20 08:05:35.0±0.0, 67°.18N×20°.66E, h1km, ML2.3, ML2.1(UPP), Confirmed Induced event

BER 20 08:05:36.7±3.6, 67°.10N×20°.96E, h0km, ML2.1, Suspected explosion

ISC 20 08:05:34.2±0.7, 67°.19N±0°.02×20°.62E±0°.02, h0km, n54, σ1s.47/91, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	Dundret	0.08	196	iP	Pg	08 05 36.3	+0.6
DUNU				iS	Sg	08 05 37.4	+0.8
MASU	Masugnsbyn	0.59	63	iP	Pg	08 05 45.7	+0.1
MASU				iS	Sg	08 05 54.0	+0.7
RATU	Laukkuluspa	0.75	328	iP	Pg	08 05 48.6	+0.1
RATU				iS	Sg	08 05 58.4	+0.2
KUA	Kurravaara	0.77	352	iP	Pg	08 05 48.8	-0.2
KUA				iS	Sg	08 05 59.7	+0.7
ERTU	Ertsjaerv	0.89	135	eP	Pg	08 05 50.5	-0.8
ERTU				eSB	Sg	08 06 02.6	-0.3
PAJU	Pajala	0.99	99	eP	Pg	08 05 52.5	-0.7
PAJU				eS	Sg	08 06 05.8	-0.2
LANU	Lannavaara	1.01	31	eP	Pg	08 05 52.9	-0.6
LANU				eS	Sg	08 06 06.3	-0.2
HARU	Harads	1.04	172	eP	Pg	08 05 53.3	-0.9
KOVU	Salmi	1.05	351	eP	Pg	08 05 53.8	-0.5
KOVU				eS	Sg	08 06 08.3	+0.4
HEF	Hetta	1.68	42	Pg	Pn	08 06 04.7	-0.1
HEF				Lg	Lg	08 06 27.0	
HEF	Hetta	1.68	42	eP	Pn	08 06 04.5	-0.4
HEF				MSG		08 06 24.4	
	comp=Z,14nm,0.2s						
HEF				eSG	Sn	08 06 26.6	-0.4
HEF	Hetta	1.68	42	Pg	Pn	08 06 04.7	-0.1
HEF				Sg	Sn	08 06 27.0	-0.1
KALU	Kalix	1.73	139	eP	Pn	08 06 05.4	-0.1
KALU				eSN	Sn	08 06 28.9	+0.7
KIF	Kilpisjarvi	1.82	2	Pn	Pb	08 06 08.0	-0.4
KIF				Sn	Sg	08 06 33.5	+0.9
KIF	Kilpisjarvi	1.82	2	eP	Pb	08 06 07.8	-0.5
KIF				MSG		08 06 30.7	
	comp=Z,29nm,0.2s						
KIF				eSG	Sg	08 06 33.5	+0.9
KIF	Kilpisjarvi	1.82	2	Pn	Pb	08 06 08.0	-0.4
KIF				Sn	Sg	08 06 33.5	+0.9
TOF	Tornio	1.85	125	eP	Pn	08 06 07.3	+0.1
TOF				MSG		08 06 29.4	
	comp=Z,32nm,0.2s						
TOF				eSG	Sn	08 06 32.3	+1.1
KTK1	Kautokeino	2.07	27	Pn	Pb	08 06 11.7	-1.0
KTK1				Sn	Sb	08 06 38.0	-0.9
KTK1	Kautokeino	2.07	27	eP	Pb	08 06 11.8	-1.0
KTK1				eS	Sn	08 06 36.2	-0.5
KTK1				IAML		08 06 40.9	
	comp=Z,41nm,0.5s						
STEI	Steigen	2.19	292	Pn	Pb	08 06 14.2	-0.5
STEI				Sn	Sb	08 06 43.2	+0.8
STEI	Steigen	2.19	292	eP	Pb	08 06 13.9	-0.8
STEI				eS	Sb	08 06 42.9	+0.5
STEI				IAML		08 06 45.1	
	comp=Z,15nm,0.4s						
RNF	Rovaniemi	2.21	103	ePB	Pn	08 06 12.9	+0.8
RNF				eSG	Sb	08 06 42.0	-0.7
SGF	Sodankyl	2.30	81	eP	Pn	08 06 14.2	+0.8
SGF				eSG	Sb	08 06 45.3	-0.2
TRO	Tromso	2.53	346	Pn	Pn	08 06 17.7	+1.2
TRO				Sn	Sb	08 06 52.4	+0.3
BURU	Burvik	2.64	173	eP	Pn	08 06 18.9	+0.9
MOR8	Moi Rana	2.67	250	Pn	Pn	08 06 18.4	0.0
MOR8				Sn	Sn	08 06 52.9	+1.6
MOR8	Moi Rana	2.67	250	eP	Pn	08 06 18.7	+0.3
MOR8				eS	Sn	08 06 49.6	-1.7
MOR8				IAML		08 06 54.3	
	comp=Z,18nm,0.4s						
ARA0	ARCESS Array S	2.97	35	Pn	Pn	08 06 23.5	+1.0
	baz=210,slow=14						
ARA0				Sn	Sn	08 06 59.1	+0.3
	baz=212,slow=22						
ARA0	ARCESS Array S	2.97	35	Pn	Pn	08 06 23.5	+1.0
	baz=210,slow=14						
ARA0				Sn	Sn	08 06 59.1	+0.3
	baz=212,slow=22						
ARCES	ARCESS Array B	2.97	35	Pn	P	08 06 23.1	+0.6
	comp=Z,0.8nm,0.3s,baz=213,slow=15,SNR=60						
ARCES				Sn	Sn	08 06 59.1	+0.3
	comp=Z,2.7nm,0.3s,baz=214,slow=25,SNR=14						
OUL	Oulu	3.01	132	eP	Pn	08 06 23.7	+0.6
OBF0	Syolatti, Pyha	3.09	150	ePG	Pb	08 06 29.9	-0.1
OUF	Merijarvi	3.31	147	eP	Pn	08 06 27.9	+0.8
UMAU	Umeaa	3.33	180	eP	Pn	08 06 28.0	+0.6
KEV	Kevo	3.49	40	eP	Pn	08 06 30.5	+0.9
KEV				eS	Sn	08 07 11.4	-0.1
VRF	Varrio	3.50	77	eP	Pn	08 06 30.2	+0.3
MSF	Maaselka	3.60	107	eP	Pn	08 06 31.6	+0.4
MSF				eSG	Sb	08 07 24.8	+1.8
KU6	Riekki	3.88	103	eP	Pn	08 06 35.5	+0.5
HUSU	Husum	3.91	189	eP	Pn	08 06 36.6	+1.1
VAF	Ylistaro	4.26	167	eP	Pn	08 06 41.3	+1.1
APA0	Apatity Array	4.79	79	Pn	Pn	08 06 46.5	-1.0
	baz=252,slow=16						
APA0				Sn	Sn	08 07 41.5	-2.2
	baz=281,slow=37						
APA0				Lg	Lg	08 08 01.8	
	baz=282,slow=22						
APA0	Apatity Array	4.79	79	Pn	Pn	08 06 46.5	-1.0
	baz=252,slow=16						
APA0				Sn	Sn	08 07 41.5	-2.2
	baz=281,slow=37						
APA0				Sg	Sb	08 08 01.8	+4.7
	baz=282,slow=22						
FIA0	FINESS Array S	6.24	155	Pn	Pn	08 07 08.0	+0.6
	baz=345,slow=16						
FIA0				Sn	Sn	08 08 16.9	-2.4
	baz=342,slow=28						
FIA0				Lg	Lg	08 08 45.9	
	baz=350,slow=28						
FIA0	FINESS Array S	6.24	155	Pn	Pn	08 07 08.0	+0.6
	baz=345,slow=16						
FIA0				Sg	Sb	08 08 45.9	+7.2
	baz=350,slow=28						
FINES	FINESS Array B	6.24	155	Pn	Pn	08 07 08.0	+0.6
	comp=Z,0.5nm,0.3s,baz=347,slow=14,SNR=16						
FINES				Sn	Sn	08 08 17.4	-1.9
	comp=Z,0.4nm,0.3s,baz=350,slow=23,SNR=4.0						
FINES				Lg	Lg	08 08 48.4	
	comp=Z,0.7nm,0.3s,baz=341,slow=26,SNR=7.4						
NB2	NORSAR Subarra	7.42	218	Pn	Pn	08 07 24.3	+0.7
	baz=28,slow=14						
NB2	NORSAR Subarra	7.42	218	Pn	Pn	08 07 24.3	+0.7
	baz=28,slow=14						
NOA	NORSAR Array B	7.42	218	Pn	Pn	08 07 24.8	+1.2
	comp=Z,0.0nm,0.3s,baz=28,slow=11,SNR=2.3						
NRA0	NORESS Array S	7.61	216	Pn	Pn	08 07 25.8	-0.4
	baz=16,slow=16						
NRA0	NORESS Array S	7.61	216	Pn	Pn	08 07 25.8	-0.4
	baz=16,slow=16						
HFS	Hagfors	7.72	207	Pn	Pn	08 07 26.9	-0.8
	baz=20,slow=16						
HFS				Sn	Sn	08 08 51.1	-4.7
	baz=28,slow=28						
HFS				Lg	Lg	08 09 29.4	
	baz=29,slow=28						
HFS	Hagfors	7.72	207	Pn	Pn	08 07 27.1	-0.7
	comp=Z,0.3nm,0.3s,baz=19,slow=14,SNR=8.1						
HFS				Sn	Sn	08 08 52.7	-3.1
	comp=Z,0.3nm,0.3s,baz=28,slow=22,SNR=5.3						
HFS				Lg	Lg	08 09 36.9	
	comp=Z,0.3nm,0.3s,baz=38,slow=28,SNR=4.0						
HFS	Hagfors	7.72	207	Pn	Pn	08 07 26.9	-0.8
	baz=20,slow=16						
HFS				Sn	Sn	08 08 51.1	-4.7
	baz=28,slow=28						
KOLL	Kolacno	18.70	185	eSG	Sn	08 13 13.4	-10

GUC 20 08:09:07.6±0.5, 17°.69S×69°.85W, h141km±3km, ML3.3

IDC 20 08:09:09.2±5.9, 17°.42S×69°.53W, h166km±34km, mb3.4/2, mb1 3.6/2, mb1mx3.0/30, mbtmp3.6/2, MS3.0/1, Ms1 3.0/1, ms1mx2.6/11, Error ellipse: s-maj=91.0km s-min=49.0km az=13.0

ISC 20 08:09:06.1±1.1, 17°.53S±0°.07×69°.9W±0°.1, h148km±9km, n12, σ0s.93/19, 1C-2D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.88	156	⇓iP	Pn	08 09 31.1	+0.7
PB16				iS	Sn	08 09 49.3	+0.3
PB16				IAML		08 09 51.6	
	comp=N,239nm,0.2s						
AP01	Chacalluta	0.95	207	eP	Pn	08 09 30.6	+0.4
AP01				iS	Sn	08 09 48.6	-0.1
AP01				IAML		08 09 49.4	
	comp=N,3μm,0.4s						
MNMC	Minye Minye	1.62	170	⇑iP	Pn	08 09 38.0	+0.8
MNMC				eS	Sn	08 09 59.6	-1.3
MNMC				IAML		08 10 04.9	
	comp=E,567nm,0.2s						
PSGC	Pisagua	2.07	186	eP	Pn	08 09 41.9	-0.2
PSGC				iS	Sn	08 10 08.0	-1.9
PSGC				IAML		08 10 12.1	
	comp=N,141nm,0.2s						
LPAZ	La Paz	2.08	54	P	Pn	08 09 43.1	+0.4
	comp=N,12nm,0.3s,baz=228,slow=6.7,SNR=272						
LPAZ				S	Sn	08 10 09.5	-1.3
	comp=N,2.9nm,0.3s,baz=181,slow=12,SNR=10						
GO01	Chusmiza	2.23	163	⇓iP	Pn	08 09 45.3	+0.9
GO01				eS	Sn	08 10 14.2	+0.5
GO01				IAML		08 10 19.7	
	comp=N,236nm,0.2s						
PB11	IPOC Station P	2.23	174	eP	Pn	08 09 44.4	+0.3
PB11				iS	Sn	08 10 12.4	-0.9
PB11				IAML		08 10 14.2	
	comp=N,183nm,0.6s						
PB08	IPOC Station P	2.69	165	eP	Pn	08 09 50.8	+0.9
PB08				eS	Sn	08 10 23.4	-0.3
PB08				IAML		08 10 24.8	
	comp=E,106nm,0.4s						
PB01	IPOC Station P	3.52	174	eP	Pn	08 10 00.3	+0.1
CPUP	Villa Florida	14.57	129	LR	LR	08 19 33.0	
	comp=E,58nm,18.9s,baz=216,slow=43						
TORD	Torodi Ar. Bea	76.94	72	P	P	08 20 41.9	-0.9
	comp=E,1.0nm,0.7s,baz=242,slow=4.9,SNR=5.2						
YKA	Yellowknife Ar	87.15	341	P	P	08 21 36.0	+1.0
	comp=E,0.3nm,0.6s,baz=134,slow=4.5,SNR=9.9						

IDC 20 08:10:39.7±4.2, 19°.47N×143°.09E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/51, mbtmp3.9/7, Error ellipse: s-maj=120.3km s-min=42.8km az=13.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	22.28	327	P	P	08 15 39.0	+0.4
	2.6nm,0.6s,baz=144,slow=9.7,SNR=8.4						
SONM	Songino Array	41.01	322	P	P	08 18 24.0	-0.7
	0.4nm,0.4s,baz=125,slow=6.6,SNR=5.5						
ZALV	Zalesovo Beam	55.91	323	P	P	08 20 18.6	-0.7
	0.9nm,0.3s,baz=102,slow=6.1,SNR=3.3						
MKAR	Makanchi Array	56.15	314	P	P	08 20 22.1	+0.8
	0.2nm,0.4s,baz=95,slow=9.9,SNR=5.9						
BVAR	Borovoye Array	64.31	320	P	P	08 21 17.7	+0.7
	0.7nm,0.4s,baz=89,slow=5.8,SNR=7.0						
YKA	Yellowknife Ar	78.46	28	P	P	08 22 42.7	+0.4
	0.2nm,0.7s,baz=291,slow=6.0,SNR=3.6						
FINES	FINESS Array B	85.14	335	P	P	08 23 16.6	-1.0
	1.2nm,0.3s,baz=63,slow=4.9,SNR=15						

NEIC 20 08:45:08.1±1.4, 5°.8S±0°.1×151°.36E±0°.10, h49km±9km, mb4.3/6, Error ellipse: s-maj=21.6km s-min=5.4km az=141.0

IDC 20 08:45:09.7±2.3, 5°.91S×151°.43E, h66km±14km, mb3.4/5, mb1 3.7/6, mb1mx3.3/39, mbtmp3.8/6, MS3.1/5, Ms1 3.1/5, ms1mx2.8/16, Error ellipse: s-maj=58.5km s-min=9.1km az=124.0

ISC 20 08:45:07.2±0.8, 5°.9S±0°.1×151°.5E±0°.2, h41km, n19, σ1s.85/21, mb3.9/8, MS3.1/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.68	19	P	Pn	08 45 35.8	+1.6
	742nm,0.3s,baz=174,slow=1.1,SNR=149						
KRVT				S	Sn	08 45 58.5	+4.1
	562nm,0.3s,baz=255,slow=20,SNR=9.0						
KRVT				LR	LR	08 46 35.2	
	comp=Z,562nm,19.9s,baz=202,slow=50						
RABL	Rabaul	1.84	22	Pn	Pn	08 45 37.5	+1.2
PMG	Port Moresby	5.51	231	P	Pn	08 46 30.3	+3.5
	11nm,0.3s,baz=58,slow=7.6,SNR=12						
PMG				S	Sn	08 47 29.3	+0.3
	7.8nm,0.3s,baz=255,slow=19,SNR=8.7						
PMG				LR	LR	08 47 53.9	
	comp=Z,51nm,21.1s,baz=324,slow=30						
PMG	Port Moresby	5.51	231		Pn	08 46 29.8	+3.0
PMG					Sn	08 47 28.6	-0.4
COEN	Coen	11.44	225	Pn	Pn	08 47 47.0	-1.1
COEN				Sn	Sn	08 49 51.8	-2.8
WR0	Warramunga Arr	21.59	228	P	P	08 49 52.5	-1.2
WR0				IAmb	IAmb	08 50 01.6	
	comp=Z,9.2nm,1.1s						
DZM	Mont Dzumac	21.62	139	LR	LR	08 57 32.0	
	comp=Z,81nm,18.2s,baz=251,slow=34						
WRA	Warramunga Arr	21.73	228	P	P	08 49 55.2	0.0
	comp=Z,1.6nm,0.7s,baz=54,slow=10,SNR=8.3						
KNRA	Kununurra	24.31	245	P	P	08 50 19.9	-1.2
KNRA				IAmb	IAmb	08 50 36.5	
	comp=Z,12nm,0.9s						
AS31	Alice Springs	24.45	222	P	P	08 50 22.0	-0.4
ASAR	Alice Springs	24.45	222	P	P	08 50 23.3	+0.9
	comp=Z,1.0nm,0.6s,baz=55,slow=9.0,SNR=18						
ASAR				LR	LR	09 01 38.4	
	comp=Z,40nm,18.0s,baz=10,slow=40						
FITZ	Fitzroy Crossi	27.98	242	P	P	08 50 54.8	+0.5
	comp=Z,2.6nm,0.9s,baz=49,slow=9.3,SNR=3.3						
FITZ				LR	LR	09 02 12.3	
	comp=Z,42nm,18.1s,baz=17,slow=37						
FITZ	Fitzroy Crossi	27.98	242	P	P	08 50 54.1	-0.2
FITZ				IAmb	IAmb	08 51 04.9	
	comp=Z,7.2nm,1.1s						
THZ	Tophouse	40.48	155	P	P	08 52 43.5	+1.4
MJAR	Matsushiro Arr	44.02	345	LR	LR	09 10 22.7	
	comp=Z,24nm,19.5s,baz=135,slow=34						
SONM	Songino Array	66.57	329	P	P	08 55 52.9	-0.4
	comp=Z,0.3nm,0.5s,baz=142,slow=5.4,SNR=3.4						
MLY	Manley	82.38	21	P	P	08 57 24.4	-0.3
MLY				IAmb	IAmb	08 57 39.4	
	comp=Z,5.8nm,1.5s						
ILAR	Eielson Array	83.67	22	P	P	08 57 29.4	-1.9
	comp=Z,0.2nm,0.4s,baz=253,slow=5.2,SNR=6.8						
TORD	Torodi Ar. Bea	149.37	286	PKPbc	PKPbc	09 04 52.4	-0.5
	comp=Z,1.5nm,0.3s,baz=79,slow=2.4,SNR=24						

KRSC 20 08:47:03.0±0.5, 56°.05N×161°.45E, h103km±6km, ML3.8

IDC 20 08:47:05.9±3.4, 56°.08N×161°.15E, h107km±38km,

mb3.2/10,mb1 3.4/11,mb1mx3.1/52,mbtmp3.5/11,Error ellipse: s-maj=33.2km s-min=15.7km az=7.0
ISC 20 08:47:04.9±0.7,**56.05N**±0.04×**161.42E**±0.04,**h99**km±5km, **n54**,σ**0.82**/70,**mb3.5**/10,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	**0.35**	**265**	eP	**Pn**	**08 47 19.8**	**0.0**
ZLN				eS	**Sn**	**08 47 31.8**	**+0.9**
CIRR	**Tsirk**	**0.38**	**281**	eP	**Pn**	**08 47 19.6**	**-0.4**
CIRR				eS	**Sn**	**08 47 31.8**	**+0.5**
LGNR	**Loginova**	**0.41**	**275**	eP	**Pn**	**08 47 20.1**	**-0.3**
LGNR				eS	**Sn**	**08 47 32.4**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**0.42**	**256**	eP	**Pn**	**08 47 20.1**	**-0.1**
BZGR				eS	**Sn**	**08 47 32.4**	**+0.8**
KLY	**Klyuchi**	**0.51**	**302**	eP	**Pn**	**08 47 19.6**	**-1.0**
KLY				eS	**Sn**	**08 47 31.4**	**-1.0**
KRSR	**Krestovskiy**	**0.51**	**290**	eP	**Pn**	**08 47 20.1**	**-0.7**
KRSR				eS	**Sn**	**08 47 32.3**	**-0.4**
BZMR	**Bezymyannaya**	**0.53**	**258**	eS	**Sn**	**08 47 33.2**	**+0.1**
BDR	**Baidarnaya**	**0.54**	**347**	eP	**Pn**	**08 47 21.2**	**+0.2**
BDR				eS	**Sn**	**08 47 34.4**	**+1.4**
SMKR	**Semkarok**	**0.54**	**3**	eP	**Pn**	**08 47 21.2**	**+0.2**
SMKR				eS	**Sn**	**08 47 33.6**	**+0.6**
KIRR	**Kirishev**	**0.61**	**262**	eP	**Pn**	**08 47 21.2**	**-0.5**
KIRR				eS	**Sn**	**08 47 34.2**	**0.0**
SRKR	**Sorokina**	**0.62**	**347**	eP	**Pn**	**08 47 21.7**	**0.0**
SRKR				eS	**Sn**	**08 47 34.4**	**+0.2**
KPT	**Kopyto**	**0.68**	**264**	eS	**Sn**	**08 47 35.0**	**-0.1**
KMNR	**Kamenistaya**	**0.73**	**247**	eP	**Pn**	**08 47 22.0**	**-0.6**
KMNR				eS	**Sn**	**08 47 36.4**	**+0.5**
KBG	**Krutoberegovo**	**0.75**	**73**	eP	**Pn**	**08 47 22.4**	**-0.2**
KBG				eS	**Sn**	**08 47 36.5**	**+0.5**
KBTR	**Krutoberegovo**	**0.80**	**78**	eP	**Pn**	**08 47 22.9**	**-0.3**
KBTR				eS	**Sn**	**08 47 37.2**	**+0.3**
KOZ	**Kozyrevsk**	**0.87**	**271**	eP	**Pn**	**08 47 23.6**	**-0.3**
KOZ				eS	**Sn**	**08 47 38.8**	**+0.7**
SRDR	**Sredinnyy**	**0.99**	**287**	eP	**Pn**	**08 47 24.7**	**-0.5**
SRDR				eS	**Sn**	**08 47 40.1**	**-0.4**
TUMD	**Tumrok D**	**1.02**	**215**	eP	**Pn**	**08 47 25.1**	**-0.5**
TUMD				eS	**Sn**	**08 47 40.2**	**-0.9**
TUMR	**Tumrok**	**1.05**	**224**	eP	**Pn**	**08 47 25.8**	**-0.2**
TUMR				eS	**Sn**	**08 47 41.3**	**-0.5**
KZV	**Kizimen**	**1.13**	**215**	eP	**Pn**	**08 47 26.3**	**-0.6**
ESO	**Esso**	**1.53**	**267**	eP	**Pn**	**08 47 31.2**	**-0.3**
BKI	**Bering**	**2.72**	**106**	eP	**Pn**	**08 47 46.1**	**-0.7**
BKI				eS	**Sn**	**08 48 17.1**	**-1.9**
SPN	**Mys Shipunski**	**3.06**	**196**	eP	**Pn**	**08 47 50.9**	**-0.5**
NLC	**Nalytchevo**	**3.12**	**204**	eP	**Pn**	**08 47 52.1**	**-0.1**
KRX	**Arik**	**3.14**	**212**	eP	**Pn**	**08 47 53.2**	**+0.6**
SDLR	**Sedlovina**	**3.14**	**209**	eP	**Pn**	**08 47 53.0**	**+0.4**
PALN	**Palana**	**3.15**	**346**	eP	**Pn**	**08 47 53.1**	**+0.6**
SMAR	**Somma**	**3.18**	**210**	eP	**Pn**	**08 47 54.2**	**+1.0**
AVH	**Avacha**	**3.19**	**210**	eP	**Pn**	**08 47 55.3**	**+2.1**
KOK	**Koryaka**	**3.20**	**211**	eP	**Pn**	**08 47 54.4**	**+1.1**
UGLR	**Uglovaya**	**3.22**	**209**	eP	**Pn**	**08 47 54.7**	**+1.1**
OSSR	**Ossora**	**3.33**	**15**	eP	**Pn**	**08 47 55.1**	**+0.2**
OSSR				eS	**Sn**	**08 48 32.8**	**-0.8**
DALK	**Dalny**	**3.40**	**208**	eP	**Pn**	**08 47 56.2**	**+0.3**
PET	**Petropavlovsk**	**3.43**	**209**	eP	**Pn**	**08 47 58.0**	**+1.7**
PETK	**Petropavlovsk-**	**3.65**	**218**	P	**Pn**	**08 47 59.1**	**-0.2**
	1.7nm,0.3s,baz=62,slow=16,SNR=27						
KRMR	**Karymshinskiy**	**3.75**	**212**	eP	**Pn**	**08 48 01.8**	**+1.1**
GRL	**Gorelyy**	**4.01**	**211**	eP	**Pn**	**08 48 05.2**	**+0.9**
MTVR	**Mutnovka**	**4.04**	**209**	eP	**Pn**	**08 48 05.8**	**+1.1**
ASAK	**Asacha**	**4.21**	**211**	eP	**Pn**	**08 48 08.6**	**+1.6**
TILK	**Tilichiki**	**5.07**	**28**	eP	**Pn**	**08 48 19.2**	**+0.8**
TIXI	**Tiksi**	**20.78**	**331**	P	**P**	**08 51 37.4**	**-0.2**
	2.5nm,0.6s,baz=116,slow=11,SNR=7.4						
SONM	**Songino Array**	**34.07**	**280**	P	**P**	**08 53 39.3**	**-0.2**
	0.2nm,0.5s,baz=62,slow=9.9,SNR=2.4						
H11N2	**WAKE ISLAND Hy**	**36.49**	**171**	T	T	09 31 41.5	
	baz=355,slow=76,SNR=6.3						
H11N3	**WAKE ISLAND Hy**	**36.51**	**171**	T	T	09 31 43.0	
	baz=355,slow=76,SNR=4.2						
H11N1	**WAKE ISLAND Hy**	**36.51**	**171**	T	T	09 31 42.2	
	baz=355,slow=76,SNR=8.3						
YKA	**Yellowknife Ar**	**40.49**	**45**	P	**P**	**08 54 34.4**	**+0.9**
	0.1nm,0.5s,baz=300,slow=8.2,SNR=3.7						
SPITS	**Spitsbergen Ar**	**44.35**	**350**	P	**P**	**08 55 04.5**	**0.0**
	4.7nm,0.7s,baz=56,slow=5.4,SNR=6.7						
KURBB	**Kurchatov Arra**	**46.97**	**300**	P	**P**	**08 55 24.3**	**-1.1**
	0.5nm,0.5s,baz=55,slow=7.9,SNR=3.2						
MKAR	**Makanchi Array**	**47.61**	**294**	P	**P**	**08 55 29.1**	**-1.3**
	0.4nm,0.7s,baz=59,slow=7.4,SNR=6.7						
NVAR	**Mina Array Bea**	**54.07**	**73**	P	**P**	**08 56 20.8**	**+1.6**
	0.4nm,0.6s,baz=317,slow=6.5,SNR=3.2						
PDAR	**Pinedale Array**	**55.45**	**63**	P	**P**	**08 56 30.0**	**+0.8**
	0.3nm,0.9s,baz=322,slow=2.8,SNR=2.2						
FINES	**FINESS Array B**	**57.71**	**336**	P	**P**	**08 56 43.8**	**-0.8**
	0.6nm,0.5s,baz=55,slow=7.2,SNR=5.7						
NOA	**NORSAR Array B**	**60.91**	**344**	P	**P**	**08 57 05.3**	**-1.4**
	0.6nm,0.8s,baz=10,slow=10,SNR=2.8						
TXAR	**Lajitas Array**	**68.81**	**69**	P	**P**	**08 57 59.1**	**+0.7**
	0.2nm,0.5s,baz=293,slow=5.8,SNR=4.4						

IDC **20** *08:59:56.9±8.7,36.80N×71.28E,h142km±56km,mb3.2/3, mb1 3.1/9,mb1mx2.9/48,mbtmp3.5/9,MS3.3/1,Ms1 3.3/1, ms1mx2.3/39,Error ellipse: s-maj=76.1km s-min=37.8km az=176.0*
NNC **20** *08:59:56.7±6.3,36.85N×71.02E,h87km±128km,mb3.6, mpv4.0,Error ellipse: s-maj=48.5km s-min=46.4km az=0.0*
ISC 20 08:59:58.1±1.8,**36.9N**±0.2×**71.2E**±0.1,**h150**km,**n21**, σ**0.81**/23,**mb3.3**/4,**4D**,**Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.55**	**19**	P	**Pn**	**09 01 18.0**	**-1.1**
	SNR=81						
UCH	**Uchtor**	**5.89**	**25**	P	**Pn**	**09 01 22.5**	**-1.1**
	SNR=18						
EKS2	**Erkin-Say**	**6.07**	**18**	P	**Pn**	**09 01 25.1**	**-0.6**
	SNR=15						
KK31	**Karatay Array**	**6.21**	**355**	P	**Pn**	**09 01 26.7**	**-0.8**
	10nm,0.4s,baz=180,slow=13,SNR=90						
KK31				⇓S	**Sn**	**09 02 38.0**	**+0.4**
	1.2nm,0.3s,baz=117,slow=59,SNR=5.6						
AAK	**Ala-Archa**	**6.25**	**23**	P	**Pn**	**09 01 27.6**	**-0.5**
	3.2nm,0.3s,baz=171,slow=5.6,SNR=32						
AAK				S	**Sn**	**09 02 38.9**	**+0.2**
	0.6nm,0.3s,baz=316,slow=24,SNR=8.7						
AAK	**Ala-Archa**	**6.25**	**23**	P	**Pn**	**09 01 27.6**	**-0.5**
	SNR=10						
AAK	**Ala-Archa**	**6.25**	**23**	⇓P	**Pn**	**09 01 27.7**	**-0.5**
	3.4nm,0.4s						
AAK				⇓S	**Sn**	**09 02 39.1**	**+0.4**
	8.0nm,0.8s						
ULHL	**Ulahol**	**6.59**	**34**	P	**Pn**	**09 01 31.4**	**-1.4**
	SNR=7.7						
USP	**Ospenovka**	**6.83**	**21**	P	**Pn**	**09 01 35.3**	**-0.4**
	SNR=6.6						
MK31	**Makanchi Array**	**12.85**	**36**	⇓P	**P**	**09 03 00.3**	**0.0**
	0.2nm,0.4s,baz=207,slow=9.2,SNR=5.0						
MKAR	**Makanchi Array**	**12.85**	**36**	P	**Pn**	**09 02 56.3**	**+1.0**
	0.0nm,0.3s,baz=225,slow=16,SNR=3.0						
KURBB	**Kurchatov Arra**	**14.68**	**19**	P	**P**	**09 03 20.2**	**-0.2**
	0.0nm,0.3s,baz=211,slow=10,SNR=4.3						
AB31	**Akbulak array**	**14.82**	**330**	P	**Pn**	**09 03 19.0**	**-1.0**
	3.9nm,0.6s,baz=136,slow=14,SNR=55						
BVAR	**Borovoye Array**	**16.12**	**358**	P	**P**	**09 03 37.1**	**+0.7**
	0.2nm,0.3s,baz=159,slow=8.6,SNR=3.4						
AKTO	**Aktyubinsk**	**16.52**	**329**	P	**Pn**	**09 03 42.0**	**+1.1**
	0.3nm,0.3s,baz=125,slow=8.4,SNR=5.9						
ZALV	**Zalesovo Beam**	**19.47**	**25**	P	**P**	**09 04 13.8**	**+0.8**
	0.1nm,0.3s,baz=214,slow=11,SNR=2.9						
FINES	**FINESS Array B**	**37.24**	**326**	P	**P**	**09 06 55.3**	**+0.5**
	0.4nm,0.4s,baz=126,slow=9.7,SNR=4.4						
ARCES	**ARCESS Array B**	**40.84**	**337**	P	**P**	**09 07 25.8**	**+1.3**
	2.1nm,0.8s,baz=121,slow=11,SNR=3.7						
NOA	**NORSAR Array B**	**44.16**	**323**	P	**P**	**09 07 51.4**	**-0.2**
	0.2nm,0.4s,baz=100,slow=8.1,SNR=2.8						
KSRS	**Korea Array**	**44.58**	**71**	LR	LR	09 30 15.6	
	comp=Z,33nm,19.3s,baz=126,slow=41						
YKA	**Yellowknife Ar**	**80.83**	**3**	P	**P**	**09 11 54.3**	**-0.3**
	0.1nm,0.4s,baz=353,slow=5.5,SNR=4.9						

IDC **20** *09:37:39.1±2.0,9.59N×122.22E,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.4/56,mbtmp3.6/4,MS2.9/2,Ms1 3.0/2, ms1mx2.5/43,Error ellipse: s-maj=249.7km s-min=21.4km az=63.0*
MAN **20** *09:37:44.4,9.87N×122.41E,h30km,mb4.8,ML3.7,MS3.6*
MAN INTENSITY III - HINOBA-AN AND SIPALAY NEGROS OCCIDENTAL; INTENSITY II - BASAY NEGROS ORIENTAL; INTENSITY I - BAYAWAN NEGROS ORIENTAL.
ISC 20 09:37:41.8±1.3,**9.80N**±0.03×**122.33E**±0.04,**h16**km±9km, **n22**,σ**1.51**/33,**mb3.6**/4,**5C-2D**,**Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.86**	**17**	eP	**Pg**	**09 37 58.8**	**+0.2**
GUIM				eS	**Sg**	**09 38 10.0**	**0.0**
SNPH	**Sibulan**	**1.00**	**117**	⇓iP	**Pn**	**09 38 01.7**	**+0.5**
SNPH				iS	**Sg**	**09 38 14.1**	**-0.1**
TBP	**Tagbilaran**	**1.51**	**94**	⇑eP	**Pb**	**09 38 08.9**	**-0.5**
TBP				eS	**Sn**	**09 38 26.1**	**-1.4**
DCPH	**Dipolog City**	**1.57**	**140**	⇑eP	**Sn**	**09 38 28.4**	**-0.6**
CUYO	**Cuyo Island**	**1.67**	**309**	eP	**Pb**	**09 38 12.3**	**+0.2**
CUYO				eS	**Sb**	**09 38 32.5**	**-0.3**
LLP	**Lapu-Lapu**	**1.69**	**72**	⇑eP	**Pn**	**09 38 11.0**	**+0.4**
LLP				iS	**Sn**	**09 38 30.4**	**-1.6**
RCP	**Roxas**	**1.80**	**13**	⇑eP	**Pb**	**09 38 14.0**	**-0.4**
RCP				eS	**Sb**	**09 38 38.3**	**+1.6**
PAGZ	**Pagadian**	**2.19**	**152**	eP	**Pb**	**09 38 21.2**	**+0.1**
PAGZ				eS	**Sg**	**09 38 50.2**	**-2.2**
MSLP	**Maasin**	**2.51**	**82**	eP	**Pn**	**09 38 23.3**	**+1.4**
MSLP				eS	**Sn**	**09 38 53.3**	**+1.1**
OTRP	**Odiongan**	**2.57**	**353**	eP	**Pn**	**09 38 24.1**	**+1.4**
OTRP				eS	**Sn**	**09 38 55.9**	**+2.2**
CGP	**Cagayan de Oro**	**2.69**	**120**	⇓eP	Pg	09 38 41.9	+8.6
CGP				eS	**Sn**	**09 38 58.2**	**-0.7**
SJMP	**San Jose**	**2.91**	**336**	eP	**Pn**	**09 38 26.2**	**-1.1**
SJMP				eS	**Sn**	**09 38 58.9**	**-3.0**
BUSP	**Coron**	**3.04**	**317**	eP	**Pn**	**09 38 30.1**	**+1.0**
BUSP				eS	**Sn**	**09 39 04.4**	**-0.8**
ENPP	**El Nido**	**3.19**	**296**	eP	**Pn**	**09 38 33.6**	**+2.4**
ENPP				eS	**Sn**	**09 39 08.4**	**-0.5**
BUKP	**Musuan**	**3.30**	**125**	eP	**Pn**	**09 38 33.7**	**+0.8**
BUKP				eS	**Sn**	**09 39 14.1**	**+2.3**
KCP	**Kidapawan**	**3.89**	**135**	⇑eP	**Pn**	**09 38 44.2**	**+3.3**
GUMO	**Guam**	**22.38**	**78**	LR	LR	09 50 13.4	
	comp=Z,51nm,20.8s,baz=62,slow=34						
CMAR	**Chiang Mai Arr**	**24.24**	**293**	LR	LR	09 53 08.2	
	comp=Z,17nm,19.2s,baz=50,slow=38						
WRA	**Warramunga Arr**	**31.83**	**158**	P	**P**	**09 44 03.6**	**-2.4**
	0.5nm,0.8s,baz=333,slow=10,SNR=6.9						
ASAR	**Alice Springs**	**35.13**	**161**	P	**P**	**09 44 33.9**	**-0.9**
	1.0nm,0.5s,baz=344,slow=7.2,SNR=31						
MKAR	**Makanchi Array**	**50.12**	**325**	P	**P**	**09 46 37.3**	**+1.1**
	0.4nm,0.7s,baz=120,slow=8.5,SNR=4.3						
KURBB	**Kurchatov Arra**	**54.31**	**327**	P	**P**	**09 47 07.3**	**0.0**
	0.7nm,0.7s,baz=131,slow=6.3,SNR=5.0						

TEH **20** *09:41:11.4,31.84N×50.22E,h8km,ML3.5*
THR **20** *09:41:14.5±0.3,31.84N×50.28E,h14km±5km,ML3.3*
ISC 20 09:41:12.7±0.9,**31.86N**±0.04×**50.22E**±0.03,**h10**km,**n41**, σ**2.22**/42,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHBN	**Jahan bin**	**0.53**	**45**	ePg	**Pb**	**09 41 22.9**	**-1.5**
ROKH	**ROKH**	**0.85**	**55**	ePg	**Pb**	**09 41 28.5**	**-1.2**
IBRJ	**Brojen**	**0.89**	**87**	ePg	**Pb**	**09 41 29.3**	**-1.1**
IPIR	**Pirpir**	**1.00**	**35**	ePg	**Pn**	**09 41 32.1**	**-1.1**
SHGR	**Shooshtar-Gavs**	**1.23**	**282**	eSg	**Sn**	**09 41 55.6**	**+3.0**
SHGR					IAML	09 41 57.9	
	comp=N,454nm,0.5s						
SHGR					IAML	09 42 02.2	
	comp=E,488nm,0.5s						
AHWZ	**Ahwaz**	**1.44**	**249**	ePg	**Pg**	**09 41 39.8**	**-0.6**
KLNJ	**Kolanjah**	**1.45**	**125**	ePg	**Pb**	**09 41 38.7**	**-1.3**
KLNJ				e		09 42 13.5	
IGAR	**Gharneh**	**1.64**	**70**	ePg	**Pg**	**09 41 43.9**	**-0.3**
IRAM	**Ramesheh**	**1.84**	**91**	ePn	**Pg**	**09 41 47.0**	**-1.1**
IKLH	**Kolahrood**	**1.85**	**38**	ePn	**Pg**	**09 41 48.1**	**-0.2**
IKLH				e		09 42 24.3	
KHMZ	**Khomeyn**	**1.89**	**353**	ePn	**Pg**	**09 41 48.9**	**-0.1**
KHMZ				eSg	**Sg**	**09 42 15.2**	**+1.7**
KHMZ	**Khomeyn**	**1.89**	**353**	ePn	**Pg**	**09 41 48.9**	**-0.1**
IZEF	**Zefreh**	**2.06**	**59**	ePn	**Pg**	**09 41 50.5**	**-1.8**
BMDN	**Meydan**	**2.16**	**327**	ePn	**Pb**	**09 41 50.9**	**-1.1**
BMDN				e		09 42 28.7	
IKMR	**Kamar-syah**	**2.27**	**317**	ePn	**Pb**	**09 41 52.2**	**-1.6**
IKMR				e		09 42 28.5	
BDRS	**Dareh Seyedi**	**2.37**	**332**	ePn	**Pb**	**09 41 53.6**	**-2.2**
BDRS				e		09 42 36.4	
IKAZ	**Kazeroun**	**2.50**	**146**	ePn	**Pb**	**09 41 55.7**	**-2.2**
IKAZ				e		09 42 49.2	
IDOB	**Doab**	**2.58**	**319**	ePn	**Pb**	**09 41 56.0**	**-3.2**
IDOB				e		09 42 41.1	
IKFM	**Kafar-mosalman**	**2.60**	**310**	ePn	**Pb**	**09 41 56.4**	**-3.0**
ASAO	**Ashtian**	**2.69**	**357**	ePn	**Pb**	**09 41 60.0**	**-1.1**
ASAO	**Ashtian**	**2.69**	**357**	ePn	**Pb**	**09 42 00.0**	**-1.1**
HSAM	**Samen**	**2.71**	**330**	ePn	**Pb**	**09 41 58.6**	**-2.9**
GHVR	**GHOM**	**2.77**	**19**	ePn	**Pb**	**09 42 00.5**	**-1.9**
GHVR	**GHOM**	**2.77**	**19**	ePn	**Pn**	**09 42 00.5**	**-1.9**
ISAD	**Sadrabad**	**2.95**	**88**	ePn	**Pb**	**09 42 01.9**	**-3.7**
HAGD	**Aghdareh**	**3.09**	**343**	ePn	**Pb**	**09 42 03.9**	**-4.1**
IKOM	**Komasi**	**3.24**	**316**	ePn	**Pn**	**09 42 05.6**	**+1.8**
IKOM				e		09 43 06.0	
ANAR	**Anarak**	**3.25**	**65**	ePn	**Pb**	**09 42 06.9**	**-3.7**
IVRN	**Varamin**	**3.37**	**22**	ePn	**Pb**	**09 42 08.4**	**-4.3**
IALM	**Almaboloaq**	**3.45**	**331**	ePn	**Pn**	**09 42 08.2**	**+1.4**
KCHF	**Cheshme Sefid,**	**3.60**	**313**	ePn	**Pn**	**09 42 08.6**	**-0.1**
HSRG	**Sareghieh**	**3.74**	**335**	ePn	**Pn**	**09 42 13.6**	**+2.8**
YZKH	**Yazd**	**3.75**	**81**	ePn	**Pn**	**09 42 13.4**	**+2.7**
YZKH	**Yazd**	**3.75**	**81**	ePn	**Pn**	**09 42 13.4**	**+2.7**
QABG	**Abgarm-Qazvin**	**3.88**	**352**	ePn	**Pn**	**09 42 15.4**	**+2.8**
IVIS	**Veis**	**3.88**	**314**	ePn	**Pn**	**09 42 13.1**	**+0.5**
IGHG	**Ghaleghazi**	**3.93**	**310**	ePn	**Pn**	**09 42 13.9**	**+0.5**
IGHG				e		09 43 38.4	
ILIN	**Lien**	**4.09**	**319**	ePn	**Pn**	**09 42 17.1**	**+1.5**
ILIN				e		09 43 08.4	
IDHR	**Dehrash**	**4.28**	**312**	ePn	**Pn**	**09 42 18.8**	**+0.6**
TABS	**Tabas**	**6.08**	**71**	ePn	**Pn**	**09 42 45.8**	**+3.0**
TABS	**Tabas**	**6.08**	**71**	ePn	**Pn**	**09 42 45.8**	**+3.0**

TEH **20** *10:06:43.4,28.54N×57.33E,h22km,ML3.5*
OMAN **20** *10:06:46.0±0.8,28.43N×57.48E,h34km±279km,ml3.3/8, Error ellipse: s-maj=26.2km s-min=11.6km az=301.0*
THR **20** *10:06:46.1±0.3,28.60N×57.39E,h18km±5km,ML3.0*
ISC 20 10:06:42.8±0.9,**28.49N**±0.03×**57.36E**±0.06,**h10**km,**n33**, σ**1.87**/43,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.61**	**150**	ePg	**Pg**	**10 06 55.9**	**+1.2**
NIAN	**Nian**	**1.03**	**207**	e		10 07 21.8	
NIAN				ePg	**Pg**	**10 07 03.5**	**+0.8**
IBND	**Bandar-abas**	**1.26**	**215**	e		10 07 08.1	
IBND				ePg	**Pn**	**10 07 07.4**	**+0.9**
NGRK	**Negar Kerman**	**1.28**	**335**	e		10 07 23.0	
NGRK				ePg	**Pb**	**10 07 05.6**	**-1.7**
CHMN	**Cheshme madani**	**1.38**	**6**	ePn	**Pn**	**10 07 08.0**	**-0.5**
GENO	**Geno**	**1.51**	**225**	ePn	**Pn**	**10 07 10.3**	**+0.2**
GENO				e		10 07 37.1	
KRBR	**Kerman**	**1.58**	**341**	ePg	**Pg**	**10 07 13.7**	**+0.5**
KRBR				eSg	**Sg**	**10 07 33.8**	**0.0**
KRBR					IAML	10 07 36.1	
	comp=E,200nm,0.4s						
KRBR					IAML	10 07 37.9	
	comp=N,180nm,0.2s						
KRBR	**Kerman**	**1.58**	**341**	ePn	**Pg**	**10 07 13.7**	**+0.5**
TVBK	**TV Kerman**	**1.59**	**341**	ePg	**Pn**	**10 07 10.2**	**-1.1**
TVBK				e		10 07 43.8	
KHGB	**Koh Gabri**	**2.04**	**338**	ePn	**Pn**	**10 07 18.3**	**+0.9**
KHGB				e		10 07 22.7	
BANOM	**Banah**	**2.72**	**201**	P	**Pn**	**10 07 27.0**	**+0.3**
	SNR=22						
BANOM				S	**Sn**	**10 07 59.3**	**-0.3**
SZD1	**Zahaedan-tmp**	**3.23**	**71**	ePn	**Pn**	**10 07 34.4**	**+0.7**
IBAF	**Bafgh**	**3.46**	**334**	ePn	**Pn**	**10 07 38.9**	**+1.9**
UOSS	**Minazif**	**3.67**	**197**	P	**Pn**	**10 07 40.5**	**+0.8**
NHDN	**Nehbandan**	**3.72**	**38**	ePn	**Pn**	**10 07 42.1**	**+1.6**
NHDN				e		10 08 43.2	
BSRN	**Basiran**	**3.79**	**23**	ePn	**Pn**	**10 07 44.3**	**+3.0**
BSRN	**Basiran**	**3.79**	**23**	ePn	**Pn**	**10 07 44.3**	**+3.0**
HATD	**Hatta, Dubai**	**3.81**	**197**	P	**Pn**	**10 07 42.0**	**+0.4**
	SNR=6.7						
ASHO	**Ashiyiah**	**3.96**	**197**	P	**Pn**	**10 07 45.4**	**+1.7**
ASHO				S	**Sn**	**10 08 31.0**	**+0.8**
YZKH	**Yazd**	**4.57**	**329**	ePn	**Pn**	**10 07 55.6**	**+3.5**
YZKH	**Yazd**	**4.57**	**329**	ePn	**Pn**	**10 07 55.6**	**+3.5**
HOQ	**Hoqain**	**4.88**	**181**	P	**Pn**	**10 07 56.5**	**+0.1**
HOQ				S	**Sn**	**10 08 49.0**	**-3.9**
BIDO	**Bidbid**	**4.99**	**172**	P	**Pn**	**10 07 57.3**	**-0.5**
BIDO				S	**Sn**	**10 08 52.0**	**-3.6**
TKDS	**Koohdasht(Taba**	**5.12**	**358**	ePn	**Pn**	**10 08 01.7**	**+2.1**
TABS	**Tabas**	**5.15**	**358**	ePn	**Pn**	**10 08 03.1**	**+3.0**
TABS	**Tabas**	**5.15**	**358**	ePn	**Pn**	**10 08 03.1**	**+3.0**
ARQ	**Araqi**	**5.18**	**189**	P	**Pn**	**10 08 01.7**	**+1.2**
	SNR=12						
ARQ				S	**Sn**	**10 09 01.3**	**+0.9**
WSAR	**Wadi Sarin**	**5.35**	**167**	P	**Pn**	**10 08 03.2**	**+0.5**
	SNR=29						
WSAR				S	**Sn**	**10 09 01.9**	**-2.5**
SMDO	**Samad**	**5.44**	**173**	P	**Pn**	**10 08 06.0**	**+1.9**
SMDO				S	**Sn**	**10 09 05.1**	**-1.7**
TNSJ	**Nastanj**	**5.50**	**353**	ePn	**Pn**	**10 08 06.1**	**+1.2**
BSY	**Bisya**	**5.72**	**182**	P	**Pn**	**10 08 07.9**	**+0.1**
BSY				S	**Sn**	**10 09 13.9**	**+0.3**
WBK	**Wadi Bani Khal**	**6.03**	**166**	P	**Pn**	**10 08 12.1**	**0.0**
	SNR=17						
MHTO	**MHTO**	**7.49**	**176**	P	**Pn**	**10 08 33.1**	**+1.0**
MHTO				S	**Sn**	**10 09 54.1**	**-2.9**

SOME **20** *10:13:27.8,43.60N×69.70E*
NNC **20** *10:13:28.1±1.0,42.58N×69.72E,h0km,mb3.5,mpv3.0, Error ellipse: s-maj=13.4km s-min=5.0km az=130.0, Suspected Mining explosion.*
KRNET **20** *10:13:34.4±0.1,43.60N×69.11E,mb2.7*
ISC 20 10:13:29.2±2.1,**43.79N**±0.07×**69.88E**±0.08,**h0**km,**n28**, σ**1.48**/47,**24C-12D**,**Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLS	**Borolday**	**0.76**	**183**	P	**Pb**	**10 13 44.7**	**-0.6**
	0.7nm,0.2s						
BRLS				S	**Sb**	**10 13 56.1**	**-0.1**
	12nm,0.5s						
KK09	**Karatay Array**	**0.80**	**146**	⇑P	**Pg**	**10 13 43.2**	**-1.4**
KK09				⇓S	**Sg**	**10 13 54.0**	**-0.9**
KK08	**Karatay Array**	**0.81**	**147**	⇑P	**Pg**	**10 13 43.3**	**-1.5**
KK08				⇓S	**Sg**	**10 13 54.0**	**-1.2**
KK04	**Karatay Array**	**0.81**	**146**	⇑P	**Pg**	**10 13 43.1**	**-1.7**
KK04				⇓S	**Sg**	**10 13 54.4**	**-1.0**
KK05	**Karatay Array**	**0.82**	**145**	⇑P	**Pg**	**10 13 43.2**	**-1.6**
KK05				⇑S	**Sg**	**10 13 54.6**	**-0.8**
KK01	**Karatay Array**	**0.82**	**146**	⇓P	**Pg**	**10 13 43.2**	**-1.7**
KK01				⇑S	**Sg**	**10 13 54.4**	**-1.1**
KK03	**Karatay Array**	**0.82**	**146**	⇓P	**Pg**	**10 13 43.3**	**-1.6**
KK03				⇓S	**Sg**	**10 13 54.2**	**-1.3**
KK02	**Karatay Array**	**0.82**	**146**	⇑P	**Pg**	**10 13 43.4**	**-1.6**
KK02				⇑S	**Sg**	**10 13 54.5**	**-1.1**
KK31	**Karatay Array**	**0.82**	**146**	⇑P	**Pg**	**10 13 43.2**	**-1.8**
	1.0nm,0.5s,baz=318,slow=16,SNR=92						
KK31				⇑S	**Sg**	**10 13 54.5**	**-1.2**
	29nm,0.8s,baz=298,slow=29,SNR=121						
KK07	**Karatay Array**	**0.83**	**147**	⇑P	**Pg**	**10 13 43.7**	**-1.4**
KK07				⇑S	**Sg**	**10 13 54.4**	**-1.5**
KK06	**Karatay Array**	**0.84**	**146**	⇑P	**Pg**	**10 13 43.9**	**-1.4**
KK06				⇑S	**Sg**	**10 13 54.7**	**-1.3**
ARK	**Arkit**	**2.51**	**142**	⇑iP	**Pg**	**10 14 18.1**	**+0.8**
	baz=30						
ARK				⇑iS	**Sg**	**10 14 49.9**	**+0.1**
	baz=30						
MRKS	**Merke**	**2.65**	**112**	Pg	**Pg**	**10 14 19.8**	**-0.3**
	3.2nm,0.3s						
MRKS				Lg	Lg	10 14 56.4	
	5.0nm,0.5s						
EKS2	**Erkin-Say**	**3.06**	**110**	⇓iP	**Pg**	**10 14 28.0**	**+0.1**
	baz=4.0						
EKS2				⇓iS	**Sg**	**10 15 08.2**	**+0.7**
	baz=4.0						
AML	**Almayashu**	**3.25**	**119**	⇓iP	**Pg**	**10 14 30.4**	**-1.1**
	baz=12						
AML				⇓iS	**Sg**	**10 15 12.2**	**-1.5**
	baz=12						
ARSB	**Arslanbob**	**3.36**	**136**	⇓iP	**Pb**	**10 14 30.1**	**+0.3**
	baz=27						
ARSB				⇓iS	**Sb**	**10 15 10.9**	**-0.4**
	baz=27						
USP	**Ospenovka**	**3.40**	**97**	⇑iP	**Pg**	**10 14 33.1**	**-1.2**
	baz=93						
USP				⇑iS	**Sg**	**10 15 17.0**	**-1.4**
	baz=93						
SGDS	**Sogindy**	**3.46**	**94**	Pg	**Pg**	**10 14 34.8**	**-0.8**
	2.9nm,0.4s						
SGDS				Lg	Lg	10 15 22.3	
	5.6nm,0.5s						
UCH	**Uchtor**	**3.74**	**113**	⇑iP	**Pb**	**10 14 37.8**	**+1.4**
	baz=7.0						
UCH				⇑iS	**Sb**	**10 15 24.5**	**+2.2**
	baz=7.0						
ARLS	**Aral**	**3.79**	**119**	⇑iP	**Pb**	**10 14 37.5**	**+0.4**
	baz=12						
ARLS				⇑iS	**Sb**	**10 15 24.5**	**+0.9**
	baz=12						
BTK	**Batken**	**3.79**	**169**	⇑iP	**Pn**	**10 14 31.8**	**+2.8**
	baz=60						
BTK				⇑iS	**Sn**	**10 15 14.0**	**-0.3**
	baz=60						
KRBS	**Karabastau**	**4.20**	**89**	Pg	**Pg**	**10 14 47.5**	**-2.2**
	1.9nm,0.5s						
KRBS				Lg	Lg	10 15 44.1	
	2.6nm,0.5s						
DGS	**Degeres**	**4.32**	**95**	Pg	**Pg**	**10 14 50.8**	**-1.1**
	1.6nm,0.4s						
DGS				Lg	Lg	10 15 50.1	
	8.7nm,0.5s						
KST	**Kastek**	**4.49**	**97**	Pg	**Pg**	**10 14 53.1**	**-2.2**
	2.5nm,0.6s						
KST				Lg	Lg	10 15 53.7	
	5.1nm,0.6s						
KTBS	**Karatobe**	**4.93**	**89**	Pg	**Pg**	**10 15 01.6**	**-2.0**
	0.6nm,0.2s						
KTBS				Lg	Lg	10 16 08.6	
	12nm,0.8s						
IZV	**Izvestkoviy**	**4.96**	**96**	Pg	**Pg**	**10 15 02.2**	**-2.1**
	1.4nm,0.1s						
IZV				Lg	Lg	10 16 09.2	
	7.7nm,0.6s						
CHKK	**Chushkaly**	**5.14**	**87**	Pg	**Pg**	**10 15 06.3**	**-1.4**
	1.1nm,0.1s						
CHKK				Lg	Lg	10 16 16.3	
	4.8nm,0.3s						
TNSS	**Tian-Shan**	**5.20**	**96**	Pg	**Pg**	**10 15 05.5**	**-3.4**
	0.6nm,0.1s						
TNSS				Lg	Lg	10 16 14.8	
	3.2nm,0.5s						

IDC **20** *10:20:54.8±6.9,6.95S×155.86E,h78km±54km,mb3.2/5, mb1 3.5/6,mb1mx3.3/26,mbtmp3.6/6,ML2.5/1,MS2.8/1, Ms1 2.8/1,ms1mx2.5/11,Error ellipse: s-maj=63.2km s-min=33.1km az=119.0*
ISC 20 10:20:52.3±1.7,**7.0S**±0.3×**156.1E**±0.3,**h62**km,**n7**,σ**1.03**/7, **mb3.4**/5,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.51**	**122**	LR	LR	10 23 58.8	
	comp=Z,90nm,18.9s,baz=20,slow=39						
PMG	**Port Moresby**	**9.14**	**254**	P	**Pn**	**10 23 02.4**	**+0.8**
	2.7nm,0.3s,baz=61,slow=3.1,SNR=7.7						
WRA	**Warramunga Arr**	**24.69**	**237**	P	**P**	**10 26 07.5**	**-0.4**
	0.5nm,0.7s,baz=60,slow=9.9,SNR=2.3						
ASAR	**Alice Springs**	**26.97**	**230**	P	**P**	**10 26 27.1**	**-1.3**
	0.2nm,0.5s,baz=60,slow=9.2,SNR=4.0						
ASAR				PcP	**PcP**	**10 29 50.1**	**+1.1**
	0.2nm,0.5s,baz=66,slow=3.4,SNR=4.9						
CMAR	**Chiang Mai Arr**	**61.77**	**295**	P	**P**	**10 31 04.2**	**-0.9**
	0.5nm,0.3s,baz=108,slow=4.7,SNR=4.0						
ILAR	**Eielson Array**	**83.01**	**21**	P	**P**	**10 33 10.8**	**+0.2**
	0.2nm,0.5s,baz=239,slow=5.1,SNR=8.3						
MKAR	**Makanchi Array**	**84.14**	**318**	P	**P**	**10 33 16.9**	**+0.1**
	0.3nm,0.6s,baz=103,slow=5.8,SNR=4.2						

ISN **20** *10:38:08.6±0.8,33.20N×46.00E,h13km±2km,ML3.0*
TEH **20** *10:38:15.2,33.21N×46.08E,h15km,ML2.9*

ISC 20 10:38:11.0±1.1, 33°.12N±0°.05×45°.92E±0°.06, h6km±6km, n11, σ1§22/14, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	**Badra**	**0.01**	**146**	ePg	**Pg**	**10 38 11.6**	**-0.5**
IBDR				eSg	**Sg**	**10 38 13.9**	**+1.1**
IBDR				AML	AML	10 38 17.5	
	comp=E,4μm,0.5s						
IBDR				AML	AML	10 38 18.9	
	comp=N,2μm,0.4s						
BHD	**Baghdad**	**1.30**	**277**	ePn	**Pn**	**10 38 35.0**	**-0.8**
BHD				eSn	**Sn**	**10 38 54.5**	**+1.0**
IGHG	**Ghaleghazi**	**1.32**	**24**	ePg	**Pg**	**10 38 38.6**	**+2.2**
IGHG				e		10 38 40.7	
IVIS	**Veis**	**1.60**	**29**	ePg	**Pg**	**10 38 42.7**	**+0.9**
IVIS				e		10 38 44.7	
IDHR	**Dehrash**	**1.62**	**14**	ePn	**Pg**	**10 38 42.9**	**+0.7**
IKFM	**Kafar-mosalman**	**1.66**	**75**	ePn	**Pg**	**10 38 43.0**	**+0.1**
IKFM				e		10 39 13.6	
IKOM	**Komasi**	**1.69**	**51**	ePn	**Pg**	**10 38 43.3**	**-0.2**
IKOM				e		10 39 11.7	
ILIN	**Lien**	**1.99**	**25**	ePn	**Pg**	**10 38 48.1**	**-1.1**
IDOB	**Doab**	**2.00**	**70**	ePn	**Pg**	**10 38 48.9**	**-0.5**
NSR	**Nassriya**	**2.11**	**175**	ePn	**Pn**	**10 38 47.0**	**+0.2**
NSR				eSn	**Sn**	**10 39 13.5**	**+0.1**
IKRK	**Kirkuk**	**2.63**	**330**	ePn	**Pn**	**10 38 52.0**	**-2.0**

ISN 20 10:40:23.9±0.7, 33°.67N×45°.43E, h0km±2km, ML2.3
TEH 20 10:40:25.0, 33°.67N×45°.43E, h15km, ML2.8
ISC 20 10:40:26.6±2.2, 33°.69N±0°.04×45°.48E±0°.04, h14km±18km, n10, σ0§74/15, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	**Badra**	**0.69**	**147**	ePg	**Pb**	**10 40 39.5**	**-0.9**
IBDR				eSg	**Sb**	**10 40 49.8**	**-0.1**
IBDR				AML	AML	10 40 51.3	
	comp=N,122nm,0.1s						
IBDR				AML	AML	10 40 51.3	
	comp=E,124nm,0.4s						
BHD	**Baghdad**	**1.01**	**246**	ePg	**Pb**	**10 40 45.0**	**-0.8**
BHD				eSg	**Sb**	**10 41 00.0**	**+1.1**
IGHG	**Ghaleghazi**	**1.11**	**55**	ePg	**Pb**	**10 40 47.0**	**-0.7**
IGHG				e		10 40 48.7	
IDHR	**Dehrash**	**1.26**	**37**	ePg	**Pn**	**10 40 49.3**	**-0.7**
IDHR				eSg	**Sg**	**10 41 08.0**	**+0.7**
IDHR				e		10 41 13.3	
IVIS	**Veis**	**1.41**	**53**	ePn	**Pn**	**10 40 52.2**	**+0.2**
IVIS				e		10 41 13.4	
ILIN	**Lien**	**1.74**	**45**	ePn	**Pn**	**10 40 57.3**	**+0.7**
ILIN				e		10 40 58.2	
IKOM	**Komasi**	**1.76**	**73**	ePn	**Pn**	**10 40 57.1**	**+0.3**
IKOM				e		10 40 58.4	
IKRK	**Kirkuk**	**1.95**	**332**	ePn	**Pn**	**10 40 59.0**	**-0.3**
IKRK				eSn	**Sn**	**10 41 24.0**	**+0.4**
IKFM	**Kafar-mosalman**	**1.99**	**94**	ePn	**Pn**	**10 41 00.6**	**+0.8**
IKFM				e		10 41 31.6	
NSR	**Nassriya**	**2.73**	**168**	ePn	**Pn**	**10 41 10.5**	**+0.5**
NSR				eSn	**Sn**	**10 41 42.5**	**-0.3**

SOME 20 10:43:16.3, 40°.90N×70°.28E, h0km
KRNET 20 10:43:16.9±0.1, 38°.96N×71°.92E, mb2.4
NNC 20 10:43:15.4±6.0, 40°.80N×69°.96E, h0km, mb3.4, mpv3.0, 11C-3D, Error ellipse: s-maj=39.7km s-min=27.0km az=22.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**0.98**	**138**	⇑iP	Pn	10 43 42.4	+5.9
	baz=22						
BTK				⇑iS	Sn	10 44 00.4	+9.2
	baz=22						
IUG	**Iuzhnay**	**1.35**	**2**	eP	Pb	10 43 42.8	+1.1
	1.7nm,0.1s						
IUG				eS	Sn	10 44 01.7	+1.4
	28nm,0.2s						
JBG	**Jabagly**	**1.68**	**15**	P	Pb	10 43 47.4	+0.1
	13nm,0.2s						
JBG				S	Sg	10 44 10.5	+1.0
	12nm,0.4s						
BRLS	**Borolday**	**2.23**	**358**	eP	Pn	10 43 52.4	-1.3
	0.4nm,0.1s						
BRLS				eS	Sn	10 44 18.6	-3.5
	6.6nm,0.4s						
ARSB	**Arslanbob**	**2.34**	**76**	⇑iP	Pn	10 43 57.6	-1.0
	baz=19						
ARSB				⇑iS	Sb	10 44 28.1	0.0
	baz=19						
KK31	**Karatay Array**	**2.34**	**10**	⇓Pg	Pn	10 43 56.8	+1.6
	1.1nm,0.4s,baz=192,slow=15,SNR=6.6						
KK31				⇑Lg	Lg	10 44 26.0	
	0.6nm,0.2s,baz=192,slow=27,SNR=6.5						
AML	**Almayashu**	**3.10**	**63**	⇑iP	Pb	10 44 10.7	-1.0
	baz=23						
AML				⇑iS	Sb	10 44 49.9	-0.4
	baz=23						
MRKS	**Merke**	**3.12**	**50**	eP	Pb	10 44 10.4	-1.4
	2.7nm,0.2s						
MRKS				eS	Sb	10 44 49.2	-1.3
	3.5nm,0.5s						
MRKS	**Merke**	**3.12**	**50**	Pg	Pb	10 44 11.3	-0.5
	2.7nm,0.2s						
MRKS				Lg	Lg	10 44 51.5	
	3.5nm,0.5s						
ARLS	**Aral**	**3.45**	**71**	⇑iP	Pn	10 44 10.8	+0.3
	baz=32						
ARLS				⇑iS	Sn	10 44 49.9	-2.3
	baz=32						
UCH	**Uchtor**	**3.70**	**66**	⇑iP	Pn	10 44 16.2	+1.9
	baz=30						
UCH				⇑iS	Sn	10 44 58.8	0.0
	baz=30						
KZA	**Kyzart**	**4.17**	**70**	⇓iP	Pn	10 44 19.1	-1.6
	baz=38						
KZA				⇓iS	Sn	10 45 03.6	-6.8
	baz=38						
KST	**Kastek**	**5.01**	**61**	Pg	Pb	10 44 46.4	+2.4
	1.0nm,0.2s						
KST				Lg	Lg	10 45 51.8	
	3.0nm,0.5s						

VAO 20 11:03:03.3±0.6, 22°.79S×69°.66W, h121km±5km, mb4.4
IDC 20 11:03:08.6±0.6, 22°.48S×68°.60W, h88km±7km, mb3.9/3, mb1 3.9/8, mb1mx3.5/43, mbtmp4.1/8, MS3.4/3, Ms1 3.4/3, ms1mx2.8/32, Error ellipse: s-maj=22.2km s-min=15.5km az=120.0
NEIC 20 11:03:08.6±1.9, 22°.37S±0°.05×68°.82W±0°.07, h99km±3km, mb4.0/2, ML4.3(GUC), Error ellipse: s-maj=10.0km s-min=6.8km az=82.0
GUC 20 11:03:09.7±0.5, 22°.36S×68°.97W, h91km±2km, ML4.3
ISC 20 11:03:08.0±0.6, 22°.39S±0°.04×68°.85W±0°.05, h98km±6km, n67, σ1§46/77, 5C-9D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.23**	**195**	⇓iP	**Pn**	**11 03 23.8**	**+1.2**
LVC				iS	**Sn**	**11 03 34.2**	**+0.9**
LVC	**Limon Verde**	**0.23**	**195**	LR	LR	11 03 12.3	
	comp=Z,28nm,21.1s,baz=176,slow=12						
LVC				P	**Pn**	**11 03 23.7**	**+1.1**
	306nm,0.3s,baz=358,slow=2.7,SNR=748						
LVC				S	**Sn**	**11 03 34.3**	**+0.9**
	1μm,0.3s,baz=100,slow=22,SNR=27						
LVC	**Limon Verde**	**0.23**	**195**	ePn	**Pn**	**11 03 23.5**	**+1.0**
LVC	**Limon Verde**	**0.23**	**195**	ePn	**Pn**	**11 03 23.8**	**+1.2**
PB09	**IPOC Station P**	**0.70**	**328**	eP	**Pn**	**11 03 26.6**	**+1.2**
PB09				iS	**Sn**	**11 03 38.6**	**+0.1**
PB09				IAML		11 03 41.4	
	comp=E,7μm,0.2s						
PB06	**IPOC Station P**	**0.74**	**245**	⇑iP	**Pn**	**11 03 26.7**	**+0.9**
PB06				iS	**Sn**	**11 03 39.3**	**+0.1**
PB06				IAML		11 03 40.7	
	comp=N,8μm,0.5s						
PB03	**IPOC Station P**	**0.91**	**292**	⇑iP	**Pn**	**11 03 28.0**	**+0.6**
PB03				iS	**Sn**	**11 03 41.8**	**-0.3**
PB03				IAML		11 03 42.4	
	comp=N,15μm,0.3s						
PB15	**IPOC Station P**	**1.00**	**215**	⇓iP	**Pn**	**11 03 30.0**	**+1.5**
PB15				iS	**Sn**	**11 03 45.1**	**+1.2**
PB07	**IPOC Station P**	**1.17**	**304**	⇑iP	**Pn**	**11 03 31.0**	**+0.6**
PB07				iS	**Sn**	**11 03 46.9**	**-0.3**
PB07				IAML		11 03 48.5	
	comp=N,10μm,0.3s						
PB04	**IPOC Station P**	**1.21**	**272**	⇑iP	**Pn**	**11 03 31.3**	**+0.5**
PB04				iS	**Sn**	**11 03 47.7**	**-0.3**
PB04				IAML		11 03 51.7	
	comp=E,7μm,0.4s						
PB04	**IPOC Station P**	**1.21**	**272**		**Pn**	**11 03 31.1**	**+0.3**
PB05	**IPOC Station P**	**1.33**	**250**	⇑iP	**Pn**	**11 03 32.8**	**+0.5**
PB05				iS	**Sn**	**11 03 50.3**	**-0.3**
PB05				IAML		11 03 55.0	
	comp=N,3μm,0.4s						
PB02	**IPOC Station P**	**1.44**	**317**	⇓iP	**Pn**	**11 03 34.3**	**+0.8**
PB02				iS	**Sn**	**11 03 52.6**	**-0.3**
PB02				IAML		11 03 53.8	
	comp=E,18μm,0.3s						
PB01	**IPOC Station P**	**1.47**	**336**	⇓iP	**Pn**	**11 03 34.6**	**+0.8**
PB01				iS	**Sn**	**11 03 53.9**	**+0.5**
PB01				IAML		11 03 55.8	
	comp=N,10μm,0.3s						
PB01	**IPOC Station P**	**1.47**	**336**		**Pn**	**11 03 34.6**	**+0.8**
PB01				Sn	**Sn**	**11 03 54.0**	**+0.5**
PB10	**IPOC Station P**	**1.93**	**234**	eP	**Pn**	**11 03 40.1**	**+0.5**
PB10	**IPOC Station P**	**1.93**	**234**		**Pn**	**11 03 40.5**	**+1.0**
PATCX	**Punta Patache**	**1.98**	**322**	⇓iP	**Pn**	**11 03 40.4**	**+0.1**
PATCX				iS	**Sn**	**11 04 04.2**	**-0.8**
PATCX				IAML		11 04 10.2	
	comp=N,6μm,0.3s						
TA01	**Diego Aracena**	**2.20**	**325**	⇓iP	**Pn**	**11 03 42.9**	**-0.2**
PB11	**IPOC Station P**	**2.72**	**344**	⇓iP	**Pn**	**11 03 50.0**	**-0.2**
PB11	**IPOC Station P**	**2.72**	**344**		**Pn**	**11 03 50.0**	**-0.2**
GO01	**Chusmiza**	**2.73**	**353**	⇓iP	**Pn**	**11 03 51.5**	**+1.0**
GO01	**Chusmiza**	**2.73**	**353**		**Pn**	**11 03 51.6**	**+1.0**
GO02	**Mina Guanaco**	**2.84**	**194**		**Pn**	**11 03 53.0**	**+1.1**
MNMC	**Minye Minye**	**3.32**	**348**	⇓iP	**Pn**	**11 03 58.1**	**-0.2**
MNMC	**Minye Minye**	**3.32**	**348**		**Pn**	**11 03 58.0**	**-0.2**
GO03	**Copiap**	**5.33**	**193**		**Pn**	**11 04 24.3**	**-0.9**
LPAZ	**La Paz**	**6.11**	**6**	P	**Pn**	**11 04 38.9**	**+2.5**
	comp=N,3.2nm,0.3s,baz=210,slow=5.9,SNR=35						
LPAZ				LR	LR	11 07 16.1	
	comp=N,52nm,18.6s,baz=206,slow=40						
LPAZ	**La Paz**	**6.11**	**6**	eP	**Pn**	**11 04 38.8**	**+2.5**
LPAZ	**La Paz**	**6.11**	**6**		**Pn**	**11 04 38.5**	**+2.2**
GO04	**Tololo Observa**	**7.95**	**192**		**Pn**	**11 04 58.1**	**-2.9**
CFA	**Coronel Fontan**	**9.19**	**177**	P	**Pn**	**11 05 16.4**	**-1.4**
	comp=N,2.8nm,0.3s,baz=10,slow=16,SNR=18						
CFA				S	**Sn**	**11 06 56.0**	**-3.4**
	comp=N,0.4nm,0.3s,baz=264,slow=19,SNR=1.3						
SIV	**San Ignacio**	**9.72**	**50**	P	**Pn**	**11 05 24.4**	**-0.6**
	comp=N,1.5nm,0.3s,baz=250,slow=10,SNR=29						
SIV				S	**Sn**	**11 07 06.1**	**-6.2**
	baz=318,slow=23,SNR=1.5						
CPUP	**Villa Florida**	**11.21**	**113**	P	**Pn**	**11 05 43.6**	**-1.4**
	comp=N,0.0nm,0.3s,baz=349,slow=3.9,SNR=1.3						
CPUP	**Villa Florida**	**11.21**	**113**	eP	**Pn**	**11 05 46.4**	**+1.4**
AQDB	**Aquidauana**	**12.39**	**84**	eP	**P**	**11 06 00.6**	**-2.8**
PP1B	**Ponte de Pedra**	**13.96**	**73**	eP	**P**	**11 06 27.3**	**+0.9**
SALV	**Santo Antonio**	**14.00**	**65**	eP	**P**	**11 06 27.2**	**+0.4**
TRCB	**Terra Rica**	**14.98**	**95**	eP	**P**	**11 06 38.1**	**+0.4**
C2SB	**Chapadao do Su**	**15.42**	**79**	eP	**P**	**11 06 44.6**	**+2.1**
PTGB	**Pitanga**	**15.56**	**102**	eP	**P**	**11 06 44.6**	**+0.4**
ITAB	**Concordia**	**15.92**	**111**	eP	**P**	**11 06 48.3**	**+0.3**
CPSB	**Cacapava Do Su**	**15.94**	**123**	eP	**Pn**	**11 06 46.2**	**-0.3**
PCMB	**Pacaembu**	**16.33**	**91**	eP	**P**	**11 06 55.2**	**+2.5**
CLDB	**Colider**	**16.94**	**50**	eP	**P**	**11 07 00.2**	**+0.8**
ITRB	**Iturama**	**17.46**	**85**	eP	**Pn**	**11 07 01.7**	**+1.7**
FRTB	**Fartura**	**17.80**	**97**	eP	**P**	**11 07 09.4**	**+0.6**
PLCA	**Paso Flores**	**18.34**	**184**	P	**P**	**11 07 16.1**	**+1.3**
	comp=N,0.2nm,0.3s,baz=36,slow=12,SNR=6.9						
PLCA	**Paso Flores**	**18.34**	**184**	eP	P	11 07 03.4	-11
PLCA	**Paso Flores**	**18.34**	**184**	IAmb	IAmb	11 07 19.1	
	comp=Z,12nm,1.2s						
BB19B	**Bebedouro**	**18.93**	**90**	eP	**Pn**	**11 07 22.8**	**-0.1**
RCLB	**Rio Claro- Sao**	**19.71**	**94**	eP	**P**	**11 07 31.0**	**+1.2**
SPB	**Sao Paulo**	**19.75**	**98**	eP	**P**	**11 07 31.6**	**+1.5**
PET01	**Itanhaem-SP**	**19.90**	**100**	eP	**P**	**11 07 32.9**	**+1.2**
VAO	**Valinhos**	**20.20**	**96**	eP	**P**	**11 07 36.2**	**+1.1**
BDFB	**Brasilia**	**20.80**	**75**	P	**P**	**11 07 41.2**	**-0.4**
	comp=Z,3.5nm,0.4s,baz=250,slow=12,SNR=7.1						
BDFB	**Brasilia**	**20.80**	**75**	IAmb	IAmb	11 07 44.2	
	comp=Z,7.9nm,0.9s						
PARB	**Paraibuna**	**21.42**	**97**	eP	**P**	**11 07 49.6**	**+1.4**
BSCB	**Bom Sucesso**	**22.41**	**91**	eP	**P**	**11 07 59.2**	**+0.5**
SDV	**Santo Domingo**	**31.13**	**357**	eP	**P**	**11 09 14.3**	**-3.4**
JTS	**Las Juntas de**	**36.11**	**332**	LR	LR	11 24 58.1	
	comp=Z,148nm,19.6s,baz=2.5,slow=36						
TORD	**Torodi Ar. Bea**	**77.60**	**70**	P	**P**	**11 14 54.9**	**+1.0**
	comp=Z,1.6nm,0.4s,baz=253,slow=5.5,SNR=18						
ESDC	**Sonseca Array**	**86.42**	**44**	LR	LR	11 52 08.1	
	comp=Z,33nm,19.4s,baz=145,slow=34						
YKA	**Yellowknife Ar**	**92.04**	**341**	P	**P**	**11 16 06.7**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=135,slow=4.4,SNR=9.8						
ASAR	**Alice Springs**	**129.15**	**207**	PKP	**PKiKP**	**11 22 07.0**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=132,slow=2.6,SNR=2.5						
WRA	**Warramunga Arr**	**132.22**	**210**	PKP	**PKiKP**	**11 22 13.3**	**+1.0**
	comp=Z,0.5nm,1.0s,baz=153,slow=2.3,SNR=1.6						
MKAR	**Makanchi Array**	**146.31**	**37**	PKPbc	**PKPbc**	**11 22 38.1**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=298,slow=2.6,SNR=4.1						

IDC 20 11:11:09.2±1.4, 15°.47S×173°.13W, h0km, mb4.2/4, mb1 4.3/5, mb1mx3.8/52, mbtmp4.2/5, ML4.0/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/38, Error ellipse: s-maj=53.5km s-min=23.8km az=132.0
NEIC 20 11:11:13.4±1.9, 15°.64S±0°.08×172°.7W±0°.2, h34km±7km, mb4.3/7, Error ellipse: s-maj=23.3km s-min=10.6km az=99.0
ISC 20 11:11:11.7±0.8, 15°.48S±0°.09×172°.8W±0°.1, h29km, n32, σ2§02/31, mb4.3/9, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.84**	**32**	Pn	**Pb**	**11 11 44.1**	**-0.6**
	48nm,0.3s,baz=209,slow=2.9,SNR=150						
AFI				Sn	**Sn**	**11 12 04.0**	**+0.3**
	217nm,0.3s,baz=38,slow=22,SNR=52						
AFI				LR	LR	11 12 28.7	
	comp=Z,137nm,21.5s,baz=238,slow=39						
AFI	**Afiamalu**	**1.84**	**32**		**Pb**	**11 11 44.1**	**-0.6**
AFI					**Sn**	**11 12 05.3**	**+1.6**
NIUE	**Niue**	**4.49**	**143**		**Pn**	**11 12 16.6**	**-1.2**
DZM	**Mont Dzumac**	**20.73**	**248**	LR	LR	11 22 27.6	
	comp=Z,108nm,19.1s,baz=50,slow=33						
WMGZ	**Waiomatatini S**	**23.58**	**198**	P	**P**	**11 16 23.8**	**+3.9**
HAZ	**Te Kaha**	**23.71**	**199**	P	**P**	**11 16 22.6**	**+1.5**
PUZ	**Puketiti**	**23.86**	**198**	P	**P**	**11 16 24.3**	**+1.7**
RUGZ	**Raukumara Rang**	**23.93**	**199**	P	**P**	**11 16 25.2**	**+1.8**
MWZ	**Matawai**	**24.32**	**199**	P	**P**	**11 16 28.7**	**+1.8**
URZ	**Urewera**	**24.38**	**200**	P	**P**	**11 16 28.3**	**+0.9**
	8.4nm,0.5s,baz=348,slow=1.9,SNR=11						
URZ	**Urewera**	**24.38**	**200**	P	**P**	**11 16 27.0**	**-0.4**
URZ	**Urewera**	**24.38**	**200**	P	**P**	**11 16 28.0**	**+0.6**
RAGZ	**Rawiri**	**24.50**	**199**	P	**P**	**11 16 31.3**	**+2.7**
RIGZ	**Rimuhau**	**24.59**	**198**	P	**P**	**11 16 33.3**	**+3.9**
KNZ	**Kokohu**	**24.91**	**198**	P	**P**	**11 16 36.4**	**+4.3**
TLZ	**Tolley Road**	**24.98**	**202**	P	**P**	**11 16 40.2**	**+7.3**
BKZ	**Black Stump Fm**	**25.41**	**200**	P	**P**	**11 16 38.0**	**+1.2**
BKZ				IAmb	IAmb	11 16 48.1	
	comp=Z,15nm,1.3s						
BKZ	**Black Stump Fm**	**25.41**	**200**	P	**P**	**11 16 38.7**	**+1.9**
BHHZ	**Black Hill Sta**	**25.84**	**200**	P	**P**	**11 16 41.4**	**+0.7**
KAHZ	**Kahuranaki**	**25.86**	**199**	P	**P**	**11 16 38.3**	**-2.5**
OHWZ	**Ohakea**	**26.73**	**201**	P	**P**	**11 16 52.0**	**+3.3**
MRZ	**Mangatainoka R**	**27.06**	**200**	P	**P**	**11 16 53.4**	**+1.8**
TUWZ	**Tuamarina**	**28.30**	**201**	P	**P**	**11 17 03.1**	**+0.4**
QRZ	**Quartz Range**	**28.30**	**204**	P	**P**	**11 17 02.7**	**0.0**
QRZ				IAmb	IAmb	11 17 07.9	
	comp=Z,8.6nm,0.7s						
THZ	**Tophouse**	**28.96**	**202**	P	**P**	**11 17 11.9**	**+3.2**
THZ				IAmb	IAmb	11 17 28.0	
	comp=Z,7.8nm,1.2s						
KHZ	**Kahutara**	**29.31**	**201**	P	**P**	**11 17 12.0**	**+0.3**
KHZ				IAmb	IAmb	11 17 20.9	
	comp=Z,6.3nm,1.0s						
LTZ	**Lake Taylor**	**30.08**	**202**	P	**P**	**11 17 19.2**	**+0.7**
LTZ				IAmb	IAmb	11 17 31.6	
	comp=Z,2.9nm,0.8s						
STKA	**Stephens Creek**	**44.52**	**240**	P	**P**	**11 19 20.5**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=103,slow=11,SNR=4.1						
STKA	**Stephens Creek**	**44.52**	**240**	IAmb	IAmb	11 19 22.5	
	comp=Z,2.1nm,1.3s						
WRA	**Warramunga Arr**	**50.42**	**257**	P	**P**	**11 20 05.7**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=96,slow=6.8,SNR=13						
ASAR	**Alice Springs**	**50.66**	**252**	P	**P**	**11 20 08.0**	**-0.8**
	comp=Z,3.4nm,0.5s,baz=87,slow=7.9,SNR=105						
BRTR	**Keskin Array B**	**146.60**	**321**	PKPbc	**PKPab**	**11 30 52.7**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=68,slow=1.1,SNR=7.0						

SNET 20 11:20:18.6±1.2, 13°.27N×91°.44W, h20km, ML3.5
UCR 20 11:20:18.7±1.2, 13°.29N×91°.44W, h20km, ML3.4, mb3.9(NEIC)
NEIC 20 11:20:19.1±3.3, 13°.35N±0°.07×91°.59W±0°.06, h35km±2km, mb3.9/6, Md4.1/18(MEX), Error ellipse: s-maj=12.4km s-min=7.4km az=212.0
IDC 20 11:20:21.3±2.8, 13°.49N×91°.57W, h57km±20km, mb3.7/6, mb1 4.0/10, mb1mx3.6/39, mbtmp3.9/10, ML3.8/4, MS3.5/4, Ms1 3.5/4, ms1mx2.9/39, Error ellipse: s-maj=23.6km s-min=14.7km az=1.0
MEX 20 11:20:22.2±1.0, 13°.59N×91°.72W, h26km±126km, MD4.1
GCG 20 11:20:28.4±0.3, 14°.27N×91°.34W, h52km±14km, MD4.1
ISC 20 11:20:18.8±1.6, 13°.36N±0°.09×91°.59W±0°.06, h44km±15km, n59, σ1§76/71, mb3.9/6, MS3.5/3, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**1.08**	**1**	eP	**Pn**	**11 20 37.6**	**+0.1**
FUG	**Fuego 3**	**1.30**	**34**	eP	**Pn**	**11 20 40.5**	**-0.3**
STG3	**Santiaguito 3,**	**1.35**	**1**	eP	**Pn**	**11 20 40.4**	**-1.0**
PCG	**Pacaya**	**1.40**	**43**	eP	**Pn**	**11 20 41.5**	**-0.7**
THIG		**1.68**	**337**		**Pn**	**11 20 44.3**	**-1.4**
THIG		**1.68**	**337**	i P	**Pn**	**11 20 44.3**	**-1.4**
THIG				i S	**Sn**	**11 21 00.2**	**-5.8**
NBG	**Las Nubes**	**1.72**	**44**	eP	**Pn**	**11 20 47.3**	**+0.7**
RTR	**El Retiro**	**1.96**	**74**	eP	**Pn**	**11 20 49.3**	**-0.5**
RTR	**El Retiro**	**1.96**	**74**	eP	**Pn**	**11 20 49.3**	**-0.5**
CEVE	**Cerro Verde**	**1.97**	**76**	eP	**Pn**	**11 20 49.6**	**-0.3**
CEVE				eS	**Sn**	**11 21 13.5**	**-0.1**
CEVE				IAML		11 21 18.4	
	comp=Z,2μm,0.2s						
CEVE	**Cerro Verde**	**1.97**	**76**	eP	**Pn**	**11 20 49.6**	**-0.3**
CEVE				eS	**Sn**	**11 21 13.5**	**-0.1**
CEVE				IAML		11 21 18.4	
	comp=Z,2μm,0.2s						
APG	**El Apazote**	**1.97**	**34**	P	**Pn**	**11 20 49.7**	**-0.2**
	comp=Z,42nm,0.3s,baz=166,slow=10.0,SNR=301						
APG				S	**Sn**	**11 21 14.4**	**+0.9**
	comp=Z,47nm,0.3s,baz=89,slow=20,SNR=6.4						
SBLS	**San Blas**	**1.97**	**76**	eP	**Pn**	**11 20 49.7**	**-0.2**
SBLS	**San Blas**	**1.97**	**76**	eP	**Pn**	**11 20 49.7**	**-0.2**
SNJE	**San Jose**	**1.99**	**75**	eP	**Pn**	**11 20 50.2**	**-0.1**
SNJE	**San Jose**	**1.99**	**75**	eP	**Pn**	**11 20 50.2**	**-0.1**
BOQS	**Boqueron**	**2.28**	**80**	eP	**Pn**	**11 20 53.8**	**-0.4**
SNET	**Serv Nac Est T**	**2.32**	**82**		**Pn**	**11 20 54.6**	**0.0**
SNET					**Sn**	**11 21 22.7**	**+0.8**
MTO3	**Montecristo**	**2.40**	**64**	eP	**Pn**	**11 20 55.4**	**-0.5**
MTO3				eS	**Sn**	**11 21 25.8**	**+1.6**
MTO3				IAML		11 21 28.1	
	comp=Z,96nm,0.6s						
MTO3	**Montecristo**	**2.40**	**64**	eP	**Pn**	**11 20 55.4**	**-0.5**
MTO3				eS	**Sn**	**11 21 25.8**	**+1.6**
MTO3				IAML		11 21 28.1	
	comp=Z,96nm,0.6s						
LFU	**La Fuente**	**2.44**	**80**	eP	**Pn**	**11 20 55.8**	**-0.4**
LFU	**La Fuente**	**2.44**	**80**	eP	**Pn**	**11 20 55.8**	**-0.4**
LFRS	**El Faro**	**2.47**	**84**	eP	**Pn**	**11 20 57.0**	**+0.3**
LFRS				eS	**Sn**	**11 21 25.6**	**-0.2**
PAVA	**Las Pavas**	**2.60**	**82**	eP	**Pn**	**11 20 58.8**	**+0.2**
PAVA				IAML		11 21 41.0	
	comp=Z,244nm,0.3s						
PAVA	**Las Pavas**	**2.60**	**82**	eP	**Pn**	**11 20 58.8**	**+0.2**
PAVA				IAML		11 21 41.0	
	comp=Z,244nm,0.3s						
PCIG		**2.82**	**326**		**Pn**	**11 21 00.0**	**-1.4**
PCIG					**Sn**	**11 21 33.4**	**-0.8**
PCIG		**2.82**	**326**	i P	**Pn**	**11 21 00.0**	**-1.4**
PCIG				i S	**Sn**	**11 21 33.4**	**-0.8**
CCIG	**Comitan**	**2.96**	**350**		**Pn**	**11 21 04.4**	**+0.9**
CCIG	**Comitan**	**2.96**	**350**		**Pn**	**11 21 05.0**	**+1.6**
CCIG					**Sn**	**11 21 38.0**	**+0.1**
CCIG	**Comitan**	**2.96**	**350**	i P	**Pn**	**11 21 05.0**	**+1.6**
CCIG				i S	**Sn**	**11 21 38.0**	**+0.1**
COEB	**Comit de Eme**	**2.98**	**87**	IAML		11 21 49.1	
	comp=Z,122nm,0.4s						
COEB	**Comit de Eme**	**2.98**	**87**	IAML		11 21 49.1	
	comp=Z,122nm,0.4s						
PACA	**Pacayal**	**3.18**	**88**	eP	**Pn**	**11 21 06.2**	**-0.2**
PACA	**Pacayal**	**3.18**	**88**	eP	**Pn**	**11 21 06.2**	**-0.2**
TGIG		**3.71**	**337**	eP	**Pn**	**11 21 16.9**	**+3.2**
TGIG				i S	**Sn**	**11 22 00.0**	**+3.8**
TGUH	**Tegucigalpa,Un**	**4.25**	**80**	Pn	**Pn**	**11 21 23.2**	**+1.9**
CMIG	**Matias Romero**	**4.89**	**320**	P	**Pn**	**11 21 30.4**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=119,slow=8.8,SNR=14						
CMIG				S	**Sn**	**11 22 25.7**	**+0.5**
	comp=Z,3.1nm,0.3s,baz=78,slow=15,SNR=3.6						
CMIG	**Matias Romero**	**4.89**	**320**		**Pn**	**11 21 30.3**	**+0.5**
CMIG					**Sn**	**11 22 30.5**	**+5.3**
CMIG	**Matias Romero**	**4.89**	**320**	eP	**Pn**	**11 21 30.3**	**+0.5**
CMIG				i S	**Sn**	**11 22 30.5**	**+5.3**
ESTN	**Estel**	**5.09**	**92**	Pn	**Pn**	**11 21 32.1**	**-0.6**
JTS	**Las Juntas de**	**7.17**	**114**	P	**Pn**	**11 22 04.3**	**+3.0**
	comp=Z,0.8nm,0.3s,baz=179,slow=23,SNR=6.6						
JTS				S	**Sn**	**11 23 17.0**	**-4.5**
	comp=Z,0.4nm,0.3s,baz=2.0,slow=23,SNR=2.0						
JTS	**Las Juntas de**	**7.17**	**114**		**Pn**	**11 22 04.1**	**+2.8**
ESPN	**Las Esperanzas**	**7.20**	**98**	Pn	**Pn**	**11 21 59.5**	**-2.2**
TEIG	**Tepich**	**7.53**	**24**	P	**Pn**	**11 22 06.1**	**-0.1**
	comp=Z,10.0nm,0.3s,baz=40,slow=0.5,SNR=46						
TEIG				LR	LR	11 25 09.3	
	comp=Z,221nm,18.9s,baz=140,slow=39						
TEIG	**Tepich**	**7.53**	**24**		**Pn**	**11 22 06.6**	**+0.5**
TXAR	**Lajitas Array**	**19.45**	**327**	P	**Pn**	**11 24 44.1**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=155,slow=13,SNR=19						
TX31	**Lajitas Ar. Si**	**19.45**	**327**		**Pn**	**11 24 45.4**	**+2.0**
TX32	**Lajitas Array**	**19.45**	**327**		**Pn**	**11 24 45.4**	**+1.9**
TX32				IAmb	IAmb	11 24 55.8	
	comp=Z,2.9nm,1.0s						
TKL	**Tuckaleechee C**	**23.30**	**16**	P	**P**	**11 25 21.4**	**-1.5**
	comp=Z,4.4nm,0.6s,baz=178,slow=12,SNR=10						
TKL				LR	LR	11 35 30.4	
	comp=Z,94nm,18.7s,baz=175,slow=39						
TKL	**Tuckaleechee C**	**23.30**	**16**	IAmb	IAmb	11 25 25.4	
	comp=Z,6.5nm,1.1s						
CCM	**Cathedral Cave**	**24.60**	**1**	P	**P**	**11 25 34.3**	**-0.6**
NVAR	**Mina Array Bea**	**34.42**	**321**	P	**P**	**11 27 03.8**	**+1.4**
	comp=Z,1.3nm,0.8s,baz=134,slow=8.1,SNR=8.6						
NVAR				LR	LR	11 42 55.4	
	comp=Z,85nm,18.1s,baz=313,slow=40						
ULM	**Lac du Bonnet**	**36.96**	**355**	P	**P**	**11 27 22.0**	**-1.7**
	comp=Z,1.1nm,0.6s,baz=115,slow=5.8,SNR=3.3						
ULM	**Lac du Bonnet**	**36.96**	**355**	IAmb	IAmb	11 27 35.7	
	comp=Z,1.3nm,1.1s						
SCHQ	**Schefferville**	**45.69**	**20**	P	**P**	**11 28 33.3**	**-1.9**
	comp=Z,2.1nm,0.8s,baz=238,slow=9.4,SNR=5.6						
SCHQ				LR	LR	11 48 26.3	
	comp=Z,92nm,19.8s,baz=332,slow=37						
SCHQ	**Schefferville**	**45.69**	**20**	IAmb	IAmb	11 28 42.6	
	comp=Z,5.1nm,1.5s						
YKA	**Yellowknife Ar**	**51.74**	**347**	P	**P**	**11 29 21.5**	**0.0**
	comp=Z,1.0nm,0.7s,baz=150,slow=7.6,SNR=23						
ILAR	**Eielson Array**	**63.59**	**337**	P	**P**	**11 30 45.8**	**+1.0**
	comp=Z,1.1nm,0.9s,baz=176,slow=4.8,SNR=8.3						
CMAR	**Chiang Mai Arr**	**146.73**	**342**	PKPbc	**PKPab**	**11 39 58.6**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=352,slow=4.3,SNR=7.6						

IDC 20 11:50:12.4±8.7, 5°.37S×102°.03W, h0km, mb3.3/4, mb1 3.8/4, mb1mx3.5/33, mbtmp3.3/4, MS1 3.4/3, ms1mx2.9/18, Error ellipse: s-maj=255.6km s-min=187.6km az=83.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**23.05**	**48**	LR	LR	12 01 46.7	
	comp=Z,67nm,18.0s,baz=206,slow=30						
TEIG	**Tepich**	**28.81**	**28**	LR	LR	12 05 52.2	
	comp=Z,60nm,18.8s,baz=138,slow=33						
PLCA	**Paso Flores**	**45.11**	**146**	LR	LR	12 13 25.2	
	comp=Z,44nm,18.6s,baz=352,slow=31						
NVAR	**Mina Array Bea**	**46.12**	**342**	P	P	11 58 37.4	-1.4
	0.2nm,0.6s,baz=189,slow=5.2,SNR=2.0						
PDAR	**Pinedale Array**	**48.40**	**353**	P	P	11 58 58.3	+1.8
	0.1nm,0.5s,baz=173,slow=8.0,SNR=1.8						
YKA	**Yellowknife Ar**	**68.36**	**354**	P	P	12 01 15.0	-0.4
	0.5nm,0.8s,baz=161,slow=6.5,SNR=6.1						

ILAR Eielson Array 77.38 342 P P 12 02 09.0 +0.1
0.5nm,0.8s,baz=147,slow=5.6,SNR=4.4
H11S2 WAKE ISLAND Hy 92.88 288 T T 13 45 07.9
baz=94,slow=74,SNR=18
H11S1 WAKE ISLAND Hy 92.88 288 T T 13 45 10.5
baz=94,slow=74,SNR=13
H11S3 WAKE ISLAND Hy 92.89 288 T T 13 45 10.1
baz=94,slow=74,SNR=12

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*IDC **20** 11:57:46.2±1.9, 10°.95S×162°.32E, h44km±15km, mb4.0/13, mb1 4.2/16, mb1mx4.0/32, mbtmp4.3/16, ML4.3/3, MS4.1/24, Ms1 4.1/24, ms1mx4.0/37, Error ellipse: s-maj=14.1km s-min=12.9km az=99.0*

*GCMT **20** 11:57:46.2±0.3, 10°.91S±0°.02×161°.86E±0°.02, h33km, MW5.0/59, Moment Tensor Solution. s52,c62; s59,c72; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr4.11±.23; Mθθ-3.56±.16; Mφφ-0.55±.16; Mrθ0.51±.14; Mrφ1.69±.11; Mθφ-1.63±.17; Best double couple: M0 4.54800×10^16 NP1:φs279.00000°, δ40.00000°, λ65.00000°. NP2: φs130.00000°, δ55.00000°, λ109.00000°. Principal axes: T 4.6240, Plg72.0000°, Azm91.0000°; N -0.1510, Plg16.0000°, Azm298.0000°; P -4.4730, Plg8.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **20** 11:57:48.2±2.3, 11°.02S±0°.05×162°.16E±0°.09, h62km±6km, mb4.4/24 Error ellipse: s-maj=14.0km s-min=3.2km az=64.0*

ISC 20 11:57:46.7±0.4, 10°.96S±0°.06×162°.26E±0°.07, h46km, n72, σ1s.52/56, mb4.4/25, MS4.1/22, Bougainville-Solomon Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HNR Honiara 2.73 304 P Pn 11 58 27.1 -1.0
83nm,0.3s,baz=197,slow=6.5,SNR=40
HNR S Sn 11 59 01.3 +1.3
280nm,0.3s,baz=326,slow=23,SNR=13
HNR LR LR 11 59 49.4
comp=Z,4μm,19.6s,baz=130,slow=44
HNR Honiara 2.73 304 eP Pn 11 58 28.0 -0.1
HNR iS Sn 11 59 02.0 +2.0
HNR Honiara 2.73 304 Pn 11 58 28.0 -0.1
SANVU Saraoutou 6.57 133 Pn Pn 11 59 21.9 +1.1
SANVU Sn Sn 12 00 33.7 -0.7
NOUC Port Laguerre 11.74 161 Pn 12 00 33.6 +2.0
DZM Mont Dzumac 11.76 161 ePn Pn 12 00 33.3 +1.3
4.3nm,0.2s
DZM eSn Sn 12 02 36.9 -5.0
1.5nm,0.3s
DZM eLR LR 12 03 21.2
comp=Z,2μm,22.6s
DZM Mont Dzumac 11.76 161 P Pn 12 00 33.2 +1.3
0.3nm,0.3s,baz=34,slow=8.8,SNR=40
DZM LR LR 12 04 32.1
comp=Z,1μm,19.7s,baz=17,slow=35
KRVT Keravat (AS076 12.10 302 LR LR 12 05 27.0
comp=Z,648nm,19.4s,baz=121,slow=38
PMG Port Moresby 14.94 275 LR LR 12 06 41.7
comp=Z,2μm,19.6s,baz=122,slow=36
MSVF Nonsavu 16.71 116 P P 12 01 44.2 +4.6
EIDS Eidsvold 17.82 215 P P 12 01 52.4 +0.7
CTA Charters Tower 17.88 238 P P 12 01 53.8 +1.3
1.2nm,0.3s,baz=70,slow=12,SNR=32
PATS Pohnpei 18.11 347 P Pn 12 01 55.5 +0.5
COEN Coen 18.87 259 P P 12 02 06.0 +1.7
ARMA Armidale 21.74 205 P P 12 02 35.3 +0.9
ARMA IAmb IAmb 12 02 52.6
comp=Z,38nm,1.5s
AFI Afiamalu 25.52 99 LR LR 12 11 33.6
comp=Z,566nm,19.7s,baz=278,slow=32
RAO Raoul Island 25.96 137 LR LR 12 12 11.4
comp=Z,317nm,18.1s,baz=310,slow=33
WR0 Warramunga Arr 28.13 248 P P 12 03 33.7 -1.1
WR0 IAmb IAmb 12 03 43.5
comp=Z,18nm,1.5s
WB0 Warramunga Arr 28.22 249 P P 12 03 34.1 -1.5
WB0 IAmb IAmb 12 03 45.7
comp=Z,6.9nm,0.9s
STKA Stephens Creek 28.24 219 P P 12 03 36.0 +0.5
comp=Z,2.7nm,0.8s,baz=68,slow=14,SNR=4.6
STKA PcP PcP 12 06 48.1 -0.1
comp=Z,1.7nm,0.6s,baz=59,slow=6.0,SNR=4.0
STKA LR LR 12 14 47.9
comp=Z,901nm,18.6s,baz=25,slow=36
STKA Stephens Creek 28.24 219 IAmb IAmb 12 03 40.2
comp=Z,0.8nm,0.9s
WRAB Tennant Creek 28.30 248 P P 12 03 35.1 -1.1
WRAB IAmb IAmb 12 03 46.4
comp=Z,14nm,1.3s
WB2 Warramunga Arr 28.30 248 P P 12 03 34.5 -1.8
WRA Warramunga Arr 28.31 248 P P 12 03 34.8 -1.6
comp=Z,1.9nm,0.6s,baz=76,slow=9.4,SNR=19
WRA PcP PcP 12 06 48.6 -0.1
comp=Z,1.6nm,0.8s,baz=81,slow=2.7,SNR=4.9
WRA LR LR 12 14 53.9
comp=Z,1μm,18.1s,baz=70,slow=36
H11S2 WAKE ISLAND Hy 29.59 9 T T 12 34 42.9
baz=188,slow=76,SNR=252
H11S3 WAKE ISLAND Hy 29.59 9 T T 12 34 42.2
baz=188,slow=76,SNR=266
H11S1 WAKE ISLAND Hy 29.61 9 T T 12 34 44.2
baz=188,slow=76,SNR=384
AS31 Alice Springs 29.80 241 P P 12 03 47.8 -1.8
ASAR Alice Springs 29.80 241 P P 12 03 47.9 -1.7
comp=Z,1.3nm,0.8s,baz=64,slow=10.0,SNR=21
ASAR PcP PcP 12 06 51.9 -0.5
comp=Z,2.1nm,0.9s,baz=91,slow=3.0,SNR=10
ASAR S S 12 08 45.9 +2.7
comp=Z,0.8nm,1.1s,baz=72,slow=15,SNR=2.7
ASAR LR LR 12 14 55.9
comp=Z,470nm,20.6s,baz=63,slow=34
H11N1 WAKE ISLAND Hy 30.82 9 T T 12 36 15.1
baz=188,slow=76,SNR=212
BKZ Black Stump Fm 30.82 158 P P 12 03 59.2 +0.8
BKZ IAmb IAmb 12 04 12.0
comp=Z,7.9nm,1.1s
H11N3 WAKE ISLAND Hy 30.83 9 T T 12 36 11.9
baz=188,slow=76,SNR=322
H11N2 WAKE ISLAND Hy 30.84 9 T T 12 36 16.5
baz=188,slow=76,SNR=245
BBOO Buckleboo 32.45 224 P P 12 04 12.3 -0.4
KNRA Kununurra 32.90 258 P P 12 04 16.3 -0.5
RPZ Rata Peaks 33.52 168 P P 12 04 22.4 +0.5
comp=Z,4.0nm,0.8s,baz=165,slow=5.0,SNR=4.7
FITZ Fitzroy Crossi 36.10 254 P P 12 04 43.1 -1.4
PPT Papeete 47.05 104 LR LR 12 22 59.8
comp=Z,157nm,18.4s,baz=294,slow=32
PPT2 Papeete2 47.05 104 eLR LR 12 19 47.4
comp=Z,195nm,22.0s
JAGI Jajag, Banyuwa 47.44 269 P P 12 06 15.0 -2.3
MJAR Matsushiro Arr 52.39 336 LR LR 12 27 23.7
comp=Z,83nm,21.7s,baz=150,slow=34
JKA Kamikawa-asahi 57.65 343 P P 12 07 33.0 +0.7
ASAJ Asahikawa 57.65 343 P P 12 07 33.0 +0.7
comp=Z,9.6nm,0.8s,baz=214,slow=6.6,SNR=6.8
KSRS Korea Array 57.93 328 LR LR 12 30 31.5
comp=Z,144nm,20.2s,baz=126,slow=34
RKT Rikitea 60.83 110 eLR LR 12 26 07.7
comp=Z,286nm,22.8s
USRK Ussuriysk Ar. 61.39 336 P P 12 07 59.0 +0.9
comp=Z,3.8nm,0.8s,baz=142,slow=8.4,SNR=6.1
PETK Petropavlovsk- 63.93 357 P P 12 08 15.6 +0.8
comp=Z,2.9nm,0.6s,baz=168,slow=11,SNR=3.8
PETK PP PP 12 10 34.6 -1.4
comp=Z,3.7nm,1.0s,baz=147,slow=5.0,SNR=6.1
PETK LR LR 12 32 47.7
comp=Z,123nm,19.8s,baz=231,slow=33
VNDA Vanda 66.55 180 LR LR 12 33 54.6
comp=Z,106nm,18.0s,baz=346,slow=33
CMAR Chiang Mai Arr 68.95 295 LR LR 12 38 13.9
comp=Z,30nm,20.1s,baz=95,slow=35
SONM Songino Array 76.60 325 P P 12 09 31.9 -0.8
comp=Z,1.6nm,0.8s,baz=142,slow=5.9,SNR=14
SONM LR LR 12 44 57.3
comp=Z,89nm,18.4s,baz=121,slow=37
GAMB Gambell 77.13 12 P P 12 09 35.9 +0.9
GAMB IAmb IAmb 12 09 49.0
comp=Z,6.3nm,1.5s
QSPA South Pole Qui 79.04 180 P P 12 09 47.0 +1.0
SVW2 Sparrevohn 79.13 19 P P 12 09 47.9 +1.6
SVW2 IAmb IAmb 12 09 48.8
comp=Z,12nm,1.2s
MLY Manley 83.50 18 P P 12 10 10.2 +0.8
MLY IAmb IAmb 12 10 24.6
comp=Z,3.2nm,1.0s
MAW Mawson 83.51 202 P P 12 10 09.6 +0.3
comp=Z,2.0nm,0.7s,baz=106,slow=15,SNR=3.3
WRH Wood River Hil 83.96 19 P P 12 10 12.0 +0.4
WRH IAmb IAmb 12 10 14.5
comp=Z,3.8nm,1.0s
CCB Clear Creek Bu 84.17 19 P P 12 10 12.1 -0.6
CCB IAmb IAmb 12 10 15.5
comp=Z,3.4nm,1.1s
HDA Harding Lake 84.29 20 IAmb IAmb 12 10 16.2
comp=Z,4.3nm,0.8s
H02S1 DAWSON INLET T 84.48 33 T T 13 43 24.6
SNR=10
ILAR Eielson Array 84.55 20 P P 12 10 14.7 0.0
comp=Z,0.6nm,0.5s,baz=241,slow=4.6,SNR=14
ILAR LR LR 12 43 20.6
comp=Z,205nm,20.2s,baz=254,slow=32
EGAK Eagle 86.50 21 IAmb IAmb 12 10 26.8
comp=Z,5.5nm,1.1s
NVAR Mina Array Bea 88.60 51 P P 12 10 33.5 -1.9
comp=Z,0.4nm,0.6s,baz=234,slow=4.3,SNR=3.2
NVAR LR LR 12 44 57.6
comp=Z,137nm,18.2s,baz=316,slow=32
MKAR Makanchi Array 91.13 317 P P 12 10 45.4 -1.3
comp=Z,0.6nm,0.7s,baz=106,slow=4.6,SNR=6.5
MKAR LR LR 12 52 39.2
comp=Z,65nm,20.4s,baz=64,slow=36
ZALV Zalesovo Beam 91.49 325 LR LR 12 51 05.8
comp=Z,63nm,21.1s,baz=73,slow=35
NRIK Noril'sk 94.85 340 LR LR 12 52 18.7
comp=Z,102nm,21.8s,baz=58,slow=34
PDAR Pinedale Array 96.02 48 LR LR 12 50 55.7
comp=Z,76nm,18.0s,baz=286,slow=33
YKA Yellowknife Ar 96.48 28 P P 12 11 09.8 -1.1
comp=Z,0.3nm,0.5s,baz=258,slow=4.9,SNR=6.6
YKA LR LR 12 48 20.5
comp=Z,80nm,20.9s,baz=0.0,slow=32
TXAR Lajitas Array 98.80 62 LR LR 12 50 40.3
comp=Z,68nm,18.8s,baz=0.0,slow=32
FINES FINESS Array B 120.40 337 PKP PKPdf 12 16 31.8 -0.9
comp=Z,1.4nm,1.0s,baz=180,slow=32,SNR=1.6
BOSA Boshof 122.78 225 PKP PKPdf 12 16 37.8 -0.8
comp=Z,2.9nm,0.7s,baz=114,slow=1.6,SNR=8.3
AKASG Malin Array Be 124.88 325 PKP PKPdf 12 16 40.2 -1.5
comp=Z,0.2nm,0.3s,baz=66,slow=1.5,SNR=4.2
TORD Torodi Ar. Bea 160.86 278 PKP PKPdf 12 17 42.0 -0.8
comp=Z,0.7nm,0.7s,baz=37,slow=1.1,SNR=5.3

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*NIED **20** 12:18:00, 42°.60N×142°.80E, h47km, Mw3.6 Best double couple: M0 2.90000×10^14 NP1:φs162.00000°, δ65.00000°, λ100.00000°. NP2:φs319.00000°, δ26.00000°, λ69.00000°.*

*JMA **20** 12:18:45.9±0.1, 42°.63N×142°.80E, h46km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φs349.00000°, δ42.00000°, λ132.00000°. NP2: φs118.00000°, δ60.00000°, λ59.00000°. Principal axes: T Plg61.0000°, Azm339.0000°; N Plg27.0000°, Azm135.0000°; P Plg10.0000°, Azm230.0000°;*

*IDC **20** 12:18:47.5±2.0, 42°.69N×142°.57E, h68km±16km, mb3.2/9, mb1 3.5/10, mb1mx3.3/33, mbtmp3.5/10, MS3.9/1, Ms1 3.9/1, ms1mx2.8/15 Error ellipse: s-maj=29.1km s-min=15.8km az=112.0*

*SKHL **20** 12:18:47.2±0.6, 42°.56N×142°.98E, h39km±6km, mb4.5/5*

ISC 20 12:18:45.7±0.8, 42°.61N±0°.04×142°.79E±0°.03, h52km±7km, n40, σ1s.11/50, mb3.4/9, 4C-8D, Hokkaido region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JSHD Hidakashinhida 0.31 230 P Pn 12 18 55.0 -0.1
JNBK Urakawa-nobuka 0.33 185 ⇑P Pn 12 18 55.1 -0.2
JBT2 Biratori 2 0.35 298 ⇑P Pn 12 18 54.8 -0.7
JBT2 eS Sn 12 19 01.9 -0.7
JCH Churui 0.42 89 ⇓P Pn 12 18 55.9 -0.3
JCH eS Sn 12 19 03.5 -0.2
JTHR Tokachihiroo 0.49 130 ⇑P Pn 12 18 56.6 -0.4
JFR Furan 0.57 345 ⇓P Pn 12 18 57.1 -0.8
JIAM Iburiatsuma 0.64 271 ⇓P Pn 12 18 59.2 +0.4
JIAM eS Sn 12 19 10.1 +1.9
JEM Erimo 0.66 155 P Pn 12 19 00.1 +1.2
JEM eS Sn 12 19 11.1 +2.6
JOB Onbets 0.82 69 ⇓P Pn 12 19 01.5 +0.4
JOB eS Sn 12 19 13.5 +1.1
JAB Ashibetsu 0.98 335 P Pn 12 19 03.1 -0.2
JAR Ashorobuto 0.99 46 ⇓P Pn 12 19 03.3 -0.1
JAR eS Sn 12 19 16.8 +0.4
JEW Eniwo 1.01 283 ⇓P Pn 12 19 03.2 -0.4
JEW eS Sn 12 19 16.7 -0.2
JISS Ishikarishitsu 1.21 304 ⇑P Pn 12 19 06.7 +0.5
JISS eS Sn 12 19 22.7 +1.2
JKK2 Kamakawa 2 1.26 359 ⇓P Pn 12 19 07.4 +0.4
JNB Noboribetsu 1.30 264 ⇓P Pn 12 19 06.4 -1.1
JNB eS Sn 12 19 22.3 -1.5
JHR Hokuryu 1.37 326 P Pn 12 19 09.4 +0.9
JHR eS Sn 12 19 27.8 +2.2
ASAJ Asahikawa 1.51 355 P Pn 12 19 11.4 +1.1
27nm,0.3s,baz=211,slow=12,SNR=268
ASAJ S Sn 12 19 29.4 +0.5
18nm,0.3s,baz=55,slow=25,SNR=17
NMR Nemuro--Hokkai 2.29 70 iP Pn 12 19 20.0 -0.9
NMR iS Sn 12 19 45.0 -2.8
GLVR Golovnino 2.29 60 eP Pn 12 19 21.0 0.0
GLVR AMB AMB 12 19 23.0
28nm,0.3s
GLVR eS Sn 12 19 48.0 0.0
GLVR A A 12 19 51.0
310nm,0.3s
GLVR A A 12 19 51.0
330nm,0.3s
GRPR Tuman 2.58 57 iP Pn 12 19 26.0 +1.1
GRPR AMB AMB 12 19 31.0
21nm,0.1s
GRPR eS Sn 12 19 56.0 +1.0
GRPR A A 12 19 59.0
306nm,0.6s
GRPR A A 12 19 59.0
251nm,0.6s
YUK Yuzh-Kuril'sk 2.66 57 iP Pn 12 19 27.5 +1.5
YUK AMB AMB 12 19 31.0
187nm,0.6s
YUK eS Sn 12 19 57.3 +0.4
YUK A A 12 20 04.0
272nm,0.5s
YUK A A 12 20 04.0
267nm,0.5s
SHO Shikotan 3.21 66 iP Pn 12 19 33.7 +0.1
SHO AMB AMB 12 19 34.0
102nm,0.6s
SHO iS Sn 12 20 09.1 -1.4
SHO A A 12 20 10.0
228nm,0.5s
SHO A A 12 20 10.0
109nm,0.5s
KUR Kuril'sk 4.51 53 iP Pn 12 19 53.0 +1.6
KUR AMB AMB 12 19 56.0
64nm,0.5s
KUR iS Sn 12 20 42.5 +0.1
KUR A A 12 20 58.0
12nm,0.6s
KUR A A 12 20 58.0
36nm,0.6s
MJAR Matsushiro Arr 7.02 212 P Pn 12 20 27.7 +1.9
0.1nm,0.3s,baz=23,slow=13,SNR=6.4
JCJ Chichijima 15.49 182 LR LR 12 32 12.2
comp=Z,387nm,19.1s,baz=318,slow=52
SEY Seymchan 21.12 12 P P 12 23 24.5 -1.2
0.7nm,0.6s,baz=203,slow=12,SNR=5.2
H11N2 WAKE ISLAND Hy 30.55 131 T T 12 56 33.2
baz=324,slow=76,SNR=4.9
H11N1 WAKE ISLAND Hy 30.57 131 T T 12 56 40.7
baz=324,slow=76,SNR=3.7
H11N3 WAKE ISLAND Hy 30.57 131 T T 12 56 39.3
baz=324,slow=76,SNR=3.8
H11S1 WAKE ISLAND Hy 31.43 132 T T 12 57 41.7
baz=121,slow=74,SNR=6.0
H11S3 WAKE ISLAND Hy 31.44 133 T T 12 57 40.0
baz=325,slow=74,SNR=3.1
H11S2 WAKE ISLAND Hy 31.45 132 T T 12 57 39.3
MKAR Makanchi Array 42.28 297 P P 12 26 33.1 -0.8
0.4nm,0.7s,baz=75,slow=9.3,SNR=5.3
ILAR Eielson Array 44.27 35 P P 12 26 49.9 +0.2
0.3nm,0.4s,baz=261,slow=5.1,SNR=7.5
YKA Yellowknife Ar 58.49 32 P P 12 28 36.6 +0.6
0.3nm,0.6s,baz=305,slow=6.3,SNR=8.8
WRA Warramunga Arr 62.73 189 P P 12 29 04.8 -0.5
0.6nm,1.1s,baz=7.9,slow=7.0,SNR=1.4
FINES FINESS Array B 64.40 332 P P 12 29 14.6 -1.3
0.6nm,0.5s,baz=49,slow=8.6,SNR=4.4
NVAR Mina Array Bea 70.87 55 P P 12 29 58.5 +1.2
0.1nm,0.4s,baz=73,slow=6.7,SNR=3.7
PDAR Pinedale Array 73.05 47 P P 12 30 10.4 +0.1
0.3nm,0.6s,baz=272,slow=2.1,SNR=4.9
TXAR Lajitas Array 85.91 53 P P 12 31 21.1 +0.8
0.5nm,0.6s,baz=280,slow=3.5,SNR=6.7

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*ATH **20** 12:57:38.9, 38°.20N×20°.38E, h12km, ML2.5/5, Error ellipse: s-maj=1.6km s-min=0.9km az=254.0*

*THE **20** 12:57:39.1, 38°.21N×20°.40E, h11km, ML2.4/10, Error ellipse: s-maj=0.5km s-min=0.2km az=243.0*

ISC 20 12:57:37.9±1.0, 38°.22N±0°.03×20°.33E±0°.04, h16km±4km, n43, σ0s.86/72, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF3 Kipouria, Keph 0.02 145 P Pg 12 57 41.1 +0.4
KEF3 S Sg 12 57 42.7 +0.1
AGT1 Agia Thekli 0.05 56 P Pg 12 57 41.0 +0.1
AGT1 S Sg 12 57 42.6 -0.2
CHV1 Chavriata, Kef 0.06 134 P Pg 12 57 41.0 +0.1
CHV1 S Sg 12 57 42.6 -0.2
KEF4 Livadi, Kephal 0.08 64 P Pg 12 57 41.2 +0.1
KEF4 S Sg 12 57 42.9 -0.3
LXRA Lixouri, Kepha 0.09 105 P Pg 12 57 41.1 0.0
LXRA S Sg 12 57 42.8 -0.5
LXR1 Lixouri, Cepha 0.09 104 P Pg 12 57 41.1 -0.1
LXR1 S Sg 12 57 42.8 -0.5
ARGA Argostoli. Kep 0.12 111 P Pg 12 57 41.4 -0.2
ARGA S Sg 12 57 43.2 -0.8
ARG2 Argostoli 0.13 110 P Pg 12 57 41.5 -0.2
ARG2 S Sg 12 57 43.3 -0.8
KEF2 Argostoli. Kep 0.14 115 P Pg 12 57 41.6 -0.1
KEF2 S Sg 12 57 43.6 -0.7
VLS Valsamata 0.21 102 P Pg 12 57 42.5 -0.3
VLS S Sg 12 57 45.1 -1.0
3μm,0.1s
VLS Valsamata 0.21 102 P Pg 12 57 42.5 -0.3
VLS S Sg 12 57 45.1 -1.0
VLS AML AML 12 57 45.4
comp=N,6978μm,0.3s
VLS AML AML 12 57 45.6
comp=E,6484μm,0.1s
VSK1 VASILIKIADES 0.26 44 P Pg 12 57 44.1 +0.4
VSK1 S Sg 12 57 47.9 +0.3
KONA Konidatara, Ke 0.28 43 P Pg 12 57 44.3 +0.4
KONA S Sg 12 57 48.6 +0.6
FSK Fiskardo 0.30 37 P Pg 12 57 44.6 +0.3
FSK S Sg 12 57 49.2 +0.6
comp=E,2μm,0.2s
FSK Fiskardo 0.30 37 P Pg 12 57 44.6 +0.3
FSK S Sg 12 57 49.3 +0.7
FSK AML AML 12 57 49.4
comp=N,2813μm,0.2s
FSK AML AML 12 57 49.6
comp=E,3731μm,0.2s
VLMS Volimes, Zakyn 0.43 143 P Pg 12 57 46.9 +0.2
VLMS S Sg 12 57 52.8 +0.2
VLMS AML AML 12 57 57.3
comp=N,1454μm,0.3s
VLMS AML AML 12 57 57.4
comp=E,1033μm,0.2s
MGNA Meganis 0.56 40 P Pb 12 57 49.3 -0.1
MGNA S Sb 12 57 57.6 +0.3
LKD2 Lefkada island 0.62 24 P Pb 12 57 50.7 -1.5
LKD2 S Sb 12 57 59.9 +1.0
comp=E,198nm,0.2s
LKD2 Lefkada island 0.62 24 P Pn 12 57 51.1 -1.1
LKD2 S Sb 12 57 60.0 +1.0
VTN Vitineika 0.74 114 P Pb 12 57 53.2 +0.7
PDO Prodromos 0.77 60 P Pn 12 57 52.9 -1.2
PDO S Sn 12 58 03.8 -1.6
comp=E,532nm,0.4s
PDO Prodromos 0.77 60 P Pn 12 57 52.9 -1.2
PDO S Sn 12 58 03.8 -1.6
PDO AML AML 12 58 05.2
comp=E,842μm,0.5s
PDO AML AML 12 58 06.0
comp=N,664μm,0.3s
RLS Riolos of Patr 0.91 100 P Pb 12 57 55.3 0.0
PVO Paravola 1.02 67 P Pn 12 57 57.5 0.0
PVO S Sn 12 58 11.6 0.0
comp=N,270nm,0.3s
PVO Paravola 1.02 67 P Pn 12 57 57.6 0.0
PVO S Sn 12 58 12.1 +0.5
PVO AML AML 12 58 14.2
comp=E,677μm,0.4s
PVO AML AML 12 58 20.6
comp=N,525μm,0.6s
DRO Drossia 1.12 104 P Pb 12 57 59.6 +0.6
DRO S Sb 12 58 14.1 +0.8
comp=N,158nm,0.6s
DRO Drossia 1.12 104 P Pb 12 57 59.6 +0.6
LAKA Lakka 1.30 89 P Pn 12 58 02.2 +0.7
ANX Ano Chora 1.30 73 P Pn 12 58 02.5 +0.9
ANX S Sn 12 58 19.2 +0.5
comp=N,185nm,0.5s
ANX Ano Chora 1.30 73 P Pn 12 58 02.5 +0.9
IGT Igoumenitsa 1.31 0 P Pn 12 58 03.8 +2.2
SERG Sergoula 1.37 81 P Pb 12 58 02.6 -0.6
SERG S Sn 12 58 20.8 +0.5
comp=N,92nm,0.5s
SERG Sergoula 1.37 81 P Pn 12 58 03.2 +0.8
TRIZ Trizonia 1.38 84 P Pg 12 58 02.6 -1.9
TRIZ S Sn 12 58 21.2 +0.8
comp=N,128nm,0.6s
TRIZ Trizonia 1.38 84 P Pb 12 58 02.9 -0.4
KALE Kalithea 1.43 83 P Pg 12 58 03.5 -2.0
KALE S Sn 12 58 22.2 +0.3
comp=N,75nm,0.6s
KLV Kalavryta, Ach 1.45 97 P Pn 12 58 04.0 +0.5
KLV S Sn 12 58 22.9 +0.7
KLV Kalavryta, Ach 1.45 97 P Pn 12 58 04.4 +0.9
MAKR Makrakomi, Fth 1.62 60 P Pn 12 58 09.6 +0.6
AGG Agios Georgios 1.76 62 P Pg 12 58 12.1 +0.4
ZIRJ Zirje 6.48 328 iPn Pg 13 00 04.1 +22
ZIRJ Sg Sn 13 00 23.7 -2.6
MORI Morici 6.63 330 Sn Sn 13 00 29.0 -1.0
DUGI Dugi Otok 7.00 327 Sn Sn 13 00 37.9 -1.2

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*KRSC **20** 13:13:12.0±0.5, 53°.11N×158°.41E, h155km±4km, ML3.7*

*IDC **20** 13:13:12.9±0.7, 53°.59N×157°.96E, h145km±21km, mb3.0/6, mb1 3.3/6, mb1mx3.0/45, mbtmp3.4/6, Error ellipse: s-maj=72.1km s-min=24.2km az=175.0*

ISC 20 13:13:12.3±0.8, 53°.14N±0°.06×158°.40E±0°.07, h158km±5km, n34, σ0s.88/45, mb3.2/6, Near east coast of Kamchatka Peninsula

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KOK Koryaka 0.21 43 eP Pn 13 13 34.2 +0.5
DALK Dalny 0.24 116 eP Pn 13 13 33.7 +0.1
DALK eS Sn 13 13 49.5 -0.4
AVH Avacha 0.24 58 eP Pn 13 13 34.4 +0.6
UGLR Uglovaya 0.27 74 eP Pn 13 13 34.5 +0.6
UGLR eS Sn 13 13 51.1 +0.8
KRX Arik 0.27 34 eP Pn 13 13 34.3 +0.4
KRER Koryakskii 0.27 51 eP Pn 13 13 34.5 +0.5
KRER eS Sn 13 13 50.9 +0.3
SMAR Somma 0.28 62 eP Pn 13 13 34.5 +0.5
SDLR Sedlovina 0.33 64 eP Pn 13 13 34.3 +0.2
KRMR Karymshinskiy 0.34 208 eP Pn 13 13 34.2 +0.2
KRMR eS Sn 13 13 50.5 +0.1
PETK Petropavlovsk- 0.42 267 P Pn 13 13 34.4 +0.2
15nm,0.3s,baz=91,slow=7.7,SNR=1308
PETK S Sn 13 13 50.8 -0.2
9.2nm,0.3s,baz=99,slow=7.7,SNR=15
NLC Nalytchevo 0.57 86 eP Pn 13 13 35.3 +0.4
NLC eS Sn 13 13 52.6 +0.4
GRL Gorelyy 0.62 199 eP Pn 13 13 36.0 +0.6
MTVR Mutnovka 0.67 191 eP Pn 13 13 36.3 +0.6
RUS Russkaya 0.71 174 eP Pn 13 13 35.7 +0.0
RUS eS Sn 13 13 53.2 -0.4
APC Apacha 0.78 255 iP Pn 13 13 36.7 +0.6
APC eS Sn 13 13 54.6 +0.2

ASAK	Asacha	0.81	202	eP	Pn	13 13 37.6	+1.0
SPN	Mys Shipunski	0.98	92	eP	Pn	13 13 37.6	-0.1
SPN				eS	Sn	13 13 55.9	-1.2
KDTR	Khodutka, Kamc	1.34	188	eP	Pn	13 13 40.8	-0.1
KDTR				eS	Sn	13 14 01.8	-1.0
PAU	Pauzhetka	1.93	211	eP	Pn	13 13 48.3	+1.2
KZV	Kizimen	2.27	29	eP	Pn	13 13 51.7	+0.5
TUMD	Tumrok D	2.38	29	eP	Pn	13 13 52.9	+0.5
TUMR	Tumrok	2.38	25	eP	Pn	13 13 53.9	+1.4
SKR	Severo-Kuril's	2.83	211	eP	Pn	13 13 59.0	+1.1
SKR				eS	Sn	13 14 33.7	+0.6
KMNR	Kamenistaya	2.84	22	eP	Pn	13 13 58.6	+0.6
ALID	Alaid	2.87	219	eP	Pn	13 13 59.3	+0.8
SRDR	Sredinnyy	3.28	13	eP	Pn	13 14 04.2	+0.7
SRKR	Sorokina	3.87	23	eP	Pn	13 14 12.3	+1.2
KBTR	Krutoberegovo	4.01	38	eP	Pn	13 14 12.8	0.0
ILAR	Eielson Array	29.51	45	P	P	13 19 02.6	+1.4
	0.2nm,0.4s,baz=267,slow=5.8,SNR=8.1						
YKA	Yellowknife Ar	43.82	42	P	P	13 21 02.3	+0.4
	0.1nm,0.5s,baz=304,slow=8.1,SNR=2.4						
MKAR	Makanchi Array	47.21	295	P	P	13 21 27.4	-1.4
	0.2nm,0.5s,baz=58,slow=5.8,SNR=6.0						
ARCES	ARCESS Array B	52.92	341	P	P	13 22 09.9	-1.5
	2.7nm,0.8s,baz=32,slow=8.6,SNR=2.1						
NVAR	Mina Array Bea	56.69	69	P	P	13 22 41.4	+2.2
	0.2nm,0.5s,baz=322,slow=5.7,SNR=2.2						
SFJD	Kangerlussuaq	58.21	13	P	P	13 22 47.1	-2.0
	0.4nm,0.7s,baz=293,slow=7.7,SNR=3.9						

THE ***20*** *13:17:34.4, 38.20N×20.40E, h11km, ML2.8/10, Error ellipse: s-maj=0.6km s-min=0.3km az=262.0*
ATH ***20*** *13:17:34.1, 38.21N×20.41E, h12km, ML2.7/19, Error ellipse: s-maj=1.5km s-min=0.8km az=254.0*
ISC 20 13:17:34.3±0.9, **38.20N**±0.02×**20.40E**±0.04, **h12**km±4km, **n58,** σ**0.47**/82, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	221	P	Pg	13 17 36.3	0.0
CHV1				S	Sg	13 17 37.8	0.0
LXR1	Lixouri, Cepha	0.03	95	P	Pg	13 17 36.4	0.0
LXR1				S	Sg	13 17 37.9	+0.1
LXRA	Lixouri, Kepha	0.03	97	P	Pg	13 17 36.4	0.0
LXRA				S	Sg	13 17 37.8	0.0
KEF3	Kipouria, Keph	0.04	270	P	Pg	13 17 36.5	0.0
KEF3				S	Sg	13 17 37.9	-0.2
AGT1	Agia Thekli	0.05	342	P	Pg	13 17 36.3	-0.2
AGT1				S	Sg	13 17 37.7	-0.5
KEF4	Livadi, Kephal	0.06	17	P	Pg	13 17 36.5	-0.1
KEF4				S	Sg	13 17 38.0	-0.3
ARGA	Argostoli. Kep	0.07	114	P	Pg	13 17 36.7	+0.1
ARGA				S	Sg	13 17 38.4	0.0
ARG2	Argostoli	0.07	110	P	Pg	13 17 36.8	+0.1
ARG2				S	Sg	13 17 38.4	-0.1
KEF2	Argostoli. Kep	0.08	120	P	Pg	13 17 36.9	+0.2
KEF2				S	Sg	13 17 38.6	0.0
VLS	Valsamata	0.15	100	P	Pg	13 17 37.8	0.0
VLS				S	Sg	13 17 40.4	+0.1
	31μm,0.1s						
VLS	Valsamata	0.15	100	P	Pg	13 17 37.8	0.0
VLS				S	Sg	13 17 40.4	+0.1
VLS				AML	AML	13 17 40.5	
	comp=E,82367μm,0.1s						
VLS				AML	AML	13 17 40.8	
	comp=N,37742μm,0.1s						
VSK1	VASILIKIADES	0.24	31	P	Pg	13 17 39.4	+0.1
VSK1				S	Sg	13 17 43.4	+0.6
	comp=N,7μm,0.2s						
KONA	Konidatara, Ke	0.26	31	P	Pg	13 17 39.6	-0.1
KONA				S	Sg	13 17 43.8	+0.6
FSK	Fiskardo	0.28	26	P	Pg	13 17 40.0	-0.1
FSK				S	Sg	13 17 44.5	+0.5
	comp=N,2μm,0.2s						
FSK	Fiskardo	0.28	26	P	Pg	13 17 40.0	-0.1
FSK				S	Sg	13 17 44.3	+0.3
FSK				AML	AML	13 17 46.0	
	comp=E,5305μm,0.2s						
FSK				AML	AML	13 17 46.6	
	comp=N,2498μm,0.3s						
VLMS	Volimes, Zakyn	0.39	148	P	Pg	13 17 42.2	+0.3
VLMS				S	Sb	13 17 48.1	-0.8
VLMS				AML	AML	13 17 49.5	
	comp=E,13096μm,0.3s						
VLMS				AML	AML	13 17 50.5	
	comp=N,9435μm,0.1s						
MGNA	Meganis	0.55	34	P	Pg	13 17 44.3	-0.7
MGNA				S	Sg	13 17 51.9	-0.2
MGNA				AML	AML	13 17 53.4	
	comp=N,2088μm,0.3s						
MGNA				AML	AML	13 17 53.5	
	comp=E,2360μm,0.3s						
ZAK2	Zakynthos	0.57	136	P	Pg	13 17 45.4	0.0
LKD2	Lefkada island	0.62	19	P	Pg	13 17 45.9	-0.4
LKD2	Lefkada island	0.62	19	P	Pg	13 17 45.5	-0.8
LKD2				AML	AML	13 18 02.3	
	comp=E,1032μm,0.3s						
LKD2				AML	AML	13 18 02.5	
	comp=N,834μm,0.4s						
KRI1	kERI	0.63	149	P	Pg	13 17 46.3	-0.2
VTN	Vitineika	0.68	115	P	Pg	13 17 47.6	+0.1
VTN	Vitineika	0.68	115	P	Pg	13 17 47.5	0.0
PDO	Prodromos	0.73	57	P	Pg	13 17 48.1	-0.3
PDO				S	Sb	13 17 59.4	+0.5
	comp=N,1μm,0.4s						
PDO	Prodromos	0.73	57	P	Pg	13 17 48.1	-0.3
PDO				AML	AML	13 18 06.0	
	comp=N,2094μm,0.3s						
PDO				AML	AML	13 18 07.2	
	comp=E,1530μm,0.5s						
RLS	Riolos of Patr	0.85	99	P	Pg	13 17 50.3	-0.4
RLS				S	Sb	13 18 02.4	+0.1
	comp=E,362nm,0.3s						
RLS	Riolos of Patr	0.85	99	P	Pg	13 17 50.3	-0.4
RLS				AML	AML	13 18 06.1	
	comp=N,740μm,0.5s						
RLS				AML	AML	13 18 06.8	
	comp=E,706μm,0.2s						
PVO	Paravola	0.97	65	P	Pg	13 17 52.9	-0.1
PVO	Paravola	0.97	65	P	Pg	13 17 52.9	-0.1
PVO				AML	AML	13 18 12.8	
	comp=E,1369μm,0.4s						
PVO				AML	AML	13 18 15.2	
	comp=N,1637μm,0.3s						
DRO	Drossia	1.06	103	P	Pb	13 17 54.2	-0.4
DRO				S	Sn	13 18 09.5	-0.2
	comp=N,708nm,0.3s						
DRO	Drossia	1.06	103	P	Pb	13 17 54.2	-0.4
DRO				AML	AML	13 18 15.0	
	comp=N,1302μm,0.4s						
DRO				AML	AML	13 18 20.5	
	comp=E,1538μm,0.4s						
AMT	Artemida-Makis	1.23	123	P	Pn	13 17 57.1	-0.2
AMT				S	Sg	13 18 13.9	0.0
	comp=E,330nm,0.5s						
AMT	Artemida-Makis	1.23	123	P	Pb	13 17 57.5	0.0
AMT				AML	AML	13 18 24.9	
	comp=N,669μm,0.6s						
AMT				AML	AML	13 18 27.6	
	comp=E,602μm,0.4s						
LAKA	Lakka	1.24	88	P	Pn	13 17 57.2	-0.3
ANX	Ano Chora	1.25	71	P	Pb	13 17 57.9	0.0
ANX				S	Sg	13 18 15.2	+0.5
	comp=E,308nm,0.5s						
ANX	Ano Chora	1.25	71	P	Pb	13 17 57.9	0.0
ANX				AML	AML	13 18 21.8	
	comp=N,782μm,0.5s						
ANX				AML	AML	13 18 30.3	
	comp=E,648μm,0.6s						
EVR	Evrytania	1.31	57	P	Pn	13 17 58.7	+0.2
EVR				AML	AML	13 18 28.0	
	comp=E,274μm,0.7s						
EVR				AML	AML	13 18 29.1	
	comp=N,274μm,0.4s						
SERG	Sergoula	1.32	80	P	Pn	13 17 58.3	-0.2
SERG				S	Sg	13 18 16.6	-0.1
	comp=N,258nm,0.3s						
SERG	Sergoula	1.32	80	P	Pn	13 17 58.3	-0.2
SERG				AML	AML	13 18 24.4	
	comp=E,470μm,0.3s						
SERG				AML	AML	13 18 25.7	
	comp=N,619μm,0.3s						
TRIZ	Trizonia	1.32	82	P	Pn	13 17 58.1	-0.5
TRIZ				S	Sn	13 18 16.4	+0.3
	comp=N,282nm,0.5s						
TRIZ	Trizonia	1.32	82	P	Pn	13 17 58.1	-0.5
IGT	Igoumenitsa	1.33	358	P	Pb	13 17 59.0	-0.1
KALE	Kalithea	1.38	82	P	Pn	13 17 59.0	-0.4
KALE	Kalithea	1.38	82	P	Pn	13 17 59.1	-0.4
KALE				AML	AML	13 18 26.9	
	comp=N,439μm,0.4s						
KALE				AML	AML	13 18 28.1	
	comp=E,285μm,0.6s						
KLV	Kalavryta, Ach	1.39	96	P	Pn	13 17 59.3	-0.2
KLV	Kalavryta, Ach	1.39	96	P	Pn	13 17 59.7	+0.2
KLV				AML	AML	13 18 26.1	
	comp=N,246μm,0.3s						
KLV				AML	AML	13 18 26.8	
	comp=E,220μm,0.5s						
MAKR	Makrakomi, Fth	1.58	59	P	Pb	13 18 03.2	-0.2
MAKR				AML	AML	13 18 35.9	
	comp=N,357μm,0.6s						
MAKR				AML	AML	13 18 37.5	
	comp=E,394μm,0.3s						
KEK	Kerkira	1.58	343	P	Pb	13 18 03.5	+0.1
ITM	Ithomi	1.58	130	P	Pb	13 18 03.4	0.0
PYL	PYLOS	1.68	140	P	Pb	13 18 04.5	-0.7
AGG	Agios Georgios	1.72	61	P	Pb	13 18 06.3	+0.5
AGG				AML	AML	13 18 43.3	
	comp=N,223μm,0.6s						
AGG				AML	AML	13 18 44.2	
	comp=E,199μm,0.5s						
THL	Klokotos Trika	1.85	42	P	Pb	13 18 08.6	+0.6
THL				AML	AML	13 18 42.4	
	comp=N,155μm,0.5s						
THL				AML	AML	13 18 44.4	
	comp=E,199μm,0.8s						
AXAR	Agios Charalam	1.86	72	P	Pb	13 18 08.5	+0.4
AXAR				AML	AML	13 18 48.6	
	comp=E,422μm,0.6s						
AXAR				AML	AML	13 18 58.8	
	comp=N,544μm,0.8s						
KPRO	Kipourio	1.90	23	P	Pb	13 18 09.5	+0.5
LTK	Loutraki	2.03	94	P	Pb	13 18 10.2	-0.9
PENT	Pentalofos	2.07	16	P	Pb	13 18 11.7	-0.2
DID	Didima	2.35	106	P	Pb	13 18 15.2	-1.4
KTHA	Kythira Island	2.88	132	P	Pn	13 18 22.6	+2.6

IDC ***20*** *13:21:28.1±1.7, 51.34N×4.22W, h0km, mb3.4/6, mb1 3.7/11, mb1mx3.5/46, mbtmp3.5/11, ML4.2/4, Error ellipse: s-maj=28.1km s-min=19.2km az=66.0*
NEIC ***20*** *13:21:28.7±1.8, 51.30N±0.03×4.22W±0.10, h9km±5km, Error ellipse: s-maj=9.2km s-min=3.3km az=77.0*
BGR ***20*** *13:21:29.6±0.7, 51.15N×4.37W, h10km, ML4.6, Error ellipse: s-maj=12.2km s-min=6.7km az=3.0*
STR ***20*** *13:21:30.7±0.4, 51°N±3°×°±°, h5km, mb3.9/18, MLv4.7/6*
BGS ***20*** *13:21:30.0±1.4, 51.36N×4.16W, h4km±4km, ML4.1*
LDG ***20*** *13:21:30.7±0.1, 51.31N×4.11W, h5km, Md3.9/3, Ml4.5/81, Error ellipse: s-maj=1.5km s-min=1.2km az=77.0*
ISC 20 13:21:27.9±1.1, **51.28N**±0.02×**4.04W**±0.02, **h6**km±8km, **n286,** σ**2.29**/410, **mb3.5**/5, **4C-4D, United Kingdom**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEX	Exmoor	0.26	145	⇓iP	Pb	13 21 37.0	+1.9
HEX	Exmoor	0.26	145	⇓iP	Pb	13 21 37.0	+1.9
HTL	Hartland	0.40	224	⇑iP	Pn	13 21 38.6	-1.6
HTL				eS	Sb	13 21 44.4	+0.6
HTL				IAML		13 21 46.4	
	comp=E,4μm,0.2s						
HTL				IAML		13 21 47.0	
	comp=N,6μm,0.4s						
HTL	Hartland	0.40	224	⇑iP	Pn	13 21 38.6	-1.6
HTL				eS	Sb	13 21 44.4	+0.6
HTL				IAML		13 21 46.4	
	comp=E,4μm,0.2s						
HTL				IAML		13 21 47.0	
	comp=N,6μm,0.4s						
HTL	Hartland	0.40	224	Pg	Pb	13 21 38.4	+1.0
HTL				Sg	Sb	13 21 44.0	+0.2
RSBS	Rosebush, Pemb	0.80	327	iP	Pn	13 21 52.0	+6.2
RSBS				eS	Sn	13 22 01.1	+3.1
RSBS				IAML		13 22 03.1	
	comp=Z,2μm,0.8s						
RSBS				IAML		13 22 03.5	
	comp=N,1μm,0.3s						
RSBS	Rosebush, Pemb	0.80	327	iP	Pn	13 21 52.0	+6.2
RSBS				eS	Sn	13 22 01.1	+3.1
RSBS				IAML		13 22 03.1	
	comp=Z,2μm,0.8s						
RSBS				IAML		13 22 03.5	
	comp=N,1μm,0.3s						
SBD	Saint Breward	0.83	210	eP	Pn	13 21 46.3	+0.2
SBD				eS	Sn	13 21 59.4	+0.7
SBD				IAML		13 22 00.7	
	comp=E,3μm,0.3s						
SBD				IAML		13 22 01.8	
	comp=N,3μm,0.1s						
SBD	Saint Breward	0.83	210	eP	Pn	13 21 46.3	+0.2
SBD				eS	Sn	13 21 59.4	+0.7
SBD				IAML		13 22 00.7	
	comp=E,3μm,0.3s						
SBD				IAML		13 22 01.8	
	comp=N,3μm,0.1s						
MCH1	Michaelchurch	0.97	42	eP	Pn	13 21 47.1	-0.9
MCH1				IAML		13 22 04.8	
	comp=E,2μm,0.3s						
MCH1				IAML		13 22 05.5	
	comp=N,2μm,0.2s						
MCH1	Michaelchurch	0.97	42	eP	Pn	13 21 47.1	-0.9
MCH1				IAML		13 22 04.8	
	comp=E,2μm,0.3s						
MCH1				IAML		13 22 05.5	
	comp=N,2μm,0.2s						
OLDB	Oldbury-Upon-S	1.00	67	eP	Pn	13 21 49.1	+0.6
OLDB				eS	Sn	13 22 03.8	+0.8
OLDB				IAML		13 22 05.7	
	comp=E,10μm,0.3s						
OLDB				IAML		13 22 06.8	
	comp=N,14μm,0.3s						
OLDB	Oldbury-Upon-S	1.00	67	eP	Pn	13 21 49.1	+0.6
OLDB				eS	Sn	13 22 03.8	+0.8
OLDB				IAML		13 22 05.7	
	comp=E,10μm,0.3s						
OLDB				IAML		13 22 06.8	
	comp=N,14μm,0.3s						
BATH	Bath	1.08	81	eP	Pn	13 21 51.0	+1.3
BATH				eS	Sn	13 22 06.8	+1.8
BATH				IAML		13 22 12.8	
	comp=N,10μm,0.5s						
BATH				IAML		13 22 13.7	
	comp=E,11μm,0.5s						
BATH	Bath	1.08	81	eP	Pn	13 21 51.0	+1.3
BATH				eS	Sn	13 22 06.8	+1.8
BATH				IAML		13 22 12.8	
	comp=N,10μm,0.5s						
BATH				IAML		13 22 13.7	
	comp=E,11μm,0.5s						
STRD	Stroud	1.27	66	eP	Pb	13 21 53.8	+1.6
STRD				eS	Sn	13 22 11.0	+1.4
STRD	Stroud	1.27	66	eP	Pb	13 21 53.8	+1.6
STRD				eS	Sn	13 22 11.0	+1.4
CCA1	Carnmenellis	1.33	215	eP	Pg	13 21 54.0	+0.5
CCA1				eS	Sn	13 22 13.0	+1.9
CCA1				IAML		13 22 13.4	
	comp=E,1μm,0.3s						
CCA1				IAML		13 22 16.9	
	comp=N,1μm,0.4s						
CCA1	Carnmenellis	1.33	215	eP	Pg	13 21 54.0	+0.5
CCA1				eS	Sn	13 22 13.0	+1.9
CCA1				IAML		13 22 13.4	
	comp=E,1μm,0.3s						
CCA1				IAML		13 22 16.9	
	comp=N,1μm,0.4s						
CCA1	Carnmenellis	1.33	215	Pg	Pg	13 21 54.0	+0.5
CCA1				Pn	Pb	13 21 55.3	+2.0
CCA1				Sn	Sn	13 22 13.0	+1.9
SWN1	Swindon	1.42	80	⇓iP	Pg	13 21 57.1	+2.0
SWN1				eS	Sg	13 22 17.9	+4.4
SWN1				IAML		13 22 19.4	
	comp=N,3μm,0.2s						
SWN1				IAML		13 22 22.4	
	comp=E,3μm,0.3s						
SWN1	Swindon	1.42	80	⇓iP	Pg	13 21 57.1	+2.0
SWN1				eS	Sg	13 22 17.9	+4.4
SWN1				IAML		13 22 19.4	
	comp=N,3μm,0.2s						
SWN1				IAML		13 22 22.4	
	comp=E,3μm,0.3s						
SWN1	Swindon	1.42	80	Pg	Pg	13 21 57.1	+2.0
SWN1				Sg	Sg	13 22 16.9	+3.4
HLM1	Long Mynd	1.43	30	eP	Pg	13 21 54.5	-0.8
HLM1				IAML		13 22 15.9	
	comp=N,2μm,0.2s						
HLM1				IAML		13 22 16.4	
	comp=E,3μm,0.5s						
HLM1	Long Mynd	1.43	30	eP	Pg	13 21 54.5	-0.8
HLM1				IAML		13 22 15.9	
	comp=N,2μm,0.2s						
HLM1				IAML		13 22 16.4	
	comp=E,3μm,0.5s						
LLW	Llanuwychllyn	1.58	8	eP	Pg	13 21 56.8	-1.5
LLW				eS	Sb	13 22 16.1	-1.8
LLW				IAML		13 22 17.8	
	comp=E,991nm,0.2s						
LLW				IAML		13 22 19.1	
	comp=N,894nm,0.3s						
LLW	Llanuwychllyn	1.58	8	eP	Pg	13 21 56.8	-1.5
LLW				eS	Sb	13 22 16.1	-1.8
LLW				IAML		13 22 17.8	
	comp=E,991nm,0.2s						
LLW				IAML		13 22 19.1	
	comp=N,894nm,0.3s						
LLW	Llanuwychllyn	1.58	8		Pg	13 21 56.8	-1.5
LLW					Sb	13 22 16.1	-1.8
FOEL	Foel Wylfa	1.69	18	eP	Pg	13 21 58.7	-1.6
FOEL				eS	Sg	13 22 20.1	-2.1
FOEL				IAML		13 22 22.7	
	comp=N,2μm,0.4s						
FOEL				IAML		13 22 24.0	
	comp=E,2μm,0.6s						
FOEL	Foel Wylfa	1.69	18	eP	Pg	13 21 58.7	-1.6
FOEL				eS	Sg	13 22 20.1	-2.1
FOEL				IAML		13 22 22.7	
	comp=N,2μm,0.4s						
FOEL				IAML		13 22 24.0	
	comp=E,2μm,0.6s						
FOEL	Foel Wylfa	1.69	18		Pg	13 21 58.7	-1.6
FOEL					Sg	13 22 20.1	-2.1
YLL	Llanberis	1.86	358	eP	Pb	13 22 00.5	-1.8
YLL	Llanberis	1.86	358	eP	Pb	13 22 00.5	-1.8
YLL	Llanberis	1.86	358		Pb	13 22 00.5	-1.8
YRC	Rhoscolyn	2.00	351	eP	Pb	13 22 02.7	-1.9
YRC	Rhoscolyn	2.00	351	eP	Pb	13 22 02.7	-1.9
YRC	Rhoscolyn	2.00	351		Pb	13 22 02.7	-1.9
IWEX	Carrickbyrne,	2.02	304	eP	Pn	13 22 01.5	-0.9
IWEX				IAML		13 22 32.4	
	comp=N,452nm,0.4s						
IWEX				IAML		13 22 39.5	
	comp=E,310nm,0.4s						
IWEX	Carrickbyrne,	2.02	304	eP	Pn	13 22 01.5	-0.9
IWEX				IAML		13 22 32.4	
	comp=N,452nm,0.4s						
IWEX				IAML		13 22 39.5	
	comp=E,310nm,0.4s						
IWEX	Carrickbyrne,	2.02	304		Pn	13 22 01.5	-0.9
WLF1	Llynfaes	2.02	354	eP	Pb	13 22 02.6	-2.4
WLF1				eS	Sn	13 22 26.4	-1.6
WLF1				IAML		13 22 28.6	
	comp=N,828nm,0.3s						
WLF1				IAML		13 22 28.9	
	comp=E,2μm,0.4s						
WLF1	Llynfaes	2.02	354	eP	Pb	13 22 02.6	-2.4
WLF1				eS	Sn	13 22 26.4	-1.6
WLF1				IAML		13 22 28.6	
	comp=N,828nm,0.3s						
WLF1				IAML		13 22 28.9	
	comp=E,2μm,0.4s						
WLF1	Llynfaes	2.02	354		Pb	13 22 02.6	-2.4
WLF1					Sn	13 22 26.4	-1.6
WME	Myndd Eilian	2.12	356	eP	Pb	13 22 04.0	-2.7
WME	Myndd Eilian	2.12	356	eP	Pb	13 22 04.0	-2.7
WME	Myndd Eilian	2.12	356		Pb	13 22 04.0	-2.7
STNC	Stoke	2.13	31	eP	Pb	13 22 05.5	-1.4
STNC				IAML		13 22 35.8	
	comp=N,2μm,0.4s						
STNC				IAML		13 22 38.0	
	comp=E,2μm,0.3s						
STNC	Stoke	2.13	31	eP	Pb	13 22 05.5	-1.4
STNC				IAML		13 22 35.8	
	comp=N,2μm,0.4s						
STNC				IAML		13 22 38.0	
	comp=E,2μm,0.3s						
STNC	Stoke	2.13	31		Pb	13 22 05.5	-1.4
WPS	Cemaes, Angles	2.14	353	eP	Pb	13 22 04.4	-2.6
WPS				eS	Sn	13 22 29.9	-1.0
WPS				IAML		13 22 35.2	
	comp=N,484nm,0.3s						
WPS				IAML		13 22 35.4	
	comp=E,692nm,0.4s						
WPS	Cemaes, Angles	2.14	353	eP	Pb	13 22 04.4	-2.6
WPS				eS	Sn	13 22 29.9	-1.0
WPS				IAML		13 22 35.2	
	comp=N,484nm,0.3s						
WPS				IAML		13 22 35.4	
	comp=E,692nm,0.4s						
WPS	Cemaes, Angles	2.14	353		Pb	13 22 04.4	-2.6
WPS					Sn	13 22 29.9	-1.0
CWF	Charnwood Fore	2.23	48	eP	Pn	13 22 06.5	+1.1
CWF				IAML		13 22 37.4	
	comp=N,1μm,0.3s						
CWF				IAML		13 22 37.7	
	comp=E,505nm,0.4s						
CWF	Charnwood Fore	2.23	48	eP	Pn	13 22 06.5	+1.1
CWF				IAML		13 22 37.4	
	comp=N,1μm,0.3s						
CWF				IAML		13 22 37.7	
	comp=E,505nm,0.4s						
CWF	Charnwood Fore	2.23	48		Pn	13 22 06.5	+1.1
JVM	Valle D.L. Mar	2.38	150	eP	Pn	13 22 09.4	+2.0
JVM	Valle D.L. Mar	2.38	150	eP	Pn	13 22 09.4	+2.0
JVM	Valle D.L. Mar	2.38	150		Pn	13 22 09.4	+2.0
JLP	Les Platons	2.39	148	eP	Pn	13 22 09.6	+2.0
JLP	Les Platons	2.39	148	eP	Pn	13 22 09.6	+2.0
JSA	Saint Aubin	2.42	150	eP	Pn	13 22 10.3	+2.4
JSA				IAML		13 22 54.9	
	comp=N,488nm,0.2s						
JSA				IAML		13 22 58.2	
	comp=E,570nm,0.6s						
JSA	Saint Aubin	2.42	150	eP	Pn	13 22 10.3	+2.4
JSA				IAML		13 22 54.9	
	comp=N,488nm,0.2s						
JSA				IAML		13 22 58.2	
	comp=E,570nm,0.6s						
JSA	Saint Aubin	2.42	150	Pn	Pn	13 22 10.4	+2.4
JSA	Saint Aubin	2.42	150		Pn	13 22 10.3	+2.4
JRS	Jersey	2.44	148	IAML		13 22 56.2	
	comp=E,685nm,0.5s						
JRS				IAML		13 23 00.2	
	comp=N,666nm,0.4s						
JRS	Jersey	2.44	148	IAML		13 22 56.2	
	comp=E,685nm,0.5s						
JRS				IAML		13 23 00.2	
	comp=N,666nm,0.4s						
LBWR	Ladybower, Pea	2.55	33	eP	Pb	13 22 11.4	-2.7
LBWR				IAML		13 22 49.7	
	comp=N,812nm,0.5s						
LBWR				IAML		13 23 01.0	
	comp=E,756nm,0.5s						
LBWR	Ladybower, Pea	2.55	33	eP	Pb	13 22 11.4	-2.7
LBWR				IAML		13 22 49.7	
	comp=N,812nm,0.5s						
LBWR				IAML		13 23 01.0	
	comp=E,756nm,0.5s						
LBWR	Ladybower, Pea	2.55	33		Pb	13 22 11.4	-2.7
HMNX	Herstmonceux	2.79	97	IAML		13 23 11.4	
	comp=E,2μm,0.7s						
HMNX				IAML		13 23 21.3	
	comp=N,1μm,0.5s						
HMNX	Herstmonceux	2.79	97	IAML		13 23 11.4	
	comp=E,2μm,0.7s						
HMNX				IAML		13 23 21.3	
	comp=N,1μm,0.5s						
HMNX	Herstmonceux	2.79	97	Pn	Pn	13 22 15.5	+2.4
WIM	Isle of Man	2.89	353	eP	Pn	13 22 14.4	-0.1
WIM	Isle of Man	2.89	353	eP	Pn	13 22 14.4	-0.1
WIM	Isle of Man	2.89	353		Pn	13 22 14.4	-0.1
ROSF	Rostrenen	2.99	170	ePn	Pn	13 22 17.1	+1.2
ROSF	Rostrenen	2.99	170	eP	Pb	13 22 20.1	-1.5
ROSF	Rostrenen	2.99	170	ePg	Pg	13 22 26.9	+1.7
ROSF				eSn	Sn	13 22 51.4	-0.6

comp=N,223nm,0.2s
ROSF eSg Sg 13 23 04.4 +0.5
comp=N,511nm,0.4s
IOMK Kirk Michael 3.00 354 eP Pn 13 22 15.8 -0.1
IOMK IAML 13 23 04.3
comp=E,528nm,0.4s
IOMK IAML 13 23 06.2
comp=N,418nm,0.4s
IOMK Kirk Michael 3.00 354 eP Pn 13 22 15.8 -0.1
IOMK IAML 13 23 04.3
comp=E,528nm,0.4s
IOMK IAML 13 23 06.2
comp=N,418nm,0.4s
IOMK Kirk Michael 3.00 354 Pn 13 22 15.8 -0.1
HPK Haverah Park 3.06 28 eP Pn 13 22 17.5 +0.8
HPK IAML 13 23 04.5
comp=N,755nm,0.3s
HPK IAML 13 23 11.4
comp=E,777nm,0.5s
HPK Haverah Park 3.06 28 eP Pn 13 22 17.5 +0.8
HPK IAML 13 23 04.5
comp=N,755nm,0.3s
HPK IAML 13 23 11.4
comp=E,777nm,0.5s
HPK Haverah Park 3.06 28 Pn 13 22 17.5 +0.8
LMK Market Rasen 3.15 45 eP Pn 13 22 19.1 +1.1
LMK IAML 13 23 16.5
comp=E,1μm,0.4s
LMK IAML 13 23 19.8
comp=N,1μm,0.8s
LMK Market Rasen 3.15 45 eP Pn 13 22 19.1 +1.1
LMK IAML 13 23 16.5
comp=E,1μm,0.4s
LMK IAML 13 23 19.8
comp=N,1μm,0.8s
LMK Market Rasen 3.15 45 Pn 13 22 19.1 +1.1
SGMF Saint Gilles 3.18 162 ePn Pn 13 22 20.3 +1.8
SGMF Saint Gilles 3.18 162 eP Pn 13 22 22.1 +3.6
SGMF Saint Gilles 3.18 162 ePg Pg 13 22 29.7 +0.9
SGMF eSn Sn 13 22 55.8 -0.9
comp=N,248nm,0.3s
SGMF eSg Sg 13 23 10.6 +0.6
comp=N,286nm,0.3s
WACR West Acre 3.23 62 eP Pn 13 22 21.2 +2.2
WACR IAML 13 23 15.8
comp=E,267nm,0.3s
WACR IAML 13 23 18.7
comp=N,590nm,0.4s
WACR West Acre 3.23 62 eP Pn 13 22 21.2 +2.2
WACR IAML 13 23 15.8
comp=E,267nm,0.3s
WACR IAML 13 23 18.7
comp=N,590nm,0.4s
WACR West Acre 3.23 62 Pn 13 22 21.2 +2.2
ELSH Elham, Standar 3.26 90 eP Pn 13 22 21.9 +2.5
ELSH Elham, Standar 3.26 90 eP Pn 13 22 21.9 +2.5
ELSH Elham, Standar 3.26 90 Pn Pn 13 22 22.0 +2.5
ELSH Sn Sn 13 23 01.5 +3.0
FLN La Foliniere 3.41 136 ePn Pn 13 22 22.9 +1.3
baz=316
FLN La Foliniere 3.41 136 eP Pb 13 22 26.3 -2.4
baz=324
FLN La Foliniere 3.41 136 ePg Pg 13 22 34.4 +1.2
baz=312
FLN eSn Sn 13 23 01.9 -0.5
comp=N,147nm,0.2s
FLN eSg Sg 13 23 18.5 +1.1
comp=N,429nm,0.3s,baz=321
QUIF Quistinic 3.42 170 ePn Pn 13 22 23.4 +1.7
QUIF Quistinic 3.42 170 eP Pn 13 22 25.7 +4.0
QUIF Quistinic 3.42 170 ePg Pg 13 22 33.8 +0.5
QUIF eSn Sn 13 23 01.1 -1.4
comp=N,216nm,0.3s
QUIF eSg Sg 13 23 17.5 -0.1
comp=N,263nm,0.3s
GRR Gorron 3.56 143 ePn Pn 13 22 25.6 +2.0
GRR Gorron 3.56 143 eP Pn 13 22 28.1 +4.5
GRR Gorron 3.56 143 ePg Pg 13 22 37.4 +1.4
GRR eSn Sn 13 23 05.2 -0.7
comp=N,241nm,0.3s
GRR eSg Sg 13 23 23.3 +1.3
comp=N,516nm,0.4s
LDF La Druitiere 3.69 135 ePn Pn 13 22 27.1 +1.6
LDF La Druitiere 3.69 135 eP Pn 13 22 30.2 +4.7
LDF La Druitiere 3.69 135 ePg Pg 13 22 39.7 +1.1
LDF eSn Sn 13 23 08.2 -1.2
comp=N,88nm,0.3s
LDF eSg Sg 13 23 27.8 +1.3
comp=N,231nm,0.4s
EDMD Edmundbyers 3.77 19 eP Pn 13 22 26.6 +0.1
EDMD Edmundbyers 3.77 19 eP Pn 13 22 26.6 +0.1
ESK Eskdalemuir 4.07 7 Pn Pn 13 22 30.7 +0.1
ESK Eskdalemuir 4.07 7 Pn 13 22 30.9 +0.2
ESK Sn Sn 13 23 17.0 -1.6
EKA Eskdalemuir Ar 4.09 7 Pn Pn 13 22 30.9 -0.1
baz=190,slow=13,SNR=65
EKA Sn Sn 13 23 14.5 -4.6
baz=199,slow=15,SNR=2.9
EKA Lg Lg 13 23 36.9
baz=196,slow=29,SNR=6.1
BSKQ Steenkerk 5.17 94 Pn Pn 13 22 47.1 +1.3
BSKQ Sn Sn 13 23 43.2 -2.5
BSKQ Sg Sg 13 24 13.0 -0.8
comp=N,73nm,0.6s
CLF Chambon-Foret 5.23 126 Pn Pn 13 22 48.7 +2.1
CLF Chambon-Foret 5.23 126 Pn 13 22 49.0 +2.3
CLF Sn Sn 13 23 49.9 +2.7
UCC Uccle 5.32 92 Pn Pn 13 22 48.4 +0.6
MFF Saint Martin d 5.34 150 ePn Pn 13 22 49.9 +1.8
MFF Saint Martin d 5.34 150 eP Pn 13 22 54.1 +6.0
MFF Saint Martin d 5.34 150 ePg Pg 13 23 09.2 -1.0
MFF eSn Sn 13 23 47.7 -2.2
comp=N,136nm,0.3s
MFF eSg Sg 13 24 18.9 -0.4
comp=N,144nm,0.5s
MFF Saint Martin d 5.34 150 Pn Pn 13 22 50.1 +2.0
BAIF Baives 5.39 100 ePn Pn 13 22 49.9 +1.2
BAIF Baives 5.39 100 eP Pn 13 22 53.6 +4.9
BAIF Baives 5.39 100 ePg Pg 13 23 11.1 +0.1
BAIF eSn Sn 13 23 49.1 -1.9
comp=N,45nm,0.3s
BAIF eSg Sg 13 24 21.2 +0.5
comp=N,120nm,0.6s
DOU Dourbes 5.62 99 Pn Pn 13 22 53.3 +1.4
DOU Sn Sn 13 23 55.6 -1.1
DOU Dourbes 5.62 99 P Pn 13 22 53.0 +1.1
DOU Pn Pn 13 22 53.0 +1.1
DOU Pg Pg 13 23 14.7 -0.7
DOU Sn Sn 13 23 56.6 -0.1
DOU Sg Sg 13 24 30.8 +2.7
comp=N,43nm,0.7s
BMRD Maredsous 5.67 97 ⇑Pn Pn 13 22 53.8 +1.1
BMRD Pg Pg 13 23 15.6 -0.9
BMRD Sn Sn 13 23 56.5 -1.5
CHIF Chize 5.69 154 Pn Pn 13 22 55.1 +2.2
GIVF Givet 5.76 98 ePn Pn 13 22 55.6 +1.8
GIVF Givet 5.76 98 ePg Pg 13 23 17.9 -0.2
GIVF eSn Sn 13 23 58.1 -2.1
comp=N,72nm,0.3s
GIVF eSg Sg 13 24 32.8 +0.2
comp=N,103nm,0.5s
BGES Gesves 5.85 95 Pn Pn 13 22 57.4 +2.2
BGES Pg Pg 13 23 16.8 -3.2
BGES Sn Sn 13 24 02.0 -0.6
BGES Sg Sg 13 24 39.8 +4.0
comp=N,66nm,0.6s
HYF Humbligny 5.94 130 ePn Pn 13 22 58.0 +1.7
HYF Humbligny 5.94 130 ePg Pg 13 23 21.1 -0.4
HYF eSn Sn 13 24 02.3 -2.3
HYF eSg Sg 13 24 37.4 -1.0
BCLA Clavier 5.98 95 Pn Pn 13 22 58.9 +2.0
BCLA Pg Pg 13 23 20.2 -2.1
BCLA Sn Sn 13 23 49.2 -17
RCHB Rochefort 6.00 97 Pn Pn 13 22 58.3 +1.2
RCHB Pg Pg 13 23 20.7 -2.0
BSTI Sart Tilman 6.12 93 Pn Pn 13 23 00.1 +1.4
MEM Membach 6.39 92 ePn Pn 13 23 03.6 +1.1
MEM eSn Sn 13 24 12.6 -3.0
MEM Membach 6.39 92 ⇑Pn Pn 13 23 03.5 +1.1
MEM Sn Sn 13 24 12.5 -3.1
MEM Sg Sg 13 24 55.4 +2.6
comp=E,66nm,0.7s
BHOU Houvegnez 6.43 94 Pn Pn 13 23 03.7 +0.6
BHOU Sn Sn 13 24 15.1 -1.8
BTNL Ternell 6.47 92 Pn Pn 13 23 04.7 +1.1
BTNL Sn Sn 13 24 16.7 -1.0
TCF Toulx Ste Croi 6.48 138 ePn Pn 13 23 05.6 +1.8
TCF Toulx Ste Croi 6.48 138 eP Pn 13 23 09.6 +5.8
TCF Toulx Ste Croi 6.48 138 ePg Pg 13 23 30.7 -1.3
TCF eSn Sn 13 24 15.3 -2.8
comp=E,83nm,0.3s
TCF eSg Sg 13 24 54.4 -1.5
comp=E,111nm,0.5s
MEZF Maizieres J'vi 6.50 112 ePn Pn 13 23 04.8 +0.8
baz=290
MEZF Maizieres J'vi 6.50 112 ePg Pg 13 23 31.7 -0.6
baz=293
MEZF eSn Sn 13 24 14.5 -4.0
comp=E,55nm,0.3s
MEZF eSg Sg 13 24 55.5 -1.0
comp=E,141nm,0.6s,baz=290
SSF Saint Saulge 6.50 128 ePn Pn 13 23 04.7 +0.6
SSF Saint Saulge 6.50 128 ePg Pg 13 23 30.8 -1.6
SSF eSn Sn 13 24 15.8 -2.8
SSF eSg Sg 13 24 56.4 -0.2
comp=E,124nm,0.5s
LOR Lormes 6.54 125 ePn Pn 13 23 05.5 +0.8
baz=308
LOR eSn Sn 13 24 16.9 -2.7
comp=E,46nm,0.3s,baz=307
LOR eSg Sg 13 24 56.7 -1.2
comp=E,71nm,0.3s
LOR Lormes 6.54 125 Pn Pn 13 23 05.6 +0.9
BGF Bois d'Agland 6.55 134 ePn Pn 13 23 06.2 +1.4
BGF Bois d'Agland 6.55 134 ePg Pg 13 23 32.3 -1.0
BGF eSn Sn 13 24 16.9 -2.9
comp=E,198nm,0.5s
BGF eSg Sg 13 24 57.4 -0.8
comp=E,311nm,0.4s
LKLB Kalborn 6.56 96 Pn Pn 13 23 06.2 +1.4
LKLB Sn Sn 13 24 18.0 -1.9
AVF Avril sur Loir 6.62 130 ePn Pn 13 23 06.6 +0.9
AVF Avril sur Loir 6.62 130 ePg Pg 13 23 33.7 -0.9
AVF eSn Sn 13 24 18.5 -2.9
comp=E,31nm,0.3s
AVF eSg Sg 13 24 58.7 -1.6
comp=E,163nm,0.8s
SFTF Sexfontaines 6.64 114 ePn Pn 13 23 06.8 +0.8
baz=295
SFTF eSn Sn 13 24 17.9 -4.1
comp=E,52nm,0.3s
SFTF eSg Sg 13 24 59.8 -1.2
LVIA Vianden 6.66 98 Pn Pn 13 23 07.6 +1.4
LVIA Sn Sn 13 24 16.9 -5.4
WLF Walferdange 6.71 100 ePn Pn 13 23 08.6 +1.7
WLF eSn Sn 13 24 21.2 -2.3
WLF eSg Sg 13 25 08.0 +5.0
WLF Walferdange 6.71 100 Pn Pn 13 23 08.5 +1.7
WLF Pg Pg 13 23 33.6 -2.6
WLF Sn Sn 13 24 21.1 -2.4
WLF Walferdange 6.71 100 Pn Pn 13 23 08.8 +2.0
WLF Pg Pg 13 23 38.5 +2.3
WTSB Winterswijk 6.79 80 ePn Pn 13 23 09.9 +2.0
WTSB eSn Sn 13 24 22.3 -3.1
LRVF chteau la Riv 6.81 157 Pn Pn 13 23 10.8 +2.4
PAGF Fort de Pagny 6.87 110 ePn Pn 13 23 10.1 +1.0
baz=294
PAGF Fort de Pagny 6.87 110 ePg Pg 13 23 38.6 -0.8
PAGF eSn Sn 13 24 24.4 -3.2
comp=E,50nm,0.4s,baz=305
PAGF eSg Sg 13 25 06.8 -1.5
comp=E,314nm,0.9s,baz=286
SMF Signal de Mont 6.96 129 ePn Pn 13 23 11.7 +1.3
SMF eSn Sn 13 24 26.5 -3.3
comp=E,27nm,0.3s
SMF eSg Sg 13 25 09.8 -1.4
comp=E,259nm,0.7s
RJF Les Rejaudoux 7.04 146 ePn Pn 13 23 12.4 +1.0
RJF Les Rejaudoux 7.04 146 ePg Pg 13 23 40.3 -2.3
RJF eSn Sn 13 24 27.5 -4.2
comp=E,203nm,0.4s
RJF eSg Sg 13 25 11.9 -1.8
comp=E,162nm,0.6s
AGO Saint Agoulin 7.07 135 Pn Pn 13 23 13.4 +1.5
AHRW Bad Neuenahr-A 7.07 92 ePn Pn 13 23 12.9 +1.1
AHRW eSn Sn 13 24 28.8 -3.7
RIVT Riveris 7.07 99 ePn Pn 13 23 13.2 +1.4
RIVT eSn Sn 13 24 28.9 -3.7
LFF La Frestale 7.11 151 ePn Pn 13 23 13.7 +1.3
LFF La Frestale 7.11 151 ePg Pg 13 23 42.6 -1.3
LFF eSn Sn 13 24 29.6 -3.8
comp=E,126nm,0.3s
LFF eSg Sg 13 25 13.8 -2.1
comp=E,199nm,0.5s
THEF They Montfort 7.18 111 Pn Pn 13 23 14.9 +1.5
PYM Petit Puy Mans 7.25 137 Pn Pn 13 23 16.4 +2.0
HAU Haudompre 7.50 112 ePn Pn 13 23 18.2 +0.4
HAU eSn Sn 13 24 36.0 -7.1
comp=E,76nm,0.3s
HAU eSg Sg 13 25 26.7 -1.8
comp=E,96nm,0.5s
ABH Alteburg 7.51 96 ePn Pn 13 23 19.7 +1.7
CAF Calviac 7.56 145 ePn Pn 13 23 19.5 +0.9
CAF Calviac 7.56 145 ePg Pg 13 23 50.1 -2.5
CAF eSn Sn 13 24 40.1 -4.5
comp=E,61nm,0.3s
CAF eSg Sg 13 25 27.1 -3.3
comp=E,124nm,0.6s
MONQ Montcuq 7.76 151 Pn Pn 13 23 22.9 +1.6
CDF Champ du Feu 7.86 107 ePn Pn 13 23 23.4 +0.6
CDF Champ du Feu 7.86 107 ePg Pg 13 23 55.9 -2.4
CDF eSn Sn 13 24 47.9 -4.1
comp=E,25nm,0.3s
CDF eSg Sg 13 25 38.1 -1.9
comp=E,122nm,0.9s
TERF Tercis-les-Bai 7.86 164 Pn Pn 13 23 24.5 +1.8
ECH Echery 7.88 109 Pn Pn 13 23 23.3 +0.3
ECH Echery 7.88 109 ePn Pn 13 23 23.5 +0.5
ECH eSn Sn 13 24 46.7 -5.7
ECH Echery 7.88 109 Pn 13 23 23.5 +0.5
HINF Hinteralfeld 7.89 112 ePn Pn 13 23 23.7 +0.6
HINF Hinteralfeld 7.89 112 ePg Pg 13 23 57.6 -1.2
HINF eSn Sn 13 24 45.6 -7.1
comp=E,24nm,0.3s
HINF eSg Sg 13 25 38.9 -2.0
comp=E,75nm,0.6s
WLS Welschbruch 7.91 107 Pn Pn 13 23 23.6 +0.2
TNS Taunus Mts 7.99 93 ePn Pn 13 23 25.8 +1.3
TNS eSn Sn 13 24 52.0 -3.2
MOF Molkenrain 8.03 111 Pn Pn 13 23 26.5 +1.3
ELAN Lanestosa 8.07 177 Pn 13 23 26.7 +1.1
CHMF Charmoille 8.07 116 Pn Pn 13 23 26.2 +0.5
LOMF Lomont 8.12 115 Pn Pn 13 23 27.4 +1.0
CABF La Chapelle 8.14 121 ePn Pn 13 23 27.0 +0.4
CABF eSn Sn 13 24 55.1 -3.9
comp=E,27nm,0.4s
CABF eSg Sg 13 25 46.7 -2.3
comp=E,178nm,0.8s
BRANT Les Verrieres 8.15 118 Pn Pn 13 23 27.5 +0.7
OG35 Corcelles 8.24 126 Pn Pn 13 23 29.2 +1.2
EALK Alkurruntz 8.25 167 Pn Pn 13 23 29.3 +1.2
EALK Alkurruntz 8.25 167 Pn 13 23 31.0 +2.9
GIMEL St. Georges / 8.28 121 Pn Pn 13 23 29.9 +1.2
SSB Saint Sauveur 8.29 133 Pn Pn 13 23 30.8 +2.1
SSB Saint Sauveur 8.29 133 Pn 13 23 29.8 +1.1
SJPF Ste Jean 8.39 166 ePn Pn 13 23 30.6 +0.5
SJPF Ste Jean 8.39 166 ePg Pg 13 24 04.6 -4.0
SJPF eSn Sn 13 24 59.3 -5.8
comp=E,34nm,0.3s
SJPF eSg Sg 13 25 53.1 -4.1
comp=E,40nm,0.7s
KIZ Kirchzarten 8.45 109 Pn Pn 13 23 31.5 +0.7
ATE Arette 8.51 163 Pn 13 23 33.8 +2.2
TORNY Torny/Romont 8.52 118 Pn Pn 13 23 32.6 +0.8
BFO Black Forest 8.53 105 ePn Pn 13 23 32.6 +0.7
BFO eSn Sn 13 25 01.4 -7.1
BFO Black Forest 8.53 105 Pn 13 23 32.5 +0.7
EORO Oroz-Betelu 8.60 166 Pn 13 23 34.9 +2.0
OGSM Saint Maurice 8.61 127 Pn Pn 13 23 34.3 +1.4
OGSM Sn Sn 13 25 07.2 -3.1
BALST Balsthal 8.62 113 Pn Pn 13 23 34.4 +1.2
BALST Sn Sn 13 25 04.6 -6.2
PYLO Lourdes 8.63 160 Pn 13 23 35.2 +1.9
BERGE Lenzkirch (DE) 8.64 109 ePn Pn 13 23 34.3 +0.8
VIVF Saint-Julien-l 8.68 134 ePn Pn 13 23 34.9 +0.9
VIVF Saint-Julien-l 8.68 134 eP Pn 13 23 40.4 +6.4
VIVF Saint-Julien-l 8.68 134 ePg Pg 13 24 11.2 -2.8
VIVF eSn Sn 13 25 07.5 -4.6
comp=E,30nm,0.5s
VIVF eSg Sg 13 26 03.4 -2.9
comp=E,103nm,0.9s
ETSF Etsaut 8.72 163 ePn Pn 13 23 34.7 +0.2
ETSF Etsaut 8.72 163 ePg Pg 13 24 11.5 -3.2
ETSF eSn Sn 13 25 07.4 -5.7
comp=E,28nm,0.2s
ETSF eSg Sg 13 26 04.3 -3.2
comp=E,69nm,0.9s
METMA Mettma DE 8.76 109 ePn Pn 13 23 36.1 +1.0
SULZ Cheisacher 8.77 111 Pn Pn 13 23 36.1 +0.9
EPF Esparros 8.78 158 ePn Pn 13 23 36.1 +0.8
EPF Esparros 8.78 158 ePg Pg 13 24 12.8 -3.1
EPF eSn Sn 13 25 07.0 -7.6
comp=E,22nm,0.2s
EPF eSg Sg 13 26 05.0 -4.5
comp=E,47nm,0.7s
SLE Schleitheim 8.88 108 Pn Pn 13 23 37.6 +0.9
EAGO Agolada(Pontev 8.92 200 Pn 13 23 38.3 +1.0
SENIN Lac Senin/Sane 8.95 119 Pn 13 23 39.0 +1.2
LASF Ste Croix 8.96 141 ePn Pn 13 23 39.7 +1.9
LASF Ste Croix 8.96 141 ePg Pn 13 24 15.8 +38
LASF eSn Sn 13 25 14.2 -4.8
LASF eSg Sg 13 26 11.7 -3.6
comp=E,100nm,0.8s
EMAZ Mazaricos 8.99 204 Pn 13 23 38.2 0.0
CLZ Clausthal 9.00 81 ePn Pn 13 23 40.0 +1.7
CLZ eSn Sn 13 25 15.2 -4.7
MTLF Montolieu 9.01 149 ePn Pn 13 23 39.3 +0.8
MTLF Montolieu 9.01 149 ePg Pn 13 24 17.3 +39
MTLF eSn Sn 13 25 13.2 -7.0
comp=E,26nm,0.4s
MTLF eSg 13 26 12.7
comp=E,39nm,0.7s
MTLF Montolieu 9.01 149 Pn Pn 13 23 39.7 +1.2
RSL Roselend 9.02 124 Pn Pn 13 23 40.7 +1.9
RSL Sn Sn 13 25 16.9 -3.9
MLS Moulis 9.03 155 Pn 13 23 40.0 +1.2
ECHI Chisagues Biel 9.09 160 Pn 13 23 41.1 +1.4
GDM Grand'Maison 9.10 128 Pn Pn 13 23 43.0 +3.1
GDM Sn Sn 13 25 21.7 -1.0
ORIF Oris-en-Rattie 9.19 130 ePn Pn 13 23 41.7 +0.6
ORIF Oris-en-Rattie 9.19 130 ePg Pn 13 24 21.4 +40
ORIF eSn Sn 13 25 20.2 -4.6
comp=E,46nm,0.6s
ORIF eSg 13 26 19.4
comp=E,31nm,0.7s
LPL La Plagne 9.20 125 ePn Pn 13 23 41.6 +0.4
LPL La Plagne 9.20 125 eP Pn 13 23 48.3 +7.1
LPL eSn Sn 13 25 20.7 -4.4
comp=E,36nm,0.5s
LPL eSg 13 26 20.1
comp=E,40nm,0.7s
LPG La Plagne 9.22 125 ePn Pn 13 23 42.8 +1.2
LPG La Plagne 9.22 125 eP Pn 13 23 48.2 +6.6
LPG La Plagne 9.22 125 ePg Pn 13 24 21.9 +40
LPG eSn Sn 13 25 20.7 -5.0
comp=E,32nm,0.4s
LPG eSg 13 26 20.4
comp=E,57nm,0.9s
CSOR Sort 9.59 156 Pn 13 23 48.3 +1.8
EZAM Zamans 9.68 201 Pn 13 23 48.9 +1.2
CLLI Llivia 9.72 153 Pn 13 23 50.3 +2.0
MBDF Montbardon 9.77 128 ePn Pn 13 23 49.4 +0.4
MBDF Montbardon 9.77 128 eP Pn 13 23 56.0 +7.0
MBDF eSn Sn 13 25 34.5 -4.5
comp=E,29nm,0.6s
MBDF eSg 13 26 38.5
comp=E,46nm,1.0s
SMRF Simiane la Rot 9.77 135 eP Pn 13 23 53.9 +5.0
SMRF eSg Sn 13 26 37.4 +58
comp=E,35nm,0.9s
ELOB Lobios 9.82 198 Pn 13 23 50.0 +0.4
ESAC San Caprasio 9.88 164 Pn 13 23 50.8 +0.4
SJAF Saint Jean de 9.99 149 Pn 13 23 55.0 +3.0
EJON La Jonquera 10.03 149 Pn 13 23 55.1 +2.7
EMIR Miracle 10.12 156 Pn 13 23 58.0 +4.2
DAVOX Davos/Dischmat 10.19 111 Pn Pn 13 23 57.3 +2.5
comp=E,2.3nm,0.3s,baz=225,slow=1.5,SNR=17
DAVOX Sn Sn 13 25 44.5 -4.9
comp=E,1.0nm,0.3s,baz=357,slow=19,SNR=1.8
DAVOX Lg Lg 13 26 56.9
comp=E,0.2nm,0.3s,baz=344,slow=15,SNR=1.2
RETA Reutte 10.37 106 i Pn Pn 13 23 59.6 +2.5
comp=E,1.0nm,0.2s
RETA eSn Sn 13 25 53.3 -0.4
FUORN Ofenpass-Fuorn 10.50 111 Pn Pn 13 24 02.2 +3.2
CFON Fontmartina 10.51 152 Pn 13 24 00.2 +1.1
EPOB Poblet 10.54 158 Pn 13 24 01.1 +1.6
FETA Feichten 10.57 108 i Pn Pn 13 24 03.0 +3.1
comp=E,0.5nm,0.2s
FETA i Sn Sn 13 25 59.4 +0.7
comp=E,1.2nm,0.4s
FRF La Foret Royal 10.58 133 eP Pn 13 24 06.2 +6.2
FRF eSn Sn 13 25 53.4 -5.3
comp=E,3.6nm,0.2s
MOTA Moosalm 10.64 106 ePn Pn 13 24 03.3 +2.3
comp=E,1.0nm,0.1s
GUD Guadarrama 10.64 180 Pn 13 23 59.1 -1.9
CLL Collm 10.68 83 ePn Pn 13 24 04.0 +2.8
CLL e 13 26 17.0
CLL e(Sg) 13 27 08.0
LMR La Mourre 10.69 134 ePn Pn 13 24 01.2 -0.3
LMR eSn Sn 13 25 56.1 -5.4
comp=E,2.3nm,0.4s
SBF Sospel 10.72 129 ePn Pn 13 24 02.1 +0.1
SBF Sospel 10.72 129 eP Pn 13 24 08.5 +6.5
SBF eSn Sn 13 25 57.4 -5.0
comp=E,36nm,0.6s
SQTA Sankt Quirin 10.76 106 ePn Pn 13 24 04.9 +2.3
comp=E,3.7nm,0.2s
MTE Manteigas 11.15 194 Pn 13 24 09.1 +1.2
KHC Kasperske Hory 11.49 94 ePN Pn 13 24 16.2 +3.7
KHC ePG 13 25 02.5
KHC eSN Sn 13 26 18.9 -2.3
ESDC Sonseca Array 11.61 180 Pn Pn 13 24 13.7 -0.5
comp=E,0.4nm,0.3s,baz=6.9,slow=30,SNR=1.9
ESDC Sn Sn 13 26 15.7 -8.3
comp=E,1.6nm,0.3s,baz=3.1,slow=23,SNR=5.2
GERES GERESS Array B 11.66 95 Pn Pn 13 24 16.9 +2.0
comp=E,0.4nm,0.3s,baz=292,slow=14,SNR=5.2
KBA Koelnbreinsper 12.12 104 ePn Pn 13 24 25.6 +4.3
comp=E,1.6nm,0.3s
KBA i Sn Sn 13 26 37.6 +0.9
comp=E,4.7nm,0.7s
NBO00 NORSAR Array S 12.76 34 Pn Pn 13 24 29.2 -0.4
NOA NORSAR Array B 12.92 35 Pn Pn 13 24 27.7 -4.2
comp=E,0.0nm,0.3s,baz=187,slow=17,SNR=2.1
NC204 NORSAR Array S 12.92 34 Pn Pn 13 24 31.9 0.0
VYHS Vyhne 14.99 92 e Pn 13 24 57.4 -2.8
FINES FINESS Array B 19.35 47 P Pn 13 25 54.4 -0.4
comp=E,0.1nm,0.3s,baz=221,slow=18,SNR=2.2
AKASG Malin Array Be 20.85 79 P P 13 26 10.9 +0.7
comp=E,0.5nm,0.4s,baz=285,slow=10,SNR=3.2
ARCES ARCESS Array B 22.98 26 P P 13 26 32.6 -0.2
comp=E,2.6nm,0.8s,baz=228,slow=10,SNR=4.2
ZALV Zalesovo Beam 50.57 50 P P 13 30 28.9 +1.9
comp=E,0.9nm,0.5s,baz=296,slow=7.6,SNR=4.7
MKAR Makanchi Array 53.63 58 P P 13 30 51.5 +1.7
comp=E,0.2nm,0.6s,baz=324,slow=6.0,SNR=3.9
YKA Yellowknife Ar 54.07 328 P P 13 30 53.7 +1.0
comp=E,0.2nm,0.6s,baz=52,slow=7.6,SNR=4.2
WMQ Urumqi 58.45 58 eP P 13 31 29.4 +5.0
WMQ pP sP 13 31 33.3 +6.3
SONM Songino Array 64.70 44 P P 13 32 08.7 +2.1
comp=E,0.3nm,0.8s,baz=320,slow=5.8,SNR=2.3
HHC Hu-ho-hao-te 72.47 46 eP P 13 32 58.6 +3.4
LZH Lanzhou 72.53 54 eP P 13 32 57.3 +1.6
LZH pP sP 13 33 02.8 +4.5
LZH sP PcP 13 33 06.3 -7.1
LZH PP PP 13 35 49.6 +13

DNK **20** *13:26:16.1±4.3, 80°40N×1°83E, h167km±57km, ML4.3, Hypocentre not reviewed by the ISC*
BJI **20** *13:26:16.0±0.0, 80°00N×0°10W, h5km, mB5.1/44, mb4.7/61, Ms5.1/43, Ms7 4.9/41*
IDC **20** *13:26:18.2±0.3, 80°00N×0°03E, h0km, mb4.5/34, mb1 4.7/37, mb1mx4.6/45, mbtmp4.5/37, ML3.6/2, MS4.2/49, Ms1 4.2/49, ms1mx4.1/58, Error ellipse: s-maj=10.8km s-min=8.2km az=38.0*
BER **20** *13:26:18.0±2.9, 80°21N×0°51E, h10km, ML3.8,*

ML4.5(NAO),Confirmed Earthquake
NEIC **20** 13:26:19.8±1.6,79.96N±0.08×0.3E±0.4,h10km±1km, mb4.9/119,Error ellipse: s-maj=13.6km s-min=10.7km az=358.0
MOS **20** 13:26:19.8±1.3,79.90N×0.30E,h10km,mb5.1/98, MS4.3/10,Error ellipse: s-maj=22.5km s-min=3.3km az=94.0
BGR **20** 13:26:20.2±0.0,79.93N×3.19W,h10km,mb5.1,Ms4.0
GCMT **20** 13:26:20.8±0.2,80.11N±0.01×0.1E±0.1,h17km±1km, MW5.0/112,Moment Tensor Solution. s33,c43; s112,c168; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr1.56±.13; Mθθ-3.45±.12; Mφφ1.89±.09; Mrθ-1.81±.28; Mrφ-0.36±.07; Mθφ1.64±.30; Best double couple: Mo3.86800×10^{16} NP1:φs49.00000°,δ44.00000°, λ23.00000°. NP2:φs301.00000°,δ74.00000°,λ132.00000°. Principal axes: T 3.6950, Plg45.0000°, Azm253.0000°; N 0.3460, Plg40.0000°, Azm108.0000°; P -4.0400, Plg18.0000°, Azm2.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
IEPN **20** 13:26:31.3,80.24N×4.62E,h10km
ISC 20 13:26:20.2±0.8,79.92N±0.03×0.04W±0.03,h14km±4km, n847,σ1§64/880,mb4.9/203,MS4.3/73,26C-27D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	2.42	108	Pn	Pn	13 26 55.3	-4.0
KBS				Sn	Sn	13 27 22.3	-6.3
KBS	Kingsbay	2.42	108	eP	Pn	13 26 55.2	-4.0
KBS				eS	Sn	13 27 22.1	-6.5
KBS				IAML		13 27 34.1	
	comp=Z,1μm,1.0s						
KBS	Kingsbay	2.42	108⇓	iP	Pn	13 26 55.2	-4.0
KBS				eS	Sn	13 27 21.2	-7.4
KBS	Kingsbay	2.42	108		Pn	13 26 55.2	-4.0
KBS	Kingsbay	2.42	108	iP	Pn	13 26 55.4	-4.0
KBS	Kingsbay	2.42	108	iP		13 26 55.5	
KBS				IAML		13 27 25.3	
	comp=Z,927nm,0.3s						
NOR	Nord	3.16	310	Pn	Pn	13 27 06.1	-3.4
NOR				Sn	Sn	13 27 40.4	-6.4
NOR	Nord	3.16	310	iP	Pn	13 27 06.0	-3.4
NOR	Nord	3.16	310	IAML		13 28 00.1	
	comp=Z,140nm,0.4s						
NOR	Nord	3.16	310	iP	Pn	13 27 06.0	-3.4
NOR	Nord	3.16	310	e		13 27 05.8	
	baz=92,slow=18						
NOR				iP		13 27 06.0	
NOR				IAML		13 28 00.1	
	comp=Z,140nm,0.4s						
BRBB	Barentsburg B	3.28	117	Pn	Pn	13 27 09.1	-2.0
BRBB				Sn	Sn	13 27 46.7	-3.1
BRBB	Barentsburg B	3.28	117	Pn	Pn	13 27 09.1	-2.0
BRBB				Sn	Sn	13 27 46.7	-3.1
BRBA	Barentsburg A	3.31	117	Pn	Pn	13 27 10.1	-1.3
BRBA				Sn	Sn	13 27 47.1	-3.3
BRBA	Barentsburg A	3.31	117	Pn	Pn	13 27 10.1	-1.3
BRBA				Sn	Sn	13 27 47.1	-3.3
SPA0	Spitsbergen Ar	3.58	111	Pn	Pn	13 27 12.2	-2.9
SPA0				Sn	Sn	13 27 50.2	-6.9
SPA0	Spitsbergen Ar	3.58	111	Pn	Pn	13 27 12.2	-2.9
SPA0				Sn	Sn	13 27 50.2	-6.9
SPA0	Spitsbergen Ar	3.58	111⇓	iP	Pn	13 27 11.8	-3.3
SPA0				iS	Sn	13 27 49.8	-7.3
SPA0	Spitsbergen Ar	3.58	111	Pn	Pn	13 27 12.2	-2.9
SPA0				Sn	Sn	13 27 51.9	-5.2
SPITS	Spitsbergen Ar	3.58	111	Pn	Pn	13 27 11.8	-3.3
	baz=285,slow=4.2,SNR=1584						
SPITS				Sn	Sn	13 27 50.4	-6.7
	baz=334,slow=5.6,SNR=4.7						
SPITS				LR	LR	13 28 36.3	
	comp=Z,3μm,19.5s,baz=325,slow=38						
HSPB	Hornsund (broa	4.27	125	Pn	Pn	13 27 22.2	-2.5
HSPB				Sn	Sn	13 28 09.8	-4.3
HSPB	Hornsund (broa	4.27	125	eP	Pn	13 27 22.7	-1.9
HSPB				eS	Sn	13 28 09.2	-4.9
HSPB	Hornsund (broa	4.27	125	Pn	Pn	13 27 22.2	-2.5
HSPB				eS	Sn	13 28 08.3	-5.8
HSPB				IAML		13 28 12.8	
	comp=Z,330nm,0.7s						
HSPB	Hornsund (broa	4.27	125⇓	iP	Pn	13 27 22.1	-2.5
HSPB				iS	Sn	13 28 08.8	-5.4
HSPB	Hornsund (broa	4.27	125	eP	Pn	13 27 22.7	-1.9
HSPB				eS	Sn	13 28 09.2	-4.9
DAG	Danmarks Havn	4.90	239	iP	Pn	13 27 31.4	-1.8
DAG	Danmarks Havn	4.90	239	iP	Pn	13 27 31.4	-1.8
DAG				iS	Sn	13 28 25.3	-4.2
DAG				IAML		13 28 29.7	
	comp=Z,414nm,0.3s						
DAG	Danmarks Havn	4.90	239	iP	Pn	13 27 31.4	-1.8
DAG	Danmarks Havn	4.90	239	iP		13 27 31.4	
DAG				iS		13 28 25.3	
DAG				IAML		13 28 29.7	
	comp=Z,414nm,0.3s						
HOPEN	Hopen	6.11	111	Pn	Pn	13 27 46.0	-3.8
HOPEN				Sn	Sn	13 28 52.5	-6.9
HOPEN	Hopen	6.11	111	eP	Pn	13 27 46.1	-3.8
HOPEN				eS	Sn	13 28 51.2	-8.2
HOPEN				IAML		13 28 54.6	
	comp=Z,214nm,0.4s						
HOPEN	Hopen	6.11	111	eP	Pn	13 27 45.8	-4.0
HOPEN	Hopen	6.11	111	eS	Sn	13 28 50.2	-9.2
BJO1	Bjornoya	6.84	133	Pn	Pn	13 27 59.5	-0.4
BJO1	Bjornoya	6.84	133	eP	Pn	13 27 59.2	-0.6
BJO1				eS	Sn	13 29 11.6	-5.7
BJO1				IAML		13 29 16.7	
	comp=Z,30nm,0.4s						
BJO1	Bjornoya	6.84	133	eP	Pn	13 27 58.7	-1.1
BJO1				eS	Sn	13 29 13.1	-4.2
DBG	Daneborg	7.16	229	iP	Pn	13 28 02.8	-1.4
DBG				IAML		13 29 22.3	
	comp=Z,232nm,0.3s						
DBG	Daneborg	7.16	229	iP		13 28 02.8	
DBG				iS		13 29 15.8	
DBG				IAML		13 29 22.3	
	comp=Z,232nm,0.3s						
ZFI2	Zemlya Franca-	7.85	60⇑	iP	Pn	13 28 08.5	-5.2
ZFI2				eS	Sn	13 29 28.7	-14
	comp=Z,142nm,0.9s						
JNW	Jan Mayen West	9.17	197	eP	Pn	13 28 31.5	-0.3
JNE	Jan Mayen East	9.20	197	eP	Pn	13 28 31.5	-0.7
JMIC	Jan Mayen	9.21	198	Pn	Pn	13 28 32.2	-0.2
JMIC				Sn	Sn	13 30 12.3	-3.4
JMIC	Jan Mayen	9.21	198	Pn	Pn	13 28 32.2	-0.2
	comp=Z,58nm,0.3s,baz=55,slow=3.3,SNR=42						
JMIC				Sn	Sn	13 30 10.1	-5.5
	comp=Z,56nm,0.3s,baz=53,slow=24,SNR=20						
JMIC				LR	LR	13 31 15.3	
	comp=Z,2μm,18.5s,baz=60,slow=32						
JMIC	Jan Mayen	9.21	198	Pn	Pn	13 28 32.2	-0.2
JMIC				eS	Sn	13 30 08.0	-7.6
JMI	Jan Mayen	9.28	198	eP	Pn	13 28 33.2	-0.1
SCO	Scoresbysund	10.88	222	iP	Pn	13 28 54.5	-0.7
SCO				IAML		13 31 05.9	
	comp=Z,8.4nm,0.4s						
SCO	Scoresbysund	10.88	222		Pn	13 28 55.3	+0.2
SCO	Scoresbysund	10.88	222	P	Pn	13 28 55.3	+0.2
SCO	Scoresbysund	10.88	222	iP		13 28 54.5	
SCO				IAML		13 31 05.9	
	comp=Z,8.4nm,0.4s						
HAMF	Hammerfest	10.95	135	Pn	Pn	13 28 54.9	-1.2
SUMG	Summit	11.42	251	iP	Pn	13 29 00.0	-2.9
SUMG	Summit	11.42	251	iP	Pn	13 29 00.0	-2.9
SUMG				IAML		13 31 07.9	
	comp=Z,186nm,0.3s						
SUMG	Summit	11.42	251		Pn	13 28 59.9	-2.9
SUMG	Summit	11.42	251	iP	Pn	13 29 00.0	-2.9
SUMG	Summit	11.42	251	iP		13 29 00.0	
SUMG				iS		13 30 58.8	
SUMG				IAML		13 31 07.9	
	comp=Z,186nm,0.3s						
KEV	Kevo	12.20	132	Pn	Pn	13 29 13.9	+0.7
KEV	Kevo	12.20	132	P	Pn	13 29 13.9	+0.7
ARA0	ARCESS Array S	12.21	134	Pn	Pn	13 29 11.9	-1.5
	baz=352,slow=14						
ARA0	ARCESS Array S	12.21	134	Pn	Pn	13 29 11.9	-1.5
	baz=352,slow=14						
ARCES	ARCESS Array B	12.21	134	Pn	Pn	13 29 12.4	-1.0
	comp=Z,1.2nm,0.3s,baz=349,slow=12,SNR=23						
ARCES				Sn	Sn	13 31 18.1	-11
	comp=Z,0.2nm,0.3s,baz=4.8,slow=16,SNR=2.4						
ARCES				PcP	PcP	13 34 55.8	+0.4
	comp=Z,0.4nm,0.3s,baz=333,slow=1.4,SNR=6.7						
ARE0	ARCESS Array S	12.21	134	eP	Pn	13 29 12.3	-1.1
ARE0	ARCESS Array S	12.21	134		Pn	13 29 12.5	-0.9
LOF	Lofoten	12.36	156	eP	Pn	13 29 16.9	+1.5
KTK1	Kautokeino	12.43	139	eP	Pn	13 29 17.0	+0.7
STEI	Steigen	12.69	153	eP	Pn	13 29 22.7	+2.9
HEF	Hetta	13.05	139	eP	Pn	13 29 25.3	+0.4
KULLO	Kullorsuaq	13.09	277	iP	Pn	13 29 19.8	-5.5
KULLO				IAML		13 31 41.2	
	comp=Z,74nm,0.4s						
KULLO	Kullorsuaq	13.09	277	iP		13 29 19.8	
KULLO				iS		13 31 37.4	
KULLO				IAML		13 31 41.2	
	comp=Z,74nm,0.4s						
TULEG	Thule	13.62	292	eP	Pn	13 29 26.0	-6.5
TULEG				IAML		13 31 51.7	
	comp=Z,44nm,0.4s						
TULEG	Thule	13.62	292		Pn	13 29 24.7	-7.8
TULEG	Thule	13.62	292	eP		13 29 26.0	
TULEG				IAML		13 31 51.7	
	comp=Z,44nm,0.4s						
KONS	Konsvik	13.94	158	eP	Pn	13 29 39.8	+2.8
UPNV	Upernavik	14.31	271	iP		13 29 34.8	
UPNV				iS		13 32 02.6	
UPNV				IAML		13 32 06.2	
	comp=Z,140nm,0.5s						
MOR8	Moi Rana	14.36	156	eP	Pn	13 29 45.0	+2.3
NUUG	Nuugaatsiaq	14.82	265	iP	Pn	13 29 41.8	-7.1
NUUG				IAML		13 32 35.1	
	comp=Z,56nm,0.4s						
NUUG	Nuugaatsiaq	14.82	265	iP		13 29 41.8	
NUUG				iS		13 32 17.9	
NUUG				IAML		13 32 35.1	
	comp=Z,56nm,0.4s						
APA	Apatity	15.12	126⇓	iP	Pn	13 29 53.4	+0.5
APA				i		13 32 44.5	
APA				MLR	MLR		
	comp=Z,1μm,10.0s						
BORG	Borgarnes	16.34	214	LR	LR	13 34 53.4	
	comp=Z,1μm,21.4s,baz=5.6,slow=31						
ILULI	Ilulissat	16.46	259		Pn	13 30 03.0	-7.2
ILULI				IAmb	IAmb	13 30 16.0	
	comp=Z,87nm,1.1s						
ILULI	Ilulissat	16.46	259	P	Pn	13 30 03.0	-7.2
ILULI				pmax	pmax		
	comp=Z,87nm,1.1s						
ANGG	Ammassalik, Gr	17.55	237	P	P	13 30 25.8	+0.8
ANGG				IAmb	IAmb	13 30 32.8	
	comp=Z,111nm,1.4s						
SLVR	Solovky	17.83	126	eP	Pn	13 30 25.4	-2.0
	comp=Z,30nm,0.8s						
AMDE	Amderma	17.85	89	eP	Pn	13 30 20.7	-6.8
	comp=Z,15nm,0.8s						
AMDE				eS	Sn	13 33 23.1	-23
AKN	Aaknes	17.95	169	P	P	13 30 31.4	+1.9
DOMB	Dombas	18.16	166	e	P	13 30 37.7	+5.8
SFJD	Kangerlussuaq	18.36	255	P	P	13 30 28.4	-5.5
	comp=Z,0.5nm,0.3s,baz=21,slow=12,SNR=26						
SFJD				S	Sn	13 33 38.7	-20
	comp=Z,0.3nm,0.3s,baz=87,slow=20,SNR=5.2						
SFJD				LR	LR	13 38 00.5	
	comp=Z,152nm,20.2s,baz=28,slow=38						
SFJD	Kangerlussuaq	18.36	255	iP	P	13 30 29.0	-4.9
SFJD				IAML		13 33 47.6	
	comp=Z,1.5nm,0.4s						
SFJD	Kangerlussuaq	18.36	255	P	P	13 30 28.6	-5.2
SFJD				IAmb	IAmb	13 30 36.7	
	comp=Z,201nm,1.4s						
SFJD	Kangerlussuaq	18.36	255	P	P	13 30 28.6	-5.2
SFJD				pmax	pmax		
	comp=Z,201nm,1.4s						
SFJD	Kangerlussuaq	18.36	255	iP		13 30 29.0	
SFJD				iS		13 33 43.6	
SFJD				IAML		13 33 47.6	
	comp=Z,1.5nm,0.4s						
TMCR	Tamitsa	18.99	124	eP	Pn	13 30 41.5	+0.1
	comp=Z,41nm,0.9s						
TMCR				eS	Sn	13 34 14.2	+0.8
TMCR	Tamitsa	18.99	124	eP	Pn	13 30 41.5	+0.1
TMCR				eS	Sn	13 34 14.2	+0.8
TMCR				pmax	pmax		
	comp=Z,41nm,0.9s						
NC204	NORSAR Array S	19.01	164	P	P	13 30 40.1	-1.0
NC204				IAmb	IAmb	13 30 52.4	
	comp=Z,74nm,1.2s						
NC303	NORSAR Array S	19.09	163	P	P	13 30 41.7	-0.2
RES	Resolute Bay	19.09	306	P	P	13 30 36.9	-5.0
	comp=Z,2.2nm,0.3s,baz=44,slow=11,SNR=43						
RES				S	Sn	13 33 55.8	-20
	comp=Z,1.3nm,0.3s,baz=294,slow=19,SNR=6.6						
RES				LR	LR	13 38 01.1	
	comp=Z,1μm,19.0s,baz=35,slow=37						
RES	Resolute Bay	19.09	306	P	P	13 30 37.6	-4.3
RES	Resolute Bay	19.09	306	P	P	13 30 37.6	-4.3
RES				pmax	pmax		
	comp=Z,15nm,0.5s						
NC405	NORSAR Array S	19.22	163	P	Pn	13 30 46.2	+1.8
NC405				IAmb	IAmb	13 30 52.2	
	comp=Z,64nm,1.2s						
NBO00	NORSAR Array S	19.25	164	P	Pn	13 30 46.4	+1.6
NB201	NORSAR Array S	19.26	163	P	Pn	13 30 47.0	+2.1
NB201				IAmb	IAmb	13 30 52.3	
	comp=Z,53nm,0.9s						
NB2	NORSAR Subarra	19.27	163	P	Pn	13 30 46.1	+1.1
	comp=Z,136nm,2.5s,baz=355,slow=11						
NB2	NORSAR Subarra	19.27	163	P	Pn	13 30 46.4	+1.4
	baz=356,slow=10						
NB2	NORSAR Subarra	19.27	163	P	Pn	13 30 46.4	+1.4
	baz=356,slow=10						
NOA	NORSAR Array B	19.27	163	P	Pn	13 30 45.5	+0.5
	comp=Z,0.0nm,0.3s,baz=308,slow=18,SNR=14						
NOA				LR	LR	13 37 08.5	
	comp=Z,662nm,18.8s,baz=350,slow=34						
NAO01	NORSAR Array S	19.44	164	P	Pn	13 30 47.1	+0.1
NC602	NORSAR Array S	19.59	163	P	Pn	13 30 49.8	+1.0
NRA0	NORESS Array S	19.59	163	P	Pn	13 30 49.9	+1.2
	baz=9.5,slow=11						
FIA1	FINESS Array S	20.07	142	P	Pn	13 30 54.5	+0.1
FIA1				IAmb	IAmb	13 31 02.9	
	comp=Z,60nm,0.9s						
FIA0	FINESS Array S	20.07	142	P	Pn	13 30 53.6	-0.8
	baz=342,slow=10						
FIA0	FINESS Array S	20.07	142	P	Pn	13 30 53.6	-0.8
	baz=342,slow=10						
FINES	FINESS Array B	20.07	142	P	Pn	13 30 53.8	-0.6
	comp=Z,18nm,0.7s,baz=349,slow=8.7,SNR=39						
FINES				LR	LR	13 38 03.2	
	comp=Z,899nm,21.8s,baz=352,slow=35						
HFS	Hagfors	20.31	160	P	P	13 30 55.6	+0.4
	baz=351,slow=7.9						
HFS	Hagfors	20.31	160	P	P	13 30 56.2	+1.0
	comp=Z,16nm,0.8s,baz=8.9,slow=10,SNR=21						
HFS				LR	LR	13 37 32.2	
	comp=Z,802nm,19.5s,baz=0.5,slow=33						
HFS	Hagfors	20.31	160	P	P	13 30 55.6	+0.4
	baz=351,slow=7.9						
KONO	Kongsberg	20.58	166	eP	P	13 30 59.6	+1.4
KONO	Kongsberg	20.58	166	P	Pn	13 31 00.1	-0.4
KONO	Kongsberg	20.58	166c	eP	P	13 30 59.3	+1.1
KONO				pmax	pmax		
	comp=Z,108nm,2.5s						
KLMR	Klimovskoe	22.36	125	eP	P	13 31 18.4	+1.2
KLMR	Klimovskoe	22.36	125d	iP	P	13 31 18.7	+1.5
KLMR				pmax	pmax		
	comp=Z,114nm,1.3s						
KLMR	Klimovskoe	22.36	125⇓	iPn	P	13 31 18.8	+1.5
KLMR				ePn	P	13 31 18.8	+1.5
KLMR				⇓iPn	P	13 31 18.8	+1.5
KLMR				AMP		13 31 27.9	
	comp=Z,114nm,1.3s						
KLMR				⇓Lg	Lg	13 37 19.0	
KLMR				⇓Lg	Lg	13 37 19.0	
KLMR				⇓Rg	Rg	13 38 38.9	
KLMR				AMP		13 40 37.2	
	comp=Z,764nm,13.5s						
KLMR	Klimovskoe	22.36	125	eP	P	13 31 18.4	+1.2
KLMR				eP	P	13 31 18.4	+1.2
KLMR				eP	P	13 31 18.4	+1.2
PRGR	Permogore	22.53	117	eP	P	13 31 16.8	-2.3
	comp=Z,51nm,1.0s						
PRGR				eS	S	13 35 13.8	-12
PRGR	Permogore	22.53	117	eP	P	13 31 17.2	-1.9
PRGR				eS	S	13 35 20.1	-5.2
PRGR				pmax	pmax		
	comp=Z,57nm,0.9s						
NRIK	Noril'sk	22.64	67	P	P	13 31 19.9	-0.3
	comp=Z,14nm,0.8s,baz=346,slow=7.5,SNR=31						
NRIK				LR	LR	13 41 56.0	
	comp=Z,1μm,18.1s,baz=348,slow=42						
NRIK	Noril'sk	22.64	67	iP	P	13 31 19.6	-0.7
NRS	Narsarsuaq	22.94	242	P	P	13 31 24.8	+1.4
NRS	Narsarsuaq	22.94	242	P	P	13 31 24.8	+1.4
NRS				pmax	pmax		
	comp=Z,230nm,1.1s						
VSU	Vasula	23.06	143	eP	P	13 31 24.6	-0.1
VSU	Vasula	23.06	143c	eP	P	13 31 24.2	-0.5
VSU				pmax	pmax		
	comp=Z,86nm,1.3s						
FRB	Frobisher Bay	24.45	270	P	P	13 31 37.0	-0.9
	comp=Z,30nm,0.9s,baz=25,slow=9.5,SNR=33						
FRB				LR	LR	13 41 37.8	
	comp=Z,745nm,18.2s,baz=14,slow=38						
PBUR	Paburge	25.00	150	eP	P	13 31 43.6	+0.6
PBUR				IAmb	IAmb	13 31 54.0	
	comp=Z,216nm,0.8s						
IZAR	Zarasai	25.68	145	eP	P	13 31 48.8	-0.4
PABE	Paberze	25.70	148	eP	P	13 31 49.6	+0.3
ISAL	Salakas	25.84	145	eP	P	13 31 50.2	-0.4
ISAL				IAmb	IAmb	13 32 00.5	
	comp=Z,21nm,1.0s						
RGN	Rugen	25.86	162	P	P	13 31 52.3	+1.5
RGN				IAmb	IAmb	13 32 10.5	
	comp=Z,52nm,1.0s						
TIXI	Tiksi	26.02	34	P	P	13 31 51.6	-0.5
	comp=Z,9.1nm,1.1s,baz=347,slow=7.9,SNR=16						
TIXI				LR	LR	13 41 13.5	
	comp=Z,323nm,20.4s,baz=347,slow=34						
TIXI	Tiksi	26.02	34	P	P	13 31 52.6	+0.5
TIXI				IAmb	IAmb	13 31 55.9	
	comp=Z,41nm,1.5s						
TIXI	Tiksi	26.02	34c	eP	P	13 31 52.0	-0.1
TIXI				pmax	pmax		
	comp=Z,36nm,1.7s						
KIRV	Kirov	26.04	115	P	P	13 31 52.0	-0.4
	comp=Z,16nm,0.8s,baz=337,slow=13,SNR=6.7						
KIRV				LR	LR	13 43 14.7	
	comp=Z,601nm,18.4s,baz=53,slow=39						
KIRV	Kirov	26.04	115	iP	P	13 31 52.8	+0.4
IIGN	Ignalina	26.07	145	eP	P	13 31 52.8	+0.1
IIGN				IAmb	IAmb	13 32 02.7	
	comp=Z,20nm,1.0s						
NACGM	Naroch	26.57	144	e	P	13 31 56.0	-1.2
NACGM				eLQ	LQ	13 37 02.0	
NACGM				eLR	LR	13 40 42.0	
MICGM	Minsk	27.08	143	e	P	13 32 06.0	+4.2
MNK	Minsk	27.08	143	eP	P	13 32 06.0	+4.2
SUW	Suwalki	27.10	149	P	P	13 32 02.3	+0.3
SUW	Suwalki	27.10	149	P	P	13 32 02.3	+0.3
SUW				pmax	pmax		
	comp=Z,79nm,1.4s						
OBN	Obninsk	27.51	132	LR	LR	13 42 52.4	
	comp=Z,100nm,18.6s,baz=352,slow=36						
OBN	Obninsk	27.51	132⇓	eP	P	13 32 05.6	0.0
OBN				e		13 32 14.2	
OBN				S	S	13 36 47.0	+1.4
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,477nm,17.0s						
C36M	Paulatuk	27.70	321	P	P	13 32 07.2	-0.1
C36M	Paulatuk	27.70	321	P	P	13 32 07.4	+0.1
	baz=18						
CLL	Collm	29.07	163⇓	iP	P	13 32 21.7	+2.1
	comp=Z,45nm,1.7s						
CLL				i		13 32 28.9	
CLL				ePP	PP	13 33 10.0	-15
CLL				eS	S	13 37 11.0	+0.7
CLL				e		13 37 51.0	
CLL				eSSS	SSS	13 38 48.0	
CLL	Collm	29.07	163	P	P	13 32 21.9	+2.3
CLL				IAmb	IAmb	13 32 23.2	
	comp=Z,22nm,1.3s						
CLL	Collm	29.07	163⇓	iP	P	13 32 21.7	+2.1
CLL				i		13 32 28.9	
CLL				eS	S	13 37 11.0	+0.7
CLL				pmax	pmax		
	comp=Z,45nm,1.7s						
BRG	Berggiesshubel	29.55	162	eP	P	13 32 24.6	+0.7
	comp=Z,15nm,1.0s						
BRG				i		13 32 33.1	
	comp=Z,14nm,1.1s						
BRG	Berggiesshubel	29.55	162	eP	P	13 32 24.6	+0.7
BRG				i		13 32 33.1	
BRG				pmax	pmax		
	comp=Z,15nm,1.0s						
BRG				pmax	pmax		
	comp=Z,14nm,1.1s						
SVE	Sverdlovsk	29.58	104	eP	P	13 32 25.4	+1.4
SVE				pmax	pmax		
	comp=Z,18nm,1.3s						
SVE				MLR	MLR		
	comp=Z,774nm,15.0s						
ARU	Arti	29.60	106	P	P	13 32 24.4	+0.1
	comp=Z,0.6nm,0.3s,baz=354,slow=9.3,SNR=7.8						
ARU				LR	LR	13 45 32.0	
	comp=Z,403nm,19.3s,baz=336,slow=39						
ARU	Arti	29.60	106c	iP	P	13 32 24.2	-0.1
ARU						13 33 18.9	
ARU						13 35 26.4	
ARU				S	S	13 37 20.1	+1.5
ARU				SS	SnSn	13 38 47.5	+0.9
ARU				pmax	pmax		
	comp=Z,15nm,1.2s						
ARU				MLR	MLR		
	comp=Z,700nm,16.0s						
MOX	Moxa	29.67	165	eL	L	13 42 48.8	
	comp=Z,337nm,21.5s						
MOX	Moxa	29.67	165	P	P	13 32 26.6	+1.7
MOX				pmax	pmax		
	comp=Z,42nm,1.0s						
INK	Inuvik	29.69	327	P	P	13 32 24.4	-0.5
	comp=Z,1.9nm,0.5s,baz=11,slow=10.0,SNR=12						
INK				PcP	PcP	13 35 28.6	+0.3
	comp=Z,2.1nm,0.6s,baz=348,slow=8.4,SNR=4.9						
INK				LR	LR	13 45 22.3	
	comp=Z,213nm,20.5s,baz=30,slow=39						
INK	Inuvik	29.69	327	P	P	13 32 24.7	-0.2
INK					PcP	13 35 28.1	-0.3
KSP	Ksiaz	29.72	159	P	P	13 32 26.2	+0.8
KSP				pmax	pmax		
	comp=Z,8.0nm,1.2s						
PVCC	Panska Ves	29.93	161	eP	P	13 32 28.9	+1.6
PVCC				AMS	AMS	13 43 40.0	
	comp=Z,1μm,20.9s						
PVCC	Panska Ves	29.93	161	eP	P	13 32 28.9	+1.6
PVCC				MLR	MLR		
	comp=Z,1μm,20.9s						
CHVC	Chvalec	29.96	159	eP	P	13 32 28.3	+0.7
CHVC				ex	x	13 32 36.3	
CHVC				AMS	AMS	13 43 00.0	
	comp=Z,600nm,20.4s						
GIVF	Givet	29.99	174	eP	P	13 32 25.5	-2.2
GIVF				pmax	pmax		
	comp=Z,85nm,1.9s						
OSTC	Ostas	30.00	159	AMS	AMS	13 43 30.0	
	comp=Z,600nm,15.6s						
UPC	Upice	30.04	159	AMS	AMS	13 42 50.0	
	comp=Z,800nm,22.9s						
NKC	Novy Kostel	30.12	164	eP	P	13 32 30.6	+1.7
NKC				ex	x	13 32 38.6	
NKC				AMS	AMS	13 44 20.0	
	comp=Z,900nm,15.0s						
NKC	Novy Kostel	30.12	164	eP	P	13 32 30.6	+1.7
NKC				e		13 32 38.6	
NKC				MLR	MLR		
	comp=Z,900nm,15.0s						
DPC	Dobruska-Polom	30.22	159	eP	P	13 32 39.3	+9.5
DPC				ex	x	13 32 45.1	
DPC				AMS	AMS	13 43 30.0	
	comp=Z,700nm,18.4s						
DPC	Dobruska-Polom	30.22	159	eP	P	13 32 39.3	+9.5
DPC				e		13 32 45.1	
DPC				MLR	MLR		
	comp=Z,700nm,18.4s						
LPSR	Galich'ya Gora	30.28	130	eP	P	13 32 37.8	+7.6
LPSR				pmax	pmax		
	comp=Z,60nm,1.0s						

PRA Prague 30.38 161 eP P 13 32 33.4 +2.2
PRA Prague 30.38 161 eP P 13 32 33.4 +2.2
PRU Pruhonice 30.47 161 eP P 13 32 33.2 +1.2
PRU ex x 13 32 41.6
PRU AMS AMS 13 43 30.0
comp=Z,700nm,19.5s
PRU Pruhonice 30.47 161 eP P 13 32 33.2 +1.2
PRU e 13 32 41.6
PRU MLR MLR
comp=Z,700nm,19.5s
KRLC Kraliky 30.52 158 eP P 13 32 33.0 +0.5
KRLC ex x 13 32 40.9
KRLC AMS AMS 13 43 40.0
comp=Z,500nm,20.4s
KRLC Kraliky 30.52 158 eP P 13 32 33.0 +0.5
KRLC e 13 32 40.9
KRLC MLR MLR
comp=Z,500nm,20.4s
GOPC GO Pecny, Ondr 30.56 161 eP P 13 32 34.8 +2.0
GOPC AMS AMS 13 43 50.0
comp=Z,900nm,22.0s
GOPC GO Pecny, Ondr 30.56 161 eP P 13 32 34.8 +2.0
GOPC MLR MLR
comp=Z,900nm,22.0s
OJC Ojcow 30.59 155 P P 13 32 35.0 +1.9
OJC pmax pmax
comp=Z,13nm,1.2s
GRF Grafenberg Arr 30.60 166 eP P 13 32 34.8 +1.6
comp=Z,27nm,1.1s,baz=355,slow=8.8
GRF eL L 13 43 27.1
comp=Z,493nm,20.4s
TOLK Toolik Lake Re 30.65 339 P P 13 32 33.1 -0.4
baz=10,SNR=5.4
OKC Ostrava-Krasne 30.85 157 AMS AMS 13 43 30.0
comp=Z,600nm,22.9s
MORC Moravsky Berou 30.87 158 eP P 13 32 36.2 +0.6
MORC Moravsky Berou 30.87 158 ⇑P P 13 32 36.4 +0.8
MORC Moravsky Berou 30.87 158 ⇑P P 13 32 36.4 +0.8
AKASG Malin Array Be 30.97 143 P P 13 32 36.0 -0.3
comp=Z,8.8nm,0.8s,baz=350,slow=9.4,SNR=27
AKASG LR LR 13 44 33.9
comp=Z,629nm,21.9s,baz=340,slow=35
AKBB Malin Array Si 30.97 143 i P P 13 32 36.2 -0.2
KIEV Kiev 30.98 143 P P 13 32 36.0 -0.4
TREC Trest 31.22 160 eP P 13 32 40.5 +1.9
TREC AMS AMS 13 44 10.0
comp=Z,800nm,18.3s
TREC Trest 31.22 160 eP P 13 32 40.5 +1.9
TREC MLR MLR
comp=Z,800nm,18.3s
VRAC Vranov 31.27 159 eP P 13 32 40.4 +1.3
VRAC Vranov 31.27 159 P P 13 32 40.7 +1.7
comp=Z,15nm,1.0s,baz=359,slow=8.1,SNR=9.8
VRAC LR LR 13 44 41.7
comp=Z,504nm,18.9s,baz=351,slow=35
VRAC Vranov 31.27 159 ⇑P P 13 32 40.8 +1.7
KHC Kasperske Hory 31.27 163 eP P 13 32 40.7 +1.5
KHC epP pwP 13 32 45.9 -0.3
KHC AMS AMS 13 44 50.0
comp=Z,700nm,18.2s
KHC Kasperske Hory 31.27 163 i P P 13 32 41.0 +1.8
KHC pmax pmax
comp=Z,22nm,1.2s
LVV L'vov 31.34 149 eP P 13 32 48.2 +8.6
KWP Kalwaria Pacla 31.41 151 eP P 13 32 41.5 +1.2
KWP Kalwaria Pacla 31.41 151 eP P 13 32 41.5 +1.2
NIE Niedzica 31.42 154 eP P 13 32 42.4 +1.9
NIE Niedzica 31.42 154 eP P 13 32 42.4 +1.9
KRUC Moravsky 31.50 159 eP P 13 32 42.3 +1.2
KRUC Moravsky 31.50 159 P P 13 32 43.1 +2.0
KRUC pmax pmax
comp=Z,15nm,1.8s
GERES GERESS Array B 31.57 163 P P 13 32 43.2 +1.5
comp=Z,13nm,0.9s,baz=12,slow=7.0,SNR=54
GERES PcP PcP 13 35 32.4 -1.4
comp=Z,0.2nm,0.3s,baz=5.4,slow=2.1,SNR=3.2
GERES LR LR 13 45 53.6
comp=Z,348nm,18.1s,baz=2.0,slow=37
VSR Storozhevoye 31.66 131 eP P 13 32 49.5 +7.0
VSR pmax pmax
comp=Z,30nm,1.4s
CDF Champ du Feu 31.74 171 eP P 13 32 44.9 +1.6
CDF pmax pmax
comp=Z,20nm,1.3s
JAVC Velka Javorina 31.79 158 eP P 13 32 45.2 +1.5
EPYK Eagle Plains 31.88 328 P P 13 32 44.2 -0.1
EPYK IAmb IAmb 13 32 53.4
comp=Z,14nm,1.3s
EPYK Eagle Plains 31.88 328 P P 13 32 43.2 -1.1
baz=13
ECH Echery 31.93 171 P P 13 32 46.3 +1.4
ECH pmax pmax
comp=Z,23nm,1.1s
VRH Novokhopyorsk 32.02 128 eP P 13 32 52.8 +7.2
VRH pmax pmax
comp=Z,40nm,0.8s
CRVS Cervenica-Dubn 32.03 153 eP P 13 32 50.6 +4.9
CRVS Cervenica-Dubn 32.03 153 eP P 13 32 50.6 +4.9
BILL Bilibino 32.04 10 P P 13 32 44.7 -1.0
BILL Bilibino 32.04 10⇓eP P 13 32 44.6 -1.0
BILL e 13 32 56.0
BILL pmax pmax
comp=Z,9.0nm,1.3s
BILL MLR MLR
comp=Z,627nm,17.0s
KOLS Kolonicke sedl 32.06 152 eP P 13 32 47.3 +1.2
KOLS pmax pmax
comp=Z,21nm,1.4s
KOLS Kolonicke sedl 32.06 152 eP P 13 32 47.3 +1.2
COLD Coldfoot 32.09 339 P P 13 32 45.7 -0.4
HAU Haudompre 32.12 172 eP P 13 32 48.3 +1.7
HAU pmax pmax
comp=Z,22nm,1.1s
MODS Modra-Piesok 32.25 158 eP P 13 32 49.6 +1.9
MODS pmax pmax
comp=Z,28nm,1.1s
MODS Modra-Piesok 32.25 158 eP P 13 32 49.6 +1.9
FYU Fort Yukon 32.40 335 P P 13 32 50.4 +1.6
FYU IAmb IAmb 13 33 02.6
comp=Z,15nm,0.7s
SCHQ Schefferville 32.54 261 P P 13 32 49.6 -0.6
comp=Z,5.6nm,0.5s,baz=20,slow=7.4,SNR=28
SCHQ LR LR 13 46 18.1
comp=Z,362nm,20.5s,baz=12,slow=37
SCHQ Schefferville 32.54 261 P P 13 32 50.0 -0.2
MOA Molln 32.59 162 i P P 13 32 52.2 +1.5
comp=Z,9.7nm,0.9s
CONA Conrad Observa 32.60 160 i P P 13 32 52.5 +1.6
comp=Z,12nm,1.0s
RETA Reutte 32.78 166 epP P 13 32 54.7 +2.2
comp=Z,15nm,1.1s
LOR Lormes 32.81 175 eP P 13 32 53.5 +0.9
LOR pmax pmax
comp=Z,27nm,1.4s
TRPA Tarpa 32.88 152 ⇓P P 13 32 54.7 +1.5
PSZ Piszkesteto 32.88 155 P P 13 32 56.7 +3.4
PSZ pmax pmax
comp=Z,31nm,1.4s
MOTA Moosalm 32.94 166 i P P 13 32 56.0 +2.1
comp=Z,28nm,1.2s,SNR=7.9
DAVA Damuels 32.95 168 i P P 13 32 56.3 +2.3
comp=Z,12nm,0.7s
WATA Walderalm 32.97 165 i P P 13 32 56.2 +2.0
comp=Z,18nm,0.8s
SSF Saint Saulge 33.01 176 eP P 13 32 55.4 +1.1
SSF pmax pmax
comp=Z,21nm,1.2s
WTTA Wattenberg 33.04 165 i P P 13 32 57.2 +2.4
comp=Z,19nm,1.3s
SQTA Sankt Quirin 33.07 166 i P P 13 32 57.3 +2.3
comp=Z,15nm,1.0s
YKA Yellowknife Ar 33.09 309 P P 13 32 54.4 -0.5
comp=Z,2.8nm,1.0s,baz=17,slow=9.2,SNR=31
YKA PcP PcP 13 35 37.7 +0.1
comp=Z,2.0nm,0.5s,baz=9.9,slow=2.6,SNR=19
YKA LR LR 13 46 06.7
comp=Z,710nm,19.1s,baz=0.0,slow=36
FETA Feichten 33.25 167 esP P 13 32 59.7 +3.1
comp=Z,8.5nm,1.0s
AVF Avril sur Loir 33.28 176 eP P 13 32 57.8 +1.1
AVF pmax pmax
comp=Z,12nm,1.0s
KBA Koelnbreinsper 33.31 163 i P P 13 32 59.5 +2.3
comp=Z,14nm,0.9s,SNR=5.7
KBA Koelnbreinsper 33.31 163 P P 13 32 59.2 +2.0
SORM Soroca 33.42 145 ⇓P P 13 32 57.9 +0.1
SORM Soroca 33.42 145 ⇓P P 13 32 57.9 +0.1
DAVOX Davos/Dischmat 33.45 168 LR LR 13 45 38.2
comp=Z,643nm,20.9s,baz=6.0,slow=35
PRP Porcupine Dome 33.45 335 P P 13 32 60.0 +1.7
PRP IAmb IAmb 13 33 08.1
comp=Z,15nm,1.2s
BGF Bois d'Agland 33.50 176 eP P 13 33 00.0 +1.3
BGF pmax pmax
comp=Z,54nm,1.4s
CABF La Chapelle 33.51 172 eP P 13 33 00.3 +1.5
CABF pmax pmax
comp=Z,27nm,1.2s
FCC Fort Churchill 33.53 290 P P 13 32 58.5 -0.2
FCC IAmb IAmb 13 32 60.0
comp=Z,16nm,0.6s
FCC Fort Churchill 33.53 290 P P 13 32 58.5 -0.2
FCC pmax pmax
comp=Z,16nm,0.6s
BUR08 Bucovina Ar. S 33.60 149 P P 13 33 00.7 +1.1
BUR08 IAmb IAmb 13 33 12.6
comp=Z,21nm,1.2s
ABTA Abfaltersbach 33.60 164 epP P 13 33 02.0 +2.4
comp=Z,12nm,1.2s
BURAR Bucovina Array 33.63 149 ⇑P P 13 33 00.5 +0.7
BURAR Bucovina Array 33.63 149 ⇑P P 13 33 00.5 +0.7
TCF Toulx Ste Croi 33.77 177 eP P 13 33 02.0 +1.0
TCF pmax pmax
comp=Z,41nm,1.6s
MYKA Terra Mystica 33.77 163 i pP P 13 33 03.5 +2.5
comp=Z,12nm,0.8s
SOKA Soboth 33.80 161 i pP P 13 33 03.4 +2.1
comp=Z,8.5nm,0.9s
EGAK Eagle 33.83 331 P P 13 33 00.9 -0.4
EGAK PcP 13 35 40.4 +0.7
OBKA Obir 33.94 162 i sP P 13 33 05.2 +2.6
comp=Z,32nm,0.9s,SNR=5.9
POKR Poker Flat Res 33.99 336 P P 13 33 02.6 -0.2
baz=9.8,SNR=6.3
CTI Castel Tesino 34.26 165 P P 13 33 07.3 +2.0
CTI pmax pmax
comp=Z,45nm,1.2s
TCOL CIGO, UAF Yank 34.26 336 P P 13 33 04.6 -0.5
baz=9.6
IL31 34.29 335 P P 13 33 06.7 +1.4
IL31 PcP 13 35 41.4 +0.5
ILAR Eielson Array 34.29 335 P P 13 33 06.4 +1.1
comp=Z,3.2nm,0.9s,baz=4.6,slow=7.3,SNR=26
ILAR PcP PcP 13 35 40.5 -0.5
comp=Z,1.2nm,0.5s,baz=335,slow=3.5,SNR=17
ILAR LR LR 13 46 29.5
comp=Z,126nm,20.9s,baz=13,slow=35
MLY Manley 34.30 338 P P 13 33 06.5 +1.0
MLY PcP 13 35 41.9 +0.9
DAWY Dawson 34.38 330 P P 13 33 06.2 +0.1
CCB Clear Creek Bu 34.48 336 P P 13 33 08.9 +1.9
KIS Kishinev 34.59 144 e P 13 33 15.0 +7.0
KIS eL L 13 43 08.0
KIS LRM MLR 13 47 02.0
comp=Z,700nm,16.0s
LPL La Plagne 34.62 172 eP P 13 33 10.8 +2.2
LPL pmax pmax
comp=Z,20nm,1.1s
LPG La Plagne 34.64 172 eP P 13 33 11.1 +2.3
LPG pmax pmax
comp=Z,18nm,1.0s
HDA Harding Lake 34.66 335 P P 13 33 09.8 +1.4
HDA Harding Lake 34.66 335 P P 13 33 07.8 -0.6
baz=9.7
SIRR Siria 34.66 153 ⇓P P 13 33 10.2 +1.5
RJF Les Rejaudoux 34.75 178 eP P 13 33 10.6 +1.1
RJF pmax pmax
comp=Z,41nm,1.2s
BRVK Borovoye 34.85 96 P P 13 33 10.8 +0.5
TESR Tescani 34.85 147 ⇓P P 13 33 10.9 +0.6
TEOL Teolo 34.95 166 P P 13 33 11.9 +0.7
DOT Dot Lake 35.19 333 P P 13 33 13.9 +0.8
ORIF Oris-en-Rattie 35.19 173 eP P 13 33 15.2 +1.8
ORIF pmax pmax
comp=Z,16nm,1.2s
VIVF Saint-Julien-l 35.23 174 eP P 13 33 15.4 +1.7
VIVF pmax pmax
comp=Z,22nm,1.3s
AKTO Aktyubinsk 35.28 110 LR LR 13 49 32.4
comp=Z,399nm,18.3s,baz=349,slow=40
AKTO Aktyubinsk 35.28 110 i P P 13 33 13.9 -0.1
AKTO pmax pmax
comp=Z,22nm,1.0s
DOPR Dopca 35.28 149 ⇑P P 13 33 16.0 +2.0
BZS Buzias 35.30 153 ⇑P P 13 33 14.9 +0.7
BZS Buzias 35.30 153 ⇑P P 13 33 14.9 +0.7
MBDF Montbardon 35.41 172 eP P 13 33 18.7 +3.4
MBDF pmax pmax
comp=Z,19nm,1.1s
YAK Yakutsk 35.41 39 eP P 13 33 13.9 -1.0
YAK e*PP pwP 13 33 25.7 +3.8
YAK e 13 34 30.8
YAK ePPP PPP 13 34 48.6
YAK e 13 35 49.0
YAK eS S 13 38 46.8 -1.8
YAK e*SS sS 13 39 04.6 +10
YAK eSS SnSn 13 41 09.8 +2.5
YAK eSSS SSS 13 41 26.6
YAK e 13 43 24.7
YAK pmax pmax
comp=Z,38nm,1.0s
YAK pmax pmax
comp=E,5.0nm,1.2s
YAK pmax pmax
comp=N,36nm,1.1s
YAK pmax pmax
comp=Z,44nm,2.0s
YAK pmax pmax
comp=N,58nm,2.2s
YAK pmax pmax
comp=E,30nm,2.3s
YAK smax smax
comp=N,89nm,3.1s
YAK smax smax
comp=E,77nm,3.3s
VRI Vrincioaia 35.50 147 ⇓P P 13 33 17.1 +1.1
VRI Vrincioaia 35.50 147 ⇓P P 13 33 17.1 +1.1
GZR Gura Zlata 35.62 152 ⇑P P 13 33 19.2 +2.2
GZR Gura Zlata 35.62 152 ⇑P P 13 33 19.2 +2.2
VOIR 35.77 149 ⇑P P 13 33 19.6 +1.2
VOIR 35.77 149 ⇑P P 13 33 19.6 +1.2
MLR Muntele Rosu 35.80 148 P P 13 33 20.2 +1.5
comp=E,4.7nm,0.8s,baz=175,slow=7.4,SNR=4.7
MLR Muntele Rosu 35.80 148 ⇑P P 13 33 20.1 +1.5
ARR Arges 35.80 150 ⇓P P 13 33 20.5 +1.9
PAX Paxson 35.97 334 P P 13 33 20.4 +0.5
PAX Paxson 35.97 334 P P 13 33 20.4 +0.5
PAX pmax pmax
comp=Z,5.0nm,0.6s
MDVR Moldovita 36.14 153 ⇑P P 13 33 22.9 +1.4
SBF Sospel 36.29 171 eP P 13 33 25.7 +2.9
SBF pmax pmax
comp=Z,60nm,1.0s
CFR Carcaliu 36.32 146 ⇓P P 13 33 23.3 +0.4
CFR Carcaliu 36.32 146 ⇓P P 13 33 23.3 +0.4
GAMB Gambell 36.44 354 P P 13 33 23.5 -0.3
GAMB IAmb IAmb 13 33 25.4
comp=Z,14nm,1.0s
SEY Seymchan 36.50 21 i P P 13 33 23.8 -0.5
ZALV Zalesovo Beam 36.55 81 P P 13 33 25.1 +0.3
comp=Z,5.1nm,0.9s,baz=333,slow=8.3,SNR=14
ZALV PcP PcP 13 35 47.6 -0.2
comp=Z,0.4nm,0.3s,baz=350,slow=7.3,SNR=2.0
ZALV LR LR 13 52 20.5
comp=Z,506nm,18.9s,baz=324,slow=43
FRF La Foret Royal 36.57 172 eP P 13 33 26.8 +1.7
FRF pmax pmax
comp=Z,36nm,1.1s
TOPG Topolog 36.64 145 ⇑P P 13 33 26.1 +0.4
TTA Tatalina 36.71 342 P P 13 33 26.8 +0.6
TTA Tatalina 36.71 342 P P 13 33 26.8 +0.6
MTLF Montolieu 36.71 177 eP P 13 33 28.0 +1.7
MTLF pmax pmax
comp=Z,37nm,1.8s
AB31 Akbulak array 36.74 108 i P P 13 33 26.7 +0.2
ABKAR Akbulak array 36.74 108 P P 13 33 27.1 +0.7
OSSC Osservatorio P 36.76 166 P P 13 33 27.2 +0.5
LMR La Mourre 36.79 172 eP P 13 33 29.6 +2.6
LMR pmax pmax
comp=Z,89nm,1.9s
JURR Jurilovca 36.80 145 ⇑P P 13 33 35.7 +8.7
EPF Esparros 37.02 180 eP P 13 33 30.0 +1.0
EPF pmax pmax
comp=Z,26nm,1.3s
TIRR Tirgusor 37.06 146 ⇑P P 13 33 29.9 +0.7
TIRR Tirgusor 37.06 146 ⇑P P 13 33 29.9 +0.7
MURB Monte Urbino 37.08 165 P P 13 33 30.9 +1.4
MURB IAmb IAmb 13 33 41.3
comp=Z,34nm,0.9s
ETSF Etsaut 37.15 181 eP P 13 33 32.3 +2.2
ETSF pmax pmax
comp=Z,15nm,1.3s
HYT Haines Junctio 37.39 327 P P 13 33 32.5 +0.4
HYT IAmb IAmb 13 33 41.5
comp=Z,20nm,1.3s
BOD Bodaibo 37.52 53 eP P 13 33 32.0 -1.0
BOD pmax pmax
comp=Z,28nm,1.7s
NRCA Norcia 37.53 164 P P 13 33 33.5 +0.1
NRCA IAmb IAmb 13 33 37.3
comp=Z,42nm,1.0s
PGF Pioggiola 37.65 169 eP P 13 33 35.9 +1.5
PGF pmax pmax
comp=Z,50nm,1.4s
GOF Gofitskoye 38.22 129⇑eP P 13 33 44.0 +4.9
GOF pmax pmax
comp=Z,32nm,1.1s
KURK Kurchatov 38.57 89 i P P 13 33 41.8 -0.1
KURK pmax pmax
comp=Z,28nm,1.1s
FFC Flin Flon 38.68 295 P P 13 33 42.3 -0.5
FFC Flin Flon 38.68 295 P P 13 33 42.3 -0.5
FFC pmax pmax
comp=Z,9.0nm,0.7s
KIV Kislovodsk 39.26 129 eP P 13 33 49.5 +1.6
KIV pmax pmax
comp=Z,35nm,1.1s
KIV MLR MLR
comp=Z,533nm,16.0s
MATQ Matagami 39.30 270 P P 13 33 48.0 -0.1
baz=16,SNR=5.7
KBZ Khabaz 39.51 129 P P 13 33 51.4 +1.6
comp=Z,12nm,0.9s,baz=348,slow=4.6,SNR=26
KBZ LR LR 13 50 13.4
comp=Z,284nm,18.3s,baz=331,slow=36
MA2 Magadan 39.73 23 ceP P 13 33 52.6 +1.1
MA2 pmax pmax
comp=Z,15nm,1.7s
LSQQ Lebel-sur-Quev 39.86 269 P P 13 33 52.5 -0.2
baz=15
NEY Neytrino 39.95 129 i P P 13 33 55.4 +1.6
NEY pmax pmax
comp=Z,1.0nm,0.8s
D63A Stockholm 40.26 259 P P 13 33 56.3 +0.3
baz=14
D62A Allapoint, All 40.38 260 P P 13 33 57.4 +0.4
baz=15
ESDC Sonseca Array 40.40 185 P P 13 33 58.3 +1.0
comp=Z,2.1nm,0.6s,baz=359,slow=8.5,SNR=11
ESDC LR LR 13 49 00.5
comp=Z,211nm,20.1s,baz=355,slow=34
GROC Groznyy 40.43 126 eP P 13 33 59.4 +1.9
GROC e 13 35 59.4
GROC pmax pmax
comp=Z,57nm,1.4s
D61A St Aubert, Com 40.46 261 P P 13 33 58.0 +0.3
baz=15
LATQ La Tuque 40.74 264 P P 13 33 59.8 -0.2
baz=15
E64A Bridgewater 40.81 259 P P 13 33 59.9 -0.7
baz=14
LIT Litokhoron 40.85 153 P P 13 34 02.8 +1.7
LIT pmax pmax
comp=Z,33nm,1.2s
D60A Saint Jean D'O 40.87 262 P P 13 34 01.3 +0.3
baz=15
MAK Makhachkala 40.91 124 eP P 13 33 56.0 -5.4
MAK eS S 13 40 06.5 -5.6
MAK pmax pmax
comp=Z,125nm,1.1s
E63A Oxbow 40.91 259 P P 13 34 01.5 +0.1
baz=14
D59A Saint-Raymond 40.94 263 P P 13 34 01.7 0.0
baz=15
D58A Chemin du LacG 41.04 264 P P 13 34 01.7 -0.8
baz=15
E61A Lac Etchemin 41.26 261 P P 13 34 03.8 -0.6
baz=14
D57A Chemin Vers le 41.29 265 P P 13 34 03.7 -0.9
baz=15
D56A ZEC Mazanza, M 41.41 266 P P 13 34 05.4 -0.2
baz=15,SNR=5.5
F64A Sherman 41.44 259 P P 13 34 05.3 -0.5
baz=14
IRK Irkutsk 41.45 64 eP P 13 34 04.2 -1.6
IRK e 13 35 38.6
IRK pmax pmax
comp=Z,65nm,3.0s
E60A Ste Agathe de 41.49 262 P P 13 34 05.3 -0.9
baz=14
D55A Sainte-Anne-du 41.57 266 P P 13 34 06.2 -0.6
baz=15
D54A Lac Fusel, La 41.65 268 P P 13 34 07.3 -0.2
baz=15,SNR=6.3
F63A Nahmakanta, Br 41.73 260 P P 13 34 08.2 0.0
baz=14
F61A St Evariste 41.79 262 P P 13 34 08.8 +0.1
baz=14
E58A La Victoria 41.81 264 P P 13 34 08.8 0.0
baz=14
AKH Akhalkalaki 41.87 129 ⇓P P 13 34 11.7 +2.1
AKH Akhalkalaki 41.87 129 P P 13 34 11.8 +2.2
AKH pmax pmax
comp=Z,34nm,1.2s
TLY Talaya 41.90 65 eP P 13 34 09.7 +0.2
TLY eS S 13 40 27.9 +1.2
TLY pmax pmax
comp=Z,24nm,1.1s
TLY MLR MLR
comp=Z,2μm,13.0s
D53A Lac Vacive, Po 41.90 269 P P 13 34 10.0 +0.5
D53A IAmb IAmb 13 34 11.8
comp=Z,28nm,0.8s
D53A Lac Vacive, Po 41.90 269 P P 13 34 09.5 0.0
baz=15,SNR=14
AGG Agios Georgios 41.91 154 P P 13 34 12.5 +2.7
AGG pmax pmax
comp=Z,41nm,1.4s
E57A Chemin Saint G 41.92 265 P P 13 34 09.7 -0.1
baz=15
E56A St. Veronique 41.95 266 P P 13 34 09.8 -0.2
baz=15
G65A Princeton 41.95 258 P P 13 34 10.0 +0.1
baz=14
F60A Warwick 41.96 263 P P 13 34 10.2 +0.1
baz=14
ULM Lac du Bonnet 41.99 287 P P 13 34 10.1 -0.2
comp=Z,5.1nm,0.6s,baz=15,slow=9.1,SNR=10
ULM PcP PcP 13 36 04.3 -0.8
comp=Z,3.0nm,0.8s,baz=1.2,slow=12,SNR=4.1
ULM LR LR 13 51 00.2
comp=Z,402nm,19.4s,baz=10.0,slow=35
ULM Lac du Bonnet 41.99 287 P P 13 34 10.3 +0.1
ULM IAmb IAmb 13 34 12.1
comp=Z,24nm,1.3s
ULM Lac du Bonnet 41.99 287 P P 13 34 10.3 +0.1
ULM pmax pmax
comp=Z,25nm,1.3s
G64A Maxfield 42.10 259 P P 13 34 11.2 0.0
baz=14
D51A Lot 18 Range I 42.18 270 P P 13 34 11.4 -0.4
baz=15
PKME Peaks-Kenny Pk 42.18 260 P P 13 34 12.3 +0.4
baz=14
D50A G1974 Best Tow 42.19 271 P P 13 34 11.6 -0.3
baz=15
BRTR Keskin Array B 42.30 141 P P 13 34 13.8 +0.8
comp=Z,4.3nm,0.9s,baz=340,slow=6.6,SNR=12
BRTR LR LR 13 53 19.6
comp=Z,161nm,19.7s,baz=338,slow=38
H66A Whiting 42.31 257 P P 13 34 13.3 +0.5
baz=14
G63A Kingsbury 42.39 260 P P 13 34 13.9 +0.4
baz=14
AKT Akhty 42.40 124 i P P 13 34 14.4 +0.6
AKT e 13 35 56.2

AKT e 13 36 06.8
AKT pmax pmax
comp=Z,64nm,1.0s
E54A Lac Daplat, Po 42.43 268 P P 13 34 14.1 +0.2
baz=15
D48A Paudash Townsh 42.53 273 P P 13 34 14.8 +0.1
baz=15
G61A St-Isidore-de- 42.55 262 P P 13 34 15.1 +0.2
baz=14
H65A Eastbrook 42.55 258 P P 13 34 15.0 +0.1
baz=14
E53A Dumoine, Ponti 42.57 268 P P 13 34 14.9 -0.1
baz=15
E51A G1948 Merrick 42.74 270 P P 13 34 16.2 -0.2
baz=15
E52A Mattawa 42.84 269 P P 13 34 17.1 -0.1
baz=15,SNR=5.9
F55A Otter Lake 42.87 267 P P 13 34 17.6 +0.2
baz=14
D47A Chapleau 42.87 274 P P 13 34 17.0 -0.5
baz=15
H63A New Sharon 42.90 260 P P 13 34 17.8 +0.2
baz=14
MAKZ Makanchi 42.93 87 P P 13 34 18.4 +0.5
MAKZ IAmb IAmb 13 34 19.7
comp=Z,22nm,1.1s
MAKZ Makanchi 42.93 87 i P P 13 34 18.2 +0.2
MAKZ pmax pmax
comp=Z,26nm,1.3s
MK31 Makanchi Array 43.00 87 P P 13 34 18.7 +0.2
MK31 Makanchi Array 43.00 87 i P P 13 34 18.2 -0.3
MKAR Makanchi Array 43.00 87 P P 13 34 18.7 +0.2
comp=Z,6.8nm,0.9s,baz=348,slow=6.1,SNR=42
MKAR LR LR 13 54 36.0
comp=Z,371nm,19.1s,baz=328,slow=40
G59A Clarenceville 43.04 263 P P 13 34 18.8 0.0
baz=14
ALGO Algonquin Park 43.05 269 P P 13 34 18.7 -0.2
baz=14
ZAK Zakamensk 43.10 66 eP P 13 34 19.7 +0.3
ZAK pmax pmax
comp=Z,4.0nm,1.2s
G58A Ormstown 43.13 264 P P 13 34 19.7 +0.2
baz=14
H62A Milan 43.18 261 P P 13 34 19.4 -0.6
baz=14
D46A Sault St. Mari 43.20 275 P P 13 34 19.9 -0.2
baz=15
ZEA Zeya 43.24 44 eP P 13 34 20.4 0.0
ZEA eS S 13 40 45.0 -1.4
ZEA pmax pmax
comp=Z,43nm,1.2s
ZEA smax smax
comp=N,200nm,9.0s
ZEA MLR MLR
comp=Z,1μm,15.0s
ZEA MLR MLR
comp=E,400nm,14.0s
E48A Lockeyer 43.26 273 P P 13 34 19.9 -0.7
baz=15
GNI Garni 43.28 128 LR LR 13 52 53.4
comp=E,131nm,19.7s,baz=354,slow=37
G57A Newington 43.33 265 P P 13 34 20.7 -0.5
baz=14
H61A Lyndonville 43.35 262 P P 13 34 21.1 -0.2
baz=14
F51A Arnstein 43.40 270 P P 13 34 20.6 -1.1
baz=14
F52A Sundridge 43.43 270 P P 13 34 22.1 +0.1
baz=14,SNR=5.9
H60A Morristown 43.46 263 P P 13 34 22.3 +0.1
baz=14
EYMN Ely 43.47 282 P P 13 34 22.6 +0.3
EYMN IAmb IAmb 13 34 24.4
comp=Z,25nm,0.7s
EYMN Ely 43.47 282 P P 13 34 22.2 -0.1
baz=15,SNR=24
E47A Iron Bridge 43.48 274 P P 13 34 22.1 -0.3
baz=15
G55A Calabogie 43.49 267 P P 13 34 22.2 -0.3
baz=14
I63A Otisfield 43.59 260 P P 13 34 23.1 -0.2
baz=14
G54A Lake Saint Pet 43.59 268 P P 13 34 23.1 -0.2
baz=14
LBNH Lisbon 43.63 262 P P 13 34 23.4 -0.2
baz=14
LONY Lake Ozonia 43.73 265 P P 13 34 25.7 +1.2
LONY Lake Ozonia 43.73 265 P P 13 34 24.7 +0.3
baz=14,SNR=6.5
E46A Sault Ste Mari 43.75 275 P P 13 34 25.7 +1.1
E46A IAmb IAmb 13 34 27.5
comp=Z,34nm,1.3s
PLVO Plevna 43.76 267 P P 13 34 25.3 +0.6
PLVO IAmb IAmb 13 34 27.3
comp=Z,46nm,1.4s
E44A Grand Marais A 43.79 277 P P 13 34 24.9 0.0
baz=15
AGMN Agassiz Nation 43.88 287 P P 13 34 25.5 -0.1
baz=15,SNR=9.0
I62A Tamworth 43.89 261 P P 13 34 26.1 +0.4
baz=14
F49A Sandfield 43.94 272 P P 13 34 26.2 +0.1
baz=14
G53A Haliburton 43.96 269 P P 13 34 26.0 -0.2
baz=14
F48A Evansville 43.98 273 P P 13 34 26.6 +0.2
baz=14,SNR=8.0
H57A Richville 44.03 265 P P 13 34 26.5 -0.2
baz=14
H56A Elgin 44.05 266 P P 13 34 27.0 0.0
baz=14
E43A Lone Tree Farm 44.21 277 P P 13 34 28.4 +0.1
E43A IAmb IAmb 13 34 30.4
comp=Z,15nm,0.7s
H55A Tweed 44.26 267 P P 13 34 28.5 -0.1
baz=14
I60A Shoreham 44.26 263 P P 13 34 28.7 0.0
baz=14
KEST Kesra 44.46 169 P P 13 34 31.4 +0.9
comp=Z,7.3nm,0.9s,baz=360,slow=4.6,SNR=4.0
KEST LR LR 13 54 41.7
comp=Z,183nm,18.1s,baz=274,slow=38
H53A Bobcaygeon 44.48 269 P P 13 34 29.9 -0.5
baz=14
KK31 Karatay Array 44.51 100 i P P 13 34 31.7 +1.0
KK31 pmax pmax
comp=Z,3.0nm,0.5s
I57A Carthage 44.58 266 P P 13 34 31.2 0.0
baz=14
J61A Chester 44.61 262 P P 13 34 31.4 -0.1
baz=14
F45A CMU Biological 44.62 276 P P 13 34 31.4 -0.1
baz=14
I55A Frankford 44.67 268 P P 13 34 32.2 +0.3
baz=14
I58A Old Forge 44.70 265 P P 13 34 32.1 -0.2
baz=14
E38A The Farm, Brul 44.78 282 P P 13 34 33.0 +0.2
G47A Hillman 44.83 274 P P 13 34 33.5 +0.3
baz=14
J59A Piesco 44.84 264 P P 13 34 33.4 +0.1
baz=14
ELL Elmali 44.85 145 P P 13 34 35.4 +1.8
ELL pmax pmax
comp=Z,137nm,1.2s
COWI Conover 44.85 279 P P 13 34 33.4 0.0
COWI IAmb IAmb 13 34 35.6
comp=Z,28nm,1.2s
BBB Bella Bella 44.86 317 LR LR 13 53 17.6
comp=Z,230nm,21.9s,baz=14,slow=36
MDND Maddock 44.94 290 P P 13 34 34.0 0.0
baz=14
J58A Remsen 45.08 265 P P 13 34 35.7 +0.5
baz=14
DGMT Dagmar 45.09 294 P P 13 34 35.2 -0.1
baz=14
CHM Chimkent 45.11 101 P P 13 34 38.9 +3.4
J57A Williamstown 45.15 266 P P 13 34 35.1 -0.7
baz=14
H48A Harrisville 45.19 273 P P 13 34 36.1 0.0
H48A IAmb IAmb 13 34 39.0
comp=Z,30nm,1.2s
H48A Harrisville 45.19 273 P P 13 34 36.1 0.0
baz=14
K62A Royalston 45.22 262 P P 13 34 36.6 +0.3
baz=14

G45A Suttons Bay 45.27 276 P P 13 34 37.0 +0.3
baz=14
CHMS Chumysh 45.35 96 i P P 13 34 38.9 +1.5
CHMS pmax pmax
comp=Z,25nm,1.1s
K61A Williamstown 45.39 263 P P 13 34 37.5 -0.2
baz=14
L61B Northampton 45.51 262 P P 13 34 39.3 +0.7
baz=14
K59A Cooperstown 45.57 264 P P 13 34 39.3 +0.2
baz=14
J55A Hilton 45.61 267 P P 13 34 39.3 -0.1
baz=14
AAK Ala-Archa 45.65 96 i P P 13 34 41.2 +1.2
AAK pmax pmax
comp=Z,11nm,1.2s
I51A Listowel 45.66 271 P P 13 34 39.3 -0.4
baz=14
I48A Sherman Twp 45.76 274 P P 13 34 40.9 +0.4
baz=14
I49A Point Hope 45.84 273 P P 13 34 41.2 0.0
baz=14
G40A Rib Lake 45.84 280 P P 13 34 41.7 +0.5
G40A IAmb IAmb 13 34 43.8
comp=Z,15nm,0.8s
PDGK Podgornoye 45.86 91 i P P 13 34 42.7 +1.1
PDGK pmax pmax
comp=Z,25nm,1.0s
K57A Scipio Center 45.90 266 P P 13 34 42.1 +0.3
baz=14
L61A Hillsdale 1, H 45.91 263 P P 13 34 42.3 +0.5
baz=14
SONM Songino Array 46.07 64 P P 13 34 42.9 -0.3
comp=Z,6.4nm,1.1s,baz=330,slow=7.8,SNR=32
SONM PP PP 13 36 28.8 -2.0
comp=Z,1.7nm,0.9s,baz=347,slow=7.9,SNR=4.2
SONM LR LR 13 55 50.1
comp=Z,2μm,18.4s,baz=349,slow=38
K56A Middlesex 46.08 267 P P 13 34 43.5 +0.4
baz=14
J52A Paris 46.11 270 P P 13 34 43.6 +0.3
baz=14
M64A Tiverton 46.12 260 P P 13 34 44.2 +0.8
baz=13
K55A Perry 46.18 268 P P 13 34 44.1 +0.2
baz=14
L60A Shokan 46.22 263 P P 13 34 44.5 +0.2
baz=13
I46A Reed City 46.30 275 P P 13 34 45.2 +0.3
baz=14
BINY Binghamton 46.33 265 P P 13 34 45.3 +0.2
baz=14
SPMN Marine on St. 46.34 283 P P 13 34 45.2 +0.1
baz=14
EGMT Eagleton 46.39 299 P P 13 34 45.3 -0.3
baz=13
K54A Basiliko Farm, 46.40 268 P P 13 34 45.4 -0.3
baz=14
L58A Harry Jones Me 46.45 265 P P 13 34 46.1 0.0
baz=14
J49A Marlette 46.46 273 P P 13 34 45.8 -0.3
baz=14
M62A Hamden 46.52 262 P P 13 34 46.3 -0.2
baz=13
WVNY West Valley, N 46.59 268 P P 13 34 47.5 +0.4
K52A Tillsonburg 46.59 270 P P 13 34 47.1 -0.1
baz=14
PETK Petropavlovsk- 46.60 18 LR LR 13 53 24.7
comp=Z,244nm,20.5s,baz=52,slow=35
KDJ Kajisay 46.62 93 P P 13 34 48.9 +1.3
KDJ pmax pmax
comp=Z,9.0nm,0.8s
L56A Greenwood 46.66 267 P P 13 34 47.9 +0.2
baz=14
L57A Andrews Acres 46.67 266 P P 13 34 48.5 +0.6
baz=14
L55A Hinsdale 46.77 268 P P 13 34 48.9 +0.3
baz=14
WMQ Urumqi 46.82 83 eP P 13 34 50.1 +1.1
WMQ sP pwP 13 34 58.5 +2.4
WMQ pmax pmax
comp=Z,13nm,0.9s
WMQ pmax pmax
comp=Z,100nm,3.6s
WMQ LR LR
comp=Z,300nm,28.7s
WMQ LR LR
comp=Z,470nm,17.7s
WMQ LR LR
comp=Z,270nm,19.9s
M59A Waymart 46.87 264 P P 13 34 49.5 +0.1
baz=13
L54A Sinclairville 46.88 269 P P 13 34 49.8 +0.4
baz=14
M60A Port Jervis 46.94 264 P P 13 34 50.0 +0.2
baz=13
NRN Naryn 47.09 95 P P 13 34 53.5 +2.1
NRN pmax pmax
comp=Z,8.0nm,1.0s
PAL Palisades 47.12 263 P P 13 34 51.9 +0.7
baz=13
LAO LASA Array 47.14 296 P P 13 34 51.7 +0.2
baz=13
K48A Perry 47.17 273 P P 13 34 52.4 +0.7
baz=14
GRNR Gornyy 47.21 37 ⇓ i P P 13 34 51.4 -0.5
GRNR pmax pmax
comp=Z,6.0nm,1.0s
GRNR MLR MLR
comp=Z,200nm,16.0s
M58A Price's Panora 47.21 265 P P 13 34 52.5 +0.4
baz=13
I40A Norwalk 47.25 280 P P 13 34 52.9 +0.6
MDT Midelt 47.25 185 P P 13 34 52.4 -0.1
comp=Z,3.3nm,0.8s,baz=25,slow=6.6,SNR=8.4
MDT PcP PcP 13 36 23.9 +0.4
comp=Z,1.6nm,0.7s,baz=42,slow=7.9,SNR=3.7
NEW Newport 47.25 306 LR LR 13 54 37.5
comp=Z,475nm,19.8s,baz=15,slow=36
NEW Newport 47.25 306 P P 13 34 53.7 +1.4
NEW pmax pmax
comp=Z,13nm,1.2s
NEW Newport 47.25 306 P P 13 34 52.4 +0.1
baz=12
L53A Girard 47.32 269 P P 13 34 53.2 +0.4
baz=14
JTMT Jette 47.35 303 P P 13 34 53.2 0.0
JTMT IAmb IAmb 13 34 55.0
comp=Z,6.0nm,0.7s
M57A Sunshine Farm, 47.36 266 P P 13 34 53.5 +0.3
baz=13
M56A Emporium 47.41 267 P P 13 34 53.6 +0.1
baz=13
N60A Cedar Hill Far 47.46 264 P P 13 34 54.5 +0.5
baz=13
GEYT Alibeck 47.46 114 P P 13 34 54.1 0.0
comp=Z,1.3nm,0.5s,baz=315,slow=7.5,SNR=7.0
GEYT LR LR 13 57 09.4
comp=Z,307nm,19.1s,baz=320,slow=39
B08A Colville Reser 47.47 308 P P 13 34 54.7 +0.7
B08A IAmb IAmb 13 34 56.8
comp=Z,26nm,1.4s
M55A Ridgway 47.52 268 P P 13 34 54.1 -0.4
M55A IAmb IAmb 13 35 03.5
comp=Z,6.1nm,0.6s
M55A Ridgway 47.52 268 P P 13 34 54.3 -0.2
baz=13
M54A Oil Creek Stat 47.65 269 P P 13 34 56.5 +1.1
M54A Oil Creek Stat 47.65 269 P P 13 34 55.2 -0.2
baz=13
M53A WI Miller and 47.89 270 P P 13 34 57.6 +0.3
baz=13
M52A Chesterland 47.91 270 P P 13 34 57.5 +0.1
baz=13
B05A Bryant 47.94 310 P P 13 34 56.7 -0.8
baz=12
N56A West Decatur 47.98 267 P P 13 34 57.1 -0.9
baz=13
N57A Milroy 48.00 266 P P 13 34 58.1 -0.1
baz=13
K43A Burlington 48.01 278 P P 13 34 58.7 +0.6
O60A Telford 48.05 264 P P 13 34 58.3 -0.2
baz=13
JFWS Jewell Farm 48.14 279 P P 13 34 59.1 0.0
baz=14,SNR=7.0
L47A Sherwood 48.17 274 P P 13 34 59.5 +0.1
baz=14

SSPA Standing Stone 48.18 267 P P 13 34 59.2 -0.3
baz=13
MSO Missoula 48.19 303 P P 13 34 59.8 +0.1
MSO Missoula 48.19 303 P P 13 34 59.5 -0.2
baz=12,SNR=14
O59A Robesonia 48.20 265 P P 13 35 00.0 +0.4
baz=13
N55A Marion Center 48.23 268 P P 13 35 00.3 +0.3
baz=13
N54A Moraine State 48.23 269 P P 13 35 00.1 +0.2
baz=13,SNR=5.5
M51A Elyria 48.26 271 P P 13 35 00.4 +0.3
baz=13
M50A Fremont 48.34 272 P P 13 35 00.9 +0.2
baz=13
ECSD EROS Data Cent 48.43 286 P P 13 35 01.1 -0.4
ECSD EROS Data Cent 48.43 286 P P 13 35 01.3 -0.1
baz=13,SNR=19
M49A Liberty Center 48.44 273 P P 13 35 01.8 +0.3
baz=13
O58A Lewisberry 48.51 266 P P 13 35 02.4 +0.4
baz=13
N53A Lisbon 48.53 270 P P 13 35 02.5 +0.2
baz=13
O57A Amberson 48.55 266 P P 13 35 02.5 +0.1
baz=13
O56A Blue Knob Stat 48.66 267 P P 13 35 03.3 +0.1
baz=13
N52A McGinn's Farm, 48.68 270 P P 13 35 03.4 +0.1
baz=13
N51A Ashland 48.70 271 P P 13 35 03.8 +0.3
baz=13
D03D Eldon 48.79 311 P P 13 35 04.2 +0.1
baz=11
O55A Ligonier 48.84 268 P P 13 35 05.0 +0.3
baz=13
P59A Jarrettsville 48.92 265 P P 13 35 05.5 +0.3
baz=13
KSH Kashi 48.95 96 P P 13 35 05.6 0.0
KSH PcS PcS 13 40 29.1 +3.2
KSH S S 13 42 06.4 -2.4
KSH ScS ScS 13 44 58.8 +1.9
KSH SS SS 13 45 42.0 +3.0
KSH pmax pmax
comp=Z,24nm,1.8s
KSH pmax pmax
comp=Z,220nm,7.2s
KSH LR LR
comp=Z,690nm,9.1s
KSH LR LR
comp=Z,500nm,7.0s
KSH LR LR
comp=Z,1μm,12.7s
N50A Nevada 48.98 272 P P 13 35 05.8 +0.2
baz=13
N49A Columbus Grove 49.01 273 P P 13 35 06.1 +0.2
baz=13
O54A Avella 49.06 269 P P 13 35 06.7 +0.4
baz=13
O53A New Philadelph 49.14 270 P P 13 35 07.4 +0.4
baz=13
P58A Pank, Wackersv 49.19 266 P P 13 35 07.6 +0.3
baz=13
N48A Decatur 49.22 274 P P 13 35 07.8 +0.3
baz=13
RSSD Black Hills 49.29 293 P P 13 35 08.9 +0.6
RSSD Black Hills 49.29 293 P P 13 35 08.9 +0.6
RSSD pmax pmax
comp=Z,36nm,1.3s
RSSD Black Hills 49.29 293 P P 13 35 08.8 +0.6
baz=13
N47A Urbana 49.32 274 P P 13 35 08.6 +0.4
baz=13
O52A Adamsville 49.38 270 P P 13 35 08.8 +0.1
baz=13
P56A Dayton Farm, R 49.45 267 P P 13 35 09.9 +0.6
baz=13
ACSO Alum Creek Sta 49.47 272 P P 13 35 09.5 +0.1
baz=13
MCWV Mont Chateau 49.48 268 P P 13 35 10.1 +0.6
baz=13
O51A Pataskala 49.48 271 P P 13 35 09.8 +0.2
baz=13
P55A Reedsville 49.62 268 P P 13 35 11.0 +0.4
baz=13
SCIA State Center 49.63 282 P P 13 35 11.4 +0.8
SCIA State Center 49.63 282 P P 13 35 10.8 +0.2
baz=13,SNR=5.8
P54A Burton 49.64 269 P P 13 35 11.1 +0.3
baz=13
O50A Cable 49.66 272 P P 13 35 11.8 +0.9
baz=13
YHH Holmes Hill 49.72 299 P P 13 35 11.9 +0.2
O49A Covington 49.75 273 P P 13 35 11.8 +0.2
O49A Covington 49.75 273 P P 13 35 11.7 +0.2
baz=13
Q58A Fox Den Farm, 49.79 266 P P 13 35 12.1 +0.2
baz=13
O48A Farmland 49.83 274 P P 13 35 12.3 +0.2
baz=13
Q57A Strasburg 49.83 267 P P 13 35 12.6 +0.4
baz=13
P52A Corning 49.90 271 P P 13 35 12.9 +0.2
baz=13
P53A Whipple 49.91 270 P P 13 35 13.2 +0.4
baz=13
Q56A Snyder Ridge, 49.96 267 P P 13 35 13.9 +0.7
baz=13
SFIN Lafayette 50.05 276 P P 13 35 14.7 +0.9
baz=13
H17A Grant Village 50.06 299 P P 13 35 15.4 +1.2
baz=12
Q55A Buckhannon 50.16 268 P P 13 35 15.3 +0.6
baz=13
F05D White Salmon 50.19 309 P P 13 35 15.3 +0.4
baz=11
P50A Jamestown 50.22 272 P P 13 35 15.4 +0.3
baz=13
HDIL Hopedale 50.26 278 P P 13 35 15.7 +0.3
baz=13
Q54A Coxs Mills 50.30 269 P P 13 35 16.2 +0.4
baz=13
R59A King George, V 50.41 265 P P 13 35 17.3 +0.7
baz=13
P49A Miami Univ. Ec 50.45 273 P P 13 35 17.2 +0.3
baz=13
R58A Rapidan 50.47 266 P P 13 35 17.3 +0.2
baz=13
Q53A Leroy 50.55 270 P P 13 35 18.0 +0.4
baz=13
R57A Stanardsville 50.57 267 P P 13 35 18.1 +0.3
baz=13
Q52A Bidwell 50.58 270 P P 13 35 17.9 0.0
baz=13
R56A Bull Pasture M 50.61 267 P P 13 35 18.5 +0.3
baz=13
BMO Blue Mountains 50.62 305 P P 13 35 18.3 +0.1
BMO IAmb IAmb 13 35 20.1
comp=Z,8.5nm,0.8s
BMO Blue Mountains 50.62 305 P P 13 35 18.3 +0.1
BMO pmax pmax
comp=Z,8.0nm,0.8s
P48A Milroy 50.65 274 P P 13 35 18.0 -0.3
P48A Milroy 50.65 274 P P 13 35 18.2 -0.1
baz=13
Q51A Peebles 50.71 272 P P 13 35 18.8 0.0
baz=13
R58B Mineral 50.78 266 P P 13 35 20.2 +0.9
baz=13
G05D Wamic, OR 50.80 309 P P 13 35 18.9 -0.6
baz=11
S60A Water View 50.81 265 P P 13 35 20.7 +1.1
baz=13
R55A Marlinton 50.86 268 P P 13 35 20.7 +0.7
baz=13
Q50A Georgetown 50.99 272 P P 13 35 21.3 +0.3
baz=13
Q49A Aurora 51.00 273 P P 13 35 21.5 +0.4
baz=13
R54A Victor 51.11 269 P P 13 35 22.1 +0.2
baz=13
K22A Casper 51.12 295 P P 13 35 21.8 -0.3
K22A IAmb IAmb 13 35 23.3
comp=Z,17nm,0.7s
K22A Casper 51.12 295 P P 13 35 21.6 -0.6
baz=12,SNR=12
R53A Hurricane 51.14 270 P P 13 35 22.4 +0.4
baz=13

S58A Poland Farm, P 51.15 266 P P 13 35 22.3 +0.1
baz=13
S57A Dark Hollow, R 51.16 267 P P 13 35 22.4 +0.1
baz=13
Q48A North Vernon 51.22 274 P P 13 35 22.5 -0.1
baz=13
S56A Natural Bridge 51.35 267 P P 13 35 24.6 +0.9
baz=13
T60A Surry 51.38 264 P P 13 35 24.8 +1.0
baz=13
S55A Lewisburg 51.42 268 P P 13 35 24.7 +0.5
baz=13
R51A Hillsboro 51.45 272 P P 13 35 24.9 +0.5
baz=13
BW06 Boulder Array 51.49 298 P P 13 35 25.3 +0.3
baz=12
PD31 Pinedale Array 51.49 298 P P 13 35 24.9 0.0
PDAR Pinedale Array 51.49 298 P P 13 35 24.8 -0.2
comp=Z,1.0nm,0.5s,baz=62,slow=5.0,SNR=17
PDAR PP PP 13 37 27.4 +5.6
comp=Z,1.4nm,0.9s,baz=32,slow=5.8,SNR=3.8
PDAR LR LR 13 58 54.0
comp=Z,213nm,18.2s,baz=14,slow=38
R50A Paris 51.60 272 P P 13 35 25.5 -0.1
baz=13
I07A Izee 51.69 307 P P 13 35 26.9 +0.7
T59A Double "B" Far 51.69 265 P P 13 35 26.6 +0.4
T59A Double "B" Far 51.69 265 P P 13 35 26.4 +0.3
baz=12,SNR=7.1
I05D Terrebonne, OR 51.69 309 P P 13 35 26.2 0.0
baz=11
H04D Lebanon 51.70 310 P P 13 35 26.4 +0.3
baz=11
R49A Shelbyville 51.74 273 P P 13 35 27.0 +0.5
baz=13
S53A Williamson 51.80 270 P P 13 35 27.3 +0.2
baz=13
T58A Grand View Acr 51.88 266 P P 13 35 28.1 +0.5
baz=13
BLA Blacksburg 51.96 268 P P 13 35 29.7 +1.4
BLA pmax pmax
comp=Z,24nm,0.9s
BLA Blacksburg 51.96 268 P P 13 35 28.7 +0.5
baz=13
T57A Hurt 51.96 267 P P 13 35 28.3 +0.1
baz=13
S52A Salyersville 51.97 271 P P 13 35 28.9 +0.6
baz=13
WCI Wyandotte Cave 52.00 274 P P 13 35 28.7 +0.2
baz=13
OGNE Ogallala 52.06 290 P P 13 35 29.0 0.0
baz=12
T56A Rocky Mt 52.07 268 P P 13 35 29.2 +0.2
baz=13
S51A Beattyville 52.10 271 P P 13 35 29.5 +0.3
baz=13
T55A Pulaski 52.11 268 P P 13 35 29.7 +0.3
baz=13
S50A Richmond 52.20 272 P P 13 35 30.2 +0.1
baz=13
S49A Springfield 52.26 273 P P 13 35 30.2 -0.2
baz=13
T54A Tazewell 52.31 269 P P 13 35 30.4 -0.5
baz=13
U59A Littleton 52.33 265 P P 13 35 30.6 -0.4
baz=12
I04A Tendick Farm, 52.37 309 P P 13 35 30.6 -0.7
baz=11
EIL Elat 52.38 141 LR LR 13 58 55.2
comp=Z,83nm,21.6s,baz=338,slow=37
U58A Oxford 52.42 266 P P 13 35 31.7 0.0
baz=12
MDJ Mudanjiang 52.50 44 P P 13 35 31.9 -0.2
MDJ pP pP 13 35 35.1 -0.7
MDJ sP sP 13 36 36.4 -0.8
MDJ PP PP 13 37 30.8 +0.2
MDJ PcS PcS 13 40 41.4 +0.7
MDJ S S 13 42 59.4 +1.7
MDJ ScS ScS 13 45 23.3 +2.5
MDJ SS SS 13 46 37.3 +2.3
MDJ pmax pmax
comp=Z,18nm,1.4s
MDJ pmax pmax
comp=Z,100nm,3.2s
MDJ LR LR
comp=Z,540nm,15.7s
MDJ LR LR
comp=Z,300nm,14.2s
MDJ LR LR
comp=Z,700nm,14.2s
T52A Hallie 52.51 271 P P 13 35 32.0 -0.3
baz=13
U57A Blanch 52.52 267 P P 13 35 32.9 +0.5
baz=12
T53A Wise 52.55 270 P P 13 35 33.0 +0.3
baz=13
KBL Kabul 52.59 104 P P 13 35 33.0 -0.2
KBL pmax pmax
comp=Z,15nm,1.1s
J05D Fort Rock, OR 52.71 308 P P 13 35 34.8 +0.9
baz=11,SNR=7.0
N23A Red Feather La 52.74 294 P P 13 35 34.1 -0.2
N23A IAmb IAmb 13 35 37.8
comp=Z,20nm,1.1s
N23A Red Feather La 52.74 294 P P 13 35 34.0 -0.4
baz=12
U55A TA2, Sparta 52.76 269 P P 13 35 34.5 +0.2
baz=12
CN2 Changchun 52.78 48 eP P 13 35 33.4 -0.8
CN2 esP pwP 13 35 40.4 -0.9
CN2 eS S 13 42 58.6 -2.9
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,630nm,16.0s
CN2 LR LR
comp=Z,230nm,16.0s
CN2 LR LR
comp=Z,960nm,19.0s
T51A Gray 52.82 272 P P 13 35 35.1 +0.5
baz=13
U54A Nelsons Funny 52.88 269 P P 13 35 34.9 -0.2
baz=12,SNR=5.7
T50A Nancy 52.92 272 P P 13 35 35.0 -0.3
baz=13,SNR=6.7
KSU1 Kansas State U 52.94 284 P P 13 35 35.5 0.0
baz=13
T49A Edmonton 52.96 273 P P 13 35 35.2 -0.4
baz=13
V59A Middlesex 52.98 266 P P 13 35 36.3 +0.5
baz=12
CCM Cathedral Cave 53.03 279 P P 13 35 36.0 -0.1
baz=13
V58A Windy Hill, Pi 53.11 266 P P 13 35 37.5 +0.7
baz=12
V57A Coltrane Farms 53.13 267 P P 13 35 37.3 +0.4
baz=12
TZTN Tazewell 53.16 271 P P 13 35 37.2 +0.1
baz=12
U53A Fall Branch 53.16 270 P P 13 35 37.3 +0.1
baz=12,SNR=5.4
GTA Gaotai 53.20 72 ⇑P P 13 35 38.3 +0.8
GTA pP sP 13 35 41.5 -1.1
GTA sP pwP 13 35 44.5 -0.1
GTA S S 13 43 09.6 +2.0
GTA sS sS 13 43 16.5 +2.9
GTA pmax pmax
comp=Z,14nm,1.2s
GTA LR LR
comp=Z,560nm,13.7s
GTA LR LR
comp=Z,580nm,16.8s
GTA LR LR
comp=Z,720nm,14.8s
USRK Ussuriysk Ar. 53.20 42 P P 13 35 36.2 -1.0
comp=Z,5.3nm,0.9s,baz=350,slow=7.5,SNR=9.2
USRK LR LR 13 58 13.9
comp=Z,51nm,21.8s,baz=340,slow=36
U52A Thorn Hill 53.27 271 P P 13 35 38.0 0.0
baz=12,SNR=5.6
V56A Mocksville 53.34 268 P P 13 35 38.5 +0.1
baz=12,SNR=6.0
U51A La Follette 53.40 271 P P 13 35 38.5 -0.4
baz=12
V55A Taylorsville 53.42 269 P P 13 35 39.2 +0.1
baz=12
U50A Jamestown 53.51 272 P P 13 35 39.8 0.0
baz=12
V54A Nebo 53.62 269 P P 13 35 40.8 +0.2
baz=12,SNR=5.7
BTO Baotou 53.69 63 eP P 13 35 37.9 -3.2
HHC Hu-ho-hao-te 53.69 61 eP P 13 35 42.1 +1.0
HHC pmax pmax
comp=Z,12nm,1.0s
HHC pmax pmax
comp=Z,71nm,5.2s
HHC LR LR
comp=Z,530nm,19.8s
HHC LR LR
comp=Z,270nm,16.1s
HHC LR LR
comp=Z,650nm,19.4s
ISCO Idaho Springs 53.76 293 P P 13 35 43.5 +1.6
ISCO pmax pmax
comp=Z,12nm,1.3s
ISCO Idaho Springs 53.76 293 P P 13 35 41.3 -0.6
baz=12,SNR=5.3
V52A Sevierville 53.85 271 P P 13 35 41.8 -0.4
baz=12
O20A White River Ci 53.86 296 P P 13 35 43.1 +0.7
O20A White River Ci 53.86 296 P P 13 35 42.8 +0.3
baz=12,SNR=33
V53A Saluda 53.88 270 P P 13 35 42.6 +0.2
baz=12
W58A Raeford 53.88 266 P P 13 35 42.8 +0.4
baz=12
W57A Gilead 53.89 267 P P 13 35 42.8 +0.4
baz=12
L04D Klamath Falls 53.90 309 P P 13 35 42.2 -0.4
baz=11
MOD Modoc Plateau 53.94 307 P P 13 35 43.8 +0.8
W56A Indian Trail 54.01 268 P P 13 35 43.7 +0.4
baz=12
V51A Loudon 54.02 272 P P 13 35 43.8 +0.3
baz=12
TKL Tuckaleechee C 54.06 271 P P 13 35 43.8 +0.1
TKL pmax pmax
comp=Z,13nm,0.8s
MGMO Mountain Grove 54.09 280 P P 13 35 43.7 -0.3
MGMO IAmb IAmb 13 35 45.7
comp=Z,15nm,0.8s
KMSC Kings Mountain 54.13 269 P P 13 35 43.9 -0.4
baz=12
M04C Macdoel 54.27 308 P P 13 35 45.4 0.0
baz=11
V50A Pikevile 54.28 272 P P 13 35 45.4 +0.1
baz=12
WVT Waverly 54.31 275 P P 13 35 45.0 -0.5
WVT pmax pmax
comp=Z,7.0nm,1.0s
WVT Waverly 54.31 275 P P 13 35 45.0 -0.5
baz=12
V49A McMinnville 54.33 273 P P 13 35 45.0 -0.7
baz=12
ELK Elko 54.34 302 P P 13 35 46.9 +0.9
ELK IAmb IAmb 13 35 48.4
comp=Z,8.0nm,0.8s
ELK Elko 54.34 302 P P 13 35 46.9 +0.9
ELK pmax pmax
comp=Z,8.0nm,0.8s
W54A Cherokee Point 54.34 269 P P 13 35 45.7 -0.1
baz=12,SNR=5.7
W53A Cullowhee 54.43 270 P P 13 35 46.5 0.0
baz=12,SNR=7.6
Q24A Divide 54.50 292 P P 13 35 46.9 -0.4
baz=12,SNR=12
DUG Dugway, Tooele 54.51 300 P P 13 35 47.6 +0.5
DUG Dugway, Tooele 54.51 300 P P 13 35 47.6 +0.5
DUG pmax pmax
comp=Z,5.0nm,0.7s
DUG Dugway, Tooele 54.51 300 P P 13 35 47.0 -0.2
baz=11,SNR=7.1
W52A Murphy 54.64 271 P P 13 35 48.2 +0.2
baz=12
X56A White Oak 54.71 268 P P 13 35 47.9 -0.6
baz=12
W51A Cleveland 54.72 272 P P 13 35 47.8 -0.7
baz=12
W50A Signal Mountai 54.78 272 P P 13 35 48.6 -0.4
baz=12
Y59A Loris 54.82 266 P P 13 35 49.3 0.0
baz=12
X55A Gracelyn & Ava 54.84 269 P P 13 35 49.2 -0.2
baz=12
X54A Belton 54.90 269 P P 13 35 49.4 -0.4
baz=12
LCAR Lake Charles 54.95 278 P P 13 35 50.0 -0.2
LCAR IAmb IAmb 13 35 51.4
comp=Z,15nm,0.9s
U40A Yellville 54.97 280 P P 13 35 49.0 -1.3
U40A IAmb IAmb 13 35 50.9
comp=Z,15nm,0.8s
U40A Yellville 54.97 280 P P 13 35 49.1 -1.3
baz=12,SNR=7.5
W49A Belvidere 55.02 273 P P 13 35 49.3 -1.4
baz=12
X53A Estanollee 55.10 270 P P 13 35 50.9 -0.4
baz=12,SNR=5.3
BJI Beijing 55.18 57 P P 13 35 53.0 +1.3
N02D Trinity Center 55.18 309 P P 13 35 51.4 -0.4
baz=10
HODGE Hodges 55.18 269 P P 13 35 52.1 +0.2
SRU San Rafael Swe 55.22 297 P P 13 35 53.3 +1.0
SRU pmax pmax
comp=Z,3.0nm,0.7s
X51A Calhoun 55.31 272 P P 13 35 52.3 -0.5
baz=12
Y55A Saluda 55.40 269 P P 13 35 52.9 -0.5
baz=12
Q16A Castle Valley 55.51 298 P P 13 35 55.7 +1.3
Z58A St. Stephen 55.63 267 P P 13 35 55.3 +0.3
baz=12
SDCO Great Sand Dun 55.75 292 P P 13 35 56.8 +0.5
SDCO IAmb IAmb 13 35 58.2
comp=Z,12nm,1.0s
SDCO Great Sand Dun 55.75 292 P P 13 35 55.5 -0.7
baz=12,SNR=16
Z57A Bowman 55.82 267 P P 13 35 56.0 -0.4
baz=12
Y52A Lilburn 55.86 271 P P 13 35 56.3 -0.4
baz=12
TUL1 Leonard 55.91 283 P P 13 35 56.4 -0.7
baz=12
BEKR Beckworth 55.94 307 P P 13 35 57.9 +0.4
S22A 4UR Ranch, Cre 55.96 294 P P 13 35 58.5 +0.7
S22A IAmb IAmb 13 36 00.4
comp=Z,12nm,1.0s
S22A 4UR Ranch, Cre 55.96 294 P P 13 35 57.7 -0.1
baz=12,SNR=11
O02D Mt. Diablo Mer 55.98 309 P P 13 35 57.6 0.0
baz=10
W41B Gary Mavity, V 56.02 279 P P 13 35 57.4 -0.4
W41B Gary Mavity, V 56.02 279 P P 13 35 57.7 -0.2
baz=12,SNR=11
MSU Marysvale 56.06 299 P P 13 35 59.4 +1.0
MSU Marysvale 56.06 299 P P 13 35 59.4 +1.0
T25A Trinidad 56.16 291 P P 13 35 58.5 -0.6
baz=12
OXF Oxford 56.17 276 P P 13 35 58.8 -0.1
OXF pmax pmax
comp=Z,35nm,0.8s
OXF Oxford 56.17 276 P P 13 35 58.8 -0.1
baz=12
GOGA Godfrey 56.20 270 P P 13 35 59.1 0.0
GOGA pmax pmax
comp=Z,13nm,0.8s
GOGA Godfrey 56.20 270 P P 13 35 58.3 -0.8
baz=12,SNR=5.9
W39A Magazine 56.26 281 P P 13 35 59.2 -0.4
baz=12
Y49A Blount Mountai 56.28 273 P P 13 35 58.5 -1.3
Y49A IAmb IAmb 13 36 00.1
comp=Z,12nm,0.7s
PSUT Pine Spring 56.30 300 P P 13 36 01.0 +0.9
KVN Kaiserville 56.42 304 P P 13 36 01.8 +0.8
KVN IAmb IAmb 13 36 03.2
comp=Z,12nm,0.8s
KVN Kaiserville 56.42 304 P P 13 36 01.8 +0.8
KVN pmax pmax
comp=Z,12nm,0.8s
X43A Marvell 56.42 278 P P 13 36 00.4 -0.3
baz=12
MTPU Mount Pierson 56.52 299 P P 13 36 03.2 +1.3
PNTR Pine Nut 56.60 306 P P 13 36 03.4 +1.2
PNTR IAmb IAmb 13 36 06.4
comp=Z,14nm,0.7s
YERR Yerington 56.65 305 P P 13 36 03.7 +1.1
YERR IAmb IAmb 13 36 05.1
comp=Z,9.3nm,0.8s
R11A Troy Canyon, C 56.74 302 P P 13 36 03.4 +0.2
R11A IAmb IAmb 13 36 05.1
comp=Z,6.8nm,0.8s
R11A Troy Canyon, C 56.74 302 P P 13 36 02.9 -0.3
baz=11,SNR=20
MVCO Mesa Verde 56.76 295 P P 13 36 03.9 +0.5
baz=11,SNR=5.4
Z50A Ashland 56.78 273 P P 13 36 01.9 -1.4
baz=12
X40A Basin Creek Fa 56.79 280 P P 13 36 02.5 -0.8
baz=12,SNR=14
MIAR Mount Ida 56.86 280 P P 13 36 04.3 +0.4
MIAR Mount Ida 56.86 280 P P 13 36 04.3 +0.4
MIAR pmax pmax
comp=Z,32nm,0.8s
MIAR Mount Ida 56.86 280 P P 13 36 03.6 -0.2
baz=12,SNR=20
AFDM Forest Hills D 56.93 307 P P 13 36 03.8 -0.6
AFDM IAmb IAmb 13 36 06.6
comp=Z,18nm,1.5s
NVAR Mina Array Bea 57.06 304 P P 13 36 06.0 +0.5
comp=Z,5.9nm,0.8s,baz=18,slow=5.6,SNR=19
NVAR LR LR 14 01 14.7
comp=Z,182nm,18.5s,baz=2.0,slow=37
SZCU Shurtz Canyon 57.10 299 P P 13 36 07.4 +1.6
LZH Lanzhou 57.11 69 eP P 13 36 06.9 +1.1
LZH pP pwP 13 36 13.6 +0.6
LZH sP sP 13 36 16.9 +6.0
LZH PP PP 13 38 12.1 -0.2
LZH pmax pmax
comp=Z,12nm,1.2s
LZH pmax pmax
comp=Z,110nm,4.3s
LZH LR LR
comp=Z,200nm,16.3s
LZH LR LR
comp=Z,210nm,15.0s
LZH LR LR
comp=Z,310nm,17.4s
TAM Tamanrasset 57.25 174 P P 13 36 09.0 +2.1
TAM pmax pmax
comp=Z,13nm,1.0s
WMOK Wichita Mounta 57.57 285 P P 13 36 08.6 -0.3
baz=12
KNB Kanab 57.62 299 P P 13 36 10.4 +0.9
KNB Kanab 57.62 299 P P 13 36 10.4 +0.9
KNB pmax pmax
comp=Z,15nm,1.0s
LCMT Little Creek M 57.69 299 P P 13 36 10.8 +0.9
MDPB Devils Postpil 57.95 305 P P 13 36 12.9 +1.0
MDPB IAmb IAmb 13 36 14.8
comp=Z,7.7nm,0.8s
OMMB Old Mammoth Mi 57.96 305 P P 13 36 12.5 +0.5
U15A North Rim 58.12 298 P P 13 36 13.4 +0.3
U15A IAmb IAmb 13 36 14.8
comp=Z,9.7nm,0.9s
TPNV Topopah Spring 58.21 302 P P 13 36 13.3 -0.3
TPNV IAmb IAmb 13 36 14.9
comp=Z,7.1nm,0.8s
TPNV Topopah Spring 58.21 302 P P 13 36 13.3 -0.3
TPNV pmax pmax
comp=Z,7.0nm,0.8s
TPNV Topopah Spring 58.21 302 P P 13 36 12.9 -0.7
baz=11,SNR=8.4
VBMS Vicksburg 58.60 277 P P 13 36 16.7 +0.7
baz=12
ANMO Albuquerque 58.64 293 P P 13 36 16.8 +0.1
ANMO IAmb IAmb 13 36 18.5
comp=Z,9.2nm,0.8s
ANMO Albuquerque 58.64 293 P P 13 36 16.8 +0.1
ANMO pmax pmax
comp=Z,9.0nm,0.8s
ANMO Albuquerque 58.64 293 P P 13 36 16.8 +0.1
baz=11
FURC Furnace Creek, 58.77 303 P P 13 36 17.7 +0.4
baz=10
WUAZ Wupatki 58.87 297 P P 13 36 18.5 +0.3
WUAZ Wupatki 58.87 297 P P 13 36 18.3 +0.1
baz=11,SNR=15
CWC Cottonwood Cre 58.98 304 P P 13 36 19.6 +0.6
baz=10
MSTX Muleshoe 58.99 289 P P 13 36 18.9 0.0
baz=12
W18A Petrified Fore 59.00 296 P P 13 36 19.3 +0.2
W18A Petrified Fore 59.00 296 P P 13 36 19.0 -0.1
baz=11,SNR=15
TIA Tai'an 59.07 57 P P 13 36 19.8 +0.4
TIA pmax pmax
comp=Z,16nm,1.2s
MPMC Manual Prospec 59.27 303 P P 13 36 21.1 +0.1
baz=10,SNR=12
KSRS Korea Array 59.35 47 P P 13 36 20.2 -0.9
comp=Z,3.3nm,1.0s,baz=348,slow=6.7,SNR=7.3
KSRS LR LR 14 03 26.9
comp=Z,455nm,18.0s,baz=0.5,slow=38
PMPB Monarch Peak 59.59 306 P P 13 36 24.9 +1.9
TUQ Turquoise Moun 59.64 302 P P 13 36 23.4 -0.1
baz=10
ISA Isabella, Lake 59.80 304 P P 13 36 25.3 +0.8
ISA pmax pmax
comp=Z,10.0nm,1.0s
ISA Isabella, Lake 59.80 304 P P 13 36 24.4 -0.1
baz=10,SNR=5.8
GSC Goldstone, Bar 59.91 302 P P 13 36 25.4 +0.2
baz=10,SNR=6.7
XAN Xi'an 59.94 65 P P 13 36 25.8 +0.4
XAN pP sP 13 36 29.3 -1.2
XAN S S 13 44 41.8 +5.1
XAN pmax pmax
comp=Z,13nm,2.0s
XAN pmax pmax
comp=Z,150nm,4.4s
XAN LR LR
comp=Z,1μm,18.1s
XAN LR LR
comp=Z,480nm,17.2s
XAN LR LR
comp=Z,1μm,17.5s
X16A Lo Mia Camp, P 59.95 297 P P 13 36 26.3 +0.6
X16A IAmb IAmb 13 36 28.0
comp=Z,6.6nm,0.8s
GMRC Granite Mounta 60.24 301 P P 13 36 27.0 -0.6
baz=10,SNR=5.8
HEC Hector,Ludlow 60.30 302 P P 13 36 27.9 0.0
baz=10,SNR=5.8
EDW2 Edwards Air Fo 60.49 303 P P 13 36 29.7 +0.5
baz=10
IRM Iron Mountain 60.78 301 P P 13 36 31.6 +0.4
baz=10
BBRC Big Bear Solar 60.94 302 P P 13 36 32.7 +0.2
baz=10
BFSC Mount Baldy Ra 61.08 303 P P 13 36 33.9 +0.6
baz=10
Y12C Blythe 61.09 300 P P 13 36 34.2 +1.0
baz=10
MWC Mount Wilson 61.15 303 P P 13 36 35.9 +2.0
MWC pmax pmax
comp=Z,33nm,1.4s
DANN Dangsing 61.20 91 eP P 13 36 34.9 +0.5
comp=Z,30nm,0.7s
121A Cookes Peak, D 61.22 293 P P 13 36 33.8 -0.5
baz=11,SNR=5.7
MAT Matsushiro 61.46 38 P P 13 36 35.2 -0.5
MJAR Matsushiro Arr 61.46 38 P P 13 36 36.2 +0.5
comp=Z,7.0nm,1.0s,baz=339,slow=6.5,SNR=11
MJAR LR LR 14 04 01.5
comp=Z,187nm,18.8s,baz=325,slow=37
PFO Pinyon Flats O 61.51 302 P P 13 36 38.2 +1.9
PFO pmax pmax
comp=Z,5.0nm,0.8s
PFO Pinyon Flats O 61.51 302 P P 13 36 36.6 +0.3
baz=10
MNTX Cornudas Mount 61.64 291 P P 13 36 37.5 +0.4
MNTX IAmb IAmb 13 36 38.8
comp=Z,5.9nm,0.7s
MNTX Cornudas Mount 61.64 291 P P 13 36 36.6 -0.4
baz=11,SNR=14
GKN Gorkha 61.69 90 eP P 13 36 37.7 +0.1
comp=Z,25nm,0.9s

JCT Junction City 61.90 285 P P 13 36 39.6 +0.8
JCT Junction City 61.90 285 P P 13 36 39.6 +0.8
JCT pmax pmax
comp=Z,17nm,0.7s
JCT Junction City 61.90 285 P P 13 36 38.5 -0.3
baz=11,SNR=8.0
TUC Tucson 61.92 296 P P 13 36 39.5 +0.7
TUC IAmb IAmb 13 36 42.0
comp=Z,14nm,0.9s
TUC Tucson 61.92 296 P P 13 36 39.6 +0.7
TUC pmax pmax
comp=Z,14nm,0.9s
TUC Tucson 61.92 296 P P 13 36 39.2 +0.3
baz=11
GUN Gumba 62.00 89 eP P 13 36 40.2 +0.3
comp=Z,63nm,1.4s
KKN Kakani 62.01 89 eP P 13 36 40.1 +0.3
comp=Z,38nm,0.9s
CD2 Chengdu 62.16 71 P P 13 36 41.1 +0.6
CD2 S S 13 45 06.3 +1.2
CD2 pmax pmax
comp=Z,20nm,0.7s
CD2 LR LR
comp=Z,980nm,15.1s
CD2 LR LR
comp=Z,1μm,16.3s
CD2 LR LR
comp=Z,1μm,16.3s
MONP2 Monument Peak 62.21 302 P P 13 36 41.7 +0.6
baz=10
PKIN Phulchoki 62.24 89 eP P 13 36 41.7 +0.3
PKI Pulchoki 62.25 89 eP P 13 36 42.0 +0.5
comp=Z,49nm,1.4s
JIRN Jiri 62.30 88 eP P 13 36 42.6 +0.7
comp=Z,48nm,1.0s
IKP In-Ko-Pah, Jac 62.40 301 P P 13 36 42.9 +0.7
baz=10
319A Douglas 62.59 295 P P 13 36 44.5 +0.9
TAPN Taplejung 62.87 87 eP P 13 36 45.7 +0.1
RAMN Ramite 63.07 88 eP P 13 36 46.8 -0.1
comp=Z,27nm,1.0s
ODAN Odare 63.29 87 eP P 13 36 49.0 +0.6
comp=Z,59nm,1.2s
NJ2 Nanjing 63.41 56 eP P 13 36 49.5 +0.7
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
NJ2 LR LR
comp=Z,620nm,14.7s
NJ2 LR LR
comp=Z,410nm,14.7s
NJ2 LR LR
comp=Z,1μm,16.1s
TX31 Lajitas Ar. Si 63.67 289 P P 13 36 50.8 +0.1
TX31 IAmb IAmb 13 36 52.2
comp=Z,16nm,1.2s
TX32 Lajitas Array 63.67 289 P P 13 36 50.8 +0.1
TX32 IAmb IAmb 13 36 52.2
comp=Z,16nm,1.2s
TXAR Lajitas Array 63.67 289 P P 13 36 51.3 +0.6
comp=Z,3.3nm,0.5s,baz=36,slow=5.7,SNR=42
TXAR PcP PcP 13 37 27.3 +0.5
comp=Z,1.9nm,0.6s,baz=42,slow=2.2,SNR=5.3
TXAR LR LR 14 05 14.4
comp=Z,185nm,18.5s,baz=0.0,slow=37
833A Chaparral WMA, 63.94 284 P P 13 36 52.6 +0.3
833A Chaparral WMA, 63.94 284 P P 13 36 52.6 +0.3
baz=11
WHN Wuhan 64.21 61 ⇓P P 13 36 46.3 -7.8
TOA0 Torodi Ar. Sit 66.80 178 P P 13 37 11.5 +0.6
TORD Torodi Ar. Bea 66.80 178 P P 13 37 11.2 +0.2
comp=Z,29nm,1.1s,baz=354,slow=5.7,SNR=53
TORD LR LR 14 06 34.1
comp=Z,245nm,18.3s,baz=340,slow=36
GYA Guiyang 66.99 69 eP P 13 37 10.0 -2.2
KMI Kunming 67.65 73 P P 13 37 20.8 +4.3
KMI S S 13 46 11.6 -1.5
KMI pmax pmax
comp=Z,14nm,1.2s
KMI pmax pmax
comp=Z,140nm,5.4s
KMI LR LR
comp=Z,220nm,17.7s
KMI LR LR
comp=Z,780nm,15.6s
KMI LR LR
comp=Z,670nm,15.9s
CHTO Chiang Mai 73.17 78 P P 13 37 49.6 -0.5
CHTO pmax pmax
comp=Z,8.0nm,1.2s
DBIC Dimbokro 73.27 185 LR LR 14 11 03.3
comp=Z,119nm,18.9s,baz=350,slow=37
TIC Toumodi 73.29 185 eP P 13 37 51.1 +0.3
comp=Z,4.4nm,0.3s
TIC Toumodi 73.29 185 P P 13 37 51.1 +0.3
TIC Toumodi 73.29 185 P P 13 37 51.1 +0.3
CMAR Chiang Mai Arr 73.52 78 P P 13 37 51.9 -0.3
comp=Z,3.0nm,0.9s,baz=345,slow=7.0,SNR=21
CMAR LR LR 14 14 21.9
comp=Z,212nm,19.8s,baz=352,slow=39
KIC Kosan Boka 73.57 185 eP P 13 37 52.3 -0.1
comp=Z,71nm,1.2s
KIC Kosan Boka 73.57 185 P P 13 37 52.3 -0.1
LIC Lamto 73.71 185 eP P 13 37 53.2 0.0
comp=Z,54nm,1.0s
LIC Lamto 73.71 185 P P 13 37 53.2 0.0
QIZ Qiongzhong 74.79 67 P P 13 38 02.8 +3.3
QIZ S S 13 47 36.6 +1.2
QIZ LR LR
comp=Z,730nm,17.7s
QIZ LR LR
comp=Z,380nm,16.7s
QIZ LR LR
comp=Z,790nm,20.1s
ROSC El Rosal 82.53 255 P P 13 38 43.8 +1.2
comp=Z,9.7nm,0.2s,baz=16,slow=9.0,SNR=5.8
ROSC LR LR 14 15 25.5
comp=Z,115nm,20.1s,baz=355,slow=36
OTAV Otavalo 87.74 259 P P 13 39 11.7 +2.9
OTAV pmax pmax
comp=Z,16nm,1.2s
PSI Prapat 88.83 81 LR LR 14 24 28.8
comp=Z,236nm,18.3s,baz=317,slow=39
BDFB Brasilia 98.64 226 LR LR 14 18 24.0
comp=Z,88nm,19.1s,baz=317,slow=32
ASAR Alice Springs 120.33 50 PKP PKPdf 13 45 08.8 -1.4
comp=Z,0.5nm,0.5s,baz=8.5,slow=1.6,SNR=20
PLCA Paso Flores 126.53 243 PKP PKPdf 13 45 21.9 +0.4
comp=Z,1.2nm,0.9s,baz=45,slow=4.5,SNR=4.7
PLCA Paso Flores 126.53 243 PKIKP PKPdf 13 45 22.0 +0.4
VNA2 Neumayer--Watz 150.72 185 PKPdf PKPbc 13 46 09.9 +0.3
baz=356,slow=3.8
VNA3 Neumayer Olymp 151.07 186 PKPdf PKPbc 13 46 10.2 -0.3
SNAA Sanae 151.42 182 PKPdf PKPbc 13 46 11.4 +0.1
SNAA Sanae 151.42 182 PKPbc PKPbc 13 46 11.4 +0.1
comp=Z,5.6nm,0.5s,baz=272,slow=3.5,SNR=54
SNAA Sanae 151.42 182 PKPbc 13 46 11.6 +0.3
MAW Mawson 151.46 134 PKPbc PKiKP 13 46 11.9 +0.1
comp=Z,11nm,1.0s,baz=335,slow=0.6,SNR=5.2

IDC 20 13:39:57.8±1.0, 67.16N×20.55E, h0km, mb1 3.1/3, mb1mx2.8/62, mbtmp3.1/3, ML2.5/4, Error ellipse: s-maj=16.0km s-min=8.0km az=113.0
HEL 20 13:39:58.7±0.1, 67.18N×20.66E, h1km, ML2.3, ML2.3(UPP), Confirmed Induced event
NAO 20 13:39:58.3±0.7, 67.13N×20.93E, ML2.6
BER 20 13:40:00.6±3.5, 67.09N×20.95E, h0km, ML2.2, ML2.6(NAO), Suspected explosion
ISC 20 13:39:57.5±0.7, 67.17N±0.02×20.62E±0.02, h0km, n53, σ1s62/98, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASU	Masugnsbyn	0.60	61	iP	Pg	13 40 09.5	+0.4
MASU				iS	Sg	13 40 17.3	+0.3
RATU	Laukkuluspa	0.77	329	iP	Pg	13 40 12.2	+0.1
RATU				iS	Sg	13 40 22.5	+0.4
KUA	Kurravaara	0.79	352	iP	Pg	13 40 12.5	-0.2
KUA				iS	Sg	13 40 23.3	+0.3
ERTU	Ertsjaerv	0.88	134	eP	Pg	13 40 13.9	-0.4
PAJU	Pajala	0.99	98	eP	Pg	13 40 16.1	-0.3
PAJU				eS	Sg	13 40 29.3	+0.2
HARU	Harads	1.02	172	eP	Pg	13 40 17.0	-0.1
HARU				eS	Sg	13 40 31.1	+0.8
LANU	Lannavaara	1.02	30	eP	Pg	13 40 16.5	-0.6
LANU				eSB	Sg	13 40 30.2	-0.2
KOVU	Salmi	1.07	351	eP	Pg	13 40 17.4	-0.6
KOVU				eS	Sg	13 40 31.9	+0.1
HEF	Hetta	1.69	42	Pg	Pn	13 40 28.4	0.0
HEF				Lg	Lg	13 40 50.5	
HEF	Hetta	1.69	42	eP	Pn	13 40 28.2	-0.2
HEF				MSG		13 40 48.1	
	comp=Z,18nm,0.2s						
HEF				eSN	Sn	13 40 51.1	+0.4
HEF	Hetta	1.69	42	eP	Pn	13 40 28.4	0.0
HEF				eS	Sn	13 40 50.6	-0.1
KALU	Kalix	1.71	139	eP	Pn	13 40 29.0	+0.4
KALU				eSN	Sb	13 40 52.5	+0.7
TOF	Tornio	1.84	125	eP	Pn	13 40 31.0	+0.7
TOF				MSG		13 40 52.8	
	comp=Z,38nm,0.2s						
TOF				eSG	Sb	13 40 55.8	+0.3
KIF	Kilpisjarvi	1.84	2	Pn	Pb	13 40 31.5	-0.5
KIF				Sn	Sg	13 40 57.2	+0.5
KIF	Kilpisjarvi	1.84	2	eP	Pn	13 40 31.3	+0.9
KIF				MSG		13 40 54.6	
	comp=Z,29nm,0.2s						
KIF				eSG	Sg	13 40 56.7	+0.1
KIF	Kilpisjarvi	1.84	2	eP	Pb	13 40 31.8	-0.3
KIF				eS	Sg	13 40 57.0	+0.4
KTK1	Kautokeino	2.09	27	Pn	Pb	13 40 35.6	-0.7
KTK1				Sn	Sb	13 41 03.0	+0.2
KTK1	Kautokeino	2.09	27	eP	Pb	13 40 35.4	-0.9
KTK1				eS	Sn	13 41 01.1	+0.7
KTK1				IAML		13 41 04.6	
	comp=Z,41nm,0.5s						
RNF	Rovaniemi	2.20	102	ePB	Pn	13 40 36.6	+1.4
RNF				eSG	Sb	13 41 05.6	-0.3
STEI	Steigen	2.20	293	Pn	Pb	13 40 38.0	-0.2
STEI				Sn	Sb	13 41 06.6	+0.7
SGF	Sodankyl	2.31	81	eP	Pn	13 40 37.9	+1.2
SGF				eSG	Sb	13 41 08.8	-0.1
BURU	Burvik	2.62	173	eP	Pn	13 40 42.6	+1.6
MOR8	Moi Rana	2.66	251	Pn	Pn	13 40 42.3	+0.8
MOR8				Sn	Sn	13 41 16.0	+1.5
MOR8	Moi Rana	2.66	251	eP	Pn	13 40 42.4	+0.8
MOR8				eS	Sn	13 41 14.6	+0.1
MOR8				IAML		13 41 20.3	
	comp=Z,19nm,0.3s						
ARCES	ARCESS Array B	2.98	35	Pn	Pn	13 40 47.0	+0.9
	comp=Z,1.3nm,0.3s,baz=216,slow=13,SNR=52						
ARCES				Sn	Sn	13 41 23.1	+0.6
	comp=Z,2.4nm,0.3s,baz=213,slow=24,SNR=11						
ARE0	ARCESS Array S	2.98	35	eP	Pn	13 40 46.8	+0.8
ARE0				eSB	Sb	13 41 27.4	-1.0
ARA0	ARCESS Array S	2.98	35	Pn	Pn	13 40 46.6	+0.5
	baz=209,slow=16						
ARA0				Sn	Sn	13 41 22.6	+0.2
	baz=213,slow=22						
ARA0	ARCESS Array S	2.98	35	Pn	Pn	13 40 46.6	+0.5
	baz=209,slow=16						
ARA0				Sn	Sn	13 41 22.6	+0.2
	baz=213,slow=22						
OUL	Oulu	3.00	132	ePB	Pb	13 40 50.0	-1.7
OBF0	Syolatti, Pyha	3.07	149	eSG	Sg	13 41 34.9	-1.1
OUF	Merijarvi	3.29	147	eP	Pn	13 40 51.3	+1.1
UMAU	Umeaa	3.30	180	eP	Pn	13 40 51.6	+1.2
KEV	Kevo	3.50	39	Pn	Pn	13 40 53.6	+0.4
KEV				Pg	Pb	13 41 01.8	+1.5
KEV				Sn	Sn	13 41 35.3	+0.1
KEV				Lg	Lg	13 41 48.6	
KEV	Kevo	3.50	39	eP	Pn	13 40 53.7	+0.6
KEV				eS	Sn	13 41 35.3	+0.1
KEV	Kevo	3.50	39	Pn	Pn	13 40 53.6	+0.4
KEV				Pg	Pb	13 41 01.8	+1.5
KEV				Sn	Sn	13 41 35.3	+0.1
KEV				Sg	Sg	13 41 48.6	-1.3
VRF	Varrio	3.51	76	eP	Pn	13 40 53.9	+0.7
MSF	Maaselka	3.60	107	eP	Pn	13 40 55.3	+0.9
MSF				eSG	Sb	13 41 48.5	+2.4
KU6	Riekki	3.87	103	eP	Pn	13 40 59.2	+1.0
KU6				eSG	Sg	13 41 58.8	-3.0
HUSU	Husum	3.89	189	eP	Pn	13 41 00.1	+1.6
VAF	Ylistaro	4.24	167	eP	Pn	13 41 04.8	+1.6
VAF				eSG	Sg	13 42 11.2	-2.2
APA0	Apatity Array	4.79	79	Pn	Pn	13 41 11.1	+0.2
	baz=282,slow=10						
APA0				Sn	Sn	13 42 04.8	-2.2
	baz=264,slow=22						
APA0				Lg	Lg	13 42 21.7	
	baz=270,slow=18						
APA0	Apatity Array	4.79	79	Pn	Pn	13 41 11.1	+0.2
	baz=282,slow=10						
APA0				Sn	Sn	13 42 04.8	-2.2
	baz=264,slow=22						
FIA0	FINESS Array S	6.22	155	Pn	Pn	13 41 31.6	+1.2
	baz=348,slow=16						
FIA0				Lg	Lg	13 43 09.2	
	baz=351,slow=28						
FIA0	FINESS Array S	6.22	155	Pn	Pn	13 41 31.6	+1.2
	baz=348,slow=16						
FIA0				Sg	Sg	13 43 09.2	+7.8
	baz=351,slow=28						
FINES	FINESS Array B	6.22	155	Pn	Pn	13 41 31.8	+1.4
	comp=Z,0.4nm,0.3s,baz=345,slow=12,SNR=13						
FINES				Pg	Pb	13 41 50.0	+3.5
	comp=Z,0.4nm,0.3s,baz=343,slow=14,SNR=6.0						
FINES				Sn	Sn	13 42 41.4	-0.7
	comp=Z,0.5nm,0.3s,baz=347,slow=22,SNR=5.4						
FINES				Lg	Lg	13 43 12.0	
	comp=Z,0.9nm,0.3s,baz=343,slow=27,SNR=7.6						
NB2	NORSAR Subarra	7.40	218	Pn	Pn	13 41 47.9	+1.3
NB2	NORSAR Subarra	7.40	218	Pn	Pn	13 41 47.9	+1.3
NOA	NORSAR Array B	7.40	218	Pn	Pn	13 41 45.1	-1.6
	comp=Z,0.0nm,0.3s,baz=31,slow=12,SNR=2.9						
NOA				Lg	Lg	13 43 48.0	
	comp=Z,0.0nm,0.3s,baz=195,slow=4.6,SNR=2.1						
NRA0	NORESS Array S	7.59	216	Pn	Pn	13 41 50.7	+1.4
	baz=13,slow=12						
NRA0				Sn	Sn	13 43 11.1	-4.7
NRA0				Lg	Lg	13 43 57.3	
	baz=46,slow=28						
NRA0	NORESS Array S	7.59	216	Pn	Pn	13 41 50.7	+1.4
	baz=13,slow=12						
NRA0				Sn	Sn	13 43 11.1	-4.7
NRA0				Sg	Sg	13 43 57.3	-3.6
	baz=46,slow=28						
HFS	Hagfors	7.70	207	Pn	Pn	13 41 50.5	-0.3
	baz=14,slow=12						
HFS				Sn	Sn	13 43 15.0	-3.6
	baz=26,slow=22						
HFS	Hagfors	7.70	207	Pn	Pn	13 41 49.5	-1.3
	comp=Z,0.2nm,0.3s,baz=30,slow=12,SNR=6.3						
HFS				Sn	Sn	13 43 16.5	-2.2
	comp=Z,0.5nm,0.3s,baz=26,slow=22,SNR=7.7						
HFS				Lg	Lg	13 43 54.9	
	comp=Z,0.2nm,0.3s,baz=35,slow=23,SNR=2.7						
HFS	Hagfors	7.70	207	Pn	Pn	13 41 50.5	-0.3
	baz=14,slow=12						
HFS				Sn	Sn	13 43 15.0	-3.6
	baz=26,slow=22						

ATH 20 13:41:33.7, 38.20N×20.42E, h14km±1km, ML2.6/5, Error ellipse: s-maj=1.8km s-min=1.0km az=253.0
THE 20 13:41:33.9, 38.21N×20.43E, h13km, ML2.3/9, Error ellipse: s-maj=0.7km s-min=0.3km az=260.0
ISC 20 13:41:33.5±0.9, 38.20N±0.03×20.43E±0.04, h15km±4km, n38, σ0s49/68, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXRA	Lixouri, Kepha	0.01	102	P	Pg	13 41 36.3	+0.2
LXRA				S	Sg	13 41 38.1	+0.2
LXR1	Lixouri, Cepha	0.01	97	P	Pg	13 41 36.2	+0.1
LXR1				S	Sg	13 41 38.0	+0.1
CHV1	Chavriata, Kef	0.04	243	P	Pg	13 41 36.3	+0.1
CHV1				S	Sg	13 41 38.2	+0.2
ARGA	Argostoli. Kep	0.05	121	P	Pg	13 41 36.3	0.0
ARGA				S	Sg	13 41 37.7	-0.4
ARG2	Argostoli	0.05	116	P	Pg	13 41 36.4	+0.1
ARG2				S	Sg	13 41 37.9	-0.3
KEF4	Livadi, Kephal	0.06	358	P	Pg	13 41 36.4	0.0
KEF4				S	Sg	13 41 38.3	+0.1
AGT1	Agia Thekli	0.06	325	P	Pg	13 41 36.4	0.0
AGT1				S	Sg	13 41 38.3	0.0
KEF2	Argostoli. Kep	0.06	128	P	Pg	13 41 36.4	0.0
KEF2				S	Sg	13 41 38.0	-0.3
KEF3	Kipouria, Keph	0.06	271	P	Pg	13 41 36.6	+0.1
KEF3				S	Sg	13 41 38.6	+0.3
VLS	Valsamata	0.13	101	P	Pg	13 41 37.1	-0.1
VLS				S	Sg	13 41 39.5	-0.1
	3μm,0.1s						
VLS	Valsamata	0.13	101	P	Pg	13 41 37.1	-0.1
VLS				S	Sg	13 41 39.5	-0.1
VLS				AML	AML	13 41 39.6	
	comp=N,7961μm,0.2s						
VLS				AML	AML	13 41 39.9	
	comp=E,5694μm,0.1s						
VSK1	VASILIKIADES	0.23	27	P	Pg	13 41 38.9	+0.2
VSK1				S	Sg	13 41 42.7	+0.5
	comp=E,2μm,0.2s						
KONA	Konidatara, Ke	0.25	27	P	Pg	13 41 39.1	+0.1
KONA				S	Sg	13 41 43.2	+0.5
KONA				AML	AML	13 41 43.7	
	comp=N,4560μm,0.1s						
KONA				AML	AML	13 41 43.7	
	comp=E,3251μm,0.1s						
FSK	Fiskardo	0.28	22	P	Pg	13 41 39.5	0.0
FSK				S	Sg	13 41 43.9	+0.4
	comp=E,1μm,0.1s						
FSK	Fiskardo	0.28	22	P	Pg	13 41 39.5	0.0
FSK				S	Sg	13 41 44.0	+0.4
FSK				AML	AML	13 41 44.1	
	comp=N,1909μm,0.2s						
FSK				AML	AML	13 41 44.4	
	comp=E,3394μm,0.1s						
VLMS	Volimes, Zakyn	0.37	150	P	Pg	13 41 41.4	+0.3
VLMS				S	Sb	13 41 47.5	0.0
VLMS				AML	AML	13 41 48.1	
	comp=E,3924μm,0.2s						
VLMS				AML	AML	13 41 51.5	
	comp=N,3163μm,0.3s						
MGNA	Meganis	0.54	32	P	Pg	13 41 44.1	0.0
MGNA				S	Sg	13 41 52.0	+0.7
MGNA				AML	AML	13 41 52.5	
	comp=E,1053μm,0.1s						
MGNA				AML	AML	13 41 52.6	
	comp=N,561μm,0.2s						
LKD2	Lefkada island	0.61	17	P	Pg	13 41 45.4	-0.2
LKD2				S	Sb	13 41 54.9	+0.5
	comp=N,108nm,0.2s						
LKD2	Lefkada island	0.61	17	P	Pg	13 41 45.3	-0.2
LKD2				S	Sb	13 41 54.9	+0.5
KRI1	kERI	0.62	150	P	Pg	13 41 45.6	-0.1
KRI1				S	Sb	13 41 55.6	+1.0
	comp=N,660nm,0.2s						
PDO	Prodromos	0.71	56	P	Pg	13 41 47.5	0.0
PDO				S	Sb	13 41 57.8	+0.5
	comp=N,192nm,0.4s						
PDO	Prodromos	0.71	56	P	Pg	13 41 47.5	0.0
RLS	Riolos of Patr	0.83	100	P	Pg	13 41 49.2	-0.5
RLS				S	Sb	13 42 02.0	+1.4
RLS	Riolos of Patr	0.83	100	P	Pg	13 41 49.4	-0.3
RLS				S	Sb	13 42 02.0	+1.4
PVO	Paravola	0.96	64	P	Pb	13 41 51.2	-0.6
PVO				S	Sg	13 42 05.1	+0.5
	comp=N,130nm,0.3s						
DRO	Drossia	1.04	103	P	Pb	13 41 52.7	-0.6
DRO				S	Sn	13 42 08.0	+0.1
	comp=N,118nm,0.2s						
DRO	Drossia	1.04	103	P	Pb	13 41 53.4	+0.2
LAKA	Lakka	1.22	88	P	Pb	13 41 56.6	+0.3
ANX	Ano Chora	1.24	71	P	Pn	13 41 56.3	0.0
ANX				S	Sg	13 42 13.8	+0.3
ANX	Ano Chora	1.24	71	P	Pn	13 41 56.6	+0.2
SERG	Sergoula	1.30	80	P	Pn	13 41 56.8	-0.3
TRIZ	Trizonia	1.30	82	P	Pn	13 41 57.0	-0.2
TRIZ				S	Sb	13 42 14.4	+0.1
	comp=N,50nm,0.4s						
KALE	Kalithea	1.36	81	P	Pn	13 41 57.9	-0.1
KALE				S	Sn	13 42 15.8	0.0
KALE	Kalithea	1.36	81	P	Pn	13 41 58.3	+0.3
KLV	Kalavryta, Ach	1.37	96	P	Pn	13 41 57.1	-1.0
KLV				S	Sn	13 42 15.8	-0.2
KLV	Kalavryta, Ach	1.37	96	P	Pn	13 41 58.9	+0.7
MAKR	Makrakomi, Fth	1.56	58	P	Pn	13 41 59.8	-1.0
MAKR				S	Sn	13 42 19.0	-1.8
MAKR	Makrakomi, Fth	1.56	58	P	Pg	13 42 03.4	-0.2

IDC 20 13:44:57.9±1.5, 14.93S×173.49W, h0km, mb3.8/5, mb1 4.2/5, mb1mx3.8/31, mbtmp3.8/5, MS3.5/3, Ms1 3.5/3, ms1mx2.9/28, Error ellipse: s-maj=135.9km s-min=19.1km az=151.0
NEIC 20 13:44:58.1±1.7, 15.34S±0.09×173.3W±0.1, h10km±1km, mb4.3/7, Error ellipse: s-maj=22.2km s-min=13.0km az=114.0
ISC 20 13:45:03.3±0.9, 15.7S±0.1×173.3W±0.1, h42km, n24, σ1s42/15, mb3.9/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.27	39	Pn	Pn	13 45 30.8	-7.6
	170nm,0.3s,baz=201,slow=3.6,SNR=501						
AFI				LR		13 45 47.7	
	comp=Z,115nm,20.5s,baz=232,slow=26						
AFI				Sn	Sn	13 45 50.5	-15
	384nm,0.3s,baz=45,slow=21,SNR=23						
NIUE	Niue	4.64	137		Pn	13 46 11.2	+0.4
RAO	Raoul Island	14.17	197	Pn	Pn	13 48 19.8	-1.7
DZM	Mont Dzumac	20.22	249	P	Pn	13 49 41.1	+3.9
	8.0nm,0.9s,baz=94,slow=17,SNR=6.9						
DZM				LR	LR	13 56 15.3	
	comp=Z,87nm,21.5s,baz=82,slow=33						
DZM	Mont Dzumac	20.22	249	P	Pn	13 49 36.3	-0.9
DZM				IAmb	IAmb	13 49 44.4	
	comp=Z,12nm,1.0s						
BKZ	Black Stump Fm	25.06	199	P	P	13 50 26.0	+2.2
BKZ				IAmb	IAmb	13 50 34.1	
	comp=Z,9.5nm,1.2s						
EIDS	Eidsvold	34.67	248	P	P	13 51 47.0	-2.1
EIDS				IAmb	IAmb	13 52 05.0	
	comp=Z,7.9nm,1.4s						
ARMA	Armidale	35.31	239	P	P	13 51 55.2	+0.5
CAN	Canberra	38.97	233	P	P	13 52 24.8	-0.8
CAN				IAmb	IAmb	13 52 41.7	
	comp=Z,21nm,1.5s						
H11S2	WAKE ISLAND Hy	39.28	329	T	T	14 32 50.1	
	baz=146,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	39.29	329	T	T	14 33 10.6	
	baz=146,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	39.29	329	T	T	14 32 51.3	
	baz=146,slow=76,SNR=8.5						
H11N3	WAKE ISLAND Hy	40.22	330	T	T	14 35 21.6	
	baz=150,slow=76,SNR=0.7						
H11N1	WAKE ISLAND Hy	40.23	330	T	T	14 35 22.0	
	baz=150,slow=76,SNR=6.9						
H11N2	WAKE ISLAND Hy	40.24	330	T	T	14 35 23.0	
	baz=150,slow=76,SNR=5.8						
STKA	Stephens Creek	44.02	240	P	P	13 53 08.2	+1.2
	comp=Z,0.7nm,0.4s,baz=72,slow=9.7,SNR=3.7						
STKA	Stephens Creek	44.02	240	P	P	13 53 08.1	+1.1
WRA	Warramunga Arr	49.91	257	P	P	13 53 52.6	-0.6
	comp=Z,0.8nm,0.6s,baz=92,slow=6.7,SNR=12						
AS31	Alice Springs	50.15	252	P	P	13 53 55.1	+0.1
AS31				IAmb	IAmb	13 54 03.5	
	comp=Z,1.2nm,1.1s						
ASAR	Alice Springs	50.15	252	P	P	13 53 55.2	+0.1
	comp=Z,1.5nm,0.5s,baz=87,slow=7.9,SNR=51						
ASAR				PcP	PcP	13 55 16.8	+2.7
	comp=Z,0.5nm,0.8s,baz=116,slow=3.2,SNR=5.2						
NVAR	Mina Array Bea	74.45	42	P	P	13 56 36.7	-0.9
	comp=Z,0.6nm,0.8s,baz=222,slow=9.3,SNR=3.5						
NVAR				LR	LR	14 20 04.7	
	comp=Z,53nm,20.1s,baz=312,slow=28						
TXAR	Lajitas Array	80.66	56	P	P	13 57 12.1	-0.2
	comp=Z,0.3nm,0.7s,baz=252,slow=2.5,SNR=3.4						
ILAR	Eielson Array	82.69	11	LR	LR	14 27 27.3	
	comp=Z,18nm,19.1s,baz=346,slow=31						
BRTR	Keskin Array B	146.46	321	PKPbc	PKPdf	14 04 38.5	-0.5
	comp=Z,0.7nm,0.7s,baz=357,slow=6.3,SNR=3.7						

IDC 20 14:10:27.1±1.1, 4.13N×123.40E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.5/39, mbtmp3.7/6, ML4.8/1, Error ellipse: s-maj=50.6km s-min=19.2km az=69.0
MAN 20 14:10:35.3, 5.23N×126.43E, h38km, mb4.7, ML3.6, MS3.4
ISC 20 14:10:34.9±2.0, 5.1N±0.1×126.3E±0.1, h59km±23km, n19, σ2s21/23, mb3.6/6, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.15	331	eP	Pn	14 10 54.6	-0.4
DDMP				eS	Sn	14 11 10.1	+0.2
GSPH	General Santos	1.65	307	⇑eP	Pn	14 11 00.9	-0.8
MATI	Mati	1.85	360	eP	Pn	14 11 02.9	-1.4
MATI				eS	Sn	14 11 30.3	+3.7
DAV	Davao City (W)	2.09	341	Pn	Sn	14 11 26.5	-6.0
	70nm,0.3s,baz=286,slow=14,SNR=4.0						
DMPH	Davao City--Mi	2.12	339	⇑eP	Pn	14 11 08.9	+0.8
DMPH				eS	Sn	14 11 32.6	-0.7
SKMP	Bagumbayan, Su	2.23	310	eP	Pn	14 11 10.8	+1.2
SKMP				eS	Sn	14 11 38.4	+2.5
KCP	Kidapawan	2.24	329	⇑eP	Pn	14 11 10.0	+0.2
KCP				iS	Sn	14 11 39.2	+2.9
CTBH	Cotabato--PC H	2.92	317	⇓iP	Pn	14 11 18.5	-0.5
BUKP	Musuan	3.02	337	eP	Pn	14 11 20.0	-0.4
BUKP				eS	Sn	14 11 52.4	-3.0
CGP	Cagayan de Oro	3.69	335	⇓eP	Pn	14 11 32.4	+2.9
BUTP	Butuan	3.91	351	eP	Pn	14 11 33.8	+1.2
PAGZ	Pagadian	3.97	314	eP	Pn	14 11 32.0	-1.3
MSLP	Maasin	5.21	345	eP	Pn	14 11 50.7	+0.4
WRA	Warramunga Arr	26.11	163	P	P	14 16 05.0	+1.4
	0.4nm,0.5s,baz=339,slow=10,SNR=6.9						
ASAR	Alice Springs	29.53	166	P	P	14 16 33.6	-0.5
	0.2nm,0.4s,baz=344,slow=7.1,SNR=9.3						
STKA	Stephens Creek	39.55	159	P	P	14 18 00.0	-0.4
	3.0nm,0.9s,baz=317,slow=18,SNR=2.8						
MKAR	Makanchi Array	56.19	325	P	P	14 20 03.5	-5.5
	0.2nm,0.4s,baz=115,slow=6.8,SNR=10						
KURBB	Kurchatov Arra	60.36	327	P	P	14 20 31.9	-6.0
	0.2nm,0.3s,baz=123,slow=7.0,SNR=5.1						
BVAR	Borovoye Array	65.94	327	P	P	14 21 14.8	-0.1
	0.5nm,0.6s,baz=138,slow=9.0,SNR=5.9						

NNC 20 14:27:59.2±2.6, 39.17N×74.17E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=18.8km s-min=12.0km az=165.0
ISC 20 14:27:58.1±5.4, 38.3N±0.3×73.1E±0.1, h35km, n13, σ0.76/13, 1C-3D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	3.84	7	P	Pn	14 28 55.6	+0.5
	SNR=38						
UCH	Uchtor	4.07	15	P	Pn	14 28 58.5	+0.3
	SNR=16						
KZA	Kyzart	4.12	23	P	Pn	14 28 58.4	-0.5
	SNR=8.8						
EKS2	Erkin-Say	4.38	7	P	Pn	14 29 03.0	+0.8
	SNR=13						
MRKS	Merke	4.43	2	Pg	Pn	14 29 03.9	+1.0
	7.0nm,0.2s						
MRKS				Lg	Lg	14 29 52.6	
	11nm,0.2s						
AAK	Ala-Archa	4.46	14	⇓Pg	Pn	14 29 02.6	-0.7
	4.1nm,0.6s						
AAK				⇓Lg	Lg	14 29 51.9	
	14nm,1.0s						
JBG	Jabagly	4.54	336	Pg	Pn	14 29 06.7	+2.3
	3.5nm,0.1s						
JBG				Lg	Lg	14 29 57.3	
	13nm,0.2s						
ULHL	Ulahol	4.62	31	P	Pn	14 29 04.9	-0.7
	SNR=8.1						
KK31	Karatay Array	5.17	339	⇑Pn	Pn	14 29 13.3	+0.5
	0.3nm,0.2s,baz=150,slow=14,SNR=12						
KK31				⇓Sn	Sn	14 30 10.5	-0.8
	2.2nm,0.5s,baz=156,slow=24,SNR=13						
KST	Kastek	5.21	24	Pg	Pn	14 29 14.5	+0.8
	2.2nm,0.3s						
KST				Lg	Lg	14 30 10.6	
	7.7nm,0.4s						
BRLS	Borolday	5.31	334	Pg	Pn	14 29 14.6	-0.3
	0.8nm,0.2s						
BRLS				Lg	Lg	14 30 10.8	
	0.9nm,0.4s						
DGS	Degeres	5.34	22	Pg	Pn	14 29 16.3	+1.0
	1.4nm,0.5s						
DGS				Lg	Lg	14 30 13.5	
	5.4nm,0.7s						
IZV	Izvestkoviy	5.43	29	Pg	Pn	14 29 17.0	+0.3
	1.9nm,0.4s						
IZV				Lg	Lg	14 30 14.9	
	3.0nm,0.3s						

ATH 20 15:12:00.8, 41.62N×23.82E, h20km±2km, ML2.4/8, Error ellipse: s-maj=2.9km s-min=1.0km az=181.0
SOF 20 15:12:00.0, 41.69N×23.83E, h2km, MD3.3
THE 20 15:12:01.4, 41.61N×23.81E, h7km, ML2.2/9, Error ellipse: s-maj=1.3km s-min=0.6km az=181.0
SKO 20 15:12:01.6, 41.67N×23.78E, h1km
BEO 20 15:12:01.3±0.6, 41.66N×23.87E, h2km±2km, ML2.5/9
ISC 20 15:12:01.1±0.9, 41.64N±0.02×23.81E±0.02, h7km±8km, n57, σ1.21/92, 5C-7D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMB	Musomiste	0.08	233	iP	Pg	15 12 03.2	+0.1
NVR	Nevrokopi	0.29	173	P	Pg	15 12 06.5	-0.2
NVR				S	Sg	15 12 10.8	+0.2
	858nm,0.2s						
NVR	Nevrokopi	0.29	173	P	Pg	15 12 06.6	-0.2
NVR				S	Sg	15 12 10.9	+0.2
NVR				AML	AML	15 12 11.7	
	comp=N,1339μm,0.2s						
NVR				AML	AML	15 12 11.7	
	comp=E,1918μm,0.1s						
SRS	Serrai	0.55	198	P	Pg	15 12 11.6	0.0
SRS	Serrai	0.55	198	ePg	Pg	15 12 11.6	0.0
SRS				eSg	Sg	15 12 19.6	+0.9
SRS	Serrai	0.55	198	P	Pg	15 12 11.7	0.0
SRS				S	Sg	15 12 19.1	+0.4
KKB	Krupnik	0.59	293	iP	Pg	15 12 11.0	-1.5
RZN	Rozhen	0.68	85	iP	Pg	15 12 13.5	-0.7
PLD	Plovdiv	0.81	55	iP	Pg	15 12 16.0	-0.7
KVLA	Kavala	0.82	148	P	Pg	15 12 16.9	0.0
KVLA				S	Sg	15 12 27.7	+0.2
KAVA	Kavala	0.83	140	P	Pg	15 12 16.1	-0.9
KAVA				S	Sg	15 12 28.4	+0.6
	comp=E,170nm,0.2s						
KAVA	Kavala	0.83	140	P	Pg	15 12 16.6	-0.4
KAVA				S	Sg	15 12 28.1	+0.3
KAVA				AML	AML	15 12 34.5	
	comp=N,629μm,0.3s						
KAVA				AML	AML	15 12 35.7	
	comp=E,429μm,0.4s						
KNT	Kendrikon	0.84	236	P	Pg	15 12 16.4	-0.7
KNT	Kendrikon	0.84	236	P	Pg	15 12 16.5	-0.7
KNT				S	Sg	15 12 27.6	-0.4
KNT				AML	AML	15 12 33.5	
	comp=N,513μm,0.2s						
KNT				AML	AML	15 12 34.6	
	comp=E,440μm,0.2s						
SOH	Sokhos	0.89	203	P	Pg	15 12 17.7	-0.4
SOH				S	Sg	15 12 29.6	+0.3
	comp=E,295nm,0.5s						
SOH	Sokhos	0.89	203	P	Pg	15 12 17.8	-0.3
SOH				S	Sg	15 12 30.1	+0.5
SOH				AML	AML	15 12 30.5	
	comp=E,659μm,0.3s						
SOH				AML	AML	15 12 35.3	
	comp=N,599μm,0.4s						
PGB	Panagyurishte	0.95	16	iP	Pg	15 12 17.4	-1.9
VAY	Valandovo	0.99	252	ePg	Pb	15 12 21.1	+0.6
VAY				eSg	Sb	15 12 34.2	+0.5
VAY	Valandovo	0.99	252	iPg	Pb	15 12 20.8	+0.4
VAY				iSg	Sb	15 12 36.4	+0.9
VAY				eLg	Lg	15 12 36.5	
	comp=N,58nm,0.3s						
VTS	Vitosha	1.07	337	ePg	Pg	15 12 20.7	-0.9
VTS				eSg	Sg	15 12 35.1	-0.4
VTS	Vitosha	1.07	337	⇑P	Pb	15 12 22.4	+0.4
VTS				S	Sn	15 12 39.1	+1.3
VTS	Vitosha	1.07	337	iP	Pg	15 12 20.2	-1.4
HORT	Hortiatis	1.17	208	P	Pg	15 12 23.1	-0.4
HORT				S	Sg	15 12 38.9	+0.2
	comp=N,125nm,0.3s						
HORT	Hortiatis	1.17	208	P	Pg	15 12 23.1	-0.4
HORT				S	Sg	15 12 38.8	+0.2
HORT				AML	AML	15 12 42.0	
	comp=E,215μm,0.2s						
HORT				AML	AML	15 12 42.4	
	comp=N,274μm,0.4s						
THE	Thessaloniki	1.19	213	P	Pg	15 12 23.8	-0.1
KDZ	Kurdzhali	1.20	89	iP	Pg	15 12 22.6	-1.5
STIP	Stip	1.22	273	iPg	Pg	15 12 19.5	-4.9
STIP				iSg	Sg	15 12 34.4	-5.9
STIP				eLg	Lg	15 12 34.8	
	comp=E,52nm,0.2s						
THAS	Thassos island	1.24	146	P	Pg	15 12 23.5	-1.3
THAS	Thassos island	1.24	146	P	Pg	15 12 24.3	-0.5
GRG	Griva	1.26	238	P	Pg	15 12 24.6	-0.7
GRG				S	Sg	15 12 42.1	+0.4
	comp=E,90nm,0.3s						
GRG	Griva	1.26	238	P	Pg	15 12 24.6	-0.7
GRG				S	Sg	15 12 42.0	+0.4
GRG				AML	AML	15 12 42.8	
	comp=E,204μm,0.4s						
GRG				AML	AML	15 12 43.4	
	comp=N,148μm,0.4s						
OUR	Ouranopolis	1.31	174	P	Pg	15 12 24.5	-1.6
OUR	Ouranopolis	1.31	174	P	Pg	15 12 25.2	-1.0
OUR				S	Sg	15 12 42.9	-0.2
OUR				AML	AML	15 12 44.9	
	comp=N,1007μm,0.4s						
OUR				AML	AML	15 12 46.5	
	comp=E,901μm,0.3s						
BOSS	Bosilegrad	1.31	311	ePg	Pg	15 12 25.4	-0.8
BOSS				eSg	Sg	15 12 42.8	-0.5
RDO	Rodhopi	1.39	110	P	Pn	15 12 26.5	-0.3
RDO	Rodhopi	1.39	110	P	Pn	15 12 26.5	-0.3
RDO				S	Sg	15 12 45.5	-0.2
RDO				AML	AML	15 12 49.6	
	comp=E,318μm,0.2s						
RDO				AML	AML	15 12 49.9	
	comp=N,312μm,0.2s						
PAIG	Paliouri	1.71	183	P	Pn	15 12 30.1	-1.2
PAIG				S	Sn	15 12 53.4	0.0
	comp=N,52nm,0.4s						
PAIG	Paliouri	1.71	183	P	Pn	15 12 30.9	-0.4
SMTH	Samothraki Isl	1.75	131	P	Pn	15 12 30.7	-1.1
SMTH				S	Sn	15 12 54.3	0.0
	comp=N,35nm,1.2s						
LIT	Litokhoron	1.83	214	P	Pn	15 12 32.9	-0.1
ALN	Alexandroupoli	1.84	113	P	Pn	15 12 32.5	-0.5
ALN				S	Sn	15 12 56.9	+0.4
	comp=N,32nm,0.5s						
ALN	Alexandroupoli	1.84	113	P	Pn	15 12 33.6	+0.6
PLVB	Pleven	1.85	19	⇓P	Pn	15 12 34.1	+0.9
PLVB				⇓S	Sg	15 13 02.6	+2.1
ZAPS	Zavoj	1.85	332	ePg	Pb	15 12 36.0	+0.7
ZAPS				eSg	Sg	15 12 59.9	-0.8
BARS	Barje	1.90	309	ePg	Pb	15 12 36.2	+0.2
BARS				eSg	Sg	15 13 01.6	-0.4
ELND	Elena	2.00	49	⇑P	Pn	15 12 35.5	+0.1
ELND				⇓S	Sg	15 13 05.5	+0.1
LIA	Limnos Island	2.02	149	P	Pn	15 12 35.0	-0.6
LIA				S	Sn	15 13 00.7	-0.4
	comp=N,75nm,0.6s						
LIA	Limnos Island	2.02	149	P	Pn	15 12 35.1	-0.6
BLKB	Belogradchik	2.15	337	⇑S	Sb	15 13 08.7	+1.3
ZAGS	Zajecar	2.47	332	ePn	Pn	15 12 42.0	+0.3
ZAGS				eSn	Sn	15 13 13.6	+1.5
BOVS	Bovan	2.53	323	ePn	Pn	15 12 43.6	+1.0
BOVS				eSn	Sn	15 13 15.2	+1.6
SELS	Selova	2.54	309	ePn	Pn	15 12 43.5	+0.7
SELS				eSn	Sb	15 13 17.1	-1.5
GRUS	Gruza	3.20	316	ePn	Pn	15 12 52.6	+0.8
IVAS	Ivanjica	3.33	307	ePn	Pn	15 12 54.0	+0.4
IVAS				eSn	Sn	15 13 34.7	+1.4
MDVR	Moldovita	3.50	335	⇓P	Pn	15 12 56.5	+0.6
MDVR				⇓S	Sn	15 13 41.7	+4.1
GZR	Gura Zlata	3.83	349	⇑P	Pn	15 13 00.7	+0.2
GZR				⇑S	Sb	15 13 51.3	-4.3
MLR	Muntele Rosu	4.15	21	⇓S	Sg	15 14 16.8	+2.4

KRSC 20 15:26:22.4±1.1, 60.15N×163.21E, h6km±9km, ML4.5
IDC 20 15:26:23.4±1.9, 59.96N×163.44E, h0km, mb3.3/6, mb1 3.6/9, mb1mx3.4/38, mbtmp3.5/9, ML4.0/3, MS3.0/5, Ms1 3.0/5, ms1mx2.6/46, Error ellipse: s-maj=52.3km s-min=13.9km az=169.0
MOS 20 15:26:23.5±1.9, 60.09N×163.30E, h9km, mb4.5/3, Error ellipse: s-maj=17.1km s-min=9.4km az=77.9
NEIC 20 15:26:25.4±1.0, 60.0N±0.2×163.2E±0.2, h13km±6km, mb4.0/9, Error ellipse: s-maj=27.0km s-min=14.4km az=161.0
ISC 20 15:26:24.7±0.6, 60.11N±0.05×163.33E±0.04, h10km, n38, σ1.53/41, mb3.8/13, MS2.9/5, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OSSR	Ossora	0.88	189	eP	Pg	15 26 39.8	-1.7
OSSR				eS	Sb	15 26 51.9	-1.7
OSSR	Ossora	0.88	189	PN	Pg	15 26 39.8	-1.7
OSSR				S	Sb	15 26 51.9	-1.7
TILK	Tilichiki	1.44	75	eP	Pn	15 26 50.4	-0.4
TILK				eS	Sg	15 27 10.2	-0.8
TILK	Tilichiki	1.44	75	PN	Pn	15 26 50.4	-0.4
TILK				S	Sg	15 27 10.2	-0.8
PALN	Palana	1.99	240	eP	Pn	15 26 57.9	-0.4
PALN				eS	Sb	15 27 23.2	-2.6
PALN	Palana	1.99	240	PN	Pn	15 26 57.9	-0.4
PALN				S	Sb	15 27 23.2	-2.6
KMSK	Kamenskaya	2.74	29	eP	Pn	15 27 08.6	0.0
KMSK	Kamenskaya	2.74	29	PN	Pn	15 27 08.6	0.0
KMNR	Kamenistaya	4.67	202	eP	Pn	15 27 38.3	+3.1
KMNR	Kamenistaya	4.67	202	PN	Pn	15 27 38.3	+3.1
SEY	Seymchan	5.95	303	Pn	Pn	15 27 53.2	+0.5
	0.6nm,0.3s,baz=250,slow=24,SNR=13						
SEY				Lg	Lg	15 29 29.6	
	1.0nm,0.3s,baz=142,slow=14,SNR=4.0						
MA2	Magadan	6.35	271	Pn	Pn	15 27 59.0	+0.8
	0.8nm,0.3s,baz=14,slow=7.2,SNR=2.2						
MA2				Sn	Sn	15 29 10.6	-0.2
	0.9nm,0.3s,baz=166,slow=23,SNR=2.0						
MA2				Lg	Lg	15 29 41.5	
	0.7nm,0.3s,baz=341,slow=21,SNR=1.9						
MA2	Magadan	6.35	271		Pn	15 27 57.8	-0.4
BILL	Bilibino	8.06	8		Pn	15 28 27.8	+6.2
BILL	Bilibino	8.06	8	PN	Pn	15 28 27.8	+6.2
YAK	Yakutsk	16.29	291	Pn	P	15 30 16.3	+0.2
	0.0nm,0.3s,baz=271,slow=8.2,SNR=4.3						
YAK	Yakutsk	16.29	291	P	P	15 30 15.7	-0.4
YAK				IAmb	IAmb	15 30 18.3	
	comp=Z,7.0nm,0.7s						
YAK	Yakutsk	16.29	291	P	P	15 30 15.7	-0.4
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KLR	Kul'dur	21.04	253	P	P	15 31 08.6	+0.3
	comp=Z,0.5nm,0.4s,baz=36,slow=12,SNR=1.6						
KLR				LR	LR	15 40 19.3	
	comp=Z,44nm,18.2s,baz=71,slow=40						
MCK	McKinley	22.33	60	P	P	15 31 20.2	-1.9
MCK	McKinley	22.33	60	P	P	15 31 20.2	-1.9
MCK				pmax	pmax		
	comp=Z,15nm,1.4s						
WRH	Wood River Hil	22.54	58	P	P	15 31 26.8	+2.5
WRH				IAmb	IAmb	15 31 29.8	
	comp=Z,6.2nm,1.1s						
IL31		22.98	57	P	P	15 31 31.9	+3.0
ILAR	Eielson Array	22.98	57	P	P	15 31 30.3	+1.3
	comp=Z,1.1nm,0.9s,baz=270,slow=8.1,SNR=11						
ILAR				LR	LR	15 40 30.1	
	comp=Z,44nm,20.5s,baz=32,slow=37						
FYU	Fort Yukon	23.34	52	P	P	15 31 33.9	+1.4
PRP	Porcupine Dome	23.40	55	P	P	15 31 34.5	+1.1
PRP				IAmb	IAmb	15 31 38.6	
	comp=Z,3.4nm,1.1s						
SCM	Sheep Creek Mo	23.55	64	P	P	15 31 36.1	+1.3
SCM	Sheep Creek Mo	23.55	64	P	P	15 31 36.1	+1.3
SCM				pmax	pmax		
	comp=Z,27nm,1.4s						
SCRK	Sand Creek	24.40	58	P	P	15 31 43.7	+0.8
SCRK				IAmb	IAmb	15 31 46.7	
	comp=Z,5.2nm,1.4s						
KSRS	Korea Array	31.90	241	LR	LR	15 47 01.3	
	comp=Z,11nm,19.2s,baz=175,slow=39						
SONM	Songino Array	34.54	275	P	P	15 33 13.8	+0.8
	comp=Z,0.2nm,0.6s,baz=67,slow=11,SNR=2.0						
SONM				LR	LR	15 48 13.2	
	comp=Z,37nm,18.5s,baz=202,slow=38						
YKA	Yellowknife Ar	36.99	50	P	P	15 33 33.9	+0.2
	comp=Z,0.7nm,0.9s,baz=302,slow=8.3,SNR=6.1						
ZALV	Zalesovo Beam	40.79	298	P	P	15 34 08.7	+3.1
	comp=Z,0.2nm,0.3s,baz=75,slow=7.6,SNR=1.3						
KURK	Kurchatov	45.77	298	P	P	15 34 45.9	0.0
KURK				IAmb	IAmb	15 35 04.1	
	comp=Z,4.3nm,1.4s						
KURK	Kurchatov	45.77	298	P	P	15 34 45.9	0.0
KURK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
MKAR	Makanchi Array	46.96	292	P	P	15 34 55.1	-0.2
	comp=Z,0.2nm,0.5s,baz=46,slow=6.8,SNR=5.1						
NOA	NORSAR Array B	57.27	344	P	P	15 36 12.1	+0.3
	comp=Z,0.8nm,0.6s,baz=16,slow=7.1,SNR=2.9						
CMAR	Chiang Mai Arr	61.45	257	LR	LR	16 07 45.3	
	comp=Z,8.6nm,18.1s,baz=20,slow=40						

IDC 20 15:35:30.9±3.6, 3.27S×136.32E, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.5/27, mbtmp3.6/3, ML3.2/1, Error ellipse: s-maj=159.5km s-min=30.5km az=81.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.69	186	Pn	Pn	15 39 27.5	+1.2
	0.1nm,0.3s,baz=5.8,slow=12,SNR=3.0						
ASAR	Alice Springs	20.41	186	P	P	15 40 09.3	-0.5
	1.6nm,0.6s,baz=7.9,slow=11,SNR=29						
MKAR	Makanchi Array	68.79	323	P	P	15 46 37.1	0.0
	0.4nm,0.5s,baz=111,slow=8.2,SNR=6.2						

IDC 20 15:38:34.7±28.0, 20.05S×173.26W, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.8/26, mbtmp4.0/4, MS3.5/2, Ms1 3.5/2, ms1mx2.8/27, Error ellipse: s-maj=529.7km s-min=166.8km az=76.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	27.93	288	LR	LR	15 54 37.8	
	comp=Z,64nm,19.8s,baz=195,slow=34						
CTA	Charters Tower	37.96	263	P	P	15 45 55.0	+0.5
	1.5nm,0.4s,baz=101,slow=16,SNR=1.9						
STKA	Stephens Creek	41.99	244	P	P	15 46 27.6	-0.3
	1.1nm,0.5s,baz=92,slow=11,SNR=3.9						
ASAR	Alice Springs	48.95	256	P	P	15 47 23.1	-0.1
	1.5nm,0.8s,baz=93,slow=8.5,SNR=22						
WRA	Warramunga Arr	49.07	261	P	P	15 47 23.6	-0.4
	0.4nm,0.3s,baz=96,slow=8.0,SNR=29						
NWAO	Narrogin (SRO)	62.54	243	LR	LR	16 12 12.5	
	comp=Z,52nm,20.2s,baz=330,slow=32						

JMA 20 15:40:49.3±0.1, 22.10N×121.62E, h24km, M3.5
TAP 20 15:40:49.1, 22.15N×121.58E, h6km±1km, ML3.4, D
ISC 20 15:40:48.9±1.0, 22.12N±0.04×121.60E±0.03, h14km±7km, n76, σ1.04/117, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.09	211	P	Pg	15 40 52.2	+0.3
	baz=190						
LAY				S	Sg	15 40 54.3	+0.3
	baz=190						
TWH	Lutao	0.60	349	eP	Pg	15 41 00.9	+0.2
	baz=350						
TWH				eS	Sb	15 41 09.6	0.0
	baz=350						
EAST	Anshuo	0.75	291	eP	Pg	15 41 02.2	-1.2
	baz=289						
TWKBT	Hengchun	0.75	257	eP	Pg	15 41 02.5	-1.1
	baz=253						
TWK1	Hengchun	0.76	257	eP	Pg	15 41 01.9	-1.7
	baz=253						
TTN	Taitung	0.76	327	eP	Pb	15 41 04.2	+0.3
	baz=326						
TTN				eS	Sb	15 41 15.1	+0.9
	baz=326						
ECL	Taimali	0.77	309	eP	Pg	15 41 02.9	-0.9
	baz=308						
ECL				eS	Sg	15 41 13.5	-0.4
	baz=308						
HEN	Hengchun	0.81	262	eP	Pb	15 41 04.7	0.0
	baz=259						
TWGBT	Beinan	0.85	325	eP	Pb	15 41 05.7	+0.3
	baz=325						
TWGBT				eS	Sg	15 41 16.5	-0.1
	baz=325						
TWG	Pinlang	0.86	325	eP	Pg	15 41 05.2	-0.3
	baz=325						
TWG				S	Sg	15 41 16.7	0.0
	baz=325						
SCZT	Fangliau	0.94	286	eP	Pb	15 41 06.0	-1.1
	baz=284						
SCZT				eS	Sn	15 41 21.5	+0.5
	baz=284						
CHKT	Chengkung	1.00	347	eP	Pb	15 41 06.2	-1.8
	baz=348						
CHKT				eS	Sb	15 41 21.3	+0.2
	baz=348						
MASBT	Mashibuluo	1.02	299	P	Pn	15 41 09.5	+0.7
	baz=297						
MASBT				S	Sn	15 41 23.7	+0.7
	baz=297						
SSPT	Xinbi	1.02	291	eP	Pn	15 41 08.8	0.0
	baz=289						
SSD	Sandimen	1.09	305	eP	Pb	15 41 10.4	+0.3
	baz=304						
SSD				eS	Sn	15 41 25.0	+0.3
	baz=304						
FULB	Fuli	1.11	345	eP	Pb	15 41 09.7	-0.3
	baz=345						
FULB				S	Sg	15 41 25.2	+0.2
	baz=345						
SGLT	Jiouru	1.19	301	eP	Pn	15 41 12.6	+0.7
	baz=299						
ELDTW	Lidau	1.20	333	eP	Pg	15 41 10.6	-0.7
	baz=333						
SLGT	Liugui	1.24	315	eP	Pn	15 41 13.1	+0.2
	baz=314						
SLGT				eS	Sb	15 41 27.9	-0.1
	baz=314						
TWF1	Yuli	1.26	347	eP	Pn	15 41 12.1	-0.1
	baz=348						
TWF1				eS	Sn	15 41 28.8	-0.1
	baz=348						
TWM1	Shoushan	1.30	303	eP	Pg	15 41 14.8	+0.9
	baz=302						
STYT	Tauyuan	1.30	323	eP	Pb	15 41 13.6	+0.4
	baz=323						
STYT				eS	Sg	15 41 31.1	+0.1
	baz=323						
YULB	Yu-li	1.30	348	eP	Pn	15 41 12.4	-0.3
	baz=348						
YULB				eS	Sb	15 41 29.7	0.0
	baz=348						
SGST	Jiashian	1.35	316	eP	Pb	15 41 14.1	+0.2
	baz=315						
SGST				eS	Sg	15 41 31.9	-0.4
	baz=315						
WSSB	Gushan	1.35	293	eP	Pg	15 41 15.9	+1.1
	baz=292						
HGSD	Ruisui	1.38	353	eP	Pb	15 41 14.5	0.0
	baz=353						
EHY	Hungye	1.41	350	eP	Pn	15 41 14.4	+0.3
	baz=350						
EHY				eS	Sb	15 41 33.4	+0.6
	baz=350						
WTP	Ta-pu	1.45	321	eP	Pg	15 41 16.3	-0.5
	baz=321						
CHN1	Nanshi	1.46	317	eP	Pg	15 41 17.2	+0.3
	baz=316						
TPUB	Ta-pu	1.48	323	eP	Pg	15 41 16.9	-0.5
	baz=322						
YUS	Yu-Shan	1.49	336	eP	Pb	15 41 17.0	+0.4
	baz=336						
SNST	Tainan City	1.50	317	eP	Pg	15 41 17.5	-0.3
	baz=316						
CHN4	Tsaushan	1.54	323	eP	Pb	15 41 17.6	+0.4
	baz=322						
EGFH	Guangfu	1.55	354	eP	Pb	15 41 17.2	-0.2
	baz=354						
EGFH				eS	Sb	15 41 37.3	+0.3
	baz=354						
ALS	Alishan	1.57	332	eP	Pg	15 41 18.8	-0.3
	baz=332						
VWDT	VWDT	1.69	346	eP	Pb	15 41 19.3	-0.3
	baz=345						
ESL	Shilin	1.70	355	eP	Pn	15 41 18.6	+0.5

baz=355
CHN5 Tsauling 1.70 330 eP Pb 15 41 20.3 +0.3
baz=330
WHYT Xinyi Township 1.72 336 eP Pb 15 41 20.7 +0.4
baz=336
WHYT S Sb 15 41 41.7 -0.1
baz=336
SSLB Suanglung 1.77 340 eP Pb 15 41 21.6 +0.5
baz=340
SSLB eS Sg 15 41 45.0 -0.9
baz=340
WGK Gukeng 1.83 329 eP Pb 15 41 22.2 0.0
baz=328
WGK eS Sb 15 41 45.6 +0.6
baz=328
WDLH Douliu 1.85 328 eP Pb 15 41 22.9 +0.5
baz=328
WDLH eS Sb 15 41 44.8 -0.7
baz=328
WDLH Douliu 1.85 328 eS Sn 15 41 44.4 +1.1
baz=20
OWD Renai 1.87 348 eP Pb 15 41 21.9 -1.1
baz=348
OWD eS Sn 15 41 44.0 -0.1
baz=348
SMLT Sun Moon Lake 1.87 340 eP Pb 15 41 23.1 +0.2
baz=340
TYC Yuchr 1.91 339 eP Pb 15 41 23.4 -0.1
baz=339
WNT Mingjian 1.95 334 eP Pb 15 41 24.3 +0.2
baz=334
CHGB Renai 1.98 349 eP Pb 15 41 23.6 -1.2
baz=348
CHGB S Sn 15 41 47.8 +1.0
baz=348
DPDB Guoxing 2.01 342 eP Pb 15 41 24.6 -0.6
baz=342
DPDB S Sb 15 41 50.3 +0.2
baz=342
WHF Hehuan Shan 2.04 351 eP Pb 15 41 25.3 -0.8
baz=351
NACB Ninganchiao 2.05 360 eP Pn 15 41 23.1 +0.2
ETLH Xiulin Townshi 2.08 357 eP Pb 15 41 25.3 -1.3
baz=357
RLNB Erlin 2.11 327 eS Sn 15 41 49.7 0.0
baz=327
TDCB Techi 2.17 349 eP Pb 15 41 26.6 -1.4
baz=349
TCU Taichung 2.19 337 eP Pb 15 41 27.9 -0.5
baz=337
TCU eS Sb 15 41 55.4 -0.1
baz=337
NNSB Datong 2.31 355 eP Pn 15 41 27.7 +1.1
baz=355
NNSB eS Sn 15 41 56.0 +1.1
baz=355
NNSH Datong 2.31 355 eP Pn 15 41 27.5 +0.8
baz=355
NNSH eS Sn 15 41 56.6 +1.7
baz=355
NNS Nan Shan 2.32 355 eP Pb 15 41 29.0 -1.7
baz=355
TWQ1 Liyutan 2.35 341 eP Pb 15 41 30.2 -0.8
baz=341
ENTT Nioudou 2.51 359 eP Pb 15 41 32.0 -1.8
baz=359
ENTT eS Sb 15 42 02.3 -2.3
baz=359
YHNB Yeheng 2.55 355 eP Pn 15 41 31.5 +1.6
baz=355
YHNB eS Sn 15 42 01.4 +0.6
baz=355
NSK Sanguang 2.56 355 eP Pn 15 41 32.1 +2.1
baz=355
NSK eS Sb 15 42 03.6 -2.4
baz=355
LIOB Emei 2.58 348 eP Pn 15 41 32.5 +2.3
baz=348
TWE Neicheng 2.59 1 eP Pn 15 41 32.8 +2.4
baz=2.0
TWE eS Sn 15 42 03.0 +1.2
baz=2.0
SLBB Yuanshan 2.63 1 eP Pb 15 41 34.3 -1.4
baz=1.0
HATJ Hateruma jima 2.80 46 P Pn 15 41 34.3 +1.0
HATJ S Sn 15 42 07.7 +0.8
TATO Taipei 2.85 358 eP Pb 15 41 37.9 -1.6
baz=358
TATO eS Sb 15 42 11.3 -2.9
baz=358
TIPB Shuangxi 2.85 4 eP Pn 15 41 36.8 +2.8
baz=4.0
TIPB eS Sn 15 42 10.8 +2.7
baz=4.0
IRIF Iriomote-Funau 2.95 41 P Pn 15 41 36.7 +1.4
YM10 YM10 3.03 359 eP Pb 15 41 39.9 -2.7
baz=359
JKRS Kuro-shima 3.06 46 P Pn 15 41 38.2 +1.4
JKRS eS Sn 15 42 14.0 +0.7
JIJ Ishigaki jima 3.24 46 P Pn 15 41 40.0 +0.8
JIJ S Sn 15 42 17.0 -0.6
VWUC VWUC 3.48 326 eP Pn 15 41 42.6 0.0
baz=325
VWUC eS Sn 15 42 23.1 -0.4
baz=325
JISG Ishigakijimahi 3.50 45 P Pn 15 41 43.6 +0.7
JISG eS Sn 15 42 24.4 +0.3
PTMZ Houxiangcun 3.69 322 eP Pn 15 41 46.1 +0.5
baz=321
PTMZ eS Sn 15 42 27.7 -1.2
baz=321
JTJ Tarama 3.80 48 P Pn 15 41 48.3 +1.3
JTJ S Sn 15 42 31.9 +0.4

TAP 20 15:41:32.3, 23.42N×120.43E, h7km, ML2.8, B, Taiwan
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHY Chiayi 0.08 355 eP Pg 15 41 34.3 +0.2
CHY eS Sg 15 41 36.5 +0.9
CHN2 Minshiung 0.12 20 eP Pg 15 41 35.8 +0.9
baz=19
CHN2 eS Sg 15 41 38.9 +2.3
baz=19
WLGB Puzi 0.13 296 P Pg 15 41 35.6 +0.6
baz=295
WLGB eS Sg 15 41 39.1 +2.2
baz=295
CHN4 Tsaushan 0.16 115 P Pg 15 41 36.4 +0.7
baz=114
CHN4 eS Sg 15 41 40.0 +2.1
baz=114
SNST Tainan City 0.21 163 P Pg 15 41 37.2 +0.8
baz=163
SNST S Sg 15 41 41.6 +2.4
baz=163
CHN8 Yiju 0.21 250 P Pg 15 41 37.2 +0.6
baz=249
TPUB Ta-pu 0.22 123 P Pg 15 41 37.3 +0.7
baz=123
TPUB S Sg 15 41 41.5 +2.0
baz=123
WTP Ta-pu 0.24 136 P Pg 15 41 38.0 +0.9
baz=135
WTP S Sg 15 41 43.0 +2.7
baz=135
CHN1 Nanshi 0.25 159 eP Pg 15 41 38.2 +0.9
baz=159
CHN1 S Sb 15 41 42.9 -0.9
baz=159
WDLH Douliu 0.28 20 eP Pb 15 41 39.1 -0.6
baz=20
CHN5 Tsauling 0.29 52 eP Pb 15 41 38.9 -0.9
baz=52
CHN5 eS Sb 15 41 44.2 -0.7
baz=52
WSF Szhu 0.29 319 eP Pb 15 41 39.2 -0.6
baz=319
WGK Gukeng 0.29 24 eP Pb 15 41 39.2 -0.7
baz=25
WGK eS Sb 15 41 44.6 -0.3
baz=25
SCLT Jiali 0.33 222 eP Pb 15 41 39.8 -0.7
baz=220
SCLT eS Sb 15 41 45.8 -0.2
baz=220
CHN3 Shinhua 0.35 190 eP Pb 15 41 40.6 -0.2
baz=190
ALS Alishan 0.35 75 eP Pb 15 41 40.4 -0.7
baz=75
ALS eS Sb 15 41 46.1 -1.0
baz=75
STYT Tauyuan 0.39 130 eP Pb 15 41 41.3 -0.4
baz=130
STYT eS Sb 15 41 47.8 -0.2
baz=130

ISK 20 15:56:59.7, 40.57N×35.99E, h5km, ML3.8/27
DDA 20 15:57:00.1, 40.53N×35.94E, h2km±1km, MW3.7
ISC 20 15:57:00.6±0.9, 40.56N±0.02×35.96E±0.01, h9km±7km, n90, σ$1^{s}47$/130, Turkey
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AMSY Amasya-Merkez 0.12 307 iP Pg 15 57 03.2 -0.2
AMSY iS Sg 15 57 05.5 0.0
KUPE Kupecik-Ladik(0.32 12 PG Pg 15 57 07.2 +0.2
KUPE SG Sg 15 57 12.2 +0.9
HKOY Hamitkoy-Ladik 0.33 3 PG Pg 15 57 07.4 +0.2
HKOY SG Sb 15 57 12.9 -1.4
YARM Yarimca-Ladik(0.38 344 PG Pg 15 57 08.2 +0.2
YARM SG Sb 15 57 14.4 -1.1
KAYA Kayacik-Havza(0.42 337 PG Pb 15 57 09.2 -1.0
KAYA SG Sg 15 57 15.3 +1.0
TOKA Tokat 0.46 121 iP Pb 15 57 09.7 -1.2
TOKT Tokat 0.50 118 PG Pb 15 57 10.6 -1.1
TOKT SG Sb 15 57 18.4 -0.8
KVT Kavak 0.52 7 PG Pb 15 57 11.3 -0.7
KVT SG Sb 15 57 18.7 -1.0
HAVZ Havza 0.55 340 iP Pb 15 57 11.4 -0.9
HAVZ iS Sg 15 57 18.2 -0.2
HAVZ IAML 15 57 20.0
comp=N,5μm,0.2s
HAVZ IAML 15 57 20.0
comp=E,4μm,0.7s
ERBA Erbaa 0.61 78 iP Pg 15 57 12.4 -0.1
ERBA iS Sg 15 57 21.0 +0.5
ERBA IAML 15 57 22.0
comp=N,1μm,0.6s
COAL Corum-Alaca 0.81 248 iP Pg 15 57 15.0 -1.1
COAL iS Sb 15 57 26.8 -1.1
COAL IAML 15 57 30.0
comp=E,1μm,0.4s
COAL IAML 15 57 32.0
comp=N,1μm,0.4s
SAMS Samsun-Alacam 0.82 12 iP Pb 15 57 17.1 +0.1
SAMS iS Sb 15 57 28.6 +0.5
SAMS IAML 15 57 35.0
comp=N,2μm,0.5s
CTAK Corum_Osmancik 0.90 276 iP Pb 15 57 17.7 -0.8
CTAK iS Sb 15 57 31.0 +0.4
CTAK IAML 15 57 32.0
comp=E,786nm,0.3s
CTAK IAML 15 57 36.0
comp=N,1μm,0.3s
SVSK Karacayir 1.02 129 PG Pb 15 57 19.7 -0.7
SVSK SG Sn 15 57 35.6 +0.1
YOZ Yozgat 1.04 208 PG Pb 15 57 20.4 -0.5
YOZ SG Sn 15 57 37.3 +0.9
RSDY Resadiye-TOKAT 1.05 99 PG Pg 15 57 20.0 -0.8
RSDY SG Sn 15 57 36.2 -0.2
CORM Corum 1.09 250 PN Pn 15 57 21.9 -0.3
SCER sogukcermik 1.13 128 iP Pg 15 57 21.7 -0.6
SCER iS Sn 15 57 38.3 -0.2
SCER IAML 15 57 43.0
comp=N,1μm,0.3s
SCER IAML 15 57 43.0
comp=E,1μm,0.4s
CUSAR Sarkisla-SIVAS 1.16 169 iP Pb 15 57 22.4 -0.5
CUSAR iS Sn 15 57 39.1 -0.2
CUSAR IAML 15 57 44.0
comp=E,1μm,0.6s
CUSAR IAML 15 57 46.0
comp=N,1μm,0.3s
DIKM Dikmen 1.21 334 PN Pn 15 57 24.0 +0.3
DIKM SN Sn 15 57 42.1 +1.8
KAGI orum-Kargı 1.27 298 iP Pg 15 57 23.6 -1.3
KAGI iS Sn 15 57 42.7 +1.0
KAGI IAML 15 57 46.0
comp=N,878nm,0.6s
KAGI IAML 15 57 46.0
comp=E,624nm,0.8s
SIRC Yozgat 1.38 207 iP Pb 15 57 26.1 -0.4
SIRC iS Sn 15 57 44.8 +0.3
SIRC IAML 15 57 48.0
comp=E,869nm,0.6s
CUALT Altinyayla-SIV 1.42 155 iP Pg 15 57 27.6 -0.2
CUALT IAML 15 57 51.0
comp=E,800nm,0.6s
CUALT IAML 15 57 52.0
comp=N,494nm,0.4s
ORDU Ordu-Boztepe 1.50 73 iP Pn 15 57 27.9 +0.1
ORDU IAML 15 57 52.0
comp=N,946nm,1.2s
ORDU IAML 15 57 53.0
comp=E,962nm,0.8s
CUZAR Zara_SIVAS 1.54 115 iP Pg 15 57 29.3 -0.7
CUZAR iS Sg 15 57 52.0 +2.0
CUZAR IAML 15 57 56.0
comp=N,384nm,1.1s
CUZAR IAML 15 57 57.0
comp=E,326nm,0.6s
CDAG Cicekdag 1.54 233 iP Pn 15 57 28.3 -0.1
CDAG iS Sb 15 57 49.0 0.0
CDAG IAML 15 57 53.0
comp=N,380nm,0.4s
CDAG IAML 15 57 55.0
comp=E,462nm,0.5s
TOS Tosya 1.55 288 PN Pg 15 57 29.9 -0.4
SINO SINOP_Merkez 1.56 339 iP Pb 15 57 29.3 -0.5
SINO iS Sg 15 57 50.6 -0.3
DELI KIRIKKALE 1.66 251 iP Pb 15 57 30.6 -0.9
GUNE Kayseri 1.68 189 iP Pg 15 57 31.8 -0.9
GUNE iS Sg 15 57 57.2 +2.8
CUKAN kangal_SIVAS 1.70 137 iP Pb 15 57 31.9 -0.1
CUKAN iS Sg 15 57 57.6 +2.5
CUKAN IAML 15 57 58.0
comp=E,310nm,0.7s
CUKAN IAML 15 58 01.0
comp=N,252nm,0.3s
BNN Bunyan 1.71 183 PN Pg 15 57 32.2 -1.1
SUSE Susehri 1.75 101 iP Pb 15 57 32.7 -0.2
SUSE iS Sg 15 57 57.5 +0.8
SUSE IAML 15 58 00.0
comp=N,302nm,0.9s
SUSE IAML 15 58 05.0
comp=E,319nm,0.9s
ILGA Ilgaz 1.77 287 iP Pb 15 57 33.3 -0.2
ILGA iS Sg 15 57 57.9 +0.2
ILGA IAML 15 58 01.0
comp=E,788nm,0.6s
ILGA IAML 15 58 06.0
comp=N,422nm,0.7s
CANT Cankiri 1.79 272 PN Pb 15 57 33.4 -0.1
KMON Kastamonu 1.84 297 PN Pb 15 57 33.9 -0.6
ELDT Eldivan 1.94 269 iP Pb 15 57 35.2 -0.9
ELDT iS Sg 15 58 02.1 -0.6
ELDT IAML 15 58 07.0
comp=N,277nm,0.5s
AVNS Nevsehir-Avano 1.95 207 iP Pb 15 57 35.5 -0.9
AVNS iS Sg 15 58 03.2 -0.1
BRTR Keskin Array B 1.97 246 PN Pb 15 57 35.7 -1.0
BZK Bozkurt 2.03 314 PN Pb 15 57 36.7 -1.0
CUGUR Gurin_SVAS 2.10 151 iP Pb 15 57 38.8 -0.1
CUGUR iS Sg 15 58 10.5 +2.6
KIRS Kırehir-Merke 2.13 229 iP Pb 15 57 37.7 -1.6
KIRS iS Sb 15 58 05.5 -0.3
KIRS IAML 15 58 12.0
comp=N,208nm,0.5s
KIRS IAML 15 58 13.0
comp=E,328nm,0.5s
ESPY Espiye-Giresun 2.13 80 PN Pn 15 57 37.6 +1.2
SARI SarD1z-Kayseri 2.18 171 PN Pb 15 57 38.9 -1.4
HEKM Malatya_Hekimh 2.28 137 iP Pb 15 57 40.2 -1.8
HEKM iS Sg 15 58 14.2 +0.5
HEKM IAML 15 58 19.0
comp=E,175nm,0.5s
HEKM IAML 15 58 26.0
comp=N,134nm,0.8s
DARE Darende-Malaty 2.31 149 PN Pb 15 57 40.5 -2.0
YAYX Yaylak 2.32 226 PN Pn 15 57 40.4 +1.3
KEMA Kemaliye 2.33 123 iP Pb 15 57 41.2 -1.7
ARPR Arapgir-MALATY 2.34 128 PN Pn 15 57 40.9 +1.5
BBAL Bala 2.41 246 iP Pn 15 57 41.8 +1.5
BBAL IAML 15 58 22.0
comp=N,170nm,1.5s
BBAL IAML 15 58 24.0
comp=E,167nm,0.9s
ELBS KAHRAMANMARAS 2.41 158 iP Pb 15 57 42.9 -1.3
ELBS IAML 15 58 22.0
comp=E,198nm,0.5s
ELBS IAML 15 58 27.0
comp=N,307nm,0.6s
REFA Refahiye_ERZN 2.45 118 iP Pn 15 57 40.1 -0.8
REFA iS Sn 15 58 11.0 -0.1
SERE Sereflikochisa 2.46 230 PN Pb 15 57 42.9 -2.1
AFSR Afar-Bala (An 2.49 244 PN Pb 15 57 43.5 -2.0
YAHY KAYSERI_Yahyal 2.51 191 iP Pn 15 57 43.2 +1.5
YAHY iS Sb 15 58 18.3 +1.5
YAHY IAML 15 58 24.0
comp=E,96nm,0.6s
ANTO Ankara 2.52 255 PN Pn 15 57 43.6 +1.7
KELT Kelkit 2.55 98 iP Pn 15 57 43.5 +1.2
KELT iS Sg 15 58 21.9 -0.5
KELT IAML 15 58 29.0
comp=N,108nm,0.8s
KELT IAML 15 58 35.0
comp=E,124nm,0.6s
AKSY AKSARAY - Alti 2.56 222 iP Pn 15 57 43.8 +1.5
AKSY IAML 15 58 26.0
comp=N,225nm,0.5s
AKSY IAML 15 58 32.0
comp=E,103nm,0.5s
SAIM ADANA 2.58 178 iP Pb 15 57 46.1 -1.0
GULA Gulagac 2.59 212 PN Pb 15 57 44.7 -2.5
KBUK KARABUK-Merkez 2.62 286 iP Pn 15 57 45.1 +2.0
CMDR Camlidere-ANKA 2.66 270 iP Pb 15 57 47.3 -1.1
AKCD Akcadag 2.72 146 iP Pn 15 57 46.7 +2.0
AKCD IAML 15 58 42.0
comp=N,160nm,0.5s
AKCD IAML 15 58 44.0
comp=E,141nm,0.8s
KKUL Konya-Kulu 2.73 240 iP Pn 15 57 46.5 +1.8
KKUL IAML 15 58 31.0
comp=E,163nm,1.0s
KKUL IAML 15 58 43.0
comp=N,148nm,0.8s
KURC Kurucasile-Bar 2.75 299 PN Pn 15 57 46.9 +2.0
MACK Trabzon 2.92 81 iP Pb 15 57 50.2 -2.6
MACK iS Sb 15 58 30.9 +2.4
MACK IAML 15 58 34.0
comp=E,177nm,0.3s
MACK IAML 15 58 37.0
comp=N,157nm,0.3s
BCAM Yenicaga 2.98 276 iP Pn 15 57 49.6 +1.5
EUZM Uzumlu 2.99 105 iP Pn 15 57 50.8 +2.6
ANDN Andirin 2.99 174 iP Pb 15 57 51.0 -3.1
ANDN IAML 15 58 45.0
comp=N,142nm,0.8s
ANDN IAML 15 58 46.0
comp=E,95nm,1.0s
ERZN Erzincan 3.04 107 PN Pn 15 57 50.7 +1.7
TNCL Tunceli-Merkez 3.11 117 iP Pn 15 57 52.5 +2.6
ELZG Elazig 3.12 130 iP Pn 15 57 52.1 +2.0
ELZG IAML 15 58 45.0
comp=E,224nm,0.6s
ELZG IAML 15 58 52.0
comp=N,110nm,0.6s
KIBS BOLU 3.14 269 iP Pn 15 57 51.0 +0.6
BAYT Aydıntepe-Bayb 3.19 92 PN Pn 15 57 52.7 +1.6
BAYB BAYBURT 3.29 94 iP Pb 15 57 58.9 -0.4
BAYB iS Sg 15 58 44.7 -1.6
BAYB IAML 15 58 50.0
comp=N,135nm,0.8s
GULE Gulek 3.40 196 iP Pn 15 57 56.3 +2.3
GZT Gaziantep 3.44 158 iP Pn 15 57 57.2 +2.8
KERG Konya-Eregli 3.45 205 iP Pn 15 57 56.8 +2.1
KERG iS Sg 15 58 50.1 -1.4
KOPT Kop Dagi 3.51 97 iP Pg 15 58 05.4 -2.4
KOPT iS Sg 15 58 52.5 -0.7
KOPT IAML 15 59 00.0
comp=N,76nm,1.2s
KOPT IAML 15 59 01.0
comp=E,64nm,0.6s
ATAB Bozova 3.58 149 iP Pn 15 57 58.5 +2.1
BTAS Taskesti 3.78 272 iP Pn 15 58 00.3 +1.2
KRIK Erzurum-spir 3.79 92 iP Pg 15 58 12.7 -0.6
KRIK iS Sg 15 59 04.2 +1.8
KRIK IAML 15 59 10.0
comp=N,42nm,1.3s
KONT Konya--Tatoy 3.83 228 iP Pb 15 58 10.0 +1.7
SAHE Sakarya_HENDEK 3.90 276 iP Pg 15 58 13.2 -2.0
SURC SANLIURFA_SURC 4.22 150 iP Pn 15 58 06.8 +1.7
BORA Eskisehir 4.27 263 iP Pn 15 58 06.9 +1.0
BOLV Bolvadin 4.29 246 iP Pn 15 58 08.0 +1.8
DBAD Bademkaya 4.37 82 iP Pn 15 58 10.1 +2.8
DBAD iS Sb 15 59 04.9 -5.7
DDEM Demirkent 4.41 84 iP Pb 15 58 13.0 -5.3
KAND Kocaeli-Kandir 4.41 279 iP Pn 15 58 09.9 +2.2

MAN 20 16:05:21.3, 13.32N×119.99E, h33km, mb4.4, ML3.2, MS3.0, Philippine Islands region
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LUBP Lubang 0.48 31 eP Pn 16 05 32.2 +0.3
LUBP eS Sn 16 05 41.3 +2.1
BUSP Coron 1.32 171 eP Pn 16 05 43.1 -0.3
BUSP eS Sn 16 06 00.3 +0.4
SJMP San Jose 1.39 128 eP Pn 16 05 44.9 +0.5
SJMP eS Sn 16 05 59.7 -2.0
LQP Lukban 1.70 62 eP Pn 16 05 38.5 -10
LQP eS Sb 16 06 14.9 +1.7
BOAC Boac 1.81 85 eP Pb 16 05 56.2 +2.4
BOAC eS Sn 16 06 12.4 +0.5
ENPP El Nido 2.17 195 eP Pn 16 05 56.1 +1.0
BUTP Butuan 7.01 127 eP Sn 16 08 23.6 +3.2
BUTP eS Sb 16 08 37.8 -7.9

IDC 20 16:11:53.5±76.0, 37.37N×19.23E, h0km, mb3.7/3, mb1 3.7/3, mb1mx3.2/44, mbtmp3.7/3, Error ellipse: s-maj=1459.0km s-min=73.3km az=41.0
ATH 20 16:12:06.9, 38.34N×20.43E, h14km±1km, ML3.1/9, Error ellipse: s-maj=1.3km s-min=0.6km az=257.0
THE 20 16:12:07.2, 38.33N×20.44E, h12km, ML3.1/9, Error ellipse: s-maj=0.8km s-min=0.3km az=277.0
ISC 20 16:12:06.7±0.8, 38.34N±0.02×20.44E±0.03, h15km±4km, n65, σ$0^{s}67$/93, mb3.7/3, Greece
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.08 187 P Pg 16 12 09.7 -0.1
KEF4 S Sg 16 12 11.7 -0.1
AGT1 Agia Thekli 0.10 206 P Pg 16 12 09.8 -0.2
AGT1 S Sg 16 12 11.8 -0.3
VSK1 VASILIKIADES 0.12 54 P Pg 16 12 10.3 -0.1
VSK1 S Sg 16 12 13.1 +0.4
LXR1 Lixouri, Cepha 0.14 180 P Pg 16 12 10.6 +0.1
LXR1 S Sb 16 12 13.6 -0.2
LXRA Lixouri, Kepha 0.14 180 P Pg 16 12 10.6 +0.2
LXRA S Sb 16 12 13.6 -0.2
KONA Konidatara, Ke 0.14 50 P Pg 16 12 10.6 +0.1
KONA S Sg 16 12 13.2 +0.2
KONA AML AML 16 12 13.5
comp=N,32108μm,0.2s
KONA AML AML 16 12 15.8
comp=E,24706μm,0.3s
KEF3 Kipouria, Keph 0.15 208 P Pg 16 12 10.6 -0.1
KEF3 S Sg 16 12 13.6 +0.4
FSK Fiskardo 0.16 39 P Pg 16 12 10.8 0.0
FSK S Sg 16 12 13.5
comp=E,14μm,0.3s
FSK Fiskardo 0.16 39 P Pg 16 12 10.8 0.0
FSK S Sg 16 12 13.8 +0.4
FSK AML AML 16 12 14.0
comp=N,17349μm,0.4s
FSK AML AML 16 12 14.1
comp=E,37276μm,0.3s
CHV1 Chavriata, Kef 0.16 196 P Pg 16 12 10.8 0.0
CHV1 S Sg 16 12 13.9 +0.5
ARG2 Argostoli 0.16 166 P Pg 16 12 10.8 0.0

ARG2 S Sg 16 12 13.7 +0.2
ARGA Argostoli. Kep 0.16 168 P Pg 16 12 10.7 -0.1
ARGA S Sg 16 12 13.8 +0.3
ARGA AML AML 16 12 14.0
comp=N,21722µm,0.3s
ARGA AML AML 16 12 16.3
comp=E,15741µm,0.2s
KEF2 Argostoli. Kep 0.17 167 P Pg 16 12 11.1 0.0
KEF2 S Sg 16 12 14.2 +0.4
VLS Valsamata 0.20 143 P Pg 16 12 11.4 0.0
VLS S Sg 16 12 14.8 +0.3
comp=E,14µm,0.2s
VLS Valsamata 0.20 143 P Pg 16 12 11.4 0.0
VLS S Sg 16 12 14.9 +0.3
VLS AML AML 16 12 15.0
comp=E,24194µm,0.1s
VLS AML AML 16 12 15.0
comp=N,31244µm,0.3s
MGNA Meganis 0.42 41 P Pg 16 12 15.4 +0.1
MGNA S Sg 16 12 21.0 -0.1
MGNA AML AML 16 12 22.7
comp=N,3856µm,0.2s
MGNA AML AML 16 12 23.5
comp=E,3672µm,0.1s
LKD2 Lefkada island 0.48 21 P Pg 16 12 16.4 0.0
LKD2 S Sg 16 12 23.8 +0.8
comp=E,895nm,0.3s
LKD2 Lefkada island 0.48 21 P Pg 16 12 16.4 0.0
LKD2 S Sg 16 12 23.7 +0.8
LKD2 AML AML 16 12 24.2
comp=N,2242µm,0.4s
LKD2 AML AML 16 12 32.5
comp=E,2281µm,0.2s
VLMS Volimes, Zakyn 0.49 159 P Pg 16 12 16.6 +0.1
VLMS S Sg 16 12 23.3 +0.2
VLMS AML AML 16 12 32.8
comp=E,3624µm,0.4s
VLMS AML AML 16 12 36.8
comp=N,6048µm,0.4s
PDO Prodromos 0.64 66 P Pg 16 12 19.7 +0.4
PDO S Sb 16 12 28.5 +0.1
comp=N,3µm,0.3s
PDO Prodromos 0.64 66 P Pg 16 12 19.4 +0.1
PDO S Sg 16 12 27.7 -0.1
PDO AML AML 16 12 34.6
comp=E,4055µm,0.3s
PDO AML AML 16 12 36.0
comp=N,4361µm,0.5s
VTN Vitineika 0.72 125 P Pg 16 12 20.6 -0.3
KRI1 kERI 0.74 156 P Pg 16 12 21.0 -0.1
KRI1 S Sb 16 12 31.3 +0.2
comp=N,2µm,0.3s
RLS Riolos of Patr 0.86 109 P Pg 16 12 23.1 -0.3
RLS S Sn 16 12 35.9 -0.6
comp=N,502nm,0.6s
RLS Riolos of Patr 0.86 109 P Pg 16 12 23.4 +0.1
PVO Paravola 0.90 72 P Pg 16 12 24.5 +0.3
PVO S Sn 16 12 37.5 0.0
comp=N,1µm,0.4s
PVO Paravola 0.90 72 P Pg 16 12 24.7 +0.5
DRO Drossia 1.07 111 P Pn 16 12 27.6 +0.4
DRO S Sn 16 12 43.1 +1.2
comp=N,928nm,0.4s
DRO Drossia 1.07 111 P Pb 16 12 27.1 +0.1
ANX Ano Chora 1.19 77 P Pb 16 12 29.4 +0.3
ANX Ano Chora 1.19 77 P Pn 16 12 29.2 +0.3
IGT Igoumenitsa 1.20 356 P Pg 16 12 30.0 +0.1
LAKA Lakka 1.22 94 P Pb 16 12 29.7 +0.2
EVR Evrytania 1.22 61 P Pn 16 12 29.6 +0.3
EVR S Sg 16 12 46.7 +0.5
comp=N,442nm,0.7s
EVR Evrytania 1.22 61 P Pb 16 12 30.0 +0.5
SERG Sergoula 1.27 86 P Pn 16 12 30.4 +0.4
SERG Sergoula 1.27 86 P Pn 16 12 30.2 +0.1
AMT Artemida-Makis 1.29 128 P Pg 16 12 31.6 +0.1
TRIZ Trizonia 1.29 88 P Pn 16 12 30.2 +0.1
TRIZ Trizonia 1.29 88 P Pn 16 12 30.3 +0.2
ALIK Aliki, Aigiali 1.32 93 P Pn 16 12 31.0 +0.4
ALIK S Sg 16 12 49.5 +0.2
KALE Kalithea 1.34 87 P Pn 16 12 31.2 +0.3
KALE Kalithea 1.34 87 P Pn 16 12 31.1 +0.1
JAN Janina 1.36 14 P Pg 16 12 32.9 0.0
KLV Kalavryta, Ach 1.38 102 P Pn 16 12 31.9 +0.4
KLV Kalavryta, Ach 1.38 102 P Pn 16 12 32.0 +0.5
KASA Kassiopi 1.46 345 P Pn 16 12 33.5 +0.9
KEK Kerkira 1.46 340 P Pb 16 12 33.7 +0.1
MAKR Makrakomi, Fth 1.49 62 P Pb 16 12 35.0 +0.9
AGG Agios Georgios 1.63 65 P Pb 16 12 37.6 +1.1
ITM Ithomi 1.65 134 P Pg 16 12 39.1 +0.6
THL Klokotos Trika 1.74 45 P Pb 16 12 39.3 +1.0
KPRO Kipourio 1.77 24 P Pg 16 12 40.3 -0.4
PYL PYLOS 1.77 144 P Pg 16 12 40.5 -0.2
AXAR Agios Charalam 1.79 75 P Pg 16 12 40.8 -0.4
PENT Pentalofos 1.94 16 P Pb 16 12 42.5 +0.7
LTK Loutraki 2.02 98 P Pg 16 12 42.8 -0.3
NEST Nestorio 2.13 13 P Pb 16 12 45.3 +0.2
VIL2 Platees 2.23 92 P Pb 16 12 46.3 -0.4
XOR Xorichti 2.38 64 P Pb 16 12 48.1 -1.3
OHR Ohrid 2.79 6 iPn Pn 16 12 53.7 +2.9
OHR iSn Sb 16 13 27.9 -2.3
STIP Stip 3.61 21 iPn Pb 16 13 06.9 -3.4
FINES FINESS Array B 23.40 7 P P 16 17 14.1 -0.6
comp=N,2.6nm,1.0s,baz=189,slow=8.7,SNR=3.6
MKAR Makanchi Array 45.27 59 P P 16 20 23.2 -0.4
comp=N,0.2nm,0.4s,baz=280,slow=7.8,SNR=6.4
ZALV Zalesovo Beam 45.63 48 P P 16 20 26.0 -0.2
comp=N,0.8nm,0.3s,baz=276,slow=7.8,SNR=4.7

IDC 20 16:16:03.8±34.0, 23°30S×178°91W, h400km±289km, mb3.2/4, mb1 3.4/4, mb1mx3.0/36, mbtmp3.9/4, Error ellipse: s-maj=231.4km s-min=100.7km az=114.0, South of Fiji Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CTA Charters Tower 32.48 269 P P 16 22 00.6 +1.4
1.9nm,0.5s,baz=102,slow=9.9,SNR=6.4
ASAR Alice Springs 43.12 260 P P 16 23 27.1 +0.1
0.4nm,0.8s,baz=105,slow=6.9,SNR=9.5
ASAR PcP PcP 16 25 07.8 -0.6
0.2nm,0.6s,baz=108,slow=5.0,SNR=3.3
WRA Warramunga Arr 43.45 265 P P 16 23 28.8 -0.8
1.3nm,0.5s,baz=103,slow=8.3,SNR=22
CMAR Chiang Mai Arr 90.26 290 P P 16 28 18.8 -2.0
0.9nm,0.8s,baz=121,slow=2.6,SNR=7.2
MKAR Makanchi Array 112.49 313 PKiKP PKiKP 16 33 52.5 -0.6
0.2nm,0.6s,baz=98,slow=1.0,SNR=3.8
AKASG Malin Array Be 145.00 328 PKPbc PKPdf 16 34 53.5 -0.4
0.6nm,0.4s,baz=41,slow=4.2,SNR=6.2
BRTR Keskin Array B 148.00 308 PKPbc PKiKP 16 35 04.1 -0.6
0.4nm,0.6s,baz=90,slow=1.4,SNR=4.7

NIED 20 16:23:00, 38°20N×141°70E, h53km, Mw3.6 Best double couple: M0 2.57000×10^14 NP1: φs 22.00000°, δ72.00000°, λ71.00000°. NP2: φs 250.00000°, δ26.00000°, λ135.00000°.
IDC 20 16:23:12.6±2.8, 38°27N×141°98E, h49km±27km, mb3.3/3, mb1 3.4/5, mb1mx3.1/54, mbtmp3.4/5, ML2.4/2, MS3.6/1, Ms1 3.6/1, ms1mx2.5/25, Error ellipse: s-maj=41.9km s-min=19.1km az=99.0
JMA 20 16:23:13.7±0.1, 38°18N×141°70E, h50km±1km, M3.5 JMA Felt I J1.
ISC 20 16:23:12.8±1.5, 38°17N±0°06×141°82E±0°10, h48km±10km, n24, σ0°88/28, mb3.6/3, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JIKH Ishinomakikobu 0.31 296 P Pn 16 23 22.3 +0.4
JIKH S Sn 16 23 28.2 -0.1
JIO Ouri 0.46 307 P Pn 16 23 23.8 +0.3
JIO S Sn 16 23 30.7 -0.5
JKMT Kesennumamotoy 0.69 337 P Pn 16 23 26.7 +0.3
JKMT S Sn 16 23 36.1 -0.1
JMM Marumori 0.87 250 P Pn 16 23 28.1 -0.6
JMM S Sn 16 23 38.8 -1.5
JMK Ichinoseki 0.91 329 P Pn 16 23 29.7 +0.4
JMK S Sn 16 23 41.1 -0.2
JOU Okura 0.93 282 P Pn 16 23 29.5 -0.1
JOU S Sn 16 23 41.1 -0.7
JFT Otama 1.34 241 P Pn 16 23 35.5 +0.3
JFT S Sn 16 23 51.4 -0.5
JOM Ohasama 1.36 343 P Pn 16 23 36.2 +0.8
JOM S Sn 16 23 53.2 +0.9
JYK Kaneyama 1.36 303 P Pn 16 23 35.6 +0.1
JYS Shirataka 1.38 272 P Pn 16 23 36.0 +0.3
JYS eS Sn 16 23 52.4 -0.4
JRG Rokugo 1.53 323 P Pn 16 23 38.6 +0.9
JYA Atsumi 1.71 285 P Pn 16 23 40.3 +0.2
JYA eS Sn 16 24 00.4 -0.4
MJAR Matsushiro Arr 3.31 242 P Pn 16 24 03.6 +1.5
0.1nm,0.3s,baz=64,slow=10.0,SNR=7.0
ASAJ Asahikawa 5.97 5 P Pn 16 24 38.5 0.0
0.2nm,0.3s,baz=225,slow=13,SNR=3.5
ASAJ S Sn 16 25 42.5 -3.0
0.2nm,0.3s,baz=134,slow=15,SNR=1.9
H11N2 WAKE ISLAND Hy 28.48 123 T T 16 59 18.5
baz=316,slow=76,SNR=41
H11N1 WAKE ISLAND Hy 28.49 123 T T 16 59 21.1
baz=316,slow=76,SNR=39
H11N3 WAKE ISLAND Hy 28.50 123 T T 16 59 21.2
baz=316,slow=76,SNR=42
H11S1 WAKE ISLAND Hy 29.23 125 T T 17 00 16.8
baz=318,slow=76,SNR=23
H11S3 WAKE ISLAND Hy 29.23 125 T T 17 00 17.0
baz=318,slow=76,SNR=26
H11S2 WAKE ISLAND Hy 29.25 125 T T 17 00 17.4
baz=318,slow=76,SNR=21
TGY Tagaytay City 30.29 223 LR LR 16 41 06.1
comp=Z,105nm,20.1s,baz=132,slow=35
ZALV Zalesovo Beam 41.39 311 P P 16 30 54.3 +0.2
0.5nm,0.4s,baz=107,slow=7.7,SNR=3.1
MKAR Makanchi Array 43.80 301 P P 16 31 13.6 -0.2
0.3nm,0.6s,baz=86,slow=9.6,SNR=5.6
WRA Warramunga Arr 58.23 188 P P 16 33 02.6 +0.3
0.8nm,1.0s,baz=6.5,slow=7.5,SNR=3.4

IDC 20 16:28:48.6±0.5, 36°35S×39°46W, h0km, mb4.5/16, mb1 4.6/17, mb1mx4.4/46, mbtmp4.5/17, ML4.4/1, MS3.6/16, Ms1 3.6/16, ms1mx3.5/23, Error ellipse: s-maj=16.3km s-min=15.0km az=53.0
MOS 20 16:28:48.9±1.2, 36°30S×39°61W, h10km, mb5.0/15, Error ellipse: s-maj=16.9km s-min=12.3km az=126.8
NEIC 20 16:28:50.5±1.4, 36°41S±0°06×39°6W±0°1, h15km±3km, mb5.0/38, Error ellipse: s-maj=15.6km s-min=1.6km az=57.0
BJI 20 16:28:52.0±0.0, 36°40S×39°50W, h10km, mB5.4/6, Ms5.3/4, Ms7 5.1/2
ISC 20 16:28:49.9±0.3, 36°35S±0°06×39°65W±0°07, h10km, n194, σ1°51/187, mb4.9/37, MS3.7/17, 3D, South Atlantic Ocean

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TER01 Tubaro-SC 11.17 312 eP Pn 16 31 28.0 -1.8
CNLB Canela 11.74 304 eP Pn 16 31 37.7 +0.1
PARB Paraibuna 13.96 337 eP Pn 16 32 04.8 -3.1
VAS01 Vassouras-RJ 14.41 346 eP Pn 16 32 11.5 -2.5
VAO Valinhos 14.74 333 eP Pn 16 32 14.9 -3.7
RCLB Rio Claro- Sao 15.48 332 eP Pn 16 32 26.0 -2.5
HOPE Hope Point 18.06 174 Pn Pn 16 32 57.7 -3.1
HOPE Hope Point 18.06 174 P Pn 16 32 57.7 -3.1
HOPE pmax pmax
comp=Z,62nm,1.0s
CPUP Villa Florida 18.08 299 P Pn 16 33 01.8 +0.5
comp=Z,0.3nm,0.3s,baz=133,slow=12,SNR=10
CPUP S Sn 16 36 18.6 -4.5
comp=Z,0.2nm,0.3s,baz=162,slow=19,SNR=2.3
CPUP LR LR 16 39 39.2
comp=Z,131nm,20.1s,baz=128,slow=36
CPUP Villa Florida 18.08 299 P Pn 16 33 00.3 -1.0
CPUP Villa Florida 18.08 299 P Pn 16 33 00.3 -1.0
CPUP pmax pmax
comp=Z,9.0nm,0.7s
IPMB Ipameri, GO 19.80 335 eP P 16 33 21.8 +1.1
EFI East Falkland 20.16 215 P P 16 33 23.4 -0.8
EFI IAmb IAmb 16 33 58.4
comp=Z,80nm,1.4s
EFI East Falkland 20.16 215 iP Pn 16 33 31.6 +5.5
BDFB Brasilia 21.94 338 P P 16 33 44.6 +0.9
comp=Z,44nm,0.8s,baz=146,slow=7.1,SNR=38
BDFB LR LR 16 41 24.8
comp=Z,282nm,20.9s,baz=130,slow=34
BDFB Brasilia 21.94 338 P P 16 33 44.4 +0.6
BDFB IAmb IAmb 16 33 54.3
comp=Z,52nm,0.7s
BDFB Brasilia 21.94 338 P P 16 33 44.4 +0.6
BDFB pmax pmax
comp=Z,52nm,0.7s
PP1B Ponte de Pedra 23.04 320 eP P 16 33 57.1 +1.8
ARAG Araguaiana, MT 23.25 329 eP P 16 34 00.3 +2.9
CFA Coronel Fontan 24.13 273 P P 16 34 06.4 +0.3
comp=Z,15nm,0.9s,baz=105,slow=8.7,SNR=20
CFA LR LR 16 43 47.7
comp=Z,47nm,18.8s,baz=75,slow=37
PLCA Paso Flores 24.49 250 P P 16 34 11.6 +2.2
comp=Z,13nm,0.9s,baz=125,slow=7.8,SNR=24
PLCA LR LR 16 43 41.3
comp=Z,36nm,20.2s,baz=132,slow=36
PLCA Paso Flores 24.49 250 P P 16 34 10.8 +1.4
PLCA Paso Flores 24.49 250 P P 16 34 10.8 +1.4
PLCA pmax pmax
comp=Z,156nm,2.0s
PEL Peldehue 25.65 268 P P 16 34 19.5 -0.3
PEL IAmb IAmb 16 34 21.6
comp=Z,39nm,0.9s
PEL Peldehue 25.65 268 P P 16 34 19.5 -0.3
PEL pmax pmax
comp=Z,39nm,0.9s
ROC1 El Roble 25.96 268 P P 16 34 22.0 -0.9
GO05 Huala 26.20 263 P P 16 34 25.2 +0.4
GO05 IAmb IAmb 16 35 23.8
comp=Z,31nm,1.2s
GO04 Tololo Observa 26.70 274 P P 16 34 29.0 -0.6
GO04 IAmb IAmb 16 35 02.8
comp=Z,44nm,1.3s
USHA Ushuaia 27.04 218 LR LR 16 45 25.9
comp=Z,98nm,19.1s,baz=64,slow=37
GO09 Cerro Castillo 27.63 227 P P 16 34 37.8 +0.3
GO09 IAmb IAmb 16 34 39.4
comp=Z,23nm,0.8s
SIV San Ignacio 27.83 311 P P 16 34 41.7 +2.1
comp=Z,0.8nm,0.5s,baz=158,slow=9.0,SNR=4.3
SIV LR LR 16 45 14.2
comp=Z,202nm,21.7s,baz=111,slow=35
GO02 Mina Guanaco 27.94 285 P P 16 34 41.8 +0.9
GO02 IAmb IAmb 16 34 54.3
comp=Z,27nm,1.2s
LVC Limon Verde 28.79 290 LR LR 16 46 31.9
comp=Z,83nm,19.3s,baz=140,slow=37
LVC Limon Verde 28.79 290 P P 16 34 48.0 -0.5
LVC Limon Verde 28.79 290 P P 16 34 48.0 -0.5
LVC pmax pmax
comp=Z,9.0nm,1.1s
GO01 Chusmiza 30.77 295 P P 16 35 06.1 -0.1
PB11 IPOC Station P 31.05 294 P P 16 35 09.0 +0.7
PB11 IAmb IAmb 16 36 06.4
comp=Z,20nm,1.2s
MNMC Minye Minye 31.40 295 P P 16 35 11.7 +0.2
MNMC IAmb IAmb 16 35 51.4
comp=Z,48nm,1.8s
PMSA Palmer Station 31.97 200 P P 16 35 15.2 -0.5
LPAZ La Paz 32.23 301 P P 16 35 18.9 -0.3
comp=Z,1.8nm,0.7s,baz=172,slow=3.5,SNR=5.7
LPAZ LR LR 16 49 52.5
comp=Z,102nm,20.9s,baz=108,slow=39
LPAZ La Paz 32.23 301 P P 16 35 18.7 -0.5
LPAZ La Paz 32.23 301 P P 16 35 18.7 -0.5
LPAZ pmax pmax
comp=Z,4.0nm,0.8s
SAML Samuel 34.67 316 eP P 16 35 48.1 +8.3
SAML Samuel 34.67 316 P P 16 35 39.2 -0.6
SAML Samuel 34.67 316 P P 16 35 39.2 -0.6
SAML pmax pmax
comp=Z,6.0nm,1.0s
H10S3 ASCENSION HYDR35.49 46 T T 17 12 31.9
baz=204,slow=74,SNR=14
H10S2 ASCENSION HYDR35.50 46 T T 17 12 31.9
baz=16,slow=74,SNR=8.6
H10N3 ASCENSION HYDR36.49 45 T T 17 13 52.7
baz=203,slow=75
H10N1 ASCENSION HYDR36.49 45 T T 17 13 53.1
baz=203,slow=75
H10N2 ASCENSION HYDR36.51 45 T T 17 13 54.1
baz=203,slow=75
VNA1 Neumayer--Stat 38.17 164 P P 16 36 10.0 +0.9
VNA3 Neumayer Olymp 38.31 165 P P 16 36 10.7 +0.4
VNA2 Neumayer--Watz 38.57 164 P P 16 36 12.7 +0.2
baz=318,slow=11
SNAA Sanae 40.15 163 P P 16 36 25.7 0.0
SNAA Sanae 40.15 163 P P 16 36 25.4 -0.3
comp=Z,5.3nm,0.7s,baz=307,slow=10,SNR=16
SNAA PcP PcP 16 38 30.5 +0.7
comp=Z,0.7nm,0.7s,baz=311,slow=2.2,SNR=5.3
SNAA Sanae 40.15 163 P P 16 36 25.0 -0.8
SNAA IAmb IAmb 16 36 26.6
comp=Z,57nm,1.9s
SNAA PcP 16 38 30.9 +1.0
SNAA Sanae 40.15 163 iP P 16 36 25.9 +0.2
SUR Sutherland 49.36 104 P P 16 37 37.8 -2.0
ROSC El Rosal 52.26 314 LR LR 17 00 22.2
comp=Z,106nm,20.8s,baz=96,slow=36
ROSC El Rosal 52.26 314 P P 16 38 02.4 +0.4
ROSC IAmb IAmb 16 38 14.1
comp=Z,28nm,1.6s
SYO Syowa Base 52.78 154 ⇓eP P 16 38 02.6 -2.1
SYO Syowa Base 52.78 154 ⇓epP P 16 38 05.4 +0.7
SACV Santiago Islan 53.25 19 P P 16 38 09.1 +0.3
LIC Lamto 53.35 45 eP P 16 38 09.5 -0.1
comp=Z,16nm,0.6s
LIC Lamto 53.35 45 P P 16 38 09.5 -0.1
SVB Belmont 53.41 333 P P 16 38 09.9 0.0
SDV Santo Domingo 53.61 321 P P 16 38 13.0 +1.2
KIC Kosan Boka 53.63 45 eP P 16 38 11.4 -0.2
comp=Z,22nm,0.9s
KIC Kosan Boka 53.63 45 P P 16 38 11.4 -0.2
TIC Toumodi 53.70 44 eP P 16 38 12.1 -0.1
comp=Z,9.0nm,0.4s
TIC Toumodi 53.70 44 P P 16 38 12.1 -0.1
TIC Toumodi 53.70 44 P P 16 38 12.1 -0.1
MCLT Moule a Chique 53.70 334 P P 16 38 11.9 -0.2
DBIC Dimbokro 53.81 45 P P 16 38 11.9 -1.0
comp=Z,10nm,0.7s,baz=190,slow=6.1,SNR=16
DBIC LR LR 16 55 46.4
comp=Z,41nm,21.1s,baz=203,slow=30
DBIC Dimbokro 53.81 45 P P 16 38 12.8 -0.2
DBIC IAmb IAmb 16 38 22.5
comp=Z,19nm,0.8s
DBIC Dimbokro 53.81 45 P P 16 38 12.8 -0.2
DBIC pmax pmax
comp=Z,19nm,0.8s
QSPA South Pole Qui 53.90 180 P P 16 38 13.5 +0.2
BOSA Boshof 54.39 102 P P 16 38 14.8 -2.5
comp=Z,3.1nm,0.6s,baz=299,slow=5.3,SNR=8.2
BOSA Boshof 54.39 102 P P 16 38 14.4 -3.0
BOSA IAmb IAmb 16 39 00.1
comp=Z,35nm,1.6s
BOSA Boshof 54.39 102 P P 16 38 14.4 -3.0
BOSA pmax pmax
comp=Z,35nm,1.7s
LBTB Lobatse 56.30 98 P P 16 38 30.0 -1.1
LBTB IAmb IAmb 16 38 30.3
comp=Z,10nm,0.8s
LBTB Lobatse 56.30 98 P P 16 38 30.0 -1.1
LBTB pmax pmax
comp=Z,10.0nm,0.9s
MAW Mawson 61.44 155 P P 16 39 05.5 -0.5
comp=Z,14nm,0.8s,baz=250,slow=7.3,SNR=6.1
MAW LR LR 17 01 37.8
comp=Z,94nm,19.8s,baz=240,slow=32
MAW Mawson 61.44 155 P P 16 39 06.4 +0.4
MAW Mawson 61.44 155 P P 16 39 06.4 +0.4
MAW pmax pmax
comp=Z,3.0nm,0.8s
TOA0 Torodi Ar. Sit 62.81 46 P P 16 39 15.5 -0.3
TOA0 IAmb IAmb 16 39 25.3
comp=Z,5.6nm,0.7s
TORD Torodi Ar. Bea 62.81 46 P P 16 39 15.8 0.0
comp=Z,2.5nm,0.6s,baz=214,slow=5.8,SNR=13
TORD LR LR 17 02 48.0
comp=Z,35nm,18.6s,baz=355,slow=32
VNDA Vanda 65.63 185 P P 16 39 35.4 +1.9
comp=Z,7.8nm,0.7s,baz=164,slow=4.0,SNR=15
VNDA LR LR 17 05 22.9
comp=Z,36nm,21.8s,baz=186,slow=33
VNDA Vanda 65.63 185 P P 16 39 34.8 +1.2
VNDA IAmb IAmb 16 39 36.6
comp=Z,9.5nm,0.8s
VNDA Vanda 65.63 185 P P 16 39 34.8 +1.2
VNDA pmax pmax
comp=Z,9.0nm,0.8s
TAM Tamanrasset 72.67 43 P P 16 40 18.3 +0.2
TAM Tamanrasset 72.67 43 P P 16 40 18.3 +0.2
TAM pmax pmax
comp=Z,10.0nm,1.1s
MDT Midelt 76.22 30 P P 16 40 39.0 +0.5
comp=Z,2.6nm,0.7s,baz=184,slow=4.8,SNR=7.1
KMBO Kilima Mbogo 78.79 83 iP P 16 40 57.2 +3.6
X56A White Oak 80.35 326 P P 16 41 03.9 +2.7
baz=147
GOGA Godfrey 80.58 324 P P 16 41 04.4 +2.0
GOGA pmax pmax
comp=Z,17nm,0.9s
GOGA Godfrey 80.58 324 P P 16 41 04.5 +2.1
baz=146
X55A Gracelyn & Ava 80.61 326 P P 16 41 04.9 +2.3
baz=147
U58A Oxford 80.90 329 P P 16 41 07.3 +3.2
baz=149
V56A Mocksville 81.22 327 P P 16 41 08.0 +2.2
baz=148
Y52A Lilburn 81.23 324 P P 16 41 08.5 +2.5
baz=145
U57A Blanch 81.26 329 P P 16 41 08.7 +2.7
baz=149
V55A Taylorsville 81.57 327 P P 16 41 10.5 +2.8
baz=147
U55A TA2, Sparta 82.05 327 P P 16 41 12.7 +2.4
baz=148
T56A Rocky Mt 82.06 328 P P 16 41 12.9 +2.7
baz=148
V53A Saluda 82.14 326 P P 16 41 12.5 +1.7
baz=146
X51A Calhoun 82.18 324 P P 16 41 12.4 +1.4
baz=145
S57A Dark Hollow, R 82.23 330 P P 16 41 13.7 +2.6
baz=149
ESDC Sonseca Array 82.49 27 P P 16 41 12.9 +0.5
comp=Z,4.0nm,0.9s,baz=204,slow=5.5,SNR=14
T54A Tazewell 82.75 327 P P 16 41 16.8 +2.9
baz=147
M63A Gales Ferry 82.88 336 P P 16 41 17.3 +2.9
baz=154
S55A Lewisburg 82.88 329 P P 16 41 16.6 +2.0
baz=148
W50A Signal Mountai 82.92 324 P P 16 41 16.3 +1.5
baz=144
R56A Bull Pasture M 82.97 330 P P 16 41 16.4 +1.3
baz=149
U52A Thorn Hill 82.99 326 P P 16 41 18.0 +2.9
baz=146
Q57A Strasburg 83.11 331 P P 16 41 18.1 +2.4
baz=150
X48A Hartselle 83.15 322 P P 16 41 16.3 +0.3
X48A IAmb IAmb 16 41 26.1
comp=Z,12nm,0.8s
R55A Marlinton 83.16 329 P P 16 41 18.3 +2.3
baz=148
V50A Pikevile 83.20 324 P P 16 41 17.9 +1.7
baz=145
S54A Dingess, Beckl 83.25 328 P P 16 41 18.6 +2.1
baz=147
P57A Homestead Farm 83.33 331 P P 16 41 18.6 +1.8
baz=150
O58A Lewisberry 83.47 332 P P 16 41 20.1 +2.6
baz=151
P56A Dayton Farm, R 83.68 331 P P 16 41 21.9 +3.4
baz=149
M60A Port Jervis 83.69 334 P P 16 41 20.5 +1.9
baz=152
O57A Amberson 83.82 332 P P 16 41 20.4 +1.1
baz=150
N58A Sunbury 84.02 333 P P 16 41 22.6 +2.3
baz=151
V48A Smith Brothers 84.08 323 P P 16 41 21.0 +0.3
V48A IAmb IAmb 16 41 30.5
comp=Z,6.5nm,0.7s
T50A Nancy 84.17 325 P P 16 41 22.1 +0.9
baz=145
U49A Red Boiling Sp 84.20 324 P P 16 41 22.2 +0.9
baz=144

P54A	**Burton**	**84.42**	**329**	P	**P**	**16 41 24.2**	**+1.8**
	baz=148						
T49A	**Edmonton**	**84.56**	**325**	P	**P**	**16 41 22.7**	**-0.5**
	baz=144						
WVT	**Waverly**	**84.88**	**323**	P	**P**	**16 41 24.4**	**-0.3**
WVT				IAmb	IAmb	16 41 34.3	
	comp=Z,9.7nm,0.8s						
WVT	**Waverly**	**84.88**	**323**	P	**P**	**16 41 24.4**	**-0.3**
WVT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WVT	**Waverly**	**84.88**	**323**	P	**P**	**16 41 25.0**	**+0.2**
	baz=143						
KEST	**Kesra**	84.96	38	LR	LR	17 19 04.8	
	comp=Z,51nm,18.4s,baz=302,slow=36						
LONY	**Lake Ozonia**	**86.59**	**336**	P	**P**	**16 41 30.4**	**-2.7**
W39A	**Magazine**	**87.21**	**318**	P	**P**	**16 41 36.6**	**+0.3**
W39A				IAmb	IAmb	16 41 47.2	
	comp=Z,11nm,0.8s						
CCM	**Cathedral Cave**	**88.08**	**322**	P	**P**	**16 41 40.2**	**-0.2**
CCM	**Cathedral Cave**	**88.08**	**322**	P	**P**	**16 41 40.2**	**-0.2**
CCM				pmax	pmax		
	comp=Z,15nm,0.9s						
TXAR	**Lajitas Array**	**88.79**	**308**	P	**P**	**16 41 46.0**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=129,slow=9.9,SNR=4.1						
SCHQ	**Schefferville**	**93.78**	**345**	P	**P**	**16 42 07.9**	**+1.4**
	comp=Z,1.6nm,0.7s,baz=206,slow=11,SNR=3.1						
SCHQ				LR	LR	17 18 46.6	
	comp=Z,74nm,20.7s,baz=332,slow=32						
SCHQ	**Schefferville**	**93.78**	**345**	P	**P**	**16 42 08.1**	**+1.6**
DAVOX	**Davos/Dischmat**	**93.94**	**32**	P	**P**	**16 42 07.7**	**0.0**
	comp=Z,3.2nm,0.8s,baz=184,slow=13,SNR=3.8						
ANMO	**Albuquerque**	**94.32**	**311**	*i* P	**P**	**16 42 12.0**	**+2.2**
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.9s						
FETA	**Feichten**	**94.49**	**32**	*i* PcP	**PcP**	**16 42 12.0**	**+1.4**
	comp=Z,6.4nm,1.0s						
ULM	**Lac du Bonnet**	99.46	327	LR	LR	17 29 46.8	
	comp=Z,40nm,20.6s,baz=150,slow=37						
YKA	**Yellowknife Ar**	**115.18**	**330**	PKP	**PKPdf**	**16 47 30.5**	**0.0**
	comp=Z,0.2nm,0.6s,baz=123,slow=2.5,SNR=3.9						
ASAR	**Alice Springs**	**119.99**	**173**	PKP	**PKPdf**	**16 47 40.8**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=178,slow=1.6,SNR=42						
ABKAR	**Akbulak array**	**122.28**	**50**		**PKPdf**	**16 47 43.9**	**-0.7**
WRA	**Warramunga Arr**	**123.72**	**173**	PKP	**PKPdf**	**16 47 47.9**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=208,slow=1.9,SNR=12						
INK	**Inuvik**	**124.62**	**333**	PKP	**PKPdf**	**16 47 48.7**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=87,slow=2.8,SNR=5.4						
INK	**Inuvik**	**124.62**	**333**		**PKPdf**	**16 47 48.6**	**+0.1**
ILAR	**Eielson Array**	**129.48**	**328**	PKP	**PKPdf**	**16 47 58.2**	**+0.3**
	comp=Z,1.8nm,1.1s,baz=148,slow=2.5,SNR=8.1						
BRVK	**Borovoye**	**129.54**	**47**	*i* PKIKP	**PKPdf**	**16 47 58.9**	**+0.5**
AAK	**Ala-Archa**	**129.94**	**61**		**PKPdf**	**16 47 59.2**	**-0.6**
AAK	**Ala-Archa**	**129.94**	**61**	*i* PKIKP	**PKPdf**	**16 48 00.1**	**+0.4**
DANN	**Dangsing**	**132.11**	**83**	*e*P	**PKPdf**	**16 48 04.7**	**+0.3**
GKN	**Gorkha**	**132.67**	**84**	*e*P	**PKPdf**	**16 48 05.6**	**+0.3**
	comp=Z,8.8nm,0.6s						
DMN	**Daman**	**132.88**	**84**	*e*P	**PKPdf**	**16 48 05.6**	**-0.3**
PKIN	**Phulchoki**	**133.10**	**84**	*e*P	**PKPdf**	**16 48 06.4**	**+0.1**
	comp=Z,3.9nm,0.6s						
PKI	**Pulchoki**	**133.10**	**84**	*e*P	**PKPdf**	**16 48 06.3**	**-0.1**
	comp=Z,4.1nm,0.7s						
GUN	**Gumba**	**133.63**	**84**	*e*P	**PKPdf**	**16 48 06.6**	**-0.8**
JIRN	**Jiri**	**133.77**	**85**	*e*P	**PKPdf**	**16 48 07.4**	**-0.3**
	comp=Z,7.0nm,0.6s						
RAMN	**Ramite**	**133.80**	**86**	*e*P	**PKPdf**	**16 48 08.4**	**+0.8**
	comp=Z,8.7nm,0.7s						
ODAN	**Odare**	**134.40**	**86**	*e*P	**PKPdf**	**16 48 09.1**	**+0.4**
	comp=Z,7.8nm,0.4s						
TAPN	**Taplejung**	**134.86**	**86**	*e*P	**PKPdf**	**16 48 08.9**	**-0.8**
MK31	**Makanchi Array**	**136.24**	**57**		**PKPdf**	**16 48 09.1**	**-2.1**
MK31	**Makanchi Array**	**136.24**	**57**	PKIKP	**PKPdf**	**16 48 09.1**	**-2.1**
MKAR	**Makanchi Array**	**136.24**	**57**	PKP	**PKPdf**	**16 48 10.7**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=228,slow=1.8,SNR=9.0						
ZALV	**Zalesovo Beam**	**138.25**	**47**	PKP	**PKPdf**	**16 48 14.7**	**0.0**
	comp=Z,0.4nm,0.4s,baz=338,slow=3.4,SNR=3.7						
CMAR	**Chiang Mai Arr**	**139.50**	**105**	*i* PKIKP	**PKiKP**	**16 48 21.2**	**+0.8**
WMQ	**Urumqi**	**139.61**	**63**	*e*PKP	**PKPdf**	**16 48 17.4**	**-0.2**
WMQ				LR	LR		
	comp=Z,360nm,29.2s						
TIXI	**Tiksi**	**144.13**	**6**		**PKPab**	**16 48 21.7**	**-0.7**
TIXI	**Tiksi**	**144.13**	**6**	PKIKP	**PKPab**	**16 48 21.7**	**-0.7**
SLVN	**Son La**	**144.97**	**105**		**PKPab**	**16 48 26.9**	**-0.2**
BILL	**Bilibino**	**145.08**	**343**		**PKPbc**	**16 48 25.3**	**-0.7**
BILL	**Bilibino**	**145.08**	**343**	⇓*i* PKIKP	**PKPab**	**16 48 26.7**	**+0.7**
BILL				*i*		16 48 32.5	
BILL				PPP	PPP	16 54 57.0	
BILL				pmax	pmax		
	comp=Z,37nm,1.4s						
BILL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GTA	**Gaotai**	**148.05**	**72**	PKPbc	**PKPbc**	**16 48 36.3**	**+0.6**
CD2	**Chengdu**	**149.18**	**89**	PKPbc	**PKPbc**	**16 48 33.0**	**-1.6**
TLY	**Talaya**	**149.86**	**48**	PKPdf	**PKPbc**	**16 48 35.4**	**+0.5**
TLY					**PKPbc**	**16 48 40.2**	**+0.5**
TLY	**Talaya**	**149.86**	**48**	*e*PKHKP	PKPpre	16 48 35.8	
ZAK	**Zakamensk**	**149.97**	**50**	*e*PKP2	**PKPbc**	**16 48 40.6**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
IRK	**Irkutsk**	**150.06**	**47**	*e*PKIKP	**PKPbc**	**16 48 39.7**	**-0.5**
IRK				pmax	pmax		
	comp=Z,40nm,2.0s						
LZH	**Lanzhou**	**150.65**	**80**	*e*PKPbc	**PKPbc**	**16 48 33.4**	**-3.5**
LZH				pPKP	PKPbc	16 48 42.4	0.0
LZH				sPKP		16 48 47.0	
LZH				LR	LR		
	comp=Z,250nm,17.0s						
LZH				LR	LR		
	comp=Z,270nm,20.1s						
BOD	**Bodaibo**	**152.34**	**31**	*e*PKIKP	**PKPbc**	**16 48 44.2**	**-1.1**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.9s						
SONM	**Songino Array**	**152.53**	**55**	PKPbc	**PKPbc**	**16 48 46.5**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=246,slow=2.8,SNR=21						
ULN	**Ulaanbaatar**	**152.96**	**54**		**PKPbc**	**16 48 46.4**	**-0.8**
ULN				PKPab	**PKPab**	**16 48 56.5**	**-2.1**
ULN	**Ulaanbaatar**	**152.96**	**54**	PKIKP	**PKPbc**	**16 48 46.4**	**-0.8**
ULN						16 48 56.5	
YAK	**Yakutsk**	**153.44**	**11**	PKPdf	**PKPbc**	**16 48 39.9**	**-0.1**
YAK					**PKPbc**	**16 48 47.0**	**-0.6**
YAK				PKPab	**PKPab**	**16 48 57.0**	**-2.9**
YAK	**Yakutsk**	**153.44**	**11**	PKIKP	**PKPbc**	**16 48 47.0**	**-0.6**
YAK						16 48 57.0	
XAN	**Xi'an**	**154.27**	**86**	PKPbc	**PKPab**	**16 49 04.3**	**-0.1**
XAN				sPKP		16 49 13.0	
HHC	**Hu-ho-hao-te**	**157.11**	**70**	*e*PKP	**PKPdf**	**16 48 47.4**	**+1.6**
WHN	**Wuhan**	**157.58**	**97**	PKP	**PKPdf**	**16 48 50.3**	**+3.7**
NJ2	**Nanjing**	**161.71**	**97**	*e*PKP	**PKPdf**	**16 48 51.3**	**+0.1**

IDC 20 16:37:41.3±4.4,24.89S×175.26W,h0km,mb3.7/4, mb1 3.9/4,mb1mx3.7/27,mbtmp3.7/4,Error ellipse: s-maj=236.1km s-min=53.7km az=159.0,South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	35.80	270	P	P	16 44 42.2	-0.4
	0.9nm,0.4s,baz=106,slow=7.4,SNR=3.4						
ASAR	**Alice Springs**	46.14	260	P	P	16 46 08.6	+0.7
	0.1nm,0.4s,baz=95,slow=9.9,SNR=9.3						
WRA	**Warramunga Arr**	46.65	266	P	P	16 46 11.2	-0.7
	0.5nm,0.3s,baz=106,slow=8.5,SNR=18						
CMAR	**Chiang Mai Arr**	93.93	288	P	P	16 51 02.4	+0.9
	0.2nm,0.3s,baz=133,slow=4.1,SNR=4.1						
BRTR	**Keskin Array B**	151.60	308	PKPbc	PKPbc	16 57 37.1	-0.7
	0.4nm,0.6s,baz=96,slow=7.4,SNR=2.8						

BJI 20 17:13:48.7±0.0,22.54N×101.18E,h5km,ML3.4/5
ISC 20 17:13:48.8±1.0,22.50N±0.05×101.37E±0.08,h10km,n25, σ3.01/34,Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.90**	**25**	Pg	**Pb**	**17 14 41.6**	**+0.8**
KMI				Sg	**Sg**	**17 15 21.6**	**-0.5**
NANT	**Nan**	**3.73**	**190**	P	**Pn**	**17 14 48.5**	**+1.9**
NANT				S	**Sn**	**17 15 28.9**	**-1.7**
PHRA	**Phrae**	**4.12**	**195**	P	**Pn**	**17 14 52.9**	**+1.1**
PHRA				S	**Sb**	**17 15 53.1**	**+1.8**
LAMP	**Lampang**	**4.28**	**203**	P	**Pn**	**17 14 53.8**	**-0.2**
LAMP				S	**Sb**	**17 15 57.5**	**+1.6**
LAMP	**Lampang**	**4.28**	**203**	P	**Pg**	**17 15 07.9**	**-2.9**
CMMT	**Chiang Mai**	**4.31**	**212**	P	**Pn**	**17 14 56.5**	**+2.0**
CMMT				S	**Sb**	**17 15 59.1**	**+2.3**
CMMT	**Chiang Mai**	**4.31**	**212**	P	**Pg**	**17 15 08.9**	**-2.5**
CM36	**Chiang Mai Arr**	**4.50**	**209**	P	**Pg**	**17 15 11.1**	**-3.9**
CM09	**Chiang Mai Arr**	**4.61**	**209**	P	**Pn**	**17 15 01.5**	**+2.9**
CM09				S	**Sb**	**17 16 08.0**	**+2.6**
CM15	**Chiang Mai Arr**	**4.63**	**210**	P	**Pn**	**17 15 02.4**	**+3.5**
CM02	**Chiang Mai Arr**	**4.64**	**210**	P	**Pg**	**17 15 14.9**	**-2.8**
CM01	**Chiang Mai Arr**	**4.64**	**210**	P	**Pg**	**17 15 13.9**	**-3.9**
CM04	**Chiang Mai Arr**	**4.65**	**209**	P	**Pg**	**17 15 13.6**	**-4.3**
CM05	**Chiang Mai Arr**	**4.67**	**210**	P	**Pn**	**17 14 59.6**	**+0.2**
CM05	**Chiang Mai Arr**	**4.67**	**210**	P	**Pb**	**17 15 11.4**	**+0.6**
CM13	**Chiang Mai Arr**	**4.67**	**210**	P	**Pn**	**17 14 59.5**	**+0.1**
NONG	**Nongkai**	**4.71**	**159**	P	**Pn**	**17 14 59.0**	**-1.1**
UTTA	**Uttaradit**	**4.79**	**189**	P	**Pn**	**17 15 01.4**	**+0.3**
UTTA				S	**Sb**	**17 16 16.9**	**+6.3**
UTTA	**Uttaradit**	**4.79**	**189**	P	**Pb**	**17 15 17.5**	**+2.9**
PHIT	**Phitsanulok**	**5.36**	**190**	P	**Pg**	**17 15 27.4**	**-4.0**
PHIT				S	**Sg**	**17 16 36.5**	**-4.4**
PHIT	**Phitsanulok**	**5.36**	**190**	P	**Pb**	**17 15 26.9**	**+4.3**
MHMT	**Maesarieng**	**5.37**	**217**	P	**Pn**	**17 15 12.4**	**+3.3**
MHMT				S	**Sg**	**17 16 37.1**	**-4.3**
MHMT	**Maesarieng**	**5.37**	**217**	P	**Pb**	**17 15 25.0**	**+2.2**
PBKT	**Sadao Pong**	**5.91**	**184**	P	**Pn**	**17 15 16.8**	**+0.4**
PBKT	**Sadao Pong**	**5.91**	**184**	P	**Pb**	**17 15 36.6**	**+4.6**

IDC 20 17:37:22.9±0.9,30.37N×98.25E,h0km,mb3.6/7, mb1 3.7/9,mb1mx3.5/50,mbtmp3.6/9,ML3.3/2,MS2.9/6, Ms1 3.0/6,ms1mx2.7/43,Error ellipse: s-maj=34.8km s-min=15.7km az=58.0
ISC 20 17:37:27.8±0.8,30.4N±0.1×98.1E±0.1,h35km,n22, σ1.34/20,mb3.6/7,MS3.0/4,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPN	**Taplejung**	**9.61**	**254**	*e*P	**Pn**	**17 39 45.2**	**+1.3**
	9.5nm,0.4s						
BRDH	**Bariadhala**	9.63	218	LR	LR	17 44 30.2	
	comp=Z,87nm,20.9s,baz=60,slow=44						
ODAN	**Odare**	**10.05**	**252**	*e*P	**Pn**	**17 39 50.1**	**+0.1**
	12nm,0.5s						
RAMN	**Ramite**	**10.67**	**254**	*e*P	**Pn**	**17 39 58.8**	**+0.3**
	7.9nm,0.4s						
JIRN	**Jiri**	**10.78**	**258**	*e*P	**Pn**	**17 40 00.8**	**+0.8**
	21nm,0.6s						
GUN	**Gumba**	**10.97**	**260**	*e*P	**Pn**	**17 40 02.2**	**-0.4**
	27nm,0.6s						
PKI	**Pulchoki**	**11.47**	**259**	*e*P	**Pn**	**17 40 08.3**	**-1.1**
	12nm,0.4s						
PKIN	**Phulchoki**	**11.48**	**259**	*e*P	**Pn**	**17 40 08.3**	**-1.2**
	12nm,0.4s						
KKN	**Kakani**	**11.51**	**260**	*e*P	**Pn**	**17 40 08.8**	**-1.1**
	16nm,0.6s						
DMN	**Daman**	**11.71**	**259**	*e*P	**Pn**	**17 40 11.0**	**-1.7**
CMAR	**Chiang Mai Arr**	**11.93**	**176**	Pn	**Pn**	**17 40 15.8**	**+0.3**
	0.1nm,0.3s,baz=347,slow=11,SNR=13						
CMAR				Lg	Lg	17 43 37.2	
	0.0nm,0.3s,baz=354,slow=32,SNR=3.2						
CMAR				LR	LR	17 45 20.8	
	comp=Z,27nm,22.0s,baz=355,slow=40						
GKN	**Gorkha**	**12.01**	**262**	*e*P	**Pn**	**17 40 14.3**	**-2.3**
	9.5nm,0.4s						
DANN	**Dangsing**	**12.68**	**264**	*e*P	**Pn**	**17 40 22.7**	**-3.2**
	7.1nm,0.5s						
SONM	**Songino Array**	**18.53**	**18**	P	**Pn**	**17 41 41.1**	**-0.6**
	0.1nm,0.3s,baz=201,slow=12,SNR=5.9						
MKAR	**Makanchi Array**	**20.43**	**328**	P	Pn	17 42 03.3	-1.0
	0.8nm,0.8s,baz=151,slow=11,SNR=6.3						
MKAR				LR	LR	17 51 19.1	
	comp=Z,33nm,18.0s,baz=224,slow=41						
AAK	**Ala-Archa**	**22.47**	**309**	P	**P**	**17 42 25.0**	**+0.9**
	0.7nm,0.7s,baz=74,slow=7.4,SNR=3.1						
AAK				LR	LR	17 52 25.2	
	comp=Z,97nm,19.1s,baz=104,slow=40						
KURBB	**Kurchatov Arra**	**24.93**	**330**	P	**P**	**17 42 48.1**	**+0.6**
	0.8nm,0.5s,baz=142,slow=9.6,SNR=9.3						
ZALV	**Zalesovo Beam**	**25.41**	**342**	P	**P**	**17 42 52.7**	**+0.9**
	0.9nm,0.5s,baz=141,slow=7.3,SNR=4.0						
KSRS	**Korea Array**	**25.65**	**66**	P	**P**	**17 42 53.7**	**-0.5**
	1.0nm,0.6s,baz=258,slow=9.5,SNR=4.0						
KSRS				LR	LR	17 52 14.8	
	comp=Z,10nm,21.3s,baz=105,slow=35						
WRA	**Warramunga Arr**	**61.01**	**141**	P	**P**	**17 47 37.2**	**-0.8**
	0.9nm,0.5s,baz=321,slow=8.6,SNR=12						
NOA	**NORSAR Array B**	**62.43**	**327**	P	**P**	**17 47 48.6**	**+1.5**
	0.6nm,0.7s,baz=78,slow=6.3,SNR=2.8						
NOA				LR	LR	18 16 23.2	
	comp=Z,24nm,18.5s,baz=275,slow=37						
ASAR	**Alice Springs**	**63.81**	**143**	P	**P**	**17 47 56.1**	**-0.5**
	0.6nm,0.4s,baz=325,slow=6.4,SNR=18						

IDC 20 18:04:54.2±5.8,2.65N×99.42E,h0km,mb3.3/4,mb1 3.5/4, mb1mx3.3/37,mbtmp3.3/4,Error ellipse: s-maj=312.4km s-min=23.6km az=56.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	40.98	125	P	P	18 12 39.5	+0.2
	0.3nm,0.4s,baz=304,slow=8.9,SNR=4.6						
ASAR	**Alice Springs**	42.55	130	P	P	18 12 51.7	-0.5
	0.1nm,0.5s,baz=300,slow=7.6,SNR=5.0						
MKAR	**Makanchi Array**	46.43	344	P	P	18 13 22.9	+0.2
	0.1nm,0.4s,baz=157,slow=8.2,SNR=6.9						
ZALV	**Zalesovo Beam**	52.52	349	P	P	18 14 08.8	-0.3
	0.3nm,0.3s,baz=179,slow=5.8,SNR=2.5						

IDC 20 18:25:07.9±1.8,1.00N×92.30E,h0km,mb3.7/6,mb1 3.8/8, mb1mx3.6/42,mbtmp3.7/8,ML3.4/2,MS2.9/2,Ms1 2.9/2, ms1mx2.5/38,Error ellipse: s-maj=49.5km s-min=25.3km az=46.0
ISC 20 18:25:13.7±1.7,1.1N±0.2×92.5E±0.2,h35km,n9,σ5.49/8, mb3.8/6,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.66**	**75**	Pn	**Pn**	**18 26 48.9**	**-0.3**
	0.4nm,0.3s,baz=340,slow=19,SNR=2.9						
PSI				Sn	Sn	18 27 53.3	-11
	1.7nm,0.3s,baz=351,slow=17,SNR=2.9						
PSI				LR	LR	18 29 23.5	
	comp=Z,96nm,20.4s,baz=238,slow=37						
LEM	**Lembang**	17.05	118	LR	LR	18 35 07.6	
	comp=Z,32nm,18.4s,baz=316,slow=35						
CMAR	**Chiang Mai Arr**	**18.38**	**20**	P	**Pn**	**18 29 25.9**	**+0.1**
	0.1nm,0.3s,baz=217,slow=13,SNR=13						
WRA	**Warramunga Arr**	**46.06**	**119**	P	**P**	**18 33 34.8**	**+0.3**
	0.3nm,0.8s,baz=306,slow=8.4,SNR=2.7						
MKAR	**Makanchi Array**	**46.36**	**350**	P	**P**	**18 33 37.1**	**+0.6**
	1.1nm,0.7s,baz=168,slow=9.3,SNR=14						
SONM	**Songino Array**	**48.09**	**13**	P	**P**	**18 33 50.5**	**+0.5**
	1.1nm,0.6s,baz=195,slow=9.0,SNR=4.1						
KURBB	**Kurchatov Arra**	**50.74**	**349**	P	**P**	**18 34 09.7**	**-0.3**
	0.8nm,0.8s,baz=170,slow=7.0,SNR=6.8						
ZALV	**Zalesovo Beam**	**53.04**	**354**	P	**P**	**18 34 27.1**	**0.0**
	0.8nm,0.4s,baz=177,slow=7.9,SNR=4.5						
FINES	**FINESS Array B**	**77.92**	**333**	P	**P**	**18 37 07.2**	**-0.6**
	0.4nm,0.5s,baz=46,slow=8.4,SNR=2.5						

IDC 20 18:50:05.7±3.0,5.98S×130.46E,h73km±38km,mb3.2/1, mb1 3.5/5,mb1mx3.2/29,mbtmp3.6/5,ML3.3/4,Error ellipse: s-maj=79.8km s-min=22.5km az=87.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	5.14	9	P	Pn	18 51 20.5	+0.3
	0.8nm,0.3s,baz=182,slow=20,SNR=13						
FITZ	**Fitzroy Crossi**	12.93	201	P	Pn	18 53 05.7	-0.8
	0.1nm,0.3s,baz=16,slow=12,SNR=3.9						
FITZ				S	Sn	18 55 19.6	-9.1
	0.1nm,0.3s,baz=330,slow=14,SNR=2.2						
WRA	**Warramunga Arr**	14.38	165	P	Pn	18 53 23.9	-1.9
	0.1nm,0.3s,baz=350,slow=13,SNR=6.6						
WRA				S	Sn	18 55 55.1	-8.9
	0.3nm,0.3s,baz=350,slow=23,SNR=9.6						
ASAR	**Alice Springs**	17.89	170	P	Pn	18 54 11.2	+1.4
	0.2nm,0.3s,baz=346,slow=10.0,SNR=18						
ASAR				S	Sn	18 57 20.1	-8.9
	0.0nm,0.3s,baz=352,slow=27,SNR=3.3						
MKAR	**Makanchi Array**	67.63	326	P	P	19 00 54.8	-0.1
	0.3nm,0.5s,baz=111,slow=7.1,SNR=9.3						

TAP 20 19:02:58.0,24.88N×122.17E,h13km,ML2.8,D
JMA 20 19:02:59.1±0.1,24.76N×122.15E,h46km,M2.3
ISC 20 19:02:56.0±1.1,24.86N±0.03×122.27E±0.02,h10km±9km, n72,σ0.70/108,3C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.29**	**301**	⇑*i*P	**Pb**	**19 03 03.0**	**-0.5**
	baz=308						
TWB1				*i* S	**Sg**	**19 03 06.0**	**+0.2**
	baz=308						
EOS1	**EOS1**	**0.33**	**202**	⇑*i*P	**Pn**	**19 03 05.0**	**-1.8**
	baz=194						
EOS1				*e*S	**Sb**	**19 03 10.0**	**+0.7**
	baz=194						
NTC	**Toucheng**	**0.40**	**270**	*e*P	**Pb**	**19 03 04.6**	**-0.6**
	baz=273						
NTC				*e*S	**Sg**	**19 03 09.4**	**+0.4**
	baz=273						
TIPB	**Shuangxi**	**0.42**	**286**	⇑*i*P	**Pb**	**19 03 05.2**	**-0.3**
	baz=290						
TIPB				*e*S	**Sg**	**19 03 10.2**	**+0.5**
	baz=290						
TWC	**Suao**	**0.45**	**237**	*e*P	**Pb**	**19 03 05.4**	**-0.7**
	baz=219						
TWC				*e*S	**Sg**	**19 03 09.7**	**-1.0**
	baz=219						
NWF	**Wu-fen Shan**	**0.49**	**296**	*e*P	**Pb**	**19 03 06.8**	**0.0**
	baz=298						
NWF				*e*S	**Sg**	**19 03 12.2**	**+0.2**
	baz=298						
WFSB	**Wu-fen Shan**	**0.49**	**296**	*e*P	**Pb**	**19 03 06.7**	**-0.1**
	baz=298						
WFSB				*e*S	**Sg**	**19 03 12.1**	**0.0**
	baz=298						
TWE	**Neicheng**	**0.56**	**256**	*e*P	**Pb**	**19 03 07.3**	**-0.7**
	baz=241						
TWE				*e*S	**Sg**	**19 03 14.1**	**-0.2**
	baz=241						
SLBB	**Yuanshan**	**0.58**	**260**	*e*P	**Pb**	**19 03 08.0**	**-0.3**
	baz=246						
SLBB				*e*S	**Sg**	**19 03 16.0**	**+1.0**
	baz=246						
TWA	**Mucha**	**0.63**	**282**	*e*P	**Pn**	**19 03 10.1**	**-1.0**
	baz=280						
ENA	**Nanau**	**0.64**	**228**	*e*P	**Pb**	**19 03 08.8**	**-0.4**
	baz=212						
ENA				*e*S	**Sg**	**19 03 16.5**	**-0.2**
	baz=212						
ENTT	**Nioudou**	**0.67**	**252**	*e*P	**Pb**	**19 03 09.3**	**-0.5**
	baz=246						
ENTT				*e*S	**Sg**	**19 03 17.8**	**0.0**
	baz=246						
NHDH	**Xindian Distri**	**0.68**	**279**	*e*P	**Pn**	**19 03 11.7**	**0.0**
	baz=278						
NHDH				*e*S	**Sb**	**19 03 19.1**	**-0.4**
	baz=278						
YM01	**YM01**	**0.69**	**295**	*e*P	**Pn**	**19 03 11.0**	**-1.0**
	baz=296						
YM08	**YM08**	**0.70**	**299**	P	**Pn**	**19 03 10.8**	**-1.2**
	baz=300						
NWLT	**Wulai**	**0.70**	**264**	*e*P	**Pb**	**19 03 10.2**	**-0.1**
	baz=260						
NWLT				*e*S	**Sg**	**19 03 18.3**	**-0.4**
	baz=260						
YM11	**YM11**	**0.70**	**296**	P	**Pn**	**19 03 11.1**	**-1.0**
	baz=297						
YM10	**YM10**	**0.71**	**295**	P	**Pn**	**19 03 11.2**	**-1.0**
	baz=296						
TAP	**Taipei**	**0.71**	**285**	*e*P	**Pn**	**19 03 11.8**	**-0.4**
	baz=298						
TAP				*e*S	**Sb**	**19 03 19.9**	**-0.5**
	baz=298						
YM04	**YM04**	**0.73**	**294**	*e*P	**Pn**	**19 03 11.1**	**-1.3**
	baz=295						
NDT	**Datong Townshi**	**0.73**	**250**	*e*P	**Pb**	**19 03 10.6**	**-0.3**
	baz=245						
NDT				*e*S	**Sg**	**19 03 20.2**	**+0.6**
	baz=245						
TWY	**Chenhua**	**0.73**	**305**	*e*P	**Pn**	**19 03 11.8**	**-0.7**
	baz=307						
TWY				*e*S	**Sb**	**19 03 21.3**	**+0.3**
	baz=307						
JYNG	**Yonagunijimaku**	**0.74**	**123**	P	**Pn**	**19 03 13.6**	**+1.1**
JYNG				*e*S	**Sn**	**19 03 24.6**	**+0.8**
ANP	**Anpu**	**0.75**	**296**	*e*P	**Pn**	**19 03 12.1**	**-0.8**
	baz=297						
YOJ	**Yonaguni jima**	**0.78**	**120**	P	**Pn**	**19 03 14.8**	**+1.7**
YOJ				*e*S	**Sn**	**19 03 25.9**	**+1.0**
TWS1	**Kuangyinshan**	**0.81**	**288**	*e*P	**Pn**	**19 03 13.2**	**-0.3**
	baz=288						
YHNB	**Yeheng**	**0.83**	**257**	*e*P	**Pb**	**19 03 12.1**	**-0.5**
	baz=262						
YHNB				*e*S	**Sg**	**19 03 21.3**	**-1.5**
	baz=262						
NSK	**Sanguang**	**0.84**	**258**	*e*P	**Pb**	**19 03 12.6**	**-0.3**
	baz=262						
NSK				*e*S	**Sg**	**19 03 22.7**	**-0.6**
	baz=262						
NNSB	**Datong**	**0.91**	**242**	*e*P	**Pb**	**19 03 13.8**	**-0.1**
	baz=227						
NNSB				*e*S	**Sb**	**19 03 26.4**	**+0.2**
	baz=227						
NNSH	**Datong**	**0.91**	**242**	*e*P	**Pb**	**19 03 14.0**	**+0.1**
	baz=228						
NNSH				*e*S	**Sg**	**19 03 25.3**	**0.0**
	baz=228						
NNS	**Nan Shan**	**0.91**	**243**	*e*P	**Pb**	**19 03 13.8**	**-0.2**
	baz=228						
NNS				*e*S	**Sg**	**19 03 25.6**	**+0.1**
	baz=228						
NACB	**Ninganchiao**	**0.91**	**222**	*e*P	**Pb**	**19 03 14.2**	**-0.8**
	baz=207						
NACB				*e*S	**Sb**	**19 03 26.2**	**0.0**
	baz=207						
ETLH	**Xiulin Townshi**	**0.96**	**228**	*e*P	**Pb**	**19 03 15.1**	**-0.6**
	baz=223						
ETLH				*e*S	**Sg**	**19 03 27.1**	**+0.1**
	baz=223						
TWD	**Chiawan**	**0.98**	**218**	P	**Pn**	**19 03 16.0**	**+0.1**
	baz=213						
TWD				S	**Sg**	**19 03 28.0**	**+0.3**
	baz=213						
WHF	**Hehuan Shan**	**1.15**	**232**	P	**Pn**	**19 03 19.1**	**+0.4**
	baz=228						
WHF				*e*S	**Sg**	**19 03 33.1**	**-0.1**
	baz=228						
LIOB	**Emei**	**1.16**	**260**	*e*P	**Pg**	**19 03 19.1**	**+0.9**
	baz=257						
LIOB				*e*S	**Sn**	**19 03 35.0**	**+0.8**
	baz=257						
TWT	**Tachien**	**1.16**	**239**	*e*S	**Sn**	**19 03 34.8**	**+0.3**
	baz=226						
NSTT	**Nanjuang**	**1.17**	**259**	*e*P	**Pg**	**19 03 19.8**	**+1.3**
	baz=256						
NSTT				*e*S	**Sb**	**19 03 33.7**	**+0.1**
	baz=256						
TDCB	**Techi**	**1.17**	**240**	*e*P	**Pg**	**19 03 19.4**	**+0.9**
	baz=225						
CHGB	**Renai**	**1.27**	**232**	*e*P	**Pg**	**19 03 20.7**	**+0.3**
	baz=228						
CHGB				*e*S	**Sb**	**19 03 36.7**	**0.0**
	baz=228						
ESL	**Shilin**	**1.28**	**216**	*e*P	**Pg**	**19 03 20.6**	**0.0**
	baz=212						
ESL				*e*S	**Sb**	**19 03 37.2**	**+0.3**
	baz=212						
WHP	**Taichung City**	**1.33**	**245**	*e*P	**Pg**	**19 03 22.4**	**+0.8**
	baz=241						
WHP				*e*S	**Sg**	**19 03 39.2**	**+0.3**
	baz=241						
OWD	**Renai**	**1.34**	**228**	*e*P	**Pg**	**19 03 22.0**	**+0.3**
	baz=223						
EGFH	**Guangfu**	**1.41**	**213**	*e*P	**Pg**	**19 03 22.7**	**-0.3**
	baz=224						
IRIF	**Iriomote-Funau**	**1.43**	**111**	P	**Pg**	**19 03 24.8**	**+1.4**
TWQ1	**Liyutan**	**1.45**	**250**	*e*P	**Pg**	**19 03 24.4**	**+0.5**
	baz=266						
DPDB	**Guoxing**	**1.47**	**236**	*e*P	**Pg**	**19 03 24.2**	**0.0**
	baz=223						
VWDT	**VWDT**	**1.50**	**223**	*e*P	**Pg**	**19 03 25.5**	**+0.7**
	baz=227						
VWDT				*e*S	**Sn**	**19 03 42.7**	**+0.1**
	baz=227						
HGSD	**Ruisui**	**1.56**	**210**	*e*P	**Pg**	**19 03 26.3**	**+0.4**
	baz=189						
SMLT	**Sun Moon Lake**	**1.58**	**232**	*e*P	**Pg**	**19 03 26.7**	**+0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=215						
EHY	Hungye	1.60	213	eP	Pg	19 03 26.4	-0.3
	baz=208						
TYC	Yuchr	1.60	234	eP	Pg	19 03 27.0	+0.4
	baz=229						
SSLB	Suanglung	1.60	229	eP	Pg	19 03 26.7	0.0
	baz=225						
SSLB				eS	Sn	19 03 45.4	+0.2
	baz=225						
HATJ	Hateruma jima	1.61	119	eS	Sg	19 03 46.0	-1.9
YULB	Yu-li	1.70	211	eP	Pg	19 03 28.2	-0.5
	baz=207						
WHYT	Xinyi Township	1.73	228	eP	Pg	19 03 29.9	+0.7
	baz=213						
TWF1	Yuli	1.74	211	eP	Pb	19 03 27.2	-0.9
	baz=206						
WJS	Zhushan	1.74	234	eP	Pg	19 03 29.8	+0.4
	baz=222						
JIJ	Ishigaki jima	1.78	106	P	Pg	19 03 29.0	-1.1
YUS	Yu-Shan	1.81	222	eP	Pg	19 03 31.4	+0.6
	baz=200						
YUS				eS	Sg	19 03 54.3	-0.1
	baz=200						
FULB	Fuli	1.87	209	eP	Pb	19 03 30.2	-0.1
	baz=189						
JISG	Ishigakijimahi	1.88	98	P	Pg	19 03 31.1	-0.9
ALS	Alishan	1.89	225	eP	Pg	19 03 32.3	+0.1
	baz=207						
CHN5	Tsauling	1.92	230	eP	Pg	19 03 33.2	+0.5
	baz=224						
ELDTW	Lidau	2.01	215	eP	Pb	19 03 32.5	-0.4
	baz=196						
CHN4	Tsaushan	2.14	226	eP	Pg	19 03 36.0	-1.0
	baz=221						
TPUB	Ta-pu	2.15	224	eP	Pb	19 03 35.8	+0.7
	baz=204						
TPUB				eS	Sb	19 04 03.0	+1.2
	baz=204						
WTP	Ta-pu	2.20	224	eP	Pb	19 03 36.7	+0.7
	baz=202						
TWK	Hsinying	2.27	226	eP	Pb	19 03 37.3	+0.2
	baz=221						
CHN1	Nanshi	2.30	224	eP	Pg	19 03 39.2	-0.9
	baz=219						
SLGT	Liugui	2.37	219	eP	Pb	19 03 39.7	+0.8
	baz=215						
MASBT	Mashibuluo	2.69	214	eP	Pb	19 03 42.5	-1.7
	baz=194						

IDC 20 19:27:24.3±4.1, 18.°04S×177.°95W, h618km±47km, mb3.4/12, mb1 3.6/12, mb1mx3.4/33, mbtmp4.3/12, Error ellipse: s-maj=36.5km s-min=18.3km az=144.0
NEIC 20 19:27:25.1±1.5, 18.°11S×0.°09×178.°0W±0.°1, h627km±7km, mb4.5/26, Error ellipse: s-maj=19.8km s-min=12.0km az=66.0
ISC 20 19:27:21.6±0.7, 18.°1S±0.°2×177.°8W±0.°1, h590km, n62, σ1§22/62, mb4.1/22, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.97	275	P	P	19 28 50.9	+4.6
MSVF				S	S	19 30 01.1	+5.9
STKA	Stephens Creek	39.03	242	P	P	19 33 57.9	-1.1
	2.6nm,0.9s,baz=342,slow=8.4,SNR=3.5						
STKA	Stephens Creek	39.03	242	P	P	19 33 57.7	-1.3
WRA	Warramunga Arr	45.16	260	P	P	19 34 47.3	+0.1
	0.7nm,0.3s,baz=96,slow=7.6,SNR=14						
ASAR	Alice Springs	45.29	254	P	P	19 34 48.2	+0.1
	2.5nm,0.7s,baz=92,slow=7.7,SNR=39						
ASAR				PcP	PcP	19 36 14.7	-0.5
	0.7nm,0.5s,baz=103,slow=4.0,SNR=8.2						
FORT	Forrest	50.44	245	P	P	19 35 25.8	-0.5
FORT				IAmb	IAmb	19 37 22.6	
	comp=Z,23nm,0.9s						
MJAR	Matsushiro Arr	68.44	323	P	P	19 37 25.0	-0.7
	comp=Z,2.9nm,0.7s,baz=146,slow=6.2,SNR=7.2						
ADK	Adak	69.72	1	P	P	19 37 32.7	-0.3
QSPA	South Pole Qui	71.92	180	P	P	19 37 46.6	+0.6
QSPA				IAmb	IAmb	19 40 24.1	
	comp=Z,27nm,1.9s						
UNV	Unalaska Valle	72.34	7	P	P	19 37 47.3	-0.9
SSLB	Suanglung	72.85	303	P	P	19 37 51.0	-0.9
TPUB	Ta-pu	72.87	302	P	P	19 37 51.1	-0.9
PETK	Petropavlovsk-	74.05	345	P	P	19 37 57.8	-0.2
	comp=Z,3.5nm,0.6s,baz=131,slow=9.3,SNR=11						
OHAK	Old Harbor	77.82	13	P	P	19 38 18.6	0.0
OHAK				IAmb	IAmb	19 39 46.4	
	comp=Z,58nm,1.6s						
YBH	Yreka Blue Hor	78.33	39	P	P	19 38 23.3	+1.4
	comp=Z,1.9nm,0.5s,baz=175,slow=3.2,SNR=5.8						
YBH	Yreka Blue Hor	78.33	39	P	P	19 38 23.3	+1.4
YBH				IAmb	IAmb	19 39 04.4	
	comp=Z,39nm,2.0s						
I07A	Izee	81.62	38	P	P	19 38 40.0	+0.9
I07A				IAmb	IAmb	19 39 23.0	
	comp=Z,29nm,1.9s						
GAMB	Gambell	81.78	3	P	P	19 38 39.6	+0.4
GAMB				IAmb	IAmb	19 39 27.3	
	comp=Z,17nm,1.7s						
X16A	Lo Mia Camp, P	81.88	50	P	P	19 38 41.7	+1.0
CCUT	Cedar City	82.05	46	P	P	19 38 42.8	+1.3
319A	Douglas	82.09	53	P	P	19 38 43.4	+1.6
319A				IAmb	IAmb	19 38 44.7	
	comp=Z,5.5nm,0.8s						
KNB	Kanab	82.16	47	P	P	19 38 43.0	+1.1
PSUT	Pine Spring	82.20	45	P	P	19 38 43.1	+0.9
U15A	North Rim	82.24	48	P	P	19 38 44.1	+1.6
U15A				IAmb	IAmb	19 38 44.6	
	comp=Z,5.7nm,0.8s						
ELK	Elko	82.43	43	P	P	19 38 44.1	+0.8
G08A	Pilot Rock	82.63	38		P	19 38 44.9	+0.8
G08A				IAmb	IAmb	19 40 51.3	
	comp=Z,23nm,2.0s						
GHO	Glory Hole Cre	82.89	13	P	P	19 38 44.8	-0.2
GHO				IAmb	IAmb	19 39 46.6	
	comp=Z,46nm,1.7s						
MTPU	Mount Pierson	83.10	46	P	P	19 38 48.3	+1.4
TRF	Thorofare Moun	84.11	12	P	P	19 38 50.2	-0.9
TRF				IAmb	IAmb	19 39 31.6	
	comp=Z,53nm,2.0s						
TX31	Lajitas Ar. Si	85.63	57	P	P	19 39 00.6	+1.5
TX32	Lajitas Array	85.63	57	P	P	19 39 00.6	+1.5
TXAR	Lajitas Array	85.63	57	P	P	19 39 00.7	+1.5
	comp=Z,2.4nm,0.7s,baz=219,slow=6.1,SNR=15						
ILAR	Eielson Array	85.98	13	P	P	19 38 59.0	-0.9
	comp=Z,1.3nm,0.4s,baz=218,slow=5.2,SNR=20						
MCMT	McKenzie Canyo	86.03	40	P	P	19 39 01.7	+0.8
PDAR	Pinedale Array	87.12	43	P	P	19 39 06.0	0.0
	comp=Z,1.3nm,0.7s,baz=191,slow=3.4,SNR=10						
CMAR	Chiang Mai Arr	89.51	289	P	P	19 39 18.1	+0.7
	comp=Z,0.6nm,0.8s,baz=116,slow=1.2,SNR=5.4						
INK	Inuvik	91.95	15	P	P	19 39 25.9	-1.5
	comp=Z,1.5nm,0.6s,baz=200,slow=3.4,SNR=7.4						
INK	Inuvik	91.95	15	P	P	19 39 26.8	-0.7
INK				IAmb	IAmb	19 40 58.2	
	comp=Z,18nm,1.9s						
YKA	Yellowknife Ar	94.30	25	P	P	19 39 37.7	-0.6
	comp=Z,0.8nm,0.7s,baz=241,slow=4.4,SNR=11						
W39A	Magazine	95.53	55	P	P	19 39 46.3	+1.7
MKAR	Makanchi Array	109.71	314	PKiKP	PKiKP	19 44 44.5	-1.7
	comp=Z,0.3nm,0.5s,baz=171,slow=1.2,SNR=7.0						
BVAR	Borovoye Array	117.39	321	PKP	PKPdf	19 44 59.5	-1.3
	comp=Z,0.5nm,0.4s,baz=157,slow=4.1,SNR=3.4						
FINES	FINESS Array B	133.56	344	PKP	PKPdf	19 45 29.6	-1.7
	comp=Z,1.9nm,0.9s,baz=7.8,slow=15,SNR=3.3						
EKA	Eskdalemuir Ar	142.64	5	PKhKP	PKPpre	19 45 44.0	
	comp=Z,0.6nm,0.5s,baz=304,slow=2.6,SNR=4.4						
KWP	Kalwaria Pacla	144.51	337		PKPdf	19 45 51.4	-0.2
BUR08	Bucovina Ar. S	145.07	333		PKPbc	19 45 54.0	+0.4
BR131	Keskin Array S	145.35	315		PKPbc	19 45 54.2	-0.6
BRTR	Keskin Array B	145.35	315	PKPbc	PKPdf	19 45 53.9	+0.3
	comp=Z,2.3nm,0.8s,baz=137,slow=4.5,SNR=11						
OSTC	Ostas	145.77	344	ePKP	PKPbc	19 45 55.5	0.0
CLL	Collm	145.81	348	⇓iPKPbc	PKPbc	19 45 56.2	+0.7
	comp=Z,9.0nm,0.6s						
CLL	Collm	145.81	348		PKPbc	19 45 56.2	+0.7
DPC	Dobruska-Polom	145.93	344	ePKP	PKPbc	19 45 55.9	-0.1
BRG	Berggiesshubel	146.02	347	i PKP	PKPbc	19 45 55.8	-0.3
	comp=Z,6.8nm,1.0s						
KRLC	Kraliky	146.06	343	ePKP	PKPbc	19 45 55.9	-0.4
KRLC				ex	x	19 45 58.3	
PRU	Pruhonice	146.71	345	ePKP	PKPbc	19 45 57.8	-0.2
KHC	Kasperske Hory	147.74	346	ePKP	PKPbc	19 46 00.1	-0.7
GERES	GERESS Array B	147.98	346	PKPbc	PKPbc	19 46 01.2	-0.3
	comp=Z,2.3nm,0.7s,baz=28,slow=3.8,SNR=19						
KBA	Koelnbreinsper	149.71	345	i PKiKP	PKPbc	19 46 05.4	-0.5
	comp=Z,1.7nm,0.5s						
WTTA	Wattenberg	149.93	347	i PKiKP	PKPbc	19 46 05.9	-0.5
	comp=Z,5.0nm,0.6s						
ABTA	Abfaltersbach	150.22	346	i PKPbc	PKPbc	19 46 05.8	-1.1
	comp=Z,4.8nm,0.6s						
FETA	Feichten	150.35	348	i PKiKP	PKPbc	19 46 06.8	-0.5
	comp=Z,3.1nm,0.8s						
DAVOX	Davos/Dischmat	150.74	349	PKPbc	PKPbc	19 46 07.5	-0.8
	comp=Z,5.1nm,0.6s,baz=77,slow=11,SNR=7.7						

NIC 20 19:35:56.5±0.0, 34.°33N×25.°67E, h32km±44km, Ml3.0/3
THE 20 19:35:59.5, 34.°41N×25.°94E, h0km±1km, ML2.6/5, Error ellipse: s-maj=3.1km s-min=0.9km az=151.0
ATH 20 19:36:01.4, 34.°54N×25.°98E, h36km±3km, ML2.6/6, Error ellipse: s-maj=5.7km s-min=2.4km az=356.0
DDA 20 19:36:07.0, 34.°56N×26.°40E, h35km±351km, ML2.1
ISC 20 19:36:00.5±1.6, 34.°46N±0.°07×26.°02E±0.°03, h26km±14km, n33, σ1§61/50, Crete

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FRMA	Ierapetra Chan	0.60	337	P	Pb	19 36 11.9	-0.6
FRMA				S	Sn	19 36 21.8	-0.5
	290nm,0.5s						
ZKR	Zakros	0.68	14	P	Pb	19 36 13.6	-0.1
ZKR				S	Sn	19 36 26.0	+1.8
	698nm,0.4s						
ZKR	Zakros	0.68	14	P	Pn	19 36 13.7	-0.7
ZKR				S	Sn	19 36 23.6	-0.6
ZKR				AML	AML	19 36 29.2	
	comp=E,1743µm,0.4s						
ZKR				AML	AML	19 36 29.7	
	comp=N,1042µm,0.4s						
ZKR	Zakros	0.68	14	P	Pb	19 36 13.5	-0.2
ZKR				S	Sn	19 36 24.9	+0.7
ZKR				AML	AML	19 36 28.8	
	comp=N,1.7nm,0.4s						
ZKR				AML	AML	19 36 28.8	
	comp=N,1.7nm,0.4s						
ZKR				AML	AML	19 36 29.2	
	comp=N,1.0nm,0.4s						
ZKR				AML	AML	19 36 29.2	
	comp=N,1.0nm,0.4s						
STIA	Sitia Lasithi	0.75	5	P	Pn	19 36 15.3	-0.1
STIA				S	Sn	19 36 27.5	+1.6
LAST	Lasithi	0.83	328	P	Pb	19 36 15.7	-0.6
LAST				S	Sn	19 36 29.2	+1.1
	comp=N,388nm,0.8s						
LAST	Lasithi	0.83	328	P	Pb	19 36 15.9	-0.4
LAST				S	Sn	19 36 28.1	0.0
LAST				AML	AML	19 36 34.2	
	comp=N,712µm,0.9s						
LAST				AML	AML	19 36 36.4	
	comp=E,879µm,0.8s						
NPS	Neapolis	0.87	338	P	Pb	19 36 16.4	-0.6
NPS				S	Sn	19 36 30.7	+1.7
NPS	Neapolis	0.87	338	P	Pb	19 36 16.6	-0.3
NPS				AML	AML	19 36 32.6	
	comp=E,728µm,0.8s						
NPS				AML	AML	19 36 37.1	
	comp=N,551µm,0.7s						
SIVA	Sivas	1.14	300	P	Pn	19 36 21.0	+0.2
SIVA				S	Sn	19 36 37.0	+1.4
	comp=N,295nm,0.6s						
SIVA	Sivas	1.14	300	P	Pb	19 36 21.7	+0.2
SIVA				AML	AML	19 36 47.7	
	comp=E,666µm,0.5s						
SIVA				AML	AML	19 36 58.7	
	comp=N,694µm,0.6s						
IDI	Anoyia	1.24	312	P	Pb	19 36 23.4	+0.1
IDI				S	Sb	19 36 38.5	-0.5
IDI				AML	AML	19 36 53.8	
	comp=E,192µm,1.1s						
IDI				AML	AML	19 36 55.2	
	comp=N,164µm,0.8s						
KARP	Karpathos	1.44	40	P	Pb	19 36 27.1	+0.5
KARP	Karpathos	1.44	40	P	Pb	19 36 26.9	+0.3
KARP				AML	AML	19 36 59.7	
	comp=N,551µm,0.7s						
KARP				AML	AML	19 37 08.4	
	comp=E,410µm,0.9s						
KARP	Karpathos	1.44	40	P	Pn	19 36 23.7	-1.2
KARP				S	Sb	19 36 46.5	+2.0
KARP				AML	AML	19 36 59.0	
	comp=E,0.5nm,0.7s						
KARP				AML	AML	19 36 59.0	
	comp=E,0.5nm,0.7s						
KARP				AML	AML	19 37 02.7	
	comp=E,0.4nm,1.7s						
KARP				AML	AML	19 37 02.7	
	comp=E,0.4nm,1.7s						
VAM	Vamos	1.77	303	P	Pn	19 36 29.9	+0.5
VAM				S	Sb	19 36 52.9	-1.1
	comp=E,102nm,0.9s						
VAM	Vamos	1.77	303	P	Pn	19 36 30.3	+0.9
IMMV	Iera Moni Meta	1.95	302	P	Pb	19 36 33.9	-1.4
THR3	Thira Island,	2.01	346	P	Pn	19 36 32.6	-0.2
THR5	Thira Island,	2.03	345	P	Pn	19 36 32.9	-0.1
DAT	Datca	2.60	29	i P	Pn	19 36 43.1	+2.2
DAT				i S	Sn	19 37 10.7	-1.1
DAT				IAML		19 37 12.0	
	comp=E,12nm,1.2s						
DAT				IAML		19 37 19.0	
	comp=N,10.0nm,1.1s						
APE	Apeiranthos	2.64	352	S	Sn	19 37 11.1	-1.5
DALY	Dalyan (Mula)	3.19	42	i P	Pn	19 36 50.8	+1.9
DALY				i S	Sn	19 37 27.3	+1.3
DALY				IAML		19 37 37.0	
	comp=N,6.8nm,1.0s						
TURN	Turunc	3.20	40	i P	Pn	19 36 47.8	-1.3
TURN				i S	Sn	19 37 19.2	-7.2
TURN				IAML		19 37 21.0	
	comp=N,7.8nm,0.4s						
FETY	Fethiye	3.31	48	i P	Pn	19 36 51.7	+1.0
FETY				i S	Sn	19 37 26.8	-2.5
FETY				IAML		19 37 32.0	
	comp=N,3.4nm,0.7s						
FETY				IAML		19 37 35.0	
	comp=E,4.5nm,0.3s						
AKAS	Kas	3.43	58	i P	Pn	19 36 53.5	+1.2
AKAS				i S	Sn	19 37 30.0	-2.2
AKAS				IAML		19 37 38.0	
	comp=N,13nm,0.5s						
AKAS				IAML		19 37 40.0	
	comp=E,8.3nm,0.9s						
TAVA	DENIZLI_Tavas	3.81	37	i P	Pn	19 37 00.5	+2.9
TAVA				IAML		19 37 44.0	
	comp=E,7.8nm,0.8s						
TAVA				IAML		19 37 45.0	
	comp=N,3.7nm,0.5s						
GOLH	Golhisar	4.00	45	i P	Pn	19 37 01.5	+1.3
GOLH				IAML		19 37 56.0	
	comp=N,10nm,0.9s						
NATA	Nata	5.41	85	P	Pn	19 37 19.5	0.0
ALFC	Alefka	5.46	81	P	Pn	19 37 20.6	+0.4
ALFC				AML	AML	19 37 48.1	
ALFC				AML	AML	19 37 48.5	
SZAC	Souni	5.67	85	P	Pn	19 37 24.4	+1.4
ASGA	Asgata	5.97	85	P	Pn	19 37 27.7	+0.5
CSS	Mathiatis	6.04	83	P	Pn	19 37 29.5	+1.3

IDC 20 19:42:12.5±1.4, 14.°42S×173.°50W, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.5/33, mbtmp3.8/3, MS2.2/2, Ms1 3.2/2, ms1mx2.7/26, Error ellipse: s-maj=105.7km s-min=25.0km az=159.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.75	73	Pn	Pn	19 42 44.4	+0.2
	6.5nm,0.3s,baz=234,slow=19,SNR=3.7						
AFI				Sn	Sn	19 43 02.5	-4.7
	200nm,0.3s,baz=217,slow=20,SNR=23						
RAO	Raoul Island	15.32	195	LR	LR	19 50 42.5	
	comp=Z,169nm,20.2s,baz=118,slow=33						
DZM	Mont Dzumac	20.50	245	LR	LR	19 52 50.7	
	comp=Z,31nm,19.6s,baz=30,slow=31						
STKA	Stephens Creek	44.45	239	P	P	19 50 24.7	-0.9
	0.9nm,0.5s,baz=81,slow=5.9,SNR=3.0						
WRA	Warramunga Arr	49.98	256	P	P	19 51 08.6	-0.3
	0.3nm,0.5s,baz=92,slow=7.2,SNR=9.4						
ASAR	Alice Springs	50.33	251	P	P	19 51 12.3	+0.7
	0.9nm,0.7s,baz=90,slow=7.8,SNR=19						
BRTR	Keskin Array B	145.33	322	PKPbc	PKPbc	20 01 51.4	-1.3
	0.3nm,0.5s,baz=46,slow=4.2,SNR=2.9						

IDC 20 19:43:56.8±1.3, 38.°32N×20.°50E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.4/53, mbtmp3.6/8, ML3.7/2, Error ellipse: s-maj=27.3km s-min=21.1km az=116.0
PDG 20 19:43:57.3±0.4, 38.°27N×20.°26E, h1km±1km, ML3.7/13, Error ellipse: s-maj=1.1km s-min=1.0km az=90.0
THE 20 19:43:58.8, 38.°21N×20.°41E, h11km, ML3.2/14, Error ellipse: s-maj=0.6km s-min=0.3km az=241.0
ATH 20 19:43:58.1, 38.°21N×20.°37E, h14km, ML3.3/23, Error ellipse: s-maj=1.3km s-min=0.7km az=256.0
BEO 20 19:44:00.2±0.9, 38.°21N×20.°14E, h19km±5km, ML3.4/8
ISC 20 19:43:58.3±0.7, 38.°23N±0.°02×20.°38E±0.°03, h12km±3km, n124, σ1§25/179, mb3.7/6, 3C-6D, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.04	231	P	Pg	19 44 00.9	+0.4
KEF3				S	Sg	19 44 02.3	+0.1
CHV1	Chavriata, Kef	0.04	182	P	Pg	19 44 00.8	+0.2
CHV1				S	Sg	19 44 02.3	+0.1
KEF4	Livadi, Kephal	0.04	45	P	Pg	19 44 00.9	+0.3
KEF4				S	Sg	19 44 02.4	+0.2
LXRA	Lixouri, Kepha	0.05	122	P	Pg	19 44 00.8	+0.2
LXRA				S	Sg	19 44 02.3	0.0
ARGA	Argostoli. Kep	0.09	123	P	Pg	19 44 01.2	+0.1
ARGA				S	Sg	19 44 02.8	-0.2
ARG2	Argostoli	0.10	120	P	Pg	19 44 01.2	+0.1
ARG2				S	Sg	19 44 02.8	-0.3
KEF2	Argostoli. Kep	0.10	127	P	Pg	19 44 01.4	+0.2
KEF2				S	Sg	19 44 02.9	-0.4
VLS	Valsamata	0.17	107	P	Pg	19 44 02.2	0.0
VLS				S	Sg	19 44 04.8	-0.1
	89µm,0.1s						
VLS	Valsamata	0.17	107	P	Pg	19 44 02.3	0.0
VLS				S	Sg	19 44 04.6	-0.3
VLS				AML	AML	19 44 04.9	
	comp=N,88119µm,0.2s						
VLS				AML	AML	19 44 05.0	
KONA	Konidatara, Ke	0.25	37	P	Pg	19 44 04.0	+0.5
KONA				S	Sb	19 44 08.2	+1.2
KONA				AML	AML	19 44 08.5	
	comp=N,53845µm,0.2s						
KONA				AML	AML	19 44 08.5	
	comp=E,37325µm,0.2s						
FSK	Fiskardo	0.27	31	P	Pg	19 44 04.4	+0.5
FSK				S	Sb	19 44 08.9	-0.8
	comp=E,11µm,0.1s						
FSK	Fiskardo	0.27	31	P	Pg	19 44 04.4	+0.5
FSK				S	Sg	19 44 08.7	+1.0
FSK				AML	AML	19 44 09.3	
	comp=E,31924µm,0.2s						
FSK				AML	AML	19 44 11.5	
	comp=N,10269µm,0.2s						
VLMS	Volimes, Zakyn	0.41	148	P	Pg	19 44 06.6	+0.1
VLMS				S	Sb	19 44 13.2	-0.5
VLMS				AML	AML	19 44 15.7	
	comp=E,26863µm,0.2s						
VLMS				AML	AML	19 44 18.3	
	comp=N,32662µm,0.4s						
MGNA	Meganis	0.54	37	P	Pg	19 44 09.0	+0.2
MGNA				S	Sb	19 44 17.1	-0.2
MGNA				AML	AML	19 44 17.8	
	comp=N,7493µm,0.2s						
MGNA				AML	AML	19 44 17.9	
	comp=E,8374µm,0.3s						
LKD2	Lefkada island	0.60	21	P	Pg	19 44 10.1	0.0
LKD2				S	Sb	19 44 19.1	-0.1
	comp=E,2µm,0.3s						
LKD2	Lefkada island	0.60	21	P	Pg	19 44 10.0	0.0
LKD2				AML	AML	19 44 26.7	
	comp=E,3520µm,0.3s						
LKD2				AML	AML	19 44 29.8	
	comp=N,2982µm,0.4s						
AST1	Astakos	0.64	60	P	Pg	19 44 10.9	+0.2
VTN	Vitineika	0.70	116	P	Pg	19 44 12.1	+0.1
PDO	Prodromos	0.73	59	P	Pg	19 44 12.5	+0.1
PDO				S	Sb	19 44 22.7	-0.2
PDO	Prodromos	0.73	59	P	Pg	19 44 12.5	+0.1
PDO				AML	AML	19 44 30.4	
	comp=N,8418µm,0.3s						
PDO				AML	AML	19 44 30.8	
	comp=E,5444µm,0.3s						
RLS	Riolos of Patr	0.87	101	P	Pg	19 44 14.3	-0.8
RLS				S	Sb	19 44 27.2	+0.3
	comp=E,1µm,0.6s						
RLS	Riolos of Patr	0.87	101	P	Pg	19 44 14.7	-0.4
RLS				AML	AML	19 44 30.4	
	comp=E,2719µm,0.7s						
RLS				AML	AML	19 44 37.2	
	comp=N,2400µm,0.4s						
PVO	Paravola	0.98	66	P	Pg	19 44 17.2	+0.1
PVO				S	Sn	19 44 31.4	-0.2
	comp=N,3µm,0.4s						
PVO	Paravola	0.98	66	P	Pg	19 44 17.3	+0.1
PVO				AML	AML	19 44 38.6	
	comp=E,5663µm,0.4s						
PVO				AML	AML	19 44 39.6	
	comp=N,5247µm,0.4s						
DRO	Drossia	1.08	104	P	Pb	19 44 18.2	-0.8
DRO				S	Sn	19 44 33.9	-0.2
	comp=N,2µm,0.4s						
DRO	Drossia	1.08	104	P	Pb	19 44 17.9	-1.0
DRO				S	Sn	19 44 34.0	-0.2
DRO				AML	AML	19 44 39.5	
	comp=N,4144µm,0.4s						
DRO				AML	AML	19 44 47.8	
	comp=E,5635µm,0.5s						
UPR	University Cam	1.11	87	P	Pg	19 44 19.6	0.0
UPR	University Cam	1.11	87	P	Pg	19 44 20.0	+0.4
LAKA	Lakka	1.26	89	P	Pn	19 44 21.5	-0.2
LAKA				S	Sg	19 44 38.9	+0.1
	comp=E,668nm,0.6s						
LAKA	Lakka	1.26	89	P	Pn	19 44 21.4	-0.2
LAKA				AML	AML	19 44 49.0	
	comp=E,1614µm,0.5s						
LAKA				AML	AML	19 44 52.9	
	comp=N,1709µm,0.7s						
AMT	Artemida-Makis	1.26	123	P	Pn	19 44 20.6	-1.1
AMT				S	Sb	19 44 38.0	-0.1
	comp=N,1µm,0.7s						
AMT	Artemida-Makis	1.26	123	P	Pn	19 44 21.7	0.0
AMT				AML	AML	19 44 47.6	
	comp=E,1882µm,0.8s						
AMT				AML	AML	19 44 58.6	
	comp=N,2532µm,0.6s						
ANX	Ano Chora	1.26	73	P	Pn	19 44 21.6	-0.2
ANX				S	Sn	19 44 38.9	+0.1
	comp=N,1µm,0.6s						
ANX	Ano Chora	1.26	73	P	Pn	19 44 21.7	-0.2
ANX				AML	AML	19 44 46.2	
	comp=N,3154µm,0.5s						
ANX				AML	AML	19 44 54.7	
	comp=E,3051µm,0.6s						
IGT	Igoumenitsa	1.30	358	ePg	Pg	19 44 25.1	+1.7
IGT				eSg	Sg	19 44 42.1	+1.7
IGT	Igoumenitsa	1.30	358	P	Pg	19 44 23.1	-0.3
IGT				AML	AML	19 44 48.6	
	comp=E,1414µm,0.3s						
IGT				AML	AML	19 44 48.8	
	comp=N,1004µm,0.4s						
EVR	Evrytania	1.31	58	P	Pn	19 44 22.4	-0.1
EVR				S	Sg	19 44 40.7	+0.1
	comp=N,552nm,0.6s						
EVR	Evrytania	1.31	58	P	Pn	19 44 22.4	-0.1
EVR				AML	AML	19 44 52.5	
	comp=E,1091µm,0.7s						
EVR				AML	AML	19 44 54.3	
	comp=N,1125µm,0.5s						
SERG	Sergoula	1.33	81	P	Pn	19 44 21.9	-0.8
SERG				S	Sn	19 44 40.5	+0.2
	comp=N,832nm,0.3s						
SERG	Sergoula	1.33	81	P	Pn	19 44 22.4	-0.2
TRIZ	Trizonia	1.34	84	P	Pn	19 44 22.5	-0.2
TRIZ				S	Sn	19 44 40.7	+0.3
	comp=N,1µm,0.4s						
TRIZ	Trizonia	1.34	84	P	Pn	19 44 22.6	-0.1
ALIK	Aliki, Aigiali	1.36	88	P	Pn	19 44 23.2	+0.1
ALIK				S	Sn	19 44 40.7	-0.3
KALE	Kalithea	1.39	83	P	Pn	19 44 23.0	-0.6

KALE				S	Sn	19 44 41.8	-0.1
	comp=N,650nm,0.5s						
KALE	Kalithea	1.39	83	P	Pn	19 44 23.6	0.0
KALE				AML	AML	19 44 54.6	
	comp=N,1616μm,0.6s						
KALE				AML	AML	19 44 57.3	
	comp=E,1183μm,0.4s						
KLV	Kalavryta, Ach	1.41	97	P	Pn	19 44 23.6	-0.2
KLV				S	Sn	19 44 41.6	-0.6
	comp=E,378nm,0.6s						
KLV	Kalavryta, Ach	1.41	97	P	Pn	19 44 23.8	0.0
KLV				AML	AML	19 44 50.6	
	comp=N,754μm,0.5s						
KLV				AML	AML	19 45 01.0	
	comp=E,635μm,0.6s						
JAN	Janina	1.47	14	P	Pg	19 44 27.1	+0.5
JAN				AML	AML	19 44 52.1	
	comp=E,1028μm,0.4s						
JAN				AML	AML	19 44 58.9	
	comp=N,829μm,0.4s						
KEK	Kerkira	1.55	343	P	Pb	19 44 26.8	-0.2
KASA	Kassiopi	1.56	347	P	Pb	19 44 27.3	+0.2
MAKR	Makrakomi, Fth	1.58	60	P	Pb	19 44 27.5	+0.1
MAKR				AML	AML	19 45 01.1	
	comp=N,1203μm,0.4s						
MAKR				AML	AML	19 45 07.4	
	comp=E,1317μm,0.5s						
ITM	Ithomi	1.61	130	P	Pb	19 44 27.5	-0.4
ITM				AML	AML	19 44 58.4	
	comp=E,866μm,0.4s						
ITM				AML	AML	19 45 05.4	
	comp=N,716μm,0.9s						
PYL	PYLOS	1.71	140	P	Pb	19 44 28.7	-1.0
AGG	Agios Georgios	1.72	62	P	Pb	19 44 30.1	+0.2
AGG				AML	AML	19 45 01.9	
	comp=E,885μm,0.7s						
AGG				AML	AML	19 45 07.7	
	comp=N,795μm,0.5s						
VLX	Vlachokerasia	1.80	118	P	Pb	19 44 31.8	+0.6
THL	Klokotos Trika	1.84	43	P	Pb	19 44 32.1	+0.1
AXAR	Agios Charalam	1.86	72	P	Pb	19 44 32.5	+0.2
AXAR				AML	AML	19 45 10.4	
	comp=N,2002μm,0.5s						
AXAR				AML	AML	19 45 13.1	
	comp=E,1768μm,0.6s						
KPRO	Kipourio	1.89	24	P	Pb	19 44 33.3	+0.6
PROD	Prodromos	1.98	88	P	Pb	19 44 34.0	-0.3
PROD				AML	AML	19 45 07.6	
	comp=E,850μm,0.5s						
PROD				AML	AML	19 45 16.3	
	comp=N,690μm,0.5s						
LTK	Loutraki	2.05	95	P	Pb	19 44 34.7	-0.7
LOUT	Loutraki	2.06	96	P	Pb	19 44 34.9	-0.6
LKR	Lokris	2.10	78	P	Pb	19 44 35.7	-0.5
VIL2	Platees	2.27	89	P	Pb	19 44 38.4	-0.8
KRND	KRANIDI	2.35	110	P	Pb	19 44 39.3	-1.2
DID	Didima	2.37	107	P	Pn	19 44 38.7	+1.7
SCTE	Santa Cesarea	2.37	322	P	Pn	19 44 38.1	+1.1
NEO	Neokhori	2.47	63	P	Pb	19 44 41.0	-1.6
XOR	Xorichti	2.47	62	P	Pb	19 44 40.9	-1.8
VLI	Veliai	2.53	126	P	Pn	19 44 40.3	+1.1
MRKA	Markates	2.56	78	P	Pn	19 44 41.0	+1.4
SKIA	Skiathos	2.59	68	P	Pn	19 44 42.2	+2.2
ATHU	Athens Univers	2.69	94	P	Pn	19 44 43.4	+2.0
VLY	Voula,Athens	2.72	97	P	Pn	19 44 43.6	+1.8
PTL	Penteli	2.75	93	P	Pn	19 44 43.8	+1.6
AOS	Alonnisos	2.89	70	P	Pn	19 44 45.8	+1.7
OHR	Ohrid	2.90	6	iPn	Pb	19 44 48.2	-1.8
TIP	Timpagrande	2.99	290	P	Pn	19 44 47.2	+1.6
TIP	Timpagrande	2.99	290	⇓P	Pn	19 44 46.9	+1.3
TIR	Tirane	3.14	353	ePn	Pn	19 44 49.3	+1.7
TIR				eSn	Sn	19 45 26.0	+1.0
TIR	Tirane	3.14	353	⇑P	Pn	19 44 49.1	+1.5
TIR				⇑S	Sb	19 45 29.6	-2.7
KARY	Karystos	3.20	92	P	Pn	19 44 50.1	+1.7
VAY	Valandovo	3.52	28	iPn	Pb	19 44 57.1	-3.4
STIP	Stip	3.73	21	iPn	Pb	19 45 00.4	-3.7
MATE	Matera	3.74	311	⇓P	Pn	19 44 57.0	+1.3
SRS	Serrai	3.80	40	ePn	Pn	19 45 00.1	+3.4
ULC	Ulcinj	3.83	347	ePn	Pn	19 44 57.4	+0.3
ULC				eSn	Sn	19 45 44.0	+1.9
DRME	Dracevica, Mon	4.06	347	ePn	Pn	19 45 01.0	+0.8
DRME				eSn	Sn	19 45 49.3	+1.6
PDG	Podgorica	4.29	349	⇓P	Pn	19 45 03.7	+0.4
PDG				⇓S	Sn	19 45 55.2	+2.0
TTG	Podgorica	4.29	349	ePn	Pn	19 45 04.2	+0.9
TTG				eSn	Sn	19 45 54.4	+1.2
PVY	Plav	4.38	356	ePn	Pn	19 45 05.6	+0.9
PVY				eSn	Sn	19 45 57.5	+1.9
HCY	Herceg Novi	4.46	342	ePn	Pn	19 45 05.6	-0.1
HCY				eSn	Sn	19 45 58.8	+1.4
CEME	Cevo	4.46	346	ePn	Pn	19 45 05.8	+0.1
CEME				eSn	Sn	19 45 58.0	+0.4
BOSS	Bosilegrad	4.55	20	ePn	Pn	19 45 09.5	+2.5
IVA	Berane	4.66	356	ePn	Pn	19 45 09.7	+1.2
IVA				iSn	Sn	19 46 04.2	+1.7
NKME	Niksic	4.67	347	ePn	Pn	19 45 09.3	+0.7
NKME				iSn	Sn	19 46 03.7	+1.1
KOME	Kolasin	4.67	352	ePn	Pn	19 45 09.6	+1.0
KOME				iSn	Sn	19 46 04.5	+1.8
NKY	Niksic	4.70	347	ePn	Pn	19 45 09.8	+0.7
NKY				eSn	Sn	19 46 05.3	+1.7
BARS	Barje	4.71	13	ePn	Pn	19 45 11.1	+1.9
TREB	Trebinje	4.75	342	ePn	Pn	19 45 09.8	+0.2
TREB				eSn	Sn	19 46 02.7	-1.9
BRY	Bratogost	4.88	344	ePn	Pn	19 45 11.7	+0.1
BRY				eSn	Sn	19 46 08.8	+0.8
VTS	Vitosha	4.90	25	⇓P	Pn	19 45 14.3	+2.4
VTS				⇓S	Sn	19 46 09.0	+0.6
SJES	Sjenica	5.04	357	ePn	Pn	19 45 15.0	+1.2
SJES				eSn	Sn	19 46 11.6	-0.3
UPM	Unac-Piva	5.10	348	ePn	Pn	19 45 15.5	+0.9
UPM				eSn	Sn	19 46 14.6	+1.1
PLE	Pljevlja	5.15	352	ePn	Pn	19 45 15.8	+0.5
PLE				eSn	Sn	19 46 16.0	+1.2
IVAS	Ivanjica	5.35	358	ePn	Pn	19 45 18.2	+0.2
IVAS				eSn	Sn	19 46 17.5	-2.0
BOVS	Bovan	5.50	10	ePn	Pn	19 45 20.7	+0.8
GRUS	Gruza	5.66	2	ePn	Pn	19 45 23.0	+0.8
BBLS	Lazići	5.68	353	ePn	Pn	19 45 23.3	+0.7
BBLS				eSn	Sn	19 46 26.4	-1.3
ZAGS	Zajecar	5.75	13	ePn	Pn	19 45 25.0	+1.5
DIVS	Divibare	5.87	357	ePn	Pn	19 45 26.0	+0.8
DIVS				eSn	Sn	19 46 30.4	-2.1
TRUS	Trudelj	5.99	0	ePn	Pn	19 45 27.6	+0.9
TRUS				eSn	Sn	19 46 33.7	-1.5
ARR	Arges	7.81	23	⇑P	Pn	19 46 00.0	+8.3
MLR	Muntele Rosu	8.36	28	Pn	Pn	19 45 57.0	-2.3
	comp=N,0.3nm,0.3s,baz=158,slow=19,SNR=4.4						
SOKA	Soboth	9.32	337	iPn	Pn	19 46 12.3	-0.2
	comp=N,2.8nm,0.4s						
SOKA				eSn	Sn	19 47 51.9	-5.4
	comp=N,1.4nm,0.5s						
OBKA	Obir	9.33	334	iPn	Pn	19 46 13.7	+1.0
	comp=N,2.3nm,0.2s						
OBKA				eSn	Sn	19 47 55.4	-2.1
	comp=N,1.3nm,0.3s						
KBA	Koelnbreinsper	10.25	332	iSn	Sn	19 48 15.6	-4.5
	comp=N,1.8nm,0.5s						
MOA	Molln	10.61	337	iPn	Pn	19 46 31.2	+1.2
	comp=N,1.5nm,0.3s						
MOA				iSn	Sn	19 48 24.4	-4.2
	comp=N,0.8nm,0.3s						
GERES	GERESS Array B	11.66	338	Pn	Pn	19 46 45.5	+0.9
	comp=N,0.2nm,0.3s,baz=158,slow=14,SNR=6.1						
HFS	Hagfors	22.34	351	P	P	19 48 55.4	-0.2
	comp=N,7.4nm,1.1s,baz=167,slow=15,SNR=6.1						
FINES	FINESS Array B	23.51	7	P	P	19 49 08.2	+0.3
	comp=N,0.9nm,0.7s,baz=183,slow=15,SNR=4.0						
TORD	Torodi Ar. Bea	30.00	219	P	P	19 50 07.8	+0.9
	comp=N,0.2nm,0.5s,baz=29,slow=9.4,SNR=2.6						
KURBB	Kurchatov Arra	42.29	54	P	P	19 51 51.0	-0.5
	comp=N,0.6nm,0.6s,baz=279,slow=8.3,SNR=6.0						
MKAR	Makanchi Array	45.37	58	P	P	19 52 16.2	-0.2
	comp=N,0.9nm,0.5s,baz=274,slow=7.5,SNR=19						
ZALV	Zalesovo Beam	45.74	48	P	P	19 52 19.1	0.0
	comp=N,0.8nm,0.5s,baz=273,slow=8.6,SNR=4.1						

*ISU **20** 19:49:43.0,39.80N×71.30E,h5km*
*KRNET **20** 19:49:46.3±0.1,40.01N×71.19E,h10km,mb2.4*
*SOME **20** 19:49:48.0,40.07N×71.20E,h10km*
*NNC **20** 19:49:50.5±5.4,39.99N×71.34E,h0km,mb2.8,mpv3.0,*
Error ellipse: s-maj=38.4km s-min=21.9km az=0.0
ISC 20 19:49:44.3±1.7,39.93N±0.08×71.25E±0.03,h9km±15km,
n19,σ1§12/32,9C-6D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	Batken	0.36	292	⇑iP	Pg	19 49 51.7	+0.2
	baz=79						
BTK				⇑iS	Sg	19 49 56.6	+0.4
	baz=79						
BTK	Batken	0.36	292	eP	Pg	19 49 51.2	-0.3
BTK				eS	Sg	19 49 56.7	+0.5
ARSB	Arslanbob	1.92	43	⇓iP	Pg	19 50 21.7	+0.6
	baz=46						
ARSB				⇓iS	Sg	19 50 47.6	+1.6
	baz=46						
ARSB	Arslanbob	1.92	43	eP	Pg	19 50 21.1	0.0
ARSB				eS	Sg	19 50 47.3	+1.3
ARK	Arkit	1.95	16	⇑iP	Pg	19 50 21.3	-0.4
	baz=19						
ARK				⇑iS	Sg	19 50 46.4	-0.5
	baz=19						
ARK	Arkit	1.95	16	eP	Pg	19 50 21.2	-0.4
ARK				eS	Sg	19 50 46.0	-0.9
IUG	Iuzhnay	2.40	338	eP	Pg	19 50 30.2	-0.2
	2.0nm,0.1s						
IUG				eS	Sg	19 51 00.4	-1.2
	23nm,0.7s						
JBG	Jabagly	2.55	348	Pg	Pg	19 50 35.6	+2.3
	2.5nm,0.1s						
JBG				Lg	Lg	19 51 06.3	
	10nm,0.2s						
AML	Almayashu	2.88	39	⇑iP	Pb	19 50 35.4	-0.6
	baz=41						
AML				⇑iS	Sb	19 51 12.8	+1.3
	baz=41						
DZA	Taraz	2.96	1	Pg	Pg	19 50 41.9	+0.8
	16nm,0.1s						
DZA				Lg	Lg	19 51 16.9	
	37nm,0.3s						
ARLS	Aral	3.02	49	⇑iP	Pb	19 50 37.4	-1.1
	baz=51						
ARLS				⇑iS	Sb	19 51 15.1	-0.5
	baz=51						
MRKS	Merke	3.18	27	eP	Pg	19 50 44.5	-0.9
	1.1nm,0.1s						
MRKS				eS	Sg	19 51 24.9	-1.7
	3.4nm,0.3s						
MRKS	Merke	3.18	27	Pg	Pg	19 50 46.3	+1.0
	1.1nm,0.1s						
MRKS				Lg	Lg	19 51 24.6	
	4.2nm,0.3s						
KK31	Karatay Array	3.22	350	⇑Pn	Pb	19 50 42.5	+0.8
	0.3nm,0.3s,baz=173,slow=18,SNR=4.4						
KK31				Sn	Sb	19 51 23.2	+2.1
	1.1nm,0.3s,baz=172,slow=31,SNR=9.7						
BRLS	Borolday	3.28	342	eP	Pb	19 50 42.8	+0.1
BRLS				eS	Sb	19 51 21.9	-0.8
BRLS	Borolday	3.28	342	Pg	Pg	19 50 44.8	-2.4
	0.4nm,0.1s						
BRLS				Lg	Lg	19 51 22.0	
	6.0nm,0.3s						
UCH	Uchtor	3.37	46	⇓iP	Pb	19 50 43.3	-1.2
	baz=48						
UCH				⇓iS	Sb	19 51 26.1	+0.3
	baz=48						
AAK	Ala-Archa	3.65	41	⇓Pg	Pg	19 50 54.8	+0.5
	1.9nm,0.9s						
AAK				⇓Lg	Lg	19 51 41.9	
	3.0nm,1.1s						
SGDS	Sogindy	4.34	35	Pg	Pg	19 51 07.9	+0.5
	2.5nm,0.5s						
SGDS				Lg	Lg	19 52 01.6	
	1.5nm,0.5s						

*IDC **20** 19:56:29.9±1.4,24.26N×121.06E,h0km,mb3.5/3,*
mb1 3.8/4,mb1mx3.3/63,mbtmp3.7/4,ML3.5/1,Error
ellipse: s-maj=68.4km s-min=24.6km az=66.0
*TAP **20** 19:56:40.1,24.83N×121.94E,h102km,ML4.1,B*
*JMA **20** 19:56:40.0±0.2,24.78N×121.91E,h102km±2km,M2.9*
ISC 20 19:56:40.3±0.8,24.83N±0.03×121.93E±0.02,h104km±4km,
n126,σ0§71/236,mb3.5/3,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NTC	Toucheng	0.09	283	eP	Pn	19 56 54.6	0.0
	baz=283						
NTC				eS	Sn	19 57 04.9	-0.5
	baz=283						
TIPB	Shuangxi	0.17	326	P	Pn	19 56 54.7	-0.2
	baz=322						
TIPB				S	Sn	19 57 04.7	-1.1
	baz=322						
ILA	Ilan	0.18	248	P	Pn	19 56 55.0	+0.1
	baz=250						
ILA				S	Sn	19 57 05.8	0.0
	baz=250						
TWB1	Santiao Chiao	0.18	17	P	Pn	19 56 54.6	-0.3
	baz=15						
TWB1				S	Sn	19 57 04.7	-1.0
	baz=15						
TWC	Suao	0.24	198	iP	Pn	19 56 55.1	+0.1
	baz=200						
TWC				S	Sn	19 57 05.6	-0.4
	baz=200						
TWE	Neicheng	0.26	245	P	Pn	19 56 55.4	+0.3
	baz=245						
TWE				S	Sn	19 57 06.5	+0.3
	baz=245						
NWF	Wu-fen Shan	0.27	330	eP	Pn	19 56 55.2	-0.2
	baz=323						
NWF				S	Sn	19 57 05.6	-0.9
	baz=323						
WFSB	Wu-fen Shan	0.27	330	iP	Pn	19 56 55.1	-0.1
	baz=323						
WFSB				S	Sn	19 57 05.8	-0.6
	baz=323						
SLBB	Yuanshan	0.28	253	P	Pn	19 56 55.4	+0.2
	baz=255						
SLBB				S	Sn	19 57 06.9	+0.4
	baz=255						
EOS1	EOS1	0.34	147	P	Pn	19 56 55.7	+0.3
	baz=149						
EOS1				eS	Sn	19 57 07.2	+0.4
	baz=149						
TWA	Mucha	0.35	295	P	Pn	19 56 55.5	-0.1
	baz=294						
TWA				S	Sn	19 57 06.3	-0.6
	baz=294						
ENTT	Nioudou	0.38	240	iP	Pn	19 56 56.3	+0.5
	baz=252						
ENTT				S	Sn	19 57 07.8	+0.5
	baz=252						
NHDH	Xindian Distri	0.39	289	P	Pn	19 56 55.8	+0.1
	baz=289						
NHDH				S	Sn	19 57 07.4	0.0
	baz=289						
NWLT	Wulai	0.39	262	iP	Pn	19 56 55.5	-0.3
	baz=263						
NWLT				S	Sn	19 57 07.0	-0.4
	baz=263						
TAP1	Taipei	0.42	299	eP	Pn	19 56 56.4	+0.5
	baz=300						
TAP1				eS	Sn	19 57 07.5	-0.1
	baz=300						
TAP	Taipei	0.43	298	P	Pn	19 56 56.3	+0.3
	baz=300						
TAP				eS	Sn	19 57 07.3	-0.5
	baz=300						
ENA	Nanau	0.44	203	P	Pn	19 56 56.3	+0.2
	baz=198						
ENA				S	Sn	19 57 08.7	+0.8
	baz=198						
NDT	Datong Townshi	0.44	239	iP	Pn	19 56 56.4	+0.3
	baz=251						
NDT				S	Sn	19 57 08.3	+0.3
	baz=251						
YM01	YM01	0.45	314	eP	Pn	19 56 56.1	-0.1
	baz=313						
YM01				eS	Sn	19 57 07.9	-0.2
	baz=313						
YM11	YM11	0.46	316	P	Pn	19 56 56.0	-0.3
	baz=314						
YM11				eS	Sn	19 57 08.7	+0.4
	baz=314						

YM10	YM10	0.46	314	eP	Pn	19 56 56.1	-0.2
	baz=312						
YM10				eS	Sn	19 57 08.1	-0.2
	baz=312						
YM08	YM08	0.47	319	iP	Pn	19 56 55.9	-0.4
	baz=321						
YM04	YM04	0.48	312	iP	Pn	19 56 56.1	-0.2
	baz=310						
YM04				S	Sn	19 57 07.7	-0.7
	baz=310						
ANP	Anpu	0.51	313	P	Pn	19 56 56.3	-0.4
	baz=312						
ANP				S	Sn	19 57 08.2	-0.8
	baz=312						
YHNB	Yeheng	0.53	252	eP	Pn	19 56 56.5	-0.3
	baz=245						
YHNB				S	Sn	19 57 08.6	-0.5
	baz=245						
TWS1	Kuangyinshan	0.54	300	P	Pn	19 56 57.1	+0.4
	baz=299						
TWS1				S	Sn	19 57 09.6	+0.6
	baz=299						
NSK	Sanguang	0.54	253	iP	Pn	19 56 56.7	-0.2
	baz=246						
NSK				iS	Sn	19 57 09.0	-0.3
	baz=246						
NTST	Danshui	0.55	307	P	Pn	19 56 56.9	+0.1
	baz=306						
NTST				S	Sn	19 57 10.2	+1.1
	baz=306						
WLTB	Daxi	0.61	272	iP	Pn	19 56 57.6	+0.3
	baz=263						
WLTB				S	Sn	19 57 10.8	+0.7
	baz=263						
NNS	Nan Shan	0.64	232	P	Pn	19 56 57.9	+0.2
	baz=233						
NNS				eS	Sn	19 57 11.7	+0.9
	baz=233						
NNSB	Datong	0.64	231	iP	Pn	19 56 58.0	+0.2
	baz=233						
NNSB				S	Sn	19 57 10.7	-0.1
	baz=233						
NNSH	Datong	0.64	231	iP	Pn	19 56 57.9	+0.2
	baz=239						
NNSH				S	Sn	19 57 10.0	-0.8
	baz=239						
NCU	National Centr	0.69	282	P	Pn	19 56 58.2	+0.3
	baz=281						
NCU				S	Sn	19 57 11.4	+0.2
	baz=281						
NCUH	Zhongli	0.69	281	iP	Pn	19 56 58.1	+0.2
	baz=281						
NCUH				S	Sn	19 57 11.5	+0.3
	baz=281						
NACB	Ninganchiao	0.72	205	eP	Pn	19 56 57.6	-0.7
	baz=215						
NACB				S	Sn	19 57 12.1	+0.3
	baz=215						
ETLH	Xiulin Townshi	0.75	213	P	Pn	19 56 58.4	-0.2
	baz=222						
ETLH				S	Sn	19 57 12.2	-0.1
	baz=222						
PCYT	Pengchaiyu	0.80	9	eP	Pn	19 56 58.9	-0.1
	baz=3.0						
TWD	Chiawan	0.81	202	P	Pn	19 56 58.6	-0.5
	baz=212						
TWD				S	Sn	19 57 12.6	-0.5
	baz=212						
LIOB	Emei	0.85	257	eP	Pn	19 56 59.5	0.0
	baz=251						
LIOB				S	Sn	19 57 13.5	-0.5
	baz=251						
SBCB	Hsinchu	0.86	267	P	Pn	19 56 59.8	+0.3
	baz=261						
SBCB				S	Sn	19 57 14.6	+0.6
	baz=261						
NSTT	Nanjuang	0.87	257	P	Pn	19 56 59.7	0.0
	baz=251						
NSTT				S	Sn	19 57 13.1	-1.1
	baz=251						
HSN	Hsinchu	0.87	268	P	Pn	19 56 59.5	-0.2
	baz=262						
HSN				S	Sn	19 57 13.9	-0.4
	baz=262						
TWT	Tachien	0.90	230	P	Pn	19 57 01.0	+0.8
	baz=231						
TWT				S	Sn	19 57 15.6	+0.5
	baz=231						
HWA	Hwalien	0.90	199	P	Pn	19 56 59.8	-0.2
	baz=191						
HWA				eS	Sn	19 57 15.4	+0.6
	baz=191						
TDCB	Techi	0.91	231	eP	Pn	19 57 00.9	+0.7
	baz=232						
TDCB				eS	Sn	19 57 15.8	+0.6
	baz=232						
WHF	Hehuan Shan	0.92	222	P	Pn	19 57 00.6	0.0
	baz=217						
WHF				S	Sn	19 57 15.7	-0.1
	baz=217						
ENLB	Shoufeng	0.97	198	eP	Pn	19 57 00.3	-0.4
	baz=190						
ENLB				eS	Sn	19 57 16.4	+0.3
	baz=190						
JYNG	Yonagunijimaku	1.00	112	P	Pn	19 57 00.8	-0.2
JYNG				S	Sn	19 57 16.0	-0.6
CHGB	Renai	1.03	222	P	Pn	19 57 02.2	+0.6
	baz=218						
CHGB				S	Sn	19 57 18.2	+0.5
	baz=218						
YOJ	Yonaguni jima	1.05	110	eP	Pn	19 57 01.6	+0.1
	baz=114						
YOJ				S	Sn	19 57 17.1	-0.4
	baz=114						
YOJ	Yonaguni jima	1.05	110	P	Pn	19 57 01.4	-0.1
YOJ				eS	Sn	19 57 16.9	-0.6
WHP	Taichung City	1.05	238	P	Pn	19 57 02.2	+0.6
	baz=240						
WHP				S	Sn	19 57 17.9	+0.1
	baz=240						
NMLH	Miaoli	1.08	254	P	Pn	19 57 02.1	+0.2
	baz=255						
NMLH				S	Sn	19 57 17.9	-0.1
	baz=255						
ESL	Shilin	1.11	204	iP	Pn	19 57 01.3	-0.9
	baz=205						
ESL				S	Sn	19 57 17.4	-1.4
	baz=205						
OWD	Renai	1.11	218	P	Pn	19 57 02.6	+0.2
	baz=217						
OWD				S	Sn	19 57 18.4	-0.7
	baz=217						
NSY	Sanyi	1.14	249	P	Pn	19 57 03.1	+0.5
	baz=249						
NSY				S	Sn	19 57 19.5	+0.2
	baz=249						
TWQ1	Liyutan	1.16	246	P	Pn	19 57 02.9	+0.2
	baz=246						
TWQ1				S	Sn	19 57 19.6	-0.1
	baz=246						
PTSB	Yuanli	1.18	251	eP	Pn	19 57 02.6	-0.4
	baz=252						
PTSB				S	Sn	19 57 19.6	-0.5
	baz=252						
DPDB	Guoxing	1.21	229	P	Pn	19 57 04.1	+0.7
	baz=237						
DPDB				eS	Sn	19 57 21.3	+0.4
	baz=237						
EGFH	Guangfu	1.25	202	eP	Pn	19 57 03.3	-0.5
	baz=207						
EGFH				eS	Sn	19 57 19.5	-2.0
	baz=207						
WDJ	Dajia District	1.27	248	P	Pn	19 57 04.3	+0.3
	baz=243						
WDJ				eS	Sn	19 57 21.9	0.0
	baz=243						
VWDT	VWDT	1.29	214	P	Pn	19 57 04.9	+0.6
	baz=212						
VWDT				S	Sn	19 57 22.4	0.0
	baz=212						
TCU	Taichung	1.33	239	P	Pn	19 57 05.2	+0.5
	baz=240						
TCU				S	Sn	19 57 23.7	+0.5
	baz=240						
SMLT	Sun Moon Lake	1.33	225	P	Pn	19 57 05.5	+0.6
	baz=233						
SMLT				S	Sn	19 57 24.4	+0.9
	baz=233						

TYC	Yuchr	1.35	227	P	Pn	19 57 05.4	+0.5
	baz=236						
TYC				S	Sn	19 57 24.1	+0.6
	baz=236						
SSLB	Suanglung	1.37	221	P	Pn	19 57 05.1	-0.1
	baz=231						
SSLB				S	Sn	19 57 24.6	+0.5
	baz=231						
HGSD	Ruisui	1.41	199	P	Pn	19 57 05.6	-0.1
	baz=201						
HGSD				eS	Sn	19 57 24.6	-0.3
	baz=201						
EHY	Hungye	1.43	203	P	Pn	19 57 04.9	-1.0
	baz=196						
EHY				S	Sn	19 57 24.6	-0.8
	baz=196						
WCHH	Zhanghua	1.46	239	P	Pn	19 57 06.7	+0.4
	baz=240						
WCHH				S	Sn	19 57 25.8	-0.1
	baz=240						
WNT	Mingjian	1.48	230	iP	Pn	19 57 07.3	+0.8
	baz=240						
WNT				S	Sn	19 57 27.6	+1.1
	baz=240						
WJS	Zhushan	1.49	228	P	Pn	19 57 07.7	+1.1
	baz=238						
WJS				S	Sn	19 57 26.8	+0.2
	baz=238						
WHYT	Xinyi Township	1.50	221	P	Pn	19 57 07.0	+0.2
	baz=230						
WHYT				S	Sn	19 57 28.3	+1.4
	baz=230						
YULB	Yu-li	1.55	202	eP	Pn	19 57 05.6	-1.7
	baz=197						
YULB				eS	Sn	19 57 25.9	-2.0
	baz=197						
TWF1	Yuli	1.58	202	P	Pn	19 57 07.6	-0.2
	baz=203						
TWF1				S	Sn	19 57 26.6	-2.1
	baz=203						
YUS	Yu-Shan	1.61	214	P	Pn	19 57 09.6	+1.0
	baz=216						
YUS				S	Sn	19 57 31.9	+1.9
	baz=216						
ALS	Alishan	1.67	218	P	Pn	19 57 10.1	+0.9
	baz=228						
ALS				S	Sn	19 57 32.5	+1.4
	baz=228						
CHN5	Tsauling	1.68	223	P	Pn	19 57 09.7	+0.7
	baz=225						
CHN5				eS	Sn	19 57 31.3	+0.3
	baz=225						
WGK	Gukeng	1.69	228	P	Pn	19 57 10.0	+0.9
	baz=238						
WGK				S	Sn	19 57 31.8	+0.7
	baz=238						
WDLH	Douliu	1.71	228	P	Pn	19 57 10.1	+0.8
	baz=238						
WDLH				S	Sn	19 57 32.2	+0.8
	baz=238						
RLNB	Erlin	1.71	237	P	Pn	19 57 09.0	-0.4
	baz=238						
RLNB				S	Sn	19 57 31.4	-0.1
	baz=238						
IRIF	Iriomote-Funau	1.71	106	P	Pn	19 57 09.5	+0.1
IRIF				eS	Sn	19 57 30.8	-0.7
FULB	Fuli	1.73	200	eP	Pn	19 57 09.5	-0.1
	baz=208						
FULB				S	Sn	19 57 31.6	-0.3
	baz=208						
WTCT	Ta-ch'eng	1.79	238	eS	Sn	19 57 33.6	+0.5
	baz=238						
CHKT	Chengkung	1.80	197	P	Pn	19 57 09.8	-0.7
	baz=199						
CHKT				S	Sn	19 57 32.6	-0.9
	baz=199						
ELDTW	Lidau	1.84	207	P	Pn	19 57 10.4	-0.7
	baz=202						
ELDTW				eS	Sn	19 57 33.7	-0.8
	baz=202						
CHN2	Minshiung	1.86	226	eP	Pn	19 57 11.7	+0.5
	baz=236						
CHN2				S	Sn	19 57 35.4	+0.7
	baz=236						
HATJ	Hateruma jima	1.88	114	P	Pn	19 57 11.8	+0.4
HATJ				eS	Sn	19 57 35.5	+0.3
CHY	Chiayi	1.91	226	P	Pn	19 57 12.6	+0.7
	baz=236						
CHY				eS	Sn	19 57 36.2	+0.2
	baz=236						
CHN4	Tsaushan	1.92	220	P	Pn	19 57 12.3	+0.4
	baz=222						
CHN4				S	Sn	19 57 37.5	+1.4
	baz=222						
TPUB	Ta-pu	1.94	218	eP	Pn	19 57 12.8	+0.5
	baz=221						
TPUB				S	Sn	19 57 36.4	-0.2
	baz=221						
WSF	Szhu	1.96	233	P	Pn	19 57 12.5	0.0
	baz=234						
WSF				S	Sn	19 57 36.7	-0.4
	baz=234						
JKRS	Kuro-shima	1.98	107	P	Pn	19 57 13.2	+0.4
JKRS				S	Sn	19 57 37.3	-0.3
WTP	Ta-pu	1.99	218	P	Pn	19 57 12.8	-0.1
	baz=220						
WTP				S	Sn	19 57 37.9	+0.1
	baz=220						
WLGB	Puzi	2.01	228	eP	Pn	19 57 13.5	+0.3
	baz=236						
WLGB				eS	Sn	19 57 39.2	+1.0
	baz=236						
PTTC	Pingtan	2.07	289	eP	Pn	19 57 13.1	-0.7
	baz=288						
PTTC				eS	Sn	19 57 37.9	-1.6
	baz=288						
JIJ	Ishigaki jima	2.07	103	P	Pn	19 57 13.9	0.0
JIJ				S	Sn	19 57 38.4	-1.2
SNST	Tainan City	2.07	219	eP	Pn	19 57 13.9	-0.1
	baz=222						
SNST				S	Sn	19 57 39.9	+0.2
	baz=222						
CHN1	Nanshi	2.08	218	P	Pn	19 57 14.0	-0.1
	baz=221						
CHN1				S	Sn	19 57 40.0	+0.1
	baz=221						
SGST	Jiashian	2.13	216	eP	Pn	19 57 15.2	+0.4
	baz=225						
SGST				S	Sn	19 57 41.1	0.0
	baz=225						
TWG	Pinlang	2.15	202	P	Pn	19 57 14.0	-1.0
	baz=196						
TWG				S	Sn	19 57 40.0	-1.5
	baz=196						
TWGBT	Beinan	2.15	201	eP	Pn	19 57 14.2	-0.8
	baz=196						
TWGBT				S	Sn	19 57 40.5	-1.1
	baz=196						
TWH	Lutao	2.15	191	eS	Sn	19 57 40.2	-1.4
	baz=187						
CHN8	Yiju	2.16	227	P	Pn	19 57 16.0	+0.9
	baz=237						
CHN8				S	Sn	19 57 41.7	+0.1
	baz=237						
SLGT	Liugui	2.18	213	P	Pn	19 57 15.8	+0.5
	baz=224						
SLGT				S	Sn	19 57 42.5	+0.4
	baz=224						
JISG	Ishigakijimahi	2.18	96	P	Pn	19 57 15.7	+0.4
JISG				S	Sn	19 57 41.4	-0.7
TTN	Taitung	2.19	199	S	Sn	19 57 41.1	-1.3
	baz=195						
MATB	Ma-tsu	2.22	307	eP	Pn	19 57 15.2	-0.6
	baz=306						
VWUC	VWUC	2.26	274	P	Pn	19 57 16.1	-0.2
	baz=274						
CHN3	Shinhua	2.26	220	S	Sn	19 57 45.8	+1.7
	baz=229						
SCLT	Jiali	2.29	224	S	Sn	19 57 45.2	+0.5
	baz=226						
SSD	Sandimen	2.39	210	P	Pn	19 57 19.1	+0.9
	baz=213						
SSD				S	Sn	19 57 48.0	+0.8
	baz=213						
ECL	Taimali	2.40	202	P	Pn	19 57 18.4	+0.1
	baz=198						
ECL				S	Sn	19 57 45.8	-1.5
	baz=198						
PNG	Penghu	2.51	240	P	Pn	19 57 19.1	-0.5
	baz=241						
PNG				S	Sn	19 57 47.4	-2.4
	baz=241						
MASBT	Mashibuluo	2.51	209	eP	Pn	19 57 20.0	+0.4
	baz=212						
MASBT				eS	Sn	19 57 49.8	-0.1
	baz=212						
PHUB	P'eng-hu	2.52	239	P	Pn	19 57 18.8	-1.0
	baz=240						
PHUB				S	Sn	19 57 48.0	-2.1
	baz=240						
JTJ	Tarama	2.53	94	P	Pn	19 57 20.9	+1.0
JTJ				eS	Sn	19 57 50.6	+0.3
XPSS	Dashiqiu	2.61	323	eP	Pn	19 57 20.5	-0.5
	baz=323						
EAST	Anshuo	2.63	202	P	Pn	19 57 21.2	-0.2
	baz=198						
EAST				S	Sn	19 57 52.3	-0.5
	baz=198						
SSPT	Xinbi	2.65	208	eP	Pn	19 57 22.3	+0.7
	baz=209						
WSSB	Gushan	2.66	215	eP	Pn	19 57 22.3	+0.5
	baz=218						
WSSB				eS	Sn	19 57 54.3	+0.7
	baz=218						
JIRB	Irabujima	2.95	89	S	Sn	19 57 59.8	-0.4
JMJ2	Miyako jima3	3.09	91	P	Pn	19 57 29.1	+1.8
JMJ2				S	Sn	19 58 04.5	+0.9
KSRS	Korea Array	13.58	21	Pn	P	19 59 55.0	+1.1
	0.2nm,0.3s,baz=202,slow=12,SNR=9.2						
MKAR	Makanchi Array	38.35	315	P	P	20 03 51.2	0.0
	0.3nm,0.4s,baz=100,slow=9.6,SNR=10						
WRA	Warramunga Arr	46.12	164	P	P	20 04 53.2	-1.1
	0.7nm,0.5s,baz=345,slow=8.8,SNR=9.2						
ASAR	Alice Springs	49.59	166	P	P	20 05 20.8	-0.3
	0.2nm,0.4s,baz=344,slow=7.2,SNR=4.4						

*IDC **20** 20:03:17.8±0.6, 78.°12N×7.°45E, h0km, mb3.7/18, mb1 3.8/21, mb1mx3.7/56, mbtmp3.7/21, ML2.7/3, MS3.1/4, Ms1 3.2/4, ms1mx2.6/43, Error ellipse: s-maj=15.0km s-min=10.0km az=20.0*

*BER **20** 20:03:17.1±1.9, 78.°18N×7.°33E, h10km, ML2.4, ML3.0(DNK), Confirmed Earthquake*

*NEIC **20** 20:03:18.9±2.4, 78.°22N±0.°07×8.°1E±0.°4, h11km±4km, mb4.2/8, Error ellipse: s-maj=10.9km s-min=8.9km az=120.0*

*IEPN **20** 20:03:20.0, 78.°08N×8.°56E, h15km*

ISC 20 20:03:18.2±2.5, 78.°18N±0.°05×8.°35E±0.°05, h5km±15km, n55, σ1.s63/56, mb3.8/22, MS3.2/4, 3D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	1.04	42	⇓iP	Pb	20 03 37.9	-0.8
KBS				IAML		20 03 50.5	
	comp=Z,109nm,0.7s						
KBS				eS	Sb	20 03 52.2	-0.4
KBS	Kingsbay	1.04	42	⇓iP	Pb	20 03 37.9	-0.8
KBS				eS	Sb	20 03 51.3	-1.2
KBS	Kingsbay	1.04	42		Pb	20 03 37.9	-0.8
SPA0	Spitsbergen Ar	1.65	86	eP	Pn	20 03 48.5	+0.6
SPA0				eS	Sb	20 04 09.2	-1.0
SPA0				IAML		20 04 26.0	
	comp=Z,114nm,0.6s						
SPA0	Spitsbergen Ar	1.65	86	⇓iP	Pn	20 03 48.4	+0.6
SPA0				eS	Sn	20 04 08.9	-0.5
SPA0	Spitsbergen Ar	1.65	86		Pn	20 03 48.3	+0.5
SPITS	Spitsbergen Ar	1.65	86	Pn	Pb	20 03 48.8	-0.4
	baz=241,slow=15,SNR=500						
SPITS				Sn	Sg	20 04 11.9	+0.7
	baz=233,slow=25,SNR=6.5						
HSPB	Hornsund (broa	1.95	124	eP	Pn	20 03 50.6	-1.3
HSPB				eS	Sb	20 04 16.0	-2.7
HSPB				IAML		20 04 25.4	
	comp=Z,34nm,0.5s						
HSPB	Hornsund (broa	1.95	124	eP	Pn	20 03 50.1	-1.9
HSPB				eS	Sn	20 04 13.3	-3.4
HOPEN	Hopen	4.02	106	eP	Pn	20 04 19.7	-0.6
HOPEN				eS	Sn	20 05 05.2	-2.5
HOPEN				IAML		20 05 32.1	
	comp=Z,15nm,0.4s						
HOPEN	Hopen	4.02	106	eP	Pn	20 04 20.6	+0.2
HOPEN				eS	Sn	20 05 05.6	-2.1
NOR	Nord	5.53	320	iP	Pn	20 04 36.4	-4.6
NOR	Nord	5.53	320	iP	Pn	20 04 36.5	-4.5
DAG	Danmarks Havn	6.00	270	iP	Pn	20 04 41.0	-6.5
DAG				iS	Sn	20 05 40.6	-16
DAG	Danmarks Havn	6.00	270	iP	Pn	20 04 41.0	-6.5
DAG				iS	Sn	20 05 40.6	-16
DAG				IAML		20 05 43.5	
	comp=Z,8.0nm,0.4s						
ZFI2	Zemlya Franca-	7.50	51	eP	Pn	20 05 07.8	-0.3
ZFI2				eS	Sn	20 06 27.7	-5.7
	comp=Z,5.5nm,0.6s						
DBG	Daneborg	7.75	255	iP	Pn	20 05 04.7	-6.8
DBG				IAML		20 06 28.9	
	comp=Z,3.7nm,0.4s						
JMIC	Jan Mayen	8.45	220	Pn	Pn	20 05 19.7	-1.4
	comp=Z,8.8nm,0.3s,baz=164,slow=7.6,SNR=6.5						
ARCES	ARCESS Array B	9.84	143	Pn	Pn	20 05 39.4	-0.7
	comp=Z,0.1nm,0.3s,baz=332,slow=11,SNR=2.5						
SUMG	Summit	12.69	269	iP	Pn	20 06 14.7	-4.7
SUMG	Summit	12.69	269		Pn	20 06 13.9	-5.5
FINES	FINESS Array B	17.73	151	P	P	20 07 25.2	-1.1
	comp=Z,0.1nm,0.3s,baz=355,slow=14,SNR=4.0						
HFS	Hagfors	18.22	171	P	P	20 07 31.7	0.0
	comp=Z,0.1nm,0.3s,baz=320,slow=4.4,SNR=5.8						
RES	Resolute Bay	21.45	315	P	P	20 08 06.0	-0.7
RES				IAmb	IAmb	20 08 09.6	
	comp=Z,14nm,1.8s						
KIRV	Kirov	23.80	121	P	P	20 08 31.8	+0.4
	comp=Z,2.9nm,0.6s,baz=38,slow=9.1,SNR=2.9						
TIXI	Tiksi	26.50	38	P	P	20 08 58.1	+2.3
	comp=Z,0.3nm,0.3s,baz=354,slow=7.3,SNR=3.0						
TIXI	Tiksi	26.50	38	P	P	20 08 57.4	+1.5
ARU	Arti	27.51	112	P	P	20 09 06.8	+1.7
	comp=Z,0.5nm,0.5s,baz=311,slow=20,SNR=2.2						
ARU	Arti	27.51	112	P	P	20 09 05.3	+0.2
ARU				IAmb	IAmb	20 09 32.2	
	comp=Z,3.4nm,0.8s						
AKASG	Malin Array Be	28.64	152	P	P	20 09 14.6	-0.6
	comp=Z,0.1nm,0.3s,baz=309,slow=10,SNR=2.6						
KOLS	Kolonicke sedl	29.82	161	eP	P	20 09 27.1	+1.4
BVAR	Borovoye Array	33.05	102	P	P	20 09 56.8	+2.8
	comp=Z,0.9nm,0.8s,baz=340,slow=11,SNR=4.7						
AKTO	Aktyubinsk	33.11	117	LR	LR	20 24 23.6	
	comp=Z,11nm,21.8s,baz=2.7,slow=38						
BILL	Bilibino	33.41	15	P	P	20 09 57.2	+0.2
BILL				IAmb	IAmb	20 10 06.5	
	comp=Z,14nm,1.8s						
SCHQ	Schefferville	34.04	272	LR	LR	20 24 27.1	
	comp=Z,75nm,18.8s,baz=354,slow=38						
ZALV	Zalesovo Beam	35.14	87	P	P	20 10 14.3	+2.1
	comp=Z,0.5nm,0.3s,baz=338,slow=11,SNR=3.9						
YKA	Yellowknife Ar	35.45	318	P	P	20 10 13.2	-1.6
	comp=Z,0.3nm,0.7s,baz=9.7,slow=8.4,SNR=5.9						
YKA				PcP	PcP	20 12 43.9	-0.1
	comp=Z,0.2nm,0.6s,baz=27,slow=2.8,SNR=3.6						
IL31		36.50	342	P	P	20 10 23.6	0.0
ILAR	Eielson Array	36.50	342	P	P	20 10 24.5	+0.7
	comp=Z,0.9nm,0.8s,baz=3.9,slow=7.0,SNR=11						
KURK	Kurchatov	36.91	95	P	P	20 10 27.0	-0.3
KURK				IAmb	IAmb	20 10 31.5	
	comp=Z,3.5nm,0.6s						
KURBB	Kurchatov Arra	36.98	95	P	P	20 10 30.3	+2.3
	comp=Z,1.3nm,0.2s,baz=343,slow=7.6,SNR=5.8						
KBZ	Khabaz	37.14	137	P	P	20 10 31.3	+1.9
	comp=Z,0.8nm,0.6s,baz=338,slow=14,SNR=3.0						
BRTR	Keskin Array B	39.95	149	P	P	20 10 53.3	+0.1
	comp=Z,0.6nm,0.7s,baz=330,slow=7.0,SNR=3.7						
MK31	Makanchi Array	41.40	93	P	P	20 11 07.0	+2.1
MKAR	Makanchi Array	41.40	93	P	P	20 11 07.2	+2.3
	comp=Z,1.3nm,0.7s,baz=346,slow=7.2,SNR=19						
GEYT	Alibeck	45.23	122	P	P	20 11 38.1	+2.1
	comp=Z,1.4nm,0.8s,baz=144,slow=50,SNR=3.4						
SONM	Songino Array	45.28	70	P	P	20 11 38.4	+2.0
	comp=Z,0.3nm,0.3s,baz=352,slow=8.7,SNR=5.4						
ULN	Ulaanbaatar	45.38	69	P	P	20 11 38.0	+0.8
ULN				IAmb	IAmb	20 11 47.1	
	comp=Z,1.9nm,0.8s						
PDAR	Pinedale Array	53.78	306	P	P	20 12 41.6	+0.2
	comp=Z,0.6nm,0.7s,baz=44,slow=6.6,SNR=3.1						
NVAR	Mina Array Bea	59.40	313	P	P	20 13 20.7	-0.7
	comp=Z,0.1nm,0.3s,baz=350,slow=4.6,SNR=3.0						
TORD	Torodi Ar. Bea	65.12	187	P	P	20 13 58.8	-0.9
	comp=Z,0.7nm,0.9s,baz=351,slow=2.0,SNR=3.9						
TXAR	Lajitas Array	65.83	297	P	P	20 14 03.2	-1.1
	comp=Z,0.6nm,0.7s,baz=23,slow=4.9,SNR=4.0						
TXAR				LR	LR	20 45 00.9	
	comp=Z,18nm,20.5s,baz=0.0,slow=38						
CMAR	Chiang Mai Arr	72.19	86	LR	LR	20 49 41.3	
	comp=Z,12nm,18.2s,baz=190,slow=38						
ASAR	Alice Springs	120.03	60	PKP	PKPdf	20 22 08.8	-0.4
	comp=Z,0.3nm,0.7s,baz=327,slow=1.5,SNR=4.3						
STKA	Stephens Creek	129.38	53	PKP	PKiKP	20 22 28.6	+1.1
	comp=Z,3.7nm,1.1s,baz=326,slow=3.6,SNR=2.9						

*ATH **20** 20:04:11.7, 38.°13N×20.°40E, h14km, ML2.7/14, Error ellipse: s-maj=2.2km s-min=1.0km az=243.0*

*THE **20** 20:04:11.9, 38.°15N×20.°39E, h13km, ML2.6/11, Error ellipse: s-maj=1.2km s-min=0.8km az=247.0*

ISC 20 20:04:11.8±1.0, 38.°13N±0.°03×20.°41E±0.°04, h14km±4km, n55, σ0.s46/78, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.06	338	P	Pg	20 04 14.2	-0.2
CHV1				S	Sg	20 04 16.1	-0.2
KEF2	Argostoli. Kep	0.07	62	P	Pg	20 04 14.6	0.0
KEF2				S	Sg	20 04 16.5	0.0
ARGA	Argostoli. Kep	0.07	51	P	Pg	20 04 14.6	0.0
ARGA				S	Sg	20 04 16.6	+0.1
LXRA	Lixouri, Kepha	0.07	19	P	Pg	20 04 14.4	-0.2
LXRA				S	Sg	20 04 16.7	+0.2
ARG2	Argostoli	0.08	53	P	Pg	20 04 14.7	+0.1
ARG2				S	Sg	20 04 16.7	+0.1
KEF3	Kipouria, Keph	0.09	327	P	Pg	20 04 14.5	-0.2
KEF3				S	Sg	20 04 16.6	-0.2
KEF4	Livadi, Kephal	0.13	6	P	Pg	20 04 15.1	-0.1
KEF4				S	Sg	20 04 17.8	+0.3
VLS	Valsamata	0.15	72	P	Pg	20 04 15.2	-0.4
VLS				S	Sg	20 04 18.6	+0.4
	4μm,0.2s						
VLS	Valsamata	0.15	72	P	Pg	20 04 15.5	0.0
VLS				S	Sg	20 04 18.5	+0.3
VLS				AML	AML	20 04 18.6	
	comp=E,8962μm,0.2s						
VLS				AML	AML	20 04 20.9	
	comp=N,8536μm,0.2s						
KONA	Konidatara, Ke	0.32	24	P	Pg	20 04 18.3	0.0
KONA				S	Sg	20 04 23.4	+0.6
VLMS	Volimes, Zakyn	0.33	142	P	Pg	20 04 18.9	+0.4
VLMS				S	Sb	20 04 24.5	+0.1
VLMS				AML	AML	20 04 24.8	
	comp=E,50297μm,0.2s						
VLMS				AML	AML	20 04 25.1	
	comp=N,41774μm,0.2s						
FSK	Fiskardo	0.35	20	P	Pg	20 04 18.6	-0.3
FSK				S	Sg	20 04 23.9	+0.2
	comp=N,1μm,0.3s						
FSK	Fiskardo	0.35	20	P	Pg	20 04 18.6	-0.3
MGNA	Meganis	0.60	30	P	Pg	20 04 22.9	-0.7
VTN	Vitineika	0.65	109	P	Pg	20 04 24.6	+0.1
VTN				S	Sb	20 04 34.7	+0.9
VTN	Vitineika	0.65	109	P	Pg	20 04 24.7	+0.3
LKD2	Lefkada island	0.69	17	P	Pg	20 04 24.7	-0.4
LKD2				S	Sb	20 04 35.0	+0.1
LKD2	Lefkada island	0.69	17	P	Pg	20 04 24.9	-0.3
PDO	Prodromos	0.77	52	P	Pg	20 04 25.5	-1.2
PDO				S	Sb	20 04 37.3	+0.1
	comp=N,1μm,0.4s						
PDO	Prodromos	0.77	52	P	Pg	20 04 26.4	-0.2
PDO				AML	AML	20 04 47.9	
	comp=N,1576μm,0.4s						
PDO				AML	AML	20 04 48.6	
	comp=E,1749μm,0.5s						
RLS	Riolos of Patr	0.84	95	P	Pg	20 04 27.6	-0.4
RLS				S	Sn	20 04 40.6	-0.7
	comp=E,255nm,0.5s						
RLS	Riolos of Patr	0.84	95	P	Pg	20 04 27.6	-0.4
RLS				AML	AML	20 04 45.7	
	comp=E,581μm,0.6s						
RLS				AML	AML	20 04 48.2	
	comp=N,520μm,0.3s						
PVO	Paravola	1.00	61	P	Pb	20 04 30.9	0.0
PVO				S	Sn	20 04 45.4	+0.1
	comp=N,582nm,0.3s						
PVO	Paravola	1.00	61	P	Pb	20 04 31.0	0.0
PVO				AML	AML	20 04 53.7	
	comp=N,867μm,0.5s						
PVO				AML	AML	20 04 54.0	
	comp=E,1515μm,0.4s						
DRO	Drossia	1.04	99	P	Pb	20 04 31.4	-0.2
DRO				S	Sn	20 04 47.1	+0.7
	comp=E,620nm,0.5s						
DRO	Drossia	1.04	99	P	Pb	20 04 31.4	-0.2
DRO				AML	AML	20 04 54.1	
	comp=E,1379μm,0.5s						
DRO				AML	AML	20 04 54.5	
	comp=N,1100μm,0.4s						
AMT	Artemida-Makis	1.19	120	P	Pn	20 04 32.9	-1.1
AMT				S	Sg	20 04 50.5	+0.3
	comp=N,470nm,0.6s						
AMT	Artemida-Makis	1.19	120	P	Pb	20 04 34.6	+0.5
AMT				AML	AML	20 04 59.5	
	comp=E,815μm,0.7s						
AMT				AML	AML	20 04 59.8	
	comp=N,982μm,0.5s						
ANX	Ano Chora	1.28	68	P	Pb	20 04 35.9	+0.3
ANX				AML	AML	20 05 00.6	
	comp=E,719μm,0.5s						
ANX				AML	AML	20 05 00.9	
	comp=N,865μm,0.6s						
SERG	Sergoula	1.33	77	P	Pn	20 04 35.8	-0.1
SERG				S	Sg	20 04 54.5	-0.1
	comp=N,172nm,0.6s						
SERG	Sergoula	1.33	77	P	Pn	20 04 35.7	-0.2
TRIZ	Trizonia	1.33	79	P	Pn	20 04 36.0	+0.1
TRIZ	Trizonia	1.33	79	P	Pn	20 04 36.1	+0.1
EVR	Evrytania	1.35	54	P	Pg	20 04 38.6	+0.9
EVR				AML	AML	20 05 06.9	
	comp=N,196μm,0.8s						
EVR				AML	AML	20 05 12.8	
	comp=E,169μm,0.7s						
KLV	Kalavryta, Ach	1.38	93	P	Pn	20 04 36.9	+0.3
KLV				S	Sn	20 04 54.4	-0.3
	comp=E,102nm,0.7s						
KLV	Kalavryta, Ach	1.38	93	P	Pn	20 04 37.2	+0.5
KLV				AML	AML	20 05 06.9	
	comp=N,224μm,0.4s						
KLV				AML	AML	20 05 10.1	
	comp=E,177μm,0.6s						
KALE	Kalithea	1.39	79	P	Pn	20 04 36.8	+0.1
KALE				S	Sn	20 04 54.7	-0.2
	comp=E,142nm,0.4s						
KALE	Kalithea	1.39	79	P	Pn	20 04 36.9	+0.1
KALE				AML	AML	20 05 06.7	
	comp=E,275μm,0.4s						
KALE				AML	AML	20 05 10.1	
	comp=N,309μm,0.7s						
IGT	Igoumenitsa	1.40	358	P	Pb	20 04 37.8	+0.1
ITM	Ithomi	1.54	128	P	Pb	20 04 40.2	+0.2
ITM				AML	AML	20 05 07.4	
	comp=E,294μm,0.4s						
ITM				AML	AML	20 05 09.3	
	comp=N,296μm,0.4s						
MAKR	Makrakomi, Fth	1.61	56	P	Pb	20 04 41.5	+0.2
MAKR				AML	AML	20 05 07.8	
	comp=N,267μm,0.7s						
MAKR				AML	AML	20 05 18.8	
	comp=E,448μm,0.8s						
PYL	PYLOS	1.63	139	P	Pb	20 04 41.3	-0.2
KEK	Kerkira	1.65	343	P	Pb	20 04 40.8	+0.5
AGG	Agios Georgios	1.75	59	P	Pb	20 04 44.3	+0.6
AXAR	Agios Charalam	1.88	70	P	Pb	20 04 46.6	+0.8
AXAR				AML	AML	20 05 24.3	
	comp=N,540μm,0.6s						
AXAR				AML	AML	20 05 28.9	
	comp=E,202μm,0.4s						
THL	Klokotos Trika	1.90	41	P	Pb	20 04 46.8	+0.5
KPRO	Kipourio	1.97	22	P	Pb	20 04 47.7	+0.3
PROD	Prodromos	1.97	86	P	Pb	20 04 46.5	-0.8
LTK	Loutraki	2.02	92	P	Pb	20 04 47.4	-0.5
PENT	Pentalofos	2.14	15	P	Pb	20 04 50.3	0.0
VIL2	Platees	2.26	87	P	Pb	20 04 50.8	-1.4
VILL	Villia	2.29	88	P	Pn	20 04 48.3	-0.9

VILL S Sn 20 05 17.1 -0.1
comp=E,40nm,0.5s
DID Didima 2.33 105 P Pn 20 04 49.9 +0.3
DID Didima 2.33 105 P Pb 20 04 52.8 -0.7
NEST Nestorio 2.33 12 P Pb 20 04 53.1 -0.6

BER 20 20:11:18.4±2.6, 78.15N×7.05E, h10km, ML2.3, ML2.9(DNK), Confirmed Earthquake
IDC 20 20:11:19.9±0.6, 78.27N×7.73E, h0km, mb3.6/12, mb1 3.8/15, mb1mx3.5/48, mbtmp3.6/15, ML2.7/3, MS3.1/4, Ms1 3.1/4, ms1mx2.6/42, Error ellipse: s-maj=16.5km s-min=10.3km az=17.0
IEPN 20 20:11:20.0, 78.18N×8.05E, h15km
NEIC 20 20:11:21.2±1.9, 78.29N±0.08×8.2E±0.3, h10km±5km, mb4.1/1, Error ellipse: s-maj=13.5km s-min=6.9km az=139.0
ISC 20 20:11:19.7±1.9, 78.25N±0.05×8.04E±0.05, h4km±12km, n41, σ1.74/43, mb3.6/13, MS3.0/3, 3D, Svalbard region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KBS Kingsbay 1.03 47 ⇓iP Pg 20 11 39.7 +0.1
KBS eS Sn 20 11 54.1 -1.7
KBS IAML 20 11 57.4
comp=Z,101nm,0.5s
KBS Kingsbay 1.03 47 ⇓iP Pg 20 11 39.6 +0.1
KBS eS Sb 20 11 53.8 -0.2
KBS Kingsbay 1.03 47 Pg 20 11 39.7 +0.1
SPA0 Spitsbergen Ar 1.71 88 eP Pn 20 11 50.5 +0.2
SPA0 eS Sn 20 12 12.1 -0.5
SPA0 IAML 20 12 19.5
comp=Z,84nm,0.7s
SPA0 Spitsbergen Ar 1.71 88 ⇓iP Pn 20 11 50.1 -0.1
SPA0 eS Sn 20 12 11.6 -1.0
SPA0 Spitsbergen Ar 1.71 88 Pn 20 11 50.3 0.0
SPITS Spitsbergen Ar 1.71 88 Pn Pn 20 11 50.5 +0.2
baz=240,slow=15,SNR=552
SPITS Sn Sn 20 12 12.1 -0.5
baz=244,slow=27,SNR=6.4
SPITS LR LR 20 12 37.9
comp=Z,306nm,18.7s,baz=175,slow=44
HSPB Hornsund (broa 2.04 124 eP Pn 20 11 52.4 -2.4
HSPB IAML 20 12 27.7
comp=Z,33nm,0.6s
HSPB Hornsund (broa 2.04 124 eP Pn 20 11 52.3 -2.4
HSPB eS Sn 20 12 17.4 -3.2
HSPB eP Pn 20 12 21.6 -1.4
HOPEN Hopen 4.10 107 eP Pn 20 12 21.6 -1.4
HOPEN eS Sn 20 13 08.6 -2.8
HOPEN IAML 20 13 26.6
comp=Z,11nm,0.6s
HOPEN Hopen 4.10 107 eP Pn 20 12 21.1 -1.9
HOPEN eS Sn 20 13 07.1 -4.2
NOR Nord 5.44 320 iP Pn 20 12 38.5 -2.8
NOR Nord 5.44 320 iP Pn 20 12 38.5 -2.8
DAG Danmarks Havn 5.94 269 iP Pn 20 12 42.8 -5.5
DAG iS Sn 20 13 40.6 -16
DAG Danmarks Havn 5.94 269 e Pn 20 12 42.0 -6.2
baz=68,slow=16
DAG iP Pb 20 12 42.8 -21
DAG iS Sn 20 13 40.6 -16
DAG IAML 20 13 45.9
comp=Z,5.1nm,0.3s
ZFI2 Zemlya Franca- 7.51 52 eP Pn 20 13 10.4 +0.6
ZFI2 eS Sn 20 14 30.4 -4.8
comp=Z,3.8nm,1.6s
DBG Daneborg 7.71 254 iP Pn 20 13 08.1 -4.5
DBG eS Sn 20 14 21.8 -18
DBG IAML 20 14 29.7
comp=Z,1.9nm,0.4s
JMIC Jan Mayen 8.46 219 Pn Pn 20 13 22.0 -0.9
comp=Z,7.2nm,0.3s,baz=358,slow=3.9,SNR=7.1
JMIC Jan Mayen 8.46 219 Pn 20 13 22.0 -0.9
ARCES ARCESS Array B 9.93 142 Pn Pn 20 13 43.1 +0.1
comp=Z,0.1nm,0.3s,baz=356,slow=13,SNR=3.0
SCO Scoresbysund 11.04 241 Pn Pn 20 13 56.6 -1.5
SUMG Summit 12.63 268 eP Pn 20 14 14.9 -5.2
SUMG Summit 12.63 268 Pn 20 14 14.9 -5.2
FINES FINESS Array B 17.82 151 P Pn 20 15 29.0 +0.9
comp=Z,0.1nm,0.3s,baz=351,slow=13,SNR=3.0
FINES LR LR 20 23 46.0
comp=Z,35nm,18.5s,baz=331,slow=42
HFS Hagfors 18.29 171 P P 20 15 34.1 +0.1
comp=Z,0.1nm,0.3s,baz=41,slow=9.5,SNR=2.8
RES Resolute Bay 21.35 315 LR LR 20 23 53.3
comp=Z,76nm,19.0s,baz=298,slow=35
KIRV Kirov 23.89 121 LR LR 20 26 28.9
comp=Z,27nm,20.9s,baz=250,slow=38
FRB Frobisher Bay 26.13 281 LR LR 20 28 06.6
comp=Z,46nm,18.8s,baz=310,slow=39
TIXI Tiksi 26.48 38 P P 20 16 58.9 +1.6
comp=Z,0.3nm,0.3s,baz=348,slow=8.0,SNR=3.0
GERES GERESS Array B 29.59 172 P P 20 17 27.0 +1.5
comp=Z,0.2nm,0.4s,baz=338,slow=7.4,SNR=2.5
BVAR Borovoye Array 33.12 102 P P 20 17 58.0 +1.6
comp=Z,0.7nm,0.8s,baz=355,slow=8.7,SNR=3.0
ZALV Zalesovo Beam 35.20 87 P P 20 18 15.7 +1.4
comp=Z,0.5nm,0.3s,baz=317,slow=12,SNR=3.1
YKA Yellowknife Ar 35.36 318 P P 20 18 15.6 0.0
comp=Z,0.2nm,0.8s,baz=9.1,slow=8.0,SNR=5.6
YKA PcP PcP 20 20 45.2 -0.1
comp=Z,0.1nm,0.6s,baz=12,slow=3.8,SNR=3.1
ILAR Eielson Array 36.42 342 P P 20 18 26.1 +1.5
comp=Z,1.6nm,0.8s,baz=14,slow=6.7,SNR=5.0
KURBB Kurchatov Arra 37.05 95 P P 20 18 31.4 +1.3
comp=Z,0.7nm,0.6s,baz=340,slow=8.0,SNR=4.0
MK31 Makanchi Array 41.46 93 P P 20 19 07.8 +0.7
MK31 IAmb IAmb 20 19 15.5
comp=Z,7.9nm,1.9s
MKAR Makanchi Array 41.46 93 P P 20 19 08.2 +1.1
comp=Z,0.8nm,0.9s,baz=350,slow=6.2,SNR=8.0
PDAR Pinedale Array 53.69 306 P P 20 20 42.8 +0.5
comp=Z,1.1nm,1.0s,baz=0.0,slow=2.9,SNR=3.6
NVAR Mina Array Bea 59.31 313 P P 20 21 22.8 +0.4
comp=Z,0.2nm,0.5s,baz=7.8,slow=4.0,SNR=2.4
TORD Torodi Ar. Bea 65.18 187 P P 20 22 02.7 +1.0
comp=Z,0.6nm,0.9s,baz=353,slow=8.1,SNR=3.9
TXAR Lajitas Array 65.74 297 P P 20 22 04.6 -0.8
comp=Z,0.4nm,0.7s,baz=54,slow=6.4,SNR=4.0

NEIC 20 20:35:48.4±2.2, 16.28N±0.03×98.44W±0.03, h1km±3km, Error ellipse: s-maj=5.3km s-min=3.3km az=48.0
MEX 20 20:35:51.6±1.1, 16.29N×98.27W, h9km±4km, MD4.2
ISC 20 20:35:50.1±1.2, 16.31N±0.04×98.24W±0.03, h19km±3km, n40, σ1.26/65, Near coast of Guerrero

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PNIG Pinotepa 0.14 54 Pg 20 35 54.8 +0.4
PNIG Sg 20 35 57.6 +0.3
PNIG Pinotepa 0.14 54 eP Pg 20 35 54.7 +0.4
PNIG iS Sg 20 35 57.6 +0.3
YOIG Yosondua 0.86 51 iP Pb 20 36 05.9 -0.6
YOIG iS Sg 20 36 18.4 -0.1
PEIG Puerto Escondi 1.10 106 eP Pb 20 36 09.8 -0.6
PEIG iS Sb 20 36 24.3 0.0
TLIG Tlapa 1.28 346 Pn 20 36 12.4 -0.7
TLIG Tlapa 1.28 346 Pn 20 36 12.4 -0.7
TLIG Sn 20 36 28.8 -1.0
TLIG Tlapa 1.28 346 eP Pn 20 36 12.4 -0.7
TLIG iS Sn 20 36 28.8 -1.0
HMTT Tlapaneco 1.51 348 Pn 20 36 15.9 -0.3
HMTT Tlapaneco 1.51 348 iP Pn 20 36 15.9 -0.3
HLIG Huajuapan de L 1.57 15 eP Pn 20 36 16.6 -0.4
HLIG iS Sn 20 36 36.5 -0.5
FTIG Fresnillo de T 1.59 4 eP Pn 20 36 17.1 -0.2
FTIG eS Sn 20 36 36.5 -0.9
VHO Vista Hermosa 1.63 62 eP Pn 20 36 17.6 -0.3
VHO eS Sn 20 36 38.1 -0.4
ACP2 Acapulco 1.67 290 Pb 20 36 20.1 -0.2
ACP2 Acapulco 1.67 290 iP Pb 20 36 20.1 -0.2
ACP2 iS Sb 20 36 40.0 -1.0
TOIG Toxpalan 2.10 32 eP Pb 20 36 26.4 -1.2
TOIG eS Sb 20 36 54.4 +1.1
HUIG Huatulco 2.12 104 Pb 20 36 28.0 +0.1
HUIG Huatulco 2.12 104 eP Pb 20 36 28.0 +0.1
HUIG iS Sb 20 36 48.2 -2.1
TPIG Tehuac#an 2.26 22 Pg 20 36 32.7 -0.8
TPIG Sg 20 37 01.8 -1.1
TPIG Tehuac#an 2.26 22 iP Pg 20 36 32.7 -0.8
TPIG iS Sg 20 37 01.8 -1.1
PLIG Platanillo 2.39 330 Pb 20 36 31.1 -1.5
PLIG Sb 20 37 02.8 +1.0
PLIG Platanillo 2.39 330 eP Pb 20 36 31.1 -1.5
PLIG eS Sb 20 37 02.8 +1.0
YAIG Yautepec 2.66 343 Pn 20 36 33.9 +1.9
YAIG Sb 20 37 10.4 +1.0
YAIG Yautepec 2.66 343 eP Pn 20 36 33.9 +1.9
YAIG iS Sb 20 37 10.4 +1.0
PPM Popocatepetl 2.77 352 eP Pn 20 36 33.8 0.0
PPM eS Sb 20 37 15.0 +2.2
ARIG Puente Sto Nin 2.81 315 Pb 20 36 37.8 -1.9
ARIG Sb 20 37 14.4 +0.7
ARIG Puente Sto Nin 2.81 315 eP Pb 20 36 37.8 -1.9
ARIG eS Sb 20 37 14.4 +0.7
MAVM Malinalco, Edo 2.89 336 Pb 20 36 39.4 -1.8
MAVM Malinalco, Edo 2.89 336 eP Pb 20 36 39.4 -1.8
TOVM TOLUCA 3.26 335 iP Pb 20 36 44.3 -3.2
TOVM iS Sb 20 37 28.2 +1.3
CMIG Matias Romero 3.31 76 Pn 20 36 39.2 -1.7
CMIG Sb 20 37 29.6 +1.6
CMIG Matias Romero 3.31 76 eP Pn 20 36 39.2 -1.7
CMIG eS Sb 20 37 29.6 +1.6
AZVM Cuida Lopez Ma 3.40 343 Pb 20 36 49.5 -0.5
AZVM Cuida Lopez Ma 3.40 343 iP Pb 20 36 49.5 -0.5
VTVM Tizayuca 3.48 352 Pb 20 36 50.8 -0.4
VTVM Tizayuca 3.48 352 eP Pb 20 36 50.8 -0.4
ZUVM ZUMPANGO 3.58 347 eP Pn 20 36 46.7 +1.8
ZUVM eS Sn 20 37 28.1 +1.2
V52A Sevierville 23.43 31 P P 20 40 56.0 -1.2
JSC Jenkinsville 23.51 37 P P 20 41 01.5 +2.6
U54A Nelsons Funny 24.86 33 P P 20 41 13.0 +1.5
Q54A Coxs Mills 27.25 31 P P 20 41 35.5 +2.4

ISN 20 20:46:39.2±0.4, 34.39N×45.39E, h6km±10km, ML2.8
TEH 20 20:46:40.2, 34.36N×45.48E, h16km, ML2.8
ISC 20 20:46:40.4±1.0, 34.37N±0.04×45.46E±0.04, h10km, n9, σ1.37/13, Iran-Iraq border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
IDHR Dehrash 0.83 67 ePg Pg 20 46 55.7 -0.8
IDHR eSg Sb 20 47 08.1 -0.3
IDHR e 20 47 09.8
IGHG Ghaleghazi 0.92 92 ePg Pb 20 46 58.0 -0.6
IGHG e 20 47 18.9
IVIS Veis 1.16 82 ePg Pb 20 47 01.7 -0.9
KCHF Cheshme Sefid, 1.31 94 e Sg 20 47 26.0 +3.4
IBDR Badra 1.32 163 ePg Pg 20 47 05.0 -0.8
IBDR eSg Sg 20 47 24.0 +1.1
IBDR AML AML 20 47 30.6
comp=E,82nm,0.8s
IBDR AML AML 20 47 30.6
comp=N,72nm,0.8s
ILIN Lien 1.35 66 e 20 47 31.1
ILIN ePn Pb 20 47 05.7 -0.3
IKRK Kirkuk 1.38 318 ePn Pn 20 47 06.0 +0.2
IKRK eSn Sg 20 47 26.0 +1.1
IKRK AML AML 20 47 29.4
comp=N,727nm,0.4s
IKRK AML AML 20 47 29.4
comp=E,284nm,0.3s
BHD Baghdad 1.42 220 ePn Pb 20 47 07.0 -0.1
BHD eSn Sg 20 47 27.0 +0.8
IKOM Komasi 1.71 96 ePn Pb 20 47 10.7 -1.3
IKOM e 20 47 39.3

SJA 20 21:02:35.9±0.5, 22.08S×67.42W, h184km±6km, ML2.6, MW3.0
GUC 20 21:02:38.4±0.6, 22.16S×67.92W, h213km±9km, ML3.4
ISC 20 21:02:37.0±2.1, 22.19S±0.06×67.47W±0.05, h185km±21km, n22, σ1.20/37, 6C, Chile-Bolivia border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PB09 IPOC Station P 1.69 283 ⇑iP Pn 21 03 12.8 +1.3
YJA Yavi 1.81 90 iP Pn 21 03 12.7 -0.3
YJA IAML 21 03 14.3
comp=Z,71nm,0.3s
YJA iSg Sn 21 03 39.4 -1.3
PB06 IPOC Station P 2.01 255 ⇑iP Pn 21 03 15.2 +0.5
PB06 iS Sn 21 03 44.0 0.0
PB06 IPOC Station P 2.01 255 iP Pn 21 03 14.8 0.0
PB15 IPOC Station P 2.11 241 iP Pn 21 03 16.3 +0.5
PB15 iSg Sn 21 03 46.2 +0.2
PB03 IPOC Station P 2.12 273 ⇑iP Pn 21 03 16.6 +0.6
PB03 iS Sn 21 03 45.7 -0.5
PB03 IAML 21 03 47.1
comp=N,202nm,0.3s
PB01 IPOC Station P 2.20 301 ⇑iP Pn 21 03 17.4 +0.7
PB01 iS Sn 21 03 47.9 +0.3
PB01 IAML 21 03 49.4
comp=N,158nm,0.5s
PB01 IAML 21 03 50.0
comp=E,148nm,0.2s
PB07 IPOC Station P 2.29 281 ⇑iP Pn 21 03 18.6 +0.7
PB07 iS Sn 21 03 48.5 -1.0
PB07 IAML 21 03 50.0
comp=N,175nm,0.1s
PB02 IPOC Station P 2.42 291 eP Pn 21 03 19.9 +0.7
PB02 eS Sn 21 03 50.8 -1.2
PB02 IAML 21 03 51.3
comp=N,202nm,0.4s
PB04 IPOC Station P 2.49 266 eP Pn 21 03 20.6 +0.6
PB04 eS Sn 21 03 51.8 -1.7
PB04 IAML 21 03 57.8
comp=N,119nm,0.2s
PB04 IPOC Station P 2.49 266 iP Pn 21 03 20.0 0.0
PB04 iSg Sn 21 03 53.0 -0.5
PB08 IPOC Station P 2.58 322 ⇑iP Pn 21 03 23.2 +1.9
PB08 iS Sn 21 03 56.4 +0.6
PB08 IAML 21 04 00.1
comp=N,101nm,0.2s
PB05 IPOC Station P 2.61 255 eP Pn 21 03 21.8 +0.3
PB05 eS Sn 21 03 54.4 -1.6
PB05 IAML 21 03 55.8
comp=N,64nm,0.5s
PB05 IPOC Station P 2.61 255 iP Pn 21 03 21.9 +0.4
PATCX Punta Patache 2.85 298 eP Pn 21 03 24.6 +0.4
PATCX eS Sn 21 03 59.2 -1.8
GO01 Chusmiza 2.98 327 eP Pn 21 03 27.8 +1.5
GO01 eS Sn 21 04 06.2 +1.7
AZAP Zapla 3.00 133 iP Pn 21 03 26.4 +0.3
AZAP IAML 21 04 05.0
comp=Z,6.3nm,0.5s
TA01 Diego Aracena 3.00 302 eP Pn 21 03 26.1 +0.1
TA01 eS Sn 21 04 02.2 -1.8
PB10 IPOC Station P 3.14 245 iP Pn 21 03 28.2 +0.7
PSGC Pisagua 3.58 316 eP Pn 21 03 32.9 -0.3
PSGC eS Sn 21 04 13.9 -3.1
PB14 IPOC Station P 3.63 227 iP Pn 21 03 34.5 +0.6
ACCO Cerro Coronel 8.48 189 iP Pn 21 04 39.3 +2.3

IDC 20 21:18:18.4±0.9, 15.04S×167.66E, h256km±8km, mb4.2/17, mb1 4.3/19, mb1mx4.1/33, mbtmp4.8/19, Error ellipse: s-maj=14.9km s-min=10.5km az=105.0
NEIC 20 21:18:18.6±1.6, 15.04S±0.09×167.6E±0.1, h259km±4km, mb4.6/90, Error ellipse: s-maj=14.2km s-min=12.5km az=81.0
BJI 20 21:18:19.0±0.0, 15.00S×167.60E, h271km, mB5.0/15, mb4.4/20
ISC 20 21:18:18.0±0.4, 14.96S±0.05×167.59E±0.07, h250km, n151, σ1.32/154, mb4.5/60, Vanuatu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 0.61 217 Pn 21 18 52.8 +1.6
SANVU S Sn 21 19 18.4 +1.0
DZM Mont Dzumac 7.16 189 P Pn 21 20 01.6 +0.8
31nm,0.3s,baz=44,slow=18,SNR=317
DZM S S 21 21 30.2 +6.9
baz=322,slow=19,SNR=1.8
DZM Mont Dzumac 7.16 189 Pn 21 20 01.9 +1.2
NOUC Port Laguerre 7.21 190 Pn 21 20 02.8 +1.5
HNR Honiara 9.27 305 P Pn 21 20 30.5 +3.0
5.1nm,0.3s,baz=293,slow=8.5,SNR=8.3
MSVF Nonsavu 10.41 107 Pn 21 20 42.0 0.0
LHI Lord Howe Isla 18.24 204 P P 21 22 13.7 +0.5
EIDS Eidsvold 18.62 234 P P 21 22 19.1 +1.7
baz=19,SNR=31
EIDS Eidsvold 18.62 234 P P 21 22 19.1 +1.7
PMG Port Moresby 20.71 283 P P 21 22 40.9 +1.0
12nm,0.7s,baz=192,slow=23,SNR=2.7
PMG Port Moresby 20.71 283 IAmb IAmb 21 22 55.5
comp=Z,28nm,1.1s
CTA Charters Tower 20.97 253 P P 21 22 43.0 +0.5
comp=Z,39nm,0.9s,baz=76,slow=12,SNR=31
RMQ Roma 20.98 234 P P 21 22 43.6 +1.0
baz=21,SNR=30
ARMA Armidale 21.25 221 P P 21 22 46.2 +1.0
baz=21,SNR=29
ARMA Armidale 21.25 221 P P 21 22 46.8 +1.5
MTSU Mount Surprise 22.53 259 P P 21 22 57.8 +0.8
baz=22,SNR=48
PATS Pohnpei 23.53 336 P P 21 23 08.1 +2.0
MGCD Mangrove Creek 23.53 217 P P 21 23 07.3 +1.3
baz=24,SNR=21
COEN Coen 23.66 269 P P 21 23 08.1 +0.7
baz=24,SNR=10.0
COEN Coen 23.66 269 P P 21 23 07.5 +0.2
COEN IAmb IAmb 21 23 08.8
comp=Z,9.5nm,0.8s
QLP Quilpie 24.66 238 P P 21 23 17.0 +0.7
baz=25,SNR=24
CMSA Cobar Meteorol 25.94 227 P P 21 23 28.3 +0.6
baz=26,SNR=67
CNB Canberra Magne 26.05 216 P P 21 23 29.3 +0.5
baz=26,SNR=16
QRZ Quartz Range 26.13 171 P P 21 23 30.2 +0.9
CAN Canberra 26.26 216 P P 21 23 30.9 +0.2
CAN IAmb IAmb 21 23 33.2
comp=Z,11nm,1.1s
SNZO South Karori 26.97 168 P P 21 23 36.2 -0.5
BHW Baring Head 27.10 168 P P 21 23 35.0 -2.9
THZ Tophouse 27.10 171 P P 21 23 37.6 -0.4
QIS Mount Isa 27.20 254 P P 21 23 39.2 0.0
baz=27,SNR=6.4
BSWZ Blackbirch Sta 27.21 170 P P 21 23 35.8 -3.1
PLWZ Palliser 27.33 167 P P 21 23 39.6 -0.4
KHZ Kahutara 27.84 171 P P 21 23 43.3 -1.1
LTZ Lake Taylor 28.02 173 P P 21 23 45.8 -0.3
FOZ Fox Glacier 28.54 177 P P 21 23 50.8 +0.2
FOZ IAmb IAmb 21 23 51.9
comp=Z,13nm,0.9s
RPZ Rata Peaks 28.81 175 P P 21 23 51.8 -1.3
comp=Z,12nm,1.0s,baz=122,slow=5.8,SNR=6.4
RPZ Rata Peaks 28.81 175 P P 21 23 52.9 -0.2
RPZ IAmb IAmb 21 23 56.5
comp=Z,8.9nm,0.8s
MQZ McQueen's Vall 28.98 172 P P 21 23 54.3 -0.2
STKA Stephens Creek 29.08 230 P P 21 23 56.6 +1.0
baz=29,SNR=60
STKA Stephens Creek 29.08 230 P P 21 23 56.7 +1.0
comp=Z,72nm,0.7s,baz=50,slow=8.4,SNR=124
STKA Stephens Creek 29.08 230 IAmb IAmb 21 23 57.6
comp=Z,17nm,0.8s
TOO Toolangi 29.85 217 P P 21 24 03.1 +0.7
baz=30,SNR=4.5
TOO Toolangi 29.85 217 P P 21 24 03.4 +1.0
TOO IAmb IAmb 21 24 03.6
comp=Z,17nm,0.8s
WHZ Wether Hill Ro 30.84 180 P P 21 24 10.3 -0.6
WHZ IAmb IAmb 21 24 14.1
comp=Z,8.9nm,1.0s
PYZ Puysegur Point 31.12 181 P P 21 24 12.5 -0.9
PYZ IAmb IAmb 21 24 23.1
comp=Z,24nm,0.8s
HTT Hallett 31.80 230 P P 21 24 20.3 +0.8
baz=32,SNR=27
WR0 Warramunga Arr 31.88 256 P P 21 24 19.4 -0.9
WR0 IAmb IAmb 21 24 20.1
comp=Z,20nm,0.9s
WB0 Warramunga Arr 32.01 257 P P 21 24 20.2 -1.2
WB2 Warramunga Arr 32.06 256 P P 21 24 20.7 -1.2
WB2 IAmb IAmb 21 24 21.7
comp=Z,26nm,0.8s
WRA Warramunga Arr 32.07 256 P P 21 24 20.6 -1.4
comp=Z,26nm,0.8s,baz=87,slow=8.5,SNR=45
WRA S S 21 29 09.2 -6.3
comp=Z,1.7nm,1.0s,baz=93,slow=12,SNR=3.9
WRA ScP ScP 21 30 24.3 -0.5
comp=Z,4.8nm,0.9s,baz=84,slow=3.7,SNR=14
TAU Tasmania Unive 32.84 208 P P 21 24 27.8 -0.6
ASAR Alice Springs 32.88 250 P P 21 24 28.1 -0.9
comp=Z,36nm,0.4s,baz=76,slow=9.5,SNR=668
ASAR pP pP 21 25 19.0 +1.1
comp=Z,5.3nm,0.6s,baz=72,slow=9.6,SNR=3.2
ASAR S S 21 29 22.9 -5.1
comp=Z,1.5nm,0.9s,baz=81,slow=16,SNR=7.9
ASAR ScP ScP 21 30 27.4 -0.3
comp=Z,2.3nm,0.9s,baz=96,slow=2.9,SNR=7.6
BBOO Buckleboo 33.68 233 P P 21 24 36.3 +0.5
baz=34,SNR=100
KDU Kakadu 34.15 269 P P 21 24 39.5 -0.5
baz=34,SNR=7.4
FAKI Fak Fak 36.83 285 P P 21 25 03.2 +0.4
FAKI IAmb IAmb 21 25 04.5
comp=Z,25nm,0.9s
KNRA Kununurra 37.42 264 P P 21 25 07.0 -0.6
baz=37,SNR=30
SARN Sarigan 38.12 325 P P 21 25 13.7 +0.2
WRKA Warakurna 38.14 248 P P 21 25 13.0 -0.6
baz=38,SNR=206
FORT Forrest 39.45 240 P P 21 25 24.2 -0.2
baz=39,SNR=72
FORT Forrest 39.45 240 P P 21 25 24.4 0.0
FITZ Fitzroy Crossi 40.28 260 P P 21 25 31.1 -0.2
baz=40,SNR=44
FITZ Fitzroy Crossi 40.28 260 P P 21 25 31.2 -0.1
SOEI Soe 42.58 272 IAmb IAmb 21 25 51.9
comp=Z,17nm,0.9s
PSA00 Pilbara Seismi 45.67 254 P P 21 26 14.4 -0.1
PSA00 IAmb IAmb 21 26 15.3
comp=Z,32nm,0.8s
MEEK Meekatharra 46.98 247 P P 21 26 24.2 -0.4
baz=47,SNR=28
KLBR Kellerberrin 48.26 241 P P 21 26 33.1 -1.1
baz=48,SNR=19
NWAO Narrogin (SRO) 48.90 239 P P 21 26 38.3 -0.8
baz=49,SNR=13
NWAO Narrogin (SRO) 48.90 239 P P 21 26 38.5 -0.6
NWAO IAmb IAmb 21 26 39.1
comp=Z,39nm,0.8s
NWAO Narrogin (SRO) 48.90 239 P P 21 26 38.5 -0.6
NWAO IAmb IAmb 21 26 39.1
comp=Z,31nm,0.8s
BLDU Ballidu 49.02 242 P P 21 26 39.3 -0.8
baz=49,SNR=9.3
MORW Morawa 49.45 244 P P 21 26 42.9 -0.4
baz=49,SNR=11
MORW Morawa 49.45 244 P P 21 26 42.6 -0.7
MORW IAmb IAmb 21 26 43.6
comp=Z,27nm,0.8s
GIRL Giralia 50.87 253 P P 21 26 54.0 0.0
GIRL IAmb IAmb 21 27 05.1
comp=Z,60nm,1.1s
JAGI Jajag, Banyuwa 52.62 271 P P 21 27 05.7 -1.3
JAGI IAmb IAmb 21 27 06.6
comp=Z,19nm,0.9s
UGM Wanagama 56.25 270 P P 21 27 32.4 -0.7
UGM IAmb IAmb 21 27 40.8
comp=Z,40nm,0.9s
MJAR Matsushiro Arr 58.25 332 P P 21 27 46.3 -0.3
comp=Z,7.8nm,0.8s,baz=157,slow=8.4,SNR=17
MAJO Matsushiro 58.25 332 P P 21 27 46.5 -0.1
MAJO IAmb IAmb 21 27 47.9
comp=Z,14nm,1.1s
MAT Matsushiro 58.25 332 P P 21 27 46.3 -0.3
MJB9 Matsu-Tunnel 58.26 332 P P 21 27 46.4 -0.3
MJB9 IAmb IAmb 21 27 47.9
comp=Z,13nm,1.0s
ERM Erimo 61.01 339 P P 21 28 05.8 +0.7
VNDA Vanda 62.64 181 P P 21 28 15.3 -0.2
comp=Z,5.0nm,0.8s,baz=355,slow=8.5,SNR=15
VNDA Vanda 62.64 181 P P 21 28 14.8 -0.8
VNDA IAmb IAmb 21 28 17.0
comp=Z,7.2nm,0.9s
SBA Scott Base 62.91 180 P P 21 28 17.4 +0.1
CASY Casey 63.43 202 P P 21 28 20.2 -0.7
KSRS Korea Array 64.10 326 P P 21 28 26.4 +0.7
comp=Z,1.0nm,0.8s,baz=142,slow=6.1,SNR=4.9
MNAI Manna 64.39 272 P P 21 28 25.8 -2.4
USA0B Ussuriysk Arra 67.23 333 P P 21 28 46.2 +0.7
USA0B IAmb IAmb 21 28 48.5
comp=Z,14nm,0.9s

USRK Ussuriysk Ar. 67.23 333 P P 21 28 47.1 +1.6
comp=Z,8.1nm,0.8s,baz=146,slow=6.8,SNR=19
PEA0B Petropavlovsk- 68.32 354 P P 21 28 52.7 +0.5
PEA0B IAmb IAmb 21 29 02.7
comp=Z,27nm,1.1s
PETK Petropavlovsk- 68.32 354 P P 21 28 52.8 +0.7
comp=Z,7.6nm,0.7s,baz=170,slow=4.9,SNR=11
UBPT Khong Chiam 68.34 293 P P 21 28 52.8 -0.2
MDJ Mudanjiang 68.63 332 IAmb IAmb 21 28 56.3
comp=Z,13nm,0.8s
CN2 Changchun 70.00 329 eP P 21 29 03.4 +0.8
CN2 pmax pmax
comp=Z,10.0nm,1.0s
NIKH Nikolski High 70.64 15 P P 21 29 05.0 -1.2
XAN Xi'an 74.07 312 P P 21 29 27.8 +0.8
XAN pmax pmax
comp=Z,4.0nm,1.2s
KMI Kunming 74.69 302 P P 21 29 36.6 +5.6
KMI pmax pmax
comp=Z,12nm,2.0s
QSPA South Pole Qui 75.07 180 P P 21 29 31.5 -0.8
QSPA IAmb IAmb 21 29 32.4
comp=Z,11nm,0.8s
CMAR Chiang Mai Arr 75.33 294 P P 21 29 35.9 +1.4
comp=Z,1.4nm,0.6s,baz=134,slow=5.0,SNR=13
SII Sitkinak Islan 78.07 20 P P 21 29 49.1 +0.2
KDAK Kodiak Island 79.57 20 P P 21 29 56.7 -0.3
GAMB Gambell 80.11 9 P P 21 29 59.6 -0.1
SVW2 Sparrevohn 81.28 17 P P 21 30 06.2 +0.1
BRLK Bradley Lake 81.67 20 P P 21 30 08.3 +0.1
BRLK IAmb IAmb 21 30 08.4
comp=Z,7.5nm,1.0s
ANM Nome 81.93 11 P P 21 30 09.5 +0.1
ULN Ulaanbaatar 82.50 324 IAmb IAmb 21 30 14.8
comp=Z,6.4nm,0.9s
ULN Ulaanbaatar 82.50 324 P P 21 30 13.5 +0.6
BILL Bilibino 82.78 360 P P 21 30 13.7 +0.1
BILL IAmb IAmb 21 30 14.5
comp=Z,4.5nm,0.8s
SONM Songino Array 82.86 323 P P 21 30 15.2 +0.4
comp=Z,2.6nm,0.9s,baz=151,slow=7.0,SNR=16
SUA Susitna One 83.01 19 P P 21 30 14.5 -0.7
SUA IAmb IAmb 21 30 15.6
comp=Z,9.3nm,1.0s
RC01 Rabbit Creek A 83.04 19 P P 21 30 15.3 +0.1
RC01 IAmb IAmb 21 30 16.3
comp=Z,5.8nm,0.8s
SKT Skwentna 83.17 18 P P 21 30 15.4 -0.4
PAF Port-aux-Franc 83.52 221 P P 21 30 17.6 -0.3
KNK Knik Glacier 83.70 20 P P 21 30 18.1 -0.5
KNK IAmb IAmb 21 30 28.1
comp=Z,10nm,1.2s
GLI Glacier Island 83.76 20 P P 21 30 17.3 -1.6
GHO Glory Hole Cre 83.82 19 P P 21 30 18.5 -0.7
GHO IAmb IAmb 21 30 33.6
comp=Z,13nm,1.2s
SML Sawmill 84.03 19 P P 21 30 20.0 -0.2
SML IAmb IAmb 21 30 29.3
comp=Z,4.5nm,0.9s
KMRM Mail Ridge 84.04 46 P P 21 30 20.3 -0.6
KMRM IAmb IAmb 21 30 25.0
comp=Z,6.2nm,0.9s
SCM Sheep Creek Mo 84.38 20 P P 21 30 21.6 -0.4
SCM IAmb IAmb 21 30 22.9
comp=Z,8.8nm,1.0s
KTH Kantishna Hill 84.56 17 P P 21 30 21.6 -1.3
KTH IAmb IAmb 21 30 22.5
comp=Z,9.1nm,1.1s
TRF Thorofare Moun 84.66 18 P P 21 30 22.8 -0.7
BPAW Bear Paw Mtn. 84.96 17 P P 21 30 24.6 -0.3
RND Reindeer 85.06 18 P P 21 30 24.4 -0.9
RND IAmb IAmb 21 30 26.0
comp=Z,3.7nm,0.8s
VRDI Verde Repeater 85.27 21 P P 21 30 26.0 -0.6
VRDI IAmb IAmb 21 30 34.7
comp=Z,11nm,1.2s
GLB Gilahina Butte 85.29 21 P P 21 30 26.1 -0.4
GLB IAmb IAmb 21 30 26.5
comp=Z,4.5nm,0.9s
RDOG Red Dog Mine 85.50 11 P P 21 30 27.9 +0.6
RDOG IAmb IAmb 21 30 28.2
comp=Z,4.2nm,0.6s
BALM Baldy 85.53 22 P P 21 30 26.9 -0.9
BALM IAmb IAmb 21 30 35.2
comp=Z,5.1nm,1.0s
MLY Manley 85.75 16 P P 21 30 28.1 -0.6
BARN Barnard Glacie 85.80 22 P P 21 30 28.5 -0.7
CTGM Chitina Glacie 85.85 22 P P 21 30 28.9 -0.5
CTGM IAmb IAmb 21 30 29.6
comp=Z,4.2nm,0.8s
WRH Wood River Hil 86.08 18 P P 21 30 28.8 -1.5
CCB Clear Creek Bu 86.29 18 P P 21 30 30.1 -1.2
HDA Harding Lake 86.37 18 P P 21 30 30.8 -0.9
HDA IAmb IAmb 21 30 31.4
comp=Z,5.7nm,0.9s
RIDG Independent Ri 86.54 19 P P 21 30 31.0 -1.6
IL31 86.65 18 P P 21 30 31.3 -1.7
ILAR Eielson Array 86.65 18 P P 21 30 31.2 -1.8
comp=Z,2.1nm,0.6s,baz=239,slow=5.0,SNR=42
ILAR pP pP 21 31 35.1 +2.4
comp=Z,0.8nm,0.7s,baz=236,slow=5.8,SNR=3.2
DOT Dot Lake 86.73 20 P P 21 30 33.0 -0.5
SCRK Sand Creek 86.98 19 P P 21 30 34.0 -0.8
NVAR Mina Array Bea 87.19 49 P P 21 30 35.9 -0.6
comp=Z,0.2nm,0.5s,baz=215,slow=7.7,SNR=5.8
SNAA Sanae 93.34 183 P P 21 31 02.6 -1.7
SNAA Sanae 93.34 183 P P 21 31 02.8 -1.6
SNAA IAmb IAmb 21 31 03.4
comp=Z,5.3nm,0.8s
LRM Limekiln Ridge 93.76 44 pP 21 32 11.2 +4.4
VNA3 Neumayer Olymp 93.99 181 P P 21 31 05.3 -2.0
VNA2 Neumayer--Watz 94.26 182 P P 21 31 06.9 -1.6
baz=185,slow=4.1
MK31 Makanchi Array 97.58 316 P P 21 31 24.8 +0.8
MKAR Makanchi Array 97.58 316 P P 21 31 24.1 +0.1
comp=Z,0.8nm,0.6s,baz=90,slow=6.0,SNR=12
YKA Yellowknife Ar 97.61 27 P P 21 31 22.5 -1.1
comp=Z,1.5nm,0.7s,baz=253,slow=4.6,SNR=16
YKA pP pP 21 32 25.7 +1.8
comp=Z,0.3nm,0.7s,baz=253,slow=4.7,SNR=1.8
ZALV Zalesovo Beam 97.76 324 P P 21 31 23.8 -0.7
comp=Z,0.3nm,0.3s,baz=108,slow=9.5,SNR=3.8
ARCES ARCESS Array B 120.55 345 PKP PKPdf 21 36 38.5 -0.8
comp=Z,1.7nm,0.8s,baz=56,slow=2.3,SNR=5.4
NOA NORSAR Array B 130.93 345 SKPbc SKPbc 21 39 59.8 -0.3
comp=Z,0.8nm,0.7s,baz=33,slow=2.8,SNR=3.8
GERES GERESS Array B 139.99 333 SKPbc SKPbc 21 40 29.1 +0.3
comp=Z,0.4nm,0.6s,baz=63,slow=6.1,SNR=3.5
ESDC Sonseca Array 145.29 345 PKPab PKPab 21 38 04.6 +0.7
comp=Z,0.7nm,0.6s,baz=29,slow=3.4,SNR=4.7
TORD Torodi Ar. Bea 166.19 264 PKP PKPdf 21 37 52.7 -1.4
TORD PKPab PKPab 21 38 56.2 -0.4
comp=Z,3.9nm,0.8s,baz=103,slow=4.6,SNR=21

IDC 20 21:36:24.4±1.9, 60.81N×151.24W, h43km±23km, mb3.4/7, mb1 3.5/10, mb1mx3.3/47, mbtmp3.6/10, ML3.5/4, MS2.9/1, Ms1 2.9/1, ms1mx2.2/37, Error ellipse: s-maj=25.6km s-min=13.8km az=114.0
NEIC 20 21:36:25.4±1.6, 60.80N±0.03×150.77W±0.06, h64km±4km, Error ellipse: s-maj=4.0km s-min=3.8km az=112.0
AEIC 20 21:36:26.0±1.8, 60.79N±0.02×150.73W±0.06, h63km±4km, ML3.4/102, Error ellipse: s-maj=4.0km s-min=3.5km az=99.0
ISC 20 21:36:25.8±0.7, 60.79N±0.03×150.72W±0.03, h68km±5km, n120, σ1.00/135, mb3.6/7, Kenai Peninsula

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res
CAPN Captain Cook N 0.22 265 Pn 21 36 36.2 +0.1
CAPN Sn 21 36 44.4 +0.7
SLKM Skilak Lake 0.37 139 Pn 21 36 36.5 -0.8
SLKM Sn 21 36 44.3 -1.3
FIS Fire Island 0.43 34 Pn 21 36 37.6 0.0
FIS Sn 21 36 45.1 -1.3
RC01 Rabbit Creek A 0.56 57 Pn Pn 21 36 39.1 +0.1
RC01 Pn 21 36 39.5 +0.5
RC01 Sn 21 36 49.1 +0.4
SUA Susitna One 0.68 359 Pn 21 36 39.2 -1.1
SUA Susitna One 0.68 359 Sn Sn 21 36 50.0 -1.1
SPU Mount Spurr 0.76 302 Pn Pn 21 36 40.0 -1.3
SPCG Spurr Capps Gl 0.81 309 Pn 21 36 41.0 -0.9
SPCG Sn 21 36 52.0 -1.8
SPCR Spurr Chakacha 0.84 300 Pn 21 36 41.0 -1.2
SEW Seward 0.93 137 Pn 21 36 42.5 -0.6
SEW Seward 0.93 137 Sn Sn 21 36 56.1 0.0
SPBG Spurr Blockage 0.93 301 Pn 21 36 42.4 -0.9
SPBG Sn 21 36 55.6 -0.8
DFR Drift River 0.99 259 Pn 21 36 42.9 -1.2
DFR Sn 21 36 56.6 -1.0
BRLK Bradley Lake 1.03 185 Pn 21 36 44.3 -0.3
BRLK Bradley Lake 1.03 185 Sn Sn 21 36 58.9 +0.4
RDJH Redoubt Jeurge 1.05 260 Pn 21 36 43.8 -1.0
BRSE Bradley Lake S 1.05 181 Pn 21 36 44.4 -0.4
RSO Redoubt South 1.06 253 Pn 21 36 44.2 -0.8
RED Redoubt Volcan 1.08 251 Pn 21 36 44.4 -0.8
RDWB Redoubt West 1.09 255 Pn 21 36 44.4 -1.0
RDWB Sn 21 36 58.9 -1.1
PMR Palmer 1.11 43 Pn 21 36 45.0 -0.5
PMR Palmer 1.11 43 Sn Sn 21 36 59.7 -0.6
PWL Port Wells 1.17 85 Pn 21 36 45.9 -0.4
PWL Sn 21 37 00.9 -0.7
HOM Homer 1.23 203 Pn 21 36 47.3 +0.3
HOM Sn Sn 21 37 03.7 +0.9
SKT Skwentna 1.26 342 Pn 21 36 46.7 -0.7
SKT Skwentna 1.26 342 Sn Sn 21 37 03.3 -0.4
KNK Knik Glacier 1.26 59 Pn 21 36 47.3 -0.2
KNK Knik Glacier 1.26 59 Sn Sn 21 37 03.4 -0.4
GHO Glory Hole Cre 1.31 40 Pn 21 36 47.7 -0.5
IVE Iliamna Volcan 1.38 237 Pn 21 36 48.7 -0.4
ILW Iliamna West 1.41 240 Pn 21 36 49.0 -0.5
ILS Iliamna Low So 1.44 236 Pn 21 36 49.6 -0.3
SML Sawmill 1.54 47 Pn 21 36 51.0 -0.1
SML Sn Sn 21 37 10.4 0.0
GLI Glacier Island 1.77 85 Pn 21 36 52.9 -1.4
GLI Sn 21 37 14.4 -1.5
GLI Glacier Island 1.77 85 Sn Sn 21 37 14.6 -1.3
SCM Sheep Creek Mo 1.94 56 Pn 21 36 56.5 -0.1
AU22 Augustine Moun 1.94 224 Pn 21 36 57.1 +0.6
AUH Augustine H 1.98 225 Pn 21 36 57.3 +0.3
AUW Augustine West 1.98 225 Pn 21 36 57.4 +0.3
JPK Jack Peak 2.03 81 Pn 21 36 56.9 -0.8
FID Port Fidalgo 2.08 89 Pn 21 36 56.5 -1.8
HIN Hinchinbrook I 2.12 99 Pn 21 36 57.4 -1.5
PPLA Purkeypile 2.23 342 Pn 21 37 00.2 -0.3
HUR Hurricane 2.26 13 Pn 21 37 00.8 +0.1
WAT6 Susitna Watana 2.29 37 Pn 21 37 00.9 -0.5
WAT1 Susitna Watana 2.29 26 Pn 21 37 00.9 -0.3
SVW2 Sparrevohn 2.40 280 Pn 21 37 01.3 -1.3
WAT2 Susitna Watana 2.40 24 Pn 21 37 02.5 -0.4
EYAK Cordova Ski Ar 2.46 93 Pn 21 37 02.1 -1.4
MID Middleton Isla 2.58 120 Pn Pn 21 37 02.8 -2.4
TRF Thorofare Moun 2.68 4 Pn 21 37 06.7 0.0
RND Reindeer 2.77 18 Pn 21 37 07.7 -0.1
KTH Kantishna Hill 2.78 358 Pn 21 37 08.5 +0.6
KTH Sn Sn 21 37 41.4 +1.1
GOAT Goat Mountain 2.95 91 Pn 21 37 08.9 -1.3
KAHC Katmai Hardscr 3.06 227 Pn 21 37 11.8 0.0
MCK McKinley 3.07 15 Pn 21 37 11.0 -0.8
KDAK Kodiak Island 3.16 198 P Pn 21 37 11.9 -1.2
15nm,0.3s,baz=32,slow=13,SNR=200
KDAK S Sn 21 37 46.8 -2.8
7.8nm,0.3s,baz=204,slow=17,SNR=6.4
KDAK Kodiak Island 3.16 198 Pn 21 37 11.8 -1.3
KDAK Kodiak Island 3.16 198 Pn 21 37 12.2 -0.8
TT01 Tatalina 3.29 313 Pn 21 37 14.1 -0.7
TTA Tatalina 3.30 313 Pn 21 37 14.3 -0.8
PAX Paxson 3.31 46 Pn 21 37 15.7 +0.5
BPAW Bear Paw Mtn. 3.33 358 Pn 21 37 15.2 -0.2
GLB Gilahina Butte 3.42 76 Pn 21 37 15.9 -0.7
BWN Browne 3.45 9 Pn 21 37 18.5 +1.5
VRDI Verde Repeater 3.56 80 Pn 21 37 17.6 -1.1
MCARA McCarthy VSAT 3.78 78 Pn 21 37 20.9 -0.7
OHAK Old Harbor 3.82 202 Pn 21 37 20.2 -1.7
NEA Nenana 3.88 11 Pn 21 37 22.9 +0.1
WRH Wood River Hil 3.89 17 Pn 21 37 22.7 -0.2
MENT Mentasta 3.95 54 Pn Pn 21 37 25.6 +1.7
HDA Harding Lake 4.03 24 Pn 21 37 25.3 +0.5
RIDG Independent Ri 4.04 40 Pn 21 37 26.0 +1.0
PTPK Patty Peak 4.04 81 Pn 21 37 24.6 -0.6
KIAG Kiagna River 4.09 84 Pn 21 37 24.7 -1.2
BALM Baldy 4.09 83 Pn 21 37 24.8 -1.1
CCB Clear Creek Bu 4.10 18 Pn 21 37 25.2 -0.6
PS08 TAPS Pump Stn8 4.17 24 Pn 21 37 27.0 +0.2
PLK1 Peulik 1 4.25 228 Pn 21 37 28.7 +0.8
MLY Manley 4.26 360 Pn 21 37 28.3 +0.2
TCOL CIGO, UAF Yank 4.30 16 Pn 21 37 28.6 0.0
COLA College 4.31 17 Pn 21 37 28.7 +0.1
COLA College 4.31 17 Pn 21 37 29.1 +0.5
MDM Murphy Dome 4.34 14 Pn 21 37 29.7 +0.6
IL31 4.37 22 Pn 21 37 29.8 +0.4
ILAR Eielson Array 4.37 22 P Pn 21 37 30.0 +0.5
7.3nm,0.3s,baz=211,slow=14,SNR=380
ILAR S Sn 21 38 16.5 -2.5
3.0nm,0.3s,baz=190,slow=18,SNR=6.5
BARN Barnard Glacie 4.43 83 Pn 21 37 29.6 -0.9
SCRK Sand Creek 4.48 41 Pn 21 37 30.9 -0.2
CTGM Chitina Glacie 4.59 84 Pn 21 37 31.8 -0.9
POKR Poker Plat Res 4.60 18 Pn 21 37 33.0 +0.3
SII Sitkinak Islan 4.61 205 Pn Pn 21 37 32.2 -0.6
BC03 4.80 58 Pn 21 37 35.4 +0.1
YUK2 White River 4.87 74 Pn 21 37 36.1 -0.3
BVCY Beaver Creek 4.98 67 Pn 21 37 38.2 +0.3
YUK3 Moose Creek 5.05 74 Pn 21 37 38.6 -0.3
YUK1 Sand Pete Hill 5.07 70 Pn 21 37 39.4 +0.2
PCA Pinnacle 5.23 93 Pn 21 37 39.6 -1.7
PRP Porcupine Dome 5.30 24 Pn 21 37 42.7 +0.4
IM03 5.39 347 Pn 21 37 43.0 -0.4
CHIR Chirikof Islan 5.61 210 Pn Pn 21 37 46.4 -0.1
YKU2 Yakutat 5.66 98 Pn Pn 21 37 46.7 -0.5
EGAK Eagle 5.93 43 Pn 21 37 50.9 +0.1
CHGN Chignik 6.04 225 Pn Pn 21 37 50.0 -2.3
YUK6 Outpost Mounta 6.04 83 Pn 21 37 52.2 -0.3
YUK7 Dusty Glacier 6.19 87 Pn 21 37 54.5 -0.1
YUK5 Granite Creek 6.27 81 Pn 21 37 55.3 -0.4
HYT Haines Junctio 6.47 84 Pn 21 37 57.8 -0.5
COLD Coldfoot 6.47 2 Pn Pn 21 37 59.9 +1.7
DHAK Deception Hill 6.51 100 Pn Pn 21 37 57.7 -1.1
BM03 Burnt Mountain 7.17 19 Pn 21 38 07.4 -0.4
INK Inuvik 10.52 37 P Pn 21 38 53.4 0.0
0.3nm,0.3s,baz=250,slow=16,SNR=6.3
INK S Sn 21 40 47.5 -1.9
0.1nm,0.3s,baz=255,slow=21,SNR=1.8
YKA Yellowknife Ar 17.10 69 P P 21 40 21.6 +0.9
0.1nm,0.3s,baz=278,slow=10,SNR=3.1
MA2 Magadan 28.30 294 LR LR 21 54 32.6
comp=Z,24nm,18.9s,baz=55,slow=39
KLR Kul'dur 43.33 291 P P 21 44 19.9 -0.7
0.6nm,0.5s,baz=38,slow=5.5,SNR=4.3
TXAR Lajitas Array 44.23 114 P P 21 44 32.4 +4.2
0.2nm,0.8s,baz=324,slow=9.1,SNR=3.2
KSRS Korea Array 54.10 284 P P 21 45 44.1 +0.8
0.6nm,0.6s,baz=26,slow=7.1,SNR=4.2
SONM Songino Array 55.23 307 P P 21 45 52.3 +0.8
0.7nm,0.6s,baz=43,slow=5.7,SNR=5.9
MKAR Makanchi Array 64.51 323 P P 21 46 53.9 -1.1
0.2nm,0.7s,baz=33,slow=7.3,SNR=4.2
GEYT Alibeck 78.84 337 P P 21 48 20.6 -0.5
0.6nm,0.4s,baz=23,slow=7.8,SNR=2.4
CMAR Chiang Mai Arr 83.55 296 P P 21 48 45.3 -1.0
0.2nm,0.3s,baz=32,slow=3.5,SNR=3.4

WEL 20 21:37:20.6, 39°S±2°×175°E±°, h233km±5km, M3.9/128, MLv3.9/128, Error ellipse: s-maj=0.0km s-min=0.0km az=62.9, North Island

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res
TWVZ Taurewa 0.36 128 P Pn 21 37 51.0 -0.2
VRZ Vera Road 0.37 222 P Pn 21 37 50.7 -0.4
HIZ Hauiti 0.38 333 P Pn 21 37 51.0 -0.3
HIZ S S 21 38 13.6 -1.5
WTVZ West Tongariro 0.48 124 P Pn 21 37 51.4 -0.1
PKVZ Pokaka 0.48 155 P Pn 21 37 51.4 -0.1
KATZ Kakaramea 0.50 105 P Pn 21 37 51.5 -0.2
KRVZ Karewarewa 0.50 119 P Pn 21 37 51.5 -0.1
NGZ Ngauruhoe 0.52 129 P Pn 21 37 51.6 -0.2
WATZ Wairara 0.53 75 P Pn 21 37 51.9 +0.2
WATZ S S 21 38 14.3 -1.6
RATZ Rangitukua 0.54 92 P Pn 21 37 51.4 -0.3
FWVZ Far West T-bar 0.55 138 P Pn 21 37 51.9 0.0
DRZ Dome Shelter 0.57 138 P Pn 21 37 52.2 +0.1
TRVZ Turoa 0.58 141 P Pn 21 37 52.0 0.0
WHVZ Whangaehu Hut 0.59 138 P Pn 21 37 52.1 0.0
TUVZ Tukino 0.61 133 P Pn 21 37 52.2 +0.1
MTVZ Mangateitei 0.61 150 P Pn 21 37 52.0 0.0
RITZ Rihia Road 0.62 102 P Pn 21 37 52.2 +0.2
MHEZ Mangahewa 0.63 249 P Pn 21 37 52.1 +0.2
TLZ Tolley Road 0.63 35 P Pn 21 37 51.9 -0.2
KUTZ Kaahu Road 0.69 58 P Pn 21 37 52.4 +0.2
WHTZ Whakaora 0.71 75 P Pn 21 37 52.6 +0.2
DREZ Durham Road 0.76 243 P Pn 21 37 52.5 0.0
MOVZ Moawhango 0.76 137 P Pn 21 37 52.3 -0.3
HATZ Hinemaiaia 0.79 93 P Pn 21 37 52.4 -0.3
LREZ Lake Rotokare 0.80 221 P Pn 21 37 52.9 +0.2
PREZ Palmer Road 0.87 235 P Pn 21 37 53.2 +0.1
WAZ Wanganui 0.91 185 P Pn 21 37 53.4 +0.2
WAZ S S 21 38 17.0 -1.9
WPRZ Whakapapatarin 0.91 69 P Pn 21 37 53.3 0.0
PKE Pukeiti 0.92 248 P Pn 21 37 53.3 0.0
KHEZ Kahui Hut 0.94 242 P Pn 21 37 53.4 -0.1
GRRZ Galatos Road 0.95 59 P Pn 21 37 53.6 +0.1
BHHZ Black Hill Sta 1.00 130 P Pn 21 37 53.6 -0.2
ALRZ Allen Road 1.03 74 P Pn 21 37 53.8 -0.2
NBEZ Newall Road No 1.03 246 P Pn 21 37 52.5 -1.4
MRHZ Matea Rd 1.04 89 P Pn 21 37 53.6 -0.5
HRRZ Handcock Road 1.05 64 P Pn 21 37 54.2 +0.1
HSRZ Hossack Road 1.06 60 P Pn 21 37 54.2 0.0
PRRZ Plateau Road 1.09 72 P Pn 21 37 54.1 -0.2
NMEZ Namu Road 1.09 239 P Pn 21 37 54.4 +0.1
BKZ Black Stump Fm 1.15 106 P Pn 21 37 54.6 -0.2
TOZ Tahuroa Road 1.17 17 P Pn 21 37 54.9 0.0
KWHZ Kaweka Forest 1.19 119 P Pn 21 37 55.3 +0.2
KARZ Kaharoa 1.23 48 P Pn 21 37 55.4 0.0
RRRZ Republican Roa 1.23 66 P Pn 21 37 55.0 -0.4
TARZ Mount Tarawera 1.28 62 P Pn 21 37 55.8 +0.1
KRHZ Kereru 1.28 129 P Pn 21 37 55.7 +0.1
MKRZ Makatiti 1.30 57 P Pn 21 37 56.4 +0.5
OHWZ Ohakea 1.36 172 P Pn 21 37 56.7 +0.5
NMHZ Naumai 1.37 101 P Pn 21 37 57.1 +0.8
PNHZ Pukenui 1.37 141 P Pn 21 37 56.4 +0.1
MTHZ Maungataniwha 1.38 91 P Pn 21 37 56.2 -0.2
MUGZ Murupara 1.38 75 P Pn 21 37 55.8 -0.5
TSZ Takapari Road 1.39 151 P Pn 21 37 56.5 +0.1
MCHZ McNeill Hill 1.39 116 P Pn 21 37 57.2 +0.8
TGRZ Tauranga 1.46 40 P Pn 21 37 56.9 -0.1
RTZ Ruatahuna 1.51 82 P Pn 21 37 57.1 -0.3
OPRZ Ohinepanea 1.54 50 P Pn 21 37 57.3 -0.3
ARHZ Aropaoanui 1.55 106 P Pn 21 37 58.2 +0.5
RAHZ Arahi 1.57 93 P Pn 21 37 58.3 +0.4
WPHZ Waipukurau 1.61 139 P Pn 21 37 58.4 +0.3
POWZ Post Office Ro 1.63 161 P Pn 21 37 58.2 -0.1
DVHZ Dannevirke 1.67 150 P Pn 21 37 58.6 -0.1
KAHZ Kahuranaki 1.68 125 P Pn 21 37 59.4 +0.6
WHHZ Waihua 1.69 98 P Pn 21 37 59.3 +0.4
URZ Urewera 1.70 70 P Pn 21 37 58.2 -0.8
URZ S S 21 38 24.4 -4.4
MKAZ Moumakai 1.75 2 P Pn 21 37 59.5 +0.1
CKHZ Cape Kidnapper 1.75 118 P Pn 21 38 00.0 +0.7
SNGZ Shannon Statio 1.77 88 P Pn 21 37 59.8 +0.2
PXZ Pawanui 1.81 131 P Pn 21 38 00.1 +0.2
PXZ S S 21 38 28.5 -2.1
AWAZ Awhitu Peninsu 1.82 349 P Pn 21 38 00.2 +0.2
PRWZ Pori Road 1.84 158 P Pn 21 38 00.1 0.0
MRZ Mangatainoka R 1.85 168 P Pn 21 37 59.8 -0.4
PRHZ Porangahau 1.86 140 P Pn 21 38 00.6 +0.3
RAGZ Rawiri 1.86 80 P Pn 21 38 00.3 -0.2
ETAZ East Tamaki Re 1.90 356 P Pn 21 38 00.9 +0.1
ANWZ Angora Road 1.94 147 P Pn 21 38 01.2 +0.2
WTAZ Waiatarua 1.96 348 P Pn 21 38 01.8 +0.5
OGWZ Otaki Gorge 1.96 178 P Pn 21 38 01.1 -0.2
MWZ Matawai 1.99 76 P Pn 21 38 01.2 -0.4
KIW Kapiti Island 2.01 184 P Pn 21 38 01.1 -0.6
HBAZ Herne Bay Bore 2.02 352 P Pn 21 38 01.4 -0.4
TIWZ Tintock 2.02 162 P Pn 21 38 01.4 -0.4
KNZ Kokohu 2.03 96 P Pn 21 38 02.0 +0.2
BFZ Birch Farm 2.04 154 P Pn 21 38 01.6 -0.4
WIAZ Waiheke Island 2.06 1 P Pn 21 38 02.4 +0.1
HOWZ Holdsworth Sta 2.07 171 P Pn 21 38 01.7 -0.6
MBAZ Motutapu North 2.08 356 P Pn 21 38 02.7 +0.3
RIGZ Rimuhau 2.10 87 P Pn 21 38 02.9 +0.2
DUWZ D'Urville Isla 2.14 204 P Pn 21 38 02.3 -0.7
KUZ Kuaotunu 2.16 14 P Pn 21 38 03.3 0.0
PRGZ Paritu Road 2.19 93 P Pn 21 38 03.9 +0.4
TKGZ Te Karaka 2.21 80 P Pn 21 38 03.9 +0.3
MHGZ Mahia Peninsul 2.22 99 P Pn 21 38 04.1 +0.3
RUGZ Raukumara Rang 2.23 67 P Pn 21 38 02.7 -1.3
CPWZ Castlepoint 2.23 158 P Pn 21 38 03.9 +0.1
CAW Cannon Point 2.25 180 P Pn 21 38 03.4 -0.6
ABAZ Army Bay 2.25 355 P Pn 21 38 04.7 +0.5
MTW Mount Morrison 2.33 172 P Pn 21 38 03.9 -0.9
TMWZ Te Maipa 2.34 165 P Pn 21 38 04.3 -0.7
TWGZ Tauwhareparae 2.37 74 P Pn 21 38 05.7 +0.3
HAZ Te Kaha 2.39 64 P Pn 21 38 04.4 -1.1
TCW Tory Channel 2.44 194 P Pn 21 38 05.4 -0.5
WEL Wellington 2.44 186 P Pn 21 38 05.1 -0.8
PAWZ Paruwai Farm 2.54 174 P Pn 21 38 06.1 -0.9
PKGZ Pakihiroa 2.54 69 P Pn 21 38 06.7 -0.5
BHW Baring Head 2.56 184 P Pn 21 38 06.1 -1.0
MSWZ Moikau Station 2.57 177 P Pn 21 38 06.3 -1.0
TRWZ Traveller 2.59 170 P Pn 21 38 06.7 -0.8
GRZ Great Barrier 2.61 7 P Pn 21 38 08.2 +0.3
PUZ Puketiti 2.61 74 P Pn 21 38 07.4 -0.5
NNZ Nelson 2.70 208 P Pn 21 38 07.5 -1.1
PLWZ Palliser 2.72 177 P Pn 21 38 07.8 -1.1
TUWZ Tuamarina 2.72 198 P Pn 21 38 08.1 -0.8
QRZ Quartz Range 2.78 224 P Pn 21 38 07.8 -1.7
WMGZ Waiomatatini S 2.82 70 P Pn 21 38 09.5 -0.5
MXZ Matakaoa Point 2.85 64 P Pn 21 38 10.3 0.0
WCZ Waipu Caves 2.96 348 P Pn 21 38 12.2 +0.5
CMWZ Cape Campbell 2.97 193 P Pn 21 38 11.4 -0.3
BSWZ Blackbirch Sta 3.00 197 P Pn 21 38 11.2 -0.8
THZ Tophouse 3.35 209 P Pn 21 38 14.4 -1.6
KHZ Kahutara 3.75 198 P Pn 21 38 19.4 -1.2
OUZ Omahuta 3.81 341 P Pn 21 38 22.0 +0.6
DSZ Denniston Nort 3.82 220 P Pn 21 38 19.6 -1.9
GVZ Greta Valley S 4.39 200 P Pn 21 38 26.5 -1.8
LTZ Lake Taylor 4.47 208 P Pn 21 38 27.2 -2.0
AMCZ Amberley 4.70 202 P Pn 21 38 30.2 -1.8
INZ Inchbonnie 4.75 214 P Pn 21 38 29.9 -2.8
OXZ Oxford 5.03 206 P Pn 21 38 33.4 -2.7
OKCZ Okains Bay 5.10 197 P Pn 21 38 34.8 -2.2
MQZ McQueen's Vall 5.18 200 P Pn 21 38 35.1 -2.9
AKCZ Akaroa Harbour 5.28 197 P Pn 21 38 36.8 -2.4
WVZ Waitaha Valley 5.35 217 P Pn 21 38 37.8 -2.3
RPZ Rata Peaks 5.73 211 P Pn 21 38 42.1 -2.8
FOZ Fox Glacier 6.13 219 P Pn 21 38 46.1 -3.9
LBZ Lake Benmore 6.63 212 P Pn 21 38 53.3 -3.1
ODZ Otahua Downs 7.01 207 P Pn 21 38 58.9 -2.3
JCZ Jackson Bay 7.04 220 P Pn 21 38 57.8 -3.7
HHSZ Highcliff Hill 7.77 204 P Pn 21 39 10.0 -0.8
TUZ Tuapeka 8.16 208 P Pn 21 39 14.2 -1.5
MLZ Mavora Lakes 8.31 216 P Pn 21 39 14.2 -3.6
WHZ Wether Hill Ro 8.79 215 P Pn 21 39 19.8 -4.0
SYZ Scrubby Hill 8.84 208 P Pn 21 39 22.8 -1.6
APZ The Paps 9.52 211 P Pn 21 39 30.0 -3.2
PYZ Puysegur Point 9.58 218 P Pn 21 39 30.7 -3.2

INET 20 21:47:02.9, 11.56N×86.35W, h92km, ML4.3
NEIC 20 21:47:02.4±1.7, 11.55N±0.06×86.29W±0.07, h108km±5km, mb4.4/81, Error ellipse: s-maj=10.8km s-min=6.5km az=55.0
IDC 20 21:47:02.1±0.8, 11.78N×86.02W, h101km±9km, mb3.7/12, mb1 3.9/16, mb1mx3.7/38, mbtmp4.1/16, Error ellipse: s-maj=21.5km s-min=7.8km az=49.0
UCR 20 21:47:02.9±1.8, 11.52N×86.42W, h72km±18km, MD4.1, ML4.4, mb4.4(NEIC)
SNET 20 21:47:07.4±1.0, 11.89N×86.73W, h135km±26km, ML4.6
GCG 20 21:47:12.0±3.0, 10.77N×87.79W, h17km±999km, MD4.6
ISC 20 21:47:01.4±0.7, 11.59N±0.05×86.29W±0.05, h100km±6km, n313, σ1.22/334, mb4.4/40, Near coast of Nicaragua

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res
MASN Masaya 0.42 19 eP Pn 21 47 17.4 +0.7
CNGN Cerro Negro 0.99 336 eP Pn 21 47 22.7 +0.9
ACON Acoyapa 1.16 71 Pn 21 47 25.1 +1.5
ACON Acoyapa 1.16 71 eP Pn 21 47 25.2 +1.6
GB1A Borinquen Arri 1.17 131 iP Pn 21 47 24.6 +0.9

BUEV	Buena Vista	1.17	132	eP	Pn	21 47 24.9	+1.0
LAPC	Finca la Perla	1.17	134	iP	Pn	21 47 24.8	+0.9
LAPC				iS	Sn	21 47 41.1	+0.4
BUAI	Buenos Aires	1.18	127	iP	Pn	21 47 24.9	+1.0
NY14	Universidad de	1.20	141	iP	Pn	21 47 25.4	+1.3
GPS1	Guardaparques	1.23	131	iP	Pn	21 47 25.5	+1.0
CRIN	San Cristobal	1.33	326	eP	Pn	21 47 26.8	+1.1
GUAB	Guayabo de Bag	1.36	130	iP	Pn	21 47 27.2	+1.1
MESS	Mesas	1.37	128	iP	Pn	21 47 27.3	+1.2
MATN	Matagalpa	1.38	15	eP	Pn	21 47 27.8	+1.5
HORNC	Hornillas	1.40	128	iP	Pn	21 47 27.4	+0.9
HORNC				iS	Sn	21 47 46.2	+0.7
CUI	Cuipilapa	1.44	130	iP	Pn	21 47 28.4	+1.4
CUI				iS	Sn	21 47 47.6	+1.1
ESTN	Estel	1.50	357	Pn	Pn	21 47 29.5	+1.7
ESTN				Sn	Sn	21 47 49.8	+2.0
ESTN	Estel	1.50	357	eP	Pn	21 47 29.5	+1.7
JTS	Las Juntas de	1.84	134	P	Pn	21 47 33.0	+0.9
	28nm,0.3s,baz=32,slow=13,SNR=24						
JTS				S	Sn	21 47 55.4	+0.1
	200nm,0.3s,baz=360,slow=19,SNR=25						
JTS	Las Juntas de	1.84	134	eP	Pn	21 47 32.9	+0.9
CEDE	Laguna Cedeo	1.91	125	eP	Pn	21 47 34.3	+1.5
CASO	Castillo	1.91	127	iP	Pn	21 47 34.5	+1.6
ESPN	Las Esperanzas	2.04	73		Pn	21 47 36.5	+2.0
ESPN	Las Esperanzas	2.04	73	eP	Pn	21 47 36.5	+2.0
LCND	La Caada	2.31	318	eP	Pn	21 47 39.0	+0.9
LCND				eS	Sn	21 48 05.2	-1.0
LCND	La Caada	2.31	318	eP	Pn	21 47 39.0	+0.9
LCND				eS	Sn	21 48 05.2	-1.0
JUCU	Jucuar¡n	2.53	311	eP	Pn	21 47 41.7	+0.7
JUCU				IAML		21 48 15.4	
	comp=Z,4µm,0.3s						
JUCU	Jucuar¡n	2.53	311	eP	Pn	21 47 41.7	+0.7
JUCU				IAML		21 48 15.4	
	comp=Z,4µm,0.3s						
TGUH	Tegucigalpa,Un	2.63	339	eP	Pn	21 47 44.6	+2.1
TGUH	Tegucigalpa,Un	2.63	339		Pn	21 47 44.5	+2.1
TGUH	Tegucigalpa,Un	2.63	339	eP	Pn	21 47 44.6	+2.1
BLLM	Bellamira	2.65	314	eP	Pn	21 47 43.4	+0.8
BLLM	Bellamira	2.65	314	eP	Pn	21 47 43.4	+0.8
HDC	Heredia	2.66	126	Pn	Pn	21 47 43.7	+1.0
RANC	El Ranchito	2.68	313	eP	Pn	21 47 44.7	+1.7
RANC				eS	Sn	21 48 13.6	-1.3
RANC	El Ranchito	2.68	313	eP	Pn	21 47 44.7	+1.7
RANC				eS	Sn	21 48 13.6	-1.3
PACA	Pacayal	2.72	314	eP	Pn	21 47 45.2	+1.5
PACA				eS	Sn	21 48 14.9	-1.2
PACA	Pacayal	2.72	314	eP	Pn	21 47 45.2	+1.5
PACA				eS	Sn	21 48 14.9	-1.2
ALJI	Alcalda de J	2.82	308	eP	Pn	21 47 45.8	+1.1
ALJI				eS	Sn	21 48 15.6	-2.5
ALJI	Alcalda de J	2.82	308	eP	Pn	21 47 45.8	+1.1
ALJI				eS	Sn	21 48 15.6	-2.5
COEB	Comit de Eme	2.89	311	eP	Pn	21 47 47.7	+1.9
COEB				IAML		21 48 25.6	
	comp=Z,1µm,0.3s						
COEB	Comit de Eme	2.89	311	eP	Pn	21 47 47.7	+1.9
COEB				IAML		21 48 25.6	
	comp=Z,1µm,0.3s						
PAVA	Las Pavas	3.33	310	eP	Pn	21 47 52.7	+0.9
PAVA	Las Pavas	3.33	310	eP	Pn	21 47 52.7	+0.9
LFRS	El Faro	3.38	307	eP	Pn	21 47 53.8	+1.5
LFRS				eS	Sn	21 48 28.9	-2.7
LBRS	Las Brisas	3.43	309	eP	Pn	21 47 54.1	+1.1
BOQS	Boqueron	3.61	307	eP	Pn	21 47 57.0	+1.4
BOQS				eS	Sn	21 48 34.7	-2.8
CEVE	Cerro Verde	3.94	305	eP	Pn	21 48 01.6	+1.6
CEVE				eS	Sn	21 48 43.0	-2.4
CEVE				IAML		21 48 55.0	
	comp=Z,2µm,0.4s						
CEVE	Cerro Verde	3.94	305	eP	Pn	21 48 01.6	+1.6
CEVE				eS	Sn	21 48 43.0	-2.4
CEVE				IAML		21 48 55.0	
	comp=Z,2µm,0.4s						
IXG	Ixpaco	4.79	303	eP	Pn	21 48 14.1	+2.6
IXG				eS	Sn	21 49 06.3	+0.4
PCG	Pacaya	5.04	304	eS	Sn	21 49 14.5	+2.3
FUG	Fuego 3	5.27	303	eP	Pn	21 48 22.9	+5.0
FUG				eS	Sn	21 49 18.4	+0.9
APG	El Apazote	5.29	310	P	Pn	21 48 21.3	+2.9
	comp=Z,2.3nm,0.3s,baz=251,slow=3.6,SNR=4.0						
APG				S	Sn	21 49 21.4	+3.2
	comp=Z,2.2nm,0.3s,baz=335,slow=19,SNR=2.9						
STG3	Santiaguito 3,	6.00	302	eP	Pn	21 48 31.7	+3.7
STG3				eS	Sn	21 49 34.8	-0.7
BCIP	Isla Barro Col	6.79	110	Pn	Pn	21 48 39.2	+0.7
CCIG	Comitan	7.34	310		Pn	21 48 45.4	-0.8
TEIG	Tepich	8.80	348	P	Pn	21 49 04.7	-1.1
	comp=Z,0.5nm,0.3s,baz=223,slow=24,SNR=2.2						
FSCY	Frank Sound, G	9.12	32	Pn	Pn	21 49 12.3	+2.1
CMIG	Matias Romero	9.96	304	P	Pn	21 49 23.7	+2.0
	comp=Z,0.7nm,0.3s,baz=135,slow=13,SNR=8.2						
CMIG				S	Sn	21 51 15.6	+4.1
	comp=Z,1.0nm,0.3s,baz=116,slow=16,SNR=5.9						
CBCY	The Bluff, Cay	10.26	37	Pn	Pn	21 49 27.4	+1.8
SDV	Santo Domingo	15.64	98	P	Pn	21 50 34.4	-2.2
	comp=Z,0.8nm,0.3s,baz=280,slow=6.1,SNR=8.0						
SDV	Santo Domingo	15.64	98		Pn	21 50 37.1	+0.5
SDV				IAmb	IAmb	21 50 56.2	
	comp=Z,29nm,1.1s						
SDDR	Presa de Saban	16.23	61	Pn	Pn	21 50 43.3	-0.4
656A	Willston	18.04	11	P	Pn	21 51 06.0	+0.5
656A				IAmb	IAmb	21 51 14.9	
	comp=Z,33nm,1.1s						
553A	Crawfordville	18.59	5	P	Pn	21 51 12.4	+0.2
553A				IAmb	IAmb	21 51 19.8	
	comp=Z,33nm,0.8s						
CRPR	Cabo Rojo, PR	19.61	69	P	Pn	21 51 23.6	-0.6
CRPR				IAmb	IAmb	21 51 27.9	
	comp=Z,29nm,0.9s						
MLPR	Magueyes Islan	19.66	69	P	Pn	21 51 23.3	+0.8
MLPR				IAmb	IAmb	21 51 28.3	
	comp=Z,22nm,0.8s						
346A	Big Creek Wild	19.92	352	P	P	21 51 26.0	+0.7
AOPR	Arecibo Observ	20.03	68	P	P	21 51 27.0	+0.4
AOPR				IAmb	IAmb	21 51 45.6	
	comp=Z,29nm,0.8s						
ATAH	Atahualpa	20.19	157	P	Pn	21 51 31.8	+0.2
	comp=Z,5.1nm,0.7s,baz=343,slow=14,SNR=2.2						
250A	Grady	20.29	0	P	P	21 51 27.8	-1.5
250A				IAmb	IAmb	21 51 43.9	
	comp=Z,10nm,0.8s						
GCPR	Guaynabo City	20.63	69	P	P	21 51 33.1	+0.1
GCPR				IAmb	IAmb	21 51 37.7	
	comp=Z,14nm,0.9s						
833A	Chaparral WMA,	20.68	326	P	Pn	21 51 36.2	-0.5
	baz=142						
CBYP	Canovanas	20.82	69	P	P	21 51 35.9	+0.7
CBYP				IAmb	IAmb	21 51 49.4	
	comp=Z,13nm,0.9s						
MTP	Monte Pirata	21.06	70	P	P	21 51 39.2	+1.6
MTP				IAmb	IAmb	21 51 53.0	
	comp=Z,20nm,1.0s						
154A	Montrose	21.13	7	P	P	21 51 40.1	+1.9
PCRV	Puerto La Cruz	21.31	92	P	P	21 51 40.5	0.0
	comp=Z,27nm,0.5s,baz=246,slow=4.5,SNR=11						
LRAL	Lakeview Retre	21.36	358	P	P	21 51 41.9	+1.2
LRAL	Lakeview Retre	21.36	358	P	P	21 51 43.2	+2.5
	baz=178						
CUPR	Culebra, Puert	21.36	69	P	P	21 51 38.9	-2.0
CUPR				IAmb	IAmb	21 51 41.6	
	comp=Z,30nm,1.1s						
PLCV	Puerto La Cruz	21.36	92	P	P	21 51 40.5	-0.4
Z50A	Ashland	21.57	1	P	P	21 51 44.9	+1.9
Z50A	Ashland	21.57	1	P	P	21 51 45.0	+2.0
	baz=181						
GOGA	Godfrey	21.88	6	P	P	21 51 46.6	+0.4
GOGA	Godfrey	21.88	6	P	P	21 51 48.3	+2.1
	baz=188						
Y49A	Blount Mountai	22.17	360	P	P	21 51 50.9	+1.5
Y49A				IAmb	IAmb	21 51 51.5	
	comp=Z,8.4nm,0.7s						
Y52A	Lilburn	22.27	5	P	P	21 51 52.0	+1.6
	baz=186						
Y55A	Saluda	22.61	10	P	P	21 51 55.5	+1.6
	baz=192						
HODGE	Hodges	22.84	9	P	P	21 51 57.7	+1.5
JSC	Jenkinsville	23.05	11	P	P	21 51 59.5	+1.2
X54A	Belton	23.13	8	P	P	21 52 00.5	+1.4
	baz=190						
X55A	Gracelyn & Ava	23.17	10	P	P	21 52 00.8	+1.4
	baz=192						

X56A	White Oak	23.30	11	P	P	21 52 01.7	+1.1
	baz=193						
PLAL	Pickwick Lake	23.34	356	P	P	21 52 02.0	+1.1
PLAL					PcP	21 55 46.5	+1.5
BG3	Lake Jocassee	23.50	7	P	P	21 52 03.8	+1.4
W51A	Cleveland	23.51	3	P	P	21 52 04.4	+1.9
	baz=184						
W50A	Signal Mountai	23.52	2	P	P	21 52 03.3	+0.6
W50A	Signal Mountai	23.52	2	P	P	21 52 04.9	+2.2
	baz=183						
SWET	Sewanee	23.52	1	P	P	21 52 03.1	+0.4
BIRD	Birdtown, Kers	23.56	12	P	P	21 52 03.5	+0.6
BIRD				IAmb	IAmb	21 52 04.8	
	comp=Z,10nm,0.8s						
W54A	Cherokee Point	23.69	8	P	P	21 52 05.8	+1.7
	baz=190						
CPCT	Cooper Cave	23.81	4	P	P	21 52 07.1	+1.9
CPCT				IAmb	IAmb	21 52 08.2	
	comp=Z,9.8nm,0.9s						
KMSC	Kings Mountain	23.88	10	P	P	21 52 06.2	+0.4
KMSC				IAmb	IAmb	21 52 08.0	
	comp=Z,12nm,0.9s						
KMSC	Kings Mountain	23.88	10	P	P	21 52 07.6	+1.8
	baz=192						
TXAR	Lajitas Array	23.96	320	P	P	21 52 07.9	+1.2
	comp=Z,1.8nm,0.5s,baz=139,slow=9.9,SNR=21						
TXAR				PcP	PcP	21 55 46.5	-0.1
	comp=Z,0.8nm,0.8s,baz=106,slow=3.3,SNR=6.0						
TXAR				ScP	ScP	21 59 17.6	+1.5
	comp=Z,0.3nm,0.8s,baz=132,slow=5.2,SNR=3.6						
V50A	Pikevile	24.00	2	P	P	21 52 07.8	+0.9
	baz=183						
W56A	Indian Trail	24.01	12	P	P	21 52 08.2	+1.3
	baz=194						
V48A	Smith Brothers	24.05	359	P	P	21 52 07.2	-0.1
TKL	Tuckaleechee C	24.07	5	P	P	21 52 06.7	-0.8
	comp=Z,6.6nm,0.8s,baz=188,slow=15,SNR=5.3						
TKL	Tuckaleechee C	24.07	5	P	P	21 52 09.2	+1.6
TKL				IAmb	IAmb	21 52 11.0	
	comp=Z,9.6nm,0.9s						
V49A	McMinnville	24.07	1	P	P	21 52 08.4	+0.9
	baz=181						
W57A	Gilead	24.15	13	P	P	21 52 09.2	+1.0
W57A				IAmb	IAmb	21 52 09.9	
	comp=Z,9.4nm,0.6s						
W57A	Gilead	24.15	13	P	P	21 52 08.8	+0.6
	baz=195						
V51A	Loudon	24.17	4	P	P	21 52 09.8	+1.4
	baz=185						
V53A	Saluda	24.18	7	IAmb	IAmb	21 52 12.4	
	comp=Z,7.4nm,0.7s						
V53A	Saluda	24.18	7	P	P	21 52 10.7	+2.1
	baz=188						
V52A	Sevierville	24.27	5	P	P	21 52 10.5	+1.2
	baz=187						
X37A	Clayton	24.34	342	P	P	21 52 10.6	+0.6
CLTN	Cedars of Leba	24.39	360	P	P	21 52 11.6	+1.2
CLTN				IAmb	IAmb	21 52 13.8	
	comp=Z,7.0nm,0.7s						
V54A	Nebo	24.40	9	P	P	21 52 12.0	+1.5
	baz=190						
WVT	Waverly	24.47	357	P	P	21 52 11.3	+0.1
V55A	Taylorsville	24.59	10	P	P	21 52 15.2	+2.9
	baz=192						
V56A	Mocksville	24.68	11	P	P	21 52 14.3	+1.2
	baz=194						
U50A	Jamestown	24.75	3	P	P	21 52 14.9	+1.1
	baz=184						
U49A	Red Boiling Sp	24.82	1	P	P	21 52 15.4	+1.1
	baz=181						
U52A	Thorn Hill	24.84	6	P	P	21 52 16.1	+1.6
	baz=187						
U53A	Fall Branch	24.89	7	P	P	21 52 16.6	+1.6
	baz=189						
V57A	Coltrane Farms	24.90	13	P	P	21 52 15.9	+0.8
	baz=195						
V58A	Windy Hill, Pi	24.96	14	P	P	21 52 17.1	+1.5
V58A	Windy Hill, Pi	24.96	14	P	P	21 52 16.3	+0.7
	baz=197,SNR=5.5						
U54A	Nelsons Funny	25.15	8	P	P	21 52 18.4	+1.0
U54A				IAmb	IAmb	21 52 22.0	
	comp=Z,18nm,0.8s						
U54A	Nelsons Funny	25.15	8	P	P	21 52 20.0	+2.6
	baz=190						
V59A	Middlesex	25.15	16	P	P	21 52 18.8	+1.5
	baz=199						
U55A	TA2, Sparta	25.25	10	P	P	21 52 19.3	+1.0
	baz=192						
U57A	Blanch	25.52	13	P	P	21 52 20.8	+0.2
	baz=196,SNR=5.6						
T57A	Hurt	26.08	13	P	P	21 52 27.0	+1.3
T57A				IAmb	IAmb	21 52 28.3	
	comp=Z,8.2nm,0.9s						
T57A	Hurt	26.08	13	P	P	21 52 26.5	+0.7
	baz=196						
T58A	Grand View Acr	26.20	14	P	P	21 52 27.4	+0.6
	baz=198						
WCI	Wyandotte Cave	26.53	360	P	P	21 52 31.1	+1.3
	baz=180						
R51A	Hillsboro	26.71	5	P	P	21 52 32.4	+1.1
	baz=186						
CCM	Cathedral Cave	26.73	351	P	P	21 52 32.0	+0.5
	baz=169						
S57A	Dark Hollow, R	26.88	13	P	P	21 52 33.6	+0.7
	baz=196						
S58A	Poland Farm, P	26.95	15	P	P	21 52 34.5	+1.0
	baz=198						
R56A	Bull Pasture M	27.41	12	P	P	21 52 39.2	+1.4
	baz=195						
Q51A	Peebles	27.45	5	P	P	21 52 39.3	+1.3
	baz=186						
R57A	Stanardsville	27.49	13	P	P	21 52 39.2	+0.8
	baz=197						
Q52A	Bidwell	27.50	7	P	P	21 52 39.8	+1.4
	baz=189						
R58A	Rapidan	27.61	14	P	P	21 52 40.9	+1.4
	baz=198						
CBN	Corbin Frederi	27.68	15		PcP	21 55 54.2	-0.6
Q54A	Coxs Mills	27.71	9	P	P	21 52 40.9	+0.6
	baz=192						
P48A	Milroy	27.77	1	P	P	21 52 41.5	+0.7
	baz=182						
Q55A	Buckhannon	27.85	10	P	P	21 52 43.3	+1.7
	baz=193						
Q56A	Snyder Ridge,	28.06	12	P	P	21 52 44.8	+1.3
Q56A				IAmb	IAmb	21 52 46.2	
	comp=Z,9.2nm,0.8s						
Q56A	Snyder Ridge,	28.06	12	P	P	21 52 45.0	+1.5
	baz=195						
P53A	Whipple	28.12	8	P	P	21 52 44.5	+0.5
P53A				IAmb	IAmb	21 52 46.0	
	comp=Z,15nm,0.9s						
P53A	Whipple	28.12	8	P	P	21 52 45.1	+1.1
	baz=190						
P52A	Corning	28.17	7	P	P	21 52 45.8	+1.3
	baz=189						
Q57A	Strasburg	28.22	13	P	P	21 52 46.2	+1.3
	baz=197						
Q58A	Fox Den Farm,	28.30	14	P	P	21 52 46.5	+0.9
	baz=198						
P55A	Reedsville	28.39	11	P	P	21 52 48.0	+1.5
	baz=194						
O50A	Cable	28.54	4	P	P	21 52 48.0	+0.2
	baz=186						
O48A	Farmland	28.57	2	P	P	21 52 48.0	0.0
	baz=182						
P56A	Dayton Farm, R	28.58	12	P	P	21 52 49.7	+1.7
	baz=196						
O51A	Pataskala	28.63	6	P	P	21 52 49.5	+1.0
	baz=188						
ACSO	Alum Creek Sta	28.68	5	P	P	21 52 49.5	+0.6
	baz=187						
O52A	Adamsville	28.68	7	P	P	21 52 48.9	-0.1
O52A				IAmb	IAmb	21 52 50.4	
	comp=Z,16nm,0.9s						
O52A	Adamsville	28.68	7	P	P	21 52 49.5	+0.5
	baz=189						
P57A	Homestead Farm	28.74	13	P	P	21 52 49.5	0.0
P57A				IAmb	IAmb	21 52 52.0	
	comp=Z,19nm,1.1s						
P57A	Homestead Farm	28.74	13	P	P	21 52 51.0	+1.5
	baz=197						
O53A	New Philadelph	28.90	8	P	P	21 52 51.6	+0.7
	baz=190						
P58A	Pank, Wackersv	28.91	14	P	P	21 52 52.0	+1.0
	baz=199						
N50A	Nevada	29.20	5	P	P	21 52 54.1	+0.6

	baz=186						
P59A	Jarrettsville	29.25	16	P	P	21 52 55.0	+1.1
	baz=200						
N49A	Columbus Grove	29.28	3	P	P	21 52 54.0	-0.2
N49A				IAmb	IAmb	21 52 55.6	
	comp=Z,11nm,0.7s						
N49A	Columbus Grove	29.28	3	P	P	21 52 54.9	+0.7
	baz=184						
O56A	Blue Knob Stat	29.37	12	P	P	21 52 56.2	+1.0
	baz=196						
N53A	Lisbon	29.50	8	P	P	21 52 57.0	+0.8
	baz=191						
O57A	Amberson	29.52	14	P	P	21 52 57.3	+0.9
	baz=198						
O58A	Lewisberry	29.60	15	P	P	21 52 58.6	+1.5
	baz=199						
MVL	Millersville	29.63	16	P	P	21 52 57.9	+0.6
N55A	Marion Center	29.78	11	P	P	21 52 59.1	+0.3
	baz=195						
M49A	Liberty Center	29.84	4	P	P	21 52 59.6	+0.4
	baz=185						
SSPA	Standing Stone	29.87	13	P	P	21 52 59.6	+0.1
SSPA	Standing Stone	29.87	13	P	P	21 53 00.9	+1.4
	baz=197						
O59A	Robesonia	29.97	16	P	P	21 53 01.4	+1.0
	baz=200,SNR=5.8						
N56A	West Decatur	30.05	12	P	P	21 53 02.2	+1.1
	baz=196						
N57A	Milroy	30.06	13	P	P	21 53 01.7	+0.6
	baz=197						
M53A	Wl Miller and	30.14	8	P	P	21 53 02.2	+0.4
	baz=191,SNR=6.3						
N58A	Sunbury	30.33	14	IAmb	IAmb	21 53 05.8	
	comp=Z,10nm,0.8s						
N58A	Sunbury	30.33	14	P	P	21 53 04.8	+1.3
	baz=199						
M54A	Oil Creek Stat	30.37	10	P	P	21 53 04.3	+0.4
M54A				IAmb	IAmb	21 53 05.1	
	comp=Z,5.8nm,0.9s						
M54A	Oil Creek Stat	30.37	10	P	P	21 53 04.8	+0.9
	baz=193						
M55A	Ridgway	30.49	11	P	P	21 53 06.3	+1.3
	baz=195						
M56A	Emporium	30.62	12	P	P	21 53 06.7	+0.5
M56A	Emporium	30.62	12	P	P	21 53 06.4	+0.3
	baz=196,SNR=5.3						
N59A	State Game Lan	30.65	16	P	P	21 53 07.5	+1.1
	baz=201,SNR=7.0						
L53A	Girard	30.71	9	P	P	21 53 06.9	0.0
	baz=192,SNR=6.7						
M57A	Sunshine Farm,	30.71	14	P	P	21 53 07.7	+0.8
	baz=198,SNR=5.6						
SAML	Samuel	30.73	131	P	P	21 53 06.6	-0.7
M58A	Price's Panora	30.90	14	P	P	21 53 09.7	+1.1
	baz=199						
ERPA	Erie	30.91	9	P	P	21 53 08.5	-0.1
ERPA	Erie	30.91	9	P	P	21 53 09.5	+0.9
	baz=192						
K48A	Perry	31.16	3	P	P	21 53 11.0	+0.2
	baz=184						
M59A	Waymart	31.32	16	P	P	21 53 13.6	+1.3
	baz=201						
M60A	Port Jervis	31.34	17	P	P	21 53 13.5	+1.1
	baz=202						
L56A	Greenwood	31.37	13	P	P	21 53 13.0	+0.2
L56A				IAmb	IAmb	21 53 22.3	
	comp=Z,8.6nm,1.0s						
L56A	Greenwood	31.37	13	P	P	21 53 13.5	+0.7
	baz=197						
L57A	Andrews Acres	31.40	14	P	P	21 53 13.6	+0.6
	baz=198						
L58A	Harry Jones Me	31.68	15	P	P	21 53 17.0	+1.5
	baz=200						
BINY	Binghamton	31.80	15	P	P	21 53 17.2	+0.8
BINY	Binghamton	31.80	15	P	P	21 53 17.6	+1.2
	baz=200						
K55A	Perry	31.84	12	P	P	21 53 17.2	+0.4
	baz=196						
K56A	Middlesex	31.96	13	P	P	21 53 19.1	+1.2
	baz=197						
L59A	Walton	32.03	16	P	P	21 53 19.3	+0.7
L59A				IAmb	IAmb	21 53 20.4	
	comp=Z,9.5nm,0.8s						
L59A	Walton	32.03	16	P	P	21 53 19.5	+0.9
	baz=201						
L60A	Shokan	32.07	17	P	P	21 53 20.5	+1.6
	baz=203						
K58A	Earlville	32.41	15	P	P	21 53 22.4	+0.6
K58A	Earlville	32.41	15	P	P	21 53 22.6	+0.8
	baz=200						
I51A	Listowel	32.42	7	P	P	21 53 22.4	+0.5
	baz=190						
J56A	Wolcott	32.62	13	P	P	21 53 23.6	+0.1
	baz=197						
K59A	Cooperstown	32.63	16	P	P	21 53 23.5	-0.2
	baz=201						
J57A	Williamstown	32.94	14	P	P	21 53 26.8	+0.4
J57A	Williamstown	32.94	14	P	P	21 53 27.0	+0.6
	baz=199						
L61B	Northampton	32.96	19	P	P	21 53 27.0	+0.5
	baz=205						
LPAZ	La Paz	33.02	147	P	P	21 53 29.3	+1.3
	comp=Z,0.9nm,0.6s,baz=337,slow=7.7,SNR=3.8						
LPAZ	La Paz	33.02	147	P	P	21 53 28.0	-0.1
J58A	Remsen	33.06	15	P	P	21 53 27.9	+0.4
J58A	Remsen	33.06	15	P	P	21 53 27.8	+0.3
	baz=200						
ECSD	EROS Data Cent	33.25	346	P	P	21 53 28.3	-0.8
ECSD	EROS Data Cent	33.25	346	P	P	21 53 28.4	-0.8
	baz=162						
J59A	Piesco	33.36	16	P	P	21 53 30.6	+0.5
	baz=201						
H52A	Wyevale	33.39	8	P	P	21 53 30.5	+0.2
	baz=192						
I58A	Old Forge	33.45	15	P	P	21 53 31.0	+0.1
	baz=200						
I57A	Carthage	33.52	14	P	P	21 53 32.1	+0.7
	baz=199						
H53A	Bobcaygeon	33.53	10	P	P	21 53 31.5	-0.1
	baz=194						
SADO	Sadowa	33.63	9	P	P	21 53 32.3	-0.1
I59A	Olmsteadville	33.84	16	P	P	21 53 34.7	+0.5
	baz=202						
J62A	Henniker	33.93	19	P	P	21 53 36.5	+1.4
	baz=206						
H56A	Elgin	34.00	13	P	P	21 53 35.8	+0.2
	baz=198						
G53A	Haliburton	34.06	10	P	P	21 53 35.9	-0.2
	baz=194						
H57A	Richville	34.07	14	P	P	21 53 36.5	+0.3
	baz=199						
F48A	Evansville	34.27	5	P	P	21 53 37.7	-0.2
	baz=186						
H58A	Gabriels	34.33	15	P	P	21 53 38.4	-0.1
	baz=201						
G54A	Lake Saint Pet	34.41	10	P	P	21 53 39.2	0.0
	baz=194						
LONY	Lake Ozonia	34.42	15	P	P	21 53 39.6	+0.3
LONY				IAmb	IAmb	21 53 40.4	
	comp=Z,9.3nm,0.8s						
LONY	Lake Ozonia	34.42	15	P	P	21 53 39.5	+0.3
	baz=201						
G55A	Calabogie	34.53	12	P	P	21 53 40.1	-0.1
	baz=197						
F52A	Sundridge	34.60	9	P	P	21 53 40.2	-0.6
	baz=192						
I62A	Tamworth	34.67	19	P	P	21 53 41.8	+0.5
I62A				IAmb	IAmb	21 53 50.7	
	comp=Z,12nm,1.1s						
E43A	Lone Tree Farm	34.67	359	P	P	21 53 41.1	-0.3
E43A				IAmb	IAmb	21 53 42.8	
	comp=Z,5.3nm,0.8s						
H59A	Cadyville	34.67	16	P	P	21 53 42.1	+0.6
	baz=202						
LBNH	Lisbon	34.81	18	P	P	21 53 43.6	+1.0
LBNH				IAmb	IAmb	21 53 58.1	
	comp=Z,3.7nm,0.8s						
H60A	Morristown	34.87	17	P	P	21 53 43.8	+0.6
	baz=204						
E48A	Lockeyer	34.95	5	P	P	21 53 43.1	-0.6
	baz=187						
ALGO	Algonquin Park	34.96	10	P	P	21 53 43.6	-0.3
	baz=194						
G58A	Ormstown	35.05	15	P	P	21 53 44.2	-0.4
	baz=201						
E52A	Mattawa	35.18	9	P	P	21 53 44.8	-1.0
	baz=193						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
E51A	G1948 Merrick	35.30	8	P	P	21 53 46.2	-0.6
	baz=192						
E53A	Dumoine, Ponti	35.44	10	P	P	21 53 47.4	-0.5
	baz=195						
D47A	Chapleau	35.45	4	P	P	21 53 47.1	-1.0
	baz=186						
G60A	Masonville	35.47	17	P	P	21 53 49.2	+0.9
	baz=204						
E54A	Lac Daplat, Po	35.58	11	P	P	21 53 48.6	-0.5
	baz=196						
D48A	Paudash Townsh	35.67	5	P	P	21 53 49.2	-0.7
	baz=188						
D51A	Lot 18 Range I	35.87	8	P	P	21 53 51.0	-0.6
	baz=192						
G61A	St-Isidore-de-	35.88	18	P	P	21 53 52.8	+1.1
	baz=205						
D50A	G1974 Best Tow	35.88	8	P	P	21 53 51.4	-0.3
	baz=191						
D53A	Lac Vacive, Po	36.11	10	P	P	21 53 53.9	+0.2
D53A				IAmb	IAmb	21 53 54.5	
	comp=Z,2.9nm,0.6s						
D53A	Lac Vacive, Po	36.11	10	P	P	21 53 53.8	+0.1
	baz=194						
E56A	St. Veronique	36.12	13	P	P	21 53 54.9	+1.1
	baz=199						
G62A	West of Eustis	36.13	19	P	P	21 53 53.9	0.0
G62A				IAmb	IAmb	21 54 06.0	
	comp=Z,6.1nm,1.1s						
G62A	West of Eustis	36.13	19	P	P	21 53 54.8	+0.9
	baz=207						
D54A	Lac Fusel, La	36.37	11	P	P	21 53 55.3	-0.6
	baz=196						
F60A	Warwick	36.37	17	P	P	21 53 55.9	0.0
	baz=204						
D55A	Sainte-Anne-du	36.48	12	P	P	21 53 56.4	-0.4
	baz=198						
D57A	Chemin Vers le	36.84	14	P	P	21 53 59.8	-0.1
	baz=201						
E60A	Ste Agathe de	36.88	17	P	P	21 54 00.2	0.0
	baz=205						
F63A	Nahmakanta, Br	37.02	20	P	P	21 54 01.9	+0.5
D58A	Chemin du LacG	37.16	15	P	P	21 54 03.0	+0.4
	baz=202						
F64A	Sherman	37.42	21	P	P	21 54 05.6	+0.8
F64A				IAmb	IAmb	21 54 17.2	
	comp=Z,4.1nm,1.1s						
F64A	Sherman	37.42	21	P	P	21 54 05.7	+0.9
	baz=210						
LATQ	La Tuque	37.45	15	P	P	21 54 04.9	-0.1
	baz=202						
AGMN	Agassiz Nation	37.46	349	P	P	21 54 05.3	+0.2
	baz=165						
D60A	Saint Jean D'O	37.53	17	P	P	21 54 05.9	+0.2
	baz=205						
E63A	Oxbow	37.88	20	P	P	21 54 08.6	-0.1
E63A	Oxbow	37.88	20	P	P	21 54 09.6	+0.9
	baz=209						
D61A	St Aubert, Com	38.01	18	P	P	21 54 10.0	+0.2
	baz=206						
LSQQ	Lebel-sur-Quev	38.15	10	P	P	21 54 10.0	-0.9
	baz=195						
D62A	Allapoint, All	38.25	19	P	P	21 54 12.6	+0.8
D62A	Allapoint, All	38.25	19	P	P	21 54 12.3	+0.5
	baz=208						
D63A	Stockholm	38.52	20	P	P	21 54 14.8	+0.7
	baz=209						
MATQ	Matagami	38.72	9	P	P	21 54 14.5	-1.2
	baz=194						
LMN	Caledonia Moun	38.74	24	P	P	21 54 15.5	-0.4
LMN				IAmb	IAmb	21 54 20.9	
	comp=Z,9.7nm,1.1s						
NVAR	Mina Array Bea	39.09	319	P	P	21 54 20.6	+1.4
	comp=Z,0.4nm,0.6s,baz=145,slow=5.4,SNR=4.8						
NVAR				PcP	PcP	21 56 28.5	+1.3
	comp=Z,1.0nm,0.9s,baz=131,slow=6.5,SNR=4.6						
BATG	Bathurst New B	39.45	22	P	P	21 54 22.1	+0.3
BATG				IAmb	IAmb	21 54 23.9	
	comp=Z,4.3nm,0.9s						
DGMT	Dagmar	39.69	341	P	P	21 54 23.9	+0.1
DGMT	Dagmar	39.69	341	P	P	21 54 24.4	+0.6
	baz=152						
MOD	Modoc Plateau	42.34	322		PcP	21 56 38.1	+0.5
KCPM	Cahto Peak	43.24	317	P	P	21 54 50.4	-2.7
DRLN	Deer Lake	44.48	27	P	P	21 55 02.5	-0.2
SCHQ	Schefferville	45.79	16	P	P	21 55 11.6	-1.4
	comp=Z,4.6nm,0.4s,baz=221,slow=5.7,SNR=32						
SCHQ	Schefferville	45.79	16	P	P	21 55 11.9	-1.1
SCHQ				IAmb	IAmb	21 55 12.1	
	comp=Z,5.2nm,0.6s						
PLCA	Paso Flores	54.06	165	P	P	21 56 17.0	+1.3
	comp=Z,2.3nm,0.8s,baz=357,slow=9.5,SNR=5.0						
PLCA	Paso Flores	54.06	165	IAmb	IAmb	21 56 18.2	
	comp=Z,4.5nm,0.9s						
YKA	Yellowknife Ar	54.74	344	P	P	21 56 20.1	-0.2
	comp=Z,0.3nm,0.6s,baz=141,slow=7.4,SNR=9.9						
YKA				pP	pP	21 56 44.5	0.0
	comp=Z,0.7nm,0.8s,baz=138,slow=7.5,SNR=6.5						
FID	Port Fidalgo	65.60	332	P	P	21 57 34.0	-0.5
ILAR	Eielson Array	67.26	336	P	P	21 57 44.4	-0.7
	comp=Z,0.3nm,0.6s,baz=140,slow=5.7,SNR=4.6						
ESDC	Sonseca Array	76.83	52	P	P	21 58 40.7	-2.0
	comp=Z,0.3nm,0.4s,baz=288,slow=5.3,SNR=4.0						
ARCES	ARCESS Array B	86.62	19	P	P	21 59 31.4	-2.0
	comp=Z,2.8nm,0.9s,baz=289,slow=5.5,SNR=4.5						
SONM	Songino Array	119.77	350	PKP	PKPdf	22 05 38.8	-1.5
	comp=Z,0.1nm,0.3s,baz=7.6,slow=0.8,SNR=2.6						
MKAR	Makanchi Array	120.99	9	PKP	PKPdf	22 05 40.2	-2.4
	comp=Z,0.1nm,0.4s,baz=29,slow=3.3,SNR=1.9						
LZH	Lanzhou	131.63	349	ePKP	PKPdf	22 06 03.3	-0.1
LZH				pPKP	pPKPdf	22 06 26.3	-4.5
LZH				sPKP		22 06 38.3	
ASAR	Alice Springs	139.99	247	PKhKP	PKPpre	22 06 13.8	
	comp=Z,1.4nm,0.8s,baz=102,slow=4.7,SNR=6.2						
ASAR				PKP	PKPdf	22 06 19.4	+0.4
	comp=Z,1.6nm,0.8s,baz=105,slow=1.8,SNR=13						
WRA	Warramunga Arr	140.11	253	PKhKP	PKPpre	22 06 14.5	
	comp=Z,0.4nm,0.7s,baz=93,slow=3.7,SNR=5.3						
WRA				PKP	PKPdf	22 06 19.4	+0.1
	comp=Z,1.6nm,0.8s,baz=94,slow=1.8,SNR=11						

SJA 20 22:22:45.0±0.8, 30.29S×69.32W, h10km±5km, ML3.9, MW3.8
GUC 20 22:22:46.3±0.6, 30.23S×69.50W, h18km±3km, ML4.1
IDC 20 22:22:54.2±1.4, 29.69S×68.62W, h0km, mb3.2/1, mb1 3.8/3, mb1mx3.5/41, mbtmp3.5/3, ML3.8/2, MS2.7/2, Ms1 2.7/2, ms1mx2.5/11, Error ellipse: s-maj=32.0km s-min=27.3km az=61.0
ISC 20 22:22:45.9±1.1, 30.26S±0.03×69.30W±0.03, h10km±8km, n27, σ1.77/38, 3C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AROD	Rodeo	0.17	302	eP	Pg	22 22 50.5	+0.7
ACCO	Cerro Coronel	0.39	148	iP	Pg	22 22 53.5	-0.1
AMOG	MOGNA	0.97	134	eP	Pg	22 23 03.6	-1.1
AMOG				iSg	Sg	22 23 17.4	+0.1
AGUA	GUANDACOL	1.04	43	eP	Pg	22 23 05.7	-0.3
AGUA				iSg	Sn	22 23 20.8	-0.6
RTLL	Cerro Villicun	1.28	146	eP	Pn	22 23 08.4	-1.6
RTLL				iS	Sb	22 23 25.8	-0.9
GO04	Tololo Observa	1.30	273	eP	Pn	22 23 08.3	-2.1
GO04				iS	Sb	22 23 24.6	-2.8
GO04				IAML		22 23 29.1	
	comp=N,6μm,0.5s						
CO03	El Pedregal	1.33	244	⇑iP	Pn	22 23 08.8	-1.9
CO03				iS	Sb	22 23 25.5	-2.6
CO03				IAML		22 23 26.1	
	comp=E,5μm,0.2s						
RTLS	Leoncito	1.54	180	iP	Pn	22 23 13.3	-0.4
RTLS				IAML		22 23 38.8	
	comp=Z,476nm,0.2s						
CFA	Coronel Fontan	1.62	146	LR	LR	22 24 12.3	
	comp=Z,71nm,18.8s,baz=242,slow=40						
RTCV	Cerro Valdivia	1.73	158	eP	Pn	22 23 16.2	+0.2
CO02	Combarbal	1.74	237	⇑iP	Pn	22 23 16.0	-0.3
CO02				iS	Sn	22 23 38.4	-0.2
CO02				IAML		22 23 39.6	
	comp=N,6μm,0.2s						
VCA	Vinchina	1.79	32	eP	Pb	22 23 18.6	-0.4
VCA				iS	Sg	22 23 43.7	+0.1
VCA	Vinchina	1.79	32	iP	Pb	22 23 19.1	+0.1
VCA				iSg	Sg	22 23 44.1	+0.5
VCA				IAML		22 23 46.0	
	comp=Z,3μm,0.3s						
CO04	Los Peladeros	2.29	218	⇑iP	Pn	22 23 24.9	+1.0
CO04				iS	Sb	22 23 55.0	-0.8
CO04				IAML		22 23 57.9	
	comp=N,3μm,0.4s						
ARCO	CERRO ARCO	2.59	173	iP	Pn	22 23 29.4	+1.3
ARCO				IAML		22 24 07.7	
	comp=Z,500nm,0.5s						
ACAN	Cantantal	2.70	139	eP	Pn	22 23 30.9	+1.5
GO03	Copiap	2.78	343	eP	Pn	22 23 31.8	+1.0
GO03				eS	Sn	22 24 06.5	+2.3
ROCH	El Roble	3.07	208	eP	Pn	22 23 35.4	+0.7
ROCH				eS	Sn	22 24 13.5	+1.8
ROCH				IAML		22 24 26.4	
	comp=N,408nm,0.3s						
FCH	Farellones	3.17	195	eP	Pn	22 23 38.9	+2.6
FCH				iS	Sb	22 24 20.5	-0.9
FCH				IAML		22 24 26.1	
	comp=E,491nm,0.7s						
CLCH	Cerro Calan	3.30	198	eP	Pn	22 23 39.8	+2.1
CLCH				eS	Sn	22 24 20.5	+3.4
CLCH				IAML		22 24 34.1	
	comp=N,547nm,0.5s						
LVC	Limon Verde	7.63	3	Pn	Pn	22 24 36.8	-0.7
	comp=N,1.4nm,0.3s,baz=176,slow=8.9,SNR=15						
LVC				Sn	Sn	22 26 01.5	-2.7
	comp=N,0.6nm,0.3s,baz=326,slow=7.3,SNR=1.9						
LVC				Lg	Lg	22 26 38.8	
	comp=N,1.5nm,0.3s,baz=166,slow=17,SNR=3.2						
LVC				LR	LR	22 27 50.2	
	comp=N,41nm,21.4s,baz=231,slow=42						
PLCA	Paso Flores	10.50	185	LR	LR	22 29 19.8	
	comp=N,56nm,18.6s,baz=346,slow=35						
CPUP	Villa Florida	11.25	73	Pn	Pn	22 25 26.8	0.0
	comp=N,0.2nm,0.3s,baz=240,slow=11,SNR=2.6						
CPUP				Lg	Lg	22 28 30.3	
	comp=N,0.1nm,0.3s,baz=164,slow=18,SNR=1.7						
TXAR	Lajitas Array	67.71	328	P	P	22 33 53.5	+10
	comp=N,0.1nm,0.6s,baz=143,slow=9.1,SNR=3.6						
AAK	Ala-Archa	148.60	57	PKPbc	PKPab	22 42 40.8	+4.0
	comp=N,0.5nm,0.5s,baz=320,slow=4.2,SNR=4.1						
ZALV	Zalesovo Beam	149.83	31	PKPbc	PKPab	22 42 43.1	+1.8
	comp=N,1.1nm,0.6s,baz=329,slow=2.5,SNR=4.7						
MKAR	Makanchi Array	152.52	45	PKPbc	PKPab	22 42 49.2	-3.5
	comp=N,0.3nm,0.6s,baz=314,slow=2.3,SNR=5.8						

IDC 20 22:28:07.8±0.6, 9.62N×69.72W, h0km, mb3.9/15, mb1 4.2/18, mb1mx4.0/45, mbtmp4.0/18, ML4.3/3, Error ellipse: s-maj=15.2km s-min=10.0km az=132.0
NEIC 20 22:28:09.6±2.4, 9.57N±0.06×69.71W±0.06, h13km±2km, mb4.0/10, Error ellipse: s-maj=10.1km s-min=7.4km az=128.0
ISC 20 22:28:09.5±0.5, 9.67N±0.05×69.74W±0.04, h6km, n76, σ1.50/79, mb4.0/16, Venezuela

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SDV	Santo Domingo	1.18	229	Pg	Pg	22 28 30.6	-1.5
	159nm,0.3s,baz=96,slow=7.7,SNR=192						
SDV				Lg	Lg	22 28 46.2	
	237nm,0.3s,baz=311,slow=20,SNR=22						
SDV	Santo Domingo	1.18	229	eP	Pg	22 28 30.7	-1.4
SDV				eS	Sg	22 28 45.4	-2.0
BAUV	El Baul	1.82	113	eP	Pn	22 28 42.8	+1.4
BAUV				eS	Sb	22 29 06.6	+0.2
URIC	Uribia, Colomb	3.00	313	eP	Pn	22 28 57.0	-0.6
CODC	Agustn Codazz	3.66	274	eP	Pn	22 29 07.6	+0.8
PAMC	Pamplona, Colo	3.73	232	eP	Pn	22 29 09.6	+1.5
TAMC	Tame, Arauca	3.80	212	eP	Pn	22 29 10.5	+1.8
OCAC	Ocana	3.81	248	eP	Pn	22 29 09.7	+0.8
SMLC	San Martn de	4.36	259	eP	Pn	22 29 17.3	+0.9
ARGC	Ariguani, Magd	4.45	273	eP	Pn	22 29 18.3	+0.8
BARC	Barichara	4.58	228	eP	Pn	22 29 20.9	+1.4
BRRC	Barranca, Sant	4.68	237	eP	Pn	22 29 22.2	+1.4
RUSC	La Rusia	5.00	222	eP	Pn	22 29 26.1	+0.5
PCRV	Puerto La Cruz	5.05	84	Pn	Pn	22 29 26.9	+1.0
	11nm,0.3s,baz=312,slow=2.2,SNR=22						
PCRV					Sn	22 30 26.1	+1.4
	21nm,0.3s,baz=91,slow=22,SNR=13						
PLCV	Puerto La Cruz	5.10	84		Pn	22 29 26.9	+0.5
PLCV					Sn	22 30 26.1	+0.4
SJCC	San Jacinto, C	5.37	273	eP	Pn	22 29 32.0	+1.7
ZARC	Zaragoza, Cauc	5.50	247	eP	Pn	22 29 32.4	+0.3
PTBC	PUERTO BERRIO,	5.61	237	eP	Pn	22 29 33.1	-0.4
SPBC	San Pablo de B	5.86	227	eP	Pn	22 29 37.8	+0.7
CHIC	Chingaza	6.38	219	eP	Pn	22 29 44.1	-0.4
NORC	Norcasia	6.52	232	eP	Pn	22 29 45.8	-0.3
ROSC	El Rosal	6.61	224	Pn	Pn	22 29 51.1	+3.5
	48nm,0.3s,baz=89,slow=16,SNR=46						
ROSC				Sn	Sn	22 31 08.5	+5.0
	6.9nm,0.3s,baz=45,slow=20,SNR=2.4						
ROSC	El Rosal	6.61	224		Pn	22 29 50.4	+2.8
ORTC	Ortega, Tolima	7.91	224	eP	Pn	22 30 05.8	+0.6
GRGR	Grenville	8.31	72	Pn	Pn	22 30 09.7	-0.9
MLPR	Magueyes Islan	8.66	17	Pn	Pn	22 30 15.1	-0.3
CRPR	Cabo Rojo, PR	8.67	17	Pn	Pn	22 30 14.2	-1.4
BANI	BANI	8.69	356	Pn	Pn	22 30 17.9	+1.9
MPR	Mayaguez	8.86	16	Pn	Pn	22 30 18.2	0.0
OBIP	Obispado Ponce	8.86	20		Pn	22 30 20.1	+1.9
PCDR	Punta Cana, DR	8.89	8	Pn	Pn	22 30 19.8	+1.2
IGPR	InterUniversit	8.97	23		Pn	22 30 20.8	+1.1
PDPR	Patillas Dam,	9.05	23		Pn	22 30 21.0	+0.3
DR12	Loma Pena Alta	9.07	2	Pn	Pn	22 30 22.1	+0.9
SJG	San Juan	9.09	22	Pn	Pn	22 30 20.8	-0.5
	4.5nm,0.3s,baz=184,slow=14,SNR=5.6						
SJG				Sn	Sn	22 31 51.4	-13
	2.1nm,0.3s,baz=348,slow=20,SNR=2.8						
SJG	San Juan	9.09	22		Pn	22 30 21.7	+0.4
AOPR	Arecibo Observ	9.10	18		Pn	22 30 20.9	-0.6
AGPR	Aguadilla, PR	9.11	16	Pn	Pn	22 30 20.9	-0.7
HUMP	Col San Antoni	9.23	24	Pn	Pn	22 30 23.0	-0.3
GCPR	Guaynabo City	9.29	22		Pn	22 30 25.2	+1.1
EMPR	Esperanza - Ma	9.29	19	Pn	Pn	22 30 24.2	+0.1
MTP	Monte Pirata	9.31	25		Pn	22 30 25.0	+0.6
CBYP	Canovanas	9.35	23	Pn	Pn	22 30 25.2	+0.3
SDDR	Presa de Saban	9.38	351	Pn	Pn	22 30 25.9	+0.5
CUPR	Culebra, Puert	9.62	26	Pn	Pn	22 30 26.1	-2.4
FDF	Fort de France	9.79	58	Pn	Pn	22 30 28.3	-2.6
STVI	Saint Thomas	9.80	28	Pn	Pn	22 30 31.2	+0.1
MDP	Montagnes des	17.55	104	P	Pn	22 32 13.9	-1.0
	0.6nm,0.3s,baz=298,slow=15,SNR=3.4						
SAML	Samuel	19.61	160	P	P	22 32 38.1	-0.6
LPAZ	La Paz	25.84	176	P	P	22 33 42.6	0.0
	3.1nm,0.8s,baz=350,slow=16,SNR=9.2						
LPAZ	La Paz	25.84	176	P	P	22 33 45.4	+2.8
LPAZ				IAmb	IAmb	22 33 48.1	
	comp=Z,3.4nm,0.8s						
SIV	San Ignacio	26.90	161	P	P	22 33 50.2	-1.4
	comp=Z,0.9nm,0.6s,baz=11,slow=14,SNR=4.2						
W41B	Gary Mavity, V	32.66	324		PcP	22 37 27.5	-1.0
TXAR	Lajitas Array	37.28	306	P	P	22 35 23.4	+0.8
	comp=Z,0.3nm,0.8s,baz=102,slow=8.4,SNR=3.0						
AGMN	Agassiz Nation	44.33	335	P	P	22 36 21.7	+1.3
SCHQ	Schefferville	45.11	2	P	P	22 36 27.4	+1.0
	comp=Z,2.8nm,1.0s,baz=189,slow=11,SNR=3.4						
ULM	Lac du Bonnet	45.88	337	P	P	22 36 32.6	-0.1
	comp=Z,1.6nm,0.6s,baz=118,slow=7.8,SNR=4.4						
BW06	Boulder Array	47.89	321	P	P	22 36 47.6	-1.3
BW06				IAmb	IAmb	22 36 53.8	
	comp=Z,1.0nm,0.8s						
PD31	Pinedale Array	47.89	321	P	P	22 36 48.6	-0.2
PD31				IAmb	IAmb	22 36 57.7	
	comp=Z,0.9nm,0.7s						
PDAR	Pinedale Array	47.89	321	P	P	22 36 48.3	-0.5
	comp=Z,0.5nm,0.5s,baz=127,slow=9.5,SNR=5.7						
YUF	Upper Falls	49.51	322	P	P	22 37 00.6	-0.7
PLCA	Paso Flores	50.15	181	P	P	22 37 04.2	-1.7
	comp=Z,1.6nm,0.7s,baz=17,slow=11,SNR=3.9						
PLCA	Paso Flores	50.15	181	IAmb	IAmb	22 37 12.9	
	comp=Z,1.1nm,1.0s						
FFC	Flin Flon	51.71	337	P	P	22 37 16.6	-0.8
NVAR	Mina Array Bea	51.99	312	P	P	22 37 20.4	+0.3
	comp=Z,0.4nm,0.5s,baz=111,slow=5.4,SNR=4.0						
YKA	Yellowknife Ar	61.82	338	P	P	22 38 27.6	-1.5
	comp=Z,2.0nm,0.6s,baz=122,slow=7.0,SNR=27						
TORD	Torodi Ar. Bea	69.91	80	P	P	22 39 21.2	-0.9
	comp=Z,0.5nm,0.5s,baz=288,slow=6.3,SNR=9.7						
INK	Inuvik	71.53	339	P	P	22 39 31.7	+0.7
	comp=Z,0.7nm,0.6s,baz=100,slow=7.6,SNR=3.0						
INK	Inuvik	71.53	339	IAmb	IAmb	22 39 33.2	
	comp=Z,0.9nm,0.7s						
ILAR	Eielson Array	75.83	334	P	P	22 39 54.8	-1.6
	comp=Z,0.4nm,0.7s,baz=101,slow=4.7,SNR=3.2						
ZCCA	Zocca	76.68	47	P	P	22 40 04.0	+2.3
GERES	GERESS Array B	78.48	42	P	P	22 40 11.7	0.0
	comp=Z,0.4nm,0.8s,baz=268,slow=6.9,SNR=3.7						
ARCES	ARCESS Array B	82.85	21	P	P	22 40 33.8	-0.8
	comp=Z,2.4nm,0.8s,baz=292,slow=4.8,SNR=2.9						
FINES	FINESS Array B	84.36	29	P	P	22 40 41.7	-0.7
	comp=Z,1.3nm,0.9s,baz=272,slow=9.2,SNR=2.7						
ASAR	Alice Springs	153.48	235	PKPbc	PKPdf	22 48 07.5	+5.2
	comp=Z,0.6nm,0.8s,baz=124,slow=2.5,SNR=5.1						
WRA	Warramunga Arr	154.61	244	PKPbc	PKPbc	22 48 10.4	-2.0
	comp=Z,0.5nm,0.6s,baz=111,slow=2.7,SNR=3.4						

IDC 20 22:30:34.7±10.0, 20.16S×178.97W, h679km±110km, mb2.9/5, mb1 3.2/5, mb1mx2.8/48, mbtmp3.9/5, Error ellipse: s-maj=110.5km s-min=48.4km az=129.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.71	257	P	P	22 37 43.6	-0.1
	0.5nm,0.5s,baz=87,slow=7.4,SNR=5.8						
WRA	Warramunga Arr	43.74	262	P	P	22 37 43.9	-0.1
	0.4nm,0.3s,baz=96,slow=7.6,SNR=1.7						
MJAR	Matsushiro Arr	69.40	324	P	P	22 40 37.2	-0.4
	1.2nm,0.5s,baz=136,slow=6.2,SNR=4.1						
ILAR	Eielson Array	88.19	13	P	P	22 42 16.1	+0.5
	0.3nm,0.3s,baz=213,slow=3.1,SNR=5.2						
CMAR	Chiang Mai Arr	89.14	290	P	P	22 42 22.7	+1.6
	0.4nm,0.5s,baz=110,slow=4.2,SNR=4.0						
AKASG	Malin Array Be	142.27	331	PKhKP	PKPpre	22 48 48.0	
	0.5nm,0.4s,baz=39,slow=4.1,SNR=6.1						
BRTR	Keskin Array B	145.94	312	PKPbc	PKPdf	22 48 59.7	+0.8
	0.3nm,0.6s,baz=63,slow=3.9,SNR=3.0						

SJA 20 22:44:39.7±0.5, 23.89S×66.81W, h201km±7km, ML3.7, MW3.7
GUC 20 22:44:41.2±0.6, 23.60S×67.33W, h245km±7km, ML3.4
ISC 20 22:44:38.2±2.7, 23.74S±0.08×66.79W±0.07, h221km±25km, n21, σ1.36/35, 8C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AZAP	Zapla	1.65	107	iP	Pn	22 45 15.7	+0.3
AZAP				IAML		22 45 16.4	
	comp=Z,27nm,0.2s						
ASTB	Santa Barbara	2.15	96	iP	Pn	22 45 20.7	+0.7
ASTB				IAML		22 45 37.1	
	comp=Z,5μm,1.1s						
LVC	Limon Verde	2.25	300	⇓iP	Pn	22 45 22.9	+1.6
LVC				eS	S	22 45 54.7	0.0
LVC	Limon Verde	2.25	300	iP	Pn	22 45 22.8	+1.6
PB15	IPOC Station P	2.52	282	⇑iP	Pn	22 45 25.2	+1.3
PB15				eS	S	22 45 58.7	-0.6
PB15	IPOC Station P	2.52	282	iP	Pn	22 45 24.7	+0.8
PB15				iSg	S	22 45 58.2	-1.1
PB06	IPOC Station P	2.76	291	⇑iP	Pn	22 45 27.8	+1.3
PB06				eS	S	22 46 03.1	-0.9
PB06				IAML		22 46 03.9	
	comp=N,118nm,0.1s						
PB06	IPOC Station P	2.76	291	iP	Pn	22 45 27.8	+1.3
PB06				iSg	S	22 46 03.4	-0.6
GO02	Mina Guanaco	2.92	240	⇑iP	Pn	22 45 29.4	+1.0
GO02				iS	S	22 46 07.2	-0.2
PB09	IPOC Station P	2.98	310	eP	Pn	22 45 30.9	+1.9
PB09				eS	S	22 46 08.4	0.0
PB09	IPOC Station P	2.98	310	iP	Pn	22 45 30.9	+1.9
PB03	IPOC Station P	3.21	301	⇑iP	Pn	22 45 32.6	+1.0
PB03				iS	S	22 46 11.7	-1.5
PB03				IAML		22 46 15.9	
	comp=E,73nm,0.1s						
PB05	IPOC Station P	3.26	285	⇑iP	Pn	22 45 33.0	+0.9
PB05				eS	S	22 46 12.2	-2.0
PB05				IAML		22 46 16.2	
	comp=E,36nm,0.2s						
PB05	IPOC Station P	3.26	285	iP	Pn	22 45 33.2	+1.1
PB04	IPOC Station P	3.40	294	eP	Pn	22 45 34.6	+0.8
PB04				eS	S	22 46 15.5	-1.6
PB04				IAML		22 46 20.4	
	comp=N,63nm,0.1s						
PB14	IPOC Station P	3.41	254	iP	Pn	22 45 34.8	+0.7
PB10	IPOC Station P	3.46	273	⇑iP	Pn	22 45 35.5	+1.2
PB10				eS	S	22 46 16.0	-2.2
PB10				IAML		22 46 17.8	
	comp=E,28nm,0.3s						
PB10	IPOC Station P	3.46	273	iP	Pn	22 45 35.7	+1.4
PB07	IPOC Station P	3.49	304	⇑iP	Pn	22 45 35.9	+1.0
PB07				eS	S	22 46 17.5	-1.7
PB07				IAML		22 46 20.7	
	comp=N,47nm,0.2s						
PB01	IPOC Station P	3.67	317	⇓iP	Pn	22 45 37.9	+1.0
PB01				eS	S	22 46 21.6	-1.3
PB01				IAML		22 46 23.8	
	comp=E,32nm,0.1s						
PB02	IPOC Station P	3.75	309	⇑iP	Pn	22 45 38.8	+0.8
PB02				eS	S	22 46 22.1	-2.6

NEIC 20 22:55:18.2±1.6, 16.17N±0.08×94.46W±0.04, h92km±11km, Error ellipse: s-maj=11.7km s-min=5.5km az=178.0
MEX 20 22:55:19.2±1.0, 16.16N×94.47W, h99km±20km, MD4.0
ISC 20 22:55:18.4±1.9, 16.12N±0.07×94.46W±0.04, h86km±25km, n12, σ0.61/21, Oaxaca

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	1.05	337		Pn	22 55 38.5	+0.1
CMIG					Sn	22 55 53.9	+0.5
CMIG	Matias Romero	1.05	337	eP	Pn	22 55 38.5	+0.1
CMIG				iS	Sn	22 55 53.9	+0.5
PCIG		1.26	109		Pn	22 55 41.3	+0.4
PCIG					Sn	22 55 58.4	+0.5
PCIG		1.26	109	eP	Pn	22 55 41.3	+0.4
PCIG				eS	Sn	22 55 58.4	+0.5
TGIG		1.44	63		Pn	22 55 43.0	-0.3
TGIG					Sn	22 56 00.8	-1.2
TGIG		1.44	63	eP	Pn	22 55 43.0	-0.3
TGIG				iS	Sn	22 56 00.8	-1.2
HUIG	Huatulco	1.62	258		Pn	22 55 44.9	-0.6
HUIG					Sn	22 56 06.0	-0.1
HUIG	Huatulco	1.62	258	iP	Pn	22 55 44.9	-0.6
HUIG				iS	Sn	22 56 06.0	-0.1
CCIG	Comitan	2.24	85	Pn	Pn	22 55 54.1	+0.4
VHO	Vista Hermosa	2.38	294	eP	Pn	22 55 56.1	+0.5
VHO				iS	Sn	22 56 24.8	+0.6
PEIG	Puerto Escondi	2.59	268	eP	Pn	22 55 57.6	-0.7
TEIG	Tepich	7.16	54	Pn	Pn	22 57 00.4	0.0

IDC 20 23:00:29.6±1.8, 34.67S×78.63E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/42, mbtmp3.8/7, MS3.6/5, Ms1 3.6/5, ms1mx3.2/31, Error ellipse: s-maj=70.1km s-min=29.4km az=20.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	29.07	101	T	T	23 36 59.6	
	baz=259,slow=74						
H01W3	Cape Leeuwin H	29.07	101	T	T	23 36 52.5	
	baz=259,slow=74						
H01W1	Cape Leeuwin H	29.09	101	T	T	23 36 52.6	
	baz=259						
NWAO	Narrogin (SRO)	32.00	98	LR	LR	23 16 51.5	
	comp=Z,108nm,19.3s,baz=288,slow=31						
PALK	Pallekele	41.76	3	LR	LR	23 21 36.3	
	comp=Z,44nm,19.4s,baz=213,slow=30						
PSI	Prapat	41.87	31	LR	LR	23 22 39.6	
	comp=Z,131nm,18.0s,baz=184,slow=32						
LBTB	Lobatse	46.54	267	LR	LR	23 24 55.3	
	comp=Z,39nm,18.4s,baz=146,slow=32						
ASAR	Alice Springs	48.97	93	P	P	23 09 17.6	-0.3
	1.5nm,0.9s,baz=239,slow=6.1,SNR=8.1						
WRA	Warramunga Arr	51.04	88	P	P	23 09 34.0	+0.3
	1.6nm,0.9s,baz=238,slow=8.0,SNR=5.4						
MKAR	Makanchi Array	81.16	3	P	P	23 12 46.0	-0.6
	0.7nm,0.9s,baz=177,slow=6.1,SNR=5.6						
BRTR	Keskin Array B	84.89	327	LR	LR	23 45 12.4	
	comp=Z,31nm,21.8s,baz=316,slow=32						
KURBB	Kurchatov Arra	84.92	360	P	P	23 13 06.2	+0.3
	0.9nm,0.8s,baz=190,slow=4.6,SNR=4.6						
SONM	Songino Array	85.82	18	P	P	23 13 11.1	+0.5
	0.5nm,0.8s,baz=210,slow=5.2,SNR=4.5						
TORD	Torodi Ar. Bea	86.93	288	P	P	23 13 16.9	+0.2
	0.4nm,1.0s,baz=118,slow=5.5,SNR=2.8						

BVAR Borovoye Array 87.62 355 P P 23 13 19.5 +0.3
0.6nm,0.9s,baz=184,slow=6.9,SNR=3.5
YKA Yellowknife Ar 150.93 13 PKPbc PKPbc 23 20 22.4 -0.9
0.5nm,0.9s,baz=333,slow=2.9,SNR=5.4

SOME **20** *23:05:10.1, 41.78N×80.48E, h15km*
NNC **20** *23:05:11.5±0.8, 41.83N×80.39E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=5.5km s-min=4.0km az=143.0*
KRNET **20** *23:05:12.4±0.1, 42.07N×80.54E, mb3.5*
ISC 20 23:05:14.6±1.7, 41.92N±0.06×80.45E±0.06, h10km, n53, σ2.05/89, 30C-13D, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SHLS Shalkode 1.43 330 eP Pn 23 05 37.2 -3.5
71nm,0.3s
SHLS eS Sn 23 05 56.8 -2.9
98nm,0.3s
SHLS Shalkode 1.43 330 P Pn 23 05 37.2 -3.5
71nm,0.3s
SHLS S Sn 23 05 56.8 -2.9
98nm,0.3s
KTMS Ketmen 1.52 357 eP Pn 23 05 40.5 -1.6
21nm,0.1s
KTMS eS Sg 23 06 02.5 -1.1
46nm,0.2s
KTMS Ketmen 1.52 357 P Pn 23 05 40.5 -1.6
21nm,0.1s
KTMS S Sg 23 06 02.5 -1.1
46nm,0.2s
PDGK Podgornoye 1.57 334 P Pn 23 05 41.6 -1.1
6.8nm,0.5s
PDGK S Sb 23 06 04.0 +0.1
74nm,0.3s
PDGK Podgornoye 1.57 334 ⇑P Pn 23 05 41.3 -1.4
15nm,0.6s
PDGK ⇓S Sb 23 06 03.8 -0.1
62nm,0.3s
UZB Uzynbulak 1.61 320 eP Pn 23 05 42.4 -0.9
8.9nm,0.2s
UZB eS Sg 23 06 05.6 -0.9
64nm,0.4s
UZB Uzynbulak 1.61 320 P Pn 23 05 42.4 -0.9
8.9nm,0.2s
UZB S Sg 23 06 05.6 -0.9
64nm,0.4s
PRZ Przheval'sk 1.62 291 ⇑iP Pn 23 05 43.0 -0.4
baz=85
PRZ ⇑iS Sg 23 06 05.7 -1.0
baz=85
ZHN Zhinishke 1.94 311 eP Pb 23 05 48.6 -1.5
75nm,0.3s
ZHN eS Sg 23 06 16.4 -0.5
101nm,0.4s
ZHN Zhinishke 1.94 311 Pg Pb 23 05 48.6 -1.5
75nm,0.3s
ZHN Lg Lg 23 06 16.4
101nm,0.4s
KPKS Kokpek 2.02 320 ⇓eP Pb 23 05 49.6 -1.8
16nm,0.2s
KPKS eS Sg 23 06 18.2 -1.2
ANVS Anan'yevo 2.23 294 ⇑iP Pb 23 05 53.4 -1.7
baz=89
ANVS ⇑iS Sb 23 06 22.7 -0.2
baz=89
KDJ Kajisay 2.44 276 ⇑iP Pb 23 05 56.6 -2.1
baz=72
KDJ ⇑iS Sb 23 06 28.8 -0.1
baz=72
DJR Jarkent 2.46 349 eP Pb 23 05 57.0 -1.9
1.8nm,0.1s
DJR eS Sb 23 06 30.6 +1.4
40nm,0.4s
DJR Jarkent 2.46 349 Pg Pb 23 05 56.7 -2.2
1.8nm,0.1s
DJR Lg Lg 23 06 30.6
40nm,0.4s
KOTS Kotyrbulak 2.79 299 eP Pb 23 06 02.9 -1.7
18nm,0.2s
KOTS eS Sb 23 06 41.0 +2.1
60nm,0.5s
KOTS Kotyrbulak 2.79 299 Pg Pb 23 06 02.9 -1.7
18nm,0.2s
KOTS Lg Lg 23 06 41.0
60nm,0.5s
MDOK Medeo 2.80 297 eP Pb 23 06 02.7 -2.1
5.9nm,0.4s
MDOK eS Sb 23 06 40.2 +1.0
34nm,0.6s
MDOK Medeo 2.80 297 ⇓Pg Pn 23 06 00.9 +1.3
10nm,0.6s
MDOK ⇑Lg Lg 23 06 40.5
67nm,1.0s
TNSS Tian-Shan 2.82 294 eP Pb 23 06 03.2 -2.0
16nm,0.2s
TNSS eS Sb 23 06 41.5 +1.5
33nm,0.3s
TNSS Tian-Shan 2.82 294 Pg Pb 23 06 03.1 -2.2
16nm,0.2s
TNSS Lg Lg 23 06 41.5
47nm,0.6s
KNDC Almaty 2.88 298 ⇑Pg Pb 23 06 04.2 -1.9
14nm,0.6s
KNDC ⇓Lg Lg 23 06 44.2
36nm,0.6s
ARXS Arharly 2.99 321 eP Pb 23 06 06.3 -1.6
8.5nm,0.5s
ARXS eS Sb 23 06 46.6 +2.0
59nm,0.4s
ARXS Arharly 2.99 321 Pg Pb 23 06 06.3 -1.6
8.5nm,0.5s
ARXS Lg Lg 23 06 46.6
59nm,0.4s
IZV Izvestkoviy 3.05 293 eP Pb 23 06 07.1 -1.9
11nm,0.3s
IZV eS Sb 23 06 48.2 +1.9
79nm,0.4s
IZV Izvestkoviy 3.05 293 Pg Pb 23 06 07.1 -1.9
11nm,0.3s
IZV Lg Lg 23 06 48.2
79nm,0.4s
ULHL Ulahol 3.15 277 ⇑iP Pn 23 06 06.4 +2.0
baz=75
ULHL ⇑iS Sb 23 06 45.7 -3.5
baz=75
CHKK Chushkaly 3.19 308 eP Pb 23 06 10.3 -1.1
15nm,0.2s
CHKK eS Sb 23 06 53.2 +2.9
73nm,0.4s
MTBS Maitube 3.21 293 eP Pb 23 06 09.9 -1.8
6.3nm,0.3s
MTBS eS Sb 23 06 52.6 +1.8
35nm,0.5s
MTBS Maitube 3.21 293 Pg Pb 23 06 09.9 -1.8
6.3nm,0.3s
MTBS Lg Lg 23 06 52.6
35nm,0.5s
KTBS Karatobe 3.30 304 eP Pb 23 06 12.1 -1.1
2.6nm,0.3s
KTBS eS Sb 23 06 56.3 +2.9
41nm,0.3s
KTBS Karatobe 3.30 304 Pg Pb 23 06 12.1 -1.1
2.6nm,0.3s
KTBS Lg Lg 23 06 56.3
41nm,0.3s
NRN Naryn 3.37 263 ⇑iP Pb 23 06 10.2 -4.3
baz=61
NRN ⇑iS Sb 23 06 52.2 -3.5
baz=61
BOOM Boomskoye usch 3.40 281 ⇓iP Pn 23 06 09.3 +1.5
baz=79
BOOM ⇓iS Sn 23 06 50.9 +2.7
baz=79
TDK Taldyqorghan 3.42 335 eP Pb 23 06 13.4 -1.8
18nm,0.6s
TDK eS Sb 23 06 58.6 +1.8
40nm,0.4s
TDK Taldyqorghan 3.42 335 Pg Pb 23 06 13.4 -1.8
18nm,0.6s
TDK Lg Lg 23 06 58.6
40nm,0.4s
KAPS Kapalarasan 3.45 347 eP Pb 23 06 14.5 -1.4
4.3nm,0.2s
KAPS eS Sb 23 07 00.7 +2.8
21nm,0.5s
KAPS Kapalarasan 3.45 347 Pg Pb 23 06 14.5 -1.4
4.3nm,0.2s
KAPS Lg Lg 23 07 00.7
21nm,0.5s
KUU Kurty 3.60 305 eP Pb 23 06 17.2 -1.1
1.9nm,0.2s
KUU eS Sb 23 07 05.2 +3.0
22nm,0.4s
DGS Degeres 3.69 292 eP Pb 23 06 19.0 -1.0
6.5nm,0.4s
DGS eS Sg 23 07 08.7 -4.6
30nm,0.7s
DGS Degeres 3.69 292 Pg Pb 23 06 19.0 -1.0
6.5nm,0.4s
DGS Lg Lg 23 07 08.7
30nm,0.7s
KBK Karagaybulak 4.14 282 ⇑iP Pn 23 06 19.8 +1.7
baz=80
KBK ⇑iS Sn 23 07 09.3 +2.6
baz=80
CHMS Chumysh 4.35 286 ⇓iP Pn 23 06 22.4 +1.6
baz=84
CHMS ⇓eS Sn 23 07 13.6 +2.1
baz=84
CHMS Chumysh 4.35 286 ⇑Pg Pb 23 06 31.0 -0.1
11nm,0.9s
CHMS ⇓Lg Lg 23 07 29.1
4.9nm,0.5s
UCH Uchtor 4.43 276 ⇑eP Pn 23 06 24.2 +2.0
baz=74
UCH ⇑iS Sn 23 07 16.7 +2.7
baz=74
AAK Ala-Archa 4.47 281 ⇑iP Pn 23 06 24.8 +2.2
baz=79
AAK ⇑iS Sn 23 07 17.0 +2.2
baz=79
AAK Ala-Archa 4.47 281 ⇓Pg Pb 23 06 33.2 -0.1
3.3nm,0.5s
AAK ⇑Lg Lg 23 07 32.6
7.3nm,0.6s
USP Ospenovka 4.59 289 ⇑iP Pn 23 06 25.9 +1.8
baz=87
USP ⇑iS Sn 23 07 19.3 +1.8
baz=87
MAKZ Makanchi 5.01 12 ⇑Pn Pn 23 06 30.7 +0.9
1.6nm,0.4s
MAKZ ⇓Sn Sn 23 07 31.2 +3.6
1.7nm,0.5s
MAKZ ⇑Lg Lg 23 07 54.5
2.9nm,0.8s
MK31 Makanchi Array 5.05 15 ⇑Pn Pn 23 06 30.8 +0.5
1.0nm,0.5s,baz=202,slow=14,SNR=50
MK31 ⇑Pg Pb 23 06 44.6 +1.7
0.4nm,0.3s,baz=200,slow=14,SNR=4.7
MK31 ⇑Sn Sn 23 07 32.4 +3.7
1.7nm,0.6s,baz=189,slow=26,SNR=6.9
MK31 ⇑Lg Lg 23 07 55.3
3.5nm,0.7s,baz=195,slow=28,SNR=6.0
KK31 Karatay Array 7.43 282 ⇑Pg Pb 23 07 26.6 +2.9
1.2nm,0.8s,baz=95,slow=17,SNR=4.3
KK31 ⇓Lg Lg 23 09 05.9
2.3nm,0.8s,baz=0.0,slow=0.1,SNR=5.1
KURBB Kurchatov Arra 8.80 352 ⇓Lg Lg 23 09 53.7
5.9nm,0.7s

GCMT 20 23:11:46.0±0.3, 34.97S±0.03×78.75E±0.03, h21km±1km, MW4.9/87, Moment Tensor Solution. s17,c19; s87,c107; Duration: 0 Moment tensor: Scale 10^{16} Nm; Mrr-2.53±.20; Mθθ0.59±.12; Mφφ1.95±.13; Mrθ-0.63±.21; Mrφ-1.36±.07; Mθφ-0.58±.21; Best double couple: M0 2.80300×10^{16} NP1:φs131.00000°, δ46.00000°, λ-116.00000°. NP2:φs346.00000°, δ50.00000°, λ-66.00000°. Principal axes: T 2.7950, Plg2.0000°, Azm59.0000°; N 0.0230, Plg18.0000°, Azm149.0000°; P -2.8120, Plg72.0000°, Azm323.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Mid-Indian Ridge

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NIED **20** *23:12:00, 45.70N×142.70E, h360km, Mw5.0 Best double couple: M0 3.63000×10^{16} NP1:φs358.00000°, δ79.00000°, λ-52.00000°. NP2:φs102.00000°, δ39.00000°, λ-162.00000°.*
SKHL **20** *23:12:36.9±0.7, 45.75N×142.63E, h346km±2km, mb5.3/4, msh5.7/13*
BJI **20** *23:12:36.5±0.0, 45.89N×142.74E, h330km, mB4.7/52, mb4.9/76*
MOS **20** *23:12:37.3±1.0, 45.87N×142.64E, h328km, mb5.1/80, Error ellipse: s-maj=5.9km s-min=3.4km az=107.2*
JMA **20** *23:12:37.9±0.3, 45.74N×142.75E, h336km±2km, M4.9*
JMA Felt I J1.
IDC **20** *23:12:38.1±0.4, 45.95N×142.55E, h320km±4km, mb4.5/41, mb1 4.6/50, mb1mx4.6/53, mbtmp5.2/50, Error ellipse: s-maj=7.2km s-min=5.8km az=140.0*
NEIC **20** *23:12:38.7±1.5, 45.86N±0.07×142.6E±0.1, h327km±4km, mb4.8/486, Error ellipse: s-maj=10.4km s-min=9.6km az=96.0*
BGR **20** *23:12:39.5±0.0, 46.81N×143.29E, h300km, mb5.2*
GCMT **20** *23:12:39.7±0.5, 46.07N±0.05×142.38E±0.07, h329km±3km, MW5.2/44, Moment Tensor Solution. s44,c59; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-0.38±.28; Mθθ1.77±.47; Mφφ-1.39±.43; Mrθ-3.21±.42; Mrφ-4.52±.34; Mθφ-4.26±.38; Best double couple: M0 6.60500×10^{16} NP1:φs344.00000°, δ64.00000°, λ-23.00000°. NP2:φs85.00000°, δ69.00000°, λ-152.00000°. Principal axes: T 4.9880, Plg4.0000°, Azm213.0000°; N 3.2370, Plg56.0000°, Azm118.0000°; P -8.2230, Plg34.0000°, Azm306.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
KLM **20** *23:12:40.0, 45.55N×143.08E, h340km, mb5.0*
ISC 20 23:12:38.2±0.3, 45.87N±0.03×142.64E±0.03, h324km±3km, h324km:pP-P, n1422, σ1.14/1418, mb4.8/416, 62C-72D, Hokkaido region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JWK2 Keihoku 0.76 224 ⇑P Pn 23 13 21.5 +1.2
JWK2 eS S 23 13 55.1 +1.2
JSE Soyaes 0.91 183 ⇑P Pn 23 13 21.3 +0.4
JSE eS S 23 13 54.9 0.0
YSS Yuzh-Sakhalins 1.09 4 eP Pn 23 13 23.0 +1.5
YSS AMB AMB 23 13 23.7
5μm,0.4s
YSS eS S 23 13 57.0 +1.0
YSS A A 23 13 57.5
10μm,2.0s
YSS A A 23 13 57.5
11μm,2.0s
YSS A A 23 13 58.4
6μm,0.7s
YSS A A 23 13 58.4
5μm,0.7s
YSS Yuzh-Sakhalins 1.09 4 Pn 23 13 22.9 +1.4
YSS Yuzh-Sakhalins 1.09 4 ⇑ePN Pn 23 13 22.8 +1.4
YSS eS S 23 13 57.3 +1.3
YSS pmax pmax
comp=Z,5μm,0.4s
YSS smax smax
comp=N,6μm,0.6s
JRR Rishiri 1.19 232 ⇑P Pn 23 13 23.1 +1.0
JRR eS S 23 13 58.7 +1.6
JRBN Rebuntou 1.19 249 ⇑P Pn 23 13 22.8 +0.7
JRBN eS S 23 13 57.3 +0.2
KHLM Kholmsk 1.25 341 eP Pn 23 13 24.0 +1.7
KHLM AMB AMB 23 13 24.5
comp=N,3μm,0.2s
KHLM eS S 23 13 59.3 +1.8
KHLM A A 23 14 00.6
comp=N,3μm,0.6s
KHLM A A 23 14 00.6
comp=N,4μm,0.6s
JSS Shosan 1.57 201 ⇑P Pn 23 13 24.9 +0.6
JSS eS S 23 14 02.1 +1.0
JYG Yagishiri 1.68 211 ⇑P Pn 23 13 25.6 +0.7
JYG eS S 23 14 03.1 +0.8
ASAJ Asahikawa 1.75 181 ⇑P Pn 23 13 25.9 +0.4
ASAJ Asahikawa 1.75 181 P Pn 23 13 25.9 +0.4
comp=N,224nm,0.3s,baz=340,slow=6.3,SNR=1522
ASAJ S S 23 14 03.5 +0.3
comp=N,22nm,0.3s,baz=66,slow=20,SNR=12
JKA Kamikawa-asahi 1.75 181 Pn 23 13 25.9 +0.5
JKA S 23 14 03.5 +0.3
JMP Maruseppu 1.93 164 ⇑P Pn 23 13 26.8 0.0
JKK2 Kamakawa 2 2.00 178 ⇑P Pn 23 13 27.5 +0.3
JTKR Abashiri--Toko 2.10 154 ⇓P Pn 23 13 28.1 +0.1
JHR Hokuryu 2.22 197 ⇑P Pn 23 13 29.3 +0.3
JRA Rausu 2.61 137 P Pn 23 13 32.3 +0.1
JAR Ashorobuto 2.69 162 ⇓P Pn 23 13 33.1 +0.2
JAR eS S 23 14 16.0 -0.8
JFR Furan 2.71 181 P Pn 23 13 32.9 -0.2
JFR eS S 23 14 16.7 -0.3
GRPR Tuman 2.91 129 iP Pn 23 13 34.3 -0.5
GRPR AMB AMB 23 13 35.7
comp=N,2μm,0.4s
GRPR iS S 23 14 20.3 +0.1
GRPR A A 23 14 29.4
GRPR Tuman 2.91 129 c iPN Pn 23 13 34.3 -0.5
GRPR iS S 23 14 20.3 +0.1
GRPR pmax pmax
comp=N,129nm,0.4s
GRPR pmax pmax
comp=E,421nm,0.4s
GRPR pmax pmax
comp=Z,2μm,0.4s
GRPR smax smax
comp=N,771nm,0.5s
GRPR smax smax
comp=E,351nm,0.5s
YUK Yuzh-Kuril'sk 2.93 128 iP Pn 23 13 35.2 +0.2
YUK AMB AMB 23 13 35.9
comp=E,4μm,0.6s
YUK eS S 23 14 20.8 +0.3
YUK A A 23 14 21.2
comp=E,2μm,0.8s
YUK A A 23 14 21.2
comp=E,1μm,0.8s
YUK Yuzh-Kuril'sk 2.93 128 c iPN Pn 23 13 34.7 -0.3
YUK eS S 23 14 20.8 +0.3
YUK pmax pmax
comp=N,2μm,0.7s
YUK pmax pmax
comp=Z,2μm,0.7s
YUK pmax pmax
comp=E,1μm,0.4s
YUK smax smax
comp=N,924nm,0.6s
YUK smax smax
comp=E,1μm,0.5s
JSK Shakotan 2.95 212 P Pn 23 13 35.9 +0.6
JSK eS S 23 14 20.6 -0.4
GLVR Golovnino 2.96 135 iP Pn 23 13 35.0 -0.2
GLVR AMB AMB 23 13 35.9
comp=E,2μm,0.6s
GLVR iS S 23 14 21.2 +0.2
GLVR A A 23 14 27.9
comp=E,2μm,0.6s
GLVR A A 23 14 27.9
comp=E,1μm,0.6s
GLVR Golovnino 2.96 135 c iPN Pn 23 13 35.0 -0.2
GLVR eS S 23 14 21.2 +0.2
GLVR pmax pmax
comp=Z,2μm,0.6s
GLVR pmax pmax
comp=N,77nm,0.4s
GLVR pmax pmax
comp=E,142nm,0.4s
GLVR smax smax
comp=N,2μm,0.6s
GLVR smax smax
comp=E,1μm,0.6s
JEW Eniwo 3.15 196 ⇑P Pn 23 13 37.6 +0.5
JEW eS S 23 14 23.7 -0.7
JAK Akkeshi 3.23 152 ⇓P Pn 23 13 36.1 -1.8
JAK eS S 23 14 21.6 -4.1
UGL Uglegorsk 3.23 353 iP Pn 23 13 40.0 +2.2
UGL AMB AMB 23 13 41.0
comp=E,4μm,0.6s
UGL iS S 23 14 27.4 +1.9
UGL A A 23 14 29.0
comp=E,8μm,2.0s
UGL A A 23 14 29.5
comp=E,1μm,0.8s
UGL A A 23 14 29.5
comp=E,1μm,0.8s
UGL Uglegorsk 3.23 353 ⇑iPN Pn 23 13 39.9 +2.2
UGL iS S 23 14 28.1 +2.6
UGL pmax pmax
comp=Z,6μm,0.9s
UGL pmax pmax
comp=Z,4μm,0.6s
UGL smax smax
comp=E,8μm,2.1s
AKK Akkeshi 3.26 150 iP Pn 23 13 36.5 -1.7
AKK AMB AMB 23 13 37.3
comp=E,2μm,0.5s
AKK eS S 23 14 22.6 -3.7
AKK A A 23 14 22.8
comp=E,4μm,0.5s
AKK A A 23 14 22.8
comp=E,3μm,0.5s
JCH Churui 3.29 171 P Pn 23 13 36.5 -2.1
JCH eS S 23 14 21.5 -5.5
NMR Nemuro--Hokkai 3.33 138 iP Pn 23 13 36.7 -2.2
NMR AMB AMB 23 13 39.1
comp=E,410nm,0.7s
NMR iS S 23 14 23.0 -4.6
NMR A A 23 14 23.1
comp=E,400nm,0.3s
NMR A A 23 14 23.1
comp=E,500nm,0.3s
NMR Nemuro--Hokkai 3.33 138 c iPN Pn 23 13 36.0 -2.9
NMR iS S 23 14 22.3 -5.3
NEM2 Nemuro 2 3.34 137 P Pn 23 13 36.1 -2.9
NEM2 eS S 23 14 21.8 -5.9
SHO Shikotan 3.59 122 iP Pn 23 13 39.2 -2.2
SHO AMB AMB 23 13 40.0
comp=E,1μm,2.8s
SHO AMB AMB 23 13 41.6
comp=E,610nm,0.3s
SHO iS S 23 14 27.8 -4.3
SHO A A 23 14 28.5
comp=E,300nm,0.4s
SHO A A 23 14 28.5
comp=E,1μm,0.4s
SHO Shikotan 3.59 122 c iPN Pn 23 13 39.0 -2.4
SHO iS S 23 14 27.9 -4.2
SHO pmax pmax
comp=Z,605nm,0.3s
SHO pmax pmax
comp=N,119nm,0.2s
SHO pmax pmax
comp=E,315nm,0.2s
SHO smax smax
comp=N,668nm,0.2s
SHO smax smax
comp=E,2μm,0.4s
JNBK Urakawa-nobuka 3.59 179 P Pn 23 13 40.3 -1.2
JNBK eS S 23 14 29.2 -3.1
KUR Kuril'sk 3.73 98 iP Pn 23 13 43.7 +0.9
KUR AMB AMB 23 13 44.4
comp=E,670nm,0.6s
KUR AMB AMB 23 13 44.9
comp=E,4μm,2.9s
KUR iS S 23 14 35.6 +0.9
KUR A A 23 14 37.8
comp=E,11μm,3.1s
KUR A A 23 14 37.8
comp=E,47μm,3.1s
KUR A A 23 14 38.8
comp=E,259nm,0.7s
KUR A A 23 14 38.8
comp=E,410nm,0.7s
KUR Kuril'sk 3.73 98 d iPN Pn 23 13 43.7 +0.9
KUR iS S 23 14 35.6 +0.9
KUR pmax pmax
comp=Z,672nm,0.6s
KUR pmax pmax
comp=N,186nm,0.5s
KUR pmax pmax
comp=E,142nm,0.7s
KUR pmax pmax
comp=Z,4μm,2.9s
KUR smax smax
comp=E,410nm,0.7s

KUR smax smax
comp=N,259nm,0.8s
ERM Erimo 3.87 174 Pn 23 13 43.7 -0.8
ERM Erimo 3.87 174 d iPN Pn 23 13 43.3 -1.1
JKB Kayabe 4.15 197 P Pn 23 13 45.9 -1.4
JKB eS S 23 14 37.5 -5.4
TEY Ternei 4.33 261 i P Pn 23 13 49.4 +0.2
TEY AMB AMB 23 13 51.2
comp=N,460nm,0.7s
TEY eS **S 23 14 45.7 -0.7**
TEY A A 23 14 46.8
comp=N,90nm,1.0s
TEY A A 23 14 46.8
comp=N,110nm,1.0s
TEY A A 23 14 47.9
comp=N,3µm,3.9s
TEY A A 23 14 47.9
comp=N,2µm,3.9s
TEY Ternei 4.33 261 ⇑iPN Pn 23 13 50.7 +1.5
TEY eS **S 23 14 45.7 -0.7**
TEY pmax pmax
comp=Z,460nm,0.7s
TEY pmax pmax
comp=N,90nm,0.7s
TEY pmax pmax
comp=E,580nm,0.7s
TEY smax smax
comp=E,110nm,1.8s
TEY smax smax
comp=N,90nm,1.6s
JOSM Okushiri--Mats 4.42 212 ⇑P Pn 23 13 49.5 -0.8
TYV Tymovskoe 5.00 0 eP Pn 23 13 58.0 +1.5
TYV AMB AMB 23 13 58.5
comp=N,1µm,0.5s
TYV eS **S 23 15 01.2 +1.6**
TYV A A 23 15 02.4
comp=N,4µm,3.0s
TYV A A 23 15 02.5
comp=N,300nm,1.0s
TYV A A 23 15 02.5
comp=N,380nm,1.0s
GRNR Gornyy 6.42 322 i P Pn 23 14 14.1 +1.1
GRNR AMB AMB 23 14 15.3
comp=N,90nm,1.1s
GRNR eS **S 23 15 30.0 +0.3**
GRNR A A 23 15 32.9
comp=N,90nm,1.3s
GRNR Gornyy 6.42 322⇓iPN Pn 23 14 14.1 +1.1
GRNR eS **S 23 15 30.0 +0.3**
GRNR pmax pmax
comp=Z,90nm,1.1s
GRNR smax smax
comp=E,90nm,1.3s
GRNR MLR MLR
comp=Z,130nm,15.0s
NKL Nikolayevsk 7.40 351 eP Pn 23 14 25.5 +1.0
NKL eS **S 23 15 52.1 +1.2**
NKL A A 23 15 55.6
comp=Z,90nm,2.0s
NKL A A 23 15 55.6
comp=Z,94nm,2.0s
NKL Nikolayevsk 7.40 351 ePN Pn 23 14 37.7 +13
NKL eS **S 23 15 52.0 +1.2**
NKL pmax pmax
comp=N,5.0nm,0.6s
NKL pmax pmax
comp=Z,94nm,0.6s
NKL pmax pmax
comp=E,19nm,0.4s
NKL smax smax
comp=E,86nm,2.0s
NKL smax smax
comp=N,15nm,1.9s
OKH Okha 7.69 1 eP Pn 23 14 30.2 +2.2
OKH AMB AMB 23 14 30.7
comp=N,520nm,0.7s
OKH AMB AMB 23 14 35.5
comp=N,100nm,6.0s
OKH eS **S 23 16 01.3 +4.0**
OKH A A 23 16 03.8
comp=N,4µm,4.0s
OKH A A 23 16 03.8
comp=N,4µm,4.0s
OKH Okha 7.69 1 d ePN Pn 23 14 30.4 +2.4
OKH eS **S 23 15 53.6 -3.7**
OKH pmax pmax
comp=Z,100nm,11.4s
OKH smax smax
comp=N,1µm,7.9s
OKH smax smax
comp=E,2µm,13.8s
USA0B Ussuriysk Arra 7.73 261 Pn 23 14 29.9 +1.2
USA0B Ussuriysk Arra 7.73 261 PN Pn 23 14 29.9 +1.2
USRK Ussuriysk Ar. 7.73 261 P Pn 23 14 29.8 +1.1
baz=71,slow=12,SNR=288
USRK S **S 23 15 57.4 -1.1**
baz=70,slow=17,SNR=9.0
KLR Kul'dur 8.10 298 P Pn 23 14 34.6 +1.5
comp=E,7.4nm,0.3s,baz=108,slow=13,SNR=180
KLR S **S 23 16 06.7 +0.2**
baz=46,slow=19,SNR=3.4
KLR ScP **ScP 23 23 32.5 +0.2**
comp=E,0.3nm,0.3s,baz=78,slow=4.4,SNR=5.9
VLA Vladivostok 8.17 254 c iPN Pn 23 14 34.7 +0.7
MSHR Mys Shultsa 8.88 252 c iPN Pn 23 14 43.1 +0.5
MDJ Mudanjiang 9.29 267 P P 23 14 49.3 -1.5
MDJ S **S 23 16 33.3 +0.1**
MDJ ScS **ScS 23 27 03.6 -4.3**
MDJ pmax pmax
comp=E,80nm,0.6s
MDJ pmax pmax
comp=E,310nm,3.7s
MDJ Mudanjiang 9.29 267 Pn 23 14 48.4 +0.8
EKMR Ekimchan 9.57 322 i P Pn 23 14 51.9 +1.1
EKMR AMB AMB 23 14 53.9
comp=E,310nm,0.8s
EKMR eS **S 23 16 39.5 +0.2**
EKMR A A 23 16 42.2
comp=E,120nm,1.0s
EKMR A A 23 16 42.2
comp=E,50nm,1.0s
MJB9 Matsu-Tunnel 9.89 201 Pn 23 14 54.1 -0.9
MAJO Matsushiro 9.90 201 Pn 23 14 54.1 -0.9
MAJO Matsushiro 9.90 201 PN Pn 23 14 54.1 -0.9
MAT Matsushiro 9.90 201 P Pn 23 14 53.5 -1.5
MAT S **S 23 16 39.0 -8.0**
MJAR Matsushiro Arr 9.90 201 P Pn 23 14 54.3 -0.7
comp=E,5.2nm,0.3s,baz=14,slow=12,SNR=357
SKR Severo-Kuril's 10.19 57 i P P 23 14 59.8 -0.8
SKR AMB AMB 23 15 00.6
comp=E,790nm,0.6s
SKR AMB AMB 23 15 01.1
comp=E,800nm,2.0s
SKR eS **S 23 16 51.8 -1.2**
SKR A A 23 17 02.3
comp=E,140nm,0.6s
SKR A A 23 17 02.3
comp=E,100nm,0.6s
SKR Severo-Kuril's 10.19 57 c ePN P 23 14 59.8 -0.8
INU Inuyama 11.34 204 P Pn 23 15 10.8 -1.7
PEA0B Petropavlovsk- 12.16 48 P P 23 15 23.0 +0.4
PEA0B Petropavlovsk- 12.16 48 i PN P 23 15 22.4 -0.1
PETK Petropavlovsk- 12.16 48 P P 23 15 22.4 -0.2
comp=E,6.6nm,0.3s,baz=212,slow=8.4,SNR=70
CN2 Changchun 12.38 267 eP Pn 23 15 24.3 -0.5
CN2 eS **S 23 17 37.5 -4.7**
CN2 pmax pmax
comp=E,50nm,0.6s
CN2 pmax pmax
comp=E,200nm,3.0s
CN2 LR LR
comp=E,210nm,10.0s
CN2 LR LR
comp=E,230nm,10.0s
CN2 LR LR
comp=E,240nm,12.0s
BMKR Bomnak 12.48 320 i P P 23 15 26.0 0.0
BMKR AMB AMB 23 15 29.0
comp=E,216nm,0.3s
PET Petropavlovsk 12.62 50 eP P 23 15 28.0 +0.4
PET AMB AMB 23 15 30.8
comp=E,50nm,0.6s
PET Petropavlovsk 12.62 50 P P 23 15 28.4 +0.8
PET Petropavlovsk 12.62 50 ePN P 23 15 28.7 +1.1
PET pmax pmax
comp=Z,71nm,0.6s
ZEA Zeya 12.66 314 d ePN P 23 15 28.8 +0.7
ZEA eS **S 23 17 48.0 +0.1**
ZEA pmax pmax
comp=N,1µm,2.0s
ZEA pmax pmax
comp=E,1µm,2.0s
ZEA pmax pmax
comp=Z,2µm,2.0s
ZEA pmax pmax
comp=E,300nm,0.9s
ZEA pmax pmax
comp=N,350nm,0.8s
ZEA pmax pmax
comp=Z,510nm,1.0s
ZEA smax smax
comp=E,800nm,5.0s
ZEA smax smax
comp=N,600nm,6.0s
ZEA MLR MLR
comp=N,600nm,5.0s
ZEA MLR MLR
comp=E,700nm,5.0s
ZEA MLR MLR
comp=Z,700nm,5.0s
JHJ Hachijo jima 2 12.92 191 P P 23 15 31.1 -0.1
comp=Z,75nm,0.3s,baz=67,slow=17,SNR=8.7
JHJ S **S 23 17 47.0 -6.9**
comp=Z,14nm,0.3s,baz=292,slow=19,SNR=3.4
KROS Kirovskiy 13.18 316 eP Pn 23 15 34.3 +0.1
KROS AMB AMB 23 15 37.0
comp=Z,450nm,0.2s
KSRS Korea Array 13.83 238 P Pn 23 15 42.5 +0.5
comp=Z,3.0nm,0.3s,baz=51,slow=10,SNR=69
KSRS ScP **ScP 23 23 41.5 +1.3**
comp=Z,0.4nm,0.3s,baz=27,slow=1.0,SNR=20
KS19 Wonju Array Si 13.83 238 P Pn 23 15 43.0 +0.9
MA2 Magadan 14.57 17 P Pn 23 15 49.8 -0.7
comp=Z,9.7nm,0.3s,baz=199,slow=9.3,SNR=55
MA2 S **S 23 18 27.5 +0.2**
baz=287,slow=19,SNR=4.2
MA2 Magadan 14.57 17 P Pn 23 15 50.3 -0.2
MA2 Magadan 14.57 17 d iP Pn 23 15 50.6 +0.1
INCN Inchon 14.59 241 P Pn 23 15 50.2 -0.7
INCN Inchon 14.59 241 P Pn 23 15 50.3 -0.7
TJN Taejon 14.89 236 d iP Pn 23 15 54.7 +0.1
JNU Nakatsue 15.61 219 P P 23 16 01.3 +0.5
comp=Z,5.2nm,0.3s,baz=327,slow=2.0,SNR=25
JNU Nakatsue 15.61 219 P P 23 16 00.5 -0.3
HIA Hailar 15.81 291 P P 23 16 02.6 -0.1
HIA Hailar 15.81 291 P P 23 16 02.6 -0.1
HIA pmax pmax
comp=Z,162nm,0.7s
DL2 Dalian 16.99 253 P P 23 16 16.4 +0.9
DL2 esP **sP 23 17 41.3 -2.9**
DL2 S **S 23 19 16.6 +0.7**
DL2 pmax pmax
comp=Z,44nm,0.8s
YAK Yakutsk 17.84 340 P P 23 16 23.2 -1.1
comp=Z,3.9nm,0.3s,baz=131,slow=4.0,SNR=58
YAK S **S 23 19 29.0 -3.1**
comp=Z,0.2nm,0.3s,baz=343,slow=19,SNR=7.2
YAK Yakutsk 17.84 340 P P 23 16 23.3 -1.1
YAK Yakutsk 17.84 340 eP P 23 16 22.9 -1.5
YAK eS **S 23 19 28.9 -3.1**
YAK pmax pmax
comp=Z,90nm,0.8s
YAK pmax pmax
comp=E,15nm,0.9s
YAK pmax pmax
comp=N,28nm,0.8s
YAK smax smax
comp=N,1µm,2.1s
YAK smax smax
comp=E,1µm,2.7s
SEY Seymchan 17.98 15 P P 23 16 26.0 +0.1
comp=E,13nm,0.3s,baz=193,slow=6.1,SNR=136
SEY Seymchan 17.98 15 i P P 23 16 25.4 -0.5
BJI Beijing 20.18 263 P P 23 16 48.6 -0.8
BJI S **S 23 20 15.9 +0.2**
BJI ScS **ScS 23 27 35.3 -0.9**
BJI pmax pmax
comp=E,83nm,0.9s
BJI pmax pmax
comp=E,370nm,5.6s
BJT Baijiatuau 20.20 263 IAmb IAmb 23 16 49.9
comp=Z,66nm,0.9s
BOD Bodaibo 21.17 315 eP P 23 16 56.4 -2.0
BOD pmax pmax
comp=Z,91nm,1.7s
TIA Tai'an 21.45 252 P P 23 17 01.4 +0.1
TIA S **S 23 20 40.4 +4.1**
TIA pmax pmax
comp=Z,49nm,1.0s
TIA LR LR
comp=Z,190nm,10.8s
TIA LR LR
comp=Z,100nm,7.4s
SMY Shemya 21.51 60 P P 23 17 01.9 +0.4
SMY Shemya 21.51 60 P P 23 17 01.9 +0.4
SMY pmax pmax
comp=Z,240nm,1.0s
JOW Kunigami 22.18 216 P P 23 17 08.4 +0.4
comp=Z,4.8nm,0.3s,baz=103,slow=16,SNR=11
JOW Kunigami 22.18 216 IAmb IAmb 23 17 16.0
comp=Z,70nm,1.0s
NJ2 Nanjing 22.97 241 eP P 23 17 15.5 +0.4
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
HHC Hu-ho-hao-te 23.06 269⇓iP P 23 17 17.4 +1.4
HHC S **S 23 21 03.1 +0.8**
HHC pmax pmax
comp=Z,61nm,0.8s
HHC pmax pmax
comp=Z,420nm,4.5s
TIY Taiyuan 23.84 261 eP P 23 17 24.8 +1.7
TIY S **S 23 21 19.4 +4.8**
TIY pmax pmax
comp=Z,60nm,0.6s
TIY pmax pmax
comp=Z,230nm,4.6s
TIY LR LR
comp=Z,99nm,4.5s
TIY LR LR
comp=Z,220nm,4.6s
BTO Baotou 24.23 269 eP P 23 17 26.3 -0.3
ULN Ulaanbaatar 24.29 288 P P 23 17 27.3 +0.3
ULN **P 23 17 27.5 +0.5**
ULN Ulaanbaatar 24.29 288 P P 23 17 27.3 +0.3
ULN pmax pmax
comp=Z,104nm,0.6s
SONM Songino Array 24.73 288 P P 23 17 31.1 +0.1
comp=Z,88nm,0.6s,baz=82,slow=8.5,SNR=773
SONM PcP **PcP 23 20 58.5 +0.7**
comp=Z,2.7nm,0.8s,baz=17,slow=1.8,SNR=3.6
SONM ScP **ScP 23 24 05.2 +0.1**
comp=Z,1.8nm,0.5s,baz=121,slow=2.7,SNR=9.4
BILL Bilibino 25.36 21 P P 23 17 34.7 -1.5
BILL Bilibino 25.36 21 d eP P 23 17 34.9 -1.3
BILL e*PP **pP 23 18 36.3 +2.4**
BILL *SP **sP 23 19 16.0 +1.4**
BILL i S **S 23 21 33.1 -4.6**
BILL pmax pmax
comp=Z,4.0nm,0.4s
TLY Talaya 26.11 297 P P 23 17 42.8 -0.3
comp=Z,22nm,0.7s,baz=96,slow=4.7,SNR=46
TLY PcP **PcP 23 21 01.6 +0.8**
comp=Z,2.2nm,0.5s,baz=317,slow=2.3,SNR=3.4
TLY Talaya 26.11 297 P P 23 17 42.7 -0.5
TLY IAmb IAmb 23 17 44.0
comp=Z,19nm,0.6s
TLY Talaya 26.11 297 d iP P 23 17 42.5 -0.7
TLY pmax pmax
comp=Z,43nm,0.7s
ZAK Zakamensk 26.44 294 eP P 23 17 45.9 -0.2
ZAK pmax pmax
comp=Z,23nm,0.7s
TIXI Tiksi 26.68 350 P P 23 17 46.0 -1.9
comp=Z,14nm,0.6s,baz=140,slow=6.9,SNR=44
TIXI Tiksi 26.68 350 P P 23 17 46.7 -1.1
TIXI IAmb IAmb 23 17 47.7
comp=Z,14nm,0.6s
TIXI Tiksi 26.68 350 c eP P 23 17 45.8 -2.1
TIXI pmax pmax
comp=Z,12nm,0.6s
WHN Wuhan 26.81 245 ⇓P P 23 17 50.4 +0.9
NACB Ninganchiao 27.51 225 P P 23 17 55.0 -0.8
NACB IAmb IAmb 23 17 55.5
comp=Z,22nm,1.0s
SSLB Suanglung 28.16 226 P P 23 18 02.1 +0.5
XAN Xi'an 28.21 257 P P 23 18 01.4 -0.6
XAN S **S 23 22 23.0 -0.4**
XAN pmax pmax
comp=Z,11nm,1.4s
XAN LR LR
comp=Z,180nm,15.7s
XAN LR LR
comp=Z,280nm,10.4s
XAN LR LR
comp=Z,220nm,15.2s
YULB Yu-li 28.32 225 P P 23 18 02.3 -0.6
YULB IAmb IAmb 23 18 05.5
comp=Z,20nm,0.9s
ATKA Atka Island 28.65 61 P P 23 18 03.4 -2.1
ATKA IAmb IAmb 23 18 20.1
comp=Z,37nm,1.1s
TWG Pinlang 28.91 225 P P 23 18 08.4 +0.2
LZH Lanzhou 30.61 265 ⇑P P 23 18 24.5 +1.3
LZH PP **PP 23 19 45.9 +6.0**
LZH pmax pmax
comp=Z,180nm,1.3s
LZH pmax pmax
comp=Z,290nm,5.4s
LZH LR LR
comp=Z,410nm,15.2s
LZH LR LR
comp=Z,490nm,14.6s
LZH LR LR
comp=Z,520nm,15.6s
GTA Gaotai 31.86 274 ⇓P P 23 18 35.3 +1.4
GTA pP pwP 23 19 37.3 -0.1
GTA sP sP 23 20 11.4 -1.1
GTA PcP **PcP 23 21 17.1 +1.3**
GTA S **S 23 23 19.4 -0.8**
GTA ScP **ScP 23 24 28.8 +1.2**
GTA SS **SS 23 25 45.8 -6.0**
GTA ScS **ScS 23 28 27.3 +0.4**
GTA pmax pmax
comp=Z,84nm,0.7s
GTA pmax pmax
comp=Z,180nm,5.1s
HKPS Hong Kong Po S 33.03 234 P P 23 18 44.6 +0.6
HKPS IAmb IAmb 23 18 47.1
comp=Z,50nm,0.8s
UNV Unalaska Valle 33.11 57 P P 23 18 42.3 -2.0
UNV IAmb IAmb 23 18 56.0
comp=Z,32nm,1.2s
AKUT Akutan 33.50 57 P P 23 18 46.2 -1.4
CD2 Chengdu 33.58 257 eP P 23 18 48.0 -0.7
ANM Nome 33.79 38 P P 23 18 49.7 -0.3
ANM Nome 33.79 38 P P 23 18 49.7 -0.3
ANM pmax pmax
comp=Z,9.0nm,0.8s
GYA Guiyang 34.52 248 P P 23 18 57.8 +0.9
GYA pP pP 23 19 59.5 +0.5
GYA PP **PP 23 20 28.8 +5.8**
GYA S **S 23 24 01.3 0.0**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,110nm,4.9s
RDOG Red Dog Mine 35.35 32 P P 23 19 01.9 -1.4
NRIK Noril'sk 35.83 330 P P 23 19 06.0 -1.3
comp=Z,27nm,0.5s,baz=109,slow=8.7,SNR=62
NRIK PcP **PcP 23 21 26.6 0.0**
comp=Z,11nm,0.5s,baz=135,slow=1.4,SNR=3.0
MIDW Midway 36.01 105 P P 23 19 06.8 -2.5
ZALV Zalesovo Beam 37.16 304 P P 23 19 17.6 -1.0
comp=Z,13nm,0.5s,baz=86,slow=9.8,SNR=44
ZALV PcP **PcP 23 21 31.0 +0.2**
comp=Z,15nm,0.7s,baz=79,slow=2.4,SNR=10.0
ZALV ScP **ScP 23 24 45.6 -0.6**
comp=Z,3.7nm,0.6s,baz=66,slow=3.6,SNR=5.2
CHGN Chignik 37.36 52 P P 23 19 20.5 +0.3
CHGN IAmb IAmb 23 19 25.2
comp=Z,44nm,0.7s
KMI Kunming 38.01 251 P P 23 19 26.9 +0.6
KMI sP PP 23 21 03.4 +2.4
KMI S **S 23 24 53.8 -0.3**
KMI SS **SS 23 27 51.4 -5.1**
KMI pmax pmax
comp=Z,34nm,1.0s
KMI pmax pmax
comp=Z,140nm,5.4s
KMI Kunming 38.01 251 IAmb IAmb 23 19 27.7
comp=Z,25nm,0.7s
WMQ Urumqi 38.36 287 eP P 23 19 29.8 +0.9
WMQ pP pP 23 20 30.0 -2.2
WMQ sP sP 23 21 10.0 +0.8
WMQ pmax pmax
comp=Z,61nm,1.1s
WMQ pmax pmax
comp=Z,100nm,4.7s
WMQ LR LR
comp=Z,480nm,29.0s
WMQ LR LR
comp=Z,870nm,29.2s
WMQ LR LR
comp=Z,52nm,28.8s
CHIR Chirikof Islan 38.98 52 P P 23 19 33.5 -0.1
CHIR IAmb IAmb 23 19 33.6
comp=Z,113nm,1.2s
SII Sitkinak Islan 39.62 51 P P 23 19 39.3 +0.4
SII IAmb IAmb 23 19 43.1
comp=Z,32nm,0.6s
SLVN Son La 39.93 245 P P 23 19 42.3 +0.3
OHAK Old Harbor 39.96 50 IAmb IAmb 23 19 42.6
comp=Z,35nm,0.5s
SKT Skwentna 40.03 42 P P 23 19 41.4 -0.8
KTH Kantishna Hill 40.11 40 IAmb IAmb 23 19 44.5
comp=Z,41nm,1.2s
KDAK Kodiak Island 40.22 49 P P 23 19 43.4 -0.3
comp=Z,19nm,0.5s,baz=266,slow=2.0,SNR=58
KDAK ScP **ScP 23 24 58.2 +0.3**
comp=Z,8.4nm,0.8s,baz=226,slow=8.6,SNR=4.2
KDAK Kodiak Island 40.22 49 P P 23 19 43.5 -0.2
TOLK Toolik Lake Re 40.32 32 P P 23 19 43.8 -0.7
baz=272,SNR=11
BWN Browne 40.69 39 IAmb IAmb 23 19 50.1
comp=Z,37nm,0.7s
MK31 Makanchi Array 40.77 294 IAmb IAmb 23 19 49.9
comp=Z,40nm,0.7s
MK31 Makanchi Array 40.77 294 i P P 23 19 48.2 -0.3
MK31 pmax pmax
comp=Z,43nm,0.6s
MKAR Makanchi Array 40.77 294 P P 23 19 48.2 -0.3
comp=Z,37nm,0.6s,baz=80,slow=8.6,SNR=509
MKAR PcP **PcP 23 21 42.5 0.0**
comp=Z,7.4nm,0.8s,baz=62,slow=5.6,SNR=4.4
MKAR ScP **ScP 23 25 00.6 +0.2**
comp=Z,6.3nm,0.9s,baz=58,slow=4.6,SNR=9.3
MKAR Makanchi Array 40.77 294 c eP P 23 19 48.4 -0.1
MKAR pmax pmax
comp=Z,38nm,0.6s
NEA Nenana 40.80 38 IAmb IAmb 23 19 49.8
comp=Z,22nm,0.6s
MAKZ Makanchi 40.97 294 P P 23 19 49.4 -0.7
MAKZ IAmb IAmb 23 19 51.5
comp=Z,43nm,0.6s
MAKZ Makanchi 40.97 294 i P P 23 19 49.7 -0.4
MAKZ pmax pmax
comp=Z,33nm,0.6s
PMR Palmer 41.21 42 P P 23 19 52.3 +0.6
PMR Palmer 41.21 42 P P 23 19 52.3 +0.6
PMR pmax pmax
comp=Z,9.0nm,0.4s
GHO Glory Hole Cre 41.28 42 IAmb IAmb 23 19 54.3
comp=Z,37nm,0.5s
TCOL CIGO, UAF Yank 41.29 37 P P 23 19 51.4 -0.8
baz=277
COLA College 41.29 37 P P 23 19 51.6 -0.7
COLA IAmb IAmb 23 19 53.9
comp=Z,26nm,0.8s
COLA College 41.29 37 P P 23 19 51.6 -0.7
COLA pmax pmax
comp=Z,26nm,0.8s
SEW Seward 41.34 45 P P 23 19 52.7 -0.1
POKR Poker Plat Res 41.44 37 P P 23 19 53.3 -0.2
baz=277,SNR=18
SML Sawmill 41.55 42 P P 23 19 54.4 -0.2
KNK Knik Glacier 41.56 43 IAmb IAmb 23 19 55.8
comp=Z,23nm,0.5s

KCP Kidapawan 41.58 207⇓iP P 23 19 56.6 +1.3
KURK Kurchatov 41.69 301 P P 23 19 55.1 -0.6
KURK IAmb IAmb 23 19 56.1
comp=Z,63nm,0.7s
KURK Kurchatov 41.69 301 d iP P 23 19 55.0 -0.7
KURK pmax pmax
comp=Z,59nm,0.7s
ILAR Eielson Array 41.71 37 P P 23 19 54.1 -1.6
comp=Z,8.9nm,0.6s,baz=260,slow=7.3,SNR=82
ILAR PcP PcP 23 21 44.9 -0.4
comp=Z,2.6nm,0.7s,baz=289,slow=3.2,SNR=5.0
ILAR ScP ScP 23 25 02.8 -1.0
comp=Z,1.0nm,0.7s,baz=288,slow=4.8,SNR=5.2
HDA Harding Lake 41.74 38 P P 23 19 54.7 -1.3
baz=279,SNR=18
KURBB Kurchatov Arra 41.77 301 P P 23 19 55.4 -1.0
comp=Z,60nm,0.6s,baz=67,slow=8.9,SNR=226
SCM Sheep Creek Mo 42.01 42 IAmb IAmb 23 20 00.6
comp=Z,17nm,0.5s
FYU Fort Yukon 42.14 35 IAmb IAmb 23 20 00.5
comp=Z,25nm,0.7s
PRP Porcupine Dome 42.17 36 IAmb IAmb 23 20 02.4
comp=Z,20nm,0.6s
GLI Glacier Island 42.32 43 P P 23 20 00.1 -0.5
FID Port Fidalgo 42.64 43 P P 23 20 02.3 -0.9
HIN Hinchinbrook I 42.71 44 P P 23 20 03.6 -0.3
LSA Lhasa 43.02 266 IAmb IAmb 23 20 09.3
comp=Z,19nm,0.5s
EYAK Cordova Ski Ar 43.04 43 P P 23 20 06.6 +0.2
SCRK Sand Creek 43.09 38 IAmb IAmb 23 20 07.9
comp=Z,20nm,0.6s
PDGK Podgornoye 43.99 290 iP P 23 20 14.0 -0.4
PDGK pmax pmax
comp=Z,24nm,0.7s
MCARA McCarthy VSAT 44.12 42 P P 23 20 15.5 +0.6
EGAK Eagle 44.12 37 IAmb IAmb 23 20 15.3
comp=Z,17nm,0.6s
DLV T Lat 44.53 232 P P 23 20 20.2 +1.3
CHTO Chiang Mai 44.94 248 P P 23 20 22.6 +0.7
CHTO Chiang Mai 44.94 248 P P 23 20 22.6 +0.7
CHTO pmax pmax
comp=Z,18nm,0.7s
CTGM Chitina Glacie 45.02 42 IAmb IAmb 23 20 23.2
comp=Z,17nm,0.5s
SHL Shillong 45.07 261 IAmb IAmb 23 20 24.2
comp=Z,59nm,0.7s
CMAR Chiang Mai Arr 45.20 248 P P 23 20 24.3 +0.4
comp=Z,3.4nm,0.7s,baz=37,slow=7.2,SNR=25
CMAR PcP PcP 23 21 58.5 +0.6
comp=Z,1.9nm,0.6s,baz=36,slow=2.1,SNR=7.1
CMAR ScP ScP 23 25 20.0 +1.2
comp=Z,3.1nm,0.8s,baz=7.9,slow=4.0,SNR=12
CMAR Chiang Mai Arr 45.20 248 c eP P 23 20 24.7 +0.7
CMAR pmax pmax
comp=Z,3.0nm,0.7s
EPYK Eagle Plains 45.53 34 IAmb IAmb 23 20 27.1
comp=Z,37nm,0.5s
EPYK Eagle Plains 45.53 34 P P 23 20 25.1 -0.9
baz=285,SNR=27
BRVK Borovoye 45.72 307 P P 23 20 27.0 -0.5
BRVK IAmb IAmb 23 20 28.7
comp=Z,39nm,1.0s
BRVK Borovoye 45.72 307 iP P 23 20 26.7 -0.8
BRVK pmax pmax
comp=Z,20nm,0.6s
PCA Pinnacle 45.79 43 P P 23 20 27.5 -0.6
KKM Kota Kinabalu 45.81 218 IAmb IAmb 23 20 33.9
comp=Z,28nm,0.5s
INK Inuvik 46.21 31 P P 23 20 30.1 -0.9
comp=Z,17nm,0.4s,baz=288,slow=6.7,SNR=140
INK PcP PcP 23 22 01.5 +0.9
comp=Z,4.6nm,0.7s,baz=331,slow=3.4,SNR=3.3
INK ScP ScP 23 25 22.0 -0.1
comp=Z,2.1nm,0.8s,baz=281,slow=5.2,SNR=4.5
INK Inuvik 46.21 31 IAmb IAmb 23 20 31.8
comp=Z,20nm,0.4s
ULHL Ulahol 46.62 291 P P 23 20 35.8 +0.9
SNR=22
TAPN Taplejung 46.84 266 eP P 23 20 37.5 +0.6
comp=Z,68nm,0.6s
DHAK Deception Hill 47.10 44 P P 23 20 39.2 +1.1
DHAK IAmb IAmb 23 20 56.3
comp=Z,44nm,1.2s
CHMS Chumysh 47.23 292 P P 23 20 39.7 +0.3
SNR=19
CHMS Chumysh 47.23 292 iP P 23 20 39.2 -0.2
CHMS pmax pmax
comp=Z,24nm,0.7s
KBK Karagaybulak 47.26 292 P P 23 20 40.5 +0.7
SNR=138
USP Ospenovka 47.27 293 P P 23 20 40.3 +0.6
SNR=132
KZA Kyzart 47.34 291 P P 23 20 42.1 +1.4
SNR=126
ODAN Odare 47.37 266 eP P 23 20 41.3 +0.4
comp=Z,38nm,0.5s
AAK Ala-Archa 47.57 292 P P 23 20 42.5 +0.4
comp=Z,38nm,0.7s,baz=95,slow=5.2,SNR=186
AAK Ala-Archa 47.57 292 P P 23 20 42.6 +0.5
SNR=42
AAK Ala-Archa 47.57 292 iP P 23 20 42.7 +0.6
SNR=73
AAK Ala-Archa 47.57 292 P P 23 20 42.4 +0.4
AAK IAmb IAmb 23 20 43.5
comp=Z,39nm,0.7s
AAK Ala-Archa 47.57 292 iP P 23 20 42.2 +0.1
AAK pmax pmax
comp=Z,32nm,0.6s
JIRN Jiri 47.71 268 eP P 23 20 44.0 +0.4
comp=Z,209nm,0.7s
UCH Uchtor 47.75 291 P P 23 20 44.5 +0.6
SNR=20
GUN Gumba 47.78 268 eP P 23 20 44.2 +0.1
comp=Z,82nm,0.6s
RAMN Ramite 47.87 267 eP P 23 20 45.0 +0.3
comp=Z,162nm,0.6s
KMSI Cibinong 48.01 206 P P 23 20 46.7 +1.2
comp=Z,4µmcomp=Z,114nm,0.4s
EKS2 Erkin-Say 48.02 292 P P 23 20 46.0 +0.5
SNR=33
KSH Kashi 48.13 287 P P 23 20 51.0 +4.6
KSH PcP PcP 23 22 10.3 +2.1
KSH S S 23 27 26.6 +6.7
KSH ScS ScS 23 30 09.5 +5.5
KSH SS SS 23 31 00.1 +6.8
KSH pmax pmax
comp=Z,9.0nm,1.3s
KSH LR LR
comp=Z,140nm,5.6s
KSH LR LR
comp=Z,130nm,5.8s
KSH LR LR
comp=Z,350nm,6.2s
KKN Kakani 48.27 269 eP P 23 20 48.1 +0.4
comp=Z,58nm,0.7s
PKI Pulchoki 48.31 268 eP P 23 20 48.2 0.0
comp=Z,40nm,0.7s
PKIN Phulchoki 48.32 268 eP P 23 20 48.3 +0.2
comp=Z,32nm,0.7s
AML Almayashu 48.33 292 P P 23 20 48.9 +0.8
SNR=90
DMN Daman 48.50 269 eP P 23 20 50.0 +0.5
comp=Z,63nm,0.7s
GKN Gorkha 48.59 269 eP P 23 20 50.2 +0.2
comp=Z,71nm,0.5s
MRSI Marisa 48.74 208 P P 23 20 51.8 +0.8
comp=Z,914nmcomp=Z,111nm,0.8s
BESE Bessie Mountai 48.92 44 P P 23 20 53.4 +1.5
DANN Dangsing 48.99 270 eP P 23 20 53.9 +0.7
comp=Z,230nm,0.7s
C36M Paulatuk 49.11 28 IAmb IAmb 23 20 53.9
comp=Z,22nm,0.5s
C36M Paulatuk 49.11 28 P P 23 20 52.6 -0.5
baz=293,SNR=18
JIS Juneau Island 49.27 44 P P 23 20 55.8 +1.3
JIS IAmb IAmb 23 20 57.0
comp=Z,16nm,0.5s
SIT Sitka 49.30 46 P P 23 20 56.6 +1.9
SIT IAmb IAmb 23 21 14.3
comp=Z,35nm,1.1s
SIT Sitka 49.30 46 P P 23 20 56.6 +1.9
SIT pmax pmax
comp=Z,35nm,1.1s
SVE Sverdlovsk 49.38 314 c iP P 23 20 55.1 -0.3
SVE pmax pmax
comp=Z,87nm,0.6s
FAKI Fak Fak 49.45 194 P P 23 20 57.2 +0.9
comp=Z,1µmcomp=Z,190nm,0.8s
MPSI Mapaga 49.57 211 P P 23 20 58.3 +1.0
KK31 Karatay Array 49.90 294⇑eP P 23 20 59.5 0.0
KK31 pmax pmax
comp=Z,44nm,0.6s
LUWI Luwuk 49.90 206 IAmb IAmb 23 20 59.0
comp=Z,61nm,0.8s
APSI Ampana 50.14 208 P P 23 20 59.6 -1.9
ARU Arti 50.59 314 P P 23 21 03.4 -0.9
ARU IAmb IAmb 23 21 04.5
comp=Z,45nm,0.7s
ARU Arti 50.59 314 d iP P 23 21 03.5 -0.9
ARU 23 22 15.9
ARU 23 23 02.9
ARU S S 23 27 52.6 -0.4
ARU SS SS 23 31 25.3 -5.8
ARU pmax pmax
comp=Z,43nm,0.7s
SBUM Sibu 50.78 221 P P 23 21 07.0 +0.7
DLBC Dease Lake 51.28 42 P P 23 21 11.1 +1.6
comp=Z,9.6nm,0.5s,baz=305,slow=3.8,SNR=13
DLBC Dease Lake 51.28 42 P P 23 21 10.8 +1.3
TAS Tashkent 51.58 293 P P 23 21 13.0 +1.0
TAS pmax pmax
comp=Z,132nm,0.7s
HOPEN Hopen 51.73 345 eP P 23 21 11.1 -1.4
SPA0 Spitsbergen Ar 52.06 348 eP P 23 21 13.8 -1.2
SPA0 Spitsbergen Ar 52.06 348 P P 23 21 13.8 -1.2
SPITS Spitsbergen Ar 52.06 348 P P 23 21 13.7 -1.2
SPITS pmax pmax
comp=Z,1.0nm,0.2s
KBS Kingsbay 52.13 349 P P 23 21 16.8 +1.4
KBS IAmb IAmb 23 21 21.0
comp=Z,27nm,1.1s
KBS Kingsbay 52.13 349 P P 23 21 16.8 +1.4
KBS pmax pmax
comp=Z,27nm,1.1s
NOR Nord 52.30 356 iP P 23 21 15.1 -1.5
comp=Z,8.0nm,0.8s
NOR Nord 52.30 356 iP P 23 21 15.1 -1.5
NOR pmax pmax
comp=Z,8.0nm,0.8s
DIB Dawson Inlet, 52.48 49 P P 23 21 19.6 +1.3
KSM Kuching 52.52 222 P P 23 21 20.0 +0.9
MOBC Moresby Island 52.78 49 P P 23 21 21.2 +0.6
MOBC IAmb IAmb 23 21 26.6
comp=Z,25nm,1.1s
HSPB Hornsund (broa 53.03 347 eP P 23 21 21.8 -0.1
NIL Nilore 53.15 283 P P 23 21 24.2 +0.7
NIL Nilore 53.15 283 P P 23 21 24.2 +0.7
NIL pmax pmax
comp=Z,99nm,0.8s
AKTO Aktyubinsk 53.71 308 P P 23 21 26.6 -0.6
baz=63,slow=6.8,SNR=2.6
RES Resolute Bay 53.84 16 P P 23 21 27.0 -0.8
comp=Z,52nm,0.6s,baz=291,slow=8.9,SNR=212
BNSI Bone 53.92 208 P P 23 21 29.8 +0.7
comp=Z,36nm,1.1s
KIRV Kirov 53.93 320 iP P 23 21 27.8 -0.8
PRGR Permogore 54.00 324⇓iP P 23 21 28.3 -0.8
PRGR pmax pmax
comp=Z,70nm,0.7s
KULM Kulim 54.36 235 IAmb IAmb 23 21 34.8
comp=Z,23nm,0.6s
KULM Kulim 54.36 235 P P 23 21 33.0 +0.6
JRMM Jerantut 54.49 232 P P 23 21 34.0 +0.7
LVZ Lovozero 54.51 334 P P 23 21 31.0 -1.8
LVZ IAmb IAmb 23 21 33.5
comp=Z,32nm,0.6s
LVZ Lovozero 54.51 334 P P 23 21 31.0 -1.8
LVZ pmax pmax
comp=Z,32nm,0.6s
IPM Ipoh 54.81 234 P P 23 21 37.0 +1.4
BBB Bella Bella 55.29 48 P P 23 21 39.6 +1.2
comp=Z,13nm,0.6s,baz=286,slow=9.0,SNR=6.4
BBB Bella Bella 55.29 48 P P 23 21 39.7 +1.2
BBB IAmb IAmb 23 21 53.0
comp=Z,37nm,1.1s
KBL Kabul 55.48 286 P P 23 21 39.5 -0.9
KBL Kabul 55.48 286 P P 23 21 39.5 -0.9
KBL pmax pmax
comp=Z,69nm,0.8s
TMCR Tamitsa 55.54 329 eP P 23 21 38.5 -1.5
TMCR pmax pmax
comp=Z,60nm,0.6s
KEV Kevo 55.57 338 P P 23 21 39.5 -0.6
KEV IAmb IAmb 23 21 40.6
comp=Z,20nm,0.7s
KEV Kevo 55.57 338 P P 23 21 39.5 -0.6
KEV pmax pmax
comp=Z,20nm,0.7s
YKA Yellowknife Ar 55.80 33 P P 23 21 41.5 -0.4
comp=Z,16nm,0.5s,baz=306,slow=6.9,SNR=246
YKA PcP PcP 23 22 37.6 +1.0
comp=Z,1.8nm,0.5s,baz=309,slow=3.7,SNR=6.3
YKA ScP ScP 23 26 04.0 +0.4
comp=Z,2.2nm,0.7s,baz=302,slow=4.3,SNR=12
YKA Yellowknife Ar 55.80 33 iP P 23 21 41.5 -0.4
YKA pmax pmax
comp=Z,17nm,0.5s
ARCES ARCESS Array B 56.11 338 P P 23 21 43.3 -0.7
comp=Z,2.8nm,0.4s,baz=39,slow=7.3,SNR=48
ARCES PP PP 23 23 53.0 +0.5
comp=Z,3.7nm,0.6s,baz=50,slow=10,SNR=4.1
ARE0 ARCESS Array S 56.11 338 eP P 23 21 44.2 +0.2
ARE0 ARCESS Array S 56.11 338 P P 23 21 44.5 +0.5
TULEG Thule 56.23 8 IAmb IAmb 23 21 47.1
comp=Z,14nm,0.6s
MLOA Mauna Loa Obse 56.67 96 P P 23 21 49.4 +0.2
MLOA IAmb IAmb 23 21 55.5
comp=Z,61nm,1.1s
HMH Humu'ula Sheep 56.69 96 P P 23 21 49.8 +0.7
HMH IAmb IAmb 23 21 50.6
comp=Z,23nm,0.8s
MWH Moku'aweowe 56.69 96 P P 23 21 48.7 -0.7
MWH IAmb IAmb 23 22 06.0
comp=Z,44nm,1.1s
KHU Kahuku 56.84 96 P P 23 21 50.7 +0.6
KHU IAmb IAmb 23 21 56.5
comp=Z,62nm,1.0s
KHU Kahuku 56.84 96 P P 23 21 50.7 +0.6
KHU pmax pmax
comp=Z,62nm,1.0s
AIN Ainahou 56.87 96 P P 23 21 50.8 +0.5
KLMR Klimovskoe 56.90 325 eP P 23 21 46.9 -2.6
KLMR pmax pmax
comp=Z,26nm,0.7s
KLMR Klimovskoe 56.90 325 eP P 23 21 47.0 -2.6
KLMR AMP 23 21 50.1
comp=Z,26nm,0.7s
DAG Danmarks Havn 57.06 355⇓iP P 23 21 49.2 -1.3
comp=Z,14nm,0.6s
DAG Danmarks Havn 57.06 355⇓iP P 23 21 49.2 -1.3
DAG pmax pmax
comp=Z,14nm,0.6s
KTK1 Kautokeino 57.06 338 eP P 23 21 50.2 -0.4
SGF Sodankyl 57.22 336 P P 23 21 51.3 -0.5
SGF pmax pmax
comp=Z,37nm,0.8s
PSI Prapat 57.38 235 P P 23 21 54.1 +0.4
comp=Z,4.2nm,0.5s,baz=354,slow=17,SNR=7.6
MSF Maaselka 57.48 334 P P 23 21 53.1 -0.5
MSF pmax pmax
comp=Z,54nm,0.7s
TRO Tromso 57.70 340 eP P 23 21 54.3 -0.7
SOEI Soe 57.78 202 P P 23 21 57.6 +1.2
comp=Z,77nm,0.8s
JOF Joensuu 58.68 330 P P 23 22 01.2 -0.7
JOF pmax pmax
comp=Z,57nm,0.7s
SRBI Singaraja 59.06 212 P P 23 22 05.5 +0.4
KULLO Kullorsuaq 59.10 6 iP P 23 22 02.9 -1.7
comp=Z,18nm,0.6s
KULLO Kullorsuaq 59.10 6 iP P 23 22 02.9 -1.7
KULLO pmax pmax
comp=Z,19nm,0.6s
COEN Coen 59.55 179 P P 23 22 08.8 +0.5
COEN IAmb IAmb 23 22 09.7
comp=Z,32nm,0.9s
STEI Steigen 59.87 340 eP P 23 22 08.7 -1.1
HRA Herat 60.09 290 IAmb IAmb 23 22 13.7
comp=Z,36nm,0.8s
A04D Lummi Island 60.10 50 P P 23 22 11.5 -0.2
baz=307
LOF Lofoten 60.12 340 eP P 23 22 09.7 -1.8
NLWA Neilton Lookou 60.26 51 P P 23 22 14.3 +1.4
NLWA IAmb IAmb 23 22 16.1
comp=Z,21nm,0.9s
KLSI 60.57 225 P P 23 22 16.1 +0.8
D03D Eldon 60.60 51 P P 23 22 15.5 +0.4
baz=307
GEYT Alibeck 60.62 295 P P 23 22 15.9 +0.4
comp=Z,67nm,0.6s,baz=31,slow=3.5,SNR=195
B05A Bryant 60.70 50 P P 23 22 16.1 +0.4
baz=307
UGM Wanagama 60.77 217 P P 23 22 15.4 -1.2
UGM IAmb IAmb 23 22 27.9
comp=Z,29nm,0.9s
KPJI Karang Pucung 60.94 219 P P 23 22 19.5 +1.8
E03A Lebam 60.94 52 P P 23 22 18.0 +0.6
E03A IAmb IAmb 23 22 27.2
comp=Z,35nm,1.2s
MNAI Manna 61.18 227 P P 23 22 18.7 -0.7
F03A Seaside 61.31 53 P P 23 22 20.8 +0.9
F03A IAmb IAmb 23 22 28.8
comp=Z,28nm,1.1s
MOR8 Moi Rana 61.44 339 eP P 23 22 18.3 -2.1
E04D Cinebar 61.48 52 P P 23 22 21.6 +0.6
baz=308
FINES FINESS Array B 61.49 331 P P 23 22 19.8 -1.0
comp=Z,150nm,0.7s,baz=47,slow=7.7,SNR=498
FINES FINESS Array B 61.49 331 iP P 23 22 19.9 -0.9
FINES pmax pmax
comp=Z,151nm,0.7s
KONS Konsvik 61.51 339 eP P 23 22 21.3 +0.5
C06D Leavenworth 61.54 49 P P 23 22 21.5 +0.1
baz=308
OBN Obninsk 61.68 321 P P 23 22 21.0 -1.1
comp=Z,5.2nm,0.4s,baz=26,slow=11,SNR=5.8
OBN Obninsk 61.68 321 IAmb IAmb 23 22 22.1
comp=Z,24nm,0.5s
OBN Obninsk 61.68 321 c eP P 23 22 21.3 -0.8
OBN 23 22 59.0
OBN S S 23 30 10.0 -8.0
OBN e 23 30 40.1
OBN pmax pmax
comp=Z,20nm,0.4s
VRH Novokhopyorsk 61.78 315 eP P 23 22 21.5 -1.4
VRH pmax pmax
comp=Z,60nm,0.6s
SUMG Summit 61.85 0 iP P 23 22 23.4 -0.2
comp=Z,119nm,0.7s
SUMG Summit 61.85 0 iP P 23 22 23.4 -0.2
SUMG pmax pmax
comp=Z,120nm,0.7s
LTY Liberty 62.07 50 IAmb IAmb 23 22 26.7
comp=Z,15nm,0.4s
LPSR Galich'ya Gora 62.23 318 eP P 23 22 24.9 -0.9
LPSR pmax pmax
comp=Z,40nm,0.6s
COR Corvallis 62.28 54 P P 23 22 28.0 +1.7
COR IAmb IAmb 23 22 29.0
comp=Z,22nm,0.7s
COR Corvallis 62.28 54 P P 23 22 28.0 +1.7
COR pmax pmax
comp=Z,22nm,0.7s
F05D White Salmon 62.50 52 P P 23 22 28.3 +0.6
baz=308
H04D Lebanon 62.63 53 P P 23 22 29.5 +0.8
baz=308
KEBM Edson Butte 62.75 56 P P 23 22 30.8 +1.3
KEBM IAmb IAmb 23 22 40.6
comp=Z,38nm,1.1s
I03D Drain, OR 62.80 54 P P 23 22 30.6 +0.8
baz=308
H04A Detroit Lake 62.84 53 P P 23 22 31.3 +1.2
H04A IAmb IAmb 23 22 32.8
comp=Z,14nm,0.7s
E07A Sunnyside 62.95 50 P P 23 22 31.3 +0.6
G05D Wamic, OR 62.98 52 P P 23 22 31.2 +0.3
baz=309
C09A Chrisman Ranch 63.00 48 IAmb IAmb 23 22 34.6
comp=Z,16nm,0.6s
VSR Storozhevoye 63.01 317 eP P 23 22 30.0 -1.0
VSR pmax pmax
comp=Z,50nm,0.5s
KNTN Kanton 63.03 127 P P 23 22 32.2 +0.7
VORD Divnogorie 63.11 316 eP P 23 22 30.2 -1.5
VORD pmax pmax
comp=Z,20nm,0.6s
D08A Wollman Farm, 63.13 49 P P 23 22 32.6 +0.7
KBO Bosley Butte 63.22 56 P P 23 22 33.9 +1.2
KBO IAmb IAmb 23 22 38.0
comp=Z,23nm,1.0s
HAWA Hanford 63.22 50 IAmb IAmb 23 22 34.2
comp=Z,8.9nm,0.6s
K02D Willamette Mer 63.24 55 P P 23 22 33.4 +0.6
baz=309
I04A Tendick Farm, 63.27 54 P P 23 22 33.1 +0.2
baz=309
NEW Newport 63.30 47 P P 23 22 33.8 +0.8
comp=Z,7.7nm,0.7s,baz=314,slow=6.6,SNR=11
NEW Newport 63.30 47 P P 23 22 33.3 +0.3
baz=310,SNR=7.3
F07A Phinny Hill Vi 63.32 51 P P 23 22 34.1 +1.0
F07A IAmb IAmb 23 22 35.2
comp=Z,19nm,0.6s
NSS Namsos 63.37 338 eP P 23 22 32.4 -0.7
VSU Vasula 63.38 328 eP P 23 22 32.2 -1.0
VSU Vasula 63.38 328 d iP P 23 22 32.6 -0.6
VSU pmax pmax
comp=Z,118nm,0.6s
E08A Dider Farm, El 63.41 50 IAmb IAmb 23 22 37.7
comp=Z,10nm,0.9s
SCO Scoresbysund 63.42 354 iP P 23 22 32.8 -0.5
SCO Scoresbysund 63.42 354 P P 23 22 33.2 -0.2
SCO Scoresbysund 63.42 354 iP P 23 22 32.8 -0.5
I05D Terrebonne, OR 63.53 53 P P 23 22 35.0 +0.4
baz=309
L02E Cave Junction 63.62 56 P P 23 22 35.9 +0.8
baz=309
J04D Umpqua Nationa 63.79 54 P P 23 22 37.0 +0.6
baz=309,SNR=8.2
KRMB Red Mountain 63.84 57 P P 23 22 38.0 +1.3
KRMB IAmb IAmb 23 22 38.7
comp=Z,10nm,0.9s
E09A Wood Farm, Sta 63.89 49 IAmb IAmb 23 22 41.8
comp=Z,12nm,0.7s
PINE Pine Mountain 64.10 53 IAmb IAmb 23 22 40.9
comp=Z,24nm,0.7s
JCC Jacoby Creek, 64.21 57 P P 23 22 39.9 +1.0
JCC IAmb IAmb 23 22 59.0
comp=Z,44nm,1.1s
J05D Fort Rock, OR 64.26 54 P P 23 22 40.3 +0.9
baz=310,SNR=8.3
L04D Klamath Falls 64.33 55 P P 23 22 40.8 +0.9
baz=310,SNR=8.9
KHMM Horse Mountain 64.35 57 P P 23 22 41.8 +1.7
KHMM IAmb IAmb 23 22 54.0
comp=Z,16nm,1.2s
K04D Chiloquin, OR 64.38 55 P P 23 22 40.7 +0.5
baz=310
YBH Yreka Blue Hor 64.40 56 P P 23 22 41.7 +1.4
comp=Z,6.6nm,0.6s,baz=11,slow=6.0,SNR=20
WALA Waterton Lakes 64.41 45 IAmb IAmb 23 22 44.2
comp=Z,7.5nm,0.7s
M02C Callahan 64.53 56 P P 23 22 42.5 +1.4
baz=310,SNR=6.1
AKT Akhty 64.72 304⇓iP P 23 22 42.7 +0.3
AKT e 23 23 13.8
AKT e*PP pP 23 23 58.6 +5.3
AKT pmax pmax
comp=Z,79nm,0.6s
GROC Groznyy 64.72 307 eP P 23 22 42.0 -0.2
GROC e 23 23 13.0
GROC e*PP pP 23 23 53.3 +0.1
GROC e 23 25 10.2
GROC pmax pmax
comp=Z,22nm,0.7s
KMRM Mail Ridge 64.78 58 P P 23 22 43.9 +1.2
KMRM IAmb IAmb 23 22 45.1
comp=Z,12nm,0.6s
TBLU Trondheim 64.86 338 eP P 23 22 41.1 -1.6
M04C Macdoel 64.87 55 P P 23 22 44.1 +0.7
baz=310,SNR=12
N02D Trinity Center 64.89 56 P P 23 22 43.8 +0.4
baz=310,SNR=9.4
GOF Gofitskoye 65.03 310⇓iP P 23 22 44.6 +0.4
GOF pmax pmax
comp=Z,106nm,0.6s
JTMT Jette 65.09 46 IAmb IAmb 23 22 46.8

comp=Z,8.9nm,0.6s
KCPM Cahto Peak 65.19 58 P P 23 22 46.5 +1.0
KCPM IAmb IAmb 23 22 48.1
comp=Z,10nm,0.5s
SEKA Sheki 65.20 304 P P 23 22 45.5 +0.1
LGD Lagodekhi 65.34 305 P P 23 22 47.4 +1.2
O02D Mt. Diablo Mer 65.35 57 P P 23 22 47.2 +0.8
baz=310,SNR=6.5
PALK Pallekele 65.42 254 P P 23 22 46.5 -0.6
comp=Z,5.4nm,0.6s,baz=31,slow=7.4,SNR=4.5
FITZ Fitzroy Crossi 65.50 198 IAmb IAmb 23 22 49.1
comp=Z,18nm,0.7s
IZAR Zarasai 65.52 326 eP P 23 22 46.5 -0.5
IZAR IAmb IAmb 23 22 47.4
comp=Z,13nm,0.6s
MNGR Mingechevir, A 65.54 304 P P 23 22 48.9 +1.4
SLIT Slitere, Latvi 65.60 329 eP P 23 22 46.5 -1.0
ISAL Salakas 65.69 326 eP P 23 22 47.8 -0.4
FCC Fort Churchill 65.74 29 P P 23 22 48.5 +0.1
FCC Fort Churchill 65.74 29 P P 23 22 48.5 +0.1
FCC pmax pmax
comp=Z,31nm,0.5s
J08A Circle Bar Ran 65.75 52 IAmb IAmb 23 22 51.6
comp=Z,6.9nm,0.5s
NCK Nalchik 65.75 308⇓iP P 23 22 49.2 +0.4
NCK pmax pmax
comp=Z,35nm,0.7s
IIGN Ignalina 65.81 326 eP P 23 22 48.7 -0.2
IIGN IAmb IAmb 23 22 49.6
comp=Z,25nm,0.7s
FFC Flin Flon 65.86 35 P P 23 22 49.4 +0.1
FFC Flin Flon 65.86 35 P P 23 22 49.4 +0.1
FFC pmax pmax
comp=Z,31nm,0.8s
MSO Missoula 65.87 47 IAmb IAmb 23 22 52.3
comp=Z,5.6nm,0.5s
MSO Missoula 65.87 47 P P 23 22 49.7 +0.1
baz=312,SNR=12
LKRN Lenkeran, Azer 65.87 301 P P 23 22 50.0 +0.4
NACGM Naroch 65.92 325 e P 23 22 48.0 -1.6
WRAB Tennant Creek 65.92 189ceP P 23 22 50.2 +0.2
WRAB pmax pmax
comp=Z,21nm,0.8s
WR0 Warramunga Arr 65.93 188 IAmb IAmb 23 22 51.3
comp=Z,22nm,0.8s
WB2 Warramunga Arr 65.93 189 IAmb IAmb 23 22 51.3
comp=Z,22nm,0.8s
WRA Warramunga Arr 65.93 189 P P 23 22 49.6 -0.5
comp=Z,21nm,0.8s,baz=7.0,slow=6.8,SNR=46
GUDG Gudauri 65.93 307 P P 23 22 49.6 -0.6
HOPS Hopland Field 65.94 58 P P 23 22 50.3 +0.2
KIV Kislovodsk 65.95 309 ⇓P P 23 22 50.6 +0.5
KIV Kislovodsk 65.95 309 iP P 23 22 51.0 +0.9
SNR=9.5
KIV Kislovodsk 65.95 309 P P 23 22 51.1 +1.0
KIV Kislovodsk 65.95 309 eP P 23 22 50.6 +0.5
KIV pmax pmax
comp=Z,321nm,1.0s
KIV MLR MLR
comp=Z,167nm,17.0s
KBZ Khabaz 65.98 309 P P 23 22 50.8 +0.6
comp=Z,67nm,0.8s,baz=49,slow=4.3,SNR=152
ZEI Tsey 66.04 307 eP P 23 22 49.7 -1.2
ZEI pmax pmax
comp=Z,49nm,0.8s
GANJ Ganja 66.07 304 P P 23 22 51.2 +0.3
MOL Molde 66.11 339 eP P 23 22 50.9 +0.2
DOMB Dombas 66.17 338 eP P 23 22 50.2 -1.0
SEAG Tbilisi Sea 66.21 306 P P 23 22 53.7 +2.0
NC303 NORSAR Array S 66.23 337 eP P 23 22 50.7 -0.8
TBLG Delisi 66.27 306 P P 23 22 52.8 +0.7
ONI Oni 66.42 307 P P 23 22 54.1 +1.0
NB2 NORSAR Subarra 66.42 337 P P 23 22 52.0 -0.8
comp=Z,29nm,0.5s,baz=33,slow=6.5
NB2 NORSAR Subarra 66.42 337 P P 23 22 52.0 -0.8
baz=33,slow=6.5
NOA NORSAR Array B 66.42 337 P P 23 22 51.8 -1.0
comp=Z,33nm,0.5s,baz=35,slow=6.2,SNR=215
ORV Oroville 66.51 57 IAmb IAmb 23 22 54.6
comp=Z,7.0nm,0.6s
NBO00 NORSAR Array S 66.55 337 P P 23 22 53.3 -0.2
PABE Paberze 66.57 327 eP P 23 22 52.9 -0.8
PABE IAmb IAmb 23 22 57.2
comp=Z,38nm,0.6s
NC602 NORSAR Array S 66.58 336 IAmb IAmb 23 22 54.2
comp=Z,16nm,0.6s
NORES NORESS Array B 66.58 336 P P 23 22 52.5 -1.2
NORES pmax pmax
comp=Z,5.0nm,0.3s
AKN Aaknes 66.58 339 eP P 23 22 53.1 -0.6
KZRT Kazreti 66.68 306 P P 23 22 55.1 +0.3
PBUR Paburge 66.94 328 eP P 23 22 54.8 -1.2
SFJD Kangerlussuaq 67.01 6 iP P 23 22 55.5 -0.7
SFJD Kangerlussuaq 67.01 6 P P 23 22 55.9 -0.3
SFJD Kangerlussuaq 67.01 6 iP P 23 22 55.5 -0.7
EGMT Eagleton 67.14 44 IAmb IAmb 23 22 59.6
comp=Z,15nm,0.7s
EGMT Eagleton 67.14 44 P P 23 22 57.5 -0.1
baz=314,SNR=12
MFID Camas Ranch 67.16 51 IAmb IAmb 23 23 00.1
comp=Z,6.3nm,0.6s
AKH Akhalkalaki 67.18 306 ⇓P P 23 22 59.6 +1.5
AKH Akhalkalaki 67.18 306 IAmb IAmb 23 23 01.6
comp=Z,30nm,0.9s
AKH Akhalkalaki 67.18 306 P P 23 22 59.5 +1.5
BGD Bogdanovka 67.22 306 P P 23 22 59.6 +1.3
GNI Garni 67.30 305 iP P 23 23 00.3 +1.5
SNR=17
GNI Garni 67.30 305 P P 23 23 00.3 +1.5
GNI Garni 67.30 305d iP P 23 23 00.2 +1.5
GNI pmax pmax
comp=Z,151nm,0.7s
OSL Oslo 67.47 336 eP P 23 22 59.0 -0.3
NAX Nakhchivan 67.51 303 P P 23 23 00.5 +0.5
SKAR Skarslia 67.52 338 eP P 23 23 00.2 +0.6
RUBR Rubicon Trail 67.62 57 P P 23 23 02.2 +1.3
RUBR IAmb IAmb 23 23 05.7
comp=Z,16nm,0.6s
PAHR Pah Rah Range 67.64 56 IAmb IAmb 23 23 02.5
comp=Z,12nm,0.7s
HYA Hoyanger 67.65 339 eP P 23 23 00.2 -0.1
SOC Sochi 67.80 310 eP P 23 23 00.5 -1.1
SOC e*PP pP 23 24 13.5 +0.2
SOC e*SP sP 23 24 48.0 -0.1
SOC e 23 25 33.5
SOC ePPP PPP 23 27 17.3
SOC eS S 23 31 31.2 -1.4
SOC e 23 32 18.6
SOC eSS SS 23 35 56.6 -3.6
SOC pmax pmax
comp=Z,46nm,0.7s
PNTR Pine Nut 67.92 56 IAmb IAmb 23 23 04.7
comp=Z,7.7nm,0.8s
AKASG Malin Array Be 67.94 321 P P 23 23 01.4 -1.0
comp=Z,23nm,0.6s,baz=40,slow=6.2,SNR=134
AKASG Malin Array Be 67.94 321 iP P 23 23 01.5 -0.8
AKASG pmax pmax
comp=Z,25nm,0.6s
KIEV Kiev 67.95 321 P P 23 23 01.0 -1.4
KONO Kongsberg 68.03 336 eP P 23 23 02.5 -0.2
KONO Kongsberg 68.03 336 P P 23 23 02.3 -0.4
KONO IAmb IAmb 23 23 03.3
comp=Z,21nm,0.8s
KONO Kongsberg 68.03 336 P P 23 23 02.3 -0.4
KONO pmax pmax
comp=Z,21nm,0.8s
SUE Sulen 68.10 339 eP P 23 23 03.1 0.0
CMB Columbia Colle 68.16 58 IAmb IAmb 23 23 05.7
comp=Z,12nm,1.0s
YERR Yerington 68.20 56 IAmb IAmb 23 23 06.2
comp=Z,21nm,0.6s
BCA Borcka 68.20 307 ⇓P P 23 23 04.5 +0.3
SENK Senkaya-Erzuru 68.39 306 eP P 23 23 09.3 +3.7
WAKR Walker 68.41 57 IAmb IAmb 23 23 07.7
comp=Z,7.8nm,0.6s
CLDR Caldiran 68.45 304 eP P 23 23 07.5 +1.5
ASK Askoy 68.49 339 eP P 23 23 05.2 -0.3
BER Bergen 68.54 339 eP P 23 23 06.0 +0.2
ODD1 Odda 68.61 338 eP P 23 23 06.4 0.0
AGRB Hanur-Agry 68.69 305 iP P 23 23 09.2 +1.8
RYN Ryan 68.86 56 IAmb IAmb 23 23 10.2
comp=Z,7.0nm,0.7s
BLS5 Blasjo 69.08 338 eP P 23 23 09.4 +0.2
NVAR Mina Array Bea 69.12 56 P P 23 23 10.9 +0.9
comp=Z,7.7nm,0.6s,baz=302,slow=6.2,SNR=44
VANB Van 69.12 304 eP P 23 23 11.7 +1.7
MLAZ Malazgirt-MUS 69.23 305 P P 23 23 12.6 +1.9
H17A Grant Village 69.26 47 P P 23 23 11.9 +1.0
baz=314
BANOM Banah 69.44 286 iP P 23 23 12.3 +0.3
SNR=13
DGMT Dagmar 69.45 41 P P 23 23 11.4 -0.3
baz=317,SNR=10
SHME Shamm 69.46 286 iP P 23 23 11.7 -0.4
SNR=12
AKDM Akdamar-Van 69.54 304 P P 23 23 13.8 +1.2
KMY Karmoy 69.58 338 eP P 23 23 12.4 +0.2
ASAR Alice Springs 69.66 189 P P 23 23 13.6 +0.5
comp=Z,19nm,0.7s,baz=0.5,slow=5.0,SNR=158
ASAR PKPPKP P'P'df 23 51 14.3 +4.4
comp=Z,0.8nm,0.7s,baz=178,slow=3.2,SNR=7.8
PAGB Antelope Grade 69.78 59 P P 23 23 13.9 0.0
PAGB IAmb IAmb 23 23 15.3
comp=Z,8.4nm,0.8s
LAO LASA Array 69.79 43 IAmb IAmb 23 23 17.7
comp=Z,12nm,1.1s
LAO LASA Array 69.79 43 P P 23 23 14.1 +0.2
baz=316
SNART Snartemo 69.80 337 eP P 23 23 13.6 0.0
VRTB Varto-Mus 69.84 306 P P 23 23 16.1 +1.7
MDH Madha 69.86 286 P P 23 23 13.6 -0.9
CUKT Cukurca 69.90 303 P P 23 23 15.6 +0.8
MSFE Esma-Masafi 69.91 286 iP P 23 23 14.7 -0.2
SNR=9.2
GURO Guroymak-BITLI 69.93 305 P P 23 23 16.5 +1.6
BSD Bornholm Skovb 70.13 331⇓iP P 23 23 15.0 -0.6
comp=Z,36nm,0.6s
BSD Bornholm Skovb 70.13 331⇓iP P 23 23 15.0 -0.6
BSD pmax pmax
comp=Z,36nm,0.6s
PSAD1 Pilbara Seismi 70.14 203 P P 23 23 16.0 0.0
UOSS Minazif 70.16 286 iP P 23 23 16.0 -0.3
SNR=20
UOSS Minazif 70.16 286 P P 23 23 16.2 -0.1
ESPY Espiye-Giresun 70.16 309 P P 23 23 13.6 -2.5
YEDI Yedisu-Bingol 70.17 306 P P 23 23 17.6 +1.2
SORM Soroca 70.21 320 ⇑P P 23 23 15.3 -0.9
SORM Soroca 70.21 320 P P 23 23 15.2 -0.9
PSAC1 Pilbara Seismi 70.22 203 P P 23 23 16.5 0.0
PSAC2 Pilbara Seismi 70.22 202 P P 23 23 16.4 -0.1
PSAB2 Pilbara Seismi 70.22 203 P P 23 23 16.5 0.0
PSAA2 Pilbara Seismi 70.23 203 P P 23 23 16.5 -0.1
PSAA2 IAmb IAmb 23 23 17.8
comp=Z,25nm,0.7s
PSAA3 Pilbara Seismi 70.25 203 P P 23 23 16.7 0.0
PSAB1 Pilbara Seismi 70.25 203 P P 23 23 16.7 0.0
PSAB1 IAmb IAmb 23 23 18.3
comp=Z,25nm,0.8s
PSAA1 Pilbara Seismi 70.25 203 P P 23 23 17.1 +0.4
PSAD2 Pilbara Seismi 70.25 202 P P 23 23 16.9 +0.1
PSAB3 Pilbara Seismi 70.26 203 P P 23 23 16.6 -0.1
PSAB3 IAmb IAmb 23 23 18.0
comp=Z,24nm,0.7s
HATD Hatta, Dubai 70.28 286 iP P 23 23 17.2 +0.1
SNR=34
PSAC3 Pilbara Seismi 70.30 203 P P 23 23 17.0 0.0
GOET G??ttrup 70.34 335 iP P 23 23 18.0 +1.2
comp=Z,132nm,0.7s
BNGB Bingl 70.40 306 P P 23 23 19.1 +1.4
SIRT Sirnak 70.41 304 P P 23 23 18.8 +1.0
SPUT South Promonto 70.42 51 P P 23 23 18.1 +0.2
ASHO Ashiyiah 70.43 285 iP P 23 23 17.8 -0.2
SNR=8.3
COP Copenhagen 70.48 333 iP P 23 23 16.9 -0.7
comp=Z,56nm,0.9s
COP Copenhagen 70.48 333 iP P 23 23 16.9 -0.7
COP pmax pmax
comp=Z,56nm,0.9s
NAZ Nazwa, Dubai 70.49 286 iP P 23 23 18.0 -0.3
SNR=8.1
CWC Cottonwood Cre 70.59 58 P P 23 23 19.0 +0.1
baz=313
SVAN Silvan-Diyarba 70.68 305 P P 23 23 20.7 +1.4
R11A Troy Canyon, C 70.73 55 P P 23 23 20.4 +0.6
baz=314,SNR=11
KMPD K-Podol'skiy 70.73 321 P P 23 23 18.0 -1.3
GKP Gorka Klasztor 70.80 329 P P 23 23 19.8 +0.2
LVV L'vov 70.83 323 eP P 23 23 19.2 -0.7
MUD Monsted U'grnd 70.84 335 iP P 23 23 20.4 +0.6
comp=Z,25nm,0.6s
MUD Monsted U'grnd 70.84 335 iP P 23 23 20.4 +0.6
MUD pmax pmax
comp=Z,25nm,0.6s
ISA Isabella, Lake 70.89 58 P P 23 23 20.0 -0.6
baz=313
BW06 Boulder Array 70.93 48 P P 23 23 20.9 0.0
baz=315,SNR=16
PDAR Pinedale Array 70.93 48 P P 23 23 20.9 0.0
comp=Z,7.5nm,0.6s,baz=264,slow=0.7,SNR=71
MSVF Nonsavu 70.96 144 P P 23 23 23.0 +1.9
MSVF IAmb IAmb 23 23 24.5
comp=Z,11nm,0.8s
MSVF Nonsavu 70.96 144 P P 23 23 23.0 +1.9
MSVF pmax pmax
comp=Z,11nm,0.8s
NOUC Port Laguerre 70.98 157 IAmb IAmb 23 23 23.9
comp=Z,23nm,1.0s
DAC Darwin (Calif) 70.99 57 P P 23 23 24.5 +3.1
DAC IAmb IAmb 23 23 25.6
comp=Z,6.2nm,0.6s
DAC Darwin (Calif) 70.99 57 P P 23 23 24.5 +3.1
DAC pmax pmax
comp=Z,6.0nm,0.6s
DZM Mont Dzumac 70.99 157 IAmb IAmb 23 23 24.2
comp=Z,17nm,0.8s
DUG Dugway, Tooele 71.00 52 P P 23 23 21.6 +0.3
baz=314,SNR=7.4
ALNE Al Ain 71.06 285 iP P 23 23 21.7 -0.1
SNR=27
MPMC Manual Prospec 71.20 57 P P 23 23 23.4 +0.7
baz=314,SNR=13
AJN Ajban 71.23 286 P P 23 23 22.2 -0.5
RSDY Resadiye-TOKAT 71.28 309 P P 23 23 23.9 +1.1
FURC Furnace Creek, 71.29 57 P P 23 23 23.9 +1.1
baz=314,SNR=7.6
EIDS Eidsvold 71.31 172 IAmb IAmb 23 23 27.7
comp=Z,15nm,0.8s
TPNV Topopah Spring 71.32 56 IAmb IAmb 23 23 25.0
comp=Z,14nm,0.7s
TPNV Topopah Spring 71.32 56 P P 23 23 24.1 +0.9
baz=314,SNR=17
MORS Morshin 71.41 323 P P 23 23 23.5 +0.1
LRMC Laurel Mtn Rad 71.48 58 P P 23 23 24.6 +0.3
baz=314,SNR=5.2
KVT Kavak 71.49 310 P P 23 23 25.4 +1.3
DIKM Dikmen 71.51 311 ⇓P P 23 23 25.1 +1.0
VASR Vaslui 71.57 319 ⇑P P 23 23 24.5 +0.1
MAZI Mazidag 71.59 305 P P 23 23 25.9 +1.1
SVRC Sivrice-ELAZID 71.60 306 P P 23 23 26.5 +1.6
ULM Lac du Bonnet 71.68 35 P P 23 23 25.2 +0.3
comp=Z,17nm,0.5s,baz=318,slow=6.5,SNR=47
EDW2 Edwards Air Fo 71.71 59 P P 23 23 26.3 +0.8
baz=314,SNR=11
PRAR RASCA 71.74 320 ⇑P P 23 23 24.9 -0.5
MPU Maple Canyon 71.77 51 P P 23 23 26.9 +1.0
SVSK Karacayir 71.80 309 P P 23 23 27.2 +1.4
BIR Birlad 71.92 319 ⇓P P 23 23 27.1 +0.6
BIR Birlad 71.92 319 P P 23 23 27.0 +0.6
BZK Bozkurt 71.92 312 ⇓P P 23 23 27.2 +0.6
BUR08 Bucovina Ar. S 71.98 321 IAmb IAmb 23 23 28.4
comp=Z,13nm,0.7s
BURAR Bucovina Array 72.00 321 ⇓P P 23 23 27.0 -0.1
BURAR Bucovina Array 72.00 321 P P 23 23 26.9 -0.1
GSC Goldstone, Bar 72.13 58 P P 23 23 28.5 +0.5
baz=314,SNR=9.5
GHRR 72.18 319 ⇓P P 23 23 28.4 +0.4
TESR Tescani 72.19 319 ⇓P P 23 23 28.0 -0.1
KOLS Kolonicke sedl 72.25 323 eP P 23 23 28.1 -0.3
KOLS pmax pmax
comp=Z,7.0nm,0.6s
KOLS Kolonicke sedl 72.25 323 eP P 23 23 28.1 -0.3
OJC Ojcow 72.25 325 P P 23 23 28.9 +0.6
OJC Ojcow 72.25 325 P P 23 23 28.9 +0.6
OJC pmax pmax
comp=Z,33nm,0.6s
SHPR Sheep Range 72.25 56 IAmb IAmb 23 23 30.9
comp=Z,11nm,1.0s
STHS Stebnicka Huta 72.30 324 eP P 23 23 28.5 -0.2
STHS pmax pmax
comp=Z,24nm,0.6s
STHS Stebnicka Huta 72.30 324 eP P 23 23 28.5 -0.2
BFSC Mount Baldy Ra 72.35 59 P P 23 23 30.1 +0.7
baz=314,SNR=5.9
JURR Jurilovca 72.45 317 ⇓P P 23 23 29.6 0.0
UZH Uzhgorod 72.48 323⇑eP P 23 23 28.8 -0.9
DARE Darende-Malaty 72.48 307 P P 23 23 32.2 +2.2
CFR Carcaliu 72.50 318 ⇓P P 23 23 29.6 -0.2
CFR Carcaliu 72.50 318 P P 23 23 29.6 -0.2
URFA Urfa 72.53 306 P P 23 23 32.0 +1.7
TUQ Turquoise Moun 72.55 57 P P 23 23 30.8 +0.2
baz=314,SNR=12
ODBI Odobesti 72.56 319 ⇓P P 23 23 31.7 +1.5
TOPG Topolog 72.61 317 ⇑P P 23 23 30.7 +0.1
TRSU Trosnyk 72.61 322 P P 23 23 31.2 +0.8
CRVS Cervenica-Dubn 72.61 324 eP P 23 23 30.7 +0.2
CRVS pmax pmax
comp=Z,15nm,0.6s
CRVS Cervenica-Dubn 72.61 324 eP P 23 23 30.7 +0.2
BSEG Bad Segeberg 72.62 333 eP P 23 23 30.9 +0.5
comp=Z,22nm,0.9s,baz=32,slow=5.7
VRI Vrincioaia 72.64 319 ⇑P P 23 23 31.3 +0.5
VRI Vrincioaia 72.64 319 P P 23 23 31.2 +0.5
RUE Ruedersdorf 72.67 330 eP P 23 23 31.1 +0.4
comp=Z,27nm,1.1s,baz=32,slow=5.7
PLOR Plostina 72.68 319 ⇓P P 23 23 32.1 +1.0
PLOR Plostina 72.68 319 P P 23 23 32.0 +1.0
RSSD Black Hills 72.72 44 P P 23 23 31.8 +0.4
RSSD IAmb IAmb 23 23 35.0
comp=Z,8.8nm,0.6s
RSSD Black Hills 72.72 44 P P 23 23 31.8 +0.4
RSSD pmax pmax
comp=Z,9.0nm,0.6s
RSSD Black Hills 72.72 44 P P 23 23 31.7 +0.2
baz=318
HEC Hector,Ludlow 72.73 58 P P 23 23 32.3 +0.8
baz=314,SNR=5.4
TRPA Tarpa 72.76 323 ⇓P P 23 23 31.7 +0.4
ARCR ARCALIA 72.78 321 ⇓P P 23 23 32.2 +0.7
MTPU Mount Pierson 72.86 53 P P 23 23 33.6 +1.0
BISRR Bisoca 72.89 319 ⇑P P 23 23 33.3 +1.1
CORM Corum 72.89 310 P P 23 23 31.4 -1.0
OZUR 72.89 319 ⇓P P 23 23 33.3 +1.1
TIRR Tirgusor 72.90 317 P P 23 23 30.7 -1.5
YOZ Yozgat 72.91 310 P P 23 23 32.4 -0.1
GIRL Giralia 72.91 207 P P 23 23 33.3 +0.9
GIRL IAmb IAmb 23 23 41.3
comp=Z,34nm,1.0s
HARR Harsova 72.96 317 ⇑P P 23 23 32.9 +0.3
HARR Harsova 72.96 317 P P 23 23 32.8 +0.3
KSP Ksiaz 73.10 328 P P 23 23 33.3 0.0
GMRC Granite Mounta 73.16 57 P P 23 23 34.9 +0.8
baz=314,SNR=6.8
DOPR Dopca 73.17 320 ⇓P P 23 23 34.8 +1.0
BNN Bunyan 73.18 309 P P 23 23 35.0 +0.8
SARI SarD1z-Kayseri 73.19 308 P P 23 23 35.5 +1.3
OKC Ostrava-Krasne 73.20 326 eP P 23 23 34.1 +0.2
OKC ex x 23 23 38.3
OKC Ostrava-Krasne 73.20 326 eP P 23 23 34.1 +0.2
AGMN Agassiz Nation 73.21 36 IAmb IAmb 23 23 34.7
comp=Z,5.5nm,0.5s
AGMN Agassiz Nation 73.21 36 P P 23 23 33.8 -0.2
baz=322,SNR=5.0
LANS Liptovska Anna 73.23 325 eP P 23 23 35.2 +1.1
LANS pmax pmax
comp=Z,15nm,0.5s
LANS Liptovska Anna 73.23 325 eP P 23 23 35.2 +1.1
PGOR Pogoanele 73.24 318 ⇑P P 23 23 34.8 +0.6
MLR Muntele Rosu 73.28 319 ⇑P P 23 23 35.2 +0.6
MLR Muntele Rosu 73.28 319 IAmb IAmb 23 23 37.8
comp=Z,12nm,0.8s
MLR Muntele Rosu 73.28 319 P P 23 23 35.4 +0.8
MLR pmax pmax
comp=Z,17nm,0.8s
ISR Istrita 73.29 318 ⇑P P 23 23 35.5 +1.0
ISR Istrita 73.29 318 P P 23 23 35.5 +1.0
AMRR Amara 73.30 318 ⇑P P 23 23 35.2 +0.7
OSTC Ostas 73.36 328 eP P 23 23 35.3 +0.5
OSTC ex x 23 23 39.7
CHVC Chvalec 73.40 328 eP P 23 23 35.2 +0.2
CHVC ex x 23 23 38.7
MDO Dochfour 73.45 342 eP P 23 23 35.0 -0.2
ICOR Ion Corvin 73.45 317 ⇑P P 23 23 36.2 +0.8
UPC Upice 73.48 328 eP P 23 23 35.9 +0.4
UPC ex x 23 23 41.8
UPC Upice 73.48 328 eP P 23 23 35.9 +0.4
MORC Moravsky Berou 73.49 326 eP P 23 23 36.0 +0.4
MORC Moravsky Berou 73.49 326 ⇓P P 23 23 36.0 +0.4
MORC Moravsky Berou 73.49 326 IAmb IAmb 23 23 36.6
comp=Z,18nm,0.7s
MORC Moravsky Berou 73.49 326 P P 23 23 35.9 +0.4
DPC Dobruska-Polom 73.49 327 eP P 23 23 36.0 +0.4
DPC ex x 23 23 37.7
DPC ex x 23 23 50.1
DPC Dobruska-Polom 73.49 327 eP P 23 23 36.0 +0.4
DPC e 23 23 50.1
PFO Pinyon Flats O 73.50 59 P P 23 23 35.9 -0.2
PFO Pinyon Flats O 73.50 59 P P 23 23 35.9 -0.2
PFO pmax pmax
comp=Z,7.0nm,1.1s
PFO Pinyon Flats O 73.50 59 P P 23 23 36.3 +0.2
baz=314
O20A White River Ci 73.51 49 IAmb IAmb 23 23 37.9
comp=Z,7.5nm,0.6s
O20A White River Ci 73.51 49 P P 23 23 36.4 +0.3
baz=317,SNR=9.5
BELC Belle Mtn. Jos 73.51 58 P P 23 23 36.4 +0.3
baz=314,SNR=5.1
KRLC Kraliky 73.54 327 eP P 23 23 36.4 +0.5
KRLC Kraliky 73.54 327 eP P 23 23 36.4 +0.5
KMRS Kahramanmaras 73.56 307 P P 23 23 37.0 +0.7
PSN Preselentsi 73.59 316 iP P 23 23 36.9 +0.7
GAZ Gaziantep 73.62 307 P P 23 23 38.0 +1.3
RASA Rasa 73.69 317 ⇑P P 23 23 37.4 +0.7
DRGR 73.72 322 ⇓P P 23 23 37.2 +0.1
DRGR 73.72 322 P P 23 23 37.2 +0.1
DRGR pmax pmax
comp=Z,44nm,1.2s
VOIR 73.73 319 ⇓P P 23 23 37.5 +0.3
VOIR 73.73 319 P P 23 23 37.4 +0.3
BRTR Keskin Array B 73.74 311 P P 23 23 37.6 +0.2
comp=Z,39nm,0.7s,baz=74,slow=3.6,SNR=210
BRTR Keskin Array B 73.74 311 iP P 23 23 37.7 +0.3
BRTR pmax pmax
comp=Z,39nm,0.7s
SULR 73.75 318 ⇑P P 23 23 37.8 +0.6
KPL Plockton 73.81 343 eP P 23 23 37.4 +0.1
KPL IAmb IAmb 23 23 39.4
comp=Z,53nm,0.9s
IRM Iron Mountain 73.90 58 P P 23 23 39.0 +0.8
baz=315,SNR=14
CLL Collm 73.91 330 eP P 23 23 39.0 +1.0
comp=Z,37nm,0.7s,baz=32,slow=5.7
CLL Collm 73.91 330⇓iP P 23 23 38.7 +0.8
comp=Z,32nm,0.6s
CLL i 23 23 40.5
comp=Z,37nm,0.7s
CLL ePP PP 23 26 27.0 -0.1
CLL Collm 73.91 330⇓iP P 23 23 38.7 +0.8
CLL eS SKSac 23 33 13.0 -0.1
CLL pmax pmax
comp=Z,32nm,0.6s
BRG Berggiesshubel 73.94 329 eP P 23 23 37.9 -0.2
comp=Z,5.8nm,0.4s
BRG ePP PP 23 26 20.2 -7.1
comp=Z,4.5nm,0.8s
BRG Berggiesshubel 73.94 329 eP P 23 23 38.3 +0.2
comp=Z,7.2nm,0.9s,baz=32,slow=5.7
BRG Berggiesshubel 73.94 329 eP P 23 23 37.9 -0.2
BRG pmax pmax
comp=Z,6.0nm,0.4s
RETH Rethem/Aller, 73.94 333 eP P 23 23 38.5 +0.4
comp=Z,26nm,1.1s,baz=32,slow=5.7
U15A North Rim 73.95 54 IAmb IAmb 23 23 41.0
comp=Z,8.4nm,0.8s
ARR Arges 73.97 320 ⇑P P 23 23 39.5 +1.0
PVCC Panska Ves 73.99 328 eP P 23 23 38.9 +0.5
PVCC Panska Ves 73.99 328 eP P 23 23 38.9 +0.5
VYHS Vyhne 74.00 325 eP P 23 23 39.2 +0.6
VYHS pmax pmax
comp=Z,16nm,0.9s
VYHS Vyhne 74.00 325 eP P 23 23 39.2 +0.6
ASSE Asse, Remlinge 74.02 332 eP P 23 23 39.0 +0.5
comp=Z,20nm,1.0s,baz=32,slow=5.7

BAR Barrett 74.03 60 P P 23 23 39.8 +0.8
PSZ Piszkesteto 74.03 324 ⇑P P 23 23 39.3 +0.5
PSZ Piszkesteto 74.03 324 IAmb IAmb 23 23 41.1
comp=Z,15nm,1.0s
PSZ Piszkesteto 74.03 324 P P 23 23 39.4 +0.6
PSZ pmax pmax
comp=Z,30nm,0.8s
BC3 Big Chuckawall 74.07 58 P P 23 23 39.9 +0.6
baz=315
ANTO Ankara 74.09 311 ⇓P P 23 23 40.0 +0.7
ANTO Ankara 74.09 311 P P 23 23 40.1 +0.8
ANTO Ankara 74.09 311 P P 23 23 40.1 +0.8
ANTO pmax pmax
comp=Z,118nm,0.7s
LOD Lodumlu 74.09 311 P P 23 23 40.2 +0.9
FBE Freiberg 74.11 329 eP P 23 23 39.6 +0.5
comp=Z,15nm,0.8s,baz=32,slow=5.7
N23A Red Feather La 74.15 47 P P 23 23 40.7 +0.9
JAVC Velka Javorina 74.17 326 eP P 23 23 41.0 +1.4
KOZT Kozan 74.18 308 P P 23 23 40.7 +0.9
SGRR Singureni 74.23 318 ⇑P P 23 23 40.0 +0.1
VRAC Vranov 74.23 327 eP P 23 23 40.5 +0.7
VRAC Vranov 74.23 327 ⇑P P 23 23 40.0 +0.1
VRAC Vranov 74.23 327 P P 23 23 39.9 +0.1
AFSR Afar-Bala (An 74.25 311 P P 23 23 41.4 +1.2
INVG Invergeldie, C 74.31 342 eP P 23 23 39.8 -0.3
NEF NEVSHA 74.34 317 iP P 23 23 40.9 +0.3
CLZ Clausthal 74.36 332 eP P 23 23 41.3 +0.7
comp=Z,18nm,0.8s,baz=32,slow=5.7
SWSC Sam W. Stewart 74.36 59 P P 23 23 41.2 +0.3
baz=315
IKP In-Ko-Pah, Jac 74.39 59 P P 23 23 41.8 +0.7
baz=315
GOPC GO Pecny, Ondr 74.42 328 eP P 23 23 41.3 +0.4
GOPC ex x 23 23 47.7
GOPC GO Pecny, Ondr 74.42 328 eP P 23 23 41.3 +0.4
GOPC e 23 23 47.7
PRA Prague 74.42 328 eP P 23 23 41.5 +0.6
PRA Prague 74.42 328 eP P 23 23 41.5 +0.6
NEUB Neuenburg 74.42 330 eP P 23 23 41.1 +0.2
comp=Z,35nm,0.7s,baz=32,slow=5.7
PRU Pruhonice 74.45 328 eP P 23 23 41.2 +0.2
PRU ex x 23 23 44.0
PRU Pruhonice 74.45 328 eP P 23 23 41.2 +0.2
HUMR Humele 74.46 319 ⇑P P 23 23 40.2 -1.0
MDUB Mudurnu 74.47 313 P P 23 23 42.2 +0.7
RAZG Razgrad 74.48 317 ⇓P P 23 23 41.9 +0.5
KRUC Moravsky 74.51 327 eP P 23 23 42.0 +0.6
SMOL Smolenice 74.55 326 eP P 23 23 42.6 +0.9
SMOL pmax pmax
comp=Z,10.0nm,0.7s
SMOL Smolenice 74.55 326 eP P 23 23 42.6 +0.9
Y12C Blythe 74.56 57 IAmb IAmb 23 23 43.7
comp=Z,9.7nm,0.6s
Y12C Blythe 74.56 57 P P 23 23 42.8 +0.8
baz=315,SNR=5.3
SIRR Siria 74.59 322 ⇓P P 23 23 42.4 +0.5
EAB Aberfoyle 74.59 342 eP P 23 23 41.7 0.0
COPA Copaceanca 74.65 318 ⇓P P 23 23 41.9 -0.4
TREC Trest 74.66 327 eP P 23 23 42.8 +0.5
TREC ex x 23 23 44.3
TREC Trest 74.66 327 eP P 23 23 42.8 +0.5
MODS Modra-Piesok 74.72 326 eP P 23 23 42.7 0.0
MODS pmax pmax
comp=Z,22nm,0.9s
MODS Modra-Piesok 74.72 326 eP P 23 23 42.7 0.0
GTTG Gottingen 74.75 332 eP P 23 23 43.3 +0.5
comp=Z,19nm,0.9s,baz=32,slow=5.7
YURE YUREGIR 74.75 307 P P 23 23 43.6 +0.5
SRO Srobarova 74.76 325 eP P 23 23 43.9 +1.1
SRO pmax pmax
comp=Z,40nm,0.8s
SRO Srobarova 74.76 325 eP P 23 23 43.9 +1.1
KARA Karaisali 74.76 308 P P 23 23 44.2 +1.1
SILT Sile 74.76 314 P P 23 23 43.7 +0.7
TAHT Tahtakopru-Hat 74.77 307 P P 23 23 44.2 +1.1
GZR Gura Zlata 74.78 321 ⇓P P 23 23 43.2 0.0
IBBN Ibbenburen 74.81 333 eP P 23 23 43.3 +0.2
comp=Z,32nm,1.0s,baz=32,slow=5.7
GULT Gulveren 74.85 313 P P 23 23 44.2 +0.5
SUSD Miller 74.86 41 P P 23 23 43.4 -0.1
baz=321
GLA Glamis 74.87 58 P P 23 23 43.9 +0.1
GLA IAmb IAmb 23 23 46.2
comp=Z,7.2nm,0.6s
GLA Glamis 74.87 58 P P 23 23 43.9 +0.1
GLA pmax pmax
comp=Z,7.0nm,0.6s
GLA Glamis 74.87 58 P P 23 23 44.9 +1.1
baz=315
PLN Plauen 74.89 330 eP P 23 23 44.0 +0.4
comp=Z,33nm,1.7s,baz=32,slow=5.7
PBCC Pribram 74.90 328 eP P 23 23 43.6 0.0
ZST Bratislava 74.93 326 eP P 23 23 43.8 0.0
ZST Bratislava 74.93 326 eP P 23 23 43.8 0.0
GUNZ Gunzen 74.93 330 eP P 23 23 44.3 +0.5
comp=Z,13nm,0.8s,baz=32,slow=5.7
ZIMR 74.95 318 ⇑P P 23 23 44.1 +0.1
MOX Moxa 74.95 330 eP P 23 23 44.2 +0.3
baz=32,slow=5.7
SZH Strazhica 74.98 317 iP P 23 23 44.3 +0.1
WERN Wernitzgruen 74.98 330 eP P 23 23 44.6 +0.5
comp=Z,46nm,1.7s,baz=32,slow=5.7
KLYT Kilyos 74.99 314 P P 23 23 44.8 +0.5
HRT Hereke 75.00 314 P P 23 23 44.9 +0.5
NKC Novy Kostel 75.00 329 eP P 23 23 43.8 -0.4
NKC Novy Kostel 75.00 329 eP P 23 23 43.8 -0.4
SVRH Sivrihisar-ESK 75.06 312 P P 23 23 45.1 +0.2
SRCK Saricakaya, Es 75.09 313 P P 23 23 46.2 +1.3
YESY Yesilyurt 75.10 309 P P 23 23 45.4 +0.3
EKA Eskdalemuir Ar 75.11 341 P P 23 23 44.4 -0.3
EKA pmax pmax
comp=Z,1.0nm,0.4s
BZS Buzias 75.12 322 ⇓P P 23 23 44.1 -0.9
BZS Buzias 75.12 322 P P 23 23 44.5 -0.4
BZS pmax pmax
comp=Z,42nm,1.2s
ISK Istanbul-Kandi 75.12 314 P P 23 23 45.4 +0.4
WUAZ Wupatki 75.12 54 P P 23 23 46.5 +1.2
WUAZ Wupatki 75.12 54 P P 23 23 46.6 +1.3
baz=316,SNR=6.6
ISCO Idaho Springs 75.12 48 P P 23 23 45.8 +0.3
ISCO Idaho Springs 75.12 48 P P 23 23 45.8 +0.3
ISCO pmax pmax
comp=Z,4.0nm,1.0s
ISCO Idaho Springs 75.12 48 P P 23 23 46.0 +0.5
baz=318
VLAD Vladila 75.13 319 ⇑P P 23 23 45.4 +0.4
ESK Eskdalemuir 75.14 341 eP P 23 23 44.3 -0.6
ESK Eskdalemuir 75.14 341 P P 23 23 45.2 +0.3
ESK Eskdalemuir 75.14 341 P P 23 23 45.2 +0.3
ESK pmax pmax
comp=Z,6.0nm,0.8s
SHAO Shalim 75.25 281 P P 23 23 46.3 +0.2
EYMN Ely 75.26 34 IAmb IAmb 23 23 47.4
comp=Z,15nm,0.7s
EYMN Ely 75.26 34 P P 23 23 46.1 +0.3
baz=324,SNR=20
ELND Elena 75.26 317 ⇑P P 23 23 46.1 +0.3
CTKS Kestanelik-??a 75.27 315 P P 23 23 46.3 +0.5
JMB Yambol 75.28 317 iP P 23 23 46.2 +0.3
KIZT Kizilcal 75.29 311 P P 23 23 46.5 +0.3
MANZ Manzenberg 75.33 330 eP P 23 23 46.5 +0.4
baz=32,slow=5.7
YLV Yalova 75.33 314 P P 23 23 46.7 +0.3
MERS Mersin 75.34 308 P P 23 23 46.9 +0.4
CIFT Cifteler, Eski 75.36 312 P P 23 23 46.6 0.0
SLVT Silivri 75.42 315 P P 23 23 47.6 +0.9
PHSR Pinarhisar 75.45 315 P P 23 23 47.8 +0.9
ROTZ Rotzenmuhle 75.48 329 eP P 23 23 47.6 +0.7
baz=32,slow=5.7
MVCO Mesa Verde 75.49 51 P P 23 23 48.2 +0.7
baz=317,SNR=6.6
PLVB Pleven 75.50 318 ⇓P P 23 23 47.3 +0.1
KHC Kasperske Hory 75.51 328 eP P 23 23 47.4 +0.2
KHC ex x 23 23 49.2
KHC ex x 23 23 58.9
KHC Kasperske Hory 75.51 328 IAmb IAmb 23 23 50.1
comp=Z,12nm,0.7s
KHC Kasperske Hory 75.51 328 eP P 23 23 47.4 +0.2
KHC e 23 23 58.9
LADK Ladik-KONYA 75.53 310 P P 23 23 47.9 +0.3
KAAM Kaadhehdhoo 75.58 255 P P 23 23 48.2 +0.2
KAAM IAmb IAmb 23 23 49.4
comp=Z,19nm,0.9s
PUNG Punghina 75.58 320 ⇑P P 23 23 47.5 0.0
ARMT Armutlu 75.59 314 P P 23 23 48.1 +0.3
BAIL Bailesti 75.60 319 ⇑P P 23 23 49.1 +1.4
CONA Conrad Observa 75.64 326 iP P 23 23 49.0 +1.1
comp=Z,20nm,0.7s,SNR=9.9
EDRB Edirne 75.67 316 P P 23 23 48.8 +0.7
GEC2 GERESS Array S 75.70 328 eP P 23 23 48.7 +0.3
baz=32,slow=5.7
GEC2 GERESS Array S 75.70 328 IAmb IAmb 23 23 48.9
comp=Z,9.9nm,0.8s
GERES GERESS Array B 75.70 328 P P 23 23 48.0 -0.3
comp=Z,5.8nm,0.6s,baz=36,slow=5.5,SNR=45
GERES GERESS Array B 75.70 328 P P 23 23 48.0 -0.3
BUG Bochum--Univer 75.72 333 eP P 23 23 48.4 +0.2
baz=32,slow=5.7
KONT Konya--Tatoy 75.72 310 P P 23 23 48.9 +0.3
MDNY Mudanya-Bursa 75.73 314 P P 23 23 48.9 +0.4
MDVR Moldovita 75.73 321 ⇑P P 23 23 48.2 -0.3
WET Wettzell 75.75 329 eP P 23 23 49.4 +0.9
baz=32,slow=5.7
KIZK Mersin 75.83 308 P P 23 23 49.3 +0.2
GRF Grafenberg Arr 75.89 330 eP P 23 23 50.1 +0.9
baz=32,slow=5.7
MORH Mrgy, Hungar 75.91 324 ⇓iP P 23 23 48.9 -0.5
Q24A Divide 75.99 48 P P 23 23 50.8 +0.4
Q24A Divide 75.99 48 P P 23 23 50.9 +0.5
baz=318
HPK Haverah Park 76.00 339 eP P 23 23 50.0 +0.3
S22A 4UR Ranch, Cre 76.00 50 P P 23 23 51.0 +0.5
S22A 4UR Ranch, Cre 76.00 50 P P 23 23 51.4 +0.9
baz=318
OGNE Ogallala 76.08 45 P P 23 23 51.2 +0.7
baz=320
KEBE Keben-Mersin 76.09 308 P P 23 23 50.9 +0.2
DIM Dimitrovgrad 76.10 317 iP P 23 23 51.1 +0.6
TVSB Tavsanli 76.12 313 P P 23 23 51.3 +0.4
MRMT Marmara Adasi 76.20 315 P P 23 23 51.6 +0.4
SHUT Suhut-Afyon 76.23 312 P P 23 23 52.1 +0.6
TEVE Tevekalti-Mers 76.25 308 P P 23 23 51.7 +0.1
IKL Isikli 76.26 308 P P 23 23 51.6 +0.1
EDC Edincik 76.26 314 P P 23 23 51.9 +0.4
MOA Molln 76.31 327 iP P 23 23 52.2 +0.6
comp=Z,18nm,0.7s,SNR=9.9
ARSA Arzberg 76.32 326 iP P 23 23 52.5 +0.7
comp=Z,12nm,0.9s,SNR=5.7
W18A Petrified Fore 76.33 54 P P 23 23 53.2 +1.0
baz=317
PGB Panagyurishte 76.36 318 iP P 23 23 52.5 +0.4
ARMA Armidale 76.36 172 P P 23 23 52.7 +0.6
ARMA IAmb IAmb 23 23 55.8
comp=Z,12nm,1.1s
HDMB Hadim 76.38 309 P P 23 23 53.3 +0.8
TNS Taunus Mts 76.38 332 eP P 23 23 52.4 +0.4
baz=32,slow=5.7
AKKU Akkuyu-Mersin 76.39 308 P P 23 23 52.4 +0.1
PLD Plovdiv 76.45 317 iP P 23 23 53.6 +1.1
PLD Plovdiv 76.45 317 P P 23 23 53.0 +0.5
PLD pmax pmax
comp=Z,122nm,0.8s
GEDZ Gediz 76.45 313 P P 23 23 53.5 +0.8
KDZ Kurdzhali 76.46 317 iP P 23 23 53.4 +0.8
BEHE Becsehely 76.46 325 eP P 23 23 52.8 +0.3
ECSD EROS Data Cent 76.47 40 P P 23 23 53.2 +0.5
baz=322,SNR=21
EREN Erenkoy 76.51 307 P P 23 23 53.2 +0.3
LBWR Ladybower, Pea 76.53 339 eP P 23 23 52.4 -0.3
AHRW Bad Neuenahr-A 76.56 333 eP P 23 23 53.4 +0.5
baz=32,slow=5.7
SCHQ Schefferville 76.61 17 P P 23 23 53.2 +0.1
comp=Z,18nm,0.5s,baz=0.6,slow=5.9,SNR=78
SCHQ Schefferville 76.61 17 IAmb IAmb 23 23 54.5
comp=Z,18nm,0.7s
X18A Snowflake 76.64 54 P P 23 23 54.9 +1.0
TEKE Tekeli-Mersin 76.64 308 P P 23 23 53.4 -0.3
ERIK Erikli-Kesan 76.68 315 P P 23 23 54.5 +0.7
SDCO Great Sand Dun 76.71 49 P P 23 23 55.0 +0.6
baz=318,SNR=6.9
VTS Vitosha 76.74 319 ⇓P P 23 23 54.9 +0.6
VTS Vitosha 76.74 319 iP P 23 23 54.9 +0.6
VTS Vitosha 76.74 319 P P 23 23 54.6 +0.3
VTS pmax pmax
comp=Z,71nm,1.2s
GMM Mts of Mourne 76.75 342 eP P 23 23 54.1 +0.2
RZN Rozhen 76.77 317 iP P 23 23 55.1 +0.6
BEBN Eben Emael 76.78 334 P P 23 23 53.5 -0.6
comp=Z,53nm,0.7s
BALB Balikesir 76.78 314 P P 23 23 54.8 +0.4
LPK Lapseki 76.79 315 P P 23 23 55.3 +0.9
ENEZ Enez 76.81 316 P P 23 23 54.7 +0.2
BTNL Ternell 76.82 333 P P 23 23 54.2 -0.2
MEM Membach 76.83 333 ⇓P P 23 23 54.3 -0.2
comp=Z,22nm,1.0s
MEM x x 23 23 58.4
MEM PcP PcP 23 24 04.4 +0.2
214A Organ Pipe Nat 76.84 58 P P 23 23 55.7 +0.8
baz=316
GELI Tayfur-Gelibol 76.91 315 P P 23 23 55.7 +0.6
SPMN Marine on St. 76.93 37 IAmb IAmb 23 23 55.7
comp=Z,11nm,0.5s
SPMN Marine on St. 76.93 37 P P 23 23 54.9 -0.2
baz=324
RJOB Jochberg 76.96 328 eP P 23 23 56.3 +1.0
baz=32,slow=5.7
GROS Grobnik 76.98 326 iP P 23 23 55.5 +0.1
SOKA Soboth 76.98 326 iP P 23 23 56.0 +0.5
comp=Z,25nm,0.8s,SNR=10
PERS Pernice 76.99 326 iP P 23 23 55.8 +0.3
BSTI Sart Tilman 77.00 334 P P 23 23 55.6 +0.3
GAZI Gazipasa 77.01 309 P P 23 23 54.8 -0.9
DIVS Divibare 77.03 322 ⇓iP P 23 23 55.6 -0.2
CWF Charnwood Fore 77.03 338 eP P 23 23 55.5 0.0
BHOU Houvegnez 77.06 333 P P 23 23 56.1 +0.4
FUR Furstenfeldbru 77.16 329 eP P 23 23 57.2 +0.8
baz=32,slow=5.7
WME Myndd Eilian 77.16 340 eP P 23 23 56.3 +0.1
BCLA Clavier 77.22 334 P P 23 23 56.4 -0.2
comp=Z,15nm,0.8s
BCLA x x 23 23 59.9
KBA Koelnbreinsper 77.30 327 iP P 23 23 57.9 +0.5
comp=Z,71nm,0.7s,SNR=31
KBA Koelnbreinsper 77.30 327 P P 23 23 58.5 +1.1
MMB Musomiste 77.31 318 iP P 23 23 58.0 +0.7
OBKA Obir 77.31 326 iP P 23 23 57.6 +0.3
comp=Z,30nm,0.6s,SNR=7.3
BGES Gesves 77.32 334 P P 23 23 56.8 -0.4
comp=Z,15nm,0.7s
BGES x x 23 23 59.8
FOEL Foel Wylfa 77.36 340 eP P 23 23 57.8 +0.5
FOEL IAmb IAmb 23 23 59.6
comp=Z,75nm,0.9s
YLL Llanberis 77.36 340 eP P 23 23 56.7 -0.7
STU Stuttgart 77.37 331 eP P 23 23 58.1 +0.6
baz=32,slow=5.7
STU Stuttgart 77.37 331 P P 23 23 58.4 +0.9
STKA Stephens Creek 77.39 181 P P 23 23 58.2 +0.7
comp=Z,11nm,0.9s,baz=346,slow=6.6,SNR=14
KKB Krupnik 77.39 318 iP P 23 23 58.4 +0.6
FORT Forrest 77.43 193 P P 23 23 57.8 -0.1
BBLS Lazići 77.47 322 ⇓iP P 23 23 58.6 +0.4
HAPS Han Pijesak,BI 77.48 322 ⇑iP P 23 23 57.7 -0.6
BMRD Maredsous 77.49 334 P P 23 23 58.0 -0.1
comp=Z,29nm,0.7s
LLW Llanuwychllyn 77.51 340 eP P 23 23 58.4 +0.2
CRES Cresnjev 77.52 325 ⇓iP P 23 23 58.2 -0.2
LEF Lefka 77.52 308 ⇓P P 23 23 58.2 -0.3
LEF Lefka 77.52 308 P P 23 23 58.8 +0.3
MYKA Terra Mystica 77.56 327 iP P 23 23 58.7 0.0
comp=Z,25nm,0.7s,SNR=8.0
BGNE Belgrade 77.59 42 P P 23 23 59.2 +0.3
baz=322
WLF Walferdange 77.61 333 eP P 23 23 59.1 +0.3
baz=32,slow=5.7
WLF Walferdange 77.61 333 P P 23 23 59.9 +1.1
WLF IAmb IAmb 23 24 01.9
comp=Z,11nm,0.9s
WLF Walferdange 77.61 333 P P 23 23 59.9 +1.1
WLF pmax pmax
comp=Z,11nm,0.9s
HLM1 Long Mynd 77.62 339 eP P 23 23 59.2 +0.3
GIVF Givet 77.65 334 eP P 23 23 58.3 -0.7
GIVF pmax pmax
comp=Z,18nm,0.9s
RUDO Rudo 77.68 322 eP P 23 23 58.9 -0.4
BLY Banja Luka 77.69 324 ⇓P P 23 23 59.2 -0.1
BLY Banja Luka 77.69 324 eP P 23 23 58.6 -0.7
COWI Conover 77.70 34 IAmb IAmb 23 23 59.9
comp=Z,11nm,0.5s
LJU Ljubljana 77.70 326 eP P 23 23 59.2 -0.2
LJU Ljubljana 77.70 326 ⇓iP P 23 23 59.1 -0.3
DOU Dourbes 77.72 334 P P 23 23 59.3 -0.1
T25A Trinidad 77.74 49 IAmb IAmb 23 24 02.2
comp=Z,6.8nm,0.6s
T25A Trinidad 77.74 49 P P 23 24 00.6 +0.6
baz=319,SNR=6.0
SRS Serrai 77.74 317 P P 23 23 59.6 -0.1
SRS pmax pmax
comp=Z,36nm,1.1s
WATA Walderalm 77.75 328 iP P 23 24 00.3 +0.5
comp=Z,28nm,0.5s,SNR=19
TUC Tucson 77.77 56 P P 23 24 01.2 +1.1
TUC Tucson 77.77 56 P P 23 24 01.2 +1.1
TUC pmax pmax
comp=Z,2.0nm,0.6s
TUC Tucson 77.77 56 P P 23 24 01.1 +1.1
baz=317
WTTA Wattenberg 77.78 328 iP P 23 24 00.8 +0.7
comp=Z,61nm,0.7s,SNR=20
CADS Cadrg 77.86 326 iP P 23 23 59.4 -0.9
BAIF Baives 77.88 334 eP P 23 23 58.9 -1.3
BAIF pmax pmax
comp=Z,16nm,1.0s
ABTA Abfaltersbach 77.89 327 eP P 23 24 00.5 0.0
comp=Z,10nm,0.7s
MOTA Moosalm 77.91 329 iP P 23 24 01.2 +0.5
comp=Z,88nm,1.0s,SNR=27
RETA Reutte 77.91 329 iP P 23 24 01.1 +0.5
comp=Z,17nm,0.7s,SNR=8.0
ELL Elmali 77.92 311 P P 23 24 01.4 +0.5
STIP Stip 77.95 319 iP P 23 24 00.1 -0.7
G40A Rib Lake 77.96 35 IAmb IAmb 23 24 02.0
comp=Z,16nm,1.1s
SQTA Sankt Quirin 77.98 328 iP P 23 24 01.7 +0.7
comp=Z,46nm,0.6s,SNR=23
UBR Ueberruh 77.98 329 eP P 23 24 01.3 +0.4
baz=32,slow=5.7
MGRS Mrkonjic Grad 78.01 323 eP P 23 24 02.0 +0.9
BFO Black Forest 78.05 331 eP P 23 24 01.6 +0.4
baz=32,slow=5.7
BFO Black Forest 78.05 331 P P 23 24 01.3 0.0
BFO IAmb IAmb 23 24 02.3
comp=Z,14nm,0.8s
BFO Black Forest 78.05 331 P P 23 24 01.3 0.0
BFO pmax pmax
comp=Z,14nm,0.8s
VAY Valandovo 78.06 318 iP P 23 24 01.8 +0.4
VAY Valandovo 78.06 318 iP P 23 24 02.0 +0.6
VAY Valandovo 78.06 318 P P 23 24 01.7 +0.4
VAY pmax pmax
comp=Z,64nm,0.8s
AYDB Zeytinkoy-Aydi 78.06 313 P P 23 24 02.2 +0.6
SKO Skopje 78.07 319 iP P 23 24 02.2 +0.7
MCH1 Michaelchurch 78.13 339 eP P 23 24 01.3 -0.3
MCH1 IAmb IAmb 23 24 05.2
comp=Z,32nm,0.8s
UPM Unac-Piva 78.21 322 eP P 23 24 01.2 -1.2
RAYN Ar Rayn 78.22 292 iP P 23 24 02.9 +0.3
SNR=6.7
RAYN Ar Rayn 78.22 292 P P 23 24 02.9 +0.3
RAYN Ar Rayn 78.22 292 P P 23 24 02.9 +0.3
RAYN pmax pmax
comp=Z,25nm,0.7s
SWN1 Swindon 78.27 338 eP P 23 24 02.8 +0.5
SWN1 IAmb IAmb 23 24 04.2
comp=Z,141nm,0.6s
ANMO Albuquerque 78.28 52 P P 23 24 04.5 +1.5
ANMO Albuquerque 78.28 52 ceP P 23 24 04.7 +1.7
ANMO pmax pmax
comp=Z,7.0nm,1.3s
ANMO Albuquerque 78.28 52 P P 23 24 03.9 +1.0
baz=318
TRI Trieste 78.28 326 P P 23 24 02.6 +0.1
TRI pmax pmax
comp=Z,47nm,0.8s
E43A Lone Tree Farm 78.29 33 IAmb IAmb 23 24 03.1
comp=Z,8.9nm,0.6s
WOL Wolverton 78.30 338 eP P 23 24 02.6 +0.1
WOL IAmb IAmb 23 24 03.2
comp=Z,87nm,0.7s
RIY Rijeka 78.32 325 ⇑iP P 23 24 02.3 -0.4
FETA Feichten 78.32 329 iP P 23 24 03.4 +0.4
comp=Z,33nm,0.8s,SNR=17
CDF Champ du Feu 78.33 331 eP P 23 24 02.4 -0.5
CDF pmax pmax
comp=Z,27nm,0.8s
MORW Morawa 78.40 204 IAmb IAmb 23 24 06.0
comp=Z,10nm,0.9s
DAVA Damuels 78.40 329 iP P 23 24 03.7 +0.4
comp=Z,38nm,0.7s,SNR=12
URLA Izmir 78.41 314 P P 23 24 03.9 +0.5
FETY Fethiye 78.44 311 P P 23 24 03.8 +0.2
AKAS Kas 78.47 311 P P 23 24 04.4 +0.5
YER Yerkesik 78.48 312 P P 23 24 04.8 +1.0
DALY Dalyan (Mula) 78.53 312 P P 23 24 04.7 +0.7
MATQ Matagami 78.53 25 P P 23 24 03.9 +0.1
baz=333,SNR=11
BBOO Buckleboo 78.54 186 IAmb IAmb 23 24 06.2
comp=Z,14nm,0.8s
GCAM G?zelcaml? 78.59 313 P P 23 24 04.8 +0.5
BRY Bratogost 78.62 322 eP P 23 24 03.9 -0.7
PDG Podgorica 78.68 321 ⇓P P 23 24 04.4 -0.3
PDG Podgorica 78.68 321 ⇓iP P 23 24 04.5 -0.2
TREB Trebinje 78.85 322 ⇑iP P 23 24 04.1 -1.5
DRME Dracevica, Mon 78.91 321 ⇓iP P 23 24 05.9 -0.1
D46A Sault St. Mari 78.94 31 P P 23 24 05.6 -0.4
baz=329,SNR=12
HINF Hinteralfeld 78.99 331 eP P 23 24 05.5 -0.9
HINF pmax pmax
comp=Z,12nm,0.7s
HAU Haudompre 78.99 332 eP P 23 24 05.0 -1.4
HAU pmax pmax
comp=Z,22nm,0.8s
HCY Herceg Novi 79.00 321 eP P 23 24 05.9 -0.6
STON Ston 79.00 322 ⇓iP P 23 24 05.3 -1.1
OHR Ohrid 79.04 319 iP P 23 24 06.8 0.0
OHR Ohrid 79.04 319 P P 23 24 06.7 -0.1
OHR pmax pmax
comp=Z,124nm,0.8s
LIT Litokhoron 79.06 318 IAmb IAmb 23 24 08.5
comp=Z,17nm,0.7s
D47A Chapleau 79.12 30 P P 23 24 06.6 -0.4
baz=330,SNR=6.0
TIR Tirane 79.28 320 ⇓P P 23 24 07.9 -0.1
TIR Tirane 79.28 320 P P 23 24 08.1 +0.1
TIR pmax pmax
comp=Z,172nm,0.7s
319A Douglas 79.33 56 P P 23 24 09.1 +0.5
319A IAmb IAmb 23 24 11.0
comp=Z,9.3nm,0.6s
121A Cookes Peak, D 79.33 54 IAmb IAmb 23 24 10.7
comp=Z,5.5nm,0.6s
121A Cookes Peak, D 79.33 54 P P 23 24 09.7 +1.1
baz=318,SNR=5.4
LSQQ Lebel-sur-Quev 79.35 25 P P 23 24 07.7 -0.5
baz=333
D48A Paudash Townsh 79.47 29 P P 23 24 08.4 -0.5
baz=330
E47A Iron Bridge 79.58 30 P P 23 24 09.1 -0.4
baz=329,SNR=5.8
H43A Windswept, Lux 79.59 34 P P 23 24 09.9 +0.3
I42A Draeger Farm, 79.62 35 P P 23 24 10.2 +0.5
I42A IAmb IAmb 23 24 13.8
comp=Z,12nm,0.9s
JFWS Jewell Farm 79.88 37 P P 23 24 10.5 -0.7
JFWS IAmb IAmb 23 24 11.6
comp=Z,7.1nm,0.6s
JFWS Jewell Farm 79.88 37 P P 23 24 10.5 -0.7
JFWS pmax pmax
comp=Z,7.0nm,0.6s
JFWS Jewell Farm 79.88 37 P P 23 24 11.2 0.0
baz=326
E48A Lockeyer 79.95 30 P P 23 24 11.0 -0.4
baz=330,SNR=6.0
G46A Petoskey 79.98 32 P P 23 24 11.3 -0.4
baz=329
AGG Agios Georgios 79.98 317 IAmb IAmb 23 24 12.0
comp=Z,19nm,0.7s
D50A G1974 Best Tow 80.13 28 P P 23 24 11.7 -0.7

baz=332,SNR=6.0
H45A Beulah 80.13 33 P P 23 24 12.7 +0.2
baz=328
KSU1 Kansas State U 80.13 43 P P 23 24 12.2 -0.3
baz=323
CABF La Chapelle 80.30 331 eP P 23 24 12.9 -0.5
CABF pmax pmax
comp=Z,16nm,0.7s
D51A Lot 18 Range I 80.35 28 P P 23 24 13.1 -0.5
baz=332,SNR=5.8
F48A Evansville 80.35 30 P P 23 24 13.3 -0.3
baz=330,SNR=10
FLN La Foliniere 80.41 336 eP P 23 24 13.1 -0.8
FLN pmax pmax
comp=Z,16nm,0.4s
JLP Les Platons 80.42 337 eP P 23 24 13.7 -0.2
SOCY Socotra 80.44 278 P P 23 24 13.4 -1.3
SOCY IAmb IAmb 23 24 17.9
comp=Z,28nm,1.1s
LOR Lormes 80.45 333 eP P 23 24 13.4 -0.7
LOR pmax pmax
comp=Z,41nm,0.6s
LDF La Druitiere 80.46 336 eP P 23 24 13.3 -0.8
LDF pmax pmax
comp=Z,15nm,0.5s
G47A Hillman 80.47 31 P P 23 24 14.2 -0.1
baz=329
JSA Saint Aubin 80.49 337 eP P 23 24 14.0 -0.2
JSA IAmb IAmb 23 24 15.1
comp=Z,55nm,0.7s
IGT Igoumenitsa 80.52 318 P P 23 24 14.1 -0.5
IGT pmax pmax
comp=Z,74nm,0.8s
F49A Sandfield 80.61 30 P P 23 24 14.6 -0.4
baz=330,SNR=11
SSF Saint Saulge 80.74 333 eP P 23 24 15.0 -0.7
SSF pmax pmax
comp=Z,41nm,0.8s
SGRT San Giovanni R 80.75 323 P P 23 24 15.5 -0.4
E51A G1948 Merrick 80.80 28 P P 23 24 15.4 -0.6
baz=332,SNR=6.2
K43A Burlington 80.84 35 P P 23 24 16.0 -0.3
L42A Oliver, Polo 80.88 37 P P 23 24 16.7 +0.3
L42A IAmb IAmb 23 24 16.9
comp=Z,9.7nm,0.6s
VLC Villacollemand 80.88 327 P P 23 24 17.7 +1.2
AMTX Amarillo 80.89 49 IAmb IAmb 23 24 19.1
comp=Z,10nm,0.7s
AMTX Amarillo 80.89 49 P P 23 24 17.5 +0.8
baz=320
I46A Reed City 80.93 33 P P 23 24 16.6 -0.1
baz=328
H48A Harrisville 81.07 31 P P 23 24 17.5 +0.1
baz=330
D54A Lac Fusel, La 81.15 26 P P 23 24 17.3 -0.5
baz=334,SNR=6.0
F51A Arnstein 81.19 29 P P 23 24 17.6 -0.5
baz=332,SNR=8.2
AQU L'Aquila 81.22 324 eP P 23 24 18.7 +0.4
AQU L'Aquila 81.22 324 P P 23 24 19.1 +0.7
MATE Matera 81.24 321 ⇓P P 23 24 18.2 -0.1
E52A Mattawa 81.29 28 P P 23 24 17.9 -0.6
baz=332,SNR=5.9
MNTX Cornudas Mount 81.30 53 P P 23 24 19.5 +0.6
MNTX IAmb IAmb 23 24 21.1
comp=Z,6.5nm,0.5s
MNTX Cornudas Mount 81.30 53 P P 23 24 19.7 +0.8
baz=319,SNR=14
I48A Sherman Twp 81.38 32 P P 23 24 18.5 -0.5
baz=329
BGF Bois d'Agland 81.40 333 eP P 23 24 19.2 +0.1
BGF pmax pmax
comp=Z,23nm,0.6s
N41A Harden Midland 81.44 38 P P 23 24 19.4 0.0
SGMF Saint Gilles 81.45 337 eP P 23 24 19.0 -0.3
SGMF pmax pmax
comp=Z,32nm,0.8s
BNI Bardonecchia 81.45 330 P P 23 24 19.9 +0.3
BNI Bardonecchia 81.45 330 P P 23 24 19.9 +0.3
BNI pmax pmax
comp=Z,24nm,0.6s
F52A Sundridge 81.51 28 P P 23 24 19.2 -0.5
baz=332,SNR=9.1
E53A Dumoine, Ponti 81.53 27 P P 23 24 19.3 -0.4
baz=333,SNR=7.4
ROSF Rostrenen 81.56 338 eP P 23 24 19.9 0.0
ROSF pmax pmax
comp=Z,43nm,0.6s
D55A Sainte-Anne-du 81.63 25 P P 23 24 20.0 -0.3
baz=334,SNR=5.8
E54A Lac Daplat, Po 81.63 27 P P 23 24 19.3 -1.0
baz=333
LATE Laterza 81.64 326 P P 23 24 20.6 +0.1
MBDF Montbardon 81.71 330 eP P 23 24 20.1 -0.8
MBDF pmax pmax
comp=Z,22nm,0.6s
NWAO Narrogin (SRO) 81.73 201 P P 23 24 20.9 +0.1
comp=Z,14nm,0.8s,baz=36,slow=7.1,SNR=5.8
NWAO Narrogin (SRO) 81.73 201 P P 23 24 20.9 +0.1
NWAO IAmb IAmb 23 24 22.8
comp=Z,15nm,0.9s
NWAO Narrogin (SRO) 81.73 201 P P 23 24 20.9 +0.1
NWAO IAmb IAmb 23 24 22.8
comp=Z,19nm,0.9s
J47A Sumner 81.77 33 P P 23 24 21.2 +0.1
baz=329
ALGO Algonquin Park 81.78 27 P P 23 24 20.7 -0.4
baz=333
D56A ZEC Mazanza, M 81.81 25 P P 23 24 21.1 -0.2
baz=335,SNR=12
TCF Toulx Ste Croi 81.84 333 eP P 23 24 21.1 -0.3
TCF pmax pmax
comp=Z,23nm,0.6s
PAOL Paolisi 81.84 323 IAmb IAmb 23 24 21.9
comp=Z,16nm,0.8s
ORIF Oris-en-Rattie 81.85 331 eP P 23 24 21.4 -0.2
ORIF pmax pmax
comp=Z,44nm,0.7s
CASP Castiglione de 81.86 326 P P 23 24 20.8 -0.8
CASP IAmb IAmb 23 24 30.7
comp=Z,21nm,1.0s
K46A Dorr 81.87 34 P P 23 24 21.4 -0.2
baz=328
QUIF Quistinic 81.92 338 eP P 23 24 21.3 -0.4
QUIF pmax pmax
comp=Z,19nm,0.6s
E55A Montcerf-Lytto 81.96 26 P P 23 24 21.8 -0.2
baz=334
SSB Saint Sauveur 81.98 332 IAmb IAmb 23 24 23.3
comp=Z,18nm,0.7s
M44A Midewin, Midew 82.06 36 P P 23 24 22.4 -0.3
M44A IAmb IAmb 23 24 23.7
comp=Z,18nm,0.7s
LATQ La Tuque 82.07 23 P P 23 24 22.5 0.0
LATQ La Tuque 82.07 23 P P 23 24 22.5 0.0
baz=336
D57A Chemin Vers le 82.09 24 P P 23 24 22.5 -0.2
baz=335
J48A Bridge Port 82.11 32 IAmb IAmb 23 24 25.2
comp=Z,15nm,0.7s
J48A Bridge Port 82.11 32 P P 23 24 22.7 -0.1
baz=329,SNR=5.1
E56A St. Veronique 82.19 25 P P 23 24 23.1 -0.1
baz=335,SNR=8.7
K47A Vermontville 82.19 33 P P 23 24 23.5 +0.3
baz=329
SBF Sospel 82.22 329 eP P 23 24 22.5 -1.0
SBF pmax pmax
comp=Z,24nm,0.6s
G54A Lake Saint Pet 82.26 28 P P 23 24 23.4 -0.2
baz=333
J49A Marlette 82.30 32 P P 23 24 25.1 +1.3
baz=330
D58A Chemin du LacG 82.31 24 P P 23 24 24.1 +0.3
baz=336
VIVF Saint-Julien-l 82.31 331 eP P 23 24 23.7 -0.2
VIVF pmax pmax
comp=Z,33nm,0.6s
G53A Haliburton 82.33 28 P P 23 24 23.8 -0.2
baz=332,SNR=6.6
H52A Wyevale 82.33 29 P P 23 24 23.8 -0.2
baz=332
K48A Perry 82.41 33 P P 23 24 24.5 +0.1
baz=329,SNR=6.1
F55A Otter Lake 82.42 26 P P 23 24 24.3 -0.1
baz=334,SNR=6.1
TIP Timpagrande 82.43 321 ⇑P P 23 24 24.6 -0.1
TIP Timpagrande 82.43 321 IAmb IAmb 23 24 30.3
comp=Z,19nm,0.7s
SADO Sadowa 82.47 29 P P 23 24 24.1 -0.6
WMOK Wichita Mounta 82.50 47 P P 23 24 25.9 +0.9
baz=322
E57A Chemin Saint G 82.57 25 P P 23 24 25.3 +0.1
baz=335,SNR=8.5
I51A Listowel 82.67 30 P P 23 24 26.1 +0.4
baz=331
D59A Saint-Raymond 82.68 23 P P 23 24 25.9 +0.3
baz=337
K49A Clarkson 82.68 32 P P 23 24 26.3 +0.5
baz=330
L47A Sherwood 82.70 34 P P 23 24 26.1 +0.1
baz=329,SNR=7.4
FRF La Foret Royal 82.77 329 eP P 23 24 28.2 +2.0
FRF pmax pmax
comp=Z,12nm,0.8s
G55A Calabogie 82.83 27 P P 23 24 26.4 -0.1
baz=334,SNR=5.7
H53A Bobcaygeon 82.83 28 P P 23 24 26.1 -0.5
baz=332
E58A La Victoria 82.85 24 P P 23 24 26.5 -0.1
baz=336
D61A St Aubert, Com 82.94 22 P P 23 24 27.1 +0.1
baz=338
D60A Saint Jean D'O 83.01 22 P P 23 24 27.3 0.0
baz=337,SNR=5.4
AAM Ann Arbor 83.02 33 P P 23 24 27.9 +0.4
baz=330
L48A N Adams 83.03 33 P P 23 24 27.8 +0.3
baz=329,SNR=8.4
TUL1 Leonard 83.06 44 IAmb IAmb 23 24 29.7
comp=Z,15nm,0.8s
TUL1 Leonard 83.06 44 P P 23 24 28.6 +0.8
baz=323
M47A Cromwell 83.06 34 P P 23 24 27.7 0.0
baz=328
TOO Toolangi 83.10 178 P P 23 24 29.0 +1.3
TOO Toolangi 83.10 178 P P 23 24 29.0 +1.3
TOO pmax pmax
comp=Z,5.0nm,0.9s
L49A Milan 83.14 33 P P 23 24 28.2 +0.1
baz=330
I53A Kortright Cn E 83.15 29 P P 23 24 28.3 +0.1
baz=332
F58A St-Lin Laurent 83.16 25 P P 23 24 28.6 +0.5
baz=335
DELO Deloro Mine 83.20 28 P P 23 24 28.0 -0.3
DELO IAmb IAmb 23 24 28.8
comp=Z,8.9nm,0.6s
SFIN Lafayette 83.30 36 P P 23 24 29.1 +0.2
baz=328
H55A Tweed 83.31 27 P P 23 24 28.5 -0.4
baz=333
D62A Allapoint, All 83.34 21 P P 23 24 29.4 +0.4
D62A IAmb IAmb 23 24 29.9
comp=Z,17nm,0.7s
D62A Allapoint, All 83.34 21 P P 23 24 29.1 +0.1
baz=338,SNR=6.4
J52A Paris 83.36 30 P P 23 24 29.0 -0.2
baz=331
E60A Ste Agathe de 83.37 23 P P 23 24 29.1 -0.1
baz=337
SLM Saint Louis 83.42 39 P P 23 24 30.0 +0.4
SLM Saint Louis 83.42 39 P P 23 24 30.0 +0.4
SLM pmax pmax
comp=Z,19nm,0.7s
N47A Urbana 83.44 35 P P 23 24 29.9 +0.3
N47A IAmb IAmb 23 24 30.7
comp=Z,16nm,0.7s
N47A Urbana 83.44 35 P P 23 24 29.6 -0.1
baz=328,SNR=5.6
K51A Iona Station 83.44 31 P P 23 24 30.2 +0.6
baz=331
I55A Frankford 83.44 28 P P 23 24 29.5 -0.1
baz=333
CCM Cathedral Cave 83.45 40 P P 23 24 30.4 +0.6
CCM IAmb IAmb 23 24 31.0
comp=Z,9.2nm,0.6s
CCM Cathedral Cave 83.45 40 P P 23 24 30.4 +0.6
CCM pmax pmax
comp=Z,9.0nm,0.6s
CCM Cathedral Cave 83.45 40 P P 23 24 30.2 +0.4
baz=326
F59A Saint Guilaume 83.47 24 P P 23 24 29.8 +0.1
baz=336
G57A Newington 83.50 26 P P 23 24 29.8 -0.1
baz=335,SNR=5.5
L50A Kingsville 83.56 32 P P 23 24 30.0 -0.2
baz=330
H56A Elgin 83.56 27 P P 23 24 30.0 -0.2
baz=334
E61A Lac Etchemin 83.57 22 P P 23 24 30.4 +0.1
baz=338
M49A Liberty Center 83.60 33 P P 23 24 30.6 +0.1
baz=329,SNR=5.3
D63A Stockholm 83.62 21 P P 23 24 30.5 0.0
baz=339
DRLN Deer Lake 83.64 13 P P 23 24 30.8 +0.3
DRLN IAmb IAmb 23 24 32.5
comp=Z,16nm,1.1s
K52A Tillsonburg 83.68 31 P P 23 24 31.1 +0.3
baz=331
ABTX Abilene, Hawle 83.70 49 P P 23 24 31.6 +0.4
baz=322
N48A Decatur 83.72 34 P P 23 24 31.4 +0.3
baz=329
G58A Ormstown 83.74 25 P P 23 24 31.1 0.0
baz=335,SNR=5.6
F61A St Evariste 83.86 23 P P 23 24 32.3 +0.6
baz=337
P46A Rosedale 83.89 36 IAmb IAmb 23 24 33.4
comp=Z,17nm,0.8s
H57A Richville 83.95 26 P P 23 24 31.9 -0.3
baz=334
J54A Appleton 83.96 29 P P 23 24 32.0 -0.2
baz=332
N49A Columbus Grove 84.00 34 IAmb IAmb 23 24 33.9
comp=Z,15nm,0.8s
N49A Columbus Grove 84.00 34 P P 23 24 33.0 +0.5
baz=329,SNR=5.9
M50A Fremont 84.02 33 IAmb IAmb 23 24 34.2
comp=Z,16nm,0.8s
M50A Fremont 84.02 33 P P 23 24 32.8 +0.2
baz=330
TX31 Lajitas Ar. Si 84.06 54 IAmb IAmb 23 24 35.3
comp=Z,6.6nm,0.5s
TX32 Lajitas Array 84.06 54 IAmb IAmb 23 24 35.3
comp=Z,7.0nm,0.5s
TXAR Lajitas Array 84.06 54 P P 23 24 33.6 +0.5
comp=Z,5.9nm,0.4s,baz=296,slow=4.1,SNR=146
G59A Clarenceville 84.06 25 P P 23 24 32.9 +0.2
baz=336
LONY Lake Ozonia 84.06 26 P P 23 24 32.2 -0.5
U40A Yellville 84.10 42 P P 23 24 33.6 +0.5
baz=325,SNR=11
E63A Oxbow 84.11 21 P P 23 24 33.0 +0.1
E63A IAmb IAmb 23 24 33.7
comp=Z,15nm,0.9s
E63A Oxbow 84.11 21 P P 23 24 33.0 +0.1
baz=339
MEDO Medina 84.12 29 P P 23 24 32.5 -0.5
MEDO IAmb IAmb 23 24 34.0
comp=Z,16nm,0.7s
FRNY Flat Rock 84.16 25 P P 23 24 33.7 +0.5
O48A Farmland 84.19 35 P P 23 24 33.6 +0.2
baz=329
J55A Hilton 84.25 28 P P 23 24 33.7 +0.1
J55A Hilton 84.25 28 P P 23 24 33.8 +0.1
baz=333
E64A Bridgewater 84.26 21 P P 23 24 34.0 +0.3
baz=339
G60A Masonville 84.29 24 P P 23 24 34.3 +0.5
baz=336
H59A Cadyville 84.31 25 P P 23 24 33.7 -0.3
baz=336
I57A Carthage 84.34 27 P P 23 24 34.0 -0.2
baz=334
G61A St-Isidore-de- 84.34 23 P P 23 24 34.5 +0.4
baz=337
H58A Gabriels 84.36 26 P P 23 24 34.2 -0.1
baz=335
M51A Elyria 84.41 32 P P 23 24 34.6 +0.1
baz=330
MTLF Montolieu 84.47 332 eP P 23 24 35.0 +0.2
MTLF pmax pmax
comp=Z,8.0nm,0.6s
ERPA Erie 84.52 30 P P 23 24 36.1 +1.1
ERPA Erie 84.52 30 P P 23 24 35.4 +0.3
baz=332,SNR=8.9
N50A Nevada 84.53 33 P P 23 24 35.7 +0.6
baz=330
M52A Chesterland 84.53 32 IAmb IAmb 23 24 36.8
comp=Z,18nm,0.7s
M52A Chesterland 84.53 32 P P 23 24 35.2 +0.1
baz=331,SNR=5.0
K54A Basiliko Farm, 84.53 29 P P 23 24 35.2 0.0
baz=332,SNR=6.0
J56A Wolcott 84.55 28 P P 23 24 35.4 +0.2
J56A IAmb IAmb 23 24 35.5
comp=Z,16nm,0.7s
J56A Wolcott 84.55 28 P P 23 24 35.1 0.0
baz=334
L53A Girard 84.56 31 P P 23 24 35.3 0.0
baz=332,SNR=13
O49A Covington 84.57 34 IAmb IAmb 23 24 36.6
comp=Z,9.3nm,0.8s
O49A Covington 84.57 34 P P 23 24 35.5 +0.1
baz=329
F63A Nahmakanta, Br 84.61 22 P P 23 24 36.0 +0.6
F63A IAmb IAmb 23 24 46.7
comp=Z,9.1nm,1.0s
K55A Perry 84.64 29 P P 23 24 35.5 -0.2
baz=333,SNR=8.3
L54A Sinclairville 84.65 30 P P 23 24 35.9 +0.2
baz=332,SNR=6.3
F64A Sherman 84.65 21 P P 23 24 35.6 0.0
F64A Sherman 84.65 21 P P 23 24 35.8 +0.2
baz=339
G62A West of Eustis 84.68 23 P P 23 24 36.4 +0.6
G62A IAmb IAmb 23 24 49.1
comp=Z,10nm,1.1s
N51A Ashland 84.69 33 IAmb IAmb 23 24 37.2
comp=Z,18nm,0.8s
N51A Ashland 84.69 33 P P 23 24 36.3 +0.3
baz=330
J57A Williamstown 84.71 27 P P 23 24 35.9 -0.1
J57A IAmb IAmb 23 24 36.6
comp=Z,13nm,0.6s
J57A Williamstown 84.71 27 P P 23 24 35.8 -0.1
baz=334
HPIG 84.73 56 P P 23 24 36.3 -0.4
WVNY West Valley, N 84.74 29 IAmb IAmb 23 24 37.4
comp=Z,18nm,0.8s
P48A Milroy 84.76 35 P P 23 24 36.1 -0.2
P48A IAmb IAmb 23 24 45.9
comp=Z,4.8nm,0.5s
P48A Milroy 84.76 35 P P 23 24 36.8 +0.5
baz=329
NCB Newcomb 84.76 26 P P 23 24 36.5 +0.3
I58A Old Forge 84.78 26 P P 23 24 36.1 -0.3
baz=335
M53A WI Miller and 84.87 31 P P 23 24 37.2 +0.4
baz=331,SNR=5.5
O50A Cable 84.88 34 P P 23 24 37.2 +0.3
baz=330,SNR=6.1
K56A Middlesex 84.92 28 P P 23 24 36.8 -0.2
baz=333
H61A Lyndonville 84.92 24 P P 23 24 37.4 +0.4
baz=337
PKME Peaks-Kenny Pk 84.97 22 P P 23 24 37.2 +0.1
baz=338
P49A Miami Univ. Ec 84.98 35 P P 23 24 37.4 0.0
baz=329
J58A Remsen 84.98 27 IAmb IAmb 23 24 37.9
comp=Z,13nm,0.6s
J58A Remsen 84.98 27 P P 23 24 37.1 -0.3
baz=335
L55A Hinsdale 85.00 29 P P 23 24 37.3 -0.2
baz=333
G63A Kingsbury 85.02 22 P P 23 24 37.8 +0.4
baz=338
I59A Olmsteadville 85.02 26 P P 23 24 37.4 -0.1
baz=335
N52A McGinn's Farm, 85.04 32 P P 23 24 37.8 +0.1
baz=331
ACSO Alum Creek Sta 85.06 33 IAmb IAmb 23 24 39.2
comp=Z,18nm,0.7s
ACSO Alum Creek Sta 85.06 33 P P 23 24 38.0 +0.2
baz=330,SNR=5.1
Q48A North Vernon 85.08 36 P P 23 24 38.5 +0.6
baz=328
H62A Milan 85.10 24 P P 23 24 37.9 0.0
H62A IAmb IAmb 23 24 39.2
comp=Z,15nm,0.6s
H62A Milan 85.10 24 P P 23 24 38.4 +0.5
baz=337
G64A Maxfield 85.12 22 P P 23 24 38.1 +0.2
baz=339
LCAR Lake Charles 85.12 41 P P 23 24 38.7 +0.6
LCAR IAmb IAmb 23 24 39.9
comp=Z,6.3nm,0.5s
J59A Piesco 85.13 26 IAmb IAmb 23 24 39.0
comp=Z,9.7nm,0.6s
J59A Piesco 85.13 26 P P 23 24 38.0 -0.1
baz=335
I60A Shoreham 85.15 25 P P 23 24 38.5 +0.4
baz=336
M54A Oil Creek Stat 85.17 30 IAmb IAmb 23 24 39.3
comp=Z,15nm,0.6s
M54A Oil Creek Stat 85.17 30 P P 23 24 38.5 +0.2
baz=332,SNR=5.8
MIAR Mount Ida 85.23 44 P P 23 24 39.7 +1.0
baz=324
O51A Pataskala 85.27 33 P P 23 24 39.2 +0.4
baz=330
P50A Jamestown 85.28 34 P P 23 24 39.4 +0.5
baz=330
JCT Junction City 85.29 50 P P 23 24 40.1 +1.0
baz=322
CLTB Caltabellotta 85.30 322 P P 23 24 38.9 -0.3
CLTB IAmb IAmb 23 24 49.5
comp=Z,22nm,1.1s
L56A Greenwood 85.34 29 IAmb IAmb 23 24 40.4
comp=Z,17nm,0.7s
L56A Greenwood 85.34 29 P P 23 24 39.2 0.0
baz=333,SNR=5.1
WHTX Lake Whitney, 85.34 48 P P 23 24 39.9 +0.6
baz=323
W41B Gary Mavity, V 85.35 42 P P 23 24 39.3 0.0
W41B IAmb IAmb 23 24 40.6
comp=Z,11nm,1.1s
W41B Gary Mavity, V 85.35 42 P P 23 24 39.8 +0.5
baz=325
N53A Lisbon 85.36 32 IAmb IAmb 23 24 41.4
comp=Z,17nm,0.9s
N53A Lisbon 85.36 32 P P 23 24 40.2 +0.9
baz=331
K58A Earlville 85.40 27 IAmb IAmb 23 24 40.6
comp=Z,16nm,0.7s
K58A Earlville 85.40 27 P P 23 24 39.5 0.0
baz=334,SNR=5.4
WCI Wyandotte Cave 85.45 37 P P 23 24 40.5 +0.8
WCI IAmb IAmb 23 24 41.2
comp=Z,9.7nm,0.6s
WCI Wyandotte Cave 85.45 37 P P 23 24 40.5 +0.8
WCI pmax pmax
comp=Z,10.0nm,0.6s
WCI Wyandotte Cave 85.45 37 P P 23 24 40.0 +0.3
baz=328
ACCN Adirondack Com 85.46 26 P P 23 24 40.5 +0.8
ACCN IAmb IAmb 23 24 49.3
comp=Z,6.9nm,0.9s
G65A Princeton 85.47 21 P P 23 24 39.5 -0.2
G65A IAmb IAmb 23 24 46.9
comp=Z,15nm,1.1s
G65A Princeton 85.47 21 P P 23 24 40.3 +0.6
baz=339
LMN Caledonia Moun 85.51 19 P P 23 24 40.6 +0.7
LMN IAmb IAmb 23 24 44.0
comp=Z,18nm,0.9s
M55A Ridgway 85.52 30 IAmb IAmb 23 24 41.0
comp=Z,9.7nm,0.7s
M55A Ridgway 85.52 30 P P 23 24 40.5 +0.5
baz=332
N54A Moraine State 85.53 31 P P 23 24 40.2 +0.1
N54A IAmb IAmb 23 24 41.2
comp=Z,10nm,0.6s
N54A Moraine State 85.53 31 P P 23 24 40.6 +0.5
baz=332
H64A Troy 85.56 22 P P 23 24 40.7 +0.6
baz=338

O52A Adamsville 85.59 33 IAmb IAmb 23 24 42.2
comp=Z,16nm,0.8s
O52A Adamsville 85.59 33 P P 23 24 40.7 +0.3
baz=331
X40A Basin Creek Fa 85.63 43 P P 23 24 41.3 +0.6
baz=325
K59A Cooperstown 85.65 27 P P 23 24 41.1 +0.4
baz=335
J60A Lant Hill Farm 85.66 26 P P 23 24 41.3 +0.6
baz=336
P51A Williamsport 85.67 34 P P 23 24 41.1 +0.3
baz=330
I62A Tamworth 85.69 24 P P 23 24 42.1 +1.3
L57A Andrews Acres 85.70 28 P P 23 24 41.2 +0.3
baz=334
M56A Emporium 85.71 30 P P 23 24 40.9 -0.1
M56A Emporium 85.71 30 P P 23 24 41.3 +0.3
baz=333
O53A New Philadelph 85.71 32 P P 23 24 41.5 +0.5
baz=331
GGN Saint George 85.72 20 P P 23 24 41.4 +0.5
GGN IAmb IAmb 23 24 45.3
comp=Z,16nm,0.9s
I63A Otisfield 85.74 23 P P 23 24 41.2 +0.2
I63A IAmb IAmb 23 24 42.8
comp=Z,16nm,0.7s
I63A Otisfield 85.74 23 P P 23 24 42.2 +1.2
baz=338
ETSF Etsaut 85.75 334 eP P 23 24 41.8 +0.6
ETSF pmax pmax
comp=Z,44nm,0.6s
SJPF Ste Jean 85.76 334 eP P 23 24 41.7 +0.5
SJPF pmax pmax
comp=Z,15nm,0.7s
H65A Eastbrook 85.77 22 P P 23 24 41.7 +0.6
baz=339
BINY Binghamton 85.80 28 P P 23 24 42.1 +0.6
BINY IAmb IAmb 23 24 42.3
comp=Z,7.8nm,0.8s
BINY Binghamton 85.80 28 P P 23 24 41.5 +0.1
baz=334
J61A Chester 85.83 25 P P 23 24 42.0 +0.6
baz=336
Q50A Georgetown 85.86 35 P P 23 24 42.6 +0.9
baz=330
P52A Corning 85.90 33 P P 23 24 42.1 +0.2
baz=331
Q51A Peebles 85.96 34 IAmb IAmb 23 24 43.8
comp=Z,16nm,0.8s
Q51A Peebles 85.96 34 P P 23 24 42.4 +0.2
baz=330,SNR=5.3
L58A Harry Jones Me 85.98 28 P P 23 24 42.4 +0.1
baz=334
N55A Marion Center 86.05 30 P P 23 24 43.0 +0.3
baz=332
O54A Avella 86.08 32 P P 23 24 43.4 +0.6
O54A IAmb IAmb 23 24 44.0
comp=Z,12nm,0.8s
O54A Avella 86.08 32 P P 23 24 43.2 +0.4
baz=332
L59A Walton 86.11 27 P P 23 24 43.2 +0.2
L59A IAmb IAmb 23 24 44.7
comp=Z,16nm,0.9s
L59A Walton 86.11 27 P P 23 24 43.1 +0.2
baz=335
N56A West Decatur 86.17 30 P P 23 24 43.7 +0.4
baz=333
M57A Sunshine Farm, 86.20 29 IAmb IAmb 23 24 44.1
comp=Z,10nm,0.8s
M57A Sunshine Farm, 86.20 29 P P 23 24 44.0 +0.7
baz=334
R50A Paris 86.21 35 IAmb IAmb 23 24 44.6
comp=Z,7.9nm,0.6s
R50A Paris 86.21 35 P P 23 24 44.1 +0.7
baz=329
K61A Williamstown 86.23 26 P P 23 24 44.2 +0.8
baz=336
S49A Springfield 86.24 36 P P 23 24 44.3 +0.7
baz=329
P53A Whipple 86.31 33 IAmb IAmb 23 24 45.4
comp=Z,9.6nm,0.6s
P53A Whipple 86.31 33 P P 23 24 44.6 +0.7
baz=331
M58A Price's Panora 86.39 28 P P 23 24 44.6 +0.4
baz=334
Q52A Bidwell 86.43 33 P P 23 24 44.5 +0.1
baz=330
O55A Ligonier 86.44 31 P P 23 24 45.0 +0.5
baz=332
R51A Hillsboro 86.49 35 P P 23 24 45.5 +0.8
baz=330
P54A Burton 86.55 32 P P 23 24 45.5 +0.5
baz=332,SNR=5.7
L60A Shokan 86.56 27 P P 23 24 45.5 +0.4
baz=335
SSPA Standing Stone 86.56 30 P P 23 24 45.9 +0.8
SSPA Standing Stone 86.56 30 P P 23 24 45.5 +0.4
baz=333
WVT Waverly 86.56 39 P P 23 24 46.1 +1.0
WVT IAmb IAmb 23 24 46.5
comp=Z,6.6nm,0.5s
WVT Waverly 86.56 39 P P 23 24 46.1 +1.0
WVT pmax pmax
comp=Z,7.0nm,0.5s
WVT Waverly 86.56 39 P P 23 24 46.0 +0.9
baz=327
N57A Milroy 86.57 29 P P 23 24 45.4 +0.3
baz=333
M59A Waymart 86.57 28 P P 23 24 45.9 +0.8
baz=334
O56A Blue Knob Stat 86.65 30 IAmb IAmb 23 24 46.9
comp=Z,10nm,0.8s
O56A Blue Knob Stat 86.65 30 P P 23 24 46.2 +0.6
baz=333
S50A Richmond 86.69 36 P P 23 24 46.4 +0.6
baz=329,SNR=7.8
T49A Edmonton 86.72 37 IAmb IAmb 23 24 47.2
comp=Z,7.3nm,0.7s
T49A Edmonton 86.72 37 P P 23 24 46.8 +0.9
baz=329
K63A Dunstable 86.73 25 P P 23 24 46.5 +0.7
baz=337
MCWV Mont Chateau 86.73 31 P P 23 24 46.3 +0.4
MCWV IAmb IAmb 23 24 47.9
comp=Z,8.8nm,1.1s
MCWV Mont Chateau 86.73 31 P P 23 24 46.4 +0.5
baz=332
N58A Sunbury 86.78 29 P P 23 24 45.5 -0.6
N58A IAmb IAmb 23 24 47.6
comp=Z,7.9nm,0.9s
N58A Sunbury 86.78 29 P P 23 24 46.5 +0.3
baz=334
Q53A Leroy 86.81 33 P P 23 24 46.9 +0.6
baz=331,SNR=7.6
P55A Reedsville 86.87 32 P P 23 24 47.2 +0.5
baz=332,SNR=8.0
NATX Nacogdoches 86.95 46 P P 23 24 48.4 +1.3
baz=324
Q54A Coxs Mills 86.96 32 P P 23 24 47.8 +0.7
Q54A Coxs Mills 86.96 32 P P 23 24 47.7 +0.7
baz=331,SNR=8.6
N59A State Game Lan 87.03 28 P P 23 24 47.8 +0.5
N59A IAmb IAmb 23 24 48.6
comp=Z,9.5nm,1.0s
N59A State Game Lan 87.03 28 P P 23 24 48.0 +0.7
baz=334
M60A Port Jervis 87.03 27 P P 23 24 48.4 +1.1
baz=335
O57A Amberson 87.03 30 P P 23 24 47.9 +0.6
baz=333
S51A Beattyville 87.05 35 IAmb IAmb 23 24 48.5
comp=Z,9.3nm,0.7s
S51A Beattyville 87.05 35 P P 23 24 48.0 +0.5
baz=330
R53A Hurricane 87.10 34 P P 23 24 48.5 +0.8
baz=331
U49A Red Boiling Sp 87.12 37 P P 23 24 48.7 +0.9
baz=329
Q55A Buckhannon 87.23 32 P P 23 24 48.8 +0.5
baz=332,SNR=8.2
P56A Dayton Farm, R 87.23 31 P P 23 24 48.8 +0.5
baz=332,SNR=9.9
N60A Cedar Hill Far 87.29 28 P P 23 24 48.9 +0.4
baz=335
M61A Granite Spring 87.31 27 P P 23 24 49.1 +0.5
baz=336
V48A Smith Brothers 87.33 38 IAmb IAmb 23 24 50.8
comp=Z,8.7nm,1.0s
O58A Lewisberry 87.35 29 P P 23 24 49.2 +0.4
baz=334
PLAL Pickwick Lake 87.42 40 IAmb IAmb 23 24 50.5
comp=Z,8.5nm,0.6s
O59A Robesonia 87.43 29 P P 23 24 49.8 +0.5
baz=334
T51A Gray 87.49 36 P P 23 24 49.7 +0.1
baz=330
Q56A Snyder Ridge, 87.52 31 P P 23 24 50.1 +0.5
Q56A IAmb IAmb 23 25 06.4
comp=Z,9.5nm,1.1s
Q56A Snyder Ridge, 87.52 31 P P 23 24 50.4 +0.7
baz=332
P57A Homestead Farm 87.54 30 P P 23 24 50.2 +0.4
baz=333
PAL Palisades 87.55 27 P P 23 24 49.6 -0.1
PAL IAmb IAmb 23 24 51.1
comp=Z,9.9nm,0.6s
PAL Palisades 87.55 27 P P 23 24 49.6 -0.1
PAL pmax pmax
comp=Z,10.0nm,0.6s
PAL Palisades 87.55 27 P P 23 24 50.6 +0.8
baz=336
U50A Jamestown 87.59 37 P P 23 24 50.7 +0.6
baz=329
R54A Victor 87.60 33 P P 23 24 50.8 +0.7
baz=331
L64A Middleborough 87.62 24 P P 23 24 51.1 +1.1
baz=337
N61A South Mountain 87.65 27 P P 23 24 50.6 +0.4
baz=335
MVL Millersville 87.66 29 P P 23 24 50.5 +0.3
MVL IAmb IAmb 23 24 51.7
comp=Z,5.5nm,0.7s
O60A Telford 87.69 28 P P 23 24 50.8 +0.4
baz=335
V49A McMinnville 87.70 38 P P 23 24 51.1 +0.5
baz=328
T52A Hallie 87.76 35 P P 23 24 51.7 +0.8
T52A IAmb IAmb 23 24 52.3
comp=Z,7.2nm,0.6s
T52A Hallie 87.76 35 P P 23 24 51.5 +0.6
baz=330
P58A Pank, Wackersv 87.79 30 P P 23 24 51.5 +0.6
baz=333,SNR=6.6
Q57A Strasburg 87.80 31 P P 23 24 51.8 +0.8
baz=333
S54A Dingess, Beckl 87.81 33 P P 23 24 50.5 -0.6
S54A IAmb IAmb 23 24 52.4
comp=Z,9.0nm,0.6s
S54A Dingess, Beckl 87.81 33 P P 23 24 51.2 0.0
baz=331
R55A Marlinton 87.84 32 IAmb IAmb 23 24 57.0
comp=Z,14nm,1.0s
R55A Marlinton 87.84 32 P P 23 24 52.0 +0.7
baz=332
U51A La Follette 87.97 36 P P 23 24 52.6 +0.8
baz=330
P59A Jarrettsville 87.98 29 P P 23 24 52.4 +0.6
baz=334
TZTN Tazewell 88.02 36 P P 23 24 52.2 +0.1
TZTN IAmb IAmb 23 24 53.3
comp=Z,7.0nm,0.6s
TZTN Tazewell 88.02 36 P P 23 24 52.7 +0.7
baz=330
PSUB Penn St. - Bra 88.02 28 P P 23 24 51.4 -0.6
PSUB IAmb IAmb 23 24 52.4
comp=Z,5.3nm,0.7s
T53A Wise 88.04 35 P P 23 24 53.0 +0.7
baz=330
P60A Greenville 88.07 29 P P 23 24 52.8 +0.6
baz=334
W49A Belvidere 88.09 38 P P 23 24 53.2 +0.8
baz=328
V50A Pikevile 88.12 37 P P 23 24 53.0 +0.4
baz=329
Q58A Fox Den Farm, 88.14 30 P P 23 24 53.3 +0.7
baz=333
S55A Lewisburg 88.14 33 P P 23 24 53.0 +0.3
baz=332
SWET Sewanee 88.16 38 IAmb IAmb 23 24 53.9
comp=Z,14nm,0.9s
O61A Allentown 88.17 28 P P 23 24 53.3 +0.7
baz=335
U52A Thorn Hill 88.22 36 P P 23 24 53.8 +0.8
baz=330
X48A Hartselle 88.32 39 IAmb IAmb 23 24 54.6
comp=Z,7.5nm,0.7s
V51A Loudon 88.32 36 P P 23 24 53.8 +0.3
V51A IAmb IAmb 23 24 55.0
comp=Z,7.4nm,0.8s
V51A Loudon 88.32 36 P P 23 24 54.1 +0.6
baz=329
T54A Tazewell 88.35 34 P P 23 24 54.2 +0.5
baz=331
R57A Stanardsville 88.41 31 P P 23 24 54.3 +0.4
baz=333
W50A Signal Mountai 88.43 37 IAmb IAmb 23 24 55.6
comp=Z,8.7nm,0.9s
W50A Signal Mountai 88.43 37 P P 23 24 54.3 +0.2
baz=329
KEST Kesra 88.50 324 P P 23 24 54.3 -0.2
comp=Z,15nm,0.9s,baz=354,slow=5.7,SNR=8.8
KEST Kesra 88.50 324 IAmb IAmb 23 24 55.9
comp=Z,12nm,0.8s
CPCT Cooper Cave 88.55 37 IAmb IAmb 23 24 56.2
comp=Z,10nm,0.8s
U53A Fall Branch 88.56 35 P P 23 24 54.8 +0.2
baz=330
R58A Rapidan 88.60 31 P P 23 24 55.2 +0.5
baz=333
V52A Sevierville 88.60 36 IAmb IAmb 23 24 56.4
comp=Z,8.2nm,0.6s
V52A Sevierville 88.60 36 P P 23 24 55.7 +0.8
baz=330
T55A Pulaski 88.61 33 P P 23 24 55.8 +0.9
baz=331
BLA Blacksburg 88.67 33 P P 23 24 55.7 +0.6
baz=332
TKL Tuckaleechee C 88.69 36 P P 23 24 55.7 +0.5
comp=Z,8.9nm,0.7s,baz=168,slow=3.7,SNR=16
TKL Tuckaleechee C 88.69 36 IAmb IAmb 23 24 56.8
comp=Z,9.4nm,0.8s
W51A Cleveland 88.70 37 P P 23 24 55.8 +0.5
baz=329
U54A Nelsons Funny 88.73 34 P P 23 24 56.2 +0.7
baz=331
S57A Dark Hollow, R 88.73 32 P P 23 24 56.5 +1.2
baz=332
HIZ Hauiti 88.85 155 P P 23 24 56.8 +1.2
HIZ IAmb IAmb 23 25 00.5
comp=Z,16nm,0.7s
CBN Corbin Frederi 88.91 30 P P 23 24 56.9 +0.8
baz=333
R58B Mineral 88.94 31 P P 23 24 56.9 +0.5
baz=333
T56A Rocky Mt 88.97 33 P P 23 24 57.1 +0.5
baz=332
U55A TA2, Sparta 89.05 34 P P 23 24 57.6 +0.6
baz=331
V53A Saluda 89.07 35 P P 23 24 57.4 +0.3
baz=330
Y49A Blount Mountai 89.10 39 P P 23 24 57.8 +0.6
Y49A IAmb IAmb 23 24 58.6
comp=Z,7.0nm,0.9s
X51A Calhoun 89.17 37 P P 23 24 58.1 +0.6
baz=329
S58A Poland Farm, P 89.19 31 P P 23 24 58.0 +0.5
baz=333
T57A Hurt 89.29 32 P P 23 24 58.9 +0.9
baz=332
V54A Nebo 89.32 35 P P 23 24 58.8 +0.6
baz=331
S59A Mechanicsville 89.33 31 P P 23 24 58.7 +0.5
baz=334
W53A Cullowhee 89.36 36 P P 23 24 59.1 +0.6
baz=330
U56A King 89.44 33 P P 23 24 59.4 +0.7
baz=332
T58A Grand View Acr 89.61 32 P P 23 25 00.2 +0.8
baz=333
ESBB Sonseca Array 89.73 335 IAmb IAmb 23 25 02.2
comp=Z,11nm,0.9s
ESDC Sonseca Array 89.73 335 P P 23 24 59.8 -0.3
comp=Z,2.5nm,0.4s,baz=18,slow=4.0,SNR=28
U57A Blanch 89.76 33 P P 23 25 01.2 +1.0
baz=332
Z50A Ashland 89.83 39 IAmb IAmb 23 25 02.1
comp=Z,14nm,0.7s
Z50A Ashland 89.83 39 P P 23 25 01.1 +0.5
baz=328,SNR=8.9
W54A Cherokee Point 89.83 35 P P 23 25 01.4 +0.9
baz=331
V56A Mocksville 89.87 34 P P 23 25 01.5 +0.8
baz=332
X53A Estanollee 89.88 36 P P 23 25 01.7 +0.9
baz=330
BKZ Black Stump Fm 89.94 154 P P 23 25 01.0 +0.4
BKZ IAmb IAmb 23 25 03.5
comp=Z,6.6nm,0.8s
PAB San Pablo 89.96 335 P P 23 25 02.6 +1.4
PAB IAmb IAmb 23 25 03.3
comp=Z,11nm,0.9s
PAB San Pablo 89.96 335 P P 23 25 02.6 +1.4
PAB pmax pmax
comp=Z,11nm,1.0s
V57A Coltrane Farms 90.08 33 P P 23 25 02.1 +0.4
baz=332
U58A Oxford 90.09 32 P P 23 25 02.6 +0.9
baz=333
Y52A Lilburn 90.11 37 P P 23 25 03.0 +1.2
baz=330
KMSC Kings Mountain 90.12 35 P P 23 25 02.4 +0.5
baz=331
QRZ Quartz Range 90.36 158 P P 23 25 03.8 +1.3
W56A Indian Trail 90.42 34 P P 23 25 03.7 +0.4
baz=332
W57A Gilead 90.64 34 P P 23 25 04.8 +0.6
baz=332
GOGA Godfrey 90.75 37 P P 23 25 05.8 +1.0
baz=330
V59A Middlesex 90.76 32 P P 23 25 05.5 +0.7
baz=333
Y55A Saluda 90.96 36 P P 23 25 06.7 +0.9
baz=331
W58A Raeford 91.05 33 P P 23 25 06.7 +0.6
baz=332
THZ Tophouse 91.33 158 P P 23 25 07.8 +0.7
THZ IAmb IAmb 23 25 09.3
comp=Z,6.6nm,0.8s
PLWZ Palliser 91.79 156 P P 23 25 09.1 -0.1
X60A Albert Glenn T 91.92 33 P P 23 25 10.7 +0.5
baz=333
FOZ Fox Glacier 92.23 161 P P 23 25 11.9 +0.8
FOZ IAmb IAmb 23 25 13.6
comp=Z,5.4nm,0.7s
TORD Torodi Ar. Bea 111.52 319 PKiKP PKiKP 23 30 32.6 -1.9
comp=Z,0.5nm,0.5s,baz=28,slow=2.3,SNR=7.6
TORD PKKPbc PKKPbc 23 41 28.9 +1.4
comp=Z,0.4nm,0.4s,baz=209,slow=2.7,SNR=6.9
DBIC Dimbokro 120.19 322 PKP PKPdf 23 30 50.4 -0.7
comp=Z,3.5nm,0.7s,baz=16,slow=2.2,SNR=8.6
TIC Toumodi 120.28 322 ePKIKP PKPdf 23 30 50.5 -0.8
KIC Kosan Boka 120.41 322 ePKIKP PKPdf 23 30 50.7 -0.9
comp=Z,7.7nm,0.7s
LIC Lamto 120.66 322 ePKIKP PKPdf 23 30 51.1 -0.9
comp=Z,13nm,0.7s
LBTB Lobatse 126.09 270 PKP PKiKP 23 31 02.5 -0.2
comp=Z,3.0nm,0.6s,baz=330,slow=1.6,SNR=7.4
NVL N'lazarevskaya 145.72 206 ePKP2 PKiKP 23 31 42.3 +1.3
NVL pmax pmax
comp=Z,21nm,1.0s
GO02 Mina Guanaco 146.94 62 PKPbc PKPbc 23 31 43.9 +0.7
GO02 PKPab PKPab 23 31 46.7 +1.3
BDFB Brasilia 148.56 20 PKPbc PKPbc 23 31 47.4 0.0
comp=Z,14nm,0.6s,baz=251,slow=1.7,SNR=22
BDFB Brasilia 148.56 20 PKPbc 23 31 47.5 +0.2
SNAA Sanae 149.41 201 PKPdf PKPbc 23 31 47.1 -0.6
SNAA Sanae 149.41 201 PKPab PKPbc 23 31 54.5 +0.6
SNAA Sanae 149.41 201 PKP2 PKPab 23 31 54.5 +0.6
VNA2 Neumayer--Watz 151.00 200 PKPdf PKPbc 23 31 51.3 -0.1
baz=102,slow=1.4
VNA3 Neumayer Olymp 151.29 198 PKPdf PKPbc 23 31 51.6 -0.5
VNA1 Neumayer--Stat 151.40 200 PKPdf PKPbc 23 31 52.3 -0.1
CPUP Villa Florida 154.81 46 PKPab PKPab 23 32 18.4 +0.6
comp=Z,1.7nm,0.4s,baz=348,slow=5.8,SNR=5.6

TAP 20 23:17:59.2, 23.14N×120.89E, h17km±1km, ML1.6, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STYT	Tauyuan	0.13	279	eS	Sb	23 18 07.5	+1.6
	baz=280						
SLGT	Liugui	0.27	237	P	Pb	23 18 06.2	+0.5
	baz=237						
SLGT				S	Sb	23 18 10.4	+0.5
	baz=237						
WTP	Ta-pu	0.28	292	eP	Pb	23 18 06.0	+0.2
	baz=292						
WTP				eS	Sb	23 18 10.8	+0.6
	baz=292						
TPUB	Ta-pu	0.29	303	P	Pb	23 18 06.0	0.0
	baz=303						
TPUB				eS	Sb	23 18 10.7	+0.2
	baz=303						
TPUB	Ta-pu	0.29	303	P	Pb	23 18 06.0	0.0
TPUB				IAmb	IAmb	23 18 11.4	
	comp=Z,37nm,1.1s						
CHN4	Tsaushan	0.35	307	eP	Pb	23 18 07.3	+0.4
	baz=307						
TWG	Pinlang	0.36	153	S	Sb	23 18 13.0	+0.5
	baz=152						
TWGBT	Beinan	0.37	152	eP	Pg	23 18 07.0	+0.1
	baz=152						
TWGBT				S	Sg	23 18 12.2	+0.2
	baz=152						
FULB	Fuli	0.37	81	eP	Pg	23 18 06.6	-0.4
	baz=81						
FULB				eS	Sb	23 18 13.0	+0.1
	baz=81						
ALS	Alishan	0.38	347	P	Pg	23 18 07.3	+0.1
	baz=349						
MASBT	Mashibuluo	0.58	205	P	Pb	23 18 11.4	+0.5
	baz=213						
EAST	Anshuo	0.76	183	P	Pn	23 18 14.9	-0.3
	baz=196						
SCZT	Fangliau	0.81	198	eP	Pb	23 18 14.9	+0.1
	baz=198						

ATH 20 23:46:47.5, 38.19N×20.27E, h8km±2km, ML3.1/5, Error ellipse: s-maj=2.7km s-min=1.1km az=90.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.06	77	P	Pg	23 46 49.5	+0.2
KEF3				S	Sg	23 46 50.5	0.0
LXRA	Lixouri, Kepha	0.13	85	P	Pg	23 46 50.5	+0.1
LXRA				S	Sg	23 46 52.4	+0.2
KEF4	Livadi, Kephal	0.14	60	P	Pg	23 46 50.6	+0.1
KEF4				S	Sg	23 46 52.6	+0.2
ARGA	Argostoli. Kep	0.16	94	P	Pg	23 46 51.0	+0.1
ARGA				S	Sg	23 46 53.3	+0.1
KEF2	Argostoli. Kep	0.17	98	P	Pg	23 46 51.2	+0.2
KEF2				S	Sg	23 46 53.7	+0.3
VLS	Valsamata	0.25	93	P	Pg	23 46 52.3	-0.2
VLS				S	Sg	23 46 55.7	-0.1
VLS				AML	AML	23 46 55.8	
	comp=N,48074μm,0.2s						
VLS				AML	AML	23 46 55.8	
	comp=E,47139μm,0.1s						
KONA	Konidatara, Ke	0.33	45	P	Pg	23 46 54.0	0.0
KONA				S	Sg	23 46 58.9	+0.5
KONA				AML	AML	23 46 59.3	
	comp=E,4866μm,0.1s						
KONA				AML	AML	23 46 59.4	
	comp=N,7625μm,0.2s						
FSK	Fiskardo	0.35	40	P	Pg	23 46 54.3	-0.1
FSK				S	Sg	23 46 59.6	+0.5
VLMS	Volimes, Zakyn	0.44	135	P	Pg	23 46 56.1	0.0
VLMS				S	Sg	23 47 02.7	+0.9
VLMS				AML	AML	23 47 03.3	
	comp=E,16555μm,0.2s						
VLMS				AML	AML	23 47 03.4	
	comp=N,9316μm,0.2s						
MGNA	Meganis	0.62	41	P	Pg	23 46 59.2	-0.3
MGNA				S	Sg	23 47 08.2	+0.7
LKD2	Lefkada island	0.67	27	P	Pg	23 46 59.9	-0.6
LKD2				S	Sg	23 47 09.9	+0.7
VTN	Vitineika	0.77	110	P	Pg	23 47 02.2	-0.1
PDO	Prodromos	0.82	60	P	Pg	23 47 02.9	-0.5
PDO				S	Sb	23 47 15.1	-0.3

PDO AML AML 23 47 16.5
comp=E,1346μm,0.4s
PDO AML AML 23 47 17.2
comp=N,1732μm,0.3s
RLS Riolos of Patr 0.95 98 P Pg 23 47 04.9 -0.9
PVO Paravola 1.07 66 P Pg 23 47 07.5 -0.6
PVO AML AML 23 47 25.3
comp=N,760μm,0.3s
PVO AML AML 23 47 25.5
comp=E,1134μm,0.4s
DRO Drossia 1.16 101 P Pg 23 47 08.7 -1.1

*ATH **20** 23:47:26.8, 38.22N×20.38E, h6km±1km, ML3.6/14, Error ellipse: s-maj=1.6km s-min=0.8km az=242.0*
*BEO **20** 23:47:26.0±0.7, 38.12N×20.16E, h11km±4km, ML3.7/10*
*THE **20** 23:47:26.4, 38.20N×20.36E, h9km, ML3.6/15, Error ellipse: s-maj=0.6km s-min=0.3km az=234.0*
*PDG **20** 23:47:28.6±0.8, 38.44N×20.20E, h8km±2km, ML3.9/12, Error ellipse: s-maj=1.4km s-min=1.1km az=90.0*
*MOS **20** 23:47:30.7±1.3, 38.31N×20.26E, h54km, mb4.2/9, Error ellipse: s-maj=7.2km s-min=3.9km az=66.3*
*NEIC **20** 23:47:32.0±3.1, 38.28N±0.07×20.32E±0.06, h44km±8km, Error ellipse: s-maj=10.1km s-min=6.8km az=194.0*
*IDC **20** 23:47:32.7±1.5, 38.23N×20.40E, h55km±18km, mb3.6/11, mb1 3.7/17, mb1mx3.5/60, mbtmp3.8/17, ML3.0/6, MS2.9/4, Ms1 2.9/4, ms1mx2.5/61, Error ellipse: s-maj=16.5km s-min=10.2km az=11.0*
ISC 20 23:47:26.6±0.6, 38.23N±0.02×20.39E±0.02, h6km±4km, n266, σ1.56/329, mb4.0/20, 13C-9D, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.04 43 P **Pg 23 47 28.0 0.0**
KEF4 S **Sg 23 47 29.4 +0.5**
KEF3 Kipouria, Keph 0.04 233 P **Pg 23 47 28.1 +0.1**
KEF3 S **Sg 23 47 29.5 +0.6**
CHV1 Chavriata, Kef 0.04 188 P **Pg 23 47 28.1 +0.1**
CHV1 S **Sg 23 47 29.4 +0.4**
LXRA Lixouri, Kepha 0.05 127 P **Pg 23 47 28.3 +0.3**
LXRA S **Sg 23 47 29.5 +0.5**
ARGA Argostoli. Kep 0.09 126 P **Pg 23 47 28.9 +0.3**
ARGA S **Sg 23 47 30.5 +0.6**
ARG2 Argostoli 0.09 123 P **Pg 23 47 29.0 +0.3**
ARG2 S **Sg 23 47 30.6 +0.5**
KEF2 Argostoli. Kep 0.10 129 P **Pg 23 47 29.3 +0.5**
KEF2 S **Sg 23 47 30.9 +0.6**
VLS Valsamata 0.17 108 P **Pg 23 47 30.1 +0.1**
VLS S **Sg 23 47 32.9 +0.7**
106μm,0.2s
VLS Valsamata 0.17 108 P **Pg 23 47 30.1 +0.1**
VLS S **Sg 23 47 32.7 +0.4**
VLS AML AML 23 47 33.0
VLS AML AML 23 47 33.4
KONA Konidatara, Ke 0.24 36 P **Pg 23 47 31.8 +0.4**
KONA S **Sg 23 47 36.4 +1.7**
FSK Fiskardo 0.27 30 P **Pg 23 47 32.1 +0.2**
FSK S **Sg 23 47 36.8 +1.3**
20μm,0.5s
FSK Fiskardo 0.27 30 P **Pg 23 47 32.2 +0.3**
FSK S **Sg 23 47 36.8 +1.3**
FSK AML AML 23 47 39.8
comp=N,37469μm,0.7s
FSK AML AML 23 47 43.0
comp=E,40713μm,0.6s
KFL Anninata 0.34 111 P **Pg 23 47 33.3 +0.1**
KFL S **Sg 23 47 38.8 +1.1**
KFL Anninata 0.34 111 P **Pg 23 47 33.2 0.0**
KFL S **Sg 23 47 38.7 +1.1**
VLMS Volimes, Zakyn 0.41 148 P **Pg 23 47 34.9 +0.3**
VLMS S **Sg 23 47 41.4 +1.4**
VLMS AML AML 23 47 44.1
comp=N,49729μm,0.6s
VLMS AML AML 23 47 44.2
comp=E,40172μm,0.3s
MGNA Meganis 0.53 36 P **Pg 23 47 36.9 0.0**
MGNA S **Sg 23 47 45.4 +1.6**
MGNA AML AML 23 47 46.2
comp=E,22713μm,0.4s
MGNA AML AML 23 47 46.4
comp=N,18390μm,0.5s
LKD2 Lefkada island 0.60 21 P **Pg 23 47 37.9 -0.3**
LKD2 S **Sb 23 47 48.0 -0.3**
comp=N,4μm,0.6s
LKD2 Lefkada island 0.60 21 P **Pg 23 47 38.1 -0.1**
LKD2 AML AML 23 47 52.4
comp=N,7845μm,0.6s
LKD2 AML AML 23 47 58.0
comp=E,6754μm,0.7s
VTN Vitineika 0.70 116 P **Pg 23 47 40.5 +0.4**
PDO Prodromos 0.72 59 P **Pg 23 47 40.6 0.0**
PDO S **Sb 23 47 52.1 +0.2**
comp=E,10μm,0.5s
PDO Prodromos 0.72 59 P **Pg 23 47 40.8 +0.2**
PDO S **Sg 23 47 51.4 +1.4**
PDO AML AML 23 47 55.9
comp=E,11945μm,0.6s
PDO AML AML 23 47 58.8
comp=N,14607μm,0.6s
RLS Riolos of Patr 0.87 101 P **Pg 23 47 43.4 +0.1**
RLS S **Sb 23 47 55.9 0.0**
comp=N,2μm,0.4s
RLS Riolos of Patr 0.87 101 P **Pg 23 47 42.9 -0.4**
RLS AML AML 23 48 04.0
comp=N,2904μm,1.0s
RLS AML AML 23 48 08.3
comp=E,3414μm,0.6s
PVO Paravola 0.97 66 P **Pg 23 47 45.4 +0.1**
PVO S **Sb 23 47 59.8 +0.8**
comp=E,5μm,0.5s
PVO Paravola 0.97 66 P **Pg 23 47 45.8 +0.4**
PVO S **Sg 23 47 58.9 +0.9**
PVO AML AML 23 48 04.6
comp=N,9150μm,0.6s
PVO AML AML 23 48 07.8
comp=E,8805μm,0.4s
DRO Drossia 1.08 104 P **Pg 23 47 46.5 -0.8**
DRO Drossia 1.08 104 P **Pg 23 47 47.6 +0.3**
DRO AML AML 23 48 12.6
comp=N,7726μm,0.5s
DRO AML AML 23 48 18.9
comp=E,8519μm,0.5s
UPR University Cam 1.10 87 P **Pn 23 47 48.7 +0.1**
LAKA Lakka 1.25 89 P **Pn 23 47 49.6 -1.1**
LAKA S **Sb 23 48 07.3 +0.3**
comp=E,1μm,0.8s
LAKA Lakka 1.25 89 P **Pn 23 47 49.4 -1.3**
LAKA AML AML 23 48 16.5
comp=E,2281μm,0.5s
LAKA AML AML 23 48 22.6
comp=N,2924μm,1.0s
AMT Artemida-Makis 1.25 123 P **Pn 23 47 49.8 -0.9**
AMT S **Sb 23 48 06.3 -0.8**
comp=N,4μm,0.6s
ANX Ano Chora 1.26 73 P **Pn 23 47 48.9 -1.9**
ANX S **Sn 23 48 08.7 +0.6**
comp=N,5μm,0.5s
ANX Ano Chora 1.26 73 P **Pg 23 47 51.5 +0.7**
ANX AML AML 23 48 16.6
comp=E,7240μm,0.6s
ANX AML AML 23 48 16.9
comp=N,10048μm,0.8s
IGT Igoumenitsa 1.30 358 P **Pn 23 47 50.4 -1.0**
IGT S **Sb 23 48 07.8 -0.7**
IGT Igoumenitsa 1.30 358 ePg **Pn 23 47 51.2 -0.2**
IGT eSg **Sg 23 48 11.3 +2.7**
IGT Igoumenitsa 1.30 358 P **Pn 23 47 51.2 -0.2**
IGT AML AML 23 48 20.7
comp=E,2301μm,0.4s
IGT AML AML 23 48 21.3
comp=N,1546μm,0.5s
IGT Igoumenitsa 1.30 358 P **Pg 23 47 53.0 +1.3**
EVR Evrytania 1.31 58 P **Pn 23 47 50.9 -0.7**
EVR S **Sb 23 48 09.3 +0.6**
comp=N,2μm,0.9s
EVR Evrytania 1.31 58 P **Pn 23 47 50.9 -0.7**
EVR AML AML 23 48 15.5
comp=E,2001μm,0.7s
EVR AML AML 23 48 20.0
comp=N,3980μm,1.1s
SERG Sergoula 1.32 81 P **Pn 23 47 51.4 -0.3**
SERG S **Sb 23 48 08.7 -0.4**
comp=N,2μm,0.6s
SERG Sergoula 1.32 81 P **Pn 23 47 51.3 -0.4**
TRIZ Trizonia 1.33 84 P **Pn 23 47 50.6 -1.1**
TRIZ S **Sb 23 48 09.8 +0.5**
comp=N,2μm,0.5s
TRIZ Trizonia 1.33 84 P **Pn 23 47 50.9 -0.9**
ALIK Aliki, Aigiali 1.36 88 P **Pn 23 47 50.5 -1.6**
ALIK S **Sb 23 48 09.7 -0.3**
KALE Kalithea 1.39 83 P **Pn 23 47 51.8 -0.8**
KALE S **Sb 23 48 10.4 -0.6**
comp=N,1μm,0.6s
KALE Kalithea 1.39 83 P **Pn 23 47 52.2 -0.4**
KALE AML AML 23 48 22.6
comp=N,2505μm,0.4s
KALE AML AML 23 48 24.9
comp=E,2462μm,0.5s
KLV Kalavryta, Ach 1.40 97 P **Pn 23 47 51.9 -0.9**
KLV S **Sn 23 48 11.8 +0.2**
KLV Kalavryta, Ach 1.40 97 P **Pn 23 47 52.5 -0.3**
JAN Janina 1.47 14 P **Pb 23 47 54.6 +0.2**
JAN Janina 1.47 14 P **Pg 23 47 55.9 +1.0**
KASA Kassiopi 1.56 347 P **Pg 23 47 56.8 +0.3**
MAKR Makrakomi, Fth 1.57 60 P **Pg 23 47 57.6 +0.8**
ITM Ithomi 1.61 130 P **Pn 23 47 54.4 -1.2**
ITM S **Sn 23 48 15.4 -1.2**
comp=E,810nm,0.8s
ITM Ithomi 1.61 130 Pn 23 47 44.8 -11
ITM Pn **Pg 23 48 01.6 +4.1**
PYL PYLOS 1.71 141 P **Pn 23 47 55.5 -1.5**
PYL S **Sn 23 48 18.6 -0.5**
comp=E,552nm,0.8s
AGG Agios Georgios 1.71 62 Pn **Pg 23 48 01.5 +2.0**
AGG Agios Georgios 1.71 62 P **Pg 23 48 01.5 +2.0**
THL Klokotos Trika 1.84 43 P **Pb 23 48 01.2 +0.5**
AXAR Agios Charalam 1.86 73 P **Pg 23 48 03.0 +0.7**
PROD Prodromos 1.98 88 P **Pb 23 48 03.8 +0.7**
PENT Pentalofos 2.05 16 P **Pb 23 48 03.0 +0.2**
LKR Lokris 2.09 78 P **Pb 23 48 04.5 -0.4**
KZN Kozani 2.34 27 P **Pb 23 48 07.8 -1.4**
KZN Kozani 2.34 27 P **Pb 23 48 09.2 0.0**
SCTE Santa Cesarea 2.37 322 **Pn 23 48 06.5 +0.4**
LIT Litokhoron 2.48 40 Pn **Pb 23 48 11.6 -0.1**
LIT Litokhoron 2.48 40 P **Pb 23 48 11.6 -0.1**
MRKA Markates 2.56 78 P **Pb 23 48 11.2 -1.7**
OHR Ohrid 2.90 6 *i* Pn **Pn 23 48 14.5 +1.1**
OHR Ohrid 2.90 6 P **Pn 23 48 16.1 +2.7**
TIP Timpagrande 3.00 290 ⇓P **Pn 23 48 15.0 +0.3**
TIP ⇓S **Sn 23 48 50.4 -0.6**
TIP Timpagrande 3.00 290 **Pn 23 48 15.1 +0.4**
PAIG Paliouri 3.07 55 P **Pb 23 48 19.3 -2.4**
GRG Griva 3.14 29 P **Pn 23 48 19.6 +3.0**
TIR Tirane 3.14 353 *e*Pn **Pn 23 48 17.6 +0.9**
TIR *e*Sn **Sn 23 48 54.8 +0.3**
TIR Tirane 3.14 353 ⇑P **Pn 23 48 17.9 +1.3**
TIR ⇓S **Sn 23 48 55.0 +0.5**
TIR Tirane 3.14 353 **Pn 23 48 17.8 +1.1**
TIR Tirane 3.14 353 P **Pn 23 48 17.8 +1.1**
SOH Sokhos 3.46 41 P **Pn 23 48 24.6 +3.5**
OUR Ouranopolis 3.49 52 P **Pb 23 48 29.1 +0.3**
KNT Kendrikon 3.51 33 P **Pn 23 48 25.1 +3.3**
VAY Valandovo 3.52 28 *e*P **Pn 23 48 20.6 -1.2**
VAY *e*S **Sn 23 49 02.3 -1.4**
VAY Valandovo 3.52 28 *i* Pn **Pn 23 48 22.8 +1.0**
VAY Valandovo 3.52 28 P **Pn 23 48 25.5 +3.7**
CEL Celeste 3.54 272 Pn **Pn 23 48 22.7 +0.5**
CEL **Sn 23 49 03.8 -0.6**
MATE Matera 3.74 311 ⇑P **Pn 23 48 25.3 +0.5**
SRS Serrai 3.80 40 *e*Pn **Pn 23 48 26.8 +1.1**
SRS Serrai 3.80 40 P **Pn 23 48 28.9 +3.2**
SKO Skopje 3.83 12 *e*Pn **Pn 23 48 27.7 +1.6**
SKO Skopje 3.83 12 *i* Pn Pn 23 48 21.0 -5.1
ULC Ulcinj 3.83 347 *e*Pn **Pn 23 48 25.0 -1.2**
ULC *e*Sn **Sn 23 49 10.0 -1.6**
DRME Dracevica, Mon 4.06 347 *e*Pn **Pn 23 48 29.0 -0.3**
DRME Dracevica, Mon 4.06 347 *e*Pn **Pn 23 48 29.0 -0.3**
DRME *e*Sn **Sn 23 49 15.4 -1.7**
KKB Krupnik 4.18 29 *e*S **Sn 23 49 20.2 +0.1**
MMB Musomiste 4.22 36 *e*P **Pn 23 48 32.7 +1.1**
MMB Musomiste 4.22 36 P **Pn 23 48 34.2 +2.6**
APE Apeiranthos 4.24 104 *i* P **Pb 23 48 37.6 -4.1**
ACER Acerenza 4.28 308 **Pn 23 48 33.6 +1.2**
PDG Podgorica 4.29 349 *e*Pn **Pn 23 48 32.1 -0.3**
PDG *e*Sn **Sn 23 49 22.3 -0.4**
PDG Podgorica 4.29 349 ⇑P **Pn 23 48 32.4 0.0**
PDG ⇑S **Sn 23 49 22.3 -0.4**
PDG Podgorica 4.29 349 *e*Pn **Pn 23 48 30.7 -1.7**
PDG Podgorica 4.29 349 **Pn 23 48 31.5 -0.8**
TTG Podgorica 4.29 349 *e*Pn **Pn 23 48 31.6 -0.8**
TTG *e*Sn **Sn 23 49 21.1 -1.6**
PVY Plav 4.37 356 *e*Pn **Pn 23 48 33.8 +0.1**
PVY *e*Sn **Sn 23 49 24.0 -1.0**
HCY Herceg Novi 4.46 342 *e*Pn **Pn 23 48 33.1 -1.6**
HCY Herceg Novi 4.46 342 P **Pn 23 48 35.4 +0.7**
HCY Herceg Novi 4.46 342 *e*Pn **Pn 23 48 33.5 -1.2**
HCY *e*Sn **Sn 23 49 24.3 -2.6**
CEME Cevo 4.46 346 *e*Pn **Pn 23 48 33.6 -1.2**
CEME *e*Sn **Sn 23 49 24.9 -2.1**
BOSS Bosilegrad 4.55 20 *e*Pn **Pn 23 48 36.6 +0.5**
IDI Anoyia 4.65 128 P **Pn 23 48 39.5 +2.0**
comp=E,0.3nm,0.3s,baz=299,slow=19,SNR=5.9
IDI S **Sn 23 49 33.8 +1.9**
comp=E,3.6nm,0.3s,baz=309,slow=23,SNR=9.3
IVA Berane 4.65 355 *e*Pn **Pn 23 48 37.5 0.0**
IVA *e*Sn **Sn 23 49 30.3 -1.6**
NKME Niksic 4.66 347 *e*Pn **Pn 23 48 37.0 -0.6**
NKME *e*Sn **Sn 23 49 29.9 -2.2**
KOME Kolasin 4.67 352 *e*Pn **Pn 23 48 36.7 -1.0**
KOME *e*Sn **Sn 23 49 31.1 -1.1**
NKY Niksic 4.70 347 *e*Pn **Pn 23 48 37.6 -0.6**
NKY *e*Sn **Sn 23 49 30.8 -2.3**
BARS Barje 4.71 13 *e*Pn **Pn 23 48 38.5 +0.3**
TREB Trebinje 4.75 342 *e*Pn **Pn 23 48 37.5 -1.2**
TREB *e*Sn **Sn 23 49 31.3 -2.7**
TREB Trebinje 4.75 342 *e*Pn **Pn 23 48 36.9 -1.8**
VAE Valguarnera 4.79 263 P Pn 23 48 44.7 +5.3
comp=E,0.9nm,0.3s,baz=329,slow=11,SNR=3.0
VAE S **Sn 23 49 38.8 +3.6**
comp=E,2.1nm,0.3s,baz=208,slow=5.2,SNR=4.6
BRY Bratogost 4.88 344 *e*Pn **Pn 23 48 39.0 -1.6**
BRY Bratogost 4.88 344 P **Pn 23 48 40.5 -0.1**
BRY Bratogost 4.88 344 *e*Pn **Pn 23 48 39.6 -1.0**
BRY *e*Sn **Sn 23 49 34.7 -2.8**
VTS Vitosha 4.89 25 *e*Pn **Pn 23 48 41.2 +0.3**
VTS *e*Sn **Sn 23 49 38.2 +0.3**
VTS Vitosha 4.89 25 ⇑P **Pn 23 48 41.5 +0.7**
VTS ⇑S **Sn 23 49 37.0 -0.9**
VTS Vitosha 4.89 25 *i* P **Pn 23 48 41.6 +0.7**
VTS *e*S **Sn 23 49 37.4 -0.5**
VTS Vitosha 4.89 25 **Pn 23 48 42.3 +1.4**
VTS Vitosha 4.89 25 P **Pn 23 48 42.3 +1.4**
SGRT San Giovanni R 5.01 316 **Pn 23 48 42.9 +0.5**
SELS Selova 5.02 6 *e*Pn **Pn 23 48 41.8 -0.7**
SJES Sjenica 5.04 357 *e*Pn **Pn 23 48 43.1 +0.3**
STON Ston 5.07 337 *e*Pn **Pn 23 48 42.8 -0.3**
STON *e*Sn **Sn 23 49 39.1 -2.9**
STON Ston 5.07 337 *e*Pn **Pn 23 48 42.2 -0.9**
UPM Unac-Piva 5.10 348 *e*Pn **Pn 23 48 43.4 -0.3**
UPM Unac-Piva 5.10 348 *e*Pn **Pn 23 48 43.3 -0.4**
UPM *e*Sn **Sn 23 49 40.0 -2.9**
ALN Alexandroupoli 5.12 57 Pn **Pn 23 48 46.0 +2.2**
ALN Alexandroupoli 5.12 57 P **Pn 23 48 46.0 +2.2**
PLE Pljevlja 5.15 352 *e*Pn **Pn 23 48 44.1 -0.3**
PLE *e*Sn **Sn 23 49 42.2 -2.0**
KDZ Kurdzhali 5.16 47 P **Pn 23 48 48.1 +3.7**
WDD Wied Dalam 5.26 245 Pn **Pn 23 48 45.3 -0.5**
PAOL Paolisi 5.29 304 **Pn 23 48 48.0 +1.7**
ZAPS Zavoj 5.32 18 *e*Pn **Pn 23 48 47.0 +0.4**
IVAS Ivanjica 5.35 358 *e*Pn **Pn 23 48 46.5 -0.5**
IVAS *e*Sn **Sn 23 49 48.1 -0.8**
RUDO Rudo 5.44 352 *e*Pn **Pn 23 48 47.5 -0.8**
BOVS Bovan 5.49 10 *e*Pn **Pn 23 48 49.2 +0.2**
CORL Corleone 5.60 269 Pn **Pn 23 48 53.3 +2.8**
GRUS Gruza 5.66 2 *e*Pn **Pn 23 48 51.1 -0.2**
GRUS *e*Sn **Sn 23 49 54.8 -1.8**
BBLS Lazići 5.68 353 *e*Pn **Pn 23 48 51.2 -0.4**
BBLS *e*Sn **Sn 23 49 55.6 -1.6**
BBLS Lazići 5.68 353 *e*Pn **Pn 23 48 50.3 -1.3**
CLTB Caltabellotta 5.71 266 Pn **Pn 23 48 55.5 +3.5**
ZAGS Zajecar 5.75 13 *e*Pn **Pn 23 48 53.2 +0.7**
DIVS Divibare 5.87 357 *e*Pn **Pn 23 48 53.3 -1.0**
DIVS *e*Sn **Sn 23 49 59.1 -2.8**
DIVS Divibare 5.87 357 *e*Pn **Pn 23 48 49.9 -4.4**
HAPS Han Pijesak,BI 5.95 350 *e*Pn **Pn 23 48 53.6 -1.8**
TRUS Trudelj 5.99 0 *e*Pn **Pn 23 48 55.2 -0.6**
KARP Karpathos 6.05 114 Pn Pn 23 49 02.4 +5.7
PLVB Pleven 6.07 31 ⇓P **Pn 23 48 58.7 +1.8**
ELND Elena 6.28 40 ⇑P **Pn 23 49 00.7 +0.9**
MDVR Moldovita 6.62 8 ⇑P Pn 23 48 57.9 -6.6
MGRS Mrkonjic Grad 6.66 339 *e*Pn **Pn 23 49 04.2 -0.9**
AQU L'Aquila 6.75 310 Pn **Pn 23 49 09.2 +3.0**
AQU L'Aquila 6.75 310 P **Pn 23 49 09.2 +3.0**
BLY Banja Luka 6.94 341 ⇑P **Pn 23 49 08.3 -0.6**
BLY Banja Luka 6.94 341 *e*Pn **Pn 23 49 07.0 -1.9**
BLY Banja Luka 6.94 341 **Pn 23 49 09.8 +0.9**
NRCA Norcia 7.20 312 **Pn 23 49 14.9 +2.4**
GZR Gura Zlata 7.38 13 ⇓P **Pn 23 49 14.6 -0.4**
GZR Gura Zlata 7.38 13 P **Pn 23 49 14.5 -0.4**
BZS Buzias 7.44 7 ⇑P **Pn 23 49 15.5 -0.2**
BZS Buzias 7.44 7 P **Pn 23 49 15.5 -0.2**
ELL Elmali 7.71 98 Pn 23 49 26.1 +6.6
ELL Elmali 7.71 98 P **Pn 23 49 23.0 +3.4**
MURB Monte Urbino 7.80 313 Pn **Pn 23 49 23.5 +2.8**
ARR Arges 7.80 23 ⇑P **Pn 23 49 21.7 +0.9**
LATE Laterza 7.88 306 **Pn 23 49 26.1 +4.3**
VOIR 8.00 24 ⇓P **Pn 23 49 24.4 +1.0**
VOIR 8.00 24 P **Pn 23 49 24.4 +1.0**
MORH Mrgy, Hungar 8.09 351 *e*Pn **Pn 23 49 22.9 -1.6**
MLR Muntele Rosu 8.36 28 P **Pn 23 49 32.5 +4.1**
comp=E,0.3nm,0.3s,baz=205,slow=7.1,SNR=12
MLR Muntele Rosu 8.36 28 ⇑P **Pn 23 49 30.8 +2.5**
MLR Muntele Rosu 8.36 28 **Pn 23 49 31.4 +3.0**
CRES Cresnjev 8.43 336 *e*Pn **Pn 23 49 27.5 -1.8**
CASP Castiglione de 8.57 305 Pn **Pn 23 49 34.1 +2.9**
DOPR Dopca 8.58 24 ⇓P **Pn 23 49 28.8 -2.6**
OSSC Osservatorio P 8.71 310 Pn **Pn 23 49 35.0 +1.8**
DRGR 8.73 11 ⇓P **Pn 23 49 30.5 -2.9**
PLOR Plostina 8.93 29 ⇑P **Pn 23 49 38.4 +2.3**
PLOR Plostina 8.93 29 P **Pn 23 49 38.4 +2.3**
LJU Ljubljana 8.94 333 *e*Pn **Pn 23 49 34.7 -1.6**
TRI Trieste 8.95 329 Pn **Pn 23 49 36.3 -0.1**
TRI Trieste 8.95 329 P **Pn 23 49 36.3 -0.1**
KEST Kesra 9.18 258 Pn **Pn 23 49 40.5 +0.8**
SOKA Soboth 9.32 337 Pn **Pn 23 49 40.3 -1.3**
comp=E,7.1nm,0.5s,SNR=11
OBKA Obir 9.33 334 *i* Pn **Pn 23 49 42.0 +0.2**
comp=E,5.0nm,0.4s
OBKA *e*Sn **Sn 23 51 23.1 -3.9**
comp=E,9.0nm,0.7s
ZCCA Zocca 9.36 314 Pn **Pn 23 49 43.6 +1.6**
VLC Villacollemand 9.59 311 Pn **Pn 23 49 46.7 +1.6**
TEOL Teolo 9.65 320 Pn **Pn 23 49 45.8 -0.2**
PSZ Piszkesteto 9.69 358 Pn **Pn 23 49 48.0 +1.4**
PSZ Piszkesteto 9.69 358 P **Pn 23 49 48.0 +1.4**
ARSA Arzberg 9.70 340 *e*Pn **Pn 23 49 46.7 +0.1**
comp=E,2.2nm,0.3s
BR231 Keskin MP Arra 9.77 77 Pn **Pn 23 49 50.6 +2.8**
STAL STALIGIAL 9.84 327 Pn **Pn 23 49 48.1 -0.4**
CTI Castel Tesino 10.15 323 P **Pn 23 49 52.2 -0.8**
MSSA Maissana 10.19 310 Pn **Pn 23 49 53.2 -0.3**
ABTA Abfaltersbach 10.30 328 *i* Pn **Pn 23 49 54.3 -0.7**
comp=E,3.8nm,0.6s
ABTA *i* Sn **Sn 23 51 47.9 -3.0**
comp=E,6.5nm,0.8s
VYHS Vyhne 10.32 354 *e*P **Pn 23 49 53.7 -1.5**
VYHS *e* 23 51 45.0
VYHS Vyhne 10.32 354 *e*PN **Pn 23 49 53.7 -1.5**
VYHS *e*SN **Sn 23 51 45.0 -6.2**
BRTR Keskin Array B 10.43 78 P **Pn 23 49 59.4 +2.7**
comp=E,0.1nm,0.3s,baz=268,slow=12,SNR=2.9
BRTR LR LR 23 54 11.5
comp=E,54nm,18.7s,baz=231,slow=38
MOA Molln 10.61 337 *i* Pn **Pn 23 49 58.5 -0.6**
comp=E,1.6nm,0.2s
CSS Mathiatis 10.90 103 Pn **Pn 23 50 05.8 +2.7**
WTTA Wattenberg 11.08 327 *i* Pn **Pn 23 50 06.8 +1.0**
comp=E,2.2nm,0.4s
WTTA *e*Sn **Sn 23 52 06.3 -3.8**
comp=E,7.5nm,0.8s
WATA Walderalm 11.16 327 Pn **Pn 23 50 07.6 +0.8**
comp=E,5.5nm,0.5s,SNR=6.4
FUORN Ofenpass-Fuorn 11.23 322 Pn **Pn 23 50 08.1 +0.3**
SQTA Sankt Quirin 11.23 326 *i* Pn **Pn 23 50 09.0 +1.2**
comp=E,2.9nm,0.6s
FETA Feichten 11.30 324 *i* Sn **Sn 23 52 13.9 -1.5**
comp=E,2.2nm,0.7s
MOTA Moosalm 11.37 326 Pn **Pn 23 50 10.7 +1.0**
comp=E,3.7nm,0.5s,SNR=5.3
DAVOX Davos/Dischmat 11.53 321 LR LR 23 55 02.9
comp=E,40nm,20.4s,baz=86,slow=39
GEC2 GERESS Array S 11.66 338 Pn **Pn 23 50 17.2 +3.5**
GERES GERESS Array B 11.66 338 P **Pn 23 50 11.6 -2.0**
comp=E,0.3nm,0.3s,baz=158,slow=13,SNR=11
GERES LR LR 23 55 01.5
comp=E,77nm,18.5s,baz=97,slow=38
KHC Kasperske Hory 11.96 338 *e*PN **Pn 23 50 15.0 -2.6**
KHC Kasperske Hory 11.96 338 *i* P **Pn 23 50 18.2 +0.6**
SENIN Lac Senin/Sane 12.64 314 Pn **Pn 23 50 27.1 +0.1**
MMAI Mount Meron Ar 13.27 109 P **Pn 23 50 36.0 +0.3**
comp=E,0.4nm,0.3s,baz=309,slow=9.1,SNR=3.8
RPOR Krasnaya Polya 15.97 64 *i* P **Pn 23 51 12.3 +0.5**
NEY Neytrino 17.63 66 *i* P **Pn 23 51 33.6 +0.5**
SHA1 Shidzhatmaz 17.67 65 *i* P **Pn 23 51 33.9 +0.3**
KIV Kislovodsk 17.73 64 P **P 23 51 37.2 +2.1**
KIV Kislovodsk 17.73 64 *e*P **Pn 23 51 34.6 +0.4**
KIV pmax pmax
comp=Z,17nm,1.0s
KBZ Khabaz 17.84 65 P **P 23 51 37.9 +1.8**
comp=Z,0.1nm,0.3s,baz=280,slow=8.3,SNR=10
KBZ Khabaz 17.84 65 *i* P **P 23 51 36.3 +0.2**
PYA1 Pyatigorsk 18.04 64 *i* P **P 23 51 38.4 0.0**
NCK Nalchik 18.30 66 *i* P **P 23 51 41.4 +0.1**
NCK pmax pmax
comp=Z,4.0nm,1.0s
GNI Garni 18.96 77 P **Pn 23 51 50.7 +1.3**
comp=Z,0.3nm,0.3s,baz=38,slow=9.0,SNR=7.8
GNI Garni 18.96 77 P **Pn 23 51 51.1 +1.8**
GNI IAmb IAmb 23 51 52.2
comp=Z,23nm,1.2s
GNI Garni 18.96 77 *i* P **Pn 23 51 50.9 +1.6**
GNI pmax pmax
comp=Z,59nm,1.2s
OBN Obninsk 20.13 28 ⇓*e*P Pn 23 52 03.6 +0.7
OBN pmax pmax
comp=Z,6.0nm,1.0s
VSU Vasula 20.66 9 *i* P **P 23 52 05.1 -1.8**
VSU pmax pmax
comp=Z,59nm,1.0s
AKT Akhty 21.20 73 *e*P **P 23 52 11.9 -1.2**
AKT *e* 23 52 30.0
AKT pmax pmax
comp=Z,11nm,1.1s
HFS Hagfors 22.34 351 P **P 23 52 25.1 +0.2**
comp=Z,4.2nm,0.7s,baz=153,slow=10.0,SNR=7.4
EKA Eskdalemuir Ar 23.33 325 P **P 23 52 35.7 +0.4**
comp=Z,1.5nm,0.6s,baz=123,slow=10,SNR=5.3
FINES FINESS Array B 23.51 7 P **P 23 52 35.4 -1.6**
comp=Z,2.9nm,0.6s,baz=169,slow=11,SNR=13
FINES FINESS Array B 23.51 7 *i* P **P 23 52 35.0 -2.0**
FINES pmax pmax
comp=Z,3.0nm,0.6s
NB2 NORSAR Subarra 23.55 349 P **P 23 52 37.3 -0.2**
comp=Z,3.5nm,0.9s,baz=159,slow=9.3
NOA NORSAR Array B 23.55 349 P **P 23 52 36.5 -1.0**
comp=Z,21nm,0.5s,baz=157,slow=9.2,SNR=5.6
NOA LR LR 00 03 26.2
comp=Z,32nm,19.4s,baz=330,slow=40
NOA NORSAR Array B 23.55 349 *e*P **P 23 52 39.0 +1.5**
NOA pmax pmax
comp=Z,1.0nm,0.7s
KLMR Klimovskoe 25.63 22 *e*P **P 23 52 54.8 -1.8**
KLMR pmax pmax
comp=Z,17nm,1.9s
KLMR Klimovskoe 25.63 22 *e*P **P 23 52 54.9 -1.7**
KLMR AMP 23 53 02.1
comp=Z,17nm,1.9s
PRGR Permogore 28.16 26 *e*P **P 23 53 14.9 -4.5**
PRGR pmax pmax
comp=Z,4.0nm,0.6s
GEYT Alibeck 29.57 79 P **P 23 53 32.4 +0.2**
comp=Z,0.7nm,0.4s,baz=270,slow=8.6,SNR=2.7
TORD Torodi Ar. Bea 30.00 219 P **P 23 53 35.4 -0.8**
comp=Z,1.4nm,0.9s,baz=27,slow=8.6,SNR=7.0
BRVK Borovoye 37.10 50 *i* P **P 23 54 38.1 +0.5**
BRVK pmax pmax

	comp=Z,2.0nm,1.2s						
KK31	Karatay Array	37.87	66	P	P	23 54 45.8	+1.5
KK31				IAmb	IAmb	23 54 47.4	
	comp=Z,9.1nm,1.6s						
KK31	Karatay Array	37.87	66	P	P	23 54 45.8	+1.5
KK31				pmax	pmax		
	comp=Z,9.0nm,1.7s						
KKAR	Karatay Array	37.87	66	P	P	23 54 45.8	+1.5
KKAR	Karatay Array	37.87	66	P	P	23 54 45.8	+1.5
KKAR				pmax	pmax		
	comp=Z,9.0nm,1.7s						
KURK	Kurchatov	42.33	53	iP	P	23 55 18.7	-2.4
KURK				pmax	pmax		
	comp=Z,2.0nm,1.5s						
MK31	Makanchi Array	45.36	58	P	P	23 55 44.6	-1.0
MK31	Makanchi Array	45.36	58	P	P	23 55 44.6	-1.0
MKAR	Makanchi Array	45.36	58	P	P	23 55 44.5	-1.1
	comp=Z,1.1nm,0.5s,baz=282,slow=6.9,SNR=24						
ZAA0	Zalesovo Array	45.73	48	P	P	23 55 47.6	-0.8
ZALV	Zalesovo Beam	45.73	48	P	P	23 55 47.4	-1.1
	comp=Z,2.4nm,0.5s,baz=275,slow=8.6,SNR=11						
TIXI	Tiksi	59.64	20	iP	P	23 57 29.9	-1.1
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.2s						
SONM	Songino Array	60.51	51	P	P	23 57 36.8	-0.7
	comp=Z,0.4nm,0.9s,baz=275,slow=10.0,SNR=3.8						
SONM	Songino Array	60.51	51	eP	P	23 57 38.0	+0.5
YKA	Yellowknife Ar	73.31	340	P	P	23 58 58.5	0.0
	comp=Z,0.5nm,0.9s,baz=35,slow=4.8,SNR=4.2						
KLR	Kul'dur	73.90	39	P	P	23 59 02.4	0.0
	comp=Z,0.7nm,0.5s,baz=312,slow=11,SNR=3.9						
ILAR	Eielson Array	76.85	354	P	P	23 59 19.9	+1.0
	comp=Z,0.5nm,1.1s,baz=18,slow=3.8,SNR=3.0						
ILAR	Eielson Array	76.85	354	P	P	23 59 20.0	+1.0

GCG 21 00:40:16.7±0.9, 13.14N×92.54W, h8km±233km, MD3.9
MEX 21 00:40:21.0±0.7, 15.02N×91.46W, h218km±8km, MD4.1
NEIC 21 00:40:21.1±0.8, 15.06N±0.07×91.48W±0.07, h207km±2km, Error ellipse: s-maj=10.9km s-min=9.1km az=219.0
ISC 21 00:40:24.9±2.6, 15.1N±0.1×91.70W±0.09, h194km±16km, n13, σ2.14/23, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.44	164	eP	Pn	00 40 49.0	-2.4
STG3				eS	Sn	00 41 13.2	+1.3
THIG		0.59	248		Pn	00 40 50.0	-1.7
THIG					Sn	00 41 13.0	+0.6
THIG		0.59	248	iP	Pn	00 40 49.6	-2.2
THIG				iP	Pn	00 40 50.0	-1.7
THIG				iS	Sn	00 41 13.0	+0.6
FUG	Fuego 3	1.07	129	eP	Pn	00 40 51.8	-3.1
FUG				eS	Sn	00 41 20.4	+2.4
CCIG	Comitan	1.22	340		Pn	00 40 54.9	-1.0
CCIG	Comitan	1.22	340		Pn	00 40 54.9	-1.0
CCIG					Sn	00 41 20.1	0.0
CCIG	Comitan	1.22	340	eP	Pn	00 40 54.9	-1.0
CCIG				iS	Sn	00 41 20.1	0.0
PCG	Pacaya	1.29	125	eS	Sn	00 41 27.1	+6.0
IXG	Ixpaco	1.55	128	eP	Pn	00 40 54.9	-3.8
PCIG		1.57	291		Pn	00 40 58.1	-0.6
PCIG					Sn	00 41 27.2	+2.2
PCIG		1.57	291	iP	Pn	00 40 58.1	-0.6
PCIG				iS	Sn	00 41 27.2	+2.2
CMIG	Matias Romero	3.63	303		Pn	00 41 21.0	-0.8
CMIG					Sn	00 42 07.6	+1.0
CMIG	Matias Romero	3.63	303	iP	Pn	00 41 21.0	-0.8
CMIG				iS	Sn	00 42 07.6	+1.0

AEIC 21 00:50:51.7±2.8, 50.6N±0.1×179.1E±0.1, h8km±9km, ML3.2/12, Error ellipse: s-maj=22.0km s-min=6.8km az=162.0
IDC 21 00:50:52.3±2.2, 52.07N×178.39E, h0km, mb3.2/6, mb1 3.7/7, mb1mx3.4/63, mbtmp3.3/7, ML3.9/1, Error ellipse: s-maj=60.5km s-min=29.6km az=5.0
NEIC 21 00:50:53.2±1.2, 51.1N±0.2×179.01E±0.09, h1km±7km, Error ellipse: s-maj=33.1km s-min=6.3km az=171.0
ISC 21 00:50:56.8±1.6, 52.1N±0.3×178.95E±0.09, h10km, n17, σ1.58/19, mb3.4/6, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TASE	Tanaga Southea	1.88	96		Pn	00 51 28.1	-0.8
TASE					Sb	00 51 55.4	+0.7
TAFP	Tanaga Falls P	1.90	94		Pn	00 51 28.6	-0.7
TAFP					LR	00 51 58.2	
KIMD	Kanaga Island	2.38	96		Pn	00 51 34.6	-1.2
KIKV	Kanaga Island	2.41	93		Pn	00 51 35.2	-1.0
KIKV					Sb	00 52 10.7	+0.9
ADK	Adak	2.71	92		Pn	00 51 38.6	-1.7
ADK	Adak	2.71	92		Pn	00 51 39.4	-0.8
SMY	Shemya	3.05	285	Pn	Pn	00 51 48.7	+3.7
ATKA	Atka Island	4.22	85		Pn	00 52 00.7	-0.4
ATKA					Sn	00 52 52.9	+2.5
NIKH	Nikolski High	7.50	78	Pn	Pn	00 52 47.1	+1.1
UNV	Unalaska Valle	8.96	73	Pn	Pn	00 53 06.8	+0.7
KDAK	Kodiak Island	17.25	59	P	Pn	00 54 57.0	-0.5
	0.4nm,0.3s,baz=271,slow=6.3,SNR=6.1						
ILAR	Eielson Array	21.61	41	P	P	00 55 46.0	-0.6
	0.3nm,0.6s,baz=236,slow=8.0,SNR=4.7						
YKA	Yellowknife Ar	35.78	47	P	P	00 57 54.6	-0.9
	0.4nm,0.5s,baz=280,slow=7.9,SNR=9.7						
NVAR	Mina Array Bea	44.85	82	P	P	00 59 12.7	+1.5
	0.3nm,0.7s,baz=304,slow=6.4,SNR=3.2						
PDAR	Pinedale Array	47.42	71	P	P	00 59 31.7	+0.2
	0.3nm,0.5s,baz=322,slow=2.2,SNR=3.8						
MKAR	Makanchi Array	58.51	307	P	P	01 00 48.1	-4.8
	0.2nm,0.5s,baz=54,slow=7.8,SNR=4.1						
TXAR	Lajitas Array	59.92	80	P	P	01 01 00.5	-2.5
	0.1nm,0.5s,baz=297,slow=5.9,SNR=3.3						

IDC 21 01:13:24.4±2.2, 6.58S×129.83E, h0km, mb3.7/1, mb1 3.6/4, mb1mx3.4/30, mbtmp3.3/4, ML3.3/3, Error ellipse: s-maj=95.6km s-min=27.7km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.16	199	Pn	Pn	01 16 20.3	+1.4
	0.3nm,0.3s,baz=17,slow=11,SNR=15						
WRA	Warramunga Arr	13.98	162	Pn	Pn	01 16 42.1	-1.9
	0.1nm,0.3s,baz=342,slow=13,SNR=5.3						
WRA				Sn	Sn	01 19 04.6	-15
	0.3nm,0.3s,baz=340,slow=25,SNR=5.4						
ASAR	Alice Springs	17.43	167	P	Pn	01 17 29.4	+0.3
	0.1nm,0.3s,baz=344,slow=9.9,SNR=4.8						
MKAR	Makanchi Array	67.79	327	P	P	01 24 24.1	0.0
	0.3nm,0.4s,baz=118,slow=8.0,SNR=8.9						

LSZ 21 01:34:44.9±0.3, 16.01S×26.11E, h10km, MD0.7, Zambia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITZ	Itezhi-Tezhi	0.28	341	iP	Pg	01 34 49.9	-0.7
ITZ				i		01 34 50.0	
	baz=164,slow=11						
ITZ				iS	Sg	01 34 53.4	-0.9
ITZ	Itezhi-Tezhi	0.28	341	iP	Pg	01 34 49.9	-0.7
ITZ				i		01 34 49.9	
	baz=124,slow=12						
ITZ				iS	Sg	01 34 53.5	-0.8
ITZ	Itezhi-Tezhi	0.28	341	iP	Pg	01 34 50.1	-0.5
ITZ				i		01 34 50.2	
	baz=169,slow=8.6						
ITZ				iS	Sg	01 34 53.6	-0.7
ITZ	Itezhi-Tezhi	0.28	341	iP	Pg	01 34 49.9	-0.7
ITZ				i		01 34 50.0	
	baz=164,slow=11						
ITZ				iS	Sg	01 34 53.4	-0.9
ITZ	Itezhi-Tezhi	0.28	341	iP	Pg	01 34 49.9	-0.6
ITZ				i		01 34 50.0	
	baz=166,slow=11						
ITZ				iS	Sg	01 34 53.5	-0.9

DDA 21 01:38:08.9, 37.40N×44.93E, h6km±6km, ML2.0
ISN 21 01:38:12.2±0.7, 36.85N×45.27E, h16km±7km, ML2.9
ISC 21 01:38:07.5±1.5, 37.13N±0.03×44.87E±0.07, h11km±12km, n23, σ1.81/35, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOVA	Hakkari_Yksek	0.65	315	iP	Pg	01 38 18.9	-1.2
YOVA				iS	Sg	01 38 28.1	-0.6
YOVA				IAML		01 38 29.0	
	comp=N,159nm,0.7s						
YOVA				IAML		01 38 31.0	
	comp=E,163nm,0.3s						
BASK	Baskale_VAN	1.15	324	iP	Pb	01 38 28.6	-0.8
BASK				IAML		01 38 50.0	
	comp=E,31nm,0.6s						
BASK				IAML		01 38 53.0	
	comp=N,22nm,0.6s						
IKRK	Kirkuk	1.78	194	ePg	Pg	01 38 41.5	-0.1
IKRK				eSg	Sg	01 39 03.8	-0.9
IKRK				AML	AML	01 39 10.0	
	comp=N,111nm,0.4s						
IKRK				AML	AML	01 39 10.2	
	comp=E,290nm,0.6s						
TVAN	Van	1.81	321	iP	Pg	01 38 41.5	-0.7
GEVA	Gevas	1.86	310	iP	Pg	01 38 42.0	-1.1
GEVA				iS	Sg	01 39 08.9	+1.7
GEVA				IAML		01 39 12.0	
	comp=E,19nm,0.9s						
GEVA				IAML		01 39 14.0	
	comp=N,23nm,0.6s						
VANB	Van	1.87	322	eP	Pg	01 38 42.0	-1.4
VANB				eS	Sg	01 39 10.7	+3.0
AKDM	Akdamar-Van	1.92	309	eP	Pg	01 38 43.6	-0.6
AKDM				eS	Sg	01 39 13.5	+4.4
SIRT	Sirnak	1.97	282	eP	Pg	01 38 43.7	-1.6
SIRT				eS	Sg	01 39 13.3	+2.5
SIRN	Sırnak	1.99	281	iP	Pg	01 38 44.7	-1.0
SIRN				iS	Sg	01 39 10.9	-0.6
VMUR	Van-Muradiye	2.12	332	iP	Pb	01 38 46.0	0.0
CLDR	Caldiran	2.14	340	eP	Pb	01 38 46.5	0.0
CLDR	Caldiran	2.14	340	iP	Pn	01 38 43.1	-0.3
SRTM	Siirt_Merkez	2.49	291	iP	Pb	01 38 52.2	-0.1
SRTM				iS	Sg	01 39 28.3	+0.7
SRTM				IAML		01 39 36.0	
	comp=E,24nm,0.7s						
BLIS	Bitlis-Merkez	2.53	301	iP	Pb	01 38 53.0	0.0
GURO	Guroymak-BITLI	2.66	303	eP	Pb	01 38 54.1	-1.0
AGRB	Hanur-Agry	2.85	329	eP	Pb	01 38 56.9	-1.6
BTMN	Batman	2.96	286	iP	Pg	01 39 06.7	+2.5
BTMN				iS	Sg	01 39 41.0	-1.5
SVAN	Silvan-Diyarba	3.08	290	eP	Pb	01 38 59.7	-2.7
SVAN	Silvan-Diyarba	3.08	290	iP	Pg	01 39 03.8	-2.8
SVAN				iS	Sb	01 39 41.1	+1.0
SVAN				IAML		01 39 52.0	
	comp=N,7.2nm,1.0s						
MUSM	Mu-Merkez	3.09	302	iP	Pb	01 39 01.7	-0.9
MUSM				IAML		01 39 51.0	
	comp=N,4.5nm,1.0s						
BNGL	BINGOL	3.45	303	iP	Pg	01 39 13.9	+0.3
BHD	Baghdad	3.87	186	ePn	Pn	01 39 10.0	+3.1
BHD				eSn	Sn	01 39 52.0	-0.4
IBDR	Badra	4.11	167	ePn	Pn	01 39 12.0	+1.9
IBDR				eSn	Sn	01 39 55.0	-3.2

LSZ 21 01:38:56.9±0.3, 16.03S×26.06E, h10km, MD1.0, Zambia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITZ	Itezhi-Tezhi	0.28	352	iP	Pg	01 39 02.0	-0.6
ITZ				i		01 39 02.1	
	baz=175,slow=9.3						
ITZ				iS	Sg	01 39 05.5	-0.9
ITZ	Itezhi-Tezhi	0.28	352	iP	Pg	01 39 01.9	-0.7
ITZ				i		01 39 02.0	
	baz=176,slow=10						
ITZ				iS	Sg	01 39 05.6	-0.8
ITZ	Itezhi-Tezhi	0.28	352	iP	Pg	01 39 02.0	-0.6
ITZ				i		01 39 02.1	
	baz=142,slow=5.1						
ITZ				iS	Sg	01 39 05.6	-0.9
ITZ	Itezhi-Tezhi	0.28	352	iP	Pg	01 39 01.9	-0.7
ITZ				i		01 39 02.0	
	baz=176,slow=10						
ITZ				iS	Sg	01 39 05.6	-0.8
ITZ	Itezhi-Tezhi	0.28	352	iP	Pg	01 39 01.9	-0.7
ITZ				i		01 39 02.0	
	baz=177,slow=12						
ITZ				iS	Sg	01 39 05.5	-0.9
ITZ	Itezhi-Tezhi	0.28	352	iP	Pg	01 39 02.0	-0.6
ITZ				i		01 39 02.1	
	baz=142,slow=5.1						
ITZ				iS	Sg	01 39 05.6	-0.9
ITZ	Itezhi-Tezhi	0.28	352	iP	Pg	01 39 02.0	-0.6
ITZ				i		01 39 02.1	
	baz=175,slow=9.3						
ITZ				iS	Sg	01 39 05.5	-0.9

ATH 21 01:58:23.0, 38.36N×20.48E, h14km±2km, ML2.6/3, Error ellipse: s-maj=2.3km s-min=0.8km az=253.0
THE 21 01:58:23.3, 38.37N×20.43E, h10km±1km, ML2.4/5, Error ellipse: s-maj=1.3km s-min=0.3km az=254.0
ISC 21 01:58:23.0±0.9, 38.36N±0.02×20.46E±0.04, h13km±5km, n36, σ0.38/58, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	VASILIKIADES	0.10	57	P	Pg	01 58 25.8	-0.2
VSK1				S	Sg	01 58 28.0	-0.1
	5μm,0.1s						
KEF4	Livadi, Kephal	0.10	196	P	Pg	01 58 25.8	-0.2
KEF4				S	Sg	01 58 28.2	+0.1
KONA	Konidatara, Ke	0.11	52	P	Pg	01 58 26.0	-0.1
KONA				S	Sg	01 58 28.2	-0.1
KONA				AML	AML	01 58 28.5	
	comp=E,5287μm,0.1s						
KONA				AML	AML	01 58 28.7	
	comp=N,6058μm,0.3s						
AGT1	Agia Thekli	0.12	210	P	Pg	01 58 26.1	-0.1
AGT1				S	Sg	01 58 28.6	+0.1
FSK	Fiskardo	0.13	38	P	Pg	01 58 26.3	-0.1
FSK				S	Sg	01 58 28.7	-0.1
	comp=N,3μm,0.4s						
LXR1	Lixouri, Cepha	0.16	186	P	Pg	01 58 26.9	+0.2
LXR1				S	Sg	01 58 30.1	+0.8
LXRA	Lixouri, Kepha	0.16	187	P	Pg	01 58 26.9	+0.1
LXRA				S	Sg	01 58 30.2	+0.8
KEF3	Kipouria, Keph	0.18	210	P	Pg	01 58 27.0	-0.1
KEF3				S	Sg	01 58 30.2	+0.4
ARG2	Argostoli	0.18	173	P	Pg	01 58 27.1	0.0
ARG2				S	Sg	01 58 30.5	+0.6
ARGA	Argostoli. Kep	0.18	175	P	Pg	01 58 27.1	0.0
ARGA				S	Sg	01 58 29.9	0.0
CHV1	Chavriata, Kef	0.18	200	P	Pg	01 58 27.2	0.0
CHV1				S	Sg	01 58 30.6	+0.6
KEF2	Argostoli. Kep	0.19	174	P	Pg	01 58 27.2	-0.1
KEF2				S	Sg	01 58 30.0	-0.3
VLS	Valsamata	0.21	150	P	Pg	01 58 27.6	0.0
VLS				S	Sg	01 58 31.2	+0.5
	comp=N,3μm,0.2s						
VLS	Valsamata	0.21	150	P	Pg	01 58 27.5	0.0
VLS				S	Sg	01 58 31.1	+0.5
VLS				AML	AML	01 58 31.3	
	comp=E,5870μm,0.1s						
VLS				AML	AML	01 58 31.3	
	comp=N,5703μm,0.3s						
KFL	Anninata	0.36	134	P	Pg	01 58 30.2	0.0
KFL				S	Sg	01 58 35.7	+0.7
MGNA	Meganis	0.40	41	P	Pg	01 58 30.9	-0.1
MGNA				S	Sg	01 58 37.0	+0.8
LKD2	Lefkada island	0.46	20	P	Pg	01 58 31.9	-0.2
LKD2				S	Sb	01 58 39.3	-0.5
	comp=N,222nm,0.4s						
LKD2	Lefkada island	0.46	20	P	Pg	01 58 31.7	-0.4
LKD2				S	Sg	01 58 38.9	+0.6
VLMS	Volimes, Zakyn	0.51	162	P	Pg	01 58 32.8	-0.2
VLMS				S	Sb	01 58 40.7	-0.4
VLMS				AML	AML	01 58 41.9	
	comp=E,1888μm,0.3s						
VLMS				AML	AML	01 58 42.4	
	comp=N,2041μm,0.3s						
AST1	Astakos	0.53	69	P	Pg	01 58 33.5	+0.1
AST1				S	Sb	01 58 41.9	+0.2
PDO	Prodromos	0.62	67	P	Pg	01 58 35.3	+0.2
PDO				S	Sb	01 58 45.0	+0.7
PDO	Prodromos	0.62	67	P	Pg	01 58 35.2	+0.1
RLS	Riolos of Patr	0.85	110	P	Pg	01 58 39.1	-0.3
RLS				S	Sn	01 58 52.7	-0.3
	comp=N,80nm,0.4s						
RLS	Riolos of Patr	0.85	110	P	Pg	01 58 39.0	-0.4
PVO	Paravola	0.88	72	P	Pg	01 58 40.0	0.0
PVO	Paravola	0.88	72	P	Pg	01 58 39.9	0.0
DRO	Drossia	1.06	112	P	Pb	01 58 43.3	-0.1
ANX	Ano Chora	1.17	78	P	Pb	01 58 44.8	-0.4
EVR	Evrytania	1.20	62	P	Pn	01 58 45.2	-0.4
SERG	Sergoula	1.26	87	P	Pn	01 58 45.7	-0.6
TRIZ	Trizonia	1.27	89	P	Pn	01 58 46.0	-0.5
KALE	Kalithea	1.32	88	P	Pn	01 58 46.8	-0.4
KLV	Kalavryta, Ach	1.37	103	P	Pn	01 58 48.0	+0.1
KEK	Kerkira	1.45	339	P	Pg	01 58 51.1	+0.2
MAKR	Makrakomi, Fth	1.46	63	P	Pn	01 58 49.4	+0.2
AGG	Agios Georgios	1.61	65	P	Pb	01 58 53.2	+0.5

IDC 21 02:24:33.8±0.8, 9.92N×124.60E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.8/42, mbtmp3.8/10, MS3.5/15, Ms1 3.5/15, ms1mx3.3/35, Error ellipse: s-maj=36.5km s-min=17.7km az=75.0
MAN 21 02:24:34.4, 9.80N×124.20E, h5km, mb5.0, ML4.0, MS4.1
MAN INTENSITY IV - CARMEN INABANGA & BATUAN BOHOL; INTENSITY III - LOBOC & CATIGBIAN BOHOL; CEBU CITY; INTENSITY II - TAGBILARAN CITY.
NEIC 21 02:24:44.3±1.1, 9.8N±0.1×124.4E±0.2, h89km±8km, mb4.5/12, Error ellipse: s-maj=28.4km s-min=14.4km az=70.0
ISC 21 02:24:34.5±1.2, 9.80N±0.03×124.24E±0.04, h3km±8km, n49, σ1.51/47, mb3.9/14, MS3.5/13, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.38	253	⇑eP	Pg	02 24 41.4	-0.5
TBP				eS	Sg	02 24 46.3	-0.5
LLP	Lapu-Lapu	0.57	333	⇓iP	Pg	02 24 45.0	-0.5
LLP				iS	Sg	02 24 53.1	+0.1
MSLP	Maasin	0.70	62	eP	Pb	02 24 49.3	+0.1
MSLP				eS	Sn	02 25 01.7	-0.8
SNPH	Sibulan	1.09	245	eP	Pg	02 24 55.4	0.0
SNPH				iS	Sb	02 25 10.3	-0.3
OCLP	Ormoc	1.29	17	eP	Pg	02 24 58.5	-0.8
OCLP				eS	Sn	02 25 18.3	+1.1
CGP	Cagayan de Oro	1.41	161	⇓eP	Pn	02 25 00.1	-1.0
CGP				eS	Sn	02 25 30.0	+10
DCPH	Dipolog City	1.49	216	⇑eP	Sb	02 25 20.7	-1.5
BUTP	Butuan	1.60	121	eP	Pn	02 25 01.9	-1.7
GUIM	Jordan	1.81	297	eP	Pn	02 25 05.8	-0.8
GUIM				eS	Sn	02 25 29.0	-1.1
BUKP	Musuan	2.08	157	eP	Pn	02 25 11.3	+1.0
BUKP				eS	Sg	02 25 51.2	+10
PAGZ	Pagadian	2.12	204	eP	Pn	02 25 10.6	-0.1
PAGZ				eS	Sn	02 25 37.6	0.0
CTBH	Cotabato--PC H	2.56	180	⇑iP	Pn	02 25 17.6	+0.7
CTBH				iS	Sn	02 25 49.8	+1.1
CNP	Catarman	2.72	9	eP	Pn	02 25 19.9	+0.8
DAV	Davao City (W)	3.02	154	Pn	Pb	02 25 29.5	+0.5
	46nm,0.3s,baz=80,slow=17,SNR=3.0						
DAV				Sn	Sg	02 26 14.4	+2.7
	87nm,0.3s,baz=97,slow=22,SNR=3.7						
DAV				LR	LR	02 26 47.7	
	comp=Z,953nm,19.9s,baz=232,slow=45						
SKMP	Bagumbayan, Su	3.28	175	eP	Pn	02 25 23.8	-2.9
SKMP				eS	Sb	02 26 11.9	-1.7
SIJI	Sorong	12.70	146	LR	LR	02 32 10.0	
	comp=Z,107nm,21.4s,baz=42,slow=36						
SOEI	Soe	19.43	180	P	Pn	02 29 03.2	-0.2
SOEI				IAmb	IAmb	02 29 21.0	
	comp=Z,27nm,1.0s						
CMAR	Chiang Mai Arr	25.96	292	P	P	02 30 12.5	+4.0
	comp=Z,0.8nm,0.4s,baz=94,slow=10.0,SNR=5.8						
CMAR				LR	LR	02 40 59.0	
	comp=Z,88nm,18.1s,baz=100,slow=38						
KSRS	Korea Array	27.73	6	P	P	02 30 30.0	+5.9
	comp=Z,1.1nm,0.6s,baz=174,slow=8.8,SNR=5.3						
FITZ	Fitzroy Crossi	27.76	177	P	P	02 30 24.6	+0.1
	comp=Z,2.6nm,1.0s,baz=350,slow=12,SNR=3.5						
FITZ	Fitzroy Crossi	27.76	177	IAmb	IAmb	02 31 01.6	
	comp=Z,26nm,1.8s						
XAN	Xi'an	27.92	332	P	P	02 30 26.9	+0.9
MJAR	Matsushiro Arr	29.48	23	LR	LR	02 41 07.6	
	comp=Z,40nm,20.3s,baz=210,slow=34						
WRAB	Tennant Creek	31.18	161	P	P	02 30 53.7	-1.3
WB2	Warramunga Arr	31.19	161	P	P	02 30 54.2	-0.9
SHL	Shillong	34.45	301	P	P	02 31 24.8	+0.9
ASAR	Alice Springs	34.58	164	P	P	02 31 24.6	-0.1
	comp=Z,0.8nm,0.5s,baz=341,slow=7.1,SNR=8.8						
USRK	Ussuriysk Ar.	34.92	10	P	P	02 31 26.3	-1.1
	comp=Z,1.1nm,0.5s,baz=219,slow=42,SNR=2.7						
SONM	Songino Array	40.79	342	P	P	02 32 17.2	0.0
	comp=Z,0.3nm,0.6s,baz=166,slow=7.4,SNR=3.3						
SONM				LR	LR	02 50 26.8	
	comp=Z,76nm,18.0s,baz=154,slow=38						
STKA	Stephens Creek	44.65	159	LR	LR	02 54 56.6	
	comp=Z,38nm,18.1s,baz=22,slow=41						
TLY	Talaya	45.02	342	P	P	02 32 49.3	-2.0
	comp=Z,1.5nm,0.6s,baz=204,slow=22,SNR=4.9						
TLY	Talaya	45.02	342	IAmb	IAmb	02 32 54.3	
	comp=Z,1.7nm,0.6s						
PETK	Petropavlovsk-	50.90	25	LR	LR	02 53 51.2	
	comp=Z,23nm,20.8s,baz=59,slow=35						
MK31	Makanchi Array	51.20	324	P	P	02 33 39.6	+0.4
MK31				IAmb	IAmb	02 34 12.4	
	comp=Z,7.6nm,1.8s						
MKAR	Makanchi Array	51.20	324	P	P	02 33 39.1	-0.1
	comp=Z,0.8nm,0.7s,baz=127,slow=7.8,SNR=9.5						
MKAR				LR	LR	02 56 58.0	
	comp=Z,78nm,18.3s,baz=90,slow=38						
ZALV	Zalesovo Beam	54.09	332	P	P	02 34 00.1	-0.2
	comp=Z,0.8nm,0.5s,baz=306,slow=37,SNR=3.1						
ZALV				LR	LR	02 56 51.5	
	comp=Z,42nm,18.3s,baz=30,slow=36						
AAK	Ala-Archa	54.26	316	LR	LR	02 58 30.6	
	comp=Z,60nm,20.7s,baz=86,slow=37						
KURK	Kurchatov	55.33	326	P	P	02 34 08.8	-0.7
KK31	Karatay Array	57.16	315	P	P	02 34 22.7	-0.1
KK31				IAmb	IAmb	02 35 51.9	
	comp=Z,12nm,2.0s						
KKAR	Karatay Array	57.16	315	P	P	02 34 22.7	-0.1
KKAR				IAmb	IAmb	02 35 51.9	
	comp=Z,12nm,2.0s						
BRVK	Borovoye	60.99	326	P	P	02 34 49.6	+0.5
NRIK	Noril'sk	63.98	346	LR	LR	03 04 48.0	
	comp=Z,29nm,18.7s,baz=70,slow=38						
GEYT	Alibeck	65.22	307	LR	LR	03 06 18.0	
	comp=Z,38nm,18.5s,baz=170,slow=38						
AKTO	Aktyubinsk	67.41	321	LR	LR	03 05 25.3	
	comp=Z,60nm,18.9s,baz=115,slow=36						
ARU	Arti	68.52	327	LR	LR	03 05 05.9	
	comp=Z,21nm,18.9s,baz=92,slow=35						
ILAR	Eielson Array	80.73	26	P	P	02 36 48.0	-0.9
	comp=Z,0.2nm,0.7s,baz=227,slow=5.0,SNR=4.5						
NOA	NORSAR Array B	92.28	333	LR	LR	03 22 25.5	
	comp=Z,45nm,19.3s,baz=290,slow=38						
YKA	Yellowknife Ar	94.99	24	P	P	02 37 57.2	-1.0
	comp=Z,0.3nm,0.8s,baz=299,slow=4.6,SNR=4.5						
PLCA	Paso Flores	146.53	159	PKPbc	PKPbc	02 44 17.0	-0.7
	comp=Z,1.1nm,0.7s,baz=246,slow=3.3,SNR=3.6						

IDC 21 03:05:07.9±3.9, 1.80S×136.19E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.3/32, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=178.3km s-min=27.7km az=81.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.13	186	P	P	03 09 21.9	+0.2
	0.1nm,0.3s,baz=3.0,slow=11,SNR=4.4						
ASAR	Alice Springs	21.85	186	P	P	03 10 01.1	-1.2
	0.6nm,0.6s,baz=6.8,slow=12,SNR=7.9						
MKAR	Makanchi Array	67.54	323	P	P	03 16 06.5	+0.4
	0.1nm,0.4s,baz=105,slow=6.8,SNR=3.8						

IDC 21 03:16:19.2±3.5, 13.79S×167.03E, h219km±36km, mb3.7/10, mb1 3.7/11, mb1mx3.6/37, mbtmp4.1/11, Error ellipse: s-maj=30.8km s-min=20.0km az=124.0

ISC 21 03:16:17.5±1.0,13°.68S±0°.08×167°.0E±0°.2,h200km,n15,σ1§04/16,mb3.9/10,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.36	183	P	Pn	03 18 16.5	+1.0
	0.8nm,0.3s,baz=58,slow=16,SNR=9.3						
DZM				S	Sn	03 19 48.9	-0.8
	0.2nm,0.3s,baz=316,slow=23,SNR=2.6						
STKA	Stephens Creek	29.47	228	P	P	03 22 02.9	+0.1
	4.6nm,0.4s,baz=56,slow=9.8,SNR=16						
WRA	Warramunga Arr	31.82	254	P	P	03 22 23.5	-0.2
	1.3nm,0.5s,baz=85,slow=9.5,SNR=7.1						
ASAR	Alice Springs	32.79	247	P	P	03 22 31.6	-0.5
	2.2nm,0.5s,baz=74,slow=9.3,SNR=40						
MJAR	Matsushiro Arr	56.85	332	P	P	03 25 39.7	-1.6
	1.0nm,0.7s,baz=163,slow=7.6,SNR=4.4						
ASAJ	Asahikawa	61.66	340	P	P	03 26 15.8	+1.7
	2.8nm,0.4s,baz=72,slow=6.4,SNR=7.8						
KLR	Kul'dur	69.94	336	P	P	03 27 08.3	+1.4
	1.1nm,0.5s,baz=151,slow=3.2,SNR=5.0						
CMAR	Chiang Mai Arr	74.26	294	P	P	03 27 32.8	-0.4
	0.8nm,0.3s,baz=129,slow=4.0,SNR=4.9						
SONM	Songino Array	81.49	324	P	P	03 28 12.9	+0.4
	0.4nm,0.4s,baz=146,slow=5.1,SNR=6.6						
ILAR	Eielson Array	85.62	18	P	P	03 28 31.6	-1.4
	0.3nm,0.5s,baz=236,slow=5.2,SNR=8.1						
MKAR	Makanchi Array	96.25	317	P	P	03 29 23.5	+0.5
	1.0nm,0.7s,baz=89,slow=6.3,SNR=13						
ARCES	ARCESS Array B	119.17	345	PKP	PKPdf	03 34 41.0	-1.1
	0.9nm,0.5s,baz=44,slow=5.6,SNR=14						
FINES	FINESS Array B	124.65	338	PKP	PKPdf	03 34 51.9	-0.9
	0.4nm,0.3s,baz=120,slow=4.2,SNR=7.2						
KEST	Kesra	150.22	321	PKPbc	PKPbc	03 35 45.5	+0.2
	4.8nm,1.0s,baz=9.7,slow=2.7,SNR=4.9						
TORD	Torodi Ar. Bea	165.67	270	PKPab	PKPab	03 36 59.1	-0.2
	0.4nm,0.5s,baz=81,slow=4.3,SNR=6.2						

IDC 21 03:16:44.4±3.3,5°.93S×130°.99E,h0km,mb3.4/1,mb1 3.5/3,mb1mx3.3/37,mbtmp3.3/3,ML3.5/2,MS2.9/1,Ms1 2.9/1,ms1mx2.5/15,Error ellipse: s-maj=258.1km s-min=31.9km az=72.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.30	167	Pn	Pn	03 20 07.5	-0.8
	0.4nm,0.3s,baz=348,slow=11,SNR=12						
WRA				Sn	Sn	03 22 35.2	-13
	0.7nm,0.3s,baz=337,slow=23,SNR=8.5						
WRA				LR	LR	03 26 13.9	
	comp=Z,42nm,18.2s,baz=105,slow=40						
ASAR	Alice Springs	17.86	171	P	Pn	03 20 53.6	-0.8
	0.1nm,0.3s,baz=347,slow=8.8,SNR=4.2						
ASAR				S	Sn	03 24 03.0	-11
	0.2nm,0.3s,baz=356,slow=27,SNR=5.1						
MKAR	Makanchi Array	67.88	326	P	P	03 27 43.9	-0.9
	0.2nm,0.4s,baz=114,slow=7.4,SNR=5.2						
TORD	Torodi Ar. Bea	129.56	282	PKP	PKiKP	03 35 57.7	+0.5
	0.6nm,0.7s,baz=100,slow=0.9,SNR=3.1						

NEIC 21 03:33:24.0±1.2,16°.05N±0°.04×95°.67W±0°.07,h44km±21km, Error ellipse: s-maj=10.9km s-min=4.2km az=114.0
MEX 21 03:33:24.3±1.0,15°.94N×95°.63W,h57km±12km,MD4.1
ISC 21 03:33:20.6±1.9,15°.93N±0°.05×95°.61W±0°.02,h15km±14km,n23,σ1§62/43,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.51	251		Pn	03 33 34.4	+1.1
HUIG					Sn	03 33 42.9	+1.2
HUIG	Huatulco	0.51	251	eP	Pn	03 33 34.4	+1.1
HUIG				iS	Sn	03 33 42.9	+1.2
PANG	Puerto Angel	0.87	253	eP	Pn	03 33 38.8	+0.4
PANG				iS	Sg	03 33 49.5	+0.5
CMIG	Matias Romero	1.35	31		Pb	03 33 45.4	-0.2
CMIG					Sn	03 34 01.4	-1.2
CMIG	Matias Romero	1.35	31	iP	Pb	03 33 45.4	-0.2
CMIG				eS	Sn	03 34 01.4	-1.2
PEIG	Puerto Escondi	1.48	273	iP	Pn	03 33 46.6	-0.1
PEIG				eS	Sn	03 34 04.0	-1.8
OXBJ	Oaxaca	1.56	317	iP	Pb	03 33 49.2	0.0
OXBJ				eS	Sn	03 34 07.0	-1.0
VHO	Vista Hermosa	1.56	317	eP	Pb	03 33 49.0	-0.4
VHO				eS	Sn	03 34 07.1	-1.1
YOIG	Yosondua	2.07	297	eP	Pn	03 33 55.8	+0.7
YOIG				iS	Sn	03 34 19.4	-1.4
PCIG		2.31	95		Pn	03 33 59.3	+1.1
PCIG					Sn	03 34 28.1	+1.7
PCIG		2.31	95	eP	Pn	03 33 59.3	+1.1
PCIG				iS	Sn	03 34 25.9	-0.4
PNIG	Pinotepa	2.46	281		Pn	03 34 00.5	+0.2
PNIG					Sn	03 34 26.6	-3.5
PNIG	Pinotepa	2.46	281	eP	Pn	03 34 00.5	+0.2
PNIG				eS	Sn	03 34 26.6	-3.5
TGIG		2.53	70		Pb	03 34 04.1	-1.8
TGIG					Sb	03 34 35.5	-1.4
TGIG		2.53	70	eP	Pb	03 34 04.1	-1.8
TGIG				iS	Sb	03 34 35.5	-1.4
TOIG	Toxpalan	2.56	327	eP	Pb	03 34 04.9	-1.4
TOIG				iS	Sb	03 34 39.3	+1.5
HLIG	Huajuapan de L	2.82	312	eP	Pb	03 34 08.6	-2.3
HLIG				iS	Sb	03 34 45.2	-0.1
FTIG	Fresnillo de T	3.11	310	eP	Pb	03 34 13.6	-2.2
FTIG				eS	Sn	03 34 46.1	-0.3
TLIG	Tlapa	3.26	300		Pn	03 34 13.1	+1.7
TLIG	Tlapa	3.26	300		Pb	03 34 17.9	-0.4
TLIG					Sn	03 34 53.1	+3.1
TLIG	Tlapa	3.26	300	eP	Pb	03 34 17.9	-0.4
TLIG				iS	Sn	03 34 53.1	+3.1
CCIG	Comitan	3.36	84	Pn	Pn	03 34 15.1	+2.4
TEIG	Tepich	8.18	57		Pn	03 35 20.6	+1.8

BER 21 03:34:17.0±1.7,79°.00N×3°.35E,h10km,ML1.9,ML2.5(DNK),Confirmed Earthquake
DNK 21 03:34:18.1±2.3,79°.03N×3°.26E,h49km±152km,ML2.5, Hypocentre not reviewed by the ISC
IEPN 21 03:34:19.0,78°.96N×4°.74E,h15km
ISC 21 03:34:14.1±1.0,79°.01N±0°.08×3°.72E±0°.05,h10km,n14,σ2§05/25,3C,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	1.58	89	eP	Pg	03 34 44.6	+0.2
KBS				eS	Sb	03 35 02.9	-0.6
KBS				IAML		03 35 06.8	
	comp=Z,28nm,0.4s						
KBS	Kingsbay	1.58	89	⇑iP	Pg	03 34 44.2	-0.3
KBS				eS	Sn	03 35 02.3	-0.4
KBS	Kingsbay	1.58	89	⇑iP		03 34 44.6	
KBS				IAML		03 35 09.5	
	comp=Z,44nm,0.3s						
SPA0	Spitsbergen Ar	2.65	102	eP	Pb	03 35 00.3	-1.2
SPA0				eS	Sn	03 35 29.8	+0.9
SPA0				IAML		03 35 34.3	
	comp=Z,18nm,0.8s						
SPA0	Spitsbergen Ar	2.65	102	⇑iP	Pb	03 35 00.3	-1.2
SPA0				iS	Sn	03 35 29.2	+0.4
HSPB	Hornsund (broa	3.18	123	eP	Pn	03 35 06.0	+2.0
HSPB				eS	Sn	03 35 41.6	-0.3
HSPB				IAML		03 35 43.6	
	comp=Z,5.0nm,0.4s						
HSPB	Hornsund (broa	3.18	123	eP	Pn	03 35 06.3	+2.2
HSPB				eS	Sn	03 35 41.4	-0.5
NOR	Nord	4.29	317	iP	Pn	03 35 20.3	+1.0
NOR				iS	Sn	03 36 05.7	-3.6
NOR	Nord	4.29	317	iP	Pn	03 35 20.4	+1.0
NOR				iS	Sn	03 36 05.7	-3.6
NOR				IAML		03 36 09.4	
	comp=Z,1.8nm,0.3s						
NOR	Nord	4.29	317	iP		03 35 20.4	
NOR				iS		03 36 05.7	
NOR				IAML		03 36 09.4	
	comp=Z,1.8nm,0.3s						
HOPEN	Hopen	5.15	108	eP	Pn	03 35 33.1	+2.8
HOPEN				eS	Sn	03 36 29.3	-1.1
HOPEN				IAML		03 36 53.6	
	comp=Z,10nm,0.8s						
HOPEN	Hopen	5.15	108	eP	Pn	03 35 33.1	+2.0
HOPEN				eS	Sn	03 36 27.9	-2.5
DAG	Danmarks Havn	5.19	256	iP	Pn	03 35 31.5	-0.1
DAG				i		03 35 34.5	
DAG				iS	Sn	03 36 23.5	-7.8
DAG	Danmarks Havn	5.19	256	iP	Pn	03 35 31.6	-0.1
DAG				i		03 35 34.6	
DAG				iS	Sn	03 36 23.6	-7.8
DAG				IAML		03 36 34.0	
	comp=Z,2.4nm,0.3s						
DAG	Danmarks Havn	5.19	256	iP		03 35 31.6	
DAG				i		03 35 34.6	
DAG				iS		03 36 23.6	
DAG				IAML		03 36 34.0	
	comp=Z,2.4nm,0.3s						
DBG	Daneborg	7.21	242	iP	Pn	03 35 59.2	-0.1
DBG				iS	Sn	03 37 12.3	-8.7
DBG				IAML		03 37 15.2	
	comp=Z,1.9nm,0.3s						
DBG	Daneborg	7.21	242	iP		03 35 59.2	
DBG				iS		03 37 12.3	
DBG				IAML		03 37 15.2	
	comp=Z,1.9nm,0.3s						
ZFI2	Zemlya Franca-	7.75	56	eP	Pn	03 36 09.9	+3.2
ZFI2				eS	Sn	03 37 29.8	-4.5
	comp=Z,4.4nm,0.6s						

IDC 21 04:09:40.0±9.4,34°.99N×80°.73E,h0km,mb3.4/1,mb1 3.5/3,mb1mx3.1/52,mbtmp3.5/3,ML3.2/2,Error ellipse: s-maj=135.6km s-min=55.9km az=55.0
NNC 21 04:10:01.7±6.0,36°.51N×82°.59E,h0km,mb3.8,mpv3.4,1C-5D,Error ellipse: s-maj=89.2km s-min=46.4km az=73.0,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	7.21	342	⇓Pn	Pn	04 11 47.6	-0.9
	1.5nm,0.6s						
PDGK				⇓Sn	Sn	04 13 13.5	+2.3
	10nm,0.8s						
MK31	Makanchi Array	10.28	359	⇓Pn	Pn	04 12 30.7	+0.3
	0.5nm,0.5s,baz=185,slow=12,SNR=25						
MK31				⇑Sn	Sn	04 14 26.8	+0.5
	0.7nm,0.6s,baz=187,slow=24,SNR=3.9						
MKAR	Makanchi Array	10.28	359	Pn	Pn	04 12 30.9	+0.5
	0.4nm,0.3s,baz=189,slow=13,SNR=22						
MKAR				Sn	Sn	04 14 40.9	+15
	0.3nm,0.3s,baz=188,slow=24,SNR=5.4						
MAKZ	Makanchi	10.30	358	⇓Pn	Pn	04 12 31.5	+0.8
	1.9nm,0.5s						
MAKZ				⇓Sn	Sn	04 14 26.7	-0.2
	0.4nm,0.5s						
ZALV	Zalesovo Beam	17.51	4	P	Pn	04 14 05.0	-2.0
	0.1nm,0.3s,baz=184,slow=13,SNR=7.0						
SONM	Songino Array	20.87	50	P	P	04 14 46.4	+1.1
	1.0nm,0.7s,baz=240,slow=11,SNR=9.2						

IDC 21 04:31:57.3±10.0,6°.71S×130°.89E,h380km±129km,mb2.6/1,mb1 2.8/3,mb1mx2.6/27,mbtmp3.5/3,Error ellipse: s-maj=120.0km s-min=50.4km az=71.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.57	166	P	P	04 34 53.8	-1.3
	0.3nm,0.3s,baz=346,slow=11,SNR=10						
WRA				S	S	04 37 23.2	+1.1
	0.5nm,0.3s,baz=314,slow=9.6,SNR=5.4						
ASAR	Alice Springs	17.10	171	P	P	04 35 33.6	+0.3
	0.2nm,0.3s,baz=343,slow=9.3,SNR=13						
MKAR	Makanchi Array	68.47	326	P	P	04 42 19.8	0.0
	0.2nm,0.5s,baz=120,slow=7.2,SNR=3.0						

BJI 21 04:43:31.0±0.0,22°.20S×179°.40W,h577km,mB5.0/5,mb4.6/4
IDC 21 04:43:33.4±1.4,22°.04S×179°.53W,h578km±14km,mb3.9/17,mb1 4.0/19,mb1mx3.8/34,mbtmp4.7/19,Error ellipse: s-maj=22.7km s-min=9.4km az=158.0
NEIC 21 04:43:33.1±1.5,22°.1S±0°.1×179°.5W±0°.1,h579km±6km,mb4.4/90,Error ellipse: s-maj=17.6km s-min=15.3km az=153.0
ISC 21 04:43:33.8±0.4,22°.03S±0°.07×179°.48W±0°.06,h592km,n182,σ1§66/171,mb4.4/51,18C-11D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.86	331	P	P	04 45 05.7	+0.4
NIUE	Niue	9.42	74	P	P	04 45 44.9	-1.8
AFI	Afiamalu	10.90	44	P	P	04 45 59.6	-2.0
	baz=100,slow=17,SNR=3.1						
AFI				S	S	04 47 55.9	-7.1
	2.5nm,0.3s,baz=31,slow=23,SNR=4.8						
DZM	Mont Dzumac	13.05	267	P	P	04 46 22.8	-0.5
	3.9nm,0.3s,baz=75,slow=20,SNR=40						
DZM				S	S	04 48 36.8	-5.9
	0.9nm,0.3s,baz=121,slow=10,SNR=18						
DZM	Mont Dzumac	13.05	267	P	P	04 46 22.4	-0.9
NOUC	Port Laguerre	13.18	267	P	P	04 46 23.9	-0.6
SANVU	Saraoutou	14.20	295	P	P	04 46 34.3	-0.6
PKGZ	Pakihiroa	15.95	187	P	P	04 46 56.7	+5.8
URZ	Urewera	16.44	190	P	P	04 46 51.1	-4.2
	2.9nm,0.3s,baz=286,slow=3.8,SNR=15						
URZ				S	S	04 49 33.8	-5.6
	0.9nm,0.3s,baz=204,slow=22,SNR=8.5						
URZ	Urewera	16.44	190	P	P	04 46 52.2	-3.1
URZ				IAmb	IAmb	04 46 53.1	
	comp=Z,13nm,0.8s						
TKGZ	Te Karaka	16.52	187	P	P	04 47 01.0	+5.0
MUGZ	Murupara	16.71	190	P	S	04 49 54.0	+10
HIZ	Hauiti	17.14	195	P	P	04 47 02.8	+1.2
NMHZ	Naumai	17.31	190	P	P	04 47 01.2	-2.1
BKZ	Black Stump Fm	17.43	190	P	P	04 47 01.1	-3.3
BKZ				IAmb	IAmb	04 47 08.6	
	comp=Z,6.6nm,0.7s						
BKZ					S	04 49 53.3	-2.3
BKZ	Black Stump Fm	17.43	190	P	P	04 47 00.9	-3.5
KWHZ	Kaweka Forest	17.69	190	P	P	04 47 04.4	-2.4
KWHZ	Kaweka Forest	17.69	190	P	S	04 49 59.1	-0.8
BHHZ	Black Hill Sta	17.82	191	P	P	04 47 05.0	-2.9
BHHZ	Black Hill Sta	17.82	191	P	S	04 50 01.9	-0.1
KRHZ	Kereru	17.91	190	P	P	04 47 06.2	-2.6
KRHZ	Kereru	17.91	190	P	S	04 50 04.1	+0.7
KAHZ	Kahuranaki	17.98	189	P	P	04 47 08.0	-1.4
PNHZ	Pukenui	18.20	191	P	P	04 47 09.2	-2.2
PXZ	Pawanui	18.21	189	P	P	04 47 09.0	-2.5
TSZ	Takapari Road	18.39	191	P	P	04 47 10.9	-2.2
TSZ	Takapari Road	18.39	191	P	S	04 50 10.9	-0.2
ANWZ	Angora Road	18.69	190	P	P	04 47 14.6	-1.2
ANWZ	Angora Road	18.69	190	P	S	04 50 15.5	-0.4
BFZ	Birch Farm	18.95	190	P	P	04 47 16.2	-2.0
BFZ	Birch Farm	18.95	190	P	S	04 50 21.3	+1.3
MRZ	Mangatainoka R	19.04	192	P	P	04 47 16.7	-2.3
MRZ	Mangatainoka R	19.04	192	P	S	04 50 22.5	+1.0
OGWZ	Otaki Gorge	19.27	192	P	P	04 47 18.9	-2.1
HOWZ	Holdsworth Sta	19.28	192	P	S	04 50 24.0	-1.4
DUWZ	D'Urville Isla	19.53	195	P	P	04 47 23.6	+0.1
TRWZ	Traveller	19.74	191	P	P	04 47 24.6	-0.7
MSWZ	Moikau Station	19.83	192	P	P	04 47 25.6	-0.5
QRZ	Quartz Range	19.92	198	P	P	04 47 28.6	+1.7
TUWZ	Tuamarina	20.12	194	P	P	04 47 28.9	+0.1
EIDS	Eidsvold	27.13	257	P	P	04 48 30.8	-0.4
ARMA	Armidale	27.17	246	P	P	04 48 32.0	+0.4
CAN	Canberra	30.52	237	P	P	04 49 00.4	0.0
CTA	Charters Tower	32.00	267	P	P	04 49 13.7	+0.6
	comp=Z,28nm,0.4s,baz=94,slow=11,SNR=64						
PMG	Port Moresby	34.38	286	P	P	04 49 34.0	+0.8
	comp=Z,37nm,0.8s,baz=77,slow=5.4,SNR=6.0						
PMG	Port Moresby	34.38	286	IAmb	IAmb	04 49 34.6	
	comp=Z,32nm,0.8s						
STKA	Stephens Creek	35.89	246	P	P	04 49 46.0	+0.5
	comp=Z,12nm,0.5s,baz=94,slow=10,SNR=43						
STKA				ScP	ScP	04 54 49.5	+3.0
	comp=Z,3.6nm,1.0s,baz=317,slow=5.6,SNR=3.5						
STKA	Stephens Creek	35.89	246	P	P	04 49 45.6	+0.1
BBOO	Buckleboo	40.64	245	P	P	04 50 23.4	-0.4
BBOO				IAmb	IAmb	04 50 23.9	
	comp=Z,12nm,0.7s						
AS31	Alice Springs	42.84	259	P	P	04 50 40.9	-0.4
AS31				IAmb	IAmb	04 50 42.0	
	comp=Z,7.1nm,0.7s						
ASAR	Alice Springs	42.84	259	P	P	04 50 41.4	0.0
	comp=Z,31nm,0.8s,baz=97,slow=8.1,SNR=262						
ASAR				ScP	ScP	04 55 17.8	+3.9
	comp=Z,0.9nm,0.9s,baz=90,slow=4.6,SNR=4.4						
ASAR				S	S	04 56 22.4	-1.7
	comp=Z,1.9nm,0.9s,baz=91,slow=16,SNR=9.3						
WR0	Warramunga Arr	42.85	264	P	P	04 50 41.6	+0.2
WR0				IAmb	IAmb	04 50 41.7	
	comp=Z,7.5nm,0.7s						
WB0	Warramunga Arr	43.03	264	P	P	04 50 42.2	-0.5
WB2	Warramunga Arr	43.03	264	P	P	04 50 42.4	-0.4
WRA	Warramunga Arr	43.04	264	P	P	04 50 42.4	-0.5
	comp=Z,16nm,0.6s,baz=96,slow=8.0,SNR=87						
WRA				ScP	ScP	04 55 18.5	+3.7
	comp=Z,3.5nm,1.0s,baz=100,slow=4.0,SNR=8.3						
WRA				S	S	04 56 26.6	-0.4
	comp=Z,0.4nm,0.6s,baz=72,slow=15,SNR=3.6						
FORT	Forrest	47.43	248	P	P	04 51 15.4	-0.7
KNRA	Kununurra	49.20	268	P	P	04 51 28.9	-0.5
FITZ	Fitzroy Crossi	51.47	264	P	P	04 51 46.5	+0.5
	comp=Z,4.5nm,0.3s,baz=58,slow=6.7,SNR=29						
FITZ	Fitzroy Crossi	51.47	264	P	P	04 51 46.0	+0.1
FITZ				IAmb	IAmb	04 51 47.3	
	comp=Z,29nm,1.4s						
SIJI	Sorong	52.32	287	P	P	04 51 52.6	+0.6
	comp=Z,63nm,0.7s,baz=86,slow=6.3,SNR=20						
SOEI	Soe	55.19	273	P	P	04 52 12.3	0.0
PSA00	Pilbara Seismi	55.99	258	IAmb	IAmb	04 52 18.6	
	comp=Z,15nm,0.9s						
PETK	Petropavlovsk-	77.40	346	P	P	04 54 29.6	+1.2
	comp=Z,6.0nm,0.7s,baz=125,slow=9.3,SNR=7.9						
ISA	Isabella, Lake	81.39	46	P	P	04 54 51.2	+1.3
ISA				IAmb	IAmb	04 54 52.5	
	comp=Z,5.6nm,0.8s						
CMB	Columbia Colle	81.52	43	IAmb	IAmb	04 54 52.5	
	comp=Z,5.2nm,0.8s						
WDC	Whiskeytown Da	81.73	40	IAmb	IAmb	04 54 55.0	
	comp=Z,12nm,1.3s						
MDPB	Devils Postpil	82.12	44	P	P	04 54 55.2	+1.4
MDPB				IAmb	IAmb	04 54 56.4	
	comp=Z,6.8nm,0.9s						
WHN	Wuhan	82.25	307	P	P	04 54 55.8	+1.5
WAKR	Walker	82.40	43	IAmb	IAmb	04 54 57.9	
	comp=Z,7.4nm,0.8s						
YERR	Yerington	82.80	43	P	P	04 54 58.6	+1.4
YERR				IAmb	IAmb	04 54 59.6	
	comp=Z,9.6nm,0.6s						
NVAR	Mina Array Bea	83.08	44	P	P	04 55 00.0	+1.4
	comp=Z,4.9nm,0.9s,baz=224,slow=8.2,SNR=30						
GO09	Cerro Castillo	83.20	143	P	P	04 54 59.5	+0.7
HSIG		83.26	55	P	P	04 55 00.8	+1.4
HSIG				IAmb	IAmb	04 55 01.9	
	comp=Z,9.0nm,1.0s						
MOD	Modoc Plateau	83.87	40	IAmb	IAmb	04 55 04.8	
	comp=Z,12nm,1.4s						
TUC	Tucson	85.00	52	P	P	04 55 09.4	+1.4
TUC				IAmb	IAmb	04 55 11.3	
	comp=Z,6.8nm,0.9s						
X16A	Lo Mia Camp, P	85.58	50	IAmb	IAmb	04 55 13.8	
	comp=Z,5.9nm,1.2s						
I07A	Izee	85.64	39	IAmb	IAmb	04 55 13.2	
	comp=Z,4.1nm,0.8s						
319A	Douglas	85.66	54	IAmb	IAmb	04 55 14.6	
	comp=Z,9.2nm,0.8s						
J08A	Circle Bar Ran	85.82	40	IAmb	IAmb	04 55 14.2	
	comp=Z,13nm,1.4s						
CCUT	Cedar City	85.86	47	P	P	04 55 13.8	+1.6
U15A	North Rim	86.01	48	IAmb	IAmb	04 55 15.8	
	comp=Z,7.8nm,0.8s						
WUAZ	Wupatki	86.18	49	IAmb	IAmb	04 55 16.4	
	comp=Z,6.4nm,1.2s						
SUA	Susitna One	86.35	13	P	P	04 55 14.4	+0.7
G08A	Pilot Rock	86.67	38	IAmb	IAmb	04 55 18.3	
	comp=Z,12nm,1.2s						
E07A	Sunnyside	86.91	37	IAmb	IAmb	04 55 19.4	
	comp=Z,11nm,0.8s						
BMO	Blue Mountains	87.37	39	IAmb	IAmb	04 55 21.1	
	comp=Z,5.1nm,0.9s						
MFID	Camas Ranch	87.44	41	P	P	04 55 20.8	+1.5
MFID				IAmb	IAmb	04 55 21.8	
	comp=Z,6.2nm,0.9s						
KTH	Kantishna Hill	88.20	12	IAmb	IAmb	04 55 23.9	
	comp=Z,5.5nm,0.7s						
B08A	Colville Reser	88.27	35	IAmb	IAmb	04 55 24.9	
	comp=Z,7.6nm,0.9s						
RND	Reindeer	88.49	13	P	P	04 55 24.5	+0.8
MNTX	Cornudas Mount	88.76	55	P	P	04 55 26.8	+1.2
MCK	McKinley	88.76	13	P	P	04 55 26.0	+1.1
MCK				IAmb	IAmb	04 55 27.4	
	comp=Z,8.6nm,1.0s						
TX31	Lajitas Ar. Si	89.04	58	IAmb	IAmb	04 55 30.1	
	comp=Z,5.8nm,1.1s						
TX32	Lajitas Array	89.04	58	IAmb	IAmb	04 55 30.1	
	comp=Z,6.0nm,1.1s						
TXAR	Lajitas Array	89.04	58	P	P	04 55 28.8	+1.7
	comp=Z,4.1nm,0.9s,baz=213,slow=5.8,SNR=20						
HWUT	Hardware Ranch	89.15	44	IAmb	IAmb	04 55 29.2	
	comp=Z,3.9nm,0.8s						
PLCA	Paso Flores	89.22	134	P	P	04 55 29.0	+1.2
	comp=Z,1.1nm,0.9s,baz=236,slow=11,SNR=3.3						
CMAR	Chiang Mai Arr	89.33	290	P	P	04 55 30.9	+2.4
	comp=Z,1.2nm,0.3s,baz=133,slow=3.5,SNR=7.6						
ANMO	Albuquerque	89.43	52	P	P	04 55 29.4	+0.5
ANMO				IAmb	IAmb	04 55 31.1	
	comp=Z,3.3nm,0.9s						
WRH	Wood River Hil	89.59	13	P	P	04 55 29.1	+0.5
WRH				IAmb	IAmb	04 55 29.6	
	comp=Z,7.4nm,1.0s						
RIDG	Independent Ri	89.68	15	IAmb	IAmb	04 55 30.6	
	comp=Z,4.7nm,0.9s						
CCB	Clear Creek Bu	89.81	13	IAmb	IAmb	04 55 30.4	
	comp=Z,4.1nm,0.5s						
AHID	Auburn Hatcher	90.03	43	IAmb	IAmb	04 55 34.5	
	comp=Z,4.8nm,0.7s						
ILAR	Eielson Array	90.11	13	P	P	04 55 31.1	+0.1
	comp=Z,0.9nm,0.6s,baz=221,slow=4.4,SNR=17						
PD31	Pinedale Array	91.02	44	P	P	04 55 37.4	+1.3
PD31				IAmb	IAmb	04 55 37.7	
	comp=Z,5.8nm,1.2s						
PDAR	Pinedale Array	91.02	44	P	P	04 55 37.0	+0.9
	comp=Z,1.6nm,0.8s,baz=200,slow=3.5,SNR=14						
LZH	Lanzhou	92.61	308	eP	P	04 55 40.8	-2.6
LZH				pP	pP	04 57 45.3	-5.4
LZH				sP	sP	04 58 47.5	-1.6
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,58nm,4.9s						
SONM	Songino Array	96.00	319	P	P	04 55 59.2	+0.7
	comp=Z,0.1nm,0.4s,baz=96,slow=5.8,SNR=2.4						
INK	Inuvik	96.11	16	P	P	04 55 58.4	+0.1
	comp=Z,0.7nm,0.6s,baz=233,slow=4.1,SNR=5.9						
INK	Inuvik	96.11	16	IAmb	IAmb	04 56 03.8	
	comp=Z,2.1nm,1.1s						
YKA	Yellowknife Ar	98.47	25	P	Pdif	04 56 09.4	+0.4
	comp=Z,0.2nm,0.6s,baz=252,slow=4.9,SNR=4.3						
MKAR	Makanchi Array	111.23	313	PKiKP	PKiKP	05 01 00.3	-0.8
	comp=Z,0.4nm,0.5s,baz=186,slow=0.9,SNR=13						
KSH	Kashi	114.62	305	PKP	PKiKP	05 01 08.3	+0.4
KSH				PP	PP	05 02 18.8	+1.8
KSH				PKS	PKSdf	05 04 42.1	-2.6
KSH				SKS	SKSdf	05 07 24.3	-0.3
ARCES	ARCESS Array B	130.16	349	PKP	PKPdf	05 01 36.6	0.0
	comp=Z,1.7nm,0.5s,baz=42,slow=1.6,SNR=16						
FINES	FINESS Array B	136.82	342	PKP	PKiKP	05 01 51.1	-0.2
	comp=Z,0.9nm,0.4s,baz=75,slow=1.5,SNR=7.8						
NB2	NORSAR Subarra	140.31	352	PKP	PKPdf	05 01 50.6	-5.1
	comp=Z,0.2nm,0.4s,baz=17,slow=2.6						
AKASG	Malin Array Be	143.64	329	PKP	PKPbc	05 02 00.8	-0.1
	comp=Z,2.7nm,0.3s,baz=42,slow=4.0,SNR=25						
SUW	Suwalki	143.74	337	ePKP	PKPdf	05 02 02.5	+0.6
SORM	Soroca	145.74	326	⇓P	PKPbc	05 02 07.6	+0.3
BEL	Belsk	146.36	337	ePKP	PKiKP	05 02 10.3	-0.8
BR131	Keskin Array S	146.79	310		PKPbc	05 02 11.2	+0.5
BRTR	Keskin Array B	146.79	310	PKPbc	PKPbc	05 02 10.8	+0.1
	comp=Z,1.5nm,0.7s,baz=142,slow=4.7,SNR=12						
ANTO	Ankara	147.34	310	⇓P	PKPbc	05 02 12.6	+0.5
KWP	Kalwaria Pacla	147.35	333	ePKP	PKPbc	05 02 12.6	+1.0
KWP	Kalwaria Pacla	147.35	333		PKPbc	05 02 12.3	+0.7
BUR08	Bucovina Ar. S	147.65	328		PKiKP	05 02 14.5	+0.4
BURAR	Bucovina Array	147.66	328	⇓P	PKiKP	05 02 14.2	+0.1
CFR	Carcaliu	147.68	322	⇓P	PKPbc	05 02 13.3	+0.7
OJC	Ojcow	148.04	336	ePKP	PKPbc	05 02 14.0	+0.6
OJC	Ojcow	148.04	336		PKPbc	05 02 13.8	+0.4
VRI	Vrincioaia	148.04	324	⇓P	PKPbc	05 02 14.1	+0.6
KOLS	Kolonicke sedl	148.06	332	ePKP	PKiKP	05 02 14.7	0.0
NIE	Niedzica	148.50	335	ePKP	PKiKP	05 02 16.1	+0.4
TRPA	Tarpa	148.55	331	⇑P	PKPbc	05 02 15.2	+0.6
DOPR	Dopca	148.69	326	⇓P	PKiKP	05 02 16.6	+0.5
KSP	Ksiaz	148.70	341	ePKP	PKiKP	05 02 16.2	+0.2

OSTC	Ostas	148.98	340	⇑ePKP	PKiKP	05 02 16.9	+0.3
CHVC	Chvalec	149.00	341	⇑ePKP	PKiKP	05 02 16.6	0.0
CHVC				ex	x	05 03 14.1	
LANS	Liptovska Anna	149.03	336	ePKP	PKiKP	05 02 17.7	+0.9
UPC	Upice	149.08	341	⇑ePKP	PKiKP	05 02 17.0	+0.2
DPC	Dobruska-Polom	149.12	340	⇑ePKP	PKiKP	05 02 17.3	+0.4
CLL	Collm	149.20	345	ePKP	PKiKP	05 02 17.7	+0.8
	baz=21,slow=1.9						
CLL	Collm	149.20	345	⇑iPKPbc	PKiKP	05 02 17.8	+0.8
	comp=Z,15nm,0.8s						
CLL				⇓iPKPab	PKPab	05 02 24.9	+1.8
CLL	Collm	149.20	345		PKiKP	05 02 17.3	+0.3
KRLC	Kraliky	149.22	339	⇑ePKP	PKiKP	05 02 17.3	+0.2
MORC	Moravsky Berou	149.22	338	⇓P	PKiKP	05 02 17.5	+0.4
VOIR		149.22	325	⇑P	PKPbc	05 02 16.9	+0.4
CLZ	Clausthal	149.27	348	ePKP	PKiKP	05 02 17.3	+0.1
	baz=21,slow=1.9						
BRG	Berggiesshubel	149.35	343	i PKP	PKiKP	05 02 17.5	+0.1
	comp=Z,13nm,0.6s						
BRG	Berggiesshubel	149.35	343	ePKP	PKiKP	05 02 17.4	0.0
	baz=21,slow=1.9						
DRGR		149.46	329	⇑P	PKPbc	05 02 17.4	+0.4
FBE	Freiberg	149.46	344	ePKP	PKiKP	05 02 18.0	+0.4
	baz=21,slow=1.9						
ARR	Arges	149.49	325	⇓P	PKiKP	05 02 18.9	+1.0
PVCC	Panska Ves	149.49	342	⇑ePKP	PKiKP	05 02 18.1	+0.5
NEUB	Neuenburg	149.58	346	ePKP	PKiKP	05 02 18.2	+0.4
	baz=21,slow=1.9						
GTTG	Gottingen	149.63	348	ePKP	PKiKP	05 02 18.2	+0.3
	baz=21,slow=1.9						
VYHS	Vyhne	149.81	335	ePKP	PKiKP	05 02 18.6	+0.2
GOPC	GO Pecny, Ondr	149.98	341	⇑ePKP	PKiKP	05 02 18.9	+0.2
PRU	Pruhonice	149.98	342	⇑ePKP	PKiKP	05 02 18.8	+0.2
MOX	Moxa	150.14	346	ePKP	PKPbc	05 02 18.9	+0.4
	baz=21,slow=1.9						
TANN	Tannenbergstha	150.15	345	ePKP	PKiKP	05 02 19.2	+0.1
	baz=21,slow=1.9						
PLN	Plauen	150.16	345	ePKP	PKiKP	05 02 19.2	+0.2
	baz=21,slow=1.9						
BUG	Bochum--Univer	150.18	351	ePKP	PKPbc	05 02 18.6	+0.2
	baz=21,slow=1.9						
GUNZ	Gunzen	150.23	345	ePKP	PKiKP	05 02 19.7	+0.4
	baz=21,slow=1.9						
NKC	Novy Kostel	150.33	344	⇑ePKP	PKPbc	05 02 19.3	+0.4
SIRR	Siria	150.34	330	⇓P	PKPbc	05 02 20.7	+1.2
PBCC	Pribram	150.41	342	⇑ePKP	PKiKP	05 02 19.8	+0.2
GZR	Gura Zlata	150.42	327	⇑P	PKPbc	05 02 19.7	+0.3
MODS	Modra-Piesok	150.49	337	ePKP	PKiKP	05 02 20.1	+0.3
VLAD	Vladila	150.51	324	⇑P	PKPab	05 02 27.1	-1.7
MANZ	Manzenberg	150.64	345	ePKP	PKiKP	05 02 20.3	+0.2
	baz=21,slow=1.9						
PLVB	Pleven	150.78	322	⇓P	PKiKP	05 02 20.7	+0.3
BZS	Buzias	150.83	329	⇑P	PKiKP	05 02 20.7	+0.1
KHC	Kasperske Hory	151.03	342	⇑ePKP	PKiKP	05 02 21.3	+0.4
KHC				ePKPAB	PKPab	05 02 32.4	+1.5
KHC				ex	x	05 03 21.8	
GEC2	GERESS Array S	151.25	342	ePKP	PKiKP	05 02 21.6	+0.1
	baz=21,slow=1.9						
GERES	GERESS Array B	151.25	342	PKPbc	PKiKP	05 02 21.8	+0.3
	comp=Z,1.9nm,0.5s,baz=25,slow=1.5,SNR=17						
GERES				PKPab	PKPab	05 02 31.3	-0.6
	comp=Z,0.6nm,0.5s,baz=27,slow=4.5,SNR=4.7						
CONA	Conrad Observa	151.37	338	i PKiKP	PKiKP	05 02 22.1	+0.4
	comp=Z,2.0nm,0.5s						
MOA	Molln	151.97	340	i PKPbc	PKPbc	05 02 22.8	+0.1
	comp=Z,1.3nm,0.5s						
MYKA	Terra Mystica	153.25	340	i PKPbc	PKPbc	05 02 25.3	-0.2
	comp=Z,1.9nm,0.4s						
WTTA	Wattenberg	153.27	343	i PKPbc	PKPbc	05 02 25.8	+0.1
	comp=Z,2.8nm,0.4s						
ABTA	Abfaltersbach	153.49	341	i PKPbc	PKPbc	05 02 25.9	-0.2
	comp=Z,0.5nm,0.2s						
TORD	Torodi Ar. Bea	171.10	187	PKP	PKPdf	05 02 35.4	-0.3
	comp=Z,0.6nm,0.8s,baz=312,slow=0.8,SNR=3.8						
TORD				PKPab	PKPab	05 03 58.6	-0.6
	comp=Z,0.4nm,0.7s,baz=171,slow=4.7,SNR=3.2						

*THE **21** 04:55:24.7, 38°.41N×20°.47E, $h11^{km}$, ML3.3/9, Error ellipse: s-maj=0.8km s-min=0.3km az=268.0*
*ATH **21** 04:55:24.4, 38°.41N×20°.46E, $h13^{km}\pm1^{km}$, ML2.9/13, Error ellipse: s-maj=1.5km s-min=0.6km az=282.0*
ISC 21 04:55:25.0±0.9, **38°.40N**±0°.02×**20°.48E**±0°.03, **$h10^{km}\pm5^{km}$, n60, $\sigma 0^{s}.68$**/85, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	VASILIKIADES	0.07	84	P	Pg	04 55 26.9	-0.3
VSK1				S	Sg	04 55 28.8	+0.1
	36µm,0.1s						
KONA	Konidatara, Ke	0.07	72	P	Pg	04 55 27.0	-0.2
KONA				S	Sg	04 55 28.9	0.0
FSK	Fiskardo	0.09	48	P	Pg	04 55 27.1	-0.3
KEF1	Kardakata, Kep	0.12	183	P	Pg	04 55 27.4	-0.5
KEF1				S	Sg	04 55 30.0	+0.1
KEF4	Livadi, Kephal	0.15	197	P	Pg	04 55 28.0	-0.4
KEF4				S	Sg	04 55 30.7	+0.1
AGT1	Agia Thekli	0.17	207	P	Pg	04 55 28.2	-0.4
AGT1				S	Sg	04 55 31.4	+0.3
	36µm,0.2s						
LXR1	Lixouri, Cepha	0.20	189	P	Pg	04 55 29.1	-0.1
LXR1				S	Sg	04 55 32.9	+0.8
LXRA	Lixouri, Kepha	0.20	190	P	Pg	04 55 29.1	-0.2
LXRA				S	Sg	04 55 33.0	+0.9
ARG2	Argostoli	0.22	178	P	Pg	04 55 29.4	-0.2
ARG2				S	Sg	04 55 33.0	+0.3
KEF3	Kipouria, Keph	0.22	208	P	Pg	04 55 29.2	-0.5
KEF3				S	Sg	04 55 32.9	+0.1
ARGA	Argostoli. Kep	0.23	180	P	Pg	04 55 29.3	-0.3
ARGA				S	Sg	04 55 32.6	-0.1
CHV1	Chavriata, Kef	0.23	200	P	Pg	04 55 29.3	-0.4
CHV1				S	Sg	04 55 33.5	+0.6
KEF2	Argostoli. Kep	0.24	179	P	Pg	04 55 29.5	-0.4
KEF2				S	Sg	04 55 33.5	+0.4
VLS	Valsamata	0.24	159	P	Pg	04 55 29.5	-0.4
VLS				S	Sg	04 55 34.0	+0.8
	7µm,0.1s						
VLS	Valsamata	0.24	159	P	Pg	04 55 29.5	-0.4
VLS				S	Sg	04 55 33.6	+0.4
VLS				AML	AML	04 55 34.0	
	comp=E,15317µm,0.1s						
VLS				AML	AML	04 55 34.0	
	comp=N,12065µm,0.2s						
MGNA	Meganis	0.35	44	P	Pg	04 55 31.8	-0.2
MGNA				S	Sg	04 55 37.6	+0.9
LKD2	Lefkada island	0.41	20	P	Pg	04 55 32.7	-0.4
LKD2				S	Sg	04 55 38.6	0.0
	comp=N,1µm,0.3s						
LKD2	Lefkada island	0.41	20	P	Pg	04 55 32.7	-0.4
LKD2				S	Sg	04 55 38.5	-0.1
LKD2				AML	AML	04 55 45.9	
	comp=N,2229µm,0.5s						
LKD2				AML	AML	04 55 46.8	
	comp=E,2649µm,0.6s						
AST1	Astakos	0.50	74	P	Pg	04 55 34.7	0.0
AST1				S	Sg	04 55 42.3	+1.0
	comp=E,4µm,0.3s						
VLMS	Volimes, Zakyn	0.54	165	P	Pg	04 55 35.0	-0.5
VLMS				S	Sg	04 55 43.5	+0.8
VLMS				AML	AML	04 55 44.9	
	comp=E,7857µm,0.2s						
VLMS				AML	AML	04 55 45.1	
	comp=N,10344µm,0.2s						
PDO	Prodromos	0.59	70	P	Pg	04 55 36.1	-0.3
PDO	Prodromos	0.59	70	P	Pg	04 55 36.3	-0.1
PDO				AML	AML	04 55 49.5	
	comp=E,2110µm,0.3s						
PDO				AML	AML	04 55 50.9	
	comp=N,3306µm,0.3s						
ZAK2	Zakynthos	0.70	151	P	Pg	04 55 38.2	-0.3
ZAK2				S	Sg	04 55 48.1	+0.5
	comp=N,5µm,0.3s						
VTN	Vitineika	0.74	131	P	Pg	04 55 39.1	-0.1
KRI1	kERI	0.79	160	P	Pg	04 55 39.1	-1.0
KRI1				S	Sb	04 55 51.8	+0.3
PVO	Paravola	0.85	75	P	Pg	04 55 41.2	-0.1
PVO	Paravola	0.85	75	P	Pg	04 55 41.3	-0.1
PVO				S	Sg	04 55 52.9	+0.5
RLS	Riolos of Patr	0.85	114	P	Pg	04 55 40.6	-0.8
RLS				S	Sg	04 55 53.3	+0.9
	comp=N,398nm,0.4s						
RLS	Riolos of Patr	0.85	114	P	Pg	04 55 40.5	-0.8
RLS				AML	AML	04 56 04.3	
	comp=N,1298µm,0.5s						
RLS				AML	AML	04 56 04.3	
	comp=E,840µm,0.7s						
DRO	Drossia	1.07	114	P	Pg	04 55 44.5	-1.1
DRO				S	Sb	04 56 00.4	+0.7
	comp=E,1µm,0.4s						
DRO	Drossia	1.07	114	P	Pg	04 55 44.5	-1.1
IGT	Igoumenitsa	1.14	354	P	Pg	04 55 45.9	-0.9
IGT	Igoumenitsa	1.14	354	P	Pg	04 55 45.7	-1.2
ANX	Ano Chora	1.15	80	P	Pg	04 55 46.1	-0.9
ANX				S	Sb	04 56 02.9	+0.9
	comp=E,1µm,0.6s						
ANX	Ano Chora	1.15	80	P	Pg	04 55 46.1	-0.9
EVR	Evrytania	1.16	63	P	Pg	04 55 46.4	-1.0
EVR	Evrytania	1.16	63	P	Pg	04 55 46.3	-1.0
EVR				AML	AML	04 56 10.6	
	comp=E,558µm,0.6s						
EVR				AML	AML	04 56 12.3	
	comp=N,597µm,0.6s						
LAKA	Lakka	1.19	97	P	Pb	04 55 46.2	-1.5
LAKA				AML	AML	04 56 13.6	
	comp=E,490µm,0.9s						
LAKA				AML	AML	04 56 19.1	
	comp=N,611µm,0.6s						
SERG	Sergoula	1.24	89	P	Pn	04 55 47.4	-1.0
TRIZ	Trizonia	1.25	91	P	Pn	04 55 47.5	-1.1
TRIZ	Trizonia	1.25	91	P	Pn	04 55 47.5	-1.1
JAN	Janina	1.29	13	P	Pb	04 55 49.5	+0.1
JAN				AML	AML	04 56 11.5	
	comp=E,888µm,0.3s						
JAN				AML	AML	04 56 12.9	
	comp=N,700µm,0.4s						
AMT	Artemida-Makis	1.30	131	P	Pn	04 55 48.6	-0.7
KALE	Kalithea	1.30	90	P	Pn	04 55 48.4	-1.0
KALE	Kalithea	1.30	90	P	Pn	04 55 48.3	-1.0
KALE				AML	AML	04 56 14.0	
	comp=E,1035µm,0.6s						
KALE				AML	AML	04 56 14.5	
	comp=N,1518µm,0.7s						
KLV	Kalavryta, Ach	1.36	105	P	Pn	04 55 49.5	-0.7
KLV	Kalavryta, Ach	1.36	105	P	Pn	04 55 49.4	-0.7
KLV				AML	AML	04 56 12.0	
	comp=N,483µm,0.4s						
KLV				AML	AML	04 56 16.1	
	comp=E,304µm,0.5s						
KASA	Kassiopi	1.41	343	P	Pg	04 55 51.9	-0.1
KEK	Kerkira	1.41	338	P	Pn	04 55 50.8	0.0
MAKR	Makrakomi, Fth	1.43	64	P	Pn	04 55 50.8	-0.2
MAKR				AML	AML	04 56 19.9	
	comp=E,931µm,0.5s						
MAKR				AML	AML	04 56 22.6	
	comp=N,590µm,0.6s						
AGG	Agios Georgios	1.57	66	P	Pn	04 55 53.4	+0.3
THL	Klokotos Trika	1.67	45	P	Pn	04 55 55.2	+0.9
ITM	Ithomi	1.67	136	P	Pn	04 55 54.8	+0.4
AXAR	Agios Charalam	1.75	77	P	Pb	04 55 57.7	+0.5
AXAR				AML	AML	04 56 34.0	
	comp=N,1066µm,0.5s						
AXAR				AML	AML	04 56 34.8	
	comp=E,803µm,0.5s						
PYL	PYLOS	1.81	146	P	Pn	04 55 56.5	+0.3
VLX	Vlachokerasia	1.82	124	P	Pb	04 55 58.7	+0.2
PROD	Prodromos	1.91	94	P	Pb	04 55 59.5	-0.5
PROD				AML	AML	04 56 32.2	
	comp=N,362µm,0.6s						
PROD				AML	AML	04 56 35.1	
	comp=E,490µm,0.6s						
VIL2	Platees	2.20	94	P	Pb	04 56 04.0	-0.9
DID	Didima	2.35	111	P	Pn	04 56 05.5	+1.7
MRKA	Markates	2.46	82	P	Pn	04 56 06.1	+1.0

DJA 21 05:00:17.4±0.4, **2°S**±4°×**12°4E**±°, **$h10^{km}$, M4.2**/8, **mB5.0**/1, **mb4.6**/3, **MLv4.0**/8, **Mw(mB)4.3**/1, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	1.52	300	P	Pn	05 00 44.3	-0.4
LUWI				S	Sn	05 01 04.4	-0.2
SANI	Sanana	1.91	97	P	Pn	05 00 49.4	-0.7
APSI	Ampana	2.60	290	P	Pn	05 00 59.5	0.0
NLAI	Namlea	3.33	115	P	Pn	05 01 10.2	+0.7
BBSI	Bau Bau	3.96	203	P	Pn	05 01 18.1	-0.1
SPSI	Sidrap Palu	4.82	244	P	Pn	05 01 29.9	-0.1
BKSI	Bulukumba	5.28	229	P	Pn	05 01 36.8	+0.4
	0.1nm22nm,0.5s						
EDFI	Ende, Flores	7.30	199	P	Pn	05 02 04.3	+0.1

*IDC **21** 05:34:43.4±1.6, 17°.21S×178°.83W, $h557^{km}\pm19^{km}$, mb3.6/8, mb1 3.9/10, mb1mx3.5/29, mbtmp4.5/10, Error ellipse: s-maj=62.8km s-min=11.0km az=152.0*
*NEIC **21** 05:34:44.5±1.9, 17°.7S±0°.1×178°.6W±0°.1, $h584^{km}\pm7^{km}$, mb4.2/68, Error ellipse: s-maj=19.5km s-min=14.5km az=149.0*
ISC 21 05:34:41.8±0.5, **17°.64S**±0°.10×**178°.60W**±0°.08, **$h547^{km}$, n106, $\sigma 1^{s}.11$**/107, **mb4.1**/41, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.20	268	P	P	05 36 05.2	+7.3
AFI	Afiamalu	7.54	62	P	P	05 36 36.1	+1.0
	13nm,0.3s,baz=94,slow=1.5,SNR=27						
AFI	Afiamalu	7.54	62	P	P	05 36 36.8	+1.7
NIUE	Niue	8.36	101	P	P	05 36 45.6	+2.6
SANVU	Saraoutou	13.79	277	P	P	05 37 42.4	+3.6
DZM	Mont Dzumac	14.74	250	P	P	05 37 49.8	+1.0
	1.0nm,0.3s,baz=271,slow=20,SNR=20						
DZM	Mont Dzumac	14.74	250	P	P	05 37 49.6	+0.8
NOUC	Port Laguerre	14.88	250	P	P	05 37 50.8	+0.7
THZ	Tophouse	25.12	195	P	P	05 39 24.0	+0.4
THZ				IAmb	IAmb	05 39 26.4	
	comp=Z,11nm,1.0s						
MLZ	Mavora Lakes	29.79	199	P	P	05 40 04.9	+0.5
ARMA	Armidale	29.92	239	P	P	05 40 07.4	+1.6
ARMA				IAmb	IAmb	05 40 08.0	
	comp=Z,10nm,0.8s						
WHZ	Wether Hill Ro	30.32	199	P	P	05 40 09.6	+0.7
CAN	Canberra	33.72	232	P	P	05 40 39.2	+1.1
PMG	Port Moresby	34.24	279	P	P	05 40 44.6	+2.0
COEN	Coen	36.92	270	P	P	05 41 06.3	+1.4
TOO	Toolangi	37.20	230	P	P	05 41 07.6	+0.7
STKA	Stephens Creek	38.60	241	P	P	05 41 19.5	+1.2
	comp=Z,13nm,0.5s,baz=81,slow=9.5,SNR=49						
STKA	Stephens Creek	38.60	241	P	P	05 41 19.6	+1.2
STKA				IAmb	IAmb	05 41 20.4	
	comp=Z,5.0nm,1.0s						
BBOO	Buckleboo	43.38	241	P	P	05 41 56.7	+0.5
WR0	Warramunga Arr	44.31	259	P	P	05 42 03.4	-0.3
WR0				IAmb	IAmb	05 42 05.8	
	comp=Z,6.2nm,0.3s						
WB0	Warramunga Arr	44.47	260	P	P	05 42 04.5	-0.4
WB0				IAmb	IAmb	05 42 05.3	
	comp=Z,13nm,0.8s						
WB2	Warramunga Arr	44.49	259	P	P	05 42 04.7	-0.4
WRA	Warramunga Arr	44.50	259	P	P	05 42 04.9	-0.2
	comp=Z,8.7nm,0.5s,baz=93,slow=6.9,SNR=67						
AS31	Alice Springs	44.69	254	P	P	05 42 06.8	+0.2
ASAR	Alice Springs	44.69	254	P	P	05 42 06.8	+0.3
	comp=Z,91nm,0.5s,baz=88,slow=8.3,SNR=1670						
ASAR				ScP	ScP	05 46 36.9	-0.8
	comp=Z,0.9nm,0.8s,baz=103,slow=4.7,SNR=4.6						
ASAR				S	S	05 48 01.3	-2.4
	comp=Z,0.4nm,1.0s,baz=86,slow=16,SNR=4.1						
MIDW	Midway	45.60	2	P	P	05 42 15.2	+2.0
FORT	Forrest	49.96	244	P	P	05 42 45.4	-0.6
KNRA	Kununurra	50.34	264	P	P	05 42 48.8	-0.1
FITZ	Fitzroy Crossi	52.89	260	P	P	05 43 07.6	+0.3
FITZ				IAmb	IAmb	05 43 08.0	
	comp=Z,3.4nm,0.7s						
SOEI	Soe	55.89	270	P	P	05 43 30.6	+2.0
PSA00	Pilbara Seismi	57.80	255	P	P	05 43 41.1	-0.4
PSA00				IAmb	IAmb	05 43 41.7	
	comp=Z,16nm,0.8s						
NWAO	Narrogin (SRO)	59.18	242	P	P	05 43 50.7	+0.2
NWAO				IAmb	IAmb	05 44 09.5	
	comp=Z,15nm,1.1s						
MORW	Morawa	60.42	246	P	P	05 43 58.3	-0.6
MORW				IAmb	IAmb	05 44 07.9	
	comp=Z,24nm,1.4s						
GIRL	Giralia	62.80	253	P	P	05 44 15.3	+0.8
JAGI	Jajag, Banyuwa	65.87	268	P	P	05 44 32.7	-1.3
UGM	Wanagama	69.47	268	P	P	05 44 55.5	-0.7
QSPA	South Pole Qui	72.41	180	P	P	05 45 12.4	-0.2
QSPA				IAmb	IAmb	05 45 13.4	
	comp=Z,4.5nm,1.0s						
ORV	Oroville	77.91	42	P	P	05 45 43.0	-0.4
MDPB	Devils Postpil	78.41	44	P	P	05 45 46.7	+0.2
OMMB	Old Mammoth Mi	78.45	44	P	P	05 45 47.1	+0.3
WAKR	Walker	78.65	43	P	P	05 45 48.3	+0.6
BEKR	Beckworth	78.81	42	P	P	05 45 48.7	+0.2
BEKR				IAmb	IAmb	05 45 48.9	
	comp=Z,2.4nm,0.5s						
PNTR	Pine Nut	78.87	43	P	P	05 45 49.1	+0.3
PNTR				IAmb	IAmb	05 45 50.0	
	comp=Z,7.2nm,0.9s						
YERR	Yerington	79.04	43	P	P	05 45 50.1	+0.3
YERR				IAmb	IAmb	05 45 50.6	
	comp=Z,4.5nm,0.6s						
PAHR	Pah Rah Range	79.35	42	P	P	05 45 51.5	+0.2
NVAR	Mina Array Bea	79.36	44	P	P	05 45 51.4	0.0
	comp=Z,1.6nm,0.6s,baz=225,slow=8.5,SNR=20						
NV11	Mina Array Sit	79.46	44	P	P	05 45 52.2	+0.3
KVN	Kaiserville	79.83	44	P	P	05 45 54.0	+0.1
TPNV	Topopah Spring	79.97	46	P	P	05 45 54.5	-0.1
MOD	Modoc Plateau	80.00	40	P	P	05 45 55.0	+0.3
WHN	Wuhan	80.30	306	P	P	05 45 52.0	-4.3
BRLK	Bradley Lake	80.36	14	P	P	05 45 55.1	-0.8
BRLK				IAmb	IAmb	05 46 12.5	
	comp=Z,16nm,1.3s						
PINE	Pine Mountain	80.69	38	P	P	05 45 58.9	+0.6
PINE				IAmb	IAmb	05 46 02.1	
	comp=Z,8.9nm,1.4s						
R11A	Troy Canyon, C	81.13	45	P	P	05 46 00.9	+0.2
WVOR	Wild Horse Val	81.32	40	P	P	05 46 00.8	-0.6
WVOR				IAmb	IAmb	05 46 02.5	
	comp=Z,3.7nm,1.0s						
GAMB	Gambell	81.33	3	P	P	05 46 00.9	+0.1
TUC	Tucson	81.68	52	P	P	05 46 04.6	+1.1
I07A	Izee	81.71	39	P	P	05 46 02.8	-0.6
SUA	Susitna One	81.91	13	P	P	05 46 02.6	-1.4
SUA				IAmb	IAmb	05 46 04.7	
	comp=Z,4.4nm,0.9s						
X16A	Lo Mia Camp, P	82.15	50	P	P	05 46 06.6	+0.6
X16A				IAmb	IAmb	05 46 08.0	
	comp=Z,3.6nm,0.9s						
TTA	Tatalina	82.24	10	P	P	05 46 05.2	-0.4
KNB	Kanab	82.38	47	P	P	05 46 07.5	+0.4
PMR	Palmer	82.39	14	P	P	05 46 05.2	-1.1
PMR				IAmb	IAmb	05 46 22.3	
	comp=Z,11nm,1.4s						
U15A	North Rim	82.47	48	P	P	05 46 08.3	+0.6
U15A				IAmb	IAmb	05 46 09.2	
	comp=Z,4.5nm,0.7s						
GHO	Glory Hole Cre	82.59	14	P	P	05 46 06.6	-0.8
GHO				IAmb	IAmb	05 46 07.1	
	comp=Z,5.1nm,0.6s						
G08A	Pilot Rock	82.71	38	P	P	05 46 08.6	+0.2
SCM	Sheep Creek Mo	83.01	14	P	P	05 46 08.6	-1.0
SCM				IAmb	IAmb	05 46 09.7	
	comp=Z,12nm,1.0s						
VRDI	Verde Repeater	83.47	16	P	P	05 46 11.3	-0.7
VRDI				IAmb	IAmb	05 46 25.1	
	comp=Z,11nm,1.4s						
GLB	Gilahina Butte	83.56	16	P	P	05 46 11.5	-0.7
GLB				IAmb	IAmb	05 46 12.0	
	comp=Z,4.0nm,0.6s						
BALM	Baldy	83.61	17	P	P	05 46 11.9	-0.7
BALM				IAmb	IAmb	05 46 14.9	
	comp=Z,12nm,1.5s						
KTH	Kantishna Hill	83.75	12	P	P	05 46 11.3	-1.9
KTH				IAmb	IAmb	05 46 21.1	
	comp=Z,4.7nm,1.4s						
TRF	Thorofare Moun	83.79	12	P	P	05 46 12.1	-1.4
TRF				IAmb	IAmb	05 46 12.8	
	comp=Z,5.5nm,0.8s						
BARN	Barnard Glacie	83.83	17	P	P	05 46 13.4	-0.3
BARN				IAmb	IAmb	05 46 17.5	
	comp=Z,11nm,1.4s						
CTGM	Chitina Glacie	83.84	17	P	P	05 46 13.1	-0.7
CTGM				IAmb	IAmb	05 46 23.8	
	comp=Z,12nm,1.3s						
RND	Reindeer	84.05	13	P	P	05 46 13.6	-1.0
RND				IAmb	IAmb	05 46 29.6	
	comp=Z,6.0nm,1.4s						
DHY	Denali Highway	84.08	14	P	P	05 46 13.9	-1.0
B08A	Colville Reser	84.22	35	P	P	05 46 14.6	-1.2
MCK	McKinley	84.32	13	P	P	05 46 15.2	-0.7
MCK				IAmb	IAmb	05 46 15.3	
	comp=Z,5.5nm,1.2s						
ILAR	Eielson Array	85.67	13	P	P	05 46 20.6	-1.7
	comp=Z,0.7nm,0.4s,baz=220,slow=5.3,SNR=18						
TX31	Lajitas Ar. Si	86.00	58	P	P	05 46 25.8	+0.9
TX31				IAmb	IAmb	05 46 26.4	
	comp=Z,3.1nm,0.8s						
TX32	Lajitas Array	86.00	58	P	P	05 46 25.9	+0.9
TX32				IAmb	IAmb	05 46 26.4	
	comp=Z,3.1nm,0.8s						
TXAR	Lajitas Array	86.00	58	P	P	05 46 25.8	+0.9
	comp=Z,3.0nm,0.8s,baz=215,slow=6.2,SNR=19						
YHL	Hebgen Lake	87.20	41	P	P	05 46 31.7	+1.2
PD31	Pinedale Array	87.28	44	P	P	05 46 30.7	-0.2
PD31				IAmb	IAmb	05 46 31.0	
	comp=Z,5.1nm,1.5s						
PDAR	Pinedale Array	87.28	44	P	P	05 46 30.4	-0.4
	comp=Z,1.2nm,0.5s,baz=220,slow=3.3,SNR=17						
CMAR	Chiang Mai Arr	88.62	290	P	P	05 46 38.3	+1.0
	comp=Z,0.5nm,0.3s,baz=102,slow=2.7,SNR=4.5						
SNAA	Sanae	90.87	179	P	P	05 46 45.5	-1.3
VNA3	Neumayer Olymp	91.02	176	P	P	05 46 46.5	-1.0
VNA2	Neumayer--Watz	91.45	177	P	P	05 46 49.1	-0.3
YKA	Yellowknife Ar	94.16	25	P	P	05 47 00.8	-1.0
	comp=Z,0.6nm,0.8s,baz=245,slow=4.5,SNR=6.0						
MKAR	Makanchi Array	108.82	314	PKiKP	PKiKP	05 52 07.1	-1.9
	comp=Z,0.3nm,0.6s,baz=72,slow=2.6,SNR=3.8						
BATG	Bathurst New B	118.00	45	PKPdf	PKPdf	05 52 24.7	-1.8
GBN	Guysborough	121.31	47	PKPdf	PKPdf	05 52 31.5	-1.4
CLL	Collm	145.16	347	i PKPbc	PKPbc	05 53 17.9	-0.1
LANS	Liptovska Anna	145.32	339	ePKP	PKPab	05 53 19.2	-0.6
KHC	Kasperske Hory	147.07	345	ePKP	PKPdf	05 53 20.1	-0.3
KHC	Kasperske Hory	147.07	345	PKPbc	PKPbc	05 53 23.3	-0.2
GEC2	GERESS Array S	147.31	345	PKPbc	PKPdf	05 53 21.4	+0.6
GERES	GERESS Array B	147.31	345	PKPbc	PKPbc	05 53 23.3	-0.8
	comp=Z,1.3nm,0.4s,baz=25,slow=3.5,SNR=10.0						
CONA	Conrad Observa	147.55	342	i PKiKP	PKPbc	05 53 24.6	-0.2
	comp=Z,0.9nm,0.3s						
MOA	Molln	148.08	344	i PKiKP	PKPbc	05 53 25.2	-0.8
	comp=Z,0.9nm,0.4s						
WTTA	Wattenberg	149.28	346	i PKiKP	PKPbc	05 53 28.3	-0.9
	comp=Z,3.2nm,0.3s						
MYKA	Terra Mystica	149.37	343	i PKPbc	PKPbc	05 53 27.7	-1.7
	comp=Z,2.5nm,0.4s						
ABTA	Abfaltersbach	149.55	345	i PKPbc	PKPbc	05 53 28.4	-1.4
	comp=Z,1.4nm,0.4s						
STAL	STALIGIAL	149.96	344	PKPbc	PKPbc	05 53 29.7	-0.9
FUORN	Ofenpass-Fuorn	150.18	348	PKPbc	PKPbc	05 53 30.2	-1.3

*IDC **21** 06:00:32.2±4.7, 37°.52N×72°.46E, $h129^{km}\pm29^{km}$, mb3.4/8, mb1 3.6/14, mb1mx3.3/45, mbtmp4.0/14, Error ellipse: s-maj=51.0km s-min=20.2km az=153.0*
*NEIC **21** 06:00:35.4±2.5, 37°.81N±0°.05×72°.53E±0°.05, $h150^{km}\pm9^{km}$, mb4.2/13, Error ellipse: s-maj=8.0km s-min=5.5km az=170.0*
*NNC **21** 06:00:41.3±3.9, 38°.29N×72°.45E, $h185^{km}\pm60^{km}$, mb3.2, mpv4.4, Error ellipse: s-maj=43.9km s-min=22.7km az=8.0*
ISC 21 06:00:34.4±0.5, **37°.78N**±0°.04×**72°.53E**±0°.05, **$h150^{km}$, n73, $\sigma 1^{s}.95$**/84, **mb4.0**/13, **5C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	Batken	2.63	330		Pn	06 01 18.7	+1.4
BTK				Sn	Sn	06 01 49.7	-0.7
ARSB	Arslanbob	3.56	6		Pn	06 01 29.6	+0.6
ARSB				Sn	Sn	06 02 10.1	-1.2
CEP	Cherat	3.98	187	P	Pn	06 01 36.2	+1.6
CEP				S	Sn	06 02 22.0	+0.7
CHCP	Chirah Chowk	4.16	171	P	Pn	06 01 39.1	+2.3
NIL	Nilore	4.17	172		Pn	06 01 39.1	+2.2
NIL				Sn	Sn	06 02 25.1	-0.4
KBL	Kabul	4.29	222		Pn	06 01 41.0	+2.3
KBL				Sn	Sn	06 02 28.6	-0.1
AML	Almayashu	4.43	11	P	Pn	06 01 41.8	+1.1
	SNR=130						
NRN	Naryn	4.53	35		Pn	06 01 42.0	+0.2
UCH	Uchtor	4.70	18	P	Pn	06 01 45.6	+1.4
	SNR=49						
KZA	Kyzart	4.77	25	P	Pn	06 01 46.1	+0.9

SNR=16
EKS2 Erkin-Say 4.97 11 P Pn 06 01 49.0 +1.6
SNR=21
THW Thamme Wali 5.02 188 P Pn 06 01 48.8 +0.6
AAK Ala-Archa 5.08 17 P Pn 06 01 50.8 +1.8
14nm,0.3s,baz=177,slow=7.2,SNR=105
AAK S Sn 06 02 45.7 -1.4
2.1nm,0.3s,baz=186,slow=10,SNR=3.7
AAK Ala-Archa 5.08 17 P Pn 06 01 50.8 +1.8
SNR=52
AAK Ala-Archa 5.08 17 ⇑P Pn 06 01 50.3 +1.3
27nm,0.5s
AAK ⇑S Sn 06 02 45.5 -1.6
62nm,0.9s
AAK Ala-Archa 5.08 17 Pn 06 01 50.7 +1.8
AAK Sn Sn 06 02 45.3 -1.8
KBK Karagaybulak 5.21 20 P Pn 06 01 53.8 +3.0
SNR=10
ULHL Ulahol 5.29 31 P Pn 06 01 52.8 +1.0
SNR=17
BOOM Boomskoye usch 5.38 28 Pn 06 01 54.2 +1.3
CHMS Chumysh 5.48 17 P Pn 06 01 55.8 +1.6
SNR=31
CHMS Chumysh 5.48 17 ⇑P Pn 06 01 55.5 +1.3
36nm,0.5s
CHMS ⇑S Sn 06 02 54.8 -1.7
43nm,0.9s
KK31 Karatay Array 5.53 345 P Pn 06 01 55.5 +0.6
16nm,0.4s,baz=158,slow=14,SNR=302
KK31 ⇑S Sn 06 02 54.4 -3.4
54nm,0.5s,baz=175,slow=22,SNR=40
KK31 Karatay Array 5.53 345 Pn 06 01 55.6 +0.8
KKAR Karatay Array 5.53 345 Pn 06 01 55.6 +0.8
USP Ospenovka 5.68 15 P Pn 06 01 58.1 +1.2
SNR=9.9
SARP Sargodha 5.85 179 P Pn 06 01 59.4 +0.3
THN Thein Dam 5.94 153 eP Sn 06 03 05.5 -2.0
DHRM DHARAMSHALA 6.33 150 eP Pn 06 02 06.9 +1.2
DHRM eS Sn 06 03 12.8 -4.4
DHRM IAML 06 03 40.4
comp=E,103nm,0.4s
DHRM IAML 06 03 40.6
comp=N,67nm,0.3s
PRZ Przheval'sk 6.50 42 Pn 06 02 10.7 +2.8
BHK Bhakra 7.11 152 ex Sn 06 03 34.6 -1.1
SMLA Simla 7.66 149 eP Pn 06 02 24.0 +0.7
SMLA eS Sn 06 03 43.2 -5.6
SMLA IAML 06 03 46.9
comp=N,156nm,0.6s
SMLA IAML 06 03 47.4
comp=E,173nm,0.4s
JOSI Joshimath 9.26 139 eP Pn 06 02 45.1 +0.2
JOSI eS Sn 06 04 19.6 -8.1
JOSI IAML 06 04 30.4
comp=E,80nm,0.5s
JOSI IAML 06 04 31.7
comp=N,55nm,0.2s
KUDL Kundal 10.17 160 eP Pn 06 02 45.2 -11
KUDL eS Sn 06 04 30.3 -19
GEYT Alibeck 11.40 275 P Pn 06 03 10.1 -2.7
comp=N,0.2nm,0.3s,baz=96,slow=15,SNR=2.0
GEYT S Sn 06 05 10.7 -8.1
comp=N,1.6nm,0.3s,baz=141,slow=27,SNR=4.7
MAKZ Makanchi 11.41 35 Pn Pn 06 03 08.3 -4.6
DANN Dangsing 13.30 132 eP Pn 06 03 36.5 -1.3
comp=N,26nm,0.3s
KURBB Kurchatov Arra 13.53 17 P Pn 06 03 42.8 +2.6
comp=N,0.3nm,0.3s,baz=206,slow=10,SNR=36
KURK Kurchatov 13.64 17 P P 06 03 46.5 +1.2
GKN Gorkha 14.08 130 eP Pn 06 03 46.6 -0.9
comp=N,23nm,0.2s
KKN Kakani 14.62 129 eP Pn 06 03 53.5 -0.9
AB31 Akbulak array 14.63 326 ⇓P Pn 06 03 52.9 -1.2
comp=N,0.8nm,0.5s
DMN Daman 14.65 130 eP Pn 06 03 54.0 -0.8
comp=N,7.1nm,0.3s
PKIN Phulchoki 14.85 130 eP Pn 06 03 55.8 -1.5
comp=N,6.0nm,0.4s
PKI Pulchoki 14.86 130 eP Pn 06 03 56.1 -1.4
comp=N,7.9nm,0.5s
GUN Gumba 14.91 127 eP Pn 06 03 57.1 -1.0
comp=N,6.5nm,0.3s
JIRN Jiri 15.28 127 eP Pn 06 04 02.4 -0.3
comp=N,30nm,0.3s
BVAR Borovoye Array 15.32 355 P Pn 06 04 03.8 +1.2
comp=N,0.6nm,0.3s,baz=156,slow=12,SNR=10
BRVK Borovoye 15.36 355 P P 06 04 04.4 +0.1
RAMN Ramite 16.04 128 eP Pn 06 04 10.2 -1.7
comp=N,19nm,0.6s
AKTO Aktyubinsk 16.35 325 P Pn 06 04 16.2 +0.8
comp=N,1.2nm,0.3s,baz=127,slow=8.9,SNR=18
AKTO S S 06 07 07.2 -9.5
comp=N,0.4nm,0.3s,baz=360,slow=16,SNR=10
AKTO Aktyubinsk 16.35 325 ⇓P P 06 04 16.1 +0.8
comp=N,3.7nm,0.6s
ZAA0 Zalesovo Array 18.25 24 P Pn 06 04 38.1 +0.3
ZAA0 IAmb IAmb 06 04 38.5
comp=Z,3.7nm,0.8s
ZALV Zalesovo Beam 18.25 24 P P 06 04 37.4 +1.3
comp=Z,0.7nm,0.3s,baz=218,slow=11,SNR=13
BRTR Keskin Array B 30.23 286 P P 06 06 32.0 +0.9
comp=Z,0.3nm,0.6s,baz=63,slow=20,SNR=4.0
AKASG Malin Array Be 33.12 307 P P 06 06 56.1 +0.1
comp=Z,0.2nm,0.4s,baz=68,slow=7.7,SNR=3.8
FIA1 FINESS Array S 37.12 325 P P 06 07 31.8 +1.7
FINES FINESS Array B 37.12 325 P P 06 07 31.8 +1.7
comp=Z,1.0nm,0.3s,baz=118,slow=9.7,SNR=13
ARCES ARCESS Array B 40.44 337 P P 06 07 59.4 +1.7
comp=Z,4.1nm,0.9s,baz=113,slow=9.4,SNR=15
ARE0 ARCESS Array S 40.44 337 P P 06 07 58.5 +0.8
NC303 NORSAR Array S 44.04 322 P P 06 08 28.7 +1.9
NC303 IAmb IAmb 06 08 32.9
comp=Z,11nm,1.1s
NB201 NORSAR Array S 44.07 322 P P 06 08 28.7 +1.6
NB2 NORSAR Subarra 44.10 322 P P 06 08 28.4 +1.0
comp=Z,0.6nm,0.5s,baz=93,slow=8.6
NOA NORSAR Array B 44.10 322 P P 06 08 28.4 +1.0
comp=Z,0.9nm,0.6s,baz=93,slow=7.7,SNR=3.6
NC204 NORSAR Array S 44.34 322 P P 06 08 31.0 +1.8
TORD Torodi Ar. Bea 66.96 269 P P 06 11 10.9 -0.3
comp=Z,0.3nm,0.4s,baz=46,slow=5.5,SNR=4.4
INK Inuvik 72.44 10 P P 06 11 45.8 +2.0
comp=Z,0.6nm,0.5s,baz=307,slow=3.6,SNR=6.8
INK Inuvik 72.44 10 P P 06 11 45.7 +2.0
INK IAmb IAmb 06 11 57.5
comp=Z,4.9nm,1.4s
PPLA Purkeypile 73.47 20 P P 06 11 51.6 +1.3
PPLA IAmb IAmb 06 11 58.6
comp=Z,6.9nm,1.4s
RND Reindeer 73.91 18 P P 06 11 53.5 +0.8
RND IAmb IAmb 06 11 55.4
comp=Z,5.7nm,1.3s
SKT Skwentna 74.40 20 P P 06 11 56.1 +0.7
SKT IAmb IAmb 06 12 03.2
comp=Z,12nm,1.5s
SCRK Sand Creek 74.54 16 P P 06 11 58.0 +1.7
DHY Denali Highway 74.54 18 P P 06 11 57.3 +0.8
DHY IAmb IAmb 06 11 59.8
comp=Z,6.9nm,1.4s
YKA Yellowknife Ar 79.90 3 P P 06 12 27.6 +1.5
comp=Z,0.6nm,0.4s,baz=350,slow=5.5,SNR=16

ISK 21 06:14:57.0, 38°.19N×26°.70E, h5km, ML2.7/8
DDA 21 06:14:57.0, 38°.17N×26°.68E, h5km±2km, ML2.0
ISC 21 06:14:57.1±0.9, 38°.16N±0°.03×26°.66E±0°.03, h11km±7km, n24, σ0s.73/39, Aegean Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ZEY zmir 0.14 302 i P Pg 06 15 00.6 +0.1
ZEY i S Sg 06 15 03.4 +0.6
URLA Izmir 0.20 346 PG Pg 06 15 01.3 -0.2
URLA SG Sg 06 15 04.8 +0.4
URLA Izmir 0.20 346 i P Pg 06 15 01.3 -0.2
URLA i S Sg 06 15 04.0 -0.4
URLA IAML 06 15 06.0
comp=E,406nm,0.7s
URLA IAML 06 15 06.0
comp=N,229nm,0.5s
DGB zmir 0.21 122 i P Pg 06 15 01.5 0.0
DGB IAML 06 15 04.0
comp=N,444nm,0.2s
DGB i S Sg 06 15 04.1 -0.4
DGB IAML 06 15 05.0
comp=E,822nm,0.2s

GMLD Gumuldur 0.22 113 PG Pg 06 15 01.7 0.0
GMLD SG Sg 06 15 05.2 +0.4
BLCB Balcova 0.37 54 PG Pg 06 15 04.1 -0.4
BLCB SG Sg 06 15 09.1 -0.4
KRBN Karaburun 0.44 349 PG Pg 06 15 05.9 +0.2
KRBN SG Sg 06 15 12.2 +0.7
CHOS Chios island 0.53 295 PG Pg 06 15 07.9 +0.5
CHOS SG Sb 06 15 16.4 +0.4
FOCM Foa 0.55 6 PG Pb 06 15 08.3 -0.5
FOCM SG Sb 06 15 15.8 -0.9
GCAM G?zelcaml? 0.65 135 PG Pg 06 15 09.9 +0.2
GCAM G?zelcaml? 0.65 135 i P Pg 06 15 09.6 -0.1
GCAM i S Sg 06 15 18.4 +0.2
GCAM IAML 06 15 22.0
comp=E,95nm,0.2s
GCAM IAML 06 15 22.0
comp=N,139nm,0.4s
ZEDA zmir-Bergama 0.87 22 i P Pb 06 15 14.3 +0.1
ZEDA i S Sb 06 15 26.0 +0.2
ZEDA IAML 06 15 29.0
comp=N,49nm,0.3s
ZEDA IAML 06 15 29.0
comp=E,41nm,0.2s
DKL Dikili 0.93 12 PG Pb 06 15 15.1 -0.1
AYDB Zeytinkoy-Aydi 1.00 102 PG Pb 06 15 16.1 -0.4
AYDN Tasoluk 1.09 117 i P Pg 06 15 17.6 -0.4
AYDN i S Sg 06 15 31.9 -0.3
AYDN IAML 06 15 32.0
comp=N,24nm,0.3s
AYVA Ayvalik 1.14 1 i P Pn 06 15 19.9 +0.8
AYVA IAML 06 15 36.0
comp=N,40nm,0.6s
AYVA IAML 06 15 37.0
comp=E,28nm,0.7s
AKHS Akhisar 1.15 51 i P Pn 06 15 21.3 +2.0
STEP BALIKESIR_Sava 1.47 34 i P Pg 06 15 25.5 +0.3
STEP i S Sg 06 15 45.4 +1.0
STEP IAML 06 15 49.0
comp=N,31nm,0.3s
STEP IAML 06 15 51.0
comp=E,29nm,0.3s
MANT Manisa 1.53 77 i P Pb 06 15 25.3 -0.3
MANT i S Sn 06 15 44.9 +0.3
MANT IAML 06 15 47.0
comp=N,43nm,0.3s
MANT IAML 06 15 47.0
comp=E,25nm,0.2s
BAYC CANAKKALE_Bayr 1.58 357 i P Pn 06 15 24.1 -0.9
BAYC IAML 06 15 50.0
comp=N,10nm,0.2s
BAYC IAML 06 15 53.0
comp=E,13nm,0.7s
BOZC Bozcaada 1.74 344 i P Pn 06 15 25.2 -2.1
BALY Balya 1.74 25 i P Pg 06 15 29.7 -0.8
BALY IAML 06 15 56.0
comp=N,21nm,0.4s
BALY IAML 06 15 57.0
comp=E,13nm,0.3s
USAK Uak-Merkez 1.93 73 i P Pb 06 15 32.6 +0.2
USAK IAML 06 15 58.0
comp=E,18nm,1.2s
USAK i S Sg 06 15 58.3 -1.0
DURS Dursunbey 2.02 44 i P Pg 06 15 37.0 +1.3

THE 21 06:15:32.7, 38°.14N×20°.43E, h14km, ML2.7/6, Error ellipse: s-maj=0.9km s-min=0.4km az=264.0
ATH 21 06:15:32.7, 38°.14N×20°.43E, h15km±1km, ML2.8/4, Error ellipse: s-maj=2.0km s-min=1.1km az=255.0
ISC 21 06:15:32.6±1.0, 38°.14N±0°.03×20°.43E±0°.05, h15km±5km, n32, σ0s.29/53, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF2 Argostoli. Kep 0.05 62 P Pg 06 15 35.3 -0.1
KEF2 S Sg 06 15 37.0 -0.3
CHV1 Chavriata, Kef 0.06 317 P Pg 06 15 35.4 -0.1
CHV1 S Sg 06 15 37.1 -0.2
ARG2 Argostoli 0.06 51 P Pg 06 15 35.3 -0.2
ARG2 S Sg 06 15 37.0 -0.3
LXRA Lixouri, Kepha 0.06 5 P Pg 06 15 35.5 0.0
LXRA S Sg 06 15 37.5 +0.2
LXR1 Lixouri, Cepha 0.06 6 P Pg 06 15 35.1 -0.4
LXR1 S Sg 06 15 37.5 +0.2
KEF3 Kipouria, Keph 0.09 313 P Pg 06 15 35.7 -0.1
KEF3 S Sg 06 15 38.0 +0.2
AGT1 Agia Thekli 0.12 341 P Pg 06 15 36.0 -0.1
AGT1 S Sg 06 15 38.2 -0.1
10μm,0.2s
KEF4 Livadi, Kephal 0.12 358 P Pg 06 15 36.0 -0.1
KEF4 S Sg 06 15 38.7 +0.3
VLS Valsamata 0.13 74 P Pg 06 15 36.1 -0.2
VLS S Sg 06 15 38.6 -0.1
14μm,0.0s
VLS Valsamata 0.13 74 P Pg 06 15 36.1 -0.2
VLS S Sg 06 15 38.6 -0.1
VLS AML AML 06 15 38.7
comp=N,25144μm,0.2s
VLS AML AML 06 15 38.8
comp=E,33396μm,0.1s
KEF1 Kardakata, Kep 0.14 13 P Pg 06 15 36.3 -0.1
KEF1 S Sg 06 15 39.0 +0.2
VSK1 VASILIKIADES 0.29 21 P Pg 06 15 38.7 0.0
VSK1 S Sg 06 15 43.2 +0.3
comp=E,4μm,0.1s
KONA Konidatara, Ke 0.30 21 P Pg 06 15 39.0 0.0
KONA S Sg 06 15 43.9 +0.5
KONA AML AML 06 15 44.2
comp=E,2518μm,0.2s
KONA AML AML 06 15 44.3
comp=N,3256μm,0.1s
VLMS Volimes, Zakyn 0.32 145 P Pg 06 15 39.5 +0.2
VLMS S Sb 06 15 44.9 -0.2
VLMS AML AML 06 15 45.3
comp=E,6124μm,0.2s
VLMS AML AML 06 15 46.6
comp=N,3535μm,0.2s
FSK Fiskardo 0.33 18 P Pg 06 15 39.4 -0.2
FSK S Sb 06 15 44.9 -0.6
comp=N,1μm,0.2s
FSK Fiskardo 0.33 18 P Pg 06 15 39.3 -0.2
FSK S Sg 06 15 44.6 +0.4
FSK AML AML 06 15 44.8
comp=N,1377μm,0.2s
FSK AML AML 06 15 45.2
comp=E,3433μm,0.2s
KRI1 kERI 0.57 147 P Pg 06 15 43.2 -0.6
KRI1 S Sb 06 15 52.4 +0.2
comp=E,625nm,0.2s
MGNA Meganis 0.59 29 P Pg 06 15 43.9 -0.3
MGNA S Sg 06 15 51.7 -0.3
LKD2 Lefkada island 0.67 15 P Pg 06 15 45.2 -0.6
LKD2 S Sb 06 15 55.0 -0.2
LKD2 Lefkada island 0.67 15 P Pg 06 15 45.5 -0.3
PDO Prodromos 0.75 52 P Pg 06 15 46.6 -0.6
PDO S Sb 06 15 58.0 +0.6
comp=E,250nm,0.3s
PDO Prodromos 0.75 52 P Pg 06 15 47.0 -0.2
PVO Paravola 0.98 61 P Pb 06 15 51.2 -0.2
PVO S Sn 06 16 05.4 -0.2
PVO Paravola 0.98 61 P Pg 06 15 51.6 -0.1
DRO Drossia 1.03 100 P Pb 06 15 52.3 +0.1
LAKA Lakka 1.22 85 P Pb 06 15 55.8 +0.3
ANX Ano Chora 1.25 68 P Pn 06 15 56.0 +0.2
SERG Sergoula 1.31 78 P Pn 06 15 56.7 +0.2
TRIZ Trizonia 1.31 80 P Pn 06 15 56.6 +0.2
KLV Kalavryta, Ach 1.36 94 P Pb 06 15 58.0 +0.2
KALE Kalithea 1.37 79 P Pn 06 15 57.6 +0.3
MAKR Makrakomi, Fth 1.59 56 P Pg 06 16 03.4 +0.1

RSNC 21 06:21:11.0±0.8, 3°.90N×71°.57W, h4km±6km, ML3.3, Mw3.4, 2C-1D, Colombia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PTGC Puerto Gaitan, 0.63 298 ⇑i Pg Pg 06 21 21.7 -1.5
PTGC eSg Sg 06 21 31.1 -0.3
PTGC i 06 21 48.0
comp=Z,634nm,0.5s
GUVC San Jose del G 1.71 218 eP Pn 06 21 39.7 -2.0
GUVC eS Sn 06 22 03.2 -0.8
GUVC i 06 22 07.1
comp=Z,483nm,0.2s
GUVC i 06 22 10.1
comp=Z,550nm,0.2s
CHIC Chingaza 2.27 289 ⇓eP Pn 06 21 48.6 -1.1
CHIC eS Sn 06 22 18.0 -0.4
CHIC i 06 22 23.4
comp=Z,247nm,0.4s
RUSC La Rusia 2.48 323 ⇑eP Pn 06 21 52.0 -0.7
RUSC eS Sn 06 22 23.0 -0.8
RUSC i 06 22 40.4
comp=Z,119nm,0.6s
TAMC Tame, Arauca 2.52 355 eP Pn 06 21 52.0 -0.9
TAMC eS Sb 06 22 28.1 -0.3
TAMC i 06 22 31.5
comp=Z,244nm,0.2s
MACC Macarena, Meta 2.87 233 eP Pn 06 21 58.1 +0.5
MACC eS Sb 06 22 37.5 -0.7
MACC i 06 22 50.5
comp=Z,159nm,0.4s
ROSC El Rosal 2.89 289 eP Pn 06 21 58.8 +0.5
ROSC i 06 22 59.4
comp=Z,51nm,0.8s
SPBC San Pablo de B 3.04 305 eP Pn 06 21 58.6 -1.4
SPBC eS Sb 06 22 44.5 +1.3
SPBC i 06 22 45.9
comp=Z,64nm,0.5s
BARC Barichara 3.12 329 eP Pn 06 21 59.5 -1.7
BARC i 06 22 54.4
comp=Z,222nm,0.5s
PRAC Prado 3.31 267 eP Pn 06 22 03.9 +0.2
PRAC i 06 23 14.5
comp=Z,52nm,0.4s
PAMC Pamplona, Colo 3.59 342 eP Pn 06 22 06.6 -1.3
PAMC i 06 23 05.9
comp=Z,72nm,0.4s
PAMC i 06 23 12.2
comp=Z,86nm,0.7s
ORTC Ortega, Tolima 3.67 270 eP Pn 06 22 07.7 -0.9
ORTC eS Sg 06 23 05.1 -3.8
ORTC i 06 23 18.8
comp=Z,74nm,1.2s
NORC Norcasia 3.68 297 eP Pn 06 22 07.1 -1.6
PTBC PUERTO BERRIO, 3.89 312 eP Pn 06 22 10.5 -1.1
PTBC i 06 23 15.9
comp=Z,33nm,0.3s
GUY2C Guyana, Caldas 4.00 289 eP Pn 06 22 13.1 -0.5
HELC Santa Helena 4.55 300 eP Pn 06 22 19.9 -1.2
HELC eS Sn 06 23 15.7 +1.1
OCAC Ocana 4.64 338 eP Pn 06 22 20.6 -1.5
OCAC i 06 23 38.6
comp=Z,43nm,0.4s
FLOC Florencia 4.68 241 eP Pn 06 22 21.9 -0.6
FLOC eS Sb 06 23 32.3 +1.7
FLOC i 06 23 41.9
comp=Z,80nm,1.5s
YOTC Yotoco, Valle 4.76 271 eP Pn 06 22 22.2 -1.5
PLMC San Jos del P 4.80 282 eP Pn 06 22 25.5 +1.3
CBOC Ciudad Bolivar 4.83 294 eP Pn 06 22 24.3 -0.5
ZARC Zaragoza, Cauc 4.84 318 eP Pn 06 22 23.2 -1.5
ZARC i 06 23 43.4
comp=Z,14nm,0.5s
PTLC Puerto Leguiza 4.91 221 eS Sg 06 23 47.8 -1.2
SMLC San Martn de 5.46 333 eP Pn 06 22 29.9 -3.3
SMLC i 06 24 17.3
comp=Z,11nm,0.9s

IDC 21 06:21:42.3±1.6, 2°.13S×139°.12E, h0km, mb3.4/5, mb1 3.7/6, mb1mx3.5/35, mbtmp3.5/6, ML3.9/1, Error ellipse: s-maj=64.7km s-min=23.3km az=99.0
DJA 21 06:21:42.4±1.9, 2°S±12°×14°0E±°, h10km, M3.7/2, MLv3.7/2
ISC 21 06:21:46.1±0.9, 2°.2S±0°.1×139°.63E±0°.09, h27km, n11, σ2s.75/10, mb3.5/4, Near north coast of Irian Jaya

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GENI Genyem 0.67 127 P Pb 06 21 59.7 +0.4
GENI S Sb 06 22 11.0 +2.8
SMPI Sarmi 0.94 282 P Pn 06 22 04.0 +0.4
SMPI S Sn 06 22 21.1 +5.0
WRA Warramunga Arr 18.39 196 P Pn 06 25 59.2 -0.1
0.4nm,0.3s,baz=16,slow=12,SNR=5.6
FITZ Fitzroy Crossi 20.94 220 P P 06 26 23.5 -3.5
1.2nm,0.6s,baz=24,slow=12,SNR=2.3
ASAR Alice Springs 22.06 194 P P 06 26 38.5 -0.5
0.9nm,0.7s,baz=23,slow=8.4,SNR=11
H11N1 WAKE ISLAND Hy 34.50 50 T T 07 05 02.8
baz=233,slow=76,SNR=7.2
H11N2 WAKE ISLAND Hy 34.51 50 T T 07 05 04.5
baz=233,slow=76,SNR=7.1
H11N3 WAKE ISLAND Hy 34.51 50 T T 07 05 05.1
baz=233,slow=76,SNR=5.0
MKAR Makanchi Array 69.94 322 P P 06 32 52.5 -2.6
0.4nm,1.0s,baz=131,slow=5.9,SNR=1.4
BVAR Borovoye Array 79.41 325 P P 06 33 49.6 -0.2
0.2nm,0.4s,baz=117,slow=5.4,SNR=3.7
ILAR Eielson Array 84.98 24 P P 06 34 19.5 +0.8
0.3nm,0.5s,baz=242,slow=3.8,SNR=4.3

NIED 21 06:33:00, 36°.60N×141°.00E, h50km, Mw3.6 Best double couple: M0 2.88000×10^14 NP1:φs33.00000°, δ76.00000°, λ107.00000°. NP2:φs160.00000°, δ22.00000°, λ39.00000°.
JMA 21 06:33:36.0±0.1, 36°.60N×141°.00E, h46km±1km, M3.7, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JHO Hitachi 0.35 272 P Pn 06 33 45.3 +0.1
JHO S Sn 06 33 51.5 -0.3
JHYU Hitachinakayam 0.42 232 P Pn 06 33 46.2 +0.1
JHYU S Sn 06 33 53.1 -0.1
ONAJ Iwakimizuishiy 0.53 342 P Pn 06 33 47.0 -0.4
ONAJ S Sn 06 33 54.5 -1.1
JFFD Fukushimafurud 0.60 324 P Pn 06 33 48.3 -0.1
JFFD S Sn 06 33 56.7 -0.5
JYT Yasato 0.75 240 P Pn 06 33 50.1 -0.1
JYT S Sn 06 34 00.1 -0.4
JSB Shiboa 0.94 293 P Pn 06 33 53.5 +0.6
JSB eS Sn 06 34 06.0 +0.7
JSMT Sammumatsuo 1.05 205 S Sn 06 34 08.7 +0.8
JFT Otama 1.06 330 P Pn 06 33 55.3 +0.8
JFT S Sn 06 34 09.0 +0.9
JAG Ashikaga 1.26 262 P Pn 06 33 57.4 +0.2
JMM Marumori 1.27 353 P Pn 06 33 57.3 -0.1
JFY Yanaizu 1.31 308 P Pn 06 33 58.4 +0.5
MAT Matsushiro 2.25 269 P Pn 06 34 12.5 +1.8
MAT S Sn 06 34 40.1 +2.8

UCR 21 06:39:30.3±1.3, 10°.13N×85°.92W, h22km±5km, MD3.9, MW3.9, 3C-4D, Costa Rica

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GUAI GUAI 0.43 71 i P Pb 06 39 38.8 -0.4
GUAI eS Sb 06 39 45.8 +0.6
PLVR Palo Verde 0.60 69 ⇓i P Pb 06 39 41.8 -0.5
PLVR eS Sb 06 39 50.9 +0.4
NY14 Universidad de 0.64 37 ⇑i P Pb 06 39 43.0 +0.1
NY14 eS Sn 06 39 53.7 +0.2
GBS3 Finca Las Img 0.79 35 i P Pb 06 39 44.9 -0.6
GBS3 eS Sb 06 39 56.2 +0.4
LAPC Finca la Perla 0.80 37 i P Pb 06 39 44.6 -0.9
LAPC eS Sb 06 39 55.9 +0.1
GPS3 Bodega del ICE 0.83 41 i P Pb 06 39 45.6 -0.5
GPS3 i S Sb 06 39 57.3 +0.5
BUEV Buena Vista 0.83 37 ⇑i P Pb 06 39 45.7 -0.4
BUEV eS Sb 06 39 57.6 +0.5
GPS2 Hotel Rincn d 0.83 42 i P Pb 06 39 45.5 -0.7
GPS2 eS Sb 06 39 57.6 +0.6
GPS1 Guardaparques 0.85 41 i P Pb 06 39 45.6 -0.9
GPS1 i S Sb 06 39 58.2 +0.7
GB1A Borinquen Arri 0.86 37 i P Pb 06 39 45.9 -0.7
GB1A eS Sb 06 39 57.9 +0.3
LIM1 Limonal 0.87 49 i P Pb 06 39 46.2 -0.5
LIM1 eS Sn 06 39 58.6 -0.6
COLC Colonia 0.88 53 i P Pb 06 39 46.2 -0.8
COLC eS Sn 06 39 59.1 -0.6
GUAB Guayabo de Bag 0.89 50 i P Pb 06 39 46.4 -0.8
GUAB eS Sb 06 39 59.1 +0.4
CUI Cuipilapa 0.91 55 ⇑i P Pb 06 39 46.8 -0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUI				eS	Sb	06 39 59.5	+0.3
HORNC	**Hornillas**	**0.93**	**52**	iP	Pb	06 39 46.8	-1.0
HORNC				iS	Sb	06 39 59.5	-0.3
MESS	**Mesas**	**0.94**	**50**	iP	Pb	06 39 47.0	-0.9
MESS				eS	Sn	06 40 00.6	-0.5
BUAI	**Buenos Aires**	**0.94**	**38**	iP	Pb	06 39 47.5	-0.5
BUAI				eS	Sb	06 40 00.3	+0.2
JTS	**Las Juntas de**	**0.97**	**80**	⇓iP	Pb	06 39 47.2	-1.2
JTS				eS	Sb	06 40 00.9	+0.1
ACAL	**Aguas Claras**	**1.01**	**60**	eP	Pb	06 39 48.3	-0.8
ACAL				eS	Sn	06 40 03.2	+0.5
AMAS	**Alto Masis**	**1.03**	**62**	eP	Pn	06 39 49.3	-0.2
AMAS				eS	Sn	06 40 03.3	-0.1
PTEN	**Parque Tenorio**	**1.09**	**58**	iP	Pn	06 39 50.3	0.0
PTEN				eS	Sn	06 40 05.5	+0.8
CASO	**Castillo**	**1.21**	**75**	iP	Pn	06 39 52.2	+0.3
CASO				eS	Sb	06 40 08.4	+0.7
FORC	**Fortuna**	**1.28**	**75**	eP	Pb	06 39 53.6	-0.1
FORC				eS	Sb	06 40 11.3	+1.7
SRA1	**San Ramn**	**1.42**	**92**	⇓iP	Pn	06 39 54.3	-0.6
SRA1				eS	Sn	06 40 12.1	-0.9
ACON	**Acoyapa**	**1.97**	**22**	⇓iP	Pn	06 40 02.1	-0.3
EDPN	**Palmar Norte**	**2.69**	**115**	eP	Pn	06 40 12.0	-0.3

*IDC **21** 06:46:44.4±1.0, 29.°94N×76.°15E, h0km, mb3.6/11, mb1 3.8/13, mb1mx3.6/48, mbtmp3.6/13, ML3.7/2, Error ellipse: s-maj=29.0km s-min=17.9km az=51.0*

*NEIC **21** 06:46:47.3±1.7, 30.°00N±0.°1×76.°2E±0.°1, h16km±4km, mb4.6/6, Error ellipse: s-maj=17.1km s-min=13.1km az=222.0*

*NDI **21** 06:46:48.1±2.2, 29.°97N×76.°19E, h10km, ML3.9, mb4.6(NEIC)*

ISC 21 06:46:48.9±1.1, **30.°05N**±0.°03×**76.°27E**±0.°05, **h31**km±9km, **n59**, σ**2.°30**/70, **mb3.7**/13, **1C, Northern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMLA	**Simla**	**1.32**	**35**	eP	**Pb**	**06 47 13.6**	**+0.5**
SMLA				eS	**Sb**	**06 47 32.3**	**+2.6**
SMLA				IAML		06 47 38.8	
	comp=E,2μm,0.3s						
SMLA				IAML		06 47 39.0	
	comp=N,2μm,0.1s						
BHK	**Bhakra**	**1.37**	**5**	eP	**Pb**	**06 47 13.8**	**-0.1**
BHK				eS	**Sb**	**06 47 34.8**	**+3.8**
BHGR	**Bahadurgarh**	**1.48**	**157**	eP	**Pb**	**06 47 15.1**	**-0.6**
BHGR				eS	**Sb**	**06 47 33.7**	**-0.3**
AYAN	**Aya Nagar**	**1.73**	**154**	eP	**Pn**	**06 47 17.9**	**+1.0**
AYAN				eS	**Sb**	**06 47 40.3**	**-1.0**
KUDL	**Kundal**	**1.91**	**174**	eP	Pn	06 47 09.4	-10
KUDL				ex	x	06 47 09.6	
KUDL				eS	Sn	06 47 32.6	-10
DHRM	**DHARAMSHALA**	**2.19**	**1**	eP	**Pb**	**06 47 27.3**	**-0.8**
DHRM				eS	**Sb**	**06 47 55.2**	**+0.3**
DHRM				IAML		06 47 59.3	
	comp=N,2μm,0.2s						
DHRM				IAML		06 48 02.2	
	comp=E,2μm,0.5s						
KALG	**Kalgarh**	**2.22**	**103**	eP	Pn	06 47 15.3	-8.3
KALG				eS	**Sn**	**06 47 44.8**	**-5.3**
THN	**Thein Dam**	**2.42**	**349**	eP	**Pb**	**06 47 30.5**	**-1.3**
THN				ex	x	06 48 01.5	
JOSI	**Joshimath**	**2.89**	**79**	eP	**Pb**	**06 47 36.5**	**-3.4**
JOSI				ex	x	06 48 20.9	
JOSI				IAML		06 48 23.0	
	comp=E,597nm,0.4s						
JOSI				IAML		06 48 24.1	
	comp=N,450nm,0.6s						
JMU	**Jammu**	**2.91**	**337**	ex	**Sb**	**06 48 13.0**	**-2.1**
SARP	**Sargodha**	**3.61**	**302**	P	**Pn**	**06 47 41.5**	**-1.2**
AJM	**Ajmer**	**3.84**	**202**	eP	**Pn**	**06 47 45.0**	**-0.9**
AJM				ix	x	06 48 30.0	
AJM	**Ajmer**	**3.84**	**202**	eP	**Pn**	**06 47 45.0**	**-0.9**
NIL	**Nilore**	**4.41**	**325**	P	**Pn**	**06 47 52.8**	**-1.0**
CHCP	**Chirah Chowk**	**4.42**	**325**	P	**Pn**	**06 47 54.5**	**+0.7**
THW	**Thamme Wali**	**4.74**	**306**	P	**Pn**	**06 47 56.5**	**-1.8**
CEP	**Cherat**	**5.28**	**317**	P	**Pn**	**06 48 06.4**	**+0.6**
DANN	**Dangsing**	**6.76**	**103**	ePn	**Pn**	**06 48 28.1**	**+1.8**
BHPL	**Bhopal**	**6.86**	**171**	eP	**Pn**	**06 48 27.0**	**-0.4**
BHPL				eS	**Sn**	**06 49 40.5**	**-4.0**
BHPL				IAML		06 49 45.6	
	comp=E,62nm,0.2s						
KBL	**Kabul**	**7.58**	**308**	Pn	**Pn**	**06 48 36.7**	**-0.7**
GKN	**Gorkha**	**7.60**	**104**	ePn	**Pn**	**06 48 38.9**	**+1.2**
GKN				eSn	**Sn**	**06 50 02.4**	**-0.5**
	comp=E,71nm,0.2s						
JBP	**Jabalpur**	**7.62**	**153**	⇑ex	**Sb**	**06 49 58.4**	**-4.6**
JBP				ex	x	06 50 41.7	
DMN	**Daman**	**8.12**	**105**	ePn	**Pn**	**06 48 45.6**	**+0.7**
PKIN	**Phulchoki**	**8.38**	**105**	ePn	**Pn**	**06 48 48.9**	**+0.5**
PKIN				eSn	**Sn**	**06 50 20.1**	**-2.0**
	comp=E,50nm,0.5s						
PKI	**Pulchoki**	**8.39**	**105**	ePn	**Pn**	**06 48 49.4**	**+0.7**
PKI				eSn	**Sn**	**06 50 20.4**	**-2.1**
GUN	**Gumba**	**8.68**	**102**	ePn	**Pn**	**06 48 53.5**	**+0.8**
JIRN	**Jiri**	**9.02**	**103**	ePn	**Pn**	**06 48 58.1**	**+0.8**
RAMN	**Ramite**	**9.60**	**106**	ePn	**Pn**	**06 49 05.2**	**0.0**
ODAN	**Odare**	**10.29**	**105**	ePn	**Pn**	**06 49 15.3**	**+0.7**
TAPN	**Taplejung**	**10.40**	**102**	ePn	**Pn**	**06 49 16.6**	**+0.4**
BTK	**Batken**	**10.94**	**337**	Pn	**Pn**	**06 49 24.2**	**+0.9**
NRN	**Naryn**	**11.36**	**359**	Pn	**Pn**	**06 49 31.1**	**+1.8**
ARSB	**Arslanbob**	**11.56**	**348**	Pn	**Pn**	**06 49 31.9**	**0.0**
POO	**Poona**	**11.68**	**191**	ex	**Sn**	**06 51 50.2**	**+7.3**
BOOM	**Boomskoye usch**	**12.42**	**359**	Pn	**Pn**	**06 49 44.4**	**+0.7**
HRA	**Herat**	**12.64**	**294**	Pn	**Pn**	**06 49 48.9**	**+2.2**
AAK	**Ala-Archa**	**12.64**	**354**	Pn	**Pn**	**06 49 45.8**	**-0.9**
	comp=E,0.6nm,0.3s,baz=160,slow=7.3,SNR=6.2						
AAK				Sn	**Sn**	**06 52 01.8**	**-4.6**
	comp=E,0.3nm,0.3s,baz=24,slow=20,SNR=2.6						
AAK	**Ala-Archa**	**12.64**	**354**		**Pn**	**06 49 45.6**	**-1.1**
KK31	**Karatay Array**	**13.82**	**342**		**Pn**	**06 50 00.7**	**-1.9**
KK31					**Sn**	**06 52 29.4**	**-5.6**
KKAR	**Karatay Array**	**13.82**	**342**		**Pn**	**06 50 00.7**	**-1.9**
KKAR					**Sn**	**06 52 29.4**	**-5.6**
MK31	**Makanchi Array**	**17.36**	**14**	P	**P**	**06 50 50.8**	**+0.9**
MKAR	**Makanchi Array**	**17.36**	**14**	P	**Pn**	**06 50 48.2**	**-0.6**
	comp=E,0.2nm,0.3s,baz=203,slow=14,SNR=9.0						
MKAR				S	**Sn**	**06 53 55.0**	**-6.0**
	comp=E,0.2nm,0.3s,baz=204,slow=27,SNR=6.1						
KURBB	**Kurchatov Arra**	**20.62**	**4**	P	**P**	**06 51 25.5**	**0.0**
	comp=E,0.4nm,0.5s,baz=195,slow=9.5,SNR=2.9						
KURK	**Kurchatov**	**20.72**	**4**	P	**P**	**06 51 27.0**	**+0.4**
BVAR	**Borovoye Array**	**23.36**	**351**	P	**P**	**06 51 55.1**	**+0.6**
	comp=E,0.4nm,0.5s,baz=148,slow=8.5,SNR=4.1						
CMAR	**Chiang Mai Arr**	**23.62**	**114**	P	**P**	**06 51 58.9**	**+1.4**
	comp=E,2.5nm,0.8s,baz=302,slow=9.5,SNR=15						
AKTO	**Aktyubinsk**	**24.55**	**331**	P	**P**	**06 52 06.4**	**+0.7**
	comp=E,1.1nm,0.5s,baz=114,slow=12,SNR=4.2						
SONM	**Songino Array**	**29.14**	**44**	P	**P**	**06 52 49.7**	**+2.5**
	comp=E,0.1nm,0.3s,baz=241,slow=7.9,SNR=2.5						
ARU	**Arti**	**29.18**	**340**		pP	06 52 54.0	-2.3
ARCES	**ARCESS Array B**	**48.76**	**339**	P	**P**	**06 55 31.1**	**+0.7**
	comp=E,4.0nm,1.1s,baz=111,slow=6.6,SNR=3.7						
KEST	**Kesra**	**55.52**	**295**	P	**P**	**06 56 21.8**	**+0.5**
	comp=E,1.5nm,0.5s,baz=14,slow=4.2,SNR=3.1						
KEST	**Kesra**	**55.52**	**295**	P	**P**	**06 56 21.8**	**+0.5**
KEST				IAmb	IAmb	06 56 34.4	
	comp=Z,13nm,1.3s						
FITZ	**Fitzroy Crossi**	**67.47**	**129**	P	**P**	**06 57 40.8**	**-1.2**
FITZ				IAmb	IAmb	06 57 50.4	
	comp=Z,4.8nm,1.2s						
TORD	**Torodi Ar. Bea**	**70.29**	**274**	P	**P**	**06 57 59.4**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=43,slow=5.8,SNR=3.4						
RDOG	**Red Dog Mine**	**72.86**	**20**	P	**P**	**06 58 17.0**	**+2.6**
RDOG				IAmb	IAmb	06 58 17.1	
	comp=Z,3.7nm,0.5s						
WB0	**Warramunga Arr**	**74.71**	**124**	P	**P**	**06 58 27.1**	**+1.2**
WB0				IAmb	IAmb	06 58 27.4	
	comp=Z,5.8nm,1.4s						
WRA	**Warramunga Arr**	**74.78**	**124**	P	**P**	**06 58 25.3**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=322,slow=5.9,SNR=4.6						
ASAR	**Alice Springs**	**76.90**	**127**	P	**P**	**06 58 39.0**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=315,slow=6.0,SNR=3.9						
YKA	**Yellowknife Ar**	**87.37**	**5**	P	**P**	**06 59 33.6**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=346,slow=4.8,SNR=5.1						

*UPA **21** 07:24:12.0±2.0, 8.°60N×83.°15W, h0km±6km, ML3.4, MW3.6*

*UCR **21** 07:24:12.6±1.6, 8.°60N×83.°20W, h4km±5km*

ISC 21 07:24:12.7±0.9, **8.°59N**±0.°03×**83.°17W**±0.°02, **h9**km±8km, **n42**, σ**1.°07**/64, **2C-9D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTJ1	**Puerto Jimnez**	**0.14**	**248**	⇑iP	**Pg**	**07 24 15.3**	**-0.5**
PTJ1				eS	**Sg**	**07 24 18.9**	**+1.0**
PTJ1	**Puerto Jimnez**	**0.14**	**248**	⇑iP	**Pg**	**07 24 15.3**	**-0.5**
PTJ1				eS	**Sg**	**07 24 18.6**	**+0.6**
PIRO	**Carate, Puerto**	**0.25**	**222**	⇓eP	**Pg**	**07 24 16.5**	**-1.2**
PIRO				eS	**Sg**	**07 24 21.7**	**+0.7**
EDSV	**San Vito**	**0.30**	**40**	⇓iP	**Pb**	**07 24 20.1**	**-0.2**
SBAR3	**San Bartolo, C**	**0.39**	**134**	eP	**Pg**	**07 24 21.0**	**+0.6**
SBAR3				eS	**Sb**	**07 24 27.6**	**-0.3**
EDPN	**Palmar Norte**	**0.47**	**323**	⇓iP	**Pg**	**07 24 21.3**	**-0.6**
BRU2	**Volcan**	**0.52**	**67**	⇓iP	**Pb**	**07 24 23.4**	**-0.6**
	baz=247,slow=3.0						
BRU2				AMP		07 24 26.4	
	comp=Z,3μm,0.2s						
BRU2				eS	**Sb**	**07 24 32.6**	**+1.0**
BRU2	**Volcan**	**0.52**	**67**	⇓iP	**Pb**	**07 24 23.4**	**-0.6**
BRU2				eS	**Sb**	**07 24 32.7**	**+1.0**
EDBA	**Buenos Aires**	**0.58**	**350**	⇓iP	**Pb**	**07 24 24.2**	**-0.9**
EDBA				eS	**Sb**	**07 24 34.0**	**+0.5**
BAGA3	**Bagala, Chiriq**	**0.65**	**101**	eP	**Pg**	**07 24 25.5**	**+0.3**
BAGA3				eS	**Sb**	**07 24 35.0**	**-0.3**
BCO2	**Palmira**	**0.65**	**78**	⇓iP	**Pg**	**07 24 25.5**	**+0.2**
BCO2				eS	**Sb**	**07 24 35.7**	**+0.3**
PTAR3	**Potrerillos Ar**	**0.67**	**81**	⇓iP	**Pg**	**07 24 25.9**	**+0.2**
PTAR3				iS	**Sg**	**07 24 34.8**	**+0.3**
DVD	**David**	**0.73**	**102**	eP	**Pg**	**07 24 26.4**	**-0.3**
PEDE3	**Pedregal, Chir**	**0.77**	**105**	eP	**Pg**	**07 24 26.7**	**-0.8**
PEDE3				eS	**Sb**	**07 24 40.0**	**+1.2**
EDLM	**Las Mercedes**	**0.80**	**329**	⇓iP	**Pg**	**07 24 27.1**	**-1.1**
EDLM				eS	**Sb**	**07 24 39.4**	**-0.4**
CHIR3	**Chiriqui UPA,**	**0.85**	**103**	eP	**Pg**	**07 24 28.1**	**-0.9**
CHIR3				eS	**Sb**	**07 24 42.4**	**+1.2**
CNI2	**El Empalme, Bo**	**1.08**	**40**	eP	**Pg**	**07 24 32.1**	**-1.4**
LCR2	**La Lucha 2**	**1.41**	**324**	eP	**Pn**	**07 24 37.3**	**-1.5**
NANC3	**Nancito, Chiri**	**1.46**	**104**	iP	**Pn**	**07 24 35.2**	**-4.1**
NANC3				iS	**Sb**	**07 24 58.5**	**-0.3**
CVTR	**Volcan Turrial**	**1.54**	**338**	eP	**Pn**	**07 24 40.4**	**-0.3**
HDC	**Heredia**	**1.69**	**326**	eP	**Pn**	**07 24 42.5**	**0.0**
HDC				eS	**Sg**	**07 25 07.0**	**0.0**
HDC	**Heredia**	**1.69**	**326**	eP	**Pn**	**07 24 42.5**	**0.0**
HDC				eS	**Sb**	**07 25 05.8**	**+0.4**
CNAZ3	**Canazas, Verag**	**1.95**	**97**	eP	**Pn**	**07 24 43.5**	**-2.6**
SRA1	**San Ramn**	**1.97**	**319**	eP	**Pn**	**07 24 45.8**	**-0.7**
SRA1				iS	**Sn**	**07 25 12.3**	**+1.0**
MESA3	**La Mesa, Verag**	**2.01**	**102**	eP	**Pn**	**07 24 44.5**	**-2.4**
RSUS3	**Rio de Jesus,**	**2.08**	**107**	eP	**Pn**	**07 24 47.1**	**-0.7**
RSUS3				eS	**Sb**	**07 25 16.2**	**-0.4**
GMAL	**Guarumal, Vera**	**2.08**	**113**	eP	**Pn**	**07 24 46.6**	**-1.3**
GMAL				eS	**Sn**	**07 25 14.5**	**+0.5**
SFRA3	**San Francisco,**	**2.20**	**99**	eP	**Pn**	**07 24 49.0**	**-0.4**
STIA3	**Santiago, Vera**	**2.23**	**102**	eP	**Pn**	**07 24 49.0**	**-0.8**
CALO3	**Calobre, Verag**	**2.32**	**96**	iP	**Pn**	**07 24 51.8**	**+0.7**
JTS	**Las Juntas de**	**2.44**	**314**	eP	**Pn**	**07 24 53.6**	**+0.8**
JTS	**Las Juntas de**	**2.44**	**314**	eP	**Pn**	**07 24 53.6**	**+0.8**
OCU3	**Ocu, Herrera**	**2.45**	**105**	eP	**Pn**	**07 24 53.5**	**+0.6**
OCU3				eS	**Sn**	**07 25 22.7**	**-0.4**
CACAO	**El Cacao, Vera**	**2.60**	**118**	eP	**Pn**	**07 24 55.9**	**+1.0**
CACAO				eS	**Sn**	**07 25 27.2**	**+0.5**
PLVR	**Palo Verde**	**2.77**	**309**	eP	**Pn**	**07 24 57.9**	**+0.4**
CUI	**Cuipilapa**	**2.85**	**316**	eP	**Pn**	**07 25 00.1**	**+1.7**
AZU	**Azuero**	**2.97**	**105**	eP	**Pn**	**07 25 01.8**	**+1.8**
AZU				eS	**Sn**	**07 25 35.8**	**-0.1**
VTON	**El Valle, Cocl**	**3.02**	**89**	eP	**Pn**	**07 25 02.6**	**+1.8**
ZANG	**Zanguenga, Cho**	**3.28**	**83**	eP	**Pn**	**07 25 05.5**	**+1.2**
CHOR3	**La Chorrera**	**3.38**	**85**	eP	**Pn**	**07 25 06.2**	**+0.5**
FRIJ	**El Hiral**	**3.46**	**79**	eP	**Pn**	**07 25 07.1**	**+0.4**
ACON	**Acoyapa**	**3.90**	**330**	eP	**Pn**	**07 25 14.1**	**+1.3**

NDI 21 07:26:06.9±2.4, **30.°04N**×**76.°22E**, **h9**km±11km, **ML3.5, Northern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMLA	**Simla**	**1.36**	**37**	ePN	Pn	07 26 30.9	-1.1
SMLA				eSN	Sb	07 26 49.9	-0.1
SMLA				IAML		07 26 56.0	
	comp=E,797nm,0.2s						
SMLA				IAML		07 26 56.6	
	comp=N,827nm,0.1s						
BHK	**Bhakra**	**1.38**	**7**	ePN	Pn	07 26 29.8	-2.6
BHK				eSN	Sb	07 26 47.8	-2.9
DDI	**Dehra Dun**	**1.62**	**80**	eP	Pb	07 26 36.4	-0.6
DDI				eS	Sg	07 26 59.0	+0.1
DDI				IAML		07 27 02.3	
	comp=N,1μm,0.3s						
DDI				IAML		07 27 03.5	
	comp=E,1μm,0.5s						
AYAN	**Aya Nagar**	**1.75**	**153**	eP	Pn	07 26 36.9	-0.5
AYAN				ex	x	07 26 58.9	
KUDL	**Kundal**	**1.91**	**173**	eP	Pn	07 26 27.6	-12
KUDL				eS	Sn	07 26 51.9	-12
KUDL				eS	Sb	07 26 52.0	-14
SONA	**Sohna**	**1.94**	**157**	eP	Pn	07 26 40.7	+0.7
SONA				eS	Sn	07 27 04.2	-0.3
SONA				IAML		07 27 06.2	
	comp=N,272nm,0.3s						
DHRM	**DHARAMSHALA**	**2.20**	**2**	eP	Pn	07 26 44.7	+0.8
DHRM				IAML		07 26 47.2	
	comp=E,219nm,0.3s						
DHRM				IAML		07 26 48.9	
	comp=N,152nm,0.4s						
DHRM				eS	Sn	07 27 12.0	+0.6
DHRM				IAML		07 27 16.6	
	comp=E,706nm,0.1s						
DHRM				IAML		07 27 17.2	
	comp=N,610nm,0.1s						
KALG	**Kalgarh**	**2.27**	**103**	eP	Pn	07 26 35.9	-8.7
KALG				eS	Sn	07 27 04.2	-8.4
THN	**Thein Dam**	**2.42**	**350**	eP	Pn	07 26 48.0	+1.4
THN				eS	Sb	07 27 20.0	-0.6
JMU	**Jammu**	**2.89**	**337**	ex	Sn	07 27 32.5	+4.5
JOSI	**Joshimath**	**2.94**	**79**	ex	Pn	07 26 57.8	+3.9
JOSI				ex	x	07 27 32.7	
JOSI				ex	x	07 27 36.1	
JOSI				IAML		07 27 42.6	
	comp=E,215nm,0.5s						
JOSI				IAML		07 27 43.7	
	comp=N,224nm,0.5s						
AJM	**Ajmer**	**3.81**	**202**	eP	Pn	07 27 06.0	+0.2
AJM				iS	Sn	07 27 49.0	-1.8
AJM	**Ajmer**	**3.81**	**202**	eP	Pn	07 27 06.0	+0.2
BHPL	**Bhopal**	**6.86**	**171**	IAML		07 29 03.3	
	comp=E,18nm,0.3s						

*IDC **21** 07:41:06.2±0.8, 8.°93S×106.°03E, h0km, mb3.9/14, mb1 4.1/15, mb1mx3.9/45, mbtmp3.9/15, ML4.2/1, MS3.5/17, Ms1 3.5/17, ms1mx3.2/57, Error ellipse: s-maj=29.9km s-min=15.1km az=47.0*

*DJA **21** 07:41:09.7±1.2, 9°S±6°×10°6E±°, h20km±16km, M4.7/12, mB5.4/6, mb5.1/7, MLv4.4/12, Mw(mB)4.8/6*

*NEIC **21** 07:41:11.5±2.7, 8.°85S±0.°08×106.°13E±0.°07, h32km±5km, mb4.5/11, Error ellipse: s-maj=11.5km s-min=9.7km az=170.0*

ISC 21 07:41:11.9±0.5, **8.°93S**±0.°06×**106.°25E**±0.°06, **h35**km, **n87**, σ**2.°02**/77, **mb4.1**/19, **MS3.5**/16, **1D, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNJI	**Cibinong**	**1.83**	**29**	P	**Pn**	**07 41 38.4**	**-2.5**
CNJI				S	**Sn**	**07 42 02.1**	**-0.8**
SKJI	**Sukabumi**	**1.94**	**9**	P	**Pn**	**07 41 40.3**	**-2.0**
CISI	**Cisompet, Garu**	**2.07**	**49**	P	**Pn**	**07 41 41.6**	**-2.6**
CISI				S	**Sn**	**07 42 07.1**	**-1.7**
CISI	**Cisompet, Garu**	**2.07**	**49**		**Pn**	**07 41 41.4**	**-2.7**
DBJI	**Dramaga**	**2.41**	**12**	P	**Pn**	**07 41 46.9**	**-2.0**
DBJI				S	**Sn**	**07 42 15.9**	**-1.3**
LEM	**Lembang**	**2.49**	**33**	Pn	**Pn**	**07 41 51.2**	**+1.1**
	43nm,0.3s,baz=203,slow=4.6,SNR=11						
LEM				Sn	**Sn**	**07 42 22.1**	**+2.8**
	59nm,0.3s,baz=139,slow=16,SNR=6.5						
LEM	**Lembang**	**2.49**	**33**	P	**Pn**	**07 41 48.4**	**-1.7**
SBJI	**Serang**	**2.79**	**358**	P	**Pn**	**07 41 51.4**	**-2.7**
KPJI	**Karang Pucung**	**3.09**	**59**	P	**Pn**	**07 41 57.2**	**-1.1**
KASI	**Kota Agung**	**3.80**	**333**	P	**Pn**	**07 42 05.5**	**-2.5**
UGM	**Wanagama**	**4.35**	**77**	P	**Pn**	**07 42 14.7**	**-0.9**
UGM				S	**Sn**	**07 43 05.8**	**+0.7**
UGM	**Wanagama**	**4.35**	**77**		**Pn**	**07 42 14.7**	**-0.9**
LWLI	**Liwa**	**4.45**	**331**	P	**Pn**	**07 42 14.8**	**-2.3**
KLSI		**4.47**	**340**	P	**Pn**	**07 42 15.0**	**-2.2**
WOJI	**Wonogiri, Jawa**	**4.75**	**77**	P	Pn	07 42 32.8	+12
PCJI	**Pacitan**	**4.93**	**82**	P	**Pn**	**07 42 22.3**	**-1.2**
PWJI	**Pagerwojo**	**5.57**	**81**	P	**Pn**	**07 42 31.6**	**-0.7**
	0.6nm128nm,0.9s						
MNAI	**Manna**	**5.59**	**324**	Pn	**Pn**	**07 42 28.7**	**-4.0**
KSI	**Kapahiang**	**6.38**	**325**	P	**Pn**	**07 42 44.3**	**+0.8**
GMJI	**Gumukmas**	**7.15**	**85**	P	**Pn**	**07 42 54.1**	**+0.1**
	0.2nm987nm41nm,0.9s						
JAGI	**Jajag, Banyuwa**	**7.83**	**87**	P	**Pn**	**07 43 02.9**	**-0.5**
	1.1nm3μm226nm,0.5s						
JAGI	**Jajag, Banyuwa**	**7.83**	**87**		**Pn**	**07 43 03.3**	**0.0**
IGBI	**Denpasar**	**8.79**	**90**	P	**Pn**	**07 43 16.4**	**-0.2**
	9μm127nm,0.5s						
SRBI	**Singaraja**	**8.91**	**85**	P	**Pn**	**07 43 18.5**	**+0.3**
	1μm126nm,0.7s						
COCO	**West Island**	**9.80**	**250**		**Pn**	**07 43 29.3**	**-1.1**
PLAI	**Plampang**	**11.39**	**90**	P	**Pn**	**07 43 52.1**	**-0.1**
	78nm,1.1s						
KAPI	**Kappang**	**13.96**	**75**	LR	LR	07 50 36.6	
	comp=Z,163nm,21.6s,baz=252,slow=40						
EDFI	**Ende, Flores**	**15.26**	**91**	P	**Pn**	**07 44 43.1**	**-1.9**
GIRL	**Giralia**	**15.64**	**152**	Pn	**Pn**	**07 44 50.8**	**+1.0**
FITZ	**Fitzroy Crossi**	**20.92**	**118**	P	Pn	07 45 53.7	-0.6
	3.7nm,0.7s,baz=271,slow=6.5,SNR=9.5						
FITZ				S	**S**	**07 49 33.2**	**-10**
	0.4nm,0.3s,baz=90,slow=20,SNR=2.1						
FITZ				LR	LR	07 53 33.9	
	comp=Z,106nm,18.5s,baz=313,slow=35						
FITZ	**Fitzroy Crossi**	**20.92**	**118**	P	Pn	07 45 54.7	+0.4
FITZ				IAmb	IAmb	07 46 03.7	
	comp=Z,13nm,1.0s						
KNRA	**Kununurra**	**22.98**	**109**	P	**P**	**07 46 18.0**	**+4.3**
KNRA				IAmb	IAmb	07 46 27.9	
	comp=Z,29nm,1.1s						
H01W3	**Cape Leeuwin H**	**26.82**	**166**	T	T	08 14 46.5	
	baz=342						
H01W1	**Cape Leeuwin H**	**26.84**	**165**	T	T	08 14 53.7	
	baz=342						
H01W2	**Cape Leeuwin H**	**26.84**	**166**	T	T	08 14 50.2	
	baz=342						
CMAR	**Chiang Mai Arr**	**28.15**	**345**	P	**Pn**	**07 46 59.6**	**-1.5**
	comp=Z,1.0nm,0.3s,baz=169,slow=9.8,SNR=6.0						
CMAR				LR	LR	07 58 55.3	
	comp=Z,60nm,21.1s,baz=175,slow=38						
WB0	**Warramunga Arr**	**29.27**	**115**	P	**P**	**07 47 13.9**	**+2.9**
WRA	**Warramunga Arr**	**29.27**	**115**	P	**P**	**07 47 11.6**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=288,slow=11,SNR=5.4						
WRAB	**Tennant Creek**	**29.28**	**115**	P	**P**	**07 47 13.9**	**+2.8**
WRAB				IAmb	IAmb	07 47 15.7	
	comp=Z,4.9nm,0.8s						
WR0	**Warramunga Arr**	**29.46**	**115**	P	**P**	**07 47 15.7**	**+2.9**
WR0				IAmb	IAmb	07 47 32.2	
	comp=Z,16nm,1.5s						
PALK	**Pallekele**	**30.12**	**302**	LR	LR	07 58 43.1	
	comp=Z,84nm,19.1s,baz=27,slow=35						
ASAR	**Alice Springs**	**30.23**	**122**	P	**P**	**07 47 19.7**	**+0.1**
	comp=Z,1.4nm,1.0s,baz=296,slow=8.5,SNR=6.8						
ASAR				LR	LR	08 00 43.2	
	comp=Z,103nm,18.4s,baz=298,slow=39						
H08S2	**Diego Garcia H**	**33.42**	**270**	T	T	08 22 56.6	
	baz=94,slow=75,SNR=7.9						
H08S3	**Diego Garcia H**	**33.43**	**270**	T	T	08 22 58.2	
	baz=94,slow=75,SNR=30						
H08S1	**Diego Garcia H**	**33.44**	**270**	T	T	08 22 56.8	
	baz=94,slow=75,SNR=5.8						
SHL	**Shillong**	**37.03**	**338**	P	**P**	**07 48 17.3**	**-1.5**
STKA	**Stephens Creek**	**39.94**	**130**	P	**P**	**07 48 44.2**	**+1.2**
	comp=Z,1.4nm,0.7s,baz=9.1,slow=16,SNR=2.9						
STKA				LR	LR	08 05 06.0	
	comp=Z,111nm,21.8s,baz=336,slow=36						
STKA	**Stephens Creek**	**39.94**	**130**	IAmb	IAmb	07 48 53.2	
	comp=Z,1.0nm,0.9s						
ODAN	**Odare**	**40.01**	**333**	eP	**P**	**07 48 43.8**	**0.0**
	comp=Z,26nm,0.7s						
TAPN	**Taplejung**	**40.29**	**334**	eP	**P**	**07 48 46.5**	**+0.3**
RAMN	**Ramite**	**40.44**	**332**	eP	**P**	**07 48 47.5**	**+0.1**
	comp=Z,28nm,1.0s						
LSA	**Lhasa**	**41.06**	**340**	P	**P**	**07 48 52.6**	**-0.2**
LSA				IAmb	IAmb	07 49 09.5	
	comp=Z,12nm,1.0s						
JIRN	**Jiri**	**41.23**	**333**	eP	**P**	**07 48 54.1**	**0.0**
PKI	**Pulchoki**	**41.52**	**332**	eP	**P**	**07 48 56.2**	**-0.2**
GUN	**Gumba**	**41.59**	**332**	eP	**P**	**07 48 57.0**	**0.0**
DMN	**Daman**	**41.70**	**331**	eP	**P**	**07 48 57.8**	**0.0**
GKN	**Gorkha**	**42.25**	**331**	eP	**P**	**07 49 02.2**	**0.0**
XAN	**Xi'an**	**42.81**	**3**	P	**P**	**07 49 09.3**	**+2.9**
DANN	**Dangsing**	**42.96**	**330**	eP	**P**	**07 49 07.2**	**-0.9**
GUMO	**Guam**	**44.39**	**60**	LR	LR	08 05 41.3	
	comp=Z,20nm,21.3s,baz=214,slow=33						
GTA	**Gaotai**	**48.46**	**353**	⇓P	**P**	**07 49 51.8**	**+0.6**
GTA				pP	pP	07 50 00.1	-0.3
GTA				sP	pwP	07 50 04.8	-0.7
KSRS	**Korea Array**	**50.41**	**22**	LR	LR	08 12 42.2	
	comp=Z,14nm,21.6s,baz=175,slow=38						
JHJ	**Hachijo jima 2**	**52.61**	**36**	LR	LR	08 10 01.0	
	comp=Z,19nm,20.7s,baz=203,slow=33						
MJAR	**Matsushiro Arr**	**54.29**	**32**	LR	LR	08 16 39.2	
	comp=Z,27nm,18.1s,baz=140,slow=39						
KSH	**Kashi**	**55.78**	**332**	P	**P**	**07 50 47.3**	**+1.6**
KSH				PcP	**PcP**	**07 51 46.5**	**+2.0**
KSH				PP	**PP**	**07 52 55.6**	**+5.1**
KSH				S	**S**	**07 58 30.8**	**+0.4**
KSH				ScS	**ScS**	**08 00 33.3**	**+0.9**
KSH	**Kashi**	**55.78**	**332**	SS	**SS**	**08 02 18.3**	**+1.7**
SONM	**Songino Array**	**56.51**	**0**	P	**P**	**07 50 50.7**	**0.0**
	comp=Z,0.7nm,0.5s,baz=172,slow=7.5,SNR=6.9						
MK31	**Makanchi Array**	**59.45**	**341**	P	**P**	**07 51 10.4**	**-0.7**
MK31				IAmb	IAmb	07 51 26.2	
	comp=Z,1.7nm,0.7s						
MKAR	**Makanchi Array**	**59.45**	**341**	P	**P**	**07 51 10.5**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=145,slow=8.5,SNR=14						
MKAR				LR	LR	08 19 55.0	
	comp=Z,54nm,18.3s,baz=169,slow=39						
TLY	**Talaya**	**60.41**	**358**	LR	LR	08 20 43.0	
	comp=Z,58nm,18.1s,baz=166,slow=39						
KLR	**Kul'dur**	**62.09**	**19**	LR	LR	08 18 39.0	
	comp=Z,28nm,21.4s,baz=244,slow=36						
KURBB	**Kurchatov Arra**	**64.01**	**341**	P	**P**	**07 51 41.1**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=156,slow=5.8,SNR=7.7						
KURK	**Kurchatov**	**64.06**	**341**	P	**P**	**07 51 41.3**	**-0.8**
KURK				IAmb	IAmb	07 52 00.6	
	comp=Z,6.0nm,0.9s						
GEYT	**Alibeck**	**64.72**	**319**	P	**P**	**07 51 46.9**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=123,slow=5.3,SNR=2.9						
GEYT				LR	LR	08 22 24.7	
	comp=Z,50nm,18.5s,baz=340,slow=38						
ZALV	**Zalesovo Beam**	**65.21**	**346**	P	**P**	**07 51 48.4**	**-1.1**
	comp=Z,0.8nm,0.4s,baz=82,slow=3.1,SNR=3.7						
BVAR	**Borovoye Array**	**68.85**	**338**	P	**P**	**07 52 12.0**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=150,slow=10,SNR=5.3						
AKTO	**Aktyubinsk**	**72.40**	**330**	P	**P**	**07 52 33.1**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=150,slow=8.9,SNR=3.4						
KBZ	**Khabaz**	**77.58**	**318**	P	**P**	**07 53 02.6**	**-1.8**
	comp=Z,1.2nm,0.8s,baz=225,slow=2.9,SNR=2.5						
BOSA	**Boshof**	**77.91**	**243**	LR	LR	08 20 02.8	
	comp=Z,48nm,20.6s,baz=323,slow=30						
BRTR	**Keskin Array B**	**82.55**	**312**	P	**P**	**07 53 30.4**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=116,slow=5.3,SNR=3.5						
BRTR				LR	LR	08 32 20.3	
	comp=Z,26nm,18.0s,baz=74,slow=37						
ARCES	**ARCESS Array B**	**95.08**	**340**	LR	LR	08 44 27.0	
	comp=Z,43nm,20.1s,baz=188,slow=40						
YKA	**Yellowknife Ar**	**118.92**	**20**	PKP	**PKiKP**	**07 59 57.0**	**+0.5**
	comp=Z,0.2nm,0.8s,baz=307,slow=2.2,SNR=3.9						
BDFB	**Brasilia**	**144.70**	**226**	PKP	**PKPdf**	**08 00 47.0**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=149,slow=12,SNR=3.2						
TX31	**Lajitas Ar. Si**	**145.38**	**50**		**PKiKP**	**08 00 49.9**	**-1.0**
TX32	**Lajitas Array**	**145.38**	**50**		**PKiKP**	**08 00 50.6**	**-0.3**
TXAR	**Lajitas Array**	**145.38**	**50**	PKPbc	**PKPbc**	**08 00 46.0**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=256,slow=3.6,SNR=3.5						
WMOK	**Wichita Mounta**	**145.56**	**38**		**PKPab**	**08 00 47.0**	**-0.5**

*NNC **21** 07:51:11.3±4.4, 37.°44N×71.°25E, h131km±99km, mb3.0, mpv3.8, Error ellipse: s-maj=44.5km s-min=30.8km az=157.0*

ISC 21 07:51:09.7±3.7, **37.°3N**±0.°2×**71.°3E**±0.°1, **h109**km, **n10**, σ**0.°67**/13, **5C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.16**	**21**	P	**Pn**	**07 52 25.1**	**+0.1**
	SNR=19						

UCH Uchtor 5.50 26 P Pn 07 52 30.8 +1.2
SNR=6.5
EKS2 Erkin-Say 5.67 19 P Pn 07 52 32.5 +0.9
SNR=5.5
KK31 Karatay Array 5.80 355 P Pn 07 52 34.4 +1.1
3.5nm,0.4s,baz=179,slow=13,SNR=31
KK31 ⇑S Sn 07 53 38.2 -0.3
0.7nm,0.3s,baz=173,slow=21,SNR=4.8
AAK Ala-Archa 5.86 24 P Pn 07 52 34.9 +0.6
SNR=6.4
AAK Ala-Archa 5.86 24 ⇑P Pn 07 52 34.3 +0.1
4.0nm,0.3s
AAK ⇓S Sn 07 53 39.9 -0.2
3.9nm,0.6s
CHMS Chumysh 6.27 24 P Pn 07 52 39.8 +0.2
SNR=6.0
CHMS Chumysh 6.27 24 ⇑P Pn 07 52 39.6 -0.1
5.2nm,0.4s
CHMS ⇑S Sn 07 53 49.9 0.0
5.5nm,0.8s
USP Ospenovka 6.43 22 P Pn 07 52 41.4 -0.5
SNR=6.1
AB31 Akbulak array 14.47 329 ⇑P Pn 07 54 28.5 -0.6
0.3nm,0.5s

WEL 21 08:11:19.4,35°S±18°×17°9E±1°5,h216km±13km,M3.5/24, MLv3.5/24,MLv3.5/21,Error ellipse: s-maj=0.0km s-min=0.0km az=16.2,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	2.39	189	P	Pn	08 12 02.9	-0.1
HAZ	Te Kaha	2.46	200	P	Pn	08 12 04.4	+0.7
PKGZ	Pakihiroa	2.51	194	P	Pn	08 12 04.4	0.0
PKGZ				S	S	08 12 39.0	-0.4
PUZ	Puketiti	2.66	190	P	Pn	08 12 05.6	-0.4
PUZ				S	S	08 12 45.1	+2.8
RUGZ	Raukumara Rang	2.68	201	P	Pn	08 12 06.2	-0.1
RUGZ				S	S	08 12 43.9	+1.0
KUZ	Kuaotunu	2.85	242	P	Pn	08 12 08.0	-0.2
OPRZ	Ohinepanea	3.02	217	P	Pn	08 12 10.6	+0.6
MWZ	Matawai	3.06	200	P	Pn	08 12 10.7	+0.1
MWZ				S	S	08 12 55.2	+4.6
TKGZ	Te Karaka	3.09	195	P	Pn	08 12 11.8	+1.0
RIGZ	Rimuhau	3.36	195	P	Pn	08 12 14.2	+0.2
RTZ	Ruatahuna	3.50	205	P	Pn	08 12 16.2	+0.5
SNGZ	Shannon Statio	3.54	200	P	Pn	08 12 16.6	+0.5
KNZ	Kokohu	3.68	195	P	Pn	08 12 17.0	-0.8
RAHZ	Arahi	3.73	202	P	Pn	08 12 19.0	+0.6
MTHZ	Maungataniwha	3.75	205	P	Pn	08 12 19.7	+1.0
MHGZ	Mahia Peninsul	3.77	191	P	Pn	08 12 20.1	+1.3
NMHZ	Naumai	3.99	204	P	Pn	08 12 22.1	+0.4
ARHZ	Aropaoanui	4.08	201	P	Pn	08 12 22.5	-0.2
BKZ	Black Stump Fm	4.16	206	P	Pn	08 12 23.6	-0.1
MCHZ	McNeill Hill	4.34	203	P	Pn	08 12 26.0	+0.1
KWHZ	Kaweka Forest	4.41	205	P	Pn	08 12 26.3	-0.5
HIZ	Hauiti	4.43	225	P	Pn	08 12 29.3	+2.3
BHHZ	Black Hill Sta	4.60	208	P	Pn	08 12 28.4	-0.8
KAHZ	Kahuranaki	4.61	199	P	Pn	08 12 28.5	-0.7
KRHZ	Kereru	4.62	205	P	Pn	08 12 28.4	-1.0
PXZ	Pawanui	4.83	199	P	Pn	08 12 30.6	-1.4
PNHZ	Pukenui	4.92	205	P	Pn	08 12 32.0	-1.2
PRHZ	Porangahau	5.12	200	P	Pn	08 12 35.4	-0.2
TSZ	Takapari Road	5.14	206	P	Pn	08 12 34.1	-1.7
BFZ	Birch Farm	5.61	201	P	Pn	08 12 40.3	-1.5
MRZ	Mangatainoka R	5.81	206	P	Pn	08 12 42.3	-2.0

BJI 21 08:32:43.1±0.0,6°81S×130°63E,h162km,mB4.9/32, mb4.7/46
IDC 21 08:32:49.0±0.8,6°39S×130°06E,h159km±6km,mb4.2/27, mb1 4.3/30,mb1mx4.2/48,mbtmp4.7/30,MS3.2/8, Ms1 3.2/8,ms1mx2.9/40,Error ellipse: s-maj=14.6km s-min=8.4km az=71.0
DJA 21 08:32:48.8±0.2,6°S±2°×13°0E±°,h168km±3km,M4.9/25, mb4.8/25,mB5.2/19,MLv5.3/13,MLv5.5/6,Mw(mB)4.6/19
NEIC 21 08:32:49.2±2.0,6°43S±0°05×130°13E±0°07,h163km±4km, mb4.8/52,Error ellipse: s-maj=9.4km s-min=7.5km az=91.0
KLM 21 08:32:49.0,6°58S×130°15E,h143km,mb5.1
ISC 21 08:32:47.3±0.3,6°45S±0°04×130°12E±0°04,h146km,n212, σ1°80/225,mb4.7/58,2C,Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SAUI Saumlaki 1.92 142 P Pn 08 33 24.7 +3.4
SAUI S Sn 08 33 49.9 +2.5
SAUI Saumlaki 1.92 142 Pn 08 33 25.0 +3.7
SAUI Sn Sn 08 33 51.8 +4.4
BNDI Bandanaira 1.93 354 P Pn 08 33 25.1 +3.7
MSAI Masohi 3.31 339 P Pn 08 33 41.5 +3.0
AAI Ambon 3.35 325 P Pn 08 33 42.8 +3.7
FAKI Fak Fak 4.10 31 P Pn 08 33 49.0 +0.1
FAKI Fak Fak 4.10 31 Pn 08 33 49.2 +0.4
FAKI Sn Sn 08 34 34.2 -2.5
NLAI Namlea 4.39 317 P Pn 08 33 57.9 +5.3
KMPI Kaimana, Papua 4.52 52 P Pn 08 33 55.0 +0.6
SIJI Sorong 5.66 12 P Pn 08 34 09.5 -0.1
120nm,0.3s,baz=128,slow=24,SNR=189
SIJI S Sn 08 35 09.2 -4.7
106nm,0.3s,baz=88,slow=23,SNR=16
SWI Sorong 5.67 12 P Pn 08 34 09.4 -0.2
3.5nm3.5nm21μm338nm,0.5s
SANI Sanana 6.01 317 P Pn 08 34 17.2 +3.0
0.6nm0.6nm2μm181nm,0.7s
LBMI Labuha 6.34 336 P Pn 08 34 20.6 +2.0
2.1nm5μm617nm,0.9s
RKPI Ransiki, Papua 6.36 40 P Pn 08 34 20.3 +1.4
18nm18nm61μm3μm,0.4s
KDU Kakadu 6.62 160 P Pn 08 34 23.2 +0.9
baz=6.6,SNR=1000
KDU S Sn 08 35 31.7 -4.9
baz=6.6
SOEI Soe 6.66 240 P Pn 08 34 25.5 +2.5
2.7nm2.7nm4μm171nm,0.6s
SOEI Soe 6.66 240 Pn 08 34 25.3 +2.3
SOEI Sn Sn 08 35 38.0 +0.2
TNTI Ternate 7.68 339 P Pn 08 34 37.9 +1.3
1.8nm3μm77nm,1.0s
EDFI Ende, Flores 8.66 254 P Pn 08 34 53.6 +3.8
648nm27nm,0.5s
LUWI Luwuk 9.09 306 Pn Pn 08 34 58.5 +3.1
KNRA Kununurra 9.26 188 P Pn 08 34 57.5 -0.1
baz=9.3,SNR=302
KNRA S Sn 08 36 34.6 -5.8
baz=9.3
KNRA Kununurra 9.26 188 Pn 08 34 57.6 -0.1
KNRA Sn Sn 08 36 34.8 -5.6
APSI Ampana 10.09 303 P Pn 08 35 13.3 +4.7
2μm173nm,1.1s
BNSI Bone 10.17 281 P Pn 08 35 22.4 +13
SPSI Sidrap Palu 10.60 283 P Pn 08 35 27.5 +12
MRSI Marisa 10.68 310 P Pn 08 35 19.8 +3.3
2μm217nm,1.1s
TTSI Tana Toraja 10.81 288 P Pn 08 35 31.8 +14
WBSI Waikabubak, Su 11.08 253 P Pn 08 35 22.4 +0.5
1μm92nm,0.8s
MPSI Mapaga 12.23 303 P P 08 35 42.8 -0.3
FITZ Fitzroy Crossi 12.37 200 P Pn 08 35 36.7 -2.0
baz=12,SNR=89
FITZ S Sn 08 37 45.3 -10
baz=12
FITZ Fitzroy Crossi 12.37 200 P Pn 08 35 37.2 -1.4
12nm,0.3s,baz=24,slow=9.8,SNR=121
FITZ S Sn 08 37 44.2 -11
8.6nm,0.3s,baz=335,slow=17,SNR=4.4
FITZ LR LR 08 41 09.8
comp=Z,33nm,19.1s,baz=20,slow=40
FITZ Fitzroy Crossi 12.37 200 Pn 08 35 36.4 -2.2
PLAI Plampang 12.46 258 P Pn 08 35 39.9 +0.1
WB0 Warramunga Arr 13.87 163 Pn 08 35 55.7 -2.2
WRAB Tennant Creek 14.02 163 Pn 08 35 57.8 -1.9
WRA Warramunga Arr 14.02 163 P Pn 08 35 57.8 -2.0
7.3nm,0.3s,baz=342,slow=12,SNR=83
WRA S Sn 08 38 24.8 -10
22nm,0.3s,baz=347,slow=22,SNR=12
WRA LR LR 08 42 20.6
comp=Z,145nm,19.3s,baz=355,slow=40
WB2 Warramunga Arr 14.03 163 Pn 08 35 57.8 -2.0
WR0 Warramunga Arr 14.10 163 Pn 08 35 59.9 -0.9
KCP Kidapawan 14.28 339 ⇑iP P 08 36 08.2 +2.1
COEN Coen 14.85 121 P P 08 36 11.8 -0.5
baz=15,SNR=81
COEN S Sn 08 38 44.6 -11
baz=15
COEN Coen 14.85 121 P P 08 36 12.1 -0.2
SRBI Singaraja 14.88 263 P Pn 08 36 12.7 +0.1
77nm,1.0s
JAGI Jajag, Banyuwa 15.96 262 P Pn 08 36 22.2 -1.7
1μm46nm,1.1s
JAGI Jajag, Banyuwa 15.96 262 P Pn 08 36 22.4 -1.6
JAGI IAmb IAmb 08 36 27.2
comp=Z,46nm,1.1s
GMJI Gumukmas 16.64 263 P Pn 08 36 33.8 +1.6
comp=Z,36nm,0.9s
QIS Mount Isa 16.77 148 P Pn 08 36 34.9 +1.2
baz=17,SNR=66
PMG Port Moresby 17.13 101 P Pn 08 36 39.4 +1.3
comp=Z,1.7nm,0.3s,baz=296,slow=10,SNR=8.5
PMG S S 08 39 37.8 -11
comp=Z,0.4nm,0.3s,baz=234,slow=19,SNR=2.3
PMG Port Moresby 17.13 101 P Pn 08 36 40.2 +2.1
AS31 Alice Springs 17.50 168 P Pn 08 36 43.5 +1.0
ASAR Alice Springs 17.50 168 P Pn 08 36 43.4 +0.9
comp=Z,14nm,0.3s,baz=347,slow=12,SNR=631
ASAR S S 08 39 47.2 -9.0
comp=Z,3.4nm,0.3s,baz=354,slow=27,SNR=8.1
ASAR LR LR 08 44 15.7
comp=Z,133nm,18.5s,baz=336,slow=39
ASAR ScP ScP 08 44 33.2 -3.1
comp=Z,0.7nm,0.3s,baz=359,slow=1.5,SNR=5.0
SPMM Sapulut 17.57 309 P Pn 08 36 47.0 +3.5
PSA00 Pilbara Seismi 18.02 212 P Pn 08 36 48.5 -0.2
MTSU Mount Surprise 18.07 131 P Pn 08 36 50.0 +0.6
baz=18,SNR=42
PWJI Pagerwojo 18.24 264 P P 08 36 49.3 -0.3
comp=Z,44nm,0.9s
WRKA Warakurna 18.56 185 P Pn 08 36 54.8 -0.3
baz=19,SNR=224
KKM Kota Kinabalu 18.62 312 P P 08 36 54.6 +0.7
KKM IAmb IAmb 08 36 55.9
comp=Z,60nm,1.0s
STKI Sintang 19.70 288 P Pn 08 37 09.9 +1.4
SBUM Sibu 19.94 296 P 08 37 09.5 +1.4
SBUM IAmb IAmb 08 37 11.8
comp=Z,25nm,1.0s
CTA Charters Tower 20.71 132 P P 08 37 18.5 +2.1
comp=Z,11nm,0.5s,baz=296,slow=12,SNR=21
CTA S S 08 40 57.2 -2.7
comp=Z,3.4nm,0.8s,baz=262,slow=15,SNR=1.9
KPJI Karang Pucung 21.05 266 P P 08 37 20.4 +0.4
comp=Z,42nm,1.0s
KSM Kuching 21.29 291 P P 08 37 27.0 +4.4
CISI Cisompet, Garu 22.16 266 P P 08 37 32.2 +0.4
comp=Z,236nm,1.4s
CISI Cisompet, Garu 22.16 266 P P 08 37 31.2 -0.6
GIRL Giralia 22.22 222 P P 08 37 31.1 -1.1
baz=22,SNR=4.9
LEM Lembang 22.35 268 P P 08 37 34.1 +0.3
comp=Z,46nm,0.7s,baz=57,slow=7.7,SNR=6.7
LEM LR LR 08 48 55.1
comp=Z,57nm,18.4s,baz=167,slow=43
TGY Tagaytay City 22.36 336 P P 08 37 34.2 +0.6
comp=Z,163nm,0.3s,baz=333,slow=2.3,SNR=3.7
CNJI Cibinong 22.84 267 P P 08 37 36.8 -1.4
comp=Z,4μmcomp=Z,440nm,1.1s
MEEK Meekatharra 22.87 207 P P 08 37 38.9 +0.5
baz=23,SNR=8.2
QLP Quilpie 24.12 148 P P 08 37 50.7 +1.0
baz=24,SNR=14
FORT Forrest 24.28 184 P P 08 37 52.5 +1.4
baz=24,SNR=12
FORT Forrest 24.28 184 P P 08 37 51.7 +0.6
MDSI Maura Dua 25.89 273 P P 08 38 09.6 +3.6
KMBL Kambalda 25.96 196 P P 08 38 07.4 +1.1
baz=26,SNR=5.8
MORW Morawa 26.13 209 P P 08 38 08.6 +0.7
baz=26,SNR=5.6
MORW Morawa 26.13 209 P P 08 38 08.2 +0.2
BBOO Buckleboo 26.80 169 P P 08 38 14.6 +0.7
baz=27,SNR=19
BBOO Buckleboo 26.80 169 P P 08 38 14.3 +0.4
BBOO IAmb IAmb 08 38 15.4
comp=Z,14nm,0.7s
BLDU Ballidu 27.14 206 P P 08 38 17.6 +0.7
baz=27,SNR=15
STKA Stephens Creek 27.47 158 P P 08 38 20.8 +0.8
baz=28,SNR=34
STKA Stephens Creek 27.47 158 P P 08 38 20.6 +0.8
comp=Z,6.4nm,0.4s,baz=337,slow=8.5,SNR=47
STKA Stephens Creek 27.47 158 P P 08 38 20.4 +0.4
EIDS Eidsvold 27.49 135 P P 08 38 20.2 +0.1
KLBR Kellerberrin 27.56 203 P P 08 38 21.6 +1.0
baz=28,SNR=12
HTT Hallett 28.06 164 P P 08 38 26.2 +1.1
baz=28,SNR=11
CMSA Cobar Meteorol 28.90 152 P P 08 38 33.9 +1.3
baz=29,SNR=20
NWAO Narrogin (SRO) 28.94 203 P P 08 38 34.1 +1.2
baz=29,SNR=4.2
NWAO Narrogin (SRO) 28.94 203 P P 08 38 33.8 +0.9
comp=Z,3.4nm,0.4s,baz=45,slow=10,SNR=4.1
NWAO Narrogin (SRO) 28.94 203 P P 08 38 34.3 +1.3
HNR Honiara 29.68 98 LR LR 08 50 45.6
comp=Z,94nm,20.8s,baz=282,slow=36
ARMA Armidale 31.25 142 P P 08 38 55.4 +1.9
baz=31,SNR=13
RPSI Rantau Prapat 32.44 285 P P 08 39 02.1 -1.9
YNG Young 32.45 151 P P 08 39 05.6 +1.7
baz=33,SNR=7.5
PSI Prapat 32.47 286 P P 08 39 02.7 -1.7
comp=Z,14nm,0.9s,baz=92,slow=1.6,SNR=4.3
MGCD Mangrove Creek 33.00 147 P P 08 39 11.1 +2.6
baz=33,SNR=7.9
CNB Canberra Magne 33.74 151 P P 08 39 17.8 +2.7
baz=34,SNR=18
KCSI Kotacane, Aceh 33.78 286 P P 08 39 21.0 +5.4
TOO Toolangi 33.99 158 P P 08 39 19.8 +2.7
baz=34,SNR=6.4
MILA Mila 35.06 153 P P 08 39 28.8 +2.4
baz=35,SNR=4.3
SANVU Saraoutou 37.44 107 P P 08 39 47.0 +0.2
SLVN Son La 37.74 318 P P 08 39 48.9 -0.5
SLVN IAmb IAmb 08 39 50.2
comp=Z,17nm,1.2s
NOUC Port Laguerre 38.22 118 P P 08 39 54.2 +0.8
DZM Mont Dzumac 38.34 118 LR LR 08 56 33.1
comp=Z,31nm,18.4s,baz=149,slow=37
DZM Mont Dzumac 38.34 118 P P 08 39 55.4 +1.0
CM31 Chiang Mai Arr 39.48 309 P P 08 40 04.0 +0.2
CM31 IAmb IAmb 08 40 05.2
comp=Z,28nm,1.2s
CMAR Chiang Mai Arr 39.48 309 P P 08 40 04.1 +0.3
comp=Z,5.4nm,0.8s,baz=140,slow=7.3,SNR=34
CMAR PcP PcP 08 42 08.5 -0.3
comp=Z,1.0nm,0.3s,baz=167,slow=3.2,SNR=6.3
CMAR LR LR 08 58 24.7
comp=Z,16nm,19.1s,baz=136,slow=39
CHTO Chiang Mai 39.68 310 P P 08 40 05.2 -0.3
CHTO IAmb IAmb 08 40 06.7
comp=Z,25nm,1.0s
NJ2 Nanjing 39.77 345 eP P 08 40 08.3 +2.3
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
WHN Wuhan 39.77 338 P P 08 40 06.1 +0.1
WHN pmax pmax
comp=Z,140nm,1.5s
GYA Guiyang 39.85 326 eP P 08 40 13.3 +6.4
GYA pP sP 08 40 48.8 -4.8
GYA sP pwP 08 41 06.4 +23
GYA PP PnPn 08 41 53.6 +7.3
GYA S S 08 46 10.3 +10
MJAR Matsushiro Arr 43.44 9 P P 08 40 34.9 -0.9
comp=Z,5.5nm,0.9s,baz=184,slow=9.3,SNR=7.8
MJAR LR LR 08 57 16.8
comp=Z,32nm,20.5s,baz=215,slow=34
KSRS Korea Array 43.73 357 P P 08 40 37.7 -0.3
comp=Z,1.7nm,0.8s,baz=174,slow=11,SNR=9.5
KSRS PcP PcP 08 42 21.9 -0.4
comp=Z,1.7nm,0.8s,baz=178,slow=3.0,SNR=4.3
CD2 Chengdu 44.91 327 eP P 08 40 49.0 +1.3
XAN Xi'an 44.99 335 P P 08 40 47.1 -1.2
XAN pmax pmax
comp=Z,13nm,1.0s
XAN pmax pmax
comp=Z,150nm,6.2s
BJI Beijing 48.02 346 P P 08 41 11.8 +0.2
BJI pmax pmax
comp=Z,13nm,1.2s
LZH Lanzhou 48.98 332 eP P 08 41 19.0 -0.3
LZH pP pwP 08 41 56.3 -0.3
LZH sP sP 08 42 11.6 +4.5
LZH pmax pmax
comp=Z,17nm,1.1s
LZH pmax pmax
comp=Z,62nm,5.4s
USRK Ussuriysk Ar. 50.45 2 P P 08 41 29.9 -0.1
comp=Z,2.5nm,0.6s,baz=192,slow=7.7,SNR=5.9
QRZ Quartz Range 50.99 139 P P 08 41 36.3 +2.0
QRZ IAmb IAmb 08 41 40.2
comp=Z,29nm,1.2s
WHZ Wether Hill Ro 51.09 147 P P 08 41 36.1 +1.1
RPZ Rata Peaks 51.59 143 P P 08 41 40.1 +1.4
comp=Z,4.3nm,0.4s,baz=284,slow=4.2,SNR=3.8
RPZ Rata Peaks 51.59 143 P P 08 41 40.6 +1.8
RPZ IAmb IAmb 08 41 51.4
comp=Z,28nm,1.4s
THZ Tophouse 51.71 140 P P 08 41 40.5 +0.9
LSA Lhasa 51.89 316 P P 08 41 42.3 +0.6
LSA pmax pmax
comp=Z,96nm,1.7s
KHZ Kahutara 52.45 140 P P 08 41 45.9 +0.9
KHZ IAmb IAmb 08 41 57.5
comp=Z,29nm,1.4s
BHW Baring Head 52.81 138 P P 08 41 47.7 -0.1
BKZ Black Stump Fm 52.90 135 P P 08 41 48.9 +0.4
ODAN Odare 52.99 311 eP P 08 41 49.3 -0.3
comp=Z,58nm,0.6s
TAPN Taplejung 53.01 311 eP P 08 41 49.4 -0.4
comp=Z,172nm,0.9s
GTA Gaotai 53.55 331 ⇑P P 08 41 53.4 +0.1
GTA pmax pmax
comp=Z,9.0nm,1.0s
GTA pmax pmax
comp=Z,55nm,4.6s
GTA LR LR
comp=Z,56nm,15.2s
GTA LR LR
comp=Z,220nm,15.2s
GTA LR LR
comp=Z,99nm,15.6s
RAMN Ramite 53.64 310 eP P 08 41 54.3 0.0
comp=Z,126nm,0.6s
JIRN Jiri 54.32 311 eP P 08 41 59.0 -0.4
comp=Z,95nm,0.6s
GUN Gumba 54.69 311 eP P 08 42 01.7 -0.3
comp=Z,96nm,0.5s
PKI Pulchoki 54.86 310 eP P 08 42 02.6 -0.7
PKIN Phulchoki 54.88 310 eP P 08 42 02.7 -0.6
comp=Z,17nm,0.5s
KKN Kakani 55.07 310 eP P 08 42 04.4 -0.3
DMN Daman 55.11 310 eP P 08 42 04.6 -0.4
GKN Gorkha 55.67 310 eP P 08 42 08.6 -0.2
comp=Z,66nm,0.3s
HYB Hyderabad 56.18 296 iP P 08 42 11.0 -1.5
DANN Dangsing 56.51 310 eP P 08 42 14.5 -0.5
ULN Ulaanbaatar 57.78 342 P P 08 42 24.1 +0.8
ULN IAmb IAmb 08 42 25.1
comp=Z,14nm,0.7s
SONM Songino Array 57.96 341 P P 08 42 24.9 +0.3
comp=Z,4.4nm,0.6s,baz=160,slow=7.5,SNR=32
SONM pP pwP 08 43 02.3 -0.5
comp=Z,2.1nm,0.9s,baz=163,slow=4.4,SNR=2.5
WMQ Urumqi 63.00 327 eP P 08 42 59.8 +1.0
WMQ pmax pmax
comp=Z,19nm,1.1s
WMQ pmax pmax
comp=Z,120nm,5.1s
WMQ LR LR
comp=Z,450nm,28.8s
WMQ LR LR
comp=Z,670nm,29.3s
WMQ LR LR
comp=Z,87nm,29.0s
PEA0B Petropavlovsk- 63.77 18 P P 08 43 04.2 +0.6
PEA0B IAmb IAmb 08 43 15.1
comp=Z,25nm,1.1s
PETK Petropavlovsk- 63.77 18 P P 08 43 04.2 +0.6
comp=Z,6.3nm,0.7s,baz=171,slow=3.9,SNR=23
NIL Nilore 66.95 311 P P 08 43 23.8 -0.7
NIL IAmb IAmb 08 43 25.4
comp=Z,13nm,0.8s
KSH Kashi 67.70 317 P P 08 43 30.5 +1.3
KSH PcP PcP 08 43 56.4 +1.4
KSH PP PP 08 46 04.4 +3.9
KSH S S 08 52 11.6 -3.6
KSH pmax pmax
comp=Z,43nm,1.1s
KSH pmax pmax
comp=Z,500nm,5.0s
KSH LR LR
comp=Z,310nm,7.6s
KSH LR LR
comp=Z,220nm,7.5s
KSH LR LR
comp=Z,370nm,7.6s
MK31 Makanchi Array 67.84 327 P P 08 43 30.2 +0.4
MKAR Makanchi Array 67.84 327 P P 08 43 30.4 +0.6
comp=Z,17nm,0.3s,baz=115,slow=7.9,SNR=356
MAKZ Makanchi 68.02 327 P P 08 43 31.1 +0.2
KDJ Kajisay 68.23 320 P P 08 43 32.7 +0.1
KDJ IAmb IAmb 08 43 34.0
comp=Z,20nm,0.9s
YAK Yakutsk 68.28 360 P P 08 43 32.0 -0.1
comp=Z,5.6nm,0.3s,baz=135,slow=1.0,SNR=6.3
YAK Yakutsk 68.28 360 IAmb IAmb 08 43 33.0
comp=Z,33nm,1.0s
NRN Naryn 68.63 319 P P 08 43 35.5 +0.3
NRN IAmb IAmb 08 43 36.6
comp=Z,13nm,1.0s
BOOM Boomskoye usch 69.20 320 P P 08 43 39.5 +0.9
BOOM IAmb IAmb 08 43 40.4
comp=Z,24nm,0.9s
KZA Kyzart 69.44 319 P P 08 43 41.6 +1.3
SNR=13
KBK Karagaybulak 69.92 320 P P 08 43 43.9 +0.9
SNR=7.2
UCH Uchtor 69.99 319 P P 08 43 45.2 +1.5
SNR=13
AAK Ala-Archa 70.20 320 P P 08 43 46.1 +1.4
SNR=11
AAK Ala-Archa 70.20 320 P P 08 43 45.2 +0.6
AAK IAmb IAmb 08 43 46.7
comp=Z,17nm,0.8s
AML Almayashu 70.48 319 P P 08 43 48.0 +1.3
SNR=5.8
KBL Kabul 70.50 310 P P 08 43 46.8 0.0
KBL IAmb IAmb 08 43 47.8
comp=Z,16nm,0.9s
USP Ospenovka 70.51 320 P P 08 43 46.9 +0.5
SNR=19
ARSB Arslanbob 70.57 318 P P 08 43 46.4 -0.5
EKS2 Erkin-Say 70.68 319 P P 08 43 48.6 +1.1
SNR=18
ZAA0 Zalesovo Array 71.15 334 P P 08 43 49.0 -0.9
ZALV Zalesovo Beam 71.15 334 P P 08 43 49.1 -0.8
comp=Z,4.3nm,0.4s,baz=114,slow=4.4,SNR=18
ZALV pP pwP 08 44 26.9 -1.7
comp=Z,1.3nm,0.6s,baz=134,slow=8.3,SNR=1.6
SEY Seymchan 71.25 11 P P 08 43 50.8 +0.4
comp=Z,8.6nm,0.9s,baz=204,slow=7.3
BTK Batken 71.47 316 P P 08 43 52.1 -0.2
BTK IAmb IAmb 08 43 54.7
comp=Z,15nm,0.9s
KURBB Kurchatov Arra 72.11 328 P P 08 43 55.4 -0.3
comp=Z,4.8nm,0.4s,baz=127,slow=4.8,SNR=18
KURBB pP pwP 08 44 33.7 -1.4
comp=Z,0.8nm,0.3s,baz=127,slow=5.5,SNR=1.7
KURK Kurchatov 72.11 328 P P 08 43 55.5 -0.2
KURK IAmb IAmb 08 43 56.8
comp=Z,24nm,1.2s
VNDA Vanda 72.97 173 P P 08 44 01.1 +0.7
comp=Z,4.3nm,0.9s,baz=324,slow=6.4,SNR=6.5
VNDA Vanda 72.97 173 P P 08 43 59.9 -0.5
VNDA IAmb IAmb 08 44 08.7
comp=Z,19nm,1.4s
KK31 Karatay Array 73.01 319 P P 08 44 01.1 -0.2
KK31 IAmb IAmb 08 44 02.6
comp=Z,21nm,1.1s
KKAR Karatay Array 73.01 319 P P 08 44 01.1 -0.1
KKAR IAmb IAmb 08 44 02.7
comp=Z,21nm,1.1s
TAS Tashkent 73.06 317 P P 08 44 02.2 +0.6
HRA Herat 75.71 308 P P 08 44 17.7 +0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HRA				IAmb	IAmb	08 44 18.6	
	comp=Z,18nm,1.1s						
BVAR	**Borovoye Array**	**77.67**	**328**	P	**P**	**08 44 27.3**	**-0.3**
	comp=Z,2.2nm,0.3s,baz=109,slow=6.9,SNR=28						
BRVK	**Borovoye**	**77.74**	**328**	P	**P**	**08 44 27.2**	**-0.8**
TIXI	**Tiksi**	**77.95**	**360**	P	**P**	**08 44 27.9**	**-0.9**
	comp=Z,4.5nm,0.6s,baz=171,slow=3.3,SNR=14						
TIXI	**Tiksi**	**77.95**	**360**	P	**P**	**08 44 28.4**	**-0.4**
UOSS	**Minazif**	**78.28**	**297**	P	**P**	**08 44 31.4**	**-0.3**
GEYT	**Alibeck**	**79.95**	**310**	P	**P**	**08 44 40.0**	**-0.5**
	comp=Z,4.2nm,0.6s,baz=163,slow=5.4,SNR=9.5						
GYA0B	**ALIBECK ARRAY**	**79.95**	**310**	P	**P**	**08 44 41.1**	**+0.6**
NRIK	**Noril'sk**	**81.06**	**346**	P	**P**	**08 44 45.2**	**-0.4**
	comp=Z,11nm,0.8s,baz=137,slow=6.9,SNR=12						
QSPA	**South Pole Qui**	**83.52**	**180**	P	**P**	**08 44 58.7**	**-0.1**
	comp=Z,2.7nm,0.6s,baz=311,slow=0.6,SNR=30						
AKTO	**Aktyubinsk**	**83.72**	**322**	P	**P**	**08 44 59.9**	**0.0**
	comp=Z,2.9nm,0.5s,baz=102,slow=7.7,SNR=13						
ARU	**Arti**	**85.31**	**328**	P	**P**	**08 45 07.0**	**-0.7**
	comp=Z,1.5nm,0.2s,baz=95,slow=3.0,SNR=9.1						
ARU	**Arti**	**85.31**	**328**	P	**P**	**08 45 06.8**	**-0.9**
ARU				IAmb	IAmb	08 45 08.1	
	comp=Z,10nm,0.9s						
RAYN	**Ar Rayn**	**87.63**	**294**	P	**P**	**08 45 19.7**	**-0.2**
RAYN				IAmb	IAmb	08 45 20.9	
	comp=Z,18nm,0.9s						
ILAR	**Eielson Array**	**92.80**	**25**	P	**P**	**08 45 41.1**	**-1.9**
	comp=Z,0.8nm,0.7s,baz=260,slow=4.5,SNR=13						
BRTR	**Keskin Array B**	**99.06**	**309**	P	**Pdif**	**08 46 10.6**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=122,slow=5.4,SNR=3.6						
ARCES	**ARCESS Array B**	**101.11**	**340**	P	**Pdif**	**08 46 19.3**	**-1.1**
	comp=Z,3.2nm,1.0s,baz=84,slow=8.3,SNR=3.9						
YKA	**Yellowknife Ar**	**107.21**	**26**	PKiKP	**PKiKP**	**08 50 55.3**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=294,slow=1.7,SNR=13						
YKA				PKKPbc	**PKKPbc**	**09 02 12.0**	**-3.3**
	comp=Z,0.2nm,0.4s,baz=117,slow=3.4,SNR=5.8						
GERES	**GERESS Array B**	**112.08**	**320**	PKiKP	**PKiKP**	**08 51 04.9**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=29,slow=3.0,SNR=3.5						
PDAR	**Pinedale Array**	**116.42**	**45**	PKP	**PKPdf**	**08 51 13.9**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=233,slow=1.5,SNR=5.0						
ULM	**Lac du Bonnet**	**121.92**	**33**	PKP	**PKPdf**	**08 51 23.6**	**-0.7**
	comp=Z,1.8nm,0.5s,baz=108,slow=11,SNR=6.4						
ULM	**Lac du Bonnet**	**121.92**	**33**		**PKPdf**	**08 51 23.2**	**-1.2**
MNTX	**Cornudas Mount**	**122.56**	**56**		**PKPdf**	**08 51 25.9**	**-0.3**
TXAR	**Lajitas Array**	**124.55**	**59**	PKP	**PKiKP**	**08 51 30.5**	**0.0**
	comp=Z,0.9nm,0.9s,baz=238,slow=0.7,SNR=4.7						
JCT	**Junction City**	**127.50**	**56**		**PKiKP**	**08 51 36.5**	**+0.2**
TORD	**Torodi Ar. Bea**	**128.82**	**282**	PKP	**PKPdf**	**08 51 37.7**	**-0.9**
	comp=Z,2.0nm,0.6s,baz=62,slow=1.7,SNR=11						
SCHQ	**Schefferville**	**129.87**	**13**	PKP	**PKiKP**	**08 51 40.1**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=14,slow=4.4,SNR=3.6						
DBIC	**Dimbokro**	**135.28**	**273**	PKP	**PKPdf**	**08 51 51.3**	**+0.5**
	comp=Z,1.3nm,0.4s,baz=83,slow=6.1,SNR=3.7						
DBIC	**Dimbokro**	**135.28**	**273**		**PKPdf**	**08 51 50.7**	**-0.1**
JTS	**Las Juntas de**	**145.11**	**81**		**PKPdf**	**08 52 08.9**	**+0.4**
ESPN	**Las Esperanzas**	**145.58**	**78**		**PKPab**	**08 52 10.1**	**-0.1**
HDC	**Heredia**	**145.95**	**82**		**PKPdf**	**08 52 09.4**	**-0.7**
CPUP	**Villa Florida**	**146.62**	**168**	PKPbc	**PKPbc**	**08 52 12.9**	**+0.4**
	comp=Z,5.0nm,0.8s,baz=199,slow=2.5,SNR=14						
CPUP				PP	**PP**	**08 55 36.2**	**+0.8**
	comp=Z,3.7nm,1.1s,baz=149,slow=3.8,SNR=4.1						
CPUP	**Villa Florida**	**146.62**	**168**		**PKPbc**	**08 52 12.7**	**+0.1**
PB11	**IPOC Station P**	**147.48**	**144**		**PKPbc**	**08 52 14.8**	**-0.5**
GO01	**Chusmiza**	**147.82**	**144**		**PKPbc**	**08 52 17.3**	**+0.6**
MNMC	**Minye Minye**	**148.01**	**143**		**PKPbc**	**08 52 17.6**	**+0.7**
LPAZ	**La Paz**	**151.07**	**142**	PKPbc	**PKPbc**	**08 52 25.1**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=34,slow=2.2,SNR=8.8						

*IPEC **21** 08:34:07.3±0.2, 49.84N×18.58E, h0km±3km, ML2.6/3, Error ellipse: s-maj=1.7km s-min=1.1km az=165.0*
*PRU **21** 08:34:07.8±0.0, 49.79N×18.48E, h0km, Mining Induced Event Csm, E=1.7e+06*
ISC 21 08:34:06.7±0.8, 49.81N±0.03×18.52E±0.02, h0km, n39, σ0.83/73, 6C-3D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.24**	**278**	ePG	**Pg**	**08 34 13.0**	**+1.7**
OKC				eSG	**Sg**	**08 34 16.2**	**+1.7**
	comp=Z,233nm,0.5s						
MORC	**Moravsky Berou**	**0.63**	**268**	ePG	**Pb**	**08 34 20.2**	**-0.4**
MORC				eSG	**Sg**	**08 34 28.3**	**+1.3**
MORC	**Moravsky Berou**	**0.63**	**268**	⇑P	**Pb**	**08 34 20.4**	**-0.2**
MORC				⇑S	**Sb**	**08 34 29.6**	**-0.4**
MORC	**Moravsky Berou**	**0.63**	**268**	ePg	**Pb**	**08 34 20.1**	**-0.5**
	baz=85						
MORC				eSg	**Sg**	**08 34 28.2**	**+1.3**
	167nm,0.4s,baz=85						
LANS	**Liptovska Anna**	**0.90**	**136**	ePG	**Pg**	**08 34 24.6**	**+0.7**
LANS				eSG	**Sb**	**08 34 37.4**	**-0.4**
LANS				eLG	Lg	08 34 41.8	
OJC	**Ojcow**	**0.92**	**63**	ePg	**Pg**	**08 34 24.0**	**-0.4**
OJC				eSg	**Sg**	**08 34 36.2**	**-0.2**
JAVC	**Velka Javorina**	**1.10**	**211**	ePG	**Pn**	**08 34 29.4**	**0.0**
JAVC	**Velka Javorina**	**1.10**	**211**	ePg	**Pn**	**08 34 29.4**	**0.0**
	baz=31						
KRLC	**Kraliky**	**1.15**	**284**	ePG	**Pg**	**08 34 28.3**	**-0.5**
KRLC				eSG	**Sb**	**08 34 44.5**	**-0.6**
	comp=Z,114nm,0.3s						
NIE	**Niedzica**	**1.22**	**108**	ePg	**Pn**	**08 34 30.0**	**-0.1**
NIE				eSg	**Sn**	**08 34 48.5**	**+0.2**
VYHS	**Vyhne**	**1.33**	**171**	ePG	**Pn**	**08 34 32.5**	**0.0**
VYHS				eSG	**Sn**	**08 34 50.9**	**0.0**
VRAC	**Vranov**	**1.35**	**249**	ePG	**Pb**	**08 34 33.1**	**+0.3**
VRAC				eSG	**Sb**	**08 34 50.8**	**+0.2**
VRAC	**Vranov**	**1.35**	**249**	⇓P	**Pb**	**08 34 32.7**	**-0.1**
VRAC				⇓S	**Sb**	**08 34 50.7**	**+0.1**
VRAC	**Vranov**	**1.35**	**249**	ePg	**Pb**	**08 34 33.1**	**+0.3**
	baz=67						
VRAC				eSg	**Sb**	**08 34 50.8**	**+0.2**
	61nm,0.3s,baz=67						
SMOL	**Smolenice**	**1.48**	**209**	ePG	**Pn**	**08 34 34.7**	**+0.2**
SMOL				eSG	**Sg**	**08 34 53.4**	**-0.7**
SMOL				eLG	Lg	08 34 57.9	
DPC	**Dobruska-Polom**	**1.52**	**292**	ePG	**Pn**	**08 34 35.0**	**-0.1**
DPC				eSG	**Sn**	**08 34 55.4**	**-0.2**
	comp=Z,53nm,0.3s						
KRUC	**Moravsky**	**1.57**	**243**	ePG	**Pb**	**08 34 36.6**	**0.0**
KRUC				eSG	**Sg**	**08 34 58.0**	**+0.8**
KRUC	**Moravsky**	**1.57**	**243**	ePg	**Pb**	**08 34 36.6**	**0.0**
	baz=61						
KRUC				eSg	**Sg**	**08 34 58.0**	**+0.8**
	49nm,0.2s,baz=61						
MODS	**Modra-Piesok**	**1.65**	**210**	ePG	**Pn**	**08 34 36.0**	**-0.9**
MODS				eSG	**Sn**	**08 34 58.4**	**-0.4**
OSTC	**Ostas**	**1.66**	**298**	ePG	**Pb**	**08 34 37.9**	**-0.2**
OSTC				eSG	**Sg**	**08 35 00.3**	**+0.3**
	comp=Z,49nm,0.6s						
UPC	**Upice**	**1.76**	**295**	ePG	**Pb**	**08 34 39.7**	**-0.1**
UPC				eSG	**Sg**	**08 35 02.9**	**-0.3**
KSP	**Ksiaz**	**1.76**	**307**	ePb	**Pb**	**08 34 38.4**	**-0.1**
KSP				ePg	**Pg**	**08 34 40.4**	**-0.1**
KSP				eSg	**Sg**	**08 35 03.0**	**-0.3**
CHVC	**Chvalec**	**1.77**	**297**	ePG	**Pb**	**08 34 39.6**	**-0.4**
CHVC				eSG	**Sg**	**08 35 03.3**	**-0.1**
	comp=Z,37nm,0.4s						
STHS	**Stebnicka Huta**	**1.81**	**101**	ePN	**Pb**	**08 34 40.7**	**-0.1**
STHS				eSN	**Sb**	**08 35 06.1**	**+1.1**
STHS				eLG	Lg	08 35 10.3	
KECS	**Kecovo**	**1.85**	**135**	ePN	**Pn**	**08 34 39.5**	**-0.1**
KECS				eSN	**Sn**	**08 35 03.6**	**-0.1**
KECS				eLG	Lg	08 35 07.6	
ZST	**Bratislava**	**1.86**	**211**	ePN	**Pn**	**08 34 39.9**	**+0.1**
ZST				eSN	**Sn**	**08 35 02.2**	**-1.8**
PSZ	**Piszkesteto**	**2.10**	**154**	⇓P	**Pn**	**08 34 43.3**	**+0.2**
CRVS	**Cervenica-Dubn**	**2.13**	**114**	ePN	**Pn**	**08 34 46.9**	**-0.5**
GOPC	**GO Pecny, Ondr**	**2.42**	**274**	ePN	**Pn**	**08 34 47.1**	**-0.4**
GOPC				eSG	**Sb**	**08 35 22.7**	**+1.3**
CONA	**Conrad Observa**	**2.57**	**224**	i Sn	**Sn**	**08 35 22.6**	**+0.9**
	10.0nm,0.4s						
PRU	**Pruhonice**	**2.58**	**276**	ePG	**Pb**	**08 34 53.8**	**0.0**
PRU				eSG	**Sg**	**08 35 27.8**	**-1.7**
	comp=Z,16nm,0.4s						
PVCC	**Panska Ves**	**2.64**	**287**	eSG	**Sg**	**08 35 31.3**	**-0.2**
	comp=Z,32nm,0.4s						
BRG	**Berggiesshubel**	**3.12**	**292**	PG	**Pb**	**08 35 04.4**	**+1.4**
BRG				SG	**Sb**	**08 35 45.1**	**-1.7**
	16nm,0.4s						
TRPA	**Tarpa**	**3.13**	**121**	⇑P	**Pn**	**08 34 58.6**	**+1.3**
KHC	**Kasperske Hory**	**3.29**	**260**	ePN	**Pn**	**08 34 59.5**	**0.0**
KHC				ePG	**Pg**	**08 35 08.4**	**-1.3**
KHC				eSG	**Sg**	**08 35 51.6**	**-0.8**
	comp=Z,15nm,0.4s						
MOA	**Molln**	**3.42**	**237**	i Pn	**Pn**	**08 35 01.9**	**+0.6**
	0.7nm,0.2s						
MOA				ePg	**Pg**	**08 35 10.5**	**-1.7**
	1.7nm,0.2s						
MOA				eSg	**Sb**	**08 35 53.2**	**+2.9**
	6.0nm,0.3s						
CLL	**Collm**	**3.83**	**295**	ePg	**Pg**	**08 35 20.0**	**0.0**
CLL				eSg	**Sg**	**08 36 10.0**	**+0.5**
	comp=Z,15nm,0.7s						
DRGR		**4.11**	**136**	⇑P	**Pn**	**08 35 10.7**	**-0.1**
DRGR				⇑S	**Sn**	**08 35 58.4**	**-1.3**
GZR	**Gura Zlata**	**5.27**	**145**	⇑P	**Pn**	**08 35 26.6**	**-0.1**

*UPP **21** 08:59:49.7±2.7, 64.49N×31.11E, h0km, ML1.9, Suspected explosion*
*IDC **21** 08:59:50.7±3.9, 64.60N×31.75E, h0km, mb1 3.1/4, mb1mx2.9/39, mbtmp3.1/4, ML2.2/4, Error ellipse: s-maj=59.4km s-min=15.1km az=105.0*
*HEL **21** 08:59:51.2±0.1, 64.73N×30.78E, h0km, ML2.0, Explosion*
*NAO **21** 08:59:53.7±1.5, 64.74N×30.48E, ML2.0*
*KOLA **21** 08:59:53.5, 64.80N×30.00E, M2.5, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*BER **21** 08:59:54.1±3.7, 64.66N×30.67E, h0km, ML2.0(NAO), Suspected explosion*
ISC 21 08:59:52.6±0.9, 64.74N±0.03×30.55E±0.05, h0km, n44, σ1.59/62, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.33**	**348**	PN	**Pg**	**09 00 17.1**	**-0.9**
	baz=167						
KU6				MSG		09 00 31.9	
	comp=Z,10.0nm,0.2s						
KU6				SN	**Sb**	**09 00 36.0**	**+0.2**
MSF	**Maaselka**	**1.34**	**332**	PN	**Pg**	**09 00 17.5**	**-0.8**
MSF				SN	**Sg**	**09 00 36.5**	**+0.8**
JOF	**Joensuu**	**1.85**	**169**	PG	**Pn**	**09 00 24.0**	**-1.6**
	baz=350						
JOF				SG	**Sn**	**09 00 49.2**	**-0.5**
OUL	**Oulu**	**2.02**	**282**	PG	**Pn**	**09 00 29.1**	**+1.3**
OUL				SG	**Sb**	**09 00 55.9**	**+0.2**
OUF	**Merijarvi**	**2.54**	**264**	PG	**Pn**	**09 00 36.3**	**+1.2**
	baz=83						
OUF				MSG		09 01 08.9	
	comp=Z,15nm,0.2s						
OUF				SG	**Sb**	**09 01 10.8**	**+0.1**
OBF0	**Syolatti, Pyha**	**2.73**	**268**	PG	**Pn**	**09 00 39.4**	**+1.8**
SUF	**Sumiainen**	**2.81**	**226**	PG	**Pn**	**09 00 40.6**	**+1.8**
SUF				MSG		09 01 16.2	
	comp=Z,6.1nm,0.2s						
SUF				SG	**Sb**	**09 01 18.1**	**-0.5**
TOF	**Tornio**	**2.93**	**300**	PG	**Pn**	**09 00 42.4**	**+2.0**
TOF				MSG		09 01 19.8	
	comp=Z,5.8nm,0.2s						
APA0	**Apatity Array**	**3.05**	**18**	Pn	**Pn**	**09 00 41.8**	**-0.2**
	baz=192,slow=11						
APA0				Sn	**Sn**	**09 01 20.1**	**+0.9**
	baz=192,slow=28						
APA0				Lg	Lg	09 01 31.4	
	baz=180,slow=37						
APA0	**Apatity Array**	**3.05**	**18**	Pn	**Pn**	**09 00 41.8**	**-0.2**
	baz=192,slow=11						
APA0				Sn	**Sn**	**09 01 20.1**	**+0.9**
	baz=192,slow=28						
APA0				Sg	**Sg**	**09 01 31.4**	**+1.0**
	baz=180,slow=37						
VRF	**Varrio**	**3.05**	**353**	PB	**Pn**	**09 00 42.6**	**+0.5**
VRF				MSG		09 01 21.4	
	comp=Z,2.5nm,0.2s						
SGF	**Sodankyl**	**3.17**	**331**	PB	**Pn**	**09 00 45.3**	**+1.6**
	baz=141						
KALU	**Kalix**	**3.23**	**294**	P	**Pn**	**09 00 46.0**	**+1.5**
KALU				S	**Sb**	**09 01 28.1**	**-2.3**
KALU	**Kalix**	**3.23**	**294**	PB	**Pn**	**09 00 46.6**	**+2.2**
	baz=111						
KALU				SG	**Sb**	**09 01 30.2**	**-0.2**
KAF	**Kangasniemi**	**3.25**	**218**	PG	**Pn**	**09 00 47.6**	**+2.9**
KEF	**Keuruu**	**3.63**	**227**	PB	**Pn**	**09 00 51.5**	**+1.5**
PAJU	**Pajala**	**3.82**	**310**	P	**Pn**	**09 00 53.5**	**+0.9**
SJUU	**Sjulsmark**	**3.86**	**286**	P	**Pn**	**09 00 54.1**	**+1.0**
SJUU				S	**Sn**	**09 01 41.9**	**+2.8**
FIA0	**FINESS Array S**	**3.88**	**214**	Pn	**Pn**	**09 00 54.0**	**+0.6**
	baz=46,slow=14						
FIA0				Pg	**Pb**	**09 01 00.9**	**-0.9**
	baz=29,slow=16						
FIA0				Lg	Lg	09 01 54.6	
	baz=24,slow=28						
FIA0	**FINESS Array S**	**3.88**	**214**	Pn	**Pn**	**09 00 54.0**	**+0.6**
	baz=46,slow=14						
FIA0				Pg	**Pb**	**09 01 00.9**	**-0.9**
	baz=29,slow=16						
FIA0				Sg	**Sg**	**09 01 54.6**	**-2.4**
	baz=24,slow=28						
FINES	**FINESS Array B**	**3.88**	**214**	Pn	**Pn**	**09 00 53.8**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=37,slow=14,SNR=5.3						
FINES				Lg	Lg	09 01 54.0	
	comp=Z,1.1nm,0.3s,baz=34,slow=28,SNR=7.3						
ERTU	**Ertsjaerv**	**3.92**	**302**	P	**Pn**	**09 00 54.8**	**+0.9**
BURU	**Burvik**	**3.95**	**272**	P	**Pn**	**09 00 54.2**	**-0.2**
BURU	**Burvik**	**3.95**	**272**	PN	**Pn**	**09 00 54.5**	**+0.1**
HARU	**Harads**	**4.25**	**294**	P	**Pn**	**09 00 59.8**	**+1.4**
ODEU	**Stanfors**	**4.25**	**270**	P	**Pn**	**09 00 58.2**	**-0.4**
UMAU	**Umeaa**	**4.38**	**263**	P	**Pn**	**09 01 00.0**	**-0.3**
UMAU	**Umeaa**	**4.38**	**263**	PN	**Pn**	**09 01 00.3**	**0.0**
MASU	**Masugnsbyn**	**4.42**	**312**	P	**Pn**	**09 01 02.3**	**+1.4**
VJF	**Virojoki**	**4.43**	**200**	SG	**Sb**	**09 02 08.8**	**+3.7**
LILU	**Lilltraesk**	**4.58**	**282**	P	**Pn**	**09 01 03.4**	**+0.5**
HEF	**Hetta**	**4.60**	**326**	PN	**Pn**	**09 01 04.9**	**+1.6**
	baz=139						
HEF				SG	**Sb**	**09 02 14.1**	**+4.1**
HEF	**Hetta**	**4.60**	**326**	eP	**Pn**	**09 01 05.2**	**+1.9**
PVF	**Pernaja**	**4.73**	**209**	SG	**Sb**	**09 02 17.6**	**+3.9**
SVAU	**Svanoeiden**	**4.73**	**272**	P	**Pn**	**09 01 04.9**	**-0.2**
ARA0	**ARCESS Array S**	**5.21**	**340**	Pn	**Pn**	**09 01 11.5**	**-0.1**
	baz=152,slow=14						
ARA0				Sn	**Sn**	**09 02 09.7**	**-2.6**
	baz=154,slow=22						
ARA0				Lg	Lg	09 02 31.4	
	baz=148,slow=37						
ARA0	**ARCESS Array S**	**5.21**	**340**	Pn	**Pn**	**09 01 11.5**	**-0.1**
	baz=152,slow=14						
ARA0				Sn	**Sn**	**09 02 09.7**	**-2.6**
	baz=154,slow=22						
ARCES	**ARCESS Array B**	**5.21**	**340**	Pn	**Pn**	**09 01 11.6**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=150,slow=13,SNR=37						
ARCES				Sn	**Sn**	**09 02 09.2**	**-3.1**
	comp=Z,0.2nm,0.3s,baz=152,slow=21,SNR=3.0						
ARCES				Lg	Lg	09 02 33.0	
	comp=Z,0.7nm,0.3s,baz=159,slow=31,SNR=5.9						
KIF	**Kilpisjarvi**	**5.75**	**322**	eP	**Pn**	**09 01 19.5**	**+0.4**
I43RU	**DUBNA INFRASON**	**8.67**	**155**	i		09 50 00.0	
	baz=340,slow=328,SNR=1.2						
HFS	**Hagfors**	**9.06**	**247**	Pn	**Pn**	**09 02 04.1**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=51,slow=11,SNR=4.0						
NB2	**NORSAR Subarra**	**9.56**	**256**	Pn	**Pn**	**09 02 12.4**	**+1.1**
	baz=53,slow=14						
NB2	**NORSAR Subarra**	**9.56**	**256**	Pn	**Pn**	**09 02 12.4**	**+1.1**
	baz=53,slow=14						
NOA	**NORSAR Array B**	**9.56**	**256**	Pn	**Pn**	**09 02 11.0**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=54,slow=11,SNR=2.6						

*AEIC **21** 09:00:38.1±1.9, 54.5N±0.1×153.1W±0.1, h11km±8km, ML3.4/27, Error ellipse: s-maj=16.6km s-min=10.8km az=158.0*
*NEIC **21** 09:00:38.6±1.6, 54.7N±0.1×153.3W±0.1, h28km±14km, Error ellipse: s-maj=18.8km s-min=10.6km az=155.0*
*IDC **21** 09:00:39.6±3.6, 54.37N×151.92W, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/42, mbtmp3.5/5, ML3.1/1, Error ellipse: s-maj=74.6km s-min=33.9km az=157.0*
ISC 21 09:00:40.8±2.3, 54.9N±0.2×153.2W±0.1, h35km, n61, σ1.85/59, mb3.4/4, South of Alaska

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHIR	**Chirikof Islan**	**1.69**	**305**		**Pn**	**09 01 06.2**	**-1.5**
SII	**Sitkinak Islan**	**1.78**	**342**		**Pn**	**09 01 09.1**	**+0.1**
OHAK	**Old Harbor**	**2.35**	**358**		**Pn**	**09 01 17.1**	**+0.3**
KDAK	**Kodiak Island**	**2.92**	**6**		**Pn**	**09 01 25.2**	**+0.5**
CNBA	**Chernabura Isl**	**3.71**	**272**		**Pn**	**09 01 31.3**	**-4.2**
KAHC	**Katmai Hardscr**	**3.91**	**346**		**Pn**	**09 01 39.5**	**+1.2**
SDPT	**Sand Point**	**4.22**	**279**	Pn	**Pn**	**09 01 41.9**	**-0.7**
HOM	**Homer**	**4.86**	**9**	Pn	**Pn**	**09 01 53.0**	**+1.7**
BRSE	**Bradley Lake S**	**5.05**	**14**		**Pn**	**09 01 53.7**	**-0.2**
BRLK	**Bradley Lake**	**5.05**	**13**		**Pn**	**09 01 53.9**	**-0.1**
RED	**Redoubt Volcan**	**5.55**	**2**		**Pn**	**09 02 02.5**	**+1.5**
RSO	**Redoubt South**	**5.60**	**2**	Pn	**Pn**	**09 02 03.4**	**+1.7**
SEW	**Seward**	**5.61**	**19**	Pn	**Pn**	**09 02 02.1**	**+0.7**
RDWB	**Redoubt West**	**5.62**	**2**		**Pn**	**09 02 03.0**	**+1.0**
SLKM	**Skilak Lake**	**5.86**	**14**		**Pn**	**09 02 04.8**	**-0.2**
SVW2	**Sparrevohn**	**6.36**	**349**		**Pn**	**09 02 12.9**	**+1.0**
RC01	**Rabbit Creek A**	**6.49**	**15**		**Pn**	**09 02 15.2**	**+1.6**
PWL	**Port Wells**	**6.52**	**21**		**Pn**	**09 02 13.9**	**-0.2**
HIN	**Hinchinbrook I**	**6.58**	**30**	Pn	**Pn**	**09 02 16.4**	**+1.4**
SUA	**Susitna One**	**6.72**	**10**		**Pn**	**09 02 17.4**	**+0.5**
GLI	**Glacier Island**	**6.83**	**26**		**Pn**	**09 02 18.5**	**+0.2**
FID	**Port Fidalgo**	**6.88**	**29**		**Pn**	**09 02 19.2**	**+0.2**
EYAK	**Cordova Ski Ar**	**6.93**	**32**	Pn	**Pn**	**09 02 21.0**	**+1.4**
KNK	**Knik Glacier**	**7.00**	**19**		**Pn**	**09 02 22.3**	**+1.6**
RAGM	**Ragged Mountai**	**7.15**	**36**	Pn	**Pn**	**09 02 23.9**	**+1.1**
SKT	**Skwentna**	**7.17**	**6**		**Pn**	**09 02 24.8**	**+1.8**
GHO	**Glory Hole Cre**	**7.26**	**16**		**Pn**	**09 02 25.7**	**+1.4**
SML	**Sawmill**	**7.39**	**18**	Pn	**Pn**	**09 02 27.6**	**+1.5**
SCM	**Sheep Creek Mo**	**7.61**	**21**		**Pn**	**09 02 30.1**	**+1.0**
TGL	**Tana Glacier**	**8.06**	**39**		**Pn**	**09 02 37.1**	**+1.8**
VRDI	**Verde Repeater**	**8.18**	**35**	Pn	**Pn**	**09 02 38.4**	**+1.4**
GLB	**Gilahina Butte**	**8.22**	**33**	Pn	**Pn**	**09 02 38.8**	**+1.3**
BALM	**Baldy**	**8.43**	**39**		**Pn**	**09 02 41.6**	**+1.2**
MCARA	**McCarthy VSAT**	**8.43**	**35**	Pn	**Pn**	**09 02 42.1**	**+1.8**
PCA	**Pinnacle**	**8.69**	**48**	Pn	**Pn**	**09 02 44.5**	**+0.6**
BARN	**Barnard Glacie**	**8.69**	**40**		**Pn**	**09 02 45.5**	**+1.4**
TRF	**Thorofare Moun**	**8.72**	**9**	Pn	**Pn**	**09 02 46.4**	**+2.0**
DHY	**Denali Highway**	**8.74**	**18**	Pn	**Pn**	**09 02 47.1**	**+2.5**
CTGM	**Chitina Glacie**	**8.76**	**41**	Pn	**Pn**	**09 02 46.1**	**+1.3**
KTH	**Kantishna Hill**	**8.77**	**7**	Pn	**Pn**	**09 02 47.2**	**+2.2**
RND	**Reindeer**	**8.83**	**13**	Pn	**Pn**	**09 02 48.0**	**+2.2**
PAX	**Paxson**	**9.03**	**23**	Pn	**Pn**	**09 02 51.1**	**+2.6**
MCK	**McKinley**	**9.13**	**12**	Pn	**Pn**	**09 02 52.5**	**+2.6**
RIDG	**Independent Ri**	**9.84**	**22**	Pn	**Pn**	**09 03 03.5**	**+3.9**
WRH	**Wood River Hil**	**9.95**	**13**	Pn	**Pn**	**09 03 03.2**	**+2.1**
HDA	**Harding Lake**	**10.05**	**16**	Pn	**Pn**	**09 03 04.3**	**+1.8**
CCB	**Clear Creek Bu**	**10.16**	**13**	Pn	**Pn**	**09 03 06.0**	**+2.2**
SCRK	**Sand Creek**	**10.24**	**23**	Pn	**Pn**	**09 03 08.0**	**+2.9**
HYT	**Haines Junctio**	**10.24**	**48**	Pn	**Pn**	**09 03 07.2**	**+2.1**
MLY	**Manley**	**10.25**	**6**	Pn	**Pn**	**09 03 06.6**	**+1.3**
IL31		**10.40**	**15**		**Pn**	**09 03 10.1**	**+2.9**
ILAR	**Eielson Array**	**10.40**	**15**	Pn	**Pn**	**09 03 09.3**	**+2.1**
	0.1nm,0.3s,baz=201,slow=13,SNR=15						
ILAR				Sn	**Sn**	**09 04 58.4**	**-4.0**
	0.1nm,0.3s,baz=202,slow=21,SNR=5.0						
SKAG	**Skagway**	**10.70**	**57**	Pn	**Pn**	**09 03 13.1**	**+1.8**
PRP	**Porcupine Dome**	**11.31**	**16**	Pn	**Pn**	**09 03 21.9**	**+2.1**
WHY	**Whitehorse**	**11.33**	**52**	Pn	**Pn**	**09 03 21.5**	**+1.5**
DAWY	**Dawson**	**11.54**	**32**	Pn	**Pn**	**09 03 24.4**	**+1.6**
EGAK	**Eagle**	**11.59**	**26**	Pn	**Pn**	**09 03 25.9**	**+2.5**
YKA	**Yellowknife Ar**	**21.15**	**53**	P	**P**	**09 05 22.4**	**0.0**
	0.5nm,0.8s,baz=262,slow=11,SNR=6.2						
NRIK	**Noril'sk**	**48.49**	**336**	P	P	09 09 27.9	+8.5
	1.1nm,0.3s,baz=45,slow=5.7,SNR=4.0						
SONM	**Songino Array**	**57.82**	**308**	P	P	09 10 38.1	+10
	0.2nm,0.5s,baz=46,slow=6.2,SNR=2.7						
MKAR	**Makanchi Array**	**68.41**	**323**	P	P	09 11 49.6	+11
	0.2nm,0.6s,baz=46,slow=5.9,SNR=2.7						

*NEIC **21** 09:02:22.7±0.7, 41.57N±0.02×122.35W±0.03, h20km±1km, Error ellipse: s-maj=3.1km s-min=2.8km az=101.0*
*ANF **21** 09:02:22.6±0.2, 41.59N×122.37W, h14km±1km, ML2.7/7, ML2.3/6, Error ellipse: s-maj=2.0km s-min=1.2km az=128.0*
*NCEDC **21** 09:02:23±1.0, 41.571N±0.010×122.33W±0.03, h18km±3km, Md2.5/27, Error ellipse: s-maj=2.9km s-min=1.3km az=74.0*
ISC 21 09:02:22.5±1.0, 41.58N±0.02×122.36W±0.02, h18km±3km, n47, σ0.35/61, Northern California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LHEM	**Herd Peak**	**0.11**	**64**		**Pg**	**09 02 26.7**	**+0.1**
LCSM	**College of the**	**0.17**	**189**		**Pg**	**09 02 27.5**	**+0.4**
LMPM	**Military Pass**	**0.17**	**122**		**Pg**	**09 02 27.7**	**+0.4**
LAMM	**Antelope Mount**	**0.20**	**279**		**Pg**	**09 02 28.1**	**+0.4**
B040	**Montague**	**0.26**	**349**		**Pg**	**09 02 28.6**	**+0.2**
LGBM	**Gray Butte**	**0.26**	**152**		**Pb**	**09 02 29.2**	**+0.5**
YBH	**Yreka Blue Hor**	**0.31**	**300**		**Pg**	**09 02 29.4**	**+0.2**
YBH	**Yreka Blue Hor**	**0.31**	**300**		**Pg**	**09 02 29.5**	**+0.3**
YBH					**Sg**	**09 02 34.2**	**+0.4**
M03C	**McCloud**	**0.35**	**150**		**Pg**	**09 02 30.1**	**+0.1**
M03C					**Sb**	**09 02 35.6**	**0.0**
LGMM	**Garner Mountai**	**0.39**	**87**		**Pb**	**09 02 31.1**	**0.0**
M02C	**Callahan**	**0.42**	**244**		**Pg**	**09 02 31.1**	**-0.1**
M02C	**Callahan**	**0.42**	**244**	P	**Pg**	**09 02 31.1**	**-0.1**
	baz=65,SNR=553						
M02C				S	**Sg**	**09 02 37.0**	**0.0**
	baz=65						
LBFM	**Black Fox Moun**	**0.42**	**123**		**Pb**	**09 02 31.6**	**0.0**
M04C	**Macdoel**	**0.44**	**62**		**Pg**	**09 02 31.7**	**+0.1**
M04C	**Macdoel**	**0.44**	**62**	P	**Pg**	**09 02 31.6**	**+0.1**
	baz=240,SNR=59						
M04C				S	**Sb**	**09 02 38.1**	**0.0**
	baz=240						
LMHM	**Little Mount H**	**0.53**	**90**		**Pg**	**09 02 33.1**	**0.0**
LBKM	**Bonanza King**	**0.55**	**205**		**Pg**	**09 02 33.4**	**-0.1**
LASM	**Arnica Sink**	**0.58**	**88**		**Pb**	**09 02 33.9**	**-0.4**
L04D	**Klamath Falls**	**0.64**	**3**		**Pg**	**09 02 35.4**	**+0.2**
L04D	**Klamath Falls**	**0.64**	**3**	P	**Pg**	**09 02 35.3**	**+0.2**
	baz=182,SNR=120						
L04D				S	**Sb**	**09 02 44.1**	**+0.2**
	baz=182						
N02D	**Trinity Center**	**0.66**	**204**		**Pb**	**09 02 35.1**	**-0.3**
N02D	**Trinity Center**	**0.66**	**204**	P	**Pb**	**09 02 35.5**	**0.0**
	baz=25,SNR=15						
N02D				S	**Sg**	**09 02 44.8**	**+0.4**
	baz=25						
LGPM	**Granite Peak**	**0.76**	**208**		**Pb**	**09 02 36.8**	**-0.3**
LTIM	**Timbered Crate**	**0.77**	**121**		**Pb**	**09 02 37.4**	**0.0**
LSHM	**Sage Hen Hill**	**0.82**	**163**		**Pb**	**09 02 38.1**	**-0.1**
HOG	**Hogback Mounta**	**0.82**	**36**		**Pb**	**09 02 38.5**	**+0.2**
KTRM	**Thompson Ridge**	**0.83**	**294**		**Pb**	**09 02 38.7**	**+0.2**
KOMM	**Orleans Mounta**	**0.88**	**250**		**Pb**	**09 02 38.8**	**-0.4**
WDC	**Whiskeytown Da**	**1.01**	**188**		**Pb**	**09 02 41.2**	**-0.2**
WDC				Sg	**Sg**	**09 02 54.8**	**-0.5**
HATC	**Hat Creek Radi**	**1.02**	**138**		**Pb**	**09 02 42.4**	**+0.1**
LBCM	**Butte Creek Ri**	**1.06**	**134**		**Pb**	**09 02 42.5**	**+0.1**
L02E	**Cave Junction**	**1.10**	**302**		**Pb**	**09 02 43.2**	**+0.2**
L02E	**Cave Junction**	**1.10**	**302**	P	**Pn**	**09 02 43.0**	**0.0**
	baz=121,SNR=26						
L02E				S	**Sn**	**09 02 58.2**	**+0.5**
	baz=121						
HUMO	**Hull Mountain**	**1.12**	**337**		**Pn**	**09 02 42.8**	**-0.6**
HUMO	**Hull Mountain**	**1.12**	**337**		**Pn**	**09 02 43.0**	**-0.4**
HUMO				Sn	**Sb**	**09 02 57.5**	**-0.1**
KHBM	**Hayfork Bally**	**1.12**	**216**		**Pn**	**09 02 43.5**	**0.0**
K04D	**Chiloquin, OR**	**1.14**	**23**		**Pg**	**09 02 44.4**	**-0.2**
K04D	**Chiloquin, OR**	**1.14**	**23**	P	**Pg**	**09 02 44.3**	**-0.2**
	baz=202						
K04D				S	**Sg**	**09 02 59.8**	**+0.3**
	baz=202						
KRMB	**Red Mountain**	**1.17**	**268**	Pn	**Pg**	**09 02 45.0**	**-0.1**
O03E	**Paynes Creek**	**1.35**	**162**	P	**Pb**	**09 02 47.5**	**+0.2**
	baz=343,SNR=17						
O02D	**Mt. Diablo Mer**	**1.44**	**193**	P	**Pb**	**09 02 48.5**	**-0.3**
	baz=14						
O02D				S	**Sb**	**09 03 07.6**	**+0.8**
	baz=14						
K02D	**Willamette Mer**	**1.48**	**319**	Pb	**Pb**	**09 02 49.7**	**+0.1**
	baz=138						
K02D				S	**Sb**	**09 03 08.5**	**+0.4**
	baz=138						
MOD	**Modoc Plateau**	**1.57**	**77**		**Pn**	**09 02 50.2**	**+0.5**
MOD				Sn	**Sn**	**09 03 09.7**	**+0.2**
KCRM	**Chalk Rock**	**1.60**	**224**		**Sb**	**09 03 11.3**	**0.0**
J04D	**Umpqua Nationa**	**1.67**	**6**	Sb	**Sg**	**09 03 15.9**	**-0.6**
	baz=186						
J05D	**Fort Rock, OR**	**1.90**	**26**	Pb	**Pb**	**09 02 56.8**	**+0.1**
	baz=206						
J05D				Sb	**Sg**	**09 03 22.5**	**-1.2**
	baz=206						
KRKM	**Rackout Spring**	**2.11**	**198**		**Sn**	**09 03 22.0**	**-0.8**

*NEIC **21** 09:03:01.7±1.6, 40.35N±0.02×124.35W±0.06, h31km±8km,*

Error ellipse: s-maj=7.4km s-min=2.4km az=77.0
*NCEDC **21** 09:03:02.5±1.6,40°.34N±0°.03×124°.35W±0°.05,h30km±6km, ML3.1/23,Error ellipse: s-maj=6.2km s-min=2.8km az=65.0*
ISC 21 09:03:01.4±1.2,40°.34N±0°.03×124°.39W±0°.05,h32km±9km, n139,σ0s.97/156,Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	Capetown	0.15	17		Pn	09 03 08.5	+1.0
KCTM					Sn	09 03 13.5	+2.3
KMPM	Mount Pierce	0.22	68		Pb	09 03 08.6	+0.3
KMPM					Sn	09 03 13.4	+0.2
KMRM	Mail Ridge	0.54	102		Pb	09 03 13.0	+0.4
KMRM				Sg	Sb	09 03 20.8	+0.5
JCC	Jacoby Creek,	0.56	30		Pb	09 03 12.4	-0.5
JCC				Sg	Sb	09 03 19.9	-0.8
KCSM	Cold Springs	0.70	73		Pb	09 03 15.0	-0.4
KHMM	Horse Mountain	0.74	43		Pb	09 03 15.5	-0.5
KHMM				Sg	Sb	09 03 25.1	-0.9
KBSM	Bell Springs	0.74	124		Pb	09 03 15.5	-0.4
KPPM	Pickett Peak	0.79	89		Pn	09 03 16.2	-0.2
KRPM	Rodgers	0.87	19		Pn	09 03 17.2	-0.3
KIPM	Iron Peak	0.88	127		Pn	09 03 17.6	0.0
KCPM	Cahto Peak	0.90	136	Pn	Pn	09 03 17.6	-0.3
KCPM				Sn	Sn	09 03 28.7	-1.1
KHBM	Hayfork Bally	0.95	70		Pn	09 03 18.2	-0.5
KFPM	Farley Peak	1.02	133		Pn	09 03 19.2	-0.3
KBNM	Bluenose Ridge	1.02	115		Pn	09 03 19.9	+0.3
GTC	Three Chop Rid	1.14	145		Pn	09 03 20.7	-0.4
LBPM	Beegum Peak	1.16	90		Pn	09 03 21.0	-0.4
KOMM	Orleans Mounta	1.18	37		Pn	09 03 21.6	-0.3
O02D	Mt. Diablo Mer	1.24	97		Pn	09 03 22.4	-0.1
O02D	Mt. Diablo Mer	1.24	97	P	Pn	09 03 22.4	-0.1
	baz=278,SNR=190						
O02D				S	Sn	09 03 37.9	-0.2
	baz=278						
KRMB	Red Mountain	1.24	17		Pn	09 03 22.4	-0.3
KRMB				Sn	Sn	09 03 36.5	-1.9
GNAM	Navarro Ridge	1.28	152		Pn	09 03 22.6	-0.5
LGPM	Granite Peak	1.32	64		Pn	09 03 23.4	-0.3
GROM	Round Mountain	1.39	107		Pn	09 03 24.9	+0.3
GHMM	Hull Mountain	1.40	126		Pn	09 03 24.7	-0.2
GVV	Valley View	1.43	112		Pn	09 03 25.4	+0.1
N02D	Trinity Center	1.43	63		Pn	09 03 25.0	-0.3
N02D	Trinity Center	1.43	63	Pb	Pn	09 03 25.0	-0.3
	baz=244,SNR=5.8						
N02D				S	Sn	09 03 41.7	-1.4
	baz=244						
WDC	Whiskeytown Da	1.43	80	Pn	Pn	09 03 24.8	-0.4
WDC				Sn	Sn	09 03 41.6	-1.2
GHOM	Hamilton Openi	1.45	153		Pn	09 03 24.9	-0.5
GASB	Alder Springs	1.46	117		Pn	09 03 25.6	0.0
LBKM	Bonanza King	1.51	60		Pn	09 03 26.3	-0.1
KSXB	Camp Six Broad	1.54	14		Pn	09 03 26.6	-0.2
M02C	Callahan	1.57	47		Pn	09 03 27.1	-0.1
M02C	Callahan	1.57	47	Pb	Pn	09 03 27.1	-0.1
	baz=228,SNR=70						
M02C				S	Sn	09 03 44.9	-1.6
	baz=228						
GGUM	Gualala	1.63	155		Pn	09 03 27.3	-0.6
GHLM	Highland Sprin	1.67	140		Pn	09 03 28.1	-0.4
GSNM	Snow Mountain	1.67	146		Pn	09 03 28.2	-0.3
HOPS	Hopland Field	1.68	142	Pn	Pn	09 03 28.3	-0.3
GCK	Clark Valley	1.70	117		Pn	09 03 28.7	-0.1
GTSM	Trough Springs	1.72	126		Pn	09 03 29.4	+0.3
LTCM	Tuscan Springs	1.74	93		Pn	09 03 29.3	0.0
KTRM	Thompson Ridge	1.75	26		Pn	09 03 29.5	-0.1
GDCM	Dry Creek	1.80	150		Pn	09 03 29.8	-0.4
LAMM	Antelope Mount	1.85	46		Pn	09 03 31.2	+0.1
LSHM	Sage Hen Hill	1.85	75		Pn	09 03 31.0	+0.1
LSHM					Pb	09 03 35.8	+1.2
GPMM	Pine Mountain	1.86	143		Pn	09 03 31.1	0.0
LCSM	College of the	1.86	54		Pn	09 03 31.8	+0.6
GACM	Adobe Creek	1.88	140		Pn	09 03 31.2	-0.1
KBO	Bosley Butte	1.88	4		Pn	09 03 31.6	+0.2
YBH	Yreka Blue Hor	1.89	42		Pn	09 03 31.6	+0.1
GCVM	Cloverdale	1.89	145		Pn	09 03 31.2	-0.3
L02E	Cave Junction	1.92	18		Pn	09 03 31.7	-0.1
L02E	Cave Junction	1.92	18	P	Pn	09 03 31.8	-0.1
	baz=197,SNR=141						
L02E				S	Sn	09 03 53.7	-1.1
	baz=197						
GSSM	Skaggs Springs	1.95	146		Pn	09 03 31.7	-0.6
LGBM	Gray Butte	1.95	58		Pn	09 03 33.5	+1.1
M03C	McCloud	1.96	61		Pn	09 03 32.4	-0.2
O03E	Paynes Creek	1.98	90		Pn	09 03 32.2	-0.6
O03E	Paynes Creek	1.98	90	P	Pn	09 03 32.2	-0.6
	baz=272,SNR=32						
O03E				S	Sn	09 03 55.6	-0.9
	baz=272						
LDBM	Digger Butte	2.00	86		Pn	09 03 32.5	-0.4
FTR	Fort Ross	2.05	152		Pn	09 03 33.1	-0.5
LMPM	Military Pass	2.05	55		Pn	09 03 35.4	+1.7
NMCNC	Mill Creek, So	2.08	146		Pn	09 03 33.7	-0.4
LHEM	Herd Peak	2.09	51		Pn	09 03 35.3	+0.9
B040	Montague	2.11	44		Pn	09 03 35.2	+0.7
NMTM	Middletown	2.14	135		Pn	09 03 35.4	+0.5
LBFM	Black Fox Moun	2.15	61		Pn	09 03 36.2	+1.0
LMEM	Manzanita Entr	2.16	84		Pn	09 03 35.7	+0.3
LCMM	Colby Mountain	2.21	94		Pn	09 03 36.0	0.0
MGL	Magalia	2.24	103		Pn	09 03 35.9	-0.4
LRDM	Redding Peak	2.24	86		Pn	09 03 36.7	+0.4
NSHM	Saint Helena R	2.28	142		Pn	09 03 36.6	-0.1
HATC	Hat Creek Radi	2.28	77		Pn	09 03 37.6	+0.7
SUTB	Sutter Butte	2.29	118		Pn	09 03 36.1	-0.8
LGMM	Garner Mountai	2.31	56		Pn	09 03 38.3	+0.9
ORV	Oroville	2.36	108		Pn	09 03 37.4	-0.5
ORV	Oroville	2.36	108		Pn	09 03 37.3	-0.5
LTIM	Timbered Crate	2.36	68		Pn	09 03 38.4	+0.4
NTYM	Taylor	2.36	145		Pn	09 03 37.8	0.0
LBCM	Butte Creek Ri	2.37	77		Pn	09 03 38.5	+0.3
PAM	Palermo	2.38	111		Pn	09 03 37.6	-0.6
M04C	Macdoel	2.41	52	Sb	Sn	09 04 08.0	+0.8
	baz=234						
K02D	Willamette Mer	2.42	13	P	Pn	09 03 39.5	+0.7
	baz=192,SNR=5.8						
K02D				S	Sn	09 04 06.6	-0.8
	baz=192						
OHCM	Honcut	2.45	113		Pn	09 03 38.4	-0.7
L04D	Klamath Falls	2.45	39		Pn	09 03 40.9	+1.6
L04D	Klamath Falls	2.45	39	Pb	Pn	09 03 40.9	+1.6
	baz=220,SNR=40						
L04D				Sb	Sn	09 04 09.3	+1.1
	baz=220						
MCCM	Marconi Confer	2.48	151	Pn	Pn	09 03 39.7	+0.2
CVS	Carmenet Viney	2.49	142		Pn	09 03 39.8	+0.2
HUMO	Hull Mountain	2.51	25	Pn	Pn	09 03 39.6	-0.5
KEBM	Edson Butte	2.54	1	Pn	Pn	09 03 41.1	+0.7
NPRM	Point Reyes	2.57	155		Pn	09 03 40.8	0.0
NOLM	Olema	2.61	151		Pn	09 03 41.2	0.0
SNT	Sears Point	2.62	144		Pn	09 03 41.5	0.0
J01E	Myrtle Point	2.85	7	P	Pn	09 03 45.3	+0.8
	baz=186,SNR=7.5						
J01E				S	Sn	09 04 16.3	-1.4
	baz=186						
FARB	Farallon Islan	2.85	157		Pn	09 03 44.6	0.0
CSPM	San Pablo Ridg	2.87	145		Pn	09 03 45.1	+0.2
AFDM	Forest Hills D	2.98	117		Pn	09 03 46.7	+0.2
K04D	Chiloquin, OR	3.03	40	S	Sn	09 04 21.6	-0.8
	baz=221						
BEKR	Beckworth	3.13	97		Pn	09 03 49.2	+0.6
SAC	San Andreas	3.15	150		Pn	09 03 49.8	+1.0
IND	Independence	3.28	105		Pn	09 03 52.7	+2.0
KBF	Kyburz Flat	3.32	103		Pn	09 03 52.9	+1.6
JRSC	Jasper Ridge	3.38	149		Pn	09 03 52.0	+0.2
JFP	Foothills Park	3.43	149		Pn	09 03 52.8	+0.2
I03D	Drain, OR	3.45	13	P	Pn	09 03 53.8	+0.9
	baz=193						
MOD	Modoc Plateau	3.46	62	Pn	Pn	09 03 53.9	+0.7
JUMM	Mount Umunhum	3.72	148		Pn	09 03 57.0	+0.3
AMC	Almaden	3.75	147		Pn	09 03 59.3	+2.4
J05D	Fort Rock, OR	3.78	38	S	Sn	09 04 39.7	-1.2
	baz=219						
I02D	Swisshome	3.79	6	P	Pn	09 03 58.8	+1.3
	baz=186						
JLAB	Laurel Hill	3.79	146		Pn	09 04 00.2	+2.6
VCNR	Virginia City	3.80	104	Pn	Pn	09 03 58.5	+0.7
JRGM	Rodeo Gulch Ro	3.80	149		Pn	09 03 59.2	+1.5
PAHR	Pah Rah Range	3.90	98	Pn	Pn	09 03 59.2	0.0
PNTR	Pine Nut	3.90	107	Pn	Pn	09 04 01.0	+1.7
HERM	Elkhorn Road	4.11	148		Pn	09 04 04.0	+2.1
HTUM	Tustin Road	4.11	148		Pn	09 04 03.7	+1.8
HJGM	San Juan Grade	4.17	147		Pn	09 04 04.3	+1.6
YERR	Yerington	4.20	107		Pn	09 04 04.1	+0.7
HMOM	Monterey	4.20	152		Pn	09 04 03.6	+0.4
SAO	San Andreas Ge	4.25	146	Pn	Pn	09 04 04.4	+0.5
BSRM	Salinas Radio	4.30	147		Pn	09 04 06.1	+1.5
PINE	Pine Mountain	4.31	36	Pn	Pn	09 04 06.3	+1.5
COR	Corvallis	4.32	10	Pn	Pn	09 04 04.4	-0.5
BPCNC	Pine Canyon	4.34	149		Pn	09 04 06.1	+1.0
BJOM	Mount Johnson	4.42	146		Pn	09 04 08.5	+2.3
BJCM	Johnson Can.	4.46	147		Pn	09 04 08.5	+1.8
BVL	Bear Valley	4.52	145		Pn	09 04 10.1	+2.5
HAST	Hastings Reser	4.53	150		Pn	09 04 07.6	-0.1
BBGB	Big Mountain B	4.58	144		Pn	09 04 12.8	+4.2
BSMM	Soledad Missio	4.58	148		Pn	09 04 09.4	+0.9
BPOM	Post Ranch	4.59	152		Pn	09 04 08.7	+0.2
BPIM	Pinnacles	4.60	146		Pn	09 04 10.8	+2.1
WVOR	Wild Horse Val	4.81	62	Pn	Pn	09 04 12.3	+0.6
PCCM	Crazy Canyon	4.94	148		Pn	09 04 15.1	+1.7
PMPB	Monarch Peak	4.99	144	Pn	Pn	09 04 14.8	+0.7
KVN	Kaiserville	5.02	103	Pn	Pn	09 04 13.7	-1.0
J08A	Circle Bar Ran	5.35	54	Pn	Pn	09 04 19.9	+0.7
G06A	Carlson Farm,	5.62	28	Pn	Pn	09 04 21.5	-1.3
PAGB	Antelope Grade	5.64	143	Pn	Pn	09 04 23.8	+0.7

*RSNC **21** 09:15:05.5±0.8,3°.91N×71°.61W,h4km±6km,ML3.0,Mw3.2*
ISC 21 09:15:04.7±1.9,3°.91N±0°.04×71°.71W±0°.05,h0km±14km, n20,σ0s.75/27,2C,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTGC	Puerto Gaitan,	0.51	304⇑	iPg	Pg	09 15 15.3	+0.7
PTGC				eS	Sb	09 15 24.7	+0.1
PTGC				i		09 15 41.1	
	comp=Z,407nm,0.9s						
GUVC	San Jose del G	1.64	214	eP	Pn	09 15 34.0	-0.8
GUVC				eS	Sb	09 15 56.8	-0.2
GUVC				i		09 16 01.1	
	comp=Z,336nm,0.2s						
CHIC	Chingaza	2.14	290	eP	Pn	09 15 42.3	+0.2
CHIC				eS	Sb	09 16 12.6	+0.7
CHIC				i		09 16 16.9	
	comp=Z,120nm,0.4s						
RUSC	La Rusia	2.40	325⇑	eP	Pn	09 15 45.6	-0.1
RUSC				eS	Sn	09 16 16.5	+0.5
RUSC				i		09 16 31.2	
	comp=Z,56nm,0.7s						
TAMC	Tame, Arauca	2.51	358	eP	Pn	09 15 45.7	-1.2
TAMC				eS	Sn	09 16 17.6	-0.6
TAMC				i		09 16 39.2	
	comp=Z,108nm,0.5s						
MACC	Macarena, Meta	2.77	231	eP	Pn	09 15 50.4	+0.1
MACC				eS	Sb	09 16 29.4	-0.1
MACC				i		09 16 41.3	
	comp=Z,120nm,0.6s						
ROSC	El Rosal	2.77	290	eP	Pb	09 15 54.3	-0.9
ROSC				i		09 16 45.5	
	comp=Z,26nm,0.5s						
SPBC	San Pablo de B	2.92	306	eS	Sg	09 16 37.3	-1.5
BARC	Barichara	3.04	331	eP	Pn	09 15 53.8	-0.5
BARC				eS	Sn	09 16 31.1	-0.5
BARC				i		09 16 47.5	
	comp=Z,137nm,0.5s						
PRAC	Prado	3.18	267	eP	Pn	09 15 57.5	+1.5
PRAC				i		09 17 02.6	
	comp=Z,35nm,0.5s						
ORTC	Ortega, Tolima	3.53	270	eP	Pn	09 16 01.4	+0.5
ORTC				i		09 17 10.6	
	comp=Z,40nm,0.5s						
PAMC	Pamplona, Colo	3.55	344	eP	Pn	09 16 00.8	-0.7
PAMC				i		09 17 06.0	
	comp=Z,44nm,0.5s						
NORC	Norcasia	3.56	298	eP	Pn	09 16 01.6	+0.4
NORC				i		09 17 01.4	
	comp=Z,19nm,0.5s						
PTBC	PUERTO BERRIO,	3.79	314	eP	Pn	09 16 04.7	+0.4
PTBC				i		09 17 09.5	
	comp=Z,17nm,0.5s						
GUY2C	Guyana, Caldas	3.87	290	eP	Pn	09 16 06.8	+0.9
GUY2C				i		09 17 10.3	
	comp=Z,11nm,0.3s						
HELC	Santa Helena	4.43	301	eP	Pn	09 16 13.8	+0.3
HELC				i		09 17 34.8	
	comp=Z,6.3nm,0.6s						
ZARC	Zaragoza, Cauc	4.74	319	eP	Pn	09 16 18.4	+0.9
ZARC				i		09 17 37.0	
	comp=Z,7.3nm,0.6s						
DBBC	Dabeiba	5.44	305	eP	Pn	09 16 27.4	+0.2
DBBC				i		09 17 35.2	
	comp=Z,13nm,0.6s						
BAUV	El Baul	6.18	36	eP	Pb	09 16 54.2	+0.9
BAUV	El Baul	6.18	36	eS	Sb	09 18 08.4	+0.4

*NIED **21** 09:34:00,36°.80N×141°.00E,h11km,Mw3.4 Best double couple: M₀1.61000×10¹⁴ NP1:φs207.00000°,δ70.00000°, λ-64.00000°. NP2:φs333.00000°,δ33.00000°, λ-140.00000°.*
JMA 21 09:34:37.8,36°.76N×140°.97E,h19km±1km,M3.7,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.35	245	P	Pg	09 34 45.0	-0.4
JHO				S	Sg	09 34 50.2	-0.3
ONAJ	Iwakimizuishiy	0.37	338	P	Pg	09 34 45.3	-0.3
ONAJ				S	Sg	09 34 50.7	-0.2
JFFD	Fukushimafurud	0.47	315	P	Pg	09 34 46.9	-0.4
JFFD				S	Sg	09 34 53.2	-0.5
JHYU	Hitachinakayam	0.52	217	P	Pb	09 34 48.1	-0.2
JHYU				S	Sb	09 34 55.5	+0.1
JYT	Yasato	0.82	230	P	Pb	09 34 53.2	-0.2
JYT				S	Sb	09 35 04.2	+0.1
JSB	Shiboa	0.87	284	P	Pg	09 34 54.7	-0.1
JSB				S	Sn	09 35 07.3	+0.1
JFT	Otama	0.91	326	P	Pb	09 34 54.9	-0.1
JFT				S	Sb	09 35 07.0	+0.3
MAT	Matsushiro	2.23	265	P	Pn	09 35 15.0	+1.2
MAT				S	Sb	09 35 46.4	+1.6

*IDC **21** 10:24:26.0±3.1,6°.23S×130°.48E,h122km±28km,mb3.9/9, mb1 3.9/11,mb1mx3.7/34,mbtmp4.3/11,MS3.2/1, Ms1 3.2/1,ms1mx2.4/37,Error ellipse: s-maj=32.6km s-min=16.7km az=64.0*
*NEIC **21** 10:24:26.0±2.6,6°.23S±0°.05×130°.60E±0°.06,h131km±5km, mb4.4/18,Error ellipse: s-maj=8.7km s-min=6.9km az=53.0*
*DJA **21** 10:24:26.6±0.4,6°S±3'×13°1E±',h150km±8km,M4.5/16, mB5.1/7,mb4.5/5,MLv4.6/16,Mw(mB)4.4/7*
ISC 21 10:24:27.0±0.5,6°.27S±0°.04×130°.65E±0°.06,h150km,n58, σ2s.15/62,mb4.2/15,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.82	159	P	Pn	10 24 59.8	-0.3
SAUI	Saumlaki	1.82	159		Pn	10 24 59.3	-0.8
SAUI				Sn	Sn	10 25 21.0	-4.5
BNDI	Bandanaira	1.89	337	P	Pn	10 25 01.0	+0.1
BNDI				S	Sn	10 25 27.0	+0.1
MSAI	Masohi	3.37	329	P	Pn	10 25 18.6	-0.6
MSAI				S	Sn	10 25 56.5	-3.1
AAI	Ambon	3.55	316	P	Pn	10 25 20.8	-0.6
FAKI	Fak Fak	3.69	26	P	Pn	10 25 22.0	-1.3
FAKI	Fak Fak	3.69	26		Pn	10 25 21.8	-1.5
FAKI				Sn	Sn	10 26 01.3	-5.7
KMPI	Kaimana, Papua	4.00	50	P	Pn	10 25 26.9	-0.3
NLAI	Namlea	4.65	310	P	Pn	10 25 36.1	+0.3
SIJI	Sorong	5.40	7	P	Pn	10 25 44.2	-1.6
	31nm,0.3s,baz=226,slow=22,SNR=116						
SIJI				S	Sn	10 26 41.0	-6.4
	59nm,0.3s,baz=126,slow=23,SNR=28						
SWI	Sorong	5.41	6	P	Pn	10 25 44.4	-1.5
RKPI	Ransiki, Papua	5.89	37	P	Pn	10 25 52.4	+0.1
	2.2nm294nm,0.6s						
SANI	Sanana	6.26	312	P	Pn	10 25 56.9	-0.3
	0.4nm2μm73nm,0.8s						
LBMI	Labuha	6.42	331	P	Pn	10 25 58.3	-1.0
SOEI	Soe	7.21	241	P	Pn	10 26 08.6	-1.3
	0.4nm2μm53nm,0.6s						
SOEI	Soe	7.21	241		Pn	10 26 08.7	-1.3
SOEI				Sn	Sn	10 27 28.1	-2.7
EDFI	Ende, Flores	9.22	254	P	Pn	10 26 36.7	-0.1
KNRA	Kununurra	9.53	191		Pn	10 26 38.4	-2.5
FITZ	Fitzroy Crossi	12.73	202	P	Pn	10 27 18.3	-4.5
	5.0nm,0.3s,baz=29,slow=9.9,SNR=67						
FITZ				S	Sn	10 29 29.9	-14
	7.4nm,0.3s,baz=240,slow=18,SNR=6.1						
FITZ	Fitzroy Crossi	12.73	202		Pn	10 27 18.7	-4.2
WB0	Warramunga Arr	13.90	165		Pn	10 27 35.2	-2.5
WRA	Warramunga Arr	14.05	166	P	Pn	10 27 36.0	-3.7
	1.6nm,0.3s,baz=356,slow=13,SNR=41						
WRA				S	Sn	10 30 01.1	-14
	3.4nm,0.3s,baz=5.9,slow=19,SNR=9.0						
WB2	Warramunga Arr	14.06	166	Pn	Pn	10 27 36.2	-3.5
WR0	Warramunga Arr	14.12	165		Pn	10 27 37.1	-3.5
COEN	Coen	14.50	123	Pn	Pn	10 27 45.9	+0.6
AS31	Alice Springs	17.58	170	P	P	10 28 22.3	+0.5
AS31				IAmb	IAmb	10 28 36.5	
	comp=Z,4.2nm,0.3s						
ASAR	Alice Springs	17.58	170	P	Pn	10 28 23.1	+0.2
	comp=Z,0.8nm,0.3s,baz=348,slow=10.0,SNR=44						
ASAR				S	S	10 31 24.3	-13
	comp=Z,0.5nm,0.3s,baz=331,slow=16,SNR=6.1						
PSA00	Pilbara Seismi	18.46	213	P	Pn	10 28 32.2	-1.1
PSA00				IAmb	IAmb	10 28 40.1	
	comp=Z,8.6nm,0.7s						
KKM	Kota Kinabalu	18.90	310	P	Pn	10 28 37.7	-0.9
KKM				IAmb	IAmb	10 28 51.7	
	comp=Z,20nm,1.0s						
CTA	Charters Tower	20.45	134	P	Pn	10 28 55.5	-1.3
	comp=Z,3.0nm,1.1s,baz=324,slow=8.7,SNR=2.3						
CISI	Cisompet, Garu	22.70	265	P	P	10 29 16.3	0.0
UBPT	Khong Chiam	32.88	311	P	P	10 30 46.8	-0.2
CMAR	Chiang Mai Arr	39.77	309	P	P	10 31 46.3	+0.8
	comp=Z,1.8nm,0.5s,baz=138,slow=7.8,SNR=12						
WHN	Wuhan	39.80	338	P	P	10 31 42.8	-2.7
CHTO	Chiang Mai	39.98	309	P	P	10 31 47.5	+0.3
CHTO				IAmb	IAmb	10 31 48.6	
	comp=Z,4.6nm,0.7s						
USRK	Ussuriysk Ar.	50.25	1	P	P	10 33 08.1	+0.2
	comp=Z,1.3nm,0.6s,baz=201,slow=7.1,SNR=3.7						
ASAJ	Asahikawa	51.30	11	LR	LR	10 58 26.0	
	comp=Z,24nm,18.2s,baz=224,slow=40						
ULN	Ulaanbaatar	57.78	341	P	P	10 34 04.9	+2.3
ULN				IAmb	IAmb	10 34 05.4	
	comp=Z,4.8nm,0.7s						
SONM	Songino Array	57.96	341	P	P	10 34 05.9	+2.1
	comp=Z,1.2nm,0.3s,baz=162,slow=4.8,SNR=23						
PETK	Petropavlovsk-	63.44	18	P	P	10 34 43.7	+3.1
	comp=Z,1.4nm,0.8s,baz=200,slow=12,SNR=3.5						
MK31	Makanchi Array	67.98	326	P	P	10 35 11.5	+1.6
MK31				IAmb	IAmb	10 35 12.3	
	comp=Z,6.4nm,0.7s						
MKAR	Makanchi Array	67.98	326	P	P	10 35 11.6	+1.7
	comp=Z,8.9nm,0.4s,baz=113,slow=8.9,SNR=138						
MAKZ	Makanchi	68.16	326	P	P	10 35 12.5	+1.5
AAK	Ala-Archa	70.41	319	P	P	10 35 26.6	+1.4
AAK				IAmb	IAmb	10 35 28.0	
	comp=Z,3.0nm,0.7s						
ARSB	Arslanbob	70.79	318	P	P	10 35 28.9	+1.4
ARSB				IAmb	IAmb	10 35 30.0	
	comp=Z,6.9nm,0.7s						
ZAA0	Zalesovo Array	71.22	333	P	P	10 35 28.9	-0.7
ZAA0				IAmb	IAmb	10 35 31.1	
	comp=Z,2.7nm,0.7s						
ZALV	Zalesovo Beam	71.22	333	P	P	10 35 29.4	-0.2
	comp=Z,2.4nm,0.6s,baz=124,slow=4.3,SNR=8.7						
KURK	Kurchatov	72.24	328	P	P	10 35 34.7	-1.0
KURK				IAmb	IAmb	10 35 37.9	
	comp=Z,5.0nm,0.8s						
KK31	Karatay Array	73.22	318	P	P	10 35 41.0	-0.7
KKAR	Karatay Array	73.22	318	P	P	10 35 41.2	-0.5
BRVK	Borovoye	77.87	328	P	P	10 36 08.8	+0.9
GEYT	Alibeck	80.24	310	P	P	10 36 22.8	+1.5
	comp=Z,1.4nm,0.5s,baz=64,slow=3.4,SNR=3.0						
NRIK	Noril'sk	81.01	346	P	P	10 36 25.5	+0.9
	comp=Z,2.2nm,0.6s,baz=128,slow=5.2,SNR=4.8						
QSPA	South Pole Qui	83.70	180	P	P	10 36 39.9	+1.0
CHGN	Chignik	84.78	32	P	P	10 36 45.7	+1.4
ARCES	ARCESS Array B	101.12	340	P	Pdif	10 38 00.4	+0.8
	comp=Z,2.3nm,0.8s,baz=82,slow=7.6,SNR=3.2						
TORD	Torodi Ar. Bea	129.30	282	PKP	PKiKP	10 43 20.0	+0.6
	comp=Z,0.4nm,0.5s,baz=80,slow=1.7,SNR=3.0						
LPAZ	La Paz	150.88	141	PKPbc	PKiKP	10 44 06.8	+2.6
	comp=Z,0.6nm,0.3s,baz=170,slow=6.1,SNR=6.6						

MAN 21 10:28:45.9,10°.05N×123°.95E,h27km,mb3.1,ML1.8, MS1.0,1C-1D,Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.27	4⇓	eP	Pn	10 28 54.7	+0.5
LLP				eS	Sn	10 29 01.0	+1.6
TBP	Tagbilaran	0.36	193⇑	eP	Pb	10 28 51.7	-2.4
TBP				eS	Sb	10 28 54.8	-4.8
MSLP	Maasin	0.90	84	eP	Pn	10 29 01.8	-1.0
MSLP				eS	Sn	10 29 15.7	+0.7

IDC 21 10:32:04.6±1.5,24°.49S×115°.89W,h0km,mb3.9/4, mb1 4.3/4,mb1mx3.8/32,mbtmp3.9/4,MS3.4/4,Ms1 3.4/4, ms1mx3.1/27,Error ellipse: s-maj=52.9km s-min=38.7km az=31.0,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	6.46	115	LR	LR	10 35 24.9	
	comp=Z,374nm,19.2s,baz=324,slow=31						
PLCA	Paso Flores	41.01	125	LR	LR	10 52 35.9	
	comp=Z,55nm,20.0s,baz=318,slow=30						
LPAZ	La Paz	45.32	89	P	P	10 40 25.8	+0.3
	2.6nm,1.0s,baz=275,slow=4.5,SNR=6.1						
CPUP	Villa Florida	52.53	105	LR	LR	10 59 46.6	
	comp=Z,11nm,18.7s,baz=233,slow=32						
NVAR	Mina Array Bea	62.63	358	P	P	10 42 31.9	+0.8
	1.1nm,0.9s,baz=179,slow=9.7,SNR=6.5						
PDAR	Pinedale Array	67.18	5	P	P	10 43 00.7	0.0
	0.7nm,0.8s,baz=174,slow=3.0,SNR=5.9						
H11S2	WAKE ISLAND Hy	86.64	292	T	T	12 20 47.6	
	baz=118,slow=75,SNR=68						
H11S1	WAKE ISLAND Hy	86.66	292	T	T	12 20 50.6	
	baz=118,slow=75,SNR=84						
H11S3	WAKE ISLAND Hy	86.66	292	T	T	12 20 52.1	
	baz=118,slow=75,SNR=61						
YKA	Yellowknife Ar	86.69	1	P	P	10 44 48.5	-1.3
	1.1nm,0.9s,baz=174,slow=5.2,SNR=14						
PMG	Port Moresby	92.40	259	LR	LR	11 18 52.0	
	comp=Z,34nm,19.0s,baz=112,slow=30						
ZALV	Zalesovo Beam	146.75	338	PKPbc	PKPab	10 51 49.2	-0.2
	0.5nm,0.3s,baz=316,slow=4.0,SNR=1.9						
CMAR	Chiang Mai Arr	147.09	266	PKPbc	PKPbc	10 51 49.9	-0.5
	0.6nm,0.5s,baz=91,slow=1.2,SNR=5.1						
BRTR	Keskin Array B	150.23	52	PKPbc	PKPbc	10 51 56.6	-1.4
	0.9nm,0.8s,baz=238,slow=2.7,SNR=2.7						
MKAR	Makanchi Array	153.42	331	PKPbc	PKPbc	10 52 04.0	-0.9
	0.3nm,0.7s,baz=87,slow=3.2,SNR=2.7						

*NEIC **21** 10:43:47.1±3.3,28°.52S±0°.05×67°.96W±0°.09,h124km±6km, Error ellipse: s-maj=11.4km s-min=7.8km az=84.0*
*SJA **21** 10:43:47.1±0.7,28°.53S×67°.96W,h126km±5km,ML4.5, MW4.4*
*IDC **21** 10:43:49.3±0.6,28°.67S×68°.07W,h120km±4km,mb3.8/5, mb1 3.9/7,mb1mx3.7/27,mbtmp4.1/7,MS2.7/1,Ms1 2.7/1, ms1mx2.5/22,Error ellipse: s-maj=24.8km s-min=10.6km az=98.0*
*VAO **21** 10:43:50.1±1.4,28°.39S×67°.68W,h107km±8km,mb4.7*
ISC 21 10:43:47.8±0.4,28°.53S±0°.04×67°.98W±0°.04,h126km±3km, n126,σ2s.10/172,mb4.6/19,4C-4D,La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCA	Vinchina	0.28	223	iP	Pn	10 44 05.8	+0.2
VCA				iS	Sn	10 44 18.1	-1.0
VCA				IAML		10 44 19.5	
	comp=Z,19μm,0.4s						
CYA	Choya	1.92	88	iP	Pn	10 44 21.6	+1.0
CYA				iS	Sn	10 44 44.9	-0.8
CYA				IAML		10 44 49.2	
	comp=Z,1μm,0.5s						
AC02	Maricunga	1.97	329⇓	iP	Pn	10 44 23.7	+2.0
AC02				IAML		10 44 56.5	
	comp=E,2μm,0.3s						
AC05	El Transito	2.04	261⇑	iP	Pn	10 44 23.6	+1.4

AC05 IAML 10 44 52.5
comp=E,5μm,0.6s
GO03 Copiap 2.20 295 Pn 10 44 24.9 +0.9
GO03 Sn Sn 10 44 51.4 -0.4
AMOG MOGNA 2.44 190 i P Pn 10 44 27.5 +0.4
AMOG eS Sn 10 44 56.4 -1.0
AMOG IAML 10 45 01.9
comp=Z,1μm,0.7s
RTLL Cerro Villicun 2.82 189 i P Pn 10 44 32.7 +0.7
RTLL i S Sn 10 45 05.1 -1.1
RTLL IAML 10 45 08.2
comp=Z,2μm,0.6s
AHML Horco Molle 2.92 54 i P Pn 10 44 34.1 +0.8
AHML i S Sn 10 45 02.5 -5.9
AHML IAML 10 45 33.9
comp=Z,971nm,0.9s
GO04 Tololo Observa 2.95 236⇑i P Pn 10 44 34.0 +0.2
GO04 IAML 10 45 13.2
comp=E,8μm,0.5s
GO04 Tololo Observa 2.95 236 Pn 10 44 34.2 +0.2
GO04 Sn Sn 10 45 10.1 +0.6
GO04 Tololo Observa 2.95 236 i P Pn 10 44 34.1 +0.2
GO04 i S Sn 10 45 09.6 +0.1
GO04 eS 10 45 10.0
ZON Zonda 3.07 191 eP Pn 10 44 35.9 +0.7
ZON eS Sn 10 45 10.8 -1.0
ZON IAML 10 45 16.1
comp=Z,1μm,0.5s
CFA Coronel Fontan 3.08 184 P Pn 10 44 35.7 +0.5
comp=Z,80nm,0.3s,baz=0.4,slow=10,SNR=820
CFA S Sn 10 45 09.8 -2.2
baz=114,slow=20
CFA Coronel Fontan 3.08 184 i P Pn 10 44 35.7 +0.5
CFA i S Sn 10 45 10.4 -1.5
RTCV Cerro Valdivia 3.36 188 i P Pn 10 44 39.7 +0.7
RTCV i S Sn 10 45 18.2 -0.4
RTCV IAML 10 45 23.4
comp=Z,558nm,1.9s
GO02 Mina Guanaco 3.65 336 Pn 10 44 44.8 +1.7
GO02 Sn Sn 10 45 27.2 +1.4
ACAN Cantantal 3.80 170 i P Pn 10 44 45.5 +0.7
ACAN eS Sn 10 45 26.9 -2.0
ACAN IAML 10 45 28.5
comp=Z,346nm,0.5s
ASAL Salagasta 4.12 190 i P Pn 10 44 49.6 +0.6
ASAL i S Sn 10 45 35.5 -1.1
ASAL IAML 10 45 42.1
comp=Z,343nm,0.4s
ARCO CERRO ARCO 4.38 191 eP Pn 10 44 53.0 +0.4
ARCO i S Sn 10 45 38.7 -4.2
ARCO IAML 10 45 44.9
comp=Z,791nm,0.5s
SLA San Lorenzo 4.39 31 i P Pn 10 44 55.3 +2.4
SLA i S Sn 10 45 34.5 -8.9
SLA IAML 10 45 40.1
comp=Z,317nm,1.5s
PB14 IPOC Station P 4.45 330⇑eP Pn 10 44 54.7 +0.9
PB14 ⇑i P Pn 10 44 54.7 +0.9
PB14 IPOC Station P 4.45 330 i P Pn 10 44 54.8 +1.0
PB14 i S Sn 10 45 43.9 -1.0
PB14 IAML 10 45 50.0
comp=Z,543nm,0.4s
AAGR Agrelo 4.60 189 eP Pn 10 44 55.9 +0.3
AAGR i S Sn 10 45 40.4 -7.8
AAGR IAML 10 46 16.9
comp=Z,389nm,0.7s
AZAP Zapla 5.02 32 i P Pn 10 45 03.0 +1.6
AZAP i S Sn 10 45 47.0 -12
AZAP IAML 10 45 57.4
comp=Z,188nm,0.5s
ROC1 El Roble 5.14 210 Pn 10 45 01.5 -1.5
ROC1 Sn Sn 10 45 58.8 -2.6
ROC1 El Roble 5.14 210 i P Pn 10 45 01.6 -1.4
ROC1 i S Sn 10 45 57.5 -4.0
PEL Peldehue 5.15 206 Pn 10 45 02.4 -0.5
PEL Sn Sn 10 46 00.5 -0.9
PEL Peldehue 5.15 206 i P Pn 10 45 02.2 -0.7
PB15 IPOC Station P 5.46 345⇓i P Pn 10 45 08.1 +0.8
PB15 IPOC Station P 5.46 345 i P Pn 10 45 08.1 +0.8
PB15 i S Sn 10 46 08.9 -0.3
PB10 IPOC Station P 5.50 335⇓i P Pn 10 45 07.0 -0.6
PB10 IPOC Station P 5.50 335 Pn 10 45 07.2 -0.5
PB10 Sn Sn 10 46 06.9 -2.9
PB10 IPOC Station P 5.50 335 i P Pn 10 45 07.0 -0.6
HJA Humahuaca 5.78 24 i P Pn 10 45 14.4 +2.7
LVC Limon Verde 5.95 352 P Pn 10 45 14.6 +0.7
comp=Z,26nm,0.3s,baz=151,slow=8.9,SNR=194
LVC S Sn 10 46 17.4 -3.8
comp=Z,22nm,0.3s,baz=200,slow=4.8,SNR=8.0
LVC Limon Verde 5.95 352 eP Pn 10 45 14.7 +0.7
LVC Limon Verde 5.95 352 Pn 10 45 14.3 +0.3
LVC Sn Sn 10 46 19.0 -2.2
LVC Limon Verde 5.95 352 i P Pn 10 45 14.7 +0.7
LVC i S Sn 10 46 18.8 -2.4
PB06 IPOC Station P 5.97 346⇓i P Pn 10 45 14.3 +0.2
PB06 IPOC Station P 5.97 346 i P Pn 10 45 14.4 +0.2
PB06 i S Sn 10 46 17.4 -4.0
PB05 IPOC Station P 6.00 340 i P Pn 10 45 13.6 -0.8
PB05 i S Sn 10 46 18.9 -3.0
PB04 IPOC Station P 6.47 342 Pn 10 45 19.7 -1.1
PB04 Sn Sn 10 46 30.4 -3.0
GO05 Huala 7.28 206 Pn 10 45 27.8 -3.8
GO05 Sn Sn 10 46 46.0 -6.7
PB01 IPOC Station P 7.58 349 Pn 10 45 34.4 -1.3
PB01 Sn Sn 10 46 57.7 -2.4
PB11 IPOC Station P 8.86 350 Pn 10 45 50.5 -2.5
PB11 Sn Sn 10 47 26.6 -4.8
GO01 Chusmiza 8.89 353 Pn 10 45 51.9 -1.9
GO01 Sn Sn 10 47 26.5 -6.0
MNMC Minye Minye 9.47 351 Pn 10 45 58.5 -2.8
MNMC Sn Sn 10 47 39.6 -6.6
CPUP Villa Florida 9.72 79 P Pn 10 46 02.2 -2.2
comp=Z,2.5nm,0.3s,baz=258,slow=12,SNR=43
CPUP LR LR 10 50 31.5
comp=Z,37nm,18.1s,baz=284,slow=41
CPUP Villa Florida 9.72 79 Pn 10 46 02.3 -2.0
LPAZ La Paz 12.18 359 P Pn 10 46 38.3 +0.5
comp=Z,0.6nm,0.3s,baz=163,slow=4.4,SNR=14
LPAZ La Paz 12.18 359 eP Pn 10 46 38.1 +0.3
LPAZ La Paz 12.18 359 Pn 10 46 37.3 -0.6
PLCA Paso Flores 12.36 189 P Pn 10 46 37.4 -2.1
comp=Z,0.1nm,0.3s,baz=21,slow=11,SNR=6.2
PLCA Paso Flores 12.36 189 Pn Pn 10 46 37.7 -1.7
CPSB Cacapava Do Su 12.81 102 eP Pn 10 46 44.3 -1.0
AQDB Aquidauana 13.75 57 eP Pn 10 46 57.1 -0.4
SIV San Ignacio 14.02 29 P Pn 10 46 59.2 -1.8
comp=Z,0.9nm,0.3s,baz=231,slow=9.4,SNR=13
ITAB Concordia 14.08 88 eP Pn 10 47 01.1 -0.7
PTGB Pitanga 14.73 79 eP Pn 10 47 09.7 -0.4
TRCB Terra Rica 14.97 71 eP Pn 10 47 12.2 -0.8
CNLB Canela 15.03 97 eP Pn 10 47 14.6 +0.9
PP1B Ponte de Pedra 16.22 51 eP Pn 10 47 28.1 -0.5
PCMB Pacaembu 16.64 69 eP Pn 10 47 33.8 +0.2
C2SB Chapadao do Su 16.92 58 eP P 10 47 37.7 +0.7
SALV Santo Antonio 16.93 45 eP P 10 47 36.7 -0.4
FRTB Fartura 17.35 77 eP P 10 47 42.7 +0.5
PET01 Itanhaem-SP 19.02 82 eP P 10 48 00.6 +0.6
RCLB Rio Claro- Sao 19.43 76 eP P 10 48 04.9 +0.4
ARAG Araguaiana, MT 19.65 53 eP P 10 48 07.1 +0.3
VAO Valinhos 19.70 79 eP P 10 48 08.4 +1.0
SAML Samuel 19.99 14 eP P 10 48 12.8 +2.3
SAML Samuel 19.99 14 P P 10 48 10.4 -0.1
SAML IAmb IAmb 10 48 13.9
comp=Z,14nm,0.6s
PARB Paraibuna 20.75 81 eP P 10 48 19.2 +0.5
CLDB Colider 20.95 35 eP P 10 48 20.4 -0.5
IPMB Ipameri, GO 20.95 64 eP P 10 48 21.0 +0.1
BDFB Brasilia 22.47 59 P P 10 48 35.8 -1.0
comp=Z,4.2nm,0.5s,baz=225,slow=7.4,SNR=6.0
BDFB Brasilia 22.47 59 P P 10 48 36.4 -0.5
BDFB IAmb IAmb 10 48 45.9
comp=Z,11nm,0.7s
EFI East Falkland 24.29 165 P P 10 48 54.8 +1.6
EFI IAmb IAmb 10 49 13.8
comp=Z,113nm,1.4s
JANB Januaria 25.68 64 eP P 10 49 06.6 +0.3
SJMB Sao Joao De Ma 26.38 74 eP P 10 49 13.9 +1.4
SDV Santo Domingo 37.28 356 P P 10 50 48.1 +0.2
SDV IAmb IAmb 10 50 50.3
comp=Z,7.6nm,1.1s
FDF Fort de France 43.51 10 P P 10 51 38.1 -0.8
SABA Saba 46.10 6 P P 10 51 55.9 -3.5
CRPR Cabo Rojo, PR 46.27 1 P P 10 52 00.8 +0.1
GCPR Guaynabo City 46.60 2 P P 10 52 02.3 -0.9
GCPR IAmb IAmb 10 52 06.6
comp=Z,37nm,1.2s
CUPR Culebra, Puert 46.63 4 P P 10 52 04.5 +1.0
CUPR IAmb IAmb 10 52 08.2
comp=Z,63nm,1.4s
AGPR Aguadilla, PR 46.73 1 P P 10 52 04.4 +0.2
SDDR Presa de Saban 47.34 356 P P 10 52 09.3 +0.3
SDDR IAmb IAmb 10 52 13.3
comp=Z,11nm,0.9s
VNA3 Neumayer Olymp 53.20 160 P P 10 52 54.9 +2.4
VNA2 Neumayer--Watz 53.79 159 P P 10 52 59.1 +2.3
baz=285,slow=8.6
SNAA Sanae 55.41 160 P P 10 53 10.6 +1.9
SNAA Sanae 55.41 160 P P 10 53 09.9 +1.3
SNAA IAmb IAmb 10 53 11.7
comp=Z,19nm,1.2s
QSPA South Pole Qui 61.69 180 P P 10 53 54.4 +2.1
QSPA IAmb IAmb 10 53 56.0
comp=Z,11nm,0.8s
Y58A Scranton 63.07 349 P P 10 53 59.6 -1.9
TXAR Lajitas Array 66.89 326 pP pP 10 55 00.4 +1.6
comp=Z,1.3nm,0.9s,baz=145,slow=6.3,SNR=7.8
TX31 Lajitas Ar. Si 66.89 326 P P 10 54 23.8 -2.8
TX32 Lajitas Array 66.89 326 P P 10 54 23.2 -3.3
P48A Milroy 69.57 346 P P 10 54 42.6 -0.3
LIC Lamto 69.72 71 eP P 10 54 46.1 +1.7
comp=Z,14nm,0.6s
TIC Toumodi 69.96 70 eP P 10 54 47.9 +2.0
comp=Z,3.6nm,0.3s
KIC Kosan Boka 70.03 71 eP P 10 54 48.7 +2.3
comp=Z,15nm,0.6s
DBIC Dimbokro 70.11 70 P P 10 54 49.3 +2.5
comp=Z,8.8nm,0.6s,baz=227,slow=7.3,SNR=12
DBIC Dimbokro 70.11 70 P P 10 54 49.3 +2.5
DBIC IAmb IAmb 10 54 49.9
comp=Z,9.7nm,0.8s
OSI Osito Audit: C 79.01 319 P P 10 55 35.9 -1.9
OSI IAmb IAmb 10 55 44.6
comp=Z,5.3nm,0.7s
TOA0 Torodi Ar. Sit 79.03 69 P P 10 55 40.3 +2.0
TORD Torodi Ar. Bea 79.03 69 P P 10 55 41.0 +2.6
comp=Z,3.3nm,0.7s,baz=266,slow=5.1,SNR=19
TORD pP pP 10 56 11.2 +0.8
comp=Z,3.0nm,0.8s,baz=265,slow=5.2,SNR=5.1
TORD sP sP 10 56 25.7 +1.7
comp=Z,2.4nm,0.7s,baz=254,slow=5.2,SNR=3.7
BOSA Boshof 79.48 117 P P 10 55 43.2 +2.4
comp=Z,6.4nm,0.8s,baz=224,slow=2.1,SNR=4.8
BOSA Boshof 79.48 117 P P 10 55 36.8 -4.0
BOSA PcP PcP 10 55 43.5 -4.9
BOSA IAmb IAmb 10 55 43.7
comp=Z,7.2nm,0.9s
JLU Jordanelle 79.73 328 P P 10 55 38.1 -3.8
HWUT Hardware Ranch 80.58 328 P P 10 55 43.5 -2.8
PDAR Pinedale Array 80.60 330 P P 10 55 49.3 +2.9
comp=Z,0.2nm,0.5s,baz=112,slow=8.8,SNR=3.5
PDAR pP pP 10 56 20.2 +0.7
comp=Z,1.2nm,0.9s,baz=134,slow=4.3,SNR=6.1
PDAR sP sP 10 56 37.6 +4.2
comp=Z,0.5nm,0.9s,baz=141,slow=5.7,SNR=3.2
NVAR Mina Array Bea 81.54 322 P P 10 55 52.2 +0.7
comp=Z,0.1nm,0.4s,baz=111,slow=9.9,SNR=2.2
YMP Mirror Lake Pl 82.45 331 P P 10 55 55.0 -1.3
YKA Yellowknife Ar 98.06 340 pP pP 10 57 43.0 0.0
comp=Z,0.3nm,0.7s,baz=138,slow=4.3,SNR=5.0
YKA sP sP 10 57 53.7 -2.9
comp=Z,0.2nm,0.6s,baz=135,slow=4.5,SNR=2.9
ASAR Alice Springs 123.99 204 PKP PKiKP 11 02 33.4 +1.3
comp=Z,1.4nm,0.4s,baz=134,slow=1.7,SNR=35
WRA Warramunga Arr 127.21 207 PKP PKiKP 11 02 40.0 +1.5
comp=Z,2.1nm,0.5s,baz=165,slow=1.6,SNR=16
FITZ Fitzroy Crossi 131.81 197 PKP PKiKP 11 02 49.5 +1.7
comp=Z,1.4nm,0.6s,baz=153,slow=2.3
ZALV Zalesovo Beam 147.76 30 PKPbc PKPab 11 03 20.6 +0.6
comp=Z,1.7nm,0.4s,baz=297,slow=3.4,SNR=5.2
ZALV pPKPbc pPKPdf 11 03 50.7 +1.3
comp=Z,1.6nm,0.4s,baz=300,slow=3.1,SNR=3.3
KSH Kashi 148.37 60 PKPbc PKPdf 11 03 17.3 +1.3
KSH PP PP 11 06 50.5 +0.6
KSH SKS SKSdf 11 10 15.3 +2.5
KSH SKKS SKKSac 11 13 28.3 -0.8
KSH AMB AMB
comp=Z,190nm,6.4s
KSH LR LR
comp=Z,61nm,6.6s
KSH LR LR
comp=Z,77nm,8.4s
KSH LR LR
comp=Z,290nm,7.2s
MKAR Makanchi Array 150.49 44 PKPbc PKiKP 11 03 27.4 +2.3
comp=Z,1.1nm,0.6s,baz=291,slow=2.2,SNR=16
MKAR pPKPbc pPKPbc 11 03 58.8 -0.4
comp=Z,2.2nm,0.7s,baz=298,slow=2.5,SNR=5.9
WMQ Urumqi 155.26 45 ePKP PKPdf 11 03 26.4 +0.3
WMQ LR LR
comp=Z,570nm,29.3s
WMQ LR LR
comp=Z,750nm,29.0s
WMQ LR LR
comp=Z,85nm,29.1s
LZH Lanzhou 169.78 40 ePKP PKPdf 11 03 40.9 +0.2
LZH LR LR
comp=Z,250nm,18.0s
LZH LR LR
comp=Z,260nm,18.3s
LZH LR LR
comp=Z,270nm,20.1s
CD2 Chengdu 172.44 70 PKP PKPdf 11 03 41.0 -1.1
NJ2 Nanjing 173.12 302 ePKP PKPdf 11 03 43.3 +1.1
GYA Guiyang 174.82 112 ePKP PKPdf 11 03 43.8 +0.6
GYA pPKP pPKPdf 11 04 10.0 -8.2
GYA PKPab PKPab 11 05 21.4 +3.1
GYA PKS PKSdf 11 07 13.8 -1.8
GYA PP PP 11 09 13.6 +2.5
GYA AMB AMB
comp=Z,120nm,8.2s
WHN Wuhan 177.14 315 PKP PKPdf 11 03 52.3 +8.9

IDC 21 10:44:57.0±2.8, 10.44S×161.42E, h83km±20km, mb3.4/5, mb1 3.6/6, mb1mx3.4/30, mbtmp3.7/6, Error ellipse: s-maj=31.9km s-min=20.7km az=64.0

ISC 21 10:44:52.9±1.1, 10.7S±0.2×161.6E±0.2, h61km, n13, σ1§42/8, mb3.5/5, Bougainville-Solomon Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HNR Honiara 2.05 307 P Pn 10 45 24.6 -0.5
46nm,0.3s,baz=183,slow=6.7,SNR=12
HNR S Sn 10 45 48.2 -1.4
275nm,0.3s,baz=345,slow=17,SNR=10
DZM Mont Dzumac 12.24 158 P P 10 47 53.3 -1.6
0.3nm,0.3s,baz=40,slow=9.5,SNR=26
WRA Warramunga Arr 27.83 247 P P 10 50 38.5 +1.7
0.6nm,0.5s,baz=78,slow=9.1,SNR=7.0
ASAR Alice Springs 29.38 240 P P 10 50 51.8 +1.2
0.3nm,0.5s,baz=66,slow=9.9,SNR=5.2
H11S2 WAKE ISLAND Hy 29.42 10 T T 11 20 20.0
baz=194,slow=76,SNR=7.3
H11S3 WAKE ISLAND Hy 29.42 10 T T 11 20 00.4
baz=194,slow=76,SNR=6.3
H11S1 WAKE ISLAND Hy 29.44 10 T T 11 20 21.1
baz=194,slow=76,SNR=5.1
H11N1 WAKE ISLAND Hy 30.65 10 T T 11 21 51.5
baz=190
H11N3 WAKE ISLAND Hy 30.66 10 T T 11 21 51.9
baz=190,slow=74
H11N2 WAKE ISLAND Hy 30.67 10 T T 11 21 46.6
baz=190,slow=74
SONM Songino Array 76.01 325 P P 10 56 34.0 +0.3
0.9nm,0.7s,baz=140,slow=6.1,SNR=4.5
MKAR Makanchi Array 90.49 318 P P 10 57 48.3 +0.2
0.1nm,0.4s,baz=108,slow=4.2,SNR=3.3
YKA Yellowknife Ar 96.53 28 P P 10 58 16.2 +0.8
0.2nm,0.6s,baz=256,slow=3.9,SNR=4.0

SJA 21 11:04:17.1±0.8, 24.07S×66.84W, h207km±6km, ML2.8, MW2.7

IDC 21 11:04:18.1±1.3, 24.04S×66.95W, h207km±27km, mb3.2/1, mb1 3.1/7, mb1mx3.0/26, mbtmp3.6/7, Error ellipse: s-maj=35.3km s-min=16.5km az=100.0

GUC 21 11:04:18.4±0.5, 24.04S×67.13W, h212km±13km, ML3.9

ISC 21 11:04:17.8±0.9, 24.11S±0.05×66.88W±0.04, h203km±8km, n26, σ1§19/43, 4C-2D, Salta Province

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SLA San Lorenzo 1.39 116 i P Pn 11 04 51.6 +0.6
SLA IAML 11 04 51.8
comp=Z,31nm,0.5s
SLA eS S 11 05 16.1 -0.3
HJA Humahuaca 1.62 57 i P Pn 11 04 53.2 -0.1
HJA IAML 11 04 53.8
comp=Z,46nm,0.3s
HJA eS S 11 05 20.4 0.0
AZAP Zapla 1.66 94 i P Pn 11 04 53.3 -0.2
AZAP IAML 11 05 53.4
comp=Z,71nm,0.6s
AZAP eS S 11 05 20.6 -0.1
YJA Yavi 2.30 33 i P Pn 11 05 00.1 -0.1
YJA eS S 11 05 32.2 -0.4
LVC Limon Verde 2.39 308 P Pn 11 05 01.6 +0.5
comp=Z,9.3nm,0.3s,baz=145,slow=6.6,SNR=162
LVC S S 11 05 33.6 -0.5
comp=Z,14nm,0.3s,baz=55,slow=22,SNR=5.5
LVC Limon Verde 2.39 308⇑i P Pn 11 05 01.6 +0.5
LVC eS S 11 05 33.4 -0.7
PB15 IPOC Station P 2.54 290⇑i P Pn 11 05 03.1 +0.5
PB15 i S S 11 05 36.6 -0.2
PB15 IPOC Station P 2.54 290 i P Pn 11 05 03.2 +0.7
PB15 eS S 11 05 37.2 +0.4
GO02 Mina Guanaco 2.68 246⇑i P Pn 11 05 05.0 +0.8
GO02 ⇓eS S 11 05 40.8 +1.0
GO02 IAML 11 05 42.7
comp=N,292nm,0.3s
PB06 IPOC Station P 2.84 299⇑i P Pn 11 05 06.3 +0.4
PB06 i S S 11 05 42.2 -0.7
PB06 IAML 11 05 44.6
comp=N,364nm,0.1s
PB06 IPOC Station P 2.84 299 i P Pn 11 05 06.2 +0.2
PB06 eS S 11 05 42.7 -0.2
PB09 IPOC Station P 3.17 316 eP Pn 11 05 10.5 +0.7
PB14 IPOC Station P 3.25 260 i P Pn 11 05 11.2 +0.3
PB05 IPOC Station P 3.30 292⇓eP Pn 11 05 11.4 +0.2
PB05 i S S 11 05 50.4 -2.1
PB05 IAML 11 05 55.3
comp=E,83nm,0.5s
PB05 IPOC Station P 3.30 292 i P Pn 11 05 11.4 +0.2
PB03 IPOC Station P 3.35 307 i P Pn 11 05 12.1 +0.2
PB03 i S S 11 05 52.4 -1.3
PB03 IAML 11 05 53.5
comp=N,214nm,0.1s
PB10 IPOC Station P 3.42 279⇑i P Pn 11 05 12.9 +0.4
PB10 i S S 11 05 54.1 -0.7
PB10 IAML 11 05 56.1
comp=E,126nm,0.9s
PB10 IPOC Station P 3.42 279⇑i P Pn 11 05 12.9 +0.4
PB04 IPOC Station P 3.49 300 i P Pn 11 05 13.9 +0.3
PB04 i S S 11 05 55.9 -0.8
PB04 IPOC Station P 3.49 300 i P Pn 11 05 13.7 +0.1
CFA Coronel Fontan 7.56 189 P Pn 11 06 04.8 -0.6
comp=E,0.3nm,0.3s,baz=17,slow=14,SNR=12
CFA S S 11 07 25.5 -5.4
comp=E,1.3nm,0.3s,baz=171,slow=22,SNR=9.5
LPAZ La Paz 7.87 351 P Pn 11 06 10.5 +0.5
comp=E,0.5nm,0.3s,baz=160,slow=8.1,SNR=12
LPAZ S S 11 07 36.2 -3.1
comp=E,0.1nm,0.3s,baz=270,slow=20,SNR=2.8
SIV San Ignacio 9.75 35 P Pn 11 06 34.9 +1.0
comp=E,0.3nm,0.3s,baz=249,slow=14,SNR=5.1
PLCA Paso Flores 16.86 190 P Pn 11 08 03.7 +1.4
comp=E,0.1nm,0.3s,baz=37,slow=13,SNR=2.8
BDFB Brasilia 19.62 68 P P 11 08 31.4 +0.2
comp=E,0.5nm,0.3s,baz=247,slow=11,SNR=3.7
TORD Torodi Ar. Bea 76.50 69 P P 11 15 45.6 -0.3
comp=E,0.4nm,0.4s,baz=256,slow=5.4,SNR=6.2

TIF 21 11:10:18.5, 42.40N×44.86E, h15km±1km

NORS 21 11:10:18.0±0.0, 42.33N×44.91E, h10km, MPVA4.3

DDA 21 11:10:19.0, 42.36N×44.72E, h11km±7km, MW3.4

MOS 21 11:10:19.7±0.8, 42.33N×44.85E, h12km, mb3.8/1, Error ellipse: s-maj=5.6km s-min=4.0km az=104.5

ISK 21 11:10:19.7, 42.34N×44.71E, h5km, ML3.0/6

DRS 21 11:10:22.5±0.0, 42.49N×45.02E, h16km

ISC 21 11:10:19.9±1.0, 42.34N±0.01×44.88E±0.01, h9km±8km, n97, σ1§35/180, 2C-9D, Western Caucasus

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GUDG Gudauri 0.32 293 P Pg 11 10 24.6 -1.7
GUDG S Sg 11 10 29.7 -1.0
GUDG Gudauri 0.32 293 PG Pg 11 10 24.6 -1.7
SEAG Tbilisi Sea 0.58 186 P Pb 11 10 31.8 -0.4
SEAG S Sb 11 10 40.7 +0.2
SEAG Tbilisi Sea 0.58 186 PG Pb 11 10 31.8 -0.4
SEAG S Sb 11 10 40.7 +0.2
TBLG Delisi 0.62 190 P Pg 11 10 32.4 +0.4
TBLG S Sb 11 10 42.2 +0.5
TBLG Delisi 0.62 190 PG Pg 11 10 32.3 +0.5
TBLG SG Sn 11 10 42.5 -2.4
TBLG Delisi 0.62 190 i P Pg 11 10 32.1 +0.4
TBLG i S Sb 11 10 42.1 +0.5
TBLG Delisi 0.62 190 PG Pg 11 10 32.2 +0.4
TBLG S Sb 11 10 42.2 +0.5
LACR Lac 0.65 319 i Pg Pg 11 10 30.8 -1.7
LACR eSg Sg 11 10 40.5 -0.5
LACR Lac 0.65 319⇓i PG Pg 11 10 30.8 -1.7
LACR eS Sg 11 10 40.5 -0.5
BTNK Botanikuri 0.66 185 P Pb 11 10 32.8 +0.3
BTNK S Sn 11 10 43.5 -2.5
BTNK Botanikuri 0.66 185 PG Pb 11 10 32.8 +0.3
BTNK S Sn 11 10 43.4 -2.5
KMGR Komgaron 0.72 359 i Pg Pg 11 10 33.4 -0.3
KMGR eSg Sb 11 10 45.1 +0.4
KMGR Komgaron 0.72 359⇓i PG Pg 11 10 33.4 -0.3
KMGR eS Sb 11 10 45.1 +0.4
VLKR Vladikavkaz 0.72 348 ePg Pb 11 10 33.6 -1.1
VLKR eSg Sb 11 10 44.6 -0.1
VLKR Vladikavkaz 0.72 348 ePG Pb 11 10 33.6 -1.1
VLKR eS Sb 11 10 44.7 -0.1
ARNR Ardon 0.95 333 ePg Pn 11 10 39.3 -0.2
ARNR eSg Sn 11 10 52.8 -0.3
ARNR Ardon 0.95 333 ePG Pn 11 10 39.3 -0.2
ARNR eS Sn 11 10 52.8 -0.3
KORR Kora 0.96 322 ePg Pb 11 10 37.9 -0.8
KORR eSg Sn 11 10 52.6 -0.8
KORR Kora 0.96 322 ePG Pb 11 10 37.9 -0.8
KORR eS Sn 11 10 52.6 -0.8
TRLG Trialeti 0.99 216 P Pb 11 10 38.7 -0.5
TRLG S Sn 11 10 53.0 -1.2
TRLG Trialeti 0.99 216 PG Pb 11 10 38.5 -0.8
KZRT Kazreti 1.02 201 P Pb 11 10 38.7 -1.0
KZRT S Sg 11 10 53.5 +0.9
KZRT Kazreti 1.02 201 i P Pb 11 10 38.6 -1.1
KZRT i S Sg 11 10 53.2 +0.6
KZRT Kazreti 1.02 201 PG Pb 11 10 38.7 -1.0
KZRT S Sg 11 10 53.5 +0.9
BTLR Botlikh 1.05 71 ePg Pb 11 10 38.1 -2.1
BTLR eSg Sb 11 10 51.9 -2.2
BTLR Botlikh 1.05 71⇑i PG Pb 11 10 38.7 -1.5
BTLR eS Sb 11 10 51.8 -2.2
BTLR pmax pmax
comp=Z,79nm,0.8s
BTKR Batakoyurt 1.06 347 i Pg Pn 11 10 40.7 -0.3
BTKR eSg Sn 11 10 57.5 +1.5
BTKR Batakoyurt 1.06 347⇓i PG Pn 11 10 40.7 -0.3
BTKR eS Sn 11 10 57.5 +1.5
ONI Oni 1.08 284 P Pb 11 10 39.9 -1.1
ONI S Sb 11 10 55.0 -0.3
ONI Oni 1.08 284 PG Pb 11 10 39.8 -1.1
ONI S Sb 11 10 54.9 -0.3
GROC Groznyy 1.10 38 ePg Pb 11 10 40.5 -0.5
GROC eSg Sg 11 10 56.6 +1.4
GROC Groznyy 1.10 38 ePG Pb 11 10 40.0 -1.0
GROC e 11 10 54.7
GROC pmax pmax
comp=Z,185nm,0.3s
GROC smax smax
comp=E,702nm,0.5s
GROC smax smax
comp=E,645nm,0.6s
GROC smax smax
comp=N,545nm,0.5s

DIGR Digorskoe uzhe 1.11 301 ePg Pb 11 10 40.4 -1.0
DIGR eSg Sn 11 10 56.6 -0.7
DIGR Digorskoe uzhe 1.11 301 ePG Pb 11 10 40.4 -1.0
DIGR eS Sn 11 10 56.7 -0.7
LGD Lagodekhi 1.13 116 P Pb 11 10 40.7 -0.9
LGD S Sg 11 10 57.1 +0.7
LGD Lagodekhi 1.13 116 PG Pb 11 10 40.7 -0.9
LGD S Sg 11 10 57.0 +0.7
STDR Stavd-Durt 1.19 330 ePg Pb 11 10 42.8 +0.1
STDR eSg Sg 11 11 01.4 +3.2
STDR Stavd-Durt 1.19 330 ePG Pb 11 10 42.8 +0.1
STDR eS Sg 11 11 01.4 +3.2
LSNR Lesken 1.22 321 ePg Pb 11 10 43.3 +0.2
LSNR eSg Sg 11 11 00.4 +1.4
LSNR Lesken 1.22 321 ePG Pb 11 10 43.3 +0.2
LSNR eS Sg 11 11 00.4 +1.4
DDFL Dedoflistskaro 1.28 134 P Pg 11 10 45.1 +0.6
DDFL S Sg 11 11 06.9 +5.7
DDFL Dedoflistskaro 1.28 134 i P Pg 11 10 45.1 +0.6
DDFL i S Sg 11 11 07.2 +6.0
DDFL Dedoflistskaro 1.28 134 PG Pg 11 10 45.1 +0.6
DDFL S Sg 11 11 06.9 +5.7
XNZR Khunzakh 1.37 81 ePg Pn 11 10 44.6 -0.7
XNZR eSg Sn 11 11 01.4 -2.3
XNZR Khunzakh 1.37 81 ePG Pn 11 10 44.6 -0.7
XNZR eS Sn 11 11 01.4 -2.3
TRKR Terskaya 1.39 356 ePg Pb 11 10 46.0 0.0
TRKR eSg Sg 11 11 05.3 +0.8
TRKR Terskaya 1.39 356 ePG Pb 11 10 46.0 0.0
TRKR eS Sg 11 11 05.3 +0.8
AKH Akhalkalaki 1.39 229 P Pn 11 10 45.0 -0.6
AKH S Sb 11 11 04.6 +0.5
AKH Akhalkalaki 1.39 229 PN Pn 11 10 45.2 -0.5
AKH SN Sg 11 11 04.7 +0.1
AKH Akhalkalaki 1.39 229 PG Pn 11 10 45.0 -0.6
AKH S Sb 11 11 04.5 +0.5
TKB Tkibuli 1.40 271 P Pn 11 10 45.4 -0.2
TKB S Sb 11 11 04.8 +0.6
TKB Tkibuli 1.40 271 PG Pn 11 10 45.4 -0.2
TKB S Sb 11 11 04.8 +0.6
BGD Bogdanovka 1.44 222 P Pn 11 10 46.2 -0.2
BGD S Sg 11 11 06.4 +0.2
BGD Bogdanovka 1.44 222 PG Pn 11 10 46.1 -0.2
BGD S Sg 11 11 06.3 +0.2
UNCR Uncukul 1.47 75 ePg Pn 11 10 46.0 -0.6
comp=N,41nm,0.3s
UNCR eSg Sn 11 11 04.5 -1.4
comp=N,1μm,0.0s
UNCR Uncukul 1.47 75 ePG Pn 11 10 46.0 -0.6
UNCR eS Sn 11 11 04.5 -1.4
UNCR pmax pmax
comp=Z,41nm,0.3s
PRTR Priterechnaya 1.48 343 ePg Pb 11 10 46.9 -0.6
PRTR eSg Sg 11 11 08.8 +1.4
PRTR Priterechnaya 1.48 343 ePG Pb 11 10 46.9 -0.6
PRTR eS Sg 11 11 08.8 +1.4
DLMR Dylym 1.48 60 ePg Pn 11 10 46.0 -0.8
comp=Z,107nm,0.2s
DLMR eSg Sn 11 11 05.0 -1.3
comp=Z,493nm,0.5s
DLMR Dylym 1.48 60 ePG Pn 11 10 46.0 -0.8
DLMR eS Sn 11 11 05.0 -1.3
DLMR pmax pmax
comp=Z,107nm,0.2s
NCK Nalchik 1.49 321 ePg Pb 11 10 47.6 -0.2
NCK eSg Sg 11 11 09.1 +1.3
NCK Nalchik 1.49 321 ePG Pb 11 10 47.6 -0.2
NCK eS Sg 11 11 09.1 +1.3
GNBR Gunib 1.55 87 ePg Pn 11 10 47.5 -0.2
GNBR i Pg Pg 11 10 50.6 +1.1
comp=Z,77nm,0.7s
GNBR eSg Sg 11 11 10.0 +0.4
GNBR eSg Sb 11 11 11.6 +3.1
comp=Z,169nm,0.4s
GNBR Gunib 1.55 87 ePG Pn 11 10 47.5 -0.2
GNBR eS Sg 11 11 10.0 +0.4
KRNR Karanay 1.58 71 ePg Pn 11 10 48.0 -0.1
comp=Z,29nm,0.3s
KRNR i Sg Sn 11 11 07.5 -1.2
comp=Z,71nm,0.4s
KRNR Karanay 1.58 71 ePG Pn 11 10 48.0 -0.1
KRNR pmax pmax
comp=Z,29nm,0.3s
ARKR Arakani 1.59 80 ePg Pb 11 10 48.5 -0.9
comp=Z,80nm,0.2s
ARKR eSg Sb 11 11 09.0 -0.6
comp=Z,162nm,0.3s
ARKR Arakani 1.59 80 ePG Pb 11 10 48.5 -0.9
ARKR eS Sb 11 11 09.0 -0.6
ARKR pmax pmax
comp=Z,80nm,0.2s
DBC Dubki 1.59 64 i Pg Pn 11 10 47.7 -0.6
comp=Z,55nm,0.3s
DBC eSg Sb 11 11 09.1 -0.7
comp=Z,114nm,0.5s
DBC Dubki 1.59 64⇓i PG Pn 11 10 47.7 -0.6
DBC eS Sb 11 11 09.1 -0.7
DBC pmax pmax
comp=Z,55nm,0.3s
BUJR Buynaksk 1.72 73 ePg Pg 11 10 53.6 +0.8
BUJR eSg Sg 11 11 16.9 +1.9
BUJR Buynaksk 1.72 73 ePN Pg 11 10 53.6 +0.8
BUJR eS Sg 11 11 16.9 +1.9
EPOS Posof 1.81 243 i P Pb 11 10 52.8 -0.5
EPOS i S Sg 11 11 17.9 -0.1
EPOS IAML 11 11 21.0
comp=E,46nm,0.7s
NEY Neytrino 1.83 301⇓i PN Pb 11 10 53.9 +0.3
EAK Akyaka 1.91 210 i P Pb 11 10 53.6 -1.4
EAK i S Sb 11 11 20.0 +1.0
EAK IAML 11 11 31.0
comp=E,105nm,0.6s
GANJ Ganja 2.01 147 PN Pn 11 10 53.7 -0.3
KBZ Khabaz 2.01 314 dePN Pn 11 10 54.5 +0.5
MAK Makhachkala 2.04 71⇓i PN Pb 11 10 55.1 -1.9
MAK e 11 11 25.8
MAK pmax pmax
comp=Z,109nm,0.3s
MAK smax smax
comp=N,240nm,0.4s
MAK smax smax
comp=N,258nm,0.4s
SEKA Sheki 2.07 122 PN Pn 11 10 55.3 +0.4
SHA1 Shidzhatmaz 2.15 311 ePg Pb 11 10 57.7 -1.4
SHA1 eSg Sb 11 11 27.3 +1.4
SHA1 Shidzhatmaz 2.15 311 ePN Pb 11 10 57.7 -1.4
SHA1 eS Sb 11 11 27.3 +1.4
PYA1 Pyatigorsk 2.16 323⇓ePN Pn 11 10 56.4 +0.3
PYA1 pmax pmax
comp=Z,1.0nm,0.1s
GNI Garni 2.19 183 PN Pn 11 10 58.6 -1.2
GNI SN Sb 11 11 27.3 +0.2
GNI Garni 2.19 183 d i PN Pb 11 10 58.7 -1.1
DIGO Kars 2.23 211 eP Pn 11 10 58.0 +0.7
DIGO i S Sg 11 11 30.6 -0.9
DIGO IAML 11 11 36.0
comp=E,47nm,0.3s
AKT Akhty 2.29 111 ePn Pb 11 11 00.0 -1.5
AKT eSn Sb 11 11 29.5 -0.5
AKT Akhty 2.29 111 ePN Pb 11 10 59.9 -1.6
AKT e 11 11 03.0
AKT e 11 11 04.7
AKT eS Sg 11 11 31.6 -2.0
AKT e 11 11 36.9
AKT pmax pmax
comp=Z,31nm,0.4s
AKT smax smax
comp=N,68nm,0.4s
AKT smax smax
comp=E,62nm,0.4s
AKT smax smax
comp=N,68nm,0.5s
TASB TASBURUN-IGDIR 2.40 192 PN Pb 11 11 01.3 -2.0
BATM Batumi 2.49 254 PN Pb 11 11 01.2 +0.6
IGDI IGDIR 2.54 194 i P Pn 11 11 01.9 +0.6
IGDI i S Sn 11 11 39.6 -1.8
DAGI Agillar 2.55 241 i P Pn 11 11 03.2 +1.6
DAGI i S Sg 11 11 42.9 +1.1
DAGI IAML 11 11 51.0
comp=E,15nm,0.5s
BCA Borcka 2.59 251 PN Pn 11 11 03.0 +1.0
GOF Gofitskoye 3.03 335⇑ePN Pb 11 11 15.3 +1.4
GOF eS Sg 11 11 58.2 +1.1
GOF pmax pmax
comp=Z,13nm,0.4s
GOF smax smax
comp=N,101nm,0.6s
GOF smax smax
comp=E,44nm,0.4s
AGRB Hanur-Agry 3.11 208 PN Pn 11 11 10.9 +1.6
ANN Anapa 5.94 297 eP Pn 11 11 48.6 +0.6
ANN eS Sn 11 12 58.8 +2.6
ANN pmax pmax
comp=Z,34nm,1.0s
OBN Obninsk 13.90 340 eP Pn 11 13 37.3 +0.5
OBN pmax pmax
comp=Z,13nm,0.2s

IDC 21 11:15:02.9±3.2, 15.42S×173.40W, h0km, mb3.7/4, mb1 4.1/5, mb1mx3.7/38, mbtmp3.7/5, ML4.2/1, MS2.8/2, Ms1 2.8/2, ms1mx2.5/32, Error ellipse: s-maj=184.7km s-min=21.4km az=147.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.18	47	Pn	Pn	11 15 39.6	-0.8
	68nm,0.3s,baz=187,slow=1.7,SNR=106						
AFI				Sn	Sn	11 15 59.5	-8.6
	206nm,0.3s,baz=207,slow=16,SNR=20						
AFI				LR	LR	11 16 15.8	
	comp=Z,68nm,20.4s,baz=268,slow=34						
H11S2	WAKE ISLAND Hy	38.98	329	T	T	12 03 41.8	
	baz=149,slow=76,SNR=4.3						
H11S3	WAKE ISLAND Hy	38.99	329	T	T	12 03 38.0	
	baz=149,slow=76,SNR=5.0						
H11S1	WAKE ISLAND Hy	39.00	329	T	T	12 03 17.3	
	baz=149,slow=76,SNR=5.1						
H11N3	WAKE ISLAND Hy	39.93	330	T	T	12 04 53.7	
	baz=152						
H11N1	WAKE ISLAND Hy	39.93	330	T	T	12 04 56.4	
	baz=152,slow=74						
H11N2	WAKE ISLAND Hy	39.94	330	T	T	12 04 49.0	
	baz=152,slow=74						
WRA	Warramunga Arr	49.84	257	P	P	11 23 57.7	-0.5
	0.2nm,0.3s,baz=90,slow=7.0,SNR=7.4						
ASAR	Alice Springs	50.10	252	P	P	11 24 00.1	-0.1
	1.3nm,0.7s,baz=88,slow=7.9,SNR=20						
NVAR	Mina Array Bea	74.35	42	P	P	11 26 42.9	+0.1
	0.4nm,0.7s,baz=230,slow=8.1,SNR=3.5						
ILAR	Eielson Array	82.47	11	P	P	11 27 27.4	+0.6
	0.3nm,0.7s,baz=226,slow=6.2,SNR=4.5						
INK	Inuvik	88.29	14	LR	LR	11 59 42.2	
	comp=Z,375nm,21.7s,baz=272,slow=30						
YAK	Yakutsk	89.13	337	LR	LR	12 03 23.3	
	comp=Z,18nm,20.3s,baz=62,slow=32						

VAO 21 11:43:22.3±0.4, 12.52N×70.66W, h10km, mb5.2
BJI 21 11:43:22.0±0.0, 12.40N×70.70W, h10km, Ms5.2/4, Ms7 4.9/5
MOS 21 11:43:24.6±0.9, 12.40N×70.87W, h30km, mb5.3/46, Error ellipse: s-maj=7.7km s-min=5.5km az=82.6
NEIC 21 11:43:26.5±1.7, 12.46N±0.05×70.72W±0.06, h33km±3km, mb5.1/428, Mwr4.6(CAR), Error ellipse: s-maj=8.2km s-min=6.9km az=88.0
CAR 21 11:43:27.8±2.6, 12.60N±0.05×70.70W±0.06, h23km±3km, Error ellipse: s-maj=7.5km s-min=6.7km az=79.0
GCMT 21 11:43:28.5±0.2, 12.48N±0.01×70.75W±0.01, h37km, MW5.1/106, Moment Tensor Solution. s94,c133; s106,c157; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-5.29±.15; Mθθ5.26±.10; Mφφ0.03±.11; Mrθ-2.61±.09; Mθφ-0.39±.08; Mφr0.30±.10; Best double couple: Mo5.90600×10^16 NP1:φs273.00000°, δ32.00000°, λ-92.00000°. NP2:φs95.00000°, δ58.00000°, λ-89.00000°. Principal axes: T 5.9040, Plg13.0000°, Azm184.0000°; N 0.0100, Plg1.0000°, Azm275.0000°; P -5.9070, Plg77.0000°, Azm9.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
IDC 21 11:43:29.4±1.6, 12.39N×70.78W, h60km±15km, mb4.7/31, mb1 4.9/36, mb1mx4.8/39, mbtmp5.0/36, MS4.5/33, Ms1 4.5/33, ms1mx4.4/38 Error ellipse: s-maj=11.0km s-min=7.6km az=76.0
RSNC 21 11:43:29.2±0.5, 12.50N×70.83W, h32km±14km, ML5.2, Mw5.1
OSPL 21 11:43:34.0±4.8, 13.03N×70.62W, h145km±236km, ML5.3
BGR 21 11:43:37.5±0.0, 13.90N×69.61W, h33km, mb4.8
ISC 21 11:43:25.0±0.5, 12.51N±0.03×70.72W±0.03, h26km±3km, h26km:pP-P, n1088, σ1§79/983, mb5.1/281, MS4.6/34, 61C-20D, Near coast of Venezuela

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
URIC Uribia, Colomb 1.48 237⇑eP Pb 11 43 51.4 -0.4
URIC ePg Pn 11 43 53.4 +3.4
URIC eS Sn 11 44 09.4 +0.8
URIC i 11 44 12.0
comp=Z,15μm,0.7s
URIC Lg Lg 11 44 13.6
DABV Dabajuro 1.57 177⇑i P Pb 11 43 54.5 +1.0
DABV eS Sb 11 44 14.6 +1.6
SDV Santo Domingo 3.60 179 P Pn 11 44 22.5 +3.1
comp=Z,539nm,0.3s,baz=0.6,slow=7.9,SNR=1269
SDV S Sn 11 45 02.1 +1.0
comp=Z,864nm,0.3s,baz=310,slow=22,SNR=9.6
SDV LR LR 11 46 19.9
comp=Z,15μm,19.5s,baz=4.5,slow=49
SDV Santo Domingo 3.60 179⇑i P Pn 11 44 22.5 +3.1
SDV eS Sn 11 45 03.8 +2.6
SDV i 11 45 10.5
comp=Z,2μm,0.5s
SDV Santo Domingo 3.60 179 Pn 11 44 22.2 +2.8
SDV Sn Sn 11 44 57.8 -3.4
CODC Agustn Codazz 3.70 227⇑i P Pn 11 44 21.8 +1.3
CODC eS Sn 11 45 03.4 0.0
CODC i 11 45 24.5
comp=Z,3μm,0.6s
SOCV Socops 4.20 182⇑i P Pn 11 44 30.5 +3.1
SOCV eS Sn 11 45 17.8 +2.1
ARGC Ariguani, Magd 4.35 233 eP Pn 11 44 30.8 +1.3
ARGC eS Sn 11 45 19.3 -0.1
ARGC i 11 45 40.5
comp=Z,1μm,0.4s
BAUV El Baul 4.41 143 eP Pn 11 44 33.6 +3.2
BAUV El Baul 4.41 143 e Sn 11 45 18.6 -2.3
SMLC San Martn de 4.94 222 eP Pn 11 44 38.5 +0.8
SMLC eS Sn 11 45 33.8 -0.2
SMLC i 11 45 44.4
comp=Z,1μm,0.6s
OCAC Ocana 4.95 211⇑i P Pn 11 44 39.6 +1.6
OCAC eS Sn 11 45 33.1 -1.4
OCAC i 11 45 42.5
comp=Z,8μm,0.4s
SJCC San Jacinto, C 5.09 240 eP Pn 11 44 41.1 +1.4
SJCC eS Sn 11 45 35.9 -1.8
SJCC i 11 45 57.6
comp=Z,1μm,0.7s
PAMC Pamplona, Colo 5.49 201 eP Pn 11 44 47.9 +2.2
PAMC eS Sn 11 45 48.8 +0.5
PAMC i 11 45 53.4
comp=Z,2μm,0.4s
LOBA1 Barahona 5.57 356 eS Sn 11 45 45.5 -4.1
LOPE2 Hotel El Peder 5.58 350 eS Sn 11 45 45.9 -3.9
BANI BANI 5.86 3 Pn 11 44 51.9 +1.4
SDD Santo Domingo 5.97 7 i P Pn 11 44 54.3 +2.5
SDD eS Sn 11 45 54.7 -4.7
SDD IAML 11 46 16.5
comp=Z,343nm,0.9s
SDD Santo Domingo 5.97 7 Pn 11 44 52.6 +0.8
SDD Sn Sn 11 45 58.8 -0.6
LONE1 Neyba 5.98 354 eS Sn 11 45 58.6 -1.1
TAMC Tame, Arauca 6.12 190⇑i P Pn 11 44 56.2 +2.2
TAMC eS Sn 11 46 04.1 +0.9
LGNH Logne 6.24 343 i P Pn 11 44 58.4 +2.9
LGNH eS Sn 11 46 02.4 -3.8
LGNH Logne 6.24 343 Pn 11 44 57.8 +2.2
LGNH Sn Sn 11 46 04.3 -1.8
BARC Barichara 6.36 203⇓eP Pn 11 44 59.6 +2.3
BARC eS Sn 11 46 08.0 -1.3
DR12 Loma Pena Alta 6.38 11 Pn 11 44 57.8 +0.3
PCDR Punta Cana, DR 6.38 20 i P Pn 11 44 58.9 +1.4
PCDR eS Sn 11 46 04.0 -5.6
PCDR IAML 11 46 16.0
comp=Z,998nm,0.8s
PCRV Puerto La Cruz 6.40 111 P Pn 11 44 58.6 +0.9
comp=Z,15nm,0.3s,baz=317,slow=3.9,SNR=52
PCRV S Sn 11 46 11.7 +1.7
comp=Z,29nm,0.3s,baz=134,slow=21,SNR=3.7
BON1 Bonao 6.41 3 i P Pn 11 44 59.8 +1.9
ZARC Zaragoza, Cauc 6.44 220 eP Pn 11 44 59.1 +0.8
ZARC eS Sn 11 46 09.7 -1.3
ZARC i 11 46 17.2
comp=Z,1μm,0.5s
PLCV Puerto La Cruz 6.45 111 Pn 11 44 58.6 +0.2
PLCV Sn 11 46 11.7 +0.5
SDDR Presa de Saban 6.46 355 i P Pn 11 45 02.1 +3.4
SDDR eS Sn 11 46 10.3 -1.4
SDDR IAML 11 46 16.4
comp=Z,1μm,0.5s
SDDR Presa de Saban 6.46 355 Pn 11 45 01.2 +2.6
SDDR Sn Sn 11 46 10.9 -0.8
LCBC Los crdobas, 6.63 237 eP Pn 11 45 04.4 +3.5
LCBC eS Sn 11 46 13.9 -1.7
LCBC i 11 46 27.9
comp=Z,654nm,0.5s
MPR Mayaguez 6.64 31 i P Pn 11 45 01.0 0.0
MPR eS Sn 11 46 11.7 -4.2
MPR IAML 11 46 13.3
comp=Z,506nm,0.8s
UREC San Jos de Ur 6.69 226 eP Pn 11 45 03.4 +1.7
AGPR Aguadilla, PR 6.87 30 i P Pn 11 45 04.1 -0.1
AGPR eS Sn 11 46 17.1 -4.6
AGPR IAML 11 46 22.9
comp=Z,652nm,0.2s
SC01 Santiago de lo 6.88 360 i P Pn 11 45 07.8 +3.5
SC01 eS Sn 11 46 21.9 0.0
SC01 IAML 11 46 39.5
comp=Z,1μm,0.7s
SC01 Santiago de lo 6.88 360 Pn 11 45 07.3 +2.9
RUSC La Rusia 6.97 200⇑eP Pn 11 45 08.0 +2.0
RUSC eS Sn 11 46 24.4 -0.4
RUSC i 11 46 32.7
comp=Z,374nm,0.6s
PTBC PUERTO BERRIO, 6.98 212 eP Pn 11 45 06.1 +0.3
PTBC eS Sn 11 46 24.2 -0.1
PTBC i 11 46 33.6
comp=Z,1μm,0.6s
SJG San Juan 7.11 38 P Pn 11 45 05.4 -2.0
comp=Z,20nm,0.3s,baz=218,slow=13,SNR=24
SJG S Sn 11 46 20.3 -7.1
comp=Z,306nm,0.3s,baz=236,slow=10,SNR=21
SJG LR LR 11 47 55.7
comp=Z,5μm,20.5s,baz=280,slow=37
SJG San Juan 7.11 38 eP Pn 11 45 05.3 -2.1
SJG eS Sn 11 46 21.4 -6.0
SJG San Juan 7.11 38 Pn 11 45 05.6 -1.8
SJG San Juan 7.11 38 P Pn 11 45 05.6 -1.8
SPBC San Pablo de B 7.57 206⇑eP Pn 11 45 15.3 +1.4
SPBC eS Sn 11 46 37.1 -1.9
SPBC i 11 46 46.8
comp=Z,773nm,0.4s
DBBC Dabeiba 7.68 225 eP Pn 11 45 16.8 +1.3
YHJ Yallahs 7.73 315⇑i P Pn 11 45 19.1 +3.1
YHJ i S Sn 11 46 39.2 -3.7
CMJ Castle Mountai 7.81 316⇑i P Pn 11 45 19.1 +1.9
HELC Santa Helena 7.87 218 eP Pn 11 45 20.6 +2.4
HELC eS Sn 11 46 47.6 +0.9
HELC i 11 46 56.0
comp=Z,695nm,0.5s
ORIV Oritupano 7.95 115 eP Pn 11 45 22.3 +3.3
ORIV Oritupano 7.95 115 e 11 46 47.5
HOJ Hope 7.98 314⇓i P Pn 11 45 22.2 +2.7
GWJ Greenwich 8.02 314⇑i P Pn 11 45 22.1 +2.0
NORC Norcasia 8.02 211 eP Pn 11 45 20.8 +0.7
NORC eS Sn 11 46 46.9 -3.2
NORC i 11 46 55.0
comp=Z,428nm,0.5s
STH Stony Hill 8.07 314⇑i P Pn 11 45 23.0 +2.3
PCJ Portland Cotta 8.11 311⇓i P Pn 11 45 22.3 +1.1
PTGC Puerto Gaitan, 8.37 190⇑i P Pn 11 45 25.4 +0.6
PTGC eS Sn 11 46 54.8 -3.7
PTGC i 11 47 04.5
comp=Z,636nm,0.4s
CHIC Chingaza 8.37 201⇑i P Pn 11 45 26.9 +1.7
CHIC eS Sn 11 46 57.6 -1.6
CHIC i 11 47 29.5
comp=Z,216nm,0.5s
ROSC El Rosal 8.41 205 P Pn 11 45 28.4 +2.8
comp=Z,51nm,0.3s,baz=64,slow=7.7,SNR=81
ROSC S Sn 11 47 00.3 +0.3
comp=Z,79nm,0.3s,baz=11,slow=18,SNR=2.6
ROSC LR LR 11 49 27.0
comp=Z,13μm,19.6s,baz=20,slow=43
ROSC El Rosal 8.41 205⇑eP Pn 11 45 28.6 +3.0
ROSC eS Sn 11 46 59.6 -0.4
ROSC i 11 47 15.8
comp=Z,515nm,0.6s
ROSC El Rosal 8.41 205 Pn 11 45 28.0 +2.4
ROSC Sn Sn 11 47 00.7 +0.7
CBOC Ciudad Bolivar 8.41 219⇓eP Pn 11 45 28.0 +2.4
CBOC eS Sn 11 47 00.9 +1.0
GTBY Guantanamo Bay 8.50 331 i P Pn 11 45 27.6 +1.0
GTBY eS Sn 11 46 55.8 -5.8
GTBY IAML 11 47 04.1
comp=Z,196nm,0.6s
GTBY Guantanamo Bay 8.50 331 Pn 11 45 27.6 +1.0
GUIV Guiria 8.53 102 eP Pn 11 45 33.4 +6.4
GUY2C Guyana, Caldas 8.57 213⇑i P Pn 11 45 29.9 +2.0
GUY2C eS Sn 11 47 03.9 -0.1
GUY2C i 11 47 25.8
comp=Z,542nm,0.6s
CVER Cruz Verde, Cu 8.60 203 eP Pn 11 45 31.8 +3.5
BBJ Bamboo Saint A 8.60 314⇓i P Pn 11 45 30.0 +2.0
MCJ Malvern 8.62 310⇓i P Pn 11 45 29.0 +0.8
MCJ ⇑i S Sn 11 46 57.9 -6.8
MTDJ Mount Denham 8.69 312 Pn 11 45 30.8 +1.5
PTAC Punta Ardita, 8.78 233 eP Pn 11 45 32.5 +2.1
PTAC eS Sn 11 47 00.2 -8.5
SABA Saba 8.83 54 eP Pn 11 45 35.9 +4.8
SABA Saba 8.83 54 Pn Pn 11 45 31.3 +0.2
GRGR Grenville 8.87 91 eP Pn 11 45 30.8 -0.8
GRGR Grenville 8.87 91 Pn Pn 11 45 30.5 -1.1
GRHS Sauteurs 8.87 91 eP Pn 11 45 22.9 -8.7
GRSS Sisters 8.90 90 eP Pn 11 45 32.4 +0.4
SOLC Bahia Solano 9.08 227 eP Pn 11 45 36.6 +2.0
SOLC eS Sn 11 47 09.3 -6.7
SOLC i 11 47 23.7
comp=Z,113nm,0.4s
SKI Saint Kitts 9.08 57 eP Pn 11 45 43.3 +8.7
SMRT St. Maarten 9.21 52 Pn Pn 11 45 37.2 +0.9
MLYT Lee's Yard 9.26 62 eP Pn 11 45 35.2 -1.7
SVB Belmont 9.26 84 eP Pn 11 45 34.4 -2.7
SVB Belmont 9.26 84 Pn 11 45 34.7 -2.4
SVV Soufriere Volc 9.30 84 eP Pn 11 45 36.2 -1.3
TRN Trinidad (W) 9.31 100 eP Pn 11 45 43.5 +5.8
SSV Crater Summit 9.32 84 eP Pn 11 45 34.6 -3.4
PLMC San Jos del P 9.34 217 eP Pn 11 45 38.5 +0.4
PLMC eS Sn 11 47 20.5 -2.0
TPP Pointe-a-Pierr 9.34 103 eP Pn 11 45 47.2 +9.1
SVCV St. Vincent, C 9.37 84 eP Pn 11 45 35.1 -3.4
MDPO Dominica; Chan 9.50 70 eP Pn 11 45 46.1 +5.8
MDPO Dominica; Chan 9.50 70 eS Sn 11 47 21.9 -4.3
BCIP Isla Barro Col 9.55 251 eP Pn 11 45 39.2 -1.8
BCIP Isla Barro Col 9.55 251 Pn 11 45 39.6 -1.4
BCIP Isla Barro Col 9.55 251 P Pn 11 45 39.6 -1.4
FDF Fort de France 9.56 76 eP Pn 11 45 36.6 -4.6
FDF Fort de France 9.56 76 eS Sn 11 47 24.1 -3.9
FDF Fort de France 9.56 76 Pn Pn 11 45 39.0 -2.2
FDF Fort de France 9.56 76 P Pn 11 45 39.0 -2.2
MCLT Moule a Chique 9.60 82 eP Pn 11 45 30.4 -11
ORTC Ortega, Tolima 9.64 208⇑i P Pn 11 45 43.5 +1.2
ORTC eS Sn 11 47 28.1 -1.8
ORTC i 11 47 44.4
comp=Z,226nm,0.4s
PRAC Prado 9.66 206⇑eP Pn 11 45 43.4 +0.9
PRAC eS Sn 11 47 29.3 -1.0
PRAC i 11 47 38.3
comp=Z,302nm,0.5s
PIZC Pizarro, Choco 9.96 222 eP Pn 11 45 49.5 +2.9
PIZC eS Sn 11 47 29.7 -7.9
ANWB Willy Bob 10.04 58 eP Pn 11 45 50.2 +2.5
ANWB Willy Bob 10.04 58 eS Sn 11 47 35.3 -4.2
TOSP Speyside 10.04 96 eP Pn 11 45 46.5 -1.2

GUVC San Jose del G 10.07 191 eP Pn 11 45 48.8 +0.6
GUVC eS Sn 11 47 36.5 -4.0
YOTC Yotoco, Valle 10.13 214⇑eP Pn 11 45 49.5 +0.4
YOTC eS Sn 11 47 40.7 -1.3
YOTC i 11 47 46.9
comp=Z,49nm,0.6s
MACC Macarena, Meta 10.75 197 eP Pn 11 45 56.9 -0.6
MACC eS Sn 11 47 48.5 -8.6
CBCY The Bluff, Cay 11.27 311 Pn 11 46 03.9 -0.7
FLOC Florencia 11.90 205⇑eP Pn 11 46 13.1 -0.2
FLOC eS Sn 11 48 17.6 -7.8
FLOC i 11 49 00.9
comp=Z,102nm,0.7s
FSCY Frank Sound, G 12.13 305 Pn 11 46 14.7 -1.5
BBAC Balboa, Cauca 12.26 212 eP Pn 11 46 18.8 +0.5
CRUC La Cruz 12.50 210 eP Pn 11 46 23.5 +1.8
PTLC Puerto Leguiza 12.90 199 eP Pn 11 46 29.7 +2.8
PTLC eS Sn 11 49 00.8 +11
JTS Las Juntas de 14.13 262 P Pn 11 46 44.6 +0.9
comp=Z,0.7nm,0.3s,baz=149,slow=16,SNR=3.8
JTS S Sn 11 49 09.6 -10
comp=Z,1.1nm,0.3s,baz=41,slow=20,SNR=2.6
JTS LR LR 11 53 51.3
comp=Z,370nm,19.3s,baz=158,slow=44
JTS Las Juntas de 14.13 262⇑eP Pn 11 46 46.7 +3.0
JTS pmax pmax
comp=Z,14nm,1.3s
OTAV Otavalo 14.40 213 eP Pn 11 46 47.8 0.0
OTAV Otavalo 14.40 213 eP Pn 11 46 47.6 -0.2
OTAV Otavalo 14.40 213 Pn 11 46 47.7 0.0
OTAV Otavalo 14.40 213 P Pn 11 46 47.7 0.0
ESTN Estel 15.28 274 Pn 11 46 58.4 -0.9
ESTN IAmb IAmb 11 47 09.5
comp=Z,56nm,0.5s
TGUH Tegucigalpa,Un 16.19 277 Pn Pn 11 47 12.4 +1.3
DWPF Disney Wildern 18.47 329 P Pn 11 47 40.1 +0.8
baz=145
TEIG Tepich 18.50 297 P Pn 11 47 40.9 +1.2
comp=Z,3.3nm,0.3s,baz=133,slow=2.5,SNR=21
TEIG LR LR 11 54 13.8
comp=Z,749nm,21.8s,baz=319,slow=35
TEIG Tepich 18.50 297 P Pn 11 47 39.8 +0.1
MDP Montagnes des 19.31 111 P Pn 11 47 49.5 -0.1
comp=Z,0.8nm,0.3s,baz=84,slow=9.2,SNR=4.9
MDP S Sn 11 51 21.5 -4.0
comp=Z,0.6nm,0.3s,baz=42,slow=11,SNR=4.3
MDP LR LR 11 56 05.0
comp=Z,1μm,18.4s,baz=296,slow=39
APG El Apazote 19.34 280 P Pn 11 47 50.2 +0.1
comp=Z,0.8nm,0.3s,baz=52,slow=5.8,SNR=12
APG LR LR 11 55 41.5
comp=Z,1μm,20.6s,baz=99,slow=38
BBSR BB Station 20.53 15 P Pn 11 48 03.2 -0.6
456A Hilliard 20.93 332 IAmb IAmb 11 48 09.1
comp=Z,91nm,0.8s
ATAH Atahualpa 20.95 202 P P 11 48 07.6 +1.0
comp=Z,84nm,0.6s,baz=22,slow=5.1,SNR=26
ATAH S S 11 51 56.8 -2.4
comp=Z,7.7nm,0.7s,baz=108,slow=19,SNR=3.2
ATAH LR LR 11 57 59.9
comp=Z,4μm,21.5s,baz=19,slow=42
CCIG Comitan 21.08 283 P P 11 48 08.8 +1.0
553A Crawfordville 21.71 326 P P 11 48 16.3 +2.1
158A Hollywood 21.93 338 P P 11 48 17.7 +1.1
baz=155
Z59A Georgetown, SC 22.08 341 P P 11 48 19.0 +0.8
baz=157
157A Early Branch 22.18 337 P P 11 48 20.4 +1.1
baz=153
NHSC New Hope 22.26 339 P P 11 48 21.8 +1.7
baz=155
TIGA Tifton 22.27 330 IAmb IAmb 11 48 36.9
comp=Z,92nm,1.1s
TIGA Tifton 22.27 330 P P 11 48 22.2 +2.0
baz=145
Z58A St. Stephen 22.34 340 P P 11 48 22.2 +1.2
baz=156
Y60A Bolivia 22.47 344 P P 11 48 23.5 +1.2
baz=161
SAML Samuel 22.59 160 P P 11 48 22.8 -1.0
SAML Samuel 22.59 160 P P 11 48 22.8 -1.0
SAML pmax pmax
comp=Z,125nm,0.7s
Z57A Bowman 22.62 338 P P 11 48 25.2 +1.2
baz=154,SNR=10
Y59A Loris 22.64 342 P P 11 48 24.8 +0.6
baz=159,SNR=14
Y58A Scranton 22.81 341 P P 11 48 26.6 +0.6
baz=157,SNR=5.4
Z56A Williston 22.90 337 P P 11 48 27.3 +0.4
baz=152
X60A Albert Glenn T 22.94 344 P P 11 48 28.3 +1.0
baz=162
154A Montrose 23.01 332 IAmb IAmb 11 48 32.7
comp=Z,71nm,0.8s
X59A McDuffie Farm, 23.11 343 P P 11 48 29.9 +0.9
baz=160
Y57A Sumter 23.16 339 P P 11 48 30.5 +1.0
baz=156,SNR=7.1
W61A Ground Anchor 23.28 347 P P 11 48 31.5 +0.8
baz=164
X58A Rowland 23.31 342 IAmb IAmb 11 48 34.5
comp=Z,49nm,0.8s
X58A Rowland 23.31 342 P P 11 48 32.2 +1.1
baz=158,SNR=5.2
W60A Pink Hill 23.33 345 P P 11 48 32.2 +1.0
baz=163
PAYG Puerto Ayora 23.42 237 P P 11 48 32.0 -0.4
V62A Hyde County Ai 23.44 349 P P 11 48 33.3 +1.0
baz=167
X57A Johnson Farm, 23.46 340 P P 11 48 33.7 +1.1
baz=157
CNNC Cliffs of the 23.55 345 P P 11 48 34.4 +1.0
baz=162
W59A Clinton 23.62 344 P P 11 48 35.6 +1.4
baz=161
Y55A Saluda 23.63 336 P P 11 48 35.5 +1.3
baz=152,SNR=20
JSC Jenkinsville 23.71 338 P P 11 48 35.8 +0.9
JSC Jenkinsville 23.71 338 P P 11 48 35.8 +0.9
JSC pmax pmax
comp=Z,27nm,1.0s
W58A Raeford 23.71 342 P P 11 48 36.1 +1.1
baz=159,SNR=10
BIRD Birdtown, Kers 23.75 340 P P 11 48 35.8 +0.4
BIRD IAmb IAmb 11 48 38.0
comp=Z,32nm,0.7s
V61A Roper 23.78 348 P P 11 48 36.7 +1.1
baz=166
CMIG Matias Romero 23.80 284 P P 11 48 33.5 -2.5
comp=Z,5.1nm,0.7s,baz=105,slow=8.1,SNR=9.4
CMIG LR LR 11 58 05.2
comp=Z,992nm,21.7s,baz=107,slow=37
X56A White Oak 23.81 339 P P 11 48 37.2 +1.3
baz=154,SNR=10
GOGA Godfrey 23.85 333 IAmb IAmb 11 48 39.6
comp=Z,26nm,0.7s
GOGA Godfrey 23.85 333 P P 11 48 37.8 +1.5
baz=148,SNR=12
V60A Jim Taylor Roa 23.90 347 IAmb IAmb 11 48 39.5
comp=Z,57nm,0.7s
V60A Jim Taylor Roa 23.90 347 P P 11 48 37.9 +1.1
baz=164
BRAL Brewton 23.92 324 P P 11 48 37.2 +0.2
baz=138
X55A Gracelyn & Ava 24.01 337 P P 11 48 39.3 +1.5
baz=153,SNR=19
W57A Gilead 24.06 341 IAmb IAmb 11 48 40.6
comp=Z,27nm,0.6s
W57A Gilead 24.06 341 P P 11 48 39.5 +1.2
baz=157,SNR=7.8
250A Grady 24.08 326 IAmb IAmb 11 48 41.6
comp=Z,51nm,0.8s
V59A Middlesex 24.14 345 P P 11 48 40.0 +1.1
baz=162,SNR=9.1
W56A Indian Trail 24.24 340 P P 11 48 41.2 +1.2
baz=156,SNR=7.6
U61A Possum Corner 24.28 349 P P 11 48 41.4 +1.1
baz=166
X54A Belton 24.37 336 P P 11 48 42.1 +1.0
baz=152,SNR=17
PAULI Pauline 24.39 337 IAmb IAmb 11 48 45.0
comp=Z,53nm,0.9s
V58A Windy Hill, Pi 24.40 343 P P 11 48 42.4 +1.0
baz=160
Y52A Lilburn 24.50 332 IAmb IAmb 11 48 46.4
comp=Z,61nm,0.8s
Y52A Lilburn 24.50 332 P P 11 48 43.5 +1.2
baz=147,SNR=18
KMSC Kings Mountain 24.50 339 IAmb IAmb 11 48 45.8
comp=Z,37nm,0.8s
KMSC Kings Mountain 24.50 339 P P 11 48 43.6 +1.2
baz=154,SNR=9.9
U60A Pendleton 24.56 347 P P 11 48 44.0 +1.2
baz=165,SNR=5.4
U59A Littleton 24.59 346 P P 11 48 43.8 +0.7
baz=163,SNR=6.0
V57A Coltrane Farms 24.68 342 P P 11 48 45.0 +1.1
baz=158,SNR=13
X53A Estanollee 24.71 335 P P 11 48 44.9 +0.7
baz=150,SNR=14
W54A Cherokee Point 24.77 337 P P 11 48 45.2 +0.4
baz=152,SNR=14
U58A Oxford 24.81 345 P P 11 48 45.9 +0.8
baz=162,SNR=15
V56A Mocksville 24.83 341 P P 11 48 46.5 +1.3
baz=157,SNR=22
Z50A Ashland 24.89 329 IAmb IAmb 11 48 49.1
comp=Z,54nm,0.8s
Z50A Ashland 24.89 329 P P 11 48 47.0 +1.0
baz=143,SNR=41
U57A Blanch 25.06 343 P P 11 48 48.6 +1.2
baz=160,SNR=18
NNA Nana 25.08 194 P P 11 48 47.4 -0.3
comp=Z,34nm,0.7s,baz=343,slow=5.8,SNR=19
NNA LR LR 12 00 42.7
comp=Z,2μm,19.6s,baz=346,slow=41
NNA Nana 25.08 194 P P 11 48 47.5 -0.3
NNA IAmb IAmb 11 48 49.7
comp=Z,31nm,0.6s
NNA Nana 25.08 194deP P 11 48 47.7 -0.1
NNA pmax pmax
comp=Z,43nm,0.6s
V55A Taylorsville 25.10 340 IAmb IAmb 11 48 52.9
comp=Z,49nm,0.9s
V55A Taylorsville 25.10 340 P P 11 48 49.4 +1.6
baz=155,SNR=16
T60A Surry 25.12 349 P P 11 48 48.9 +1.0
baz=166
T59A Double "B" Far 25.12 347 IAmb IAmb 11 48 50.5
comp=Z,40nm,0.8s
T59A Double "B" Far 25.12 347 P P 11 48 49.4 +1.5
baz=164,SNR=14
W53A Cullowhee 25.22 336 P P 11 48 51.0 +2.0
baz=151,SNR=19
U56A King 25.29 342 IAmb IAmb 11 48 54.6
comp=Z,30nm,0.9s
U56A King 25.29 342 P P 11 48 50.5 +1.0
baz=158
LRAL Lakeview Retre 25.29 327 IAmb IAmb 11 48 53.8
comp=Z,33nm,0.8s
LRAL Lakeview Retre 25.29 327 P P 11 48 51.4 +2.0
baz=140,SNR=17
V54A Nebo 25.29 338 P P 11 48 50.9 +1.4
baz=154,SNR=18
T58A Grand View Acr 25.33 345 P P 11 48 51.1 +1.3
baz=162
X51A Calhoun 25.44 332 P P 11 48 51.7 +0.8
baz=146
S61A Accomac 25.46 351 P P 11 48 52.7 +1.7
baz=169
W52A Murphy 25.48 334 P P 11 48 52.8 +1.6
baz=149,SNR=18
V53A Saluda 25.52 337 P P 11 48 53.5 +1.8
baz=152,SNR=33
T57A Hurt 25.57 344 P P 11 48 53.2 +1.2
baz=160,SNR=6.9
Y49A Blount Mountai 25.62 329 IAmb IAmb 11 48 57.4
comp=Z,45nm,0.8s
U55A TA2, Sparta 25.64 340 P P 11 48 54.2 +1.5
baz=156,SNR=36
S60A Water View 25.65 349 P P 11 48 54.2 +1.6
baz=167,SNR=5.8
FPAL Fort Paine 25.77 331 IAmb IAmb 11 48 57.0
comp=Z,36nm,0.8s
T56A Rocky Mt 25.81 343 P P 11 48 55.8 +1.6
baz=159,SNR=6.2
S59A Mechanicsville 25.83 348 P P 11 48 55.6 +1.3
baz=165
S58A Poland Farm, P 25.85 347 P P 11 48 55.4 +0.9
baz=164
W51A Cleveland 25.89 333 P P 11 48 56.9 +1.9
baz=147,SNR=13
TKL Tuckaleechee C 25.90 335 P P 11 48 56.6 +1.6
comp=Z,33nm,0.7s,baz=151,slow=11,SNR=45
TKL LR LR 11 59 31.4
comp=Z,2μm,19.4s,baz=141,slow=37
TKL Tuckaleechee C 25.90 335 IAmb IAmb 11 48 58.2
comp=Z,28nm,0.7s
U54A Nelsons Funny 25.92 339 IAmb IAmb 11 48 58.1
comp=Z,39nm,0.7s
U54A Nelsons Funny 25.92 339 P P 11 48 56.7 +1.4
baz=155,SNR=11
V52A Sevierville 25.98 336 P P 11 48 57.4 +1.6
baz=150,SNR=12
CPCT Cooper Cave 26.03 334 IAmb IAmb 11 48 59.4
comp=Z,30nm,0.7s
U53A Fall Branch 26.05 338 P P 11 48 57.8 +1.4
baz=153,SNR=12
R61A Willards 26.05 352 P P 11 48 58.1 +1.8
baz=170
BLA Blacksburg 26.09 342 IAmb IAmb 11 48 59.9
comp=Z,34nm,0.8s
BLA Blacksburg 26.09 342 P P 11 48 59.0 +2.1
baz=158,SNR=8.3
T55A Pulaski 26.12 341 P P 11 48 58.9 +1.9
baz=157,SNR=11
R58B Mineral 26.15 347 P P 11 48 59.8 +2.6
baz=164
W50A Signal Mountai 26.18 332 P P 11 48 59.8 +2.3
baz=146,SNR=19
S57A Dark Hollow, R 26.21 345 P P 11 49 00.2 +2.5
baz=162
R59A King George, V 26.22 349 P P 11 48 59.6 +1.7
baz=166
V51A Loudon 26.26 334 P P 11 49 00.4 +2.1
baz=149,SNR=29
CBN Corbin Frederi 26.27 348 P P 11 48 59.7 +1.4
baz=165
S56A Natural Bridge 26.29 344 P P 11 48 59.9 +1.4
baz=160
T54A Tazewell 26.32 340 P P 11 49 00.6 +1.7
baz=156,SNR=14
U52A Thorn Hill 26.37 337 P P 11 49 00.8 +1.5
baz=151,SNR=10.0
X48A Hartselle 26.41 329 IAmb IAmb 11 49 05.0
comp=Z,26nm,0.8s
V50A Pikevile 26.47 333 P P 11 49 02.2 +2.0
baz=147,SNR=23
R58A Rapidan 26.50 347 P P 11 49 02.3 +1.9
baz=164
W49A Belvidere 26.56 331 P P 11 49 02.3 +1.4
baz=144,SNR=12
TZTN Tazewell 26.57 336 IAmb IAmb 11 49 06.8
comp=Z,46nm,1.0s
TZTN Tazewell 26.57 336 P P 11 49 02.8 +1.7
baz=151,SNR=14
T53A Wise 26.58 339 P P 11 49 02.9 +1.7
baz=154,SNR=6.3
Q61A Milford 26.59 352 P P 11 49 01.4 +0.3
baz=170
R57A Stanardsville 26.61 346 P P 11 49 03.3 +1.9
baz=163,SNR=9.5
U51A La Follette 26.62 336 P P 11 49 03.4 +1.8
baz=150,SNR=14
S55A Lewisburg 26.64 343 P P 11 49 03.6 +1.8
baz=158,SNR=6.5
VBMS Vicksburg 26.75 320 P P 11 49 04.0 +1.3
baz=133
Q59A Harwood 26.78 350 P P 11 49 04.4 +1.5
baz=167
Q60A Greensboro 26.78 351 P P 11 49 04.5 +1.6
baz=169
T52A Hallie 26.86 338 P P 11 49 04.9 +1.2
baz=153
S54A Dingess, Beckl 26.91 341 IAmb IAmb 11 49 10.8
comp=Z,34nm,0.8s
S54A Dingess, Beckl 26.91 341 P P 11 49 05.7 +1.6
baz=157,SNR=7.0
V49A McMinnville 26.93 332 P P 11 49 06.0 +1.8
baz=146,SNR=18
R56A Bull Pasture M 26.93 345 P P 11 49 05.9 +1.5
baz=161
U50A Jamestown 26.99 334 P P 11 49 06.9 +2.0
baz=148,SNR=21
R55A Marlinton 27.00 344 P P 11 49 06.4 +1.3
baz=160
Q58A Fox Den Farm, 27.05 348 P P 11 49 07.0 +1.7
baz=165
S53A Williamson 27.07 340 P P 11 49 07.4 +1.8
baz=155
T51A Gray 27.10 336 P P 11 49 07.6 +1.8
baz=151,SNR=15
R54A Victor 27.16 342 P P 11 49 08.3 +1.9
baz=158,SNR=6.6
Q57A Strasburg 27.29 347 P P 11 49 08.8 +1.2
baz=164
PLAL Pickwick Lake 27.36 328 IAmb IAmb 11 49 14.6
comp=Z,31nm,0.8s
P59A Jarrettsville 27.47 350 P P 11 49 10.6 +1.5
baz=168
Q56A Snyder Ridge, 27.48 346 P P 11 49 11.0 +1.8
baz=162
U49A Red Boiling Sp 27.48 333 P P 11 49 11.1 +1.8
baz=147,SNR=6.8
P58A Pank, Wackersv 27.50 349 P P 11 49 11.0 +1.6
baz=166
T50A Nancy 27.50 335 P P 11 49 11.4 +1.9
baz=149,SNR=22
P60A Greenville 27.54 352 P P 11 49 11.1 +1.4
baz=170
CLDB Colider 27.55 147 eP P 11 49 09.1 -1.0
S51A Beattyville 27.55 338 P P 11 49 11.2 +1.3
baz=152
R53A Hurricane 27.60 341 P P 11 49 11.9 +1.6
baz=156
P57A Homestead Farm 27.64 348 P P 11 49 12.4 +1.8
baz=165
Q55A Buckhannon 27.66 344 P P 11 49 11.6 +0.7
baz=160,SNR=5.2
O61A Allentown 27.69 354 P P 11 49 12.4 +1.4
baz=172
OXF Oxford 27.72 325 IAmb IAmb 11 49 46.3
comp=Z,50nm,1.0s
OXF Oxford 27.72 325 P P 11 49 12.9 +1.5
baz=138
MVL Millersville 27.83 351 IAmb IAmb 11 49 15.2
comp=Z,20nm,0.8s
R52A Catlettsburg 27.83 340 P P 11 49 13.9 +1.5
baz=154
P56A Dayton Farm, R 27.84 346 P P 11 49 14.4 +2.0
baz=163,SNR=16
Q54A Coxs Mills 27.86 343 IAmb IAmb 11 49 16.0
comp=Z,36nm,0.8s
Q54A Coxs Mills 27.86 343 P P 11 49 14.7 +2.1
baz=159,SNR=13
T49A Edmonton 27.87 334 IAmb IAmb 11 49 19.9
comp=Z,20nm,0.8s
T49A Edmonton 27.87 334 P P 11 49 14.6 +1.9
baz=148,SNR=12
S50A Richmond 27.89 336 P P 11 49 15.1 +2.1
baz=151,SNR=13
Q53A Leroy 27.95 342 P P 11 49 15.3 +1.9
baz=157,SNR=14
O60A Telford 28.01 352 P P 11 49 15.1 +1.2
baz=170
O58A Lewisberry 28.05 350 P P 11 49 16.0 +1.7
baz=167
P55A Reedsville 28.08 345 P P 11 49 16.6 +2.0
baz=161
O59A Robesonia 28.11 351 P P 11 49 17.0 +2.2
baz=169
WVT Waverly 28.13 330 P P 11 49 15.9 +0.9
WVT Waverly 28.13 330 P P 11 49 15.9 +0.9
WVT pmax pmax
comp=Z,17nm,0.9s
WVT Waverly 28.13 330 P P 11 49 16.3 +1.2
baz=143
R51A Hillsboro 28.13 338 P P 11 49 16.5 +1.5
baz=153,SNR=10
MCWV Mont Chateau 28.23 345 P P 11 49 18.3 +2.5
baz=161
O57A Amberson 28.26 349 P P 11 49 17.8 +1.6
baz=166
BRNJ Basking Ridge 28.27 354 IAmb IAmb 11 49 19.1
comp=Z,42nm,0.8s
Q52A Bidwell 28.27 341 P P 11 49 18.1 +1.8
baz=156,SNR=6.3
N61A South Mountain 28.31 354 P P 11 49 18.4 +1.8
baz=173
P54A Burton 28.34 344 P P 11 49 19.0 +2.0
baz=160,SNR=6.4
S49A Springfield 28.34 335 P P 11 49 18.8 +1.9
baz=149,SNR=11
R50A Paris 28.39 337 IAmb IAmb 11 49 21.0
comp=Z,49nm,0.8s
R50A Paris 28.39 337 P P 11 49 19.9 +2.5
baz=151,SNR=19
T47A Sharon Grove 28.47 332 IAmb IAmb 11 49 21.4
comp=Z,19nm,0.7s
P53A Whipple 28.49 343 IAmb IAmb 11 49 21.2
comp=Z,44nm,0.7s
P53A Whipple 28.49 343 P P 11 49 20.2 +2.0
baz=158,SNR=12
O56A Blue Knob Stat 28.51 347 IAmb IAmb 11 49 21.8
comp=Z,27nm,0.8s
O56A Blue Knob Stat 28.51 347 P P 11 49 20.5 +2.0
baz=164,SNR=7.6
N60A Cedar Hill Far 28.52 353 P P 11 49 19.7 +1.3
baz=171
PAL Palisades 28.53 355 P P 11 49 20.4 +1.9
baz=174
X43A Marvell 28.56 323 P P 11 49 20.8 +1.9
baz=135
O55A Ligonier 28.61 346 P P 11 49 21.1 +1.7
baz=162,SNR=5.5
N59A State Game Lan 28.65 352 IAmb IAmb 11 49 22.7
comp=Z,19nm,0.7s
N59A State Game Lan 28.65 352 P P 11 49 21.8 +2.2
baz=170,SNR=6.2
Q51A Peebles 28.69 339 P P 11 49 22.3 +2.3
baz=154,SNR=20
N58A Sunbury 28.71 351 P P 11 49 21.9 +1.7
baz=168
LPAZ La Paz 28.72 175 P P 11 49 20.7 -0.5
comp=Z,41nm,0.6s,baz=17,slow=2.8,SNR=70
LPAZ LR LR 12 01 58.8
comp=Z,3μm,19.7s,baz=23,slow=39
LPAZ La Paz 28.72 175 eP P 11 49 20.7 -0.5
LPAZ La Paz 28.72 175 P P 11 49 20.7 -0.5
LPAZ IAmb IAmb 11 49 24.7
comp=Z,45nm,0.7s
SSPA Standing Stone 28.72 349 P P 11 49 21.5 +1.2
SSPA Standing Stone 28.72 349 P P 11 49 22.3 +2.1
baz=165
R49A Shelbyville 28.73 336 P P 11 49 22.1 +1.7
baz=150,SNR=7.1
Q50A Georgetown 28.76 338 P P 11 49 22.9 +2.3
baz=152,SNR=5.9
N57A Milroy 28.77 349 P P 11 49 22.6 +1.8
baz=166
M63A Gales Ferry 28.81 358 P P 11 49 23.1 +2.1
baz=177
M61A Granite Spring 28.82 355 P P 11 49 22.9 +1.7
baz=174
P52A Corning 28.84 342 P P 11 49 23.4 +2.0
baz=156,SNR=11
O54A Avella 28.85 345 IAmb IAmb 11 49 24.8
comp=Z,26nm,0.7s
O54A Avella 28.85 345 P P 11 49 23.4 +1.9
baz=160,SNR=8.2
Z41A Richland Creek 28.88 319 P P 11 49 23.0 +1.2
baz=131
M62A Hamden 28.89 357 P P 11 49 23.8 +2.1
baz=176
M60A Port Jervis 28.91 354 P P 11 49 23.7 +1.7
baz=172,SNR=7.0
M64A Tiverton 28.94 359 P P 11 49 24.0 +1.9
baz=179
P51A Williamsport 29.00 340 P P 11 49 24.9 +2.1
baz=155,SNR=14
HKT Hockley 29.04 311 P P 11 49 23.1 0.0
N56A West Decatur 29.07 348 P P 11 49 25.7 +2.2
baz=165
N55A Marion Center 29.09 347 P P 11 49 25.6 +2.0
baz=163
WCI Wyandotte Cave 29.14 334 P P 11 49 24.7 +0.7
WCI IAmb IAmb 11 49 28.9
comp=Z,24nm,0.8s
WCI Wyandotte Cave 29.14 334 P P 11 49 24.7 +0.7
WCI pmax pmax
comp=Z,25nm,0.9s
WCI Wyandotte Cave 29.14 334 P P 11 49 26.0 +2.0

	baz=148						
O53A	New Philadelph	29.14	343	P	P	11 49 26.0	+2.0
	baz=159,SNR=10						
NATX	Nacogdoches	29.19	315	P	P	11 49 26.1	+1.6
	baz=126						
M58A	Price's Panora	29.19	351	P	P	11 49 26.8	+2.3
	baz=168,SNR=5.9						
O52A	Adamsville	29.20	342	P	P	11 49 26.5	+2.0
	baz=157,SNR=17						
M59A	Waymart	29.22	353	P	P	11 49 26.8	+2.1
	baz=171,SNR=5.0						
Q49A	Aurora	29.24	337	P	P	11 49 27.1	+2.2
	baz=151,SNR=7.3						
M57A	Sunshine Farm,	29.27	350	IAmb	IAmb	11 49 28.0	
	comp=Z,24nm,0.8s						
M57A	Sunshine Farm,	29.27	350	P	P	11 49 27.3	+2.2
	baz=167,SNR=6.6						
WLAR	White Oak Lake	29.35	320	IAmb	IAmb	11 49 29.6	
	comp=Z,26nm,0.8s						
P50A	Jamestown	29.37	339	P	P	11 49 28.3	+2.3
	baz=153,SNR=9.0						
O51A	Pataskala	29.46	341	P	P	11 49 28.9	+2.0
	baz=156,SNR=20						
N54A	Moraine State	29.49	346	P	P	11 49 29.5	+2.3
	baz=161,SNR=14						
Q48A	North Vernon	29.50	336	P	P	11 49 29.1	+1.9
	baz=149,SNR=21						
L60A	Shokan	29.53	355	P	P	11 49 29.7	+2.2
	baz=173						
N53A	Lisbon	29.56	344	P	P	11 49 29.4	+1.7
	baz=160						
M56A	Emporium	29.60	349	IAmb	IAmb	11 49 31.0	
	comp=Z,24nm,0.8s						
M56A	Emporium	29.60	349	P	P	11 49 30.2	+2.1
	baz=165,SNR=6.6						
P49A	Miami Univ. Ec	29.63	338	P	P	11 49 30.2	+1.8
	baz=152,SNR=6.6						
ACSO	Alum Creek Sta	29.66	341	P	P	11 49 30.6	+2.0
	baz=155,SNR=24						
L61A	Hillsdale 1, H	29.68	356	P	P	11 49 30.6	+1.9
	baz=174						
M55A	Ridgway	29.70	348	IAmb	IAmb	11 49 31.9	
	comp=Z,23nm,0.8s						
M55A	Ridgway	29.70	348	P	P	11 49 31.1	+2.1
	baz=164,SNR=7.0						
X40A	Basin Creek Fa	29.70	321	P	P	11 49 30.8	+1.7
	baz=132						
L58A	Harry Jones Me	29.77	352	P	P	11 49 31.8	+2.2
	baz=170,SNR=5.8						
O50A	Cable	29.79	340	P	P	11 49 31.6	+1.9
	baz=154,SNR=26						
N52A	McGinn's Farm,	29.80	343	P	P	11 49 31.7	+1.9
	baz=158						
L59A	Walton	29.81	354	P	P	11 49 32.0	+2.0
	baz=172						
W41B	Gary Mavity, V	29.82	323	P	P	11 49 31.5	+1.5
	baz=134,SNR=12						
P48A	Milroy	29.84	337	IAmb	IAmb	11 49 32.1	
	comp=Z,23nm,0.7s						
P48A	Milroy	29.84	337	P	P	11 49 31.4	+1.2
	baz=150,SNR=7.9						
L57A	Andrews Acres	29.87	351	P	P	11 49 32.4	+1.9
	baz=168,SNR=11						
SIV	San Ignacio	29.88	161	P	P	11 49 30.1	-0.7
	comp=Z,12nm,0.5s,baz=19,slow=11,SNR=47						
SIV				LR	LR	12 02 39.7	
	comp=Z,3µm,18.7s,baz=356,slow=39						
L61B	Northampton	29.88	357	P	P	11 49 32.1	+1.5
	baz=176						
HRV	Adam Dziewonsk	29.90	359	P	P	11 49 32.8	+2.1
	baz=178						
WHAR	Wooly Hollow	29.92	323	IAmb	IAmb	11 49 33.4	
	comp=Z,17nm,0.8s						
M54A	Oil Creek Stat	29.93	346	P	P	11 49 33.3	+2.2
	baz=162,SNR=17						
BINY	Binghamton	29.94	352	IAmb	IAmb	11 49 34.3	
	comp=Z,36nm,1.1s						
BINY	Binghamton	29.94	352	P	P	11 49 33.4	+2.3
	baz=170						
BLO	Bloomington	30.03	335	IAmb	IAmb	11 49 34.9	
	comp=Z,37nm,0.7s						
S44A	Carbondale	30.06	330	IAmb	IAmb	11 49 34.6	
	comp=Z,36nm,0.8s						
O49A	Covington	30.07	339	P	P	11 49 34.0	+1.7
	baz=153,SNR=17						
K62A	Royalston	30.08	358	P	P	11 49 34.5	+2.2
	baz=177						
K63A	Dunstable	30.08	359	P	P	11 49 34.5	+2.2
	baz=178						
N51A	Ashland	30.10	342	IAmb	IAmb	11 49 36.1	
	comp=Z,36nm,0.8s						
N51A	Ashland	30.10	342	P	P	11 49 34.3	+1.8
	baz=157,SNR=7.0						
M53A	WI Miller and	30.11	345	P	P	11 49 34.4	+1.8
	baz=160						
L56A	Greenwood	30.12	350	IAmb	IAmb	11 49 36.4	
	comp=Z,30nm,0.8s						
L56A	Greenwood	30.12	350	P	P	11 49 34.4	+1.7
	baz=167,SNR=9.5						
237A	Washetta, Mont	30.13	314	P	P	11 49 33.8	+1.0
237A				IAmb	IAmb	11 49 36.4	
	comp=Z,32nm,0.7s						
K60A	Five Rivers En	30.13	355	P	P	11 49 34.7	+2.0
	baz=174						
K61A	Williamstown	30.14	356	P	P	11 49 34.9	+2.1
	baz=175						
N50A	Nevada	30.20	341	P	P	11 49 35.4	+2.0
	baz=155,SNR=17						
MIAR	Mount Ida	30.20	320	P	P	11 49 34.2	+0.7
	baz=131,SNR=8.6						
FCAR	Ozark Folk Cen	30.25	324	IAmb	IAmb	11 49 35.4	
	comp=Z,17nm,0.6s						
L55A	Hinsdale	30.32	349	P	P	11 49 36.4	+1.9
	baz=165						
OLIL	Olney	30.35	332	P	P	11 49 36.1	+1.4
OLIL				IAmb	IAmb	11 49 37.3	
	comp=Z,50nm,1.1s						
K59A	Cooperstown	30.37	354	P	P	11 49 36.6	+1.7
	baz=172						
M52A	Chesterland	30.39	344	P	P	11 49 36.7	+1.7
	baz=159						
M51A	Elyria	30.42	343	P	P	11 49 37.3	+2.0
	baz=158						
O48A	Farmland	30.43	338	P	P	11 49 36.9	+1.5
	baz=151,SNR=8.3						
K58A	Earlville	30.45	353	IAmb	IAmb	11 49 38.6	
	comp=Z,26nm,0.7s						
K58A	Earlville	30.45	353	P	P	11 49 37.5	+1.9
	baz=170,SNR=7.5						
L53A	Girard	30.50	346	P	P	11 49 37.6	+1.6
	baz=162,SNR=6.5						
L54A	Sinclairville	30.55	347	P	P	11 49 38.3	+1.8
	baz=163,SNR=7.4						
WVNY	West Valley, N	30.57	348	IAmb	IAmb	11 49 39.7	
	comp=Z,33nm,0.8s						
ERPA	Erie	30.59	346	P	P	11 49 38.5	+1.7
	baz=162,SNR=12						
J62A	Henniker	30.62	358	P	P	11 49 39.1	+2.0
	baz=178						
K56A	Middlesex	30.62	350	P	P	11 49 39.2	+2.0
	baz=167						
J63A	Strafford	30.66	359	P	P	11 49 39.5	+2.1
	baz=179						
N49A	Columbus Grove	30.68	340	IAmb	IAmb	11 49 40.9	
	comp=Z,18nm,0.8s						
N49A	Columbus Grove	30.68	340	P	P	11 49 39.3	+1.7
	baz=154						
P46A	Rosedale	30.69	335	IAmb	IAmb	11 49 40.8	
	comp=Z,42nm,0.8s						
J60A	Lant Hill Farm	30.72	356	P	P	11 49 40.3	+2.4
	baz=175						
M50A	Fremont	30.74	342	P	P	11 49 40.4	+2.2
	baz=156						
W39A	Magazine	30.76	321	IAmb	IAmb	11 49 41.3	
	comp=Z,19nm,0.8s						
W39A	Magazine	30.76	321	P	P	11 49 39.9	+1.5
	baz=132,SNR=12						
435B	Jarrell	30.76	310	IAmb	IAmb	11 49 40.6	
	comp=Z,23nm,0.8s						
435B	Jarrell	30.76	310	P	P	11 49 39.9	+1.4
	baz=120						
J61A	Chester	30.77	357	P	P	11 49 40.6	+2.2
	baz=176						
K55A	Perry	30.78	349	P	P	11 49 40.0	+1.5
	baz=166						
K54A	Basiliko Farm,	30.78	348	P	P	11 49 40.5	+1.9
	baz=165						
ACCN	Adirondack Com	30.87	356	IAmb	IAmb	11 49 43.0	
	comp=Z,32nm,0.8s						
N48A	Decatur	30.91	339	P	P	11 49 41.1	+1.4
	baz=152,SNR=9.7						
U40A	Yellville	30.99	324	IAmb	IAmb	11 49 42.2	
	comp=Z,13nm,0.7s						
U40A	Yellville	30.99	324	P	P	11 49 41.5	+1.0
	baz=135,SNR=13						
J58A	Remsen	31.00	354	IAmb	IAmb	11 49 43.4	
	comp=Z,28nm,0.7s						
J58A	Remsen	31.00	354	P	P	11 49 42.5	+2.0
	baz=171,SNR=12						
J59A	Piseco	31.02	355	P	P	11 49 42.3	+1.7
	baz=173						
833A	Chaparral WMA,	31.03	305	P	P	11 49 41.6	+0.7
	baz=115,SNR=27						
M49A	Liberty Center	31.10	341	P	P	11 49 43.1	+1.8
	baz=154						
J56A	Wolcott	31.12	351	P	P	11 49 43.2	+1.8
	baz=168						
J57A	Williamstown	31.13	353	P	P	11 49 43.2	+1.7
	baz=170,SNR=14						
N47A	Urbana	31.17	338	P	P	11 49 43.6	+1.6
	baz=151,SNR=17						
L50A	Kingsville	31.26	343	P	P	11 49 44.4	+1.7
	baz=157,SNR=8.5						
J55A	Hilton	31.26	350	P	P	11 49 43.9	+1.2
	baz=167						
SLM	Saint Louis	31.28	330	IAmb	IAmb	11 49 46.2	
	comp=Z,24nm,0.8s						
SFIN	Lafayette	31.29	335	IAmb	IAmb	11 49 46.6	
	comp=Z,19nm,0.8s						
SFIN	Lafayette	31.29	335	P	P	11 49 44.6	+1.6
	baz=148,SNR=7.3						
I58A	Old Forge	31.29	354	P	P	11 49 44.7	+1.7
	baz=172,SNR=8.2						
WHTX	Lake Whitney,	31.29	313	P	P	11 49 43.6	+0.5
WHTX				IAmb	IAmb	11 49 46.5	
	comp=Z,22nm,0.9s						
WHTX	Lake Whitney,	31.29	313	P	P	11 49 44.2	+1.1
	baz=122,SNR=6.1						
I59A	Olmsteadville	31.30	356	P	P	11 49 45.3	+2.3
	baz=174						
I60A	Shoreham	31.31	356	P	P	11 49 45.5	+2.4
	baz=175						
I64A	Boothbay	31.32	2	P	P	11 49 45.4	+2.2
	baz=182						
I61A	Oroboro, Fairl	31.34	358	P	P	11 49 45.4	+2.0
	baz=177						
CCM	Cathedral Cave	31.34	328	P	P	11 49 44.0	+0.5
CCM				IAmb	IAmb	11 49 45.3	
	comp=Z,15nm,0.8s						
CCM	Cathedral Cave	31.34	328	P	P	11 49 44.0	+0.5
CCM				pmax	pmax		
	comp=Z,15nm,0.8s						
CCM	Cathedral Cave	31.34	328	P	P	11 49 45.0	+1.5
	baz=139						
M48A	Edgerton	31.36	340	P	P	11 49 45.0	+1.4
	baz=153,SNR=11						
K52A	Tillsonburg	31.39	346	P	P	11 49 45.4	+1.5
	baz=161,SNR=5.7						
I63A	Otisfield	31.43	0	P	P	11 49 46.6	+2.4
	baz=180						
K51A	Iona Station	31.53	345	P	P	11 49 47.1	+2.0
	baz=160						
M47A	Cromwell	31.57	338	P	P	11 49 47.1	+1.7
	baz=151,SNR=6.0						
L49A	Milan	31.61	341	P	P	11 49 47.8	+2.0
	baz=155,SNR=8.0						
I57A	Carthage	31.61	353	P	P	11 49 47.5	+1.7
	baz=171						
LBNH	Lisbon	31.64	358	P	P	11 49 48.1	+2.0
	baz=178,SNR=8.3						
L48A	N Adams	31.67	340	P	P	11 49 47.9	+1.5
	baz=154,SNR=11						
J52A	Paris	31.77	346	P	P	11 49 48.6	+1.4
	baz=162,SNR=6.9						
K50A	Casco	31.88	343	P	P	11 49 50.3	+2.1
	baz=158						
SALV	Santo Antonio	31.90	152	eP	P	11 49 48.4	-0.2
H61A	Lyndonville	31.93	358	P	P	11 49 50.7	+2.0
	baz=178						
H58A	Gabriels	31.94	355	P	P	11 49 50.6	+1.9
	baz=174						
H62A	Milan	31.96	359	P	P	11 49 51.5	+2.6
	baz=179						
L47A	Sherwood	31.96	339	P	P	11 49 50.3	+1.4
	baz=153,SNR=12						
H60A	Morristown	31.99	357	P	P	11 49 51.2	+2.0
	baz=176,SNR=5.3						
H63A	New Sharon	32.05	1	P	P	11 49 52.2	+2.5
	baz=181						
H64A	Troy	32.05	2	P	P	11 49 52.0	+2.4
	baz=183						
H57A	Richville	32.10	354	P	P	11 49 51.6	+1.5
	baz=171						
K49A	Clarkson	32.13	342	P	P	11 49 52.3	+2.0
	baz=156						
H59A	Cadyville	32.13	356	P	P	11 49 52.2	+1.8
	baz=175						
I53A	Kortright Cn E	32.13	348	P	P	11 49 52.2	+1.8
	baz=164						
I55A	Frankford	32.16	351	P	P	11 49 52.1	+1.5
	baz=167						
JCT	Junction City	32.29	308	P	P	11 49 53.0	+1.0
	baz=118						
FRNY	Flat Rock	32.31	356	IAmb	IAmb	11 49 54.9	
	comp=Z,19nm,0.8s						
H56A	Elgin	32.33	353	P	P	11 49 53.9	+1.8
	baz=170,SNR=12						
K48A	Perry	32.35	341	P	P	11 49 53.9	+1.6
	baz=155,SNR=6.3						
HDIL	Hopedale	32.37	333	P	P	11 49 53.4	+0.9
	baz=145						
L46A	Eue Claire	32.38	338	P	P	11 49 54.0	+1.5
	baz=151						
H55A	Tweed	32.41	351	P	P	11 49 54.4	+1.6
	baz=168,SNR=6.1						
I51A	Listowel	32.43	346	P	P	11 49 54.5	+1.5
	baz=161,SNR=16						
DELO	Deloro Mine	32.45	351	IAmb	IAmb	11 49 56.3	
	comp=Z,29nm,1.4s						
TUL1	Leonard	32.47	320	IAmb	IAmb	11 49 54.5	
	comp=Z,17nm,0.7s						
TUL1	Leonard	32.47	320	P	P	11 49 53.8	+0.3
	baz=130,SNR=7.0						
I52A	Shelburne	32.49	347	P	P	11 49 55.2	+1.7
	baz=163						
G60A	Masonville	32.51	358	P	P	11 49 55.7	+2.0
	baz=177						
K47A	Vermontville	32.51	340	P	P	11 49 55.1	+1.4
	baz=154,SNR=9.9						
G63A	Kingsbury	32.51	1	P	P	11 49 55.8	+2.1
	baz=182						
G59A	Clarenceville	32.53	357	P	P	11 49 55.9	+2.1
	baz=176						
J49A	Marlette	32.56	343	P	P	11 49 55.6	+1.4
	baz=157,SNR=7.6						
G62A	West of Eustis	32.60	0	P	P	11 49 56.6	+2.1
G62A				IAmb	IAmb	11 49 58.1	
	comp=Z,29nm,0.7s						
G62A	West of Eustis	32.60	0	P	P	11 49 57.0	+2.5
	baz=180,SNR=8.4						
G58A	Ormstown	32.66	356	P	P	11 49 56.8	+1.9
	baz=174						
H53A	Bobcaygeon	32.66	350	P	P	11 49 56.8	+1.8
	baz=166						
PKME	Peaks-Kenny Pk	32.67	2	P	P	11 49 57.6	+2.5
	baz=183						
G61A	St-Isidore-de-	32.67	359	P	P	11 49 57.6	+2.5
	baz=178,SNR=5.6						
G64A	Maxfield	32.68	3	P	P	11 49 57.2	+2.0
	baz=184						
G57A	Newington	32.69	354	P	P	11 49 56.9	+1.6
	baz=172						
G65A	Princeton	32.70	4	P	P	11 49 57.9	+2.6
	baz=186						
J48A	Bridge Port	32.70	342	P	P	11 49 56.8	+1.5
	baz=156,SNR=9.9						
K46A	Dorr	32.79	339	P	P	11 49 57.5	+1.3
	baz=152,SNR=6.8						
PLVO	Plevna	32.88	352	IAmb	IAmb	11 49 59.5	
	comp=Z,20nm,0.8s						
SADO	Sadowa	32.95	349	P	P	11 49 58.4	+0.8
	comp=Z,21nm,0.8s,baz=185,slow=3.2,SNR=15						
SADO	Sadowa	32.95	349	IAmb	IAmb	11 49 59.7	
	comp=Z,18nm,0.8s						
J47A	Sunmer	32.96	341	P	P	11 49 58.7	+1.0
	baz=154,SNR=12						
H52A	Wyevale	32.98	348	P	P	11 49 59.3	+1.5
	baz=163,SNR=6.4						
X34A	Smith Ranch, M	33.00	316	IAmb	IAmb	11 50 01.6	
	comp=Z,20nm,0.7s						
I49A	Point Hope	33.01	344	P	P	11 49 59.5	+1.4
	baz=158,SNR=5.7						
G55A	Calabogie	33.04	352	P	P	11 49 59.3	+1.0
	baz=169,SNR=6.2						
F63A	Nahmakanta, Br	33.12	2	IAmb	IAmb	11 50 02.0	
	comp=Z,26nm,0.8s						
F63A	Nahmakanta, Br	33.12	2	P	P	11 50 01.1	+2.2
	baz=183,SNR=5.7						
L44A	Lake County Fo	33.14	336	P	P	11 50 00.9	+1.8
	baz=148						
G53A	Haliburton	33.20	350	P	P	11 50 01.2	+1.5
	baz=166						
ABTX	Abilene, Hawle	33.20	312	P	P	11 50 00.8	+0.8
	baz=121,SNR=22						
F64A	Sherman	33.31	3	P	P	11 50 02.1	+1.5
F64A				IAmb	IAmb	11 50 04.1	
	comp=Z,31nm,1.1s						
F64A	Sherman	33.31	3	P	P	11 50 02.8	+2.1
	baz=184						
J46A	Howard City	33.33	340	P	P	11 50 02.7	+1.8
	baz=153						
F61A	St Evariste	33.36	360	P	P	11 50 02.7	+1.6
	baz=180						
F60A	Warwick	33.37	358	P	P	11 50 02.9	+1.8
	baz=178,SNR=5.9						
G54A	Lake Saint Pet	33.38	351	P	P	11 50 02.5	+1.2
	baz=167,SNR=9.1						
I48A	Sherman Twp	33.48	343	P	P	11 50 03.9	+1.7
	baz=157						
F55A	Otter Lake	33.56	353	P	P	11 50 04.9	+2.0
	baz=170						
LMN	Caledonia Moun	33.61	7	IAmb	IAmb	11 50 06.5	
	comp=Z,13nm,0.8s						
J45A	Montague	33.66	339	P	P	11 50 05.3	+1.6
	baz=152						
ARAG	Araguaiana, MT	33.70	146	eP	P	11 50 04.6	+0.2
WMOK	Wichita Mounta	33.72	316	IAmb	IAmb	11 50 05.9	
	comp=Z,17nm,0.7s						
WMOK	Wichita Mounta	33.72	316	P	P	11 50 04.5	+0.1
	baz=124,SNR=26						
E60A	Ste Agathe de	33.76	359	P	P	11 50 06.2	+1.7
	baz=179						
I46A	Reed City	33.79	341	P	P	11 50 05.9	+1.0
	baz=154,SNR=6.3						
E61A	Lac Etchemin	33.82	0	P	P	11 50 07.1	+2.0
	baz=180						
E58A	La Victoria	33.83	357	P	P	11 50 06.8	+1.7
	baz=176,SNR=6.6						
H48A	Harrisville	33.85	344	IAmb	IAmb	11 50 07.7	
	comp=Z,24nm,0.7s						
H48A	Harrisville	33.85	344	P	P	11 50 06.8	+1.4
	baz=158						
E63A	Oxbow	33.86	3	IAmb	IAmb	11 50 08.6	
	comp=Z,21nm,0.7s						
E63A	Oxbow	33.86	3	P	P	11 50 07.9	+2.4
	baz=184,SNR=5.5						
E64A	Bridgewater	33.89	4	P	P	11 50 06.9	+1.2
	baz=185,SNR=5.6						
ALGO	Algonquin Park	33.91	351	P	P	11 50 07.3	+1.4
	baz=167,SNR=11						
E57A	Chemin Saint G	33.92	356	P	P	11 50 07.6	+1.6
	baz=174,SNR=13						
F52A	Sundridge	33.98	349	P	P	11 50 07.6	+1.2
	baz=165,SNR=12						
H47A	Mio	34.01	343	P	P	11 50 08.8	+2.0
	baz=156						
E56A	St. Veronique	34.12	355	P	P	11 50 09.3	+1.6
	baz=172						
F51A	Arnstein	34.22	349	P	P	11 50 09.7	+1.2
	baz=164,SNR=14						
E54A	Lac Daplat, Po	34.26	352	P	P	11 50 10.2	+1.3
	baz=169,SNR=5.7						
E53A	Dumoine, Ponti	34.27	351	P	P	11 50 10.2	+1.2
	baz=168,SNR=12						
D60A	Saint Jean D'O	34.30	360	P	P	11 50 10.8	+1.6
	baz=180,SNR=7.1						
E52A	Mattawa	34.33	350	P	P	11 50 10.4	+0.8
	baz=166,SNR=6.1						
D59A	Saint-Raymond	34.41	359	P	P	11 50 12.7	+2.6
	baz=178						
G47A	Hillman	34.43	343	P	P	11 50 12.1	+1.7
	baz=157,SNR=10.0						
L40A	Anamosa	34.44	333	IAmb	IAmb	11 50 12.8	
	comp=Z,34nm,0.8s						
D63A	Stockholm	34.49	3	P	P	11 50 13.2	+2.3
	baz=184,SNR=5.7						
D62A	Allapoint, All	34.49	2	IAmb	IAmb	11 50 13.6	
	comp=Z,16nm,0.8s						
D62A	Allapoint, All	34.49	2	P	P	11 50 13.2	+2.2
	baz=183						
D57A	Chemin Vers le	34.51	356	P	P	11 50 12.4	+1.3
	baz=175						
F49A	Sandfield	34.52	346	P	P	11 50 12.1	+1.0
	baz=160,SNR=16						
D58A	Chemin du LacG	34.53	357	P	P	11 50 13.0	+1.7
	baz=176,SNR=7.2						
D61A	St Aubert, Com	34.59	1	P	P	11 50 14.3	+2.6
	baz=181,SNR=12						
H45A	Beulah	34.59	341	P	P	11 50 13.0	+1.1
	baz=153,SNR=5.4						
D56A	ZEC Mazanza, M	34.60	355	P	P	11 50 13.5	+1.7
	baz=173,SNR=16						
D55A	Sainte-Anne-du	34.64	354	P	P	11 50 13.8	+1.7
	baz=172,SNR=15						
JFWS	Jewell Farm	34.70	334	P	P	11 50 13.7	+0.9
	baz=145,SNR=12						
F48A	Evansville	34.72	345	P	P	11 50 13.9	+1.0
	baz=159,SNR=8.1						
E51A	G1948 Merrick	34.72	349	P	P	11 50 14.2	+1.3
	baz=165,SNR=16						
U32A	Winter Ranch,	34.81	318	IAmb	IAmb	11 50 15.9	
	comp=Z,27nm,1.0s						
LATQ	La Tuque	34.81	358	P	P	11 50 15.5	+1.8
	baz=176						
G45A	Suttons Bay	34.84	341	P	P	11 50 15.8	+1.8
	baz=154,SNR=14						
G46A	Petoskey	34.85	342	P	P	11 50 16.0	+1.9
	baz=155						
TXAR	Lajitas Array	34.87	304	P	P	11 50 15.6	+1.0
	comp=Z,5.6nm,0.6s,baz=133,slow=8.2,SNR=77						
TXAR				PcP	PcP	11 52 48.4	+1.1
	comp=Z,6.4nm,0.7s,baz=130,slow=5.3,SNR=14						
TXAR				LR	LR	12 05 04.2	
	comp=Z,89nm,21.4s,baz=0.0,slow=37						
TX31	Lajitas Ar. Si	34.87	304	IAmb	IAmb	11 50 18.4	
	comp=Z,65nm,2.0s						
TX32	Lajitas Array	34.87	304	P	P	11 50 15.2	+0.6
TX32				IAmb	IAmb	11 50 18.4	
	comp=Z,66nm,2.0s						
BATG	Bathurst New B	34.88	6	IAmb	IAmb	11 50 17.5	
	comp=Z,29nm,0.9s						
D54A	Lac Fusel, La	34.90	353	P	P	11 50 15.9	+1.5
	baz=170,SNR=15						
LVC	Limon Verde	34.94	177	eP	P	11 50 13.6	-1.8
LVC	Limon Verde	34.94	177	P	P	11 50 13.6	-1.8
LVC	Limon Verde	34.94	177	P	P	11 50 13.6	-1.8
LVC				pmax	pmax		
	comp=Z,101nm,0.7s						
D53A	Lac Vacive, Po	34.96	352	IAmb	IAmb	11 50 18.4	
	comp=Z,26nm,0.9s						
D53A	Lac Vacive, Po	34.96	352	P	P	11 50 16.3	+1.3
	baz=168,SNR=16						
KSU1	Kansas State U	35.04	324	P	P	11 50 15.7	-0.1
	baz=132,SNR=6.4						
E48A	Lockeyer	35.22	346	P	P	11 50 18.8	+1.5
	baz=160,SNR=11						
D51A	Lot 18 Range I	35.24	350	P	P	11 50 18.9	+1.5
	baz=165						
SCIA	State Center	35.25	330	P	P	11 50 18.6	+1.1
	baz=140						
F45A	CMU Biological	35.38	342	P	P	11 50 20.5	+1.9
	baz=155,SNR=12						
D50A	G1974 Best Tow	35.39	349	P	P	11 50 20.4	+1.8
	baz=165						
E47A	Iron Bridge	35.47	345	P	P	11 50 21.1	+1.8
	baz=159,SNR=15						
C2SB	Chapadao do Su	35.73	150	eP	P	11 50 21.1	-0.8
D49A	Beulah Townshi	35.79	348	P	P	11 50 23.5	+1.4
	baz=162,SNR=5.0						
D48A	Paudash Townsh	35.80	347	P	P	11 50 23.6	+1.4
	baz=161,SNR=21						
PB10	IPOC Station P	35.80	180	IAmb	IAmb	11 50 25.0	
	comp=Z,29nm,0.9s						
AMTX	Amarillo	35.81	314	P	P	11 50 23.6	+1.0

baz=121
BDFB Brasilia 35.87 141 P P 11 50 24.2 +0.9
comp=Z,25nm,0.9s,baz=310,slow=10,SNR=20
BDFB LR LR 12 05 40.0
comp=Z,851nm,20.4s,baz=306,slow=37
BDFB Brasilia 35.87 141 P P 11 50 24.1 +0.8
BDFB IAmb IAmb 11 50 26.1
comp=Z,32nm,0.9s
AQDB Aquidauana 35.95 156 eP P 11 50 23.6 -0.2
D47A Chapleau 35.98 346 P P 11 50 25.1 +1.3
baz=159,SNR=9.7
D46A Sault St. Mari 36.07 344 P P 11 50 25.9 +1.4
baz=158,SNR=14
MSTX Muleshoe 36.14 312 IAmb IAmb 11 50 26.9
comp=Z,24nm,0.8s
MSTX Muleshoe 36.14 312 P P 11 50 25.9 +0.4
baz=119,SNR=21
E44A Grand Marais A 36.35 342 P P 11 50 28.7 +1.8
baz=154
G40A Rib Lake 36.63 337 IAmb IAmb 11 50 32.4
comp=Z,27nm,0.8s
CBKS Cedar Bluff 36.73 321 IAmb IAmb 11 50 31.9
comp=Z,31nm,1.1s
CBKS Cedar Bluff 36.73 321 P P 11 50 30.7 +0.3
baz=128,SNR=5.3
LSQQ Lebel-sur-Quev 36.81 353 P P 11 50 32.1 +1.3
baz=170
COWI Conover 36.94 339 IAmb IAmb 11 50 34.2
comp=Z,24nm,0.8s
MNTX Cornudas Mount 37.14 307 P P 11 50 34.9 +1.0
MNTX IAmb IAmb 11 50 36.0
comp=Z,22nm,0.7s
MNTX Cornudas Mount 37.14 307 P P 11 50 34.8 +1.0
baz=113,SNR=64
BGNE Belgrade 37.46 325 P P 11 50 36.5 0.0
baz=132,SNR=5.9
IPMB Ipameri, GO 37.57 143 eP P 11 50 37.4 -0.2
D41A Chassel 37.58 340 IAmb IAmb 11 50 39.7
comp=Z,30nm,0.8s
MATQ Matagami 37.58 353 P P 11 50 38.7 +1.4
baz=169,SNR=10
SPMN Marine on St. 37.65 334 IAmb IAmb 11 50 39.4
comp=Z,18nm,0.7s
SPMN Marine on St. 37.65 334 P P 11 50 38.9 +0.9
baz=143
JANB Januaria 37.86 136 eP P 11 50 39.3 -0.8
ECSD EROS Data Cent 38.28 329 P P 11 50 43.9 +0.6
baz=137,SNR=8.0
KSCO Kaye Shedlock' 38.67 319 P P 11 50 47.1 +0.2
baz=124
T25A Trinidad 38.86 315 P P 11 50 49.8 +1.3
baz=120,SNR=7.6
PCMB Pacaembu 38.91 150 eP P 11 50 48.9 0.0
RCBR Riachuelo 39.11 116 P P 11 50 52.0 +1.3
RCBR IAmb IAmb 11 50 53.3
comp=Z,24nm,0.8s
RCBR Riachuelo 39.11 116 P P 11 50 52.0 +1.3
RCBR pmax pmax
comp=Z,25nm,0.8s
Y22D IRIS PASSCAL I 39.28 309 IAmb IAmb 11 50 55.5
comp=Z,24nm,0.8s
ANMO Albuquerque 39.30 311 P P 11 50 53.8 +1.6
comp=Z,7.2nm,0.7s,baz=118,slow=8.6,SNR=47
ANMO Albuquerque 39.30 311 P P 11 50 52.9 +0.6
ANMO Albuquerque 39.30 311⇓eP P 11 50 52.5 +0.3
ANMO pmax pmax
comp=Z,7.0nm,0.7s
ANMO Albuquerque 39.30 311 P P 11 50 54.1 +1.9
baz=116
TRCB Terra Rica 39.30 153 eP P 11 50 51.5 -0.6
121A Cookes Peak, D 39.34 307 IAmb IAmb 11 50 56.5
comp=Z,28nm,0.8s
121A Cookes Peak, D 39.34 307 P P 11 50 54.5 +1.9
baz=112,SNR=25
EYMN Ely 39.36 338 IAmb IAmb 11 50 53.8
comp=Z,24nm,0.7s
EYMN Ely 39.36 338 P P 11 50 52.8 +0.4
baz=147,SNR=25
GO03 Copiap 39.86 179 IAmb IAmb 11 51 18.3
comp=Z,22nm,0.9s
SDCO Great Sand Dun 39.92 315 P P 11 50 58.5 +1.1
baz=120,SNR=18
SUSD Miller 39.97 328 IAmb IAmb 11 50 58.9
comp=Z,44nm,0.8s
SUSD Miller 39.97 328 P P 11 50 57.7 +0.3
baz=134
319A Douglas 40.13 304 IAmb IAmb 11 51 02.2
comp=Z,22nm,0.8s
Q24A Divide 40.30 317 P P 11 51 00.8 +0.2
baz=122
CPUP Villa Florida 40.74 161 P P 11 51 02.1 -1.8
comp=Z,6.3nm,0.7s,baz=345,slow=9.3,SNR=13
CPUP LR LR 12 09 21.7
comp=Z,2µm,18.8s,baz=345,slow=38
CPUP Villa Florida 40.74 161 P P 11 51 02.7 -1.2
CPUP Villa Florida 40.74 161 P P 11 51 02.7 -1.2
CPUP pmax pmax
comp=Z,19nm,1.2s
HSIG 40.81 300 P P 11 51 05.4 +0.7
HSIG IAmb IAmb 11 51 20.8
comp=Z,25nm,1.0s
S22A 4UR Ranch, Cre 40.84 314 P P 11 51 06.5 +1.4
baz=118,SNR=15
ISCO Idaho Springs 41.04 318 P P 11 51 07.6 +0.9
baz=122
PTGB Pitanga 41.23 154 eP P 11 51 07.1 -1.1
TUC Tucson 41.64 305 P P 11 51 12.8 +1.3
TUC Tucson 41.64 305 P P 11 51 12.8 +1.3
TUC pmax pmax
comp=Z,18nm,0.8s
TUC Tucson 41.64 305 P P 11 51 13.0 +1.4
baz=109
X18A Snowflake 41.76 308 IAmb IAmb 11 51 16.0
comp=Z,29nm,0.8s
MVCO Mesa Verde 41.77 313 P P 11 51 13.6 +0.9
MVCO Mesa Verde 41.77 313 P P 11 51 14.0 +1.3
baz=116,SNR=11
W18A Petrified Fore 41.82 309 IAmb IAmb 11 51 16.0
comp=Z,30nm,0.8s
W18A Petrified Fore 41.82 309 P P 11 51 14.8 +1.7
baz=113,SNR=17
N23A Red Feather La 41.83 319 P P 11 51 13.8 +0.6
baz=122
BSCB Bom Sucesso 41.94 142 eP P 11 51 13.2 -0.8
VAO Valinhos 42.27 147 eP P 11 51 16.5 -0.2
SCHQ Schefferville 42.34 3 P P 11 51 18.1 +1.3
comp=Z,28nm,0.8s,baz=193,slow=6.6,SNR=54
SCHQ LR LR 12 07 11.2
comp=Z,752nm,21.8s,baz=194,slow=34
SCHQ Schefferville 42.34 3 IAmb IAmb 11 51 19.4
comp=Z,39nm,1.0s
GO04 Tololo Observa 42.43 180 P P 11 51 17.0 -1.0
GO04 IAmb IAmb 11 51 22.3
comp=Z,28nm,0.8s
RSSD Black Hills 42.52 324 P P 11 51 19.4 +0.7
RSSD Black Hills 42.52 324 P P 11 51 19.4 +0.7
RSSD pmax pmax
comp=Z,8.0nm,0.8s
RSSD Black Hills 42.52 324 P P 11 51 19.3 +0.5
baz=128
SJMB Sao Joao De Ma 42.54 136 eP P 11 51 18.4 -0.4
MDND Maddock 42.69 331 IAmb IAmb 11 51 21.5
comp=Z,61nm,1.1s
MDND Maddock 42.69 331 P P 11 51 20.5 +0.7
baz=136,SNR=6.6
BSFB Barra de Sao F 42.86 136 eP P 11 51 20.8 -0.7
ULM Lac du Bonnet 42.91 336 P P 11 51 21.6 +0.1
comp=Z,32nm,0.9s,baz=143,slow=8.6,SNR=67
ULM LR LR 12 10 20.1
comp=Z,800nm,18.2s,baz=128,slow=38
ULM Lac du Bonnet 42.91 336 IAmb IAmb 11 51 22.5
comp=Z,39nm,1.0s
O20A White River Ci 42.95 317 P P 11 51 23.7 +1.5
baz=119,SNR=6.8
PET01 Itanhaem-SP 43.15 148 eP P 11 51 23.3 -0.4
K22A Casper 43.15 321 P P 11 51 24.4 +0.6
baz=124,SNR=6.5
214A Organ Pipe Nat 43.17 304 P P 11 51 25.4 +1.5
baz=107,SNR=11
WUAZ Wupatki 43.21 309 IAmb IAmb 11 51 27.4
comp=Z,24nm,0.8s
WUAZ Wupatki 43.21 309 P P 11 51 26.3 +2.0
baz=112,SNR=20
ITAB Concordia 43.43 156 eP P 11 51 24.7 -1.2
ESAR Angra dos Reis 43.69 144 eP P 11 51 27.3 -0.7
VAS01 Vassouras-RJ 43.71 142 eP P 11 51 27.5 -0.8
ITQB Itaqui 44.08 162 eP P 11 51 29.0 -2.1
U15A North Rim 44.24 310 IAmb IAmb 11 51 36.0
comp=Z,22nm,0.8s
Y12C Blythe 45.07 305 P P 11 51 40.5 +1.4
baz=107,SNR=6.2
PD31 Pinedale Array 45.11 319 P P 11 51 39.6 0.0
PDAR Pinedale Array 45.11 319 P P 11 51 40.0 +0.4
comp=Z,5.4nm,0.5s,baz=122,slow=10,SNR=85
PDAR PcP PcP 11 53 19.8 -0.2
comp=Z,4.6nm,0.7s,baz=124,slow=5.1,SNR=10.0
PDAR LR LR 12 11 49.0
comp=Z,123nm,21.1s,baz=116,slow=38
BW06 Boulder Array 45.11 319 P P 11 51 39.8 +0.2
baz=120,SNR=8.4
GLA Glamis 45.11 304 IAmb IAmb 11 51 41.8
comp=Z,15nm,0.9s
GLA Glamis 45.11 304 P P 11 51 40.9 +1.4
baz=106
ROC1 El Roble 45.23 180 P P 11 51 40.7 +0.2
LAO LASA Array 45.30 326 P P 11 51 41.1 +0.3
baz=127
DGMT Dagmar 45.36 329 IAmb IAmb 11 51 44.2
comp=Z,32nm,0.8s
DGMT Dagmar 45.36 329 P P 11 51 42.2 +1.1
baz=131,SNR=8.2
IRM Iron Mountain 45.69 306 P P 11 51 45.6 +1.6
baz=107,SNR=32
CNLB Canela 45.79 156 eP P 11 51 43.8 -1.0
BC3 Big Chuckawall 45.79 305 P P 11 51 46.1 +1.2
baz=107,SNR=12
CPSB Cacapava Do Su 45.79 159 eP P 11 51 42.7 -2.1
HWUT Hardware Ranch 45.87 317 IAmb IAmb 11 51 47.4
comp=Z,26nm,0.7s
SWSC Sam W. Stewart 45.87 304 P P 11 51 46.4 +1.0
baz=106
IKP In-Ko-Pah, Jac 46.05 303 P P 11 51 48.1 +1.2
baz=105
DUG Dugway, Tooele 46.10 315 IAmb IAmb 11 51 49.7
comp=Z,16nm,1.0s
DUG Dugway, Tooele 46.10 315 P P 11 51 49.0 +1.7
baz=115,SNR=18
AHID Auburn Hatcher 46.10 319 IAmb IAmb 11 51 49.0
comp=Z,10nm,0.7s
RLMT Red Lodge 46.16 322 IAmb IAmb 11 51 49.1
comp=Z,14nm,0.8s
RLMT Red Lodge 46.16 322 P P 11 51 48.5 +0.7
baz=123,SNR=11
GMRC Granite Mounta 46.28 306 P P 11 51 50.3 +1.5
baz=108,SNR=12
BELC Belle Mtn. Jos 46.32 305 P P 11 51 50.5 +1.3
baz=106,SNR=10
MONP2 Monument Peak 46.36 304 P P 11 51 51.0 +1.5
baz=105,SNR=7.6
H17A Grant Village 46.57 321 P P 11 51 52.0 +0.9
baz=121
XPFO Pion Flat 46.58 305 P P 11 51 51.0 -0.2
PFO Pinyon Flats O 46.58 305 P P 11 51 52.6 +1.4
PFO Pinyon Flats O 46.58 305⇓eP P 11 51 51.7 +0.5
PFO pmax pmax
comp=Z,16nm,1.0s
PFO Pinyon Flats O 46.58 305 P P 11 51 52.5 +1.4
baz=106,SNR=7.5
YPP Pitchstone Pla 46.65 320 pP 11 52 00.6 +0.9
TUQ Turquoise Moun 46.68 307 P P 11 51 53.4 +1.5
baz=108,SNR=16
HEC Hector,Ludlow 46.82 306 P P 11 51 54.8 +1.8
baz=107,SNR=15
109C Camp Elliot, M 46.92 303 P P 11 51 54.5 +0.8
baz=105
PLTB Pedras Altas 46.98 160 eP P 11 51 52.0 -2.0
SHOC Shoshone, Teco 47.09 308 P P 11 51 56.4 +1.4
baz=108,SNR=15
BBRC Big Bear Solar 47.13 305 P P 11 51 57.4 +1.8
baz=106,SNR=10
MURC Murrieta 47.17 304 P P 11 51 57.0 +1.3
baz=105,SNR=5.9
GSC Goldstone, Bar 47.33 307 P P 11 51 59.0 +2.0
baz=107,SNR=11
R11A Troy Canyon, C 47.38 311 P P 11 51 59.3 +1.8
baz=111,SNR=24
TPNV Topopah Spring 47.40 309 IAmb IAmb 11 52 01.6
comp=Z,22nm,0.8s
TPNV Topopah Spring 47.40 309 P P 11 51 59.5 +1.9
baz=109,SNR=52
BFSC Mount Baldy Ra 47.71 305 P P 11 52 01.0 +1.0
baz=105
FURC Furnace Creek, 47.72 308 P P 11 52 01.8 +1.9
baz=108,SNR=45
EGMT Eagleton 48.03 325 P P 11 52 03.2 +0.9
baz=124,SNR=20
LRMC Laurel Mtn Rad 48.07 307 P P 11 52 04.0 +1.3
baz=106,SNR=20
MPMC Manual Prospec 48.08 307 P P 11 52 04.1 +1.1
baz=107,SNR=9.9
CIS Catalina Islan 48.11 304 P P 11 52 04.1 +1.1
baz=104
SCI2 San Clemente I 48.12 303 P P 11 52 04.3 +1.3
baz=104
EDW2 Edwards Air Fo 48.15 306 P P 11 52 04.6 +1.3
baz=106,SNR=8.7
DAC Darwin (Calif) 48.23 308 P P 11 52 06.3 +2.3
DAC Darwin (Calif) 48.23 308 P P 11 52 06.3 +2.3
DAC pmax pmax
comp=Z,7.0nm,1.0s
GRAC Grapevine Rang 48.27 309 P P 11 52 05.9 +1.8
baz=108,SNR=7.2
CWC Cottonwood Cre 48.65 308 P P 11 52 08.8 +1.5
baz=107
ISA Isabella, Lake 48.74 307 P P 11 52 08.4 +0.6
ISA Isabella, Lake 48.74 307 P P 11 52 08.4 +0.6
ISA pmax pmax
comp=Z,6.0nm,0.9s
ISA Isabella, Lake 48.74 307 P P 11 52 09.3 +1.5
baz=106,SNR=5.1
FFC Flin Flon 48.74 336 P P 11 52 07.5 +0.1
FFC Flin Flon 48.74 336 P P 11 52 07.5 +0.1
FFC pmax pmax
comp=Z,42nm,0.8s
BLG Laguna Peak, P 48.80 305 P P 11 52 09.3 +1.0
baz=104
ARVC Arvin 48.87 306 P P 11 52 10.0 +1.2
baz=105
SCZ2 Santa Cruz Isl 49.24 304 P P 11 52 13.2 +1.6
baz=104
VES Vestal, Richgr 49.26 307 P P 11 52 13.4 +1.6
baz=106,SNR=16
NV11 Mina Array Sit 49.31 310 P P 11 52 13.0 +0.7
NV11 IAmb IAmb 11 52 14.4
comp=Z,11nm,0.8s
FCC Fort Churchill 49.40 344 IAmb IAmb 11 52 13.1
comp=Z,18nm,0.8s
NVAR Mina Array Bea 49.42 310 P P 11 52 14.6 +1.4
comp=Z,12nm,0.7s,baz=121,slow=7.4,SNR=148
NVAR PcP PcP 11 53 35.9 +0.5
comp=Z,4.9nm,0.8s,baz=133,slow=4.7,SNR=6.3
NVAR LR LR 12 17 02.2
comp=Z,208nm,18.1s,baz=150,slow=41
KVN Kaiserville 49.47 311 IAmb IAmb 11 52 15.9
comp=Z,21nm,0.7s
MFID Camas Ranch 49.49 317 IAmb IAmb 11 52 15.3
comp=Z,16nm,0.7s
PKM Mcpherson Peak 49.59 305 P P 11 52 15.4 +0.8
baz=104
MSO Missoula 49.83 322 P P 11 52 16.9 +0.9
baz=119,SNR=6.5
SMMC Simmler 49.84 306 P P 11 52 17.9 +1.6
baz=104,SNR=5.7
PAGB Antelope Grade 50.15 306 IAmb IAmb 11 52 35.0
comp=Z,29nm,1.3s
JTMT Jette 50.48 323 IAmb IAmb 11 52 24.0
comp=Z,13nm,0.7s
VCNR Virginia City 50.69 311 IAmb IAmb 11 52 25.7
comp=Z,16nm,0.9s
RUBR Rubicon Trail 50.99 310 IAmb IAmb 11 52 32.6
comp=Z,17nm,0.8s
WVOR Wild Horse Val 51.01 315 IAmb IAmb 11 52 26.8
comp=Z,11nm,0.8s
F10A Beach Ranch, E 51.47 320 IAmb IAmb 11 52 30.8
comp=Z,19nm,0.8s
MOD Modoc Plateau 51.99 314 IAmb IAmb 11 52 34.0
comp=Z,13nm,0.7s
E09A Wood Farm, Sta 52.27 320 IAmb IAmb 11 52 37.3
comp=Z,17nm,0.9s
NEW Newport 52.41 322 P P 11 52 35.7 +0.4
NEW IAmb IAmb 11 52 36.2
comp=Z,13nm,0.7s
NEW Newport 52.41 322 P P 11 52 35.7 +0.4
NEW pmax pmax
comp=Z,13nm,0.7s
NEW Newport 52.41 322 P P 11 52 35.5 +0.1
baz=117,SNR=15
O03E Paynes Creek 52.57 311 P P 11 52 36.5 -0.2
baz=107,SNR=6.2
E08A Dider Farm, El 52.84 320 IAmb IAmb 11 52 40.0
comp=Z,10nm,0.7s
PLCA Paso Flores 52.97 180 P P 11 52 38.1 -1.4
comp=Z,20nm,0.6s,baz=16,slow=9.0,SNR=53
PLCA Paso Flores 52.97 180 eP P 11 52 37.9 -1.6
PLCA Paso Flores 52.97 180 P P 11 52 38.0 -1.4
PLCA IAmb IAmb 11 52 42.0
comp=Z,24nm,0.7s
M04C Macdoel 53.04 313 P P 11 52 41.4 +1.2
baz=108,SNR=11
PINE Pine Mountain 53.07 316 IAmb IAmb 11 52 42.5
comp=Z,14nm,0.8s
J05D Fort Rock, OR 53.10 315 P P 11 52 41.9 +1.2
baz=110,SNR=8.5
F07A Phinny Hill Vi 53.16 319 IAmb IAmb 11 52 42.7
comp=Z,18nm,0.7s
K04D Chiloquin, OR 53.24 314 P P 11 52 43.0 +1.3
baz=109
O02D Mt. Diablo Mer 53.26 311 P P 11 52 41.2 -0.5
baz=106
E07A Sunnyside 53.37 319 IAmb IAmb 11 52 44.0
comp=Z,15nm,0.7s
G06A Carlson Farm, 53.38 318 IAmb IAmb 11 52 47.1
comp=Z,46nm,1.5s
N02D Trinity Center 53.42 312 P P 11 52 42.3 -0.7
baz=107,SNR=5.3
L04D Klamath Falls 53.50 314 P P 11 52 44.5 +0.8
baz=108,SNR=13
I05D Terrebonne, OR 53.53 316 P P 11 52 44.6 +1.0
baz=110
YBH Yreka Blue Hor 53.65 313 IAmb IAmb 11 52 45.1
comp=Z,17nm,0.7s
M02C Callahan 53.65 312 P P 11 52 44.5 -0.1
baz=107,SNR=5.7
J04D Umpqua Nationa 53.69 315 P P 11 52 46.4 +1.4
baz=109,SNR=14
B08A Colville Reser 53.78 322 IAmb IAmb 11 52 46.2
comp=Z,17nm,0.7s
G05D Wamic, OR 53.83 317 P P 11 52 47.4 +1.6
baz=111
I04A Tendick Farm, 54.07 315 P P 11 52 48.3 +0.6
baz=109
F05D White Salmon 54.15 318 P P 11 52 49.9 +1.7
baz=111,SNR=8.9
LTY Liberty 54.16 320 IAmb IAmb 11 52 49.7
comp=Z,15nm,0.9s
L02E Cave Junction 54.41 313 P P 11 52 50.8 +0.7
baz=107
H04D Lebanon 54.53 316 P P 11 52 51.6 +0.7
baz=109
K02D Willamette Mer 54.61 314 P P 11 52 52.1 +0.5
baz=107
I03D Drain, OR 54.69 315 P P 11 52 52.6 +0.6
baz=108
LON Longmire 54.69 319 IAmb IAmb 11 52 54.6
comp=Z,14nm,0.8s
J01E Myrtle Point 54.93 314 P P 11 52 54.6 +0.8
baz=107
COR Corvallis 54.94 316 P P 11 52 54.9 +1.1
COR Corvallis 54.94 316 P P 11 52 54.9 +1.1
COR pmax pmax
comp=Z,217nm,1.7s
E04D Cinebar 55.11 319 P P 11 52 55.5 +0.4
baz=111
G03D McMinnville, O 55.11 317 P P 11 52 56.1 +1.1
baz=109
KEBM Edson Butte 55.13 314 P P 11 52 57.0 +1.7
I02D Swisshome 55.16 315 P P 11 52 56.9 +1.5
baz=108
B05A Bryant 55.43 321 P P 11 52 57.0 -0.3
baz=112
D03D Eldon 55.79 320 P P 11 52 59.6 -0.4
baz=111
NLWA Neilton Lookou 56.23 319 IAmb IAmb 11 53 06.4
comp=Z,26nm,0.9s
ANGG Ammassalik, Gr 57.63 16 P P 11 53 13.6 +1.0
ILULI Ilulissat 58.04 8 P P 11 53 16.1 +0.7
ILULI IAmb IAmb 11 53 17.0
comp=Z,26nm,0.9s
ILULI Ilulissat 58.04 8 P P 11 53 16.1 +0.7
ILULI pmax pmax
comp=Z,26nm,0.9s
YKA Yellowknife Ar 58.85 338 P P 11 53 21.2 0.0
comp=Z,18nm,0.7s,baz=123,slow=7.2,SNR=298
YKA PcP PcP 11 54 10.1 -0.4
comp=Z,3.2nm,0.6s,baz=122,slow=4.3,SNR=8.3
YKA LR LR 12 19 39.4
comp=Z,540nm,18.8s,baz=0.0,slow=37
PNCL Nicolau / Gran 60.55 53 eP P 11 53 35.5 +2.1
PCAS Casmilo, Conde 60.84 51 eP P 11 53 37.1 +1.7
PTOM Tomar 60.84 52 eP P 11 53 29.3 -6.1
PCVE Castro Verde 60.88 54 eP P 11 53 38.1 +2.4
PMTG Montargil 60.91 52 eP P 11 53 37.5 +1.6
PBDV Barranco-do-Ve 60.92 54 eP P 11 53 36.1 +0.1
COI Coimbra 60.93 51 eP P 11 53 38.4 +2.5
EVO Evora 61.01 53 eP P 11 53 35.5 -1.0
PBEJ Beja 61.06 53 eP P 11 53 39.0 +2.1
PVIS Viseu 61.39 50 eP P 11 53 40.4 +1.2
comp=Z,52nm,1.3s
PCBR Castelo Branco 61.59 51 eP P 11 53 41.9 +1.5
comp=Z,49nm,1.5s
PMRV Marv??o 61.60 52 eP P 11 53 41.9 +1.3
comp=Z,30nm,1.8s
MTE Manteigas 61.61 51 eP P 11 53 42.2 +1.5
MVO Moncorvo 62.10 50 eP P 11 53 45.1 +1.1
comp=Z,41nm,1.3s
SUMG Summit 63.00 10⇓iP P 11 53 50.7 +0.9
comp=Z,98nm,0.8s
SUMG Summit 63.00 10⇓iP P 11 53 50.7 +0.9
SUMG pmax pmax
comp=Z,98nm,0.8s
PAB San Pablo 63.95 52 P P 11 53 57.5 +1.2
PAB IAmb IAmb 11 53 58.1
comp=Z,13nm,0.9s
PAB San Pablo 63.95 52 P P 11 53 57.5 +1.2
PAB pmax pmax
comp=Z,13nm,0.9s
TULEG Thule 64.03 0 IAmb IAmb 11 53 57.5
comp=Z,16nm,0.8s
ESDC Sonseca Array 64.26 52 P P 11 53 59.7 +1.4
comp=Z,5.3nm,0.8s,baz=268,slow=6.5,SNR=18
ESDC LR LR 12 16 02.3
comp=Z,200nm,21.8s,baz=320,slow=30
ESBB Sonseca Array 64.26 52 P P 11 53 58.3 -0.1
EFI East Falkland 64.85 171 P P 11 54 01.7 0.0
EFI East Falkland 64.85 171 P P 11 54 01.7 0.0
EFI pmax pmax
comp=Z,165nm,1.5s
TIC Toumodi 64.92 88 eP P 11 54 03.6 +0.6
comp=Z,2.0nm,0.2s
LIC Lamto 64.98 89 eP P 11 54 04.0 +0.6
comp=Z,78nm,1.0s
DBIC Dimbokro 65.07 88 P P 11 54 04.7 +0.7
comp=Z,15nm,0.7s,baz=266,slow=6.3,SNR=25
DBIC LR LR 12 19 26.3
comp=Z,111nm,22.0s,baz=252,slow=33
DBIC Dimbokro 65.07 88 P P 11 54 04.6 +0.7
DBIC IAmb IAmb 11 54 05.6
comp=Z,16nm,0.7s
KIC Kosan Boka 65.24 89 eP P 11 54 05.8 +0.7
comp=Z,88nm,1.0s
JIS Juneau Island 65.70 329 IAmb IAmb 11 54 11.6
comp=Z,17nm,1.0s
C36M Paulatuk 65.92 342 P P 11 54 07.2 -1.2
baz=121
SKAG Skagway 66.50 330 IAmb IAmb 11 54 14.2
comp=Z,9.5nm,0.7s
ESK Eskdalemuir 67.04 35 P P 11 54 17.0 +1.1
ESK Eskdalemuir 67.04 35 P P 11 54 17.0 +1.1
ESK pmax pmax
comp=Z,106nm,1.6s
HYT Haines Junctio 67.90 331 IAmb IAmb 11 54 24.3
comp=Z,18nm,0.8s
INK Inuvik 68.55 339 P P 11 54 25.3 +0.1
comp=Z,14nm,0.8s,baz=97,slow=6.6,SNR=64
INK Inuvik 68.55 339 IAmb IAmb 11 54 25.9
comp=Z,14nm,0.7s
EPYK Eagle Plains 69.08 337 P P 11 54 29.6 +1.0
baz=107,SNR=28
DAWY Dawson 69.55 334 IAmb IAmb 11 54 35.1
comp=Z,12nm,0.8s
DAG Danmarks Havn 69.66 11 iP P 11 54 31.5 -0.4

comp=Z,12nm,0.8s
DAG Danmarks Havn 69.66 11 iP P 11 54 31.5 -0.4
DAG pmax pmax
comp=Z,12nm,0.8s
BARN Barnard Glacie 69.94 331 IAmb IAmb 11 54 38.4
comp=Z,16nm,0.7s
BALM Baldy 70.26 331 P P 11 54 37.5 +1.5
BALM IAmb IAmb 11 55 28.6
comp=Z,50nm,2.0s
TOA0 Torodi Ar. Sit 70.36 80 P P 11 54 38.1 +0.8
TOA0 IAmb IAmb 11 54 39.8
comp=Z,13nm,1.0s
TORD Torodi Ar. Bea 70.36 80 P P 11 54 37.7 +0.4
comp=Z,11nm,0.9s,baz=283,slow=5.2,SNR=41
TORD LR LR 12 25 42.8
comp=Z,192nm,18.9s,baz=300,slow=36
EGAK Eagle 70.46 335 IAmb IAmb 11 54 41.5
comp=Z,12nm,0.8s
VRDI Verde Repeater 70.82 331 IAmb IAmb 11 54 44.0
comp=Z,21nm,1.2s
GLB Gilahina Butte 71.03 331 IAmb IAmb 11 54 44.2
comp=Z,21nm,0.8s
DOU Dourbes 71.09 41 P P 11 54 42.0 +0.9
DOU Dourbes 71.09 41 pP pP 11 54 50.5 +1.2
BMRD Maredsous 71.22 41 P P 11 54 43.1 +1.2
comp=Z,15nm,0.9s
DOT Dot Lake 71.49 333 IAmb IAmb 11 54 45.6
comp=Z,14nm,0.8s
SCRK Sand Creek 71.51 334 IAmb IAmb 11 54 45.7
comp=Z,23nm,0.8s
EYAK Cordova Ski Ar 71.84 330 IAmb IAmb 11 54 47.8
comp=Z,21nm,0.7s
RIDG Independent Ri 71.85 333 IAmb IAmb 11 54 47.7
comp=Z,20nm,0.8s
BHOU Houvegnez 72.01 41 P P 11 54 48.0 +1.3
BHOU PcP PcP 11 55 04.5 -0.7
MEM Membach 72.02 41 P P 11 54 48.1 +1.4
comp=Z,20nm,1.1s
MEM pP pP 11 54 54.7 -0.2
WLF Walferdange 72.08 42 P P 11 54 48.4 +1.3
comp=Z,21nm,0.9s
WLF Walferdange 72.08 42 IAmb IAmb 11 54 49.4
comp=Z,22nm,0.7s
NOR Nord 72.71 7 iP P 11 54 50.4 +0.1
comp=Z,10nm,0.9s
NOR Nord 72.71 7 iP P 11 54 50.4 +0.1
NOR pmax pmax
comp=Z,11nm,0.9s
ECH Echery 72.72 43 IAmb IAmb 11 54 53.3
comp=Z,24nm,1.0s
SENIN Lac Senin/Sane 72.81 45 IAmb IAmb 11 54 54.6
comp=Z,14nm,1.1s
HDA Harding Lake 72.86 334 P P 11 54 51.4 -0.1
baz=97,SNR=9.7
IL31 72.88 334 IAmb IAmb 11 54 52.1
comp=Z,8.6nm,0.7s
ILAR Eielson Array 72.88 334 P P 11 54 51.8 +0.2
comp=Z,7.9nm,0.8s,baz=106,slow=4.8,SNR=82
ILAR LR LR 12 28 31.8
comp=Z,456nm,19.3s,baz=108,slow=37
POKR Poker Flat Res 73.15 335 P P 11 54 53.6 +0.4
baz=97,SNR=7.8
KNK Knik Glacier 73.24 331 IAmb IAmb 11 54 56.2
comp=Z,29nm,0.8s
CCB Clear Creek Bu 73.25 334 IAmb IAmb 11 54 55.3
comp=Z,26nm,1.5s
COLA College 73.30 334 P P 11 54 54.3 +0.3
COLA College 73.30 334 P P 11 54 54.3 +0.3
COLA pmax pmax
comp=Z,10.0nm,0.9s
TCOL CIGO, UAF Yank 73.30 334 P P 11 54 54.2 +0.2
baz=96
WRH Wood River Hil 73.36 334 IAmb IAmb 11 54 56.4
comp=Z,12nm,0.8s
MDM Murphy Dome 73.47 334 IAmb IAmb 11 54 57.5
comp=Z,13nm,0.8s
PMR Palmer 73.58 331 IAmb IAmb 11 54 58.6
comp=Z,25nm,0.8s
RND Reindeer 73.59 333 IAmb IAmb 11 54 58.2
comp=Z,27nm,0.9s
MCK McKinley 73.66 333 IAmb IAmb 11 54 59.4
comp=Z,23nm,1.2s
NEA Nenana 73.79 334 IAmb IAmb 11 54 58.3
comp=Z,23nm,0.7s
MUD Monsted U'grnd 74.09 35 iP P 11 55 00.4 +1.6
comp=Z,24nm,0.8s
MUD Monsted U'grnd 74.09 35 iP P 11 55 00.4 +1.6
MUD pmax pmax
comp=Z,24nm,0.8s
TRF Thorofare Moun 74.24 333 IAmb IAmb 11 55 01.8
comp=Z,24nm,0.8s
TOLK Toolik Lake Re 74.38 338 IAmb IAmb 11 55 02.7
comp=Z,21nm,1.1s
TOLK Toolik Lake Re 74.38 338 P P 11 55 00.7 +0.4
baz=96,SNR=14
KONO Kongsberg 74.41 31⇑eP P 11 55 01.4 +0.8
KONO pmax pmax
comp=Z,52nm,2.5s
COLD Coldfoot 74.48 337 IAmb IAmb 11 55 04.0
comp=Z,12nm,0.9s
KTH Kantishna Hill 74.53 333 IAmb IAmb 11 55 03.3
comp=Z,27nm,0.9s
MLY Manley 74.54 334 IAmb IAmb 11 55 02.6
comp=Z,13nm,0.6s
DAVA Damuels 74.56 44 iP P 11 55 03.5 +1.5
comp=Z,27nm,0.8s,SNR=7.7
KEST Kesra 74.80 56 P P 11 55 04.9 +1.4
comp=Z,18nm,0.8s,baz=207,slow=2.8,SNR=12
KEST LR LR 12 24 60.0
comp=Z,138nm,18.3s,baz=286,slow=33
KEST Kesra 74.80 56 IAmb IAmb 11 55 05.9
comp=Z,16nm,0.8s
PPLA Purkeypile 75.07 332 IAmb IAmb 11 55 05.8
comp=Z,17nm,0.8s
FETA Feichten 75.15 44 iP P 11 55 06.9 +1.5
comp=Z,19nm,0.7s,SNR=7.6
RETA Reutte 75.16 44 iP P 11 55 06.6 +1.2
comp=Z,12nm,0.8s
NB2 NORSAR Subarra 75.25 30 P P 11 55 07.4 +1.9
comp=Z,7.2nm,0.7s,baz=269,slow=6.2
NOA NORSAR Array B 75.25 30 P P 11 55 07.2 +1.6
comp=Z,13nm,0.8s,baz=270,slow=6.0,SNR=32
NOA LR LR 12 22 43.4
comp=Z,230nm,22.0s,baz=270,slow=31
GRF Grafenberg Arr 75.37 42 eP P 11 55 07.6 +1.1
comp=Z,10nm,1.1s,baz=267,slow=6.4
MOTA Moosalm 75.39 44 iP P 11 55 07.9 +1.1
comp=Z,9.9nm,0.8s
ZCCA Zocca 75.46 47 IAmb IAmb 11 55 11.0
comp=Z,20nm,0.9s
SQTA Sankt Quirin 75.47 44 iP P 11 55 08.6 +1.4
comp=Z,16nm,0.7s,SNR=5.1
CASP Castiglione de 75.47 49 IAmb IAmb 11 55 09.0
comp=Z,17nm,1.3s
OSSC Osservatorio P 75.70 48 IAmb IAmb 11 55 25.8
comp=Z,14nm,1.0s
WTTA Wattenberg 75.76 44 iP P 11 55 10.0 +1.1
comp=Z,11nm,0.8s
CTI Castel Tesino 75.84 45 P P 11 55 10.2 +0.9
CTI IAmb IAmb 11 55 11.4
comp=Z,19nm,0.8s
CTI Castel Tesino 75.84 45 P P 11 55 10.2 +0.9
CTI pmax pmax
comp=Z,19nm,0.8s
NKC Novy Kostel 76.14 41 eP P 11 55 12.3 +1.5
NKC Novy Kostel 76.14 41 eP P 11 55 12.3 +1.5
ABTA Abfaltersbach 76.39 45 eP P 11 55 13.7 +1.3
comp=Z,20nm,1.0s,SNR=5.7
CLL Collm 76.44 40 eP P 11 55 14.0 +1.6
comp=Z,9.0nm,0.9s
CLL esP PcP 11 55 28.0 +3.9
CLL eSS SS 12 09 42.0 -8.8
CLL LmV 12 26 00.0
comp=Z,300nm,20.0s
CLL Collm 76.44 40 IAmb IAmb 11 56 14.5
comp=Z,12nm,0.9s
CLL Collm 76.44 40 eP P 11 55 14.0 +1.6
CLL pmax pmax
comp=Z,9.0nm,0.9s
CLL MLR MLR
comp=Z,300nm,20.0s
STAL STALIGIAL 76.56 45 IAmb IAmb 11 55 15.9
comp=Z,17nm,0.9s
SVW2 Sparrevohn 76.67 330 P P 11 55 14.3 +0.7
KBA Koelnbreinsper 76.93 44 iP P 11 55 16.6 +1.1
comp=Z,16nm,0.9s,SNR=7.1
KHC Kasperske Hory 76.94 42 eP P 11 55 16.9 +1.5
KHC epP PcP 11 55 27.3 +0.9
KHC esP sP 11 55 32.5 +5.8
KHC Kasperske Hory 76.94 42⇓eP P 11 55 16.7 +1.3
KHC pmax pmax
comp=Z,39nm,0.8s
GEC2 GERESS Array S 77.04 42 P P 11 55 16.8 +0.7
GEC2 IAmb IAmb 11 55 18.1
comp=Z,16nm,0.9s
GERES GERESS Array B 77.04 42 P P 11 55 17.1 +1.0
comp=Z,11nm,0.8s,baz=268,slow=4.0,SNR=56
GERES LR LR 12 30 15.5
comp=Z,132nm,18.0s,baz=272,slow=36
BRG Berggiesshubel 77.06 40 eP P 11 55 17.1 +1.2
comp=Z,10nm,0.8s
BRG e 11 55 32.6
comp=Z,13nm,1.3s
BRG Berggiesshubel 77.06 40 eP P 11 55 17.1 +1.2
BRG e 11 55 32.7
BRG pmax pmax
comp=Z,11nm,0.8s
BRG pmax pmax
comp=Z,13nm,1.3s
MYKA Terra Mystica 77.17 45 iP P 11 55 18.0 +1.2
comp=Z,12nm,0.7s
PBCC Pribram 77.17 42 eP P 11 55 18.7 +2.0
PMSA Palmer Station 77.22 177 eP P 11 55 16.2 -0.1
BSD Bornholm Skovb 77.36 36 iP P 11 55 19.0 +1.4
comp=Z,32nm,0.9s
BSD Bornholm Skovb 77.36 36 eP P 11 55 19.0 +1.4
BSD pmax pmax
comp=Z,32nm,0.9s
PVCC Panska Ves 77.48 41 eP P 11 55 20.3 +2.0
PVCC esP PcP 11 55 36.2 +7.5
PVCC Panska Ves 77.48 41 eP P 11 55 20.3 +2.0
PVCC e 11 55 36.2
MOA Molln 77.50 43 iP P 11 55 19.6 +1.0
comp=Z,6.4nm,0.7s
PRU Pruhonice 77.50 41 eP P 11 55 20.1 +1.6
PRU esP PcP 11 55 36.0 +7.2
PRU Pruhonice 77.50 41 eP P 11 55 20.1 +1.6
PRU e 11 55 36.0
GOPC GO Pecny, Ondr 77.67 41 eP P 11 55 22.6 +3.2
GOPC GO Pecny, Ondr 77.67 41 eP P 11 55 22.6 +3.2
OBKA Obir 77.81 45 iP P 11 55 21.0 +0.6
comp=Z,9.6nm,0.8s
SOKA Soboth 78.12 45 iP P 11 55 22.8 +0.7
comp=Z,5.1nm,1.0s
ARSA Arzberg 78.40 44 iP P 11 55 24.5 +0.9
comp=Z,7.4nm,0.9s
CHVC Chvalec 78.42 41 eP P 11 55 25.2 +1.6
OSTC Ostas 78.52 41 eP P 11 55 26.0 +1.8
KSP Ksiaz 78.54 40 eP P 11 55 25.6 +1.3
KSP Ksiaz 78.54 40 eP P 11 55 25.6 +1.3
CONA Conrad Observa 78.56 43 iP P 11 55 25.7 +1.2
comp=Z,8.4nm,1.0s
DPC Dobruska-Polom 78.61 41 eP P 11 55 25.8 +1.1
DPC epP sP 11 55 36.2 +0.2
DPC esP PcP 11 55 41.7 +8.0
DPC Dobruska-Polom 78.61 41 eP P 11 55 25.8 +1.1
DPC e 11 55 36.2
DPC e 11 55 41.7
KRUC Moravsky 78.79 42 eP P 11 55 26.6 +0.9
VRAC Vranov 78.89 42 eP P 11 55 27.3 +1.1
VRAC Vranov 78.89 42 ⇑P P 11 55 27.9 +1.7
VRAC Vranov 78.89 42 ⇑P P 11 55 27.9 +1.7
KRLC Kraliky 78.93 41 eP P 11 55 28.3 +1.8
KRLC Kraliky 78.93 41 eP P 11 55 28.3 +1.8
RDOG Red Dog Mine 79.32 338 IAmb IAmb 11 55 29.8
comp=Z,14nm,0.6s
ZST Bratislava 79.36 43 eP P 11 55 29.3 +0.5
ZST pmax pmax
comp=Z,24nm,1.0s
ZST Bratislava 79.36 43 eP P 11 55 29.2 +0.5
MODS Modra-Piesok 79.45 43 eP P 11 55 30.0 +0.7
MODS pmax pmax
comp=Z,32nm,1.3s
MODS Modra-Piesok 79.45 43 eP P 11 55 30.0 +0.7
MORC Moravsky Berou 79.45 41 eP P 11 55 30.9 +1.6
JAVC Velka Javorina 79.65 42 eP P 11 55 32.3 +1.9
VYHS Vyhne 80.46 42 eP P 11 55 36.1 +1.3
VYHS pmax pmax
comp=Z,10.0nm,1.2s
VYHS Vyhne 80.46 42 eP P 11 55 36.1 +1.3
ARCES ARCESS Array B 80.55 21 P P 11 55 35.5 +0.7
comp=Z,7.6nm,0.8s,baz=301,slow=5.2,SNR=9.9
ARCES LR LR 12 24 54.8
comp=Z,198nm,21.1s,baz=320,slow=31
OJC Ojcow 80.84 41 eP P 11 55 38.9 +2.2
OJC Ojcow 80.84 41 P P 11 55 37.6 +0.9
OJC Ojcow 80.84 41 eP P 11 55 38.9 +2.2
NIE Niedzica 81.28 41 eP P 11 55 41.6 +2.4
NIE Niedzica 81.28 41 eP P 11 55 41.6 +2.4
KECS Kecovo 81.55 42 eP P 11 55 42.8 +2.2
KECS pmax pmax
comp=Z,5.0nm,0.8s
KECS Kecovo 81.55 42 eP P 11 55 42.8 +2.2
CRVS Cervenica-Dubn 82.12 42 eP P 11 55 45.7 +2.1
CRVS pmax pmax
comp=Z,25nm,1.1s
CRVS Cervenica-Dubn 82.12 42 eP P 11 55 45.7 +2.1
FIA1 FINESS Array S 82.35 29 P P 11 55 45.4 +1.0
FINES FINESS Array B 82.35 29 P P 11 55 45.5 +1.1
comp=Z,26nm,0.7s,baz=300,slow=3.8,SNR=58
FINES LR LR 12 26 31.8
comp=Z,406nm,20.1s,baz=262,slow=31
PABE Paberze 82.44 35 eP P 11 55 46.5 +1.5
KOLS Kolonicke sedl 82.64 42 eP P 11 55 48.4 +2.1
KOLS pmax pmax
comp=Z,7.0nm,1.1s
KOLS Kolonicke sedl 82.64 42 eP P 11 55 48.4 +2.1
SIRR Siria 82.71 44 ⇑P P 11 55 48.6 +1.9
KWP Kalwaria Pacla 82.79 41 eP P 11 55 49.4 +2.4
KWP Kalwaria Pacla 82.79 41 P P 11 55 48.5 +1.4
KWP Kalwaria Pacla 82.79 41 eP P 11 55 49.4 +2.4
BZS Buzias 82.80 45 ⇓P P 11 55 49.3 +2.1
BZS Buzias 82.80 45 ⇑P P 11 55 49.3 +2.1
TRPA Tarpa 82.96 42 ⇓P P 11 55 49.9 +2.0
VSU Vasula 83.31 32 eP P 11 55 50.3 +0.8
VSU IAmb IAmb 11 55 51.8
comp=Z,148nm,0.8s
VSU Vasula 83.31 32deP P 11 55 50.2 +0.7
VSU pmax pmax
comp=Z,136nm,0.8s
DRGR 83.33 44 ⇑P P 11 55 51.7 +1.7
DRGR 83.33 44 ⇑P P 11 55 51.7 +1.7
ISAL Salakas 83.63 35 eP P 11 55 52.9 +1.7
ISAL IAmb IAmb 11 55 57.0
comp=Z,8.3nm,1.0s
GZR Gura Zlata 83.64 45 ⇑P P 11 55 53.7 +2.1
GZR Gura Zlata 83.64 45 ⇑P P 11 55 53.7 +2.1
IZAR Zarasai 83.66 34 eP P 11 55 52.5 +1.2
GAMB Gambell 83.68 334 IAmb IAmb 11 55 53.8
comp=Z,12nm,0.8s
IIGN Ignalina 83.73 35 eP P 11 55 53.8 +2.0
IIGN IAmb IAmb 11 55 54.6
comp=Z,11nm,0.8s
APA Apatity 83.84 22⇓iP P 11 55 53.0 +0.9
APA pmax pmax
comp=Z,12nm,0.8s
APA MLR MLR
comp=Z,800nm,22.0s
LVZ Lovozero 84.19 22⇑eP P 11 55 54.2 +0.3
LVZ pmax pmax
comp=Z,34nm,1.7s
LOT Lotru 84.32 45 ⇑P P 11 55 56.2 +1.0
ARCR ARCALIA 84.37 43 ⇑P P 11 55 57.5 +2.3
VTS Vitosha 84.52 48 ⇑P P 11 55 58.5 +2.2
VTS Vitosha 84.52 48 IAmb IAmb 11 56 00.1
comp=Z,17nm,1.0s
VTS Vitosha 84.52 48 ⇑P P 11 55 58.5 +2.2
AGG Agios Georgios 84.58 51 IAmb IAmb 11 55 59.8
comp=Z,20nm,1.1s
BUR08 Bucovina Ar. S 84.81 42 IAmb IAmb 11 56 01.5
comp=Z,11nm,0.9s
BURAR Bucovina Array 84.83 43 ⇑P P 11 55 59.9 +2.2
BURAR Bucovina Array 84.83 43 ⇑P P 11 55 59.9 +2.2
ARR Arges 84.93 45 ⇑P P 11 56 00.1 +1.9
VOIR 85.20 45 ⇑P P 11 56 01.4 +1.9
VOIR 85.20 45 ⇑P P 11 56 01.4 +1.9
DOPR Dopca 85.31 44 ⇓P P 11 56 01.8 +1.8
PLVB Pleven 85.35 47 ⇑P P 11 56 02.0 +1.8
MLR Muntele Rosu 85.80 44 ⇑P P 11 56 04.8 +2.2
MLR Muntele Rosu 85.80 44 ⇑P P 11 56 04.8 +2.2
PLOR Plostina 86.20 44 ⇑P P 11 56 06.9 +2.5
PLOR Plostina 86.20 44 ⇑P P 11 56 06.9 +2.5
VRI Vrincioaia 86.25 44 ⇑P P 11 56 07.0 +2.4
VRI Vrincioaia 86.25 44 ⇑P P 11 56 07.0 +2.4
AKASG Malin Array Be 86.63 39 P P 11 56 06.7 +0.4
comp=Z,6.6nm,1.0s,baz=281,slow=3.8,SNR=8.9
AKASG LR LR 12 33 31.7
comp=Z,110nm,19.0s,baz=290,slow=35
AKASG Malin Array Be 86.63 39ceP P 11 56 06.6 +0.3
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKBB Malin Array Si 86.63 39 P P 11 56 06.5 +0.1
AKBB IAmb IAmb 11 56 08.0
comp=Z,9.4nm,1.1s
AKBB Malin Array Si 86.63 39 P P 11 56 06.5 +0.1
AKBB pmax pmax
comp=Z,9.0nm,1.1s
SORM Soroca 86.75 41 ⇑P P 11 56 08.2 +1.2
SORM Soroca 86.75 41 ⇑P P 11 56 08.2 +1.2
TMCR Tamitsa 86.80 25 eP P 11 56 06.9 0.0
TMCR pmax pmax
comp=Z,23nm,0.8s
ALN Alexandroupoli 86.96 49 IAmb IAmb 11 56 10.8
comp=Z,6.7nm,0.8s
CFR Carcaliu 87.38 44 ⇑P P 11 56 10.6 +0.5
CFR Carcaliu 87.38 44 ⇑P P 11 56 10.6 +0.5
TSCT Constanta Port 88.00 45 ⇑P P 11 56 14.8 +1.7
KLMR Klimovskoe 88.73 27 eP P 11 56 15.8 -0.4
KLMR pmax pmax
comp=Z,30nm,1.0s
KLMR Klimovskoe 88.73 27 eP P 11 56 15.8 -0.4
KLMR AMP 11 56 17.9
comp=Z,30nm,1.0s
KLMR PP PP 11 59 37.8 -6.9
KLMR LR LR 12 26 57.8
OBN Obninsk 89.46 33 eP P 11 56 19.9 +0.2
OBN e 11 59 49.8
OBN ePPP PPP 12 01 47.6
OBN pmax pmax
comp=Z,16nm,0.5s
OBN MLR MLR
comp=Z,250nm,19.0s
BILL Bilibino 90.05 342 P P 11 56 22.3 +0.1
BILL Bilibino 90.05 342 eP P 11 56 23.0 +0.8
BILL e 11 56 35.0
BILL e 11 59 53.1
BILL ePPP PPP 12 01 53.2
BILL pmax pmax
comp=Z,22nm,1.8s
BILL MLR MLR
comp=Z,447nm,20.0s
PRGR Permogore 91.03 25 eP P 11 56 27.1 +0.2
PRGR e*PP sP 11 56 37.4 -0.8
PRGR pmax pmax
comp=Z,21nm,0.8s
LPSR Galich'ya Gora 91.71 35 eP P 11 56 30.6 +0.3
LPSR pmax pmax
comp=Z,30nm,0.8s
VSR Storozhevoye 92.39 36 eP P 11 56 33.5 0.0
VSR pmax pmax
comp=Z,8.0nm,0.6s
VORD Divnogorie 92.56 36 eP P 11 56 34.2 0.0
VORD pmax pmax
comp=Z,5.0nm,0.6s
BR131 Keskin Array S 92.86 48 P P 11 56 36.9 +0.8
BR131 IAmb IAmb 11 56 38.0
comp=Z,7.9nm,0.8s
BR131 Keskin Array S 92.86 48 P P 11 56 36.9 +0.8
BR131 pmax pmax
comp=Z,8.0nm,0.8s
BRTR Keskin Array B 92.86 48 P P 11 56 37.2 +1.1
comp=Z,7.5nm,0.8s,baz=262,slow=3.5,SNR=37
VNA3 Neumayer Olymp 92.90 164 P P 11 56 36.1 +0.8
VNA1 Neumayer--Stat 93.00 163 P P 11 56 37.1 +1.4
VNA2 Neumayer--Watz 93.39 163 P P 11 56 38.3 +0.7
baz=302,slow=5.9
VRH Novokhopyorsk 93.86 36 eP P 11 56 40.2 0.0
VRH pmax pmax
comp=Z,10.0nm,0.7s
TIXI Tiksi 95.01 354 P P 11 56 45.1 +0.1
comp=Z,4.3nm,0.9s,baz=42,slow=2.3,SNR=7.1
TIXI Tiksi 95.01 354 P P 11 56 44.3 -0.8
TIXI IAmb IAmb 11 56 46.0
comp=Z,4.8nm,1.0s
TIXI Tiksi 95.01 354⇑iP P 11 56 45.2 +0.1
TIXI pmax pmax
comp=Z,5.0nm,0.9s
SNAA Sanae 95.03 163 P P 11 56 45.7 +0.6
SNAA Sanae 95.03 163 P P 11 56 45.5 +0.4
SNAA IAmb IAmb 11 56 57.3
comp=Z,10nm,1.1s
SNAA Sanae 95.03 163⇓eP P 11 56 45.6 +0.4
NRIK Noril'sk 96.94 8 P P 11 56 53.6 -0.3
comp=Z,8.9nm,1.0s,baz=50,slow=3.8,SNR=9.9
NRIK LR LR 12 42 09.0
comp=Z,251nm,19.6s,baz=350,slow=36
SEY Seymchan 97.75 342⇓iP Pdif 11 56 58.5 +0.7
KBZ Khabaz 97.78 42 P Pdif 11 56 59.9 +1.6
comp=Z,1.8nm,0.9s,baz=314,slow=8.7,SNR=4.0
KBZ LR LR 12 38 00.7
comp=Z,90nm,21.8s,baz=307,slow=33
NEY Neytrino 97.87 43⇑eP Pdif 11 57 01.6 +2.6
NEY pmax pmax
comp=Z,1.0nm,0.9s
ARU Arti 99.47 26⇑eP Pdif 11 57 08.3 +2.7
ARU pmax pmax
comp=Z,5.0nm,1.3s
KURK Kurchatov 111.59 20 iPKIKP PKiKP 12 01 56.9 -0.4
KURBB Kurchatov Arra 111.64 21 PKiKP PKiKP 12 01 56.9 -0.5
comp=Z,0.1nm,0.3s,baz=320,slow=2.6,SNR=4.7
MK31 Makanchi Array 116.20 20 PKiKP PKiKP 12 02 05.0 -1.3
MKAR Makanchi Array 116.20 20 PKP PKiKP 12 02 05.6 -0.8
comp=Z,0.4nm,0.5s,baz=299,slow=2.5,SNR=6.6
MKAR PKKPbc PKKPbc 12 12 38.4 +1.0
comp=Z,0.4nm,0.6s,baz=144,slow=8.0,SNR=5.3
MKAR Makanchi Array 116.20 20c iPKIKP PKiKP 12 02 05.5 -0.8
MKAR pmax pmax
comp=Z,1.0nm,0.5s
AAK Ala-Archa 116.53 28 PKP PKiKP 12 02 07.6 +0.3
comp=Z,0.9nm,0.5s,baz=170,slow=2.3,SNR=3.7
AAK Ala-Archa 116.53 28⇓iPKIKP PKiKP 12 02 07.7 +0.4
KSH Kashi 119.67 29 PKP PKPdf 12 02 09.4 -4.0
KSH sPKP 12 02 20.1
KSH SKS SKSdf 12 09 24.8 +0.7
KSH LR LR
comp=Z,290nm,11.7s
SONM Songino Array 119.88 2 PKP PKPdf 12 02 13.1 -0.4
comp=Z,0.7nm,0.6s,baz=292,slow=0.9,SNR=5.9
SONM PKKPbc PKKPbc 12 12 21.7 -2.7
comp=Z,0.7nm,0.6s,baz=171,slow=4.1,SNR=6.4
USRK Ussuriysk Ar. 119.90 341 PKP PKPdf 12 02 13.1 -0.4
comp=Z,1.1nm,0.7s,baz=15,slow=6.0,SNR=3.5
USRK PP PP 12 03 32.8 -3.5
comp=Z,2.3nm,0.7s,baz=60,slow=8.7,SNR=5.0
WMQ Urumqi 120.59 18 ePKP PKPdf 12 02 14.9 0.0
WMQ LR LR
comp=Z,440nm,29.2s
WMQ LR LR
comp=Z,130nm,29.1s
MJAR Matsushiro Arr 124.11 332 PKP PKPdf 12 02 21.7 -0.1
comp=Z,2.6nm,0.7s,baz=166,slow=0.6,SNR=6.4
KSRS Korea Array 127.31 341 PKP PKPdf 12 02 28.0 +0.1
comp=Z,3.6nm,0.8s,baz=1.3,slow=1.6,SNR=18
KSRS Korea Array 127.31 341 PKIKP PKPdf 12 02 28.0 +0.1
BJI Beijing 127.33 353 PKP PKiKP 12 02 28.3 -0.1
GTA Gaotai 127.61 9 PKP PKPdf 12 02 28.9 +0.3
GTA LR LR
comp=Z,150nm,23.5s
GTA LR LR
comp=Z,130nm,20.0s
GTA LR LR
comp=Z,290nm,24.8s
LZH Lanzhou 131.40 6 ePKP PKPdf 12 02 34.8 -1.1
LZH LR LR
comp=Z,260nm,17.0s
LZH LR LR
comp=Z,270nm,17.3s
LZH LR LR
comp=Z,280nm,20.1s
XAN Xi'an 133.71 0 PKP PKPdf 12 02 40.3 +0.1
NJ2 Nanjing 134.76 349 ePKP PKPdf 12 02 41.4 -0.7
WHN Wuhan 136.92 354 PKP PKPdf 12 02 45.1 -1.1
STKA Stephens Creek 144.61 232 PKP PKPbc 12 02 59.1 +0.4
comp=Z,14nm,0.7s,baz=123,slow=4.8,SNR=22
STKA Stephens Creek 144.61 232 PKPbc 12 02 58.9 +0.2

SLVN	Son La	145.96	9		PKPbc	12 03 03.7	+0.3
COEN	Coen	146.99	264	PKPdf	PKPdf	12 03 01.4	-3.0
COEN					PKPbc	12 03 06.4	-0.1
CHTO	Chiang Mai	147.25	18		PKPbc	12 03 06.9	-0.2
CHTO	Chiang Mai	147.25	18	PKP2	PKPbc	12 03 06.9	-0.2
CM31	Chiang Mai Arr	147.59	19		PKPbc	12 03 08.2	+0.2
CMAR	Chiang Mai Arr	147.59	19	PKPbc	PKPbc	12 03 08.7	+0.6
	comp=Z,19nm,0.8s,baz=324,slow=4.1,SNR=55						
CMAR	Chiang Mai Arr	147.59	19*c*	*i*PKP2	PKPbc	12 03 08.5	+0.5
CMAR				pmax	pmax		
	comp=Z,19nm,0.8s						
PBKT	Sadao Pong	149.97	16		PKPbc	12 03 14.2	+0.1
AS31	Alice Springs	154.14	241		PKPdf	12 03 15.6	+0.2
AS31				PKPbc	pPKPdf	12 03 23.0	-1.0
ASAR	Alice Springs	154.14	241	PKP	PKPdf	12 03 15.3	-0.1
	comp=Z,1.6nm,0.8s,baz=92,slow=1.6,SNR=14						
ASAR				PKPbc	pPKPdf	12 03 23.1	-0.9
	comp=Z,4.4nm,0.7s,baz=107,slow=2.3,SNR=38						
WB2	Warramunga Arr	154.84	250		PKPdf	12 03 16.5	+0.1
WB2				PKPbc	PKPbc	12 03 24.7	-0.4
WB0	Warramunga Arr	154.84	250		PKPdf	12 03 16.4	-0.1
WB0				PKPbc	PKPbc	12 03 24.8	-0.3
WRAB	Tennant Creek	154.84	250*c*	*i*PKIKP	PKPbc	12 03 25.2	+0.1
WRAB				pmax	pmax		
	comp=Z,14nm,1.7s						
WRA	Warramunga Arr	154.85	250	PKP	PKPdf	12 03 16.2	-0.2
	comp=Z,2.8nm,0.9s,baz=94,slow=1.4,SNR=15						
WRA				PKPbc	PKPbc	12 03 24.6	-0.5
	comp=Z,5.7nm,0.8s,baz=98,slow=2.6,SNR=28						
WRA				PKPab	PKPab	12 03 39.5	-0.8
	comp=Z,3.4nm,0.6s,baz=98,slow=3.0,SNR=7.1						

*JMA **21** 11:55:19.3±0.1, 23°.97N×121°.94E, h36km±3km, M3.0*
*TAP **21** 11:55:19.8, 24°.02N×121°.94E, h42km, ML3.5, C*
ISC 21 11:55:18.1±1.0, **23°.99N**±0°.02×**121°.98E**±0°.01, **h18**km±3km, **n110**, σ**0s.64**/214, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	Hwalien	0.34	267	*i* P	Pn	11 55 28.6	+0.5
	baz=263						
HWA				S	Sn	11 55 35.6	+1.1
	baz=263						
ENLB	Shoufeng	0.35	256	P	Pn	11 55 27.9	-0.5
	baz=247						
ENLB				S	Sn	11 55 35.2	+0.4
	baz=247						
NACB	Ninganchiao	0.39	298	P	Pn	11 55 28.6	-0.3
	baz=292						
NACB				*i* S	Sn	11 55 35.1	-0.7
	baz=292						
ENA	Nanau	0.48	334	*i* P	Pn	11 55 30.0	-0.1
	baz=328						
ENA				*i* S	Sn	11 55 37.7	-0.4
	baz=328						
ETLH	Xiulin Townshi	0.50	295	P	Pn	11 55 30.1	-0.3
	baz=294						
ETLH				S	Sn	11 55 37.6	-1.1
	baz=294						
ESL	Shilin	0.53	250	*i* P	Pn	11 55 30.3	-0.4
	baz=254						
ESL				S	Sn	11 55 38.7	-0.5
	baz=254						
EOS1	EOS1	0.57	14	P	Pn	11 55 31.7	+0.4
	baz=27						
EOS1				S	Sn	11 55 40.7	+0.5
	baz=27						
EGFH	Guangfu	0.60	237	P	Pn	11 55 31.4	-0.2
	baz=229						
EGFH				S	Sn	11 55 41.2	+0.4
	baz=229						
TWC	Suao	0.62	349	*i* P	Pn	11 55 32.3	+0.2
	baz=1.0						
TWC				*i* S	Sn	11 55 41.3	-0.3
	baz=1.0						
WHF	Hehuan Shan	0.67	283	*i* P	Pn	11 55 32.6	-0.5
	baz=282						
WHF				S	Sn	11 55 42.0	-1.2
	baz=282						
NNSB	Datong	0.69	309	P	Pn	11 55 32.8	-0.3
	baz=300						
NNSB				S	Sg	11 55 41.9	+0.8
	baz=300						
NNSH	Datong	0.69	309	*i* P	Pn	11 55 32.9	-0.3
	baz=300						
NNSH				S	Sn	11 55 42.1	-1.4
	baz=300						
NNS	Nan Shan	0.71	309	*i* P	Pn	11 55 33.0	-0.4
	baz=301						
NNS				S	Sn	11 55 42.7	-1.1
	baz=301						
HGSD	Ruisui	0.71	226	P	Pn	11 55 33.4	+0.1
	baz=218						
HGSD				*e*S	Sn	11 55 44.2	+0.6
	baz=218						
OWD	Renai	0.73	267	P	Pn	11 55 33.5	-0.2
	baz=273						
OWD				S	Sg	11 55 42.7	+0.4
	baz=273						
CHGB	Renai	0.74	275	P	Pn	11 55 33.7	-0.1
	baz=274						
CHGB				S	Sn	11 55 43.7	-1.0
	baz=274						
NDT	Datong Townshi	0.74	325	*i* P	Pn	11 55 33.8	+0.1
	baz=326						
NDT				S	Sn	11 55 43.4	-1.1
	baz=326						
ENTT	Nioudou	0.74	330	*i* P	Pn	11 55 33.8	0.0
	baz=331						
ENTT				S	Sn	11 55 43.8	-0.8
	baz=331						
EHY	Hungye	0.77	231	P	Pn	11 55 33.9	-0.2
	baz=228						
EHY				S	Sg	11 55 44.0	+0.5
	baz=228						
TWT	Tachien	0.78	290	P	Pn	11 55 34.7	+0.4
	baz=280						
TWT				S	Sn	11 55 44.9	-0.7
	baz=280						
TWE	Neicheng	0.78	339	*i* P	Pn	11 55 34.4	+0.2
	baz=341						
TWE				S	Sn	11 55 45.1	-0.3
	baz=341						
TDCB	Techi	0.79	289	P	Pn	11 55 34.5	+0.1
	baz=281						
TDCB				S	Sg	11 55 44.7	+0.5
	baz=281						
ILA	Ilan	0.80	345	S	Sn	11 55 46.4	+0.6
	baz=347						
VWDT	VWDT	0.80	253	P	Pn	11 55 34.8	+0.3
	baz=242						
VWDT				S	Sg	11 55 45.1	+0.7
	baz=242						
SLBB	Yuanshan	0.82	338	*i* P	Pn	11 55 35.2	+0.4
	baz=339						
SLBB				*e*S	Sn	11 55 45.7	-0.7
	baz=339						
YULB	Yu-li	0.86	226	P	Pg	11 55 35.1	+0.1
	baz=235						
YULB				*e*S	Sb	11 55 46.2	+0.4
	baz=235						
NTC	Toucheng	0.87	351	P	Pn	11 55 35.9	+0.5
	baz=4.0						
NTC				S	Sn	11 55 47.6	0.0
	baz=4.0						
YHNB	Yeheng	0.87	321	P	Pn	11 55 35.7	+0.2
	baz=312						
YHNB				S	Sg	11 55 46.4	-0.3
	baz=312						
NSK	Sanguang	0.88	321	*i* P	Pn	11 55 35.6	-0.1
	baz=312						
NSK				*i* S	Sg	11 55 46.5	-0.6
	baz=312						
TWF1	Yuli	0.89	224	*i* P	Pb	11 55 35.5	+0.4
	baz=234						
TWF1				*e*S	Sb	11 55 47.3	+0.7
	baz=234						
NWLT	Wulai	0.89	331	P	Pn	11 55 36.1	+0.3
	baz=332						
NWLT				S	Sg	11 55 47.2	-0.2
	baz=332						
SSLB	Suanglung	0.96	258	P	Pg	11 55 36.8	+0.1
	baz=256						
SSLB				S	Sg	11 55 49.3	-0.1
	baz=256						
DPDB	Guoxing	0.96	273	P	Pg	11 55 37.1	+0.3
	baz=272						
DPDB				S	Sn	11 55 49.9	-0.1
	baz=272						
WHP	Taichung City	0.98	287	P	Pg	11 55 37.8	+0.5
	baz=286						
WHP				S	Sg	11 55 49.9	-0.3
	baz=286						
TIPB	Shuangxi	0.98	352	P	Pg	11 55 38.0	+0.7
	baz=3.0						
TIPB				S	Sn	11 55 50.4	-0.2
	baz=3.0						
SMLT	Sun Moon Lake	0.99	264	*i* P	Pg	11 55 37.5	+0.1
	baz=258						
SMLT				S	Sg	11 55 50.7	+0.2
	baz=258						
JYNG	Yonagunijimaku	1.00	63	P	Pg	11 55 38.0	+0.5
JYNG				S	Sn	11 55 51.2	+0.5
FULB	Fuli	1.01	218	P	Pn	11 55 37.5	+0.1
	baz=206						
FULB				S	Sg	11 55 51.5	+0.5
	baz=206						
TWB1	Santiao Chiao	1.01	1	*e*P	Pg	11 55 38.2	+0.4
	baz=2.0						
TWB1				*e*S	Sn	11 55 51.1	-0.1
	baz=2.0						
TYC	Yuchr	1.03	265	*i* P	Pg	11 55 37.9	-0.2
	baz=264						
TYC				S	Sb	11 55 51.0	+0.5
	baz=264						
TWA	Mucha	1.05	340	P	Pg	11 55 39.2	+0.7
	baz=329						
TWA				S	Sn	11 55 52.1	+0.1
	baz=329						
NHDH	Xindian Distri	1.05	337	P	Pg	11 55 39.2	+0.7
	baz=327						
NHDH				S	Sg	11 55 52.3	-0.1
	baz=327						
CHKT	Chengkung	1.05	212	*e*P	Pb	11 55 37.8	0.0
	baz=200						
CHKT				S	Sb	11 55 50.0	-1.2
	baz=200						
YOJ	Yonaguni jima	1.05	63	P	Pg	11 55 39.0	+0.3
	baz=65						
YOJ				S	Sg	11 55 52.8	+0.3
	baz=65						
YOJ	Yonaguni jima	1.05	63	P	Pg	11 55 38.9	+0.3
YOJ				*e*S	Sg	11 55 52.2	-0.3
YUS	Yu-Shan	1.06	242	*i* P	Pg	11 55 39.0	+0.1
	baz=231						
YUS				S	Sb	11 55 52.0	0.0
	baz=231						
WHYT	Xinyi Township	1.07	254	P	Pg	11 55 39.2	+0.3
	baz=246						
WHYT				S	Sn	11 55 53.0	+0.4
	baz=246						
TATO	Taipei	1.07	336	P	Pg	11 55 38.6	-0.4
	baz=336						
TATO				S	Sg	11 55 52.9	-0.3
	baz=336						
WLTB	Daxi	1.08	323	*e*P	Pg	11 55 39.1	0.0
	baz=323						
WLTB				*e*S	Sg	11 55 53.0	-0.3
	baz=323						
NWF	Wu-fen Shan	1.09	351	P	Pg	11 55 39.3	0.0
	baz=351						
NWF				S	Sg	11 55 54.3	+0.7
	baz=351						
WFSB	Wu-fen Shan	1.09	351	P	Pg	11 55 39.8	+0.5
	baz=351						
WFSB				S	Sg	11 55 54.1	+0.5
	baz=351						
LIOB	Emei	1.09	307	*i* P	Pg	11 55 39.6	+0.3
	baz=300						
LIOB				S	Sg	11 55 53.2	-0.4
	baz=300						
NSTT	Nanjuang	1.09	306	*i* P	Pg	11 55 39.6	+0.2
	baz=299						
NSTT				*i* S	Sn	11 55 53.0	-0.1
	baz=299						
TAP1	Taipei	1.12	339	*e*S	Sg	11 55 54.0	-0.6
	baz=328						
TWQ1	Liyutan	1.15	288	P	Pg	11 55 40.2	-0.2
	baz=288						
TWQ1				S	Sg	11 55 55.3	-0.3
	baz=288						
WJS	Zhushan	1.15	262	*i* P	Pg	11 55 41.2	+0.7
	baz=261						
WJS				S	Sg	11 55 56.4	+0.7
	baz=261						
ALS	Alishan	1.18	246	P	Pg	11 55 40.8	-0.2
	baz=245						
ALS				S	Sn	11 55 56.1	+0.5
	baz=245						
NSY	Sanyi	1.19	291	*i* P	Pg	11 55 41.0	-0.1
	baz=291						
NSY				S	Sg	11 55 56.5	-0.2
	baz=291						
WNT	Mingjian	1.19	265	P	Pg	11 55 41.2	+0.1
	baz=264						
WNT				S	Sg	11 55 56.7	0.0
	baz=264						
ELDTW	Lidau	1.19	228	*i* P	Pn	11 55 40.0	+0.1
	baz=226						
ELDTW				S	Sb	11 55 54.1	-1.2
	baz=226						
TCU	Taichung	1.20	278	P	Pg	11 55 41.2	-0.1
	baz=277						
TCU				S	Sg	11 55 57.7	+0.7
	baz=277						
SBCB	Hsinchu	1.20	312	P	Pg	11 55 40.9	-0.6
	baz=312						
SBCB				S	Sg	11 55 57.8	+0.5
	baz=312						
YM01	YM01	1.21	342	P	Pg	11 55 40.5	-1.0
	baz=328						
YM01				S	Sg	11 55 56.1	-1.3
	baz=328						
NCUH	Zhongli	1.21	324	P	Pg	11 55 41.1	-0.4
	baz=323						
NCUH				S	Sg	11 55 56.8	-0.6
	baz=323						
NCU	National Centr	1.21	324	P	Pg	11 55 40.9	-0.6
	baz=324						
NCU				S	Sg	11 55 57.2	-0.2
	baz=324						
NMLH	Miaoli	1.21	297	P	Pg	11 55 41.6	0.0
	baz=297						
NMLH				S	Sg	11 55 57.6	+0.2
	baz=297						
TWS1	Kuangyinshan	1.22	335	P	Pg	11 55 41.0	-0.6
	baz=335						
TWS1				S	Sg	11 55 57.2	-0.3
	baz=335						
YM10	YM10	1.22	342	P	Pb	11 55 40.7	0.0
	baz=328						
YM10				*e*S	Sn	11 55 55.9	-0.5
	baz=328						
HSN	Hsinchu	1.22	312	P	Pg	11 55 41.7	0.0
	baz=314						
HSN				S	Sg	11 55 57.5	-0.3
	baz=314						
YM11	YM11	1.22	343	P	Pn	11 55 40.0	-0.3
	baz=329						
YM11				*e*S	Sg	11 55 57.0	-0.9
	baz=329						
PTSB	Yuanli	1.25	292	*e*P	Pg	11 55 41.8	-0.4
	baz=291						
PTSB				S	Sg	11 55 57.7	-0.8
	baz=291						
YM03	YM03	1.25	342	*e*P	Pb	11 55 41.1	-0.1
	baz=329						
YM03				*e*S	Sg	11 55 57.3	-1.3
	baz=329						
CHN5	Tsauling	1.25	252	*i* P	Pg	11 55 42.0	-0.4
	baz=251						
CHN5				*i* S	Sn	11 55 58.2	+1.0
	baz=251						
ANP	Anpu	1.26	341	*e*P	Pb	11 55 41.4	0.0
	baz=342						
WDJ	Dajia District	1.27	286	P	Pb	11 55 41.8	+0.3
	baz=286						
WDJ				S	Sn	11 55 58.2	+0.7
	baz=286						
WCHH	Zhanghua	1.30	274	P	Pg	11 55 42.7	-0.5
	baz=274						
WCHH				S	Sg	11 55 59.7	-0.5
	baz=274						
TWY	Chenhua	1.32	345	*e*P	Pg	11 55 43.1	-0.6
	baz=345						
TWY				*e*S	Sg	11 55 59.8	-1.2
	baz=345						
WGK	Gukeng	1.33	257	P	Pg	11 55 43.3	-0.5
	baz=256						
WGK				S	Sg	11 56 01.0	-0.2
	baz=256						
WDLH	Douliu	1.35	257	P	Pb	11 55 43.4	+0.6
	baz=246						
WDLH				S	Sg	11 56 01.1	-0.8
	baz=246						
TWH	Lutao	1.36	200	*e*P	Pn	11 55 42.1	0.0
	baz=198						
TWH				S	Sn	11 55 57.8	-1.8
	baz=198						
STYT	Tauyuan	1.39	234	P	Pb	11 55 44.0	+0.4
	baz=227						
STYT				S	Sb	11 56 01.6	+0.6
	baz=227						
TPUB	Ta-pu	1.41	241	P	Pb	11 55 44.3	+0.4
	baz=240						
TPUB				S	Sb	11 56 02.6	+0.9
	baz=240						
CHN4	Tsaushan	1.42	244	*i* P	Pg	11 55 45.0	-0.5
	baz=233						
CHN4				*i* S	Sb	11 56 02.9	+1.1
	baz=233						
TWGBT	Beinan	1.43	215	P	Pn	11 55 42.3	-0.8
	baz=214						
TWGBT				S	Sn	11 55 60.0	-1.5
	baz=214						
TWG	Pinlang	1.43	216	*e*P	Pn	11 55 42.1	-1.0
	baz=214						
TWG				S	Sn	11 56 00.2	-1.3
	baz=214						
CHN2	Minshiung	1.45	252	*e*S	Sg	11 56 04.4	-0.6
	baz=251						
WTP	Ta-pu	1.45	240	*i* P	Pb	11 55 45.2	+0.6
	baz=239						
WTP				*i* S	Sb	11 56 04.2	+1.4
	baz=239						
RLNB	Erlin	1.48	266	P	Pb	11 55 45.8	+0.7
	baz=278						
RLNB				S	Sb	11 56 04.7	+1.1
	baz=278						
CHY	Chiayi	1.50	251	P	Pb	11 55 46.0	+0.5
	baz=251						
CHY				S	Sb	11 56 05.1	+0.9
	baz=251						
TWK	Hsinying	1.54	242	P	Pb	11 55 46.3	+0.1
	baz=242						
TWK				S	Sb	11 56 06.2	+0.8
	baz=242						
CHN1	Nanshi	1.55	239	*i* P	Pb	11 55 46.9	+0.6
	baz=239						
CHN1				*i* S	Sb	11 56 06.4	+0.8
	baz=239						
WTCT	Ta-ch'eng	1.56	266	*e*S	Sb	11 56 06.9	+1.1
	baz=280						
SNST	Tainan City	1.56	241	P	Pb	11 55 47.2	+0.8
	baz=240						
SNST				S	Sb	11 56 06.7	+0.8
	baz=240						
SGST	Jiashian	1.57	235	*i* P	Pb	11 55 46.2	-0.3
	baz=234						
SGST				S	Sb	11 56 06.0	0.0
	baz=234						
SLGT	Liugui	1.57	231	P	Pb	11 55 47.0	+0.3
	baz=240						
SLGT				S	Sb	11 56 07.2	+1.0
	baz=240						
IRIF	Iriomote-Funau	1.64	78	P	Pb	11 55 47.1	-0.7
IRIF				*e*S	Sb	11 56 07.7	-0.4
WSF	Szhu	1.64	258	P	Pb	11 55 47.7	-0.2
	baz=258						
WSF				S	Sb	11 56 09.1	+0.8
	baz=258						
HATJ	Hateruma jima	1.67	87	P	Pb	11 55 47.9	-0.5
HATJ				*e*S	Sb	11 56 08.2	-0.9
ECL	Taimali	1.68	214	*e*P	Pn	11 55 46.3	-0.2
	baz=213						
ECL				*e*S	Sn	11 56 06.0	-1.6
	baz=213						
CHN8	Yiju	1.74	249	P	Pb	11 55 48.7	-0.8
	baz=249						
CHN8				*e*S	Sb	11 56 11.3	+0.2
	baz=249						
SSD	Sandimen	1.75	225	P	Pb	11 55 49.5	-0.2
	baz=224						
SSD				S	Sb	11 56 11.4	+0.1
	baz=224						
MASBT	Mashibuluo	1.85	222	P	Pb	11 55 50.6	-0.8
	baz=222						
MASBT				S	Sb	11 56 14.1	0.0
	baz=222						
JKRS	Kuro-shima	1.87	82	P	Pb	11 55 50.8	-1.0
JKRS				S	Sb	11 56 13.5	-1.4
EAST	Anshuo	1.91	213	*e*P	Pn	11 55 50.2	+0.4
	baz=212						
EAST				*e*S	Sn	11 56 12.1	-1.2
	baz=212						
JIJ	Ishigaki jima	2.01	79	P	Pn	11 55 52.0	+0.8
JIJ				S	Sn	11 56 15.2	-0.7
JISG	Ishigakijimahi	2.21	74	P	Pn	11 55 54.6	+0.7
JISG				S	Sn	11 56 20.1	-0.7
JTJ	Tarama	2.57	75	P	Pn	11 56 00.1	+1.3
JTJ				S	Sn	11 56 30.0	+0.4
JIRB	Irabujima	3.03	73	P	Pn	11 56 06.4	+1.2
JIRB				*e*S	Sn	11 56 40.8	-0.2
JMJ2	Miyako jima3	3.15	76	P	Pn	11 56 08.4	+1.6
JMJ2				*e*S	Sn	11 56 44.9	+1.1
JOGS	Gusukube	3.22	76	*e*S	Sn	11 56 46.5	+0.8

*NEIC **21** 12:12:11.2±1.4, 19°.07N±0°.06×66°.59W±0°.03, h27km±13km,*
Error ellipse: s-maj=8.7km s-min=3.8km az=167.0
*RSPR **21** 12:12:12.0, 19°.12N×66°.63W, h48km±5km, MD3.0/15*
ISC 21 12:12:12.6±1.5, **19°.04N**±0°.08×**66°.60W**±0°.03, **h43**km±25km, **n48**, σ**0s.73**/62, **9C-6D**, **Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.57	173⇑	*e*P	Pn	12 12 24.0	-0.4
EMPR	Esperanza - Ma	0.57	173	*e*S	Sn	12 12 33.8	+1.1
EMPR	Esperanza - Ma	0.57	173		Pn	12 12 23.9	-0.4
EMPR					Sn	12 12 33.8	+1.1
AOPR	Arecibo Observ	0.71	192⇓	*e*P	Pn	12 12 25.6	-0.6
AOPR	Arecibo Observ	0.71	192	*e*S	Sn	12 12 36.6	+0.6
AOPR	Arecibo Observ	0.71	192		Pn	12 12 25.6	-0.6
AOPR					Sn	12 12 36.3	+0.2
AGPR	Aguadilla, PR	0.75	220⇑	*e*P	Pn	12 12 25.6	-1.1
AGPR	Aguadilla, PR	0.75	220	*e*S	Sn	12 12 36.7	-0.3
AGPR	Aguadilla, PR	0.75	220		Pn	12 12 25.4	-1.4
AGPR					Sn	12 12 36.0	-1.0
GCPR	Guaynabo City	0.88	146⇑	*e*P	Pn	12 12 28.1	-0.4
GCPR	Guaynabo City	0.88	146	*e*S	Sn	12 12 40.7	+0.6
GCPR	Guaynabo City	0.88	146		Pn	12 12 28.1	-0.4
GCPR					Sn	12 12 40.9	+0.7
CELP	Cerrillos	0.96	179⇓	*e*P	Pn	12 12 29.4	-0.3
CELP	Cerrillos	0.96	179		Pn	12 12 29.4	-0.3
MPR	Mayaguez	0.97	212		Pn	12 12 28.8	-0.9
MPR				Sn	Sn	12 12 43.5	+1.2
LSP	Las Mesas	0.98	208⇑	*e*P	Pn	12 12 29.2	-0.7
LSP	Las Mesas	0.98	208		Pn	12 12 29.2	-0.7
OBIP	Obispado Ponce	0.99	180⇑	*e*P	Pn	12 12 29.0	-1.1
OBIP	Obispado Ponce	0.99	180	*e*S	Sn	12 12 42.9	0.0
OBIP	Obispado Ponce	0.99	180		Pn	12 12 28.9	-1.2
OBIP					Sn	12 12 43.2	+0.3
SJG	San Juan	1.02	155		Pn	12 12 30.6	+0.1
SJG				Sn	Sn	12 12 44.8	+1.3
IDE	Isla Desecheo	1.05	232⇑	*e*P	Pn	12 12 29.7	-1.2
IDE	Isla Desecheo	1.05	232		Pn	12 12 29.7	-1.2
CRPR	Cabo Rojo, PR	1.14	205⇓	*e*P	Pn	12 12 31.6	-0.4
CRPR	Cabo Rojo, PR	1.14	205	*e*S	Sn	12 12 46.9	+0.4
CRPR	Cabo Rojo, PR	1.14	205		Pn	12 12 31.7	-0.3
CRPR					Sn	12 12 47.5	+1.1
HUMP	Col San Antoni	1.14	141⇑	*e*P	Pn	12 12 32.0	-0.1
HUMP	Col San Antoni	1.14	141	*e*S	Sn	12 12 46.2	-0.4
HUMP	Col San Antoni	1.14	141		Pn	12 12 31.9	-0.2
HUMP					Sn	12 12 46.0	-0.6
MLPR	Magueyes Islan	1.15	202⇓	*e*P	Pn	12 12 30.9	-1.3
MLPR	Magueyes Islan	1.15	202	*e*S	Sn	12 12 46.9	+0.2
MLPR	Magueyes Islan	1.15	202		Pn	12 12 31.1	-1.1
MLPR					Sn	12 12 47.3	+0.6
ICMP	Isla Caja de M	1.15	176		Pn	12 12 31.8	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
IGPR	InterUniversit	1.17	156⇓	eP	Pn	12 12 32.7	+0.3
IGPR	InterUniversit	1.17	156	eS	Sn	12 12 47.7	+0.5
IGPR	InterUniversit	1.17	156		Pn	12 12 32.9	+0.4
IGPR					Sn	12 12 48.0	+0.7
MTP	Monte Pirata	1.37	133⇑	eP	Pn	12 12 34.8	-0.4
MTP	Monte Pirata	1.37	133	eS	Sn	12 12 52.8	+0.6
MTP	Monte Pirata	1.37	133		Pn	12 12 34.9	-0.3
MTP					Sn	12 12 52.7	+0.6
CUPR	Culebra, Puert	1.45	120⇑	eP	Pn	12 12 35.6	-0.7
CUPR	Culebra, Puert	1.45	120	eS	Sn	12 12 53.4	-0.6
CUPR	Culebra, Puert	1.45	120		Pn	12 12 35.9	-0.4
CUPR					Sn	12 12 53.6	-0.5
STVI	Saint Thomas	1.71	113⇓	eP	Pn	12 12 39.4	-0.6
STVI	Saint Thomas	1.71	113	eS	Sn	12 13 00.7	+0.3
STVI	Saint Thomas	1.71	113		Pn	12 12 39.2	-0.6
STVI					Sn	12 13 00.1	-0.4
PCDR	Punta Cana, DR	1.77	253	Pn	Pn	12 12 40.8	+0.1
DR12	Loma Pena Alta	2.64	265		Pn	12 12 52.6	-0.2
SDDR	Presa de Saban	4.43	270	Pn	Pn	12 13 18.5	+1.1

IDC **21** *12:14:36.8±0.7, 24°11S×115°56W, h0km, mb4.3/12, mb1 4.5/12, mb1mx4.4/26, mbtmp4.2/12, MS4.2/14, Ms1 4.2/14, ms1mx4.0/34, Error ellipse: s-maj=23.4km s-min=22.2km az=46.0*

NEIC **21** *12:14:38.5±1.2, 24°3S±0°1×115°49W±0°09, h10km±1km, mb4.8/98, Error ellipse: s-maj=19.2km s-min=13.7km az=190.0*

BJI **21** *12:14:40.3±0.0, 24°30S×115°50W, h10km, mB5.2/4, Ms5.2/5, Ms7 5.2/5*

GCMT **21** *12:14:42.5±0.2, 24°28S±0°02×115°44W±0°01, h14km±1km, MW5.0/109, Moment Tensor Solution. s41,c56; s109,c156; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.36±.13; $M_{\theta\theta}$-1.35±.12; $M_{\phi\phi}$2.71±.11; $M_{r\theta}$-0.31±.26; $M_{r\phi}$2.95±.09; $M_{\theta\phi}$0.68±.23; Best double couple: $M_0$3.70200×10^{16} NP1:ϕ_s72.00000°, δ73.00000°, λ-10.00000°. NP2:ϕ_s165.00000°, δ80.00000°, λ-163.00000°. Principal axes: T 4.2980, Plg5.0000°, Azm297.0000°; N -1.1920, Plg70.0000°, Azm194.0000°; P -3.1070, Plg19.0000°, Azm29.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 12:14:38.5±0.4, 24°28S±0°10×115°47W±0°07, h10km, n134, σ1§06/99, mb4.7/51, MS4.3/20, 1D, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
RPN	Rapa Nui	6.22	118	LR	LR	12 17 56.5	
	comp=Z,5μm,18.9s,baz=339,slow=31						
RPN	Rapa Nui	6.22	118	Pn	Pn	12 16 10.2	-0.2
PTCN	Pitcairn Islan	13.32	264	Pn	Pn	12 17 45.9	-1.9
RKT	Rikitea	17.90	270	eLR	LR	12 22 49.3	
	comp=Z,3μm,25.8s						
TAOE	Nuku Hiva Isla	28.11	299	eLR	LR	12 27 35.2	
	comp=Z,2μm,26.1s,baz=136						
MEH	Mehetia	31.02	276	eT	T	12 53 22.4	
	9.9nm,0.2s						
TBI	Tubuai	31.07	265	eLR	LR	12 28 56.9	
	comp=Z,941nm,27.8s,baz=96						
TIAR	Tiarei	32.28	275	eT	T	12 54 56.1	
	3.6nm,0.3s						
PPTF	Pamatai, Papee	32.47	275	P	P	12 21 09.5	+0.1
PPT2	Papeete2	32.48	275	eS	S	12 26 26.8	+2.1
	164nm,23.2s						
PPT2				eLR	LR	12 29 27.5	
	comp=Z,1μm,28.2s						
PPT	Papeete	32.49	275	LR	LR	12 29 58.7	
	comp=Z,427nm,20.4s,baz=206,slow=28						
PPT	Papeete	32.49	275	P	P	12 21 10.2	+0.7
ATAH	Atahualpa	39.38	71	P	P	12 22 09.4	+0.4
	6.5nm,0.8s,baz=246,slow=9.9,SNR=4.7						
PLCA	Paso Flores	40.81	125	P	P	12 22 22.4	+2.1
	3.6nm,0.8s,baz=320,slow=9.1,SNR=8.4						
PLCA				LR	LR	12 34 57.2	
	comp=Z,989nm,20.9s,baz=288,slow=30						
PLCA	Paso Flores	40.81	125	P	P	12 22 20.6	+0.3
PLCA				IAmb	IAmb	12 22 25.9	
	comp=Z,38nm,1.6s						
RAR	Rarotonga	40.84	265	LR	LR	12 34 35.8	
	comp=Z,211nm,21.7s,baz=105,slow=29						
GO02	Mina Guanaco	41.53	101	P	P	12 22 26.7	0.0
GO02				IAmb	IAmb	12 22 30.1	
	comp=Z,32nm,1.6s						
PB04	IPOC Station P	41.53	97	P	P	12 22 26.2	-0.3
PB04				IAmb	IAmb	12 22 32.1	
	comp=Z,43nm,1.4s						
CFA	Coronel Fontan	42.10	111	LR	LR	12 35 43.5	
	comp=Z,913nm,18.9s,baz=274,slow=30						
PB01	IPOC Station P	42.41	95	P	P	12 22 33.6	-0.1
LVC	Limon Verde	42.60	98	P	P	12 22 35.0	-0.5
OTAV	Otavalo	43.37	61	P	P	12 22 42.1	+0.2
OTAV				IAmb	IAmb	12 22 55.3	
	comp=Z,16nm,1.2s						
LPAZ	La Paz	44.94	89	P	P	12 22 54.9	+0.2
	comp=Z,3.2nm,0.6s,baz=282,slow=5.7,SNR=12						
LPAZ	La Paz	44.94	89	P	P	12 22 54.6	-0.1
LPAZ				IAmb	IAmb	12 22 56.9	
	comp=Z,14nm,1.4s						
ZAIG	Zacatecas	48.42	16	P	P	12 23 21.8	+0.5
ROSC	El Rosal	49.42	60	P	P	12 23 29.5	+0.1
SAML	Samuel	52.07	82	P	P	12 23 49.1	+0.1
CPUP	Villa Florida	52.22	105	LR	LR	12 41 55.9	
	comp=Z,349nm,20.3s,baz=266,slow=31						
HSIG		53.17	5	P	P	12 23 57.2	+0.5
AFI	Afiamalu	53.89	270	P	P	12 24 02.1	-0.4
TX32	Lajitas Array	54.50	13	P	P	12 24 06.6	0.0
TXAR	Lajitas Array	54.50	13	P	P	12 24 05.3	-1.3
	comp=Z,0.6nm,0.9s,baz=191,slow=10,SNR=4.8						
TXAR				LR	LR	12 41 43.2	
	comp=Z,51nm,18.9s,baz=20,slow=30						
SDV	Santo Domingo	54.78	59	P	P	12 24 08.7	-0.4
SDV				IAmb	IAmb	12 24 13.4	
	comp=Z,18nm,1.2s						
319A	Douglas	55.66	6	P	P	12 24 15.5	+0.5
319A				IAmb	IAmb	12 24 18.1	
	comp=Z,15nm,1.4s						
TUC	Tucson	56.45	5	P	P	12 24 21.1	+0.6
JCT	Junction City	56.48	16	P	P	12 24 20.9	+0.1
JCT				IAmb	IAmb	12 24 23.6	
	comp=Z,11nm,0.9s						
MNTX	Cornudas Mount	56.49	10	P	P	12 24 21.0	+0.2
MNTX				IAmb	IAmb	12 24 23.1	
	comp=Z,9.7nm,1.2s						
BAR	Barrett	56.65	359	P	P	12 24 22.6	+0.7
BAR				IAmb	IAmb	12 24 31.1	
	comp=Z,17nm,1.4s						
121A	Cookes Peak, D	56.97	8	P	P	12 24 25.1	+0.8
HKT	Hockley	57.12	20	P	P	12 24 26.4	+1.2
HKT				IAmb	IAmb	12 24 39.2	
	comp=Z,13nm,1.4s						
435B	Jarrell	57.37	18	P	P	12 24 28.4	+1.4
435B				IAmb	IAmb	12 24 29.7	
	comp=Z,14nm,1.1s						
Y14A	Wickenburg	57.95	2	P	P	12 24 31.5	+0.5
KKO	Keanakako`i	58.21	315	P	P	12 24 33.3	+0.1
RIM	Rim	58.21	315	P	P	12 24 33.3	0.0
OBL	Observatory Le	58.23	315	P	P	12 24 33.3	-0.1
X16A	Lo Mia Camp, P	58.50	4	IAmb	IAmb	12 24 39.0	
	comp=Z,11nm,1.6s						
X18A	Snowflake	58.72	5	P	P	12 24 36.7	+0.1
X18A				IAmb	IAmb	12 24 39.9	
	comp=Z,5.7nm,0.9s						
W13A	Hualapai Mount	59.08	2	P	P	12 24 39.1	0.0
MSTX	Muleshoe	59.17	12	IAmb	IAmb	12 24 41.0	
	comp=Z,20nm,1.6s						
GSC	Goldstone, Bar	59.27	359	P	P	12 24 40.6	+0.3
GSC				IAmb	IAmb	12 24 48.2	
	comp=Z,9.0nm,1.2s						
ANMO	Albuquerque	59.52	9	P	P	12 24 42.2	0.0
ISA	Isabella, Lake	59.69	357	P	P	12 24 43.4	+0.2
PCRV	Puerto La Cruz	60.29	62	LR	LR	12 49 27.7	
	comp=Z,260nm,18.4s,baz=35						
U15A	North Rim	60.46	3	IAmb	IAmb	12 24 52.0	
	comp=Z,18nm,1.5s						
SHPR	Sheep Range	60.46	0	P	P	12 24 49.2	+0.6
SHPR				IAmb	IAmb	12 24 56.1	
	comp=Z,6.4nm,0.9s						
CCUT	Cedar City	61.53	2	P	P	12 24 56.6	+0.6
MSVF	Nonsavu	61.91	262	P	P	12 24 59.2	+0.4
CMB	Columbia Colle	62.16	356	IAmb	IAmb	12 25 07.8	
	comp=Z,6.5nm,1.1s						
R11A	Troy Canyon, C	62.30	360	IAmb	IAmb	12 25 05.1	
	comp=Z,5.8nm,1.1s						
SDCO	Great Sand Dun	62.41	9	IAmb	IAmb	12 25 04.3	
	comp=Z,8.2nm,1.4s						
NV11	Mina Array Sit	62.43	358	IAmb	IAmb	12 25 05.1	
	comp=Z,11nm,1.2s						
NVAR	Mina Array Bea	62.44	357	P	P	12 25 02.6	+0.6
	comp=Z,2.6nm,0.8s,baz=186,slow=10,SNR=20						
NVAR				LR	LR	12 46 35.7	
	comp=Z,201nm,18.1s,baz=195,slow=31						
Q16A	Castle Valley	63.00	4	P	P	12 25 06.1	+0.4
KVN	Kaiserville	63.05	358	IAmb	IAmb	12 25 14.0	
	comp=Z,7.9nm,1.3s						
W41B	Gary Mavity, V	63.09	21	P	P	12 25 06.2	0.0
W41B				IAmb	IAmb	12 25 12.2	
	comp=Z,14nm,1.3s						
AFDM	Forest Hills D	63.11	355	P	P	12 25 06.4	+0.2
AFDM				IAmb	IAmb	12 25 09.3	
	comp=Z,6.9nm,1.2s						
BDFB	Brasilia	63.47	96	LR	LR	12 50 22.0	
	comp=Z,207nm,18.9s,baz=260,slow=34						
P17A	Butcher Ranch,	63.58	4	P	P	12 25 09.3	-0.1
BEKR	Beckworth	63.98	356	P	P	12 25 12.7	+0.5
BEKR				IAmb	IAmb	12 25 20.0	
	comp=Z,7.1nm,1.3s						
DUG	Dugway, Tooele	64.19	2	IAmb	IAmb	12 25 17.2	
	comp=Z,8.9nm,1.1s						
ISCO	Idaho Springs	64.41	8	IAmb	IAmb	12 25 18.8	
	comp=Z,6.9nm,1.4s						
JLU	Jordanelle	64.66	3	P	P	12 25 17.1	+0.5
QSPA	South Pole Qui	65.88	180	P	P	12 25 24.9	+0.7
WVOR	Wild Horse Val	66.44	357	P	P	12 25 27.6	-0.4
WVOR				IAmb	IAmb	12 25 36.7	
	comp=Z,6.1nm,1.1s						
HUMO	Hull Mountain	66.91	354	IAmb	IAmb	12 25 39.8	
	comp=Z,13nm,1.2s						
BW06	Boulder Array	66.94	5	P	P	12 25 31.6	+0.3
BW06				IAmb	IAmb	12 25 32.8	
	comp=Z,6.4nm,1.1s						
PD31	Pinedale Array	66.94	5	P	P	12 25 30.9	-0.4
PDAR	Pinedale Array	66.94	5	P	P	12 25 29.6	-1.6
	comp=Z,2.1nm,0.8s,baz=160,slow=6.8,SNR=18						
J08A	Circle Bar Ran	67.36	358	IAmb	IAmb	12 25 37.2	
	comp=Z,5.8nm,1.1s						
MFID	Camas Ranch	67.36	360	IAmb	IAmb	12 25 35.7	
	comp=Z,6.0nm,1.1s						
PINE	Pine Mountain	67.92	356	IAmb	IAmb	12 25 45.5	
	comp=Z,10nm,0.9s						
RLMT	Red Lodge	69.30	5	IAmb	IAmb	12 26 01.1	
	comp=Z,7.6nm,1.3s						
MSO	Missoula	70.79	1	IAmb	IAmb	12 26 02.4	
	comp=Z,9.4nm,1.2s						
DZM	Mont Dzumac	70.88	254	eLR	LR	12 47 27.2	
	comp=Z,233nm,28.2s						
DZM	Mont Dzumac	70.88	254	P	P	12 25 56.6	+0.3
DZM				IAmb	IAmb	12 26 05.4	
	comp=Z,13nm,1.1s						
NOUC	Port Laguerre	70.99	254	P	P	12 25 56.6	-0.2
NOUC				IAmb	IAmb	12 26 05.7	
	comp=Z,9.3nm,0.9s						
C09A	Chrisman Ranch	71.79	358	IAmb	IAmb	12 26 08.9	
	comp=Z,18nm,1.6s						
EGMT	Eagleton	72.15	4	IAmb	IAmb	12 26 11.1	
	comp=Z,12nm,1.1s						
NEW	Newport	72.23	359	IAmb	IAmb	12 26 06.1	
	comp=Z,21nm,1.6s						
SNAA	Sanae	73.93	162	P	P	12 26 13.6	0.0
SNAA				IAmb	IAmb	12 26 15.3	
	comp=Z,11nm,1.3s						
ULM	Lac du Bonnet	76.21	13	P	P	12 26 25.5	-1.2
	comp=Z,1.5nm,0.7s,baz=222,slow=7.7,SNR=3.3						
EIDS	Eidsvold	82.84	246	P	P	12 27 03.6	0.0
YKA	Yellowknife Ar	86.47	0	P	P	12 27 26.0	-0.9
	comp=Z,3.0nm,0.8s,baz=176,slow=5.3,SNR=49						
YKA				LR	LR	13 00 35.9	
	comp=Z,54nm,20.6s,baz=0.0,slow=32						
H11S2	WAKE ISLAND Hy	86.92	292	T	T	14 03 24.2	
	baz=117,slow=75,SNR=266						
H11S1	WAKE ISLAND Hy	86.93	292	T	T	14 03 23.5	
	baz=117,slow=75,SNR=292						
H11S3	WAKE ISLAND Hy	86.94	292	T	T	14 03 22.3	
	baz=117,slow=75,SNR=210						
H11N3	WAKE ISLAND Hy	87.30	293	T	T	14 03 51.6	
	baz=112,slow=78,SNR=70						
H11N1	WAKE ISLAND Hy	87.31	293	T	T	14 03 52.1	
	baz=112,slow=78,SNR=40						
H11N2	WAKE ISLAND Hy	87.31	293	T	T	14 03 52.0	
	baz=112,slow=78,SNR=131						
TGL	Tana Glacier	87.61	347	P	P	12 27 26.5	-0.1
STKA	Stephens Creek	87.64	236	P	P	12 27 27.4	-0.2
	comp=Z,5.5nm,0.9s,baz=111,slow=6.8,SNR=7.3						
STKA	Stephens Creek	87.64	236	P	P	12 27 27.3	-0.2
BALM	Baldy	87.76	347	P	P	12 27 26.6	-0.8
SCHQ	Schefferville	89.12	26	LR	LR	13 02 40.0	
	comp=Z,113nm,21.3s,baz=324,slow=32						
ILAR	Eielson Array	92.05	347	P	P	12 27 46.2	-1.0
	comp=Z,0.3nm,0.8s,baz=190,slow=4.5,SNR=3.6						
INK	Inuvik	93.27	353	LR	LR	13 01 22.9	
	comp=Z,64nm,20.1s,baz=136,slow=30						
ASAR	Alice Springs	97.56	240	P	P	12 28 13.3	-0.2
	comp=Z,0.5nm,0.9s,baz=99,slow=5.7,SNR=3.3						
WRA	Warramunga Arr	99.07	243	P	Pdif	12 28 21.0	+0.6
	comp=Z,1.3nm,0.9s,baz=104,slow=5.3,SNR=4.8						
RES	Resolute Bay	99.62	5	LR	LR	13 10 26.3	
	comp=Z,87nm,18.2s,baz=100,slow=34						
TORD	Torodi Ar. Bea	119.89	88	PKP	PKPdf	12 33 28.8	-1.2
	comp=Z,0.9nm,0.8s,baz=300,slow=2.8,SNR=4.3						
NJ2	Nanjing	131.90	292	ePKP	PKPdf	12 33 51.8	-0.7
WHN	Wuhan	135.62	290	PKP	PKiKP	12 34 01.4	+0.4
SONM	Songino Array	139.47	316	PKP	PKPdf	12 34 03.5	-2.7
	comp=Z,0.7nm,0.8s,baz=114,slow=3.5,SNR=2.4						
AKASG	Malin Array Be	142.11	37	PKP	PKPdf	12 34 10.3	-0.4
	comp=Z,0.2nm,0.3s,baz=293,slow=2.7,SNR=3.7						
KMBO	Kilima Mbogo	143.41	130	PKP	PKPdf	12 34 13.4	-1.1
	comp=Z,1.0nm,0.3s,baz=67,slow=2.3,SNR=6.3						
KMBO	Kilima Mbogo	143.41	130		PKPbc	12 34 13.0	+1.4
LZH	Lanzhou	144.26	299	ePKP	PKPbc	12 34 13.8	+0.3
LZH				pPKP	PKiKP	12 34 21.9	+3.1
LZH				LR	LR		
	comp=Z,200nm,17.9s						
LZH				LR	LR		
	comp=Z,360nm,20.0s						
CD2	Chengdu	144.74	290	PKP	PKPbc	12 34 15.5	+0.5
PBKT	Sadao Pong	145.08	264		PKPbc	12 34 16.6	+0.2
GTA	Gaotai	146.68	305	⇓PKPbc	PKPdf	12 34 20.4	+1.2
GTA				pPKP	sPKPab	12 34 26.8	+1.6
GTA				LR	LR		
	comp=Z,170nm,22.5s						
GTA				LR	LR		
	comp=Z,170nm,21.6s						
GTA				LR	LR		
	comp=Z,190nm,23.2s						
ZAA0	Zalesovo Array	146.70	338		PKPdf	12 34 18.6	+0.1
ZALV	Zalesovo Beam	146.70	338	PKPbc	PKPdf	12 34 18.9	+0.4
	comp=Z,7.7nm,0.9s,baz=5.4,slow=2.8,SNR=22						
CMAR	Chiang Mai Arr	147.49	266	PKPbc	PKPbc	12 34 23.9	+0.3
	comp=Z,3.9nm,0.8s,baz=87,slow=1.2,SNR=27						
CHTO	Chiang Mai	147.59	267		PKPbc	12 34 23.9	+0.1
BR131	Keskin Array S	149.80	52		PKPbc	12 34 29.4	+0.6
BR131				PKPbc	PKPbc	12 34 28.9	-0.2
BRTR	Keskin Array B	149.80	52	PKPbc	PKPbc	12 34 29.0	-0.2
	comp=Z,3.1nm,0.9s,baz=228,slow=1.5,SNR=12						
BRVK	Borovoye	150.94	353		PKPbc	12 34 31.3	+0.2
BRVK				PKPab	PKPab	12 34 38.4	-0.1
KURK	Kurchatov	151.44	341	PKPdf	PKPdf	12 34 26.4	+0.1
KURK					PKPbc	12 34 31.4	-1.0
KURK				PKPab	PKPab	12 34 40.0	-0.7
WMQ	Urumqi	152.80	321	ePKPbc	PKPdf	12 34 28.9	+0.2
WMQ				LR	LR		
	comp=Z,160nm,29.2s						
MK31	Makanchi Array	153.41	332	PKPdf	PKPdf	12 34 28.9	-0.5
MK31					PKPbc	12 34 35.9	-1.2
MKAR	Makanchi Array	153.41	332	PKP	PKPdf	12 34 28.9	-0.6
	comp=Z,0.5nm,0.9s,baz=354,slow=2.4,SNR=3.9						
MKAR				PKPbc	PKPbc	12 34 35.5	-1.5
	comp=Z,1.1nm,0.8s,baz=58,slow=2.9,SNR=10						
MAKZ	Makanchi	153.53	332	PKPdf	PKPdf	12 34 29.2	-0.4
MAKZ					PKPbc	12 34 36.3	-1.0
KBZ	Khabaz	153.72	37	PKPbc	PKPbc	12 34 36.0	-1.7
	comp=Z,2.0nm,0.8s,baz=297,slow=1.0,SNR=5.5						
KSH	Kashi	161.99	330	PKP	PKPdf	12 34 41.6	+1.2
KSH				PKS	PKSdf	12 38 16.0	+2.3
KSH				PP	PP	12 39 16.6	+6.8
KSH				SKKS		12 46 06.3	
KSH				AMB	AMB		
	comp=Z,110nm,6.2s						
KSH				LR	LR		
	comp=Z,60nm,9.4s						
KSH				LR	LR		
	comp=Z,60nm,8.6s						

JMA 21 12:17:20.5±0.3, 35°03N×127°65E, h8km, M3.0, South Korea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
JTU	Tsushima	1.52	109	P	Pn	12 17 48.2	+0.2
JTU				S	Sn	12 18 07.3	-0.8
JTSM	Tsushimamitsus	1.59	115	P	Pn	12 17 49.3	+0.4
JTSM				S	Sn	12 18 09.4	-0.2
JII	Iki	2.12	125	P	Pn	12 17 56.3	+0.1
JFU	Fukue jima 2	2.54	159	P	Pn	12 18 02.9	+0.9
HJU	Haeju	3.38	333	Pg	Pg	12 18 24.3	-1.0
HJU				Sg	Sg	12 19 07.5	-1.7
PYAG	Pyongyang	4.29	340	Sg	Sg	12 19 34.7	-3.5
PYS	Pyongsong	4.45	342	Sg	Sg	12 19 39.9	-3.5
SUJ	Sinuiju	5.65	335	Sg	Sb	12 20 13.9	+6.7

IDC 21 12:17:36.8±2.4, 7°92S×130°91E, h0km, mb3.7/1, mb1 3.5/3, mb1mx3.3/24, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=137.3km s-min=32.2km az=70.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
WRA	Warramunga Arr	12.40	165	Pn	Pn	12 20 34.7	0.0
	0.2nm,0.3s,baz=348,slow=13,SNR=12						
WRA				Sn	Sn	12 22 48.9	-4.8
	0.3nm,0.3s,baz=339,slow=25,SNR=7.2						
ASAR	Alice Springs	15.91	170	Pn	Pn	12 21 22.3	0.0
	0.1nm,0.3s,baz=342,slow=8.8,SNR=16						
ASAR				Sn	Sn	12 24 12.2	-7.3
	0.1nm,0.3s,baz=346,slow=25,SNR=4.0						
MKAR	Makanchi Array	69.49	327	P	P	12 28 47.2	0.0
	0.5nm,0.6s,baz=111,slow=7.9,SNR=5.6						

IDC **21** *12:24:45.6±1.2, 24°07S×115°55W, h0km, mb3.8/6, mb1 4.1/6, mb1mx3.9/26, mbtmp3.8/6, MS3.6/3, Ms1 3.6/3, ms1mx3.2/34, Error ellipse: s-maj=44.2km s-min=27.7km az=53.0*

NEIC **21** *12:24:47.3±1.1, 24°26S±0°08×115°5W±0°2, h10km±1km, mb4.5/22, Error ellipse: s-maj=27.9km s-min=13.5km az=266.0*

ISC 21 12:24:47.3±0.7, 24°3S±0°1×115°5W±0°2, h10km, n38, σ1§04/30, mb4.4/16, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
RPN	Rapa Nui	6.29	118	LR	LR	12 28 04.4	
	comp=Z,404nm,19.8s,baz=324,slow=31						
PLCA	Paso Flores	40.88	125	P	P	12 32 30.5	+0.8
	2.8nm,1.0s,baz=319,slow=8.7,SNR=3.8						
PLCA				LR	LR	12 44 41.9	
	comp=Z,88nm,21.5s,baz=352,slow=29						
PLCA	Paso Flores	40.88	125	P	P	12 32 29.3	-0.4
PLCA				IAmb	IAmb	12 32 33.4	
	comp=Z,8.5nm,1.3s						
LVC	Limon Verde	42.66	98	LR	LR	12 45 14.9	
	comp=Z,87nm,18.4s,baz=246,slow=29						
LVC	Limon Verde	42.66	98	P	P	12 32 44.4	-0.5
LVC				IAmb	IAmb	12 32 53.4	
	comp=Z,14nm,1.4s						
LPAZ	La Paz	45.00	89	P	P	12 33 03.8	-0.2
	comp=Z,2.4nm,0.9s,baz=263,slow=9.8,SNR=3.7						
LPAZ	La Paz	45.00	89	P	P	12 33 03.0	-1.1
JTS	Las Juntas de	45.52	45	P	P	12 33 07.9	+0.5
JTS				IAmb	IAmb	12 33 14.8	
	comp=Z,21nm,1.5s						
TXAR	Lajitas Array	54.50	13	P	P	12 34 15.2	-0.2
	comp=Z,0.8nm,1.1s,baz=177,slow=4.5,SNR=3.0						
MNTX	Cornudas Mount	56.49	10	P	P	12 34 30.1	+0.5
W13A	Hualapai Mount	59.06	2	P	P	12 34 47.5	-0.4
W13A				IAmb	IAmb	12 34 49.8	
	comp=Z,5.1nm,1.6s						
GSC	Goldstone, Bar	59.25	359	P	P	12 34 49.5	+0.5
GSC				IAmb	IAmb	12 34 54.0	
	comp=Z,5.3nm,1.3s						
W18A	Petrified Fore	59.31	6	P	P	12 34 50.7	+1.1
W18A				IAmb	IAmb	12 34 59.5	
	comp=Z,3.9nm,0.8s						
SHPR	Sheep Range	60.44	0	P	P	12 34 57.5	+0.3
SHPR				IAmb	IAmb	12 34 58.7	
	comp=Z,2.4nm,0.9s						
CCUT	Cedar City	61.52	2	P	P	12 35 05.0	+0.4
R11A	Troy Canyon, C	62.28	360	P	P	12 35 09.7	0.0
R11A				IAmb	IAmb	12 35 11.0	
	comp=Z,3.5nm,1.2s						
NVAR	Mina Array Bea	62.41	358	P	P	12 35 08.9	-1.8
	comp=Z,1.0nm,0.8s,baz=184,slow=8.8,SNR=7.2						
PNTR	Pine Nut	63.13	356	P	P	12 35 15.7	+0.2
PNTR				IAmb	IAmb	12 35 31.8	
	comp=Z,4.8nm,1.1s						
WHAR	Wooly Hollow	63.19	21	P	P	12 35 15.5	-0.1
WHAR				IAmb	IAmb	12 35 29.8	
	comp=Z,14nm,1.5s						
BDFB	Brasilia	63.54	96	P	P	12 35 18.3	-0.2
P17A	Butcher Ranch,	63.56	4	P	P	12 35 18.4	+0.1
U38A	Gravette	63.59	19	P	P	12 35 18.6	+0.3
VNDA	Vanda	64.89	194	P	P	12 35 26.4	+0.1
QSPA	South Pole Qui	65.89	180	P	P	12 35 32.8	-0.4
PDAR	Pinedale Array	66.92	5	P	P	12 35 38.4	-1.7
	comp=Z,0.3nm,0.6s,baz=154,slow=5.0,SNR=3.4						
K22A	Casper	67.10	7	P	P	12 35 41.0	0.0
SNAA	Sanae	73.97	162	P	P	12 36 22.6	0.0
SNAA				IAmb	IAmb	12 36 23.6	
	comp=Z,5.9nm,1.2s						
YKA	Yellowknife Ar	86.46	0	P	P	12 37 28.6	-1.0
	comp=Z,1.0nm,0.9s,baz=174,slow=5.1,SNR=16						
H11S2	WAKE ISLAND Hy	86.85	292	T	T	14 13 29.3	
	baz=117,slow=75,SNR=62						
H11S1	WAKE ISLAND Hy	86.86	292	T	T	14 13 36.2	
	baz=117,slow=75,SNR=67						
H11S3	WAKE ISLAND Hy	86.87	292	T	T	14 13 32.3	
	baz=117,slow=75,SNR=47						
H11N3	WAKE ISLAND Hy	87.23	293	T	T	14 13 59.5	
	baz=108						
H11N1	WAKE ISLAND Hy	87.24	293	T	T	14 13 59.9	
	baz=108						
H11N2	WAKE ISLAND Hy	87.24	293	T	T	14 13 59.6	
	baz=108						
ZALV	Zalesovo Beam	146.66	338	PKPbc	PKPdf	12 44 27.2	-0.2
	comp=Z,1.7nm,0.8s,baz=32,slow=1.0,SNR=5.9						
CMAR	Chiang Mai Arr	147.42	267	PKPbc	PKPbc	12 44 32.6	+0.4
	comp=Z,1.4nm,0.7s,baz=98,slow=0.8,SNR=10						
BRTR	Keskin Array B	149.84	52	PKPbc	PKPdf	12 44 37.0	+3.7
	comp=Z,2.2nm,0.8s,baz=266,slow=4.0,SNR=4.2						
MKAR	Makanchi Array	153.36	332	PKPbc	PKPbc	12 44 44.1	-1.6
	comp=Z,0.5nm,0.7s,baz=48,slow=1.8,SNR=5.3						

THE **21** *12:24:53.6, 38°18N×20°42E, h4km±1km, ML2.5/6, Error ellipse: s-maj=1.3km s-min=0.6km az=249.0*

ATH **21** *12:24:53.7, 38°20N×20°44E, h3km±1km, ML2.4/3, Error ellipse: s-maj=1.6km s-min=0.8km az=227.0*

ISC 21 12:24:53.8±1.0, 38°19N±0°02×20°44E±0°02, h3km±5km, n30, σ0§90/52, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
LXR1	Lixouri, Cepha	0.01	2	P	Pg	12 24 54.1	-0.3
LXR1				S	Sg	12 24 54.9	+0.1
LXRA	Lixouri, Kepha	0.01	359	P	Pg	12 24 54.1	-0.3
LXRA				S	Sg	12 24 54.8	0.0
ARGA	Argostoli. Kep	0.03	108	P	Pg	12 24 54.6	0.0
ARG2	Argostoli	0.04	103	P	Pg	12 24 54.6	-0.1
ARG2				S	Sg	12 24 55.8	+0.5
CHV1	Chavriata, Kef	0.04	265	P	Pg	12 24 54.6	-0.2
CHV1				S	Sg	12 24 55.9	+0.5
KEF2	Argostoli. Kep	0.04	119	P	Pg	12 24 54.8	0.0
KEF2				S	Sg	12 24 56.0	+0.5
KEF4	Livadi, Kephal	0.07	352	P	Pg	12 24 55.3	0.0
KEF4				S	Sg	12 24 56.7	+0.4
KEF3	Kipouria, Keph	0.07	283	P	Pg	12 24 55.1	-0.2
KEF3				S	Sg	12 24 57.1	+0.8
AGT1	Agia Thekli	0.08	326	P	Pg	12 24 55.1	-0.3
AGT1				S	Sg	12 24 56.8	+0.4

VLS Valsamata 0.12 95 P Pg 12 24 55.9 -0.3
VLS S Sg 12 24 58.3 +0.5
3μm,0.1s
VLS Valsamata 0.12 95 P Pg 12 24 55.9 -0.3
VLS S Sg 12 24 58.0 +0.3
VLS AML AML 12 24 58.5
comp=E,6631μm,0.1s
VLS AML AML 12 25 02.4
comp=N,6658μm,0.4s
VSK1 VASILIKIADES 0.24 24 P Pg 12 24 58.3 -0.2
VSK1 S Sg 12 25 02.3 +0.6
KONA Konidatara, Ke 0.26 24 P Pg 12 24 58.6 -0.2
KONA S Sg 12 25 02.8 +0.6
FSK Fiskardo 0.29 20 P Pg 12 24 58.9 -0.4
FSK Fiskardo 0.29 20 P Pg 12 24 59.0 -0.4
FSK S Sg 12 25 03.6 +0.4
FSK AML AML 12 25 05.0
comp=N,2174μm,0.2s
FSK AML AML 12 25 05.0
comp=E,2354μm,0.1s
VLMS Volimes, Zakyn 0.36 150 P Pg 12 25 00.7 0.0
VLMS S Sg 12 25 06.8 +1.4
VLMS AML AML 12 25 10.9
comp=N,2424μm,0.3s
VLMS AML AML 12 25 12.6
comp=E,1153μm,0.3s
EVGI Lefkada island 0.47 22 P Pg 12 25 02.4 -0.3
EVGI S Sg 12 25 10.0 +1.1
EVGI Lefkada island 0.47 22 P Pg 12 25 02.4 -0.3
EVGI S Sg 12 25 09.9 +1.1
MGNA Meganis 0.54 31 P Pg 12 25 03.6 -0.6
KRI1 kERI 0.60 150 P Pg 12 25 04.5 -0.9
KRI1 S Sb 12 25 14.7 -1.3
comp=E,532nm,0.2s
LKD2 Lefkada island 0.62 16 P Pg 12 25 05.3 -0.5
TSLK Tsoukalades, L 0.66 15 P Pg 12 25 05.7 -0.8
TSLK S Sb 12 25 16.4 -1.2
comp=E,272nm,0.6s
TSLK Tsoukalades, L 0.66 15 P Pg 12 25 05.7 -0.8
PDO Prodromos 0.71 55 P Pg 12 25 07.3 -0.2
PDO S Sb 12 25 18.7 -0.5
PDO Prodromos 0.71 55 P Pg 12 25 07.6 +0.1
PVO Paravola 0.96 63 P Pg 12 25 11.8 -0.3
PVO S Sn 12 25 27.5 -0.9
comp=E,470nm,0.5s
PVO Paravola 0.96 63 P Pg 12 25 11.8 -0.3
DRO Drossia 1.03 103 P Pg 12 25 13.0 -0.6
DRO S Sn 12 25 29.3 -0.9
comp=E,185nm,0.4s
LAKA Lakka 1.22 87 P Pg 12 25 16.3 -0.8
ANX Ano Chora 1.23 70 P Pg 12 25 16.3 -1.2
ANX S Sn 12 25 39.8 +4.4
comp=E,190nm,0.5s

IGQ **21** *12:42:06.9±0.2, 0°N±2°×7°9W±°, h27km, M4.8/19*
NEIC **21** *12:42:08.7±1.1, 0°.22N±0°.06×79°.11W±0°.02, h42km±7km, mb4.6/81, Error ellipse: s-maj=9.2km s-min=2.5km az=164.0*
IDC **21** *12:42:10.0±2.2, 0°.28N×79°.00W, h54km±21km, mb3.9/16, mb1 4.1/22, mb1mx3.9/47, mbtmp4.2/22, ML3.5/6, MS3.6/13, Ms1 3.6/13, ms1mx3.4/38, Error ellipse: s-maj=20.5km s-min=10.7km az=65.0*
ISC 21 12:42:07.3±1.0, 0°.18N±0°.03×79°.20W±0°.04, h33km±5km, n162, σ1s16/159, mb4.5/45, MS3.5/10, Near coast of Ecuador

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
APR2 Miler 0.26 114 P Pn 12 42 14.1 -0.7
PAC1 Pacto, Paraso 0.42 79 P Pb 12 42 15.8 -0.9
PAC1 S Sn 12 42 23.1 -0.7
ASDO Santo Domingo 0.45 170 P Pb 12 42 16.1 -1.4
ASDO S Sn 12 42 22.9 -1.6
TERV Terraza Guagua 0.69 121 P Pn 12 42 20.6 -0.7
YANA Yana 0.70 115 P Pn 12 42 20.6 -0.7
GGP Refugio Guagua 0.70 120 P Pn 12 42 20.8 -0.6
PULU Pululahua 0.72 103 P Pn 12 42 20.8 -0.7
OTAV Otavalo 0.75 86 Pb 12 42 21.2 -1.1
OTAV Sb 12 42 31.4 -1.1
OTAV Otavalo 0.75 86 P Pb 12 42 21.0 -1.3
CUSE Cuicocha Este 0.81 81 P Pb 12 42 22.1 -1.2
CUIC Cuicocha-Domo 0.85 82 P Pb 12 42 22.7 -1.2
URCU Urcuqui 0.98 75 P Pb 12 42 24.9 -1.1
IMBA Imbabura, San 1.01 85 P Pb 12 42 26.4 -0.2
ILLI Illinizas Sur 1.01 152 S Sn 12 42 39.7 +0.7
ILLI P Pb 12 42 25.7 -1.0
PAST Pastocalle 1.04 147 P Pb 12 42 28.1 +1.1
PITA Cotopaxi Volc 1.06 134 P Pb 12 42 27.6 0.0
AIB2 Ibarra (Univer 1.11 82 P Pb 12 42 27.8 -0.4
BNAS Cotopaxi Volca 1.11 140 P Pb 12 42 28.4 0.0
BNAS S Sb 12 42 44.2 +1.4
BREF Cotopaxi Volca 1.14 138 P Pb 12 42 29.9 +1.0
VC1 Cotopaxi 1 1.14 136 P Pb 12 42 28.8 -0.1
YAHU Yahuarcocha 1.15 81 P Pb 12 42 28.3 -0.6
ANTG Antisana-Guama 1.17 126 P Pb 12 42 28.6 -0.7
ANTG S Sb 12 42 44.5 +0.2
BTAM Cotopaxi Volca 1.17 137 P Pb 12 42 29.3 -0.1
BMOR Cotopaxi Volca 1.17 141 P Pb 12 42 29.1 -0.3
ANTM Antisana-La Mi 1.21 126 P Pb 12 42 29.3 -0.7
ANTM S Sb 12 42 45.7 +0.1
ANTI Antisana 1.22 121 P Pb 12 42 29.5 -0.6
CAYA Cayambe 1.22 95 P Pb 12 42 29.3 -0.8
APS4 Papallacta 1.23 117 P Pb 12 42 29.4 -0.8
ANTS Antisana-Sarah 1.23 123 P Pb 12 42 29.7 -0.8
APUJ Pujili 1.24 156 P Pb 12 42 30.1 -0.3
AQUE Quevedo 1.26 193 P Pb 12 42 28.4 -2.1
VCES Cotopaxi 1.27 140 P Pb 12 42 30.8 -0.2
VCES S Sb 12 42 47.9 +0.7
SAGO Sagoatoa 1.43 158 P Pb 12 42 33.5 -0.3
PIS1 Pisayambo 1.48 147 P Pb 12 42 34.3 -0.3
PISA Pisayambo 1.48 147 P Pb 12 42 34.1 -0.5
CMBC Cumbal 1.57 61 eP Pn 12 42 34.0 +0.7
CMBC eS Sb 12 42 54.0 -1.7
ATUL Tulcn 1.59 68 P Pb 12 42 36.0 -0.3
LAV4 Lava4-Reventad 1.60 100 P Pb 12 42 35.8 -0.6
RUN5 Runtun 1.77 154 P Pb 12 42 39.6 +0.3
BRUN Tungurahua Vol 1.78 154 P Pb 12 42 38.5 -1.0
BULB Ulba Tungurahu 1.79 154 P Pb 12 42 38.9 -0.9
CASC Dorado de Casc 1.86 91 P Pb 12 42 39.5 -1.4
PPLP Puerto Lpez 2.33 223 P Pn 12 42 41.7 -1.6
AGUAY Guayaquil 2.35 199 P Pn 12 42 42.7 -0.9
COHC Cochancay 2.63 181 P Pn 12 42 47.7 +0.2
CRUC La Cruz 2.64 59 eP Pn 12 42 50.2 +2.3
BBAC Balboa, Cauca 2.67 47 eP Pn 12 42 48.2 -0.1
SALI Salinas 2.96 217 P Pn 12 42 52.5 +0.5
MORR Playas El Morr 3.03 202 P Pn 12 42 52.9 0.0
BOSC San Juan Bosco 3.39 168 P Pb 12 43 02.4 -4.3
FLOC Florencia 3.81 69 eP Pn 12 43 11.2 -2.7
YOTC Yotoco, Valle 4.73 37 eP Pn 12 43 15.5 -1.1
ORTC Ortega, Tolima 5.41 47 eP Pn 12 43 27.2 +1.3
PLMC San Jos del P 5.52 32 eP Pn 12 43 25.2 -2.1
PRAC Prado 5.56 51 eP Pn 12 43 29.4 +1.6
MACC Macarena, Meta 5.70 70 eP Pn 12 43 32.3 +2.6
GUY2C Guyana, Caldas 6.30 37 eP Pn 12 43 38.5 0.0
CBOC Ciudad Bolivar 6.48 29 eP Pn 12 43 40.3 -0.3
ROSC El Rosal 6.72 46 P Pn 12 43 45.4 +1.2
4.6nm,0.3s,baz=242,slow=12,SNR=6.7
ROSC S Sn 12 44 57.4 -2.4
baz=162,slow=20,SNR=2.1
ROSC LR LR 12 46 51.6
comp=Z,505nm,19.7s,baz=158,slow=43
ROSC El Rosal 6.72 46 Pn Pn 12 43 44.8 +0.7
NORC Norcasia 6.88 39 eP Pn 12 43 46.1 +0.2
HELC Santa Helena 7.00 31 eP Pn 12 43 49.3 +1.3
CHIC Chingaza 7.03 51 eP Pn 12 43 50.2 +1.9
ATAH Atahualpa 7.31 174 P Pn 12 43 54.4 +2.1
4.9nm,0.3s,baz=353,slow=9.6,SNR=25
ATAH S Sn 12 45 16.0 +1.6
2.9nm,0.3s,baz=169,slow=16,SNR=2.8
SPBC San Pablo de B 7.46 43 eP Pn 12 43 53.5 -0.6
PTBC PUERTO BERRIO, 7.89 37 eP Pn 12 43 57.4 -2.5
RUSC La Rusia 8.33 47 eP Pn 12 44 06.3 0.0
BCIP Isla Barro Col 8.95 356 Pn Pn 12 44 14.9 +0.6
HDC Heredia 10.91 334 Pn Pn 12 44 43.0 +1.6
PAYG Puerto Ayora 11.12 266 Pn Pn 12 44 45.5 +1.3
JTS Las Juntas de 11.56 331 P Pn 12 44 52.8 +2.7
0.8nm,0.3s,baz=195,slow=2.4,SNR=6.5
JTS LR LR 12 48 39.1
comp=Z,588nm,19.6s,baz=218,slow=34
JTS Las Juntas de 11.56 331 Pn Pn 12 44 51.8 +1.6
SDV Santo Domingo 12.15 44 P Pn 12 44 58.8 +0.5
0.5nm,0.3s,baz=278,slow=14,SNR=2.5
SDV Santo Domingo 12.15 44 Pn Pn 12 44 58.6 +0.3
NNA Nana 12.32 169 P Pn 12 45 00.6 0.0
2.3nm,0.3s,baz=353,slow=11,SNR=4.3
NNA S Sn 12 47 14.5 -2.2
2.0nm,0.3s,baz=256,slow=19,SNR=3.6
NNA Nana 12.32 169 Pn Pn 12 45 01.2 +0.6
TGUH Tegucigalpa,Un 15.93 330 Pn Pn 12 45 49.7 +0.4
TGUH IAmb IAmb 12 45 56.9
comp=Z,37nm,1.1s
SAML Samuel 18.35 120 P Pn 12 46 20.7 +1.3
APG El Apazote 18.46 323 P P 12 46 20.4 -0.3
comp=Z,0.2nm,0.3s,baz=103,slow=14,SNR=2.9
LPAZ La Paz 19.68 147 P Pn 12 46 35.0 -1.0
comp=Z,0.2nm,0.3s,baz=319,slow=19,SNR=7.7
LPAZ LR LR 12 55 45.9
comp=Z,361nm,19.7s,baz=318,slow=42
LPAZ La Paz 19.68 147 P Pn 12 46 34.8 -1.2
DR12 Loma Pena Alta 20.85 27 P P 12 46 47.4 +0.8
MNMC Minye Minye 21.38 154 P P 12 46 52.5 0.0
MNMC IAmb IAmb 12 47 07.9
comp=Z,23nm,0.8s
TEIG Tepich 21.81 337 P P 12 46 57.8 +1.0
comp=Z,9.1nm,0.9s,baz=140,slow=17,SNR=3.3
TEIG LR LR 12 55 07.6
comp=Z,298nm,19.1s,baz=303,slow=36
TEIG Tepich 21.81 337 P P 12 46 57.0 +0.2
TEIG IAmb IAmb 12 47 00.5
comp=Z,21nm,1.1s
PB11 IPOC Station P 21.92 155 P P 12 46 58.8 +0.6
GO01 Chusmiza 22.03 154 P P 12 47 00.3 +0.5
GCPR Guaynabo City 22.15 35 P P 12 46 59.9 -0.6
GCPR IAmb IAmb 12 47 09.9
comp=Z,39nm,1.4s
CMIG Matias Romero 22.82 318 P P 12 47 09.0 +1.3
comp=Z,6.2nm,0.9s,baz=76,slow=8.5,SNR=7.3
CMIG LR LR 12 54 23.3
comp=Z,133nm,20.8s,baz=154,slow=32
PB01 IPOC Station P 23.14 156 P P 12 47 11.9 +0.9
SIV San Ignacio 24.05 133 P P 12 47 19.4 -0.4
comp=Z,3.8nm,1.0s,baz=321,slow=11,SNR=8.3
LVC Limon Verde 24.77 157 P P 12 47 27.1 +0.4
comp=Z,5.4nm,0.8s,baz=325,slow=8.7,SNR=4.2
LVC Limon Verde 24.77 157 P P 12 47 27.1 +0.4
TLIG Tlapa 25.72 313 P P 12 47 35.6 +0.6
TLIG IAmb IAmb 12 47 51.3
comp=Z,24nm,1.5s
LRAL Lakeview Retre 33.49 348 P P 12 48 43.9 +0.2
LRAL IAmb IAmb 12 48 44.4
comp=Z,7.4nm,0.8s
BDFB Brasilia 34.58 118 P P 12 48 53.0 -0.5
comp=Z,2.0nm,0.5s,baz=228,slow=12,SNR=1.9
BDFB LR LR 13 03 06.6
comp=Z,85nm,18.2s,baz=142,slow=36
BDFB Brasilia 34.58 118 P P 12 48 53.6 +0.1
BDFB IAmb IAmb 12 49 03.7
comp=Z,5.5nm,1.0s
JCT Junction City 35.94 329 P P 12 49 05.7 +0.7
JCT IAmb IAmb 12 49 16.2
comp=Z,7.2nm,0.9s
V48A Smith Brothers 36.08 349 P P 12 49 06.0 -0.1
WHAR Wooly Hollow 37.00 342 P P 12 49 13.7 -0.2
TXAR Lajitas Array 37.22 323 P P 12 49 17.3 +1.3
comp=Z,1.2nm,0.9s,baz=147,slow=9.3,SNR=7.8
TXAR PcP PcP 12 51 35.8 +0.3
comp=Z,0.5nm,0.9s,baz=151,slow=5.9,SNR=3.5
TXAR LR LR 13 05 05.2
comp=Z,30nm,19.5s,baz=0.0,slow=37
TX32 Lajitas Array 37.22 323 P P 12 49 17.0 +1.0
LCAR Lake Charles 37.40 344 P P 12 49 16.6 -0.7
W39A Magazine 37.40 340 P P 12 49 17.7 +0.4
FCAR Ozark Folk Cen 37.51 343 IAmb IAmb 12 49 27.4
comp=Z,12nm,1.2s
ABTX Abilene, Hawle 37.59 331 P P 12 49 19.9 +0.9
ABTX IAmb IAmb 12 49 20.9
comp=Z,8.1nm,0.9s
LPIG La Paz 38.40 311 LR LR 13 01 20.0
comp=Z,63nm,20.5s,baz=116,slow=30
HHAR Hobbs 38.44 341 P P 12 49 25.9 -0.2
HHAR IAmb IAmb 12 49 27.0
comp=Z,8.3nm,0.8s
MGMO Mountain Grove 38.72 343 IAmb IAmb 12 49 28.9
comp=Z,11nm,0.9s
CCM Cathedral Cave 39.29 345 P P 12 49 32.1 -1.1
CCM IAmb IAmb 12 49 33.5
comp=Z,9.1nm,1.0s
MNTX Cornudas Mount 39.95 324 P P 12 49 39.1 +0.3
MNTX IAmb IAmb 12 49 40.9
comp=Z,6.7nm,1.1s
MSTX Muleshoe 40.23 329 IAmb IAmb 12 49 52.1
comp=Z,11nm,0.8s
AMTX Amarillo 40.41 331 P P 12 49 43.4 +0.8
PLCA Paso Flores 41.48 170 P P 12 49 52.7 +1.4
comp=Z,8.0nm,0.9s,baz=6.0,slow=9.2,SNR=21
PLCA Paso Flores 41.48 170 P P 12 49 51.9 +0.6
PLCA IAmb IAmb 12 49 53.3
comp=Z,8.6nm,0.8s
121A Cookes Peak, D 41.97 323 P P 12 49 57.0 +1.3
121A IAmb IAmb 12 49 59.2
comp=Z,12nm,1.1s
CBKS Cedar Bluff 42.81 336 P P 12 50 03.0 +0.8
ANMO Albuquerque 42.94 326 P P 12 50 05.3 +1.8
comp=Z,11nm,0.9s,baz=140,slow=9.6,SNR=46
ANMO Albuquerque 42.94 326 P P 12 50 04.6 +1.2
ANMO IAmb IAmb 12 50 06.3
comp=Z,11nm,0.8s
T25A Trinidad 43.54 330 P P 12 50 09.8 +1.5
T25A IAmb IAmb 12 50 21.1
comp=Z,15nm,1.4s
TUC Tucson 43.69 320 P P 12 50 10.3 +0.8
SDCO Great Sand Dun 44.55 330 IAmb IAmb 12 50 19.4
comp=Z,11nm,1.1s
214A Organ Pipe Nat 44.80 318 P P 12 50 19.3 +1.0
214A IAmb IAmb 12 50 21.2
comp=Z,9.3nm,1.4s
113A Mohawk Valley, 45.93 318 P P 12 50 27.9 +0.7
U15A North Rim 47.35 323 IAmb IAmb 12 50 41.6
comp=Z,5.7nm,1.2s
PFO Pinyon Flats O 48.24 317 P P 12 50 45.7 +0.3
PFO IAmb IAmb 12 50 47.9
comp=Z,8.7nm,1.4s
RSSD Black Hills 49.02 336 P P 12 50 51.9 +0.6
TPNV Topopah Spring 50.11 321 IAmb IAmb 12 51 02.6
comp=Z,4.1nm,1.1s
PD31 Pinedale Array 50.39 331 P P 12 51 02.0 +0.3
PDAR Pinedale Array 50.39 331 P P 12 51 02.1 +0.3
comp=Z,1.3nm,0.9s,baz=120,slow=9.0,SNR=8.7
ULM Lac du Bonnet 51.87 346 P P 12 51 11.0 -1.5
comp=Z,2.1nm,0.6s,baz=144,slow=8.0,SNR=7.0
ULM LR LR 13 16 13.9
comp=Z,28nm,19.6s,baz=110,slow=39
ULM Lac du Bonnet 51.87 346 P P 12 51 12.7 +0.2
ULM IAmb IAmb 12 51 20.4
comp=Z,6.4nm,0.9s
ELK Elko 51.94 325 P P 12 51 14.3 +0.8
NV11 Mina Array Sit 52.22 321 P P 12 51 15.7 +0.3
NV11 IAmb IAmb 12 51 18.3
comp=Z,6.5nm,1.1s
OMMB Old Mammoth Mi 52.26 320 P P 12 51 17.1 +1.1
OMMB IAmb IAmb 12 51 18.6
comp=Z,3.7nm,0.9s
NVAR Mina Array Bea 52.31 321 P P 12 51 18.2 +2.0
comp=Z,4.0nm,0.8s,baz=130,slow=7.1,SNR=34
MDPB Devils Postpil 52.32 320 IAmb IAmb 12 51 36.7
comp=Z,5.6nm,1.0s
KVN Kaiserville 52.56 322 P P 12 51 18.9 +0.9
MFID Camas Ranch 54.06 328 IAmb IAmb 12 51 31.3
comp=Z,7.0nm,1.0s
ORV Oroville 54.98 321 IAmb IAmb 12 51 38.4
comp=Z,6.7nm,1.0s
J08A Circle Bar Ran 55.47 326 IAmb IAmb 12 51 51.1
comp=Z,8.0nm,1.3s
YBH Yreka Blue Hor 56.98 322 P P 12 51 49.5 -0.3
comp=Z,1.8nm,0.7s,baz=134,slow=3.4,SNR=6.3
YBH LR LR 13 15 58.3
comp=Z,55nm,19.6s,baz=142,slow=36
PINE Pine Mountain 57.14 325 IAmb IAmb 12 51 54.6
comp=Z,6.2nm,0.8s
NEW Newport 58.03 331 LR LR 13 18 39.5
comp=Z,61nm,18.5s,baz=122,slow=38
LLLB Lillooet 61.91 331 P P 12 52 24.4 +0.7
FRB Frobisher Bay 63.90 5 P P 12 52 35.6 -1.0
comp=Z,0.7nm,0.5s,baz=39,slow=6.5,SNR=2.9
BBB Bella Bella 65.97 329 LR LR 13 27 28.8
comp=Z,26nm,19.1s,baz=160,slow=41
YKA Yellowknife Ar 67.59 343 P P 12 53 00.0 -0.4
comp=Z,1.8nm,0.8s,baz=140,slow=5.7,SNR=23
INK Inuvik 77.30 342 P P 12 53 58.4 +0.3
comp=Z,2.2nm,1.0s,baz=111,slow=6.4,SNR=4.7
INK LR LR 13 29 10.9
comp=Z,39nm,19.9s,baz=92,slow=36
INK Inuvik 77.30 342 IAmb IAmb 12 54 05.2
comp=Z,7.7nm,1.5s
EGAK Eagle 78.21 337 P P 12 54 03.8 +0.5
EGAK IAmb IAmb 12 54 05.0
comp=Z,7.6nm,1.2s
RIDG Independent Ri 79.26 336 P P 12 54 10.1 +0.9
RIDG IAmb IAmb 12 54 24.5
comp=Z,5.1nm,0.8s
ILAR Eielson Array 80.47 336 P P 12 54 15.8 +0.1
comp=Z,0.7nm,0.8s,baz=124,slow=3.4,SNR=7.8
BPAW Bear Paw Mtn. 81.94 335 P P 12 54 23.9 +0.3
TAM Tamanrasset 85.06 67 P P 12 54 40.4 -0.2
TAM IAmb IAmb 12 54 56.6
comp=Z,3.3nm,1.1s
SNAA Sanae 85.89 162 P P 12 54 43.4 -0.3
PRMA PARMA 89.53 45 P P 12 55 01.5 0.0
QSPA South Pole Qui 90.23 180 P P 12 55 05.2 +0.6
KSH Kashi 134.43 27 PKP PKPdf 13 01 20.4 -2.3
KSH sPKP 13 01 36.4
KSH PP PP 13 03 55.3 +1.3
WRA Warramunga Arr 141.74 237 PKhKP PKPpre 13 01 33.4
comp=Z,1.0nm,1.0s,baz=109,slow=2.6,SNR=7.7
LZH Lanzhou 143.80 356 ePKP PKPbc 13 01 38.6 +1.1
LZH pPKP pPKPdf 13 01 49.1 -1.7
LZH sPKP 13 01 53.8
WHN Wuhan 146.84 338 PKPbc PKPdf 13 01 40.8 -4.3

KRNET **21** *12:42:20.1±0.1, 41°.33N×70°.06E, mb2.7*
ISC 21 12:42:22.3±1.7, 41°.26N±0°.06×70°.2E±0°.1, h10km, n8, σ0s74/15, 13C-2D, Kyrgyzstan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BTK Batken 1.28 159 ⇑iP Pn 12 42 45.4 -1.0
baz=55
BTK ⇑iS Sb 12 43 04.1 +0.9
baz=55
ARK Arkit 1.42 67 ⇑iP Pn 12 42 47.7 -0.6
baz=72
ARK ⇑iS Sb 12 43 07.4 +0.2
baz=72
KK31 Karatay Array 1.86 7 Pg Pg 12 42 58.7 +0.7
0.8nm,0.3s,baz=181,slow=16,SNR=8.8
KK31 ⇑Lg Lg 12 43 22.7
1.5nm,0.3s,baz=176,slow=26,SNR=8.5
ARSB Arslanbob 2.09 87 ⇑iP Pn 12 42 57.1 -0.4
baz=89
ARSB ⇑iS Sn 12 43 24.5 +0.9
baz=89
AML Almayashu 2.75 70 ⇑eP Pn 12 43 06.6 -0.2
baz=72
AML ⇑iS Sn 12 43 40.2 -0.1
baz=72
EKS2 Erkin-Say 3.01 61 ⇓iP Pn 12 43 09.2 -0.9
baz=63
EKS2 ⇓iS Sn 12 43 45.0 -1.3
baz=63
UCH Uchtor 3.36 72 ⇑iP Pn 12 43 15.0 -0.3
baz=73
UCH ⇑iS Sn 12 43 55.3 -0.2
baz=73
KZA Kyzart 3.86 76 ⇑iP Pn 12 43 22.0 -0.1
baz=77
KZA ⇑iS Sn 12 44 07.3 -0.5
baz=77

JMA **21** *13:13:22.3±0.2, 28°.06N×129°.49E, h29km±3km, M3.9*
JMA Felt II J1.
IDC **21** *13:13:24.4±1.4, 28°.08N×129°.45E, h46km±14km, mb3.5/13, mb1 3.6/16, mb1mx3.5/46, mbtmp3.7/16, ML3.7/3, Error ellipse: s-maj=25.4km s-min=8.3km az=114.0*
ISC 21 13:13:20.9±0.7, 27°.99N±0°.03×129°.59E±0°.04, h22km±5km, n42, σ1s06/57, mb3.7/13, Ryukyu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JAM Amami Oshima 0.42 2 P Pb 13 13 30.1 +0.4
JAM S Sb 13 13 35.4 -0.2
JAMN Amaminishikomi 0.45 305 P Pb 13 13 30.1 +0.1
JAMN S Sb 13 13 35.8 -0.5
JZK Kikaishima 0.47 46 P Pn 13 13 32.6 +0.3
JZK S Sn 13 13 41.1 +1.1
JTK Tokunoshima 0.60 251 P Pb 13 13 32.9 +0.2
JTK S Sb 13 13 40.4 -0.4
JOKE Okinoerabujima 1.10 236 P Pb 13 13 41.4 +0.2
JOKE S Sb 13 13 55.3 +0.3
JTAJ Takarajima 1.21 344 P Pn 13 13 42.0 -0.5
JTAJ eS Sn 13 13 56.7 -1.5
JYRO Yoronjima 1.39 227 P Pb 13 13 45.9 -0.3
JYRO eS Sb 13 14 03.7 +0.2
JOW Kunigami 1.64 226 P Pn 13 13 49.2 +0.8
JOW S Sn 13 14 09.1 +0.3
JOW Kunigami 1.64 226 P Pn 13 13 49.5 +1.0
24nm,0.3s,baz=96,slow=15,SNR=216
JOW S Sb 13 14 10.4 -0.3
20nm,0.3s,baz=68,slow=27,SNR=6.0
JIH Iheya 1.72 237 P Pn 13 13 50.5 +1.0
JIH eS Sb 13 14 12.0 -1.1
JNN Nakanoshima 1.86 8 P Pn 13 13 52.1 +0.6
JNN eS Sn 13 14 13.3 -1.1
JNTH Nagotoyohara 2.02 224 P Pn 13 13 54.4 +0.8
JNTH S Sn 13 14 19.3 +1.1
JYAK Yakushimahirau 2.38 20 P Pn 13 13 59.9 +1.3
JYAK eS Sn 13 14 27.3 +0.1
JAGN Aguni-jima 2.51 237 P Pn 13 14 01.4 +1.0
JAGN S Sn 13 14 31.3 +1.0
JKC Kuchinoerabu 2.52 12 P Pn 13 14 01.8 +1.3
JKC eS Sn 13 14 30.0 -0.6
JKDJ Kitadaitoujima 2.54 143 P Pn 13 14 01.0 +0.2
JKDJ S Sn 13 14 30.9 -0.1
JMZ Minamidaito 2 2.60 146 P Pn 13 14 01.6 -0.1
JMZ eS Sn 13 14 29.7 -2.9
JMTN Minamitane 2.66 25 P Pn 13 14 03.7 +1.2
JMTN eS Sn 13 14 34.7 +0.6
JTN Tanegashima 3 2.92 24 P Pn 13 14 07.4 +1.3
JTN S Sn 13 14 41.2 +0.7
JKE Kume jima 2 3.00 237 P Pn 13 14 07.4 +0.4
JKE eS Sn 13 14 41.8 -0.5
JNU Nakatsue 5.24 12 P Pn 13 14 40.8 +2.9
12nm,0.3s,baz=182,slow=8.8,SNR=128
JNU S Sn 13 15 39.4 +1.8
baz=162,slow=16,SNR=1.3
KSRS Korea Array 9.54 352 P Pn 13 15 36.1 -0.9
0.1nm,0.3s,baz=174,slow=14,SNR=3.4
ASAJ Asahikawa 19.19 30 P P 13 17 42.4 -0.6
0.3nm,0.3s,baz=246,slow=11,SNR=5.8
KLR Kul'dur 21.28 4 P P 13 18 04.3 -1.4
1.1nm,0.7s,baz=201,slow=13,SNR=4.1
SONM Songino Array 26.79 324 P P 13 19 00.7 +1.3
0.4nm,0.5s,baz=139,slow=9.0,SNR=3.2
MA2 Magadan 34.76 19 P P 13 20 09.2 -0.2
2.0nm,0.6s,baz=313,slow=19,SNR=3.7
H11N2 WAKE ISLAND Hy 34.99 95 T T 13 57 28.6
baz=290,slow=74,SNR=17
H11N1 WAKE ISLAND Hy 34.99 95 T T 13 57 25.5
baz=290,slow=74,SNR=13
H11N3 WAKE ISLAND Hy 35.00 95 T T 13 57 28.6
baz=290,slow=74,SNR=11
H11S3 WAKE ISLAND Hy 35.26 97 T T 13 57 49.8
baz=300,slow=77,SNR=5.9
H11S1 WAKE ISLAND Hy 35.26 97 T T 13 57 51.9
baz=300,slow=77,SNR=5.9
H11S2 WAKE ISLAND Hy 35.27 97 T T 13 57 51.3
baz=300,slow=77,SNR=4.4
SEY Seymchan 37.99 17 P P 13 20 37.5 +0.6
1.7nm,0.6s,baz=149,slow=6.3,SNR=15
MKAR Makanchi Array 41.30 310 P P 13 21 03.8 -0.9
0.2nm,0.6s,baz=94,slow=10,SNR=3.4
ZALV Zalesovo Beam 41.61 321 P P 13 21 06.0 -1.1
0.6nm,0.4s,baz=98,slow=10,SNR=3.7
TIXI Tiksi 43.71 360 P P 13 21 22.7 -1.2
1.3nm,0.3s,baz=236,slow=1.6,SNR=7.9
WRA Warramunga Arr 47.87 174 P P 13 21 57.8 +0.4
0.2nm,0.4s,baz=354,slow=8.4,SNR=3.0
NRIK Noril'sk 47.97 341 P P 13 21 56.7 -0.8
2.7nm,0.5s,baz=120,slow=8.1,SNR=4.9
ASAR Alice Springs 51.52 175 P P 13 22 27.7 +2.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.2nm,0.9s,baz=3.8,slow=14,SNR=3.0						
FINES	**FINESS Array B**	**71.93**	**331**	P	**P**	**13 24 41.9**	**-0.3**
	2.1nm,0.7s,baz=69,slow=5.8,SNR=11						
YKA	**Yellowknife Ar**	**76.43**	**25**	P	**P**	**13 25 09.2**	**+0.8**
	0.2nm,0.6s,baz=304,slow=5.1,SNR=4.1						
NOA	**NORSAR Array B**	**78.27**	**334**	P	**P**	**13 25 18.4**	**-0.5**
	0.5nm,0.5s,baz=51,slow=5.5,SNR=3.1						

IDC 21 13:23:06.2±5.5,24°.69S×114°.65W,h0km,mb3.5/2, mb1 3.9/2,mb1mx3.5/18,mbtmp3.5/2,Error ellipse: s-maj=361.0km s-min=62.3km az=111.0,Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVAR	**Mina Array Bea**	**62.88**	**357**	P	P	13 33 34.7	+0.4
	0.3nm,0.7s,baz=168,slow=9.0,SNR=2.3						
YKA	**Yellowknife Ar**	**86.88**	**0**	P	P	13 35 52.1	-0.1
	0.9nm,1.1s,baz=175,slow=5.8,SNR=6.3						
H11S2	**WAKE ISLAND Hy**	**87.76**	**291**	T	T	15 11 57.4	
	baz=117,slow=75,SNR=21						
H11S1	**WAKE ISLAND Hy**	**87.77**	**291**	T	T	15 11 58.5	
	baz=117,slow=75,SNR=26						
H11S3	**WAKE ISLAND Hy**	**87.78**	**291**	T	T	15 11 56.6	
	baz=117,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**88.14**	**293**	T	T	15 12 20.0	
	baz=114,slow=77,SNR=5.4						
H11N1	**WAKE ISLAND Hy**	**88.16**	**293**	T	T	15 12 27.9	
	baz=114,slow=77,SNR=5.1						
H11N2	**WAKE ISLAND Hy**	**88.16**	**293**	T	T	15 12 21.1	
	baz=114,slow=77,SNR=9.7						
ZALV	**Zalesovo Beam**	**147.35**	**339**	PKPbc	PKPdf	13 42 50.1	+1.0
	0.6nm,0.3s,baz=129,slow=2.0,SNR=2.3						
CMAR	**Chiang Mai Arr**	**148.20**	**265**	PKPbc	PKPbc	13 42 54.3	-0.6
	0.3nm,0.3s,baz=72,slow=2.9,SNR=3.9						
MKAR	**Makanchi Array**	**154.12**	**333**	PKPbc	PKiKP	13 43 08.4	+0.4
	0.3nm,0.6s,baz=24,slow=2.9,SNR=2.5						

IDC 21 13:30:57.5±3.2,50°.00N×19°.18E,h0km,mb1 4.0/2, mb1mx3.2/35,mbtmp3.9/2,ML2.5/2,Error ellipse: s-maj=59.9km s-min=11.9km az=139.0
VIE 21 13:30:57.1±1.2,50°.37N×18°.89E,h0km,mb2.1/3,ml3.0/4, Error ellipse: s-maj=7.7km s-min=7.0km az=91.0 15 km NNW of Katowice Suspected Mining induced.
PRU 21 13:30:58.0±0.0,50°.25N×18°.94E,h0km
ISC 21 13:30:56.9±0.7,50°.23N±0°.04×18°.96E±0°.02,h0km,n37, σ0s91/59,8C,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.54**	**91**	ePg	**Pg**	**13 31 07.7**	**+0.6**
OJC				eSg	**Sg**	**13 31 14.8**	**+0.8**
OKC	**Ostrava-Krasne**	**0.66**	**234**	ePG	**Pb**	**13 31 11.4**	**+0.1**
OKC				eSG	**Sb**	**13 31 20.7**	**-0.2**
	comp=Z,58nm,0.3s						
MORC	**Moravsky Berou**	**1.02**	**244**	ePG	**Pb**	**13 31 17.6**	**+0.1**
MORC				eSG	**Sb**	**13 31 31.7**	**+0.2**
MORC	**Moravsky Berou**	**1.02**	**244**	⇑P	**Pn**	**13 31 18.4**	**-0.2**
MORC				⇑S	**Sb**	**13 31 32.1**	**+0.6**
LANS	**Liptovska Anna**	**1.13**	**163**	ePG	**Pb**	**13 31 19.7**	**+0.4**
LANS				eSG	**Sg**	**13 31 33.7**	**+0.5**
LANS				eLG	Lg	13 31 41.5	
NIE	**Niedzica**	**1.19**	**133**	ePg	**Pg**	**13 31 20.1**	**+0.4**
NIE				eSg	**Sb**	**13 31 36.1**	**-0.1**
KRLC	**Kraliky**	**1.41**	**264**	ePG	**Pn**	**13 31 23.6**	**-0.3**
KRLC				eSG	**Sb**	**13 31 42.6**	**-0.1**
	comp=Z,44nm,0.3s						
JAVC	**Velka Javorina**	**1.61**	**212**	ePN	**Pb**	**13 31 27.6**	**+0.1**
STHS	**Stebnicka Huta**	**1.69**	**118**	ePN	**Pb**	**13 31 28.7**	**-0.1**
STHS				eSN	**Sg**	**13 31 52.6**	**+1.6**
STHS				eLG	Lg	13 31 55.6	
DPC	**Dobruska-Polom**	**1.70**	**275**	ePG	**Pb**	**13 31 28.6**	**-0.4**
DPC				eSG	**Sg**	**13 31 51.7**	**+0.2**
	comp=Z,30nm,0.4s						
VYHS	**Vyhne**	**1.74**	**183**	ePN	**Pn**	**13 31 28.7**	**+0.3**
VYHS				eSN	**Sn**	**13 31 51.2**	**-0.1**
OSTC	**Ostas**	**1.79**	**282**	ePG	**Pb**	**13 31 30.2**	**-0.4**
VRAC	**Vranov**	**1.79**	**240**	ePN	**Pn**	**13 31 29.8**	**+0.7**
VRAC				eSG	**Sb**	**13 31 53.9**	**+0.3**
VRAC	**Vranov**	**1.79**	**240**	Pg	**Pb**	**13 31 30.7**	**+0.1**
	2.6nm,0.3s,baz=71,slow=13,SNR=8.6						
VRAC				Lg	Lg	13 31 53.9	
	9.8nm,0.3s,baz=154,slow=22,SNR=19						
VRAC	**Vranov**	**1.79**	**240**	⇑P	**Pb**	**13 31 30.1**	**-0.5**
VRAC				⇑S	**Sg**	**13 31 54.4**	**-0.1**
KSP	**Ksiaz**	**1.81**	**291**	ePg	**Pg**	**13 31 32.5**	**+0.9**
KSP				eSg	**Sg**	**13 31 56.9**	**+1.8**
CHVC	**Chvalec**	**1.90**	**282**	ePG	**Pn**	**13 31 31.3**	**+0.8**
CHVC				eSG	**Sb**	**13 31 56.5**	**-0.1**
	comp=Z,24nm,0.6s						
UPC	**Upice**	**1.91**	**279**	ePG	**Pb**	**13 31 32.3**	**-0.3**
UPC				eSG	**Sg**	**13 31 58.3**	**+0.1**
	comp=Z,20nm,0.4s						
KECS	**Kecovo**	**2.01**	**150**	ePN	**Pb**	**13 31 34.0**	**-0.3**
KECS				eSN	**Sn**	**13 31 58.1**	**+0.1**
KECS				eLG	Lg	13 32 06.0	
KRUC	**Moravsky**	**2.04**	**236**	ePN	**Pb**	**13 31 31.8**	**-0.7**
KRUC				eSG	**Sb**	**13 32 00.9**	**+0.2**
CRVS	**Cervenica-Dubn**	**2.10**	**128**	ePN	**Pb**	**13 31 36.2**	**+0.3**
MODS	**Modra-Piesok**	**2.16**	**211**	eSN	**Sn**	**13 32 01.9**	**+0.2**
PSZ	**Piszkesteto**	**2.39**	**165**	⇑P	**Pn**	**13 31 37.4**	**0.0**
PRU	**Pruhonice**	**2.86**	**267**	ePG	**Pb**	**13 31 49.3**	**+0.6**
PRU				eSG	**Sg**	**13 32 27.3**	**-1.4**
	comp=Z,21nm,0.8s						
CONA	**Conrad Observa**	**3.08**	**223**	ePn	**Pn**	**13 31 47.1**	**+0.2**
	0.6nm,0.3s						
CONA				eSn	**Sn**	**13 32 25.5**	**+1.1**
	5.0nm,0.4s						
TRPA	**Tarpa**	**3.15**	**131**	⇑P	**Pn**	**13 31 48.2**	**+0.5**
BRG	**Berggiesshubel**	**3.27**	**283**	PG	**Pb**	**13 31 59.8**	**+0.4**
BRG				SG	**Sg**	**13 32 43.2**	**+1.4**
	11nm,0.5s						
KHC	**Kasperske Hory**	**3.67**	**255**	ePN	**Pn**	**13 31 56.4**	**+1.5**
KHC				eSG	**Sg**	**13 32 53.4**	**-1.2**
	comp=Z,16nm,0.4s						
GERES	**GERESS Array B**	**3.70**	**250**	Pn	**Pn**	**13 31 57.3**	**+2.0**
	0.2nm,0.3s,baz=73,slow=14,SNR=3.7						
GERES				Pg	**Pg**	**13 32 06.7**	**-1.0**
	0.5nm,0.3s,baz=65,slow=16,SNR=7.3						
GERES				Lg	Lg	13 32 53.9	
	3.9nm,0.3s,baz=63,slow=27,SNR=12						
MOA	**Molln**	**3.90**	**234**	ePn	**Pn**	**13 31 59.4**	**+1.3**
	0.3nm,0.1s						
MOA				eSn	**Sn**	**13 32 47.0**	**+2.3**
	2.8nm,0.3s						
CLL	**Collm**	**3.94**	**288**	ePg	**Pg**	**13 32 13.0**	**+0.7**
CLL				eSg	**Sg**	**13 33 05.0**	**+1.8**
	comp=Z,8.0nm,0.5s						
DRGR		**4.25**	**143**	⇑P	**Pn**	**13 32 02.8**	**-0.1**
BURAR	**Bucovina Array**	**4.88**	**120**	⇑P	**Pn**	**13 32 12.4**	**+0.7**
AKASG	**Malin Array Be**	**6.57**	**82**	Lg	Lg	13 34 21.8	
	comp=Z,0.9nm,0.3s,baz=245,slow=23,SNR=4.1						
DAVOX	**Davos/Dischmat**	**6.95**	**244**	Lg	Lg	13 34 38.5	
	comp=Z,0.3nm,0.3s,baz=184,slow=16,SNR=2.0						
FINES	**FINESS Array B**	**11.92**	**17**	Pn	**Pn**	**13 33 44.9**	**-3.0**
	comp=Z,0.1nm,0.3s,baz=200,slow=12,SNR=3.1						
ARCES	**ARCESS Array B**	**19.62**	**7**	Pn	**P**	**13 35 26.0**	**-0.6**
	baz=188,slow=13,SNR=2.7						

INMG 21 13:34:05.4±0.8,32°.40N×7°.86W,h0km,ML2.8,Error ellipse: s-maj=11.4km s-min=3.7km az=48.0
MDD 21 13:34:04.2±3.9,32°.30N×7°.52W,h0km,mb3.9/1,Error ellipse: s-maj=61.9km s-min=30.7km az=81.0,PRXIMO, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**4.94**	**348**	ePn	Pn	13 35 18.2	-1.6
PBDV	**Barranco-do-Ve**	**4.95**	**356**	eSn	Sn	13 36 13.2	-4.6
PBDV	**Barranco-do-Ve**	**4.95**	**356**	Sn	Sn	13 36 13.2	-4.6
PVAQ	**Vaqueiros**	**5.10**	**358**	ePn	Pn	13 35 20.7	-1.2
PVAQ				eSn	Sn	13 36 16.3	-5.2
PVAQ	**Vaqueiros**	**5.10**	**358**	Pn	Pn	13 35 20.7	-1.2
PVAQ				Sn	Sn	13 36 16.3	-5.2
EGRO	**El Granado**	**5.23**	**0**	Pn	Pn	13 35 23.2	-0.4
	0.2nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	13 36 19.9	-4.7
	2.4nm,0.2s,SNR=4.9						
PCVE	**Castro Verde**	**5.34**	**356**	ePn	Pn	13 35 24.0	-1.2
PCVE				eSn	Sn	13 36 22.8	-4.6
PCVE	**Castro Verde**	**5.34**	**356**	Pn	Pn	13 35 24.0	-1.2
PCVE				Sn	Sn	13 36 22.8	-4.6
EMIN	**Mina Concepcio**	**5.50**	**7**	Pn	Pn	13 35 25.2	-2.3
	0.7nm,0.2s,SNR=7.7						
EMIN				Sn	Sn	13 36 26.0	-5.5
	4.8nm,0.4s,SNR=17						
PBEJ	**Beja**	**5.72**	**357**	eSn	Sn	13 36 32.3	-4.6
PBEJ	**Beja**	**5.72**	**357**	Sn	Sn	13 36 32.3	-4.6
ECAB	**El Cabril**	**6.02**	**16**	Pn	Pn	13 35 33.5	-1.0
	1.1nm,0.2s,SNR=7.9						
ECAB				Sn	Sn	13 36 39.4	-4.7
	6.1nm,0.5s,SNR=11						
EADA	**Adamuz**	**6.33**	**22**	Pn	Pn	13 35 37.7	-1.2
	0.6nm,0.1s,SNR=7.9						
EADA				Sn	Sn	13 36 39.7	-12
	1.0nm,0.2s,SNR=7.9						

OMAN 21 13:52:53.3±0.4,16°.76N×59°.68E,h33km±10km,ml4.0/6, Error ellipse: s-maj=18.7km s-min=6.5km az=6.0,Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DQM	**DQM**	**3.75**	**328**	P	Pn	13 53 48.9	0.0
DQM				S	Sn	13 54 33.2	+1.3
SHAO	**Shalim**	**4.07**	**289**	P	Pn	13 53 52.7	-0.6
	SNR=69						
SHAO				S	Sn	13 54 39.0	-0.9
MHTO	**MHTO**	**4.50**	**339**	P	Pn	13 53 58.4	-0.8
	SNR=7.9						
MHTO				S	Sn	13 54 51.5	+1.0
DMTO	**DMTO**	**4.62**	**283**	P	Pn	13 54 01.0	+0.1
	SNR=65						
DMTO				S	Sn	13 54 51.8	-1.7
RBK	**Rabkut**	**5.29**	**279**	P	Pn	13 54 09.8	-0.2
	SNR=12						
RBK				S	Sn	13 55 08.9	-1.1
JLN	**Jalan Bani Buh**	**5.37**	**357**	S	Sn	13 55 11.2	-0.6
WHFO	**Wadi Hawf**	**5.76**	**282**	P	Pn	13 54 16.7	+0.2
	SNR=7.4						
WHFO				S	Sn	13 55 23.0	+1.5
JMDO	**Jabal Madar**	**5.77**	**345**	P	Pn	13 54 17.1	+0.4
	SNR=5.4						
JMDO				S	Sn	13 55 24.9	+3.0
WBK	**Wadi Bani Khal**	**5.86**	**354**	P	Pn	13 54 18.0	+0.1
	SNR=21						
ABTO	**Aybut**	**6.13**	**276**	S	Sn	13 55 30.6	-0.2
SMDO	**Samad**	**6.45**	**347**	P	Pn	13 54 26.0	-0.1
	SNR=5.0						
SMDO				S	Sn	13 55 38.2	-0.4
BIDO	**Bidbid**	**6.88**	**348**	P	Pn	13 54 32.5	+0.6
	SNR=10						
HOQ	**Hoqain**	**7.14**	**342**	P	Pn	13 54 36.6	+1.1
HOQ				S	Sn	13 55 56.3	+0.7
ARQ	**Araqi**	**7.18**	**336**	P	Pn	13 54 37.6	+1.5
	SNR=22						

IDC 21 13:54:02.6±1.9,20°.88S×176°.42E,h0km,mb3.6/4, mb1 4.0/6,mb1mx3.7/25,mbtmp3.8/6,ML3.3/2,MS3.4/14, Ms1 3.4/14,ms1mx3.3/27,Error ellipse: s-maj=48.2km s-min=33.3km az=154.0
NEIC 21 13:54:04.2±1.9,20°.8S±0°.1×176°.6E±0°.2,h36km±8km, mb4.4/7,Error ellipse: s-maj=26.9km s-min=12.8km az=130.0
ISC 21 13:54:05.1±1.0,20°.9S±0°.1×176°.6E±0°.1,h35km,n33, σ2s48/15,mb4.0/8,MS3.7/13,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.39**	**23**		**Pn**	**13 54 52.8**	**-2.9**
MSVF				Sn	**Sn**	**13 55 35.2**	**+0.6**
DZM	**Mont Dzumac**	**9.57**	**261**	ePn	Pn	13 56 24.3	+3.8
	82nm,1.5s						
DZM				eLR	LR	13 58 29.7	
	comp=Z,558nm,26.0s						
DZM	**Mont Dzumac**	**9.57**	**261**	Pn	**Pn**	**13 56 19.8**	**-0.7**
	0.1nm,0.3s,baz=84,slow=18,SNR=2.2						
DZM				Sn	**Sn**	**13 58 08.5**	**+1.6**
	0.0nm,0.3s,baz=222,slow=14,SNR=2.5						
DZM				LR	LR	13 59 14.0	
	comp=Z,237nm,20.4s,baz=95,slow=33						
AFI	**Afiamalu**	**13.04**	**60**	LR	LR	14 01 45.3	
	comp=Z,60nm,20.4s,baz=236,slow=35						
URZ	**Urewera**	**17.34**	**179**	P	**P**	**13 58 05.4**	**-0.1**
	0.5nm,0.3s,baz=26,slow=11,SNR=4.8						
URZ				LR	LR	14 03 05.5	
	comp=Z,128nm,21.6s,baz=18,slow=31						
URZ	**Urewera**	**17.34**	**179**	IAmb	IAmb	13 58 13.8	
	comp=Z,48nm,1.3s						
HNR	**Honiara**	**19.70**	**303**	LR	LR	14 04 35.9	
	comp=Z,129nm,20.2s,baz=137,slow=32						
RAR	**Rarotonga**	**22.02**	**95**	LR	LR	14 05 35.2	
	comp=Z,38nm,20.8s,baz=268,slow=31						
RPZ	**Rata Peaks**	**23.26**	**190**	LR	LR	14 06 58.3	
	comp=Z,99nm,19.1s,baz=168,slow=33						
ARMA	**Armidale**	**24.43**	**242**	P	**P**	**13 59 16.5**	**-4.2**
ARMA				IAmb	IAmb	13 59 21.5	
	comp=Z,23nm,1.4s						
TBI	**Tubuai**	**31.46**	**101**	eLR	LR	14 08 39.6	
	comp=Z,276nm,30.0s						
TOO	**Toolangi**	**31.68**	**231**	P	**P**	**14 00 25.1**	**-0.3**
PPT2	**Papeete2**	**32.03**	**90**	eLR	LR	14 08 51.6	
	comp=Z,358nm,30.0s						
PPT	**Papeete**	**32.04**	**90**	LR	LR	14 11 04.0	
	comp=Z,38nm,18.7s,baz=191,slow=32						
STKA	**Stephens Creek**	**33.12**	**243**	LR	LR	14 11 45.1	
	comp=Z,46nm,21.8s,baz=7.7,slow=32						
AS31	**Alice Springs**	**39.54**	**258**	P	**P**	**14 01 33.2**	**+0.1**
ASAR	**Alice Springs**	**39.54**	**258**	P	**P**	**14 01 33.3**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=84,slow=8.5,SNR=16						
ASAR				LR	LR	14 17 30.3	
	comp=Z,62nm,19.0s,baz=93,slow=36						
WB2	**Warramunga Arr**	**39.56**	**264**	P	**P**	**14 01 29.3**	**-3.9**
WB2				IAmb	IAmb	14 01 37.5	
	comp=Z,5.2nm,1.2s						
WRAB	**Tennant Creek**	**39.57**	**264**	P	**P**	**14 01 31.5**	**-1.7**
WRAB				IAmb	IAmb	14 01 47.6	
	comp=Z,4.8nm,1.2s						
WRA	**Warramunga Arr**	**39.57**	**264**	P	**P**	**14 01 32.8**	**-0.5**
	comp=Z,0.5nm,1.0s,baz=88,slow=8.5,SNR=3.0						
WRA				LR	LR	14 17 23.0	
	comp=Z,126nm,19.9s,baz=105,slow=36						
H11S2	**WAKE ISLAND Hy**	**40.31**	**345**	T	T	14 44 33.5	
	baz=166,slow=76,SNR=39						
H11S3	**WAKE ISLAND Hy**	**40.31**	**345**	T	T	14 44 37.0	
	baz=166,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**40.32**	**345**	T	T	14 44 35.5	
	baz=166,slow=76,SNR=36						
H11N3	**WAKE ISLAND Hy**	**41.44**	**346**	T	T	14 46 01.3	
	baz=167						
H11N1	**WAKE ISLAND Hy**	**41.44**	**346**	T	T	14 45 59.9	
	baz=167						
H11N2	**WAKE ISLAND Hy**	**41.46**	**346**	T	T	14 46 02.4	
	baz=167						
RKT	**Rikitea**	**44.76**	**102**	eLR	LR	14 14 48.8	
	comp=Z,137nm,32.0s						
FITZ	**Fitzroy Crossi**	**48.00**	**264**	P	**P**	**14 02 39.7**	**-1.3**
FITZ				IAmb	IAmb	14 02 55.8	
	comp=Z,13nm,1.4s						
PFO	**Pinyon Flats O**	**83.62**	**51**	LR	LR	14 38 28.8	
	comp=Z,42nm,18.5s,baz=268,slow=32						
LPIG	**La Paz**	**83.95**	**62**	LR	LR	14 37 26.0	
	comp=Z,33nm,19.7s,baz=218,slow=31						
CMAR	**Chiang Mai Arr**	**85.54**	**292**	P	**P**	**14 06 43.9**	**+3.7**
	comp=Z,0.3nm,0.4s,baz=118,slow=5.2,SNR=3.4						
BBB	**Bella Bella**	**87.18**	**30**	LR	LR	14 43 22.1	
	comp=Z,32nm,18.3s,baz=174,slow=34						
ILAR	**Eielson Array**	**89.86**	**15**	P	**P**	**14 07 03.0**	**+3.2**
	comp=Z,0.6nm,1.1s,baz=218,slow=5.7,SNR=2.4						
ILAR				LR	LR	14 41 27.7	
	comp=Z,23nm,19.4s,baz=333,slow=32						

IDC 21 15:15:02.1±1.0,29°.92N×139°.28E,h393km±20km,mb3.0/7, mb1 3.0/11,mb1mx2.8/73,mbtmp3.7/11,Error ellipse: s-maj=53.8km s-min=12.2km az=73.0
ISC 21 15:15:01.7±0.8,29°.9N±0°.1×139°.2E±0°.2,h388km,n11, σ0s78/12,mb3.0/6,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.84**	**136**	P	**Pn**	**15 16 11.1**	**-0.5**
	7.4nm,0.3s,baz=270,slow=20,SNR=2.4						
JCJ				S	**S**	**15 17 08.7**	**+0.6**
	14nm,0.3s,baz=300,slow=20,SNR=4.2						
MJAR	**Matsushiro Arr**	**6.67**	**353**	P	**P**	**15 16 42.1**	**+0.1**
	0.1nm,0.3s,baz=170,slow=11,SNR=4.5						
KSRS	**Korea Array**	**12.03**	**312**	P	**Pn**	**15 17 44.1**	**+0.8**
	0.1nm,0.3s,baz=119,slow=9.9,SNR=3.9						
USRK	**Ussuriysk Ar.**	**15.37**	**340**	P	**P**	**15 18 18.7**	**+0.2**
	baz=156,slow=11,SNR=3.9						
KLR	**Kul'dur**	**20.11**	**346**	P	**P**	**15 19 09.0**	**+1.2**
	1.2nm,0.5s,baz=156,slow=12,SNR=8.4						
ZALV	**Zalesovo Beam**	**45.65**	**318**	P	**P**	**15 22 44.3**	**-0.8**
	0.4nm,0.3s,baz=128,slow=8.2,SNR=2.8						
MKAR	**Makanchi Array**	**46.68**	**308**	P	**P**	**15 22 52.7**	**-0.5**
	0.1nm,0.3s,baz=86,slow=9.2,SNR=3.9						
WRA	**Warramunga Arr**	**49.78**	**186**	P	**P**	**15 23 16.6**	**-0.3**
	0.2nm,0.3s,baz=2.0,slow=7.8,SNR=5.8						
ASAR	**Alice Springs**	**53.51**	**186**	P	**P**	**15 23 44.9**	**+0.8**
	0.2nm,0.4s,baz=1.4,slow=7.4,SNR=6.2						
FINES	**FINESS Array B**	**74.27**	**333**	P	**P**	**15 25 56.2**	**-0.9**
	3.6nm,1.1s,baz=59,slow=6.7,SNR=2.5						
HFS	**Hagfors**	**79.80**	**336**	P	**P**	**15 26 27.2**	**-0.5**
	3.3nm,0.8s,baz=52,slow=12,SNR=3.6						

IDC 21 15:18:21.5±0.5,38°.27N×20°.45E,h0km,mb4.3/34, mb1 4.3/44,mb1mx4.2/69,mbtmp4.3/44,ML4.0/9,MS3.3/14, Ms1 3.3/14,ms1mx3.0/52,Error ellipse: s-maj=11.0km s-min=10.0km az=129.0
HLW 21 15:18:21.7,38°.34N×21°.18E,h10km±36km,Md4.6,Ml4.9
BEO 21 15:18:22.9±0.6,38°.06N×20°.25E,h28km±4km,ML4.0/11
SKO 21 15:18:22.1,38°.09N×20°.44E,h0km
MED_RC 21 15:18:23.0±0.9,38°.22N×20°.42E,h23km±3km,MW4.1/6, Moment Tensor Solution.Mantle waves: s6,c8; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.19±.51; $M_{\theta\theta}$0.96±.27; $M_{\phi\phi}$0.23±.36; $M_{r\theta}$1.17±.20; $M_{\theta\phi}$0.72±.18; $M_{\phi r}$-0.31±.26; Best double couple: $M_0$1.78000×10^{15} NP1:ϕ_s35.00000°,δ34.00000°,λ-136.00000°. NP2: ϕ_s266.00000°,δ67.00000°,λ-65.00000°. Principal axes: T 1.6800, Plg18.0000°, Azm337.0000°; N 0.1800, Plg23.0000°, Azm75.0000°; P -1.8700, Plg60.0000°, Azm213.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.
THE 21 15:18:23.9,38°.22N×20°.42E,h13km,ML4.3/9 Error ellipse: s-maj=1.0km s-min=0.5km az=270.0
ATH 21 15:18:23.4,38°.22N×20°.40E,h16km±1km,ML4.3/11,Error ellipse: s-maj=1.5km s-min=0.9km az=236.0
PDG 21 15:18:23.3±0.7,38°.25N×20°.39E,h12km±1km,ML4.2/13, Error ellipse: s-maj=1.3km s-min=1.1km az=90.0
MOS 21 15:18:25.4±1.2,38°.34N×20°.32E,h38km,mb4.7/18,Error ellipse: s-maj=6.9km s-min=3.9km az=72.7
NEIC 21 15:18:26.5±2.4,38°.21N±0°.03×20°.36E±0°.06,h37km±6km, Error ellipse: s-maj=7.0km s-min=3.6km az=80.0
ISC 21 15:18:23.5±0.5,38°.19N±0°.02×20°.42E±0°.02,h16km±3km, n370,σ1s72/442,mb4.5/60,MS3.2/8,11C-29D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXRA	**Lixouri, Kepha**	**0.02**	**69**	P	**Pg**	**15 18 26.3**	**0.0**
LXRA				S	**Sg**	**15 18 28.1**	**0.0**
LXR1	**Lixouri, Cepha**	**0.02**	**68**	P	**Pg**	**15 18 26.3**	**0.0**
LXR1				S	**Sg**	**15 18 28.2**	**0.0**
CHV1	**Chavriata, Kef**	**0.03**	**249**	P	**Pg**	**15 18 26.4**	**+0.1**
CHV1				S	**Sg**	**15 18 28.5**	**+0.3**
KEF3	**Kipouria, Keph**	**0.05**	**280**	P	**Pg**	**15 18 26.5**	**0.0**
KEF3				S	**Sg**	**15 18 28.8**	**+0.3**
ARG2	**Argostoli**	**0.06**	**105**	P	**Pg**	**15 18 26.5**	**0.0**
ARG2				S	**Sg**	**15 18 28.2**	**-0.3**
AGT1	**Agia Thekli**	**0.06**	**336**	P	**Pg**	**15 18 26.4**	**-0.2**
AGT1				S	**Sg**	**15 18 28.3**	**-0.3**
KEF2	**Argostoli. Kep**	**0.06**	**116**	P	**Pg**	**15 18 26.6**	**0.0**
KEF2				S	**Sg**	**15 18 28.3**	**-0.2**
KEF4	**Livadi, Kephal**	**0.07**	**6**	P	**Pg**	**15 18 26.3**	**-0.3**
KEF1	**Kardakata, Kep**	**0.10**	**27**	P	**Pg**	**15 18 26.6**	**-0.3**
KEF1				S	**Sg**	**15 18 28.5**	**-0.5**
VLS	**Valsamata**	**0.14**	**97**	P	**Pg**	**15 18 27.2**	**-0.2**
VLS				S	**Sg**	**15 18 29.7**	**-0.2**
	496μm,0.3s						
VLS	**Valsamata**	**0.14**	**97**	P	**Pg**	**15 18 27.3**	**-0.1**
VLS				S	**Sg**	**15 18 29.7**	**-0.2**
VLS				AML	AML	15 18 29.9	
VLS				AML	AML	15 18 30.4	
VSK1	**VASILIKIADES**	**0.24**	**28**	P	**Pg**	**15 18 28.8**	**-0.2**
VSK1				S	**Sg**	**15 18 32.5**	**-0.2**
KONA	**Konidatara, Ke**	**0.26**	**28**	P	**Pg**	**15 18 29.2**	**-0.1**
KONA				S	**Sg**	**15 18 32.7**	**-0.5**
FSK	**Fiskardo**	**0.29**	**23**	P	**Pg**	**15 18 29.4**	**-0.3**
FSK				S	**Sg**	**15 18 33.8**	**-0.2**
	180μm,0.4s						
FSK	**Fiskardo**	**0.29**	**23**	P	**Pg**	**15 18 29.5**	**-0.3**
FSK				S	**Sg**	**15 18 33.8**	**-0.2**
FSK				AML	AML	15 18 34.1	
FSK				AML	AML	15 18 34.1	
VLMS	**Volimes, Zakyn**	**0.37**	**148**	P	**Pg**	**15 18 31.6**	**+0.4**
VLMS				S	**Sb**	**15 18 37.8**	**+0.5**
VLMS				AML	AML	15 18 38.3	
VLMS				AML	AML	15 18 38.4	
EVGI	**Lefkada island**	**0.47**	**24**	P	**Pg**	**15 18 32.4**	**-0.4**
EVGI	**Lefkada island**	**0.47**	**24**	P	**Pg**	**15 18 32.5**	**-0.4**
EVGI				S	**Sb**	**15 18 39.6**	**-0.5**
MGNA	**Meganis**	**0.55**	**32**	P	**Pg**	**15 18 34.0**	**-0.4**
ZAK2	**Zakynthos**	**0.56**	**136**	P	**Pb**	**15 18 34.9**	**0.0**
KRI1	**kERI**	**0.62**	**149**	P	**Pg**	**15 18 35.4**	**-0.3**
KRI1				S	**Sb**	**15 18 45.4**	**+1.0**
LKD2	**Lefkada island**	**0.62**	**18**	P	**Pg**	**15 18 34.8**	**-1.0**
LKD2				S	**Sg**	**15 18 43.3**	**-0.9**
	19μm,0.5s						
LKD2	**Lefkada island**	**0.62**	**18**	P	**Pg**	**15 18 35.2**	**-0.6**
LKD2				S	**Sg**	**15 18 42.7**	**-1.5**
LKD2				AML	AML	15 18 52.1	
	comp=N,41142μm,0.4s						
LKD2				AML	AML	15 18 52.4	
	comp=E,35882μm,0.7s						
AST1	**Astakos**	**0.63**	**57**	P	**Pg**	**15 18 35.5**	**-0.5**
AST1				S	**Sb**	**15 18 45.2**	**+0.4**
	comp=E,51μm,0.4s						
TSLK	**Tsoukalades, L**	**0.66**	**17**	P	**Pg**	**15 18 35.6**	**-0.8**
TSLK				S	**Sb**	**15 18 45.0**	**-0.6**
	comp=E,20μm,0.5s						
VTN	**Vitineika**	**0.67**	**114**	P	**Pg**	**15 18 36.6**	**0.0**
VTN	**Vitineika**	**0.67**	**114**	P	**Pg**	**15 18 36.7**	**0.0**
PDO	**Prodromos**	**0.73**	**56**	P	**Pg**	**15 18 37.1**	**-0.6**
PDO				S	**Sb**	**15 18 48.3**	**+0.8**
	comp=E,41μm,0.5s						
PDO	**Prodromos**	**0.73**	**56**	P	**Pg**	**15 18 37.3**	**-0.4**
PDO				S	**Sb**	**15 18 48.4**	**+0.8**
PDO				AML	AML	15 18 55.1	
	comp=E,54958μm,0.5s						
PDO				AML	AML	15 18 55.1	
	comp=N,63670μm,0.4s						
RLS	**Riolos of Patr**	**0.84**	**99**	P	**Pb**	**15 18 39.1**	**-0.6**
RLS	**Riolos of Patr**	**0.84**	**99**	P	**Pg**	**15 18 39.9**	**+0.1**
RLS				S	**Sg**	**15 18 51.6**	**+0.6**
RLS				AML	AML	15 19 00.9	
	comp=E,11914μm,0.5s						
RLS				AML	AML	15 19 01.6	
	comp=N,9797μm,0.3s						
PVO	**Paravola**	**0.97**	**64**	P	**Pb**	**15 18 41.8**	**-0.1**
PVO				S	**Sn**	**15 18 57.5**	**+1.6**
	comp=N,26μm,0.6s						
PVO	**Paravola**	**0.97**	**64**	P	**Pg**	**15 18 42.1**	**-0.2**
PVO				S	**Sn**	**15 18 55.8**	**-0.1**
PVO				AML	AML	15 19 02.5	
	comp=N,43370μm,0.6s						
PVO				AML	AML	15 19 02.9	
	comp=E,59345μm,0.6s						
DRO	**Drossia**	**1.05**	**103**	P	**Pb**	**15 18 43.1**	**-0.2**
DRO	**Drossia**	**1.05**	**103**	P	**Pg**	**15 18 43.9**	**0.0**
DRO				S	**Sn**	**15 18 58.5**	**+0.5**
DRO				AML	AML	15 19 07.8	
	comp=E,26415μm,0.4s						
DRO				AML	AML	15 19 10.8	
	comp=N,35385μm,0.5s						
LAKA	**Lakka**	**1.23**	**87**	P	**Pn**	**15 18 46.1**	**0.0**
LAKA				S	**Sg**	**15 19 04.7**	**+1.3**
	comp=N,4μm,0.7s						
LAKA	**Lakka**	**1.23**	**87**	P	**Pn**	**15 18 46.1**	**0.0**
LAKA				S	**Sg**	**15 19 04.1**	**+0.7**
LAKA				AML	AML	15 19 14.6	
	comp=N,6806μm,0.6s						
LAKA				AML	AML	15 19 17.5	
	comp=E,10979μm,0.7s						
SERG	**Sergoula**	**1.31**	**80**	P	**Pn**	**15 18 47.0**	**-0.2**

TRIZ Trizonia 1.31 82 P Pn 15 18 47.1 -0.1
IGT Igoumenitsa 1.34 357 ePg Pg 15 18 50.3 +1.0
IGT eSg Sg 15 19 09.6 +2.8
IGT Igoumenitsa 1.34 357 P Pb 15 18 48.4 +0.1
IGT S Sg 15 19 06.3 -0.5
IGT AML AML 15 19 15.0
comp=E,14476µm,0.6s
IGT AML AML 15 19 17.9
comp=N,7549µm,0.7s
KALE Kalithea 1.37 81 P Pn 15 18 48.0 -0.1
KALE S Sg 15 19 11.7 +3.9
comp=N,4µm,0.4s
KALE Kalithea 1.37 81 P Pg 15 18 49.5 -0.4
KALE S Sg 15 19 08.0 +0.2
KALE AML AML 15 19 17.5
comp=E,8566µm,0.4s
KALE AML AML 15 19 20.2
comp=N,8452µm,0.5s
KLV Kalavryta, Ach 1.38 96 P Pb 15 18 48.7 -0.2
KLV S Sg 15 19 10.7 +2.7
JAN Janina 1.50 13 P Pg 15 18 51.5 -0.9
ITM Ithomi 1.57 130 Pb 15 18 52.5 +0.3
KASA Kassiopi 1.59 347 P Pb 15 18 52.3 -0.3
AGG Agios Georgios 1.71 61 Pg Pg 15 18 55.8 -0.7
AGG Agios Georgios 1.71 61 P Pg 15 18 55.8 -0.7
SCTE Santa Cesarea 2.41 322 Pn 15 19 03.1 +0.8
LIT Litokhoron 2.50 40 Pn 15 19 05.0 +1.5
LIT Litokhoron 2.50 40 P Pn 15 19 05.0 +1.5
KTHA Kythira Island 2.86 132 eP Pb 15 19 12.5 -1.8
AOS Alonnisos 2.88 69 eP Pn 15 19 10.8 +2.0
OHR Ohrid 2.93 6 iPn Pn 15 19 11.8 +2.3
OHR iSg Sg 15 19 58.2 +0.6
OHR eLg Lg 15 19 58.5
comp=E,862nm,1.1s
OHR eLg Lg 15 19 59.1
comp=N,379nm,0.9s
TIP Timpagrande 3.03 290 ⇓P Sn 15 19 47.8 +1.0
TIP Timpagrande 3.03 290 Pn 15 19 12.0 +1.2
TIR Tirane 3.18 353 ePn Pn 15 19 13.5 +0.6
TIR eSn Sn 15 19 51.4 +1.0
TIR Tirane 3.18 353 Pn 15 19 13.8 +0.9
TIR Tirane 3.18 353 P Pn 15 19 13.8 +0.9
TAR1 Taranto 3.36 315 ePn Pn 15 19 14.1 -1.3
OUR Ouranopolis 3.50 51 eP Pn 15 19 19.7 +2.5
VAY Valandovo 3.54 27 iP Pn 15 19 20.3 +2.5
VAY Valandovo 3.54 27 iPn Pn 15 19 19.1 +1.4
CEL Celeste 3.56 272 Pn 15 19 18.0 -0.2
STIP Stip 3.75 21 iPn Pn 15 19 23.6 +2.9
RODP Rodopos 3.75 133 eP Pn 15 19 23.9 +3.1
MATE Matera 3.78 312 ⇓P Sn 15 20 03.9 -1.2
SRS Serrai 3.81 39 ePn Pn 15 19 22.6 +1.0
SKO Skopje 3.85 11 ePn Pn 15 19 23.3 +1.1
SKO eSn Sn 15 20 08.2 +1.1
SKO Skopje 3.85 11 iPn Pn 15 19 23.4 +1.3
ULC Ulcinj 3.87 347 ePn Pn 15 19 21.9 -0.5
ULC eSn Sn 15 20 08.6 +1.0
SG1 Sgolgore (BA) 3.92 314 ⇓iPn Pn 15 19 23.7 +0.7
IMMV Iera Moni Meta 3.95 133 eP Pn 15 19 25.3 +1.8
BAI Bari 3.99 318 ⇓iPn Pn 15 19 24.6 +0.6
DRME Dracevica, Mon 4.10 347 ePn Pn 15 19 25.4 -0.1
DRME Dracevica, Mon 4.10 347 ePn Pn 15 19 25.4 -0.1
DRME eSn Sn 15 20 13.9 +0.8
KKB Krupnik 4.20 28 iP Pn 15 19 28.0 +1.1
APE Apeiranthos 4.21 104 ⇑P Pn 15 19 30.5 +3.4
APE Apeiranthos 4.21 104 eP Pb 15 19 32.6 -4.7
APE Apeiranthos 4.21 104⇓eP Pn 15 19 28.8 +1.7
MMB Musomiste 4.24 36 iP Pb 15 19 38.6 +0.8
ACER Acerenza 4.32 308 Pn 15 19 30.6 +2.0
PDG Podgorica 4.32 349 ePn Pn 15 19 28.6 0.0
PDG eSn Sn 15 20 17.3 -1.3
PDG Podgorica 4.32 349 ⇓P Pn 15 19 28.7 +0.1
PDG Podgorica 4.32 349 ePn Pn 15 19 28.4 -0.2
PDG Podgorica 4.32 349 Pn 15 19 28.7 +0.1
TTG Podgorica 4.32 349 ePn Pn 15 19 28.5 -0.1
TTG eSn Sn 15 20 19.9 +1.3
SIGR SIGRI 4.38 75 eP Pn 15 19 31.8 +2.5
PVY Plav 4.41 356 ePn Pn 15 19 30.4 +0.5
PVY eSn Sn 15 20 21.6 +0.6
CHOS Chios island 4.44 86 eP Pn 15 19 32.4 +2.1
GVDS Gavdos 4.46 137 eP Pn 15 19 33.8 +3.3
GVD Gavdhos 4.47 137 eP Pn 15 19 33.4 +2.8
CEME Cevo 4.50 346 ePn Pn 15 19 30.1 -0.9
CEME iSn Sn 15 20 23.6 +0.6
HCY Herceg Novi 4.50 342 ePn Pn 15 19 29.9 -1.1
HCY Herceg Novi 4.50 342 ePn Pn 15 19 29.7 -1.3
HCY eSn Sn 15 20 23.6 +0.7
BOSS Bosilegrad 4.58 19 ePn Pn 15 19 33.0 +0.9
IDI Anoyia 4.62 128 Pn Pn 15 19 33.6 +0.6
comp=N,1.3nm,0.3s,baz=350,slow=17,SNR=8.8
IDI Sn Sn 15 20 28.6 +2.6
comp=N,13nm,0.3s,baz=314,slow=23,SNR=9.4
IDI LR LR 15 21 41.9
comp=N,174nm,21.5s,baz=311,slow=43
IDI Anoyia 4.62 128 eP Pn 15 19 36.5 +3.8
BOZC Bozcaada 4.69 68 eP Pn 15 19 36.1 +2.5
IVA Berane 4.69 355 ePn Pn 15 19 34.4 +0.7
IVA eSn Sn 15 20 28.9 +1.1
KOME Kolasin 4.70 352 ePn Pn 15 19 34.2 +0.3
KOME eSn Sn 15 20 29.0 +0.9
NKME Niksic 4.70 347 ePn Pn 15 19 33.0 -0.9
NKME eSn Sn 15 20 28.7 +0.6
BARS Barje 4.74 13 ePn Pn 15 19 34.7 +0.4
NKY Niksic 4.74 347 ePn Pn 15 19 34.4 0.0
NKY eSn Sn 15 20 29.8 +0.7
TREB Trebinje 4.79 341 ePn Pn 15 19 34.2 -0.7
TREB eSn Sn 15 20 28.6 -1.5
TREB Trebinje 4.79 341 ePn Pn 15 19 33.8 -1.1
RZN Rozhen 4.81 42 iP Pn 15 19 37.1 +1.7
VAE Valguarnera 4.81 263 Sn Sn 15 20 32.1 +1.5
comp=N,10nm,0.3s,baz=345,slow=18,SNR=5.2
URLA Izmir 4.87 86 eP Pn 15 19 42.1 +6.0
EZN Ezine 4.88 69 eP Pn 15 19 39.4 +3.1
BRY Bratogost 4.92 344 ePn Pn 15 19 36.0 -0.9
BRY Bratogost 4.92 344 ePn Pn 15 19 35.5 -1.4
BRY eSn Sn 15 20 33.7 +0.2
VTS Vitosha 4.92 25 ePn Pn 15 19 37.8 +0.9
VTS eSn Sn 15 20 31.9 -1.6
VTS Vitosha 4.92 25 ⇓P Pn 15 19 38.1 +1.2
VTS Vitosha 4.92 25 iP Pn 15 19 37.9 +1.0
VTS Vitosha 4.92 25 Pn 15 19 38.1 +1.2
VTS Vitosha 4.92 25 ⇓P Pn 15 19 38.1 +1.2
RDO Rodhopi 4.93 52 eP Pn 15 19 39.0 +2.1
SELS Selova 5.05 6 ePn Pn 15 19 38.4 -0.2
SELS eSn Sn 15 20 34.8 -1.8
SGRT San Giovanni R 5.05 316 Pn 15 19 39.4 +0.7
SJES Sjenica 5.07 356 ePn Pn 15 19 39.2 +0.2
SJES eSn Sn 15 20 35.8 -1.5
PLD Plovdiv 5.10 39 eP Pn 15 19 44.4 +5.1
STON Ston 5.11 337 ePn Pn 15 19 38.6 -0.8
STON Ston 5.11 337 ePn Pn 15 19 38.3 -1.1
ENEZ Enez 5.11 58 eP Pn 15 19 41.3 +1.9
ALN Alexandroupoli 5.12 56 eP Pn 15 19 41.9 +2.4
ALN Alexandroupoli 5.12 56 Pn 15 19 41.1 +1.6
ALN Alexandroupoli 5.12 56 P Pn 15 19 41.1 +1.6
UPM Unac-Piva 5.13 348 ePn Pn 15 19 39.7 -0.2
UPM Unac-Piva 5.13 348 ePn Pn 15 19 39.8 -0.1
UPM eSn Sn 15 20 38.9 0.0
KDZ Kurdzhali 5.17 47 iP Pn 15 19 40.7 +0.5
KDZ Kurdzhali 5.17 47 P Pn 15 19 41.8 +1.6
GELI Tayfur-Gelibol 5.19 63 eP Pn 15 19 42.9 +2.4
PLE Pljevlja 5.19 352 ePn Pn 15 19 41.2 +0.6
PLE eSn Sn 15 20 40.3 +0.1
PGB Panagyurishte 5.21 32 iP Pn 15 19 41.9 +1.1
WDD Wied Dalam 5.27 245 Pn Pn 15 19 41.5 -0.1
ERIK Erikli-Kesan 5.33 60 eP Pn 15 19 44.3 +1.9
PAOL Paolisi 5.33 304 Pn 15 19 45.1 +2.6
ZAPS Zavoj 5.35 18 ePn Pn 15 19 43.5 +0.8
IVAS Ivanjica 5.38 358 ePn Pn 15 19 42.7 -0.5
LPK Lapseki 5.38 64 eP Pn 15 19 45.8 +2.7
RUDO Rudo 5.48 352 ePn Pn 15 19 43.8 -0.7
BOVS Bovan 5.52 10 ePn Pn 15 19 44.9 -0.2
BOVS eSn Sn 15 20 47.0 -1.2
ZKR Zakros 5.58 122 eP Pn 15 19 49.8 +3.9
UKOP Uzunkopru-Edir 5.62 57 eP Pn 15 19 50.8 +4.4
CORL Corleone 5.62 269 Pn 15 19 47.4 +0.9
GRUS Gruza 5.69 2 ePn Pn 15 19 47.2 -0.2
BBLS Lazići 5.72 353 ePn Pn 15 19 47.7 -0.1
BBLS eSn Sn 15 20 51.6 -1.5
BBLS Lazići 5.72 353 ePn Pn 15 19 47.2 -0.6
CLTB Caltabellotta 5.73 266 Pn 15 19 50.6 +2.6

ZAGS Zajecar 5.78 13 ePn Pn 15 19 48.4 -0.2
DIVS Divibare 5.91 357 ePn Pn 15 19 49.8 -0.7
DIVS eSn Sn 15 20 54.5 -3.3
DIVS Divibare 5.91 357 ePn Pn 15 19 49.7 -0.7
HAPS Han Pijesak,Bl 5.99 350 ePn Pn 15 19 50.1 -1.5
KARP Karpathos 6.02 114 Pn Pn 15 19 55.3 +3.4
TRUS Trudelj 6.03 360 ePn Pn 15 19 51.5 -0.5
TRUS eSn Sn 15 20 59.4 -1.2
EDRB Edirne 6.07 51 eP Pn 15 19 54.8 +2.2
PLVB Pleven 6.09 30 ⇓P Pn 15 19 54.1 +1.3
PVL Pavlikeni 6.25 35 iP Pn 15 19 55.3 +0.2
INTR Introdacqua 6.28 309 Pn 15 19 58.2 +2.7
KUBS Kucevo 6.29 8 ePn Pn 15 19 54.3 -1.2
ELND Elena 6.30 40 ⇑P Pn 15 19 57.2 +1.5
TEKS Tekeris 6.38 354 ePn Pn 15 19 56.5 -0.4
TEKS Tekeris 6.38 354 ePn Pn 15 19 56.0 -0.9
DALY Dalyan (Mula) 6.69 99 eP Pn 15 20 10.1 +9.0
MGRS Mrkonjic Grad 6.70 339 ePn Pn 15 20 01.7 +0.4
FRGS Fruska Gora 6.97 356 ePn Pn 15 20 00.5 -4.5
BLY Banja Luka 6.98 341 ⇑P Pn 15 20 05.1 0.0
BLY Banja Luka 6.98 341 ePn Pn 15 20 04.9 -0.2
BLY Banja Luka 6.98 341 Pn 15 20 05.4 +0.2
FETY Fethiye 7.07 100 eP Pn 15 20 14.8 +8.4
TVSB Tavsanli 7.17 77 eP Pn 15 20 13.8 +6.0
NRCA Norcia 7.24 312 Pn 15 20 11.0 +2.3
BZS Buzias 7.47 6 ⇓P Pn 15 20 11.6 -0.2
BZS Buzias 7.47 6 ⇓P Pn 15 20 11.6 -0.2
SLUM Salum 7.76 148 P Pn 15 20 14.4 -1.4
baz=153
SLUM AMP 15 21 00.0
baz=153
SLUM S Sn 15 21 34.9 -8.4
baz=153
MURB Monte Urbino 7.84 313 Pn 15 20 19.3 +2.3
VOIR 8.02 24 ⇓P Pn 15 20 21.1 +1.7
VOIR 8.02 24 ⇓P Pn 15 20 21.1 +1.7
MORH Mrgy, Hungar 8.12 351 ePn Pn 15 20 18.9 -1.8
MLR Muntele Rosu 8.38 28 Pn Pn 15 20 25.1 +0.7
comp=N,0.8nm,0.3s,baz=201,slow=3.6,SNR=18
MLR LR LR 15 24 17.3
comp=N,230nm,20.7s,baz=123,slow=43
MLR Muntele Rosu 8.38 28 ⇓P Pn 15 20 27.4 +3.1
MLR Muntele Rosu 8.38 28 ⇓P Pn 15 20 27.4 +3.1
RIY Rijeka 8.39 330 ePn Pn 15 20 24.6 +0.2
CRES Cresnjev 8.47 336 ePn Pn 15 20 24.6 -0.9
DOPR Dopca 8.60 24 ⇑P Pn 15 20 29.1 +1.8
BEHE Becsehely 8.70 343 ePn Pn 15 20 27.3 -1.3
OSSC Osservatorio P 8.75 310 Pn Pn 15 20 29.4 0.0
LJU Ljubljana 8.98 333 ePn Pn 15 20 31.9 -0.6
VRI Vrincioaia 8.99 29 ⇓P Pn 15 20 35.4 +2.8
VRI Vrincioaia 8.99 29 ⇓P Pn 15 20 35.4 +2.8
TRI Trieste 8.99 329 Pn 15 20 32.2 -0.5
TRI Trieste 8.99 329 P Pn 15 20 32.2 -0.5
KEST Kesra 9.19 258 Pn Pn 15 20 36.8 +1.3
comp=N,0.6nm,0.3s,baz=42,slow=9.8,SNR=5.7
KEST Sn Sn 15 22 15.9 -2.8
comp=N,0.1nm,0.3s,baz=60,slow=20,SNR=2.3
KEST Kesra 9.19 258 Pn 15 20 35.2 -0.3
SOKA Soboth 9.36 337 ePn Pn 15 20 36.9 -1.0
comp=N,24nm,0.4s,SNR=13
SOKA iSn Sn 15 22 16.5 -6.3
comp=N,1.6nm,0.2s
OBKA Obir 9.37 334 ePn Pn 15 20 38.1 +0.1
comp=N,7.9nm,0.2s,SNR=17
OBKA eSn Sn 15 22 18.9 -4.1
comp=N,25nm,0.8s
TEOL Teolo 9.69 320 Pn 15 20 42.0 -0.2
PSZ Piszkesteto 9.73 358 ⇓P Pn 15 20 44.0 +1.2
PSZ Piszkesteto 9.73 358 Pn Pn 15 20 44.0 +1.2
PSZ Piszkesteto 9.73 358 ⇓P Pn 15 20 44.0 +1.2
ARSA Arzberg 9.74 340 ePn Pn 15 20 42.0 -0.9
comp=N,6.5nm,0.3s,SNR=7.5
ARSA eSn Sn 15 22 26.4 -5.5
comp=N,2.0nm,0.4s
MYKA Terra Mystica 9.80 331 Pn Pn 15 20 43.7 -0.2
comp=N,10.0nm,0.5s,SNR=6.7
MYKA eSn Sn 15 22 28.9 -4.7
comp=N,4.6nm,0.4s
SWA2 9.86 153 P Pn 15 20 43.2 -1.4
baz=157
SWA2 AMP 15 22 00.0
baz=157
SWA2 S Sn 15 22 26.8 -8.2
baz=157
STAL STALIGIAL 9.88 327 Pn 15 20 44.1 -0.7
CTI Castel Tesino 10.19 323 Pn 15 20 48.0 -1.1
CTI Castel Tesino 10.19 323 P Pn 15 20 48.1 -1.1
MSSA Maissana 10.23 310 Pn Pn 15 20 51.3 +1.6
KBA Koelnbreinsper 10.29 332 ePn Pn 15 20 50.4 -0.2
comp=N,2.7nm,0.3s,SNR=9.2
KBA eSn Sn 15 22 41.0 -4.6
comp=N,3.5nm,0.3s
ABTA Abfaltersbach 10.35 328 ePn Pn 15 20 50.6 -0.7
comp=N,4.1nm,0.3s,SNR=9.5
ABTA eSn Sn 15 22 42.5 -4.4
comp=N,3.3nm,0.3s
VYHS Vyhne 10.36 354 eP Pn 15 20 51.2 -0.2
VYHS e 15 22 43.2
VYHS Vyhne 10.36 354 ePN Pn 15 20 51.2 -0.2
VYHS eSN Sn 15 22 43.1 -4.0
BR131 Keskin Array S 10.41 77 ceP Pn 15 20 55.3 +3.0
BRTR Keskin Array B 10.41 77 Pn Pn 15 20 56.1 +3.9
comp=N,0.2nm,0.3s,baz=260,slow=12,SNR=7.2
BRTR LR LR 15 25 53.1
comp=N,93nm,20.0s,baz=240,slow=44
SALO Salr 10.45 318 Pn 15 20 51.4 -1.3
MOA Molln 10.64 337 ePn Pn 15 20 54.8 -0.5
comp=N,10nm,0.3s,SNR=20
MOA eSn Sn 15 22 50.2 -4.0
comp=N,5.9nm,0.4s
KOLS Kolonicke sedl 10.82 7 eP Pn 15 20 58.4 +0.7
KOLS Kolonicke sedl 10.82 7 ePN Pn 15 20 58.4 +0.7
RJOB Jochberg 11.04 332 ePn Pn 15 21 01.0 +0.1
WTTA Wattenberg 11.12 327 ePn Pn 15 21 03.1 +1.1
comp=N,7.6nm,0.3s,SNR=7.9
WTTA eSn Sn 15 23 02.9 -3.2
comp=N,7.0nm,0.5s
WATA Walderalm 11.20 327 ePn Pn 15 21 03.6 +0.5
comp=N,5.8nm,0.2s
FUORN Ofenpass-Fuorn 11.27 322 Pn 15 21 05.0 +0.9
SQTA Sankt Quirin 11.27 326 ePn Pn 15 21 05.3 +1.3
comp=N,6.1nm,0.3s
SQTA eSn Sn 15 23 07.5 -2.2
comp=N,7.8nm,0.4s
MOTA Moosalm 11.41 326 iPn Pn 15 21 07.2 +1.2
comp=N,9.2nm,0.4s,SNR=11
MOTA eSn Sn 15 23 10.9 -2.2
comp=N,7.5nm,0.5s
VRAC Vranov 11.45 347 LR LR 15 26 36.6
comp=N,102nm,19.5s,baz=182,slow=44
PART Garmisch-Parte 11.53 327 ePn Pn 15 21 09.3 +1.9
DAVOX Davos/Dischmat 11.57 321 Pn Pn 15 21 09.3 +1.1
comp=N,1.0nm,0.3s,baz=140,slow=14,SNR=9.4
DAVOX Sn Sn 15 23 11.6 -5.5
comp=N,0.6nm,0.3s,baz=162,slow=19,SNR=2.7
DAVOX LR LR 15 26 52.9
comp=N,106nm,20.0s,baz=276,slow=44
TUE Stuetta 11.63 319 Pn 15 21 09.3 +0.3
RETA Reutte 11.67 326 ePn Pn 15 21 11.3 +1.9
comp=N,1.9nm,0.2s
RETA eSn Sn 15 23 15.3 -4.1
comp=N,2.9nm,0.3s
GEC2 GERESS Array S 11.70 338 ePn Pn 15 21 08.5 -1.4
GEC2 GERESS Array S 11.70 338 Pn 15 21 07.7 -2.1
GERES GERESS Array B 11.70 338 Pn Pn 15 21 08.5 -1.4
comp=N,1.0nm,0.3s,baz=156,slow=14,SNR=18
GERES Sn Sn 15 23 12.6 -7.5
comp=N,0.7nm,0.3s,baz=159,slow=26,SNR=4.9
GERES LR LR 15 27 06.7
comp=N,166nm,18.2s,baz=309,slow=45
KHC Kasperske Hory 11.99 338 ePN Pn 15 21 12.5 -1.3
KHC eSN Sn 15 23 21.4 -5.8
KHC Kasperske Hory 11.99 338 Pn 15 21 13.0 -0.8
KHC Kasperske Hory 11.99 338 eP Pn 15 21 12.5 -1.3
KHC e 15 23 21.4
HNAT Natroun 12.02 132 P Pn 15 21 10.9 -3.3
baz=135
PRU Pruhonice 12.52 342 ePN Pn 15 21 20.0 -0.9
PRU Pruhonice 12.52 342 eP Pn 15 21 20.0 -0.9
SENIN Lac Senin/Sane 12.68 314 Pn 15 21 23.4 +0.1
GLL Jalalah 12.71 129 P Pn 15 21 20.4 -3.3
baz=132
HFRF Wahat Farafira 12.86 147 P Pn 15 21 23.2 -2.4
baz=149

MMAI Mount Meron Ar 13.24 108 Pn Pn 15 21 27.8 -3.1
comp=N,0.9nm,0.3s,baz=300,slow=12,SNR=4.0
MMAI Sn Sn 15 23 52.2 -5.6
comp=N,1.6nm,0.3s,baz=316,slow=30,SNR=4.5
ECH Echery 13.90 320 Pn Pn 15 21 40.0 +0.2
ECH Echery 13.90 320 P Pn 15 21 40.0 +0.2
AKASG Malin Array Be 13.98 24 Pn Pn 15 21 37.9 -3.0
comp=N,1.0nm,0.3s,baz=213,slow=12,SNR=8.2
CLL Collm 14.12 341 esP) 15 21 49.0
CLL ePP P 15 21 53.0 +2.7
CLL Collm 14.12 341 eP P 15 21 49.0 -1.3
EIL Elat 14.75 121 Pn Pn 15 21 48.5 -2.9
comp=N,0.7nm,0.3s,baz=214,slow=4.5,SNR=8.6
EIL Sn Sn 15 24 22.0 -13
comp=N,0.7nm,0.3s,baz=346,slow=17,SNR=4.1
ASF Jabal al Asfar 14.75 109 Pn Pn 15 21 48.4 -3.1
comp=N,0.1nm,0.3s,baz=225,slow=2.8,SNR=2.2
NACGM Naroch 17.27 12 e Pn 15 22 23.0 -0.8
NEY Neytrino 17.63 66⇓eP P 15 22 32.3 +2.8
KIV Kislovodsk 17.73 64 Pn Pn 15 22 28.5 -1.2
KIV Kislovodsk 17.73 64 eP P 15 22 32.2 +1.7
KIV pmax pmax
comp=Z,36nm,1.0s
KBZ Khabaz 17.84 65 Pn P 15 22 33.5 +1.9
comp=Z,0.3nm,0.3s,baz=258,slow=7.6,SNR=16
NCK Nalchik 18.30 66⇓eP P 15 22 39.3 +2.6
ZEI Tsey 18.42 68 eP P 15 22 38.2 -0.1
ZEI pmax pmax
comp=Z,8.0nm,0.6s
VSR Storozhevoye 18.56 39 eP P 15 22 38.7 -0.8
VSR pmax pmax
comp=Z,10.0nm,0.6s
GNI Garni 18.95 76 P Pn 15 22 45.8 +1.0
comp=Z,0.7nm,0.3s,baz=293,slow=2.4,SNR=6.7
GNI LR LR 15 30 29.7
comp=Z,52nm,18.5s,baz=270,slow=38
GNI Garni 18.95 76deP Pn 15 22 46.0 +1.3
GNI pmax pmax
comp=Z,105nm,1.7s
ESDC Sonseca Array 19.01 282 P Pn 15 22 45.9 +0.5
comp=Z,0.3nm,0.3s,baz=82,slow=10,SNR=5.7
LPSR Galich'ya Gora 19.32 36 eP P 15 22 47.7 -0.1
LPSR pmax pmax
comp=Z,40nm,0.6s
VRH Novokhopyorsk 19.87 42 eP P 15 22 54.1 +0.3
VRH pmax pmax
comp=Z,20nm,0.5s
OBN Obninsk 20.15 28 P P 15 22 56.3 -0.6
comp=Z,5.9nm,0.4s,baz=297,slow=2.3,SNR=4.8
OBN Obninsk 20.15 28 IAmb IAmb 15 22 57.7
comp=Z,30nm,0.4s
OBN Obninsk 20.15 28⇓eP P 15 22 56.2 -0.6
OBN e 15 23 12.9
OBN ePPP PPP 15 23 20.6
OBN pmax pmax
comp=Z,29nm,1.0s
OBN MLR MLR
comp=Z,137nm,14.0s
VSU Vasula 20.70 9d iP P 15 23 03.0 +0.3
VSU pmax pmax
comp=Z,269nm,0.7s
MOS Moscow 21.01 28 eP P 15 23 05.2 -1.0
MOS pmax pmax
comp=Z,62nm,0.7s
MDT Midelt 21.04 263 P P 15 23 08.1 +1.3
comp=Z,6.9nm,0.4s,baz=146,slow=18,SNR=12
MDT LR LR 15 30 57.5
comp=Z,56nm,21.4s,baz=354,slow=36
HFS Hagfors 22.37 351 P P 15 23 20.6 -0.1
comp=Z,8.9nm,0.4s,baz=163,slow=11,SNR=41
PUL Pulkovo 22.51 13⇓eP P 15 23 21.5 -0.6
PUL pmax pmax
comp=Z,71nm,0.4s
KONO Kongsberg 22.56 346 P P 15 23 22.7 -0.1
KONO IAmb IAmb 15 23 31.7
comp=Z,18nm,1.1s
KONO Kongsberg 22.56 346 P P 15 23 22.7 -0.1
KONO pmax pmax
comp=Z,18nm,1.1s
NC602 NORSAR Array S 23.25 349 P P 15 23 29.4 -0.4
EKR5 Eskdalemuir Ar 23.35 325 P P 15 23 30.3 -0.7
EKR5 IAmb IAmb 15 23 43.7
comp=Z,32nm,1.2s
EKA Eskdalemuir Ar 23.37 325 P P 15 23 31.2 +0.1
comp=Z,8.6nm,0.9s,baz=131,slow=10,SNR=7.9
EKB9 Eskdalemuir Ar 23.38 325 P P 15 23 31.4 +0.1
NAO01 NORSAR Array S 23.45 348 P P 15 23 31.8 -0.2
FINES FINESS Array B 23.54 7 P P 15 23 31.6 -1.2
comp=Z,6.5nm,0.6s,baz=172,slow=9.8,SNR=33
FINES LR LR 15 33 08.0
comp=Z,150nm,18.1s,baz=226,slow=38
FIA1 FINESS Array S 23.54 7 P P 15 23 31.0 -1.8
FIA1 IAmb IAmb 15 23 37.5
comp=Z,20nm,1.2s
NC405 NORSAR Array S 23.58 349 P P 15 23 33.2 0.0
NC405 IAmb IAmb 15 23 35.6
comp=Z,27nm,0.8s
NB201 NORSAR Array S 23.58 349 P P 15 23 33.4 +0.1
NB2 NORSAR Subarra 23.59 349 P P 15 23 33.4 +0.1
comp=Z,12nm,1.0s,baz=162,slow=9.3
NOA NORSAR Array B 23.59 349 P P 15 23 32.9 -0.4
comp=Z,3.7nm,0.8s,baz=160,slow=9.4,SNR=19
NOA LR LR 15 33 17.7
comp=Z,44nm,21.2s,baz=245,slow=38
NBO00 NORSAR Array S 23.65 348 P P 15 23 33.1 -0.7
NBO00 IAmb IAmb 15 23 35.0
comp=Z,19nm,0.8s
NC303 NORSAR Array S 23.74 349 P P 15 23 33.5 -1.2
NC204 NORSAR Array S 23.88 348 P P 15 23 37.2 +1.0
NC204 IAmb IAmb 15 23 52.7
comp=Z,29nm,1.2s
KLMR Klimovskoe 25.66 22 eP P 15 23 50.7 -1.5
KLMR pmax pmax
comp=Z,14nm,0.7s
KLMR Klimovskoe 25.66 22 eP P 15 23 50.7 -1.5
KLMR AMP 15 24 04.4
comp=Z,14nm,0.7s
KIRV Kirov 27.69 33 P P 15 24 09.7 -0.8
comp=Z,9.9nm,0.5s,baz=52,slow=3.5,SNR=5.5
KIRV LR LR 15 35 03.3
comp=Z,44nm,20.4s,baz=360,slow=36
PRGR Permogore 28.18 26 eP P 15 24 13.9 -1.1
PRGR pmax pmax
comp=Z,11nm,0.6s
AKTO Aktyubinsk 29.24 53 P P 15 24 23.6 -0.9
comp=Z,2.3nm,0.3s,baz=231,slow=4.1,SNR=12
AKTO Aktyubinsk 29.24 53 P P 15 24 23.3 -1.2
GEYT Alibeck 29.55 79 P P 15 24 28.2 +0.7
comp=Z,2.7nm,0.5s,baz=269,slow=8.9,SNR=7.2
TOA0 Torodi Ar. Sit 29.99 219 P P 15 24 32.4 +0.9
TOA0 IAmb IAmb 15 24 32.9
comp=Z,5.8nm,0.8s
TORD Torodi Ar. Bea 29.99 219 P P 15 24 32.2 +0.8
comp=Z,5.8nm,0.7s,baz=30,slow=9.7,SNR=35
TORD LR LR 15 36 47.9
comp=Z,38nm,19.3s,baz=35,slow=37
AB31 Akbulak array 30.30 56 eP P 15 24 33.3 -0.6
ARU Arti 31.10 42 P P 15 24 38.7 -2.2
ARU Arti 31.10 42c iP P 15 24 39.8 -1.1
ARU S S 15 29 45.8 +0.2
ARU pmax pmax
comp=Z,3.0nm,0.5s
ARCES ARCESS Array B 31.52 3 P P 15 24 43.9 -0.6
comp=Z,1.1nm,0.5s,baz=182,slow=11,SNR=12
ARCES PcP PcP 15 27 36.8 0.0
comp=Z,2.9nm,1.0s,baz=199,slow=2.9,SNR=7.9
ARCES LR LR 15 39 02.4
comp=Z,93nm,20.6s,baz=161,slow=40
SVE Sverdlovsk 32.32 42⇑eP P 15 24 51.7 +0.1
SVE pmax pmax
comp=Z,16nm,0.6s
BRVK Borovoye 37.11 50⇑eP P 15 25 35.3 +2.3
BRVK pmax pmax
comp=Z,6.0nm,1.4s
KK31 Karatay Array 37.87 66 P P 15 25 40.9 +1.3
KK31 IAmb IAmb 15 25 42.4
comp=Z,8.8nm,0.6s
KK31 Karatay Array 37.87 66 eP P 15 25 39.5 -0.1
KKAR Karatay Array 37.87 66 P P 15 25 40.9 +1.3
KKAR IAmb IAmb 15 25 42.4
comp=Z,8.8nm,0.6s
KKAR Karatay Array 37.87 66 P P 15 25 40.9 +1.3
KKAR pmax pmax
comp=Z,9.0nm,0.6s
BTK Batken 38.72 71 P P 15 25 47.1 +0.2
BTK Batken 38.72 71 P P 15 25 47.1 +0.2

BTK			pmax	pmax		
	comp=Z,3.0nm,0.8s					
DBIC	**Dimbokro**	**38.85 223**	P	**P**	**15 25 48.4 +0.3**	
	comp=Z,7.1nm,0.6s,baz=9.6,slow=10.0,SNR=19					
DBIC	**Dimbokro**	**38.85 223**	IAmb	IAmb	15 25 49.2	
	comp=Z,7.2nm,0.6s					
TIC	**Toumodi**	**38.96 223**	eP	**P**	**15 25 49.3 +0.3**	
KIC	**Kosan Boka**	**39.05 222**	eP	**P**	**15 25 49.8 +0.1**	
	comp=Z,11nm,0.5s					
SCO	**Scoresbysund**	**39.14 339**	P	**P**	**15 25 50.9 +1.0**	
SCO			IAmb	IAmb	15 26 07.9	
	comp=Z,19nm,1.5s					
SCO	**Scoresbysund**	**39.14 339**	P	**P**	**15 25 50.9 +1.0**	
SCO			pmax	pmax		
	comp=Z,19nm,1.5s					
LIC	**Lamto**	**39.31 222**	eP	**P**	**15 25 51.8 -0.1**	
	comp=Z,44nm,0.6s					
SPA0	**Spitsbergen Ar**	**40.13 359**	P	**P**	**15 25 59.0 +0.9**	
SPITS	**Spitsbergen Ar**	**40.13 359**	P	**P**	**15 25 57.8 -0.3**	
	comp=Z,5.5nm,0.8s,baz=160,slow=15,SNR=9.6					
AAK	**Ala-Archa**	**40.83 66**	P	**P**	**15 26 05.0 +0.6**	
	comp=Z,1.2nm,0.4s,baz=252,slow=0.6,SNR=10					
AAK	**Ala-Archa**	**40.83 66**	P	**P**	**15 26 04.5 0.0**	
AAK	**Ala-Archa**	**40.83 66⇑**	eP	**P**	**15 26 06.7 +2.2**	
AAK			pmax	pmax		
	comp=Z,2.0nm,0.9s					
KURK	**Kurchatov**	**42.33 53**	P	**P**	**15 26 15.6 -0.9**	
KURK	**Kurchatov**	**42.33 53⇓**	eP	**P**	**15 26 16.1 -0.4**	
KURK			pmax	pmax		
	comp=Z,6.0nm,1.3s					
SUMG	**Summit**	**44.78 339**	i P	**P**	**15 26 36.3 -0.1**	
SUMG	**Summit**	**44.78 339**	i P	**P**	**15 26 36.3 -0.1**	
MAKZ	**Makanchi**	**45.15 58**	P	**P**	**15 26 38.1 -1.2**	
MAKZ	**Makanchi**	**45.15 58**	P	**P**	**15 26 38.1 -1.2**	
MAKZ			pmax	pmax		
	comp=Z,3.0nm,1.2s					
MK31	**Makanchi Array**	**45.36 58**	P	**P**	**15 26 40.8 -0.2**	
MK31			IAmb	IAmb	15 26 43.4	
	comp=Z,4.5nm,0.5s					
MK31	**Makanchi Array**	**45.36 58**	eP	**P**	**15 26 40.4 -0.6**	
MKAR	**Makanchi Array**	**45.36 58**	P	**P**	**15 26 40.6 -0.4**	
	comp=Z,6.7nm,0.5s,baz=274,slow=7.3,SNR=116					
MKAR			PcP	**PcP**	**15 28 20.2 0.0**	
	comp=Z,0.5nm,0.5s,baz=304,slow=2.5,SNR=3.0					
ZAA0	**Zalesovo Array**	**45.74 48**	P	**P**	**15 26 43.5 -0.3**	
ZALV	**Zalesovo Beam**	**45.74 48**	P	**P**	**15 26 43.3 -0.5**	
	comp=Z,13nm,0.5s,baz=273,slow=8.7,SNR=82					
ZALV			PP	**PP**	**15 28 27.1 -3.7**	
	comp=Z,2.6nm,0.6s,baz=276,slow=10,SNR=4.0					
NRIK	**Noril'sk**	**46.82 27**	P	**P**	**15 26 52.8 +0.7**	
	comp=Z,2.0nm,0.3s,baz=262,slow=3.3,SNR=3.7					
WMQ	**Urumqi**	**49.82 61**	eP	**P**	**15 27 15.9 +0.2**	
LSZ	**Lusaka**	**53.68 171**	P	**P**	**15 27 46.3 +1.6**	
	comp=Z,3.1nm,0.5s,baz=20,slow=6.6,SNR=7.7					
TLY	**Talaya**	**57.34 47⇓**	eP	**P**	**15 28 12.0 +1.4**	
TLY			pmax	pmax		
	comp=Z,5.0nm,0.9s					
SCHQ	**Schefferville**	**58.39 317**	P	**P**	**15 28 18.7 +0.7**	
	comp=Z,1.4nm,0.4s,baz=86,slow=4.4,SNR=9.6					
TIXI	**Tiksi**	**59.66 20**	P	**P**	**15 28 27.6 +1.1**	
	comp=Z,1.1nm,0.2s,baz=356,slow=3.1,SNR=3.2					
TIXI	**Tiksi**	**59.66 20⇓**	eP	**P**	**15 28 28.5 +2.0**	
TIXI			pmax	pmax		
	comp=Z,2.0nm,1.2s					
GTA	**Gaotai**	**59.89 62**	eP	**P**	**15 28 31.6 +2.9**	
GTA			pP	sP	15 28 38.3 +2.4	
GTA			sP	pP	15 28 41.6 +7.7	
BOD	**Bodaibo**	**60.41 38**	eP	**P**	**15 28 30.8 -1.0**	
BOD			pmax	pmax		
	comp=Z,3.0nm,0.9s					
SONM	**Songino Array**	**60.51 51**	P	**P**	**15 28 32.6 -0.2**	
	comp=Z,1.3nm,0.7s,baz=273,slow=8.1,SNR=7.7					
LZH	**Lanzhou**	**64.27 63**	eP	**P**	**15 28 58.9 +0.7**	
LZH			pP	sP	15 29 07.3 +1.9	
LZH			sP	pP	15 29 13.6 +10	
LZH			PP	**PP**	**15 31 22.5 +3.2**	
YAK	**Yakutsk**	**65.14 29**	P	**P**	**15 29 03.0 -0.2**	
	comp=Z,6.1nm,0.4s,baz=269,slow=0.8,SNR=11					
BOSA	**Boshof**	**66.61 175**	P	**P**	**15 29 14.1 +0.9**	
	comp=Z,3.1nm,0.6s,baz=6.5,slow=6.1,SNR=7.3					
CMAR	**Chiang Mai Arr**	**69.97 82**	P	**P**	**15 29 34.0 -0.5**	
	comp=Z,1.3nm,0.7s,baz=306,slow=6.7,SNR=10					
CMAR	**Chiang Mai Arr**	**69.97 82**	P	**P**	**15 29 34.0 -0.5**	
BILL	**Bilibino**	**71.02 13**	eP	**P**	**15 29 40.1 0.0**	
BILL			e		15 29 56.9	
BILL			e		15 32 14.8	
BILL			ePPP	PPP	15 33 54.9	
BILL			pmax	pmax		
	comp=Z,5.0nm,1.7s					
SEY	**Seymchan**	**72.15 21**	P	**P**	**15 29 47.1 +0.1**	
	comp=Z,0.8nm,0.6s,baz=350,slow=6.2,SNR=5.7					
SEY	**Seymchan**	**72.15 21⇓**	eP	**P**	**15 29 48.3 +1.3**	
YKA	**Yellowknife Ar**	**73.35 340**	P	**P**	**15 29 54.6 +0.6**	
	comp=Z,0.4nm,0.5s,baz=35,slow=5.2,SNR=7.3					
KLR	**Kul'dur**	**73.91 39**	P	**P**	**15 29 58.1 +0.5**	
	comp=Z,4.1nm,0.7s,baz=314,slow=5.7,SNR=18					
KLR	**Kul'dur**	**73.91 39c**	eP	**P**	**15 29 57.7 0.0**	
KLR			pmax	pmax		
	comp=Z,6.0nm,0.8s					
CN2	**Changchun**	**73.94 47**	eP	**P**	**15 29 57.4 -0.5**	
MA2	**Magadan**	**74.31 24**	P	**P**	**15 30 00.3 +0.5**	
	comp=Z,2.1nm,0.4s,baz=341,slow=8.7,SNR=4.6					
MA2	**Magadan**	**74.31 24**	IAmb	IAmb	15 30 06.7	
	comp=Z,3.8nm,0.8s					
MA2	**Magadan**	**74.31 24⇑**	eP	**P**	**15 30 01.0 +1.2**	
MA2			pmax	pmax		
	comp=Z,4.0nm,0.7s					
WHN	**Wuhan**	**74.65 63**	P	P	15 29 57.0 -5.2	
ULM	**Lac du Bonnet**	**75.64 324**	P	**P**	**15 30 08.3 +0.7**	
	comp=Z,1.4nm,0.7s,baz=47,slow=11,SNR=3.1					
ULM	**Lac du Bonnet**	**75.64 324**	IAmb	IAmb	15 30 15.7	
	comp=Z,8.4nm,1.4s					
NJ2	**Nanjing**	**76.88 60**	eP	**P**	**15 30 14.4 -0.6**	
ILAR	**Eielson Array**	**76.89 354**	P	**P**	**15 30 15.6 +1.1**	
	comp=Z,0.6nm,0.9s,baz=342,slow=3.2,SNR=4.7					
USRK	**Ussuriysk Ar.**	**77.33 43**	P	**P**	**15 30 17.3 0.0**	
	comp=Z,0.6nm,0.3s,baz=293,slow=4.4,SNR=10					
KSRS	**Korea Array**	**79.38 51**	P	**P**	**15 30 28.9 +0.1**	
	comp=Z,1.3nm,0.6s,baz=308,slow=5.0,SNR=9.2					
YSS	**Yuzh-Sakhalins**	**80.80 36**	eP	**P**	**15 30 36.8 +0.6**	
YSS			e		15 30 44.2	
YSS			pmax	pmax		
	comp=Z,20nm,0.9s					
ASAJ	**Asahikawa**	**82.83 38**	P	**P**	**15 30 47.4 +0.4**	
	comp=Z,3.0nm,0.6s,baz=309,slow=6.8,SNR=6.8					
JKA	**Kamikawa-asahi**	**82.83 38**	P	**P**	**15 30 47.4 +0.4**	
PDAR	**Pinedale Array**	**87.49 326**	P	**P**	**15 31 11.5 +0.8**	
	comp=Z,0.3nm,0.8s,baz=64,slow=10,SNR=2.7					
DAV	**Davao City (W)**	**97.43 75**	LR	LR	16 21 15.0	
	comp=Z,57nm,19.0s,baz=290,slow=39					
WRA	**Warramunga Arr**	**120.62 92**	PKP	**PKPdf**	**15 37 14.2 -0.7**	
	comp=Z,0.1nm,0.3s,baz=320,slow=2.0,SNR=5.4					
ASAR	**Alice Springs**	**122.26 96**	PKP	**PKPdf**	**15 37 17.6 -0.3**	
	comp=Z,0.2nm,0.5s,baz=304,slow=1.6,SNR=7.7					

*SKHL **21** 15:18:28.1±0.4, 44.°43N×147.°79E, h111km±5km, mb4.2/5, msh4.8/4*
*JMA **21** 15:18:28.7±0.3, 44.°02N×147.°98E, h88km, M3.9*
*IDC **21** 15:18:31.2±3.2, 44.°46N×147.°68E, h128km±30km, mb3.3/8, mb1 3.6/9, mb1mx3.2/65, mbtmp3.7/9, MS3.3/1, Ms1 3.3/1, ms1mx2.3/22, Error ellipse: s-maj=45.5km s-min=23.3km az=174.0*
ISC 21 15:18:26.9±1.1, 44.°21N±0.°07×148.°00E±0.°08, h99km±9km, n41, σ1§78/50, mb3.7/8, Kuril Islands

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.03 355**	i P	**Pn**	**15 18 47.1 -0.4**	
KUR			AMB	AMB	15 18 47.5	
	110nm,0.4s					
KUR			i S	**Sn**	**15 19 01.4 -1.6**	
KUR			A	A	15 19 02.0	
	140nm,0.4s					
KUR			A	A	15 19 02.0	
	170nm,0.4s					
YUK	**Yuzh-Kuril'sk**	**1.55 264**	eP	**Pn**	**15 18 54.4 +0.7**	
YUK			AMB	AMB	15 18 55.5	
	30nm,0.3s					
YUK			eS	**Sn**	**15 19 14.3 +0.3**	
YUK			A	A	15 19 17.0	
	130nm,0.3s					
YUK			A	A	15 19 17.0	
	140nm,0.3s					
GRPR	**Tuman**	**1.62 263**	eP	**Pn**	**15 18 55.1 +0.5**	
GRPR			AMB	AMB	15 18 55.3	
	40nm,0.2s					
GRPR			eS	**Sn**	**15 19 15.4 -0.2**	
GRPR			A	A	15 19 17.0	
	160nm,0.3s					
GRPR			A	A	15 19 17.0	
	90nm,0.3s					
NEM2	**Nemuro 2**	**1.84 244**	P	**Pn**	**15 18 57.8 +0.5**	
NEM2			eS	**Sn**	**15 19 19.6 -0.9**	
NMR	**Nemuro--Hokkai**	**1.85 244**	eP	**Pn**	**15 18 57.7 +0.3**	
NMR			eS	**Sn**	**15 19 20.4 -0.3**	
GLVR	**Golovnino**	**1.85 256**	eP	**Pn**	**15 18 58.6 +1.1**	
GLVR			AMB	AMB	15 18 59.0	
	20nm,0.2s					
GLVR			eS	**Sn**	**15 19 21.5 +0.7**	
GLVR			A	A	15 19 21.9	
	130nm,0.3s					
GLVR			A	A	15 19 21.9	
	90nm,0.3s					
JRA	**Rausu**	**2.10 264**	P	**Pn**	**15 19 02.1 +1.5**	
JRA			eS	**Sn**	**15 19 27.5 +1.2**	
JNSB	**Nemuroshibetsu**	**2.21 260**	P	**Pn**	**15 19 03.8 +1.7**	
JNSB			eS	**Sn**	**15 19 30.2 +1.2**	
JKHN	**Kushirohamanak**	**2.35 242**	P	**Pn**	**15 19 04.8 +0.9**	
JKHN			eS	**Sn**	**15 19 31.9 -0.4**	
JNK	**Nakash**	**2.46 256**	P	**Pn**	**15 19 06.4 +1.1**	
JAK	**Akkeshi**	**2.69 244**	P	**Pn**	**15 19 09.0 +0.6**	
JAK			eS	**Sn**	**15 19 39.7 -0.7**	
JTKR	**Abashiri--Toko**	**2.96 267**	P	**Pn**	**15 19 13.4 +1.4**	
JAR	**Ashorobuto**	**3.20 255**	P	**Pn**	**15 19 17.1 +1.9**	
JAR			eS	**Sn**	**15 19 53.9 +1.3**	
JCH	**Churui**	**3.74 246**	P	**Pn**	**15 19 23.2 +0.7**	
JCH			eS	**Sn**	**15 20 04.8 -0.7**	
JKK2	**Kamakawa 2**	**3.80 267**	P	**Pn**	**15 19 25.2 +1.8**	
ASAJ	**Asahikawa**	**3.89 271**	P	**Pn**	**15 19 26.5 +1.9**	
	1.0nm,0.3s,baz=82,slow=17,SNR=19					
ASAJ			S	**Sn**	**15 20 04.0 -5.2**	
	1.5nm,0.3s,baz=81,slow=17,SNR=4.6					
JSE	**Soyaes**	**3.94 283**	P	**Pn**	**15 19 26.4 +1.2**	
JFR	**Furan**	**4.06 257**	P	**Pn**	**15 19 29.2 +2.4**	
JNBK	**Urakawa-nobuka**	**4.29 245**	P	**Pn**	**15 19 30.4 +0.5**	
JWK2	**Keihoku**	**4.49 286**	P	**Pn**	**15 19 35.3 +2.8**	
YSS	**Yuzh-Sakhalins**	**4.59 309**	eP	**Pn**	**15 19 32.7 -1.3**	
YSS			AMB	AMB	15 19 35.1	
	20nm,0.4s					
JKB	**Kayabe**	**5.61 248**	P	**Pn**	**15 19 48.6 +0.8**	
JKB			eS	**Sn**	**15 20 47.7 -3.2**	
JOT	**Ohata**	**5.84 243**	P	**Pn**	**15 19 51.3 +0.3**	
JOT			eS	**Sn**	**15 20 52.5 -4.1**	
JANG	**Nango**	**6.15 234**	P	**Pn**	**15 19 54.6 -0.6**	
JANG			eS	**Sn**	**15 20 58.8 -5.3**	
JNU	**Nakatsue**	**17.32 236**	LR	LR	15 29 08.9	
	comp=Z,91nm,19.9s,baz=194,slow=37					
SEY	**Seymchan**	**18.93 6**	P	**Pn**	**15 22 39.5 -1.9**	
	0.1nm,0.3s,baz=184,slow=6.1,SNR=5.4					
H11N2	**WAKE ISLAND Hy**	**29.06 141**	T	T	15 55 19.9	
	baz=332,slow=76,SNR=46					
H11N1	**WAKE ISLAND Hy**	**29.07 141**	T	T	15 55 23.2	
	baz=332,slow=76,SNR=30					
H11N3	**WAKE ISLAND Hy**	**29.08 141**	T	T	15 55 19.2	
	baz=332,slow=76,SNR=37					
H11S1	**WAKE ISLAND Hy**	**30.05 143**	T	T	15 56 35.1	
	baz=333,slow=76,SNR=71					
H11S3	**WAKE ISLAND Hy**	**30.05 143**	T	T	15 56 36.1	
	baz=333,slow=76,SNR=51					
H11S2	**WAKE ISLAND Hy**	**30.06 143**	T	T	15 56 34.1	
	baz=333,slow=76,SNR=42					
ILAR	**Eielson Array**	**40.75 37**	P	**P**	**15 25 58.0 +0.3**	
	0.8nm,1.0s,baz=273,slow=8.6,SNR=6.7					
MKAR	**Makanchi Array**	**44.92 298**	P	**P**	**15 26 30.3 -1.3**	
	0.3nm,0.7s,baz=81,slow=8.7,SNR=3.8					
MKAR	**Makanchi Array**	**44.92 298**	eP	**P**	**15 26 31.2 -0.3**	
INK	**Inuvik**	**45.69 31**	P	**P**	**15 26 38.4 +1.1**	
	0.4nm,0.3s,baz=295,slow=7.1,SNR=5.1					
YKA	**Yellowknife Ar**	**55.08 34**	P	**P**	**15 27 48.5 +0.6**	
	0.8nm,0.7s,baz=299,slow=7.0,SNR=12					
FINES	**FINESS Array B**	**64.74 333**	P	**P**	**15 28 53.4 -0.7**	
	1.6nm,0.7s,baz=39,slow=5.7,SNR=2.5					
NVAR	**Mina Array Bea**	**66.81 58**	P	**P**	**15 29 09.7 +1.6**	
	0.4nm,0.7s,baz=292,slow=2.4,SNR=3.2					
NOA	**NORSAR Array B**	**69.39 339**	P	**P**	**15 29 22.6 -1.0**	
	1.1nm,0.9s,baz=15,slow=7.3,SNR=2.7					
TXAR	**Lajitas Array**	**81.88 57**	P	**P**	**15 30 36.8 +1.3**	
	0.7nm,0.6s,baz=294,slow=3.5,SNR=9.3					

*IDC **21** 15:18:52.6±1.8, 18.°55N×145.°56E, h201km±18km, mb3.6/16, mb1 3.7/18, mb1mx3.5/58, mbtmp4.1/18, Error ellipse: s-maj=23.6km s-min=9.2km az=90.0*
*NEIC **21** 15:18:52.9±1.1, 18.°62N±0.°09×145.°5E±0.°2, h198km±5km, mb4.0/11, Error ellipse: s-maj=27.0km s-min=12.0km az=96.0*
ISC 21 15:18:52.8±0.6, 18.°58N±0.°06×145.°4E±0.°2, h200km, n36, σ1§15/29, mb3.9/21, Mariana Islands

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.98 186**	P	**Pn**	**15 20 07.8 +0.7**	
	3.0nm,0.3s,baz=17,slow=17,SNR=3.3					
GUMO			S	**Sn**	**15 21 04.5 -1.1**	
	8.4nm,0.3s,baz=342,slow=20,SNR=3.9					
MJAR	**Matsushiro Arr**	**18.98 342**	P	**P**	**15 22 59.2 0.0**	
	0.1nm,0.3s,baz=152,slow=9.7,SNR=7.4					
MAJO	**Matsushiro**	**18.98 342**	P	**P**	**15 22 58.0 -1.2**	
MAJO			IAmb	IAmb	15 23 01.8	
	comp=Z,6.0nm,0.8s					
JNU	**Nakatsue**	**19.46 321**	P	**P**	**15 23 01.7 -2.8**	
H11S3	**WAKE ISLAND Hy**	**20.21 87**	T	T	15 44 10.3	
	baz=273					
H11S1	**WAKE ISLAND Hy**	**20.22 87**	T	T	15 44 13.5	
	baz=273					
H11S2	**WAKE ISLAND Hy**	**20.22 87**	T	T	15 44 10.1	
	baz=273					
H11N1	**WAKE ISLAND Hy**	**20.36 83**	T	T	15 44 34.1	
	baz=271					
H11N2	**WAKE ISLAND Hy**	**20.36 83**	T	T	15 44 33.0	
	baz=271					
H11N3	**WAKE ISLAND Hy**	**20.37 83**	T	T	15 44 30.7	
	baz=271					
KSRS	**Korea Array**	**24.24 324**	P	**P**	**15 23 51.8 +0.4**	
	comp=Z,1.0nm,0.7s,baz=140,slow=9.0,SNR=6.1					
JKA	**Kamikawa-asahi**	**25.57 355**	P	**P**	**15 24 04.9 +1.6**	
ASAJ	**Asahikawa**	**25.57 355**	P	**P**	**15 24 04.9 +1.6**	
	comp=Z,6.9nm,0.7s,baz=206,slow=7.2,SNR=5.2					
KLR	**Kul'dur**	**32.50 343**	P	**P**	**15 25 04.6 +0.1**	
	comp=Z,3.6nm,0.6s,baz=164,slow=6.2,SNR=17					
PETK	**Petropavlovsk-**	**35.77 13**	P	**P**	**15 25 33.6 +1.0**	
	comp=Z,1.5nm,0.7s,baz=170,slow=7.8,SNR=3.7					
WB0	**Warramunga Arr**	**39.60 196**	P	**P**	**15 26 05.9 +0.9**	
WB0			IAmb	IAmb	15 26 06.2	
	comp=Z,6.9nm,1.2s					
WR0	**Warramunga Arr**	**39.75 196**	P	**P**	**15 26 07.1 +0.9**	
WR0			IAmb	IAmb	15 26 10.7	
	comp=Z,2.0nm,0.8s					
WRAB	**Tennant Creek**	**39.77 196**	P	**P**	**15 26 07.5 +1.0**	
WRAB			IAmb	IAmb	15 26 11.1	
	comp=Z,4.1nm,0.6s					
WB2	**Warramunga Arr**	**39.78 196**	P	**P**	**15 26 07.3 +0.8**	
WRA	**Warramunga Arr**	**39.78 196**	P	**P**	**15 26 07.0 +0.5**	
	comp=Z,1.7nm,0.4s,baz=18.8,slow=9.6,SNR=45					
FITZ	**Fitzroy Crossi**	**41.29 209**	P	**P**	**15 26 20.0 +1.2**	
FITZ			IAmb	IAmb	15 26 21.2	
	comp=Z,2.9nm,0.8s					
SONM	**Songino Array**	**43.05 322**	P	**P**	**15 26 33.6 +0.6**	
	comp=Z,0.7nm,0.7s,baz=140,slow=9.4,SNR=4.1					
AS31	**Alice Springs**	**43.45 195**	P	**P**	**15 26 36.8 +0.5**	
ASAR	**Alice Springs**	**43.45 195**	P	**P**	**15 26 36.6 +0.3**	
	comp=Z,0.5nm,0.5s,baz=18,slow=12,SNR=14					
EIDS	**Eidsvold**	**44.03 173**	P	**P**	**15 26 41.6 +0.8**	
EIDS			IAmb	IAmb	15 26 52.1	
	comp=Z,14nm,1.5s					
SEY	**Seymchan**	**44.58 5**	P	**P**	**15 26 45.4 +0.7**	
	comp=Z,0.8nm,0.5s,baz=192,slow=9.3,SNR=6.4					
STKA	**Stephens Creek**	**50.30 184**	P	**P**	**15 27 27.7 -1.4**	
	comp=Z,2.3nm,1.0s,baz=0.0,slow=6.1,SNR=2.5					
STKA	**Stephens Creek**	**50.30 184**	IAmb	IAmb	15 27 33.3	
	comp=Z,1.7nm,1.2s					
NRIK	**Noril'sk**	**61.62 340**	P	**P**	**15 28 48.5 -0.4**	
	comp=Z,3.1nm,0.6s,baz=119,slow=6.8,SNR=4.2					
ILAR	**Eielson Array**	**63.89 26**	P	**P**	**15 29 02.0 -1.9**	
	comp=Z,1.5nm,0.9s,baz=251,slow=5.3,SNR=15					
INK	**Inuvik**	**69.60 23**	P	**P**	**15 29 39.2 -0.7**	
	comp=Z,1.6nm,0.8s,baz=244,slow=5.4,SNR=6.3					
INK	**Inuvik**	**69.60 23**	IAmb	IAmb	15 29 39.7	
	comp=Z,2.7nm,1.0s					
YKA	**Yellowknife Ar**	**78.24 28**	P	**P**	**15 30 29.2 -0.8**	
	comp=Z,1.3nm,0.8s,baz=290,slow=5.5,SNR=12					
ARCES	**ARCESS Array B**	**82.51 342**	P	**P**	**15 30 53.9 +1.1**	
	comp=Z,2.9nm,0.8s,baz=56,slow=4.8,SNR=2.4					
NVAR	**Mina Array Bea**	**83.45 52**	P	**P**	**15 30 58.4 -0.1**	
	comp=Z,1.5nm,0.7s,baz=266,slow=5.6,SNR=12					
FINES	**FINESS Array B**	**86.87 335**	P	**P**	**15 31 13.1 -1.5**	
	comp=Z,2.3nm,1.0s,baz=41,slow=4.4,SNR=2.8					

*NIED **21** 15:21:00, 21.°10N×121.°90E, h47km, Mw4.1 Best double couple: $M_0$1.39000×10^15 NP1:ϕ_s319.00000°, δ88.00000°, λ-72.00000°. NP2:ϕ_s55.00000°, δ18.00000°, λ-173.00000°.*
*IDC **21** 15:21:02.0±0.8, 20.°96N×122.°10E, h0km, mb3.8/9, mb1 4.0/10, mb1mx3.7/52, mbtmp3.8/10, ML3.5/1, MS3.4/4, Ms1 3.4/4, ms1mx2.9/29, Error ellipse: s-maj=30.2km s-min=16.5km az=72.0*
*JMA **21** 15:21:02.2±0.9, 21.°10N×121.°91E, h22km, M3.6*
*NEIC **21** 15:21:02.6±1.9, 20.°96N±0.°02×122.°1E±0.°1, h7km±5km, mb4.2/12, Error ellipse: s-maj=18.1km s-min=3.2km az=92.0*
ISC 21 15:21:02.8±0.6, 21.°01N±0.°05×122.°12E±0.°07, h10km, n45, σ1§26/42, mb4.1/15, Taiwan region

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**2.05 332**		**Pn**	**15 21 36.1 -1.3**	
YULB	**Yu-li**	**2.50 342**		**Pn**	**15 21 41.9 -1.7**	
TPUB	**Ta-pu**	**2.67 329**		**Pn**	**15 21 46.7 +0.8**	
SSLB	**Suanglung**	**2.97 339**		**Pn**	**15 21 50.5 +0.4**	
NACB	**Ninganchiao**	**3.19 351**		**Pn**	**15 21 50.6 -2.5**	
HATJ	**Hateruma jima**	**3.41 27**	P	**Pn**	**15 21 55.4 -0.7**	
HATJ			eS	**Sn**	**15 22 34.6 -2.0**	
JYNG	**Yonagunijimaku**	**3.51 12**	eS	**Sn**	**15 22 36.8 -2.3**	
IRIF	**Iriomote-Funau**	**3.63 24**	P	**Pn**	**15 21 59.6 +0.5**	
IRIF			eS	**Sn**	**15 22 39.9 -2.1**	
JKRS	**Kuro-shima**	**3.66 28**	P	**Pn**	**15 22 00.0 +0.5**	
JKRS			eS	**Sn**	**15 22 40.8 -1.9**	
YHNB	**Yeheng**	**3.71 349**		**Pn**	**15 22 01.2 +0.9**	
SZP	**Santa**	**3.78 205**	Pn	**Pn**	**15 21 59.8 -1.3**	
JIJ	**Ishigaki jima**	**3.83 29**	P	**Pn**	**15 22 01.7 -0.1**	
JIJ			eS	**Sn**	**15 22 44.5 -2.4**	
JISG	**Ishigakijimahi**	**4.10 29**	P	**Pn**	**15 22 05.6 +0.1**	
JISG			eS	**Sn**	**15 22 52.0 -1.5**	
JTJ	**Tarama**	**4.33 33**	eS	**Sn**	**15 22 57.8 -1.5**	
JMJ2	**Miyako jima3**	**4.75 38**	eS	**Sn**	**15 23 09.0 -0.6**	
KNMB	**Chin-men Tao**	**4.87 316**	Pn	**Pn**	**15 22 15.5 -0.7**	
DAV	**Davao City (W)**	**14.25 166**	LR	LR	15 29 04.8	
	comp=Z,126nm,20.9s,baz=318,slow=34					
KSRS	**Korea Array**	**17.15 16**	P	**P**	**15 25 04.7 +0.5**	
	0.2nm,0.3s,baz=199,slow=13,SNR=9.8					
KSRS			LR	LR	15 31 49.2	
	comp=Z,52nm,20.7s,baz=202,slow=38					
CMAR	**Chiang Mai Arr**	**21.96 267**	P	**P**	**15 25 58.5 +1.5**	
	0.7nm,0.8s,baz=74,slow=8.4,SNR=6.2					
SONM	**Songino Array**	**29.62 338**	P	**P**	**15 27 08.1 -0.3**	
	0.9nm,0.7s,baz=158,slow=11,SNR=5.7					
SONM			LR	LR	15 39 51.9	
	comp=Z,77nm,18.9s,baz=359,slow=38					
PMG	**Port Moresby**	**38.97 138**	P	**P**	**15 28 28.4 -1.0**	
COEN	**Coen**	**40.43 147**	P	**P**	**15 28 42.1 +0.5**	
MK31	**Makanchi Array**	**41.24 318**	P	**P**	**15 28 48.8 +0.8**	
MKAR	**Makanchi Array**	**41.24 318**	P	**P**	**15 28 49.1 +1.0**	
	0.8nm,0.5s,baz=109,slow=9.2,SNR=8.2					
H11N1	**WAKE ISLAND Hy**	**41.89 84**	T	T	16 13 48.4	
	baz=280,slow=75,SNR=74					
H11N2	**WAKE ISLAND Hy**	**41.89 84**	T	T	16 13 46.7	
	baz=280,slow=75,SNR=57					
H11N3	**WAKE ISLAND Hy**	**41.91 84**	T	T	16 13 48.4	
	baz=280,slow=75,SNR=69					
H11S3	**WAKE ISLAND Hy**	**41.92 85**	T	T	16 13 47.6	
	baz=281,slow=75,SNR=142					
H11S1	**WAKE ISLAND Hy**	**41.93 85**	T	T	16 13 47.6	
	baz=281,slow=75,SNR=157					
H11S2	**WAKE ISLAND Hy**	**41.94 85**	T	T	16 13 48.2	
	baz=281,slow=75,SNR=156					
WB0	**Warramunga Arr**	**42.26 163**	P	**P**	**15 28 56.5 -0.1**	
WB0			IAmb	IAmb	15 28 57.5	
	comp=Z,7.0nm,1.4s					
WRAB	**Tennant Creek**	**42.41 163**	P	**P**	**15 28 58.9 +1.1**	
WRAB			IAmb	IAmb	15 29 01.6	
	comp=Z,6.1nm,0.7s					
WRA	**Warramunga Arr**	**42.42 163**	P	**P**	**15 28 57.2 -0.6**	
	comp=Z,0.8nm,0.7s,baz=345,slow=9.8,SNR=5.5					
WB2	**Warramunga Arr**	**42.42 163**	P	**P**	**15 28 58.1 +0.3**	
WB2			IAmb	IAmb	15 29 10.1	
	comp=Z,7.5nm,1.4s					
WR0	**Warramunga Arr**	**42.49 163**	P	**P**	**15 28 57.8 -0.6**	
WR0			IAmb	IAmb	15 29 06.0	
	comp=Z,5.1nm,1.3s					
ZAA0	**Zalesovo Array**	**43.38 329**	P	**P**	**15 29 05.5 +0.2**	
ZAA0			IAmb	IAmb	15 29 06.7	
	comp=Z,3.2nm,0.8s					
ZALV	**Zalesovo Beam**	**43.38 329**	P	**P**	**15 29 05.6 +0.2**	
	comp=Z,2.4nm,0.7s,baz=103,slow=6.5,SNR=6.5					
KURK	**Kurchatov**	**45.09 322**	P	**P**	**15 29 19.5 +0.4**	
KURK			IAmb	IAmb	15 29 20.5	
	comp=Z,3.0nm,1.1s					
AS31	**Alice Springs**	**45.86 165**	P	**P**	**15 29 26.1 +0.6**	
ASAR	**Alice Springs**	**45.86 165**	P	**P**	**15 29 25.8 +0.3**	
	comp=Z,0.5nm,0.5s,baz=346,slow=6.9,SNR=16					
MORW	**Morawa**	**50.13 187**	P	**P**	**15 29 56.1 -2.3**	
STKA	**Stephens Creek**	**55.80 160**	P	**P**	**15 30 41.1 +0.9**	
	comp=Z,2.1nm,0.6s,baz=358,slow=11,SNR=6.5					
ILAR	**Eielson Array**	**71.64 27**	P	**P**	**15 32 26.0 +1.6**	
	comp=Z,0.3nm,0.7s,baz=287,slow=6.3,SNR=3.3					
NOA	**NORSAR Array B**	**81.43 333**	LR	LR	16 12 58.2	
	comp=Z,41nm,19.4s,baz=290,slow=38					
YKA	**Yellowknife Ar**	**85.55 23**	P	**P**	**15 33 42.2 +1.2**	
	comp=Z,1.1nm,0.8s,baz=311,slow=4.6,SNR=16					

WEL 21 15:28:20.4, 38.°9S±0.°6×17.°6E±°, h10km±1km, ML4.0/18, MLv3.6/114, Error ellipse: s-maj=0.0km s-min=0.0km az=69.1, North Island

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RITZ	**Rihia Road**	**0.06 171**	P	Pg	15 28 22.9 +0.4	
RATZ	**Rangitukua**	**0.08 314**	P	Pg	15 28 23.2 +0.4	
KATZ	**Kakaramea**	**0.13 246**	P	Pg	15 28 24.3 +0.8	
HATZ	**Hinemaiaia**	**0.19 80**	P	Pg	15 28 24.7 +0.2	
HATZ			S	Sg	15 28 27.5 +0.1	
WATZ	**Wairara**	**0.23 337**	P	Pg	15 28 25.9 +0.7	
KRVZ	**Karewarewa**	**0.23 223**	P	Pg	15 28 26.3 +1.0	
WHTZ	**Whakaora**	**0.27 19**	P	Pb	15 28 27.1 -0.4	
WTVZ	**West Tongariro**	**0.28 226**	P	Pb	15 28 27.1 -0.5	
NGZ	**Ngauruhoe**	**0.32 217**	P	Pb	15 28 27.9 -0.4	
TWVZ	**Taurewa**	**0.35 245**	P	Pb	15 28 28.3 -0.5	
TWVZ			S	Sg	15 28 33.2 +1.0	
TUVZ	**Tukino**	**0.38 204**	P	Pb	15 28 28.9 -0.3	
FWVZ	**Far West T-bar**	**0.40 215**	P	Pb	15 28 29.4 -0.4	
WHVZ	**Whangaehu Hut**	**0.41 209**	P	Pb	15 28 29.5 -0.4	
DRZ	**Dome Shelter**	**0.41 212**	P	Pb	15 28 29.8 -0.3	
KUTZ	**Kaahu Road**	**0.43 358**	P	Pb	15 28 29.7 -0.4	
TRVZ	**Turoa**	**0.44 212**	P	Pb	15 28 30.0 -0.4	
MRHZ	**Matea Rd**	**0.45 79**	P	Pb	15 28 29.6 +0.3	
WPRZ	**Whakapapatarin**	**0.47 32**	P	Pb	15 28 30.5 -0.4	
MOVZ	**Moawhango**	**0.49 189**	P	Pb	15 28 30.6 -0.6	
ALRZ	**Allen Road**	**0.53 47**	P	Pb	15 28 31.0 +0.3	
PKVZ	**Pokaka**	**0.53 227**	P	Pb	15 28 31.7 -0.2	
MTVZ	**Mangateitei**	**0.55 212**	P	Pb	15 28 31.9 -0.3	
BKZ	**Black Stump Fm**	**0.56 116**	P	Pb	15 28 32.2 -0.1	
BHHZ	**Black Hill Sta**	**0.59 164**	P	Pb	15 28 32.6 -0.2	
BHHZ			S	Sg	15 28 40.2 +0.6	
PRRZ	**Plateau Road**	**0.60 45**	P	Pb	15 28 32.4 +0.3	
GRRZ	**Galatos Road**	**0.61 20**	P	Pb	15 28 33.5 +0.3	
HRRZ	**Handcock Road**	**0.63 33**	P	Pb	15 28 33.8 +0.2	
TLZ	**Tolley Road**	**0.64 338**	P	Pg	15 28 32.9 +0.1	
KWHZ	**Kaweka Forest**	**0.67 138**	P	Pb	15 28 34.6 +0.3	
HSRZ	**Hossack Road**	**0.69 27**	P	Pb	15 28 34.8 +0.3	
NMHZ	**Naumai**	**0.77 103**	P	Pn	15 28 36.8 -0.5	
HLRZ	**Highlands Stat**	**0.78 31**	P	Pn	15 28 37.0 -0.5	
MTHZ	**Maungataniwha**	**0.78 85**	P	Pn	15 28 36.0 -0.1	
RRRZ	**Republican Roa**	**0.78 42**	P	Pn	15 28 37.0 -0.5	
UTU	**Utuhina**	**0.79 20**	P	Pn	15 28 37.5 -0.1	
KRHZ	**Kereru**	**0.83 151**	P	Pn	15 28 37.4 +0.6	
MCHZ	**McNeill Hill**	**0.84 129**	P	Pb	15 28 38.9 +0.6	
MUGZ	**Murupara**	**0.85 59**	P	Pg	15 28 36.8 0.0	
TARZ	**Mount Tarawera**	**0.86 37**	P	Pn	15 28 37.7 -0.4	
NGRZ	**Ngongotaha**	**0.86 18**	P	Pb	15 28 37.9 +0.4	

VRZ	Vera Road	0.87	256	P	Pb	15 28 37.8	+0.2
HIZ	Hauiti	0.88	298	P	Pb	15 28 37.9	+0.2
OMRZ	Omania	0.91	27	P	Pb	15 28 38.8	+0.5
MKRZ	Makatiti	0.92	32	P	Pn	15 28 40.1	+0.6
RTZ	Ruatahuna	0.94	71	P	Pb	15 28 38.8	0.0
KARZ	Kaharoa	0.95	19	P	Pn	15 28 39.6	-0.3
ARHZ	Aropaoanui	0.96	111	P	Pn	15 28 41.1	+1.2
RAHZ	Arahi	0.97	90	P	Pn	15 28 40.3	+0.3
LIRZ	Lichensteins R	1.01	25	P	Pn	15 28 43.0	+2.4
PNHZ	Pukenui	1.03	165	P	Pn	15 28 41.1	+0.2
WAZ	Wanganui	1.07	219	P	Pn	15 28 41.4	0.0
EDRZ	Edgecumbe	1.07	41	P	Pn	15 28 41.8	+0.2
KMRZ	Kaimai	1.08	4	P	Pn	15 28 41.4	-0.2
WHHZ	Waihua	1.09	99	P	Pn	15 28 43.3	+1.5
TSZ	Takapari Road	1.14	176	P	Pn	15 28 43.0	+0.6
MARZ	Manawahe	1.14	35	P	Pn	15 28 42.8	+0.4
SNGZ	Shannon Statio	1.17	84	P	Pg	15 28 44.0	+1.0
KAHZ	Kahuranaki	1.18	138	P	Pg	15 28 45.2	+2.1
URZ	Urewera	1.19	57	P	Pb	15 28 43.0	-0.1
MHEZ	Mangahewa	1.20	262	P	Pg	15 28 44.7	+1.3
CKHZ	Cape Kidnapper	1.21	128	P	Pg	15 28 46.1	+2.6
OPRZ	Ohinepanea	1.21	28	P	Pn	15 28 43.3	-0.1
TOZ	Tahuroa Road	1.22	347	P	Pn	15 28 42.7	-0.8
WPHZ	Waipukurau	1.23	158	P	Pg	15 28 45.7	+1.7
TGRZ	Tauranga	1.24	15	P	Pn	15 28 43.3	-0.4
LREZ	Lake Rotokare	1.24	244	P	Pg	15 28 45.7	+1.4
RAGZ	Rawiri	1.30	71	P	Pg	15 28 45.9	+0.6
DREZ	Durham Road	1.31	258	P	Pg	15 28 46.2	+0.6
OHWZ	Ohakea	1.34	198	P	Pg	15 28 46.5	+0.3
PXZ	Pawanui	1.36	145	P	Pg	15 28 48.3	+1.8
PREZ	Palmer Road	1.38	252	P	Pg	15 28 47.8	+1.0
DVHZ	Dannevirke	1.40	170	P	Pg	15 28 48.3	+1.1
KNZ	Kokohu	1.43	95	P	Pg	15 28 48.4	+0.6
MWZ	Matawai	1.44	66	P	Pn	15 28 46.9	+0.3
POWZ	Post Office Ro	1.47	182	P	Pg	15 28 49.0	+0.4
KHEZ	Kahui Hut	1.47	255	P	Pg	15 28 49.1	+0.4
PKE	Pukeiti	1.47	259	P	Pg	15 28 48.9	+0.2
PRHZ	Porangahau	1.47	156	P	Pg	15 28 50.4	+1.7
RIGZ	Rimuhau	1.51	82	P	Pg	15 28 50.1	+0.7
NBEZ	Newall Road No	1.58	257	P	Pg	15 28 50.8	+0.1
PRGZ	Paritu Road	1.59	91	P	Pg	15 28 50.6	-0.3
NMEZ	Namu Road	1.61	252	P	Pg	15 28 51.3	0.0
ANWZ	Angora Road	1.61	163	P	Pg	15 28 51.8	+0.5
MHGZ	Mahia Peninsul	1.62	99	P	Pg	15 28 52.6	+1.1
PRWZ	Pori Road	1.63	177	P	Pn	15 28 48.9	-0.3
TKGZ	Te Karaka	1.64	73	P	Pg	15 28 51.6	-0.3
RUGZ	Raukumara Rang	1.73	57	P	Pn	15 28 51.0	+0.4
BFZ	Birch Farm	1.78	170	P	Pn	15 28 50.8	-0.5
MKAZ	Moumakai	1.90	343	P	Pb	15 28 54.0	-1.0
HAZ	Te Kaha	1.92	53	P	Pn	15 28 53.8	+0.8
OGWZ	Otaki Gorge	1.96	195	P	Pn	15 28 54.6	+0.8
KBAZ	Karaka Road Bo	1.98	337	P	Pn	15 28 53.8	-0.1
CPWZ	Castlepoint	2.00	172	P	Pg	15 29 01.8	+3.0
PKGZ	Pakihiroa	2.03	60	P	Pb	15 28 57.6	+0.1
KIW	Kapiti Island	2.06	200	P	Pb	15 28 57.9	-0.1
PUZ	Puketiti	2.07	67	P	Pb	15 28 57.4	-0.7
AWAZ	Awhitu Peninsu	2.09	332	P	Pn	15 28 55.4	0.0
ETAZ	East Tamaki Re	2.10	339	P	Pn	15 28 55.1	-0.5
KUZ	Kuaotunu	2.18	357	P	Pn	15 28 57.8	+1.2
WIAZ	Waiheke Island	2.20	345	P	Pn	15 28 58.2	+1.2
EPAZ	Eden Park BICE	2.22	337	P	Pb	15 29 01.6	+0.9
WTAZ	Waiatarua	2.23	333	P	Pn	15 28 57.8	+0.4
HBAZ	Herne Bay Bore	2.25	337	P	Pg	15 29 02.9	-0.6
CAW	Cannon Point	2.26	195	P	Pn	15 28 57.8	-0.1
MBAZ	Motutapu North	2.28	340	P	Pn	15 28 57.5	-0.6
WMGZ	Waiomatatini S	2.30	62	P	Pb	15 29 01.3	-0.7
DUWZ	D'Urville Isla	2.39	218	P	Pb	15 29 03.6	+0.1
ABAZ	Army Bay	2.45	341	P	Pb	15 29 02.0	+1.5
PAWZ	Paruwai Farm	2.48	187	P	Pg	15 29 08.0	+0.1
MSWZ	Moikau Station	2.53	190	P	Pb	15 29 03.1	+1.5
TCW	Tory Channel	2.58	207	P	Pb	15 29 05.6	-1.2
BHW	Baring Head	2.59	196	P	Pn	15 29 04.2	+1.8
PLWZ	Palliser	2.68	190	P	Pn	15 29 05.0	+1.3
TUWZ	Tuamarina	2.90	210	P	Pb	15 29 09.6	-2.5
NNZ	Nelson	2.97	219	P	Pb	15 29 12.2	-1.3
BSWZ	Blackbirch Sta	3.17	208	P	Pn	15 29 18.0	+1.2
QRZ	Quartz Range	3.18	232	P	Pn	15 29 12.3	+1.8
THZ	Tophouse	3.62	217	P	Pn	15 29 19.5	+2.9
KHZ	Kahutara	3.91	206	P	Pn	15 29 21.4	+1.0
OUZ	Omahuta	4.11	333	P	Pn	15 29 25.0	+1.8
DSZ	Denniston Nort	4.18	226	P	Pn	15 29 27.3	+3.0
INZ	Inchbonnie	5.06	220	P	Pn	15 29 41.8	+5.6

*THE **21** 15:36:21.8, 38°.22N×20°.40E, h12km, ML2.5/5, Error ellipse: s-maj=1.5km s-min=0.6km az=255.0*
*ATH **21** 15:36:21.4, 38°.21N×20°.42E, h14km±1km, ML2.4/12, Error ellipse: s-maj=1.6km s-min=0.8km az=253.0*
ISC 21 15:36:21.8±1.0, 38°.22N±0°.03×20°.43E±0°.04, h13km±5km, n36, σ0s41/63, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.02	159	P	Pg	15 36 24.0	-0.1
LXR1				S	Sg	15 36 25.8	+0.1
LXRA	Lixouri, Kepha	0.02	162	P	Pg	15 36 24.0	-0.1
LXRA				S	Sg	15 36 25.9	+0.2
KEF4	Livadi, Kephal	0.04	353	P	Pg	15 36 24.1	-0.2
KEF4				S	Sg	15 36 26.0	0.0
CHV1	Chavriata, Kef	0.05	230	P	Pg	15 36 24.1	-0.2
CHV1				S	Sg	15 36 26.1	+0.1
AGT1	Agia Thekli	0.05	313	P	Pg	15 36 24.1	-0.2
AGT1				S	Sg	15 36 25.9	-0.2
ARGA	Argostoli. Kep	0.05	136	P	Pg	15 36 24.0	-0.3
ARGA				S	Sg	15 36 25.8	-0.3
ARG2	Argostoli	0.06	130	P	Pg	15 36 24.1	-0.3
ARG2				S	Sg	15 36 26.0	-0.2
KEF3	Kipouria, Keph	0.07	259	P	Pg	15 36 24.2	-0.2
KEF3				S	Sg	15 36 26.2	-0.1
KEF2	Argostoli. Kep	0.07	139	P	Pg	15 36 24.2	-0.2
KEF2				S	Sg	15 36 26.1	-0.2
KEF1	Kardakata, Kep	0.07	27	P	Pg	15 36 24.2	-0.2
KEF1				S	Sg	15 36 26.0	-0.3
VLS	Valsamata	0.13	107	P	Pg	15 36 24.9	-0.3
VLS				S	Sg	15 36 27.4	-0.2
VLS	Valsamata	0.13	107	P	Pg	15 36 24.9	-0.3
VLS				S	Sg	15 36 27.5	-0.2
VLS				AML	AML	15 36 27.6	
	comp=N,17747μm,0.2s						
VLS				AML	AML	15 36 27.9	
	comp=E,15684μm,0.1s						
VSK1	VASILIKIADES	0.22	28	P	Pg	15 36 26.4	-0.2
VSK1				S	Sg	15 36 30.4	+0.5
KONA	Konidatara, Ke	0.24	28	P	Pg	15 36 26.7	-0.2
KONA				S	Sg	15 36 30.8	+0.4
FSK	Fiskardo	0.26	23	P	Pg	15 36 27.1	-0.3
FSK				S	Sg	15 36 31.4	+0.3
	comp=E,3μm,0.2s						
FSK	Fiskardo	0.26	23	P	Pg	15 36 27.1	-0.3
FSK				S	Sg	15 36 31.4	+0.3
FSK				AML	AML	15 36 31.8	
	comp=N,5710μm,0.4s						
FSK				AML	AML	15 36 31.8	
	comp=E,5868μm,0.1s						
VLMS	Volimes, Zakyn	0.39	152	P	Pg	15 36 29.2	-0.3
VLMS				S	Sg	15 36 34.7	-0.1
VLMS				AML	AML	15 36 36.1	
	comp=E,7574μm,0.4s						
VLMS				AML	AML	15 36 40.4	
	comp=N,6695μm,0.4s						
EVGI	Lefkada island	0.44	24	P	Pg	15 36 30.1	-0.5
EVGI				S	Sb	15 36 37.5	-0.5
EVGI	Lefkada island	0.44	24	P	Pg	15 36 30.1	-0.5
EVGI				S	Sg	15 36 37.1	+0.6
MGNA	Meganis	0.52	33	P	Pg	15 36 31.5	-0.6
MGNA				S	Sb	15 36 39.9	-0.4
MGNA				AML	AML	15 36 40.1	
	comp=N,1379μm,0.1s						
MGNA				AML	AML	15 36 40.3	
	comp=E,1688μm,0.1s						
LKD2	Lefkada island	0.60	17	P	Pg	15 36 32.6	-0.9
LKD2				S	Sg	15 36 41.3	-0.2
	comp=E,242nm,0.6s						
LKD2	Lefkada island	0.60	17	P	Pg	15 36 32.9	-0.7
LKD2				AML	AML	15 36 41.9	
	comp=N,373μm,0.3s						
LKD2				AML	AML	15 36 43.7	
	comp=E,343μm,0.4s						
TSLK	Tsoukalades, L	0.63	16	P	Pg	15 36 33.7	-0.5
TSLK				S	Sb	15 36 43.1	-0.4
	comp=E,298nm,0.5s						
TSLK	Tsoukalades, L	0.63	16	P	Pg	15 36 33.6	-0.6
TSLK				S	Sg	15 36 42.9	+0.3
TSLK				AML	AML	15 36 49.8	
	comp=E,486μm,0.5s						
TSLK				AML	AML	15 36 50.9	
	comp=N,711μm,0.5s						
VTN	Vitineika	0.67	116	P	Pg	15 36 34.2	-0.6
PDO	Prodromos	0.70	57	P	Pg	15 36 35.0	-0.5
PDO				S	Sb	15 36 46.4	+0.9
	comp=N,572nm,0.4s						
PDO	Prodromos	0.70	57	P	Pg	15 36 35.0	-0.5
PDO				S	Sg	15 36 44.7	-0.1
PDO				AML	AML	15 36 46.5	
	comp=E,957μm,0.5s						
PDO				AML	AML	15 36 49.5	
	comp=N,747μm,0.4s						
RLS	Riolos of Patr	0.83	101	P	Pg	15 36 37.3	-0.6
RLS				AML	AML	15 36 55.7	
	comp=E,140μm,0.4s						
RLS				AML	AML	15 36 55.8	
	comp=N,216μm,0.4s						
PVO	Paravola	0.95	65	P	Pb	15 36 39.5	-0.6
PVO				S	Sn	15 36 55.2	+1.0
	comp=N,365nm,0.4s						
PVO	Paravola	0.95	65	P	Pb	15 36 39.7	-0.3
PVO				S	Sb	15 36 53.4	+0.8
PVO				AML	AML	15 36 55.5	
	comp=E,804μm,0.3s						
PVO				AML	AML	15 36 59.7	
	comp=N,634μm,0.4s						
ANX	Ano Chora	1.23	72	P	Pn	15 36 44.7	-0.1
EVR	Evrytania	1.29	57	P	Pb	15 36 46.0	+0.1
EVR				AML	AML	15 37 13.1	
	comp=E,124μm,0.9s						
EVR				AML	AML	15 37 15.8	
	comp=N,190μm,0.6s						
TRIZ	Trizonia	1.30	83	P	Pb	15 36 46.2	+0.1
IGT	Igoumenitsa	1.32	357	P	Pb	15 36 46.5	+0.1
KALE	Kalithea	1.36	82	P	Pb	15 36 47.2	+0.2
KALE				AML	AML	15 37 13.4	
	comp=E,116μm,0.4s						
KALE				AML	AML	15 37 15.3	
	comp=N,164μm,0.9s						
KLV	Kalavryta, Ach	1.37	97	P	Pn	15 36 46.7	+0.1
KLV				AML	AML	15 37 13.4	
	comp=E,85μm,0.5s						
KLV				AML	AML	15 37 14.4	
	comp=N,89μm,0.5s						

IDC 21 15:39:44.4±2.3, 5°.97S×130°.04E, h0km, mb3.6/1, mb1 3.5/3, mb1mx3.3/22, mbtmp3.3/3, ML2.9/2, Error ellipse: s-maj=144.9km s-min=31.4km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.50	164	Pn	Pn	15 43 12.9	+1.8
	0.1nm,0.3s,baz=347,slow=12,SNR=9.4						
WRA				Sn	Sn	15 45 37.1	-16
	0.1nm,0.3s,baz=332,slow=21,SNR=4.4						
ASAR	Alice Springs	17.98	168	P	Pn	15 43 54.8	-1.3
	0.0nm,0.3s,baz=358,slow=11,SNR=2.4						
ASAR				S	Sn	15 46 59.9	-17
	0.0nm,0.3s,baz=351,slow=22,SNR=3.2						
MKAR	Makanchi Array	67.39	327	P	P	15 50 41.8	0.0
	0.3nm,0.3s,baz=123,slow=8.0,SNR=9.8						

*SJA **21** 16:01:42.5±1.1, 22°.57S×67°.78W, h166km±7km, ML3.8, MW3.7*
*GUC **21** 16:01:44.5±0.6, 22°.52S×68°.10W, h178km±6km, ML4.1*
ISC 21 16:01:42.5±1.4, 22°.64S±0°.06×67°.82W±0°.04, h173km±15km, n41, σ1s20/66, 9C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.01	271	iP	Pn	16 02 10.5	+0.6
LVC				iS	Sn	16 02 30.5	-0.5
PB09	IPOC Station P	1.56	302	⇑iP	Pn	16 02 15.7	+1.1
PB09				iS	Sn	16 02 39.0	-0.5
PB09				IAML		16 02 41.0	
	comp=N,974nm,0.7s						
PB09	IPOC Station P	1.56	302	iP	Pn	16 02 15.8	+1.1
PB09				iS	Sn	16 02 38.9	-0.5
PB09				IAML		16 02 40.4	
	comp=Z,659nm,0.6s						
PB06	IPOC Station P	1.62	267	⇑iP	Pn	16 02 16.0	+0.7
PB06				iS	Sn	16 02 40.9	+0.4
PB06	IPOC Station P	1.62	267	iP	Pn	16 02 16.2	+1.0
PB06				iS	Sn	16 02 40.9	+0.4
PB06				IAML		16 02 42.9	
	comp=Z,386nm,0.3s						
PB15	IPOC Station P	1.63	249	⇑iP	Pn	16 02 16.6	+1.3
PB15				iS	Sn	16 02 41.3	+0.6
PB15	IPOC Station P	1.63	249	iP	Pn	16 02 16.6	+1.3
PB03	IPOC Station P	1.89	288	⇑iP	Pn	16 02 18.7	+0.7
PB03				iS	Sn	16 02 44.2	-1.2
PB03				IAML		16 02 45.8	
	comp=N,1μm,0.2s						
PB03	IPOC Station P	1.89	288	iP	Pn	16 02 18.7	+0.7
PB03				iS	Sn	16 02 44.2	-1.2
PB07	IPOC Station P	2.12	295	⇑iP	Pn	16 02 21.4	+0.7
PB07				iS	Sn	16 02 48.8	-1.3
PB07				IAML		16 02 50.0	
	comp=N,2μm,0.5s						
PB07	IPOC Station P	2.12	295	iP	Pn	16 02 21.5	+0.8
PB07				iS	Sn	16 02 48.8	-1.3
PB04	IPOC Station P	2.18	278	⇑iP	Pn	16 02 22.0	+0.8
PB04				iS	Sn	16 02 50.0	-1.2
PB04				IAML		16 02 52.4	
	comp=N,847nm,0.3s						
PB04	IPOC Station P	2.18	278	⇑iP	Pn	16 02 22.0	+0.8
PB04				iS	Sn	16 02 50.4	-0.8
PB04				IAML		16 02 52.5	
	comp=Z,570nm,0.2s						
YJA	Yavi	2.18	78	iP	Pn	16 02 22.1	+0.6
PB05	IPOC Station P	2.21	264	⇑iP	Pn	16 02 22.4	+0.9
PB05				iS	Sn	16 02 51.1	-0.7
PB05	IPOC Station P	2.21	264	⇑iP	Pn	16 02 22.5	+0.9
PB01	IPOC Station P	2.22	315	⇑iP	Pn	16 02 22.0	+0.4
PB01				iS	Sn	16 02 50.8	-1.2
PB01				IAML		16 02 53.7	
	comp=E,758nm,0.3s						
PB02	IPOC Station P	2.33	304	⇑iP	Pn	16 02 23.4	+0.4
PB02				eS	Sn	16 02 52.5	-1.8
PB02				IAML		16 02 54.2	
	comp=N,1μm,0.5s						
PB02	IPOC Station P	2.33	304	iP	Pn	16 02 23.4	+0.4
PB02				iS	Sn	16 02 52.5	-1.8
PB08	IPOC Station P	2.78	333	⇓iP	Pn	16 02 29.7	+1.1
PB08				iS	Sn	16 03 04.1	-0.2
PB08				IAML		16 03 07.8	
	comp=E,363nm,0.4s						
PB08	IPOC Station P	2.78	333	iP	Pn	16 02 29.8	+1.2
PATCX	Punta Patache	2.83	309	eP	Pn	16 02 28.7	0.0
PATCX				iS	Sn	16 03 02.8	-1.9
PATCX				IAML		16 03 07.3	
	comp=N,672nm,0.3s						
PATCX	Punta Patache	2.83	309	iP	Pn	16 02 28.8	0.0
PATCX				iS	Sn	16 03 02.9	-1.9
SLA	San Lorenzo	2.96	135	iP	Pn	16 02 32.6	+2.0
AZAP	Zapla	2.98	123	iP	Pn	16 02 31.6	+0.8
AZAP				iS	Sn	16 03 08.1	-0.3
GO02	Mina Guanaco	2.99	213	eP	Pn	16 02 32.5	+1.5
GO02				eS	Sn	16 03 08.9	+0.2
PB14	IPOC Station P	3.09	230	iP	Pn	16 02 33.3	+1.1
GO01	Chusmiza	3.22	336	eP	Pn	16 02 34.6	+0.5
GO01				eS	Sn	16 03 13.9	-0.3
GO01				IAML		16 03 16.9	
	comp=N,350nm,0.2s						
PB11	IPOC Station P	3.34	329	eP	Pn	16 02 34.9	-0.3
PB11				eS	Sn	16 03 14.0	-2.2
ASTB	Santa Barbara	3.36	113	iP	Pn	16 02 35.7	+0.3
ASTB				iS	Sn	16 03 15.2	-1.4
AHML	Horco Molle	4.70	152	iP	Pn	16 02 54.4	+1.8
VCA	Vinchina	6.08	183	iP	Pn	16 03 12.3	+1.7
AROD	Rodeo	7.64	191	iP	Pn	16 03 32.0	+0.6
ACCO	Cerro Coronel	7.99	188	iP	Pn	16 03 36.2	+0.1
AMOG	MOGNA	8.29	184	iP	Pn	16 03 39.2	-0.5
AMOG				iS	Sn	16 05 08.1	-4.3
RTLL	Cerro Villicun	8.68	184	iP	Pn	16 03 44.1	-0.6
CFA	Coronel Fontan	8.94	182	iP	Pn	16 03 48.0	-0.2
ACAN	Cantantal	9.61	177	iP	Pn	16 03 57.3	+0.2
MRA	San Martin	9.92	170	iP	Pn	16 03 59.8	-1.4
ASAL	Salagasta	9.95	185	iP	Pn	16 04 02.2	+0.6
ARCO	CERRO ARCO	10.21	185	iP	Pn	16 04 06.8	+1.7

*IDC **21** 16:11:04.9±1.9, 18°.82N×145°.42E, h232km±22km, mb3.1/8, mb1 3.3/10, mb1mx3.1/39, mbtmp3.7/10, Error ellipse: s-maj=29.2km s-min=15.2km az=84.0*
ISC 21 16:11:03.6±0.8, 18°.94N±0°.08×145°.4E±0°.2, h214km, n10, σ1s56/11, mb3.2/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.34	186	P	Pn	16 12 24.8	+2.1
	3.5nm,0.3s,baz=158,slow=19,SNR=3.4						
GUMO				S	S	16 13 23.8	-1.5
	2.9nm,0.3s,baz=163,slow=19,SNR=2.5						
MJAR	Matsushiro Arr	18.65	342	P	P	16 15 07.1	+1.6
	0.0nm,0.3s,baz=155,slow=12,SNR=3.1						
KSRS	Korea Array	23.98	324	P	P	16 15 58.7	+0.2
	0.4nm,0.7s,baz=144,slow=10,SNR=3.4						
ASAJ	Asahikawa	25.22	355	P	P	16 16 11.6	+2.0
	4.5nm,1.0s,baz=152,slow=9.9,SNR=3.0						
WRA	Warramunga Arr	40.14	196	P	P	16 18 18.3	-0.6
	0.6nm,1.0s,baz=1.3,slow=9.3,SNR=2.6						
MKAR	Makanchi Array	58.11	314	P	P	16 20 34.9	+0.1
	0.3nm,0.6s,baz=94,slow=7.8,SNR=3.9						
ILAR	Eielson Array	63.55	26	P	P	16 21 09.8	-1.1
	0.2nm,0.7s,baz=256,slow=5.6,SNR=4.9						
YKA	Yellowknife Ar	77.90	28	P	P	16 22 37.0	-0.4
	0.3nm,0.5s,baz=288,slow=5.2,SNR=5.2						
NVAR	Mina Array Bea	83.19	52	P	P	16 23 07.2	+0.8
	0.5nm,0.7s,baz=266,slow=7.0						
FINES	FINESS Array B	86.56	335	P	P	16 23 20.3	-2.0
	1.1nm,0.7s,baz=94,slow=5.6,SNR=3.6						

*IDC **21** 16:13:01.7±1.3, 1°.62S×135°.21E, h0km, mb3.6/3, mb1 3.8/6, mb1mx3.5/32, mbtmp3.6/6, ML3.2/3, Error ellipse: s-maj=33.4km s-min=22.3km az=84.0*
ISC 21 16:13:06.6±1.3, 1°.7S±0°.1×135°.2E±0°.1, h35km, n6, σ1s57/7, mb3.7/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	3.97	281	Pn	Pn	16 14 03.0	-1.9
	1.9nm,0.3s,baz=149,slow=17,SNR=11						
SIJI				Sn	Sn	16 14 52.1	+1.8
	1.3nm,0.3s,baz=143,slow=20,SNR=2.5						
WRA	Warramunga Arr	18.19	182	P	Pn	16 17 16.9	+0.3
	0.1nm,0.3s,baz=4.7,slow=12,SNR=8.3						
FITZ	Fitzroy Crossi	18.82	209	P	P	16 17 22.7	-0.7
	0.1nm,0.3s,baz=30,slow=14,SNR=2.1						
ASAR	Alice Springs	21.91	183	P	P	16 17 57.8	+0.8
	2.6nm,0.9s,baz=5.8,slow=12,SNR=16						
MKAR	Makanchi Array	66.81	323	P	P	16 23 56.0	+1.1
	0.3nm,0.5s,baz=113,slow=7.3,SNR=10.0						
ILAR	Eielson Array	86.36	25	P	P	16 25 44.5	-0.4
	0.3nm,0.6s,baz=262,slow=4.9,SNR=6.5						

*ATH **21** 16:16:29.4, 36°.23N×25°.57E, h137km±2km, ML3.0/7, Error ellipse: s-maj=2.9km s-min=1.5km az=118.0*
*HLW **21** 16:16:29.5, 35°.86N×25°.92E, h10km±12km, Md4.0*
*ISK **21** 16:16:29.9, 36°.26N×25°.62E, h141km±1km, ML3.0/16*
*THE **21** 16:16:32.2, 36°.27N×25°.59E, h138km±4km, ML2.9/6, Error ellipse: s-maj=5.5km s-min=2.0km az=294.0*
*DDA **21** 16:16:37.0, 35°.99N×26°.47E, h31km±5km, ML2.6*
ISC 21 16:16:28.2±1.4, 36°.27N±0°.05×25°.66E±0°.04, h152km±8km, n67, σ1s56/92, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANT	Santorini	0.19	304	P	Pn	16 16 49.4	+0.7
SANT				S	Sn	16 17 03.6	-0.8
SANT	Santorini	0.19	304	P	Pn	16 16 49.4	+0.7
SANT				S	Sn	16 17 03.3	-1.0
SANT	Santorini	0.19	304	PG	Pn	16 16 49.3	+0.6
SANT				SG	Sn	16 17 03.5	-0.8
THR6	Thira Island,	0.23	294	P	Pn	16 16 49.7	+1.0
SAP1	Santorini-Akro	0.23	294	P	Pn	16 16 49.1	+0.4
SAP1				S	Sn	16 17 03.5	-0.9
THR3	Thira Island,	0.25	305	P	Pn	16 16 49.8	+1.0
THT2	Imerovigli	0.25	312	PG	Pn	16 16 49.7	+0.9
THT2				SG	Sn	16 17 03.7	-0.9
IOSP	Ios island	0.54	327	P	Pn	16 16 50.9	+1.0
IOSP				S	Sn	16 17 05.2	-1.4
	212nm,0.3s						
IOSP	Ios island	0.54	327	P	Pn	16 16 51.0	+1.0
IOSP				S	Sn	16 17 05.8	-0.8
AMGA	Amorgos Island	0.60	19	P	Pn	16 16 51.4	+1.1
AMGA				S	Sn	16 17 06.4	-0.8
	428nm,0.4s						
AMGA	Amorgos Island	0.60	19	P	Pn	16 16 51.4	+1.1
AMGA				S	Sn	16 17 06.6	-0.6
APE	Apeiranthos	0.81	353	P	Pn	16 16 52.8	+1.1
APE	Apeiranthos	0.81	353	P	Pn	16 16 52.8	+1.1
APE	Apeiranthos	0.81	353	PG	Pn	16 16 52.7	+1.1
NPS	Neapolis	1.00	182	P	Pn	16 16 53.6	+0.4
NPS				S	Sn	16 17 11.2	-1.0
	1μm,0.4s						
NPS	Neapolis	1.00	182	P	Pn	16 16 53.7	+0.4
NPS				S	Sn	16 17 11.3	-0.9
NPS				AML	AML	16 17 12.3	
	comp=E,1767μm,0.4s						
NPS				AML	AML	16 17 12.6	
	comp=N,1461μm,0.3s						
MHLO	Agia Marina, M	1.09	293	P	Pn	16 16 53.7	-0.2
MHLA	Plaka, Milos I	1.10	296	P	Pn	16 16 55.3	+1.3
LAST	Lasithi	1.11	187	P	Pn	16 16 54.8	+0.6
LAST				S	Sn	16 17 12.9	-1.2
	comp=N,82nm,0.2s						
LAST	Lasithi	1.11	187	P	Pn	16 16 54.9	+0.7
LAST				S	Sn	16 17 13.4	-0.7
LAST				AML	AML	16 17 13.9	
	comp=N,338μm,0.2s						
LAST				AML	AML	16 17 15.2	
	comp=E,286μm,0.3s						
STIA	Sitia Lasithi	1.12	161	P	Pn	16 16 55.2	+1.0
STIA				S	Sn	16 17 13.5	-0.5
IDI	Anoyia	1.16	213	P	Pn	16 16 54.9	+0.3
IDI				S	Sn	16 17 13.2	-1.5
IDI				AML	AML	16 17 13.8	
	comp=N,319μm,0.4s						
IDI				AML	AML	16 17 14.6	
	comp=E,432μm,0.3s						
IDI	Anoyia	1.16	213	PN	Pn	16 16 55.4	+0.8
IDI				SN	Sn	16 17 13.0	-1.7
ZKR	Zakros	1.24	158	P	Pn	16 16 56.8	+1.5
ZKR				S	Sn	16 17 16.6	+0.7
	comp=E,205nm,0.3s						
ZKR	Zakros	1.24	158	P	Pn	16 16 56.7	+1.5
ZKR				S	Sn	16 17 15.7	-0.2
ZKR				AML	AML	16 17 17.8	
	comp=E,620μm,0.3s						
ZKR				AML	AML	16 17 19.1	
	comp=N,200μm,0.3s						
ZKR	Zakros	1.24	158	PN	Pn	16 16 56.9	+1.6
SERI	Serifos	1.30	314	P	Pn	16 16 57.0	+1.1
KARP	Karpathos	1.42	120	P	Pn	16 16 58.2	+1.1
KARP				S	Sn	16 17 19.4	+0.3
	comp=N,462nm,0.1s						
KARP	Karpathos	1.42	120	P	Pn	16 16 58.4	+1.3
KARP				S	Sn	16 17 19.7	+0.5
KARP				AML	AML	16 17 20.1	
	comp=E,1144μm,0.1s						
KARP				AML	AML	16 17 20.3	
	comp=N,678μm,0.2s						
KARP	Karpathos	1.42	120	PN	Pn	16 16 57.9	+0.8
KARP				SN	Sn	16 17 19.6	+0.5
VAM	Vamos	1.46	235	P	Pn	16 16 58.3	+0.8
VAM				S	Sn	16 17 18.5	-1.3
VAM				AML	AML	16 17 19.7	
	comp=N,304μm,0.2s						
VAM				AML	AML	16 17 20.9	
	comp=E,280μm,0.2s						
IMMV	Iera Moni Meta	1.58	240	P	Pn	16 16 59.4	+0.6
IMMV				S	Sn	16 17 20.6	-1.5
IMMV	Iera Moni Meta	1.58	240	PN	Pn	16 17 00.1	+1.4
DAT	Datca	1.62	73	PN	Pn	16 17 00.9	+1.7
RODP	Rodopos	1.69	246	PN	Pn	16 17 01.5	+1.5

ARG	Arkhangelos	2.00	91	P	Pn	16 17 05.1	+1.7
ARG	Arkhangelos	2.00	91	PN	Pn	16 17 05.1	+1.7
KARY	Karystos	2.01	331	P	Pn	16 17 05.1	+1.5
KTHA	Kythira Island	2.10	271	P	Pn	16 17 05.4	+0.8
KTHA				AML	AML	16 17 32.3	
	comp=E,738µm,0.6s						
KTHA				AML	AML	16 17 32.7	
	comp=N,600µm,0.4s						
CHOS	Chios island	2.14	8	P	Pn	16 17 06.8	+1.6
CHOS	Chios island	2.14	8	PN	Pn	16 17 06.5	+1.4
MNVA	Monemvasia	2.15	282	P	Pn	16 17 06.3	+1.1
URLA	Izmir	2.22	19	PN	Pn	16 17 07.7	+1.7
VLI	Veliai	2.24	282	P	Pn	16 17 07.1	+0.9
YER	Yerkesik	2.28	67	PN	Pn	16 17 08.9	+2.1
KRND	KRANIDI	2.30	300	P	Pn	16 17 08.2	+1.3
DID	Didima	2.30	303	P	Pn	16 17 08.2	+1.3
TURN	Turunc	2.45	75	PN	Pn	16 17 07.1	-1.6
TURN	Turunc	2.45	75	*i* P	Pn	16 17 06.3	-2.4
TURN				*i* S	Sn	16 17 28.8	-11
DALY	Dalyan (Mula)	2.48	76	PN	Pn	16 17 11.8	+2.7
DALY	Dalyan (Mula)	2.48	76	*i* P	Pn	16 17 11.2	+2.2
DALY				*i* S	Sn	16 17 38.8	-1.7
DALY				IAML		16 17 42.0	
	comp=E,43nm,0.4s						
FETY	Fethiye	2.79	81	PN	Pn	16 17 15.5	+2.5
FETY	Fethiye	2.79	81	*i* P	Pn	16 17 14.6	+1.6
FETY				*i* S	Sn	16 17 41.5	-6.1
ITM	Ithomi	3.13	288	PN	Pn	16 17 18.9	+1.6
AKAS	Kas	3.19	89	PN	Pn	16 17 20.0	+1.8
AKAS	Kas	3.19	89	*i* P	Pn	16 17 19.6	+1.4
AKAS				*i* S	Sn	16 17 51.4	-5.4
AKAS				IAML		16 18 05.0	
	comp=N,57nm,1.2s						
GOLH	Golhisar	3.28	72	*i* P	Pn	16 17 21.0	+1.7
GOLH				*i* S	Sn	16 17 51.7	-7.2
GOLH				IAML		16 18 30.0	
	comp=N,18nm,1.9s						
ELL	Elmali	3.46	81	PN	Pn	16 17 23.9	+2.3
AKUM	Antalya-Kumluc	3.79	88	*i* P	Pn	16 17 27.3	+1.6
AKUM				*i* S	Sn	16 18 03.7	-6.6
AKUM				IAML		16 18 05.0	
	comp=N,74nm,0.9s						
AKUM				IAML		16 18 17.0	
	comp=E,26nm,0.6s						
AGG	Agios Georgios	3.81	317	PN	Pn	16 17 27.8	+1.7
KORT	Korkueli	3.85	78	PN	Pn	16 17 29.3	+2.7
KEPZ	Antalya-Kepez	4.83	81	*i* P	Pn	16 17 41.4	+2.2
KEPZ				*i* S	Sn	16 18 28.3	-6.6
KEPZ				IAML		16 18 38.0	
	comp=N,7.6nm,1.0s						
KEPZ				IAML		16 18 38.0	
	comp=E,6.3nm,1.0s						
SWA2		7.00	181	P	Pn	16 18 07.3	-1.0
	baz=184						
HNAT	Natroun	7.82	146	P	Pn	16 18 18.0	-1.2
	baz=146						
GLL	Jalalah	8.39	141	P	Pn	16 18 26.3	-0.5
	baz=140						
HFRF	Wahat Farafira	9.37	165	P	Pn	16 18 39.7	-0.1
	baz=166						
HFRF				S	Sn	16 20 14.6	-9.2
	baz=166						
HKAT	Jabal Katrina	10.45	135	P	Pn	16 18 54.8	+0.5
	baz=134						

IDC **21** *16:37:29.2±0.7, 33.91S×57.31E, h0km, mb3.8/10, mb1 3.9/10, mb1mx3.8/44, mbtmp3.8/10, MS3.1/1, Ms1 3.1/1, ms1mx2.7/29, Error ellipse: s-maj=24.9km s-min=21.5km az=78.0*

NEIC **21** *16:37:30.1±2.4, 33.8S±0.1×57.2E±0.2, h10km±1km, mb4.6/11, Error ellipse: s-maj=22.1km s-min=17.8km az=245.0*

ISC 21 16:37:30.1±0.6, **33.8S**±0.1×**57.2E**±0.1, **h10km, n33,** σ1.27/25, **mb4.2**/15, **Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RER	Riviere de l'E	12.68	354	Pn	Pn	16 40 30.9	+0.2
ABPO	Ambohimpanom	17.21	326	Pn	Pn	16 41 28.5	-2.4
LBTB	Lobatse	28.78	279	P	P	16 43 26.1	-2.2
MSEY	Mahe Island	29.05	357	P	P	16 43 28.3	-2.3
H08S1	Diego Garcia H	29.64	32	T	T	17 14 26.3	
	baz=204						
H08S2	Diego Garcia H	29.65	32	T	T	17 14 24.6	
	baz=204						
H08S3	Diego Garcia H	29.66	32	T	T	17 14 21.6	
	baz=204						
H08N3	Diego Garcia H	30.20	28	T	T	17 15 03.2	
	baz=203,slow=76,SNR=11						
H08N1	Diego Garcia H	30.21	28	T	T	17 15 03.9	
	baz=203,slow=76,SNR=4.9						
H08N2	Diego Garcia H	30.22	28	T	T	17 15 03.9	
	baz=203,slow=76,SNR=8.3						
SUR	Sutherland	30.39	262	LR	LR	16 54 37.9	
	comp=Z,34nm,18.1s,baz=198,slow=34						
KMBO	Kilima Mbogo	37.50	326	P	P	16 44 44.8	+0.3
TSUM	Tsumeb	38.05	282	P	P	16 44 49.0	0.0
TSUM				IAmb	IAmb	16 44 54.4	
	comp=Z,12nm,1.4s						
SNAA	Sanae	48.91	201	P	P	16 46 16.3	+0.3
	comp=Z,2.5nm,0.9s,baz=169,slow=7.6,SNR=5.2						
SNAA	Sanae	48.91	201	P	P	16 46 16.4	+0.5
SNAA				IAmb	IAmb	16 46 35.2	
	comp=Z,11nm,1.5s						
QSPA	South Pole Qui	56.35	180	P	P	16 47 11.3	+0.1
	comp=Z,2.0nm,0.7s,baz=261,slow=1.4,SNR=18						
QSPA	South Pole Qui	56.35	180	P	P	16 47 11.2	+0.1
QSPA				IAmb	IAmb	16 47 17.1	
	comp=Z,12nm,1.5s						
FITZ	Fitzroy Crossi	62.51	94	P	P	16 47 53.0	-1.3
FITZ				IAmb	IAmb	16 48 00.8	
	comp=Z,8.6nm,1.3s						
CMAR	Chiang Mai Arr	65.49	44	P	P	16 48 14.8	+1.1
	comp=Z,1.5nm,0.8s,baz=219,slow=7.0,SNR=14						
KNRA	Kununurra	66.30	93	P	P	16 48 17.9	-1.2
ASAR	Alice Springs	66.66	104	P	P	16 48 20.5	-0.9
	comp=Z,0.3nm,0.8s,baz=241,slow=6.4,SNR=4.9						
WRA	Warramunga Arr	68.79	100	P	P	16 48 34.7	-0.2
	comp=Z,0.5nm,0.8s,baz=240,slow=6.8,SNR=11						
STKA	Stephens Creek	68.90	115	P	P	16 48 33.9	-1.4
STKA				IAmb	IAmb	16 48 44.4	
	comp=Z,1.6nm,1.5s						
WB0	Warramunga Arr	68.92	100	P	P	16 48 34.9	-0.8
WB0				IAmb	IAmb	16 48 49.3	
	comp=Z,6.2nm,1.3s						
WR0	Warramunga Arr	68.95	100	P	P	16 48 35.8	0.0
WR0				IAmb	IAmb	16 48 47.7	
	comp=Z,4.5nm,1.3s						
TORD	Torodi Ar. Bea	70.46	302	P	P	16 48 46.8	+1.7
	comp=Z,0.3nm,0.6s,baz=144,slow=4.4,SNR=2.6						
DBIC	Dimbokro	71.09	292	P	P	16 48 51.1	+2.2
	comp=Z,2.8nm,0.9s,baz=140,slow=4.5,SNR=3.0						
BRTR	Keskin Array B	76.35	342	P	P	16 49 20.1	+0.7
	comp=Z,0.8nm,0.8s,baz=171,slow=7.9,SNR=6.0						
MKAR	Makanchi Array	83.38	17	P	P	16 49 58.8	+1.6
	comp=Z,0.2nm,0.6s,baz=203,slow=5.1,SNR=3.8						
AKASG	Malin Array Be	87.70	343	P	P	16 50 18.6	+0.1
	comp=Z,0.3nm,0.4s,baz=167,slow=4.7,SNR=3.2						
INK	Inuvik	144.93	7	PKPbc	PKPbc	16 57 06.2	+0.4
	comp=Z,2.1nm,0.9s,baz=329,slow=6.8,SNR=4.5						
ILAR	Eielson Array	145.73	18	PKPbc	PKPbc	16 57 08.3	-0.1
	comp=Z,0.9nm,0.7s,baz=311,slow=3.8,SNR=6.5						
YKA	Yellowknife Ar	150.84	352	PKPbc	PKiKP	16 57 22.6	0.0
	comp=Z,1.5nm,0.8s,baz=3.8,slow=2.1,SNR=13						

WEL 21 16:57:13.3, 40.3S±0.7×**17°6E**±°, **h32**km±1km, **M3.7**/107, **ML4.2**/12, **MLv3.7**/107, **Error ellipse: s-maj=0.0km s-min=0.0km az=88.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
POWZ	Post Office Ro	0.08	193	P	Pb	16 57 19.1	+0.2
POWZ				S	Sb	16 57 23.4	+0.8
PRWZ	Pori Road	0.28	150	P	Pn	16 57 21.0	-0.1
PRWZ				S	Sn	16 57 27.5	+1.2
DVHZ	Dannevirke	0.29	87	P	Pb	16 57 20.9	+0.1
DVHZ				S	Sn	16 57 26.7	+0.1
TSZ	Takapari Road	0.29	27	P	Pb	16 57 21.1	+0.2
OHWZ	Ohakea	0.38	287	P	Pn	16 57 23.4	+0.8
MRZ	Mangatainoka R	0.38	205	P	Pb	16 57 22.3	+0.2
TIWZ	Tintock	0.47	171	P	Pb	16 57 23.7	-0.2
BFZ	Birch Farm	0.50	137	P	Pb	16 57 23.9	0.0
PNHZ	Pukenui	0.51	38	P	Pb	16 57 24.2	+0.2
ANWZ	Angora Road	0.54	106	P	Pn	16 57 24.7	-0.1
WPHZ	Waipukurau	0.56	63	P	Pn	16 57 25.1	+0.1
HOWZ	Holdsworth Sta	0.62	200	P	Pb	16 57 25.8	0.0
PRHZ	Porangahau	0.65	86	P	Pb	16 57 26.1	-0.1
CPWZ	Castlepoint	0.67	152	P	Pb	16 57 26.6	0.0
OGWZ	Otaki Gorge	0.69	223	P	Pb	16 57 26.9	0.0
TMWZ	Te Maipa	0.79	175	P	Pn	16 57 27.7	-0.6
KRHZ	Kereru	0.81	34	P	Pb	16 57 28.8	-0.1
WAZ	Wanganui	0.83	312	P	Pn	16 57 30.6	+1.2
BHHZ	Black Hill Sta	0.85	14	P	Pb	16 57 29.7	0.0
KIW	Kapiti Island	0.86	231	P	Pb	16 57 29.8	-0.1
PXZ	Pawanui	0.87	71	P	Pn	16 57 28.9	-0.3
MTW	Mount Morrison	0.87	195	P	Pb	16 57 28.8	-0.6
MOVZ	Moawhango	0.91	358	P	Pb	16 57 30.5	-0.1
MTVZ	Mangateitei	0.96	345	P	Pb	16 57 31.8	+0.3
CAW	Cannon Point	0.96	215	P	Pb	16 57 30.6	-0.1
KAHZ	Kahuranaki	0.98	58	P	Pn	16 57 30.9	0.0
KWHZ	Kaweka Forest	1.01	29	P	Pb	16 57 31.9	+0.5
TRVZ	Turoa	1.03	349	P	Pb	16 57 32.9	+0.1
WHVZ	Whangaehu Hut	1.04	351	P	Pb	16 57 33.0	0.0
TUVZ	Tukino	1.05	354	P	Pb	16 57 33.1	+0.1
DRZ	Dome Shelter	1.05	350	P	Pb	16 57 33.3	+0.1
FWVZ	Far West T-bar	1.07	350	P	Pb	16 57 33.5	-0.1
PKVZ	Pokaka	1.08	341	P	Pb	16 57 33.6	+0.1
TRWZ	Traveller	1.08	184	P	Pn	16 57 31.5	-0.8
PAWZ	Paruwai Farm	1.10	194	P	Pn	16 57 31.8	-0.8
MCHZ	McNeill Hill	1.11	39	P	Pb	16 57 33.1	+0.4
NGZ	Ngauruhoe	1.15	353	P	Pb	16 57 34.6	-0.1
MSWZ	Moikau Station	1.17	200	P	Pn	16 57 32.7	-0.9
CKHZ	Cape Kidnapper	1.19	57	P	Pn	16 57 33.3	-0.4
WTVZ	West Tongariro	1.21	353	P	Pb	16 57 35.5	-0.2
KRVZ	Karewarewa	1.23	355	P	Pb	16 57 35.7	-0.2
WEL	Wellington	1.24	218	P	Pn	16 57 34.1	-0.3
BKZ	Black Stump Fm	1.27	25	P	Pb	16 57 35.1	+0.3
TWVZ	Taurewa	1.27	347	P	Pb	16 57 36.4	-0.4
BHW	Baring Head	1.30	212	P	Pn	16 57 34.5	-0.7
PLWZ	Palliser	1.32	198	P	Pn	16 57 34.4	-1.1
RITZ	Rihia Road	1.34	2	P	Pb	16 57 37.3	-0.5
KATZ	Kakaramea	1.34	357	P	Pb	16 57 37.4	-0.2
LREZ	Lake Rotokare	1.37	308	P	Pb	16 57 38.9	+0.6
ARHZ	Aropaoanui	1.40	42	P	Pn	16 57 36.5	-0.1
VRZ	Vera Road	1.43	326	P	Pb	16 57 38.5	-0.9
HATZ	Hinemaiaia	1.44	9	P	Pb	16 57 38.0	+0.8
NMHZ	Naumai	1.45	33	P	Pb	16 57 37.6	+0.3
RATZ	Rangitukua	1.45	359	P	Pb	16 57 38.5	-1.2
TCW	Tory Channel	1.46	232	P	Pn	16 57 37.1	-0.3
DUWZ	D'Urville Isla	1.50	251	P	Pn	16 57 38.3	+0.2
MRHZ	Matea Rd	1.56	18	P	Pb	16 57 39.1	+0.2
PREZ	Palmer Road	1.59	307	P	Pb	16 57 41.6	-0.5
WATZ	Wairara	1.61	358	P	Pb	16 57 40.5	+1.0
WHTZ	Whakaora	1.65	5	P	Pb	16 57 41.2	+1.1
DREZ	Durham Road	1.66	312	P	Pb	16 57 42.5	-0.8
WHHZ	Waihua	1.66	42	P	Pn	16 57 39.9	-0.4
MTHZ	Maungataniwha	1.67	29	P	Pn	16 57 40.2	-0.2
MHEZ	Mangahewa	1.68	317	P	Pb	16 57 43.1	-0.5
KHEZ	Kahui Hut	1.71	306	P	Pb	16 57 43.3	-0.8
RAHZ	Arahi	1.72	36	P	Pn	16 57 41.0	-0.1
NMEZ	Namu Road	1.73	301	P	Pb	16 57 43.6	-0.8
PKE	Pukeiti	1.79	308	P	Pb	16 57 44.4	-1.0
TUWZ	Tuamarina	1.79	231	P	Pn	16 57 41.1	-0.9
ALRZ	Allen Road	1.80	14	P	Pn	16 57 42.3	+0.1
NBEZ	Newall Road No	1.81	305	P	Pb	16 57 44.9	-1.0
WPRZ	Whakapapatarin	1.82	9	P	Pn	16 57 42.8	+0.5
KUTZ	Kaahu Road	1.82	1	P	Pn	16 57 44.2	+1.7
PRRZ	Plateau Road	1.87	15	P	Pb	16 57 45.5	-1.4
RTZ	Ruatahuna	1.93	29	P	Pn	16 57 43.7	-0.3
HIZ	Hauiti	1.94	338	P	Pb	16 57 45.4	+1.3
KNZ	Kokohu	1.94	49	P	Pn	16 57 42.7	-1.3
SNGZ	Shannon Statio	1.94	39	P	Pn	16 57 43.4	-0.7
HRRZ	Handcock Road	1.96	11	P	Pn	16 57 45.0	+0.6
GRRZ	Galatos Road	1.98	7	P	Pb	16 57 49.9	+1.2
TLZ	Tolley Road	1.99	354	P	Pn	16 57 45.8	+1.0
MHGZ	Mahia Peninsul	2.00	55	P	Pn	16 57 43.9	-1.0
BSWZ	Blackbirch Sta	2.01	225	P	Pn	16 57 44.1	-1.0
HSRZ	Hossack Road	2.03	10	P	Pn	16 57 45.8	+0.4
NNZ	Nelson	2.04	243	P	Pn	16 57 45.2	-0.2
RRRZ	Republican Roa	2.05	16	P	Pb	16 57 52.2	+2.3
HLRZ	Highlands Stat	2.11	12	P	Pn	16 57 47.5	+1.2
PRGZ	Paritu Road	2.13	50	P	Pn	16 57 45.4	-1.3
TARZ	Mount Tarawera	2.15	15	P	Pn	16 57 47.1	+0.1
RIGZ	Rimuhau	2.21	44	P	Pn	16 57 46.5	-1.4
NGRZ	Ngongotaha	2.23	8	P	Pn	16 57 55.2	+2.2
OMRZ	Omania	2.25	12	P	Pn	16 57 54.4	+1.0
URZ	Urewera	2.29	27	P	Pn	16 57 47.5	-1.3
MWZ	Matawai	2.39	35	P	Pn	16 57 48.9	-1.4
MARZ	Manawahe	2.43	17	P	Pn	16 57 50.2	-0.5
TKGZ	Te Karaka	2.46	41	P	Pn	16 57 49.7	-1.4
QRZ	Quartz Range	2.54	257	P	Pn	16 57 51.8	-0.4
TOZ	Tahuroa Road	2.59	355	P	Pn	16 57 56.0	+3.0
THZ	Tophouse	2.62	236	P	Pn	16 57 52.1	-1.4
KHZ	Kahutara	2.70	218	P	Pn	16 57 52.4	-2.0
RUGZ	Raukumara Rang	2.77	33	P	Pn	16 57 54.3	-1.2
PUZ	Puketiti	2.95	41	P	Pn	16 57 56.0	-2.0
PKGZ	Pakihiroa	3.01	37	P	Pn	16 58 01.0	+2.2
WMGZ	Waiomatatini S	3.22	40	P	Pn	16 57 59.9	-1.7
MKAZ	Moumakai	3.24	351	P	Pn	16 58 04.7	+2.8
DSZ	Denniston Nort	3.34	243	P	Pn	16 58 02.2	-1.0
GVZ	Greta Valley S	3.36	217	P	Pn	16 58 01.1	-2.5
AWAZ	Awhitu Peninsu	3.37	344	P	Pn	16 58 05.9	+2.3
ETAZ	East Tamaki Re	3.42	348	P	Pn	16 58 07.3	+2.9
WTAZ	Waiatarua	3.51	344	P	Pn	16 58 07.9	+2.3
WIAZ	Waiheke Island	3.55	351	P	Pn	16 58 07.9	+1.6
KUZ	Kuaotunu	3.56	359	P	Pn	16 58 10.4	+4.1
MBAZ	Motutapu North	3.61	349	P	Pn	16 58 08.4	+1.4
LTZ	Lake Taylor	3.61	226	P	Pn	16 58 04.7	-2.3
OKCZ	Okains Bay	3.97	210	P	Pn	16 58 08.8	-3.2
OXZ	Oxford	4.11	222	P	Pn	16 58 10.7	-3.2
MQZ	McQueen's Vall	4.12	214	P	Pn	16 58 10.2	-3.7
AKCZ	Akaroa Harbour	4.15	210	P	Pn	16 58 11.3	-3.1
WCZ	Waipu Caves	4.51	345	P	Pn	16 58 21.3	+1.9
ODZ	Otahua Downs	6.06	217	P	Pn	16 58 37.0	-3.6

ISC 21 17:09:38.7±1.4, **50.21N**±0.07×**18.77E**±0.04, **h0km, n10,** σ0.78/17, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.55	227	*e*PG	Pg	17 09 50.0	+0.8
OKC				*e*SG	Sg	17 09 56.5	+0.2
	comp=Z,13nm,0.4s						
LANS	Liptovska Anna	1.16	156	*e*PG	Pg	17 10 00.8	-0.1
LANS				*e*SG	Sg	17 10 16.7	+0.9
LANS				*e*LG	Lg	17 10 20.3	
NIE	Niedzica	1.27	128	*e*Pg	Pg	17 10 02.7	-0.4
NIE				*e*Sg	Sg	17 10 20.0	+0.4
VRAC	Vranov	1.67	238	*e*PN	Pn	17 10 09.1	-0.2
VRAC				*e*SG	Sn	17 10 32.1	+0.6
KSP	Ksiaz	1.70	293	*e*Pg	Pn	17 10 10.1	+0.4
KSP				*e*Sg	Sb	17 10 32.7	0.0
VYHS	Vyhne	1.72	178	*e*PN	Pn	17 10 09.2	-0.7
VYHS				*e*SN	Sn	17 10 33.2	+0.6
KRUC	Moravsky	1.92	234	*e*PN	Pn	17 10 11.8	-0.9
KRUC				*e*SG	Sb	17 10 39.0	-0.2
GOPC	GO Pecny, Ondr	2.58	265	*e*SG	Sb	17 10 58.2	+0.1
PRU	Pruhonice	2.73	267	*e*SG	Sb	17 11 02.6	+0.3
KHC	Kasperske Hory	3.54	254	*e*SG	Sg	17 11 30.3	-2.0

IDC **21** *17:16:27.9±3.7, 42.17S×88.08E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/27, mbtmp3.6/4, MS3.5/8, Ms1 3.5/8, ms1mx3.3/21, Error ellipse: s-maj=104.7km s-min=39.6km az=30.0*

NEIC **21** *17:16:30.7±2.2, 41.8S±0.1×88.28E±0.09, h10km±1km, mb4.8/10, Error ellipse: s-maj=24.0km s-min=9.3km az=160.0*

ISC 21 17:16:31.4±1.0, **41.8S**±0.2×**88.5E**±0.2, **h15km, n30,** σ1.27/16, **mb4.5**/9, **MS3.6**/8, **Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	21.25	79	T	T	17 43 12.1	
	baz=243,slow=74,SNR=54						
H01W3	Cape Leeuwin H	21.26	79	T	T	17 43 16.6	
	baz=243,slow=74,SNR=64						
H01W1	Cape Leeuwin H	21.27	79	T	T	17 43 12.3	
	baz=243,slow=74,SNR=53						
MAW	Mawson	29.29	200	LR	LR	17 31 25.4	
	comp=Z,174nm,21.1s,baz=60,slow=31						
XMIS	Christmas Isla	34.70	31	P	P	17 23 18.8	-1.9
H08S2	Diego Garcia H	36.88	333	T	T	18 02 40.4	
	baz=160,slow=76,SNR=30						
H08S1	Diego Carcia H	36.88	333	T	T	18 02 41.2	
	baz=160,slow=76,SNR=18						
H08S3	Diego Garcia H	36.90	333	T	T	18 02 41.9	
	baz=160,slow=76,SNR=66						
DGAR	Diego Garcia	37.11	333	P	P	17 23 40.6	-0.7
BBOO	Buckleboo	38.49	92	P	P	17 23 51.8	-1.2
BBOO				IAmb	IAmb	17 24 55.0	
	comp=Z,30nm,1.2s						
H08N1	Diego Carcia H	38.60	331	T	T	18 05 07.4	
	baz=169						
H08N3	Diego Garcia H	38.61	331	T	T	18 05 01.7	
	baz=169						
H08N2	Diego Garcia H	38.62	331	T	T	18 05 05.1	
	baz=169						
LEM	Lembang	38.80	31	LR	LR	17 38 39.9	
	comp=Z,39nm,18.7s,baz=214,slow=34						
FITZ	Fitzroy Crossi	39.52	65	P	P	17 24 00.3	-1.4
ASAR	Alice Springs	41.76	79	P	P	17 24 21.6	+1.4
	comp=Z,0.5nm,0.7s,baz=222,slow=7.1,SNR=9.3						
ASAR				PcP	PcP	17 26 16.4	0.0
	comp=Z,0.4nm,0.7s,baz=225,slow=2.0,SNR=4.4						
ASAR				LR	LR	17 39 37.0	
	comp=Z,72nm,21.6s,baz=228,slow=33						
AS31	Alice Springs	41.77	79	P	P	17 24 20.5	+0.2
STKA	Stephens Creek	43.06	94	LR	LR	17 38 46.2	
	comp=Z,79nm,18.0s,baz=205,slow=31						
WRA	Warramunga Arr	44.38	75	P	P	17 24 43.0	+1.6
	comp=Z,0.7nm,0.8s,baz=234,slow=9.4,SNR=5.7						
WB2	Warramunga Arr	44.39	75	P	P	17 24 43.3	+1.7
WB2				IAmb	IAmb	17 25 50.4	
	comp=Z,20nm,1.6s						
WB0	Warramunga Arr	44.54	75	P	P	17 24 42.9	+0.3
WB0				IAmb	IAmb	17 24 52.9	
	comp=Z,30nm,1.8s						
VNDA	Vanda	45.96	163	LR	LR	17 40 52.7	
	comp=Z,40nm,21.3s,baz=286,slow=32						
QSPA	South Pole Qui	48.31	180	P	P	17 25 11.3	-0.5
QSPA				IAmb	IAmb	17 25 26.6	
	comp=Z,7.1nm,1.6s						
PBKT	Sadao Pong	59.26	14	P	P	17 26 34.1	+1.8
PBKT				IAmb	IAmb	17 26 35.3	
	comp=Z,5.7nm,0.9s						
CMAR	Chiang Mai Arr	60.77	11	P	P	17 26 44.0	+1.3
	comp=Z,0.8nm,0.8s,baz=209,slow=8.2,SNR=7.6						
CMAR				LR	LR	17 51 53.0	
	comp=Z,17nm,18.5s,baz=195,slow=35						
BHW	Baring Head	61.77	122	P	P	17 26 49.9	+0.6
TSUM	Tsumeb	63.34	268	LR	LR	17 49 16.0	
	comp=Z,77nm,20.7s,baz=136,slow=31						
MKAR	Makanchi Array	88.42	356	P	P	17 29 22.7	+0.3
	comp=Z,0.3nm,0.8s,baz=197,slow=4.5,SNR=3.0						
TORD	Torodi Ar. Bea	96.26	282	LR	LR	18 10 01.7	
	comp=Z,35nm,18.7s,baz=5.0,slow=34						
INK	Inuvik	145.43	26		PKPab	17 36 08.2	+0.5

IDC 21 17:31:48.3±2.3, **4.34N**×**123.30E, h0km, mb3.6**/3, **mb1 3.8**/3, **mb1mx3.4**/39, **mbtmp3.6**/3, **MS3.1**/1, **Ms1 3.1**/1, **ms1mx2.4**/38, **Error ellipse: s-maj=302.2km s-min=27.0km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.46	156	P	P	17 37 27.6	+0.3
	0.4nm,0.3s,baz=336,slow=9.4,SNR=6.1						
ASAR	Alice Springs	29.70	160	P	P	17 37 56.0	-0.2
	0.4nm,0.5s,baz=336,slow=7.6,SNR=15						
KLR	Kul'dur	45.30	8	LR	LR	17 58 10.7	
	comp=Z,20nm,18.8s,baz=151,slow=35						
MKAR	Makanchi Array	55.13	327	P	P	17 41 22.5	-0.1
	0.3nm,0.3s,baz=132,slow=7.6,SNR=4.5						

BJI **21** *17:51:35.9±0.0, 30.20S×177.38W, h9km, mB5.3/6, mb5.1/18, Ms5.0/8, Ms7 4.7/8*

NEIC **21** *17:51:42.9±2.6, 30.58S±0.06×178.0W±0.1, h51km±3km, mb5.0/73, Error ellipse: s-maj=14.1km s-min=8.3km az=108.0*

MOS **21** *17:51:43.4±0.8, 30.45S×178.08W, h56km, mb4.9/5, Error ellipse: s-maj=13.6km s-min=10.5km az=67.0*

IDC **21** *17:51:45.7±1.5, 30.31S×178.20W, h62km±11km, mb4.2/13, mb1 4.4/14, mb1mx4.3/22, mbtmp4.5/14, MS3.6/18, Ms1 3.6/18, ms1mx3.5/32, Error ellipse: s-maj=18.2km s-min=14.7km az=131.0*

ISC 21 17:51:42.7±0.3, **30.68S**±0.04×**178.20W**±0.06, **h46km, n317,** σ1.70/305, **mb5.0**/60, **MS3.8**/19, **5C-6D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.43	10	P	Pn	17 52 04.3	-1.9
GLKZ				S	Sn	17 52 19.1	-4.7
RAO	Raoul Island	1.44	10	P	Pn	17 52 05.0	-1.4
	2µm,0.3s,baz=100,slow=8.4,SNR=57						
RAO				S	Sn	17 52 19.4	-4.7
	11µm,0.3s,baz=108,slow=20,SNR=92						
RAO	Raoul Island	1.44	10		Pn	17 52 05.0	-1.4
RIZ	Raoul Island	1.45	9	P	Pn	17 52 06.7	+0.3
RIZ				S	Sn	17 52 20.1	-4.1
MXZ	Matakaoa Point	7.46	202	Pn	Pn	17 53 29.3	+0.4
WMGZ	Waiomatatini S	7.66	201	P	Pn	17 53 33.0	+1.4
WMGZ				S	Sn	17 55 02.9	+5.8
HAZ	Te Kaha	7.81	204	P	Pn	17 53 36.2	+2.5
HAZ				S	Sn	17 55 08.5	+7.8
PKGZ	Pakihiroa	7.83	202	P	Pn	17 53 33.7	-0.4
PUZ	Puketiti	7.94	201	P	Pn	17 53 36.2	+0.6
RUGZ	Raukumara Rang	8.03	204	P	Pn	17 53 37.9	+1.0
WCZ	Waipu Caves	8.15	228	P	Pn	17 53 50.9	+12
OUZ	Omahuta	8.25	235	P	Pn	17 53 51.8	+12
MWZ	Matawai	8.41	204	P	Pn	17 53 42.5	+0.4
URZ	Urewera	8.50	206	P	Pn	17 53 43.3	+0.2
	1.6nm,0.3s,baz=298,slow=5.6,SNR=12						
URZ				S	Sn	17 55 21.1	+3.5
	4.9nm,0.3s,baz=36,slow=17,SNR=11						
URZ				LR	LR	17 56 15.8	
	comp=Z,108nm,21.7s,baz=25,slow=31						
URZ	Urewera	8.50	206	Pn	Pn	17 53 43.5	+0.4
URZ	Urewera	8.50	206	P	Pn	17 53 43.8	+0.6
RIGZ	Rimuhau	8.67	201	P	Pn	17 53 46.2	+0.6
MHGZ	Mahia Peninsul	9.04	200	P	Pn	17 53 50.7	+0.1
RAHZ	Arahi	9.09	204	P	Pn	17 53 53.7	+2.4
MTHZ	Maungataniwha	9.12	205	P	Pn	17 53 53.3	+1.6
HATZ	Hinemaiaia	9.44	208	P	Pn	17 53 55.5	-0.7
BKZ	Black Stump Fm	9.52	206	Pn	Pn	17 53 55.8	-1.5
BKZ	Black Stump Fm	9.52	206	P	Pn	17 53 56.8	-0.5
RATZ	Rangitukua	9.56	210	P	Pn	17 53 53.9	-3.8
RITZ	Rihia Road	9.61	209	P	Pn	17 53 53.8	-4.7
KATZ	Kakaramea	9.68	210	P	Pn	17 53 55.1	-4.4
HIZ	Hauiti	9.69	214	Pn	Pn	17 53 57.9	-1.6
KRVZ	Karewarewa	9.80	209	P	Pn	17 53 57.1	-4.1
WTVZ	West Tongariro	9.84	210	P	Pn	17 53 57.9	-3.8
MSWZ	Moikau Station	11.95	204	Pn	Pn	17 54 29.0	-1.4
BHW	Baring Head	12.08	206	Pn	Pn	17 54 30.6	-1.6
PLWZ	Palliser	12.09	204	Pn	Pn	17 54 31.6	-0.7
TUWZ	Tuamarina	12.47	208	Pn	Pn	17 54 33.4	-4.1
TUWZ				Sn	Sn	17 56 48.6	-6.2
QRZ	Quartz Range	12.61	214	Pn	Pn	17 54 36.0	-3.5
CMWZ	Cape Campbell	12.63	207	Pn	Pn	17 54 36.9	-2.7
BSWZ	Blackbirch Sta	12.73	208	Pn	Pn	17 54 40.3	-0.8
THZ	Tophouse	13.18	210	Pn	Pn	17 54 45.5	-1.8
THZ				Sn	Sn	17 57 07.7	-4.7
MSVF	Nonsavu	13.33	344		Pn	17 54 50.1	+0.7
MSVF	Nonsavu	13.33	344	P	Pn	17 54 50.1	+0.7
KHZ	Kahutara	13.46	207	Pn	Pn	17 54 48.0	-3.0
NIUE	Niue	13.77	35	Pn	Pn	17 54 47.9	-7.4
LTZ	Lake Taylor	14.28	210	Pn	Pn	17 55 00.0	-2.2
MQZ	McQueen's Vall	14.90	207	Pn	Pn	17 55 05.2	-5.1
FOZ	Fox Glacier	15.98	213	Pn	Pn	17 55 22.8	-1.5
FOZ				IAmb	IAmb	17 55 45.1	
	comp=Z,98nm,1.5s						
DZM	Mont Dzumac	16.20	298	*e*P	P	17 55 33.9	+4.0
	comp=Z,73nm,1.4s						
DZM				*e*S	S	17 58 34.9	-2.4
	comp=Z,250nm,25.7s						
DZM				*e*LR	LR	17 59 15.7	
	comp=Z,1µm,26.2s						
DZM	Mont Dzumac	16.20	298	LR	LR	18 00 32.9	
	comp=Z,515nm,18.4s,baz=145,slow=33						
DZM	Mont Dzumac	16.20	298	P	P	17 55 31.2	+1.3
NOUC	Port Laguerre	16.29	298	P	P	17 55 30.1	-0.7

ODZ Otahua Downs 16.81 208 Pn Pn 17 55 32.5 -2.2
ODZ Otahua Downs 16.81 208 P P 17 55 38.6 +2.3
MLZ Mavora Lakes 18.16 212 P P 17 55 48.7 -2.7
RAR Rarotonga 19.04 65 P Pn 17 56 02.1 -0.1
comp=Z,1.3nm,0.3s,baz=263,slow=17,SNR=3.2
RAR LR LR 18 01 45.9
comp=Z,116nm,21.2s,baz=263,slow=32
RAR Rarotonga 19.04 65 P P 17 55 59.8 -1.2
RAR Rarotonga 19.04 65 P P 17 55 59.8 -1.2
SANVU Saraoutou 20.22 315 P Pn 17 56 18.1 +1.9
FUNA Funafuti 22.17 353 P P 17 56 36.8 +1.8
FUNA IAmb IAmb 17 57 16.1
comp=Z,91nm,1.1s
ARMA Armidale 25.95 263 P P 17 57 13.8 +2.7
ARMA IAmb IAmb 17 57 22.6
comp=Z,48nm,1.7s
TBI Tubuai 26.57 81 eLR LR 18 03 49.4
comp=Z,391nm,31.0s
TBI Tubuai 26.57 81 eT T 18 24 36.0
comp=Z,101nm,0.3s
EIDS Eidsvold 27.58 273 P P 17 57 29.3 +3.7
CAN Canberra 27.82 252 P P 17 57 31.9 +4.1
CAN IAmb IAmb 17 57 34.0
comp=Z,28nm,1.1s
CAN Canberra 27.82 252 P P 17 57 31.9 +4.1
CAN pmax pmax
comp=Z,28nm,1.1s
PAE Paea 29.05 70 eT T 18 27 40.8
comp=Z,18nm,0.3s
PPT2 Papeete2 29.09 70 eS S 18 02 32.8 +4.8
comp=Z,157nm,32.0s
PPT2 eLR LR 18 05 05.1
comp=Z,413nm,28.2s
PPT2 Papeete2 29.09 70 eT T 18 27 44.6
comp=Z,11nm,0.3s
PPT Papeete 29.10 70 LR LR 18 08 27.6
comp=Z,35nm,18.7s,baz=188,slow=35
TVO Taravao 29.25 71 eT T 18 27 57.2
comp=Z,4.0nm,0.3s
TAU Tasmania Unive 29.99 236 P P 17 57 50.4 +3.6
TAU IAmb IAmb 17 58 43.2
comp=Z,78nm,1.3s
TAU Tasmania Unive 29.99 236 P P 17 57 50.4 +3.6
TAU pmax pmax
comp=Z,78nm,1.3s
MEH Mehetia 30.17 72 eT T 18 29 05.8
comp=Z,42nm,0.3s
TOO Toolangi 30.70 247 P P 17 57 57.1 +3.8
TOO IAmb IAmb 17 58 53.7
comp=Z,50nm,1.7s
TOO Toolangi 30.70 247 P P 17 57 57.1 +3.8
TOO pmax pmax
comp=Z,50nm,1.7s
STKA Stephens Creek 34.25 257 P P 17 58 28.2 +3.9
comp=Z,36nm,0.7s,baz=100,slow=10.0,SNR=49
STKA LR LR 18 10 16.6
comp=Z,175nm,21.4s,baz=43,slow=32
STKA Stephens Creek 34.25 257 P P 17 58 27.1 +2.7
STKA Stephens Creek 34.25 257 P P 17 58 27.1 +2.7
STKA pmax pmax
comp=Z,9.0nm,0.9s
BBOO Buckleboo 38.73 255 P P 17 59 04.5 +1.9
BBOO IAmb IAmb 17 59 06.6
comp=Z,22nm,0.8s
RKT Rikitea 39.09 90 eT T 18 40 14.4
comp=Z,4.7nm,0.3s
COEN Coen 39.19 286 P P 17 59 08.0 +1.5
COEN IAmb IAmb 17 59 25.9
comp=Z,93nm,1.9s
AS31 Alice Springs 42.92 267 P P 17 59 37.4 +0.1
ASAR Alice Springs 42.93 267 P P 17 59 38.6 +1.3
comp=Z,4.6nm,0.7s,baz=105,slow=7.3,SNR=81
ASAR PcP PcP 18 01 27.5 +0.1
comp=Z,2.4nm,0.7s,baz=118,slow=4.3,SNR=6.6
ASAR ScP ScP 18 05 13.7 -1.0
comp=Z,2.4nm,1.0s,baz=110,slow=4.1,SNR=5.2
ASAR LR LR 18 17 20.9
comp=Z,179nm,18.0s,baz=133,slow=36
WR0 Warramunga Arr 43.76 273 P P 17 59 45.0 +1.1
WR0 IAmb IAmb 17 59 48.1
comp=Z,22nm,1.1s
WB2 Warramunga Arr 43.93 273 P P 17 59 46.6 +1.2
WB2 IAmb IAmb 17 59 49.5
comp=Z,27nm,1.0s
WRAB Tennant Creek 43.93 273 P P 17 59 46.7 +1.3
WRAB IAmb IAmb 17 59 49.5
comp=Z,24nm,0.9s
WRAB Tennant Creek 43.93 273 P P 17 59 46.7 +1.3
WRAB pmax pmax
comp=Z,24nm,0.9s
WRA Warramunga Arr 43.94 273 P P 17 59 46.6 +1.2
comp=Z,12nm,0.5s,baz=111,slow=7.8,SNR=102
WRA PcP PcP 18 01 30.9 +0.1
comp=Z,1.9nm,0.9s,baz=110,slow=3.7,SNR=5.0
WRA ScP ScP 18 05 19.7 +0.9
comp=Z,0.5nm,0.6s,baz=126,slow=3.6,SNR=3.7
WRA LR LR 18 16 24.0
comp=Z,159nm,20.8s,baz=140,slow=34
WB0 Warramunga Arr 43.96 273 P P 17 59 46.7 +1.1
WB0 IAmb IAmb 17 59 48.6
comp=Z,27nm,1.0s
FORT Forrest 45.81 255 P P 18 00 02.4 +2.2
FORT IAmb IAmb 18 00 05.1
comp=Z,23nm,0.7s
FORT PcP 18 01 37.0 -0.1
VNDA Vanda 47.80 186 LR LR 18 17 23.3
comp=Z,27nm,21.1s,baz=288,slow=32
KNRA Kununurra 50.56 275 P P 18 00 37.8 +0.8
KNRA IAmb IAmb 18 01 09.8
comp=Z,38nm,1.6s
FITZ Fitzroy Crossi 52.19 270 P P 18 00 49.9 +0.7
FITZ IAmb IAmb 18 00 52.6
comp=Z,8.9nm,0.9s
FAKI Fak Fak 54.28 291 P P 18 01 04.8 +0.2
HMH Humu'ula Sheep 54.55 27 P P 18 01 03.9 -2.8
CASY Casey 54.82 208 P P 18 01 08.2 +0.5
PSAB1 Pilbara Seismi 55.79 264 P P 18 01 13.9 -1.6
PSAB1 IAmb IAmb 18 01 34.3
comp=Z,18nm,1.4s
MORW Morawa 56.29 254 P P 18 01 19.6 +0.7
MORW IAmb IAmb 18 03 08.8
comp=Z,47nm,1.7s
GUMO Guam 56.56 316 LR LR 18 21 15.4
comp=Z,120nm,19.8s,baz=131,slow=31
QSPA South Pole Qui 59.43 180 P P 18 01 45.1 +4.6
comp=Z,7.3nm,0.6s,baz=20,slow=0.9,SNR=34
QSPA South Pole Qui 59.43 180 P P 18 01 44.8 +4.2
QSPA IAmb IAmb 18 01 51.0
comp=Z,18nm,0.8s
RPN Rapa Nui 59.53 105 LR LR 18 20 49.2
comp=Z,59nm,19.6s,baz=105,slow=29
GIRL Giralia 60.13 260 P P 18 01 47.3 +1.5
BKB Balikpapan 67.89 282 P P 18 02 36.9 0.0
UGM Wanagama 69.92 273 P P 18 02 49.9 +0.4
MAW Mawson 71.99 201 LR LR 18 34 53.4
comp=Z,52nm,18.4s,baz=54,slow=36
KKM Kota Kinabalu 72.48 288 P P 18 03 05.2 +0.1
KKM IAmb IAmb 18 04 22.5
comp=Z,39nm,1.2s
KSM Kuching 74.91 281 P P 18 03 20.2 +1.0
KSM IAmb IAmb 18 03 27.5
comp=Z,41nm,1.4s
SNAA Sanae 77.89 178 P P 18 03 38.0 +2.8
SNAA Sanae 77.89 178 P P 18 03 37.1 +1.9
SNAA Sanae 77.89 178⇓iP P 18 03 37.5 +2.2
VNA3 Neumayer Olymp 78.04 176 P P 18 03 38.7 +2.6
MJAR Matsushiro Arr 78.37 325 P P 18 03 37.0 -1.2
comp=Z,2.0nm,0.7s,baz=152,slow=6.3,SNR=5.4
MJAR LR LR 18 36 34.0
comp=Z,15nm,18.5s,baz=310,slow=34
VNA2 Neumayer--Watz 78.47 177 P P 18 03 41.4 +3.0
baz=179,slow=4.2
VNA1 Neumayer--Stat 78.70 177 P P 18 03 42.5 +2.8
TPUB Ta-pu 79.50 305 P P 18 03 42.4 -2.3
SSLB Suanglung 79.58 306 P P 18 03 43.1 -2.1
JNU Nakatsue 79.65 319 P P 18 03 45.5 +0.2
JNU IAmb IAmb 18 05 27.5
comp=Z,29nm,1.3s
DLV T Lat 82.09 289 P P 18 03 59.8 +0.8
KIWB Kanaga Island 82.18 1 P P 18 03 57.3 -1.0
PLCA Paso Flores 82.44 133 P P 18 04 03.3 +2.9
comp=Z,2.8nm,0.8s,baz=240,slow=6.7,SNR=5.1
EFI East Falkland 82.65 147 P P 18 03 58.3 -2.8
EFI East Falkland 82.65 147 P P 18 03 58.3 -2.8
EFI pmax pmax
comp=Z,196nm,1.5s
NIKH Nikolski High 83.69 6 P P 18 04 05.9 -0.2
IPM Ipoh 84.36 279 P P 18 04 10.5 -0.1
IPM IAmb IAmb 18 04 11.2
comp=Z,10nm,0.8s
KSRS Korea Array 84.45 320 P P 18 04 10.6 +0.2
comp=Z,2.4nm,0.9s,baz=146,slow=5.2,SNR=11
KSRS LR LR 18 38 09.6
comp=Z,12nm,20.5s,baz=132,slow=33
YSS Yuzh-Sakhalins 84.92 334⇑eP P 18 04 13.6 +1.1
YSS pmax pmax
comp=Z,10.0nm,0.9s
KULM Kulim 85.10 279 P P 18 04 14.4 +0.1
KULM IAmb IAmb 18 04 21.6
comp=Z,27nm,1.3s
PEA0B Petropavlovsk- 86.04 346 P P 18 04 17.9 0.0
PEA0B Petropavlovsk- 86.04 346 P P 18 04 17.9 0.0
PEA0B pmax pmax
comp=Z,39nm,1.3s
PETK Petropavlovsk- 86.04 346 P P 18 04 17.5 -0.4
comp=Z,8.8nm,0.8s,baz=115,slow=6.5,SNR=17
PETK LR LR 18 37 36.3
comp=Z,31nm,19.5s,baz=64,slow=32
BFSC Mount Baldy Ra 86.17 46 P P 18 04 19.9 +0.6
baz=228
NJ2 Nanjing 86.30 311 eP P 18 04 21.9 +2.2
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
UBPT Khong Chiam 86.36 290 P P 18 04 21.6 +1.2
EDW2 Edwards Air Fo 86.39 46 P P 18 04 21.4 +1.2
baz=228
PFO Pinyon Flats O 86.52 47 P P 18 04 22.0 +1.0
baz=229
TPFO Pinon Flats 86.52 47 P P 18 04 22.7 +1.7
baz=229
ISA Isabella, Lake 86.61 45 P P 18 04 20.2 -1.1
ISA IAmb IAmb 18 04 23.8
comp=Z,5.7nm,0.9s
ISA Isabella, Lake 86.61 45 P P 18 04 20.2 -1.1
ISA pmax pmax
comp=Z,6.0nm,0.9s
ISA Isabella, Lake 86.61 45 P P 18 04 22.8 +1.5
baz=228
LRMC Laurel Mtn Rad 86.97 45 P P 18 04 24.0 +0.8
baz=228
BELC Belle Mtn. Jos 87.06 47 P P 18 04 24.5 +0.9
baz=230
CMB Columbia Colle 87.08 42 P P 18 04 23.8 +0.3
CMB Columbia Colle 87.08 42 P P 18 04 23.8 +0.3
CMB pmax pmax
comp=Z,3.0nm,0.9s
BC3 Big Chuckawall 87.19 48 P P 18 04 24.9 +0.7
baz=230
O02D Mt. Diablo Mer 87.22 39 P P 18 04 25.4 +1.3
baz=225
CWC Cottonwood Cre 87.37 44 P P 18 04 25.9 +0.8
baz=228
HEC Hector,Ludlow 87.38 47 P P 18 04 25.8 +0.7
baz=229
GSC Goldstone, Bar 87.40 46 P P 18 04 25.4 +0.2
GSC IAmb IAmb 18 04 27.6
comp=Z,7.6nm,1.1s
GSC Goldstone, Bar 87.40 46 P P 18 04 25.4 +0.2
GSC pmax pmax
comp=Z,8.0nm,1.2s
GSC Goldstone, Bar 87.40 46 P P 18 04 26.2 +1.1
baz=229
MPMC Manual Prospec 87.47 45 P P 18 04 26.3 +0.7
baz=228
WDC Whiskeytown Da 87.64 39 P P 18 04 26.1 +0.1
WDC IAmb IAmb 18 04 32.9
comp=Z,10nm,1.5s
WDC Whiskeytown Da 87.64 39 P P 18 04 26.1 +0.1
WDC pmax pmax
comp=Z,10.0nm,1.5s
IRM Iron Mountain 87.70 48 P P 18 04 27.5 +0.9
baz=230
GMRC Granite Mounta 87.78 47 P P 18 04 27.9 +0.8
baz=230
N02D Trinity Center 87.82 39 P P 18 04 28.3 +1.3
baz=225
214A Organ Pipe Nat 87.84 51 P P 18 04 26.7 -0.6
214A Organ Pipe Nat 87.84 51 P P 18 04 28.3 +1.1
baz=231
PAYG Puerto Ayora 87.86 90 P P 18 04 24.6 -3.2
WAKR Walker 87.95 42 P P 18 04 26.1 -1.7
WAKR IAmb IAmb 18 04 30.2
comp=Z,5.6nm,1.0s
TUQ Turquoise Moun 88.03 46 P P 18 04 29.1 +0.8
baz=230
M02C Callahan 88.04 38 P P 18 04 29.5 +1.4
baz=225
FURC Furnace Creek, 88.12 45 P P 18 04 29.7 +1.2
baz=229
GO04 Tololo Observa 88.23 124 P P 18 04 26.8 -2.9
TYV Tymovskoe 88.24 336 eP P 18 04 29.2 +0.6
TYV pmax pmax
comp=Z,5.0nm,0.8s
PNTR Pine Nut 88.25 42 P P 18 04 30.0 +0.7
PNTR IAmb IAmb 18 04 31.6
comp=Z,6.1nm,0.7s
KEBM Edson Butte 88.32 36 P P 18 04 28.1 -1.2
BEKR Beckworth 88.34 41 P P 18 04 29.1 -0.5
BEKR IAmb IAmb 18 06 28.7
comp=Z,12nm,1.7s
WHN Wuhan 88.38 307 P P 18 04 26.4 -3.4
YERR Yerington 88.38 42 P P 18 04 30.0 +0.1
NVAR Mina Array Bea 88.56 43 P P 18 04 32.0 +1.2
comp=Z,3.4nm,0.7s,baz=222,slow=8.1,SNR=33
RYN Ryan 88.56 43 P P 18 04 30.0 -0.7
NV11 Mina Array Sit 88.64 43 P P 18 04 31.1 0.0
PAHR Pah Rah Range 88.79 41 P P 18 04 32.3 +0.6
TPNV Topopah Spring 88.81 45 P P 18 04 33.0 +1.1
TPNV Topopah Spring 88.81 45 P P 18 04 33.0 +1.1
TPNV pmax pmax
comp=Z,3.0nm,0.8s
TPNV Topopah Spring 88.81 45 P P 18 04 33.0 +1.1
baz=229
HUMO Hull Mountain 88.84 37 P P 18 04 32.5 +0.8
KVN Kaiserville 89.09 42 P P 18 04 33.4 +0.2
KVN Kaiserville 89.09 42 P P 18 04 33.4 +0.2
KVN pmax pmax
comp=Z,3.0nm,0.8s
W13A Hualapai Mount 89.10 48 P P 18 04 33.6 +0.2
SHPR Sheep Range 89.19 46 P P 18 04 33.2 -0.6
SHPR IAmb IAmb 18 05 00.1
comp=Z,14nm,1.9s
TUC Tucson 89.42 51 P P 18 04 35.5 +0.7
TUC IAmb IAmb 18 04 38.3
comp=Z,7.7nm,1.4s
TUC Tucson 89.42 51 P P 18 04 35.5 +0.7
TUC pmax pmax
comp=Z,8.0nm,1.4s
J04D Umpqua Nationa 89.73 37 P P 18 04 37.3 +1.2
baz=225
I04A Tendick Farm, 89.96 37 P P 18 04 37.4 +0.5
baz=225
J05D Fort Rock, OR 90.22 38 P P 18 04 39.7 +1.4
baz=226
CN2 Changchun 90.26 323 eP P 18 04 38.4 +0.1
CN2 pmax pmax
comp=Z,10.0nm,1.0s
X16A Lo Mia Camp, P 90.26 49 P P 18 04 40.0 +1.2
X16A IAmb IAmb 18 04 42.0
comp=Z,5.7nm,0.8s
PBKT Sadao Pong 90.70 289 P P 18 04 42.9 +2.0
PBKT IAmb IAmb 18 04 45.8
comp=Z,15nm,1.6s
U15A North Rim 90.94 47 P P 18 04 42.6 +0.5
U15A IAmb IAmb 18 04 45.0
comp=Z,4.7nm,0.7s
WUAZ Wupatki 90.97 49 P P 18 04 43.5 +1.4
baz=232
KLR Kul'dur 91.19 330⇑iP P 18 04 42.7 +0.2
KLR pmax pmax
comp=Z,5.0nm,0.6s
I07A Izee 91.68 38 P P 18 04 46.0 +0.9
I07A IAmb IAmb 18 04 47.1
comp=Z,4.9nm,0.9s
LON Longmire 92.33 35 P P 18 04 47.3 -0.6
LON IAmb IAmb 18 04 53.0
comp=Z,16nm,1.4s
LON Longmire 92.33 35 P P 18 04 47.3 -0.6
LON pmax pmax
comp=Z,16nm,1.5s
TXAR Lajitas Array 92.68 57 P P 18 04 49.6 -0.5
comp=Z,0.7nm,0.8s,baz=202,slow=6.5,SNR=6.2
CMAR Chiang Mai Arr 93.33 289 P P 18 04 53.6 +0.4
comp=Z,0.8nm,0.7s,baz=142,slow=3.8,SNR=7.1
CMAR LR LR 18 51 03.8
comp=Z,12nm,18.0s,baz=157,slow=38
CMAR Chiang Mai Arr 93.33 289 iP P 18 04 55.5 +2.3
CMAR pmax pmax
comp=Z,1.0nm,0.7s
MA2 Magadan 93.51 345 LR LR 18 41 46.1
comp=Z,34nm,21.4s,baz=144,slow=32
MA2 Magadan 93.51 345⇓eP P 18 04 51.8 -1.2
NEW Newport 95.69 36 LR LR 18 39 32.6
comp=Z,31nm,21.4s,baz=344,slow=30
CD2 Chengdu 96.09 302 eP P 18 05 07.0 +1.4
CD2 pmax pmax
comp=Z,10.0nm,0.5s
PDAR Pinedale Array 96.45 44 P P 18 05 07.5 +0.3
comp=Z,0.3nm,0.6s,baz=192,slow=2.5,SNR=4.0
LPAZ La Paz 98.19 114 LR LR 18 41 30.6
comp=Z,19nm,19.7s,baz=252,slow=30
ILAR Eielson Array 98.23 13 P P 18 05 13.4 -0.9
comp=Z,0.7nm,0.9s,baz=219,slow=6.3,SNR=5.0
ILAR PKiKP PKiKP 18 09 46.8 +0.1
comp=Z,0.3nm,0.8s,baz=232,slow=4.4,SNR=8.2
LZH Lanzhou 98.75 307 eP Pdif 18 05 21.9 +4.3
LZH pP pP 18 05 30.4 -0.3
LZH PP PP 18 09 21.5 +1.8
LZH pmax pmax
comp=Z,15nm,1.0s
LZH LR LR
comp=Z,250nm,17.6s
LZH LR LR
comp=Z,270nm,18.2s
LZH LR LR
comp=Z,230nm,19.7s
BILL Bilibino 99.10 354 eP Pdif 18 05 16.6 -1.5
BILL e 18 09 20.4
BILL pmax pmax
comp=Z,1.0nm,1.1s
V52A Sevierville 110.61 60 Pdif 18 06 08.6 -1.6
WMQ Urumqi 113.26 308 ePKP PKiKP 18 10 15.1 -0.1
WMQ LR LR
comp=Z,57nm,28.9s
MK31 Makanchi Array 117.82 310 PKPdf 18 10 22.6 -1.2
MK31 Makanchi Array 117.82 310 PKIKP PKPdf 18 10 22.6 -1.2
MKAR Makanchi Array 117.82 310 PKP PKPdf 18 10 23.0 -0.8
comp=Z,1.0nm,0.7s,baz=123,slow=0.8,SNR=10
MKAR Makanchi Array 117.82 310 PKIKP PKPdf 18 10 23.0 -0.8
MAKZ Makanchi 118.03 310 PKPdf 18 10 23.6 -0.6
MAKZ Makanchi 118.03 310 PKIKP PKPdf 18 10 23.6 -0.6
ZALV Zalesovo Beam 118.12 318 PKP PKPdf 18 10 23.5 -0.6
comp=Z,1.0nm,0.6s,baz=48,slow=2.2,SNR=4.6
KSH Kashi 120.23 301 PKP PKiKP 18 10 32.3 +3.4
KSH PKS 18 14 04.1
KSH SKS SKSdf 18 17 39.3 +2.1
KSH SKKS SKKSac 18 18 51.6 +0.7
KSH LR LR
comp=Z,63nm,6.8s
KSH LR LR
comp=Z,610nm,7.2s
NRN Naryn 120.74 303 PKiKP 18 10 30.2 +0.1
NRN Naryn 120.74 303 PKIKP PKiKP 18 10 30.2 +0.1
KURK Kurchatov 121.12 314 PKPdf 18 10 28.7 -1.2
KURK Kurchatov 121.12 314⇑iPKIKP PKPdf 18 10 29.7 -0.3
AAK Ala-Archa 122.12 304 PKPdf 18 10 32.1 -0.3
AAK Ala-Archa 122.12 304⇓iPKIKP PKPdf 18 10 32.4 0.0
TULEG Thule 124.09 15 PKPdf 18 10 33.6 -1.3
KBL Kabul 124.17 293 PKPdf 18 10 36.3 -0.4
KBL Kabul 124.17 293 PKIKP PKPdf 18 10 36.3 -0.4
KK31 Karatay Array 125.08 303 PKPdf 18 10 36.4 -1.5
KK31 Karatay Array 125.08 303 PKIKP PKPdf 18 10 36.4 -1.5
KKAR Karatay Array 125.08 303 PKPdf 18 10 36.3 -1.6
KKAR Karatay Array 125.08 303 PKIKP PKPdf 18 10 36.3 -1.6
BRVK Borovoye 126.55 316 PKPdf 18 10 39.5 -0.8
BRVK Borovoye 126.55 316⇓iPKIKP PKPdf 18 10 40.1 -0.2
SCHQ Schefferville 126.56 42 PKP PKPdf 18 10 39.6 -0.7
comp=Z,4.0nm,0.8s,baz=252,slow=15,SNR=4.9
SCHQ Schefferville 126.56 42 PKPdf 18 10 39.8 -0.5
SPA0 Spitsbergen Ar 131.97 356 ePKPdf PKPdf 18 10 50.5 +0.5
ARU Arti 133.19 320 PKPdf 18 10 52.1 -0.7
ARU Arti 133.19 320 iPKIKP PKiKP 18 10 55.8 +1.8
ARU 18 13 27.5
ARU SS SS 18 31 04.5 +4.1
GEYT Alibeck 133.52 295 PKP PKPdf 18 10 54.1 0.0
comp=Z,1.8nm,0.7s,baz=180,slow=1.4,SNR=3.3
ARCES ARCESS Array B 138.82 348 PKhKP PKPpre 18 10 54.3
comp=Z,4.1nm,1.0s,baz=71,slow=2.0,SNR=8.2
KLMR Klimovskoe 140.92 332 ePKPdf PKPdf 18 10 57.7 -9.3
KLMR AMP 18 11 07.3
comp=Z,32nm,2.2s
ZEI Tsey 144.51 302 iPKIKP PKPab 18 11 12.3 -0.4
ZEI pmax pmax
comp=Z,10.0nm,0.8s
NCK Nalchik 144.65 303⇓iPKIKP PKPbc 18 11 13.3 +0.2
GOF Gofitskoye 144.82 306⇑ePKIKP PKPdf 18 11 14.1 -0.3
AKH Akhalkalaki 144.93 299 PKPbc 18 11 14.3 +0.1
AKH Akhalkalaki 144.93 299 PKIKP PKPab 18 11 14.4 +0.1
KBZ Khabaz 145.12 304 PKP PKPbc 18 11 14.2 -0.3
comp=Z,7.6nm,0.8s,baz=110,slow=2.3,SNR=19
LPSR Galich'ya Gora 145.21 320 ePKP2 PKPbc 18 11 13.7 -0.8
LPSR pmax pmax
comp=Z,10.0nm,0.9s
KIV Kislovodsk 145.24 304 PKPab 18 11 15.3 +0.1
KIV Kislovodsk 145.24 304 ePKIKP PKPbc 18 11 14.7 -0.4
KIV pmax pmax
comp=Z,36nm,1.0s
OBN Obninsk 145.30 325 ePKP2 PKPbc 18 11 13.4 -1.3
OBN e 18 14 34.4
OBN ePPP PPP 18 17 48.2
OBN pmax pmax
comp=Z,16nm,0.9s
NEY Neytrino 145.31 303⇑ePKIKP PKPab 18 11 16.0 +0.4
FIA1 FINESS Array S 145.34 340 PKPbc 18 11 13.8 -0.9
FINES FINESS Array B 145.34 340 PKPbc PKPbc 18 11 13.9 -0.7
comp=Z,25nm,0.6s,baz=52,slow=3.7,SNR=143
FINES FINESS Array B 145.34 340 PKIKP PKPbc 18 11 14.0 -0.7
NSS Namsos 145.53 352 ePKPdf PKPbc 18 11 14.9 -0.1
VSR Storozhevoye 145.62 317 ePKIKP PKPdf 18 11 14.9 -0.6
VSR pmax pmax
comp=Z,10.0nm,0.6s
VORD Divnogorie 145.65 317 ePKIKP PKPdf 18 11 14.6 -1.0
VORD pmax pmax
comp=Z,10.0nm,0.7s
VSU Vasula 147.41 336⇓iPKP2 PKPbc 18 11 19.7 -1.1
MOL Molde 147.88 355 ePKPbc PKPbc 18 11 22.0 0.0
DOMB Dombas 148.27 353 ePKPbc PKPbc 18 11 23.0 -0.1
AKN Aaknes 148.31 355 ePKPbc PKPbc 18 11 23.5 +0.3
NC303 NORSAR Array S 148.80 351 PKPbc 18 11 24.0 -0.5
NC405 NORSAR Array S 148.86 351 PKPbc 18 11 24.4 -0.3
NB201 NORSAR Array S 148.98 351 PKPbc 18 11 23.7 -1.3
FOO Floro 149.00 357 epPKPbc PKPab 18 11 27.9 -1.2
NB2 NORSAR Subarra 149.00 351 PKP PKPbc 18 11 24.1 -0.9
comp=Z,10nm,1.2s,baz=17,slow=2.6
NOA NORSAR Array B 149.00 351 PKPbc PKPbc 18 11 24.6 -0.4
comp=Z,7.3nm,0.8s,baz=14,slow=4.3,SNR=26
NC602 NORSAR Array S 149.25 351 epPKPdf PKPbc 18 11 24.6 -0.9
NC602 NORSAR Array S 149.25 351 PKPbc 18 11 24.7 -0.9
SKAR Skarslia 149.68 354 ePKPbc PKPbc 18 11 26.8 0.0
GAZ Gaziantep 150.03 292 PKPbc 18 11 28.9 +0.5
ASK Askoy 150.10 357 epPKPbc PKiKP 18 11 31.1 +2.5
BER Bergen 150.20 356 epPKPbc PKPab 18 11 31.5 -2.6
KONO Kongsberg 150.55 352 ePKPbc PKPbc 18 11 29.0 +0.2
ODD1 Odda 150.58 355 ePKPbc PKPbc 18 11 28.9 0.0
BLS5 Blasjo 151.08 355 ePKPbc PKPbc 18 11 30.4 +0.3
AKASG Malin Array Be 151.41 322 PKPbc PKPbc 18 11 30.7 -0.4
comp=Z,8.4nm,0.6s,baz=48,slow=2.9,SNR=49
AKBB Malin Array Si 151.41 322 PKPbc 18 11 30.4 -0.7
AKBB Malin Array Si 151.41 322 PKIKP PKPbc 18 11 30.4 -0.7
HOMB Homborsund 152.03 352 ePKPbc PKPbc 18 11 32.3 +0.1
SUW Suwalki 152.04 333 PKPbc 18 11 31.0 -1.4
SUW Suwalki 152.04 333 PKIKP PKPbc 18 11 31.0 -1.4
SNART Snartemo 152.09 354 ePKPbc PKPbc 18 11 32.5 +0.1
ILGA Ilgaz 152.28 301 PKPbc 18 11 33.6 -0.2
BR131 Keskin Array S 152.58 298 PKPdf PKPdf 18 11 27.7 +0.4
BR131 PKPbc 18 11 33.7 -0.6
BR131 Keskin Array S 152.58 298 PKIKP PKPdf 18 11 27.7 +0.4
BRTR Keskin Array B 152.58 298 PKPbc PKPbc 18 11 34.1 -0.2
comp=Z,4.9nm,0.9s,baz=128,slow=3.8,SNR=13
CSS Mathiatis 153.22 288 PKPbc 18 11 35.2 -0.6
DBIC Dimbokro 155.31 164 PKP PKPdf 18 11 33.1 +1.4
comp=Z,3.1nm,0.9s,baz=185,slow=4.4,SNR=3.7
DBIC PKPbc pPKPdf 18 11 45.4 +0.2
comp=Z,2.0nm,0.5s,baz=145,slow=2.9,SNR=5.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
DBIC	**Dimbokro**	**155.31**	**164**		**PKPdf**	**18 11 33.3**	**+1.6**
DBIC					**pPKPdf**	**18 11 45.2**	**0.0**
BUR08	**Bucovina Ar. S**	**155.32**	**320**		PKPab	18 11 43.9	-12
KWP	**Kalwaria Pacla**	**155.37**	**326**		**PKPab**	**18 11 55.8**	**-0.5**
KWP	**Kalwaria Pacla**	**155.37**	**326**	PKP2	**PKPab**	**18 11 55.8**	**-0.5**
KOLS	**Kolonicke sedl**	**156.05**	**325**	ePKP2	**PKPab**	**18 12 00.1**	**+0.9**
KOLS	**Kolonicke sedl**	**156.05**	**325**	ePKP	**PKPab**	**18 12 00.1**	**+0.9**
CRVS	**Cervenica-Dubn**	**156.47**	**326**	ePKP2	**PKPab**	**18 12 02.2**	**+1.2**
CRVS	**Cervenica-Dubn**	**156.47**	**326**	ePKP	**PKPab**	**18 12 02.2**	**+1.2**
CLL	**Collm**	**157.77**	**341**	ePKPab	**PKPab**	**18 12 07.0**	**+0.5**
CLL	**Collm**	**157.77**	**341**	ePKP2	**PKPab**	**18 12 07.0**	**+0.5**
BRG	**Berggiesshubel**	**157.88**	**339**	ePKP	**PKPab**	**18 12 06.3**	**-0.7**
	comp=Z,5.3nm,0.9s						
BRG	**Berggiesshubel**	**157.88**	**339**	ePKP2	**PKPab**	**18 12 06.3**	**-0.7**
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VYHS	**Vyhne**	**157.97**	**329**	ePKP2	**PKPab**	**18 12 07.3**	**-0.2**
VYHS	**Vyhne**	**157.97**	**329**	ePKP	**PKPab**	**18 12 07.3**	**-0.2**
KHC	**Kasperske Hory**	**159.52**	**337**		**PKPab**	**18 12 13.2**	**-1.0**
KHC	**Kasperske Hory**	**159.52**	**337**	PKP2	**PKPab**	**18 12 13.2**	**-1.0**
CONA	**Conrad Observa**	**159.68**	**332**	iPKPab	**PKPab**	**18 12 14.6**	**-0.4**
	comp=Z,1.1nm,0.5s						
GERES	**GERESS Array B**	**159.72**	**337**	PKPab	**PKPab**	**18 12 13.5**	**-1.6**
	comp=Z,0.7nm,0.6s,baz=22,slow=4.3,SNR=6.3						
SOKA	**Soboth**	**161.02**	**331**	iPKPab	**PKPab**	**18 12 19.9**	**-0.9**
	comp=Z,1.3nm,0.6s						
OBKA	**Obir**	**161.35**	**332**	ePKPab	**PKPab**	**18 12 22.8**	**+0.4**
	comp=Z,1.2nm,0.5s						
WATA	**Walderalm**	**161.74**	**338**	iPKPab	**PKPab**	**18 12 23.7**	**-0.3**
	comp=Z,2.4nm,0.6s						
WTTA	**Wattenberg**	**161.78**	**338**	iPKPab	**PKPab**	**18 12 24.1**	**-0.2**
	comp=Z,3.7nm,1.0s						
RETA	**Reutte**	**161.85**	**340**	iPKPab	**PKPab**	**18 12 24.2**	**-0.2**
	comp=Z,2.1nm,0.6s						
MOTA	**Moosalm**	**161.88**	**339**	ePKPab	**PKPab**	**18 12 23.6**	**-1.1**
	comp=Z,3.1nm,0.7s						
ABTA	**Abfaltersbach**	**161.94**	**336**	ePKPab	**PKPab**	**18 12 23.7**	**-1.2**
	comp=Z,1.6nm,0.6s						
SQTA	**Sankt Quirin**	**161.96**	**339**	ePKPab	**PKPab**	**18 12 23.4**	**-1.6**
	comp=Z,1.4nm,0.4s						
FETA	**Feichten**	**162.28**	**340**	ePKPab	**PKPab**	**18 12 26.1**	**-0.3**
	comp=Z,2.1nm,0.8s						
TOA0	**Torodi Ar. Sit**	**162.56**	**180**		**PKPab**	**18 12 28.1**	**0.0**
TORD	**Torodi Ar. Bea**	**162.56**	**180**	PKP	**PKPdf**	**18 11 40.7**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=357,slow=1.0,SNR=5.2						
TORD				PKPab	**PKPab**	**18 12 30.3**	**+2.1**
	comp=Z,4.2nm,0.8s,baz=172,slow=4.1,SNR=9.5						

*IDC **21** 18:14:10.6±1.9, 14.82S×177.47W, h0km, mb3.9/5, mb1 4.3/5, mb1mx3.8/35, mbtmp3.9/5, Error ellipse: s-maj=122.8km s-min=23.4km az=151.0*
*NEIC **21** 18:14:56.0±0.1, 15.5S±0.2×177.7W±0.2, h437km±11km, mb4.0/6, Error ellipse: s-maj=42.2km s-min=21.3km az=139.0*
ISC 21 18:14:57.2±0.9, 15.5S±0.3×177.8W±0.2, h450km, n12, σ0.62/12, mb3.7/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.59**	**240**	P	**P**	**18 16 16.7**	**-1.1**
KHZ	**Kahutara**	**27.86**	**194**	P	**P**	**18 20 08.7**	**0.0**
BBOO	**Buckleboo**	**45.14**	**239**	P	**P**	**18 22 32.7**	**+0.4**
BBOO				IAmb	IAmb	18 22 39.3	
	comp=Z,35nm,1.4s						
WB0	**Warramunga Arr**	**45.67**	**257**	P	**P**	**18 22 37.1**	**+0.5**
WB0				IAmb	IAmb	18 22 53.2	
	comp=Z,11nm,1.5s						
WB2	**Warramunga Arr**	**45.71**	**257**	P	**P**	**18 22 37.2**	**+0.4**
WRAB	**Tennant Creek**	**45.71**	**257**	P	**P**	**18 22 37.2**	**+0.4**
WRAB				IAmb	IAmb	18 22 53.6	
	comp=Z,4.0nm,1.2s						
WRA	**Warramunga Arr**	**45.72**	**257**	P	**P**	**18 22 37.1**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=92,slow=6.1,SNR=21						
AS31	**Alice Springs**	**46.08**	**252**	P	**P**	**18 22 40.3**	**+0.7**
AS31				IAmb	IAmb	18 22 41.0	
	comp=Z,2.5nm,0.6s						
ASAR	**Alice Springs**	**46.08**	**252**	P	**P**	**18 22 40.5**	**+0.9**
	comp=Z,6.1nm,0.6s,baz=84,slow=6.9,SNR=131						
NVAR	**Mina Array Bea**	**77.26**	**44**	P	**P**	**18 26 04.0**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=223,slow=8.6,SNR=6.3						
ILAR	**Eielson Array**	**83.40**	**13**	P	**P**	**18 26 35.4**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=223,slow=5.8,SNR=6.3						
TXAR	**Lajitas Array**	**84.19**	**58**	P	**P**	**18 26 41.0**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=232,slow=6.4,SNR=4.4						

IDC 21 18:25:40.4±6.3, 6.62S×152.19E, h0km, mb3.0/3, mb1 3.3/3, mb1mx3.2/32, mbtmp3.1/3, Error ellipse: s-maj=189.7km s-min=37.2km az=109.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.81**	**231**	P	P	18 30 34.6	+0.2
	0.3nm,0.7s,baz=58,slow=11,SNR=4.1						
ASAR	**Alice Springs**	**24.41**	**224**	P	P	18 31 00.8	-0.1
	0.4nm,0.8s,baz=55,slow=9.0,SNR=5.1						
MKAR	**Makanchi Array**	**81.30**	**319**	P	P	18 37 58.8	0.0
	0.1nm,0.6s,baz=129,slow=3.9,SNR=2.2						

*AEIC **21** 18:47:03±3.4, 55.8N±0.1×164.1W±0.1, h148km±7km, ML3.2/24, Error ellipse: s-maj=18.8km s-min=6.3km az=154.0*
*NEIC **21** 18:47:03.9±1.2, 55.4N±0.1×163.5W±0.1, h182km±6km, Error ellipse: s-maj=20.9km s-min=6.3km az=161.0*
*IDC **21** 18:47:06.0±4.0, 55.75N×163.71W, h169km±38km, mb3.0/5, mb1 3.1/8, mb1mx2.9/50, mbtmp3.5/8, Error ellipse: s-maj=72.9km s-min=21.3km az=168.0*
ISC 21 18:47:04.3±0.8, 55.74N±0.09×163.76W±0.07, h150km, n40, σ1.48/45, mb3.1/5, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALA	**Baldy Mountain**	**0.78**	**134**		**Pn**	**18 47 28.7**	**+1.4**
FALS	**False Pass**	**0.90**	**167**		**Pn**	**18 47 28.7**	**+0.4**
SSBA	**Shishaldin**	**0.99**	**192**		**Pn**	**18 47 29.6**	**+0.5**
SSBA					**Sn**	**18 47 48.2**	**+0.3**
DT1	**Dutton Round H**	**1.05**	**126**		**Pn**	**18 47 30.1**	**+0.6**
HAG	**Hague Volcano**	**1.14**	**111**		**Pn**	**18 47 32.4**	**+2.1**
PVV	**Pavlof Volcano**	**1.18**	**107**		**Pn**	**18 47 32.5**	**+1.9**
WESE	**West Dahl East**	**1.35**	**201**		**Pn**	**18 47 33.4**	**+0.9**
WESP	**Westdahl Peak**	**1.36**	**204**		**Pn**	**18 47 33.1**	**+0.6**
WESP					**Sn**	**18 47 55.2**	**+1.2**
SDPT	**Sand Point**	**1.91**	**100**	Pn	**Pn**	**18 47 39.0**	**+0.8**
SDPT					**Sn**	**18 48 04.6**	**+0.3**
AKSA	**Akutan Strait**	**1.96**	**216**		**Pn**	**18 47 38.5**	**-0.3**
AKUT	**Akutan**	**1.98**	**217**	Pn	**Pn**	**18 47 38.7**	**-0.5**
AKUT	**Akutan**	**1.98**	**217**		**Sn**	**18 48 05.8**	**-0.1**
AKBBA	**Akutan Broad B**	**2.07**	**218**		**Pn**	**18 47 39.7**	**-0.5**
MTBL	**Makushin Table**	**2.45**	**225**		**Pn**	**18 47 44.8**	**0.0**
UNV	**Unalaska Valle**	**2.47**	**221**	Pn	**Pn**	**18 47 44.2**	**-0.9**
MSW	**Makushin Switc**	**2.53**	**225**		**Pn**	**18 47 44.9**	**-0.8**
CNBA	**Chernabura Isl**	**2.56**	**109**	Pn	**Pn**	**18 47 44.7**	**-1.3**
MGOD	**Makushin Gods**	**2.65**	**224**		**Pn**	**18 47 46.6**	**-0.7**
MGOD					**Sn**	**18 48 21.0**	**+0.5**
CHGN	**Chignik**	**3.05**	**77**	Pn	**Pn**	**18 47 54.6**	**+2.4**
OKFG	**Magazine Ridge**	**3.36**	**228**		**Pn**	**18 47 54.9**	**-1.3**
NIKH	**Nikolski High**	**4.07**	**229**	Pn	**Pn**	**18 48 04.2**	**-1.2**
CHIR	**Chirikof Islan**	**4.60**	**86**	Pn	**Pn**	**18 48 12.4**	**+0.1**
SII	**Sitkinak Islan**	**5.42**	**77**	Pn	**Pn**	**18 48 21.6**	**-1.6**
OHAK	**Old Harbor**	**5.99**	**71**	Pn	**Pn**	**18 48 30.9**	**+0.1**
KDAK	**Kodiak Island**	**6.48**	**67**	P	**Pn**	**18 48 37.9**	**+0.7**
	3.9nm,0.3s,baz=250,slow=11,SNR=70						
KDAK				S	**Sn**	**18 49 46.3**	**-3.7**
	0.9nm,0.3s,baz=232,slow=21,SNR=7.0						
KDAK	**Kodiak Island**	**6.48**	**67**	Pn	**Pn**	**18 48 38.1**	**+0.8**
SVW2	**Sparrevohn**	**6.88**	**35**	Pn	**Pn**	**18 48 47.1**	**+4.6**
ATKA	**Atka Island**	**7.10**	**244**	Pn	**Pn**	**18 48 44.6**	**-1.0**
RSO	**Redoubt South**	**7.51**	**46**		**Pn**	**18 48 54.8**	**+3.7**
SUA	**Susitna One**	**8.88**	**44**		**Pn**	**18 49 12.0**	**+2.7**
SCM	**Sheep Creek Mo**	**10.47**	**48**		**Pn**	**18 49 30.8**	**+0.4**
ILAR	**Eielson Array**	**12.29**	**36**	P	**Pn**	**18 49 54.4**	**+0.3**
	0.1nm,0.3s,baz=223,slow=12,SNR=3.5						
MENT	**Mentasta**	**12.47**	**47**		**Pn**	**18 49 56.8**	**+0.4**
INK	**Inuvik**	**18.69**	**36**	P	**P**	**18 51 11.0**	**+0.3**
	0.2nm,0.3s,baz=235,slow=9.3,SNR=9.2						
INK	**Inuvik**	**18.69**	**36**	P	**P**	**18 51 10.1**	**-0.6**
PETK	**Petropavlovsk-**	**22.38**	**279**	P	**P**	**18 51 50.7**	**+0.8**
	1.1nm,0.5s,baz=86,slow=12,SNR=5.6						
SEY	**Seymchan**	**23.09**	**306**	P	**P**	**18 51 56.9**	**+0.5**
	0.5nm,0.6s,baz=84,slow=17,SNR=2.6						
MA2	**Magadan**	**24.25**	**298**	P	**P**	**18 52 07.6**	**+0.6**
	1.3nm,0.3s,baz=98,slow=14,SNR=3.5						
YKA	**Yellowknife Ar**	**25.56**	**55**	P	**P**	**18 52 19.5**	**+0.7**
	0.2nm,0.4s,baz=278,slow=9.0,SNR=2.6						
MKAR	**Makanchi Array**	**63.80**	**316**	P	**P**	**18 57 18.8**	**-1.3**
	0.1nm,0.5s,baz=44,slow=6.0,SNR=2.5						

*NEIC **21** 18:47:06.2±2.7, 36.60N±0.05×108.65W±0.04, h0km±2km, ML2.7/59, Error ellipse: s-maj=9.1km s-min=3.1km az=329.0*
*IDC **21** 18:47:08.8±1.5, 37.08N×106.98W, h0km, mb1 3.1/3, mb1mx3.0/44, mbtmp2.7/3, Error ellipse: s-maj=32.4km s-min=10.3km az=71.0*
ISC 21 18:47:06.1±1.1, 36.57N±0.04×108.70W±0.04, h0km, n33, σ1.09/31, New Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MVCO	**Mesa Verde**	**0.67**	**14**		**Pg**	**18 47 18.2**	**-0.7**
W18A	**Petrified Fore**	**1.67**	**210**		**Pg**	**18 47 38.7**	**+0.6**
W18A				IAML		18 48 06.2	
	comp=E,99nm,0.6s						
S22A	**4UR Ranch, Cre**	**1.91**	**51**		**Pn**	**18 47 41.0**	**+0.9**
S22A				IAML		18 48 11.3	
	comp=E,47nm,0.1s						
S22A				IAML		18 48 11.6	
	comp=N,69nm,0.1s						
X18A	**Snowflake**	**2.27**	**207**	Pn	**Pb**	**18 47 47.1**	**-1.0**
X18A				IAML		18 48 24.8	
	comp=N,61nm,0.7s						
X18A				IAML		18 48 25.5	
	comp=E,65nm,0.6s						
WUAZ	**Wupatki**	**2.40**	**245**	Pn	**Pg**	**18 47 52.1**	**-0.1**
ANMO	**Albuquerque**	**2.44**	**131**	Pn	**Pn**	**18 47 47.7**	**+0.3**
	comp=E,1.5nm,0.3s,baz=351,slow=19,SNR=16						
ANMO				Lg	Lg	18 48 17.1	
	comp=E,2.5nm,0.3s,baz=257,slow=18,SNR=8.0						
ANMO	**Albuquerque**	**2.44**	**131**	Pn	**Pn**	**18 47 46.7**	**-0.7**
SDCO	**Great Sand Dun**	**2.82**	**64**		**Pn**	**18 47 53.1**	**+0.5**
U15A	**North Rim**	**2.89**	**268**		**Pn**	**18 47 56.0**	**+2.3**
U15A				IAML		18 48 50.5	
	comp=N,34nm,0.6s						
U15A				IAML		18 48 53.2	
	comp=E,29nm,1.6s						
SRU	**San Rafael Swe**	**2.92**	**331**		**Pn**	**18 47 53.4**	**-0.6**
SMCO	**Snowmass**	**2.95**	**27**		**Pn**	**18 47 54.3**	**-0.3**
SMCO				IAML		18 49 02.0	
	comp=E,19nm,4.9s						
PKCU	**Pink Cliffs**	**3.02**	**288**		**Pn**	**18 47 55.0**	**-0.5**
Q16A	**Castle Valley**	**3.06**	**321**		**Pn**	**18 47 55.9**	**0.0**
X16A	**Lo Mia Camp, P**	**3.10**	**227**		**Pn**	**18 47 55.3**	**-1.1**
X16A				IAML		18 48 56.2	
	comp=E,23nm,0.9s						
MTPU	**Mount Pierson**	**3.14**	**299**		**Pn**	**18 47 56.5**	**-0.7**
P17A	**Butcher Ranch,**	**3.32**	**332**		**Pn**	**18 47 58.0**	**-1.5**
KNB	**Kanab**	**3.34**	**279**		**Pn**	**18 48 00.4**	**+0.7**
TMUT	**Trail Mountain**	**3.37**	**325**		**Pn**	**18 48 01.0**	**+0.7**
MSU	**Marysvale**	**3.38**	**306**		**Pn**	**18 48 00.9**	**+0.6**
T25A	**Trinidad**	**3.49**	**79**		Pn	18 47 54.6	-7.2
T25A				IAML		18 48 53.6	
	comp=E,16nm,0.7s						
T25A				IAML		18 48 56.6	
	comp=N,14nm,2.7s						
TCRU	**Three Creeks R**	**3.61**	**306**		**Pn**	**18 48 01.4**	**-2.1**
SZCU	**Shurtz Canyon**	**3.65**	**288**		**Pn**	**18 48 03.1**	**-1.0**
LCMT	**Little Creek M**	**3.67**	**278**	Pn	**Pn**	**18 48 04.2**	**0.0**
CCUT	**Cedar City**	**3.85**	**286**		**Pn**	**18 48 06.6**	**-0.3**
121A	**Cookes Peak, D**	**4.09**	**169**		**Pn**	**18 48 09.6**	**-0.5**
121A				IAML		18 49 31.2	
	comp=N,14nm,2.1s						
NLU	**North Lily Min**	**4.30**	**323**		**Pn**	**18 48 13.1**	**+0.1**
W13A	**Hualapai Mount**	**4.46**	**252**		**Pn**	**18 48 14.5**	**-0.6**
W13A				IAML		18 49 18.3	
	comp=E,7.5nm,5.0s						
W13A				IAML		18 49 46.6	
	comp=N,7.6nm,4.3s						
PSUT	**Pine Spring**	**4.54**	**297**		**Pn**	**18 48 16.0**	**-0.3**
TUC	**Tucson**	**4.58**	**203**	Pn	**Pn**	**18 48 18.2**	**+1.5**
TUC				IAML		18 49 40.9	
	comp=N,6.4nm,2.9s						
TUC				IAML		18 49 43.6	
	comp=N,6.0nm,2.0s						
319A	**Douglas**	**5.20**	**185**		**Pn**	**18 48 26.9**	**+1.6**
PDAR	**Pinedale Array**	**6.23**	**354**	Pn	**Pn**	**18 48 42.1**	**+2.6**
	comp=N,0.2nm,0.3s,baz=159,slow=13,SNR=5.6						
PDAR				Lg	Lg	18 50 17.8	
	comp=N,0.1nm,0.3s,baz=175,slow=34,SNR=2.5						
NVAR	**Mina Array Bea**	**7.86**	**287**	Pn	**Pb**	**18 49 24.2**	**+0.9**
	comp=N,0.0nm,0.3s,baz=102,slow=13,SNR=2.0						
NVAR				Pg	Pg	18 49 41.7	+5.2
	comp=N,0.1nm,0.3s,baz=101,slow=15,SNR=5.2						
TXAR	**Lajitas Array**	**8.36**	**148**	Pg	Pb	18 49 25.3	-6.5
	comp=N,0.0nm,0.3s,baz=333,slow=19,SNR=2.5						
TXAR				Lg	Lg	18 51 26.9	
	comp=N,0.0nm,0.3s,baz=340,slow=26,SNR=2.8						

*IDC **21** 19:01:09.2±1.6, 43.78N×105.37W, h0km, mb4.1/5, mb1 4.0/11, mb1mx3.7/41, mbtmp3.9/11, ML3.0/5, Error ellipse: s-maj=49.0km s-min=7.5km az=149.0*
*NEIC **21** 19:01:10.6±1.3, 43.83N±0.05×105.25W±0.08, h0km±1km, ML3.6/58, Error ellipse: s-maj=10.1km s-min=8.6km az=110.0*
ISC 21 19:01:10.0±0.8, 43.83N±0.06×105.27W±0.06, h0km, n79, σ1.06/76, mb4.2/5, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.94**	**71**		**Pg**	**19 01 27.6**	**-0.3**
K22A	**Casper**	**1.49**	**218**		**Pn**	**19 01 35.3**	**-2.9**
K22A				IAML		19 02 03.5	
	comp=E,564nm,0.7s						
K22A				IAML		19 02 06.0	
	comp=N,538nm,0.6s						
LAO	**LASA Array**	**2.94**	**347**		**Pn**	**19 01 59.0**	**+0.9**
LAO				IAML		19 02 43.1	
	comp=N,412nm,0.6s						
N23A	**Red Feather La**	**2.97**	**190**		**Pn**	**19 01 59.6**	**+1.0**
N23A				IAML		19 02 43.5	
	comp=N,190nm,0.7s						
N23A				IAML		19 02 47.5	
	comp=E,158nm,0.6s						
RLMT	**Red Lodge**	**3.14**	**296**		**Pn**	**19 02 02.1**	**+1.1**
RLMT				IAML		19 02 59.2	
	comp=E,128nm,1.1s						
BW06	**Boulder Array**	**3.31**	**253**		**Pn**	**19 02 04.0**	**+0.7**
PD31	**Pinedale Array**	**3.31**	**253**		**Pn**	**19 02 03.0**	**-0.3**
PDAR	**Pinedale Array**	**3.31**	**253**	Pn	**Pn**	**19 02 04.1**	**+0.8**
	comp=E,7.7nm,0.3s,baz=65,slow=16,SNR=33						
PDAR				Lg	Lg	19 02 48.3	
	comp=E,18nm,0.3s,baz=70,slow=30,SNR=10						
YNE	**Yellowstone No**	**3.60**	**291**		**Pn**	**19 02 07.5**	**+0.3**
YMP	**Mirror Lake Pl**	**3.63**	**286**		**Pn**	**19 02 08.7**	**+0.9**
GCMT	**Greycliff**	**3.70**	**304**		**Pn**	**19 02 09.8**	**+1.3**
OGNE	**Ogallala**	**3.74**	**139**		**Pn**	**19 02 10.1**	**+1.0**
OGNE				IAML		19 03 15.5	
	comp=E,183nm,0.8s						
OGNE				IAML		19 03 17.6	
	comp=E,246nm,0.7s						
LKWY	**Lake**	**3.77**	**283**		**Pn**	**19 02 10.1**	**+0.5**
LKWY				IAML		19 02 37.2	
	comp=E,56nm,0.6s						
LKWY				IAML		19 03 25.8	
	comp=E,71nm,0.7s						
H17A	**Grant Village**	**3.87**	**280**		**Pn**	**19 02 12.7**	**+1.7**
YUF	**Upper Falls**	**3.87**	**285**		**Pn**	**19 02 12.4**	**+1.4**
YNR	**Norris Junctio**	**3.99**	**285**		**Pn**	**19 02 13.0**	**+0.3**
YPP	**Pitchstone Pla**	**4.02**	**278**		**Pn**	**19 02 13.8**	**+0.7**
ISCO	**Idaho Springs**	**4.03**	**184**		**Pn**	**19 02 14.2**	**+1.0**
YHH	**Holmes Hill**	**4.12**	**285**		**Pn**	**19 02 15.2**	**+0.7**
YMR	**Madison River**	**4.18**	**284**		**Pn**	**19 02 15.3**	**0.0**
O20A	**White River Ci**	**4.30**	**212**		**Pn**	**19 02 17.9**	**+1.0**
O20A				IAML		19 03 34.5	
	comp=E,93nm,0.7s						
O20A				IAML		19 03 40.9	
	comp=N,89nm,1.0s						
YHB	**Horse Butte**	**4.36**	**284**		**Pn**	**19 02 18.7**	**+1.0**
YHL	**Hebgen Lake**	**4.37**	**286**		**Pn**	**19 02 18.9**	**+1.0**
AHID	**Auburn Hatcher**	**4.39**	**258**		**Pn**	**19 02 19.0**	**+0.9**
AHID				IAML		19 03 34.0	
	comp=N,64nm,1.1s						
AHID				IAML		19 03 45.1	
	comp=E,57nm,1.0s						
QLMT	**Earthquake Lak**	**4.54**	**285**		**Pn**	**19 02 20.5**	**+0.4**
SUSD	**Miller**	**4.58**	**80**		**Pn**	**19 02 20.8**	**+0.2**
DGMT	**Dagmar**	**4.70**	**9**		**Pn**	**19 02 23.7**	**+1.5**
SMCO	**Snowmass**	**4.82**	**196**		**Pn**	**19 02 23.0**	**-1.1**
SMCO				IAML		19 03 45.5	
	comp=E,35nm,0.9s						
SMCO				IAML		19 03 54.4	
	comp=E,31nm,0.9s						
Q24A	**Divide**	**4.86**	**179**		**Pn**	**19 02 24.9**	**+0.3**
Q24A				IAML		19 03 50.9	
	comp=E,41nm,1.1s						
Q24A				IAML		19 04 02.2	
	comp=N,24nm,0.9s						
HWUT	**Hardware Ranch**	**5.14**	**247**		**Pn**	**19 02 28.7**	**+0.2**
HWUT				IAML		19 03 57.2	
	comp=N,62nm,1.0s						
HWUT				IAML		19 04 01.2	
	comp=N,37nm,1.0s						
KSCO	**Kaye Shedlock'**	**5.20**	**157**		**Pn**	**19 02 29.3**	**+0.1**
EGMT	**Eagleton**	**5.24**	**325**		**Pn**	**19 02 29.6**	**-0.1**
TCUT	**Toone Canyon**	**5.29**	**241**		**Pn**	**19 02 30.8**	**+0.3**
LRM	**Limekiln Ridge**	**5.49**	**294**		Pn	19 02 39.0	+5.8
MCMT	**McKenzie Canyo**	**5.53**	**283**		**Pn**	**19 02 34.3**	**+0.5**
JLU	**Jordanelle**	**5.61**	**237**		**Pn**	**19 02 35.5**	**+0.6**
MDND	**Maddock**	**5.64**	**43**		**Pn**	**19 02 34.7**	**-0.4**
MDND					**Sg**	**19 04 12.1**	**+0.9**
CTU	**Camp Tracy**	**5.74**	**239**		**Pn**	**19 02 37.3**	**+0.7**
BGNE	**Belgrade**	**5.78**	**112**		**Pn**	**19 02 37.3**	**+0.3**
SPUT	**South Promonto**	**5.87**	**247**		**Pn**	**19 02 39.9**	**+1.5**
P17A	**Butcher Ranch,**	**5.98**	**225**		**Pn**	**19 02 40.8**	**+0.9**
SDCO	**Great Sand Dun**	**6.08**	**182**		**Pn**	**19 02 42.3**	**+1.0**
MPU	**Maple Canyon**	**6.09**	**233**		**Pn**	**19 02 41.7**	**+0.3**
SRU	**San Rafael Swe**	**6.15**	**222**		**Pn**	**19 02 42.3**	**0.0**
S22A	**4UR Ranch, Cre**	**6.19**	**192**		**Pn**	**19 02 44.0**	**+1.1**
ECSD	**EROS Data Cent**	**6.26**	**88**		**Pn**	**19 02 44.2**	**+0.6**
TMUT	**Trail Mountain**	**6.35**	**227**		**Pn**	**19 02 46.5**	**+1.3**
NLU	**North Lily Min**	**6.38**	**235**		**Pn**	**19 02 45.4**	**-0.2**
CBKS	**Cedar Bluff**	**6.51**	**138**		**Pn**	**19 02 47.4**	**+0.3**
Q16A	**Castle Valley**	**6.62**	**224**		**Pn**	**19 02 49.4**	**+0.8**
DUG	**Dugway, Tooele**	**6.69**	**240**		**Pn**	**19 02 50.2**	**+0.5**
T25A	**Trinidad**	**6.71**	**174**		**Pn**	**19 02 50.4**	**+0.4**
MSO	**Missoula**	**6.81**	**299**		**Pn**	**19 02 51.4**	**+0.1**
MVCO	**Mesa Verde**	**7.05**	**202**		**Pn**	**19 02 55.8**	**+1.1**
JTMT	**Jette**	**7.42**	**305**		**Pn**	**19 02 59.9**	**+0.2**
MSU	**Marysvale**	**7.44**	**227**		**Pn**	**19 03 00.6**	**+0.6**
MTPU	**Mount Pierson**	**7.80**	**225**		**Pn**	**19 03 05.5**	**+0.4**
AGMN	**Agassiz Nation**	**7.92**	**52**		**Pn**	**19 03 06.9**	**+0.6**
ELK	**Elko**	**8.01**	**251**	Pn	**Pn**	**19 03 07.7**	**-0.2**
	comp=N,0.2nm,0.3s,baz=45,slow=11,SNR=3.4						
ELK				Lg	Lg	19 05 15.0	
	comp=N,0.2nm,0.3s,baz=76,slow=16,SNR=2.3						
ELK	**Elko**	**8.01**	**251**		**Pn**	**19 03 07.6**	**-0.3**
PSUT	**Pine Spring**	**8.36**	**234**		**Pn**	**19 03 12.7**	**+0.1**
F10A	**Beach Ranch, E**	**8.76**	**288**	Pn	**Pn**	**19 03 17.7**	**-0.3**
CCUT	**Cedar City**	**8.78**	**227**		**Pn**	**19 03 19.0**	**+0.6**
I10CA	**LAC DU BONNET**	**8.97**	**41**	i		19 59 10.0	
	baz=223,slow=332,SNR=2.5						
ULM	**Lac du Bonnet**	**9.07**	**42**	Pn	**Pn**	**19 03 18.9**	**-3.3**
	comp=N,0.4nm,0.3s,baz=233,slow=12,SNR=4.7						
ULM				Pg		19 03 54.1	
	comp=N,2.2nm,0.3s,baz=220,slow=16,SNR=8.8						
ULM				Lg	Lg	19 05 52.3	
	comp=N,1.1nm,0.3s,baz=311,slow=19,SNR=3.1						
ULM	**Lac du Bonnet**	**9.07**	**42**		**Pn**	**19 03 20.0**	**-2.1**
NEW	**Newport**	**9.36**	**302**	Lg	Lg	19 05 57.4	
	comp=N,0.0nm,0.3s,baz=43,slow=19,SNR=2.4						
WUAZ	**Wupatki**	**9.54**	**212**		**Pn**	**19 03 29.3**	**+0.6**
KVN	**Kaiserville**	**10.75**	**248**		**Pn**	**19 03 46.0**	**+0.7**
FFC	**Flin Flon**	**11.12**	**10**		**Pn**	**19 03 49.2**	**-0.9**
NVAR	**Mina Array Bea**	**11.21**	**246**	Pn	**Pn**	**19 03 53.3**	**+1.6**
	comp=N,0.3nm,0.3s,baz=53,slow=13,SNR=6.4						
YBH	**Yreka Blue Hor**	**12.99**	**267**	Pn	**Pn**	**19 04 20.0**	**+4.2**
	comp=N,0.1nm,0.3s,baz=144,slow=13,SNR=3.8						
TXAR	**Lajitas Array**	**14.52**	**174**	Lg	Lg	19 08 42.3	
	comp=N,0.0nm,0.3s,baz=339,slow=36,SNR=2.9						
YKA	**Yellowknife Ar**	**19.48**	**347**	P	**P**	**19 05 38.0**	**-0.2**
	comp=N,0.1nm,0.3s,baz=156,slow=12,SNR=11						
ARCES	**ARCESS Array B**	**61.33**	**18**	P	**P**	**19 11 25.7**	**-1.2**
	comp=N,2.5nm,0.9s,baz=333,slow=5.8,SNR=9.2						
FINES	**FINESS Array B**	**67.95**	**23**	P	**P**	**19 12 10.3**	**+0.1**
	comp=N,2.0nm,0.9s,baz=335,slow=8.4,SNR=5.8						
ZALV	**Zalesovo Beam**	**82.22**	**354**	P	**P**	**19 13 32.5**	**-0.2**
	comp=N,0.5nm,0.5s,baz=352,slow=4.5,SNR=6.3						
SONM	**Songino Array**	**84.56**	**339**	P	**P**	**19 13 44.9**	**-0.1**
	comp=N,0.5nm,0.5s,baz=0.3,slow=3.4,SNR=3.5						
MKAR	**Makanchi Array**	**89.52**	**355**	P	**P**	**19 14 09.3**	**+0.3**
	comp=N,0.9nm,0.6s,baz=8.3,slow=4.3,SNR=14						

IDC 21 19:32:04.1±1.9, 9.09S×124.77E, h0km, mb3.1/1, mb1 3.4/5, mb1mx3.2/28, mbtmp3.2/3, ML3.4/2, Error ellipse: s-maj=204.0km s-min=31.9km az=57.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.21**	**140**	Pn	Pn	19 35 26.9	+0.1
	0.2nm,0.3s,baz=320,slow=20,SNR=4.5						
WRA				Sn	Sn	19 37 54.0	-11
	0.3nm,0.3s,baz=317,slow=26,SNR=8.4						
ASAR	**Alice Springs**	**16.92**	**150**	Pn	Pn	19 36 02.4	-0.2
	0.2nm,0.3s,baz=319,slow=12,SNR=16						
ASAR				Sn	Sn	19 38 57.8	-14
	0.1nm,0.3s,baz=314,slow=21,SNR=4.7						
MKAR	**Makanchi Array**	**67.27**	**330**	P	P	19 43 00.6	0.0
	0.1nm,0.6s,baz=131,slow=6.5,SNR=2.2						

IDC 21 19:38:10.8±16.0, 19.43S×177.61W, h537km±121km, mb3.3/4, mb1 3.4/5, mb1mx3.0/26, mbtmp4.2/5, Error ellipse: s-maj=148.2km s-min=105.7km az=72.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.15**	**257**	P	P	19 41 21.7	-0.4
	0.1nm,0.3s,baz=119,slow=19,SNR=2.6						
CTA	**Charters Tower**	**33.98**	**263**	P	P	19 44 10.3	+0.3
	2.9nm,0.5s,baz=86,slow=11,SNR=7.6						
STKA	**Stephens Creek**	**38.59**	**243**	P	P	19 44 47.6	-0.3
	1.4nm,0.7s,baz=96,slow=11,SNR=5.6						
WRA	**Warramunga Arr**	**45.12**	**261**	P	P	19 45 39.2	-0.4
	1.5nm,0.5s,baz=97,slow=6.9,SNR=24						
ASAR	**Alice Springs**	**45.13**	**256**	P	P	19 45 39.5	-0.2
	2.3nm,0.5s,baz=88,slow=8.4,SNR=57						
ASAR				PcP	PcP	19 47 08.6	-0.2
	0.4nm,0.8s,baz=120,slow=3.2,SNR=3.1						

IDC 21 19:48:45.2±8.2, 8.50S×75.47W, h59km±89km, mb3.7/3, mb1 3.7/4, mb1mx3.8/4, mbtmp3.8/4, ML3.0/1, Error ellipse: s-maj=134.0km s-min=45.7km az=28.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**10.55**	**138**	P	Pn	19 51 14.2	0.0
	0.1nm,0.3s,baz=315,slow=11,SNR=2.7						
LPAZ				S	Sn	19 53 28.2	+17
	0.2nm,0.3s,baz=228,slow=12,SNR=1.7						
DBIC	**Dimbokro**	**71.99**	**80**	P	P	20 00 03.1	-0.1
	4.4nm,0.9s,baz=256,slow=7.7,SNR=4.7						
YKA	**Yellowknife Ar**	**76.93**	**342**	P	P	20 00 31.0	+0.1
	0.2nm,0.4s,baz=135,slow=6.2,SNR=3.9						
TORD	**Torodi Ar. Bea**	**79.58**	**75**	P	P	20 00 46.8	+0.2
	0.5nm,0.3s,baz=262,slow=5.2,SNR=10						
WRA	**Warramunga Arr**	**139.26**	**226**	PKP	PKPdf	20 08 05.8	-0.7
	0.2nm,0.5s,baz=131,slow=1.8,SNR=3.0						

*IDC **21** 19:53:27.9±2.0, 26.64S×29.04E, h0km, mb3.6/2, mb1 3.4/5, mb1mx3.3/37, mbtmp3.4/5, ML3.0/3, Error ellipse: s-maj=25.5km s-min=18.7km az=153.0*
*BUL **21** 19:53:29.6±2.2, 26.53S×29.07E, h10km, MD3.5*
ISC 21 19:53:29.0±1.2, 26.48S±0.07×28.96E±0.09, h6km, n11, σ1.94/16, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**3.36**	**295**	iP	**Pn**	**19 54 24.6**	**+2.4**
LBTB	**Lobatse**	**3.36**	**295**	Pn	**Pn**	**19 54 24.2**	**+2.0**
	1.2nm,0.3s,baz=119,slow=16,SNR=10.0						
LBTB				Pg	**Pg**	**19 54 32.6**	**-0.9**
	3.9nm,0.3s,baz=118,slow=16,SNR=24						
LBTB				Sn	**Sb**	**19 55 08.6**	**-1.7**

1.1nm,0.3s,baz=184,slow=17,SNR=2.8
LBTB Lg Lg 19 55 17.6
3.7nm,0.3s,baz=106,slow=19,SNR=10
LBTB Lobatse 3.36 295 *i* P Pn 19 54 24.6 +2.4
BOSA Boshof 3.91 236 *i* P Pn 19 54 29.8 +0.1
BOSA Boshof 3.91 236 Pn Pn 19 54 30.6 +0.9
0.3nm,0.3s,baz=63,slow=16,SNR=3.6
BOSA Pg Pb 19 54 38.3 -0.1
1.3nm,0.3s,baz=62,slow=15,SNR=11
BOSA Lg Lg 19 55 29.7
4.2nm,0.3s,baz=90,slow=9.1,SNR=11
BOSA Boshof 3.91 236 *i* P Pn 19 54 29.8 +0.1
MSNA Messina 4.23 14 *i* P Pn 19 54 36.4 +2.3
MSNA *i* S Sn 19 55 21.1 -2.8
MSNA Messina 4.23 14 *i* P Pn 19 54 36.4 +2.3
MSNA *i* S Sn 19 55 21.1 -2.8
LSZ Lusaka 11.17 356 Pn Pn 19 56 09.5 0.0
0.2nm,0.3s,baz=181,slow=11,SNR=3.7
TORD Torodi Ar. Bea 47.48 323 P P 20 02 06.6 +1.6
0.8nm,0.7s,baz=140,slow=7.6,SNR=4.5
MKAR Makanchi Array 87.40 33 P P 20 06 16.7 -0.3
0.2nm,0.7s,baz=237,slow=4.3,SNR=2.3

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*IDC **21** 20:05:13.0±1.9, 36.40N×136.88E, h257km±10km, mb3.2/2, mb1 3.4/5, mb1mx2.8/50, mbtmp4.0/5, Error ellipse: s-maj=38.6km s-min=29.0km az=51.0*
*JMA **21** 20:05:12.7±0.1, 36.28N×137.02E, h266km±1km, M2.9*
ISC 21 20:05:12.5±1.0, 36.3N±0.1×137.0E±0.1, h263km±9km, n18, σ0.89/23, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.28**	**109**	**P**	**Pn**	**20 05 46.8**	**+0.3**
JKG	**Kaga**	**0.53**	**266**	**P**	**Pn**	**20 05 47.6**	**+0.7**
JYTA	**Yamagatataniai**	**0.75**	**196**	**P**	**Pn**	**20 05 48.0**	**+0.2**
JYTA				*e*S	S	20 06 14.8	-0.7
MAT	**Matsushiro**	**1.01**	**77**	**P**	**Pn**	**20 05 49.5**	**+0.6**
MAT				*e*S	S	20 06 17.7	+0.1
MAT	**Matsushiro**	**1.01**	**77**	**P**	**Pn**	**20 05 49.5**	**+0.6**
MAT				S	S	20 06 18.1	+0.5
MJAR	**Matsushiro Arr**	**1.01**	**77**	**P**	**Pn**	**20 05 49.8**	**+0.8**
	0.8nm,0.3s,baz=260,slow=7.1,SNR=71						
MJAR				S	S	20 06 18.2	+0.6
	0.1nm,0.3s,baz=262,slow=14,SNR=8.4						
JWT	**Wachi**	**1.65**	**232**	**P**	**Pn**	**20 05 53.4**	**+0.2**
JIE	**Ise**	**1.93**	**187**	**P**	**Pn**	**20 05 56.2**	**+0.7**
JAG	**Ashikaga**	**1.99**	**86**	***e*S**	**S**	**20 06 28.6**	**-1.7**
JSD	**Sado**	**2.00**	**30**	**P**	**Pn**	**20 05 56.8**	**+0.9**
JWY	**Kouya**	**2.38**	**209**	**P**	**Pn**	**20 06 00.2**	**+0.5**
JWY				*e*S	S	20 06 36.6	-0.5
JNS	**Sasagawa**	**2.39**	**51**	**P**	**Pn**	**20 06 00.3**	**+0.8**
JTNC	**Tanabenakahech**	**2.74**	**205**	**P**	**Pn**	**20 06 03.3**	**+0.2**
USRK	**Ussuriysk Ar.**	**8.75**	**336**	**P**	**Pn**	**20 07 15.9**	**+0.8**
	baz=166,slow=13,SNR=7.5						
ASAJ	**Asahikawa**	**8.89**	**27**	**P**	**Pn**	**20 07 15.3**	**-1.6**
	3.3nm,0.3s,baz=239,slow=9.4,SNR=44						
KLR	**Kul'dur**	**13.46**	**345**	**P**	**Pn**	**20 08 12.0**	**-1.5**
	0.5nm,0.3s,baz=152,slow=12,SNR=13						
ILAR	**Eielson Array**	**51.99**	**32**	**P**	**P**	**20 13 55.9**	**+1.1**
	0.2nm,0.5s,baz=262,slow=5.8,SNR=5.4						
FINES	**FINESS Array B**	**67.75**	**331**	**P**	**P**	**20 15 41.5**	**0.0**
	3.2nm,1.0s,baz=99,slow=8.6,SNR=3.7						

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*IDC **21** 20:09:59.1±2.2, 6.98S×130.40E, h0km, mb3.7/1, mb1 4.2/3, mb1mx3.6/31, mbtmp3.9/3, ML4.3/2, MS4.2/1, Ms1 4.2/1, ms1mx2.9/24, Error ellipse: s-maj=136.0km s-min=31.0km az=70.0*
*DJA **21** 20:10:08.0±0.7, 7°S±5°×13°1E±°, h124km±12km, M4.2/12, mb4.0/6, mB4.9/2, MLv4.2/12, Mw(mB)4.2/2*
ISC 21 20:10:08.0±1.0, 6.94S±0.06×131.0E±0.1, h100km, n13, σ3.23/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.09**	**162**	**P**	**Pn**	**20 10 31.8**	**+2.4**
SAUI				S	Sn	20 10 50.3	+4.7
BNDI	**Bandanaira**	**2.62**	**336**	**P**	**Pn**	**20 10 48.7**	**0.0**
MSAI	**Masohi**	**4.10**	**330**	**P**	**Pn**	**20 11 09.2**	**+0.6**
FAKI	**Fak Fak**	**4.20**	**18**	**P**	**Pn**	**20 11 09.5**	**-0.4**
AAI	**Ambon**	**4.24**	**320**	**P**	**Pn**	**20 11 11.0**	**+0.5**
KMPI	**Kaimana, Papua**	**4.26**	**40**	**P**	**Pn**	**20 11 10.6**	**-0.1**
SWI	**Sorong**	**6.05**	**3**	**P**	**Pn**	**20 11 34.1**	**-0.9**
	0.3nm1μm20nm,0.5s						
RKPI	**Ransiki, Papua**	**6.28**	**31**	**P**	**Pn**	**20 11 37.5**	**-0.7**
	0.3nm36nm,1.2s						
SOEI	**Soe**	**7.18**	**247**	**P**	**Pn**	**20 11 50.9**	**+0.4**
WRA	**Warramunga Arr**	**13.33**	**166**	**Pn**	**Pn**	**20 13 11.4**	**-1.9**
	1.7nm,0.3s,baz=347,slow=13,SNR=32						
WRA				Sn	Sn	20 15 30.1	-10
	1.2nm,0.3s,baz=348,slow=22,SNR=6.4						
ASAR	**Alice Springs**	**16.87**	**171**	**Pn**	**Pn**	**20 13 57.4**	**-0.7**
	0.7nm,0.3s,baz=349,slow=14,SNR=30						
ASAR				Sn	**Sn**	**20 16 56.9**	**-8.7**
	0.3nm,0.3s,baz=350,slow=26,SNR=6.2						
ASAJ	**Asahikawa**	**51.90**	**11**	**LR**	LR	20 40 35.4	
	comp=Z,227nm,20.9s,baz=258,slow=35						
MKAR	**Makanchi Array**	**68.70**	**326**	**P**	**P**	**20 21 03.0**	**+2.1**
	0.3nm,0.3s,baz=125,slow=8.1,SNR=13						

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*NIED **21** 20:25:00, 24.60N×121.50E, h77km, Mw4.8 Best double couple: M0 1.87000×10^16 NP1:φs262.00000°, δ81.00000°, λ-87.00000°. NP2:φs63.00000°, δ10.00000°, λ-109.00000°.*
*BGR **21** 20:25:15.4±0.0, 24.30N×122.36E, h74km, mb5.0*
*BJI **21** 20:25:15.7±0.0, 24.76N×121.59E, h60km, mB4.8/54, mb4.7/70, ML4.9/14, Ms4.3/60, Ms7 3.9/56*
*JMA **21** 20:25:15.5±0.1, 24.64N×121.53E, h68km±2km, M4.8*
*IDC **21** 20:25:16.8±0.5, 24.69N×121.74E, h69km±4km, mb4.4/33, mb1 4.5/35, mb1mx4.3/49, mbtmp4.7/35, MS3.8/21, Ms1 3.8/21, ms1mx3.7/32, Error ellipse: s-maj=11.2km s-min=8.7km az=95.0*
*MOS **21** 20:25:16.6±1.0, 24.64N×121.66E, h83km, mb4.8/30, Error ellipse: s-maj=6.5km s-min=4.4km az=103.0*
*NEIC **21** 20:25:16.4±1.9, 24.64N±0.05×121.64E±0.06, h68km±2km, mb4.9/192, Mwr4.8/18, Error ellipse: s-maj=8.6km s-min=7.0km az=132.0, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr-0.05; Mθθ0.02; Mφφ0.03; Mrθ2.06; Mθφ-0.10; Mφr0.41; Fault plane solution: M0 2.10000×10^16 NP1:φs164.45000°, δ2.45000°, λ-4.36000°. NP2:φs258.80000°, δ89.81000°, λ-92.44000°. Principal axes: T 2.0667, Plg45.0000°, Azm351.0000°; N 0.0633, Plg2.0000°, Azm259.0000°; P -2.1300, Plg45.0000°, Azm166.0000°;*
*ASIES **21** 20:25:16.7, 24.70N×121.60E, h64km, MW4.5*
*GCMT **21** 20:25:17.4±0.2, 24.71N±0.02×121.54E±0.02, h57km±3km, MW4.9/92, Moment Tensor Solution. s24,c28; s92,c123; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.91±.14; Mθθ0.98±.10; Mφφ-0.06±.10; Mrθ2.18±.08; Mθφ0.87±.12; Mφr0.01±.06; Best double couple: M0 2.52700×10^16 NP1:φs29.00000°, δ22.00000°, λ-147.00000°. NP2: φs267.00000°, δ78.00000°, λ-71.00000°. Principal axes: T 2.6130, Plg30.0000°, Azm342.0000°; N -0.1730, Plg19.0000°, Azm83.0000°; P -2.4400, Plg53.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **21** 20:25:17.0, 24.69N×121.64E, h99km, mb5.0*
*TAP **21** 20:25:17.0, 24.70N×121.60E, h61km, ML5.6, A*
ISC 21 20:25:16.8±0.3, 24.68N±0.02×121.61E±0.02, h69km±2km, h69km:pP-P, n640, σ1.32/813, mb4.9/197, 96C-65D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENTT	**Nioudou**	**0.06**	**221**	**⇓*i*P**	**Pn**	**20 25 26.7**	**-0.1**
	baz=202						
ENTT				*i* S	**Sn**	**20 25 33.4**	**-0.8**
	baz=202						
TWE	**Neicheng**	**0.07**	**56**	**⇓*i*P**	**Pn**	**20 25 26.8**	**0.0**
	baz=75						
TWE				*i* S	**Sn**	**20 25 33.0**	**-1.0**
	baz=75						
SLBB	**Yuanshan**	**0.07**	**20**	**⇓*i*P**	**Pn**	**20 25 26.6**	**-0.3**
	baz=29						
SLBB				*i* S	**Sn**	**20 25 33.2**	**-1.0**
	baz=29						
NDT	**Datong Townshi**	**0.12**	**227**	**⇓*i*P**	**Pn**	**20 25 26.9**	**-0.1**
	baz=219						
NDT				*i* S	**Sn**	**20 25 33.4**	**-1.0**
	baz=219						
NWLT	**Wulai**	**0.13**	**314**	**⇓*i*P**	**Pn**	**20 25 26.5**	**-0.5**
	baz=310						
NWLT				*i* S	**Sn**	**20 25 32.8**	**-1.7**
	baz=310						
ILA	**Ilan**	**0.15**	**58**	**⇓*i*P**	**Pn**	**20 25 27.1**	**+0.1**
	baz=65						
ILA				*i* S	**Sn**	**20 25 34.7**	**+0.2**
	baz=65						
YHNB	**Yeheng**	**0.21**	**266**	**⇓P**	**Pn**	**20 25 26.9**	**-0.5**
	baz=261						
YHNB				S	**Sn**	**20 25 33.5**	**-1.7**
	baz=261						
YHNB	**Yeheng**	**0.21**	**266**		**Pn**	**20 25 26.0**	**-1.4**
NSK	**Sanguang**	**0.23**	**268**	**⇓*i*P**	**Pn**	**20 25 26.9**	**-0.5**
	baz=263						
NSK				*i* S	**Sn**	**20 25 33.7**	**-1.6**
	baz=263						
TWC	**Suao**	**0.23**	**109**	**⇑*i*P**	**Pn**	**20 25 27.4**	**0.0**
	baz=111						
TWC				*i* S	**Sn**	**20 25 34.6**	**-0.5**
	baz=111						
NTC	**Toucheng**	**0.26**	**50**	**⇓*i*P**	**Pn**	**20 25 27.5**	**-0.1**
	baz=53						
NTC				S	**Sn**	**20 25 34.7**	**-0.7**
	baz=53						
ENA	**Nanau**	**0.28**	**155**	**⇑*i*P**	**Pn**	**20 25 27.2**	**-0.5**
	baz=153						
ENA				S	**Sn**	**20 25 34.7**	**-1.0**
	baz=153						
NHDH	**Xindian Distri**	**0.29**	**345**	**⇓*i*P**	**Pn**	**20 25 27.4**	**-0.3**
	baz=345						
NHDH				*i* S	**Sn**	**20 25 34.6**	**-1.1**
	baz=345						
TWA	**Mucha**	**0.29**	**356**	**⇓*i*P**	**Pn**	**20 25 27.6**	**-0.3**
	baz=358						
TWA				*i* S	**Sn**	**20 25 34.9**	**-0.9**
	baz=358						
TATO	**Taipei**	**0.31**	**339**		**Pn**	**20 25 27.2**	**-0.7**
NNS	**Nan Shan**	**0.32**	**221**	**⇑*i*P**	**Pn**	**20 25 28.2**	**+0.1**
	baz=217						
NNS				*i* S	**Sn**	**20 25 36.0**	**-0.5**
	baz=217						
NNSB	**Datong**	**0.33**	**219**	**⇑P**	**Pn**	**20 25 28.3**	**+0.1**
	baz=216						
NNSB				S	**Sn**	**20 25 35.8**	**-0.7**
	baz=216						
NNSH	**Datong**	**0.33**	**219**	**⇑*i*P**	**Pn**	**20 25 28.3**	**+0.1**
	baz=216						
NNSH				S	**Sn**	**20 25 35.8**	**-0.6**
	baz=216						
TIPB	**Shuangxi**	**0.35**	**35**	**⇓*i*P**	**Pn**	**20 25 28.1**	**-0.1**
	baz=36						
TIPB				S	**Sn**	**20 25 35.3**	**-1.2**
	baz=36						
TAP1	**Taipei**	**0.36**	**348**	**⇓*i*P**	**Pn**	**20 25 28.0**	**-0.3**
	baz=346						
TAP1				S	**Sn**	**20 25 35.6**	**-1.0**
	baz=346						
WLTB	**Daxi**	**0.36**	**297**	**⇓*i*P**	**Pn**	**20 25 28.3**	**+0.1**
	baz=295						
WLTB				*i* S	**Sn**	**20 25 36.5**	**-0.1**
	baz=295						
TAP	**Taipei**	**0.36**	**345**	**⇓*i*P**	**Pn**	**20 25 28.0**	**-0.3**
	baz=346						
TAP				*i* S	**Sn**	**20 25 36.0**	**-0.7**
	baz=346						
NWF	**Wu-fen Shan**	**0.42**	**22**	**⇓*i*P**	**Pn**	**20 25 28.7**	**-0.1**
	baz=23						
NWF				S	**Sn**	**20 25 36.4**	**-1.2**
	baz=23						
WFSB	**Wu-fen Shan**	**0.42**	**22**	**⇓P**	**Pn**	**20 25 28.7**	**0.0**
	baz=23						
WFSB				S	**Sn**	**20 25 36.4**	**-1.1**
	baz=23						
TWS1	**Kuangyinshan**	**0.45**	**337**	**⇓*i*P**	**Pn**	**20 25 29.0**	**0.0**
	baz=338						
TWS1				S	**Sn**	**20 25 37.6**	**-0.3**
	baz=338						
YM01	**YM01**	**0.46**	**356**	**⇓*i*P**	**Pn**	**20 25 28.9**	**-0.3**
	baz=356						
YM01				S	**Sn**	**20 25 37.2**	**-1.1**
	baz=356						
YM10	**YM10**	**0.47**	**355**	**⇓*i*P**	**Pn**	**20 25 29.0**	**-0.3**
	baz=355						
YM10				S	**Sn**	**20 25 37.1**	**-1.3**
	baz=355						
TWB1	**Santiao Chiao**	**0.47**	**47**	**⇓*i*P**	**Pn**	**20 25 29.4**	**+0.1**
	baz=49						
TWB1				*i* S	**Sn**	**20 25 37.5**	**-0.8**
	baz=49						
YM04	**YM04**	**0.47**	**352**	**⇓P**	**Pn**	**20 25 29.0**	**-0.3**
	baz=352						
YM04				S	**Sn**	**20 25 37.0**	**-1.3**
	baz=352						
NCU	**National Centr**	**0.48**	**307**	**⇓*i*P**	**Pn**	**20 25 29.2**	**0.0**
	baz=305						
NCU				*i* S	**Sn**	**20 25 38.1**	**-0.3**
	baz=305						
NCUH	**Zhongli**	**0.48**	**306**	**⇓*i*P**	**Pn**	**20 25 29.2**	**0.0**
	baz=305						
NCUH				S	**Sn**	**20 25 38.1**	**-0.3**
	baz=305						
YM05	**YM05**	**0.48**	**355**	**⇓P**	**Pn**	**20 25 29.0**	**-0.4**
	baz=356						
YM05				S	**Sn**	**20 25 37.1**	**-1.5**
	baz=356						
YM11	**YM11**	**0.48**	**356**	**⇓P**	**Pn**	**20 25 29.1**	**-0.4**
	baz=356						
YM11				S	**Sn**	**20 25 37.5**	**-1.1**
	baz=356						
ETLH	**Xiulin Townshi**	**0.49**	**194**	**⇑P**	**Pn**	**20 25 29.4**	**-0.1**
	baz=192						
ETLH				*e*S	**Sn**	**20 25 38.5**	**-0.3**
	baz=192						
EOS1	**EOS1**	**0.49**	**106**	**⇑*e*P**	**Pn**	**20 25 30.4**	**+1.0**
	baz=107						
EOS1				*e*S	**Sn**	**20 25 40.3**	**+1.7**
	baz=107						
YM03	**YM03**	**0.50**	**353**	**⇓P**	**Pn**	**20 25 29.1**	**-0.5**
	baz=353						
YM03				S	**Sn**	**20 25 37.7**	**-1.1**
	baz=353						
NTST	**Danshui**	**0.50**	**343**	**⇓*i*P**	**Pn**	**20 25 29.5**	**0.0**
	baz=343						
NTST				*e*S	**Sn**	**20 25 38.6**	**-0.2**
	baz=343						
ANP	**Anpu**	**0.51**	**351**	**⇓*i*P**	**Pn**	**20 25 29.1**	**-0.5**
	baz=352						
ANP				S	**Sn**	**20 25 37.9**	**-1.2**
	baz=352						
NACB	**Ninganchiao**	**0.51**	**181**	**⇑P**	**Pn**	**20 25 28.7**	**-0.9**
	baz=180						
NACB				*e*S	**Sn**	**20 25 37.7**	**-1.2**
	baz=180						
NACB	**Ninganchiao**	**0.51**	**181**		**Pn**	**20 25 28.3**	**-1.2**
LIOB	**Emei**	**0.54**	**266**	**⇓*i*P**	**Pn**	**20 25 29.9**	**0.0**
	baz=264						
LIOB				S	**Sn**	**20 25 38.8**	**-0.8**
	baz=264						
NSTT	**Nanjuang**	**0.56**	**265**	**⇓*i*P**	**Pn**	**20 25 29.9**	**-0.1**
	baz=262						
NSTT				S	**Sn**	**20 25 39.1**	**-0.6**
	baz=262						
SBCB	**Hsinchu**	**0.58**	**281**	**⇓P**	**Pn**	**20 25 30.4**	**+0.1**
	baz=279						
SBCB				S	**Sn**	**20 25 39.4**	**-0.7**
	baz=279						
TWT	**Tachien**	**0.58**	**223**	**⇑*i*P**	**Pn**	**20 25 31.4**	**+0.9**
	baz=221						
TWT				S	**Sn**	**20 25 41.2**	**+0.6**
	baz=221						
HSN	**Hsinchu**	**0.59**	**282**	**⇓*i*P**	**Pn**	**20 25 30.2**	**-0.2**
	baz=283						
HSN				S	**Sn**	**20 25 39.3**	**-1.1**
	baz=283						
TDCB	**Techi**	**0.59**	**224**	**⇑P**	**Pn**	**20 25 31.4**	**+0.8**
	baz=222						
TDCB				S	**Sn**	**20 25 40.3**	**-0.4**
	baz=222						
TWD	**Chiawan**	**0.60**	**181**	**⇑*i*P**	**Pn**	**20 25 29.6**	**-0.9**
	baz=179						
TWD				S	**Sn**	**20 25 39.8**	**-0.8**
	baz=179						
WHF	**Hehuan Shan**	**0.62**	**210**	**⇑*i*P**	**Pn**	**20 25 31.8**	**+0.6**
	baz=208						
WHF				S	**Sn**	**20 25 41.6**	**-0.1**
	baz=208						
HWA	**Hwalien**	**0.70**	**180**	**⇑P**	**Pn**	**20 25 31.1**	**-0.5**
	baz=179						
HWA				*e*S	**Sn**	**20 25 42.0**	**-0.5**
	baz=179						
WHP	**Taichung City**	**0.73**	**236**	**⇑*i*P**	**Pn**	**20 25 32.8**	**+0.8**
	baz=234						
WHP				S	**Sn**	**20 25 43.4**	**+0.2**
	baz=234						
CHGB	**Renai**	**0.74**	**213**	**⇑P**	**Pn**	**20 25 33.2**	**+0.9**
	baz=211						
CHGB				S	**Sn**	**20 25 43.8**	**+0.1**
	baz=211						
NMLH	**Miaoli**	**0.76**	**259**	**⇓P**	**Pn**	**20 25 32.6**	**+0.4**
	baz=257						
NMLH				S	**Sn**	**20 25 43.6**	**-0.1**
	baz=257						
ENLB	**Shoufeng**	**0.78**	**180**	**⇑*e*P**	**Pn**	**20 25 30.9**	**-1.6**
	baz=179						
ENLB				S	**Sn**	**20 25 44.0**	**0.0**
	baz=179						
NSY	**Sanyi**	**0.82**	**251**	**⇑*i*P**	**Pn**	**20 25 33.5**	**+0.6**
	baz=249						
NSY				S	**Sn**	**20 25 45.3**	**+0.3**
	baz=249						
OWD	**Renai**	**0.83**	**209**	**⇑P**	**Pn**	**20 25 33.9**	**+0.7**
	baz=207						
OWD				S	**Sn**	**20 25 45.6**	**+0.3**
	baz=207						
TWQ1	**Liyutan**	**0.83**	**246**	**⇑*i*P**	**Pn**	**20 25 33.5**	**+0.3**
	baz=245						
TWQ1				S	**Sn**	**20 25 44.8**	**-0.4**
	baz=245						
PTSB	**Yuanli**	**0.86**	**254**	**P**	**Pn**	**20 25 34.2**	**+0.8**
	baz=252						
PTSB				S	**Sn**	**20 25 45.5**	**-0.2**
	baz=252						
ESL	**Shilin**	**0.88**	**190**	**⇑*i*P**	**Pn**	**20 25 32.5**	**-1.3**
	baz=189						
ESL				*e*S	**Sn**	**20 25 44.2**	**-2.1**
	baz=189						
DPDB	**Guoxing**	**0.90**	**224**	**⇑*i*P**	**Pn**	**20 25 34.8**	**+0.8**
	baz=222						
DPDB				*e*S	**Sn**	**20 25 47.3**	**+0.6**
	baz=222						
WDJ	**Dajia District**	**0.94**	**249**	**⇑P**	**Pn**	**20 25 35.1**	**+0.6**
	baz=248						
WDJ				S	**Sn**	**20 25 47.9**	**+0.3**
	baz=248						
TCU	**Taichung**	**1.00**	**238**	**⇑P**	**Pn**	**20 25 35.9**	**+0.6**
	baz=236						
TCU				S	**Sn**	**20 25 49.3**	**+0.3**
	baz=236						
VWDT	**VWDT**	**1.02**	**205**	**⇑P**	**Pn**	**20 25 36.4**	**+0.9**
	baz=204						
VWDT				S	**Sn**	**20 25 50.1**	**+0.8**
	baz=204						
EGFH	**Guangfu**	**1.02**	**189**	***e*P**	**Pn**	**20 25 34.3**	**-1.3**
	baz=188						
EGFH				*e*S	**Sn**	**20 25 47.6**	**-1.9**
	baz=188						
SMLT	**Sun Moon Lake**	**1.03**	**219**	**⇑*i*P**	**Pn**	**20 25 36.4**	**+0.8**
	baz=217						
SMLT				S	**Sn**	**20 25 51.1**	**+1.4**
	baz=217						
PCYT	**Pengchaiyu**	**1.03**	**24**	**⇓*e*P**	**Pn**	**20 25 35.4**	**-0.2**
	baz=25						
PCYT				S	**Sn**	**20 25 48.8**	**-0.8**
	baz=25						
TYC	**Yuchr**	**1.04**	**222**	**⇑*i*P**	**Pn**	**20 25 36.4**	**+0.7**
	baz=220						
TYC				S	**Sn**	**20 25 50.7**	**+1.0**
	baz=220						
SSLB	**Suanglung**	**1.07**	**214**	**⇑P**	**Pn**	**20 25 36.9**	**+0.7**
	baz=213						
SSLB				S	**Sn**	**20 25 51.0**	**+0.4**
	baz=213						
SSLB	**Suanglung**	**1.07**	**214**		**Pn**	**20 25 36.9**	**+0.7**
WCHH	**Zhanghua**	**1.13**	**238**	**⇑P**	**Pn**	**20 25 37.2**	**+0.4**
	baz=237						
WCHH				*e*S	**Sn**	**20 25 52.1**	**+0.3**
	baz=237						
WNT	**Mingjian**	**1.16**	**227**	**⇑*i*P**	**Pn**	**20 25 38.0**	**+0.7**
	baz=225						
WNT				S	**Sn**	**20 25 53.3**	**+0.7**
	baz=225						
WJS	**Zhushan**	**1.18**	**223**	**⇑*i*P**	**Pn**	**20 25 38.2**	**+0.7**
	baz=222						
WJS				S	**Sn**	**20 25 53.8**	**+0.9**
	baz=222						
HGSD	**Ruisui**	**1.20**	**188**	**⇑P**	**Pn**	**20 25 36.8**	**-0.9**
	baz=187						
HGSD				S	**Sn**	**20 25 53.1**	**-0.3**
	baz=187						
WHYT	**Xinyi Township**	**1.20**	**215**	**⇑P**	**Pn**	**20 25 38.8**	**+1.0**
	baz=214						
WHYT				*e*S	**Sn**	**20 25 55.1**	**+1.5**
	baz=214						
EHY	**Hungye**	**1.20**	**193**	**⇑P**	**Pn**	**20 25 36.1**	**-1.7**
	baz=191						
EHY				*e*S	**Sn**	**20 25 52.1**	**-1.5**
	baz=191						
JYNG	**Yonagunijimaku**	**1.24**	**101**	**P**	**Pn**	**20 25 38.7**	**+0.4**
JYNG				S	**Sn**	**20 25 54.8**	**+0.5**
YOJ	**Yonaguni jima**	**1.30**	**100**	**⇑P**	**Pn**	**20 25 39.4**	**+0.4**
	baz=100						
YOJ				S	**Sn**	**20 25 55.4**	**-0.3**
	baz=100						
YOJ	**Yonaguni jima**	**1.30**	**100**	**P**	**Pn**	**20 25 39.4**	**+0.4**
YOJ				S	**Sn**	**20 25 55.5**	**-0.2**
YOJ	**Yonaguni jima**	**1.30**	**100**		**Pn**	**20 25 39.3**	**+0.3**
YOJ	**Yonaguni jima**	**1.30**	**100**	**P**	**Pn**	**20 25 39.3**	**+0.3**
YULB	**Yu-li**	**1.32**	**193**	***e*P**	**Pn**	**20 25 37.5**	**-1.8**
	baz=192						
YULB				*e*S	**Sn**	**20 25 53.9**	**-2.3**
	baz=192						
YULB	**Yu-li**	**1.32**	**193**		**Pn**	**20 25 37.5**	**-1.8**
YUS	**Yu-Shan**	**1.33**	**207**	**⇑*i*P**	**Pn**	**20 25 41.0**	**+1.0**
	baz=206						
YUS				S	**Sn**	**20 25 58.6**	**+1.4**
	baz=206						
TWF1	**Yuli**	**1.36**	**192**	**⇑P**	**Pn**	**20 25 38.1**	**-1.7**
	baz=191						
TWF1				*e*S	**Sn**	**20 25 56.2**	**-0.9**
	baz=191						
CHN5	**Tsauling**	**1.38**	**218**	**⇑*i*P**	**Pn**	**20 25 40.9**	**+0.7**
	baz=217						
CHN5				S	**Sn**	**20 25 59.2**	**+1.5**
	baz=217						
WGK	**Gukeng**	**1.38**	**224**	**⇑*i*P**	**Pn**	**20 25 41.0**	**+0.9**
	baz=222						
WGK				S	**Sn**	**20 25 59.0**	**+1.4**
	baz=222						
ALS	**Alishan**	**1.38**	**212**	**⇑*e*P**	**Pn**	**20 25 41.4**	**+1.0**
	baz=211						
ALS				*e*S	**Sn**	**20 25 59.9**	**+1.8**
	baz=211						
RLNB	**Erlin**	**1.39**	**236**	**⇑P**	**Pn**	**20 25 40.5**	**+0.4**
	baz=234						
RLNB				S	**Sn**	**20 25 57.1**	**-0.6**
	baz=234						
WDLH	**Douliu**	**1.39**	**225**	**⇑*e*P**	**Pn**	**20 25 41.0**	**+0.8**
	baz=223						
WDLH				S	**Sn**	**20 25 59.5**	**+1.6**
	baz=223						
WTCT	**Ta-ch'eng**	**1.46**	**236**	**⇑P**	**Pn**	**20 25 41.3**	**+0.1**
	baz=235						
WTCT				S	**Sn**	**20 25 58.9**	**-0.6**
	baz=235						
FULB	**Fuli**	**1.51**	**191**	**⇑*e*P**	**Pn**	**20 25 40.9**	**-1.0**
	baz=190						
FULB				*e*S	**Sn**	**20 26 01.2**	**+0.5**
	baz=190						
WMLT	**Mailiao**	**1.54**	**236**	***e*P**	**Pn**	**20 25 42.7**	**+0.5**
	baz=234						
WMLT				*e*S	**Sn**	**20 26 01.4**	**+0.1**
	baz=234						
CHN2	**Minshiung**	**1.54**	**222**	***e*P**	**Pn**	**20 25 43.2**	**+0.9**
	baz=221						
CHN2				*e*S	**Sn**	**20 26 03.0**	**+1.4**
	baz=221						
ELDTW	**Lidau**	**1.58**	**200**	**⇑*e*P**	**Pn**	**20 25 42.4**	**-0.5**
	baz=199						

ELDTW eS Sn 20 26 02.6 -0.1
baz=199
CHKT Chengkung 1.59 188 eP Pn 20 25 42.0 -0.9
baz=187
CHKT S Sn 20 26 01.8 -1.0
baz=187
CHY Chiayi 1.60 223 P Pn 20 25 43.8 +0.7
baz=221
CHY S Sn 20 26 04.0 +1.1
baz=221
CHN4 Tsaushan 1.62 215⇑iP Pn 20 25 44.4 +1.0
baz=214
CHN4 eS Sn 20 26 05.6 +2.2
baz=214
WSF Szhu 1.64 231⇑iP Pn 20 25 43.8 +0.2
baz=229
WSF S Sn 20 26 04.0 +0.2
baz=229
TPUB Ta-pu 1.64 213 ⇑P Pn 20 25 44.5 +0.8
baz=212
TPUB S Sn 20 26 04.5 +0.6
baz=212
TPUB Ta-pu 1.64 213 Pn 20 25 44.0 +0.4
WLGB Puzi 1.69 225 ⇑P Pn 20 25 45.1 +0.8
baz=224
WLGB S Sn 20 26 06.2 +1.1
baz=224
WTP Ta-pu 1.70 213⇑iP Pn 20 25 45.1 +0.7
baz=211
WTP S Sn 20 26 06.2 +1.0
baz=211
STYT Tauyuan 1.70 207⇑iP Pn 20 25 45.6 +1.1
baz=206
STYT eS Sn 20 26 06.4 +1.0
baz=206
TWK Hsinying 1.74 216⇑iP Pn 20 25 45.7 +0.7
baz=215
TWK S Sn 20 26 06.9 +0.5
baz=215
SNST Tainan City 1.78 215 ⇑P Pn 20 25 46.1 +0.7
baz=214
SNST S Sn 20 26 07.8 +0.7
baz=214
CHN1 Nanshi 1.79 214⇑iP Pn 20 25 46.2 +0.6
baz=213
CHN1 S Sn 20 26 08.1 +0.6
baz=213
CHN8 Yiju 1.85 224⇑iP Pn 20 25 46.9 +0.6
baz=223
CHN8 S Sn 20 26 09.7 +0.9
baz=223
SGST Jiashian 1.85 211⇑eP Pn 20 25 46.4 -0.1
baz=209
SGST eS Sn 20 26 09.1 +0.2
baz=209
PTTC Pingtan 1.85 296⇓eP Pn 20 25 45.7 -0.7
baz=295
SLGT Liugui 1.90 208 eP Pn 20 25 48.2 +1.2
baz=207
SLGT eS Sn 20 26 11.2 +1.1
baz=207
TWG Pinlang 1.92 195⇑eP Pn 20 25 45.6 -1.7
baz=194
TWG Pinlang 1.92 195 Pn 20 25 45.6 -1.7
TWGBT Beinan 1.92 195⇑eP Pn 20 25 45.6 -1.8
baz=194
TWGBT eS Sn 20 26 09.1 -1.5
baz=194
CHN3 Shinhua 1.96 216⇑iP Pn 20 25 49.2 +1.3
baz=215
CHN3 eS Sn 20 26 11.9 +0.3
baz=215
IRIF Iriomote-Funau 1.96 100 P Pn 20 25 48.1 +0.2
IRIF eS Sn 20 26 11.7 +0.1
TTN Taitung 1.97 192 eP Pn 20 25 47.5 -0.5
baz=191
TWH Lutao 1.97 184 ⇑P Pn 20 25 47.0 -1.0
baz=183
TWH eS Sn 20 26 09.9 -1.9
baz=183
SCLT Jiali 1.98 221 ⇑P Pn 20 25 48.9 +0.8
baz=220
SCLT S Sn 20 26 13.2 +1.1
baz=220
VWUC VWUC 1.98 279⇓eP Pn 20 25 47.8 -0.4
baz=278
TAI1 Yung-k'ang 2.07 218⇑eP Pn 20 25 50.3 +1.0
baz=217
TAI1 eS Sn 20 26 15.0 +1.0
baz=217
MATB Ma-tsu 2.10 315⇑eP Pn 20 25 48.9 -0.8
baz=313
HATJ Hateruma jima 2.10 107 P Pn 20 25 50.6 +0.9
HATJ eS Sn 20 26 16.2 +1.4
SSD Sandimen 2.13 205 ⇑P Pn 20 25 51.2 +1.1
baz=204
SSD eS Sn 20 26 16.7 +1.1
baz=204
TWM1 Shoushan 2.15 211 ⇑P Pn 20 25 52.1 +1.6
baz=209
ECL Taimali 2.16 196 eP Pn 20 25 49.0 -1.6
baz=195
PNG Penghu 2.18 240 ⇑P Pn 20 25 50.2 -0.6
baz=238
PNG eS Sn 20 26 14.4 -2.4
baz=238
PHUB P'eng-hu 2.20 238 ⇑P Pn 20 25 50.4 -0.7
baz=237
PHUB eS Sn 20 26 14.4 -2.8
baz=237
SGLT Jiouru 2.20 208 eP Pn 20 25 53.1 +2.0
baz=207
JKRS Kuro-shima 2.23 101 P Pn 20 25 52.2 +0.7
JKRS S Sn 20 26 18.9 +0.8
MASBT Mashibuluo 2.25 204 ⇑P Pn 20 25 52.8 +1.0
baz=203
MASBT eS Sn 20 26 19.1 +0.6
baz=203
SNJT Kaohsiung City 2.25 212 eP Pn 20 25 52.8 +1.0
baz=210
WDGT Dungji 2.28 232 eP Pn 20 25 51.8 -0.4
baz=230
WDGT eS Sn 20 26 17.8 -1.4
baz=230
PTMZ Houxiangcun 2.29 279⇓eP Pn 20 25 51.9 -0.4
baz=278
JIJ Ishigaki jima 2.33 97 P Pn 20 25 53.0 +0.1
JIJ S Sn 20 26 19.9 -0.6
WSSB Gushan 2.38 212 eP Pn 20 25 54.8 +1.3
baz=210
SSPT Xinbi 2.39 204 eP Pn 20 25 55.4 +1.7
baz=203
EAST Anshuo 2.40 197 eP Pn 20 25 52.9 -1.0
baz=196
EAST eS Sn 20 26 24.0 +1.9
baz=196
TAW Tawu 2.41 196 eP Pn 20 25 55.2 +1.3
baz=195
KAU Kaohsiung 2.42 210 eP Pn 20 25 55.1 +1.0
baz=209
JISG Ishigakijimahi 2.46 92 P Pn 20 25 55.1 +0.5
JISG eS Sn 20 26 24.0 +0.4
SCZT Fangliau 2.47 202 eP Pn 20 25 55.8 +0.9
baz=201
VCHM Qimei 2.48 234 eP Pn 20 25 54.4 -0.4
baz=233
XPSS Dashiqiu 2.58 331⇑eP Pn 20 25 55.4 -0.8
baz=330
WLCH Liuqiu 2.58 206 eP Pn 20 25 58.8 +2.5
baz=205
TWP Hsiaoliuchiu 2.59 206 eP Pn 20 25 57.9 +1.5
baz=205
LAY Lan-yu 2.63 181 eP Pn 20 25 56.0 -1.1
baz=180
MHZQ Yeshan 2.73 302⇑eP Pn 20 25 57.4 -0.8
baz=300
QZH Quanzhou 2.75 276⇓iP Pn 20 25 58.1 -0.5
QZH S Sn 20 26 27.6 -3.1
QZH smax smax
comp=N,1μm,0.9s
QZH smax smax
comp=E,980nm,0.7s
HEN Hengchun 2.78 197 eP Pn 20 26 00.9 +1.8
baz=196
JTJ Tarama 2.81 90 P Pn 20 26 00.8 +1.4
JTJ S Sn 20 26 33.9 +1.6
TWK1 Hengchun 2.83 195 eP Pn 20 26 00.1 +0.4
baz=194

TWKBT Hengchun 2.83 195 eP Pn 20 26 00.4 +0.8
baz=194
TSEB Hengchuen, Pin 2.85 193 eP Pn 20 26 00.3 +0.4
baz=193
TSEB eS Sn 20 26 32.2 -0.8
baz=193
KNM Kinmen 2.90 265⇓eP Pn 20 26 01.9 +1.3
baz=264
KNMB Chin-men Tao 2.94 266⇓eP Pn 20 26 00.6 -0.5
baz=265
KNMB Chin-men Tao 2.94 266 Pn 20 26 00.4 -0.7
JIRB Irabujima 3.24 87 P Pn 20 26 06.7 +1.4
JIRB eS Sn 20 26 45.0 +2.3
AXDP Jialang 3.31 274⇓eP Pn 20 26 06.3 +0.1
baz=273
JIKM Ikemajima 3.32 85 P Pn 20 26 08.2 +1.9
JIKM eS Sn 20 26 46.7 +2.2
JMJ Miyako jima 2 3.35 87 eP Pn 20 26 09.3 +2.5
baz=87
JMJ2 Miyako jima3 3.38 88 P Pn 20 26 09.3 +2.1
JMJ2 eS Sn 20 26 47.0 +0.8
JOGS Gusukube 3.46 88 P Pn 20 26 10.4 +2.2
JOGS eS Sn 20 26 48.9 +1.0
ZPLA Ao Xicun 3.60 259⇓eP Pn 20 26 09.9 -0.2
baz=257
ZZJH Jiuhuzhen 3.63 267 eP Pn 20 26 10.3 -0.2
baz=266
VDOS Pratas Island 6.00 230 eP Pn 20 26 45.1 +2.1
baz=228
JOW Kunigami 6.38 69 eP Pn 20 26 49.0 +0.8
baz=70
JOW Kunigami 6.38 69 P Pn 20 26 48.3 +0.1
1.5nm,0.3s,baz=206,slow=17,SNR=14
JOW Kunigami 6.38 69 Pn 20 26 48.7 +0.5
SSE Sheshan 6.40 357 P Pn 20 26 47.6 -0.8
SSE S Sn 20 27 56.8 -3.2
SSE pmax pmax
comp=Z,100nm,0.8s
SSE smax smax
comp=N,570nm,1.2s
SSE smax smax
comp=E,680nm,0.8s
SZP Santa 7.18 189 Pn 20 26 56.4 -2.7
HKPS Hong Kong Po S 7.26 252 Pn Pn 20 26 59.3 -1.0
HKPS Sn 20 28 16.4 -4.9
GZH Guangzhou 7.73 260 P Pn 20 27 02.4 -4.2
GZH S Sn 20 28 18.0 -15
GZH smax smax
comp=N,520nm,1.0s
GZH smax smax
comp=E,410nm,0.8s
NJ2 Nanjing 7.73 342 eP Pn 20 27 05.3 -1.3
NJ2 S Sn 20 28 30.1 -2.5
NJ2 pmax pmax
comp=Z,280nm,3.5s
NJ2 smax smax
comp=N,940nm,1.0s
NJ2 smax smax
comp=E,880nm,1.1s
NJ2 LR LR
comp=N,2μm,5.3s
NJ2 LR LR
comp=E,4μm,4.8s
WHN Wuhan 8.69 314 P Pn 20 27 18.4 -1.3
WHN S Sn 20 28 52.4 -3.7
WHN smax smax
comp=N,1μm,1.0s
WHN smax smax
comp=E,830nm,0.8s
TGY Tagaytay City 10.55 184 LR LR 20 32 31.1
comp=Z,560nm,19.2s,baz=302,slow=41
JNU Nakatsue 11.68 42 P Pn 20 28 02.8 +2.1
0.6nm,0.3s,baz=236,slow=8.8,SNR=30
JNU LR LR 20 32 24.6
comp=Z,378nm,20.9s,baz=226,slow=37
JNU Nakatsue 11.68 42 Pn 20 28 04.2 +3.6
TIA Tai'an 12.12 342 P Pn 20 28 05.9 -0.7
TIA pmax pmax
comp=Z,8.0nm,0.6s
TIA LR LR
comp=N,390nm,6.8s
TIA LR LR
comp=E,530nm,3.3s
TIA LR LR
comp=Z,540nm,9.5s
QIZ Qiongzhong 12.29 245 P Pn 20 28 06.1 -2.8
QIZ S Sn 20 30 21.3 -2.8
QIZ LR LR
comp=E,250nm,11.1s
QIZ LR LR
comp=Z,330nm,23.0s
TJN Taejon 12.66 22ceP Pn 20 28 16.2 +2.3
INCN Inchon 13.46 17 P P 20 28 28.9 -2.8
INCN Inchon 13.46 17 P P 20 28 28.9 -2.8
GYA Guiyang 13.60 281⇑iP P 20 28 31.8 -1.6
GYA PP PnPn 20 28 40.1 +4.9
GYA sP Pn 20 28 49.6 +23
GYA S Sn 20 31 03.8 +7.5
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=N,510nm,10.6s
GYA LR LR
comp=E,320nm,11.1s
GYA LR LR
comp=Z,310nm,10.2s
KSRS Korea Array 13.82 21 P Pn 20 28 30.6 +1.2
0.7nm,0.3s,baz=198,slow=13,SNR=20
KS19 Wonju Array Si 13.85 21 Pn 20 28 31.8 +1.9
DL2 Dalian 14.18 0⇑iP Pn 20 28 36.6 +2.5
DL2 pP P 20 28 48.3 +8.7
DL2 S Sn 20 31 17.9 +8.0
DL2 pmax pmax
comp=Z,61nm,1.0s
DL2 pmax pmax
comp=Z,390nm,4.9s
DL2 LR LR
comp=N,270nm,13.9s
DL2 LR LR
comp=E,440nm,12.6s
DL2 LR LR
comp=Z,620nm,14.7s
XAN Xi'an 14.45 313 P Pn 20 28 38.3 +0.5
XAN pP P 20 28 44.8 +2.1
XAN S Sn 20 31 12.3 -4.5
XAN sS S 20 31 29.8 -2.9
XAN pmax pmax
comp=Z,35nm,1.3s
XAN pmax pmax
comp=Z,210nm,3.8s
XAN LR LR
comp=N,600nm,4.3s
XAN LR LR
comp=E,400nm,3.8s
XAN LR LR
comp=Z,240nm,6.2s
TIY Taiyuan 15.16 331 eP P 20 28 50.9 +0.3
TIY pmax pmax
comp=Z,93nm,1.4s
TIY LR LR
comp=N,240nm,10.0s
TIY LR LR
comp=E,470nm,9.5s
TIY LR LR
comp=Z,440nm,22.6s
BJI Beijing 15.98 345 P P 20 28 59.1 -0.4
BJI pmax pmax
comp=Z,30nm,1.0s
BJI LR LR
comp=N,280nm,12.3s
BJI LR LR
comp=E,260nm,18.1s
BJI LR LR
comp=Z,410nm,39.2s
SLVN Son La 16.64 262 P P 20 29 07.6 +0.5
CD2 Chengdu 16.96 295 P Pn 20 29 09.8 +0.2
CD2 S S 20 32 20.8 -3.1
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 LR LR
comp=N,420nm,6.7s
CD2 LR LR
comp=E,530nm,6.7s
CD2 LR LR

comp=Z,410nm,6.7s
INU Inuyama 17.04 48 P Pn 20 29 10.3 -0.1
KMI Kunming 17.13 275 P P 20 29 17.6 +5.0
KMI pmax pmax
comp=Z,7.0nm,0.6s
KMI LR LR
comp=N,170nm,4.8s
KMI LR LR
comp=E,280nm,6.7s
KMI LR LR
comp=Z,470nm,11.0s
SNY Shenyang 17.18 5 ⇓P P 20 29 14.6 +1.8
SNY S Sn 20 32 21.3 -1.2
SNY pmax pmax
comp=Z,430nm,4.3s
SNY LR LR
comp=N,490nm,10.0s
SNY LR LR
comp=E,380nm,10.0s
SNY LR LR
comp=Z,670nm,14.5s
DLV T Lat 17.75 227 P Pn 20 29 19.7 +0.1
DLV IAmb IAmb 20 29 58.0
comp=Z,90nm,1.5s
UBPT Khong Chiam 17.80 241 P Pn 20 29 20.2 +0.2
KCP Kidapawan 17.89 169⇑eP P 20 29 20.3 -0.6
JHJ Hachijo jima 2 17.98 58 LR LR 20 35 36.8
comp=Z,116nm,20.1s,baz=40,slow=35
MAJO Matsushiro 18.51 46 P Pn 20 29 30.1 +1.7
MAJO Matsushiro 18.51 46⇓eP Pn 20 29 29.7 +1.2
MAT Matsushiro 18.51 46 P Pn 20 29 28.3 -0.2
MAT S S 20 32 52.4 -2.3
MJB9 Matsu-Tunnel 18.51 46 P Pn 20 29 30.4 +2.0
MJAR Matsushiro Arr 18.51 46 P Pn 20 29 28.2 -0.2
comp=Z,0.1nm,0.3s,baz=240,slow=9.7,SNR=12
MJAR LR LR 20 36 57.8
comp=Z,140nm,20.9s,baz=230,slow=38
BTO Baotou 18.61 331 eP Pn 20 29 30.8 +1.1
BTO S S 20 32 42.8 -14
LZH Lanzhou 19.05 311 ⇑P Pn 20 29 35.9 +0.9
LZH sP pP 20 29 51.6 +3.8
LZH S S 20 33 03.0 -3.2
LZH sS Sn 20 33 16.6 +8.7
LZH pmax pmax
comp=Z,42nm,1.2s
LZH pmax pmax
comp=Z,220nm,4.3s
LZH LR LR
comp=Z,710nm,11.0s
LZH LR LR
comp=Z,530nm,11.7s
LZH LR LR
comp=Z,790nm,12.5s
KKM Kota Kinabalu 19.24 196 Pn 20 29 36.8 -0.6
KKM IAmb IAmb 20 29 40.8
comp=Z,103nm,1.1s
CN2 Changchun 19.33 8 eP Pn 20 29 37.8 -0.3
CN2 esP sP 20 29 58.1 -1.2
CN2 eS S 20 33 05.9 -5.6
CN2 pmax pmax
comp=Z,40nm,0.7s
CN2 LR LR
comp=Z,280nm,15.0s
CN2 LR LR
comp=Z,190nm,15.0s
CN2 LR LR
comp=Z,400nm,16.0s
MSHR Mys Shultsa 19.52 22c iP Pn 20 29 40.5 +0.2
VLA Vladivostok 20.24 22c iP Pn 20 29 48.4 -0.4
PBKT Sadao Pong 20.92 251 P Pn 20 29 56.0 -1.0
MDJ Mudanjiang 20.92 16 P P 20 29 55.1 +1.5
MDJ pmax pmax
comp=Z,26nm,1.3s
MDJ pmax pmax
comp=Z,160nm,4.0s
USA0B Ussuriysk Arra 21.23 21 P P 20 29 58.6 +1.6
USA0B Ussuriysk Arra 21.23 21 P P 20 29 58.6 +1.6
USA0B pmax pmax
comp=Z,27nm,1.0s
USRK Ussuriysk Ar. 21.23 21 P P 20 29 57.7 +0.7
comp=Z,9.5nm,0.7s,baz=211,slow=11,SNR=20
CHTO Chiang Mai 21.83 259 P P 20 30 05.5 +1.8
CHTO Chiang Mai 21.83 259 P P 20 30 05.5 +1.8
CHTO pmax pmax
comp=Z,12nm,1.0s
CM31 Chiang Mai Arr 21.96 258 P P 20 30 05.7 +0.7
CMAR Chiang Mai Arr 21.96 258 P P 20 30 08.1 +3.1
comp=Z,5.2nm,1.0s,baz=63,slow=8.2,SNR=30
CMAR LR LR 20 40 40.7
comp=Z,75nm,18.1s,baz=74,slow=42
GTA Gaotai 23.51 314 ⇑P P 20 30 21.3 +0.5
GTA pP pP 20 30 33.0 -3.2
GTA sP sP 20 30 36.8 -7.9
GTA pmax pmax
comp=Z,33nm,1.1s
GTA pmax pmax
comp=Z,230nm,5.2s
GTA LR LR
comp=Z,140nm,14.6s
GTA LR LR
comp=Z,150nm,15.9s
GTA LR LR
comp=Z,150nm,14.6s
SBUM Sibu 23.89 204 P P 20 30 23.1 -1.2
SBUM IAmb IAmb 20 30 25.6
comp=Z,49nm,0.9s
SBUM Sibu 23.89 204 P P 20 30 24.0 -0.2
MRSI Marisa 24.07 179 P P 20 30 27.6 +1.8
comp=Z,801nmcomp=Z,54nm,1.2s
MPSI Mapaga 24.26 184 P P 20 30 28.7 +1.1
comp=Z,815nmcomp=Z,77nm,1.2s
TNTI Ternate 24.42 166 P P 20 30 26.5 -2.5
GUMO Guam 24.55 112 P P 20 30 30.7 +0.5
comp=Z,14nm,0.3s,baz=190,slow=18,SNR=4.0
GUMO Guam 24.55 112 P P 20 30 31.0 +0.7
ERM Erimo 24.84 41⇑eP P 20 30 33.8 +1.1
ERM pmax pmax
comp=Z,38nm,1.0s
APSI Ampana 25.44 180 P P 20 30 39.7 +1.4
comp=Z,892nmcomp=Z,96nm,1.2s
KSM Kuching 25.53 207 P P 20 30 39.1 -0.1
LUWI Luwuk 25.60 177 P P 20 30 41.9 +2.2
comp=Z,1μmcomp=Z,123nm,0.9s
LUWI Luwuk 25.60 177 P P 20 30 39.2 -0.6
KLR Kul'dur 25.76 15 P P 20 30 41.4 +0.5
comp=Z,37nm,1.0s,baz=230,slow=7.7,SNR=50
KLR Kul'dur 25.76 15c iP P 20 30 41.9 +1.0
KLR pmax pmax
comp=Z,44nm,0.9s
LBMI Labuha 25.81 166 P P 20 30 44.3 +2.6
comp=Z,93nm,0.9s
ULN Ulaanbaatar 25.85 337 P P 20 30 42.3 +0.3
ULN P 20 30 42.4 +0.4
ULN IAmb IAmb 20 31 00.8
comp=Z,27nm,0.9s
ASAJ Asahikawa 25.86 36 P P 20 30 43.1 +1.1
comp=Z,11nm,0.8s,baz=236,slow=9.1,SNR=12
JKA Kamikawa-asahi 25.86 36 P P 20 30 43.1 +1.1
SONM Songino Array 26.06 336 P P 20 30 44.5 +0.6
comp=Z,13nm,0.9s,baz=153,slow=9.8,SNR=80
SONM pP pP 20 31 01.4 +1.2
comp=Z,27nm,0.9s,baz=155,slow=10.0,SNR=14
SONM LR LR 20 42 18.4
comp=Z,400nm,19.3s,baz=172,slow=39
BKB Balikpapan 26.19 191 P P 20 30 43.2 -1.9
SHL Shillong 26.90 278 P P 20 30 52.6 +0.9
SHL IAmb IAmb 20 31 31.8
comp=Z,63nm,1.5s
SHL Shillong 26.90 278 P P 20 30 52.6 +0.9
SHL pmax pmax
comp=Z,63nm,1.5s
SIMRM Sittwe 26.91 266 P P 20 30 51.3 -0.3
LSA Lhasa 27.50 287 P P 20 30 58.9 +1.5
LSA sP pP 20 31 15.5 +1.7
LSA pmax pmax
comp=Z,17nm,1.3s
LSA pmax pmax
comp=Z,250nm,3.6s
LSA LR LR
comp=Z,210nm,6.5s
LSA LR LR
comp=Z,230nm,5.8s
LSA LR LR
comp=Z,440nm,6.7s
TTSI Tana Toraja 27.62 184 P P 20 30 57.5 -0.4
comp=Z,26nm,1.4s

YSS	Yuzh-Sakhalins	27.90 32	P	P	20 31 01.4	+1.2
YSS	Yuzh-Sakhalins	27.90 32⇓	eP	P	20 31 03.8	+3.6
YSS			e*PP	pP	20 31 20.1	+3.5
YSS			eS	S	20 35 40.9	+2.1
YSS			pmax	pmax		
	comp=Z,20nm,1.2s					
IPM	Ipoh	28.20 228	P	P	20 31 03.7	+0.4
IPM			IAmb	IAmb	20 31 05.0	
	comp=Z,45nm,1.2s					
IPM	Ipoh	28.20 228	P	P	20 31 01.0	-2.2
NLAI	Namlea	28.27 168	P	P	20 31 07.6	+3.9
GRNR	Gornyy	28.45 20⇑	iP	P	20 31 05.5	+0.5
GRNR			pmax	pmax		
	comp=Z,7.0nm,0.8s					
GRNR			MLR	MLR		
	comp=Z,130nm,17.0s					
BNSI	Bone	28.95 183	P	P	20 31 11.3	+1.6
	comp=Z,28nm,1.2s					
ZAK	Zakamensk	29.32 336	eP	P	20 31 12.6	-0.3
ZAK			pmax	pmax		
	comp=Z,5.0nm,1.1s					
KAPI	Kappang	29.57 184	P	P	20 31 14.3	-1.0
	comp=Z,23nm,1.0s,baz=334,slow=11,SNR=4.2					
PBA	Port Blair	30.25 250	P	P	20 31 20.5	-0.9
TLY	Talaya	30.26 338	P	P	20 31 20.6	-0.5
TLY			IAmb	IAmb	20 31 39.4	
	comp=Z,16nm,0.9s					
TLY	Talaya	30.26 338	eP	P	20 31 22.5	+1.4
TLY			e		20 31 37.8	
TLY			pmax	pmax		
	comp=Z,27nm,0.8s					
TLY			MLR	MLR		
	comp=Z,671nm,19.0s					
IRK	Irkutsk	30.52 339	eP	P	20 31 19.5	-3.9
IRK			e		20 31 38.2	
IRK			pmax	pmax		
	comp=Z,32nm,1.7s					
TYV	Tymovskoe	30.76 26	eP	P	20 31 27.8	+2.3
TYV			eS	S	20 36 28.5	+4.9
TYV			pmax	pmax		
	comp=Z,5.0nm,1.4s					
TYV			smax	smax		
	comp=E,800nm,9.9s					
PSI	Prapat	30.85 229	P	P	20 31 28.2	+1.4
	comp=E,8.5nm,0.6s,baz=346,slow=4.8,SNR=9.7					
PSI			LR	LR	20 43 58.8	
	comp=E,108nm,18.2s,baz=32,slow=36					
RPSI	Rantau Prapat	30.93 229	P	P	20 31 27.3	-0.1
RPSI			IAmb	IAmb	20 31 29.3	
	comp=Z,22nm,1.0s					
RPSI	Rantau Prapat	30.93 229	P	P	20 31 28.2	+0.9
MOY	Mondy	31.22 335	eP	P	20 31 29.6	-0.1
MOY			pmax	pmax		
	comp=Z,30nm,2.4s					
SRBI	Singaraja	33.16 192	P	P	20 31 48.0	+1.2
	comp=Z,51nm,1.2s					
EDFI	Ende, Flores	33.23 180	P	P	20 31 45.6	-2.0
KLSI		33.50 212	P	P	20 31 48.4	-1.4
PLAI	Plampang	33.52 187	P	P	20 31 50.2	+0.3
	comp=Z,734nmcomp=Z,85nm,0.9s					
BOD	Bodaibo	33.55 353	eP	P	20 31 46.8	-3.0
BOD			pmax	pmax		
	comp=Z,5.0nm,1.6s					
MDSI	Maura Dua	33.59 213	P	P	20 31 52.0	+1.4
	comp=Z,1μmcomp=Z,21nm,1.2s					
WMQ	Urumqi	33.59 313	eP	P	20 31 51.8	+1.3
WMQ			sP	sP	20 32 13.5	-1.7
WMQ			pmax	pmax		
	comp=Z,16nm,1.5s					
WMQ			pmax	pmax		
	comp=Z,150nm,6.3s					
WMQ			LR	LR		
	comp=Z,540nm,23.9s					
WMQ			LR	LR		
	comp=Z,1μm,28.8s					
JAGI	Jajag, Banyuwa	33.75 193	P	P	20 31 52.1	+0.2
SAUI	Saumlaki	33.82 163	P	P	20 31 49.9	-2.6
WOJI	Wonogiri, Jawa	33.96 199	P	P	20 31 54.5	+0.7
	comp=Z,51nm,1.4s					
LWLI	Liwa	34.11 212	P	P	20 31 57.4	+2.2
	comp=Z,12μmcomp=Z,24nm,0.7s					
KPJI	Karang Pucung	34.14 203	P	P	20 31 57.0	+1.7
	comp=Z,941nmcomp=Z,70nm,0.8s					
LEM	Lembang	34.16 205	P	P	20 31 57.7	+2.0
	comp=Z,56nm,0.8s,baz=344,slow=20,SNR=12					
DBJI	Dramaga	34.26 207	P	P	20 31 56.4	0.0
	comp=Z,3μmcomp=Z,107nm,1.1s					
SOEI	Soe	34.33 175	P	P	20 31 54.1	-3.0
SOEI			IAmb	IAmb	20 32 16.4	
	comp=Z,23nm,1.0s					
CISI	Cisompet, Garu	34.75 204	P	P	20 32 03.9	+3.2
CISI	Cisompet, Garu	34.75 204	P	P	20 31 58.9	-1.8
YAK	Yakutsk	37.73 6	P	P	20 32 24.9	-0.7
	comp=Z,6.9nm,0.4s,baz=200,slow=1.9,SNR=15					
YAK	Yakutsk	37.73 6	P	P	20 32 24.7	-0.8
YAK	Yakutsk	37.73 6	eP	P	20 32 24.3	-1.3
YAK			e		20 32 41.4	
YAK			pmax	pmax		
	comp=Z,37nm,0.9s					
YAK			pmax	pmax		
	comp=E,5.0nm,1.1s					
YAK			pmax	pmax		
	comp=N,18nm,1.1s					
MK31	Makanchi Array	38.25 315	P	P	20 32 30.1	-0.2
MK31			IAmb	IAmb	20 32 32.0	
	comp=Z,13nm,1.0s					
MK31	Makanchi Array	38.25 315	P	P	20 32 30.1	-0.2
MK31			pmax	pmax		
	comp=Z,13nm,1.0s					
MKAR	Makanchi Array	38.25 315	P	P	20 32 30.9	+0.7
	comp=Z,11nm,0.8s,baz=107,slow=10,SNR=104					
MKAR			pP	pP	20 32 47.5	+0.4
	comp=Z,4.8nm,0.5s,baz=96,slow=11,SNR=6.7					
MAKZ	Makanchi	38.46 315	P	P	20 32 32.3	+0.4
MAKZ			IAmb	IAmb	20 32 33.9	
	comp=Z,17nm,0.9s					
MAKZ	Makanchi	38.46 315	P	P	20 32 32.3	+0.4
MAKZ			pmax	pmax		
	comp=Z,17nm,0.9s					
PETK	Petropavlovsk-	39.24 34	LR	LR	20 49 44.2	
	comp=Z,81nm,18.5s,baz=240,slow=38					
PRZ	Przheval'sk	39.65 307	P	P	20 32 43.5	+1.3
PRZ			IAmb	IAmb	20 32 48.2	
	comp=Z,11nm,0.8s					
PRZ	Przheval'sk	39.65 307	P	P	20 32 43.5	+1.3
PRZ			pmax	pmax		
	comp=Z,11nm,0.8s					
ZAA0	Zalesovo Array	40.04 327	P	P	20 32 44.2	-0.8
ZAA0			IAmb	IAmb	20 32 45.6	
	comp=Z,15nm,0.9s					
ZALV	Zalesovo Beam	40.04 327	P	P	20 32 44.6	-0.4
	comp=Z,12nm,0.8s,baz=116,slow=7.8,SNR=47					
ZALV			LR	LR	20 50 24.9	
	comp=Z,185nm,19.4s,baz=114,slow=38					
MA2	Magadan	40.38 23	P	P	20 32 47.0	-0.7
	comp=Z,11nm,0.9s,baz=202,slow=7.0,SNR=9.9					
MA2	Magadan	40.38 23	P	P	20 32 47.7	0.0
MA2			IAmb	IAmb	20 32 50.1	
	comp=Z,14nm,1.0s					
MA2	Magadan	40.38 23d	iP	P	20 32 48.9	+1.2
MA2			pmax	pmax		
	comp=Z,14nm,1.0s					
KDJ	Kajisay	40.47 307	P	P	20 32 50.1	+1.1
KDJ	Kajisay	40.47 307	P	P	20 32 50.1	+1.1
KDJ			pmax	pmax		
	comp=Z,11nm,1.0s					
KNRA	Kununurra	40.72 169	P	P	20 32 47.8	-3.1
KSH	Kashi	40.95 302	P	P	20 32 57.3	+4.4
KSH			pP	sP	20 33 14.5	-3.4
KSH			sP	pP	20 33 18.5	+8.5
KSH			PP	PnPn	20 34 31.9	-1.3
KSH			S	S	20 39 04.9	+4.9
KSH			sS	sS	20 39 32.3	+3.2
KSH			SS	SS	20 42 07.1	+3.1
KSH			pmax	pmax		
	comp=Z,19nm,0.7s					
KSH			pmax	pmax		
	comp=Z,120nm,9.0s					
KSH			LR	LR		
	comp=Z,170nm,6.8s					
KSH			LR	LR		
	comp=Z,190nm,5.9s					
KSH			LR	LR		
	comp=Z,160nm,7.5s					
ULHL	Ulahol	41.17 307	P	P	20 32 56.4	+1.7
	SNR=13					
NRN	Naryn	41.21 305	P	P	20 32 56.3	+1.1
NRN			IAmb	IAmb	20 32 58.0	
	comp=Z,14nm,0.9s					
NRN	Naryn	41.21 305	P	P	20 32 56.3	+1.1
NRN			pmax	pmax		
	comp=Z,14nm,0.9s					
KURK	Kurchatov	41.96 320	P	P	20 33 00.2	-0.6
KURK	Kurchatov	41.96 320c	iP	P	20 33 00.9	+0.1
KURK			pmax	pmax		
	comp=Z,20nm,1.7s					
PMG	Port Moresby	42.06 141	P	P	20 33 01.8	-0.2
PMG	Port Moresby	42.06 141	P	P	20 33 01.8	-0.2
PMG			pmax	pmax		
	comp=Z,56nm,0.9s					
KBK	Karagaybulak	42.19 307	P	P	20 33 04.7	+1.7
	SNR=11					
CHMS	Chumysh	42.39 307	P	P	20 33 05.9	+1.4
	SNR=9.5					
UCH	Uchtor	42.43 306	P	P	20 33 07.3	+2.0
	SNR=20					
AAK	Ala-Archa	42.51 307	P	P	20 33 07.3	+1.6
	SNR=5.4					
AAK	Ala-Archa	42.51 307	P	P	20 33 06.2	+0.5
AAK	Ala-Archa	42.51 307ce	P	P	20 33 07.5	+1.8
AAK			pmax	pmax		
	comp=Z,6.0nm,0.8s					
USP	Ospenovka	42.62 308	P	P	20 33 07.8	+1.5
	SNR=6.5					
FITZ	Fitzroy Crossi	42.70 174	P	P	20 33 05.2	-2.0
NIL	Nilore	42.84 294	P	P	20 33 08.9	+0.6
NIL	Nilore	42.84 294	P	P	20 33 08.9	+0.6
NIL			pmax	pmax		
	comp=Z,12nm,0.9s					
AML	Almayashu	43.02 306	P	P	20 33 12.1	+2.0
	SNR=14					
EKS2	Erkin-Say	43.04 307	P	P	20 33 11.5	+1.6
	SNR=9.2					
SEY	Seymchan	43.38 20	P	P	20 33 11.1	-1.0
	comp=Z,6.0nm,1.0s,baz=210,slow=4.7,SNR=11					
SEY			pP	pP	20 33 29.4	+0.1
	comp=Z,12nm,0.9s,baz=226,slow=6.1,SNR=14					
SEY	Seymchan	43.38 20⇓	eP	P	20 33 11.9	-0.2
COEN	Coen	43.80 149	P	P	20 33 15.7	-0.3
COEN			IAmb	IAmb	20 33 17.6	
	comp=Z,20nm,0.8s					
BTK	Batken	44.96 303	P	P	20 33 26.2	+0.9
BTK	Batken	44.96 303	P	P	20 33 26.2	+0.9
BTK			pmax	pmax		
	comp=Z,13nm,1.5s					
KK31	Karatay Array	45.48 307	P	P	20 33 30.1	+1.0
KK31	Karatay Array	45.48 307	P	P	20 33 30.2	+1.0
KK31			pmax	pmax		
	comp=Z,5.0nm,0.8s					
KKAR	Karatay Array	45.48 307	P	P	20 33 30.0	+0.8
KKAR	Karatay Array	45.48 307	P	P	20 33 30.0	+0.8
KKAR			pmax	pmax		
	comp=Z,5.0nm,0.8s					
PSAD1	Pilbara Seismi	45.90 182	P	P	20 33 30.9	-1.7
PSAD1			IAmb	IAmb	20 33 32.3	
	comp=Z,18nm,0.8s					
WB0	Warramunga Arr	45.90 163	P	P	20 33 30.5	-2.2
PSAC1	Pilbara Seismi	45.97 182	P	P	20 33 31.5	-1.7
PSAC1			IAmb	IAmb	20 33 32.9	
	comp=Z,21nm,0.8s					
PSAC2	Pilbara Seismi	46.00 182	P	P	20 33 31.6	-1.8
PSAC2			IAmb	IAmb	20 33 33.1	
	comp=Z,20nm,0.7s					
PSAB1	Pilbara Seismi	46.01 182	P	P	20 33 31.8	-1.6
PSAB1			IAmb	IAmb	20 33 33.2	
	comp=Z,20nm,0.8s					
PSA00	Pilbara Seismi	46.01 182	P	P	20 33 31.7	-1.8
PSA00			IAmb	IAmb	20 33 33.2	
	comp=Z,20nm,0.8s					
WRAB	Tennant Creek	46.05 163	P	P	20 33 32.5	-1.3
WRAB			IAmb	IAmb	20 34 12.0	
	comp=Z,14nm,0.7s					
WRAB	Tennant Creek	46.05 163d	iP	P	20 33 32.6	-1.3
WRAB			pmax	pmax		
	comp=Z,23nm,1.7s					
WRA	Warramunga Arr	46.06 163	P	P	20 33 32.3	-1.6
	comp=Z,10nm,0.8s,baz=345,slow=8.5,SNR=61					
WRA			pP	pP	20 33 51.5	+0.2
	comp=Z,6.9nm,0.6s,baz=344,slow=8.5,SNR=6.0					
WB2	Warramunga Arr	46.06 163	P	P	20 33 32.6	-1.3
WB2			IAmb	IAmb	20 33 34.6	
	comp=Z,16nm,0.8s					
PSAD3	Pilbara Seismi	46.09 182	P	P	20 33 32.0	-2.0
PSAD3			IAmb	IAmb	20 33 33.8	
	comp=Z,17nm,0.8s					
WR0	Warramunga Arr	46.13 163	P	P	20 33 33.0	-1.5
WR0			IAmb	IAmb	20 33 57.6	
	comp=Z,14nm,0.7s					
KBL	Kabul	46.30 295	P	P	20 33 37.7	+1.6
KBL			IAmb	IAmb	20 33 38.7	
	comp=Z,17nm,0.8s					
KBL	Kabul	46.30 295	P	P	20 33 37.7	+1.6
KBL			pmax	pmax		
	comp=Z,17nm,0.9s					
TIXI	Tiksi	47.18 3	P	P	20 33 40.6	-1.4
TIXI			IAmb	IAmb	20 33 42.4	
	comp=Z,23nm,0.9s					
TIXI	Tiksi	47.18 3ce	P	P	20 33 41.2	-0.8
TIXI			pmax	pmax		
	comp=Z,39nm,1.3s					
GIRL	Giralia	47.59 189	P	P	20 33 45.8	0.0
BRVK	Borovoye	47.60 320	P	P	20 33 45.5	-0.2
BRVK			IAmb	IAmb	20 33 47.3	
	comp=Z,14nm,1.1s					
BRVK			PcP	PcP	20 35 15.0	+0.6
BRVK	Borovoye	47.60 320c	iP	P	20 33 46.0	+0.3
BRVK			pmax	pmax		
	comp=Z,18nm,1.3s					
NRIK	Noril'sk	49.02 345	P	P	20 33 55.9	-0.4
	comp=Z,7.3nm,1.0s,baz=119,slow=7.6,SNR=10					
AS31	Alice Springs	49.52 165	P	P	20 33 59.8	-0.9
ASAR	Alice Springs	49.52 165	P	P	20 33 59.9	-0.8
	comp=Z,5.5nm,0.7s,baz=339,slow=6.7,SNR=85					
ASAR			PcP	PcP	20 35 21.0	-0.7
	comp=Z,1.0nm,0.4s,baz=345,slow=3.3,SNR=4.9					
CTAO	Charters Tower	50.56 150	P	P	20 34 07.8	-0.8
CTAO	Charters Tower	50.56 150	P	P	20 34 07.8	-0.8
BILL	Bilibino	51.08 20	P	P	20 34 11.5	-0.4
BILL	Bilibino	51.08 20	P	P	20 34 11.5	-0.4
BILL			pmax	pmax		
	comp=Z,90nm,1.8s					
HRA	Herat	51.91 295	P	P	20 34 19.6	+0.6
MORW	Morawa	53.71 186	P	P	20 34 30.4	-1.4
MORW			IAmb	IAmb	20 34 31.9	
	comp=Z,12nm,0.8s					
SVE	Sverdlovsk	53.87 323⇓	eP	P	20 34 32.7	0.0
SVE			pmax	pmax		
	comp=Z,12nm,0.9s					
GEYT	Alibeck	54.88 300	P	P	20 34 42.5	+2.0
	comp=Z,11nm,0.8s,baz=90,slow=4.4,SNR=23					
GEYT			LR	LR	21 02 20.4	
	comp=Z,81nm,19.3s,baz=50,slow=40					
GYA0B	ALIBECK ARRAY	54.88 300	P	P	20 34 41.7	+1.3
GYA0B			IAmb	IAmb	20 34 43.4	
	comp=Z,17nm,0.8s					
ARU	Arti	54.94 323	P	P	20 34 39.7	-0.8
ARU			IAmb	IAmb	20 34 58.9	
	comp=Z,8.7nm,0.7s					
ARU	Arti	54.94 323c	iP	P	20 34 40.1	-0.4
ARU			*PP	pP	20 34 57.7	-0.5
ARU					20 36 41.9	
ARU			S	S	20 42 18.4	+1.4
ARU			SS	SS	20 46 02.5	+1.5
ARU			pmax	pmax		
	comp=Z,8.0nm,0.8s					
FORT	Forrest	55.49 173	P	P	20 34 44.0	-0.6
EIDS	Eidsvold	57.35 148	P	P	20 34 55.9	-2.1
EIDS			IAmb	IAmb	20 35 26.0	
	comp=Z,29nm,1.6s					
NWAO	Narrogin (SRO)	57.44 184	P	P	20 34 57.3	-1.2
NWAO	Narrogin (SRO)	57.44 184	P	P	20 34 56.9	-1.6
NWAO			IAmb	IAmb	20 35 18.4	
	comp=Z,48nm,1.4s					
NWAO	Narrogin (SRO)	57.44 184	P	P	20 34 57.3	-1.2
NWAO			pmax	pmax		
	comp=Z,38nm,1.4s					
BBOO	Buckleboo	58.81 166	P	P	20 35 06.8	-1.3
BBOO			IAmb	IAmb	20 35 32.1	
	comp=Z,16nm,0.9s					
STKA	Stephens Creek	59.40 160	P	P	20 35 11.4	-0.7
	comp=Z,7.6nm,0.7s,baz=340,slow=7.4,SNR=28					
STKA			LR	LR	21 02 21.4	
	comp=Z,32nm,21.5s,baz=27,slow=38					
STKA	Stephens Creek	59.40 160	P	P	20 35 11.2	-1.0
SANVU	Saraoutou	59.74 127	P	P	20 35 15.1	+0.3
ANM	Nome	60.70 28	P	P	20 35 18.7	-2.0
ANM			IAmb	IAmb	20 35 41.2	
	comp=Z,11nm,0.9s					
ANM	Nome	60.70 28	P	P	20 35 18.7	-2.0
ANM			pmax	pmax		
	comp=Z,11nm,0.9s					
ARMA	Armidale	61.89 151	P	P	20 35 29.1	-0.2
ARMA			IAmb	IAmb	20 35 56.9	
	comp=Z,17nm,1.1s					
PRGR	Permogore	61.96 328	eP	P	20 35 25.6	-3.6
PRGR			e*PP	pP	20 35 45.4	-1.8
PRGR			pmax	pmax		
	comp=Z,9.0nm,0.8s					
NOUC	Port Laguerre	63.62 133	P	P	20 35 39.5	-1.3
NOUC			IAmb	IAmb	20 36 08.6	
	comp=Z,8.8nm,1.0s					
DZM	Mont Dzumac	63.69 133	P	P	20 35 41.9	+0.5
SOCY	Socotra	64.80 272	P	P	20 35 47.8	-1.1
SOCY			IAmb	IAmb	20 36 03.7	
	comp=Z,28nm,1.1s					
TTA	Tatalina	64.88 30	P	P	20 35 48.9	+0.3
TTA	Tatalina	64.88 30	P	P	20 35 48.9	+0.3
ZEI	Tsey	64.93 307	eP	P	20 35 49.0	-0.5
ZEI			pmax	pmax		
	comp=Z,8.0nm,0.8s					
KLMR	Klimovskoe	64.95 328	eP	P	20 35 46.0	-2.9
KLMR			pmax	pmax		
	comp=Z,25nm,1.5s					
KLMR	Klimovskoe	64.95 328	eP	P	20 35 46.1	-2.9
KLMR			AMP		20 35 50.4	
	comp=Z,25nm,1.5s					
VRH	Novokhopyorsk	64.96 317	eP	P	20 35 48.5	-0.7
VRH			e*PP	pP	20 36 06.3	-1.1
VRH			pmax	pmax		
	comp=Z,10.0nm,0.6s					
SVW2	Sparrevohn	65.27 32	P	P	20 35 51.2	+0.1
SVW2			IAmb	IAmb	20 36 13.2	
	comp=Z,28nm,1.5s					
TMCR	Tamitsa	65.30 331	eP	P	20 35 50.7	-0.4
TMCR			pmax	pmax		
	comp=Z,30nm,1.5s					
KBZ	Khabaz	65.47 309	P	P	20 35 54.0	+1.4
	comp=Z,5.1nm,0.9s,baz=48,slow=3.5,SNR=7.0					
KBZ	Khabaz	65.47 309	P	P	20 35 54.0	+1.4
AKH	Akhalkalaki	65.51 306	P	P	20 35 54.9	+1.7
AKH			IAmb	IAmb	20 35 56.3	
	comp=Z,15nm,1.2s					
AKH	Akhalkalaki	65.51 306	P	P	20 35 54.9	+1.7
AKH			pmax	pmax		
	comp=Z,15nm,1.2s					
KIV	Kislovodsk	65.58 309	P	P	20 35 53.2	-0.3
KIV			IAmb	IAmb	20 36 15.1	
	comp=Z,11nm,0.8s					
KIV	Kislovodsk	65.58 309	eP	P	20 35 54.4	+0.9
KIV			pmax	pmax		
	comp=Z,39nm,1.1s					
NEY	Neytrino	65.69 308⇓	eP	P	20 35 55.7	+1.4
TOO	Toolangi	65.87 159	P	P	20 35 54.6	-0.6
TOO			IAmb	IAmb	20 36 22.0	
	comp=Z,32nm,1.4s					
TOO	Toolangi	65.87 159	P	P	20 35 54.6	-0.6
TOO			pmax	pmax		
	comp=Z,32nm,1.4s					
LHI	Lord Howe Isla	66.38 145	P	P	20 35 56.8	-1.8
LPSR	Galich'ya Gora	66.43 319	eP	P	20 35 57.3	-1.4
LPSR			e*PP	pP	20 36 15.1	-1.9
LPSR			pmax	pmax		
	comp=Z,20nm,1.0s					
VORD	Divnogorie	66.51 317	eP	P	20 35 58.3	-0.8
VORD			e*PP	pP	20 36 16.4	-1.0
VORD			pmax	pmax		
	comp=Z,10.0nm,1.4s					
VSR	Storozhevoye	66.54 317	eP	P	20 35 57.7	-1.7
VSR			e*PP	pP	20 36 15.8	-1.9
VSR			pmax	pmax		
	comp=Z,8.0nm,0.7s					
PPLA	Purkeypile	66.62 30	P	P	20 36 00.5	+0.6
PPLA			IAmb	IAmb	20 36 09.6	
	comp=Z,27nm,1.4s					
MOS	Moscow	66.64 322	eP	P	20 35 59.1	-0.8
RSO	Redoubt South	66.73 33	P	P	20 35 60.0	-0.7
COLD	Coldfoot	66.81 25	P	P	20 35 59.9	-1.0
TOLK	Toolik Lake Re	66.84 23	P	P	20 36 01.8	+0.7
TOLK			IAmb	IAmb	20 36 21.4	
	comp=Z,14nm,0.8s					
MLY	Manley	66.93 27	P	P	20 36 01.9	+0.2
BPAW	Bear Paw Mtn.	66.97 28	P	P	20 36 02.4	+0.5
OHAK	Old Harbor	67.00 36	P	P	20 36 03.0	+0.8
SKT	Skwentna	67.07 31	P	P	20 36 02.3	-0.3
KTH	Kantishna Hill	67.09 29	P	P	20 36 02.8	0.0
KDAK	Kodiak Island	67.28 35	P	P	20 36 03.1	-0.8
	comp=Z,21nm,1.1s,baz=260,slow=1.6,SNR=5.7					
KDAK	Kodiak Island	67.28 35	P	P	20 36 03.5	-0.4
KDAK	Kodiak Island	67.28 35	P	P	20 36 03.5	-0.4
KDAK			pmax	pmax		
	comp=Z,57nm,1.4s					
OBN	Obninsk	67.35 322	eP	P	20 36 05.3	+0.9
OBN			e*PP	pP	20 36 22.8	-0.1
OBN			e		20 36 32.1	
OBN			e		20 38 36.7	
OBN			ePPP	PPP	20 40 12.2	
OBN			pmax	pmax		
	comp=Z,37nm,3.2s					
TRF	Thorofare Moun	67.38 29	P	P	20 36 05.6	+0.9
SUA	Susitna One	67.53 31	P	P	20 36 05.3	-0.4
SUA			IAmb	IAmb	20 36 36.4	
	comp=Z,13nm,0.9s					
BWN	Browne	67.62 28	P	P	20 36 05.5	-0.5
BWN			IAmb	IAmb	20 36 34.0	
	comp=Z,11nm,0.7s					
MCK	McKinley	67.93 29	P	P	20 36 07.5	-0.4
MCK			IAmb	IAmb	20 36 35.0	
	comp=Z,30nm,1.7s					
MCK	McKinley	67.93 29	P	P	20 36 07.6	-0.4
MCK			pmax	pmax		
	comp=Z,30nm,1.7s					
MDM	Murphy Dome	67.99 27	P	P	20 36 08.9	+0.5
MDM			IAmb	IAmb	20 36 29.5	
	comp=Z,14nm,1.0s					
RND	Reindeer	68.03 29	P	P	20 36 07.7	-1.0
RND			IAmb	IAmb	20 36 10.4	
	comp=Z,16nm,0.8s					
RND	Reindeer	68.03 29	P	P	20 36 07.7	-1.0
RND			pmax	pmax		
	comp=Z,16nm,0.8s					
WRH	Wood River Hil	68.15 28	P	P	20 36 10.1	+0.8
COLA	College	68.17 27	P	P	20 36 09.2	-0.2
COLA	College	68.17 27	P	P	20 36 09.2	-0.2
COLA			pmax	pmax		
	comp=Z,6.0nm,0.8s					
CCB	Clear Creek Bu	68.23 28	P	P	20 36 09.3	-0.5
GHO	Glory Hole Cre	68.32 31	P	P	20 36 09.6	-1.0
GHO			IAmb	IAmb	20 36 27.3	
	comp=Z,20nm,1.5s					
RAYN	Ar Rayn	68.57 287	P	P	20 36 13.7	+0.9
RAYN			IAmb	IAmb	20 36 32.6	
	comp=Z,14nm,1.2s					
RAYN	Ar Rayn	68.57 287	P	P	20 36 13.7	+0.9
RAYN			pmax	pmax		
	comp=Z,14nm,1.3s					
IL31		68.59 27	P	P	20 36 11.1	-0.9
ILAR	Eielson Array	68.59 27	P	P	20 36 10.9	-1.2
	comp=Z,1.4nm,0.6s,baz=281,slow=5.8,SNR=25					
ILAR			LR	LR	21 10 07.4	
	comp=Z,41nm,18.1s,baz=310,slow=39					
KNK	Knik Glacier	68.61 31	P	P	20 36 11.9	-0.5
KNK			IAmb	IAmb	20 36 43.2	
	comp=Z,10nm,1.0s					
HDA	Harding Lake	68.64 28	P	P	20 36 11.5	-1.0
KEV	Kevo	68.66 338	P	P	20 36 12.7	+0.3
KEV	Kevo	68.66 338	P	P	20 36 12.7	+0.3
KEV			pmax	pmax		
	comp=Z,65nm,1.6s					
DHY	Denali Highway	68.75 29	P	P	20 36 13.1	-0.2
DHY			IAmb	IAmb	20 36 18.5	
	comp=Z,19nm,1.7s					
FYU	Fort Yukon	68.86 25	P	P	20 36 14.0	+0.3
FYU			IAmb	IAmb	20 36 30.3	
	comp=Z,16nm,1.4s					

PRP Porcupine Dome 68.99 26 P P 20 36 15.5 +0.8
SCM Sheep Creek Mo 69.05 31 P P 20 36 14.9 -0.2
SCM IAmb IAmb 20 36 48.8
comp=Z,20nm,1.1s
SCM Sheep Creek Mo 69.05 31 P P 20 36 14.9 -0.2
SCM pmax pmax
comp=Z,20nm,1.1s
ANN Anapa 69.06 311 eP P 20 36 13.7 -1.6
ANN e*PP pP 20 36 32.9 -0.8
ANN e 20 38 47.3
ANN ePPP PPP 20 40 24.7
ANN eS S 20 45 11.5 -3.7
ANN eSS SS 20 49 44.4 +2.6
ANN pmax pmax
comp=Z,33nm,1.2s
SPA0 Spitsbergen Ar 69.08 348 P P 20 36 15.1 +0.1
SPA0 IAmb IAmb 20 36 45.1
comp=Z,24nm,1.1s
ARCES ARCESS Array B 69.22 338 P P 20 36 16.1 +0.1
comp=Z,2.7nm,0.7s,baz=59,slow=6.5,SNR=9.5
ARCES LR LR 21 14 20.8
comp=Z,65nm,18.2s,baz=7.5,slow=42
MSVF Nonsavu 69.30 122 P P 20 36 18.3 +1.1
MSVF IAmb IAmb 20 36 19.7
comp=Z,31nm,1.1s
MSVF Nonsavu 69.30 122 P P 20 36 18.3 +1.1
MSVF pmax pmax
comp=Z,31nm,1.2s
RIDG Independent Ri 69.70 28 P P 20 36 18.5 -0.6
RIDG IAmb IAmb 20 36 45.9
comp=Z,13nm,1.2s
FID Port Fidalgo 69.70 32 P P 20 36 18.2 -0.9
HIN Hinchinbrook I 69.78 32 P P 20 36 18.7 -0.9
SCRK Sand Creek 70.01 28 P P 20 36 20.3 -0.7
DOT Dot Lake 70.06 28 P P 20 36 19.9 -1.3
EYAK Cordova Ski Ar 70.10 32 P P 20 36 21.0 -0.5
EYAK IAmb IAmb 20 36 31.6
comp=Z,39nm,1.6s
KNTN Kanton 70.13 103 P P 20 36 21.5 -0.9
MENT Mentasta 70.40 29 P P 20 36 23.5 +0.1
RAGM Ragged Mountai 70.66 32 P P 20 36 25.4 +0.5
RAGM IAmb IAmb 20 37 01.2
comp=Z,30nm,1.2s
GLB Gilahina Butte 70.77 30 P P 20 36 25.6 0.0
GLB IAmb IAmb 20 36 47.7
comp=Z,12nm,1.1s
EGAK Eagle 70.96 27 P P 20 36 26.5 -0.1
VRDI Verde Repeater 71.00 31 P P 20 36 25.9 -1.3
VRDI IAmb IAmb 20 36 49.3
comp=Z,27nm,1.8s
MCARA McCarthy VSAT 71.15 30 P P 20 36 27.5 -0.4
FIA1 FINESS Array S 71.21 330 P P 20 36 27.9 -0.2
FINES FINESS Array B 71.21 330 P P 20 36 28.3 +0.1
comp=Z,12nm,0.6s,baz=56,slow=6.0,SNR=79
FINES LR LR 21 09 28.2
comp=Z,195nm,19.1s,baz=57,slow=37
TAU Tasmania Unive 71.31 160 P P 20 36 28.2 -0.7
TAU Tasmania Unive 71.31 160 P P 20 36 28.2 -0.7
TAU pmax pmax
comp=Z,84nm,1.5s
TGL Tana Glacier 71.43 31 P P 20 36 29.7 0.0
TGL IAmb IAmb 20 37 05.9
comp=Z,13nm,1.2s
VSU Vasula 71.78 327 ceP P 20 36 32.2 +0.6
BARN Barnard Glacie 71.88 31 P P 20 36 31.7 -0.8
NOR Nord 71.88 354 iP P 20 36 30.9 -1.0
comp=Z,3.0nm,0.7s
NOR Nord 71.88 354 iP P 20 36 30.9 -1.0
NOR pmax pmax
comp=Z,3.0nm,0.7s
DAWY Dawson 71.92 27 P P 20 36 32.2 -0.2
CTGM Chitina Glacie 72.06 31 P P 20 36 32.8 -0.8
CTGM IAmb IAmb 20 36 33.6
comp=Z,32nm,1.6s
EPYK Eagle Plains 72.19 24 P P 20 36 33.6 -0.4
EPYK IAmb IAmb 20 36 35.3
comp=Z,14nm,1.1s
INK Inuvik 72.62 22 P P 20 36 36.0 -0.5
comp=Z,5.5nm,1.0s,baz=304,slow=6.6,SNR=8.7
INK Inuvik 72.62 22 P P 20 36 35.9 -0.5
INK Inuvik 72.62 22 P P 20 36 36.0 -0.5
AKASG Malin Array Be 72.75 318 P P 20 36 37.6 0.0
comp=Z,7.7nm,0.9s,baz=59,slow=6.0,SNR=25
AKASG pP PcP 20 36 55.2 +0.6
comp=Z,2.7nm,0.6s,baz=59,slow=6.5,SNR=5.5
AKASG LR LR 21 11 06.6
comp=Z,70nm,20.3s,baz=275,slow=38
AKBB Malin Array Si 72.75 318 P P 20 36 36.8 -0.8
AKBB IAmb IAmb 20 36 38.3
comp=Z,11nm,1.1s
AKBB Malin Array Si 72.75 318 P P 20 36 36.8 -0.8
AKBB pmax pmax
comp=Z,11nm,1.1s
NACGM Naroch 72.85 323 e P 20 36 37.0 -1.1
BR131 Keskin Array S 73.19 306 P P 20 36 40.3 -0.3
BR131 IAmb IAmb 20 36 42.3
comp=Z,17nm,1.2s
BR131 Keskin Array S 73.19 306 P P 20 36 40.3 -0.3
BR131 pmax pmax
comp=Z,17nm,1.3s
BRTR Keskin Array B 73.19 306 P P 20 36 41.5 +0.8
comp=Z,7.9nm,1.0s,baz=108,slow=4.0,SNR=23
BRTR pP pP 20 36 59.5 +0.4
comp=Z,4.1nm,1.0s,baz=111,slow=4.6,SNR=3.4
HYT Haines Junctio 73.87 30 P P 20 36 44.6 +0.4
HYT IAmb IAmb 20 36 59.7
comp=Z,14nm,1.4s
SORM Soroca 74.11 316 ⇓P P 20 36 45.6 0.0
CSS Mathiatis 74.97 302 P P 20 36 50.2 -0.7
CSS IAmb IAmb 20 36 52.4
comp=Z,15nm,0.8s
WHY Whitehorse 75.12 30 P P 20 36 46.0 -5.5
WHY IAmb IAmb 20 37 14.8
comp=Z,14nm,1.3s
SUW Suwalki 75.13 323 eP P 20 36 51.7 +0.3
SUW Suwalki 75.13 323 P P 20 36 51.2 -0.2
SUW Suwalki 75.13 323 eP P 20 36 51.7 +0.3
TOPG Topolog 75.19 313 ⇑P P 20 36 52.2 +0.3
HARR Harsova 75.55 313 ⇑P P 20 36 55.2 +1.1
TESR Tescani 75.76 315 ⇑P P 20 36 55.2 0.0
DAG Danmarks Havn 75.93 351 iP P 20 36 55.1 -0.5
comp=Z,2.4nm,0.9s
DAG Danmarks Havn 75.93 351 iP P 20 36 55.1 -0.5
DAG pmax pmax
comp=Z,2.0nm,0.9s
VRI Vrincioaia 75.94 314 ⇓P P 20 36 57.8 +1.6
PLOR Plostina 75.99 314 ⇑P P 20 36 58.4 +1.8
BUR08 Bucovina Ar. S 76.27 316 P P 20 36 58.6 +0.4
BURAR Bucovina Array 76.27 316 ⇑P P 20 36 58.8 +0.6
OZUR 76.46 315 ⇓P P 20 37 00.4 +1.1
KLNR Kaliningrad 76.52 324 ⇑eP P 20 37 00.9 +1.6
MLR Muntele Rosu 76.58 314 ⇓P P 20 37 01.1 +1.1
MLR Muntele Rosu 76.58 314 P P 20 37 00.1 0.0
MLR Muntele Rosu 76.58 314 P P 20 37 00.1 0.0
MLR pmax pmax
comp=Z,7.0nm,0.9s
DOPR Dopca 76.77 315 ⇓P P 20 37 02.2 +1.2
ELL Elmali 76.95 305 P P 20 37 01.9 -0.4
ELL Elmali 76.95 305 P P 20 37 01.9 -0.4
ELL pmax pmax
comp=Z,239nm,1.8s
KWP Kalwaria Pacla 77.06 319 eP P 20 37 03.4 +0.9
KWP epP pP 20 37 22.5 +1.3
KWP Kalwaria Pacla 77.06 319 P P 20 37 01.6 -0.9
KWP Kalwaria Pacla 77.06 319 eP P 20 37 03.4 +0.9
KWP e*PP pP 20 37 22.5 +1.3
VOIR 77.19 314 ⇓P P 20 37 05.8 +2.4
BEL Belsk 77.31 321 eP P 20 37 04.1 +0.3
BEL epP pP 20 37 24.0 +1.4
BEL Belsk 77.31 321 eP P 20 37 04.1 +0.3
BEL e*PP pP 20 37 24.0 +1.4
ARR Arges 77.48 314 ⇓P P 20 37 05.9 +0.9
HUMR Humele 77.58 313 ⇑P P 20 37 05.6 +0.1
ELND Elena 77.58 312 ⇑P P 20 37 06.3 +0.8
KOLS Kolonicke sedl 77.59 318 eP P 20 37 05.8 +0.3
KOLS Kolonicke sedl 77.59 318 eP P 20 37 05.8 +0.3
NC405 NORSAR Array S 77.72 332 P P 20 37 05.4 -0.6
TRPA Tarpa 77.74 317 ⇑P P 20 37 07.2 +0.8
NB201 NORSAR Array S 77.93 332 P P 20 37 06.6 -0.6
NB2 NORSAR Subarra 77.96 332 P P 20 37 07.1 -0.3
comp=Z,2.8nm,0.7s,baz=57,slow=5.6
NOA NORSAR Array B 77.96 332 P P 20 37 07.1 -0.3
comp=Z,8.1nm,0.9s,baz=58,slow=5.7,SNR=20
NOA pP pP 20 37 25.6 -0.6
comp=Z,11nm,1.0s,baz=58,slow=5.7,SNR=9.4
NOA LR LR 21 14 29.6
comp=Z,128nm,19.2s,baz=60,slow=38
NC602 NORSAR Array S 77.97 332 P P 20 37 06.7 -0.7
NC204 NORSAR Array S 78.04 333 P P 20 37 07.7 -0.1
RES Resolute Bay 78.11 9 P P 20 37 07.3 -0.6
RES Resolute Bay 78.11 9 P P 20 37 07.3 -0.6
RES pmax pmax
comp=Z,4.0nm,1.0s
NBO00 NORSAR Array S 78.15 332 P P 20 37 08.8 +0.4
DRGR 78.17 316 ⇓P P 20 37 09.5 +0.7
NAO01 NORSAR Array S 78.20 332 P P 20 37 09.0 +0.3
NIE Niedzica 78.58 319 eP P 20 37 11.2 +0.2
NIE Niedzica 78.58 319 eP P 20 37 11.2 +0.2
PUNG Punghina 79.03 314 ⇓P P 20 37 14.4 +0.9
SIRR Siria 79.04 316 ⇓P P 20 37 14.2 +0.6
LANS Liptovska Anna 79.19 319 eP P 20 37 15.8 +1.5
LANS Liptovska Anna 79.19 319 eP P 20 37 15.8 +1.5
PSZ Piszkesteto 79.45 318 ⇑P P 20 37 16.7 +0.9
VTS Vitosha 79.49 312 ⇓P P 20 37 17.4 +1.1
VTS Vitosha 79.49 312 P P 20 37 16.4 +0.1
VTS IAmb IAmb 20 37 18.2
comp=Z,12nm,1.0s
VTS Vitosha 79.49 312 P P 20 37 16.4 +0.1
VTS pmax pmax
comp=Z,12nm,1.0s
OKC Ostrava-Krasne 79.67 320 eP P 20 37 17.5 +0.6
OKC Ostrava-Krasne 79.67 320 eP P 20 37 17.5 +0.6
VYHS Vyhne 79.84 319 eP P 20 37 18.9 +1.0
VYHS pmax pmax
comp=Z,19nm,1.0s
VYHS Vyhne 79.84 319 eP P 20 37 18.9 +1.0
MORC Moravsky Berou 80.04 320 eP P 20 37 19.8 +0.8
MORC Moravsky Berou 80.04 320 ⇓P P 20 37 19.8 +0.8
MORC Moravsky Berou 80.04 320 P P 20 37 18.8 -0.2
MORC IAmb IAmb 20 37 40.2
comp=Z,12nm,1.1s
MORC Moravsky Berou 80.04 320 P P 20 37 18.8 -0.2
MORC pmax pmax
comp=Z,12nm,1.1s
KSP Ksiaz 80.28 322 eP P 20 37 20.8 +0.7
KSP epP pP 20 37 40.5 +1.5
KSP Ksiaz 80.28 322 eP P 20 37 20.8 +0.7
KSP e*PP pP 20 37 40.5 +1.5
KRLC Kraliky 80.35 321 eP P 20 37 21.1 +0.5
KRLC epP pP 20 37 40.6 +1.1
KRLC Kraliky 80.35 321 eP P 20 37 21.1 +0.5
KRLC e 20 37 40.6
JAVC Velka Javorina 80.38 319 eP P 20 37 22.9 +2.1
OSTC Ostas 80.45 321 eP P 20 37 22.5 +1.4
DPC Dobruska-Polom 80.49 321 eP P 20 37 22.3 +0.9
DPC epP pP 20 37 41.8 +1.6
DPC Dobruska-Polom 80.49 321 eP P 20 37 22.3 +0.9
DPC e 20 37 41.8
UPC Upice 80.59 321 eP P 20 37 22.7 +0.8
UPC Upice 80.59 321 eP P 20 37 22.7 +0.8
VRAC Vranov 80.81 320 eP P 20 37 24.1 +1.1
VRAC Vranov 80.81 320 ⇓P P 20 37 24.4 +1.3
MODS Modra-Piesok 80.83 319 eP P 20 37 23.9 +0.7
MODS Modra-Piesok 80.83 319 eP P 20 37 23.9 +0.7
LIT Litokhoron 81.03 310 P P 20 37 23.5 -0.9
LIT Litokhoron 81.03 310 P P 20 37 23.5 -0.9
LIT pmax pmax
comp=Z,7.0nm,0.8s
KRUC Moravsky 81.04 320 eP P 20 37 25.1 +0.9
URZ Urewera 81.40 139 P P 20 37 25.5 -0.6
URZ IAmb IAmb 20 37 31.9
comp=Z,24nm,1.2s
BRG Berggiesshubel 81.58 322 eP P 20 37 27.2 +0.1
comp=Z,4.8nm,0.9s
BRG Berggiesshubel 81.58 322 eP P 20 37 27.2 +0.1
BRG pmax pmax
comp=Z,5.0nm,0.9s
PRU Pruhonice 81.67 321 eP P 20 37 28.3 +0.7
PRU Pruhonice 81.67 321 eP P 20 37 28.3 +0.7
CONA Conrad Observa 81.88 319 ePcP P 20 37 29.9 +1.1
comp=Z,5.2nm,1.1s
CLL Collm 81.89 323 eP P 20 37 30.0 +1.3
comp=Z,11nm,0.9s
CLL ePcP PcP 20 37 34.0 -0.1
CLL epP pP 20 37 49.2 +1.6
comp=Z,13nm,1.1s
CLL Collm 81.89 323 P P 20 37 29.3 +0.6
CLL IAmb IAmb 20 37 50.5
comp=Z,9.4nm,0.9s
CLL Collm 81.89 323 eP P 20 37 30.0 +1.3
CLL i*PP pP 20 37 49.2 +1.6
CLL pmax pmax
comp=Z,11nm,0.9s
YKA Yellowknife Ar 82.36 23 P P 20 37 30.2 -0.7
comp=Z,5.2nm,0.8s,baz=315,slow=4.9,SNR=50
YKA LR LR 21 18 54.6
comp=Z,48nm,18.8s,baz=0.0,slow=39
ARSA Arzberg 82.40 319 ePcP P 20 37 32.7 +1.2
comp=Z,5.6nm,1.1s
KHC Kasperske Hory 82.63 321 eP P 20 37 33.3 +0.6
KHC epP pP 20 37 52.0 +0.4
KHC Kasperske Hory 82.63 321 P P 20 37 32.9 +0.2
KHC Kasperske Hory 82.63 321 ⇓iP P 20 37 33.2 +0.6
KHC pmax pmax
comp=Z,15nm,1.4s
ITM Ithomi 82.66 307 P P 20 37 32.5 -0.6
GEC2 GERESS Array S 82.70 321 P P 20 37 33.0 -0.1
GERES GERESS Array B 82.70 321 P P 20 37 33.6 +0.5
comp=Z,4.6nm,0.9s,baz=66,slow=4.5,SNR=25
GERES pP pP 20 37 52.5 +0.5
comp=Z,3.3nm,0.8s,baz=57,slow=4.9,SNR=7.6
GERES LR LR 21 17 57.1
comp=Z,142nm,19.9s,baz=64,slow=38
MOA Molln 82.86 320 eP P 20 37 34.4 +0.6
comp=Z,5.6nm,0.9s,SNR=7.3
SOKA Soboth 82.96 318 eP P 20 37 34.6 +0.1
comp=Z,6.1nm,1.0s,SNR=5.4
PDKS Podkum 83.28 318 iP P 20 37 36.4 +0.3
OBKA Obir 83.34 318 iP P 20 37 36.5 +0.1
comp=Z,15nm,1.3s,SNR=5.0
BOJS Bojanci 83.39 317 iP P 20 37 37.2 +0.6
BOJS ipP pP 20 37 56.7 +1.2
GRF Grafenberg Arr 83.68 322 eP P 20 37 38.5 +0.5
comp=Z,12nm,1.1s,baz=63,slow=4.7
GRF epP pP 20 37 58.6 +1.6
CRNS Crni Vrh 83.72 318 iP P 20 37 38.8 +0.4
CRNS ipP pP 20 37 58.7 +1.4
KBA Koelnbreinsper 83.78 319 iP P 20 37 38.7 -0.1
comp=Z,9.8nm,1.2s,SNR=6.7
MYKA Terra Mystica 83.83 319 eP P 20 37 38.4 -0.6
comp=Z,2.8nm,0.6s
OPO Ambohidratompo 84.24 247 P P 20 37 42.0 +0.4
comp=Z,3.5nm,0.8s,baz=102,slow=9.3,SNR=3.6
ABTA Abfaltersbach 84.44 319 eP P 20 37 41.3 -0.8
comp=Z,11nm,1.1s,SNR=6.8
STAL STALIGIAL 84.57 319 P P 20 37 41.6 -1.1
STAL IAmb IAmb 20 37 43.4
comp=Z,16nm,1.2s
WATA Walderalm 84.69 320 ePcP P 20 37 43.9 +0.6
comp=Z,9.8nm,1.1s
WTTA Wattenberg 84.69 320 iPcP P 20 37 43.7 +0.2
comp=Z,11nm,0.9s
MOTA Moosalm 84.96 320 iP P 20 37 44.3 -0.4
comp=Z,6.5nm,1.0s
SQTA Sankt Quirin 84.97 320 ePcP P 20 37 45.3 +0.6
comp=Z,9.7nm,1.0s
KMBO Kilima Mbogo 85.33 267 P P 20 37 48.5 +1.2
comp=Z,0.9nm,0.5s,baz=67,slow=9.2,SNR=5.2
KMBO Kilima Mbogo 85.33 267 P P 20 37 47.7 +0.4
FETA Feichten 85.35 320 ePcP P 20 37 46.4 -0.3
comp=Z,6.9nm,0.9s,SNR=6.2
TEOL Teolo 85.65 318 P P 20 37 47.8 -0.2
TEOL IAmb IAmb 20 37 49.2
comp=Z,17nm,0.9s
FUORN Ofenpass-Fuorn 85.83 320 P P 20 37 49.3 0.0
FUORN IAmb IAmb 20 37 50.4
comp=Z,8.6nm,0.8s
NRCA Norcia 86.04 316 P P 20 37 50.4 +0.3
NRCA IAmb IAmb 20 37 51.8
comp=Z,21nm,1.1s
AQU L'Aquila 86.09 315 P P 20 37 50.4 0.0
AQU L'Aquila 86.09 315 P P 20 37 50.4 0.0
AQU pmax pmax
comp=Z,24nm,1.0s
MURB Monte Urbino 86.20 316 P P 20 37 51.0 +0.2
BORG Borgarnes 86.34 345 P P 20 37 54.4 +3.4
BORG Borgarnes 86.34 345 P P 20 37 54.4 +3.4
BORG pmax pmax
comp=Z,135nm,1.7s
LON Longmire 88.76 38 P P 20 38 03.4 +0.3
LON IAmb IAmb 20 38 08.2
comp=Z,9.9nm,1.1s
LON Longmire 88.76 38 P P 20 38 03.4 +0.3
LON pmax pmax
comp=Z,10.0nm,1.2s
F04A Amboy 88.89 39 P P 20 38 03.8 +0.2
F04A IAmb IAmb 20 38 06.2
comp=Z,12nm,0.9s
LTY Liberty 89.09 37 P 20 38 04.5 -0.2
LTY IAmb IAmb 20 38 09.3
comp=Z,7.9nm,1.1s
B08A Colville Reser 89.15 36 P P 20 38 05.0 +0.1
B08A IAmb IAmb 20 38 32.3
comp=Z,9.1nm,0.9s
E07A Sunnyside 89.96 37 P P 20 38 08.7 +0.1
C09A Chrisman Ranch 90.06 36 P P 20 38 08.5 -0.6
D08A Wollman Farm, 90.17 37 P P 20 38 10.0 +0.4
D08A IAmb IAmb 20 38 11.4
comp=Z,7.1nm,1.0s
HAWA Hanford 90.24 37 P P 20 38 10.1 +0.1
HAWA IAmb IAmb 20 38 11.9
comp=Z,8.8nm,1.1s
G06A Carlson Farm, 90.31 39 P P 20 38 09.9 -0.5
G06A IAmb IAmb 20 38 15.8
comp=Z,13nm,1.1s
F07A Phinny Hill Vi 90.32 38 P P 20 38 09.9 -0.4
NEW Newport 90.37 35 P P 20 38 10.8 +0.2
NEW IAmb IAmb 20 38 38.2
comp=Z,6.0nm,0.9s
NEW Newport 90.37 35 P P 20 38 10.8 +0.2
NEW pmax pmax
comp=Z,6.0nm,1.0s
E08A Dider Farm, El 90.44 37 P P 20 38 12.2 +1.4
E09A Wood Farm, Sta 90.92 37 P P 20 38 13.8 +0.6
KHMM Horse Mountain 90.98 44 P P 20 38 11.6 -2.1
PINE Pine Mountain 90.99 40 P P 20 38 13.8 0.0
YBH Yreka Blue Hor 91.13 42 P P 20 38 15.0 +0.7
YBH IAmb IAmb 20 38 16.2
comp=Z,5.9nm,1.1s
YBH Yreka Blue Hor 91.13 42 P P 20 38 15.0 +0.7
YBH pmax pmax
comp=Z,6.0nm,1.1s
WALA Waterton Lakes 91.49 33 P P 20 38 15.8 0.0
WALA IAmb IAmb 20 38 43.8
comp=Z,7.1nm,0.9s
MOD Modoc Plateau 92.49 41 P P 20 38 18.7 -2.0
MOD IAmb IAmb 20 38 23.0
comp=Z,8.9nm,1.1s
FFC Flin Flon 92.52 24 P P 20 38 19.1 -1.2
FFC IAmb IAmb 20 38 20.7
comp=Z,5.0nm,1.0s
FFC Flin Flon 92.52 24 P P 20 38 19.1 -1.2
FFC pmax pmax
comp=Z,5.0nm,1.0s
J08A Circle Bar Ran 92.68 39 P P 20 38 20.7 -0.8
J08A IAmb IAmb 20 38 49.2
comp=Z,6.2nm,0.9s
ORV Oroville 93.14 44 P P 20 38 21.9 -1.5
ORV IAmb IAmb 20 38 30.4
comp=Z,5.1nm,1.0s
ORV Oroville 93.14 44 P P 20 38 22.0 -1.5
ORV pmax pmax
comp=Z,5.0nm,1.0s
WVOR Wild Horse Val 93.15 40 P P 20 38 23.8 +0.1
WVOR IAmb IAmb 20 39 00.4
comp=Z,8.9nm,1.5s
WVOR Wild Horse Val 93.15 40 P P 20 38 23.8 +0.1
WVOR pmax pmax
comp=Z,9.0nm,1.5s
PAHR Pah Rah Range 94.36 43 P P 20 38 29.9 +0.5
PAHR IAmb IAmb 20 38 56.3
comp=Z,6.7nm,1.1s
VCNR Virginia City 94.44 43 P P 20 38 29.0 -0.8
VCNR IAmb IAmb 20 38 31.6
comp=Z,4.0nm,0.7s
CMB Columbia Colle 94.73 44 P P 20 38 30.7 -0.2
CMB IAmb IAmb 20 38 31.9
comp=Z,3.7nm,0.8s
CMB Columbia Colle 94.73 44 P P 20 38 30.7 -0.2
CMB pmax pmax
comp=Z,4.0nm,0.8s
KVN Kaiserville 95.55 42 P P 20 38 35.7 +0.9
KVN IAmb IAmb 20 38 36.4
comp=Z,4.0nm,1.0s
KVN Kaiserville 95.55 42 P P 20 38 35.7 +0.9
KVN pmax pmax
comp=Z,4.0nm,1.0s
NVAR Mina Array Bea 95.80 43 P P 20 38 36.1 +0.1
comp=Z,1.4nm,0.7s,baz=270,slow=4.5,SNR=16
NVAR LR LR 21 26 47.7
comp=Z,15nm,18.0s,baz=230,slow=38
PDAR Pinedale Array 98.00 35 LR LR 21 25 41.0
comp=Z,21nm,18.1s,baz=24,slow=37
ULM Lac du Bonnet 98.34 23 LR LR 21 31 23.4
comp=Z,70nm,19.7s,baz=4.5,slow=40
SDV Santo Domingo 144.56 21 PKPab 20 44 44.0 -1.0

TAP 21 20:37:53.4, 24°.74N 121°.57E, h58km, ML2.2, A, Taiwan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SLBB Yuanshan 0.06 78 eP Pn 20 38 02.6 +0.4
baz=78
SLBB eS Sn 20 38 09.1 +0.6
baz=78
NWLT Wulai 0.07 301 iP Pn 20 38 02.4 +0.3
baz=300
NWLT S Sn 20 38 08.8 +0.3
baz=300
TWE Neicheng 0.09 103 P Pn 20 38 02.4 +0.3
baz=102
TWE eS Sn 20 38 09.2 +0.8
baz=102
ENTT Nioudou 0.10 182 P Pn 20 38 02.6 +0.3
baz=177
ENTT iS Sn 20 38 09.1 +0.6
baz=177
NDT Datong Townshi 0.15 200 P Pn 20 38 02.7 +0.3
baz=200
NDT S Sn 20 38 09.4 +0.6
baz=200
YHNB Yeheng 0.19 248 P Pn 20 38 02.7 +0.1
baz=247
YHNB eS Sn 20 38 10.0 +0.6
baz=247
NSK Sanguang 0.20 251 P Pn 20 38 02.8 +0.1
baz=249
NSK S Sn 20 38 09.7 +0.3
baz=249
NHDH Xindian Distri 0.23 350 eP Pn 20 38 02.8 +0.1
baz=349
NHDH eS Sn 20 38 10.1 +0.6
baz=349
TIPB Shuangxi 0.33 45 P Pn 20 38 04.0 +0.4
baz=45
TIPB S Sn 20 38 11.4 +0.5
baz=45
NNS Nan Shan 0.35 211 P Pn 20 38 04.1 +0.2
baz=209
NNS S Sn 20 38 12.0 +0.6
baz=209
NNSB Datong 0.35 209 P Pn 20 38 04.1 +0.2
baz=208
NNSB eS Sn 20 38 11.7 +0.2
baz=208
NNSH Datong 0.35 209 eP Pn 20 38 04.1 +0.2
baz=208
NNSH eS Sn 20 38 11.7 +0.3
baz=208
YM01 YM01 0.40 0 eP Pn 20 38 04.5 +0.2
YM01 eS Sn 20 38 12.8 +0.7
YM04 YM04 0.41 356 eP Pn 20 38 04.9 +0.6
baz=355
YM04 eS Sn 20 38 12.9 +0.7
baz=355
YM10 YM10 0.41 359 eP Pn 20 38 04.9 +0.5
baz=358
YM10 eS Sn 20 38 13.0 +0.7
baz=358
YM05 YM05 0.42 360 eP Pn 20 38 04.4 0.0
baz=359
YM05 eS Sn 20 38 13.3 +0.9
baz=359
YM11 YM11 0.42 1 eP Pn 20 38 04.9 +0.4

YM11				eS	Sn	20 38 13.4	+0.9
YM03	YM03	0.44	357	eS	Sn	20 38 13.5	+0.7
	baz=356						
TWB1	Santiao Chiao	0.47	55	eP	Pn	20 38 05.2	+0.5
	baz=55						
TWB1				eS	Sn	20 38 13.8	+0.8
	baz=55						
LIOB	Emei	0.51	259	eP	Pn	20 38 05.8	+0.4
	baz=259						
LIOB				eS	Sn	20 38 15.0	+1.0
	baz=259						
NSTT	Nanjuang	0.53	258	eP	Pn	20 38 05.7	+0.2
	baz=257						
NSTT				eS	Sn	20 38 14.9	+0.7
	baz=257						
ETLH	Xiulin Townshi	0.54	189	eP	Pn	20 38 06.0	+0.3
	baz=188						
ETLH				eS	Sn	20 38 14.7	0.0
	baz=188						
TDCB	Techi	0.61	218	eP	Pn	20 38 07.3	+0.7
	baz=217						
TDCB				eS	Sn	20 38 17.4	+1.2
	baz=217						
WHF	Hehuan Shan	0.66	205	eP	Pn	20 38 07.0	-0.4
	baz=204						
WHF				eS	Sn	20 38 18.3	+0.7
	baz=204						
WHP	Taichung City	0.73	231	eP	Pn	20 38 08.7	+0.7
	baz=230						
WHP				eS	Sn	20 38 19.4	+0.7
	baz=230						
CHGB	Renai	0.77	208	eP	Pn	20 38 09.2	+0.7
	baz=207						
CHGB				eS	Sn	20 38 20.3	+0.6
	baz=207						
DPDB	Guoxing	0.92	220	eS	Sn	20 38 23.8	+1.0
	baz=219						
VWDT	VWDT	1.06	202	eP	Pn	20 38 12.2	+0.2
	baz=201						
VWDT				eS	Sn	20 38 27.2	+1.3
	baz=201						
SSLB	Suanglung	1.10	211	eP	Pn	20 38 14.0	+1.2
	baz=210						
SSLB				eS	Sn	20 38 28.1	+1.0
	baz=210						
WGK	Gukeng	1.40	221	eS	Sn	20 38 34.4	+0.4
	baz=220						
CHN5	Tsauling	1.40	216	eP	Pn	20 38 16.9	+0.2
	baz=215						
CHN5				eS	Sn	20 38 35.4	+1.1
	baz=215						
ALS	Alishan	1.41	210	eP	Pn	20 38 17.5	+0.4
	baz=209						
ALS				eS	Sn	20 38 35.6	+0.8
	baz=209						
ELDTW	Lidau	1.62	198	eP	Pn	20 38 20.8	+1.0
	baz=197						

TAP 21 20:38:32.6,23°.09N×120°.66E,h15km,ML1.3,A,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGST	Jiashian	0.07	261	eP	Pg	20 38 34.8	-0.8
	baz=259						
SLGT	Liugui	0.10	188	P	Pb	20 38 36.4	+0.1
	baz=188						
SLGT				S	Sb	20 38 39.1	+0.4
	baz=188						
STYT	Tauyuan	0.11	51	eP	Pb	20 38 36.6	+0.1
	baz=54						
STYT				eS	Sb	20 38 39.4	+0.2
	baz=54						
CHN1	Nanshi	0.15	307	iP	Pb	20 38 37.1	-0.1
	baz=306						
CHN1				iS	Sb	20 38 40.5	+0.2
	baz=306						
WTP	Ta-pu	0.16	344	iP	Pb	20 38 37.1	-0.2
	baz=346						
WTP				iS	Sb	20 38 40.5	0.0
	baz=346						
SNST	Tainan City	0.20	310	eP	Pb	20 38 37.8	-0.1
	baz=309						
SNST				eS	Sb	20 38 41.7	+0.2
	baz=309						
TPUB	Ta-pu	0.21	352	eP	Pb	20 38 37.9	-0.2
	baz=351						
TPUB				eS	Sb	20 38 41.8	-0.1
	baz=351						
TWK	Hsinying	0.24	317	eP	Pb	20 38 38.3	-0.4
	baz=319						
TWK				eS	Sb	20 38 42.6	0.0
	baz=319						
CHN4	Tsaushan	0.27	346	P	Pb	20 38 38.8	-0.3
	baz=346						
CHN4				S	Sb	20 38 44.1	+0.6
	baz=346						
ELDTW	Lidau	0.34	74	eP	Pb	20 38 40.4	0.0
	baz=74						
ELDTW				eS	Sb	20 38 45.9	+0.1
	baz=74						
ELDTW	Lidau	0.34	74	eS	Pb	20 38 40.5	0.0
	baz=197						
SSD	Sandimen	0.35	185	eP	Pb	20 38 40.3	-0.2
	baz=183						
SSD				eS	Sb	20 38 46.2	+0.4
	baz=183						
ALS	Alishan	0.44	18	eS	Sb	20 38 49.1	+0.4
	baz=18						
TWG	Pinlang	0.47	126	eP	Pb	20 38 43.0	+0.5
	baz=125						
TWG				eS	Sb	20 38 50.3	+1.1
	baz=125						
TWGBT	Beinan	0.47	125	eP	Pb	20 38 43.0	+0.3
	baz=125						
TWGBT				eS	Sb	20 38 50.2	+0.8
	baz=125						
YUS	Yu-Shan	0.48	34	eS	Sb	20 38 50.1	0.0
	baz=34						
MASBT	Mashibuluo	0.48	183	eP	Pb	20 38 42.7	0.0
	baz=183						
MASBT				eS	Sb	20 38 50.0	+0.4
	baz=183						
FULB	Fuli	0.59	80	eP	Pb	20 38 44.7	0.0
	baz=79						
TWF1	Yuli	0.64	66	eP	Pb	20 38 45.7	+0.2
	baz=66						
SSLB	Suanglung	0.74	21	eP	Pb	20 38 47.4	+0.1
	baz=21						
SSLB				eS	Sb	20 38 58.0	+0.8
	baz=21						

IDC 21 20:40:40.2±1.5,3°.90N×92°.48E,h0km,mb3.9/5,mb1 4.0/7, mb1mx3.6/37,mbtmp3.9/7,ML3.9/1,MS3.1/3,Ms1 3.1/3, ms1mx2.7/42,Error ellipse: s-maj=47.1km s-min=25.5km az=43.0
NEIC 21 20:40:44.9±2.1,4°.0N±0°.1×92°.71E±0°.10,h28km±6km, mb4.1/8,Error ellipse: s-maj=19.9km s-min=12.5km az=203.0
ISC 21 20:40:40.0±0.8,3°.4N±0°.1×92°.66E±0°.09,h24km,n22, σ1§46/19,mb4.1/10,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	4.64	67	Pn	Pn	20 41 49.0	+0.4
RPSI	Rantau Prapat	6.29	96	Pn	Pn	20 42 12.0	+0.6
KULM	Kulim	8.18	77	Pn	Pn	20 42 36.5	-0.8
PALK	Pallekele	12.51	288	Pn	Pn	20 43 35.3	-1.4
	0.7nm,0.3s,baz=107,slow=13,SNR=7.7						
PALK				Sn	Sn	20 45 43.4	-12
	2.1nm,0.3s,baz=214,slow=15,SNR=9.7						
PALK				LR	LR	20 47 44.8	
	comp=Z,63nm,20.9s,baz=70,slow=35						
PALK	Pallekele	12.51	288		Pn	20 43 36.0	-0.7
PALK					S	20 45 43.6	-12
MNAI	Manna	12.86	127		Pn	20 43 40.2	-1.3
PMBI	Palembang	13.64	117	Pn	Pn	20 43 59.0	-1.8
CMAR	Chiang Mai Arr	16.17	22	Pn	Pn	20 44 23.1	-2.7
	baz=215,slow=14,SNR=7.4						
LSA	Lhasa	26.18	357	P	P	20 46 14.2	+0.8
LSA				IAmb	IAmb	20 46 15.2	
	comp=Z,3.3nm,0.6s						
LUWI	Luwuk	30.42	98	P	P	20 46 54.8	+3.9
BTK	Batken	41.49	334		P	20 48 26.3	+0.9
BTK				IAmb	IAmb	20 48 27.4	
	comp=Z,7.5nm,1.3s						
BOOM	Boomskoye usch	41.68	341	P	P	20 48 27.2	+0.3
BOOM				IAmb	IAmb	20 48 59.2	
	comp=Z,2.8nm,1.2s						
MK31	Makanchi Array	44.14	350	P	P	20 48 46.5	-0.2
MKAR	Makanchi Array	44.14	350	P	P	20 48 46.6	-0.1
	comp=Z,1.6nm,0.7s,baz=170,slow=9.0,SNR=27						
MAKZ	Makanchi	44.21	349	P	P	20 48 47.4	+0.2
MAKZ				IAmb	IAmb	20 49 21.1	
	comp=Z,1.6nm,1.1s						
GEYT	Alibeck	46.66	322	P	P	20 49 07.7	+0.9
	comp=Z,1.5nm,0.5s,baz=160,slow=9.3,SNR=4.5						
WB0	Warramunga Arr	47.02	121	P	P	20 49 17.4	+7.5
WRA	Warramunga Arr	47.05	121	P	P	20 49 17.2	+7.1
	comp=Z,0.7nm,1.0s,baz=301,slow=8.5,SNR=2.7						
ASAR	Alice Springs	48.35	126	LR	LR	21 11 36.4	
	comp=Z,24nm,18.2s,baz=12,slow=38						
ZALV	Zalesovo Beam	50.78	354	P	P	20 49 38.2	0.0
	comp=Z,1.3nm,0.5s,baz=179,slow=6.9,SNR=6.4						
ZALV				LR	LR	21 17 38.5	
	comp=Z,29nm,18.5s,baz=19,slow=44						
TIXI	Tiksi	71.87	11	P	P	20 51 59.8	-0.8
TIXI				IAmb	IAmb	20 52 00.4	
	comp=Z,1.6nm,0.5s						
GERES	GERESS Array B	80.17	319	P	P	20 52 48.9	+0.4
	comp=Z,0.5nm,0.7s,baz=104,slow=5.6,SNR=5.0						

SKHL 21 20:52:01.1±0.3,44°.01N×147°.70E,h24km±1km,mb3.5/1
JMA 21 20:52:01.2±0.5,43°.50N×147°.60E,h12km,M2.7,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.36	265	P	Pn	20 52 26.0	0.0
NEM2				eS	Sb	20 52 43.5	-0.4
JRA	Rausu	1.85	285	P	Pn	20 52 32.7	0.0
JNK	Nakash	2.10	273	eS	Sb	20 53 04.4	-0.7
JAK	Akkeshi	2.18	258	P	Pn	20 52 38.2	+1.0
JTKR	Abashiri--Toko	2.72	281	P	Pn	20 52 45.9	+1.3
JAR	Ashorobuto	2.80	267	P	Pn	20 52 47.4	+1.6
JAR				eS	Sn	20 53 21.2	+1.7
JCH	Churui	3.23	256	P	Pn	20 52 53.4	+1.7

IDC 21 20:54:24.6±4.0,2°.20S×140°.96E,h0km,mb3.3/2, mb1 3.5/3,mb1mx3.3/26,mbtmp3.3/3,ML3.5/1,Error ellipse: s-maj=144.4km s-min=28.8km az=88.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.79	200	P	P	20 58 44.0	-1.7
	0.2nm,0.3s,baz=20,slow=12,SNR=5.3						
ASAR	Alice Springs	22.41	197	P	P	20 59 25.6	+0.6
	0.7nm,0.6s,baz=30,slow=10,SNR=13						
MKAR	Makanchi Array	70.77	322	P	P	21 05 43.1	+0.2
	0.2nm,0.6s,baz=116,slow=7.5,SNR=3.7						

IDC 21 21:28:32.2±3.5,28°.14N×61°.79E,h0km,mb3.7/3, mb1 3.8/3,mb1mx3.3/42,mbtmp3.7/3,Error ellipse: s-maj=95.6km s-min=34.1km az=145.0
OMAN 21 21:28:48.8±1.7,27°.48N×61°.23E,h30km±9km,ml3.0/3, Error ellipse: s-maj=29.5km s-min=10.3km az=299.0
ISC 21 21:28:29.9±1.5,27°.6N±0°.1×61°.3E±0°.2,h10km,n9, σ2§27/14,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIDO	Bidbid	4.93	216	P	Pb	21 29 59.6	+3.2
BIDO				S	Sb	21 30 55.7	-0.2
HOQ	Hoqain	5.34	223	P	Pb	21 30 04.2	+0.7
HOQ				S	Sb	21 31 04.8	-2.9
SMDO	Samad	5.36	213	P	Pb	21 30 05.5	+1.8
	SNR=7.5						
SMDO				S	Sb	21 31 06.3	-1.9
SOHO	SOHO	5.47	232	P	Pb	21 30 06.6	+1.0
SOHO				S	Sb	21 31 08.6	-2.6
ARQ	Araqi	6.01	226	P	Pb	21 30 17.4	+2.5
	SNR=20						
ARQ				S	Sb	21 31 27.6	+0.6
BSY	Bisya	6.06	218	P	Pb	21 30 16.5	+0.9
	SNR=22						
BSY				S	Sb	21 31 25.7	-2.6
MKAR	Makanchi Array	25.33	35	P	P	21 33 54.1	-2.7
	0.1nm,0.3s,baz=222,slow=8.8,SNR=5.1						
FINES	FINESS Array B	41.19	335	P	P	21 36 15.7	+1.3
	9.2nm,1.3s,baz=138,slow=11,SNR=4.3						
TORD	Torodi Ar. Bea	57.17	268	P	P	21 38 24.7	+7.3
	0.4nm,0.4s,baz=58,slow=6.9,SNR=9.7						

ANF 21 21:38:49.8±0.4,35°.76N×97°.48W,h5km,ML3.9/13,Error ellipse: s-maj=7.1km s-min=3.4km az=158.0
TUL 21 21:38:49.6±1.1,35°.78N±0°.02×97°.48W±0°.02,h5km±3km, ML3.1,Error ellipse: s-maj=2.7km s-min=1.8km az=56.0
NEIC 21 21:38:50.0±1.2,35°.78N±0°.01×97°.48W±0°.02,h5km±1km, Error ellipse: s-maj=3.3km s-min=2.7km az=226.0
ISC 21 21:38:50.3±1.3,35°.76N±0°.03×97°.48W±0°.03,h4km±11km, n34,σ1§21/47,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.14	142	Pg	Pg	21 38 53.1	0.0
OK005	Luther M Schoo	0.26	115	Pg	Pg	21 38 55.2	-0.1
OKCFA	Oklahoma City	0.35	176	Pg	Pg	21 38 56.9	-0.1
OKCSW	OKLAHOMA CITY	0.36	175		Pg	21 38 57.1	-0.1
FNO	Franklin	0.51	173		Pg	21 39 00.3	+0.2
W35A	Tecumseh	0.78	141		Pg	21 39 04.5	-0.8
W35A				Sg	Sg	21 39 15.5	0.0
X34A	Smith Ranch, M	1.20	194	Pg	Pg	21 39 12.6	-0.7
X34A				Sg	Sn	21 39 29.7	-0.7
TUL1	Leonard	1.38	83	Pn	Pn	21 39 14.4	-1.9
TUL1					Sb	21 39 32.9	-1.7
TUL1	Leonard	1.38	83	P	Pn	21 39 14.4	-1.9
	baz=265						
TUL1				S	Sb	21 39 33.0	-1.6
	baz=265						
U32A	Winter Ranch,	1.38	297		Pn	21 39 14.6	-1.8
WMOK	Wichita Mounta	1.48	227	Pn	Pn	21 39 16.7	-1.0
WMOK					Sn	21 39 36.3	-1.2
WMOK	Wichita Mounta	1.48	227	P	Pn	21 39 17.1	-0.6
	baz=45						
WMOK				S	Sn	21 39 36.0	-1.4
	baz=45						
X37A	Clayton	2.09	124		Pn	21 39 25.7	-0.4
HHAR	Hobbs	2.92	79		Pn	21 39 37.5	0.0
W39A	Magazine	3.07	100		Pn	21 39 39.5	-0.1
W39A	Magazine	3.07	100	P	Pn	21 39 39.7	+0.1
	baz=282						
W39A				S	Sn	21 40 15.8	-0.9
	baz=282						
KSU1	Kansas State U	3.40	11	Pb	Pb	21 39 50.9	-0.2
	baz=192						
KSU1				Sb	Sb	21 40 34.8	+1.9
	baz=192						
MIAR	Mount Ida	3.42	110		Pn	21 39 42.7	-1.7
MIAR	Mount Ida	3.42	110	P	Pn	21 39 44.2	-0.2
	baz=292						
MIAR				S	Sn	21 40 25.8	+0.4
	baz=292						
CBKS	Cedar Bluff	3.54	330		Pn	21 39 46.3	+0.2
CBKS	Cedar Bluff	3.54	330	Pb	Pb	21 39 53.5	-0.1
	baz=149						
CBKS				S	Sn	21 40 28.3	-0.1
	baz=149						
AMTX	Amarillo	3.55	257		Pn	21 39 47.1	+0.9
AMTX	Amarillo	3.55	257	P	Pn	21 39 46.6	+0.4
	baz=74						
ABTX	Abilene, Hawle	3.61	210		Pn	21 39 46.5	-0.6
ABTX	Abilene, Hawle	3.61	210	P	Pn	21 39 46.4	-0.6
	baz=29						
ABTX				S	Sn	21 40 30.3	+0.2
	baz=29						
WHTX	Lake Whitney,	3.76	180		Pn	21 39 48.4	-0.7
WHTX	Lake Whitney,	3.76	180	Sb	Sb	21 40 45.6	+2.4
	baz=360						
U40A	Yellville	3.79	80		Pn	21 39 49.4	-0.2
U40A	Yellville	3.79	80	P	Pn	21 39 49.4	-0.2
	baz=262						
U40A				Sb	Sb	21 40 47.2	+3.1
	baz=262						
X40A	Basin Creek Fa	4.01	107	P	Pn	21 39 53.6	+1.1
	baz=290						
X40A				Sb	Sb	21 40 53.9	+3.5
	baz=290						
W41B	Gary Mavity, V	4.31	96	P	Pn	21 39 56.4	-0.2
	baz=280						
MSTX	Muleshoe	4.71	249	P	Pn	21 40 01.7	-0.5
	baz=66						
T25A	Trinidad	5.75	286	P	Pn	21 40 16.0	-0.7
	baz=102						
OGNE	Ogallala	6.29	327	P	Pn	21 40 24.9	+1.0
	baz=144						

JMA 21 21:55:00.0±0.2,42°.06N×142°.60E,h59km±2km,M3.7
JMA Felt I J1.
NIED 21 21:55:00,42°.00N×142°.60E,h53km,Mw3.7 Best double couple: $M_0$3.65000×10^{14} NP1:φs22.00000°,δ69.00000°, λ89.00000°. NP2:φs206.00000°,δ21.00000°,λ93.00000°.
IDC 21 21:55:03.3±2.3,42°.21N×142°.54E,h88km±14km,mb3.5/8, mb1 3.5/11,mb1mx3.3/36,mbtmp3.7/11,MS2.5/1, Ms1 2.5/1,ms1mx2.1/37,Error ellipse: s-maj=28.1km s-min=14.0km az=124.0
ISC 21 21:55:00.3±0.9,42°.07N±0°.05×142°.59E±0°.04,h63km±7km, n31,σ1§36/38,mb3.7/8,6C-7D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.25	30	⇑P	Pn	21 55 09.6	-0.7
JNBK				eS	Sn	21 55 17.1	-0.5
JSHD	Hidakashinhida	0.36	346	⇑P	Pn	21 55 10.8	-0.3
JEM	Erimo	0.43	96	⇑P	Pn	21 55 11.2	-0.5
JTHR	Tokachihiroo	0.57	67	⇑P	Pn	21 55 12.8	-0.5
JBT2	Biratori 2	0.73	347	⇓P	Pn	21 55 14.6	-0.5
JBT2				eS	Sn	21 55 25.7	-0.3
JIAM	Iburiatsuma	0.74	319	⇓P	Pn	21 55 15.6	+0.4
JCH	Churui	0.80	46	⇑P	Pn	21 55 15.4	-0.5
JCH				eS	Sn	21 55 26.2	-1.1
JFR	Furan	1.10	0	⇓P	Pn	21 55 19.2	-0.6
JEW	Eniwo	1.14	313	⇓P	Pn	21 55 20.1	-0.2
JEW				eS	Sn	21 55 35.8	+0.6
JKB	Kayabe	1.17	262	⇓P	Pn	21 55 19.8	-0.9
JKB				eS	Sn	21 55 34.7	-1.2
JNB	Noboribetsu	1.22	290	⇓P	Pn	21 55 20.0	-1.3
JNB				eS	Sn	21 55 35.5	-1.5
JOB	Onbets	1.25	47	⇑P	Pn	21 55 22.3	+0.6
JOB				eS	Sn	21 55 39.0	+1.4
JOT	Ohata	1.34	240	⇓P	Pn	21 55 21.9	-1.0
JAB	Ashibetsu	1.46	350	P	Pn	21 55 24.7	+0.1
JISS	Ishikarishitsu	1.49	325	P	Pn	21 55 24.8	0.0
JISS				eS	Sn	21 55 43.2	-0.1
JAR	Ashorobuto	1.51	35	P	Pn	21 55 24.9	-0.3
JAR				eS	Sn	21 55 43.0	-0.9
ASAJ	Asahikawa	2.05	0	P	Pn	21 55 33.3	+0.8
	29nm,0.3s,baz=208,slow=12,SNR=123						
ASAJ				S	Sn	21 55 58.4	+1.4
	11nm,0.3s,baz=100,slow=26,SNR=8.5						
MJAR	Matsushiro Arr	6.47	213	P	Pn	21 56 36.7	+3.7
	0.1nm,0.3s,baz=30,slow=15,SNR=4.3						
USRK	Ussuriysk Ar.	8.04	289	P	Pn	21 56 56.5	+2.2
	baz=95,slow=14,SNR=5.6						
KSRS	Korea Array	12.19	253	P	Pn	21 57 55.6	+4.7
	0.3nm,0.3s,baz=63,slow=14,SNR=3.7						
KSRS				LR	LR	22 01 53.5	
	comp=Z,24nm,20.0s,baz=190,slow=34						
SONM	Songino Array	26.09	295	P	P	22 00 27.6	-0.4
	0.5nm,0.5s,baz=76,slow=8.5,SNR=5.0						
H11N2	WAKE ISLAND Hy	30.32	130	T	T	22 33 53.0	
	baz=322,slow=76,SNR=4.1						
H11N1	WAKE ISLAND Hy	30.33	130	T	T	22 33 49.2	
	baz=322,slow=76,SNR=3.9						
H11N3	WAKE ISLAND Hy	30.33	130	T	T	22 33 53.2	
	baz=322,slow=76,SNR=4.3						
ZALV	Zalesovo Beam	39.36	308	P	P	22 02 23.1	-0.3
	1.6nm,0.5s,baz=91,slow=6.4,SNR=7.6						
MKAR	Makanchi Array	42.40	298	P	P	22 02 48.3	-0.2
	1.1nm,0.9s,baz=82,slow=8.9,SNR=8.2						
ILAR	Eielson Array	44.81	35	P	P	22 03 07.2	-0.3
	0.2nm,0.6s,baz=262,slow=5.1,SNR=4.2						
INK	Inuvik	49.52	29	P	P	22 03 44.4	+0.3
	0.4nm,0.4s,baz=270,slow=8.1,SNR=4.1						
FINES	FINESS Array B	64.81	332	P	P	22 05 31.2	-0.8
	3.4nm,0.8s,baz=52,slow=7.5,SNR=7.3						
NOA	NORSAR Array B	69.91	337	P	P	22 06 02.5	-1.8
	0.7nm,0.7s,baz=34,slow=6.5,SNR=3.4						
AKASG	Malin Array Be	70.89	322	P	P	22 06 08.9	-1.4
	0.2nm,0.3s,baz=37,slow=5.2,SNR=4.1						

WEL 21 22:18:28.3±0.7,35°S±11°×17°9E±1°7,h632km±10km, M4.1/51,MLv4.2/51,MLv4.1/24,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	Te Kaha	3.41	203	P	P	22 19 48.3	-3.8
HAZ				S	S	22 20 59.8	-1.1
PKGZ	Pakihiroa	3.44	199	P	P	22 19 49.9	-2.6
PUZ	Puketiti	3.57	196	P	P	22 19 50.3	-2.9
PUZ				S	S	22 21 02.2	-0.6
RUGZ	Raukumara Rang	3.63	203	P	P	22 19 49.6	-4.1
OPRZ	Ohinepanea	3.98	216	P	P	22 19 53.2	-2.6
MWZ	Matawai	4.01	203	P	P	22 19 54.8	-1.3
MWZ				S	S	22 21 13.1	+5.1
TKGZ	Te Karaka	4.02	199	P	P	22 19 55.6	-0.4
URZ	Urewera	4.09	207	P	P	22 19 52.4	-4.1
URZ				S	S	22 21 10.6	+1.9
RAGZ	Rawiri	4.20	203	P	P	22 19 56.1	-1.3
RIGZ	Rimuhau	4.29	198	P	P	22 19 57.6	-0.3
KMRZ	Kaimai	4.30	221	P	P	22 19 57.4	-0.6
TARZ	Mount Tarawera	4.32	213	P	P	22 19 58.1	-0.1
HLRZ	Highlands Stat	4.40	214	P	P	22 19 58.7	-0.1
MUGZ	Murupara	4.41	209	P	P	22 19 58.2	-0.6
PRGZ	Paritu Road	4.47	196	P	P	22 20 00.7	+1.6
SNGZ	Shannon Statio	4.48	202	P	P	22 20 00.1	+0.9
HSRZ	Hossack Road	4.50	214	P	P	22 19 54.2	-5.2
HRRZ	Handcock Road	4.55	214	P	P	22 19 58.0	-1.7
KNZ	Kokohu	4.61	198	P	P	22 20 01.1	+0.9
ALRZ	Allen Road	4.66	212	P	P	22 20 00.8	+0.2
MHGZ	Mahia Peninsul	4.68	195	P	P	22 20 02.7	+2.1
RAHZ	Arahi	4.69	204	P	P	22 20 02.0	+1.3
MTHZ	Maungataniwha	4.71	206	P	P	22 20 01.5	+0.6
WHHZ	Waihua	4.79	201	P	P	22 20 03.6	+2.2
MRHZ	Matea Rd	4.86	210	P	P	22 20 02.1	0.0
NMHZ	Naumai	4.94	205	P	P	22 20 05.0	+2.3
ARHZ	Aropaoanui	5.03	203	P	P	22 20 05.7	+2.5
BKZ	Black Stump Fm	5.12	207	P	P	22 20 04.6	+0.6
MCHZ	McNeill Hill	5.29	204	P	P	22 20 07.4	+2.1
CKHZ	Cape Kidnapper	5.37	200	P	P	22 20 09.3	+3.5
HIZ	Hauiti	5.37	223	P	P	22 20 08.3	+2.4
KWHZ	Kaweka Forest	5.37	206	P	P	22 20 07.4	+1.5
WTVZ	West Tongariro	5.45	214	P	P	22 20 07.9	+1.2
TWVZ	Taurewa	5.49	215	P	P	22 20 08.1	+1.1
NGZ	Ngauruhoe	5.50	213	P	P	22 20 07.9	+0.9
KAHZ	Kahuranaki	5.55	201	P	P	22 20 10.9	+3.5
BHHZ	Black Hill Sta	5.56	208	P	P	22 20 08.6	+1.1
KRHZ	Kereru	5.58	206	P	P	22 20 09.2	+1.6
PXZ	Pawanui	5.78	200	P	P	22 20 12.4	+3.3
GLKZ	Green Lake	5.79	23	P	P	22 20 13.2	+3.6
VRZ	Vera Road	5.87	219	P	P	22 20 13.2	+3.4
PNHZ	Pukenui	5.88	205	P	P	22 20 12.0	+2.0
TSZ	Takapari Road	6.10	206	P	P	22 20 14.8	+3.0
BFZ	Birch Farm	6.56	202	P	P	22 20 21.1	+5.4
MRZ	Mangatainoka R	6.76	206	P	P	22 20 22.2	+4.7
HOWZ	Holdsworth Sta	7.00	206	P	P	22 20 24.7	+5.2
OGWZ	Otaki Gorge	7.05	208	P	P	22 20 24.8	+4.8
KIW	Kapiti Island	7.19	209	P	P	22 20 26.0	+4.7
MTW	Mount Morrison	7.23	205	P	P	22 20 27.9	+6.3
MSWZ	Moikau Station	7.55	205	P	P	22 20 31.7	+7.2
TCW	Tory Channel	7.75	211	P	P	22 20 31.8	+5.6
KHZ	Kahutara	9.05	209	P	P	22 20 47.5	+9.1

NIED 21 22:31:00,36°.10N×140°.50E,h56km,Mw4.4 Best double couple: $M_0$4.64000×10^{15} NP1:φs3.00000°,δ65.00000°, λ81.00000°. NP2:φs204.00000°,δ26.00000°,λ109.00000°.
BJI 21 22:31:08.4±0.0,35°.94N×140°.48E,h62km,mB4.9/32, mb4.6/53,Ms4.2/13,Ms7 3.9/11
MOS 21 22:31:09.3±1.1,35°.97N×140°.52E,h56km,mb4.8/28,Error ellipse: s-maj=9.3km s-min=5.2km az=106.7
NEIC 21 22:31:11.0±2.8,35°.98N±0°.05×140°.53E±0°.08,h54km±6km,

mb4.5/64, Error ellipse: s-maj=9.3km s-min=7.5km az=92.0
JMA **21** *22:31:12.1±0.1, 36°.02N×140°.38E, h54km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs173.00000°, δ22.00000°, λ62.00000°. NP2: φs22.00000°, δ71.00000°, λ101.00000°. Principal axes: T Plg63.0000°, Azm309.0000°; N Plg10.0000°, Azm199.0000°; P Plg25.0000°, Azm104.0000°;*
JMA Felt II J1.
IDC **21** *22:31:14.1±1.5, 35°.95N×140°.38E, h80km±13km, mb4.0/25, mb1 4.2/30, mb1mx4.1/43, mbtmp4.3/30, MS3.1/8, Ms1 3.1/8, ms1mx2.9/35 Error ellipse: s-maj=13.3km s-min=10.1km az=86.0*
ISC 21 22:31:10.9±0.5, 35°.95N±0°.04×140°.51E±0°.05, h54km±4km, n206, σ1s59/207, mb4.5/77, 24C-11D, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)

JIHU Itakohorinouch 0.02 28 ⇑P Pn 22 31 21.0 +2.0
JSMT Sammumatsuo 0.31 190 ⇑P Pn 22 31 22.9 +2.4
JYT Yasato 0.38 317 ⇓P Pn 22 31 21.4 +0.3
JAG Ashikaga 0.98 299 ⇓P Pn 22 31 28.3 -0.2
BSO3 Boso 3 1.14 180 ⇑P Pn 22 31 32.7 +2.3
BSO3 *e*S **Sn 22 31 48.6 +3.7**
JKT Katashina 1.31 309 ⇓P Pn 22 31 33.0 +0.1
JRY Ryogami san 1.31 274 ⇓P Pn 22 31 33.0 +0.1
JRY *e*S **Sn 22 31 48.0 -1.3**
JOD2 Odawara 2 1.35 240 ⇓P Pn 22 31 34.0 +0.6
MJAR Matsushiro Arr 1.96 288 P Pn 22 31 42.1 +0.4
36nm,0.3s,baz=90,slow=9.9,SNR=2752
MJAR S **Sn 22 32 07.0 +1.9**
5.6nm,0.3s,baz=114,slow=15,SNR=9.4
MJAR LR LR 22 32 34.6
comp=Z,820nm,18.6s,baz=110,slow=44
MAJO Matsushiro 1.96 288 Pn 22 31 42.5 +0.8
MAJO Matsushiro 1.96 288*d i*P Pn 22 31 42.5 +0.8
MAT Matsushiro 1.96 288 P Pn 22 31 42.8 +1.1
MAT S **Sn 22 32 08.0 +2.9**
MJB9 Matsu-Tunnel 1.96 288 Pn 22 31 42.6 +0.9
JHJ Hachijo jima 2 2.88 192 P Pn 22 31 56.1 +1.8
38nm,0.3s,baz=156,slow=23,SNR=23
JHJ S **Sn 22 32 30.4 +2.6**
143nm,0.3s,baz=70,slow=22,SNR=10
JHJ LR LR 22 32 50.4
comp=Z,208nm,21.1s,baz=290,slow=34
JHJ2 Mitsune 2.89 192 Pn 22 31 56.1 +1.8
INU Inuyama 2.91 259 Pn 22 31 55.8 +1.1
ERM Erimo 6.40 18 Pn Pn 22 32 42.2 -0.2
ERM **Sn 22 33 56.3 +2.2**
ERM Erimo 6.40 18 P Pn 22 32 42.2 -0.2
ERM 22 33 56.3
ASAJ Asahikawa 8.31 10 P Pn 22 33 07.7 -1.0
2.1nm,0.3s,baz=213,slow=6.5,SNR=8.6
ASAJ S **Sn 22 34 38.5 -2.6**
0.8nm,0.3s,baz=34,slow=18,SNR=2.5
ASAJ LR LR 22 37 32.2
comp=Z,57nm,18.1s,baz=198,slow=45
JKA Kamikawa-asahi 8.31 10 Pn 22 33 07.7 -1.0
JKA **Sn 22 34 38.5 -2.6**
NMR Nemuro--Hokkai 8.43 27 *e*P Pn 22 33 09.8 -0.5
NMR *e*S **Sn 22 34 36.9 -7.0**
JNU Nakatsue 8.43 253 P Pn 22 33 11.7 +1.3
0.8nm,0.3s,baz=70,slow=8.8,SNR=12
JNU LR LR 22 36 34.9
comp=Z,309nm,20.7s,baz=70,slow=38
JNU Nakatsue 8.43 253 Pn 22 33 11.9 +1.4
JCJ Chichijima 8.94 170 P Pn 22 33 15.6 -1.8
14nm,0.3s,baz=290,slow=11,SNR=4.7
JCJ S **Sn 22 34 49.5 -7.1**
8.2nm,0.3s,baz=162,slow=20,SNR=3.9
KSRS Korea Array 10.22 282 P Pn 22 33 37.9 +3.0
0.5nm,0.3s,baz=98,slow=14,SNR=16
KSRS LR LR 22 37 34.3
comp=Z,64nm,20.4s,baz=90,slow=38
KS19 Wonju Array Si 10.27 282 Pn Pn 22 33 35.2 -0.3
USA0B Ussuriysk Arra 10.51 324 Pn Pn 22 33 37.0 -1.7
USA0B Ussuriysk Arra 10.51 324 P Pn 22 33 37.1 -1.7
USRK Ussuriysk Ar. 10.51 324 P Pn 22 33 40.2 +1.5
baz=139,slow=14,SNR=9.0
YSS Yuzh-Sakhalins 11.12 8 *e*P Pn 22 33 48.7 +1.6
YSS pmax pmax
comp=Z,20nm,0.9s
MDJ Mudanjiang 12.01 319 P Pn 22 34 02.8 +3.6
MDJ pmax pmax
comp=Z,10.0nm,1.0s
MDJ pmax pmax
comp=Z,90nm,4.7s
MDJ Mudanjiang 12.01 319 Pn 22 34 02.8 +3.6
KLR Kul'dur 14.74 337 P Pn 22 34 36.7 +0.6
comp=Z,0.2nm,0.3s,baz=157,slow=14,SNR=4.7
KLR Kul'dur 14.74 337⇑*e*P Pn 22 34 37.6 +1.5
KLR pmax pmax
comp=Z,5.0nm,1.0s
TYV Tymovskoe 14.99 5 *e*P P 22 34 44.5 +0.9
TYV pmax pmax
comp=Z,14nm,0.9s
GRNR Gornyy 15.11 350⇓*i*P Pn 22 34 42.3 +1.5
GRNR pmax pmax
comp=Z,2.0nm,0.7s
GRNR MLR MLR
comp=Z,60nm,15.0s
NJ2 Nanjing 18.37 264 *e*P Pn 22 35 22.4 +0.8
NJ2 pmax pmax
comp=Z,13nm,0.6s
BJI Beijing 19.59 289 P P 22 35 33.1 -1.3
BJI pmax pmax
comp=Z,10.0nm,0.9s
YHNB Yeheng 19.95 241 P P 22 35 36.8 -1.6
ZEA Zeya 20.06 337 *e*P P 22 35 40.2 +0.8
ZEA pmax pmax
comp=N,19nm,0.4s
ZEA pmax pmax
comp=Z,20nm,0.8s
SSLB Suanglung 20.80 240 P P 22 35 45.1 -2.6
YULB Yu-li 20.82 238 P P 22 35 45.3 -2.6
PEA0B Petropavlovsk- 20.99 30 P P 22 35 47.9 -1.6
PEA0B Petropavlovsk- 20.99 30 P P 22 35 47.9 -1.6
PEA0B pmax pmax
comp=Z,13nm,1.2s
PETK Petropavlovsk- 20.99 30 LR LR 22 44 13.5
comp=Z,35nm,19.6s,baz=240,slow=37
TPUB Ta-pu 21.34 239 P P 22 35 50.6 -2.9
TPUB IAmb IAmb 22 35 57.7
comp=Z,16nm,1.0s
TWG Pinlang 21.35 238 P P 22 35 50.5 -3.1
WHN Wuhan 22.50 264 P P 22 36 04.9 -1.0
WHN S **S 22 40 01.3 -7.8**
WHN pmax pmax
comp=Z,32nm,0.6s
WHN LR LR
comp=Z,460nm,21.3s
MA2 Magadan 24.57 13 P P 22 36 26.6 +1.2
comp=Z,5.5nm,0.4s,baz=199,slow=6.1,SNR=9.2
MA2 Magadan 24.57 13 P P 22 36 26.7 +1.3
MA2 IAmb IAmb 22 36 27.4
comp=Z,8.4nm,0.8s
MA2 Magadan 24.57 13⇑*e*P P 22 36 26.6 +1.2
MA2 pmax pmax
comp=Z,8.0nm,0.7s
XAN Xi'an 25.90 275 P P 22 36 36.0 -1.7
XAN pmax pmax
comp=Z,8.0nm,0.6s
XAN pmax pmax
comp=Z,71nm,5.4s
XAN Xi'an 25.90 275 P P 22 36 36.1 -1.7
XAN IAmb IAmb 22 36 36.4
comp=Z,5.9nm,0.5s
XAN Xi'an 25.90 275 P P 22 36 36.1 -1.7
XAN pmax pmax
comp=Z,6.0nm,0.5s
ENH Enshi 26.53 267 P P 22 36 40.7 -2.9
YAK Yakutsk 26.98 349 P P 22 36 48.1 +0.9
comp=Z,8.1nm,0.4s,baz=121,slow=13.1,SNR=4.6
YAK Yakutsk 26.98 349 P P 22 36 48.0 +0.9
YAK IAmb IAmb 22 36 48.6
comp=Z,19nm,0.9s
YAK Yakutsk 26.98 349 *e*P P 22 36 47.0 -0.1
YAK pmax pmax
comp=Z,19nm,1.0s
YAK pmax pmax
comp=N,12nm,1.3s
YAK pmax pmax
comp=E,4.0nm,1.3s
ULN Ulaanbaatar 27.39 306 P P 22 36 51.0 -0.2
ULN Ulaanbaatar 27.39 306 P P 22 36 51.0 -0.2
ULN pmax pmax
comp=Z,4.0nm,1.0s
SONM Songino Array 27.81 306 P P 22 36 54.5 -0.4
comp=Z,2.7nm,0.5s,baz=106,slow=8.2,SNR=22
SEY Seymchan 28.00 12 P P 22 36 57.4 +1.2
comp=Z,3.3nm,0.3s,baz=347,slow=1.2,SNR=11
BOD Bodaibo 28.08 330 *e*P P 22 36 56.2 -0.8
BOD pmax pmax
comp=Z,4.0nm,0.9s
H11N2 WAKE ISLAND Hy 28.25 118 T T 23 06 28.9
baz=322,slow=75,SNR=22
H11N1 WAKE ISLAND Hy 28.26 118 T T 23 06 28.5
SNR=24
H11N3 WAKE ISLAND Hy 28.27 118 T T 23 06 32.2
baz=312,slow=75,SNR=21
H11S1 WAKE ISLAND Hy 28.91 120 T T 23 07 20.5
baz=13,slow=74,SNR=44
H11S3 WAKE ISLAND Hy 28.91 120 T T 23 07 19.5
SNR=32
H11S2 WAKE ISLAND Hy 28.93 120 T T 23 07 12.1
baz=316,slow=74,SNR=29
LZH Lanzhou 29.55 281 *e*P P 22 37 10.8 +0.2
LZH pP pP 22 37 25.1 +0.8
LZH sP sP 22 37 34.3 +3.6
LZH pmax pmax
comp=Z,15nm,1.1s
LZH pmax pmax
comp=Z,140nm,4.8s
LZH LR LR
comp=Z,260nm,14.1s
LZH LR LR
comp=Z,280nm,14.6s
CD2 Chengdu 30.96 271 P P 22 37 22.3 -0.6
CD2 pmax pmax
comp=Z,20nm,0.5s
GTA Gaotai 32.20 289 *e*P P 22 37 32.6 -1.3
GTA PcP **PcP 22 40 22.4 +0.9**
GTA pmax pmax
comp=Z,5.0nm,0.7s
GTA pmax pmax
comp=Z,100nm,5.4s
GTA LR LR
comp=Z,100nm,15.6s
GTA LR LR
comp=Z,100nm,16.8s
GTA LR LR
comp=Z,100nm,16.5s
BILL Bilibino 35.27 16 *e*P P 22 37 59.0 -1.0
BILL *e**PP **pP 22 38 16.0 +2.1**
BILL *e* 22 39 16.1
BILL *e* 22 40 26.1
BILL pmax pmax
comp=Z,7.0nm,1.7s
TIXI Tiksi 36.28 354 P P 22 38 07.7 -0.9
comp=Z,0.9nm,0.3s,baz=156,slow=4.8,SNR=4.4
TIXI Tiksi 36.28 354 IAmb IAmb 22 38 12.6
comp=Z,3.4nm,1.1s
TIXI Tiksi 36.28 354⇓*e*P P 22 38 08.2 -0.4
TIXI pmax pmax
comp=Z,2.0nm,1.1s
FAKI Fak Fak 39.43 193 P P 22 38 34.9 -0.8
PBKT Sadao Pong 40.03 252 P P 22 38 40.1 -0.6
PBKT IAmb IAmb 22 38 47.0
comp=Z,6.3nm,1.2s
CHTO Chiang Mai 40.33 256 P P 22 38 43.0 -0.2
CHTO Chiang Mai 40.33 256 P P 22 38 43.0 -0.2
CHTO pmax pmax
comp=Z,3.0nm,0.9s
CMAR Chiang Mai Arr 40.52 256 P P 22 38 44.4 -0.5
comp=Z,1.4nm,0.4s,baz=48,slow=5.9,SNR=4.8
CMAR LR LR 22 58 03.4
comp=Z,22nm,20.4s,baz=75,slow=40
WMQ Urumqi 40.69 298 *e*P P 22 38 46.5 +0.5
WMQ pP pP 22 39 01.8 +1.6
WMQ sP sP 22 39 09.3 +2.8
WMQ pmax pmax
comp=Z,11nm,1.1s
WMQ pmax pmax
comp=Z,130nm,3.9s
WMQ LR LR
comp=Z,460nm,29.2s
WMQ Urumqi 40.69 298 IAmb IAmb 22 38 48.6
comp=Z,11nm,1.0s
LSA Lhasa 41.59 276 IAmb IAmb 22 38 55.9
comp=Z,6.1nm,0.8s
ZALV Zalesovo Beam 42.12 313 P P 22 38 57.1 -0.4
comp=Z,2.4nm,0.5s,baz=99,slow=6.6,SNR=15
ZALV PcP **PcP 22 40 50.8 -0.3**
comp=Z,2.2nm,0.7s,baz=104,slow=2.5,SNR=6.0
NRIK Noril'sk 43.95 336 LR LR 22 58 12.9
comp=Z,46nm,18.3s,baz=17,slow=37
MKAR Makanchi Array 44.09 303 P P 22 39 13.1 -0.4
comp=Z,3.3nm,0.7s,baz=82,slow=9.8,SNR=49
MAKZ Makanchi 44.30 303 P P 22 39 14.9 -0.3
MAKZ Makanchi 44.30 303 P P 22 39 14.9 -0.3
MAKZ pmax pmax
comp=Z,4.0nm,0.7s
RDOG Red Dog Mine 44.80 26 P P 22 39 20.0 +1.1
TAPN Taplejung 45.30 275 *e*P P 22 39 23.9 +0.2
comp=Z,10.0nm,0.4s
ODAN Odare 45.76 274 *e*P P 22 39 26.4 -0.9
comp=Z,8.1nm,0.6s
KURK Kurchatov 46.04 309 P P 22 39 27.8 -1.0
KURK Kurchatov 46.04 309*ce*P P 22 39 27.9 -1.0
KURK pmax pmax
comp=Z,21nm,1.0s
RAMN Ramite 46.36 275 *e*P P 22 39 31.3 -0.8
comp=Z,17nm,0.7s
JIRN Jiri 46.40 276 *e*P P 22 39 32.2 -0.3
comp=Z,23nm,0.7s
GUN Gumba 46.55 276 *e*P P 22 39 33.8 +0.2
comp=Z,14nm,0.6s
PKI Pulchoki 47.06 276 *e*P P 22 39 37.4 -0.3
comp=Z,8.3nm,0.6s
PKIN Phulchoki 47.07 276 *e*P P 22 39 37.7 0.0
KKN Kakani 47.08 276 *e*P P 22 39 38.0 +0.4
GKN Gorkha 47.51 277 *e*P P 22 39 40.7 -0.2
DANN Dangsing 48.07 278 *e*P P 22 39 45.1 -0.3
comp=Z,76nm,0.8s
KDJ Kajisay 48.59 298 IAmb IAmb 22 39 51.5
comp=Z,5.0nm,0.7s
BOOM Boomskoye usch 49.38 298 IAmb IAmb 22 40 01.5
comp=Z,3.9nm,0.8s
NRN Naryn 49.62 297 IAmb IAmb 22 39 59.9
comp=Z,9.6nm,1.1s
KSH Kashi 50.19 295 P P 22 40 04.4 +3.1
KSH sP sP 22 40 27.1 +5.1
KSH PP **PP 22 42 01.8 +5.0**
KSH PcS **PcS 22 45 18.4 +1.3**
KSH S **S 22 47 10.6 +1.2**
KSH sS sS 22 47 40.6 +6.8
KSH pmax pmax
comp=Z,9.0nm,0.7s
KSH pmax pmax
comp=Z,150nm,6.7s
KSH LR LR
comp=Z,130nm,6.0s
KSH LR LR
comp=Z,150nm,8.4s
KSH LR LR
comp=Z,65nm,9.6s
MDM Murphy Dome 50.22 32 P P 22 40 02.1 +1.2
AAK Ala-Archa 50.37 299 P P 22 40 02.6 0.0
AAK IAmb IAmb 22 40 05.3
comp=Z,3.6nm,0.8s
AAK Ala-Archa 50.37 299*ce*P P 22 40 02.1 -0.6
AAK pmax pmax
comp=Z,5.0nm,1.0s
IL31 50.80 32 P P 22 40 06.7 +1.4
ILAR Eielson Array 50.80 32 P P 22 40 06.3 +1.0
comp=Z,3.2nm,0.7s,baz=269,slow=6.0,SNR=35
BRVK Borovoye 50.83 313 P P 22 40 05.7 0.0
BRVK IAmb IAmb 22 40 11.2
comp=Z,3.2nm,0.9s
BRVK Borovoye 50.83 313⇑*e*P P 22 40 05.2 -0.5
BRVK pmax pmax
comp=Z,3.0nm,0.8s
DOT Dot Lake 52.11 33 P P 22 40 16.6 +1.5
DOT IAmb IAmb 22 40 20.4
comp=Z,2.8nm,0.8s
SCRK Sand Creek 52.11 33 P P 22 40 16.3 +1.0
SCRK IAmb IAmb 22 40 17.5
comp=Z,3.1nm,0.7s
RAGM Ragged Mountai 52.20 37 P P 22 40 17.5 +1.6
KNRA Kununurra 52.53 194 P P 22 40 19.3 +0.6
BALM Baldy 53.24 36 P P 22 40 23.1 -0.5
BALM IAmb IAmb 22 40 30.7
comp=Z,7.6nm,1.1s
BTK Batken 53.79 297 IAmb IAmb 22 40 34.7
comp=Z,2.8nm,0.6s
NIL Nilore 54.27 289 P P 22 40 31.7 +0.2
NIL IAmb IAmb 22 40 32.2
comp=Z,6.0nm,0.9s
NIL Nilore 54.27 289 P P 22 40 31.7 +0.2
NIL pmax pmax
comp=Z,6.0nm,0.9s
EPYK Eagle Plains 54.83 29 P P 22 40 37.3 +2.3
FITZ Fitzroy Crossi 55.57 197 P P 22 40 41.6 +0.8
comp=Z,3.0nm,0.5s,baz=14,slow=7.2,SNR=8.8
FITZ Fitzroy Crossi 55.57 197 P P 22 40 41.4 +0.6
FITZ IAmb IAmb 22 40 42.2
comp=Z,4.1nm,0.7s
INK Inuvik 55.68 27 P P 22 40 41.4 +0.3
comp=Z,2.5nm,0.6s,baz=287,slow=7.6,SNR=13
INK Inuvik 55.68 27 P P 22 40 42.8 +1.7
INK IAmb IAmb 22 40 43.4
comp=Z,3.0nm,0.8s
INK Inuvik 55.68 27 P P 22 40 42.8 +1.7
INK pmax pmax
comp=Z,3.0nm,0.8s
WB0 Warramunga Arr 55.71 187 P P 22 40 42.1 +0.3
WRAB Tennant Creek 55.88 187⇑*e*P P 22 40 42.7 -0.4
WRAB pmax pmax
comp=Z,16nm,1.8s
WR0 Warramunga Arr 55.89 187 IAmb IAmb 22 40 43.6
comp=Z,4.8nm,0.7s
WRA Warramunga Arr 55.89 187 P P 22 40 42.8 -0.3
comp=Z,4.0nm,0.5s,baz=2.4,slow=7.3,SNR=34
ARU Arti 56.70 319 P P 22 40 48.2 -0.4
ARU Arti 56.70 319*c i*P P 22 40 47.9 -0.6
ARU *PP **pP 22 41 05.1 +1.9**
ARU 22 42 51.5
ARU S **S 22 48 36.1 -0.7**
ARU pmax pmax
comp=Z,16nm,0.8s
C36M Paulatuk 58.72 24 IAmb IAmb 22 41 04.6
comp=Z,5.4nm,0.9s
AS31 Alice Springs 59.62 187 IAmb IAmb 22 41 13.2
comp=Z,1.4nm,0.3s
ASAR Alice Springs 59.62 187 P P 22 41 09.8 +0.5
comp=Z,1.2nm,0.6s,baz=18,slow=12,SNR=16
PRGR Permogore 61.28 327 *e*P P 22 41 19.3 -0.9
PRGR pmax pmax
comp=Z,5.0nm,0.8s
NOUC Port Laguerre 62.68 153 P P 22 41 31.3 +1.4
NOUC IAmb IAmb 22 41 48.9
comp=Z,8.1nm,1.1s
GEYT Alibeck 63.73 299 P P 22 41 36.7 -0.3
comp=Z,2.0nm,0.7s,baz=347,slow=6.1,SNR=5.8
RES Resolute Bay 63.83 14 P P 22 41 37.5 +0.5
RES IAmb IAmb 22 41 38.3
comp=Z,3.0nm,0.8s
RES Resolute Bay 63.83 14 P P 22 41 37.5 +0.5
RES pmax pmax
comp=Z,3.0nm,0.8s
KLMR Klimovskoe 64.29 328 *e*P P 22 41 38.6 -1.6
KLMR pmax pmax
comp=Z,7.0nm,0.8s
KLMR Klimovskoe 64.29 328 *e*P P 22 41 38.7 -1.5
KLMR AMP 22 41 40.2
comp=Z,7.0nm,0.8s
ARCES ARCESS Array B 64.76 339 P P 22 41 43.1 0.0
comp=Z,3.4nm,0.9s,baz=34,slow=6.6,SNR=8.1
YKA Yellowknife Ar 65.11 30 P P 22 41 46.5 +1.0
comp=Z,0.6nm,0.7s,baz=299,slow=6.5,SNR=11
DAG Danmarks Havn 66.79 355 *i* P P 22 41 56.2 +0.1
comp=Z,4.3nm,0.7s
DAG Danmarks Havn 66.79 355 *i* P P 22 41 56.2 +0.1
DAG pmax pmax
comp=Z,4.0nm,0.7s
STKA Stephens Creek 67.48 179 P P 22 42 01.9 +1.0
comp=Z,2.0nm,0.7s,baz=0.8,slow=9.7,SNR=4.0
STKA Stephens Creek 67.48 179 P P 22 42 01.4 +0.5
VRH Novokhopyorsk 67.90 318 *e*P P 22 42 01.9 -1.6
VRH pmax pmax
comp=Z,10.0nm,0.7s
OBN Obninsk 68.53 323 *e*P P 22 42 06.5 -0.8
OBN *e* 22 42 30.1
OBN *e* 22 44 38.1
OBN *e*PPP PPP 22 46 15.0
OBN pmax pmax
comp=Z,11nm,0.9s
LPSR Galich'ya Gora 68.67 320 *e*P P 22 42 07.4 -0.9
LPSR pmax pmax
comp=Z,10.0nm,0.6s
VSR Storozhevoye 69.27 319 *e*P P 22 42 11.1 -0.9
VSR pmax pmax
comp=Z,10.0nm,0.9s
VORD Divnogorie 69.33 318 *e*P P 22 42 11.4 -1.0
VORD pmax pmax
comp=Z,6.0nm,0.6s
FIA1 FINESS Array S 69.43 332 P P 22 42 11.8 -1.1
FIA1 IAmb IAmb 22 42 23.0
comp=Z,7.6nm,0.9s
FINES FINESS Array B 69.44 332 P P 22 42 12.6 -0.2
comp=Z,4.9nm,0.8s,baz=54,slow=6.2,SNR=11
NCK Nalchik 70.75 310⇑*e*P P 22 42 21.6 +0.3
NCK pmax pmax
comp=Z,6.0nm,1.0s
KBZ Khabaz 71.06 311 P P 22 42 23.4 +0.3
comp=Z,6.5nm,0.8s,baz=18,slow=3.5,SNR=14
KBZ Khabaz 71.06 311*d i*P P 22 42 23.4 +0.3
KBZ pmax pmax
comp=Z,9.0nm,0.9s
KIV Kislovodsk 71.07 311 ⇑P P 22 42 23.5 +0.1
KIV Kislovodsk 71.07 311 P P 22 42 23.6 +0.3
KIV Kislovodsk 71.07 311 *e*P P 22 42 24.0 +0.7
KIV pmax pmax
comp=Z,40nm,1.0s
NEY Neytrino 71.42 310 *e*P P 22 42 26.0 +0.4
NWAO Narrogin (SRO) 71.90 200 P P 22 42 28.9 +0.8
NWAO IAmb IAmb 22 42 29.8
comp=Z,6.5nm,0.8s
NWAO Narrogin (SRO) 71.90 200 P P 22 42 29.3 +1.2
NWAO IAmb IAmb 22 42 29.8
comp=Z,5.2nm,0.8s
NWAO Narrogin (SRO) 71.90 200 P P 22 42 29.3 +1.2
NWAO pmax pmax
comp=Z,5.0nm,0.8s
AKH Akhalkalaki 71.91 308 ⇑P P 22 42 29.3 +0.8
AKH Akhalkalaki 71.91 308 IAmb IAmb 22 42 30.0
comp=Z,6.2nm,0.9s
BCA Borcka 73.08 309 ⇑P P 22 42 35.5 +0.2
NC405 NORSAR Array S 74.69 337 P P 22 42 43.4 -1.0
AKASG Malin Array Be 74.71 322 P P 22 42 44.0 -0.6
comp=Z,6.9nm,0.7s,baz=48,slow=6.1,SNR=28
NC303 NORSAR Array S 74.71 337 P P 22 42 44.1 -0.4
NB2 NORSAR Subarra 74.90 337 P P 22 42 45.1 -0.5
comp=Z,1.6nm,0.6s,baz=41,slow=5.9
NOA NORSAR Array B 74.90 337 P P 22 42 45.5 -0.1
comp=Z,4.1nm,0.8s,baz=39,slow=5.8,SNR=14
NOA LR LR 23 19 09.8
comp=Z,11nm,18.7s,baz=320,slow=38
NBO00 NORSAR Array S 75.05 337 P P 22 42 45.9 -0.6
NBO00 IAmb IAmb 22 42 48.1
comp=Z,4.0nm,0.7s
NAO01 NORSAR Array S 75.16 337 P P 22 42 46.4 -0.7
NAO01 IAmb IAmb 22 42 47.3
comp=Z,11nm,0.8s
NVAR Mina Array Bea 76.22 52 P P 22 42 54.7 +0.9
comp=Z,0.9nm,0.8s,baz=283,slow=6.6,SNR=6.1
SORM Soroca 76.77 320 ⇑P P 22 42 55.6 -0.8
SORM Soroca 76.77 320 ⇑P P 22 42 55.6 -0.8
TESR Tescani 78.70 320 ⇑P P 22 43 07.1 -0.1
BURAR Bucovina Array 78.71 321 ⇑P P 22 43 07.5 +0.1
BURAR Bucovina Array 78.71 321 ⇑P P 22 43 07.5 +0.1
PDAR Pinedale Array 78.94 45 P P 22 43 10.2 +1.3
comp=Z,0.6nm,0.6s,baz=244,slow=2.8,SNR=7.3
BRTR Keskin Array B 79.03 311 P P 22 43 09.3 0.0
comp=Z,1.9nm,0.7s,baz=118,slow=4.2,SNR=10
KOLS Kolonicke sedl 79.27 324 *e*P P 22 43 10.8 +0.5
KOLS Kolonicke sedl 79.27 324 *e*P P 22 43 10.8 +0.5
BISRR Bisoca 79.30 319 ⇑P P 22 43 11.9 +1.3
TRPA Tarpa 79.69 323 ⇑P P 22 43 13.2 +0.6
RDMU Red Mountain 80.32 47 P P 22 43 18.6 +2.2
RAYN Ar Rayn 80.39 292 P P 22 43 16.5 -0.4
RAYN IAmb IAmb 22 43 17.5
comp=Z,5.1nm,0.8s

RAYN	Ar Rayn	80.39	292	P	P	22 43 16.5	-0.4
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARR	Arges	80.51	320	⇑P	P	22 43 17.9	+0.7
VYHS	Vyhne	81.20	325	eP	P	22 43 21.4	+0.7
VYHS	Vyhne	81.20	325	eP	P	22 43 21.3	+0.6
CLL	Collm	81.67	330	eP	P	22 43 24.0	+0.9
	comp=Z,6.0nm,1.0s						
CLL				e(sP)	sP	22 43 42.0	-2.6
CLL	Collm	81.67	330	eP	P	22 43 24.0	+0.9
CLL				e*PP	sP	22 43 42.0	-2.6
CLL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
QRZ	Quartz Range	81.87	156	P	P	22 43 25.0	+1.0
CSS	Mathiatis	82.15	308	P	P	22 43 25.2	-0.8
CSS				IAmb	IAmb	22 43 26.9	
	comp=Z,6.3nm,0.7s						
KHC	Kasperske Hory	83.08	328	⇓eP	P	22 43 30.8	+0.2
KHC				pmax	pmax		
	comp=Z,56nm,3.6s						
VTS	Vitosha	83.12	319	⇑P	P	22 43 31.5	+0.4
VTS	Vitosha	83.12	319	IAmb	IAmb	22 43 32.1	
	comp=Z,3.1nm,0.8s						
VTS	Vitosha	83.12	319	⇑P	P	22 43 31.5	+0.4
PDG	Podgorica	85.34	321	⇓P	P	22 43 42.1	0.0
ITM	Ithomi	87.62	315	P	P	22 43 51.6	-1.8
TXAR	Lajitas Array	91.36	52	P	P	22 44 12.8	+1.6
	comp=Z,0.9nm,0.6s,baz=295,slow=3.0,SNR=12						
LPAZ	La Paz	147.87	60	PKPbc	PKPbc	22 50 52.0	+0.9
	comp=Z,1.4nm,0.8s,baz=34,slow=3.0,SNR=6.7						

NNC 21 22:51:58.1±7.7, 36.97N×70.91E, h0km, mb3.8, mpv3.6, 3C-2D, Error ellipse: s-maj=76.3km s-min=53.2km az=141.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.13	357	⇓P	Pn	22 53 01.0	+1.1
	2.8nm,0.3s,baz=175,slow=12,SNR=53						
KK31				⇑S	Sn	22 54 42.8	+2.0
	2.9nm,0.4s,baz=189,slow=27,SNR=9.9						
AAK	Ala-Archa	6.29	25	⇓P	Pn	22 53 32.7	+0.4
	1.3nm,0.3s						
AAK				⇑S	Sn	22 54 45.3	+0.3
	4.5nm,0.8s						
AB31	Akbulak array	14.64	330	⇑P	Pn	22 55 23.4	-2.9
	0.2nm,0.3s						

ISU 21 23:18:05.0, 39.90N×69.30E, h5km
KRNET 21 23:18:05.5±0.1, 39.86N×69.22E, mb3.1
SOME 21 23:18:06.9, 40.03N×69.42E, h0km
NNC 21 23:18:08.8±6.4, 40.16N×69.22E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=46.4km s-min=26.4km az=20.0
ISC 21 23:18:05.9±2.4, 39.87N±0.07×69.21E±0.04, h10km±15km, n20, σ1.65/37, 11C-13D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZI	Dzhizak	1.10	284	eP	Pn	23 18 26.9	-0.4
DZI				eS	Sn	23 18 42.7	+0.2
YNGY	Yangiyul	1.25	354	eP	Pn	23 18 28.7	-0.6
YNGY				eS	Sb	23 18 44.8	-0.8
BTK	Batken	1.25	81	⇑iP	Pn	23 18 28.2	-1.3
	baz=80						
BTK				⇑iS	Sb	23 18 45.1	-0.7
	baz=80						
TAS	Tashkent	1.45	3	⇑iP	Pn	23 18 32.0	-0.2
	baz=2.0						
TAS				⇑iS	Sb	23 18 51.6	0.0
	baz=2.0						
CHM	Chimkent	2.46	7	eP	Pb	23 18 50.7	+0.4
	56nm,0.2s						
CHM				eS	Sg	23 19 23.0	-2.1
	185nm,0.3s						
ARK	Arkit	2.84	46	⇑iP	Pn	23 18 51.6	+0.2
	baz=47						
ARK				⇑iS	Sn	23 19 25.1	-0.6
	baz=47						
ARSB	Arslanbob	3.22	62	⇓iP	Pn	23 18 56.7	+0.1
	baz=62						
ARSB				⇓iS	Sn	23 19 33.8	-1.2
	baz=62						
ARSB	Arslanbob	3.22	62	eP	Pb	23 19 03.3	+0.1
ARSB				eS	Sg	23 19 47.3	-1.9
KK31	Karatay Array	3.38	16	⇓Pg	Pb	23 19 06.6	+0.8
	2.4nm,0.4s,baz=206,slow=17,SNR=4.9						
KK31				⇓Lg	Lg	23 19 48.9	
	9.4nm,0.4s,baz=198,slow=28,SNR=17						
DZA	Taraz	3.41	27	eP	Pb	23 19 07.3	+0.8
	8.8nm,0.1s						
DZA				eS	Sb	23 19 50.9	+2.9
	35nm,0.2s						
AML	Almayashu	4.08	55	⇓iP	Pn	23 19 08.8	+0.2
	baz=55						
AML				⇓iS	Sn	23 19 54.8	-1.8
	baz=55						
MRKS	Merke	4.17	45	eP	Pb	23 19 20.6	+1.2
	5.0nm,0.4s						
MRKS				eS	Sb	23 20 13.5	+3.6
	10nm,0.3s						
ARLS	Aral	4.36	61	⇓iP	Pn	23 19 12.7	+0.4
	baz=61						
ARLS				⇓iS	Sn	23 20 01.3	-1.9
	baz=61						
EKS2	Erkin-Say	4.43	50	⇓iP	Pn	23 19 13.2	0.0
	baz=49						
EKS2				⇓iS	Sn	23 20 03.1	-1.8
	baz=49						
UCH	Uchtor	4.65	58	⇑iP	Pn	23 19 16.6	0.0
	baz=58						
UCH				⇑iS	Sn	23 20 08.7	-2.1
	baz=58						
AAK	Ala-Archa	4.85	54	⇓Pn	Pn	23 19 21.8	+2.8
	3.0nm,0.6s						
AAK				⇑Sn	Sn	23 20 16.2	+1.0
	2.1nm,0.4s						
KZA	Kyzart	5.08	62	⇓eP	Pn	23 19 22.4	0.0
	baz=62						
KZA				⇓iS	Sn	23 20 18.6	-2.6
	baz=62						
KBK	Karagaybulak	5.14	55	⇑iP	Pn	23 19 23.2	+0.1
	baz=55						
KBK				⇑iS	Sn	23 20 20.0	-2.5
	baz=55						
SGDS	Sogindy	5.41	47	Pg	Pb	23 19 43.4	+2.9
	1.8nm,0.5s						
SGDS				Lg	Lg	23 20 52.8	
	4.4nm,0.3s						
KST	Kastek	5.98	56	Pg	Pb	23 19 53.1	+2.8
	1.2nm,0.3s						
KST				Lg	Lg	23 21 10.8	
	3.1nm,0.6s						

THE 21 23:25:57.9, 38.38N×20.36E, h7km±1km, ML3.2/12, Error ellipse: s-maj=1.4km s-min=0.8km az=71.0
ATH 21 23:25:58.5, 38.39N×20.47E, h15km±1km, ML3.1/15, Error ellipse: s-maj=1.8km s-min=0.6km az=263.0
BEO 21 23:26:00.7±1.1, 38.38N×20.05E, h17km±6km, ML3.2/4
ISC 21 23:25:58.5±0.8, 38.39N±0.02×20.43E±0.03, h11km±5km, n58, σ1.38/97, 7C-9D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KONA	Konidatara, Ke	0.12	72	⇓Pd0	Pg	23 26 01.4	-0.2
KONA				S	Sg	23 26 03.5	-0.2
FSK	Fiskardo	0.13	57	P	Pg	23 26 01.5	-0.1
FSK				S	Sg	23 26 03.7	-0.2
	17μm,0.3s						
FSK	Fiskardo	0.13	57	⇓Pd0	Pg	23 26 01.6	-0.1
FSK				S	Sg	23 26 03.6	-0.3
FSK				AML	AML	23 26 03.8	
	comp=E,30261μm,0.1s						
FSK				AML	AML	23 26 04.2	
	comp=N,37719μm,0.4s						
KEF4	Livadi, Kephal	0.13	180	⇑Pc0	Pg	23 26 02.1	+0.4
KEF4				S	Sg	23 26 04.6	+0.7
LXRA	Lixouri, Kepha	0.19	177	⇑Pc0	Pg	23 26 03.1	+0.5
LXRA				S	Sg	23 26 06.6	+1.2
KEF3	Kipouria, Keph	0.20	198	⇓Pd0	Pg	23 26 03.3	+0.6
KEF3				S	Sg	23 26 06.8	+1.3
ARGA	Argostoli. Kep	0.21	169	⇑Pc0	Pg	23 26 02.6	+0.2
ARGA				S	Sg	23 26 06.8	+0.7
KEF2	Argostoli. Kep	0.23	168	⇑Pc0	Pg	23 26 03.4	+0.1
KEF2				S	Sg	23 26 07.0	+0.6
VLS	Valsamata	0.25	148	P	Pg	23 26 03.6	-0.1
VLS				S	Sg	23 26 07.6	+0.5
	comp=N,7μm,0.2s						
VLS	Valsamata	0.25	148	⇑Pc0	Pg	23 26 03.6	-0.1
VLS				S	Sg	23 26 07.2	+0.1
EVGI	Lefkada island	0.29	38	P	Pg	23 26 04.7	+0.2
EVGI				S	Sg	23 26 09.4	+0.9
EVGI	Lefkada island	0.29	38	⇓Pd0	Pg	23 26 04.7	+0.2
EVGI				S	Sg	23 26 09.2	+0.7
MGNA	Meganis	0.39	47	⇓Pd0	Pg	23 26 06.1	-0.2
MGNA				S	Sg	23 26 11.8	+0.3
MGNA				AML	AML	23 26 12.6	
	comp=N,15030μm,0.2s						
MGNA				AML	AML	23 26 12.7	
	comp=E,11532μm,0.3s						
KFL	Anninata	0.40	134	⇑Pc0	Pg	23 26 06.2	-0.2
LKD2	Lefkada island	0.44	24	P	Pg	23 26 07.1	-0.1
LKD2				S	Sg	23 26 13.8	+0.7
	comp=E,2μm,0.3s						
LKD2	Lefkada island	0.44	24	⇓Pd0	Pg	23 26 07.2	-0.1
LKD2				S	Sg	23 26 13.7	+0.6
LKD2				AML	AML	23 26 15.6	
	comp=E,4567μm,0.2s						
LKD2				AML	AML	23 26 19.9	
	comp=N,4010μm,0.2s						
TSLK	Tsoukalades, L	0.47	22	P	Pg	23 26 07.9	+0.1
TSLK				S	Sb	23 26 15.4	-0.5
	comp=N,3μm,0.3s						
TSLK	Tsoukalades, L	0.47	22	⇓Pd0	Pg	23 26 07.8	+0.1
TSLK				S	Sg	23 26 15.0	+0.9
TSLK				AML	AML	23 26 16.6	
	comp=N,6961μm,0.4s						
TSLK				AML	AML	23 26 19.7	
	comp=E,5962μm,0.3s						
AST1	Astakos	0.54	73	P	Pg	23 26 08.8	-0.3
VLMS	Volimes, Zakyn	0.54	160	⇑Pc0	Pg	23 26 08.9	-0.2
VLMS				S	Sb	23 26 17.4	-0.6
VLMS				AML	AML	23 26 18.1	
	comp=N,29933μm,0.3s						
VLMS				AML	AML	23 26 20.4	
	comp=E,12488μm,0.3s						
PDO	Prodromos	0.63	70	P	Pg	23 26 10.4	-0.4
PDO				S	Sb	23 26 20.7	+0.3
	comp=E,2μm,0.6s						
PDO	Prodromos	0.63	70	⇓Pd0	Pg	23 26 10.2	-0.6
PDO				S	Sg	23 26 19.5	+0.4
PDO				AML	AML	23 26 25.1	
	comp=E,2971μm,0.6s						
PDO				AML	AML	23 26 29.8	
	comp=N,4464μm,0.5s						
RLS	Riolos of Patr	0.89	112	P	Pg	23 26 14.8	-0.8
RLS				S	Sb	23 26 28.7	+1.0
	comp=N,755nm,0.5s						
RLS	Riolos of Patr	0.89	112	P	Pg	23 26 15.1	-0.5
RLS				S	Sg	23 26 27.7	+0.6
RLS				AML	AML	23 26 33.1	
	comp=N,1821μm,0.4s						
RLS				AML	AML	23 26 36.4	
	comp=E,1148μm,0.6s						
PVO	Paravola	0.89	75	P	Pg	23 26 15.4	-0.3
PVO				S	Sn	23 26 29.6	-0.4
	comp=E,1μm,0.5s						
PVO	Paravola	0.89	75	⇓Pd0	Pg	23 26 15.5	-0.3
PVO				S	Sg	23 26 26.7	-0.7
PVO				AML	AML	23 26 34.7	
	comp=N,2829μm,0.5s						
PVO				AML	AML	23 26 36.4	
	comp=E,2980μm,0.4s						
DRO	Drossia	1.10	113	P	Pb	23 26 18.5	-1.1
DRO				S	Sn	23 26 36.4	+1.2
	comp=E,1μm,0.5s						
DRO	Drossia	1.10	113	P	Pb	23 26 18.8	-0.8
DRO				S	Sb	23 26 33.7	-0.4
DRO				AML	AML	23 26 43.1	
	comp=N,3117μm,0.5s						
DRO				AML	AML	23 26 44.3	
	comp=E,2922μm,0.3s						
IGT	Igoumenitsa	1.15	356	P	Pb	23 26 19.9	-0.5
IGT	Igoumenitsa	1.15	356	ePg	Pg	23 26 22.5	+1.9
IGT				eSg	Sn	23 26 37.7	+1.5
IGT	Igoumenitsa	1.15	356	P	Pb	23 26 19.8	-0.5
IGT				S	Sn	23 26 36.4	+0.2
IGT				AML	AML	23 26 39.7	
	comp=E,988μm,0.6s						
IGT				AML	AML	23 26 39.9	
	comp=N,930μm,0.6s						
ANX	Ano Chora	1.19	80	P	Pn	23 26 20.4	-0.9
ANX				S	Sn	23 26 40.3	+2.8
	comp=N,2μm,0.6s						
ANX	Ano Chora	1.19	80	P	Pn	23 26 20.1	-1.2
ANX				AML	AML	23 26 43.6	
	comp=N,3077μm,0.5s						
ANX				AML	AML	23 26 44.5	
	comp=E,3334μm,0.6s						
EVR	Evrytania	1.21	64	P	Pn	23 26 20.2	-1.2
EVR	Evrytania	1.21	64	P	Pn	23 26 20.3	-1.1
EVR				AML	AML	23 26 47.8	
	comp=E,754μm,0.5s						
EVR				AML	AML	23 26 54.9	
	comp=N,586μm,0.7s						
SERG	Sergoula	1.28	88	P	Pn	23 26 21.5	-1.0
SERG				S	Sg	23 26 41.9	+2.1
	comp=N,760nm,0.7s						
SERG	Sergoula	1.28	88	P	Pn	23 26 21.4	-1.0
SERG				AML	AML	23 26 45.4	
	comp=E,1580μm,0.7s						
SERG				AML	AML	23 26 46.2	
	comp=N,1499μm,0.4s						
TRIZ	Trizonia	1.29	90	P	Pn	23 26 21.6	-0.9
TRIZ				S	Sg	23 26 40.9	+0.7
	comp=N,800nm,0.5s						
TRIZ	Trizonia	1.29	90	P	Pn	23 26 21.7	-0.9
AMT	Artemida-Makis	1.33	130	P	Pn	23 26 22.8	-0.2
AMT	Artemida-Makis	1.33	130	P	Pn	23 26 22.6	-0.5
AMT				AML	AML	23 26 57.1	
	comp=N,1759μm,0.6s						
AMT				AML	AML	23 26 57.5	
	comp=E,1276μm,0.9s						
ALIK	Aliki, Aigiali	1.33	95	P	Pn	23 26 22.4	-0.7
KALE	Kalithea	1.35	89	P	Pn	23 26 22.3	-1.1
KALE				S	Sg	23 26 45.3	+3.4
	comp=E,645nm,0.6s						
KLV	Kalavryta, Ach	1.40	104	P	Pn	23 26 23.6	-0.5
KLV				S	Sg	23 26 44.6	+0.9
KLV	Kalavryta, Ach	1.40	104	P	Pn	23 26 23.7	-0.4
KLV				S	Sn	23 26 42.9	+0.2
KLV				AML	AML	23 26 45.4	
	comp=N,655μm,0.5s						
KLV				AML	AML	23 26 54.0	
	comp=E,491μm,0.8s						
MAKR	Makrakomi, Fth	1.47	64	P	Pn	23 26 25.3	+0.2
THL	Klokotos Trika	1.71	46	P	Pb	23 26 30.5	+0.6
OHR	Ohrid	2.73	6	i Pn	Pg	23 26 54.6	+3.6
STIP	Stip	3.57	22	i Pn	Pb	23 26 59.4	-2.3
SRS	Serrai	3.66	41	ePn	Pn	23 26 58.8	+3.7
PDG	Podgorica	4.13	348	ePn	Pn	23 27 02.7	+1.1
PDG				eSn	Sn	23 27 49.0	-0.9
BOSS	Bosilegrad	4.39	20	ePn	Pn	23 27 08.4	+3.2
TREB	Trebinje	4.60	341	ePn	Pn	23 27 07.9	-0.2
VTS	Vitosha	4.74	26	ePn	Pn	23 27 13.2	+3.2
SJES	Sjenica	4.88	356	ePn	Pn	23 27 12.9	+0.9
SJES				eSn	Sn	23 28 08.4	-0.1
IVAS	Ivanjica	5.19	358	ePn	Pn	23 27 16.5	+0.4
IVAS				eSn	Sn	23 28 14.4	-1.6
SOKA	Soboth	9.19	336	i Pn	Pn	23 28 10.4	-0.7
	comp=E,0.7nm,0.3s						
SOKA				i Sn	Sn	23 29 48.2	-6.2
	comp=E,0.2nm,0.2s						
OBKA	Obir	9.20	334	i Pn	Pn	23 28 09.7	-1.6
	comp=E,0.7nm,0.2s						
OBKA				i Sn	Sn	23 29 50.5	-4.3
	comp=E,1.5nm,0.3s						

IDC 21 23:26:14.2±2.5, 14.28N×93.02W, h0km, mb3.8/5, mb1 4.1/9, mb1mx3.8/46, mbtmp3.9/9, ML4.1/4, Error ellipse: s-maj=53.5km s-min=19.7km az=18.0
NEIC 21 23:26:17.0±2.6, 14.35N±0.08×93.03W±0.04, h17km±5km, Error ellipse: s-maj=12.3km s-min=5.1km az=197.0
MEX 21 23:26:17.5±0.5, 14.35N×93.02W, h75km±33km, MD4.0
GCG 21 23:26:18.3±0.5, 14.70N×92.92W, h80km±22km, MD4.2
ISC 21 23:26:16.1±3.4, 14.43N±0.07×93.00W±0.05, h6km±22km, n26, σ1.25/36, mb3.9/6, 1D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.86	56		Pb	23 26 33.8	+0.3
THIG					Sn	23 26 46.9	-0.7
THIG		0.86	56	eP	Pb	23 26 33.8	+0.3
THIG				eS	Sn	23 26 46.9	-0.7
PCIG		1.29	351		Pn	23 26 39.5	-1.2
PCIG					Sb	23 26 54.2	-3.4
PCIG		1.29	351	eP	Pn	23 26 39.5	-1.2
PCIG				i S	Sb	23 26 56.0	-1.6
ERG	Entre ros, C	1.39	89	eP	Pn	23 26 41.7	-0.3
ERG				eS	Sb	23 26 59.9	-0.7
STG3	Santiaguito 3,	1.42	78	⇓iP	Pn	23 26 41.8	-0.8
CCIG	Comitan	2.02	24		Pb	23 26 53.1	-0.3
CCIG	Comitan	2.02	24		Pb	23 26 53.5	+0.1
CCIG					Sb	23 27 19.1	+0.1
CCIG	Comitan	2.02	24	eP	Pb	23 26 53.5	+0.1
CCIG				eS	Sb	23 27 19.1	+0.1
FUG	Fuego 3	2.10	89	eP	Pn	23 26 51.8	-0.1
PCG	Pacaya	2.32	91	eP	Pn	23 26 54.9	-0.2
TGIG		2.34	357		Pn	23 26 56.8	+1.6
TGIG					Sn	23 27 25.1	+0.7
TGIG		2.34	357	eP	Pn	23 26 56.8	+1.6
TGIG				eS	Sn	23 27 25.1	+0.7
IXG	Ixpaco	2.50	96	eP	Pn	23 26 57.1	-0.4
APG	El Apazote	2.52	77	Pn	Pn	23 26 58.5	+0.6
	38nm,0.3s,baz=331,slow=8.2,SNR=56						
APG				Sn	Sn	23 27 30.8	+1.7
	43nm,0.3s,baz=329,slow=15,SNR=11						
CMIG	Matias Romero	3.21	326	Pn	Pn	23 27 07.4	+0.3
	7.7nm,0.3s,baz=166,slow=13,SNR=56						
CMIG				Sn	Sn	23 27 45.1	-0.6
	25nm,0.3s,baz=140,slow=17,SNR=8.7						
TEIG	Tepich	7.32	37	Pn	Pn	23 28 03.9	+0.3
	17nm,0.3s,baz=302,slow=1.5,SNR=38						
TEIG	Tepich	7.32	37		Pn	23 28 04.1	+0.4
TXAR	Lajitas Array	17.81	328	P	P	23 30 26.0	+0.4
	0.1nm,0.3s,baz=144,slow=12,SNR=9.5						
121A	Cookes Peak, D	22.50	326	P	P	23 31 20.7	+4.0
121A				IAmb	IAmb	23 31 25.1	
	comp=Z,4.7nm,1.1s						
SDV	Santo Domingo	22.58	102	P	P	23 31 16.3	-1.4
	comp=Z,1.0nm,0.3s,baz=331,slow=4.8,SNR=4.0						
NVAR	Mina Array Bea	32.73	322	P	P	23 32 51.0	+1.1
	comp=Z,1.0nm,0.7s,baz=135,slow=8.6,SNR=7.8						
GCMT	Greycliff	34.28	339	P	P	23 32 58.2	-5.1
YKA	Yellowknife Ar	50.39	347	P	P	23 35 12.9	-1.0
	comp=Z,1.1nm,0.6s,baz=153,slow=7.4,SNR=22						
INK	Inuvik	59.76	344	P	P	23 36 20.9	-0.7
	comp=Z,0.5nm,0.5s,baz=120,slow=8.1,SNR=4.8						
ILAR	Eielson Array	62.07	337	P	P	23 36 37.2	-0.2
	comp=Z,0.4nm,0.8s,baz=115,slow=4.7,SNR=5.6						

NIED 21 23:40:00, 37.60N×142.10E, h41km, Mw3.9 Best double couple: $M_0$8.64000×10^{14} NP1:ϕ_s123.00000°, δ84.00000°, λ-63.00000°. NP2:ϕ_s224.00000°, δ28.00000°, λ-168.00000°.
JMA 21 23:40:14.8±0.1, 37.60N×142.07E, h31km±3km, M4.0
IDC 21 23:40:16.0±0.8, 37.51N×142.10E, h35km±6km, mb3.6/10, mb1 3.9/14, mb1mx3.7/48, mbtmp3.9/14, ML4.4/3, MS3.1/1, Ms1 3.1/1, ms1mx2.4/36, Error ellipse: s-maj=18.5km s-min=13.6km az=111.0
NEIC 21 23:40:16.6±1.8, 37.45N±0.07×142.2E±0.1, h41km±7km, mb4.3/8, Error ellipse: s-maj=13.3km s-min=9.4km az=112.0
ISC 21 23:40:16.0±0.9, 37.57N±0.04×142.08E±0.06, h32km±6km, n53, σ1.72/65, mb4.0/14, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.89	327	P	Pn	23 40 30.5	-1.8
JIKH				eS	Sn	23 40 41.2	-2.8
JMST	Minamisoumatoc	0.96	280	P	Pn	23 40 32.0	-1.2
JMST				S	Sn	23 40 44.3	-1.5
JFK	Kawauchi	0.98	259	P	Pn	23 40 32.4	-1.2
JFK				S	Sn	23 40 44.9	-1.4
JIO	Ouri	1.06	327	P	Pn	23 40 33.2	-1.4
JIO				eS	Sn	23 40 46.0	-2.2
JMM	Marumori	1.06	287	P	Pn	23 40 33.6	-1.1
JMM				S	Sn	23 40 46.8	-1.5
ONAJ	Iwakimizuishiy	1.12	246	P	Pn	23 40 34.4	-1.1
ONAJ				S	Sn	23 40 48.2	-1.7
JOU	Okura	1.37	306	P	Pn	23 40 38.7	-0.3
JOU				S	Sn	23 40 55.4	-0.7
JFT	Otama	1.39	269	P	Pn	23 40 39.3	+0.2
JFT				S	Sn	23 40 56.6	+0.2
JMK	Ichinoseki	1.54	334	P	Pn	23 40 40.2	-1.0
JMK				S	Sn	23 40 58.5	-1.6
JYS	Shirataka	1.72	293	P	Pn	23 40 45.1	+1.3
JYS				S	Sn	23 41 06.0	+1.4
JFY	Yanaizu	1.89	266	P	Pn	23 40 46.7	+0.5
JFY				S	Sn	23 41 10.8	+1.9
JYK	Kaneyama	1.91	315	P	Pn	23 40 46.6	+0.2
JOM	Ohasama	2.00	342	P	Pn	23 40 46.9	-0.7
JRG	Rokugo	2.15	329	P	Pn	23 40 49.7	0.0
JRG				S	Sn	23 41 15.7	+0.5
MJAR	Matsushiro Arr	3.26	253	Pn	Pn	23 41 05.2	+0.3
	1.5nm,0.3s,baz=73,slow=18,SNR=41						
MJAR				Sn	Sn	23 41 46.9	+4.3
	1.0nm,0.3s,baz=127,slow=43,SNR=3.4						
MAJO	Matsushiro	3.26	253		Pn	23 41 07.3	+2.4
MAT	Matsushiro	3.26	253	P	Pn	23 41 07.6	+2.7
MAT				S	Sb	23 41 48.4	-4.1
MJB9	Matsu-Tunnel	3.26	253		Pn	23 41 06.2	+1.2
ERM	Erimo	4.52	10		Pn	23 41 26.1	+3.9
INU	Inuyama	4.64	243		Pn	23 41 24.9	+1.1
JHJ2	Mitsune	4.81	203	Pn	Pn	23 41 25.2	-1.0
JHJ	Hachijo jima 2	4.82	204	Pn	Pn	23 41 26.1	-0.2
	52nm,0.3s,baz=322,slow=20,SNR=14						
JHJ				Sn	Sn	23 42 18.6	-2.5
	26nm,0.3s,baz=90,slow=19,SNR=3.8						
JHJ				LR	LR	23 43 37.8	
	comp=Z,208nm,20.8s,baz=85,slow=42						
JKA	Kamikawa-asahi	6.55	3		Pn	23 41 51.1	+1.0
ASAJ	Asahikawa	6.56	3	Pn	Pn	23 41 51.1	+1.0
	15nm,0.3s,baz=205,slow=9.1,SNR=45						
YSS	Yuzh-Sakhalins	9.39	3	Pn	Pn	23 42 30.9	+1.9
USA0B	Ussuriysk Arra	10.11	314	Pn	Pn	23 42 41.1	+2.2
KSRS	Korea Array	11.25	274	Pn	Pn	23 42 56.9	+2.4
	0.4nm,0.3s,baz=88,slow=13,SNR=2.7						
SONM	Songino Array	27.93	303	P	P	23 46 03.6	+0.2
	0.4nm,0.6s,baz=88,slow=8.2,SNR=4.5						
H11N2	WAKE ISLAND Hy	27.98	123	T	T	00 15 33.1	
	baz=315,slow=75,SNR=224						
H11N1	WAKE ISLAND Hy	27.98	123	T	T	00 15 30.1	
	baz=315,slow=75,SNR=178						
H11N3	WAKE ISLAND Hy	27.99	123	T	T	00 15 34.5	
	baz=315,slow=75,SNR=138						
H11S1	WAKE ISLAND Hy	28.71	125	T	T	00 16 18.6	
	baz=317,slow=76,SNR=134						
H11S3	WAKE ISLAND Hy	28.72	125	T	T	00 16 19.1	
	baz=317,slow=76,SNR=184						
H11S2	WAKE ISLAND Hy	28.73	125	T	T	00 16 29.8	
	baz=317,slow=76,SNR=105						
ZALV	Zalesovo Beam	41.95	312	P	P	23 48 03.1	-0.5
	0.3nm,0.3s,baz=71,slow=11,SNR=2.7						
MKAR	Makanchi Array	44.29	302	P	P	23 48 22.6	0.0
	0.3nm,0.5s,baz=86,slow=9.7,SNR=5.9						
MKAR				pP	pP	23 48 32.5	+0.5
	0.4nm,0.5s,baz=86,slow=10,SNR=4.9						
KURK	Kurchatov	46.02	308	P	P	23 48 36.0	-0.3
KURK				IAmb	IAmb	23 48 47.5	
	comp=Z,2.4nm,0.8s						
RSO	Redoubt South	46.16	39	P	P	23 48 36.3	-1.2
IL31		48.76	33	P	P	23 48 57.5	+0.1
IL31				IAmb	IAmb	23 48 58.2	
	comp=Z,1.8nm,0.8s						
ILAR	Eielson Array	48.76	33	P	P	23 48 57.3	-0.1
	comp=Z,1.0nm,0.7s,baz=264,slow=6.3,SNR=13						
ILAR				pP	pP	23 49 08.2	+1.4
	comp=Z,1.0nm,0.8s,baz=268,slow=5.8,SNR=6.3						
DOT	Dot Lake	50.07	34	P	P	23 49 07.9	+0.5
SCRK	Sand Creek	50.07	34	P	P	23 49 07.5	-0.1
WB0	Warramunga Arr	57.48	189	P	P	23 50 01.3	-0.8
WB0				IAmb	IAmb	23 50 02.3	
	comp=Z,3.1nm,0.8s						
FITZ	Fitzroy Crossi	57.49	199	P	P	23 50 02.2	+0.1
FITZ				IAmb	IAmb	23 50 06.6	
	comp=Z,3.0nm,1.1s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WRA	Warramunga Arr	57.66	189	P	P	23 50 01.6	-1.7
	comp=Z,1.6nm,0.5s,baz=5.5,slow=7.1,SNR=11						
WRA				pP	pP	23 50 12.3	-0.6
	comp=Z,0.9nm,0.4s,baz=5.8,slow=7.2,SNR=3.5						
ASAR	Alice Springs	61.39	189	P	P	23 50 29.1	+0.1
	comp=Z,1.2nm,0.7s,baz=12,slow=6.2,SNR=14						
YKA	Yellowknife Ar	63.08	30	P	P	23 50 39.6	-0.3
	comp=Z,0.5nm,0.6s,baz=302,slow=6.6,SNR=12						
FINES	FINESS Array B	68.59	332	P	P	23 51 14.5	-0.8
	comp=Z,2.4nm,0.8s,baz=16,slow=11,SNR=5.7						
G08A	Pilot Rock	69.96	48		PcP	23 51 52.5	+5.9
EGMT	Eagleton	73.52	42	P	P	23 51 45.6	0.0
PDAR	Pinedale Array	76.92	46	P	P	23 52 05.7	+0.2
	comp=Z,0.4nm,0.6s,baz=299,slow=1.5,SNR=5.9						
D41A	Chassel	84.34	32	P	P	23 52 44.0	-0.9
TXAR	Lajitas Array	89.38	53	P	P	23 53 09.7	-0.1
	comp=Z,0.3nm,0.6s,baz=318,slow=2.8,SNR=4.8						

IDC 21 23:41:07.3±10.0, 11.94S×166.59E, h299km±116km, mb3.2/5, mb1 3.5/6, mb1mx3.2/46, mbtmp4.0/6, MS3.3/1, Ms1 3.3/1, ms1mx2.6/13, Error ellipse: s-maj=86.5km s-min=23.4km az=162.0

NEIC 21 23:41:07.7±1.6, 11.98S±0.10×166.7E±0.1, h307km±8km, mb4.1/7, Error ellipse: s-maj=19.2km s-min=13.5km az=100.0

ISC 21 23:41:07.1±1.0, 11.94S±0.09×166.7E±0.1, h300km, n23, σ0.83/20, mb3.9/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.52	172		Pn	23 41 59.3	-8.9
HNR	Honiara	7.06	290	Pn	Pn	23 42 50.0	+0.8
DZM	Mont Dzumac	10.08	181	P	Pn	23 43 26.8	+0.5
	3.9nm,0.3s,baz=346,slow=12,SNR=40						
DZM				S	S	23 45 20.3	+0.5
	0.3nm,0.3s,baz=139,slow=20,SNR=2.9						
DZM	Mont Dzumac	10.08	181	P	Pn	23 43 27.0	+0.8
NOUC	Port Laguerre	10.11	182	Pn	Pn	23 43 27.3	+0.8
PMG	Port Moresby	19.34	276	LR	LR	23 53 13.2	
	comp=Z,80nm,18.4s,baz=286,slow=38						
EIDS	Eidsvold	19.88	226	P	P	23 45 18.2	+1.3
CTA	Charters Tower	21.21	245	P	P	23 45 29.3	-0.8
	1.9nm,0.6s,baz=69,slow=15,SNR=3.5						
COEN	Coen	22.98	262		P	23 45 45.3	-0.9
ARMA	Armidale	23.07	215	P	P	23 45 47.7	+0.7
ARMA				IAmb	IAmb	23 45 50.2	
	comp=Z,7.6nm,0.9s						
URZ	Urewera	27.82	162	P	P	23 46 29.4	+0.2
URZ				IAmb	IAmb	23 46 35.0	
	comp=Z,13nm,1.0s						
BHW	Baring Head	30.22	168	P	P	23 46 49.5	-0.9
BSWZ	Blackbirch Sta	30.32	169	P	P	23 46 50.5	-0.8
PLWZ	Palliser	30.46	167	P	P	23 46 51.1	-1.4
TOO	Toolangi	31.80	213	P	P	23 47 03.4	-0.8
TOO				IAmb	IAmb	23 47 14.6	
	comp=Z,9.7nm,1.1s						
WB0	Warramunga Arr	31.96	252	P	P	23 47 05.7	-0.2
WB0				IAmb	IAmb	23 47 06.5	
	comp=Z,3.8nm,0.7s						
WB2	Warramunga Arr	32.03	251	P	P	23 47 05.3	-1.2
WB2				IAmb	IAmb	23 47 10.8	
	comp=Z,4.9nm,0.7s						
WRA	Warramunga Arr	32.04	251	P	P	23 47 06.3	-0.3
	comp=Z,1.4nm,0.5s,baz=85,slow=9.2,SNR=7.4						
ASAR	Alice Springs	33.22	245	P	P	23 47 16.6	-0.1
	comp=Z,1.0nm,0.4s,baz=69,slow=10,SNR=20						
ILAR	Eielson Array	84.07	18	P	P	23 53 04.5	+0.5
	comp=Z,1.0nm,0.9s,baz=234,slow=5.2,SNR=7.7						
LON	Longmire	86.33	41		pwP	23 54 29.3	+0.2
EGMT	Eagleton	94.53	42		pwP	23 55 11.2	+3.4
YKA	Yellowknife Ar	95.35	27	P	P	23 53 57.2	+0.1
	comp=Z,0.1nm,0.4s,baz=256,slow=5.2,SNR=2.4						

JMA 21 23:41:17.3±0.2, 42.10N×142.76E, h46km±2km, M3.8

JMA Felt II J1.

IDC 21 23:41:24.2±8.4, 42.51N×142.50E, h96km±93km, mb3.6/3, mb1 3.8/4, mb1mx3.2/43, mbtmp4.0/4, ML3.9/1, Error ellipse: s-maj=84.3km s-min=48.0km az=4.0

ISC 21 23:41:18.5±0.9, 42.17N±0.09×142.85E±0.05, h45km±7km, n13, σ1.50/16, mb4.0/3, 1C-4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.13	327	P	Pn	23 41 24.8	-1.1
JNBK				eS	Sn	23 41 31.1	0.0
JEM	Erimo	0.28	124	⇓P	Pn	23 41 26.0	-1.0
JEM				eS	Sn	23 41 32.6	-0.3
JTHR	Tokachihiroo	0.36	70	⇓P	Pn	23 41 27.6	-0.2
JTHR				eS	Sn	23 41 35.7	+1.4
JSHD	Hidakashinhida	0.37	310	⇑P	Pn	23 41 26.9	-1.0
JCH	Churui	0.58	41	⇓P	Pn	23 41 30.6	0.0
JBT2	Biratori 2	0.70	330	P	Pn	23 41 31.6	-0.5
JIAM	Iburiatsuma	0.82	304	P	Pn	23 41 33.8	+0.1
JOB	Onbets	1.03	45	⇓P	Pn	23 41 37.7	+1.1
JEW	Eniwo	1.23	303	P	Pn	23 41 39.2	-0.1
KSRS	Korea Array	12.40	253	P	Pn	23 44 15.9	+3.6
	0.7nm,0.3s,baz=59,slow=14,SNR=6.2						
INK	Inuvik	49.34	29	P	P	23 50 01.8	-0.9
	0.8nm,0.5s,baz=302,slow=6.9,SNR=4.9						
FINES	FINESS Array B	64.81	332	P		23 51 49.5	-2.5
	1.5nm,0.6s,baz=38,slow=6.7,SNR=9.1						
TXAR	Lajitas Array	86.14	53	P	P	23 53 54.9	-0.1
	0.4nm,0.6s,baz=289,slow=2.9,SNR=6.2						

NIED 21 23:44:00, 40.20N×142.50E, h38km, Mw4.3 Best double couple: $M_0$3.70000×10^{15} NP1:ϕ_s27.00000°, δ75.00000°, λ101.00000°. NP2:ϕ_s170.00000°, δ19.00000°, λ54.00000°.

JMA 21 23:44:53.6±0.1, 40.15N×142.49E, h34km±1km, M4.2

JMA Felt I J1.

BJI 21 23:44:54.6±0.0, 40.30N×142.38E, h58km, mB4.7/26, mb4.4/38, Ms3.8/5, Ms7 3.7/4

MOS 21 23:44:54.2±0.8, 40.18N×142.45E, h55km, mb4.9/13, Error ellipse: s-maj=9.3km s-min=5.3km az=107.5

NEIC 21 23:44:54.6±1.9, 40.13N±0.06×142.61E±0.09, h48km±6km, mb4.5/39, Error ellipse: s-maj=11.4km s-min=6.9km az=129.0

IDC 21 23:44:54.2±0.6, 40.07N×142.46E, h42km±4km, mb3.9/20, mb1 4.0/22, mb1mx3.9/42, mbtmp4.1/22, ML4.1/1, MS3.5/18, Ms1 3.5/18, ms1mx3.3/37, Error ellipse: s-maj=16.8km s-min=12.4km az=104.0

ISC 21 23:44:53.6±0.5, 40.14N±0.03×142.55E±0.04, h34km±1km, h35km:pP-P, n181, σ1.57/191, mb4.4/64, MS3.6/14, 19C-10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTH	Tanohata	0.56	249	P	Pb	23 45 04.5	-0.8
JTH				S	Sn	23 45 12.7	-0.5
JKEN	Kujiedanarisaw	0.65	276	P	Pn	23 45 05.3	-0.9
JKEN				S	Sn	23 45 13.7	-1.6
MIYJ	Miyakonagasawa	0.80	225	P	Pn	23 45 07.8	-0.6
MIYJ				S	Sn	23 45 17.7	-1.3
JANG	Nango	0.82	287	P	Pn	23 45 08.0	-0.7
JANG				S	Sn	23 45 18.3	-1.4
JKZ	Kuzumaki	0.95	261	P	Pn	23 45 10.3	-0.2
JKZ				eS	Sn	23 45 22.0	-0.9
JOM	Ohasama	1.18	236	P	Pn	23 45 14.0	+0.4
JARK	Aomorirokkasho	1.25	314	P	Pn	23 45 14.5	-0.1
OFUJ	Ofunato	1.26	213	P	Pn	23 45 15.2	+0.5
OFUJ				S	Sb	23 45 31.2	-1.5
JTM	Tenmabayashi	1.30	300	P	Pn	23 45 15.5	+0.2
JTM				eS	Sb	23 45 31.8	-2.1
JAH	Hinai	1.47	272	P	Pn	23 45 18.2	+0.6
JAH				S	Sb	23 45 36.5	-2.1
JMK	Ichinoseki	1.57	221	P	Pn	23 45 19.9	+0.9
JMK				S	Sb	23 45 39.9	-1.7
ERM	Erimo	1.93	14		Pn	23 45 25.0	+1.1
ERM	Erimo	1.93	14c	eP	Pn	23 45 25.2	+1.3
ASAJ	Asahikawa	3.97	0	P	Pn	23 45 53.8	+1.8
	8.9nm,0.3s,baz=229,slow=11,SNR=11						
ASAJ				LR	LR	23 47 53.1	
	comp=Z,602nm,21.7s,baz=196,slow=44						
JKA	Kamikawa-asahi	3.97	1		Pn	23 45 53.8	+1.8
MJB9	Matsu-Tunnel	4.96	225		Pn	23 46 08.8	+3.2
MAJO	Matsushiro	4.96	225		Pn	23 46 08.8	+3.2
MAJO	Matsushiro	4.96	225c	iP	Pn	23 46 08.5	+2.9
MAT	Matsushiro	4.96	225	P	Pn	23 46 08.6	+3.0
MAT				eS	Sb	23 47 14.9	-3.8
MJAR	Matsushiro Arr	4.96	225	P	Pn	23 46 08.1	+2.5
	0.6nm,0.3s,baz=36,slow=14,SNR=46						
MJAR				LR	LR	23 48 16.8	
	comp=Z,336nm,20.1s,baz=20,slow=42						
KUR	Kuril'sk	6.42	36	P	Pn	23 46 21.7	-3.9
KUR				eS	Sn	23 47 34.2	-3.4
KUR				smax	smax		
	comp=N,130nm,0.6s						
KUR				smax	smax		
	comp=E,115nm,1.0s						
INU	Inuyama	6.49	224		Pn	23 46 28.5	+1.9
YSS	Yuzh-Sakhalins	6.81	1	⇓eP	Pn	23 46 32.3	+1.3
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				MLR	MLR		
	comp=Z,400nm,13.0s						
YSS				MLR	MLR		
	comp=N,300nm,12.0s						
JHJ2	Mitsune	7.35	198	Pn	Pn	23 46 40.0	+1.5
USA0B	Ussuriysk Arra	8.83	301		Pn	23 47 01.5	+2.9
USA0B	Ussuriysk Arra	8.83	301	P	Pn	23 47 01.5	+2.9
USRK	Ussuriysk Ar.	8.83	301	P	Pn	23 47 02.0	+3.4
	baz=102,slow=13,SNR=19						
USRK				LR	LR	23 50 18.1	
	comp=N,276nm,18.6s,baz=128,slow=37						
MSHR	Mys Shultsa	8.91	290c	eP	Pn	23 47 02.3	+2.6
MDJ	Mudanjiang	10.57	299		Pn	23 47 24.8	+2.2
TYV	Tymovskoe	10.72	0	eP	Pn	23 47 26.3	+1.7
TYV				eS	Sn	23 49 25.1	+1.8
TYV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TYV				pmax	pmax		
	comp=Z,200nm,5.2s						
TYV				smax	smax		
	comp=E,2μm,9.3s						
JNU	Nakatsue	11.70	237	LR	LR	23 52 33.0	
	comp=E,118nm,18.5s,baz=62,slow=40						
KSRS	Korea Array	11.73	261	P	Pn	23 47 42.8	+4.5
	comp=E,0.3nm,0.3s,baz=85,slow=14,SNR=5.0						
KSRS				LR	LR	23 51 54.5	
	comp=E,201nm,18.2s,baz=82,slow=36						
KLR	Kul'dur	11.89	323	P	Pn	23 47 41.6	+1.1
	baz=158,slow=14,SNR=2.7						
KLR				LR	LR	23 52 28.8	
	comp=E,219nm,18.2s,baz=133,slow=38						
KLR	Kul'dur	11.89	323	⇑eP	Pn	23 47 41.7	+1.1
KLR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
JCJ	Chichijima	13.02	181	LR	LR	23 54 21.5	
	comp=Z,36nm,19.3s,baz=116,slow=44						
ZEA	Zeya	17.10	328	eP	Pn	23 48 47.1	-2.6
ZEA				pmax	pmax		
	comp=Z,16nm,0.9s						
ZEA				MLR	MLR		
	comp=Z,200nm,15.0s						
MA2	Magadan	20.13	12	P	P	23 49 24.0	-0.4
	comp=Z,3.1nm,0.5s,baz=146,slow=18,SNR=2.8						
MA2				LR	LR	23 58 41.0	
	comp=Z,67nm,18.6s,baz=252,slow=41						
MA2	Magadan	20.13	12	⇓eP	Pn	23 49 25.5	-0.9
MA2				pmax	pmax		
	comp=Z,8.0nm,1.6s						
YAK	Yakutsk	23.27	345	P	P	23 49 56.6	-1.1
	comp=Z,6.0nm,0.3s,baz=342,slow=3.0,SNR=4.5						
YAK	Yakutsk	23.27	345	eP	P	23 49 56.1	-1.7
YAK				e*PP	pP	23 50 07.9	+1.0
YAK				eS	S	23 54 03.6	-3.8
YAK				e*SS	Sn	23 54 25.7	-1.2
YAK				eSS	SnSn	23 54 51.3	+8.1
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.8s						
YAK				smax	smax		
	comp=N,82nm,2.9s						
YAK				smax	smax		
	comp=E,50nm,2.5s						
SEY	Seymchan	23.57	11	P	P	23 50 01.4	+0.8
	comp=E,5.8nm,0.7s,baz=188,slow=6.6,SNR=15						
SEY	Seymchan	23.57	11	⇓iP	P	23 50 01.2	+0.5
WHN	Wuhan	24.83	256	P	P	23 50 15.1	+2.5
BOD	Bodaibo	25.47	324	eP	P	23 50 17.2	-0.9
BOD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ULN	Ulaanbaatar	26.49	299	P	P	23 50 27.1	-0.6
ULN	Ulaanbaatar	26.49	299	P	P	23 50 27.1	-0.6
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	Songino Array	26.93	299	P	P	23 50 31.4	-0.3
	comp=Z,2.6nm,0.9s,baz=101,slow=8.7,SNR=14						
SONM				LR	LR	00 01 43.5	
	comp=Z,147nm,18.8s,baz=68,slow=38						
TLY	Talaya	29.08	306	eP	P	23 50 50.4	-0.3
TLY				pmax	pmax		
	comp=Z,12nm,1.4s						
TLY				MLR	MLR		
	comp=Z,220nm,16.0s						
H11N2	WAKE ISLAND Hy	29.14	127	T	T	00 21 35.9	
	baz=319,slow=75,SNR=60						
H11N1	WAKE ISLAND Hy	29.15	127	T	T	00 21 33.0	
	baz=319,slow=75,SNR=66						
H11N3	WAKE ISLAND Hy	29.16	127	T	T	00 21 44.3	
	baz=319,slow=75,SNR=72						
ZAK	Zakamensk	29.16	304	eP	P	23 50 49.7	-1.8
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
H11S1	WAKE ISLAND Hy	29.96	129	T	T	00 22 53.8	
	baz=321,slow=76,SNR=65						
H11S3	WAKE ISLAND Hy	29.96	129	T	T	00 22 53.0	
	baz=321,slow=76,SNR=24						
H11S2	WAKE ISLAND Hy	29.98	129	T	T	00 22 55.2	
	baz=321,slow=76,SNR=24						
LZH	Lanzhou	30.56	275	eP	P	23 51 05.6	+1.6
LZH				pP	sP	23 51 21.3	+3.7
LZH				sP	pP	23 51 27.8	+14
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
LZH				pmax	pmax		
	comp=Z,130nm,5.4s						
BILL	Bilibino	30.80	17	eP	P	23 51 07.7	+2.1
BILL				e*PP	sP	23 51 22.6	+3.2
BILL				e		23 52 12.6	
BILL				e		23 54 05.8	
BILL				pmax	pmax		
	comp=Z,9.0nm,2.5s						
TIXI	Tiksi	32.33	352	⇑eP	P	23 51 21.1	+2.1
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GTA	Gaotai	32.62	283	eP	P	23 51 22.8	+0.7
GTA				PcP	PcP	23 54 08.8	+1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,69nm,5.9s						
GTA				LR	LR		
	comp=Z,92nm,16.2s						
GTA				LR	LR		
	comp=Z,88nm,16.8s						
GTA				LR	LR		
	comp=Z,150nm,17.1s						
WMQ	Urumqi	40.32	294	eP	P	23 52 30.3	+2.7
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,86nm,6.3s						
WMQ				LR	LR		
	comp=Z,120nm,28.8s						
ZAA0	Zalesovo Array	40.55	310	P	P	23 52 29.1	-0.2
ZALV	Zalesovo Beam	40.55	310	P	P	23 52 29.0	-0.3
	comp=Z,3.6nm,0.7s,baz=90,slow=7.2,SNR=13						
ZALV				LR	LR	00 09 22.9	
	comp=Z,72nm,18.2s,baz=79,slow=36						
ZALV	Zalesovo Beam	40.55	310	P	P	23 52 29.0	-0.3
NRIK	Noril'sk	40.85	334	LR	LR	00 10 29.4	
	comp=Z,128nm,19.1s,baz=112,slow=38						
CMAR	Chiang Mai Arr	43.20	253	P	P	23 52 49.7	-1.7
	comp=Z,1.1nm,0.4s,baz=56,slow=6.2,SNR=5.8						
CMAR				LR	LR	00 09 54.6	
	comp=Z,33nm,20.7s,baz=183,slow=35						
CMAR	Chiang Mai Arr	43.20	253	iP	P	23 52 51.2	-0.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MK31	Makanchi Array	43.29	300	P	P	23 52 51.1	-0.7
MK31	Makanchi Array	43.29	300	P	P	23 52 51.2	-0.7
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	43.29	300	P	P	23 52 51.3	-0.5
	comp=Z,3.2nm,0.7s,baz=85,slow=9.4,SNR=19						
MKAR				LR	LR	00 11 41.2	
	comp=Z,106nm,18.1s,baz=38,slow=37						
MAKZ	Makanchi	43.50	300	P	P	23 52 53.5	0.0
MAKZ	Makanchi	43.50	300	P	P	23 52 53.5	0.0
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURK	Kurchatov	44.78	306	P	P	23 53 03.1	-0.5
KURK	Kurchatov	44.78	306c	iP	P	23 53 02.8	-0.8
KURK				pmax	pmax		
	comp=Z,21nm,1.3s						
IL31		46.41	34	P	P	23 53 16.3	0.0
ILAR	Eielson Array	46.41	34	P	P	23 53 17.0	+0.6
	comp=Z,1.0nm,0.7s,baz=264,slow=6.0,SNR=16						
TAPN	Taplejung	46.68	272	eP	P	23 53 19.6	+0.3
PRP	Porcupine Dome	46.93	33	P	P	23 53 20.5	-0.1
ODAN	Odare	47.17	271	eP	P	23 53 23.1	0.0
JIRN	Jiri	47.69	273	eP	P	23 53 27.3	+0.1
RAMN	Ramite	47.73	272	eP	P	23 53 27.1	-0.4
	comp=Z,21nm,1.0s						
SCRK	Sand Creek	47.74	35	P	P	23 53 27.5	+0.7
SCRK				IAmb	IAmb	23 53 28.0	
	comp=Z,3.4nm,0.8s						
GUN	Gumba	47.80	273	eP	P	23 53 28.0	-0.1
	comp=Z,30nm,0.8s						
KDJ	Kajisay	48.18	295	P	P	23 53 29.6	-1.0
KDJ				IAmb	IAmb	23 53 31.5	
	comp=Z,3.0nm,0.9s						
KDJ	Kajisay	48.18	295	P	P	23 53 29.7	-1.0
KDJ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KKN	Kakani	48.32	274	eP	P	23 53 32.0	+0.1
	comp=Z,24nm,0.8s						
PKI	Pulchoki	48.33	273	eP	P	23 53 31.0	-1.2
PKIN	Phulchoki	48.33	273	eP	P	23 53 31.3	-0.8
GKN	Gorkha	48.70	274	eP	P	23 53 34.7	-0.1
BALM	Baldy	48.94	39	P	P	23 53 36.8	+0.7
BALM				IAmb	IAmb	23 53 42.9	
	comp=Z,5.3nm,0.9s						
DANN	Dangsing	49.20	275	eP	P	23 53 38.9	+0.1
	comp=Z,51nm,0.7s						
BRVK	Borovoye	49.24	311	P	P	23 53 38.3	-0.1
BRVK				IAmb	IAmb	23 53 39.5	
	comp=Z,5.0nm,0.8s						
BRVK	Borovoye	49.24	311	P	P	23 53 38.3	-0.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	Ala-Archa	49.85	296	P	P	23 53 43.3	-0.1
AAK				IAmb	IAmb	23 53 43.5	
	comp=Z,3.2nm,1.0s						
AAK	Ala-Archa	49.85	296	⇓eP	P	23 53 43.3	-0.1
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KSH	Kashi	50.01	292	P	P	23 53 47.6	+3.0
KSH				pP	sP	23 54 00.5	+2.0
KSH				PcP	PcP	23 55 08.8	+4.6
KSH				PcS	PcS	23 59 01.6	+0.3
KSH				pmax	pmax		
	comp=Z,11nm,1.1s						
KSH				pmax	pmax		
	comp=Z,210nm,5.4s						
KSH				LR	LR		
	comp=Z,80nm,6.2s						
INK	Inuvik	51.22	28	P	P	23 53 54.2	+1.0
	comp=Z,3.0nm,0.8s,baz=291,slow=6.8,SNR=14						
INK	Inuvik	51.22	28	IAmb	IAmb	23 53 55.0	
	comp=Z,3.5nm,0.8s						
HNR	Honiara	51.89	158	P	P	23 53 59.0	+0.3
HNR	Honiara	51.89	158	P	P	23 53 59.0	+0.3
HNR				pmax	pmax		
	comp=Z,108nm,0.8s						
KK31	Karatay Array	52.38	298	P	P	23 54 01.4	-0.9
KK31				IAmb	IAmb	23 54 02.5	
	comp=Z,3.1nm,0.8s						
KK31	Karatay Array	52.38	298	P	P	23 54 01.4	-0.9
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	Karatay Array	52.38	298	P	P	23 54 00.8	-1.4
KKAR				IAmb	IAmb	23 54 02.5	
	comp=Z,3.1nm,0.8s						
KKAR	Karatay Array	52.38	298	P	P	23 54 00.9	-1.4
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BTK	Batken	53.41	295	IAmb	IAmb	23 54 11.1	
	comp=Z,3.5nm,0.9s						
SVE	Sverdlovsk	53.44	317	⇑eP	P	23 54 10.4	+0.6
SVE				pmax	pmax		
	comp=Z,17nm,0.9s						
NIL	Nilore	54.53	287	P	P	23 54 18.9	+0.7
NIL	Nilore	54.53	287	P	P	23 54 18.9	+0.7
NIL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ARU	Arti	54.65	317	P	P	23 54 18.5	-0.2
ARU	Arti	54.65	317c	iP	P	23 54 18.4	-0.2
ARU				*PP	sP	23 54 35.8	+3.2
ARU						23 56 18.7	
ARU				S	S	00 01 54.7	-1.3
ARU				SS	SS	00 05 38.1	-0.4
ARU				pmax	pmax		
	comp=Z,12nm,0.8s						
KHLU	Kahalu`u	56.06	92	P	P	23 54 27.1	-2.4
KBL	Kabul	57.17	290	P	P	23 54 36.3	-1.0
KBL	Kabul	57.17	290	P	P	23 54 36.3	-1.0
KBL				pmax	pmax		
	comp=Z,16nm,0.9s						
PRGR	Permogore	58.66	326	eP	P	23 54 46.3	-0.7
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WRA	Warramunga Arr	60.26	189	P	P	23 54 57.4	-1.1
	comp=Z,1.3nm,0.7s,baz=8.2,slow=7.1,SNR=5.8						
WRA				pP	pP	23 55 09.1	+0.3
	comp=Z,2.4nm,0.7s,baz=6.6,slow=6.9,SNR=6.3						
YKA	Yellowknife Ar	60.69	31	P	P	23 55 01.1	+0.2
	comp=Z,0.5nm,0.7s,baz=300,slow=6.5,SNR=8.1						
YKA				pP	sP	23 55 13.2	-1.9
	comp=Z,0.6nm,0.6s,baz=305,slow=7.5,SNR=6.5						
ARCES	ARCESS Array B	61.41	339	pP	pP	23 55 17.9	+1.9
	comp=Z,4.0nm,0.8s,baz=45,slow=13,SNR=2.7						
KLMR	Klimovskoe	61.62	327	eP	P	23 55 02.9	-4.3
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.5s						
KLMR	Klimovskoe	61.62	327	eP	P	23 55 03.0	-4.3
KLMR				AMP		23 55 06.5	
	comp=Z,9.0nm,1.5s						
HRA	Herat	62.11	293	IAmb	IAmb	23 55 12.2	
	comp=Z,3.2nm,0.9s						
DAG	Danmarks Havn	62.76	355	iP	P	23 55 14.3	-0.4
DAG				i		23 55 27.7	
DAG	Danmarks Havn	62.76	355	iP	P	23 55 14.3	-0.4
DAG				i		23 55 27.7	
GEYT	Alibeck	63.13	298	P	P	23 55 17.6	-0.2
	comp=Z,4.1nm,0.7s,baz=2.9,slow=3.0,SNR=9.6						
GYA0B	ALIBECK ARRAY	63.13	298	P	P	23 55 17.5	-0.4
ASAR	Alice Springs	63.99	189	P	P	23 55 23.2	-0.2
	comp=Z,0.8nm,0.8s,baz=1.1,slow=5.7,SNR=7.0						
ASAR				pP	pP	23 55 35.2	+1.5
	comp=Z,0.9nm,0.7s,baz=0.5,slow=4.6,SNR=3.8						
VRH	Novokhopyorsk	65.89	317	eP	P	23 55 35.0	-0.6
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN	Obninsk	66.15	323	eP	P	23 55 35.7	-1.5
OBN				e*PP	sP	23 55 51.7	+0.3
OBN				e		23 56 06.5	
OBN				pmax	pmax		
	comp=Z,22nm,2.5s						
FINES	FINESS Array B	66.49	332	P	P	23 55 38.9	-0.3
	comp=Z,3.0nm,0.8s,baz=41,slow=13,SNR=7.0						
FINES				pP	sP	23 55 52.0	-1.5
	comp=Z,4.0nm,0.8s,baz=36,slow=7.1,SNR=3.2						
FINES				LR	LR	00 29 17.4	
	comp=Z,92nm,18.4s,baz=32,slow=40						
LPSR	Galich'ya Gora	66.50	320	eP	P	23 55 32.0	-7.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	Storozhevoye	67.19	318	eP	P	23 55 43.3	-0.6
VSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SUMG	Summit	67.58	0	iP	P	23 55 46.8	+0.3
SUMG				e		23 55 59.4	
SUMG	Summit	67.58	0	P	P	23 55 46.8	+0.3
SUMG	Summit	67.58	0	iP	P	23 55 46.8	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
SUMG				e		23 55 59.4	
JTMT	Jette	69.14	45	P	P	23 55 56.2	-0.2
JTMT				IAmb	IAmb	23 56 06.0	
	comp=Z,11nm,1.1s						
NCK	Nalchik	69.29	310	⇓eP	P	23 55 56.7	-0.6
KIV	Kislovodsk	69.55	311	⇑P	P	23 56 00.0	+1.0
KIV	Kislovodsk	69.55	311	P	P	23 55 60.0	+1.0
KIV				IAmb	IAmb	23 56 01.0	
	comp=Z,8.1nm,0.8s						
KIV	Kislovodsk	69.55	311	⇑P	P	23 56 00.0	+1.0
KBZ	Khabaz	69.56	310	P	P	23 55 59.3	+0.5
	comp=Z,4.6nm,0.8s,baz=70,slow=3.9,SNR=9.8						
TBLG	Delisi	69.64	308	P	P	23 55 58.8	-0.7
TBLG				IAmb	IAmb	23 56 00.7	
	comp=Z,6.3nm,1.0s						
TBLG	Delisi	69.64	308	P	P	23 55 58.8	-0.7
TBLG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WVOR	Wild Horse Val	69.83	51	P	P	23 56 00.1	-0.6
WVOR				IAmb	IAmb	23 56 02.8	
	comp=Z,2.2nm,0.5s						
WVOR	Wild Horse Val	69.83	51	P	P	23 56 00.1	-0.6
WVOR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MSO	Missoula	69.89	45	P	P	23 55 59.4	-1.6
NEY	Neytrino	69.95	310	⇓eP	P	23 56 01.2	-0.3
ILULI	Ilulissat	70.49	5	P	P	23 56 05.4	+1.3
ILULI				IAmb	IAmb	23 56 09.2	
	comp=Z,6.1nm,0.8s						
ILULI	Ilulissat	70.49	5	P	P	23 56 05.4	+1.3
ILULI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKH	Akhalkalaki	70.59	308	⇑P	P	23 56 06.6	+1.1
NC405	NORSAR Array S	71.46	337	P	P	23 56 09.5	-0.7
NC204	NORSAR Array S	71.61	338	P	P	23 56 11.2	+0.1
NC204				IAmb	IAmb	23 56 14.9	
	comp=Z,8.0nm,0.9s						
NB201	NORSAR Array S	71.64	337	P	P	23 56 11.1	-0.2
NB2	NORSAR Subarra	71.67	337	P	P	23 56 11.0	-0.5
	comp=Z,1.5nm,0.7s,baz=37,slow=6.2						
NOA	NORSAR Array B	71.67	337	P	P	23 56 11.0	-0.5
	comp=Z,2.8nm,0.8s,baz=38,slow=6.1,SNR=8.6						
NOA				pP	sP	23 56 24.3	-1.4
	comp=Z,1.9nm,0.7s,baz=38,slow=5.9,SNR=5.2						
NOA				LR	LR	00 35 54.2	
	comp=Z,16nm,18.2s,baz=25,slow=43						
UOSS	Minazif	71.72	287	P	P	23 56 11.8	-0.5
UOSS				IAmb	IAmb	23 56 12.6	
	comp=Z,6.3nm,0.8s						
NBO00	NORSAR Array S	71.80	338	P	P	23 56 11.8	-0.4
NBO00				IAmb	IAmb	23 56 30.9	
	comp=Z,6.0nm,0.9s						
AKASG	Malin Array Be	72.39	322	P	P	23 56 15.3	-0.5
	comp=Z,1.7nm,0.7s,baz=45,slow=6.1,SNR=9.2						
MORW	Morawa	73.13	204	P	P	23 56 20.8	+0.4
SORM	Soroca	74.56	321	⇑P	P	23 56 27.9	-0.8
SORM	Soroca	74.56	321	⇑P	P	23 56 27.9	-0.8
PDAR	Pinedale Array	74.87	47	P	P	23 56 31.4	+0.5
	comp=Z,0.3nm,0.6s,baz=272,slow=4.6,SNR=3.7						
BUR08	Bucovina Ar. S	76.41	322	P	P	23 56 39.8	+0.3
BUR08				IAmb	IAmb	23 56 40.1	
	comp=Z,4.3nm,1.0s						
BURAR	Bucovina Array	76.42	322	⇓P	P	23 56 39.6	0.0
BURAR	Bucovina Array	76.42	322	⇓P	P	23 56 39.6	0.0
TESR	Tescani	76.52	320	⇑P	P	23 56 37.8	-2.1
BRTR	Keskin Array B	77.46	312	P	P	23 56 45.2	-0.4
	comp=Z,0.8nm,0.7s,baz=116,slow=5.6,SNR=3.9						
BRTR				LR	LR	00 33 41.6	
	comp=Z,28nm,19.6s,baz=340,slow=38						
VOIR		78.07	320	⇑P	P	23 56 49.1	+0.3
VOIR		78.07	320	⇑P	P	23 56 49.1	+0.3
ARR	Arges	78.32	320	⇑P	P	23 56 51.9	+1.7
VYHS	Vyhne	78.67	326	eP	P	23 56 52.5	+0.5
VYHS	Vyhne	78.67	326	eP	P	23 56 52.5	+0.5
CLL	Collm	78.84	330	epP	pP	23 57 07.0	+3.7
VRAC	Vranov	79.00	327	⇓P	P	23 57 07.4	+14
KHC	Kasperske Hory	80.36	329	⇓eP	P	23 57 01.7	+0.5
KHC				pmax	pmax		
	comp=Z,37nm,3.7s						
GERES	GERESS Array B	80.53	329	P	P	23 57 02.1	-0.1
	comp=Z,0.6nm,0.6s,baz=38,slow=6.8,SNR=7.2						
GERES				pP	sP	23 57 15.5	-1.1
	comp=Z,0.5nm,0.6s,baz=22,slow=5.0,SNR=3.7						
GERES				LR	LR	00 35 50.9	
	comp=Z,84nm,18.5s,baz=334,slow=38						
VTS	Vitosha	81.02	319	⇑P	P	23 57 05.4	+0.5
VTS	Vitosha	81.02	319	P	P	23 57 05.3	+0.3
VTS	Vitosha	81.02	319	⇑P	P	23 57 05.4	+0.5
ELL	Elmali	81.63	311	P	P	23 57 07.7	-0.6
ELL	Elmali	81.63	311	P	P	23 57 07.7	-0.6
ELL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
DOU	Dourbes	82.84	334	P	P	23 57 14.9	+0.7
FUORN	Ofenpass-Fuorn	83.70	329	P	P	23 57 19.5	+0.5
FUORN				IAmb	IAmb	23 57 33.2	
	comp=Z,5.2nm,0.8s						
TXAR	Lajitas Array	87.53	53	LR	LR	00 37 14.3	
	comp=Z,9.3nm,19.3s,baz=0.0,slow=36						

TIF 22 00:07:47.3, 42.32N×40.85E, h29km±4km
MOS 22 00:07:47.5±0.0, 42.46N×41.10E, h10km, MPVA2.6
ISC 22 00:07:47.7±3.6, 42.40N±0.05×41.01E±0.05, h16km±27km, n9, σ0.90/18, Western Caucasus

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATM	Batumi	0.95	147	P	Pn	00 08 05.8	-0.4
BATM				S	Sn	00 08 19.1	-0.3
BATM	Batumi	0.95	147	*i* Pg	Pn	00 08 05.8	-0.4
BATM				*i* Sg	Sn	00 08 19.0	-0.4
ARXR	Arkhyz	1.18	9	*i* Pg	Pn	00 08 08.3	-1.3
ARXR				*i* Sg	Sb	00 08 24.5	-0.2
RPOR	Krasnaya Polya	1.41	338	ePg	Pb	00 08 13.2	-0.3
RPOR				eSg	Sb	00 08 33.0	+1.8
SOC	Sochi	1.52	322	ePg	Pb	00 08 15.2	-0.1
SOC				eSg	Sb	00 08 35.8	+1.5
GUZR	Guzeripl'	1.72	338	ePg	Pb	00 08 17.9	-1.1
GUZR				eSg	Sb	00 08 41.2	+0.9
SHA1	Shidzhatmaz	1.80	42	ePg	Pn	00 08 18.5	+0.3
SHA1				eSg	Sn	00 08 40.7	-0.2
ONI	Oni	1.82	83	P	Pb	00 08 20.9	+0.3
ONI				S	Sb	00 08 43.9	+0.8
LZRR	Lazarevskoye	1.94	323	ePg	Pb	00 08 22.9	+0.3
LZRR				eSg	Sb	00 08 47.3	+0.7

IDC 22 00:25:27.9±4.5, 16.36S×69.42W, h181km±14km, mb3.3/2, mb1 3.3/2, mb1mx2.9/29, mbtmp3.9/2, Error ellipse: s-maj=183.5km s-min=60.4km az=4.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	1.24	87	P	Pn	00 25 58.2	-0.2
	20nm,0.3s,baz=273,slow=3.3,SNR=515						
LPAZ				S	Sn	00 26 21.9	+0.1
	2.4nm,0.3s,baz=178,slow=7.1,SNR=7.8						
BDFB	Brasilia	20.59	91	P	P	00 29 53.1	-0.1
	1.5nm,0.4s,baz=173,slow=14,SNR=3.7						
TORD	Torodi Ar. Bea	76.15	72	P	P	00 36 56.6	+0.1
	0.7nm,0.7s,baz=233,slow=6.1,SNR=5.4						

TAP 22 00:29:03.9, 24.81N×122.42E, h20km±1km, ML3.2, C
JMA 22 00:29:04.4±0.1, 24.74N×122.40E, h4km, M2.3
ISC 22 00:29:04.3±1.0, 24.78N±0.03×122.41E±0.02, h14km±9km, n36, σ0.32/63, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.35	228	P	Pb	00 29 12.2	0.0
	baz=225						
EOS1				S	Sb	00 29 18.8	+1.2
	baz=225						
TWB1	Santiao Chiao	0.45	300	P	Pg	00 29 13.0	-0.1
	baz=297						
TWB1				eS	Sg	00 29 19.3	+0.2
	baz=297						
NTC	Toucheng	0.53	278	eP	Pb	00 29 15.2	-0.2
	baz=274						
TWC	Suao	0.54	252	P	Pg	00 29 14.6	-0.3
	baz=248						
TWC				eS	Sb	00 29 23.9	+0.8
	baz=248						
TIPB	Shuangxi	0.56	290	P	Pg	00 29 15.6	+0.2
	baz=286						
TIPB				eS	Sb	00 29 24.3	+0.4
	baz=286						
JYNG	Yonagunijimaku	0.59	124	P	Pg	00 29 15.8	0.0
JYNG				eS	Sg	00 29 23.6	0.0
YOJ	Yonaguni jima	0.63	120	P	Pg	00 29 16.7	+0.1
	baz=122						
YOJ				eS	Sg	00 29 25.0	0.0
	baz=122						
YOJ	Yonaguni jima	0.63	120	P	Pg	00 29 16.5	-0.1
YOJ				eS	Sg	00 29 24.4	-0.6
NWF	Wu-fen Shan	0.64	297	P	Pb	00 29 17.7	+0.4
	baz=294						
NWF				S	Sb	00 29 26.5	+0.3
	baz=294						
WFSB	Wu-fen Shan	0.64	297	P	Pb	00 29 17.6	+0.3
	baz=294						
WFSB				S	Sb	00 29 26.5	+0.4
	baz=294						
TWE	Neicheng	0.68	265	P	Pg	00 29 17.6	0.0
	baz=262						
TWE				eS	Sg	00 29 26.6	+0.1
	baz=262						
ENA	Nanau	0.70	240	P	Pg	00 29 17.9	-0.1
	baz=237						
ENA				eS	Sb	00 29 28.1	+0.1
	baz=237						
SLBB	Yuanshan	0.71	268	P	Pb	00 29 18.5	+0.1
	baz=265						
SLBB				eS	Sb	00 29 28.4	+0.4
	baz=265						
ENTT	Nioudou	0.78	260	*i* P	Pg	00 29 19.4	0.0
	baz=257						
NHDH	Xindian Distri	0.82	283	eS	Sb	00 29 31.7	+0.3
	baz=280						
NWLT	Wulai	0.83	270	P	Pg	00 29 20.3	0.0
	baz=267						
NWLT				eS	Sg	00 29 31.0	-0.1
	baz=267						
NDT	Datong Townshi	0.84	258	eP	Pn	00 29 21.4	-0.3
	baz=255						
NDT				eS	Sn	00 29 33.4	-0.4
	baz=255						
YM01	YM01	0.84	296	P	Pb	00 29 20.9	+0.1
	baz=293						
YM01				S	Sb	00 29 32.0	-0.1
	baz=293						
YM08	YM08	0.85	299	eP	Pg	00 29 20.6	-0.1
	baz=296						
YM08				eS	Sg	00 29 31.6	-0.3
	baz=296						
YM05	YM05	0.86	297	eP	Pb	00 29 21.3	+0.3
	baz=294						
YM05				eS	Sg	00 29 32.2	+0.1
	baz=294						
YM10	YM10	0.86	296	eP	Pn	00 29 21.8	-0.3
	baz=293						
YM10				eS	Sb	00 29 32.3	-0.1
	baz=293						
TATO	Taipei	0.86	283	S	Sg	00 29 32.2	0.0
	baz=281						
YM04	YM04	0.88	295	eP	Pb	00 29 21.6	+0.3
	baz=293						
YM04				eS	Sg	00 29 32.8	0.0
	baz=293						
TWY	Chenhua	0.89	304	eP	Pn	00 29 22.1	-0.2
	baz=302						
TWY				eS	Sb	00 29 33.5	+0.3
	baz=302						
YHNB	Yeheng	0.95	263	P	Pb	00 29 22.5	-0.1
	baz=261						
YHNB				eS	Sb	00 29 34.5	-0.5
	baz=261						
NACB	Ninganchiao	0.96	231	P	Pb	00 29 22.6	-0.1
	baz=229						
NACB				eS	Sg	00 29 35.4	0.0
	baz=229						
NSK	Sanguang	0.96	264	P	Pb	00 29 22.6	-0.2
	baz=261						
NSK				eS	Sg	00 29 35.6	+0.1
	baz=261						
NNSB	Datong	1.00	250	P	Pb	00 29 23.2	-0.3
	baz=248						
NNSH	Datong	1.00	250	P	Pb	00 29 23.2	-0.2
	baz=248						
NNSH				eS	Sg	00 29 37.2	+0.5
	baz=248						
NNS	Nan Shan	1.00	250	eP	Pg	00 29 23.8	+0.1
	baz=248						
NNS				eS	Sn	00 29 38.0	-0.2
	baz=248						
ETLH	Xiulin Townshi	1.02	236	P	Pb	00 29 23.7	-0.1
	baz=234						
ETLH				eS	Sn	00 29 38.2	-0.4
	baz=234						
IRIF	Iriomote-Funau	1.28	110	P	Pb	00 29 28.5	+0.3
IRIF				eS	Sb	00 29 44.6	+0.1
HATJ	Hateruma jima	1.46	119	P	Pg	00 29 31.9	-0.5
JKRS	Kuro-shima	1.55	110	P	Pb	00 29 33.3	+0.5
JIJ	Ishigaki jima	1.63	104	P	Pb	00 29 34.3	+0.1
YULB	Yu-li	1.72	217	eP	Pn	00 29 34.2	+0.4
	baz=216						

HEL 22 00:40:29.5, 67.83N×19.98E, h0km, ML1.6, Explosion
UPP 22 00:40:31.0±0.1, 67.84N×20.21E, h0km, ML1.8, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	22	P	Pg	00 40 33.7	+0.3
KUA				S	Sg	00 40 35.4	+0.3
KUA	Kurravaara	0.13	22	*i* P	Pg	00 40 33.7	+0.3
KUA				*i* S	Sg	00 40 35.4	+0.3
KOVU	Salmi	0.39	357	P	Pg	00 40 38.5	+0.1
KOVU	Salmi	0.39	357	*i* P	Pg	00 40 38.5	+0.1
LANU	Lannavaara	0.70	72	P	Pg	00 40 44.3	-0.1
LANU	Lannavaara	0.70	72	eP	Pg	00 40 44.1	-0.4
LANU				eS	Sg	00 40 53.6	+0.1
MASU	Masugnsbyn	0.78	118	P	Pg	00 40 45.8	-0.2
MASU	Masugnsbyn	0.78	118	*i* P	Pg	00 40 45.8	-0.2
KIF	Kilpisjarvi	1.19	10	ePB	Pg	00 40 54.0	+0.2
KIF				MSG		00 41 07.6	
	comp=Z,5.1nm,0.2s						
KIF				eSB	Sg	00 41 09.7	+0.5
PAJU	Pajala	1.39	125	P	Pg	00 40 56.2	-1.3
PAJU	Pajala	1.39	125	eP	Pg	00 40 56.2	-1.3
HEF	Hetta	1.41	65	ePG	Pn	00 40 57.0	-1.0
	baz=248						
HEF				MSG		00 41 14.3	
	comp=Z,4.1nm,0.2s						
HEF				eSB	Sg	00 41 15.5	-0.9
ERTU	Ertsjaerv	1.50	148	P	Pn	00 40 58.6	-0.5
ERTU	Ertsjaerv	1.50	148	ePG	Pn	00 40 58.2	-0.9
ERTU				eSB	Sg	00 41 18.6	-0.6
HARU	Harads	1.71	170	P	Pn	00 41 01.8	-0.1
HARU	Harads	1.71	170	eP	Pn	00 41 01.8	-0.1
KALU	Kalix	2.34	146	P	Pn	00 41 11.6	+0.9
KALU	Kalix	2.34	146	ePB	Pn	00 41 11.7	+1.1
KALU				eSG	Sb	00 41 43.5	0.0
TOF	Tornio	2.40	136	ePB	Pn	00 41 12.7	+1.3
TOF				MSG		00 41 42.1	
	comp=Z,2.2nm,0.2s						
TOF				eSG	Sb	00 41 44.9	0.0
SGF	Sodankyl	2.45	96	ePG	Pb	00 41 15.1	-0.7
	baz=281						
SGF				eSG	Sb	00 41 47.6	+1.1
RNF	Rovaniemi	2.57	116	ePB	Pn	00 41 15.7	+1.9
RNF				eSG	Sb	00 41 49.8	-0.3
ARE0	ARCESS Array S	2.58	46	eP	Pn	00 41 15.2	+1.3
	baz=228						
ARE0				eS	Sn	00 41 44.2	-1.7

UPP 22 00:40:52.7±0.2, 67.83N×20.16E, h0km, ML1.8, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	28	P	Pg	00 40 55.6	+0.2
	baz=210						
KUA				S	Sg	00 40 57.3	+0.1
KOVU	Salmi	0.40	0	P	Pg	00 41 00.3	+0.1
LANU	Lannavaara	0.72	71	P	Pg	00 41 06.5	-0.1
MASU	Masugnsbyn	0.80	117	P	Pg	00 41 07.6	-0.4
PAJU	Pajala	1.40	124	P	Pn	00 41 18.1	-1.4

IDC 22 00:54:17.5±8.5, 25.74S×13.44W, h0km, mb4.0/3, mb1 4.0/3, mb1mx3.6/36, mbtmp4.0/3, Error ellipse: s-maj=474.3km s-min=133.7km az=99.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	41.37	23	P	P	01 02 05.4	-0.1
	1.6nm,0.9s,baz=208,slow=6.6,SNR=7.5						
BRTR	Keskin Array B	78.53	35	P	P	01 06 20.9	0.0
	0.5nm,0.9s,baz=216,slow=7.6,SNR=4.9						
AKASG	Malin Array Be	84.93	26	P	P	01 06 54.2	0.0
	0.9nm,0.6s,baz=223,slow=3.9,SNR=5.1						

IDC 22 01:11:23.6±6.4, 10.84S×166.05E, h256km±65km, mb3.6/6, mb1 3.8/7, mb1mx3.4/42, mbtmp4.2/7, MS3.2/1, Ms1 3.2/1, ms1mx2.6/32, Error ellipse: s-maj=35.8km s-min=19.7km az=2.0
ISC 22 01:11:23.4±1.0, 10.9S±0.1×166.1E±0.2, h250km, n31, σ1.51/25, mb3.9/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.10	178	P	Pn	01 13 56.7	+0.9
	1.0nm,0.3s,baz=353,slow=13,SNR=13						
DZM				S	S	01 15 57.1	-2.9
	0.4nm,0.3s,baz=149,slow=19,SNR=6.2						
PMG	Port Moresby	18.67	273	LR	LR	01 21 23.4	
	comp=Z,63nm,18.3s,baz=112,slow=32						
CTA	Charters Tower	21.13	242	P	P	01 15 49.7	+0.3
	4.4nm,0.6s,baz=67,slow=12,SNR=4.0						
RUGZ	Raukumara Rang	28.88	161	P	P	01 16 59.4	+0.2
URZ	Urewera	28.97	162	P	P	01 17 00.3	+0.5
	3.9nm,0.3s,baz=301,slow=5.9,SNR=12						
URZ	Urewera	28.97	162	P	P	01 17 00.6	+0.8
MWZ	Matawai	29.17	161	P	P	01 17 01.8	+0.2
H11S2	WAKE ISLAND Hy	29.23	1	T	T	01 48 03.7	
	baz=181,slow=76,SNR=3.6						
H11S3	WAKE ISLAND Hy	29.23	1	T	T	01 48 05.4	
	baz=181,slow=76,SNR=3.8						
H11S1	WAKE ISLAND Hy	29.25	1	T	T	01 47 59.9	
	baz=181,slow=76,SNR=5.0						
MRHZ	Matea Rd	29.30	163	P	P	01 17 04.6	+1.8
WTVZ	West Tongariro	29.34	165	P	P	01 17 06.8	+3.5
BKZ	Black Stump Fm	29.63	163	P	P	01 17 06.1	+0.4
NMHZ	Naumai	29.65	163	P	P	01 17 07.7	+1.8
MOVZ	Moawhango	29.65	165	P	P	01 17 08.1	+2.1
BHHZ	Black Hill Sta	29.81	164	P	P	01 17 08.8	+1.4
KWHZ	Kaweka Forest	29.85	164	P	P	01 17 09.6	+1.9
KRHZ	Kereru	30.04	164	P	P	01 17 10.5	+1.2
PNHZ	Pukenui	30.25	164	P	P	01 17 12.3	+1.2
KAHZ	Kahuranaki	30.32	163	P	P	01 17 12.2	+0.5
TSZ	Takapari Road	30.32	165	P	P	01 17 13.3	+1.5
H11N1	WAKE ISLAND Hy	30.45	2	T	T	01 49 35.9	
	baz=185						
H11N3	WAKE ISLAND Hy	30.46	2	T	T	01 49 38.8	
	baz=185						
H11N2	WAKE ISLAND Hy	30.47	2	T	T	01 49 46.0	
	baz=185						
PXZ	Pawanui	30.54	164	P	P	01 17 14.9	+1.3
DVHZ	Dannevirke	30.60	165	P	P	01 17 15.5	+1.3
BFZ	Birch Farm	30.98	165	P	P	01 17 18.3	+0.8
WRA	Warramunga Arr	31.82	250	P	P	01 17 24.9	-0.2
	2.0nm,0.5s,baz=82,slow=9.0,SNR=12						
ASAR	Alice Springs	33.12	243	P	P	01 17 36.2	-0.2
	1.7nm,0.8s,baz=71,slow=9.3,SNR=16						
ILAR	Eielson Array	83.30	18	P	P	01 23 20.8	-1.0
	0.8nm,0.6s,baz=238,slow=4.9,SNR=17						
NVAR	Mina Array Bea	85.71	50	P	P	01 23 34.4	-0.3
	2.1nm,1.2s,baz=236,slow=7.6,SNR=3.7						

PDG 22 01:27:01.2±0.2, 38.15N×20.37E, h20km, ML3.5/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0
ATH 22 01:27:02.1, 38.16N×20.45E, h15km, ML3.4/9, Error ellipse: s-maj=1.1km s-min=0.6km az=248.0
THE 22 01:27:02.2, 38.16N×20.43E, h14km, ML3.5/8, Error ellipse: s-maj=0.7km s-min=0.3km az=258.0
BEO 22 01:27:02.9±0.9, 38.13N×20.28E, h20km±5km, ML3.3/6
IDC 22 01:27:03.7±1.2, 38.61N×20.95E, h0km, mb4.5, mb1 3.5/7, mb1mx3.4/46, mbtmp3.5/7, ML3.3/2, Error ellipse: s-maj=29.2km s-min=18.3km az=72.0
ISC 22 01:27:02.0±0.7, 38.16N±0.02×20.42E±0.03, h16km±3km, n160, σ0.94/216, mb3.6/5, 10C-3D, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.04	305	P	Pg	01 27 04.9	+0.1
CHV1				S	Sg	01 27 06.9	+0.2
LXRA	Lixouri, Kepha	0.04	19	P	Pg	01 27 04.9	+0.1
LXRA				S	Sg	01 27 06.9	+0.2
LXR1	Lixouri, Cepha	0.04	20	P	Pg	01 27 04.9	0.0
LXR1				S	Sg	01 27 07.0	+0.3
ARGA	Argostoli. Kep	0.05	72	P	Pg	01 27 04.7	-0.2
ARGA				S	Sg	01 27 06.3	-0.5
KEF2	Argostoli. Kep	0.05	87	P	Pg	01 27 04.7	-0.2
KEF2				S	Sg	01 27 06.4	-0.4
ARG2	Argostoli	0.06	73	P	Pg	01 27 04.7	-0.2
ARG2				S	Sg	01 27 06.4	-0.5
KEF3	Kipouria, Keph	0.07	306	P	Pg	01 27 05.2	+0.1
KEF3				S	Sg	01 27 07.6	+0.5
AGT1	Agia Thekli	0.09	342	P	Pg	01 27 05.4	+0.1
AGT1				S	Sg	01 27 07.7	+0.3
	75µm,0.3s						
KEF4	Livadi, Kephal	0.10	2	P	Pg	01 27 05.5	+0.1
KEF4				S	Sg	01 27 08.0	+0.5
VLS	Valsamata	0.13	84	P	Pg	01 27 05.5	-0.3
VLS				S	Sg	01 27 07.9	-0.4
	131µm,0.1s						
VLS	Valsamata	0.13	84	P	Pg	01 27 05.5	-0.3
VLS				S	Sg	01 27 07.9	-0.4
VLS				AML	AML	01 27 08.0	
VLS				AML	AML	01 27 08.2	
VSK1	VASILIKIADES	0.27	25	P	Pg	01 27 07.9	0.0
VSK1				S	Sb	01 27 12.6	-0.4
	24µm,0.2s						
KONA	Konidatara, Ke	0.29	24	P	Pg	01 27 08.2	0.0
KONA				S	Sg	01 27 12.1	-0.3
KONA				AML	AML	01 27 13.3	
	comp=E,19435µm,0.3s						
KONA				AML	AML	01 27 13.3	
	comp=N,29970µm,0.4s						
KFL	Anninata	0.29	100	P	Pg	01 27 08.0	-0.2
KFL				S	Sg	01 27 12.8	+0.2
KFL	Anninata	0.29	100	P	Pg	01 27 08.0	-0.2
KFL				S	Sg	01 27 12.8	+0.2
FSK	Fiskardo	0.32	21	P	Pg	01 27 08.6	-0.1
FSK				S	Sg	01 27 13.6	+0.4
	comp=N,8µm,0.3s						
FSK	Fiskardo	0.32	21	P	Pg	01 27 08.6	-0.1
FSK				S	Sg	01 27 13.4	+0.2
FSK				AML	AML	01 27 14.8	
	comp=N,11268µm,0.4s						
FSK				AML	AML	01 27 14.8	
	comp=E,19915µm,0.2s						
VLMS	Volimes, Zakyn	0.34	146	P	Pg	01 27 08.9	-0.2
VLMS				S	Sg	01 27 14.7	+0.7
VLMS				AML	AML	01 27 15.0	
	comp=N,58648µm,0.3s						
VLMS				AML	AML	01 27 16.0	
	comp=E,32905µm,0.2s						
EVGI	Lefkada island	0.49	22	P	Pg	01 27 11.7	-0.2
EVGI				S	Sb	01 27 19.2	-0.2
	comp=E,2µm,0.1s						
EVGI	Lefkada island	0.49	22	P	Pg	01 27 11.7	-0.2
EVGI				S	Sb	01 27 19.3	-0.1
ZAK2	Zakynthos	0.53	134	P	Pg	01 27 12.6	0.0
ZAK2				S	Sg	01 27 20.3	+0.6
	comp=E,19µm,0.4s						
MGNA	Meganis	0.57	30	P	Pg	01 27 12.9	-0.4
MGNA				S	Sg	01 27 20.4	-0.6
MGNA				AML	AML	01 27 22.3	
	comp=E,4444µm,0.2s						
MGNA				AML	AML	01 27 22.4	
	comp=N,3444µm,0.1s						

KRI1 kERI 0.59 148 P Pg 01 27 13.0 -0.6
KRI1 S Sg 01 27 21.6 +0.1
AST1 Astakos 0.65 54 P Pg 01 27 14.4 -0.3
AST1 S Sb 01 27 24.5 +0.7
VTN Vitineika 0.65 112 P Pg 01 27 14.5 -0.3
VTN Vitineika 0.65 112 P Pg 01 27 14.5 -0.3
VTN S Sg 01 27 23.0 -0.5
LKD2 Lefkada island 0.65 17 P Pg 01 27 14.3 -0.5
LKD2 Lefkada island 0.65 17 P Pg 01 27 14.3 -0.5
TSLK Tsoukalades, L 0.69 16 P Pg 01 27 15.2 -0.3
TSLK Tsoukalades, L 0.69 16 P Pg 01 27 15.1 -0.3
TSLK S Sb 01 27 25.2 +0.2
PDO Prodromos 0.74 54 P Pb 01 27 15.9 -0.7
PDO Prodromos 0.74 54 P Pb 01 27 16.0 -0.5
PDO S Sg 01 27 26.2 -0.1
PDO AML AML 01 27 31.9
comp=N,5125μm,0.5s
PDO AML AML 01 27 32.7
comp=E,3521μm,0.4s
RLS Riolos of Patr 0.83 97 P Pb 01 27 17.4 -0.7
RLS S Sn 01 27 30.8 -0.3
comp=E,1μm,0.4s
RLS Riolos of Patr 0.83 97 P Pb 01 27 17.5 -0.7
RLS S Sb 01 27 29.3 +0.2
RLS AML AML 01 27 34.2
comp=N,3559μm,0.4s
RLS AML AML 01 27 35.7
comp=E,2022μm,0.4s
PVO Paravola 0.98 62 P Pb 01 27 20.5 -0.1
PVO Paravola 0.98 62 P Pb 01 27 20.7 0.0
PVO S Sb 01 27 32.8 -0.6
PVO AML AML 01 27 40.9
comp=N,3266μm,0.6s
PVO AML AML 01 27 44.0
comp=E,3388μm,0.5s
DRO Drossia 1.04 101 P Pb 01 27 21.4 -0.3
DRO Drossia 1.04 101 P Pb 01 27 21.4 -0.3
DRO S Sb 01 27 35.0 -0.1
DRO AML AML 01 27 41.7
comp=N,2693μm,0.3s
DRO AML AML 01 27 41.8
comp=E,5377μm,0.3s
UPR University Cam 1.08 83 P Pb 01 27 21.4 -1.0
AMT Artemida-Makis 1.20 121 P Pb 01 27 24.3 +0.1
AMT Artemida-Makis 1.20 121 P Pn 01 27 24.1 -0.1
LAKA Lakka 1.23 86 P Pn 01 27 24.4 -0.2
ANX Ano Chora 1.25 69 P Pn 01 27 24.9 -0.1
ANX Ano Chora 1.25 69 P Pn 01 27 25.0 -0.1
SERG Sergoula 1.31 78 P Pn 01 27 25.4 -0.3
SERG Sergoula 1.31 78 P Pn 01 27 25.5 -0.3
TRIZ Trizonia 1.32 81 P Pn 01 27 25.5 -0.2
TRIZ Trizonia 1.32 81 P Pn 01 27 25.5 -0.2
EVR Evrytania 1.32 55 P Pn 01 27 26.2 +0.2
EVR Evrytania 1.32 55 P Pn 01 27 25.9 -0.1
ALIK Aliki, Aigiali 1.34 85 P Pn 01 27 26.3 +0.3
IGT Igoumenitsa 1.37 357 P Pb 01 27 27.1 -0.2
IGT S Sb 01 27 44.9 +0.3
comp=E,500nm,0.5s
IGT Igoumenitsa 1.37 357 ePg Pg 01 27 29.1 +0.7
IGT eSg Sg 01 27 47.0 +0.7
IGT Igoumenitsa 1.37 357 P Pb 01 27 27.5 +0.2
KLV Kalavryta, Ach 1.37 94 P Pn 01 27 27.0 +0.4
KLV Kalavryta, Ach 1.37 94 P Pn 01 27 26.8 +0.2
KALE Kalithea 1.37 80 P Pn 01 27 26.3 -0.3
KALE Kalithea 1.37 80 P Pn 01 27 26.4 -0.2
JAN Janina 1.53 13 P Pg 01 27 31.8 +0.3
ITM Ithomi 1.55 129 P Pn 01 27 29.4 +0.4
ITM Ithomi 1.55 129 P Pb 01 27 30.0 -0.3
MAKR Makrakomi, Fth 1.59 57 P Pb 01 27 30.8 -0.2
KEK Kerkira 1.62 343 P Pn 01 27 30.2 +0.2
KEK Kerkira 1.62 343 P Pn 01 27 31.1 -0.5
KASA Kassiopi 1.63 347 P Pb 01 27 31.6 -0.1
PYL PYLOS 1.64 140 P Pn 01 27 31.1 +0.8
AGG Agios Georgios 1.73 60 P Pb 01 27 33.5 +0.1
VLX Vlachokerasia 1.74 116 P Pb 01 27 34.7 +1.0
AXAR Agios Charalam 1.86 70 P Pb 01 27 36.6 +1.0
THL Klokotos Trika 1.87 41 P Pb 01 27 36.1 +0.2
KPRO Kipourio 1.94 22 P Pb 01 27 37.0 0.0
PROD Prodromos 1.96 86 P Pb 01 27 37.4 +0.1
LTK Loutraki 2.01 93 P Pb 01 27 37.3 -1.0
LOUT Loutraki 2.02 94 P Pb 01 27 37.5 -0.9
DYR Agios Nikonas 2.07 132 P Pb 01 27 38.9 -0.3
LKR Lokris 2.08 76 P Pb 01 27 38.8 -0.6
PENT Pentalofos 2.11 15 P Pb 01 27 39.8 -0.1
LRSO Larissa Observ 2.15 45 P Pb 01 27 40.0 -0.7
VIL2 Platees 2.24 88 P Pb 01 27 40.7 -1.5
KRND KRANIDI 2.30 109 P Pb 01 27 42.5 -0.6
NEST Nestorio 2.30 12 P Pb 01 27 42.9 -0.4
DID Didima 2.32 106 P Pb 01 27 42.1 -1.4
KZN Kozani 2.38 26 P Pb 01 27 43.2 -1.4
VLI Veliai 2.47 125 P Pb 01 27 44.9 -1.1
NEO Neokhori 2.47 62 P Pb 01 27 44.2 -1.9
XOR Xorichti 2.48 60 P Pn 01 27 43.7 +1.9
LIT Litokhoron 2.52 39 P Pb 01 27 45.0 -1.9
ATHU Athens Univers 2.66 93 P Pn 01 27 45.9 +1.6
VLY Voula,Athens 2.68 96 P Pn 01 27 46.0 +1.5
PTL Penteli 2.72 91 P Pn 01 27 47.3 +2.2
AOS Alonnisos 2.89 69 P Pn 01 27 49.2 +1.8
TIP Timpagrande 3.04 291 ⇓P Pn 01 27 51.2 +1.7
TIP ⇓S Sn 01 28 26.0 +0.3
TIR Tirane 3.21 353 ePn Pn 01 27 53.2 +1.4
TIR Tirane 3.21 353 ⇑P Pn 01 27 52.6 +0.8
VAY Valandovo 3.56 27 i Pn Pn 01 27 59.5 +2.8
STIP Stip 3.78 20 i Pn Pn 01 28 03.3 +3.7
MATE Matera 3.80 312 ⇑P Pn 01 27 59.8 -0.1
MATE ⇑S Sn 01 28 44.3 0.0
SRS Serrai 3.83 39 ePn Pn 01 28 02.5 +2.1
SKO Skopje 3.88 11 ePn Pn 01 28 03.2 +2.1
ULC Ulcinj 3.90 347 ePn Pn 01 28 01.3 -0.1
ULC eSn Sn 01 28 47.0 +0.1
DRME Dracevica, Mon 4.13 347 ePn Pn 01 28 04.7 +0.2
DRME Dracevica, Mon 4.13 347 ePn Pn 01 28 04.5 0.0
DRME i Sn Sn 01 28 52.7 +0.2
PDG Podgorica 4.36 349 ePn Pn 01 28 08.6 +1.1
PDG eSn Sn 01 28 57.5 -0.5
PDG Podgorica 4.36 349 ⇑P Pn 01 28 08.2 +0.7
PDG ⇑S Sn 01 28 59.1 +1.1
PDG Podgorica 4.36 349 ePn Pn 01 28 06.8 -0.7
TTG Podgorica 4.36 349 ePn Pn 01 28 07.9 +0.4
TTG eSn Sn 01 28 58.3 +0.3
PVY Plav 4.44 356 ePn Pn 01 28 09.6 +0.7
PVY eSn Sn 01 29 00.0 -0.3
HCY Herceg Novi 4.53 342 ePn Pn 01 28 09.3 -0.6
HCY Herceg Novi 4.53 342 ePn Pn 01 28 09.2 -0.7
HCY eSn Sn 01 29 01.8 -0.4
CEME Cevo 4.53 346 ePn Pn 01 28 09.6 -0.4
CEME eSn Sn 01 29 02.0 -0.3
IDI Anoyia 4.59 127 Pn Pn 01 28 13.5 +2.5
comp=E,0.2nm,0.3s,baz=317,slow=16,SNR=3.7
IDI Sn Sn 01 29 07.4 +3.3
comp=E,1.2nm,0.3s,baz=159,slow=22,SNR=8.7
BOSS Bosilegrad 4.61 19 ePn Pn 01 28 11.8 +0.8
IVA Berane 4.72 355 ePn Pn 01 28 13.1 +0.4
IVA eSn Sn 01 29 07.2 0.0
KOME Kolasin 4.73 352 ePn Pn 01 28 13.1 +0.2
KOME i Sn Sn 01 29 07.6 +0.1
NKME Niksic 4.73 347 ePn Pn 01 28 12.8 0.0
NKME eSn Sn 01 29 07.3 -0.1
BARS Barje 4.77 12 ePn Pn 01 28 14.1 +0.8
NKY Niksic 4.77 347 ePn Pn 01 28 13.4 0.0
NKY eSn Sn 01 29 08.1 -0.3
TREB Trebinje 4.82 342 ePn Pn 01 28 13.7 -0.2
TREB eSn Sn 01 29 08.6 -0.8
TREB Trebinje 4.82 342 ePn Pn 01 28 13.2 -0.7
VTS Vitosha 4.94 25 ePn Pn 01 28 16.0 +0.2
VTS Vitosha 4.94 25 ⇓P Pn 01 28 18.1 +2.3
VTS ⇑S Sn 01 29 13.5 +0.8
BRY Bratogost 4.95 344 ePn Pn 01 28 15.5 -0.3
BRY Bratogost 4.95 344 ePn Pn 01 28 15.3 -0.5
BRY eSn Sn 01 29 12.0 -0.8
SJES Sjenica 5.11 356 ePn Pn 01 28 19.1 +1.1
STON Ston 5.14 337 ePn Pn 01 28 18.2 -0.1
STON eSn Sn 01 29 15.0 -2.3
STON Ston 5.14 337 ePn Pn 01 28 17.2 -1.1
UPM Unac-Piva 5.17 348 ePn Pn 01 28 18.2 -0.7
UPM Unac-Piva 5.17 348 ePn Pn 01 28 18.8 -0.1
UPM eSn Sn 01 29 17.8 -0.4
IVAS Ivanjica 5.41 358 ePn Pn 01 28 22.3 +0.1
IVAS eSn Sn 01 29 23.2 -1.0
RUDO Rudo 5.51 352 ePn Pn 01 28 22.1 -1.3
BOVS Bovan 5.55 10 ePn Pn 01 28 25.4 +1.4
GRUS Gruza 5.72 2 ePn Pn 01 28 26.6 +0.2
BBLS Lazići 5.75 353 ePn Pn 01 28 26.4 -0.4
BBLS eSn Sn 01 29 30.2 -2.3
BBLS Lazići 5.75 353 ePn Pn 01 28 29.7 +2.9
ZAGS Zajecar 5.81 13 ePn Pn 01 28 28.5 +1.0
DIVS Divibare 5.94 357 ePn Pn 01 28 29.1 -0.3
DIVS eSn Sn 01 29 35.1 -2.1
DIVS Divibare 5.94 357 ePn Pn 01 28 28.8 -0.6
HAPS Han Pijesak,Bl 6.02 350 ePn Pn 01 28 28.0 -2.6
MGRS Mrkonjic Grad 6.73 339 ePn Pn 01 28 40.7 +0.4
BLY Banja Luka 7.01 341 ⇑P Pn 01 28 44.5 +0.5
BLY ⇑S Sn 01 30 02.4 -1.1
BLY Banja Luka 7.01 341 ePn Pn 01 28 44.4 +0.3
BZS Buzias 7.50 6 ⇑P Pn 01 28 51.7 +1.0
VOIR 8.05 24 ⇑P Pn 01 28 59.7 +1.4
MORH Mrgy, Hungar 8.15 351 ePn Pn 01 28 57.2 -2.5
RIY Rijeka 8.42 330 ePn Pn 01 29 03.1 -0.2
CRES Cresnjev 8.50 336 ePn Pn 01 29 03.9 -0.6
LJU Ljubljana 9.01 333 ePn Pn 01 29 10.9 -0.5
SOKA Soboth 9.39 337 i Pn Pn 01 29 16.2 -0.6
comp=E,2.1nm,0.2s,SNR=9.2
OBKA Obir 9.40 334 ePn Pn 01 29 17.6 +0.7
comp=E,2.7nm,0.4s,SNR=7.9
OBKA i Sn Sn 01 30 59.0 -3.3
comp=E,0.7nm,0.2s
MOA Molln 10.68 337 i Pn Pn 01 29 35.3 +1.0
comp=E,2.9nm,0.3s,SNR=8.8
WTTA Wattenberg 11.15 327 ePn Pn 01 29 42.6 +1.7
comp=E,1.1nm,0.2s
SQTA Sankt Quirin 11.30 326 eSn Sn 01 31 47.9 -1.0
comp=E,1.7nm,0.4s
RETA Reutte 11.70 326 ePn Pn 01 29 58.8 +10
comp=E,2.7nm,0.3s
GERES GERESS Array B 11.73 338 ePn Pn 01 29 48.8 0.0
comp=E,0.2nm,0.3s,baz=157,slow=13,SNR=7.0
KHC Kasperske Hory 12.03 338 ePN Pn 01 29 53.2 +0.5
KHC ex x 01 30 14.0
HFS Hagfors 22.40 351 P P 01 32 00.7 +1.1
comp=E,3.2nm,0.8s,baz=158,slow=12,SNR=8.7
FINES FINESS Array B 23.57 7 P P 01 32 11.2 -0.4
comp=E,2.6nm,0.9s,baz=180,slow=15,SNR=4.0
NOA NORSAR Array B 23.62 349 P P 01 32 12.2 0.0
comp=E,0.5nm,0.7s,baz=149,slow=8.9,SNR=3.0
TORD Torodi Ar. Bea 29.97 219 P P 01 33 19.7 +10
comp=E,0.1nm,0.4s,baz=29,slow=8.4,SNR=2.6
MKAR Makanchi Array 45.38 58 P P 01 35 19.2 -0.5
comp=E,0.3nm,0.4s,baz=284,slow=6.7,SNR=6.1

IDC 22 01:32:20.4±1.1,20.25N×120.37E,h0km,mb3.8/5, mb1 4.1/5,mb1mx3.6/52,mbtmp3.8/5,MS3.0/2,Ms1 3.0/2, ms1mx2.5/44,Error ellipse: s-maj=72.3km s-min=22.1km az=68.0,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	18.36	19	LR	LR	01 43 39.8	
	comp=Z,17nm,18.5s,baz=5.0,slow=37						
MKAR	Makanchi Array	40.73	320	P	P	01 40 03.0	0.0
	0.4nm,0.6s,baz=109,slow=7.9,SNR=3.6						
WRA	Warramunga Arr	42.22	160	P	P	01 40 15.5	0.0
	1.4nm,0.4s,baz=343,slow=9.1,SNR=5.4						
ZALV	Zalesovo Beam	43.19	330	P	P	01 40 22.6	-0.4
	1.0nm,0.7s,baz=120,slow=8.5,SNR=3.6						
ASAR	Alice Springs	45.60	163	P	P	01 40 42.3	-0.3
	0.4nm,0.4s,baz=344,slow=6.9,SNR=8.8						
STKA	Stephens Creek	55.68	158	LR	LR	02 06 48.1	
	comp=Z,31nm,20.7s,baz=203,slow=37						
YKA	Yellowknife Ar	86.88	22	P	P	01 45 07.0	+0.1
	1.2nm,0.9s,baz=312,slow=4.8,SNR=14						

IDC 22 01:36:09.7±5.4,25.23S×66.16W,h0km,mb4.1/1, mb1 4.0/2,mb1mx3.6/25,mbtmp3.9/2,ML3.8/1,Error ellipse: s-maj=161.7km s-min=51.2km az=54.0
SJA 22 01:36:44.1±0.7,22.77S×66.18W,h265km±4km,ML3.9, MW3.6
GUC 22 01:36:46.8±0.5,22.60S×66.82W,h283km±15km,ML3.8
ISC 22 01:36:44.1±1.0,22.75S±0.07×66.27W±0.06,h259km±8km, n30,σ1§42/44,8C-1D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	Yavi	0.90	51	i P	Pn	01 37 20.8	+0.5
YJA				eS	S	01 37 48.3	-0.4
SLA	San Lorenzo	2.08	160	i P	Pn	01 37 29.0	+0.7
SLA				eS	S	01 38 02.0	-1.3
LVC	Limon Verde	2.44	273	i P	Pn	01 37 33.4	+1.5
LVC				eS	S	01 38 09.7	0.0
PB09	IPOC Station P	2.91	289	⇑iP	Pn	01 37 38.3	+1.8
PB09				IAML		01 38 21.4	
	comp=N,97nm,0.3s						
PB09	IPOC Station P	2.91	289	i P	Pn	01 37 38.6	+2.1
PB09				eS	S	01 38 18.1	+0.1
PB09				IAML		01 38 21.6	
	comp=Z,118nm,0.2s						
PB15	IPOC Station P	2.98	261	eP	Pn	01 37 39.1	+1.8
PB15				i S	S	01 38 19.1	-0.3
PB15	IPOC Station P	2.98	261	i P	Pn	01 37 39.0	+1.8
PB06	IPOC Station P	3.05	270	⇑iP	Pn	01 37 39.8	+1.9
PB06				i S	S	01 38 19.5	-1.0
PB06				IAML		01 38 21.7	
	comp=N,193nm,0.4s						
PB06	IPOC Station P	3.05	270	i P	Pn	01 37 39.5	+1.6
PB06				IAML		01 38 23.2	
	comp=Z,150nm,0.2s						
PB03	IPOC Station P	3.30	282	⇑iP	Pn	01 37 41.7	+1.1
PB03				i S	S	01 38 23.9	-1.6
PB01	IPOC Station P	3.44	299	⇑iP	Pn	01 37 43.5	+1.4
PB01				i S	S	01 38 26.4	-1.8
PB07	IPOC Station P	3.50	286	⇑iP	Pn	01 37 44.2	+1.3
PB07				i S	S	01 38 27.6	-1.9
PB04	IPOC Station P	3.61	276	⇑iP	Pn	01 37 45.3	+1.2
PB04				i S	S	01 38 30.1	-1.6
PB04	IPOC Station P	3.61	276	i P	Pn	01 37 45.7	+1.6
PB05	IPOC Station P	3.63	268	⇑iP	Pn	01 37 45.5	+1.2
PB05				i S	S	01 38 30.1	-1.9
PB05	IPOC Station P	3.63	268	i P	Pn	01 37 45.7	+1.4
PB05				IAML		01 38 35.5	
	comp=Z,81nm,0.4s						
PB02	IPOC Station P	3.66	292	⇑iP	Pn	01 37 45.6	+1.1
PB02				i S	S	01 38 30.4	-2.1
PB10	IPOC Station P	4.02	258	i P	Pn	01 37 50.0	+1.5
PB10				IAML		01 38 42.2	
	comp=Z,80nm,0.3s						
PATCX	Punta Patache	4.09	297	eP	Pn	01 37 50.5	+0.9
PATCX				i S	S	01 38 39.0	-2.6
GO01	Chusmiza	4.11	318	⇓iP	Pn	01 37 51.4	+1.2
GO01				i S	S	01 38 41.4	-1.2
PB14	IPOC Station P	4.22	243	i P	Pn	01 37 52.5	+1.2
PB14				IAML		01 38 46.7	
	comp=Z,162nm,0.4s						
MNMC	Minye Minye	4.76	319	eP	Pn	01 37 58.7	+1.0
GO03	Copiap	6.01	216	i P	Pn	01 38 13.0	+0.4
LPAZ	La Paz	6.67	344	Pn	Pn	01 38 22.8	+1.4
	comp=Z,0.5nm,0.3s,baz=168,slow=5.5,SNR=12						
LPAZ	La Paz	6.67	344	i P	Pn	01 38 22.8	+1.3
ACCO	Cerro Coronel	8.19	197	i P	Pn	01 38 41.2	+1.0
AMOG	MOGNA	8.39	193	i P	Pn	01 38 42.8	+0.4
CFA	Coronel Fontan	8.99	191	i P	Pn	01 38 50.1	+0.2
TORD	Torodi Ar. Bea	75.50	69	P	P	01 48 01.0	+0.6
	comp=Z,0.6nm,0.3s,baz=259,slow=5.9,SNR=16						
MKAR	Makanchi Array	145.14	39	PKPbc	PKiKP	01 55 53.4	-1.2
	comp=Z,1.0nm,0.7s,baz=315,slow=3.7,SNR=6.6						

AEIC 22 01:41:37.4±2.1,50.99N±0.08×176.20W±0.08,h25km±4km, Error ellipse: s-maj=11.5km s-min=7.0km az=169.0
NEIC 22 01:41:38.5±1.4,51.18N±0.08×176.30W±0.08,h26km±2km, mb4.8/243,ML4.2/25(AEIC),Error ellipse: s-maj=11.5km s-min=6.5km az=164.0
BJI 22 01:41:39.9±0.0,51.59N×176.52W,h50km,mB5.0/39, mb5.0/57,Ms4.5/26,Ms7 4.2/25
MOS 22 01:41:39.1±0.9,51.21N×176.33W,h45km,mb5.0/40, Error ellipse: s-maj=8.2km s-min=5.6km az=107.7
IDC 22 01:41:40.7±3.3,51.18N×176.30W,h47km±31km,mb4.2/34, mb1 4.3/34,mb1mx4.2/57,mbtmp4.5/34,ML3.7/1,MS3.8/18, Ms1 3.8/18,ms1mx3.6/47,Error ellipse: s-maj=18.1km s-min=9.4km az=171.0
ISC 22 01:41:38.9±0.9,51.13N±0.06×176.33W±0.03,h32km±5km, n628,σ0§85/575,mb4.8/167,MS3.8/24,42C-10D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETKA	Kagalaska Isla	0.74	356		Pn	01 41 53.1	0.0
ADK	Adak	0.79	344		Pn	01 41 53.6	-0.2
ADK	Adak	0.79	344	P	Pn	01 41 53.6	-0.2
KIMD	Kanaga Island	0.85	319		Pn	01 41 55.0	+0.3
ADAG	Mount Adagdak	0.87	349		Pn	01 41 55.8	+0.8
KIWB	Kanaga Island	0.89	325		Pn	01 41 55.5	+0.3
KIKV	Kanaga Island	0.92	325		Pn	01 41 56.3	+0.6
GSMY	Great Sitkin M	0.93	10		Pn	01 41 56.2	+0.4
GSTD	Great Sitkin T	0.94	7		Pn	01 41 56.5	+0.5
KICM	Kanaga Island	0.96	326		Pb	01 41 57.1	+0.1
GSTR	Great Sitkin T	0.98	10		Pb	01 41 56.8	-0.6
TAPA	Tanaga Point A	1.16	307		Pb	01 41 59.4	-1.0
TASE	Tanaga Southea	1.28	304		Pb	01 42 01.5	-1.0
TAFP	Tanaga Falls P	1.29	307		Pb	01 42 01.5	-1.1
GAEA	Gareloi East	1.65	294		Pn	01 42 06.8	+1.1
GALAA	Gareloi Lava P	1.66	294		Pn	01 42 06.7	+0.9
ATKA	Atka Island	1.71	50		Pn	01 42 05.5	-0.9
KOKL	Mount Kliuchef	1.79	47		Pn	01 42 07.5	0.0
KOFP	Korovin Flat P	1.80	49		Pn	01 42 07.5	-0.4
NIKH	Nikolski High	4.97	65		Pn	01 42 51.0	-0.2
OKFG	Magazine Ridge	5.65	63		Pn	01 43 01.9	+1.3
MREP	Makushin Rep't	6.44	62		Pn	01 43 12.0	+0.5
UNV	Unalaska Valle	6.59	62	Pn	Pn	01 43 15.5	+2.0
GAMB	Gambell	12.92	9		Pn	01 44 41.1	+1.1
ANM	Nome	14.65	19	Pn	Pn	01 45 05.5	+1.9
ANM	Nome	14.65	19	P	Pn	01 45 05.5	+1.9
SVW2	Sparrevohn	15.21	41		Pn	01 45 09.4	-1.8
KDAK	Kodiak Island	15.28	55	P	Pn	01 45 08.3	-3.7
	1.6nm,0.3s,baz=250,slow=5.8,SNR=22						
KDAK				S	Sn	01 48 05.6	+5.6
	0.3nm,0.3s,baz=24,slow=22,SNR=7.8						
KDAK				LR	LR	01 52 05.6	
	comp=Z,790nm,18.6s,baz=243,slow=41						
PET	Petropavlovsk	15.48	287		Pn	01 45 15.7	+1.0
PET	Petropavlovsk	15.48	287	eP	P	01 45 19.8	+1.0
PET				pmax	pmax		
	comp=Z,153nm,1.0s						
PET				MLR	MLR		
	comp=Z,600nm,19.0s						
PEA0B	Petropavlovsk-	16.05	287	P	P	01 45 24.8	-0.3
PEA0B				IAmb	IAmb	01 45 27.8	
	comp=Z,105nm,0.7s						
PEA0B	Petropavlovsk-	16.05	287	⇓eP	P	01 45 24.2	-0.9
PETK	Petropavlovsk-	16.05	287	P	Pn	01 45 23.2	+1.2
	comp=Z,1.4nm,0.3s,baz=100,slow=12,SNR=102						
PETK				LR	LR	01 51 10.8	
	comp=Z,301nm,21.7s,baz=73,slow=36						
TTA	Tatalina	16.09	35	P	P	01 45 25.8	+0.1
TTA	Tatalina	16.09	35	P	P	01 45 25.8	+0.1
RSO	Redoubt South	16.13	46	Pn	Pn	01 45 23.3	+0.1
CNPM	China Poot	16.48	50	Pn	Pn	01 45 27.3	-0.2
BRLK	Bradley Lake	16.73	49	Pn	Pn	01 45 30.5	-0.1
BRLK				IAmb	IAmb	01 45 41.5	
	comp=Z,48nm,1.3s						
SKT	Skwentna	17.34	42	P	P	01 45 38.4	-1.0
SKR	Severo-Kuril's	17.35	279	⇓eP	P	01 45 39.9	+0.4
SUA	Susitna One	17.44	44	P	P	01 45 39.9	-0.7
PPLA	Purkeypile	17.52	38	P	P	01 45 41.6	+0.1
SEW	Seward	17.52	49	Pn	Pn	01 45 38.4	-2.1
RC01	Rabbit Creek A	17.74	46	P	P	01 45 43.3	-0.4
PMR	Palmer	18.20	44	P	P	01 45 49.1	+0.3
PMR	Palmer	18.20	44	P	P	01 45 49.1	+0.3
PMR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RDOG	Red Dog Mine	18.21	16	P	P	01 45 49.5	+0.6
KTH	Kantishna Hill	18.35	38	P	P	01 45 50.7	+0.1
GHO	Glory Hole Cre	18.36	44	P	P	01 45 49.4	-1.3
KNK	Knik Glacier	18.43	45	P	P	01 45 50.7	-0.7
TRF	Thorofare Moun	18.54	38	IAmb	IAmb	01 46 13.0	
	comp=Z,30nm,0.9s						
BPAW	Bear Paw Mtn.	18.61	36	IAmb	IAmb	01 45 57.3	
	comp=Z,39nm,1.2s						
SML	Sawmill	18.64	44	P	P	01 45 53.3	-0.3
MID	Middleton Isla	18.85	52	P	Pn	01 45 56.8	+0.1
MID	Middleton Isla	18.85	52	P	Pn	01 45 56.8	+0.1
MID				pmax	pmax		
	comp=Z,177nm,0.9s						
GLI	Glacier Island	18.88	48	P	P	01 45 56.0	-0.3
BILL	Bilibino	18.98	340	P	Pn	01 45 57.7	-0.5
BILL				IAmb	IAmb	01 45 59.6	
	comp=Z,24nm,0.8s						
BILL	Bilibino	18.98	340	c iP	Pn	01 45 58.2	0.0
BILL				eS	Sn	01 49 29.2	-0.3
BILL				pmax	pmax		
	comp=Z,32nm,1.0s						
BILL				MLR	MLR		
	comp=Z,241nm,19.0s						
HIN	Hinchinbrook I	19.02	49	P	P	01 45 57.0	-0.8
HIN				IAmb	IAmb	01 46 06.9	
	comp=Z,55nm,1.2s						
RND	Reindeer	19.09	39	IAmb	IAmb	01 45 59.8	
	comp=Z,36nm,0.7s						
FID	Port Fidalgo	19.13	48	IAmb	IAmb	01 46 07.6	
	comp=Z,44nm,1.2s						
MLY	Manley	19.21	34	P	P	01 45 59.4	-0.6
MLY				IAmb	IAmb	01 46 01.7	
	comp=Z,31nm,0.9s						
BWN	Browne	19.22	37	IAmb	IAmb	01 46 14.9	
	comp=Z,55nm,0.9s						
EYAK	Cordova Ski Ar	19.41	49	P	P	01 46 01.4	-0.7
DHY	Denali Highway	19.55	41	P	Pn	01 46 04.1	-1.1
DHY				IAmb	IAmb	01 46 16.7	
	comp=Z,24nm,0.6s						
RAGM	Ragged Mountai	19.89	50	P	P	01 46 07.5	+0.1
MDM	Murphy Dome	20.08	36	IAmb	IAmb	01 46 24.7	
	comp=Z,30nm,1.0s						
CCB	Clear Creek Bu	20.08	37	P	P	01 46 08.2	-1.2
TCOL	CIGO, UAF Yank	20.17	36	P	P	01 46 10.5	+0.2
	baz=240						
COLA	College	20.18	36	P	P	01 46 10.3	0.0
COLA				IAmb	IAmb	01 46 27.1	
	comp=Z,26nm,0.7s						
COLA	College	20.18	36	eP	Pn	01 46 11.5	-0.9
HDA	Harding Lake	20.30	38	IAmb	IAmb	01 46 13.3	
	comp=Z,27nm,0.6s						
HDA	Harding Lake	20.30	38	P	P	01 46 11.0	-0.7
	baz=243,SNR=21						
MA2	Magadan	20.34	307	P	P	01 46 13.1	+0.9
	comp=Z,9.0nm,0.5s,baz=106,slow=12,SNR=8.0						
MA2				LR	LR	01 55 17.6	
	comp=Z,210nm,18.2s,baz=111,slow=40						
MA2	Magadan	20.34	307	P	P	01 46 12.3	+0.1
MA2	Magadan	20.34	307	c eP	Pn	01 46 14.9	+0.5
MA2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
POKR	Poker Flat Res	20.45	36	P	P	01 46 13.2	-0.2
	baz=240,SNR=9.4						
SEY	Seymchan	20.48	317	P	P	01 46 14.3	+0.6
	comp=Z,17nm,1.0s,baz=113,slow=13,SNR=32						
SEY	Seymchan	20.48	317	⇑eP	P	01 46 13.6	-0.1
IL31		20.49	37	P	P	01 46 12.8	-0.9
ILAR	Eielson Array	20.49	37	P	P	01 46 10.9	-2.9
	comp=Z,2.6nm,0.4s,baz=242,slow=9.8,SNR=33						
GLB	Gilahina Butte	20.56	47	P	P	01 46 15.1	+0.4
GLB				IAmb	IAmb	01 46 30.8	
	comp=Z,13nm,0.6s						
VRDI	Verde Repeater	20.68	48	P	Pn	01 46 17.1	-1.4
COLD	Coldfoot	20.70	29	P	P	01 46 16.4	+0.4
CRQM	Cirque	20.71	49	P	P	01 46 16.5	0.0
RIDG	Independent Ri	20.86	41	IAmb	IAmb	01 46 30.3	
	comp=Z,30nm,0.7s						
MCARA	McCarthy VSAT	20.91	48	P	P	01 46 19.2	+0.7
MCARA				IAmb	IAmb	01 46 35.7	
	comp=Z,22nm,0.8s						
MENT	Mentasta	21.05	43	IAmb	IAmb	01 46 40.7	
	comp=Z,14nm,0.7s						
DOT	Dot Lake	21.15	41	IAmb	IAmb	01 46 24.8	
	comp=Z,37nm,0.8s						
SCRK	Sand Creek	21.30	41	P	P	01 46 22.3	-0.4
PRP	Porcupine Dome	21.35	36	IAmb	IAmb	01 46 39.4	
	comp=Z,31nm,1.2s						
CTGM	Chitina Glacie	21.62	49	P	P	01 46 27.7	+1.6
CTGM				IAmb	IAmb	01 46 43.7	
	comp=Z,15nm,0.8s						
TOLK	Toolik Lake Re	21.78	26	IAmb	IAmb	01 46 44.1	
	comp=Z,15nm,0.8s						
TOLK	Toolik Lake Re	21.78	26	P	P	01 46 28.0	+0.3
	baz=230,SNR=9.9						
FYU	Fort Yukon	21.96	34	P	P	01 46 29.6	+0.1
FYU				IAmb	IAmb	01 46 46.0	

comp=Z,61nm,1.4s
EGAK Eagle 22.74 40 IAmb IAmb 01 46 52.9
comp=Z,25nm,0.7s
EPYK Eagle Plains 25.00 37 IAmb IAmb 01 47 01.4
comp=Z,15nm,0.8s
EPYK Eagle Plains 25.00 37 P P 01 46 59.9 +0.4
baz=252
WRAK Wrangell Islan 26.17 61 P P 01 47 11.2 +1.1
WRAK IAmb IAmb 01 47 13.0
comp=Z,20nm,0.8s
INK Inuvik 26.79 34 P P 01 47 14.5 -1.0
comp=Z,3.5nm,0.4s,baz=254,slow=8.1,SNR=34
INK Inuvik 26.79 34 P P 01 47 14.5 -1.0
INK Inuvik 26.79 34 P P 01 47 14.5 -1.0
INK pmax pmax
comp=Z,5.0nm,0.7s
YSS Yuzh-Sakhalins 26.89 277 P P 01 47 17.5 +0.8
YSS IAmb IAmb 01 47 18.6
comp=Z,28nm,0.9s
YSS Yuzh-Sakhalins 26.89 277⇓iP P 01 47 17.8 +1.1
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,300nm,15.0s
ASAJ Asahikawa 28.26 272 P P 01 47 29.5 +0.5
comp=Z,8.6nm,0.8s,baz=77,slow=5.5,SNR=5.5
ASAJ LR LR 02 01 26.2
comp=Z,89nm,18.0s,baz=26,slow=42
GRNR Gornyy 29.37 288⇑iP P 01 47 38.8 0.0
GRNR pmax pmax
comp=Z,10.0nm,1.3s
GRNR MLR MLR
comp=Z,140nm,16.0s
C36M Paulatuk 30.37 34 P P 01 47 46.6 -0.8
baz=260,SNR=5.8
TIXI Tiksi 31.62 330 P P 01 47 59.9 +1.6
comp=Z,1.9nm,0.4s,baz=113,slow=9.2,SNR=6.1
TIXI PcP PcP 01 50 49.6 -0.1
comp=Z,3.6nm,0.7s,baz=72,slow=1.6,SNR=5.9
TIXI LR LR 02 02 09.3
comp=Z,168nm,18.0s,baz=88,slow=39
TIXI Tiksi 31.62 330 IAmb IAmb 01 48 08.3
comp=Z,3.3nm,1.1s
TIXI Tiksi 31.62 330⇑eP P 01 48 00.1 +1.7
TIXI pmax pmax
comp=Z,2.0nm,1.3s
KLR Kul'dur 32.74 287 P P 01 48 08.4 -0.1
comp=Z,12nm,0.4s,baz=70,slow=7.2,SNR=103
KLR LR LR 02 02 19.4
comp=Z,217nm,19.1s,baz=74,slow=38
KLR Kul'dur 32.74 287ciP P 01 48 08.2 -0.3
KLR pmax pmax
comp=Z,44nm,1.4s
LLLB Lillooet 33.70 69 IAmb IAmb 01 48 33.0
comp=Z,8.2nm,0.8s
ZEA Zeya 33.73 297 eP P 01 48 16.1 -0.9
ZEA pmax pmax
comp=Z,15nm,0.8s
ZEA MLR MLR
comp=Z,200nm,16.0s
H11N2 WAKE ISLAND Hy 34.01 209 T T 02 25 12.4
baz=18,slow=76,SNR=114
H11N3 WAKE ISLAND Hy 34.02 209 T T 02 25 10.2
baz=18,slow=76,SNR=98
H11N1 WAKE ISLAND Hy 34.03 209 T T 02 25 09.7
baz=18,slow=76,SNR=96
YKA Yellowknife Ar 34.28 47 P P 01 48 21.1 -0.6
comp=Z,2.5nm,0.7s,baz=281,slow=7.7,SNR=24
YKA PcP PcP 01 50 57.5 +0.3
comp=Z,1.1nm,0.7s,baz=287,slow=2.8,SNR=6.3
B05A Bryant 34.53 73 P P 01 48 25.5 +1.5
baz=295
USRK Ussuriysk Ar. 34.87 279 P P 01 48 26.9 0.0
comp=Z,3.2nm,0.6s,baz=58,slow=9.7,SNR=13
USRK PcP PcP 01 50 59.8 +0.5
comp=Z,2.9nm,0.8s,baz=120,slow=0.6,SNR=4.5
USRK LR LR 02 02 14.5
comp=Z,105nm,21.4s,baz=51,slow=35
H11S1 WAKE ISLAND Hy 35.22 209 T T 02 26 38.4
baz=18,slow=76,SNR=48
H11S2 WAKE ISLAND Hy 35.24 209 T T 02 26 36.9
baz=18,slow=76,SNR=25
H11S3 WAKE ISLAND Hy 35.24 209 T T 02 26 28.9
baz=18,slow=76,SNR=27
MJAR Matsushiro Arr 35.29 264 P P 01 48 31.0 +0.3
comp=Z,2.8nm,0.8s,baz=47,slow=9.1,SNR=5.1
MJAR PcP PcP 01 51 01.1 +0.4
comp=Z,2.7nm,0.8s,baz=57,slow=1.8,SNR=4.7
MJAR LR LR 02 01 35.3
comp=Z,72nm,21.3s,baz=55,slow=34
MAJO Matsushiro 35.29 264⇓eP P 01 48 32.5 +1.8
MAJO pmax pmax
comp=Z,9.0nm,0.7s
B08A Colville Reser 36.15 71 IAmb IAmb 01 48 53.6
comp=Z,13nm,0.9s
KBO Bosley Butte 36.16 83 P P 01 48 40.6 +2.4
MSHR Mys Shultsa 36.23 277deP P 01 48 39.4 +0.8
HAWA Hanford 36.94 75 IAmb IAmb 01 48 59.9
comp=Z,11nm,0.9s
D08A Wollman Farm, 36.99 73 IAmb IAmb 01 49 03.5
comp=Z,9.6nm,1.2s
PINE Pine Mountain 37.38 79 P P 01 48 49.2 +0.5
PINE IAmb IAmb 01 49 08.0
comp=Z,12nm,1.3s
NEW Newport 37.51 71 P P 01 48 49.3 -0.2
comp=Z,8.3nm,0.8s,baz=323,slow=3.5,SNR=15
NEW Newport 37.51 71 IAmb IAmb 01 49 04.8
comp=Z,16nm,0.9s
NEW Newport 37.51 71 P P 01 48 49.6 0.0
baz=297,SNR=9.0
KMRM Mail Ridge 37.59 86 P P 01 48 51.0 +0.6
KMRM IAmb IAmb 01 48 51.8
comp=Z,40nm,1.4s
G08A Pilot Rock 37.83 76 P P 01 48 51.6 -0.8
I07A Izee 38.11 78 P P 01 48 55.1 +0.3
WDC Whiskeytown Da 38.12 85 P P 01 48 55.4 +0.6
WDC Whiskeytown Da 38.12 85 P P 01 48 55.4 +0.6
WDC pmax pmax
comp=Z,4.0nm,0.9s
MOD Modoc Plateau 38.78 81 P P 01 49 02.2 +1.6
WALA Waterton Lakes 39.03 68 IAmb IAmb 01 49 17.2
comp=Z,11nm,0.9s
BMO Blue Mountains 39.06 75 P P 01 49 04.3 +1.6
BMO Blue Mountains 39.06 75 P P 01 49 04.3 +1.6
BMO pmax pmax
comp=Z,3.0nm,0.8s
CN2 Changchun 39.12 283 eP P 01 49 03.9 +0.8
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 LR LR
comp=Z,200nm,18.0s
CN2 LR LR
comp=Z,200nm,18.0s
CN2 LR LR
comp=Z,200nm,19.0s
J08A Circle Bar Ran 39.13 78 P P 01 49 03.1 -0.2
RES Resolute Bay 39.33 24 P P 01 49 03.9 -0.6
RES PcP 01 51 13.0 +0.6
MSO Missoula 40.09 71 IAmb IAmb 01 49 26.2
comp=Z,10nm,0.9s
MSO Missoula 40.09 71 P P 01 49 11.4 +0.2
baz=300,SNR=6.5
PAHR Pah Rah Range 40.60 83 P P 01 49 15.8 +0.1
MFID Camas Ranch 40.72 76 P P 01 49 17.3 +0.7
KSRS Korea Array 41.20 273 P P 01 49 21.1 +0.7
comp=Z,7.8nm,0.8s,baz=58,slow=8.0,SNR=26
KSRS LR LR 02 07 34.4
comp=Z,64nm,18.1s,baz=50,slow=38
WAKR Walker 41.28 85 P P 01 49 21.6 +0.3
LRM Limekiln Ridge 41.49 71 P P 01 49 19.6 -3.4
MCMT McKenzie Canyo 41.77 73 P P 01 49 26.2 +0.9
RYN Ryan 41.78 84 P P 01 49 26.7 +1.4
EGMT Eagleton 41.95 67 P P 01 49 26.3 -0.3
EGMT IAmb IAmb 01 49 28.5
comp=Z,9.1nm,0.8s
EGMT Eagleton 41.95 67 P P 01 49 26.9 +0.3
baz=300
NVAR Mina Array Bea 42.04 84 P P 01 49 28.1 +0.6
comp=Z,0.7nm,0.8s,baz=281,slow=9.1,SNR=5.4
NVAR LR LR 02 04 12.5
comp=Z,103nm,19.5s,baz=290,slow=32
JNU Nakatsue 42.09 266 P P 01 49 28.6 +0.8
comp=Z,11nm,0.9s,baz=57,slow=6.9,SNR=5.0
JNU Nakatsue 42.09 266 IAmb IAmb 01 49 40.5
comp=Z,18nm,1.0s
TJN Taejon 42.22 272ceP P 01 49 29.1 +0.4
ELK Elko 42.58 79 P P 01 49 32.3 +0.3
ELK Elko 42.58 79 P P 01 49 32.3 +0.3
ELK pmax pmax
comp=Z,3.0nm,0.8s
QLMT Earthquake Lak 42.63 72 P P 01 49 33.0 +0.8
FFC Flin Flon 43.02 55 P P 01 49 34.8 -0.2
FFC Flin Flon 43.02 55 P P 01 49 34.8 -0.2
FFC pmax pmax
comp=Z,3.0nm,0.6s
YNR Norris Junctio 43.14 72 P P 01 49 36.9 +0.5
GCMT Greycliff 43.16 70 P P 01 49 36.4 -0.1
H17A Grant Village 43.38 72 IAmb IAmb 01 49 55.1
comp=Z,20nm,1.1s
H17A Grant Village 43.38 72 P P 01 49 40.5 +2.1
baz=303,SNR=7.0
CWC Cottonwood Cre 43.40 86 P P 01 49 40.3 +1.8
baz=309
FLWY Flagg Ranch 43.47 73 P P 01 49 39.9 +0.8
FLWY IAmb IAmb 01 49 55.6
comp=Z,8.9nm,0.9s
RLMT Red Lodge 43.76 71 IAmb IAmb 01 49 57.0
comp=Z,30nm,0.9s
RLMT Red Lodge 43.76 71 P P 01 49 42.4 +1.0
baz=303,SNR=17
R11A Troy Canyon, C 43.79 82 P P 01 49 42.2 +0.5
baz=307
DAC Darwin (Calif) 43.80 86 P P 01 49 41.8 -0.1
DAC Darwin (Calif) 43.80 86 P P 01 49 41.8 -0.1
DAC pmax pmax
comp=Z,4.0nm,1.1s
AHID Auburn Hatcher 43.97 74 P P 01 49 43.3 +0.2
MPMC Manual Prospec 44.01 86 P P 01 49 45.0 +1.5
baz=309
TPNV Topopah Spring 44.23 84 IAmb IAmb 01 50 02.6
comp=Z,5.9nm,0.8s
TPNV Topopah Spring 44.23 84 P P 01 49 45.9 +0.7
baz=308
DUG Dugway, Tooele 44.40 78 IAmb IAmb 01 50 05.7
comp=Z,7.5nm,0.9s
DUG Dugway, Tooele 44.40 78 P P 01 49 47.0 +0.4
baz=306
LAO LASA Array 44.70 67 P P 01 49 49.7 +1.0
baz=302
SHOC Shoshone, Teco 44.87 86 P P 01 49 51.7 +1.5
baz=309
BW06 Boulder Array 44.90 73 IAmb IAmb 01 50 05.9
comp=Z,18nm,1.1s
BW06 Boulder Array 44.90 73 P P 01 49 51.0 +0.5
baz=305,SNR=26
PD31 Pinedale Array 44.90 73 IAmb IAmb 01 50 05.9
comp=Z,17nm,1.1s
PDAR Pinedale Array 44.90 73 P P 01 49 50.5 -0.1
comp=Z,3.3nm,0.6s,baz=309,slow=4.0,SNR=47
PDAR LR LR 02 06 47.8
comp=Z,108nm,19.7s,baz=320,slow=34
DGMT Dagmar 44.91 64 P P 01 49 49.9 -0.4
DGMT IAmb IAmb 01 49 54.8
comp=Z,12nm,1.1s
DGMT Dagmar 44.91 64 P P 01 49 51.3 +1.0
baz=302
GSC Goldstone, Bar 44.92 87 P P 01 49 51.5 +0.9
GSC IAmb IAmb 01 50 10.7
comp=Z,10.0nm,1.1s
GSC Goldstone, Bar 44.92 87 P P 01 49 51.5 +0.9
GSC pmax pmax
comp=Z,10.0nm,1.1s
GSC Goldstone, Bar 44.92 87 P P 01 49 51.8 +1.2
baz=310
JLU Jordanelle 45.00 77 P P 01 49 51.7 +0.3
FCC Fort Churchill 45.01 47 IAmb IAmb 01 49 51.4
comp=Z,5.2nm,0.7s
BFSC Mount Baldy Ra 45.06 89 P P 01 49 53.1 +1.3
baz=310
MPU Maple Canyon 45.24 78 P P 01 49 53.2 -0.1
TUQ Turquoise Moun 45.39 86 P P 01 49 54.8 +0.4
baz=310
NRIK Noril'sk 45.41 330 P P 01 49 53.9 0.0
comp=Z,3.3nm,0.5s,baz=76,slow=9.9,SNR=4.6
CCUT Cedar City 45.66 82 P P 01 49 57.0 +0.3
MSU Marysvale 45.81 80 P P 01 49 58.4 +0.6
MSU Marysvale 45.81 80 P P 01 49 58.4 +0.6
TMUT Trail Mountain 45.93 78 P P 01 50 00.1 +1.2
GMRC Granite Mounta 45.97 86 P P 01 50 00.1 +1.1
baz=310
LCMT Little Creek M 46.07 82 P P 01 50 00.3 +0.5
MTPU Mount Pierson 46.09 80 P P 01 50 00.9 +0.7
P17A Butcher Ranch, 46.12 78 P P 01 50 01.8 +1.6
Q16A Castle Valley 46.19 79 P P 01 50 02.7 +1.9
XPFO Pion Flat 46.23 88 P P 01 50 01.7 +0.7
KNB Kanab 46.33 82 P P 01 50 03.6 +1.7
KNB Kanab 46.33 82 P P 01 50 03.6 +1.7
KNB pmax pmax
comp=Z,4.0nm,1.0s
SRU San Rafael Swe 46.47 78 P P 01 50 03.5 +0.6
SRU San Rafael Swe 46.47 78 P P 01 50 03.5 +0.6
SRU pmax pmax
comp=Z,6.0nm,0.7s
IRM Iron Mountain 46.70 87 P P 01 50 05.4 +0.8
baz=311
K22A Casper 46.79 72 IAmb IAmb 01 50 20.0
comp=Z,11nm,0.8s
K22A Casper 46.79 72 P P 01 50 05.8 +0.3
baz=306
BJI Beijing 46.94 284 P P 01 50 07.8 +1.4
BJI pmax pmax
comp=Z,19nm,0.9s
U15A North Rim 47.03 82 IAmb IAmb 01 50 25.6
comp=Z,7.7nm,0.9s
IKP In-Ko-Pah, Jac 47.08 89 P P 01 50 09.0 +1.3
baz=312
O20A White River Ci 47.25 76 IAmb IAmb 01 50 25.1
comp=Z,12nm,0.8s
O20A White River Ci 47.25 76 P P 01 50 09.0 -0.1
baz=307
Y12C Blythe 47.35 87 P P 01 50 10.4 +0.7
baz=311
RSSD Black Hills 47.41 69 P P 01 50 09.9 -0.3
RSSD IAmb IAmb 01 50 24.4
comp=Z,4.7nm,0.8s
RSSD Black Hills 47.41 69 P P 01 50 10.0 -0.3
RSSD pmax pmax
comp=Z,5.0nm,0.8s
RSSD Black Hills 47.41 69 P P 01 50 10.1 -0.2
baz=305
TLY Talaya 47.50 304⇑eP P 01 50 11.4 +0.7
TLY pmax pmax
comp=Z,11nm,2.2s
GLA Glamis 47.62 88 P P 01 50 12.7 +0.9
GLA IAmb IAmb 01 50 30.3
comp=Z,3.8nm,0.7s
GLA Glamis 47.62 88 P P 01 50 12.7 +0.9
GLA pmax pmax
comp=Z,4.0nm,0.7s
ULN Ulaanbaatar 47.76 298 P P 01 50 12.8 0.0
ULN IAmb IAmb 01 50 14.3
comp=Z,8.2nm,0.7s
ULN Ulaanbaatar 47.76 298 eP P 01 50 13.4 +0.5
MDND Maddock 47.83 62 P P 01 50 13.8 +0.6
baz=304
SONM Songino Array 48.14 298 P P 01 50 15.8 0.0
comp=Z,6.6nm,0.8s,baz=53,slow=8.8,SNR=37
SONM LR LR 02 12 40.2
comp=Z,312nm,18.4s,baz=24,slow=39
N23A Red Feather La 48.18 73 IAmb IAmb 01 50 31.8
comp=Z,19nm,1.4s
N23A Red Feather La 48.18 73 P P 01 50 17.4 +1.0
baz=307
WUAZ Wupatki 48.19 83 P P 01 50 16.7 +0.3
WUAZ IAmb IAmb 01 50 34.2
comp=Z,5.4nm,0.8s
ZAK Zakamensk 48.41 302 eP P 01 50 17.5 -0.3
ZAK pmax pmax
comp=Z,9.0nm,1.4s
ULM Lac du Bonnet 48.52 58 P P 01 50 18.2 -0.3
comp=Z,4.7nm,0.6s,baz=305,slow=8.0,SNR=12
ULM Lac du Bonnet 48.52 58 IAmb IAmb 01 50 18.9
comp=Z,8.5nm,0.9s
TIA Tai'an 48.74 279 P P 01 50 20.6 +0.2
TIA pmax pmax
comp=Z,15nm,1.0s
X16A Lo Mia Camp, P 48.85 84 P P 01 50 21.6 +0.1
X16A IAmb IAmb 01 50 30.1
comp=Z,7.0nm,1.5s
ISCO Idaho Springs 49.05 74 P P 01 50 23.7 +0.6
ISCO IAmb IAmb 01 50 36.6
comp=Z,12nm,1.4s
ISCO Idaho Springs 49.05 74 P P 01 50 23.7 +0.6
ISCO pmax pmax
comp=Z,12nm,1.5s
ISCO Idaho Springs 49.05 74 P P 01 50 23.8 +0.6
baz=308
S22A 4UR Ranch, Cre 49.59 77 IAmb IAmb 01 50 46.0
comp=Z,8.7nm,1.2s
S22A 4UR Ranch, Cre 49.59 77 P P 01 50 28.2 +1.0
baz=309
214A Organ Pipe Nat 49.62 87 P P 01 50 27.7 +0.5
214A IAmb IAmb 01 50 44.5
comp=Z,5.4nm,0.9s
214A Organ Pipe Nat 49.62 87 P P 01 50 28.3 +1.1
baz=312
AGMN Agassiz Nation 49.63 60 IAmb IAmb 01 50 28.1
comp=Z,21nm,1.1s
AGMN Agassiz Nation 49.63 60 P P 01 50 26.7 -0.3
baz=305,SNR=6.6
SUSD Miller 50.17 66 P P 01 50 31.0 -0.2
baz=307
BTO Baotou 50.32 288 eP P 01 50 33.1 +0.6
NJ2 Nanjing 50.38 274 eP P 01 50 34.4 +1.5
NJ2 pmax pmax
comp=Z,12nm,0.5s
SDCO Great Sand Dun 50.40 76 P P 01 50 33.7 +0.3
baz=309
OGNE Ogallala 50.50 71 P P 01 50 34.5 +0.7
TUC Tucson 50.66 85 P P 01 50 35.6 +0.5
TUC Tucson 50.66 85 P P 01 50 35.6 +0.5
TUC pmax pmax
comp=Z,5.0nm,1.0s
TUC Tucson 50.66 85 P P 01 50 36.0 +0.8
baz=312
SPA0 Spitsbergen Ar 50.73 357 P P 01 50 34.0 -1.0
SPITS Spitsbergen Ar 50.73 357 P P 01 50 34.0 -1.0
comp=Z,7.9nm,0.8s,baz=96,slow=5.4,SNR=9.2
SPITS Spitsbergen Ar 50.73 357 P P 01 50 34.0 -1.0
T25A Trinidad 51.46 76 IAmb IAmb 01 50 59.0
comp=Z,18nm,1.1s
T25A Trinidad 51.46 76 P P 01 50 42.5 +1.2
baz=310
DAG Danmarks Havn 51.59 6 iP P 01 50 39.7 -1.7
comp=Z,4.4nm,1.2s
DAG i 01 51 54.4
DAG Danmarks Havn 51.59 6 iP P 01 50 39.7 -1.7
DAG i 01 51 54.4
DAG pmax pmax
comp=Z,4.0nm,1.2s
ECSD EROS Data Cent 51.94 65 IAmb IAmb 01 50 58.0
comp=Z,7.9nm,1.0s
ECSD EROS Data Cent 51.94 65 P P 01 50 43.8 -0.7
baz=308
EYMN Ely 52.20 58 IAmb IAmb 01 50 47.4
comp=Z,20nm,1.1s
EYMN Ely 52.20 58 P P 01 50 46.5 +0.1
baz=307,SNR=6.5
121A Cookes Peak, D 52.39 83 P P 01 50 49.4 +1.3
baz=312
BGNE Belgrade 52.50 68 P P 01 50 48.8 +0.1
baz=309
E38A The Farm, Brul 52.99 59 IAmb IAmb 01 50 53.0
comp=Z,23nm,1.1s
SUMG Summit 53.16 15 iP P 01 50 53.0 -0.6
SUMG Summit 53.16 15 iP P 01 50 53.0 -0.6
CBKS Cedar Bluff 53.21 72 P P 01 50 54.8 +0.7
baz=310
WHN Wuhan 54.23 276 P P 01 51 01.4 0.0
MNTX Cornudas Mount 54.45 82 P P 01 51 03.9 +0.7
baz=313
MSTX Muleshoe 54.54 78 IAmb IAmb 01 51 21.1
comp=Z,6.4nm,0.8s
MSTX Muleshoe 54.54 78 P P 01 51 04.9 +1.0
baz=312
KSU1 Kansas State U 54.88 69 P P 01 51 05.9 -0.3
baz=311
XAN Xi'an 55.23 283 P P 01 51 08.3 -0.5
XAN pP pwP 01 51 23.3 +0.9
XAN pmax pmax
comp=Z,16nm,1.2s
XAN pmax pmax
comp=Z,88nm,4.3s
U32A Winter Ranch, 55.24 73 P P 01 51 09.2 +0.3
ZAA0 Zalesovo Array 55.32 315 P P 01 51 08.2 -0.9
ZALV Zalesovo Beam 55.32 315 P P 01 51 08.1 -1.0
comp=Z,1.3nm,0.4s,baz=37,slow=6.8,SNR=6.5
ZALV PcP PcP 01 52 09.5 +0.2
comp=Z,3.1nm,0.7s,baz=32,slow=3.6,SNR=6.9
E43A Lone Tree Farm 55.57 57 P P 01 51 11.2 +0.2
E44A Grand Marais A 55.98 56 P P 01 51 13.7 -0.2
WMOK Wichita Mounta 56.47 75 IAmb IAmb 01 51 32.6
comp=Z,6.6nm,0.8s
WMOK Wichita Mounta 56.47 75 P P 01 51 17.7 +0.1
baz=312
D46A Sault St. Mari 56.78 55 P P 01 51 19.6 0.0
baz=311
LZH Lanzhou 56.94 288 eP P 01 51 21.9 +0.8
LZH pP pwP 01 51 34.3 -0.5
LZH sP sP 01 51 41.6 +8.8
LZH ePP PP 01 53 25.3 -2.2
LZH pmax pmax
comp=Z,29nm,1.2s
LZH pmax pmax
comp=Z,130nm,5.0s
LZH LR LR
comp=Z,270nm,12.5s
LZH LR LR
comp=Z,260nm,14.1s
LZH LR LR
comp=Z,350nm,14.8s
E46A Sault Ste Mari 56.99 56 P P 01 51 20.9 -0.2
GTA Gaotai 57.10 293 ⇑P P 01 51 22.3 +0.2
GTA pP pwP 01 51 36.4 +0.4
GTA sP sP 01 51 41.0 +7.2
GTA pmax pmax
comp=Z,19nm,0.9s
GTA pmax pmax
comp=Z,72nm,4.4s
GTA LR LR
comp=Z,180nm,18.7s
GTA LR LR
comp=Z,200nm,17.5s
TX31 Lajitas Ar. Si 57.15 83 IAmb IAmb 01 51 41.8
comp=Z,5.2nm,1.1s
TX32 Lajitas Array 57.15 83 IAmb IAmb 01 51 27.2
comp=Z,6.5nm,1.4s
TXAR Lajitas Array 57.15 83 P P 01 51 22.4 -0.2
comp=Z,2.0nm,0.9s,baz=302,slow=5.5,SNR=16
D47A Chapleau 57.15 54 P P 01 51 22.4 +0.1
baz=311,SNR=5.9
ABTX Abilene, Hawle 57.38 77 P P 01 51 24.0 -0.1
ABTX IAmb IAmb 01 51 41.2
comp=Z,13nm,1.2s
ABTX Abilene, Hawle 57.38 77 P P 01 51 24.2 +0.1
baz=313
G46A Petoskey 57.39 57 P P 01 51 24.6 +0.7
baz=312
E47A Iron Bridge 57.46 55 P P 01 51 24.6 +0.1
baz=312,SNR=5.4
TUL1 Leonard 57.48 72 P P 01 51 24.1 -0.6
TUL1 IAmb IAmb 01 51 38.9
comp=Z,10nm,0.9s
HPIG 57.58 86 P P 01 51 25.7 -0.1
HPIG IAmb IAmb 01 51 37.5
comp=Z,3.6nm,0.6s
D48A Paudash Townsh 57.74 54 P P 01 51 26.1 -0.2
baz=312,SNR=7.1
E48A Lockeyer 58.02 54 P P 01 51 28.4 0.0
baz=312
HDIL Hopedale 58.15 64 P P 01 51 29.0 -0.3
baz=312
F48A Evansville 58.23 55 P P 01 51 30.3 +0.5
baz=312
HHAR Hobbs 58.34 70 P P 01 51 30.1 -0.6
HHAR IAmb IAmb 01 51 44.4
comp=Z,6.7nm,0.9s
F49A Sandfield 58.57 55 P P 01 51 32.6 +0.4
baz=312,SNR=5.9
ARCES ARCESS Array B 58.59 351 P P 01 51 31.7 -0.3
comp=Z,4.6nm,0.8s,baz=16,slow=7.7,SNR=6.2
ARCES PcP PcP 01 52 22.1 +0.2
comp=Z,5.8nm,0.8s,baz=15,slow=5.0,SNR=4.9
D50A G1974 Best Tow 58.73 52 P P 01 51 33.3 0.0
baz=313
MGMO Mountain Grove 58.73 68 IAmb IAmb 01 51 46.9
comp=Z,13nm,0.8s
LSQQ Lebel-sur-Quev 58.84 49 P P 01 51 31.7 -2.4
baz=313
U40A Yellville 58.93 69 IAmb IAmb 01 51 48.9

comp=Z,15nm,0.9s
U40A Yellville 58.93 69 P P 01 51 34.4 -0.4
D51A Lot 18 Range I 59.02 52 P P 01 51 34.9 -0.4
baz=313
WHTX Lake Whitney, 59.16 76 P P 01 51 36.8 +0.3
WHTX IAmb IAmb 01 51 49.6
comp=Z,12nm,0.8s
WHTX Lake Whitney, 59.16 76 P P 01 51 36.7 +0.3
baz=314
W39A Magazine 59.17 71 P P 01 51 36.1 -0.4
baz=313
SCHQ Schefferville 59.23 39 P P 01 51 36.2 -0.5
comp=Z,3.7nm,0.8s,baz=346,slow=7.5,SNR=7.7
SCHQ Schefferville 59.23 39 IAmb IAmb 01 51 55.4
comp=Z,20nm,1.4s
VLDQ Val d'Or 59.26 50 IAmb IAmb 01 51 36.0
comp=Z,11nm,0.8s
E51A G1948 Merrick 59.34 53 P P 01 51 37.4 -0.1
baz=313
SFIN Lafayette 59.50 62 P P 01 51 38.8 +0.1
baz=313
F51A Arnstein 59.54 54 P P 01 51 39.0 +0.1
baz=313
MIAR Mount Ida 59.74 71 P P 01 51 40.7 +0.2
baz=314
D53A Lac Vacive, Po 59.85 51 P P 01 51 40.9 -0.1
baz=314
E52A Mattawa 59.93 53 P P 01 51 41.4 -0.1
baz=314
F52A Sundridge 59.93 53 P P 01 51 42.0 +0.4
baz=314,SNR=5.4
N47A Urbana 59.94 61 P P 01 51 41.1 -0.6
baz=313
P46A Rosedale 59.96 63 P P 01 51 42.0 +0.1
M48A Edgerton 60.06 60 P P 01 51 42.5 -0.1
baz=313
PBMO Poplar Bluff 60.06 68 P P 01 51 42.1 -0.5
W41B Gary Mavity, V 60.10 70 IAmb IAmb 01 51 56.6
comp=Z,15nm,0.9s
W41B Gary Mavity, V 60.10 70 P P 01 51 42.1 -0.8
baz=314
KURK Kurchatov 60.31 315 P P 01 51 43.4 -0.7
KURK PcP PcP 01 52 28.9 -0.2
KURK Kurchatov 60.31 315c iP P 01 51 43.8 -0.3
KURK pmax pmax
comp=Z,47nm,1.0s
D54A Lac Fusel, La 60.31 51 P P 01 51 42.0 -2.3
baz=314
N48A Decatur 60.32 61 P P 01 51 43.6 -0.8
baz=313
E53A Dumoine, Ponti 60.36 52 P P 01 51 44.5 0.0
baz=314
I51A Listowel 60.44 56 P P 01 51 46.3 +1.2
baz=314,SNR=5.7
H52A Wyevale 60.44 55 P P 01 51 45.7 +0.5
baz=314,SNR=5.8
ALGO Algonquin Park 60.46 53 P P 01 51 45.2 -0.1
baz=314
M49A Liberty Center 60.47 60 P P 01 51 45.5 +0.1
baz=314
833A Chaparral WMA, 60.52 81 P P 01 51 46.3 +0.4
baz=315
CD2 Chengdu 60.55 284 eP P 01 51 45.0 -1.1
E54A Lac Daplat, Po 60.56 52 P P 01 51 45.4 -0.5
baz=314
O48A Farmland 60.66 61 P P 01 51 45.8 -1.0
baz=314,SNR=6.0
N49A Columbus Grove 60.74 60 P P 01 51 46.5 -0.7
baz=314
G53A Haliburton 60.75 54 P P 01 51 47.8 +0.5
baz=314,SNR=13
WMQ Urumqi 60.77 304 eP P 01 51 47.4 -0.1
WMQ pmax pmax
comp=Z,10.0nm,0.9s
WMQ pmax pmax
comp=Z,88nm,7.1s
WMQ LR LR
comp=Z,650nm,29.1s
WMQ LR LR
comp=Z,160nm,26.1s
G54A Lake Saint Pet 60.83 53 P P 01 51 47.6 -0.2
baz=314
D55A Sainte-Anne-du 60.98 50 P P 01 51 48.2 -0.6
baz=315
P48A Milroy 61.06 62 P P 01 51 48.8 -0.6
baz=314
E55A Montcerf-Lytto 61.10 51 P P 01 51 49.3 -0.2
baz=315
H53A Bobcaygeon 61.16 54 P P 01 51 50.4 +0.4
baz=314,SNR=6.9
D56A ZEC Mazanza, M 61.31 50 P P 01 51 50.3 -0.7
baz=315
MK31 Makanchi Array 61.40 310 P P 01 51 50.3 -1.3
MK31 IAmb IAmb 01 51 51.4
comp=Z,7.3nm,1.2s
MK31 Makanchi Array 61.40 310 P P 01 51 50.3 -1.3
MK31 pmax pmax
comp=Z,7.0nm,1.2s
MKAR Makanchi Array 61.40 310 P P 01 51 50.4 -1.3
comp=Z,2.3nm,0.5s,baz=48,slow=6.0,SNR=59
MKAR Makanchi Array 61.40 310 iP P 01 51 50.7 -0.9
MKAR pmax pmax
comp=Z,2.0nm,0.5s
N50A Nevada 61.41 60 P P 01 51 51.8 0.0
baz=314
P49A Miami Univ. Ec 61.41 62 P P 01 51 51.1 -0.7
baz=314
WCI Wyandotte Cave 61.43 64 P P 01 51 51.4 -0.6
WCI IAmb IAmb 01 51 52.4
comp=Z,9.7nm,0.8s
WCI Wyandotte Cave 61.43 64 P P 01 51 51.4 -0.6
WCI pmax pmax
comp=Z,10.0nm,0.8s
WCI Wyandotte Cave 61.43 64 P P 01 51 51.7 -0.3
baz=314
E56A St. Veronique 61.53 50 P P 01 51 51.7 -0.8
baz=315
MAKZ Makanchi 61.54 310 P P 01 51 51.6 -1.0
MAKZ IAmb IAmb 01 51 52.3
comp=Z,4.5nm,0.8s
MAKZ Makanchi 61.54 310 P P 01 51 51.6 -1.0
MAKZ pmax pmax
comp=Z,4.0nm,0.8s
O50A Cable 61.59 61 P P 01 51 52.8 -0.2
baz=314,SNR=5.3
G55A Calabogie 61.62 52 P P 01 51 51.7 -1.4
baz=315
N51A Ashland 61.73 59 P P 01 51 53.6 -0.3
N51A Ashland 61.73 59 P P 01 51 53.7 -0.3
baz=314
T47A Sharon Grove 61.84 65 IAmb IAmb 01 52 06.4
comp=Z,9.4nm,0.7s
P50A Jamestown 61.86 61 P P 01 51 54.9 +0.1
baz=314,SNR=7.8
I55A Frankford 61.87 54 P P 01 51 55.2 +0.4
baz=315
ACSO Alum Creek Sta 61.88 60 P P 01 51 55.2 +0.3
baz=314
H55A Tweed 61.88 53 P P 01 51 54.9 0.0
baz=315
GYA Guiyang 61.90 278 eP P 01 51 55.8 +0.4
GYA pmax pmax
comp=Z,10.0nm,0.8s
LATQ La Tuque 62.01 48 P P 01 51 55.7 0.0
baz=316
J54A Appleton 62.05 55 P P 01 51 55.7 -0.3
J54A Appleton 62.05 55 P P 01 51 56.4 +0.4
baz=315
E57A Chemin Saint G 62.06 50 P P 01 51 55.4 -0.7
baz=316
BRVK Borovoye 62.09 321 P P 01 51 56.0 -0.2
BRVK Borovoye 62.09 321c iP P 01 51 55.9 -0.2
BRVK pmax pmax
comp=Z,20nm,0.7s
L53A Girard 62.13 57 P P 01 51 57.2 +0.6
baz=315
O51A Pataskala 62.14 60 P P 01 51 56.6 -0.2
baz=315
ERPA Erie 62.16 57 P P 01 51 57.5 +0.7
baz=315
D58A Chemin du LacG 62.17 49 P P 01 51 56.0 -0.8
baz=316
N52A McGinn's Farm, 62.17 59 P P 01 51 57.1 +0.2
baz=315
MEDO Medina 62.22 55 P P 01 51 57.0 -0.2
OXF Oxford 62.23 69 P P 01 51 57.9 +0.5
baz=315
M53A WI Miller and 62.27 58 P P 01 51 57.8 +0.3
baz=315,SNR=7.2
Q50A Georgetown 62.30 62 P P 01 51 57.7 -0.1
baz=315
S49A Springfield 62.31 63 P P 01 51 57.7 -0.2
baz=315
L54A Sinclairville 62.43 56 P P 01 51 59.4 +0.8
baz=315,SNR=9.1
J55A Hilton 62.47 55 P P 01 51 59.9 +1.0
baz=315
K54A Basiliko Farm, 62.49 56 P P 01 51 59.8 +0.8
baz=315,SNR=5.1
R50A Paris 62.50 62 P P 01 51 59.3 +0.2
baz=315
Q51A Peebles 62.52 61 P P 01 51 59.7 +0.4
baz=315
O52A Adamsville 62.58 59 P P 01 51 59.9 +0.2
baz=315,SNR=6.7
SVE Sverdlovsk 62.63 329 eP P 01 52 00.2 +0.5
SVE pmax pmax
comp=Z,16nm,1.3s
N53A Lisbon 62.63 58 P P 01 52 00.6 +0.6
T49A Edmonton 62.65 64 P P 01 52 00.1 0.0
baz=315
WVNY West Valley, N 62.68 56 P P 01 52 00.9 +0.6
PLAL Pickwick Lake 62.68 67 IAmb IAmb 01 52 14.5
comp=Z,11nm,1.1s
PRGR Permogore 62.72 339 eP P 01 51 58.9 -1.2
PRGR e 01 52 36.4
PRGR pmax pmax
comp=Z,12nm,0.9s
D59A Saint-Raymond 62.73 48 P P 01 52 00.3 -0.2
baz=317
K55A Perry 62.73 55 P P 01 52 01.2 +0.6
baz=315,SNR=5.4
M54A Oil Creek Stat 62.76 57 P P 01 52 01.3 +0.5
baz=315
O53A New Philadelph 62.82 59 P P 01 52 01.3 0.0
baz=315
R51A Hillsboro 62.90 62 P P 01 52 02.1 +0.3
baz=315,SNR=8.5
L55A Hinsdale 62.92 56 P P 01 52 02.8 +0.8
baz=315
J56A Wolcott 62.96 54 P P 01 52 02.8 +0.7
baz=316
N54A Moraine State 62.98 58 P P 01 52 02.5 +0.2
baz=315
G58A Ormstown 63.01 51 P P 01 52 01.8 -0.6
baz=316
I57A Carthage 63.09 53 P P 01 52 02.8 -0.2
baz=316
T50A Nancy 63.10 64 P P 01 52 02.8 -0.3
baz=315
F59A Saint Guilaume 63.12 50 P P 01 52 02.5 -0.6
baz=316
K56A Middlesex 63.13 55 P P 01 52 04.1 +0.8
baz=316,SNR=12
D60A Saint Jean D'O 63.22 48 P P 01 52 03.1 -0.7
baz=317
M55A Ridgway 63.26 57 P P 01 52 04.9 +0.7
baz=316
P53A Whipple 63.27 60 P P 01 52 04.5 +0.3
baz=315
J57A Williamstown 63.30 53 P P 01 52 04.7 +0.4
baz=316
O54A Avella 63.32 59 P P 01 52 04.4 -0.2
baz=315
D61A St Aubert, Com 63.35 47 P P 01 52 04.4 -0.2
baz=317
V49A McMinnville 63.38 65 P P 01 52 05.1 0.0
baz=315
L56A Greenwood 63.41 55 P P 01 52 06.1 +0.9
baz=316,SNR=12
K57A Scipio Center 63.52 54 P P 01 52 06.4 +0.5
baz=316,SNR=7.8
M56A Emporium 63.56 56 P P 01 52 06.4 +0.2
baz=316
ARU Arti 63.62 330 P P 01 52 06.2 -0.1
ARU IAmb IAmb 01 52 07.2
comp=Z,8.0nm,0.7s
ARU Arti 63.62 330c iP P 01 52 06.0 -0.3
ARU *PP pwP 01 52 20.6 +0.4
ARU 01 52 41.5
ARU S S 02 00 37.8 +0.1
ARU pmax pmax
comp=Z,10.0nm,0.8s
N55A Marion Center 63.64 57 P P 01 52 06.4 -0.3
baz=316
Q53A Leroy 63.64 60 P P 01 52 07.1 +0.4
baz=315
T51A Gray 63.65 63 P P 01 52 07.0 +0.3
baz=315
P54A Burton 63.68 59 P P 01 52 07.0 +0.1
baz=316
J58A Remsen 63.69 53 P P 01 52 07.1 +0.2
baz=316
L57A Andrews Acres 63.88 55 P P 01 52 08.9 +0.7
baz=316,SNR=8.4
N56A West Decatur 63.90 57 P P 01 52 08.9 +0.5
baz=316
V50A Pikevile 63.91 65 P P 01 52 08.0 -0.6
baz=315
Q54A Coxs Mills 63.93 60 P P 01 52 09.1 +0.5
baz=316
K58A Earlville 63.94 54 P P 01 52 09.0 +0.3
baz=316
D62A Allapoint, All 63.96 47 P P 01 52 08.4 -0.3
baz=318
MCWV Mont Chateau 63.98 59 P P 01 52 09.3 +0.3
baz=316
J59A Piesco 64.01 52 P P 01 52 08.9 -0.2
baz=317
I59A Olmsteadville 64.08 52 P P 01 52 08.7 -0.8
baz=317
P55A Reedsville 64.10 59 P P 01 52 10.4 +0.6
baz=316
BINY Binghamton 64.18 54 P P 01 52 11.1 +0.9
baz=316,SNR=6.3
M57A Sunshine Farm, 64.21 56 P P 01 52 11.0 +0.6
baz=316
SSPA Standing Stone 64.32 57 P P 01 52 11.1 -0.1
SSPA Standing Stone 64.32 57 P P 01 52 11.5 +0.4
baz=316
Q55A Buckhannon 64.33 59 P P 01 52 11.9 +0.6
baz=316
L58A Harry Jones Me 64.36 54 P P 01 52 12.4 +1.0
baz=316,SNR=6.8
FPAL Fort Paine 64.42 66 P P 01 52 11.3 -0.6
FPAL IAmb IAmb 01 52 26.0
comp=Z,10nm,0.9s
M58A Price's Panora 64.53 55 P P 01 52 13.2 +0.7
baz=316
P56A Dayton Farm, R 64.63 58 P P 01 52 13.7 +0.5
baz=316
L59A Walton 64.67 54 P P 01 52 14.1 +0.7
baz=317
J60A Lant Hill Farm 64.71 52 P P 01 52 13.9 +0.3
baz=317
O57A Amberson 64.76 57 P P 01 52 14.3 +0.3
baz=316
H62A Milan 64.84 50 P P 01 52 14.7 +0.2
baz=318
T54A Tazewell 64.90 62 P P 01 52 15.4 +0.4
baz=316
M59A Waymart 64.94 54 P P 01 52 15.9 +0.8
baz=317
S55A Lewisburg 64.98 60 P P 01 52 15.6 +0.1
baz=316
E64A Bridgewater 65.02 46 P P 01 52 15.2 -0.4
baz=319
P57A Homestead Farm 65.09 58 P P 01 52 16.4 +0.3
baz=316
R56A Bull Pasture M 65.12 59 P P 01 52 16.9 +0.5
baz=316
Z50A Ashland 65.16 67 P P 01 52 15.8 -0.9
baz=316
N59A State Game Lan 65.22 55 P P 01 52 18.1 +1.0
baz=317
PDGK Podgornoye 65.28 309 P P 01 52 17.0 -0.5
T55A Pulaski 65.30 61 P P 01 52 18.8 +1.1
baz=316
BLA Blacksburg 65.43 61 P P 01 52 18.0 -0.5
baz=316
M60A Port Jervis 65.51 54 P P 01 52 19.2 +0.3
baz=317
S56A Natural Bridge 65.56 60 P P 01 52 20.1 +0.8
baz=316
N60A Cedar Hill Far 65.60 55 P P 01 52 20.2 +0.7
baz=317,SNR=5.9
Q58A Fox Den Farm, 65.66 58 P P 01 52 20.3 +0.5
baz=317
R57A Stanardsville 65.68 59 P P 01 52 20.9 +0.9
baz=317
P59A Jarrettsville 65.83 57 P P 01 52 21.4 +0.4
baz=317
R58A Rapidan 65.95 58 P P 01 52 22.3 +0.6
baz=317
PAL Palisades 66.11 54 P P 01 52 23.3 +0.6
baz=318
T57A Hurt 66.23 60 P P 01 52 23.6 0.0
baz=317
R58B Mineral 66.27 59 P P 01 52 24.5 +0.8
baz=317
FINES FINESS Array B 66.36 348 P P 01 52 22.6 -1.3
comp=Z,3.4nm,0.8s,baz=60,slow=4.6,SNR=5.3
FINES LR LR 02 25 41.6
comp=Z,87nm,18.3s,baz=249,slow=40
FINES FINESS Array B 66.36 348 iP P 01 52 24.2 +0.3
FINES pmax pmax
comp=Z,3.0nm,0.7s
KMSC Kings Mountain 66.42 63 P P 01 52 25.2 +0.4
baz=317
PRZ Przheval'sk 66.44 309 P P 01 52 25.1 +0.1
PRZ Przheval'sk 66.44 309 P P 01 52 25.2 +0.1
PRZ pmax pmax
comp=Z,25nm,1.2s
GOGA Godfrey 66.47 66 P P 01 52 24.9 -0.3
baz=317
T58A Grand View Acr 66.66 60 P P 01 52 26.5 +0.2
baz=317
X55A Gracelyn & Ava 66.74 64 P P 01 52 28.2 +1.4
baz=317
T59A Double "B" Far 67.17 59 P P 01 52 30.4 +0.9
baz=317
KDJ Kajisay 67.30 309 P P 01 52 30.4 -0.1
KDJ Kajisay 67.30 309 P P 01 52 30.4 -0.1
KDJ pmax pmax
comp=Z,18nm,1.0s
SLVN Son La 67.34 276 P P 01 52 31.5 +0.5
SLVN IAmb IAmb 01 52 32.3
comp=Z,11nm,0.8s
ULHL Ulahol 67.67 310 P P 01 52 33.7 +0.8
SNR=18
V59A Middlesex 67.69 61 P P 01 52 33.5 +0.7
baz=318
W58A Raeford 67.69 62 P P 01 52 33.3 +0.5
baz=317
USP Ospenovka 67.72 312 P P 01 52 33.3 +0.3
SNR=35
U60A Pendleton 67.75 59 P P 01 52 33.7 +0.5
baz=318
CHMS Chumysh 67.81 311 P P 01 52 34.3 +0.8
SNR=9.2
CHMS Chumysh 67.81 311 iP P 01 52 33.1 -0.4
CHMS pmax pmax
comp=Z,16nm,0.9s
KBK Karagaybulak 67.98 311 P P 01 52 35.4 +0.6
SNR=17
NB2 NORSAR Subarra 68.02 356 P P 01 52 33.8 -0.8
comp=Z,1.0nm,0.6s,baz=5.0,slow=6.5
NOA NORSAR Array B 68.02 356 P P 01 52 33.8 -0.8
comp=Z,2.3nm,0.8s,baz=5.2,slow=6.5,SNR=5.5
NOA LR LR 02 20 59.6
comp=Z,25nm,21.5s,baz=270,slow=35
AAK Ala-Archa 68.21 311 P P 01 52 36.7 +0.5
SNR=20
AAK Ala-Archa 68.21 311 P P 01 52 36.2 0.0
AAK Ala-Archa 68.21 311c iP P 01 52 36.4 +0.2
AAK pmax pmax
comp=Z,25nm,0.8s
KZA Kyzart 68.28 311 P P 01 52 37.7 +0.7
SNR=9.2
NRN Naryn 68.41 310 IAmb IAmb 01 52 39.3
comp=Z,14nm,1.0s
UCH Uchtor 68.51 311 P P 01 52 39.4 +0.9
SNR=13
EKS2 Erkin-Say 68.53 312 P P 01 52 38.6 +0.4
SNR=27
AML Almayashu 68.97 312 P P 01 52 42.0 +0.7
SNR=36
VSU Vasula 69.16 347⇑ eP P 01 52 41.3 -0.3
VSU pmax pmax
comp=Z,34nm,0.8s
KK31 Karatay Array 69.69 314 P P 01 52 45.2 0.0
KK31 Karatay Array 69.69 314 P P 01 52 45.2 0.0
KK31 pmax pmax
comp=Z,35nm,0.7s
KKAR Karatay Array 69.69 314 P P 01 52 45.2 0.0
KKAR Karatay Array 69.69 314 P P 01 52 45.2 0.0
KKAR pmax pmax
comp=Z,35nm,0.7s
KSH Kashi 69.89 308 P P 01 52 50.6 +4.0
KSH pP PcP 01 53 04.3 -4.7
KSH PP PP 01 55 26.3 +5.4
KSH S S 02 01 53.8 -0.4
KSH ScS SKSac 02 02 44.3 -0.9
KSH pmax pmax
comp=Z,25nm,0.8s
KSH pmax pmax
comp=Z,130nm,6.5s
KSH LR LR
comp=Z,87nm,5.7s
KSH LR LR
comp=Z,110nm,8.4s
KSH LR LR
comp=Z,310nm,6.6s
OBN Obninsk 70.64 341⇑ eP P 01 52 50.3 -0.4
OBN e*PP pwP 01 53 05.3 +0.5
OBN pmax pmax
comp=Z,53nm,4.4s
OBN MLR MLR
comp=Z,94nm,17.0s
SHL Shillong 71.61 288 P P 01 52 57.2 -0.2
SHL IAmb IAmb 01 53 16.2
comp=Z,9.6nm,0.7s
SHL Shillong 71.61 288 P P 01 52 57.2 -0.2
SHL pmax pmax
comp=Z,10.0nm,0.7s
TAS Tashkent 71.65 314 P P 01 52 57.3 +0.1
TAS Tashkent 71.65 314 P P 01 52 57.3 +0.1
TAS pmax pmax
comp=Z,82nm,1.1s
CHTO Chiang Mai 72.32 278 P P 01 53 01.5 0.0
CHTO IAmb IAmb 01 53 02.2
comp=Z,8.9nm,1.2s
CHTO Chiang Mai 72.32 278 P P 01 53 01.5 0.0
CHTO pmax pmax
comp=Z,9.0nm,1.2s
LPSR Galich'ya Gora 72.45 338 eP P 01 53 00.1 -1.7
LPSR pmax pmax
comp=Z,10.0nm,0.8s
CM31 Chiang Mai Arr 72.58 278 P P 01 53 03.4 +0.4
CM31 IAmb IAmb 01 53 04.3
comp=Z,9.0nm,0.8s
CMAR Chiang Mai Arr 72.58 278 P P 01 53 03.3 +0.2
comp=Z,6.1nm,0.6s,baz=28,slow=6.6,SNR=18
CMAR LR LR 02 27 01.4
comp=Z,35nm,20.8s,baz=68,slow=38
CMAR Chiang Mai Arr 72.58 278ceP P 01 53 03.2 +0.2
CMAR pmax pmax
comp=Z,7.0nm,0.6s
PBKT Sadao Pong 72.73 275 P P 01 53 03.9 -0.1
PBKT IAmb IAmb 01 53 04.8
comp=Z,9.2nm,0.7s
TAPN Taplejung 72.75 292 eP P 01 53 05.0 +0.7
comp=Z,34nm,0.8s
VRH Novokhopyorsk 73.06 336 eP P 01 53 04.7 -0.7
VRH pmax pmax
comp=Z,10.0nm,0.8s
GUN Gumba 73.39 294 eP P 01 53 08.9 +0.8
comp=Z,86nm,0.6s
JIRN Jiri 73.39 293 eP P 01 53 09.1 +0.9
comp=Z,101nm,0.7s
VSR Storozhevoye 73.68 338 eP P 01 53 08.5 -0.5
VSR pmax pmax
comp=Z,7.0nm,0.6s
RAMN Ramite 73.69 293 eP P 01 53 10.5 +0.7
comp=Z,50nm,0.6s
VORD Divnogorie 73.88 337 eP P 01 53 10.2 0.0
VORD pmax pmax
comp=Z,10.0nm,0.9s
PKI Pulchoki 73.91 294 eP P 01 53 11.5 +0.3
comp=Z,36nm,0.9s

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKIN	Phulchoki	73.92	294	eP	P	01 53 11.5	+0.3
GKN	Gorkha	74.03	295	eP	P	01 53 12.3	+0.6
	comp=Z,46nm,0.6s						
DMN	Daman	74.06	294	eP	P	01 53 12.9	+0.9
DANN	Dangsing	74.27	296	eP	P	01 53 13.7	+0.5
	comp=Z,73nm,0.8s						
NIL	Nilore	75.83	306	P	P	01 53 22.4	+0.5
NIL	Nilore	75.83	306	P	P	01 53 22.4	+0.5
NIL				pmax	pmax		
	comp=Z,29nm,0.8s						
AKASG	Malin Array Be	76.25	344	P	P	01 53 22.9	-1.0
	comp=Z,2.5nm,0.6s,baz=23,slow=6.3,SNR=7.3						
KBL	Kabul	77.20	310	P	P	01 53 29.5	-0.4
KBL	Kabul	77.20	310	P	P	01 53 29.5	-0.4
KBL				pmax	pmax		
	comp=Z,29nm,0.9s						
CLL	Collm	77.64	354	eP	P	01 53 32.0	+0.3
CLL	Collm	77.64	354	eP	P	01 53 32.0	+0.3
KWP	Kalwaria Pacla	78.31	347	P	P	01 53 35.1	-0.4
KWP	Kalwaria Pacla	78.31	347	P	P	01 53 35.1	-0.4
KWP				pmax	pmax		
	comp=Z,253nm,1.5s						
SORM	Soroca	78.88	343	⇑P	P	01 53 37.9	-0.6
KOLS	Kolonicke sedl	79.06	348	eP	P	01 53 38.6	-1.0
KOLS	Kolonicke sedl	79.06	348	eP	P	01 53 38.6	-1.0
GEYT	Alibeck	79.31	319	P	P	01 53 41.6	+0.4
	comp=Z,15nm,0.9s,baz=343,slow=4.6,SNR=31						
GEYT				LR	LR	02 32 13.4	
	comp=Z,125nm,18.4s,baz=20,slow=38						
GYA0B	ALIBECK ARRAY	79.31	319	IAmb	IAmb	01 53 42.8	
	comp=Z,18nm,0.9s						
UZH	Uzhgorod	79.35	348	⇓iP	P	01 53 38.1	-3.0
UZH				i		01 53 47.8	
UZH				i		01 53 53.6	
KIV	Kislovodsk	79.43	332	⇓P	P	01 53 42.4	+0.6
KIV	Kislovodsk	79.43	332	P	P	01 53 41.5	-0.4
KIV				IAmb	IAmb	01 53 43.1	
	comp=Z,7.8nm,1.0s						
KIV	Kislovodsk	79.43	332	eP	P	01 53 42.0	+0.2
KIV				pmax	pmax		
	comp=Z,24nm,1.1s						
KBZ	Khabaz	79.58	332	P	P	01 53 42.9	+0.5
	comp=Z,5.1nm,0.9s,baz=83,slow=4.4,SNR=7.9						
NCK	Nalchik	79.58	332	⇓iP	P	01 53 43.6	+1.0
NCK				pmax	pmax		
	comp=Z,28nm,1.1s						
KHC	Kasperske Hory	79.76	353	⇓eP	P	01 53 43.5	0.0
TRPA	Tarpa	79.81	347	⇑P	P	01 53 43.7	+0.1
BURAR	Bucovina Array	79.91	345	⇑P	P	01 53 44.3	0.0
VYHS	Vyhne	79.91	350	eP	P	01 53 45.4	+1.1
VYHS	Vyhne	79.91	350	eP	P	01 53 45.4	+1.1
GERES	GERESS Array B	80.04	353	P	P	01 53 44.6	-0.5
	comp=Z,0.7nm,0.8s,baz=356,slow=4.4,SNR=4.2						
SMOL	Smolenice	80.04	351	eP	P	01 53 46.3	+1.4
SMOL	Smolenice	80.04	351	eP	P	01 53 46.3	+1.4
AKT	Akhty	80.09	328	eP	P	01 53 45.6	+0.1
AKT				pmax	pmax		
	comp=Z,51nm,0.8s						
ZEI	Tsey	80.13	331	eP	P	01 53 45.1	-0.7
ZEI				pmax	pmax		
	comp=Z,16nm,1.1s						
HRA	Herat	80.52	314	IAmb	IAmb	01 53 49.6	
	comp=Z,10nm,0.8s						
TESR	Tescani	80.74	344	⇑P	P	01 53 50.1	+1.4
CONA	Conrad Observa	80.77	352	eP	P	01 53 49.2	+0.2
	comp=Z,0.2nm,0.3s						
MOA	Molln	80.98	353	iP	P	01 53 50.4	+0.3
	comp=Z,0.6nm,0.5s						
GHRR		81.05	344	⇑P	P	01 53 51.7	+1.4
DRGR		81.09	347	⇑P	P	01 53 50.3	-0.4
ODBI	Odobesti	81.40	344	⇑P	P	01 53 53.4	+1.1
DOPR	Dopca	81.48	345	⇑P	P	01 53 54.2	+1.5
AKH	Akhalkalaki	81.51	331	⇑P	P	01 53 52.6	-0.5
AKH	Akhalkalaki	81.51	331	IAmb	IAmb	01 53 54.5	
	comp=Z,7.4nm,1.0s						
TLCR		81.63	342	⇑P	P	01 53 54.3	+0.8
TLCR		81.63	342	P	P	01 53 54.8	+1.4
MOTA	Moosalm	81.70	355	eP	P	01 53 54.2	+0.2
	comp=Z,0.4nm,0.3s						
CFR	Carcaliu	81.77	343	⇑P	P	01 53 54.4	+0.2
SQTA	Sankt Quirin	81.82	355	iP	P	01 53 54.3	-0.3
	comp=Z,0.6nm,0.4s						
KBA	Koelnbreinsper	81.82	353	iP	P	01 53 55.3	+0.7
	comp=Z,1.5nm,0.3s						
MLR	Muntele Rosu	81.85	344	⇑P	P	01 53 55.7	+0.8
MLR	Muntele Rosu	81.85	344	IAmb	IAmb	01 54 04.4	
	comp=Z,10nm,1.3s						
VOIR		82.06	345	⇑P	P	01 53 56.3	+0.4
SOKA	Soboth	82.08	352	iP	P	01 53 56.4	+0.5
	comp=Z,2.9nm,0.8s						
ARR	Arges	82.19	345	⇑P	P	01 53 57.1	+0.6
GNI	Garni	82.27	329	P	P	01 53 57.1	0.0
GNI				IAmb	IAmb	01 54 14.0	
	comp=Z,11nm,0.9s						
GNI	Garni	82.27	329	ceP	P	01 53 57.9	+0.8
GNI				pmax	pmax		
	comp=Z,47nm,1.7s						
HARR	Harsova	82.28	343	⇑P	P	01 53 57.7	+0.8
HARR	Harsova	82.28	343	P	P	01 53 57.9	+1.1
BZS	Buzias	82.40	347	⇑P	P	01 53 57.1	-0.3
ICOR	Ion Corvin	82.85	343	⇑P	P	01 54 00.5	+0.6
WRA	Warramunga Arr	82.93	226	P	P	01 53 59.2	-1.3
	comp=Z,0.8nm,0.5s,baz=35,slow=6.1,SNR=3.6						
SGRR	Singureni	83.08	344	⇑P	P	01 54 00.7	-0.4
VLAD	Vladila	83.56	345	⇑P	P	01 54 03.7	+0.2
RAZG	Razgrad	83.62	344	⇑P	P	01 54 03.9	+0.1
BAIL	Bailesti	83.71	346	⇓P	P	01 54 04.8	+0.5
PLVB	Pleven	84.12	345	⇑P	P	01 54 06.8	+0.4
ELND	Elena	84.35	344	⇑P	P	01 54 07.7	+0.1
PSI	Prapat	84.53	268	P	P	01 54 09.2	+0.2
PSI				pmax	pmax		
	comp=Z,15nm,1.0s						
RPSI	Rantau Prapat	84.61	268	P	P	01 54 09.2	-0.1
VTS	Vitosha	85.09	346	⇑P	P	01 54 11.5	0.0
VTS	Vitosha	85.09	346	IAmb	IAmb	01 54 12.4	
	comp=Z,7.8nm,0.9s						
VTS	Vitosha	85.09	346	P	P	01 54 12.1	+0.6
FITZ	Fitzroy Crossi	85.55	234	P	P	01 54 13.9	+0.1
FITZ				IAmb	IAmb	01 54 14.5	
	comp=Z,7.3nm,1.0s						
BRTR	Keskin Array B	85.80	337	P	P	01 54 14.9	-0.2
	comp=Z,13nm,0.7s,baz=50,slow=2.7,SNR=60						
BRTR	Keskin Array B	85.80	337	ceP	P	01 54 15.3	+0.2
BRTR				pmax	pmax		
	comp=Z,13nm,0.7s						
PDG	Podgorica	85.84	348	⇑P	P	01 54 14.7	-0.3
ANTO	Ankara	85.87	338	P	P	01 54 14.9	-0.4
ANTO				IAmb	IAmb	01 54 17.4	
	comp=Z,11nm,0.9s						
ANTO	Ankara	85.87	338	P	P	01 54 14.9	-0.4
ANTO				pmax	pmax		
	comp=Z,11nm,1.0s						
NRCA	Norcia	86.06	353	IAmb	IAmb	01 54 24.5	
	comp=Z,13nm,1.1s						
ASAR	Alice Springs	86.37	225	P	P	01 54 17.2	-0.5
	comp=Z,1.1nm,1.0s,baz=22,slow=3.9,SNR=5.6						
ASAR				LR	LR	02 35 55.3	
	comp=Z,32nm,18.1s,baz=353,slow=38						
GAZ	Gaziantep	87.27	334	P	P	01 54 23.1	+0.8
LIT	Litokhoron	87.67	346	IAmb	IAmb	01 54 24.4	
	comp=Z,8.2nm,1.1s						
ESDC	Sonseca Array	89.33	6	P	P	01 54 31.7	-0.3
	comp=Z,2.1nm,0.8s,baz=343,slow=3.8,SNR=12						
STKA	Stephens Creek	90.58	215	LR	LR	02 33 14.8	
	comp=Z,56nm,19.6s,baz=21,slow=34						
RAYN	Ar Rayn	97.06	322	P	P	01 55 07.3	-0.5
RAYN				IAmb	IAmb	01 55 09.0	
	comp=Z,4.1nm,0.9s						
RAYN	Ar Rayn	97.06	322	P	P	01 55 07.3	-0.5
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TORD	Torodi Ar. Bea	115.98	2	PKP	PKiKP	02 00 17.5	-1.1
	comp=Z,0.4nm,0.5s,baz=358,slow=2.8,SNR=7.3						
TSUM	Tsumeb	146.30	336		PKPbc	02 01 16.6	+0.2
LBTB	Lobatse	148.97	319		PKPbc	02 01 23.9	+0.4
LBTB	Lobatse	148.97	319	PKP2	PKPbc	02 01 23.9	+0.4
BOSA	Boshof	152.27	316	PKPbc	PKPbc	02 01 31.0	-0.2
	comp=Z,4.4nm,0.7s,baz=31,slow=4.1,SNR=8.6						

TRN 22 01:46:39.0, 12°03N×60°02W, h46km, MD3.6, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOSP	Speyside	0.88	215	eP	Pn	01 46 56.0	+1.0
TOSP				eS	Sn	01 47 08.7	+2.0
BBGH	Gun Hill	1.20	22	eP	Pn	01 47 01.3	+1.9
BBGH				eS	Sn	01 47 23.4	+8.9
GRSS	Sisters	1.58	280	eP	Pn	01 47 06.0	+1.4
GRHS	Sauteurs	1.60	277	eP	Pn	01 47 07.0	+2.2
GRGR	Grenville	1.60	274	eP	Pn	01 47 06.3	+1.4
GRGR				eS	Sn	01 47 26.4	+2.0
SVCV	St. Vincent, C	1.66	319	eP	Pn	01 47 06.5	+0.8
SVCV				eS	Sn	01 47 27.6	+1.9
SVB	Belmont	1.73	316	eP	Pn	01 47 07.9	+1.2
SVB				eS	Sn	01 47 29.1	+1.6
SVV	Soufriere Volc	1.74	318	eP	Pn	01 47 07.5	+0.7
SVV				eS	Sn	01 47 29.2	+1.5
MCLT	Moule a Chique	1.90	332	eP	Pn	01 47 09.6	+0.6
MCLT				eS	Sn	01 47 33.3	+1.6
TRN	Trinidad (W)	1.93	225	eP	Pn	01 47 10.8	+1.5
SLAC	Saint Lucia, A	2.05	335	eP	Pn	01 47 11.5	+0.5
SLAC				eS	Sn	01 47 36.5	+1.1
SLB	Belfond	2.05	331	eP	Pn	01 47 13.7	+2.6
SLBI	Saint Lucia, B	2.19	335	eP	Pn	01 47 15.6	+2.6
SLBI				eS	Sn	01 47 41.1	+2.2
MPOM	Morne Pois Mar	2.54	341	eP	Pn	01 47 18.8	+1.0
BIM	Bigot	2.68	338	eP	Pn	01 47 20.9	+1.1
TRMF	Trois Ilets	2.69	338	eP	Pn	01 47 20.8	+1.0
LPMF	Morne Lapointe	2.70	340	eP	Pn	01 47 21.2	+1.3
ZAM	Aeronautique	2.72	339	eP	Pn	01 47 21.5	+1.3
BAMF	Morne Balai	2.98	339	eP	Pn	01 47 26.2	+2.3

IDC 22 01:53:19.3±2.6, 51°51N×176°38W, h0km, mb3.5/5, mb1 3.8/6, mb1mx3.5/41, mbtmp3.7/6, ML3.3/1, Error ellipse: s-maj=80.1km s-min=22.3km az=173.0

AEIC 22 01:53:21.4±1.5, 51°01N±0°08×176°21W±0°07, h52km±7km, ML3.1/21, Error ellipse: s-maj=11.1km s-min=6.2km az=177.0

NEIC 22 01:53:21±1.0, 50°96N±0°02×176°21W±0°06, h29km±6km, Error ellipse: s-maj=5.6km s-min=2.9km az=74.0

ISC 22 01:53:20.3±1.4, 51°0N±0°1×176°21W±0°05, h22km±8km, n30, σ0§77/29, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	Adak	0.96	342	Pn	Pb	01 53 38.4	+0.1
ADK				Sn	Sb	01 53 51.1	+0.5
KIMD	Kanaga Island	1.02	322		Pb	01 53 38.9	-0.4
GSIG	Igitkin Island	1.04	10		Pb	01 53 39.5	-0.1
GSIG					Sn	01 53 53.5	+0.1
ADAG	Mount Adagdak	1.04	347		Pn	01 53 40.1	+0.5
KIWB	Kanaga Island	1.06	327		Sn	01 53 54.6	+0.5
KIWB	Kanaga Island	1.06	327	Pn	Pn	01 53 39.2	-0.7
GSMY	Great Sitkin M	1.08	5		Pb	01 53 40.3	-0.1
GSTD	Great Sitkin T	1.09	2		Pb	01 53 40.5	-0.1
GSTD					Sn	01 53 55.3	+0.5
KIKV	Kanaga Island	1.09	327		Pb	01 53 40.4	-0.1
GSTR	Great Sitkin T	1.13	5		Pb	01 53 41.5	+0.2
KICM	Kanaga Island	1.14	328		Pn	01 53 40.6	-0.3
TAPA	Tanaga Point A	1.31	311		Pn	01 53 43.4	0.0
TASE	Tanaga Southea	1.44	308		Pn	01 53 45.4	+0.3
TAFP	Tanaga Falls P	1.45	311		Pn	01 53 45.5	+0.3
TAFP					Sn	01 54 03.7	+0.1
ATKA	Atka Island	1.77	45		Pn	01 53 49.8	+0.2
ATKA					Sn	01 54 10.2	-1.1
GALAA	Gareloi Lava P	1.79	297		Pn	01 53 50.1	+0.2
KOKL	Mount Kliuchef	1.85	42		Pn	01 53 51.4	+0.7
KDAK	Kodiak Island	15.31	54	Pn	Pn	01 56 52.5	-2.4
	0.1nm,0.3s,baz=212,slow=13,SNR=3.4						
ILAR	Eielson Array	20.57	37	P	P	01 57 56.6	-0.7
	0.4nm,0.3s,baz=240,slow=8.7,SNR=12						
SCRK	Sand Creek	21.38	40	P	P	01 58 06.7	+0.6
KLR	Kul'dur	32.86	288	P	P	01 59 52.4	+0.2
	1.3nm,0.4s,baz=66,slow=6.8,SNR=9.4						
H11N2	WAKE ISLAND Hy	33.91	209	T	T	02 36 42.2	
	baz=18,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	33.91	209	T	T	02 36 43.0	
	baz=18,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	33.92	209	T	T	02 36 43.5	
	baz=18,slow=76,SNR=10						
H11S1	WAKE ISLAND Hy	35.12	209	T	T	02 38 14.1	
	baz=21						
H11S2	WAKE ISLAND Hy	35.13	209	T	T	02 38 22.4	
	baz=21						
H11S3	WAKE ISLAND Hy	35.13	209	T	T	02 38 20.1	
	baz=21						
PDAR	Pinedale Array	44.88	73	P	P	02 01 35.1	+1.9
	0.1nm,0.3s,baz=315,slow=8.9,SNR=3.0						
MKAR	Makanchi Array	61.55	310	P	P	02 03 34.6	-0.9
	0.1nm,0.5s,baz=44,slow=5.9,SNR=5.0						
BRTR	Keskin Array B	85.97	337	P	P	02 05 59.0	+0.1
	1.3nm,0.8s,baz=10,slow=5.9,SNR=4.4						

THE 22 01:54:09.5, 38°16N×20°44E, h12km, ML3.1/2, Error ellipse: s-maj=0.7km s-min=0.4km az=254.0

ATH 22 01:54:09.0, 38°16N×20°43E, h16km, ML2.7/4, Error ellipse: s-maj=1.4km s-min=0.8km az=247.0

ISC 22 01:54:09.4±0.9, 38°16N±0°03×20°45E±0°03, h14km±4km, n49, σ0§34/71, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARGA	Argostoli. Kep	0.03	48	P	Pg	01 54 11.7	-0.2
ARGA				S	Sg	01 54 13.4	-0.2
KEF2	Argostoli. Kep	0.03	74	P	Pg	01 54 11.7	-0.2
KEF2				S	Sg	01 54 13.4	-0.2
ARG2	Argostoli	0.04	54	P	Pg	01 54 11.8	-0.1
ARG2				S	Sg	01 54 13.4	-0.2
LXRA	Lixouri, Kepha	0.04	346	P	Pg	01 54 11.9	-0.1
LXRA				S	Sg	01 54 13.9	+0.2
LXR1	Lixouri, Cepha	0.04	347	P	Pg	01 54 11.9	-0.1
LXR1				S	Sg	01 54 13.7	0.0
CHV1	Chavriata, Kef	0.06	296	P	Pg	01 54 11.9	-0.2
CHV1				S	Sg	01 54 13.6	-0.3
KEF3	Kipouria, Keph	0.09	300	P	Pg	01 54 12.2	-0.2
KEF3				S	Sg	01 54 14.6	+0.1
KEF4	Livadi, Kephal	0.10	348	P	Pg	01 54 12.4	-0.1
KEF4				S	Sg	01 54 15.0	+0.3
AGT1	Agia Thekli	0.11	331	P	Pg	01 54 12.4	-0.2
AGT1				S	Sg	01 54 14.9	+0.1
	8µm,0.2s						
VLS	Valsamata	0.11	79	P	Pg	01 54 12.4	-0.2
VLS				S	Sg	01 54 14.9	0.0
	18µm,0.1s						
VLS	Valsamata	0.11	79	P	Pg	01 54 12.5	-0.2
VLS				S	Sg	01 54 15.0	0.0
VLS				AML	AML	01 54 15.0	
	comp=N,40959µm,0.2s						
VLS				AML	AML	01 54 15.2	
	comp=E,28721µm,0.1s						
VSK1	VASILIKIADES	0.27	19	P	Pg	01 54 14.9	-0.2
VSK1				S	Sg	01 54 19.4	+0.5
KFL	Anninata	0.27	100	P	Pg	01 54 15.1	0.0
KFL				S	Sg	01 54 19.6	+0.6
KFL	Anninata	0.27	100	P	Pg	01 54 15.1	0.0
KFL				S	Sg	01 54 19.7	+0.7
KONA	Konidatara, Ke	0.28	19	P	Pg	01 54 15.2	-0.2
KONA				S	Sg	01 54 19.1	-0.4
KONA				AML	AML	01 54 20.3	
	comp=E,2479µm,0.3s						
KONA				AML	AML	01 54 20.7	
	comp=N,3836µm,0.3s						
VLMS	Volimes, Zakyn	0.33	149	P	Pg	01 54 16.0	-0.1
VLMS				S	Sb	01 54 21.5	-0.6
VLMS				AML	AML	01 54 21.9	
	comp=E,3951µm,0.2s						
VLMS				AML	AML	01 54 22.1	
	comp=N,4099µm,0.2s						
EVGI	Lefkada island	0.49	19	P	Pg	01 54 18.7	-0.4
EVGI	Lefkada island	0.49	19	P	Pg	01 54 18.8	-0.4
EVGI				S	Sg	01 54 25.9	+0.1
MGNA	Meganis	0.57	28	P	Pg	01 54 20.2	-0.4
MGNA				S	Sg	01 54 27.5	-0.5
KRI1	kERI	0.57	149	P	Pg	01 54 20.2	-0.5
KRI1				S	Sb	01 54 29.4	+0.2
VTN	Vitineika	0.63	112	P	Pg	01 54 21.9	+0.2
VTN				S	Sb	01 54 31.1	+0.3
AST1	Astakos	0.63	52	P	Pg	01 54 21.4	-0.4
AST1				S	Sb	01 54 31.4	+0.4
LKD2	Lefkada island	0.65	14	P	Pg	01 54 21.8	-0.4
LKD2	Lefkada island	0.65	14	P	Pg	01 54 21.7	-0.4
TSLK	Tsoukalades, L	0.69	13	P	Pg	01 54 22.7	-0.1
TSLK	Tsoukalades, L	0.69	13	P	Pg	01 54 22.4	-0.4
PDO	Prodromos	0.72	52	P	Pg	01 54 23.1	-0.4
PDO				S	Sb	01 54 34.5	+0.8
PDO				AML	AML	01 54 39.3	
	comp=N,452µm,0.3s						
PDO				AML	AML	01 54 41.7	
	comp=E,424µm,0.3s						
RLS	Riolos of Patr	0.81	97	P	Pg	01 54 25.0	-0.1
RLS	Riolos of Patr	0.81	97	P	Pg	01 54 24.3	-0.7
PVO	Paravola	0.96	61	P	Pb	01 54 27.8	-0.1
PVO	Paravola	0.96	61	P	Pb	01 54 27.6	-0.3
DRO	Drossia	1.01	101	P	Pb	01 54 28.8	0.0
DRO	Drossia	1.01	101	P	Pb	01 54 28.8	0.0
AMT	Artemida-Makis	1.18	122	P	Pb	01 54 31.6	0.0
LAKA	Lakka	1.21	86	P	Pn	01 54 31.9	0.0
ANX	Ano Chora	1.23	69	P	Pn	01 54 32.3	-0.1
SERG	Sergoula	1.29	78	P	Pn	01 54 32.8	-0.2
TRIZ	Trizonia	1.29	80	P	Pn	01 54 32.7	-0.3
EVR	Evrytania	1.31	54	P	Pb	01 54 34.1	+0.2
KLV	Kalavryta, Ach	1.35	94	P	Pb	01 54 34.2	-0.2
KALE	Kalithea	1.35	80	P	Pn	01 54 33.6	-0.4
IGT	Igoumenitsa	1.38	356	P	Pb	01 54 35.0	0.0
ITM	Ithomi	1.52	129	P	Pb	01 54 37.0	-0.5
MAKR	Makrakomi, Fth	1.57	56	P	Pb	01 54 38.3	+0.1
PYL	PYLOS	1.62	140	P	Pn	01 54 38.4	+0.7
KEK	Kerkira	1.64	342	P	Pn	01 54 38.3	+0.5
AGG	Agios Georgios	1.71	59	P	Pg	01 54 41.7	-0.5
AXAR	Agios Charalam	1.84	70	P	Pb	01 54 43.1	+0.3
PROD	Prodromos	1.93	86	P	Pb	01 54 44.5	+0.1

IDC 22 02:12:20.3±3.0, 25°21S×178°96W, h0km, mb4.0/4, mb1 4.3/4, mb1mx3.8/39, mbtmp4.0/4, Error ellipse: s-maj=233.5km s-min=33.5km az=166.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	32.45	272	P	P	02 18 54.3	+1.8
	2.5nm,0.3s,baz=96,slow=9.3,SNR=6.0						
ASAR	Alice Springs	42.77	262	P	P	02 20 19.7	-0.2
	0.4nm,0.4s,baz=93,slow=7.3,SNR=10						
WRA	Warramunga Arr	43.28	267	P	P	02 20 22.6	-1.4
	1.2nm,0.3s,baz=104,slow=8.0,SNR=12						
TXAR	Lajitas Array	90.32	58	P	P	02 25 23.7	+0.1
	0.4nm,0.8s,baz=217,slow=7.9,SNR=4.3						

IDC 22 02:13:13.2±1.0, 3°44N×92°71E, h0km, mb4.0/8, mb1 4.2/11, mb1mx3.8/56, mbtmp4.1/11, ML4.2/2, MS3.3/3, Ms1 3.3/3, ms1mx2.8/43, Error ellipse: s-maj=27.6km s-min=21.1km az=36.0

NEIC 22 02:13:17.6±1.3, 3°51N±0°08×92°72E±0°10, h28km±4km, mb4.3/17, Error ellipse: s-maj=15.5km s-min=8.7km az=57.0

ISC 22 02:13:16.9±0.8, 3°5N±0°1×92°71E±0°09, h24km, n30, σ0§65/29, mb4.3/15, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	6.24	96	Pn	Pn	02 14 47.6	-0.1
	4.5nm,0.3s,baz=328,slow=6.2,SNR=18						
PSI				LR	LR	02 17 07.0	
	comp=Z,103nm,18.3s,baz=243,slow=37						
RPSI	Rantau Prapat	6.26	97		Pn	02 14 47.8	0.0
RPSI	Rantau Prapat	6.26	97		Pn	02 14 47.6	-0.2
PALK	Pallekele	12.53	288	Pn	Pn	02 16 12.4	-1.4
	1.4nm,0.3s,baz=99,slow=9.7,SNR=5.9						
PALK				Sn	Sn	02 18 19.8	-13
	5.1nm,0.3s,baz=189,slow=22,SNR=11						
PALK				LR	LR	02 20 12.0	
	comp=Z,80nm,18.4s,baz=86,slow=33						
CM31	Chiang Mai Arr	16.06	22	Pn	Pn	02 17 00.4	-0.9
CM31				IAmb	IAmb	02 17 49.8	
	comp=Z,6.6nm,0.4s						
CMAR	Chiang Mai Arr	16.06	22	Pn	Pn	02 17 00.2	-1.1
	baz=218,slow=13,SNR=11						
SHL	Shillong	21.94	358	P	P	02 18 08.9	-0.2
SHL				IAmb	IAmb	02 18 13.0	
	comp=Z,11nm,0.8s						
LSA	Lhasa	26.09	357	P	P	02 18 50.1	+0.7
XAN	Xi'an	33.92	25	P	P	02 19 57.5	-0.8
XAN				IAmb	IAmb	02 19 58.4	
	comp=Z,6.0nm,0.8s						
NIL	Nilore	35.05	331	P	P	02 20 08.2	+0.1
KDJ	Kajisay	40.88	342	P	P	02 20 57.5	+0.2
BTK	Batken	41.42	334	P	P	02 21 02.8	+1.1
BJT	Baijiatuau	42.08	27	P	P	02 21 07.6	+0.6
BJT				IAmb	IAmb	02 21 09.5	
	comp=Z,4.9nm,0.8s						
MK31	Makanchi Array	44.05	350	P	P	02 21 22.3	-0.6
MKAR	Makanchi Array	44.05	350	P	P	02 21 23.4	+0.5
	comp=Z,3.2nm,0.6s,baz=171,slow=8.8,SNR=46						
KK31	Karatay Array	44.09	337	P	P	02 21 23.2	0.0
KK31				IAmb	IAmb	02 21 24.2	
	comp=Z,2.4nm,0.6s						
KKAR	Karatay Array	44.09	337	P	P	02 21 23.2	0.0
KKAR				IAmb	IAmb	02 21 24.2	
	comp=Z,2.4nm,0.6s						
MAKZ	Makanchi	44.12	349	P	P	02 21 23.7	+0.2
SONM	Songino Array	45.70	13	P	P	02 21 36.6	+0.5
	comp=Z,0.8nm,0.7s,baz=191,slow=7.7,SNR=4.7						
GEYT	Alibeck	46.61	322	P	P	02 21 44.5	+1.2
	comp=Z,2.2nm,0.6s,baz=131,slow=10,SNR=6.4						
WRA	Warramunga Arr	47.06	121	P	P	02 21 46.3	-0.8
	comp=Z,0.5nm,0.5s,baz=296,slow=9.2,SNR=3.1						
KURK	Kurchatov	48.52	348	P	P	02 21 58.1	+0.3
KURK				IAmb	IAmb	02 21 59.1	
	comp=Z,5.8nm,1.4s						
ZAA0	Zalesovo Array	50.69	354	P	P	02 22 14.7	+0.3
ZAA0				IAmb	IAmb	02 22 16.6	
	comp=Z,7.2nm,1.4s						
ZALV	Zalesovo Beam	50.69	354	P	P	02 22 14.9	+0.6
	comp=Z,2.8nm,0.4s,baz=186,slow=8.8,SNR=13						
COEN	Coen	52.97	110	P	P	02 22 32.6	+0.5
BRTR	Keskin Array B	64.25	313	P	P	02 23 50.2	-0.3
	comp=Z,0.2nm,0.4s,baz=131,slow=7.4,SNR=3.2						
TIXI	Tiksi	71.76	11	P	P	02 24 36.2	-0.6
BOSA	Boshof	72.09	239	P	P	02 24 40.1	+0.3
	comp=Z,3.7nm,1.1s,baz=96,slow=9.2,SNR=4.4						
GERES	GERESS Array B	80.13	319	P	P	02 25 25.7	+0.5
	comp=Z,1.0nm,0.6s,baz=93,slow=5.5,SNR=11						
KEST	Kesra	82.58	305	LR	LR	03 07 05.3	
	comp=Z,47nm,18.7s,baz=282,slow=39						

IDC 22 02:19:38.3±1.4, 8°69S×147°69E, h0km, mb3.7/2, mb1 4.1/5, mb1mx3.7/40, mbtmp3.9/5, ML3.9/3, MS3.0/1, Ms1 3.0/1, ms1mx2.5/31, Error ellipse: s-maj=46.0km s-min=11.7km az=120.0

ISC 22 02:19:43.3±1.4, 8°7S±0°1×147°5E±0°3, h35km, n7, σ1§38/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	0.74	204	Pg	Pn	02 19 55.8	-1.6
	244nm,0.3s,baz=42,slow=9.5,SNR=212						
PMG				Lg	Lg	02 20 06.9	
	1µm,0.3s,baz=49,slow=20,SNR=39						
PMG				LR	LR	02 20 33.9	
	comp=Z,332nm,18.1s,baz=51,slow=62						
CTA	Charters Tower	11.36	186	Pn	Pn	02 22 24.6	+1.4
	0.6nm,0.3s,baz=358,slow=11,SNR=4.5						
WRA	Warramunga Arr	16.90	227	P	P	02 23 38.8	-0.3
	0.4nm,0.3s,baz=51,slow=12,SNR=2.4						
WRA				LR	LR	02 30 44.8	
	comp=Z,46nm,19.5s,baz=50,slow=39						
ASAR	Alice Springs	19.73	220	P	Pn	02 24 12.4	+0.5
	0.2nm,0.3s,baz=42,slow=12,SNR=24						
MKAR	Makanchi Array	79.89	321	P	P	02 31 49.8	+1.3
	0.3nm,0.6s,baz=103,slow=6.7,SNR=4.5						
ILAR	Eielson Array	87.79	23	P	P	02 32 27.4	-1.1
	0.5nm,0.7s,baz=246,slow=4.7,SNR=5.7						
TORD	Torodi Ar. Bea	146.13	281	PKPbc	PKPab	02 39 21.5	-0.1
	0.4nm,0.6s,baz=63,slow=2.9,SNR=3.5						

IDC 22 02:24:37.9±29.0, 46°41N×150°57E, h93km±138km, mb3.3/4, mb1 3.7/5, mb1mx3.2/39, mbtmp3.6/5, ML2.2/1, Error ellipse: s-maj=348.8km s-min=121.2km az=65.0,

Kuril Islands
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PETK Petropavlovsk- 8.14 32 P Pn 02 26 33.1 0.0
0.2nm,0.3s,baz=200,slow=12,SNR=6.1
H11N2 WAKE ISLAND Hy 29.79 148 T T 03 01 41.6
baz=337,slow=76,SNR=130
H11N1 WAKE ISLAND Hy 29.81 148 T T 03 01 43.5
baz=337,slow=76,SNR=79
H11N3 WAKE ISLAND Hy 29.81 148 T T 03 01 41.9
baz=337,slow=76,SNR=79
H11S1 WAKE ISLAND Hy 30.84 149 T T 03 03 05.5
baz=338,slow=76,SNR=247
H11S3 WAKE ISLAND Hy 30.85 149 T T 03 03 06.2
baz=338,slow=76,SNR=115
H11S2 WAKE ISLAND Hy 30.86 149 T T 03 02 58.6
baz=338,slow=76,SNR=106
YKA Yellowknife Ar 52.24 36 P P 02 33 38.8 -0.2
0.6nm,0.7s,baz=300,slow=7.2,SNR=8.6
NVAR Mina Array Bea 64.14 61 P P 02 35 03.0 +0.4
0.6nm,0.6s,baz=291,slow=7.4,SNR=5.8
PDAR Pinedale Array 66.35 52 P P 02 35 16.9 0.0
0.3nm,0.6s,baz=243,slow=1.6,SNR=4.6
TXAR Lajitas Array 79.18 59 P P 02 36 32.5 -0.2
0.4nm,0.5s,baz=302,slow=4.2,SNR=10

YARS 22 02:44:48.6±0.0, 55.°81N×130.°75E, h2km, mb0.0/3, ML3.5/17, Ms0.0/3
SKHL 22 02:44:50.0±0.3, 55.°63N×130.°77E, h9km, mb3.9/3
ISC 22 02:44:48.3±0.9, 55.°77N±0.°03×130.°82E±0.°04, h10km, n15, σ3.°68/40, 2D, Southeastern Siberia
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BMKR Bomnak 1.55 228 ⇓iPg **Pn 02 45 16.6 +0.6**
0.1nm,0.2s
BMKR eSg **Sn 02 45 35.7 -0.5**
0.6nm,0.2s
BMKR Bomnak 1.55 228 ⇓iPg **Pn 02 45 16.4 +0.4**
BMKR AMB AMB 02 45 16.8
55nm,0.4s
BMKR Pg **Pg 02 45 20.0 +1.9**
BMKR eSg **Sn 02 45 35.7 -0.5**
BMKR A A 02 45 37.5
320nm,0.4s
BMKR A A 02 45 37.5
308nm,0.4s
KROS Kirovskiy 2.59 240 ePn **Pn 02 45 29.6 -0.6**
KROS ePg **Pb 02 45 34.5 -0.2**
KROS AMB AMB 02 45 35.3
18nm,0.3s
KROS Pg **Pg 02 45 38.4 +0.6**
KROS eSg **Sb 02 46 07.2 +0.7**
KROS A A 02 46 13.4
73nm,0.3s
KROS A A 02 46 13.4
69nm,0.3s
ZEA Zeya 2.90 227 ePg **Sb 02 46 16.2 +0.6**
ZEA A A 02 46 17.7
39nm,0.6s
ZEA A A 02 46 17.7
64nm,0.6s
EKMR Ekimchan 2.98 154 ePg **Pb 02 45 41.6 +0.2**
EKMR AMB AMB 02 45 46.5
18nm,0.5s
EKMR eSg **Sb 02 46 18.9 +1.1**
EKMR A A 02 46 22.5
28nm,0.5s
CGD Chagda 2.99 358 ePg **Pb 02 45 42.1 +0.5**
0.0nm,0.1s
CGD eSg **Sg 02 46 20.8 -3.4**
0.1nm,0.2s
CGD eSg **Sg 02 46 20.8 -3.4**
0.1nm,0.3s
CLNS Chul'man 3.47 290 ePg **Pb 02 45 50.9 +1.1**
0.0nm,0.3s
CLNS eSn **Sn 02 46 24.7 +1.2**
CLNS eSg **Sg 02 46 36.1 -3.6**
0.1nm,0.4s
CLNS eSg **Sg 02 46 36.1 -3.6**
0.1nm,0.5s
TNDR Tynda 3.53 262 ePg **Pb 02 45 52.0 +1.2**
0.0nm,0.3s
TNDR eSg **Sg 02 46 38.2 -3.3**
0.0nm,0.5s
TNDR eSg **Sg 02 46 38.2 -3.3**
0.1nm,0.5s
ALDR Aldan 4.09 316 ePn **Pn 02 45 52.1 +1.1**
ALDR ePg **Pb 02 46 01.7 +1.3**
0.0nm,0.2s
ALDR eSn **Sn 02 46 38.9 0.0**
ALDR eSg **Sg 02 46 55.0 -4.7**
0.0nm,0.2s
ALDR eSg **Sg 02 46 55.0 -4.7**
0.0nm,0.2s
YKLR Yuktali 5.19 283 ePg **Pb 02 46 21.9 +2.9**
0.0nm,0.2s
YKLR eSg **Sg 02 47 28.8 -5.9**
0.0nm,0.5s
YKLR eSg **Sg 02 47 28.8 -5.9**
0.0nm,0.8s
BLSR Buluus 5.68 351 eSg **Sg 02 47 44.4 -6.2**
TBGR Tabaga 6.10 355 ePn **Pn 02 46 20.3 +1.9**
TBGR ePg **Pb 02 46 38.3 +3.8**
0.0nm,0.6s
TBGR eSn **Sn 02 47 28.8 +0.7**
TBGR eSg **Sg 02 47 58.5 -5.4**
0.1nm,0.7s
TBGR eSg **Sg 02 47 58.5 -5.4**
0.1nm,1.1s
KHN Khani 6.24 285 eSg **Sb 02 47 58.2 +6.6**
0.0nm,0.2s
YAK Yakutsk 6.31 355 eSg **Sg 02 48 03.5 -7.0**
OLMR Olekminsk 7.17 314 eSg **Sg 02 48 31.6 -6.6**
0.0nm,0.8s
OLMR eSg **Sg 02 48 31.6 -6.6**
0.0nm,0.7s

IDC 22 02:51:08.6±6.7, 37.°71N×67.°58E, h0km, mb3.5/2, mb1 3.5/3, mb1mx3.2/31, mbtmp3.4/3, ML2.6/1, Error ellipse: s-maj=261.1km s-min=26.7km az=148.0, Afghanistan-Tajikistan border region
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MKAR Makanchi Array 14.16 46 Pn Pn 02 54 27.0 -3.4
0.0nm,0.3s,baz=241,slow=15,SNR=3.0
TORD Torodi Ar. Bea 63.04 266 P P 03 01 37.5 -0.3
0.8nm,1.0s,baz=38,slow=6.5,SNR=4.2
YKA Yellowknife Ar 80.12 1 P P 03 03 20.5 +0.5
0.2nm,0.7s,baz=354,slow=6.0,SNR=4.4

IDC 22 02:58:34.6±4.4, 36.°62N×73.°76E, h54km±31km, mb3.5/9, mb1 3.6/15, mb1mx3.4/64, mbtmp3.8/15, ML3.8/6, MS3.0/2, Ms1 3.0/2, ms1mx2.4/42, Error ellipse: s-maj=43.2km s-min=20.4km az=162.0
MOS 22 02:58:38.0±1.0, 36.°95N×73.°84E, h80km, mb4.4/6, Error ellipse: s-maj=11.1km s-min=5.7km az=93.6
NEIC 22 02:58:39.0±1.5, 36.°90N±0.°05×73.°73E±0.°08, h79km±10km, mb4.1/7, Error ellipse: s-maj=11.4km s-min=2.4km az=125.0
BJI 22 02:58:41.3±0.0, 37.°11N×74.°25E, h192km, mB4.3/3, mb4.1/5
NNC 22 02:58:41.1±3.0, 37.°08N×73.°14E, h82km±70km, mb3.9, mpv4.0, Error ellipse: s-maj=27.1km s-min=18.2km az=128.0
ISC 22 02:58:37.1±0.5, 36.°87N±0.°04×73.°79E±0.°05, h80km, n102, σ2.°74/102, mb4.0/14, 13C-5D, Northwestern Kashmir
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSH Kashi 3.15 32 P **Pn 02 59 20.6 -4.0**
KSH S Sn 02 59 46.8 -14
KSH smax smax
comp=N,720nm,0.4s
KSH smax smax
comp=E,300nm,0.3s
CHCP Chirah Chowk 3.23 188 P **Pn 02 59 29.3 +3.6**
NIL Nilore 3.24 188 **Pn 02 59 28.8 +3.0**
NIL Nilore 3.24 188 PN **Pn 02 59 28.8 +3.0**
CEP Cherat 3.41 207 P **Pn 02 59 30.6 +2.5**
BTK Batken 3.94 325 Pn **Pn 02 59 36.7 +1.4**
BTK Batken 3.94 325 PN **Pn 02 59 36.7 +1.4**
THW Thamme Wali 4.40 203 P **Pn 02 59 43.6 +2.1**
KBL Kabul 4.51 240 **Pn 02 59 44.4 +1.3**
KBL Sn **Sn 03 00 34.3 -0.1**
THN Thein Dam 4.70 160 eP **Pn 02 59 48.0 +2.4**
THN ex x 03 00 39.5
NRN Naryn 4.87 20 **Pn 02 59 49.6 +1.5**
NRN Naryn 4.87 20 PN **Pn 02 59 49.6 +1.5**
SARP Sargodha 5.02 191 P **Pn 02 59 51.4 +1.4**
DHRM DHARAMSHALA 5.05 155 eP **Pn 02 59 52.6 +2.0**
DHRM eS **Sn 03 00 44.1 -3.7**
DHRM IAML 03 00 51.3
comp=N,616nm,0.3s
DHRM IAML 03 00 51.6
comp=E,578nm,0.1s
DHRM IAML 03 01 45.2
comp=Z,40nm,0.4s
AML Almayashu 5.25 359 P **Pn 02 59 55.1 +1.7**
SNR=31
KZA Kyzart 5.32 12 P **Pn 02 59 56.6 +2.2**
SNR=21
UCH Uchtor 5.38 6 P **Pn 02 59 57.4 +2.2**
SNR=16
TAS Tashkent 5.66 323 Pn **Pn 02 59 59.7 +1.1**
TAS Tashkent 5.66 323 PN **Pn 02 59 59.7 +1.1**
ULHL Ulahol 5.69 19 P **Pn 03 00 02.2 +2.9**
SNR=10
EKS2 Erkin-Say 5.78 360 P **Pn 03 00 02.6 +2.2**
SNR=24
AAK Ala-Archa 5.79 5 P **Pn 03 00 02.7 +2.2**
comp=Z,1.5nm,0.3s,baz=141,slow=5.5,SNR=22
AAK S **Sn 03 01 06.1 +0.6**
comp=Z,4.9nm,0.3s,baz=328,slow=21,SNR=7.5
AAK Ala-Archa 5.79 5 P **Pn 03 00 03.1 +2.6**
SNR=8.7
AAK Ala-Archa 5.79 5 P **Pn 03 00 02.3 +1.8**
comp=Z,14nm,1.0s
AAK S **Sn 03 01 05.6 +0.2**
comp=Z,23nm,0.8s
AAK Ala-Archa 5.79 5 **Pn 03 00 02.3 +1.8**
AAK Ala-Archa 5.79 5 cePN **Pn 03 00 03.1 +2.6**
KBK Karagaybulak 5.85 8 P **Pn 03 00 04.0 +2.6**
SNR=13
KDJ Kajisay 5.87 25 **Pn 03 00 03.9 +2.2**
KDJ Kajisay 5.87 25 PN **Pn 03 00 03.9 +2.2**
FRU1 Bishkek 5.97 6 Pn **Pn 03 00 04.8 +1.9**
FRU1 Bishkek 5.97 6 PN **Pn 03 00 04.8 +1.9**
CHMS Chumysh 6.16 7 ⇑P **Pn 03 00 06.4 +0.9**
comp=Z,19nm,1.1s
CHMS ⇑S **Sn 03 01 18.4 +3.8**
comp=Z,15nm,0.8s
SMLA Simla 6.38 153 eP **Pn 03 00 09.5 +1.0**
SMLA eS **Sn 03 01 14.4 -5.4**
SMLA IAML 03 01 17.8
comp=E,450nm,0.2s
SMLA IAML 03 01 18.6
comp=N,408nm,0.1s
PRZ Przheval'sk 6.64 31 Pn **Pn 03 00 13.8 +1.7**
PRZ Przheval'sk 6.64 31 PN **Pn 03 00 13.8 +1.7**
KK31 Karatay Array 6.71 339 ⇑P **Pn 03 00 13.4 +0.5**
comp=N,6.3nm,0.5s,baz=151,slow=12,SNR=55
KK31 ⇑S **Sn 03 01 23.8 -4.2**
comp=N,62nm,0.7s,baz=152,slow=24,SNR=12
KK31 Karatay Array 6.71 339 **Pn 03 00 13.8 +0.9**
KK31 Karatay Array 6.71 339 PN **Pn 03 00 13.9 +0.9**
KKAR Karatay Array 6.71 339 **Pn 03 00 13.8 +0.9**
KKAR Karatay Array 6.71 339 PN **Pn 03 00 13.9 +0.9**
DDI Dehra Dun 7.44 150 eP **Pn 03 00 25.0 +2.0**
DDI eS **Sn 03 01 39.8 -6.0**
DDI IAML 03 01 46.4
comp=E,458nm,0.6s
JOSI Joshimath 7.92 141 eP **Pn 03 00 30.9 +1.1**
JOSI eS **Sn 03 01 51.0 -6.9**
JOSI IAML 03 02 00.0
comp=N,479nm,0.6s
JOSI IAML 03 02 02.4
comp=E,291nm,0.6s
KUDL Kundal 8.99 165 eP Pn 03 00 32.6 -12
KUDL eS Sn 03 02 03.8 -20
SONA Sohna 9.03 161 eS Sn 03 02 17.5 -7.3
HRA Herat 9.72 259 **Pn 03 00 55.7 +1.4**
MAKZ Makanchi 11.65 29 Pn **Pn 03 01 21.3 +1.1**
MAKZ Makanchi 11.65 29 P **Pn 03 01 21.3 +1.1**
MK31 Makanchi Array 11.76 30 **Pn 03 01 22.5 +0.8**
MK31 Makanchi Array 11.76 30 P **Pn 03 01 22.5 +0.8**
MKAR Makanchi Array 11.76 30 P **Pn 03 01 22.4 +0.7**
comp=E,0.1nm,0.5s,baz=208,slow=13,SNR=9.6
DANN Dangsing 11.95 132 eP Pn 03 01 20.4 -4.2
comp=E,57nm,0.5s
GEYT Alibeck 12.51 280 P **Pn 03 01 28.8 -3.2**
comp=E,0.9nm,0.3s,baz=88,slow=8.0,SNR=6.5
GEYT S Sn 03 03 41.1 -8.3
comp=E,1.5nm,0.3s,baz=90,slow=19,SNR=6.1
GYA0B ALIBECK ARRAY 12.51 280 ⇑P Pn 03 01 27.3 -4.8
GYA0B ⇓S **Sn 03 03 43.0 -6.4**
WMQ Urumqi 12.67 52 eP **P 03 01 38.5 -3.8**
WMQ Urumqi 12.67 52 eP **Pn 03 01 29.8 -4.3**
GKN Gorkha 12.72 131 eP Pn 03 01 31.4 -3.7
comp=E,25nm,0.3s
DMN Daman 13.29 131 eP Pn 03 01 36.8 -4.2
comp=E,13nm,0.3s
PKIN Phulchoki 13.50 130 eP Pn 03 01 40.8 -4.6
PKI Pulchoki 13.51 130 eP Pn 03 01 40.9 -4.7
GUN Gumba 13.56 128 eP Pn 03 01 42.0 -4.4
comp=E,15nm,0.5s
JIRN Jiri 13.93 128 eP Pn 03 01 47.2 -4.0
comp=E,59nm,0.4s
KURK Kurchatov 14.27 13 **P 03 01 58.7 -1.2**
KURK Kurchatov 14.27 13 ceP **P 03 01 59.9 0.0**
RAMN Ramite 14.69 129 eP Pn 03 01 56.2 -4.8
TAPN Taplejung 15.13 125 eP **Pn 03 02 01.4 -5.2**
AB31 Akbulak array 15.95 325 ⇑P **Pn 03 02 14.4 -2.2**
comp=E,9.0nm,0.7s,baz=133,slow=12,SNR=75
AB31 ⇓S **Sn 03 05 03.3 -9.3**
comp=E,7.1nm,0.7s,baz=132,slow=24,SNR=12
BVAR Borovoye Array 16.33 353 P **P 03 02 23.9 +1.1**
comp=E,0.4nm,0.3s,baz=160,slow=10,SNR=8.5
BRVK Borovoye 16.37 352 P **P 03 02 24.6 +1.4**
BRVK IAmb IAmb 03 02 44.5
comp=Z,9.8nm,0.7s
BRVK Borovoye 16.37 352 P **P 03 02 24.6 +1.4**
BRVK pmax pmax
comp=Z,10.0nm,0.7s
AKTO Aktyubinsk 17.67 325 P **P 03 02 38.0 +0.4**
comp=Z,1.2nm,0.3s,baz=133,slow=13,SNR=29
AKTO Aktyubinsk 17.67 325 ⇓P **P 03 02 37.5 -0.1**
comp=Z,12nm,1.1s
AKTO ⇓S **Sn 03 05 45.9 -8.2**
comp=Z,3.5nm,0.8s
ZAA0 Zalesovo Array 18.71 21 P **Pn 03 02 50.1 -0.1**
ZAA0 IAmb IAmb 03 03 10.1
comp=Z,7.4nm,0.8s
ZALV Zalesovo Beam 18.71 21 P **Pn 03 02 50.3 +0.1**
comp=Z,1.1nm,0.3s,baz=214,slow=10,SNR=27
SHL Shillong 19.11 121 P **Pn 03 02 57.0 +1.6**
SHL Shillong 19.11 121 P **Pn 03 02 57.0 +1.6**
SHL pmax pmax
comp=Z,9.0nm,1.2s
GTA Gaotai 20.61 75 ⇑P Pn 03 03 12.0 -0.8
GTA pP pP 03 03 31.3 +4.0
GTA sP sP 03 03 40.3 +2.3
ARU Arti 22.09 337 P **P 03 03 26.6 +1.2**
comp=Z,0.7nm,0.4s,baz=144,slow=11,SNR=5.4
ARU Arti 22.09 337 P **P 03 03 27.2 +1.8**
ARU IAmb IAmb 03 03 46.8
comp=Z,14nm,1.5s
ARU Arti 22.09 337 c iP **P 03 03 26.4 +1.0**
ARU 03 03 46.3
ARU S **S 03 07 26.4 +2.5**
ARU SS **SnSn 03 07 54.9 -2.0**
ARU pmax pmax
comp=Z,6.0nm,0.9s
GNI Garni 22.92 287 P **P 03 03 37.1 +2.6**
GNI Garni 22.92 287 ceP **P 03 03 38.1 +3.6**
GNI pmax pmax
comp=Z,32nm,1.3s
TBLG Delisi 22.94 291 P **P 03 03 37.1 +2.5**
TBLG IAmb IAmb 03 04 19.8
comp=Z,19nm,1.5s
TBLG Delisi 22.94 291 eP **P 03 03 37.1 +2.5**
AKH Akhalkalaki 23.87 290 P **P 03 03 46.4 +3.1**
AKH IAmb IAmb 03 03 47.4
comp=Z,6.9nm,1.0s
AKH Akhalkalaki 23.87 290 eP **P 03 03 46.4 +3.1**
NCK Nalchik 23.91 295 ⇑iP **P 03 03 45.8 +2.3**
NCK pmax pmax
comp=Z,4.0nm,0.3s
KIV Kislovodsk 24.61 296 eP **P 03 03 51.7 +1.8**
KIV pmax pmax
comp=Z,15nm,1.0s
TLY Talaya 25.77 45 LR LR 03 15 26.3
comp=Z,24nm,21.6s,baz=202,slow=39
SONM Songino Array 26.28 55 P **P 03 04 07.1 +2.1**
comp=Z,0.2nm,0.3s,baz=227,slow=12,SNR=4.0
BRTR Keskin Array B 31.46 288 P **P 03 04 53.1 +2.0**
comp=Z,0.9nm,0.6s,baz=97,slow=6.7,SNR=8.9
BRTR Keskin Array B 31.46 288 ceP **P 03 04 53.2 +2.1**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 34.47 308 P **P 03 05 19.1 +2.0**
comp=Z,1.1nm,0.5s,baz=110,slow=8.2,SNR=6.2
FINES FINESS Array B 38.44 325 P **P 03 05 52.3 +1.6**
comp=Z,1.1nm,0.5s,baz=114,slow=9.4,SNR=12
ARCES ARCESS Array B 41.67 337 P **P 03 06 19.2 +1.9**
comp=Z,3.1nm,0.8s,baz=112,slow=8.9,SNR=11
NB2 NORSAR Subarra 45.44 323 P **P 03 06 48.8 +1.1**
comp=Z,0.7nm,0.5s,baz=92,slow=7.9
NOA NORSAR Array B 45.44 323 P **P 03 06 48.7 +1.1**
comp=Z,0.7nm,0.4s,baz=101,slow=7.2,SNR=6.6
SPITS Spitsbergen Ar 47.65 346 LR LR 03 29 50.3
comp=Z,22nm,19.1s,baz=110,slow=39
BILL Bilibino 57.28 27 ⇓eP **P 03 08 16.7 +0.7**
BILL e 03 10 26.8
BILL eS **S 03 16 09.1 +3.5**
BILL pmax pmax
comp=Z,5.0nm,1.5s
BILL MLR MLR
comp=Z,43nm,18.0s
SKR Severo-Kuril's 58.06 48 eP P 03 08 11.5 -10
SKR pmax pmax
comp=Z,300nm,6.5s
SKR pmax pmax
comp=Z,600nm,5.3s
TORD Torodi Ar. Bea 67.96 270 P **P 03 09 27.1 -0.7**
comp=Z,0.3nm,0.6s,baz=42,slow=4.9,SNR=4.3
YKA Yellowknife Ar 80.75 4 P **P 03 10 43.0 +1.7**
comp=Z,0.1nm,0.5s,baz=346,slow=5.0,SNR=3.3
YKA Yellowknife Ar 80.75 4 P **P 03 10 43.0 +1.7**

NIED 22 03:02:00, 38.°60N×141.°90E, h53km, Mw3.6 Best double couple: M₀2.93000×10¹⁴ NP1:φs6.00000°, δ66.00000°, λ108.00000°. NP2:φs146.00000°, δ29.00000°, λ55.00000°.
IDC 22 03:02:36.0±2.5, 39.°05N×141.°74E, h0km, mb3.7/4, mb1 3.7/5, mb1mx3.4/65, mbtmp3.6/5, ML2.4/1, MS3.8/1, Ms1 3.8/1, ms1mx2.4/42, Error ellipse: s-maj=56.3km s-min=30.1km az=147.0
JMA 22 03:02:39.8, 38.°64N×141.°90E, h48km±1km, M3.7
JMA Felt I J1.
NEIC 22 03:02:41.9±0.9, 38.°8N±0.°2×141.°8E±0.°3, h57km±17km, mb4.2/4, Error ellipse: s-maj=39.2km s-min=6.8km az=132.0
ISC 22 03:02:39.8±1.3, 38.°65N±0.°05×141.°93E±0.°09, h44km±10km, n31, σ0.°90/32, mb4.0/6, Near east coast of eastern Honshu
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JKMT Kesennumamotoy 0.39 294 P **Pn 03 02 49.6 +0.3**
JKMT S **Sn 03 02 56.3 +0.2**
OFUJ Ofunato 0.47 335 P **Pn 03 02 50.7 +0.3**
OFUJ S **Sn 03 02 58.3 +0.5**
JIO Ouri 0.50 247 P **Pn 03 02 50.6 0.0**
JIO i S **Sn 03 02 58.0 -0.3**
JIKH Ishinomakikobu 0.50 227 P **Pn 03 02 50.5 -0.2**
JIKH S **Sn 03 02 58.0 -0.4**
JMK Ichinoseki 0.63 299 P **Pn 03 02 52.6 +0.2**
JMK S **Sn 03 03 01.5 +0.1**
JOM Ohasama 0.96 329 P **Pn 03 02 57.1 +0.3**
JOU Okura 1.03 254 P **Pn 03 02 57.7 -0.1**
JOU S **Sn 03 03 11.0 -0.1**
JMM Marumori 1.19 229 P **Pn 03 02 59.3 -0.7**
JMM S **Sn 03 03 13.6 -1.3**
JRG Rokugo 1.25 307 P **Pn 03 03 01.1 +0.3**
JRG S **Sn 03 03 16.1 -0.4**
JYK Kaneyama 1.25 283 P **Pn 03 03 01.0 +0.1**
ERM Erimo 3.49 15 Pn **Pn 03 03 31.9 +0.5**
MJAR Matsushiro Arr 3.63 236 Pn **Pn 03 03 35.0 +1.6**
0.3nm,0.3s,baz=44,slow=12,SNR=19
MAJO Matsushiro 3.63 236 **Pn 03 03 35.4 +1.9**
MAT Matsushiro 3.63 236 P **Pn 03 03 35.2 +1.7**
MAT eS **Sn 03 04 16.6 +1.5**
MJB9 Matsu-Tunnel 3.63 236 **Pn 03 03 35.3 +1.9**
H11N2 WAKE ISLAND Hy 28.67 124 T T 03 38 48.9
baz=316,slow=75,SNR=182
H11N1 WAKE ISLAND Hy 28.68 124 T T 03 38 49.8
baz=316,slow=75,SNR=197
H11N3 WAKE ISLAND Hy 28.69 124 T T 03 38 50.5
baz=316,slow=75,SNR=296
H11S1 WAKE ISLAND Hy 29.44 126 T T 03 39 45.6
baz=318,slow=76,SNR=102
H11S3 WAKE ISLAND Hy 29.44 126 T T 03 39 45.3
baz=318,slow=76,SNR=179
H11S2 WAKE ISLAND Hy 29.45 126 T T 03 39 46.8
baz=318,slow=76,SNR=126
ZAA0 Zalesovo Array 41.14 311 P **P 03 10 17.8 -1.6**
MK31 Makanchi Array 43.62 301 P **P 03 10 39.2 -0.5**
MKAR Makanchi Array 43.62 301 P **P 03 10 39.4 -0.4**
0.6nm,0.8s,baz=87,slow=9.9,SNR=5.4
MAKZ Makanchi 43.83 301 P **P 03 10 41.1 -0.3**
MAKZ IAmb IAmb 03 12 17.4
comp=Z,10.0nm,2.0s
KURK Kurchatov 45.27 307 P **P 03 10 52.6 -0.1**
KURK Kurchatov 45.27 307 IAmb IAmb 03 10 52.7
comp=Z,2.7nm,0.8s
KURBB Kurchatov Arra 45.34 307 P **P 03 10 52.6 -0.7**
comp=Z,2.6nm,0.5s,baz=82,slow=8.0,SNR=9.7
ILAR Eielson Array 47.91 33 P **P 03 11 13.5 +0.2**
comp=Z,0.3nm,0.8s,baz=262,slow=6.3,SNR=2.7
BVAR Borovoye Array 49.80 311 P **P 03 11 27.4 -0.5**
comp=Z,0.4nm,0.5s,baz=81,slow=6.8,SNR=3.3
PSI Prapat 52.98 239 LR LR 03 37 47.5
comp=Z,82nm,18.2s,baz=82,slow=40

IDC 22 03:09:39.3±29.0, 20.°61S×178.°19W, h429km±262km, mb3.2/3, mb1 3.3/3, mb1mx2.9/38, mbtmp4.0/3, Error ellipse: s-maj=165.8km s-min=123.2km az=87.0, Fiji Islands region
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STKA Stephens Creek 37.58 244 P P 03 16 15.1 -0.4
2.9nm,0.8s,baz=82,slow=9.0,SNR=6.7
ASAR Alice Springs 44.32 257 P P 03 17 09.8 +0.1
1.5nm,0.9s,baz=86,slow=8.6,SNR=19
ASAR PcP PcP 03 18 44.8 -0.4
0.3nm,0.5s,baz=102,slow=3.8,SNR=4.6
WRA Warramunga Arr 44.41 262 P P 03 17 10.5 0.0
1.2nm,0.7s,baz=97,slow=6.6,SNR=6.4
ARCES ARCESS Array B 129.00 350 PKP PKiKP 03 27 57.0 -0.3
2.1nm,0.8s,baz=48,slow=1.3,SNR=6.6
AKASG Malin Array Be 143.03 331 PKP PKPbc 03 28 21.3 +0.8
0.1nm,0.3s,baz=42,slow=4.6,SNR=4.7

THE 22 03:17:19.5, 38.°15N×20.°40E, h10km, ML2.7/2, Error ellipse: s-maj=0.7km s-min=0.5km az=249.0
ATH 22 03:17:19.3, 38.°16N×20.°39E, h12km±7km, ML2.4/5, Error ellipse: s-maj=1.4km s-min=0.8km az=250.0
ISC 22 03:17:19.4±1.0, 38.°16N±0.°03×20.°40E±0.°04, h11km±4km, n46, σ0.°35/68, Greece
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHV1 Chavriata, Kef 0.02 333 P **Pg 03 17 21.4 0.0**
CHV1 S **Sg 03 17 22.9 +0.1**
LXRA Lixouri, Kepha 0.05 41 P **Pg 03 17 21.7 +0.2**
LXRA S **Sg 03 17 23.3 +0.2**
LXR1 Lixouri, Cepha 0.05 41 P **Pg 03 17 21.7 +0.2**
LXR1 S **Sg 03 17 23.4 +0.3**
KEF3 Kipouria, Keph 0.06 318 P **Pg 03 17 21.8 +0.2**
KEF3 S **Sg 03 17 23.4 +0.2**
ARGA Argostoli. Kep 0.07 77 P **Pg 03 17 21.8 +0.1**
ARGA S **Sg 03 17 23.1 -0.3**
KEF2 Argostoli. Kep 0.07 87 P **Pg 03 17 21.9 +0.1**

KEF2				S	Sg	03 17 23.6	+0.1
ARG2	Argostoli	0.07	77	P	Pg	03 17 21.9	+0.1
ARG2				S	Sg	03 17 23.3	-0.2
AGT1	Agia Thekli	0.09	354	P	Pg	03 17 22.1	+0.1
AGT1				S	Sg	03 17 24.0	+0.1
	9μm,0.1s						
KEF4	Livadi, Kephal	0.10	13	P	Pg	03 17 22.3	+0.2
KEF4				S	Sg	03 17 24.5	+0.4
VLS	Valsamata	0.15	84	P	Pg	03 17 22.9	0.0
VLS				S	Sg	03 17 25.6	+0.2
VLS	Valsamata	0.15	84	P	Pg	03 17 23.0	0.0
VLS				S	Sg	03 17 25.7	+0.2
VLS				AML	AML	03 17 26.1	
	comp=E,7857μm,0.1s						
VLS				AML	AML	03 17 26.1	
	comp=N,4515μm,0.1s						
VSK1	VASILIKIADES	0.28	28	P	Pg	03 17 25.3	+0.2
KONA	Konidatara, Ke	0.30	28	P	Pg	03 17 25.5	+0.1
KONA				S	Sg	03 17 30.3	+0.9
KONA				AML	AML	03 17 30.6	
	comp=N,2475μm,0.2s						
KONA				AML	AML	03 17 30.7	
	comp=E,2154μm,0.2s						
FSK	Fiskardo	0.33	24	P	Pg	03 17 25.9	0.0
FSK				S	Sg	03 17 31.0	+0.7
	comp=E,1μm,0.1s						
FSK	Fiskardo	0.33	24	P	Pg	03 17 25.9	0.0
FSK				S	Sg	03 17 31.0	+0.7
FSK				AML	AML	03 17 31.4	
	comp=N,1714μm,0.2s						
FSK				AML	AML	03 17 31.5	
	comp=E,2876μm,0.1s						
VLMS	Volimes, Zakyn	0.35	143	P	Pg	03 17 26.7	+0.3
VLMS				S	Sg	03 17 31.9	+0.8
VLMS				AML	AML	03 17 33.5	
	comp=N,1506μm,0.6s						
VLMS				AML	AML	03 17 39.9	
	comp=E,1448μm,0.3s						
EVGI	Lefkada island	0.50	24	P	Pg	03 17 29.1	-0.1
EVGI				S	Sb	03 17 37.0	-0.6
EVGI	Lefkada island	0.50	24	P	Pg	03 17 29.1	-0.1
EVGI				S	Sg	03 17 36.9	+1.0
MGNA	Meganis	0.58	32	P	Pg	03 17 30.5	-0.2
MGNA				S	Sb	03 17 39.8	-0.1
KRI1	kERI	0.60	146	P	Pg	03 17 30.8	-0.2
LKD2	Lefkada island	0.66	18	P	Pg	03 17 32.1	-0.1
LKD2	Lefkada island	0.66	18	P	Pg	03 17 31.8	-0.4
LKD2				S	Sg	03 17 41.6	+0.7
AST1	Astakos	0.66	55	P	Pg	03 17 32.0	-0.3
VTN	Vitineika	0.67	111	P	Pg	03 17 32.7	+0.3
VTN				S	Sg	03 17 41.5	+0.3
TSLK	Tsoukalades, L	0.69	17	P	Pg	03 17 32.7	-0.1
TSLK	Tsoukalades, L	0.69	17	P	Pg	03 17 32.6	-0.3
PDO	Prodromos	0.76	55	P	Pg	03 17 33.7	-0.4
PDO				S	Sg	03 17 44.5	+0.5
PDO				AML	AML	03 17 46.2	
	comp=E,519μm,0.4s						
PDO				AML	AML	03 17 50.5	
	comp=N,425μm,0.3s						
RLS	Riolos of Patr	0.85	97	P	Pg	03 17 35.5	-0.3
RLS				S	Sb	03 17 47.6	0.0
PVO	Paravola	1.00	63	P	Pg	03 17 38.5	-0.1
DRO	Drossia	1.06	101	P	Pb	03 17 39.2	-0.5
AMT	Artemida-Makis	1.22	121	P	Pg	03 17 43.3	+0.6
LAKA	Lakka	1.25	86	P	Pn	03 17 42.6	-0.2
ANX	Ano Chora	1.27	70	P	Pn	03 17 43.1	-0.1
SERG	Sergoula	1.33	79	P	Pn	03 17 43.6	-0.3
TRIZ	Trizonia	1.34	81	P	Pn	03 17 43.5	-0.4
EVR	Evrytania	1.34	55	P	Pg	03 17 45.3	+0.1
IGT	Igoumenitsa	1.37	358	P	Pb	03 17 45.2	+0.1
KLV	Kalavryta, Ach	1.39	94	P	Pn	03 17 44.8	0.0
KALE	Kalithea	1.39	80	P	Pn	03 17 44.5	-0.3
ITM	Ithomi	1.56	128	P	Pb	03 17 48.1	-0.2
MAKR	Makrakomi, Fth	1.60	57	P	Pg	03 17 50.6	+0.4
KEK	Kerkira	1.62	343	P	Pb	03 17 48.9	-0.4
PYL	PYLOS	1.66	139	P	Pb	03 17 49.9	0.0
AGG	Agios Georgios	1.74	60	P	Pb	03 17 52.8	-0.1
KPRO	Kipourio	1.94	23	P	Pb	03 17 55.0	+0.2
PROD	Prodromos	1.98	86	P	Pb	03 17 55.3	0.0

IDC 22 03:24:26.0±2.3, 6.34S×129.77E, h0km, mb3.4/1, mb1 3.6/4, mb1mx3.4/31, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=89.5km s-min=29.1km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.37	199	Pn	Pn	03 27 25.1	+1.6
	0.1nm,0.3s,baz=24,slow=13,SNR=5.2						
FITZ				Sn	Sn	03 29 28.6	-13
	0.2nm,0.3s,baz=235,slow=12,SNR=3.7						
WRA	Warramunga Arr	14.24	162	Pn	Pn	03 27 48.1	-1.0
	0.1nm,0.3s,baz=339,slow=13,SNR=4.7						
ASAR	Alice Springs	17.68	167	P	Pn	03 28 33.5	-0.5
	0.1nm,0.3s,baz=352,slow=12,SNR=9.4						
MKAR	Makanchi Array	67.55	327	P	P	03 35 24.3	0.0
	0.1nm,0.3s,baz=117,slow=7.7,SNR=4.2						

KRSC 22 03:58:45.5±0.4, 54.09N×160.58E, h86km±10km, ML3.6
IDC 22 03:58:50.5±1.5, 53.68N×159.75E, h148km±23km, mb2.8/3, mb1 3.2/3, mb1mx2.8/55, mbtmp3.3/3, Error ellipse: s-maj=63.1km s-min=25.6km az=175.0
ISC 22 03:58:47.0±0.9, 54.12N±0.04×160.47E±0.06, h89km±8km, n40, σ1.08/52, mb3.0/3, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KII	Karymskiy	0.61	262	eP	Pn	03 59 02.1	-0.5
KII				eS	Sn	03 59 14.0	-0.2
KZV	Kizimen	1.00	354	eP	Pn	03 59 06.8	+0.1
KZV				eS	Sn	03 59 22.1	+0.6
SPN	Mys Shipunski	1.06	195	eP	Pn	03 59 07.0	-0.3
SPN				eS	Sn	03 59 22.2	-0.3
TUMD	Tumrok D	1.08	358	eP	Pn	03 59 07.4	-0.2
TUMD				eS	Sn	03 59 23.1	+0.1
NLC	Nalytchevo	1.16	215	eP	Pn	03 59 08.4	-0.1
NLC				eS	Sn	03 59 24.8	+0.1
TUMR	Tumrok	1.18	351	eP	Pn	03 59 09.2	+0.4
TUMR				eS	Sn	03 59 26.3	+1.1
SDLR	Sedlovina	1.27	229	eP	Pn	03 59 10.0	+0.1
SDLR				eS	Sn	03 59 28.4	+1.3
KRER	Koryakskii	1.31	232	eP	Pn	03 59 10.9	+0.4
KRER				eS	Sn	03 59 28.9	+0.7
SMAR	Somma	1.31	230	eP	Pn	03 59 10.7	+0.1
KRX	Arik	1.32	235	eP	Pn	03 59 11.0	+0.4
KRX				eS	Sn	03 59 28.7	+0.3
AVH	Avacha	1.34	231	eP	Pn	03 59 11.2	+0.4
AVH				eS	Sn	03 59 29.9	+1.2
UGLR	Uglovaya	1.34	227	eP	Pn	03 59 10.9	+0.1
UGLR				eS	Sn	03 59 29.2	+0.5
KOK	Koryaka	1.37	233	eP	Pn	03 59 11.5	+0.3
DALK	Dalny	1.50	224	eP	Pn	03 59 12.7	+0.1
DALK				eS	Sn	03 59 32.3	+0.3
PET	Petropavlovsk	1.54	225	eP	Pn	03 59 13.4	+0.2
PET				eS	Sn	03 59 33.7	+0.7
KMNR	Kamenistaya	1.64	355	eP	Pn	03 59 15.6	+1.0
BZGR	Bezymyannyi-Gr	1.82	4	eP	Pn	03 59 18.0	+1.0
KIRR	Kirishev	1.83	358	eP	Pn	03 59 17.1	0.0
KPT	Kopyto	1.85	356	eP	Pn	03 59 18.0	+0.7
KRMR	Karymshinskiy	1.91	228	eP	Pn	03 59 18.3	+0.4
KRMR				eS	Sn	03 59 43.4	+2.0
ZLN	Zelenaya	1.91	6	eP	Pn	03 59 18.1	+0.1
PETK	Petropavlovsk-	1.94	239	P	Pn	03 59 18.2	-0.1
	4.1nm,0.3s,baz=70,slow=15,SNR=26						
RUS	Russkaya	2.06	215	eS	Sn	03 59 44.8	-0.2
ESO	Esso	2.07	331	eP	Pn	03 59 20.0	-0.1
KRSR	Krestovskiy	2.10	2	eP	Pn	03 59 21.1	+0.6
GRL	Gorelyy	2.13	223	eP	Pn	03 59 21.6	+0.6
MTVR	Mutnovka	2.14	221	eP	Pn	03 59 22.0	+0.9
APC	Apacha	2.31	240	eP	Pn	03 59 23.7	+0.5
ASAK	Asacha	2.33	223	eP	Pn	03 59 24.3	+0.7
BDR	Baidarnaya	2.49	10	eP	Pn	03 59 27.1	+1.4
KBTR	Krutoberegovo	2.49	32	eP	Pn	03 59 27.4	+1.8
SRKR	Sorokina	2.57	9	eP	Pn	03 59 27.1	+0.4
KDTR	Khodutka, Kamc	2.73	213	eP	Pn	03 59 30.6	+1.7
BKI	Bering	3.38	69	eP	Pn	03 59 37.3	-0.2
BKI				eS	Sn	04 00 14.7	-1.8
ILAR	Eielson Array	27.94	47	P	P	04 04 31.5	+3.0
	0.4nm,0.9s,baz=276,slow=9.0,SNR=3.9						
H11N2	WAKE ISLAND Hy	34.68	169	T	T	04 42 43.8	
	baz=354,slow=76,SNR=9.9						
H11N3	WAKE ISLAND Hy	34.70	169	T	T	04 42 48.8	
	baz=354,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	34.70	169	T	T	04 42 54.8	
	baz=354,slow=76,SNR=9.7						
MKAR	Makanchi Array	47.91	295	P	P	04 07 11.8	-4.3
	0.2nm,0.6s,baz=68,slow=9.2,SNR=3.2						
TXAR	Lajitas Array	70.03	68	P	P	04 09 50.1	+0.8
	0.1nm,0.5s,baz=308,slow=4.4,SNR=3.6						

NEIC 22 04:05:07.8±1.4, 18.75S±0.09×169.1E±0.1, h222km±6km, mb4.3/16, Error ellipse: s-maj=15.7km s-min=12.0km az=112.0
IDC 22 04:05:09.3±1.6, 18.91S×169.13E, h240km±16km, mb3.8/11, mb1 4.0/12, mb1mx3.7/42, mbtmp4.4/12, Error ellipse: s-maj=31.4km s-min=11.9km az=150.0
ISC 22 04:05:09.8±0.6, 19.1S±0.1×169.2E±0.1, h250km, n55, σ0.88/53, mb4.2/16, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.95	220	P	Pn	04 06 11.9	-1.2
	21nm,0.3s,baz=149,slow=22,SNR=141						
DZM				S	S	04 07 04.2	+0.7
	8.9nm,0.3s,baz=109,slow=13,SNR=4.4						
DZM	Mont Dzumac	3.95	220		Pn	04 06 11.3	-1.9
SANVU	Saraoutou	4.06	332		Pn	04 06 06.8	-7.6
NOUC	Port Laguerre	4.06	221		Pn	04 06 13.1	-1.2
MSVF	Nonsavu	8.51	83		Pn	04 07 09.6	-0.2
EIDS	Eidsvold	17.90	246	P	P	04 09 01.3	-0.1
EIDS				IAmb	IAmb	04 09 04.4	
	comp=Z,13nm,1.1s						
CTA	Charters Tower	21.64	263	P	P	04 09 40.4	-0.3
	comp=Z,8.6nm,0.6s,baz=87,slow=11,SNR=12						
STKA	Stephens Creek	27.91	237	P	P	04 10 38.9	+1.9
	comp=Z,7.5nm,0.7s,baz=67,slow=9.0,SNR=22						
STKA	Stephens Creek	27.91	237	P	P	04 10 38.8	+1.9
WB0	Warramunga Arr	32.80	263	P	P	04 11 19.6	-0.4
WB2	Warramunga Arr	32.82	263	P	P	04 11 19.7	-0.6
WRA	Warramunga Arr	32.83	263	P	P	04 11 19.7	-0.7
	comp=Z,5.3nm,0.6s,baz=97,slow=8.4,SNR=34						
AS31	Alice Springs	33.13	256	P	P	04 11 23.1	+0.2
ASAR	Alice Springs	33.13	256	P	P	04 11 23.4	+0.4
	comp=Z,34nm,0.4s,baz=82,slow=8.8,SNR=796						
ASAR				S	S	04 16 24.6	+1.1
	comp=Z,1.2nm,0.9s,baz=82,slow=19,SNR=6.4						
FITZ	Fitzroy Crossi	41.22	264	P	P	04 12 30.8	+0.1
FITZ				IAmb	IAmb	04 12 32.3	
	comp=Z,9.4nm,0.8s						
PETK	Petropavlovsk-	72.55	353	P	P	04 16 09.1	-0.2
	comp=Z,7.2nm,0.7s,baz=161,slow=8.7,SNR=10						
KLR	Kul'dur	75.69	336	P	P	04 16 27.5	0.0
	comp=Z,0.5nm,0.3s,baz=100,slow=2.5,SNR=5.9						
SEY	Seymchan	82.78	352	P	P	04 17 05.9	+0.5
	comp=Z,1.1nm,0.5s,baz=180,slow=14,SNR=5.2						
ULN	Ulaanbaatar	86.69	323	P	P	04 17 25.8	+0.2
ULN				IAmb	IAmb	04 17 26.6	
	comp=Z,3.7nm,0.9s						
ORV	Oroville	86.99	46	P	P	04 17 27.0	+0.1
SONM	Songino Array	87.05	323	P	P	04 17 27.5	+0.3
	comp=Z,2.0nm,0.8s,baz=148,slow=4.8,SNR=12						
CMB	Columbia Colle	87.07	48	P	P	04 17 28.0	+0.6
CMB				IAmb	IAmb	04 17 28.7	
	comp=Z,3.5nm,0.8s						
AFDM	Forest Hills D	87.07	47	P	P	04 17 27.8	+0.4
YBH	Yreka Blue Hor	87.20	44	P	P	04 17 28.6	+0.6
	comp=Z,3.5nm,1.0s,baz=196,slow=2.8,SNR=4.9						
YBH	Yreka Blue Hor	87.20	44	IAmb	IAmb	04 17 29.4	
	comp=Z,4.3nm,0.9s						
PAHR	Pah Rah Range	88.51	47	P	P	04 17 35.3	+1.0
PAHR				IAmb	IAmb	04 17 36.5	
	comp=Z,5.8nm,1.2s						
NVAR	Mina Array Bea	88.71	49	P	P	04 17 34.8	-0.6
	comp=Z,1.0nm,0.8s,baz=228,slow=8.3,SNR=8.5						
MDM	Murphy Dome	89.84	17	P	P	04 17 38.7	-1.0
D05A	Enumclaw	90.24	39	P	P	04 17 42.9	+0.9
TUC	Tucson	91.94	57	P	P	04 17 51.7	+1.4
BMO	Blue Mountains	92.12	43	P	P	04 17 51.4	+0.4
PDAR	Pinedale Array	96.52	47	P	P	04 18 12.6	+1.3
	comp=Z,0.1nm,0.4s,baz=297,slow=4.0,SNR=2.7						
TXAR	Lajitas Array	96.72	61	P	P	04 18 13.5	+1.1
	comp=Z,0.3nm,0.8s,baz=232,slow=6.2,SNR=5.8						
WMQ	Urumqi	97.05	314	eP	P	04 18 14.1	+0.7
YKA	Yellowknife Ar	100.53	27	P	Pdif	04 18 28.0	-0.3
	comp=Z,1.2nm,0.8s,baz=250,slow=4.5,SNR=8.5						
MKAR	Makanchi Array	101.58	316	P	Pdif	04 18 35.1	+1.6
	comp=Z,0.3nm,0.5s,baz=90,slow=5.8,SNR=3.2						
AKTO	Aktyubinsk	117.91	318	PKP	PKiKP	04 23 26.1	-0.4
	comp=Z,0.6nm,0.6s,baz=82,slow=7.1,SNR=3.9						
ARCES	ARCESS Array B	124.88	345	PKP	PKPdf	04 23 38.4	-0.9
	comp=Z,4.8nm,1.0s,baz=71,slow=2.3,SNR=17						
BRTR	Keskin Array B	136.67	308	PKP	PKiKP	04 24 03.9	-0.6
	comp=Z,0.3nm,0.6s,baz=140,slow=5.0,SNR=2.7						
MODS	Modra-Piesok	142.97	329	ePKP	PKiKP	04 24 16.6	-0.3
CONA	Conrad Observa	143.96	329	i PKPdf	PKPdf	04 24 15.4	-0.1
	comp=Z,1.8nm,0.6s						
GERES	GERESS Array B	144.31	332	PKP	PKPbc	04 24 14.4	-0.7
	comp=Z,2.2nm,0.8s,baz=41,slow=4.3,SNR=17						
ARSA	Arzberg	144.60	329	i PKPdf	PKPbc	04 24 15.2	-0.7
	comp=Z,1.4nm,0.5s						
MOA	Molln	144.78	330	i PKPdf	PKPdf	04 24 16.8	0.0
	comp=Z,6.7nm,0.7s						
SOKA	Soboth	145.24	328	ePKPdf	PKPab	04 24 18.4	+0.1
	comp=Z,3.6nm,0.5s,SNR=9.2						
OBKA	Obir	145.59	328	i PKPab	PKPab	04 24 19.4	-0.4
	comp=Z,2.3nm,0.7s						
KBA	Koelnbreinsper	145.77	330	i PKPab	PKPab	04 24 19.4	-1.1
	comp=Z,1.2nm,0.5s						
MYKA	Terra Mystica	145.95	329	ePKPab	PKPab	04 24 19.8	-1.3
	comp=Z,3.1nm,0.6s						
ABTA	Abfaltersbach	146.40	331	i PKPab	PKPbc	04 24 20.6	-0.8
	comp=Z,2.4nm,0.6s						
WTTA	Wattenberg	146.41	332	i PKPab	PKPbc	04 24 21.0	-0.6
	comp=Z,2.0nm,0.5s						
MOTA	Moosalm	146.59	333	i PKPab	PKPbc	04 24 21.7	-0.3
	comp=Z,3.0nm,0.7s						
RETA	Reutte	146.62	333	i PKPab	PKPbc	04 24 21.8	-0.2
	comp=Z,0.8nm,0.4s						
SQTA	Sankt Quirin	146.63	332	i PKPab	PKPbc	04 24 21.7	-0.4
	comp=Z,3.0nm,0.5s						
FETA	Feichten	147.00	333	i PKPab	PKPab	04 24 23.3	-2.0
	comp=Z,2.0nm,0.5s,SNR=6.5						
TORD	Torodi Ar. Bea	166.63	246	PKP	PKPdf	04 24 46.1	0.0
	comp=Z,1.0nm,0.8s,baz=101,slow=1.5,SNR=4.7						

IDC 22 04:15:28.4±1.4, 40.42N×113.73E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.3/49, mbtmp3.4/4, ML3.2/1, Error ellipse: s-maj=50.6km s-min=23.5km az=57.0
ISC 22 04:15:31.2±1.0, 40.5N±0.2×113.52E±0.08, h10km, n6, σ1.94/7, mb3.7/3, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJI	Beijing	2.07	101	Pg	Pg	04 16 11.4	+0.4
BJI				Sg	Sg	04 16 39.8	+2.0
BJI				smax	smax		
	comp=N,170nm,0.9s						
BJI				smax	smax		
	comp=E,76nm,0.8s						
BTO	Baotou	2.67	274	ePn	Pn	04 16 05.5	-8.9
BTO				ePg	Pb	04 16 12.5	-6.7
BTO				Sg	Sn	04 16 49.3	+2.4
SONM	Songino Array	8.97	328	Pn	Pn	04 17 40.8	0.0
	comp=E,0.2nm,0.3s,baz=148,slow=12,SNR=5.0						
SONM				Lg	Lg	04 20 16.4	
	comp=E,0.2nm,0.3s,baz=145,slow=29,SNR=5.9						
KURBB	Kurchatov Arra	26.30	304	P	P	04 21 07.3	+0.5
	comp=E,0.2nm,0.3s,baz=98,slow=11,SNR=2.9						
ASAR	Alice Springs	66.57	160	P	P	04 26 19.6	-1.9
	comp=E,0.6nm,1.0s,baz=359,slow=5.6,SNR=5.0						
YKA	Yellowknife Ar	70.35	22	P	P	04 26 43.5	-1.2
	comp=E,0.5nm,0.8s,baz=323,slow=5.7,SNR=6.1						

IDC 22 04:19:45.8±1.1, 3.44N×92.71E, h0km, mb4.1/8, mb1 4.2/11, mb1mx3.8/49, mbtmp4.1/11, ML4.2/3, MS3.1/2, Ms1 3.1/2, ms1mx2.7/37, Error ellipse: s-maj=36.7km s-min=17.3km az=47.0
NEIC 22 04:19:49.8±1.6, 3.5N±0.1×92.77E±0.09, h28km±5km, mb4.3/10, Error ellipse: s-maj=18.6km s-min=11.6km az=205.0
ISC 22 04:19:50.3±0.8, 3.4N±0.1×92.85E±0.08, h35km, n31, σ1.89/29, mb4.2/13, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	5.17	114	Pn	Pn	04 21 06.0	+0.7
PSI	Prapat	6.09	96	Pn	Pn	04 21 20.5	+2.4
	3.2nm,0.3s,baz=332,slow=8.6,SNR=14						
PSI				Sn	Sn	04 22 21.9	-4.7
	1.0nm,0.3s,baz=311,slow=11,SNR=1.8						
RPSI	Rantau Prapat	6.11	97		Pn	04 21 19.9	+1.9
RPSI	Rantau Prapat	6.11	97		Pn	04 21 20.5	+2.4
RPSI					Sn	04 22 21.9	-4.8
KULM	Kulim	7.99	76	Pn	Pn	04 21 45.5	+1.5
PALK	Pallekele	12.69	288	Pn	Pn	04 22 44.5	-3.9
	1.0nm,0.3s,baz=89,slow=13,SNR=3.5						
PALK				Sn	Sn	04 24 51.1	-17
	1.8nm,0.3s,baz=191,slow=19,SNR=10						
PALK				LR	LR	04 26 55.8	
	comp=Z,112nm,19.3s,baz=137,slow=34						
PALK	Pallekele	12.69	288		Sn	04 24 54.2	-14
CMAR	Chiang Mai Arr	16.08	21	Pn	Pn	04 23 33.4	-0.5
	0.5nm,0.3s,baz=218,slow=13,SNR=12						
CHTO	Chiang Mai	16.41	21	Pn	Pn	04 23 37.0	-1.1
LEM	Lembang	17.92	125	LR	LR	04 30 28.8	
	comp=Z,58nm,21.1s,baz=236,slow=36						
SHL	Shillong	22.03	358	P	P	04 24 44.0	+1.9
SHL				IAmb	IAmb	04 24 45.8	
	comp=Z,20nm,1.2s						
H08S2	Diego Garcia H	23.10	242	T	T	04 50 07.6	
	baz=62						
H08S3	Diego Garcia H	23.10	242	T	T	04 50 05.6	
	baz=62						
H08S1	Diego Carcia H	23.12	242	T	T	04 50 07.0	
	baz=62						
LSA	Lhasa	26.18	357	P	P	04 25 23.1	+0.9
LSA				IAmb	IAmb	04 25 24.6	
	comp=Z,7.6nm,0.6s						
XAN	Xi'an	33.94	24	P	P	04 26 29.7	-0.6
NIL	Nilore	35.20	331	P	P	04 26 40.7	-0.5
MK31	Makanchi Array	44.16	350	P	P	04 27 55.6	0.0
MK31				IAmb	IAmb	04 28 18.9	
	comp=Z,3.1nm,0.8s						
MKAR	Makanchi Array	44.16	350	P	P	04 27 56.0	+0.3
	comp=Z,2.6nm,0.6s,baz=171,slow=8.8,SNR=17						
MAKZ	Makanchi	44.23	349	P	P	04 27 56.2	0.0
MAKZ				IAmb	IAmb	04 28 09.9	
	comp=Z,3.6nm,0.8s						
SONM	Songino Array	45.75	13	P	P	04 28 09.1	+0.8
	comp=Z,0.4nm,0.5s,baz=191,slow=7.3,SNR=5.9						
GEYT	Alibeck	46.76	322	P	P	04 28 17.1	+0.7
	comp=Z,2.6nm,0.6s,baz=134,slow=8.5,SNR=4.8						
WRA	Warramunga Arr	46.89	121	P	P	04 28 19.1	+1.5
	comp=Z,0.7nm,0.3s,baz=298,slow=8.9,SNR=5.0						
ASAR	Alice Springs	48.20	126	P	P	04 28 29.1	+1.3
	comp=Z,0.2nm,0.5s,baz=296,slow=7.5,SNR=3.7						
ASAR				PcP	PcP	04 29 56.4	+1.6
	comp=Z,0.3nm,0.7s,baz=316,slow=3.9,SNR=2.8						
KURBB	Kurchatov Arra	48.56	348	P	P	04 28 30.3	+0.3
	comp=Z,2.3nm,0.7s,baz=167,slow=7.1,SNR=12						
KURK	Kurchatov	48.62	348	P	P	04 28 30.3	-0.2
ZAA0	Zalesovo Array	50.79	354	P	P	04 28 46.8	-0.1
ZAA0				IAmb	IAmb	04 28 48.1	
	comp=Z,2.8nm,0.6s						
ZALV	Zalesovo Beam	50.79	354	P	P	04 28 47.1	+0.2
	comp=Z,2.4nm,0.4s,baz=185,slow=8.8,SNR=9.4						
TIXI	Tiksi	71.81	11	P	P	04 31 09.1	+0.1
GERES	GERESS Array B	80.29	319	P	P	04 31 58.7	+0.9
	comp=Z,1.2nm,0.6s,baz=104,slow=5.6,SNR=13						
TXAR	Lajitas Array	143.77	25	PKP	PKPdf	04 39 22.6	0.0
	comp=Z,0.1nm,0.4s,baz=258,slow=2.7,SNR=3.1						

SOME 22 04:24:09.6, 41.28N×74.80E, h10km
KNET 22 04:24:11.8±0.7, 41.49N×74.70E, h10km±3km, ml2.7, Error ellipse: s-maj=4.0km s-min=2.9km az=177.0
KRNET 22 04:24:11.0±0.1, 41.42N×74.74E, h21km, mb3.4
NNC 22 04:24:12.5±0.9, 41.47N×74.65E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=5.9km s-min=3.8km az=16.0
ISC 22 04:24:11.2±1.2, 41.44N±0.03×74.73E±0.02, h8km±9km, n82, σ1.55/131, 30C-39D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	Aral	0.52	324	⇓ iP	Pg	04 24 21.1	-0.2
	baz=26						
ARLS				⇓ iS	Sg	04 24 28.6	+0.5
	baz=26						
KZA	Kyzart	0.75	31	⇓ iP	Pg	04 24 25.7	0.0
	baz=30						
KZA				⇓ iS	Sb	04 24 36.1	-1.2
	baz=30						
KZA	Kyzart	0.75	31	⇑P	Pg	04 24 25.8	+0.2
	31nm,0.2s,SNR=45						
KZA				⇓S	Sb	04 24 36.5	-0.8
	113nm,0.2s						
UCH	Uchtor	0.80	349	⇓ iP	Pg	04 24 27.0	+0.3
	baz=48						
UCH				⇓ iS	Sb	04 24 38.1	-0.8
	baz=48						
UCH	Uchtor	0.80	349	⇓P	Pg	04 24 27.0	+0.3
	65nm,0.4s,SNR=155						
UCH				⇑S	Sb	04 24 38.8	-0.1
	158nm,0.4s						
NRN	Naryn	0.96	90	⇑ iP	Pg	04 24 28.1	-1.5
	baz=89						
NRN				⇑ iS	Sg	04 24 40.9	-1.2
	baz=89						
AML	Almayashu	1.04	312	⇓ iP	Pg	04 24 30.6	-0.5
	baz=13						
AML				⇓ iS	Sg	04 24 44.8	+0.2
	baz=13						
AML	Almayashu	1.04	312	⇓P	Pg	04 24 30.6	-0.5
	39nm,0.3s,SNR=67						
AML				⇓S	Sg	04 24 45.0	+0.4
	168nm,0.3s						
AAK	Ala-Archa	1.21	352	⇑ eP	Pb	04 24 33.9	-0.5
	baz=52						
AAK				⇑ iS	Sg	04 24 50.2	+0.1
	baz=52						
AAK	Ala-Archa	1.21	352	⇓P	Pb	04 24 34.3	-0.2
	28nm,0.3s,SNR=17						
AAK				⇑S	Sn	04 24 51.0	-0.2
	68nm,0.4s						
AAK	Ala-Archa	1.21	352	⇑P	Pb	04 24 34.0	-0.5
	11nm,0.3s						
AAK				⇑S	Sn	04 24 50.8	-0.4
	57nm,0.5s						
KBK	Karagaybulak	1.23	8	⇑ iP	Pb	04 24 34.4	-0.4
	baz=7.0						
KBK				⇑ iS	Sn	04 24 51.0	-0.7
	baz=7.0						
KBK	Karagaybulak	1.23	8	⇓P	Pb	04 24 34.8	+0.1
	40nm,0.1s,SNR=69						
KBK				⇓S	Sn	04 24 52.2	+0.5
	125nm,0.2s						
ARSB	Arslanbob	1.32	266	⇑ iP	Pn	04 24 35.4	-0.6
	baz=66						
ARSB				⇑ iS	Sb	04 24 53.3	-0.1
	baz=66						
FRU1	Bishkek	1.37	357	⇑ iP	Pn	04 24 36.6	-0.1
	baz=57						
FRU1				⇑ iS	Sg	04 24 55.4	+0.1
	baz=57						
BOOM	Boomskoye usch	1.39	40	⇑ iP	Pn	04 24 36.8	-0.2
	baz=40						
BOOM				⇑ iS	Sg	04 24 55.7	-0.1
	baz=40						
ULHL	Ulahol	1.39	54	⇓ iP	Pn	04 24 36.6	-0.5
	baz=53						
ULHL				⇓ iS	Sn	04 24 55.3	-0.5
	baz=53						
ULHL	Ulahol	1.39	54	⇑P	Pn	04 24 37.0	-0.1
	20nm,0.3s,SNR=55						
EKS2	Erkin-Say	1.41	330	⇓ iP	Pn	04 24 37.4	+0.1
	baz=30						
EKS2				⇓ iS	Sg	04 24 56.4	-0.2
	baz=30						
EKS2	Erkin-Say	1.41	330	⇓P	Pb	04 24 37.8	-0.1
	20nm,0.4s,SNR=39						
CHMS	Chumysh	1.56	1	⇑ iP	Pb	04 24 40.1	-0.2
	baz=0.0						
CHMS				⇑ iS	Sg	04 25 00.9	-0.4
	baz=0.0						
CHMS	Chumysh	1.56	1	⇓P	Pg	04 24 40.7	-0.4
	23nm,0.3s,SNR=11						

CHMS ⇑S Sg 04 25 01.6 +0.3
67nm,0.4s
CHMS Chumysh 1.56 1 ⇑P Pb 04 24 40.2 -0.2
11nm,0.5s
CHMS ⇑S Sg 04 25 01.5 +0.2
104nm,0.6s
MRKS Merke 1.72 320 eP Pb 04 24 43.5 +0.4
44nm,0.2s
MRKS eS Sg 04 25 07.8 +1.4
53nm,0.1s
MRKS Merke 1.72 320 P Pb 04 24 42.9 -0.2
55nm,0.3s
MRKS S Sg 04 25 06.4 0.0
USP Ospenovka 1.83 355⇓eP Pb 04 24 44.4 -0.6
baz=55
USP ⇓iS Sb 04 25 08.7 +0.5
baz=55
USP Ospenovka 1.83 355 ⇓P Pb 04 24 45.5 +0.5
17nm,0.3s,SNR=19
KST Kastek 1.85 29 eP Pg 04 24 48.1 +1.5
31nm,0.2s
KST eS Sg 04 25 15.8 +5.3
433nm,0.3s
KST Kastek 1.85 29 P Pg 04 24 46.1 -0.5
32nm,0.4s
KST S Sg 04 25 11.9 +1.3
462nm,0.5s
KDJ Kajisay 1.96 69⇓iP Pn 04 24 46.1 +1.2
baz=68
KDJ ⇓iS Sb 04 25 11.5 -0.4
baz=68
DGS Degeres 1.96 23 eP Pg 04 24 49.9 +1.1
26nm,0.2s
DGS eS Sg 04 25 18.8 +4.6
184nm,0.3s
DGS Degeres 1.96 23 Pg Pg 04 24 48.2 -0.6
41nm,0.4s
DGS Lg Lg 04 25 15.4
192nm,0.6s
ARK Arkit 2.10 281 ⇓iP Pn 04 24 48.0 +1.2
baz=81
ARK ⇓iS Sb 04 25 15.1 -0.9
baz=81
MTBS Maitube 2.11 36 eP Pb 04 24 50.3 +0.5
26nm,0.2s
MTBS eS Sg 04 25 19.7 +0.7
178nm,0.2s
MTBS Maitube 2.11 36 Pg Pg 04 24 50.9 -0.8
44nm,0.4s
MTBS Lg Lg 04 25 19.9
192nm,0.5s
IZV Izvestkoviy 2.12 41 eP Pg 04 24 52.1 +0.2
23nm,0.2s
IZV eS Sg 04 25 22.6 +3.2
162nm,0.3s
IZV Izvestkoviy 2.12 41 Pg Pb 04 24 50.8 +0.8
45nm,0.4s
IZV Lg Lg 04 25 19.7
165nm,0.5s
TNSS Tian-Shan 2.29 45 eP Pb 04 24 53.6 +0.5
19nm,0.2s
TNSS eS Sg 04 25 25.1 +0.2
110nm,0.4s
KRBS Karabastau 2.36 17 eP Pb 04 24 55.1 +1.1
31nm,0.2s
KRBS eS Sg 04 25 27.7 +0.7
102nm,0.3s
KRBS Karabastau 2.36 17 Pg Pg 04 24 55.3 -1.2
KRBS Lg Lg 04 25 27.6
AAA Alma-Ata 2.40 42 eP Pg 04 24 56.4 -0.8
15nm,0.0s
AAA eS Sg 04 25 30.3 +2.1
45nm,0.1s
AAA Alma-Ata 2.40 42 Pg Pg 04 24 56.4 -0.8
46nm,0.2s
AAA Lg Lg 04 25 29.0
92nm,0.3s
KNDC Almaty 2.43 42 ⇓Pg Pb 04 24 55.8 +0.6
KNDC ⇑Lg Lg 04 25 29.9
MDOK Medeo 2.44 44 eP Pb 04 24 55.7 +0.4
15nm,0.3s
MDOK eS Sg 04 25 29.1 -0.4
108nm,0.3s
MDOK Medeo 2.44 44 ⇑P Pb 04 24 55.8 +0.5
28nm,0.6s
MDOK ⇑S Sg 04 25 28.9 -0.6
104nm,0.6s
MDOK Medeo 2.44 44 Pg Pb 04 24 56.4 +1.1
32nm,0.5s
MDOK Lg Lg 04 25 28.7
70nm,0.7s
KOTS Kotyrbulak 2.52 44 eP Pb 04 24 57.3 +0.6
77nm,0.3s
KOTS eS Sg 04 25 32.0 -0.1
455nm,0.3s
KOTS Kotyrbulak 2.52 44 Pg Pg 04 24 58.1 -1.3
81nm,0.5s
KOTS Lg Lg 04 25 32.1
461nm,0.5s
ANVS Anan'yevo 2.57 57⇓eP Pn 04 24 54.6 +1.3
baz=57
ANVS ⇓iS Sn 04 25 25.8 +1.0
baz=57
KTBS Karatobe 2.69 32 eP Pb 04 25 00.1 +0.5
15nm,0.4s
KTBS eS Sg 04 25 36.8 -0.8
221nm,0.5s
KTBS Karatobe 2.69 32 Pg Pg 04 25 01.6 -1.1
16nm,0.5s
KTBS Lg Lg 04 25 37.9
221nm,0.7s
KUU Kurty 2.73 25 eP Pb 04 25 01.0 +0.8
6.9nm,0.2s
KUU eS Sg 04 25 38.1 -0.6
183nm,0.4s
KUU Kurty 2.73 25 Pg Pg 04 25 01.8 -1.6
18nm,0.4s
KUU Lg Lg 04 25 37.9
190nm,0.6s
CHKK Chushkaly 2.93 34 eP Pb 04 25 04.5 +0.8
2.3nm,0.1s
CHKK eS Sg 04 25 44.2 -1.2
74nm,0.2s
CHKK Chushkaly 2.93 34 Pg Pb 04 25 05.2 +1.5
9.4nm,0.2s
CHKK Lg Lg 04 25 44.1
48nm,0.7s
ZHN Zhinishke 3.25 57 eP Pb 04 25 09.9 +0.8
1.9nm,0.1s
ZHN eS Sg 04 25 53.3 -2.2
15nm,0.2s
ZHN Zhinishke 3.25 57 Pg Pb 04 25 10.7 +1.5
4.2nm,0.2s
ZHN Lg Lg 04 25 52.8
18nm,0.4s
KURS Kuram 3.27 50 eP Pb 04 25 10.5 +1.1
4.3nm,0.2s
KURS eS Sg 04 25 54.5 -1.6
21nm,0.3s
KURS Kuram 3.27 50 Pg Pb 04 25 11.3 +1.9
7.0nm,0.5s
KURS Lg Lg 04 25 54.3
17nm,1.0s
BTK Batken 3.27 246⇓eP Pn 04 25 03.9 +1.0
baz=47
BTK ⇓iS Sn 04 25 43.0 +0.9
baz=47
KK31 Karatay Array 3.54 299 ⇓Pg Pb 04 25 15.2 +1.1
3.2nm,0.3s,baz=137,slow=6.7,SNR=41
KK31 ⇓Lg Lg 04 26 03.3
16nm,0.5s,baz=124,slow=28,SNR=12
KPKS Kokpek 3.56 54 eP Pb 04 25 15.4 +0.9
1.7nm,0.1s
KPKS eS Sg 04 26 02.4 -3.1
58nm,0.3s
IUG Iuzhnay 3.58 283 eP Pb 04 25 16.6 +1.8
1.3nm,0.2s
IUG eS Sg 04 26 04.6 -1.6
43nm,0.5s
ARXS Arharly 3.59 38 eP Pb 04 25 15.7 +0.8
3.0nm,0.2s
ARXS eS Sg 04 26 03.5 -2.9
64nm,0.4s
ARXS Arharly 3.59 38 Pg Pg 04 25 18.5 -1.4
12nm,0.6s
ARXS Lg Lg 04 26 03.9
51nm,0.6s
UZB Uzynbulak 3.61 60 eP Pb 04 25 16.2 +0.8
3.7nm,0.1s
UZB eS Sg 04 26 04.1 -3.1
19nm,0.4s
UZB Uzynbulak 3.61 60 Pg Pg 04 25 18.6 -1.8
15nm,0.5s
UZB Lg Lg 04 26 06.9
23nm,0.7s
SHLS Shalkode 3.91 62 eP Pg 04 25 26.5 +0.5
2.0nm,0.1s
SHLS eS Sg 04 26 21.8 +5.1
47nm,0.3s
SHLS Shalkode 3.91 62 Pg Pg 04 25 29.6 +3.6
23nm,0.7s
SHLS Lg Lg 04 26 25.6
48nm,0.6s
BRLS Borolday 3.96 295 eP Pb 04 25 23.9 +2.6
0.2nm,0.1s
BRLS eS Sg 04 26 17.3 -1.2
18nm,0.5s
BRLS Borolday 3.96 295 Pg Pg 04 25 24.7 -2.4
1.6nm,0.3s
BRLS Lg Lg 04 26 17.0
2.6nm,0.5s
PDGK Podgornoye 4.00 60 Pg Pg 04 25 25.9 -1.9
3.8nm,0.6s
PDGK Lg Lg 04 26 18.7
11nm,0.7s
PDGK Podgornoye 4.00 60 ⇓Pg Pb 04 25 24.6 +2.6
6.5nm,0.6s
PDGK ⇓Lg Lg 04 26 26.3
28nm,0.8s
TDK Taldyqorghan 4.46 36 eP Pb 04 25 32.7 +2.9
7.6nm,0.1s
TDK eS Sg 04 26 32.3 -2.1
28nm,0.2s
TDK Taldyqorghan 4.46 36 Pg Pg 04 25 33.2 -3.4
37nm,0.5s
TDK Lg Lg 04 26 31.7
59nm,0.6s
DJR Jarkent 4.71 50 eP Pb 04 25 36.4 +2.3
0.3nm,0.0s
DJR eS Sg 04 26 38.9 -3.5
8.4nm,0.2s
DJR Jarkent 4.71 50 Pg Pg 04 25 38.2 -3.2
2.0nm,0.4s
DJR Lg Lg 04 26 41.3
19nm,0.8s
KAPS Kapalarasan 5.12 40 Pg Pg 04 25 45.0 -4.1
3.5nm,0.7s
KAPS Lg Lg 04 26 52.0
19nm,0.7s
MAKZ Makanchi 7.48 42 ⇓Pn Pn 04 26 02.4 +1.8
1.5nm,0.9s
MAKZ ⇑Lg Lg 04 28 12.8
4.2nm,0.9s
MK31 Makanchi Array 7.63 43 ⇑Pn Pn 04 26 07.4 +4.8
1.1nm,0.6s,baz=217,slow=13,SNR=8.4
MK31 ⇑Lg Lg 04 28 17.8
4.7nm,0.8s,baz=225,slow=29,SNR=5.3
KURBB Kurchatov Arra 9.56 15 ⇓Lg Lg 04 29 14.4
17nm,0.8s
KURK Kurchatov 9.66 15 ⇑Lg Lg 04 29 17.2
15nm,0.9s

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*IDC **22** 04:56:15.2±0.6, 37.74N×102.39E, h0km, mb4.0/21, mb1 4.2/25, mb1mx4.1/59, mbtmp4.1/25, ML4.3/4, MS3.8/27, Ms1 3.8/27, ms1mx3.7/53, Error ellipse: s-maj=15.9km s-min=12.6km az=42.0*
*MOS **22** 04:56:16.8±1.1, 37.75N×102.32E, h18km, mb4.6/25, MS4.2/4, Error ellipse: s-maj=8.5km s-min=5.4km az=119.2*
*BJI **22** 04:56:16.0±0.0, 37.61N×102.27E, h6km, mB4.6/24, mb4.5/29, ML4.6/19, Ms4.5/47, Ms7 4.3/42*
*NEIC **22** 04:56:17.5±1.8, 37.76N±0.10×102.3E±0.1, h10km±2km, mb4.4/32, Error ellipse: s-maj=14.6km s-min=13.9km az=80.0*
ISC 22 04:56:17.1±0.3, 37.68N±0.04×102.31E±0.03, h10km, n177, σ1.71/171, mb4.4/50, MS3.8/27, 24C-7D, Gansu

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

LZH Lanzhou 2.01 142 Pg Pb 04 56 51.1 -2.7
LZH Sg Sg 04 57 20.9 -0.8
LZH smax smax
comp=N,10μm,1.0s
LZH smax smax
comp=E,10μm,1.1s
GTA Gaotai 2.61 312 Pn Pn 04 57 00.3 +0.8
GTA Pg Pb 04 57 03.1 -1.0
GTA Sn Sn 04 57 33.0 +1.7
GTA Sg Sb 04 57 37.1 +0.8
GTA smax smax
comp=N,3μm,1.0s
GTA smax smax
comp=E,3μm,1.1s
XAN Xi'an 6.48 122 Pn Pn 04 57 51.4 -1.2
XAN Pg Pb 04 58 13.8 +3.8
XAN Sn Sn 04 59 06.1 -0.5
XAN Sg Sg 04 59 39.5 -5.7
XAN smax smax
comp=N,310nm,0.9s
XAN smax smax
comp=E,200nm,1.0s
XAN LR LR
comp=N,2μm,6.5s
XAN LR LR
comp=E,2μm,6.8s
XAN LR LR
comp=Z,2μm,11.1s
BTO Baotou 6.67 62 ePn Pn 04 57 55.5 +0.3
BTO ePg Pb 04 58 18.6 +5.4
BTO Sn Sn 04 59 10.0 -1.3
BTO Sg Sb 04 59 40.6 +7.6
TIY Taiyuan 8.03 87 eP Pn 04 58 15.1 +1.2
TIY smax smax
comp=N,2μm,1.1s
TIY smax smax
comp=E,320nm,0.7s
SONM Songino Array 10.59 15 Pn Pn 04 58 49.0 +0.1
6.0nm,0.3s,baz=198,slow=14,SNR=15
SONM Lg Lg 05 01 46.4
0.9nm,0.3s,baz=216,slow=25,SNR=3.3
SONM LR LR 05 03 21.0
comp=Z,726nm,19.9s,baz=193,slow=40
ULN Ulaanbaatar 10.76 17 Pn Pn 04 58 51.3 0.0
ULN Ulaanbaatar 10.76 17 P Pn 04 58 51.3 0.0
GYA Guiyang 11.78 161 eP Pn 04 59 04.6 -0.7
GYA S Sn 05 01 19.6 +2.7
GYA LR LR
comp=N,360nm,7.0s
GYA LR LR
comp=E,770nm,5.0s
GYA LR LR
comp=Z,430nm,7.1s
TIA Tai'an 11.95 93 P Pn 04 59 06.0 -1.5
TIA S Sn 05 01 20.8 0.0
TIA pmax pmax
comp=Z,5.0nm,0.6s
TIA LR LR
comp=N,2μm,9.2s
TIA LR LR
comp=E,840nm,10.9s
TIA LR LR
comp=Z,790nm,9.8s
LSA Lhasa 12.22 233 P Pn 04 59 12.0 +0.3
LSA pP 04 59 14.8
LSA pmax pmax
comp=Z,13nm,0.8s
LSA LR LR
comp=N,1μm,8.5s
LSA LR LR
comp=E,2μm,12.1s
LSA LR LR
comp=Z,3μm,9.3s
WHN Wuhan 12.25 122 P Pn 04 59 14.3 +2.7
WHN S Sn 05 01 31.1 +2.9
WHN LR LR
comp=N,2μm,9.9s
WHN LR LR
comp=E,2μm,7.7s
WHN LR LR
comp=Z,2μm,12.3s

KMI Kunming 12.52 178 P Pn 04 59 21.8 +6.2
KMI pP 04 59 23.8
KMI sP 04 59 26.0
KMI LR LR
comp=N,420nm,8.9s
KMI LR LR
comp=E,500nm,9.8s
KMI LR LR
comp=Z,150nm,8.5s
WMQ Urumqi 12.66 304 eP Pn 04 59 19.4 +2.2
WMQ S Sn 05 01 40.8 +2.5
WMQ LR LR
comp=N,340nm,7.7s
WMQ LR LR
comp=E,240nm,3.9s
WMQ LR LR
comp=Z,580nm,15.3s
ZAK Zakamensk 12.72 3 eP Pn 04 59 19.0 +0.9
ZAK pmax pmax
comp=Z,11nm,0.8s
MOY Mondy 14.02 357 eP P 04 59 44.0 +0.2
MOY pmax pmax
comp=Z,14nm,1.8s
TLY Talaya 14.03 3 Pn Pn 04 59 35.7 -0.2
comp=Z,0.1nm,0.3s,baz=168,slow=8.6,SNR=15
TLY Lg Lg 05 03 36.9
comp=Z,0.0nm,0.3s,baz=267,slow=18,SNR=4.0
TLY LR LR 05 05 24.3
comp=Z,361nm,19.5s,baz=175,slow=39
TLY Talaya 14.03 3 Pn 04 59 36.9 +0.9
TLY Talaya 14.03 3 eP Pn 04 59 37.7 +1.8
TAPN Taplejung 16.03 234 eP P 05 00 05.9 -0.6
ODAN Odare 16.58 234 eP P 05 00 11.5 -0.9
GUN Gumba 16.88 240 eP Pn 05 00 11.1 -2.7
comp=Z,60nm,0.9s
RAMN Ramite 17.02 236 eP P 05 00 16.1 -1.3
MK31 Makanchi Array 17.36 308 Pn 05 00 18.6 -0.8
MK31 Makanchi Array 17.36 308 P Pn 05 00 18.6 -0.8
MK31 pmax pmax
comp=Z,8.0nm,1.2s
MKAR Makanchi Array 17.36 308 P Pn 05 00 18.5 -0.9
comp=Z,0.1nm,0.3s,baz=115,slow=14,SNR=32
MKAR Lg Lg 05 05 22.1
comp=Z,0.0nm,0.3s,baz=96,slow=23,SNR=3.3
MKAR LR LR 05 07 31.3
comp=Z,559nm,18.5s,baz=105,slow=39
PKI Pulchoki 17.42 240 eP Pn 05 00 17.2 -3.3
comp=Z,9.4nm,0.5s
PKIN Phulchoki 17.42 240 eP Pn 05 00 17.2 -3.3
MAKZ Makanchi 17.56 308 Pn 05 00 21.2 -0.7
MAKZ IAmb IAmb 05 00 24.5
comp=Z,58nm,1.9s
MAKZ Makanchi 17.56 308 P Pn 05 00 21.2 -0.7
MAKZ pmax pmax
comp=Z,58nm,2.0s
DMN Daman 17.60 240 eP Pn 05 00 20.8 -1.9
DANN Dangsing 18.10 244 eP Pn 05 00 27.0 -1.9
comp=Z,42nm,0.8s
CN2 Changchun 18.54 63 eP P 05 00 33.4 -0.4
CN2 eS Sn 05 03 56.1 -5.1
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 LR LR
comp=Z,800nm,11.0s
CN2 LR LR
comp=Z,600nm,11.0s
CN2 LR LR
comp=Z,800nm,12.0s
PRZ Przheval'sk 18.89 292 P P 05 00 36.3 -1.5
PRZ IAmb IAmb 05 00 42.4
comp=Z,20nm,0.7s
PRZ Przheval'sk 18.89 292 P P 05 00 36.3 -1.5
PRZ pmax pmax
comp=Z,20nm,0.7s
CHTO Chiang Mai 19.02 190 P Pn 05 00 42.3 +2.4
CHTO Chiang Mai 19.02 190 P Pn 05 00 42.3 +2.4
CHTO pmax pmax
comp=Z,7.0nm,0.7s
CM31 Chiang Mai Arr 19.37 190 P Pn 05 00 44.7 +0.6
CMAR Chiang Mai Arr 19.37 190 P Pn 05 00 44.4 +0.2
comp=Z,1.0nm,0.3s,baz=7.0,slow=12,SNR=12
CMAR LR 05 08 33.3
comp=Z,130nm,18.8s,baz=12,slow=38
QIZ Qiongzhong 19.71 158 P Pn 05 00 49.3 +1.1
QIZ LR LR
comp=Z,1μm,10.6s
QIZ LR LR
comp=Z,530nm,8.8s
KDJ Kajisay 19.76 291 P Pn 05 00 49.3 +0.5
KDJ IAmb IAmb 05 00 56.0
comp=Z,28nm,1.4s
KDJ Kajisay 19.76 291 P Pn 05 00 49.3 +0.5
KDJ pmax pmax
comp=Z,28nm,1.4s
TJN Taejon 20.04 86⇑eP Pn 05 00 53.3 +1.4
ZAA0 Zalesovo Array 20.24 329 P Pn 05 00 52.8 -1.4
ZALV Zalesovo Beam 20.24 329 P P 05 00 51.3 -0.9
comp=Z,3.9nm,0.6s,baz=131,slow=11,SNR=15
ZALV Lg Lg 05 06 50.9
comp=Z,0.3nm,0.3s,baz=132,slow=2.2,SNR=4.5
ZALV LR LR 05 09 22.9
comp=Z,78nm,21.1s,baz=130,slow=39
KSRS Korea Array 20.29 83 P P 05 00 53.1 +0.1
comp=Z,7.2nm,0.9s,baz=281,slow=9.9,SNR=13
KSRS LR LR 05 08 39.6
comp=Z,168nm,19.1s,baz=277,slow=37
ULHL Ulahol 20.46 291 P Pn 05 00 57.0 -0.1
SNR=8.9
NRN Naryn 20.60 289 P Pn 05 00 57.6 -1.2
NRN Naryn 20.60 289 P Pn 05 00 57.6 -1.3
NRN pmax pmax
comp=Z,14nm,1.3s
KSH Kashi 20.64 283 P Pn 05 01 02.3 +3.1
KSH sP sP 05 01 08.8 +6.4
KSH S Sn 05 04 49.8 -2.3
KSH PcP PcP 05 05 11.6 +4.5
KSH pmax pmax
comp=Z,12nm,0.7s
KSH pmax pmax
comp=Z,160nm,5.3s
KSH LR LR
comp=Z,310nm,10.2s
KSH LR LR
comp=Z,450nm,11.1s
KSH LR LR
comp=Z,1μm,9.7s
BOOM Boomskoye usch 20.70 292 P Pn 05 00 57.9 -2.1
BOOM IAmb IAmb 05 00 59.6
comp=Z,16nm,1.1s
BOOM Boomskoye usch 20.70 292 P Pn 05 00 57.9 -2.0
BOOM pmax pmax
comp=Z,16nm,1.1s
PBKT Sadao Pong 21.06 184 P P 05 01 04.4 +3.1
KZA Kyzart 21.19 290 P P 05 01 05.0 +1.9
SNR=10
KURK Kurchatov 21.29 315 P P 05 01 03.3 -0.3
KURK IAmb IAmb 05 01 04.5
comp=Z,20nm,0.9s
KURK Kurchatov 21.29 315c iP P 05 01 03.0 -0.7
KURK pmax pmax
comp=Z,26nm,1.0s
KURBB Kurchatov Arra 21.30 315 P P 05 01 03.5 -0.3
comp=Z,21nm,1.0s,baz=118,slow=11,SNR=96
KURBB Lg Lg 05 07 28.4
comp=Z,0.6nm,0.5s,baz=105,slow=29,SNR=4.9
KBK Karagaybulak 21.45 292 P P 05 01 07.7 +2.1
SNR=12
BOD Bodaibo 21.57 17 eP P 05 01 06.6 0.0
BOD pmax pmax
comp=Z,12nm,1.0s
UCH Uchtor 21.74 291 P P 05 01 10.4 +1.3
SNR=16
AAK Ala-Archa 21.78 292 P P 05 01 10.2 +1.0
comp=Z,7.9nm,0.9s,baz=72,slow=5.7,SNR=7.5
AAK LR LR 05 09 54.5
comp=Z,251nm,18.3s,baz=56,slow=38
AAK Ala-Archa 21.78 292 P P 05 01 09.6 +0.4
AAK IAmb IAmb 05 01 16.8
comp=Z,15nm,1.1s
AAK Ala-Archa 21.78 292⇓eP P 05 01 10.3 +1.1
AAK pmax pmax
comp=Z,20nm,2.5s
USP Ospenovka 21.82 294 P P 05 01 10.7 +1.1
SNR=9.7
EKS2 Erkin-Say 22.31 292 P P 05 01 15.5 +0.7
SNR=6.4

AML Almayashu 22.35 290 P P 05 01 16.6 +1.1
SNR=9.1
USRK Ussuriysk Ar. 23.27 64 LR LR 05 11 04.1
comp=Z,211nm,18.3s,baz=258,slow=38
ZEA Zeya 23.51 39 eP P 05 01 28.2 +1.2
ZEA pmax pmax
comp=N,29nm,1.2s
ZEA pmax pmax
comp=E,29nm,1.2s
ZEA pmax pmax
comp=Z,39nm,1.2s
ZEA MLR MLR
comp=E,800nm,9.0s
ZEA MLR MLR
comp=Z,900nm,9.0s
ZEA MLR MLR
comp=N,500nm,6.0s
JNU Nakatsue 23.68 92 P P 05 01 28.3 -0.7
comp=N,8.4nm,0.9s,baz=328,slow=4.8,SNR=4.6
NIL Nilore 23.90 269 P P 05 01 31.8 +0.7
NIL Nilore 23.90 269 P P 05 01 31.8 +0.7
NIL pmax pmax
comp=Z,23nm,1.0s
KLR Kul'dur 24.14 52 P P 05 01 31.3 -1.8
comp=Z,4.3nm,1.0s,baz=273,slow=9.5,SNR=6.7
KLR Kul'dur 24.14 52 ceP P 05 01 33.6 +0.5
KLR pmax pmax
comp=Z,11nm,1.5s
BTK Batken 24.57 285 P P 05 01 38.2 +0.9
BTK Batken 24.57 285 P P 05 01 38.2 +0.9
BTK pmax pmax
comp=Z,7.0nm,1.1s
KK31 Karatay Array 24.73 293 P P 05 01 38.9 +0.4
KK31 IAmb IAmb 05 01 40.6
comp=Z,12nm,1.2s
KK31 Karatay Array 24.73 293 P P 05 01 38.9 +0.4
KK31 pmax pmax
comp=Z,12nm,1.3s
KKAR Karatay Array 24.73 293 P P 05 01 38.9 +0.4
KKAR IAmb IAmb 05 01 40.6
comp=Z,12nm,1.2s
KKAR Karatay Array 24.73 293 P P 05 01 38.9 +0.4
KKAR pmax pmax
comp=Z,12nm,1.3s
BVAR Borovoye Array 26.89 315 P P 05 01 58.7 +0.7
comp=Z,1.4nm,0.6s,baz=108,slow=8.9,SNR=7.4
BRVK Borovoye 26.96 315 P P 05 01 58.6 -0.1
BRVK IAmb IAmb 05 02 11.8
comp=Z,11nm,1.2s
BRVK Borovoye 26.96 315⇓eP P 05 02 00.6 +2.0
BRVK pmax pmax
comp=Z,3.0nm,0.9s
KBL Kabul 26.98 274 P P 05 02 00.1 +0.9
KBL IAmb IAmb 05 02 15.6
comp=Z,17nm,1.6s
KBL Kabul 26.98 274 P P 05 02 00.1 +0.9
KBL pmax pmax
comp=Z,17nm,1.6s
MJAR Matsushiro Arr 28.55 81 LR LR 05 13 01.4
comp=Z,131nm,20.0s,baz=255,slow=35
YAK Yakutsk 29.66 26 LR LR 05 15 07.6
comp=Z,232nm,19.5s,baz=206,slow=38
ABKAR Akbulak array 32.44 305 P P 05 02 47.4 +0.1
NRIK Noril'sk 32.72 350 P P 05 02 49.4 0.0
comp=Z,1.8nm,0.4s,baz=138,slow=7.3,SNR=3.8
AKTO Aktyubinsk 33.79 307 LR LR 05 17 46.9
comp=Z,349nm,20.4s,baz=100,slow=38
ARU Arti 34.46 317 P P 05 03 04.3 -0.5
ARU IAmb IAmb 05 03 06.6
comp=Z,6.4nm,0.8s
ARU Arti 34.46 317 c iP P 05 03 04.7 -0.1
ARU 05 04 13.8
ARU S S 05 08 33.3 +0.5
ARU SS SnSn 05 10 36.8 -6.4
ARU pmax pmax
comp=Z,7.0nm,0.9s
GEYT Alibeck 34.67 284 P P 05 03 07.5 +0.6
comp=Z,1.7nm,0.6s,baz=77,slow=6.5,SNR=2.7
GEYT LR LR 05 20 20.0
comp=Z,194nm,20.0s,baz=75,slow=42
PSI Prapat 34.85 186 LR LR 05 18 19.5
comp=Z,160nm,18.4s,baz=338,slow=38
TIXI Tiksi 36.67 14 LR LR 05 19 43.9
comp=Z,109nm,18.9s,baz=209,slow=38
TIXI Tiksi 36.67 14⇓eP P 05 03 21.1 -2.4
TIXI pmax pmax
comp=Z,4.0nm,2.5s
DAV Davao City (W) 37.08 139 LR LR 05 20 25.3
comp=Z,172nm,18.7s,baz=344,slow=39
MA2 Magadan 37.66 39 P P 05 03 30.8 -1.3
comp=Z,1.4nm,0.4s,baz=242,slow=6.5,SNR=3.8
MA2 Magadan 37.66 39 IAmb IAmb 05 03 33.1
comp=Z,5.6nm,0.8s
MA2 Magadan 37.66 39⇓eP P 05 03 32.1 0.0
MA2 pmax pmax
comp=Z,6.0nm,0.8s
KIRV Kirov 39.72 319 LR LR 05 20 49.3
comp=Z,122nm,18.7s,baz=56,slow=37
PETK Petropavlovsk- 40.77 49 LR LR 05 22 39.4
comp=Z,204nm,18.1s,baz=241,slow=39
MAK Makhachkala 41.49 295 eP P 05 03 59.8 -4.4
MAK eS S 05 10 13.8 -5.8
MAK pmax pmax
comp=Z,115nm,0.8s
MAK MLR MLR
comp=Z,165nm,19.0s
LWLI Liwa 42.51 177 P P 05 04 15.9 +3.1
VRH Novokhopyorsk 44.09 308 eP P 05 04 24.8 -0.4
VRH pmax pmax
comp=Z,10.0nm,0.7s
KBZ Khabaz 44.61 297 LR LR 05 25 18.9
comp=Z,188nm,19.7s,baz=82,slow=39
KIV Kislovodsk 44.70 298 eP P 05 04 29.2 -1.1
KIV pmax pmax
comp=Z,14nm,1.0s
KIV MLR MLR
comp=Z,261nm,16.0s
NEY Neytrino 44.84 297⇓eP P 05 04 31.7 +0.1
KLMR Klimovskoe 44.90 322 eP P 05 04 29.8 -1.7
KLMR pmax pmax
comp=Z,21nm,1.7s
KLMR Klimovskoe 44.90 322 eP P 05 04 29.8 -1.7
KLMR AMP 05 04 33.8
comp=Z,21nm,1.7s
VORD Divnogorie 45.64 308 eP P 05 04 37.0 -0.5
VORD pmax pmax
comp=Z,3.0nm,0.5s
LPSR Galich'ya Gora 45.64 310 eP P 05 04 36.8 -0.7
LPSR pmax pmax
comp=Z,9.0nm,0.8s
VSR Storozhevoye 45.68 308 eP P 05 04 37.0 -0.9
VSR pmax pmax
comp=Z,8.0nm,0.5s
BILL Bilibino 45.98 28 P P 05 04 40.5 +0.5
BILL IAmb IAmb 05 04 45.7
comp=Z,4.3nm,0.9s
BILL Bilibino 45.98 28⇑eP P 05 04 40.4 +0.4
BILL e 05 06 32.4
BILL eS S 05 11 26.2 +1.7
BILL pmax pmax
comp=Z,8.0nm,1.7s
BILL MLR MLR
comp=Z,229nm,19.0s
OBN Obninsk 46.73 314 LR LR 05 25 58.4
comp=Z,41nm,19.7s,baz=347,slow=38
OBN Obninsk 46.73 314 P P 05 04 48.0 +2.0
OBN Obninsk 46.73 314⇑eP P 05 04 48.7 +2.7
OBN pmax pmax
comp=Z,8.0nm,0.6s
ARCES ARCESS Array B 50.69 334 P P 05 05 16.3 -0.1
comp=Z,9.4nm,1.1s,baz=69,slow=7.3,SNR=5.5
ARCES LR LR 05 29 02.3
comp=Z,94nm,20.6s,baz=112,slow=39
FINES FINESS Array B 51.35 323 P P 05 05 20.1 -1.3
comp=Z,1.2nm,0.6s,baz=76,slow=8.0,SNR=13
VSU Vasula 51.56 319⇑eP P 05 05 25.1 +2.1
AKASG Malin Array Be 51.94 309 P P 05 05 25.2 -0.7
comp=Z,0.6nm,0.3s,baz=63,slow=7.3,SNR=6.9
AKASG LR LR 05 28 29.3
comp=Z,150nm,19.3s,baz=315,slow=37
AKASG Malin Array Be 51.94 309 cP P 05 05 25.3 -0.7
AKASG pmax pmax
comp=Z,3.0nm,0.7s
BRTR Keskin Array B 52.41 295 P P 05 05 29.6 -0.3
comp=Z,0.8nm,0.6s,baz=92,slow=6.6,SNR=4.7
BRTR LR LR 05 29 11.4
comp=Z,49nm,19.2s,baz=82,slow=38
SORM Soroca 53.22 307 ⇑P P 05 05 35.4 -0.1
SORM Soroca 53.22 307 P P 05 05 35.4 -0.1
LVV L'vov 55.38 310 eP P 05 05 51.6 +0.4
BURAR Bucovina Array 55.38 307 ⇑P P 05 05 51.6 +0.2
BURAR Bucovina Array 55.38 307 P P 05 05 51.6 +0.2
MLR Muntele Rosu 55.65 304 ⇑P P 05 05 54.9 +1.5
MLR Muntele Rosu 55.65 304 ⇑P P 05 05 54.9 +1.5
DOPR Dopca 55.85 305 ⇑P P 05 05 56.2 +1.5
ARCR ARCALIA 56.12 306 ⇑P P 05 05 57.8 +1.3
KWP Kalwaria Pacla 56.25 310 P P 05 05 57.9 +0.4
KWP Kalwaria Pacla 56.25 310 P P 05 05 57.9 +0.4
KWP pmax pmax
comp=Z,136nm,0.5s
UZH Uzhgorod 56.86 309 eP P 05 05 55.6 -6.2
TRPA Tarpa 56.89 308 ⇑P P 05 06 02.9 +1.0
DRGR 57.27 307 ⇑P P 05 06 05.5 +0.7
DRGR 57.27 307 P P 05 06 05.5 +0.7
GZR Gura Zlata 57.76 305 ⇑P P 05 06 09.6 +1.3
GZR Gura Zlata 57.76 305 ⇑P P 05 06 09.6 +1.3
NOA NORSAR Array B 58.38 325 P P 05 06 10.7 -1.6
comp=Z,1.7nm,0.7s,baz=70,slow=6.9,SNR=4.5
NOA LR LR 05 31 53.6
comp=Z,90nm,19.5s,baz=70,slow=37
BZS Buzias 58.42 306 ⇑P P 05 06 13.5 +0.7
BZS Buzias 58.42 306 ⇑P P 05 06 13.5 +0.7
VTS Vitosha 58.56 302 ⇑P P 05 06 17.0 +3.0
VTS Vitosha 58.56 302 ⇑P P 05 06 17.0 +3.0
VYHS Vyhne 59.04 310 eP P 05 06 16.1 -1.0
VYHS Vyhne 59.04 310 eP P 05 06 16.1 -1.0
MORC Moravsky Berou 59.31 311 ⇓P P 05 06 19.5 +0.5
MORC Moravsky Berou 59.31 311 P P 05 06 19.4 +0.5
MORC IAmb IAmb 05 06 25.3
comp=Z,4.4nm,1.0s
MORC Moravsky Berou 59.31 311 ⇓P P 05 06 19.5 +0.5
VRAC Vranov 60.07 311 ⇑P P 05 06 24.1 -0.1
VRAC Vranov 60.07 311 P P 05 06 24.1 -0.1
CONA Conrad Observa 61.09 310 epP P 05 06 32.4 +1.1
comp=Z,0.5nm,0.4s
CLL Collm 61.33 314 iP P 05 06 33.5 +0.8
CLL Collm 61.33 314 iP P 05 06 33.5 +0.8
GERES GERESS Array B 61.99 312 P P 05 06 37.2 -0.1
comp=Z,0.6nm,0.7s,baz=111,slow=7.4,SNR=5.0
GERES LR LR 05 34 23.9
comp=Z,124nm,20.5s,baz=50,slow=37
COLD Coldfoot 62.11 25 P P 05 06 38.4 +0.7
SOKA Soboth 62.14 309 ipP P 05 06 38.7 +0.3
comp=Z,1.8nm,0.6s
KBA Koelnbreinsper 62.99 310 ipP P 05 06 44.6 +0.5
comp=Z,2.3nm,0.6s
SVW2 Sparrevohn 63.19 32 P P 05 06 45.9 +0.9
ABTA Abfaltersbach 63.65 310 epP P 05 06 48.8 +0.4
comp=Z,1.0nm,0.6s
WTTA Wattenberg 63.94 311 ipP P 05 06 50.7 +0.3
comp=Z,4.3nm,0.7s
WATA Walderalm 63.94 311 iP P 05 06 50.2 -0.2
comp=Z,2.8nm,0.5s
COLA College 64.19 26 P P 05 06 51.9 +0.4
COLA College 64.19 26 P P 05 06 51.9 +0.4
COLA pmax pmax
comp=Z,9.0nm,0.8s
MOTA Moosalm 64.22 311 epP P 05 06 52.4 +0.1
comp=Z,2.9nm,0.6s
IL31 64.59 26 P P 05 06 53.5 -0.6
ILAR Eielson Array 64.59 26 P P 05 06 53.4 -0.8
comp=Z,2.5nm,0.9s,baz=290,slow=5.8,SNR=22
ILAR LR LR 05 37 27.8
comp=Z,130nm,18.5s,baz=304,slow=38
WRAB Tennant Creek 64.75 147⇑eP P 05 06 57.1 +1.3
WRAB pmax pmax
comp=Z,3.0nm,0.8s
WRA Warramunga Arr 64.76 147 P P 05 06 55.0 -0.8
comp=Z,0.6nm,0.4s,baz=340,slow=7.0,SNR=7.7
WRA Warramunga Arr 64.76 147 P P 05 06 55.0 -0.8
FUORN Ofenpass-Fuorn 65.07 311 P P 05 06 57.0 -1.0
ASAR Alice Springs 67.87 149 P P 05 07 15.3 -0.4
comp=Z,0.7nm,0.5s,baz=329,slow=6.6,SNR=9.8
KMBO Kilima Mbogo 71.17 253 LR LR 05 38 58.6
comp=Z,75nm,19.1s,baz=97,slow=36
YKA Yellowknife Ar 75.85 17 P P 05 08 02.7 -0.5
comp=Z,0.9nm,0.9s,baz=328,slow=5.3,SNR=10
STKA Stephens Creek 78.31 147 LR LR 05 46 58.4
comp=Z,46nm,18.1s,baz=9.2,slow=39
TORD Torodi Ar. Bea 90.27 287 P P 05 09 17.5 -1.0
comp=Z,0.3nm,0.6s,baz=41,slow=4.6,SNR=2.5

IDC 22 05:14:58.3±3.7, 30.45S×138.31E, h0km, mb1 3.1/3, mb1mx3.0/38, mbtmp2.8/3, ML2.6/3, Error ellipse: s-maj=87.3km s-min=16.1km az=41.0, South Australia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STKA Stephens Creek 3.15 118 Pn Pn 05 15 49.9 +0.7
0.4nm,0.3s,baz=292,slow=13,SNR=5.2
STKA Pg Pb 05 15 56.6 +1.4
0.5nm,0.3s,baz=292,slow=13,SNR=9.6
STKA Sn Sn 05 16 28.1 +0.5
0.8nm,0.3s,baz=326,slow=18,SNR=4.5
STKA Lg Lg 05 16 37.1
2.6nm,0.3s,baz=312,slow=12,SNR=8.1
ASAR Alice Springs 7.82 329 Pn Pn 05 16 53.2 -0.2
0.1nm,0.3s,baz=149,slow=12,SNR=7.6
ASAR Sn Sn 05 18 21.8 -0.9
0.1nm,0.3s,baz=154,slow=22,SNR=5.6
WRA Warramunga Arr 11.06 340 Pn Pn 05 17 38.2 +0.3
0.1nm,0.3s,baz=156,slow=13,SNR=3.9

IDC 22 05:23:03.1±1.6, 9.14S×109.63W, h0km, mb3.7/9, mb1 4.0/9, mb1mx3.8/28, mbtmp3.7/9, MS4.3/22, Ms1 4.2/23, ms1mx4.3/25, Error ellipse: s-maj=52.9km s-min=26.4km az=49.0

NEIC 22 05:23:06.8±2.5, 9.0S±0.1×109.87W±0.06, h10km±1km, mb4.7/38, Error ellipse: s-maj=23.7km s-min=9.9km az=179.0

GCMT 22 05:23:08.8±0.2, 8.97S±0.01×109.24W±0.01, h12km±1km, MW5.0/119, Moment Tensor Solution. s59,c79; s119,c181; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-0.56±.08; Mθθ1.43±.09; Mφφ-0.86±.09; Mrθ0.48±.21; Mθφ3.86±.08; Mφr0.05±.21; Best double couple: Mo4.05500×10^{16} NP1:φs8.00000°, δ83.00000°, λ180.00000°. NP2:φs98.00000°, δ90.00000°, λ7.00000°. Principal axes: T 4.3450, Plg5.0000°, Azm323.0000°; N -0.5750, Plg83.0000°, Azm100.0000°; P -3.7650, Plg5.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 22 05:23:06.2±1.0, 9.0S±0.1×109.9W±0.2, h10km, n73, σ1§38/46, mb4.6/24, MS4.2/25, Central East Pacific Rise

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RPN Rapa Nui 18.01 178 LR LR 05 32 11.6
comp=Z,1µm,19.8s,baz=359,slow=31
MOIG Morelia 29.79 17 P P 05 29 13.7 +0.1
MOIG IAmb IAmb 05 29 26.0
comp=Z,18nm,0.9s
TAOE Nuku Hiva Isla 29.88 268 eLR LR 05 37 13.9
comp=Z,372nm,26.2s
CMIG Matias Romero 29.90 30 LR LR 05 37 17.7
comp=Z,228nm,22.0s,baz=208,slow=29
JTS Las Juntas de 31.38 53 LR LR 05 38 36.0
comp=Z,1µm,21.3s,baz=330,slow=30
NNA Nana 32.62 98 LR LR 05 38 00.4
comp=Z,157nm,21.6s,baz=270,slow=28
ROSC El Rosal 38.05 70 LR LR 05 42 57.6
comp=Z,279nm,19.7s,baz=254,slow=32
TXAR Lajitas Array 38.61 9 P P 05 30 28.4 -1.4
comp=Z,0.1nm,0.6s,baz=202,slow=11,SNR=2.5
TXAR LR LR 05 43 15.2
comp=Z,223nm,20.6s,baz=0.0,slow=31
TX31 Lajitas Ar. Si 38.61 9 P P 05 30 30.5 +0.7
TX32 Lajitas Array 38.61 9 P P 05 30 30.7 +0.9
PPT Papeete 39.47 253 LR LR 05 42 38.7
comp=Z,462nm,19.9s,baz=53,slow=30
PPT2 Papeete2 39.47 253 eS S 05 36 53.5 +14
comp=Z,95nm,26.5s
PPT2 eLQ LQ 05 40 03.7
comp=Z,2µm,33.2s
PPT2 eLR LR 05 41 34.6
comp=Z,1µm,26.0s,baz=90
TBI Tubuai 40.42 245 eLQ LQ 05 40 22.1
comp=Z,1µm,30.5s
TBI eLR LR 05 42 10.8
comp=Z,1µm,27.0s,baz=69
MNTX Cornudas Mount 40.73 6 P P 05 30 49.4 +2.1
LPAZ La Paz 41.32 104 P P 05 30 47.7 -5.5
comp=Z,1.0nm,1.0s,baz=311,slow=9.3,SNR=3.0
LPAZ LR LR 05 44 10.5
comp=Z,344nm,19.6s,baz=258,slow=31
121A Cookes Peak, D 41.38 3 P P 05 30 55.0 +2.1
LVC Limon Verde 41.53 114 LR LR 05 43 25.6
comp=Z,577nm,20.0s,baz=280,slow=30
PFO Pinyon Flats O 42.86 352 LR LR 05 44 29.3
comp=Z,744nm,20.4s,baz=168,slow=30
SDV Santo Domingo 42.97 67 LR LR 05 47 05.4
comp=Z,306nm,19.2s,baz=234,slow=34
237A Washetta, Mont 42.97 18 P P 05 31 08.9 +3.3
237A IAmb IAmb 05 31 14.3
comp=Z,20nm,1.1s
MWC Mount Wilson 43.71 350 P P 05 31 11.1 -0.7
MWC IAmb IAmb 05 31 13.0
comp=Z,10.0nm,1.2s
W13A Hualapai Mount 44.05 355 P P 05 31 14.9 +0.3
344A Westbrook Farm 44.24 24 P P 05 31 18.0 +2.1
MIAR Mount Ida 46.02 19 P P 05 31 30.6 +0.6
MIAR IAmb IAmb 05 31 46.5
comp=Z,8.5nm,1.2s
MVCO Mesa Verde 46.02 2 P P 05 31 30.0 -0.2
CCAR Cane Creek 46.05 21 P P 05 31 32.9 +2.6
SAML Samuel 46.12 94 P P 05 31 31.0 -0.1
SAML IAmb IAmb 05 31 32.8
comp=Z,5.4nm,1.1s
S22A 4UR Ranch, Cre 46.62 3 P P 05 31 34.2 -0.9
S22A IAmb IAmb 05 31 50.0
comp=Z,7.6nm,1.4s
TUL1 Leonard 46.64 16 P P 05 31 34.0 -0.8
TUL1 IAmb IAmb 05 31 40.1
comp=Z,9.4nm,1.1s
SDCO Great Sand Dun 46.71 5 P P 05 31 35.6 -0.2
SDCO IAmb IAmb 05 31 45.7
comp=Z,11nm,1.4s
W41B Gary Mavity, V 47.02 20 P P 05 31 39.9 +2.1
W41B IAmb IAmb 05 31 46.1
comp=Z,12nm,1.1s
U38A Gravette 47.52 17 P P 05 31 43.6 +1.9
U38A IAmb IAmb 05 31 49.0
comp=Z,11nm,1.2s
NVAR Mina Array Bea 47.86 351 P P 05 31 45.1 +0.5
comp=Z,0.5nm,0.7s,baz=167,slow=8.3,SNR=5.9
NVAR LR LR 05 47 35.4
comp=Z,663nm,19.2s,baz=176,slow=31
SIV San Ignacio 48.08 103 P P 05 31 44.2 -2.2
comp=Z,1.0nm,0.7s,baz=301,slow=18,SNR=3.2
SIV LR LR 05 48 33.1
comp=Z,197nm,19.8s,baz=286,slow=32
LCAR Lake Charles 48.21 20 P P 05 31 46.5 -0.5
P17A Butcher Ranch, 48.26 359 P P 05 31 48.1 +0.5
PLAL Pickwick Lake 48.40 24 P P 05 31 50.3 +1.8
ISCO Idaho Springs 48.74 4 P P 05 31 51.8 +0.3
MPU Maple Canyon 48.82 358 P P 05 31 53.1 +1.2
OGNE Ogallala 50.25 8 P P 05 32 04.9 +2.1
OGNE IAmb IAmb 05 32 17.9
comp=Z,13nm,0.9s
PDAR Pinedale Array 51.55 0 P P 05 32 13.2 +0.6
comp=Z,0.8nm,0.8s,baz=168,slow=7.6,SNR=3.7
PDAR LR LR 05 51 20.9
comp=Z,489nm,18.3s,baz=191,slow=33
MOD Modoc Plateau 51.58 350 P P 05 32 12.8 0.0
FXWY Fox Creek 52.43 359 P P 05 32 20.4 +1.2
MFID Camas Ranch 52.47 355 P P 05 32 19.1 -0.2
MFID IAmb IAmb 05 32 29.0
comp=Z,9.2nm,1.1s
CPUP Villa Florida 52.59 116 LR LR 05 50 12.7
comp=Z,386nm,21.6s,baz=282,slow=31
DGMT Dagmar 57.47 4 P P 05 32 55.8 +0.4
EYMN Ely 59.02 14 P P 05 33 05.8 -0.4
ULM Lac du Bonnet 60.29 10 P P 05 33 14.2 -0.6
comp=Z,3.3nm,0.9s,baz=164,slow=7.4,SNR=4.1
ULM LR LR 05 56 27.9
comp=Z,115nm,21.0s,baz=204,slow=33
ULM Lac du Bonnet 60.29 10 P P 05 33 13.9 -1.0
ULM IAmb IAmb 05 33 22.6
comp=Z,9.5nm,1.0s
BDFB Brasilia 60.64 103 LR LR 05 57 08.8
comp=Z,114nm,18.4s,baz=287,slow=34
AFI Afiamalu 60.70 259 LR LR 05 53 36.4
comp=Z,149nm,18.7s,baz=186,slow=30
FCC Fort Churchill 68.76 9 P P 05 34 11.7 +1.6
FCC IAmb IAmb 05 34 19.0
comp=Z,10.0nm,1.1s
YKA Yellowknife Ar 71.40 358 P P 05 34 24.1 -2.1
comp=Z,0.5nm,0.9s,baz=167,slow=6.0,SNR=6.4
SCHQ Schefferville 73.12 24 LR LR 06 05 32.9
comp=Z,206nm,20.3s,baz=246,slow=35
ILAR Eielson Array 78.62 345 P P 05 35 07.0 -0.9
comp=Z,0.4nm,0.8s,baz=174,slow=3.6,SNR=4.1
ILAR LR LR 06 03 09.4
comp=Z,152nm,18.5s,baz=139,slow=30
WRH Wood River Hil 78.70 344 P P 05 35 08.2 -0.2
WRH IAmb IAmb 05 35 09.1
comp=Z,17nm,1.4s
INK Inuvik 78.95 351 P P 05 35 07.7 -1.9
comp=Z,2.2nm,1.1s,baz=181,slow=7.2,SNR=2.6
INK Inuvik 78.95 351 P P 05 35 10.0 +0.4
INK IAmb IAmb 05 35 27.5
comp=Z,7.2nm,1.4s
DZM Mont Dzumac 80.82 249 eLR LR 06 00 51.0
comp=Z,130nm,28.9s
VNDA Vanda 80.86 193 LR LR 06 03 21.8
comp=Z,93nm,19.4s,baz=97,slow=30
QSPA South Pole Qui 81.05 180 P P 05 35 22.3 +1.0
QSPA IAmb IAmb 05 35 41.7
comp=Z,10nm,1.1s
H11S2 WAKE ISLAND Hy 86.64 289 T T 07 12 08.7
baz=101,slow=75,SNR=638
H11S1 WAKE ISLAND Hy 86.64 289 T T 07 12 13.2
baz=101,slow=75,SNR=340
H11S3 WAKE ISLAND Hy 86.66 289 T T 07 12 14.0
baz=101,slow=75,SNR=432
H11N3 WAKE ISLAND Hy 86.67 290 T T 07 12 14.8
baz=102,slow=74,SNR=112
H11N2 WAKE ISLAND Hy 86.69 290 T T 07 12 12.9
baz=102,slow=74,SNR=110
H11N1 WAKE ISLAND Hy 86.69 290 T T 07 12 12.3
baz=102,slow=74,SNR=58
PETK Petropavlovsk- 98.59 322 LR LR 06 12 39.5
comp=Z,273nm,21.2s,baz=61,slow=30
VYHS Vyhne 121.84 38 ePKP PKPdf 05 42 01.8 +1.0
MKAR Makanchi Array 140.96 347 PKhKP PKPpre 05 42 31.2
comp=Z,0.2nm,0.8s,baz=0.0,slow=0.1,SNR=3.1
AAK Ala-Archa 146.30 354 PKPbc PKPbc 05 42 48.8 +1.1
BTK Batken 149.10 359 PKPbc PKPbc 05 42 57.2 +2.0
CMAR Chiang Mai Arr 150.50 292 PKPbc PKPbc 05 42 58.7 -0.5
comp=Z,2.7nm,0.7s,baz=46,slow=1.0,SNR=12

IDC 22 05:37:21.7±1.4, 9.06S×109.31W, h0km, mb3.7/11, mb1 3.9/11, mb1mx3.9/29, mbtmp3.7/11, MS4.2/15, Ms1 4.2/15, ms1mx4.2/17, Error ellipse: s-maj=46.5km s-min=20.8km az=53.0

GCMT 22 05:37:26.7±0.2, 8.97S±0.01×109.26W±0.01, h16km±1km, MW5.0/118, Moment Tensor Solution. s42,c49; s118,c166; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-0.36±.09; Mθθ1.12±.09; Mφφ-0.76±.09; Mrθ0.57±.24; Mθφ3.21±.07; Mφr-0.56±.24; Best double couple: Mo3.45200×10^{16} NP1:φs9.00000°, δ78.00000°, λ-171.00000°. NP2:φs277.00000°, δ81.00000°, λ-12.00000°. Principal axes: T 3.5270, Plg2.0000°, Azm323.0000°; N -0.1520, Plg75.0000°, Azm60.0000°; P -3.3770, Plg15.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC 22 05:37:27.7±2.9, 8.9S±0.1×109.3W±0.1, h10km±1km, mb4.6/79 Error ellipse: s-maj=25.4km s-min=19.6km az=54.0

ISC 22 05:37:27.6±0.8, 8.9S±0.1×108.8W±0.2, h10km, n114, σ1§68/94, mb4.5/43, MS4.2/18, Central East Pacific Rise

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TLIG Tlapa 28.11 21 P P 05 43 18.8 -1.3
TLIG IAmb IAmb 05 43 31.9
comp=Z,14nm,1.3s
CMIG Matias Romero 29.20 28 LR LR 05 52 51.6

comp=Z,227nm,19.2s,baz=208,slow=31
APG El Apazote 29.85 38 LR LR 05 53 12.3
comp=Z,1µm,21.3s,baz=218,slow=31
ZAIG Zacatecas 32.01 11 P P 05 43 54.7 0.0
ZAIG IAmb IAmb 05 44 01.4
comp=Z,7.3nm,1.1s
ROSC El Rosal 36.93 70 LR LR 05 57 15.2
comp=Z,249nm,18.8s,baz=258,slow=32
HSIG 37.71 357 P P 05 44 44.5 +1.0
HSIG IAmb IAmb 05 44 49.0
comp=Z,11nm,1.1s
TX31 Lajitas Ar. Si 38.28 7 P P 05 44 49.3 +0.8
TX32 Lajitas Array 38.28 7 P P 05 44 49.9 +1.4
TXAR Lajitas Array 38.28 7 P P 05 44 47.8 -0.6
comp=Z,1.6nm,1.0s,baz=195,slow=7.8,SNR=11
319A Douglas 40.01 359 P P 05 45 03.0 +0.2
JCT Junction City 40.04 12 P P 05 45 04.3 +1.2
LPAZ La Paz 40.28 105 P P 05 45 04.2 -1.8
comp=Z,0.6nm,0.8s,baz=270,slow=7.1,SNR=2.3
LPAZ LR LR 05 58 18.6
comp=Z,297nm,19.7s,baz=262,slow=31
MNTX Cornudas Mount 40.45 4 P P 05 45 06.8 +0.3
PPT Papeete 40.59 253 LR LR 05 55 20.2
comp=Z,93nm,19.7s,baz=10.0,slow=27
PPT2 Papeete2 40.60 253 eLQ LQ 05 54 10.6
comp=Z,1µm,30.2s
PPT2 eLR LR 05 55 54.3
comp=Z,1µm,25.8s
214A Organ Pipe Nat 40.77 355 P 05 45 11.0 +1.9
435B Jarrell 40.84 15 P P 05 45 10.9 +1.2
435B IAmb IAmb 05 45 17.8
comp=Z,11nm,1.1s
121A Cookes Peak, D 41.17 1 P P 05 45 13.3 +0.8
121A IAmb IAmb 05 45 17.6
comp=Z,18nm,1.5s
TBI Tubuai 41.51 245 eLQ LQ 05 54 41.5
comp=Z,744nm,30.2s
TBI eLR LR 05 56 29.2
comp=Z,1µm,27.0s,baz=65
113A Mohawk Valley, 41.66 354 P P 05 45 16.4 0.0
SDV Santo Domingo 41.86 66 P P 05 45 17.7 -0.9
comp=Z,2.5nm,0.9s,baz=285,slow=16,SNR=2.8
WHTX Lake Whitney, 42.03 14 P P 05 45 21.5 +2.1
WHTX IAmb IAmb 05 45 24.2
comp=Z,19nm,1.4s
GLA Glamis 42.07 352 P P 05 45 20.1 +0.3
ABTX Abilene, Hawle 42.15 11 P P 05 45 23.1 +2.7
ABTX IAmb IAmb 05 45 25.4
comp=Z,9.2nm,1.1s
Y14A Wickenburg 42.75 355 P P 05 45 26.6 +1.3
MSTX Muleshoe 42.97 7 P P 05 45 29.2 +2.1
SNCC San Nicolas Is 43.10 347 P P 05 45 25.7 -2.4
X16A Lo Mia Camp, P 43.11 357 P P 05 45 30.8 +2.4
W18A Petrified Fore 43.74 359 P P 05 45 35.5 +2.0
W18A IAmb IAmb 05 45 39.0
comp=Z,14nm,1.4s
W13A Hualapai Mount 43.98 354 P P 05 45 37.3 +1.8
W13A IAmb IAmb 05 45 41.0
comp=Z,7.4nm,1.1s
AMTX Amarillo 44.01 8 P P 05 45 37.5 +1.9
143A Socs Landing, 44.52 21 P P 05 45 41.2 +1.8
143A IAmb IAmb 05 45 45.7
comp=Z,14nm,0.9s
Z41A Richland Creek 44.55 19 P P 05 45 40.1 +0.4
SHPR Sheep Range 45.52 353 P P 05 45 48.3 +0.7
MVCO Mesa Verde 45.82 0 P P 05 45 53.1 +3.0
MVCO IAmb IAmb 05 45 54.7
comp=Z,9.5nm,1.2s
TPNV Topopah Spring 46.10 352 P P 05 45 52.5 +0.3
TPNV IAmb IAmb 05 46 03.1
comp=Z,9.0nm,1.4s
TUL1 Leonard 46.17 15 P P 05 45 52.2 -0.4
TUL1 IAmb IAmb 05 45 56.5
comp=Z,19nm,1.4s
CCUT Cedar City 46.36 355 P P 05 45 55.5 +1.2
S22A 4UR Ranch, Cre 46.39 2 P P 05 45 55.1 +0.5
S22A IAmb IAmb 05 46 00.1
comp=Z,5.5nm,1.1s
PLCA Paso Flores 46.41 140 P P 05 45 52.2 -2.3
comp=Z,1.5nm,1.1s,baz=311,slow=9.3,SNR=2.1
PLCA LR LR 06 00 18.2
comp=Z,665nm,21.0s,baz=328,slow=30
PLCA Paso Flores 46.41 140 P P 05 45 56.6 +2.0
PLCA IAmb IAmb 05 46 07.2
comp=Z,14nm,1.5s
SDCO Great Sand Dun 46.46 4 P P 05 45 56.8 +1.7
SDCO IAmb IAmb 05 46 00.1
comp=Z,14nm,1.4s
WHAR Wooly Hollow 46.58 19 P P 05 45 59.2 +3.4
SIV San Ignacio 47.02 104 P P 05 46 00.6 +0.9
comp=Z,0.7nm,0.7s,baz=256,slow=14,SNR=3.6
MET Memphis--Engin 47.22 21 P P 05 46 02.5 +1.7
HBAR Harrisburg 47.36 20 P P 05 46 03.3 +1.4
Q16A Castle Valley 47.58 357 P P 05 46 06.7 +2.8
LCAR Lake Charles 47.66 19 P P 05 46 07.6 +3.4
Q24A Divide 47.69 4 P P 05 46 04.2 -0.7
Q24A IAmb IAmb 05 46 11.3
comp=Z,7.8nm,1.2s
SRU San Rafael Swe 47.75 358 P P 05 46 06.2 +1.1
NVAR Mina Array Bea 47.88 350 P P 05 46 03.7 -2.5
comp=Z,0.8nm,0.8s,baz=166,slow=7.7,SNR=6.0
NVAR LR LR 06 01 54.8
comp=Z,492nm,19.8s,baz=173,slow=31
P17A Butcher Ranch, 48.12 358 P P 05 46 11.3 +3.3
CBKS Cedar Bluff 48.16 9 P P 05 46 10.3 +2.2
ISCO Idaho Springs 48.50 3 P P 05 46 10.3 -0.7
ISCO IAmb IAmb 05 46 16.2
comp=Z,7.1nm,1.1s
O20A White River Ci 48.74 1 P P 05 46 13.0 +0.2
O20A IAmb IAmb 05 46 17.7
comp=Z,13nm,1.2s
DUG Dugway, Tooele 48.95 356 P P 05 46 13.4 -0.9
DUG IAmb IAmb 05 46 19.8
comp=Z,6.3nm,1.1s
CTU Camp Tracy 49.38 357 P P 05 46 15.9 -1.7
BGU Big Grassy Mou 49.69 356 P P 05 46 21.1 +1.2
PHWY Pilot Hill 50.00 3 P P 05 46 22.5 0.0
PHWY IAmb IAmb 05 46 26.5
comp=Z,8.3nm,0.9s
SPUT South Promonto 50.03 356 P P 05 46 23.9 +1.3
OLIL Olney 51.10 21 P P 05 46 31.0 +0.5
K22A Casper 51.30 2 P P 05 46 31.6 -0.5
K22A IAmb IAmb 05 46 36.6
comp=Z,10nm,1.2s
BW06 Boulder Array 51.38 359 P P 05 46 33.4 +0.7
BW06 IAmb IAmb 05 46 41.1
comp=Z,7.3nm,1.3s
PD31 Pinedale Array 51.38 359 P P 05 46 32.7 -0.1
PDAR Pinedale Array 51.38 359 P P 05 46 29.8 -3.0
comp=Z,0.2nm,0.6s,baz=167,slow=4.3,SNR=3.3
PDAR LR LR 06 05 31.1
comp=Z,362nm,18.3s,baz=200,slow=33
MOD Modoc Plateau 51.61 349 P P 05 46 35.0 +0.6
CPUP Villa Florida 51.65 117 LR LR 06 05 00.9
comp=Z,266nm,19.2s,baz=282,slow=32
FXWY Fox Creek 52.28 358 P P 05 46 38.5 -1.0
MFID Camas Ranch 52.42 354 P P 05 46 39.2 -1.1
MFID IAmb IAmb 05 46 45.8
comp=Z,9.2nm,1.2s
J08A Circle Bar Ran 52.71 351 P P 05 46 42.3 -0.2
FLWY Flagg Ranch 52.72 358 P P 05 46 44.2 +1.5
RSSD Black Hills 52.90 4 P P 05 46 44.8 +0.7
RSSD IAmb IAmb 05 46 48.4
comp=Z,7.6nm,1.2s
YPP Pitchstone Pla 52.91 358 P P 05 46 43.4 -0.8
YHH Holmes Hill 53.43 358 P P 05 46 48.4 +0.3
QLMT Earthquake Lak 53.49 358 P P 05 46 46.7 -1.7
YHL Hebgen Lake 53.50 358 P P 05 46 48.7 +0.1
SUSD Miller 53.78 9 P P 05 46 52.1 +1.8
DLMT Dillon 54.08 357 P P 05 46 52.8 +0.2
DLMT IAmb IAmb 05 47 05.7
comp=Z,5.8nm,1.2s
GCMT Greycliff 54.40 359 P P 05 46 53.8 -1.2
JTMT Jette 56.56 356 P P 05 47 09.6 -0.9
JTMT IAmb IAmb 05 47 15.7
comp=Z,4.1nm,1.0s
EGMT Eagleton 56.64 359 P P 05 47 12.7 +1.7
EGMT IAmb IAmb 05 47 15.3
comp=Z,20nm,1.4s
C09A Chrisman Ranch 57.03 352 P P 05 47 13.4 -0.3
C09A IAmb IAmb 05 47 18.0
comp=Z,9.0nm,1.2s
MDND Maddock 57.03 7 P P 05 47 13.8 +0.1
DGMT Dagmar 57.22 4 P P 05 47 14.4 -0.5

BDFB Brasilia 59.58 103 LR LR 06 10 34.1
comp=Z,71nm,20.1s,baz=302,slow=33
ULM Lac du Bonnet 59.92 10 P P 05 47 30.6 -3.1
comp=Z,1.8nm,0.7s,baz=222,slow=13,SNR=3.5
ULM LR LR 06 10 47.3
comp=Z,103nm,20.7s,baz=228,slow=33
ULM Lac du Bonnet 59.92 10 P P 05 47 34.4 +0.6
FCC Fort Churchill 68.43 8 P P 05 48 30.1 +0.8
FCC IAmb IAmb 05 48 38.0
comp=Z,9.4nm,1.0s
YKA Yellowknife Ar 71.28 357 P P 05 48 43.1 -3.8
comp=Z,1.5nm,0.9s,baz=168,slow=5.8,SNR=7.4
YKA LR LR 06 16 51.8
comp=Z,117nm,18.5s,baz=0.0,slow=33
HYT Haines Junctio 73.07 346 P P 05 48 55.3 -2.5
HYT IAmb IAmb 05 49 07.6
comp=Z,11nm,1.2s
ILAR Eielson Array 78.76 344 P P 05 49 25.6 -4.5
comp=Z,0.6nm,0.9s,baz=171,slow=2.9,SNR=5.1
ILAR LR LR 06 17 18.6
comp=Z,107nm,18.4s,baz=136,slow=30
INK Inuvik 78.95 351 P P 05 49 26.1 -4.9
comp=Z,0.6nm,0.8s,baz=150,slow=6.1,SNR=2.1
INK Inuvik 78.95 351 P P 05 49 31.1 +0.1
INK IAmb IAmb 05 49 41.9
comp=Z,5.9nm,1.2s
PRP Porcupine Dome 79.00 345 P P 05 49 29.2 -2.4
PRP IAmb IAmb 05 49 42.9
comp=Z,6.2nm,1.1s
MLY Manley 80.02 343 P P 05 49 35.5 -1.5
MLY IAmb IAmb 05 49 53.3
comp=Z,9.1nm,1.4s
QSPA South Pole Qui 81.22 180 P P 05 49 44.3 +0.6
VNDA Vanda 81.28 193 LR LR 06 18 31.4
comp=Z,81nm,19.0s,baz=102,slow=30
DZM Mont Dzumac 81.94 249 eLR LR 06 15 11.8
comp=Z,133nm,34.4s
H11S2 WAKE ISLAND Hy 87.64 289 T T 07 26 28.9
baz=101,slow=75,SNR=517
H11S1 WAKE ISLAND Hy 87.65 289 T T 07 26 32.7
baz=101,slow=75,SNR=208
H11S3 WAKE ISLAND Hy 87.66 289 T T 07 26 32.9
baz=101,slow=75,SNR=345
H11N3 WAKE ISLAND Hy 87.67 290 T T 07 26 36.2
baz=102,slow=74,SNR=58
H11N2 WAKE ISLAND Hy 87.68 290 T T 07 26 37.3
baz=102,slow=74,SNR=58
H11N1 WAKE ISLAND Hy 87.69 290 T T 07 26 37.9
baz=102,slow=74,SNR=30
PETK Petropavlovsk- 99.14 322 LR LR 06 26 48.4
comp=Z,200nm,21.6s,baz=60,slow=30
MKAR Makanchi Array 141.03 348 PKhKP PKPpre 05 56 50.6
comp=Z,0.2nm,0.6s,baz=64,slow=3.4,SNR=2.3
SLVN Son La 146.20 295 PKPdf 05 57 06.3 -1.9
AAK Ala-Archa 146.23 356 PKPdf 05 57 06.4 -1.4
BOOM Boomskoye usch 146.25 354 PKPdf 05 57 07.0 -0.9
KDJ Kajisay 146.45 352 PKPdf 05 57 06.8 -1.5
NRN Naryn 147.28 353 PKPdf 05 57 09.3 -0.6
KSH Kashi 149.18 353 PKPbc PKPab 05 57 22.0 +0.8
KSH PKS PKSdf 06 00 54.3 +6.4
KSH PP PP 06 01 03.8 +17
CHTO Chiang Mai 151.38 293 PKPbc 05 57 21.4 -1.2
CMAR Chiang Mai Arr 151.48 292 PKPbc PKPdf 05 57 17.7 +0.9
comp=Z,1.3nm,0.4s,baz=157,slow=0.7,SNR=2.7

ECX 22 05:52:08.7±0.6,31.53N×115.49W,h7km±2km,MD2.1,ML2.3
MEX 22 05:52:09.6±0.4,31.12N×115.96W,h10km,MD3.5
ISC 22 05:52:06.5±1.2,31.54N±0.03×115.50W±0.04,h15km±11km,n18,σ0.79/30,2C-1D,Baja California

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ECBX El Chinero 0.39 99 ⇑iP Pb 05 52 15.4 +0.3
ECBX eS Sb 05 52 20.6 -0.4
SPIG San Pedro Mart 0.49 176 eP Pb 05 52 17.6 +0.5
SPIG eS Sb 05 52 24.3 +0.1
SPIG San Pedro Mart 0.49 176 eP Pb 05 52 17.6 +0.5
SPIG eS Sb 05 52 24.1 -0.1
SPX San Pedro Mart 0.50 176 eP Pb 05 52 17.7 +0.4
SPX eS Sb 05 52 24.5 0.0
SPX San Pedro Mart 0.50 176 eP Pb 05 52 17.6 +0.4
SPX eS Sb 05 52 24.2 -0.2
ESJX Sierra Juarez 0.60 321 eP Pg 05 52 18.1 -0.4
ESJX eS Sg 05 52 26.2 -0.2
ESJX IAML 05 52 27.4
comp=E,262nm,0.1s
ESJX ⇑e 05 52 27.4
SVX San Vicente 0.67 252 eP Pn 05 52 20.6 -0.9
SVX eS Sb 05 52 29.8 +0.6
SFX San Felipe 0.75 131 eP Pn 05 52 21.9 -0.6
SFX eS Sb 05 52 31.9 +0.6
CPBX Cerro Prieto 0.90 11 eP Pb 05 52 24.5 +0.6
CPBX eS Sb 05 52 36.9 +1.2
SQX San Quintin 1.01 199 eP Pn 05 52 26.5 +0.3
SQX eS Sn 05 52 39.8 -0.4
ERMX Rumorosa 1.11 336 IAML 05 52 44.5
comp=N,36nm,0.1s
ERMX ⇓e 05 52 44.5
IKP In-Ko-Pah, Jac 1.23 335 eP Pg 05 52 30.4 +0.2
CBX Cerro Bola 1.26 308 eP Pg 05 52 30.9 +0.1
CBX eS Sg 05 52 47.5 +0.4
CBX IAML 05 52 48.5
comp=N,72nm,0.3s
CBX e 05 52 48.5
CBX Cerro Bola 1.26 308 eP Pg 05 52 30.7 0.0
CBX eS Sn 05 52 47.1 +0.6
TJIG Tijuana 1.34 312 eP Pn 05 52 27.9 -2.8
TJIG eS Sn 05 52 49.1 +0.8
BAR Barrett 1.51 319 eP Pb 05 52 35.0 +0.6
MONP2 Monument Peak 1.56 330 eP Pb 05 52 36.1 +0.8
EML El Monte Cty P 1.77 320 eP Pb 05 52 39.2 +0.5

IDC 22 05:55:28.9±1.2,21.71N×122.16E,h0km,mb3.3/5,mb1 3.5/5,mb1mx3.4/29,mbtmp3.3/5,MS3.9/2,Ms1 3.9/2,ms1mx2.9/16,Error ellipse: s-maj=78.9km s-min=23.5km az=70.0
JMA 22 05:55:30.5±0.4,21.93N×121.46E,h0km,M3.8
TAP 22 05:55:30.4,21.76N×121.39E,h27km,ML3.5,D
ISC 22 05:55:31.9±1.0,21.85N±0.05×121.37E±0.03,h29km±7km,n74,σ1.09/99,mb3.4/5,Taiwan region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LAY Lan-yu 0.26 42 P Pb 05 55 38.0 -0.7
baz=37
LAY eS Sb 05 55 43.6 +0.2
baz=37
TSEB Hengchuen, Pin 0.43 277 P Pb 05 55 41.5 +0.2
baz=286
TSEB eS Sn 05 55 49.4 +0.3
baz=286
TWKBT Hengchun 0.52 280 P Pb 05 55 42.0 -0.7
baz=298
TWKBT eS Sb 05 55 50.7 +0.7
baz=298
TWK1 Hengchun 0.53 280 P Pb 05 55 42.0 -0.8
baz=298
TWK1 eS Sb 05 55 50.2 0.0
baz=298
HEN Hengchun 0.60 285 eP Pb 05 55 43.9 -0.2
baz=299
HEN eS Sn 05 55 53.4 +0.1
baz=299
TAW Tawu 0.67 319 P Pb 05 55 44.8 -0.4
baz=323
TAW eS Sn 05 55 54.8 -0.1
baz=323
EAST Anshuo 0.72 318 P Pb 05 55 45.2 -0.7
baz=330
ECL Taimali 0.84 333 eP Pn 05 55 47.5 -0.3
baz=335
TWH Lutao 0.86 7 iP Pn 05 55 47.0 -1.2
baz=5.0
TWH eS Sb 05 55 59.2 -0.5
baz=5.0
SCZT Fangliau 0.86 307 P Pb 05 55 48.4 -0.1
baz=320
SCZT eS Sn 05 56 00.1 +0.3
baz=320
SSPT Xinbi 0.97 311 eP Pn 05 55 49.8 +0.2
baz=325

TWGBT Beinan 1.00 345 eP Pn 05 55 49.1 -0.9
baz=345
TWGBT eS Sn 05 56 02.4 -0.8
baz=345
TWG Pinlang 1.00 344 iP Pn 05 55 49.2 -0.9
baz=345
TWG eS Sn 05 56 02.3 -1.0
baz=345
MASBT Mashibuluo 1.02 318 P Pn 05 55 50.5 +0.2
baz=321
MASBT eS Sb 05 56 05.0 +1.0
baz=321
SSD Sandimen 1.12 323 eP Pb 05 55 52.6 -0.1
baz=338
CHKT Chengkung 1.25 0 eP Pn 05 55 53.1 -0.3
baz=8.0
CHKT eS Sn 05 56 09.1 -0.1
baz=8.0
TWM1 Shoushan 1.30 318 eP Pb 05 55 56.6 +0.8
baz=334
SLGT Liugui 1.32 330 eP Pb 05 55 56.6 +0.5
baz=333
FULB Fuli 1.34 357 P Pn 05 55 54.8 0.0
baz=343
FULB eS Sb 05 56 12.9 -0.6
baz=343
STYT Tauyuan 1.42 337 eP Pn 05 55 56.4 +0.5
baz=343
SGST Jiashian 1.43 330 eP Pb 05 55 57.5 -0.4
baz=342
WTP Ta-pu 1.56 334 P Pb 05 55 59.7 -0.5
baz=344
HGSD Ruisui 1.64 2 eP Pn 05 55 59.4 +0.6
baz=12
CHN4 Tsaushan 1.66 335 eP Pb 05 56 01.4 -0.4
baz=335
YUS Yu-Shan 1.68 347 eP Pn 05 56 00.5 +0.7
baz=354
ALS Alishan 1.73 343 eP Pn 05 56 01.5 +1.1
baz=352
CHN5 Tsauling 1.85 340 eP Pb 05 56 04.2 -1.0
baz=340
WHYT Xinyi Township 1.90 346 eP Pb 05 56 04.8 -1.2
baz=354
VWDT VWDT 1.91 354 eP Pn 05 56 03.2 +0.7
baz=5.0
VWDT eS Sn 05 56 27.5 +2.0
baz=5.0
ESL Shilin 1.96 2 eP Pn 05 56 04.2 +0.9
baz=351
SSLB Suanglung 1.97 349 eP Pn 05 56 04.5 +1.1
baz=349
SSLB eS Sb 05 56 30.8 -0.5
baz=349
SMLT Sun Moon Lake 2.07 348 P Pb 05 56 07.3 -1.6
baz=348
SMLT eS Sb 05 56 33.9 -0.4
baz=348
TYC Yuchr 2.10 347 P Pb 05 56 07.8 -1.5
baz=347
TYC eS Sb 05 56 34.8 -0.2
baz=347
OWD Renai 2.10 355 eP Pn 05 56 06.5 +1.2
baz=4.0
OWD eS Sn 05 56 31.4 +0.8
baz=4.0
WDGT Dungji 2.11 312 P Pn 05 56 05.5 +0.2
baz=313
WDGT eS Sn 05 56 30.6 +0.1
baz=313
CHGB Renai 2.21 355 P Pn 05 56 08.1 +1.2
baz=4.0
CHGB eS Sn 05 56 34.6 +1.3
baz=4.0
VCHM Qimei 2.24 307 P Pn 05 56 07.3 +0.2
baz=321
VCHM eS Sn 05 56 34.9 +1.0
baz=321
WHF Hehuan Shan 2.29 358 P Pn 05 56 09.0 +0.9
baz=357
WHF eS Sn 05 56 36.9 +1.3
baz=357
NACB Ninganchiao 2.32 5 P Pn 05 56 08.3 +0.1
baz=354
NACB eS Sn 05 56 35.3 -0.5
baz=354
PHUB P'eng-hu 2.34 315 P Pn 05 56 08.6 +0.2
baz=316
PHUB eS Sn 05 56 37.1 +0.8
baz=316
ETLH Xiulin Townshi 2.35 3 eP Pn 05 56 08.9 +0.3
baz=2.0
PNG Penghu 2.39 316 eP Pn 05 56 09.5 +0.3
baz=317
TWT Tachien 2.40 356 eP Pn 05 56 11.3 +1.8
baz=5.0
TDCB Techi 2.40 355 P Pn 05 56 11.5 +2.0
baz=5.0
WHP Taichung City 2.45 351 P Pb 05 56 12.8 -2.5
baz=351
WHP eS Sb 05 56 44.2 -0.9
baz=351
NNSB Datong 2.57 0 eP Pn 05 56 12.9 +1.1
baz=9.0
NDT Datong Townshi 2.75 3 eP Pn 05 56 15.2 +1.1
baz=2.0
ENTT Nioudou 2.79 4 eP Pn 05 56 16.0 +1.4
baz=3.0
YHNB Yeheng 2.81 0 eP Pn 05 56 16.4 +1.4
baz=10.0
YHNB eS Sn 05 56 50.0 +2.0
baz=10.0
NWLT Wulai 2.92 2 eP Pn 05 56 18.3 +1.8
baz=2.0
JYNG Yonagunijimaku 2.97 29 P Pn 05 56 19.4 +2.3
JYNG eS Sn 05 56 54.4 +2.6
YOJ Yonaguni jima 3.01 30 P Pn 05 56 19.5 +1.8
YOJ eS Sn 05 56 54.8 +2.0
TIPB Shuangxi 3.14 8 P Pn 05 56 21.7 +2.2
baz=357
TIPB eS Sn 05 56 57.3 +1.3
baz=357
HATJ Hateruma jima 3.14 45 P Pn 05 56 19.9 +0.4
HATJ eS Sn 05 56 56.5 +0.4
IRIF Iriomote-Funau 3.30 41 P Pn 05 56 22.8 +1.2
IRIF eS Sn 05 57 00.7 +0.9
JKRS Kuro-shima 3.40 45 P Pn 05 56 24.3 +1.2
JKRS S Sn 05 57 03.8 +1.3
JIJ Ishigaki jima 3.58 45 P Pn 05 56 26.0 +0.5
JIJ eS Sn 05 57 06.2 -0.6
KNM Kinmen 3.72 314 P Pn 05 56 29.4 +2.0
baz=313
KNMB Chin-men Tao 3.78 314 eP Pn 05 56 28.6 +0.4
baz=315
JISG Ishigakijimahi 3.84 44 P Pn 05 56 30.4 +1.3
JISG eS Sn 05 57 13.6 +0.3
JTJ Tarama 4.14 47 P Pn 05 56 34.3 +1.1
JTJ eS Sn 05 57 21.0 +0.3
SONM Songino Array 28.59 339 P P 06 01 30.8 +5.3
0.2nm,0.2s,baz=143,slow=10,SNR=2.9
MKAR Makanchi Array 40.15 318 P P 06 03 11.2 +5.9
0.1nm,0.4s,baz=108,slow=9.3,SNR=2.9
H11N1 WAKE ISLAND Hy 42.50 84 T T 06 48 38.0
baz=282,slow=75,SNR=4.1
H11N2 WAKE ISLAND Hy 42.50 84 T T 06 48 38.2
baz=282,slow=75,SNR=4.0
H11N3 WAKE ISLAND Hy 42.52 84 T T 06 48 26.5
baz=282,slow=75,SNR=5.0
H11S3 WAKE ISLAND Hy 42.56 86 T T 06 48 39.1
baz=282,slow=75,SNR=11
H11S1 WAKE ISLAND Hy 42.57 86 T T 06 48 37.9
baz=282,slow=75,SNR=7.1
H11S2 WAKE ISLAND Hy 42.58 86 T T 06 48 39.4
baz=282,slow=75,SNR=4.0
WRA Warramunga Arr 43.43 162 P P 06 03 29.9 -2.5
0.3nm,0.5s,baz=345,slow=8.7,SNR=5.0
ASAR Alice Springs 46.86 164 P P 06 03 59.4 -0.2
0.1nm,0.3s,baz=341,slow=6.6,SNR=3.6
NRIK Noril'sk 51.69 345 LR LR 06 30 11.5
comp=Z,126nm,19.6s,baz=38,slow=40
STKA Stephens Creek 56.83 159 LR LR 06 29 15.1
comp=Z,114nm,21.6s,baz=38,slow=36
YKA Yellowknife Ar 85.05 23 P P 06 08 05.3 +0.7
0.2nm,0.8s,baz=316,slow=4.7,SNR=4.3

IDC 22 06:02:50.3±51.0,17.94S×171.92W,h0km,mb4.2/3,

mb1 4.4/3,mb1mx3.7/26,mbtmp4.2/3,Error ellipse: s-maj=981.5km s-min=186.5km az=82.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	44.07	243	P	P	06 11 00.6	+0.2
	1.7nm,0.7s,baz=90,slow=7.5,SNR=3.7						
WRA	Warramunga Arr	50.70	259	P	P	06 11 51.8	-0.3
	1.2nm,0.3s,baz=98,slow=6.8,SNR=17						
ASAR	Alice Springs	50.73	254	P	P	06 11 52.2	-0.1
	2.1nm,0.5s,baz=90,slow=8.0,SNR=48						

NCEDC 22 06:23:29.3±2.0,38.835N±0.010×122.80W±0.02, h3km±4km,ML2.9/39,Error ellipse: s-maj=2.0km s-min=1.5km az=93.0

NEIC 22 06:23:29.9±1.8,38.793N±0.008×122.82W±0.02, h12km±3km,Error ellipse: s-maj=2.3km s-min=1.0km az=75.0,Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDXM	Geysers	0.03	54		Pg	06 23 30.2	-2.0
GACM	Adobe Creek	0.09	338		Pg	06 23 30.8	-1.9
GAXM	Alexander Vall	0.10	148		Pg	06 23 32.0	-0.7
GSGM	Seigler Mounta	0.11	50		Pg	06 23 31.5	-1.4
GCVM	Cloverdale	0.15	261		Pg	06 23 33.4	-0.1
GSSM	Skaggs Springs	0.18	239		Pg	06 23 34.0	+0.1
NHSM	Mount Saint He	0.21	130		Pg	06 23 34.0	-0.5
HOPS	Hopland Field	0.28	316		Pg	06 23 35.0	-0.8
NMTM	Middletown	0.29	87		Pg	06 23 35.2	-0.7
MNRC	McLaughlin Min	0.31	74		Pg	06 23 35.6	-0.6
GDCM	Dry Creek	0.33	266		Pg	06 23 36.9	+0.3
GWKM	Walker Ridge	0.36	45		Pg	06 23 36.3	-1.0
GBMM	Baldy Mountain	0.43	36		Pg	06 23 37.8	-0.7
GARM	Arbuckle	0.47	70		Pg	06 23 38.3	-0.9
NBPM	Berryessa Peak	0.51	104		Pg	06 23 40.2	+0.4
GGUM	Gualala	0.53	277		Pg	06 23 40.6	+0.2
GTSM	Trough Springs	0.55	18		Pg	06 23 40.0	-0.6
NAPC	Atlas Peak	0.57	128		Pg	06 23 40.9	-0.1
GHOM	Hamilton Openi	0.61	294		Pg	06 23 41.8	-0.1
MCCM	Marconi Confer	0.65	184		Pb	06 23 43.6	+0.5
SNT	Sears Point	0.67	155		Pg	06 23 42.8	-0.2
GFC	Funks Creek	0.68	38		Pn	06 23 44.5	-0.8
NGVM		0.70	137		Pb	06 23 43.8	-0.2
GHMM	Hull Mountain	0.71	353		Pg	06 23 43.3	-0.4
NDHM	Dunnigan Hills	0.71	92		Pb	06 23 44.7	+0.5
NADM	Allendale	0.74	116		Pn	06 23 45.5	-0.7
GNAM	Navarro Ridge	0.75	303		Pg	06 23 44.0	-0.5
NOLM	Olema	0.75	178		Pb	06 23 45.3	+0.4
GCK	Clark Valley	0.81	22		Pb	06 23 46.3	+0.4
NPRM	Point Reyes	0.81	199		Pg	06 23 45.6	+0.1
GTC	Three Chop Rid	0.83	317		Pg	06 23 45.5	-0.5
NLHM	Lake Herman	0.85	142		Pg	06 23 46.2	-0.2
GASB	Alder Springs	0.86	5		Pb	06 23 46.8	-0.1
HERB	Hercules	0.89	150		Pb	06 23 47.4	+0.1
CPMM	Point Molate	0.90	159		Pb	06 23 47.5	0.0
SUTB	Sutter Butte	0.92	61		Pg	06 23 46.7	-0.9
CSPM	San Pablo Ridg	0.93	154		Pb	06 23 48.2	+0.3
KFPM	Farley Peak	0.97	331		Pg	06 23 47.6	-0.9
GVV	Valley View	0.99	7		Pb	06 23 49.3	+0.2
BRK	Berkeley--Havi	1.02	154		Pg	06 23 49.6	+0.1
BL67	Building 67, L	1.02	154		Pg	06 23 49.6	+0.1
BRIB	Briones	1.02	149		Pg	06 23 49.6	+0.1
VAK	Adit at Lawren	1.02	154		Pg	06 23 49.5	0.0
CVPM	Vollmer Peak	1.02	152		Pb	06 23 49.1	-0.4
BKS	Berkeley--Byer	1.02	153		Pb	06 23 49.6	0.0
JPRM	Presidio of Sa	1.03	165		Pn	06 23 50.3	+0.1
CYBM	Yerba Buena Is	1.04	160		Pn	06 23 50.5	+0.1
KCPM	Cahto Peak	1.07	327		Pg	06 23 50.6	0.0
FARB	Farallon Islan	1.10	187		Pb	06 23 50.9	0.0
SMCB	Saint Mary's C	1.10	149		Pn	06 23 51.4	+0.3
BDM	Black Diamond	1.12	138		Pb	06 23 50.2	-1.1
CRPB	Russellman Par	1.14	140		Pb	06 23 51.0	-0.5
KBNM	Bluenose Ridge	1.14	345		Pg	06 23 52.0	+0.2
KIPM	Iron Peak	1.14	333		Pn	06 23 51.7	0.0
CRHM	Round Hill Res	1.14	145		Pg	06 23 51.9	+0.1
BGC	Bolinger Road	1.14	148		Pb	06 23 51.6	-0.1
OHCM	Honcut	1.17	62		Pb	06 23 50.5	-1.6
CSLM	San Leandro Hi	1.20	152		Pb	06 23 52.7	+0.1
PAM	Palermo	1.21	57		Pb	06 23 51.0	-1.5
CLCB	Lake Chabot	1.21	150		Pn	06 23 52.5	-0.1
SAC	San Andreas	1.25	165		Pn	06 23 52.9	-0.3
JCPM	Coyote Point	1.27	162		Pn	06 23 54.4	+0.1
CMOB	Morgan Territo	1.27	140		Pn	06 23 52.9	-0.6
KBSM	Bell Springs	1.27	332		Pn	06 23 54.5	+0.1
ORV	Oroville	1.28	53		Pn	06 23 51.9	-1.7
ORV	Oroville	1.28	53		Pn	06 23 51.9	-1.7
ORV	Oroville	1.28	53	Pg	Pn	06 23 51.1	-2.5
CBSNC	Byron Hot Spri	1.34	136		Pb	06 23 55.2	+0.2
CNIC	Niles Canyon	1.36	150		Pb	06 23 55.4	+0.1
O02D	Mt. Diablo Mer	1.38	1		Pg	06 23 56.6	+0.1
AASM	Arroyo Seco	1.39	105		Pn	06 23 53.1	-2.0
JHPM	Huddart Park	1.41	163		Pg	06 23 56.9	0.0
MGL	Magalia	1.41	44		Pn	06 23 54.0	-1.6
WENL	Wente Vineyard	1.44	144		Pn	06 23 55.5	-0.3
AFDM	Forest Hills D	1.45	83		Pn	06 23 54.2	-1.8
JRSC	Jasper Ridge	1.46	162		Pn	06 23 55.7	-0.4
CMJM	Mission San Jo	1.47	149		Pn	06 23 55.7	-0.7
JSFB	Stanford Teles	1.48	160		Pn	06 23 57.0	-0.3
JFP	Foothills Park	1.51	161		Pn	06 23 56.9	0.0
KMRM	Mail Ridge	1.58	335		Pg	06 23 60.0	-0.4
ASMM	Slate Mountain	1.67	88		Pn	06 23 59.6	+0.5
O03E	Paynes Creek	1.69	27		Pn	06 23 58.8	-0.6
MNHB	New Hogan Dam	1.70	112		Pn	06 23 58.1	-1.4
MHC	Mount Hamilton	1.72	147		Pn	06 24 00.1	+0.2
ARN	Arnold Ranch	1.76	144		Pn	06 24 00.2	-0.1
JSTM	Santa Teresa H	1.78	153		Pn	06 23 59.6	+0.8
JUMM	Mount Umunhum	1.79	156		Pn	06 24 00.7	0.0
WDC	Whiskeytown Da	1.80	7		Pb	06 24 03.2	+0.5
AMC	Almaden	1.80	154		Pn	06 24 00.4	-0.4
JLAB	Laurel Hill	1.85	152		Pn	06 24 01.6	+0.2
JRGM	Rodeo Gulch Ro	1.88	159		Pn	06 24 01.7	-0.1
MCUB	Copperopolis B	1.91	115		Pn	06 24 01.8	-0.5
HSPM	Sheep	1.97	148		Pn	06 24 03.1	-0.1
JELB	Ellicott, Sant	2.02	157		Pn	06 24 02.8	-1.0
DONR	Donner Summit	2.02	73		Pn	06 24 04.0	-0.1
CMB	Columbia Colle	2.06	111		Pn	06 24 03.7	-0.6
IND	Independence	2.07	71		Pn	06 24 05.3	+0.7
RUBR	Rubicon Trail	2.10	82		Pn	06 24 05.3	+0.3
TAHR	Tahoe	2.10	79		Pn	06 24 06.1	+1.0
HPCM	Pacheco Lake	2.12	144		Pn	06 24 04.8	-0.4
HFEM	San Felipe	2.13	148		Pn	06 24 06.0	+0.7
KBF	Kyburz Flat	2.15	70		Pn	06 24 07.1	+1.3
SFJWR	San Luis Fatjo	2.17	143		Pn	06 24 05.3	-0.7
LOY	Loyalton	2.19	66		Pn	06 24 06.9	+0.7
BEKR	Beckworth	2.19	60		Pn	06 24 06.2	-0.1
HJGM	San Juan Grade	2.22	153		Pn	06 24 06.2	-0.4
MPK	Martis Peak	2.23	76		Pn	06 24 07.6	+0.6
HLTM	Lone Tree Road	2.25	147		Pn	06 24 06.9	-0.1
BABR	Babbit Peak	2.26	68		Pn	06 24 08.6	+1.3
VPK	Verdi Peak	2.27	72		Pn	06 24 09.1	+1.6
FRP	Fremont Peak	2.29	152		Pn	06 24 07.1	-0.5
SAO	San Andreas Ge	2.30	151		Pn	06 24 07.3	-0.3
GNO	Genoa	2.32	86		Pn	06 24 09.7	+1.6
MYLM	Yosemite Lake	2.36	126		Pn	06 24 07.5	-0.9
PEAR	Peavine Mounta	2.37	69		Pn	06 24 09.8	+1.0
BCGM	Cienega Road	2.39	150		Pn	06 24 08.6	-0.3
BHRM	Hodges Ranch	2.40	149		Pn	06 24 09.5	+0.4
BPCNC	Pine Canyon	2.41	156		Pn	06 24 09.3	+0.1
SCZ	Santa Cruz	2.46	152		Pn	06 24 08.5	-1.4
BEHM	Elkhorn Ranch	2.49	148		Pn	06 24 10.8	+0.5
BFC	Buffalo Canyon	2.51	87		Pn	06 24 12.0	+1.3
BJCM	Johnson Can.	2.51	153		Pn	06 24 10.3	-0.2
VCNR	Virginia City	2.52	78		Pn	06 24 11.8	+0.9
PNTR	Pine Nut	2.53	82		Pn	06 24 12.7	+1.7
BEMM	Emmet	2.53	147		Pn	06 24 11.3	+0.5
BAVM	Antelope Valle	2.57	146		Pn	06 24 11.0	-0.4
HAST	Hastings Reser	2.60	157		Pn	06 24 10.8	-1.1
BBGB	Big Mountain B	2.62	147		Pn	06 24 13.3	+1.1
BPIM	Pinnacles	2.65	150		Pn	06 24 11.3	-1.1
WAKR	Walker	2.67	95		Pn	06 24 14.3	+1.4
YERR	Yerington	2.80	85		Pn	06 24 15.6	+0.9
PAHR	Pah Rah Range	2.82	70		Pn	06 24 15.9	+0.9
YBH	Yreka Blue Hor	2.94	2		Pb	06 24 23.3	+1.1
PMPB	Monarch Peak	3.03	147	Pn	Pn	06 24 18.8	+1.0
RYN	Ryan	3.37	91		Pn	06 24 22.6	+0.2
MOD	Modoc Plateau	3.65	31		Pn	06 24 29.6	+3.2
NV11	Mina Array Sit	3.67	94		Pn	06 24 27.4	+0.8
KVN	Kaiserville	3.69	85		Pn	06 24 26.9	-0.1
ISA	Isabella, Lake	4.67	131		Pn	06 24 39.2	-1.1

IDC 22 06:24:30.4±1.2,9.11S×109.67W,h0km,mb4.0/10, mb1 4.0/10,mb1mx4.0/30,mbtmp4.0/10,MS4.3/25, Ms1 4.3/25,ms1mx4.3/25,Error ellipse: s-maj=39.0km s-min=19.8km az=52.0

NEIC 22 06:24:35.7±2.2,8.8S±0.1×109.0W±0.2,h10km±1km, mb4.8/111,Error ellipse: s-maj=28.7km s-min=19.6km az=256.0

GCMT 22 06:24:35.7±0.2,8.96S±0.01×109.33W±0.01,h14km±1km, MW5.0/124,Moment Tensor Solution. s51,c66; s124,c189; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.83±.10; $M_{\theta\theta}$1.55±.10; $M_{\phi\phi}$-0.71±.09; $M_{r\theta}$0.60±.19; $M_{r\phi}$3.99±.09; $M_{\theta\phi}$-0.33±.18; Best double couple: $M_0$4.22000×10^{16} NP1:ϕ_s8.00000°,δ80.00000°, λ-174.00000°. NP2:ϕ_s277.00000°,δ84.00000°, λ-10.00000°. Principal axes: T 4.5780, Plg3.0000°, Azm323.0000°; N -0.7120, Plg78.0000°, Azm67.0000°; P -3.8620, Plg12.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 22 06:24:35.8±0.7,8.9S±0.1×109.3W±0.2,h20km,n159, σ1.78/129,mb4.7/59,MS4.3/27,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	18.11	180	LR	LR	06 33 39.4	
	comp=Z,1μm,19.9s,baz=359,slow=31						
CMIG	Matias Romero	29.51	29	LR	LR	06 38 46.0	
	comp=Z,207nm,21.9s,baz=211,slow=29						
APG	El Apazote	30.22	38	LR	LR	06 40 22.1	
	comp=Z,1μm,21.0s,baz=222,slow=31						
ATAH	Atahualpa	30.64	89	LR	LR	06 40 19.3	
	comp=Z,296nm,18.2s,baz=262,slow=31						
ACON	Acoyapa	31.71	50	P	P	06 30 56.8	-1.7
ZAIG	Zacatecas	32.17	12	P	P	06 31 04.2	+1.5
ZAIG				IAmb	IAmb	06 31 09.6	
	comp=Z,14nm,1.4s						
HPIG		35.81	6	P	P	06 31 36.3	+2.1
ROSC	El Rosal	37.45	70	LR	LR	06 44 25.5	
	comp=Z,301nm,18.8s,baz=290,slow=32						
HSIG		37.75	358	P	P	06 31 51.9	+1.4
HSIG				IAmb	IAmb	06 31 57.0	
	comp=Z,13nm,1.2s						
833A	Chaparral WMA,	38.24	14	P	P	06 31 55.3	+0.7
833A				IAmb	IAmb	06 32 00.7	
	comp=Z,14nm,1.2s						
TXAR	Lajitas Array	38.41	8	P	P	06 31 57.0	+0.9
	comp=Z,1.2nm,1.0s,baz=186,slow=10,SNR=6.8						
TXAR				LR	LR	06 44 42.5	
	comp=Z,202nm,20.2s,baz=0.0,slow=31						
PPT	Papeete	40.07	253	LR	LR	06 43 56.1	
	comp=Z,501nm,22.0s,baz=70,slow=29						
PPT2	Papeete2	40.08	253	eLQ	LQ	06 41 20.0	
	comp=Z,1μm,28.2s						
PPT2				eLR	LR	06 43 14.5	
	comp=Z,975nm,24.5s,baz=77						
JCT	Junction City	40.22	13	P	P	06 32 12.1	+0.9
MNTX	Cornudas Mount	40.56	5	P	P	06 32 14.1	+0.2
LPAZ	La Paz	40.77	105	P	P	06 32 17.2	+0.5
	comp=Z,1.2nm,0.9s,baz=282,slow=3.9,SNR=2.7						
LPAZ				LR	LR	06 45 30.3	
	comp=Z,363nm,19.6s,baz=262,slow=31						
LPAZ	La Paz	40.77	105	IAmb	IAmb	06 32 26.5	
	comp=Z,1.7nm,0.8s						
TBI	Tubuai	41.01	245	eLQ	LQ	06 41 48.2	
	comp=Z,881nm,29.0s						
TBI				eLR	LR	06 43 36.3	
	comp=Z,1μm,27.8s,baz=68						
435B	Jarrell	41.04	15	P	P	06 32 18.9	+1.0
435B				IAmb	IAmb	06 32 27.9	
	comp=Z,15nm,1.3s						
121A	Cookes Peak, D	41.24	2	P	P	06 32 21.8	+2.0
113A	Mohawk Valley,	41.67	354	P	P	06 32 24.4	+1.3
BAR	Barrett	41.96	351	P	P	06 32 27.7	+2.2
ABTX	Abilene, Hawle	42.32	12	P	P	06 32 28.5	+0.1
ABTX				IAmb	IAmb	06 32 37.6	
	comp=Z,11nm,1.1s						
SDV	Santo Domingo	42.37	66	P	P	06 32 30.9	+1.6
	comp=Z,2.8nm,0.7s,baz=302,slow=13,SNR=4.5						
Y12C	Blythe	42.72	354	P	P	06 32 31.6	0.0
Y14A	Wickenburg	42.77	355	P	P	06 32 35.5	+3.5
MSTX	Muleshoe	43.10	8	P	P	06 32 35.3	+0.5
X16A	Lo Mia Camp, P	43.15	357	P	P	06 32 39.8	+4.5
342A	Flagon Creek P	43.24	21	P	P	06 32 35.7	-0.1
342A				IAmb	IAmb	06 32 42.8	
	comp=Z,12nm,0.8s						
W13A	Hualapai Mount	43.99	355	P	P	06 32 42.8	+0.6
GSC	Goldstone, Bar	44.55	351	P	P	06 32 47.8	+1.4
143A	Socs Landing,	44.77	22	P	P	06 32 48.9	+0.8
143A				IAmb	IAmb	06 32 54.0	
	comp=Z,25nm,1.2s						
Z41A	Richland Creek	44.78	20	P	P	06 32 47.8	-0.4
WLAR	White Oak Lake	45.08	19	P	P	06 32 50.7	+0.2
WLAR				IAmb	IAmb	06 33 02.0	
	comp=Z,23nm,1.2s						
U15A	North Rim	45.19	357	P	P	06 32 56.0	+4.2
OKCFA	Oklahoma City	45.49	14	P	P	06 32 54.1	+0.3
SHPR	Sheep Range	45.52	353	P	P	06 32 57.8	+3.6
SAML	Samuel	45.52	94	P	P	06 32 53.9	-0.5
SAML				IAmb	IAmb	06 32 57.1	
	comp=Z,17nm,1.5s						
PAGB	Antelope Grade	45.60	347	P	P	06 33 01.6	+6.9
PAGB				IAmb	IAmb	06 33 01.8	
	comp=Z,21nm,1.4s						
MIAR	Mount Ida	45.72	18	P	P	06 32 55.5	-0.1
MIAR				IAmb	IAmb	06 33 04.9	
	comp=Z,8.9nm,1.1s						
KNB	Kanab	45.81	356	P	P	06 32 57.8	+1.3
MVCO	Mesa Verde	45.89	1	P	P	06 32 58.5	+1.2
MVCO				IAmb	IAmb	06 33 04.1	
	comp=Z,12nm,1.3s						
T25A	Trinidad	46.04	5	P	P	06 33 01.3	+2.9
T25A				IAmb	IAmb	06 33 05.0	
	comp=Z,15nm,1.5s						
TUL1	Leonard	46.37	15	P	P	06 33 00.4	-0.3
TUL1				IAmb	IAmb	06 33 05.3	
	comp=Z,9.0nm,0.9s						
CCUT	Cedar City	46.38	356	P	P	06 33 03.4	+2.3
S22A	4UR Ranch, Cre	46.48	3	P	P	06 33 03.2	+1.3
S22A				IAmb	IAmb	06 33 21.8	
	comp=Z,11nm,1.4s						
SDCO	Great Sand Dun	46.55	4	P	P	06 33 03.5	+1.0
SDCO				IAmb	IAmb	06 33 08.8	
	comp=Z,8.1nm,1.2s						
X43A	Marvell	46.59	21	P	P	06 33 01.8	-0.6
PLCA	Paso Flores	46.70	139	P	P	06 33 00.4	-3.1
	comp=Z,3.7nm,1.1s,baz=291,slow=15,SNR=3.9						
PLCA				LR	LR	06 47 29.0	
	comp=Z,844nm,21.5s,baz=322,slow=30						
PLCA	Paso Flores	46.70	139	P	P	06 33 03.2	-0.3
W41B	Gary Mavity, V	46.72	19	P	P	06 33 03.0	-0.4
WHAR	Wooly Hollow	46.81	19	P	P	06 33 04.9	+0.7
OXF	Oxford	47.12	23	P	P	06 33 06.0	-0.6
HHAR	Hobbs	47.22	17	P	P	06 33 09.5	+2.1
HHAR				IAmb	IAmb	06 33 16.4	
	comp=Z,9.1nm,1.3s						
R11A	Troy Canyon, C	47.39	353	P	P	06 33 12.2	+3.3
Z50A	Ashland	47.47	27	P	P	06 33 09.6	+0.2
SIV	San Ignacio	47.52	103	P	P	06 33 11.0	+0.9
	comp=Z,1.7nm,1.0s,baz=278,slow=16,SNR=3.5						
152A	Waverly Hall	47.53	28	P	P	06 33 10.5	+0.6
U40A	Yellville	47.62	18	P	P	06 33 10.4	-0.1
U40A				IAmb	IAmb	06 33 19.3	
	comp=Z,16nm,1.2s						
Q24A	Divide	47.79	4	P	P	06 33 15.8	+3.7
Q24A				IAmb	IAmb	06 33 21.8	
	comp=Z,6.9nm,1.2s						
NVAR	Mina Array Bea	47.85	350	P	P	06 33 12.4	-0.1
	comp=Z,1.5nm,0.7s,baz=181,slow=9.5,SNR=6.7						
NVAR				LR	LR	06 49 02.9	
	comp=Z,673nm,19.3s,baz=171,slow=31						
LCAR	Lake Charles	47.90	20	P	P	06 33 12.5	-0.1
LCAR				IAmb	IAmb	06 33 17.9	
	comp=Z,15nm,1.1s						
PLAL	Pickwick Lake	48.05	24	P	P	06 33 12.6	-1.3
RYN	Ryan	48.08	350	P	P	06 33 15.4	+1.2
RYN				IAmb	IAmb	06 33 20.6	
	comp=Z,10nm,1.4s						
KSCO	Kaye Shedlock'	48.09	7	P	P	06 33 17.9	+3.7
KSCO				IAmb	IAmb	06 33 20.4	
	comp=Z,13nm,1.1s						
P17A	Butcher Ranch,	48.16	358	P	P	06 33 16.5	+1.7
154A	Montrose	48.26	30	P	P	06 33 19.1	+3.6
MGMO	Mountain Grove	48.53	18	P	P	06 33 18.9	+1.3
MGMO				IAmb	IAmb	06 33 26.6	
	comp=Z,18nm,1.2s						
ISCO	Idaho Springs	48.59	4	P	P	06 33 19.0	+0.7
ISCO				IAmb	IAmb	06 33 19.8	
	comp=Z,11nm,1.4s						
NLU	North Lily Min	48.69	357	P	P	06 33 21.3	+2.3
PBMO	Poplar Bluff	48.79	20	P	P	06 33 20.3	+0.8
PBMO				IAmb	IAmb	06 33 24.7	
	comp=Z,9.7nm,0.9s						
O20A	White River Ci	48.81	1	P	P	06 33 22.2	+2.3
O20A				IAmb	IAmb	06 33 30.1	
	comp=Z,17nm,1.4s						
DUG	Dugway, Tooele	48.97	356	P	P	06 33 22.2	+1.2
DUG				IAmb	IAmb	06 33 27.7	
	comp=Z,7.3nm,1.4s						
SWET	Sewanee	49.13	25	IAmb	IAmb	06 33 31.2	
	comp=Z,7.6nm,1.0s						
V48A	Smith Brothers	49.22	24	P	P	06 33 23.6	+0.8
V48A				IAmb	IAmb	06 33 27.5	
	comp=Z,8.3nm,0.9s						
CCM	Cathedral Cave	49.68	19	P	P	06 33 24.7	-1.6
CCM				IAmb	IAmb	06 33 30.8	
	comp=Z,10nm,0.9s						
ELK	Elko	49.72	354	LR	LR	06 50 42.7	
	comp=Z,476nm,18.3s,baz=159,slow=32						
ELK	Elko	49.72	354	P	P	06 33 30.3	+3.4
W52A	Murphy	49.91	27	P	P	06 33 26.3	-1.9
SPUT	South Promonto	50.06	357	P	P	06 33 30.4	+1.0
T47A	Sharon Grove	50.19	23	P	P	06 33 28.8	-1.4
T47A				IAmb	IAmb	06 33 34.3	
	comp=Z,8.5nm,1.0s						
TKL	Tuckaleechee C	50.45	27	LR	LR	06 54 46.6	
	comp=Z,107nm,19.2s,baz=191,slow=36						
T49A	Edmonton	50.92	25	P	P	06 33 35.4	-0.3
T49A				IAmb	IAmb	06 33 40.5	
	comp=Z,16nm,1.1s						
BGNE	Belgrade	51.12	11	P	P	06 33 37.1	-0.1
OLIL	Olney	51.35	21	P	P	06 33 38.4	-0.5
BW06	Boulder Array	51.44	360	P	P	06 33 41.0	+1.2
PD31	Pinedale Array	51.44	360	P	P	06 33 39.7	-0.1
PDAR	Pinedale Array	51.44	360	P	P	06 33 37.1	-2.7
	comp=Z,1.4nm,1.0s,baz=191,slow=7.1,SNR=6.9						
PDAR				LR	LR	06 52 48.7	
	comp=Z,511nm,18.2s,baz=188,slow=33						
YBH	Yreka Blue Hor	51.89	347	LR	LR	06 50 44.5	
	comp=Z,511nm,20.0s,baz=173,slow=30						
REDW	Red Top Meadow	52.05	359	P	P	06 33 48.5	+4.2
CPUP	Villa Florida	52.10	116	LR	LR	06 51 30.7	
	comp=Z,447nm,22.0s,baz=284,slow=31						
FXWY	Fox Creek	52.33	358	P	P	06 33 45.3	-1.2
MFID	Camas Ranch	52.42	354	P	P	06 33 48.2	+1.3
MFID				IAmb	IAmb	06 33 52.9	
	comp=Z,18nm,1.4s						
P46A	Rosedale	52.46	21	P	P	06 33 46.5	-0.7
J08A	Circle Bar Ran	52.70	352	P	P	06 33 52.0	+3.0
FLWY	Flagg Ranch	52.77	359	P	P	06 33 50.1	+0.5
RSSD	Black Hills	53.00	5	P	P	06 33 51.4	0.0
RSSD				IAmb	IAmb	06 33 57.1	
	comp=Z,15nm,1.4s						
YHH	Holmes Hill	53.48	359	P	P	06 33 54.7	-0.2
PINE	Pine Mountain	53.52	350	P	P	06 33 59.9	+4.7
PINE				IAmb	IAmb	06 34 01.1	
	comp=Z,11nm,1.4s						
YHL	Hebgen Lake	53.55	358	P	P	06 33 58.7	+3.2
MCMT	McKenzie Canyo	53.59	357	P	P	06 33 55.4	-0.4
M44A	Midewin, Midew	53.74	20	P	P	06 33 55.9	-0.7
SUSD	Miller	53.93	9	P	P	06 33 57.8	-0.1
GCMT	Greycliff	54.46	360	P	P	06 34 02.4	+0.4
G08A	Pilot Rock	54.66	352	P	P	06 34 07.0	+3.6
G08A				IAmb	IAmb	06 34 09.4	
	comp=Z,7.9nm,1.4s						
F10A	Beach Ranch, E	55.10	353	P	P	06 34 10.6	+4.0
EGMT	Eagleton	56.70	360	P	P	06 34 18.0	+0.1
EGMT				IAmb	IAmb	06 34 23.1	
	comp=Z,11nm,1.1s						
C09A	Chrisman Ranch	57.03	353	P	P	06 34 23.6	+3.4
C09A				IAmb	IAmb	06 34 25.7	
	comp=Z,5.1nm,0.8s						
DGMT	Dagmar	57.32	4	P	P	06 34 22.4	+0.1
NEW	Newport	57.35	354	LR	LR	06 54 53.1	
	comp=Z,337nm,20.4s,baz=180,slow=32						
AGMN	Agassiz Nation	58.19	11	P	P	06 34 30.9	+2.6
AGMN				IAmb	IAmb	06 34 32.9	
	comp=Z,6.3nm,0.9s						
D41A	Chassel	58.71	16	P	P	06 34 32.0	+0.1
EYMN	Ely	58.77	14	P	P	06 34 35.3	+2.8
SADO	Sadowa	59.97	24	LR	LR	07 00 25.8	
	comp=Z,191nm,18.5s,baz=39,slow=36						
ULM	Lac du Bonnet	60.07	10	P	P	06 34 40.4	-0.9
	comp=Z,8.5nm,1.0s,baz=213,slow=7.4,SNR=6.5						
ULM				LR	LR	07 00 21.8	
	comp=Z,135nm,18.8s,baz=222,slow=36						
ULM	Lac du Bonnet	60.07	10	P	P	06 34 40.6	-0.7
ULM				IAmb	IAmb	06 34 45.7	
	comp=Z,12nm,1.1s						
BDFB	Brasilia	60.08	103	LR	LR	06 57 56.7	
	comp=Z,102nm,19.2s,baz=282,slow=33						
BBB	Bella Bella	62.97	347	LR	LR	06 57 14.8	
	comp=Z,187nm,19.6s,baz=157,slow=31						
TRQ	Mont Tremblant	63.07	26	P	P	06 34 59.8	-2.0
FFC	Flin Flon	63.70	5	P	P	06 35 04.2	-1.5
FFC				IAmb	IAmb	06 35 09.8	
	comp=Z,9.8nm,1.2s						
FCC	Fort Churchill	68.56	8	P	P	06 35 36.3	-0.5
YKA	Yellowknife Ar	71.31	357	P	P	06 35 51.7	-2.0
	comp=Z,1.6nm,1.1s,baz=173,slow=6.3,SNR=11						
YKA				LR	LR	07 04 18.3	
	comp=Z,173nm,18.5s,baz=0.0,slow=33						
SCHQ	Schefferville	72.78	24	LR	LR	07 07 11.0	
	comp=Z,192nm,19.9s,baz=348,slow=35						
DAWY	Dawson	76.26	347	P	P	06 36 22.3	-0.4
DAWY				IAmb	IAmb	06 36 37.0	
	comp=Z,7.2nm,1.2s						
EGAK	Eagle	77.27	347	P	P	06 36 29.0	+0.7
EGAK				IAmb	IAmb	06 36 37.9	
	comp=Z,14nm,1.4s						
SCRK	Sand Creek	77.28	345	P	P	06 36 29.9	+1.3
SCRK				IAmb	IAmb	06 36 43.8	
	comp=Z,14nm,1.5s						
RIDG	Independent Ri	77.31	345	P	P	06 36 29.5	+0.8
ILAR	Eielson Array	78.68	345	P	P	06 36 34.1	-2.0
	comp=Z,1.1nm,1.1s,baz=170,slow=7.1,SNR=3.8						
ILAR				LR	LR	07 04 36.7	
	comp=Z,156nm,18.6s,baz=145,slow=31						
KTH	Kantishna Hill	78.87	342	P	P	06 36 39.7	+2.4
KTH				IAmb	IAmb	06 36 42.5	
	comp=Z,12nm,1.0s						
PRP	Porcupine Dome	78.92	345	P	P	06 36 37.8	+0.2
PRP				IAmb	IAmb	06 36 44.0	
	comp=Z,9.8nm,1.3s						
INK	Inuvik	78.93	351	P	P	06 36 38.0	+0.6
INK				IAmb	IAmb	06 36 46.6	
	comp=Z,7.4nm,1.2s						
VNDA	Vanda	81.11	193	LR	LR	07 05 29.4	
	comp=Z,79nm,18.6s,baz=105,slow=30						
QSPA	South Pole Qui	81.16	180	P	P	06 36 52.6	+2.8
QSPA				IAmb	IAmb	06 36 58.8	
	comp=Z,11nm,1.1s						
DZM	Mont Dzumac	81.42	249	eLR	LR	07 02 25.6	
	comp=Z,130nm,27.9s						
COLD	Coldfoot	81.44	345	P	P	06 36 52.0	+0.9
RES	Resolute Bay	83.92	4	P	P	06 37 03.0	-0.8
RES				IAmb	IAmb	06 37 08.2	
	comp=Z,3.4nm,0.9s						
VNA3	Neumayer Olymp	84.70	161	P	P	06 37 08.2	+0.2
VNA1	Neumayer--Stat	85.28	161	P	P	06 37 13.7	+2.8
VNA2	Neumayer--Watz	85.50	161	P	P	06 37 11.4	-0.6
	baz=248,slow=3.6						
SNAA	Sanae	86.70	162	P	P	06 37 18.0	+0.1
SNAA	Sanae	86.70	162	P	P	06 37 19.5	+1.6
SNAA				IAmb	IAmb	06 37 21.0	
	comp=Z,14nm,1.4s						
H11S2	WAKE ISLAND Hy	87.17	289	T	T	08 13 36.4	
	baz=101,slow=75,SNR=406						
H11S1	WAKE ISLAND Hy	87.18	289	T	T	08 13 37.0	
	baz=101,slow=75,SNR=270						
H11S3	WAKE ISLAND Hy	87.19	289	T	T	08 13 37.6	
	baz=101,slow=75,SNR=405						
H11N3	WAKE ISLAND Hy	87.20	290	T	T	08 13 36.8	
	baz=101,slow=75,SNR=67						

H11N2	WAKE ISLAND Hy	87.21	290	T	T	08 13 37.8	
	baz=101,slow=75,SNR=71						
H11N1	WAKE ISLAND Hy	87.21	290	T	T	08 13 41.6	
	baz=101,slow=75,SNR=30						
PETK	Petropavlovsk-	98.87	322	LR	LR	07 13 45.1	
	comp=Z,269nm,21.2s,baz=62,slow=30						
SONM	Songino Array	130.88	329	PKP	PKPdf	06 43 45.0	-1.2
	comp=Z,0.6nm,0.9s,baz=323,slow=0.7,SNR=3.3						
MKAR	Makanchi Array	130.98	347	PKhKP	PKPpre	06 43 58.0	
	comp=Z,0.3nm,0.7s,baz=45,slow=2.7,SNR=2.9						
PRZ	Przheval'sk	145.89	350	PKPdf	PKPab	06 44 14.0	-0.7
KK31	Karatay Array	145.95	0	PKPdf	PKPab	06 44 14.6	-0.1
KKAR	Karatay Array	145.95	0	PKPdf	PKPab	06 44 14.9	+0.2
AAK	Ala-Archa	146.25	355	PKPdf	PKPab	06 44 16.3	+0.3
KDJ	Kajisay	146.43	351		PKPbc	06 44 15.4	-0.5
NRN	Naryn	147.28	353		PKPbc	06 44 18.6	0.0
KSH	Kashi	149.17	352	PKPbc	PKPbc	06 44 22.3	-1.1
KSH				PKS	PP	06 47 49.3	-4.2
KSH				PP	PP	06 48 01.5	+8.0
KSH				SKS	SKSdf	06 50 52.6	-34
PBKT	Sadao Pong	149.55	288	PKPbc	PKPab	06 44 28.5	-1.3
CMAR	Chiang Mai Arr	151.01	292	PKPbc	PKPbc	06 44 26.5	-1.8
	comp=Z,1.4nm,0.3s,baz=58,slow=1.0,SNR=9.2						

NEIC **22** *06:41:58.4±3.6, 72.22N±0.06×75.9W±0.2, h14km±5km, Error ellipse: s-maj=9.6km s-min=7.7km az=130.0*
IDC **22** *06:41:59.1±1.1, 72.09N×76.24W, h0km, mb3.7/7, mb1 3.9/12, mb1mx3.6/54, mbtmp3.8/12, ML3.5/5, Error ellipse: s-maj=20.0km s-min=13.2km az=61.0*
OTT **22** *06:41:60.0±0.2, 72.29N×75.85W, h18km, MN4.1/8, 85km southeast from Pond Inlet, Nu Eastern Arctic Background Seismic Zone.*
ISC 22 06:41:56.7±0.5, **72.17N**±0.04×**75.94W**±0.04, **h10**km, **n65**, σ**3.58**/89, **mb4.0**/17, **Baffin Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILON	Igloolik, Nuna	3.42	218	PN	Pn	06 42 53.2	+3.3
ILON				SN	Sn	06 43 33.5	+3.1
ILON				LG	Lg	06 43 47.1	
ILON				Trac		06 43 50.5	
	comp=Z,554nm,0.3s						
ILON	Igloolik, Nuna	3.42	218	Pn	Pn	06 42 53.2	+3.3
ILON				Sn	Sn	06 43 33.5	+3.1
TULEG	Thule	4.79	20	PN	Pn	06 43 08.9	+0.2
TULEG				SN	Sn	06 44 00.7	-3.5
TULEG				Trac		06 44 02.4	
	comp=Z,42nm,0.2s						
TULEG	Thule	4.79	20		Pn	06 43 08.7	-0.1
TULEG				Sn	Sn	06 44 01.3	-2.9
KULLO	Kullorsuaq	5.88	57	i P	Pn	06 43 23.9	+0.3
KULLO	Kullorsuaq	5.88	57	PN	Pn	06 43 24.2	+0.6
KULLO				SN	Sn	06 44 26.9	-4.0
KULLO				Trac		06 44 27.4	
	comp=Z,81nm,0.5s						
KULLO	Kullorsuaq	5.88	57	Pn	Pn	06 43 24.2	+0.6
KULLO				Sn	Sn	06 44 26.9	-4.0
RES	Resolute Bay	5.97	304	Pn	Pn	06 43 26.4	+1.6
	0.8nm,0.3s,baz=106,slow=8.0,SNR=17						
RES				Sn	Sn	06 44 31.7	-1.4
	4.6nm,0.3s,baz=203,slow=12,SNR=4.9						
RES				Lg	Lg	06 45 04.9	
	12nm,0.3s,baz=192,slow=21,SNR=9.4						
RES	Resolute Bay	5.97	304	PN	Pn	06 43 25.9	+1.0
RES				SN	Sn	06 44 31.1	-1.9
RES				LG	Lg	06 45 04.2	
RES				Trac		06 45 11.2	
	comp=Z,87nm,0.5s						
RES	Resolute Bay	5.97	304		Pn	06 43 26.2	+1.4
RES				Sn	Sn	06 44 33.1	+0.1
EUNU	Eureka	8.29	347	PN	Pn	06 43 58.0	+1.2
EUNU				SN	Sn	06 45 22.9	-7.5
EUNU				Trac		06 45 36.3	
	comp=Z,112nm,2.2s						
EUNU	Eureka	8.29	347	Pn	Pn	06 43 58.0	+1.2
EUNU				Sn	Sn	06 45 22.9	-7.5
ILULI	Ilulissat	8.71	98	SN	Sn	06 45 36.5	-3.9
ILULI	Ilulissat	8.71	98	Sn	Sn	06 45 36.5	-3.9
FRB	Frobisher Bay	8.89	158	Pn	Pn	06 44 05.2	+0.2
	4.0nm,0.3s,baz=339,slow=12,SNR=54						
FRB				Sn	Sn	06 45 40.1	-5.0
	4.9nm,0.3s,baz=73,slow=18,SNR=6.2						
FRB				Lg	Lg	06 46 30.8	
	5.4nm,0.3s,baz=65,slow=21,SNR=3.5						
FRB	Frobisher Bay	8.89	158	PN	Pn	06 44 06.0	+1.1
FRB				SN	Sn	06 45 44.0	-1.1
FRB				LG	Lg	06 46 39.0	
FRB				Trac		06 46 46.3	
	comp=Z,96nm,0.5s						
CB31	Cambridge Bay	10.08	267	PN	Pn	06 44 19.9	-1.3
CB31				SN	Sn	06 46 09.0	-5.0
CB31				LG	Lg	06 47 10.4	
CB31				Trac		06 47 15.9	
	comp=Z,82nm,0.3s						
CB31	Cambridge Bay	10.08	267	Pn	Pn	06 44 19.9	-1.3
CB31				Sn	Sn	06 46 09.0	-5.0
SFJD	Kangerlussuaq	10.18	108	PN	Pn	06 44 23.9	+1.3
SFJD				SN	Sn	06 46 11.6	-5.0
SFJD				Trac		06 46 15.0	
	comp=Z,68nm,4.1s						
SFJD	Kangerlussuaq	10.18	108	Pn	Pn	06 44 23.4	+0.8
KNGQ	Kangiqsujuaq	10.74	170	PN	Pn	06 44 28.6	-1.7
KNGQ				SN	Sn	06 46 27.1	-3.2
KNGQ				Trac		06 47 34.1	
	comp=Z,283nm,1.6s						
KNGQ				LG	Lg	06 47 36.5	
KNGQ	Kangiqsujuaq	10.74	170	Pn	Pn	06 44 28.6	-1.7
KNGQ				Sn	Sn	06 46 27.1	-3.2
SUMG	Summit	11.24	70	i P	Pn	06 44 36.7	-0.8
SUMG	Summit	11.24	70	PN	Pn	06 44 36.8	-0.6
KUKN	Kugluktuk,NWT	13.87	271	PN	Pn	06 45 11.3	-1.7
KUKN				SN	Sn	06 47 39.2	-7.6
KUKN				LG	Lg	06 49 10.7	
KUKN				Trac		06 49 18.1	
	comp=Z,36nm,0.5s						
KUKN	Kugluktuk,NWT	13.87	271	Pn	Pn	06 45 11.3	-1.7
KUKN				Sn	Sn	06 47 39.2	-7.6
KAJQ	Kangiqsualujju	14.12	158	PN	Pn	06 45 13.9	-2.4
KAJQ				SN	Sn	06 47 47.6	-5.2
KAJQ				Trac		06 49 15.2	
	comp=Z,339nm,2.2s						
KAJQ				LG	Lg	06 49 21.6	
KAJQ	Kangiqsualujju	14.12	158	Pn	Pn	06 45 13.9	-2.4
KAJQ				Sn	Sn	06 47 47.6	-5.2
FCC	Fort Churchill	15.31	218	PN	Pn	06 45 32.5	+0.2
FCC				SN	Sn	06 48 14.8	-6.9
FCC				Trac		06 49 59.2	
	comp=Z,61nm,0.7s						
FCC				LG	Lg	06 50 01.9	
FCC	Fort Churchill	15.31	218		Pn	06 45 30.6	-1.8
FCC				IAmb	IAmb	06 45 34.2	
	comp=Z,6.7nm,1.1s						
NOR	Nord	15.38	28	i P	Pn	06 45 30.0	-3.3
DAG	Danmarks Havn	15.39	47	i P	Pn	06 45 30.4	-3.1
C36M	Paulatuk	15.76	283	Pn	Pn	06 45 37.8	-0.4
NRS	Narsarsuaq	16.11	117	Pn	Pn	06 45 43.3	+0.5
SCO	Scoresbysund	16.89	69	Pn	Pn	06 45 51.5	-1.1
SCO				IAmb	IAmb	06 45 52.8	
	comp=Z,17nm,1.2s						
KJKQ	Kuujjuarapik	16.98	184	PN	Pn	06 45 53.6	-0.2
KJKQ				SN	Sn	06 48 53.9	-8.3
KJKQ	Kuujjuarapik	16.98	184	Pn	Pn	06 45 53.6	-0.2
KJKQ				Sn	Sn	06 48 53.9	-8.3
YKA	Yellowknife Ar	17.39	256	Pn	Pn	06 45 54.6	-4.4
	comp=Z,0.2nm,0.3s,baz=38,slow=12,SNR=11						
YKA				Sn	Sn	06 48 58.0	-14
	comp=Z,0.4nm,0.3s,baz=34,slow=21,SNR=8.0						
YKA				Lg	Lg	06 50 48.5	
	comp=Z,1.2nm,0.3s,baz=39,slow=30,SNR=12						
SCHQ	Schefferville	17.83	163	Pn	Pn	06 46 01.2	-3.3
	comp=Z,0.7nm,0.3s,baz=1.6,slow=8.9,SNR=19						
SCHQ				Sn	Sn	06 49 11.0	-12
	comp=Z,0.4nm,0.3s,baz=356,slow=19,SNR=3.9						
SCHQ				Lg	Lg	06 51 06.5	
	comp=Z,0.9nm,0.3s,baz=24,slow=20,SNR=3.8						
SCHQ	Schefferville	17.83	163		Pn	06 46 01.0	-3.6
INK	Inuvik	19.17	287	Pn	Pn	06 46 20.2	+0.4
	comp=Z,0.1nm,0.3s,baz=52,slow=12,SNR=5.8						
INK				Sn	Sn	06 49 42.5	-13
	comp=Z,0.1nm,0.3s,baz=9.5,slow=6.1,SNR=6.7						
INK	Inuvik	19.17	287		Pn	06 46 19.9	+0.1
FFC	Flin Flon	20.69	226	P	Pn	06 46 38.5	-0.2
EPYK	Eagle Plains	21.36	285	P	P	06 46 45.6	+1.9
EPYK				IAmb	IAmb	06 47 02.9	
	comp=Z,6.1nm,1.1s						
SPITS	Spitsbergen Ar	21.82	34	P	P	06 46 54.4	+6.0
	comp=Z,12nm,1.1s,baz=247,slow=3.0,SNR=3.2						
FYU	Fort Yukon	23.72	292	P	P	06 47 06.5	-1.7
FYU				IAmb	IAmb	06 47 20.9	
	comp=Z,12nm,1.3s						
ULM	Lac du Bonnet	23.74	213	P	P	06 47 11.1	+2.5
	comp=Z,2.4nm,0.8s,baz=23,slow=9.0,SNR=6.1						
ULM	Lac du Bonnet	23.74	213	P	P	06 47 11.1	+2.5
ULM				IAmb	IAmb	06 47 13.3	
	comp=Z,4.4nm,0.9s						
DAWY	Dawson	23.79	283	P	P	06 47 13.4	+4.3
DAWY				IAmb	IAmb	06 47 31.6	
	comp=Z,7.7nm,1.5s						
EGAK	Eagle	23.80	285	P	P	06 47 12.7	+3.6
EGAK				IAmb	IAmb	06 47 17.3	
	comp=Z,4.5nm,1.1s						
VLDQ	Val d'Or	24.14	182	P	P	06 47 12.5	+0.1
VLDQ				IAmb	IAmb	06 47 29.9	
	comp=Z,13nm,1.5s						
DRLN	Deer Lake	24.47	150	P	P	06 47 17.1	+1.8
DRLN				IAmb	IAmb	06 47 18.8	
	comp=Z,19nm,1.4s						
PRP	Porcupine Dome	24.55	290	P	P	06 47 21.1	+4.9
D53A	Lac Vacive, Po	25.18	183	P	P	06 47 27.1	+5.3
D53A				IAmb	IAmb	06 47 28.7	
	comp=Z,10nm,1.2s						
D62A	Allapoint, All	25.37	169	P	P	06 47 26.5	+3.0
ILAR	Eielson Array	25.49	290	P	P	06 47 27.8	+3.3
	comp=Z,0.9nm,0.9s,baz=50,slow=7.1,SNR=7.0						
TRQ	Mont Tremblant	26.03	178	P	P	06 47 33.5	+3.8
DGMT	Dagmar	27.04	224	P	P	06 47 41.2	+2.5
DGMT				IAmb	IAmb	06 47 48.2	
	comp=Z,5.0nm,0.9s						
BW06	Boulder Array	33.63	227	P	P	06 48 40.2	+2.9
BW06				IAmb	IAmb	06 48 56.9	
	comp=Z,1.4nm,0.8s						
PDAR	Pinedale Array	33.63	227	P	P	06 48 41.5	+4.3
	comp=Z,0.2nm,0.4s,baz=11,slow=5.5,SNR=4.4						
W57A	Gilead	37.14	185	P	P	06 49 10.8	+3.7
LRAL	Lakeview Retre	39.63	195	P	P	06 49 29.1	+1.0
LRAL				IAmb	IAmb	06 49 45.2	
	comp=Z,12nm,1.5s						
NVAR	Mina Array Bea	39.85	236	P	P	06 49 34.9	+4.7
	comp=Z,0.3nm,0.6s,baz=355,slow=5.7,SNR=4.1						
TXAR	Lajitas Array	45.43	215	P	P	06 50 18.8	+3.4
	comp=Z,0.7nm,0.7s,baz=30,slow=5.6,SNR=11						
ZALV	Zalesovo Beam	53.46	14	P	P	06 51 20.2	+4.0
	comp=Z,0.6nm,0.4s,baz=336,slow=6.3,SNR=3.3						

NCEDC **22** *07:20:50.9±0.8, 37.468N±0.006×121.82W±0.01, h8km±2km, Md2.0/70, Error ellipse: s-maj=1.3km s-min=0.9km az=80.0*
NEIC 22 07:20:51.0±0.9, **37.454N**±0.007×**121.84W**±0.01, **h14**km±1km, **Error ellipse: s-maj=1.4km s-min=1.0km az=78.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJM	Mission San Jo	0.07	337		Pg	07 20 52.9	-0.9
CMLM	Mount Lewis	0.15	81		Pg	07 20 54.2	-0.7
SCCB	Santa Clara Co	0.17	187		Pg	07 20 55.0	0.0
WENL	Wente Vineyard	0.18	21		Pg	07 20 54.7	-0.5
CNIC	Niles Canyon	0.18	327		Pg	07 20 55.0	-0.3
MHC	Mount Hamilton	0.19	126		Pg	07 20 55.0	-0.5
CYD1	Coyote D'meter	0.23	298		Pg	07 20 55.6	-0.4
CCOB	Coe Ranch Numb	0.23	146		Pg	07 20 56.4	+0.3
JSTM	Santa Teresa H	0.25	172		Pg	07 20 56.4	+0.1
ARN	Arnold Ranch	0.27	113		Pg	07 20 56.2	-0.5
CMMM	Mount Mocho	0.27	90		Pg	07 20 56.4	-0.4
JSFB	Stanford Teles	0.27	260		Pg	07 20 56.9	+0.2
AMC	Almaden	0.29	181		Pg	07 20 57.3	+0.1
JFP	Foothills Park	0.29	252		Pg	07 20 57.4	+0.2
C055	Cottonwood Ave	0.30	313		Pg	07 20 57.1	-0.1
JUMM	Mount Umunhum	0.30	189		Pg	07 20 57.3	+0.1
JJRM	Joaquin Road	0.31	249		Pg	07 20 57.7	+0.3
JLAB	Laurel Hill	0.31	165		Pg	07 20 57.4	0.0
JRSC	Jasper Ridge	0.32	261		Pg	07 20 57.5	-0.1
CADM	Anderson Res.	0.34	150		Pg	07 20 58.0	+0.2
CLCB	Lake Chabot	0.34	328		Pg	07 20 58.0	+0.1
JHLM	Holstrom Ranch	0.34	179		Pg	07 20 58.2	+0.1
CSLM	San Leandro Hi	0.35	320		Pg	07 20 58.2	+0.1
CMOB	Morgan Territo	0.36	4		Pb	07 20 58.8	-0.4
JHPM	Huddart Park	0.37	269		Pg	07 20 58.6	+0.1
CBSNC	Byron Hot Spri	0.40	23		Pb	07 20 59.4	-0.4
BGC	Bolinger Road	0.40	334		Pg	07 20 59.6	-0.4
JCPM	Coyote Point	0.41	289		Pg	07 20 59.1	-0.1
JBNB	Ben Lomond Mou	0.42	218		Pg	07 20 59.6	+0.3
CRHM	Round Hill Res	0.42	343		Pb	07 21 00.3	0.0
HSPM	Sheep	0.42	143		Pg	07 20 59.6	+0.1
JTGM	Trout Gulch Ro	0.43	184		Pb	07 21 00.0	-0.3
JRGM	Rodeo Gulch Ro	0.43	194		Pg	07 20 59.8	+0.3
HLPM	Lions Peak	0.44	158		Pg	07 20 59.7	-0.1
CRPB	Russellman Par	0.46	353		Pg	07 21 00.5	+0.3
GHS	Gilroy Hot Spr	0.47	139		Pg	07 20 59.7	-0.7
BDM	Black Diamond	0.50	357		Pb	07 21 01.5	-0.1
CDC	Canada Road	0.51	147		Pb	07 21 01.5	-0.3
BKS	Berkeley--Byer	0.53	323		Pg	07 21 01.5	+0.1
CVPM	Vollmer Peak	0.53	325		Pg	07 21 01.6	+0.2
JELB	Ellicott, Sant	0.53	179		Pb	07 21 02.0	-0.1
CYBM	Yerba Buena Is	0.55	311		Pb	07 21 01.4	-0.3
HCOM	Corn Cob Canyo	0.57	170		Pg	07 21 02.5	+0.2
HFEM	San Felipe	0.58	143		Pg	07 21 02.6	+0.2
HPCM	Pacheco Lake	0.60	131		Pb	07 21 02.4	-0.3
CPIM	Pinole Ridge	0.61	331		Pb	07 21 03.5	-0.1
SLD	San Luis Dam	0.62	127		Pb	07 21 02.8	-0.3
CSPM	San Pablo Ridg	0.63	323		Pb	07 21 03.5	-0.2
HBTM	San Juan Bauti	0.65	159		Pb	07 21 04.4	+0.3
HTUM	Tustin Road	0.65	166		Pb	07 21 03.5	-0.1
HERM	Elkhorn Road	0.66	171		Pg	07 21 04.1	+0.2
SFJWR	San Luis Fatjo	0.67	127		Pb	07 21 03.7	-0.3
HJGM	San Juan Grade	0.69	162		Pg	07 21 04.4	0.0
HLTM	Lone Tree Road	0.71	143		Pg	07 21 05.0	+0.2
FRP	Fremont Peak	0.75	158		Pg	07 21 05.5	-0.1
SAO	San Andreas Ge	0.76	155		Pb	07 21 05.9	-0.1
SAO	San Andreas Ge	0.76	155	Pg	Pg	07 21 05.7	0.0
BVYM	Vineyard	0.78	154		Pb	07 21 06.4	0.0
BSRM	Salinas Radio	0.83	162		Pb	07 21 06.5	-0.6
HMOM	Monterey	0.85	184		Pb	07 21 07.2	-0.3
SNT	Sears Point	0.88	326		Pb	07 21 08.2	+0.1
BPCNC	Pine Canyon	0.90	169		Pb	07 21 08.0	-0.3
NOLM	Olema	0.96	308		Pb	07 21 08.9	-0.5
BJCM	Johnson Can.	0.97	158		Pb	07 21 08.8	-0.9
MCCM	Marconi Confer	1.08	310	Pg	Pb	07 21 10.1	-1.3
CMB	Columbia Colle	1.29	63	Pn	Pn	07 21 14.6	-0.1
CMB					Sb	07 21 31.2	-0.3
AFDM	Forest Hills D	1.64	24		Pg	07 21 22.4	-0.1
WAKR	Walker	2.17	60		Pb	07 21 28.9	-1.3
MDPB	Devils Postpil	2.20	85		Pn	07 21 28.4	+1.0
OMMB	Old Mammoth Mi	2.26	85		Pb	07 21 30.2	-1.6
YERR	Yerington	2.55	52	Pg	Pb	07 21 36.0	-0.8

NEIC **22** *08:04:19.9±1.9, 3.2S±0.1×146.2E±0.2, h5km±7km, mb4.4/7, Error ellipse: s-maj=28.3km s-min=10.1km az=115.0*
IDC **22** *08:04:23.7±1.2, 3.28S×145.54E, h0km, mb4.0/6, mb1 4.3/7, mb1mx3.9/28, mbtmp4.0/7, ML3.9/1, MS3.4/8, Ms1 3.4/8, ms1mx3.0/32, Error ellipse: s-maj=55.4km s-min=21.3km az=112.0*
ISC 22 08:04:21.2±1.0, **3.16S**±0.09×**146.3E**±0.1, **h10**km, **n22**, σ**1.94**/16, **mb3.9**/6, **MS3.4**/7, **Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	Manus Island	1.53	44		Pb	08 04 49.5	-0.3
PMG	Port Moresby	6.27	172	Pn	Pn	08 05 51.3	-2.5
	1.7nm,0.3s,baz=358,slow=17,SNR=4.1						
PMG				Sn	Sn	08 07 08.2	+2.7
	baz=26,slow=21,SNR=2.3						
PMG	Port Moresby	6.27	172		Pn	08 05 52.5	-1.3
COEN	Coen	11.17	196	Pn	Pn	08 07 00.6	-0.6
GUMO	Guam	16.70	355	LR	LR	08 15 06.6	
	comp=Z,74nm,18.2s,baz=126,slow=38						
WB0	Warramunga Arr	20.20	214	P	P	08 08 54.9	-1.4
WB0				IAmb	IAmb	08 08 56.5	
	comp=Z,20nm,1.1s						
WR0	Warramunga Arr	20.27	214	P	P	08 08 55.0	-2.1
WR0				IAmb	IAmb	08 08 57.9	
	comp=Z,23nm,1.1s						
WB2	Warramunga Arr	20.36	214	P	P	08 08 56.2	-2.0
WB2				IAmb	IAmb	08 08 59.1	
	comp=Z,39nm,1.4s						
WRA	Warramunga Arr	20.36	214	P	P	08 08 56.8	-1.4
	comp=Z,0.4nm,0.3s,baz=38,slow=12,SNR=18						
WRA				LR	LR	08 16 41.0	
	comp=Z,84nm,20.8s,baz=55,slow=37						
KNRA	Kununurra	21.28	233	P	P	08 09 08.2	+0.1
AS31	Alice Springs	23.65	209	P	P	08 09 30.8	-2.3
ASAR	Alice Springs	23.65	209	P	P	08 09 31.1	-1.9
	comp=Z,6.3nm,0.9s,baz=40,slow=9.0,SNR=44						
ASAR				LR	LR	08 19 07.8	
	comp=Z,81nm,18.4s,baz=12,slow=38						
FITZ	Fitzroy Crossi	25.11	232	P	P	08 09 45.0	-1.5
	comp=Z,6.7nm,0.9s,baz=58,slow=9.4,SNR=14						
FITZ				LR	LR	08 20 02.0	
	comp=Z,112nm,21.1s,baz=51,slow=38						
FITZ	Fitzroy Crossi	25.11	232	P	P	08 09 44.7	-1.8
FITZ				IAmb	IAmb	08 09 51.9	
	comp=Z,7.9nm,0.9s						
DZM	Mont Dzumac	27.13	136	LR	LR	08 19 29.3	
	comp=Z,139nm,20.1s,baz=230,slow=33						
STKA	Stephens Creek	28.91	188	P	P	08 10 22.7	+2.2
	comp=Z,2.0nm,0.8s,baz=346,slow=12,SNR=3.6						
STKA	Stephens Creek	28.91	188	IAmb	IAmb	08 10 35.3	
	comp=Z,2.1nm,1.4s						
JHJ	Hachijo jima 2	36.60	351	LR	LR	08 25 00.5	
	comp=Z,52nm,18.4s,baz=282,slow=34						
KSRS	Korea Array	43.87	339	LR	LR	08 28 03.1	
	comp=Z,43nm,19.9s,baz=208,slow=32						
MKAR	Makanchi Array	74.88	320	P	P	08 16 03.9	+1.6
	comp=Z,0.8nm,0.9s,baz=105,slow=7.6,SNR=4.6						
ILAR	Eielson Array	83.16	23	P	P	08 16 53.4	+6.1
	comp=Z,0.6nm,0.7s,baz=258,slow=3.9,SNR=5.9						
ILAR				LR	LR	08 50 43.2	
	comp=Z,18nm,21.1s,baz=118,slow=33						
YKA	Yellowknife Ar	96.99	28	P	P	08 17 59.6	+6.6
	comp=Z,0.2nm,0.7s,baz=270,slow=4.9,SNR=4.1						

WEL 22 08:13:56.0±0.6, **32˚S**±7˚×**17˚9E**±1˚3, **h336**km±9km, **M4.1**/12, **mB4.4**/6, **MLv4.4**/12, **Mw(mB)3.5**/6, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.44	41	P	Pn	08 14 58.3	-0.2
GLKZ				S	S	08 15 49.4	+0.6
KUZ	Kuaotunu	5.76	212	S	S	08 16 34.8	+0.6
WMGZ	Waiomatatini S	5.98	188	P	Pn	08 15 27.1	+1.2
WMGZ				S	S	08 16 40.7	+2.0
HAZ	Te Kaha	6.01	193	P	Pn	08 15 27.5	+1.2
HAZ				S	S	08 16 40.3	+0.8
RUGZ	Raukumara Rang	6.24	193	P	Pn	08 15 28.9	-0.2
PUZ	Puketiti	6.25	189	P	Pn	08 15 28.8	-0.3
PUZ				S	S	08 16 43.2	-1.3
MWZ	Matawai	6.62	194	P	Pn	08 15 33.6	+0.1
URZ	Urewera	6.64	196	P	Pn	08 15 33.3	-0.4
TKGZ	Te Karaka	6.67	191	P	Pn	08 15 33.7	-0.2
RAGZ	Rawiri	6.80	194	P	Pn	08 15 37.1	+1.5
MUGZ	Murupara	6.94	198	P	Pn	08 15 37.5	+0.4
RIGZ	Rimuhau	6.94	191	P	Pn	08 15 36.7	-0.5
SNGZ	Shannon Statio	7.09	194	P	Pn	08 15 38.7	-0.3
MTHZ	Maungataniwha	7.27	197	P	Pn	08 15 40.8	-0.3
RAHZ	Arahi	7.28	195	P	Pn	08 15 41.4	+0.2
MHGZ	Mahia Peninsul	7.36	190	P	Pn	08 15 42.9	+0.8
NMHZ	Naumai	7.51	196	P	Pn	08 15 44.3	+0.3
ARHZ	Aropaoanui	7.63	195	P	Pn	08 15 45.0	-0.3

GUC **22** *08:38:56.7±0.5, 34.97S×72.25W, h23km±3km, ML3.2*
SJA **22** *08:38:56.0±1.1, 34.93S×72.13W, h32km±4km, MD3.9*
ISC 22 08:38:56.4±1.5, **34.94S**±0.05×**72.2W**±0.1, **h29**km±8km, **n17**, σ**1.76**/27, **2C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	Huala	0.24	108⇑	eP	Pb	08 39 02.9	-0.2
GO05				i S	Sb	08 39 07.2	-0.5
GO05	Huala	0.24	108	i P	Pb	08 39 02.9	-0.2
GO05				i S	Sb	08 39 07.4	-0.3
CCHI	Chillan	1.67	176	eP	Pn	08 39 24.0	+0.4
CCHI				i S	Sn	08 39 44.6	+0.5
CCHI				IAML		08 39 51.3	
	comp=N,425nm,0.4s						
CCHI	Chillan	1.67	176	i P	Pb	08 39 25.2	-1.3
CCHI				i S	Sb	08 39 46.5	-0.5
LMEL	Las Melosas	1.98	57⇑	i P	Pb	08 39 30.1	-1.9
LMEL				i S	Sb	08 39 55.8	-0.5
LMEL				IAML		08 40 00.1	
	comp=N,176nm,0.1s						
MT03	Universidad Ad	2.02	45	eP	Pb	08 39 30.6	-1.8
MT03				i S	Sb	08 39 56.4	-0.8
MT03				IAML		08 40 00.3	
	comp=N,421nm,0.4s						
PEL	Peldehue	2.19	36	i P	Pn	08 39 33.0	+2.0
PEL				i S	Sn	08 39 59.1	+2.0
ROC1	El Roble	2.19	27	i P	Pn	08 39 32.1	+0.9
ROC1				i S	Sn	08 39 59.5	+2.0
ROCH	El Roble	2.20	27	eP	Pn	08 39 32.1	+0.9
ROCH				eS	Sn	08 40 00.1	+2.6
ROCH				IAML		08 40 10.9	
	comp=N,117nm,0.6s						
PUMA	Malargue	2.33	105	i P	Pb	08 39 36.1	-1.6
LAMA	Las Malvinas	2.46	91	i P	Pb	08 39 38.4	-1.7
AAGR	Agrelo	3.36	58	i P	Pb	08 39 52.4	-3.0
ASAL	Salagasta	3.66	51	i P	Pb	08 39 56.8	-3.6
CFA	Coronel Fontan	4.70	46	i P	Pn	08 40 07.4	+1.9
GO04	Tololo Observa	4.90	14	i P	Pn	08 40 08.3	-0.1
GO04				i S	Sn	08 41 03.8	-0.4
AMOG	MOGNA	5.07	39	i P	Pn	08 40 11.7	+1.2
AROD	Rodeo	5.29	27	i P	Pn	08 40 16.6	+2.8

NEIC **22** *09:00:25.9±1.8, 4.42S±0.06×139.81E±0.09, h43km±8km, mb4.2/12, Error ellipse: s-maj=13.0km s-min=9.0km az=77.0*
DJA **22** *09:00:26.2±1.8, 3˚S±23˚×14˚1E±˚, h162km±11km, M5.0/2, mB5.6/1, mb5.4/1, MLv4.8/2, Mw(mB)5.1/1*
IDC **22** *09:00:27.6±0.8, 4.18S×139.85E, h49km±7km, mb3.7/5, mb1 4.0/8, mb1mx3.7/25, mbtmp4.1/8, MS3.1/7, Ms1 3.1/7, ms1mx2.8/38, Error ellipse: s-maj=25.0km s-min=13.3km az=82.0*
ISC 22 09:00:25.5±0.5, **4.29S**±0.05×**139.83E**±0.07, **h37**km, **n39**, σ**1.83**/44, **mb4.1**/7, **MS3.2**/4, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	Genyem	1.72	11	P	Pn	09 00 51.9	-1.1
GENI				S	Sn	09 01 12.2	-1.5
SMPI	Sarmi	2.54	334	P	Pn	09 01 06.4	+2.1
SMPI				S	Sn	09 01 33.5	-0.5
FAKI	Fak Fak	7.68	280	Pn	Pn	09 02 15.4	+0.4
PMG	Port Moresby	8.88	125	P	Pn	09 02 34.6	+3.3
	2.6nm,0.3s,baz=316,slow=8.7,SNR=15						
PMG	Port Moresby	8.88	125		Pn	09 02 31.0	-0.3
SIJI	Sorong	9.20	291	P	Pn	09 02 42.1	+6.3
	5.3nm,0.3s,baz=4.6,slow=23,SNR=7.0						
SAUI	Saumlaki	9.23	246	Pn	Pn	09 02 35.7	-0.5
COEN	Coen	10.15	161	Pn	Pn	09 02 49.5	+0.6
COEN				Sn	Sn	09 04 40.7	-0.8
KNRA	Kununurra	15.69	223	P	Pn	09 04 07.1	+3.1
WB0	Warramunga Arr	16.27	199	P	Pn	09 04 11.4	+0.1
SOEI	Soe	16.36	250		Pn	09 04 10.9	-1.7
SOEI				IAmb	IAmb	09 04 29.9	
	comp=Z,28nm,0.9s						
WR0	Warramunga Arr	16.40	198	P	Pn	09 04 13.3	+0.3
WR0				IAmb	IAmb	09 04 32.9	
	comp=Z,27nm,1.1s						
WRAB	Tennant Creek	16.43	198	Pn	Pn	09 04 11.4	-2.0
WB2	Warramunga Arr	16.44	198	P	Pn	09 04 12.3	-1.3
WB2				IAmb	IAmb	09 04 21.0	
	comp=Z,15nm,0.7s						
WRA	Warramunga Arr	16.45	199	P	Pn	09 04 13.5	-0.1
	comp=Z,0.4nm,0.3s,baz=18,slow=13,SNR=11						
WRA				S	Sn	09 07 14.7	-0.5
	comp=Z,0.4nm,0.3s,baz=164,slow=22,SNR=3.9						
WRA				LR	LR	09 11 07.7	
	comp=Z,97nm,19.9s,baz=335,slow=39						
CTA	Charters Tower	16.90	159	P	Pn	09 04 22.1	+2.7
	comp=Z,1.1nm,0.3s,baz=333,slow=12,SNR=11						

DAV Davao City (W) 18.15 308 LR LR 09 11 49.4
comp=Z,14nm,18.1s,baz=320,slow=38
GUMO Guam 18.46 16 LR LR 09 10 58.2
comp=Z,48nm,20.7s,baz=122,slow=34
FITZ Fitzroy Crossi 19.52 224 P Pn 09 04 52.7 +1.4
comp=Z,0.3nm,0.3s,baz=55,slow=9.8,SNR=6.8
FITZ S S 09 08 23.5 -4.9
comp=Z,0.5nm,0.3s,baz=221,slow=19,SNR=4.2
FITZ Fitzroy Crossi 19.52 224 P P 09 04 49.1 -0.7
AS31 Alice Springs 20.09 196 P P 09 04 56.7 +0.7
AS31 IAmb IAmb 09 05 15.2
comp=Z,7.1nm,0.8s
ASAR Alice Springs 20.09 196 P P 09 04 59.1 +3.0
comp=Z,18nm,0.7s,baz=30,slow=9.6,SNR=254
ASAR S S 09 08 41.8 +1.8
comp=Z,2.8nm,0.9s,baz=18,slow=25,SNR=5.2
ASAR LR LR 09 13 12.4
comp=Z,69nm,21.3s,baz=16,slow=38
EIDS Eidsvold 23.58 154 P P 09 05 31.3 -1.6
STKA Stephens Creek 27.49 177 P P 09 06 11.9 +3.5
comp=Z,0.8nm,0.5s,baz=351,slow=12,SNR=4.5
STKA LR LR 09 17 43.4
comp=Z,93nm,20.0s,baz=26,slow=38
STKA Stephens Creek 27.49 177 P P 09 06 04.3 -4.2
KSRS Korea Array 42.99 346 P P 09 08 19.9 -1.4
comp=Z,1.0nm,0.7s,baz=160,slow=8.3,SNR=4.6
KSRS LR LR 09 24 53.9
comp=Z,24nm,18.1s,baz=160,slow=34
CMAR Chiang Mai Arr 46.19 301 P P 09 08 49.0 +1.9
comp=Z,0.8nm,0.6s,baz=128,slow=7.6,SNR=5.4
CMAR pP sP 09 09 01.8 -1.7
comp=Z,0.8nm,0.4s,baz=126,slow=6.3,SNR=2.2
TUWZ Tuamarina 47.95 145 P P 09 08 60.0 -0.5
MKAR Makanchi Array 71.71 322 P P 09 11 44.1 +0.3
comp=Z,0.3nm,0.5s,baz=94,slow=8.0,SNR=7.4
MKAR pP pP 09 11 57.6 +1.8
comp=Z,1.6nm,0.7s,baz=113,slow=7.4,SNR=11
MAKZ Makanchi 71.91 322 P P 09 11 45.1 +0.1
MAKZ IAmb IAmb 09 12 01.4
comp=Z,1.8nm,0.8s
TIXI Tiksi 76.14 356 LR LR 09 45 02.8
comp=Z,14nm,18.5s,baz=182,slow=35
TIXI Tiksi 76.14 356 P P 09 12 08.9 -0.2
TIXI IAmb IAmb 09 12 13.1
comp=Z,2.4nm,0.8s
GEYT Alibeck 86.09 308 pP pP 09 13 18.5 +3.5
comp=Z,2.4nm,0.8s,baz=66,slow=10,SNR=2.1
DBIC Dimbokro 144.77 275 PKP PKPab 09 19 58.3 -0.2
comp=Z,1.1nm,0.4s,baz=119,slow=4.0,SNR=4.0
DBIC pPKP pPKPdf 09 20 13.7 +1.3
comp=Z,5.4nm,0.6s,baz=67,slow=4.2,SNR=5.6
DBIC Dimbokro 144.77 275 PKPab 09 19 58.6 +0.1
CPUP Villa Florida 145.32 152 PKPbc PKPbc 09 19 59.5 -0.5
comp=Z,3.1nm,0.6s,baz=238,slow=3.3,SNR=9.5
CPUP pPKPbc pPKPbc 09 20 15.0 +1.9
comp=Z,2.0nm,0.9s,baz=171,slow=8.9,SNR=3.2
CPUP Villa Florida 145.32 152 PKPbc 09 19 59.1 -0.8
LPAZ La Paz 145.61 127 PKPbc PKPdf 09 20 02.2 +0.5
comp=Z,8.8nm,0.7s,baz=251,slow=2.1,SNR=38
LPAZ La Paz 145.61 127 PKPdf 09 20 02.0 +0.2

MOS 22 09:37:45.4±1.9, 52.61N×106.80E, h11km, mb3.7/2, Error ellipse: s-maj=10.1km s-min=7.2km az=56.6
MOS Felt (II-III) at Tyrgan, Elantsy.
BYKL 22 09:37:46.8±0.1, 52.58N×106.68E, h19km±2km
IDC 22 09:37:47.6±2.5, 52.43N×106.54E, h0km, mb3.1/5, mb1mx3.0/43, mbtmp3.1/5, ML2.7/4, MS2.8/1, Ms1 2.8/1, ms1mx2.2/22, Error ellipse: s-maj=24.3km s-min=19.4km az=44.0
ISC 22 09:37:45.3±1.1, 52.56N±0.02×106.74E±0.02, h3km±8km, n66, σ2.12/118, mb3.4/3, 18C-4D, Lake Baykal region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ZRHB Zarechye 0.25 91⇑iPg Pb 09 37 52.9 +0.4
ZRHB iSg Sb 09 37 57.6 +0.3
ZRHB e 09 37 59.6
ZRHB e 09 38 03.3
ZRHB Pmax
716nm,0.4s
ZRHB Smax
11μm,0.4s
TRG Tyrgan 0.31 311⇑iPg Pg 09 37 52.4 +1.1
675nm,0.2s
TRG ⇓iPg Pg 09 37 52.4 +1.1
857nm,0.2s
TRG ⇑iPg Pg 09 37 52.4 +1.1
2μm,0.2s
TRG eSg Sg 09 37 56.6 +1.2
TRG Pmax
2μm,0.2s
TRG Smax
3μm,0.2s
TRG Tyrgan 0.31 311⇑iPG Pg 09 37 52.4 +1.1
TRG e 09 37 56.6
TRG pmax pmax
comp=Z,2μm,0.1s
TRG smax smax
comp=N,6μm,0.1s
STDB Stepnoy Dvoret 0.45 211⇑iPg Pb 09 37 56.3 +0.4
STDB e 09 38 02.6
STDB eSg Sb 09 38 03.8 +0.8
FFNB Fofonovo 0.51 178⇑iPg Pb 09 37 56.7 -0.2
FFNB eSg Sg 09 38 03.9 +2.2
KAB Kabansk 0.51 186⇑iPg Pb 09 37 56.9 0.0
KAB e 09 37 58.2
KAB eSg Sb 09 38 04.5 -0.2
KAB Pmax
comp=N,244nm,0.1s
KAB Smax
comp=N,2μm,0.2s
KAB Kabansk 0.51 186⇑iPG Pb 09 37 56.9 0.0
KAB e 09 38 04.4
KAB pmax pmax
comp=Z,308nm,0.3s
KAB smax smax
comp=E,2μm,0.5s
TRTB Turuntaevo 0.64 121⇓iPg Pb 09 37 59.4 +0.4
TRTB eSg Sb 09 38 08.7 +0.4
KELR Kotokel 0.84 76⇑iPg Pg 09 38 02.3 +0.9
KELR ePb Pn 09 38 04.3 +0.3
KELR e 09 38 08.0
KELR eSg Sg 09 38 13.8 +1.5
UUDB Ulan-Yde 0.90 140⇑iPg Pb 09 38 03.7 +0.3
UUDB iSg Sg 09 38 15.8 +1.8
UUDB Pmax
comp=E,164nm,0.2s
UUDB Smax
comp=E,1μm,0.4s
HRMR Khuramsha 0.94 172⇓iPg Pb 09 38 04.4 +0.2
HRMR ePb Pn 09 38 05.9 +0.5
HRMR eSg Sb 09 38 17.3 +0.2
HRMR eSb Sn 09 38 19.9 +0.6
HRMR max
comp=E,433nm,0.2s
HRMR max
comp=E,5μm,0.2s
BGT Bolshoye Golou 0.96 238 ePg Pg 09 38 04.2 +0.4
BGT eSg Sg 09 38 16.7 +0.5
BGT Pmax
comp=E,182nm,0.1s
BGT Smax
comp=E,1μm,0.2s
BGT Bolshoye Golou 0.96 238 ePG Pb 09 38 04.6 0.0
BGT e 09 38 16.6
BGT pmax pmax
comp=Z,119nm,0.1s
BGT smax smax
comp=N,1μm,0.3s
OGRR Ongureny 1.21 25⇑iPg Pn 09 38 09.6 +0.6
OGRR ePb Pn 09 38 10.9 +2.2
OGRR eSg Sn 09 38 25.6 -0.3
OGRR eSb Sb 09 38 28.2 +3.5
OGRR max
comp=N,105nm,0.4s
OGRR max
comp=N,909nm,0.2s
OGRR Ongureny 1.21 25 ePG Pn 09 38 09.6 +0.6
OGRR e 09 38 26.1
OGRR pmax pmax
comp=Z,121nm,0.4s
OGRR smax smax
comp=E,2μm,1.2s
LSTR Listvyanka 1.36 240⇑iPg Pn 09 38 10.8 -0.4
LSTR eSg Sb 09 38 28.8 -0.4
LSTR Pmax
comp=E,160nm,0.2s
LSTR Smax
comp=E,972nm,0.2s
LSTR Listvyanka 1.36 240⇑iPG Pn 09 38 10.9 -0.3
LSTR e 09 38 28.2
LSTR pmax pmax
comp=Z,162nm,0.2s
LSTR smax smax
comp=N,978nm,0.2s
MXMB Maximikha 1.41 59⇑iPg Pg 09 38 12.8 +0.6
MXMB eSg Sg 09 38 32.7 +2.3
IRK Irkutsk 1.54 259 ePg Pb 09 38 14.3 -0.2
IRK e 09 38 15.8
IRK iSg Sb 09 38 34.3 -0.1
IRK Pmax
comp=N,1μm,0.4s
IRK Smax
comp=N,4μm,0.3s
IRK Irkutsk 1.54 259⇑iPN Pb 09 38 14.4 -0.1
IRK e 09 38 34.0
IRK pmax pmax
comp=Z,1μm,0.3s
IRK smax smax
comp=N,5μm,0.4s
IVK Ivanovka 1.62 243 ePn Pn 09 38 14.5 -0.2
IVK ePg Pb 09 38 15.6 -0.2
IVK eSn Sn 09 38 35.9 -0.2
IVK eSg Sg 09 38 37.0 -0.2
IVK Pmax
comp=N,147nm,0.1s
IVK Smax
comp=N,2μm,0.3s
TLY Talaya 2.10 247 ePn Pn 09 38 21.9 +0.6
TLY ePg Pb 09 38 23.7 -0.3
TLY eSn Sb 09 38 49.0 -1.4
TLY eSg Sg 09 38 50.9 -1.8
TLY Pmax
comp=N,98nm,0.2s
TLY Smax
comp=N,1μm,0.2s
TLY Talaya 2.10 247 Pn Pn 09 38 21.6 +0.3
comp=N,0.4nm,0.3s,baz=72,slow=13,SNR=104
TLY Pg Pb 09 38 23.7 -0.3
comp=N,0.4nm,0.3s,baz=71,slow=13,SNR=89
TLY Lg Lg 09 38 49.4
comp=N,1.3nm,0.3s,baz=182,slow=12,SNR=68
TLY LR LR 09 39 19.4
comp=N,67nm,18.5s,baz=161,slow=47
TLY Talaya 2.10 247 ePN Pn 09 38 21.7 +0.3
TLY e 09 38 23.4
TLY e 09 38 50.7
TLY pmax pmax
comp=Z,350nm,0.2s
TLY smax smax
comp=N,2μm,0.2s
SYVR Suvo 2.25 59⇑iPn Pn 09 38 24.1 +0.7
SYVR ePg Pb 09 38 27.3 +0.7
SYVR e 09 38 53.8
SYVR eSg Sg 09 38 57.9 +0.3
SYVR Pmax
comp=N,58nm,0.4s
SYVR Smax
comp=N,179nm,0.5s
SYVR Suvo 2.25 59⇑iPN Pn 09 38 24.1 +0.7
SYVR e 09 38 27.1
SYVR e 09 38 57.5
SYVR pmax pmax
comp=Z,59nm,0.4s
SYVR smax smax
comp=E,185nm,0.5s
ARS Arshan 2.73 258⇑iPn Pn 09 38 30.3 +0.2
ARS ePg Pb 09 38 34.2 -0.5
ARS eSg Sb 09 39 10.0 +1.4
ARS Pmax
comp=E,227nm,0.3s
ARS Smax
comp=E,935nm,0.3s
ARS Arshan 2.73 258 ePN Pn 09 38 30.2 +0.2
ARS e 09 38 34.3
ARS e 09 39 08.8
ARS pmax pmax
comp=Z,126nm,0.2s
ARS smax smax
comp=E,948nm,0.2s
ZAK Zakamensk 3.07 226 ePg Pb 09 38 41.7 +1.2
ZAK eSg Sg 09 39 22.6 -1.2
ZAK Pmax
comp=E,12nm,0.2s
ZAK Smax
comp=E,237nm,0.6s
ZAK Zakamensk 3.07 226 ePN Pg 09 38 42.7 -1.4
ZAK e 09 39 22.4
ZAK pmax pmax
comp=Z,21nm,0.1s
ZAK smax smax
comp=N,228nm,0.2s
YLYR Ulyunkhan 3.51 47 ePn Pn 09 38 40.8 +0.1
YLYR e 09 38 44.3
YLYR ePg Pb 09 38 49.0 +1.0
YLYR e 09 39 16.4
YLYR eSg Sg 09 39 35.4 -2.5
YLYR Pmax
comp=N,14nm,0.6s
YLYR Smax
comp=N,150nm,0.8s
NIZ Nizh Angarsk 3.62 26 ePn Pn 09 38 43.1 +0.9
NIZ e 09 38 49.4
NIZ e 09 39 27.4
NIZ eSg Sg 09 39 38.1 -3.4
NIZ max
comp=N,20nm,0.4s
NIZ Smax
comp=N,493nm,1.1s
NIZ Nizh Angarsk 3.62 26 ePN Pn 09 38 43.1 +0.9
NIZ e 09 38 49.6
NIZ eS Sn 09 39 24.5 -0.9
NIZ e 09 39 38.5
NIZ pmax pmax
comp=Z,20nm,0.6s
NIZ smax smax
comp=N,495nm,0.9s
MOY Mondy 3.65 258 e Pn 09 38 44.5 +1.8
MOY e 09 38 46.1
MOY e 09 39 29.3
MOY eSg Sb 09 39 37.3 +2.1
MOY e 09 39 44.6
MOY max
comp=N,186nm,0.3s
MOY max
comp=N,569nm,0.3s
MOY Mondy 3.65 258 ePN Pn 09 38 45.3 +2.6
MOY e 09 38 52.5
CIT Chita 4.22 95 e Sn 09 39 31.8 -8.4
CIT eSg Sg 09 39 58.9 -1.8
CIT e 09 40 02.0
CIT max
comp=N,163nm,0.2s
CIT Chita 4.22 95 ePN Pn 09 38 49.1 -1.4
CIT e 09 39 02.4
CIT e 09 39 57.3
CIT pmax pmax
comp=Z,129nm,0.9s
CIT smax smax
comp=E,120nm,1.2s
ORL Orlik 4.23 272⇓iPn Pn 09 38 51.5 +0.8
ORL e 09 39 03.2
ORL e 09 39 08.3
ORL e 09 39 42.1
ORL eSg Sg 09 39 56.4 -4.6
ORL max
comp=E,31nm,0.6s
ORL Smax
comp=E,181nm,0.6s
ORL Orlik 4.23 272 ePN Pn 09 38 51.9 +1.2
ORL e 09 39 04.1
ORL e 09 39 54.9
ORL pmax pmax
comp=Z,31nm,0.6s
ORL smax smax
comp=N,181nm,0.6s
KMO Kumora 4.24 36 ePn Pn 09 38 52.2 +1.5
KMO ePg Pb 09 39 02.5 +2.1
KMO e 09 39 06.2
KMO eSg Sg 09 39 57.9 -3.5
KMO max
comp=N,11nm,0.3s
KMO Smax
comp=N,165nm,1.3s
KMO Kumora 4.24 36 ePN Pn 09 38 53.5 +2.8
KMO e 09 39 04.0
KMO eS Sn 09 39 41.2 +0.5
KMO e 09 39 57.0
KMO pmax pmax
comp=Z,11nm,0.3s
KMO smax smax
comp=N,164nm,1.3s
KPC Khapcheranga 4.56 127 ePn Pn 09 38 55.1 0.0
KPC ePg Pb 09 39 09.2 +3.3
KPC eSn Sn 09 39 48.2 -0.4
KPC eSg Sg 09 40 09.7 -1.9
KPC Pmax
comp=N,17nm,0.4s
KPC Smax
comp=N,217nm,1.4s
KPC Khapcheranga 4.56 127 ePN Pn 09 38 55.6 +0.5
KPC e 09 39 08.3
KPC eS Sn 09 39 48.1 -0.5
KPC e 09 40 08.6
KPC pmax pmax
comp=Z,17nm,0.4s
KPC smax smax
comp=E,216nm,1.4s
YOA Uoyan 4.62 37 eSg Sg 09 40 10.9 -2.6
YOA e 09 40 15.1
YOA e 09 40 32.2
YOA max
comp=E,319nm,1.3s
SONM Songino Array 4.73 183 Pn Pn 09 38 59.6 +2.0
comp=E,0.2nm,0.3s,baz=358,slow=31,SNR=10
SONM Pg Pb 09 39 11.6 +2.7
comp=E,1.8nm,0.3s,baz=1.3,slow=13,SNR=19
SONM Lg Lg 09 40 13.5
comp=E,13nm,0.3s,baz=6.0,slow=30,SNR=22
UKT Uakit 5.01 51 ePn Pn 09 39 02.3 +0.9
UKT e 09 39 11.0
UKT ePg Pb 09 39 15.8 +2.2
UKT eSg Sg 09 40 21.5 -4.6
UKT e 09 40 25.0
UKT Pmax
comp=E,10.0nm,1.1s
UKT max
comp=E,39nm,1.1s
SVKR Severomuysk 5.35 46 e Sn 09 39 46.8 -21
SVKR eSg Sg 09 40 33.8 -3.2
SVKR e 09 40 51.7
SVKR Smax
comp=E,134nm,0.9s
TDJR Todzha 6.50 273 ePn Pn 09 39 22.4 +0.6
TDJR e 09 39 33.3
TDJR e 09 40 52.2
TDJR eSg Sg 09 41 06.5 -7.4
NLYR Nelyaty 6.54 49 ePn Pn 09 39 23.1 +0.8
NLYR ePg Pb 09 39 44.8 +5.3
NLYR eSg Sg 09 41 10.5 -4.5
NLYR e 09 41 20.4
NLYR Pmax
comp=E,2.0nm,0.6s
NLYR max
comp=E,49nm,1.1s
BOD Bodaibo 6.71 35 e Sn 09 40 42.0 +0.5
BOD eSg Sg 09 41 13.4 -7.3
BOD e 09 41 18.1
BOD max
comp=E,38nm,2.0s
CRS Chara 7.96 52 e Pb 09 39 54.0 -10
CRS e 09 41 04.3
CRS eSg Sg 09 41 54.8 -5.9
CRS Smax
comp=E,34nm,1.2s
TUP Tupik 8.10 71 ePn Pn 09 39 43.5 -0.2
TUP e 09 39 46.9
TUP ePg Pg 09 40 14.0 -6.3
TUP eSg Sg 09 41 59.3 -5.9
TUP Pmax
comp=E,2.0nm,0.4s
TUP Smax
comp=E,79nm,1.4s
TUP Tupik 8.10 71 ePN Pn 09 39 43.8 +0.1
TUP e 09 40 11.3
TUP eS Sn 09 41 15.0 -0.8
TUP pmax pmax
comp=Z,3.0nm,0.5s
TUP smax smax
comp=N,80nm,1.4s
CLNS Chul'man 11.34 61 e 09 42 05.2
CLNS Sg 09 43 36.7
CLNS e 09 43 43.0
ZALV Zalesovo Beam 13.19 285 Pn Pn 09 40 55.2 +1.9
comp=N,0.2nm,0.3s,baz=91,slow=15,SNR=3.7
ZALV Lg Lg 09 44 38.9
comp=N,0.2nm,0.3s,baz=64,slow=24,SNR=4.2
ZALV Zalesovo Beam 13.19 285 iP Pn 09 40 55.7 +2.4
KLR Kul'dur 16.10 92 Lg Lg 09 46 16.3
comp=N,0.1nm,0.3s,baz=319,slow=20,SNR=3.7
MK31 Makanchi Array 16.80 260 iP Pn 09 41 41.9 +0.5
MKAR Makanchi Array 16.80 260 Pn P 09 41 43.4 -0.2
comp=N,0.0nm,0.3s,baz=59,slow=9.9,SNR=3.1
KURK Kurchatov 17.51 275 P P 09 41 52.3 +0.9
KURBB Kurchatov Arra 17.59 275 P P 09 41 52.3 0.0
comp=N,0.0nm,0.3s,baz=82,slow=14,SNR=3.3
KURBB Lg Lg 09 47 03.5
comp=N,0.0nm,0.3s,baz=79,slow=30,SNR=4.0
TIXI Tiksi 21.51 19 iP P 09 42 31.9 -3.0
TIXI pmax pmax
comp=Z,4.0nm,2.5s
BVAR Borovoye Array 21.84 286 P P 09 42 39.7 +1.1
comp=Z,0.4nm,0.5s,baz=82,slow=11,SNR=3.5
BRVK Borovoye 21.90 286 iP P 09 42 38.6 -0.6
BRVK pmax pmax
comp=Z,6.0nm,2.6s
MJAR Matsushiro Arr 27.27 113 LR LR 09 56 07.0
comp=Z,19nm,18.1s,baz=30,slow=40
AKASG Malin Array Be 45.96 300 iP P 09 46 09.3 +0.2

RSNC 22 09:49:04.8±0.8, 10.80N×73.69W, h26km±9km, ML4.0, Mw3.8, 6C-1D, Northern Colombia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SMRC Santa Marta, M 0.64 305⇑iP Pb 09 49 16.4 -0.9
SMRC eS Sb 09 49 26.4 +0.5
SMRC i 09 49 28.4
comp=Z,3μm,0.1s
CODC Agustn Codazz 0.90 164⇑iP Pb 09 49 20.7 -1.0
comp=Z,863nm,0.3s
CODC eS Sb 09 49 33.5 +0.2
CODC i 09 49 34.3
comp=Z,863nm,0.3s
ARGC Ariguani, Magd 1.08 210⇑iP Pn 09 49 23.6 -0.8
ARGC eS Sn 09 49 37.5 -1.1
ARGC i 09 49 37.6
comp=Z,1μm,0.7s
SJCC San Jacinto, C 1.72 239⇓iP Pn 09 49 31.6 -1.6
SJCC eS Sn 09 49 53.5 -0.8
SJCC i 09 49 58.9
comp=Z,750nm,0.3s
URIC Uribia, Colomb 1.89 62 eP Pn 09 49 34.1 -1.3
URIC eS Sn 09 49 57.8 -0.6
URIC i 09 50 03.7
comp=Z,522nm,0.5s
SMLC San Martn de 2.02 191⇑eP Pn 09 49 35.9 -1.4
SMLC eS Sn 09 50 02.4 +0.7
SMLC i 09 50 07.0
comp=Z,1μm,0.3s
OCAC Ocana 2.57 172 eP Pn 09 49 43.4 -1.6
OCAC eS Sn 09 50 16.1 +0.5
OCAC i 09 50 23.0
comp=Z,2μm,0.6s
LCBC Los crdobas, 3.27 234 eP Pn 09 49 55.6 +1.2
LCBC i 09 51 11.6
comp=Z,146nm,1.4s
ZARC Zaragoza, Cauc 3.48 199 eP Pn 09 49 56.9 -0.5
ZARC eS Sn 09 50 41.5 +3.6
ZARC i 09 50 46.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,637nm,0.3s						
UREC	San Jos de Ur	3.53	211	eP	Pn	09 49 57.4	-0.7
UREC				i		09 50 51.2	
	comp=Z,222nm,0.8s						
SDV	Santo Domingo	3.56	122	⇑iP	Pn	09 49 58.0	-0.6
SDV				eS	Sn	09 50 37.5	-2.5
SDV				i		09 50 39.8	
	comp=Z,285nm,0.7s						
PAMC	Pamplona, Colo	3.58	164	⇑eP	Pn	09 49 57.8	-1.2
PAMC				eS	Sn	09 50 40.1	-0.7
PAMC				i		09 50 47.5	
	comp=Z,181nm,0.3s						
BARC	Barichara	4.21	173	eP	Pn	09 50 06.6	-1.1
BARC				eS	Sn	09 50 55.8	-0.3
BARC				i		09 50 59.8	
	comp=Z,318nm,0.4s						
BARC				i		09 51 18.9	
	comp=Z,445nm,0.7s						
PTBC	PUERTO BERRIO,	4.30	190	eP	Pn	09 50 08.2	-0.4
PTBC				eS	Sn	09 51 01.6	+3.5
PTBC				i		09 51 05.9	
	comp=Z,403nm,0.5s						
DBBC	Dabeiba	4.51	214	eP	Pn	09 50 11.1	-0.4
DBBC				i		09 51 32.9	
	comp=Z,142nm,0.6s						
TAMC	Tame, Arauca	4.73	156	eP	Pn	09 50 13.1	-1.4
TAMC				eS	Sn	09 51 06.3	-2.3
TAMC				i		09 51 15.1	
	comp=Z,118nm,0.4s						
RUSC	La Rusia	4.92	173	eP	Pn	09 50 15.9	-1.6
RUSC				i		09 51 36.1	
	comp=Z,89nm,0.7s						
HELC	Santa Helena	4.93	202	eP	Pn	09 50 17.9	+0.3
HELC				eS	Sb	09 51 24.7	-5.0
HELC				i		09 51 28.0	
	comp=Z,259nm,0.7s						
SPBC	San Pablo de B	5.13	184	eP	Pn	09 50 20.5	+0.4
SPBC				eS	Sn	09 51 19.3	+0.7
SPBC				i		09 51 29.3	
	comp=Z,137nm,0.5s						
NORC	Norcasia	5.33	193	eP	Pn	09 50 22.3	-0.6
NORC				eS	Sn	09 51 25.2	+1.6
NORC				i		09 51 36.0	
	comp=Z,148nm,0.5s						
CBOC	Ciudad Bolivar	5.42	205	eP	Pn	09 50 24.2	+0.1
CBOC				i		09 51 44.9	
	comp=Z,72nm,0.8s						
PTAC	Punta Ardita,	5.45	229	eP	Pn	09 50 23.3	-1.1
PTAC				i		09 51 30.5	
	comp=Z,141nm,0.2s						
ROSC	El Rosal	5.96	186	eP	Pn	09 50 33.8	+2.1
ROSC				eS	Sn	09 51 47.8	+8.4
ROSC				i		09 52 07.4	
	comp=Z,74nm,0.6s						
CHIC	Chingaza	6.13	180	eP	Pn	09 50 34.5	+0.3
CHIC				eS	Sn	09 51 46.6	+2.9
CHIC				i		09 52 04.3	
	comp=Z,50nm,0.5s						
BCIP	Isla Barro Col	6.27	256	eP	Pn	09 50 32.9	-2.7
BCIP				i		09 51 42.8	
	comp=Z,24nm,1.6s						
PLMC	San Jos del P	6.40	204	eP	Pn	09 50 38.2	+0.7
PLMC				i		09 52 18.2	
	comp=Z,44nm,1.2s						
PTGC	Puerto Gaitan,	6.74	167	eP	Pn	09 50 39.3	-2.9
PTGC				i		09 52 07.8	
	comp=Z,55nm,0.4s						
ORTC	Ortega, Tolima	7.02	193	eP	Pn	09 50 46.8	+0.8
ORTC				eS	Sn	09 52 14.0	+8.9
ORTC				i		09 52 33.7	
	comp=Z,62nm,1.0s						
PRAC	Prado	7.14	190	eP	Pn	09 50 47.9	+0.2
PRAC				eS	Sn	09 52 16.2	+8.2
PRAC				i		09 52 35.1	
	comp=Z,60nm,0.5s						
AZU	Azuero	7.15	246	eP	Pn	09 50 44.8	-3.0
MACC	Macarena, Meta	8.60	181	eP	Pn	09 51 05.4	-2.3
MACC				eS	Sn	09 52 34.8	-9.2
CRUC	La Cruz	9.73	200	eP	Pn	09 51 23.7	+0.2

NIED 22 09:49:00, 33.70N×140.80E, h41km, Mw3.8 Best double couple: $M_0$5.06000×10^{14} NP1:φs247.00000°,δ86.00000°, λ-173.00000°. NP2:φs157.00000°,δ83.00000°, λ-4.00000°.
JMA 22 09:49:39.3±0.1, 33.68N×140.81E, h53km±5km, M3.9
IDC 22 09:49:40.7±2.5, 33.56N×140.78E, h55km±23km, mb3.4/5, mb1 3.7/7, mb1mx3.3/35, mbtmp3.7/7, ML3.2/2, MS3.2/1, Ms1 3.2/1, ms1mx2.4/25, Error ellipse: s-maj=32.2km s-min=10.5km az=89.0
ISC 22 09:49:39.4±1.3, 33.64N±0.04×140.84E±0.07, h44km±15km, n33, σ1.01/38, mb3.8/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.00	239	P	Pn	09 49 57.4	+0.3
JHJ2				S	Sn	09 50 10.0	0.0
BSO1	Boso 1	1.02	7	P	Pn	09 49 57.0	+0.2
BSO1				eS	Sn	09 50 11.1	+1.4
JHJ	Hachijo jima 2	1.02	240	P	Pn	09 49 57.6	+0.3
	396nm,0.3s,baz=75,slow=20,SNR=240						
JHJ				S	Sn	09 50 10.4	-0.1
	1μm,0.3s,baz=63,slow=23,SNR=55						
JHJ				LR	LR	09 50 24.8	
	comp=Z,150nm,20.8s,baz=178,slow=48						
JHCJ	Hachijojimakas	1.04	237	P	Pn	09 49 57.8	+0.3
JHCJ				eS	Sn	09 50 10.2	-0.7
JMKN	Mikurajimanish	1.07	284	P	Pn	09 49 58.1	+0.1
BSO3	Boso 3	1.19	347	P	Pn	09 49 59.6	+0.2
BSO3				eS	Sn	09 50 14.7	+0.4
BSO4	Boso 4	1.41	343	P	Pn	09 50 02.9	+0.3
JAOM	Aogashimamukai	1.48	218	P	Pn	09 50 03.8	+0.2
JAOM				eS	Sn	09 50 22.5	+0.8
JNIO	Niijimaoohara	1.48	299	P	Pn	09 50 03.9	+0.3
JKO	Kozu shima	1.52	292	P	Pn	09 50 04.4	+0.3
JTHY	Toshimahigashi	1.56	305	P	Pn	09 50 05.0	+0.3
JTHY				eS	Sn	09 50 23.8	+0.1
JIM2	Oshima 3	1.59	313	P	Pn	09 50 04.9	-0.2
JIM2				eS	Sn	09 50 22.9	-1.5
JIZS	Izushimoda	1.95	304	P	Pn	09 50 10.6	+0.6
KTJ3	Kamata3	1.95	312	P	Pn	09 50 09.9	-0.2
KTJ3				eS	Sn	09 50 31.8	-1.6
JSMT	Sammumatsuo	2.03	351	P	Pn	09 50 11.1	0.0
JOD2	Odawara 2	2.17	319	P	Pn	09 50 13.2	+0.1
JOD2				S	Sn	09 50 37.2	-1.6
JFNN	Fujinakano	2.36	312	P	Pn	09 50 16.8	+1.1
MJAR	Matsushiro Arr	3.61	324	P	Pn	09 50 34.4	+1.5
	2.8nm,0.3s,baz=144,slow=12,SNR=112						
MJAR				S	Sn	09 51 16.6	+2.4
	2.0nm,0.3s,baz=117,slow=11,SNR=11						
MAT	Matsushiro	3.61	324	P	Pn	09 50 35.0	+2.1
MAT				S	Sn	09 51 15.0	+0.7
JNU	Nakatsue	8.35	269	P	Pn	09 51 39.5	+1.7
	0.3nm,0.3s,baz=121,slow=5.9,SNR=3.4						
ASAJ	Asahikawa	10.55	7	P	Pn	09 52 05.8	-2.3
	1.1nm,0.3s,baz=212,slow=10,SNR=10						
KSRS	Korea Array	11.19	294	P	Pn	09 52 22.2	+5.5
	0.1nm,0.3s,baz=108,slow=12,SNR=5.1						
H11N2	WAKE ISLAND Hy	27.00	114	T	T	10 24 10.9	
	baz=306,slow=75,SNR=42						
H11N1	WAKE ISLAND Hy	27.00	114	T	T	10 24 06.8	
	baz=306,slow=75,SNR=62						
H11N3	WAKE ISLAND Hy	27.02	114	T	T	10 24 07.4	
	baz=306,slow=75,SNR=36						
H11S3	WAKE ISLAND Hy	27.58	117	T	T	10 24 57.7	
	baz=307,slow=75,SNR=5.8						
H11S1	WAKE ISLAND Hy	27.59	117	T	T	10 24 58.3	
	baz=307,slow=75,SNR=4.5						
H11S2	WAKE ISLAND Hy	27.60	117	T	T	10 24 56.9	
	baz=307,slow=75,SNR=4.1						
MKAR	Makanchi Array	45.60	305	P	P	09 57 54.8	-0.4
	0.3nm,0.5s,baz=81,slow=8.9,SNR=6.0						
ILAR	Eielson Array	52.63	31	P	P	09 58 49.3	+0.7
	0.3nm,0.6s,baz=272,slow=8.2,SNR=4.1						
WRA	Warramunga Arr	53.64	188	P	P	09 58 55.9	-0.7
	1.6nm,0.5s,baz=3.2,slow=7.5,SNR=16						
WRA				LR	LR	10 22 13.4	
	comp=Z,23nm,18.4s,baz=155,slow=36						
ASAR	Alice Springs	57.37	188	P	P	09 59 23.1	-0.1
	0.4nm,0.4s,baz=3.3,slow=8.8,SNR=14						
INK	Inuvik	57.63	26	P	P	09 59 24.6	+0.1
	0.4nm,0.4s,baz=288,slow=6.4,SNR=5.3						

SJA 22 10:11:16.6±0.3, 33.68S×71.03W, h129km±25km, ML2.5, MW2.8, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAGR	Agrelo	1.93	73	iP	Pn	10 11 50.8	+1.0
RTCV	Cerro Valdivia	2.77	50	iS	Sn	10 12 36.3	+2.4
CFA	Coronel Fontan	3.13	49	iP	Pn	10 12 06.0	+1.1
CFA				⇑iS	Sn	10 12 42.6	+0.3
RTLL	Cerro Villicun	3.18	43	iP	Pn	10 12 06.7	+1.0
RTLL				IAML		10 12 09.3	
	comp=Z,11nm,0.4s						
RTLL				iS	Sn	10 12 43.7	+0.2
AMOG	MOGNA	3.47	39	iP	Pn	10 12 10.4	+0.9
AMOG				iS	Sn	10 12 53.6	+3.3
AROD	Rodeo	3.74	21	iP	Pn	10 12 14.8	+1.6

ATH 22 10:12:05.4, 35.27N×27.26E, h19km±1km, ML3.0/9, Error ellipse: s-maj=3.8km s-min=1.1km az=326.0
ISK 22 10:12:06.2, 35.33N×27.16E, h8km, ML3.2/21
THE 22 10:12:07.8, 35.35N×27.10E, h0km±1km, ML2.8/3, Error ellipse: s-maj=5.8km s-min=0.9km az=134.0
DDA 22 10:12:08.2, 35.62N×27.01E, h6km±2km, MW3.7
ISC 22 10:12:07.3±1.1, 35.35N±0.05×27.17E±0.04, h17km±6km, n60, σ1.62/76, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.20	359	P	Pg	10 12 11.8	-0.3
KARP				S	Sg	10 12 16.2	+0.8
	5μm,0.3s						
KARP	Karpathos	0.20	359	P	Pg	10 12 11.8	-0.3
KARP				S	Sg	10 12 16.2	+0.9
KARP				AML	AML	10 12 17.7	
	comp=N,10157μm,0.1s						
KARP				AML	AML	10 12 17.9	
	comp=E,12754μm,0.2s						
KARP	Karpathos	0.20	359	PG	Pg	10 12 11.5	-0.7
KARP				SG	Sg	10 12 15.0	-0.4
ZKR	Zakros	0.81	254	P	Pg	10 12 22.6	-0.5
ZKR				S	Sb	10 12 34.9	+1.2
	comp=E,1μm,0.5s						
ZKR	Zakros	0.81	254	P	Pg	10 12 21.4	-1.8
ZKR				S	Sg	10 12 34.4	+0.5
ZKR				AML	AML	10 12 39.7	
	comp=N,1769μm,0.4s						
ZKR				AML	AML	10 12 39.9	
	comp=E,2741μm,0.7s						
ZKR	Zakros	0.81	254	PG	Pg	10 12 21.3	-1.8
ZKR				SG	Sg	10 12 33.7	-0.2
STIA	Sitia Lasithi	0.89	261	P	Pg	10 12 24.2	-0.5
ARG	Arkhangelos	1.17	42	P	Pb	10 12 27.7	-1.3
ARG				S	Sg	10 12 44.1	-1.0
ARG				AML	AML	10 12 49.7	
	comp=E,1099μm,0.3s						
ARG				AML	AML	10 12 52.5	
	comp=N,1399μm,0.7s						
ARG	Arkhangelos	1.17	42	PN	Pb	10 12 28.8	-0.2
ARG				SN	Sb	10 12 45.9	+2.0
FRMA	Ierapetra Chan	1.22	255	P	Pb	10 12 27.9	-2.1
NISR	Nisiros	1.26	359	P	Pn	10 12 30.9	+0.7
NISR				AML	AML	10 12 56.9	
	comp=E,1025μm,0.3s						
NISR				AML	AML	10 12 58.0	
	comp=N,527μm,0.5s						
NPS	Neapolis	1.27	267	P	Pn	10 12 31.1	+0.7
NPS	Neapolis	1.27	267	P	Pn	10 12 30.8	+0.4
NPS				S	Sn	10 12 49.7	+2.6
NPS				AML	AML	10 12 57.1	
	comp=E,1173μm,0.6s						
NPS				AML	AML	10 12 58.6	
	comp=N,786μm,0.3s						
LAST	Lasithi	1.39	263	P	Pn	10 12 33.1	+1.0
LAST				S	Sb	10 12 51.6	+1.1
	comp=N,290nm,0.6s						
LAST	Lasithi	1.39	263	P	Pn	10 12 32.9	+0.8
LAST				S	Sg	10 12 53.4	+1.0
LAST				AML	AML	10 13 02.1	
	comp=N,526μm,0.4s						
LAST				AML	AML	10 13 04.3	
	comp=E,545μm,0.6s						
DAT	Datca	1.42	14	PN	Pn	10 12 32.5	0.0
DAT				SN	Sb	10 12 52.5	+1.2
DATC	Datca-Mugla	1.46	16	PN	Pn	10 12 33.6	+0.6
MRSB	Marmaris-Mugla	1.60	31	PN	Pn	10 12 36.1	+1.2
BODT	Bodrum	1.71	4	P	Pn	10 12 37.4	+1.0
BODT	Bodrum	1.71	4	PN	Pn	10 12 37.5	+1.0
SANT	Santorini	1.72	307	P	Pn	10 12 37.6	+1.0
SANT				AML	AML	10 13 07.4	
	comp=E,1124μm,0.5s						
SANT				AML	AML	10 13 11.3	
	comp=N,185μm,0.4s						
SANT	Santorini	1.72	307	PN	Pn	10 12 37.2	+0.6
SANT	Santorini	1.72	307	iP	Pn	10 12 38.1	+1.5
SANT				iS	Sn	10 12 56.7	-1.5
THR6	Thira Island,	1.75	305	P	Pn	10 12 38.0	+1.0
THT2	Imerovigli	1.78	308	PN	Pn	10 12 38.5	+1.1
AMGA	Amorgos Island	1.80	326	P	Pn	10 12 38.4	+0.7
AMGA				AML	AML	10 13 11.3	
	comp=N,748μm,0.4s						
AMGA				AML	AML	10 13 11.7	
	comp=E,618μm,0.5s						
IDI	Anoyia	1.86	269	P	Pn	10 12 39.8	+1.3
IDI				AML	AML	10 13 11.4	
	comp=N,342μm,0.6s						
IDI				AML	AML	10 13 14.4	
	comp=E,436μm,0.5s						
IDI	Anoyia	1.86	269	PN	Pn	10 12 39.6	+1.1
DALY	Dalyan (Mula)	1.90	39	PN	Pn	10 12 39.9	+1.0
TURN	Turunc	1.92	37	PN	Pn	10 12 37.1	-2.1
TURN	Turunc	1.92	37	iP	Pn	10 12 37.5	-1.7
TURN				iS	Sn	10 12 58.1	-4.8
SIVA	Sivas	1.96	261	P	Pn	10 12 41.5	+1.7
YER	Yerkesik	2.00	27	P	Pn	10 12 42.3	+1.9
YER	Yerkesik	2.00	27	PN	Pn	10 12 41.7	+1.3
FETY	Fethiye	2.02	50	P	Pn	10 12 42.5	+1.9
FETY	Fethiye	2.02	50	PN	Pn	10 12 41.9	+1.3
IOSP	Ios island	2.05	313	P	Pn	10 12 42.0	+1.0
APE	Apeiranthos	2.17	323	PN	Pn	10 12 43.7	+1.0
APE	Apeiranthos	2.17	323	iP	Pn	10 12 43.7	+1.0
APE				iS	Sn	10 13 06.8	-2.5
AKAS	Kas	2.17	65	PN	Pn	10 12 43.8	+0.9
AKAS	Kas	2.17	65	iP	Pn	10 12 45.3	+2.4
AYDN	Tasoluk	2.38	14	iP	Pn	10 12 47.0	+1.4
AYDN				iS	Sn	10 13 16.8	+2.4
TAVA	DENIZLI_Tavas	2.54	33	iP	Pn	10 12 51.0	+3.1
TAVA				iS	Sb	10 13 23.0	-0.5
GVD	Gavdhos	2.58	259	PN	Pn	10 12 49.9	+1.6
IMMV	Iera Moni Meta	2.60	273	PN	Pn	10 12 49.9	+1.2
ELL	Elmali	2.62	57	PN	Pn	10 12 50.5	+1.4
AYDB	Zeytinkoy-Aydi	2.66	12	PN	Pn	10 12 50.9	+1.4
DGB	zmir	2.71	355	iP	Pn	10 12 54.0	+3.9
RODP	Rodopos	2.79	275	PN	Pn	10 12 53.0	+1.7
ZEY	zmir	2.93	350	iP	Pn	10 12 53.1	-0.1
URLA	Izmir	3.04	352	PN	Pn	10 12 56.6	+1.9
URLA	Izmir	3.04	352	iP	Pn	10 12 58.3	+3.6
KORT	Korkueli	3.06	56	PN	Pn	10 12 57.0	+1.9
CHOS	Chios island	3.16	344	PN	Pn	10 12 57.6	+1.2
KHAL	Karahalli	3.54	31	iP	Pn	10 13 03.7	+2.0
USAK	Uak-Merkez	3.67	23	iP	Pn	10 13 04.7	+1.3
DEMI	Demirci	3.89	18	iP	Pn	10 13 08.6	+2.1
KEPZ	Antalya-Kepez	3.91	65	iP	Pn	10 13 08.3	+1.6
DURS	Dursunbey	4.37	13	iP	Pn	10 13 12.7	-0.4
AGG	Agios Georgios	5.32	315	iP	Pn	10 13 31.1	+5.0

BJI 22 10:30:57.1±0.0, 24.19N×123.83E, h45km, mB4.6/37, mb4.4/52, ML4.3/3, Ms4.2/25, Ms7 3.9/19
NIED 22 10:31:00, 24.60N×123.50E, h68km, Mw4.4 Best double couple: $M_0$4.95000×10^{15} NP1:φs37.00000°,δ59.00000°, λ120.00000°. NP2:φs167.00000°,δ42.00000°,λ50.00000°.
KLM 22 10:31:03.0, 24.35N×123.60E, h72km, mb5.0
NEIC 22 10:31:03.6±1.8, 24.55N±0.06×123.51E±0.03, h68km±4km, mb4.7/61, Error ellipse: s-maj=9.1km s-min=3.9km az=181.0
JMA 22 10:31:04.5±0.1, 24.59N×123.48E, h64km±1km, M4.5
JMA Felt II J1.
TAP 22 10:31:04.4, 24.45N×123.38E, h71km, ML5.1, C
IDC 22 10:31:05.2±0.7, 24.62N×123.60E, h83km±6km, mb4.0/22, mb1 4.1/27, mb1mx4.1/47, mbtmp4.3/27, MS3.3/14, Ms1 3.3/14, ms1mx3.2/36, Error ellipse: s-maj=11.0km s-min=9.5km az=93.0
ISC 22 10:31:04.3±0.4, 24.49N±0.03×123.48E±0.02, h75km±3km, n278, σ1.40/391, mb4.6/56, 1C-94D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.28	123	⇓P	Pn	10 31 15.3	-0.5
IRIF				S	Sn	10 31 23.1	-1.2
YOJ	Yonaguni jima	0.42	267	⇓P	Pn	10 31 16.4	-0.5
	baz=270						
YOJ				S	Sn	10 31 24.8	-1.4
	baz=270						
YOJ	Yonaguni jima	0.42	267	⇓P	Pn	10 31 16.3	-0.6
YOJ				S	Sn	10 31 24.7	-1.4
YOJ	Yonaguni jima	0.42	267		Pn	10 31 16.5	-0.4
YOJ					Sn	10 31 24.9	-1.4
JYNG	Yonagunijimaku	0.48	266	⇓P	Pn	10 31 16.8	-0.6
JYNG				S	Sn	10 31 25.9	-1.2
HATJ	Hateruma jima	0.52	145	⇓P	Pn	10 31 17.8	0.0
HATJ				S	Sn	10 31 27.9	+0.2
JKRS	Kuro-shima	0.55	117	⇓P	Pn	10 31 18.1	+0.1
JKRS				S	Sn	10 31 27.9	-0.2
JIJ	Ishigaki jima	0.62	101	⇓P	Pn	10 31 18.3	-0.4
JIJ				iS	Sn	10 31 28.3	-1.1
JISG	Ishigakijimahi	0.77	82	⇓P	Pn	10 31 19.8	-0.5
JISG				S	Sn	10 31 31.2	-1.0
JTJ	Tarama	1.13	82	P	Pn	10 31 24.5	-0.1
JTJ				S	Sn	10 31 39.5	-0.3
EOS1	EOS1	1.23	273	⇓P	Pn	10 31 25.5	-0.3
	baz=281						
EOS1				eS	Sn	10 31 40.3	-1.7
	baz=281						
TWB1	Santiao Chiao	1.45	291	⇓iP	Pn	10 31 28.5	-0.2
	baz=290						
TWB1				eS	Sn	10 31 45.9	-1.3
	baz=290						
TWC	Suao	1.49	275	⇓iP	Pn	10 31 28.6	-0.6
	baz=272						
TWC				S	Sn	10 31 46.1	-2.0
	baz=272						
NTC	Toucheng	1.54	284	⇓iP	Pn	10 31 29.7	-0.2
	baz=279						
NTC				eS	Sn	10 31 48.3	-1.0
	baz=279						
TIPB	Shuangxi	1.58	288	⇓iP	Pn	10 31 30.4	0.0
	baz=291						
TIPB				S	Sn	10 31 49.7	-0.5
	baz=291						
ENA	Nanau	1.58	268	P	Pn	10 31 29.8	-0.6
	baz=276						
ENA				S	Sn	10 31 48.9	-1.4
	baz=276						
JIRB	Irabujima	1.58	77	⇓P	Pn	10 31 30.2	-0.2
JIRB				eS	Sn	10 31 49.6	-0.7
ILA	Ilan	1.60	280	eP	Pn	10 31 30.5	-0.1
	baz=283						
ILA				S	Sn	10 31 50.0	-0.6
	baz=283						
NWF	Wu-fen Shan	1.65	291	⇓iP	Pn	10 31 31.7	+0.3
	baz=283						
NWF				S	Sn	10 31 51.7	-0.2
	baz=283						
WFSB	Wu-fen Shan	1.65	291	⇓P	Pn	10 31 31.6	+0.3
	baz=284						
WFSB				eS	Sn	10 31 51.3	-0.5
	baz=284						
TWE	Neicheng	1.66	278	⇓iP	Pn	10 31 31.4	-0.2
	baz=275						
TWE				S	Sn	10 31 50.8	-1.4
	baz=275						
JIKM	Ikemajima	1.67	75	⇓P	Pn	10 31 31.6	0.0
JIKM				S	Sn	10 31 51.2	-1.2
JMJ	Miyako jima 2	1.69	78	⇓eP	Pn	10 31 32.4	+0.6
	baz=78						
SLBB	Yuanshan	1.69	279	⇓P	Pn	10 31 32.2	+0.1
	baz=282						
SLBB				eS	Sn	10 31 52.0	-1.1
	baz=282						
JMJ2	Miyako jima3	1.71	81	⇓P	Pn	10 31 32.3	+0.2
JMJ2				eS	Sn	10 31 52.7	-0.5
PCYT	Pengchaiyu	1.71	312	⇓eP	Pn	10 31 32.6	+0.5
	baz=323						
PCYT				eS	Sn	10 31 53.2	0.0
	baz=323						
NACB	Ninganchiao	1.74	260	⇓P	Pn	10 31 32.0	-0.6
	baz=261						
NACB				S	Sn	10 31 52.0	-2.1
	baz=261						
NACB	Ninganchiao	1.74	260		Pn	10 31 32.0	-0.6
ENTT	Nioudou	1.75	275	⇓iP	Pn	10 31 32.6	-0.1
	baz=277						
TWD	Chiawan	1.76	257	⇓iP	Pn	10 31 32.1	-0.7
	baz=246						
TWD				eS	Sn	10 31 53.4	-1.1
	baz=246						
JOGS	Gusukube	1.78	81	⇓P	Pn	10 31 33.4	+0.3
JOGS				eS	Sn	10 31 53.9	-1.0
HWA	Hwalien	1.78	254	eP	Pn	10 31 32.6	-0.4
	baz=244						
HWA				eS	Sn	10 31 53.5	-1.5
	baz=244						
NDT	Datong Townshi	1.79	274	⇓P	Pn	10 31 33.4	+0.2
	baz=276						
NDT				eS	Sn	10 31 55.2	-0.1
	baz=276						
ENLB	Shoufeng	1.81	252	⇓P	Pn	10 31 31.8	-1.6
	baz=243						
ENLB				eS	Sn	10 31 53.2	-2.4
	baz=243						
NWLT	Wulai	1.82	280	⇓eP	Pn	10 31 33.8	+0.2
	baz=282						
NWLT				eS	Sn	10 31 54.9	-1.0
	baz=282						
NHDH	Xindian Distri	1.84	285	⇓P	Pn	10 31 34.3	+0.4
	baz=288						
NHDH				eS	Sn	10 31 56.1	-0.2
	baz=288						
ETLH	Xiulin Townshi	1.84	262	⇓P	Pn	10 31 33.4	-0.5
	baz=263						
YM08	YM08	1.85	293	iP	Pn	10 31 34.3	+0.2
	baz=285						
YM01	YM01	1.85	291	⇓iP	Pn	10 31 34.7	+0.6
	baz=285						
YM01				eS	Sn	10 31 56.3	-0.5
	baz=285						
YM11	YM11	1.85	292	⇓iP	Pn	10 31 34.7	+0.5
	baz=285						
YM11				eS	Sn	10 31 56.6	-0.3
	baz=285						
YM10	YM10	1.86	291	⇓P	Pn	10 31 34.9	+0.6
	baz=285						
YM10				eS	Sn	10 31 56.7	-0.4
	baz=285						
TATO	Taipei	1.87	285	⇓P	Pn	10 31 34.6	+0.3
	baz=279						
TATO				S	Sn	10 31 57.8	+0.6
	baz=279						
TATO	Taipei	1.87	285		Pn	10 31 34.5	+0.3
TAP	Taipei	1.87	288	eP	Pn	10 31 34.9	+0.5
	baz=282						
TAP				eS	Sn	10 31 56.7	-0.5
	baz=282						
YM03	YM03	1.89	292	⇓P	Pn	10 31 35.0	+0.4
	baz=285						
YM03				eS	Sn	10 31 57.4	-0.3
	baz=285						
ANP	Anpu	1.91	292	⇓iP	Pn	10 31 35.1	+0.3
	baz=284						
NNSB	Datong	1.91	269	⇓P	Pn	10 31 34.9	0.0
	baz=270						
NNSB				eS	Sn	10 31 57.5	-0.7
	baz=270						
NNSH	Datong	1.91	269	⇓P	Pn	10 31 34.8	-0.1
	baz=270						
NNSH				eS	Sn	10 31 57.9	-0.3
	baz=270						
NNS	Nan Shan	1.92	269	⇓iP	Pn	10 31 35.0	0.0
	baz=270						
YHNB	Yeheng	1.92	276	⇓P	Pn	10 31 35.4	+0.4
	baz=278						
YHNB				eS	Sn	10 31 57.5	-0.9
	baz=278						

YHNB	Yeheng	1.92 276		Pn	10 31 35.2	+0.2
NTST	Danshui	1.96 291	eP	Pn	10 31 36.3	+0.9
	baz=284					
TWS1	Kuangyinshan	1.97 289	⇓P	Pn	10 31 36.3	+0.7
	baz=290					
ESL	Shilin	1.98 251	⇓iP	Pn	10 31 34.5	-1.3
	baz=244					
EGFH	Guangfu	2.04 247	⇓eP	Pn	10 31 35.5	-1.0
	baz=238					
EGFH			eS	Sn	10 31 58.9	-2.3
	baz=238					
WHF	Hehuan Shan	2.04 261	⇓iP	Pn	10 31 36.5	-0.6
	baz=261					
HGSD	Ruisui	2.12 243	⇓P	Pn	10 31 36.4	-1.2
	baz=233					
HGSD			S	Sn	10 31 59.9	-3.3
	baz=233					
TDCB	Techi	2.13 264	⇓P	Pn	10 31 38.0	+0.2
	baz=265					
TDCB			eS	Sn	10 32 00.6	-2.9
	baz=265					
NCU	National Centr	2.14 284	P	Pn	10 31 38.4	+0.5
	baz=286					
NCU			eS	Sn	10 32 02.4	-1.1
	baz=286					
NCUH	Zhongli	2.14 283	eP	Pn	10 31 38.4	+0.5
	baz=285					
CHGB	Renai	2.14 259	⇓P	Pn	10 31 37.8	-0.3
	baz=249					
CHGB			eS	Sn	10 32 00.4	-3.6
	baz=249					
OWD	Renai	2.17 256	⇓P	Pn	10 31 37.9	-0.5
	baz=257					
OWD			eS	Sn	10 32 02.4	-2.1
	baz=257					
EHY	Hungye	2.20 244	⇓P	Pn	10 31 37.7	-1.0
	baz=235					
EHY			eS	Sn	10 32 02.5	-2.5
	baz=235					
LIOB	Emei	2.25 275	eP	Pn	10 31 40.2	+0.8
	baz=276					
LIOB			eS	Sn	10 32 06.3	+0.2
	baz=276					
VWDT	VWDT	2.25 252	⇓P	Pn	10 31 39.3	-0.1
	baz=242					
VWDT			eS	Sn	10 32 04.4	-1.9
	baz=242					
NSTT	Nanjuang	2.26 274	⇓P	Pn	10 31 40.0	+0.5
	baz=276					
NSTT			eS	Sn	10 32 05.4	-1.0
	baz=276					
YULB	Yu-li	2.27 242	⇓P	Pn	10 31 38.7	-1.0
	baz=233					
YULB			S	Sn	10 32 03.8	-3.0
	baz=233					
YULB	Yu-li	2.27 242		Pn	10 31 39.0	-0.7
YULB			Sn	Sn	10 32 05.3	-1.5
SBCB	Hsinchu	2.29 278	eP	Pn	10 31 40.4	+0.5
	baz=279					
TWF1	Yuli	2.29 241	⇓P	Pn	10 31 38.9	-1.0
	baz=232					
TWF1			eS	Sn	10 32 04.4	-2.9
	baz=232					
HSN	Hsinchu	2.30 278	eP	Pn	10 31 40.1	+0.1
	baz=280					
WHP	Taichung City	2.32 265	⇓P	Pn	10 31 41.2	+0.9
	baz=266					
WHP			eS	Sn	10 32 07.9	-0.1
	baz=266					
DPDB	Guoxing	2.37 260	⇓P	Pn	10 31 41.4	+0.3
	baz=254					
DPDB			eS	Sn	10 32 08.2	-1.0
	baz=254					
FULB	Fuli	2.37 238	⇓iP	Pn	10 31 39.4	-1.6
	baz=228					
FULB			eS	Sn	10 32 06.6	-2.7
	baz=228					
CHKT	Chengkung	2.38 235	⇓iP	Pn	10 31 39.3	-1.8
	baz=226					
CHKT			eS	Sn	10 32 05.1	-4.1
	baz=226					
SSLB	Suanglung	2.41 254	⇓P	Pn	10 31 41.4	-0.1
	baz=262					
SSLB			eS	Sn	10 32 08.1	-2.0
	baz=262					
SSLB	Suanglung	2.41 254		Pn	10 31 41.4	-0.1
SSLB			Sn	Sn	10 32 09.4	-0.7
SMLT	Sun Moon Lake	2.43 256	⇓P	Pn	10 31 42.0	+0.1
	baz=256					
SMLT			eS	Sn	10 32 09.2	-1.5
	baz=256					
NMLH	Miaoli	2.45 272	eP	Pn	10 31 43.0	+1.0
	baz=273					
NSY	Sanyi	2.48 269	eP	Pn	10 31 43.2	+0.8
	baz=270					
NSY			eS	Sn	10 32 11.8	+0.1
	baz=270					
YUS	Yu-Shan	2.51 247	⇓iP	Pn	10 31 43.2	-0.1
	baz=247					
YUS			eS	Sn	10 32 10.6	-2.7
	baz=247					
WHYT	Xinyi Township	2.52 252	⇓P	Pn	10 31 43.5	+0.4
	baz=245					
WHYT			eS	Sn	10 32 12.1	-0.8
	baz=245					
PTSB	Yuanli	2.52 270	eP	Pn	10 31 43.4	+0.2
	baz=270					
TWH	Lutao	2.55 226	⇓iP	Pn	10 31 41.8	-1.6
	baz=224					
TWH			S	Sn	10 32 09.1	-4.3
	baz=224					
TCU	Taichung	2.58 263	⇓P	Pn	10 31 44.7	+0.9
	baz=276					
WDJ	Dajia District	2.59 268	eP	Pn	10 31 44.6	+0.6
	baz=268					
ELDTW	Lidau	2.59 241	⇓P	Pn	10 31 43.1	-1.1
	baz=240					
WJS	Zhushan	2.59 256	⇓eP	Pn	10 31 45.2	+1.2
	baz=256					
WJS			eS	Sn	10 32 15.8	+1.2
	baz=256					
WNT	Mingjian	2.62 257	⇓P	Pn	10 31 45.8	+1.5
	baz=252					
WNT			eS	Sn	10 32 16.1	+0.9
	baz=252					
ALS	Alishan	2.63 249	⇓eP	Pn	10 31 45.2	+0.4
	baz=248					
ALS			eS	Sn	10 32 14.6	-1.2
	baz=248					
WCHH	Zhanghua	2.69 262	⇓eP	Pn	10 31 45.8	+0.4
	baz=274					
WCHH			eS	Sn	10 32 17.0	+0.1
	baz=274					
CHN5	Tsauling	2.71 251	⇓P	Pn	10 31 46.4	+0.7
	baz=251					
CHN5			eS	Sn	10 32 16.9	-0.5
	baz=251					
TTN	Taitung	2.75 232	⇓P	Pn	10 31 44.9	-1.2
	baz=223					
TTN			eS	Sn	10 32 14.7	-3.5
	baz=223					
TWGBT	Beinan	2.75 233	⇓P	Pn	10 31 44.9	-1.3
	baz=226					
TWGBT			eS	Sn	10 32 14.4	-4.0
	baz=226					
TWG	Pinlang	2.76 234	⇓P	Pn	10 31 44.9	-1.4
	baz=226					
TWG			eS	Sn	10 32 14.7	-3.8
	baz=226					
TWG	Pinlang	2.76 234		Pn	10 31 44.9	-1.4
WGK	Gukeng	2.78 254	eP	Pn	10 31 47.6	+1.1
	baz=254					
WGK			eS	Sn	10 32 19.9	+0.8
	baz=254					
WDLH	Douliu	2.80 254	eP	Pn	10 31 48.0	+1.2
	baz=254					
WDLH			eS	Sn	10 32 21.1	+1.6
	baz=254					
STYT	Tauyuan	2.82 243	⇓P	Pn	10 31 47.2	+0.1
	baz=236					
STYT			eS	Sn	10 32 18.4	-1.6
	baz=236					
TPUB	Ta-pu	2.86 246	⇓P	Pn	10 31 48.5	+0.9
	baz=246					
TPUB			eS	Sn	10 32 19.8	-1.3
	baz=246					
TPUB	Ta-pu	2.86 246		Pn	10 31 48.6	+0.9
TPUB			Sn	Sn	10 32 22.2	+1.1
CHN4	Tsaushan	2.87 247	⇓P	Pn	10 31 48.7	+0.9
	baz=247					
CHN4			eS	Sn	10 32 21.2	0.0
	baz=247					
WTP	Ta-pu	2.90 245	⇓P	Pn	10 31 49.0	+0.9
	baz=245					
WTP			eS	Sn	10 32 22.1	+0.1
	baz=245					
RLNB	Erlin	2.91 259	eP	Pn	10 31 48.8	+0.6
	baz=259					
RLNB			eS	Sn	10 32 22.1	0.0
	baz=259					
CHY	Chiayi	2.96 251	⇓eP	Pn	10 31 49.8	+0.9
	baz=251					
CHY			eS	Sn	10 32 24.0	+0.6
	baz=251					
ECL	Taimali	2.98 231	⇓iP	Pn	10 31 47.5	-1.8
	baz=238					
ECL			eS	Sn	10 32 19.8	-4.2
	baz=238					
WTCT	Ta-ch'eng	2.98 259	eP	Pn	10 31 49.4	+0.2
	baz=259					
WTCT			eS	Sn	10 32 23.5	-0.5
	baz=259					
SLGT	Liugui	2.99 241	⇓eP	Pn	10 31 49.9	+0.5
	baz=233					
SLGT			eS	Sn	10 32 23.8	-0.4
	baz=233					
TWK	Hsinying	2.99 247	⇓P	Pn	10 31 50.2	+0.7
	baz=246					
TWK			eS	Sn	10 32 24.2	-0.2
	baz=246					
CHN1	Nanshi	2.99 245	⇓P	Pn	10 31 50.4	+0.9
	baz=255					
CHN1			eS	Sn	10 32 24.8	+0.5
	baz=255					
SGST	Jiashian	3.00 243	⇓P	Pn	10 31 49.5	0.0
	baz=235					
SGST			eS	Sn	10 32 23.6	-0.7
	baz=235					
SNST	Tainan City	3.00 246	eP	Pn	10 31 50.4	+0.8
	baz=245					
SNST			eS	Sn	10 32 24.8	+0.2
	baz=245					
LAY	Lan-yu	3.01 216	⇓iP	Pn	10 31 47.5	-2.2
	baz=221					
LAY			eS	Sn	10 32 19.3	-5.5
	baz=221					
WMLT	Mailiao	3.05 258	eP	Pn	10 31 49.9	-0.3
	baz=258					
WLGB	Puzi	3.07 252	eP	Pn	10 31 50.9	+0.4
	baz=251					
WLGB			eS	Sn	10 32 25.6	-0.6
	baz=251					
WSF	Szhu	3.09 255	eP	Pn	10 31 51.1	+0.4
	baz=255					
SSD	Sandimen	3.13 237	eP	Pn	10 31 51.0	-0.4
	baz=232					
CHN3	Shinhua	3.18 244	eP	Pn	10 31 52.7	+0.8
	baz=244					
TAW	Tawu	3.18 229	eP	Pn	10 31 50.8	-1.2
	baz=233					
TAW			eS	Sn	10 32 25.6	-3.1
	baz=233					
EAST	Anshuo	3.19 230	eP	Pn	10 31 51.2	-1.0
	baz=235					
CHN8	Yiju	3.19 250	⇓eP	Pn	10 31 52.5	+0.4
	baz=250					
MASBT	Mashibuluo	3.21 235	eP	Pn	10 31 51.7	-0.7
	baz=229					
SGLT	Jiouru	3.25 238	eP	Pn	10 31 54.5	+1.5
	baz=236					
SGLT			eS	Sn	10 32 32.5	+2.0
	baz=236					
TWM1	Shoushan	3.25 240	eP	Pn	10 31 55.2	+2.3
	baz=252					
SCLT	Jiali	3.28 247	eP	Pn	10 31 54.0	+0.7
	baz=246					
SCLT			eS	Sn	10 32 30.3	-0.9
	baz=246					
TAI1	Yung-k'ang	3.31 245	eP	Pn	10 31 54.5	+0.8
	baz=256					
SSPT	Xinbi	3.33 234	eP	Pn	10 31 54.2	+0.2
	baz=229					
SNJT	Kaohsiung City	3.36 240	eP	Pn	10 31 55.5	+1.1
	baz=252					
SCZT	Fangliau	3.36 232	eP	Pn	10 31 54.3	-0.1
	baz=228					
WSSB	Gushan	3.47 239	eP	Pn	10 31 57.4	+1.4
	baz=252					
TSEB	Hengchuen, Pin	3.50 223	eP	Pn	10 31 56.1	-0.2
	baz=232					
TSEB			eS	Sn	10 32 35.0	-1.6
	baz=232					
PTTC	Pingtan	3.51 287	⇓eP	Pn	10 31 56.4	-0.1
	baz=278					
TWKBT	Hengchun	3.52 225	⇓P	Pn	10 31 56.4	-0.3
	baz=216					
TWKBT			eS	Sn	10 32 34.2	-3.0
	baz=216					
HEN	Hengchun	3.53 226	eP	Pn	10 31 56.6	-0.1
	baz=220					
TWK1	Hengchun	3.53 225	eP	Pn	10 31 56.2	-0.5
	baz=217					
TWK1			eS	Sn	10 32 35.0	-2.3
	baz=217					
WLCH	Liuqiu	3.55 234	eP	Pn	10 31 59.4	+2.4
	baz=246					
MATB	Ma-tsu	3.60 298	⇓eP	Pn	10 31 57.9	+0.2
	baz=299					
VWUC	VWUC	3.69 279	⇓P	Pn	10 31 58.4	-0.6
	baz=270					
VWUC			eS	Sn	10 32 37.9	-3.5
	baz=270					
PHUB	P'eng-hu	3.70 256	P	Pn	10 31 58.6	-0.5
	baz=255					
PHUB			S	Sn	10 32 39.2	-2.2
	baz=255					
PNG	Penghu	3.70 256	⇓P	Pn	10 31 58.3	-0.7
	baz=256					
PNG			eS	Sn	10 32 38.6	-2.9
	baz=256					
WDGT	Dungji	3.70 252	⇓iP	Pn	10 31 58.8	-0.2
	baz=250					
WDGT			eS	Sn	10 32 38.9	-2.6
	baz=250					
XPSS	Dashiqiu	3.83 310	eP	Pn	10 32 00.9	0.0
	baz=320					
VCHM	Qimei	3.92 252	⇓eP	Pn	10 32 02.0	0.0
	baz=252					
PTMZ	Houxiangcun	4.00 279	eP	Pn	10 32 02.8	-0.3
	baz=269					
MHZQ	Yeshan	4.33 293	⇓eP	Pn	10 32 07.5	-0.2
	baz=292					
QZH	Quanzhou	4.46 277	P	Pn	10 32 08.8	-0.7
QZH			S	Sn	10 32 56.3	-3.9
QZH			smax	smax		
	comp=N,140nm,0.6s					
QZH			smax	smax		
	comp=E,110nm,0.8s					
KNM	Kinmen	4.59 270	eP	Pn	10 32 12.0	+0.7
	baz=270					
KNMB	Chin-men Tao	4.63 271	eP	Pn	10 32 10.6	-1.3
	baz=271					
KNMB	Chin-men Tao	4.63 271		Pn	10 32 10.7	-1.1
JOW	Kunigami	4.92 61	eP	Pn	10 32 14.4	-1.3
	baz=61					
JOW	Kunigami	4.92 61	P	Pn	10 32 14.4	-1.3
	14nm,0.3s,baz=177,slow=14,SNR=227					
JOW			S	Sn	10 33 09.6	-1.8
	5.6nm,0.3s,baz=96,slow=18,SNR=2.5					
JOW	Kunigami	4.92 61		Pn	10 32 14.2	-1.5
ZPLA	Ao Xicun	5.26 265	eP	Pn	10 32 19.5	-0.8
	baz=257					
ZZJH	Jiuhuzhen	5.33 271	eP	Pn	10 32 20.5	-0.7
	baz=270					
SSE	Sheshan	6.89 343	Pn	Pn	10 32 42.6	0.0
SZP	Santa	7.45 203	Pn	Pn	10 32 50.1	-0.2
NJ2	Nanjing	8.57 333	eP	Pn	10 33 06.0	+0.5
NJ2			pmax	pmax		
	comp=Z,63nm,0.7s					
HKPS	Hong Kong Po S	8.85 257	Pn	Pn	10 33 09.2	-0.3
WHN	Wuhan	10.10 309	⇓P	Pn	10 33 26.6	+0.2
WHN			S	Sn	10 35 22.3	+4.4
WHN			LR	LR		
	comp=Z,890nm,5.0s					
TGY	Tagaytay City	10.60 194	S	Sn	10 35 36.8	+6.2
	39nm,0.3s,baz=306,slow=17,SNR=2.6					
JNU	Nakatsue	10.77 35	P	Pn	10 33 34.4	-1.2
	0.9nm,0.3s,baz=191,slow=13,SNR=9.0					
JNU			LR	LR	10 38 18.5	
	comp=Z,89nm,19.9s,baz=204,slow=41					
JNU	Nakatsue	10.77 35	Pn	Pn	10 33 34.9	-0.8
TIA	Tai'an	12.90 336	P	Pn	10 34 06.3	+1.7
TIA			pmax	pmax		
	comp=Z,4.0nm,0.6s					
KSRS	Korea Array	13.47 15	P	Pn	10 34 11.4	-0.7
	0.4nm,0.3s,baz=194,slow=12,SNR=31					
KSRS			LR	LR	10 40 10.3	
	comp=Z,73nm,18.7s,baz=193,slow=41					
KS19	Wonju Array Si	13.51 15		Pn	10 34 15.0	+2.4
ENH	Enshi	13.70 298	Pn	Pn	10 34 16.4	+1.2
GYA	Guiyang	15.31 281	⇑iP	P	10 34 39.6	+0.2
GYA			pP	pP	10 34 46.4	-7.7
GYA			PP		10 34 48.8	
GYA			S	Sn	10 37 26.3	+1.2
GYA			sS	S	10 37 47.3	+10
GYA			pmax	pmax		
	comp=Z,10.0nm,0.7s					
GYA			pmax	pmax		
	comp=Z,100nm,4.1s					
GYA			LR	LR		
	comp=N,210nm,16.9s					
GYA			LR	LR		
	comp=E,150nm,14.3s					
XAN	Xi'an	15.86 310	P	P	10 34 45.6	+0.3
XAN			pP	pP	10 34 53.3	-6.5
XAN			pmax	pmax		
	comp=Z,23nm,0.8s					
XAN			pmax	pmax		
	comp=Z,98nm,3.5s					
XAN	Xi'an	15.86 310	Pn	Pn	10 34 41.6	-1.4
XAN			IAmb	IAmb	10 34 46.9	
	comp=Z,17nm,0.7s					
BJT	Baijiatuau	16.66 340	Pn	Pn	10 34 51.7	-1.2
JHJ	Hachijo jima 2	16.67 55	P	Pn	10 34 53.4	+0.3
	comp=Z,7.0nm,0.3s,baz=224,slow=18,SNR=3.2					
JCJ	Chichijima	17.05 77	LR	LR	10 40 05.7	
	comp=Z,109nm,20.5s,baz=94,slow=32					
DAV	Davao City (W)	17.43 173	LR	LR	10 41 33.5	
	comp=Z,86nm,19.9s,baz=6.0,slow=36					
MAT	Matsushiro	17.45 43	P	Pn	10 35 01.5	-1.2
MAT			eS	Sn	10 38 14.6	-1.9
MJAR	Matsushiro Arr	17.45 43	P	Pn	10 35 01.9	-0.8
	comp=Z,0.1nm,0.3s,baz=225,slow=8.6,SNR=15					
MJAR			LR	LR	10 42 01.3	
	comp=Z,77nm,21.4s,baz=210,slow=38					
CD2	Chengdu	18.58 295	P	Pn	10 35 16.4	-0.1
CD2			S	S	10 38 43.3	+0.3
CD2			pmax	pmax		
	comp=Z,30nm,0.6s					
CD2			LR	LR		
	comp=Z,210nm,8.0s					
CD2			LR	LR		
	comp=Z,290nm,9.2s					
CD2			LR	LR		
	comp=Z,210nm,8.2s					
CN2	Changchun	19.34 4	eP	P	10 35 22.5	-1.0
CN2			eS	S	10 38 50.8	-7.5
CN2			pmax	pmax		
	comp=Z,10.0nm,0.6s					
KKM	Kota Kinabalu	19.62 202	P	P	10 35 27.5	+0.7
KKM			IAmb	IAmb	10 35 29.3	
	comp=Z,55nm,1.2s					
LZH	Lanzhou	20.48 309	eP	Pn	10 35 38.3	-0.6
LZH			pP	pwP	10 35 54.0	+0.8
LZH			pmax	pmax		
	comp=Z,30nm,1.1s					
LZH			pmax	pmax		
	comp=Z,160nm,5.4s					
LZH			LR	LR		
	comp=Z,210nm,14.6s					
LZH			LR	LR		
	comp=Z,180nm,14.0s					
LZH			LR	LR		
	comp=Z,230nm,14.8s					
MDJ	Mudanjiang	20.69 12	P	P	10 35 36.2	-2.0
USA0B	Ussuriysk Arra	20.86 17	P	P	10 35 38.6	-1.3
USRK	Ussuriysk Ar.	20.86 17	pP	pP	10 35 55.7	+0.9
	comp=Z,8.1nm,0.8s,baz=202,slow=9.7,SNR=7.5					
USRK			LR	LR	10 42 59.9	
	comp=Z,32nm,21.4s,baz=172,slow=34					
PBKT	Sadao Pong	22.48 254	P	P	10 35 56.4	-1.2
CHTO	Chiang Mai	23.47 261	P	P	10 36 06.5	-1.0
CMAR	Chiang Mai Arr	23.59 260	P	P	10 36 10.3	+1.8
	comp=Z,4.1nm,0.8s,baz=60,slow=8.2,SNR=17					
CMAR			LR	LR	10 45 59.7	
	comp=Z,90nm,20.2s,baz=161,slow=38					
MRSI	Marisa	23.91 184	P	P	10 36 12.3	+1.0
SBUM	Sibu	24.46 208	P	P	10 36 16.2	0.0
SBUM			IAmb	IAmb	10 36 17.7	
	comp=Z,20nm,1.3s					
SBUM	Sibu	24.46 208	P	P	10 36 16.0	-0.2
GTA	Gaotai	24.89 312	eP	P	10 36 21.4	+1.2
GTA			pP	pP	10 36 35.3	-1.8
GTA			sP	pwP	10 36 41.3	+1.8
GTA			pmax	pmax		
	comp=Z,5.0nm,1.2s					
GTA			pmax	pmax		
	comp=Z,65nm,4.3s					
GTA			LR	LR		
	comp=Z,130nm,17.8s					
GTA			LR	LR		
	comp=Z,150nm,16.8s					
HIA	Hailar	24.91 354	P	P	10 36 19.8	-0.4
ASAJ	Asahikawa	25.05 34	P	P	10 36 18.6	-2.9
	comp=Z,2.3nm,0.3s,baz=232,slow=10,SNR=12					
ASAJ			LR	LR	10 46 44.9	
	comp=Z,23nm,18.7s,baz=212,slow=38					
JKA	Kamikawa-asahi	25.05 34	P	P	10 36 18.6	-2.9
LBMI	Labuha	25.28 171	P	P	10 36 34.6	+11
APSI	Ampana	25.31 184	P	P	10 36 25.9	+1.9
	comp=Z,30nm,1.1s					
KLR	Kul'dur	25.54 13	P	P	10 36 23.5	-2.3
	comp=Z,1.4nm,0.5s,baz=197,slow=7.0,SNR=6.5					
KLR			pP	pP	10 36 43.5	+0.9
	comp=Z,4.4nm,1.0s,baz=224,slow=10,SNR=4.8					
KSM	Kuching	26.18 211	P	P	10 36 32.6	+0.7
KSM			IAmb	IAmb	10 36 34.4	
	comp=Z,27nm,1.0s					
KSM	Kuching	26.18 211	P	P	10 36 32.0	+0.1
SANI	Sanana	26.49 174	P	P	10 36 35.0	+0.3
	comp=Z,38nm,1.1s					
SONM	Songino Array	26.95 334	P	P	10 36 38.7	-0.1
	comp=Z,1.7nm,0.6s,baz=151,slow=10,SNR=7.4					
SONM			pP	pwP	10 36 57.8	-0.4
	comp=Z,2.9nm,0.7s,baz=147,slow=10,SNR=7.0					
SONM			LR	LR	10 46 44.1	
	comp=Z,89nm,21.8s,baz=201,slow=35					
YSS	Yuzh-Sakhalins	27.20 30	P	P	10 36 40.2	-0.6
YSS			IAmb	IAmb	10 36 56.1	
	comp=Z,14nm,1.1s					
SHL	Shillong	28.61 279	P	P	10 36 53.9	+0.1
SHL			IAmb	IAmb	10 36 56.7	
	comp=Z,11nm,0.6s					
RPSI	Rantau Prapat	32.10 231	P	P	10 37 23.3	-1.2
RPSI			IAmb	IAmb	10 37 25.9	
	comp=Z,14nm,1.1s					
MMRI	Maumere	32.94 182	P	P	10 37 31.8	0.0
EDFI	Ende, Flores	33.08 183	P	P	10 37 33.7	+0.6
	comp=Z,225nmcomp=Z,17nm,0.8s					
PLAI	Plampang	33.58 190	P	P	10 37 37.6	+0.3
	comp=Z,33nm,0.8s					
WMQ	Urumqi	34.98 312	eP	P	10 37 50.9	+1.6
WMQ			pmax	pmax		
	comp=Z,6.0nm,0.7s					
WMQ			pmax	pmax		
	comp=Z,170nm,6.3s					
WMQ			LR	LR		
	comp=Z,760nm,28.8s					
WMQ			LR	LR		
	comp=Z,1μm,28.9s					
WMQ			LR	LR		
	comp=Z,94nm,19.9s					
YAK	Yakutsk	37.77 5	P	P	10 38 10.8	-1.9
YAK			IAmb	IAmb	10 38 11.9	
	comp=Z,6.4nm,0.8s					
PETK	Petropavlovsk-	38.46 33	P	P	10 38 16.4	-2.3
	comp=Z,1.5nm,0.8s,baz=163,slow=3.9,SNR=12					
PETK			LR	LR	10 54 10.8	
	comp=Z,34nm,19.9s,baz=241,slow=36					
MK31	Makanchi Array	39.59 315	P	P	10 38 27.3	-1.0
MKAR	Makanchi Array	39.59 315	P	P	10 38 27.3	-1.0
	comp=Z,3.9nm,0.5s,baz=99,slow=9.7,SNR=74					

MAKZ Makanchi 39.80 315 P P 10 38 29.3 -0.7
MAKZ IAmb IAmb 10 38 31.2
comp=Z,6.8nm,0.5s
MA2 Magadan 39.93 21 P P 10 38 29.5 -1.3
MA2 IAmb IAmb 10 38 30.0
comp=Z,4.8nm,0.9s
KNRA Kununurra 40.25 172 P P 10 38 33.6 -0.3
PMG Port Moresby 40.85 143 P P 10 38 38.7 -0.3
PMG IAmb IAmb 10 38 45.5
comp=Z,31nm,1.2s
ZAA0 Zalesovo Array 41.15 326 P P 10 38 40.0 -0.9
ZALV Zalesovo Beam 41.15 326 P P 10 38 39.4 -1.6
comp=Z,2.0nm,0.4s,baz=116,slow=8.2,SNR=12
KDJ Kajisay 41.95 306 P P 10 38 45.6 -2.3
KDJ IAmb IAmb 10 38 50.6
comp=Z,4.2nm,0.8s
FITZ Fitzroy Crossi 42.38 177 P P 10 38 51.2 -0.1
comp=Z,6.2nm,0.7s,baz=4.8,slow=7.7,SNR=15
FITZ Fitzroy Crossi 42.38 177 P P 10 38 51.2 -0.1
FITZ IAmb IAmb 10 39 03.2
comp=Z,12nm,0.5s
KSH Kashi 42.49 302 P P 10 38 55.8 +3.5
KSH PcP PcP 10 40 45.8 +1.9
KSH S S 10 45 13.0 +3.9
KSH pmax pmax
comp=Z,8.0nm,0.5s
KSH pmax pmax
comp=Z,310nm,6.3s
KSH LR LR
comp=Z,130nm,10.3s
NRN Naryn 42.71 305 P P 10 38 54.4 +0.1
COEN Coen 42.78 151 P P 10 38 55.4 +0.8
KURK Kurchatov 43.22 319 P P 10 38 57.2 -0.6
WB0 Warramunga Arr 45.25 165 P P 10 39 14.9 +0.5
WRAB Tennant Creek 45.40 166 P P 10 39 15.9 +0.4
WRA Warramunga Arr 45.41 166 P P 10 39 16.4 +0.7
comp=Z,38nm,0.7s,baz=347,slow=8.6,SNR=82
WRA PcP PcP 10 40 53.8 0.0
comp=Z,1.1nm,0.5s,baz=350,slow=4.3,SNR=2.5
WB2 Warramunga Arr 45.41 166 P P 10 39 16.1 +0.5
WR0 Warramunga Arr 45.47 165 P P 10 39 16.6 +0.5
PSA00 Pilbara Seismi 45.92 185 P P 10 39 19.6 0.0
KK31 Karatay Array 46.96 307 P P 10 39 28.2 +0.5
KK31 IAmb IAmb 10 39 31.2
comp=Z,2.0nm,0.5s
KKAR Karatay Array 46.96 307 P P 10 39 28.2 +0.5
KKAR IAmb IAmb 10 39 31.2
comp=Z,2.0nm,0.5s
GIRL Giralia 47.70 192 P P 10 39 34.6 +1.1
BRVK Borovoye 48.84 320 P P 10 39 41.3 -0.7
BRVK IAmb IAmb 10 39 44.2
comp=Z,3.2nm,0.5s
AS31 Alice Springs 48.92 167 P P 10 39 44.4 +1.5
AS31 IAmb IAmb 10 39 46.1
comp=Z,5.6nm,0.6s
ASAR Alice Springs 48.92 167 P P 10 39 44.0 +1.1
comp=Z,9.6nm,0.6s,baz=350,slow=9.1,SNR=36
ASAR PcP PcP 10 41 06.4 +0.2
comp=Z,2.8nm,0.8s,baz=355,slow=2.7,SNR=5.5
NRIK Noril'sk 49.67 344 LR LR 11 05 16.2
comp=Z,57nm,18.7s,baz=54,slow=41
MORW Morawa 53.72 188 P P 10 40 19.0 +0.3
MORW IAmb IAmb 10 40 19.7
comp=Z,14nm,0.8s
FORT Forrest 55.13 175 P P 10 40 30.2 +1.4
EIDS Eidsvold 56.30 150 P P 10 40 37.2 -0.2
EIDS IAmb IAmb 10 40 38.2
comp=Z,11nm,1.1s
GEYT Alibeck 56.45 300 P P 10 40 40.4 +1.9
comp=Z,1.9nm,0.5s,baz=123,slow=11,SNR=4.0
GEYT pP pwP 10 41 00.1 +1.0
comp=Z,2.5nm,0.7s,baz=98,slow=3.1,SNR=3.4
NWAO Narrogin (SRO) 57.40 186 P P 10 40 46.0 +1.0
NWAO Narrogin (SRO) 57.40 186 P P 10 40 46.0 +1.0
BBOO Buckleboo 58.23 168 P P 10 40 51.6 +0.8
STKA Stephens Creek 58.66 162 P P 10 40 54.6 +0.8
comp=Z,8.7nm,0.5s,baz=350,slow=6.5,SNR=25
STKA Stephens Creek 58.66 162 P P 10 40 54.9 +1.1
STKA IAmb IAmb 10 40 55.4
comp=Z,2.6nm,0.9s
ARMA Armidale 60.90 152 P P 10 41 11.3 +1.9
ARMA IAmb IAmb 10 41 12.1
comp=Z,7.7nm,0.8s
CAN Canberra 64.21 157 P P 10 41 32.7 +1.4
CAN IAmb IAmb 10 41 33.2
comp=Z,18nm,1.2s
SUA Susitna One 66.81 31 P P 10 41 47.3 -0.5
SUA IAmb IAmb 10 41 58.5
comp=Z,7.6nm,1.1s
KBZ Khabaz 66.92 309 P P 10 41 49.5 +0.8
comp=Z,1.4nm,0.7s,baz=60,slow=6.1,SNR=4.3
ILAR Eielson Array 67.98 28 P P 10 41 55.1 +0.1
comp=Z,0.3nm,0.5s,baz=280,slow=5.3,SNR=8.4
ILAR LR LR 11 16 17.9
comp=Z,20nm,18.2s,baz=250,slow=40
SCM Sheep Creek Mo 68.35 31 P P 10 41 57.6 +0.1
SCM IAmb IAmb 10 42 02.9
comp=Z,18nm,1.2s
ARCES ARCESS Array B 70.04 338 P P 10 42 09.0 +1.2
comp=Z,3.9nm,0.9s,baz=73,slow=6.9,SNR=4.5
GLB Gilahina Butte 70.08 31 P P 10 42 08.1 0.0
GLB IAmb IAmb 10 42 18.0
comp=Z,8.7nm,1.4s
EGAK Eagle 70.37 27 P P 10 42 10.7 +0.9
BARN Barnard Glacie 71.18 31 P P 10 42 15.4 +0.3
BARN IAmb IAmb 10 42 15.8
comp=Z,12nm,1.5s
DAWY Dawson 71.31 27 P P 10 42 15.9 +0.3
CTGM Chitina Glacie 71.36 31 P P 10 42 16.5 +0.4
CTGM IAmb IAmb 10 42 20.8
comp=Z,5.8nm,1.0s
EPYK Eagle Plains 71.66 25 P P 10 42 17.6 0.0
INK Inuvik 72.16 22 P P 10 42 20.4 0.0
FINES FINESS Array B 72.24 330 P P 10 42 20.4 -0.7
comp=Z,2.4nm,0.8s,baz=56,slow=4.7,SNR=8.0
FINES LR LR 11 17 09.3
comp=Z,98nm,20.6s,baz=92,slow=38
AKASG Malin Array Be 74.03 319 P P 10 42 30.8 -1.1
comp=Z,0.6nm,0.4s,baz=69,slow=6.0,SNR=3.7
BRTR Keskin Array B 74.67 307 P P 10 42 36.3 +0.3
comp=Z,2.5nm,0.8s,baz=104,slow=5.3,SNR=10
RES Resolute Bay 78.02 10 P P 10 42 53.8 -0.3
NC405 NORSAR Array S 78.68 333 P P 10 42 56.4 -1.6
NB201 NORSAR Array S 78.89 333 P P 10 42 57.6 -1.6
NB2 NORSAR Subarra 78.93 333 P P 10 42 58.2 -1.2
comp=Z,1.0nm,0.7s,baz=59,slow=5.3
NOA NORSAR Array B 78.93 333 P P 10 42 58.2 -1.2
comp=Z,2.8nm,1.0s,baz=57,slow=5.4,SNR=4.5
NOA LR LR 11 21 08.6
comp=Z,44nm,19.7s,baz=15,slow=38
NC204 NORSAR Array S 78.99 333 P P 10 42 58.9 -0.9
HIZ Hauiti 79.02 141 P P 10 43 02.6 +2.5
HIZ IAmb IAmb 10 43 12.0
comp=Z,22nm,1.1s
BKZ Black Stump Fm 80.40 141 P P 10 43 08.2 +0.6
BKZ IAmb IAmb 10 43 17.7
comp=Z,16nm,1.1s
RPZ Rata Peaks 80.69 147 P P 10 43 09.4 +0.4
comp=Z,16nm,0.8s,baz=26,slow=8.1,SNR=4.3
RPZ Rata Peaks 80.69 147 P P 10 43 10.1 +1.1
RPZ IAmb IAmb 10 43 13.1
comp=Z,13nm,0.9s
VYHS Vyhne 81.11 319 eP P 10 43 10.8 -0.6
YKA Yellowknife Ar 81.87 23 P P 10 43 14.5 -0.6
comp=Z,2.3nm,0.7s,baz=306,slow=5.2,SNR=31
YKA pP pP 10 43 35.5 +0.8
comp=Z,1.4nm,0.6s,baz=308,slow=5.0,SNR=5.0
MODS Modra-Piesok 82.08 320 eP P 10 43 14.1 -2.5
GERES GERESS Array B 83.93 321 P P 10 43 25.8 -0.4
comp=Z,0.9nm,0.6s,baz=57,slow=4.9,SNR=8.4
ABPO Ambohimpanom 85.91 247 P P 10 43 37.3 +0.7
ABPO IAmb IAmb 10 43 37.8
comp=Z,8.4nm,0.7s
NVAR Mina Array Bea 94.78 44 P P 10 44 19.1 +1.1
comp=Z,0.3nm,0.6s,baz=289,slow=6.4,SNR=3.9
NVAR pP pP 10 44 39.3 +1.2
comp=Z,0.2nm,0.5s,baz=251,slow=4.5,SNR=3.2

NEIC 22 10:33:55.8±2.2, 5°.14S±0°.08×147°.1E±0°.2, h168km±10km, mb4.4/5, Error ellipse: s-maj=32.6km s-min=10.1km az=98.0
IDC 22 10:34:00.0±4.0, 5°.66S×147°.62E, h214km±42km, mb3.7/3, mb1 3.9/5, mb1mx3.3/33, mbtmp4.3/5, MS3.0/1, Ms1 3.0/1, ms1mx2.3/24, Error ellipse: s-maj=72.9km s-min=25.3km az=134.0
ISC 22 10:33:55.4±1.0, 5°.16S±0°.06×147°.1E±0°.2, h150km, n15, σ1°.54/17, Eastern New Guinea region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MANU Manus Island 3.11 5 Pn Pn 10 34 45.9 +1.7
PMG Port Moresby 4.22 179 P Pn 10 35 00.4 +1.9
24nm,0.3s,baz=17,slow=11,SNR=65
PMG S Sn 10 35 46.1 -1.5
13nm,0.3s,baz=343,slow=20,SNR=11
PMG Port Moresby 4.22 179 Pn 10 35 00.6 +2.0
PMG Sn 10 35 48.3 +0.6
COEN Coen 9.55 204 Pn Pn 10 36 11.6 +2.0
COEN Sn Sn 10 37 55.7 +0.2
CTA Charters Tower 14.86 183 P P 10 37 20.5 +0.3
0.5nm,0.3s,baz=11,slow=12,SNR=5.0
WB0 Warramunga Arr 19.07 219 P P 10 38 05.7 -0.8
WR0 Warramunga Arr 19.12 219 P P 10 38 05.8 -1.3
WR0 IAmb IAmb 10 38 06.9
comp=Z,11nm,0.6s
WB2 Warramunga Arr 19.23 219 P P 10 38 06.5 -1.6
WRA Warramunga Arr 19.23 219 P P 10 38 07.4 -0.8
comp=Z,2.1nm,0.3s,baz=47,slow=11,SNR=46
KNRA Kununurra 20.82 238 P P 10 38 24.1 -1.2
KNRA IAmb IAmb 10 38 34.3
comp=Z,26nm,1.1s
AS31 Alice Springs 22.36 213 P P 10 38 39.4 -1.9
AS31 IAmb IAmb 10 38 49.4
comp=Z,4.2nm,0.3s
ASAR Alice Springs 22.36 213 P P 10 38 40.0 -1.4
comp=Z,5.7nm,0.8s,baz=49,slow=8.1,SNR=54
ASAR LR LR 10 48 30.9
comp=Z,40nm,18.4s,baz=281,slow=39
FITZ Fitzroy Crossi 24.59 237 P P 10 39 02.2 +0.4
comp=Z,12nm,0.4s,baz=48,slow=11,SNR=31
ILAR Eielson Array 84.68 23 P P 10 46 10.2 -1.8
comp=Z,0.3nm,0.7s,baz=255,slow=5.5,SNR=4.4
TORD Torodi Ar. Bea 144.97 286 PKPbc PKPbc 10 53 13.7 -1.8
comp=Z,0.3nm,0.5s,baz=60,slow=1.5,SNR=3.0

NEIC 22 10:42:28.7±1.1, 26°.75S±0°.08×178°.6W±0°.2, h310km±7km, mb4.1/14, Error ellipse: s-maj=22.5km s-min=11.3km az=95.0
IDC 22 10:42:29.4±0.9, 27°.02S×178°.40W, h330km±13km, mb3.5/11, mb1 3.7/13, mb1mx3.7/22, mbtmp4.3/13, Error ellipse: s-maj=24.3km s-min=15.5km az=164.0
ISC 22 10:42:30.4±0.6, 27°.22S±0°.06×178°.3W±0°.1, h350km, n67, σ1°.57/73, mb4.0/20, Kermadec Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RIZ Raoul Island 2.04 171 P Pn 10 43 21.2 -0.7
RIZ S S 10 44 03.6 +0.3
RAO Raoul Island 2.05 171 P Pn 10 43 20.5 -1.4
596nm,0.3s,baz=296,slow=22,SNR=19
RAO S S 10 44 02.4 -1.0
186nm,0.3s,baz=74,slow=23,SNR=3.0
RAO Raoul Island 2.05 171 Pn 10 43 21.0 -1.0
RAO Raoul Island 2.05 171 Pn Pn 10 43 20.7 -1.3
RAO S 10 44 02.7 -0.8
GLKZ Green Lake 2.06 171 P Pn 10 43 22.0 0.0
GLKZ S S 10 44 01.1 -2.4
MSVF Nonsavu 10.03 339 Pn 10 44 40.8 -8.1
OUZ Omahuta 10.58 219 P P 10 44 58.9 +2.7
OPRZ Ohinepanea 11.46 201 P P 10 45 08.6 +2.7
URZ Urewera 11.67 198 P Pn 10 45 08.6 +0.5
1.2nm,0.3s,baz=261,slow=5.0,SNR=41
URZ S S 10 47 16.5 -1.7
6.4nm,0.3s,baz=175,slow=22,SNR=9.4
URZ Urewera 11.67 198 P Pn 10 45 07.1 -1.0
MUGZ Murupara 11.97 199 P Pn 10 45 13.5 +1.8
SNGZ Shannon Statio 12.10 197 P P 10 45 13.7 +0.7
SNGZ S S 10 47 27.1 -0.5
ALRZ Allen Road 12.18 200 P P 10 45 10.4 -3.5
TLZ Tolley Road 12.24 204 P Pn 10 45 19.0 +4.1
RAHZ Arahi 12.30 197 P Pn 10 45 17.2 +1.7
MTHZ Maungataniwha 12.30 198 P Pn 10 45 17.1 +1.5
MTHZ S S 10 47 30.5 -1.3
MRHZ Matea Rd 12.41 200 P P 10 45 17.3 +0.8
MRHZ S S 10 47 33.2 -0.7
WHHZ Waihua 12.41 196 P P 10 45 13.3 -3.1
NMHZ Naumai 12.54 198 P Pn 10 45 20.0 +1.6
NMHZ S S 10 47 35.1 -1.6
HATZ Hinemaiaia 12.56 201 P Pn 10 45 19.9 +1.2
ARHZ Aropaoanui 12.65 197 P P 10 45 20.1 +1.1
HIZ Hauiti 12.65 205 P Pn 10 45 24.5 +4.8
BKZ Black Stump Fm 12.69 199 P P 10 45 20.0 +0.4
MCHZ McNeill Hill 12.90 198 P Pn 10 45 23.3 +0.7
WTVZ West Tongariro 12.93 202 P Pn 10 45 24.2 +1.2
TWVZ Taurewa 12.94 202 P Pn 10 45 24.9 +1.8
KWHZ Kaweka Forest 12.95 199 P P 10 45 23.4 +1.0
BHHZ Black Hill Sta 13.12 200 P P 10 45 24.9 +0.6
KRHZ Kereru 13.17 198 P P 10 45 25.2 +0.4
KAHZ Kahuranaki 13.18 197 P P 10 45 25.6 +0.7
TSZ Takapari Road 13.67 199 P P 10 45 30.7 +0.4
AFI Afiamalu 14.56 26 P P 10 45 32.8 -7.7
7.0nm,0.3s,baz=298,slow=2.7,SNR=13
AFI S S 10 48 02.9 -15
2.7nm,0.3s,baz=40,slow=22,SNR=5.9
DZM Mont Dzumac 14.80 287 P Pn 10 45 42.9 -2.2
2.4nm,0.3s,baz=348,slow=21,SNR=30
DZM Mont Dzumac 14.80 287 P Pn 10 45 43.5 -1.6
CTA Charters Tower 33.17 275 P P 10 48 36.8 +1.3
2.3nm,0.4s,baz=94,slow=9.9,SNR=7.7
STKA Stephens Creek 35.08 253 P P 10 48 53.3 +1.6
1.6nm,0.8s,baz=126,slow=4.2,SNR=3.2
STKA Stephens Creek 35.08 253 P P 10 48 53.2 +1.5
KRVT Keravat (AS076 36.36 304 P P 10 49 00.8 -1.8
117nm,0.5s,baz=270,slow=1.0,SNR=3.3
COEN Coen 38.26 282 P P 10 49 18.1 -0.3
COEN IAmb IAmb 10 49 34.8
comp=Z,15nm,1.4s
AS31 Alice Springs 43.13 264 P P 10 49 58.0 +0.2
ASAR Alice Springs 43.13 264 P P 10 49 57.0 -0.7
comp=Z,1.1nm,0.8s,baz=95,slow=6.9,SNR=16
WRA Warramunga Arr 43.82 269 P P 10 50 02.6 -0.7
comp=Z,0.7nm,0.4s,baz=103,slow=8.6,SNR=8.7
WB0 Warramunga Arr 43.83 269 P P 10 50 02.8 -0.6
KNRA Kununurra 50.29 272 P P 10 50 52.9 +0.1
KNRA IAmb IAmb 10 51 07.2
comp=Z,9.7nm,1.2s
QSPA South Pole Qui 62.88 180 P P 10 52 26.0 +6.0
QSPA IAmb IAmb 10 52 30.5
comp=Z,5.1nm,1.4s
MJAR Matsushiro Arr 75.50 325 P P 10 53 35.7 -1.3
comp=Z,6.4nm,0.6s,baz=152,slow=6.0,SNR=23
MAJO Matsushiro 75.50 325 P P 10 53 36.2 -0.7
MJB9 Matsu-Tunnel 75.50 325 P P 10 53 36.2 -0.8
KSRS Korea Array 81.77 320 P P 10 54 11.1 +0.3
comp=Z,2.7nm,0.8s,baz=134,slow=6.7,SNR=11
PETK Petropavlovsk- 82.68 346 P P 10 54 14.9 -0.2
comp=Z,1.9nm,0.6s,baz=142,slow=6.5,SNR=5.1
USRK Ussuriysk Ar. 84.38 327 P P 10 54 23.9 0.0
comp=Z,1.9nm,0.7s,baz=90,slow=2.9,SNR=3.7
NVAR Mina Array Bea 86.08 43 P P 10 54 34.0 +1.4
comp=Z,0.7nm,0.6s,baz=217,slow=8.1,SNR=10
HUMO Hull Mountain 86.14 37 P P 10 54 35.4 +2.8
HUMO IAmb IAmb 10 54 37.9
comp=Z,5.1nm,1.2s
KVN Kaiserville 86.59 43 P P 10 54 36.9 +1.8
KVN IAmb IAmb 10 54 37.1
comp=Z,1.3nm,0.7s
MOD Modoc Plateau 87.14 39 P P 10 54 39.3 +1.7
MOD IAmb IAmb 10 54 39.6
comp=Z,1.6nm,0.7s
I07A Izee 89.01 38 P P 10 54 48.3 +2.1
I07A IAmb IAmb 10 54 48.9
comp=Z,3.3nm,1.2s
G06A Carlson Farm, 89.15 37 P P 10 54 48.5 +1.8
G06A IAmb IAmb 10 54 49.1
comp=Z,3.4nm,1.0s
G08A Pilot Rock 90.08 37 P P 10 54 53.3 +2.1
PDAR Pinedale Array 94.00 43 P P 10 55 10.1 +0.6
comp=Z,0.3nm,0.6s,baz=150,slow=3.3,SNR=4.1
ILAR Eielson Array 94.89 13 P P 10 55 13.2 +0.5
comp=Z,0.4nm,0.8s,baz=207,slow=3.5,SNR=3.7
MKAR Makanchi Array 115.52 311 PKP PKiKP 11 00 31.4 +0.5
comp=Z,0.4nm,0.8s,baz=236,slow=1.7,SNR=3.1
ARCES ARCESS Array B 135.44 348 PKP PKiKP 11 01 10.6 +0.8
comp=Z,6.9nm,1.1s,baz=14,slow=6.2,SNR=4.1
FINES FINESS Array B 142.07 341 PKhKP PKPpre 11 01 16.2
comp=Z,1.2nm,0.6s,baz=72,slow=6.2,SNR=7.0
NB2 NORSAR Subarra 145.58 352 PKP PKPab 11 01 27.9 -0.7
comp=Z,6.0nm,0.9s,baz=16,slow=2.5
NOA NORSAR Array B 145.58 352 PKPbc PKPab 11 01 28.1 -0.4
comp=Z,3.4nm,0.8s,baz=16,slow=2.8,SNR=6.9
AKASG Malin Array Be 148.58 326 PKPbc PKiKP 11 01 36.2 -1.1
comp=Z,2.4nm,0.6s,baz=43,slow=4.2,SNR=19
BRTR Keskin Array B 150.76 303 PKPbc PKiKP 11 01 42.8 +0.4
comp=Z,1.0nm,0.6s,baz=158,slow=1.3,SNR=4.5
BRTR PKPab PKPab 11 01 49.5 -0.9
comp=Z,1.5nm,0.6s,baz=99,slow=2.4,SNR=6.0

IDC 22 11:16:39.1±1.8, 2°.10N×129°.22E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/33, mbtmp3.7/5, ML3.9/1, Error ellipse: s-maj=95.3km s-min=24.1km az=64.0, Halmahera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 3.59 145 Pn Pn 11 17 35.5 -0.6
9.9nm,0.3s,baz=326,slow=17,SNR=20
SIJI Sn Sn 11 18 13.9 -5.3
4.9nm,0.3s,baz=170,slow=23,SNR=14
WRA Warramunga Arr 22.47 167 P P 11 21 40.0 -0.2
1.0nm,0.6s,baz=346,slow=11,SNR=4.9
ASAR Alice Springs 26.01 170 P P 11 22 14.4 +0.3
0.6nm,0.8s,baz=353,slow=7.7,SNR=7.7
STKA Stephens Creek 35.77 162 P P 11 23 39.9 -0.2
1.2nm,0.4s,baz=329,slow=5.6,SNR=2.9
MKAR Makanchi Array 60.31 325 P P 11 26 49.8 0.0
0.3nm,0.6s,baz=121,slow=8.0,SNR=4.4

SKO 22 11:42:25.9, 40°.75N×21°.16E, h15km
TIR 22 11:42:26.5, 40°.82N×21°.22E, h6km, Md3.8/6
ATH 22 11:42:27.3, 40°.78N×21°.19E, h22km±2km, ML3.6/10, Error ellipse: s-maj=3.0km s-min=1.1km az=159.0
PDG 22 11:42:27.8±0.5, 40°.79N×21°.21E, h12km, ML3.7/12, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0
THE 22 11:42:28.5, 40°.77N×21°.26E, h0km±2km, ML3.5/3, Error ellipse: s-maj=2.5km s-min=0.6km az=324.0
BEO 22 11:42:29.6±0.3, 40°.84N×21°.23E, h12km±3km, ML3.3/7
IDC 22 11:42:33.3±1.6, 40°.82N×21°.19E, h61km±16km, mb3.1/10, mb1 3.6/16, mb1mx3.3/65, mbtmp3.7/16, Error ellipse: s-maj=18.9km s-min=11.1km az=57.0
ISC 22 11:42:28.9±0.9, 40°.77N±0°.02×21°.16E±0°.02, h20km±3km, n177, σ1°.69/242, mb3.7/9, 18C-15D, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NEST Nestorio 0.37 193 P Pg 11 42 35.0 -1.7
NEST S Sg 11 42 41.0 -1.0
NEST Nestorio 0.37 193 P Pg 11 42 35.0 -1.7
NEST S Sg 11 42 40.9 -1.1
NEST AML AML 11 42 41.5
comp=E,29665µm,0.4s
NEST AML AML 11 42 41.9
comp=N,22626µm,0.4s
OHR Ohrid 0.43 321 ⇑iPg Pg 11 42 36.4 -1.5
OHR iSg Sg 11 42 43.8 -0.2
OHR eLg Lg 11 42 44.1
comp=N,7µm,0.5s
OHR eLg Lg 11 42 44.3
comp=E,8µm,0.4s
PENT Pentalofos 0.58 182 P Pb 11 42 38.9 -1.4
PENT S Sg 11 42 49.0 +0.8
comp=E,8µm,0.9s
PENT Pentalofos 0.58 182 P Pb 11 42 39.0 -1.3
PENT S Sb 11 42 47.6 -0.5
PENT AML AML 11 42 50.6
comp=E,15832µm,1.2s
PENT AML AML 11 42 51.5
comp=N,15286µm,0.6s
KZN Kozani 0.66 135 P Pb 11 42 40.1 -1.6
KZN Kozani 0.66 135 P Pb 11 42 40.1 -1.6
KZN S Sb 11 42 49.3 -1.1
KZN AML AML 11 42 51.1
comp=N,11024µm,0.3s
KZN AML AML 11 42 53.9
comp=E,16537µm,0.4s
KPRO Kipourio 0.83 169 P Pb 11 42 43.2 -1.5
KPRO S Sn 11 42 57.1 -0.2
KPRO Kipourio 0.83 169 P Pb 11 42 42.7 -2.0
KPRO AML AML 11 43 02.4
comp=E,11591µm,0.4s
KPRO AML AML 11 43 05.3
comp=N,9094µm,1.1s
GRG Griva 0.96 79 P Pb 11 42 45.5 -1.4
GRG S Sb 11 42 58.8 -0.4
GRG Griva 0.96 79 P Pb 11 42 45.3 -1.5
GRG S Sb 11 42 58.6 -0.6
GRG AML AML 11 43 03.6
comp=N,7487µm,0.4s
GRG AML AML 11 43 04.7
comp=E,5696µm,0.8s
TPE Tepelena 1.00 242 iPG Pb 11 42 46.9 -0.5
TPE iSg Sg 11 43 02.4 +1.1
PHP Peshkopia 1.06 330 iPG Pb 11 42 46.8 -1.8
PHP iSG Sb 11 43 02.4 +0.3
TIR Tirane 1.14 301 ePg Pb 11 42 49.9 +0.1
TIR eSg Sg 11 43 07.1 +1.3
TIR Tirane 1.14 301 iPG Pn 11 42 49.1 -0.6
TIR iSg Sn 11 43 06.1 +0.3
TIR Tirane 1.14 301 ⇓P Pn 11 42 49.0 -0.6
TIR ⇓S Sb 11 43 03.5 -0.7
JAN Janina 1.14 192 P Pn 11 42 49.8 +0.1
JAN S Sg 11 43 07.0 +1.1
JAN Janina 1.14 192 P Pn 11 42 49.2 -0.6
JAN S Sn 11 43 05.1 +0.3
JAN AML AML 11 43 09.7
comp=E,3348µm,0.9s
JAN AML AML 11 43 13.4
comp=N,3972µm,0.9s
VAY Valandovo 1.20 62 ePg Pn 11 42 50.1 -0.5
VAY eSg Sb 11 43 06.1 +0.1
VAY Valandovo 1.20 62 iP Pn 11 42 50.0 -0.5
VAY Valandovo 1.20 62 iPg Pn 11 42 49.8 -0.7
VAY iSg Sn 11 43 06.5 +0.2
VAY eLg Lg 11 43 06.6
comp=N,770nm,0.6s
VAY eLg Lg 11 43 07.0
comp=E,384nm,0.6s
STIP Stip 1.20 40 iPg Pn 11 42 52.7 +0.5
STIP iSg Sg 11 43 13.3 +5.3
STIP eLg Lg 11 43 14.2
comp=N,120nm,0.4s
STIP eLg Lg 11 43 14.8
comp=E,195nm,0.3s
LIT Litokhoron 1.22 123 P Pn 11 42 50.4 -0.4
LIT Litokhoron 1.22 123 P Pn 11 42 50.2 -0.6
LIT S Sn 11 43 07.4 +0.7
LIT AML AML 11 43 14.3
comp=E,4704µm,0.4s
LIT AML AML 11 43 16.0
comp=N,5689µm,0.6s
SKO Skopje 1.22 10 ePg Pn 11 42 50.4 -0.4
SKO eSg Sn 11 43 06.7 -0.1
SKO Skopje 1.22 10 iPg Pn 11 42 50.1 -0.7
VLO Vlora 1.30 257 iPN Pb 11 42 53.1 +0.5
VLO iSN Sg 11 43 12.7 +1.6
THL Klokotos Trika 1.37 151 P Pn 11 42 52.8 -0.2
THL Klokotos Trika 1.37 151 P Pn 11 42 52.7 -0.2
THL AML AML 11 43 15.7
comp=E,1886µm,0.4s
THL AML AML 11 43 19.4
comp=N,4683µm,0.5s
KNT Kendrikon 1.37 73 P Pn 11 42 53.0 0.0
KNT S Sb 11 43 11.4 +0.3
KNT Kendrikon 1.37 73 P Pn 11 42 53.0 0.0
KNT AML AML 11 43 15.4
comp=E,1441µm,0.8s
KNT AML AML 11 43 15.8
comp=N,3919µm,0.6s
THE Thessaloniki 1.38 95 P Pn 11 42 52.5 -0.5
IGT Igoumenitsa 1.39 207 P Pb 11 42 54.8 +0.6
IGT S Sg 11 43 15.5 +1.6
comp=N,1µm,0.5s
IGT Igoumenitsa 1.39 207 ePg Pg 11 42 56.4 +0.7
IGT eSg Sg 11 43 17.2 +3.3
LRSO Larissa Observ 1.45 139 P Pb 11 42 54.9 -0.3
KEK Kerkira 1.48 225 P Pg 11 42 57.1 -0.4
KEK Kerkira 1.48 225 P Pb 11 42 55.7 -0.1

HORT Hortiatis 1.49 96 P **Pn** 11 42 54.1 -0.5
HORT Hortiatis 1.49 96 P **Pn** 11 42 54.1 -0.5
HORT S **Sb** 11 43 14.1 -0.3
HORT AML AML 11 43 19.3
comp=E,910µm,0.7s
HORT AML AML 11 43 20.5
comp=N,1246µm,0.5s
PUK Puka 1.59 324 i PN **Pb** 11 42 56.9 -0.7
PUK i SN **Sg** 11 43 19.6 -0.6
SOH Sokhos 1.67 88 P **Pn** 11 42 57.6 +0.6
BCI Bajram Curri 1.79 333 i PN **Pb** 11 43 00.5 -0.5
BCI i SN **Sg** 11 43 25.7 -1.0
KKB Krupnik 1.82 52 i P **Pn** 11 42 59.6 +0.5
ULC Ulcinj 1.87 310 ePn **Pb** 11 43 01.3 -1.1
ULC eSn **Sg** 11 43 27.4 -1.7
SRS Serrai 1.88 79 P **Pn** 11 42 59.8 -0.1
SRS Serrai 1.88 79 ePg **Pb** 11 43 01.9 -0.6
SRS eSg **Sg** 11 43 27.4 -1.9
MAKR Makrakomi, Fth 1.91 157 P **Pn** 11 43 01.0 +0.7
EVR Evrytania 1.92 165 P **Pb** 11 43 02.1 -1.2
AGG Agios Georgios 1.97 152 P **Pn** 11 43 01.7 +0.6
AGG S **Sb** 11 43 27.3 -0.8
comp=N,598nm,0.6s
BOSS Bosilegrad 1.99 29 ePn **Pn** 11 43 01.7 +0.3
BOSS eSn **Sb** 11 43 29.7 +1.0
LKD2 Lefkada island 2.02 191 P **Pb** 11 43 04.1 -0.8
PVY Plav 2.03 334 ePn **Pn** 11 43 03.5 +1.4
PVY eSn **Sb** 11 43 31.1 +1.0
DRME Dracevica, Mon 2.05 314 ePn **Pn** 11 43 04.5 -0.9
DRME Dracevica, Mon 2.05 314 ePn **Pb** 11 43 04.2 -1.2
DRME eSn **Sb** 11 43 31.7 +1.2
XOR Xorichti 2.10 131 P **Pn** 11 43 03.0 +0.1
BARS Barje 2.10 13 ePn **Pn** 11 43 03.5 +0.5
BARS Barje 2.10 13 ePn Pg 11 43 19.4 +10
PAIG Paliouri 2.10 113 P **Pn** 11 43 02.6 -0.4
MMB Musomiste 2.10 66 i P **Pn** 11 43 03.5 +0.5
NVR Nevrokopi 2.12 73 P **Pn** 11 43 03.9 +0.6
SCTE Santa Cesarea 2.17 252 P **Pn** 11 43 04.9 +1.0
EVGI Lefkada island 2.18 190 P **Pb** 11 43 06.2 -1.5
PDG Podgorica 2.19 320 ePn **Pb** 11 43 06.5 -1.2
PDG eSn **Sb** 11 43 33.7 -0.7
PDG Podgorica 2.19 320 ⇑P **Pn** 11 43 04.8 +0.7
PDG ⇑S **Sn** 11 43 31.8 +1.2
PDG Podgorica 2.19 320 ePn **Pb** 11 43 07.0 -0.7
TTG Podgorica 2.19 320 ePn **Pn** 11 43 05.6 +1.5
TTG eSn **Sb** 11 43 34.9 +0.5
ANX Ano Chora 2.25 165 P **Pn** 11 43 06.8 +1.7
IVA Berane 2.30 336 ePn **Pn** 11 43 07.1 +1.3
IVA eSn **Sb** 11 43 37.0 -0.8
FSK Fiskardo 2.35 191 P **Pb** 11 43 08.7 -1.9
KOME Kolasin 2.41 330 ePn **Pb** 11 43 09.6 -2.1
KOME eSn **Sb** 11 43 40.4 -0.6
VTS Vitosha 2.41 39 P **Pn** 11 43 07.6 +0.3
VTS Vitosha 2.41 39 ePn **Pn** 11 43 07.9 +0.5
VTS Vitosha 2.41 39 ⇓P **Pn** 11 43 07.7 +0.3
VTS ⇑S **Sb** 11 43 41.9 +0.8
VTS Vitosha 2.41 39 i P **Pn** 11 43 07.8 +0.4
CEME Cevo 2.44 317 ePn **Pn** 11 43 09.1 +1.4
CEME eSn **Sb** 11 43 41.1 -0.7
SELS Selova 2.45 359 ePn **Pn** 11 43 07.7 0.0
KAVA Kavala 2.55 84 P **Pn** 11 43 09.1 -0.1
NKME Niksic 2.59 321 ePn **Pn** 11 43 11.8 +2.1
NKME eSn **Sb** 11 43 44.3 -1.7
HCY Herceg Novi 2.61 311 ePn **Pn** 11 43 11.2 +1.3
HCY Herceg Novi 2.61 311 ePn **Pn** 11 43 11.2 +1.3
HCY eSn **Sb** 11 43 45.3 -1.2
AOS Alonnisos 2.63 127 P **Pn** 11 43 09.9 -0.3
SJES Sjenica 2.64 341 ePn **Pn** 11 43 12.2 +1.7
ZAPS Zavoj 2.73 23 ePn **Pn** 11 43 12.4 +0.8
RZN Rozhen 2.83 70 eP **Pb** 11 43 18.6 -0.3
TREB Trebinje 2.86 314 ePn **Pn** 11 43 14.9 +1.5
TREB Trebinje 2.86 314 ePn **Pn** 11 43 14.8 +1.4
PLE Pljevlja 2.88 333 ePn **Pn** 11 43 14.8 +1.1
PLE eSn **Sb** 11 43 51.3 -3.1
BOVS Bovan 2.89 8 ePn **Pn** 11 43 14.0 +0.2
BRY Bratogost 2.89 318 ePn **Pn** 11 43 15.9 +2.0
BRY Bratogost 2.89 318 ePn **Pn** 11 43 15.1 +1.2
BRY i Sn **Sb** 11 43 52.0 -2.8
IVAS Ivanjica 2.90 345 ePn **Pn** 11 43 14.0 0.0
UPM Unac-Piva 2.95 326 ePn **Pn** 11 43 17.4 +2.6
UPM Unac-Piva 2.95 326 ePn **Pn** 11 43 15.9 +1.1
UPM eSn **Sn** 11 43 52.9 +3.1
BLKB Belogradchik 3.06 21 ⇑S **Sb** 11 43 56.4 -3.3
GRUS Gruza 3.13 354 ePn **Pn** 11 43 18.0 +0.9
RUDO Rudo 3.14 336 ePn **Pn** 11 43 18.2 +1.0
ZAGS Zajecar 3.14 14 ePn **Pn** 11 43 17.2 0.0
MPEP Malo Peshtene 3.22 36 i P **Pn** 11 43 19.0 +0.7
STON Ston 3.33 310 ePn **Pn** 11 43 23.0 +3.2
STON Ston 3.33 310 ePn **Pn** 11 43 20.2 +0.4
BBLS Lazići 3.35 338 ePn **Pn** 11 43 21.0 +0.7
BBLS Lazići 3.35 338 ePn **Pn** 11 43 20.9 +0.7
MATE Matera 3.39 269 ⇑P **Pn** 11 43 21.7 +1.1
SG1 Sgolgore (BA) 3.40 273 ePn **Pn** 11 43 21.5 +0.7
DIVS Divibare 3.44 346 ePn **Pn** 11 43 22.0 +0.6
DIVS Divibare 3.44 346 ePn **Pn** 11 43 21.5 +0.1
TRUS Trudelj 3.49 351 ePn **Pn** 11 43 22.7 +0.6
DID Didima 3.64 153 P **Pn** 11 43 24.8 +0.7
PLVB Pleven 3.67 43 ⇓P **Pn** 11 43 28.1 +3.6
PLVB ⇑S **Sb** 11 44 13.3 -3.8
HAPS Han Pijesak,BI 3.69 334 ePn **Pn** 11 43 26.2 +1.3
HAPS Han Pijesak,BI 3.69 334 ePn **Pn** 11 43 24.7 -0.2
TIP Timpagrande 3.74 246 ⇓P **Pn** 11 43 26.1 +0.6
TIP ⇑S **Sn** 11 44 10.1 +1.1
TEKS Tekeris 3.96 343 ePn **Pn** 11 43 29.2 +0.7
TEKS Tekeris 3.96 343 ePn **Pn** 11 43 28.0 -0.5
VLAD Vladila 4.02 36 ⇑P **Pn** 11 43 32.2 +2.9
MDVR Moldovita 4.03 6 ⇓P **Pn** 11 43 32.0 +2.6
FRGS Fruska Gora 4.49 348 ePn **Pn** 11 43 32.1 -3.8
MGRS Mrkonjic Grad 4.72 322 ePn **Pn** 11 43 41.7 +2.7
GZR Gura Zlata 4.77 14 ⇑P **Pn** 11 43 41.4 +1.7
GZR ⇑S **Sn** 11 44 39.7 +5.3
BZS Buzias 4.85 4 ePn **Pn** 11 43 39.9 -0.9
BZS Buzias 4.85 4 ⇑P **Pn** 11 43 43.2 +2.4
BLY Banja Luka 4.94 325 ePn **Pn** 11 43 44.2 +2.3
BLY Banja Luka 4.94 325 ⇓P **Pn** 11 43 42.8 +0.9
BLY ⇓S **Sn** 11 44 39.9 +1.5
BLY Banja Luka 4.94 325 ePn **Pn** 11 43 43.2 +1.3
APE Apeiranthos 5.03 136 ⇓P **Pn** 11 43 46.2 +2.9
LOT Lotru 5.05 21 ⇑P **Pn** 11 43 45.7 +2.2
VOIR 5.46 30 ⇓P **Pn** 11 43 51.8 +2.6
SIRR Siria 5.51 4 ⇑P **Pn** 11 43 51.4 +1.7
MORH Mrgy, Hungar 5.74 342 ePn **Pn** 11 43 53.1 +0.2
ISR Istrita 5.87 41 ⇓P **Pn** 11 43 58.4 +3.6
MLR Muntele Rosu 5.87 35 P **Pn** 11 43 58.5 +3.6
comp=N,1.0nm,0.3s,baz=318,slow=9.5,SNR=10
MLR Muntele Rosu 5.87 35 ⇓P **Pn** 11 43 58.3 +3.4
DOPR Dopca 6.04 29 ⇑P **Pn** 11 44 00.4 +3.4
DRGR 6.12 10 ⇓P **Pn** 11 44 00.7 +2.5
IDI Anoyia 6.22 151 P **Pn** 11 44 03.2 +3.6
comp=N,0.8nm,0.3s,baz=306,slow=11,SNR=5.8
IDI S **Sn** 11 45 11.9 +1.8
comp=N,0.5nm,0.3s,baz=62,slow=22,SNR=2.4
PLOR Plostina 6.46 36 ⇑P **Pn** 11 44 05.1 +2.2
VRI Vrincioaia 6.51 37 ⇑P **Pn** 11 44 05.8 +2.2
CRES Cresnjev 6.54 322 ePn **Pn** 11 44 03.7 -0.3
RIY Rijeka 6.68 315 ePn **Pn** 11 44 07.1 +1.3
CFR Carcaliu 6.75 47 ⇑P **Pn** 11 44 10.8 +4.0
CEY Cerknica 6.98 318 ePn **Pn** 11 44 10.3 +0.3
LJU Ljubljana 7.14 320 ePn **Pn** 11 44 12.2 0.0
PSZ Piszkesteto 7.20 353 ⇓P **Pn** 11 44 14.6 +1.5
SRO Srobarova 7.33 345 eSG **Sn** 11 45 31.9 -5.4
SOKA Soboth 7.38 325 ePn **Pn** 11 44 17.4 +1.8
comp=N,5.1nm,0.6s,SNR=7.5
SOKA eSn **Sn** 11 45 36.3 -2.5
comp=N,2.3nm,0.6s
BURAR Bucovina Array 7.44 22 ⇓P **Pn** 11 44 19.4 +3.1
OBKA Obir 7.47 322 ePn **Pn** 11 44 19.6 +2.8
comp=N,1.8nm,0.5s
OBKA eSn **Sn** 11 45 39.9 -1.1
comp=N,10nm,0.5s
ARSA Arzberg 7.64 330 i Pn **Pn** 11 44 21.9 +2.8
comp=N,2.6nm,0.4s
ARSA i Sn **Sn** 11 45 44.0 -1.1
comp=N,2.0nm,0.4s
VYHS Vyhne 7.90 349 ePG **Pn** 11 44 25.0 +2.5
VYHS eSG 11 44 32.4
MYKA Terra Mystica 7.99 320 eSn **Sn** 11 45 53.2 -0.5
comp=N,4.4nm,0.4s
CONA Conrad Observa 8.10 334 ePn **Pn** 11 44 28.0 +2.6
comp=N,0.9nm,0.4s
KBA Koelnbreinsper 8.46 321 i Pn **Pn** 11 44 31.2 +0.9
comp=N,1.7nm,0.5s
KBA eSn **Sn** 11 46 04.0 -1.3
comp=N,2.2nm,0.5s
MOA Molln 8.63 327 i Pn **Pn** 11 44 35.4 +2.8
comp=N,2.4nm,0.5s
MOA eSn **Sn** 11 46 11.1 +1.8
comp=N,1.6nm,0.3s
ABTA Abfaltersbach 8.65 317 i Pn **Pn** 11 44 33.5 +0.6
comp=N,2.4nm,0.4s
ABTA eSn **Sn** 11 46 08.4 -1.4
comp=N,9.1nm,0.6s
WTTA Wattenberg 9.44 317 ePn **Pn** 11 44 45.5 +1.6
comp=N,1.9nm,0.3s
WTTA eSn **Sn** 11 46 28.4 -1.0
comp=N,11nm,0.6s
WATA Walderalm 9.52 317 ePn **Pn** 11 44 46.9 +2.1
comp=N,2.6nm,0.3s,SNR=4.3
WATA eSn **Sn** 11 46 30.6 -0.7
comp=N,13nm,0.6s
BRTR Keskin Array B 9.60 92 P **Pn** 11 44 50.4 +4.4
comp=N,0.1nm,0.3s,baz=269,slow=12,SNR=2.5
SQTA Sankt Quirin 9.64 315 ePn **Pn** 11 44 48.2 +1.7
comp=N,3.0nm,0.3s,SNR=4.7
SQTA eSn **Sn** 11 46 33.0 -1.2
comp=N,5.9nm,0.4s
GERES GERESS Array B 9.65 329 P **Pn** 11 44 50.4 +3.7
comp=N,0.2nm,0.3s,baz=151,slow=12,SNR=11
GERES S **Sn** 11 46 37.1 +2.6
comp=N,0.3nm,0.3s,baz=152,slow=24,SNR=3.1
MOTA Moosalm 9.77 316 ePn **Pn** 11 44 50.2 +1.8
comp=N,1.4nm,0.3s
MOTA eSn **Sn** 11 46 36.2 -1.3
comp=N,6.2nm,0.5s
FETA Feichten 9.78 313 ePn **Pn** 11 44 50.3 +1.8
comp=N,1.8nm,0.5s
FETA eSn **Sn** 11 46 35.4 -2.3
comp=N,3.5nm,0.7s
KHC Kasperske Hory 9.93 330 ePN **Pn** 11 44 53.0 +2.6
KHC eSN **Sn** 11 46 44.9 +3.6
RETA Reutte 10.04 315 i Pn **Pn** 11 44 53.7 +1.8
comp=N,0.6nm,0.3s
RETA eSn **Sn** 11 46 40.7 -3.3
comp=N,3.4nm,0.4s
DAVOX Davos/Dischmat 10.12 310 P **Pn** 11 44 55.9 +2.7
DAVOX S **Sn** 11 46 45.7 -0.6
HFS Hagfors 19.93 349 P **P** 11 46 58.3 -1.0
comp=N,0.2nm,0.3s,baz=156,slow=11,SNR=7.9
FINES FINESS Array B 20.92 7 P **P** 11 47 08.8 -1.1
comp=N,0.5nm,0.3s,baz=169,slow=13,SNR=6.6
NB2 NORSAR Subarra 21.19 347 P **P** 11 47 12.2 -0.7
comp=Z,1.3nm,0.6s,baz=154,slow=10
NOA NORSAR Array B 21.19 347 P **P** 11 47 12.3 -0.7
comp=Z,0.9nm,0.7s,baz=166,slow=11,SNR=5.7
EKA Eskdalemuir Ar 21.67 320 P **P** 11 47 18.1 +0.1
comp=Z,2.5nm,0.8s,baz=111,slow=11,SNR=3.8
ARCES ARCESS Array B 28.92 3 P **P** 11 48 25.0 -1.2
comp=Z,1.3nm,0.9s,baz=188,slow=10,SNR=9.3
TORD Torodi Ar. Bea 32.37 217 P **P** 11 48 58.1 +1.0
comp=Z,0.5nm,0.6s,baz=22,slow=10,SNR=2.6
MKAR Makanchi Array 43.56 61 P **P** 11 50 30.8 -0.5
comp=Z,0.2nm,0.3s,baz=288,slow=7.1,SNR=5.5
SCHQ Schefferville 56.91 316 P **P** 11 52 11.6 -0.7
comp=Z,1.4nm,0.9s,baz=54,slow=14,SNR=4.3
CMAR Chiang Mai Arr 69.07 83 P **P** 11 53 32.2 -1.4
comp=Z,0.7nm,0.4s,baz=316,slow=7.6,SNR=3.7
YKA Yellowknife Ar 71.12 340 P **P** 11 53 45.0 -0.5
comp=Z,0.4nm,0.5s,baz=38,slow=5.4,SNR=11
ILAR Eielson Array 74.38 355 P **P** 11 54 04.6 -0.2
comp=Z,0.3nm,0.6s,baz=352,slow=5.7,SNR=3.9
ASAR Alice Springs 121.93 95 PKP **PKPdf** 12 01 20.6 -1.4
comp=Z,0.3nm,1.0s,baz=327,slow=1.3,SNR=3.3

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*BJI **22** 11:45:31.4±0.0, 0°.58N×97°.22E, h24km, mB4.9/38, mb4.8/59, Ms4.4/23, Ms7 4.2/21*
*IDC **22** 11:45:34.1±0.7, 1°.14N×97°.26E, h0km, mb4.3/24, mb1 4.4/26, mb1mx4.2/66, mbtmp4.3/26, ML3.9/2, MS3.6/9, Ms1 3.6/9, ms1mx3.3/42, Error ellipse: s-maj=20.4km s-min=13.7km az=46.0*
*NEIC **22** 11:45:35.5±1.2, 1°.14N±0°.07×97°.12E±0°.08, h10km±1km, mb4.7/53, Error ellipse: s-maj=13.9km s-min=10.7km az=232.0*
*DJA **22** 11:45:36.8±1.3, 1°N±4°×9°7E±°, h21km±13km, M4.6/13, mB5.0/2, mb5.0/3, MLv4.5/13, Mw(mB)4.3/2*
*KLM **22** 11:45:38.0, 1°.12N×97°.04E, h97km, mb4.8*
ISC 22 11:45:37.4±0.4, **1°.10N**±0°.04×**97°.08E**±0°.05, **h25km, n132,** σ**1ˢ.28**/131, **mb4.7**/59, **MS3.8**/11, **2D, Northern Sumatera**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
SNSI Sinabang, Aceh 1.50 330 P **Pn** 11 46 02.4 -0.4
SNSI S **Sn** 11 46 21.5 -0.1
PBSI Pulau Batu 1.66 134 P **Pn** 11 46 04.2 -0.8
TPTI 2.15 3 P **Pn** 11 46 10.4 -1.3
TPTI S **Sn** 11 46 37.0 -0.5
RPSI Rantau Prapat 2.43 49 **Pn** 11 46 15.2 -0.3
PSI Prapat 2.50 47 Pn **Pn** 11 46 14.7 -2.0
14nm,0.3s,baz=268,slow=7.6,SNR=43
PSI Sn **Sb** 11 46 55.8 +3.7
37nm,0.3s,baz=32,slow=24,SNR=8.9
PSI LR LR 11 47 04.8
comp=Z,643nm,21.3s,baz=294,slow=40
KCSI Kotacane, Aceh 2.50 16 P **Pn** 11 46 15.8 -0.8
KCSI S **Sn** 11 46 46.6 +0.3
SISI Saibi 3.14 140 P **Pn** 11 46 26.1 +0.8
MLSI Meulaboh, Aceh 3.22 348 P **Pn** 11 46 25.5 -0.9
MLSI S **Sn** 11 47 03.7 -0.2
PDSI Padang 3.93 121 P **Pn** 11 46 36.6 +0.4
BKNI Bangkinang 4.03 101 P **Pn** 11 46 37.8 +0.2
BKNI Bangkinang 4.03 101 P **Pn** 11 46 37.1 -0.6
LHMI Lhok Sumawe 4.10 358 Pn **Pn** 11 46 38.9 +0.3
LHMI Sn **Sn** 11 47 25.8 0.0
IPM Ipoh 5.17 50 **Pn** 11 46 53.2 -0.2
IPM Sn **Sn** 11 47 54.9 +2.6
IPM Ipoh 5.17 50 P **Pn** 11 46 54.0 +0.6
KULM Kulim 5.48 41 **Pn** 11 46 56.7 -0.8
KULM Kulim 5.48 41 P **Pn** 11 46 57.0 -0.5
JRMM Jerantut 6.06 63 P **Pn** 11 47 05.0 -0.5
MYKOM Kota Tinggi 6.80 84 **Pn** 11 47 15.6 -0.1
MNAI Manna 7.99 133 Pn 11 47 24.3 -7.8
MNAI Sn **Sn** 11 48 57.2 -4.6
SBUM Sibu 15.19 85 **Pn** 11 49 10.0 -0.5
DLV T Lat 15.62 46 **Pn** 11 49 15.4 -0.9
DLV IAmb IAmb 11 49 20.0
comp=Z,48nm,0.9s
PBKT Sadao Pong 15.84 14 **Pn** 11 49 18.6 -0.3
UBPT Khong Chiam 16.34 30 **Pn** 11 49 25.1 -0.2
CM31 Chiang Mai Arr 17.34 6 **Pn** 11 49 36.7 -1.2
CMAR Chiang Mai Arr 17.34 6 P **Pn** 11 49 36.8 -1.2
comp=Z,0.3nm,0.3s,baz=194,slow=13,SNR=30
CMAR LR LR 11 57 07.3
comp=Z,207nm,19.5s,baz=202,slow=40
PALK Pallekele 17.44 291 LR LR 11 55 55.9
comp=Z,244nm,18.2s,baz=112,slow=35
CHTO Chiang Mai 17.70 6 **Pn** 11 49 40.6 -1.8
KKM Kota Kinabalu 19.71 75 P **P** 11 50 04.4 -1.0
KKM IAmb IAmb 11 50 17.2
comp=Z,30nm,1.0s
SLVN Son La 21.18 18 P **P** 11 50 20.4 -0.9
SLVN IAmb IAmb 11 50 25.2
comp=Z,35nm,0.8s
QIZ Qiongzhong 21.77 34 P **P** 11 50 26.0 -1.5
QIZ IAmb IAmb 11 50 42.6
comp=Z,71nm,1.4s
KAPI Kappang 23.45 105 LR LR 12 00 20.3
comp=Z,175nm,18.1s,baz=292,slow=38
KMI Kunming 24.50 12 P **P** 11 50 56.6 +1.5
KMI pP pP 11 50 59.9 -2.6
KMI pmax pmax
comp=Z,49nm,1.1s
KMI LR LR
comp=Z,480nm,13.8s
KMI LR LR
comp=Z,180nm,12.0s
KMI LR LR
comp=Z,530nm,15.5s
KMI Kunming 24.50 12 P **P** 11 50 55.0 -0.1
SHL Shillong 24.83 349 P **P** 11 50 57.9 -0.2
H08S2 Diego Garcia H 26.02 250 T T 12 18 04.3
baz=72,slow=75,SNR=311
H08S3 Diego Garcia H 26.02 250 T T 12 18 09.1
baz=72,slow=75,SNR=731
H08S1 Diego Garcia H 26.04 250 T T 12 18 15.1
baz=72,slow=75,SNR=226
GYA Guiyang 26.84 19 ⇓i P **P** 11 51 15.9 -0.3
GYA PP **PnPn** 11 51 59.8 +1.3
GYA S **S** 11 55 48.8 -2.7
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,130nm,4.0s
GYA LR LR
comp=Z,190nm,16.3s
GYA LR LR
comp=Z,260nm,17.4s
GYA LR LR
comp=Z,150nm,18.3s
ODAN Odare 27.25 341 eP **P** 11 51 21.7 +1.7
comp=Z,36nm,0.9s
RAMN Ramite 27.60 339 eP **P** 11 51 25.5 +2.3
comp=Z,27nm,0.9s
TAPN Taplejung 27.60 342 eP **P** 11 51 25.2 +1.9
JIRN Jiri 28.40 339 eP **P** 11 51 32.2 +1.8
comp=Z,23nm,0.7s
PKI Pulchoki 28.60 338 eP **P** 11 51 33.2 +1.0
GUN Gumba 28.73 339 eP **P** 11 51 35.1 +1.7
LSA Lhasa 29.00 349 P **P** 11 51 37.5 +1.7
LSA pmax pmax
comp=Z,19nm,1.1s
LSA Lhasa 29.00 349 P **P** 11 51 35.8 -0.1
LSA IAmb IAmb 11 51 38.3
comp=Z,8.0nm,1.0s
GKN Gorkha 29.28 337 eP **P** 11 51 39.7 +1.6
DANN Dangsing 29.94 336 eP **P** 11 51 45.5 +1.4
comp=Z,18nm,0.6s
CD2 Chengdu 30.32 11 P **P** 11 51 48.0 +1.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s
ENH Enshi 31.31 21 P **P** 11 51 54.6 -1.3
PSAB2 Pilbara Seismi 31.66 137 P **P** 11 51 59.2 +0.2
PSAB2 IAmb IAmb 11 52 03.4
comp=Z,11nm,1.1s
YULB Yu-li 32.30 45 P **P** 11 52 03.4 -1.1
YULB IAmb IAmb 11 52 09.5
comp=Z,22nm,1.4s
FITZ Fitzroy Crossi 33.97 126 P **P** 11 52 18.1 -1.1
XAN Xi'an 34.59 17 P **P** 11 52 23.1 -1.4
XAN pmax pmax
comp=Z,12nm,0.6s
XAN pmax pmax
comp=Z,64nm,7.6s
XAN Xi'an 34.59 17 P **P** 11 52 22.9 -1.5
LZH Lanzhou 35.37 9 eP **P** 11 52 32.3 +1.0
LZH pP pP 11 52 36.6 -2.2
LZH sP sP 11 52 39.5 -2.3
LZH pmax pmax
comp=Z,17nm,0.9s
NJ2 Nanjing 37.01 32 eP **P** 11 52 46.8 +1.6
NJ2 pmax pmax
comp=Z,12nm,0.6s
GTA Gaotai 38.21 3 ⇓P **P** 11 52 55.8 +0.4
GTA pP pP 11 53 00.3 -2.6
GTA sP sP 11 53 03.3 -2.7
GTA pmax pmax
comp=Z,14nm,0.8s
GTA pmax pmax
comp=Z,88nm,4.9s
GTA LR LR
comp=Z,130nm,18.1s
GTA LR LR
comp=Z,95nm,16.5s
GTA LR LR
comp=Z,120nm,18.1s
H01W3 Cape Leeuwin H 39.20 158 T T 12 34 26.1
baz=334,slow=76,SNR=9.2
H01W2 Cape Leeuwin H 39.21 158 T T 12 34 28.4
baz=334,slow=76
H01W1 Cape Leeuwin H 39.22 158 T T 12 34 39.3
baz=334,slow=76,SNR=10
NIL Nilore 39.34 328 P **P** 11 53 04.7 -0.2
NIL IAmb IAmb 11 53 12.8
comp=Z,12nm,0.8s
WB0 Warramunga Arr 42.06 122 P **P** 11 53 26.6 -0.9
WRA Warramunga Arr 42.09 122 P **P** 11 53 26.2 -1.5
comp=Z,3.4nm,0.6s,baz=300,slow=9.1,SNR=37
WB2 Warramunga Arr 42.09 122 P **P** 11 53 27.2 -0.6
WR0 Warramunga Arr 42.26 122 P **P** 11 53 28.7 -0.5
BJT Baijiatuau 42.45 22 P **P** 11 53 30.8 +0.4
BJT IAmb IAmb 11 53 31.8
comp=Z,10.0nm,0.7s
BJI Beijing 42.47 22 P **P** 11 53 31.3 +0.8
BJI pmax pmax
comp=Z,13nm,0.7s
KSH Kashi 42.81 336 P **P** 11 53 33.1 -0.4
KSH PcS **PcS** 11 59 10.3 -6.5
KSH S **S** 11 59 51.8 -4.6
KSH pmax pmax
comp=Z,20nm,1.7s
KSH pmax pmax
comp=Z,180nm,5.1s
KSH LR LR
comp=Z,170nm,6.2s
KSH LR LR
comp=Z,200nm,4.7s
KSH LR LR
comp=Z,340nm,5.2s
FORT Forrest 43.28 140 P **P** 11 53 38.5 +1.3
FORT IAmb IAmb 11 53 56.7
comp=Z,21nm,0.8s
WMQ Urumqi 43.35 350 eP **P** 11 53 39.1 +1.4
WMQ pP pP 11 53 41.6 -3.5
WMQ sP sP 11 53 46.0 -2.1
WMQ pmax pmax
comp=Z,11nm,0.9s
WMQ pmax pmax
comp=Z,63nm,4.1s
WMQ LR LR
comp=Z,430nm,29.3s
WMQ LR LR
comp=Z,630nm,28.9s
WMQ LR LR
comp=Z,130nm,28.9s
WMQ Urumqi 43.35 350 P **P** 11 53 38.0 +0.3
WMQ IAmb IAmb 11 53 40.2
comp=Z,12nm,1.0s
AS31 Alice Springs 43.43 127 P **P** 11 53 38.2 -0.5
ASAR Alice Springs 43.43 127 P **P** 11 53 37.8 -0.8
comp=Z,3.0nm,0.9s,baz=298,slow=7.7,SNR=24
SOCY Socotra 44.12 286 P **P** 11 53 44.7 +0.3
NRN Naryn 44.43 337 P **P** 11 53 47.3 +0.5
NRN IAmb IAmb 11 53 48.9
comp=Z,9.3nm,1.0s
KDJ Kajisay 44.60 339 P **P** 11 53 48.6 +0.8
KDJ IAmb IAmb 11 53 51.1
comp=Z,12nm,1.0s
JNU Nakatsue 44.96 41 P **P** 11 53 50.4 -0.3
KSRS Korea Array 46.00 35 P **P** 11 53 58.2 -0.6
comp=Z,14nm,0.8s,baz=222,slow=9.0,SNR=42
KSRS LR LR 12 13 52.4
comp=Z,52nm,18.0s,baz=224,slow=37
KS19 Wonju Array Si 46.00 34 P **P** 11 53 58.3 -0.5
AAK Ala-Archa 46.05 337 P **P** 11 53 58.6 -0.7
SONM Songino Array 47.25 9 P **P** 11 54 08.9 +0.3
comp=Z,8.6nm,0.8s,baz=190,slow=10,SNR=30
MK31 Makanchi Array 47.31 346 P **P** 11 54 09.6 +0.7
MK31 IAmb IAmb 11 54 10.7
comp=Z,4.0nm,0.8s
MKAR Makanchi Array 47.31 346 P **P** 11 54 10.0 +1.0
comp=Z,5.2nm,0.7s,baz=159,slow=7.9,SNR=60
ULN Ulaanbaatar 47.38 9 P **P** 11 54 09.9 +0.2
ULN IAmb IAmb 11 54 12.6
comp=Z,6.5nm,0.8s
MAKZ Makanchi 47.40 346 P **P** 11 54 10.2 +0.5
MAKZ IAmb IAmb 11 54 11.3
comp=Z,4.3nm,0.8s
COEN Coen 48.04 110 P **P** 11 54 15.0 -0.2
COEN IAmb IAmb 11 54 28.4
comp=Z,8.3nm,1.1s
KK31 Karatay Array 48.09 334 P **P** 11 54 15.5 +0.4
KK31 IAmb IAmb 11 54 23.7
comp=Z,6.3nm,1.1s
KKAR Karatay Array 48.09 334 IAmb IAmb 11 54 23.7
comp=Z,6.3nm,1.1s
CN2 Changchun 49.45 27 eP **P** 11 54 24.8 -0.7
CN2 pmax pmax
comp=Z,200nm,0.7s
CN2 LR LR
comp=Z,200nm,13.0s

CN2 LR LR
comp=Z,200nm,13.0s
CN2 LR LR
comp=Z,200nm,14.0s
TLY Talaya 50.70 5 P P 11 54 36.2 +1.3
comp=Z,3.0nm,0.6s,baz=270,slow=10,SNR=7.0
TLY LR LR 12 18 21.7
comp=Z,133nm,18.7s,baz=171,slow=39
TLY Talaya 50.70 5 P P 11 54 34.9 0.0
PMG Port Moresby 50.95 103 P P 11 54 38.2 +0.9
GEYT Alibeck 51.21 320 P P 11 54 41.4 +2.3
comp=Z,1.6nm,0.7s,baz=167,slow=13,SNR=3.2
HIA Hailar 51.77 19 P P 11 54 42.9 -0.1
HIA IAmb IAmb 11 54 43.7
comp=Z,7.8nm,0.8s
KURBB Kurchatov Arra 51.79 345 P P 11 54 43.8 +0.7
comp=Z,4.4nm,0.7s,baz=167,slow=7.0,SNR=47
MAT Matsushiro 51.84 42 P P 11 54 44.0 +0.3
MJAR Matsushiro Arr 51.84 42 P P 11 54 43.1 -0.6
comp=Z,1.3nm,0.5s,baz=214,slow=6.7,SNR=7.0
MJAR LR LR 12 18 22.2
comp=Z,37nm,18.2s,baz=255,slow=38
KURK Kurchatov 51.86 345 P P 11 54 44.1 +0.6
KURK IAmb IAmb 11 54 45.3
comp=Z,8.8nm,1.1s
MDJ Mudanjiang 52.01 29 P P 11 54 44.9 +0.1
MDJ pmax pmax
comp=Z,10.0nm,0.7s
MDJ pmax pmax
comp=Z,100nm,4.0s
USA0B Ussuriysk Arra 52.91 31 P P 11 54 51.3 -0.2
USA0B IAmb IAmb 11 54 52.6
comp=Z,17nm,1.0s
USRK Ussuriysk Ar. 52.91 31 P P 11 54 51.5 0.0
comp=Z,11nm,0.8s,baz=236,slow=5.1,SNR=17
STKA Stephens Creek 53.38 132 P P 11 54 55.8 +0.6
comp=Z,3.9nm,0.6s,baz=309,slow=7.6,SNR=9.3
STKA LR LR 12 19 25.1
comp=Z,79nm,21.5s,baz=241,slow=38
STKA Stephens Creek 53.38 132 P P 11 54 55.6 +0.5
ZAA0 Zalesovo Array 53.64 351 P P 11 54 56.9 +0.3
ZAA0 IAmb IAmb 11 54 58.6
comp=Z,12nm,0.8s
ZALV Zalesovo Beam 53.64 351 P P 11 54 57.1 +0.5
comp=Z,11nm,0.7s,baz=179,slow=5.5,SNR=53
BVAR Borovoye Array 56.30 341 P P 11 55 16.2 +0.2
comp=Z,3.7nm,0.8s,baz=141,slow=7.6,SNR=22
BRVK Borovoye 56.37 341 P P 11 55 16.3 -0.1
BRVK IAmb IAmb 11 55 17.4
comp=Z,9.0nm,1.1s
KLR Kul'dur 56.40 27 P P 11 55 17.0 +0.3
comp=Z,9.0nm,0.9s,baz=269,slow=5.8,SNR=24
EIDS Eidsvold 58.43 121 P P 11 55 31.8 +0.3
AKTO Aktyubinsk 59.26 332 P P 11 55 36.6 -0.2
comp=Z,2.0nm,0.8s,baz=155,slow=6.3,SNR=7.0
CAN Canberra 60.44 132 P P 11 55 45.6 +0.3
CAN IAmb IAmb 11 55 53.4
comp=Z,12nm,1.1s
YSS Yuzh-Sakhalins 60.50 34 P P 11 55 45.2 -0.2
TBLG Delisi 61.97 318 P P 11 55 55.7 +0.2
KBZ Khabaz 64.07 319 P P 11 56 10.5 +1.2
comp=Z,2.6nm,0.8s,baz=130,slow=6.9,SNR=6.6
YAK Yakutsk 65.55 16 P P 11 56 18.1 -0.5
NRIK Noril'sk 68.42 356 P P 11 56 36.5 -0.3
comp=Z,4.0nm,0.7s,baz=159,slow=5.2,SNR=4.4
BRTR Keskin Array B 69.09 312 P P 11 56 42.6 +0.8
comp=Z,0.8nm,0.8s,baz=144,slow=4.6,SNR=3.7
PETK Petropavlovsk- 71.88 34 P P 11 56 57.1 -1.2
comp=Z,1.3nm,0.7s,baz=251,slow=4.4,SNR=4.0
PET Petropavlovsk 72.38 34 P P 11 57 01.0 -0.3
MAW Mawson 72.59 193 P P 11 57 02.7 +0.5
MAW IAmb IAmb 11 57 06.2
comp=Z,8.4nm,1.2s
SEY Seymchan 73.90 23 P P 11 57 10.3 +0.2
comp=Z,4.7nm,0.9s,baz=242,slow=7.0,SNR=11
AKASG Malin Array Be 75.26 322 P P 11 57 18.2 0.0
comp=Z,0.6nm,0.5s,baz=88,slow=4.4,SNR=3.8
FINES FINESS Array B 80.03 333 P P 11 57 45.0 +0.4
comp=Z,1.8nm,0.9s,baz=112,slow=8.6,SNR=7.1
ARCES ARCESS Array B 82.59 340 P P 11 57 58.6 +0.6
comp=Z,4.2nm,1.0s,baz=90,slow=4.0,SNR=7.9
GERES GERESS Array B 84.81 319 P P 11 58 11.1 +1.1
comp=Z,1.2nm,0.9s,baz=102,slow=3.1,SNR=6.1
CLL Collm 85.43 321 eP P 11 58 14.0 +1.1
NOA NORSAR Array B 87.03 331 LR LR 12 43 01.1
comp=Z,21nm,18.9s,baz=355,slow=40
H09N1 TRISTAN DA CUN106.08 232 T T 13 56 56.7
SNR=17
NVAR Mina Array Bea 128.93 36 PKP **PKiKP 12 04 45.6 +1.2**
comp=Z,0.6nm,0.8s,baz=246,slow=3.9,SNR=5.5
TXAR Lajitas Array 143.81 32 PKP PKPbc 12 05 09.6 +0.6
comp=Z,0.5nm,0.7s,baz=79,slow=1.6,SNR=6.6
CPUP Villa Florida 144.85 222 PKPbc **PKPdf 12 05 13.5 +0.4**
comp=Z,0.8nm,0.3s,baz=90,slow=3.7,SNR=3.2

IDC 22 11:46:52.4±14.0, 11.77S×166.25E, h128km±148km, mb3.4/4, mb1 3.7/5, mb1mx3.3/50, mbtmp3.9/5, ML4.2/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/27, Error ellipse: s-maj=106.6km s-min=30.5km az=156.0, Santa Cruz Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HNR Honiara 6.62 290 LR LR 11 50 44.3
comp=Z,122nm,18.7s,baz=135,slow=35
DZM Mont Dzumac 10.25 179 P Pn 11 49 16.9 +0.7
1.8nm,0.3s,baz=326,slow=9.8,SNR=79
DZM S Sn 11 51 08.5 -0.9
0.8nm,0.3s,baz=296,slow=20,SNR=6.0
WRA Warramunga Arr 31.71 251 P P 11 53 04.1 -0.1
0.7nm,0.8s,baz=82,slow=9.7,SNR=3.3
ASAR Alice Springs 32.92 245 P P 11 53 14.8 0.0
0.7nm,0.7s,baz=69,slow=9.8,SNR=11
ILAR Eielson Array 84.04 18 P P 11 59 08.0 -0.2
0.2nm,0.5s,baz=238,slow=5.8,SNR=3.5
MKAR Makanchi Array 94.38 317 P P 11 59 57.8 +0.1
0.9nm,0.5s,baz=90,slow=6.3,SNR=12

SJA 22 11:49:30.8±1.2, 23.18S×69.02W, h88km±5km, ML3.7, MW3.7
IDC 22 11:49:31.5±1.0, 23.12S×68.83W, h82km±8km, mb3.6/2, mb1 3.8/4, mb1mx3.4/26, mbtmp3.9/4, Error ellipse: s-maj=41.9km s-min=18.0km az=90.0
GUC 22 11:49:31.6±0.5, 23.17S×69.06W, h89km±3km, ML3.4
ISC 22 11:49:31.9±0.9, 23.15S×69.04W±0.05, h90km±7km, n30, σ1.00/50, 5C-2D, Northern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PB15 IPOC Station P 0.40 262 ⇑iP Pn 11 49 46.1 0.0
PB15 iS **Sn 11 49 57.0 +0.2**
PB15 IPOC Station P 0.40 262 iP Pn 11 49 46.3 +0.1
PB15 iS **Sn 11 49 57.2 +0.4**
PB15 IAML 11 50 00.1
comp=Z,8μm,0.1s
LVC Limon Verde 0.55 12 ⇓eP Pn 11 49 47.3 -0.2
LVC iS **Sn 11 49 58.6 -0.4**
LVC Limon Verde 0.55 12 P Pn 11 49 47.2 -0.3
comp=Z,66nm,0.3s,baz=178,slow=7.7,SNR=431
LVC S **Sn 11 49 58.3 -0.7**
comp=Z,502nm,0.3s,baz=15,slow=19,SNR=177
LVC Limon Verde 0.55 12 iP Pn 11 49 47.1 -0.3
LVC iS **Sn 11 49 58.7 -0.3**
PB06 IPOC Station P 0.66 312 ⇑iP Pn 11 49 48.3 +0.1
PB06 iS **Sn 11 50 00.6 +0.2**
PB06 IAML 11 50 02.2
comp=E,3μm,0.1s
PB06 IPOC Station P 0.66 312 iP Pn 11 49 48.3 +0.1
PB06 iS **Sn 11 50 00.9 +0.6**
PB06 IAML 11 50 02.1
comp=Z,1μm,0.3s
PB05 IPOC Station P 1.11 285 ⇑iP Pn 11 49 53.0 -0.1
PB05 iS **Sn 11 50 09.3 +0.4**
PB05 IAML 11 50 15.1
comp=E,857nm,0.9s
PB05 IPOC Station P 1.11 285 iP Pn 11 49 53.0 -0.1
PB05 iS **Sn 11 50 09.5 +0.6**
PB03 IPOC Station P 1.28 329 iP Pn 11 49 55.3 +0.2
PB04 IPOC Station P 1.31 308 iP Pn 11 49 55.6 +0.1
PB04 iS **Sn 11 50 14.3 +1.1**
PB04 IAML 11 50 19.3
comp=Z,945nm,0.5s
PB09 IPOC Station P 1.36 352 ⇓iP Pn 11 49 56.9 +0.8
PB09 iS **Sn 11 50 15.5 +1.2**
PB09 IAML 11 50 18.1
comp=N,665nm,0.5s
PB09 IPOC Station P 1.36 352 iP Pn 11 49 57.1 +1.0
PB09 iS **Sn 11 50 16.5 +2.2**
PB09 IAML 11 50 24.9
comp=Z,552nm,0.6s
PB10 IPOC Station P 1.44 255 ⇑eP Pn 11 49 56.9 0.0
PB10 iS **Sn 11 50 15.7 -0.1**
PB10 IAML 11 50 22.8
comp=E,744nm,0.3s
PB10 IPOC Station P 1.44 255 iP Pn 11 49 57.2 +0.3
PB10 iS **Sn 11 50 15.8 +0.1**
PB10 IAML 11 50 24.1
comp=Z,436nm,0.3s
PB07 IPOC Station P 1.62 331 ⇑iP Pn 11 49 59.7 +0.4
PB07 iS **Sn 11 50 21.2 +1.0**
PB07 IPOC Station P 1.62 331 iP Pn 11 49 59.9 +0.5
PB07 iS **Sn 11 50 21.5 +1.3**
PB14 IPOC Station P 1.93 220 eP Pn 11 50 03.7 +0.3
PB14 iS **Sn 11 50 27.9 +0.4**
PB14 IAML 11 50 33.9
comp=E,413nm,0.4s
PB14 IPOC Station P 1.93 220 iP Pn 11 50 03.5 +0.1
PB14 iS **Sn 11 50 28.3 +0.9**
PB14 IAML 11 50 35.0
comp=Z,515nm,0.3s
PB02 IPOC Station P 1.99 336 iP Pn 11 50 04.5 +0.5
PB02 iS **Sn 11 50 30.3 +1.7**
PB08 IPOC Station P 3.00 358 iP Pn 11 50 17.9 +0.2
HJA Humahuaca 3.34 92 iP Pn 11 50 24.4 +2.1
PB11 IPOC Station P 3.42 350 iP Pn 11 50 22.2 -1.1
MNMCX Minye Minye 4.04 352 iP Pn 11 50 30.6 -1.0
LPAZ La Paz 6.88 7 P Pn 11 51 13.8 +3.1
comp=Z,0.7nm,0.3s,baz=201,slow=5.5,SNR=10
LPAZ S Sn 11 52 09.6 -18
comp=Z,0.2nm,0.3s,baz=135,slow=4.7,SNR=5.3
CFA Coronel Fontan 8.45 175 P Pn 11 51 30.5 -1.0
comp=Z,0.7nm,0.3s,baz=348,slow=14,SNR=4.4
CFA S **Sn 11 53 06.3 +1.1**
comp=Z,0.4nm,0.3s,baz=323,slow=5.2,SNR=3.0
SIV San Ignacio 10.35 48 P Pn 11 51 54.7 -2.7
comp=Z,2.1nm,0.3s,baz=250,slow=11,SNR=27
TORD Torodi Ar. Bea 78.02 70 P P 12 01 20.2 -0.9
comp=Z,1.2nm,0.6s,baz=252,slow=5.5,SNR=9.0
YKA Yellowknife Ar 92.70 341 P P 12 02 33.1 -0.2
comp=Z,0.2nm,0.7s,baz=138,slow=4.7,SNR=4.2
MKAR Makanchi Array 147.02 37 PKPbc **PKPbc 12 09 04.8 +0.6**
comp=Z,0.4nm,0.7s,baz=298,slow=2.2,SNR=6.0

SKO 22 12:08:37.8, 40.77N×21.06E, h15km
TIR 22 12:08:37.4, 40.76N×21.32E, h2km, Md3.0/6
THE 22 12:08:39.8, 40.80N×21.18E, h0km±3km, ML2.9/3, Error ellipse: s-maj=4.0km s-min=1.4km az=351.0
ATH 22 12:08:39.6, 40.76N×21.21E, h17km±3km, ML2.8/9, Error ellipse: s-maj=4.0km s-min=1.0km az=161.0
PDG 22 12:08:40.6±0.3, 40.68N×21.04E, h10km, ML3.0/11, Error ellipse: s-maj=0.9km s-min=0.7km az=90.0
BEO 22 12:08:41.5±0.5, 40.82N×21.25E, h14km±4km, ML2.5/10
ISC 22 12:08:39.6±1.1, 40.78N±0.01×21.21E±0.02, h0km±10km, n79, σ1.43/122, 13C-9D, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NEST Nestorio 0.39 199 P Pg 12 08 46.9 -0.1
NEST S **Sg 12 08 52.9 +0.9**
4μm,0.4s
NEST Nestorio 0.39 199 P Pg 12 08 46.9 -0.1
NEST S **Sg 12 08 52.6 +0.6**
NEST AML AML 12 08 53.7
comp=E,7630μm,0.2s
NEST AML AML 12 08 53.7
comp=N,5462μm,0.2s
OHR Ohrid 0.45 317 ⇑iPg Pg 12 08 48.4 +0.1
OHR iSg **Sb 12 08 56.2 -1.6**
OHR eLg Lg 12 08 56.8
comp=E,1μm,0.4s
OHR eLg Lg 12 08 56.9
comp=N,658nm,0.3s
PENT Pentalofos 0.59 185 P Pg 12 08 50.8 0.0
PENT Pentalofos 0.59 185 P Pg 12 08 50.9 0.0
PENT S **Sg 12 08 59.3 +0.9**
PENT AML AML 12 09 02.9
comp=N,2383μm,0.4s
PENT AML AML 12 09 03.3
comp=E,2607μm,0.4s
KZN Kozani 0.64 138 P Pg 12 08 52.0 +0.2
KZN S **Sb 12 09 03.1 0.0**
KZN Kozani 0.64 138 P Pg 12 08 51.7 -0.1
KZN S **Sg 12 09 01.3 +1.3**
KZN AML AML 12 09 03.6
comp=N,1854μm,0.5s
KZN AML AML 12 09 04.2
comp=E,3244μm,0.7s
KPRO Kipourio 0.83 172 P Pg 12 08 55.5 0.0
KPRO S **Sb 12 09 09.6 +0.9**
comp=E,838nm,0.4s
KPRO Kipourio 0.83 172 P Pg 12 08 54.6 -0.9
KPRO AML AML 12 09 15.0
comp=E,2098μm,0.5s
KPRO AML AML 12 09 18.7
comp=N,1656μm,0.4s
GRG Griva 0.92 79 P Pg 12 08 57.8 +0.6
GRG Griva 0.92 79 P Pg 12 08 57.3 +0.1
GRG S **Sb 12 09 10.3 -0.8**
GRG AML AML 12 09 13.7
comp=N,635μm,0.5s
GRG AML AML 12 09 16.8
comp=E,483μm,0.6s
TPE Tepelena 1.04 242 iPG Pg 12 08 59.3 -0.1
TPE iSG **Sn 12 09 16.2 -0.3**
PHP Peshkopia 1.07 327 iPN Pg 12 08 58.6 -1.5
PHP iSN **Sn 12 09 16.6 -0.9**
JAN Janina 1.16 194 P Pg 12 09 01.1 -0.6
VAY Valandovo 1.16 62 iPg Pb 12 09 02.4 0.0
VAY iSg **Sn 12 09 20.4 +0.9**
VAY eLg Lg 12 09 20.6
comp=N,524nm,3.3s
VAY eLg Lg 12 09 20.9
comp=E,31nm,0.6s
TIR Tirane 1.17 300 ePg Pb 12 09 02.5 -0.1
TIR eSg **Sn 12 09 18.6 -1.1**
TIR Tirane 1.17 300 iPN Pb 12 09 02.2 -0.3
TIR iSN **Sn 12 09 20.7 +1.0**
TIR Tirane 1.17 300 P Pn 12 09 03.3 +0.2
TIR ⇑S **Sg 12 09 17.2 +0.2**
TIR ⇑S **Sb 12 09 17.4 -0.8**
STIP Stip 1.17 39 iPg Pn 12 09 05.1 +1.9
STIP iSg **Sn 12 09 25.5 +5.6**
STIP eLg Lg 12 09 25.6
comp=N,28nm,0.4s
STIP eLg Lg 12 09 27.1
comp=E,56nm,0.5s
LIT Litokhoron 1.19 124 P Pg 12 09 02.4 0.0
LIT S **Sn 12 09 20.8 +0.5**
LIT Litokhoron 1.19 124 P Pg 12 09 02.1 -0.3
LIT S **Sg 12 09 18.1 +0.3**
LIT AML AML 12 09 24.9
comp=N,947μm,0.4s
LIT AML AML 12 09 25.8
comp=E,607μm,0.4s
SKO Skopje 1.20 8 ePg Pg 12 09 02.3 -0.3
SKO eSg **Sb 12 09 18.8 -0.5**
SKO Skopje 1.20 8 iPg Pg 12 09 02.8 +0.1
SKO iSg **Sg 12 09 18.1 -0.1**
SKO eLg Lg 12 09 19.4
comp=N,13nm,0.5s
SKO eLg Lg 12 09 19.9
comp=E,19nm,0.7s
KNT Kendrikon 1.33 73 P Pb 12 09 05.4 0.0
KNT Kendrikon 1.33 73 P Pn 12 09 04.9 -0.5
VLO Vlora 1.34 257 iPN Pb 12 09 05.5 -0.1
VLO iSN **Sn 12 09 26.5 +2.5**
THL Klokotos Trika 1.36 153 P Pn 12 09 04.6 -1.2
THL Klokotos Trika 1.36 153 P Pn 12 09 04.4 -1.4
THL AML AML 12 09 31.8
comp=E,480μm,0.5s
THL AML AML 12 09 31.9
comp=N,384μm,0.4s
IGT Igoumenitsa 1.42 209 P Pg 12 09 06.9 +0.2
IGT S **Sn 12 09 27.1 +1.2**
comp=N,290nm,0.6s
IGT Igoumenitsa 1.42 209 ePg Pg 12 09 07.4 +0.7
IGT eSg **Sn 12 09 28.4 +2.5**
IGT Igoumenitsa 1.42 209 P Pn 12 09 06.3 -0.3
IGT AML AML 12 09 30.8
comp=N,639μm,0.5s
IGT AML AML 12 09 32.1
comp=E,520μm,0.7s
KEK Kerkira 1.52 226 P Pb 12 09 08.3 -0.3
KEK Kerkira 1.52 226 P Pb 12 09 08.2 -0.4
KEK S **Sg 12 09 29.2 +0.8**
KEK AML AML 12 09 41.1
comp=E,261μm,0.8s
KEK AML AML 12 09 41.9
comp=N,303μm,0.7s
PUK Puka 1.60 322 iPN Pn 12 09 09.3 +0.1
PUK iSN **Sn 12 09 34.6 +3.5**
BCI Bajram Curri 1.80 332 iPN Pb 12 09 13.3 -0.2
BCI iSN **Sg 12 09 40.2 +2.7**
SRS Serrai 1.83 79 ePn Pn 12 09 12.1 -0.2
SRS eSn **Sn 12 09 34.4 -1.8**
ULC Ulcinj 1.89 309 ePn Pn 12 09 13.8 +0.6
ULC eSn **Sb 12 09 39.7 +0.5**
AGG Agios Georgios 1.96 154 P Pn 12 09 13.7 -0.3
AGG Agios Georgios 1.96 154 P Pn 12 09 13.7 -0.3
BOSS Bosilegrad 1.96 29 ePn Pn 12 09 14.6 +0.5
PVY Plav 2.04 333 ePn Pn 12 09 16.1 +0.8
PVY eSn **Sg 12 09 44.4 -0.7**
DRME Dracevica, Mon 2.07 313 ePn Pn 12 09 16.1 +0.5
DRME eSn **Sb 12 09 44.2 -0.1**
BARS Barje 2.08 12 ePn Pn 12 09 15.8 +0.1
BARS Barje 2.08 12 ePn Pg 12 09 33.7 +14
PDG Podgorica 2.21 319 ⇑P Pb 12 09 20.6 +0.3
PDG ⇓S **Sg 12 09 49.7 -0.7**
TTG Podgorica 2.21 319 ePn Pn 12 09 18.6 +1.2
TTG eSn **Sb 12 09 47.8 -0.3**
IVA Berane 2.31 335 ePn Pb 12 09 20.4 -1.7
IVA eSn **Sb 12 09 51.5 +0.3**
VTS Vitosha 2.38 39 ⇑P Pg 12 09 25.1 -0.1
VTS ⇑S Sg 12 10 06.5 +10
KOME Kolasin 2.42 329 ePn Pn 12 09 21.7 +1.2
KOME eSn **Sb 12 09 53.8 -0.8**
SELS Selova 2.44 358 ePn Pn 12 09 20.4 -0.2
CEME Cevo 2.46 317 ePn Pn 12 09 21.6 +0.6
CEME eSn **Sb 12 09 53.8 -1.8**
NKME Niksic 2.61 320 ePn Pn 12 09 24.0 +1.0
NKME eSn **Sb 12 09 57.7 -2.0**
HCY Herceg Novi 2.63 310 ePn Pn 12 09 24.1 +0.8
HCY iSn **Sn 12 09 56.9 +1.0**
SJES Sjenica 2.64 340 ePn Pn 12 09 23.8 +0.2
ZAPS Zavoj 2.71 23 ePn Pn 12 09 23.7 -0.6
BOVS Bovan 2.88 7 ePn Pn 12 09 26.0 -0.6
TREB Trebinje 2.88 313 ePn Pn 12 09 27.2 +0.4
PLE Pljevlja 2.89 333 ⇑iPn Pn 12 09 28.2 +1.3
PLE eSn **Sb 12 10 05.1 -2.8**
IVAS Ivanjica 2.90 345 ePn Pn 12 09 26.7 -0.4
BRY Bratogost 2.91 318 ePn Pn 12 09 28.0 +0.8
BRY eSn **Sn 12 10 04.5 +1.5**
UPM Unac-Piva 2.97 325 ePn Pn 12 09 29.6 +1.5
UPM eSn **Sn 12 10 06.3 +1.8**
BLKB Belogradchik 3.04 20 ⇓S Sg 12 10 21.1 +3.8
ZAGS Zajecar 3.12 14 ePn Pn 12 09 30.3 +0.3
GRUS Gruza 3.13 353 ePn Pn 12 09 30.4 +0.3
STON Ston 3.35 310 ePn Pn 12 09 34.1 +0.9
BBLS Lazići 3.36 337 ePn Pn 12 09 33.6 +0.2
MATE Matera 3.43 269 ⇑P Pn 12 09 34.1 -0.1
MATE ⇓S **Sn 12 10 10.8 -4.7**
DIVS Divibare 3.44 345 ePn Pn 12 09 34.9 +0.5
TRUS Trudelj 3.49 350 ePn Pn 12 09 35.8 +0.7
PLVB Pleven 3.64 43 ⇑P Pg 12 09 49.5 +0.2
PLVB ⇓S **Sg 12 10 38.2 +1.8**
VLAD Vladila 3.99 35 ⇑P Pg 12 09 54.4 -1.7
MDVR Moldovita 4.01 5 ⇑P Pb 12 09 50.7 -0.5
MDVR ⇓S **Sb 12 10 42.5 +2.2**
ELND Elena 4.09 57 ⇓P Pg 12 09 56.6 -1.4
ELND ⇓S **Sg 12 10 50.3 -0.7**
FRGS Fruska Gora 4.49 347 ePn Pn 12 09 44.3 -4.6
GZR Gura Zlata 4.75 13 ⇑P Pb 12 10 02.7 -1.0
BZS Buzias 4.84 3 ePn Pn 12 09 54.2 +0.6
BZS Buzias 4.84 3 ⇑P Pb 12 10 02.9 -2.3
BLY Banja Luka 4.95 325 ⇓P Pn 12 09 59.7 +4.5
VOIR 5.43 30 ⇓P Pb 12 10 12.6 -2.8

ROM 22 12:09:35.0±0.1, 43.365N±0.003×12.556E±0.007, h3km, ML1.0/1, 1C-4D, Error ellipse: s-maj=0.4km s-min=0.4km az=259.0, Central Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ATFO Monte Foce - G 0.01 81 P Pg 12 09 35.6 -0.2
ATFO S Sg 12 09 36.2 -0.1
MURB Monte Urbino 0.10 193 P Pg 12 09 37.5 +0.4
MURB S Sg 12 09 39.2 +0.7
MURB AML AML
comp=N,138μm,0.2s
MURB AML AML
comp=E,161μm,0.2s
MURB AML AML
comp=N,138μm,0.2s
ATVO AVT- Monte Val 0.11 279 P Pg 12 09 37.4 +0.2
ATVO S Sg 12 09 39.2 +0.5
ATVO AML AML
comp=E,63μm,0.6s
ATVO AML AML
comp=N,48μm,1.6s
ATPI Pietralunga - 0.14 307 ⇑P Pg 12 09 38.3 +0.5
ATPI S Sg 12 09 40.8 +1.1
PIEI Pieia 0.17 355 ⇓P Pg 12 09 38.6 +0.3
PIEI S Sg 12 09 41.9 +1.2
PIEI AML AML
comp=E,85μm,0.3s
PIEI AML AML
comp=N,66μm,0.3s
PIEI AML AML
comp=E,85μm,0.3s
PP3 Marolino 0.77 89 ⇓P Pg 12 09 47.8 -1.9
PP3 S Sn 12 10 05.0 +0.3
INTR Introdacqua 1.68 143 S Sn 12 10 27.0 -0.3
VVLD Villa Vallelon 1.69 152 P Pn 12 09 59.5 -6.0
PTRJ Pietraroja 2.48 143 ⇓P Pn 12 10 08.3 -8.0
PTRJ AML AML
comp=E,979μm,0.4s
PTRJ AML AML
comp=N,2530μm,0.4s
TRI Trieste 2.50 20 S Sn 12 10 49.0 +1.6
ZAG Zagreb 3.47 44 ⇓P Pn 12 10 27.1 -2.8

IEPN 22 12:28:10.0, 81.53N×1.90W, h15km
BER 22 12:28:07.2±1.5, 80.35N×7.73W, h10km, ML1.4, ML1.8(DNK), Confirmed Earthquake, North of Svalbard

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NOR Nord 1.89 316 iP Pn 12 28 37.4 -2.1
NOR iS Sn 12 29 00.0 -3.3
NOR Nord 1.89 316 e Pn 12 28 37.1 -2.4
baz=131,slow=5.9
NOR iP Pb 12 28 37.4 -4.3
NOR iS Sn 12 29 00.1 -3.2
NOR IAML 12 29 02.2
comp=Z,1.9nm,0.3s
KBS Kingsbay 3.81 102 eP Pn 12 29 04.4 -1.4
KBS eS Sn 12 29 45.4 -5.3
KBS IAML 12 29 58.7
comp=Z,2.8nm,0.7s
KBS Kingsbay 3.81 102 eP Pn 12 29 04.2 -1.7
KBS eS Sn 12 29 44.3 -6.4
DAG Danmarks Havn 4.19 217 iP Pg 12 29 28.6 +1.3
SPA0 Spitsbergen Ar 4.97 104 eP Pn 12 29 21.0 -0.7
SPA0 eS Sn 12 30 13.1 -6.1
SPA0 IAML 12 30 19.8
comp=Z,3.3nm,0.8s
SPA0 Spitsbergen Ar 4.97 104 eP Pn 12 29 19.8 -2.0
SPA0 eS Sn 12 30 11.6 -7.5
HSPB Hornsund (broa 5.63 114 eP Pn 12 29 30.9 +0.1

IDC 22 12:40:19.2±0.8, 1.01N×97.02E, h0km, mb4.2/15, mb1 4.2/17, mb1mx4.0/45, mbtmp4.1/17, ML3.8/2, MS3.4/11, Ms1 3.4/11, ms1mx3.1/41, Error ellipse: s-maj=17.9km *s-min=14.8km az=54.0*

DJA 22 12:40:24.3±1.2, 1°N±3°×97°E±°, h32km±18km, M4.4/11, mB4.8/1, mb4.8/2, MLv4.2/11, Mw(mB)4.0/1

NEIC 22 12:40:24.8±1.4, 1°.13N±0°.06×97°.10E±0°.08, h35km±5km, mb4.4/35, Error ellipse: s-maj=11.9km s-min=8.1km az=59.0

ISC 22 12:40:24.1±3.7, 1°.13N±0°.04×97°.14E±0°.06, h29km±27km, n89, σ0°.72/84, mb4.4/34, MS3.4/8, 3C-2D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	1.50	327	P	Pn	12 40 49.4	+0.3
SNSI				S	Sn	12 41 07.4	-0.4
PBSI	Pulau Batu	1.64	136	P	Pn	12 40 51.5	+0.5
PBSI				S	Sn	12 41 12.6	+1.4
TPTI		2.11	1	P	Pn	12 40 56.8	-0.7
TPTI				S	Sn	12 41 23.6	+0.8
RPSI	Rantau Prapat	2.36	49		Pn	12 41 01.6	+0.6
RPSI				Sn	Sn	12 41 29.4	+0.4
RPSI	Rantau Prapat	2.36	49		Pn	12 41 01.6	+0.6
RPSI						12 41 08.8	
PSI	Prapat	2.43	47	Pn	Pn	12 41 01.6	-0.5
	4.9nm,0.3s,baz=205,slow=7.9,SNR=23						
PSI				Pg		12 41 08.8	
	6.1nm,0.3s,baz=238,slow=11,SNR=23						
PSI				Lg	Lg	12 41 42.3	
	12nm,0.3s,baz=38,slow=19,SNR=8.6						
PSI				LR	LR	12 41 50.7	
	comp=Z,349nm,20.7s,baz=298,slow=36						
KCSI	Kotacane, Aceh	2.46	15	P	Pn	12 41 02.3	0.0
KCSI				S	Sn	12 41 32.3	+1.0
SISI	Saibi	3.13	141	P	Pn	12 41 12.3	+0.8
MLSI	Meulaboh, Aceh	3.20	347	P	Pn	12 41 12.2	-0.3
PDSI	Padang	3.89	121	P	Pn	12 41 22.1	0.0
BKNI	Bangkinang	3.98	102	P	Pn	12 41 24.3	+1.1
BKNI	Bangkinang	3.98	102		Pn	12 41 24.3	+1.1
LHMI	Lhok Sumawe	4.07	357	Pn	Pn	12 41 24.2	-0.3
LHMI				Sn	Sn	12 42 11.1	-0.1
IPM	Ipoh	5.11	49		Pn	12 41 39.6	+0.9
KULM	Kulim	5.42	40		Pn	12 41 43.3	+0.3
MYKOM	Kota Tinggi	6.74	84	Pn	Pn	12 42 02.2	+1.0
MNAI	Manna	7.97	133	Pn	Pn	12 42 18.2	+0.1
MNAI				Sn	Sn	12 43 44.1	-3.4
DLV	T Lat	15.56	46	P	P	12 44 04.7	-1.1
DLV				IAmb	IAmb	12 44 05.9	
	comp=Z,23nm,1.0s						
PBKT	Sadao Pong	15.80	14		Pn	12 44 05.0	+0.4
UGM	Wanagama	16.09	124	Pn	Pn	12 44 09.3	+0.8
UBPT	Khong Chiam	16.29	30		Pn	12 44 11.0	+0.1
CM31	Chiang Mai Arr	17.31	6	Pn	Pn	12 44 23.8	0.0
CMAR	Chiang Mai Arr	17.31	6	Pn	Pn	12 44 22.9	-0.9
	comp=Z,0.4nm,0.3s,baz=196,slow=13,SNR=13						
CMAR				LR	LR	12 51 14.4	
	comp=Z,76nm,20.1s,baz=190,slow=38						
PALK	Pallekele	17.48	291	LR	LR	12 50 18.7	
	comp=Z,60nm,18.1s,baz=116,slow=34						
CHTO	Chiang Mai	17.66	6		Pn	12 44 27.9	-0.2
KKM	Kota Kinabalu	19.65	75	P	P	12 44 50.6	-0.2
KKM				IAmb	IAmb	12 45 03.8	
	comp=Z,60nm,1.5s						
SLVN	Son La	21.13	18	P	P	12 45 06.3	-0.6
SLVN				IAmb	IAmb	12 45 11.3	
	comp=Z,15nm,0.8s						
KMI	Kunming	24.45	12	P	P	12 45 43.1	+2.2
KMI				pP	pP	12 45 48.3	-1.0
KMI				sP	sP	12 45 49.6	-3.1
KMI	Kunming	24.45	12	P	P	12 45 41.6	+0.7
SHL	Shillong	24.81	349	P	P	12 45 44.0	-0.1
SHL				IAmb	IAmb	12 45 45.1	
	comp=Z,17nm,0.8s						
H08S2	Diego Garcia H	26.08	250	T	T	13 13 10.1	
	baz=72,slow=75,SNR=198						
H08S3	Diego Garcia H	26.09	250	T	T	13 13 13.6	
	baz=72,slow=75,SNR=594						
H08S1	Diego Garcia H	26.10	250	T	T	13 13 11.5	
	baz=72,slow=75,SNR=101						
TGY	Tagaytay City	26.83	60	LR	LR	12 58 13.6	
	comp=Z,81nm,19.6s,baz=152,slow=40						
LSA	Lhasa	28.98	349	P	P	12 46 22.0	+0.2
LSA				IAmb	IAmb	12 46 24.4	
	comp=Z,3.6nm,0.5s						
WHN	Wuhan	33.50	28	P	P	12 47 07.4	+6.3
FITZ	Fitzroy Crossi	33.94	126	P	P	12 47 04.2	-0.9
	comp=Z,1.1nm,0.6s,baz=330,slow=8.1,SNR=2.7						
FITZ	Fitzroy Crossi	33.94	126	P	P	12 47 04.6	-0.5
XAN	Xi'an	34.54	17	P	P	12 47 09.4	-0.8
XAN	Xi'an	34.54	17	P	P	12 47 09.5	-0.8
KNRA	Kununurra	35.43	119	P	P	12 47 17.4	-0.7
KNRA				IAmb	IAmb	12 47 20.8	
	comp=Z,12nm,1.4s						
GTA	Gaotai	38.17	3	⇑P	P	12 47 41.3	0.0
GTA				pP	pP	12 47 46.1	-3.7
GTA				sP	sP	12 47 48.6	-4.5
H01W3	Cape Leeuwin H	39.21	158	T	T	13 29 16.4	
	baz=334,slow=76,SNR=8.5						
H01W2	Cape Leeuwin H	39.22	158	T	T	13 29 13.2	
	baz=334,slow=76,SNR=8.7						
H01W1	Cape Leeuwin H	39.22	158	T	T	13 29 13.9	
	baz=334,slow=76,SNR=7.2						
NIL	Nilore	39.34	328	P	P	12 47 51.1	0.0
NIL				IAmb	IAmb	12 47 52.7	
	comp=Z,10.0nm,1.1s						
WB0	Warramunga Arr	42.02	122	P	P	12 48 12.8	-0.6
WB0				IAmb	IAmb	12 48 27.1	
	comp=Z,15nm,1.5s						
WRA	Warramunga Arr	42.05	122	P	P	12 48 13.1	-0.5
	comp=Z,2.2nm,0.7s,baz=300,slow=9.1,SNR=13						
WB2	Warramunga Arr	42.06	122	P	P	12 48 13.1	-0.6
WMQ	Urumqi	43.33	350	P	P	12 48 24.0	+0.4
WMQ				IAmb	IAmb	12 48 26.2	
	comp=Z,8.0nm,1.1s						
ASAR	Alice Springs	43.40	127	P	P	12 48 24.6	0.0
	comp=Z,1.0nm,0.8s,baz=298,slow=7.9,SNR=8.4						
NRN	Naryn	44.43	337	P	P	12 48 33.4	+0.5
NRN				IAmb	IAmb	12 48 35.0	
	comp=Z,6.9nm,1.2s						
KDJ	Kajisay	44.59	339	P	P	12 48 34.6	+0.6
KDJ				IAmb	IAmb	12 48 36.7	
	comp=Z,6.0nm,0.9s						
PDGK	Podgornoye	44.87	342	⇓S	P	12 48 35.9	-0.2
	comp=Z,1.4nm,0.3s						
KSRS	Korea Array	45.94	35	P	P	12 48 44.6	+0.1
	comp=Z,6.6nm,0.8s,baz=222,slow=9.1,SNR=24						
KSRS				LR	LR	13 08 49.4	
	comp=Z,17nm,18.3s,baz=275,slow=37						
SONM	Songino Array	47.20	8	P	P	12 48 55.1	+0.7
	comp=Z,2.9nm,0.8s,baz=192,slow=9.6,SNR=14						
SONM				PcP	PcP	12 50 25.6	0.0
	comp=Z,1.0nm,0.8s,baz=192,slow=4.1,SNR=4.0						
MK31	Makanchi Array	47.29	346	P	P	12 48 55.2	+0.2
MK31	Makanchi Array	47.29	346	⇑Sn	P	12 48 54.9	-0.1
	comp=Z,2.8nm,0.7s,baz=193,slow=28,SNR=17						
MKAR	Makanchi Array	47.29	346	P	P	12 48 55.3	+0.3
	comp=Z,3.1nm,0.8s,baz=162,slow=7.5,SNR=15						
ULN	Ulaanbaatar	47.34	9	P	P	12 48 55.9	+0.4
ULN				IAmb	IAmb	12 48 58.7	
	comp=Z,2.9nm,0.8s						
MAKZ	Makanchi	47.38	346	⇓Sn	P	12 48 56.7	+1.0
	comp=Z,0.6nm,0.4s						
COEN	Coen	48.00	110	P	P	12 49 00.5	-0.5
KK31	Karatay Array	48.09	334	P	P	12 49 01.7	+0.5
KK31				IAmb	IAmb	12 49 03.9	
	comp=Z,4.4nm,1.3s						
GEYT	Alibeck	51.23	320	P	P	12 49 25.6	+0.4
	comp=Z,0.7nm,0.4s,baz=148,slow=12,SNR=2.1						
HIA	Hailar	51.72	19	P	P	12 49 28.8	+0.1
HIA				IAmb	IAmb	12 49 41.9	
	comp=Z,5.3nm,0.8s						
MJAR	Matsushiro Arr	51.78	42	LR	LR	13 12 05.5	
	comp=Z,24nm,20.1s,baz=225,slow=37						
KURK	Kurchatov	51.84	345	P	P	12 49 29.3	-0.2
KURK				IAmb	IAmb	12 49 31.4	
	comp=Z,4.9nm,1.1s						
USA0B	Ussuriysk Arra	52.86	31	P	P	12 49 37.5	+0.3
USRK	Ussuriysk Ar.	52.86	31	P	P	12 49 37.1	-0.1
	comp=Z,5.9nm,0.8s,baz=205,slow=3.0,SNR=9.0						
USRK				LR	LR	13 14 35.8	
	comp=Z,39nm,18.3s,baz=249,slow=39						
STKA	Stephens Creek	53.36	132	P	P	12 49 41.4	+0.2
	comp=Z,2.4nm,0.7s,baz=299,slow=8.3,SNR=4.1						
STKA	Stephens Creek	53.36	132	P	P	12 49 40.5	-0.7
ZAA0	Zalesovo Array	53.61	351	P	P	12 49 42.8	+0.1
ZAA0				IAmb	IAmb	12 49 44.2	
	comp=Z,6.1nm,0.8s						
ZALV	Zalesovo Beam	53.61	351	P	P	12 49 43.2	+0.6
	comp=Z,6.5nm,0.8s,baz=179,slow=6.2,SNR=28						
ZALV				LR	LR	13 15 41.5	
	comp=Z,37nm,18.1s,baz=343,slow=40						
BVAR	Borovoye Array	56.29	341	P	P	12 50 01.7	-0.3
	comp=Z,1.8nm,0.8s,baz=149,slow=6.9,SNR=9.4						
KLR	Kul'dur	56.34	27	P	P	12 50 02.2	-0.2
	comp=Z,4.3nm,1.0s,baz=250,slow=7.0,SNR=11						
BRVK	Borovoye	56.35	341	P	P	12 50 01.9	-0.6
BRVK				IAmb	IAmb	12 50 06.0	
	comp=Z,2.6nm,0.8s						
BRVK	Borovoye	56.35	341	⇑Sn	P	12 50 01.8	-0.6
	comp=Z,0.9nm,0.4s						
EIDS	Eidsvold	58.40	121	P	P	12 50 17.3	-0.2
KBZ	Khabaz	64.08	319	P	P	12 50 55.7	+0.2
	comp=Z,1.4nm,0.7s,baz=99,slow=10,SNR=4.9						
YAK	Yakutsk	65.50	16	P	P	12 51 04.3	-0.1
PEA0B	Petropavlovsk-	71.82	34	P	P	12 51 44.1	0.0
TIXI	Tiksi	73.26	10	P	P	12 51 51.8	-0.5
TIXI				IAmb	IAmb	12 51 53.0	
	comp=Z,6.1nm,1.4s						
FINES	FINESS Array B	80.03	333	P	P	12 52 30.7	0.0
	comp=Z,1.6nm,0.8s,baz=153,slow=30,SNR=3.9						
FINES				LR	LR	13 33 02.4	
	comp=Z,52nm,18.8s,baz=291,slow=40						
GERES	GERESS Array B	84.82	319	P	P	12 52 57.0	+0.8
	comp=Z,1.0nm,1.0s,baz=99,slow=6.1,SNR=4.1						
NOA	NORSAR Array B	87.03	331	LR	LR	13 38 04.8	
	comp=Z,13nm,18.7s,baz=0.0,slow=40						
AFI	Afiamalu	91.32	104	LR	LR	13 37 39.4	
	comp=Z,55nm,20.3s,baz=234,slow=38						
TXAR	Lajitas Array	143.75	32	PKP	PKPbc	12 59 55.6	+0.7
	comp=Z,0.3nm,0.9s,baz=88,slow=1.3,SNR=3.9						
CPUP	Villa Florida	144.92	222	PKP	PKiKP	13 00 03.8	+0.7
	comp=Z,2.8nm,0.9s,baz=105,slow=3.4,SNR=6.1						
CPUP	Villa Florida	144.92	222		PKPdf	12 59 59.9	+0.5

JMA 22 12:41:57.7±0.1, 42°.97N×145°.41E, h47km±1km, M2.9

SKHL 22 12:41:58.8±0.3, 42°.98N×145°.49E, h40km±1km, mb4.3/3

ISC 22 12:41:57.3±1.9, 42°.95N±0°.09×145°.45E±0°.05, h46km±11km, n14, σ0°.45/27, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKHN	Kushirohamanak	0.25	302	P	Pn	12 42 05.9	+0.3
JKHN				eS	Sn	12 42 11.3	-0.1
NMR	Nemuro--Hokkai	0.46	26	eP	Pn	12 42 08.1	+0.2
NMR				eS	Sn	12 42 15.0	-0.4
NEM2	Nemuro 2	0.46	28	P	Pn	12 42 08.0	+0.1
NEM2				eS	Sn	12 42 15.5	+0.1
JAK	Akkeshi	0.55	275	P	Pn	12 42 08.9	-0.1
JAK				eS	Sn	12 42 17.3	0.0
GLVR	Golovnino	0.79	4	eP	Pn	12 42 12.3	+0.2
GLVR				AMB	AMB	12 42 12.9	
	110nm,0.2s						
GLVR				eS	Sn	12 42 22.6	-0.2
GLVR				A	A	12 42 26.0	
	400nm,0.2s						
GLVR				A	A	12 42 26.0	
	270nm,0.2s						
JNK	Nakash	0.83	320	P	Pn	12 42 12.4	-0.2
JNK				eS	Sn	12 42 22.8	-0.9
JNSB	Nemuroshibetsu	0.88	339	P	Pn	12 42 13.5	+0.1
JNSB				eS	Sn	12 42 25.3	+0.2
JRA	Rausu	1.01	347	P	Pn	12 42 15.3	+0.2
JRA				eS	Sn	12 42 28.0	-0.2
GRPR	Tuman	1.06	13	eP	Pn	12 42 16.2	+0.4
GRPR				eS	Sn	12 42 28.7	-0.8
GRPR				A	A	12 42 29.0	
	330nm,0.1s						
GRPR				A	A	12 42 29.0	
	140nm,0.1s						
YUK	Yuzh-Kuril'sk	1.12	15	eP	Pn	12 42 17.2	+0.6
YUK				AMB	AMB	12 42 17.7	
	40nm,0.2s						
YUK				eS	Sn	12 42 30.7	-0.2
YUK				A	A	12 42 33.0	
	190nm,0.2s						
YUK				A	A	12 42 33.0	
	100nm,0.2s						
JOB	Onbets	1.19	268	P	Pn	12 42 17.4	-0.1
JOB				eS	Sn	12 42 32.3	-0.1
JAR	Ashorobuto	1.28	286	P	Pn	12 42 18.9	+0.2
JAR				eS	Sn	12 42 34.9	+0.2
SHO	Shikotan	1.36	47	eP	Pn	12 42 20.4	+0.5
SHO				AMB	AMB	12 42 20.5	
	100nm,0.2s						
SHO				eS	Sn	12 42 35.6	-1.1
SHO				A	A	12 42 38.9	
	60nm,0.2s						
SHO				A	A	12 42 38.9	
	300nm,0.2s						
JTKR	Abashiri--Toko	1.51	313	P	Pn	12 42 22.6	+0.7

ATH 22 12:41:56.9, 38°.31N×20°.40E, h10km±1km, ML3.1/13, Error ellipse: s-maj=1.8km s-min=0.6km az=232.0

THE 22 12:41:57.2, 38°.31N×20°.42E, h8km±1km, ML3.4/3, Error ellipse: s-maj=1.2km s-min=0.3km az=265.0

ISC 22 12:41:57.1±0.8, 38°.30N±0°.02×20°.44E±0°.03, h9km±5km, n54, σ0°.61/81, 4C-12D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF1	Kardakata, Kep	0.04	136	⇓Pd0	Pg	12 41 58.7	-0.1
KEF1				S	Sg	12 42 00.1	+0.2
KEF4	Livadi, Kephal	0.05	194	⇓Pd0	Pg	12 41 58.7	-0.1
KEF4				S	Sg	12 42 00.3	+0.1
AGT1	Agia Thekli	0.07	219	P	Pg	12 41 59.2	+0.1
AGT1				S	Sg	12 42 00.6	+0.1
LXR1	Lixouri, Cepha	0.10	180	P	Pg	12 41 59.8	+0.2
LXR1				S	Sg	12 42 02.2	+0.9
LXRA	Lixouri, Kepha	0.10	181	⇓Pd0	Pg	12 41 59.8	+0.2
LXRA				S	Sg	12 42 02.1	+0.8
KEF3	Kipouria, Keph	0.12	216	⇓Pd0	Pg	12 41 59.8	-0.1
KEF3				S	Sg	12 42 02.2	+0.4
CHV1	Chavriata, Kef	0.13	201	P	Pg	12 42 00.1	+0.2
CHV1				S	Sg	12 42 02.6	+0.7
ARGA	Argostoli. Kep	0.13	166	⇓Pd0	Pg	12 42 00.1	+0.1
ARGA				S	Sg	12 42 02.5	+0.5
ARG2	Argostoli	0.13	163	P	Pg	12 42 00.2	+0.2
ARG2				S	Sg	12 42 02.7	+0.7
KEF2	Argostoli. Kep	0.14	165	⇓Pd0	Pg	12 42 00.3	+0.1
KEF2				S	Sg	12 42 03.0	+0.6
VSK1	VASILIKIADES	0.14	43	P	Pg	12 42 00.5	+0.2
VSK1				S	Sg	12 42 02.2	-0.2
KONA	Konidatara, Ke	0.16	40	⇓Pd0	Pg	12 42 00.7	+0.2
KONA				S	Sg	12 42 03.7	+0.9
VLS	Valsamata	0.17	137	P	Pg	12 42 00.8	+0.1
VLS	Valsamata	0.17	137	⇓Pd0	Pg	12 42 00.7	+0.1
VLS				S	Sg	12 42 03.7	+0.5
FSK	Fiskardo	0.18	32	P	Pg	12 42 01.0	+0.1
FSK				S	Sg	12 42 04.0	+0.5
FSK	Fiskardo	0.18	32	⇓Pd0	Pg	12 42 01.0	+0.1
FSK				S	Sg	12 42 03.9	+0.4
FSK				AML	AML	12 42 04.6	
	comp=E,15440μm,0.2s						
FSK				AML	AML	12 42 09.3	
	comp=N,10971μm,0.5s						
EVGI	Lefkada island	0.36	28	P	Pg	12 42 04.3	+0.1
EVGI				S	Sg	12 42 10.1	+1.1
	comp=N,3μm,0.1s						
EVGI	Lefkada island	0.36	28	⇑Pc0	Pg	12 42 04.2	0.0
EVGI				S	Sg	12 42 10.0	+1.1
MGNA	Meganis	0.45	38	P	Pg	12 42 05.6	-0.2
MGNA				S	Sg	12 42 12.5	+0.8
MGNA				AML	AML	12 42 13.3	
	comp=E,4974μm,0.1s						
MGNA				AML	AML	12 42 13.4	
	comp=N,7346μm,0.1s						
VLMS	Volimes, Zakyn	0.46	157	⇓Pd0	Pg	12 42 06.0	-0.1
VLMS				S	Sg	12 42 13.3	+1.1
VLMS				AML	AML	12 42 14.6	
	comp=E,36996μm,0.4s						
VLMS				AML	AML	12 42 14.6	
	comp=N,65007μm,0.4s						
LKD2	Lefkada island	0.51	19	P	Pg	12 42 06.8	-0.3
LKD2	Lefkada island	0.51	19	⇑Pc0	Pg	12 42 06.7	-0.4
LKD2				S	Sg	12 42 14.8	+1.0
LKD2				AML	AML	12 42 23.2	
	comp=N,2875μm,0.7s						
LKD2				AML	AML	12 42 25.6	
	comp=E,2366μm,0.6s						
TSLK	Tsoukalades, L	0.55	18	P	Pg	12 42 07.5	-0.3
TSLK	Tsoukalades, L	0.55	18	⇑Pc0	Pg	12 42 07.4	-0.3
TSLK				S	Sg	12 42 15.8	+0.9
TSLK				AML	AML	12 42 21.9	
	comp=N,2228μm,0.4s						
TSLK				AML	AML	12 42 25.0	
	comp=E,3917μm,0.5s						
AST1	Astakos	0.56	65	P	Pg	12 42 08.1	+0.1
AST1				S	Sb	12 42 17.4	+0.1
	comp=E,7μm,0.2s						
ZAK2	Zakynthos	0.63	145	P	Pg	12 42 09.6	+0.3
PDO	Prodromos	0.65	63	P	Pg	12 42 09.9	+0.2
PDO	Prodromos	0.65	63	⇓Pd0	Pg	12 42 09.6	-0.1
PDO				S	Sb	12 42 19.8	-0.1
PDO				AML	AML	12 42 25.1	
	comp=N,4680μm,0.4s						
PDO				AML	AML	12 42 25.1	
	comp=E,7694μm,0.3s						
VTN	Vitineika	0.70	123	P	Pg	12 42 10.7	+0.1
KRI1	kERI	0.71	155	P	Pg	12 42 10.3	-0.4
RLS	Riolos of Patr	0.85	107	P	Pg	12 42 13.3	-0.1
RLS	Riolos of Patr	0.85	107	⇑Pc0	Pg	12 42 13.2	-0.2
RLS				S	Sb	12 42 26.2	+0.7
RLS				AML	AML	12 42 33.0	
	comp=E,2498μm,0.5s						
RLS				AML	AML	12 42 34.3	
	comp=N,1421μm,0.5s						
PVO	Paravola	0.91	70	P	Pg	12 42 14.7	+0.1
PVO	Paravola	0.91	70	⇓Pd0	Pg	12 42 14.6	+0.1
PVO				AML	AML	12 42 31.0	
	comp=E,6348μm,0.2s						
PVO				AML	AML	12 42 31.1	
	comp=N,3753μm,0.3s						
DRO	Drossia	1.06	109	P	Pg	12 42 17.3	-0.2
DRO				S	Sn	12 42 32.9	-0.2
	comp=N,2μm,0.5s						
DRO	Drossia	1.06	109	P	Pg	12 42 16.9	-0.6
DRO				S	Sb	12 42 32.4	+0.7
DRO				AML	AML	12 42 38.2	
	comp=N,3112μm,0.6s						
DRO				AML	AML	12 42 40.1	
	comp=E,4503μm,0.4s						
ANX	Ano Chora	1.20	76	P	Pb	12 42 19.5	-0.5
ANX	Ano Chora	1.20	76	P	Pb	12 42 19.7	-0.4
ANX				AML	AML	12 42 47.4	
	comp=E,2033μm,0.5s						
ANX				AML	AML	12 42 50.5	
	comp=N,2346μm,0.6s						
IGT	Igoumenitsa	1.23	356	P	Pn	12 42 20.3	-0.2
IGT	Igoumenitsa	1.23	356	P	Pn	12 42 20.3	-0.2
IGT				S	Sb	12 42 36.0	-0.5
IGT				AML	AML	12 42 40.6	
	comp=E,1040μm,0.8s						
IGT				AML	AML	12 42 50.9	
	comp=N,691μm,0.7s						
EVR	Evrytania	1.23	60	P	Pn	12 42 19.7	-1.0
EVR	Evrytania	1.23	60	P	Pn	12 42 20.7	+0.1
AMT	Artemida-Makis	1.27	127	P	Pg	12 42 21.8	+0.5
AMT				AML	AML	12 42 51.4	
	comp=E,2444μm,0.6s						
AMT				AML	AML	12 42 52.4	
	comp=N,2155μm,0.5s						
SERG	Sergoula	1.28	85	P	Pn	12 42 20.8	-0.3
SERG	Sergoula	1.28	85	P	Pg	12 42 21.8	+0.3
SERG				AML	AML	12 42 44.0	
	comp=E,1127μm,0.4s						
SERG				AML	AML	12 42 45.0	
	comp=N,1236μm,0.6s						
TRIZ	Trizonia	1.29	87	P	Pn	12 42 20.5	-0.7
ALIK	Aliki, Aigiali	1.32	91	P	Pn	12 42 21.7	+0.1
KLV	Kalavryta, Ach	1.37	100	P	Pn	12 42 22.3	-0.2
OHR	Ohrid	2.82	6	i Pn	Pg	12 42 53.8	+2.7
VAY	Valandovo	3.43	28	i Pn	Pg	12 43 01.6	-1.2
SG1	Sgolgore (BA)	3.85	312	ePn	Pn	12 42 56.4	-0.2
SOKA	Soboth	9.27	336	i Pn	Pn	12 44 09.1	-1.3
	comp=N,2.1nm,0.6s						
OBKA	Obir	9.28	334	ePn	Pn	12 44 11.7	+0.6
	comp=N,1.1nm,0.3s						
MOA	Molln	10.55	337	ePn	Pn	12 44 28.3	-0.1
	comp=N,1.0nm,0.3s						

IDC 22 12:42:34.0±2.5, 7°.13S×128°.76E, h0km, mb3.4/1, mb1 3.7/3, mb1mx3.4/36, mbtmp3.5/3, ML3.5/2, Error ellipse: s-maj=202.4km s-min=33.7km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.84	158	Pn	Pn	12 45 53.7	+2.1
	0.1nm,0.3s,baz=338,slow=9.0,SNR=3.0						
ASAR	Alice Springs	17.17	164	P	Pn	12 46 33.9	-1.6
	0.6nm,0.3s,baz=346,slow=12,SNR=37						
MKAR	Makanchi Array	67.67	327	P	P	12 53 33.1	0.0
	0.3nm,0.8s,baz=142,slow=4.7,SNR=2.8						

IDC 22 12:43:21.1±0.8, 2°.49N×99°.10E, h153km±5km, mb3.4/8, mb1 3.5/9, mb1mx3.2/42, mbtmp3.8/9, Error ellipse: s-maj=59.2km s-min=16.9km az=55.0

ISC 22 12:43:21.1±1.1, 2°.5N±0°.2×99°.2E±0°.3, h150km, n10, σ0°.68/11, mb3.5/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	0.40	314	P	Pn	12 43 43.2	+1.1
	54nm,0.3s,baz=221,slow=11,SNR=26						
PSI				S	Sn	12 43 58.9	+0.7
	27nm,0.3s,baz=339,slow=21,SNR=7.9						
CMAR	Chiang Mai Arr	15.84	359	P	P	12 46 57.4	+0.7
	0.3nm,0.3s,baz=190,slow=10,SNR=4.9						
WRA	Warramunga Arr	41.08	125	P	P	12 50 50.4	+0.1
	0.3nm,0.3s,baz=285,slow=6.9,SNR=7.3						
ASAR	Alice Springs	42.63	130	P	P	12 51 03.0	0.0
	0.5nm,0.8s,baz=303,slow=7.3,SNR=4.3						
SONM	Songino Array	45.56	7	P	P	12 51 26.0	-0.1
	0.5nm,0.6s,baz=191,slow=9.0,SNR=3.2						
MKAR	Makanchi Array	46.49	344	P	P	12 51 33.0	-0.2
	0.6nm,0.4s,baz=155,slow=8.7,SNR=6.6						
ZALV	Zalesovo Beam	52.60	349	P	P	12 52 18.9	-0.5
	0.6nm,0.3s,baz=171,slow=8.8,SNR=3.2						
FINES	FINESS Array B	79.77	332	P	P	12 55 11.6	-0.7
	3.3nm,1.0s,baz=96,slow=16,SNR=4.3						
ARCES	ARCESS Array B	81.98	340	P	P	12 55 23.3	-0.6
	2.3nm,0.8s,baz=108,slow=7.8,SNR=1.3						
GERES	GERESS Array B	85.15	319	P	P	12 55 39.9	-0.7
	0.3nm,0.8s,baz=90,slow=1.0,SNR=1.4						

NNC 22 12:47:55.2±1.6, 52°.17N×62°.81E, h0km, mb3.0, mpv2.6, 3C-3D, Error ellipse: s-maj=28.6km s-min=8.7km az=154.0, Suspected Mining explosion., Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AB31	Akbulak array	3.44	213	⇑Pg	Pb	12 48 58.5	+1.6
	0.5nm,0.3s,baz=30,slow=16,SNR=9.0						
AB31				⇓Lg	Lg	12 49 46.7	
	1.6nm,0.4s,baz=34,slow=25,SNR=7.8						
AKTO	Aktyubinsk	3.47	242	⇑Pg	Pb	12 48 57.6	0.0
	1.5nm,0.6s						
AKTO				⇑Lg	Lg	12 49 43.7	
	9.5nm,0.8s						
BRVK	Borovoye	4.64	76	⇓Pn	Pn	12 49 07.2	+0.6
	1.3nm,1.0s						
BRVK				⇓Lg	Lg	12 50 23.8	
	3.1nm,0.8s						

INET 22 13:17:20.0, 12°.01N×87°.55W, h8km, ML4.1, Near coast of Nicaragua

IDC 22 13:31:15.9±2.1, 19°.57S×177°.75W, h0km, mb3.9/5, mb1 4.2/5, mb1mx3.8/22, mbtmp3.9/5, Error ellipse: s-maj=69.3km s-min=29.4km az=145.0

NEIC 22 13:31:16.1±2.5, 19°.87S±0°.09×177°.8W±0°.1, h10km±2km, mb4.4/8, Error ellipse: s-maj=21.0km s-min=15.2km az=71.0

ISC 22 13:31:16.0±0.8, 19°.9S±0°.2×177°.8W±0°.1, h10km, n18,

σ1§33/16,mb4.2/9,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.53	298		Pn	13 32 18.2	-6.5
NIUE	Niue	7.45	85	Pn	Pn	13 33 04.7	-0.1
CMWZ	Cape Campbell	22.78	196	P	P	13 36 18.3	-0.4
ARMA	Armidale	29.50	243	P	P	13 37 19.1	-1.7
CTAO	Charters Tower	33.76	263	P	P	13 37 57.5	-0.7
BBOO	Buckleboo	42.99	243	P	P	13 39 16.9	+1.2
BBOO				IAmb	IAmb	13 39 28.8	
	comp=Z,14nm,1.2s						
WR0	Warramunga Arr	44.70	261	P	P	13 39 29.7	+0.1
WR0				IAmb	IAmb	13 39 47.7	
	comp=Z,5.9nm,1.4s						
AS31	Alice Springs	44.85	256	P	P	13 39 32.5	+1.7
ASAR	Alice Springs	44.86	256	P	P	13 39 33.2	+2.3
	comp=Z,1.0nm,0.4s,baz=88,slow=8.4,SNR=28						
WB0	Warramunga Arr	44.87	262	P	P	13 39 32.9	+1.9
WB2	Warramunga Arr	44.88	261	P	P	13 39 31.8	+0.8
WB2				IAmb	IAmb	13 39 37.6	
	comp=Z,6.7nm,1.3s						
WRAB	Tennant Creek	44.88	261	P	P	13 39 29.8	-1.3
WRA	Warramunga Arr	44.89	261	P	P	13 39 33.0	+1.8
	comp=Z,1.8nm,0.8s,baz=97,slow=7.7,SNR=17						
KNRA	Kununurra	50.91	266	P	P	13 40 17.9	+0.1
KNRA				IAmb	IAmb	13 40 25.2	
	comp=Z,6.7nm,1.2s						
MJAR	Matsushiro Arr	69.89	323	P	P	13 42 27.1	-0.2
	comp=Z,0.4nm,0.5s,baz=151,slow=6.0,SNR=1.7						
PETK	Petropavlovsk-	75.79	345	P	P	13 43 01.5	-0.4
	comp=Z,1.5nm,0.6s,baz=132,slow=8.1,SNR=12						
TXAR	Lajitas Array	86.58	57	P	P	13 44 00.4	+0.4
	comp=Z,0.2nm,0.7s,baz=216,slow=5.6,SNR=3.7						
AKASG	Malin Array Be	142.63	332	PKhKP	PKPpre	13 50 38.3	
	comp=Z,0.9nm,0.5s,baz=48,slow=3.8,SNR=5.8						

NIED 22 13:59:00, 33.°70N×142.°10E, h5km, Mw3.5 Best double couple: Mo2.22000×10^14 NP1:φs337.00000°, δ47.00000°, λ-68.00000°. NP2:φs126.00000°, δ47.00000°, λ-112.00000°.
IDC 22 13:59:35.9±1.1, 33.°60N×142.°30E, h0km, mb3.5/7, mb1 3.7/10, mb1mx3.6/33, mbtmp3.6/10, ML3.6/3, MS2.8/3, Ms1 2.8/3, ms1mx2.5/39, Error ellipse: s-maj=25.7km s-min=19.1km az=75.0
JMA 22 13:59:40.5±0.4, 33.°65N×142.°14E, h51km, M3.7
ISC 22 13:59:40.6±0.9, 33.°56N±0.°05×142.°20E±0.°08, h35km, n28, σ1§40/37, mb3.5/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	1.49	317	P	Pn	14 00 04.1	-0.4
BSO1				S	Sn	14 00 21.1	-1.4
BSO3	Boso 3	1.87	312	P	Pn	14 00 09.9	0.0
JHJ2	Mitsune	2.04	258	P	Pn	14 00 13.2	+0.7
JHCJ	Hachijojimakas	2.07	257	P	Pn	14 00 13.2	+0.3
JHCJ				S	Sn	14 00 37.5	0.0
JHJ	Hachijo jima 2	2.07	259	Pn	Pn	14 00 13.4	+0.5
	52nm,0.3s,baz=78,slow=22,SNR=31						
JHJ				Sn	Sn	14 00 35.7	-1.8
	89nm,0.3s,baz=74,slow=23,SNR=14						
BSO4	Boso 4	2.10	313	P	Pn	14 00 13.9	+0.6
JMKN	Mikurajimanish	2.20	279	P	Pn	14 00 14.7	0.0
JMKN				eS	Sn	14 00 40.6	-0.1
JIM2	Oshima 3	2.57	298	P	Pn	14 00 18.9	-0.9
JIZS	Izushimoda	2.99	294	P	Pn	14 00 25.2	-0.3
JOD2	Odawara 2	3.09	304	P	Pn	14 00 26.2	-0.7
JYN	Shimob	3.59	304	P	Pn	14 00 33.7	-0.1
JYN				eS	Sn	14 01 16.1	+1.1
JAG	Ashikaga	3.64	323	P	Pn	14 00 34.1	-0.5
JRY	Ryogami san	3.66	313	P	Pn	14 00 34.9	+0.1
JRY				eS	Sn	14 01 17.7	+0.9
JFT	Otama	4.24	339	P	Pn	14 00 42.0	-0.7
JFT				S	Sn	14 01 27.9	-3.0
MJAR	Matsushiro Arr	4.43	313	Pn	Pn	14 00 45.5	+0.2
	0.5nm,0.3s,baz=279,slow=28,SNR=58						
MJAR				Sn	Sn	14 01 34.8	-0.9
	0.4nm,0.3s,baz=7.3,slow=32,SNR=2.3						
MJAR				LR	LR	14 02 21.5	
	comp=Z,19nm,18.5s,baz=105,slow=38						
MAT	Matsushiro	4.43	313	P	Pn	14 00 46.5	+1.2
MAT				eS	Sn	14 01 35.9	+0.2
MAT	Matsushiro	4.43	313	P	Pn	14 00 46.5	+1.2
MAT				S	Sn	14 01 32.3	-3.4
JYTA	Yamagatataniai	4.95	296	P	Pn	14 00 51.8	-0.6
JCJ	Chichijima	6.44	180	Pn	Pn	14 01 11.3	-1.6
	5.7nm,0.3s,baz=284,slow=18,SNR=7.2						
JCJ				Sn	Sn	14 02 20.1	-5.1
	4.9nm,0.3s,baz=281,slow=19,SNR=1.2						
PETK	Petropavlovsk-	22.47	25	LR	LR	14 13 13.7	
	comp=Z,16nm,20.9s,baz=239,slow=36						
SONM	Songino Array	30.36	309	P	P	14 05 49.3	+0.1
	0.8nm,0.6s,baz=107,slow=7.9,SNR=5.1						
ZALV	Zalesovo Beam	44.78	315	P	P	14 07 51.0	+0.3
	0.5nm,0.5s,baz=78,slow=9.4,SNR=1.6						
MKAR	Makanchi Array	46.58	305	P	P	14 08 05.8	+0.7
	0.5nm,0.8s,baz=88,slow=8.3,SNR=4.6						
ILAR	Eielson Array	52.11	31	P	P	14 08 47.1	+0.2
	0.2nm,0.8s,baz=258,slow=4.2,SNR=1.2						
WRA	Warramunga Arr	53.73	189	P	P	14 09 00.2	+0.9
	0.6nm,0.5s,baz=5.9,slow=7.6,SNR=7.1						
ASAR	Alice Springs	57.45	189	P	P	14 09 27.3	+1.2
	0.3nm,0.6s,baz=351,slow=5.1,SNR=2.2						
AKTO	Aktyubinsk	61.51	314	LR	LR	14 39 41.9	
	comp=Z,46nm,19.0s,baz=332,slow=39						
YKA	Yellowknife Ar	66.50	30	P	P	14 10 26.4	+0.1
	0.3nm,0.8s,baz=292,slow=6.5,SNR=3.2						

IDC 22 14:00:33.6±3.0, 0.°02N×132.°67E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.2/25, mbtmp3.3/3, ML3.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/18, Error ellipse: s-maj=152.3km s-min=29.6km az=74.0
DJA 22 14:00:40.7±2.4, 0.°S±15.°×13.°2E±.°, h22km±35km, M3.2/5, MLv3.2/5
ISC 22 14:00:40.4±1.5, 0.°1S±0.°1×132.°44E±0.°08, h35km, n7, σ1§70/8, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	Sorong	1.43	236	P	Pn	14 01 04.8	+1.0
SWI				S	Sn	14 01 23.3	+1.9
RKPI	Ransiki, Papua	2.26	130	P	Pn	14 01 17.2	+2.0
FAKI	Fak Fak	2.85	184	P	Pn	14 01 23.6	+0.2
FAKI				S	Sn	14 01 56.3	-0.2
WRA	Warramunga Arr	19.85	175	P	P	14 05 06.5	-1.9
	0.1nm,0.3s,baz=355,slow=11,SNR=4.8						
ASAR	Alice Springs	23.51	177	P	P	14 05 46.2	-1.2
	0.4nm,0.4s,baz=358,slow=8.3,SNR=8.2						
ASAJ	Asahikawa	44.90	10	LR	LR	14 26 45.0	
	comp=Z,27nm,18.4s,baz=353,slow=35						
MKAR	Makanchi Array	63.93	324	P	P	14 11 09.2	-0.7
	0.2nm,0.7s,baz=111,slow=8.3,SNR=1.5						

NEIC 22 14:09:40.5±2.5, 18.°7S±0.°1×64.°60E±0.°06, h10km±1km, mb4.5/11, Error ellipse: s-maj=22.5km s-min=4.6km az=204.0
IDC 22 14:09:41.1±13.0, 18.°77S×64.°82E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.4/50, mbtmp3.6/4, Error ellipse: s-maj=439.1km s-min=44.3km az=57.0
ISC 22 14:09:41.1±1.0, 18.°7S±0.°2×64.°7E±0.°1, h10km, n22, σ1§04/14, mb4.3/8, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	Diego Garcia H	13.28	36	T	T	14 26 21.8	
H08S2	Diego Garcia H	13.29	36	T	T	14 26 21.8	
H08S3	Diego Garcia H	13.30	36	T	T	14 26 24.4	
	SNR=20						
DGAR	Diego Garcia	13.46	35	Pn	Pn	14 12 51.6	-0.8
H08N3	Diego Garcia H	13.67	27	T	T	14 27 05.2	
	baz=203,slow=76,SNR=18						
H08N1	Diego Garcia H	13.68	27	T	T	14 26 57.1	
	baz=203,slow=76,SNR=11						
H08N2	Diego Garcia H	13.69	27	T	T	14 27 01.7	
	baz=203,slow=76,SNR=23						
MSEY	Mahe Island	16.57	326		P	14 13 36.8	+0.4
MSEY				IAmb	IAmb	14 13 50.8	
	comp=Z,25nm,1.4s						
ABPO	Ambohimpanom	16.57	266		Pn	14 13 33.8	-0.1
KAAM	Kaadhehdhoo	20.69	24	P	P	14 14 20.1	-1.4
PALK	Pallekele	30.20	33	P	P	14 15 51.8	-0.2
PALK				IAmb	IAmb	14 16 01.1	
	comp=Z,12nm,1.2s						
LBTB	Lobatse	36.78	253	P	P	14 16 44.5	-4.9
BOSA	Boshof	37.35	247	P	P	14 16 53.3	-1.0
BOSA				IAmb	IAmb	14 16 55.3	
	comp=Z,9.5nm,1.3s						
DAMY	Dhamar	38.62	327	P	P	14 17 05.3	+0.1
DAMY				IAmb	IAmb	14 17 23.1	
	comp=Z,21nm,1.4s						
FITZ	Fitzroy Crossi	57.55	100	P	P	14 19 32.4	+1.0
	comp=Z,1.5nm,0.9s,baz=288,slow=3.2,SNR=3.1						
FITZ	Fitzroy Crossi	57.55	100	IAmb	IAmb	14 19 35.6	
	comp=Z,4.9nm,1.4s						
ASAR	Alice Springs	64.16	108	P	P	14 20 17.8	+1.4
	comp=Z,0.6nm,0.7s,baz=271,slow=5.6,SNR=6.7						
WRA	Warramunga Arr	65.26	104	P	P	14 20 23.6	+0.1
	comp=Z,0.8nm,0.7s,baz=260,slow=6.5,SNR=4.6						
WB2	Warramunga Arr	65.27	104	P	P	14 20 23.9	+0.2
WB2				IAmb	IAmb	14 20 40.3	
	comp=Z,3.6nm,1.1s						
WRAB	Tennant Creek	65.27	104	P	P	14 20 23.2	-0.5
WB0	Warramunga Arr	65.34	104	P	P	14 20 23.8	-0.4
MKAR	Makanchi Array	67.04	13	P	P	14 20 36.6	+2.2
	comp=Z,0.3nm,0.9s,baz=212,slow=8.2,SNR=1.5						

IDC 22 14:16:04.5±7.2, 35.°91N×71.°48E, h70km±37km, mb3.5/6, mb1 3.5/12, mb1mx3.2/59, mbtmp3.7/12, ML3.4/6, MS3.3/1, Ms1 3.5/1, ms1mx2.4/53, Error ellipse: s-maj=84.8km s-min=29.5km az=161.0
NNC 22 14:16:14.7±8.8, 36.°78N×70.°74E, h51km±232km, mb3.8, mpv3.6, Error ellipse: s-maj=71.4km s-min=54.1km az=149.0
ISC 22 14:16:11.8±1.7, 36.°5N±0.°1×71.°1E±0.°1, h100km, n18, σ1§75/21, mb3.8/5, 4C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.59	356	⇑P	Pn	14 17 46.8	+0.8
	1.1nm,0.3s,baz=176,slow=13,SNR=27						
KK31				⇓S	Sn	14 18 59.1	-0.5
	1.8nm,0.5s,baz=186,slow=26,SNR=4.2						
AAK	Ala-Archa	6.65	22	P	Pn	14 17 47.5	+0.5
	1.1nm,0.3s,baz=172,slow=8.1,SNR=13						
AAK				S	Sn	14 18 58.0	-3.3
	0.6nm,0.3s,baz=316,slow=23,SNR=13						
AAK	Ala-Archa	6.65	22	⇓P	Pn	14 17 47.1	+0.1
	2.5nm,0.5s						
AAK				⇑S	Sn	14 19 00.2	-1.2
	13nm,1.1s						
CHMS	Chumysh	7.06	22	⇓P	Pn	14 17 52.2	-0.2
	4.4nm,0.8s						
CHMS				⇑S	Sn	14 19 10.0	-1.0
	2.7nm,0.5s						
GEYT	Alibeck	10.44	282	P	Pn	14 18 36.8	-1.6
	0.4nm,0.3s,baz=111,slow=12,SNR=1.9						
GEYT				S	Sn	14 20 30.6	-2.8
	0.8nm,0.3s,baz=295,slow=29,SNR=6.4						
MKAR	Makanchi Array	13.23	36	P	Pn	14 19 14.0	-1.6
	0.0nm,0.3s,baz=210,slow=17,SNR=1.8						
KURBB	Kurchatov Arra	15.08	18	P	Pn	14 19 38.0	-1.4
	0.0nm,0.3s,baz=208,slow=12,SNR=3.5						
AB31	Akbulak array	15.10	331	⇓P	Pn	14 19 41.9	+2.3
	0.9nm,0.5s,baz=141,slow=11,SNR=11						
AB31				⇑S	Sn	14 22 18.1	-8.0
	0.2nm,0.3s						
BVAR	Borovoye Array	16.51	359	P	P	14 19 58.5	+0.5
	0.2nm,0.3s,baz=158,slow=8.4,SNR=4.9						
AKTO	Aktyubinsk	16.79	330	P	Pn	14 20 03.5	+2.8
	0.6nm,0.3s,baz=134,slow=8.8,SNR=15						
AKTO				S	Sn	14 22 59.0	-7.9
	0.1nm,0.3s,baz=5.8,slow=9.2,SNR=2.5						
AKTO	Aktyubinsk	16.79	330	⇓P	Pn	14 20 02.9	+2.2
	1.4nm,0.5s						
AKTO				⇓S	Sn	14 23 02.8	-4.2
	1.0nm,0.9s						
ZALV	Zalesovo Beam	19.87	24	P	Pn	14 20 33.8	-3.5
	1.4nm,0.3s,baz=212,slow=11,SNR=10						
CMAR	Chiang Mai Arr	30.41	119	LR	LR	14 36 36.3	
	comp=Z,51nm,18.6s,baz=186,slow=41						
FINES	FINESS Array B	37.50	326	P	P	14 23 17.2	+1.7
	1.0nm,0.7s,baz=110,slow=12,SNR=1.5						
ARCES	ARCESS Array B	41.15	338	P	P	14 23 47.3	+1.5
	2.8nm,1.0s,baz=115,slow=8.2,SNR=0.9						
NOA	NORSAR Array B	44.40	323	P	P	14 24 13.4	+1.2
	1.1nm,0.8s,baz=80,slow=8.3,SNR=2.7						
YKA	Yellowknife Ar	81.22	3	P	P	14 28 15.6	-0.6
	0.2nm,0.7s,baz=348,slow=5.3,SNR=5.0						
SCHQ	Schefferville	82.10	337	P	P	14 28 20.8	-0.2
	2.5nm,0.8s,baz=70,slow=5.6,SNR=2.7						

IDC 22 14:24:22.6±4.5, 45.°59N×155.°92E, h0km, mb3.6/3, mb1 3.7/5, mb1mx3.3/58, mbtmp3.6/5, ML2.6/2, Error ellipse: s-maj=100.2km s-min=31.6km az=154.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	7.62	8	Pn	Pn	14 26 15.3	+0.5
	0.1nm,0.3s,baz=182,slow=11,SNR=6.2						
ASAJ	Asahikawa	9.58	266	Pn	Pn	14 26 40.4	-1.3
	0.1nm,0.3s,baz=130,slow=28,SNR=2.7						
SONM	Songino Array	33.57	292	P	P	14 31 06.0	+1.7
	0.2nm,0.4s,baz=93,slow=5.8,SNR=1.9						
ILAR	Eielson Array	36.26	38	P	P	14 31 27.4	+0.3
	0.5nm,1.0s,baz=281,slow=9.1,SNR=3.0						
FINES	FINESS Array B	65.91	336	P	P	14 35 08.8	-1.0
	1.8nm,0.9s,baz=24,slow=11,SNR=6.0						

IDC 22 14:34:27.8±0.9, 14.°19N×56.°68E, h0km, mb3.7/10, mb1 3.8/11, mb1mx3.6/59, mbtmp3.7/11, ML3.7/1, MS3.3/10, Ms1 3.3/10, ms1mx3.0/51, Error ellipse: s-maj=25.9km s-min=20.2km az=130.0
OMAN 22 14:34:31.2±2.2, 14.°22N×56.°53E, h48km±14km, ml3.5/5, Error ellipse: s-maj=22.5km s-min=8.2km az=261.0
ISC 22 14:34:30.5±0.8, 14.°24N±0.°08×56.°56E±0.°09, h19km, n32, σ1§40/21, mb3.7/10, MS3.1/8, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	Socotra	3.23	231	P	Pn	14 35 16.3	-4.0
	SNR=11						
SOCY				S	Sn	14 35 50.7	-7.7
	SNR=6.6						
DMTO	DMTO	3.78	336	P	Pn	14 35 27.1	-0.7
	SNR=11						
DMTO				S	Sn	14 36 09.1	-2.7
SHAO	Shalim	3.86	347	P	Pn	14 35 27.6	-1.3
	SNR=9.1						
ABTO	Aybut	4.40	315	P	Pn	14 35 36.9	+0.5
WHFO	Wadi Hawf	4.53	324	P	Pn	14 35 39.1	+0.9
WHFO				S	Sn	14 36 29.8	-0.5
DQM	DQM	5.73	9	P	Pn	14 35 54.3	-0.3
WSAR	Wadi Sarin	9.16	12	Pn	Pn	14 36 41.3	-0.4
	0.7nm,0.3s,baz=223,slow=12,SNR=4.1						
WSAR				LR	LR	14 40 00.8	
	comp=Z,265nm,19.8s,baz=194,slow=36						
ATD	Arta Tunnel	13.63	260	LR	LR	14 41 40.4	
	comp=Z,83nm,20.7s,baz=46,slow=32						
GEYT	Alibeck	23.63	3	P	P	14 39 41.1	+0.6
	2.1nm,0.8s,baz=228,slow=15,SNR=4.6						
GEYT				LR	LR	14 49 51.0	
	comp=Z,52nm,18.4s,baz=315,slow=39						
KMBO	Kilima Mbogo	24.47	233	P	P	14 39 50.2	+1.3
	0.9nm,0.4s,baz=44,slow=12,SNR=3.8						
H08N2	Diego Garcia H	24.96	144	T	T	15 05 29.9	
	baz=325,slow=76,SNR=32						
H08N3	Diego Garcia H	24.97	144	T	T	15 05 30.7	
	baz=325,slow=76,SNR=25						
H08N1	Diego Garcia H	24.98	144	T	T	15 05 31.8	
	baz=325,slow=76,SNR=31						
EIL	Elat	25.17	311	LR	LR	14 50 09.5	
	comp=Z,44nm,20.2s,baz=96,slow=37						
GNI	Garni	27.81	340	LR	LR	14 53 18.1	
	comp=Z,42nm,20.2s,baz=114,slow=40						
KBZ	Khabaz	31.63	341	LR	LR	14 54 57.2	
	comp=Z,39nm,19.4s,baz=150,slow=39						
BRTR	Keskin Array B	32.39	326	LR	LR	14 55 05.7	
	comp=Z,26nm,18.7s,baz=204,slow=38						
AKTO	Aktyubinsk	36.11	2	P	P	14 41 31.1	-0.1
	1.8nm,0.7s,baz=184,slow=7.7,SNR=7.6						
MKAR	Makanchi Array	38.94	28	P	P	14 41 56.1	+0.9
	0.5nm,0.8s,baz=202,slow=6.0,SNR=6.7						
MKAR				LR	LR	14 58 04.1	
	comp=Z,36nm,18.2s,baz=208,slow=36						
KURBB	Kurchatov Arra	40.42	22	P	P	14 42 08.3	+0.9
	0.6nm,0.9s,baz=220,slow=8.2,SNR=4.6						
CMAR	Chiang Mai Arr	40.82	78	P	P	14 42 10.8	-0.5
	0.3nm,0.3s,baz=276,slow=10,SNR=2.5						
ZALV	Zalesovo Beam	45.41	23	P	P	14 42 48.3	+0.5
	1.5nm,0.6s,baz=224,slow=6.8,SNR=7.3						
FINES	FINESS Array B	51.98	342	P	P	14 43 38.3	+0.1
	1.8nm,0.8s,baz=145,slow=7.0,SNR=4.9						
TORD	Torodi Ar. Bea	53.21	276	P	P	14 43 49.3	+1.3
	0.2nm,0.4s,baz=103,slow=7.2,SNR=4.4						
NRIK	Noril'sk	58.43	12	LR	LR	15 14 01.2	
	comp=Z,42nm,18.4s,baz=56,slow=41						
KLR	Kul'dur	69.69	43	LR	LR	15 19 11.0	
	comp=Z,42nm,18.8s,baz=228,slow=38						
H01W3	Cape Leeuwin H	73.25	134	T	T	16 05 46.1	
	baz=302,slow=75,SNR=6.4						
H01W2	Cape Leeuwin H	73.26	134	T	T	16 05 46.8	
	baz=302,slow=75,SNR=7.1						
H01W1	Cape Leeuwin H	73.27	134	T	T	16 05 44.4	
	baz=302,slow=75,SNR=5.8						
ASAR	Alice Springs	84.43	116	P	P	14 47 01.3	-1.1
	0.7nm,0.8s,baz=285,slow=4.8,SNR=9.9						
PDAR	Pinedale Array	121.85	348	PKP	PKiKP	14 53 24.2	0.0
	0.2nm,0.6s,baz=222,slow=2.0,SNR=2.8						
NVAR	Mina Array Bea	127.38	355	PKP	PKiKP	14 53 36.0	+0.7
	0.5nm,0.8s,baz=313,slow=1.3,SNR=4.6						

ATH 22 14:34:33.0, 38.°17N×20.°41E, h15km±1km, ML3.4/12, Error ellipse: s-maj=1.6km s-min=0.8km az=258.0
PDG 22 14:34:32.3±0.6, 38.°19N×20.°28E, h4km±1km, ML3.7/11, Error ellipse: s-maj=1.2km s-min=1.2km az=90.0
THE 22 14:34:33.5, 38.°16N×20.°42E, h12km, ML4.0/4, Error ellipse: s-maj=0.9km s-min=0.4km az=245.0
IDC 22 14:34:34.0±1.9, 38.°69N×20.°75E, h0km, mb3.4/5, mb1 3.6/11, mb1mx3.4/53, mbtmp3.4/11, ML3.7/5, MS2.6/1, Ms1 2.6/1, ms1mx2.0/37, Error ellipse: s-maj=36.5km s-min=19.0km az=38.0
BEO 22 14:34:34.8±0.9, 38.°15N×20.°29E, h22km±5km, ML3.4/7
ISC 22 14:34:33.4±0.7, 38.°16N±0.°02×20.°41E±0.°03, h13km±3km, n119, σ1§46/164, mb3.6/5, 17C-23D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	322	P	Pg	14 34 35.8	0.0
CHV1				S	Sg	14 34 37.6	+0.2
LXRA	Lixouri, Kepha	0.05	32	⇑Pc0	Pg	14 34 35.7	-0.2
LXRA				S	Sg	14 34 37.5	-0.1
LXR1	Lixouri, Cepha	0.05	32	P	Pg	14 34 35.9	0.0
LXR1				S	Sg	14 34 37.6	0.0
ARGA	Argostoli. Kep	0.06	73	⇓Pd0	Pg	14 34 35.6	-0.4
ARGA				S	Sg	14 34 37.2	-0.6
KEF3	Kipouria, Keph	0.06	314	⇓Pd0	Pg	14 34 36.0	0.0
KEF3				S	Sg	14 34 37.8	-0.1
KEF2	Argostoli. Kep	0.07	85	⇓Pd0	Pg	14 34 35.7	-0.3
KEF2				S	Sg	14 34 37.2	-0.6
ARG2	Argostoli	0.07	74	P	Pg	14 34 35.8	-0.2
ARG2				S	Sg	14 34 37.4	-0.5
AGT1	Agia Thekli	0.09	350	P	Pg	14 34 36.2	-0.1
AGT1				S	Sg	14 34 38.4	0.0
	227μm,0.2s						
KEF4	Livadi, Kephal	0.10	9	⇓Pd0	Pg	14 34 36.2	-0.2
KEF4				S	Sg	14 34 38.3	-0.2
KEF1	Kardakata, Kep	0.13	24	⇓Pd0	Pg	14 34 36.5	-0.3
KEF1				S	Sg	14 34 38.8	-0.4
VLS	Valsamata	0.15	83	P	Pg	14 34 36.8	-0.3
VLS				S	Sg	14 34 39.1	-0.5
	150μm,0.1s						
VLS	Valsamata	0.15	83	⇓Pd0	Pg	14 34 36.6	-0.5
VLS				S	Sg	14 34 38.9	-0.7
VLS				AML	AML	14 34 39.3	
VLS				AML	AML	14 34 40.0	
VSK1	VASILIKIADES	0.28	27	P	Pg	14 34 39.1	-0.2
KONA	Konidatara, Ke	0.29	26	⇑Pc0	Pg	14 34 39.3	-0.3
FSK	Fiskardo	0.32	22	P	Pg	14 34 39.8	-0.3
FSK				S	Sg	14 34 44.8	+0.3
	29μm,0.2s						
FSK	Fiskardo	0.32	22	⇓Pd0	Pg	14 34 39.6	-0.5
FSK				S	Sg	14 34 44.6	+0.1
FSK				AML	AML	14 34 45.2	
	comp=N,40662μm,0.3s						
FSK				AML	AML	14 34 45.3	
	comp=E,74528μm,0.2s						
VLMS	Volimes, Zakyn	0.35	144	⇑Pc0	Pg	14 34 40.3	-0.2
VLMS				S	Sg	14 34 45.8	+0.6
VLMS				AML	AML	14 34 46.3	
	comp=E,27425μm,0.3s						
VLMS				AML	AML	14 34 46.7	
	comp=N,39647μm,0.5s						
EVGI	Lefkada island	0.50	23	P	Pg	14 34 42.9	-0.5
EVGI	Lefkada island	0.50	23	⇓Pd0	Pg	14 34 42.8	-0.5
EVGI				S	Sg	14 34 50.4	+0.3
MGNA	Meganis	0.58	31	P	Pg	14 34 44.1	-0.7
MGNA				S	Sg	14 34 52.6	0.0
MGNA				AML	AML	14 34 53.3	
	comp=N,4825μm,0.2s						
MGNA				AML	AML	14 34 54.8	
	comp=E,6642μm,0.1s						
KRI1	kERI	0.59	147	P	Pg	14 34 44.4	-0.6
AST1	Astakos	0.66	54	P	Pg	14 34 45.7	-0.6
LKD2	Lefkada island	0.66	17	P	Pg	14 34 45.6	-0.7
LKD2	Lefkada island	0.66	17	⇓Pd0	Pg	14 34 45.3	-1.0
LKD2				AML	AML	14 35 02.2	
	comp=E,5309μm,0.3s						
LKD2				AML	AML	14 35 04.2	
	comp=N,5173μm,0.3s						
VTN	Vitineika	0.66	111	P	Pg	14 34 46.0	-0.4
VTN	Vitineika	0.66	111	⇑Pc0	Pg	14 34 45.9	-0.4
TSLK	Tsoukalades, L	0.69	16	P	Pg	14 34 46.5	-0.4
TSLK	Tsoukalades, L	0.69	16	P	Pg	14 34 46.0	-0.9
TSLK				S	Sg	14 34 55.6	-0.5
TSLK				AML	AML	14 35 03.2	
	comp=E,7007μm,0.3s						
TSLK				AML	AML	14 35 05.4	
	comp=N,5892μm,0.5s						
PDO	Prodromos	0.75	54	P	Pg	14 34 47.4	-0.7
PDO	Prodromos	0.75	54	⇓Pd0	Pg	14 34 47.3	-0.7
PDO				S	Sg	14 34 57.7	-0.3
PDO				AML	AML	14 35 04.3	
	comp=E,6359μm,0.5s						
PDO				AML	AML	14 35 05.5	
	comp=N,8927μm,0.4s						
RLS	Riolos of Patr	0.84	97	P	Pg	14 34 49.0	-0.8
RLS	Riolos of Patr	0.84	97	P	Pg	14 34 48.9	-0.8
RLS				AML	AML	14 35 04.3	
	comp=N,3077μm,0.3s						
RLS				AML	AML	14 35 04.5	
	comp=E,2584μm,0.4s						
PVO	Paravola	0.99	62	P	Pb	14 34 52.0	-0.5
PVO				S	Sn	14 35 07.0	+0.1
	comp=E,3μm,0.4s						
PVO	Paravola	0.99	62	⇓Pd0	Pb	14 34 51.9	-0.5
PVO				S	Sb	14 35 05.2	-0.3
PVO				AML	AML	14 35 12.4	
	comp=E,6352μm,0.4s						
PVO				AML	AML	14 35 14.5	
	comp=N,5996μm,0.6s						
DRO	Drossia	1.05	101	⇓Pd0	Pg	14 34 52.9	-0.8
DRO				S	Sb	14 35 07.1	0.0
DRO				AML	AML	14 35 14.4	
	comp=E,3988μm,0.3s						
DRO				AML	AML	14 35 14.9	
	comp=N,3643μm,0.5s						
AMT	Artemida-Makis	1.21	121	P	Pb	14 34 56.1	0.0
ANX	Ano Chora	1.27	70	P	Pn	14 34 56.3	-0.7
ANX	Ano Chora	1.27	70	P	Pn	14 34 56.2	-0.8
ANX				AML	AML	14 35 23.0	
	comp=E,3243μm,0.5s						
ANX				AML	AML	14 35 24.2	
	comp=N,4894μm,0.6s						
EVR	Evrytania	1.33	55	P	Pn	14 34 57.5	-0.4
IGT	Igoumenitsa	1.37	358	ePg	Pg	14 35 00.9	+1.1
IGT				eSg	Sg	14 35 18.1	+0.4
IGT	Igoumenitsa	1.37	358	⇑Pc0	Pg	14 34 58.6	-1.2
IGT				S	Sb	14 35 16.8	+0.4
IGT				AML	AML	14 35 22.6	
	comp=N,1267μm,0.2s						
IGT				AML	AML	14 35 23.2	
	comp=E,1546μm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ITM	Ithomi	1.55	129	P	Pb	14 35 01.6	-0.5
OHR	Ohrid	2.96	6	i Pn	Pn	14 35 23.1	+2.9
TIP	Timpagrande	3.03	291	⇓P	Pn	14 35 20.9	-0.3
TIP				⇑S	Sn	14 35 55.4	-2.0
TIR	Tirane	3.21	353	ePn	Pn	14 35 25.3	+1.7
TIR				eSn	Sn	14 36 01.4	-0.3
TIR	Tirane	3.21	353	⇓P	Pn	14 35 25.3	+1.7
TIR				⇑S	Sn	14 36 04.4	+2.6
TAR1	Taranto	3.38	315	ePn	Pn	14 35 26.3	+0.4
VAY	Valandovo	3.57	27	i Pn	Pn	14 35 31.3	+2.8
STIP	Stip	3.79	21	i Pn	Pn	14 35 35.3	+3.8
MATE	Matera	3.79	312	⇑P	Pn	14 35 31.8	+0.3
MATE				⇓S	Sn	14 36 15.0	-1.0
SRS	Serrai	3.84	39	ePn	Pn	14 35 33.6	+1.3
ULC	Ulcinj	3.90	347	ePn	Pn	14 35 32.7	-0.4
ULC				eSn	Sn	14 36 20.0	+1.2
SG1	Sgolgore (BA)	3.93	314	⇑Pn	Pn	14 35 34.2	+0.7
BAI	Bari	4.01	318	ePn	Pn	14 35 34.6	+0.1
DRME	Dracevica, Mon	4.13	347	ePn	Pn	14 35 36.1	-0.1
DRME	Dracevica, Mon	4.13	347	ePn	Pn	14 35 36.3	+0.1
DRME				eSn	Sn	14 36 25.8	+1.4
PDG	Podgorica	4.36	349	ePn	Pn	14 35 40.3	+1.0
PDG	Podgorica	4.36	349	⇑P	Pn	14 35 41.1	+1.9
PDG				⇑S	Sn	14 36 31.7	+1.8
PDG	Podgorica	4.36	349	ePn	Pn	14 35 38.0	-1.3
TTG	Podgorica	4.36	349	ePn	Pn	14 35 39.2	-0.1
TTG				eSn	Sn	14 36 31.0	+1.1
HCY	Herceg Novi	4.53	342	ePn	Pn	14 35 36.5	-5.2
HCY	Herceg Novi	4.53	342	ePn	Pn	14 35 40.8	-0.9
HCY				eSn	Sn	14 36 33.0	-1.1
CEME	Cevo	4.53	346	ePn	Pn	14 35 41.1	-0.6
CEME				eSn	Sn	14 36 36.0	+1.7
IDI	Anoyia	4.60	127	Pn	Pn	14 35 45.9	+3.1
	comp=E,0.4nm,0.3s,baz=335,slow=17,SNR=1.1						
IDI				Sn	Sn	14 36 37.1	+0.9
	comp=E,1.2nm,0.3s,baz=155,slow=22,SNR=7.6						
BOSS	Bosilegrad	4.61	19	ePn	Pn	14 35 43.6	+0.7
IVA	Berane	4.72	355	ePn	Pn	14 35 44.8	+0.3
IVA				eSn	Sn	14 36 40.7	+1.6
NKME	Niksic	4.73	347	ePn	Pn	14 35 45.0	+0.4
NKME				eSn	Sn	14 36 40.4	+1.1
KOME	Kolasin	4.74	352	ePn	Pn	14 35 45.1	+0.5
KOME				eSn	Sn	14 36 40.4	+1.0
NKY	Niksic	4.77	347	ePn	Pn	14 35 45.1	0.0
NKY				eSn	Sn	14 36 40.9	+0.6
TREB	Trebinje	4.81	342	ePn	Pn	14 35 44.6	-1.0
TREB				eSn	Sn	14 36 39.2	-2.1
TREB	Trebinje	4.81	342	ePn	Pn	14 35 44.7	-0.9
BRY	Bratogost	4.95	344	ePn	Pn	14 35 46.9	-0.6
BRY	Bratogost	4.95	344	ePn	Pn	14 35 47.0	-0.6
BRY				eSn	Sn	14 36 45.5	+0.8
VTS	Vitosha	4.95	25	⇓P	Pn	14 35 51.9	+4.3
VTS				⇑S	Sn	14 36 46.6	+1.8
STON	Ston	5.14	337	ePn	Pn	14 35 49.3	-0.7
STON				eSn	Sn	14 36 46.8	-2.4
STON	Ston	5.14	337	ePn	Pn	14 35 49.4	-0.6
UPM	Unac-Piva	5.17	348	ePn	Pn	14 35 50.6	0.0
UPM	Unac-Piva	5.17	348	ePn	Pn	14 35 50.4	-0.2
UPM				eSn	Sn	14 36 50.4	+0.2
IVAS	Ivanjica	5.42	358	ePn	Pn	14 35 53.6	-0.3
BOVS	Bovan	5.56	10	ePn	Pn	14 35 55.9	+0.1
BOVS				eSn	Sn	14 36 58.3	-1.2
GRUS	Gruza	5.73	2	ePn	Pn	14 35 57.6	-0.6
BBLS	Lazići	5.75	353	ePn	Pn	14 35 58.1	-0.4
BBLS				eSn	Sn	14 37 02.0	-2.4
BBLS	Lazići	5.75	353	ePn	Pn	14 35 56.7	-1.8
DIVS	Divibare	5.94	357	ePn	Pn	14 36 01.3	+0.1
DIVS				eSn	Sn	14 37 05.4	-3.7
DIVS	Divibare	5.94	357	ePn	Pn	14 35 59.0	-2.2
HAPS	Han Pijesak,BI	6.02	350	ePn	Pn	14 36 01.0	-1.3
ELND	Elena	6.33	39	⇑P	Pn	14 36 11.9	+5.5
MDVR	Moldovita	6.69	8	⇑P	Pn	14 36 14.7	+3.3
MGRS	Mrkonjic Grad	6.73	339	ePn	Pn	14 36 13.0	+1.0
BLY	Banja Luka	7.01	341	⇑P	Pn	14 36 17.1	+1.3
BLY				⇑S	Sn	14 37 37.4	+2.1
GZR	Gura Zlata	7.44	13	⇓P	Pn	14 36 24.9	+3.1
GZR				⇓P	Pn	14 36 25.2	+3.4
BZS	Buzias	7.51	7	⇓P	Pn	14 36 25.8	+3.2
ARR	Arges	7.86	22	⇓P	Pn	14 36 31.6	+4.1
VOIR		8.05	24	⇓P	Pn	14 36 34.5	+4.3
MORH	Mrgy, Hungar	8.15	351	ePn	Pn	14 36 29.7	-1.7
MLR	Muntele Rosu	8.41	28	⇓P	Pn	14 36 39.9	+4.8
CRES	Cresnjev	8.50	336	ePn	Pn	14 36 35.1	-1.1
CEY	Cerknica	8.78	331	ePn	Pn	14 36 40.0	-0.1
PLOR	Plostina	8.98	29	⇑P	Pn	14 36 47.6	+4.8
LJU	Ljubljana	9.01	333	ePn	Pn	14 36 42.4	-0.7
VRI	Vrincioaia	9.02	29	⇓P	Pn	14 36 47.9	+4.6
SOKA	Soboth	9.39	337	i Pn	Pn	14 36 47.9	-0.6
	comp=E,2.2nm,0.2s,SNR=9.0						
OBKA	Obir	9.40	334	ePn	Pn	14 36 49.0	+0.4
	comp=E,4.7nm,0.3s,SNR=8.0						
ARSA	Arzberg	9.77	340	i Pn	Pn	14 36 53.9	+0.3
	comp=E,1.4nm,0.3s						
KBA	Koelnbreinsper	10.31	332	ePn	Pn	14 37 01.3	+0.1
	comp=E,1.5nm,0.3s						
ABTA	Abfaltersbach	10.37	328	i Pn	Pn	14 37 00.3	-1.6
	comp=E,0.1nm,0.0s						
BRTR	Keskin Array B	10.43	77	Pn	Pn	14 37 02.7	0.0
	comp=E,0.1nm,0.3s,baz=277,slow=19,SNR=1.4						
BRTR				LR	LR	14 40 45.5	
	comp=E,32nm,18.1s,baz=342,slow=37						
MOA	Molln	10.67	337	ePn	Pn	14 37 06.4	+0.5
	comp=E,2.8nm,0.3s,SNR=12						
WTTA	Wattenberg	11.14	328	ePn	Pn	14 37 13.1	+0.5
	comp=E,2.6nm,0.3s						
WATA	Walderalm	11.23	328	i Pn	Pn	14 37 14.5	+0.8
	comp=E,1.9nm,0.2s						
VRAC	Vranov	11.48	347	Pn	Pn	14 37 12.3	-4.6
	comp=E,0.9nm,0.3s,baz=173,slow=14,SNR=4.2						
DAVOX	Davos/Dischmat	11.59	321	Pn	Pn	14 37 18.9	+0.2
	comp=E,0.2nm,0.3s,baz=150,slow=20,SNR=1.7						
GERES	GERESS Array B	11.73	338	Pn	Pn	14 37 18.4	-2.1
	comp=E,0.3nm,0.3s,baz=161,slow=14,SNR=9.8						
ESDC	Sonseca Array	19.01	282	P	P	14 38 59.5	+3.8
	baz=84,slow=13,SNR=1.7						
HFS	Hagfors	22.40	351	P	P	14 39 29.2	-2.2
	comp=E,1.3nm,0.5s,baz=156,slow=11,SNR=8.9						
FINES	FINESS Array B	23.58	7	P	P	14 39 41.2	-2.2
	comp=E,1.4nm,0.7s,baz=166,slow=10,SNR=5.9						
NOA	NORSAR Array B	23.62	349	P	P	14 39 43.1	-0.8
	comp=E,0.5nm,0.6s,baz=158,slow=9.8,SNR=4.8						
MKAR	Makanchi Array	45.39	58	P	P	14 42 50.4	-1.2
	comp=E,0.3nm,0.4s,baz=274,slow=7.7,SNR=10.0						
YKA	Yellowknife Ar	73.38	340	P	P	14 46 04.6	-0.1
	comp=E,0.1nm,0.6s,baz=42,slow=6.6,SNR=3.0						

TAP 22 14:39:17.1, 25°.14N×122°.29E, h159km, ML2.9, D
JMA 22 14:39:17.4±0.2, 25°.05N×122°.44E, h142km±3km, M2.0
ISC 22 14:39:16.6±2.2, 24°.99N±0°.09×122°.45E±0°.04, h155km±13km, n52, σ0.84/95, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.53	214	eP	Pn	14 39 39.8	+1.1
	baz=194						
EOS1				S	Sn	14 39 56.4	+0.9
	baz=194						
TIPB	Shuangxi	0.57	268	P	Pn	14 39 39.0	0.0
	baz=259						
TIPB				S	Sn	14 39 55.2	-0.7
	baz=259						
TWC	Suao	0.67	235	eP	Pn	14 39 39.9	+0.5
	baz=216						
TWC				eS	Sn	14 39 56.1	-0.7
	baz=216						
JYNG	Yonagunijimaku	0.70	140	P	Pn	14 39 39.6	-0.1
TWE	Neicheng	0.76	249	P	Pn	14 39 40.8	+0.7
	baz=230						
TWE				S	Sn	14 39 58.1	+0.2
	baz=230						
SLBB	Yuanshan	0.78	252	eP	Pn	14 39 41.2	+1.0
	baz=235						
SLBB				eS	Sn	14 39 58.5	+0.3
	baz=235						
YM01	YM01	0.81	281	eS	Sn	14 39 57.1	-1.6
	baz=270						
ENA	Nanau	0.86	229	P	Pn	14 39 41.7	+0.9
	baz=210						
ENA				S	Sn	14 39 59.8	+0.6
	baz=210						
ENTT	Nioudou	0.88	247	P	Pn	14 39 41.6	+0.7
	baz=232						
ENTT				S	Sn	14 39 59.9	+0.4
	baz=232						
NWLT	Wulai	0.89	256	P	Pn	14 39 41.5	+0.5
	baz=243						
NWLT				S	Sn	14 39 58.4	-1.2
	baz=243						
NDT	Datong Townshi	0.94	246	P	Pn	14 39 42.3	+0.9
	baz=243						
NDT				S	Sn	14 40 00.6	+0.3
	baz=243						
YHNB	Yeheng	1.03	252	P	Pn	14 39 42.3	+0.1
	baz=231						
YHNB				S	Sn	14 40 00.9	-0.8
	baz=231						
NSK	Sanguang	1.04	253	i P	Pn	14 39 42.4	+0.1
	baz=232						
NSK				S	Sn	14 40 00.9	-1.0
	baz=232						
WLTB	Daxi	1.10	263	eS	Sn	14 40 02.3	-0.3
	baz=253						
NNSB	Datong	1.12	240	P	Pn	14 39 43.7	+0.7
	baz=229						
NNSB				S	Sn	14 40 03.0	-0.3
	baz=229						
NNSH	Datong	1.12	240	i P	Pn	14 39 43.7	+0.6
	baz=230						
NNSH				S	Sn	14 40 02.8	-0.5
	baz=230						
NNS	Nan Shan	1.12	241	P	Pn	14 39 43.8	+0.7
	baz=230						
NNS				S	Sn	14 40 03.2	-0.1
	baz=230						
NACB	Ninganchiao	1.13	224	P	Pn	14 39 43.2	+0.3
	baz=213						
NACB				S	Sn	14 40 02.1	-1.0
	baz=213						
ETLH	Xiulin Townshi	1.18	229	P	Pn	14 39 44.2	+0.6
	baz=218						
ETLH				S	Sn	14 40 03.4	-0.7
	baz=218						
TWD	Chiawan	1.20	221	eS	Sn	14 40 03.5	-0.7
	baz=218						
IRIF	Iriomote-Funau	1.34	119	P	Pn	14 39 45.1	+0.2
IRIF				eS	Sn	14 40 06.0	-0.5
LIOB	Emei	1.35	255	eP	Pn	14 39 45.1	+0.1
	baz=252						
LIOB				S	Sn	14 40 05.1	-1.8
	baz=252						
NSTT	Nanjuang	1.37	255	P	Pn	14 39 45.5	+0.3
	baz=241						
NSTT				i S	Sn	14 40 05.6	-1.5
	baz=241						
WHF	Hehuan Shan	1.37	232	P	Pn	14 39 47.0	+1.3
	baz=219						
WHF				S	Sn	14 40 07.8	-0.2
	baz=219						
TWT	Tachien	1.38	238	P	Pn	14 39 46.9	+1.4
	baz=229						
TWT				S	Sn	14 40 07.4	-0.2
	baz=229						
TDCB	Techi	1.39	238	P	Pn	14 39 46.4	+0.8
	baz=229						
TDCB				S	Sn	14 40 06.7	-1.1
	baz=229						
CHGB	Renai	1.49	232	P	Pn	14 39 47.9	+1.2
	baz=217						
CHGB				S	Sn	14 40 09.2	-0.5
	baz=217						
ESL	Shilin	1.50	219	eP	Pn	14 39 46.4	-0.1
	baz=214						
ESL				S	Sn	14 40 07.8	-1.7
	baz=214						
WHP	Taichung City	1.54	243	P	Pn	14 39 47.9	+0.8
	baz=235						
WHP				S	Sn	14 40 09.6	-0.9
	baz=235						
OWD	Renai	1.56	229	P	Pn	14 39 48.3	+1.0
	baz=219						
OWD				S	Sn	14 40 10.2	-0.6
	baz=219						
JKRS	Kuro-shima	1.61	118	P	Pn	14 39 48.3	+0.7
JKRS				S	Sn	14 40 11.9	+0.4
EGFH	Guangfu	1.62	215	eP	Pn	14 39 48.0	+0.2
	baz=208						
EGFH				eS	Sn	14 40 10.4	-1.3
	baz=208						
NSY	Sanyi	1.64	250	eP	Pn	14 39 48.2	+0.2
	baz=243						
TWQ1	Liyutan	1.66	248	eP	Pn	14 39 48.5	+0.3
	baz=239						
TWQ1				eS	Sn	14 40 11.6	-0.8
	baz=239						
JIJ	Ishigaki jima	1.66	112	P	Pn	14 39 48.6	+0.3
JIJ				S	Sn	14 40 11.4	-1.1
VWDT	VWDT	1.72	224	P	Pn	14 39 50.0	+1.2
	baz=214						
VWDT				S	Sn	14 40 13.7	+0.1
	baz=214						
JISG	Ishigakijimahi	1.74	103	P	Pn	14 39 49.5	+0.4
JISG				eS	Sn	14 40 13.4	-0.6
HGSD	Ruisui	1.76	212	eP	Pn	14 39 50.3	+0.9
	baz=212						
HGSD				eS	Sn	14 40 14.3	-0.3
	baz=212						
SMLT	Sun Moon Lake	1.79	232	P	Pn	14 39 50.6	+0.8
	baz=232						
EHY	Hungye	1.80	215	eS	Sn	14 40 13.6	-1.8
	baz=208						
TYC	Yuchr	1.81	234	P	Pn	14 39 50.8	+0.9
	baz=218						
TYC				S	Sn	14 40 16.0	+0.5
	baz=218						
SSLB	Suanglung	1.82	229	P	Pn	14 39 51.2	+1.2
	baz=222						
SSLB				S	Sn	14 40 16.0	+0.3
	baz=222						
YULB	Yu-li	1.91	214	P	Pn	14 39 50.5	-0.5
	baz=207						
YULB				eS	Sn	14 40 15.8	-1.8
	baz=207						
TWF1	Yuli	1.94	213	eP	Pn	14 39 51.5	+0.1
	baz=212						
TWF1				eS	Sn	14 40 16.1	-2.2
	baz=212						
WHYT	Xinyi Township	1.95	229	P	Pn	14 39 52.2	+0.7
	baz=222						
WHYT				S	Sn	14 40 19.3	+1.0
	baz=222						
WJS	Zhushan	1.96	234	eP	Pn	14 39 51.9	+0.3
	baz=235						
WJS				eS	Sn	14 40 18.2	-0.2
	baz=235						
FULB	Fuli	2.08	211	eP	Pn	14 39 53.5	+0.6
	baz=212						
FULB				eS	Sn	14 40 20.7	-0.2
	baz=212						
JTJ	Tarama	2.08	99	P	Pn	14 39 53.6	+0.7
JTJ				S	Sn	14 40 20.3	-0.5
ALS	Alishan	2.11	226	P	Pn	14 39 54.6	+1.0
	baz=220						
ALS				S	Sn	14 40 22.5	+0.5
	baz=220						
CHN5	Tsauling	2.13	230	P	Pn	14 39 54.6	+0.9
	baz=223						
CHN5				S	Sn	14 40 21.9	-0.3
	baz=223						
CHN4	Tsaushan	2.36	226	eP	Pn	14 39 57.2	+0.9
	baz=222						
TPUB	Ta-pu	2.37	225	eP	Pn	14 39 56.3	-0.2
	baz=220						

IDC 22 14:52:00.3±3.1, 30°.32S×177°.78W, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.4/19, mbtmp3.3/2, Error ellipse: s-maj=68.9km s-min=24.6km az=108.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.07	354	Pn	Pn	14 52 24.0	+1.5
	38nm,0.3s,baz=85,slow=23,SNR=1.2						
RAO				Sn	Sb	14 52 37.0	+0.9
	214nm,0.3s,baz=69,slow=21,SNR=7.3						
ASAR	Alice Springs	43.30	267	P	P	15 00 04.0	-0.2
	0.1nm,0.3s,baz=105,slow=7.5,SNR=6.1						
WRA	Warramunga Arr	44.28	272	P	P	15 00 12.0	0.0
	0.4nm,0.5s,baz=111,slow=7.9,SNR=6.6						
FINES	FINESS Array B	145.13	340	PKPbc	PKPbc	15 11 37.1	-1.4
	11nm,1.3s,baz=43,slow=4.2,SNR=10						

NEIC 22 15:31:11.4±2.8, 15°.31N±0°.06×94°.80W±0°.05, h46km±28km, Error ellipse: s-maj=10.4km s-min=5.2km az=210.0
MEX 22 15:31:14.0±1.5, 15°.42N×94°.79W, h38km±177km, MD4.1
ISC 22 15:31:09.1±1.5, 15°.39N±0°.07×94°.81W±0°.03, h16km±12km, n26, σ1.42/40, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.31	287		Pg	15 31 34.7	+0.3
HUIG					Sb	15 31 49.8	-0.2
HUIG	Huatulco	1.31	287	eP	Pg	15 31 34.7	+0.3
HUIG				eS	Sb	15 31 49.8	-0.2
PCIG		1.56	78		Pn	15 31 37.2	+0.9
PCIG					Sn	15 31 55.1	-1.1
PCIG		1.56	78	eP	Pn	15 31 37.2	+0.9
PCIG				eS	Sn	15 31 55.1	-1.1
PANG	Puerto Angel	1.63	280	i P	Pg	15 31 39.9	-0.6
PANG				i S	Sn	15 31 58.3	+0.5
CMIG	Matias Romero	1.70	358		Pb	15 31 39.8	-0.2
CMIG					Sn	15 31 58.5	-1.1
CMIG	Matias Romero	1.70	358	eP	Pb	15 31 39.8	-0.2
CMIG				eS	Sn	15 31 58.5	-1.1
TGIG		2.13	49		Pb	15 31 46.7	-0.7
TGIG					Sn	15 32 10.0	-0.4
TGIG		2.13	49	eP	Pb	15 31 46.7	-0.7
TGIG				eS	Sn	15 32 10.0	-0.4
PEIG	Puerto Escondi	2.33	285	eP	Pb	15 31 49.3	-1.6
PEIG				i S	Sn	15 32 14.3	-1.0
VHO	Vista Hermosa	2.50	312	i P	Pb	15 31 51.6	-2.1
VHO				eS	Sn	15 32 20.1	+0.6
THIG		2.50	101	i P	Pb	15 31 51.0	+1.9
CCIG	Comitan	2.72	71		Pb	15 31 55.9	-1.6
CCIG	Comitan	2.72	71	eP	Pb	15 31 55.9	-1.6
YOIG	Yosondua	3.01	299	eP	Pb	15 32 01.5	-1.1
YOIG				eS	Sn	15 32 30.0	-2.4
PNIG	Pinotepa	3.35	288		Pn	15 32 04.0	+3.1
PNIG					Sn	15 32 37.3	-3.1
PNIG	Pinotepa	3.35	288	eP	Pn	15 32 04.0	+3.1
PNIG				i S	Sn	15 32 40.6	+0.3
TOIG	Toxpalan	3.46	322	eP	Pb	15 32 08.6	-1.5
TLIG	Tlapa	4.21	301	Pn	Pn	15 32 13.8	+1.1
ACON	Acoyapa	9.96	109	Pn	Pn	15 33 31.3	-0.4
KVTX	Kingsville	12.44	347	Pn	Pn	15 34 04.6	-0.9
FSCY	Frank Sound, G	13.58	71	Pn	Pn	15 34 23.2	+2.0
HPIG		15.31	320	P	P	15 34 49.3	-0.3
342A	Flagon Creek P	16.08	8	Pn	Pn	15 34 55.4	+0.8
342A				IAmb	IAmb	15 36 33.3	
	comp=Z,13nm,0.8s						
344A	Westbrook Farm	16.42	12	Pn	Pn	15 34 59.6	+0.6
344A				IAmb	IAmb	15 35 41.3	
	comp=Z,38nm,1.4s						
ETX02	Prairie Street	16.45	1	Pn	P	15 35 01.1	-1.0

IDC 22 15:35:44.1±0.9, 3°.60S×77°.57W, h0km, mb3.6/9, mb1 3.9/11, mb1mx3.8/39, mbtmp3.6/11, ML3.6/2, MS3.0/3, Ms1 3.0/3, ms1mx2.7/18, Error ellipse: s-maj=33.2km s-min=19.4km az=65.0
NEIC 22 15:35:49.5±2.8, 3°.83S±0°.07×77°.5W±0°.2, h49km±6km, mb4.3/14, Error ellipse: s-maj=22.9km s-min=10.0km az=82.0
ISC 22 15:35:48.5±0.6, 3°.75S±0°.06×77°.4W±0°.1, h35km, n30, σ1.88/30, mb3.9/14, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	3.50	196	Pn	Pn	15 36 42.1	+1.3
	2.9nm,0.3s,baz=15,slow=9.5,SNR=7.6						
ATAH				Sn	Sn	15 37 24.7	+3.6
	3.5nm,0.3s,baz=133,slow=14,SNR=1.7						
OTAV	Otavalo	4.09	345	Pn	Pn	15 36 51.7	+2.7
NNA	Nana	8.20	176	LR	LR	15 41 00.5	
	comp=Z,76nm,19.9s,baz=352,slow=38						
SAML	Samuel	15.06	111	P	P	15 39 24.7	+1.0
LPAZ	La Paz	15.45	144	Pn	P	15 39 28.8	+0.1
	0.2nm,0.3s,baz=331,slow=2.9,SNR=4.4						
LPAZ				LR	LR	15 45 44.9	
	comp=Z,14nm,18.4s,baz=243,slow=38						
LPAZ	La Paz	15.45	144		Pn	15 39 23.2	-1.3
SIV	San Ignacio	20.16	128	P	P	15 40 22.0	+1.9
	0.8nm,0.7s,baz=289,slow=14,SNR=2.7						
LVC	Limon Verde	20.48	157	P	P	15 40 18.2	-5.6
LVC				IAmb	IAmb	15 40 36.5	
	comp=Z,12nm,1.3s						
BDFB	Brasilia	31.25	114	LR	LR	15 56 41.3	
	comp=Z,98nm,18.4s,baz=99,slow=40						
WHAR	Wooly Hollow	41.27	341	P	P	15 43 27.2	-3.2
WHAR				IAmb	IAmb	15 43 38.2	
	comp=Z,7.3nm,1.3s						
TXAR	Lajitas Array	41.42	324	P	P	15 43 31.3	-0.6
	comp=Z,0.3nm,0.7s,baz=136,slow=7.8,SNR=5.5						
TXAR				PcP	PcP	15 45 30.3	+0.7
	comp=Z,0.1nm,0.6s,baz=30,slow=0.6,SNR=1.8						
U40A	Yellville	42.43	341	P	P	15 43 39.4	-0.5
U40A				IAmb	IAmb	15 43 39.8	
	comp=Z,4.0nm,0.5s						
WMOK	Wichita Mounta	43.24	334	P	P	15 43 46.6	+0.1
WMOK				IAmb	IAmb	15 43 48.7	
	comp=Z,2.1nm,0.7s						
SDCO	Great Sand Dun	48.83	330	P	P	15 44 29.2	-1.6
SDCO				IAmb	IAmb	15 44 32.5	
	comp=Z,2.9nm,1.1s						
F64A	Sherman	50.05	8	P	P	15 44 39.8	+0.1
ISCO	Idaho Springs	50.49	332	P	P	15 44 43.4	-0.2
E63A	Oxbow	50.59	8	P	P	15 44 44.8	+1.1
LMN	Caledonia Moun	50.65	11	P	P	15 44 46.6	+2.4
LATQ	La Tuque	51.08	4	P	P	15 44 48.6	+1.2
LATQ				IAmb	IAmb	15 44 49.7	
	comp=Z,2.6nm,0.5s						
BATG	Bathurst New B	51.79	10	P	P	15 44 51.8	-1.0
PKCU	Pink Cliffs	52.26	325	P	P	15 44 55.0	-1.8
EYMN	Ely	52.94	348	P	P	15 44 59.8	-1.5
EYMN				IAmb	IAmb	15 45 17.2	
	comp=Z,6.8nm,1.4s						
PDAR	Pinedale Array	54.67	331	P	P	15 45 14.2	-0.1
	comp=Z,0.4nm,0.6s,baz=119,slow=8.6,SNR=4.9						
ULM	Lac du Bonnet	56.09	346	P	P	15 45 23.0	-1.1
	comp=Z,3.4nm,0.7s,baz=144,slow=9.2,SNR=7.8						
NVAR	Mina Array Bea	56.47	322	P	P	15 45 27.2	-0.2
	comp=Z,0.3nm,0.7s,baz=170,slow=5.5,SNR=2.7						
YKA	Yellowknife Ar	71.85	343	P	P	15 47 07.1	-0.4
	comp=Z,0.3nm,0.5s,baz=139,slow=5.7,SNR=6.6						
ESDC	Sonseca Array	79.75	49	P	P	15 47 54.7	+1.5
	comp=Z,0.3nm,0.3s,baz=318,slow=13,SNR=4.9						
TORD	Torodi Ar. Bea	80.28	76	P	P	15 47 58.2	+1.7
	comp=Z,0.2nm,0.6s,baz=298,slow=4.7,SNR=1.0						
ILAR	Eielson Array	84.76	336	P	P	15 48 18.3	-0.6
	comp=Z,0.5nm,0.9s,baz=132,slow=2.1,SNR=4.3						
ASAR	Alice Springs	139.08	227	PKP	PKPdf	15 55 11.7	-0.8
	comp=Z,0.3nm,0.9s,baz=116,slow=2.2,SNR=2.4						

DJA 22 15:38:28.5±3.1, 8°S±6°×10°9E±°, h17km±29km, M3.9/10, mb4.2/1, MLv3.7/10, Jawa

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KPJI	Karang Pucung	1.14	348	P	Pn	15 38 49.5	-0.1
KPJI				S	Sn	15 39 04.5	-0.3
UGM	Wanagama	1.44	68	P	Pn	15 38 53.4	-0.5
UGM				S	Sn	15 39 09.7	-2.8
CISI	Cisompet, Garu	1.61	303	P	Pn	15 38 56.1	-0.1
CISI				S	Sn	15 39 15.3	-1.3
SMRI	Semarang	1.88	42	P	Pn	15 39 00.1	+0.2
SMRI				S	Sn	15 39 23.6	+0.4
PCJI	Pacitan	2.00	83	P	Pn	15 39 01.8	+0.2
PCJI				S	Sn	15 39 24.5	-1.7
CNJI	Cibinong	2.32	299	P	Pn	15 39 05.8	-0.1
CNJI				S	Sn	15 39 33.4	-0.6
GRJI	Gresik	3.62	65	P	Pn	15 39 23.9	+0.1
GRJI				S	Sn	15 40 04.4	-1.7
GMJI	Gumukmas	4.23	88	P	Pn	15 39 32.4	+0.1
GMJI				S	Sn	15 40 21.2	-0.1
JAGI	Jajag, Banyuwa	4.93	91	P	Pn	15 39 41.5	-0.4
JAGI				S	Sn	15 40 37.5	-1.0
KASI	Kota Agung	5.47	302	P	Pn	15 39 49.3	0.0

IDC 22 15:39:15.9±1.1, 53°.06S×140°.05E, h0km, mb3.9/5,

mb1 4.1/5, mb1mx3.8/28, mbtmp3.9/5, MS3.5/4, Ms1 3.4/4,
ms1mx3.2/18, Error ellipse: s-maj=119.9km s-min=20.3km
az=85.0
NEIC 22 15:39:16.1±2.9, 53°.03S±0°.04×139°.9E±0°.4, h10km±1km,
mb4.3/10, Error ellipse: s-maj=43.5km s-min=7.5km
az=87.0
ISC 22 15:39:16.4±0.8, 53°.05S±0°.1×140°.2E±0°.3, h10km, n31, σ1s52/19, mb4.0/8, MS3.3/4, West of Macquarie Island

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Code  Station Name           Δ°    AZ°  Phase ID          Time        Res
                                        Op      ISC     h  m  s      ISC
TOO   Toolangi              15.84  16          Pn      15 42 59.6  +0.2
TOO                                     IAmb    IAmb   15 43 12.1
      comp=Z,32nm,1.5s
CAN   Canberra              18.72  23   P      P       15 43 32.9  -2.1
CAN                                     IAmb    IAmb   15 43 44.0
      comp=Z,34nm,1.5s
STKA  Stephens Creek        21.11   3   P      P       15 44 03.4  +2.3
      comp=Z,5.5nm,1.1s,baz=208,slow=14,SNR=4.5
STKA                                    LR      LR     15 50 45.0
      comp=Z,56nm,19.9s,baz=203,slow=32
STKA  Stephens Creek        21.11   3   P      P       15 44 03.5  +2.4
RPZ   Rata Peaks            22.34  78   LR     LR      15 51 15.5
      comp=Z,116nm,18.1s,baz=224,slow=32
ARMA  Armidale              24.04  25   P      P       15 44 30.1  -1.5
H01W1 Cape Leeuwin H        25.83 304   T      T       16 11 55.7
      baz=142,slow=75,SNR=29
H01W2 Cape Leeuwin H        25.84 304   T      T       16 11 57.6
      baz=142,slow=75,SNR=35
H01W3 Cape Leeuwin H        25.85 304   T      T       16 11 54.6
      baz=142,slow=75,SNR=32
VNDA  Vanda                 25.89 169   P      P       15 44 47.6  -0.3
      comp=Z,4.3nm,0.8s,baz=10,slow=4,SNR=2.0
URZ   Urewera               29.32  75   LR     LR      15 55 02.1
      comp=Z,65nm,18.6s,baz=242,slow=32
ASAR  Alice Springs         29.66 348   P      P       15 45 22.9  +0.8
      comp=Z,0.8nm,0.6s,baz=164,slow=10,SNR=9.5
ASAR                                    PcP     PcP    15 48 26.3  -0.1
      comp=Z,0.7nm,1.1s,baz=159,slow=4.0,SNR=2.2
AS31  Alice Springs         29.66 348   P      P       15 45 20.6  -1.6
MORW  Morawa                29.79 314   P      P       15 45 20.6  -2.6
MORW                                    IAmb    IAmb   15 45 28.7
      comp=Z,9.2nm,1.2s
WB2   Warramunga Arr        33.28 350   P      P       15 45 54.5  +0.5
WB2                                     IAmb    IAmb   15 46 06.0
      comp=Z,10nm,1.3s
WRA   Warramunga Arr        33.29 350   P      P       15 45 54.0  -0.1
      comp=Z,1.2nm,1.0s,baz=174,slow=7.6,SNR=5.0
WRAB  Tennant Creek         33.30 350   P      P       15 45 55.1  +0.9
WB0   Warramunga Arr        33.45 350   P      P       15 45 54.6  -0.9
WB0                                     IAmb    IAmb   15 46 10.5
      comp=Z,5.6nm,1.2s
QSPA  South Pole Qui        37.14 180   P      P       15 46 26.7  -0.3
      comp=Z,2.8nm,1.1s,baz=360,slow=7.4,SNR=3.5
QSPA  South Pole Qui        37.14 180   IAmb    IAmb   15 46 38.0
      comp=Z,2.2nm,1.2s
MAW   Mawson                38.15 217   LR     LR      16 00 46.2
      comp=Z,126nm,18.4s,baz=40,slow=34
H08S2 Diego Garcia H        70.58 283   T      T       17 07 47.3
      baz=153,slow=76,SNR=4.7
H08S1 Diego Garcia H        70.59 283   T      T       17 07 46.8
H08S3 Diego Garcia H        70.60 283   T      T       17 07 52.3
      baz=151,slow=76,SNR=12
H08N1 Diego Garcia H        72.50 283   T      T       17 10 09.5
      baz=138,slow=76,SNR=12
H08N3 Diego Garcia H        72.51 283   T      T       17 10 13.6
      baz=138,slow=76,SNR=6.1
H08N2 Diego Garcia H        72.52 283   T      T       17 10 15.8
      baz=138,slow=76,SNR=16
FINES FINESS Array B       144.82 310   PKP     PKPdf  15 58 54.1  +2.0
      comp=Z,2.5nm,1.0s,baz=134,slow=4.0,SNR=1.5
ARCES ARCESS Array B       146.56 325   PKPbc   PKPab  15 58 58.9  +1.3
      comp=Z,6.4nm,0.9s,baz=9.9,slow=15,SNR=2.6
GERES GERESS Array B       146.68 285   PKPbc   PKPdf  15 58 56.6  +0.7
      comp=Z,0.2nm,0.3s,baz=35,slow=3.6,SNR=2.6
SPITS Spitsbergen Ar       148.08 341   PKPbc   PKiKP  15 59 03.2  +0.9
      comp=Z,14nm,1.0s,baz=130,slow=9.9,SNR=5.8
```

IDC 22 15:42:05.8±0.7, 37°.34N×36°.41E, h0km, mb4.0/23,
mb1 4.0/31, mb1mx3.9/42, mbtmp3.9/31, ML3.6/4, MS3.3/21,
Ms1 3.3/21, ms1mx3.2/53, Error ellipse: s-maj=13.7km
s-min=10.6km az=160.0
MOS 22 15:42:05.9±1.7, 37°.19N×36°.41E, h12km, mb4.5/19, Error
ellipse: s-maj=6.8km s-min=4.3km az=98.6
MED_RC 22 15:42:06.0±0.4, 37°.42N×36°.38E, h20km, MW4.4/11,
Moment Tensor Solution.Mantle waves: s11,c16;
Duration: 1s0 Moment tensor: Scale 10^15Nm;
Mrr-2.80±.39; Mθθ-0.57±.30; Mφφ3.37±.22; Mrθ3.07±.38;
Mrφ-1.70±.24; Mθφ1.55±.26; Best double couple:
M0 4.78000×10^15 NP1:φs309.00000°, δ52.00000°,
λ-141.00000°. NP2:φs193.00000°, δ60.00000°,
λ-45.00000°. Principal axes: T 4.0300, Plg5.0000°,
Azm253.0000°; N 1.4800, Plg38.0000°, Azm346.0000°; P
-5.5200, Plg52.0000°, Azm157.0000°; nsta1 refers to
body waves. nsta2 refers to surface waves, cutoff=35s.
ISK 22 15:42:06.6, 37°.41N×36°.40E, h7km, ML4.5/36
DDA 22 15:42:06.8, 37°.43N×36°.40E, h12km±1km, ML4.4
HLW 22 15:42:07.6, 37°.51N×35°.73E, h10km±10km, Md4.0
NIC 22 15:42:07.2±0.0, 37°.37N×36°.47E, h0km±2km, Ml4.8/5
GII 22 15:42:07.3±0.0, 37°.47N×36°.23E, h5km, mb4.2/4, MD4.1/4
NEIC 22 15:42:07.1±2.1, 37°.33N±0°.05×36°.29E±0°.04, h10km±1km,
Error ellipse: s-maj=7.4km s-min=4.9km az=195.0
ISC 22 15:42:08.2±0.6, 37°.41N±0°.02×36°.36E±0°.01, h10km±3km, n320, σ1s80/369, mb4.2/45, MS3.4/16, 49C-16D, Turkey

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Code  Station Name           Δ°    AZ°  Phase ID          Time        Res
                                        Op      ISC     h  m  s      ISC
ANDN  Andirin                0.18 355⇓P        Pg      15 42 10.7  -1.4
ANDN                                    IAML           15 42 13.0
      comp=E,131μm,0.3s
ANDN                                    iS      Sg     15 42 13.4  -1.4
ANDN                                    IAML           15 42 16.0
      comp=N,157μm,0.4s
KAMA  Osmaniye               0.33 132⇓iP       Pg      15 42 13.6  -1.1
KAMA                                    iS      Sg     15 42 17.8  -1.3
KOZT  Kozan                  0.43 280   PG      Pg     15 42 16.2  -0.6
KOZT                                    SG      Sg     15 42 22.9  +0.4
HCB   Kahramanmara           0.44  98⇑iP       Pg      15 42 15.3  -1.5
KMRS  Kahramanmaras          0.44  77   PG      Pg     15 42 15.1  -1.7
KMRS                                    SG      Sg     15 42 20.5  -2.1
SAIM  ADANA                  0.61 339⇓iP       Pg      15 42 18.4  -1.8
SAIM                                    iS      Sg     15 42 26.9  -1.3
CEYT  Ceyhan                 0.63 231   PG      Pg     15 42 20.1  -0.3
KHMN  Narli-Kahraman         0.63  91   PG      Pg     15 42 19.5  -1.0
GAZ   Gaziantep              0.71 109   PG      Pg     15 42 20.6  -1.5
GAZ                                     SG      Sg     15 42 30.3  -1.1
GAZ   Gaziantep              0.71 109           Pg     15 42 21.5  -0.5
GAZ                                             Sb     15 42 31.8  -1.0
GAZ   Gaziantep              0.71 109   P       Pg     15 42 20.9  -1.2
GAZ                                     S       Sg     15 42 30.5  -0.9
AKO   Adana                  0.73 275⇑iP       Pg      15 42 21.4  -1.0
AKO                                     iS      Sb     15 42 33.8  +0.6
YURE  YUREGIR                0.82 226   PG      Pg     15 42 23.3  -0.8
YURE  YUREGIR                0.82 226⇑iP       Pg      15 42 22.7  -1.4
YURE                                    iS      Sn     15 42 40.2  +2.0
KUZU  Kuzuini                0.85 138⇓iP       Pg      15 42 23.9  -0.7
KUZU                                    iS      Sb     15 42 35.5  -1.1
KUZU                                    IAML           15 42 39.0
      comp=E,19μm,0.3s
GZT   Gaziantep              0.96  93⇑iP       Pg      15 42 24.8  -1.9
GZT                                     iS      Sg     15 42 37.6  -1.6
SARI  SarD1z-Kayseri         1.00   2   PG      Pg     15 42 25.9  -1.6
SARI                                    SG      Sb     15 42 40.7  -0.5
TAHT  Tahtakopru-Hat         1.04 188   PG      Pg     15 42 26.9  -1.3
YAHY  KAYSERI_Yahyal         1.05 311⇑iP       Pg      15 42 26.7  -1.8
YAHY                                    iS      Sg     15 42 41.6  -0.6
YAHY                                    IAML           15 42 47.0
      comp=E,6μm,0.9s
KARA  Karaisali              1.05 263   PN      Pg     15 42 27.8  -0.7
ELBS  KAHRAMANMARAS          1.10  33⇑iP       Pg      15 42 26.4  -3.1
ELBS                                    iS      Sg     15 42 39.6  -4.1
ELBS                                    IAML           15 42 47.0
      comp=N,9μm,0.5s
KRTD  Karatas-Adana          1.11 223   PN      Pb     15 42 28.6  -0.9
CMRD  Camardi-Nigde          1.12 284   PN      Pb     15 42 27.6  -2.2
KRTS  Karatas                1.15 224   PN      Pb     15 42 29.1  -1.1
GULE  Gulek                  1.27 265⇑iP       Pb      15 42 30.2  -2.0
GULE                                    iS      Sn     15 42 50.0  +0.6
GULE                                    IAML           15 42 53.0
      comp=N,10μm,0.5s
DED   Mersin                 1.33 251⇑iP       Pn      15 42 30.7  -2.2
DED                                     iS      Sg     15 42 51.1  +0.2
DED                                     IAML           15 42 53.0
      comp=E,6μm,0.5s
YAYL  Yayladag               1.38 189   iP      Pn     15 42 32.8  -1.0
YAYL                                    iS      Sb     15 42 51.4  -0.6
YAYL                                    IAML           15 42 56.0
      comp=E,3μm,0.5s
DARE  Darende-Malaty         1.46  37   PN      Pn     15 42 33.8  -1.0
CUGUR Gurin_SVAS             1.50  28⇑iP       Pn      15 42 33.8  -1.6
CUGUR                                   iS      Sn     15 42 54.6  -0.5
BNN   Bunyan                 1.50 344   PN      Pn     15 42 34.6  -0.8
AKCD  Akcadag                1.52  54⇑iP       Pn      15 42 34.0  -1.7
AKCD                                    iS      Sn     15 42 55.1  -0.5
AKCD                                    IAML           15 43 00.0
      comp=E,14μm,0.4s
ATAB  Bozova                 1.54  87⇑iP       Pn      15 42 33.7  -2.1
ATAB                                    iS      Sb     15 42 55.7  -0.7
NIG   Nigde                  1.56 297   PN      Pn     15 42 35.6  -0.7
MERS  Mersin                 1.57 251   PN      Pn     15 42 35.8  -0.4
GUNE  Kayseri                1.60 339   iP      Pn     15 42 37.2  +0.4
GUNE                                    iS      Sg     15 42 59.3  -0.6
KERG  Konya-Eregli           1.78 271⇑iP       Pn      15 42 38.1  -1.2
KERG                                    iS      Sb     15 43 04.3  +0.8
AVNS  Nevsehir-Avano         1.84 320⇑iP       Pn      15 42 40.1  +0.1
AVNS                                    iS      Sb     15 43 04.7  -0.5
AVNS                                    IAML           15 43 15.0
      comp=N,2μm,0.7s
SURC  SANLIURFA_SURC         1.87 106⇓iP       Pn      15 42 38.2  -2.2
SURC                                    iS      Sb     15 43 05.6  -0.4
CUALT Altinyayla-SIV         1.89   9   iP      Pn     15 42 40.4  -0.4
CUALT                                   iS      Sb     15 43 07.4  +0.7
GULA  Gulagac                1.93 300   PN      Pn     15 42 41.2   0.0
HEKM  Malatya_Hekimh         1.94  40⇑iP       Pn      15 42 40.1  -1.3
HEKM                                    iS      Sg     15 43 09.5  -1.0
URFA  Urfa                   1.96  88   PN      Pn     15 42 40.7  -0.9
KIZK  Mersin                 2.00 243   PN      Pn     15 42 41.8  -0.3
KIZK  Mersin                 2.00 243⇑iP       Pn      15 42 41.4  -0.8
KIZK                                    iS      Sb     15 43 09.6  -0.2
CUSAR Sarkisla-SIVAS         2.01 357   iP      Pn     15 42 41.7  -0.7
CUSAR                                   iS      Sb     15 43 09.0  -1.2
CUKAN kangal_SIVAS           2.10  24⇑iP       Pn      15 42 42.9  -0.7
CUKAN                                   iS      Sb     15 43 12.5  -0.1
SANL  SANLIURFA_Merk         2.11  96⇓iP       Pn      15 42 41.2  -2.4
SANL                                    iS      Sb     15 43 13.1  +0.4
YESY  Yesilyurt              2.12 281   PN      Pn     15 42 44.0  +0.2
SIRC  Yozgat                 2.15 334   iP      Pn     15 42 43.9  -0.5
SIRC                                    iS      Sg     15 43 15.9  -1.6
SILI  Silifke-Mersin         2.21 243   PN      Pn     15 42 45.6  +0.6
ARPR  Arapgir-MALATY         2.29  42   PN      Pn     15 42 45.7  -0.6
KEBE  Keben-Mersin           2.33 247   PN      Pn     15 42 47.0  +0.3
ELZG  Elazig                 2.34  61⇑iP       Pn      15 42 45.3  -1.6
ELZG                                    iS      Sb     15 43 19.9  +0.2
YOZ   Yozgat                 2.38 340   PN      Pn     15 42 47.2  -0.2
AKSY  AKSARAY - Alti         2.40 302   iP      Pn     15 42 47.8  +0.1
AKSY                                    iS      Sb     15 43 21.2  -0.2
IKL   Isikli                 2.44 242   PN      Pn     15 42 47.9  -0.3
KARG  Kargicak-Mersi         2.44 241   PN      Pn     15 42 48.0  -0.2
KRMN  Karaman                2.48 266   PN      Pn     15 42 49.5  +0.7
TISA  Tisan-Mersin           2.49 241   PN      Pn     15 42 49.3  +0.5
YESI  Yesilovacik-Me         2.50 242   PN      Pn     15 42 49.3  +0.4
KEMA  Kemaliye               2.50  41⇑iP       Pn      15 42 47.7  -1.5
KEMA                                    iS      Sb     15 43 24.6  +0.3
SVRC  Sivrice-ELAZID         2.52  66   PN      Pn     15 42 48.6  -0.9
SCER  sogukcermik            2.52  13   iP      Pn     15 42 49.5   0.0
SCER                                    iS      Sg     15 43 28.8  -0.6
YAYX  Yaylak                 2.53 308   PN      Pn     15 42 49.3  -0.2
TEVE  Tevekalti-Mers         2.53 248   PN      Pn     15 42 49.7  +0.2
TEPK  Tepekoy-MERSIN         2.55 243   PN      Pn     15 42 50.2  +0.5
SVSK  Karacayir              2.56  11   PN      Pn     15 42 49.4  -0.3
GULN  MERSIN_Gulnar          2.57 243   iP      Pn     15 42 48.9  -1.1
GULN                                    iS      Sn     15 43 22.2  +0.9
EREN  Erenkoy                2.57 224   PN      Pn     15 42 50.6  +0.6
EREN  Erenkoy                2.57 224   iP      Pn     15 42 49.4  -0.6
AKKU  Akkuyu-Mersin          2.58 242   PN      Pn     15 42 50.1  +0.1
KIRS  Kırehir-Merke          2.59 313   iP      Pn     15 42 50.8  +0.6
KIRS                                    iS      Sb     15 43 24.9  -1.7
AKK2  Akkuyu-Mersin          2.59 242   PN      Pn     15 42 50.8  +0.6
AKK1  Akkuyu-Mersin          2.59 242   PN      Pn     15 42 50.8  +0.6
OREN  Orenkoy-Mersin         2.62 244   PN      Pn     15 42 50.6   0.0
YORU  Yoruktepe-Mers         2.68 243   PN      Pn     15 42 52.1  +0.6
SERE  Sereflikochisa         2.69 306   PN      Pn     15 42 51.6  -0.1
CDAG  Cicekdag               2.71 325   iP      Pn     15 42 52.2  +0.2
CDAG                                    iS      Sb     15 43 32.1  +1.9
CUZAR Zara_SIVAS             2.71  24   iP      Pn     15 42 53.2  +1.2
CUZAR                                   iS      Sg     15 43 33.7  -1.8
REFA  Refahiye_ERZN          2.74  43   iP      Pb     15 42 56.6  -0.9
REFA                                    iS      Sg     15 43 35.2  -1.1
ERMK  Ermenek                2.87 256   iP      Pn     15 42 55.7  +1.5
ERMK                                    iS      Sb     15 43 32.9  -1.9
TOKT  Tokat                  2.92   3   PN      Pn     15 42 54.8  +0.1
DIYA  Diyarbakir             3.03  79   iP      Pn     15 42 54.6  -1.7
DIYA                                    iS      Sg     15 43 42.3  -3.2
TNCL  Tunceli-Merkez         3.03  55   iP      Pn     15 42 54.7  -1.7
TNCL                                    iS      Sg     15 43 46.4  +0.8
COAL  Corum-Alaca            3.04 340   iP      Pn     15 42 58.2  +1.6
COAL                                    iS      Sb     15 43 38.6  -1.2
DYBB  Diyarbakir             3.04  78   PN      Pn     15 42 56.7  +0.2
PARAL Paralimni              3.05 219   P       Pn     15 42 57.2  +0.6
PARAL                                   S       Sb     15 43 37.3  -2.7
PARAL                                   AML     AML    15 43 41.6
      comp=N,5.1nm,0.6s
PARAL                                   AML     AML    15 43 41.6
      comp=N,5.1nm,0.6s
PARAL                                   AML     AML    15 43 43.6
      comp=N,6.0nm,0.8s
PARAL                                   AML     AML    15 43 43.6
      comp=N,6.0nm,0.8s
RSDY  Resadiye-TOKAT         3.08  14   PN      Pn     15 42 56.8  -0.2
HWQ   Hawqa                  3.14 186   eP      Pn     15 42 57.6  -0.2
SUSE  Susehri                3.15  27   iP      Pn     15 42 58.0  -0.1
SUSE                                    iS      Sg     15 43 48.5  -0.8
BR131 Keskin Array S         3.15 318           Pn     15 42 58.9  +0.8
BR131 Keskin Array S         3.15 318   iP      Pn     15 42 58.7  +0.6
BRTR  Keskin Array B         3.15 318   Pn      Pn     15 42 58.7  +0.6
      comp=N,6.5nm,0.3s,baz=145,slow=18,SNR=90
BRTR                                    Sn      Sn     15 43 35.0  -0.9
      comp=N,10.0nm,0.3s,baz=345,slow=32,SNR=1.7
MAZI  Mazidag                3.25  88   PN      Pn     15 42 59.1  -0.3
ATHAL Athalassa              3.29 228   P       Pn     15 43 00.4  +0.5
ATHAL                                   AML     AML    15 43 47.5
      comp=N,5.5nm,0.8s
ATHAL                                   AML     AML    15 43 59.5
      comp=N,5.4nm,1.0s
HANI  Diyarbakir_Han         3.35  71⇑iP       Pn      15 42 59.2  -1.5
HANI                                    iS      Sg     15 43 52.3  -3.5
ERZN  Erzincan               3.42  49   PN      Pn     15 43 01.6  -0.1
CSS   Mathiatis              3.46 226           Pn     15 42 59.6  -2.6
CSS                                             Sn     15 43 38.7  -4.5
CSS   Mathiatis              3.46 226⇑P        Pn      15 43 04.0  +1.8
CSS   Mathiatis              3.46 226   Pn      Pn     15 43 01.5  -0.7
MARD  Mardin                 3.52  90   iP      Pn     15 43 00.4  -2.7
MARD                                    iS      Sb     15 43 56.2  +2.7
BHL   Bhannes                3.54 190   eP      Pn     15 43 03.0  -0.4
LEF   Lefka                  3.62 232⇑P        Pn      15 43 00.2  -4.1
LEF                                     ⇑S      Sn     15 43 34.5  -13
ASGA  Asgata                 3.63 225⇑P        Pn      15 43 05.4  +0.9
ASGA                                    AML     AML    15 43 59.4
      comp=N,3.5nm,0.8s
ASGA                                    AML     AML    15 43 59.6
      comp=N,2.5nm,0.7s
BR231 Keskin MP Arra         3.72 312           Pn     15 43 06.3  +0.5
ANTO  Ankara                 3.72 312⇓P        Pn      15 43 07.9  +2.0
ANTO  Ankara                 3.72 312           Pn     15 43 06.6  +0.7
ANTO  Ankara                 3.72 312   P       Pn     15 43 06.6  +0.7
DQRL  Deir Qamar             3.75 190   eP      Pn     15 43 06.0  -0.2
SZAC  Souni                  3.87 228   P       Pn     15 43 08.8  +1.0
SZAC                                    S       Sn     15 43 57.1  +3.9
SZAC                                    AML     AML    15 44 01.5
      comp=N,4.2nm,1.0s
SZAC                                    AML     AML    15 44 01.5
      comp=N,4.2nm,1.0s
SZAC                                    AML     AML    15 44 02.2
      comp=N,3.9nm,0.5s
SZAC                                    AML     AML    15 44 02.2
      comp=N,3.9nm,0.5s
QRWL  Qaraoun                3.89 188   eP      Pn     15 43 08.3  +0.1
RCY   Rachaya                3.92 186   eP      Pn     15 43 08.8  +0.1
AKMS  Akamas                 4.04 235   P       Pn     15 43 10.3  +0.2
AKMS                                    AML     AML    15 44 08.0
      comp=N,3.4nm,0.6s
AKMS                                    AML     AML    15 44 09.6
      comp=N,3.4nm,1.1s
NATA  Nata                   4.04 231⇑P        Pn      15 43 12.0  +1.9
NATA                                    S       Sn     15 44 01.9  +4.4
SHBL  Chebaa                 4.08 187   eP      Pn     15 43 10.5  -0.3
NATI  Neve Ativ              4.17 187   Pn      Pn     15 43 11.8  -0.1
NATI                                    Sn      Sn     15 44 02.3  +1.7
ILGA  Ilgaz                  4.18 331           Pn     15 43 13.7  +1.4
KSDI  Kefar Szold            4.24 188   P       Pn     15 43 12.9   0.0
KSDI                                    S       Sn     15 44 05.3  +2.8
KSDI  Kefar Szold            4.24 188   Pn      Pn     15 43 13.1  +0.2
DIKM  Dikmen                 4.33 349⇑P        Pb      15 43 23.6  -0.8
DIKM                                    ⇑S      Sb     15 44 17.1  +0.6
HNTI  Hanita                 4.42 193   Pn      Pn     15 43 15.1  -0.3
HNTI                                    Sn      Sn     15 44 07.9  +1.0
KSHT  Keshet                 4.44 186   Pn      Pn     15 43 17.1  +1.4
MMA0B Mount Meron ar         4.45 190   Pn      Pn     15 43 16.3  +0.4
MMA0B                                   Sn      Sn     15 44 07.8  +0.1
MMAI  Mount Meron Ar         4.45 190   Pn      Pn     15 43 15.8  -0.1
      comp=N,25nm,0.3s,baz=14,slow=14,SNR=138
MMAI                                    Sn      Sn     15 44 07.0  -0.8
      comp=N,38nm,0.3s,baz=5.7,slow=26,SNR=11
MMAI                                    Lg      Lg     15 44 31.7
      comp=N,11nm,0.3s,baz=19,slow=36,SNR=2.2
ISP   Isparta                4.66 277   Pn      Pn     15 43 18.2  -0.5
ISP   Isparta                4.66 277   P       Pn     15 43 18.3  -0.5
ISP   Isparta                4.66 277           Pn     15 43 17.0  -1.7
BLGI  Bet Lehem HaGe         4.76 192   Pn      Pn     15 43 20.4  +0.4
BLGI                                    Sn      Sn     15 44 17.6  +2.3
BZK   Bozkurt                4.90 339⇓P        Pb      15 43 28.9  -5.2
BZK                                     ⇓S      Sb     15 44 28.7  -4.4
OFRI  `Ofer                  4.91 194   Pn      Pn     15 43 22.3  +0.2
MMLI  Mount Malkishu         5.01 189   P       Pn     15 43 23.8  +0.2
MMLI                                    S       Sn     15 44 24.1  +2.4
MMLI  Mount Malkishu         5.01 189   Pn      Pn     15 43 24.9  +1.3
MMLI                                    Sn      Sn     15 44 23.6  +2.0
ELL   Elmali                 5.20 265           Pn     15 43 28.9  +2.7
ELL   Elmali                 5.20 265   P       Pn     15 43 29.0  +2.7
ELL   Elmali                 5.20 265   Pn      Pn     15 43 28.3  +2.1
OSC2  CSNet OBS 4            5.47 219   P       Pn     15 43 31.0  +1.3
OSC2                                    S       Sn     15 44 36.0  +3.3
BCA   Borcka                 5.73  44⇑P        Pn      15 43 50.7  +2.4
BCA                                     ⇑S      Sg     15 45 07.5  -4.7
DSI   Dead Sea               5.88 188   Pn      Pn     15 43 36.5  +1.1
BATM  Batumi                 5.88  43⇑P        Pb      15 43 53.2  +2.4
BATM                                    ⇑S      Sb     15 45 06.0  +4.7
AMAZ  Amatzia                5.98 192   P       Pn     15 43 38.5  +1.6
AMAZ  Amatzia                5.98 192   Pn      Pn     15 43 38.0  +1.2
MANT  Manisa                 6.26 282           Pn     15 43 38.8  -2.1
SOC   Sochi                  6.68  21   eP      Pn     15 43 49.8  +3.4
SOC                                     e              15 45 07.4
SOC                                     pmax    pmax
      comp=Z,10.0nm,0.6s
SOC                                     MLR     MLR
      comp=Z,306nm,9.0s
RSH                          6.79 200   P       Pn     15 43 46.7  -1.2
      baz=195
RSH                                     S       Sn     15 44 59.1  -6.3
      baz=195
AKH   Akhalkalaki            6.81  52⇑P        Pb      15 44 07.2  +0.3
GNI   Garni                  7.09  65   Pn      Pn     15 43 52.1  -0.2
      comp=Z,0.5nm,0.3s,baz=156,slow=13,SNR=3.3
GNI                                     Pg      Pb     15 44 15.6  +4.0
      comp=Z,0.2nm,0.3s,baz=265,slow=12,SNR=4.9
GNI   Garni                  7.09  65   iP      Pn     15 43 55.0  +2.7
SEV   Sevastopol'            7.42 345   eP      Pn     15 43 57.6  +1.1
SEV                                     eS      Sn     15 45 21.7  +1.0
ALU   Alushta                7.42 349   eP      Pn     15 43 57.5  +1.0
SUDU  Sudak                  7.55 353   eP      Pn     15 44 00.4  +2.1
NEY   Neytrino               7.59  38   iP      Pn     15 44 03.3  +4.2
KARP  Karpathos              7.64 259           Pn     15 43 58.9  -0.7
EIL   Elat                   7.80 189   Pn      Pn     15 44 01.2  -0.7
      comp=Z,0.2nm,0.3s,baz=10.0,slow=17,SNR=1.6
EIL                                     Sn      Sn     15 45 34.3  +4.0
      comp=Z,0.7nm,0.3s,baz=10,slow=14,SNR=1.3
EIL                                     LR      LR     15 47 25.6
      comp=Z,128nm,18.6s,baz=297,slow=41
EIL   Elat                   7.80 189   Pn      Pn     15 44 02.6  +0.7
SHA1  Shidzhatmaz            7.93  35   iP      Pn     15 44 08.3  +4.5
KBZ   Khabaz                 8.04  36   Pn      Pn     15 44 07.8  +2.8
      comp=Z,0.0nm,0.3s,baz=176,slow=20,SNR=2.9
KBZ                                     LR      LR     15 47 51.7
      comp=Z,90nm,19.7s,baz=226,slow=43
SUZ   Suez                   8.10 202   P       Pn     15 44 05.1  -0.8
      baz=199
KIV   Kislovodsk             8.12  34   eP      Pn     15 44 09.8  +3.6
KIV                                     pmax    pmax
      comp=Z,22nm,1.0s
KIV                                     MLR     MLR
      comp=Z,111nm,9.0s
GLL   Jalalah                8.72 208   P       Pn     15 44 12.5  -1.9
      baz=205
ALN   Alexandroupoli         8.74 297   Pn      Pn     15 44 15.4  +0.8
ALN   Alexandroupoli         8.74 297   P       Pn     15 44 15.5  +0.8
IDI   Anoyia                 9.49 261   Pn      Pn     15 44 23.5  -1.6
      comp=Z,4.5nm,0.3s,baz=75,slow=14,SNR=31
IDI                                     Sn      Sn     15 46 05.4  -6.5
      comp=Z,0.4nm,0.3s,baz=53,slow=17,SNR=2.4
HARR  Harsova                9.67 321⇑P        Pn      15 44 29.7  +2.3
RAZG  Razgrad                9.70 312⇑P        Pn      15 44 28.9  +1.0
CFR   Carcaliu               9.93 324⇑P        Pn      15 44 34.3  +3.4
MAK   Makhachkala           10.17  53   eP      Pn     15 44 35.9  +1.7
MAK                                     eS      Sn     15 46 32.3  +4.1
MAK                                     pmax    pmax
      comp=Z,95nm,1.2s
MAK                                     MLR     MLR
      comp=Z,288nm,10.0s
ISR   Istrita               10.67 319⇓P        Pn      15 44 44.0  +2.8
ISR   Istrita               10.67 319   eP      Pn     15 44 44.0  +2.8
VRI   Vrincioaia            11.10 323⇑P        Pn      15 44 50.2  +3.2
MLR   Muntele Rosu          11.23 319   LR      LR     15 49 45.9
      comp=Z,108nm,19.1s,baz=113,slow=41
MLR   Muntele Rosu          11.23 319⇑P        Pn      15 44 51.0  +2.0
VTS   Vitosha               11.33 301⇑P        Pn      15 44 49.3  -1.0
VTS   Vitosha               11.33 301   Pn      Pn     15 44 48.2  -2.1
VTS   Vitosha               11.33 301   P       Pn     15 44 48.2  -2.1
TESR  Tescani               11.61 325⇓P        Pn      15 44 56.9  +2.9
VOIR                        11.68 317⇓P        Pn      15 44 55.9  +0.9
DOPR  Dopca                 11.84 320⇓P        Pn      15 45 00.1  +2.9
SORM  Soroca                12.22 334⇓P        Pn      15 45 07.4  +5.1
LOT   Lotru                 12.39 314⇑P        Pn      15 45 06.7  +1.9
GZR   Gura Zlata            12.94 312⇑P        Pn      15 45 12.3  +0.1
BURAR Bucovina Array        13.09 325⇑P        Pn      15 45 17.0  +2.8
BUR08 Bucovina Ar. S        13.12 325   Pn      Pn     15 45 12.4  -2.3
BZS   Buzias                13.75 311⇑P        Pn      15 45 22.4  -0.7
DRGR                        13.79 317⇓P        Pn      15 45 25.6  +1.8
VSR   Storozhevoye          13.95   7   eP      P      15 45 30.2  -3.8
VSR                                     pmax    pmax
      comp=Z,5.0nm,0.7s
AKASG Malin Array Be        14.24 341   Pn      Pn     15 45 29.9   0.0
      comp=Z,0.6nm,0.3s,baz=158,slow=12,SNR=7.3
AKASG Malin Array Be        14.24 341   iP      Pn     15 45 31.7  +1.9
VRH   Novokhopyorsk         14.31  14   eP      Pn     15 45 32.5  +1.7
VRH                                     pmax    pmax
      comp=Z,5.0nm,0.6s
TRPA  Tarpa                 14.74 321⇑P        Pn      15 45 38.2  +1.5
LPSR  Galich'ya Gora        15.30   6   eP      Pn     15 45 42.6  -1.6
LPSR                                    pmax    pmax
      comp=Z,10.0nm,0.6s
KOLS  Kolonicke sedl        15.41 323   eP      P      15 45 51.2  +0.9
KOLS  Kolonicke sedl        15.41 323   eP      P      15 45 51.2  +0.9
CRVS  Cervenica-Dubn        15.79 321   eP      P      15 45 55.2  +0.7
CRVS  Cervenica-Dubn        15.79 321   eP      P      15 45 55.2  +0.7
PSZ   Piszkesteto           16.00 316⇑P        Pn      15 45 55.0  +1.6
SGRT  San Giovanni R        16.47 292   P       P      15 46 00.8  -1.4
SGRT                                    IAmb    IAmb   15 46 06.3
      comp=Z,15nm,0.9s
VYHS  Vyhne                 16.91 316   eP      P      15 46 09.4  +2.5
VYHS  Vyhne                 16.91 316   eP      P      15 46 09.4  +2.5
GEYT  Alibeck               17.23  82   P       Pn     15 46 07.0  -2.1
      comp=Z,0.3nm,0.3s,baz=257,slow=13,SNR=2.4
GEYT                                    LR      LR     15 52 51.3
      comp=Z,46nm,19.5s,baz=60,slow=38
GYA0B ALIBECK ARRAY         17.23  82           Pn     15 46 08.3  -0.7
VAE   Valguarnera           17.43 277   LR      LR     15 53 43.1
      comp=Z,114nm,18.8s,baz=172,slow=40
OBN   Obninsk               17.71   0⇑eP       P       15 46 16.9  +1.2
OBN                                     eS      S      15 49 37.4  -2.0
OBN                                     pmax    pmax
      comp=Z,45nm,1.7s
OBN                                     MLR     MLR
      comp=Z,94nm,16.0s
MODS  Modra-Piesok          17.72 314   eP      P      15 46 17.8  +1.9
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MODS	Modra-Piesok	17.72	314	eP	P	15 46 17.8	+1.9
SOKA	Soboth	18.31	307	esP	P	15 46 23.9	+1.5
	comp=Z,8.1nm,1.3s						
VRAC	Vranov	18.60	316	P	P	15 46 20.3	-5.2
	comp=Z,0.6nm,0.3s,baz=182,slow=4.1,SNR=4.3						
VRAC				LR	LR	15 54 40.7	
	comp=Z,134nm,19.2s,baz=118,slow=40						
VRAC	Vranov	18.60	316	⇑P	Pn	15 46 26.8	+1.0
TRI	Trieste	18.79	303	P	P	15 46 25.9	-1.7
TRI				IAmb	IAmb	15 46 37.8	
	comp=Z,26nm,1.1s						
TRI	Trieste	18.79	303	P	P	15 46 26.0	-1.7
TRI				pmax	pmax		
	comp=Z,26nm,1.1s						
MOA	Molln	19.26	310	eP	Pn	15 46 35.9	+2.1
	comp=Z,6.2nm,1.0s						
DPC	Dobruska-Polom	19.32	318	eP	Pn	15 46 36.6	+2.1
DPC	Dobruska-Polom	19.32	318	eP	Pn	15 46 36.6	+2.1
KBA	Koelnbreinsper	19.53	307	eP	Pn	15 46 40.3	+3.1
	comp=Z,13nm,1.1s						
UPC	Upice	19.57	318	eP	Pn	15 46 40.2	+2.7
UPC	Upice	19.57	318	eP	Pn	15 46 40.2	+2.7
CHVC	Chvalec	19.59	319	eP	Pn	15 46 37.8	0.0
STAL	STALIGIAL	19.66	304	P	P	15 46 35.3	-2.0
STAL				IAmb	IAmb	15 46 40.6	
	comp=Z,8.9nm,0.9s						
GOPC	GO Pecny, Ondr	19.91	316	eP	Pn	15 46 43.5	+1.9
GOPC	GO Pecny, Ondr	19.91	316	eP	Pn	15 46 43.5	+1.9
ABTA	Abfaltersbach	19.95	305	eP	Pn	15 46 41.7	-0.4
	comp=Z,11nm,1.4s						
OSSC	Osservatorio P	20.03	296	P	Pn	15 46 38.5	-2.7
OSSC				IAmb	IAmb	15 46 44.4	
	comp=Z,33nm,1.3s						
GEC2	GERESS Array S	20.03	312	P	P	15 46 39.8	-1.5
GERES	GERESS Array B	20.03	312	P	P	15 46 41.6	+0.3
	comp=Z,3.1nm,0.9s,baz=112,slow=10,SNR=16						
PRU	Pruhonice	20.09	316	eP	Pn	15 46 43.6	0.0
PRU	Pruhonice	20.09	316	eP	Pn	15 46 43.6	0.0
TEOL	Teolo	20.11	301	P	P	15 46 40.6	-1.5
CASP	Castiglione de	20.20	293	P	P	15 46 41.5	-1.6
AKTO	Aktyubinsk	20.23	43	P	P	15 46 43.1	-0.2
	comp=Z,4.3nm,0.7s,baz=254,slow=10,SNR=13						
AKTO				LR	LR	15 54 57.9	
	comp=Z,43nm,18.6s,baz=218,slow=38						
KHC	Kasperske Hory	20.23	313	eP	P	15 46 41.2	-2.2
KHC				epP	Pn	15 46 45.6	+0.3
KHC				esP	sP	15 46 52.0	+4.3
KHC	Kasperske Hory	20.23	313	P	P	15 46 42.5	-0.9
KHC	Kasperske Hory	20.23	313	iP	Pn	15 46 46.1	+0.8
KHC				pmax	pmax		
	comp=Z,21nm,1.6s						
PVCC	Panska Ves	20.35	317	eP	Pn	15 46 46.7	0.0
PVCC	Panska Ves	20.35	317	eP	Pn	15 46 46.7	0.0
WTTA	Wattenberg	20.69	306	iP	Pn	15 46 49.9	-1.0
	comp=Z,17nm,1.4s						
WATA	Walderalm	20.75	306	eP	Pn	15 46 50.7	-0.9
	comp=Z,18nm,1.1s						
BRG	Berggiesshubel	20.87	317	eP	Pn	15 46 53.6	+0.8
	comp=Z,34nm,1.6s						
BRG	Berggiesshubel	20.87	317	eP	Pn	15 46 53.6	+0.8
BRG				pmax	pmax		
	comp=Z,34nm,1.6s						
SQTA	Sankt Quirin	20.95	306	isP	P	15 46 52.3	+1.0
	comp=Z,10nm,1.4s						
MOTA	Moosalm	21.06	306	esP	P	15 46 53.4	+0.9
	comp=Z,12nm,1.0s						
FETA	Feichten	21.20	305	eP	P	15 46 55.2	+1.1
	comp=Z,7.2nm,1.1s						
RETA	Reutte	21.32	306	iPn	P	15 46 55.8	+0.5
	comp=Z,5.8nm,0.6s						
FUORN	Ofenpass-Fuorn	21.39	304	P	P	15 46 53.8	-2.4
FUORN				IAmb	IAmb	15 47 04.2	
	comp=Z,15nm,1.3s						
CLL	Collm	21.61	317	i (sP)	sP	15 47 02.4	-0.1
	comp=Z,9.0nm,0.9s						
CLL	Collm	21.61	317	iP	sP	15 47 02.4	-0.1
CLL				i		15 47 10.8	
CLL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DAVOX	Davos/Dischmat	21.68	304	P	P	15 46 59.2	-0.1
	comp=Z,1.5nm,0.5s,baz=82,slow=14,SNR=3.3						
DAVOX				LR	LR	15 56 47.5	
	comp=Z,127nm,18.5s,baz=82,slow=40						
KEST	Kesra	21.74	274	P	P	15 47 01.2	+1.3
	comp=Z,2.2nm,0.8s,baz=39,slow=19,SNR=1.7						
KEST	Kesra	21.74	274	IAmb	IAmb	15 47 08.2	
	comp=Z,13nm,1.0s						
DAVA	Damuels	21.83	305	eP	P	15 47 01.1	+0.2
	comp=Z,19nm,1.1s						
VSU	Vasula	21.99	346	iP	P	15 47 06.2	+4.0
VSU				pmax	pmax		
	comp=Z,22nm,1.0s						
KIRV	Kirov	22.84	18	P	P	15 47 11.8	+0.5
	comp=Z,11nm,0.8s,baz=211,slow=12,SNR=5.8						
BFO	Black Forest	23.14	307	P	P	15 47 13.8	-0.8
BFO				IAmb	IAmb	15 47 18.1	
	comp=Z,21nm,1.1s						
BFO	Black Forest	23.14	307	P	P	15 47 13.8	-0.8
BFO				pmax	pmax		
	comp=Z,21nm,1.1s						
SENIN	Lac Senin/Sane	23.31	302	P	P	15 47 15.4	-1.2
BNI	Bardonecchia	23.50	298	P	P	15 47 17.4	-1.0
BNI	Bardonecchia	23.50	298	P	P	15 47 17.4	-1.0
BNI				pmax	pmax		
	comp=Z,33nm,1.1s						
KLMR	Klimovskoe	23.56	4	eP	P	15 47 09.8	-8.7
KLMR				pmax	pmax		
	comp=Z,28nm,1.6s						
KLMR	Klimovskoe	23.56	4	e	P	15 47 09.8	-8.7
KLMR				AMP		15 47 25.5	
	comp=Z,28nm,1.6s						
WSAR	Wadi Sarin	23.77	120	LR	LR	15 59 16.9	
	comp=Z,49nm,18.7s,baz=324,slow=44						
ECH	Echery	23.86	306	P	P	15 47 19.8	-1.9
ECH	Echery	23.86	306	P	P	15 47 19.8	-1.9
ECH				pmax	pmax		
	comp=Z,36nm,1.1s						
ARU	Arti	24.14	31	P	P	15 47 23.0	-1.2
	comp=Z,1.2nm,0.6s,baz=265,slow=6.9,SNR=6.8						
ARU				LR	LR	15 58 07.5	
	comp=Z,57nm,20.9s,baz=226,slow=40						
ARU	Arti	24.14	31	P	P	15 47 22.1	-2.0
ARU				IAmb	IAmb	15 47 27.9	
	comp=Z,4.8nm,0.8s						
ARU	Arti	24.14	31c	iP	P	15 47 26.2	+2.0
ARU						15 47 56.1	
ARU				S	S	15 51 46.7	+4.9
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FIA1	FINESS Array S	24.91	348	P	P	15 47 31.0	-0.1
FIA1				IAmb	IAmb	15 47 37.3	
	comp=Z,28nm,1.4s						
FINES	FINESS Array B	24.91	348	P	P	15 47 30.0	-1.1
	comp=Z,2.4nm,0.7s,baz=148,slow=13,SNR=10.0						
FINES	FINESS Array B	24.91	348c	eP	P	15 47 37.7	+6.6
FINES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PRGR	Permogore	24.94	11	eP	P	15 47 30.4	-0.9
PRGR				pmax	pmax		
	comp=Z,11nm,0.8s						
SVE	Sverdlovsk	25.27	32	eP	P	15 47 34.5	+0.1
SVE				pmax	pmax		
	comp=Z,16nm,1.1s						
HFS	Hagfors	26.95	335	P	P	15 47 51.3	+1.8
	comp=Z,2.1nm,0.7s,baz=132,slow=10,SNR=5.5						
HFS				LR	LR	16 00 23.0	
	comp=Z,117nm,20.5s,baz=91,slow=41						
BRVK	Borovoye	28.22	45c	eP	P	15 48 06.0	+4.9
BRVK				pmax	pmax		
	comp=Z,4.0nm,2.5s						
BVAR	Borovoye Array	28.27	46	P	P	15 48 02.5	+0.9
	comp=Z,0.9nm,0.9s,baz=259,slow=6.8,SNR=4.0						
NOA	NORSAR Array B	28.45	334	LR	LR	15 59 55.6	
	comp=Z,48nm,18.3s,baz=290,slow=38						
AAK	Ala-Archa	29.49	68	LR	LR	16 02 12.7	
	comp=Z,61nm,21.6s,baz=223,slow=41						
ARCES	ARCESS Array B	32.73	353	P	P	15 48 40.5	-0.1
	comp=Z,2.5nm,0.7s,baz=159,slow=7.3,SNR=9.6						
MAKZ	Makanchi	34.69	60	P	P	15 48 56.2	-1.9
MAKZ	Makanchi	34.69	60	P	P	15 48 56.2	-1.9
MAKZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK31	Makanchi Array	34.91	60	P	P	15 48 57.5	-2.4
MK31				IAmb	IAmb	15 49 08.2	
	comp=Z,3.7nm,1.3s						
MK31	Makanchi Array	34.91	60	P	P	15 48 57.6	-2.4
MK31				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MKAR	Makanchi Array	34.91	60	P	P	15 49 00.2	+0.3
	comp=Z,2.1nm,0.8s,baz=274,slow=6.8,SNR=16						
MKAR				LR	LR	16 04 00.6	
	comp=Z,48nm,18.2s,baz=267,slow=38						
MKAR	Makanchi Array	34.91	60c	eP	P	15 49 02.2	+2.2
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZALV	Zalesovo Beam	36.86	48	P	P	15 49 15.2	-1.4
	comp=Z,1.5nm,0.6s,baz=264,slow=10,SNR=6.4						
ZALV				LR	LR	16 08 10.4	
	comp=Z,42nm,18.2s,baz=294,slow=42						
WMQ	Urumqi	38.97	64	eP	P	15 49 36.1	+1.5
TORD	Torodi Ar. Bea	39.22	241	P	P	15 49 35.7	-1.1
	comp=Z,6.7nm,1.1s,baz=44,slow=8.0,SNR=20						
DANN	Dangsing	40.46	89	eP	P	15 49 47.1	-0.3
	comp=Z,13nm,0.7s						
GKN	Gorkha	41.31	89	eP	P	15 49 53.8	-0.5
	comp=Z,14nm,0.6s						
DMN	Daman	41.85	89	eP	P	15 49 58.5	-0.4
KKN	Kakani	41.91	89	eP	P	15 49 58.5	-0.8
	comp=Z,7.4nm,0.6s						
NRIK	Noril'sk	42.05	24	P	P	15 49 59.3	-0.3
	comp=Z,1.1nm,0.3s,baz=233,slow=6.9,SNR=5.1						
NRIK				LR	LR	16 09 11.4	
	comp=Z,44nm,18.8s,baz=218,slow=39						
PKIN	Phulchoki	42.10	89	eP	P	15 50 00.2	-0.7
PKI	Pulchoki	42.11	89	eP	P	15 50 00.3	-0.8
GUN	Gumba	42.34	88	eP	P	15 50 03.2	+0.3
JIRN	Jiri	42.69	88	eP	P	15 50 05.3	-0.6
	comp=Z,9.5nm,0.7s						
RAMN	Ramite	43.34	89	eP	P	15 50 09.8	-1.1
	comp=Z,20nm,0.7s						
ODAN	Odare	44.01	89	eP	P	15 50 15.7	-0.6
TAPN	Taplejung	44.04	88	eP	P	15 50 16.0	-0.7
TLY	Talaya	48.33	50	eP	P	15 50 51.0	+1.2
TLY				pmax	pmax		
	comp=Z,11nm,1.0s						
DBIC	Dimbokro	48.34	241	P	P	15 50 48.2	-1.9
	comp=Z,2.6nm,0.7s,baz=6.6,slow=7.9,SNR=5.6						
DBIC				LR	LR	16 14 02.2	
	comp=Z,49nm,18.1s,baz=25,slow=40						
DBIC	Dimbokro	48.34	241	IAmb	IAmb	15 50 49.1	
	comp=Z,7.8nm,1.1s						
TIC	Toumodi	48.47	241	eP	P	15 50 50.4	-0.8
KIC	Kosan Boka	48.47	241	eP	P	15 50 50.5	-0.8
	comp=Z,2.4nm,0.4s						
LIC	Lamto	48.77	241	eP	P	15 50 53.7	+0.2
	comp=Z,5.2nm,0.5s						
GTA	Gaotai	48.84	67	eP	P	15 50 52.9	-1.1
GTA				pP	sP	15 51 04.0	+5.4
GTA				sP	pP	15 51 08.9	+12
SONM	Songino Array	50.94	55	P	P	15 51 08.9	-0.9
	comp=Z,0.3nm,0.4s,baz=295,slow=11,SNR=2.6						
SONM				LR	LR	16 15 29.7	
	comp=Z,86nm,18.8s,baz=273,slow=39						
BOD	Bodaibo	52.97	41	eP	P	15 51 22.8	-1.9
BOD				pmax	pmax		
	comp=Z,6.0nm,1.4s						
LZH	Lanzhou	53.00	70	eP	P	15 51 25.1	-0.3
LZH				pP	sP	15 51 29.8	-0.3
LZH				sP	pP	15 51 32.8	+4.0
TIXI	Tiksi	55.76	23	eP	P	15 51 48.4	+3.7
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.7s						
CMAR	Chiang Mai Arr	57.42	91	P	P	15 51 55.7	-1.6
	comp=Z,0.8nm,0.4s,baz=297,slow=8.0,SNR=6.9						
WHN	Wuhan	63.33	71	P	P	15 52 46.4	+8.8
NJ2	Nanjing	65.93	67	eP	P	15 52 52.3	-2.3
KLR	Kul'dur	65.94	46	LR	LR	16 24 33.1	
	comp=Z,34nm,18.1s,baz=318,slow=39						
KLR	Kul'dur	65.94	46	iP	P	15 52 57.9	+3.6
KLR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SCHQ	Schefferville	67.16	322	P	P	15 53 02.2	+0.2
	comp=Z,1.9nm,0.7s,baz=229,slow=8.6,SNR=3.7						
BILL	Bilibino	68.39	18	⇓eP	P	15 53 12.6	+3.0
BILL				e		15 53 38.7	
BILL				e		15 55 48.0	
BILL				eS	S	16 02 10.4	-0.2
BILL				pmax	pmax		
	comp=Z,9.0nm,2.5s						
BILL				MLR	MLR		
	comp=Z,244nm,23.0s						
KSRS	Korea Array	69.57	58	P	P	15 53 15.5	-1.9
	comp=Z,0.6nm,0.7s,baz=287,slow=5.8,SNR=2.7						
KSRS				LR	LR	16 27 19.3	
	comp=Z,31nm,19.9s,baz=255,slow=39						
YKA	Yellowknife Ar	77.73	347	P	P	15 54 03.4	-1.5
	comp=Z,1.4nm,0.8s,baz=28,slow=5.7,SNR=16						
ILAR	Eielson Array	78.13	1	P	P	15 54 06.5	-0.6
	comp=Z,0.5nm,0.9s,baz=309,slow=5.4,SNR=4.4						
ULM	Lac du Bonnet	83.10	331	P	P	15 54 33.6	-0.4
	comp=Z,1.8nm,0.6s,baz=81,slow=4.1,SNR=4.1						
ULM	Lac du Bonnet	83.10	331	IAmb	IAmb	15 54 36.7	
	comp=Z,8.0nm,1.4s						
BBB	Bella Bella	89.76	351	LR	LR	16 39 19.2	
	comp=Z,43nm,18.4s,baz=124,slow=38						
PDAR	Pinedale Array	94.39	336	P	P	15 55 27.2	-1.3
	comp=Z,0.2nm,0.6s,baz=49,slow=4.1,SNR=2.4						

JMA 22 15:58:08.1±0.1, 37°.5N×141°.91E, h28km±2km, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.80	334	P	Pb	15 58 23.0	-0.5
JMST	Minamisoumatoc	0.82	280	P	Pb	15 58 23.4	-0.4
JMST				S	Sb	15 58 33.9	-0.6
JFK	Kawauchi	0.85	255	P	Pn	15 58 23.8	-0.5
JFK				S	Sb	15 58 34.9	-0.6
JMM	Marumori	0.93	288	P	Pn	15 58 25.0	-0.3
JMM				S	Sb	15 58 37.0	-0.5
JIO	Ouri	0.97	333	P	Pn	15 58 25.6	-0.2
JIO				S	Sn	15 58 37.8	-0.9
ONAJ	Iwakimizuishiy	1.01	242	P	Pn	15 58 26.4	-0.1
ONAJ				eS	Sn	15 58 38.4	-1.4
JFT	Otama	1.25	267	P	Pb	15 58 30.7	-0.4
JFT				S	Sb	15 58 46.4	-0.4
JOU	Okura	1.25	309	P	Pb	15 58 30.5	-0.6
JOU				S	Sb	15 58 46.4	-0.4
JKMT	Kesennumamotoy	1.27	344	P	Pn	15 58 30.0	+0.1
JMK	Ichinoseki	1.46	338	P	Pn	15 58 33.2	+0.6
JMK				S	Sn	15 58 51.5	+0.6
JYS	Shirataka	1.59	294	P	Pb	15 58 37.0	+0.2
JYS				S	Sb	15 58 56.7	+0.2
JFY	Yanaizu	1.76	265	P	Pb	15 58 38.4	-1.4
JFY				S	Sb	15 59 00.0	-1.5
JYK	Kaneyama	1.80	318	P	Pn	15 58 38.2	+0.9
JYK				S	Sb	15 59 01.1	-1.5
MAT	Matsushiro	3.14	252	P	Pn	15 58 59.3	+3.6
MAT				S	Sb	15 59 37.6	-3.5

NEIC 22 16:08:24.8±1.2, 17°.5N±0°.1×94°.63W±0°.08, h140km±7km, Error ellipse: s-maj=22.2km s-min=8.9km az=199.0
MEX 22 16:08:26.5±0.5, 17°.52N×94°.62W, h140km±6km, MD4.0
ISC 22 16:08:24.6±0.9, 17°.43N±0°.09×94°.65W±0°.06, h150km, n17, σ0°.84/25, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.41	214		Pn	16 08 45.3	-0.2
CMIG					Sn	16 09 00.0	-1.5
CMIG	Matias Romero	0.41	214	iP	Pn	16 08 45.4	-0.2
CMIG				iS	Sn	16 09 00.0	-1.5
TGIG		1.59	114		Pn	16 08 55.4	+0.2
TGIG					Sn	16 09 17.4	-1.3
TGIG		1.59	114	eP	Pn	16 08 55.4	+0.2
TGIG				eS	Sn	16 09 17.4	-1.3
OXBJ	Oaxaca	2.02	260	iS	Sn	16 09 28.4	+0.9
PCIG		2.20	141		Pn	16 09 02.3	+0.3
PCIG					Sn	16 09 30.2	-0.7
PCIG		2.20	141	eP	Pn	16 09 02.3	+0.3
PCIG				eS	Sn	16 09 30.2	-0.7
CCIG	Comitan	2.66	115		Pn	16 09 08.3	+0.4
CCIG					Sn	16 09 41.5	+0.2
CCIG	Comitan	2.66	115	eP	Pn	16 09 08.3	+0.4
CCIG				eS	Sn	16 09 41.5	+0.2
TLIG	Tlapa	3.75	273	Pn	Pn	16 09 21.9	+0.3
TGUH	Tegucigalpa,Un	7.85	114	Pn	Pn	16 10 16.6	+0.4
ACON	Acoyapa	10.65	119	Pn	Pn	16 10 55.2	+2.0
FSCY	Frank Sound, G	12.92	80	Pn	Pn	16 11 22.2	-0.5
NATX	Nacogdoches	14.27	360	P	P	16 11 43.3	+0.7
TX31	Lajitas Ar. Si	14.45	327	Pn	Pn	16 11 42.2	0.0
TX32	Lajitas Array	14.45	327	Pn	Pn	16 11 42.1	-0.1
237A	Washetta, Mont	14.54	356	Pn	Pn	16 11 42.7	-0.5

NIC 22 16:12:12.7±0.0, 34°.50N×32°.08E, h30km, Ml2.5/5
GII 22 16:12:14.6±0.0, 34°.41N×32°.52E, h1km
ISC 22 16:12:13.6±2.0, 34°.46N±0°.06×32°.30E±0°.09, h14km±11km, n13, σ0°.65/24, 2C-1D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NATA	Nata	0.39	36	P	Pb	16 12 23.2	+1.0
NATA				S	Sn	16 12 31.2	-0.7
NATA				AML	AML	16 12 32.3	
	1.1nm,0.4s						
NATA				AML	AML	16 12 32.3	
	1.1nm,0.4s						
NATA				AML	AML	16 12 34.5	
	1.8nm,0.3s						
NATA				AML	AML	16 12 34.5	
	1.8nm,0.3s						
AKMS	Akamas	0.55	3	⇑P	Pg	16 12 24.3	-0.2
AKMS				S	Sb	16 12 33.2	+0.3
AKMS				AML	AML	16 12 33.9	
	1.0nm,0.3s						
AKMS				AML	AML	16 12 33.9	
	1.0nm,0.3s						
AKMS				AML	AML	16 12 34.3	
	0.6nm,0.2s						
AKMS				AML	AML	16 12 34.3	
	0.6nm,0.2s						
SZAC	Souni	0.56	59	⇓P	Pn	16 12 26.3	-0.9
SZAC				S	Sn	16 12 36.9	+0.6
SZAC				AML	AML	16 12 37.5	
	2.0nm,0.2s						
SZAC				AML	AML	16 12 37.5	
	2.0nm,0.2s						
SZAC				AML	AML	16 12 37.6	
	2.6nm,0.3s						
SZAC				AML	AML	16 12 37.6	
	2.6nm,0.3s						
ALFC	Alefka	0.73	20	⇑P	Pg	16 12 27.3	-0.6
ALFC				S	Sb	16 12 38.4	+0.3
ALFC				AML	AML	16 12 38.6	
	0.6nm,0.2s						
ALFC				AML	AML	16 12 38.6	
	0.6nm,0.2s						
ALFC				AML	AML	16 12 39.2	
	0.5nm,0.3s						
ALFC				AML	AML	16 12 39.2	
	0.5nm,0.3s						
ASGA	Asgata	0.85	67	P	Pg	16 12 30.3	+0.2
ASGA				S	Sn	16 12 43.9	+0.6
ASGA				AML	AML	16 12 44.4	
	0.9nm,0.2s						
ASGA				AML	AML	16 12 44.4	
	0.9nm,0.2s						
ASGA				AML	AML	16 12 45.9	
	0.7nm,0.3s						
ASGA				AML	AML	16 12 45.9	
	0.7nm,0.3s						
CSS	Mathiatis	0.99	59	P	Pb	16 12 32.2	-0.2
CSS				S	Sn	16 12 47.6	+0.8
CSS	Mathiatis	0.99	59	Pg	Pb	16 12 32.0	-0.5
CSS				Sg	Sb	16 12 45.3	0.0
MVOU	Mavrovouni	1.23	63	P	Pn	16 12 36.2	-0.1
MVOU				S	Sg	16 12 53.7	+0.3
HNTI	Hanita	2.77	119	Pn	Pn	16 12 58.1	+0.7
HNTI				Sn	Sn	16 13 29.7	-0.9
MMA0B	Mount Meron ar	2.96	118	Sn	Sn	16 13 35.7	+0.1
KSDI	Kefar Szold	3.07	113	Pn	Pn	16 13 01.2	-0.5
KSDI				Sn	Sn	16 13 37.1	-1.1
NATI	Neve Ativ	3.10	112	Pn	Pn	16 13 01.8	-0.3
NATI				Sn	Sn	16 13 38.4	-0.5
HMDT	Nahal Hemdat	3.49	128	Pn	Pn	16 13 08.2	+0.8

IDC 22 16:13:57.0±0.7, 14°.00N×56°.78E, h0km, mb3.9/25, mb1 4.0/26, mb1mx3.9/55, mbtmp3.9/26, ML3.4/1, MS3.6/28, Ms1 3.6/28, ms1mx3.5/55, Error ellipse: s-maj=15.2km s-min=14.9km az=137.0
NEIC 22 16:13:58.0±2.3, 14°.04N±0°.07×56°.67E±0°.08, h10km±1km, mb4.4/7, Error ellipse: s-maj=16.1km s-min=8.1km az=126.0
OMAN 22 16:14:02.2±0.9, 14°.24N×56°.39E, h34km±7km, ml4.0/6, Error ellipse: s-maj=12.0km s-min=5.7km az=1.0
ISC 22 16:13:59.1±0.5, 14°.03N±0°.05×56°.65E±0°.06, h20km, n65, σ2°.97/56, mb4.0/27, MS3.7/27, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	Socotra	3.18	235	Pn	Pn	16 14 46.0	-2.0
SOCY				Sn	Sn	16 15 20.4	-5.1
SOCY	Socotra	3.18	235	P	Pn	16 14 45.8	-2.3
	SNR=610						
SOCY				S	Sn	16 15 20.1	-5.4
DMTO	DMTO	4.01	336	P	Pn	16 14 57.1	-2.3
	SNR=23						
DMTO				S	Sn	16 15 38.2	-7.7
SHAO	Shalim	4.09	346	P	Pn	16 14 57.0	-3.5
	SNR=27						
SHAO				S	Sn	16 15 38.3	-10
RBK	Rabkut	4.18	326	P	Pn	16 15 00.6	-1.2
RBK				S	Sn	16 15 44.2	-5.9
ABTO	Aybut	4.62	316	P	Pn	16 15 06.6	-1.3
WHFO	Wadi Hawf	4.76	325	P	Pn	16 15 08.4	-1.3
	SNR=24						
WHFO				S	Sn	16 15 59.8	-4.5
MHTO	MHTO	7.03	10	P	Pn	16 15 40.6	-0.3
WSAR	Wadi Sarin	9.35	11	Pn	Pn	16 16 12.1	-0.6
	0.3nm,0.3s,baz=231,slow=10,SNR=6.4						
WSAR				LR	LR	16 19 30.1	
	comp=Z,1μm,20.4s,baz=208,slow=36						
UOSS	Minazif	10.86	358	Pn	Pn	16 16 30.9	-2.7
RAYN	Ar Rayn	14.15	313	Pn	Pn	16 17 16.1	-2.5
MSEY	Mahe Island	18.62	184	P	P	16 18 10.8	-4.8
MSEY				IAmb	IAmb	16 18 25.5	
	comp=Z,70nm,1.4s						
LODK	Lodwar	23.51	245	P	P	16 19 12.5	+4.4
	SNR=6.9						
GEYT	Alibeck	23.84	3	P	P	16 19 10.9	-0.1
	comp=Z,4.8nm,1.0s,baz=198,slow=14,SNR=9.0						
GEYT				LR	LR	16 29 22.7	
	comp=Z,134nm,20.2s,baz=165,slow=39						
KMBO	Kilima Mbogo	24.42	233	P	P	16 19 19.3	+2.5
	comp=Z,1.9nm,0.2s,baz=33,slow=12,SNR=7.7						
PALK	Pallekele	24.55	103	LR	LR	16 27 00.1	
	comp=Z,124nm,20.2s,baz=286,slow=32						
PALK	Pallekele	24.55	103	P	P	16 19 14.4	-3.4
PALK				IAmb	IAmb	16 19 24.0	
	comp=Z,13nm,1.2s						
KIBK	Kibwezi	24.59	230	P	P	16 19 21.3	+3.1
	SNR=6.7						
H08N2	Diego Garcia H	24.73	144	T	T	16 45 03.4	
	baz=325,slow=76,SNR=92						
H08N3	Diego Garcia H	24.75	144	T	T	16 45 03.9	
	baz=325,slow=76,SNR=91						
H08N1	Diego Carcia H	24.76	144	T	T	16 45 05.0	
	baz=325,slow=76,SNR=88						
EIL	Elat	25.38	311	P	P	16 19 28.6	+3.4
	comp=Z,3.7nm,0.8s,baz=109,slow=6.2,SNR=3.2						
EIL				LR	LR	16 29 47.7	
	comp=Z,195nm,18.7s,baz=100,slow=37						
DGAR	Diego Garcia	26.45	143	P	P	16 19 31.4	-3.5
MMAI	Mount Meron Ar	27.04	318	P	P	16 19 46.1	+5.8
	comp=Z,4.1nm,0.9s,baz=224,slow=10,SNR=3.8						
MMAI				LR	LR	16 30 35.2	
	comp=Z,53nm,18.6s,baz=225,slow=37						
GNI	Garni	28.04	340	P	P	16 19 52.8	+3.6
	comp=Z,3.8nm,0.7s,baz=219,slow=6.5,SNR=4.0						
GNI				LR	LR	16 33 49.8	
	comp=Z,40nm,19.1s,baz=148,slow=42						
MBAR	Mbarara	29.50	243	LR	LR	16 32 34.0	
	comp=Z,112nm,18.0s,baz=66,slow=38						
KSH	Kashi	30.55	30	P	P	16 20 10.4	-1.1
KSH				pP	pP	16 20 17.3	+0.5
KSH				PP	PnPn	16 21 12.3	+1.5
KSH				PcP	PcP	16 23 11.5	+1.4
KSH				S	S	16 25 05.9	-6.4

KSH PcS PcS 16 26 53.1 -0.8
KBZ Khabaz 31.86 341 P P 16 20 26.1 +3.4
comp=Z,1.0nm,0.7s,baz=124,slow=7.3,SNR=2.2
KBZ LR LR 16 34 17.2
comp=Z,83nm,19.0s,baz=156,slow=38
AAK Ala-Archa 32.40 25 P P 16 20 29.2 +1.5
comp=Z,1.2nm,0.7s,baz=193,slow=10,SNR=5.0
AAK LR LR 16 34 37.1
comp=Z,155nm,21.9s,baz=195,slow=38
BRTR Keskin Array B 32.62 326 P P 16 20 32.2 +2.6
comp=Z,0.6nm,0.7s,baz=130,slow=8.8,SNR=3.7
BRTR LR LR 16 35 29.4
comp=Z,127nm,18.2s,baz=144,slow=40
AKTO Aktyubinsk 36.32 1 P P 16 21 01.9 +0.5
comp=Z,3.1nm,0.8s,baz=183,slow=9.1,SNR=10
MKAR Makanchi Array 39.08 28 P P 16 21 25.9 +1.0
comp=Z,0.8nm,0.8s,baz=215,slow=9.8,SNR=7.9
MKAR LR LR 16 39 18.5
comp=Z,107nm,19.9s,baz=218,slow=39
KURBB Kurchatov Arra 40.59 21 P P 16 21 37.6 +0.4
comp=Z,0.5nm,0.6s,baz=220,slow=8.3,SNR=5.8
MLR Muntele Rosu 40.69 327 P P 16 21 40.2 +1.8
comp=Z,1.0nm,0.5s,baz=140,slow=17,SNR=1.7
MLR Muntele Rosu 40.69 327 IAmb IAmb 16 21 51.5
comp=Z,4.6nm,1.0s
KURK Kurchatov 40.70 21 P P 16 21 37.6 -0.5
CMAR Chiang Mai Arr 40.77 78 P P 16 21 39.3 0.0
comp=Z,0.8nm,0.5s,baz=275,slow=8.8,SNR=9.0
CMAR LR LR 16 39 28.3
comp=Z,40nm,19.0s,baz=240,slow=38
ARU Arti 42.34 2 P P 16 21 51.7 +0.2
comp=Z,0.8nm,0.5s,baz=169,slow=9.9,SNR=5.8
ARU Arti 42.34 2 IAmb IAmb 16 21 52.8
comp=Z,4.9nm,0.9s
AKASG Malin Array Be 42.80 334 P P 16 21 57.3 +2.0
comp=Z,0.2nm,0.2s,baz=74,slow=37,SNR=3.9
AKASG LR LR 16 42 43.6
comp=Z,58nm,18.8s,baz=180,slow=40
ZALV Zalesovo Beam 45.56 23 P P 16 22 17.6 +0.1
comp=Z,1.2nm,0.7s,baz=243,slow=6.5,SNR=6.5
ZALV LR LR 16 42 37.2
comp=Z,121nm,19.6s,baz=248,slow=38
GERES GERESS Array B 49.45 324 P P 16 22 50.5 +2.6
comp=Z,0.5nm,0.6s,baz=134,slow=7.0,SNR=4.4
GERES LR LR 16 47 25.9
comp=Z,57nm,20.1s,baz=90,slow=40
BOSA Boshof 52.15 215 P P 16 23 08.8 +0.3
comp=Z,2.8nm,1.0s,baz=27,slow=6.8,SNR=2.6
BOSA LR LR 16 44 08.2
comp=Z,80nm,19.2s,baz=40,slow=35
BOSA Boshof 52.15 215 IAmb IAmb 16 23 27.5
comp=Z,6.9nm,1.1s
FINES FINESS Array B 52.21 342 P P 16 23 09.1 +0.7
comp=Z,3.0nm,0.7s,baz=123,slow=7.0,SNR=10
FINES LR LR 16 50 16.5
comp=Z,74nm,18.1s,baz=232,slow=42
SONM Songino Array 53.09 40 P P 16 23 17.1 +1.9
comp=Z,0.4nm,0.7s,baz=226,slow=8.0,SNR=3.5
SONM LR LR 16 48 34.5
comp=Z,84nm,18.6s,baz=244,slow=39
TORD Torodi Ar. Bea 53.32 276 P P 16 23 19.2 +1.9
comp=Z,0.9nm,0.7s,baz=89,slow=6.4,SNR=5.5
LEM Lembang 54.65 109 LR LR 16 42 08.0
comp=Z,78nm,21.8s,baz=232,slow=31
NOA NORSAR Array B 57.19 336 LR LR 16 50 14.3
comp=Z,13nm,21.2s,baz=15,slow=38
NRIK Noril'sk 58.61 12 LR LR 16 53 11.2
comp=Z,52nm,19.1s,baz=214,slow=40
ESDC Sonseca Array 58.62 308 P P 16 23 55.4 +0.5
comp=Z,0.3nm,0.4s,baz=81,slow=5.7,SNR=6.2
ARCES ARCESS Array B 58.82 348 P P 16 23 55.9 +0.1
comp=Z,5.1nm,1.0s,baz=151,slow=8.3,SNR=5.3
ARCES LR LR 16 52 16.5
comp=Z,66nm,18.7s,baz=155,slow=39
KAPI Kappang 65.38 102 LR LR 16 51 30.9
comp=Z,189nm,21.9s,baz=167,slow=34
KSRS Korea Array 66.80 55 P P 16 24 50.2 +0.7
comp=Z,0.8nm,0.7s,baz=264,slow=6.4,SNR=3.9
KSRS LR LR 16 53 57.4
comp=Z,47nm,19.3s,baz=256,slow=36
H01W3 Cape Leeuwin H 73.04 134 T T 17 45 14.3
baz=302,slow=75,SNR=8.2
H01W2 Cape Leeuwin H 73.04 134 T T 17 45 14.7
baz=302,slow=75,SNR=7.4
H01W1 Cape Leeuwin H 73.06 134 T T 17 45 18.5
baz=302,slow=75,SNR=8.0
MJAR Matsushiro Arr 75.07 56 LR LR 17 01 07.7
comp=Z,23nm,18.8s,baz=85,slow=38
JHJ Hachijo jima 2 76.79 59 LR LR 17 00 46.5
comp=Z,44nm,18.5s,baz=348,slow=37
WRA Warramunga Arr 83.51 112 P P 16 26 27.1 +0.9
comp=Z,1.3nm,1.0s,baz=293,slow=4.5,SNR=3.1
ASAR Alice Springs 84.25 116 P P 16 26 30.8 +0.9
comp=Z,0.8nm,0.8s,baz=289,slow=5.1,SNR=12
ASAR LR LR 17 01 15.2
comp=Z,39nm,18.1s,baz=310,slow=34
PETK Petropavlovsk- 85.40 36 LR LR 17 08 29.6
comp=Z,34nm,18.2s,baz=242,slow=38
YKA Yellowknife Ar 103.41 356 PP PKiKP 16 32 12.4 -4.2
comp=Z,0.1nm,0.4s,baz=359,slow=5.6,SNR=5.4
PDAR Pinedale Array 122.08 348 PKP PKiKP 16 32 53.0 -0.1
comp=Z,0.3nm,0.7s,baz=90,slow=1.8,SNR=3.5
NVAR Mina Array Bea 127.60 355 PKP PKiKP 16 33 05.3 +1.2
comp=Z,1.0nm,0.8s,baz=280,slow=0.3,SNR=8.2

IDC 22 16:37:50.4±1.9, 6.93S×128.73E, h0km, mb3.6/1, mb1 3.9/4, mb1mx3.5/29, mbtmp3.7/4, ML4.0/3, Error ellipse: s-maj=75.6km s-min=26.7km az=75.0
NEIC 22 16:38:06.7±2.6, 7.7S±0.1×128.5E±0.1, h158km±13km, mb4.0/3, Error ellipse: s-maj=16.2km s-min=15.0km az=87.0
ISC 22 16:38:06.1±1.3, 7.71S±0.09×128.6E±0.1, h151km, n13, σ2.27/17, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
SOEI	**Soe**	**4.70**	**244**	Pn	**Pn**	**16 39 16.0**	**+0.3**
KNRA	**Kununurra**	**7.92**	**179**		**Pn**	**16 40 00.7**	**+2.3**
KNRA					**Sn**	**16 41 27.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**10.71**	**195**	Pn	**Pn**	**16 40 34.9**	**-0.6**
	0.8nm,0.3s,baz=21,slow=14,SNR=17						
FITZ				Sn	**Sn**	**16 42 31.3**	**-2.6**
	0.8nm,0.3s,baz=87,slow=18,SNR=5.7						
WB0	**Warramunga Arr**	**13.25**	**155**	Pn	**Pn**	**16 41 10.0**	**+1.5**
WRAB	**Tennant Creek**	**13.38**	**156**	Pn	**Pn**	**16 41 12.2**	**+1.9**
WRA	**Warramunga Arr**	**13.39**	**156**	Pn	**Pn**	**16 41 11.3**	**+1.1**
	0.9nm,0.3s,baz=339,slow=13,SNR=47						
WRA				Sn	**Sn**	**16 43 34.5**	**-4.1**
	0.4nm,0.3s,baz=335,slow=22,SNR=5.7						
WB2	**Warramunga Arr**	**13.39**	**156**	Pn	**Pn**	**16 41 11.5**	**+1.1**
WR0	**Warramunga Arr**	**13.49**	**155**	Pn	**Pn**	**16 41 12.8**	**+1.2**
AS31	**Alice Springs**	**16.67**	**163**		**Pn**	**16 41 54.9**	**+3.8**
AS31				IAmb	IAmb	16 41 57.3	
	comp=Z,0.6nm,0.8s						
ASAR	**Alice Springs**	**16.67**	**163**	P	**Pn**	**16 41 55.1**	**+4.0**
	comp=Z,0.3nm,0.3s,baz=335,slow=10,SNR=32						
ASAR				S	**S**	**16 44 57.3**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=346,slow=27,SNR=4.2						
PMG	**Port Moresby**	**18.47**	**97**	P	**P**	**16 42 09.7**	**-0.9**
PMG				IAmb	IAmb	16 42 28.6	
	comp=Z,22nm,1.5s						
MORW	**Morawa**	**24.29**	**207**	P	**P**	**16 43 08.6**	**-1.0**
MORW				IAmb	IAmb	16 43 12.2	
	comp=Z,13nm,1.5s						
MKAR	**Makanchi Array**	**68.05**	**328**	P	**P**	**16 48 48.3**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=121,slow=7.9,SNR=12						

THE 22 16:45:12.2, 38.28N×20.37E, h12km, ML2.5/4, Error ellipse: s-maj=1.2km s-min=0.4km az=248.0
ATH 22 16:45:12.3, 38.28N×20.42E, h11km±1km, ML2.6/9, Error ellipse: s-maj=1.7km s-min=0.7km az=264.0
ISC 22 16:45:12.2±0.9, 38.28N±0.02×20.41E±0.04, h11km±5km, n42, σ0.42/66, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
KEF4	**Livadi, Kephal**	**0.03**	**152**	P	**Pg**	**16 45 14.1**	**-0.1**
KEF4				S	**Sg**	**16 45 15.5**	**+0.2**
AGT1	**Agia Thekli**	**0.04**	**208**	P	**Pg**	**16 45 14.2**	**0.0**
AGT1				S	**Sg**	**16 45 15.4**	**-0.3**
KEF1	**Kardakata, Kep**	**0.05**	**97**	P	**Pg**	**16 45 14.2**	**-0.2**
KEF1				S	**Sg**	**16 45 15.4**	**-0.4**
LXR1	**Lixouri, Cepha**	**0.09**	**163**	P	**Pg**	**16 45 14.4**	**-0.3**
LXR1				S	**Sg**	**16 45 17.2**	**+0.7**
LXRA	**Lixouri, Kepha**	**0.09**	**164**	P	**Pg**	**16 45 15.1**	**+0.4**
LXRA				S	**Sg**	**16 45 16.9**	**+0.4**
KEF3	**Kipouria, Keph**	**0.09**	**210**	P	**Pg**	**16 45 15.1**	**+0.4**
KEF3				S	**Sg**	**16 45 17.1**	**+0.4**
CHV1	**Chavriata, Kef**	**0.10**	**191**	P	**Pg**	**16 45 15.2**	**+0.3**
CHV1				S	**Sg**	**16 45 17.4**	**+0.5**
ARGA	**Argostoli. Kep**	**0.12**	**152**	P	**Pg**	**16 45 15.3**	**+0.2**
ARGA				S	**Sg**	**16 45 17.5**	**+0.3**
ARG2	**Argostoli**	**0.12**	**149**	P	**Pg**	**16 45 15.6**	**+0.4**
ARG2				S	**Sg**	**16 45 17.7**	**+0.4**
KEF2	**Argostoli. Kep**	**0.13**	**152**	P	**Pg**	**16 45 15.7**	**+0.3**
KEF2				S	**Sg**	**16 45 17.8**	**+0.2**
VSK1	**VASILIKIADES**	**0.18**	**45**	P	**Pg**	**16 45 16.3**	**+0.2**
VLS	**Valsamata**	**0.18**	**126**	P	**Pg**	**16 45 16.2**	**+0.1**
VLS				S	**Sg**	**16 45 19.1**	**+0.3**
VLS	**Valsamata**	**0.18**	**126**	P	**Pg**	**16 45 16.2**	**+0.1**
VLS				S	**Sg**	**16 45 18.9**	**+0.1**
VLS				AML	AML	16 45 19.3	
	comp=N,7573μm,0.2s						
VLS				AML	AML	16 45 19.3	
	comp=E,4413μm,0.2s						
KONA	**Konidatara, Ke**	**0.19**	**43**	P	**Pg**	**16 45 16.5**	**+0.2**
KONA				S	**Sg**	**16 45 19.7**	**+0.5**
FSK	**Fiskardo**	**0.21**	**35**	P	**Pg**	**16 45 16.8**	**+0.1**
FSK				S	**Sg**	**16 45 20.7**	**+0.9**
FSK	**Fiskardo**	**0.21**	**35**	P	**Pg**	**16 45 16.8**	**+0.1**
FSK				S	**Sg**	**16 45 20.4**	**+0.6**
FSK				AML	AML	16 45 21.4	
	comp=E,4521μm,0.1s						
FSK				AML	AML	16 45 22.2	
	comp=N,1764μm,0.2s						
EVGI	**Lefkada island**	**0.39**	**30**	P	**Pg**	**16 45 20.2**	**+0.3**
EVGI				S	**Sb**	**16 45 26.6**	**-0.5**
	comp=N,902nm,0.1s						
EVGI	**Lefkada island**	**0.39**	**30**	P	**Pg**	**16 45 20.2**	**+0.3**
EVGI				S	**Sg**	**16 45 25.8**	**+0.7**
VLMS	**Volimes, Zakyn**	**0.45**	**153**	P	**Pg**	**16 45 21.3**	**+0.2**
VLMS				S	**Sg**	**16 45 27.9**	**+0.8**
VLMS				AML	AML	16 45 30.3	
	comp=E,3818μm,0.2s						
VLMS				AML	AML	16 45 30.8	
	comp=N,3727μm,0.2s						
MGNA	**Meganis**	**0.48**	**39**	P	**Pg**	**16 45 21.6**	**0.0**
MGNA				S	**Sg**	**16 45 28.0**	**+0.1**
MGNA				AML	AML	16 45 29.5	
	comp=E,1836μm,0.1s						
MGNA				AML	AML	16 45 29.6	
	comp=N,1865μm,0.1s						
LKD2	**Lefkada island**	**0.54**	**21**	P	**Pg**	**16 45 22.6**	**-0.1**
LKD2				S	**Sb**	**16 45 31.4**	**-0.1**
	comp=N,238nm,0.2s						
LKD2	**Lefkada island**	**0.54**	**21**	P	**Pg**	**16 45 22.6**	**-0.1**
LKD2				S	**Sg**	**16 45 30.3**	**+0.3**
TSLK	**Tsoukalades, L**	**0.57**	**20**	P	**Pg**	**16 45 23.1**	**-0.3**
TSLK	**Tsoukalades, L**	**0.57**	**20**	P	**Pg**	**16 45 23.0**	**-0.3**
AST1	**Astakos**	**0.59**	**64**	P	**Pg**	**16 45 23.9**	**+0.2**
AST1				S	**Sb**	**16 45 33.7**	**+0.7**
PDO	**Prodromos**	**0.69**	**63**	P	**Pg**	**16 45 25.6**	**+0.1**
PDO				S	**Sb**	**16 45 36.4**	**+0.8**
	comp=N,870nm,0.3s						
PDO	**Prodromos**	**0.69**	**63**	P	**Pg**	**16 45 25.4**	**0.0**
PDO				AML	AML	16 45 37.4	
	comp=E,1199μm,0.4s						
PDO				AML	AML	16 45 39.5	
	comp=N,1277μm,0.3s						
RLS	**Riolos of Patr**	**0.87**	**105**	P	**Pg**	**16 45 28.2**	**-0.6**
PVO	**Paravola**	**0.94**	**69**	P	**Pb**	**16 45 30.4**	**-0.1**
PVO	**Paravola**	**0.94**	**69**	P	**Pb**	**16 45 30.3**	**-0.1**
PVO				AML	AML	16 45 50.4	
	comp=E,592μm,0.3s						
PVO				AML	AML	16 45 50.4	
	comp=N,488μm,0.5s						
DRO	**Drossia**	**1.08**	**107**	P	**Pb**	**16 45 32.8**	**-0.1**
DRO				S	**Sn**	**16 45 48.3**	**+0.1**
	comp=N,238nm,0.4s						
DRO	**Drossia**	**1.08**	**107**	P	**Pb**	**16 45 32.4**	**-0.4**
DRO				AML	AML	16 45 56.7	
	comp=N,392μm,0.6s						
DRO				AML	AML	16 45 58.5	
	comp=E,529μm,0.4s						
ANX	**Ano Chora**	**1.23**	**75**	P	**Pn**	**16 45 35.0**	**-0.4**
ANX				AML	AML	16 45 59.8	
	comp=E,442μm,0.7s						
ANX				AML	AML	16 46 00.0	
	comp=N,583μm,0.5s						
IGT	**Igoumenitsa**	**1.25**	**357**	P	**Pg**	**16 45 36.1**	**0.0**
AMT	**Artemida-Makis**	**1.27**	**126**	P	**Pg**	**16 45 37.1**	**+0.5**
KALE	**Kalithea**	**1.37**	**85**	P	**Pn**	**16 45 37.2**	**-0.1**
KLV	**Kalavryta, Ach**	**1.40**	**99**	P	**Pb**	**16 45 38.1**	**-0.2**
KEK	**Kerkira**	**1.50**	**342**	P	**Pb**	**16 45 39.9**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.53**	**61**	P	**Pg**	**16 45 41.6**	**0.0**
MAKR				AML	AML	16 46 07.7	
	comp=N,143μm,0.8s						
MAKR				AML	AML	16 46 12.8	
	comp=E,272μm,0.3s						
ITM	**Ithomi**	**1.63**	**132**	P	**Pg**	**16 45 43.5**	**0.0**
AGG	**Agios Georgios**	**1.68**	**63**	P	**Pb**	**16 45 43.2**	**+0.2**
DID	**Didima**	**2.37**	**108**	P	**Pb**	**16 45 53.3**	**-1.6**

IDC 22 16:51:23.7±1.6, 6.95N×123.87E, h615km±21km, mb2.7/5, mb1 2.9/5, mb1mx2.5/39, mbtmp3.8/5, Error ellipse: s-maj=33.5km s-min=13.3km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
CMAR	**Chiang Mai Arr**	**26.83**	**298**	P	P	16 56 17.2	-0.1
	0.5nm,0.6s,baz=107,slow=7.6,SNR=6.5						
WRA	**Warramunga Arr**	**28.64**	**159**	P	P	16 56 32.5	-0.5
	0.6nm,0.3s,baz=337,slow=9.5,SNR=30						
WRA				ScP	ScP	17 02 06.6	-0.7
	0.6nm,1.1s,baz=337,slow=3.0,SNR=2.5						
ASAR	**Alice Springs**	**31.96**	**162**	P	P	16 57 02.0	+0.5
	0.8nm,0.3s,baz=340,slow=7.4,SNR=60						
ASAR				ScP	ScP	17 02 17.8	-0.6
	0.3nm,0.8s,baz=343,slow=3.7,SNR=3.7						
MJAR	**Matsushiro Arr**	**32.24**	**22**	P	P	16 57 03.6	0.0
	1.8nm,1.1s,baz=202,slow=9.5,SNR=4.1						
MKAR	**Makanchi Array**	**53.31**	**325**	P	P	16 59 47.0	+0.1
	0.4nm,0.4s,baz=120,slow=8.3,SNR=13						

NIED 22 17:02:00, 38.10N×144.10E, h5km, Mw3.6 Best double couple: M0 3.11000×10^14 NP1: φs 239.00000°, δ51.00000°, λ-77.00000°. NP2: φs 38.00000°, δ41.00000°, λ-106.00000°.
IDC 22 17:02:47.8±0.8, 37.95N×144.30E, h0km, mb3.6/11, mb1 3.8/15, mb1mx3.6/64, mbtmp3.6/15, ML3.4/4, MS3.1/1, Ms1 3.1/1, ms1mx2.3/62, Error ellipse: s-maj=23.2km s-min=16.3km az=127.0
JMA 22 17:02:51.2±0.2, 38.08N×144.13E, h47km, M3.9
NEIC 22 17:02:52.0±1.8, 38.02N±0.07×144.23E±0.09, h27km±5km, mb4.5/3, Error ellipse: s-maj=12.9km s-min=6.4km az=138.0
ISC 22 17:02:53.0±0.7, 38.09N±0.05×144.21E±0.07, h35km, n47, σ2.13/68, mb3.7/15, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
JIKH	**Ishinomakikobu**	**2.17**	**277**	P	**Pn**	**17 03 25.1**	**-1.5**
JIKH				S	**Sn**	**17 03 49.8**	**-2.5**
OFUJ	**Ofunato**	**2.22**	**297**	P	**Pn**	**17 03 26.0**	**-1.3**
OFUJ				S	**Sn**	**17 03 51.8**	**-1.7**
JKMT	**Kesennumamotoy**	**2.26**	**289**	P	**Pn**	**17 03 26.5**	**-1.4**
JKMT				S	**Sn**	**17 03 52.7**	**-1.8**
JIO	**Ouri**	**2.28**	**280**	P	**Pn**	**17 03 26.8**	**-1.3**
JIO				S	**Sn**	**17 03 52.7**	**-2.2**
JMK	**Ichinoseki**	**2.50**	**291**	P	**Pn**	**17 03 30.0**	**-1.1**
JMK				S	**Sn**	**17 03 59.3**	**-1.0**
JOM	**Ohasama**	**2.66**	**302**	P	**Pn**	**17 03 32.5**	**-0.9**
JOM				eS	**Sn**	**17 04 04.1**	**-0.3**
JANG	**Nango**	**3.09**	**318**	P	**Pn**	**17 03 38.5**	**-0.8**
JFT	**Otama**	**3.12**	**261**	P	**Pn**	**17 03 39.1**	**-0.5**
JFT				S	**Sn**	**17 04 14.7**	**-1.0**
JYK	**Kaneyama**	**3.13**	**286**	P	**Pn**	**17 03 39.7**	**-0.1**
JYK				S	**Sn**	**17 04 15.2**	**-0.7**
ERM	**Erimo**	**4.00**	**349**	Pn	**Pn**	**17 03 51.0**	**-0.8**
ERM					**Sn**	**17 04 34.0**	**-3.3**
BSO1	**Boso 1**	**4.31**	**218**	P	**Pn**	**17 03 53.3**	**-2.2**
BSO1				S	**Sn**	**17 04 42.2**	**-2.0**
JKB	**Kayabe**	**4.51**	**328**	P	**Pn**	**17 03 58.3**	**-0.4**
JKB				S	**Sn**	**17 04 46.0**	**-3.9**
JCH	**Churui**	**4.56**	**352**	P	**Pn**	**17 03 57.5**	**-2.0**
JCH				eS	**Sn**	**17 04 46.1**	**-5.2**
JRY	**Ryogami san**	**4.72**	**246**	P	**Pn**	**17 04 00.4**	**-1.3**
JRY				S	**Sn**	**17 04 51.7**	**-3.5**
JOD2	**Odawara 2**	**4.99**	**237**	P	**Pn**	**17 04 03.7**	**-1.7**
JOD2				eS	**Sn**	**17 04 57.2**	**-4.6**
MJAR	**Matsushiro Arr**	**5.03**	**254**	Pn	**Pn**	**17 04 06.1**	**+0.2**
	0.4nm,0.3s,baz=84,slow=15,SNR=41						
MJAR				Sn	**Sn**	**17 05 01.3**	**-1.4**
	0.2nm,0.3s,baz=54,slow=23,SNR=2.9						
MAJO	**Matsushiro**	**5.03**	**254**		**Pn**	**17 04 06.2**	**+0.3**
MAT	**Matsushiro**	**5.03**	**254**	P	**Pn**	**17 04 06.3**	**+0.4**
MAT				S	**Sn**	**17 05 02.7**	**0.0**
MJB9	**Matsu-Tunnel**	**5.03**	**254**		**Pn**	**17 04 06.2**	**+0.3**
JOSM	**Okushiri--Mats**	**5.39**	**319**	P	**Pn**	**17 04 10.7**	**-0.1**
JOSM				eS	**Sn**	**17 05 10.5**	**-1.1**
NEM2	**Nemuro 2**	**5.40**	**12**	P	**Pn**	**17 04 07.0**	**-3.9**
NEM2				S	**Sn**	**17 05 04.6**	**-7.1**
JTKR	**Abashiri--Toko**	**5.88**	**358**	P	**Pn**	**17 04 15.7**	**-1.8**
JTKR				eS	**Sn**	**17 05 19.7**	**-3.9**
JHR	**Hokuryu**	**5.95**	**342**	P	**Pn**	**17 04 19.5**	**+1.0**
JHJ2	**Mitsune**	**6.12**	**217**	Pn	**Pn**	**17 04 19.6**	**-1.3**
JHJ	**Hachijo jima 2**	**6.13**	**217**	Pn	**Pn**	**17 04 19.3**	**-1.8**
	4.1nm,0.3s,baz=334,slow=20,SNR=5.4						
JHJ				Sn	**Sn**	**17 05 23.2**	**-6.7**
	18nm,0.3s,baz=310,slow=23,SNR=5.9						
JKA	**Kamikawa-asahi**	**6.14**	**349**		**Pn**	**17 04 21.1**	**0.0**
JKA					**Sn**	**17 05 29.0**	**-1.1**
ASAJ	**Asahikawa**	**6.14**	**349**	Pn	**Pn**	**17 04 21.1**	**0.0**
	2.2nm,0.3s,baz=206,slow=16,SNR=35						
ASAJ				Sn	**Sn**	**17 05 29.0**	**-1.1**
	2.0nm,0.3s,baz=36,slow=18,SNR=6.1						
INU	**Inuyama**	**6.39**	**247**	Pn	**Pn**	**17 04 24.1**	**-0.5**
KSRS	**Korea Array**	**12.90**	**272**	Pn	**Pn**	**17 05 55.5**	**+1.7**
	0.1nm,0.3s,baz=88,slow=14,SNR=4.2						
SEY	**Seymchan**	**25.37**	**9**	P	**P**	**17 08 17.6**	**+1.2**
	1.1nm,0.4s,baz=179,slow=9.2,SNR=6.4						
SONM	**Songino Array**	**29.08**	**302**	LR	LR	17 20 22.6	
	comp=Z,41nm,20.9s,baz=49,slow=36						
ZALV	**Zalesovo Beam**	**42.86**	**312**	PcP	**PcP**	**17 12 38.1**	**+0.2**
	0.6nm,0.6s,baz=66,slow=3.5,SNR=2.4						
CMAR	**Chiang Mai Arr**	**43.91**	**256**	P	**P**	**17 10 55.8**	**-0.6**
	0.2nm,0.5s,baz=40,slow=7.1,SNR=3.4						
MK31	**Makanchi Array**	**45.45**	**302**	P	**P**	**17 11 09.3**	**+0.9**
MK31				IAmb	IAmb	17 11 40.8	
	comp=Z,3.1nm,1.6s						
MKAR	**Makanchi Array**	**45.45**	**302**	P	**P**	**17 11 09.4**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=84,slow=10.0,SNR=10.0						
ILAR	**Eielson Array**	**47.41**	**33**	P	**P**	**17 11 24.2**	**+0.7**
	comp=Z,0.5nm,0.9s,baz=240,slow=6.5,SNR=4.6						
BOOM	**Boomskoye usch**	**50.98**	**298**	P	**P**	**17 11 53.0**	**+1.6**
BVAR	**Borovoye Array**	**51.51**	**312**	P	**P**	**17 11 56.0**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=72,slow=9.3,SNR=3.2						
WB0	**Warramunga Arr**	**58.28**	**191**	P	**P**	**17 12 43.1**	**-1.1**
WB0				IAmb	IAmb	17 12 49.4	
	comp=Z,8.3nm,1.3s						
WB2	**Warramunga Arr**	**58.46**	**191**	P	**P**	**17 12 44.2**	**-1.2**
WB2				IAmb	IAmb	17 13 12.0	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**58.47**	**191**	P	**P**	**17 12 44.3**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=11,slow=6.9,SNR=4.6						
YKA	**Yellowknife Ar**	**61.77**	**31**	P	**P**	**17 13 08.5**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=302,slow=7.0,SNR=4.4						
ASAR	**Alice Springs**	**62.19**	**191**	P	**P**	**17 13 10.2**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=8.7,slow=8.1,SNR=4.6						
NVAR	**Mina Array Bea**	**72.57**	**55**	P	**P**	**17 14 17.2**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=289,slow=8.1,SNR=5.5						
HFS	**Hagfors**	**74.02**	**337**	P	**P**	**17 14 25.7**	**+1.0**
	comp=Z,9.4nm,1.2s,baz=50,slow=9.6,SNR=3.2						
AKASG	**Malin Array Be**	**74.80**	**323**	P	**P**	**17 14 30.1**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=44,slow=5.4,SNR=3.3						
PDAR	**Pinedale Array**	**75.33**	**47**	P	**P**	**17 14 34.0**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=308,slow=2.1,SNR=3.2						

IDC 22 17:05:10.7±4.1, 24.44S×141.22E, h0km, mb1 3.0/3, mb1mx2.9/39, mbtmp2.8/3, ML2.7/3, Error ellipse: s-maj=46.4km s-min=24.8km az=48.0
AUST 22 17:05:11.7±0.0, 24.62S×141.26E, h0km, Error ellipse: s-maj=0.2km s-min=0.1km az=43.0
ISC 22 17:05:12.7±1.4, 24.59S±0.09×141.20E±0.09, h10km, n11, σ1.72/16, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
INKA	**Innaminka**	**3.16**	**187**	P	**Pn**	**17 06 04.1**	**+1.6**
	baz=3.2						
QLP	**Quilpie**	**3.38**	**126**	P	**Pn**	**17 06 06.3**	**+0.8**
	baz=3.3						
QLP				S	**Sn**	**17 06 45.2**	**-0.6**
	baz=3.3						
OOD	**Oodnadatta**	**5.89**	**236**	P	**Pn**	**17 06 42.3**	**+2.3**
	baz=5.9						
LCRK	**Leigh Creek**	**6.40**	**204**	P	**Pn**	**17 06 48.4**	**+1.3**
	baz=6.4						
AS01	**Alice Springs**	**6.69**	**276**	P	**Pn**	**17 06 53.6**	**+2.6**
	baz=6.7						
ASAR	**Alice Springs**	**6.73**	**276**	Pn	**Pn**	**17 06 52.8**	**+1.2**
	0.1nm,0.3s,baz=93,slow=13,SNR=4.6						
ASAR				Sn	**Sn**	**17 08 08.9**	**+0.5**
	0.1nm,0.3s,baz=99,slow=24,SNR=4.4						
ASAR				Lg	Lg	17 08 44.2	
	0.3nm,0.8s,baz=95,slow=28,SNR=10						
STKA	**Stephens Creek**	**7.26**	**177**	P	**Pn**	**17 06 59.6**	**+0.7**
	baz=7.3						
STKA				S	**Sn**	**17 08 19.7**	**-1.8**
	baz=7.3						
STKA	**Stephens Creek**	**7.26**	**177**	Pn	**Pn**	**17 06 59.4**	**+0.5**
	0.1nm,0.3s,baz=342,slow=12,SNR=2.1						
STKA				Sn	**Sn**	**17 08 19.5**	**-2.0**
	0.1nm,0.3s,baz=137,slow=20,SNR=2.9						
WC3	**Warramunga Arr**	**7.83**	**305**	P	**Pn**	**17 07 08.2**	**+1.6**
	baz=7.9						
WRA	**Warramunga Arr**	**7.86**	**305**	Pn	**Pn**	**17 07 05.0**	**-2.2**
	0.1nm,0.3s,baz=129,slow=13,SNR=8.1						
WRA				Sn	**Sn**	**17 08 34.0**	**-2.2**
	0.4nm,0.3s,baz=137,slow=25,SNR=11						
WRA				Lg	Lg	17 09 18.4	
	0.4nm,0.3s,baz=128,slow=27,SNR=5.5						
BBOO	**Buckleboo**	**9.35**	**208**	P	**Pn**	**17 07 27.4**	**-0.1**
	baz=9.4						

SJA 22 17:08:38.8±1.1, 19.99S×69.29W, h109km±12km, ML3.7, MW3.7
GUC 22 17:08:38.8±0.5, 20.00S×69.16W, h97km±2km, ML3.7
IDC 22 17:08:43.5±2.5, 19.93S×67.98W, h146km±21km, mb3.3/3, mb1 3.6/4, mb1mx3.3/26, mbtmp3.8/4, MS2.8/1, Ms1 2.8/1, ms1mx2.6/8, Error ellipse: s-maj=48.2km s-min=22.2km az=92.0
ISC 22 17:08:39.8±1.0, 20.00S±0.03×69.25W±0.06, h96km±6km, n37, σ1.11/45, 3C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
PB08	**IPOC Station P**	**0.17**	**146**	⇓iP	**Pn**	**17 08 53.5**	**-0.5**
PB08				iS	**Sn**	**17 09 04.6**	**+0.1**
PB08				IAML		17 09 06.3	
	comp=N,3μm,0.2s						
GO01	**Chusmiza**	**0.34**	**9**	eP	**Pn**	**17 08 54.2**	**-0.6**
GO01				eS	**Sn**	**17 09 05.9**	**0.0**
GO01				IAML		17 09 07.9	
	comp=N,10μm,0.1s						
PB11	**IPOC Station P**	**0.45**	**302**	⇑iP	**Pn**	**17 08 54.9**	**-0.1**
PB11				iS	**Sn**	**17 09 07.4**	**+1.0**
PSGC	**Pisagua**	**0.91**	**296**	⇑iP	**Pn**	**17 08 59.3**	**+0.1**
PSGC				iS	**Sn**	**17 09 15.1**	**+1.4**
MNMC	**Minye Minye**	**0.93**	**339**	⇓iP	**Pn**	**17 08 59.8**	**+0.3**
MNMC				eS	**Sn**	**17 09 15.2**	**+1.0**
MNMC				IAML		17 09 17.5	
	comp=N,3μm,0.3s						
MNMCX	**Minye Minye**	**0.93**	**339**	iP	**Pn**	**17 08 59.7**	**+0.2**
MNMCX				iS	**Sn**	**17 09 15.6**	**+1.4**
TA01	**Diego Aracena**	**1.04**	**237**	eP	**Pn**	**17 09 00.5**	**+0.2**
TA01				iS	**Sn**	**17 09 17.1**	**+1.2**
PB01	**IPOC Station P**	**1.06**	**192**	⇓iP	**Pn**	**17 09 00.7**	**-0.1**
PB01				iS	**Sn**	**17 09 17.1**	**+0.6**
PB01				IAML		17 09 19.6	
	comp=N,2μm,0.2s						
PATCX	**Punta Patache**	**1.17**	**226**	⇑iP	**Pn**	**17 09 02.2**	**+0.2**
PATCX				iS	**Sn**	**17 09 20.2**	**+1.4**
PATCX				IAML		17 09 28.0	
	comp=E,1μm,0.4s						
PATCX	**Punta Patache**	**1.17**	**226**	iP	**Pn**	**17 09 02.3**	**+0.3**

PATCX i S Sn 17 09 20.1 +1.3
PB02 IPOC Station P 1.44 205 eP Pn 17 09 05.6 +0.4
PB02 i S Sn 17 09 25.8 +1.2
PB02 IAML 17 09 32.0
comp=N,2µm,0.3s
PB02 IPOC Station P 1.44 205 i P Pn 17 09 05.7 +0.4
PB02 i S Sn 17 09 26.7 +2.1
PB09 IPOC Station P 1.79 180 i P Pn 17 09 10.3 +0.6
PB09 i S Sn 17 09 34.0 +1.6
PB09 IAML 17 09 41.2
comp=Z,476nm,0.5s
PB07 IPOC Station P 1.81 199 eP Pn 17 09 10.2 +0.1
PB07 eS Sn 17 09 34.7 +1.7
PB07 IAML 17 09 40.6
comp=E,941nm,0.6s
PB07 IPOC Station P 1.81 199 i P Pn 17 09 10.2 +0.1
PB07 i S Sn 17 09 34.9 +1.9
PB03 IPOC Station P 2.09 193 eP Pn 17 09 13.2 -0.3
PB03 i S Sn 17 09 38.4 -0.9
PB03 IPOC Station P 2.09 193 i P Pn 17 09 14.2 +0.6
PB04 IPOC Station P 2.47 200 i P Pn 17 09 19.6 +1.1
PB04 IAML 17 09 58.5
comp=Z,326nm,0.4s
PB06 IPOC Station P 2.71 186 eP Pn 17 09 22.0 +0.3
PB06 IPOC Station P 2.71 186 i P Pn 17 09 22.0 +0.3
PB06 IAML 17 10 02.3
comp=Z,277nm,0.2s
PB05 IPOC Station P 2.97 197 i P Pn 17 09 24.7 -0.5
PB15 IPOC Station P 3.20 184 i P Pn 17 09 30.8 +2.5
PB10 IPOC Station P 3.70 199 i P Pn 17 09 34.0 -0.9
LPAZ La Paz 3.84 16 P Pn 17 09 39.2 +1.8
comp=Z,5.3nm,0.3s,baz=194,slow=7.1,SNR=90
LPAZ S Sn 17 10 23.3 +1.3
baz=270,slow=18,SNR=2.4
LPAZ La Paz 3.84 16 i P Pn 17 09 38.9 +1.4
HJA Humahuaca 4.79 132 i P Pn 17 09 50.7 +0.6
PLCA Paso Flores 20.69 183 P Pn 17 13 13.9 -1.5
comp=Z,2.6nm,1.1s,baz=39,slow=13,SNR=4.0
RPN Rapa Nui 37.30 251 LR LR 17 26 21.4
comp=Z,16nm,21.5s,baz=66,slow=28
TORD Torodi Ar. Bea 77.16 71 P P 17 20 15.0 -8.5
comp=Z,0.5nm,0.6s,baz=281,slow=6.7,SNR=3.1
YKA Yellowknife Ar 89.67 341 P P 17 21 25.1 -1.3
comp=Z,0.6nm,0.7s,baz=134,slow=4.5,SNR=12
H11S2 WAKE ISLAND Hy127.36 278 T T 19 47 20.7
baz=102,slow=75,SNR=7.4
H11S1 WAKE ISLAND Hy127.37 278 T T 19 47 24.5
baz=102,slow=75,SNR=7.8
H11S3 WAKE ISLAND Hy127.38 278 T T 19 47 24.3
baz=102,slow=75,SNR=9.6
H11N3 WAKE ISLAND Hy127.40 280 T T 19 47 32.2
baz=98
H11N2 WAKE ISLAND Hy127.42 280 T T 19 47 31.9
baz=98
H11N1 WAKE ISLAND Hy127.42 280 T T 19 47 32.8
baz=98
SONM Songino Array 152.01 6 PKPbc PKPbc 17 28 21.9 -2.0
comp=Z,0.3nm,0.3s,baz=323,slow=0.8,SNR=3.3

BJI 22 17:27:55.3±0.0, 0.91N×97.37E, h19km, mB5.0/44, mb4.9/63, Ms5.1/29, Ms7 4.8/28
IDC 22 17:27:55.7±0.5, 1.12N×97.20E, h0km, mb4.5/44, mb1 4.5/47, mb1mx4.4/73, mbtmp4.5/47, ML4.0/3, Error ellipse: s-maj=14.2km s-min=10.3km az=35.0
MOS 22 17:27:57.8±0.9, 1.10N×97.20E, h30km, mb5.0/29, Error ellipse: s-maj=7.9km s-min=5.1km az=100.3
NEIC 22 17:27:59.3±2.2, 1.08N±0.06×97.24E±0.07, h28km±4km, mb5.1/88, Error ellipse: s-maj=10.6km s-min=8.5km az=55.0
DJA 22 17:28:00.1±0.6, 1°N±2°×97°E±°, h34km±7km, M4.9/19, mb4.9/19, mB5.2/8, MLv5.4/14, Mw(mB)4.5/8
KLM 22 17:28:01.0, 1.20N×97.13E, h24km, mb4.7
ISC 22 17:27:58.8±0.3, 1.11N±0.04×97.19E±0.04, h25km, n332, σ1.48/331, mb4.9/122, 23C-8D, Northern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SNSI Sinabang, Aceh 1.56 326 P Pn 17 28 24.9 0.0
SNSI S Sn 17 28 44.4 +0.1
PBSI Pulau Batu 1.58 137 P Pn 17 28 26.0 +0.7
PBSI S Sb 17 28 46.1 -1.0
TPTI 2.14 360 P Pn 17 28 32.4 -0.6
TPTI S Sn 17 29 00.3 +1.6
RPSI Rantau Prapat 2.34 48 Pn 17 28 36.7 +1.0
RPSI Rantau Prapat 2.34 48 Pn 17 28 37.4 +1.7
PSI Prapat 2.41 46 Pn Pn 17 28 37.4 +0.5
17nm,0.3s,baz=210,slow=9.1,SNR=100
PSI Prapat 2.41 46 P Pn 17 28 36.7 -0.2
SISI Saibi 3.07 142 P Pn 17 28 47.4 +1.6
SISI S Sn 17 29 21.9 +0.1
MLSI Meulaboh, Aceh 3.24 346 P Pn 17 28 48.1 0.0
MLSI S Sn 17 29 26.3 +0.5
PDSI Padang 3.83 122 P Pn 17 28 57.8 +1.5
BKNI Bangkinang 3.92 101 P Pn 17 28 58.9 +1.4
BKNI Bangkinang 3.92 101 Pn 17 28 58.6 +1.1
LHMI Lhok Sumawe 4.10 357 P Pn 17 29 00.6 +0.6
LHMI S Sn 17 29 48.2 +1.0
LHMI Lhok Sumawe 4.10 357 Pn 17 29 00.0 0.0
SDSI Sungai Dareh 4.69 116 P Pn 17 29 08.9 +0.8
IPM Ipoh 5.09 49 Pn 17 29 15.2 +1.7
IPM Ipoh 5.09 49 P Pn 17 29 16.0 +2.5
KRJI Kerinci 5.32 127 P Pn 17 29 17.5 +0.7
24nm5µm355nm,0.5s
KULM Kulim 5.40 40 Pn 17 29 18.7 +0.8
KULM Kulim 5.40 40 P Pn 17 29 19.0 +1.1
JRMM Jerantut 5.96 62 P Pn 17 29 27.0 +1.5
MYKOM Kota Tinggi 6.69 84 Pn 17 29 36.3 +0.7
MYKOM Kota Tinggi 6.69 84 P Pn 17 29 38.0 +2.4
KSI Kapahiang 7.17 131 P Pn 17 29 43.4 +1.1
3.9nm87nm,0.7s
MNAI Manna 7.92 133 Pn Pn 17 29 53.6 +1.2
MNAI Sn Sn 17 31 18.1 -3.2
MDSI Maura Dua 8.92 129 P Pn 17 30 07.4 +1.2
42nm,0.8s
LWLI Liwa 9.17 132 P Pn 17 30 09.9 +0.2
36nm,0.6s
KLSI 9.48 127 P Pn 17 30 14.7 +0.8
7.8nm,1.0s
KASI Kota Agung 9.83 132 P Pn 17 30 18.6 0.0
48nm,0.7s
KSM Kuching 13.12 88 P Pn 17 31 06.0 +2.3
COCO West Island 13.21 182 Pn Pn 17 31 05.0 +0.1
COCO West Island 13.21 182 P Pn 17 31 05.1 +0.1
CISI Cisompet, Garu 13.65 129 Pn Pn 17 31 08.8 -2.2
SBUM Sibu 15.08 85 Pn 17 31 31.6 +1.2
SBUM Sibu 15.08 85 P P 17 31 33.0 -2.5
SMRI Semarang 15.50 122 Pn Pn 17 31 37.1 +1.1
SMRI IAmb IAmb 17 32 29.6
comp=Z,203nm,1.3s
DLV T Lat 15.54 46 Pn 17 31 36.8 +0.2
PBKT Sadao Pong 15.81 13 Pn 17 31 41.2 +1.3
UGM Wanagama 16.03 124 Pn Pn 17 31 39.0 -3.8
UGM IAmb IAmb 17 31 58.6
comp=Z,301nm,1.7s
UBPT Khong Chiam 16.28 30 Pn 17 31 45.0 -1.0
CM31 Chiang Mai Arr 17.33 6 Pn 17 31 58.2 -1.0
CMAR Chiang Mai Arr 17.33 6 P Pn 17 31 58.7 -0.5
comp=Z,0.3nm,0.3s,baz=195,slow=13,SNR=45
CMAR Chiang Mai Arr 17.33 6 i P Pn 17 31 58.7 -0.5
CMAR pmax pmax
comp=Z,13nm,0.9s
PALK Pallekele 17.54 291 P P 17 32 03.5 +0.7
comp=Z,0.3nm,0.3s,baz=58,slow=7.2,SNR=3.4
CHTO Chiang Mai 17.68 5 Pn 17 32 02.1 -1.5
CHTO Chiang Mai 17.68 5 P Pn 17 32 02.1 -1.5
CHTO pmax pmax
comp=Z,10.0nm,1.0s
SIMRM Sittwe 19.37 348 P P 17 32 23.1 +0.2
JAGI Jajag, Banyuwa 19.40 120 P P 17 32 20.7 -2.5
KKM Kota Kinabalu 19.60 75 P P 17 32 25.8 +0.2
SLVN Son La 21.14 18 P P 17 32 42.7 +0.5
SLVN IAmb IAmb 17 32 46.9
comp=Z,67nm,1.0s
BRDH Bariadhala 22.11 346 P P 17 32 53.6 +1.1
comp=Z,160nm,0.3s,baz=70,slow=7.1,SNR=5.9
MPSI Mapaga 22.72 92 P P 17 33 00.0 +0.9
comp=Z,20nm,1.0s
KAPI Kappang 23.34 105 P P 17 33 06.6 +1.1
comp=Z,7.6nm,0.6s,baz=206,slow=19,SNR=2.7
HYB Hyderabad 24.47 313 i P P 17 33 18.0 +1.8
KMI Kunming 24.47 12 P P 17 33 17.8 +1.5
KMI pP pP 17 33 24.0 +0.3
KMI sP sP 17 33 27.6 +0.8
KMI S S 17 37 33.0 -2.3
KMI pmax pmax
comp=Z,100nm,1.4s
KMI pmax pmax
comp=Z,320nm,3.1s
KMI LR LR
comp=Z,16µm,16.5s
APSI Ampana 24.54 95 P P 17 33 17.7 +0.9
comp=Z,516nmcomp=Z,38nm,1.1s
WBSI Waikabubak, Su 24.55 116 P P 17 33 16.0 -0.9
comp=Z,36nm,1.1s
MRSI Marisa 24.75 91 P P 17 33 19.4 +0.7
SHL Shillong 24.85 349 P P 17 33 19.9 +0.2
SHL IAmb IAmb 17 33 21.3
comp=Z,78nm,0.9s
SHL Shillong 24.85 349 P P 17 33 19.9 +0.2
SHL pmax pmax
comp=Z,78nm,0.9s
LUWI Luwuk 25.67 95 P P 17 33 25.2 -1.8
LUWI IAmb IAmb 17 34 20.6
comp=Z,73nm,1.0s
DGAR Diego Garcia 26.09 251 P P 17 33 29.6 -1.3
DGAR Diego Garcia 26.09 251 P P 17 33 29.6 -1.3
DGAR pmax pmax
comp=Z,563nm,2.0s
H08S2 Diego Garcia H 26.12 250 T T 18 00 34.1
baz=74
H08S3 Diego Garcia H 26.13 250 T T 18 00 36.9
baz=74
H08S1 Diego Garcia H 26.14 250 T T 18 00 38.0
baz=74
HKPS Hong Kong Po S 26.74 37 P P 17 33 34.9 -1.7
GYA Guiyang 26.80 19⇑i P P 17 33 37.5 +0.2
GYA pP pP 17 33 44.8 +0.1
GYA S S 17 38 14.3 +2.1
GYA sS sS 17 38 24.9 +0.4
GYA SS SnSn 17 39 21.0 +3.5
GYA pmax pmax
comp=Z,20nm,1.1s
GYA pmax pmax
comp=Z,140nm,3.5s
GYA LR LR
comp=Z,4µm,18.8s
GYA LR LR
comp=Z,8µm,17.3s
GYA LR LR
comp=Z,3µm,17.2s
ODAN Odare 27.28 341 eP P 17 33 43.5 +1.8
TAPN Taplejung 27.64 342 eP P 17 33 46.9 +1.9
comp=Z,116nm,0.9s
RAMN Ramite 27.64 339 eP P 17 33 47.2 +2.3
comp=Z,89nm,1.2s
JIRN Jiri 28.43 339 eP P 17 33 54.0 +1.8
comp=Z,76nm,0.8s
PKI Pulchoki 28.64 338 eP P 17 33 55.5 +1.6
comp=Z,68nm,1.2s
PKIN Phulchoki 28.65 338 eP P 17 33 55.3 +1.3
GUN Gumba 28.77 339 eP P 17 33 57.0 +1.9
DMN Daman 28.79 337 eP P 17 33 56.9 +1.7
KKN Kakani 28.88 338 eP P 17 33 57.5 +1.5
comp=Z,82nm,1.1s
SOEI Soe 29.04 112 P P 17 33 55.6 -1.8
SOEI IAmb IAmb 17 34 17.6
comp=Z,50nm,1.4s
GKN Gorkha 29.32 337 eP P 17 34 01.5 +1.7
DANN Dangsing 29.98 336 eP P 17 34 07.4 +1.6
CD2 Chengdu 30.29 11 P P 17 34 09.3 +1.1
CD2 pmax pmax
comp=Z,40nm,0.5s
PSA00 Pilbara Seismi 31.59 137 P P 17 34 18.7 -1.1
TPUB Ta-pu 31.68 44 P P 17 34 18.9 -1.7
TPUB IAmb IAmb 17 34 33.7
comp=Z,75nm,1.5s
TWG Pinlang 31.69 45 P P 17 34 17.6 -3.1
YULB Yu-li 32.21 45 P P 17 34 22.7 -2.6
YULB IAmb IAmb 17 34 55.1
comp=Z,46nm,1.5s
SSLB Suanglung 32.23 44 P P 17 34 23.9 -1.5
SSLB IAmb IAmb 17 35 29.0
comp=Z,76nm,1.8s
NACB Ninganchiao 32.92 44 P P 17 34 27.4 -4.0
NACB IAmb IAmb 17 35 28.9
comp=Z,26nm,1.0s
FITZ Fitzroy Crossi 33.88 126 P P 17 34 40.1 +0.2
comp=Z,1.1nm,0.6s,baz=302,slow=9.5,SNR=5.0
FITZ Fitzroy Crossi 33.88 126 P P 17 34 39.5 -0.4
YOJ Yonaguni jima 34.10 45 P P 17 34 42.0 +0.3
YOJ Yonaguni jima 34.10 45 P P 17 34 42.0 +0.3
YOJ pmax pmax
comp=Z,220nm,1.5s
SIJI Sorong 34.13 93 P P 17 34 42.7 +0.6
comp=Z,17nm,0.9s,baz=81,slow=20,SNR=3.2
XAN Xi'an 34.55 17 P P 17 34 44.8 -0.8
XAN pP pP 17 34 51.0 -2.0
XAN pmax pmax
comp=Z,16nm,0.9s
XAN pmax pmax
comp=Z,110nm,3.6s
FAKI Fak Fak 35.27 97 P P 17 34 50.9 -1.1
LZH Lanzhou 35.35 9 eP P 17 34 55.5 +3.0
LZH pP pP 17 35 00.0 0.0
LZH sP sP 17 35 02.5 -0.6
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,55nm,5.4s
LZH LR LR
comp=Z,120nm,15.2s
LZH LR LR
comp=Z,140nm,15.2s
LZH LR LR
comp=Z,150nm,13.6s
KNRA Kununurra 35.37 119 P P 17 34 52.8 0.0
KNRA IAmb IAmb 17 36 03.3
comp=Z,32nm,1.6s
NJ2 Nanjing 36.95 31 eP P 17 35 07.0 +1.0
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
NJ2 LR LR
comp=Z,3µm,19.9s
NJ2 LR LR
comp=Z,4µm,15.6s
NJ2 LR LR
comp=Z,4µm,19.0s
GTA Gaotai 38.20 3 ⇑P P 17 35 17.3 +0.6
GTA pP pP 17 35 23.0 -1.2
GTA sP sP 17 35 26.1 -1.2
GTA pmax pmax
comp=Z,27nm,1.0s
GTA pmax pmax
comp=Z,95nm,4.4s
GTA LR LR
comp=Z,3µm,16.8s
GTA LR LR
comp=Z,3µm,14.9s
GTA LR LR
comp=Z,4µm,15.5s
H01W3 Cape Leeuwin H 39.16 158 T T 18 16 48.8
baz=334
H01W2 Cape Leeuwin H 39.17 158 T T 18 16 50.1
baz=334
H01W1 Cape Leeuwin H 39.18 158 T T 18 16 50.0
baz=334
NIL Nilore 39.39 328 P P 17 35 26.7 0.0
NIL IAmb IAmb 17 35 28.4
comp=Z,20nm,0.8s
NIL Nilore 39.39 328 P P 17 35 26.7 0.0
NIL pmax pmax
comp=Z,20nm,0.8s
WRKA Warakurna 39.78 133 P P 17 35 31.7 +1.7
baz=40,SNR=9.6
WB0 Warramunga Arr 41.96 122 P P 17 35 47.5 -0.6
WRA Warramunga Arr 41.99 122 P P 17 35 48.8 +0.5
comp=Z,2.0nm,0.6s,baz=301,slow=9.2,SNR=30
WRA Warramunga Arr 41.99 122 i P P 17 35 48.5 +0.1
WRA pmax pmax
comp=Z,3.0nm,0.5s
WRAB Tennant Creek 42.00 122 P P 17 35 47.6 -0.8
WRAB Tennant Creek 42.00 122 P P 17 35 47.6 -0.8
WRAB pmax pmax
comp=Z,23nm,1.4s
WB2 Warramunga Arr 42.00 122 P P 17 35 48.4 -0.1
WR0 Warramunga Arr 42.17 122 P P 17 35 48.5 -1.3
KSH Kashi 42.85 336 P P 17 35 55.3 +0.1
KSH pP pP 17 36 01.3 -1.5
KSH sP sP 17 36 04.9 -0.9
KSH PP PcP 17 37 42.1 -4.0
KSH PcS PcS 17 41 37.6 -0.8
KSH S S 17 42 16.5 -1.9
KSH SS SS 17 45 21.0 -9.3
KSH pmax pmax
comp=Z,6.0nm,1.0s
KSH pmax pmax
comp=Z,290nm,3.6s
KSH LR LR
comp=Z,410nm,7.7s
KSH LR LR
comp=Z,790nm,10.9s
KSH LR LR
comp=Z,410nm,12.6s
FORT Forrest 43.21 140 P P 17 35 57.8 -0.3
FORT IAmb IAmb 17 36 18.8
comp=Z,29nm,0.9s
ASAR Alice Springs 43.34 127 P P 17 36 00.1 +0.8
comp=Z,2.8nm,0.9s,baz=298,slow=7.6,SNR=32
AS31 Alice Springs 43.34 127 P P 17 35 59.3 -0.1
WMQ Urumqi 43.36 350 eP P 17 36 00.9 +1.7
WMQ pP pP 17 36 07.9 +1.1
WMQ sP sP 17 36 16.5 +6.6
WMQ SS SS 17 45 31.3 -8.7
WMQ pmax pmax
comp=Z,22nm,1.1s
WMQ pmax pmax
comp=Z,150nm,4.5s
WMQ LR LR
comp=Z,990nm,19.1s
WMQ LR LR
comp=Z,1µm,21.3s
WMQ LR LR
comp=Z,2µm,28.8s
DL2 Dalian 43.76 28 P P 17 36 03.3 +0.9
DL2 pmax pmax
comp=Z,45nm,1.0s
NRN Naryn 44.47 337 P P 17 36 08.4 -0.1
NRN IAmb IAmb 17 36 11.2
comp=Z,12nm,0.8s
NRN Naryn 44.47 337 P P 17 36 08.4 -0.1
NRN pmax pmax
comp=Z,12nm,0.8s
PRZ Przheval'sk 44.52 340 P P 17 36 09.3 +0.7
PRZ IAmb IAmb 17 36 11.9
comp=Z,22nm,1.4s
PRZ Przheval'sk 44.52 340 P P 17 36 09.3 +0.7
PRZ pmax pmax
comp=Z,22nm,1.4s
KDJ Kajisay 44.63 339 P P 17 36 10.4 +0.9
KDJ IAmb IAmb 17 36 12.8
comp=Z,23nm,0.9s
KDJ Kajisay 44.63 339 P P 17 36 10.4 +0.9
KDJ pmax pmax
comp=Z,23nm,1.0s
TJN Taejon 44.85 35ceP P 17 36 11.3 +0.1
JNU Nakatsue 44.88 41 P P 17 36 12.2 +0.7
comp=Z,5.9nm,0.8s,baz=298,slow=2.6,SNR=5.6
JNU Nakatsue 44.88 41 P P 17 36 11.9 +0.4
JNU IAmb IAmb 17 36 54.5
comp=Z,24nm,1.2s
ULHL Ulahol 45.08 338 P P 17 36 14.9 +1.7
SNR=7.2
INCN Inchon 45.23 33 P P 17 36 13.7 -0.5
INCN IAmb IAmb 17 36 15.3
comp=Z,46nm,1.5s
INCN Inchon 45.23 33 P P 17 36 13.7 -0.5
INCN pmax pmax
comp=Z,46nm,1.5s
BOOM Boomskoye usch 45.40 338 P P 17 36 17.1 +1.4
BOOM Boomskoye usch 45.40 338 P P 17 36 17.1 +1.4
BTK Batken 45.59 331 P P 17 36 16.7 -0.4
BTK IAmb IAmb 17 36 26.6
comp=Z,25nm,1.1s
BTK Batken 45.59 331 P P 17 36 16.7 -0.4
BTK pmax pmax
comp=Z,25nm,1.1s
UCH Uchtor 45.73 336 P P 17 36 20.6 +2.0
SNR=15
KBK Karagaybulak 45.92 337 P P 17 36 22.2 +2.4
SNR=13
KSRS Korea Array 45.93 34 P P 17 36 20.3 +0.6
comp=Z,20nm,0.9s,baz=221,slow=9.1,SNR=57
KS19 Wonju Array Si 45.93 34 P P 17 36 19.4 -0.3
KS19 IAmb IAmb 17 36 21.3
comp=Z,25nm,0.9s
AML Almayashu 45.98 336 P P 17 36 22.4 +1.8
SNR=10.0
AAK Ala-Archa 46.09 337 P P 17 36 22.4 +1.3
comp=Z,3.1nm,0.7s,baz=140,slow=8.9,SNR=5.3
AAK Ala-Archa 46.09 337 P P 17 36 22.2 +1.1
AAK Ala-Archa 46.09 337ceP P 17 36 20.5 -0.6
AAK pmax pmax
comp=Z,16nm,2.5s
FRU1 Bishkek 46.18 337 P P 17 36 21.1 -0.6
FRU1 IAmb IAmb 17 36 25.1
comp=Z,23nm,1.4s
FRU1 Bishkek 46.18 337 P P 17 36 21.1 -0.6
FRU1 pmax pmax
comp=Z,23nm,1.4s
EKS2 Erkin-Say 46.39 336 P P 17 36 25.7 +2.2
SNR=11
HRA Herat 46.49 319 P P 17 36 24.2 -0.3
USP Ospenovka 46.62 337 P P 17 36 26.9 +1.8
SNR=17
SONM Songino Array 47.22 8 P P 17 36 30.9 +1.1
comp=Z,12nm,0.8s,baz=189,slow=9.7,SNR=37
SONM PcP PcP 17 38 01.9 +1.0
comp=Z,3.8nm,0.9s,baz=185,slow=4.2,SNR=5.0
TAS Tashkent 47.30 331 P P 17 36 31.8 +1.3
TAS Tashkent 47.30 331 P P 17 36 31.8 +1.3
TAS pmax pmax
comp=Z,48nm,1.0s
MK31 Makanchi Array 47.33 346 P P 17 36 30.9 +0.3
MK31 Makanchi Array 47.33 346 P P 17 36 30.9 +0.3
MK31 pmax pmax
comp=Z,9.0nm,0.9s
MKAR Makanchi Array 47.33 346 P P 17 36 31.8 +1.3
comp=Z,8.2nm,0.8s,baz=159,slow=7.8,SNR=50
MKAR Makanchi Array 47.33 346 i P P 17 36 31.7 +1.1
MKAR pmax pmax
comp=Z,8.0nm,0.8s
ULN Ulaanbaatar 47.35 9 P P 17 36 31.2 +0.3
ULN IAmb IAmb 17 36 34.7
comp=Z,12nm,0.9s
ULN PcP PcP 17 38 02.0 +0.6
MAKZ Makanchi 47.42 346 P P 17 36 31.9 +0.7
MAKZ Makanchi 47.42 346 P P 17 36 32.0 +0.7
MAKZ pmax pmax
comp=Z,8.0nm,0.9s
COEN Coen 47.94 110 P P 17 36 35.6 -0.2
COEN IAmb IAmb 17 37 45.7
comp=Z,48nm,1.7s
KK31 Karatay Array 48.14 334 P P 17 36 36.9 0.0
KK31 IAmb IAmb 17 36 45.9
comp=Z,23nm,1.4s
KK31 Karatay Array 48.14 334 P P 17 36 36.9 0.0
KK31 pmax pmax
comp=Z,23nm,1.4s
KKAR Karatay Array 48.14 334 P P 17 36 36.5 -0.4
KKAR IAmb IAmb 17 36 46.0
comp=Z,23nm,1.4s
KKAR Karatay Array 48.14 334 P P 17 36 36.5 -0.4
KKAR pmax pmax
comp=Z,23nm,1.4s
ZAK Zakamensk 49.37 5 eP P 17 36 47.2 +0.9
ZAK pmax pmax
comp=Z,5.0nm,1.5s
CN2 Changchun 49.39 27 eP P 17 36 46.8 +0.3
CN2 pmax pmax
comp=Z,20nm,1.0s
BBOO Buckleboo 49.82 136 P P 17 36 50.6 +0.6
BBOO IAmb IAmb 17 38 44.2
comp=Z,18nm,0.9s
MOY Mondy 50.48 3 eP P 17 36 48.7 -6.1
TLY Talaya 50.69 5 P P 17 36 57.4 +1.2
comp=Z,4.9nm,0.8s,baz=197,slow=8.6,SNR=8.1
TLY Talaya 50.69 5 P P 17 36 56.0 -0.2
TLY IAmb IAmb 17 38 49.5
comp=Z,19nm,0.8s
TLY Talaya 50.69 5 eP P 17 36 57.8 +1.6
TLY pmax pmax

comp=Z,17nm,0.9s
PMG Port Moresby 50.84 103 P P 17 36 59.0 +1.0
comp=Z,3.3nm,0.5s,baz=288,slow=9.6,SNR=4.1
PMG Port Moresby 50.84 103 P P 17 36 56.7 -1.3
PMG Port Moresby 50.84 103 P P 17 36 56.7 -1.3
PMG pmax pmax
comp=Z,34nm,0.8s
GEYT Alibeck 51.28 320 P P 17 37 02.2 +1.2
comp=Z,3.6nm,0.8s,baz=173,slow=13,SNR=7.9
GYA0B ALIBECK ARRAY 51.28 320 P P 17 37 00.7 -0.2
GYA0B IAmb IAmb 17 38 57.5
comp=Z,9.5nm,0.7s
IRK Irkutsk 51.30 6 eP P 17 37 00.8 0.0
IRK pmax pmax
comp=Z,28nm,2.6s
MJB9 Matsu-Tunnel 51.76 42 P P 17 37 03.5 -1.1
MJB9 IAmb IAmb 17 38 56.1
comp=Z,64nm,1.9s
MAJO Matsushiro 51.76 42 P P 17 37 03.2 -1.4
MAJO IAmb IAmb 17 38 56.2
comp=Z,66nm,1.9s
MAJO Matsushiro 51.76 42 P P 17 37 03.2 -1.4
MAJO pmax pmax
comp=Z,66nm,1.9s
MJAR Matsushiro Arr 51.76 42 P P 17 37 05.2 +0.7
comp=Z,1.1nm,0.5s,baz=214,slow=6.7,SNR=13
KURBB Kurchatov Arra 51.82 345 P P 17 37 05.8 +1.1
comp=Z,8.5nm,0.9s,baz=167,slow=7.1,SNR=52
KURK Kurchatov 51.88 345 P P 17 37 05.5 +0.4
KURK Kurchatov 51.88 345ceP P 17 37 05.5 +0.4
KURK pmax pmax
comp=Z,21nm,1.0s
MDJ Mudanjiang 51.95 29 P P 17 37 06.6 +0.8
MDJ pP pP 17 37 12.6 -0.9
MDJ sP sP 17 37 16.8 +0.3
MDJ pmax pmax
comp=Z,15nm,1.1s
MDJ pmax pmax
comp=Z,240nm,5.5s
VLA Vladivostok 52.05 32 iP P 17 37 07.7 +1.2
VLA pmax pmax
comp=Z,31nm,1.2s
HTT Hallett 52.16 135 P P 17 37 09.4 +1.8
baz=52,SNR=3.7
CTAO Charters Tower 52.47 116 P P 17 37 09.1 -1.0
CTAO Charters Tower 52.47 116 P P 17 37 09.1 -1.0
USA0B Ussuriysk Arra 52.85 31 P P 17 37 13.2 +0.8
USA0B Ussuriysk Arra 52.85 31 iP P 17 37 12.3 -0.2
USRK Ussuriysk Ar. 52.85 31 P P 17 37 13.6 +1.1
comp=Z,21nm,0.9s,baz=233,slow=5.0,SNR=23
OPO Ambohidratompo 52.88 246 P P 17 37 15.1 +1.8
comp=Z,5.6nm,0.9s,baz=27,slow=21,SNR=3.9
ABPO Ambohimpanom 52.97 245 P P 17 37 15.1 +1.1
ABPO IAmb IAmb 17 39 08.8
comp=Z,28nm,1.2s
ABPO Ambohimpanom 52.97 245 P P 17 37 15.1 +1.1
ABPO pmax pmax
comp=Z,28nm,1.2s
STKA Stephens Creek 53.30 132 P P 17 37 17.9 +2.0
baz=54,SNR=7.9
STKA Stephens Creek 53.30 132 P P 17 37 16.7 +0.7
comp=Z,4.8nm,0.8s,baz=317,slow=6.9,SNR=12
STKA Stephens Creek 53.30 132 P P 17 37 16.0 0.0
STKA Stephens Creek 53.30 132 P P 17 37 16.0 0.0
STKA pmax pmax
comp=Z,15nm,1.2s
ZAA0 Zalesovo Array 53.65 351 P P 17 37 18.3 +0.2
ZALV Zalesovo Beam 53.65 351 P P 17 37 19.1 +1.0
comp=Z,26nm,0.9s,baz=178,slow=5.9,SNR=57
CMSA Cobar Meteorol 56.24 130 P P 17 37 39.6 +2.2
baz=56,SNR=19
BVAR Borovoye Array 56.34 341 P P 17 37 37.9 +0.3
comp=Z,8.2nm,0.9s,baz=142,slow=7.5,SNR=26
KLR Kul'dur 56.34 27c iP P 17 37 38.6 +0.9
KLR pmax pmax
comp=Z,22nm,1.0s
BRVK Borovoye 56.40 341 P P 17 37 38.1 +0.1
BRVK Borovoye 56.40 341ceP P 17 37 38.4 +0.4
BRVK pmax pmax
comp=Z,11nm,1.0s
ABKAR Akbulak array 57.59 332 P P 17 37 46.5 0.0
ZEA Zeya 58.03 21 eP P 17 37 50.8 +1.3
ZEA pmax pmax
comp=Z,15nm,1.0s
BOD Bodaibo 58.10 11 eP P 17 37 49.6 -0.4
BOD pmax pmax
comp=Z,21nm,1.1s
EIDS Eidsvold 58.34 121 P P 17 37 54.3 +2.0
baz=58,SNR=7.5
EIDS Eidsvold 58.34 121 P P 17 37 54.2 +2.0
AKTO Aktyubinsk 59.31 332 P P 17 37 58.6 +0.1
comp=Z,4.2nm,0.9s,baz=142,slow=4.4,SNR=8.3
GRNR Gornyy 59.56 28⇑iP P 17 37 59.5 -0.8
GRNR eS S 17 46 11.9 +3.2
GRNR pmax pmax
comp=Z,7.0nm,1.3s
GRNR MLR MLR
comp=Z,270nm,18.0s
CAN Canberra 60.36 132 P P 17 38 07.9 +1.8
CAN Canberra 60.36 132 P P 17 38 07.9 +1.8
CAN pmax pmax
comp=Z,31nm,1.0s
YSS Yuzh-Sakhalins 60.43 34 P P 17 38 06.8 +0.5
YSS Yuzh-Sakhalins 60.43 34 eP P 17 38 07.3 +1.0
YSS e 17 38 21.4
YSS pmax pmax
comp=Z,20nm,1.1s
ARMA Armidale 60.48 126 P P 17 38 06.0 -1.2
PATS Pohnpei 61.20 83 P P 17 38 10.1 -2.0
GNI Garni 61.36 316 P P 17 38 13.5 +0.6
comp=Z,2.3nm,0.6s,baz=45,slow=21,SNR=2.0
GNI Garni 61.36 316 P P 17 38 11.7 -1.2
GNI IAmb IAmb 17 40 25.4
comp=Z,26nm,0.9s
GNI Garni 61.36 316 P P 17 38 11.7 -1.2
GNI pmax pmax
comp=Z,26nm,0.9s
TBLG Delisi 62.05 318 P P 17 38 18.4 +1.0
TBLG Delisi 62.05 318 P P 17 38 18.4 +1.0
TBLG pmax pmax
comp=Z,48nm,1.1s
TYV Tymovskoe 62.66 31 eP P 17 38 22.8 +1.5
TYV pmax pmax
comp=Z,6.0nm,1.7s
TYV pmax pmax
comp=Z,300nm,5.3s
AKH Akhalkalaki 62.75 317 ⇑P P 17 38 23.7 +1.3
AKH Akhalkalaki 62.75 317 P P 17 38 22.6 +0.3
AKH IAmb IAmb 17 40 35.7
comp=Z,15nm,1.0s
AKH Akhalkalaki 62.75 317 P P 17 38 22.6 +0.3
AKH pmax pmax
comp=Z,15nm,1.0s
SVE Sverdlovsk 62.77 338 eP P 17 38 22.4 +0.5
SVE pmax pmax
comp=Z,18nm,1.4s
ZEI Tsey 63.07 319 eP P 17 38 24.7 +0.2
ZEI pmax pmax
comp=Z,4.0nm,0.6s
ARU Arti 63.27 337 P P 17 38 25.7 +0.5
comp=Z,0.4nm,0.3s,baz=167,slow=4.9,SNR=7.2
ARU Arti 63.27 337 P P 17 38 24.6 -0.6
ARU Arti 63.27 337c iP P 17 38 25.3 +0.1
ARU 17 38 59.5
ARU 17 40 44.4
ARU S S 17 46 57.4 +1.9
ARU SS SS 17 50 57.4 -4.8
ARU pmax pmax
comp=Z,14nm,1.3s
KBZ Khabaz 64.14 319 P P 17 38 32.4 +1.2
comp=Z,4.4nm,0.8s,baz=135,slow=6.3,SNR=11
KBZ Khabaz 64.14 319 iP P 17 38 32.2 +1.0
SHA1 Shidzhatmaz 64.30 319 iP P 17 38 33.5 +0.9
KIV Kislovodsk 64.37 319 eP P 17 38 34.0 +1.1
KIV pmax pmax
comp=Z,25nm,1.1s
EIL Elat 65.50 302 P P 17 38 41.0 +0.6
comp=Z,5.6nm,1.0s,baz=354,slow=12,SNR=2.9
YAK Yakutsk 65.51 16 P P 17 38 40.0 +0.2
comp=Z,6.8nm,0.5s,baz=246,slow=2.3,SNR=22
YAK Yakutsk 65.51 16 P P 17 38 39.4 -0.4
YAK Yakutsk 65.51 16 eP P 17 38 39.8 0.0
YAK pmax pmax
comp=Z,37nm,0.9s
YAK pmax pmax
comp=N,14nm,1.0s
YAK pmax pmax
comp=E,9.0nm,1.0s
MBAR Mbarara 66.47 269 P P 17 38 47.6 +0.4
comp=E,1.3nm,0.2s,baz=139,slow=9.3,SNR=3.1
MBAR Mbarara 66.47 269 P P 17 38 47.1 -0.1
MBAR Mbarara 66.47 269 P P 17 38 47.1 -0.1
MBAR pmax pmax
comp=Z,37nm,1.3s
VRH Novokhopyorsk 68.19 326 eP P 17 38 56.9 -0.2
VRH pmax pmax
comp=Z,9.0nm,0.7s
KIRV Kirov 68.39 335 P P 17 38 58.6 +0.4
comp=Z,7.1nm,0.8s,baz=99,slow=4.8,SNR=4.2
NRIK Noril'sk 68.42 356 P P 17 38 58.7 +0.5
comp=Z,5.9nm,0.7s,baz=146,slow=6.1,SNR=11
BRTR Keskin Array B 69.17 312 P P 17 39 03.7 +0.1
comp=Z,2.1nm,0.8s,baz=139,slow=7.6,SNR=7.6
VSR Storozhevoye 69.64 325 eP P 17 39 03.2 -2.9
VSR pmax pmax
comp=Z,10.0nm,0.8s
LPSR Galich'ya Gora 70.37 327 eP P 17 39 10.1 -0.4
LPSR pmax pmax
comp=Z,10.0nm,0.6s
ELL Elmali 71.25 309 P P 17 39 17.0 +0.6
ELL Elmali 71.25 309 P P 17 39 17.0 +0.6
ELL pmax pmax
comp=Z,342nm,1.8s
MA2 Magadan 71.42 26 P P 17 39 16.9 +0.1
comp=Z,7.9nm,0.8s,baz=211,slow=6.4,SNR=7.2
MA2 Magadan 71.42 26 P P 17 39 16.3 -0.5
MA2 Magadan 71.42 26ceP P 17 39 18.2 +1.4
MA2 pmax pmax
comp=Z,13nm,1.7s
PRGR Permogore 71.72 337 eP P 17 39 18.2 -0.3
PETK Petropavlovsk- 71.82 34 P P 17 39 19.6 +0.3
comp=Z,2.0nm,0.8s,baz=222,slow=1.2,SNR=5.8
OBN Obninsk 72.69 328⇑eP P 17 39 24.6 +0.1
OBN e 17 39 40.3
OBN e 17 42 08.0
OBN eS S 17 48 40.5 -7.7
OBN pmax pmax
comp=Z,9.0nm,1.4s
TIXI Tiksi 73.28 10 P P 17 39 27.5 -0.1
comp=Z,8.5nm,0.9s,baz=203,slow=2.1,SNR=14
TIXI Tiksi 73.28 10 P P 17 39 27.0 -0.6
TIXI Tiksi 73.28 10ceP P 17 39 27.5 -0.1
TIXI pmax pmax
comp=Z,12nm,0.8s
KLMR Klimovskoe 73.83 334 eP P 17 39 27.2 -3.9
KLMR pmax pmax
comp=Z,28nm,1.9s
KLMR Klimovskoe 73.83 334 eP P 17 39 27.2 -3.9
KLMR AMP 17 39 32.1
comp=Z,28nm,1.9s
SEY Seymchan 73.85 23 P P 17 39 31.0 -0.1
comp=Z,7.5nm,0.9s,baz=249,slow=6.0,SNR=15
SEY Seymchan 73.85 23 iP P 17 39 32.2 +1.0
TIRR Tirgusor 74.19 316 ⇓P P 17 39 44.8 +11
TIRR Tirgusor 74.19 316 P P 17 39 34.0 +0.5
TIRR Tirgusor 74.19 316 P P 17 39 34.0 +0.5
TIRR pmax pmax
comp=Z,72nm,1.1s
SANT Santorini 74.68 307 P P 17 39 36.6 0.0
SANT IAmb IAmb 17 40 34.7
comp=Z,43nm,1.1s
BOSA Boshof 74.73 240 P P 17 39 38.2 +1.0
comp=Z,1.8nm,0.8s,baz=11,slow=3.7,SNR=2.1
BOSA Boshof 74.73 240 P P 17 39 37.9 +0.7
BOSA IAmb IAmb 17 41 51.9
comp=Z,18nm,1.1s
BOSA Boshof 74.73 240 P P 17 39 37.9 +0.7
BOSA pmax pmax
comp=Z,18nm,1.1s
SORM Soroca 75.17 320 ⇓P P 17 39 39.8 +0.7
SORM Soroca 75.17 320 ⇓P P 17 39 39.8 +0.7
AKASG Malin Array Be 75.33 322 P P 17 39 39.9 -0.1
comp=Z,0.4nm,0.3s,baz=88,slow=4.7,SNR=9.9
AKASG Malin Array Be 75.33 322 iP P 17 39 39.9 -0.1
AKASG pmax pmax
comp=Z,3.0nm,0.8s
VRI Vrincioaia 75.68 317 ⇑P P 17 39 51.2 +9.0
VRI Vrincioaia 75.68 317 ⇑P P 17 39 51.2 +9.0
PLOR Plostina 75.73 317 ⇓P P 17 39 54.2 +12
PLOR Plostina 75.73 317 ⇓P P 17 39 54.2 +12
MLR Muntele Rosu 76.13 317 P P 17 39 46.0 +1.1
comp=Z,1.4nm,0.4s,baz=135,slow=5.7,SNR=4.1
MLR Muntele Rosu 76.13 317 ⇑P P 17 39 54.4 +9.5
MLR Muntele Rosu 76.13 317 P P 17 39 45.2 +0.3
MLR Muntele Rosu 76.13 317 P P 17 39 45.2 +0.3
MLR pmax pmax
comp=Z,42nm,1.2s
MTUR Matau 76.68 316 ⇑P P 17 39 56.6 +8.6
MTUR Matau 76.68 316 ⇑P P 17 39 56.6 +8.6
BURAR Bucovina Array 77.09 319 ⇓P P 17 39 52.4 +2.2
BURAR Bucovina Array 77.09 319 ⇓P P 17 39 52.4 +2.2
BUR08 Bucovina Ar. S 77.11 319 P P 17 39 51.7 +1.3
LIT Litokhoron 77.61 311 P P 17 39 52.7 -0.5
LIT IAmb IAmb 17 42 22.4
comp=Z,14nm,0.9s
LIT Litokhoron 77.61 311 P P 17 39 52.7 -0.5
LIT pmax pmax
comp=Z,14nm,0.9s
GZR Gura Zlata 78.30 316 ⇑P P 17 39 54.8 -2.2
GZR Gura Zlata 78.30 316 ⇑P P 17 39 54.8 -2.2
DRGR 78.60 318 ⇑P P 17 39 59.9 +1.3
DRGR 78.60 318 ⇑P P 17 39 59.9 +1.3
APA Apatity 79.21 339⇓iP P 17 39 57.2 -4.2
APA pmax pmax
comp=Z,9.0nm,1.1s
APA MLR MLR
comp=Z,1μm,19.0s
UZH Uzhgorod 79.21 319⇑iP P 17 40 11.3 +9.5
UZH e 17 40 15.0
KOLS Kolonicke sedl 79.28 320 eP P 17 40 04.2 +1.9
KOLS Kolonicke sedl 79.28 320 eP P 17 40 04.2 +1.9
FINES FINESS Array B 80.08 333 P P 17 40 06.8 +0.5
comp=Z,3.6nm,0.9s,baz=112,slow=8.5,SNR=4.9
PSZ Piszkesteto 80.67 318 P P 17 40 10.8 +0.9
PSZ IAmb IAmb 17 42 12.2
comp=Z,24nm,1.2s
PSZ Piszkesteto 80.67 318 P P 17 40 10.8 +0.9
PSZ pmax pmax
comp=Z,24nm,1.2s
BILL Bilibino 81.25 21 iP P 17 40 12.5 0.0
BILL e 17 40 18.9
BILL e 17 43 16.1
BILL pmax pmax
comp=Z,8.0nm,1.6s
MODS Modra-Piesok 82.47 319 eP P 17 40 20.1 +0.8
MODS Modra-Piesok 82.47 319 eP P 17 40 20.1 +0.8
ARCES ARCESS Array B 82.62 340 P P 17 40 20.8 +1.1
comp=Z,0.9nm,0.4s,baz=104,slow=4.2,SNR=7.0
GEC2 GERESS Array S 84.88 319 P P 17 40 32.5 +0.8
GERES GERESS Array B 84.88 319 P P 17 40 33.2 +1.4
comp=Z,2.9nm,0.9s,baz=101,slow=5.6,SNR=16
STAL STALIGIAL 85.38 316 P P 17 40 34.4 +0.2
CLL Collm 85.50 321 eP P 17 40 37.0 +2.3
CLL epP sP 17 40 45.0 -0.4
CLL Collm 85.50 321 eP P 17 40 37.0 +2.3
CLL e 17 40 45.0
HFS Hagfors 85.80 330 P P 17 40 37.1 +1.1
comp=Z,2.4nm,0.9s,baz=101,slow=7.5,SNR=3.8
NOA NORSAR Array B 87.08 331 P P 17 40 43.5 +1.2
comp=Z,1.9nm,0.9s,baz=95,slow=5.7,SNR=3.1
DAVOX Davos/Dischmat 87.36 317 P P 17 40 45.5 +1.3
comp=Z,2.3nm,0.9s,baz=78,slow=1.9,SNR=3.9
KEST Kesra 87.61 306 P P 17 40 48.3 +2.9
comp=Z,4.4nm,0.9s,baz=116,slow=4.1,SNR=3.8
KEST Kesra 87.61 306 P P 17 40 47.5 +2.0
NVAR Mina Array Bea 128.86 36 PKP PKiKP 17 47 06.6 +0.8
comp=Z,0.7nm,0.8s,baz=162,slow=1.5,SNR=5.7
PDAR Pinedale Array 130.13 26 PKP PKPdf 17 47 06.4 -1.0
comp=Z,0.6nm,0.9s,baz=333,slow=1.7,SNR=4.3
R11A Troy Canyon, C 130.47 34 PKiKP 17 47 09.1 +0.2
TX31 Lajitas Ar. Si 143.75 32 PKPbc 17 47 30.3 +0.1
TX32 Lajitas Array 143.75 32 PKPbc 17 47 30.9 +0.7
TXAR Lajitas Array 143.75 32 PKhKP PKPpre 17 47 31.5
comp=Z,1.5nm,1.1s,baz=320,slow=0.9,SNR=8.0
WLAR White Oak Lake 144.06 15 PKPbc 17 47 30.7 -0.1
JCT Junction City 144.66 26 PKPbc 17 47 33.4 +0.5
JCT Junction City 144.66 26 PKIKP PKPbc 17 47 33.4 +0.5
CPUP Villa Florida 144.93 222 PKP PKPdf 17 47 36.0 +1.3
comp=Z,2.2nm,0.7s,baz=118,slow=4.0,SNR=6.5
CPUP Villa Florida 144.93 222 PKPdf 17 47 35.1 +0.4
CPUP Villa Florida 144.93 222 PKIKP PKPdf 17 47 35.1 +0.4
Y49A Blount Mountai 145.06 5 PKPbc 17 47 34.0 -0.1
Y52A Lilburn 145.19 2 PKPbc 17 47 34.2 -0.3
GOGA Godfrey 145.66 1 PKPab 17 47 36.1 -0.1
GOGA Godfrey 145.66 1 PKP2 PKPab 17 47 36.1 -0.1
Z50A Ashland 145.70 5 PKPab 17 47 36.3 -0.1
LRAL Lakeview Retre 145.81 6 PKPbc 17 47 36.2 -0.2
152A Waverly Hall 146.36 3 PKPbc 17 47 38.2 +0.1

TEH 22 17:29:09.8, 28.19N 56.84E, h9km, ML4.1
NEIC 22 17:29:09.2±1.9, 28.03N±0.07 56.74E±0.10, h14km±5km, Error ellipse: s-maj=12.6km s-min=9.1km az=110.0
THR 22 17:29:10.6±0.4, 28.04N 56.96E, h14km±7km, ML3.9
DSN 22 17:29:10.2±1.8, 28.35N 56.79E, h30km, ML4.5/8, Error ellipse: s-maj=24.9km s-min=14.9km az=80.0
OMAN 22 17:29:15.0±0.7, 27.87N 57.09E, h18km, mb4.3/1, ml4.0/17, ms2.8/2, Error ellipse: s-maj=23.2km s-min=7.1km az=159.0
IDC 22 17:29:14.0±2.1, 28.04N 56.79E, h54km±23km, mb3.9/24, mb1 4.0/29, mb1mx3.8/76, mbtmp4.1/29, ML3.8/5, MS3.0/2, Ms1 3.0/2, ms1mx2.8/54, Error ellipse: s-maj=13.0km s-min=12.6km az=136.0
ISC 22 17:29:10.8±0.4, 28.05N±0.03 56.86E±0.04, h24km, n215, σ2.03/222, mb4.2/47, 11C-3D, Southern Iran

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
NIAN Nian 0.49 182 ePg Pn 17 29 23.0 +0.7
NIAN e 17 29 39.2
IBND Bandar-abas 0.66 205 ePg Pn 17 29 26.1 +1.4
IBND e 17 29 54.5
KHNJ Kahnooj 0.76 98 ePg Pb 17 29 24.6 -0.8
GENO Geno 0.89 223 ePg Pn 17 29 30.1 +2.1
GENO e 17 29 52.1
NGRK Negar Kerman 1.59 356 ePn Pn 17 29 37.0 -0.9
NGRK e 17 29 40.5
CHMN Cheshme madani 1.90 18 ePn Pn 17 29 42.0 -0.1
CHMN e 17 30 08.7
KRBR Kerman 1.93 358 ePg Pb 17 29 46.2 +0.7
KRBR eSg Sb 17 30 12.0 +2.8
KRBR IAML 17 30 15.9
comp=N,893nm,0.4s
KRBR IAML 17 30 16.1
comp=E,995nm,0.6s
KRBR Kerman 1.93 358 ePg Pb 17 29 46.2 +0.7
TVBK TV Kerman 1.93 358 ePn Pn 17 29 43.2 +0.7
TVBK e 17 29 46.2
SHME Shamm 2.09 198 eP Pb 17 29 47.3 -0.8
SNR=32
SHME S Sb 17 30 15.5 +1.8
SHME Shamm 2.09 198 ePn Pn 17 29 47.1 +2.7
BANOM Banah 2.17 193 eP Pb 17 29 48.6 -1.0
SNR=79
BANOM Banah 2.17 193 P Pb 17 29 48.4 +2.8
SNR=146
BANOM S Sb 17 30 18.7 +2.6
BANOM Banah 2.17 193 ePn Pb 17 29 48.7 -0.8
LAR1 LAR 2.23 261 ePn Pb 17 29 50.7 +0.2
KHGB Koh Gabri 2.34 352 ePn Pn 17 29 49.5 +1.5
KHGB e 17 30 27.7
UMQ Umm Al-Quwin 2.73 203 ePn Pb 17 29 57.9 -1.1
MSFE Esma-Masafi 2.75 193 iP Pn 17 29 56.7 +3.2
SNR=16
MSFE Esma-Masafi 2.75 193 ePn Pn 17 29 57.1 +3.6
MDH Madha 2.79 190 iP Pn 17 29 55.6 +1.7
SNR=9.3
MDH Madha 2.79 190 P Pn 17 29 54.9 +0.9
SNR=8.1
MDH Madha 2.79 190 ePn Pn 17 29 56.8 +2.9
UOSS Minazif 3.15 191 iP Pn 17 30 01.7 +2.8
SNR=16
UOSS Minazif 3.15 191 Pn 17 29 58.8 -0.1
UOSS Minazif 3.15 191 P Pn 17 30 01.8 +2.9
UOSS Minazif 3.15 191 ePn Pn 17 30 01.7 +2.8
NAZ Nazwa, Dubai 3.23 200 iP Pn 17 30 04.0 +4.0
SNR=24
NAZ Nazwa, Dubai 3.23 200 P Pn 17 30 04.2 +4.1
SNR=26
NAZ Nazwa, Dubai 3.23 200 ePn Pn 17 30 04.2 +4.1
HATD Hatta, Dubai 3.28 192 P Pb 17 30 05.6 -2.7
HATD Hatta, Dubai 3.28 192 ePn Pn 17 30 04.4 +3.7
LMD1 Lamerd 3.35 259 ePn Pn 17 30 05.1 +3.4
ASHO Ashiyiah 3.43 192 iP Pn 17 30 06.1 +3.3
SNR=87
ASHO Ashiyiah 3.43 192 P Pn 17 30 06.1 +3.3
SNR=87
ASHO Ashiyiah 3.43 192 ePn Pn 17 30 06.3 +3.5
FAQ Al Faqa, Dubai 3.48 199 iP Pn 17 30 07.2 +3.7
SNR=13
FAQ Al Faqa, Dubai 3.48 199 P Pn 17 30 07.5 +3.9
SNR=18
FAQ S Sn 17 30 49.4 +5.4
FAQ Al Faqa, Dubai 3.48 199 ePn Pn 17 30 07.4 +3.9
ISRV Sarvestan 3.54 293 ePn Pn 17 30 06.7 +2.0
IBAF Bafgh 3.70 343 ePn Pn 17 30 07.4 +0.7
SZD1 Zahaedan-tmp 3.80 67 ePn Pn 17 30 11.6 +3.6
AJN Ajban 3.86 206 iP Pn 17 30 12.1 +3.4
SNR=45
AJN Ajban 3.86 206 P Pn 17 30 12.6 +3.9
SNR=45
AJN Ajban 3.86 206 ePn Pn 17 30 12.6 +3.9
IMEH Mehriz 3.86 330 ePn Pn 17 30 10.5 +1.6
SOHO SOHO 3.91 184 P Pn 17 30 10.5 +1.1
SNR=12
SOHO SOHO 3.91 184 ePn Pn 17 30 10.0 +0.6
CHBR Chabahar 4.06 126 ePn Pn 17 30 13.2 +1.7
CHBR Chabahar 4.06 126 ePn Pn 17 30 13.2 +1.7
ALNE Al Ain 4.10 194 iP Pn 17 30 15.2 +3.2
SNR=9.4
ALNE Al Ain 4.10 194 ePn Pn 17 30 15.4 +3.4
BSRN Basiran 4.37 26 ePn Pn 17 30 18.6 +2.7
BSRN Basiran 4.37 26 ePn Pn 17 30 18.6 +2.7
HOQ Hoqain 4.47 175 P Pn 17 30 18.6 +1.5
SNR=83
BIDO Bidbid 4.65 165 P Pn 17 30 21.1 +1.4
SNR=60
BIDO Bidbid 4.65 165 ePn Pn 17 30 21.2 +1.6
ICHK Chekchek 4.69 334 ePn Pn 17 30 22.5 +2.2
ARQ Araqi 4.70 184 P Pn 17 30 23.8 +3.4
SNR=41
IKAZ Kazeroun 4.72 293 ePn Pn 17 30 22.2 +1.3
ISAD Sadrabad 4.73 325 ePn Pn 17 30 23.0 +2.0
JRN Qarnain Island 4.74 230 ePn Pn 17 30 23.3 +2.5
IKOO Kooshah 4.74 23 ePn Pn 17 30 22.7 +1.7
TPRV Parvadeh(Tabas 4.96 358 ePn Pn 17 30 26.0 +2.0
WSAR Wadi Sarin 5.05 161 P Pn 17 30 27.6 +2.5
comp=E,27nm,0.3s,baz=340,slow=7.8,SNR=399
WSAR S Sn 17 31 24.7 +1.9
comp=E,73nm,0.3s,baz=235,slow=15,SNR=30
WSAR LR LR 17 33 17.5
comp=E,107nm,18.9s,baz=355,slow=48
WSAR Wadi Sarin 5.05 161 P Pn 17 30 27.5 +2.3
SMDO Samad 5.08 167 P Pn 17 30 28.1 +2.4
SNR=35
ITEG Tejag 5.10 18 ePn Pn 17 30 27.1 +1.2
BSY Bisya 5.29 177 P Pn 17 30 31.9 +3.4
SNR=35
IDAH Dahanechah 5.35 28 ePn Pn 17 30 34.3 +4.9
IRAM Ramesheh 5.39 315 ePn Pn 17 30 31.2 +1.2
GHWR Ruwais 5.42 222 ePn Pn 17 30 32.1 +1.9
KLNJ Kolanjah 5.45 304 ePn Pn 17 30 32.4 +1.5
UMZA Um Al Zommool 5.53 196 ePn Pn 17 30 34.0 +2.3
TKDS Koohdasht(Taba 5.55 2 ePn Pn 17 30 34.1 +2.0
TABS Tabas 5.59 2 ePn Pn 17 30 35.8 +3.3
TABS Tabas 5.59 2 ePn Pn 17 30 35.8 +3.3
IMON Monand 5.67 25 ePn Pn 17 30 37.7 +3.9
AFRZ Afriz 5.67 19 ePn Pn 17 30 36.6 +2.9
WBK Wadi Bani Khal 5.74 160 P Pn 17 30 37.0 +2.3
SNR=204
WBK S Sn 17 31 40.8 +0.9
ANAR Anarak 5.79 333 ePn Pn 17 30 36.2 +0.9
TNSJ Nastanj 5.90 358 ePn Pn 17 30 39.1 +2.3
IGAR Gharneh 6.01 317 ePn Pn 17 30 39.9 +1.4
IBRJ Brojen 6.19 310 ePn Pn 17 30 44.5 +3.5
IZEF Zefreh 6.21 322 ePn Pn 17 30 42.1 +1.0
ROKH ROKH 6.61 312 ePn Pn 17 30 48.9 +2.2
JHBN Jahan bin 6.79 309 ePn Pn 17 30 50.4 +1.2
IPIR Pirpir 6.92 313 ePn Pn 17 30 52.4 +1.4
IKLH Kolahrood 6.94 320 ePn Pn 17 30 52.8 +1.5

MHTO	**MHTO**	**7.11**	**172**	P	**Pn**	**17 30 56.3**	**+3.0**
	SNR=24						
MHTO				S	**Sn**	**17 32 14.4**	**+1.1**
QAM	**Ghamsar**	**7.35**	**322**	*e*Pn	**Pn**	**17 30 58.6**	**+1.7**
HRA	**Herat**	**7.82**	**35**		**Pn**	**17 31 06.0**	**+2.7**
IPAY	**Payeh**	**8.57**	**12**	*e*Pn	**Pn**	**17 31 17.9**	**+4.3**
IAKL	**Akhelmad**	**8.68**	**10**	*e*Pn	**Pn**	**17 31 18.8**	**+3.7**
BMDN	**Meydan**	**8.89**	**311**	*e*Pn	**Pn**	**17 31 18.1**	**+0.2**
BDRS	**Dareh Seyedi**	**9.02**	**313**	*e*Pn	**Pn**	**17 31 19.7**	**-0.2**
ISFR	**Sfrayin**	**9.03**	**6**	*e*Pn	**Pn**	**17 31 23.7**	**+3.7**
IDOB	**Doab**	**9.39**	**310**	*e*Pn	**Pn**	**17 31 24.4**	**-0.5**
HAGD	**Aghdareh**	**9.43**	**318**	*e*Pn	**Pn**	**17 31 26.4**	**+1.0**
IEMG	**Emamgholi**	**9.46**	**9**	*e*Pn	**Pn**	**17 31 28.1**	**+2.2**
GEYT	**Alibeck**	**9.91**	**6**	P	**Pn**	**17 31 35.7**	**+3.9**
	comp=E,0.5nm,0.3s,baz=178,slow=10,SNR=5.8						
GYA0B	**ALIBECK ARRAY**	**9.91**	**6**	Pn	**Pn**	**17 31 35.2**	**+3.5**
SHAO	**Shalim**	**10.04**	**187**	*i* P	**Pn**	**17 31 33.9**	**+0.3**
	SNR=81						
SHAO	**Shalim**	**10.04**	**187**	P	**Pn**	**17 31 34.0**	**+0.3**
	SNR=81						
IKOM	**Komasi**	**10.07**	**310**	*e*Pn	**Pn**	**17 31 33.5**	**-0.6**
HSRG	**Sareghieh**	**10.23**	**317**	*e*Pn	**Pn**	**17 31 33.8**	**-2.7**
DMTO	**DMTO**	**10.43**	**190**	P	**Pn**	**17 31 39.0**	**0.0**
	SNR=36						
WHFO	**Wadi Hawf**	**10.47**	**196**	P	**Pn**	**17 31 39.5**	**-0.1**
	SNR=254						
RBK	**Rabkut**	**10.78**	**194**	P	**Pn**	**17 31 44.5**	**+0.7**
	SNR=8.5						
IDHR	**Dehrash**	**11.13**	**309**	*e*Pn	**Pn**	**17 31 47.3**	**-1.4**
RAYN	**Ar Rayn**	**11.18**	**249**	*i* P	**Pn**	**17 31 47.7**	**-1.5**
	SNR=20						
RAYN	**Ar Rayn**	**11.18**	**249**	P	**Pn**	**17 31 47.2**	**-2.0**
NIL	**Nilore**	**15.14**	**64**	Pn	**Pn**	**17 32 42.8**	**-0.5**
GNI	**Garni**	**15.68**	**323**	P	**P**	**17 32 53.3**	**-0.9**
	comp=E,0.2nm,0.3s,baz=144,slow=14,SNR=3.0						
GNI	**Garni**	**15.68**	**323**		**Pn**	**17 32 50.0**	**-0.3**
GNI				IAmb	IAmb	17 33 18.3	
	comp=Z,15nm,1.1s						
SOCY	**Socotra**	**16.01**	**190**		Pn	17 32 47.8	-6.8
SOCY				IAmb	IAmb	17 32 51.5	
	comp=Z,30nm,1.2s						
BTK	**Batken**	**16.63**	**40**		**Pn**	**17 33 02.0**	**-0.4**
AKH	**Akhalkalaki**	**17.24**	**324**	P	**Pn**	**17 33 10.2**	**+0.1**
KK31	**Karatay Array**	**18.64**	**33**	P	**P**	**17 33 25.1**	**-1.7**
KKAR	**Karatay Array**	**18.64**	**33**	P	**P**	**17 33 26.1**	**-0.7**
GAZ	**Gaziantep**	**18.86**	**304**	P	**P**	**17 33 29.5**	**+0.2**
GAZ				IAmb	IAmb	17 33 33.4	
	comp=Z,10nm,0.8s						
MMAI	**Mount Meron Ar**	**19.12**	**290**	P	**P**	**17 33 32.7**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=93,slow=14,SNR=4.1						
MMAI				LR	LR	17 42 47.8	
	comp=Z,73nm,18.4s,baz=190,slow=43						
EIL	**Elat**	**19.25**	**280**	P	**Pn**	**17 33 35.0**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=66,slow=12,SNR=3.3						
KBZ	**Khabaz**	**19.26**	**328**	P	**Pn**	**17 33 34.5**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=148,slow=5.2,SNR=4.6						
KIV	**Kislovodsk**	**19.53**	**328**	P	**Pn**	**17 33 37.5**	**-0.5**
KSH	**Kashi**	**19.54**	**49**	P	**P**	**17 33 31.3**	**-5.5**
KSH				sP	Pn	17 33 40.1	+2.0
KSH				S	S	17 36 58.8	-17
KSH				SS	**SnSn**	**17 37 26.8**	**-4.3**
KSH				PcP	**PcP**	**17 37 58.3**	**+1.7**
AAK	**Ala-Archa**	**20.41**	**40**	P	Pn	17 33 47.4	-1.1
	comp=Z,3.4nm,0.8s,baz=207,slow=7.8,SNR=17						
AAK	**Ala-Archa**	**20.41**	**40**	P	**P**	**17 33 47.0**	**+0.7**
NRN	**Naryn**	**20.57**	**45**	P	**P**	**17 33 48.3**	**0.0**
NRN				IAmb	IAmb	17 33 49.6	
	comp=Z,9.1nm,0.8s						
ATD	**Arta Tunnel**	**21.03**	**221**	P	**P**	**17 33 52.0**	**-1.1**
	comp=Z,2.7nm,0.3s,baz=114,slow=22,SNR=2.5						
BOOM	**Boomskoye usch**	**21.15**	**42**	P	**P**	**17 33 55.2**	**+0.9**
CSS	**Mathiatis**	**21.18**	**295**	P	**P**	**17 33 54.7**	**+0.1**
CSS				IAmb	IAmb	17 33 58.7	
	comp=Z,11nm,1.0s						
ABKAR	**Akbulak array**	**21.31**	**6**	P	**P**	**17 33 55.1**	**-0.6**
ABKAR				IAmb	IAmb	17 34 05.4	
	comp=Z,7.4nm,0.9s						
KDJ	**Kajisay**	**21.70**	**44**	P	**P**	**17 34 01.1**	**+1.0**
KDJ				IAmb	IAmb	17 34 04.5	
	comp=Z,13nm,1.1s						
AKTO	**Aktyubinsk**	**22.37**	**2**	P	**P**	**17 34 07.7**	**+0.5**
	comp=Z,4.0nm,0.5s,baz=174,slow=10,SNR=17						
BR131	**Keskin Array S**	**22.45**	**307**	P	**P**	**17 34 08.0**	**-0.2**
BR131				IAmb	IAmb	17 34 11.4	
	comp=Z,8.9nm,1.0s						
BR131	**Keskin Array S**	**22.45**	**307**	P	**P**	**17 34 09.2**	**+1.0**
	SNR=7.7						
BRTR	**Keskin Array B**	**22.45**	**307**	P	**P**	**17 34 09.0**	**+0.7**
	comp=Z,5.2nm,0.8s,baz=116,slow=11,SNR=24						
PRZ	**Przheval'sk**	**22.65**	**45**	P	**P**	**17 34 11.4**	**+1.0**
PRZ				IAmb	IAmb	17 34 13.6	
	comp=Z,8.3nm,1.2s						
ANTO	**Ankara**	**23.10**	**307**	P	**P**	**17 34 14.4**	**-0.6**
ANTO				IAmb	IAmb	17 34 23.0	
	comp=Z,11nm,0.7s						
BR231	**Keskin MP Arra**	**23.11**	**307**	P	**P**	**17 34 12.4**	**-2.7**
BR231				IAmb	IAmb	17 34 23.9	
	comp=Z,8.2nm,0.6s						
ELL	**Elmali**	**24.29**	**298**	P	**P**	**17 34 25.7**	**-0.8**
MDUB	**Mudurnu**	**24.46**	**307**	P	**P**	**17 34 26.6**	**-1.5**
MANT	**Manisa**	**25.76**	**301**	P	**P**	**17 34 37.7**	**-2.2**
KARP	**Karpathos**	**26.25**	**294**	P	**P**	**17 34 41.9**	**-2.3**
BVAR	**Borovoye Array**	**26.89**	**18**	P	**P**	**17 34 50.0**	**+0.2**
	comp=Z,6.1nm,0.7s,baz=201,slow=7.9,SNR=34						
BRVK	**Borovoye**	**26.89**	**18**	P	**P**	**17 34 46.8**	**-3.0**
BRVK				IAmb	IAmb	17 34 50.7	
	comp=Z,4.1nm,0.7s						
MAKZ	**Makanchi**	**27.17**	**40**	P	**P**	**17 34 51.8**	**-0.6**
MAKZ				IAmb	IAmb	17 34 53.8	
	comp=Z,6.1nm,1.1s						
MK31	**Makanchi Array**	**27.34**	**40**	P	**P**	**17 34 53.7**	**-0.2**
MKAR	**Makanchi Array**	**27.34**	**40**	P	**P**	**17 34 54.4**	**+0.4**
	comp=Z,2.2nm,0.8s,baz=228,slow=8.6,SNR=24						
KURBB	**Kurchatov Arra**	**27.90**	**30**	P	**P**	**17 34 59.3**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=229,slow=8.6,SNR=26						
KURK	**Kurchatov**	**28.00**	**30**	P	**P**	**17 34 59.6**	**-0.1**
IDI	**Anoyia**	**28.06**	**293**	P	**P**	**17 35 00.6**	**+0.1**
	comp=Z,6.1nm,0.9s,baz=42,slow=16,SNR=2.4						
ICOR	**Ion Corvin**	**28.24**	**312**	⇑P	**P**	**17 35 05.2**	**+3.4**
HARR	**Harsova**	**28.40**	**314**	⇑P	**P**	**17 35 06.6**	**+3.3**
RAZG	**Razgrad**	**28.88**	**310**	⇓P	**P**	**17 35 10.6**	**+3.0**
PGOR	**Pogoanele**	**29.10**	**313**	⇑P	**P**	**17 35 12.4**	**+2.9**
WMQ	**Urumqi**	**29.30**	**49**	*e*P	**P**	**17 35 14.5**	**+3.0**
PLOR	**Plostina**	**29.72**	**315**	⇑P	**P**	**17 35 16.4**	**+1.2**
SORM	**Soroca**	**29.82**	**320**	⇑P	**P**	**17 35 15.1**	**-0.7**
MLR	**Muntele Rosu**	**30.02**	**314**	P	**P**	**17 35 15.7**	**-2.2**
	comp=Z,2.7nm,1.0s,baz=154,slow=11,SNR=3.1						
MLR	**Muntele Rosu**	**30.02**	**314**	⇑P	**P**	**17 35 19.0**	**+1.1**
TESR	**Tescani**	**30.02**	**316**	⇑P	**P**	**17 35 18.1**	**+0.4**
DOPR	**Dopca**	**30.57**	**314**	⇑P	**P**	**17 35 23.2**	**+0.6**
AGG	**Agios Georgios**	**30.62**	**300**	P	**P**	**17 35 22.0**	**-1.2**
LIT	**Litokhoron**	**30.71**	**302**	P	**P**	**17 35 20.3**	**-3.7**
LIT				IAmb	IAmb	17 35 25.3	
	comp=Z,4.0nm,1.0s						
AKASG	**Malin Array Be**	**30.80**	**325**	P	**P**	**17 35 23.6**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=128,slow=8.3,SNR=7.6						
AKBB	**Malin Array Si**	**30.80**	**325**	P	**P**	**17 35 23.7**	**-0.8**
AKBB				IAmb	IAmb	17 35 24.2	
	comp=Z,2.9nm,0.8s						
ARR	**Arges**	**30.81**	**313**	⇑P	**P**	**17 35 25.5**	**+0.7**
VTS	**Vitosha**	**30.81**	**307**	⇑P	**P**	**17 35 25.4**	**+0.5**
VTS	**Vitosha**	**30.81**	**307**	P	**P**	**17 35 22.8**	**-2.1**
VTS				IAmb	IAmb	17 35 25.2	
	comp=Z,8.5nm,1.6s						
BURAR	**Bucovina Array**	**31.40**	**317**	⇓P	**P**	**17 35 29.6**	**-0.3**
BUR08	**Bucovina Ar. S**	**31.42**	**317**	P	**P**	**17 35 29.0**	**-1.2**
BUR08				IAmb	IAmb	17 36 00.9	
	comp=Z,7.6nm,1.6s						
GZR	**Gura Zlata**	**32.03**	**312**	⇓P	**P**	**17 35 34.3**	**-1.2**
DRGR		**32.60**	**314**	⇑P	**P**	**17 35 39.0**	**-1.5**
ZAA0	**Zalesovo Array**	**32.99**	**31**	P	**P**	**17 35 43.1**	**-0.6**
ZAA0				IAmb	IAmb	17 35 44.4	
	comp=Z,7.0nm,0.8s						
ZALV	**Zalesovo Beam**	**32.99**	**31**	P	**P**	**17 35 43.8**	**0.0**
	comp=Z,3.2nm,0.3s,baz=243,slow=9.5,SNR=32						
SCTE	**Santa Cesarea**	**33.74**	**301**	P	**P**	**17 35 49.2**	**-1.2**
KOLS	**Kolonicke sedl**	**33.74**	**318**	*e*P	**P**	**17 35 51.2**	**+0.8**
KWP	**Kalwaria Pacla**	**33.80**	**319**	P	**P**	**17 35 49.8**	**-1.1**
VYHS	**Vyhne**	**35.66**	**315**	*e*P	**P**	**17 36 07.1**	**+0.1**
KRLC	**Kraliky**	**37.48**	**317**	*e*P	**P**	**17 36 22.0**	**-0.5**
KRLC				*ex*	x	17 36 30.5	
DPC	**Dobruska-Polom**	**37.86**	**317**	*e*P	**P**	**17 36 25.4**	**-0.3**
MOA	**Molln**	**38.37**	**313**	*e*P	**P**	**17 36 30.4**	**+0.4**
	comp=Z,3.8nm,0.9s						
KBA	**Koelnbreinsper**	**38.78**	**311**	*e*P	**P**	**17 36 34.1**	**+0.4**
	comp=Z,6.5nm,1.1s						
GERES	**GERESS Array B**	**39.00**	**314**	P	**P**	**17 36 35.0**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=115,slow=9.0,SNR=12						
KHC	**Kasperske Hory**	**39.16**	**315**	*e*P	**P**	**17 36 36.3**	**-0.3**
KHC				*e*pP	**pP**	**17 36 42.2**	**-2.3**
KHC	**Kasperske Hory**	**39.16**	**315**	P	**P**	**17 36 36.0**	**-0.6**
FIA1	**FINESS Array S**	**39.18**	**337**	P	**P**	**17 36 36.3**	**-0.3**
FINES	**FINESS Array B**	**39.18**	**337**	P	**P**	**17 36 36.1**	**-0.5**
	comp=Z,8.0nm,0.6s,baz=131,slow=9.7,SNR=56						
ABTA	**Abfaltersbach**	**39.26**	**311**	*e*P	**P**	**17 36 37.6**	**+0.1**
	comp=Z,6.5nm,1.0s						
CLL	**Collm**	**40.16**	**318**	*e*P	**P**	**17 36 46.0**	**+1.1**
	comp=Z,4.0nm,0.9s						
CLL				*e*		17 36 55.0	
CLL				*e*PPPP		17 38 55.0	
SQTA	**Sankt Quirin**	**40.23**	**311**	*e*P	**P**	**17 36 45.2**	**-0.5**
	comp=Z,2.3nm,0.5s						
MOTA	**Moosalm**	**40.33**	**311**	*i* P	**P**	**17 36 45.1**	**-1.4**
	comp=Z,3.5nm,0.6s						
FETA	**Feichten**	**40.51**	**311**	*e*P	**P**	**17 36 46.6**	**-1.4**
	comp=Z,6.2nm,1.0s						
KEST	**Kesra**	**40.74**	**293**	P	**P**	**17 36 48.8**	**-1.2**
	comp=Z,2.7nm,0.8s,baz=88,slow=15,SNR=2.2						
KEST	**Kesra**	**40.74**	**293**	P	**P**	**17 36 49.1**	**-0.9**
KEST				IAmb	IAmb	17 37 20.8	
	comp=Z,11nm,1.3s						
FUORN	**Ofenpass-Fuorn**	**40.75**	**310**	P	**P**	**17 36 50.3**	**+0.2**
FUORN				IAmb	IAmb	17 37 26.2	
	comp=Z,6.7nm,1.2s						
DAVOX	**Davos/Dischmat**	**41.04**	**310**	P	**P**	**17 36 51.7**	**-0.8**
	comp=Z,3.5nm,0.8s,baz=49,slow=8.4,SNR=4.5						
DAVA	**Damuels**	**41.13**	**311**	*e*P	**P**	**17 36 52.1**	**-1.0**
	comp=Z,5.3nm,0.6s						
SENIN	**Lac Senin/Sane**	**42.73**	**309**	P	**P**	**17 37 05.3**	**-1.1**
SENIN				IAmb	IAmb	17 37 15.6	
	comp=Z,12nm,1.6s						
HFS	**Hagfors**	**43.31**	**330**	P	**P**	**17 37 09.8**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=126,slow=10,SNR=9.7						
NC405	**NORSAR Array S**	**44.63**	**331**	P	**P**	**17 37 20.0**	**-1.1**
NB2	**NORSAR Subarra**	**44.81**	**330**	P	**P**	**17 37 21.8**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=115,slow=7.9						
NOA	**NORSAR Array B**	**44.81**	**330**	P	**P**	**17 37 21.9**	**-0.8**
	comp=Z,2.7nm,1.0s,baz=114,slow=7.8,SNR=4.6						
KEV	**Kevo**	**45.14**	**346**	P	**P**	**17 37 25.1**	**0.0**
EKA	**Eskdalemuir Ar**	**50.48**	**320**	P	**P**	**17 38 05.7**	**-1.0**
	comp=Z,1.8nm,0.7s,baz=105,slow=8.1,SNR=3.7						
ESDC	**Sonseca Array**	**50.95**	**300**	P	**P**	**17 38 10.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=64,slow=7.8,SNR=4.0						
ESDC	**Sonseca Array**	**50.95**	**300**	P	**P**	**17 38 10.0**	**-0.5**
TOA0	**Torodi Ar. Sit**	**53.30**	**266**	P	**P**	**17 38 27.3**	**-0.9**
TOA0				IAmb	IAmb	17 38 34.5	
	comp=Z,4.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**53.30**	**266**	P	**P**	**17 38 27.9**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=65,slow=7.3,SNR=16						
TIXI	**Tiksi**	**57.98**	**21**	P	**P**	**17 39 00.0**	**-1.0**
	comp=Z,1.8nm,0.4s,baz=306,slow=9.6,SNR=6.8						
TIXI	**Tiksi**	**57.98**	**21**	P	**P**	**17 39 00.3**	**-0.7**
ILAR	**Eielson Array**	**85.65**	**10**	P	**P**	**17 41 46.5**	**-0.7**
	comp=Z,0.4nm,1.0s,baz=340,slow=2.7,SNR=3.1						
YKA	**Yellowknife Ar**	**89.51**	**356**	P	**P**	**17 42 05.6**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=0.2,slow=4.9,SNR=24						
ASAR	**Alice Springs**	**90.29**	**117**	P	**P**	**17 42 11.5**	**+1.5**
	comp=Z,1.0nm,0.8s,baz=310,slow=4.6,SNR=2.8						

BGR **22** *17:29:45.3±0.0, 1°.09N×99°.38E, h33km, mb5.3*

NEIC **22** *17:29:48.9, 1°.21N×97°.26E, h19km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.97; $M_{\theta\theta}$0.04; $M_{\phi\phi}$-1.01; $M_{r\theta}$0.59; $M_{\theta\phi}$-0.00; $M_{\phi r}$-0.43; Fault plane solution: $M_0$1.23000×10^{17} NP1:ϕ_s20.27000°, δ37.00000°, λ128.82000°. NP2:ϕ_s155.06000°, δ62.04000°, λ64.72000°. Principal axes: T 1.3218, Plg64.0000°, Azm22.0000°; N -0.2093, Plg22.0000°, Azm168.0000°; P -1.1125, Plg13.0000°, Azm263.0000°;*

BJI **22** *17:29:48.7±0.0, 1°.09N×97°.35E, h26km, mB5.4/75, mb5.5/86, Ms5.7/90, Ms7 5.5/84*

MOS **22** *17:29:48.8±0.8, 1°.18N×97°.25E, h22km, mb5.6/61, MS5.1/47, Error ellipse: s-maj=7.3km s-min=4.4km az=102.6*

NEIC **22** *17:29:48.7±1.9, 1°.21N±0°.05×97°.26E±0°.06, h12km±1km, mb5.5/221, Ms_20 5.2/222, Mwb5.3/53, Error ellipse: s-maj=9.1km s-min=7.6km az=64.0*

IDC **22** *17:29:50.2±1.4, 1°.20N×97°.28E, h18km±7km, mb4.8/60, mb1 4.8/63, mb1mx4.8/72, mbtmp4.9/63, ML4.6/3, MS4.9/16, Ms1 4.9/16, ms1mx4.6/30, Error ellipse: s-maj=9.6km s-min=7.2km az=47.0*

GCMT **22** *17:29:51.7±0.1, 1°.03N±0°.01×96°.98E±0°.01, h22km, MW5.4/122, Moment Tensor Solution. s104,c177; s122,c199; Duration: 1s.2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.96±.02; $M_{\theta\theta}$-0.40±.01; $M_{\phi\phi}$-0.56±.02; $M_{r\theta}$0.65±.03; $M_{\theta\phi}$0.46±.01; $M_{\phi r}$-0.79±.03; Best double couple: $M_0$1.40000×10^{17} NP1:ϕ_s320.00000°, δ21.00000°, λ90.00000°. NP2:ϕ_s140.00000°, δ69.00000°, λ90.00000°. Principal axes: T 1.4090, Plg66.0000°, Azm51.0000°; N -0.0180, Plg0.0000°, Azm320.0000°; P -1.3900, Plg24.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM **22** *17:29:52.0, 1°.21N×97°.05E, h37km, mb5.6*

DJA **22** *17:29:52.7±0.3, 1°N±2°×9°7E±°, h39km±3km, M5.2/61, mb5.3/61, mB5.6/44, MLv5.7/18, Mw(mB)5.1/44, Mwp5.5/18*

ISC 22 17:29:51.2±0.4, **1°.18N**±0°.03×**97°.28E**±0°.03, **h29**km±2km, **h29**km**:pP-P, n997, σ1s.59**/1035, **mb5.3**/286, **MS5.2**/178, **71C-17D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**1.55**	**322**	P	**Pn**	**17 30 16.3**	**-0.6**
SNSI				S	**Sn**	**17 30 36.7**	**+0.7**
PBSI	**Pulau Batu**	**1.58**	**141**	P	**Pb**	**17 30 18.9**	**-1.0**
PBSI				S	**Sn**	**17 30 37.6**	**+0.7**
TPTI		**2.07**	**357**	P	**Pn**	**17 30 23.7**	**-0.3**
TPTI				S	**Sn**	**17 30 50.0**	**+1.1**
RPSI	**Rantau Prapat**	**2.23**	**48**	Pn	**Pn**	**17 30 28.0**	**+1.8**
RPSI	**Rantau Prapat**	**2.23**	**48**		**Pb**	**17 30 28.6**	**-2.2**
PSI	**Prapat**	**2.30**	**46**	Pn	**Pn**	**17 30 28.6**	**+1.3**
	88nm,0.3s,baz=263,slow=8.7,SNR=13						
PSI				LR	LR	17 30 55.6	
	comp=Z,10μm,21.5s,baz=295,slow=30						
PSI	**Prapat**	**2.30**	**46**	P	**Pn**	**17 30 28.0**	**+0.6**
SISI	**Saibi**	**3.08**	**144**	P	**Pn**	**17 30 38.7**	**+0.7**
MLSI	**Meulaboh, Aceh**	**3.19**	**344**	P	**Pn**	**17 30 39.3**	**-0.2**
MLSI				S	**Sn**	**17 31 17.0**	**+0.5**
PDSI	**Padang**	**3.80**	**123**	P	**Pn**	**17 30 50.0**	**+2.1**
BKNI	**Bangkinang**	**3.85**	**103**	P	**Pn**	**17 30 51.4**	**+2.7**
BKNI	**Bangkinang**	**3.85**	**103**	Pn	**Pn**	**17 30 50.7**	**+2.1**
LHMI	**Lhok Sumawe**	**4.03**	**355**	P	**Pn**	**17 30 51.6**	**+0.5**
LHMI				S	**Sn**	**17 31 39.8**	**+2.4**
LHMI	**Lhok Sumawe**	**4.03**	**355**	Pn	**Pn**	**17 30 51.5**	**+0.4**
SDSI	**Sungai Dareh**	**4.65**	**117**	P	**Pn**	**17 31 02.1**	**+2.5**
PPSI	**Pulau Pagai**	**4.78**	**145**	P	**Pn**	**17 31 02.5**	**+1.2**
IPM	**Ipoh**	**4.97**	**49**	Pn	**Pn**	**17 31 05.9**	**+1.9**
KULM	**Kulim**	**5.29**	**39**	Pn	**Pn**	**17 31 09.7**	**+1.3**
KULM	**Kulim**	**5.29**	**39**	P	**Pn**	**17 31 10.0**	**+1.6**
KRJI	**Kerinci**	**5.30**	**128**	P	**Pn**	**17 31 09.1**	**+0.5**
	25nm12μm32μm2μm,0.8s						
JRMM	**Jerantut**	**5.85**	**63**	P	**Pn**	**17 31 19.0**	**+3.0**
MYKOM	**Kota Tinggi**	**6.60**	**85**	Pn	**Pn**	**17 31 27.5**	**+1.1**
MYKOM	**Kota Tinggi**	**6.60**	**85**	P	**Pn**	**17 31 29.0**	**+2.6**
KSI	**Kapahiang**	**7.16**	**132**	P	**Pn**	**17 31 35.8**	**+1.6**
	3.9nm8μm716nm,0.8s						
KSI				S	**Sn**	**17 32 52.8**	**-1.8**
	3.9nm8μm716nm,0.8s						
MNAI	**Manna**	**7.91**	**134**	P	**Pn**	**17 31 45.0**	**+0.7**
	4.0nm11μm668nm,0.6s						
MNAI				S	**Sn**	**17 33 10.8**	**-2.1**
	4.0nm11μm668nm,0.6s						
MNAI	**Manna**	**7.91**	**134**	Pn	**Pn**	**17 31 45.5**	**+1.2**
MNAI				Sn	**Sn**	**17 33 09.6**	**-3.3**
PMBI	**Palembang**	**8.53**	**119**	Pn	**Pn**	**17 31 53.6**	**+0.6**
MDSI	**Maura Dua**	**8.90**	**129**	P	**Pn**	**17 31 58.2**	**+0.2**
	2μm264nm,0.9s						
LWLI	**Liwa**	**9.15**	**132**	P	Pn	17 32 08.6	+7.0
KLSI		**9.46**	**128**	P	**Pn**	**17 32 05.1**	**-0.5**
	932nm46nm,0.8s						
KASI	**Kota Agung**	**9.81**	**133**	P	Pn	17 32 04.9	-5.6
DBJI	**Dramaga**	**12.18**	**129**	P	**P**	**17 32 54.7**	**-0.5**
DGPR	**DIGLIPUR**	**12.67**	**340**	*e*P	**Pn**	**17 32 48.2**	**-1.5**
DGPR				*ex*	x	17 36 21.5	
CNJI	**Cibinong**	**12.95**	**131**	P	P	17 33 11.6	+7.9
LEM	**Lembang**	**13.03**	**128**	Pn	**Pn**	**17 32 56.1**	**+1.4**
	0.7nm,0.3s,baz=308,slow=19,SNR=2.8						
KSM	**Kuching**	**13.03**	**89**		**Pn**	**17 32 55.3**	**+0.7**
CISI	**Cisompet, Garu**	**13.63**	**130**		**Pn**	**17 32 59.2**	**-3.6**
KPJI	**Karang Pucung**	**14.38**	**126**	P	**Pn**	**17 33 10.5**	**-2.5**
	45nm,0.6s						
SBUM	**Sibu**	**14.99**	**85**		**Pn**	**17 33 22.4**	**+1.1**
SBUM	**Sibu**	**14.99**	**85**	P	**P**	**17 33 25.0**	**-1.4**
DLV	**T Lat**	**15.43**	**46**		**Pn**	**17 33 27.8**	**+0.6**
DLV				IAmb	IAmb	17 33 33.4	
	comp=Z,467nm,1.0s						
SMRI	**Semarang**	**15.47**	**122**	Pn	**Pn**	**17 33 28.9**	**+1.3**
PBKT	**Sadao Pong**	**15.72**	**13**		**Pn**	**17 33 29.8**	**-1.0**
PBKT				IAmb	IAmb	17 33 36.5	
	comp=Z,326nm,1.4s						
UGM	**Wanagama**	**16.00**	**125**	Pn	**Pn**	**17 33 32.3**	**-2.2**
UBPT	**Khong Chiam**	**16.18**	**30**		**Pn**	**17 33 35.6**	**-1.0**
WOJI	**Wonogiri, Jawa**	**16.29**	**124**	P	**Pn**	**17 33 37.4**	**-0.8**
	comp=Z,46nm,1.0s						
CM31	**Chiang Mai Arr**	**17.25**	**5**		**Pn**	**17 33 48.0**	**-2.2**
CMAR	**Chiang Mai Arr**	**17.25**	**5**	P	**Pn**	**17 33 50.0**	**-0.2**
	comp=Z,3.5nm,0.3s,baz=195,slow=11,SNR=35						
CMAR				LR	LR	17 41 20.9	
	comp=Z,7μm,19.4s,baz=202,slow=40						
CMAR				ScP	**ScP**	**17 42 07.3**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=207,slow=1.0,SNR=4.2						
CMAR	**Chiang Mai Arr**	**17.25**	**5**	P	**Pn**	**17 33 50.0**	**-0.2**
PALK	**Pallekele**	**17.60**	**291**	P	**Pn**	**17 33 55.1**	**+0.5**
	comp=Z,1.5nm,0.3s,baz=99,slow=6.9,SNR=8.5						
PALK				LR	LR	17 40 19.4	
	comp=Z,7μm,18.4s,baz=114,slow=36						
PALK	**Pallekele**	**17.60**	**291**	P	**Pn**	**17 33 54.0**	**-0.6**
CHTO	**Chiang Mai**	**17.60**	**5**		**Pn**	**17 33 52.4**	**-2.1**
CHTO	**Chiang Mai**	**17.60**	**5**	P	**Pn**	**17 33 52.4**	**-2.1**
CHTO				pmax	pmax		
	comp=Z,40nm,0.7s						
SIMRM	**Sittwe**	**19.32**	**347**	P	**P**	**17 34 13.1**	**-1.2**
JAGI	**Jajag, Banyuwa**	**19.36**	**120**	P	**Pn**	**17 34 16.8**	**+0.8**
	comp=Z,865nmcomp=Z,32nm,0.8s						
JAGI	**Jajag, Banyuwa**	**19.36**	**120**	P	**P**	**17 34 14.7**	**-0.1**
KBKI	**Kotabaru**	**19.40**	**103**	P	**Pn**	**17 34 16.4**	**-0.1**
	comp=Z,571nmcomp=Z,38nm,1.0s						
KKM	**Kota Kinabalu**	**19.50**	**75**	P	**P**	**17 34 16.1**	**-0.3**
KKM				IAmb	IAmb	17 34 21.6	
	comp=Z,185nm,1.0s						
BKB	**Balikpapan**	**19.77**	**97**	P	**Pn**	**17 34 20.6**	**-0.3**
	comp=Z,9μmcomp=Z,5μmcomp=Z,321nm,0.9s						
BKB	**Balikpapan**	**19.77**	**97**	P	**Pn**	**17 34 21.4**	**+0.5**
BKB				IAmb	IAmb	17 34 26.9	
	comp=Z,490nm,1.2s						
SRBI	**Singaraja**	**20.11**	**118**	P	**P**	**17 34 22.0**	**-1.0**
	comp=Z,2μmcomp=Z,105nm,0.9s						
MDRS	**Chennai**	**20.59**	**306**	*e*P	**P**	**17 34 27.7**	**-0.5**
MDRS				IAmb	IAmb	17 34 32.2	
	comp=Z,28nm,0.7s						
SLVN	**Son La**	**21.05**	**17**	P	**P**	**17 34 33.0**	**-0.2**
SLVN				IAmb	IAmb	17 34 38.1	
	comp=Z,292nm,0.9s						
SLVN				IAMs_20	IAMs_20	17 43 35.7	
	comp=Z,7μm,20.0s						
SKHT	**Srikalahasti**	**21.40**	**306**	*e*P	**P**	**17 34 39.2**	**+2.4**
SKHT				IAmb	IAmb	17 34 51.0	
	comp=Z,16nm,0.9s						
SKHT				*e*S	**S**	**17 38 34.9**	**+1.7**
SKHT				IVMs_BB	IVMs_BB	17 42 24.5	
	comp=Z,583nm,12.6s						
TRD	**Trivandrum**	**21.50**	**290**	*e*P	P	17 34 45.5	+7.5
CHLP	**Challavanipeta**	**21.56**	**324**	*e*P	**P**	**17 34 38.9**	**+0.3**
CHLP				IAmb	IAmb	17 34 44.2	
	comp=Z,59nm,1.2s						
CHLP				*e*S	**S**	**17 38 35.4**	**-0.8**
CHLP				IVMs_BB	IVMs_BB	17 46 20.0	
	comp=Z,610nm,17.8s						
QIZ	**Qiongzhong**	**21.59**	**34**	P	**P**	**17 34 39.5**	**+0.5**
QIZ				pmax	pmax		
	comp=Z,110nm,1.2s						
QIZ				LR	LR		
	comp=Z,6μm,13.3s						
QIZ				LR	LR		
	comp=Z,8μm,13.5s						
QIZ				LR	LR		
	comp=Z,7μm,12.7s						
QIZ	**Qiongzhong**	**21.59**	**34**	P	**P**	**17 34 37.6**	**-1.3**
QIZ				IAmb	IAmb	17 34 41.4	
	comp=Z,162nm,1.2s						
BRDH	**Bariadhala**	**22.06**	**346**	P	**P**	**17 34 44.3**	**+0.5**
	comp=Z,117nm,0.4s,baz=84,slow=4.9,SNR=16						
BWNR	**Bhubaneshwar**	**22.06**	**330**	⇑*i*P	**P**	**17 34 41.5**	**-2.4**
BWNR				IAmb	IAmb	17 34 47.4	
	comp=Z,87nm,0.5s						
BWNR				*ex*	x	17 38 44.8	
PVM	**Polavaram**	**22.18**	**317**	*e*P	**P**	**17 34 47.4**	**+2.1**
PVM				IAmb	IAmb	17 34 54.0	
	comp=Z,32nm,0.9s						
PVM				*e*		17 38 42.5	
PVM				*e*S	**S**	**17 38 50.7**	**+2.4**
PVM				IVMs_BB	IVMs_BB	17 48 12.8	
	comp=Z,708nm,15.4s						
ADKI	**Addanki**	**22.44**	**311**	*e*P	**P**	**17 34 45.5**	**-2.6**
ADKI				IAmb	IAmb	17 35 02.2	
	comp=Z,23nm,1.1s						
ADKI				*e*		17 38 38.7	
ADKI				*e*S	**S**	**17 38 52.9**	**-0.1**
ADKI				IVMs_BB	IVMs_BB	17 46 07.3	
	comp=Z,601nm,17.9s						
MYLAV	**Mylavaram**	**22.54**	**314**	*e*P	**P**	**17 34 50.8**	**+1.7**
MYLAV				IAmb	IAmb	17 35 59.0	
	comp=Z,14nm,0.8s						
MYLAV				*e*		17 38 48.5	
MYLAV				*e*S	**S**	**17 38 55.0**	**+0.3**
MYLAV				IVMs_BB	IVMs_BB	17 50 19.5	
	comp=Z,412nm,14.3s						
MPSI	**Mapaga**	**22.63**	**92**	P	**P**	**17 34 50.6**	**+0.4**
	comp=Z,5μmcomp=Z,2μmcomp=Z,158nm,0.9s						
PLAI	**Plampang**	**22.72**	**116**	P	**P**	**17 34 49.9**	**-1.2**
	comp=Z,717nmcomp=Z,59nm,1.2s						
TTSI	**Tana Toraja**	**22.92**	**101**	P	**P**	**17 34 52.3**	**-0.9**
	comp=Z,1μmcomp=Z,128nm,1.2s						
SPSI	**Sidrap Palu**	**23.05**	**103**	P	**P**	**17 34 54.1**	**-0.4**
	comp=Z,3μmcomp=Z,1μmcomp=Z,80nm,1.0s						
KAPI	**Kappang**	**23.28**	**106**	P	**P**	**17 34 57.0**	**+0.2**
	comp=Z,72nm,1.0s,baz=289,slow=11,SNR=8.9						
KAPI	**Kappang**	**23.28**	**106**	P	**P**	**17 34 57.0**	**+0.2**
NJS	**Nagarjunasagar**	**23.38**	**312**	*e*P	**P**	**17 34 58.8**	**+1.0**
NJS				IAmb	IAmb	17 35 02.2	
	comp=Z,20nm,0.8s						
NJS				*e*S	**S**	**17 39 10.8**	**+1.6**
NJS				IVMs_BB	IVMs_BB	17 45 26.5	
	comp=Z,422nm,21.1s						
SRLM	**Srisailam**	**23.41**	**310**	*e*P	**P**	**17 35 00.0**	**+1.8**
SRLM				IAmb	IAmb	17 35 10.3	
	comp=Z,21nm,0.7s						
SRLM				*e*S	**S**	**17 39 10.3**	**+0.5**
SRLM				IVMs_BB	IVMs_BB	17 43 54.5	
	comp=Z,548nm,14.8s						
BNSI	**Bone**	**23.47**	**104**	P	**P**	**17 34 58.8**	**+0.1**
	comp=Z,2μmcomp=Z,130nm,1.5s						
BKSI	**Bulukumba**	**23.71**	**106**	P	**P**	**17 35 01.5**	**+0.5**
	comp=Z,3μmcomp=Z,2μmcomp=Z,76nm,0.8s						
URV	**Uravakonda**	**24.04**	**306**	*e*P	**P**	**17 35 05.0**	**+0.8**
URV				IAmb	IAmb	17 35 08.6	
	comp=Z,28nm,0.9s						
URV				*e*		17 39 14.7	
URV				*e*S	**S**	**17 39 22.6**	**+2.7**
URV				IVMs_BB	IVMs_BB	17 46 04.2	
	comp=Z,1μm,14.3s						
KAAM	**Kaadhehdhoo**	**24.29**	**269**	P	**P**	**17 35 06.0**	**-0.5**
KAAM				IAmb	IAmb	17 35 16.1	
	comp=Z,142nm,1.3s						
KMI	**Kunming**	**24.38**	**12**	P	**P**	**17 35 08.9**	**+1.5**
KMI				pP	sP	17 35 19.0	-0.3
KMI				sP	pP	17 35 24.8	+9.0
KMI				S	**S**	**17 39 25.4**	**-0.1**
KMI				pmax	pmax		
	comp=Z,450nm,1.4s						
KMI				pmax	pmax		
	comp=Z,2μm,4.6s						
KMI				LR	LR		
	comp=Z,15nm,16.7s						
KMI				LR	LR		
	comp=Z,5μm,13.7s						
KMI				LR	LR		
	comp=Z,16μm,16.5s						

KMI	Kunming	24.38	12	P	P	17 35 07.5	+0.1
KMI	Kunming	24.38	12	P	P	17 35 07.5	+0.1
KMI				pmax	pmax		
	comp=Z,706nm,1.3s						
KMI				MLR	MLR		
	comp=Z,15µm,18.0s						
APSI	Ampana	24.46	95	P	P	17 35 09.5	+1.5
	comp=Z,2µmcomp=Z,2µmcomp=Z,241nm,1.0s						
HYB	Hyderabad	24.48	312	iP	P	17 35 10.0	+1.8
HYB				eS	S	17 39 32.0	+5.1
HYBB	Hyderabad (bro	24.48	312	eP	P	17 35 09.7	+1.5
HYBB				IAmb	IAmb	17 35 19.5	
	comp=Z,30nm,0.9s						
HYBB				e		17 38 39.6	
HYBB				eS	S	17 39 25.4	-1.5
HYBB				IVMs_BB	IVMs_BB	17 47 09.9	
	comp=Z,428nm,13.7s						
WBSI	Waikabubak, Su	24.50	117	P	P	17 35 04.8	-3.6
	comp=Z,2µmcomp=Z,191nm,1.2s						
KOHI	KOHIMA	24.59	353	⇑iP	P	17 35 07.3	-1.9
MRSI	Marisa	24.67	91	P	P	17 35 10.3	+0.4
	comp=Z,3µmcomp=Z,2µmcomp=Z,254nm,0.8s						
SHL	Shillong	24.80	348	⇑iP	P	17 35 08.0	-3.1
SHL	Shillong	24.80	348	P	P	17 35 11.3	+0.2
SHL	Shillong	24.80	348	P	P	17 35 11.3	+0.2
SHL				pmax	pmax		
	comp=Z,240nm,0.8s						
SHL				MLR	MLR		
	comp=Z,1µm,20.0s						
RPR	Rampur	24.89	316	eP	P	17 35 08.0	-3.9
RPR				eS	S	17 39 33.7	+0.3
BOK	Bokaro	25.05	335	⇑iP	P	17 35 12.8	-0.4
BOK				IAmb	IAmb	17 35 19.0	
	comp=Z,140nm,0.8s						
JORH	JORHAT	25.58	354	⇑iP	P	17 35 16.7	-1.2
LUWI	Luwuk	25.59	95	P	P	17 35 19.3	+1.1
	comp=Z,5µmcomp=Z,411nm,1.2s						
LUWI	Luwuk	25.59	95	P	P	17 35 18.1	-0.1
SRSP	Sriramsagar	25.61	315	eP	P	17 35 19.4	+1.1
SRSP				IAmb	IAmb	17 35 21.8	
	comp=Z,8.9nm,0.9s						
SRSP				eS	S	17 39 45.8	+0.9
SRSP				IVMs_BB	IVMs_BB	17 48 57.8	
	comp=Z,374nm,19.4s						
BASI	Baing, Sumba	25.81	117	P	P	17 35 19.8	-0.4
	comp=Z,1µmcomp=Z,100nm,1.1s						
LKP	Lekhapani	26.04	357	⇑iP	P	17 35 22.4	+0.3
H08S2	Diego Garcia H	26.23	250	T	T	18 02 26.1	
	baz=72,slow=75,SNR=7363						
H08S3	Diego Garcia H	26.23	250	T	T	18 02 30.6	
	baz=72,slow=75						
H08S1	Diego Garcia H	26.25	250	T	T	18 02 26.0	
	baz=72,slow=75,SNR=5813						
EDFI	Ende, Flores	26.25	113	P	P	17 35 20.9	-3.5
	comp=Z,361nmcomp=Z,32nm,0.7s						
KLRI	Killari	26.35	311	eP	P	17 35 26.2	+1.1
KLRI				IAmb	IAmb	17 35 36.7	
	comp=Z,16nm,0.8s						
KLRI				eS	S	17 39 57.4	+0.7
KLRI				IVMsBB		17 48 23.3	
	comp=Z,616nm,18.5s						
ZIRO	ZIRO	26.40	353	⇑iP	P	17 35 25.8	+0.2
HKPS	Hong Kong Po S	26.62	37	P	P	17 35 27.8	+0.3
HKPS				IAmb	IAmb	17 35 45.8	
	comp=Z,94nm,1.1s						
NGP	Nagpur	26.65	319	eP	P	17 35 29.9	+2.1
NGP				i x	x	17 35 30.7	
	baz=136,slow=12						
NGP				ex	x	17 35 35.2	
	comp=Z,8.9nm,0.7s						
NGP				eS	S	17 40 00.2	-1.1
TGY	Tagaytay City	26.69	60	P	P	17 35 28.6	+0.4
	comp=Z,173nm,0.4s,baz=299,slow=2.8,SNR=5.8						
GYA	Guiyang	26.70	19	⇑iP	P	17 35 28.3	0.0
GYA				pP	pP	17 35 37.8	+1.1
GYA				PP	PnPn	17 36 09.9	-0.1
GYA				S	S	17 40 00.4	-1.8
GYA				sS	sS	17 40 16.6	+0.4
GYA				SS		17 41 11.3	
GYA				pmax	pmax		
	comp=Z,50nm,1.3s						
GYA				pmax	pmax		
	comp=Z,340nm,3.5s						
GYA				LR	LR		
	comp=Z,6µm,12.9s						
GYA				LR	LR		
	comp=Z,6µm,14.4s						
GYA				LR	LR		
	comp=Z,8µm,13.8s						
GOA	Goa	27.16	303	eP	P	17 35 35.9	+3.5
ODAN	Odare	27.24	340	eP	P	17 35 34.5	+1.2
	comp=Z,137nm,0.6s						
H08N1	Diego Carcia H	27.26	254	T	T	18 04 29.7	
	baz=133,slow=75,SNR=216						
H08N2	Diego Garcia H	27.27	254	T	T	18 04 36.0	
	baz=133,slow=75,SNR=56						
H08N3	Diego Garcia H	27.29	254	T	T	18 04 37.2	
	baz=133,slow=75,SNR=44						
GTK	Tadong	27.29	343	⇑iP	P	17 35 32.1	-1.5
GTK				IAmb	IAmb	17 35 39.7	
	comp=Z,282nm,0.2s						
PCPH	Palayan	27.50	57	⇑eP	P	17 35 34.9	-0.6
CTBH	Cotabato--PC H	27.54	77	⇑iP	P	17 35 36.4	+0.5
JBP	Jabalpur	27.56	324	eP	P	17 35 37.7	+1.8
JBP				ex	x	17 35 37.7	
	baz=139,slow=18						
JBP				eS	S	17 40 16.8	+1.2
TAPN	Taplejung	27.59	341	eP	P	17 35 38.1	+1.6
	comp=Z,315nm,0.9s						
RAMN	Ramite	27.60	339	eP	P	17 35 38.1	+1.6
	comp=Z,98nm,0.7s						
SZP	Santa	28.00	53	P	P	17 35 40.9	+1.0
JIRN	Jiri	28.39	339	eP	P	17 35 45.0	+1.3
	comp=Z,460nm,1.0s						
PKI	Pulchoki	28.60	338	eP	P	17 35 46.3	+0.8
PKIN	Phulchoki	28.61	338	eP	P	17 35 46.5	+0.9
GUN	Gumba	28.73	339	eP	P	17 35 48.0	+1.3
POO	Poona	28.73	308	eP	P	17 35 47.0	+0.5
DMN	Daman	28.75	337	eP	P	17 35 48.0	+1.2
DAV	Davao City (W)	28.81	77	P	P	17 35 48.0	+0.7
	comp=Z,99nm,0.4s,baz=114,slow=0.9,SNR=8.8						
DAV				LR	LR	17 49 09.7	
	comp=Z,2µm,18.6s,baz=186,slow=40						
DAV	Davao City (W)	28.81	77	P	P	17 35 47.9	+0.7
KKN	Kakani	28.85	338	eP	P	17 35 48.7	+1.1
	comp=Z,279nm,1.2s						
GIRL	Giralia	28.88	146	P	P	17 35 47.1	-0.5
SANI	Sanana	28.88	96	P	P	17 35 47.1	-0.7
	comp=Z,56nm,1.0s						
LSA	Lhasa	28.95	349	P	P	17 35 49.9	+1.1
LSA				pP	pP	17 35 58.1	+0.8
LSA				S	S	17 40 32.5	-5.8
LSA				pmax	pmax		
	comp=Z,140nm,1.4s						
LSA				pmax	pmax		
	comp=Z,1µm,3.9s						
LSA				LR	LR		
	comp=Z,7µm,23.5s						
LSA				LR	LR		
	comp=Z,5µm,19.9s						
LSA				LR	LR		
	comp=Z,12µm,23.5s						
LSA	Lhasa	28.95	349	P	P	17 35 50.2	+1.4
LSA				IAmb	IAmb	17 35 59.0	
	comp=Z,100nm,1.5s						
LSA	Lhasa	28.95	349	P	P	17 35 50.2	+1.4
LSA				pmax	pmax		
	comp=Z,100nm,1.5s						
LSA				MLR	MLR		
	comp=Z,900nm,21.0s						
SOEI	Soe	28.98	113	P	P	17 35 46.9	-2.0
	comp=Z,1µmcomp=Z,112nm,1.2s						
SOEI	Soe	28.98	113	P	P	17 35 45.7	-3.1
SOEI				IAmb	IAmb	17 35 54.7	
	comp=Z,132nm,1.1s						
SOEI					S	17 40 34.8	-3.7
SOEI				IAMs_20	IAMs_20	17 47 01.1	
	comp=Z,6µm,22.0s						
GKN	Gorkha	29.29	337	eP	P	17 35 52.8	+1.4
DANN	Dangsing	29.95	336	eP	P	17 35 58.7	+1.2
	comp=Z,93nm,0.6s						
TNTI	Ternate	30.09	90	P	P	17 35 56.8	-1.7
NLAI	Namlea	30.13	98	P	P	17 35 59.4	+0.5
	comp=Z,2µmcomp=Z,140nm,0.7s						
CD2	Chengdu	30.20	11	P	P	17 36 00.0	+0.7

CD2				pP	sP	17 36 09.8	-1.5
CD2				sP	pP	17 36 15.8	+8.0
CD2				S	S	17 41 03.9	+6.9
CD2				pmax	pmax		
	comp=Z,70nm,0.6s						
CD2				pmax	pmax		
	comp=Z,660nm,4.7s						
CD2				LR	LR		
	comp=Z,15µm,16.7s						
CD2				LR	LR		
	comp=Z,15µm,16.2s						
CD2				LR	LR		
	comp=Z,19µm,15.7s						
LBMI	Labuha	30.27	93	P	P	17 36 00.7	+0.5
	comp=Z,3µmcomp=Z,75nm,0.9s						
KNMB	Chin-men Tao	30.86	40	P	P	17 36 04.1	-1.1
KNMB				IAmb	IAmb	17 36 17.2	
	comp=Z,70nm,0.9s						
KNMB				IAMs_20	IAMs_20	17 49 52.3	
	comp=Z,4µm,18.0s						
ENH	Enshi	31.17	21	P	P	17 36 07.8	-0.1
ENH				IAMs_20	IAMs_20	17 49 14.2	
	comp=Z,4µm,19.0s						
MBWA	Marble Bar	31.23	137	IAMs_20	IAMs_20	17 50 50.5	
	comp=Z,4µm,21.0s						
AAI	Ambon	31.27	99	P	P	17 36 08.4	-0.6
	comp=Z,1µmcomp=Z,98nm,0.8s						
QZH	Quanzhou	31.34	39	⇑iP	P	17 36 08.6	-0.8
QZH				S	S	17 41 10.3	-4.6
QZH				pmax	pmax		
	comp=Z,440nm,6.9s						
QZH				LR	LR		
	comp=Z,6µm,13.6s						
QZH				LR	LR		
	comp=Z,3µm,14.8s						
QZH				LR	LR		
	comp=Z,7µm,14.9s						
PSAC1	Pilbara Seismi	31.53	137	IAMs_20	IAMs_20	17 50 01.7	
	comp=Z,6µm,21.0s						
PSAB1	Pilbara Seismi	31.57	137	IAMs_20	IAMs_20	17 50 01.5	
	comp=Z,5µm,21.0s						
TPUB	Ta-pu	31.57	44	P	P	17 36 10.8	-0.8
TPUB				IAmb	IAmb	17 36 13.8	
	comp=Z,86nm,1.1s						
TWG	Pinlang	31.57	45	P	P	17 36 11.8	+0.2
TWG				IAMs_20	IAMs_20	17 47 34.9	
	comp=Z,8µm,22.0s						
PSAA2	Pilbara Seismi	31.58	137	IAMs_20	IAMs_20	17 50 01.9	
	comp=Z,6µm,21.0s						
PSAA1	Pilbara Seismi	31.58	137	IAMs_20	IAMs_20	17 50 00.9	
	comp=Z,5µm,21.0s						
PSAB2	Pilbara Seismi	31.59	137	IAMs_20	IAMs_20	17 50 12.0	
	comp=Z,5µm,21.0s						
PSA00	Pilbara Seismi	31.59	137	P	P	17 36 11.8	+0.1
PSA00				IAmb	IAmb	17 36 33.6	
	comp=Z,41nm,0.9s						
PSA00				IAMs_20	IAMs_20	17 50 01.0	
	comp=Z,6µm,21.0s						
PSAD3	Pilbara Seismi	31.59	137	IAMs_20	IAMs_20	17 50 12.1	
	comp=Z,7µm,22.0s						
PSAA3	Pilbara Seismi	31.60	137	IAMs_20	IAMs_20	17 50 13.3	
	comp=Z,5µm,21.0s						
PSAB3	Pilbara Seismi	31.61	137	IAMs_20	IAMs_20	17 50 02.6	
	comp=Z,6µm,21.0s						
PSAC3	Pilbara Seismi	31.61	137	IAMs_20	IAMs_20	17 50 02.6	
	comp=Z,6µm,21.0s						
PSAC2	Pilbara Seismi	31.62	137	IAMs_20	IAMs_20	17 50 01.8	
	comp=Z,5µm,21.0s						
PSAD2	Pilbara Seismi	31.70	137	IAMs_20	IAMs_20	17 50 02.9	
	comp=Z,6µm,22.0s						
MSAI	Masohi	31.95	98	P	P	17 36 14.1	-0.9
	comp=Z,180nmcomp=Z,16nm,0.6s						
YULB	Yu-li	32.10	45	P	P	17 36 16.2	0.0
YULB				IAmb	IAmb	17 36 18.9	
	comp=Z,102nm,1.1s						
SSLB	Suanglung	32.11	44	P	P	17 36 16.5	+0.2
SSLB				IAmb	IAmb	17 36 18.7	
	comp=Z,122nm,1.2s						
NACB	Ninganchiao	32.81	44	P	P	17 36 22.3	-0.1
NACB				IAmb	IAmb	17 36 31.6	
	comp=Z,122nm,1.4s						
NACB				IAMs_20	IAMs_20	17 49 11.5	
	comp=Z,4µm,21.0s						
YHNB	Yeheng	32.98	43	P	P	17 36 24.5	+0.5
YHNB				IAmb	IAmb	17 36 43.5	
	comp=Z,218nm,1.8s						
TATO	Taipei	33.26	43	P	P	17 36 25.6	-0.7
WHN	Wuhan	33.39	27	⇑P	P	17 36 28.1	+0.8
WHN				S	S	17 41 52.0	+5.2
WHN				pmax	pmax		
	comp=Z,110nm,0.9s						
WHN				pmax	pmax		
	comp=Z,920nm,4.8s						
WHN				LR	LR		
	comp=Z,4µm,11.3s						
WHN				LR	LR		
	comp=Z,9µm,12.2s						
WHN				LR	LR		
	comp=Z,13µm,14.3s						
FITZ	Fitzroy Crossi	33.85	126	P	P	17 36 31.1	-0.4
	baz=34,SNR=17						
FITZ	Fitzroy Crossi	33.85	126	P	P	17 36 31.3	-0.2
	comp=Z,15nm,0.8s,baz=303,slow=6.2,SNR=23						
FITZ	Fitzroy Crossi	33.85	126	P	P	17 36 30.2	-1.3
YOJ	Yonaguni jima	33.98	45	P	P	17 36 31.9	-0.7
YOJ	Yonaguni jima	33.98	45	P	P	17 36 31.9	-0.7
YOJ				pmax	pmax		
	comp=Z,208nm,1.4s						
YOJ				MLR	MLR		
	comp=Z,2µm,18.0s						
SIJI	Sorong	34.05	93	P	P	17 36 32.6	-0.7
	comp=Z,19nm,0.7s,baz=271,slow=7.6,SNR=7.0						
DDI	Dehra Dun	34.25	330	eP	P	17 36 34.9	0.0
XAN	Xi'an	34.46	17	P	P	17 36 36.3	-0.3
XAN				pP	sP	17 36 51.1	+2.4
XAN				PP	PP	17 37 56.1	+1.0
XAN				S	S	17 42 01.6	-1.7
XAN				SS	SnSn	17 44 20.3	+4.9
XAN				pmax	pmax		
	comp=Z,78nm,0.9s						
XAN				pmax	pmax		
	comp=Z,760nm,3.5s						
XAN				LR	LR		
	comp=Z,5µm,11.9s						
XAN				LR	LR		
	comp=Z,4µm,12.5s						
XAN				LR	LR		
	comp=Z,8µm,16.8s						
XAN	Xi'an	34.46	17	P	P	17 36 35.8	-0.8
XAN	Xi'an	34.46	17	P	P	17 36 35.8	-0.8
XAN				pmax	pmax		
	comp=Z,141nm,0.7s						
XAN				MLR	MLR		
	comp=Z,7µm,18.0s						
MEEK	Meekatharra	34.47	145	P	P	17 36 38.3	+1.5
	baz=35,SNR=3.5						
MORW	Morawa	35.03	151	P	P	17 36 44.8	+3.2
	baz=35,SNR=4.5						
MORW	Morawa	35.03	151	P	P	17 36 40.4	-1.2
MORW				IAMs_20	IAMs_20	17 50 26.4	
	comp=Z,3µm,20.0s						
SAUI	Saumlaki	35.12	106	IAMs_20	IAMs_20	17 52 24.2	
	comp=Z,3µm,18.0s						
FAKI	Fak Fak	35.20	97	P	P	17 36 42.1	-1.2
FAKI				IAmb	IAmb	17 37 09.7	
	comp=Z,98nm,1.3s						
LZH	Lanzhou	35.26	9	eP	P	17 36 44.3	+0.6
LZH				pP	sP	17 36 56.6	+0.9
LZH				PP	PP	17 38 08.3	+4.2
LZH				S	S	17 42 12.0	-3.9
LZH				sS	sS	17 42 28.3	-1.6
LZH				pmax	pmax		
	comp=Z,71nm,1.1s						
LZH				pmax	pmax		
	comp=Z,820nm,5.4s						
LZH				LR	LR		
	comp=Z,6µm,14.3s						
LZH				LR	LR		
	comp=Z,4µm,14.8s						
LZH				LR	LR		
	comp=Z,6µm,15.6s						
KNRA	Kununurra	35.33	120	P	P	17 36 43.2	-1.2
	baz=35,SNR=5.3						
KNRA	Kununurra	35.33	120	P	P	17 36 42.1	-2.3
SMLA	Simla	35.35	329	eP	P	17 36 44.0	-0.3
DHRM	DHARAMSHALA	36.69	329	ex	P	17 36 56.3	+0.2

NJ2	Nanjing	36.84	31	⇑iP	P	17 36 57.6	+0.6
NJ2				PP	PnPn	17 38 25.3	+3.8
NJ2				S	S	17 42 40.6	+0.8
NJ2				sS	sS	17 42 55.3	+1.4
NJ2				pmax	pmax		
	comp=Z,52nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,630nm,4.1s						
NJ2				LR	LR		
	comp=Z,6µm,15.2s						
NJ2				LR	LR		
	comp=Z,5µm,13.3s						
NJ2				LR	LR		
	comp=Z,7µm,14.7s						
THN	Thein Dam	37.13	329	eP	P	17 37 00.0	+0.5
THN				eS	S	17 42 45.0	+0.8
SSE	Sheshan	37.38	35	P	P	17 37 03.0	+1.3
SSE				S	S	17 42 50.3	+2.2
SSE				pmax	pmax		
	comp=Z,45nm,0.9s						
SSE				pmax	pmax		
	comp=Z,290nm,6.0s						
SSE				LR	LR		
	comp=Z,2µm,14.9s						
SSE				LR	LR		
	comp=Z,2µm,13.7s						
SSE	Sheshan	37.38	35	P	P	17 37 01.8	+0.1
SSE				IAmb	IAmb	17 37 03.9	
	comp=Z,84nm,0.9s						
SSE	Sheshan	37.38	35	IAMs_20	IAMs_20	17 53 48.8	
	comp=Z,3µm,18.0s						
KDU	Kakadu	37.55	113	P	P	17 37 02.1	-1.1
	baz=38,SNR=12						
KLBR	Kellerberrin	37.94	151	P	P	17 37 09.3	+2.9
	baz=38,SNR=4.4						
GTA	Gaotai	38.12	3	⇑P	P	17 37 08.4	+0.5
GTA				pP	pP	17 37 15.8	-0.7
GTA				sP	sP	17 37 20.0	0.0
GTA				PP	PnPn	17 38 41.5	+4.5
GTA				PcP	PcP	17 39 24.1	+1.5
GTA				S	S	17 42 56.8	-2.5
GTA				ScP	ScP	17 43 09.6	+1.1
GTA				ScS	ScS	17 47 16.4	-1.7
GTA				pmax	pmax		
	comp=Z,95nm,1.0s						
GTA				pmax	pmax		
	comp=Z,670nm,6.7s						
GTA				LR	LR		
	comp=Z,3µm,17.1s						
GTA				LR	LR		
	comp=Z,3µm,16.8s						
GTA				LR	LR		
	comp=Z,4µm,17.5s						
NWAO	Narrogin (SRO)	38.80	153	P	P	17 37 16.0	+2.3
	baz=39,SNR=4.6						
NWAO	Narrogin (SRO)	38.80	153	P	P	17 37 15.3	+1.7
	comp=Z,8.0nm,0.8s,baz=300,slow=9.8,SNR=3.7						
NWAO	Narrogin (SRO)	38.80	153	P	P	17 37 14.3	+0.6
NWAO	Narrogin (SRO)	38.80	153	P	P	17 37 14.4	+0.8
NWAO				IAmb	IAmb	17 37 36.8	
	comp=Z,34nm,0.9s						
NWAO	Narrogin (SRO)	38.80	153	IAMs_20	IAMs_20	17 52 29.0	
	comp=Z,4µm,22.0s						
NWAO	Narrogin (SRO)	38.80	153	P	P	17 37 14.3	+0.6
NWAO				pmax	pmax		
	comp=Z,43nm,1.0s						
NWAO				MLR	MLR		
	comp=Z,4µm,22.0s						
TIY	Taiyuan	38.94	19	eP	P	17 37 16.5	+1.7
TIY				PP	PnPn	17 38 49.5	+2.6
TIY				S	S	17 43 15.4	+3.7
TIY				sS	sS	17 43 26.1	+0.3
TIY				pmax	pmax		
	comp=Z,26nm,0.7s						
TIY				pmax	pmax		
	comp=Z,420nm,7.3s						
TIY				LR	LR		
	comp=Z,6µm,12.1s						
TIY				LR	LR		
	comp=Z,3µm,13.9s						
TIY				LR	LR		
	comp=Z,7µm,13.1s						
JOW	Kunigami	39.20	47	P	P	17 37 16.4	-0.6
JOW				IAmb	IAmb	17 37 19.4	
	comp=Z,64nm,0.9s						
H01W3	Cape Leeuwin H	39.20	158	T	T	18 18 53.2	
	baz=334,slow=76,SNR=531						
H01W2	Cape Leeuwin H	39.21	158	T	T	18 18 43.4	
	baz=334,slow=76,SNR=85						
H01W1	Cape Leeuwin H	39.21	158	T	T	18 18 51.0	
	baz=334,slow=76,SNR=69						
NIL	Nilore	39.38	328	P	P	17 37 18.1	-0.4
NIL				IAmb	IAmb	17 37 19.5	
	comp=Z,55nm,0.6s						
NIL	Nilore	39.38	328	IAMs_20	IAMs_20	17 56 32.7	
	comp=Z,2µm,18.0s						
TIA	Tai'an	39.41	26	P	P	17 37 18.9	+0.2
TIA				pmax	pmax		
	comp=Z,19nm,0.7s						
TIA				LR	LR		
	comp=Z,2µm,19.6s						
TIA				LR	LR		
	comp=Z,2µm,20.1s						
TIA				LR	LR		
	comp=Z,2µm,23.7s						
WRKA	Warakurna	39.77	133	P	P	17 37 23.1	+1.2
	baz=40,SNR=11						
BTO	Baotou	40.91	15	eP	P	17 37 32.3	+1.1
BTO				S	S	17 43 44.8	+3.7
WB0	Warramunga Arr	41.93	122	P	P	17 37 39.1	-0.7
WB0				IAmb	IAmb	17 37 53.9	
	comp=Z,46nm,0.8s						
WB0				IAMs_20	IAMs_20	17 58 28.3	
	comp=Z,3µm,20.0s						
WB8	Warramunga Arr	41.94	122	IAMs_20	IAMs_20	17 58 18.6	
	comp=Z,2µm,20.0s						
WB5	Warramunga Arr	41.95	122	IAMs_20	IAMs_20	17 58 30.0	
	comp=Z,2µm,20.0s						
WRA	Warramunga Arr	41.96	122	P	P	17 37 39.9	-0.1
	comp=Z,18nm,0.7s,baz=300,slow=9.1,SNR=34						
WRA				ScP	ScP	17 43 24.3	+0.5
	comp=Z,1.6nm,1.1s,baz=301,slow=3.4,SNR=4.9						
WRA				S	S	17 43 53.9	-3.2
	comp=Z,2.8nm,1.1s,baz=293,slow=16,SNR=5.5						
WRA	Warramunga Arr	41.96	122	ceP	P	17 37 39.9	-0.1
WRA				pmax	pmax		
	comp=Z,23nm,0.7s						
WRAB	Tennant Creek	41.96	122	P	P	17 37 40.0	-0.1
WRAB				IAmb	IAmb	17 38 01.9	
	comp=Z,67nm,1.0s						
WRAB	Tennant Creek	41.96	122	ceP	P	17 37 40.3	+0.3
WRAB				pmax	pmax		
	comp=Z,28nm,0.8s						
WB2	Warramunga Arr	41.97	122	P	P	17 37 40.2	+0.2
WB2				IAmb	IAmb	17 37 54.4	
	comp=Z,49nm,0.8s						
WB2				IAMs_20	IAMs_20	17 55 24.4	
	comp=Z,2µm,22.0s						
WR5	Warramunga Arr	42.04	122	IAMs_20	IAMs_20	17 54 22.3	
	comp=Z,3µm,22.0s						
WR7	Warramunga Arr	42.08	122	IAMs_20	IAMs_20	17 53 42.4	
	comp=Z,2µm,21.0s						
WR0	Warramunga Arr	42.14	122	P	P	17 37 41.3	-0.1
WR0				IAmb	IAmb	17 37 55.9	
	comp=Z,65nm,0.8s						
MSEY	Mahe Island	42.16	262	P	P	17 37 43.2	+1.4
MSEY	Mahe Island	42.16	262	IAMs_20	IAMs_20	17 52 32.4	
	comp=Z,2µm,18.0s						
MSEY	Mahe Island	42.16	262	P	P	17 37 43.2	+1.4
MSEY				pmax	pmax		
	comp=Z,55nm,1.4s						
MSEY				MLR	MLR		
	comp=Z,2µm,18.0s						
BJT	Baijiatuau	42.30	22	P	P	17 37 43.6	+1.1
BJT				IAmb	IAmb	17 37 46.3	
	comp=Z,83nm,0.8s						
BJT	Baijiatuau	42.30	22	P	P	17 37 43.6	+1.1
BJT				pmax	pmax		
	comp=Z,83nm,0.8s						
BJT				MLR	MLR		
	comp=Z,2µm,20.0s						
BJI	Beijing	42.33	22	P	P	17 37 44.3	+1.7
BJI				S	S	17 44 02.0	+0.1
BJI				pmax	pmax		
	comp=Z,98nm,0.7s						
BJI				pmax	pmax		

comp=Z,810nm,3.4s
BJI LR LR
comp=Z,1µm,14.7s
BJI LR LR
comp=Z,2µm,18.6s
KBL Kabul 42.38 325 P **P** 17 37 43.6 +0.1
KBL Kabul 42.38 325 P **P** 17 37 43.6 +0.1
KBL pmax pmax
comp=Z,16nm,0.8s
KBL MLR MLR
comp=Z,1µm,18.0s
KSH Kashi 42.82 336 P **P** 17 37 45.8 -1.0
KSH pP sP 17 37 58.9 -0.1
KSH PcP **PcP** 17 39 34.1 -3.7
KSH S **S** 17 44 03.3 -6.2
KSH sS sS 17 44 24.4 +0.8
KSH SS **SS** 17 47 14.4 -6.9
KSH pmax pmax
comp=Z,14nm,0.7s
KSH pmax pmax
comp=Z,970nm,3.8s
KSH LR LR
comp=Z,2µm,14.5s
KSH LR LR
comp=Z,910nm,8.8s
KSH LR LR
comp=Z,5µm,18.9s
FORT Forrest 43.21 140 P **P** 17 37 52.5 +2.5
baz=43,SNR=12
FORT Forrest 43.21 140 P **P** 17 37 50.5 +0.5
FORT IAmb IAmb 17 37 59.8
comp=Z,113nm,0.8s
FORT IAMs_20 IAMs_20 17 56 02.5
comp=Z,5µm,21.0s
WMQ Urumqi 43.30 350 eP **P** 17 37 52.3 +1.7
WMQ pP pP 17 37 59.6 +0.3
WMQ sP sP 17 38 07.8 +5.0
WMQ S **S** 17 44 17.4 +1.0
WMQ ScS **ScS** 17 47 50.0 +1.1
WMQ pmax pmax
comp=Z,63nm,1.3s
WMQ pmax pmax
comp=Z,440nm,4.9s
WMQ LR LR
comp=Z,1µm,16.5s
WMQ LR LR
comp=Z,1µm,22.7s
WMQ LR LR
comp=Z,2µm,26.9s
WMQ Urumqi 43.30 350 P **P** 17 37 51.1 +0.5
WMQ IAmb IAmb 17 37 53.6
comp=Z,96nm,1.1s
WMQ Urumqi 43.30 350 P **P** 17 37 51.1 +0.5
WMQ pmax pmax
comp=Z,96nm,1.1s
WMQ MLR MLR
comp=Z,2µm,21.0s
AS31 Alice Springs 43.32 127 P **P** 17 37 51.0 -0.1
ASAR Alice Springs 43.32 127 P **P** 17 37 51.5 +0.5
comp=Z,19nm,0.9s,baz=300,slow=7.4,SNR=44
ASAR ScP **ScP** 17 43 30.2 +0.9
comp=Z,1.7nm,0.9s,baz=321,slow=3.5,SNR=4.8
ASAR S **S** 17 44 15.0 -2.1
comp=Z,5.8nm,1.2s,baz=300,slow=15,SNR=9.1
WSAR Wadi Sarin 43.43 303 P **P** 17 37 53.4 +1.5
comp=Z,2.6nm,0.7s,baz=108,slow=9.6,SNR=2.8
DL2 Dalian 43.66 28 P **P** 17 37 54.6 +1.2
DL2 pP **sP** 17 38 04.4 -1.2
DL2 S **S** 17 44 26.9 +5.4
DL2 pmax pmax
comp=Z,160nm,0.9s
DL2 pmax pmax
comp=Z,880nm,4.8s
DL2 LR LR
comp=Z,1µm,14.0s
DL2 LR LR
comp=Z,2µm,14.0s
DL2 LR LR
comp=Z,2µm,15.6s
SOCY Socotra 44.29 286 P **P** 17 38 00.0 +1.0
NRN Naryn 44.44 337 P **P** 17 38 00.8 +0.8
NRN IAmb IAmb 17 38 01.8
comp=Z,36nm,0.6s
NRN IAMs_20 IAMs_20 17 59 36.8
comp=Z,3µm,19.0s
NRN Naryn 44.44 337 P **P** 17 38 00.9 +0.8
NRN pmax pmax
comp=Z,36nm,0.6s
NRN MLR MLR
comp=Z,2µm,19.0s
PRZ Przheval'sk 44.47 340 P **P** 17 37 59.1 -1.1
PRZ IAmb IAmb 17 38 18.5
comp=Z,203nm,2.0s
PRZ Przheval'sk 44.47 340 P **P** 17 37 59.1 -1.1
PRZ pmax pmax
comp=Z,203nm,2.0s
KDJ Kajisay 44.59 339 P **P** 17 38 02.2 +1.0
KDJ IAmb IAmb 17 38 24.4
comp=Z,67nm,1.1s
KDJ IAMs_20 IAMs_20 17 59 42.8
comp=Z,2µm,18.0s
KDJ Kajisay 44.59 339 P **P** 17 38 02.2 +1.0
KDJ pmax pmax
comp=Z,67nm,1.1s
KDJ MLR MLR
comp=Z,2µm,18.0s
SHLS Shalkode 44.73 341 eP **P** 17 38 02.5 +0.4
comp=Z,87nm,2.2s
SHLS eLR LR 18 00 02.9
SHLS Shalkode 44.73 341 eP **P** 17 38 02.5 +0.4
SHLS pmax pmax
comp=Z,87nm,2.2s
TJN Taejon 44.74 35ceP **P** 17 38 02.9 +0.7
JNU Nakatsue 44.77 41 P **P** 17 38 02.9 +0.4
comp=Z,38nm,0.9s,baz=262,slow=2.7,SNR=15
JNU Nakatsue 44.77 41 P **P** 17 38 02.9 +0.4
JNU IAMs_20 IAMs_20 17 59 22.5
comp=Z,3µm,18.0s
UZB Uzynbulak 44.86 341 eP **P** 17 38 03.5 +0.3
comp=Z,73nm,2.3s
UZB ePP **PP** 17 39 46.5 -1.8
UZB Uzynbulak 44.86 341 eP **P** 17 38 03.5 +0.3
UZB e 17 39 46.5
UZB pmax pmax
comp=Z,73nm,2.3s
ULHL Ulahol 45.04 338 P **P** 17 38 06.0 +1.2
SNR=10
ZHN Zhinishke 45.07 341 eP **P** 17 38 04.8 0.0
comp=Z,50nm,2.4s
ZHN ePP **PP** 17 39 48.0 -2.6
ZHN Zhinishke 45.07 341 eP **P** 17 38 04.8 0.0
ZHN e 17 39 47.9
ZHN pmax pmax
comp=Z,50nm,2.4s
INCN Inchon 45.12 33 P **P** 17 38 04.8 -0.4
INCN IAmb IAmb 17 38 06.5
comp=Z,174nm,1.4s
INCN Inchon 45.12 33 IAMs_20 IAMs_20 17 57 49.4
comp=Z,2µm,19.0s
INCN Inchon 45.12 33 P **P** 17 38 04.8 -0.4
INCN pmax pmax
comp=Z,174nm,1.5s
INCN MLR MLR
comp=Z,2µm,19.0s
KPKS Kokpek 45.25 341 eP **P** 17 38 06.0 -0.3
comp=Z,147nm,2.8s
KPKS ePP **PcP** 17 39 48.5 +2.5
KPKS Kokpek 45.25 341 eP **P** 17 38 05.9 -0.3
KPKS e 17 39 48.4
KPKS pmax pmax
comp=Z,147nm,2.8s
KZA Kyzart 45.28 337 P **P** 17 38 08.4 +1.5
SNR=5.7
BOOM Boomskoye usch 45.37 338 P **P** 17 38 07.7 +0.4
BOOM Boomskoye usch 45.37 338 P **P** 17 38 07.7 +0.4
TNSS Tian-Shan 45.47 339 eP **P** 17 38 09.1 +0.7
TNSS Tian-Shan 45.47 339 eP **P** 17 38 09.0 +0.7
MDOK Medeo 45.54 339 i P **P** 17 38 10.0 +1.3
MDOK ePP **PP** 17 39 56.7 +1.1
MDOK eS **S** 17 44 50.7 +1.5
MDOK eLR LR 17 58 42.9
comp=Z,691nm,17.6s
MDOK Medeo 45.54 339 i P **P** 17 38 09.9 +1.3
MDOK e 17 39 56.6
MDOK eS **S** 17 44 50.6 +1.5

MDOK MLR MLR
comp=Z,691nm,18.0s
BTK Batken 45.56 331 **P** 17 38 10.3 +1.5
BTK IAmb IAmb 17 38 17.8
comp=Z,59nm,0.9s
BTK Batken 45.56 331 P **P** 17 38 10.3 +1.5
BTK pmax pmax
comp=Z,59nm,1.0s
BTK MLR MLR
comp=Z,1µm,20.0s
KNDC Almaty 45.62 339 P **P** 17 38 10.7 +1.6
AAA Alma-Ata 45.63 339 eP **P** 17 38 08.7 -0.5
AAA ePP **PP** 17 39 56.3 -0.1
AAA eLR LR 17 58 47.5
comp=Z,782nm,17.9s
AAA Alma-Ata 45.63 339 i P **P** 17 38 11.0 +1.8
AAA i S **S** 17 44 56.0 +5.8
AAA pmax pmax
comp=Z,500nm,3.6s
AAA smax smax
comp=N,300nm,8.8s
AAA MLR MLR
comp=Z,900nm,16.0s
UCH Uchtor 45.70 336 P **P** 17 38 11.7 +1.5
SNR=16
KSRS Korea Array 45.82 34 P **P** 17 38 11.2 +0.5
comp=Z,98nm,0.9s,baz=221,slow=9.1,SNR=123
KSRS ScP **ScP** 17 43 42.2 +3.1
comp=Z,3.3nm,0.8s,baz=122,slow=38,SNR=5.8
KS19 Wonju Array Si 45.82 34 P **P** 17 38 10.8 +0.1
KBK Karagaybulak 45.89 337 P **P** 17 38 13.2 +1.8
SNR=20
AML Almayashu 45.95 336 P **P** 17 38 13.8 +1.6
SNR=7.9
AAK Ala-Archa 46.05 337 P **P** 17 38 14.1 +1.4
comp=Z,6.8nm,0.6s,baz=141,slow=7.3,SNR=10
AAK ScP **ScP** 17 43 42.6 +2.4
comp=Z,4.4nm,1.1s,baz=56,slow=3.6,SNR=4.7
AAK Ala-Archa 46.05 337 P **P** 17 38 13.4 +0.7
AAK IAmb IAmb 17 38 36.2
comp=Z,83nm,1.4s
AAK Ala-Archa 46.05 337 IAMs_20 IAMs_20 18 00 34.7
comp=Z,2µm,19.0s
AAK Ala-Archa 46.05 337 P **P** 17 38 13.2 +0.5
FRU1 Bishkek 46.14 337 P **P** 17 38 13.9 +0.6
FRU1 IAmb IAmb 17 38 46.4
comp=Z,161nm,1.9s
FRU1 IAMs_20 IAMs_20 18 00 42.1
comp=Z,2µm,19.0s
FRU1 Bishkek 46.14 337 P **P** 17 38 13.9 +0.6
FRU1 pmax pmax
comp=Z,161nm,1.9s
FRU1 MLR MLR
comp=Z,2µm,19.0s
UOSS Minazif 46.15 304 P **P** 17 38 14.4 +0.9
CHKK Chushkaly 46.17 340 eP **P** 17 38 13.1 -0.3
CHKK Chushkaly 46.17 340 eP **P** 17 38 13.1 -0.3
CHMS Chumysh 46.26 337 P **P** 17 38 15.3 +1.1
SNR=8.7
CHMS Chumysh 46.26 337 i P **P** 17 38 13.9 -0.2
CHMS pmax pmax
comp=Z,45nm,1.3s
RER Riviere de l'E 46.27 239 P **P** 17 38 15.9 +1.2
RER IAmb IAmb 17 38 24.2
comp=Z,82nm,1.0s
EKS2 Erkin-Say 46.36 336 P **P** 17 38 16.7 +1.7
SNR=12
KUU Kurty 46.43 339⇑ iP **P** 17 38 15.5 0.0
comp=Z,245nm,3.4s
KUU ePP **PP** 17 40 03.5 -1.4
KUU eS **S** 17 45 01.9 +0.2
KUU eLR LR 17 59 45.9
KUU Kurty 46.43 339c iP **P** 17 38 15.5 0.0
KUU e 17 40 03.5
KUU eS **S** 17 45 01.8 +0.2
KUU pmax pmax
comp=Z,245nm,3.4s
HRA Herat 46.49 319 P **P** 17 38 15.6 -0.7
USP Ospenovka 46.58 337 P **P** 17 38 18.0 +1.3
SNR=33
TDK Taldyqorghan 46.72 342 i P **P** 17 38 18.2 +0.5
comp=Z,333nm,3.9s
TDK ePP **PP** 17 40 05.4 -2.5
TDK eS **S** 17 45 06.2 +0.6
TDK eLR LR 17 58 38.3
comp=Z,810nm,20.4s
TDK Taldyqorghan 46.72 342 i P **P** 17 38 18.2 +0.5
TDK e 17 40 05.4
TDK eS **S** 17 45 06.2 +0.6
TDK pmax pmax
comp=Z,333nm,3.9s
TDK MLR MLR
comp=Z,810nm,20.0s
QIS Mount Isa 46.72 120 P **P** 17 38 18.6 +0.5
baz=47,SNR=10
SONM Songino Array 47.14 8 P **P** 17 38 22.1 +1.0
comp=Z,50nm,0.8s,baz=190,slow=9.6,SNR=39
SONM PcP **PcP** 17 39 53.3 +0.8
comp=Z,10nm,0.8s,baz=199,slow=3.9,SNR=3.8
SONM ScP **ScP** 17 43 46.8 +2.2
comp=Z,1.6nm,1.0s,baz=174,slow=2.9,SNR=3.5
SONM LR LR 18 00 48.4
comp=Z,7µm,18.8s,baz=188,slow=39
ULN Ulaanbaatar 47.27 9 P **P** 17 38 22.1 +0.1
ULN **P** 17 38 22.4 +0.3
MK31 Makanchi Array 47.28 346 P **P** 17 38 22.3 +0.3
MK31 IAmb IAmb 17 38 55.9
comp=Z,43nm,0.9s
MK31 Makanchi Array 47.28 346 P **P** 17 38 22.3 +0.3
MK31 pmax pmax
comp=Z,43nm,0.9s
MKAR Makanchi Array 47.28 346 P **P** 17 38 22.9 +0.9
comp=Z,22nm,0.6s,baz=162,slow=8.7,SNR=30
MKAR ScP **ScP** 17 43 46.8 +1.7
comp=Z,2.5nm,1.1s,baz=145,slow=5.3,SNR=3.6
MKAR Makanchi Array 47.28 346ceP **P** 17 38 23.0 +0.9
MKAR pmax pmax
comp=Z,22nm,0.6s
TAS Tashkent 47.28 331 P **P** 17 38 23.1 +1.0
TAS Tashkent 47.28 331 P **P** 17 38 23.1 +1.0
TAS pmax pmax
comp=Z,65nm,0.5s
ZSN Zaisan 47.33 349⇑ iP **P** 17 38 23.6 +1.2
comp=Z,191nm,2.6s
ZSN ePP **PP** 17 40 10.6 -3.3
ZSN eS **S** 17 45 15.4 +1.1
ZSN Zaisan 47.33 349c iP **P** 17 38 23.6 +1.2
ZSN e 17 40 10.6
ZSN eS **S** 17 45 15.4 +1.1
ZSN pmax pmax
comp=Z,191nm,2.6s
MAKZ Makanchi 47.37 346 P **P** 17 38 22.9 +0.1
MAKZ IAmb IAmb 17 38 39.4
comp=Z,45nm,0.7s
MAKZ Makanchi 47.37 346 P **P** 17 38 22.9 +0.1
MAKZ pmax pmax
comp=Z,45nm,0.7s
MAKZ MLR MLR
comp=Z,1µm,22.0s
JBG Jabagly 47.55 333c iP **P** 17 38 25.1 +0.7
JBG e 17 40 15.7
JBG eS **S** 17 45 18.8 +0.9
JBG pmax pmax
comp=Z,110nm,2.9s
IUG Iuzhnay 47.57 333⇑ iP **P** 17 38 25.1 +0.6
IUG eS **S** 17 45 19.1 +1.0
IUG Iuzhnay 47.57 333c iP **P** 17 38 25.1 +0.6
IUG eS **S** 17 45 19.1 +1.0
COEN Coen 47.88 110 P **P** 17 38 27.2 0.0
baz=48,SNR=20
COEN Coen 47.88 110 P **P** 17 38 26.7 -0.6
COEN IAmb IAmb 17 38 28.3
comp=Z,61nm,0.9s
KK31 Karatay Array 48.11 334 P **P** 17 38 28.9 +0.4
KK31 IAmb IAmb 17 38 55.0
comp=Z,49nm,1.2s
KK31 Karatay Array 48.11 334 P **P** 17 38 29.0 +0.4
KK31 pmax pmax
comp=Z,49nm,1.2s
KKAR Karatay Array 48.11 334 P **P** 17 38 29.2 +0.7
KKAR IAmb IAmb 17 38 55.0
comp=Z,49nm,1.2s
KKAR Karatay Array 48.11 334 P **P** 17 38 29.2 +0.7
KKAR pmax pmax
comp=Z,49nm,1.2s

BTLS Baital 48.26 338 eP **P** 17 38 29.7 +0.1
BTLS ePP **PP** 17 40 23.5 +1.2
BTLS Baital 48.26 338 eP **P** 17 38 29.7 +0.1
BTLS e 17 40 23.4
BRLS Borolday 48.35 333 eS **S** 17 45 27.0 -2.0
CN2 Changchun 49.28 27⇑ iP **P** 17 38 37.9 +0.4
CN2 PcP **PcP** 17 39 57.5 -2.6
CN2 PP **PP** 17 40 31.9 +0.2
CN2 eS **S** 17 45 40.3 -1.7
CN2 SS **SS** 17 49 05.6 -8.3
CN2 pmax pmax
comp=Z,110nm,0.7s
CN2 pmax pmax
comp=Z,600nm,3.0s
CN2 LR LR
comp=Z,4µm,14.0s
CN2 LR LR
comp=Z,2µm,14.0s
CN2 LR LR
comp=Z,5µm,14.0s
ZAK Zakamensk 49.28 5 eP **P** 17 38 38.1 +0.5
ZAK pmax pmax
comp=Z,19nm,1.4s
BBOO Buckleboo 49.81 136 P **P** 17 38 43.6 +1.8
baz=50,SNR=5.1
BBOO Buckleboo 49.81 136 P **P** 17 38 42.7 +0.9
BBOO IAmb IAmb 17 38 50.5
comp=Z,36nm,1.1s
BBOO IAMs_20 IAMs_20 18 00 59.7
comp=Z,4µm,21.0s
MTSU Mount Surprise 50.09 115 P **P** 17 38 45.1 +1.0
baz=50,SNR=11
MANU Manus Island 50.18 94 P **P** 17 38 44.8 -0.1
MANU IAmb IAmb 17 38 46.1
comp=Z,43nm,0.8s
INU Inuyama 50.19 43 P **P** 17 38 44.3 -0.3
MOY Mondy 50.40 3 eP **P** 17 38 46.6 +0.5
MOY pmax pmax
comp=Z,93nm,3.5s
TLY Talaya 50.60 5 P **P** 17 38 49.0 +1.6
comp=Z,10nm,0.6s,baz=218,slow=6.3,SNR=16
TLY Talaya 50.60 5 P **P** 17 38 48.0 +0.6
TLY Talaya 50.60 5c iP **P** 17 38 48.8 +1.3
TLY e 17 40 04.7
TLY e 17 40 46.2
TLY eS **S** 17 45 57.9 -2.3
TLY pmax pmax
comp=Z,75nm,1.1s
TLY MLR MLR
comp=Z,9µm,19.0s
PMG Port Moresby 50.77 103 P **P** 17 38 49.8 +0.5
comp=Z,33nm,0.8s,baz=286,slow=4.9,SNR=14
PMG LR LR 18 02 30.2
comp=Z,1µm,18.6s,baz=264,slow=39
PMG Port Moresby 50.77 103 P **P** 17 38 49.2 -0.1
PMG IAmb IAmb 17 38 50.8
comp=Z,34nm,0.8s
PMG Port Moresby 50.77 103ceP **P** 17 38 50.4 +1.1
PMG pmax pmax
comp=Z,91nm,0.6s
ASHT Ashkhabad 51.12 320 P **P** 17 38 50.6 -0.9
ASHT Ashkhabad 51.12 320 P **P** 17 38 50.6 -0.9
ASHT pmax pmax
comp=Z,120nm,0.4s
SEM Semipalatinsk 51.14 346 eP **P** 17 38 50.3 -1.5
comp=Z,15nm,0.9s
SEM Semipalatinsk 51.14 346 eP **P** 17 38 50.3 -1.5
SEM pmax pmax
comp=Z,15nm,0.9s
MSHR Mys Shultsa 51.18 32 i P **P** 17 38 52.5 +0.6
IRK Irkutsk 51.22 6 eP **P** 17 38 52.8 +0.7
IRK e 17 40 52.5
IRK pmax pmax
comp=Z,113nm,2.2s
GEYT Alibeck 51.28 320 P **P** 17 38 53.1 +0.3
comp=Z,7.8nm,0.7s,baz=153,slow=10.0,SNR=9.5
GEYT LR LR 18 04 12.7
comp=Z,825nm,18.6s,baz=140,slow=40
GYA0B ALIBECK ARRAY 51.28 320 P **P** 17 38 52.9 +0.1
GYA0B IAmb IAmb 17 39 27.7
comp=Z,34nm,0.9s
HIA Hailar 51.63 19 P **P** 17 38 56.0 +0.7
HIA IAmb IAmb 17 38 57.1
comp=Z,61nm,1.0s
HIA Hailar 51.63 19 IAMs_20 IAMs_20 18 03 24.7
comp=Z,3µm,22.0s
HIA Hailar 51.63 19 P **P** 17 38 56.0 +0.7
MJB9 Matsu-Tunnel 51.65 42 P **P** 17 38 55.3 -0.3
MAJO Matsushiro 51.65 42 P **P** 17 38 55.5 -0.1
MAJO IAmb IAmb 17 39 08.0
comp=Z,107nm,2.0s
MAJO Matsushiro 51.65 42c iP **P** 17 38 55.2 -0.4
MAJO pmax pmax
comp=Z,6.0nm,0.5s
MAT Matsushiro 51.65 42 P **P** 17 38 55.2 -0.4
MAT S **S** 17 46 14.6 -0.6
MJAR Matsushiro Arr 51.65 42 P **P** 17 38 55.5 -0.1
comp=Z,8.6nm,0.6s,baz=212,slow=5.5,SNR=38
MJAR PcP **PcP** 17 40 10.4 +1.3
comp=Z,4.8nm,0.9s,baz=234,slow=3.7,SNR=2.1
KURBB Kurchatov Arra 51.77 345 P **P** 17 38 56.9 +0.8
comp=Z,15nm,0.6s,baz=164,slow=6.9,SNR=34
KURBB PcP **PcP** 17 40 10.1 +1.0
comp=Z,4.4nm,0.8s,baz=157,slow=5.0,SNR=2.0
KURBB ScP **ScP** 17 44 05.2 +1.1
comp=Z,3.3nm,1.1s,baz=152,slow=4.9,SNR=5.3
KURBB S **S** 17 46 18.6 +2.4
comp=Z,0.4nm,0.7s,baz=148,slow=16,SNR=2.5
KURBB Kurchatov Arra 51.77 345 P **P** 17 38 56.4 +0.2
KURK Kurchatov 51.83 345 P **P** 17 38 56.9 +0.3
KURK IAmb IAmb 17 39 18.5
comp=Z,57nm,1.1s
KURK Kurchatov 51.83 345 **ScP** 17 44 05.2 +0.8
KURK **S** 17 46 18.6 +1.5
KURK Kurchatov 51.83 345 IAMs_20 IAMs_20 18 05 03.5
comp=Z,2µm,19.0s
KURK Kurchatov 51.83 345 P **P** 17 38 56.9 +0.3
KURK 17 40 10.1
KURK S **S** 17 46 18.6 +1.5
MDJ Mudanjiang 51.84 29 P **P** 17 38 58.0 +1.1
MDJ pP sP 17 39 09.3 +0.1
MDJ S **S** 17 46 22.8 +5.3
MDJ pmax pmax
comp=Z,61nm,1.1s
MDJ pmax pmax
comp=Z,830nm,5.6s
MDJ LR LR
comp=Z,3µm,16.1s
MDJ LR LR
comp=Z,2µm,18.0s
MDJ LR LR
comp=Z,6µm,16.7s
MDJ Mudanjiang 51.84 29 P **P** 17 38 57.9 +1.0
VLA Vladivostok 51.94 32c iP **P** 17 38 58.7 +1.1
VLA pmax pmax
comp=Z,120nm,1.2s
HTT Hallett 52.15 135 P **P** 17 39 01.0 +1.5
baz=52,SNR=11
CTA Charters Tower 52.42 117 P **P** 17 39 02.6 +1.0
comp=Z,13nm,0.9s,baz=282,slow=10,SNR=5.9
CTAO Charters Tower 52.42 117 IAMs_20 IAMs_20 18 05 24.7
comp=Z,2µm,18.0s
CIT Chita 52.47 13 eP **P** 17 39 03.1 +1.6
CIT e 17 39 07.1
CIT e 17 42 02.8
CIT pmax pmax
comp=Z,169nm,1.4s
USA0B Ussuriysk Arra 52.74 31 P **P** 17 39 04.1 +0.6
USA0B IAMs_20 IAMs_20 18 04 37.4
comp=Z,3µm,18.0s
USA0B Ussuriysk Arra 52.74 31c iP **P** 17 39 04.5 +1.0
USRK Ussuriysk Ar. 52.74 31 P **P** 17 39 04.7 +1.2
comp=Z,95nm,0.9s,baz=231,slow=5.5,SNR=70
QLP Quilpie 52.99 125 P **P** 17 39 07.4 +1.7
baz=53,SNR=19
OPO Ambohidratompo 52.99 246 P **P** 17 39 07.2 +1.2
comp=Z,33nm,1.1s,baz=69,slow=8.4,SNR=10
ABPO Ambohimpanom 53.08 245 P **P** 17 39 07.2 +0.5
ABPO Ambohimpanom 53.08 245 IAMs_20 IAMs_20 17 57 06.6
comp=Z,2µm,19.0s
ABPO Ambohimpanom 53.08 245 P **P** 17 39 07.2 +0.5
ABPO pmax pmax
comp=Z,28nm,1.2s
ABPO MLR MLR
comp=Z,2µm,19.0s

STKA Stephens Creek 53.28 132 P P 17 39 09.2 +1.5
baz=53,SNR=21
STKA Stephens Creek 53.28 132 P P 17 39 09.1 +1.3
comp=Z,31nm,0.9s,baz=305,slow=7.6,SNR=23
STKA S S 17 46 38.7 +1.0
comp=Z,5.6nm,1.3s,baz=204,slow=18,SNR=2.8
STKA LR LR 18 03 50.7
comp=Z,2μm,21.9s,baz=296,slow=38
STKA Stephens Creek 53.28 132 P P 17 39 08.3 +0.5
ZAA0 Zalesovo Array 53.59 351 P P 17 39 09.9 +0.3
ZAA0 IAmb IAmb 17 39 11.5
comp=Z,96nm,1.1s
ZALV Zalesovo Beam 53.59 351 P P 17 39 10.3 +0.7
comp=Z,63nm,0.8s,baz=179,slow=6.1,SNR=33
ZALV S S 17 46 42.4 +1.4
comp=Z,1.0nm,0.8s,baz=156,slow=11,SNR=4.1
ZALV LR LR 18 07 15.0
comp=Z,1μm,19.3s,baz=172,slow=42
DAMY Dhamar 53.90 287 P P 17 39 14.3 +1.4
DAMY IAmb IAmb 17 39 34.0
comp=Z,27nm,0.8s
RAYN Ar Rayn 54.84 298 P P 17 39 19.7 +0.4
RAYN IAMs_20 IAMs_20 18 01 07.5
comp=Z,3μm,21.0s
RAYN Ar Rayn 54.84 298 P P 17 39 19.7 +0.4
RAYN pmax pmax
comp=Z,15nm,0.8s
RAYN MLR MLR
comp=Z,3μm,21.0s
CMSA Cobar Meteorol 56.22 130 P P 17 39 30.9 +1.8
baz=56,SNR=29
KLR Kul'dur 56.23 27 P P 17 39 29.8 +1.0
comp=Z,72nm,1.0s,baz=232,slow=7.2,SNR=6.4
KLR Kul'dur 56.23 27c iP P 17 39 30.0 +1.2
KLR pmax pmax
comp=Z,89nm,1.0s
BVAR Borovoye Array 56.29 341 P P 17 39 29.1 -0.1
comp=Z,19nm,0.8s,baz=142,slow=7.5,SNR=20
BVAR ScP ScP 17 44 26.2 +2.4
comp=Z,0.6nm,0.7s,baz=180,slow=3.9,SNR=2.9
BRVK Borovoye 56.36 341 P P 17 39 29.2 -0.4
BRVK IAmb IAmb 17 39 37.2
comp=Z,46nm,1.1s
BRVK Borovoye 56.36 341 IAMs_20 IAMs_20 18 07 06.3
comp=Z,2μm,20.0s
BRVK Borovoye 56.36 341ceP P 17 39 29.8 +0.2
BRVK pmax pmax
comp=Z,27nm,1.0s
RMQ Roma 56.70 123 P P 17 39 34.9 +2.3
baz=57,SNR=16
AB31 Akbulak array 57.57 332 i P P 17 39 37.4 -0.9
ABKAR Akbulak array 57.57 332 P P 17 39 37.9 -0.4
ABKAR IAmb IAmb 17 39 46.6
comp=Z,44nm,1.0s
ERM Erimo 57.84 39 IAMs_20 IAMs_20 18 06 32.3
comp=Z,1μm,19.0s
ZEA Zeya 57.93 21 eP P 17 39 42.0 +1.3
ZEA eS S 17 47 44.0 +5.1
ZEA eSS SS 17 51 32.0 +1.8
ZEA pmax pmax
comp=N,35nm,1.0s
ZEA pmax pmax
comp=E,24nm,1.0s
ZEA pmax pmax
comp=Z,58nm,1.0s
ZEA pmax pmax
comp=Z,500nm,10.0s
ZEA smax smax
comp=N,500nm,9.0s
ZEA MLR MLR
comp=Z,900nm,17.0s
ZEA MLR MLR
comp=E,1μm,16.0s
ZEA MLR MLR
comp=N,800nm,15.0s
BOD Bodaibo 58.01 10⇓iP P 17 39 41.8 +0.6
BOD pmax pmax
comp=Z,80nm,1.2s
EIDS Eidsvold 58.30 121 P P 17 39 45.3 +1.5
baz=58,SNR=26
EIDS Eidsvold 58.30 121 P P 17 39 44.4 +0.5
EIDS IAmb IAmb 17 39 46.4
comp=Z,100nm,1.1s
EIDS IAMs_20 IAMs_20 18 05 19.1
comp=Z,2μm,22.0s
TOO Toolangi 58.87 136 P P 17 39 50.1 +2.4
baz=59,SNR=5.2
TOO Toolangi 58.87 136 P P 17 39 47.4 -0.3
TOO IAmb IAmb 17 40 05.0
comp=Z,32nm,1.1s
TOO IAMs_20 IAMs_20 18 07 28.2
comp=Z,2μm,21.0s
TOO Toolangi 58.87 136 P P 17 39 47.4 -0.3
TOO pmax pmax
comp=Z,32nm,1.2s
TOO MLR MLR
comp=Z,2μm,21.0s
AKTO Aktyubinsk 59.28 332 P P 17 39 49.7 -0.5
comp=Z,7.0nm,0.8s,baz=118,slow=6.0,SNR=11
GRNR Gornyy 59.45 28⇑iP P 17 39 52.5 +1.1
GRNR eS S 17 48 05.9 +7.0
GRNR eSS SS 17 51 55.9 +1.5
GRNR pmax pmax
comp=Z,30nm,1.2s
GRNR MLR MLR
comp=Z,2μm,13.0s
YNG Young 59.46 132 P P 17 39 53.9 +2.0
baz=60,SNR=5.6
AKT Akhty 59.94 319 eP P 17 39 55.7 +0.6
AKT e 17 40 42.8
AKT pmax pmax
comp=Z,28nm,0.9s
KMBO Kilima Mbogo 60.07 268 P P 17 39 57.8 +1.1
comp=Z,3.5nm,0.9s,baz=65,slow=8.9,SNR=6.3
KMBO Kilima Mbogo 60.07 268 P P 17 39 56.3 -0.3
KMBO Kilima Mbogo 60.07 268 IAMs_20 IAMs_20 18 04 49.5
comp=Z,1μm,18.0s
YSS Yuzh-Sakhalins 60.32 34 P P 17 39 57.7 +0.3
YSS Yuzh-Sakhalins 60.32 34αeP P 17 39 58.4 +1.0
YSS e*SP sP 17 40 08.9 -0.9
YSS e 17 40 36.7
YSS e 17 42 14.0
YSS eS S 17 48 12.6 +2.6
YSS e 17 48 23.1
YSS pmax pmax
comp=Z,80nm,1.2s
YSS pmax pmax
comp=Z,500nm,6.7s
YSS MLR MLR
comp=Z,2μm,15.0s
YSS MLR MLR
comp=N,1μm,18.0s
YSS MLR MLR
comp=E,1μm,15.0s
CAN Canberra 60.35 132 P P 17 39 58.8 +0.8
CAN IAmb IAmb 17 40 07.4
comp=Z,31nm,1.0s
CAN Canberra 60.35 132 P P 17 39 58.8 +0.8
CAN pmax pmax
comp=Z,31nm,1.0s
CAN MLR MLR
comp=Z,3μm,21.0s
ARMA Armidale 60.46 126 P P 17 40 01.6 +2.8
baz=61,SNR=5.0
ARMA Armidale 60.46 126 P P 17 40 00.4 +1.6
ARMA IAmb IAmb 17 40 02.9
comp=Z,47nm,1.1s
ARMA IAMs_20 IAMs_20 18 08 58.1
comp=Z,2μm,22.0s
YUK Yuzh-Kuril'sk 60.58 38 eP P 17 39 57.1 -2.1
YUK e 17 40 43.2
YUK e 17 42 12.6
YUK ePPP PPP 17 43 36.8
YUK eS S 17 48 12.3 -1.2
YUK e 17 49 46.2
YUK eSS SS 17 52 12.3 +0.1
YUK pmax pmax
comp=Z,222nm,1.3s
YUK pmax pmax
comp=N,134nm,1.4s
YUK pmax pmax
comp=E,160nm,1.0s
YUK pmax pmax
comp=Z,238nm,2.0s
YUK MLR MLR
comp=Z,1μm,15.0s
YUK MLR MLR
comp=N,545nm,16.0s
YUK MLR MLR
comp=E,1μm,15.0s
MAK Makhachkala 60.80 320 eP P 17 39 54.0 -6.7
MAK eS S 17 48 09.4 -6.9
MAK pmax pmax
comp=Z,28nm,0.6s
PATS Pohnpei 61.10 83 P P 17 40 04.0 +0.6
GNI Garni 61.36 316 P P 17 40 05.1 +0.3
comp=Z,5.3nm,0.6s,baz=178,slow=18,SNR=3.5
GNI Garni 61.36 316 P P 17 40 05.0 +0.1
GNI IAmb IAmb 17 40 28.3
comp=Z,90nm,1.4s
GNI Garni 61.36 316 i P P 17 40 03.7 -1.2
GROC Groznyy 62.02 320 eP P 17 40 07.8 -1.2
GROC e 17 40 47.8
GROC pmax pmax
comp=Z,54nm,1.2s
TBLG Delisi 62.05 318 P P 17 40 08.8 -0.5
TBLG IAmb IAmb 17 40 22.3
comp=Z,48nm,1.1s
TBLG Delisi 62.05 318 P P 17 40 08.8 -0.5
TBLG pmax pmax
comp=Z,48nm,1.1s
KUR Kuril'sk 62.42 38 eP P 17 40 13.3 +1.7
KUR eS S 17 48 43.7 +6.9
KUR MLR MLR
comp=Z,644nm,15.0s
KUR MLR MLR
comp=E,645nm,18.0s
TYV Tymovskoe 62.55 31 eP P 17 40 14.1 +1.7
TYV eS S 17 48 43.7 +5.4
TYV pmax pmax
comp=Z,26nm,1.6s
TYV pmax pmax
comp=Z,600nm,6.4s
TYV smax smax
comp=N,2μm,10.8s
TYV MLR MLR
comp=Z,3μm,15.0s
SVE Sverdlovsk 62.73 338deP P 17 40 13.6 +0.1
SVE eS S 17 48 39.0 -1.4
SVE pmax pmax
comp=Z,53nm,1.2s
SVE MLR MLR
comp=Z,1μm,17.0s
AKH Akhalkalaki 62.76 317 ⇑P P 17 40 12.1 -2.2
AKH Akhalkalaki 62.76 317 P P 17 40 14.6 +0.4
AKH Akhalkalaki 62.76 317 P P 17 40 14.6 +0.4
AKH pmax pmax
comp=Z,17nm,1.0s
NKL Nikolayevsk 63.01 28 eP P 17 40 17.0 +1.6
NKL e 17 40 54.7
NKL eS S 17 48 51.2 +7.3
NKL pmax pmax
comp=Z,28nm,1.3s
NKL pmax pmax
comp=N,4.0nm,1.1s
NKL pmax pmax
comp=E,3.0nm,0.8s
NKL pmax pmax
comp=Z,44nm,3.7s
ZEI Tsey 63.07 318 eP P 17 40 16.0 -0.3
ZEI pmax pmax
comp=Z,16nm,0.8s
ARU Arti 63.23 337 P P 17 40 16.5 -0.3
comp=Z,2.9nm,0.5s,baz=142,slow=6.5,SNR=10
ARU Arti 63.23 337 P P 17 40 16.0 -0.9
ARU IAmb IAmb 17 40 24.3
comp=Z,28nm,1.0s
ARU Arti 63.23 337c iP P 17 40 16.4 -0.4
ARU 17 40 55.6
ARU S S 17 48 49.8 +3.2
ARU SS SS 17 52 49.7 -3.6
ARU pmax pmax
comp=Z,41nm,1.4s
ARU MLR MLR
comp=Z,1μm,16.0s
HNR Honiara 63.28 101 P P 17 40 17.6 -0.4
HNR Honiara 63.28 101 P P 17 40 17.6 -0.4
HNR pmax pmax
comp=Z,220nm,0.9s
NCK Nalchik 63.58 319 i P P 17 40 18.8 -0.7
NCK pmax pmax
comp=Z,9.0nm,0.7s
NEY Neytrino 64.05 319 i P P 17 40 22.8 0.0
NEY pmax pmax
comp=Z,3.0nm,0.7s
KBZ Khabaz 64.14 319 P P 17 40 23.1 +0.1
comp=Z,11nm,0.7s,baz=109,slow=8.7,SNR=21
KBZ LR LR 18 12 50.0
comp=Z,225nm,18.2s,baz=115,slow=40
KBZ Khabaz 64.14 319c iP P 17 40 22.9 -0.2
SHA1 Shidzhatmaz 64.30 319c iP P 17 40 24.4 -0.1
KVAR Kislovodsk Arr 64.37 319 P P 17 40 25.3 +0.6
comp=Z,4.0nm,0.7s,baz=80,slow=21,SNR=6.7
KIV Kislovodsk 64.37 319 ⇑P P 17 40 23.1 -1.7
KIV Kislovodsk 64.37 319 P P 17 40 24.6 -0.1
KIV IAmb IAmb 17 40 42.4
comp=Z,26nm,0.8s
KIV Kislovodsk 64.37 319 eP P 17 40 24.8 0.0
KIV eS S 17 49 01.8 +0.3
KIV eSS SS 17 53 13.8 +2.0
KIV pmax pmax
comp=Z,68nm,1.1s
KIV pmax pmax
comp=Z,137nm,4.7s
GOF Gofitskoye 64.62 320⇑eP P 17 40 26.9 +0.7
YAK Yakutsk 65.42 16 P P 17 40 31.1 0.0
comp=Z,38nm,0.5s,baz=232,slow=2.1,SNR=51
YAK Yakutsk 65.42 16 P P 17 40 30.8 -0.2
YAK IAMs_20 IAMs_20 18 11 28.4
comp=Z,3μm,22.0s
YAK Yakutsk 65.42 16c iP P 17 40 31.0 0.0
YAK e*PP sP 17 40 44.2 +0.7
YAK e 17 41 05.2
YAK eS S 17 49 12.0 -1.4
YAK e*SS sS 17 49 31.4 +3.1
YAK eSSS SSS 17 56 21.1
YAK pmax pmax
comp=Z,162nm,1.0s
YAK pmax pmax
comp=N,39nm,0.9s
YAK pmax pmax
comp=E,36nm,1.0s
YAK pmax pmax
comp=Z,122nm,2.9s
YAK pmax pmax
comp=N,40nm,2.2s
YAK pmax pmax
comp=E,48nm,2.7s
YAK smax smax
comp=N,99nm,2.8s
YAK smax smax
comp=E,54nm,2.3s
YAK MLR MLR
comp=Z,3μm,17.0s
YAK MLR MLR
comp=N,2μm,17.0s
YAK MLR MLR
comp=E,1μm,18.0s
EIL Elat 65.53 302 P P 17 40 33.6 +1.1
comp=E,8.4nm,0.7s,baz=70,slow=2.3,SNR=9.4
GAZ Gaziantep 65.74 311 P P 17 40 34.1 +0.4
GAZ IAmb IAmb 17 40 49.7
comp=Z,19nm,0.8s
MMAI Mount Meron Ar 65.98 306 P P 17 40 36.1 +0.7
comp=Z,3.5nm,0.7s,baz=84,slow=8.7,SNR=5.8
SOC Sochi 66.19 318c iP P 17 40 35.5 -0.9
SOC e 17 42 59.8
SOC ePPP PPP 17 44 35.7
SOC eS S 17 49 24.8 +1.3
SOC eSS SS 17 53 38.5 -1.3
SOC pmax pmax
comp=Z,16nm,0.9s
SOC MLR MLR
comp=Z,463nm,22.0s
MBAR Mbarara 66.56 269 P P 17 40 41.0 +1.4
comp=Z,7.8nm,0.8s,baz=90,slow=6.9,SNR=10
MBAR Mbarara 66.56 269 P P 17 40 41.1 +1.4
MBAR IAmb IAmb 17 40 50.5
comp=Z,36nm,1.3s
MBAR Mbarara 66.56 269 P P 17 40 41.0 +1.4
LHI Lord Howe Isla 66.86 125 P P 17 40 43.3 +2.4
CASY Casey 67.98 174 P P 17 40 50.3 +3.0
CASY IAmb IAmb 17 40 57.6
comp=Z,46nm,1.2s
CSS Mathiatis 68.14 307 P P 17 40 48.2 -0.8
CSS IAmb IAmb 17 41 06.7
comp=Z,24nm,1.1s
CSS IAMs_20 IAMs_20 18 14 51.1
comp=Z,1μm,18.0s
ANN Anapa 68.17 318 eP P 17 40 46.5 -2.4
ANN e 17 43 22.9
ANN eS S 17 49 46.2 -1.1
ANN pmax pmax
comp=Z,46nm,0.9s
ANN MLR MLR
comp=Z,1μm,22.0s
VRH Novokhopyorsk 68.18 326 eP P 17 40 47.1 -1.8
VRH pmax pmax
comp=Z,30nm,1.0s
NRIK Noril'sk 68.35 356 P P 17 40 49.8 +0.2
comp=Z,19nm,0.6s,baz=153,slow=5.2,SNR=22
NRIK LR LR 18 13 54.6
comp=Z,1μm,18.1s,baz=176,slow=39
KIRV Kirov 68.36 335 P P 17 40 49.8 -0.1
comp=Z,13nm,0.7s,baz=34,slow=0.8,SNR=7.4
BR131 Keskin Array S 69.18 312 P P 17 40 54.8 -0.8
BR131 Keskin Array S 69.18 312 P P 17 40 54.8 -0.8
BR131 pmax pmax
comp=Z,11nm,0.9s
BRTR Keskin Array B 69.18 312 P P 17 40 54.8 -0.8
comp=Z,4.1nm,0.7s,baz=132,slow=6.6,SNR=13
BRTR Keskin Array B 69.18 312ceP P 17 40 54.7 -0.8
BRTR pmax pmax
comp=Z,5.0nm,0.7s
ILGA Ilgaz 69.51 314 P P 17 40 56.7 -1.0
ILGA IAmb IAmb 17 41 13.2
comp=Z,38nm,1.2s
VSR Storozhevoye 69.63 325 eP P 17 40 56.0 -1.9
VSR pmax pmax
comp=Z,20nm,0.8s
VSR MLR MLR
comp=Z,760nm,19.0s
SKR Severo-Kuril's 69.82 35d iP P 17 40 58.9 -0.2
SKR ePPP PPP 17 43 40.4
SKR eS S 17 50 11.4 +4.8
SKR eSS SS 17 54 33.1 -2.6
SKR pmax pmax
comp=Z,35nm,1.4s
SKR pmax pmax
comp=Z,200nm,4.2s
SKR pmax pmax
comp=Z,600nm,4.5s
SKR MLR MLR
comp=Z,600nm,20.0s
SKR MLR MLR
comp=Z,500nm,19.0s
ANTO Ankara 69.85 312 P P 17 40 59.9 +0.3
ANTO IAmb IAmb 17 41 40.7
comp=Z,31nm,1.4s
ANTO Ankara 69.85 312 P P 17 40 59.9 +0.3
ANTO pmax pmax
comp=Z,31nm,1.4s
BR231 Keskin MP Arra 69.85 312 P P 17 40 58.1 -1.6
LSZ Lusaka 70.18 253 P P 17 41 02.3 +0.1
comp=Z,6.1nm,1.1s,baz=104,slow=5.6,SNR=4.7
LSZ Lusaka 70.18 253 P P 17 41 02.0 -0.2
LSZ IAmb IAmb 17 41 21.1
comp=Z,53nm,1.9s
LSZ Lusaka 70.18 253 IAMs_20 IAMs_20 18 06 45.9
comp=Z,2μm,19.0s
LPSR Galich'ya Gora 70.35 327 eP P 17 41 01.0 -1.3
LPSR pmax pmax
comp=Z,20nm,0.8s
SIM Simferopol' 70.43 318 eP P 17 41 02.7 -0.3
SIM eS S 17 50 13.0 -1.1
SIM pmax pmax
comp=Z,21nm,0.9s
SANVU Saraoutou 71.00 107 P P 17 41 07.8 +0.8
SANVU IAmb IAmb 17 41 09.5
comp=Z,72nm,1.1s
ISP Isparta 71.04 310 P P 17 41 06.8 -0.1
ISP Isparta 71.04 310 P P 17 41 06.8 -0.1
ISP pmax pmax
comp=Z,20nm,0.9s
ISP MLR MLR
comp=Z,700nm,20.0s
NOUC Port Laguerre 71.08 114 P P 17 41 07.8 +0.4
NOUC IAmb IAmb 17 41 09.8
comp=Z,27nm,1.0s
MDUB Mudurnu 71.19 313 P P 17 41 06.7 -1.1
DZM Mont Dzumac 71.20 114 eP P 17 41 09.5 +1.3
comp=Z,58nm,1.2s
DZM eS S 17 50 25.3 +1.3
comp=Z,1μm,25.0s
DZM Mont Dzumac 71.20 114 eLR LR 18 02 55.4
comp=Z,1μm,23.3s
DZM Mont Dzumac 71.20 114 P P 17 41 08.6 +0.4
DZM IAmb IAmb 17 41 11.1
comp=Z,23nm,1.0s
ELL Elmali 71.27 308 P P 17 41 08.0 -0.4
ELL Elmali 71.27 308 P P 17 41 08.0 -0.4
ELL pmax pmax
comp=Z,342nm,1.8s
ELL MLR MLR
comp=Z,3μm,18.0s
MA2 Magadan 71.31 26 P P 17 41 08.8 +0.8
comp=Z,38nm,0.8s,baz=230,slow=5.6,SNR=26
MA2 Magadan 71.31 26 P P 17 41 08.1 0.0
MA2 IAmb IAmb 17 41 09.3
comp=Z,38nm,0.8s
MA2 Magadan 71.31 26 IAMs_20 IAMs_20 18 14 02.7
comp=Z,1μm,20.0s
MA2 Magadan 71.31 26ceP P 17 41 08.9 +0.8
MA2 pmax pmax
comp=Z,52nm,1.3s
PRGR Permogore 71.69 337 eP P 17 41 06.3 -3.9
PRGR eS S 17 50 20.7 -7.2
PRGR pmax pmax
comp=Z,48nm,1.0s
PEA0B Petropavlovsk- 71.71 34 P P 17 41 10.5 -0.1
PEA0B IAmb IAmb 17 41 48.5
comp=Z,36nm,1.1s
PEA0B IAMs_20 IAMs_20 18 16 31.4
comp=Z,2μm,18.0s
PEA0B Petropavlovsk- 71.71 34 i P P 17 41 10.9 +0.4
PETK Petropavlovsk- 71.71 34 P P 17 41 10.8 +0.2
comp=Z,7.3nm,0.8s,baz=220,slow=1.0,SNR=18
PET Petropavlovsk 72.20 34 P P 17 41 13.6 +0.1
PET IAmb IAmb 17 41 14.6
comp=Z,48nm,0.6s
PET Petropavlovsk 72.20 34⇑iP P 17 41 13.9 +0.4
PET eS S 17 50 34.6 +0.4
PET pmax pmax
comp=Z,75nm,0.7s
PET pmax pmax
comp=Z,600nm,16.6s
PET pmax pmax
comp=Z,500nm,17.5s
PET MLR MLR
comp=Z,1μm,16.0s
PET MLR MLR
comp=Z,2μm,15.0s
MOS Moscow 72.39 329 eP P 17 41 14.2 -0.3
MOS e 17 41 19.9
MOS e 17 41 33.0
MOS eS SKiKP 17 50 43.2 -5.0
MOS pmax pmax
comp=Z,59nm,1.2s
OBN Obninsk 72.67 328 P P 17 41 15.7 -0.5
OBN IAmb IAmb 17 41 23.8
comp=Z,58nm,1.3s
OBN Obninsk 72.67 328⇓eP P 17 41 16.4 +0.2
OBN e 17 41 32.1
OBN e 17 43 54.5
OBN i S S 17 50 36.9 -2.6
OBN pmax pmax
comp=Z,12nm,0.6s
MANT Manisa 72.70 310 P P 17 41 15.8 -1.3
MANT IAmb IAmb 17 42 01.8
comp=Z,34nm,0.9s
MAW Mawson 72.71 193 P P 17 41 16.0 -0.2
comp=Z,5.6nm,0.9s,baz=27,slow=11,SNR=2.3
MAW Mawson 72.71 193 P P 17 41 17.4 +1.2
MAW Mawson 72.71 193 P P 17 41 17.4 +1.2
MAW pmax pmax
comp=Z,35nm,2.0s

TIXI Tiksi 73.19 10 P P 17 41 18.7 -0.3
comp=Z,18nm,0.5s,baz=204,slow=3.5,SNR=30
TIXI Tiksi 73.19 10 P P 17 41 18.4 -0.5
TIXI IAmb IAmb 17 41 19.9
comp=Z,64nm,1.2s
TIXI Tiksi 73.19 10 ceP P 17 41 18.5 -0.5
TIXI pmax pmax
comp=Z,42nm,0.8s
KARP Karpathos 73.19 307 P P 17 41 19.3 -0.6
KARP IAmb IAmb 17 41 34.4
comp=Z,80nm,1.0s
SEY Seymchan 73.75 23 P P 17 41 23.1 +0.7
comp=Z,32nm,0.9s,baz=242,slow=6.0,SNR=30
SEY Seymchan 73.75 23 ⇑ P P 17 41 22.7 +0.3
KLMR Klimovskoe 73.80 334 eP P 17 41 18.8 -4.0
KLMR e 17 44 03.6
KLMR pmax pmax
comp=Z,32nm,1.5s
KLMR Klimovskoe 73.80 334 eP P 17 41 18.8 -4.0
KLMR AMP 17 41 23.3
comp=Z,32nm,1.5s
KLMR ePP PP 17 44 03.6 -4.0
KLMR LR LR 18 13 39.9
KLMR AMP 18 24 08.6
comp=Z,757nm,14.2s
LBTB Lobatse 73.95 244 P P 17 41 24.7 +0.2
LBTB Lobatse 73.95 244 P P 17 41 24.7 +0.2
LBTB pmax pmax
comp=Z,24nm,1.3s
TIRR Tirgusor 74.19 316 ⇓P P 17 41 24.8 -0.6
TIRR Tirgusor 74.19 316 P P 17 41 24.8 -0.6
TIRR Tirgusor 74.19 316 ⇓P P 17 41 24.8 -0.6
CFR Carcaliu 74.56 317 ⇑P P 17 41 27.3 -0.2
CFR Carcaliu 74.56 317 ⇑P P 17 41 27.3 -0.2
HARR Harsova 74.58 316 ⇑P P 17 41 26.8 -0.9
HARR Harsova 74.58 316 ⇑P P 17 41 26.8 -0.9
SANT Santorini 74.70 307 P P 17 41 29.6 +1.0
SANT IAmb IAmb 17 42 21.9
comp=Z,43nm,1.1s
BOSA Boshof 74.84 240 P P 17 41 29.8 +0.1
comp=Z,8.5nm,1.0s,baz=80,slow=9.3,SNR=6.0
BOSA Boshof 74.84 240 P P 17 41 29.9 +0.2
IDI Anoyia 74.97 306 P P 17 41 30.7 +0.5
comp=Z,9.8nm,0.7s,baz=111,slow=7.2,SNR=9.5
IDI LR LR 18 17 47.9
comp=Z,260nm,20.1s,baz=87,slow=38
ALN Alexandroupoli 75.10 312 P P 17 41 30.1 -0.7
ALN Alexandroupoli 75.10 312 P P 17 41 30.1 -0.7
ALN pmax pmax
comp=Z,32nm,1.6s
ALN MLR MLR
comp=Z,300nm,18.0s
SORM Soroca 75.17 320 ⇑P P 17 41 30.6 -0.4
SORM Soroca 75.17 320 P P 17 41 30.6 -0.4
RAZG Razgrad 75.32 315 ⇑P P 17 41 31.1 -0.9
AKASG Malin Array Be 75.32 322 P P 17 41 31.1 -0.7
comp=Z,2.7nm,0.8s,baz=87,slow=5.1,SNR=14
AKBB Malin Array Si 75.32 322 P P 17 41 30.4 -1.4
AKBB Malin Array Si 75.32 322 P P 17 41 30.4 -1.4
AKBB pmax pmax
comp=Z,13nm,1.0s
VRI Vrincioaia 75.69 317 ⇑P P 17 41 33.8 -0.3
VRI Vrincioaia 75.69 317 P P 17 41 33.8 -0.3
PLOR Plostina 75.73 317 ⇑P P 17 41 34.6 +0.2
PLOR Plostina 75.73 317 P P 17 41 34.6 +0.2
TESR Tescani 75.89 318 ⇑P P 17 41 35.3 +0.1
TMCR Tamitsa 75.97 337 eP P 17 41 35.3 +0.1
TMCR pmax pmax
comp=Z,22nm,1.0s
MLR Muntele Rosu 76.14 317 ⇓P P 17 41 35.7 -1.1
MLR Muntele Rosu 76.14 317 P P 17 41 36.2 -0.6
MLR IAmb IAmb 17 41 54.8
comp=Z,42nm,1.2s
MLR Muntele Rosu 76.14 317 ⇓P P 17 41 35.7 -1.1
HUMR Humele 76.60 316 ⇓P P 17 41 38.7 -0.6
PYZ Puysegur Point 76.72 138 P P 17 41 39.6 -0.3
VOIR 76.74 316 ⇑P P 17 41 39.5 -0.7
VOIR 76.74 316 ⇑P P 17 41 39.5 -0.7
ARR Arges 77.01 316 ⇓P P 17 41 41.7 0.0
BURAR Bucovina Array 77.09 319 ⇑P P 17 41 42.9 +0.8
BURAR Bucovina Array 77.09 319 ⇑P P 17 41 42.9 +0.8
BUR08 Bucovina Ar. S 77.11 319 P P 17 41 42.8 +0.5
BUR08 IAmb IAmb 17 41 56.4
comp=Z,29nm,1.1s
MLZ Mavora Lakes 77.48 137 P P 17 41 42.6 -1.6
VTS Vitosha 77.48 313 ⇑P P 17 41 44.2 -0.3
VTS Vitosha 77.48 313 P P 17 41 43.0 -1.5
VTS Vitosha 77.48 313 ⇑P P 17 41 44.2 -0.3
WHZ Wether Hill Ro 77.50 138 P P 17 41 42.7 -1.6
AGG Agios Georgios 77.58 310 P P 17 41 42.7 -2.3
AGG Agios Georgios 77.58 310 P P 17 41 42.7 -2.3
AGG pmax pmax
comp=Z,10.0nm,1.0s
LIT Litokhoron 77.62 311 P P 17 41 43.8 -1.4
LIT Litokhoron 77.62 311 P P 17 41 43.8 -1.4
LIT pmax pmax
comp=Z,14nm,0.9s
ITM Ithomi 77.63 308 P P 17 41 44.9 -0.3
ITM IAmb IAmb 17 43 53.3
comp=Z,122nm,1.7s
NACGM Naroch 77.91 326 e P 17 41 45.0 -1.4
NACGM eLQ LQ 18 16 24.0
NACGM eLR LR 18 22 26.0
LVV L'vov 78.33 321 eP P 17 41 56.2 +7.4
IIGN Ignalina 78.33 327 eP P 17 41 49.4 +0.6
ISAL Salakas 78.45 327 eP P 17 41 48.9 -0.4
DRGR 78.60 317 ⇑P P 17 41 50.5 0.0
DRGR 78.60 317 ⇑P P 17 41 50.5 0.0
LVZ Lovozero 78.88 340 P P 17 41 50.9 -0.6
LVZ IAmb IAmb 17 43 21.8
comp=Z,117nm,1.7s
LVZ Lovozero 78.88 340 P P 17 41 50.9 -0.6
LVZ pmax pmax
comp=Z,117nm,1.7s
VSU Vasula 78.90 330 i P P 17 41 51.8 0.0
VSU pmax pmax
comp=Z,20nm,1.1s
TRPA Tarpa 78.96 319 ⇑P P 17 41 53.2 +0.8
KWP Kalwaria Pacla 79.13 320 eP P 17 41 51.4 -1.9
KWP Kalwaria Pacla 79.13 320 P P 17 41 52.1 -1.2
KWP Kalwaria Pacla 79.13 320 eP P 17 41 51.4 -1.9
ODZ Otahua Downs 79.14 136 P P 17 41 52.5 -0.9
ODZ IAmb IAmb 17 42 56.3
comp=Z,168nm,1.7s
RPZ Rata Peaks 79.14 135 P P 17 41 54.7 +1.3
comp=Z,8.5nm,0.6s,baz=281,slow=5.7,SNR=6.3
RPZ Rata Peaks 79.14 135 P P 17 41 53.0 -0.4
BZS Buzias 79.14 316 ⇓P P 17 41 53.4 0.0
BZS Buzias 79.14 316 ⇓P P 17 41 53.4 0.0
APA Apatity 79.17 339 ⇓i P P 17 41 52.8 -0.3
APA pmax pmax
comp=Z,13nm,1.0s
APA MLR MLR
comp=Z,2µm,20.0s
SUR Sutherland 79.22 237 P P 17 41 53.6 -0.7
SUR IAmb IAmb 17 42 26.8
comp=Z,152nm,2.0s
SIRR Siria 79.22 317 ⇓P P 17 41 54.3 +0.5
KOLS Kolonicke sedl 79.28 320 eP P 17 41 55.2 +1.1
KOLS pmax pmax
comp=Z,31nm,1.3s
KOLS Kolonicke sedl 79.28 320 eP P 17 41 55.2 +1.1
PABE Paberze 79.62 326 eP P 17 41 55.6 -0.1
PABE IAmb IAmb 17 42 03.9
comp=Z,31nm,1.1s
QRZ Quartz Range 79.64 132 P P 17 41 54.7 -1.6
SUW Suwalki 79.73 325 eP P 17 41 55.9 -0.5
SUW Suwalki 79.73 325 P P 17 41 55.4 -1.1
SUW IAmb IAmb 17 42 20.2
comp=Z,80nm,1.0s
SUW Suwalki 79.73 325 eP P 17 41 55.9 -0.5
CRVS Cervenica-Dubn 79.80 319 eP P 17 41 58.5 +1.5
CRVS pmax pmax
comp=Z,53nm,1.5s
CRVS Cervenica-Dubn 79.80 319 eP P 17 41 58.5 +1.5
LTZ Lake Taylor 79.82 134 P P 17 41 56.3 -0.9
LTZ IAmb IAmb 17 43 16.4
comp=Z,164nm,1.8s
FIA1 FINESS Array S 80.05 332 P P 17 41 57.0 -0.9
FINES FINESS Array B 80.05 332 P P 17 41 58.0 0.0
comp=Z,4.0nm,0.5s,baz=102,slow=5.4,SNR=22
FINES LR LR 18 20 40.5
comp=Z,472nm,20.1s,baz=105,slow=38

FINES FINESS Array B 80.05 332 ceP P 17 41 58.0 0.0
FINES pmax pmax
comp=Z,4.0nm,0.5s
THZ Tophouse 80.09 133 P P 17 41 58.7 0.0
THZ IAmb IAmb 17 42 20.8
comp=Z,58nm,1.1s
MQZ McQueen's Vall 80.27 135 P P 17 41 59.5 -0.1
PDG Podgorica 80.36 313 ⇑P P 17 41 59.5 -0.6
PDG Podgorica 80.36 313 P P 17 41 58.4 -1.7
NIE Niedzica 80.64 320 eP P 17 42 02.4 +0.9
NIE Niedzica 80.64 320 eP P 17 42 02.4 +0.9
TSUM Tsumeb 80.66 250 P P 17 42 02.7 +0.4
PSZ Piszkesteto 80.67 318 ⇓P P 17 42 02.1 +0.3
PSZ Piszkesteto 80.67 318 P P 17 42 01.8 +0.1
PSZ Piszkesteto 80.67 318 ⇓P P 17 42 02.1 +0.3
SCTE Santa Cesarea 80.68 310 P P 17 42 00.9 -0.9
SCTE IAmb IAmb 17 43 02.1
comp=Z,52nm,1.1s
BSWZ Blackbirch Sta 80.80 132 P P 17 42 02.9 +0.5
HIZ Hauiti 81.02 129 P P 17 42 04.0 +0.3
CMWZ Cape Campbell 81.05 132 P P 17 42 03.6 -0.2
SMY Shemya 81.09 37 P P 17 42 03.0 -0.7
SMY Shemya 81.09 37 P P 17 42 03.0 -0.7
SMY pmax pmax
comp=Z,443nm,1.4s
BILL Bilibino 81.15 21 P P 17 42 03.0 -0.8
BILL Bilibino 81.15 21⇑eP P 17 42 03.4 -0.4
BILL e 17 42 09.6
BILL e 17 45 09.4
BILL i S S 17 52 08.2 -3.4
BILL pmax pmax
comp=Z,13nm,1.3s
VYHS Vyhne 81.46 319 eP P 17 42 06.0 +0.2
VYHS pmax pmax
comp=Z,13nm,1.2s
VYHS Vyhne 81.46 319 eP P 17 42 06.0 +0.2
MSVF Nonsavu 81.57 108 P P 17 42 07.4 +0.3
MSVF IAmb IAmb 17 42 10.5
comp=Z,32nm,1.1s
MSVF Nonsavu 81.57 108 P P 17 42 07.4 +0.3
MSVF pmax pmax
comp=Z,32nm,1.1s
MSWZ Moikau Station 81.77 132 P P 17 42 08.1 +0.5
PLWZ Palliser 81.79 132 P P 17 42 07.4 -0.4
TIP Timpagrande 81.90 309 P P 17 42 07.7 -0.7
BLY Banja Luka 82.13 315 ⇓P P 17 42 10.0 +0.6
BLY Banja Luka 82.13 315 P P 17 42 08.8 -0.7
KEV Kevo 82.14 341 P P 17 42 07.2 -1.8
KEV IAmb IAmb 17 44 16.2
comp=Z,137nm,1.8s
KEV IAMs_20 IAMs_20 18 22 46.0
comp=Z,1µm,22.0s
KEV Kevo 82.14 341 P P 17 42 07.2 -1.8
KEV pmax pmax
comp=Z,137nm,1.8s
KEV MLR MLR
comp=Z,1µm,22.0s
FUNA Funafuti 82.18 99 P P 17 42 09.1 -1.2
JAVC Velka Javorina 82.27 319 eP P 17 42 11.3 +1.1
BKZ Black Stump Fm 82.38 130 P P 17 42 11.2 +0.3
BKZ IAmb IAmb 17 42 38.3
comp=Z,56nm,1.0s
MORC Moravsky Berou 82.47 320 eP P 17 42 11.7 +0.5
MORC Moravsky Berou 82.47 320 P P 17 42 10.6 -0.6
MORC Moravsky Berou 82.47 320 P P 17 42 10.6 -0.6
MORC pmax pmax
comp=Z,24nm,1.3s
MODS Modra-Piesok 82.47 319 eP P 17 42 11.2 0.0
MODS Modra-Piesok 82.47 319 eP P 17 42 11.2 0.0
CEL Celeste 82.50 308 P P 17 42 10.7 -0.9
CEL IAmb IAmb 17 42 30.8
comp=Z,22nm,0.9s
ZST Bratislava 82.57 318 eP P 17 42 10.3 -1.4
ZST pmax pmax
comp=Z,52nm,1.6s
ZST Bratislava 82.57 318 eP P 17 42 10.2 -1.4
ARCES ARCESS Array B 82.58 340 P P 17 42 11.7 +0.4
comp=Z,3.9nm,0.5s,baz=97,slow=4.9,SNR=30
ARE0 ARCESS Array S 82.58 340 P P 17 42 11.3 0.0
ACER Acerenza 82.66 311 P P 17 42 12.8 +0.4
ACER IAmb IAmb 17 42 44.7
comp=Z,53nm,1.1s
URZ Urewera 82.74 129 P P 17 42 13.6 +0.9
comp=Z,6.4nm,0.8s,baz=282,slow=17,SNR=3.0
URZ Urewera 82.74 129 P P 17 42 11.3 -1.4
URZ IAmb IAmb 17 42 27.9
comp=Z,34nm,1.1s
URZ IAMs_20 IAMs_20 18 20 08.6
comp=Z,2µm,20.0s
SGRT San Giovanni R 82.89 312 P P 17 42 14.6 +1.0
SGRT IAmb IAmb 17 42 56.1
comp=Z,28nm,1.3s
KRLC Kraliky 82.99 320 eP P 17 42 14.6 +0.7
KRLC ex x 17 42 21.9
KRLC AMS AMS 18 27 30.0
comp=Z,600nm,17.9s
KRLC Kraliky 82.99 320 eP P 17 42 14.6 +0.7
KRLC e 17 42 21.9
KRLC MLR MLR
comp=Z,600nm,17.9s
VRAC Vranov 83.03 319 eP P 17 42 13.3 -0.7
KRUC Moravsky 83.13 319 eP P 17 42 13.1 -1.4
DPC Dobruska-Polom 83.32 320 eP P 17 42 16.1 +0.6
DPC ex x 17 42 23.8
DPC Dobruska-Polom 83.32 320 eP P 17 42 16.1 +0.6
DPC e 17 42 23.8
CONA Conrad Observa 83.37 318 i P P 17 42 16.3 +0.4
comp=Z,4.4nm,0.9s
OSTC Ostas 83.41 321 eP P 17 42 16.8 +0.8
CRES Cresnjev 83.45 316 eP P 17 42 16.2 -0.1
CHVC Chvalec 83.51 321 eP P 17 42 17.4 +0.9
CHVC ex x 17 42 24.5
UPC Upice 83.53 321 eP P 17 42 17.4 +0.8
UPC Upice 83.53 321 eP P 17 42 17.4 +0.8
ARSA Arzberg 83.53 317 i P P 17 42 17.6 +0.9
comp=Z,4.5nm,0.8s
BOJS Bojanci 83.56 316 eP P 17 42 16.1 -0.7
MXZ Matakaoa Point 83.60 128 IAMs_20 IAMs_20 18 21 20.3
comp=Z,2µm,22.0s
PERS Pernice 83.75 317 i P P 17 42 18.3 +0.4
SOKA Soboth 83.82 317 i P P 17 42 18.8 +0.6
comp=Z,12nm,1.5s
OBKA Obir 84.13 316 i P P 17 42 20.5 +0.6
comp=Z,13nm,1.6s
MOZS Mozjanca 84.19 316 eP P 17 42 20.5 +0.4
GOPC GO Pecny, Ondr 84.26 320 eP P 17 42 20.6 +0.3
GOPC AMS AMS 18 25 50.0
comp=Z,600nm,22.5s
GOPC GO Pecny, Ondr 84.26 320 eP P 17 42 20.6 +0.3
GOPC MLR MLR
comp=Z,600nm,22.5s
INTR Introdacqua 84.28 312 P P 17 42 19.4 -1.3
INTR IAmb IAmb 17 42 44.0
comp=Z,28nm,1.2s
PRU Pruhonice 84.42 320 eP P 17 42 21.5 +0.4
PRU AMS AMS 18 25 50.0
comp=Z,900nm,21.9s
PRU Pruhonice 84.42 320 eP P 17 42 21.5 +0.4
PRU MLR MLR
comp=Z,900nm,21.9s
CLTB Caltabellotta 84.57 307 P P 17 42 21.2 -1.1
CLTB IAmb IAmb 17 44 30.2
comp=Z,25nm,1.0s
TRI Trieste 84.62 316 P P 17 42 20.2 -2.0
TRI IAmb IAmb 17 43 10.7
comp=Z,43nm,1.1s
TRI Trieste 84.62 316 P P 17 42 20.2 -2.0
TRI pmax pmax
comp=Z,43nm,1.1s
AQU L'Aquila 84.68 312 P P 17 42 22.4 -0.3
AQU IAmb IAmb 17 42 45.4
comp=Z,53nm,1.2s
AQU L'Aquila 84.68 312 P P 17 42 22.4 -0.3
AQU pmax pmax
comp=Z,53nm,1.2s
BRG Berggiesshubel 84.87 321 eP P 17 42 23.8 +0.4
comp=Z,16nm,1.5s
BRG e 17 42 31.6
comp=Z,35nm,1.6s
BRG Berggiesshubel 84.87 321 S S 17 52 51.0 +1.0
BRG ePKPPKP 18 08 28.1
comp=Z,7.0nm,1.6s
BRG Berggiesshubel 84.87 321 eP P 17 42 23.8 +0.4
BRG e 17 42 31.6

BRG S S 17 52 51.0 +1.0
BRG pmax pmax
comp=Z,16nm,1.5s
BRG pmax pmax
comp=Z,35nm,1.6s
GEC2 GERESS Array S 84.88 319 P P 17 42 23.8 +0.2
GEC2 IAmb IAmb 17 42 47.8
comp=Z,31nm,1.2s
GERES GERESS Array B 84.88 319 P P 17 42 24.0 +0.4
comp=Z,2.9nm,0.8s,baz=98,slow=4.4,SNR=12
NRCA Norcia 84.91 313 P P 17 42 23.9 0.0
KHC Kasperske Hory 84.98 319 eP P 17 42 24.2 +0.2
KHC ex x 17 42 30.7
KHC Kasperske Hory 84.98 319 P P 17 42 23.5 -0.5
KHC Kasperske Hory 84.98 319 eP P 17 42 24.2 +0.2
KHC e 17 42 30.7
RUE Ruedersdorf 85.10 322 eP P 17 42 23.5 -0.9
MIDW Midway 85.35 62 P P 17 42 26.1 -0.2
MURB Monte Urbino 85.37 313 P P 17 42 26.5 +0.4
MURB IAmb IAmb 17 43 04.1
comp=Z,25nm,1.2s
STAL STALIGIAL 85.39 316 P P 17 42 25.4 -0.7
STAL IAmb IAmb 17 42 42.1
comp=Z,43nm,1.2s
CLL Collm 85.50 321 eP P 17 42 27.0 +0.5
comp=Z,8.0nm,1.1s
CLL esP pP 17 42 34.0 -1.7
comp=Z,12nm,1.4s
CLL e 17 42 48.0
CLL esPP 17 45 51.0
CLL eSKSac SKSac 17 52 51.0 +1.2
CLL eS SKKSac 17 53 01.0 +4.5
CLL ePS 17 53 51.0
CLL e 17 55 24.0
CLL eSSS SSS 18 02 00.0
CLL eSSSS 18 05 00.0
CLL LmV 18 28 00.0
comp=Z,500nm,18.6s
CLL Collm 85.50 321 P P 17 42 26.3 -0.1
CLL Collm 85.50 321 eP P 17 42 27.0 +0.5
CLL e 17 42 34.0
CLL eS SKSac 17 52 51.0 +1.2
CLL pmax pmax
comp=Z,8.0nm,1.1s
CLL MLR MLR
comp=Z,500nm,18.6s
HFS Hagfors 85.78 330 P P 17 42 28.1 +0.4
comp=Z,2.2nm,0.5s,baz=104,slow=4.7,SNR=13
LATE Laterza 85.87 312 P P 17 42 27.7 -0.9
LATE IAmb IAmb 17 42 39.1
comp=Z,26nm,1.0s
CTI Castel Tesino 86.11 316 P P 17 42 28.3 -1.5
CTI Castel Tesino 86.11 316 P P 17 42 28.3 -1.5
CTI pmax pmax
comp=Z,19nm,1.0s
KIWB Kanaga Island 86.33 38 P P 17 42 31.0 +0.4
SQTA Sankt Quirin 86.46 317 i P P 17 42 31.2 -0.4
comp=Z,9.6nm,1.0s
ZCCA Zocca 86.53 314 P P 17 42 29.7 -2.1
ZCCA IAmb IAmb 17 43 30.6
comp=Z,73nm,1.4s
MOTA Moosalm 86.54 317 i PcP P 17 42 31.8 -0.1
comp=Z,6.0nm,0.9s
GRA1 Grafenberg Arr 86.55 320 P P 17 42 31.6 -0.2
GRA1 IAmb IAmb 17 42 56.1
comp=Z,22nm,1.1s
GRF Grafenberg Arr 86.55 320 eP P 17 42 32.4 +0.6
comp=Z,20nm,1.3s,baz=109,slow=4.2
GRF Grafenberg Arr 86.55 320 P P 17 42 31.6 -0.2
GRF pmax pmax
comp=Z,22nm,1.1s
CASP Castiglione de 86.57 313 P P 17 42 34.1 +2.1
ADK Adak 86.62 38 P P 17 42 33.8 +1.8
ADK Adak 86.62 38 P P 17 42 33.8 +1.8
ADK pmax pmax
comp=Z,183nm,1.6s
RETA Reutte 86.78 317 i P P 17 42 32.9 -0.1
comp=Z,4.5nm,0.8s
NC405 NORSAR Array S 86.82 331 P P 17 42 31.8 -1.1
NC602 NORSAR Array S 86.88 331 P P 17 42 31.8 -1.3
NC602 IAmb IAmb 17 43 11.2
comp=Z,98nm,1.5s
SALO Salr 86.89 315 P P 17 42 34.0 +0.5
NC303 NORSAR Array S 87.00 331 P P 17 42 32.6 -1.1
PRMA PARMA 87.02 315 P P 17 42 33.4 -0.7
GSTR Great Sitkin T 87.02 38 P P 17 42 35.8 +1.8
NB201 NORSAR Array S 87.02 331 P P 17 42 32.2 -1.6
NB2 NORSAR Subarra 87.06 331 P P 17 42 33.8 -0.3
comp=Z,8.6nm,1.2s,baz=90,slow=5.3
NOA NORSAR Array B 87.06 331 P P 17 42 33.9 -0.2
comp=Z,7.6nm,1.1s,baz=94,slow=5.0,SNR=7.0
NOA LR LR 18 24 53.6
comp=Z,440nm,20.5s,baz=90,slow=38
FUORN Ofenpass-Fuorn 87.09 316 P P 17 42 34.9 +0.1
FUORN IAmb IAmb 17 42 45.5
comp=Z,40nm,1.4s
NAO01 NORSAR Array S 87.21 331 P P 17 42 35.7 +1.0
NBO00 NORSAR Array S 87.27 331 P P 17 42 35.6 +0.6
NC204 NORSAR Array S 87.29 331 P P 17 42 35.7 +0.5
DAVOX Davos/Dischmat 87.36 317 P P 17 42 37.0 +1.0
comp=Z,4.3nm,0.5s,baz=134,slow=2.3,SNR=7.4
DAVOX Davos/Dischmat 87.36 317 P P 17 42 37.0 +1.0
DAVA Damuels 87.37 317 i PcP P 17 42 35.9 -0.2
comp=Z,6.0nm,0.9s
MSSA Maissana 87.58 314 P P 17 42 36.2 -0.8
KEST Kesra 87.64 306 P P 17 42 39.0 +1.6
comp=Z,5.3nm,0.7s,baz=126,slow=2.9,SNR=6.6
KEST Kesra 87.64 306 P P 17 42 38.5 +1.1
KEST IAmb IAmb 17 43 02.4
comp=Z,15nm,0.9s
KONO Kongsberg 87.81 329 P P 17 42 37.5 -0.1
KONO Kongsberg 87.81 329 P P 17 42 37.5 -0.1
KONO pmax pmax
comp=Z,124nm,1.9s
KBS Kingsbay 87.95 349 P P 17 42 38.0 +0.1
KBS Kingsbay 87.95 349 IAMs_20 IAMs_20 18 29 50.1
comp=Z,1µm,20.0s
KBS Kingsbay 87.95 349 P P 17 42 38.0 +0.1
KBS pmax pmax
comp=Z,233nm,1.9s
KBS MLR MLR
comp=Z,1µm,20.0s
MUD Monsted U'grnd 87.97 326 i P P 17 42 47.0 +8.6
MUD Monsted U'grnd 87.97 326 i P P 17 42 47.0 +8.6
BFO Black Forest 88.42 318 P P 17 42 40.9 0.0
BFO Black Forest 88.42 318 P P 17 42 40.9 0.0
BFO pmax pmax
comp=Z,23nm,1.6s
NVL N'lazarevskaya 89.60 199 eP P 17 42 55.9 +10
NVL eS S 17 53 28.5 -6.2
NVL pmax pmax
comp=Z,29nm,1.0s
KNTN Kanton 91.06 93 P P 17 42 53.9 +0.1
SSB Saint Sauveur 91.10 315 P P 17 42 53.1 -0.4
SSB Saint Sauveur 91.10 315 P P 17 42 53.1 -0.4
SSB pmax pmax
comp=Z,13nm,1.1s
QSPA South Pole Qui 91.12 180 P P 17 42 54.4 +1.2
QSPA IAmb IAmb 17 43 05.3
comp=Z,26nm,1.2s
NIKH Nikolski High 91.40 37 P P 17 42 52.7 -1.9
ANM Nome 92.11 25 IAMs_20 IAMs_20 18 31 36.9
comp=Z,1µm,18.0s
NOR Nord 92.26 352 i P P 17 42 57.0 -1.1
comp=Z,10nm,1.1s
NOR Nord 92.26 352 i P P 17 42 57.0 -1.1
NOR pmax pmax
comp=Z,10.0nm,1.1s
CLF Chambon-Foret 92.50 318 P P 17 43 00.4 +0.6
RDOG Red Dog Mine 92.58 22 P P 17 43 00.1 +0.4
UNV Unalaska Valle 92.73 36 P P 17 43 00.2 -0.5
DAG Danmarks Havn 94.63 348 i P P 17 43 08.0 -1.0
comp=Z,4.7nm,0.8s
DAG Danmarks Havn 94.63 348 i P P 17 43 08.0 -1.0
DAG pmax pmax
comp=Z,5.0nm,0.8s
EKA Eskdalemuir Ar 94.97 326 P P 17 43 11.3 +0.3
comp=Z,2.4nm,0.6s,baz=102,slow=4.9,SNR=5.9
ESK Eskdalemuir 95.00 326 P P 17 43 11.8 +0.6
ESK Eskdalemuir 95.00 326 P P 17 43 11.8 +0.6
ESK pmax pmax
comp=Z,194nm,2.0s
TOC2 Torodi Ar. Sit 95.15 283 IAMs_20 IAMs_20 18 22 13.5
comp=Z,684nm,21.0s

TOC3 Torodi Ar. Sit 95.15 283 IAMs_20 IAMs_20 18 22 02.5
comp=Z,696nm,21.0s
TOB2 Torodi Ar. Sit 95.16 283 IAMs_20 IAMs_20 18 23 41.9
comp=Z,1µm,20.0s
TOB3 Torodi Ar. Sit 95.16 283 IAMs_20 IAMs_20 18 21 51.6
comp=Z,675nm,21.0s
TOC1 Torodi Ar. Sit 95.16 283 IAMs_20 IAMs_20 18 22 22.6
comp=Z,721nm,20.0s
TOA2 Torodi Ar. Sit 95.17 283 IAMs_20 IAMs_20 18 22 14.0
comp=Z,689nm,21.0s
TOC4 Torodi Ar. Sit 95.17 283 IAMs_20 IAMs_20 18 21 52.1
comp=Z,729nm,21.0s
TOA0 Torodi Ar. Sit 95.17 283 IAMs_20 IAMs_20 18 24 58.2
comp=Z,647nm,20.0s
TORD Torodi Ar. Bea 95.17 283 P P 17 43 14.1 +1.3
comp=Z,1.1nm,0.9s,baz=96,slow=1.4,SNR=3.5
TOA3 Torodi Ar. Sit 95.17 283 IAMs_20 IAMs_20 18 24 57.2
comp=Z,652nm,19.0s
TOB4 Torodi Ar. Sit 95.18 283 IAMs_20 IAMs_20 18 24 57.5
comp=Z,677nm,20.0s
TOB5 Torodi Ar. Sit 95.19 283 IAMs_20 IAMs_20 18 22 33.2
comp=Z,704nm,20.0s
TOC7 Torodi Ar. Sit 95.19 283 IAMs_20 IAMs_20 18 25 07.2
comp=Z,658nm,20.0s
TOC5 Torodi Ar. Sit 95.19 283 IAMs_20 IAMs_20 18 24 57.4
comp=Z,798nm,20.0s
TOLK Toolik Lake Re 97.18 20 P P 17 43 20.5 -0.3
TOLK IAmb IAmb 17 43 22.3
comp=Z,12nm,1.1s
TOLK Toolik Lake Re 97.18 20 P Pdif 17 43 22.0 +1.1
baz=292
ESDC Sonseca Array 97.90 310 P Pdif 17 43 25.1 +0.3
comp=Z,0.3nm,0.5s,baz=96,slow=1.3,SNR=3.0
ESDC LR LR 18 29 49.2
comp=Z,187nm,21.4s,baz=165,slow=37
PPLA Purkeypile 98.19 26 IAMs_20 IAMs_20 18 35 49.7
comp=Z,1µm,18.0s
BPAW Bear Paw Mtn. 98.29 24 P P 17 43 25.5 -0.4
BPAW IAmb IAmb 17 43 27.2
comp=Z,11nm,1.0s
BPAW IAMs_20 IAMs_20 18 33 32.3
comp=Z,1µm,19.0s
TRF Thorofare Moun 98.81 25 IAMs_20 IAMs_20 18 37 20.1
comp=Z,900nm,20.0s
MCK McKinley 99.27 24 IAMs_20 IAMs_20 18 34 02.2
comp=Z,1µm,18.0s
RND Reindeer 99.43 25 IAMs_20 IAMs_20 18 34 08.3
comp=Z,1µm,18.0s
ILAR Eielson Array 99.68 23 P Pdif 17 43 33.0 +0.9
comp=Z,0.6nm,0.8s,baz=284,slow=6.1,SNR=5.7
ILAR PP PP 17 47 28.4 -7.7
comp=Z,1.3nm,1.0s,baz=289,slow=8.3,SNR=3.7
ILAR PKKP PKKPdf 18 00 00.1 +0.3
comp=Z,0.4nm,0.8s,baz=153,slow=2.8,SNR=4.1
ILAR LR LR 18 35 23.9
comp=Z,465nm,18.8s,baz=320,slow=40
DHY Denali Highway 100.17 25 IAMs_20 IAMs_20 18 37 58.1
comp=Z,662nm,19.0s
RIDG Independent Ri 100.93 24 IAMs_20 IAMs_20 18 36 43.0
comp=Z,667nm,18.0s
PAX Paxson 101.01 24 IAMs_20 IAMs_20 18 37 25.2
comp=Z,695nm,18.0s
SCRK Sand Creek 101.17 23 IAMs_20 IAMs_20 18 36 48.2
comp=Z,800nm,18.0s
EYAK Cordova Ski Ar 101.90 27 IAMs_20 IAMs_20 18 39 26.0
comp=Z,883nm,18.0s
GLB Gilahina Butte 102.37 26 IAMs_20 IAMs_20 18 35 56.3
comp=Z,873nm,20.0s
INK Inuvik 102.47 17 P Pdif 17 43 43.9 -0.5
comp=Z,2.3nm,0.9s,baz=230,slow=5.4,SNR=4.9
INK PP PP 17 47 50.5 -6.3
comp=Z,1.8nm,0.9s,baz=314,slow=5.9,SNR=3.7
INK Inuvik 102.47 17 Pdif 17 43 43.7 -0.6
INK IAMs_20 IAMs_20 18 34 33.3
comp=Z,1µm,22.0s
EPYK Eagle Plains 102.60 20 IAMs_20 IAMs_20 18 36 34.9
comp=Z,861nm,20.0s
VRDI Verde Repeater 102.62 26 IAMs_20 IAMs_20 18 30 50.0
comp=Z,567nm,20.0s
MCARA McCarthy VSAT 102.74 25 IAMs_20 IAMs_20 18 30 54.0
comp=Z,829nm,22.0s
CRQM Cirque 102.97 26 IAMs_20 IAMs_20 18 37 54.8
comp=Z,883nm,20.0s
CTGM Chitina Glacie 103.66 25 IAMs_20 IAMs_20 18 37 20.2
comp=Z,853nm,18.0s
RES Resolute Bay 103.88 3 Pdiff Pdif 17 43 50.6 +0.1
comp=Z,1.1nm,0.8s,baz=0.0,slow=3.0,SNR=3.9
PCA Pinnacle 104.55 26 IAMs_20 IAMs_20 18 37 53.9
comp=Z,896nm,20.0s
HYT Haines Junctio 105.34 25 IAMs_20 IAMs_20 18 38 29.8
comp=Z,1µm,20.0s
WHY Whitehorse 106.51 24 IAMs_20 IAMs_20 18 39 30.7
comp=Z,943nm,20.0s
TBI Tubuai 111.77 115 eLR LR 18 21 47.5
comp=Z,942nm,24.2s
YKA Yellowknife Ar 112.09 15 PKiKP PKiKP 17 48 23.8 +0.2
comp=Z,0.9nm,1.0s,baz=334,slow=2.9,SNR=4.1
YKA PP PP 17 49 04.9 -2.4
comp=Z,2.0nm,0.8s,baz=329,slow=6.9,SNR=7.7
YKA PKKPab PKKPab 17 59 25.4 +0.3
comp=Z,0.2nm,0.6s,baz=126,slow=4.5,SNR=4.6
YKA PKKP PKKPdf 17 59 35.1 -1.6
comp=Z,0.8nm,0.9s,baz=146,slow=3.4,SNR=6.6
PPT2 Papeete2 112.39 108 eLR LR 18 22 00.4
comp=Z,602nm,23.2s
B05A Bryant 120.08 29 P PKiKP 17 48 40.3 +0.8
baz=313
B08A Colville Reser 121.33 28 PKPdf 17 48 41.3 -0.6
SCHQ Schefferville 122.66 349 PKP PKiKP 17 48 44.6 +0.2
comp=Z,1.9nm,0.6s,baz=349,slow=3.8,SNR=3.9
SCHQ Schefferville 122.66 349 PKiKP 17 48 44.4 0.0
E08A Dider Farm, El 122.79 29 PKPdf 17 48 44.6 -0.1
HUMO Hull Mountain 123.34 35 PKiKP 17 48 46.4 +0.2
J04D Umpqua Nationa 123.41 34 P PKiKP 17 48 47.5 +0.9
baz=311
PINE Pine Mountain 123.69 33 PKPdf 17 48 46.6 -0.2
J05D Fort Rock, OR 123.87 33 P PKiKP 17 48 48.5 +1.1
baz=312
L04D Klamath Falls 123.96 35 P PKiKP 17 48 48.1 +0.5
baz=310
F10A Beach Ranch, E 124.05 28 PKPdf 17 48 46.6 -0.7
M02C Callahan 124.17 36 P PKiKP 17 48 48.8 +0.9
baz=309
I07A Izee 124.25 31 PKPdf 17 48 47.7 -0.1
M04C Macdoel 124.51 35 P PKiKP 17 48 49.4 +0.8
baz=310
BMO Blue Mountains 124.83 29 IAMs_20 IAMs_20 18 50 20.5
comp=Z,455nm,20.0s
MSO Missoula 124.90 26 PKPdf 17 48 48.3 -0.7
MSO Missoula 124.90 26 P PKiKP 17 48 49.1 -0.2
baz=321,SNR=7.5
J08A Circle Bar Ran 125.29 31 PKiKP 17 48 50.0 -0.2
MOD Modoc Plateau 125.30 34 PKiKP 17 48 50.4 +0.1
O03E Paynes Creek 125.48 36 P PKiKP 17 48 50.5 0.0
baz=309
EGMT Eagleton 125.64 22 PKiKP 17 48 50.6 0.0
EGMT Eagleton 125.64 22 P PKiKP 17 48 51.1 +0.5
baz=326
GDXM Geysers 125.80 38 IAMs_20 IAMs_20 18 43 48.3
comp=Z,498nm,19.0s
MFID Camas Ranch 126.60 30 PKiKP 17 48 52.6 -0.1
BEKR Beckworth 126.60 38 PKiKP 17 48 52.9 0.0
DLMT Dillon 126.63 26 PKiKP 17 48 53.2 +0.4
DLMT IAMs_20 IAMs_20 18 52 26.9
comp=Z,809nm,20.0s
AFDM Forest Hills D 126.83 37 PKiKP 17 48 53.1 -0.2
PAHR Pah Rah Range 127.28 35 PKiKP 17 48 54.6 +0.3
ULM Lac du Bonnet 127.54 11 PKP PKPdf 17 48 53.4 -0.3
comp=Z,4.5nm,0.8s,baz=304,slow=3.9,SNR=7.2
ULM Lac du Bonnet 127.54 11 PKPdf 17 48 52.6 -1.1
ULM Lac du Bonnet 127.54 11 PKIKP PKPdf 17 48 52.6 -1.1
PNTR Pine Nut 127.56 36 PKPdf 17 48 53.0 -1.4
YHL Hebgen Lake 127.65 25 PKiKP 17 48 55.0 0.0
YHB Horse Butte 127.72 25 PKiKP 17 48 55.0 -0.1
CMB Columbia Colle 127.76 38 PKPdf 17 48 53.9 -0.7
CMB Columbia Colle 127.76 38 PKIKP PKPdf 17 48 53.9 -0.7
YMR Madison River 127.89 25 PKiKP 17 48 54.5 -0.3
KVN Kaiserville 128.45 35 PKiKP 17 48 56.4 -0.3
KVN Kaiserville 128.45 35 PKIKP PKiKP 17 48 56.4 -0.3
RYN Ryan 128.49 36 PKPdf 17 48 56.2 +0.1
RYN IAMs_20 IAMs_20 18 56 55.3
comp=Z,436nm,20.0s
FXWY Fox Creek 128.68 26 PKPdf 17 48 56.3 -0.1
NVAR Mina Array Bea 128.75 36 PKP PKiKP 17 48 58.2 +0.9
comp=Z,3.0nm,0.9s,baz=267,slow=1.8,SNR=18
MDPB Devils Postpil 128.81 37 PKPdf 17 48 55.6 -1.3
NV11 Mina Array Sit 128.84 36 PKPdf 17 48 56.8 0.0
ELK Elko 128.84 32 PKiKP 17 48 57.2 -0.3
ELK Elko 128.84 32 PKIKP PKiKP 17 48 57.2 -0.3
REDW Red Top Meadow 128.98 26 PKPdf 17 48 56.9 -0.1
MATQ Matagami 129.07 356 P PKiKP 17 48 57.2 -0.2
baz=6.5
BW06 Boulder Array 130.02 26 P PKiKP 17 48 59.7 -0.1
baz=324
PD31 Pinedale Array 130.02 26 PKPdf 17 48 58.3 -0.7
PDAR Pinedale Array 130.02 26 PKhKP PKPpre 17 48 57.1
comp=Z,1.0nm,0.6s,baz=264,slow=1.5,SNR=8.0
R11A Troy Canyon, C 130.36 34 PKiKP 17 49 00.3 -0.2
R11A Troy Canyon, C 130.36 34 P PKiKP 17 49 01.3 +0.8
baz=315
EYMN Ely 130.48 8 P PKiKP 17 49 00.3 +0.1
baz=348
DUG Dugway, Tooele 130.50 30 PKiKP 17 48 59.9 0.0
DUG IAMs_20 IAMs_20 18 53 42.8
comp=Z,539nm,21.0s
DUG Dugway, Tooele 130.50 30 PKIKP PKPdf 17 48 59.9 0.0
DUG MLR MLR
comp=Z,500nm,21.0s
DUG Dugway, Tooele 130.50 30 P PKiKP 17 49 02.0 +1.3
baz=319
MPMC Manual Prospec 130.81 38 P PKiKP 17 49 02.9 +1.4
baz=311
TPNV Topopah Spring 130.95 36 PKPdf 17 49 00.4 -0.5
TPNV Topopah Spring 130.95 36 PKIKP PKPdf 17 49 00.4 -0.5
TPNV Topopah Spring 130.95 36 P PKiKP 17 49 02.0 +0.3
baz=313
RSSD Black Hills 131.04 20 P PKiKP 17 49 02.6 +0.8
baz=331
PSUT Pine Spring 131.18 33 PKPdf 17 49 01.6 +0.3
EDW2 Edwards Air Fo 131.25 39 P PKiKP 17 49 03.3 +1.0
baz=310
D54A Lac Fusel, La 131.57 354 P PKiKP 17 49 02.1 -0.4
baz=8.1
D47A Chapleau 131.96 0 P PKiKP 17 49 02.9 -0.4
baz=360
MSU Marysvale 132.09 31 PKiKP 17 49 04.3 +0.2
MSU Marysvale 132.09 31 PKIKP PKiKP 17 49 04.3 +0.2
Q16A Castle Valley 132.29 30 PKPdf 17 49 03.7 +0.3
MTPU Mount Pierson 132.43 32 PKPdf 17 49 04.7 -0.3
SRU San Rafael Swe 132.47 29 PKPdf 17 49 04.0 +0.3
SRU San Rafael Swe 132.47 29 PKIKP PKPdf 17 49 04.0 +0.3
LCMT Little Creek M 132.62 34 PKPdf 17 49 03.5 -0.5
O20A White River Ci 132.73 27 PKPdf 17 49 03.5 -0.7
O20A White River Ci 132.73 27 P PKiKP 17 49 05.5 +0.2
baz=324
KNB Kanab 132.85 33 PKPdf 17 49 04.3 -0.1
KNB Kanab 132.85 33 PKIKP PKPdf 17 49 04.4 -0.1
IRM Iron Mountain 133.50 38 P PKiKP 17 49 08.1 +1.3
baz=312
MONP2 Monument Peak 133.53 40 P PKiKP 17 49 08.9 +1.8
baz=310
U15A North Rim 133.57 33 PKPdf 17 49 05.6 -0.4
ECSD EROS Data Cent 133.58 14 PKPdf 17 49 04.6 -0.8
ECSD EROS Data Cent 133.58 14 P PKiKP 17 49 06.2 -0.5
baz=341
W13A Hualapai Mount 133.61 36 PKPdf 17 49 03.9 -2.1
WUAZ Wupatki 134.74 33 PKPdf 17 49 08.3 +0.3
WUAZ Wupatki 134.74 33 P PKiKP 17 49 09.5 0.0
baz=318
PECO Prince Edward 134.79 354 IAMs_20 IAMs_20 18 54 23.3
comp=Z,623nm,20.0s
MVCO Mesa Verde 134.95 29 PKPdf 17 49 06.5 -1.9
MVCO Mesa Verde 134.95 29 P PKiKP 17 49 10.2 +0.3
baz=322
X16A Lo Mia Camp, P 135.51 35 PKPdf 17 49 06.2 -3.3
X18A Snowflake 136.25 33 PKPdf 17 49 08.3 -2.6
L58A Harry Jones Me 136.53 353 P PKiKP 17 49 12.6 -0.1
baz=10.0
ANMO Albuquerque 137.75 29 PKPdf 17 49 10.6 -3.1
ANMO Albuquerque 137.75 29 PKIKP PKPdf 17 49 10.6 -3.1
ANMO Albuquerque 137.75 29 P PKPdf 17 49 12.4 -1.2
baz=323
N58A Sunbury 137.82 353 P PKiKP 17 49 14.9 -0.4
baz=8.9
PLCA Paso Flores 139.11 194 PKP PKiKP 17 49 18.0 -0.1
comp=Z,1.6nm,1.0s,baz=170,slow=0.6,SNR=3.1
PLCA SKPbc SKPbc 17 52 50.4 +1.2
comp=Z,4.0nm,1.1s,baz=189,slow=5.6,SNR=3.5
PLCA Paso Flores 139.11 194 PKIKP PKiKP 17 49 18.0 -0.1
U32A Winter Ranch, 139.68 20 IAMs_20 IAMs_20 18 56 36.6
comp=Z,669nm,21.0s
MSTX Muleshoe 140.28 26 PKPdf 17 49 13.8 -4.5
R56A Bull Pasture M 140.49 356 P PKPdf 17 49 19.2 +0.8
baz=5.2
MGMO Mountain Grove 140.84 12 PKPdf 17 49 18.9 -0.2
MGMO IAMs_20 IAMs_20 18 59 06.8
comp=Z,666nm,21.0s
MNTX Cornudas Mount 140.87 31 PKPpre 17 49 12.0
MNTX PKPdf PKPdf 17 49 17.7 -1.5
MNTX IAMs_20 IAMs_20 18 59 47.4
comp=Z,582nm,19.0s
MNTX Cornudas Mount 140.87 31 P PKPdf 17 49 14.4 -4.8
baz=323
S57A Dark Hollow, R 141.09 355 P PKiKP 17 49 20.7 +1.2
baz=6.0
WMOK Wichita Mounta 141.23 21 PKPpre 17 49 12.6
WMOK PKPdf PKPdf 17 49 19.6 -0.2
WMOK Wichita Mounta 141.23 21 PKHKP PKPpre 17 49 12.6
WMOK PP 17 49 19.6
WMOK Wichita Mounta 141.23 21 P PKPdf 17 49 13.6 -6.2
baz=334
U40A Yellville 141.48 13 PKPpre 17 49 12.8
U40A Yellville 141.48 13 P PKPdf 17 49 15.6 -4.6
baz=344
PBMO Poplar Bluff 141.56 10 IAMs_20 IAMs_20 18 58 30.7
comp=Z,667nm,21.0s
LCAR Lake Charles 142.12 11 IAMs_20 IAMs_20 19 06 18.5
comp=Z,612nm,18.0s
U49A Red Boiling Sp 142.39 4 P PKPdf 17 49 19.8 -2.0
baz=355
U50A Jamestown 142.54 3 P PKPdf 17 49 18.3 -3.8
baz=356
WVT Waverly 142.57 7 PKPdf 17 49 17.5 -4.6
WVT Waverly 142.57 7 PKIKP PKPdf 17 49 17.5 -4.6
WVT Waverly 142.57 7 P PKPdf 17 49 18.3 -3.8
baz=352
WHAR Wooly Hollow 142.63 13 PKPdf 17 49 17.1 -5.1
W41B Gary Mavity, V 142.75 13 P PKPdf 17 49 18.6 -3.9
baz=344
ABTX Abilene, Hawle 142.76 24 PKPdf 17 49 18.1 -4.5
ABTX Abilene, Hawle 142.76 24 P PKPdf 17 49 19.2 -3.4
baz=331
CLTN Cedars of Leba 142.76 5 PKPdf 17 49 18.2 -4.2
CLTN IAMs_20 IAMs_20 19 01 27.4
comp=Z,383nm,20.0s
MIAR Mount Ida 143.03 15 P PKPbc 17 49 20.5 +0.8
baz=342,SNR=5.1
X40A Basin Creek Fa 143.27 14 P PKPbc 17 49 20.5 +0.1
baz=343,SNR=6.0
V53A Saluda 143.34 0 P PKPbc 17 49 20.4 -0.1
baz=360
TX31 Lajitas Ar. Si 143.64 32 PKPbc 17 49 22.1 +0.4
TX32 Lajitas Array 143.64 32 PKPbc 17 49 22.3 +0.6
TXAR Lajitas Array 143.64 32 PKhKP PKPbc 17 49 22.3 +0.6
comp=Z,6.0nm,1.0s,baz=148,slow=0.6,SNR=24
TXAR PP PP 17 52 37.4 +1.8
comp=Z,1.2nm,1.1s,baz=276,slow=3.5,SNR=3.8
PLAL Pickwick Lake 143.68 7 PKPab 17 49 20.2 -0.5
W49A Belvidere 143.74 5 P PKPbc 17 49 21.8 +0.1
baz=354
W53A Cullowhee 143.84 1 P PKPab 17 49 21.2 -0.3
baz=359
KMSC Kings Mountain 143.84 358 P PKPab 17 49 21.6 +0.3
baz=2.4
WLAR White Oak Lake 143.96 15 PKPbc 17 49 22.6 +0.3
BG3 Lake Jocassee 144.01 0 IAMs_20 IAMs_20 19 03 18.4
comp=Z,643nm,19.0s
WHTX Lake Whitney, 144.17 22 PKPbc 17 49 23.0 -0.1
WHTX Lake Whitney, 144.17 22 P PKPbc 17 49 23.7 +0.6
baz=334
X48A Hartselle 144.32 6 PKPab 17 49 23.0 -0.1
X51A Calhoun 144.38 3 P PKPbc 17 49 24.2 +0.5
baz=356
Z41A Richland Creek 144.45 15 PKPbc 17 49 24.2 +0.3
Z41A Richland Creek 144.45 15 P PKPdf 17 49 25.0 -0.5
baz=343,SNR=5.2
X54A Belton 144.46 360 P PKPab 17 49 24.0 0.0
baz=0.6
X53A Estanollee 144.50 1 P PKPbc 17 49 24.8 -0.7
baz=359
X55A Gracelyn & Ava 144.52 358 P PKPbc 17 49 24.6 +0.5
baz=1.9
JCT Junction City 144.56 26 PKPbc 17 49 24.5 +0.1
JCT Junction City 144.56 26 PKIKP PKPbc 17 49 24.5 +0.1
JCT Junction City 144.56 26 P PKPbc 17 49 24.9 +0.5
baz=330
237A Washetta, Mont 144.74 19 PKPab 17 49 24.8 0.0
HODGE Hodges 144.77 359 PKPab 17 49 24.7 -0.1
Y49A Blount Mountai 144.97 5 PKPab 17 49 25.4 -0.2
CPUP Villa Florida 145.04 222 PKPbc PKPdf 17 49 27.1 +0.5
comp=Z,23nm,1.0s,baz=112,slow=3.7,SNR=23
CPUP Villa Florida 145.04 222 PKPbc 17 49 26.1 +0.1
CPUP Villa Florida 145.04 222 PKIKP PKPbc 17 49 26.1 +0.1
Y55A Saluda 145.06 359 P PKPbc 17 49 25.8 -0.1
baz=1.5
Y52A Lilburn 145.12 2 PKPab 17 49 26.1 0.0
Y52A Lilburn 145.12 2 P PKPdf 17 49 26.8 +0.1
baz=358,SNR=14
435B Jarrell 145.21 23 P PKPdf 17 49 27.0 +0.1
baz=333
143A Socs Landing, 145.31 13 PKPdf 17 49 27.3 +0.3
NATX Nacogdoches 145.34 18 PKPbc 17 49 26.5 -0.3
NATX Nacogdoches 145.34 18 P PKPdf 17 49 27.7 +0.6
baz=339
Z58A St. Stephen 145.56 356 P PKPab 17 49 28.4 +0.7
baz=5.1
GOGA Godfrey 145.58 1 PKPdf 17 49 27.2 -0.2
GOGA Godfrey 145.58 1 PKIKP PKPdf 17 49 27.2 -0.2
GOGA Godfrey 145.58 1 P PKPab 17 49 28.1 +0.3
baz=359,SNR=12
Z59A Georgetown, SC 145.61 355 P PKPab 17 49 28.7 +0.8
baz=6.1
Z51A Franklin 145.61 4 PKPdf 17 49 27.3 -0.2
Z50A Ashland 145.62 5 PKPdf 17 49 27.1 -0.4
Z50A Ashland 145.62 5 P PKPbc 17 49 27.6 -0.1
baz=354,SNR=17
Z57A Bowman 145.65 357 P PKPab 17 49 28.1 +0.1
baz=3.6,SNR=8.0
LRAL Lakeview Retre 145.73 6 PKPdf 17 49 27.3 -0.4
LRAL Lakeview Retre 145.73 6 P PKPbc 17 49 27.9 -0.1
baz=352,SNR=17
NHSC New Hope 145.81 356 P PKPab 17 49 28.5 -0.2
baz=4.5
VBMS Vicksburg 145.97 12 PKPbc 17 49 28.8 0.0
152A Waverly Hall 146.28 3 PKPdf 17 49 29.1 +0.4
157A Early Branch 146.28 357 P PKPab 17 49 30.8 +0.3
baz=3.1
154A Montrose 146.38 1 PKPdf 17 49 29.9 -0.1
154A IAMs_20 IAMs_20 19 06 11.2
comp=Z,648nm,20.0s
833A Chaparral WMA, 146.58 27 PKPbc 17 49 31.0 +0.2
833A Chaparral WMA, 146.58 27 P PKPab 17 49 32.0 +0.2
baz=329
HKT Hockley 146.61 21 PKPdf 17 49 29.6 +0.4
HKT Hockley 146.61 21 PKP2 PKPdf 17 49 29.6 +0.4
HKT MLR MLR
comp=Z,1µm,19.0s
344A Westbrook Farm 146.66 13 PKPdf 17 49 29.1 -0.3
344A PKPbc PKPab 17 49 31.6 -0.3
CFA Coronel Fontan 146.79 203 PKPbc PKPab 17 49 32.3 -0.2
comp=Z,6.6nm,0.7s,baz=148,slow=3.1,SNR=12
250A Grady 146.85 6 PKPbc 17 49 31.0 -0.4
346A Big Creek Wild 146.98 11 PKPbc 17 49 31.9 +0.1
255A Hazlehurst 147.07 360 PKPbc 17 49 32.0 0.0
352A Blakely 147.45 4 PKPbc 17 49 32.5 -0.6
MDP Montagnes des 149.31 282 PKPbc PKiKP 17 49 40.4 +0.7
comp=Z,30nm,1.1s,baz=135,slow=1.4,SNR=2.3
ZAIG Zacatecas 149.33 38 PKPbc 17 49 37.1 -1.6
656A Willston 149.62 360 PKPbc 17 49 37.7 -1.1
GO03 Copiap 151.14 203 PKPdf 17 49 38.8 +2.0
GO03 sPKPdf 17 49 50.0 +0.3
SMRT St. Maarten 152.81 316 IAMs_20 IAMs_20 19 09 34.9
comp=Z,471nm,19.0s
SIV San Ignacio 154.08 234 PKP PKPdf 17 49 41.9 +0.6
comp=Z,0.8nm,0.7s,baz=112,slow=11,SNR=2.9
SIV PKPbc PKiKP 17 49 49.7 +0.2
comp=Z,2.2nm,0.9s,baz=230,slow=2.9,SNR=5.4
SIV PKPab sPKPbc 17 50 01.6 -0.7
comp=Z,2.3nm,0.8s,baz=160,slow=6.8,SNR=6.5
LVC Limon Verde 154.82 211 PKPab PKPab 17 50 05.8 -0.4
comp=Z,4.7nm,0.7s,baz=91,slow=1.9,SNR=3.4
LVC Limon Verde 154.82 211 IAMs_20 IAMs_20 18 49 17.7
comp=Z,495nm,19.0s
PB11 IPOC Station P 157.54 214 PKPdf PKPdf 17 49 44.7 -1.3
PB11 PKPab 17 50 18.4 +0.7
SAML Samuel 159.08 248 PKPdf PKPdf 17 49 46.3 -1.5
SAML PKPab 17 50 24.6 +0.1
SAML Samuel 159.08 248 IAMs_20 IAMs_20 18 58 34.1
comp=Z,493nm,20.0s
SAML Samuel 159.08 248 PKIKP PKPdf 17 49 46.3 -1.5
SAML 17 50 24.6
SAML MLR MLR
comp=Z,500nm,20.0s
LPAZ La Paz 159.21 223 PKP PKPdf 17 49 48.4 -0.3
comp=Z,1.1nm,0.8s,baz=65,slow=1.5,SNR=3.4
LPAZ La Paz 159.21 223 PKPdf 17 49 48.7 0.0
LPAZ La Paz 159.21 223 PKIKP PKPdf 17 49 48.7 0.0
OTAV Otavalo 175.50 288 PKPdf 17 49 58.8 -1.5
OTAV Otavalo 175.50 288 PKIKP PKPdf 17 49 58.8 -1.5

ATH 22 17:38:39.0, 38.26N×20.36E, h14km±1km, ML2.3/3, Error ellipse: s-maj=2.0km s-min=0.9km az=266.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.05	87	P	Pg	17 38 41.7	0.0
KEF4				S	Sg	17 38 43.4	0.0
KEF3	Kipouria, Keph	0.05	189	P	Pg	17 38 41.8	+0.2
KEF3				S	Sg	17 38 43.9	+0.5
LXRA	Lixouri, Kepha	0.08	132	P	Pg	17 38 42.0	+0.1
LXRA				S	Sg	17 38 44.0	+0.1
KEF2	Argostoli. Kep	0.14	132	P	Pg	17 38 42.5	-0.1
KEF2				S	Sg	17 38 44.8	-0.2
VLS	Valsamata	0.20	113	P	Pg	17 38 43.2	-0.3
VLS				S	Sg	17 38 46.3	-0.3
VLS				AML	AML	17 38 46.4	
	comp=E,8500µm,0.1s						
VLS				AML	AML	17 38 46.4	
	comp=N,7011µm,0.1s						
KONA	Konidatara, Ke	0.24	45	P	Pg	17 38 44.0	-0.2
KONA				S	Sg	17 38 48.0	+0.3
FSK	Fiskardo	0.26	38	P	Pg	17 38 44.4	-0.2
FSK				S	Sg	17 38 48.2	0.0
FSK				AML	AML	17 38 48.8	
	comp=N,648µm,0.2s						
FSK				AML	AML	17 38 48.8	
	comp=E,970µm,0.2s						
KFL	Anninata	0.37	113	P	Pg	17 38 46.1	-0.4
EVGI	Lefkada island	0.43	33	P	Pg	17 38 47.5	-0.1
EVGI				S	Sg	17 38 54.1	+0.6
VLMS	Volimes, Zakyn	0.45	147	P	Pg	17 38 47.7	-0.2
VLMS				S	Sg	17 38 54.4	+0.4
VLMS				AML	AML	17 38 55.9	
	comp=E,756µm,0.1s						
VLMS				AML	AML	17 38 58.0	
	comp=N,826µm,0.2s						
MGNA	Meganis	0.53	40	P	Pg	17 38 49.1	-0.2
LKD2	Lefkada island	0.58	24	P	Pg	17 38 50.2	-0.2
TSLK	Tsoukalades, L	0.61	22	P	Pg	17 38 50.6	-0.4
PVO	Paravola	0.98	68	P	Pb	17 38 57.7	-0.1
AGG	Agios Georgios	1.72	63	P	Pb	17 39 11.1	+0.7

SKO 22 17:54:46.7, 40.94N×20.10E, h49km
TIR 22 17:54:50.7, 41.03N×20.17E, h18km, Md2.7/5
BEO 22 17:54:53.7±0.4, 41.32N×20.31E, h6km±2km, ML1.9/7
ISC 22 17:54:52.7±1.0, 41.18N±0.04×20.12E±0.03, h32km±8km, n28, σ1.72/52, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.25	311	ePg	Pb	17 54 59.7	-0.1
TIR				eSg	Sn	17 55 05.8	+0.6
TIR	Tirane	0.25	311	i PG	Pb	17 54 58.3	-1.5
TIR				i SG	Sn	17 55 05.7	+0.6
OHR	Ohrid	0.52	97	i Pg	Pb	17 55 00.8	-2.8
OHR				i Sg	Sb	17 55 09.8	-1.3
OHR				eLg	Lg	17 55 09.9	
	comp=E,44nm,0.6s						
OHR				eLg	Lg	17 55 10.2	
	comp=N,52nm,0.5s						
PHP	Peshkopia	0.56	26	i PG	Pb	17 55 04.2	0.0
PHP				i SG	Sn	17 55 15.0	+2.2
PUK	Puka	0.88	349	i PG	Pn	17 55 05.8	-3.2
PUK				i SG	Sn	17 55 17.3	-3.4

TPE Tepelena 0.89 185 *i* PG Pb 17 55 09.9 +0.2
TPE *i* SG Sb 17 55 25.6 +4.4
BCI Bajram Curri 1.19 358 *i* PN Pb 17 55 15.6 +0.9
BCI *i* SN Sb 17 55 35.2 +5.5
SKO Skopje 1.27 51 *e*Pg Pn 17 55 13.5 -0.7
SKO *e*Sg Sn 17 55 28.2 -2.0
SKO Skopje 1.27 51 *i* Pg Pb 17 55 14.7 +0.5
SKO *i* Sg Sb 17 55 33.0 +1.0
SKO *e*Lg Lg 17 55 33.4
comp=E,2.7nm,0.5s
SKO *e*Lg Lg 17 55 33.9
comp=N,4.7nm,0.4s
PDG Podgorica 1.41 333 *e*Pg Pb 17 55 17.8 -0.6
PDG *e*Sg Sb 17 55 35.6 -0.3
STIP Stip 1.64 71 *i* Pg Pb 17 55 21.2 -1.1
TREB Trebinje 2.02 320 *e*Pn Pb 17 55 28.3 -0.6
TREB *e*Sn Sb 17 55 54.8 +1.2
SJES Sjenica 2.08 357 *e*Pn Pb 17 55 27.8 -2.1
SJES *e*Sn Sn 17 55 52.5 +2.1
DBRK Dubrovnik 2.09 316 *e*Pn Pn 17 55 24.9 -0.7
DBRK Sn Sn 17 55 50.6 +0.1
BOSS Bosilegrad 2.20 53 *e*Pn Pn 17 55 26.8 -0.3
BOSS *e*Sn Sn 17 55 52.6 -0.6
STON Ston 2.47 314 *e*Pn Pn 17 55 30.3 -0.4
STON Sn Sn 17 55 58.7 -1.1
BOVS Bovan 2.72 25 *e*Pn Pn 17 55 36.1 +1.9
VTS Vitosha 2.73 57 *e*Pn Pn 17 55 34.5 0.0
VTS *e*Sn Sn 17 56 06.8 +0.2
GRUS Gruza 2.74 9 *e*Pn Pn 17 55 36.6 +2.1
ZAPS Zavoj 2.80 41 *e*Pn Pn 17 55 37.2 +1.8
ZAPS *e*Sn Sn 17 56 07.9 -0.2
ZAGS Zajecar 3.06 30 *e*Pn Pn 17 55 39.2 +0.3
MAKA Makarska 3.12 313 *e*Pn Pn 17 55 38.6 -1.1
MAKA Sn Sn 17 56 14.4 -1.3
KIJV Kijevo 3.94 317 *e*Pn Pn 17 55 51.4 +0.5
KIJV Sn Sn 17 56 35.5 -0.5
ZIRJ Zirje 4.13 308 *e*Pn Pn 17 55 53.5 -0.1
ZIRJ Sn Sn 17 56 38.7 -2.1
MORI Morici 4.22 311 *e*Pn Pn 17 55 54.3 -0.6
MORI Sn Sn 17 56 42.7 -0.3
UDBI Udbina 4.63 318 *e*Pn Pn 17 56 01.1 +0.6
UDBI Sn Sn 17 56 52.9 -0.3
DUGI Dugi Otok 4.67 309 *e*Pn Pn 17 56 01.3 +0.2
DUGI Sn Sn 17 56 52.6 -1.5
NVLJ Novalja 5.13 313 *e*Pn Pn 17 56 07.1 -0.1
NVLJ Sn Sn 17 57 02.0 -3.3

ATH 22 17:55:26.3, 38°.38N×22°.03E, h13km±3km, ML1.2/1, Error ellipse: s-maj=5.2km s-min=1.7km az=56.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	Trizonia	0.04	108	P	Pg	17 55 28.5	-0.1
TRIZ				S	Sg	17 55 30.5	+0.3
SERG	Sergoula	0.04	29	P	Pg	17 55 28.5	-0.2
SERG				S	Sg	17 55 30.4	0.0
SERG				AML	AML	17 55 30.8	
	comp=E,330µm,0.1s						
SERG				AML	AML	17 55 30.8	
	comp=N,504µm,0.2s						
KALE	Kalithea	0.09	80	P	Pg	17 55 29.1	0.0
KALE				S	Sg	17 55 31.0	-0.2
ANX	Ano Chora	0.23	338	P	Pg	17 55 31.3	0.0
ANX				S	Sg	17 55 34.8	0.0

IDC 22 17:56:12.6±2.3, 7°.08S×129°.57E, h130km±25km, mb3.5/5, mb1 3.6/9, mb1mx3.4/32, mbtmp3.9/9, Error ellipse: s-maj=35.9km s-min=14.2km az=85.0
ISC 22 17:56:12.7±0.8, 7°.18S±0°.07×129°.7E±0°.2, h139km, n9, σ2§61/11, mb3.7/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.46	14	P	Pn	17 57 46.5	+1.0
	1.2nm,0.3s,baz=228,slow=22,SNR=10						
SIJI				S	Sn	17 58 55.9	-2.2
	2.4nm,0.3s,baz=160,slow=23,SNR=7.2						
FITZ	Fitzroy Crossi	11.55	200	P	Pn	17 58 52.5	-1.1
	0.3nm,0.3s,baz=358,slow=9.8,SNR=11						
FITZ				S	Sn	18 00 53.2	-7.9
	0.3nm,0.3s,baz=222,slow=22,SNR=8.8						
WRA	Warramunga Arr	13.46	161	P	Pn	17 59 18.5	+0.2
	0.3nm,0.3s,baz=344,slow=13,SNR=14						
WRA				S	Sn	18 01 40.1	-7.1
	0.4nm,0.3s,baz=329,slow=23,SNR=11						
ASAR	Alice Springs	16.89	167	P	Pn	18 00 04.2	+3.3
	0.5nm,0.3s,baz=343,slow=9.3,SNR=64						
ASAR				S	S	18 03 04.4	-5.2
	0.1nm,0.3s,baz=359,slow=26,SNR=5.3						
STKA	Stephens Creek	26.96	157	P	P	18 01 44.4	+3.0
	1.0nm,0.6s,baz=350,slow=13,SNR=3.2						
CMAR	Chiang Mai Arr	39.62	310	P	P	18 03 30.8	-0.2
	0.8nm,0.5s,baz=142,slow=6.7,SNR=6.7						
MKAR	Makanchi Array	68.21	327	P	P	18 06 58.4	+0.2
	0.9nm,0.4s,baz=114,slow=8.6,SNR=28						
ZALV	Zalesovo Beam	71.61	334	P	P	18 07 18.7	-0.1
	0.4nm,0.5s,baz=125,slow=7.4,SNR=2.6						
ILAR	Eielson Array	93.63	25	P	P	18 09 12.3	-0.7
	0.5nm,1.1s,baz=260,slow=2.7,SNR=3.0						

IDC 22 18:09:57.6±2.4, 2°.40N×128°.65E, h225km±25km, mb3.3/7, mb1 3.4/8, mb1mx3.1/48, mbtmp3.8/8, Error ellipse: s-maj=41.5km s-min=12.1km az=65.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.17	141	P	Pn	18 11 02.8	+0.4
	1.6nm,0.3s,baz=319,slow=19,SNR=8.0						
FITZ	Fitzroy Crossi	20.59	188	P	P	18 14 18.6	-1.0
	1.5nm,0.7s,baz=24,slow=9.7,SNR=5.4						
WRA	Warramunga Arr	22.90	166	P	P	18 14 42.0	0.0
	1.3nm,0.3s,baz=342,slow=10,SNR=37						
ASAR	Alice Springs	26.41	169	P	P	18 15 13.5	-0.2
	1.4nm,0.5s,baz=352,slow=7.7,SNR=77						
ASAR				PcP	PcP	18 18 33.2	+0.1
	0.2nm,0.4s,baz=353,slow=1.7,SNR=4.5						
CMAR	Chiang Mai Arr	33.19	301	P	P	18 16 14.2	+0.8
	0.9nm,0.8s,baz=119,slow=6.9,SNR=11						
STKA	Stephens Creek	36.24	161	P	P	18 16 39.7	+0.4
	1.1nm,0.3s,baz=337,slow=7.1,SNR=13						
SONM	Songino Array	49.17	340	P	P	18 18 22.2	-0.7
	0.3nm,0.7s,baz=128,slow=5.9,SNR=2.8						
MKAR	Makanchi Array	59.73	325	P	P	18 19 38.3	-0.5
	0.9nm,0.4s,baz=117,slow=8.1,SNR=32						

SKHL 22 18:11:48.5±0.6, 47°.57N×152°.82E, h145km±5km, mb5.1/9, msh5.7/7
BJI 22 18:11:49.0±0.0, 47°.90N×152°.30E, h140km, mB4.9/17, mb4.3/24
MOS 22 18:11:49.8±1.2, 47°.80N×152°.50E, h159km, mb4.0/6, Error ellipse: s-maj=9.3km s-min=5.9km az=59.5
NEIC 22 18:11:50.0±2.8, 47°.86N±0°.03×152°.4E±0°.1, h141km±6km, mb4.3/23, Error ellipse: s-maj=13.2km s-min=4.3km az=91.0
IDC 22 18:11:53.0±1.9, 47°.99N×152°.29E, h164km±18km, mb3.5/23, mb1 3.7/28, mb1mx3.6/57, mbtmp4.1/28, Error ellipse: s-maj=13.7km s-min=9.3km az=136.0
ISC 22 18:11:50.0±0.5, 47°.69N±0°.06×152°.57E±0°.06, h150km, n159, σ1§82/175, mb3.8/31, 3D, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

SKR Severo-Kuril's 3.79 37 *e*P Pn 18 12 47.2 -0.2
SKR AMB AMB 18 12 51.0
100nm,0.3s
SKR *e*S Sn 18 13 31.6 -0.4
SKR A A 18 13 45.0
90nm,0.2s
SKR A A 18 13 45.0
190nm,0.2s
SKR Severo-Kuril's 3.79 37 *e*PN Pn 18 12 47.2 -0.2
SKR *e*S Sn 18 13 30.3 -1.7
SKR pmax pmax
comp=Z,87nm,0.4s
SKR smax smax
comp=E,186nm,0.2s
SKR smax smax
comp=N,93nm,0.2s
SKR MLR MLR
comp=Z,500nm,13.0s
SKR MLR MLR
comp=Z,500nm,16.0s
KUR Kuril'sk 4.07 235 *i* P Pn 18 12 53.3 +2.2
KUR AMB AMB 18 12 54.0
comp=Z,100nm,0.4s
KUR *e*S Sn 18 13 41.2 +2.5
KUR A A 18 13 53.0
comp=Z,280nm,0.5s
KUR A A 18 13 53.0
comp=Z,180nm,0.5s
KUR Kuril'sk 4.07 235 *d i*PN Pn 18 12 53.3 +2.2
KUR *e*S Sn 18 13 44.2 +5.5
KUR pmax pmax
comp=Z,100nm,0.4s
KUR pmax pmax
comp=N,23nm,0.2s
KUR pmax pmax
comp=E,5.0nm,0.3s
KUR smax smax
comp=N,283nm,0.5s
KUR smax smax
comp=E,179nm,0.5s
SHO Shikotan 5.54 228 *e*P Pn 18 13 09.7 -0.8
SHO AMB AMB 18 13 12.0
comp=E,80nm,0.4s
SHO *e*S Sn 18 14 10.4 -3.0
SHO A A 18 14 17.0
comp=E,80nm,0.2s
SHO A A 18 14 17.0
comp=E,70nm,0.2s
SHO Shikotan 5.54 228 *e*PN Pn 18 13 09.2 -1.3
SHO *e*S Sn 18 14 10.1 -3.3
SHO pmax pmax
comp=Z,78nm,0.4s
SHO pmax pmax
comp=N,55nm,0.3s
SHO pmax pmax
comp=E,53nm,0.5s
SHO smax smax
comp=N,77nm,0.2s
SHO smax smax
comp=E,74nm,0.2s
YUK Yuzh-Kuril'sk 5.94 234 *e*P Pn 18 13 16.9 +1.1
YUK AMB AMB 18 13 17.0
comp=E,170nm,0.5s
YUK AMB AMB 18 13 17.0
comp=E,360nm,0.5s
YUK *e*S Sn 18 14 23.6 +0.7
YUK A A 18 14 27.0
comp=E,170nm,0.5s
YUK A A 18 14 27.0
comp=E,60nm,0.5s
YUK Yuzh-Kuril'sk 5.94 234 *e*PN Pn 18 13 16.7 +0.9
YUK *e*S Sn 18 14 20.2 -2.7
YUK pmax pmax
comp=Z,359nm,0.5s
YUK pmax pmax
comp=N,30nm,0.2s
YUK pmax pmax
comp=E,166nm,0.4s
YUK smax smax
comp=N,165nm,0.5s
YUK smax smax
comp=E,60nm,0.2s
GRPR Tuman 6.02 235 *e*P Pn 18 13 17.2 +0.3
GRPR AMB AMB 18 13 22.0
comp=E,50nm,0.2s
GRPR *e*S Sn 18 14 23.9 -0.9
GRPR A A 18 14 35.0
comp=E,90nm,0.4s
GRPR A A 18 14 35.0
comp=E,130nm,0.4s
GRPR Tuman 6.02 235 *e*PN Pn 18 13 17.2 +0.3
GRPR *e*S Sn 18 14 23.9 -0.9
GRPR pmax pmax
comp=N,111nm,0.2s
GRPR pmax pmax
comp=E,99nm,0.2s
GRPR pmax pmax
comp=Z,251nm,0.2s
GRPR smax smax
comp=N,186nm,0.3s
GRPR smax smax
comp=E,131nm,0.3s
GLVR Golovnino 6.32 234 *e*P Pn 18 13 20.9 0.0
GLVR AMB AMB 18 13 22.0
comp=E,190nm,0.4s
GLVR *e*S Sn 18 14 32.0 -0.1
GLVR A A 18 14 34.0
comp=E,190nm,0.5s
GLVR A A 18 14 34.0
comp=E,110nm,0.5s
GLVR Golovnino 6.32 234 *e*PN Pn 18 13 20.9 0.0
GLVR *e*S Sn 18 14 32.0 -0.1
GLVR pmax pmax
comp=Z,192nm,0.4s
GLVR smax smax
comp=N,190nm,0.4s
GLVR smax smax
comp=E,255nm,0.4s
PEA0B Petropavlovsk- 6.34 29 P Pn 18 13 21.4 +0.4
PEA0B Petropavlovsk- 6.34 29 *i* PN Pn 18 13 21.4 +0.4
PETK Petropavlovsk- 6.34 29 P Pn 18 13 20.6 -0.4
comp=E,2.5nm,0.3s,baz=201,slow=14,SNR=19
JRA Rausu 6.42 237 P Pn 18 13 23.0 +0.9
NEM2 Nemuro 2 6.46 230 P Pn 18 13 20.9 -1.8
NEM2 *e*S Sn 18 14 30.3 -5.0
NMR Nemuro--Hokkai 6.46 231 *e*P Pn 18 13 21.3 -1.5
NMR Nemuro--Hokkai 6.46 231 *e*PN Pn 18 13 21.0 -1.8
PET Petropavlovsk 6.61 34 *e*P Pn 18 13 24.3 -0.3
PET AMB AMB 18 13 33.7
comp=E,30nm,0.2s
PET *e*S Sn 18 14 35.3 -3.4
PET A A 18 14 37.7
comp=E,40nm,0.4s
PET A A 18 14 37.7
comp=E,20nm,0.4s
PET Petropavlovsk 6.61 34 P Pn 18 13 20.6 -4.0
PET Petropavlovsk 6.61 34 *e*PN Pn 18 13 23.9 -0.7
PET *e*S Sn 18 14 35.5 -3.2
PET smax smax
comp=N,51nm,0.5s
PET smax smax
comp=E,40nm,0.5s
YSS Yuzh-Sakhalins 6.71 267 *i* P Pn 18 13 28.9 +2.8
YSS AMB AMB 18 13 29.8
comp=E,20nm,0.9s
YSS Yuzh-Sakhalins 6.71 267 ⇓ *i*PN Pn 18 13 29.1 +3.0
YSS pmax pmax
comp=Z,20nm,0.9s
JNK Nakash 6.86 236 P Pn 18 13 28.4 +0.2
JTKR Abashiri--Toko 7.10 242 P Pn 18 13 32.5 +1.2
TYV Tymovskoe 7.22 300 *e*P Pn 18 13 33.7 +0.9
TYV AMB AMB 18 13 34.6
comp=Z,7.0nm,0.7s
TYV Tymovskoe 7.22 300 *e*PN Pn 18 13 33.7 +0.9
TYV pmax pmax
comp=Z,7.0nm,0.7s
JAK Akkeshi 7.26 233 P Pn 18 13 31.7 -1.8
JMP Maruseppu 7.41 244 P Pn 18 13 36.9 +1.4
JAR Ashorobuto 7.58 238 P Pn 18 13 38.5 +0.8
JOB Onbets 7.80 235 P Pn 18 13 39.6 -1.0
JOB *e*S Sn 18 15 04.2 -3.3
JKA Kamikawa-asahi 7.82 246 *e*P Pn 18 13 43.4 +2.5
JKA Kamikawa-asahi 7.82 246 P Pn 18 13 43.4 +2.5
ASAJ Asahikawa 7.82 246 P Pn 18 13 43.4 +2.5
ASAJ Asahikawa 7.82 246 P Pn 18 13 43.4 +2.5
comp=Z,19nm,0.3s,baz=66,slow=11,SNR=361
JKK2 Kamakawa 2 7.85 245 P Pn 18 13 43.2 +1.8
JCH Churui 8.25 235 P Pn 18 13 44.8 -1.8
JCH *e*S Sn 18 15 14.0 -4.4
JFR Furan 8.35 241 P Pn 18 13 48.9 +0.9
JBT2 Biratori 2 8.71 239 P Pn 18 13 52.2 -0.6
ERM Erimo 8.77 233 P Pn 18 13 52.6 -0.9
ERM Erimo 8.77 233 *i* PN Pn 18 13 53.0 -0.5
JNB Noboribetsu 9.68 242 P Pn 18 14 04.1 -1.6
JKB Kayabe 10.04 239 P Pn 18 14 08.2 -2.2
JKB *e*S Sn 18 15 53.2 -8.3
JSH Shimam 10.18 245 P Pn 18 14 12.7 +0.5
JYM2 Yakumo 2 10.29 242 P Pn 18 14 12.1 -1.6
JSR Shiriuchi 10.62 239 P Pn 18 14 16.2 -1.9
JANG Nango 10.80 231 P Pn 18 14 16.1 -4.4
JANG *e*S Sn 18 16 09.3 -11
JOSM Okushiri--Mats 10.85 244 P Pn 18 14 19.2 -1.8
EKMR Ekimchan 13.61 301 *e*P Pn 18 14 58.2 +1.5
EKMR AMB AMB 18 15 03.7
comp=Z,10.0nm,0.8s
KLR Kul'dur 13.90 284 P Pn 18 15 01.5 +1.1
comp=Z,0.8nm,0.3s,baz=89,slow=10,SNR=28
KLR Kul'dur 13.90 284 *e*P Pn 18 15 00.9 +0.5
KLR Kul'dur 13.90 284 *i* P Pn 18 15 00.9 +0.5
KLR pmax pmax
comp=Z,9.0nm,0.9s
USA0B Ussuriysk Arra 14.73 264 P Pn 18 15 12.0 +1.1
USA0B Ussuriysk Arra 14.73 264 P Pn 18 15 12.0 +1.1
USRK Ussuriysk Ar. 14.73 264 P Pn 18 15 12.1 +1.2
baz=65,slow=12,SNR=29
SEY Seymchan 15.28 360 P Pn 18 15 17.9 +0.5
comp=Z,0.3nm,0.3s,baz=182,slow=10,SNR=12
MJA0 Matsu Arr-Jizo 15.37 229 *e*P P 18 15 19.6 -0.6
MJB9 Matsu-Tunnel 15.39 229 P P 18 15 19.1 -1.3
MJB9 IAmb IAmb 18 15 23.5
comp=Z,20nm,1.0s
MAJO Matsushiro 15.39 229 P Pn 18 15 18.2 -0.9
MAJO IAmb IAmb 18 15 23.6
comp=Z,19nm,1.0s
MAJO Matsushiro 15.39 229 *i* P P 18 15 19.7 -0.7
MAT Matsushiro 15.39 229 P Pn 18 15 17.2 -1.9
MJAR Matsushiro Arr 15.39 229 P P 18 15 19.6 -0.8
comp=Z,0.1nm,0.3s,baz=26,slow=12,SNR=18
MDJ Mudanjiang 16.20 268 Pn 18 15 27.7 -1.3
MDJ IAmb IAmb 18 15 32.8
comp=Z,9.8nm,0.8s
BMKR Bomnak 16.39 304 *e*P P 18 15 31.6 +0.3
BMKR AMB AMB 18 15 31.8
comp=Z,6.0nm,0.6s
INU Inuyama 16.92 229 P P 18 15 35.6 -1.7
INU IAmb IAmb 18 15 41.2
comp=Z,18nm,1.0s
ZEA Zeya 17.09 300 *e*P P 18 15 39.2 +0.3
ZEA Zeya 17.09 300 *e*P P 18 15 39.2 +0.3
KROS Kirovskiy 17.38 302 *e*P P 18 15 42.1 -0.1
KROS AMB AMB 18 15 46.8
comp=Z,5.0nm,0.8s
CN2 Changchun 19.28 268 *e*P P 18 16 01.8 -1.2
CN2 pmax pmax
comp=Z,10.0nm,0.6s
YAK Yakutsk 19.33 326 P P 18 16 02.0 -1.3
YAK IAmb IAmb 18 16 07.9
comp=Z,8.4nm,0.6s
YAK Yakutsk 19.33 326 P P 18 16 02.0 -1.3
YAK pmax pmax
comp=Z,8.0nm,0.6s
KIWB Kanaga Island 19.92 67 P Pn 18 16 10.5 -2.4
ADK Adak 20.21 67 P Pn 18 16 13.5 -2.9
ADK Adak 20.21 67 P Pn 18 16 13.5 -2.9
ADK pmax pmax
comp=Z,59nm,1.2s
KSRS Korea Array 20.75 249 P P 18 16 20.2 +1.5
comp=Z,11nm,0.9s,baz=50,slow=10,SNR=29
KS19 Wonju Array Si 20.76 250 P P 18 16 18.3 -0.5
KS19 IAmb IAmb 18 16 21.4
comp=Z,10nm,0.9s
BILL Bilibino 21.56 14 *e*P P 18 16 27.5 +0.3
BILL Bilibino 21.56 14 *i* P P 18 16 27.5 +0.3
BILL pmax pmax
comp=Z,1.0nm,1.0s
JNU Nakatsue 21.91 236 P P 18 16 33.2 +2.0
comp=Z,2.9nm,0.7s,baz=58,slow=15,SNR=4.7
JNU Nakatsue 21.91 236 P P 18 16 30.0 -1.2
JNU IAmb IAmb 18 16 53.6
comp=Z,20nm,1.3s
TIXI Tiksi 26.46 343 P P 18 17 11.4 -1.1
comp=Z,1.3nm,0.3s,baz=53,slow=0.5,SNR=7.7
TIXI Tiksi 26.46 343 P P 18 17 16.2 +3.8
TIXI Tiksi 26.46 343 *i* P P 18 17 07.8 -4.7
TIXI pmax pmax
comp=Z,6.0nm,2.1s
BJT Baijiatuau 27.15 267 P P 18 17 21.1 +2.2
BJT IAmb IAmb 18 17 23.4
comp=Z,4.8nm,1.0s
BJT Baijiatuau 27.15 267 P P 18 17 21.2 +2.2
BJT pmax pmax
comp=Z,5.0nm,1.0s
H11N2 WAKE ISLAND Hy 30.23 152 T T 18 49 44.4
baz=340,slow=75
H11N1 WAKE ISLAND Hy 30.24 152 T T 18 49 45.8
baz=340,slow=75
H11N3 WAKE ISLAND Hy 30.24 152 T T 18 49 46.2
baz=340,slow=75
SONM Songino Array 30.68 288 P P 18 17 49.6 -0.7
comp=Z,0.7nm,0.7s,baz=62,slow=8.9,SNR=5.3
SONM Songino Array 30.68 288 *e*P P 18 17 50.2 -0.2
SONM pmax pmax
comp=Z,1.0nm,0.7s
H11S1 WAKE ISLAND Hy 31.32 154 T T 18 51 03.2
baz=343,slow=76
H11S3 WAKE ISLAND Hy 31.32 154 T T 18 50 57.8
baz=343,slow=76
H11S2 WAKE ISLAND Hy 31.34 154 T T 18 50 55.3
baz=343,slow=76
TLY Talaya 31.43 296 *i* P P 18 17 54.8 -1.9
TLY pmax pmax
comp=Z,4.0nm,2.0s
YULB Yu-li 34.76 237 P P 18 18 25.1 -0.8
TPUB Ta-pu 35.20 238 P P 18 18 30.0 +0.2
RND Reindeer 35.22 42 P P 18 18 28.4 -1.1
RND IAmb IAmb 18 18 31.8
comp=Z,6.7nm,1.3s
RND Reindeer 35.22 42 P P 18 18 28.5 -1.1
RND pmax pmax
comp=Z,7.0nm,1.3s
ILAR Eielson Array 36.05 39 P P 18 18 37.1 +0.7
comp=Z,0.4nm,0.7s,baz=257,slow=5.9,SNR=9.0
ILAR Eielson Array 36.05 39 *e*P P 18 18 37.4 +0.9
ILAR pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 41.76 305 P P 18 19 22.4 -1.7
comp=Z,2.1nm,0.5s,baz=61,slow=6.8,SNR=14
ZALV pP pwP 18 19 59.9 -0.6
comp=Z,1.1nm,0.5s,baz=68,slow=6.3,SNR=3.5
ZALV PcP PcP 18 21 17.4 +0.1
comp=Z,1.2nm,0.5s,baz=93,slow=2.3,SNR=7.1
ZALV Zalesovo Beam 41.76 305 *e*P P 18 19 22.5 -1.6
ZALV pmax pmax
comp=Z,3.0nm,0.6s
WMQ Urumqi 44.25 290 *e*P P 18 19 46.0 +1.7
WMQ pmax pmax
comp=Z,46nm,9.7s
WMQ LR LR
comp=Z,520nm,29.3s
WMQ LR LR
comp=Z,2µm,29.1s
WMQ LR LR
comp=Z,120nm,23.3s
MKAR Makanchi Array 46.18 296 P P 18 19 58.2 -1.2
comp=Z,0.7nm,0.5s,baz=72,slow=8.6,SNR=11
MKAR pP pwP 18 20 36.2 -0.3
comp=Z,3.0nm,0.9s,baz=67,slow=7.9,SNR=8.3
MKAR PcP PcP 18 21 33.4 +0.7
comp=Z,0.7nm,0.6s,baz=78,slow=2.1,SNR=8.2
KURK Kurchatov 46.54 303 *e*P P 18 20 00.7 -1.4
KURK Kurchatov 46.54 303 P P 18 20 00.7 -1.4
KURK IAmb IAmb 18 20 01.8
comp=Z,5.7nm,0.7s
KURK Kurchatov 46.54 303 P P 18 20 00.7 -1.4
KURK pmax pmax
comp=Z,6.0nm,0.7s
LSA Lhasa 49.86 272 P P 18 20 30.3 +1.9
LSA pmax pmax
comp=Z,15nm,1.1s
YKA Yellowknife Ar 50.39 37 P P 18 20 32.7 +1.4
comp=Z,0.6nm,0.5s,baz=299,slow=7.0,SNR=9.3
CHTO Chiang Mai 51.98 255 P P 18 20 45.2 +1.4
CHTO IAmb IAmb 18 20 46.4
comp=Z,4.1nm,0.8s
CHTO Chiang Mai 51.98 255 P P 18 20 45.2 +1.4
CHTO pmax pmax
comp=Z,4.0nm,0.9s
CMAR Chiang Mai Arr 52.24 255 P P 18 20 47.5 +1.8
comp=Z,2.9nm,0.8s,baz=35,slow=7.2,SNR=26
CMAR PcP PcP 18 21 56.8 +1.7
comp=Z,0.6nm,0.7s,baz=6.3,slow=2.1,SNR=4.9
PBKT Sadao Pong 52.31 252 P P 18 20 47.7 +1.6
TAPN Taplejung 53.68 272 *e*P P 18 20 58.3 +1.7
comp=Z,3.2nm,0.4s
ARU Arti 54.07 317 *e*P P 18 20 57.4 -1.2
ARU Arti 54.07 317 P P 18 20 57.1 -1.5
ARU Arti 54.07 317 *d i*P P 18 20 57.4 -1.2
ARU S S 18 28 23.2 +0.3

ARU SS SS 18 32 07.7 +2.0
ARU pmax pmax
comp=Z,15nm,2.1s
ODAN Odare 54.22 272 eP P 18 21 01.9 +1.5
JIRN Jiri 54.51 274 eP P 18 21 03.6 +1.0
comp=Z,9.1nm,0.5s
GUN Gumba 54.56 274 eP P 18 21 03.5 +0.6
comp=Z,6.2nm,0.5s
RAMN Ramite 54.69 273 eP P 18 21 04.5 +0.7
comp=Z,4.7nm,0.3s
KKN Kakani 55.04 274 eP P 18 21 07.8 +1.5
PKI Pulchoki 55.09 274 eP P 18 21 07.3 +0.5
PKIN Phulchoki 55.10 274 eP P 18 21 07.4 +0.7
comp=Z,2.9nm,0.5s
DMN Daman 55.27 274 eP P 18 21 09.2 +1.2
comp=Z,6.8nm,0.4s
GKN Gorkha 55.33 275 eP P 18 21 09.0 +0.7
comp=Z,11nm,0.5s
DANN Dangsing 55.70 276 eP P 18 21 11.7 +0.6
comp=Z,18nm,0.5s
ARCES ARCESS Array B 56.84 340 P P 18 21 16.5 -1.7
comp=Z,3.0nm,0.9s,baz=35,slow=8.0,SNR=3.6
NVAR Mina Array Bea 62.33 62 P P 18 21 58.4 +1.9
comp=Z,0.5nm,0.5s,baz=299,slow=7.7,SNR=5.4
FINES FINESS Array B 63.03 334 P P 18 21 58.7 -1.7
comp=Z,2.7nm,0.6s,baz=41,slow=7.9,SNR=14
PDAR Pinedale Array 64.49 54 P P 18 22 12.1 +1.4
comp=Z,0.6nm,0.7s,baz=323,slow=1.5,SNR=7.9
NOA NORSAR Array B 67.22 341 P P 18 22 26.4 -1.1
comp=Z,0.5nm,0.6s,baz=25,slow=6.4,SNR=4.7
NOA NORSAR Array B 67.22 341 eP P 18 22 27.9 +0.4
NOA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 69.29 198 P P 18 22 42.5 +1.7
comp=Z,0.8nm,0.6s,baz=13,slow=6.7,SNR=7.0
WRA Warramunga Arr 69.29 198 eP P 18 22 42.1 +1.3
WRA pmax pmax
comp=Z,1.0nm,0.6s
FITZ Fitzroy Crossi 69.80 207 P P 18 22 45.8 +1.8
comp=Z,1.2nm,0.7s,baz=68,slow=5.4,SNR=3.5
FITZ Fitzroy Crossi 69.80 207 P P 18 22 45.9 +1.9
FITZ IAmb IAmb 18 23 16.9
comp=Z,5.7nm,1.3s
KIV Kislovodsk 69.88 314 eP P 18 22 43.6 -0.8
KIV Kislovodsk 69.88 314 eP P 18 22 43.6 -0.8
KIV pmax pmax
comp=Z,12nm,1.1s
AKASG Malin Array Be 70.56 326 P P 18 22 47.3 -1.0
comp=Z,0.6nm,0.4s,baz=36,slow=6.3,SNR=7.5
AKASG Malin Array Be 70.56 326 eP P 18 22 47.9 -0.4
AKASG pmax pmax
comp=Z,1.0nm,0.4s
SCHQ Schefferville 72.58 23 P P 18 23 00.8 +0.5
comp=Z,0.8nm,0.4s,baz=306,slow=5.8,SNR=4.6
SCHQ Schefferville 72.58 23 P P 18 23 01.0 +0.6
AS31 Alice Springs 72.99 198 P P 18 23 05.5 +2.4
ASAR Alice Springs 72.99 198 P P 18 23 06.1 +3.1
comp=Z,2.4nm,0.4s,baz=10,slow=5.6,SNR=116
VYHS Vyhne 76.12 330 eP P 18 23 21.9 +1.0
VYHS Vyhne 76.12 330 eP P 18 23 21.9 +1.0
KHC Kasperske Hory 77.23 334 eP P 18 23 26.0 -1.1
KHC Kasperske Hory 77.23 334 eP P 18 23 26.0 -1.1
TX31 Lajitas Ar. Si 77.35 60 P P 18 23 30.1 +1.9
TX32 Lajitas Array 77.35 60 P P 18 23 29.6 +1.4
TXAR Lajitas Array 77.35 60 P P 18 23 29.9 +1.7
comp=Z,1.2nm,0.7s,baz=303,slow=4.5,SNR=18
TXAR Lajitas Array 77.35 60 P P 18 23 30.0 +1.7
BRTR Keskin Array B 77.45 316 P P 18 23 27.8 -0.9
comp=Z,0.9nm,1.0s,baz=143,slow=2.9,SNR=3.1
STKA Stephens Creek 79.82 189 P P 18 23 43.8 +2.5
comp=Z,0.8nm,0.4s,baz=32,slow=7.5,SNR=4.5
STKA Stephens Creek 79.82 189 P P 18 23 43.7 +2.5
STKA Stephens Creek 79.82 189 P P 18 23 43.7 +2.5
STKA pmax pmax
comp=Z,3.0nm,1.7s
MMAI Mount Meron Ar 81.91 311 P P 18 23 52.9 +0.2
comp=Z,0.7nm,0.5s,baz=52,slow=7.5,SNR=2.5

IDC 22 18:53:24.2±4.9,2.74N×127.58E,h115km±50km,mb3.2/4, mb1 3.3/5,mb1mx3.1/31,mbtmp3.6/5,Error ellipse: s-maj=87.5km s-min=21.4km az=66.0,Northern Molucca Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 5.14 134 P Pn 18 54 40.0 +0.9
1.8nm,0.3s,baz=304,slow=23,SNR=11
SIJI S Sn 18 55 37.1 -0.1
1.3nm,0.3s,baz=211,slow=19,SNR=5.1
WRA Warramunga Arr 23.49 164 P P 18 58 23.9 0.0
0.6nm,0.5s,baz=345,slow=9.5,SNR=8.2
ASAR Alice Springs 26.96 167 P P 18 58 55.3 +0.1
0.5nm,1.1s,baz=349,slow=8.1,SNR=3.9
ASAR PcP PcP 19 02 13.9 -0.5
0.3nm,0.9s,baz=353,slow=2.3,SNR=3.3
STKA Stephens Creek 36.91 160 P P 19 00 22.1 +0.1
1.2nm,0.4s,baz=333,slow=8.3,SNR=6.3
MKAR Makanchi Array 58.85 325 P P 19 03 10.8 -0.2
0.2nm,0.6s,baz=115,slow=7.9,SNR=2.7

IDC 22 19:00:42.0±6.8,19.58S×176.14W,h0km,mb3.7/3, mb1 4.0/3,mb1mx3.6/29,mbtmp3.7/3,MS3.5/2,Ms1 3.5/2, ms1mx2.9/26,Error ellipse: s-maj=261.3km s-min=74.5km az=143.0,Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AFI Afiamalu 7.01 37 LR LR 19 05 00.8
comp=Z,84nm,18.5s,baz=245,slow=37
RAR Rarotonga 15.43 99 LR LR 19 08 10.0
comp=Z,597nm,20.5s,baz=71,slow=29
ASAR Alice Springs 46.44 256 P P 19 09 10.8 -0.2
0.7nm,0.5s,baz=88,slow=8.1,SNR=22
WRA Warramunga Arr 46.47 261 P P 19 09 10.8 -0.4
0.9nm,0.9s,baz=97,slow=7.5,SNR=5.4
CMAR Chiang Mai Arr 91.47 289 P P 19 13 51.5 +0.7
0.3nm,0.8s,baz=87,slow=3.7,SNR=3.1
AKASG Malin Array Be 143.02 333 PKP PKPbc 19 20 15.3 +0.9
0.2nm,0.5s,baz=48,slow=3.4,SNR=4.1

IDC 22 19:06:12.6±0.8, 62.83S×161.64W, h0km, mb4.2/6, mb1 4.3/6, mb1mx4.1/26, mbtmp4.2/6, MS4.0/12, Ms1 4.0/12, ms1mx3.3/8/20, Error ellipse: s-maj=36.5km s-min=22.1km az=29.0
NEIC 22 19:06:13.3±2.6, 62.8S±0.2×161.8W±0.2, h10km±1km, mb4.9/13, Error ellipse: s-maj=28.1km s-min=18.3km az=14.0
ISC 22 19:06:13.4±0.7,62.8S±0.2×161.8W±0.1,h10km,n48, σ1§00/29,mb4.6/11,MS4.0/13,Pacific-Antarctic Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VNDA Vanda 18.69 204 LR LR 19 16 04.3
comp=Z,740nm,18.5s,baz=69,slow=32
MCQ Macquarie Isla 21.73 274 P P 19 11 02.1 -2.3
MCQ IAmb IAmb 19 11 03.8
comp=Z,246nm,1.4s
RPZ Rata Peaks 24.75 308 P P 19 11 33.9 -0.9
FOZ Fox Glacier 25.36 306 P P 19 11 39.5 -0.8
QSPA South Pole Qui 27.34 180 P P 19 11 58.3 +0.1
comp=Z,7.3nm,1.1s,baz=351,slow=2.6,SNR=3.9
QSPA LR LR 19 20 49.7
comp=Z,280nm,19.0s,baz=68,slow=32
QSPA South Pole Qui 27.34 180 P P 19 11 57.9 -0.3
QSPA IAmb IAmb 19 12 04.5
comp=Z,21nm,1.4s
LHI Lord Howe Isla 39.96 303 P P 19 13 48.0 +0.3
TBI Tubuai 40.28 18 eLR LR 19 24 37.0
comp=Z,430nm,27.0s
RAR Rarotonga 41.56 3 LR LR 19 26 49.8
comp=Z,116nm,19.4s,baz=184,slow=30
RKT Rikitea 43.56 37 eT T 20 00 16.3
comp=Z,5.6nm,0.3s
ARMA Armidale 43.92 295 P P 19 14 20.1 -0.1
ARMA IAmb IAmb 19 14 22.9
comp=Z,23nm,1.4s
SNAA Sanae 45.04 171 P P 19 14 29.0 +0.4
comp=Z,6.8nm,1.0s,baz=168,slow=7.4,SNR=6.4
SNAA Sanae 45.04 171 P P 19 14 27.8 -0.8
SNAA IAmb IAmb 19 14 33.5
comp=Z,13nm,1.2s
TVO Taravao 45.79 17 eT T 20 03 05.5
comp=Z,2.8nm,0.3s
MEH Mehetia 45.86 18 eT T 20 03 10.6
comp=Z,24nm,0.3s
PAE Paea 45.86 16 eT T 20 03 11.0
comp=Z,3.4nm,0.3s
PPT2 Papeete2 45.93 16 eLR LR 19 27 20.4
comp=Z,493nm,25.8s
PPT2 Papeete2 45.93 16 eT T 20 03 17.2
comp=Z,11nm,0.3s
PPT Papeete 45.95 16 LR LR 19 28 17.5
comp=Z,212nm,19.8s,baz=193,slow=29
MAW Mawson 45.99 202 LR LR 19 31 38.5
comp=Z,201nm,21.2s,baz=208,slow=33
DZM Mont Dzumac 46.03 317 LR LR 19 31 21.3
comp=Z,82nm,18.9s,baz=181,slow=33
STKA Stephens Creek 47.02 284 LR LR 19 30 06.0
comp=Z,127nm,21.5s,baz=193,slow=30
PLCA Paso Flores 55.26 112 P P 19 15 44.9 -1.6
comp=Z,0.9nm,0.8s,baz=249,slow=8.6,SNR=3.0
PLCA LR LR 19 33 53.6
comp=Z,140nm,21.1s,baz=50,slow=30
H01W1 Cape Leeuwin H 57.00 257 T T 20 18 27.6
baz=146,slow=74
H01W2 Cape Leeuwin H 57.01 257 T T 20 18 20.4
baz=146,slow=74
H01W3 Cape Leeuwin H 57.02 257 T T 20 18 23.2
baz=146
AS31 Alice Springs 57.52 282 P P 19 16 03.2 +0.5
ASAR Alice Springs 57.52 282 P P 19 16 03.6 +0.9
comp=Z,2.9nm,0.9s,baz=154,slow=7.1,SNR=14
ASAR LR LR 19 37 19.2
comp=Z,152nm,20.5s,baz=158,slow=32
WRA Warramunga Arr 60.56 284 P P 19 16 23.8 0.0
comp=Z,1.5nm,0.9s,baz=151,slow=5.7,SNR=2.8
PMG Port Moresby 64.58 302 LR LR 19 43 07.1
comp=Z,52nm,18.8s,baz=16,slow=34
PSA00 Pilbara Seismi 65.75 270 P P 19 16 58.8 +0.6
PSA00 IAmb IAmb 19 17 03.1
comp=Z,12nm,1.1s
GO02 Mina Guanaco 68.92 104 P P 19 17 18.8 +0.2
LVC Limon Verde 71.44 103 P P 19 17 33.8 -0.4
LVC IAmb IAmb 19 17 42.5
comp=Z,5.7nm,0.9s
MNMC Minye Minye 74.17 101 P P 19 17 49.8 -0.5
MNMC IAmb IAmb 19 17 58.3
comp=Z,11nm,1.1s
LPAZ La Paz 77.32 101 P P 19 18 08.8 +0.1
comp=Z,1.3nm,0.6s,baz=229,slow=9.0,SNR=4.0
LPAZ La Paz 77.32 101 P P 19 18 07.4 -1.4
BDFB Brasilia 86.59 118 LR LR 19 54 32.2
comp=Z,130nm,19.8s,baz=231,slow=34
BOSA Boshof 88.75 186 LR LR 19 55 33.3
comp=Z,116nm,19.8s,baz=166,slow=33
ILAR Eielson Array 127.72 8 PKP PKiKP 19 25 19.6 +1.8
comp=Z,0.3nm,0.6s,baz=239,slow=1.3,SNR=5.8
MKAR Makanchi Array 141.58 276 PKhKP PKPpre 19 25 39.5
comp=Z,0.3nm,0.8s,baz=102,slow=5.0,SNR=3.4
AAK Ala-Archa 141.98 265 PKPdf 19 25 44.5 -0.1
KK31 Karatay Array 144.16 262 PKPab 19 25 46.8 +0.8
KKAR Karatay Array 144.16 262 PKPab 19 25 46.8 +0.8
GEYT Alibeck 145.35 243 PKPbc PKPbc 19 25 49.1 -1.3
comp=Z,4.8nm,1.0s,baz=114,slow=1.8,SNR=5.0
ZALV Zalesovo Beam 145.51 287 PKPbc PKPab 19 25 51.2 +0.6
comp=Z,1.7nm,0.7s,baz=101,slow=3.3,SNR=8.4
KURK Kurchatov 146.09 278 PKPdf 19 25 51.0 -0.3
ESDC Sonseca Array 153.29 140 PKPbc PKiKP 19 26 11.9 +1.0
comp=Z,0.8nm,0.7s,baz=251,slow=2.3,SNR=4.8
ESDC PKPab PKPab 19 26 23.9 +1.2
comp=Z,0.9nm,0.8s,baz=180,slow=3.7,SNR=4.1
BRTR Keskin Array B 155.12 209 PKPab PKPab 19 26 32.1 +1.5
comp=Z,1.1nm,0.9s,baz=186,slow=4.8,SNR=4.2

IDC 22 19:11:08.6±2.2, 10.87N×62.51W, h88km±21km, mb3.4/10, mb1 3.7/13, mb1mx3.5/34, mbtmp3.8/13, Error ellipse: s-maj=20.8km s-min=14.1km az=41.0
NEIC 22 19:11:10.7±2.1, 10.77N±0.05×62.60W±0.06, h109km±6km, mb4.2/5, Error ellipse: s-maj=9.9km s-min=5.8km az=126.0
TRN 22 19:11:11.3, 10.69N×62.52W, h100km, MD3.7
ISC 22 19:11:09.7±0.7,10.71N±0.04×62.60W±0.04,h103km±7km, n62,σ1§42/86,mb3.8/11,Near coast of Venezuela

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TRN Trinidad (W) 1.18 93 eP Pn 19 11 33.5 +1.1
TRN eS Sn 19 11 48.5 -0.9
TPP Pointe-a-Pierr 1.19 109 eP Pn 19 11 32.6 +0.1
TPP eS Sn 19 11 49.6 -0.2
TBH Brigand Hill 1.52 98 eP Pn 19 11 37.8 +1.4
TBH eS Sn 19 11 55.4 -1.3
GRGR Grenville 1.69 33 eP Pn 19 11 39.4 +0.7
GRGR eS Sn 19 12 00.5 0.0
GRGR Grenville 1.69 33 Pn Pn 19 11 39.3 +0.7
GRGR Sn Sn 19 12 00.2 -0.4
GRHS Sauteurs 1.78 32 eP Pn 19 11 41.1 +1.4
GRHS eS Sn 19 12 02.8 +0.5
GRSS Sisters 1.85 31 eP Pn 19 11 41.7 +1.1
GRSS eS Sn 19 12 04.1 0.0
PLCV Puerto La Cruz 2.03 255 Pn 19 11 44.8 +1.9
PLCV Sn 19 12 09.5 +1.3
PCRV Puerto La Cruz 2.07 255 P Pn 19 11 44.8 +1.4
34nm,0.3s,baz=57,slow=3.6,SNR=293
PCRV S Sn 19 12 09.5 +0.3
32nm,0.3s,baz=63,slow=9.0,SNR=28
TOSP Speyside 2.11 74 eP Pn 19 11 44.2 +0.4
TOSP eS Sn 19 12 08.9 -1.0
TOSP Speyside 2.11 74 Pn Pn 19 11 43.7 -0.1
TOSP Sn Sn 19 12 09.2 -0.8
SVB Belmont 2.87 27 eP Pn 19 11 56.0 +2.1
SVB eS Sn 19 12 27.7 -0.2
SVB Belmont 2.87 27 Pn Pn 19 11 55.0 +1.1
SVB Sn Sn 19 12 28.3 +0.4
SVCV St. Vincent, C 2.92 29 eP Pn 19 11 56.1 +1.5
SVCV eS Sn 19 12 28.6 -0.5
SVV Soufriere Volc 2.93 27 eP Pn 19 11 55.6 +0.9
SVV eS Sn 19 12 28.6 -0.6
SSV Crater Summit 2.95 28 eP Pn 19 11 56.8 +1.9
SSV eS Sn 19 12 29.5 -0.3
MCLT Moule a Chique 3.40 28 eP Pn 19 12 02.2 +1.3
MCLT eS Sn 19 12 39.6 -0.9
MCLT Moule a Chique 3.40 28 Pn Pn 19 12 01.5 +0.6
MCLT Sn Sn 19 12 44.4 +4.0
SLB Belfond 3.46 26 eP Pn 19 12 03.3 +1.5
SLB eS Sn 19 12 41.1 -0.8
BBGH Gun Hill 3.84 51 eP Pn 19 12 08.4 +1.6
BBGH eS Sn 19 12 49.2 -1.8
BBGH Gun Hill 3.84 51 Pn Pn 19 12 08.0 +1.2
BBGH Sn Sn 19 12 50.7 -0.3
BBSP Saint Philip 3.89 52 eP Pn 19 12 09.0 +1.5
BBSP eS Sn 19 12 50.6 -1.7
BIM Bigot 4.07 21 eP Pn 19 12 10.7 +0.6
MPOM Morne Pois Mar 4.09 24 eP Pn 19 12 12.1 +1.9
TRMF Trois Ilets 4.10 21 eP Pn 19 12 09.4 -0.9
ZAM Aeronautique 4.14 22 eP Pn 19 12 11.8 +0.9
LPMF Morne Lapointe 4.16 22 eP Pn 19 12 11.6 +0.4
FDF Fort de France 4.25 19 eP Pn 19 12 14.8 +2.4
FDF Fort de France 4.25 19 eS Sn 19 13 01.0 +0.1
FDF Fort de France 4.25 19 Pn Pn 19 12 12.5 +0.1
FDF Sn Sn 19 12 57.5 -3.5
PML Morne Lenard 4.28 19 eP Pn 19 12 13.3 +0.5
PCM Pelee Case Pet 4.30 18 eP Pn 19 12 14.1 +0.9
BBL Barber's Block 4.92 13 eP Pn 19 12 23.9 +2.5
BBL Barber's Block 4.92 13 eS Sn 19 13 16.6 -0.6
DWS Wesley 4.99 14 eP Pn 19 12 24.1 +1.6
DWS Wesley 4.99 14 eS Sn 19 13 17.1 -1.9
SKI Saint Kitts 6.59 359 Pn Pn 19 12 45.0 +0.9
MTP Monte Pirata 7.89 339 Pn Pn 19 13 02.1 +0.4
STVI Saint Thomas 7.94 344 Pn Pn 19 13 03.0 +0.6
SDV Santo Domingo 8.12 258 P Pn 19 13 04.3 -0.8
0.7nm,0.3s,baz=142,slow=3.2,SNR=6.7
SDV S Sn 19 14 31.5 -4.0
3.3nm,0.3s,baz=56,slow=20,SNR=8.7
SDV Santo Domingo 8.12 258 Pn Pn 19 13 05.1 -0.1
AOPR Arecibo Observ 8.60 333 Pn Pn 19 13 12.9 +1.5
DR12 Loma Pena Alta 10.37 322 Pn Pn 19 13 35.2 -0.4
BANI BANI 10.71 316 Pn Pn 19 13 41.4 +1.1
MDP Montagnes des 11.32 119 P Pn 19 13 45.6 -2.8
2.4nm,0.3s,baz=312,slow=15,SNR=17
MDP S Sn 19 15 43.0 -10
7.9nm,0.3s,baz=48,slow=16,SNR=24
SDDR Presa de Saban 11.76 315 Pn Pn 19 13 55.9 +1.6
SAML Samuel 19.53 182 P P 19 15 32.2 +2.9
SIV San Ignacio 26.57 177 P P 19 16 40.5 +2.2
2.0nm,0.6s,baz=15,slow=8.6,SNR=9.9
TXAR Lajitas Array 42.53 302 P P 19 18 57.6 +2.1
0.2nm,0.6s,baz=101,slow=9.3,SNR=2.6
TXAR PcP PcP 19 20 46.0 -0.3
0.3nm,0.9s,baz=100,slow=3.7,SNR=2.8
SCHQ Schefferville 44.14 356 P P 19 19 08.2 +0.3
3.0nm,1.1s,baz=179,slow=7.0,SNR=4.0
SCHQ Schefferville 44.14 356 P P 19 19 07.2 -0.7
EYMN Ely 44.35 332 P P 19 19 09.2 -0.4
EYMN IAmb IAmb 19 19 19.3
comp=Z,2.7nm,1.0s
ULM Lac du Bonnet 48.01 332 P P 19 19 37.1 -1.2
comp=Z,0.9nm,0.4s,baz=78,slow=8.0,SNR=4.2
ULM Lac du Bonnet 48.01 332 IAmb IAmb 19 19 39.4
comp=Z,5.1nm,1.3s
PLCA Paso Flores 51.70 188 P P 19 20 07.7 +1.3
comp=Z,0.8nm,0.7s,baz=17,slow=7.1,SNR=4.0
PLCA Paso Flores 51.70 188 P P 19 20 07.4 +1.0
PLCA IAmb IAmb 19 20 22.3
comp=Z,5.5nm,1.4s
PDAR Pinedale Array 51.77 317 P P 19 20 06.7 -0.5
comp=Z,0.5nm,0.5s,baz=114,slow=11,SNR=5.3
YKA Yellowknife Ar 63.62 336 P P 19 21 27.5 -2.0
comp=Z,0.4nm,0.5s,baz=112,slow=7.7,SNR=4.9
GERES GERESS Array B 73.00 42 P P 19 22 28.7 +0.2
comp=Z,0.5nm,0.8s,baz=292,slow=5.2,SNR=4.7
ILAR Eielson Array 77.96 334 P P 19 22 55.5 -0.8
comp=Z,0.2nm,0.5s,baz=102,slow=4.7,SNR=5.9
FINES FINESS Array B 80.05 29 P P 19 23 08.1 +0.3
comp=Z,2.0nm,1.0s,baz=280,slow=8.3,SNR=3.6
CMAR Chiang Mai Arr 145.77 32 PKPbc PKPdf 19 30 37.9 +0.6
comp=Z,0.1nm,0.7s,baz=301,slow=5.2,SNR=5.0

IDC 22 19:26:54.2±1.5, 22.52S×175.38W, h0km, mb3.9/9, mb1 4.2/9, mb1mx4.0/24, mbtmp3.8/9, MS3.3/3, Ms1 3.3/3, ms1mx2.9/30, Error ellipse: s-maj=65.5km s-min=23.9km az=156.0
ISC 22 19:26:56.9±0.7,23.2S±0.1×175.0W±0.1,h33km,n20, σ1§53/14,mb3.8/9,Tonga Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AFI Afiamalu 9.73 19 Pn Pn 19 29 02.9 -12
27nm,0.3s,baz=120,slow=2.3,SNR=32
AFI Sn Sn 19 30 35.5 -27
3.3nm,0.3s,baz=119,slow=19,SNR=2.5
RAR Rarotonga 14.24 85 Pn Pn 19 30 14.8 -1.5
2.9nm,0.3s,baz=252,slow=12,SNR=6.1
RAR LR LR 19 35 54.8
comp=Z,62nm,18.9s,baz=288,slow=37
URZ Urewera 16.46 202 Sn Sn 19 33 46.2 -0.7
0.4nm,0.3s,baz=90,slow=20,SNR=4.2
ASAR Alice Springs 46.67 259 P P 19 35 22.8 +0.1
0.3nm,0.4s,baz=94,slow=7.3,SNR=10
WRA Warramunga Arr 47.04 264 P P 19 35 25.1 -0.5
0.7nm,1.0s,baz=95,slow=8.2,SNR=9.2
RPN Rapa Nui 58.97 109 LR LR 19 57 13.6
comp=Z,30nm,20.2s,baz=33,slow=31
MJAR Matsushiro Arr 74.03 322 P P 19 38 27.1 -2.4
0.8nm,0.6s,baz=134,slow=6.8,SNR=6.1
PETK Petropavlovsk- 79.61 344 P P 19 38 59.0 -1.4
2.1nm,0.6s,baz=142,slow=9.0,SNR=9.1
KSRS Korea Array 80.75 317 LR LR 20 11 20.5
comp=Z,18nm,20.0s,baz=165,slow=33
NVAR Mina Array Bea 81.12 42 P P 19 39 10.6 +1.4
0.8nm,0.8s,baz=229,slow=8.5,SNR=5.8
TXAR Lajitas Array 86.20 56 P P 19 39 38.0 +2.7
0.2nm,0.8s,baz=205,slow=4.0,SNR=3.7
PDAR Pinedale Array 89.05 42 P P 19 39 48.8 -0.1
0.3nm,0.6s,baz=204,slow=2.0,SNR=3.4
CMAR Chiang Mai Arr 93.62 288 P P 19 40 12.3 +1.9
0.7nm,0.9s,baz=160,slow=2.9,SNR=5.1
YKA Yellowknife Ar 97.81 24 P P 19 40 28.2 -0.2
0.1nm,0.3s,baz=242,slow=4.4,SNR=4.2
H10N3 ASCENSION HYDR 43.73 146 T T 22 28 58.5
baz=206,slow=75,SNR=4.3
H10N1 ASCENSION HYDR 43.74 146 T T 22 29 00.6
baz=206,slow=75,SNR=3.9
H10N2 ASCENSION HYDR 43.75 146 T T 22 29 00.7
baz=206,slow=75,SNR=3.6
AKASG Malin Array Be 146.71 332 PKPbc PKPbc 19 46 34.6 -0.5
1.1nm,0.5s,baz=40,slow=4.4,SNR=9.5
BRTR Keskin Array B 150.71 311 PKPbc PKPbc 19 46 45.9 -0.2
0.8nm,0.8s,baz=92,slow=4.3,SNR=4.7
MMAI Mount Meron Ar 151.54 297 PKPbc PKiKP 19 46 49.9 +1.4
0.9nm,0.5s,baz=81,slow=8.9,SNR=5.1

IDC 22 19:30:32.7±0.9, 36.84N×3.71E, h0km, mb3.9/17, mb1 4.0/21, mb1mx3.9/53, mbtmp3.9/21, ML4.3/4, MS3.4/5, Ms1 3.4/5, ms1mx2.9/50, Error ellipse: s-maj=24.8km s-min=14.9km az=169.0
CRAAG 22 19:30:32.3, 36.74N×3.75E, Ml4.2
MOS 22 19:30:33.6±1.6, 36.87N×3.53E, h14km, mb4.7/13, Error ellipse: s-maj=8.0km s-min=4.6km az=55.4
MED_RC 22 19:30:34.0±1.3, 36.82N×3.64E, h18km, MW4.2/6, Moment Tensor Solution. Mantle waves: s6,c7; Duration: 1§0 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.28±.42; $M_{\theta\theta}$0.34±.40; $M_{\phi\phi}$-0.06±.22; $M_{r\theta}$-0.71±.34; $M_{r\phi}$-1.57±.31; $M_{\theta\phi}$-1.38±.54; Best double couple: Mo2.16000×10^{15} NP1:φs94.00000°, δ54.00000°, λ-164.00000°. NP2: φs354.00000°, δ77.00000°, λ-37.00000°. Principal axes: T 1.8300, Plg15.0000°, Azm48.0000°; N 0.6600, Plg51.0000°, Azm158.0000°; P -2.4800, Plg35.0000°, Azm308.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.
NEIC 22 19:30:34.5±2.1, 36.81N±0.06×3.66E±0.05, h14km±3km, mb4.3/15, ML4.5(ALG) Error ellipse: s-maj=8.1km s-min=5.3km az=173.0
LDG 22 19:30:34.0±0.2, 37.01N×3.50E, h10km, Ml3.8/26, Error ellipse: s-maj=4.1km s-min=2.6km az=176.0
MDD 22 19:30:35.1±0.7, 36.78N×3.69E, h16km±7km, mb4.9/49, Error ellipse: s-maj=6.8km s-min=4.0km az=18.0, PRXIMO
ISC 22 19:30:34.4±0.4,36.80N±0.04×3.64E±0.02,h12km,n399, σ1§94/474,mb4.3/38,22C-18D,Northern Algeria

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ABA Alger-Bouzarea 0.49 270 P Pb 19 30 45.2 +0.2
ABA Alger-Bouzarea 0.49 270 P Pb 19 30 45.2 +0.2
ADJB Djebel Djouab 0.67 194 P Pg 19 30 47.0 -0.4
ADJB Djebel Djouab 0.67 194 P Pg 19 30 47.0 -0.4
AKET Djebel Ketaf 0.78 166 P Pg 19 30 48.0 -1.6
AKET Djebel Ketaf 0.78 166 P Pg 19 30 48.0 -1.6
EMHD Djebel Mahouad 0.82 223 P Pg 19 30 50.4 +0.1
EMHD Djebel Mahouad 0.82 223 P Pg 19 30 50.4 +0.1
EMHD Djebel Mahouad 0.82 223 Pg 19 30 50.4 +0.1
SET Setif 1.54 113 P Pn 19 31 01.0 -0.8
SET Setif 1.54 113 P Pn 19 31 01.0 -0.8
CKHR Kef el Ahmar 1.70 117 P Pn 19 31 03.2 -0.9
CKHR Kef el Ahmar 1.70 117 P Pn 19 31 03.2 -0.9
CKHR Kef el Ahmar 1.70 117 Pn 19 31 03.2 -0.9
EBNR Beni Rached 1.78 254 P Pg 19 31 08.6 +0.1
DFRA Djebel Bou Aff 1.81 98 P Pn 19 31 03.6 -2.0
DFRA Djebel Bou Aff 1.81 98 Pn 19 31 03.6 -2.0
ECHA Ech Chlef 1.95 251 P Pg 19 31 13.5 +1.7
ECHF Ech Chlef 1.96 251 P Pg 19 31 13.5 +1.4
ECHF Ech Chlef 1.96 251 Pg 19 31 13.5 +1.4
EANR 'Ain N'Sour 2.22 248 P Pg 19 31 16.3 -0.8
EANR 'Ain N'Sour 2.22 248 P Pg 19 31 16.3 -0.8
EANR 'Ain N'Sour 2.22 248 Pg 19 31 16.3 -0.8
CTEI Djebel Teioual 2.35 108 P Pb 19 31 15.3 -1.5
CTEI Djebel Teioual 2.35 108 P Pb 19 31 15.3 -1.5
CASM Ain Smara 2.36 102 P Pn 19 31 11.7 -1.3
CASM Ain Smara 2.36 102 P Pn 19 31 11.7 -1.3
CASM Ain Smara 2.36 102 Pn 19 31 11.8 -1.3
CKFL Kef-Lekhel 2.51 98 P Pn 19 31 15.0 -0.2
CKFL Kef-Lekhel 2.51 98 P Pn 19 31 15.0 -0.2
CKFL Kef-Lekhel 2.51 98 Pn 19 31 15.5 +0.3
OKGL Djebel Kef Gue 2.54 253 P Pg 19 31 28.0 +4.9
CAEH 'Ain El Ouahch 2.57 90 P Pn 19 31 13.7 -2.2
CAEH 'Ain El Ouahch 2.57 90 P Pn 19 31 13.7 -2.2
CAEH 'Ain El Ouahch 2.57 90 Pn 19 31 13.8 -2.2
OJGS Djebel Guires 2.68 242 P Pb 19 31 24.0 +1.7
OJGS Djebel Guires 2.68 242 P Pb 19 31 24.0 +1.7
OJGS Djebel Guires 2.68 242 Pn 19 31 20.0 +2.6
EIBI Ibiza 2.87 321 ⇓P Pn 19 31 19.9 -0.1
65nm,0.2s,SNR=18
EIBI S Sn 19 31 51.9 -2.6

151nm,0.3s
EIBI Ibiza 2.87 321 Pn 19 31 19.9 -0.1
EIBI Sn 19 31 51.9 -2.6
OJBR Djebel Berber 2.93 246 P Pn 19 31 23.0 +2.1
OJBR Djebel Berber 2.93 246 P Pn 19 31 23.0 +2.1
OJBR Djebel Berber 2.93 246 Pn 19 31 23.0 +2.1
ETOS Mallorca 3.03 348 P Pn 19 31 21.3 -0.9
113nm,0.3s,SNR=7.9
ETOS S Sn 19 31 54.3 -4.2
80nm,0.2s
ETOS Mallorca 3.03 348 Pn 19 31 21.4 -0.9
ETOS Sn 19 31 54.3 -4.2
CMAH Djebel Manchou 3.04 92 P Pn 19 31 20.0 -2.4
CMAH Djebel Manchou 3.04 92 P Pn 19 31 20.0 -2.4
CMAH Djebel Manchou 3.04 92 Pb 19 31 30.1 +1.6
MAHO Mahon 3.13 9 eP Pn 19 31 21.0 -2.5
MAHO eS Sn 19 31 54.3 -6.5
ODJA Bouhanifia 3.41 246 P Pn 19 31 27.0 -0.4
ODJA Bouhanifia 3.41 246 P Pn 19 31 27.0 -0.4
ODJA Bouhanifia 3.41 246 Pn 19 31 27.0 -0.4
USTO Oran 3.55 254 P Pb 19 31 35.0 -2.2
USTO Oran 3.55 254 Pb 19 31 35.0 -2.2
EBEN2 Beniarda presa 3.57 303 P Pn 19 31 29.2 -0.5
91nm,0.3s,SNR=7.9
EBEN2 S Sn 19 32 07.8 -3.9
82nm,0.2s,SNR=7.9
EBEN2 Beniarda presa 3.57 303 Pn 19 31 29.1 -0.5
EBEN2 Sn 19 32 07.8 -3.9
ETRV Los Montesinos 3.71 290 P Pn 19 31 30.9 -0.7
78nm,0.2s,SNR=7.9
ETRV S Sn 19 32 12.1 -3.1
118nm,0.2s,SNR=7.9
ETRV Los Montesinos 3.71 290 Pn 19 31 30.9 -0.7
ETRV Sn 19 32 12.1 -3.1
CART Cartagena 3.79 283 Pn 19 31 32.1 -0.6
CART Sn Sn 19 32 14.9 -2.2
CART Cartagena 3.79 283 eP Pn 19 31 32.2 -0.5
CART eS Sn 19 32 15.6 -1.5
AFON Font Roja 3.80 301 P Pn 19 31 32.5 -0.4
45nm,0.3s,SNR=34
AFON S Sn 19 32 14.6 -3.0
71nm,0.4s
AFON Font Roja 3.80 301 Pn 19 31 32.5 -0.4
AFON Sn 19 32 14.6 -3.0
EMUR La Murta 4.03 286 P Pn 19 31 35.7 -0.3
19nm,0.3s,SNR=42
EMUR S Sn 19 32 20.7 -2.4
36nm,0.3s,SNR=4.9
EMUR La Murta 4.03 286 Pn 19 31 35.7 -0.3
EMUR Sn 19 32 20.7 -2.4
TLOR Lorca, Murcia 4.34 283 P Pn 19 31 40.8 +0.6
170nm,0.2s,SNR=4.0
TLOR S Sn 19 32 30.4 -0.3
320nm,0.4s,SNR=7.9
ETOB Tobarra 4.51 296 P Pn 19 31 42.6 +0.1
126nm,0.2s,SNR=218
ETOB S Sn 19 32 34.1 -0.8
54nm,0.3s
ETOB Tobarra 4.51 296 Pn 19 31 42.6 +0.1
ETOB Sn 19 32 34.1 -0.8
ECHE Chera 4.58 309 P Pn 19 31 43.9 +0.4
87nm,0.3s,SNR=7.9
ECHE S Sn 19 32 34.9 -1.7
12nm,0.2s,SNR=7.9
ECHE Chera 4.58 309 Pn 19 31 43.9 +0.4
ECHE Sn 19 32 34.9 -1.7
ECHE Chera 4.58 309 P Pn 19 31 43.9 +0.4
ECHE 19 32 34.9
ENIJ Nijar 4.69 274 P Pn 19 31 44.5 -0.6
31nm,0.3s,SNR=7.9
ENIJ S Sn 19 32 34.3 -5.2
86nm,0.3s,SNR=7.9
ENIJ Nijar 4.69 274 Pn 19 31 44.5 -0.6
ENIJ Nijar 4.69 274 P Pn 19 31 44.5 -0.6
I48TN KESRA INFRASON 4.69 101 i 19 57 40.0
baz=286,slow=336,SNR=1.2
KEST Kesra 4.73 101 Pn Pn 19 31 45.8 +0.1
5.0nm,0.3s,baz=136,slow=1.5,SNR=53
KEST Sn Sn 19 32 38.3 -2.2
6.7nm,0.3s,baz=308,slow=19,SNR=2.4
KEST Kesra 4.73 101 Pn 19 31 45.7 +0.1
KEST Sn Sn 19 32 41.0 +0.5
EMOS Mosqueruela 4.80 319 P Pn 19 31 46.5 -0.1
31nm,0.3s,SNR=54
EMOS S Sn 19 32 38.4 -3.9
19nm,0.3s
EMOS Mosqueruela 4.80 319 Pn 19 31 46.5 -0.1
EMOS Sn 19 32 38.4 -3.9
ERTA Horta de San J 4.88 329 P Pn 19 31 46.9 -0.9
17nm,0.4s,SNR=17
ERTA S Sn 19 32 40.3 -3.9
24nm,0.3s
ERTA Horta de San J 4.88 329 Pn 19 31 46.9 -0.9
ERTA Sn 19 32 40.3 -3.9
EPOB Poblet 4.96 337 P Pn 19 31 47.8 -1.1
26nm,0.2s,SNR=45
EPOB S Sn 19 32 41.5 -4.7
17nm,0.3s
EPOB Poblet 4.96 337 Pn 19 31 47.8 -1.1
CFON Fontmartina 5.04 350 ⇓P Pn 19 31 49.1 -0.8
98nm,0.2s,SNR=18
CFON S Sn 19 32 42.4 -5.7
54nm,0.2s
CFON Fontmartina 5.04 350 Pn 19 31 49.1 -0.8
SESP Santiago Espad 5.09 287 P Pn 19 31 51.5 +0.8
33nm,0.2s,SNR=7.9
SESP S Sn 19 32 48.1 -1.5
29nm,0.2s,SNR=7.9
SESP Santiago Espad 5.09 287 P Pn 19 31 43.0 -7.7
SESP S Sn 19 32 47.2 -2.4
SESP Santiago Espad 5.09 287 Pn 19 31 51.5 +0.8
SESP Sn 19 32 48.1 -1.5
EBER Berja 5.24 273 P Pn 19 31 51.7 -1.0
35nm,0.3s,SNR=26
EBER S Sn 19 32 50.6 -2.6
24nm,0.3s,SNR=6.1
EBER Berja 5.24 273 Pn 19 31 51.7 -1.0
EBER Sn 19 32 50.6 -2.6
TAF Taforalt 5.31 250 P Pn 19 31 52.3 -1.3
EMIR Miracle 5.36 343 P Pn 19 31 54.7 +0.4
164nm,0.4s,SNR=81
EMIR S Sn 19 32 51.6 -4.3
136nm,0.4s
EMIR Miracle 5.36 343 Pn 19 31 54.7 +0.4
GORA Gorafe 5.38 279 P Pn 19 31 59.3 +4.7
37nm,0.2s,SNR=4.0
GORA S Sn 19 32 55.1 -1.5
32nm,0.3s,SNR=7.9
GORA Gorafe 5.38 279 Sn 19 32 55.1 -1.5
EQES Quesada 5.45 283 P Pn 19 31 56.5 +1.0
24nm,0.2s,SNR=95
EQES S Sn 19 32 59.2 +1.1
47nm,0.3s,SNR=4.2
EQES Quesada 5.45 283 Pn 19 31 56.5 +1.0
EQES Sn 19 32 59.2 +1.1
EALB Alboran 5.46 263 P Pn 19 31 55.4 -0.1
6.2nm,0.2s,SNR=4.0
EALB S Sn 19 32 55.0 -3.2
40nm,0.3s,SNR=7.9
EALB Alboran 5.46 263 Pn 19 31 55.4 -0.1
EALB Sn 19 32 55.0 -3.2
GOG Mont Gurugu 5.61 256 P Pn 19 31 56.1 -1.7
JBK JBK 5.63 246 P Pn 19 31 57.2 -1.0
EJON La Jonquera 5.67 354 P Pn 19 31 58.3 -0.2
107nm,0.3s,SNR=166
EJON S Sn 19 32 57.6 -5.9
36nm,0.3s
EJON La Jonquera 5.67 354 Pn 19 31 58.3 -0.2
SJAF Saint Jean de 5.70 354 ⇓P Pn 19 31 58.6 -0.3
77nm,0.2s,SNR=18
SJAF S Sn 19 32 58.0 -6.4
8.6nm,0.2s,SNR=7.9
SJAF Saint Jean de 5.70 354 Pn 19 31 58.6 -0.3
CLLI Llivia 5.81 348 P Pn 19 32 01.0 +0.4
15nm,0.2s,SNR=82
CLLI S Sn 19 33 01.8 -5.5
6.1nm,0.2s
CLLI Llivia 5.81 348 Pn 19 32 01.0 +0.4
ELGU Los Guajares, 5.83 273 P Pn 19 31 59.1 -1.7
38nm,0.6s,SNR=7.9
ELGU S Sn 19 33 04.2 -3.5
28nm,0.4s,SNR=7.9
ELGU Los Guajares, 5.83 273 Pn 19 31 59.1 -1.7
ELGU Sn 19 33 04.2 -3.5
ESAC San Caprasio 5.86 328 P Pn 19 32 01.4 +0.3
32nm,0.2s,SNR=11
ESAC S Sn 19 33 06.6 -1.6
39nm,0.2s,SNR=4.0
ESAC San Caprasio 5.86 328 Pn 19 32 01.4 +0.3
ESAC Sn 19 33 06.6 -1.6
CSOR Sort 5.89 342 P Pn 19 32 02.4 +0.7
23nm,0.2s,SNR=63
CSOR S Sn 19 33 04.6 -4.6
23nm,0.3s
CSOR Sort 5.89 342 Pn 19 32 02.4 +0.7
TDRA Tendrara 5.98 233 P Pn 19 32 03.0 0.0
TDRA S Sb 19 33 31.5 +1.0
FIGM Figuig 6.17 222 P Pn 19 32 04.2 -1.4
FIGM S Sb 19 33 35.0 -0.9
EGOR Sierra Gorda, 6.22 275 P Pn 19 32 06.7 +0.5
11nm,0.4s,SNR=7.9
EGOR S Sn 19 33 19.2 +2.0
7.3nm,0.3s,SNR=7.9
EGOR Sierra Gorda, 6.22 275 Pn 19 32 06.7 +0.5
EGOR Sn 19 33 19.2 +2.0
ECHI Chisagues Biel 6.43 337 P Pn 19 32 09.3 +0.3
6.8nm,0.2s,SNR=7.9
ECHI S Sn 19 33 17.6 -4.8
5.0nm,0.2s,SNR=4.0
ECHI Chisagues Biel 6.43 337 Pn 19 32 09.3 +0.3
UCM Universidad Co 6.43 305 eP Pn 19 32 10.3 +1.3
UCM eS Sn 19 33 22.3 0.0
EMAL Malaga-Limoner 6.48 272 eP Pn 19 32 10.3 +0.7
EMAL eS Sn 19 33 21.4 -2.1
AKLM AKL 6.53 252 P Pn 19 32 09.3 -1.1
AKLM S Sb 19 33 38.8 -7.1
MTLF Montolieu 6.62 351 eP Pn 19 32 11.1 -0.4
MTLF eSn Sn 19 33 14.8 -12
11nm,0.4s
ESBB Sonseca Array 6.64 298 Pn 19 32 12.1 +0.3
ESBB Sn Sn 19 33 25.2 -2.2
ESDC Sonseca Array 6.64 298 Pn Pn 19 32 12.1 +0.3
17nm,0.3s,baz=109,slow=14,SNR=137
ESDC Sn Sn 19 33 24.7 -2.7
2.1nm,0.3s,baz=111,slow=24,SNR=2.5
ESDC LR LR 19 34 41.5
comp=Z,144nm,19.7s,baz=130,slow=37
ESDC Sonseca Array 6.64 298 P Pn 19 32 11.5 -0.3
19nm,0.1s,baz=110,slow=14,SNR=83
ESDC S Sn 19 33 22.9 -4.6
1.3nm,0.2s,baz=112,slow=24,SNR=16
EADA Adamuz 6.68 284 P Pn 19 32 11.6 -0.8
2.7nm,0.2s,SNR=10
EADA S Sn 19 33 24.8 -3.6
2.9nm,0.2s,SNR=7.9
EADA Adamuz 6.68 284 Pn 19 32 11.6 -0.8
EADA Sn 19 33 24.8 -3.6
EPF Esparros 6.72 339 eP Pn 19 32 13.1 +0.2
EPF eSn Sn 19 33 16.8 -13
19nm,0.3s
EMIJ Mijas 6.77 270 P Pn 19 32 11.6 -2.0
4.2nm,0.2s,SNR=13
EMIJ S Sn 19 33 24.7 -5.9
7.7nm,0.4s,SNR=7.9
EMIJ Mijas 6.77 270 Pn 19 32 11.6 -2.0
PAB San Pablo 6.86 296 P Pn 19 32 14.8 -0.1
20nm,0.3s,SNR=7.9
PAB S Sn 19 33 27.8 -5.3
1.7nm,0.3s,SNR=4.0
PAB San Pablo 6.86 296 Pn 19 32 14.9 -0.1
PAB Sn Sn 19 33 34.3 +1.3
PAB San Pablo 6.86 296 P Pn 19 32 14.9 -0.1
PAB 19 33 34.3
LMR La Mourre 6.88 18 eP Pn 19 32 13.8 -1.3
LMR eSn Sn 19 33 22.8 -11
16nm,0.3s
ETSF Etsaut 6.89 333 eP Pn 19 32 15.5 +0.2
ETSF eSn Sn 19 33 20.8 -13
14nm,0.4s
PGF Pioggiola 7.07 34 ePn Pn 19 32 14.1 -3.7
PGF eSn Sn 19 33 28.8 -9.3
33nm,0.3s
ATE Arette 7.11 333 P Pn 19 32 18.8 +0.5
9.4nm,0.3s,SNR=7.9
ATE S Sn 19 33 34.4 -4.4
6.9nm,0.2s,SNR=7.9
ATE Arette 7.11 333 Pn 19 32 18.8 +0.5
FRF La Foret Royal 7.13 18 eP Pn 19 32 17.2 -1.3
FRF eSn Sn 19 33 28.9 -11
17nm,0.3s
HORN Hornachuelos 7.17 281 P Pn 19 32 11.5 -7.6
SNR=12
HORN S Sn 19 33 40.4 0.0
EORO Oroz-Betelu 7.17 329 P Pn 19 32 19.6 +0.4
3.6nm,0.2s,SNR=12
EORO S Sn 19 33 37.7 -3.0
17nm,0.3s
EORO Oroz-Betelu 7.17 329 Pn 19 32 19.6 +0.4
EORO Sn 19 33 37.7 -3.0
EARA Aranguren 7.19 328 P Pn 19 32 19.2 -0.1
5.7nm,0.2s,SNR=6.7
EARA Aranguren 7.19 328 Pn 19 32 19.2 -0.1
GUD Guadarrama 7.20 305 P Pn 19 32 20.4 +0.8
6.3nm,0.3s,SNR=24
GUD Guadarrama 7.20 305 Pn 19 32 20.4 +0.8
GUD Guadarrama 7.20 305 P Pn 19 32 20.4 +0.8
LASF Ste Croix 7.27 1 eP Pn 19 32 18.9 -1.5
LASF eSn Sn 19 33 31.7 -11
10.0nm,0.4s
SMRF Simiane la Rot 7.31 11 eP Pn 19 32 20.6 -0.5
SMRF eSn Sn 19 33 32.9 -11
8.0nm,0.4s
ECAB El Cabril 7.32 283 P Pn 19 32 20.4 -0.8
9.0nm,0.3s,SNR=30
ECAB S Sn 19 33 42.0 -2.2
4.4nm,0.3s,SNR=4.0
ECAB El Cabril 7.32 283 Pn 19 32 20.4 -0.8
ECAB Sn 19 33 42.0 -2.2
SJPF Ste Jean 7.33 331 eP Pn 19 32 21.2 0.0
SJPF eSn Sn 19 33 31.1 -13
10nm,0.3s
CEU Ceuta 7.33 266 eP Pn 19 32 18.9 -2.3
CEU eS Sn 19 33 37.1 -7.3
SMIR Smir Dam 7.38 264 P Pn 19 32 19.7 -2.3
SMIR S Sn 19 33 55.7 +10
CHEFC Chefchaouen 7.48 260 P Pn 19 32 20.1 -3.4
EALK Alkurruntz 7.53 330 P Pn 19 32 24.2 +0.1
14nm,0.3s,SNR=16
EALK S Sn 19 33 45.1 -4.3
21nm,0.3s,SNR=5.0
EALK Alkurruntz 7.53 330 Pn 19 32 24.2 +0.1
SBF Sospel 7.62 21 eP Pn 19 32 25.3 0.0
SBF eSn Sn 19 33 40.8 -11
27nm,0.4s
CLTB Caltabellotta 7.68 81 Pn 19 32 24.6 -1.6
CLTB Sn Sn 19 33 51.4 -1.8
CORL Corleone 7.77 79 Pn Pn 19 32 25.7 -1.7
CORL Sn Sn 19 33 52.6 -2.8
SICH Sidi Chahed 7.79 252 P Pn 19 32 26.6 -1.0
SICH S Sn 19 34 08.3 +12
MDT Midelt 7.87 242 Pn Pn 19 32 28.9 +0.2
0.9nm,0.3s,baz=56,slow=7.9,SNR=24
MDT Lg Lg 19 34 44.1
1.6nm,0.3s,baz=345,slow=7.7,SNR=4.4
MDT LR LR 19 35 24.6
comp=Z,129nm,20.1s,baz=26,slow=37
MDT Midelt 7.87 242 P Pn 19 32 29.1 +0.4
SNR=14
MDT S Sb 19 34 13.3 -11
IFR Ifrane 7.89 248 eP Pn 19 32 30.8 +1.5
IFR eS Sn 19 33 59.4 +0.8
RSA Sarsar 7.92 259 P Pn 19 32 27.4 -2.0
RSA S Sn 19 34 07.6 +8.5
MD31 MD31 7.95 243 P Pn 19 32 27.8 -2.0
VIVF Saint-Julien-l 8.08 5 eP Pn 19 32 31.0 -0.6
VIVF eSn Sn 19 33 51.2 -12
12nm,0.5s
CASP Castiglione de 8.16 41 Pn Pn 19 32 31.2 -1.5
CAF Calviac 8.20 352 eP Pn 19 32 33.8 +0.5
MBDF Montbardon 8.26 16 eP Pn 19 32 33.7 -0.5
MBDF eSn Sn 19 33 55.2 -12
11nm,0.6s
EMIN Mina Concepcio 8.28 280 P Pn 19 32 34.5 +0.1
3.4nm,0.4s,SNR=12
EMIN S Sn 19 34 03.1 -4.7
2.3nm,0.5s,SNR=7.9
EMIN Mina Concepcio 8.28 280 Pn 19 32 34.5 +0.1
ORIF Oris-en-Rattie 8.28 11 eP Pn 19 32 34.6 +0.2
ORIF eSn Sn 19 33 55.7 -12
12nm,0.7s
EPLA Plasencia 8.29 296 P Pn 19 32 34.4 -0.2
4.2nm,0.2s,SNR=15
EPLA Plasencia 8.29 296 Pn 19 32 34.4 -0.2
EPLA Plasencia 8.29 296 P Pn 19 32 34.4 -0.2
ELAN Lanestosa 8.40 322 P Pn 19 32 36.5 +0.4
3.6nm,0.2s,SNR=127
ELAN S Sn 19 34 08.2 -2.7
3.0nm,0.3s,SNR=4.0
ELAN Lanestosa 8.40 322 Pn 19 32 36.5 +0.4
ELAN Sn 19 34 08.2 -2.7
LFF La Frestale 8.42 346 eP Pn 19 32 36.1 -0.1
LFF eSn Sn 19 33 57.0 -14
8.4nm,0.4s
ARF Arif 8.44 233 P Pn 19 32 35.4 -1.2
ARF S Sb 19 34 28.1 -13
SSB Saint Sauveur 8.49 4 Pn 19 32 37.0 -0.3
SSB Saint Sauveur 8.49 4 P Pn 19 32 37.0 -0.3
BNI Bardonecchia 8.55 15 Pn Pn 19 32 39.0 +0.8
BNI Sn Sn 19 34 12.5 -2.2
LATE Laterza 8.55 45 Pn Pn 19 32 36.7 -1.4
RJF Les Rejaudoux 8.64 350 eP Pn 19 32 39.5 +0.2
EBAD Badajoz 8.66 286 P Pn 19 32 39.3 -0.3
1.3nm,0.2s,SNR=6.1
EBAD S Sn 19 34 14.3 -2.8
3.7nm,0.3s,SNR=7.9
EBAD Badajoz 8.66 286 Pn 19 32 39.3 -0.3
EBAD Sn 19 34 14.3 -2.8
MSSA Maissana 8.73 29 Pn Pn 19 32 39.6 -1.0
MSSA Sn Sn 19 34 16.2 -2.7
GOLM Goulmima 8.74 237 P Pn 19 32 41.0 +0.1
GOLM S Sn 19 34 38.2 +19
OSSC Osservatorio P 8.88 39 Pn Pn 19 32 42.3 -0.3
EGRO El Granado 8.91 278 P Pn 19 32 41.0 -2.0
3.9nm,0.4s,SNR=5.9
EGRO S Sn 19 34 11.7 -12
0.9nm,0.3s,SNR=7.9
EGRO El Granado 8.91 278 Pn 19 32 41.0 -2.0
VLC Villacollemand 8.96 33 Pn Pn 19 32 43.6 -0.1
LPG La Plagne 9.00 14 eP Pn 19 32 44.9 +0.5
LPG eSn Sn 19 34 13.3 -12
7.2nm,0.6s
LPL La Plagne 9.01 14 eP Pn 19 32 45.1 +0.6
LPL eSn Sn 19 34 13.5 -12
15nm,0.7s
ZHG ZHG 9.07 251 P Pn 19 32 46.1 +0.9
ZHG S Sn 19 34 43.6 +16
PMRV Marv??o 9.08 290 eP Pn 19 32 46.5 +1.1
PVAQ Vaqueiros 9.10 277 eP Pn 19 32 44.4 -1.1
22nm,1.4s
PVAQ Vaqueiros 9.10 277 P Pn 19 32 39.6 -5.9
SNR=9.5
PVAQ S Sn 19 34 30.3 +2.4
PVAQ Vaqueiros 9.10 277 Pn 19 32 44.6 -0.9
PESTR Estremoz 9.12 286 P Pn 19 32 35.5 -10
PESTR S Sn 19 34 26.2 -2.3
PESTR Estremoz 9.12 286 Pn Pn 19 32 46.3 +0.4
PBEJ Beja 9.24 281 eP Pn 19 32 47.8 +0.3
PCBR Castelo Branco 9.25 292 eP Pn 19 32 49.0 +1.4
PCVE Castro Verde 9.36 279 eP Pn 19 32 48.8 -0.3
MURB Monte Urbino 9.38 44 Pn Pn 19 32 49.7 +0.2
MVO Moncorvo 9.38 301 eP Pn 19 32 50.6 +1.1
34nm,1.8s
MVO Moncorvo 9.38 301 P Pn 19 32 49.8 +0.4
17nm,0.3s,SNR=12
MVO S Sn 19 34 29.8 -5.1
4.3nm,0.2s,SNR=4.0
MVO Moncorvo 9.38 301 Pn 19 32 49.8 +0.4
EARI Arriondas 9.39 316 P Pn 19 32 51.4 +1.8
14nm,0.4s,SNR=20
EARI Arriondas 9.39 316 Pn 19 32 51.4 +1.8
EVO Evora 9.40 284 eP Pn 19 32 49.7 0.0
EVO eS Sn 19 34 30.0 -5.3
NRCA Norcia 9.45 48 Pn 19 32 50.2 -0.2
MTE Manteigas 9.46 296 eP Pn 19 32 52.1 +1.5
44nm,1.5s
MTE Manteigas 9.46 296 Pn Pn 19 32 50.9 +0.3
PBRG Braganca 9.47 305 eP Pn 19 32 51.4 +0.7
31nm,1.7s
INTR Introdacqua 9.49 54 Pn Pn 19 32 51.0 0.0
ECAL Calabor 9.53 306 P Pn 19 32 52.2 +0.7
40nm,0.3s,SNR=45
ECAL Calabor 9.53 306 Pn 19 32 52.2 +0.7
TCF Toulx Ste Croi 9.54 354 eP Pn 19 32 51.4 -0.2
TCF Toulx Ste Croi 9.54 354 ePg Pn 19 33 24.3 +33
PMTG Montargil 9.64 287 eP Pn 19 32 56.1 +3.1
TZRR Tazzarine 9.73 235 P Pn 19 32 54.7 +0.3
TZRR S Sn 19 35 00.8 +17
BGF Bois d'Agland 9.76 357 eP Pn 19 32 54.8 +0.1
PNCL Nicolau / Gran 9.77 281 eP Pn 19 32 57.3 +2.6
PVIS Viseu 9.82 297 eP Pn 19 32 55.9 +0.4
42nm,1.5s
SMF Signal de Mont 9.84 1 eP Pn 19 32 56.2 +0.6
SMF eSn Sn 19 34 31.9 -14
9.1nm,0.6s
PVRL Vila Real 9.90 300 eP Pn 19 32 56.9 +0.4
SENIN Lac Senin/Sane 9.94 15 Pn 19 32 57.0 -0.2
CABF La Chapelle 9.97 10 eP Pn 19 32 57.1 -0.4
AVF Avril sur Loir 9.98 359 eP Pn 19 32 57.4 -0.2
AVF Avril sur Loir 9.98 359 ePg Pn 19 33 32.0 +34
COI Coimbra 10.04 293 Pn Pn 19 32 58.4 -0.1
COI Coimbra 10.04 293 P Pn 19 32 58.4 -0.1
PCAS Casmilo, Conde 10.06 292 eP Pn 19 32 59.6 +0.8
MFF Saint Martin d 10.19 345 eP Pn 19 33 00.3 -0.2
MFF Saint Martin d 10.19 345 ePg Pn 19 33 36.1 +36
MFF eSn Sn 19 34 40.5 -14
3.3nm,0.3s
ZGR Zagora 10.21 232 P Pn 19 33 01.8 +0.9
ZGR S Sn 19 35 13.6 +18
SSF Saint Saulge 10.25 359 eP Pn 19 33 00.8 -0.5
PCAB Cabril 10.29 302 eP Pn 19 33 02.7 +0.8
ELOB Lobios 10.38 303 P Pn 19 33 03.4 +0.3
10nm,0.6s,SNR=8.2
ELOB Lobios 10.38 303 Pn 19 33 03.4 +0.3
LOR Lormes 10.46 1 eP Pn 19 33 00.6 -3.6
baz=175
TEOL Teolo 10.47 33 Pn Pn 19 33 06.9 +2.5
EPON Pontenova 10.52 312 P Pn 19 33 06.4 +1.4
6.4nm,0.2s,SNR=9.1
EPON Pontenova 10.52 312 Pn 19 33 06.4 +1.4
TUE Stuetta 10.56 22 Pn Pn 19 33 06.2 +0.5
EAGO Agolada(Pontev 10.83 307 P Pn 19 33 09.8 +0.6
2.3nm,0.3s,SNR=7.9
EAGO Agolada(Pontev 10.83 307 Pn 19 33 09.8 +0.6
EZAM Zamans 10.93 303 P Pn 19 33 12.1 +1.5
3.9nm,0.3s,SNR=4.0
EZAM Zamans 10.93 303 Pn 19 33 12.1 +1.5
EZAM Zamans 10.93 303 P Pn 19 33 12.1 +1.5
FUORN Ofenpass-Fuorn 10.98 25 Pn Pn 19 33 11.7 +0.1
DAVOX Davos/Dischmat 11.00 23 LR LR 19 36 50.0
comp=Z,152nm,19.4s,baz=226,slow=34
CTI Castel Tesino 11.01 31 Pn Pn 19 33 12.8 +0.9
CTI Castel Tesino 11.01 31 P Pn 19 33 12.8 +0.9
HINF Hinteralfeld 11.26 11 eP Pn 19 33 14.8 -0.3
HINF eSn Sn 19 35 06.8 -14
1.4nm,0.3s
CLF Chambon-Foret 11.26 355 Pn Pn 19 33 15.7 +0.6
HAU Haudompre 11.37 9 eP Pn 19 33 16.0 -0.7
HAU eSn Sn 19 35 09.8 -14
3.2nm,0.5s
SFTF Sexfontaines 11.44 5 eP Pn 19 33 17.4 -0.2
EMAZ Mazaricos 11.47 306 P Pn 19 33 18.7 +0.7
5.4nm,0.4s,SNR=4.0
EMAZ Mazaricos 11.47 306 Pn 19 33 18.8 +0.7
FETA Feichten 11.49 25 ePn Pn 19 33 21.2 +2.9
1.0nm,0.7s
ECH Echery 11.69 12 Pn 19 33 19.7 -1.4
ECH Echery 11.69 12 P Pn 19 33 19.7 -1.4
MEZF Maizieres J'vi 11.74 5 eP Pn 19 33 21.3 -0.3
baz=186
SQTA Sankt Quirin 11.82 26 iPn Pn 19 33 24.3 +1.3
0.7nm,0.3s
PAGF Fort de Pagny 11.84 7 eP Pn 19 33 22.6 -0.5
baz=186
MOTA Moosalm 11.89 25 ePn Pn 19 33 26.5 +2.6
0.6nm,0.3s
CDF Champ du Feu 11.90 12 eP Pn 19 33 24.0 0.0
ABTA Abfaltersbach 11.93 31 ePn Pn 19 33 26.3 +2.0
2.6nm,0.6s
WTTA Wattenberg 12.02 27 ePn Pn 19 33 28.5 +2.9
1.3nm,0.3s
BFO Black Forest 12.02 15 Pn Pn 19 33 24.1 -1.4
BFO Black Forest 12.02 15 P Pn 19 33 24.1 -1.4
GRR Gorron 12.04 345 eP Pn 19 33 25.2 -0.6

LDF La Druitiere 12.10 348 eP Pn 19 33 26.1 -0.5
QUIF Quistinic 12.19 338 eP Pn 19 33 27.2 -0.6
QUIF Quistinic 12.19 338 ePg P 19 34 13.0 +33
SGMF Saint Gilles 12.32 340 eP Pn 19 33 29.1 -0.4
SGMF Saint Gilles 12.32 340 ePg P 19 34 15.8 +34
FLN La Foliniere 12.33 347 eP Pn 19 33 28.9 -0.8
baz=168
ROSF Rostrenen 12.60 338 eP Pn 19 33 32.7 -0.6
BAIF Baives 13.26 2 eP Pn 19 33 42.2 -0.2
DOU Dourbes 13.30 3 Pn Pn 19 33 43.5 +0.5
MOA Molln 13.53 32 i Pn Pn 19 33 48.3 +2.1
0.4nm,0.3s
ARSA Arzberg 13.65 36 ePn Pn 19 33 50.0 +2.2
1.1nm,0.3s
BCLA Clavier 13.66 4 PnPn P 19 33 53.2 -3.5
BCLA PbPb PbPb 19 34 29.9 -2.7
BSTI Sart Tilman 13.84 5 Pn Pn 19 33 50.8 +0.4
MEM Membach 13.90 6 pP Pn 19 33 53.5 +2.3
MEM x x 19 33 56.8
GEC2 GERESS Array S 14.10 28 Pn Pn 19 33 54.2 +0.2
GERES GERESS Array B 14.10 28 Pn Pn 19 33 52.3 -1.7
0.2nm,0.3s,baz=216,slow=9.6,SNR=6.5
GERES Sn Sn 19 36 15.0 -15
0.1nm,0.3s,baz=228,slow=25,SNR=2.6
KHC Kasperske Hory 14.29 27 eP Pn 19 33 55.0 -1.5
KHC ex x 19 33 58.5
KHC epP P 19 34 05.5 +1.7
KHC Kasperske Hory 14.29 27 eP Pn 19 33 58.5 +2.0
CONA Conrad Observa 14.30 35 i Pn Pn 19 33 58.7 +1.9
0.3nm,0.3s
CLL Collm 15.96 22 eP Pn 19 34 18.0 -0.7
CLL e(sP) pP 19 34 25.0 -0.6
CLL ePP PnPn 19 34 29.0 +1.7
CLL Collm 15.96 22 Pn Pn 19 34 18.2 -0.5
CLL IAmb IAmb 19 34 30.6
comp=Z,7.3nm,1.1s
CLL Collm 15.96 22 eP Pn 19 34 18.0 -0.7
BZS Buzias 16.11 51 ⇓P P 19 34 25.6 +1.6
BZS Buzias 16.11 51 ⇓P P 19 34 25.6 +1.6
VYHS Vyhne 16.13 39 eP P 19 34 24.9 +0.7
VYHS Vyhne 16.13 39 eP P 19 34 24.9 +0.7
VTS Vitosha 16.14 63 ⇑P P 19 34 26.0 +1.5
VTS Vitosha 16.14 63 Pn Pn 19 34 21.0 -0.2
VTS Vitosha 16.14 63 ⇑P P 19 34 26.0 +1.5
PSZ Piszkesteto 16.32 42 ⇓P P 19 34 27.4 +1.0
PSZ Piszkesteto 16.32 42 Pn Pn 19 34 23.2 -0.2
PSZ IAmb IAmb 19 34 30.7
comp=Z,5.3nm,0.8s
PSZ Piszkesteto 16.32 42 ⇓P P 19 34 27.4 +1.0
MORC Moravsky Berou 16.41 33 ⇑P P 19 34 27.5 +0.2
MORC Moravsky Berou 16.41 33 ⇑P P 19 34 27.5 +0.2
SIRR Siria 16.44 49 ⇑P P 19 34 29.5 +1.8
GZR Gura Zlata 16.75 53 ⇑P P 19 34 33.1 +1.9
DRGR 17.33 49 ⇑P P 19 34 39.9 +2.4
DRGR 17.33 49 ⇑P P 19 34 39.9 +2.4
APE Apeiranthos 17.50 83 i P P 19 34 40.5 +1.0
PMOZ Porto Moniz, M 17.56 263 Pn Pn 19 34 38.8 -0.4
CRVS Cervenica-Dubn 17.75 41 eP P 19 34 47.2 +5.1
CRVS Cervenica-Dubn 17.75 41 eP P 19 34 47.2 +5.1
TRPA Tarpa 17.91 45 ⇓P P 19 34 46.0 +2.3
ALN Alexandroupoli 17.91 70 P Pn 19 34 43.0 -0.3
ALN Alexandroupoli 17.91 70 P Pn 19 34 43.0 -0.3
ALN pmax pmax
comp=Z,6.0nm,1.1s
ARR Arges 17.95 55 ⇓P P 19 34 47.0 +2.6
KOLS Kolonicke sedl 18.20 42 eP P 19 34 49.5 +2.4
KOLS Kolonicke sedl 18.20 42 eP P 19 34 49.5 +2.4
VOIR 18.25 55 ⇑P P 19 34 50.4 +2.7
VOIR 18.25 55 ⇑P P 19 34 50.4 +2.7
DOPR Dopca 18.66 54 ⇑P Pn 19 34 54.7 +2.2
MLR Muntele Rosu 18.86 56 LR LR 19 41 55.7
comp=Z,146nm,18.7s,baz=300,slow=36
MLR Muntele Rosu 18.86 56 ⇓P Pn 19 34 57.0 +2.0
MLR Muntele Rosu 18.86 56 ⇓P Pn 19 34 57.0 +2.0
BURAR Bucovina Array 19.23 49 ⇑P Pn 19 35 00.7 +1.3
BURAR Bucovina Array 19.23 49 ⇑P Pn 19 35 00.7 +1.3
BUR08 Bucovina Ar. S 19.23 49 P Pn 19 34 58.2 -0.3
PLOR Plostina 19.45 55 ⇓P Pn 19 35 03.3 +1.3
PLOR Plostina 19.45 55 ⇓P Pn 19 35 03.3 +1.3
VRI Vrincioaia 19.50 55 ⇓P Pn 19 35 04.0 +1.4
VRI Vrincioaia 19.50 55 ⇓P Pn 19 35 04.0 +1.4
CFR Carcaliu 20.24 58 ⇑P Pn 19 35 11.8 +0.5
CFR Carcaliu 20.24 58 ⇑P Pn 19 35 11.8 +0.5
LEOM Leova 20.70 54 ⇑P Pn 19 35 16.5 -0.2
LEOM Leova 20.70 54 ⇑P Pn 19 35 16.5 -0.2
ELL Elmali 21.02 82 P P 19 35 17.9 -0.2
ELL Elmali 21.02 82 P P 19 35 17.9 -0.2
ELL pmax pmax
comp=Z,41nm,1.2s
KLNR Kaliningrad 21.14 27 i P P 19 35 21.0 +2.0
KLNR pmax pmax
comp=Z,98nm,1.4s
SORM Soroca 21.36 50 ⇓P P 19 35 23.7 +2.3
SORM Soroca 21.36 50 ⇓P P 19 35 23.7 +2.3
AKASG Malin Array Be 22.97 45 P P 19 35 36.9 -1.7
comp=Z,11nm,0.7s,baz=244,slow=10.0,SNR=26
AKASG Malin Array Be 22.97 45 i P P 19 35 38.9 +0.3
AKASG pmax pmax
comp=Z,11nm,0.7s
AKBB Malin Array Si 22.97 45 P P 19 35 38.1 -0.5
AKBB IAmb IAmb 19 35 40.7
comp=Z,15nm,0.8s
AKBB Malin Array Si 22.97 45 P P 19 35 38.1 -0.5
AKBB pmax pmax
comp=Z,15nm,0.8s
BRTR Keskin Array B 23.68 74 P P 19 35 44.5 -1.6
comp=Z,0.5nm,0.9s,baz=274,slow=7.1,SNR=2.4
NACGM Naroch 24.05 34 e P 19 35 47.0 -2.2
MMAI Mount Meron Ar 26.25 89 P P 19 36 10.4 +0.8
comp=Z,0.7nm,0.5s,baz=280,slow=8.1,SNR=3.9
VSU Vasula 26.43 28ceP P 19 36 13.9 +3.2
VSU pmax pmax
comp=Z,39nm,0.8s
SOC Sochi 28.21 65 i P P 19 36 28.9 +1.9
SOC pmax pmax
comp=Z,8.0nm,1.0s
FINES FINESS Array B 28.41 23 P P 19 36 27.4 -1.1
comp=Z,2.1nm,0.8s,baz=231,slow=11,SNR=3.4
FIA1 FINESS Array S 28.41 23 P P 19 36 28.7 +0.2
FIA1 IAmb IAmb 19 36 35.5
comp=Z,14nm,1.1s
OBN Obninsk 28.92 40⇓eP P 19 36 34.1 +1.0
OBN e 19 37 25.0
OBN pmax pmax
comp=Z,6.0nm,1.0s
OBN MLR MLR
comp=Z,88nm,15.0s
VSR Storozhevoye 29.00 49 eP P 19 36 34.0 +0.1
VSR pmax pmax
comp=Z,5.0nm,0.7s
VORD Divnogorie 29.01 49 eP P 19 36 34.4 +0.4
VORD pmax pmax
comp=Z,5.0nm,0.9s
LPSR Galich'ya Gora 29.27 46 eP P 19 36 35.8 -0.5
LPSR pmax pmax
comp=Z,10.0nm,0.8s
VRH Novokhopyorsk 30.56 50 eP P 19 36 48.8 +1.2
VRH pmax pmax
comp=Z,10.0nm,0.7s
KLMR Klimovskoe 33.02 32 eP P 19 37 07.6 -1.6
KLMR pmax pmax
comp=Z,5.0nm,0.5s
KLMR Klimovskoe 33.02 32 eP P 19 37 07.6 -1.6
KLMR AMP 19 37 11.5
comp=Z,5.0nm,0.5s
ARCES ARCESS Array B 34.88 13 P P 19 37 24.9 -0.4
comp=Z,2.6nm,0.8s,baz=195,slow=8.8,SNR=6.9
PRGR Permogore 36.00 33 eP P 19 37 32.1 -2.9
PRGR pmax pmax
comp=Z,8.0nm,0.8s
KIRV Kirov 36.74 39 P P 19 37 41.0 -0.3
comp=Z,8.2nm,0.7s,baz=209,slow=3.5,SNR=4.5
KIRV Kirov 36.74 39 P P 19 37 41.0 -0.3
AKTO Aktyubinsk 40.75 53 P P 19 38 15.1 0.0
comp=Z,1.3nm,0.5s,baz=276,slow=6.0,SNR=6.1
ARU Arti 41.21 44 P P 19 38 18.3 -0.5
comp=Z,2.5nm,0.7s,baz=250,slow=5.3,SNR=13
ARU Arti 41.21 44 P P 19 38 18.1 -0.7
ARU IAmb IAmb 19 38 21.3
comp=Z,9.4nm,0.9s
ARU Arti 41.21 44c i P P 19 38 19.3 +0.5
ARU 19 39 52.8
ARU S S 19 44 35.5 +3.5
ARU pmax pmax
comp=Z,10.0nm,0.9s
UOSS Minazif 46.12 89 P P 19 38 58.0 -0.7
UOSS IAmb IAmb 19 39 03.3
comp=Z,4.6nm,0.9s
BRVK Borovoye 48.11 48ceP P 19 39 17.0 +3.1
BRVK pmax pmax
comp=Z,2.0nm,0.7s
E63A Oxbow 53.01 305 P P 19 39 50.5 -0.5
D62A Allapoint, All 53.23 305 P P 19 39 52.2 -0.4
KURBB Kurchatov Arra 53.62 50 P P 19 39 55.6 +0.2
comp=Z,2.2nm,0.6s,baz=294,slow=8.2,SNR=4.6
KURK Kurchatov 53.65 50 P P 19 39 55.2 -0.4
KURK IAmb IAmb 19 39 58.3
comp=Z,5.1nm,0.9s
KURK Kurchatov 53.65 50ceP P 19 39 56.5 +0.9
KURK pmax pmax
comp=Z,6.0nm,1.7s
ZAA0 Zalesovo Array 56.36 45 P P 19 40 15.5 +0.3
ZAA0 IAmb IAmb 19 40 17.5
comp=Z,2.0nm,0.8s
ZALV Zalesovo Beam 56.36 45 P P 19 40 14.8 -0.4
comp=Z,1.1nm,0.5s,baz=283,slow=7.5,SNR=6.7
MK31 Makanchi Array 57.18 53 P P 19 40 19.9 -1.3
MK31 IAmb IAmb 19 40 29.4
comp=Z,1.8nm,0.8s
MK31 Makanchi Array 57.18 53 P P 19 40 19.9 -1.3
MK31 pmax pmax
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 57.18 53 P P 19 40 20.0 -1.2
comp=Z,0.7nm,0.5s,baz=286,slow=5.8,SNR=15
WMQ Urumqi 61.85 55 eP P 19 40 54.8 +1.3
TIXI Tiksi 65.22 17 eP P 19 41 16.9 +1.7
TIXI pmax pmax
comp=Z,1.0nm,1.0s
TLY Talaya 67.67 42 i P P 19 41 33.9 +2.7
TLY pmax pmax
comp=Z,3.0nm,1.0s
YKA Yellowknife Ar 69.39 334 P P 19 41 41.7 -0.1
comp=Z,0.7nm,0.5s,baz=51,slow=5.9,SNR=12
YKA LR LR 20 12 41.8
comp=Z,105nm,18.4s,baz=0.0,slow=36
SONM Songino Array 71.25 44 P P 19 41 53.8 +0.2
comp=Z,0.6nm,0.7s,baz=318,slow=8.4,SNR=4.4
BILL Bilibino 74.66 7⇑eP P 19 42 14.0 +0.7
BILL e 19 42 28.2
BILL pmax pmax
comp=Z,2.0nm,1.2s
ILAR Eielson Array 76.14 347 P P 19 42 23.6 +1.7
comp=Z,0.5nm,0.7s,baz=27,slow=6.1,SNR=5.5
PDAR Pinedale Array 80.17 317 P P 19 42 43.8 -1.1
comp=Z,0.5nm,0.9s,baz=40,slow=7.1,SNR=2.8
CMAR Chiang Mai Arr 83.26 72 P P 19 43 00.6 -0.7
comp=Z,0.3nm,0.8s,baz=298,slow=10,SNR=3.4
TXAR Lajitas Array 85.28 303 P P 19 43 13.1 +1.6
comp=Z,0.3nm,0.9s,baz=350,slow=4.6,SNR=2.5
NJ2 Nanjing 88.58 50 eP P 19 43 26.8 -0.6
WRA Warramunga Arr 133.99 83 PKP PKPdf 19 49 52.1 0.0
comp=Z,0.6nm,0.8s,baz=329,slow=1.5,SNR=3.3
ASAR Alice Springs 135.54 87 PKP PKPdf 19 49 54.0 -0.8
comp=Z,0.4nm,0.7s,baz=325,slow=1.5,SNR=3.5
STKA Stephens Creek 145.14 95 PKPbc PKPbc 19 50 10.3 -1.1
comp=Z,2.8nm,0.6s,baz=288,slow=3.6,SNR=11
STKA Stephens Creek 145.14 95 PKPbc 19 50 10.8 -0.7
STKA Stephens Creek 145.14 95 PKIKP PKPbc 19 50 10.8 -0.7

DDA 22 19:32:46.6,37.39N×36.38E,h7km±4km,ML1.5,Turkey
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ANDN Andirin 0.19 352 i P Pg 19 32 50.6 +0.1
ANDN IAML 19 32 53.0
comp=E,127nm,0.8s
ANDN IAML 19 32 56.0
comp=N,92nm,0.3s
KAMA Osmaniye 0.31 131 i P Pb 19 32 53.6 -0.9
KAMA i S Sg 19 32 58.1 +1.3
HCB Kahramanmara 0.43 96 i P Pg 19 32 55.4 +0.5
SAIM ADANA 0.63 338 i P Pg 19 32 58.5 -0.3
SAIM IAML 19 33 21.0
comp=N,21nm,0.2s
KUZU Kuzuini 0.83 138 i P Pn 19 33 05.4 +0.6
KUZU i S Sg 19 33 13.6 +0.3
KUZU IAML 19 33 21.0
comp=E,20nm,0.4s
KUZU IAML 19 33 32.0
comp=N,13nm,0.4s
GZT Gaziantep 0.95 92 i P Pn 19 33 07.1 +0.6
GZT i S Sg 19 33 17.3 +0.2
GZT IAML 19 33 22.0
comp=N,20nm,0.9s
GZT IAML 19 33 33.0
comp=E,14nm,0.3s

ATH 22 19:33:12.6,38.31N×20.34E,h9km±3km,ML2.3/3,Error ellipse: s-maj=3.4km s-min=1.0km az=155.0,Greece
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.08 129 P Pg 19 33 14.7 -0.1
KEF4 S Sg 19 33 16.2 -0.2
KEF3 Kipouria, Keph 0.11 177 P Pg 19 33 15.4 +0.3
KEF3 S Sg 19 33 17.5 +0.6
LXRA Lixouri, Kepha 0.13 146 P Pg 19 33 15.7 +0.1
LXRA S Sg 19 33 18.0 +0.5
ARGA Argostoli. Kep 0.17 141 P Pg 19 33 16.0 -0.1
ARGA S Sg 19 33 18.5 -0.1
KEF2 Argostoli. Kep 0.18 142 P Pg 19 33 16.3 -0.1
KEF2 S Sg 19 33 19.1 +0.1
KONA Konidatara, Ke 0.21 58 P Pg 19 33 16.9 0.0
KONA S Sg 19 33 20.4 +0.5
FSK Fiskardo 0.23 49 P Pg 19 33 17.2 -0.1
FSK S Sg 19 33 20.8 +0.4
FSK AML AML 19 33 21.2
comp=N,1062μm,0.4s
FSK AML AML 19 33 21.6
comp=E,892μm,0.2s
VLS Valsamata 0.24 124 P Pg 19 33 17.0 -0.4
VLS S Sg 19 33 20.2 -0.3
VLS AML AML 19 33 20.6
comp=E,2450μm,0.1s
VLS AML AML 19 33 20.7
comp=N,2873μm,0.1s
EVGI Lefkada island 0.40 38 P Pg 19 33 20.3 -0.1
VLMS Volimes, Zakyn 0.50 150 P Pg 19 33 22.0 -0.3
VLMS S Sb 19 33 30.2 -0.8
VLMS AML AML 19 33 31.0
comp=E,1505μm,0.1s
VLMS AML AML 19 33 32.0
comp=N,3277μm,0.2s
LKD2 Lefkada island 0.54 27 P Pg 19 33 23.1 0.0

IDC 22 19:36:56.9±1.0,40.37N×63.37E,h0km,mb3.8/9, mb1 3.9/15,mb1mx3.7/47,mbtmp3.8/15,ML3.5/6,MS3.6/2, Ms1 3.7/15,ms1mx2.6/50,Error ellipse: s-maj=18.9km s-min=9.0km az=170.0
NNC 22 19:36:56.2±0.6,40.22N×63.58E,h0km,mb4.1,mpv3.7, Error ellipse: s-maj=14.7km s-min=6.3km az=142.0
ISC 22 19:36:58.7±0.7,40.36N±0.09×63.40E±0.06,h13km,n25, σ1§43/27,mb3.8/9,7C-5D,Northwestern Uzbekistan
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GEYT Alibeck 4.77 241 Pn Pn 19 38 10.9 +0.6
3.5nm,0.3s,baz=62,slow=11,SNR=44
GEYT Pg Pb 19 38 23.4 +1.3
19nm,0.3s,baz=62,slow=12,SNR=33
GEYT Sn Sn 19 39 05.2 -0.3
24nm,0.3s,baz=174,slow=23,SNR=11
GEYT Lg Lg 19 39 28.2
10nm,0.3s,baz=66,slow=15,SNR=2.9
GYA0B ALIBECK ARRAY 4.77 241 ⇓Pn Pn 19 38 10.8 +0.5
GYA0B ⇑Pg Pb 19 38 23.3 +1.2
GYA0B ⇓Lg Lg 19 39 28.1
KK31 Karatay Array 5.99 60 ⇑Pn Pn 19 38 25.2 -1.7
3.6nm,0.6s,baz=241,slow=17,SNR=38
KK31 ⇑Pg Pb 19 38 45.2 +2.4
4.1nm,0.5s,baz=246,slow=18,SNR=6.8
KK31 ⇓Lg Lg 19 40 03.0
24nm,0.5s,baz=249,slow=28,SNR=4.9
AAK Ala-Archa 8.63 71 Pn Pn 19 39 02.6 -0.7
1.0nm,0.3s,baz=218,slow=4.1,SNR=23
AAK Sn Sn 19 40 38.6 -2.0
0.7nm,0.3s,baz=114,slow=9.6,SNR=3.6
AAK Lg Lg 19 41 32.7
0.8nm,0.3s,baz=336,slow=19,SNR=2.0
AB31 Akbulak array 9.22 346 ⇑Pn Pn 19 39 13.7 +2.4
0.7nm,0.3s,baz=182,slow=14,SNR=23
AB31 ⇑Lg Lg 19 41 57.3
11nm,0.6s,baz=169,slow=27,SNR=5.0
AKTO Aktyubinsk 10.76 341 Pn Pn 19 39 31.3 -1.0
0.6nm,0.3s,baz=165,slow=9.6,SNR=15
AKTO Sn Sn 19 41 25.6 -6.8
0.4nm,0.3s,baz=270,slow=20,SNR=3.0
AKTO Lg Lg 19 42 39.8
0.1nm,0.3s,baz=81,slow=19,SNR=3.0
AKTO Aktyubinsk 10.76 341 ⇑Pn Pn 19 39 32.6 +0.3
3.2nm,0.8s
AKTO ⇓Lg Lg 19 42 46.1
17nm,0.9s
BRVK Borovoye 13.54 18 ⇑Pn Pn 19 40 11.6 +1.3
2.4nm,0.5s
BRVK ⇓Sn Sn 19 42 42.4 +1.8
5.6nm,0.6s
GNI Garni 14.25 275 Lg Lg 19 44 32.7
0.3nm,0.3s,baz=204,slow=20,SNR=2.1
KURBB Kurchatov Arra 14.73 41 Pn Pn 19 40 22.4 -4.2
0.1nm,0.3s,baz=238,slow=13,SNR=4.6
KURBB Lg Lg 19 44 45.6
0.0nm,0.3s,baz=239,slow=36,SNR=2.9
KBZ Khabaz 15.59 289 Pn Pn 19 40 34.3 -3.7
0.1nm,0.3s,baz=139,slow=11,SNR=2.9
KBZ Sn Sn 19 43 22.1 -8.5
0.2nm,0.3s,baz=266,slow=16,SNR=3.1
KVAR Kislovodsk Arr 15.76 290 Sn Sn 19 43 23.6 -11
baz=117,slow=6.8,SNR=3.9
ARU Arti 16.39 350 Pn Pn 19 40 49.0 +0.8
0.0nm,0.3s,baz=141,slow=7.7,SNR=5.3
ARU Sn Sn 19 43 39.2 -11
0.0nm,0.3s,baz=143,slow=20,SNR=2.0
ARU Lg Lg 19 45 37.4
0.0nm,0.3s,baz=166,slow=22,SNR=3.7
ZALV Zalesovo Beam 19.82 40 P P 19 41 27.2 -1.5
0.3nm,0.3s,baz=241,slow=12,SNR=10
ZALV S S 19 45 10.5 -1.0
0.1nm,0.3s,baz=239,slow=20,SNR=3.0
BRTR Keskin Array B 22.75 278 P P 19 42 00.6 0.0
0.7nm,0.8s,baz=98,slow=10,SNR=4.5
AKASG Malin Array Be 25.86 305 P P 19 42 29.4 -0.4
0.3nm,0.4s,baz=84,slow=8.4,SNR=4.5
MLR Muntele Rosu 27.72 293 P P 19 42 47.5 +0.7
1.2nm,0.7s,baz=86,slow=19,SNR=2.5
FINES FINESS Array B 30.94 325 P P 19 43 14.6 -0.4
1.5nm,0.8s,baz=131,slow=10,SNR=10
SONM Songino Array 31.44 62 P P 19 43 19.5 -0.2
0.2nm,0.6s,baz=284,slow=5.8,SNR=2.8
ARCES ARCESS Array B 35.32 338 P P 19 43 53.3 +0.2
2.8nm,0.9s,baz=138,slow=7.6,SNR=4.7
HFS Hagfors 36.31 320 P P 19 44 02.3 +0.6
1.2nm,0.5s,baz=102,slow=13,SNR=4.5
CMAR Chiang Mai Arr 37.52 115 LR LR 20 04 02.4
comp=Z,59nm,18.1s,baz=194,slow=43
KMBO Kilima Mbogo 47.69 217 LR LR 20 08 43.2
comp=Z,89nm,19.4s,baz=90,slow=40
USRK Ussuriysk Ar. 49.55 62 P P 19 45 49.6 +0.5
1.1nm,0.6s,baz=324,slow=9.2,SNR=4.5
YKA Yellowknife Ar 77.48 359 P P 19 48 52.8 -0.5
0.4nm,0.6s,baz=356,slow=6.3,SNR=9.9

IDC 22 19:49:47.8±1.7,19.15S×176.47W,h0km,mb4.1/7, mb1 4.4/7,mb1mx4.1/23,mbtmp4.0/7,MS3.7/15, Ms1 3.7/15,ms1mx3.5/37,Error ellipse: s-maj=108.6km s-min=20.4km az=149.0
NEIC 22 19:49:48.4±1.4,19.6S±0.2×176.14W±0.05,h10km±1km, mb4.5/12,Error ellipse: s-maj=29.5km s-min=6.6km az=188.0
ISC 22 19:49:52.0±0.6,19.6S±0.2×176.14W±0.08,h35km,n38, σ1§10/25,mb4.3/12,MS3.7/14,Fiji Islands region
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSVF Nonsavu 5.80 287 Pn Pn 19 51 14.8 -0.9
NIUE Niue 5.88 86 Pn Pn 19 51 14.4 -2.4
RAO Raoul Island 9.78 189 LR LR 19 55 42.6
comp=Z,440nm,20.7s,baz=3.0,slow=35
RAR Rarotonga 15.43 99 Pn Pn 19 53 26.5 -0.6
SANVU Saraoutou 16.41 282 Pn Pn 19 53 38.7 -1.0
SANVU IAmb IAmb 19 53 43.6
comp=Z,47nm,1.3s
DZM Mont Dzumac 16.47 258 eLR LR 19 58 05.0
comp=Z,935nm,24.9s
DZM Mont Dzumac 16.47 258 Pn Pn 19 53 40.8 +0.2
comp=Z,0.1nm,0.3s,baz=36,slow=16,SNR=3.2
DZM LR LR 19 58 57.4
comp=Z,606nm,20.2s,baz=58,slow=34
DZM Mont Dzumac 16.47 258 Pn 19 53 39.0 -1.6
NOUC Port Laguerre 16.61 258 Pn 19 53 41.9 -0.3
URZ Urewera 19.53 196 LR LR 20 01 12.1
comp=Z,236nm,21.5s,baz=24,slow=34
TBI Tubuai 25.10 103 eT T 19 56 12.3
comp=Z,16nm,0.3s
TBI Tubuai 25.10 103 eLQ LQ 20 00 17.9
comp=Z,601nm,28.5s
TBI eLR LR 20 01 27.2
comp=Z,352nm,30.2s
HNR Honiara 25.22 290 LR LR 20 03 54.5
comp=Z,86nm,18.3s,baz=122,slow=34
PPT2 Papeete2 25.25 90 eLR LR 20 01 27.6
comp=Z,569nm,26.2s
PPT Papeete 25.25 90 LR LR 20 02 32.8
comp=Z,158nm,20.6s,baz=264,slow=30
TOO Toolangi 37.86 233 P P 19 57 05.2 -0.4
TOO IAmb IAmb 19 57 21.4
comp=Z,14nm,1.1s
STKA Stephens Creek 39.77 243 P P 19 57 21.8 +0.1
comp=Z,9.2nm,1.0s,baz=90,slow=9.6,SNR=16
STKA LR LR 20 12 08.2
comp=Z,104nm,18.1s,baz=36,slow=34
STKA Stephens Creek 39.77 243 P P 19 57 21.8 +0.1
BBOO Buckleboo 44.53 243 P 19 58 00.5 +0.1
AS31 Alice Springs 46.44 256 P P 19 58 15.4 -0.4
AS31 IAmb IAmb 19 58 17.6
comp=Z,1.9nm,0.7s
ASAR Alice Springs 46.44 256 P P 19 58 15.3 -0.5
comp=Z,5.0nm,0.7s,baz=92,slow=8.4,SNR=74
ASAR LR LR 20 17 35.6
comp=Z,54nm,18.6s,baz=90,slow=36
WB0 Warramunga Arr 46.45 261 P P 19 58 14.5 -1.3
WB0 IAmb IAmb 19 58 26.3
comp=Z,5.9nm,1.1s
WB2 Warramunga Arr 46.46 261 P P 19 58 13.9 -2.0
WRA Warramunga Arr 46.47 261 P P 19 58 14.6 -1.4
comp=Z,2.1nm,0.8s,baz=95,slow=7.7,SNR=9.9
WRA LR LR 20 16 39.2
comp=Z,240nm,20.2s,baz=255,slow=35
SOEI Soe 58.23 270 P P 19 59 44.4 +0.9
VNDA Vanda 58.99 185 LR LR 20 20 25.2
comp=Z,31nm,21.6s,baz=152,slow=31
NWAO Narrogin (SRO) 60.35 243 P P 19 59 58.2 +0.5
NWAO IAmb IAmb 20 00 15.3
comp=Z,6.0nm,1.1s
QSPA South Pole Qui 70.50 180 P P 20 01 03.9 +1.0
QSPA IAmb IAmb 20 01 08.3
comp=Z,5.8nm,1.3s
PETK Petropavlovsk- 75.84 344 LR LR 20 27 13.5
comp=Z,34nm,21.9s,baz=62,slow=30
NVAR Mina Array Bea 79.15 43 P P 20 01 53.8 +0.3
comp=Z,0.4nm,0.9s,baz=258,slow=11,SNR=3.1
NVAR LR LR 20 28 45.4
comp=Z,70nm,19.4s,baz=230,slow=30
USHA Ushuaia 83.94 146 LR LR 20 37 26.7
comp=Z,68nm,18.2s,baz=52,slow=34
TXAR Lajitas Array 85.08 57 P P 20 02 26.4 +1.8
comp=Z,0.6nm,1.0s,baz=219,slow=7.0,SNR=4.5
TXAR LR LR 20 32 26.9
comp=Z,11nm,21.6s,baz=0.0,slow=30
ILAR Eielson Array 87.03 12 P P 20 02 33.5 +0.1
comp=Z,1.0nm,0.9s,baz=224,slow=5.0,SNR=4.2
NNA Nana 94.61 104 LR LR 20 36 12.7
comp=Z,22nm,19.5s,baz=240,slow=29
ATAH Atahualpa 94.88 99 LR LR 20 35 41.5
comp=Z,34nm,18.8s,baz=195,slow=29
YKA Yellowknife Ar 94.94 24 P P 20 03 11.3 +1.1
comp=Z,0.2nm,0.7s,baz=242,slow=4.8,SNR=3.6
BRTR Keskin Array B 147.47 315 PKPbc PKPdf 20 09 31.3 +1.2
comp=Z,0.8nm,1.1s,baz=356,slow=4.3,SNR=2.6
GERES GERESS Array B 149.74 347 PKPbc PKPbc 20 09 38.0 -0.2
comp=Z,0.4nm,0.6s,baz=350,slow=4.0,SNR=3.6

IDC 22 20:20:41.3±0.8, 53.16N×35.19W, h0km, mb3.6/14, mb1 3.8/16, mb1mx3.6/66, mbtmp3.6/16, ML3.4/2, MS3.4/14, Ms1 3.5/14, ms1mx3.2/53, Error ellipse: s-maj=29.5km s-min=14.0km az=6.0
NEIC 22 20:20:42.9±1.0, 53.2N±0.2×35.2W±0.2, h10km±1km, mb4.3/13, Error ellipse: s-maj=26.7km s-min=17.2km az=189.0
ISC 22 20:20:43.3±0.6, 53.2N±0.2×35.20W±0.07, h13km, n41, σ0.48/33, mb3.6/17, MS3.5/14, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	Borgarnes	13.58	26	LR	LR	20 27 02.4	
	comp=Z,15nm,21.5s,baz=293,slow=28						
SFJD	Kangerlussuaq	15.77	337		P	20 24 27.7	-0.9
SFJD				IAmb	IAmb	20 24 36.1	
	comp=Z,19nm,1.2s						
SCHQ	Schefferville	18.59	288	P	Pn	20 25 00.5	+0.3
	comp=Z,0.1nm,0.3s,baz=104,slow=11,SNR=3.8						
SCHQ	Schefferville	18.59	288	P	Pn	20 24 59.9	-0.2
EKA	Eskdalemuir Ar	18.75	71	P	Pn	20 25 01.8	-0.3
	baz=278,slow=11,SNR=3.0						
E63A	Oxbow	22.34	266	P	P	20 25 40.1	-0.4
D62A	Allapoint, All	22.39	268	P	P	20 25 41.0	-0.1
ESBB	Sonseca Array	25.18	110	P	P	20 26 08.0	-0.2
ESBB				IAmb	IAmb	20 26 21.8	
	comp=Z,16nm,1.5s						
ESDC	Sonseca Array	25.18	110	P	P	20 26 07.9	-0.3
	comp=Z,0.7nm,0.5s,baz=318,slow=9.9,SNR=6.6						
NOA	NORSAR Array B	25.90	54	P	P	20 26 14.4	-0.1
	comp=Z,0.8nm,0.7s,baz=276,slow=9.9,SNR=2.8						
NOA				LR	LR	20 36 08.6	
	comp=Z,68nm,18.5s,baz=310,slow=36						
DAVOX	Davos/Dischmat	29.28	84	LR	LR	20 36 45.5	
	comp=Z,44nm,20.6s,baz=224,slow=33						
GERES	GERESS Array B	30.58	78	P	P	20 26 57.1	+0.5
	comp=Z,0.4nm,0.8s,baz=304,slow=10,SNR=3.7						
FIA1	FINESS Array S	32.93	51	P	P	20 27 16.9	0.0
FINES	FINESS Array B	32.93	51	P	P	20 27 16.1	-0.8
	comp=Z,2.5nm,0.8s,baz=298,slow=8.2,SNR=4.2						
FINES				LR	LR	20 38 45.7	
	comp=Z,99nm,19.7s,baz=114,slow=33						
ULM	Lac du Bonnet	36.73	291	LR	LR	20 42 48.8	
	comp=Z,60nm,19.6s,baz=304,slow=36						
AKASG	Malin Array Be	38.59	67	P	P	20 28 05.4	-0.3
	comp=Z,0.7nm,0.6s,baz=294,slow=8.0,SNR=3.1						
OLIL	Olney	38.60	270	P	P	20 28 06.0	+0.2
YKA	Yellowknife Ar	40.66	316	P	P	20 28 22.1	-0.5
	comp=Z,0.2nm,0.4s,baz=62,slow=9.3,SNR=3.9						
YKA				PcP	PcP	20 30 23.7	-0.3
	comp=Z,0.9nm,0.8s,baz=61,slow=3.5,SNR=9.3						
BR131	Keskin Array S	47.47	77	P	P	20 29 18.1	+0.3
BR131				IAmb	IAmb	20 29 20.1	
	comp=Z,1.9nm,0.7s						
BRTR	Keskin Array B	47.47	77	P	P	20 29 18.8	+1.1
	comp=Z,1.7nm,0.6s,baz=299,slow=6.8,SNR=11						
BRTR				LR	LR	20 50 46.2	
	comp=Z,35nm,18.6s,baz=339,slow=38						
YNE	Yellowstone No	47.57	292	P	P	20 29 19.1	+0.6
PD31	Pinedale Array	48.72	289	P	P	20 29 27.3	-0.1
PD31				IAmb	IAmb	20 29 32.9	
	comp=Z,2.6nm,1.1s						
PDAR	Pinedale Array	48.72	289	P	P	20 29 27.6	+0.1
	comp=Z,0.7nm,0.7s,baz=62,slow=7.2,SNR=4.5						
PDAR				LR	LR	20 47 46.5	
	comp=Z,48nm,18.7s,baz=48,slow=33						
NEW	Newport	49.41	299	LR	LR	20 51 34.1	
	comp=Z,52nm,18.3s,baz=16,slow=38						
TORD	Torodi Ar. Bea	49.50	130	P	P	20 29 32.6	-0.8
	comp=Z,0.9nm,0.7s,baz=318,slow=7.2,SNR=3.7						
HWUT	Hardware Ranch	50.61	289	P	P	20 29 42.2	+0.4
HWUT				IAmb	IAmb	20 29 43.7	
	comp=Z,3.2nm,0.8s						
ILAR	Eielson Array	51.23	329	P	P	20 29 46.0	+0.1
	comp=Z,0.4nm,0.9s,baz=39,slow=4.6,SNR=3.0						
ANMO	Albuquerque	52.11	280	LR	LR	20 51 11.4	
	comp=Z,82nm,20.1s,baz=56,slow=35						
TXAR	Lajitas Array	54.40	273	P	P	20 30 10.2	+0.3
	comp=Z,0.3nm,0.7s,baz=63,slow=6.2,SNR=4.0						
TXAR				PcP	PcP	20 31 14.3	+0.6
	comp=Z,0.5nm,0.8s,baz=80,slow=1.4,SNR=4.0						
X16A	Lo Mia Camp, P	55.42	283	P	P	20 30 17.7	+0.3
X16A				IAmb	IAmb	20 30 20.6	
	comp=Z,3.2nm,1.1s						
NVAR	Mina Array Bea	56.56	291	P	P	20 30 25.6	0.0
	comp=Z,0.1nm,0.3s,baz=35,slow=8.0,SNR=3.7						
NVAR				LR	LR	20 56 08.9	
	comp=Z,23nm,18.9s,baz=195,slow=38						
YBH	Yreka Blue Hor	56.69	297	LR	LR	20 53 26.2	
	comp=Z,47nm,18.9s,baz=336,slow=35						
APG	El Apazote	57.53	250	LR	LR	20 55 20.9	
	comp=Z,34nm,19.3s,baz=44,slow=36						
JTS	Las Juntas de	58.37	242	LR	LR	20 52 33.6	
	comp=Z,36nm,20.3s,baz=50,slow=33						
MK31	Makanchi Array	67.08	41	P	P	20 31 36.9	+0.9
MKAR	Makanchi Array	67.08	41	P	P	20 31 36.2	+0.1
	comp=Z,0.3nm,0.6s,baz=328,slow=5.5,SNR=5.9						
AAK	Ala-Archa	67.09	49	LR	LR	20 59 54.0	
	comp=Z,44nm,18.9s,baz=228,slow=35						
SONM	Songino Array	74.20	26	P	P	20 32 20.0	+0.5
	comp=Z,0.4nm,0.6s,baz=319,slow=4.6,SNR=2.4						
CMAR	Chiang Mai Arr	98.43	44	LR	LR	21 20 35.9	
	comp=Z,11nm,21.0s,baz=210,slow=36						
WRA	Warramunga Arr	145.85	18	PKPbc	PKPab	20 40 22.2	-0.3
	comp=Z,1.1nm,0.8s,baz=340,slow=3.0,SNR=4.6						
ASAR	Alice Springs	149.39	20	PKPbc	PKPbc	20 40 31.6	-0.3
	comp=Z,0.7nm,0.5s,baz=355,slow=2.3,SNR=16						

IDC 22 20:22:48.4±1.0, 18.94S×65.34E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.7/46, mbtmp3.8/8, MS3.5/11, Ms1 3.5/11, ms1mx3.3/38, Error ellipse: s-maj=28.3km s-min=26.9km az=156.0
ISC 22 20:22:50.1±0.9, 18.9S±0.2×65.3E±0.2, h10km, n21, σ0.75/8, mb4.0/8, MS3.5/11, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	13.20	33	T	T	20 39 18.6	
	baz=210,slow=75,SNR=17						
H08S2	Diego Garcia H	13.21	33	T	T	20 39 17.2	
	baz=210,slow=75,SNR=16						
H08S3	Diego Garcia H	13.22	33	T	T	20 39 19.9	
	baz=210,slow=75,SNR=53						
H08N3	Diego Garcia H	13.68	25	T	T	20 40 04.7	
	baz=203,slow=76,SNR=93						
H08N1	Diego Garcia H	13.69	25	T	T	20 40 01.2	
	baz=203,slow=76,SNR=50						
H08N2	Diego Garcia H	13.70	25	T	T	20 40 10.7	
	baz=203,slow=76,SNR=88						
LSZ	Lusaka	35.62	270	P	P	20 29 48.4	-0.1
	1.2nm,0.2s,baz=131,slow=14,SNR=2.3						
BOSA	Boshof	37.75	248	LR	LR	20 43 13.0	
	comp=Z,89nm,18.1s,baz=128,slow=32						
PSI	Prapat	39.49	60	LR	LR	20 45 20.6	
	comp=Z,129nm,18.7s,baz=180,slow=34						
LEM	Lembang	42.84	79	LR	LR	20 45 56.4	
	comp=Z,64nm,18.8s,baz=218,slow=32						
MAW	Mawson	48.68	181	LR	LR	20 47 55.1	
	comp=Z,33nm,20.3s,baz=60,slow=31						
CMAR	Chiang Mai Arr	49.71	44	P	P	20 31 43.5	+0.8
	0.5nm,0.7s,baz=234,slow=7.5,SNR=6.1						
CMAR				LR	LR	20 49 29.4	
	comp=Z,44nm,20.6s,baz=240,slow=32						
KAPI	Kappang	54.80	83	LR	LR	20 52 02.4	
	comp=Z,37nm,19.1s,baz=300,slow=32						
FITZ	Fitzroy Crossi	56.96	100	LR	LR	20 55 06.6	
	comp=Z,38nm,18.5s,baz=296,slow=34						
ASAR	Alice Springs	63.55	108	P	P	20 33 20.9	-0.4
	1.5nm,0.8s,baz=272,slow=5.9,SNR=22						
ASAR				LR	LR	20 57 28.0	
	comp=Z,52nm,19.7s,baz=282,slow=33						
WRA	Warramunga Arr	64.66	104	P	P	20 33 27.9	-0.7
	1.9nm,0.8s,baz=260,slow=5.7,SNR=8.3						
SNAA	Sanae	65.63	199	P	P	20 33 32.6	+0.4
	1.5nm,0.9s,baz=57,slow=5.4,SNR=3.0						
MKAR	Makanchi Array	67.19	13	P	P	20 33 43.4	-0.9
	0.2nm,0.8s,baz=202,slow=7.4,SNR=3.0						
ZALV	Zalesovo Beam	74.50	12	P	P	20 34 28.1	-0.4
	0.5nm,0.4s,baz=185,slow=7.4,SNR=3.6						
ZALV				LR	LR	21 03 12.6	
	comp=Z,30nm,18.7s,baz=146,slow=32						
SONM	Songino Array	75.97	27	P	P	20 34 37.9	+0.5
	0.6nm,0.8s,baz=214,slow=4.9,SNR=3.8						
SONM				LR	LR	21 06 15.3	
	comp=Z,64nm,19.5s,baz=76,slow=34						
KSRS	Korea Array	81.30	46	LR	LR	21 09 52.7	
	comp=Z,17nm,21.7s,baz=230,slow=35						

IDC 22 20:39:27.6±36.0, 16.01S×175.07W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.6/46, mbtmp3.9/4, MS3.5/1, Ms1 3.5/1, ms1mx2.6/30, Error ellipse: s-maj=721.3km s-min=184.1km az=86.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	37.38	275	LR	LR	20 59 58.7	
	comp=Z,60nm,18.3s,baz=232,slow=33						
STKA	Stephens Creek	42.34	240	P	P	20 47 23.9	+0.3
	0.6nm,0.3s,baz=90,slow=7.1,SNR=1.9						
WRA	Warramunga Arr	48.14	257	P	P	20 48 09.4	-0.5
	0.6nm,0.7s,baz=83,slow=6.7,SNR=1.7						
ASAR	Alice Springs	48.40	252	P	P	20 48 11.2	-0.6
	2.2nm,0.3s,baz=89,slow=8.1,SNR=13						
FITZ	Fitzroy Crossi	56.51	259	P	P	20 49 12.8	+0.6
	0.9nm,0.7s,baz=90,slow=6.1,SNR=1.4						

IDC 22 20:42:17.9±1.5, 2.92N×122.35E, h553km±18km, mb3.1/7, mb1 3.2/8, mb1mx2.7/48, mbtmp4.1/8, Error ellipse: s-maj=32.4km s-min=11.7km az=65.0
NEIC 22 20:42:17.2±0.9, 2.9N±0.1×122.3E±0.1, h543km±11km, mb4.3/17, Error ellipse: s-maj=18.3km s-min=14.2km az=58.0
DJA 22 20:42:19.3±0.6, 3°N±7°×122°2E±°, h532km±7km, M3.9/9, mb3.8/5, MLv4.0/9
ISC 22 20:42:17.9±0.6, 2.82N±0.07×122.29E±0.08, h552km, n41, σ1.02/49, mb4.2/15, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	Marisa	2.35	189	P	P	20 43 29.7	+0.2
MRSI				S	S	20 44 26.8	-0.9
MPSI	Mapaga	3.44	224	P	P	20 43 36.2	+0.2
APSI	Ampana	3.76	190	P	P	20 43 39.0	+0.7
LUWI	Luwuk	3.87	173	P	P	20 43 39.2	+0.2
LUWI				S	S	20 44 44.2	-0.8
LUWI	Luwuk	3.87	173	P	P	20 43 38.2	-0.8
LUWI					S	20 44 44.7	-0.3
DAV	Davao City (W)	5.34	38	S	S	20 45 10.3	+3.6
	baz=233,slow=20,SNR=4.1						
TNTI	Ternate	5.47	112	P	P	20 43 50.5	-1.4
TNTI					S	20 45 05.7	-3.0
SANI	Sanana	6.09	143	P	P	20 43 59.1	+1.6
	0.1nm12nm,0.9s						
TTSI	Tana Toraja	6.33	203	P	P	20 44 01.9	+2.2
	0.1nm14nm,1.0s						
KKM	Kota Kinabalu	6.85	298	P	P	20 44 03.9	-0.8
SIJI	Sorong	9.69	112	P	P	20 44 32.7	-0.2
	3.8nm,0.3s,baz=315,slow=18,SNR=14						
SBUM	Sibu	10.07	268	P	P	20 44 37.0	+0.3
FAKI	Fak Fak	11.47	120	P	P	20 44 51.3	+0.2
KSM	Kuching	12.05	264	P	P	20 44 56.9	-0.2
SOEI	Soe	12.65	171	P	P	20 45 04.1	+0.8
JAGI	Jajag, Banyuwa	13.84	216	P	P	20 45 15.9	+0.3
KNRA	Kununurra	19.46	161	P	P	20 46 09.9	+0.8
FITZ	Fitzroy Crossi	21.05	171	P	P	20 46 24.0	+0.5
	1.9nm,0.3s,baz=7.9,slow=6.3,SNR=25						
FITZ	Fitzroy Crossi	21.05	171	P	P	20 46 23.7	+0.3
FITZ				IAmb	IAmb	20 46 25.4	
	comp=Z,3.3nm,0.8s						
PSA00	Pilbara Seismi	24.36	186	P	P	20 46 52.8	-0.2
PSA00				IAmb	IAmb	20 46 53.3	
	comp=Z,5.0nm,0.5s						
WB0	Warramunga Arr	25.40	153	P	P	20 47 01.6	-0.7
WRA	Warramunga Arr	25.53	153	P	P	20 47 03.0	-0.3
	comp=Z,4.1nm,0.5s,baz=336,slow=9.5,SNR=57						
WRA				ScP	ScP	20 53 02.8	-0.8
	comp=Z,0.2nm,0.4s,baz=334,slow=2.9,SNR=4.7						
WB2	Warramunga Arr	25.54	153	P	P	20 47 02.9	-0.6
WB2				IAmb	IAmb	20 47 03.7	
	comp=Z,7.7nm,0.6s						
CMAR	Chiang Mai Arr	27.65	306	P	P	20 47 21.7	-0.3
	comp=Z,0.3nm,0.6s,baz=134,slow=7.7,SNR=3.6						
AS31	Alice Springs	28.65	157	P	P	20 47 30.9	+0.2
ASAR	Alice Springs	28.65	157	P	P	20 47 31.2	+0.5
	comp=Z,3.1nm,0.6s,baz=333,slow=7.2,SNR=71						
ASAR				PcP	PcP	20 50 23.4	-0.3
	comp=Z,0.2nm,0.4s,baz=352,slow=2.7,SNR=3.4						
ASAR				ScP	ScP	20 53 12.3	-0.8
	comp=Z,0.5nm,0.5s,baz=339,slow=3.1,SNR=9.2						
MORW	Morawa	32.27	190	P	P	20 48 01.8	+0.1
MORW				IAmb	IAmb	20 48 02.3	
	comp=Z,7.1nm,0.6s						
FORT	Forrest	33.86	171	P	P	20 48 15.6	+0.5
NWAO	Narrogin (SRO)	35.87	187	P	P	20 48 32.2	+0.3
MAJO	Matsushiro	36.63	22	P	P	20 48 38.2	+0.1
MAJO				IAmb	IAmb	20 48 46.6	
	comp=Z,6.6nm,1.3s						
BBOO	Buckleboo	37.76	161	P	P	20 48 47.8	+0.4
BBOO				IAmb	IAmb	20 48 57.7	
	comp=Z,11nm,1.1s						
STKA	Stephens Creek	39.08	154	P	P	20 48 59.2	+1.2
	comp=Z,2.4nm,0.4s,baz=339,slow=6.7,SNR=12						
STKA	Stephens Creek	39.08	154	P	P	20 48 58.6	+0.6
ASAJ	Asahikawa	44.88	21	P	P	20 49 42.5	-0.9
	comp=Z,1.3nm,0.4s,baz=198,slow=13,SNR=3.5						
JKA	Kamikawa-asahi	44.88	21	P	P	20 49 42.5	-0.9
CAN	Canberra	45.45	149	P	P	20 49 49.2	+1.2
CAN				IAmb	IAmb	20 49 52.6	
	comp=Z,26nm,1.4s						
WMQ	Urumqi	51.03	328	P	P	20 50 28.3	-1.2
WMQ				IAmb	IAmb	20 50 28.4	
	comp=Z,3.5nm,0.5s						
MK31	Makanchi Array	55.86	328	P	P	20 51 03.2	-0.4
MKAR	Makanchi Array	55.86	328	P	P	20 51 03.0	-0.6
	comp=Z,0.3nm,0.4s,baz=129,slow=8.1,SNR=11						
MKAR				PcP	PcP	20 51 53.4	-0.8
	comp=Z,0.1nm,0.5s,baz=118,slow=4.2,SNR=2.9						
KURK	Kurchatov	60.20	330	P	P	20 51 32.0	-0.8
BKZ	Black Stump Fm	64.95	136	P	P	20 52 04.2	+0.4
BKZ				IAmb	IAmb	20 52 05.4	
	comp=Z,22nm,1.2s						

ATH 22 20:44:38.7, 38.14N×20.39E, h14km±1km, ML3.0/10, Error ellipse: s-maj=1.8km s-min=1.1km az=247.0
THE 22 20:44:39.0, 38.12N×20.40E, h13km, ML3.1/3, Error ellipse: s-maj=0.6km s-min=0.3km az=258.0
BEO 22 20:44:40.4±1.0, 38.11N×20.40E, h25km±5km, ML3.2/6
IDC 22 20:44:43.9±11.0, 38.86N×20.61E, h0km, mb3.5/2, mb1 3.4/4, mb1mx3.1/55, mbtmp3.2/4, ML3.0/2, MS3.5/1, Ms1 3.5/1, ms1mx2.6/30, Error ellipse: s-maj=199.7km s-min=29.3km az=32.0
ISC 22 20:44:38.9±0.8, 38.15N±0.03×20.43E±0.03, h14km±4km, n61, σ0.91/89, 3C-11D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARGA	Argostoli. Kep	0.05	53	⇓Pd0	Pg	20 44 41.7	+0.1
ARGA				S	Sg	20 44 43.4	+0.1
KEF2	Argostoli. Kep	0.05	69	⇓Pd0	Pg	20 44 41.7	+0.1
KEF2				S	Sg	20 44 43.3	0.0
LXRA	Lixouri, Kepha	0.05	4	⇓Pd0	Pg	20 44 41.8	+0.2
LXRA				S	Sg	20 44 43.7	+0.3
ARG2	Argostoli	0.05	56	P	Pg	20 44 41.8	+0.2
ARG2				S	Sg	20 44 43.6	+0.2
LXR1	Lixouri, Cepha	0.05	5	P	Pg	20 44 41.8	+0.2
LXR1				S	Sg	20 44 43.8	+0.4
KEF3	Kipouria, Keph	0.09	309	⇑Pc0	Pg	20 44 41.9	0.0
KEF3				S	Sg	20 44 43.8	-0.2
AGT1	Agia Thekli	0.11	339	P	Pb	20 44 42.4	-0.4
AGT1				S	Sg	20 44 44.7	+0.3
KEF4	Livadi, Kephal	0.11	357	⇓Pd0	Pg	20 44 42.4	+0.2
KEF4				S	Sg	20 44 44.9	+0.5
VLS	Valsamata	0.13	77	P	Pb	20 44 42.7	-0.5
VLS				S	Sb	20 44 45.4	-0.6
VLS	Valsamata	0.13	77	⇓Pd0	Pb	20 44 42.7	-0.5
VLS				S	Sg	20 44 45.2	+0.4
KEF1	Kardakata, Kep	0.13	13	⇓Pd0	Pg	20 44 41.8	-0.7
VSK1	VASILIKIADES	0.28	22	P	Pb	20 44 45.2	-0.6
VSK1				S	Sb	20 44 50.3	-0.1
KONA	Konidatara, Ke	0.30	22	⇓Pd0	Pg	20 44 45.5	+0.3
FSK	Fiskardo	0.33	18	P	Pg	20 44 45.9	+0.2
FSK				S	Sb	20 44 51.4	-0.3
FSK	Fiskardo	0.33	18	⇓Pd0	Pg	20 44 45.9	+0.2
FSK				S	Sb	20 44 51.0	-0.7
FSK				AML	AML	20 44 51.9	
	comp=E,7704µm,0.2s						
FSK				AML	AML	20 44 52.0	
	comp=N,6287µm,0.4s						
VLMS	Volimes, Zakyn	0.33	146	⇑Pc0	Pg	20 44 45.9	+0.2
VLMS				S	Sb	20 44 50.8	-0.9
VLMS				AML	AML	20 44 51.8	
	comp=E,18467µm,0.3s						
VLMS				AML	AML	20 44 51.9	
	comp=N,35970µm,0.4s						
EVGI	Lefkada island	0.50	20	P	Pg	20 44 49.0	+0.1
EVGI				S	Sb	20 44 57.3	+0.5
EVGI	Lefkada island	0.50	20	⇓Pd0	Pg	20 44 49.0	+0.1
KRI1	kERI	0.57	148	P	Pb	20 44 49.9	-0.9
MGNA	Meganis	0.58	29	P	Pg	20 44 50.3	0.0
MGNA				AML	AML	20 45 01.3	
	comp=E,1667µm,0.2s						
MGNA				AML	AML	20 45 04.6	
	comp=N,1718µm,0.2s						
VTN	Vitineika	0.64	111	P	Pb	20 44 51.7	-0.1
AST1	Astakos	0.65	53	P	Pb	20 44 51.8	-0.2
LKD2	Lefkada island	0.66	15	P	Pb	20 44 51.9	-0.4
LKD2	Lefkada island	0.66	15	P	Pg	20 44 51.4	-0.5
LKD2				S	Sb	20 45 01.3	-0.1
LKD2				AML	AML	20 45 09.2	
	comp=N,1586µm,0.3s						
LKD2				AML	AML	20 45 14.4	
	comp=E,1737µm,0.5s						
TSLK	Tsoukalades, L	0.70	14	P	Pb	20 44 52.3	-0.6
TSLK				S	Sn	20 45 03.9	-1.1
TSLK	Tsoukalades, L	0.70	14	P	Pb	20 44 52.2	-0.6
TSLK				S	Sg	20 45 02.6	+0.9
TSLK				AML	AML	20 45 10.4	
	comp=E,2599µm,0.4s						
TSLK				AML	AML	20 45 11.9	
	comp=N,2484µm,0.7s						
PDO	Prodromos	0.74	53	P	Pg	20 44 53.5	+0.1
PDO	Prodromos	0.74	53	⇓Pd0	Pg	20 44 53.4	0.0
PDO				S	Sn	20 45 05.1	-1.0
PDO				AML	AML	20 45 09.9	
	comp=N,4058µm,0.4s						
PDO				AML	AML	20 45 14.7	
	comp=E,2367µm,0.4s						
RLS	Riolos of Patr	0.82	96	P	Pg	20 44 54.8	-0.1
RLS	Riolos of Patr	0.82	96	⇑Pc0	Pg	20 44 54.7	-0.2
RLS				AML	AML	20 45 10.9	
	comp=N,1352µm,0.3s						
RLS				AML	AML	20 45 12.6	
	comp=E,1336µm,0.4s						
PVO	Paravola	0.98	61	P	Pg	20 44 58.0	+0.2
PVO				S	Sn	20 45 12.6	+0.7
	comp=E,1µm,0.4s						
PVO	Paravola	0.98	61	⇓Pd0	Pg	20 44 58.1	+0.2
PVO				AML	AML	20 45 14.8	
	comp=N,2946µm,0.4s						
PVO				AML	AML	20 45 19.6	
	comp=E,2297µm,0.4s						
DRO	Drossia	1.03	101	P	Pg	20 44 58.5	-0.3
DRO	Drossia	1.03	101	P	Pg	20 44 58.4	-0.4
DRO				AML	AML	20 45 20.1	
	comp=N,1920µm,0.7s						
DRO				AML	AML	20 45 20.9	
	comp=E,2328µm,0.6s						
AMT	Artemida-Makis	1.18	121	P	Pg	20 45 01.2	-0.5
AMT				S	Sg	20 45 17.7	+0.5
	comp=E,665nm,0.6s						
LAKA	Lakka	1.22	85	P	Pg	20 45 01.8	-0.7
ANX	Ano Chora	1.25	69	P	Pg	20 45 02.8	-0.2
ANX				S	Sg	20 45 19.9	+0.5
	comp=E,1µm,0.7s						
SERG	Sergoula	1.30	78	P	Pb	20 45 03.1	-0.2
TRIZ	Trizonia	1.31	80	P	Pb	20 45 02.9	-0.4
EVR	Evrytania	1.32	54	P	Pb	20 45 03.8	-0.6
KLV	Kalavryta, Ach	1.36	94	P	Pb	20 45 04.0	-0.2
IGT	Igoumenitsa	1.38	357	P	Pb	20 45 04.5	-0.1
IGT				S	Sb	20 45 22.0	-0.1
IGT	Igoumenitsa	1.38	357	*e*Pg	Pg	20 45 06.5	+0.9
IGT				*e*Sg	Sg	20 45 25.4	+1.8
IGT	Igoumenitsa	1.38	357	P	Pb	20 45 04.8	+0.2
IGT				AML	AML	20 45 27.9	
	comp=E,609µm,0.7s						
IGT				AML	AML	20 45 28.6	
	comp=N,615µm,0.5s						
STIP	Stip	3.79	20	*i* Pn	Pb	20 45 41.7	-3.9
SRS	Serrai	3.84	38	*e*Pn	Pn	20 45 38.2	+0.6
SG1	Sgolgore (BA)	3.96	314	*e*Pn	Pn	20 45 40.2	+1.0
SG1				Sn	Sn	20 46 24.1	-1.3
TREB	Trebinje	4.83	341	*e*Pn	Pn	20 45 52.1	+0.9
TREB				*e*Sn	Sn	20 46 45.6	-1.4
SJES	Sjenica	5.12	356	*e*Pn	Pn	20 45 55.5	+0.2
SJES				*e*Sn	Sn	20 46 52.2	-2.0
STON	Ston	5.16	337	*e*Pn	Pn	20 45 55.6	-0.1
IVAS	Ivanjica	5.43	358	*e*Pn	Pn	20 45 59.5	0.0
IVAS				*e*Sn	Sn	20 47 01.1	-0.6
BBLS	Lazići	5.76	353	*e*Pn	Pn	20 46 04.7	+0.6
BBLS				*e*Sn	Sn	20 47 06.8	-3.2
DIVS	Divibare	5.95	357	*e*Pn	Pn	20 46 07.2	+0.5
DIVS				*e*Sn	Sn	20 47 12.3	-2.4
SOKA	Soboth	9.41	337	*e*Pn	Pn	20 46 53.6	-0.5
	comp=N,0.8nm,0.3s						
OBKA	Obir	9.42	334	*e*Pn	Pn	20 46 54.6	+0.4
	comp=N,1.8nm,0.4s						
BRTR	Keskin Array B	10.41	77	Pn	Pn	20 47 15.0	+7.1
	comp=N,0.0nm,0.3s,baz=272,slow=9.0,SNR=1.4						
MOA	Molln	10.69	337	*i* Pn	Pn	20 47 12.5	+0.9
	comp=N,0.5nm,0.2s						
GERES	GERESS Array B	11.75	338	Pn	Pn	20 47 26.0	-0.1
	comp=N,0.1nm,0.3s,baz=156,slow=15,SNR=2.4						
FINES	FINESS Array B	23.58	7	P	P	20 49 48.3	-0.6
	comp=N,3.5nm,1.0s,baz=171,slow=9.8,SNR=2.4						
MKAR	Makanchi Array	45.38	58	P	P	20 52 59.8	+3.0
	comp=N,0.2nm,0.5s,baz=269,slow=7.3,SNR=3.6						
NRIK	Noril'sk	46.85	27	LR	LR	21 12 57.5	
	comp=N,48nm,18.9s,baz=168,slow=37						

LSZ 22 21:00:29.9±0.3, 16.00S×25.94E, h10km, MD0.6, Zambia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITZ	Itezhi-Tezhi	0.26	15	*i* P	Pg	21 00 34.8	-0.5
ITZ				*i*		21 00 34.8	
	baz=202,slow=22						
ITZ				*i* S	Sg	21 00 38.3	-0.5
ITZ	Itezhi-Tezhi	0.26	15	*i* P	Pg	21 00 34.7	-0.5
ITZ				*i*		21 00 34.8	
	baz=201,slow=22						
ITZ				*i* S	Sg	21 00 38.2	-0.6
ITZ	Itezhi-Tezhi	0.26	15	*i* P	Pg	21 00 34.8	-0.5
ITZ				*i*		21 00 34.8	
	baz=202,slow=22						
ITZ				*i* S	Sg	21 00 38.3	-0.5
ITZ	Itezhi-Tezhi	0.26	15	*i* P	Pg	21 00 34.7	-0.5
ITZ				*i*		21 00 34.8	
	baz=201,slow=22						
ITZ				*i* S	Sg	21 00 38.2	-0.6
ITZ	Itezhi-Tezhi	0.26	15	*i* P	Pg	21 00 34.8	-0.5
ITZ				*i*		21 00 34.8	
	baz=202,slow=22						
ITZ				*i* S	Sg	21 00 38.3	-0.5
ITZ	Itezhi-Tezhi	0.26	15	*i* P	Pg	21 00 34.8	-0.5
ITZ				*i*		21 00 34.9	
	baz=214,slow=18						
ITZ				*i* S	Sg	21 00 38.2	-0.6
ITZ	Itezhi-Tezhi	0.26	15	*i* P	Pg	21 00 34.8	-0.5
ITZ				*i*		21 00 34.8	
	baz=202,slow=22						
ITZ				*i* S	Sg	21 00 38.3	-0.5

TAP 22 21:02:30.4, 24.56N×122.25E, h73km±1km, ML2.8, D
JMA 22 21:02:30.0±0.1, 24.44N×122.27E, h75km±2km, M1.9
ISC 22 21:02:30.6±1.3, 24.54N±0.03×122.29E±0.02, h71km±7km, n80, σ0.80/132, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.15	272	P	Pn	21 02 41.4	+0.4
	baz=264						
EOS1				S	Sn	21 02 50.0	+1.3
	baz=264						
TWC	Suao	0.41	279	P	Pn	21 02 42.4	-0.3
	baz=277						
TWC				*e*S	Sn	21 02 50.5	-1.1

baz=277
ENA Nanau 0.51 257 P Pn 21 02 43.6 -0.1
baz=253
ENA eS Sn 21 02 53.6 +0.4
baz=253
NTC Toucheng 0.52 306 S Sn 21 02 53.0 -0.3
baz=307
ILA Ilan 0.54 294 eP Pn 21 02 44.0 +0.1
baz=294
ILA S Sn 21 02 54.2 +0.5
baz=294
TWE Neicheng 0.59 287 P Pn 21 02 44.5 +0.1
baz=287
TWE eS Sn 21 02 54.7 +0.1
baz=287
TIPB Shuangxi 0.60 315 P Pn 21 02 44.6 0.0
baz=317
TIPB S Sn 21 02 54.6 -0.2
baz=317
JYNG Yonagunijimaku 0.60 99 P Pn 21 02 44.6 +0.1
JYNG eS Sn 21 02 54.9 +0.1
SLBB Yuanshan 0.63 289 P Pn 21 02 45.0 +0.2
baz=289
YOJ Yonaguni jima 0.66 97 P Pn 21 02 45.2 +0.1
YOJ S Sn 21 02 56.3 +0.5
ENTT Nioudou 0.67 278 P Pn 21 02 45.8 +0.5
baz=277
ENTT eS Sn 21 02 56.9 +0.9
baz=277
NWF Wu-fen Shan 0.70 319 eS Sn 21 02 56.9 +0.1
baz=320
WFSB Wu-fen Shan 0.70 319 eS Sn 21 02 57.3 +0.7
baz=320
NDT Datong Townshi 0.71 275 P Pn 21 02 46.1 +0.4
baz=273
NDT eS Sn 21 02 57.4 +0.5
baz=273
NACB Ninganchiao 0.73 240 i P Pn 21 02 45.4 -0.6
baz=237
NACB eS Sn 21 02 56.7 -0.6
baz=237
NWLT Wulai 0.75 288 P Pn 21 02 46.9 +0.6
baz=287
NWLT eS Sn 21 02 58.1 +0.3
baz=287
TWA Mucha 0.78 304 P Pn 21 02 46.3 -0.2
baz=305
TWA i S Sn 21 02 57.9 -0.3
baz=305
TWD Chiawan 0.78 234 P Pn 21 02 46.2 -0.4
baz=230
TWD eS Sn 21 02 57.6 -0.7
baz=230
ETLH Xiulin Townshi 0.81 246 P Pn 21 02 46.3 -0.6
baz=243
ETLH eS Sn 21 02 58.0 -1.1
baz=243
NHDH Xindian Distri 0.81 301 eS Sn 21 02 58.8 -0.1
baz=301
NNSB Datong 0.83 262 P Pn 21 02 47.2 -0.1
baz=260
NNSB eS Sn 21 02 59.2 -0.4
baz=260
NNSH Datong 0.83 262 P Pn 21 02 47.2 -0.1
baz=260
NNSH S Sn 21 02 59.3 -0.3
baz=260
YHNB Yeheng 0.84 279 P Pn 21 02 47.5 +0.2
baz=277
YHNB S Sn 21 02 59.9 +0.2
baz=277
NNS Nan Shan 0.84 263 i S Sn 21 02 59.5 -0.3
baz=261
NSK Sanguang 0.86 279 P Pn 21 02 47.7 +0.2
baz=278
NSK eS Sn 21 02 59.9 -0.1
baz=278
YM11 YM11 0.90 314 eP Pn 21 02 47.6 -0.4
baz=314
YM11 eS Sn 21 03 00.6 -0.3
baz=314
YM10 YM10 0.90 313 P Pn 21 02 47.8 -0.2
baz=313
YM10 eS Sn 21 03 00.7 -0.2
baz=313
YM05 YM05 0.90 313 P Pn 21 02 47.8 -0.3
baz=314
YM05 S Sn 21 03 00.5 -0.5
baz=314
YM04 YM04 0.92 312 P Pn 21 02 47.8 -0.3
baz=312
YM04 S Sn 21 03 00.6 -0.6
baz=312
YM03 YM03 0.93 313 eS Sn 21 03 01.9 +0.3
baz=313
TWS1 Kuangyinshan 0.97 305 eS Sn 21 03 02.1 -0.1
baz=305
WLTB Daxi 0.99 288 eS Sn 21 03 04.1 +1.3
baz=287
WHF Hehuan Shan 1.02 247 P Pn 21 02 49.5 -0.3
baz=244
WHF i S Sn 21 03 03.1 -0.9
baz=244
TWT Tachien 1.06 254 eS Sn 21 03 04.2 -0.3
baz=252
ESL Shilin 1.07 227 P Pn 21 02 48.9 -1.1
baz=224
ESL eS Sn 21 03 02.8 -1.7
baz=224
TDCB Techi 1.07 255 eP Pn 21 02 50.5 +0.3
baz=252
TDCB S Sn 21 03 04.3 -0.5
baz=252
CHGB Renai 1.13 245 P Pn 21 02 50.8 -0.2
baz=243
CHGB eS Sn 21 03 05.8 -0.4
baz=243
LIOB Emei 1.17 275 P Pn 21 02 51.8 +0.6
baz=274
LIOB eS Sn 21 03 07.0 +0.3
baz=274
EGFH Guangfu 1.18 222 eS Sn 21 03 05.7 -1.2
baz=220
OWD Renai 1.18 240 eP Pn 21 02 51.0 -0.5
baz=238
OWD eS Sn 21 03 05.8 -1.3
baz=238
NSTT Nanjuang 1.18 274 eP Pn 21 02 52.2 +0.8
baz=273
NSTT eS Sn 21 03 07.1 +0.2
baz=273
WHP Taichung City 1.25 258 eP Pn 21 02 52.8 +0.3
baz=256
WHP eS Sn 21 03 09.1 +0.3
baz=256
VWDT VWDT 1.31 233 eP Pn 21 02 53.3 +0.1
baz=231
VWDT S Sn 21 03 09.2 -0.8
baz=231
HGSD Ruisui 1.31 217 P Pn 21 02 53.9 +0.8
baz=215
HGSD S Sn 21 03 09.3 -0.7
baz=215
IRIF Iriomote-Funau 1.33 99 P Pn 21 02 53.2 -0.1
IRIF eS Sn 21 03 10.3 -0.1
DPDB Guoxing 1.34 248 eP Pn 21 02 54.0 +0.3
baz=246
DPDB eS Sn 21 03 11.5 +0.6
baz=246
EHY Hungye 1.36 221 eP Pn 21 02 53.5 -0.3
baz=218
EHY eS Sn 21 03 09.1 -2.1
baz=218
NMLH Miaoli 1.37 270 eS Sn 21 03 11.9 +0.6
baz=269
NSY Sanyi 1.40 265 eS Sn 21 03 12.0 -0.1
baz=263
SMLT Sun Moon Lake 1.43 243 eP Pn 21 02 55.5 +0.7
baz=241
SMLT eS Sn 21 03 14.0 +1.0
baz=241
SSLB Suanglung 1.44 239 P Pn 21 02 55.6 +0.8
baz=236
SSLB eS Sn 21 03 13.1 +0.1
baz=236
TYC Yuchr 1.46 244 P Pn 21 02 55.9 +0.9
baz=242
TYC eS Sn 21 03 14.3 +0.9
baz=242
YULB Yu-li 1.46 219 eP Pn 21 02 53.6 -1.5
baz=216
TWF1 Yuli 1.50 218 eP Pn 21 02 54.0 -1.6
baz=215
TWF1 eS Sn 21 03 12.8 -1.6
baz=215
WHYT Xinyi Township 1.56 238 P Pn 21 02 56.8 +0.3
baz=235
WHYT eS Sn 21 03 16.9 +0.9
baz=235
JKRS Kuro-shima 1.60 101 P Pn 21 02 57.2 +0.3
JKRS S Sn 21 03 17.4 +0.7
WJS Zhushan 1.60 244 eS Sn 21 03 18.1 +1.3
baz=242
YUS Yu-Shan 1.61 230 eP Pn 21 02 57.2 -0.4
baz=227
YUS eS Sn 21 03 17.2 -0.7
baz=227
FULB Fuli 1.62 214 P Pn 21 02 58.1 +0.9
baz=212
FULB eS Sn 21 03 16.8 -0.6
baz=212
JIJ Ishigaki jima 1.70 96 P Pn 21 02 58.2 0.0
JIJ S Sn 21 03 18.6 -0.5
ALS Alishan 1.70 233 eP Pn 21 02 59.1 +0.5
baz=231
ALS eS Sn 21 03 19.7 -0.1
baz=231
CHN5 Tsauling 1.75 238 eS Sn 21 03 22.9 +2.4
baz=236
ELDTW Lidau 1.78 221 eP Pn 21 02 58.9 -0.6
baz=219
ELDTW eS Sn 21 03 20.4 -0.9
baz=219
WGK Gukeng 1.80 242 eS Sn 21 03 22.5 +1.0
baz=240
WDLH Douliu 1.81 242 eS Sn 21 03 23.3 +1.4
baz=240
JISG Ishigakijimahi 1.84 88 P Pn 21 03 00.1 0.0
JISG eS Sn 21 03 21.8 -0.7
CHN4 Tsaushan 1.96 233 eP Pn 21 03 03.1 +1.4
baz=231
CHN4 eS Sn 21 03 27.0 +1.6
baz=231
TPUB Ta-pu 1.96 231 eP Pn 21 03 03.0 +1.2
baz=229
TPUB eS Sn 21 03 26.3 +0.8
baz=229
STYT Tauyuan 1.96 226 eS Sn 21 03 25.8 +0.1
baz=224
WTP Ta-pu 2.01 230 eS Sn 21 03 27.8 +1.2
baz=228
TWK Hsinying 2.08 233 eS Sn 21 03 29.1 +0.6
baz=231
SGST Jiashian 2.14 227 eS Sn 21 03 31.1 +1.3
baz=225
SLGT Liugui 2.16 225 eS Sn 21 03 31.3 +1.1
baz=223
JTJ Tarama 2.20 87 S Sn 21 03 31.2 +0.1
SSD Sandimen 2.35 221 eS Sn 21 03 35.9 +1.1
baz=219
MASBT Mashibuluo 2.45 219 eP Pn 21 03 08.9 +0.5
baz=217
MASBT eS Sn 21 03 38.2 +0.8
baz=217
PTTC Pingtan 2.48 293 eS Sn 21 03 36.0 -1.9
baz=292
VWUC VWUC 2.62 280 eP Pn 21 03 09.6 -1.1
baz=279
VWUC eS Sn 21 03 39.7 -1.8
baz=279
MATB Ma-tsu 2.66 308 eS Sn 21 03 42.7 +0.3
baz=306
PHUB P'eng-hu 2.69 248 eS Sn 21 03 41.2 -1.9
baz=246

HLW 22 21:03:05.1, 29.10N×34.85E, h9km±1km, Md3.1, Ml3.2
GII 22 21:03:05.8±0.8, 29.24N×34.72E, h1km±3km, MD1.6/5
ISC 22 21:03:04.4±1.6, 29.08N±0.05×34.89E±0.10, h14km±9km, n14, σ0.42/22, Egypt

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

HBST Basata 0.19 315 P Pg 21 03 08.9 +0.1
baz=319
HBST S Sg 21 03 11.7 -0.1
baz=319
DRHJ Al-Direh 0.28 13 Pg Pb 21 03 11.3 0.0
DRHJ Sg Sb 21 03 16.2 +0.3
HDHB Dhahab 0.43 213 P Pb 21 03 13.9 +0.1
baz=209
EIL Elat 0.59 5 Pg Pg 21 03 16.2 +0.2
EIL Sg Sb 21 03 24.6 -0.1
AQBJ Aqaba 0.66 12 Pg Pg 21 03 17.6 +0.3
AQBJ Sg Sb 21 03 27.2 +0.5
MBRI Mt Berech 0.71 2 Pg Pg 21 03 18.2 -0.1
MBRI Sg Sb 21 03 28.3 0.0
HRFI Mount Harif 0.96 8 Pg Pb 21 03 22.6 -0.2
HRFI Sg Sb 21 03 35.4 0.0
KRMI Paran Flat 1.04 352 Pg Pb 21 03 23.8 -0.4
KRMI Sg Sb 21 03 37.1 -0.7
PRNI Paran 1.27 5 Pg Pb 21 03 28.2 +0.1
PRNI Sg Sn 21 03 44.8 +0.2
HRDS Abu Rudays 1.44 256 P Pn 21 03 30.3 +0.2
baz=255
KZIT Kziot 1.87 347 Pn Pn 21 03 36.5 +0.6
SUZ Suez 1.94 293 P Pn 21 03 37.1 0.0
baz=294
HHRG Al Ghardaqah 2.19 212 P Pn 21 03 40.0 -0.4
baz=209
GHAJ Ghor Haditha 2.29 15 Pn Pb 21 03 44.3 -1.2

IDC 22 21:28:13.1±1.8, 19.31S×177.81W, h359km±18km, mb3.6/13, mb1 3.8/15, mb1mx3.6/39, mbtmp4.3/15, Error ellipse: s-maj=18.8km s-min=12.0km az=143.0
NEIC 22 21:28:14.7±1.7, 19.45S±0.1×177.75W±0.04, h376km±7km, mb4.4/51, Error ellipse: s-maj=15.5km s-min=5.0km az=173.0
ISC 22 21:28:12.3±0.4, 19.38S±0.06×177.79W±0.06, h350km, n123, σ1.66/133, mb4.2/34, Fiji Islands region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

MSVF Nonsavu 4.28 292 Pn 21 29 29.0 +4.6
NIUE Niue 7.43 89 Pn 21 30 02.6 +2.8
NIUE S 21 31 29.5 +2.2
AFI Afiamalu 7.92 48 P Pn 21 30 06.1 +0.4
13nm,0.3s,baz=125,slow=3.6,SNR=21
AFI S S 21 31 33.0 -5.2
42nm,0.3s,baz=295,slow=22,SNR=12
AFI Afiamalu 7.92 48 Pn 21 30 06.7 +0.9
RAO Raoul Island 9.82 181 P 21 30 30.8 +1.1
SANVU Saraoutou 14.85 283 P P 21 31 26.6 +1.2
DZM Mont Dzumac 14.99 257 P Pn 21 31 30.7 +1.4
0.5nm,0.3s,baz=73,slow=17,SNR=12
DZM Mont Dzumac 14.99 257 P Pn 21 31 29.1 -0.2
DZM IAmb IAmb 21 31 32.3
comp=Z,25nm,0.9s
NOUC Port Laguerre 15.13 257 P P 21 31 30.1 +1.7
NOUC IAmb IAmb 21 31 34.2
comp=Z,15nm,0.9s
MXZ Matakaoa Point 18.43 190 P P 21 32 04.3 +0.5
URZ Urewera 19.33 192 P P 21 32 12.9 -0.4
comp=Z,1.2nm,0.3s,baz=316,slow=5.5,SNR=6.4
URZ S S 21 35 28.0 -4.1
comp=Z,0.7nm,0.3s,baz=97,slow=23,SNR=5.9
URZ Urewera 19.33 192 P P 21 32 13.1 -0.1
URZ IAmb IAmb 21 32 14.1
comp=Z,36nm,1.1s
HIZ Hauiti 20.11 197 P P 21 32 23.8 +2.6
BKZ Black Stump Fm 20.33 193 P P 21 32 21.9 -1.4
BKZ IAmb IAmb 21 32 24.5
comp=Z,21nm,1.1s
MSWZ Moikau Station 22.75 194 P P 21 32 45.4 +0.1
SNZO South Karori 22.78 195 P P 21 32 45.1 -0.4
PLWZ Palliser 22.90 194 P P 21 32 45.6 -1.0
QRZ Quartz Range 22.92 199 P P 21 32 47.1 +0.3
QRZ IAmb IAmb 21 33 02.2
comp=Z,33nm,1.1s
TUWZ Tuamarina 23.08 196 P P 21 32 48.9 +0.7
BSWZ Blackbirch Sta 23.36 196 P P 21 32 51.4 +0.6
THZ Tophouse 23.67 198 P P 21 32 54.2 +0.5
THZ IAmb IAmb 21 32 56.5
comp=Z,8.1nm,0.7s
KHZ Kahutara 24.11 196 P P 21 32 55.2 -2.3
KHZ IAmb IAmb 21 33 07.6
comp=Z,32nm,1.2s
LTZ Lake Taylor 24.79 198 P P 21 33 02.9 -0.8
LTZ IAmb IAmb 21 33 05.4
comp=Z,16nm,0.8s
MLZ Mavora Lakes 28.43 201 P P 21 33 36.3 +0.4
MLZ IAmb IAmb 21 33 47.2
comp=Z,31nm,1.1s
EIDS Eidsvold 29.36 253 P P 21 33 44.7 +0.4
ARMA Armidale 29.75 242 P P 21 33 49.1 +1.3
PMG Port Moresby 35.30 281 P P 21 34 36.2 +0.4
comp=Z,30nm,0.8s,baz=75,slow=6.2,SNR=7.0
PMG Port Moresby 35.30 281 P P 21 34 36.6 +0.8
PMG IAmb IAmb 21 34 37.3
comp=Z,31nm,0.8s
TOO Toolangi 36.72 233 P P 21 34 48.1 +0.6
COEN Coen 37.73 272 P P 21 34 56.4 +0.3
COEN IAmb IAmb 21 34 57.4
comp=Z,24nm,0.9s
STKA Stephens Creek 38.46 243 P P 21 35 02.6 +0.7
comp=Z,3.3nm,0.6s,baz=86,slow=11,SNR=6.5
STKA Stephens Creek 38.46 243 P P 21 35 02.8 +0.8
WAKE Wake Island 41.35 337 P P 21 35 27.4 +2.0
BBOO Buckleboo 43.23 242 P P 21 35 40.2 -0.2
KHU Kahuku 44.12 31 P P 21 35 49.1 +1.3
HMH Humu'ula Sheep 44.49 31 P P 21 35 50.5 -0.3
HMH IAmb IAmb 21 35 52.1
comp=Z,41nm,1.0s
KEKH Kekaha 44.75 24 P P 21 35 52.3 -0.1
WB0 Warramunga Arr 44.94 261 P P 21 35 53.5 -0.6
WB2 Warramunga Arr 44.95 261 P P 21 35 53.0 -1.2
WRA Warramunga Arr 44.96 261 P P 21 35 53.2 -1.1
comp=Z,3.3nm,0.8s,baz=96,slow=8.1,SNR=14
WRA S S 21 41 58.1 -7.8
comp=Z,0.9nm,1.0s,baz=101,slow=14,SNR=4.3
AS31 Alice Springs 44.98 256 P P 21 35 54.2 -0.2
AS31 IAmb IAmb 21 35 55.1
comp=Z,8.8nm,0.7s
ASAR Alice Springs 44.98 256 P P 21 35 54.2 -0.2
comp=Z,28nm,0.6s,baz=91,slow=8.3,SNR=470
ASAR PcP PcP 21 37 27.7 -1.1
comp=Z,0.7nm,0.6s,baz=93,slow=5.9,SNR=3.8
ASAR ScP ScP 21 40 44.5 -2.8
comp=Z,0.6nm,1.0s,baz=117,slow=5.3,SNR=3.2
ASAR S S 21 42 00.8 -5.3
comp=Z,1.1nm,0.8s,baz=92,slow=16,SNR=7.0
FORT Forrest 49.93 246 P P 21 36 31.5 -0.4
FORT IAmb IAmb 21 36 37.4
comp=Z,22nm,0.9s
KNRA Kununurra 50.94 265 P P 21 36 39.1 -0.5
KNRA IAmb IAmb 21 36 39.7
comp=Z,11nm,0.8s
FITZ Fitzroy Crossi 53.38 262 P P 21 36 57.6 +0.1
SOEI Soe 56.67 271 P P 21 37 22.4 +1.4
PSA00 Pilbara Seismi 58.12 256 P P 21 37 30.1 -0.6
PSA00 IAmb IAmb 21 37 31.3
comp=Z,8.8nm,0.8s
VNDA Vanda 59.03 185 P P 21 37 37.5 +1.4
comp=Z,4.7nm,1.0s,baz=344,slow=6.1,SNR=4.9
VNDA Vanda 59.03 185 P P 21 37 37.2 +1.2
MORW Morawa 60.44 247 P P 21 37 46.5 +0.1
MJAR Matsushiro Arr 69.44 323 P P 21 38 42.7 -0.8
comp=Z,0.7nm,0.6s,baz=148,slow=6.1,SNR=3.5
QSPA South Pole Qui 70.68 180 P P 21 38 51.4 +0.6
TPUB Ta-pu 73.55 303 P P 21 39 06.5 -1.7
TPUB IAmb IAmb 21 39 25.6
comp=Z,15nm,1.1s
NVAR Mina Array Bea 80.08 43 P P 21 39 44.5 +0.2
comp=Z,0.7nm,0.7s,baz=228,slow=9.9,SNR=6.7
RSO Redoubt South 82.11 12 P P 21 39 55.2 +0.9
TUC Tucson 82.14 52 P P 21 39 56.4 +1.4
TUC IAmb IAmb 21 39 57.1
comp=Z,5.1nm,1.1s
319A Douglas 82.82 53 P P 21 40 00.1 +1.5
319A IAmb IAmb 21 40 00.8
comp=Z,6.1nm,0.8s
U15A North Rim 83.06 48 P P 21 40 01.0 +1.1
U15A IAmb IAmb 21 40 01.6
comp=Z,3.2nm,0.8s
ELK Elko 83.33 43 P P 21 39 59.8 -1.4
comp=Z,1.3nm,0.9s,baz=332,slow=3.2,SNR=4.5
PPLA Purkeypile 84.45 11 P P 21 40 05.2 -0.9
F10A Beach Ranch, E 85.00 38 P P 21 40 08.8 -0.3
F10A IAmb IAmb 21 40 09.4
comp=Z,3.3nm,0.9s
BALM Baldy 85.06 16 P P 21 40 08.8 -0.2
BALM IAmb IAmb 21 40 19.2
comp=Z,5.0nm,1.0s
MCARA McCarthy VSAT 85.17 16 P P 21 40 10.0 +0.5
MCARA IAmb IAmb 21 40 27.6
comp=Z,5.2nm,1.2s
TRF Thorofare Moun 85.32 12 P P 21 40 10.3 -0.1
RND Reindeer 85.57 13 P P 21 40 12.1 +0.6
RND IAmb IAmb 21 40 19.2
comp=Z,3.3nm,1.1s
TX31 Lajitas Ar. Si 86.29 57 P P 21 40 15.7 -0.2
TX31 IAmb IAmb 21 40 17.7
comp=Z,4.7nm,1.1s
TX32 Lajitas Array 86.29 57 P P 21 40 15.4 -0.4
TX32 IAmb IAmb 21 40 17.7
comp=Z,4.4nm,1.1s
TXAR Lajitas Array 86.29 57 P P 21 40 16.4 +0.6
comp=Z,2.0nm,0.9s,baz=220,slow=6.4,SNR=22
NEA Nenana 86.57 12 P 21 40 14.4 -1.8
DOT Dot Lake 86.84 14 P P 21 40 15.7 -1.9
MCMT McKenzie Canyo 86.97 40 P P 21 40 18.7 -0.2
ILAR Eielson Array 87.19 13 P P 21 40 18.0 -1.1
comp=Z,0.4nm,0.5s,baz=226,slow=4.8,SNR=9.1
QLMT Earthquake Lak 87.85 41 P P 21 40 22.4 -0.6
YHL Hebgen Lake 88.01 41 P P 21 40 23.9 0.0
PDAR Pinedale Array 88.02 43 P P 21 40 22.9 -1.0
comp=Z,0.4nm,0.8s,baz=223,slow=3.7,SNR=2.6
SNAA Sanae 89.11 178 P P 21 40 27.0 -1.4
VNA3 Neumayer Olymp 89.24 176 P P 21 40 27.7 -1.2
VNA2 Neumayer--Watz 89.68 177 P P 21 40 30.0 -1.0
baz=178,slow=3.4
VNA1 Neumayer--Stat 89.91 177 P P 21 40 30.7 -1.3
CMAR Chiang Mai Arr 89.93 289 P P 21 40 34.2 +1.1
comp=Z,0.5nm,0.7s,baz=109,slow=2.9,SNR=5.0
YKA Yellowknife Ar 95.42 25 P P 21 40 56.0 -1.2
comp=Z,0.1nm,0.4s,baz=235,slow=4.6,SNR=4.6
ACON Acoyapa 96.32 80 P P 21 41 01.3 -1.1
TLY Talaya 98.15 322 P P 21 41 08.6 -1.3
MKAR Makanchi Array 110.58 314 PKiKP PKiKP 21 46 01.7 -2.0
comp=Z,0.2nm,0.6s,baz=82,slow=2.1,SNR=6.1
KSH Kashi 114.41 305 PKP PKiKP 21 46 14.3 +3.0
KSH PP PP 21 47 21.3 +7.6
KSH sPKP 21 48 16.6
KSH SKS SKSdf 21 52 48.9 -0.8
KSH SKKS SKKSac 21 53 37.5 -0.8
KSH Kashi 114.41 305 SS SS 22 02 45.3 +16.5
ARCES ARCESS Array B 127.86 350 PKP PKPdf 21 46 35.2 -0.9
comp=Z,3.0nm,0.8s,baz=42,slow=0.7,SNR=11
FINES FINESS Array B 134.76 344 PKP PKPdf 21 46 49.2 -0.1
comp=Z,1.8nm,0.8s,baz=48,slow=2.1,SNR=3.8
NOA NORSAR Array B 137.90 353 PKP PKPdf 21 46 54.1 -1.1
comp=Z,0.9nm,0.8s,baz=13,slow=4.1,SNR=3.4
BRTR Keskin Array B 146.23 314 PKPbc PKPdf 21 47 10.2 -0.6
comp=Z,1.3nm,0.8s,baz=79,slow=0.8,SNR=6.6
CLL Collm 147.02 348 i PKPbc PKPbc 21 47 14.5 +0.3
comp=Z,12nm,1.2s
CLL Collm 147.02 348 PKPbc 21 47 14.4 +0.3
DPC Dobruska-Polom 147.12 343 ePKP PKPbc 21 47 14.2 -0.3
BRG Berggiesshubel 147.23 346 ePKP PKPbc 21 47 14.0 -0.7
comp=Z,6.7nm,1.4s
KRLC Kraliky 147.24 343 ePKP PKPbc 21 47 14.7 -0.2
MMAI Mount Meron Ar 147.42 301 PKPbc PKPbc 21 47 15.4 -0.6
comp=Z,2.7nm,0.6s,baz=73,slow=7.1,SNR=8.8
PRU Pruhonice 147.91 345 ePKP PKPbc 21 47 16.2 -0.4
GOPC GO Pecny, Ondr 147.91 345 ePKP PKPbc 21 47 16.2 -0.4
VYHS Vyhne 148.00 339 ePKP PKPbc 21 47 16.3 -0.6
MODS Modra-Piesok 148.61 341 ePKP PKPbc 21 47 17.2 -1.2
ZST Bratislava 148.82 341 ePKP PKPbc 21 47 18.0 -0.9
ZST e 21 47 23.0
GRF Grafenberg Arr 148.91 349 ePKP PKPbc 21 47 18.8 -0.3
baz=17,slow=1.7
KHC Kasperske Hory 148.94 345 ePKP PKPbc 21 47 18.7 -0.5
KHC Kasperske Hory 148.94 345 PKPbc 21 47 18.6 -0.7
KHC PKiKP 21 47 19.7 -0.7
GEC2 GERESS Array S 149.18 345 PKPbc 21 47 19.4 -0.5
GERES GERESS Array B 149.18 345 PKPbc PKPbc 21 47 19.3 -0.6
comp=Z,2.9nm,0.9s,baz=40,slow=2.3,SNR=19

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CONA	Conrad Observa	149.44	342	ePKiKP	PKPbc	21 47 19.7	-0.9
	comp=Z,5.9nm,1.1s						
MOA	Molln	149.96	344	ePKiKP	PKPbc	21 47 21.2	-0.6
	comp=Z,6.1nm,1.6s						
ARSA	Arzberg	150.15	342	ePKiKP	PKPbc	21 47 21.6	-0.6
	comp=Z,6.4nm,1.2s						
SOKA	Soboth	150.81	342	i PKiKP	PKPbc	21 47 22.9	-0.9
	comp=Z,7.0nm,1.2s						
KBA	Koelnbreinsper	150.91	344	ePKPbc	PKPbc	21 47 22.1	-2.1
	comp=Z,5.1nm,0.9s						
WATA	Walderalm	151.09	347	ePKiKP	PKPbc	21 47 23.3	-1.3
	comp=Z,4.3nm,0.6s,SNR=5.8						
OBKA	Obir	151.11	342	i PKPbc	PKPbc	21 47 22.3	-2.2
	comp=Z,2.3nm,0.8s						
RETA	Reutte	151.11	348	i PKiKP	PKPbc	21 47 23.7	-0.8
	comp=Z,7.7nm,1.4s						
WTTA	Wattenberg	151.14	347	ePKiKP	PKPbc	21 47 23.8	-1.0
	comp=Z,9.8nm,0.6s,SNR=11						
MOTA	Moosalm	151.18	347	ePKiKP	PKPbc	21 47 24.0	-0.8
	comp=Z,5.9nm,0.9s						
MYKA	Terra Mystica	151.25	344	i PKPbc	PKPbc	21 47 23.3	-1.5
	comp=Z,5.7nm,0.6s,SNR=4.1						
SQTA	Sankt Quirin	151.28	347	i PKiKP	PKPbc	21 47 23.8	-1.1
	comp=Z,7.7nm,0.8s						
ABTA	Abfaltersbach	151.43	345	i PKiKP	PKPbc	21 47 24.0	-1.3
	comp=Z,9.1nm,0.6s,SNR=10						
DAVA	Damuels	151.47	349	i PKiKP	PKPbc	21 47 24.9	-0.6
	comp=Z,8.0nm,0.9s						
FETA	Feichten	151.56	348	i PKiKP	PKPbc	21 47 25.2	-0.5
	comp=Z,5.1nm,0.9s						
FUORN	Ofenpass-Fuorn	152.04	348		PKPbc	21 47 26.4	-0.4
DBIC	Dimbokro	165.61	151	PKPab	PKPab	21 48 37.2	+0.1
	comp=Z,4.3nm,0.9s,baz=166,slow=4.0,SNR=3.5						

IDC 22 22:00:34.0±12.0, **3°.50N×93°.42E, h0km, mb3.4**/3, **mb1 3.5**/4, **mb1mx3.2**/58, **mbtmp3.4**/4, **ML3.4**/1, **Error ellipse: s-maj=243.1km s-min=108.4km az=156.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.82	20	Pn	Pn	22 04 18.6	+0.3
	0.1nm,0.3s,baz=212,slow=12,SNR=2.4						
H08S2	Diego Garcia H	23.63	242	T	T	22 30 57.0	
	baz=62,slow=76,SNR=12						
H08S3	Diego Garcia H	23.63	242	T	T	22 31 06.1	
	baz=62,slow=76,SNR=37						
H08S1	Diego Carcia H	23.65	242	T	T	22 31 00.6	
	baz=62,slow=76,SNR=5.0						
MKAR	Makanchi Array	44.20	349	P	P	22 08 44.5	-0.2
	0.3nm,0.8s,baz=165,slow=7.4,SNR=2.4						
SONM	Songino Array	45.56	12	P	P	22 08 55.4	-0.4
	0.2nm,0.5s,baz=193,slow=5.9,SNR=2.5						
ZALV	Zalesovo Beam	50.78	353	P	P	22 09 36.1	+0.3
	0.7nm,0.4s,baz=169,slow=8.5,SNR=4.0						

GUC 22 22:16:29.2±0.4, 19°.92S×69°.20W, h97km±1km, ML4.0
NEIC 22 22:16:29.1±1.6, 19°.93S±0°.04×69°.18W±0°.07, h100km±4km, Error ellipse: s-maj=10.1km s-min=5.7km az=86.0
IDC 22 22:16:30.3±1.8, 19°.85S×68°.94W, h108km±18km, mb3.4/2, mb1 3.6/5, mb1mx3.3/20, mbtmp3.8/5, MS3.0/1, Ms1 3.0/1, ms1mx2.1/23, Error ellipse: s-maj=51.5km s-min=13.9km az=96.0
ISC 22 22:16:28.9±0.8, **19°.92S**±0°.03×**69°.20W**±0°.07, **h101**km±5km, **n37, σ1.00**/45, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.23	168	eP	Pn	22 16 44.0	+0.1
PB08				iS	Sn	22 16 55.3	+0.4
PB08					IAML	22 16 57.4	
	comp=E,5μm,0.1s						
GO01	Chusmiza	0.25	2	eP	Pn	22 16 44.1	0.0
GO01				iS	Sn	22 16 55.7	+0.5
GO01	Chusmiza	0.25	2		Pn	22 16 43.9	-0.1
GO01				Sn	Sn	22 16 55.9	+0.7
PB11	IPOC Station P	0.45	290	eP	Pn	22 16 44.9	+0.2
PB11				iS	Sn	22 16 56.9	+0.5
PB11					IAML	22 16 57.5	
	comp=E,12μm,0.4s						
PB11	IPOC Station P	0.45	290		Pn	22 16 44.8	+0.2
PB11				Sn	Sn	22 16 56.4	0.0
MNMC	Minye Minye	0.86	335	eP	Pn	22 16 49.2	+0.8
MNMC				iS	Sn	22 17 04.0	+1.1
MNMC					IAML	22 17 05.3	
	comp=E,11μm,0.6s						
MNMC	Minye Minye	0.86	335		Pn	22 16 49.2	+0.8
MNMC				Sn	Sn	22 17 03.8	+1.0
PSGC	Pisagua	0.92	290	eP	Pn	22 16 49.0	+0.3
PSGC				iS	Sn	22 17 03.9	+0.3
PSGC					IAML	22 17 05.0	
	comp=N,2μm,0.3s						
TA01	Diego Aracena	1.12	235	eP	Pn	22 16 51.0	+0.2
TA01				iS	Sn	22 17 07.7	+0.5
PB01	IPOC Station P	1.15	193	eP	Pn	22 16 51.6	+0.4
PB01				iS	Sn	22 17 08.7	+0.7
PB01					IAML	22 17 10.5	
	comp=N,7μm,0.2s						
PB01	IPOC Station P	1.15	193		Pn	22 16 51.6	+0.4
PB01				Sn	Sn	22 17 09.1	+1.1
PB02	IPOC Station P	1.54	205	eP	Pn	22 16 56.5	+0.6
PB02				iS	Sn	22 17 17.1	+0.9
PB16	IPOC Station P	1.60	350	eP	Pn	22 16 58.2	+1.1
PB16				iS	Sn	22 17 20.5	+2.2
PB09	IPOC Station P	1.87	181	eP	Pn	22 17 01.1	+1.1
PB07	IPOC Station P	1.91	199	eP	Pn	22 17 01.3	+0.7
PB07				iS	Sn	22 17 26.0	+1.4
PB04	IPOC Station P	2.56	200		Pn	22 17 09.2	+0.1
LVC	Limon Verde	2.69	174	P	Pn	22 17 12.2	+1.2
	comp=N,8.2nm,0.3s,baz=348,slow=11,SNR=30						
LVC				S	Sn	22 17 43.8	+0.6
	comp=N,18nm,0.3s,baz=327,slow=22,SNR=3.7						
LVC	Limon Verde	2.69	174		Pn	22 17 11.7	+0.7
LPAZ	La Paz	3.75	16	P	Pn	22 17 26.4	+1.1
	comp=N,1.2nm,0.3s,baz=189,slow=7.8,SNR=28						
LPAZ				S	Sn	22 18 08.0	-1.0
	comp=N,0.7nm,0.3s,baz=166,slow=2.5,SNR=4.3						
LPAZ	La Paz	3.75	16		Pn	22 17 28.1	+2.7
PB10	IPOC Station P	3.79	199	Pn	Pn	22 17 25.2	-0.1
GO02	Mina Guanaco	5.23	184		Pn	22 17 44.6	-0.5
SIV	San Ignacio	8.67	65	P	Pn	22 18 28.9	-2.7
	comp=N,2.5nm,0.3s,baz=266,slow=11,SNR=54						
ATAH	Atahualpa	15.52	324	LR	LR	22 27 19.9	
	comp=N,52nm,19.5s,baz=49,slow=42						
PLCA	Paso Flores	20.78	183	P	Pn	22 21 04.9	-0.4
	comp=N,1.7nm,0.9s,baz=13,slow=9.0,SNR=4.0						
PLCA	Paso Flores	20.78	183	P	P	22 21 02.3	+0.3
PLCA				IAmb	IAmb	22 21 08.7	
	comp=Z,6.0nm,1.4s						
OTAV	Otavalo	21.98	335	P	P	22 21 14.0	-1.4
OTAV				IAmb	IAmb	22 21 26.6	
	comp=Z,4.0nm,1.4s						
PAYG	Puerto Ayora	28.14	310	P	P	22 22 10.6	-1.1
PAYG				IAmb	IAmb	22 22 11.7	
	comp=Z,32nm,1.0s						
CCIG	Comitan	42.45	326		pP	22 24 39.5	+1.1
YKA	Yellowknife Ar	89.61	341	P	P	22 29 15.2	+0.3
	comp=Z,0.8nm,0.7s,baz=135,slow=4.8,SNR=12						
YKA				pP	pP	22 29 42.4	+0.1
	comp=Z,0.3nm,0.6s,baz=136,slow=5.0,SNR=4.9						
H11S2	WAKE ISLAND Hy	127.39	278	T	T	00 55 02.3	
	baz=101,slow=75,SNR=24						
H11S1	WAKE ISLAND Hy	127.40	278	T	T	00 55 01.8	
	baz=101,slow=75,SNR=22						
H11S3	WAKE ISLAND Hy	127.41	278	T	T	00 55 03.7	
	baz=101,slow=75,SNR=21						
H11N3	WAKE ISLAND Hy	127.43	280	T	T	00 55 06.9	
	baz=100,slow=75,SNR=8.1						
H11N2	WAKE ISLAND Hy	127.44	280	T	T	00 55 06.7	
	baz=100,slow=75,SNR=8.2						
H11N1	WAKE ISLAND Hy	127.45	280	T	T	00 55 08.2	
	baz=100,slow=75,SNR=6.1						
SONM	Songino Array	151.92	6	PKPbc	PKPbc	22 36 12.2	-0.2
	comp=Z,0.2nm,0.4s,baz=341,slow=3.5,SNR=2.9						

IDC 22 22:20:25.3±1.5, 11°.69N×93°.00E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.5/36, mbtmp3.5/7, ML3.6/1, Error ellipse: s-maj=45.5km s-min=22.4km az=67.0
ISC 22 22:20:31.6±1.3, **11°.7N**±0°.1×**93°.1E**±0°.2, **h46km, n10, σ1.81**/8, **mb3.5**/6, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.78	40	Pn	Pn	22 22 33.1	-2.9
	0.2nm,0.3s,baz=230,slow=15,SNR=1.4						
CMAR				Sn	Sn	22 24 16.1	+2.4
	0.0nm,0.3s,baz=238,slow=25,SNR=2.3						
H08S3	Diego Garcia H	28.08	228	T	T	22 54 44.1	
	baz=46,SNR=3.0						
H08S2	Diego Garcia H	28.09	228	T	T	22 54 50.7	
	baz=46						
H08S1	Diego Carcia H	28.10	228	T	T	22 54 57.0	
	baz=46						
MKAR	Makanchi Array	36.13	347	P	P	22 27 29.4	0.0
	0.3nm,0.6s,baz=167,slow=8.0,SNR=4.0						
SONM	Songino Array	37.70	15	P	P	22 27 44.0	+1.3
	0.4nm,0.8s,baz=202,slow=8.1,SNR=5.1						
ZALV	Zalesovo Beam	42.63	353	P	P	22 28 23.3	0.0
	0.5nm,0.4s,baz=177,slow=8.2,SNR=2.7						
WRA	Warramunga Arr	51.38	127	P	P	22 29 32.1	0.0
	0.6nm,0.3s,baz=310,slow=7.8,SNR=9.3						
ASAR	Alice Springs	53.21	132	P	P	22 29 46.4	+0.8
	0.3nm,0.8s,baz=305,slow=7.2,SNR=2.0						
ARCES	ARCESS Array B	71.32	340	P	P	22 31 46.0	-0.2
	1.9nm,0.9s,baz=97,slow=7.4,SNR=2.7						

IDC 22 22:25:34.9±8.2, 8°.80S×111°.57E, h56km±78km, mb3.8/10, mb1 3.9/11, mb1mx3.6/36, mbtmp4.1/11, ML3.7/1, Error ellipse: s-maj=30.3km s-min=18.9km az=58.0
NEIC 22 22:25:36.7±2.3, 9°.03S±0°.08×111°.43E±0°.07, h84km±7km, mb4.2/16, Error ellipse: s-maj=12.2km s-min=8.4km az=213.0
DJA 22 22:25:36.2±0.9, 9°S±4°×11°1E±°, h21km±7km, M4.1/10, MLv4.2/10, MLv4.1/3
ISC 22 22:25:36.4±0.9, **9°.05S**±0°.06×**111°.44E**±0°.05, **h81**km±8km, **n56, σ1.35**/64, **mb4.2**/17, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	Pacitan	0.89	343	P	Pn	22 25 53.9	-0.4
PCJI				S	Sn	22 26 06.7	-0.8
WOJI	Wonogiri, Jawa	1.31	337	P	Pn	22 25 59.7	+0.3
WOJI				S	Sn	22 26 17.0	+0.4
UGM	Wanagama	1.45	321	P	Pn	22 26 01.7	+0.5
UGM				S	Sn	22 26 20.5	+0.6
UGM	Wanagama	1.45	321		Pn	22 26 01.8	+0.5
UGM				Sn	Sn	22 26 20.0	+0.1
SMRI	Semarang	2.22	333	P	Pn	22 26 13.2	+1.8
SMRI				S	Sn	22 26 41.5	+3.4
SMRI	Semarang	2.22	333	Pn	Pn	22 26 13.5	+2.1
GRJI	Gresik	2.36	26	P	Pn	22 26 15.1	+1.9
JAGI	Jajag, Banyuwa	2.74	78	P	Pn	22 26 19.4	+1.1
JAGI				S	Sn	22 26 50.2	-0.4
JAGI	Jajag, Banyuwa	2.74	78		Pn	22 26 19.7	+1.3
KPJI	Karang Pucung	3.01	304	P	Pn	22 26 23.3	+1.3
KPJI				S	Sn	22 26 59.7	+2.6
CISI	Cisompet, Garu	3.88	292	P	Pn	22 26 33.5	-0.4
CISI				S	Sn	22 27 15.9	-2.5
CISI	Cisompet, Garu	3.88	292		Pn	22 26 34.0	+0.2
LEM	Lembang	4.38	300	S	Sn	22 27 32.8	+2.1
	5.1nm,0.3s,baz=319,slow=23,SNR=2.9						
XMIS	Christmas Isla	5.88	256	Pn	Pn	22 27 01.8	+0.8
MNAI	Manna	9.63	298	Pn	Pn	22 27 52.8	+0.5
SOEI	Soe	12.68	94	Pn	Pn	22 28 33.9	+0.1
PSAB2	Pilbara Seismi	14.84	148	Pn	Pn	22 28 59.7	-2.4
PSAA1	Pilbara Seismi	14.85	148	Pn	Pn	22 28 59.5	-2.6
PSA00	Pilbara Seismi	14.85	148	Pn	Pn	22 28 59.0	-3.2
PSAA3	Pilbara Seismi	14.86	148	Pn	Pn	22 29 01.6	-0.7
PSAC2	Pilbara Seismi	14.87	148	Pn	Pn	22 29 02.8	+0.3
PSAD3	Pilbara Seismi	14.87	148	Pn	Pn	22 29 02.9	+0.5
PSAC3	Pilbara Seismi	14.88	148	Pn	Pn	22 29 02.9	+0.3
FITZ	Fitzroy Crossi	16.46	125	P	Pn	22 29 22.6	0.0
	0.2nm,0.3s,baz=309,slow=10,SNR=5.6						
FITZ				S	Sn	22 32 10.8	-14
	0.2nm,0.3s,baz=194,slow=14,SNR=3.6						
FITZ	Fitzroy Crossi	16.46	125		Pn	22 29 22.8	+0.2
KNRA	Kununurra	18.15	113	P	Pn	22 29 43.4	+0.2
WB0	Warramunga Arr	24.62	118	P	P	22 30 50.5	+1.0
WRA	Warramunga Arr	24.64	119	P	P	22 30 50.8	+1.1
	1.9nm,0.8s,baz=292,slow=12,SNR=7.2						
ASAR	Alice Springs	25.94	127	P	P	22 31 02.6	+1.2
	0.8nm,0.7s,baz=302,slow=9.1,SNR=12						
NACB	Ninganchiao	34.48	17	P	P	22 32 14.4	-2.4
PALK	Pallekele	34.66	297	P	P	22 32 19.9	+1.3
	1.7nm,0.5s,baz=153,slow=11,SNR=2.6						
PALK	Pallekele	34.66	297	P	P	22 32 19.3	+0.7
STKA	Stephens Creek	36.03	133	P	P	22 32 31.3	+1.2
	0.8nm,0.4s,baz=323,slow=10,SNR=2.2						
TAPN	Taplejung	42.88	328	eP	P	22 33 27.7	+0.3
JIRN	Jiri	43.93	327	eP	P	22 33 36.0	+0.1
	9.7nm,0.6s						
GUN	Gumba	44.29	327	eP	P	22 33 38.7	-0.1
	5.9nm,0.5s						
DMN	Daman	44.48	326	eP	P	22 33 39.9	-0.3
	6.8nm,0.7s						
GKN	Gorkha	45.05	326	eP	P	22 33 44.0	-0.6
	7.4nm,0.3s						
DANN	Dangsing	45.81	325	eP	P	22 33 49.3	-1.5
	12nm,0.7s						
MJAR	Matsushiro Arr	51.86	27	P	P	22 34 35.3	-1.4
	3.4nm,0.6s,baz=202,slow=7.1,SNR=13						
NIL	Nilore	55.85	321	P	P	22 35 04.6	-1.2
USA0B	Ussuriysk Arra	56.18	18	P	P	22 35 07.4	-0.4
SONM	Songino Array	56.81	356	P	P	22 35 12.0	-0.5
	0.9nm,0.6s,baz=175,slow=8.1,SNR=7.3						
SONM				PcP	PcP	22 36 08.0	+0.7
	0.2nm,0.3s,baz=173,slow=3.5,SNR=4.0						
KDJ	Kajisay	59.82	331	P	P	22 35 33.4	-0.2
KDJ				IAmb	IAmb	22 35 35.2	
	comp=Z,2.4nm,0.9s						
NRN	Naryn	59.87	330	P	P	22 35 32.7	-1.4
NRN				IAmb	IAmb	22 35 34.7	
	comp=Z,2.4nm,1.0s						
MK31	Makanchi Array	61.37	338	P	P	22 35 43.9	0.0
MK31				IAmb	IAmb	22 35 44.4	
	comp=Z,1.7nm,0.6s						
MKAR	Makanchi Array	61.37	338	P	P	22 35 43.9	0.0
	comp=Z,2.8nm,0.5s,baz=146,slow=7.5,SNR=38						
AAK	Ala-Archa	61.51	330	P	P	22 35 44.0	-1.1
AAK				IAmb	IAmb	22 35 46.0	
	comp=Z,1.8nm,0.9s						
BTK	Batken	61.63	325	P	P	22 35 45.2	-0.7
BTK				IAmb	IAmb	22 35 47.5	
	comp=Z,1.4nm,0.8s						
MSWZ	Moikau Station	64.48	132	P	P	22 36 04.4	-0.3
KURK	Kurchatov	65.98	338	P	P	22 36 13.2	-0.9
KURK				IAmb	IAmb	22 36 14.1	
	comp=Z,1.7nm,0.7s						
ZAA0	Zalesovo Array	66.68	343	IAmb	IAmb	22 36 18.4	
	comp=Z,1.9nm,0.8s						
ZALV	Zalesovo Beam	66.68	343	P	P	22 36 17.7	-0.8
	comp=Z,1.2nm,0.4s,baz=167,slow=3.9,SNR=11						
MAW	Mawson	66.75	198	P	P	22 36 21.4	+2.6
	comp=Z,5.1nm,0.8s,baz=77,slow=14,SNR=3.1						
MAW	Mawson	66.75	198	P	P	22 36 21.2	+2.4
PETK	Petropavlovsk-	73.32	27	P	P	22 36 59.1	-0.1
	comp=Z,1.6nm,0.8s,baz=236,slow=6.8,SNR=3.0						

BJI 22 22:39:30.1±0.0, 59°.64S×48°.09W, h10km, mB5.3/20, Ms5.4/13, Ms7 5.1/14
MOS 22 22:39:31.3±1.3, 60°.25S×47°.44W, h10km, mb5.3/11, MS4.8/12, Error ellipse: s-maj=28.4km s-min=8.8km az=102.2
NEIC 22 22:39:32.2±2.0, 60°.24S±0°.07×47°.3W±0°.1, h10km±1km, mb5.5/65, Ms_20 5.0/122, Mwb5.5/9, Mwc5.4(GCMT), Error ellipse: s-maj=10.7km s-min=9.3km az=151.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr-0.62; Mθθ0.90; Mφφ-0.28; Mrθ2.33; Mθφ0.47; Mφr0.40; Fault plane solution: $M_0$2.54000×10^{17} NP1: φs260.64000°, δ80.46000°, λ-84.27000°. NP2: φs49.47000°, δ11.11000°, λ-120.69000°. Principal axes: T 2.7216, Plg35.0000°, Azm346.0000°; N -0.4037, Plg6.0000°, Azm80.0000°; P -2.3179, Plg54.0000°, Azm178.0000°;
IDC 22 22:39:33.8±1.8, 60°.39S×47°.36W, h24km±10km, mb4.8/22, mb1 4.8/24, mb1mx4.7/31, mbtmp4.9/24, ML4.1/3, MS4.8/24, Ms1 4.8/24, ms1mx4.7/27 Error ellipse: s-maj=17.2km s-min=11.0km az=45.0
GCMT 22 22:39:37.2±0.1, 60°.48S±0°.01×47°.50W±0°.02, h12km, MW5.3/145, Moment Tensor Solution. s99,c151; s145,c252; Duration: 1.1 Moment tensor: Scale 10^{17} Nm; Mrr-0.06±.01; Mθθ0.81±.02; Mφφ-0.75±.02; Mrθ0.49±.05; Mθφ0.85±.02; Mφr0.35±.04; Best double couple: $M_0$1.28200×10^{17} NP1: φs114.00000°, δ69.00000°, λ10.00000°. NP2: φs20.00000°, δ80.00000°, λ159.00000°. Principal axes: T 1.4230, Plg22.0000°, Azm335.0000°; N -0.2820, Plg67.0000°, Azm177.0000°; P -1.1410, Plg8.0000°, Azm68.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC 22 22:39:37, 60°.40S×47°.38W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr-0.04; Mθθ0.78; Mφφ-0.74; Mrθ0.64; Mθφ0.93; Mφr0.28; Fault plane solution: $M_0$1.39000×10^{17} NP1: φs112.00000°, δ74.00000°, λ18.00000°. NP2: φs17.00000°, δ72.00000°, λ163.00000°. Principal axes: T 1.5321, Plg24.0000°, Azm335.0000°; N -0.3511, Plg66.0000°, Azm151.0000°; P -1.1811, Plg1.0000°, Azm244.0000°;
ISC 22 22:39:33.4±0.6, **60°.26S**±0°.05×**47°.38W**±0°.05, **h17**km±3km, **h18km:pP-P, n319, σ1.55**/268, **mb5.4**/59, **MS5.0**/94, **3C-3D, Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	8.40	49	Pn	Pn	22 41 33.0	-1.1
HOPE				Sn	Sn	22 43 07.9	-0.5
PMSA	Palmer Station	8.93	232	Pn	Pn	22 41 41.0	-0.3
	15nm,0.3s,baz=70,slow=9.9,SNR=20						
PMSA				Sn	Sn	22 43 19.0	-2.2
	9.3nm,0.3s,baz=162,slow=24,SNR=8.7						
PMSA				LR	LR	22 44 50.6	
	comp=Z,4μm,20.1s,baz=78,slow=36						
PMSA	Palmer Station	8.93	232	eP	Pn	22 41 41.9	+0.7
PMSA	Palmer Station	8.93	232	Pn	Pn	22 41 42.2	+0.9
EFI	East Falkland	10.46	321		Pn	22 42 02.9	+0.5
EFI	East Falkland	10.46	321	i P	Pn	22 42 04.3	+1.9
EFI				pmax	pmax		
	comp=Z,171nm,0.9s						
USHA	Ushuaia	12.51	286	Pn	Pn	22 42 29.9	-0.5
	comp=Z,0.2nm,0.3s,baz=114,slow=17,SNR=2.7						
USHA				Sn	Sn	22 44 50.1	+1.0
	comp=Z,0.3nm,0.3s,baz=114,slow=18,SNR=1.5						
USHA				LR	LR	22 45 46.3	
	comp=Z,5μm,19.4s,baz=122,slow=30						
GO10	Punta Arenas	14.75	288		Pn	22 43 02.7	+1.7
GO09	Cerro Castillo	16.58	292		Pn	22 43 24.7	0.0
VNA3	Neumayer Olymp	18.59	142	P	Pn	22 43 51.5	+2.0
VNA1	Neumayer--Stat	18.88	139	P	P	22 43 52.1	-0.3
VNA2	Neumayer--Watz	19.23	140	P	Pn	22 43 57.8	+0.6
	baz=287,slow=14						
SNAA	Sanae	20.82	141	P	Pn	22 44 15.8	-0.2
SNAA	Sanae	20.82	141	P	Pn	22 44 14.7	-1.3
	comp=Z,21nm,0.9s,baz=293,slow=11,SNR=31						
SNAA				LR	LR	22 51 19.7	
	comp=Z,3μm,18.0s,baz=290,slow=34						
SNAA	Sanae	20.82	141	P	Pn	22 44 14.7	-1.3
SNAA				IAmb	IAmb	22 44 23.9	
	comp=Z,215nm,1.5s						
SNAA	Sanae	20.82	141	P	P	22 44 14.7	+1.2
SNAA				pmax	pmax		
	comp=Z,215nm,1.5s						
SNAA				MLR	MLR		
	comp=Z,4μm,20.0s						
PLCA	Paso Flores	24.24	313	P	P	22 44 49.0	-0.2
	comp=Z,77nm,1.0s,baz=178,slow=10,SNR=86						
PLCA				LR	LR	22 54 06.4	
	comp=Z,3μm,20.6s,baz=176,slow=36						
PLCA	Paso Flores	24.24	313	eP	P	22 44 49.3	+0.1
PLCA	Paso Flores	24.24	313	P	P	22 44 49.6	+0.4
PLCA				IAmb	IAmb	22 45 03.9	
	comp=Z,131nm,1.1s						
PLCA	Paso Flores	24.24	313	P	P	22 44 49.6	+0.4
PLCA				pmax	pmax		
	comp=Z,131nm,1.1s						
NVL	N'lazarevskaya	25.52	139	eP	P	22 45 03.5	+3.1
NVL				eS	S	22 49 29.5	+2.8
NVL				pmax	pmax		
	comp=Z,35nm,1.2s						
NVL				MLR	MLR		
	comp=Z,2μm,13.0s						
PLTB	Pedras Altas	28.80	349	eP	P	22 45 31.4	+1.2
GO05	Huala	29.84	317	P	P	22 45 40.5	+1.1
GO05				IAmb	IAmb	22 45 55.4	
	comp=Z,72nm,1.1s						
QSPA	South Pole Qui	29.98	180	P	P	22 45 42.0	+1.5
	comp=Z,46nm,0.9s,baz=175,slow=4.6,SNR=70						
QSPA				LR	LR	22 59 26.6	
	comp=Z,2μm,18.7s,baz=160,slow=40						
QSPA	South Pole Qui	29.98	180	P	P	22 45 42.1	+1.5
QSPA				IAmb	IAmb	22 45 45.0	
	comp=Z,67nm,1.0s						
CNLB	Canela	31.03	354	eP	P	22 45 51.3	+1.3
PEL	Peldehue	31.14	320	P	P	22 45 51.4	+0.5
PEL	Peldehue	31.14	320	P	P	22 45 51.4	+0.5
PEL				pmax	pmax		
	comp=Z,238nm,1.0s						
PEL				MLR	MLR		
	comp=Z,2μm,19.0s						
ROC1	El Roble	31.40	320	P	P	22 45 54.6	+1.1
CFA	Coronel Fontan	31.83	325	P	P	22 45 56.8	-0.2
	comp=Z,12nm,0.8s,baz=191,slow=6.3,SNR=19						
CFA				ScP	ScP	22 52 28.6	-1.1
	comp=Z,1.2nm,0.4s,baz=222,slow=3.6,SNR=4.0						
ITAB	Concordia	33.17	352	eP	P	22 46 09.8	+1.1
GO04	Tololo Observa	33.93	322	P	P	22 46 16.3	+0.7
CPUP	Villa Florida	34.60	344	P	P	22 46 21.5	+0.4
	comp=Z,11nm,0.9s,baz=168,slow=7.7,SNR=18						
CPUP				ScP	ScP	22 52 38.0	-1.3
	comp=Z,4.1nm,1.0s,baz=124,slow=13,SNR=3.4						
CPUP				LR	LR	22 59 15.1	
	comp=Z,2μm,21.8s,baz=173,slow=34						
CPUP	Villa Florida	34.60	344	P	P	22 46 20.8	-0.3
SYO	Syowa Base	35.11	141	⇓eX	P	22 46 15.4	-10
SYO	Syowa Base	35.11	141	⇓epP	P	22 46 23.4	-1.7
SYO	Syowa Base	35.11	141	⇑ePnPn	PnPn	22 47 36.9	-5.5
PTGB	Pitanga	35.67	353	eP	P	22 46 32.4	+1.9
GO03	Copiap	36.18	324	P	P	22 46 34.7	-0.1
GO03				IAmb	IAmb	22 46 49.4	
	comp=Z,86nm,1.0s						
PARB	Paraibuna	36.91	3	eP	P	22 46 42.5	+1.5
FRTB	Fartura	36.92	357	eP	P	22 46 41.6	+0.5
VAO	Valinhos	37.23	1	eP	P	22 46 44.3	+0.5
TRCB	Terra Rica	37.61	352	eP	P	22 46 48.8	+1.8
RCLB	Rio Claro- Sao	37.81	360	eP	P	22 46 49.4	+0.7
GO02	Mina Guanaco	38.29	326	P	P	22 46 53.1	+0.1
GO02				IAmb	IAmb	22 47 08.9	
	comp=Z,135nm,1.3s						
GO02				IAMs_20	IAMs_20	23 02 16.1	
	comp=Z,3μm,20.0s						
PB10	IPOC Station P	40.12	326	P	P	22 47 08.0	+0.1
PB10				IAmb	IAmb	22 47 23.1	
	comp=Z,57nm,0.8s						
PB10				IAMs_20	IAMs_20	23 03 42.7	
	comp=Z,2μm,19.0s						
AQDB	Aquidauana	40.18	348	eP	P	22 47 09.5	+1.1
LVC	Limon Verde	40.54	329	P	P	22 47 12.1	+0.3
	comp=Z,15nm,0.8s,baz=171,slow=6.1,SNR=12						
LVC				LR	LR	23 05 04.3	
	comp=Z,719nm,18.2s,baz=196,slow=38						
LVC	Limon Verde	40.54	329	eP	P	22 47 12.9	+1.1
LVC	Limon Verde	40.54	329	P	P	22 47 12.3	+0.5
LVC	Limon Verde	40.54	329	P	P	22 47 12.3	+0.5
LVC				pmax	pmax		
	comp=Z,30nm,1.0s						
LVC				MLR	MLR		
	comp=Z,1μm,18.0s						
SBA	Scott Base	40.56	191	P	P	22 47 11.9	+0.9
SBA	Scott Base	40.56	191	P	P	22 47 11.9	+0.9
SBA				pmax	pmax		
	comp=Z,544nm,1.9s						
PB04	IPOC Station P	41.13	327	P	P	22 47 17.8	+1.3
PB04				IAmb	IAmb	22 47 31.7	
	comp=Z,99nm,0.9s						
VNDA	Vanda	41.29	189	P	P	22 47 19.8	+2.8
	comp=Z,13nm,1.2s,baz=73,slow=2.7,SNR=2.8						
VNDA				LR	LR	23 03 39.2	
	comp=Z,743nm,22.0s,baz=159,slow=35						
VNDA	Vanda	41.29	189	P	P	22 47 19.8	+2.8
VNDA				IAmb	IAmb	22 47 22.5	
	comp=Z,148nm,1.9s						
VNDA	Vanda	41.29	189	P	P	22 47 19.8	+2.8
VNDA				pmax	pmax		
	comp=Z,148nm,1.9s						

C2SB Chapadao do Su 41.62 352 eP P 22 47 22.3 +1.9
BSFB Barra de Sao F 41.64 9 eP P 22 47 21.7 +1.2
SJMB Sao Joao De Ma 41.74 9 eP P 22 47 21.2 -0.1
PB01 IPOC Station P 42.19 328 P P 22 47 26.2 +1.1
PB01 IAmb IAmb 22 47 41.4
comp=Z,122nm,1.1s
PB01 IAMs_20 IAMs_20 23 04 23.2
comp=Z,2µm,20.0s
IPMB Ipameri, GO 42.22 359 eP P 22 47 26.8 +1.5
MAW Mawson 42.73 148 P P 22 47 27.8 -1.1
comp=Z,9.7nm,1.0s,baz=205,slow=8.0,SNR=4.5
MAW LR LR 23 04 54.7
comp=Z,4µm,18.1s,baz=240,slow=36
MAW Mawson 42.73 148 P P 22 47 27.8 -1.1
MAW pmax pmax
comp=Z,33nm,2.0s
GO01 Chusmiza 43.42 329 P P 22 47 36.3 +0.8
GO01 IAmb IAmb 22 47 52.4
comp=Z,247nm,2.0s
PB11 IPOC Station P 43.45 329 P P 22 47 36.2 +0.8
MNMC Minye Minye 44.04 329 P P 22 47 41.0 +0.7
MNMC IAmb IAmb 22 47 43.0
comp=Z,78nm,0.8s
BDFB Brasilia 44.55 359 P P 22 47 45.2 +1.0
comp=Z,17nm,0.8s,baz=183,slow=4.9,SNR=24
BDFB LR LR 23 04 18.0
comp=Z,800nm,21.5s,baz=166,slow=33
BDFB Brasilia 44.55 359 P P 22 47 44.2 0.0
BDFB IAmb IAmb 22 47 46.9
comp=Z,177nm,2.0s
BDFB Brasilia 44.55 359 P P 22 47 44.2 0.0
BDFB pmax pmax
comp=Z,177nm,2.0s
BDFB MLR MLR
comp=Z,1µm,22.0s
ARAG Araguaiana, MT 44.60 354 eP P 22 47 44.8 +0.4
JANB Januaria 45.18 4 eP P 22 47 49.9 +0.8
SIV San Ignacio 45.31 341 P P 22 47 50.5 +0.4
comp=Z,27nm,0.8s,baz=180,slow=7.8,SNR=99
LPAZ La Paz 46.41 332 P P 22 47 59.7 +0.2
comp=Z,8.2nm,0.8s,baz=146,slow=8.8,SNR=19
LPAZ LR LR 23 10 10.7
comp=Z,555nm,18.2s,baz=177,slow=40
LPAZ La Paz 46.41 332 eP P 22 48 00.7 +1.2
LPAZ La Paz 46.41 332 P P 22 47 59.1 -0.5
LPAZ La Paz 46.41 332 eP P 22 48 00.5 +1.0
LPAZ pmax pmax
comp=Z,8.0nm,0.8s
CLDB Colider 49.69 349 eP P 22 48 24.2 0.0
SUR Sutherland 51.78 90 P P 22 48 40.0 0.0
comp=Z,9.9nm,0.8s,baz=212,slow=6.5,SNR=6.8
SUR Sutherland 51.78 90 P P 22 48 39.8 -0.2
SUR IAmb IAmb 22 49 46.9
comp=Z,151nm,2.0s
SAML Samuel 52.56 340 eP P 22 48 46.7 +1.0
SAML Samuel 52.56 340 P P 22 48 46.7 +1.0
SAML IAmb IAmb 22 48 47.9
comp=Z,54nm,0.9s
SAML Samuel 52.56 340 P P 22 48 46.7 +1.0
SAML pmax pmax
comp=Z,54nm,0.9s
SAML MLR MLR
comp=Z,1µm,22.0s
CASY Casey 52.72 169 P P 22 48 46.5 +0.2
CASY IAmb IAmb 22 49 32.6
comp=Z,49nm,1.0s
NNA Nana 52.87 323 P P 22 48 48.1 +0.1
comp=Z,34nm,0.9s,baz=154,slow=6.6,SNR=12
NNA Nana 52.87 323 P P 22 48 48.2 +0.2
NNA IAmb IAmb 22 48 50.2
comp=Z,53nm,1.0s
NNA Nana 52.87 323 i P P 22 48 48.8 +0.8
NNA pmax pmax
comp=Z,97nm,1.0s
RCBR Riachuelo 55.00 14 IAMs_20 IAMs_20 23 11 16.8
comp=Z,1µm,20.0s
H10S2 ASCENSION HYDR56.74 40 T T 23 51 21.3
baz=199,SNR=31
H10S3 ASCENSION HYDR56.74 40 T T 23 52 01.2
baz=21,SNR=28
BOSA Boshof 57.06 91 P P 22 49 17.5 -0.9
comp=Z,3.5nm,0.5s,baz=218,slow=6.0,SNR=13
BOSA LR LR 23 09 25.1
comp=Z,872nm,18.7s,baz=210,slow=31
BOSA Boshof 57.06 91 P P 22 49 17.7 -0.7
BOSA IAmb IAmb 22 49 26.1
comp=Z,59nm,1.4s
BOSA Boshof 57.06 91 P P 22 49 17.7 -0.7
BOSA pmax pmax
comp=Z,59nm,1.4s
H10N3 ASCENSION HYDR57.83 39 T T 23 53 33.3
baz=199,slow=75,SNR=34
H10N1 ASCENSION HYDR57.84 39 T T 23 53 17.8
baz=199,slow=75,SNR=22
H10N2 ASCENSION HYDR57.85 39 T T 23 53 34.5
baz=199,slow=75,SNR=38
ATAH Atahualpa 57.92 323 P P 22 49 25.6 +0.7
comp=Z,21nm,0.9s,baz=177,slow=5.7,SNR=15
PAF Port-aux-Franc 59.69 138 P P 22 49 36.9 +0.7
PAF Port-aux-Franc 59.69 138 P P 22 49 36.9 +0.7
PAF pmax pmax
comp=Z,486nm,1.6s
LBTB Lobatse 60.20 89 P P 22 49 40.1 -0.1
LBTB IAmb IAmb 22 49 48.1
comp=Z,64nm,1.4s
LBTB Lobatse 60.20 89 P P 22 49 40.2 -0.1
LBTB pmax pmax
comp=Z,64nm,1.4s
TSUM Tsumeb 61.13 78 P P 22 49 45.7 -0.9
comp=Z,6.0nm,0.9s,baz=193,slow=7.1,SNR=9.4
TSUM Tsumeb 61.13 78 P P 22 49 46.7 0.0
OTAV Otavalo 64.94 325 eP P 22 50 13.3 +0.9
OTAV Otavalo 64.94 325 P P 22 50 13.3 +0.9
OTAV IAmb IAmb 22 50 14.7
comp=Z,46nm,0.9s
OTAV Otavalo 64.94 325 P P 22 50 13.3 +0.9
OTAV pmax pmax
comp=Z,46nm,0.9s
OTAV MLR MLR
comp=Z,800nm,22.0s
MDP Montagnes des 65.29 354 P P 22 50 13.6 -0.4
comp=Z,39nm,1.1s,baz=196,slow=7.0,SNR=5.7
ROSC El Rosal 68.26 331 LR LR 23 24 31.9
comp=Z,768nm,18.6s,baz=190,slow=40
LSZ Lusaka 69.70 85 P P 22 50 42.7 +0.5
LSZ IAmb IAmb 22 50 50.8
comp=Z,50nm,1.2s
LSZ Lusaka 69.70 85 P P 22 50 42.7 +0.5
LSZ pmax pmax
comp=Z,51nm,1.3s
ODZ Otahua Downs 70.56 208 P P 22 50 47.6 +0.7
MQZ McQueen's Vall 71.34 209 P P 22 50 51.0 -0.6
SDV Santo Domingo 71.36 336 LR LR 23 24 11.0
comp=Z,544nm,19.5s,baz=154,slow=38
SDV Santo Domingo 71.36 336 IAMs_20 IAMs_20 23 23 58.9
comp=Z,663nm,19.0s
PLCV Puerto La Cruz 71.52 342 P P 22 50 54.1 +1.1
PCRV Puerto La Cruz 71.54 342 P P 22 50 54.1 +0.9
comp=Z,40nm,1.1s,baz=180,slow=4.0,SNR=3.5
TOSP Speyside 72.09 346 P P 22 50 55.9 -0.4
TOSP IAmb IAmb 22 53 34.6
comp=Z,87nm,1.2s
FOZ Fox Glacier 72.18 208 P P 22 50 57.3 +0.6
PLWZ Palliser 72.68 212 P P 22 51 00.3 +0.5
THZ Tophouse 73.20 210 P P 22 51 02.8 +0.5
BBGH Gun Hill 73.80 348 P P 22 51 05.8 -0.7
BCIP Isla Barro Col 73.84 327 P P 22 51 07.1 +0.3
BCIP Isla Barro Col 73.84 327 P P 22 51 07.1 +0.3
BCIP pmax pmax
comp=Z,192nm,1.7s
QRZ Quartz Range 74.08 210 P P 22 51 07.3 -0.7
LIC Lamto 74.16 44 eP P 22 51 09.3 +0.6
comp=Z,14nm,0.5s
KIC Kosan Boka 74.38 44 eP P 22 51 10.5 +0.5
comp=Z,4.8nm,0.5s
TIC Toumodi 74.55 44 eP P 22 51 11.4 +0.4
BKZ Black Stump Fm 74.59 214 P P 22 51 12.3 +1.3
BKZ IAmb IAmb 22 52 54.9
comp=Z,135nm,1.9s
DBIC Dimbokro 74.63 44 P P 22 51 11.8 +0.4
comp=Z,7.0nm,0.8s,baz=182,slow=7.4,SNR=7.0
DBIC LR LR 23 16 13.6
comp=Z,358nm,21.0s,baz=188,slow=29
DBIC Dimbokro 74.63 44 P P 22 51 11.8 +0.4
DBIC Dimbokro 74.63 44 P P 22 51 11.8 +0.4
DBIC pmax pmax
comp=Z,17nm,1.1s
URZ Urewera 75.26 215 P P 22 51 15.1 +0.3
URZ IAmb IAmb 22 51 31.6
comp=Z,96nm,1.6s
TBI Tubuai 75.78 248 eLR LR 23 14 40.3
comp=Z,2µm,27.8s,baz=154
JTS Las Juntas de 76.40 322 P P 22 51 21.5 0.0
comp=Z,23nm,1.0s,baz=223,slow=2.7,SNR=10
JTS Las Juntas de 76.40 322 P P 22 51 20.6 -1.0
JTS Las Juntas de 76.40 322c iP P 22 51 21.7 +0.1
JTS pmax pmax
comp=Z,21nm,1.0s
TAU Tasmania Unive 76.49 191 P P 22 51 22.1 +0.3
TAU IAmb IAmb 22 53 31.3
comp=Z,85nm,1.4s
TAU Tasmania Unive 76.49 191 P P 22 51 22.1 +0.3
TAU pmax pmax
comp=Z,85nm,1.4s
ESPN Las Esperanzas 78.00 323 P P 22 51 30.3 -0.2
ESPN IAmb IAmb 22 51 31.0
comp=Z,24nm,0.8s
SKI Saint Kitts 78.31 345 P P 22 51 30.8 -1.3
SKI Saint Kitts 78.31 345 P P 22 51 30.8 -1.3
SKI pmax pmax
comp=Z,124nm,0.9s
ANWB Willy Bob 78.52 346 P P 22 51 30.1 -3.2
SMRT St. Maarten 79.06 345 IAMs_20 IAMs_20 23 28 24.2
comp=Z,462nm,18.0s
SJG San Juan 79.56 342 LR LR 23 29 12.3
comp=Z,200nm,19.8s,baz=146,slow=37
MLPR Magueyes Islan 79.56 341 P P 22 51 37.2 -1.8
MLPR IAmb IAmb 22 52 04.4
comp=Z,104nm,1.4s
CRPR Cabo Rojo, PR 79.61 341 P P 22 51 38.8 -0.4
CRPR IAmb IAmb 22 51 39.7
comp=Z,52nm,1.1s
STVI Saint Thomas 79.62 343 IAmb IAmb 22 51 40.4
comp=Z,56nm,0.9s
CUPR Culebra, Puert 79.62 343 P P 22 51 39.0 -0.3
SDD Santo Domingo 80.54 338 IAMs_20 IAMs_20 23 17 51.3
comp=Z,1µm,21.0s
BANI BANI 80.56 338 P P 22 51 43.1 -1.3
PPT2 Papeete2 80.80 251 eS S 23 01 54.0 +0.8
comp=Z,182nm,25.2s
PPT2 Papeete2 80.80 251 eLR LR 23 16 57.9
comp=Z,1µm,30.0s
PPT Papeete 80.82 251 LR LR 23 19 26.2
comp=Z,190nm,21.6s,baz=176,slow=30
SNET Serv Nac Est T 80.95 319 IAMs_20 IAMs_20 23 23 15.5
comp=Z,633nm,20.0s
SDDR Presa de Saban 81.31 337 P P 22 51 47.2 -1.2
SDDR IAMs_20 IAMs_20 23 29 28.6
comp=Z,591nm,20.0s
MTDJ Mount Denham 81.93 331 P P 22 51 50.7 -1.1
MTDJ IAmb IAmb 22 53 19.8
comp=Z,73nm,1.1s
TOO Toolangi 81.95 190 P P 22 51 51.5 -0.3
TOO Toolangi 81.95 190 P P 22 51 51.5 -0.3
TOO pmax pmax
comp=Z,30nm,1.4s
APG El Apazote 82.59 318 P P 22 51 54.6 -0.8
comp=Z,16nm,0.3s,baz=190,slow=8.3,SNR=5.0
APG LR LR 23 23 58.6
comp=Z,563nm,19.4s,baz=128,slow=32
MBAR Mbarara 83.59 80 IAMs_20 IAMs_20 23 25 53.9
comp=Z,496nm,18.0s
CCIG Comitan 84.34 317 P P 22 52 03.6 -0.8
CCIG IAMs_20 IAMs_20 23 24 00.9
comp=Z,707nm,20.0s
CMIG Matias Romero 86.04 315 P P 22 52 12.2 -0.4
comp=Z,8.0nm,0.9s,baz=148,slow=2.3,SNR=10
CMIG LR LR 23 23 46.9
comp=Z,394nm,22.0s,baz=156,slow=31
NWAO Narrogin (SRO) 86.30 167 P P 22 52 13.8 -0.1
NWAO Narrogin (SRO) 86.30 167 P P 22 52 13.3 -0.7
NWAO IAmb IAmb 22 52 14.9
comp=Z,34nm,1.4s
NWAO Narrogin (SRO) 86.30 167 P P 22 52 13.8 -0.1
NWAO pmax pmax
comp=Z,27nm,1.4s
KMBO Kilima Mbogo 86.36 86 P P 22 52 12.3 -2.4
comp=Z,0.3nm,0.3s,baz=175,slow=5.7,SNR=2.2
KMBO LR LR 23 26 48.3
comp=Z,404nm,19.4s,baz=128,slow=33
KMBO Kilima Mbogo 86.36 86 P P 22 52 13.9 -0.8
KMBO Kilima Mbogo 86.36 86 IAMs_20 IAMs_20 23 26 45.2
comp=Z,492nm,19.0s
KMBO Kilima Mbogo 86.36 86 P P 22 52 13.9 -0.8
KMBO pmax pmax
comp=Z,24nm,1.6s
KMBO MLR MLR
comp=Z,500nm,19.0s
TEIG Tepich 86.79 322 P P 22 52 16.0 -0.2
TEIG IAmb IAmb 22 52 16.6
comp=Z,21nm,0.7s
TLIG Tlapa 87.81 312 P P 22 52 21.6 +0.2
STKA Stephens Creek 87.91 188 P P 22 52 20.6 -1.1
comp=Z,1.2nm,0.4s,baz=145,slow=16,SNR=2.5
STKA PP PP 22 55 46.4 -0.6
comp=Z,0.8nm,0.3s,baz=162,slow=6.8,SNR=4.0
STKA LR LR 23 29 19.5
comp=Z,387nm,20.8s,baz=178,slow=34
STKA Stephens Creek 87.91 188 P P 22 52 20.7 -1.1
STKA pmax pmax
comp=Z,3.0nm,1.4s
FORT Forrest 89.22 176 P P 22 52 27.2 -0.8
FORT IAmb IAmb 22 52 32.2
comp=Z,20nm,0.7s
060A Indiantown 91.08 331 P P 22 52 35.2 -1.1
DWPF Disney Wildern 92.37 330 IAMs_20 IAMs_20 23 39 34.9
comp=Z,441nm,18.0s
DZM Mont Dzumac 93.46 211 eLR LR 23 22 55.8
comp=Z,521nm,20.8s
DZM Mont Dzumac 93.46 211 P P 22 52 47.7 -0.2
DZM IAmb IAmb 22 54 39.1
comp=Z,24nm,1.5s
ZAIG Zacatecas 94.06 311 IAMs_20 IAMs_20 23 33 36.6
comp=Z,524nm,18.0s
FURI Furi 95.70 82 IAMs_20 IAMs_20 23 35 58.9
comp=Z,601nm,18.0s
ASAR Alice Springs 96.38 181 P P 22 52 59.7 -1.5
comp=Z,1.6nm,0.9s,baz=169,slow=3.8,SNR=11
ASAR PP PP 22 56 51.6 -2.3
comp=Z,1.1nm,1.1s,baz=178,slow=8.1,SNR=3.6
ASAR PKKP PKKPbc 23 09 44.2 +1.0
comp=Z,0.4nm,0.7s,baz=357,slow=1.8,SNR=4.6
ASAR LR LR 23 38 05.1
comp=Z,715nm,18.2s,baz=176,slow=36
154A Montrose 97.08 330 IAMs_20 IAMs_20 23 38 13.8
comp=Z,444nm,22.0s
MDT Midelt 99.17 35 LR LR 23 34 50.1
comp=Z,323nm,18.4s,baz=223,slow=33
V58A Windy Hill, Pi 99.20 334 IAMs_20 IAMs_20 23 38 46.7
comp=Z,452nm,19.0s
WR7 Warramunga Arr 100.06 182 IAMs_20 IAMs_20 23 36 50.3
comp=Z,606nm,21.0s
WRA Warramunga Arr 100.08 182 P Pdif 22 53 15.8 -2.0
comp=Z,1.2nm,0.6s,baz=184,slow=4.3,SNR=7.0
WRA LR LR 23 39 53.3
comp=Z,808nm,18.1s,baz=165,slow=36
WRAB Tennant Creek 100.09 182 i P Pdif 22 53 17.8 0.0
WRAB pmax pmax
comp=Z,13nm,1.8s
TXAR Lajitas Array 100.42 312 P Pdif 22 53 18.5 -0.4
comp=Z,0.3nm,0.8s,baz=150,slow=7.3,SNR=3.5
TXAR PP PP 22 57 30.1 +4.1
comp=Z,1.1nm,1.1s,baz=145,slow=5.5,SNR=3.7
TXAR PKiKP PKiKP 22 57 43.7 -1.9
comp=Z,0.3nm,0.6s,baz=161,slow=3.8,SNR=3.8
PENMO Penman 102.42 326 IAMs_20 IAMs_20 23 44 02.4
comp=Z,330nm,18.0s
MVL Millersville 102.70 338 IAMs_20 IAMs_20 23 38 05.1
comp=Z,499nm,20.0s
DAMY Dhamar 103.39 84 IAMs_20 IAMs_20 23 36 08.8
comp=Z,549nm,20.0s
N58A Sunbury 103.58 338 IAMs_20 IAMs_20 23 38 30.4
comp=Z,406nm,18.0s
BINY Binghamton 104.76 338 IAMs_20 IAMs_20 23 39 59.6
comp=Z,449nm,19.0s
SOCY Socotra 106.14 94 IAMs_20 IAMs_20 23 40 06.9
comp=Z,394nm,20.0s
MEDO Medina 106.16 337 IAMs_20 IAMs_20 23 38 14.8
comp=Z,567nm,22.0s
L46A Eue Claire 106.79 331 IAMs_20 IAMs_20 23 41 29.7
comp=Z,408nm,21.0s
KSU1 Kansas State U 106.92 322 IAMs_20 IAMs_20 23 39 14.7
comp=Z,389nm,22.0s
CBKS Cedar Bluff 107.65 320 IAMs_20 IAMs_20 23 41 27.0
comp=Z,553nm,19.0s
PLVO Plevna 107.71 338 IAMs_20 IAMs_20 23 41 57.6
comp=Z,532nm,20.0s
WDD Wied Dalam 108.33 49 IAMs_20 IAMs_20 23 39 18.8
comp=Z,448nm,18.0s
SDCO Great Sand Dun 108.64 315 IAMs_20 IAMs_20 23 38 37.5
comp=Z,353nm,21.0s
S22A 4UR Ranch, Cre 109.11 314 IAMs_20 IAMs_20 23 36 40.2
comp=Z,478nm,22.0s
PMG Port Moresby 109.60 195 IAMs_20 IAMs_20 23 44 21.6
comp=Z,551nm,19.0s
CISI Cisompet, Garu 109.61 154 IAMs_20 IAMs_20 23 35 52.4
comp=Z,551nm,22.0s
RAYN Ar Rayn 111.53 80 IAMs_20 IAMs_20 23 42 27.5
comp=Z,336nm,19.0s
TIP Timpagrande 112.11 49 IAMs_20 IAMs_20 23 38 06.5
comp=Z,454nm,21.0s
PAOL Paolisi 112.92 46 IAMs_20 IAMs_20 23 34 13.4
comp=Z,330nm,19.0s
ACER Acerenza 113.21 48 IAMs_20 IAMs_20 23 44 03.0
comp=Z,569nm,18.0s
PMBI Palembang 113.35 149 IAMs_20 IAMs_20 23 39 24.7
comp=Z,493nm,20.0s
DUG Dugway, Tooele 113.48 311 IAMs_20 IAMs_20 23 39 13.9
comp=Z,415nm,22.0s
PDAR Pinedale Array 114.52 314 PP PP 22 59 10.3 +1.0
comp=Z,0.4nm,0.9s,baz=134,slow=6.4,SNR=2.8
BEKR Beckworth 116.17 305 IAMs_20 IAMs_20 23 53 50.4
comp=Z,332nm,22.0s
ULM Lac du Bonnet 116.90 327 PKP PKiKP 22 58 15.7 0.0
comp=Z,0.4nm,0.3s,baz=341,slow=15,SNR=2.0
RPSI Rantau Prapat 117.06 142 IAMs_20 IAMs_20 23 42 02.7
comp=Z,482nm,20.0s
MYKOM Kota Tinggi 117.63 147 IAMs_20 IAMs_20 23 48 50.0
comp=Z,428nm,19.0s
UOSS Minazif 118.03 88 IAMs_20 IAMs_20 23 46 08.5
comp=Z,308nm,19.0s
LUWI Luwuk 118.40 169 IAMs_20 IAMs_20 23 50 15.9
comp=Z,324nm,20.0s
KSM Kuching 118.90 154 IAMs_20 IAMs_20 23 45 21.7
comp=Z,402nm,20.0s
IPM Ipoh 119.39 143 IAMs_20 IAMs_20 23 46 43.5
comp=Z,261nm,20.0s
GERES GERESS Array B 119.44 42 PKP PKPdf 22 58 19.7 -1.0
comp=Z,0.5nm,0.7s,baz=225,slow=0.6,SNR=5.3
BRTR Keskin Array B 119.46 61 PKP PKPdf 22 58 20.0 -1.1
comp=Z,0.9nm,0.7s,baz=211,slow=1.6,SNR=6.1
KULM Kulim 120.04 142 IAMs_20 IAMs_20 23 41 38.8
comp=Z,320nm,22.0s
PRU Pruhonice 120.70 41 AMS AMS 23 46 40.0
comp=Z,400nm,16.7s
VYHS Vyhne 120.89 45 ePKIKP PKiKP 22 58 25.0 +1.5
VYHS Vyhne 120.89 45 ePKP PKiKP 22 58 25.0 +1.5
CLL Collm 121.34 40 ePKiKP PKiKP 22 58 26.0 +1.8
CLL e 22 58 40.0
CLL e 22 59 36.0
CLL ePP PP 22 59 53.0 -3.3
CLL eSdif Sdif 23 07 50.0 +2.7
CLL ePKKPdf PKKPdf 23 08 59.0 -0.4
CLL e 23 10 07.0
CLL e 23 10 33.0
CLL ePPS PPS 23 11 10.0
CLL eSS SS 23 16 30.0 +0.6
CLL eSSS SSS 23 20 54.0
CLL LmV 23 48 00.0
comp=Z,200nm,19.1s
CLL Collm 121.34 40 eP Pdif 22 55 04.0 +13
CLL e 22 58 26.0
DPC Dobruska-Polom 121.61 42 AMS AMS 23 49 20.0
comp=Z,400nm,16.8s
KKM Kota Kinabalu 124.50 160 IAMs_20 IAMs_20 23 46 54.0
comp=Z,504nm,22.0s
SOC Sochi 125.25 63 i PKIKP PKiKP 22 58 33.4 +1.2
AKASG Malin Array Be 126.55 50 PKP PKPdf 22 58 32.9 -1.2
comp=Z,2.2nm,0.6s,baz=241,slow=1.5,SNR=14
AKASG Malin Array Be 126.55 50 ePKIKP PKPdf 22 58 33.2 -0.9
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKBB Malin Array Si 126.55 50 PKPdf 22 58 33.4 -0.7
AKBB Malin Array Si 126.55 50 PKIKP PKPdf 22 58 33.4 -0.7
KBZ Khabaz 126.79 65 PKP PKPdf 22 58 33.1 -1.7
comp=Z,1.3nm,0.8s,baz=153,slow=4.5,SNR=3.3
KBZ Khabaz 126.79 65 i PKIKP PKiKP 22 58 36.3 +1.0
KIV Kislovodsk 126.87 65 i PKIKP PKiKP 22 58 35.5 -0.1
KIV pmax pmax
comp=Z,16nm,1.0s
NCK Nalchik 126.92 66 i PKIKP PKPdf 22 58 35.3 +0.2
HRA Herat 128.74 87 PKPdf 22 58 38.6 -0.6
HRA IAMs_20 IAMs_20 23 52 24.3
comp=Z,295nm,20.0s
GEYT Alibeck 129.49 81 PKP PKPdf 22 58 38.5 -1.8
comp=Z,0.5nm,0.3s,baz=255,slow=4.3,SNR=3.2
GEYT SKPbc SKPab 23 01 58.7 -1.5
comp=Z,4.0nm,1.0s,baz=225,slow=8.2,SNR=7.1
VSR Storozhevoye 130.92 56 i PKIKP PKiKP 22 58 46.5 +3.2
VSR pmax pmax
comp=Z,10.0nm,0.9s
CMAR Chiang Mai Arr 131.81 135 PKP PKPdf 22 58 44.5 -0.7
comp=Z,2.4nm,0.9s,baz=230,slow=3.6,SNR=12
CMAR SKPbc SKPbc 23 02 07.1 -2.8
comp=Z,1.5nm,0.8s,baz=224,slow=3.7,SNR=7.8
LPSR Galich'ya Gora 131.86 55 i PKIKP PKiKP 22 58 45.3 +0.1
LPSR pmax pmax
comp=Z,7.0nm,0.7s
VRH Novokhopyorsk 131.98 58 i PKIKP PKiKP 22 58 46.5 +1.0
VRH pmax pmax
comp=Z,20nm,1.8s
YKA Yellowknife Ar 132.69 324 PKP PKPdf 22 58 45.0 -0.4
comp=Z,1.7nm,0.8s,baz=136,slow=2.5,SNR=14
YKA SKPbc SKPbc 23 02 09.4 -2.0
comp=Z,4.1nm,1.0s,baz=144,slow=3.5,SNR=12
YKA Yellowknife Ar 132.69 324 PKIKP PKPdf 22 58 45.0 -0.4
SUMG Summit 132.70 4 i P PKPdf 22 58 45.7 0.0
comp=Z,31nm,1.1s
SUMG Summit 132.70 4 i PKIKP PKPdf 22 58 45.7 0.0
SUMG pmax pmax
comp=Z,31nm,1.1s
OBN Obninsk 132.79 51⇑ePKIKP PKiKP 22 58 49.5 +2.6
OBN e 23 01 13.3
OBN e 23 06 01.2
OBN pmax pmax
comp=Z,4.0nm,0.7s
OBN MLR MLR
comp=Z,184nm,17.0s
NIL Nilore 133.63 97 PKiKP 22 58 49.1 -0.4
NIL Nilore 133.63 97 PKIKP PKiKP 22 58 49.1 -0.4
FINES FINESS Array B 133.79 40 PKP PKPdf 22 58 46.8 -0.8
comp=Z,1.3nm,0.6s,baz=108,slow=6.2,SNR=4.3
FINES SKPbc SKPbc 23 02 13.0 -2.2
comp=Z,5.4nm,1.5s,baz=241,slow=2.9,SNR=7.6
SHL Shillong 135.50 123 PKPdf 22 58 52.7 +0.5
SHL Shillong 135.50 123 PKIKP PKPdf 22 58 52.7 +0.5
QIZ Qiongzhong 135.72 148 PKP PKPdf 22 58 51.4 -1.1
QIZ LR LR
comp=Z,370nm,10.2s
QIZ LR LR
comp=Z,420nm,19.1s
SLVN Son La 136.16 140 IAMs_20 IAMs_20 23 47 36.7
comp=Z,273nm,22.0s
TULEG Thule 137.22 353 PKPdf PKPdf 22 58 53.3 -0.2
TAS Tashkent 137.63 87 IAMs_20 IAMs_20 00 00 38.7
comp=Z,255nm,20.0s
DAG Danmarks Havn 137.97 10 i P PKPdf 22 58 54.0 -0.9
comp=Z,4.9nm,1.1s
DAG Danmarks Havn 137.97 10 i PKIKP PKPdf 22 58 54.0 -0.9
DAG pmax pmax
comp=Z,5.0nm,1.1s
WHY Whitehorse 138.04 313 IAMs_20 IAMs_20 00 05 46.6
comp=Z,283nm,19.0s
RES Resolute Bay 138.26 343 PKPdf 22 58 56.1 +0.6
RES Resolute Bay 138.26 343 PKIKP PKPdf 22 58 56.1 +0.6
AKTO Aktyubinsk 138.68 69 PKP PKPdf 22 58 55.4 -1.6
comp=Z,1.6nm,0.9s,baz=3.9,slow=3.8,SNR=3.8
KMI Kunming 139.28 136 PKP PKPdf 22 58 59.1 -0.1
KMI sPKP 22 59 03.3
KMI PP PP 23 01 59.8 +7.1
KMI LR LR
comp=Z,170nm,16.3s
KMI LR LR
comp=Z,110nm,7.7s
KMI LR LR
comp=Z,220nm,14.5s
KMI Kunming 139.28 136 IAMs_20 IAMs_20 00 04 33.4
comp=Z,222nm,20.0s

ARCES	ARCESS Array B	139.45	31	PKhKP	PKPpre	22 58 47.7	
	comp=Z,1.5nm,0.4s,baz=227,slow=2.4,SNR=18						
KSH	Kashi	139.59	95	PKP	PKPdf	22 58 59.9	+0.7
KSH				PP	PP	23 01 58.3	+3.4
KSH				PKS	PKSdf	23 02 34.3	-1.0
KSH				SKKS		23 08 48.1	
KSH				SS	SS	23 20 15.9	+2.1
KSH				AMB	AMB		
	comp=Z,210nm,6.3s						
KSH				LR	LR		
	comp=Z,180nm,7.6s						
KSH				LR	LR		
	comp=Z,230nm,7.0s						
KSH				LR	LR		
	comp=Z,280nm,12.3s						
APA	Apatity	140.34	36	⇓i PKHKP	PKPpre	22 58 51.1	
APA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,700nm,22.0s						
AAK	Ala-Archa	141.20	90	i PKIKP	PKPdf	22 59 03.0	+0.9
INK	Inuvik	142.39	323		PKPpre	22 58 59.5	
INK	Inuvik	142.39	323	PKIKP	PKPdf	22 58 59.5	-3.6
INK				MLR	MLR		
	comp=Z,400nm,20.0s						
NOR	Nord	142.59	7	i P	PKPdf	22 59 01.9	-1.3
NOR	Nord	142.59	7	ePKIKP	PKPdf	22 59 01.9	-1.3
ARU	Arti	142.83	62		PKPpre	22 58 59.5	
ARU	Arti	142.83	62	i PKIKP	PKPdf	22 59 03.1	-1.2
YHNB	Yeheng	143.59	163	IAMs_20	IAMs_20	00 02 04.3	
	comp=Z,227nm,19.0s						
SVE	Sverdlovsk	143.99	63	ePKIKP	PKPab	22 59 03.7	0.0
SVE				pmax	pmax		
	comp=Z,26nm,1.1s						
CD2	Chengdu	144.93	134	PKPbc	PKPdf	22 59 09.0	+0.1
ILAR	Eielson Array	144.93	313	PKPbc	PKPab	22 59 06.6	-0.4
	comp=Z,21nm,0.8s,baz=141,slow=2.0,SNR=161						
ILAR	Eielson Array	144.93	313	ePKIKP	PKPab	22 59 05.7	-1.3
ILAR				pmax	pmax		
	comp=Z,21nm,0.8s						
RND	Reindeer	144.95	310		PKPbc	22 59 07.4	+0.1
RND	Reindeer	144.95	310	PKIKP	PKPbc	22 59 07.4	+0.1
MCK	McKinley	145.16	310		PKPbc	22 59 07.7	-0.1
MCK	McKinley	145.16	310	PKIKP	PKPbc	22 59 07.7	-0.1
COLA	College	145.34	312		PKPbc	22 59 08.1	-0.2
COLA	College	145.34	312	PKIKP	PKPbc	22 59 08.1	-0.2
BRVK	Borovoye	146.19	74		PKPdf	22 59 10.3	+0.1
BRVK	Borovoye	146.19	74	i PKP2	PKPdf	22 59 10.7	+0.5
ENH	Enshi	146.25	142		PKPdf	22 59 10.8	-0.3
ENH				IAMs_20	IAMs_20	00 05 23.2	
	comp=Z,245nm,20.0s						
WHN	Wuhan	147.87	149	i PKPbc	PKPbc	22 59 16.3	-0.4
WHN				PKPab	sPKPab	22 59 24.9	-0.9
WHN				LR	LR		
	comp=Z,750nm,19.7s						
MAKZ	Makanchi	147.91	92		PKPbc	22 59 15.6	-0.8
MAKZ	Makanchi	147.91	92	PKP2	PKPbc	22 59 15.6	-0.8
MK31	Makanchi Array	148.05	92	PKPbc	PKPbc	22 59 16.0	-0.8
MK31				PKPab	PKPab	22 59 23.9	+4.2
MK31	Makanchi Array	148.05	92	PKP2	PKPab	22 59 23.9	+4.2
MKAR	Makanchi Array	148.05	92	PKPbc	PKPbc	22 59 15.6	-1.2
	comp=Z,10.0nm,0.8s,baz=259,slow=1.2,SNR=44						
WMQ	Urumqi	148.61	101	ePKPbc	PKPdf	22 59 14.1	-0.6
WMQ				AMB	AMB		
	comp=Z,71nm,4.3s						
WMQ				LR	LR		
	comp=Z,800nm,29.1s						
WMQ				LR	LR		
	comp=Z,980nm,28.9s						
WMQ				LR	LR		
	comp=Z,150nm,29.0s						
WMQ	Urumqi	148.61	101	PKPdf	PKPdf	22 59 14.0	-0.7
WMQ				PKPab	pPKPab	22 59 25.7	-1.4
WMQ	Urumqi	148.61	101	PKIKP	PKPdf	22 59 14.0	-0.7
KURK	Kurchatov	148.81	83		PKPdf	22 59 13.8	-0.8
KURK				PKPbc	sPKPdf	22 59 21.2	0.0
KURK	Kurchatov	148.81	83	i PKIKP	PKPbc	22 59 16.6	-1.9
XAN	Xi'an	149.56	139	PKPbc	PKPbc	22 59 19.8	-1.3
XAN				PP	PP	23 03 03.6	+10
XAN				SS	SS	23 22 14.8	+7.8
XAN				AMB	AMB		
	comp=Z,84nm,6.5s						
XAN				LR	LR		
	comp=Z,150nm,19.8s						
XAN				LR	LR		
	comp=Z,130nm,20.3s						
XAN				LR	LR		
	comp=Z,210nm,20.3s						
XAN	Xi'an	149.56	139		PKPbc	22 59 20.1	-1.0
XAN				IAMs_20	IAMs_20	00 06 16.4	
	comp=Z,242nm,20.0s						
XAN	Xi'an	149.56	139	PKP2	PKPbc	22 59 20.1	-1.0
XAN				MLR	MLR		
	comp=Z,200nm,20.0s						
LZH	Lanzhou	149.58	130	ePKPbc	PKPbc	22 59 20.5	-0.7
NJ2	Nanjing	150.35	156	ePKPbc	PKPdf	22 59 18.9	+1.2
GTA	Gaotai	150.79	121	PKPbc	PKPdf	22 59 17.8	-0.6
GTA				pPKP	sPKPdf	22 59 23.6	-1.4
GTA				LR	LR		
	comp=Z,100nm,17.8s						
GTA				LR	LR		
	comp=Z,100nm,17.8s						
GTA				LR	LR		
	comp=Z,200nm,19.0s						
ZAA0	Zalesovo Array	153.79	82		PKPbc	22 59 28.7	-1.3
ZAA0					sPKPbc	22 59 36.0	-0.6
ZAA0				PKPab	pPKPab	22 59 48.2	-0.1
ZALV	Zalesovo Beam	153.79	82	PKPbc	PKPbc	22 59 28.6	-1.4
	comp=Z,1.7nm,0.7s,baz=263,slow=3.7,SNR=8.9						
TIA	Tai'an	153.96	151	PKPbc	PKPdf	22 59 25.9	+2.9
GAMB	Gambell	154.35	302	PKPdf	PKPdf	22 59 25.7	+3.2
BTO	Baotou	155.85	134	ePKP	PKPdf	22 59 24.3	-1.3
MJAR	Matsushiro Arr	156.00	191	PKPab	PKPab	22 59 51.5	-1.5
	comp=Z,1.9nm,0.9s,baz=162,slow=3.8,SNR=3.5						
KSRS	Korea Array	156.98	170	PKPab	PKPab	22 59 55.5	-1.7
	comp=Z,1.6nm,0.9s,baz=178,slow=1.8,SNR=3.8						
BJT	Baijiatuau	157.29	146	IAMs_20	IAMs_20	00 14 09.3	
	comp=Z,199nm,19.0s						
NRIK	Noril'sk	159.29	45	PKPab	PKPab	23 00 06.9	+0.4
	comp=Z,1.7nm,0.6s,baz=224,slow=3.6,SNR=4.1						
SONM	Songino Array	160.38	118	PKP	PKPdf	22 59 28.9	-2.0
	comp=Z,0.2nm,0.7s,baz=200,slow=2.4,SNR=2						
SONM				PKPab	PKPab	23 00 10.5	-1.5
	comp=Z,1.0nm,0.9s,baz=213,slow=3.0,SNR=5.0						
CN2	Changchun	162.96	162	ePKP	PKPdf	22 59 29.5	-4.0
YAK	Yakutsk	177.72	37	ePKP2	PKPab	23 01 28.3	+0.3
YAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.2s						

*IDC **22** 22:42:32.6±0.4, 13.°96N×144.°86E, h145km±3km, mb3.4/11, mb1 3.5/11, mb1mx3.3/45, mbtmp3.8/11, Error ellipse: s-maj=19.9km s-min=12.9km az=76.0*
*NEIC **22** 22:42:33.1±1.6, 13.°99N±0.°07×144.°8E±0.°1, h153km±4km, mb4.2/13, Error ellipse: s-maj=19.2km s-min=10.8km az=89.0*
ISC 22 22:42:32.9±0.5, 13.°98N±0.°09×144.°8E±0.°1, h150km, n32, σ0.°73/30, mb4.0/15, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.39	175	P	Pn	22 42 54.1	+0.4
	784nm,0.3s,baz=133,slow=1.8,SNR=255						
GUMO				LR	LR	22 43 01.4	
	comp=Z,88nm,18.2s,baz=74,slow=78						
GUMO				S	Sn	22 43 09.6	-0.1
	287nm,0.3s,baz=222,slow=23,SNR=19						
GUMO	Guam	0.39	175	Pn	Pn	22 42 54.5	+0.7
PATS	Pohnpei	15.03	117	P	P	22 45 59.3	-0.2
JOW	Kunigami	20.08	312	P	P	22 46 55.8	+1.1
	1.2nm,0.5s,baz=125,slow=11,SNR=4.4						
FAKI	Fak Fak	20.92	218	P	Pn	22 47 05.9	-2.4
H11N1	WAKE ISLAND Hy	21.86	72	T	T	23 10 35.3	
	baz=255,slow=75						
H11N2	WAKE ISLAND Hy	21.87	72	T	T	23 11 37.5	
	baz=255						
H11N3	WAKE ISLAND Hy	21.88	72	T	T	23 11 22.8	
	baz=255,slow=75						
JNU	Nakatsue	22.91	329	P	P	22 47 23.9	+0.1
	3.2nm,0.8s,baz=69,slow=14,SNR=2.6						
JNU	Nakatsue	22.91	329	IAmb	IAmb	22 47 32.0	
	comp=Z,12nm,1.1s						
USA0B	Ussuriysk Arra	32.06	342	P	P	22 48 45.4	+0.1
USA0B				IAmb	IAmb	22 48 47.3	
	comp=Z,3.5nm,0.7s						
KNRA	Kununurra	33.48	209	P	P	22 48 57.5	-0.5
KNRA				IAmb	IAmb	22 49 02.0	
	comp=Z,4.6nm,0.9s						
SBUM	Sibu	34.19	253	P	P	22 49 04.2	-0.1
SBUM				IAmb	IAmb	22 49 05.7	
	comp=Z,3.2nm,1.0s						
WB0	Warramunga Arr	35.07	197	P	P	22 49 11.0	-0.7
WB2	Warramunga Arr	35.25	197	P	P	22 49 13.1	-0.1
WB2				IAmb	IAmb	22 49 13.4	
	comp=Z,6.3nm,0.9s						
WRA	Warramunga Arr	35.25	197	P	P	22 49 12.8	-0.4
	comp=Z,2.9nm,0.5s,baz=15,slow=8.9,SNR=14						
WRA				PcP	PcP	22 51 41.1	+0.2
	comp=Z,0.4nm,0.5s,baz=20,slow=3.7,SNR=4.2						
FITZ	Fitzroy Crossi	37.07	211	P	P	22 49 28.0	-0.7
AS31	Alice Springs	38.91	196	P	P	22 49 43.8	-0.3
ASAR	Alice Springs	38.91	196	P	P	22 49 43.5	-0.6
	comp=Z,0.9nm,0.4s,baz=16,slow=13,SNR=20						
ASAR				PcP	PcP	22 51 52.7	+0.7
	comp=Z,0.3nm,0.5s,baz=24,slow=2.7,SNR=3.8						
DZM	Mont Dzumac	41.62	149	P	P	22 50 06.5	0.0
	comp=Z,2.3nm,0.6s,baz=263,slow=7.2,SNR=6.5						
DZM	Mont Dzumac	41.62	149	P	P	22 50 07.9	+1.4
DZM				IAmb	IAmb	22 50 08.9	
	comp=Z,5.9nm,1.0s						
CMAR	Chiang Mai Arr	44.20	282	P	P	22 50 27.9	+0.5
	comp=Z,0.8nm,0.3s,baz=84,slow=8.3,SNR=3.8						
SONM	Songino Array	46.40	325	P	P	22 50 44.4	0.0
	comp=Z,0.2nm,0.4s,baz=134,slow=8.3,SNR=2.7						
BBOO	Buckleboo	47.27	190	P	P	22 50 50.8	-0.3
MKAR	Makanchi Array	61.19	316	P	P	22 52 32.3	+0.6
	comp=Z,0.8nm,0.6s,baz=97,slow=8.5,SNR=9.0						
ZAA0	Zalesovo Array	61.29	324	P	P	22 52 30.6	-1.7
ZAA0				IAmb	IAmb	22 52 33.0	
	comp=Z,1.7nm,0.9s						
TUWZ	Tuamarina	61.34	155	P	P	22 52 32.5	-0.2
MAKZ	Makanchi	61.41	316	P	P	22 52 32.4	-0.8
ILAR	Eielson Array	68.23	25	P	P	22 53 15.8	-1.2
	comp=Z,0.2nm,0.4s,baz=250,slow=5.7,SNR=8.2						
YKA	Yellowknife Ar	82.53	27	P	P	22 54 39.2	+0.5
	comp=Z,0.1nm,0.4s,baz=286,slow=4.8,SNR=3.4						
NVAR	Mina Array Bea	86.71	51	P	P	22 55 01.4	+1.0
	comp=Z,0.3nm,0.5s,baz=288,slow=5.1,SNR=4.5						
LPAZ	La Paz	148.11	98	PKPbc	PKiKP	23 02 03.2	-1.1
	comp=Z,0.8nm,0.5s,baz=225,slow=2.9,SNR=3.3						

*SOF **22** 22:45:13.8, 40.°68N×27.°55E, h13km, MD3.6*
*DDA **22** 22:45:16.8, 40.°76N×27.°42E, h10km, ML2.9*
*ISK **22** 22:45:16.6, 40.°78N×27.°45E, h14km, ML3.2/29*
*ATH **22** 22:45:17.9, 40.°77N×27.°32E, h29km±2km, ML2.9/6, Error ellipse: s-maj=6.0km s-min=2.1km az=233.0*
*THE **22** 22:45:17.7, 40.°84N×27.°44E, h12km±2km, ML2.9/4, Error ellipse: s-maj=2.6km s-min=0.9km az=30.0*
ISC 22 22:45:16.8±0.8, 40.°80N±0.°02×27.°44E±0.°02, h15km±6km, n97, σ0.°99/119, 14C-6D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKR	Tekirdag	0.21	21	PG	Pg	22 45 21.8	+0.3
TKR				SG	Sg	22 45 25.2	+0.5
RKY	Sarkoy-Tekirda	0.23	241	PG	Pg	22 45 21.9	0.0
RKY				SG	Sg	22 45 25.8	+0.4
MRMT	Marmara Adasi	0.23	148	PG	Pg	22 45 21.6	-0.3
MRMT				SG	Sg	22 45 24.6	-0.8
CRLT	Corlu	0.40	34	PG	Pb	22 45 25.7	+0.1
KRBG	Karabiga-Canak	0.42	195	PG	Pb	22 45 25.5	-0.3
KRBG				SG	Sb	22 45 31.5	-0.5
BOTS	Marmara Eregli	0.45	65	PG	Pb	22 45 26.5	0.0
BOTS				SG	Sb	22 45 33.2	+0.2
EDC	Edincik	0.56	144	PG	Pg	22 45 27.6	-0.1
EDC				SG	Sg	22 45 35.3	+0.2
KESN	Edirne-Kesan	0.58	273	i P	Pg	22 45 28.1	-0.2
KESN				i S	Sg	22 45 36.2	+0.2
KESN				IAML		22 45 41.0	
	comp=N,812nm,0.2s						
KESN				IAML		22 45 42.0	
	comp=E,938nm,0.4s						
LPK	Lapseki	0.67	231	PG	Pb	22 45 30.0	-0.1
UKOP	Uzunkopru-Edir	0.69	299	PG	Pn	22 45 31.6	-0.4
ERIK	Erikli-Kesan	0.71	260	PG	Pg	22 45 30.6	-0.1
SLVT	Silivri	0.73	53	PG	Pb	22 45 31.6	+0.5
GONE	Gonen-Balikesi	0.77	166	PG	Pb	22 45 32.0	+0.1
ELBA	Catalca	0.83	65	i P	Pb	22 45 33.0	+0.2
ELBA				i S	Sn	22 45 45.1	-0.8
ELBA				IAML		22 45 46.0	
	comp=E,271nm,0.2s						
ELBA				IAML		22 45 47.0	
	comp=N,294nm,0.2s						
PHSR	Pinarhisar	0.83	4	PG	Pb	22 45 33.3	+0.3
GELI	Tayfur-Gelibol	0.84	242	PG	Pg	22 45 32.6	-0.4
CTKS	Kestanelik-??a	0.92	61	PG	Pb	22 45 34.3	-0.1
CTYL	Yalikoy Yolu	0.93	43	PG	Pg	22 45 34.9	0.0
YKBL	Yakuplu-Istanb	0.95	78	PG	Pg	22 45 35.4	+0.2
ENEZ	Enez	0.98	267	PG	Pb	22 45 35.6	+0.2
AVCI	Avcilar-stanb	0.99	78	PG	Pg	22 45 36.1	+0.1
ENZZ	Sultanice-Enez	1.00	259	PG	Pb	22 45 36.0	+0.2
KIRK	Kırklareli	1.02	345	i P	Pb	22 45 36.3	+0.3
KIRK				i S	Sn	22 45 50.7	+0.2
KIRK				IAML		22 45 51.0	
	comp=N,179nm,0.2s						
ALN	Alexandroupoli	1.06	276	P	Pb	22 45 37.0	+0.2
ALN				S	Sg	22 45 51.4	+0.2
	comp=N,555nm,0.4s						
ALN	Alexandroupoli	1.06	276	P	Pb	22 45 36.9	+0.1
ALN				S	Sb	22 45 50.5	0.0
ALN				AML	AML	22 45 53.2	
	comp=E,1212μm,0.3s						
ALN				AML	AML	22 45 54.2	
	comp=N,1050μm,0.5s						
ALN	Alexandroupoli	1.06	276	PG	Pb	22 45 37.1	+0.2
BALY	Balya	1.07	172	i P	Pg	22 45 37.2	-0.2
BALY				i S	Sn	22 45 52.7	+1.0
BALY				IAML		22 45 53.0	
	comp=N,434nm,0.3s						
BALY				IAML		22 45 53.0	
	comp=E,579nm,0.4s						
BGKT	Bogazkoy	1.08	69	PG	Pb	22 45 37.3	+0.2
HVHR	Bakirkoy-Istan	1.08	80	PG	Pg	22 45 37.6	0.0
ARMT	Armutlu	1.11	102	PN	Pn	22 45 37.8	+0.1
EDRB	Edirne	1.17	334	P	Pb	22 45 38.9	+0.2
EDRB				S	Sn	22 45 54.7	+0.4
	comp=E,722nm,0.3s						
MDNY	Mudanya-Bursa	1.18	111	PN	Pn	22 45 38.6	-0.1
BALB	Balikesir	1.21	164	PN	Pn	22 45 39.5	+0.2
BAYC	CANAKKALE_Bayr	1.26	213	i P	Pb	22 45 40.1	-0.1
BAYC				i S	Sg	22 45 57.1	-0.2
BAYC				IAML		22 45 58.0	
	comp=N,201nm,0.3s						
BAYC				IAML		22 46 00.0	
	comp=E,202nm,0.3s						
ISK	Istanbul-Kandi	1.26	77	P	Pn	22 45 39.6	-0.2
ISK				S	Sn	22 45 56.8	+0.4
ISK	Istanbul-Kandi	1.26	77	PN	Pn	22 45 39.7	-0.1
KAVV	Kandilli-Istan	1.26	77	PN	Pn	22 45 39.7	-0.1
BUY	Buyukada	1.28	87	i P	Pn	22 45 39.8	-0.2
BUY				i S	Sg	22 45 58.1	+0.1
BUY				IAML		22 46 00.0	
	comp=N,203nm,0.3s						
BUY				IAML		22 46 01.0	
	comp=E,191nm,0.3s						
EZN	Ezine	1.29	222	P	Pb	22 45 40.7	0.0
EZN				S	Sg	22 45 59.9	+1.4
EZN	Ezine	1.29	222	PN	Pb	22 45 40.8	0.0
KLYT	Kilyos	1.30	69	PN	Pn	22 45 40.3	0.0
TUZL	Tuzla-Istanbul	1.39	89	PN	Pn	22 45 41.7	+0.2
BOZC	Bozcaada	1.43	228	i P	Pb	22 45 42.9	-0.1
BOZC				IAML		22 46 04.0	
	comp=E,402nm,0.2s						
BOZC				IAML		22 46 06.0	
	comp=N,234nm,0.3s						
DURS	Dursunbey	1.44	146	i P	Pn	22 45 42.6	+0.3
DURS				i S	Sg	22 46 03.8	+0.7
DURS				IAML		22 46 05.0	
	comp=N,591nm,0.5s						
DURS				IAML		22 46 06.0	
	comp=E,557nm,0.4s						
STEP	BALIKESIR_Sava	1.44	171	i P	Pn	22 45 42.6	+0.3
STEP				i S	Sg	22 46 04.0	+0.9
STEP				IAML		22 46 05.0	
	comp=N,267nm,0.6s						
STEP				IAML		22 46 12.0	
	comp=E,156nm,0.4s						
RDO	Rodhopi	1.48	284	P	Pn	22 45 43.5	+0.7
RDO				S	Sb	22 46 03.2	+0.6
RDO	Rodhopi	1.48	284	P	Pb	22 45 43.7	-0.3
RDO				S	Sb	22 46 02.4	-0.1
RDO				AML	AML	22 46 05.7	
	comp=N,941μm,0.3s						
RDO				AML	AML	22 46 06.4	
	comp=E,894μm,0.4s						
SMTH	Samothraki Isl	1.49	258	P	Pn	22 45 43.2	+0.2
SMTH	Samothraki Isl	1.49	258	P	Pn	22 45 43.4	+0.4
SMTH				S	Sn	22 46 02.3	+0.2
SMTH				AML	AML	22 46 06.3	
	comp=E,1103μm,0.5s						
SMTH				AML	AML	22 46 08.8	
	comp=N,635μm,0.4s						
KDZ	Kurdzhali	1.75	300	i P	Pn	22 45 47.5	+1.0
JMB	Yambol	1.79	339	P	Pb	22 45 48.9	-0.3
PRK	Paraskevi	1.79	210	P	Pb	22 45 48.5	-0.7
PRK				S	Sb	22 46 11.8	+0.3
PRK	Paraskevi	1.79	210	P	Pb	22 45 48.5	-0.7
PRK				AML	AML	22 46 20.7	
	comp=N,469μm,0.7s						
PRK				AML	AML	22 46 23.1	
	comp=E,413μm,0.6s						
DIM	Dimitrovgrad	1.90	312	P	Pn	22 45 49.0	+0.4
LIA	Limnos Island	1.94	243	P	Pn	22 45 49.9	+0.7
LIA	Limnos Island	1.94	243	P	Pn	22 45 49.6	+0.4
LIA				AML	AML	22 46 22.0	
	comp=N,314μm,0.4s						
LIA				AML	AML	22 46 22.3	
	comp=E,255μm,0.5s						
SIGR	SIGRI	2.00	218	P	Pb	22 45 51.7	-1.1
SIGR				S	Sb	22 46 16.6	-0.8
	comp=E,185nm,0.6s						
SIGR	SIGRI	2.00	218	P	Pb	22 45 51.5	-1.3
SIGR				AML	AML	22 46 22.1	
	comp=N,562μm,0.4s						
SIGR				AML	AML	22 46 23.1	
	comp=E,471μm,0.4s						
DEMI	Demirci	2.01	150	i P	Pn	22 45 50.9	+0.6
DEMI				IAML		22 46 22.0	
	comp=E,132nm,0.3s						
DEMI				IAML		22 46 24.0	
	comp=N,97nm,0.6s						
THAS	Thassos island	2.08	266	P	Pn	22 45 51.3	+0.3
THAS	Thassos island	2.08	266	P	Pn	22 45 51.4	+0.3
KAND	Kocaeli-Kandir	2.11	81	i P	Pn	22 45 52.2	+0.8
KAND				IAML		22 46 24.0	
	comp=N,58nm,0.7s						
KAND				IAML		22 46 34.0	
	comp=E,47nm,0.5s						
KAVA	Kavala	2.23	276	P	Pn	22 45 54.2	+1.1
KAVA				S	Sn	22 46 20.7	+0.4
	comp=E,68nm,0.2s						
KAVA	Kavala	2.23	276	P	Pn	22 45 54.4	+1.3
RZN	Rozhen	2.24	294	i P	Pn	22 45 54.2	+0.8
ELND	Elena	2.43	332	⇑P	Pn	22 45 57.5	+1.6
PLD	Plovdiv	2.44	303	P	Pn	22 45 56.8	+0.8
CHOS	Chios island	2.63	204	P	Pn	22 45 59.4	+0.6
CHOS	Chios island	2.63	204	P	Pn	22 45 59.3	+0.5
OUR	Ouranopolis	2.67	261	P	Pn	22 45 59.5	+0.3
SZH	Strazhica	2.71	336	P	Pn	22 46 01.4	+1.6
NVR	Nevrokopi	2.76	283	P	Pn	22 46 01.4	+0.9
NVR	Nevrokopi	2.76	283	P	Pn	22 46 01.4	+0.9
RAZG	Razgrad	2.85	346	⇓P	Pn	22 46 03.2	+1.5
MMB	Musomiste	2.91	287	P	Pn	22 46 04.2	+1.7
SRS	Serrai	2.93	277	P	Pn	22 46 03.6	+0.8
PAIG	Paliouri	3.00	254	P	Pn	22 46 03.8	+0.1
ZIMR		3.25	332	⇓P	Pb	22 46 13.9	-0.1
PLVB	Pleven	3.33	322	⇑P	Pb	22 46 17.3	+1.8
RASA	Rasa	3.42	357	⇑P	Pn	22 46 05.6	-3.9
KNT	Kendrikon	3.46	278	P	Pn	22 46 11.3	+1.2
SGRR	Singureni	3.59	343	⇑P	Pn	22 46 13.5	+1.6
VTS	Vitosha	3.63	301	⇑P	Pg	22 46 24.4	-2.0
COPA	Copaceanca	3.72	335	⇓P	Pb	22 46 18.7	-3.4
MPEP	Malo Peshtene	3.76	314	P	Pn	22 46 15.2	+1.1
VLAD	Vladila	3.91	326	⇑P	Pb	22 46 22.8	-2.5
SULR		3.98	348	⇓P	Pn	22 46 16.0	-1.1
APE	Apeiranthos	4.01	202	⇓P	Pn	22 46 16.9	-0.8
BISRR	Bisoca	4.78	354	⇑P	Pn	22 46 23.3	-5.0
MLR	Muntele Rosu	4.82	347	⇑P	Pn	22 46 30.1	+1.3
VOIR		4.96	340	⇑P	Pn	22 46 32.3	+1.6
ARR	Arges	5.01	337	⇑P	Pn	22 46 33.6	+2.2
PLOR	Plostina	5.08	354	⇓P	Pn	22 46 26.7	-5.7
VRI	Vrincioaia	5.09	354	⇑P	Pn	22 46 34.3	+1.8
DOPR	Dopca	5.38	345	⇑P	Pn	22 46 35.0	-1.4
TESR	Tescani	5.74	355	⇑P	Pn	22 46 34.3	-7.1
BURAR	Bucovina Array	7.00	348	⇑P	Pn	22 46 54.6	-4.1

*RSNC **22** 22:49:04.6±1.4, 3.°91N×71.°57W, h0km±8km, ML3.3*
*IDC **22** 22:49:05.8±2.8, 3.°97N×71.°45W, h35km±21km, mb3.5/6, mb1 3.9/9, mb1mx3.6/29, mbtmp3.8/9, ML2.4/2, Error ellipse: s-maj=23.3km s-min=17.3km az=141.0*
ISC 22 22:49:01.6±1.7, 3.°98N±0.°04×71.°41W±0.°05, h3km±10km, n30, σ1.°32/43, mb3.9/6, 1C-2D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTGC	Puerto Gaitan,	0.75	287	⇑i P	Pg	22 49 15.6	-0.5
PTGC				eS	Sg	22 49 25.1	-0.8
PTGC				i		22 49 42.3	
	comp=Z,650nm,0.4s						
GUVC	San Jose del G	1.87	220	eP	Pn	22 49 33.0	-1.6
GUVC				eS	Sn	22 49 57.2	-1.6
GUVC				i		22 50 00.4	
	comp=Z,537nm,0.2s						
CHIC	Chingaza	2.40	286	⇓eP	Pn	22 49 42.6	+0.4
CHIC				eS	Sn	22 50 12.6	+0.3
CHIC				i		22 50 17.6	
	comp=Z,187nm,0.3s						
TAMC	Tame, Arauca	2.47	351	eP	Pb	22 49 45.9	-0.8
TAMC				eS	Sb	22 50 18.0	+0.5
TAMC				i		22 50 29.9	
	comp=Z,437nm,0.3s						
RUSC	La Rusia	2.52	319	⇓i P	Pn	22 49 45.6	+1.6
RUSC				eS	Sb	22 50 18.2	-1.3
RUSC				i		22 50 34.2	
	comp=Z,123nm,0.4s						
ROSC	El Rosal	3.02	286	Pn	Pn	22 49 52.9	+2.1
	comp=Z,3.2nm,0.3s,baz=9.1,slow=15,SNR=7.1						
ROSC				Pg	Pg	22 50 01.1	+1.5
	comp=Z,15nm,0.3s,baz=132,slow=16,SNR=22						
ROSC				Lg	Lg	22 50 37.6	
	comp=Z,11nm,0.3s,baz=349,slow=21,SNR=2.1						
ROSC	El Rosal	3.02	286	eP	Pn	22 49 52.6	+1.9
MACC	Macarena, Meta	3.04	233	eP	Pn	22 49 51.4	+0.8
MACC				eS	Sn	22 50 29.0	+1.4
MACC				i		22 50 42.3	
	comp=Z,141nm,0.5s						
BARC	Barichara	3.13	326	eP	Pg	22 50 00.5	-1.3
PRAC	Prado	3.48	266	eP	Pn	22 49 57.7	+1.0
PRAC				eS	Sb	22 50 48.2	+1.6
PRAC				i		22 50 59.5	
	comp=Z,54nm,0.7s						
PAMC	Pamplona, Colo	3.57	339	eP	Pn	22 50 00.3	+1.9
NORC	Norcasia	3.79	295	eP	Pn	22 50 01.5	+0.5
NORC				eS	Sb	22 50 56.5	+1.0
NORC				i		22 51 00.7	
	comp=Z,35nm,0.7s						
ORTC	Ortega, Tolima	3.83	269	eP	Pn	22 50 02.0	+0.5
BRRC	Barranca, Sant	3.86	324	eP	Pn	22 50 03.3	+1.4
RREF	El Recreo	4.03	283	eP	Pn	22 50 04.9	+0.1
ZARC	Zaragoza, Cauc	4.89	316	eP	Pn	22 50 18.2	+2.1
ZARC				eS	Sn	22 51 11.1	-2.1
ZARC				i		22 51 39.6	
	comp=Z,20nm,0.5s						
YOTC	Yotoco, Valle	4.92	270	eP	Pn	22 50 15.9	-0.7
SDV	Santo Domingo	4.93	9	Pn	Pn	22 50 17.8	+0.9
	comp=Z,8.7nm,0.3s,baz=210,slow=3.9,SNR=22						
SDV				Pg	Pg	22 50 36.8	+0.6
	comp=Z,15nm,0.3s,baz=180,slow=7.1,SNR=9.3						
SDV				Sn	Sn	22 51 14.2	-0.3
	comp=Z,34nm,0.3s,baz=230,slow=20,SNR=12						
SDV				Lg	Lg	22 51 36.6	
	comp=Z,17nm,0.3s,baz=317,slow=14,SNR=4.0						
SDV	Santo Domingo	4.93	9	eP	Pn	22 50 17.6	+0.7
SMLC	San Martn de	5.47	331	eP	Pn	22 50 24.2	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PCRV	Puerto La Cruz	9.11	47	Pn	Pn	22 51 15.3	+1.1
	comp=Z,3.7nm,0.3s,baz=209,slow=8.3,SNR=9.7						
PCRV				Sn	Sn	22 52 57.3	-0.1
	comp=Z,1.8nm,0.3s,baz=277,slow=2.8,SNR=1.2						
PCRV				Lg	Lg	22 53 58.3	
	comp=Z,2.6nm,0.3s,baz=0.0,slow=16,SNR=2.4						
LPAZ	La Paz	20.40	171	P	P	22 53 42.5	+1.9
	comp=Z,2.4nm,0.8s,baz=345,slow=14,SNR=6.0						
LPAZ				Lg	Lg	22 59 49.1	
	comp=Z,2.3nm,0.8s,baz=178,slow=9.7,SNR=4.0						
TXAR	Lajitas Array	39.62	313	P	P	22 56 34.5	-0.4
	comp=Z,0.6nm,0.7s,baz=128,slow=9.1,SNR=8.9						
SCHQ	Schefferville	50.83	3	P	P	22 58 04.0	+0.6
	comp=Z,2.4nm,0.7s,baz=181,slow=8.9,SNR=7.1						
NVAR	Mina Array Bea	54.68	315	P	P	22 58 30.8	-1.6
	comp=Z,0.4nm,0.6s,baz=129,slow=5.2,SNR=3.6						
YKA	Yellowknife Ar	66.50	340	P	P	22 59 50.8	-1.5
	comp=Z,0.5nm,0.8s,baz=132,slow=4.1,SNR=3.2						
GERES	GERESS Array B	83.80	41	P	P	23 01 32.7	+0.1
	comp=Z,0.5nm,0.5s,baz=253,slow=2.7,SNR=4.8						
ARCES	ARCESS Array B	88.72	20	P	P	23 01 55.1	-1.1
	comp=Z,9.2nm,1.1s,baz=264,slow=3.6,SNR=3.3						
ASAR	Alice Springs	148.69	229	PKPbc	PKPdf	23 08 48.8	+1.3
	comp=Z,0.8nm,0.8s,baz=122,slow=3.2,SNR=6.1						
WRA	Warramunga Arr	150.31	236	PKPbc	PKPdf	23 08 52.7	+2.5
	comp=Z,0.7nm,0.8s,baz=100,slow=2.9,SNR=3.4						

WEL 22 23:05:22.0, 41°S±1°×17°5E±°, h49km±2km, ML3.6/13, MLv3.5/65, Error ellipse: s-maj=0.0km s-min=0.0km az=117.7, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIW	Kapiti Island	0.22	76	P	Pn	23 05 30.7	+0.3
KIW				S	Sn	23 05 36.6	+0.3
CAW	Cannon Point	0.38	120	P	Pn	23 05 32.5	+0.6
TCW	Tory Channel	0.40	222	P	Pn	23 05 32.5	+0.5
OGWZ	Otaki Gorge	0.42	77	P	Pn	23 05 32.8	+0.6
BHW	Baring Head	0.53	160	P	Pn	23 05 33.9	+0.5
DUWZ	D'Urville Isla	0.55	282	P	Pn	23 05 34.1	+0.3
HOWZ	Holdsworth Sta	0.67	89	P	Pn	23 05 35.7	+0.3
MSWZ	Moikau Station	0.69	137	P	Pn	23 05 35.8	+0.3
MTW	Mount Morrison	0.70	110	P	Pn	23 05 35.9	+0.2
TUWZ	Tuamarina	0.73	225	P	Pn	23 05 36.7	+0.7
PAWZ	Paruwai Farm	0.76	128	P	Pn	23 05 36.7	+0.2
MRZ	Mangatainoka R	0.76	71	P	Pn	23 05 36.7	+0.2
PLWZ	Palliser	0.81	144	P	Pn	23 05 37.2	0.0
OHWZ	Ohakea	0.88	37	P	Pn	23 05 39.0	+1.0
CMWZ	Cape Campbell	0.89	200	P	Pn	23 05 40.5	+2.3
TRWZ	Traveller	0.93	121	P	Pn	23 05 38.8	0.0
TIWZ	Tintock	0.96	82	P	Pn	23 05 39.4	+0.2
TMWZ	Te Maipa	0.97	102	P	Pn	23 05 39.4	0.0
BSWZ	Blackbirch Sta	0.98	215	P	Pn	23 05 40.1	+0.7
NNZ	Nelson	0.99	252	P	Pn	23 05 40.2	+0.7
POWZ	Post Office Ro	1.01	59	P	Pn	23 05 39.8	-0.1
PRWZ	Pori Road	1.08	71	P	Pn	23 05 41.2	+0.4
WAZ	Wanganui	1.19	13	P	Pn	23 05 43.6	+1.4
CPWZ	Castlepoint	1.19	90	P	Pn	23 05 42.7	+0.4
BFZ	Birch Farm	1.25	80	P	Pn	23 05 42.8	-0.3
DVHZ	Dannevirke	1.32	63	P	Pn	23 05 43.6	-0.5
TSZ	Takapari Road	1.33	50	P	Pn	23 05 44.0	-0.1
LREZ	Lake Rotokare	1.46	353	P	Pn	23 05 47.4	+1.4
THZ	Tophouse	1.55	236	P	Pn	23 05 47.7	+0.5
PNHZ	Pukenui	1.56	51	P	Pn	23 05 46.8	-0.6
QRZ	Quartz Range	1.59	273	P	Pn	23 05 48.3	+0.6
NMEZ	Namu Road	1.61	339	P	Pn	23 05 50.2	+2.2
PREZ	Palmer Road	1.61	347	P	Pn	23 05 50.0	+2.0
WPHZ	Waipukurau	1.62	59	P	Pn	23 05 50.3	+2.2
MTVZ	Mangateitei	1.66	23	P	Pn	23 05 50.3	+1.5
PRHZ	Porangahau	1.66	68	P	Pn	23 05 50.5	+1.9
KHEZ	Kahui Hut	1.69	344	P	Pn	23 05 51.0	+1.9
KHZ	Kahutara	1.71	208	P	Pn	23 05 49.6	+0.3
PKVZ	Pokaka	1.71	19	P	Pn	23 05 50.7	+1.2
MOVZ	Moawhango	1.73	30	P	Pn	23 05 49.8	0.0
NBEZ	Newall Road No	1.75	340	P	Pn	23 05 51.5	+1.7
TRVZ	Turoa	1.76	24	P	Pn	23 05 51.2	+1.0
PKE	Pukeiti	1.79	344	P	Pn	23 05 53.0	+2.6
WHVZ	Whangaehu Hut	1.79	25	P	Pn	23 05 51.7	+1.0
VRZ	Vera Road	1.79	3	P	Pn	23 05 52.1	+1.6
BHHZ	Black Hill Sta	1.80	38	P	Pn	23 05 50.5	-0.1
FWVZ	Far West T-bar	1.80	23	P	Pn	23 05 52.0	+1.2
TUVZ	Tukino	1.82	26	P	Pn	23 05 52.0	+0.9
KRHZ	Kereru	1.84	47	P	Pn	23 05 50.6	-0.6
MHEZ	Mangahewa	1.85	353	P	Pn	23 05 51.4	+0.2
NGZ	Ngauruhoe	1.89	24	P	Pn	23 05 52.9	+1.0
PXZ	Pawanui	1.92	63	P	Pn	23 05 51.8	-0.4
WTVZ	West Tongariro	1.94	23	P	Pn	23 05 53.4	+0.8
TWVZ	Taurewa	1.94	19	P	Pn	23 05 53.3	+0.6
KRVZ	Karewarewa	1.98	23	P	Pn	23 05 55.1	+2.0
KWHZ	Kaweka Forest	2.03	43	P	Pn	23 05 58.6	+4.9
KAHZ	Kahuranaki	2.05	58	P	Pn	23 05 53.4	-0.6
KATZ	Kakaramea	2.10	23	P	Pn	23 05 58.5	+3.7
RITZ	Rihia Road	2.15	26	P	Pn	23 05 59.0	+3.5
MCHZ	McNeill Hill	2.16	48	P	Pn	23 06 02.3	+6.8
RATZ	Rangitukua	2.23	24	P	Pn	23 06 01.4	+4.9
BKZ	Black Stump Fm	2.26	40	P	Pn	23 05 56.1	-0.8
DSZ	Denniston Nort	2.28	248	P	Pn	23 05 57.7	+0.4
WATZ	Wairara	2.36	21	P	Pn	23 06 02.7	+4.4
GVZ	Greta Valley S	2.37	210	P	Pn	23 05 58.1	-0.3
HIZ	Hauiti	2.41	4	P	Pn	23 06 00.2	+1.3
ARHZ	Aropaoanui	2.45	48	P	Pn	23 06 01.6	+2.1
NMHZ	Naumai	2.47	43	P	Pn	23 06 07.1	+7.3
LTZ	Lake Taylor	2.56	223	P	Pn	23 06 00.7	-0.4
KUTZ	Kaahu Road	2.59	21	P	Pn	23 06 08.4	+6.9
TLZ	Tolley Road	2.68	15	P	Pn	23 06 06.5	+3.8
ALRZ	Allen Road	2.70	30	P	Pn	23 06 05.9	+3.1
RTZ	Ruatahuna	2.93	39	P	Pn	23 06 11.5	+5.5
INZ	Inchbonnie	2.99	232	P	Pn	23 06 06.5	-0.4
OKCZ	Okains Bay	3.04	202	P	Pn	23 06 06.5	-1.1
MQZ	McQueen's Vall	3.15	207	P	Pn	23 06 07.0	-2.1
AKCZ	Akaroa Harbour	3.22	203	P	Pn	23 06 08.9	-1.1
WVZ	Waitaha Valley	3.62	232	P	Pn	23 06 14.7	-0.7
RUGZ	Raukumara Rang	3.77	40	P	Pn	23 06 19.5	+1.7
MKAZ	Moumakai	3.83	6	P	Pn	23 06 19.2	+0.8
AWAZ	Awhitu Peninsu	3.85	0	P	Pn	23 06 20.2	+1.6
RPZ	Rata Peaks	4.35	222	P	Pn	23 06 17.3	-1.5
FOZ	Fox Glacier	4.43	232	P	Pn	23 06 25.4	-1.1
LBZ	Lake Benmore	4.77	222	P	Pn	23 06 29.0	-2.3
ODZ	Otahua Downs	5.06	214	P	Pn	23 06 32.8	-2.4
JCZ	Jackson Bay	5.35	232	P	Pn	23 06 37.7	-1.6
GLKZ	Green Lake	13.12	30	P	Pn	23 08 29.1	+3.4

IDC 22 23:30:42.8±1.0, 37°.60N×142°.28E, h0km, mb3.6/9, mb1 3.7/13, mb1mx3.6/46, mbtmp3.7/13, ML3.6/3, MS3.1/2, Ms1 3.1/2, ms1mx2.6/38, Error ellipse: s-maj=24.0km s-min=17.0km az=90.0
JMA 22 23:30:47.3±0.1, 37°.59N×142°.00E, h33km±3km, M4.1
ISC 22 23:30:45.1±1.7, 37°.60N±0°.04×142°.07E±0°.06, h13km±10km, n36, σ1º02/45, mb3.5/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.85	326	P	Pn	23 31 02.7	-0.1
JIKH				S	Sg	23 31 13.0	+0.2
JMST	Minamisoumatoc	0.94	278	P	Pg	23 31 03.5	+0.2
JMST				S	Sb	23 31 15.1	-0.6
JFK	Kawauchi	0.98	257	P	Pb	23 31 04.0	+0.1
JFK				S	Sb	23 31 15.9	-0.8
JIO	Ouri	1.02	327	P	Pg	23 31 05.3	+0.5
JIO				S	Sb	23 31 17.5	-0.5
JMM	Marumori	1.04	285	P	Pg	23 31 05.3	+0.1
JMM				eS	Sb	23 31 17.8	-0.8
ONAJ	Iwakimizuishiy	1.13	244	P	Pb	23 31 06.0	-0.6
ONAJ				S	Sb	23 31 19.1	-1.9
JOU	Okura	1.35	305	P	Pb	23 31 10.3	+0.1
JOU				S	Sb	23 31 26.8	-0.5
JFT	Otama	1.38	267	P	Pb	23 31 10.8	+0.1
JFT				S	Sn	23 31 27.6	-0.5
JMK	Ichinoseki	1.51	334	P	Pb	23 31 12.6	-0.3
JMK				eS	Sb	23 31 30.7	-1.2
JYS	Shirataka	1.70	292	P	Pb	23 31 15.7	-0.5
JYS				eS	Sb	23 31 36.7	-0.8
JYK	Kaneyama	1.88	315	P	Pb	23 31 17.9	-1.4
JYK				eS	Sb	23 31 41.3	-1.4
JFY	Yanaizu	1.89	265	P	Pn	23 31 17.9	+0.9
JFY				eS	Sn	23 31 41.1	+0.4
JOM	Ohasama	1.97	342	P	Pb	23 31 19.4	-1.3
JOM				S	Sb	23 31 43.0	-2.2
JYA	Atsumi	2.10	299	P	Pb	23 31 21.2	-1.9
MJAR	Matsushiro Arr	3.26	252	Pn	Pn	23 31 37.3	+1.4
	0.8nm,0.3s,baz=88,slow=26,SNR=40						
MJAR				Sn	Sb	23 32 20.8	-1.6
	0.9nm,0.3s,baz=69,slow=26,SNR=4.3						
MAT	Matsushiro	3.26	252	P	Pn	23 31 37.1	+1.2
MAT				S	Sb	23 32 20.6	-1.9
JHJ	Hachijo jima 2	4.84	203	Pn	Pn	23 31 58.0	+0.4
	9.4nm,0.3s,baz=3.9,slow=18,SNR=4.7						
JHJ				Sn	Sn	23 32 52.0	-1.6
	18nm,0.3s,baz=60,slow=24,SNR=1.8						
ASAJ	Asahikawa	6.52	3	Pn	Pn	23 32 20.9	+0.2
	2.2nm,0.3s,baz=225,slow=14,SNR=9.6						
ASAJ				Sn	Sn	23 33 36.5	+1.6
	0.7nm,0.3s,baz=97,slow=26,SNR=1.9						
USRK	Ussuriysk Ar.	10.08	314	Pn	Pn	23 33 10.7	+1.3
	baz=122,slow=12,SNR=3.8						
JCJ	Chichijima	10.47	179	LR	LR	23 39 14.8	
	comp=Z,21nm,19.9s,baz=84,slow=49						
SONM	Songino Array	27.91	303	P	P	23 36 34.9	0.0
	0.4nm,0.5s,baz=107,slow=10,SNR=4.1						
H11N2	WAKE ISLAND Hy	28.00	123	T	T	00 06 06.0	
	baz=314,slow=75,SNR=138						
H11N1	WAKE ISLAND Hy	28.01	123	T	T	00 06 07.7	
	baz=314,slow=75,SNR=139						
H11N3	WAKE ISLAND Hy	28.02	123	T	T	00 06 08.4	
	baz=314,slow=75,SNR=158						
H11S1	WAKE ISLAND Hy	28.74	125	T	T	00 07 01.1	
	baz=316,slow=76,SNR=83						
H11S3	WAKE ISLAND Hy	28.74	125	T	T	00 07 01.7	
	baz=316,slow=76,SNR=73						
H11S2	WAKE ISLAND Hy	28.76	125	T	T	00 07 02.2	
	baz=316,slow=76,SNR=72						
ZALV	Zalesovo Beam	41.92	312	P	P	23 38 35.5	+0.4
	0.3nm,0.3s,baz=76,slow=6.1,SNR=3.2						
MKAR	Makanchi Array	44.26	302	P	P	23 38 55.3	+1.1
	0.4nm,0.5s,baz=81,slow=12,SNR=8.3						
KURBB	Kurchatov Arra	46.07	308	P	P	23 39 09.1	+0.7
	1.2nm,0.4s,baz=81,slow=7.9,SNR=16						
AAK	Ala-Archa	50.68	298	P	P	23 39 45.2	+0.9
	0.5nm,0.3s,baz=130,slow=7.9,SNR=4.1						
WRA	Warramunga Arr	57.69	189	P	P	23 40 35.1	-0.3
	0.3nm,0.6s,baz=5.3,slow=7.3,SNR=2.4						
ASAR	Alice Springs	61.42	189	P	P	23 41 01.0	-0.1
	0.4nm,0.7s,baz=16,slow=7.0,SNR=4.4						
YKA	Yellowknife Ar	63.06	30	P	P	23 41 10.9	-0.7
	0.1nm,0.4s,baz=304,slow=6.7,SNR=2.7						
FINES	FINESS Array B	68.56	332	P	P	23 41 47.5	+0.5
	1.3nm,0.7s,baz=35,slow=7.6,SNR=3.7						
SADO	Sadowa	89.95	28	LR	LR	00 28 47.5	
	comp=Z,41nm,18.2s,baz=212,slow=39						

RSPR 22 23:33:49.1, 18°.16N×67°.38W, h14km±3km, MD2.8/6
NEIC 22 23:33:49.0±1.6, 18°.25N±0°.02×67°.37W±0°.01, h17km±1km, Error ellipse: s-maj=3.3km s-min=1.7km az=190.0
ISC 22 23:33:48.9±1.0, 18°.18N±0°.04×67°.38W±0°.03, h12km±8km, n37, σ1º22/48, 3C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPR	Mayaguez	0.23	81	Pg	Pb	23 33 54.7	-0.3
MPR				Sg	Sg	23 33 58.1	+1.1
LSP	Las Mesas	0.28	90	⇓eP	Pg	23 33 55.3	+0.6
LSP	Las Mesas	0.28	90	eS	Sb	23 33 59.9	-0.6
LSP	Las Mesas	0.28	90		Pg	23 33 55.3	+0.6
LSP					Sb	23 33 59.9	-0.6
CRPR	Cabo Rojo, PR	0.30	124	⇑eP	Pg	23 33 55.6	+0.4
CRPR	Cabo Rojo, PR	0.30	124	eS	Sg	23 34 00.3	+1.0
CRPR	Cabo Rojo, PR	0.30	124	Pg	Pg	23 33 55.0	-0.2
MLPR	Magueyes Islan	0.38	123	⇑eP	Pg	23 33 55.9	-0.6
MLPR	Magueyes Islan	0.38	123	eS	Sg	23 34 01.3	-0.2
MLPR	Magueyes Islan	0.38	123	Pg	Pg	23 33 56.4	-0.1
MLPR				Sg	Sg	23 34 01.5	-0.1
AGPR	Aguadilla, PR	0.38	41	⇑eP	Pg	23 33 56.8	+0.2
AGPR	Aguadilla, PR	0.38	41	eS	Sb	23 34 02.6	-0.9
AGPR	Aguadilla, PR	0.38	41	Pg	Pg	23 33 56.8	+0.2
AGPR				Sg	Sg	23 33 58.2	-3.5
AOPR	Arecibo Observ	0.61	74	⇓eP	Pg	23 34 00.6	-0.4
AOPR	Arecibo Observ	0.61	74	eS	Sg	23 34 09.1	+0.1
AOPR	Arecibo Observ	0.61	74		Pg	23 34 00.6	-0.4
AOPR	Arecibo Observ	0.61	74		Sg	23 34 09.1	+0.1
AOPR	Arecibo Observ	0.61	74		Pg	23 34 00.8	-0.1
AOPR	Arecibo Observ	0.61	74	Sg	Sg	23 34 09.4	+0.4
OBIP	Obispado Ponce	0.74	100	Pg	Pg	23 34 03.6	+0.3
OBIP				Sg	Sg	23 34 11.7	-1.4
EMPR	Esperanza - Ma	0.86	70		Pn	23 34 09.2	+2.4
EMPR					Sn	23 34 23.9	+4.6
ICMP	Isla Caja de M	0.86	110	Pg	Pb	23 34 05.4	-0.4
ICMP				Sg	Sb	23 34 16.6	-0.6
PCDR	Punta Cana, DR	1.01	289		Pg	23 34 09.2	+0.8
PCDR					Sg	23 34 21.6	-0.1
SJG	San Juan	1.17	93		Pn	23 34 10.7	-0.4
SJG					Sb	23 34 25.8	-0.3
IGPR	InterUniversit	1.23	100	Pn	Pb	23 34 12.3	+0.2
GCPR	Guaynabo City	1.23	84	Pn	Pb	23 34 12.4	+0.2
GCPR					Sb	23 34 27.4	-0.7
CBYP	Canovanas	1.45	86	Pn	Pn	23 34 14.8	-0.2
HUMP	Col San Antoni	1.45	91	⇓eP	Pn	23 34 13.9	-1.0
HUMP	Col San Antoni	1.45	91		Pn	23 34 13.9	-1.0
MTP	Monte Pirata	1.73	92	Pn	Pn	23 34 16.5	-2.4
MTP				Sn	Sn	23 34 39.9	-1.1
CUPR	Culebra, Puert	1.99	86	Pn	Pn	23 34 23.2	+0.8
DR12	Loma Pena Alta	2.00	288	Pn	Pn	23 34 20.8	-1.8
STVI	Saint Thomas	2.31	85	Pn	Pn	23 34 25.4	-1.4
SDD	Santo Domingo	2.43	277	Pn	Pn	23 34 28.6	+0.2
CDVI	St. Croix	2.52	99	Pn	Pn	23 34 30.7	+1.0
BANI	BANI	2.84	275	Pn	Pn	23 34 33.9	-0.3
SDDR	Presa de Saban	3.80	283	Pn	Pn	23 34 47.4	+0.1

IDC 22 23:34:53.9±3.7, 24°.60N×123°.59E, h82km±38km, mb3.4/7, mb1 3.5/9, mb1mx3.2/42, mbtmp3.7/9, Error ellipse: s-maj=26.7km s-min=16.6km az=63.0
JMA 22 23:34:53.3±0.1, 24°.57N×123°.48E, h63km±2km, M3.6
ISC 22 23:34:52.8±0.7, 24°.57N±0°.07×123°.46E±0°.04, h70km±6km, n20, σ0º64/32, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.34	134	P	Pn	23 35 03.8	-0.5
IRIF				S	Sn	23 35 12.3	-0.3
YOJ	Yonaguni jima	0.42	256	P	Pn	23 35 05.1	+0.2
YOJ				S	Sn	23 35 13.3	-0.6
JYNG	Yonagunijimaku	0.48	256	P	Pn	23 35 05.6	+0.1
JYNG				S	Sn	23 35 14.5	-0.3
HATJ	Hateruma jima	0.60	148	P	Pn	23 35 06.7	+0.1
HATJ				eS	Sn	23 35 16.8	0.0
JKRS	Kuro-shima	0.60	123	P	Pn	23 35 06.9	+0.3
JKRS				S	Sn	23 35 17.1	+0.3
JIJ	Ishigaki jima	0.65	108	P	Pn	23 35 07.1	-0.1
JIJ				S	Sn	23 35 17.3	-0.5
JISG	Ishigakijimahi	0.77	88	P	Pn	23 35 08.6	+0.1
JISG				S	Sn	23 35 20.1	-0.1
JTJ	Tarama	1.13	86	P	Pn	23 35 13.4	+0.5
JTJ				S	Sn	23 35 28.3	+0.3
JIRB	Irabujima	1.58	80	P	Pn	23 35 19.1	+0.3
JIRB				eS	Sn	23 35 38.6	+0.2
JIKM	Ikemajima	1.66	77	P	Pn	23 35 20.4	+0.5
JMJ2	Miyako jima3	1.71	84	P	Pn	23 35 21.4	+0.9
JOW	Kunigami	4.89	62	P	Pn	23 36 03.2	-0.6
	2.0nm,0.3s,baz=185,slow=12,SNR=37						
JOW				S	Sn	23 36 58.1	-1.0
	0.7nm,0.3s,baz=89,slow=19,SNR=1.8						
KSRS	Korea Array	13.40	15	P	Pn	23 37 59.6	-0.2
	0.1nm,0.3s,baz=184,slow=11,SNR=2.8						
CMAR	Chiang Mai Arr	23.59	260	P	P	23 39 58.9	+1.5
	0.3nm,0.3s,baz=61,slow=9.4,SNR=3.1						
SONM	Songino Array	26.88	334	P	P	23 40 28.7	+1.7
	0.2nm,0.7s,baz=142,slow=7.3,SNR=2.1						
SONM				pP	pwP	23 40 46.1	+0.5
	0.2nm,0.5s,baz=144,slow=9.5,SNR=3.5						
MKAR	Makanchi Array	39.53	315	P	P	23 42 16.2	-0.5
	0.3nm,0.4s,baz=99,slow=9.4,SNR=15						
MKAR				PcP	PcP	23 44 22.4	-0.6
	0.4nm,1.1s,baz=112,slow=1.6,SNR=2.5						
WRA	Warramunga Arr	45.49	166	P	P	23 43 04.8	-0.5
	3.9nm,0.7s,baz=346,slow=8.5,SNR=11						
ASAR	Alice Springs	49.01	167	P	P	23 43 33.0	+0.4
	1.4nm,0.7s,baz=351,slow=11,SNR=18						
STKA	Stephens Creek	58.74	162	P	P	23 44 42.7	-0.7
	1.9nm,0.8s,baz=333,slow=4.5,SNR=3.8						
YKA	Yellowknife Ar	81.80	23	P	P	23 47 03.2	-0.6
	0.3nm,0.7s,baz=301,slow=5.6,SNR=3.9						

NNC 23 00:10:31.9±2.1, 41°.30N×83°.13E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=16.5km s-min=10.6km az=164.0
SOME 23 00:10:34.2, 41°.65N×83°.10E, h5km
ISC 23 00:10:35.8±2.2, 41°.76N±0°.09×83°.00E±0°.07, h10km, n42, σ2º26/66, 8C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	2.58	312	eP	Pg	00 11 24.7	-0.6
	3.1nm,0.1s						
KTMS				eS	Sg	00 12 01.3	+2.6
	16nm,0.5s						
SHLS	Shalkode	2.97	299	eP	Pb	00 11 26.4	-2.5
	34nm,0.3s						
SHLS				eS	Sb	00 12 03.7	-1.4
	59nm,0.4s						
SHLS	Shalkode	2.97	299	Pg	Pb	00 11 30.1	+1.3
	34nm,0.3s						
SHLS				Lg	Lg	00 12 10.3	
	59nm,0.4s						
PDGK	Podgornoye	3.03	302	⇑Pn	Pn	00 11 24.0	+0.1
	3.1nm,0.4s						
PDGK				⇑Pg	Pg	00 11 34.7	+0.9
	16nm,0.8s						
PDGK				⇓Lg	Lg	00 12 17.6	
	15nm,0.6s						
UZB	Uzynbulak	3.25	296	eP	Pg	00 11 36.9	-1.3
	7.9nm,0.4s						
UZB				eS	Sg	00 12 21.2	+1.0
	43nm,0.7s						
UZB	Uzynbulak	3.25	296	Pg	Pg	00 11 38.4	+0.3
	7.9nm,0.4s						
UZB				Lg	Lg	00 12 26.5	
	43nm,0.7s						
DJR	Jarkent	3.48	319	eP	Pg	00 11 40.9	-1.6
	2.3nm,0.3s						
DJR				eS	Sg	00 12 28.5	+0.9
	7.3nm,0.5s						
DJR	Jarkent	3.48	319	Pg	Pg	00 11 47.6	+5.1
	2.3nm,0.3s						
DJR				Lg	Lg	00 12 40.0	
	10nm,0.5s						
KPKS	Kokpek	3.61	300	eP	Pb	00 11 42.1	+2.3
	12nm,0.3s						
KPKS				eS	Sg	00 12 31.1	-0.7
	69nm,0.5s						
ZHN	Zhinishke	3.66	294	eP	Pb	00 11 43.3	+2.7
	5.7nm,0.4s						
ZHN				eS	Sg	00 12 33.0	-0.3
	8.0nm,0.3s						
ZHN	Zhinishke	3.66	294	Pg	Pg	00 11 44.3	-1.6
	5.7nm,0.4s						
ZHN				Lg	Lg	00 12 36.0	
	8.0nm,0.3s						
KURS	Kuram	3.96	297	eP	Pg	00 11 50.6	-1.0
	2.7nm,0.4s						
KURS				eS	Sg	00 12 45.9	+2.9
	13nm,0.7s						
KURS	Kuram	3.96	297	Pg	Pg	00 11 50.6	-1.0
	2.7nm,0.4s						
KURS				Lg	Lg	00 12 45.9	
	13nm,0.7s						
MNBS	Baschi	4.09	306	eP	Pg	00 11 53.2	-1.0
	23nm,0.6s						
MNBS				eS	Sg	00 12 49.8	+2.5
	27nm,0.3s						
ARXS	Arharly	4.52	305	eP	Pg	00 12 01.0	-1.3
	2.3nm,0.5s						
ARXS				eS	Sg	00 13 03.4	+2.6
	6.5nm,0.5s						
KOTS	Kotyrbulak	4.60	291	eP	Pg	00 12 01.2	-2.6
	6.1nm,0.4s						
KOTS				eS	Sg	00 13 03.3	0.0
	31nm,0.7s						
KOTS	Kotyrbulak	4.60	291	Pg	Pg	00 12 02.8	-1.0
	6.1nm,0.4s						
KOTS				Lg	Lg	00 13 06.5	
	31nm,0.7s						
MDOK	Medeo	4.62	290	eP	Pg	00 12 02.1	-2.2
	3.0nm,0.4s						
MDOK				eS	Sg	00 13 05.6	+1.5
	25nm,0.5s						
MDOK	Medeo	4.62	290	⇑Pg	Pb	00 11 58.8	+1.7
	3.6nm,0.6s						
MDOK				Lg	Lg	00 13 08.1	
	16nm,0.5s						
MDOK	Medeo	4.62	290	Pg	Pg	00 12 02.1	-2.2
	3.0nm,0.4s						
MDOK				Lg	Lg	00 13 05.6	
	25nm,0.5s						
TDK	Taldyqorghan	4.66	316	eP	Pg	00 12 02.8	-2.2
	20nm,0.3s						
TDK				eS	Sg	00 13 05.9	+0.6
	22nm,0.7s						
TNSS	Tian-Shan	4.66	288	eP	Pg	00 12 02.6	-2.5
	3.9nm,0.6s						
TNSS				eS	Sg	00 13 06.3	+0.9
	13nm,0.7s						
TNSS	Tian-Shan	4.66	288	Pg	Pb	00 12 01.5	+3.6
	3.9nm,0.6s						
TNSS				Lg	Lg	00 13 05.2	
	13nm,0.7s						
CHKK	Chushkaly	4.89	297	eP	Pg	00 12 07.0	-2.4
	1.3nm,0.2s						
CHKK				eS	Sg	00 13 13.7	+0.9
	7.8nm,0.3s						
CHKK	Chushkaly	4.89	297	Pg	Pg	00 12 07.0	-2.4
	1.3nm,0.2s						
CHKK				Lg	Lg	00 13 13.7	
	7.8nm,0.3s						
IZV	Izvestkoviy	4.90	287	eP	Pg	00 12 06.5	-3.2
	3.2nm,0.4s						
IZV				eS	Sg	00 13 12.8	-0.2
	46nm,0.7s						
IZV	Izvestkoviy	4.90	287	Pg	Pg	00 12 06.5	-3.2
	3.2nm,0.4s						
IZV				Lg	Lg	00 13 12.8	
	46nm,0.7s						
KTBS	Karatobe	5.04	295	eP	Pg	00 12 09.0	-3.4
	1.8nm,0.5s						
KTBS				eS	Sg	00 13 17.3	-0.4
	26nm,0.7s						
KTBS	Karatobe	5.04	295	Pg	Pg	00 12 09.0	-3.4
	1.8nm,0.5s						
KTBS				Lg	Lg	00 13 17.3	
	26nm,0.7s						
MTBS	Maitube	5.05	288	eP	Pg	00 12 10.4	-2.1
	3.2nm,0.3s						
MTBS				eS	Sg	00 13 20.0	+2.1
	9.4nm,0.3s						
MTBS	Maitube	5.05	288	Pg	Pg	00 12 10.4	-2.1
	3.2nm,0.3s						
MTBS				Lg	Lg	00 13 20.0	
	9.4nm,0.3s						
MK31	Makanchi Array	5.05	354	⇑Pn	Pn	00 11 54.4	+2.7
	0.2nm,0.3s,baz=311,slow=24,SNR=18						
MK31				⇓Pg	Pg	00 12 12.4	-0.2
	0.3nm,0.3s,baz=172,slow=15,SNR=4.2						
MK31				⇓Lg	Lg	00 13 25.9	
	5.2nm,0.7s,baz=172,slow=28,SNR=3.8						
MAKZ	Makanchi	5.10	352	⇓Pn	Pn	00 11 55.3	+3.0
	1.0nm,0.7s						
MAKZ				⇑Sn	Sb	00 13 01.0	-5.3
	1.2nm,0.4s						
MAKZ				⇑Lg	Lg	00 13 30.8	
	7.7nm,1.1s						
KST	Kastek	5.37	286	eP	Pg	00 12 15.3	-3.3
	3.0nm,0.4s						
KST				eS	Sg	00 13 28.1	+0.1
	14nm,0.6s						
KST	Kastek	5.37	286	Pg	Pg	00 12 15.3	-3.3
	3.0nm,0.4s						
KST				Lg	Lg	00 13 28.1	
	14nm,0.6s						
DGS	Degeres	5.54	288	eP	Pg	00 12 19.1	-2.9
	2.8nm,0.5s						
DGS				eS	Sg	00 13 34.4	+0.6
	11nm,0.5s						
DGS	Degeres	5.54	288	Pg	Pg	00 12 19.1	-2.9
	2.8nm,0.5s						
DGS				Lg	Lg	00 13 34.4	
	11nm,0.5s						
KRBS	Karabastau	5.73	292	eP	Pg	00 12 23.1	-2.4
	1.4nm,0.3s						
KRBS				eS	Sg	00 13 41.6	+1.8
	2.9nm,0.4s						
KRBS	Karabastau	5.73	292	Pg	Pg	00 12 23.1	-2.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	1.4nm,0.3s						
KRBS				Lg	Lg	00 13 41.6	
	2.9nm,0.4s						
ZSN	**Zaisan**	**5.84**	**13**	eP	**Pg**	**00 12 23.2**	**-4.4**
	2.0nm,0.3s						
ZSN				eS	**Sg**	**00 13 40.7**	**-2.5**
	5.8nm,0.6s						
AAK	**Ala-Archa**	**6.38**	**281**	⇑Pg	**Pb**	**00 12 27.3**	**+0.4**
	1.8nm,0.6s						
AAK				⇑Lg	Lg	00 13 59.0	
	7.2nm,0.8s						
MRKS	**Merke**	**7.32**	**281**	eP	**Pg**	**00 12 52.1**	**-3.8**
	1.5nm,0.6s						
MRKS				eS	**Sg**	**00 14 31.5**	**+0.8**
	2.9nm,0.5s						

JMA **23** *00:18:57.1±0.1, 32.77N×136.36E, h471km, M3.0*
IDC **23** *00:19:01.9±1.4, 33.12N×136.26E, h442km±32km, mb2.7/2, mb1 2.8/6, mb1mx2.5/50, mbtmp3.5/6, Error ellipse: s-maj=37.3km s-min=35.7km az=115.0*
ISC 23 00:19:00.2±2.2, **33.0N**±0.2×**136.3E**±0.1, **h450**km, **n17**, σ**0.58**/16, **Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKN2	**Miekihoku**	**1.27**	**358**	P	**P**	**00 19 57.4**	**+0.2**
JWY	**Kouya**	**1.39**	**334**	P	**P**	**00 19 58.0**	**+0.2**
JEG	**Eigenji**	**2.16**	**1**	P	**P**	**00 20 02.1**	**+0.5**
JMN	**Monobe**	**2.19**	**291**	P	**P**	**00 20 02.1**	**+0.3**
HMMJ	**Hamamatsu 2**	**2.21**	**31**	P	**P**	**00 20 02.4**	**+0.6**
JWT	**Wachi**	**2.43**	**342**	P	**P**	**00 20 03.1**	**-0.1**
JNY	**Yasuok**	**2.70**	**28**	P	**P**	**00 20 05.7**	**+0.6**
JRY	**Ryogami san**	**3.71**	**34**	P	**P**	**00 20 13.6**	**+0.8**
JRY				eS	**S**	**00 21 12.1**	**+0.2**
JHU	**Hanno**	**3.77**	**40**	P	**P**	**00 20 13.9**	**+0.6**
MJAR	**Matsushiro Arr**	**3.89**	**23**	P	**P**	**00 20 15.0**	**+0.8**
	0.3nm,0.3s,baz=190,slow=8.0,SNR=34						
BSO4	**Boso 4**	**3.89**	**58**	eS	**S**	**00 21 14.1**	**-0.4**
JNU	**Nakatsue**	**4.58**	**273**	P	**P**	**00 20 20.9**	**+0.3**
	0.7nm,0.3s,baz=166,slow=3.3,SNR=5.1						
JHO	**Hitachi**	**5.04**	**43**	P	**P**	**00 20 24.2**	**-0.6**
KSRS	**Korea Array**	**8.21**	**305**	P	**P**	**00 20 58.5**	**+0.8**
	0.2nm,0.3s,baz=125,slow=10,SNR=7.9						
USRK	**Ussuriysk Ar.**	**11.71**	**344**	P	**P**	**00 21 35.3**	**-0.4**
	baz=153,slow=18,SNR=2.5						
WRA	**Warramunga Arr**	**52.65**	**182**	P	P	00 27 33.9	+2.7
	0.6nm,0.3s,baz=360,slow=7.6,SNR=7.7						
ASAR	**Alice Springs**	**56.37**	**183**	P	P	00 28 01.6	+4.2
	0.2nm,0.5s,baz=24,slow=9.2,SNR=4.1						

NNC **23** *00:50:49.5±2.2, 41.32N×83.03E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=16.9km s-min=9.7km az=151.0*
SOME **23** *00:50:53.1, 41.65N×82.92E, h0km*
ISC 23 00:50:52.6±2.2, **41.61N**±0.10×**82.94E**±0.07, **h10**km, **n26**, σ**2.63**/44, **9C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.65**	**315**	eP	**Pg**	**00 51 42.3**	**-1.1**
	4.2nm,0.1s						
KTMS				eS	**Sg**	**00 52 18.6**	**+0.9**
	20nm,0.3s						
SHLS	**Shalkode**	**3.00**	**302**	eP	**Pb**	**00 51 44.4**	**-1.9**
	50nm,0.3s						
SHLS				eS	**Sb**	**00 52 21.8**	**-1.2**
	78nm,0.5s						
PDGK	**Podgornoye**	**3.08**	**305**	⇓Pn	**Pn**	**00 51 40.8**	**-0.6**
	3.8nm,0.3s						
PDGK				⇓Pg	**Pg**	**00 51 51.8**	**+0.3**
	24nm,0.8s						
PDGK				⇑Lg	Lg	00 52 35.4	
	39nm,0.7s						
UZB	**Uzynbulak**	**3.28**	**299**	eP	**Pg**	**00 51 54.1**	**-1.4**
	12nm,0.4s						
UZB				eS	**Sg**	**00 52 38.2**	**+0.2**
	54nm,0.7s						
UZB	**Uzynbulak**	**3.28**	**299**	Pg	**Pg**	**00 51 55.1**	**-0.4**
	7.0nm,0.4s						
UZB				Lg	Lg	00 52 41.4	
	20nm,0.3s						
DJR	**Jarkent**	**3.57**	**321**	eP	**Pg**	**00 51 59.3**	**-1.7**
	2.7nm,0.3s						
DJR				eS	**Sg**	**00 52 47.6**	**+0.5**
	9.1nm,0.4s						
DJR	**Jarkent**	**3.57**	**321**	Pg	**Pg**	**00 52 00.3**	**-0.6**
	2.7nm,0.3s						
DJR				Lg	Lg	00 52 49.0	
	8.1nm,0.5s						
KPKS	**Kokpek**	**3.65**	**302**	eP	**Pg**	**00 52 00.2**	**-2.3**
	17nm,0.4s						
KPKS				eS	**Sg**	**00 52 49.2**	**-0.6**
	102nm,0.5s						
ARXS	**Arharly**	**4.57**	**306**	eP	**Pg**	**00 52 17.9**	**-2.1**
	1.9nm,0.4s						
ARXS				eS	**Sg**	**00 53 20.3**	**+1.1**
	9.4nm,0.5s						
KOTS	**Kotyrbulak**	**4.61**	**293**	eP	**Pg**	**00 52 18.1**	**-2.8**
	8.1nm,0.4s						
KOTS				eS	**Sg**	**00 53 19.9**	**-0.7**
	33nm,0.7s						
KOTS	**Kotyrbulak**	**4.61**	**293**	Pg	**Pg**	**00 52 18.1**	**-2.8**
	8.1nm,0.4s						
KOTS				Lg	Lg	00 53 19.9	
	33nm,0.7s						
MDOK	**Medeo**	**4.63**	**291**	⇑Pg	**Pb**	**00 52 15.2**	**+1.2**
	11nm,1.3s						
MDOK				⇑Lg	Lg	00 53 24.8	
	20nm,0.5s						
IZV	**Izvestkoviy**	**4.90**	**289**	eP	**Pg**	**00 52 23.7**	**-2.8**
	5.4nm,0.4s						
IZV				eS	**Sg**	**00 53 28.8**	**-1.2**
	56nm,0.6s						
IZV	**Izvestkoviy**	**4.90**	**289**	Pg	**Pb**	**00 52 22.2**	**+3.6**
	5.4nm,0.4s						
IZV				Lg	Lg	00 53 27.0	
	56nm,0.6s						
CHKK	**Chushkaly**	**4.92**	**299**	eP	**Pg**	**00 52 24.4**	**-2.5**
	2.2nm,0.4s						
CHKK				eS	**Sg**	**00 53 31.2**	**+0.5**
	10nm,0.3s						
CHKK	**Chushkaly**	**4.92**	**299**	Pg	**Pg**	**00 52 24.4**	**-2.5**
	2.2nm,0.4s						
CHKK				Lg	Lg	00 53 31.2	
	10nm,0.3s						
KTBS	**Karatobe**	**5.07**	**297**	eP	**Pg**	**00 52 26.9**	**-2.8**
	1.9nm,0.3s						
KTBS				eS	**Sg**	**00 53 34.9**	**-0.4**
	38nm,0.4s						
KTBS	**Karatobe**	**5.07**	**297**	Pg	**Pg**	**00 52 26.9**	**-2.8**
	1.9nm,0.3s						
KTBS				Lg	Lg	00 53 34.9	
	38nm,0.4s						
MK31	**Makanchi Array**	**5.20**	**355**	⇓Pn	**Pn**	**00 52 11.6**	**+1.2**
	0.3nm,0.3s,baz=192,slow=12,SNR=47						
MK31				⇑Pg	**Pg**	**00 52 30.3**	**-1.9**
	0.7nm,0.4s,baz=172,slow=14,SNR=5.0						
MK31				⇓Sn	**Sb**	**00 53 18.1**	**-8.0**
	1.2nm,0.4s						
MK31				⇑Lg	Lg	00 53 46.8	
	7.2nm,0.6s,baz=178,slow=27,SNR=4.2						
MAKZ	**Makanchi**	**5.24**	**353**	⇓Pn	**Pn**	**00 52 12.4**	**+1.4**
	1.1nm,0.5s						
MAKZ				⇑Pg	**Pb**	**00 52 27.7**	**+3.4**
	2.1nm,0.7s						
MAKZ				⇓Sn	**Sn**	**00 53 18.6**	**+7.2**
	1.5nm,0.3s						
MAKZ				⇑Lg	Lg	00 53 47.6	
	12nm,1.1s						
KST	**Kastek**	**5.37**	**288**	eP	**Pg**	**00 52 33.1**	**-2.3**
	8.7nm,0.6s						
KST				eS	**Sg**	**00 53 45.0**	**+0.1**
	17nm,0.5s						
KST	**Kastek**	**5.37**	**288**	Pg	**Pg**	**00 52 31.7**	**-3.7**
	6.1nm,0.6s						
KST				Lg	Lg	00 53 43.1	
	10.0nm,0.7s						
DGS	**Degeres**	**5.55**	**289**	eP	**Pg**	**00 52 36.3**	**-2.6**
	3.0nm,0.6s						
DGS				eS	**Sg**	**00 53 51.6**	**+0.9**
	19nm,0.6s						
DGS	**Degeres**	**5.55**	**289**	Pg	**Pg**	**00 52 36.0**	**-2.9**
	3.0nm,0.6s						
DGS				Lg	Lg	00 53 51.0	
	19nm,0.6s						
ZSN	**Zaisan**	**6.00**	**13**	eP	**Pg**	**00 52 44.0**	**-3.3**
	4.4nm,0.2s						
ZSN				eS	**Sg**	**00 54 03.8**	**-1.2**
	10nm,0.7s						
AAK	**Ala-Archa**	**6.36**	**282**	⇑Pg	**Pb**	**00 52 46.8**	**+3.3**
	2.8nm,0.7s						
AAK				⇑Lg	Lg	00 54 17.2	
	13nm,1.0s						

IDC **23** *00:55:34.7±2.7, 10.30S×161.26E, h101km±17km, mb3.6/7, mb1 3.7/8, mb1mx3.5/44, mbtmp4.0/8, Error ellipse: s-maj=32.6km s-min=20.7km az=77.0*
ISC 23 00:55:34.5±1.3, **10.3S**±0.1×**161.3E**±0.2, **h100**km, **n16**, σ**0.81**/11, **mb3.6**/7, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.55**	**304**	P	**Pn**	**00 56 01.4**	**-0.1**
	51nm,0.3s,baz=191,slow=14,SNR=14						
HNR				S	**Sn**	**00 56 22.3**	**+0.4**
	575nm,0.3s,baz=165,slow=20,SNR=22						
HNR	**Honiara**	**1.55**	**304**	P	**Pn**	**00 56 01.0**	**-0.5**
DZM	**Mont Dzumac**	**12.72**	**158**	P	**Pn**	**00 58 31.9**	**0.0**
	1.1nm,0.3s,baz=307,slow=15,SNR=12						
WRA	**Warramunga Arr**	**27.66**	**247**	P	**P**	**01 01 13.7**	**+0.4**
	1.5nm,0.5s,baz=77,slow=9.2,SNR=9.7						
STKA	**Stephens Creek**	**28.15**	**217**	P	**P**	**01 01 18.0**	**+0.6**
	1.7nm,0.9s,baz=11,slow=10,SNR=2.9						
H11S2	**WAKE ISLAND Hy**	**29.11**	**11**	T	T	01 30 23.9	
	baz=194,slow=76,SNR=5.7						
H11S3	**WAKE ISLAND Hy**	**29.11**	**11**	T	T	01 30 45.0	
	baz=194,slow=76,SNR=4.8						
H11S1	**WAKE ISLAND Hy**	**29.12**	**11**	T	T	01 30 22.3	
	baz=194,slow=76,SNR=4.3						
ASAR	**Alice Springs**	**29.27**	**239**	P	**P**	**01 01 26.9**	**-0.6**
	0.6nm,0.5s,baz=60,slow=10.0,SNR=9.7						
H11N1	**WAKE ISLAND Hy**	**30.33**	**11**	T	T	01 32 05.0	
	baz=193,slow=76,SNR=6.1						
H11N3	**WAKE ISLAND Hy**	**30.34**	**11**	T	T	01 31 55.6	
	baz=193,slow=76,SNR=8.5						
H11N2	**WAKE ISLAND Hy**	**30.35**	**11**	T	T	01 32 04.1	
	baz=193,slow=76,SNR=9.8						
FITZ	**Fitzroy Crossi**	**35.34**	**253**	P	**P**	**01 02 20.5**	**-0.1**
	1.5nm,0.7s,baz=53,slow=10,SNR=4.2						
SONM	**Songino Array**	**75.50**	**325**	P	**P**	**01 07 09.2**	**+1.1**
	0.5nm,0.6s,baz=145,slow=5.4,SNR=3.6						
MKAR	**Makanchi Array**	**89.98**	**318**	P	**P**	**01 08 23.1**	**+0.3**
	0.2nm,0.5s,baz=96,slow=4.4,SNR=5.2						
ZALV	**Zalesovo Beam**	**90.39**	**325**	P	**P**	**01 08 22.9**	**-1.6**
	0.5nm,0.6s,baz=13,slow=15,SNR=3.6						

NEIC **23** *01:00:42.7±0.7, 1.0S±0.1×98.4E±0.2, h30km±7km, mb4.4/11, Error ellipse: s-maj=27.4km s-min=5.4km az=58.0*
IDC **23** *01:00:55.7±0.9, 1.07N×97.11E, h0km, mb4.1/15, mb1 4.2/17, mb1mx4.0/40, mbtmp4.1/17, ML4.2/2, MS3.6/9, Ms1 3.6/9, ms1mx3.2/46, Error ellipse: s-maj=27.4km s-min=14.6km az=54.0*
DJA **23** *01:01:00.1±0.9, 1°N±3°×9°7E±°, h29km±11km, M4.4/12, mB5.1/4, mb4.6/5, MLv4.2/12, Mw(mB)4.4/4*
ISC 23 01:00:60.0±0.6, **1.15N**±0.05×**97.11E**±0.06, **h25**km, **n67**, σ**1.42**/61, **mb4.3**/19, **MS3.6**/6, **1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**1.48**	**328**	P	**Pn**	**01 01 24.6**	**-0.4**
SNSI				S	**Sn**	**01 01 41.4**	**-2.1**
TPTI		**2.10**	**2**	P	**Pn**	**01 01 32.1**	**-1.5**
TPTI				S	**Sn**	**01 01 58.8**	**-0.1**
RPSI	**Rantau Prapat**	**2.38**	**50**	P	**Pn**	**01 01 37.8**	**+0.4**
PSI	**Prapat**	**2.45**	**48**	Pn	**Pn**	**01 01 37.7**	**-0.8**
	15nm,0.3s,baz=228,slow=8.6,SNR=57						
PSI				LR	LR	01 02 26.6	
	comp=Z,826nm,21.1s,baz=297,slow=37						
KCSI	**Kotacane, Aceh**	**2.45**	**16**	P	**Pn**	**01 01 37.6**	**-0.9**
KCSI				S	**Sn**	**01 02 07.8**	**+0.2**
SISI	**Saibi**	**3.16**	**141**	P	**Pn**	**01 01 48.2**	**+0.1**
MLSI	**Meulaboh, Aceh**	**3.18**	**347**	P	**Pn**	**01 01 47.3**	**-1.1**
MLSI				S	**Sn**	**01 02 25.9**	**+0.3**
PDSI	**Padang**	**3.93**	**121**	P	**Pn**	**01 01 58.7**	**-0.1**
BKNI	**Bangkinang**	**4.01**	**102**	P	**Pn**	**01 02 01.6**	**+1.6**
BKNI				S	**Sn**	**01 02 46.0**	**-0.3**
LHMI	**Lhok Sumawe**	**4.06**	**358**	P	**Pn**	**01 01 59.5**	**-1.0**
LHMI				S	**Sn**	**01 02 46.6**	**-0.7**
LHMI	**Lhok Sumawe**	**4.06**	**358**	Pn	**Pb**	**01 02 14.3**	**+3.5**
SDSI	**Sungai Dareh**	**4.79**	**116**	P	**Pn**	**01 02 09.2**	**-1.4**
IPM	**Ipoh**	**5.12**	**50**	Pn	**Pn**	**01 02 15.0**	**-0.2**
KULM	**Kulim**	**5.43**	**41**	Pn	**Pn**	**01 02 18.7**	**-0.7**
CMAR	**Chiang Mai Arr**	**17.30**	**6**	P	**Pn**	**01 04 58.5**	**-1.5**
	0.7nm,0.3s,baz=194,slow=12,SNR=6.4						
CMAR				LR	LR	01 12 29.3	
	comp=Z,233nm,19.4s,baz=211,slow=40						
PALK	**Pallekele**	**17.45**	**291**	LR	LR	01 11 17.1	
	comp=Z,233nm,19.2s,baz=116,slow=36						
SLVN	**Son La**	**21.13**	**18**	P	**P**	**01 05 43.3**	**+0.1**
QIZ	**Qiongzhong**	**21.72**	**34**	P	**P**	**01 05 43.5**	**-6.0**
QIZ				S	**S**	**01 09 48.9**	**+0.1**
KMI	**Kunming**	**24.45**	**12**	P	**P**	**01 06 17.9**	**+0.6**
H08S2	**Diego Garcia H**	**26.06**	**250**	T	T	01 33 36.4	
	baz=72,slow=76,SNR=371						
H08S3	**Diego Garcia H**	**26.06**	**250**	T	T	01 33 31.0	
	baz=72,slow=76,SNR=1055						
H08S1	**Diego Carcia H**	**26.08**	**250**	T	T	01 33 32.3	
	baz=72,slow=76,SNR=133						
H08N1	**Diego Carcia H**	**27.09**	**254**	T	T	01 35 44.2	
	baz=132,slow=75,SNR=44						
H08N2	**Diego Garcia H**	**27.10**	**254**	T	T	01 35 46.9	
	baz=132,slow=75,SNR=38						
H08N3	**Diego Garcia H**	**27.11**	**254**	T	T	01 35 36.8	
	baz=132,slow=75,SNR=34						
ODAN	**Odare**	**27.22**	**341**	eP	**P**	**01 06 43.8**	**+1.5**
	11nm,0.5s						
RAMN	**Ramite**	**27.57**	**339**	eP	**P**	**01 06 47.5**	**+2.0**
	9.8nm,0.6s						
TAPN	**Taplejung**	**27.57**	**342**	eP	**P**	**01 06 47.2**	**+1.6**
	26nm,0.8s						
JIRN	**Jiri**	**28.36**	**339**	eP	**P**	**01 06 54.0**	**+1.3**
	23nm,0.8s						
GUN	**Gumba**	**28.70**	**339**	eP	**P**	**01 06 56.9**	**+1.2**
	31nm,0.9s						
DMN	**Daman**	**28.72**	**337**	eP	**P**	**01 06 59.8**	**+4.1**
GKN	**Gorkha**	**29.25**	**337**	eP	**P**	**01 07 02.0**	**+1.6**
DANN	**Dangsing**	**29.91**	**336**	eP	**P**	**01 07 07.4**	**+1.0**
FITZ	**Fitzroy Crossi**	**33.97**	**126**	P	**P**	**01 07 40.3**	**-1.5**
	1.5nm,0.7s,baz=334,slow=5.2,SNR=5.1						
XAN	**Xi'an**	**34.54**	**17**	P	**P**	**01 07 46.4**	**-0.2**
XAN				pP	pP	01 07 54.3	+0.2
GTA	**Gaotai**	**38.16**	**3**	⇓P	**P**	**01 08 17.6**	**0.0**
GTA				pP	pP	01 08 24.8	-0.3
GTA				sP	sP	01 08 27.8	-0.4
H01W3	**Cape Leeuwin H**	**39.23**	**158**	T	T	01 49 52.9	
	baz=333,slow=76,SNR=11						
H01W2	**Cape Leeuwin H**	**39.24**	**158**	T	T	01 49 48.6	
	baz=333,slow=76,SNR=15						
H01W1	**Cape Leeuwin H**	**39.25**	**158**	T	T	01 50 02.9	
	baz=333,slow=76,SNR=10						
WRA	**Warramunga Arr**	**42.09**	**122**	P	**P**	**01 08 49.0**	**-1.3**
	0.9nm,0.5s,baz=301,slow=9.1,SNR=18						
WMQ	**Urumqi**	**43.31**	**350**	eP	**P**	**01 09 01.6**	**+1.7**
ASAR	**Alice Springs**	**43.44**	**127**	P	**P**	**01 09 00.8**	**-0.5**
	0.5nm,0.4s,baz=296,slow=7.9,SNR=10						
NRN	**Naryn**	**44.40**	**337**	P	**P**	**01 09 10.1**	**+1.0**
NRN				IAmb	IAmb	01 09 10.9	
	comp=Z,3.2nm,0.6s						
KDJ	**Kajisay**	**44.56**	**339**	P	**P**	**01 09 11.1**	**+0.9**
BTK	**Batken**	**45.51**	**332**	P	**P**	**01 09 18.5**	**+0.9**
KSRS	**Korea Array**	**45.94**	**35**	P	**P**	**01 09 20.5**	**-0.5**
	comp=Z,3.6nm,0.7s,baz=221,slow=9.3,SNR=19						
KSRS				LR	LR	01 29 05.5	
	comp=Z,61nm,18.4s,baz=226,slow=37						
SONM	**Songino Array**	**47.20**	**9**	P	**P**	**01 09 30.2**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=191,slow=9.4,SNR=13						
SONM				LR	LR	01 31 56.3	
	comp=Z,276nm,18.5s,baz=190,slow=39						
MK31	**Makanchi Array**	**47.27**	**346**	P	**P**	**01 09 31.6**	**+0.4**
MK31				IAmb	IAmb	01 09 32.7	
	comp=Z,1.7nm,0.7s						
MKAR	**Makanchi Array**	**47.27**	**346**	P	**P**	**01 09 31.9**	**+0.6**
	comp=Z,2.1nm,0.5s,baz=160,slow=9.1,SNR=49						
MKAR				LR	LR	01 33 51.6	
	comp=Z,52nm,18.4s,baz=158,slow=42						
MAKZ	**Makanchi**	**47.36**	**346**	P	**P**	**01 09 32.2**	**+0.2**
KK31	**Karatay Array**	**48.06**	**334**	P	**P**	**01 09 38.5**	**+1.0**
KKAR	**Karatay Array**	**48.06**	**334**	P	**P**	**01 09 38.2**	**+0.7**
GEYT	**Alibeck**	**51.20**	**320**	P	**P**	**01 10 02.3**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=101,slow=12,SNR=2.4						
MJAR	**Matsushiro Arr**	**51.79**	**42**	P	**P**	**01 10 05.9**	**0.0**
	comp=Z,0.9nm,0.7s,baz=222,slow=4.6,SNR=4.2						
KURK	**Kurchatov**	**51.82**	**345**	P	**P**	**01 10 05.7**	**-0.2**
KURK				IAmb	IAmb	01 10 23.7	
	comp=Z,6.5nm,1.4s						
USRK	**Ussuriysk Ar.**	**52.86**	**31**	P	**P**	**01 10 14.2**	**+0.5**
	comp=Z,3.1nm,0.7s,baz=229,slow=3.9,SNR=6.5						
STKA	**Stephens Creek**	**53.39**	**132**	P	**P**	**01 10 17.6**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=290,slow=5.7,SNR=5.4						
STKA				LR	LR	01 34 37.0	
	comp=Z,85nm,21.8s,baz=335,slow=38						
ZAA0	**Zalesovo Array**	**53.60**	**351**	P	**P**	**01 10 18.2**	**-0.7**
ZALV	**Zalesovo Beam**	**53.60**	**351**	P	**P**	**01 10 19.4**	**+0.5**
	comp=Z,3.7nm,0.5s,baz=184,slow=6.7,SNR=26						
ABKAR	**Akbulak array**	**57.52**	**332**	P	**P**	**01 10 46.9**	**-0.3**
ABKAR				IAmb	IAmb	01 10 54.9	
	comp=Z,2.9nm,0.8s						
NRIK	**Noril'sk**	**68.38**	**356**	P	**P**	**01 11 58.1**	**-0.9**
	comp=Z,1.2nm,0.4s,baz=173,slow=5.4,SNR=3.7						
BRTR	**Keskin Array B**	**69.08**	**312**	P	**P**	**01 12 03.2**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=165,slow=9.5,SNR=3.7						
OBN	**Obninsk**	**72.61**	**328**	LR	LR	01 46 24.0	
	comp=Z,8.3nm,21.0s,baz=258,slow=38						
FINES	**FINESS Array B**	**80.00**	**333**	P	**P**	**01 13 07.5**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=188,slow=3.9,SNR=4.1						
ARCES	**ARCESS Array B**	**82.55**	**340**	P	**P**	**01 13 20.9**	**+0.4**
	comp=Z,2.7nm,1.0s,baz=72,slow=4.0,SNR=4.7						
NOA	**NORSAR Array B**	**87.01**	**331**	LR	LR	01 57 25.0	
	comp=Z,21nm,18.2s,baz=355,slow=39						
TXAR	**Lajitas Array**	**143.76**	**32**	PKP	PKPbc	01 20 31.8	+0.4
	comp=Z,0.1nm,0.5s,baz=58,slow=2.4,SNR=4.1						

IDC 23 01:07:02.2±59.0, **0.43N×97.24E**, **h0**km, **mb3.4**/3, **mb1 3.4**/3, **mb1mx3.2**/29, **mbtmp3.4**/3, **MS3.5**/3, **Ms1 3.5**/3, **ms1mx3.0**/26, **Error ellipse: s-maj=1150.0km s-min=152.3km az=175.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**25.95**	**252**	T	T	01 39 39.1	
	baz=72,slow=76,SNR=148						
H08S3	**Diego Garcia H**	**25.95**	**252**	T	T	01 39 38.6	
	baz=72,slow=76,SNR=449						
H08S1	**Diego Carcia H**	**25.97**	**252**	T	T	01 39 40.8	
	baz=72,slow=76,SNR=70						
H08N1	**Diego Garcia H**	**27.03**	**255**	T	T	01 41 51.8	
	baz=15,slow=74,SNR=4.1						
H08N2	**Diego Garcia H**	**27.04**	**255**	T	T	01 41 46.6	
	SNR=4.4						
H08N3	**Diego Garcia H**	**27.05**	**255**	T	T	01 41 41.9	
	baz=148,slow=74,SNR=8.5						
H01W3	**Cape Leeuwin H**	**38.52**	**157**	T	T	01 56 06.5	
	baz=334,slow=76,SNR=5.1						
H01W2	**Cape Leeuwin H**	**38.53**	**157**	T	T	01 56 07.7	
	baz=334,slow=76,SNR=4.2						
H01W1	**Cape Leeuwin H**	**38.53**	**157**	T	T	01 56 06.3	
	baz=334,slow=76,SNR=3.7						
AAK	**Ala-Archa**	**46.73**	**337**	LR	LR	01 35 33.1	
	comp=Z,45nm,20.1s,baz=149,slow=37						
SONM	**Songino Array**	**47.89**	**8**	P	P	01 15 42.1	-0.1
	0.4nm,0.8s,baz=179,slow=5.8,SNR=2.5						
MKAR	**Makanchi Array**	**48.00**	**346**	P	P	01 15 42.9	-0.1
	0.4nm,0.8s,baz=161,slow=8.0,SNR=4.2						
ZALV	**Zalesovo Beam**	**54.33**	**351**	P	P	01 16 30.2	-0.1
	0.4nm,0.4s,baz=168,slow=8.1,SNR=2.6						
KVAR	**Kislovodsk Arr**	**64.91**	**319**	LR	LR	01 47 55.2	
	comp=Z,70nm,20.5s,baz=93,slow=38						
AKASG	**Malin Array Be**	**75.89**	**323**	LR	LR	01 56 28.1	
	comp=Z,12nm,18.4s,baz=310,slow=39						

DRS **23** *01:12:38.5±0.0, 43.29N×44.50E, h20km*
MOS **23** *01:12:41.8±0.0, 43.06N×45.07E, h8km, MPVA3.5*
NORS **23** *01:12:42.0±0.0, 43.05N×45.08E, h13km, MPVA3.4*
TIF **23** *01:12:43.7, 43.12N×45.11E, h36km±2km*
ISC 23 01:12:43.7±0.9, **43.08N**±0.03×**45.06E**±0.02, **h11**km±7km, **n35**, σ**0.97**/62, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMGR	**Komgaron**	**0.14**	**263**	ePg	**Pg**	**01 12 46.5**	**-0.6**
KMGR				eSg	**Sg**	**01 12 50.7**	**+1.2**
VLKR	**Vladikavkaz**	**0.28**	**264**	ePg	**Pb**	**01 12 50.1**	**-0.7**
VLKR				ePg	**Pg**	**01 12 50.3**	**+0.8**
VLKR				eSg	**Sb**	**01 12 54.1**	**-1.4**
VLKR				eSg	**Sb**	**01 12 54.2**	**-1.4**
BTKR	**Batakoyurt**	**0.48**	**308**	ePg	**Pb**	**01 12 53.7**	**-0.6**
BTKR				eSg	**Sb**	**01 13 03.0**	**+1.6**
GROC	**Groznyy**	**0.55**	**76**	ePg	**Pb**	**01 12 55.3**	**-0.1**
GROC				eSg	**Sb**	**01 13 02.6**	**-0.8**
ARNR	**Ardon**	**0.58**	**281**	ePg	**Pb**	**01 12 55.8**	**-0.1**
ARNR				eSg	**Sb**	**01 13 05.7**	**+1.6**
LACR	**Lac**	**0.61**	**246**	ePg	**Pb**	**01 12 55.7**	**-0.8**
LACR				eSg	**Sb**	**01 13 06.3**	**+1.1**
TRKR	**Terskaya**	**0.69**	**340**	ePg	**Pb**	**01 12 57.0**	**-0.8**
TRKR				eSg	**Sb**	**01 13 09.8**	**-0.4**
GUDG	**Gudauri**	**0.75**	**215**	P	**Pg**	**01 12 57.1**	**-1.1**
GUDG				S	**Sb**	**01 13 09.2**	**+0.1**
GUDG	**Gudauri**	**0.75**	**215**	ePg	**Pg**	**01 12 57.1**	**-1.1**
GUDG				eSg	**Sb**	**01 13 09.4**	**+0.3**
STDR	**Stavd-Durt**	**0.79**	**292**	i Pg	**Pn**	**01 12 59.8**	**-1.0**
STDR				eSg	**Sb**	**01 13 11.1**	**+1.0**
ZEI	**Tsey**	**0.90**	**252**	i Pg	**Pg**	**01 13 00.6**	**-0.4**
ZEI				eSg	**Sn**	**01 13 15.1**	**-0.5**
LSNR	**Lesken**	**0.92**	**283**	ePg	**Pb**	**01 13 01.9**	**+0.1**
LSNR				eSg	**Sn**	**01 13 17.5**	**+1.5**
BTLR	**Botlikh**	**0.95**	**115**	i Pg	**Pb**	**01 13 01.5**	**-0.7**
BTLR				eSg	**Sn**	**01 13 17.2**	**+0.5**
DIGR	**Digorskoe uzhe**	**1.10**	**261**	ePg	**Pg**	**01 13 03.7**	**-1.2**
DIGR				eSg	**Sn**	**01 13 19.8**	**+0.5**
NCK	**Nalchik**	**1.15**	**292**	ePg	**Pb**	**01 13 05.3**	**-0.3**
NCK				eSg	**Sn**	**01 13 23.7**	**+2.2**
ONI	**Oni**	**1.28**	**248**	P	**Pn**	**01 13 07.4**	**-0.1**
ONI				S	**Sn**	**01 13 25.6**	**+0.9**
ONI	**Oni**	**1.28**	**248**	ePg	**Pn**	**01 13 07.4**	**-0.1**
ONI				eSg	**Sn**	**01 13 25.6**	**+0.9**
DBC	**Dubki**	**1.30**	**92**	i Pg	**Pn**	**01 13 07.3**	**-0.6**
DBC				eSg	**Sn**	**01 13 26.4**	**+1.1**
XNZR	**Khunzakh**	**1.32**	**113**	ePg	**Pn**	**01 13 08.2**	**-0.5**
XNZR				eSg	**Sn**	**01 13 27.0**	**+1.0**
KRNR	**Karanay**	**1.38**	**100**	ePg	**Pn**	**01 13 08.0**	**-1.0**
KRNR				eSg	**Sn**	**01 13 28.0**	**+0.7**
LGD	**Lagodekhi**	**1.52**	**144**	P	**Pg**	**01 13 12.6**	**-0.3**
LGD	**Lagodekhi**	**1.52**	**144**	ePg	**Pg**	**01 13 12.6**	**-0.3**
LGD				eSg	**Sg**	**01 13 32.0**	**-0.5**
BUJR	**Buynaksk**	**1.52**	**99**	ePg	**Pg**	**01 13 12.7**	**-0.3**
BUJR				eSg	**Sg**	**01 13 35.1**	**+2.3**
GNBR	**Gunib**	**1.56**	**115**	ePg	**Pg**	**01 13 12.2**	**-1.5**
GNBR				eSg	**Sg**	**01 13 34.3**	**+0.3**
TRLG	**Trialeti**	**1.69**	**205**	P	**Pb**	**01 13 14.8**	**-0.2**
TRLG	**Trialeti**	**1.69**	**205**	ePg	**Pb**	**01 13 14.8**	**-0.2**
NEY	**Neytrino**	**1.72**	**277**	ePg	**Pn**	**01 13 13.4**	**-0.4**
KZRT	**Kazreti**	**1.76**	**196**	P	**Pb**	**01 13 15.1**	**-0.9**
KZRT	**Kazreti**	**1.76**	**196**	ePg	**Pb**	**01 13 15.1**	**-0.9**
DDFL	**Dedoflistskaro**	**1.81**	**154**	P	**Pg**	**01 13 20.1**	**+1.7**
DDFL	**Dedoflistskaro**	**1.81**	**154**	ePn	**Pg**	**01 13 20.1**	**+1.7**
SHA1	**Shidzhatmaz**	**1.87**	**292**	ePg	**Pn**	**01 13 16.1**	**+0.2**
SHA1				eSg	**Sg**	**01 13 42.4**	**-1.6**
KIV0	**Kislovodsk Arr**	**1.93**	**298**	ePg	**Pn**	**01 13 16.0**	**-0.6**
KIV0				eSg	**Sn**	**01 13 41.1**	**+0.2**
KIV	**Kislovodsk**	**1.94**	**298**	ePg	**Pn**	**01 13 17.0**	**+0.3**
SOC	**Sochi**	**3.93**	**279**	ePn	**Pn**	**01 13 44.0**	**0.0**

DJA **23** *01:28:41.3±1.5, 7°S±6°×10°4E±°, h16km±16km, M4.4/10, mb4.7/3, MLv4.3/10, MLv4.4/4*
IDC **23** *01:28:43.9±1.6, 7.10S×104.39E, h42km±8km, mb3.8/9, mb1 3.8/9, mb1mx3.5/48, mbtmp4.0/9, MS3.3/1, Ms1 3.3/1, ms1mx2.7/39, Error ellipse: s-maj=63.6km s-min=14.4km az=55.0*
NEIC **23** *01:28:43.4±1.8, 7.2S±0.1×104.3E±0.1, h46km±9km, mb4.2/5, Error ellipse: s-maj=26.2km s-min=9.2km az=222.0*
ISC 23 01:28:41.7±0.8, **7.29S**±0.07×**104.27E**±0.08, **h35**km, **n35**, σ**1.40**/37, **mb4.2**/11, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC

Code	Station	Δ°	AZ°	Op	ISC	Time	Res
KASI	Kota Agung	1.77	7	P	Pn	01 29 08.7	-1.2
KASI				S	Sn	01 29 28.7	-2.6
BLSI	Bandar Lampung	2.15	27	P	Pn	01 29 13.7	-1.4
BLSI				S	Sn	01 29 38.1	-2.4
LWLI	Liwa	2.27	355	P	Pn	01 29 20.7	+3.8
SKJI	Sukabumi	2.29	83	P	Pn	01 29 16.6	-0.4
DBJI	Dramaga	2.57	74	P	Pn	01 29 20.6	-0.3
KLSI		2.63	10	P	Pn	01 29 21.2	-0.5
MDSI	Maura Dua	2.79	358	P	Pn	01 29 24.0	+0.1
MDSI				S	Sn	01 29 56.3	-0.1
CNJI	Cibinong	2.84	90	P	Pn	01 29 23.0	-1.6
MNAI	Manna	3.19	336	P	Pn	01 29 29.2	-0.3
MNAI	Manna	3.19	336	Pn	Pn	01 29 29.0	-0.5
LEM	Lembang	3.36	82	P	Pn	01 29 36.5	+4.6
	5.7nm,0.3s,baz=319,slow=20,SNR=2.6						
LEM				LR	LR	01 31 14.9	
	comp=Z,481nm,18.4s,baz=326,slow=47						
XMIS	Christmas Isla	3.45	157	Pn	Pn	01 29 30.1	-2.9
CISI	Cisompet, Garu	3.53	94	Pn	Pn	01 29 34.0	-0.1
PPSI	Pulau Pagai	6.18	317	P	Pn	01 30 10.7	+0.1
	0.8nm0.8nm160nm,1.0s						
UGM	Wanagama	6.23	96	P	Pn	01 30 10.8	-0.5
	0.6nm0.6nm147nm,1.8s						
UGM	Wanagama	6.23	96	Pn	Pn	01 30 13.3	+2.0
PCJI	Pacitan	6.91	98	P	Pn	01 30 21.3	+0.8
JAGI	Jajag, Banyuwa	9.86	97	Pn	Pn	01 31 01.6	+0.5
FITZ	Fitzroy Crossi	23.42	119	P	P	01 33 49.0	+1.1
	2.4nm,1.0s,baz=266,slow=8.0,SNR=3.7						
FITZ	Fitzroy Crossi	23.42	119	IAmb	IAmb	01 34 23.5	
	comp=Z,21nm,1.9s						
WRA	Warramunga Arr	31.75	116	P	P	01 35 05.4	+2.6
	comp=Z,5.4nm,0.3s,baz=285,slow=6.6,SNR=15						
ASAR	Alice Springs	32.76	123	P	P	01 35 12.2	+0.5
	comp=Z,0.7nm,0.8s,baz=294,slow=7.8,SNR=7.7						
ASAR				pP	sP	01 35 24.7	+0.1
	comp=Z,1.6nm,1.0s,baz=294,slow=6.9,SNR=6.3						
STKA	Stephens Creek	42.49	130	P	P	01 36 35.5	+1.7
	comp=Z,1.5nm,0.9s,baz=322,slow=12,SNR=2.7						
STKA				pP	pwP	01 36 47.9	+0.4
	comp=Z,3.7nm,0.8s,baz=286,slow=3.2,SNR=4.9						
STKA	Stephens Creek	42.49	130	IAmb	IAmb	01 36 48.8	
	comp=Z,1.1nm,1.0s						
KSRS	Korea Array	49.70	25	P	P	01 37 30.4	0.0
	comp=Z,2.3nm,1.0s,baz=198,slow=7.9,SNR=5.9						
NIL	Nilore	50.24	326	P	P	01 37 34.1	-0.5
SONM	Songino Array	54.92	2	P	P	01 38 08.9	-0.2
	comp=Z,0.4nm,0.3s,baz=180,slow=7.4,SNR=5.0						
USRK	Ussuriysk Ar.	57.05	23	P	P	01 38 23.6	-0.6
	comp=Z,2.4nm,0.6s,baz=212,slow=6.8,SNR=5.9						
MKAR	Makanchi Array	57.29	342	P	P	01 38 26.8	+0.8
	comp=Z,0.9nm,0.6s,baz=149,slow=5.9,SNR=6.0						
KURBB	Kurchatov Arra	61.84	342	P	P	01 38 57.4	+0.3
	comp=Z,1.1nm,0.2s,baz=157,slow=7.2,SNR=4.7						
KURK	Kurchatov	61.89	342	P	P	01 38 57.4	-0.1
KURK	Kurchatov	61.89	342	IAmb	IAmb	01 39 42.0	
	comp=Z,9.3nm,1.7s						
ZAA0	Zalesovo Array	63.18	347	P	P	01 39 06.8	+0.7
ZALV	Zalesovo Beam	63.18	347	P	P	01 39 07.2	+1.1
	comp=Z,0.9nm,0.3s,baz=167,slow=8.4,SNR=5.1						
ZALV				pP	pwP	01 39 18.0	-2.0
	comp=Z,0.8nm,0.5s,baz=169,slow=3.0,SNR=2.9						
TXAR	Lajitas Array	145.77	47	PKPbc	PKPdf	01 48 16.5	-1.0
	comp=Z,0.4nm,0.8s,baz=286,slow=3.4,SNR=4.2						

BJI ***23*** *01:47:00.9±0.0, 0.̊65N×97.̊28E, h28km, mB5.2/49, mb4.9/62, Ms4.9/51, Ms7 4.8/49*

IDC ***23*** *01:47:02.3±0.5, 1.̊15N×97.̊17E, h0km, mb4.5/26, mb1 4.6/29, mb1mx4.4/55, mbtmp4.5/29, ML3.9/3, MS4.2/20, Ms1 4.2/20, ms1mx4.0/46, Error ellipse: s-maj=15.7km s-min=12.4km az=46.0*

DJA ***23*** *01:47:06.5±0.6, 1.̊N±2.̊×97.̊E±.̊, h31km±6km, M5.0/28, mb4.9/28, mB5.5/16, MLv5.1/18, Mw(mB)4.9/16, Mwp5.4/2*

NEIC ***23*** *01:47:06.6±1.2, 1.̊19N±0.̊07×97.̊13E±0.̊07, h27km±4km, mb4.8/53, Error ellipse: s-maj=10.3km s-min=9.0km az=54.0*

GCMT ***23*** *01:47:06.6±0.3, 1.̊12N±0.̊03×96.̊91E±0.̊03, h22km±1km, MW5.0/69, Moment Tensor Solution. s46,c58; s69,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.60±.17; $M_{\theta\theta}$-0.96±.10; $M_{\phi\phi}$-1.64±.12; $M_{r\theta}$0.48±.18; $M_{\theta\phi}$0.76±.07; $M_{\phi r}$-3.38±.30; Best double couple: $M_0$4.13200×10^{16} NP1:ϕ_s320.00000°, δ19.00000°, λ65.00000°. NP2: ϕ_s167.00000°, δ73.00000°, λ98.00000°. Principal axes: T 4.4700, Plg61.0000°, Azm89.0000°; N -0.6760, Plg8.0000°, Azm344.0000°; P -3.7940, Plg28.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM ***23*** *01:47:10.0, 1.̊31N×97.̊24E, h54km, mb4.8*

ISC 23 01:47:05.9±0.6, 1.̊14N±0.̊04×97.̊12E±0.̊04, h25km±4km, h25km:pP-P, n212, σ1§74/223, mb4.8/68, MS4.5/29, 10C-7D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	1.49	328	P	Pn	01 47 30.6	-0.5
SNSI				S	Sn	01 47 48.4	-1.4
PBSI	Pulau Batu	1.66	136	P	Pn	01 47 33.8	+0.4
TPTI		2.11	2	P	Pn	01 47 37.9	-1.7
TPTI				S	Sn	01 48 03.6	-1.4
RPSI	Rantau Prapat	2.37	49		Pn	01 47 43.2	0.0
RPSI	Rantau Prapat	2.37	49	P	Pn	01 47 43.5	+0.3
RPSI					Sn	01 48 12.2	+0.7
PSI	Prapat	2.44	47	Pn	Pn	01 47 43.5	-0.7
	12nm,0.3s,baz=213,slow=9.2,SNR=59						
PSI				Sn	Sn	01 48 12.2	-1.2
	46nm,0.3s,baz=232,slow=12,SNR=6.8						
PSI				LR	LR	01 48 33.3	
	comp=Z,5μm,21.1s,baz=295,slow=39						
SISI	Saibi	3.14	141	P	Pn	01 47 54.4	+0.6
MLSI	Meulaboh, Aceh	3.19	347	P	Pn	01 47 53.4	-1.1
MLSI				S	Sn	01 48 28.7	-3.0
PDSI	Padang	3.91	121	P	Pn	01 48 06.5	+2.1
BKNI	Bangkinang	4.00	102	P	Pn	01 48 06.5	+0.9
BKNI	Bangkinang	4.00	102		Pn	01 48 06.0	+0.4
LHMI	Lhok Sumawe	4.07	358	P	Pn	01 48 08.4	+1.9
LHMI	Lhok Sumawe	4.07	358	Pn	Pn	01 48 06.1	-0.5
SDSI	Sungai Dareh	4.77	116	P	Pn	01 48 18.2	+2.0
PPSI	Pulau Pagai	4.83	143	P	Pn	01 48 17.0	-0.1
IPM	Ipoh	5.12	50		Pn	01 48 21.2	+0.2
IPM	Ipoh	5.12	50	P	Pn	01 48 22.0	+1.0
KRJI	Kerinci	5.40	126	P	Pn	01 48 27.0	+2.1
	7.3nm13μm595nm,0.8s						
RGRI	Rengat	5.42	106	P	Pn	01 48 25.7	+0.6
KULM	Kulim	5.42	40		Pn	01 48 24.6	-0.5
KULM	Kulim	5.42	40	P	Pn	01 48 25.0	-0.2
JRMM	Jerantut	6.00	63	P	Pn	01 48 34.0	+0.8
MYKOM	Kota Tinggi	6.75	84		Pn	01 48 43.2	-0.3
MYKOM	Kota Tinggi	6.75	84	P	Pn	01 48 45.0	+1.5
KSI	Kapahiang	7.25	131	P	Pn	01 48 50.7	+0.3
	1.7nm13μm189nm,1.2s						
TPRI	Tanjung Pinang	7.41	92	P	Pn	01 48 53.8	+1.4
MNAI	Manna	7.99	133	P	Pn	01 49 00.8	+0.3
	316nm,0.9s						
MNAI	Manna	7.99	133	Pn	Pn	01 49 01.1	+0.6
MDSI	Maura Dua	9.00	128	P	Pn	01 49 14.4	+0.1
	824nm68nm,0.9s						
LWLI	Liwa	9.24	131	P	Pn	01 49 18.8	+1.0
	76μm82nm,0.7s						
KLSI		9.55	127	P	Pn	01 49 21.2	-0.8
	20μm24nm,1.0s						
KASI	Kota Agung	9.90	132	P	Pn	01 49 23.8	-2.9
PBA	Port Blair	11.32	338	Pn	Pn	01 49 45.2	-0.8
KPJI	Karang Pucung	14.48	126	P	P	01 50 43.0	+7.2
SBUM	Sibu	15.14	85		Pn	01 50 38.6	+0.3
DLV	T Lat	15.56	46	P	Pn	01 50 43.6	-0.4
DLV				IAmb	IAmb	01 50 49.4	
	comp=Z,45nm,0.8s						
PBKT	Sadao Pong	15.79	14	Pn	Pn	01 50 45.5	-1.3
CM31	Chiang Mai Arr	17.30	6	Pn	Pn	01 51 04.9	-1.0
CMAR	Chiang Mai Arr	17.30	6	P	Pn	01 51 05.0	-0.8
	comp=Z,0.5nm,0.3s,baz=197,slow=12,SNR=20						
CMAR				LR	LR	01 59 09.0	
	comp=Z,2μm,18.3s,baz=202,slow=42						
PALK	Pallekele	17.47	291	P	P	01 51 09.1	+0.1
	comp=Z,0.2nm,0.3s,baz=165,slow=12,SNR=2.8						
PALK				LR	LR	01 57 23.5	
	comp=Z,1μm,18.7s,baz=93,slow=36						
CHTO	Chiang Mai	17.65	6	Pn	Pn	01 51 08.5	-1.8
SIMRM	Sittwe	19.33	348	P	P	01 51 28.7	-0.7
KKM	Kota Kinabalu	19.66	75	P	P	01 51 32.7	-0.6
KKM				IAmb	IAmb	01 51 37.7	
	comp=Z,86nm,1.3s						
SLVN	Son La	21.13	18	P	P	01 51 49.0	-0.1
SAIH	SAIHA	21.60	350	eP	P	01 51 54.2	0.0
SAIH				IAmb	IAmb	01 51 57.7	
	comp=Z,45nm,0.3s						
QIZ	Qiongzhong	21.71	34	P	P	01 51 55.6	+0.3
QIZ				sP	pP	01 52 02.6	+0.3
QIZ				S	S	01 55 56.3	+1.7
QIZ				sS	sS	01 56 06.6	+1.1
QIZ				LR	LR		
	comp=Z,1μm,12.0s						
QIZ				LR	LR		
	comp=Z,2μm,12.9s						
QIZ				LR	LR		
	comp=Z,1μm,12.8s						
BRDH	Bariadhala	22.06	346	P	P	01 51 59.6	+0.7
	comp=Z,66nm,0.3s,baz=49,slow=19,SNR=8.2						
MPSI	Mapaga	22.79	92	P	P	01 52 06.9	0.0
	comp=Z,24nm,0.9s						
PLAI	Plampang	22.84	116	P	P	01 52 06.9	-0.5
TTSI	Tana Toraja	23.07	100	P	P	01 52 09.5	-0.3
	comp=Z,728nmcomp=Z,23nm,1.2s						
KAPI	Kappang	23.42	105	P	P	01 52 13.5	+0.2
	comp=Z,20nm,0.9s,baz=254,slow=7.4,SNR=3.1						
BNSI	Bone	23.61	104	P	P	01 52 15.6	+0.4
	comp=Z,43nm,1.6s						
HYB	Hyderabad	24.39	313	iP	P	01 52 25.0	+2.5
HYB	Hyderabad	24.39	313	ex	P	01 52 34.9	+12
KMI	Kunming	24.45	12	P	P	01 52 24.6	+1.4
KMI				pP	pP	01 52 31.5	+0.9
KMI				sP	sP	01 52 38.3	+4.6
KMI				PP		01 53 03.5	
KMI				S	S	01 56 43.3	+1.2
KMI				sS	pS	01 56 51.6	+1.2
KMI				SS	SnSn	01 57 37.3	+10
KMI				pmax	pmax		
	comp=Z,90nm,1.0s						
KMI				pmax	pmax		
	comp=Z,540nm,4.1s						
KMI				LR	LR		
	comp=Z,3μm,16.1s						
KMI				LR	LR		
	comp=Z,1μm,14.7s						
KMI				LR	LR		
	comp=Z,3μm,15.6s						
KOHI	KOHIMA	24.61	353	eP	P	01 52 24.5	0.0
KOHI				IAmb	IAmb	01 52 29.0	
	comp=Z,44nm,1.4s						
WBSI	Waikabubak, Su	24.62	116	P	P	01 52 20.8	-3.9
	comp=Z,600nmcomp=Z,55nm,1.3s						
SHL	Shillong	24.80	349	P	P	01 52 25.5	-0.8
MRSI	Marisa	24.82	91	P	P	01 52 26.0	-0.4
	comp=Z,46nm,1.0s						
BOK	Bokaro	25.02	335	eP	P	01 52 30.7	+2.7
BOK				IAmb	IAmb	01 52 40.3	
	comp=Z,36nm,0.8s						
TEZP	TEZPUR	25.67	351	eP	P	01 52 35.0	+1.1
LUWI	Luwuk	25.74	95	P	P	01 52 36.0	+1.3
	comp=Z,3μmcomp=Z,67nm,1.1s						
LUWI	Luwuk	25.74	95	P	P	01 52 34.6	-0.2
BASI	Baing, Sumba	25.93	116	P	P	01 52 33.5	-2.9
	comp=Z,37nm,1.1s						
H08S2	Diego Garcia H	26.07	250	T	T	02 19 34.7	
	baz=72,slow=76,SNR=868						
H08S3	Diego Garcia H	26.07	250	T	T	02 19 34.2	
	baz=72,slow=76,SNR=5601						
H08S1	Diego Carcia H	26.09	250	T	T	02 19 35.3	
	baz=72,slow=76,SNR=712						
GYA	Guiyang	26.79	19	⇑iP	P	01 52 45.1	+0.8
GYA				pP	pP	01 52 51.3	-0.4
GYA				sP	sP	01 52 53.3	-1.4
GYA				PP	PP	01 53 35.4	-10
GYA				S	S	01 57 16.8	-2.3
GYA				sS	sS	01 57 37.1	+5.7
GYA				SS	SnSn	01 58 31.6	+7.2
GYA				pmax	pmax		
	comp=Z,20nm,1.2s						
GYA				pmax	pmax		
	comp=Z,160nm,4.2s						
GYA				LR	LR		
	comp=Z,820nm,16.9s						
GYA				LR	LR		
	comp=Z,2μm,16.9s						
GYA				LR	LR		
	comp=Z,2μm,12.5s						
ODAN	Odare	27.23	341	eP	P	01 52 49.9	+1.6
	comp=Z,115nm,1.2s						
TAPN	Taplejung	27.58	342	eP	P	01 52 52.9	+1.4
	comp=Z,109nm,0.8s						
RAMN	Ramite	27.58	339	eP	P	01 52 53.2	+1.7
	comp=Z,44nm,0.9s						
JIRN	Jiri	28.38	339	eP	P	01 53 00.1	+1.4
	comp=Z,94nm,0.9s						
PKI	Pulchoki	28.58	338	eP	P	01 53 02.2	+1.7
PKIN	Phulchoki	28.59	338	eP	P	01 53 01.3	+0.8
GUN	Gumba	28.71	339	eP	P	01 53 03.4	+1.7
	comp=Z,125nm,1.0s						
DMN	Daman	28.73	337	eP	P	01 53 03.4	+1.7
LSA	Lhasa	28.97	349	P	P	01 53 05.8	+1.8
LSA				pP	sP	01 53 13.3	-1.3
LSA				sS	sS	01 58 14.8	+8.8
LSA				SS	SnSn	01 59 25.1	+7.3
LSA				pmax	pmax		
	comp=Z,30nm,1.1s						
LSA				LR	LR		
	comp=Z,2μm,24.2s						
LSA				LR	LR		
	comp=Z,2μm,21.4s						
LSA				LR	LR		
	comp=Z,3μm,21.4s						
SOEI	Soe	29.11	112	P	P	01 53 06.8	+1.7
	comp=Z,27nm,1.0s						
SOEI	Soe	29.11	112	P	P	01 53 06.1	+0.9
GKN	Gorkha	29.26	337	eP	P	01 53 07.8	+1.4
DANN	Dangsing	29.92	336	eP	P	01 53 12.9	+0.5
CD2	Chengdu	30.27	11	P	P	01 53 15.8	+0.7
CD2				S	S	01 58 16.1	+2.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				LR	LR		
	comp=Z,3μm,17.2s						
CD2				LR	LR		
	comp=Z,3μm,17.2s						
CD2				LR	LR		
	comp=Z,4μm,17.7s						
PSA00	Pilbara Seismi	31.66	137	P	P	01 53 28.4	+0.9
WHN	Wuhan	33.50	28	P	P	01 53 40.6	-2.8
WHN				S	S	01 59 02.8	-1.1
WHN				LR	LR		
	comp=Z,2μm,15.8s						
WHN				LR	LR		
	comp=Z,2μm,12.2s						
WHN				LR	LR		
	comp=Z,2μm,14.7s						
FITZ	Fitzroy Crossi	33.95	126	P	P	01 53 46.9	-0.7
	baz=34,SNR=3.6						
FITZ	Fitzroy Crossi	33.95	126	P	P	01 53 48.5	+0.9
XAN	Xi'an	34.54	17	P	P	01 53 51.1	-1.4
XAN				pP	pP	01 53 58.4	-1.6
XAN				sP	sP	01 54 01.9	-1.2
XAN				S	S	01 59 12.5	-7.6
XAN				pmax	pmax		
	comp=Z,24nm,0.8s						
XAN				pmax	pmax		
	comp=Z,200nm,6.5s						
XAN				LR	LR		
	comp=Z,970nm,16.0s						
XAN				LR	LR		
	comp=Z,890nm,15.2s						
XAN				LR	LR		
	comp=Z,2μm,17.1s						
SMLA	Simla	35.31	330	eP	P	01 53 60.0	+0.9
SMLA				IAmb	IAmb	01 54 10.9	
	comp=Z,12nm,0.9s						
LZH	Lanzhou	35.33	9	eP	P	01 53 59.3	-0.1
LZH				pP	pP	01 54 06.5	-0.4
LZH				sP	sP	01 54 11.8	+1.9
LZH				S	S	01 59 30.8	-1.5
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,170nm,4.3s						
LZH				LR	LR		
	comp=Z,1μm,11.9s						
LZH				LR	LR		
	comp=Z,780nm,13.6s						
LZH				LR	LR		
	comp=Z,1μm,14.3s						
DHRM	DHARAMSHALA	36.65	330	eP	P	01 54 11.2	+0.3
DHRM				IAmb	IAmb	01 54 21.5	
	comp=Z,15nm,0.5s						
NJ2	Nanjing	36.95	32	eP	P	01 54 14.0	+0.8
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				LR	LR		
	comp=Z,1μm,13.3s						
NJ2				LR	LR		
	comp=Z,710nm,12.8s						
NJ2				LR	LR		
	comp=Z,2μm,14.2s						
GTA	Gaotai	38.17	3	⇑P	P	01 54 23.3	-0.2
GTA				pP	pP	01 54 30.6	-0.5
GTA				sP	sP	01 54 34.0	-0.1
GTA				S	S	02 00 13.3	-2.2
GTA				sS	sS	02 00 30.0	+2.1
GTA				pmax	pmax		
	comp=Z,23nm,1.5s						
GTA				pmax	pmax		
	comp=Z,120nm,4.6s						
GTA				LR	LR		
	comp=Z,690nm,16.5s						
GTA				LR	LR		
	comp=Z,510nm,16.5s						
GTA				LR	LR		
	comp=Z,810nm,15.5s						
H01W3	Cape Leeuwin H	39.22	158	T	T	02 36 07.6	
	baz=334,slow=76,SNR=150						
H01W2	Cape Leeuwin H	39.23	158	T	T	02 36 08.5	
	baz=334,slow=76,SNR=191						
H01W1	Cape Leeuwin H	39.23	158	T	T	02 36 08.8	
	baz=334,slow=76,SNR=109						
NIL	Nilore	39.33	328	P	P	01 54 33.4	+0.2
NIL				IAmb	IAmb	01 54 34.8	
	comp=Z,18nm,0.8s						
WRKA	Warakurna	39.85	133	P	P	01 54 38.2	+0.5
	baz=40,SNR=8.9						
BTO	Baotou	40.99	15	eP	P	01 54 47.5	+0.5
BTO				S	S	02 00 56.8	-1.0
WB0	Warramunga Arr	42.04	122	P	P	01 54 55.2	-0.6
WB0				IAmb	IAmb	01 54 56.1	
	comp=Z,8.7nm,0.7s						
WRA	Warramunga Arr	42.07	122	P	P	01 54 54.9	-1.2
	comp=Z,4.7nm,0.7s,baz=300,slow=9.1,SNR=25						
WRA				LR	LR	02 12 51.5	
	comp=Z,415nm,21.4s,baz=290,slow=37						
WB2	Warramunga Arr	42.08	122	P	P	01 54 56.5	+0.3
WR0	Warramunga Arr	42.25	122	P	P	01 54 57.2	-0.3
WR0				IAmb	IAmb	01 54 58.1	
	comp=Z,13nm,0.7s						
KBL	Kabul	42.33	325	P	P	01 54 58.4	+0.2
KSH	Kashi	42.79	336	P	P	01 55 01.6	-0.2
KSH				pP	sP	01 55 11.9	-0.2
KSH				sP	pP	01 55 16.8	+7.6
KSH				PcP	PcP	01 56 53.3	+0.4
KSH				PcS	PcS	02 00 39.1	-6.1
KSH				S	S	02 01 20.3	-4.3
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,190nm,7.6s						
KSH				LR	LR		
	comp=Z,210nm,6.3s						
KSH				LR	LR		
	comp=Z,370nm,6.7s						
KSH				LR	LR		
	comp=Z,330nm,9.0s						
FORT	Forrest	43.28	140	P	P	01 55 06.7	+1.0
WMQ	Urumqi	43.32	350	P	P	01 55 07.4	+1.5
WMQ				pP	pP	01 55 14.8	+1.3
WMQ				sP	sP	01 55 20.1	+3.6
WMQ				pmax	pmax		
	comp=Z,26nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,29nm,5.1s						
WMQ				LR	LR		
	comp=Z,260nm,22.1s						
WMQ				LR	LR		
	comp=Z,260nm,26.5s						
WMQ				LR	LR		
	comp=Z,230nm,25.3s						
WSAR	Wadi Sarin	43.32	303	LR	LR	02 11 47.5	
	comp=Z,121nm,21.1s,baz=130,slow=34						
ASAR	Alice Springs	43.42	127	P	P	01 55 06.8	-0.2
	comp=Z,5.4nm,0.9s,baz=301,slow=7.6,SNR=34						
AS31	Alice Springs	43.42	127	P	P	01 55 06.7	-0.3
NRN	Naryn	44.41	337	IAmb	IAmb	01 55 17.5	
	comp=Z,12nm,0.9s						
PRZ	Przheval'sk	44.46	340	P	P	01 55 15.5	+0.2
PRZ				IAmb	IAmb	01 55 19.0	
	comp=Z,8.9nm,0.6s						
KDJ	Kajisay	44.58	339	P	P	01 55 16.0	-0.1
INCN	Inchon	45.24	33	P	P	01 55 20.8	-0.6
BTK	Batken	45.53	332	P	P	01 55 24.0	+0.4
KSRS	Korea Array	45.94	35	P	P	01 55 26.6	-0.2
	comp=Z,17nm,0.8s,baz=222,slow=8.7,SNR=50						
KSRS				LR	LR	02 15 01.4	
	comp=Z,334nm,20.5s,baz=227,slow=37						
KS19	Wonju Array Si	45.94	34	P	P	01 55 26.7	-0.1
AAK	Ala-Archa	46.03	337	P	P	01 55 27.5	-0.1
FRU1	Bishkek	46.12	337	P	P	01 55 28.8	+0.6
SONM	Songino Array	47.20	9	P	P	01 55 36.9	+0.1
	comp=Z,7.7nm,0.8s,baz=190,slow=9.1,SNR=33						
SONM				PcP	PcP	01 57 09.1	+1.2
	comp=Z,3.1nm,0.8s,baz=175,slow=5.6,SNR=4.0						
SONM				LR	LR	02 18 12.3	
	comp=Z,1μm,18.2s,baz=191,slow=40						
MK31	Makanchi Array	47.28	346	P	P	01 55 37.7	+0.5
MK31				IAmb	IAmb	01 55 39.4	
	comp=Z,9.0nm,0.9s						
MKAR	Makanchi Array	47.28	346	P	P	01 55 37.6	+0.3
	comp=Z,7.5nm,0.8s,baz=158,slow=7.6,SNR=77						
MKAR				LR	LR	02 19 39.5	
	comp=Z,230nm,20.4s,baz=152,slow=41						
ULN	Ulaanbaatar	47.33	9	P	P	01 55 38.0	+0.2
ULN				IAmb	IAmb	01 55 41.2	
	comp=Z,8.9nm,0.9s						
MAKZ	Makanchi	47.37	346	P	P	01 55 38.4	+0.5
MAKZ				IAmb	IAmb	01 55 39.9	
	comp=Z,8.0nm,0.9s						
COEN	Coen	48.02	110	P	P	01 55 43.9	+0.5
	baz=48,SNR=5.9						
KK31	Karatay Array	48.08	334	P	P	01 55 43.9	+0.5
KKAR	Karatay Array	48.08	334	P	P	01 55 43.5	+0.1
KKAR				IAmb	IAmb	01 55 46.4	
	comp=Z,12nm,1.1s						
CN2	Changchun	49.39	27	eP	P	01 55 53.0	-0.5
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,160nm,5.0s						
CN2				LR	LR		
	comp=Z,510nm,16.0s						
CN2				LR	LR		
	comp=Z,500nm,16.0s						
CN2				LR	LR		
	comp=Z,970nm,14.0s						
JCJ	Chichijima	50.32	55	LR	LR	02 14 03.7	
	comp=Z,112nm,20.7s,baz=134,slow=32						
TLY	Talaya	50.66	5	P	P	01 56 04.1	+1.0
	comp=Z,3.4nm,0.6s,baz=262,slow=6.5,SNR=4.1						
TLY	Talaya	50.66	5	P	P	01 56 04.3	+1.2
TLY				IAmb	IAmb	01 56 05.4	
	comp=Z,5.5nm,0.7s						
GEYT	Alibeck	51.21	320	P	P	01 56 08.8	+1.3
	comp=Z,3.0nm,0.8s,baz=148,slow=8.7,SNR=7.9						
GEYT				LR	LR	02 21 36.4	
	comp=Z,170nm,18.3s,baz=200,slow=40						
GYA0B	ALIBECK ARRAY	51.21	320	P	P	01 56 06.9	-0.6
GYA0B				IAmb	IAmb	01 56 25.7	
	comp=Z,6.6nm,0.8s						
KURBB	Kurchatov Arra	51.77	345	P	P	01 56 10.9	-0.4
	comp=Z,6.2nm,0.8s,baz=163,slow=7.5,SNR=35						
MJAR	Matsushiro Arr	51.79	42	P	P	01 56 11.7	-0.1
	comp=Z,1.7nm,0.6s,baz=224,slow=5.2,SNR=9.1						
MJAR				LR	LR	02 18 18.6	
	comp=Z,210nm,21.7s,baz=235,slow=36						
KURK	Kurchatov	51.83	345	P	P	01 56 12.2	+0.5
KURK				IAmb	IAmb	01 56 13.9	
	comp=Z,13nm,1.0s						
HTT	Hallett	52.23	135	P	P	01 56 15.2	0.0

baz=52,SNR=5.6
OPO Ambohidratompo 52.83 246 P P 01 56 21.3 +1.3
comp=Z,10.0nm,1.0s,baz=73,slow=7.5,SNR=5.0
USA0B Ussuriysk Arra 52.86 31 P P 01 56 19.4 -0.2
USRK Ussuriysk Ar. 52.86 31 P P 01 56 19.6 +0.1
comp=Z,18nm,0.8s,baz=240,slow=7.4,SNR=31
STKA Stephens Creek 53.37 132 P P 01 56 24.0 +0.4
comp=Z,4.4nm,0.6s,baz=314,slow=9.0,SNR=8.7
STKA Stephens Creek 53.37 132 P P 01 56 23.9 +0.4
ZAA0 Zalesovo Array 53.60 351 P P 01 56 24.9 +0.1
ZALV Zalesovo Beam 53.60 351 P P 01 56 25.4 +0.5
comp=Z,22nm,0.8s,baz=183,slow=5.8,SNR=64
ZALV LR LR 02 24 47.8
comp=Z,231nm,18.2s,baz=180,slow=42
RAYN Ar Rayn 54.72 298 P P 01 56 34.8 +1.2
CMSA Cobar Meteorol 56.31 130 P P 01 56 46.2 +1.3
baz=56,SNR=7.7
KLR Kul'dur 56.34 27 P P 01 56 44.8 0.0
comp=Z,14nm,1.0s,baz=252,slow=6.2,SNR=32
BRVK Borovoye 56.34 341 P P 01 56 44.7 0.0
BRVK IAmb IAmb 01 56 53.1
comp=Z,11nm,1.1s
EIDS Eidsvold 58.41 121 P P 01 57 00.8 +1.0
baz=58,SNR=7.3
EIDS Eidsvold 58.41 121 P P 01 56 59.8 0.0
YSS Yuzh-Sakhalins 60.44 34 P P 01 57 13.6 +0.2
TBLG Delisi 61.98 318 P P 01 57 24.6 +0.6
ARU Arti 63.21 337 P P 01 57 32.1 +0.3
ARU IAmb IAmb 01 57 32.9
comp=Z,12nm,1.2s
KBZ Khabaz 64.07 319 P P 01 57 39.0 +1.2
comp=Z,4.3nm,0.8s,baz=129,slow=6.1,SNR=12
YAK Yakutsk 65.50 16 P P 01 57 46.4 -0.3
GAZ Gaziantep 65.65 311 P P 01 57 48.9 +0.6
GAZ IAmb IAmb 01 58 00.8
comp=Z,6.0nm,0.8s
MBAR Mbarara 66.40 269 P P 01 57 52.6 -1.1
MBAR IAmb IAmb 01 58 09.2
comp=Z,6.2nm,1.2s
NRIK Noril'sk 68.38 356 P P 01 58 04.5 -0.5
comp=Z,7.0nm,0.8s,baz=162,slow=5.2,SNR=11
NRIK LR LR 02 31 10.1
comp=Z,211nm,19.0s,baz=182,slow=39
BR131 Keskin Array S 69.09 312 P P 01 58 10.7 +0.5
BRTR Keskin Array B 69.09 312 P P 01 58 10.4 +0.2
comp=Z,1.4nm,0.8s,baz=134,slow=8.2,SNR=11
BRTR LR LR 02 29 06.9
comp=Z,36nm,21.4s,baz=112,slow=36
ELL Elmali 71.17 309 P P 01 58 23.5 +0.5
MA2 Magadan 71.42 26 P P 01 58 24.3 +0.5
MAW Mawson 72.64 193 LR LR 02 26 46.0
comp=Z,270nm,18.2s,baz=54,slow=33
TIXI Tiksi 73.26 10 P P 01 58 33.8 -0.8
TIXI IAmb IAmb 01 58 35.2
comp=Z,9.7nm,0.9s
LBTB Lobatse 73.79 244 P P 01 58 38.1 -0.7
LBTB IAmb IAmb 01 58 53.6
comp=Z,14nm,1.2s
BOSA Boshof 74.68 240 P P 01 58 44.1 +0.2
comp=Z,4.3nm,1.0s,baz=79,slow=5.6,SNR=3.1
BOSA LR LR 02 26 20.4
comp=Z,238nm,20.8s,baz=85,slow=32
BOSA Boshof 74.68 240 IAmb IAmb 01 58 53.7
comp=Z,8.5nm,1.1s
SORM Soroca 75.10 320 ⇑P P 01 58 45.2 -0.6
AKASG Malin Array Be 75.26 322 P P 01 58 46.7 +0.1
comp=Z,0.5nm,0.4s,baz=89,slow=4.7,SNR=8.7
VRI Vrincioaia 75.61 317 ⇑P P 01 58 47.4 -1.4
PLOR Plostina 75.66 317 ⇓P P 01 58 51.1 +2.0
TESR Tescani 75.81 318 ⇑P P 01 58 50.8 +0.8
MLR Muntele Rosu 76.06 317 P P 01 58 52.4 +0.9
comp=Z,3.6nm,1.0s,baz=157,slow=5.0,SNR=5.0
MLR Muntele Rosu 76.06 317 ⇑P P 01 58 51.9 +0.3
MLR Muntele Rosu 76.06 317 P P 01 58 51.4 -0.1
MLR IAmb IAmb 01 59 08.5
comp=Z,6.1nm,0.9s
PRAR RASCA 76.29 319 ⇓P P 01 58 53.9 +1.2
ARR Arges 76.93 316 ⇓P P 01 58 55.9 -0.5
BURAR Bucovina Array 77.02 319 ⇓P P 01 58 58.0 +1.1
BUR08 Bucovina Ar. S 77.04 319 ⇓P P 01 58 57.6 +0.6
VTS Vitosha 77.40 313 ⇑P P 01 58 57.4 -1.8
ARCR ARCALIA 77.48 318 ⇑P P 01 59 00.8 +1.4
LIT Litokhoron 77.53 311 P P 01 58 59.1 -0.7
LIT IAmb IAmb 01 59 01.3
comp=Z,6.3nm,0.9s
DEV Deva 78.22 317 ⇑P P 01 59 03.8 +0.2
DRGR 78.52 318 ⇓P P 01 59 07.0 +1.7
TRPA Tarpa 78.89 319 ⇓P P 01 59 07.9 +0.8
BZS Buzias 79.06 316 ⇑P P 01 59 09.0 +0.9
SIRR Siria 79.14 317 ⇓P P 01 59 09.5 +0.9
KOLS Kolonicke sedl 79.21 320 eP P 01 59 11.2 +2.3
FINES FINESS Array B 80.02 333 P P 01 59 13.3 +0.3
comp=Z,2.9nm,0.9s,baz=99,slow=6.0,SNR=6.5
FINES LR LR 02 37 44.4
comp=Z,112nm,18.6s,baz=56,slow=38
VYHS Vyhne 81.39 319 eP P 01 59 22.2 +1.6
ARCES ARCESS Array B 82.56 340 P P 01 59 26.5 +0.1
comp=Z,5.7nm,1.0s,baz=76,slow=5.1,SNR=7.0
ARCES LR LR 02 40 04.2
comp=Z,222nm,18.6s,baz=112,slow=38
KRLC Kraliky 82.92 320 eP P 01 59 29.7 +1.0
KRLC epP pP 01 59 36.8 0.0
PRU Pruhonice 84.35 320 eP P 01 59 36.9 +0.9
GEC2 GERESS Array S 84.81 319 P P 01 59 38.7 +0.3
GERES GERESS Array B 84.81 319 P P 01 59 39.0 +0.5
comp=Z,2.2nm,0.9s,baz=95,slow=4.3,SNR=13
KHC Kasperske Hory 84.91 319 eP P 01 59 39.5 +0.6
KHC epP pP 01 59 45.3 -1.7
CLL Collm 85.43 321 eS S 02 10 13.0 +1.9
NB2 NORSAR Subarra 87.02 331 P P 01 59 49.0 -0.1
comp=Z,0.9nm,0.8s,baz=97,slow=5.3
NOA NORSAR Array B 87.02 331 P P 01 59 48.5 -0.5
comp=Z,1.2nm,0.8s,baz=94,slow=5.0,SNR=4.0
NOA LR LR 02 43 40.0
comp=Z,106nm,19.2s,baz=105,slow=39
KEST Kesra 87.53 306 LR LR 02 43 15.2
comp=Z,63nm,18.8s,baz=346,slow=38
ULM Lac du Bonnet 127.61 11 PKP PKPdf 02 06 08.6 -0.4
comp=Z,2.1nm,0.7s,baz=349,slow=4.1,SNR=5.7
NVAR Mina Array Bea 128.88 36 PKP PKiKP 02 06 13.2 +0.4
comp=Z,0.6nm,0.8s,baz=243,slow=2.4,SNR=5.9
PDAR Pinedale Array 130.13 26 PKP PKPdf 02 06 13.8 -0.7
comp=Z,0.4nm,0.6s,baz=159,slow=4.5,SNR=4.3
R11A Troy Canyon, C 130.49 34 PKPdf 02 06 15.7 +0.5
TXAR Lajitas Array 143.76 32 PKP PKPbc 02 06 37.8 +0.5
comp=Z,0.7nm,0.7s,baz=236,slow=1.4,SNR=11
HPIG 144.49 37 PKPdf 02 06 41.0 -0.2
CPUP Villa Florida 144.91 222 PKP PKPdf 02 06 42.6 +1.0
comp=Z,6.4nm,0.8s,baz=106,slow=3.6,SNR=16
CPUP Villa Florida 144.91 222 PKPdf 02 06 42.0 +0.4
Y52A Lilburn 145.16 2 PKPdf 02 06 42.3 +0.3
GOGA Godfrey 145.63 1 PKPbc 02 06 43.0 +0.2
Z50A Ashland 145.67 5 PKPbc 02 06 43.2 +0.1
154A Montrose 146.43 0 PKPab 02 06 46.1 -0.1
CFA Coronel Fontan 146.69 203 PKPbc PKPab 02 06 47.4 +0.1
comp=Z,3.9nm,0.7s,baz=122,slow=5.2,SNR=8.5

IDC 23 02:04:01.2±1.4, 60.50S×46.83W, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.7/24, mbtmp3.8/4, Error ellipse: s-maj=71.9km s-min=24.9km az=42.0, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	Sanae	20.46	141	P	Pn	02 08 41.4	-0.6
	2.6nm,0.9s,baz=297,slow=11,SNR=2.4						
PLCA	Paso Flores	24.61	313	P	P	02 09 23.0	+0.1
	1.3nm,0.8s,baz=272,slow=12,SNR=2.7						
SIV	San Ignacio	45.63	341	P	P	02 12 23.9	+0.8
	0.6nm,0.7s,baz=180,slow=17						
BOSA	Boshof	56.78	90	P	P	02 13 46.6	-0.3
	2.2nm,0.9s,baz=198,slow=5.5,SNR=5.1						
H10N3	ASCENSION HYDR	57.85	39	T	T	03 16 53.5	
H10N1	ASCENSION HYDR	57.85	39	T	T	03 16 53.4	
	baz=198,slow=74,SNR=6.0						
H10N2	ASCENSION HYDR	57.87	39	T	T	03 16 54.0	
	baz=118,slow=74,SNR=5.2						
ILAR	Eielson Array	145.30	312	PKPbc	PKPbc	02 23 37.3	-1.7
	0.7nm,0.7s,baz=151,slow=2.1,SNR=8.3						
MKAR	Makanchi Array	147.77	92	PKPbc	PKPbc	02 23 45.5	-1.3
	0.3nm,0.6s,baz=239,slow=2.9,SNR=6.9						

IDC 23 02:16:12.2±1.2, 16.41S×178.65W, h0km, mb4.0/12, mb1 4.2/12, mb1mx4.0/39, mbtmp4.0/12, MS4.1/23, Ms1 4.1/23, ms1mx4.1/34, Error ellipse: s-maj=48.0km s-min=20.1km az=146.0

GCMT 23 02:16:21.0±0.1, 15.72S±0.01×178.92W±0.01, h17km, MW5.2/125, Moment Tensor Solution. s78, c108; s125, c213; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr0.40±.13; Mθθ-5.33±.12; Mφφ4.93±.10; Mrθ0.53±.28; Mrφ3.87±.11; Mθφ2.33±.33; Best double couple: Mo6.85400×10^{16} NP1:φs65.00000°, δ75.00000°, λ13.00000°. NP2:φs332.00000°, δ78.00000°, λ164.00000°. Principal axes: T 7.0740, Plg20.0000°, Azm288.0000°; N -0.4370, Plg70.0000°, Azm115.0000°; P -6.6340, Plg2.0000°, Azm19.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

BGR 23 02:16:23.5±0.0, 18.69S×173.79E, h33km

NEIC 23 02:16:23.0±1.6, 16.05S±0.1×179.1W±0.1, h56km±7km, mb4.6/32, Error ellipse: s-maj=23.2km s-min=13.1km az=133.0

ISC 23 02:16:19.7±0.6, 16.2S±0.1×178.97W±0.09, h35km, n71, σ1.72/58, mb4.5/24, MS4.2/23, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.23	242		Pn	02 17 10.6	+2.5
AFI	Afiamalu	7.31	73	LR	LR	02 20 09.8	
	comp=Z,1μm,21.9s,baz=259,slow=34						
SANVU	Saraoutou	13.33	271	Pn	Pn	02 19 23.6	-2.9
DZM	Mont Dzumac	14.96	245	eLR	LR	02 23 19.4	
	comp=Z,1μm,24.1s						
DZM	Mont Dzumac	14.96	245	LR	LR	02 24 39.1	
	comp=Z,945nm,18.6s,baz=56,slow=34						
PPT2	Papeete2	28.14	97	eS	S	02 26 45.7	-6.5
	250nm,25.2s						
PPT2				eLR	LR	02 29 20.3	
	comp=Z,2μm,27.8s,baz=262						
PPT	Papeete	28.14	97	LR	LR	02 30 25.0	
	comp=Z,368nm,19.4s,baz=215,slow=31						
TBI	Tubuai	28.62	109	eS	S	02 26 59.3	-0.1
	248nm,26.5s						
TBI				eLQ	LQ	02 28 19.6	
	824nm,28.5s						
TBI				eLR	LR	02 29 41.0	
	comp=Z,2μm,30.5s,baz=280						
STKA	Stephens Creek	39.01	239	P	P	02 23 41.9	-1.2
	3.0nm,0.9s,baz=45,slow=9.0,SNR=7.0						
STKA				LR	LR	02 38 41.2	
	comp=Z,254nm,19.8s,baz=71,slow=34						
STKA	Stephens Creek	39.01	239	P	P	02 23 44.8	+1.7
WB0	Warramunga Arr	44.40	258	P	P	02 24 27.6	+0.2
WB0				IAmb	IAmb	02 24 34.5	
	comp=Z,7.8nm,0.9s						
WRA	Warramunga Arr	44.44	258	P	P	02 24 25.6	-2.1
	comp=Z,2.0nm,1.0s,baz=89,slow=8.1,SNR=4.6						
WRA				LR	LR	02 42 05.6	
	comp=Z,285nm,18.7s,baz=80,slow=35						
AS31	Alice Springs	44.76	253	P	P	02 24 30.3	+0.1
ASAR	Alice Springs	44.76	253	P	P	02 24 30.1	-0.1
	comp=Z,2.2nm,0.5s,baz=84,slow=8.4,SNR=19						
ASAR				LR	LR	02 41 43.4	
	comp=Z,742nm,20.4s,baz=93,slow=34						
GUMO	Guam	46.41	308	LR	LR	02 42 41.1	
	comp=Z,173nm,20.9s,baz=110,slow=34						
SOEI	Soe	55.55	269	P	P	02 25 52.5	+0.3
VNDA	Vanda	62.09	185	LR	LR	02 48 41.9	
	comp=Z,133nm,20.5s,baz=6.5,slow=32						
MJAR	Matsushiro Arr	66.23	323	LR	LR	02 50 39.3	
	comp=Z,92nm,22.0s,baz=110,slow=31						
ASAJ	Asahikawa	69.54	331	LR	LR	02 52 24.5	
	comp=Z,138nm,21.5s,baz=117,slow=31						
PETK	Petropavlovsk-	71.91	345	P	P	02 27 37.6	-1.5
	comp=Z,1.4nm,0.7s,baz=150,slow=9.0,SNR=1.9						
PETK				LR	LR	02 54 52.1	
	comp=Z,87nm,19.5s,baz=225,slow=32						
KSRS	Korea Array	73.08	318	P	P	02 27 46.2	-0.3
	comp=Z,0.9nm,0.7s,baz=130,slow=7.0,SNR=2.7						
KSRS				LR	LR	02 54 06.0	
	comp=Z,102nm,20.8s,baz=126,slow=31						
QSPA	South Pole Qui	73.84	180	P	P	02 27 53.3	+2.6
USRK	Ussuriysk Ar.	74.92	326	P	P	02 27 58.9	+1.9
	comp=Z,1.7nm,0.7s,baz=86,slow=2.5,SNR=5.9						
USRK				LR	LR	02 56 31.9	
	comp=Z,120nm,19.6s,baz=133,slow=32						
MDJ	Mudanjiang	76.50	325	P	P	02 28 07.3	+1.3
CMB	Columbia Colle	76.98	44	P	P	02 28 09.7	+0.6
CMB				IAmb	IAmb	02 28 40.0	
	comp=Z,12nm,1.6s						
ISA	Isabella, Lake	77.04	47	P	P	02 28 09.1	-0.3
AFDM	Forest Hills D	77.09	43	P	P	02 28 12.0	+2.4
YBH	Yreka Blue Hor	77.56	40	P	P	02 28 13.4	+1.2
MDPB	Devils Postpil	77.64	45	P	P	02 28 13.8	+0.8
MDPB				IAmb	IAmb	02 28 38.1	
	comp=Z,6.6nm,1.2s						
BEKR	Beckworth	77.99	42	P	P	02 28 15.5	+0.7
PNTR	Pine Nut	78.07	43	P	P	02 28 16.6	+1.3
PNTR				IAmb	IAmb	02 28 29.1	
	comp=Z,6.0nm,1.0s						
YERR	Yerington	78.25	43	P	P	02 28 17.0	+0.7
YERR				IAmb	IAmb	02 28 28.4	
	comp=Z,16nm,1.8s						
KLR	Kul'dur	78.38	330	LR	LR	02 58 25.9	
	comp=Z,95nm,21.5s,baz=170,slow=32						
NVAR	Mina Array Bea	78.58	44	P	P	02 28 14.1	-4.0
	comp=Z,0.2nm,0.5s,baz=229,slow=8.2,SNR=1.9						
NVAR				LR	LR	02 54 14.8	
	comp=Z,203nm,21.3s,baz=234,slow=29						
NV11	Mina Array Sit	78.68	44	P	P	02 28 19.9	+1.2
PINE	Pine Mountain	79.80	39	P	P	02 28 25.2	+0.5
PINE				IAmb	IAmb	02 29 04.9	
	comp=Z,12nm,1.5s						
I07A	Izee	80.82	39	P	P	02 28 30.6	+0.5
I07A				IAmb	IAmb	02 28 45.2	
	comp=Z,22nm,2.0s						
G08A	Pilot Rock	81.81	38	P	P	02 28 35.4	+0.2
G08A				IAmb	IAmb	02 29 05.6	
	comp=Z,12nm,1.7s						
SEY	Seymchan	82.01	347	P	P	02 28 36.0	+0.3
	comp=Z,1.7nm,0.6s,baz=116,slow=5.1,SNR=6.6						
SEY				LR	LR	03 01 02.8	
	comp=Z,135nm,20.8s,baz=130,slow=33						
BJT	Baijiatuan	82.20	315	P	P	02 28 37.6	+0.3
BJT				IAmb	IAmb	02 28 43.5	
	comp=Z,5.0nm,0.7s						
MSU	Marysvale	82.82	47	P	P	02 28 40.9	+0.1
ENH	Enshi	82.88	304	P	P	02 28 40.7	-0.4
F10A	Beach Ranch, E	83.20	38	P	P	02 28 42.7	+0.2
BWN	Browne	83.28	13	P	P	02 28 43.1	+0.7
CCB	Clear Creek Bu	84.05	13	P	P	02 28 46.8	+0.6
CCB				IAmb	IAmb	02 28 50.8	
	comp=Z,5.5nm,0.8s						
SRU	San Rafael Swe	84.24	47	P	P	02 28 49.4	+1.3
IL31		84.36	13	P	P	02 28 47.9	+0.1
ILAR	Eielson Array	84.36	13	P	P	02 28 45.5	-2.4
	comp=Z,4.0nm,1.0s,baz=256,slow=5.2,SNR=12						
ILAR				LR	LR	03 02 21.0	
	comp=Z,109nm,18.4s,baz=260,slow=33						
HIA	Hailar	84.68	325	P	P	02 28 48.6	-1.3
HIA				IAmb	IAmb	02 29 00.5	
	comp=Z,6.5nm,1.1s						
BILL	Bilibino	84.70	354	P	P	02 28 50.3	+0.8
BILL				IAmb	IAmb	02 28 55.9	
	comp=Z,8.1nm,1.3s						
MAW	Mawson	85.27	200	LR	LR	03 02 15.8	
	comp=Z,172nm,21.6s,baz=66,slow=32						
PBKT	Sadao Pong	85.39	289	P	P	02 28 54.2	+0.1
TX31	Lajitas Ar. Si	85.54	58	P	P	02 28 57.1	+2.4
TXAR	Lajitas Array	85.54	58	P	P	02 28 53.4	-1.4
	comp=Z,0.6nm,0.7s,baz=293,slow=4.8,SNR=4.2						
TXAR				LR	LR	03 01 59.6	
	comp=Z,53nm,18.0s,baz=0.0,slow=32						
QLMT	Earthquake Lak	86.20	41	P	P	02 28 57.9	+0.1
YHL	Hebgen Lake	86.36	41	P	P	02 28 59.5	+0.7
PDAR	Pinedale Array	86.49	44	P	P	02 28 57.5	-1.8
	comp=Z,0.4nm,0.6s,baz=208,slow=2.6,SNR=6.4						
PDAR				LR	LR	03 00 09.5	
	comp=Z,120nm,21.1s,baz=294,slow=30						
CMAR	Chiang Mai Arr	87.81	290	P	P	02 29 05.8	-0.1
	comp=Z,0.7nm,0.3s,baz=130,slow=2.7,SNR=1.4						
CMAR				LR	LR	03 08 16.8	
	comp=Z,69nm,18.7s,baz=134,slow=35						
PLCA	Paso Flores	92.89	134	LR	LR	03 03 37.6	
	comp=Z,110nm,19.9s,baz=232,slow=31						
ULM	Lac du Bonnet	97.96	40	LR	LR	03 09 30.1	
	comp=Z,148nm,18.6s,baz=292,slow=33						
ARCES	ARCESS Array B	124.56	350	PKP	PKiKP	02 35 15.0	-0.1
	comp=Z,3.6nm,1.0s,baz=311,slow=30,SNR=1.7						
GRF	Grafenberg Arr	145.59	348	ePKPbc	PKiKP	02 35 59.4	+1.0
	baz=30,slow=3.1						
KHC	Kasperske Hory	145.60	345	ePKP	PKiKP	02 35 58.8	+0.4
KHC				ex	x	02 36 09.2	
GERES	GERESS Array B	145.84	345	PKPbc	PKPdf	02 35 52.5	-2.3
	comp=Z,0.5nm,0.5s,baz=18,slow=4.6,SNR=8.1						
CONA	Conrad Observa	146.09	342	PKiKP	PKiKP	02 36 01.5	+1.9
	comp=Z,5.3nm,1.0s						
SOKA	Soboth	147.46	342	ePKiKP	PKPab	02 36 04.2	+2.0
	comp=Z,10nm,1.5s						
RETA	Reutte	147.79	348	PKiKP	PKPab	02 36 05.9	+2.5
	comp=Z,5.1nm,1.2s						
MOTA	Moosalm	147.85	347	ePKiKP	PKPab	02 36 06.2	+2.5
	comp=Z,7.6nm,1.3s						
SQTA	Sankt Quirin	147.95	347	ePKiKP	PKPab	02 36 06.0	+1.9
	comp=Z,10nm,1.6s						
ABTA	Abfaltersbach	148.09	345	PKPab	PKPab	02 36 06.0	+1.4
	comp=Z,7.2nm,1.2s						
FETA	Feichten	148.24	347	ePKPab	PKPab	02 36 07.6	+2.2
	comp=Z,7.4nm,1.3s						

NEIC 23 02:19:16.0±1.3, 52.53N±0.03×167.63W±0.08, h21km±6km, Error ellipse: s-maj=7.6km s-min=2.5km az=119.0

AEIC 23 02:19:16.4±1.7, 52.51N±0.05×167.60W±0.07, h29km±6km, ML3.2/16, Error ellipse: s-maj=8.6km s-min=4.5km az=146.0

IDC 23 02:19:21.6±1.5, 53.00N×167.46W, h61km±8km, mb3.4/6, mb1 3.6/8, mb1mx3.2/46, mbtmp3.7/8, MS3.0/2, Ms1 3.1/2, ms1mx2.7/36, Error ellipse: s-maj=38.1km s-min=20.0km az=21.0

ISC 23 02:19:17.4±0.9, 52.61N±0.08×167.63W±0.06, h28km, n23, σ1.73/27, mb3.6/6, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKSP	Okmok Steeple	0.76	328		Pn	02 19 32.0	-0.2
OKFG	Magazine Ridge	0.82	348		Pb	02 19 33.1	+0.1
OKFG					Sn	02 19 46.2	+2.1
NIKH	Nikolski High	0.83	296		Pb	02 19 32.6	-0.6
NIKH					Sn	02 19 45.4	+1.0
MREP	Makushin Rep't	1.31	24		Pn	02 19 40.0	+0.2
MNAT	Makushin Natee	1.39	24		Pn	02 19 41.2	+0.3
MNAT					Sb	02 20 00.9	+0.9
MSW	Makushin Switc	1.40	21		Pn	02 19 41.3	+0.3
UNV	Unalaska Valle	1.41	28		Pn	02 19 41.0	0.0
MCIR	Makushin Cirqu	1.41	18		Pb	02 19 42.3	-0.7
MTBL	Makushin Table	1.47	22		Pn	02 19 42.6	+0.5
AKRB	Akutan Reef Bi	1.78	31		Pn	02 19 47.2	+0.9
AKUT	Akutan	1.89	35	Pn	Pn	02 19 48.6	+1.0
WESP	Westdahl Peak	2.56	41		Pn	02 19 57.8	+0.8
KDAK	Kodiak Island	10.03	53	P	Pn	02 21 38.8	-0.6
	0.4nm,0.3s,baz=357,slow=23,SNR=2.3						
ILAR	Eielson Array	16.16	33	P	Pn	02 22 57.9	-4.3
	0.0nm,0.3s,baz=213,slow=15,SNR=3.1						
ILAR				LR	LR	02 28 50.6	
	comp=Z,38nm,18.1s,baz=242,slow=36						
PETK	Petropavlovsk-	20.82	285	P	P	02 23 56.5	+0.1
	1.5nm,0.6s,baz=87,slow=13,SNR=1.5						
INK	Inuvik	22.56	33	P	P	02 24 11.2	-3.6
	0.8nm,0.6s,baz=102,slow=14,SNR=2.0						
INK	Inuvik	22.56	33	P	P	02 24 14.9	+0.1
BBB	Bella Bella	23.91	75	LR	LR	02 31 32.1	
	comp=Z,44nm,18.2s,baz=155,slow=31						
YKA	Yellowknife Ar	29.28	49	P	P	02 25 09.9	-6.8
	0.1nm,0.5s,baz=272,slow=9.8,SNR=1.9						
NVAR	Mina Array Bea	36.61	93	P	P	02 26 21.1	0.0
	0.6nm,0.7s,baz=294,slow=8.5,SNR=6.1						
NVAR				pP	pwP	02 26 35.9	+2.9
	0.6nm,0.7s,baz=303,slow=9.1,SNR=4.8						
TXAR	Lajitas Array	51.68	90	P	P	02 28 21.7	-0.1
	0.4nm,0.5s,baz=305,slow=6.2,SNR=7.0						
FINES	FINESS Array B	65.77	353	P	P	02 29 57.2	-1.9
	3.5nm,1.1s,baz=348,slow=8.6,SNR=6.6						
FINES				pP	pwP	02 30 14.5	+3.3
	1.5nm,0.6s,baz=9.3,slow=7.8,SNR=2.2						
AKASG	Malin Array Be	76.08	349	P	P	02 31 01.0	-0.8
	0.6nm,0.5s,baz=16,slow=5.8,SNR=2.4						
AKASG				pP	pwP	02 31 16.6	+2.6
	0.4nm,0.4s,baz=77,slow=16,SNR=1.7						

BGR 23 02:28:59.8±0.0, 45.70N×150.58E, h33km, mb4.9

NIED 23 02:29:00.44, 44.80N×148.60E, h113km, Mw4.3 Best double couple: Mo3.72000×10^{15} NP1:φs129.00000°, δ57.00000°, λ-100.00000°. NP2:φs327.00000°, δ34.00000°, λ-75.00000°.

BJI 23 02:29:08.9±0.0, 45.41N×148.86E, h139km, mB4.8/36, mb4.8/51

MOS 23 02:29:11.4±1.2, 45.30N×148.59E, h150km, mb4.8/45, Error ellipse: s-maj=6.0km s-min=4.6km az=99.4

NEIC 23 02:29:13.0±1.5, 45.35N±0.09×148.6E±0.1, h146km±5km, mb4.6/213, Error ellipse: s-maj=13.4km s-min=10.1km az=152.0

IDC 23 02:29:12.3±1.3, 45.40N×148.53E, h140km±10km, mb4.3/30, mb1 4.3/38, mb1mx4.3/43, mbtmp4.6/38, MS4.3/2, Ms1 4.3/2, ms1mx2.8/52, Error ellipse: s-maj=10.6km s-min=7.7km az=148.0

SKHL 23 02:29:12.9±0.5, 45.18N×148.60E, h146km±4km, mb5.2/10, msh6.1/5

JMA 23 02:29:14.6±0.4, 44.76N×148.59E, h140km, M4.4

ISC 23 02:29:11.5±0.6, 45.24N±0.04×148.64E±0.04, h138km±4km, n624, σ1.41/605, mb4.6/175, 51C-20D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.55	269	i P	Pn	02 29 33.2	+1.5
KUR				AMB	AMB	02 29 33.5	
	12μm,1.0s						
KUR				AMB	AMB	02 29 33.5	
	3μm,0.3s						
KUR				i S	Sn	02 29 48.7	+1.7
KUR				A	A	02 29 49.0	
	12μm,2.0s						
KUR				A	A	02 29 49.0	
	10μm,2.0s						
KUR				A	A	02 29 56.0	
	5μm,0.5s						
KUR				A	A	02 29 56.0	
	3μm,0.5s						
KUR	Kuril'sk	0.55	269	d iPN	Pn	02 29 32.8	+1.1
KUR				i S	Sn	02 29 48.7	+1.7
KUR				pmax	pmax		
	comp=N,848nm,0.3s						
KUR				pmax	pmax		
	comp=E,758nm,0.3s						
KUR				pmax	pmax		
	comp=Z,3μm,0.3s						
KUR				pmax	pmax		
	comp=Z,12μm,1.0s						
KUR				smax	smax		
	comp=N,12μm,1.6s						
KUR				smax	smax		
	comp=E,10μm,1.7s						
KUR				smax	smax		
	comp=N,5μm,0.5s						
KUR				smax	smax		
	comp=E,3μm,0.5s						
YUK	Yuzh-Kuril'sk	2.32	240	i P	Pn	02 29 51.2	+1.4
YUK				AMB	AMB	02 29 51.8	
	comp=E,2μm,0.3s						
YUK				i S	Sn	02 30 19.6	+0.4
YUK				A	A	02 30 26.2	
	comp=E,3μm,0.4s						
YUK				A	A	02 30 26.2	
	comp=E,2μm,0.4s						
YUK	Yuzh-Kuril'sk	2.32	240	c iPN	Pn	02 29 51.1	+1.3
YUK				i S	Sn	02 30 19.5	+0.4
YUK				pmax	pmax		
	comp=N,117nm,0.3s						
YUK				pmax	pmax		
	comp=Z,2μm,0.3s						
YUK				pmax	pmax		
	comp=E,103nm,0.2s						
YUK				smax	smax		
	comp=N,3μm,0.4s						
YUK				smax	smax		
	comp=E,2μm,0.4s						
GRPR	Tuman	2.40	240	i P	Pn	02 29 52.0	+1.3
GRPR				AMB	AMB	02 29 53.0	
	comp=E,510nm,0.3s						

GRPR i S Sn 02 30 20.9 0.0
GRPR A A 02 30 24.0
comp=E,3µm,0.3s
GRPR A A 02 30 24.0
comp=E,2µm,0.3s
GRPR Tuman 2.40 240c iPN Pn 02 29 52.0 +1.3
GRPR i S Sn 02 30 20.9 0.0
GRPR pmax pmax
comp=Z,505nm,0.3s
GRPR pmax pmax
comp=E,156nm,0.2s
GRPR pmax pmax
comp=N,189nm,0.1s
GRPR smax smax
comp=N,3µm,0.3s
GRPR smax smax
comp=E,2µm,0.3s
GLVR Golovnino 2.69 237 i P Pn 02 29 55.2 +0.8
GLVR AMB AMB 02 29 55.7
comp=E,560nm,0.4s
GLVR i S Sn 02 30 27.3 -0.1
GLVR A A 02 30 29.0
comp=E,2µm,0.4s
GLVR A A 02 30 29.0
comp=E,2µm,0.4s
GLVR Golovnino 2.69 237⇑iPN Pn 02 29 55.2 +0.8
GLVR i S Sn 02 30 27.3 -0.1
GLVR pmax pmax
comp=Z,558nm,0.2s
GLVR smax smax
comp=N,3µm,0.3s
GLVR smax smax
comp=E,2µm,0.3s
NEM2 Nemuro 2 2.80 229 P Pn 02 29 55.1 -0.7
NEM2 eS Sn 02 30 26.8 -3.1
NMR Nemuro--Hokkai 2.81 229 i P Pn 02 29 55.2 -0.6
NMR i S Sn 02 30 27.0 -3.1
NMR Nemuro--Hokkai 2.81 229c iPN Pn 02 29 55.0 -0.8
NMR i S Sn 02 30 26.9 -3.1
JRA Rausu 2.83 244 P Pn 02 29 57.5 +1.3
JNK Nakash 3.26 241 P Pn 02 30 02.7 +1.0
JTKR Abashiri--Toko 3.61 251 P Pn 02 30 07.5 +1.3
JAK Akkeshi 3.62 233 P Pn 02 30 05.9 -0.5
JAK eS Sn 02 30 45.7 -3.2
JMP Maruseppu 3.96 254 P Pn 02 30 12.7 +1.7
JAR Ashorobuto 4.00 243 P Pn 02 30 12.9 +1.5
JOB Onbets 4.18 238 P Pn 02 30 14.3 +0.6
JOB eS Sn 02 31 00.0 -2.0
JKK2 Kamakawa 2 4.43 254 P Pn 02 30 18.9 +1.9
YSS Yuzh-Sakhalins 4.43 295 i P Pn 02 30 18.7 +1.6
YSS AMB AMB 02 30 19.6
comp=E,130nm,1.0s
YSS eS Sn 02 31 09.6 +1.5
YSS A A 02 31 12.5
comp=E,130nm,1.0s
YSS Yuzh-Sakhalins 4.43 295 Pn 02 30 17.5 +0.4
YSS Yuzh-Sakhalins 4.43 295α iPN Pn 02 30 19.0 +1.9
YSS eS Sn 02 31 10.1 +2.0
YSS pmax pmax
comp=Z,130nm,1.1s
YSS smax smax
comp=E,130nm,1.1s
YSS smax smax
comp=N,400nm,3.3s
YSS smax smax
comp=E,900nm,2.4s
YSS MLR MLR
comp=Z,500nm,16.0s
JKA Kamikawa-asahi 4.45 257 eP Pn 02 30 19.7 +2.3
JKA eS Sn 02 31 08.8 +0.3
JKA Kamikawa-asahi 4.45 257 Pn 02 30 19.6 +2.3
JKA Sn 02 31 08.8 +0.3
ASAJ Asahikawa 4.45 257 P Pn 02 30 19.7 +2.3
ASAJ Asahikawa 4.45 257 P Pn 02 30 19.6 +2.3
comp=Z,2.7nm,0.3s,baz=88,slow=15,SNR=45
ASAJ S Sn 02 31 08.8 +0.2
comp=Z,3.6nm,0.3s,baz=232,slow=13,SNR=3.7
JCH Churui 4.63 237 P Pn 02 30 19.5 -0.2
JCH eS Sn 02 31 09.8 -2.9
JWK2 Keihoku 4.76 273 P Pn 02 30 24.8 +3.4
ERM Erimo 5.12 233 Pn 02 30 27.7 +1.4
ERM Erimo 5.12 233 i PN Pn 02 30 29.4 +3.1
JNBK Urakawa-nobuka 5.19 237 eS Sn 02 31 23.3 -2.8
JRBN Rebuntou 5.34 275 P Pn 02 30 31.5 +2.3
UGL Uglegorsk 5.90 313 eP Pn 02 30 38.5 +1.9
UGL AMB AMB 02 30 39.5
comp=Z,320nm,0.8s
UGL Uglegorsk 5.90 313⇑iPN Pn 02 30 38.7 +2.1
UGL pmax pmax
comp=Z,321nm,0.8s
JNB Noboribetsu 6.15 246 eS Sn 02 31 48.1 -1.2
JKB Kayabe 6.46 241 P Pn 02 30 43.3 -0.9
JKB eS Sn 02 31 51.8 -4.9
TYV Tymovskoe 6.90 327 eP Pn 02 30 51.9 +1.9
TYV AMB AMB 02 30 52.0
comp=Z,80nm,0.8s
TYV eS Sn 02 32 07.9 +0.7
TYV A A 02 32 09.4
comp=Z,40nm,0.3s
TYV A A 02 32 09.4
comp=Z,40nm,0.3s
TYV Tymovskoe 6.90 327 ePN Pn 02 30 51.9 +1.9
TYV eS Sn 02 32 01.7 -5.5
TYV pmax pmax
comp=Z,300nm,2.0s
TYV pmax pmax
comp=Z,80nm,0.8s
TYV smax smax
comp=N,19nm,1.0s
JSR Shiriuchi 7.04 241 eS Sn 02 32 05.3 -5.4
JTM Tenmabayashi 7.11 234 eS Sn 02 32 04.5 -7.9
JANG Nango 7.15 230 eS Sn 02 32 04.9 -8.3
JTH Tanohata 7.28 226 eS Sn 02 32 08.2 -8.3
SKR Severo-Kuril's 7.40 40 eP Pn 02 30 56.0 -0.7
SKR AMB AMB 02 30 59.0
comp=N,40nm,1.0s
SKR eS Sn 02 32 15.1 -4.1
SKR A A 02 32 22.0
comp=N,60nm,0.7s
SKR A A 02 32 22.0
comp=N,50nm,0.7s
SKR Severo-Kuril's 7.40 40 ePN Pn 02 30 56.6 -0.1
SKR pmax pmax
comp=Z,38nm,1.0s
SKR MLR MLR
comp=Z,200nm,14.0s
SKR MLR MLR
comp=N,700nm,12.0s
SKR MLR MLR
comp=E,300nm,12.0s
SKR MLR MLR
comp=Z,300nm,14.0s
SKR MLR MLR
comp=N,600nm,18.0s
SKR MLR MLR
comp=E,600nm,17.0s
OFUJ Ofunato 8.04 222 eS Sn 02 32 28.0 -6.8
JRG Rokugo 8.32 228 eS Sn 02 32 36.7 -4.9
TEY Ternei 8.51 273 i P Pn 02 31 14.0 +2.4
TEY AMB AMB 02 31 14.6
comp=E,50nm,0.9s
TEY AMB AMB 02 31 14.6
comp=E,60nm,0.9s
TEY Ternei 8.51 273⇑iPN Pn 02 31 14.0 +2.4
TEY pmax pmax
comp=E,50nm,0.9s
TEY pmax pmax
comp=Z,60nm,0.9s
JIO Ouri 8.69 221 P Pn 02 31 11.7 -2.4
JIO eS Sn 02 32 41.8 -8.7
PEA0B Petropavlovsk- 9.85 34 Pn Pn 02 31 29.6 +0.1
PEA0B Petropavlovsk- 9.85 34 PN Pn 02 31 29.6 +0.1
PETK Petropavlovsk- 9.85 34 P Pn 02 31 29.2 -0.3
comp=Z,1.7nm,0.3s,baz=184,slow=12,SNR=25
GRNR Gornyy 9.87 308 i P Pn 02 31 31.5 +1.7
GRNR AMB AMB 02 31 32.2
comp=Z,10.0nm,0.9s
GRNR Gornyy 9.87 308⇑iPN Pn 02 31 31.5 +1.7
GRNR eS Sn 02 33 22.4 +3.5
GRNR pmax pmax
comp=Z,10.0nm,0.9s
GRNR smax smax
comp=N,4.0nm,1.2s
GRNR MLR MLR
comp=Z,100nm,16.0s

PET Petropavlovsk 10.18 36 eP Pn 02 31 33.8 0.0
PET Petropavlovsk 10.18 36 ePN Pn 02 31 26.0 -7.8
PET MLR MLR
comp=Z,200nm,14.0s
JFY Yanaizu 10.31 224 P Pn 02 31 34.1 -1.7
JFY eS Sn 02 33 24.7 -4.9
MJA0 Matsu Arr-Jizo 11.71 226 ePN Pn 02 31 53.6 -0.7
MJAR Matsushiro Arr 11.73 226 P Pn 02 31 52.8 -1.8
comp=Z,0.1nm,0.3s,baz=28,slow=13,SNR=9.5
MAJO Matsushiro 11.73 226 i PN Pn 02 31 54.5 -0.1
USA0B Ussuriysk Arra 11.89 271 Pn 02 31 56.7 +0.1
USA0B Ussuriysk Arra 11.89 271 i PN Pn 02 31 57.6 +1.0
USRK Ussuriysk Ar. 11.89 271 P Pn 02 31 57.0 +0.4
baz=87,slow=13,SNR=17
USRK Ussuriysk Ar. 11.89 271 PN Pn 02 31 57.0 +0.4
KLR Kul'dur 12.15 295 P Pn 02 32 00.8 +1.0
comp=Z,0.2nm,0.3s,baz=103,slow=16,SNR=13
KLR Kul'dur 12.15 295 eP Pn 02 32 01.3 +1.4
KLR Kul'dur 12.15 295 ePN Pn 02 32 01.3 +1.4
KLR pmax pmax
comp=Z,5.0nm,1.0s
EKMR Ekimchan 12.89 313 eP Pn 02 32 09.9 +0.4
EKMR AMB AMB 02 32 11.0
comp=Z,7.0nm,0.8s
MDJ Mudanjiang 13.51 274 P Pn 02 32 17.8 +0.3
MDJ sP P 02 32 55.0 +33
MDJ S Sn 02 34 44.8 -1.9
MDJ PcP PcP 02 37 34.0 +1.0
MDJ ScP ScP 02 40 53.4 0.0
MDJ PcS PcS 02 41 08.9 +1.4
MDJ ScS ScS 02 44 26.4 -3.8
MDJ pmax pmax
comp=Z,12nm,1.1s
MDJ pmax pmax
comp=Z,190nm,6.4s
MA2 Magadan 14.41 4 P Pn 02 32 27.8 -1.0
comp=Z,0.8nm,0.3s,baz=185,slow=13,SNR=7.9
MA2 Magadan 14.41 4 eP Pn 02 32 28.5 -0.3
MA2 Magadan 14.41 4 Pn 02 32 28.5 -0.3
MA2 Magadan 14.41 4 P Pn 02 32 28.5 -0.3
BMKR Bomnak 15.82 314 eP Pn 02 32 46.0 -0.3
BMKR AMB AMB 02 32 49.8
comp=Z,20nm,0.8s
ZEA Zeya 16.24 309 eP Pn 02 32 50.4 -1.1
ZEA AMB AMB 02 32 54.2
comp=Z,20nm,0.8s
ZEA Zeya 16.24 309 eP P 02 32 53.4 +1.5
ZEA pmax pmax
comp=Z,15nm,0.8s
KROS Kirovskiy 16.67 311 eP P 02 32 57.0 +0.3
KROS AMB AMB 02 32 59.0
comp=Z,7.0nm,0.8s
KROS AMB AMB 02 32 59.0
comp=Z,10.0nm,0.8s
KROS AMB AMB 02 32 59.0
comp=Z,20nm,0.8s
KSRS Korea Array 17.36 251 P Pn 02 33 05.0 -0.2
comp=Z,0.2nm,0.3s,baz=55,slow=11,SNR=14
KSRS LR LR 02 39 41.9
comp=Z,23nm,20.0s,baz=45,slow=36
KSRS Korea Array 17.36 251 eP Pn 02 33 07.0 +1.8
SEY Seymchan 17.86 6 P P 02 33 09.1 -0.5
comp=Z,2.1nm,0.3s,baz=180,slow=8.5,SNR=48
SEY Seymchan 17.86 6 eP P 02 33 09.6 0.0
SEY Seymchan 17.86 6⇓iP P 02 33 09.6 0.0
TJN Taejon 18.34 249ceP Pn 02 33 16.4 -0.4
YAK Yakutsk 20.09 334 P P 02 33 32.0 -1.9
comp=Z,0.7nm,0.3s,baz=128,slow=2.9,SNR=18
YAK LR LR 02 40 41.8
comp=Z,1µm,20.4s,baz=160,slow=35
YAK Yakutsk 20.09 334 P P 02 33 32.6 -1.3
YAK Yakutsk 20.09 334 eP P 02 33 31.9 -1.9
YAK eS S 02 37 07.6 -4.1
YAK pmax pmax
comp=Z,53nm,0.8s
YAK pmax pmax
comp=N,34nm,1.1s
YAK pmax pmax
comp=E,21nm,1.2s
YAK smax smax
comp=N,127nm,2.0s
YAK smax smax
comp=E,52nm,1.8s
BILL Bilibino 24.63 16 eP P 02 34 17.8 -0.9
BILL Bilibino 24.63 16 P P 02 34 18.5 -0.2
BILL Bilibino 24.63 16ceP P 02 34 17.8 -0.9
BILL e 02 37 52.8
BILL eS S 02 38 16.5 -13
BILL pmax pmax
comp=Z,8.0nm,0.9s
BOD Bodaibo 24.64 313 eP P 02 34 16.0 -2.8
BOD pmax pmax
comp=Z,7.0nm,1.7s
TIA Tai'an 25.40 260 P P 02 34 28.8 +2.9
TIA pmax pmax
comp=Z,10.0nm,0.6s
NJ2 Nanjing 26.56 251 eP P 02 34 36.4 0.0
NJ2 pmax pmax
comp=Z,16nm,0.6s
TIXI Tiksi 28.13 347 P P 02 34 47.4 -2.6
comp=Z,9.1nm,0.5s,baz=139,slow=6.8,SNR=23
TIXI Tiksi 28.13 347 P P 02 34 47.1 -2.9
TIXI IAmb IAmb 02 34 47.9
comp=Z,9.9nm,0.6s
TIXI Tiksi 28.13 347 eP P 02 34 47.1 -2.9
TIXI pmax pmax
comp=Z,8.0nm,0.6s
BTO Baotou 28.46 274 eP P 02 34 55.6 +2.2
ULN Ulaanbaatar 28.47 290 eP P 02 34 54.0 +0.5
ULN Ulaanbaatar 28.47 290 P P 02 34 54.0 +0.5
ULN IAmb IAmb 02 34 56.1
comp=Z,7.1nm,0.8s
ULN Ulaanbaatar 28.47 290 P P 02 34 54.0 +0.5
ULN pmax pmax
comp=Z,7.0nm,0.8s
SONM Songino Array 28.91 290 P P 02 34 56.4 -1.0
comp=Z,5.0nm,0.8s,baz=86,slow=7.5,SNR=22
SONM PcP PcP 02 38 03.4 +0.5
comp=Z,0.9nm,0.7s,baz=133,slow=1.6,SNR=3.8
H11N2 WAKE ISLAND Hy 29.60 143 T T 03 06 09.7
baz=334,slow=76,SNR=1367
H11N1 WAKE ISLAND Hy 29.61 143 T T 03 06 17.8
baz=334,slow=76,SNR=887
H11N3 WAKE ISLAND Hy 29.61 143 T T 03 06 18.1
baz=334,slow=76,SNR=1528
TLY Talaya 30.13 299 eP P 02 35 07.6 -0.4
TLY Talaya 30.13 299 P P 02 35 06.4 -1.5
TLY Talaya 30.13 299 i P P 02 35 07.6 -0.4
TLY pmax pmax
comp=Z,2.0nm,0.7s
ZAK Zakamensk 30.52 296 eP P 02 35 10.2 -1.2
ZAK pmax pmax
comp=Z,3.0nm,1.1s
WHN Wuhan 30.52 253 P P 02 35 14.8 +3.3
H11S1 WAKE ISLAND Hy 30.61 145 T T 03 07 36.1
baz=336,slow=76,SNR=1497
H11S3 WAKE ISLAND Hy 30.61 145 T T 03 07 36.6
baz=336,slow=76,SNR=713
H11S2 WAKE ISLAND Hy 30.63 145 T T 03 07 37.2
baz=336,slow=76,SNR=747
XAN Xi'an 32.26 264 P P 02 35 28.4 +1.5
XAN pmax pmax
comp=Z,4.0nm,0.8s
XAN pmax pmax
comp=Z,49nm,4.6s
LZH Lanzhou 34.80 271 eP P 02 35 51.5 +2.5
LZH pP pwP 02 36 22.8 +1.9
LZH pmax pmax
comp=Z,30nm,1.0s
LZH pmax pmax
comp=Z,160nm,4.4s
GTA Gaotai 36.11 278 ⇑P P 02 36 01.3 +1.2
GTA PcP PcP 02 38 24.8 +1.9
GTA pmax pmax
comp=Z,29nm,0.8s
GTA pmax pmax
comp=Z,73nm,5.1s
GTA LR LR
comp=Z,100nm,15.5s
GTA LR LR
comp=Z,62nm,15.9s
GTA LR LR
comp=Z,100nm,15.9s
KDAK Kodiak Island 37.46 49 P P 02 36 11.1 0.0
comp=Z,16nm,0.7s,baz=314,slow=3.4,SNR=10

CD2 Chengdu 37.62 263 eP P 02 36 12.0 -0.9
BPAW Bear Paw Mtn. 37.89 38 P P 02 36 15.7 +1.0
KTH Kantishna Hill 37.92 39 P P 02 36 16.6 +1.6
MLY Manley 38.01 37 P P 02 36 16.3 +0.6
COLD Coldfoot 38.32 33 P P 02 36 19.6 +1.3
NRIK Noril'sk 38.47 330 P P 02 36 18.0 -1.5
comp=Z,3.4nm,0.5s,baz=107,slow=8.9,SNR=6.9
BWN Browne 38.56 38 P P 02 36 21.8 +1.6
RC01 Rabbit Creek A 38.58 43 P P 02 36 21.7 +1.2
TOLK Toolik Lake Re 38.66 31 P P 02 36 21.6 +0.5
TOLK IAmb IAmb 02 36 28.8
comp=Z,6.2nm,0.7s
TOLK Toolik Lake Re 38.66 31 P P 02 36 21.6 +0.5
baz=266
TGY Tagaytay City 38.90 226 LR LR 02 51 40.1
comp=Z,273nm,21.5s,baz=142,slow=35
MDM Murphy Dome 39.08 37 P P 02 36 25.6 +1.0
MDM IAmb IAmb 02 37 21.6
comp=Z,9.7nm,1.0s
WRH Wood River Hil 39.15 38 P P 02 36 26.1 +1.0
WRH IAmb IAmb 02 36 32.4
comp=Z,10nm,0.8s
KNK Knik Glacier 39.17 43 P P 02 36 25.9 +0.5
TCOL CIGO, UAF Yank 39.23 37 P P 02 36 27.2 +1.4
baz=272
COLA College 39.24 37 P P 02 36 27.4 +1.5
COLA IAmb IAmb 02 36 32.8
comp=Z,16nm,0.8s
COLA College 39.24 37 P P 02 36 27.4 +1.5
COLA pmax pmax
comp=Z,16nm,0.8s
POKR Poker Plat Res 39.41 37 P P 02 36 28.6 +1.3
baz=272,SNR=8.3
DHY Denali Highway 39.54 40 P P 02 36 29.2 +0.6
DHY IAmb IAmb 02 36 36.8
comp=Z,20nm,1.4s
DHY PcP PcP 02 38 34.6 +1.5
HDA Harding Lake 39.65 38 P P 02 36 29.3 0.0
baz=273,SNR=5.4
ILAR Eielson Array 39.66 37 P P 02 36 29.4 +0.1
comp=Z,3.0nm,0.7s,baz=265,slow=8.3,SNR=46
ILAR PcP PcP 02 38 32.4 -0.9
comp=Z,1.0nm,0.5s,baz=290,slow=3.8,SNR=7.4
PRP Porcupine Dome 40.20 36 P P 02 36 35.0 +1.1
PRP IAmb IAmb 02 36 37.9
comp=Z,9.0nm,0.6s
FYU Fort Yukon 40.27 34 IAmb IAmb 02 36 38.2
comp=Z,12nm,0.8s
ZALV Zalesovo Beam 40.97 306 P P 02 36 38.2 -2.1
comp=Z,2.7nm,0.5s,baz=78,slow=7.4,SNR=8.6
ZALV PcP PcP 02 38 36.6 -1.1
comp=Z,2.3nm,0.7s,baz=112,slow=3.8,SNR=6.2
ZALV ScP ScP 02 42 13.2 -1.1
comp=Z,0.8nm,0.6s,baz=106,slow=5.3,SNR=4.0
MENT Mentasta 41.21 40 IAmb IAmb 02 36 44.7
comp=Z,5.8nm,0.5s
KMI Kunming 41.88 257 P P 02 36 51.5 +3.2
KMI pmax pmax
comp=Z,17nm,0.6s
KMI pmax pmax
comp=Z,100nm,4.2s
EGAK Eagle 42.10 37 P P 02 36 49.5 +0.2
WMQ Urumqi 42.55 291 P P 02 36 54.5 +1.1
WMQ pP pwP 02 37 28.8 +2.4
WMQ pmax pmax
comp=Z,11nm,0.9s
WMQ pmax pmax
comp=Z,33nm,5.9s
WMQ LR LR
comp=Z,350nm,23.9s
WMQ LR LR
comp=Z,110nm,24.7s
EPYK Eagle Plains 43.69 34 P P 02 37 02.8 +0.6
EPYK IAmb IAmb 02 37 08.6
comp=Z,11nm,0.8s
EPYK Eagle Plains 43.69 34 P P 02 37 03.4 +1.2
baz=280
HYT Haines Junctio 44.51 42 P P 02 37 10.4 +1.5
HYT IAmb IAmb 02 37 12.2
comp=Z,11nm,0.9s
INK Inuvik 44.58 31 P P 02 37 09.6 +0.5
comp=Z,5.9nm,0.4s,baz=299,slow=9.1,SNR=51
INK Inuvik 44.58 31 IAmb IAmb 02 37 14.0
comp=Z,7.9nm,0.5s
MK31 Makanchi Array 44.85 297 P P 02 37 11.0 -0.7
MK31 IAmb IAmb 02 37 12.8
comp=Z,14nm,0.7s
MK31 Makanchi Array 44.85 297 P P 02 37 11.0 -0.7
MK31 pmax pmax
comp=Z,14nm,0.7s
MKAR Makanchi Array 44.85 297 P P 02 37 11.0 -0.7
comp=Z,13nm,0.7s,baz=78,slow=7.6,SNR=91
MKAR PcP PcP 02 38 50.7 -0.2
comp=Z,2.2nm,0.6s,baz=66,slow=5.1,SNR=4.5
MKAR ScP ScP 02 42 28.9 -1.3
comp=Z,0.7nm,0.7s,baz=61,slow=3.8,SNR=5.0
MAKZ Makanchi 45.04 297 P P 02 37 12.7 -0.4
MAKZ IAmb IAmb 02 37 14.4
comp=Z,15nm,0.7s
MAKZ Makanchi 45.04 297 P P 02 37 12.7 -0.4
MAKZ pmax pmax
comp=Z,15nm,0.7s
KURK Kurchatov 45.59 303 eP P 02 37 16.2 -1.2
KURK Kurchatov 45.59 303 P P 02 37 16.2 -1.2
KURK Kurchatov 45.59 303 P P 02 37 16.2 -1.2
KURK pmax pmax
comp=Z,13nm,0.5s
KURBB Kurchatov Arra 45.68 303 P P 02 37 16.2 -1.9
C36M Paulatuk 47.66 29 IAmb IAmb 02 38 53.7
comp=Z,7.5nm,0.6s
C36M Paulatuk 47.66 29 P P 02 37 33.4 +0.2
baz=288
DLBC Dease Lake 48.86 44 P P 02 37 44.0 +1.3
comp=Z,6.0nm,0.9s,baz=335,slow=3.9,SNR=3.6
DLBC Dease Lake 48.86 44 IAmb IAmb 02 37 46.3
comp=Z,9.0nm,0.9s
CMAR Chiang Mai Arr 48.97 254 P P 02 37 45.5 +1.6
comp=Z,1.2nm,0.4s,baz=42,slow=7.0,SNR=7.4
CMAR PcP PcP 02 39 06.8 +0.8
comp=Z,0.5nm,0.3s,baz=2.0,slow=2.4,SNR=4.6
CMAR ScP ScP 02 42 49.0 +1.2
comp=Z,1.0nm,0.5s,baz=346,slow=4.7,SNR=4.3
BRVK Borovoye 49.43 309 eP P 02 37 45.9 -1.1
BRVK Borovoye 49.43 309 P P 02 37 46.0 -1.0
BRVK IAmb IAmb 02 37 46.6
comp=Z,6.5nm,0.7s
BRVK Borovoye 49.43 309ceP P 02 37 45.9 -1.1
BRVK pmax pmax
comp=Z,11nm,1.3s
KDJ Kajisay 50.20 293 P P 02 37 53.8 +0.6
KDJ Kajisay 50.20 293 P P 02 37 53.8 +0.6
KDJ pmax pmax
comp=Z,30nm,0.7s
ULHL Ulahol 50.75 294 P P 02 37 58.6 +1.2
SNR=9.0
BOOM Boomskoye usch 50.82 294 P P 02 37 58.0 +0.1
BOOM Boomskoye usch 50.82 294 P P 02 37 58.0 +0.1
TAPN Taplejung 51.04 271 eP P 02 38 02.4 +2.6
comp=Z,10nm,0.5s
CHMS Chumysh 51.33 295 P P 02 38 02.2 +0.7
SNR=5.9
USP Ospenovka 51.36 296 P P 02 38 02.2 +0.5
SNR=32
KBK Karagaybulak 51.38 295 P P 02 38 03.2 +1.2
SNR=32
KZA Kyzart 51.47 294 P P 02 38 04.5 +1.5
SNR=42
AAK Ala-Archa 51.68 295 P P 02 38 04.7 +0.6
comp=Z,9.8nm,0.6s,baz=86,slow=4.0
AAK Ala-Archa 51.68 295 P P 02 38 04.8 +0.6
SNR=16
AAK Ala-Archa 51.68 295 eP P 02 38 04.9 +0.7
AAK Ala-Archa 51.68 295 IAmb IAmb 02 38 06.2
comp=Z,14nm,0.8s
AAK Ala-Archa 51.68 295ceP P 02 38 04.9 +0.7
AAK pmax pmax
comp=Z,13nm,0.7s
UCH Uchtor 51.87 295 P P 02 38 07.1 +1.1
SNR=9.2
JIRN Jiri 51.93 273 eP P 02 38 08.3 +1.8
comp=Z,61nm,0.7s
GUN Gumba 51.99 273 eP P 02 38 09.8 +2.8
comp=Z,24nm,0.4s
RAMN Ramite 52.07 272 eP P 02 38 08.2 +0.8
comp=Z,24nm,0.5s
EKS2 Erkin-Say 52.12 296 P P 02 38 08.4 +0.9

SNR=29
AML Almayashu 52.45 295 P P 02 38 11.5 +1.4
SNR=23
DMN Daman 52.72 273 eP P 02 38 14.4 +2.2
comp=Z,21nm,0.8s
SVE Sverdlovsk 52.79 316 eP P 02 38 10.2 -1.8
SVE pmax pmax
comp=Z,18nm,0.7s
GKN Gorkha 52.81 274 eP P 02 38 14.8 +2.0
comp=Z,17nm,0.3s
DANN Dangsing 53.22 275 eP P 02 38 18.1 +2.1
RES Resolute Bay 53.23 17 P P 02 38 14.4 -0.6
comp=Z,20nm,0.5s,baz=326,slow=8.1,SNR=121
RES PcP PcP 02 39 21.3 +0.5
comp=Z,3.2nm,0.7s,baz=321,slow=5.1,SNR=2.4
RES ScP ScP 02 43 06.0 +0.7
comp=Z,0.8nm,1.0s,baz=322,slow=6.0,SNR=3.8
RES Resolute Bay 53.23 17 P P 02 38 14.3 -0.6
SPA0 Spitsbergen Ar 53.52 349 eP P 02 38 15.0 -2.1
KK31 Karatay Array 53.96 298 P P 02 38 20.8 0.0
KK31 IAmb IAmb 02 38 21.8
comp=Z,12nm,0.8s
KK31 Karatay Array 53.96 298 P P 02 38 20.8 0.0
KK31 pmax pmax
comp=Z,12nm,0.8s
KKAR Karatay Array 53.96 298 P P 02 38 20.8 0.0
KKAR IAmb IAmb 02 38 21.8
comp=Z,12nm,0.8s
KKAR Karatay Array 53.96 298 P P 02 38 20.8 0.0
KKAR pmax pmax
comp=Z,12nm,0.8s
YKA Yellowknife Ar 53.97 35 P P 02 38 20.9 +0.5
comp=Z,2.8nm,0.6s,baz=299,slow=6.9,SNR=24
YKA PcP PcP 02 39 24.3 +0.4
comp=Z,1.4nm,0.7s,baz=296,slow=3.7,SNR=6.2
ARU Arti 53.99 317 eP P 02 38 19.5 -1.2
ARU Arti 53.99 317 P P 02 38 19.2 -1.5
ARU Arti 53.99 317c iP P 02 38 19.1 -1.6
ARU 02 39 23.3
ARU 02 40 19.9
ARU S S 02 45 42.6 -2.9
ARU SS SKiKP 02 49 20.4 +2.4
ARU pmax pmax
comp=Z,13nm,0.6s
LVZ Lovozero 56.88 336ceP P 02 38 40.3 -1.0
LVZ pmax pmax
comp=Z,83nm,2.5s
PRGR Permogore 56.92 326 eP P 02 38 39.4 -2.1
PRGR pmax pmax
comp=Z,38nm,0.8s
AB31 Akbulak array 56.96 309 iP P 02 38 41.5 -0.6
KIRV Kirov 57.07 322 iP P 02 38 41.3 -1.4
AKTO Aktyubinsk 57.37 311 P P 02 38 43.5 -1.5
NIL Nilore 57.38 287 P P 02 38 46.0 +0.6
NIL Nilore 57.38 287 P P 02 38 46.0 +0.6
NIL pmax pmax
comp=Z,14nm,0.8s
D03D Eldon 57.66 53 P P 02 38 48.5 +1.4
baz=304
B05A Bryant 57.82 52 P P 02 38 49.0 +0.9
baz=304
TMCR Tamitsa 58.18 331 eP P 02 38 48.5 -1.8
TMCR pmax pmax
comp=Z,23nm,0.8s
ARCES ARCESS Array B 58.22 340 P P 02 38 49.4 -1.2
comp=Z,2.2nm,0.4s,baz=44,slow=8.7,SNR=26
ARE0 ARCESS Array S 58.22 340 eP P 02 38 49.5 -1.1
KTK1 Kautokeino 59.15 340 eP P 02 38 56.1 -0.9
B08A Colville Reser 59.29 51 P P 02 38 59.0 +0.7
TRO Tromso 59.67 342 eP P 02 38 59.2 -1.4
KBL Kabul 59.68 290 P P 02 39 01.3 -0.2
KBL IAmb IAmb 02 39 03.4
comp=Z,7.7nm,1.0s
KBL Kabul 59.68 290 P P 02 39 01.3 -0.2
KBL pmax pmax
comp=Z,8.0nm,1.0s
KLMR Klimovskoe 59.74 328 eP P 02 38 58.4 -2.7
KLMR pmax pmax
comp=Z,20nm,0.8s
KLMR Klimovskoe 59.74 328 eP P 02 38 58.5 -2.7
KLMR AMP 02 39 00.5
comp=Z,20nm,0.8s
G05D Wamic, OR 59.97 55 P P 02 39 04.6 +1.5
baz=306,SNR=5.7
E07A Sunnyside 60.04 53 IAmb IAmb 02 39 05.0
comp=Z,4.5nm,0.7s
C09A Chrisman Ranch 60.20 51 IAmb IAmb 02 39 05.9
comp=Z,4.5nm,0.6s
L02E Cave Junction 60.41 59 P P 02 39 07.6 +1.5
baz=306
I05D Terrebonne, OR 60.48 56 P P 02 39 07.7 +1.1
baz=306
NEW Newport 60.55 50 P P 02 39 07.2 +0.3
NEW IAmb IAmb 02 39 08.6
comp=Z,4.8nm,0.8s
NEW Newport 60.55 50 P P 02 39 07.3 +0.3
NEW pmax pmax
comp=Z,5.0nm,0.9s
NEW Newport 60.55 50 P P 02 39 07.6 +0.6
baz=306
J04D Umpqua Nationa 60.67 57 P P 02 39 09.6 +1.5
baz=306
E09A Wood Farm, Sta 61.02 52 IAmb IAmb 02 39 11.6
comp=Z,5.8nm,0.7s
L04D Klamath Falls 61.16 58 P P 02 39 12.6 +1.3
baz=306,SNR=7.8
J05D Fort Rock, OR 61.16 56 P P 02 39 13.0 +1.7
baz=306,SNR=8.7
YBH Yreka Blue Hor 61.20 59 IAmb IAmb 02 39 14.0
comp=Z,17nm,1.5s
M02C Callahan 61.31 59 P P 02 39 13.9 +1.6
baz=307
N02D Trinity Center 61.65 59 P P 02 39 16.4 +1.8
baz=307
M04C Macdoel 61.69 58 P P 02 39 16.3 +1.4
baz=307,SNR=5.1
WALA Waterton Lakes 61.78 48 IAmb IAmb 02 39 16.9
comp=Z,5.2nm,0.9s
STEI Steigen 61.85 342 eP P 02 39 13.4 -1.9
LOF Lofoten 62.05 343 eP P 02 39 15.3 -1.3
O02D Mt. Diablo Mer 62.08 60 P P 02 39 19.1 +1.7
baz=307
SUMG Summit 62.38 2 iP P 02 39 18.0 -1.3
SUMG Summit 62.38 2 P P 02 39 18.9 -0.3
SUMG IAmb IAmb 02 39 20.6
comp=Z,14nm,1.1s
SUMG Summit 62.38 2 P P 02 39 19.0 -0.3
SUMG pmax pmax
comp=Z,14nm,1.1s
JTMT Jette 62.39 49 IAmb IAmb 02 39 21.4
comp=Z,7.0nm,1.2s
BMO Blue Mountains 62.49 53 IAmb IAmb 02 39 22.2
comp=Z,12nm,1.6s
MOD Modoc Plateau 62.54 57 IAmb IAmb 02 39 22.5
comp=Z,5.3nm,0.8s
O03E Paynes Creek 62.61 59 P P 02 39 21.7 +0.7
baz=308,SNR=6.1
J08A Circle Bar Ran 62.73 55 IAmb IAmb 02 39 23.9
comp=Z,11nm,1.3s
MSO Missoula 63.14 50 IAmb IAmb 02 39 26.1
comp=Z,10nm,1.1s
MSO Missoula 63.14 50 P P 02 39 25.2 +0.9
baz=308,SNR=6.2
WVOR Wild Horse Val 63.20 56 IAmb IAmb 02 39 26.9
comp=Z,7.7nm,1.1s
MOR8 Moi Rana 63.48 341 eP P 02 39 23.2 -2.9
BEKR Beckworth 63.75 59 IAmb IAmb 02 39 30.2
comp=Z,8.2nm,1.0s
FFC Flin Flon 63.87 38 P P 02 39 29.5 +0.6
FFC IAmb IAmb 02 39 30.2
comp=Z,6.7nm,0.9s
FFC Flin Flon 63.87 38 P P 02 39 29.5 +0.6
FFC pmax pmax
comp=Z,7.0nm,0.9s
AFDM Forest Hills D 63.94 60 IAmb IAmb 02 39 32.0
comp=Z,6.7nm,1.3s
FIA1 FINESS Array S 64.02 333 P P 02 39 28.9 -0.8
FINES FINESS Array B 64.03 333 P P 02 39 28.1 -1.7
comp=Z,29nm,0.5s,baz=39,slow=7.8,SNR=195
FCC Fort Churchill 64.20 31 P P 02 39 31.1 +0.2
FCC IAmb IAmb 02 39 34.6
comp=Z,6.5nm,0.8s
FCC Fort Churchill 64.20 31 P P 02 39 31.1 +0.2
FCC pmax pmax
comp=Z,7.0nm,0.9s
PAHR Pah Rah Range 64.44 59 IAmb IAmb 02 39 34.9
comp=Z,11nm,1.3s
VCNR Virginia City 64.53 59 IAmb IAmb 02 39 35.7
comp=Z,5.1nm,0.9s
EGMT Eagleton 64.59 47 IAmb IAmb 02 39 35.4
comp=Z,15nm,1.2s
EGMT Eagleton 64.59 47 P P 02 39 34.5 +0.7
baz=310,SNR=5.5
GEYT Alibeck 64.65 299 P P 02 39 35.2 +0.9
comp=Z,21nm,0.8s,baz=31,slow=3.5,SNR=41
OBN Obninsk 64.74 324 eP P 02 39 33.3 -1.2
OBN Obninsk 64.74 324 P P 02 39 33.4 -1.1
OBN Obninsk 64.74 324c iP P 02 39 32.5 -2.0
OBN i 02 40 13.7
OBN pmax pmax
comp=Z,16nm,1.0s
DLMT Dillon 64.78 50 P P 02 39 36.1 +0.9
DLMT IAmb IAmb 02 39 37.6
comp=Z,4.7nm,0.6s
CMB Columbia Colle 64.87 61 IAmb IAmb 02 39 37.6
comp=Z,6.2nm,0.9s
YERR Yerington 64.97 59 IAmb IAmb 02 39 38.6
comp=Z,14nm,1.2s
VRH Novokhopyorsk 65.11 318 eP P 02 39 35.3 -1.7
VRH pmax pmax
comp=Z,20nm,0.7s
WAKR Walker 65.15 60 IAmb IAmb 02 39 40.0
comp=Z,8.7nm,1.1s
NSS Namsos 65.42 341 eP P 02 39 37.5 -1.3
LPSR Galich'ya Gora 65.45 321 eP P 02 39 37.9 -1.2
LPSR pmax pmax
comp=Z,20nm,1.0s
KVN Kaiserville 65.62 59 P P 02 39 41.9 +1.1
KVN IAmb IAmb 02 39 42.8
comp=Z,11nm,1.1s
KVN Kaiserville 65.62 59 P P 02 39 41.9 +1.1
KVN pmax pmax
comp=Z,11nm,1.1s
RYN Ryan 65.63 59 IAmb IAmb 02 39 42.8
comp=Z,5.8nm,1.0s
NVAR Mina Array Bea 65.89 59 P P 02 39 43.6 +1.1
comp=Z,3.2nm,0.5s,baz=296,slow=7.2,SNR=40
NVAR PcP PcP 02 40 13.8 +1.5
comp=Z,2.0nm,0.7s,baz=308,slow=4.9,SNR=6.5
MDPB Devils Postpil 65.92 60 IAmb IAmb 02 39 44.8
comp=Z,4.8nm,0.9s
NV11 Mina Array Sit 65.98 59 IAmb IAmb 02 39 45.0
comp=Z,6.9nm,1.1s
WB0 Warramunga Arr 65.98 195 P P 02 39 42.8 -0.1
WB0 IAmb IAmb 02 39 43.6
comp=Z,11nm,0.9s
WRA Warramunga Arr 66.17 195 P P 02 39 44.0 -0.1
comp=Z,4.3nm,0.5s,baz=12,slow=6.7,SNR=27
WRA PcP PcP 02 40 14.4 +1.2
comp=Z,2.5nm,0.8s,baz=11,slow=4.9,SNR=5.7
VSR Storozhevoye 66.29 320 eP P 02 39 43.4 -1.2
VSR pmax pmax
comp=Z,30nm,1.1s
VORD Divnogorie 66.40 319 eP P 02 39 44.4 -0.9
VORD pmax pmax
comp=Z,9.0nm,0.5s
H17A Grant Village 66.51 50 IAmb IAmb 02 39 49.9
comp=Z,8.9nm,1.1s
H17A Grant Village 66.51 50 P P 02 39 49.0 +2.6
baz=311,SNR=6.4
RLMT Red Lodge 66.73 49 IAmb IAmb 02 40 18.1
comp=Z,22nm,1.9s
RLMT Red Lodge 66.73 49 P P 02 39 49.0 +1.2
baz=312,SNR=5.4
FXWY Fox Creek 66.75 51 IAmb IAmb 02 39 50.3
comp=Z,23nm,1.7s
TBLU Trondheim 66.91 341 eP P 02 39 45.9 -2.4
REDW Red Top Meadow 67.03 51 P P 02 39 50.6 +0.9
REDW IAmb IAmb 02 39 53.4
comp=Z,22nm,1.6s
VES Vestal, Richgr 67.06 62 P P 02 39 50.4 +0.6
baz=310
DGMT Dagmar 67.08 44 P P 02 39 50.2 +0.6
baz=313,SNR=7.1
LAO LASA Array 67.27 46 IAmb IAmb 02 39 54.8
comp=Z,20nm,1.5s
LAO LASA Array 67.27 46 P P 02 39 52.0 +1.0
baz=313
CWC Cottonwood Cre 67.30 61 P P 02 39 52.2 +0.7
baz=310
GRAC Grapevine Rang 67.38 60 P P 02 39 53.2 +1.4
baz=310,SNR=12
R11A Troy Canyon, C 67.58 58 P P 02 39 54.1 +0.9
baz=311,SNR=8.6
HWUT Hardware Ranch 67.79 53 IAmb IAmb 02 39 56.4
comp=Z,22nm,1.6s
MPMC Manual Prospec 67.91 61 P P 02 39 56.1 +0.8
baz=311,SNR=10.0
DUG Dugway, Tooele 68.00 55 P P 02 39 56.2 +0.4
DUG IAmb IAmb 02 39 57.8
comp=Z,12nm,1.1s
DUG Dugway, Tooele 68.00 55 P P 02 39 56.2 +0.4
DUG pmax pmax
comp=Z,12nm,1.2s
DUG Dugway, Tooele 68.00 55 P P 02 39 56.8 +1.0
baz=311,SNR=9.2
FURC Furnace Creek, 68.03 60 P P 02 39 57.0 +1.2
baz=311,SNR=9.7
TPNV Topopah Spring 68.09 59 IAmb IAmb 02 39 58.2
comp=Z,9.4nm,0.9s
TPNV Topopah Spring 68.09 59 P P 02 39 57.3 +0.9
baz=311,SNR=13
BW06 Boulder Array 68.14 51 P P 02 39 57.3 +0.6
baz=312
PD31 Pinedale Array 68.14 51 IAmb IAmb 02 39 57.7
comp=Z,4.7nm,0.6s
PDAR Pinedale Array 68.14 51 P P 02 39 57.1 +0.4
comp=Z,5.0nm,0.6s,baz=266,slow=1.3,SNR=64
LRMC Laurel Mtn Rad 68.17 61 P P 02 39 57.5 +0.6
baz=311
DOMB Dombas 68.24 341 eP P 02 39 55.9 -0.8
EDW2 Edwards Air Fo 68.50 62 P P 02 39 58.8 +0.8
baz=311,SNR=8.5
AKT Akhty 68.50 308⇑iP P 02 39 59.6 +0.8
AKT e 02 40 24.3
AKT e*PP pP 02 40 31.4 -0.2
AKT pmax pmax
comp=Z,36nm,0.8s
NB2 NORSAR Subarra 68.59 339 P P 02 39 57.7 -1.2
comp=Z,9.9nm,0.5s,baz=32,slow=6.9
NB2 NORSAR Subarra 68.59 339 P P 02 39 57.7 -1.2
baz=32,slow=6.9
NOA NORSAR Array B 68.59 339 P P 02 39 57.6 -1.2
comp=Z,10.0nm,0.5s,baz=31,slow=6.6,SNR=136
SHOC Shoshone, Teco 68.76 60 P P 02 40 01.2 +0.9
baz=311
NC602 NORSAR Array S 68.77 339 eP P 02 39 58.3 -1.7
GSC Goldstone, Bar 68.82 61 P P 02 40 01.6 +0.7
baz=311
BFSC Mount Baldy Ra 68.99 62 P P 02 40 02.8 +0.8
baz=311,SNR=5.3
TUQ Turquoise Moun 69.28 60 P P 02 40 04.7 +0.9
baz=312,SNR=12
HEC Hector,Ludlow 69.42 61 P P 02 40 05.5 +1.0
baz=312,SNR=5.3
KIV Kislovodsk 69.56 312 ⇑P P 02 40 05.9 +0.7
KIV Kislovodsk 69.56 312 eP P 02 40 06.6 +1.4
KIV Kislovodsk 69.56 312 P P 02 40 06.3 +1.0
KIV Kislovodsk 69.56 312 eP P 02 40 06.6 +1.4
KIV pmax pmax
comp=Z,265nm,0.9s
KBZ Khabaz 69.60 312 P P 02 40 06.4 +1.0
comp=Z,36nm,0.7s,baz=60,slow=4.1,SNR=114
KBZ Khabaz 69.60 312 eP P 02 40 05.0 -0.4
ULM Lac du Bonnet 69.67 38 P P 02 40 05.5 -0.2
comp=Z,3.5nm,0.4s,baz=309,slow=6.5,SNR=12
ULM Lac du Bonnet 69.67 38 IAmb IAmb 02 40 05.8
comp=Z,4.2nm,0.5s
MURC Murrieta 69.70 63 P P 02 40 06.4 +0.2
baz=312
ZEI Tsey 69.71 311 eP P 02 40 05.5 -0.9
ZEI pmax pmax
comp=Z,30nm,0.8s
MDND Maddock 69.72 42 P P 02 40 07.3 +1.2
baz=316
SHA1 Shidzhatmaz 69.72 312 iP P 02 40 05.6 -0.8
K22A Casper 69.86 49 IAmb IAmb 02 40 08.0
comp=Z,4.8nm,0.6s
K22A Casper 69.86 49 P P 02 40 07.8 +0.6
baz=314
GMRC Granite Mounta 69.87 61 P P 02 40 08.3 +0.9
baz=312,SNR=6.9
AS31 Alice Springs 69.88 194 P P 02 40 08.4 +1.2
ASAR Alice Springs 69.88 194 P P 02 40 08.1 +0.9
comp=Z,5.8nm,0.7s,baz=9.4,slow=5.7,SNR=76
TBLG Delisi 69.98 309 P P 02 40 08.4 +0.6
TBLG Delisi 69.98 309 P P 02 40 08.4 +0.6
PFO Pinyon Flats O 70.15 62 P P 02 40 09.9 +0.8
PFO Pinyon Flats O 70.15 62 P P 02 40 09.9 +0.8
PFO pmax pmax
comp=Z,5.0nm,1.0s
PFO Pinyon Flats O 70.15 62 P P 02 40 10.2 +1.1
baz=312
XPFO Pion Flat 70.15 62 P P 02 40 09.6 +0.5
RSSD Black Hills 70.16 47 P P 02 40 09.4 +0.3
RSSD IAmb IAmb 02 40 10.2
comp=Z,5.9nm,0.5s
RSSD Black Hills 70.16 47 P P 02 40 09.4 +0.3
RSSD pmax pmax
comp=Z,6.0nm,0.5s
RSSD Black Hills 70.16 47 P P 02 40 09.4 +0.3
baz=314
TPFO Pinon Flats 70.16 62 P P 02 40 09.7 +0.6
baz=312
BELC Belle Mtn. Jos 70.18 62 P P 02 40 09.6 +0.3
baz=312,SNR=5.4
KONO Kongsberg 70.20 339 eP P 02 40 08.7 -0.1
109C Camp Elliot, M 70.22 63 IAmb IAmb 02 40 10.8
comp=Z,9.4nm,1.1s
IRM Iron Mountain 70.60 61 P P 02 40 12.7 +1.0
baz=312,SNR=13
O20A White River Ci 70.64 52 IAmb IAmb 02 40 13.9
comp=Z,4.7nm,0.7s
O20A White River Ci 70.64 52 P P 02 40 12.7 +0.6
baz=313,SNR=5.2
MONP2 Monument Peak 70.65 63 P P 02 40 12.8 +0.6
baz=312
BC3 Big Chuckawall 70.75 62 P P 02 40 13.4 +0.7
baz=312,SNR=5.9
SUW Suwalki 70.77 329 P P 02 40 11.7 -0.6
SUW Suwalki 70.77 329 P P 02 40 11.7 -0.6
SUW pmax pmax
comp=Z,25nm,1.1s
AKH Akhalkalaki 70.88 310 ⇓P P 02 40 15.1 +1.6
AKH Akhalkalaki 70.88 310 P P 02 40 14.4 +0.9
AKH IAmb IAmb 02 40 16.1
comp=Z,12nm,0.9s
AKH Akhalkalaki 70.88 310 P P 02 40 14.4 +0.9
AKH pmax pmax
comp=Z,12nm,0.9s
AKASG Malin Array Be 71.00 324 P P 02 40 12.8 -0.9
comp=Z,7.5nm,0.5s,baz=37,slow=6.3,SNR=49
AKBB Malin Array Si 71.00 324 P P 02 40 13.2 -0.6
AKBB Malin Array Si 71.00 324 P P 02 40 13.2 -0.6
AKBB pmax pmax
comp=Z,12nm,0.7s
SWSC Sam W. Stewart 71.00 62 P P 02 40 14.5 +0.4
baz=312
IKP In-Ko-Pah, Jac 71.01 63 P P 02 40 14.7 +0.4
baz=312
GNI Garni 71.07 308 P P 02 40 14.3 -0.3
GNI Garni 71.07 308 P P 02 40 14.3 -0.3
GNI pmax pmax
comp=Z,13nm,0.8s
AGMN Agassiz Nation 71.11 40 IAmb IAmb 02 40 15.2
comp=Z,7.9nm,1.1s
AGMN Agassiz Nation 71.11 40 P P 02 40 14.2 -0.3
baz=318
Y12C Blythe 71.26 61 IAmb IAmb 02 40 17.5
comp=Z,8.8nm,0.8s
Y12C Blythe 71.26 61 P P 02 40 16.7 +1.0
baz=312,SNR=5.5
SOC Sochi 71.35 313 eP P 02 40 15.7 -0.3
SOC e 02 43 01.2
SOC ePPP PPP 02 44 33.6
SOC eS S 02 49 21.9 -0.7
SOC eSS SS 02 54 00.6 +1.9
SOC pmax pmax
comp=Z,36nm,0.7s
N23A Red Feather La 71.39 50 P P 02 40 17.8 +1.1
baz=314
GLA Glamis 71.54 62 IAmb IAmb 02 40 19.2
comp=Z,7.7nm,0.8s
GLA Glamis 71.54 62 P P 02 40 18.5 +1.1
baz=313
BATM Batumi 71.72 311 ⇓P P 02 40 19.1 +0.9
BCA Borcka 71.86 311 ⇑P P 02 40 19.8 +0.6
Y14A Wickenburg 72.07 60 IAmb IAmb 02 40 22.4
comp=Z,7.7nm,0.9s
ISCO Idaho Springs 72.33 51 P P 02 40 23.3 +0.9
ISCO Idaho Springs 72.33 51 P P 02 40 23.3 +0.9
ISCO pmax pmax
comp=Z,3.0nm,0.9s
ISCO Idaho Springs 72.33 51 P P 02 40 23.5 +1.2
baz=315,SNR=6.7
MVCO Mesa Verde 72.51 55 P P 02 40 24.3 +0.9
baz=314,SNR=6.3
X16A Lo Mia Camp, P 72.69 59 IAmb IAmb 02 40 26.6
comp=Z,6.5nm,0.8s
S22A 4UR Ranch, Cre 73.09 53 P P 02 40 28.2 +1.3
baz=315,SNR=8.9
SORM Soroca 73.33 323 ⇑P P 02 40 27.9 +0.3
SDCO Great Sand Dun 73.84 53 P P 02 40 32.1 +0.9
baz=315,SNR=6.8
ECSD EROS Data Cent 74.15 43 P P 02 40 32.5 -0.1
baz=318,SNR=8.5
UOSS Minazif 74.36 290 P P 02 40 33.9 -0.2
UOSS IAmb IAmb 02 40 36.7
comp=Z,9.0nm,0.9s
KWP Kalwaria Pacla 74.45 327 eP P 02 40 34.9 +0.7
KWP Kalwaria Pacla 74.45 327 eP P 02 40 34.9 +0.7
TUC Tucson 74.53 60 P P 02 40 35.9 +0.8
TUC Tucson 74.53 60 P P 02 40 35.9 +0.8
TUC pmax pmax
comp=Z,4.0nm,0.9s
TUC Tucson 74.53 60 P P 02 40 35.9 +0.8
baz=314
LEOM Leova 74.66 322 ⇑P P 02 40 36.1 +0.7
VASR Vaslui 74.73 322 ⇓P P 02 40 36.6 +0.7
PRAR RASCA 74.83 324 ⇓P P 02 40 36.6 +0.1
T25A Trinidad 74.88 52 P P 02 40 37.7 +0.6
baz=316
DIKM Dikmen 75.02 315 ⇑P P 02 40 38.6 +1.0
BUR08 Bucovina Ar. S 75.04 324 IAmb IAmb 02 40 39.3
comp=Z,7.8nm,0.7s
BURAR Bucovina Array 75.06 324 ⇑P P 02 40 37.8 0.0
BIR Birlad 75.09 322 ⇓P P 02 40 39.1 +1.2
KOLS Kolonicke sedl 75.18 327 eP P 02 40 38.8 +0.4
KOLS pmax pmax
comp=Z,7.0nm,1.1s
KOLS Kolonicke sedl 75.18 327 eP P 02 40 38.8 +0.4
ANMO Albuquerque 75.27 55 P P 02 40 40.0 +0.6
ANMO Albuquerque 75.27 55ceP P 02 40 40.8 +1.4
ANMO pmax pmax
comp=Z,4.0nm,1.3s
ANMO Albuquerque 75.27 55 P P 02 40 40.5 +1.1
baz=315
TESR Tescani 75.32 323 ⇓P P 02 40 39.2 -0.1
GHRR 75.35 322 ⇑P P 02 40 41.0 +1.6
TLCR 75.41 321 ⇑P P 02 40 40.5 +0.8
CRVS Cervenica-Dubn 75.52 327 eP P 02 40 41.1 +0.8
CRVS Cervenica-Dubn 75.52 327 eP P 02 40 41.1 +0.8
NIE Niedzica 75.53 328 eP P 02 40 41.4 +1.0
NIE Niedzica 75.53 328 eP P 02 40 41.4 +1.0
PETR Petresti 75.69 322 ⇓P P 02 40 42.5 +1.1
CFR Carcaliu 75.72 321 ⇓P P 02 40 42.0 +0.5
TRPA Tarpa 75.72 326 ⇑P P 02 40 42.1 +0.6
ODBI Odobesti 75.74 322 ⇓P P 02 40 42.8 +1.2
KSP Ksiaz 75.78 331 eP P 02 40 42.5 +0.7
KSP Ksiaz 75.78 331 eP P 02 40 42.5 +0.7
VRI Vrincioaia 75.80 322 ⇑P P 02 40 42.5 +0.5
ARCR ARCALIA 75.83 324 ⇓P P 02 40 43.6 +1.4
PLOR Plostina 75.84 322 ⇑P P 02 40 42.6 +0.3
TOPG Topolog 75.84 321 ⇑P P 02 40 42.8 +0.5
SCHQ Schefferville 75.86 20 P P 02 40 41.5 -0.6
comp=Z,2.3nm,0.5s,baz=242,slow=13,SNR=7.5
OKC Ostrava-Krasne 75.98 329 eP P 02 40 43.7 +0.8
OKC Ostrava-Krasne 75.98 329 eP P 02 40 43.7 +0.8
OZUR 76.02 323 ⇓P P 02 40 44.0 +0.7
OSTC Ostas 76.05 331 eP P 02 40 44.1 +0.8
BISRR Bisoca 76.06 322 ⇓P P 02 40 44.4 +0.9
LANS Liptovska Anna 76.06 328 eP P 02 40 45.3 +1.8
LANS pmax pmax
comp=Z,9.0nm,0.9s
LANS Liptovska Anna 76.06 328 eP P 02 40 45.3 +1.8
GRER 76.07 322 ⇑P P 02 40 45.2 +1.6
CHVC Chvalec 76.08 331 eP P 02 40 44.3 +0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DPC	Dobruska-Polom	76.19	331	eP	P	02 40 44.5	+0.3
DPC	Dobruska-Polom	76.19	331	eP	P	02 40 44.5	+0.3
HARR	Harsova	76.19	321	⇑P	P	02 40 44.7	+0.5
121A	Cookes Peak, D	76.19	58	P	P	02 40 45.4	+0.8
121A	Cookes Peak, D	76.19	58	P	P	02 40 46.2	+1.6
	baz=315,SNR=5.5						
KECS	Kecovo	76.23	327	eP	P	02 40 45.2	+0.8
KECS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KECS	Kecovo	76.23	327	eP	P	02 40 45.2	+0.8
ILGA	Ilgaz	76.24	315	P	P	02 40 45.8	+0.9
MORC	Moravsky Berou	76.24	330	eP	P	02 40 45.3	+0.8
MORC	Moravsky Berou	76.24	330	⇑P	P	02 40 45.9	+1.5
MORC	Moravsky Berou	76.24	330	IAmb	IAmb	02 40 46.4	
	comp=Z,12nm,0.9s						
KRLC	Kraliky	76.26	330	eP	P	02 40 44.7	+0.1
KRLC	Kraliky	76.26	330	eP	P	02 40 44.7	+0.1
DOPR	Dopca	76.29	323	⇑P	P	02 40 45.8	+1.0
MLR	Muntele Rosu	76.43	322	⇑P	P	02 40 46.5	+0.8
MLR	Muntele Rosu	76.43	322	IAmb	IAmb	02 40 47.8	
	comp=Z,18nm,1.4s						
CJR	Cluj-Napoca	76.44	325	⇑P	P	02 40 46.8	+1.1
CLL	Collm	76.47	333	i P	P	02 40 46.4	+0.7
	comp=Z,18nm,0.8s						
CLL				Lm	MLR	04 22 00.0	
	comp=Z,100nm,21.1s						
CLL	Collm	76.47	333	i P	P	02 40 46.4	+0.7
CLL				pmax	pmax		
	comp=Z,18nm,0.8s						
AMRR	Amara	76.52	321	⇑P	P	02 40 47.3	+1.3
BRG	Berggiesshubel	76.54	332	eP	P	02 40 46.0	-0.1
	comp=Z,4.0nm,1.1s						
BRG	Berggiesshubel	76.54	332	eP	P	02 40 46.0	-0.1
BRG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
PVCC	Panska Ves	76.63	332	eP	P	02 40 47.4	+0.8
PVCC	Panska Ves	76.63	332	eP	P	02 40 47.4	+0.8
ICOR	Ion Corvin	76.70	321	⇓P	P	02 40 48.4	+1.4
DRGR		76.74	325	⇑P	P	02 40 47.4	0.0
VYHS	Vyhne	76.84	328	eP	P	02 40 48.5	+0.7
VYHS	Vyhne	76.84	328	eP	P	02 40 48.5	+0.7
VOIR		76.86	323	⇑P	P	02 40 49.0	+0.9
RASA	Rasa	76.91	321	⇑P	P	02 40 49.0	+0.7
PSZ	Piszkesteto	76.92	327	⇑P	P	02 40 49.8	+1.4
SULR		76.94	322	⇑P	P	02 40 48.9	+0.5
JAVC	Velka Javorina	76.97	329	eP	P	02 40 50.4	+1.8
VRAC	Vranov	76.97	330	eP	P	02 40 49.7	+1.2
VRAC	Vranov	76.97	330	⇑P	P	02 40 50.1	+1.6
MTUR	Matau	77.02	323	⇓P	P	02 40 50.1	+1.2
STKA	Stephens Creek	77.02	186	P	P	02 40 50.0	+1.2
	comp=Z,1.8nm,0.6s,baz=1.3,slow=7.6,SNR=7.1						
PRA	Prague	77.07	332	eP	P	02 40 50.1	+1.1
PRA	Prague	77.07	332	eP	P	02 40 50.1	+1.1
GOPC	GO Pecny, Ondr	77.08	331	eP	P	02 40 49.3	+0.1
GOPC	GO Pecny, Ondr	77.08	331	eP	P	02 40 49.3	+0.1
ARR	Arges	77.09	323	⇑P	P	02 40 50.6	+1.2
PRU	Pruhonice	77.10	332	eP	P	02 40 49.8	+0.6
PRU	Pruhonice	77.10	332	eP	P	02 40 49.8	+0.6
SCIA	State Center	77.16	42	P	P	02 40 50.6	+0.9
	baz=321						
MATQ	Matagami	77.17	29	P	P	02 40 49.2	-0.4
	baz=329						
D46A	Sault St. Mari	77.22	34	P	P	02 40 49.1	-0.8
	baz=325						
KRUC	Moravsky	77.25	330	eP	P	02 40 51.1	+1.0
BRTR	Keskin Array B	77.28	314	P	P	02 40 51.7	+1.1
	comp=Z,4.4nm,0.8s,baz=82,slow=4.6,SNR=33						
TREC	Trest	77.37	331	eP	P	02 40 51.6	+0.8
TREC	Trest	77.37	331	eP	P	02 40 51.6	+0.8
MODS	Modra-Piesok	77.52	329	eP	P	02 40 51.9	+0.3
MODS				pmax	pmax		
	comp=Z,16nm,1.3s						
MODS	Modra-Piesok	77.52	329	eP	P	02 40 51.9	+0.3
SIRR	Siria	77.59	325	⇑P	P	02 40 52.5	+0.5
ANTO	Ankara	77.59	315	⇓P	P	02 40 53.9	+1.6
ANTO	Ankara	77.59	315	P	P	02 40 53.2	+1.0
ANTO	Ankara	77.59	315	P	P	02 40 53.2	+1.0
ANTO				pmax	pmax		
	comp=Z,18nm,0.8s						
KSU1	Kansas State U	77.62	46	P	P	02 40 51.7	-0.6
	baz=319						
BR231	Keskin MP Arra	77.62	315	IAmb	IAmb	02 40 54.7	
	comp=Z,14nm,0.8s						
COPA	Copaceanca	77.82	322	⇓P	P	02 40 53.5	+0.2
GZR	Gura Zlata	77.84	324	⇑P	P	02 40 53.7	+0.1
E47A	Iron Bridge	77.87	34	P	P	02 40 52.3	-1.2
	baz=326						
LSQQ	Lebel-sur-Quev	78.00	29	P	P	02 40 53.8	-0.4
	baz=329						
AMTX	Amarillo	78.03	52	IAmb	IAmb	02 40 56.5	
	comp=Z,15nm,1.1s						
AMTX	Amarillo	78.03	52	P	P	02 40 55.2	+0.4
	baz=317						
MSTX	Muleshoe	78.09	54	P	P	02 40 55.6	+0.5
	baz=317						
BZS	Buzias	78.14	325	⇑P	P	02 40 55.1	0.0
KHC	Kasperske Hory	78.16	332	eP	P	02 40 55.2	0.0
KHC				ePCP	PcP	02 41 03.9	-0.3
KHC	Kasperske Hory	78.16	332	P	P	02 40 54.8	-0.4
KHC	Kasperske Hory	78.16	332	eP	P	02 40 55.2	0.0
KHC				e		02 41 03.9	
MNTX	Cornudas Mount	78.21	57	P	P	02 40 56.7	+1.0
	baz=316,SNR=9.6						
E48A	Lockeyer	78.29	33	P	P	02 40 54.9	-0.9
	baz=326						
GERES	GERESS Array B	78.36	331	P	P	02 40 56.2	-0.1
	comp=Z,1.1nm,0.3s,baz=42,slow=5.4,SNR=26						
CONA	Conrad Observa	78.40	330	eP	P	02 40 57.8	+1.2
	comp=Z,11nm,1.3s						
GRA1	Grafenberg Arr	78.44	333	IAmb	IAmb	02 40 58.7	
	comp=Z,11nm,0.7s						
GRF	Grafenberg Arr	78.44	333	eP	P	02 40 56.9	+0.2
	comp=Z,13nm,1.1s,baz=26,slow=4.7						
PLVB	Pleven	78.68	322	⇓P	P	02 40 58.5	+0.4
PUNG	Punghina	78.68	323	⇓P	P	02 40 58.4	+0.4
MDVR	Moldovita	78.78	325	⇑P	P	02 40 58.7	0.0
MOA	Molln	79.03	331	eP	P	02 41 00.7	+0.7
	comp=Z,1.4nm,0.6s						
WMOK	Wichita Mounta	79.75	51	P	P	02 41 04.5	+0.4
WMOK	Wichita Mounta	79.75	51	P	P	02 41 04.5	+0.4
WMOK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WMOK	Wichita Mounta	79.75	51	P	P	02 41 04.4	+0.4
	baz=319,SNR=6.3						
SOKA	Soboth	79.76	330	eP	P	02 41 04.7	+0.7
	comp=Z,6.1nm,0.9s						
VTS	Vitosha	79.90	322	⇑P	P	02 41 06.1	+1.2
VTS	Vitosha	79.90	322	IAmb	IAmb	02 41 06.7	
	comp=Z,12nm,0.9s						
KBA	Koelnbreinsper	80.01	331	eP	P	02 41 06.2	+0.8
	comp=Z,7.7nm,0.7s,SNR=4.4						
OBKA	Obir	80.08	330	eP	P	02 41 06.2	+0.5
	comp=Z,4.0nm,0.6s						
MYKA	Terra Mystica	80.29	330	eP	P	02 41 07.2	+0.3
	comp=Z,5.5nm,0.8s						
WATA	Walderalm	80.39	332	eP	P	02 41 07.9	+0.5
	comp=Z,5.9nm,0.6s,SNR=8.5						
WTTA	Wattenberg	80.43	332	ePcP	P	02 41 08.2	+0.6
	comp=Z,6.1nm,0.4s,SNR=13						
D56A	ZEC Mazanza, M	80.48	28	P	P	02 41 07.6	-0.2
	baz=331						
RETA	Reutte	80.52	333	ePcP	P	02 41 09.2	+1.2
	comp=Z,11nm,1.4s						
MOTA	Moosalm	80.53	332	eP	P	02 41 08.5	+0.3
	comp=Z,5.4nm,0.7s,SNR=9.0						
SQTA	Sankt Quirin	80.61	332	eP	P	02 41 08.9	+0.3
	comp=Z,4.3nm,0.7s,SNR=6.3						
D57A	Chemin Vers le	80.80	28	P	P	02 41 09.4	0.0
	baz=331						
ABTX	Abilene, Hawle	80.84	53	IAmb	IAmb	02 41 12.3	
	comp=Z,12nm,1.4s						
TX31	Lajitas Ar. Si	80.94	57	IAmb	IAmb	02 41 12.3	
	comp=Z,9.8nm,0.7s						
TX32	Lajitas Array	80.94	57	IAmb	IAmb	02 41 12.3	
	comp=Z,10nm,0.7s						
TXAR	Lajitas Array	80.94	57	P	P	02 41 11.3	+0.7
	comp=Z,8.0nm,0.6s,baz=301,slow=3.9,SNR=144						
TXAR				PKKPbc	PKKPbc	02 59 47.7	+2.8
	comp=Z,0.1nm,0.4s,baz=145,slow=4.6,SNR=4.4						
E57A	Chemin Saint G	81.24	28	P	P	02 41 11.6	-0.2
	baz=331						
N47A	Urbana	81.43	39	P	P	02 41 12.3	-0.6
	baz=325						
ELL	Elmali	81.44	315	P	P	02 41 13.8	+0.6
ELL	Elmali	81.44	315	P	P	02 41 13.8	+0.6
ELL				pmax	pmax		
	comp=Z,19nm,0.8s						
E58A	La Victoria	81.57	28	P	P	02 41 13.3	-0.2
	baz=332						
U40A	Yellville	81.63	46	IAmb	IAmb	02 41 14.8	
	comp=Z,21nm,1.1s						
U40A	Yellville	81.63	46	P	P	02 41 14.0	0.0
	baz=321,SNR=9.6						
PDG	Podgorica	81.73	325	⇑P	P	02 41 14.5	+0.1
N48A	Decatur	81.74	38	P	P	02 41 14.5	0.0
	baz=325						
P46A	Rosedale	81.77	40	IAmb	IAmb	02 41 15.6	
	comp=Z,15nm,0.8s						
W39A	Magazine	82.06	47	P	P	02 41 16.4	+0.1
	baz=321						
TEOL	Teolo	82.08	331	P	P	02 41 16.3	+0.1
TEOL				IAmb	IAmb	02 42 33.5	
	comp=Z,18nm,1.0s						
RAYN	Ar Rayn	82.33	296	P	P	02 41 18.3	+0.4
RAYN	Ar Rayn	82.33	296	P	P	02 41 18.3	+0.4
RAYN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
JCT	Junction City	82.35	54	IAmb	IAmb	02 41 19.2	
	comp=Z,8.5nm,0.8s						
JCT	Junction City	82.35	54	P	P	02 41 18.2	+0.3
	baz=319,SNR=5.6						
FCAR	Ozark Folk Cen	82.36	46	IAmb	IAmb	02 41 18.0	
	comp=Z,6.2nm,0.6s						
PBMO	Poplar Bluff	82.51	44	IAmb	IAmb	02 41 19.8	
	comp=Z,18nm,1.2s						
WHTX	Lake Whitney,	82.54	52	P	P	02 41 19.6	+0.8
	baz=320						
MIAR	Mount Ida	82.67	47	P	P	02 41 19.8	+0.3
MIAR				IAmb	IAmb	02 41 20.8	
	comp=Z,12nm,0.9s						
MIAR	Mount Ida	82.67	47	P	P	02 41 19.8	+0.3
MIAR				pmax	pmax		
	comp=Z,12nm,1.0s						
MIAR	Mount Ida	82.67	47	P	P	02 41 19.7	+0.3
	baz=321,SNR=8.6						
WHAR	Wooly Hollow	82.75	46	IAmb	IAmb	02 41 20.8	
	comp=Z,12nm,1.0s						
ERPA	Erie	82.79	34	P	P	02 41 20.2	+0.2
	baz=328						
L53A	Girard	82.82	35	P	P	02 41 20.4	+0.3
	baz=328						
W41B	Gary Mavity, V	82.86	46	IAmb	IAmb	02 41 21.5	
	comp=Z,9.1nm,0.8s						
W41B	Gary Mavity, V	82.86	46	P	P	02 41 20.9	+0.5
	baz=322,SNR=5.2						
L54A	Sinclairville	82.96	34	P	P	02 41 20.8	0.0
	baz=328						
Q48A	North Vernon	83.00	40	P	P	02 41 20.9	-0.2
	baz=325						
X40A	Basin Creek Fa	83.10	47	IAmb	IAmb	02 41 23.1	
	comp=Z,8.2nm,1.1s						
X40A	Basin Creek Fa	83.10	47	P	P	02 41 22.6	+0.9
	baz=322						
WCI	Wyandotte Cave	83.31	40	P	P	02 41 23.1	+0.4
	baz=325						
M54A	Oil Creek Stat	83.44	34	P	P	02 41 23.2	-0.1
	baz=328						
N54A	Moraine State	83.77	35	P	P	02 41 25.2	+0.2
	baz=328						
M55A	Ridgway	83.83	34	P	P	02 41 25.3	0.0
	baz=329						
T47A	Sharon Grove	83.94	42	IAmb	IAmb	02 41 27.2	
	comp=Z,8.9nm,0.8s						
S49A	Springfield	84.13	40	P	P	02 41 27.3	+0.4
	baz=325						
K59A	Cooperstown	84.17	31	P	P	02 41 26.9	-0.1
	baz=331						
NATX	Nacogdoches	84.24	50	P	P	02 41 28.9	+1.4
	baz=321,SNR=5.3						
WVT	Waverly	84.29	43	P	P	02 41 27.7	0.0
WVT	Waverly	84.29	43	P	P	02 41 27.7	0.0
WVT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WVT	Waverly	84.29	43	P	P	02 41 28.1	+0.4
	baz=324						
N56A	West Decatur	84.48	34	P	P	02 41 28.7	+0.1
	baz=329						
M57A	Sunshine Farm,	84.57	33	P	P	02 41 29.1	+0.1
	baz=330						
T49A	Edmonton	84.58	41	P	P	02 41 29.5	+0.3
	baz=325						
L59A	Walton	84.61	31	P	P	02 41 29.3	0.0
	baz=331						
S50A	Richmond	84.62	40	P	P	02 41 29.6	+0.3
	baz=326						
O55A	Ligonier	84.68	35	P	P	02 41 29.6	-0.1
	baz=328						
OXF	Oxford	84.81	45	P	P	02 41 30.4	+0.1
	baz=323						
N57A	Milroy	84.91	33	P	P	02 41 31.0	+0.3
	baz=330						
O56A	Blue Knob Stat	84.93	34	P	P	02 41 31.3	+0.4
	baz=329						
U49A	Red Boiling Sp	84.95	41	P	P	02 41 31.5	+0.5
	baz=325,SNR=5.4						
T50A	Nancy	84.97	40	P	P	02 41 31.4	+0.3
	baz=326,SNR=5.3						
S51A	Beattyville	85.02	39	P	P	02 41 31.5	+0.2
	baz=326						
P55A	Reedsville	85.06	36	P	P	02 41 32.2	+0.6
	baz=328						
N58A	Sunbury	85.16	33	P	P	02 41 32.0	0.0
	baz=330						
S52A	Salyersville	85.21	39	P	P	02 41 32.6	+0.3
	baz=326						
Q55A	Buckhannon	85.39	36	P	P	02 41 33.6	+0.3
	baz=328						
U50A	Jamestown	85.46	41	P	P	02 41 34.0	+0.4
	baz=326						
P56A	Dayton Farm, R	85.47	35	P	P	02 41 34.4	+0.8
	baz=329						
V49A	McMinnville	85.50	42	P	P	02 41 33.9	+0.1
	baz=325						
SWET	Sewanee	85.93	42	IAmb	IAmb	02 41 36.2	
	comp=Z,7.8nm,0.6s						
R55A	Marlinton	85.98	36	P	P	02 41 37.0	+0.9
	baz=328						
U52A	Thorn Hill	86.15	40	P	P	02 41 37.4	+0.4
	baz=326						
V51A	Loudon	86.19	41	P	P	02 41 37.3	+0.1
	baz=326						
W50A	Signal Mountai	86.24	42	P	P	02 41 37.5	+0.1
	baz=325						
P59A	Jarrettsville	86.33	33	P	P	02 41 38.0	+0.3
	baz=330						
T54A	Tazewell	86.39	38	P	P	02 41 38.4	+0.2
	baz=327						
V52A	Sevierville	86.50	40	P	P	02 41 39.1	+0.4
	baz=326						
Z50A	Ashland	87.53	43	P	P	02 41 44.0	+0.3
	baz=325,SNR=13						
X53A	Estanollee	87.74	41	P	P	02 41 45.4	+0.7
	baz=326						
W54A	Cherokee Point	87.77	40	P	P	02 41 45.1	+0.4
	baz=327						
KMSC	Kings Mountain	88.10	39	P	P	02 41 46.3	-0.1
	baz=328						
Y55A	Saluda	88.87	40	P	P	02 41 50.7	+0.6
	baz=327						
W58A	Raeford	89.12	38	P	P	02 41 51.7	+0.6
	baz=329						
KEST	Kesra	91.39	328	P	P	02 42 01.4	-0.4
	comp=Z,1.4nm,0.5s,baz=334,slow=4.4,SNR=5.5						
ESDC	Sonseca Array	91.95	339	P	P	02 42 03.5	-0.8
	comp=Z,0.2nm,0.4s,baz=8.8,slow=4.5,SNR=6.8						
DBIC	Dimbokro	123.12	328	PKP	PKPdf	02 47 50.9	-1.1
	comp=Z,1.5nm,0.6s,baz=351,slow=3.4,SNR=5.0						
BDFB	Brasilia	147.32	31	PKPbc	PKPbc	02 48 39.4	+0.2
	comp=Z,7.1nm,0.6s,baz=302,slow=3.8,SNR=13						
BDFB	Brasilia	147.32	31		PKPbc	02 48 40.0	+0.9
BDFB	Brasilia	147.32	31	PKP2	PKPbc	02 48 40.0	+0.9
CFA	Coronel Fontan	148.35	77	PKPbc	PKPbc	02 48 41.5	+0.1
	comp=Z,24nm,0.5s,baz=285,slow=2.6,SNR=72						
SNAA	Sanae	150.20	198	PKPdf	PKPbc	02 48 44.9	+0.2
PLCA	Paso Flores	151.18	95	PKPbc	PKiKP	02 48 48.7	+0.2
	comp=Z,19nm,0.7s,baz=296,slow=2.6,SNR=68						
VNA2	Neumayer--Watz	151.72	196	PKPdf	PKiKP	02 48 48.8	+0.2
	baz=138,slow=1.1						
VNA3	Neumayer--Watz	151.89	195	PKPdf	PKPbc	02 48 48.8	+0.2
CPUP	Villa Florida	151.91	57	PKPbc	PKPbc	02 48 50.0	0.0
	comp=Z,1.9nm,0.5s,baz=13,slow=1.6,SNR=6.8						
VNA1	Neumayer--Stat	152.11	196	PKPdf	PKiKP	02 48 49.6	+0.2

ATH 23 02:37:37.9, 40.58N×19.81E, h22km±15km, ML1.8/3, Error ellipse: s-maj=15.1km s-min=1.2km az=317.0
TIR 23 02:37:40.6, 40.60N×19.85E, h3km, Md2.9/7

ISC 23 02:37:38.5±1.0, 40.59N±0.02×19.77E±0.04, h13km±9km, n17, σ1.18/31, Albania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VLO	Vlora	0.24	240	i PG	Pb	02 37 44.2	-0.4
VLO				i SG	Sb	02 37 49.9	+1.1
TPE	Tepelena	0.35	147	i PG	Pg	02 37 44.9	-0.6
TPE				i SG	Sg	02 37 50.1	-0.1
TIR	Tirane	0.76	6	i PG	Pg	02 37 52.7	-0.6
TIR				i SG	Sn	02 38 05.9	-0.5
TIR	Tirane	0.76	6	P	Pg	02 37 52.5	-0.8
TIR				S	Sb	02 38 04.1	+0.2
TIR				AML	AML	02 38 11.7	
	comp=E,219µm,0.3s						
TIR				AML	AML	02 38 12.1	
	comp=N,276µm,0.4s						
KEK	Kerkira	0.87	178	P	Pg	02 37 54.3	-1.1
KEK				S	Sb	02 38 06.9	-0.2
KEK				AML	AML	02 38 12.6	
	comp=E,122µm,0.5s						
KEK				AML	AML	02 38 15.1	
	comp=N,100µm,0.3s						
NEST	Nestorio	0.99	100	P	Pb	02 37 55.9	-1.7
SCTE	Santa Cesarea	1.12	243	P	Pg	02 37 59.8	-0.2
SCTE				S	Sn	02 38 15.5	+0.4
SCTE				AML	AML	02 38 17.6	
	comp=E,62µm,0.4s						
SCTE				AML	AML	02 38 18.2	
	comp=N,66µm,0.3s						
IGT	Igoumenitsa	1.14	157	i PG	Pg	02 38 01.3	+0.9
IGT				i SG	Sn	02 38 18.5	+2.9
IGT	Igoumenitsa	1.14	157	P	Pb	02 37 59.3	-0.8
PHP	Peshkopia	1.21	25	i PG	Pn	02 38 00.9	-0.3
PHP				i SG	Sg	02 38 17.7	+0.2
KPRO	Kipourio	1.38	117	P	Pn	02 38 03.6	+0.2
PUK	Puka	1.46	4	i PN	Pn	02 38 05.8	+0.3
PUK				i SN	Sg	02 38 28.3	+2.8
BCI	Bajram Curri	1.79	7	i PN	Pb	02 38 11.8	+0.6
BCI				i SN	Sg	02 38 38.4	+2.2
DBRK	Dubrovnik	2.41	330	ePn	Pn	02 38 16.8	-0.8
DBRK				Sn	Sn	02 38 45.9	-1.1
STON	Ston	2.76	327	ePn	Pn	02 38 21.0	-1.3
STON				Sn	Sn	02 38 55.1	-0.4
MAKA	Makarska	3.39	324	ePn	Pn	02 38 29.6	-1.4
MAKA				Sn	Sn	02 39 10.7	-0.3
KIJV	Kijevo	4.23	325	ePn	Pn	02 38 43.3	+0.7
KIJV				Sn	Sn	02 39 30.9	-0.9

BJI 23 02:41:27.3±0.0, 36.06N×82.37E, h7km, mb3.8/1, ML3.8/7
IDC 23 02:41:29.0±2.5, 36.28N×82.38E, h0km, mb3.6/3, mb1 3.8/7, mb1mx3.4/56, mbtmp3.7/7, ML2.7/4, Error ellipse: s-maj=43.4km s-min=26.8km az=48.0
NNC 23 02:41:30.9±4.8, 36.21N×82.01E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=61.7km s-min=35.3km az=77.0

ISC 23 02:41:30.6±1.9, 36.2N±0.1×82.5E±0.2, h10km, n11, σ2.31/15, mb3.7/3, 6C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	7.48	343	⇑Pn	Pn	02 43 20.9	+1.0
	3.8nm,0.6s						
PDGK				⇑Sn	Sn	02 44 46.4	+1.5
	32nm,1.0s						
PDGK				⇓Lg	Lg	02 45 24.0	
	40nm,0.9s						
WMQ	Urumqi	8.58	26	eP	Pn	02 43 36.9	+2.0
WMQ				smax	smax		
	comp=N,14nm,1.7s						
WMQ				smax	smax		
	comp=E,12nm,1.3s						
AAK	Ala-Archa	8.92	318	Pn	Pn	02 43 40.2	+0.5
	0.1nm,0.3s,baz=120,slow=14,SNR=2.1						
AAK				Pg	Pg	02 44 11.3	-10
	0.3nm,0.3s,baz=128,slow=13,SNR=5.5						
AAK				Lg	Lg	02 46 10.0	
	0.2nm,0.3s,baz=300,slow=12,SNR=9.5						
MK31	Makanchi Array	10.58	359	⇑Pn	Pn	02 44 03.1	+0.9
	1.0nm,0.4s,baz=186,slow=13,SNR=36						
MK31				⇑Sn	Sn	02 46 02.5	+1.7
	2.0nm,0.8s,baz=184,slow=25						
MK31				⇑Lg	Lg	02 47 09.2	
	2.0nm,0.8s,baz=312,slow=50,SNR=4.0						
MKAR	Makanchi Array	10.58	359	Pn	Pn	02 44 02.3	+0.1
	0.4nm,0.3s,baz=188,slow=13,SNR=21						
MKAR				Sn	Sn	02 45 55.1	-5.6
	0.1nm,0.3s,baz=173,slow=23,SNR=1.3						
MKAR				Lg	Lg	02 47 01.9	
	0.0nm,0.3s,baz=150,slow=12,SNR=2.8						
MAKZ	Makanchi	10.60	358	⇓Pn	Pn	02 44 02.4	-0.1
	3.4nm,0.5s						
MAKZ				⇑Sn	Sn	02 46 03.8	+2.6
	5.0nm,1.2s						
KURBB	Kurchatov Arra	14.69	350	Pn	Pn	02 44 56.4	-2.0
	0.0nm,0.3s,baz=170,slow=12,SNR=7.3						
ZALV	Zalesovo Beam	17.81	4	P	Pn	02 45 35.7	-2.8
	0.1nm,0.3s,baz=187,slow=11,SNR=5.5						
SONM	Songino Array	21.12	49	P	P	02 46 17.0	+1.5
	4.7nm,0.8s,baz=232,slow=7.3,SNR=28						
ILAR	Eielson Array	72.19	20	P	P	02 52 54.9	-0.5
	0.6nm,1.0s,baz=306,slow=5.4,SNR=4.7						
YKA	Yellowknife Ar	80.68	8	P	P	02 53 42.8	-0.6
	0.3nm,0.7s,baz=342,slow=5.1,SNR=3.6						

ATH 23 02:55:56.4, 40.74N×21.23E, h21km±2km, ML2.3/4, Error ellipse: s-maj=3.2km s-min=1.2km az=163.0
TIR 23 02:55:56.7, 40.99N×21.41E, h13km, Md2.8/5
SKO 23 02:55:57.7, 40.78N×21.18E, h4km

ISC 23 02:55:56.9±1.2, 40.85N±0.03×21.34E±0.03, h7km±11km, n20, σ1.99/26, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OHR	Ohrid	0.48	303	i Pg	Pg	02 56 05.3	-0.9
OHR				i Sg	Sg	02 56 12.4	-0.2
OHR				eLg	Lg	02 56 12.5	
	comp=N,274nm,0.6s						
OHR				eLg	Lg	02 56 12.9	
	comp=E,312nm,0.4s						
NEST	Nestorio	0.49	207	P	Pg	02 56 03.7	-2.7
NEST				S	Sg	02 56 09.2	-3.6
NEST				AML	AML	02 56 10.4	
	comp=N,1488µm,0.3s						
NEST				AML	AML	02 56 10.6	
	comp=E,1758µm,0.2s						
KZN	Kozani	0.64	149	P	Pg	02 56 08.6	-0.7
KZN				S	Sg	02 56 17.3	-0.2
KZN				AML	AML	02 56 19.7	
	comp=N,624µm,0.3s						
KZN				AML	AML	02 56 20.4	
	comp=E,731µm,0.3s						
PENT	Pentalofos	0.67	193	P	Pg	02 56 07.7	-2.2
GRG	Griva	0.81	82	P	Pn	02 56 14.1	-0.8
GRG				S	Sn	02 56 26.4	-0.9
GRG				AML	AML	02 56 32.2	
	comp=N,332µm,0.4s						
GRG				AML	AML	02 56 33.3	
	comp=E,226µm,0.9s						
KPRO	Kipourio	0.90	179	P	Pb	02 56 11.6	-3.3
VAY	Valandovo	1.04	63	i Pg	Pn	02 56 19.4	+1.4
VAY				i Sg	Sn	02 56 35.2	+2.3
VAY				eLg	Lg	02 56 35.4	
	comp=N,28nm,0.6s						
VAY				eLg	Lg	02 56 36.3	
	comp=E,17nm,0.5s						
STIP	Stip	1.06	37	i Pg	Pn	02 56 21.6	+3.4
STIP				i Sg	Sn	02 56 41.8	+8.5
STIP				eLg	Lg	02 56 42.4	
	comp=N,4.9nm,0.3s						
STIP				eLg	Lg	02 56 43.0	
	comp=E,4.8nm,0.3s						
PHP	Peshkopia	1.07	321	i PG	Pn	02 56 17.2	-1.3
PHP				i SG	Sn	02 56 32.6	-1.1
SKO	Skopje	1.12	4	i Pg	Pn	02 56 21.1	+2.0
TPE	Tepelena	1.15	242	i PN	Pg	02 56 21.6	+2.5
TPE				i SN	Sg	02 56 40.3	+6.3
LIT	Litokhoron	1.16	130	P	Pn	02 56 18.9	-0.8
LIT				S	Sb	02 56 34.3	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
LIT				AML	AML	02 56 42.3	
	comp=N,206µm,0.6s						
LIT				AML	AML	02 56 42.9	
	comp=E,223µm,0.4s						
TIR	Tirane	1.22	294	i PN	Pg	02 56 20.3	+0.1
TIR				i SN	Sg	02 56 38.3	+2.3
KNT	Kendrikon	1.22	75	P	Pg	02 56 21.7	+1.4
HORT	Hortiatis	1.36	100	P	Pg	02 56 23.1	0.0
THL	Klokotos Trika	1.39	158	P	Pn	02 56 21.2	-1.6
IGT	Igoumenitsa	1.53	211	P	Pn	02 56 23.5	-1.2
PUK	Puka	1.61	318	i PN	Pg	02 56 26.3	-1.5
PUK				i SN	Sg	02 56 49.1	+0.5
BCI	Bajram Curri	1.79	328	i PN	Pg	02 56 30.9	-0.3
BCI				i SN	Sg	02 56 54.1	-0.3
PAIG	Paliouri	2.02	117	P	Pn	02 56 31.3	-0.1

LJU 23 03:02:44.0, 45.75N×14.85E, h2km, ML0.3, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
VISS	Visnje	0.05	351	⇓i Pg	Pg	03 02 45.0	0.0
VISS				i Sg	Sg	03 02 45.9	+0.1
	comp=Z,8.0nm,0.0s						

LJU 23 03:02:50.0, 45.75N×14.85E, h2km, ML0.3, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
VISS	Visnje	0.05	351	i Pg	Pg	03 02 51.1	0.0
VISS				i Sg	Sg	03 02 51.9	+0.1
	comp=Z,9.0nm,0.1s						
MAKA	Makarska	2.91	147	i Pg	Pb	03 03 42.3	-0.3
MAKA				Sg	Pg	03 03 45.5	-0.3

IDC 23 03:10:05.0±0.8, 3.41S×145.84E, h0km, mb4.2/14, mb1 4.4/16, mb1mx4.1/48, mbtmp4.2/16, ML4.5/1, MS3.7/27, Ms1 3.7/27, ms1mx3.6/41, Error ellipse: s-maj=27.8km s-min=13.9km az=91.0

NEIC 23 03:10:05.9±2.0, 3.41S±0.06×146.0E±0.1, h10km±2km, mb4.7/14, Error ellipse: s-maj=14.8km s-min=8.4km az=95.0

GCMT 23 03:10:08.9±0.3, 3.28S±0.02×146.08E±0.03, h28km±1km, MW4.9/88, Moment Tensor Solution. s18,c19; s88,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-0.42±.16; Mθθ0.34±.13; Mφφ0.08±.13; Mrθ-0.44±.20; Mrφ2.62±.09; Mθφ0.16±.19; Best double couple: Mo2.67200×10^{16} NP1:φs182.00000°,δ79.00000°,λ-174.00000°. NP2: φs91.00000°,δ85.00000°,λ-11.00000°. Principal axes: T 2.8460, Plg4.0000°, Azm137.0000°; N -0.3480, Plg78.0000°, Azm244.0000°; P -2.4980, Plg11.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 23 03:10:08.1±0.6, 3.39S±0.06×146.1E±0.1, h25km, n48, σ1.50/36, mb4.2/18, MS3.7/25, Bismarck Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
MANU	Manus Island	1.83	43		Pn	03 10 35.6	-2.3
PMG	Port Moresby	6.06	170	Pn	Pn	03 11 35.9	-0.3
	6.1nm,0.3s,baz=42,slow=5.0,SNR=19						
PMG				Sn	Sn	03 12 42.5	-2.3
	baz=218,slow=24,SNR=1.3						
PMG	Port Moresby	6.06	170		Pn	03 11 36.3	+0.1
COEN	Coen	10.89	195		Pn	03 12 43.2	+0.7
HNR	Honiara	14.99	114	LR	LR	03 18 31.4	
	comp=Z,309nm,21.3s,baz=308,slow=33						
GUMO	Guam	16.92	356	LR	LR	03 20 03.0	
	comp=Z,210nm,18.6s,baz=147,slow=35						
WB0	Warramunga Arr	19.90	214	P	P	03 14 37.0	-0.9
WB0				IAmb	IAmb	03 14 38.9	
	comp=Z,63nm,1.1s						
WR0	Warramunga Arr	19.97	214	P	P	03 14 37.4	-1.3
WB2	Warramunga Arr	20.06	214	P	P	03 14 38.4	-1.4
WRA	Warramunga Arr	20.07	214	P	P	03 14 37.7	-2.1
	comp=Z,1.4nm,0.3s,baz=38,slow=12,SNR=37						
WRA				LR	LR	03 22 31.5	
	comp=Z,272nm,19.9s,baz=40,slow=38						
KNRA	Kununurra	21.00	233	P	P	03 14 48.4	-1.4
SOEI	Soe	22.60	253	P	P	03 15 06.0	-1.2
SOEI				IAmb	IAmb	03 15 16.2	
	comp=Z,24nm,0.7s						
AS31	Alice Springs	23.36	209	P	P	03 15 13.7	-1.1
ASAR	Alice Springs	23.36	209	P	P	03 15 13.1	-1.8
	comp=Z,9.3nm,0.9s,baz=40,slow=8.4,SNR=49						
ASAR				LR	LR	03 25 33.4	
	comp=Z,264nm,19.5s,baz=34,slow=40						
LUWI	Luwuk	23.45	275	P	P	03 15 15.5	-0.2
FITZ	Fitzroy Crossi	24.82	232	P	P	03 15 26.1	-2.4
	comp=Z,19nm,0.6s,baz=53,slow=8.7,SNR=57						
FITZ				LR	LR	03 25 50.9	
	comp=Z,394nm,19.8s,baz=54,slow=38						
FITZ	Fitzroy Crossi	24.82	232	P	P	03 15 26.2	-2.3
KAPI	Kappang	26.35	266	LR	LR	03 27 38.1	
	comp=Z,77nm,19.4s,baz=84,slow=40						
DZM	Mont Dzumac	27.09	135	P	P	03 15 50.8	+1.7
	comp=Z,11nm,1.1s,baz=309,slow=12,SNR=3.9						
DZM				LR	LR	03 25 37.2	
	comp=Z,336nm,19.7s,baz=233,slow=34						
DZM	Mont Dzumac	27.09	135	IAmb	IAmb	03 15 51.1	
	comp=Z,42nm,1.7s						
STKA	Stephens Creek	28.65	188	P	P	03 16 05.0	+2.1
	comp=Z,3.5nm,0.8s,baz=341,slow=11,SNR=7.5						
STKA				LR	LR	03 28 24.8	
	comp=Z,308nm,18.2s,baz=12,slow=38						
STKA	Stephens Creek	28.65	188	P	P	03 16 02.9	0.0
JCJ	Chichijima	30.55	353	LR	LR	03 26 19.5	
	comp=Z,52nm,21.9s,baz=112,slow=32						
JHJ	Hachijo jima 2	36.80	351	LR	LR	03 30 50.3	
	comp=Z,130nm,18.9s,baz=43,slow=34						
JNU	Nakatsue	39.08	340	P	P	03 17 34.7	+1.4
	comp=Z,7.3nm,0.8s,baz=168,slow=2.0,SNR=4.4						
JNU				LR	LR	03 30 50.9	
	comp=Z,62nm,20.3s,baz=158,slow=32						
MJAR	Matsushiro Arr	40.41	350	P	P	03 17 43.5	-0.7
	comp=Z,1.8nm,0.9s,baz=164,slow=9.7,SNR=3.4						
MJAR				LR	LR	03 32 03.9	
	comp=Z,39nm,20.8s,baz=235,slow=33						
KSRS	Korea Array	44.02	339	P	P	03 18 12.5	-1.1
	comp=Z,2.9nm,0.9s,baz=156,slow=9.4,SNR=8.5						
KSRS				LR	LR	03 34 03.3	
	comp=Z,109nm,19.2s,baz=176,slow=33						
URZ	Urewera	44.77	145	LR	LR	03 35 16.8	
	comp=Z,151nm,21.1s,baz=316,slow=34						
RPZ	Rata Peaks	45.83	155	LR	LR	03 34 49.1	
	comp=Z,178nm,20.1s,baz=273,slow=32						
USRK	Ussuriysk Ar.	49.05	347	LR	LR	03 37 06.4	
	comp=Z,87nm,20.4s,baz=158,slow=33						
XAN	Xi'an	51.13	320	P	P	03 19 06.8	-2.3
CMAR	Chiang Mai Arr	51.27	297	P	P	03 19 10.8	+0.4
	comp=Z,0.7nm,0.3s,baz=115,slow=5.5,SNR=6.8						
CMAR				LR	LR	03 40 40.7	
	comp=Z,23nm,19.9s,baz=110,slow=36						
KLR	Kul'dur	53.87	348	P	P	03 19 30.1	+1.0
	comp=Z,1.3nm,0.6s,baz=81,slow=3.6,SNR=3.8						
KLR				LR	LR	03 41 55.8	
	comp=Z,54nm,18.6s,baz=196,slow=36						
PETK	Petropavlovsk-	57.13	8	LR	LR	03 39 33.8	
	comp=Z,35nm,21.7s,baz=239,slow=31						
SHL	Shillong	59.89	302	P	P	03 20 12.1	-0.4
SHL				IAmb	IAmb	03 20 17.6	
	comp=Z,4.5nm,0.6s						
SONM	Songino Array	61.71	331	P	P	03 20 23.5	-0.9
	comp=Z,0.5nm,0.7s,baz=150,slow=6.8,SNR=4.1						
SONM				LR	LR	03 47 11.9	
	comp=Z,88nm,18.9s,baz=166,slow=36						
SEY	Seymchan	66.32	3	P	P	03 20 54.5	+0.3
	comp=Z,0.4nm,0.2s,baz=18,slow=22,SNR=1.9						
VNDA	Vanda	74.55	176	LR	LR	03 52 12.2	
	comp=Z,51nm,18.5s,baz=348,slow=34						
MK31	Makanchi Array	74.94	320	P	P	03 21 47.2	+0.1
MK31				IAmb	IAmb	03 21 50.4	
	comp=Z,3.9nm,1.5s						
MKAR	Makanchi Array	74.94	320	P	P	03 21 47.1	0.0
	comp=Z,0.7nm,0.9s,baz=104,slow=8.9,SNR=6.2						
MKAR				LR	LR	03 52 55.5	
	comp=Z,35nm,21.3s,baz=102,slow=34						
MAKZ	Makanchi	75.15	320	P	P	03 21 47.6	-0.7
MAKZ				IAmb	IAmb	03 21 51.7	
	comp=Z,9.3nm,1.6s						
ZALV	Zalesovo Beam	76.35	328	LR	LR	03 53 59.6	
	comp=Z,79nm,21.6s,baz=68,slow=35						
KSH	Kashi	77.00	312	P	P	03 22 00.1	+0.9
KSH				PcP	PcP	03 22 12.4	+2.3
KSH				S	S	03 31 48.3	+1.9
KSH	Kashi	77.00	312	sS	sS	03 32 06.4	+7.9
NRIK	Noril'sk	82.54	342	P	P	03 22 29.1	+0.7
	comp=Z,3.3nm,0.7s,baz=102,slow=8.4,SNR=1.6						
NRIK				LR	LR	03 59 04.3	
	comp=Z,37nm,19.7s,baz=76,slow=36						
ILAR	Eielson Array	83.45	23	P	P	03 22 35.5	+2.3
	comp=Z,0.6nm,0.8s,baz=260,slow=4.8,SNR=6.2						
ILAR				LR	LR	03 53 50.8	
	comp=Z,32nm,21.7s,baz=298,slow=31						
GEYT	Alibeck	90.48	308	LR	LR	04 05 26.0	
	comp=Z,50nm,20.9s,baz=15,slow=37						
NVAR	Mina Array Bea	96.46	52	LR	LR	03 58 30.2	
	comp=Z,80nm,21.9s,baz=276,slow=30						

IDC 23 03:11:35.1±2.4, 36.13N×96.70W, h0km, mb1 3.3/4, mb1mx3.1/67, mbtmp3.0/4, ML3.0/4, Error ellipse: s-maj=33.0km s-min=15.7km az=105.0

NEIC 23 03:11:38.8±0.7, 36.12N±0.02×97.06W±0.02, h4km±7km, Error ellipse: s-maj=2.7km s-min=2.2km az=151.0

TUL 23 03:11:38.8±1.1, 36.103N±0.008×97.08W±0.02, h5km±2km, ML3.0, Error ellipse: s-maj=3.2km s-min=3.0km az=283.0

ANF 23 03:11:29.2±0.6, 36.10N×97.03W, h5km, ML3.7/8, Error ellipse: s-maj=10.3km s-min=4.5km az=1.0

ISC 23 03:11:38.8±1.3, 36.11N±0.04×97.05W±0.03, h4km±11km, n40, σ0.85/50, Oklahoma

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
OK005	Luther M Schoo	0.47	194	Pg	Pg	03 11 47.9	+0.1
OK005				Sg	Sg	03 11 54.5	+0.6
ADOK	Arcadia Dam	0.52	210	Pg	Pg	03 11 48.9	-0.1
OKCFA	Oklahoma City	0.76	205		Pg	03 11 53.2	-0.3
OKCFA				Sg	Sg	03 12 03.7	+0.3
OKCSW	OKLAHOMA CITY	0.77	204		Pg	03 11 53.3	-0.3
OKCSW				Sg	Sg	03 12 04.0	+0.4
FNO	Franklin	0.90	199		Pg	03 11 55.9	-0.1
W35A	Tecumseh	0.96	171		Pg	03 11 56.5	-0.9
W35A				Sg	Sg	03 12 10.1	+0.2
TUL1	Leonard	1.04	101		Pg	03 11 58.5	-0.2
TUL1				Sg	Sb	03 12 12.8	-0.5
TUL1	Leonard	1.04	101	P	Pg	03 11 58.6	-0.2
	baz=279						
TUL1				S	Sb	03 12 12.9	-0.5
	baz=279						
U32A	Winter Ranch,	1.60	280		Pn	03 12 08.3	+0.3
X34A	Smith Ranch, M	1.63	203		Pn	03 12 08.5	+0.1
WMOK	Wichita Mounta	1.97	226		Pn	03 12 13.2	+0.2
WMOK	Wichita Mounta	1.97	226	P	Pn	03 12 13.1	+0.2
	baz=46						
WMOK				S	Sn	03 12 39.0	+0.9
	baz=46						
HHAR	Hobbs	2.52	85		Pn	03 12 21.3	+0.7
W39A	Magazine	2.81	108		Pn	03 12 25.3	+0.8
W39A	Magazine	2.81	108	P	Pn	03 12 24.6	0.0
	baz=289						
W39A				S	Sn	03 13 00.5	+1.7
	baz=289						
KSU1	Kansas State U	3.01	7	P	Pn	03 12 27.5	+0.2
	baz=187						
KSU1				S	Sn	03 13 04.0	+0.3
	baz=187						
MIAR	Mount Ida	3.24	118		Pn	03 12 31.6	+1.1
MIAR	Mount Ida	3.24	118	P	Pn	03 12 31.1	+0.7
	baz=299						
MIAR				S	Sn	03 13 10.3	+0.9
	baz=299						
U40A	Yellville	3.40	85		Pn	03 12 32.8	+0.1
U40A	Yellville	3.40	85	P	Pn	03 12 32.8	+0.1
	baz=266						
U40A				S	Sn	03 13 15.1	+1.6
	baz=266						
CBKS	Cedar Bluff	3.44	322	Pn	Pn	03 12 33.3	0.0
CBKS	Cedar Bluff	3.44	322	Pb	Pb	03 12 41.6	+1.2
	baz=142						
X40A	Basin Creek Fa	3.81	114	Pn	Pn	03 12 39.6	+1.3
X40A	Basin Creek Fa	3.81	114	P	Pn	03 12 39.0	+0.8
	baz=296						
X40A				S	Sn	03 13 23.1	-0.3
	baz=296						
WHAR	Wooly Hollow	3.96	100	Pn	Pn	03 12 40.4	+0.1
AMTX	Amarillo	3.97	253		Pn	03 12 40.8	+0.2
MGMO	Mountain Grove	3.98	73	Pn	Pn	03 12 41.6	+0.9
W41B	Gary Mavity, V	4.02	102		Pn	03 12 41.6	+0.4
WLAR	White Oak Lake	4.04	126	Pn	Pn	03 12 41.4	0.0
ABTX	Abilene, Hawle	4.08	212		Pn	03 12 42.5	+0.4
237A	Washetta, Mont	4.22	166	Pn	Pn	03 12 43.5	-0.4
LCAR	Lake Charles	4.78	89	Pn	Pn	03 12 51.9	+0.4
BGNE	Belgrade	5.36	351	Pn	Pn	03 13 00.0	+0.4
P43A	Skaggs, Pawnee	6.92	57	Pn	Pn	03 13 21.9	+0.9
ECSD	EROS Data Cent	7.62	2		Pn	03 13 29.5	-1.2
ISCO	Idaho Springs	7.70	301		Pg	03 14 01.4	-5.0
ANMO	Albuquerque	7.76	264	Pn	Pn	03 13 34.9	+2.2
	0.0nm,0.3s,baz=203,slow=4.9,SNR=1.4						
ANMO				Pg	Pb	03 14 01.0	+7.0
	0.2nm,0.3s,baz=84,slow=15,SNR=4.8						
ANMO				Lg	Lg	03 15 42.8	
	0.4nm,0.3s,baz=340,slow=18,SNR=2.7						
TXAR	Lajitas Array	8.76	221	Pn	Pn	03 13 43.8	-2.5
	0.1nm,0.3s,baz=33,slow=12,SNR=6.6						
TXAR				Pg	Pg	03 14 17.3	-9.2
	0.5nm,0.3s,baz=41,slow=15,SNR=14						
TXAR				Lg	Lg	03 16 14.7	
	0.6nm,0.3s,baz=53,slow=29,SNR=12						
PDAR	Pinedale Array	11.73	308	Pn	Pn	03 14 25.8	-1.3
	0.1nm,0.3s,baz=114,slow=15,SNR=1.4						
PDAR				Lg	Lg	03 17 49.0	
	0.1nm,0.3s,baz=97,slow=31,SNR=2.1						
ULM	Lac du Bonnet	14.16	3	Pn	Pn	03 14 52.6	-7.5
	0.2nm,0.3s,baz=180,slow=11,SNR=3.6						

IDC 23 03:21:49.1±1.7, 18.36S×179.94W, h0km, mb3.8/7, mb1 4.2/7, mb1mx3.9/38, mbtmp3.8/7, MS3.4/8, Ms1 3.4/8, ms1mx3.1/31, Error ellipse: s-maj=120.0km s-min=21.8km az=151.0

ISC 23 03:21:54.6±1.4, 18.2S±0.6×179.9E±0.4, h35km, n15, σ0.78/9, mb3.9/7, MS3.3/6, Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
AFI	Afiamalu	9.04	63	LR	LR	03 27 07.6	
	comp=Z,204nm,18.5s,baz=238,slow=35						
RAR	Rarotonga	19.38	102	LR	LR	03 31 09.4	
	comp=Z,102nm,20.8s,baz=268,slow=29						
HNR	Honiara	21.21	291	LR	LR	03 33 59.9	
	comp=Z,106nm,20.4s,baz=22,slow=34						
KRVT	Keravat (AS076	30.54	293	LR	LR	03 39 23.3	
	comp=Z,92nm,20.7s,baz=70,slow=34						
STKA	Stephens Creek	37.11	241	P	P	03 29 02.2	+0.4
	1.1nm,0.6s,baz=90,slow=7.7,SNR=3.4						
STKA				LR	LR	03 44 05.4	
	comp=Z,78nm,18.2s,baz=17,slow=36						
WRA	Warramunga Arr	43.01	260	P	P	03 29 49.9	-1.1
	1.5nm,0.7s,baz=96,slow=7.4,SNR=1.7						
ASAR	Alice Springs	43.18	255	P	P	03 29 52.7	+0.3
	3.5nm,0.8s,baz=86,slow=8.6,SNR=20						
MJAR	Matsushiro Arr	67.16	324	LR	LR	03 56 08.8	
	comp=Z,13nm,21.8s,baz=230,slow=31						
KSRS	Korea Array	73.83	319	LR	LR	04 02 01.0	
	comp=Z,10nm,20.4s,baz=245,slow=32						
NVAR	Mina Array Bea	80.72	45	P	P	03 34 05.1	+0.5
	0.7nm,0.7s,baz=225,slow=9.1,SNR=10						
ILAR	Eielson Array	86.49	14	P	P	03 34 34.0	+0.6
	0.8nm,1.1s,baz=220,slow=6.8,SNR=2.7						
TXAR	Lajitas Array	87.48	58	P	P	03 34 38.8	-0.3
	0.2nm,0.8s,baz=255,slow=3.5,SNR=2.7						
TXAR				LR	LR	04 06 33.9	
	comp=Z,28nm,19.9s,baz=0,slow=31						
PDAR	Pinedale Array	88.64	44	P	P	03 34 43.3	-1.1
	0.2nm,0.7s,baz=219,slow=4.2,SNR=1.9						
BRTR	Keskin Array B	143.80	314	PKP	PKPdf	03 41 26.9	+0.4
	1.7nm,1.2s,baz=339,slow=6.6,SNR=4.3						
GERES	GERESS Array B	147.40	343	PKPbc	PKiKP	03 41 37.1	+0.1
	0.3nm,0.7s,baz=356,slow=2.9,SNR=1.8						

IDC 23 03:22:08.9±4.9, 7.38S×103.94E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.2/55, mbtmp3.4/3, Error ellipse: s-maj=216.9km s-min=32.0km az=54.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
ASAR	Alice Springs	32.98	123	P	P	03 28 45.4	-0.5
	0.3nm,0.8s,baz=306,slow=8.0,SNR=4.3						
SONM	Songino Array	55.02	2	P	P	03 31 42.5	+0.2
	0.7nm,1.0s,baz=178,slow=5.6,SNR=3.4						
MKAR	Makanchi Array	57.27	342	P	P	03 31 57.7	-0.6
	0.2nm,0.5s,baz=141,slow=8.7,SNR=6.1						
TXAR	Lajitas Array	146.06	46	PKPbc	PKPbc	03 41 51.8	+0.1
	0.2nm,0.8s,baz=304,slow=2.1,SNR=2.3						

NEIC 23 03:34:22.3±1.0, 19.0N±0.1×65.18W±0.06, h40km±50km, Error ellipse: s-maj=17.3km s-min=8.3km az=171.0

NEIC 23 03:35:04.3±0.6, 18.93N±0.08×65.12W±0.04, h36km±77km, Error ellipse: s-maj=12.6km s-min=4.4km az=196.0

RSPR 23 03:34:23.0, 19.00N×65.18W, h31km±17km, MD2.6/3, 7C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
STVI	Saint Thomas	0.67	162	⇑eP	Pb	03 34 34.4	-1.9
STVI	Saint Thomas	0.67	162	⇑eP	Pb	03 34 34.4	-1.9
STVI				eS	Sb	03 34 43.6	-1.8
STVI	Saint Thomas	0.67	162		Pb	03 34 34.4	-1.9
STVI					Sb	03 34 43.6	-1.8
CUPR	Culebra, Puert	0.69	188	⇑eP	Pb	03 34 35.2	-1.4
CUPR	Culebra, Puert	0.69	188	eS	Sb	03 34 44.4	-1.5
CUPR	Culebra, Puert	0.69	188		Pb	03 34 35.2	-1.4
CUPR					Sb	03 34 44.4	-1.5
MTP	Monte Pirata	0.96	202	⇑eP	Pn	03 34 39.1	-1.3
MTP	Monte Pirata	0.96	202	⇑eP	Pn	03 34 39.1	-1.3
MTP				eS	Sn	03 34 51.3	-1.7
MTP	Monte Pirata	0.96	202		Pn	03 34 39.1	-1.3
MTP					Sn	03 34 51.3	-1.7
CBYP	Canovanas	0.97	222	⇑eP	Pn	03 34 38.6	-1.9
CBYP	Canovanas	0.97	222	⇑eP	Pn	03 34 38.6	-1.9
CBYP				eS	Sn	03 34 51.0	-2.3
CBYP	Canovanas	0.97	222		Pn	03 34 38.6	-1.9
CBYP					Sn	03 34 51.0	-2.3
HUMP	Col San Antoni	1.06	217	eS	Sn	03 34 53.0	-2.5
HUMP	Col San Antoni	1.06	217	eS	Sn	03 34 53.0	-2.5
HUMP	Col San Antoni	1.06	217		Sn	03 34 53.0	-2.5
HUMP	Col San Antoni	1.06	217	Pn	Pn	03 34 41.6	-0.2

RSPR 23 03:35:05.1, 18.97N×65.16W, h29km±23km, MD3.1/3, 9C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
STVI	Saint Thomas	0.65	162	⇑eP	Pb	03 35 16.1	-1.8
STVI	Saint Thomas	0.65	162	⇑eP	Pb	03 35 16.1	-1.8
STVI				eS	Sb	03 35 24.9	-1.7
STVI	Saint Thomas	0.65	162		Pb	03 35 16.1	-1.8
STVI					Sb	03 35 24.9	-1.7
CUPR	Culebra, Puert	0.67	190	⇑eP	Pb	03 35 16.9	-1.5
CUPR	Culebra, Puert	0.67	190	eS	Sb	03 35 26.1	-1.2
CUPR	Culebra, Puert	0.67	190		Pb	03 35 16.9	-1.5
CUPR					Sb	03 35 26.1	-1.2
MTP	Monte Pirata	0.95	203	⇑eP	Pn	03 35 20.8	-1.6
MTP	Monte Pirata	0.95	203	⇑eP	Pn	03 35 20.8	-1.6
MTP				eS	Sn	03 35 33.0	-2.0
MTP	Monte Pirata	0.95	203		Pn	03 35 20.8	-1.6
MTP					Sn	03 35 33.0	-2.0
CBYP	Canovanas	0.96	224	⇑eP	Pn	03 35 20.3	-2.4
CBYP	Canovanas	0.96	224	⇑eP	Pn	03 35 20.3	-2.4
CBYP				eS	Sn	03 35 32.6	-2.8
CBYP	Canovanas	0.96	224		Pn	03 35 20.3	-2.4
CBYP					Sn	03 35 32.6	-2.8
HUMP	Col San Antoni	1.05	219	⇑eP	Pn	03 35 22.7	-1.2
HUMP	Col San Antoni	1.05	219	⇑eP	Pn	03 35 22.7	-1.2
HUMP				eS	Sn	03 35 35.0	-2.7
HUMP	Col San Antoni	1.05	219		Pn	03 35 22.7	-1.2
HUMP					Sn	03 35 35.0	-2.7
GCPR	Guaynabo City	1.10	233	Pn	Pn	03 35 23.1	-1.4

IDC 23 03:39:15.6±2.2, 22.08N×67.35W, h0km, mb3.5/5, mb1 4.0/8, mb1mx3.7/39, mbtmp3.8/8, ML2.6/2, Error ellipse: s-maj=54.3km s-min=23.5km az=86.0

NEIC 23 03:39:18.4±1.5, 21.99N±0.06×67.63W±0.07, h10km±2km, mb4.6/183, Error ellipse: s-maj=12.5km s-min=8.1km az=40.0

OSPL 23 03:39:23.9±1.6, 21.92N×67.60W, h50km±43km, ML4.1

ISC 23 03:39:18.9±0.6, 21.92N±0.05×67.71W±0.05, h10km, n248, σ2.56/161, mb4.6/42, 1C-2D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
GRTK	Grand Turk	3.21	263		Pn	03 40 08.4	-1.0
GRTK				Sn	Sn	03 40 42.8	-4.9
PCDR	Punta Cana, DR	3.45	191	i P	Pn	03 40 13.6	+0.8
PCDR				eS	Sn	03 40 51.0	-2.7
PCDR				IAML		03 40 53.6	
	comp=Z,948nm,0.3s						
PCDR	Punta Cana, DR	3.45	191	Pn	Pn	03 40 13.3	+0.6
AGPR	Aguadilla, PR	3.48	171	i P	Pn	03 40 13.7	+0.5
AGPR				eS	Sn	03 40 50.9	-3.7
AGPR				IAML		03 40 52.1	
	comp=Z,464nm,0.2s						
AGPR	Aguadilla, PR	3.48	171		Pn	03 40 13.7	+0.5
DR12	Loma Pena Alta	3.49	207		Pn	03 40 14.3	+0.9
EMPR	Esperanza - Ma	3.60	162		Pn	03 40 15.4	+0.5
AOPR	Arecibo Observ	3.67	166		Pn	03 40 16.1	+0.3
MPR	Mayaguez	3.73	172	i P	Pn	03 40 17.4	+0.7
MPR				eS	Sn	03 40 57.7	-3.0
MPR				IAML		03 40 59.8	
	comp=Z,171nm,0.7s						
MPR	Mayaguez	3.73	172		Pn	03 40 17.4	+0.7
GCPR	Guaynabo City	3.91	157		Pn	03 40 18.9	-0.1
CRPR	Cabo Rojo, PR	3.94	172		Pn	03 40 20.2	+0.7
MLPR	Magueyes Islan	3.98	171		Pn	03 40 19.8	-0.3
OBIP	Obispado Ponce	4.00	165		Pn	03 40 19.7	-0.5
SDD	Santo Domingo	4.02	211	i P	Pn	03 40 22.4	+1.8
SDD				eS	Sn	03 41 04.5	-3.3
SDD	Santo Domingo	4.02	211		Pn	03 40 22.2	+1.6
CBYP	Canovanas	4.03	154	Pn	Pn	03 40 20.3	-0.5
SJG	San Juan	4.07	159		Pn	03 40 21.3	+0.1
HUMP	Col San Antoni	4.15	155		Pn	03 40 22.1	-0.2
ICMP	Isla Caja de M	4.17	164		Pn	03 40 23.3	+0.7
IGPR	InterUniversit	4.22	159		Pn	03 40 23.5	+0.2
CUPR	Culebra, Puert	4.26	147		Pn	03 40 22.9	-1.0
BANI	BANI	4.31	216		Pn	03 40 26.5	+1.8
MTP	Monte Pirata	4.31	152		Pn	03 40 24.0	-0.6
STVI	Saint Thomas	4.40	143		Pn	03 40 25.4	-0.3
SDDR	Presa de Saban	4.45	230	i P	Pn	03 40 28.2	+1.6
SDDR				eS	Sn	03 41 16.4	-2.1
SDDR				IAML		03 41 21.2	
	comp=Z,112nm,0.3s						
SDDR	Presa de Saban	4.45	230		Pn	03 40 27.7	+1.1
SJM1	San Juan de la	4.53	227	i P	Pn	03 40 30.6	+3.0
SJM1				eS	Sn	03 41 17.5	-2.8
CDVI	St. Croix	4.99	146		Pn	03 40 34.6	+0.7
LGNH	Logne	5.71	234	i P	Pn	03 40 46.0	+2.1
LGNH				eS	Sn	03 41 46.4	-3.2
LGNH				IAML		03 41 59.5	
	comp=Z,30nm,1.6s						
LGNH	Logne	5.71	234		Pn	03 40 45.7	+1.8
SMRT	St. Maarten	5.82	131		Pn	03 40 44.0	-1.3
SMRT				Sn	Sn	03 41 47.8	-4.3
SABA	Saba	6.00	135	Pn	Pn	03 40 46.8	-1.1
SEUS	St. Eustatius	6.27	134	Pn	Pn	03 40 48.3	-3.2
SKI	Saint Kitts	6.54	133	Pn	Pn	03 40 54.6	-0.7
ANWB	Willy Bob	7.00	126	Pn	Pn	03 40 59.4	-2.2
GTBY	Guantanamo Bay	7.20	255	i P	Pn	03 41 04.2	-0.2
GTBY				eS	Sn	03 42 18.9	-7.2
GTBY				IAML		03 42 31.9	
	comp=Z,36nm,0.5s						
GTBY	Guantanamo Bay	7.20	255		Pn	03 41 04.1	-0.2
STH	Stony Hill	9.37	248	⇓i P	Pn	03 41 33.7	-0.4
FDF	Fort de France	9.48	138	Pn	Pn	03 41 33.5	-2.2
PCJ	Portland Cotta	9.82	247	⇑i P	Pn	03 41 41.2	+1.0
MTDJ	Mount Denham	9.94	250	Pn	Pn	03 41 40.9	-1.1
MTDJ				Sn	Sn	03 43 27.8	-5.9
MCJ	Malvern	10.19	249	⇓i P	Pn	03 41 45.5	+0.1
MCLT	Moule a Chique	10.40	141	Pn	Pn	03 41 49.8	+1.5

BBSR BB Station 10.74 14 Pn Pn 03 41 51.1 -1.7
GRGR Grenville 11.33 148 Pn Pn 03 42 01.1 +0.1
CBCY The Bluff, Cay 11.47 261 Pn Pn 03 42 00.6 -2.3
BBGH Gun Hill 11.69 137 Pn Pn 03 42 05.1 -0.8
PCRV Puerto La Cruz 12.05 165 Pn Pn 03 42 11.4 +0.6
comp=Z,2.2nm,0.3s,baz=352,slow=4.8,SNR=8.8
PCRV Sn Sn 03 44 15.6 -10
comp=Z,0.8nm,0.3s,baz=131,slow=11,SNR=1.7
PLCV Puerto La Cruz 12.07 165 Pn 03 42 11.4 +0.3
PLCV Sn 03 44 15.6 -10
060A Indiantown 12.59 296 Pn Pn 03 42 18.1 -0.1
TOSP Speyside 12.60 146 Pn Pn 03 42 18.1 -0.3
061Z Ochoppi 12.69 291 Pn Pn 03 42 18.6 -1.0
FSCY Frank Sound, G 12.88 261 Pn Pn 03 42 20.1 -2.1
SDV Santo Domingo 13.27 193 Pn Pn 03 42 28.6 +1.0
comp=Z,0.3nm,0.3s,baz=319,slow=21,SNR=1.3
DWPF Disney Wildern 13.88 299 Pn 03 42 35.4 -0.3
Y60A Bolivia 15.18 325 Pn Pn 03 42 53.7 +0.2
656A Willston 15.28 302 Pn 03 42 54.4 -0.3
V62A Hyde County Ai 15.38 334 Pn 03 42 54.0 -2.1
257A Skidaway Islan 15.52 313 Pn 03 42 58.3 +0.5
456A Hilliard 15.53 307 Pn 03 42 58.4 +0.4
Y59A Loris 15.53 323 Pn 03 42 58.9 +0.9
Y59A IAmb IAmb 03 43 00.7
comp=Z,33nm,0.8s
CSU Charleston Sou 15.53 318 P Pn 03 42 59.8 +1.8
NHSC New Hope 15.68 318 P Pn 03 43 01.9 +2.0
V61A Roper 15.84 333 Pn 03 43 01.8 -0.2
Y58A Scranton 15.93 321 Pn 03 43 03.4 +0.2
CNNC Cliffs of the 15.98 328 Pn Pn 03 43 03.6 -0.3
V60A Jim Taylor Roa 16.12 331 P Pn 03 43 05.5 -0.1
X58A Rowland 16.21 323 P Pn 03 43 06.8 +0.1
X58A IAmb IAmb 03 43 10.9
comp=Z,30nm,0.6s
U61A Possum Corner 16.25 334 P Pn 03 43 07.3 +0.1
Y57A Sumter 16.43 320 P P 03 43 11.5 -0.9
255A Hazlehurst 16.50 310 P Pn 03 43 11.1 +0.7
255A IAmb IAmb 03 43 19.4
comp=Z,44nm,0.9s
Z56A Williston 16.58 316 P P 03 43 13.1 -1.0
RUSC La Rusia 16.76 199 P 03 43 16.5 -0.3
U59A Littleton 16.84 331 P Pn 03 43 15.7 +0.9
U59A IAmb IAmb 03 43 17.0
comp=Z,32nm,0.6s
BIRD Birdtown, Kers 16.91 321 P P 03 43 17.1 -0.7
BIRD IAmb IAmb 03 43 19.5
comp=Z,27nm,0.6s
W57A Gilead 17.01 323 P Pn 03 43 17.4 +0.4
V58A Windy Hill, Pi 17.03 327 P Pn 03 43 16.3 -0.9
V58A IAmb IAmb 03 43 21.9
comp=Z,27nm,0.6s
TIGA Tifton 17.05 307 P P 03 43 19.0 -0.2
TIGA IAmb IAmb 03 43 21.6
comp=Z,43nm,0.8s
T60A Surry 17.06 335 P Pn 03 43 18.2 +0.6
T60A IAmb IAmb 03 43 21.0
comp=Z,55nm,0.8s
JSC Jenkinsville 17.14 319 P P 03 43 20.7 +0.5
JSC IAmb IAmb 03 43 22.0
comp=Z,31nm,0.7s
S61A Accomac 17.14 338 Pn 03 43 18.6 0.0
T59A Double "B" Far 17.25 333 P Pn 03 43 20.3 +0.3
T59A IAmb IAmb 03 43 22.4
comp=Z,35nm,0.6s
154A Montrose 17.32 311 P P 03 43 22.8 +0.5
HELC Santa Helena 17.37 207 eP P 03 43 25.3 +2.0
R61A Willards 17.62 340 P Pn 03 43 24.1 -0.4
NORC Norcasia 17.68 204 eP P 03 43 28.0 +1.6
HODGE Hodges 17.73 317 P P 03 43 28.1 +1.3
KMSC Kings Mountain 17.77 321 P P 03 43 29.6 +2.4
KMSC IAmb IAmb 03 43 31.0
comp=Z,41nm,0.7s
PAULI Pauline 17.84 319 P P 03 43 30.3 +2.4
PAULI IAmb IAmb 03 43 38.6
comp=Z,46nm,0.6s
CBOC Ciudad Bolivar 17.87 208 eP P 03 43 30.0 +1.3
S58A Poland Farm, P 18.01 333 P P 03 43 30.4 +0.6
S58A IAmb IAmb 03 43 33.8
comp=Z,29nm,0.5s
GOGA Godfrey 18.02 313 P P 03 43 31.4 +1.3
GOGA IAmb IAmb 03 43 33.3
comp=Z,17nm,0.3s
T57A Hurt 18.05 329 P P 03 43 30.3 0.0
352A Blakely 18.07 305 P P 03 43 32.3 +1.7
352A IAmb IAmb 03 43 34.3
comp=Z,23nm,0.7s
U56A King 18.11 325 P P 03 43 32.7 +1.7
ROSC El Rosal 18.15 202 P Pn 03 43 31.8 +0.1
comp=Z,0.4nm,0.3s,baz=63,slow=6.1,SNR=4.4
ROSC El Rosal 18.15 202 P P 03 43 32.5 +0.5
CHIC Chingaza 18.16 200 eP P 03 43 33.3 +1.3
GUY2C Guyana, Caldas 18.18 205 eP P 03 43 34.6 +2.2
V55A Taylorsville 18.20 323 P P 03 43 34.6 +2.6
V55A IAmb IAmb 03 43 38.3
comp=Z,18nm,0.4s
R58B Mineral 18.23 334 P P 03 43 32.3 0.0
R58B IAmb IAmb 03 43 36.2
comp=Z,39nm,0.6s
CBN Corbin Frederi 18.23 335 P Pn 03 43 31.8 -0.3
Q60A Greensboro 18.39 340 P Pn 03 43 35.8 +1.7
Q60A IAmb IAmb 03 43 38.2
comp=Z,46nm,0.8s
152A Waverly Hall 18.50 309 P Pn 03 43 39.3 +3.9
S57A Dark Hollow, R 18.53 331 P Pn 03 43 38.7 +3.0
BG3 Lake Jocassee 18.64 318 P Pn 03 43 40.6 +3.5
Y52A Lilburn 18.69 313 P Pn 03 43 41.0 +3.3
Y52A IAmb IAmb 03 43 42.8
comp=Z,30nm,0.5s
P61A Hammonton 18.70 343 P Pn 03 43 40.6 +2.8
P61A IAmb IAmb 03 43 47.6
comp=Z,63nm,1.2s
BLA Blacksburg 18.79 327 P Pn 03 43 41.1 +2.1
V53A Saluda 19.01 319 P Pn 03 43 46.2 +4.6
V53A IAmb IAmb 03 43 48.8
comp=Z,36nm,0.6s
U54A Nelsons Funny 19.02 323 P Pn 03 43 45.6 +3.8
P60A Greenville 19.07 341 P Pn 03 43 44.5 +2.3
P60A IAmb IAmb 03 43 45.8
comp=Z,20nm,0.7s
SDMD Soldier's Deli 19.10 338 P Pn 03 43 43.9 +1.3
PSUB Penn St. - Bra 19.12 342 P Pn 03 43 45.9 +3.0
PSUB IAmb IAmb 03 43 46.6
comp=Z,27nm,0.6s
Z51A Franklin 19.16 310 P Pn 03 43 49.4 +5.9
TEIG Tepich 19.27 269 P Pn 03 43 48.0 +3.2
250A Grady 19.31 305 P Pn 03 43 49.5 +4.3
250A IAmb IAmb 03 43 59.2
comp=Z,13nm,0.6s
W52A Murphy 19.34 316 P Pn 03 43 51.1 +5.5
ACON Acoyapa 19.40 242 P P 03 43 45.4 +0.1
MVL Millersville 19.46 340 P Pn 03 43 50.6 +3.7
R55A Marlinton 19.49 330 P Pn 03 43 53.4 +6.0
CPNY Central Park 19.54 346 P Pn 03 43 51.0 +3.1
CPNY IAmb IAmb 03 43 52.7
comp=Z,20nm,0.8s
BRAL Brewton 19.58 302 P Pn 03 43 54.0 +5.6
BRAL IAmb IAmb 03 43 55.4
comp=Z,36nm,0.7s
BRNJ Basking Ridge 19.58 344 P Pn 03 43 52.1 +3.7
P57A Homestead Farm 19.59 336 P Pn 03 43 50.6 +2.1
P57A IAmb IAmb 03 43 55.6
comp=Z,24nm,0.9s
TKL Tuckaleechee C 19.59 318 P Pn 03 43 55.0 +6.4
V52A Sevierville 19.60 318 P Pn 03 43 54.2 +5.4
X51A Calhoun 19.63 314 P Pn 03 43 54.7 +5.6
Z50A Ashland 19.66 309 P Pn 03 43 54.9 +5.4
Q56A Snyder Ridge, 19.69 333 P Pn 03 43 55.2 +5.5
S54A Dingess, Beckl 19.70 326 P Pn 03 43 56.4 +6.5
LUPA Lehigh Univers 19.72 342 P Pn 03 43 54.3 +4.3
PAL Palisades 19.73 346 P Pn 03 43 54.3 +4.1
PAL IAmb IAmb 03 43 54.9
comp=Z,21nm,0.7s
WSPT Westport, CT 19.77 347 P Pn 03 43 55.1 +4.5
PAGS Pennsylvania G 19.79 339 P Pn 03 43 54.6 +3.7
YLE Yale 19.83 348 P Pn 03 43 56.3 +5.0
CPCT Cooper Cave 19.94 316 P Pn 03 43 59.1 +6.4
ODNJ Ogdensburg 19.97 345 P Pn 03 43 58.4 +5.4
ODNJ IAmb IAmb 03 44 00.6
comp=Z,23nm,1.1s
TZTN Tazewell 20.04 320 P Pn 03 44 00.9 +7.0
TZTN IAmb IAmb 03 44 02.3
comp=Z,26nm,0.6s
V51A Loudon 20.05 317 P Pn 03 44 00.1 +6.1
T52A Hallie 20.10 322 P Pn 03 44 02.6 +7.9
T52A IAmb IAmb 03 44 05.7
comp=Z,16nm,0.5s
N59A State Game Lan 20.13 342 P Pn 03 44 00.4 +5.5
FPAL Fort Paine 20.13 312 P Pn 03 44 01.3 +6.2
JTS Las Juntas de 20.18 238 P Pn 03 43 55.3 -0.4
comp=Z,10nm,0.8s,baz=88,slow=8.4,SNR=6.4
JTS Las Juntas de 20.18 238 P Pn 03 43 55.4 -0.3
BRYW Bryant College 20.19 352 P Pn 03 44 01.2 +5.5
BRYW IAmb IAmb 03 44 01.8
comp=Z,25nm,0.7s
W50A Signal Mountai 20.30 314 P Pn 03 44 03.7 +6.7
Y49A Blount Mountain 20.32 310 P Pn 03 44 03.8 +6.5
Y49A IAmb IAmb 03 44 06.3
comp=Z,12nm,0.6s
KSCT Kent School, K 20.33 347 P Pn 03 44 02.1 +4.8
KSCT IAmb IAmb 03 44 04.3
comp=Z,15nm,0.5s
N58A Sunbury 20.34 340 P Pn 03 44 02.0 +4.7
LRAL Lakeview Retre 20.34 307 Pn 03 44 02.6 +5.1
Q54A Coxs Mills 20.38 329 P Pn 03 44 05.4 +7.5
Q54A IAmb IAmb 03 44 07.3
comp=Z,16nm,0.5s
R53A Hurricane 20.43 326 P Pn 03 44 05.6 +7.1
O56A Blue Knob Stat 20.48 336 P Pn 03 44 05.7 +6.5
MCWV Mont Chateau 20.48 332 P Pn 03 44 06.5 +7.3
SSPA Standing Stone 20.55 337 P Pn 03 44 06.6 +6.7
BCX Boston College 20.56 353 P Pn 03 44 05.6 +5.7
BCX IAmb IAmb 03 44 07.0
comp=Z,22nm,0.9s
WES Weston 20.62 352 P Pn 03 44 05.6 +4.9
WES IAmb IAmb 03 44 06.6
comp=Z,24nm,0.8s
QUA2 Belchertown 20.67 350 P Pn 03 44 07.6 +6.5
QUA2 IAmb IAmb 03 44 08.9
comp=Z,31nm,1.2s
SWET Sewanee 20.73 314 P Pn 03 44 09.0 +7.0
SWET IAmb IAmb 03 44 11.7
comp=Z,9.5nm,0.4s
HRV Adam Dziewonsk 20.77 352 P Pn 03 44 08.4 +6.0
S51A Beattyville 20.82 322 P Pn 03 44 11.0 +8.0
M57A Sunshine Farm, 20.92 340 P Pn 03 44 10.1 +5.9
M57A IAmb IAmb 03 44 18.4
comp=Z,18nm,1.0s
K62A Royalston 21.02 351 P P 03 44 11.5 +8.8
K62A IAmb IAmb 03 44 15.1
comp=Z,15nm,0.6s
P53A Whipple 21.05 329 P P 03 44 03.4 +0.4
X48A Hartselle 21.08 310 P P 03 44 13.3 +10
X48A IAmb IAmb 03 44 15.5
comp=Z,12nm,0.6s
L59A Walton 21.12 345 P P 03 44 13.5 +10
O54A Avella 21.15 332 P P 03 44 14.2 +10
TRY Troy 21.34 348 P P 03 44 17.0 +11
TRY IAmb IAmb 03 44 19.9
comp=Z,25nm,0.9s
BINY Binghamton 21.38 343 P P 03 44 16.9 +10
BINY IAmb IAmb 03 44 26.1
comp=Z,18nm,0.7s
M56A Emporium 21.41 338 P P 03 44 17.9 +11
M56A IAmb IAmb 03 44 18.2
comp=Z,38nm,1.4s
CLTN Cedars of Leba 21.50 315 P P 03 44 17.9 +10
M55A Ridgway 21.60 337 P P 03 44 19.3 +10
T49A Edmonton 21.61 318 P P 03 44 08.6 -0.6
V48A Smith Brothers 21.62 314 P P 03 44 19.7 +10
N54A Moraine State 21.64 334 P P 03 44 21.6 +12
N54A IAmb IAmb 03 44 25.2
comp=Z,17nm,0.7s
Q51A Peebles 21.67 325 P P 03 44 21.9 +12
R50A Paris 21.68 322 P P 03 44 21.7 +12
R50A IAmb IAmb 03 44 24.8
comp=Z,20nm,0.6s
FFD Franklin Falls 21.73 352 P P 03 44 21.9 +12
O52A Adamsville 21.75 330 P P 03 44 21.7 +11
O52A IAmb IAmb 03 44 27.7
comp=Z,14nm,0.8s
L56A Greenwood 21.78 340 P P 03 44 22.9 +12
L56A IAmb IAmb 03 44 32.0
comp=Z,20nm,1.0s
K58A Earlville 21.81 344 P P 03 44 11.5 +0.3
N53A Lisbon 21.86 332 P P 03 44 23.2 +11
N53A IAmb IAmb 03 44 26.9
comp=Z,25nm,0.7s
P51A Williamsport 21.86 327 P P 03 44 23.5 +12
ACCN Adirondack Com 21.97 348 P P 03 44 25.3 +12
M54A Oil Creek Stat 21.97 335 P P 03 44 11.5 -1.5
PLAL Pickwick Lake 22.08 311 P P 03 44 24.9 +11
I62A Tamworth 22.10 353 P P 03 44 26.7 +12
I62A IAmb IAmb 03 44 30.9
comp=Z,26nm,1.1s
R49A Shelbyville 22.17 321 P P 03 44 26.3 +11
R49A IAmb IAmb 03 44 33.7
comp=Z,18nm,1.2s
I63A Otisfield 22.20 355 P P 03 44 26.9 +12
I63A IAmb IAmb 03 44 31.2
comp=Z,11nm,0.7s
J59A Piesco 22.21 347 P P 03 44 28.6 +13
J59A IAmb IAmb 03 44 31.6
comp=Z,13nm,0.9s
ALLY Alegheny Colle 22.28 335 P P 03 44 29.4 +13
ALLY IAmb IAmb 03 44 35.7
comp=Z,24nm,1.1s
J58A Remsen 22.29 345 P P 03 44 28.9 +13
J58A IAmb IAmb 03 44 35.4
comp=Z,29nm,1.4s
WVNY West Valley, N 22.37 338 P P 03 44 30.2 +13
WVNY IAmb IAmb 03 44 33.6
comp=Z,10nm,0.5s
ACSO Alum Creek Sta 22.39 328 P P 03 44 32.0 +14
ACSO IAmb IAmb 03 44 34.1
comp=Z,25nm,1.0s
J57A Williamstown 22.51 344 P P 03 44 32.0 +13
J57A IAmb IAmb 03 44 34.5
comp=Z,26nm,0.9s
WVT Waverly 22.52 313 P P 03 44 29.2 +10
WVT pwP 03 44 33.7 +6.5
LBNH Lisbon 22.53 352 P P 03 44 33.1 +14
LBNH IAmb IAmb 03 44 34.5
comp=Z,30nm,1.4s
T47A Sharon Grove 22.53 316 P P 03 44 34.2 +15
J56A Wolcott 22.61 342 P P 03 44 33.3 +13
WVL Waterville 22.64 356 P P 03 44 33.8 +14
NCB Newcomb 22.64 348 P P 03 44 32.3 +12
M52A Chesterland 22.69 333 P P 03 44 32.3 +12
H62A Milan 22.77 354 P P 03 44 35.2 +14
H62A IAmb IAmb 03 44 40.1
comp=Z,24nm,1.2s
WCI Wyandotte Cave 22.79 320 P P 03 44 20.9 -0.8
OXF Oxford 22.81 308 P P 03 44 32.9 +11
J55A Hilton 22.89 341 P P 03 44 36.4 +14
J55A IAmb IAmb 03 44 42.3
comp=Z,17nm,0.8s
MEDO Medina 23.00 340 P P 03 44 32.7 +8.9
MEDO IAmb IAmb 03 44 39.7
comp=Z,33nm,1.1s
O49A Covington 23.05 326 P P 03 44 25.2 +0.8
P48A Milroy 23.11 323 P P 03 44 26.1 +1.0
GGN Saint George 23.14 2 P P 03 44 42.6 +17
GGN IAmb IAmb 03 44 44.0
comp=Z,21nm,0.8s
PECO Prince Edward 23.26 343 P P 03 44 42.2 +16
PECO IAmb IAmb 03 44 46.6
comp=Z,22nm,0.9s
G62A West of Eustis 23.35 355 P P 03 44 44.5 +17
G62A IAmb IAmb 03 44 47.4
comp=Z,18nm,1.0s
FRNY Flat Rock 23.36 349 P P 03 44 39.8 +12
FRNY IAmb IAmb 03 44 48.5
comp=Z,14nm,1.0s
USIN University of 23.47 317 P P 03 44 43.9 +15
F63A Nahmakanta, Br 23.75 358 P P 03 44 50.1 +19
F63A IAmb IAmb 03 44 52.6
comp=Z,33nm,1.4s
F64A Sherman 23.89 359 P P 03 44 51.6 +19
F64A IAmb IAmb 03 44 53.2
comp=Z,7.1nm,0.5s
DELO Deloro Mine 23.97 342 P P 03 44 51.1 +18
LMN Caledonia Moun 23.99 5 P P 03 44 43.7 +10
LMN IAmb IAmb 03 44 50.4
comp=Z,27nm,1.2s
OLIL Olney 24.21 318 P P 03 44 56.5 +21
N47A Urbana 24.26 325 P P 03 44 47.2 +11
N47A pwP 03 44 57.5 +13
PLVO Plevna 24.31 344 P P 03 44 48.8 +12
PLVO IAmb IAmb 03 44 51.2
comp=Z,18nm,1.2s
PLVO pwP 03 44 55.2 +10
AAM Ann Arbor 24.32 330 P 03 45 00.2 +24
S44A Carbondale 24.34 315 P 03 44 58.5 +22
E63A Oxbow 24.45 359 P P 03 44 48.3 +11
E63A pwP 03 44 57.9 +12
SFIN Lafayette 24.68 323 P 03 45 01.2 +21
D62A Allapoint, All 25.12 358 P P 03 44 55.4 +11
D62A pwP 03 45 09.1 +17
J48A Bridge Port 25.16 332 P P 03 44 53.8 +9.4
J48A pwP 03 45 09.4 +17
J47A Sunmer 25.59 330 P 03 45 16.3 +28
P43A Skaggs, Pawnee 25.64 318 P 03 45 16.2 +28
CCM Cathedral Cave 25.85 314 P 03 45 19.2 +29
CCM IAmb IAmb 03 45 22.6
comp=Z,7.7nm,0.7s
M44A Midewin, Midew 25.89 323 P 03 45 19.3 +28
MIAR Mount Ida 25.94 305 P 03 45 18.2 +27
I47A Gladwin 26.06 332 P 03 45 21.6 +29
I47A IAmb IAmb 03 45 24.8
comp=Z,18nm,1.1s
HDIL Hopedale 26.06 320 P 03 45 21.8 +29
D53A Lac Vacive, Po 26.37 345 P 03 45 23.9 +29
VLDQ Val d'Or 27.27 346 P 03 45 38.4 +35
E46A Sault Ste Mari 27.87 335 P 03 45 44.7 +36
E46A IAmb IAmb 03 45 46.1
comp=Z,15nm,1.1s
I42A Draeger Farm, 28.07 326 P 03 45 46.8 +36
I42A IAmb IAmb 03 45 48.9
comp=Z,16nm,0.9s
JFWS Jewell Farm 28.13 323 P 03 45 48.9 +38
JFWS IAmb IAmb 03 45 50.2
comp=Z,12nm,0.7s
L40A Anamosa 28.14 321 P 03 45 48.0 +37
L40A IAmb IAmb 03 45 50.4
comp=Z,7.3nm,0.8s
E43A Lone Tree Farm 29.00 332 P 03 45 59.6 +41
E43A IAmb IAmb 03 46 00.1
comp=Z,25nm,1.4s
TXAR Lajitas Array 33.15 290 P P 03 45 57.2 +1.5
comp=Z,0.2nm,0.7s,baz=120,slow=9.0,SNR=3.8
PDAR Pinedale Array 40.49 311 PP PP 03 48 26.9 -4.5
comp=Z,0.3nm,0.7s,baz=99,slow=11,SNR=2.5
NVAR Mina Array Bea 46.15 303 P P 03 47 44.1 +0.1
comp=Z,0.2nm,0.6s,baz=136,slow=5.4,SNR=4.1
YKA Yellowknife Ar 51.44 334 P P 03 48 21.0 -2.9
comp=Z,0.6nm,0.8s,baz=120,slow=8.6,SNR=4.4
ILAR Eielson Array 65.79 333 P P 03 50 02.9 -1.1
comp=Z,0.4nm,1.0s,baz=99,slow=4.7,SNR=3.1

IDC 23 04:01:07.6±55.0, 21.88S×175.71W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/35, mbtmp4.0/3, Error ellipse: s-maj=1029.0km s-min=170.1km az=86.0, Tonga Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
STKA Stephens Creek 39.15 246 P P 04 08 37.4 +0.2
1.3nm,0.6s,baz=102,slow=8.6,SNR=5.1
ASAR Alice Springs 46.30 258 P P 04 09 35.3 -0.2
1.1nm,0.5s,baz=96,slow=7.5,SNR=21
WRA Warramunga Arr 46.54 263 P P 04 09 37.1 -0.3
0.6nm,0.3s,baz=102,slow=8.3,SNR=15

IDC 23 04:16:38.2±2.3, 6.68S×129.18E, h0km, mb3.3/1, mb1 3.4/3, mb1mx3.2/46, mbtmp3.2/3, ML3.4/2, Error ellipse: s-maj=116.9km s-min=33.4km az=67.0, Banda Sea

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
WRA Warramunga Arr 14.10 160 Pn Pn 04 19 59.9 +0.4
0.2nm,0.3s,baz=339,slow=13,SNR=9.4
WRA Sn Sn 04 22 23.8 -13
0.1nm,0.3s,baz=338,slow=21,SNR=2.7
ASAR Alice Springs 17.49 165 P Pn 04 20 43.3 -0.4
0.1nm,0.3s,baz=337,slow=11,SNR=5.5
MKAR Makanchi Array 67.52 327 P P 04 27 36.3 +0.1
0.3nm,0.9s,baz=118,slow=8.4,SNR=1.8

TUL 23 04:44:35.8±1.9, 36.18N±0.03×96.98W±0.04, h5km±1km, ML3.2, Error ellipse: s-maj=6.7km s-min=4.5km az=294.0
ANF 23 04:44:36.2±0.7, 36.15N×96.98W, h1km±5km, ML3.9/18, Error ellipse: s-maj=4.5km s-min=2.7km az=12.0
NEIC 23 04:44:36.8±3.5, 36.12N±0.02×97.10W±0.04, h1km±6km, Error ellipse: s-maj=4.3km s-min=2.4km az=100.0
ISC 23 04:44:35.7±0.6, 36.19N±0.03×97.02W±0.02, h4km, n69, $\sigma 2^{s}36$/102, Oklahoma

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
OK005 Luther M Schoo 0.55 195 Pg Pg 04 44 46.5 +0.2
ADOK Arcadia Dam 0.61 208 Pg 04 44 47.6 +0.3
OKCFA Oklahoma City 0.85 205 Pg 04 44 51.5 -0.5
OKCFA Sg Sg 04 45 03.5 +0.5
OKCSW OKLAHOMA CITY 0.85 204 Pg 04 44 51.9 -0.1
FNO Franklin 0.98 199 Pg 04 44 54.3 -0.2
TUL1 Leonard 1.03 105 Pg 04 44 54.6 -0.8
TUL1 Leonard 1.03 105 P Pg 04 44 54.6 -0.8
baz=286
TUL1 S Sg 04 45 07.8 -1.0
baz=286
W35A Tecumseh 1.04 173 Pg 04 44 54.5 -1.1
U32A Winter Ranch, 1.61 277 Pn 04 45 05.8 +0.9
X34A Smith Ranch, M 1.72 203 Pn 04 45 06.9 +0.6
WMOK Wichita Mounta 2.04 225 Pn 04 45 11.7 +0.9
WMOK Wichita Mounta 2.04 225 P Pn 04 45 11.6 +0.9
baz=45
WMOK S Sb 04 45 39.3 +0.2
baz=45
HHAR Hobbs 2.49 87 Pn 04 45 17.8 +0.8
W39A Magazine 2.81 110 Pn 04 45 21.9 +0.5
W39A Magazine 2.81 110 P Pn 04 45 22.2 +0.7
baz=292
KSU1 Kansas State U 2.92 6 Pn Pn 04 45 24.3 +1.4
baz=186
KSU1 Pb Pb 04 45 30.4 +2.1
baz=186
MIAR Mount Ida 3.26 119 Pn 04 45 28.2 +0.7
MIAR Mount Ida 3.26 119 P Pn 04 45 28.2 +0.7
baz=301
MIAR S Sn 04 46 08.1 +1.4
baz=301
U40A Yellville 3.37 86 Pn Pn 04 45 29.5 +0.4
U40A Sg Sb 04 46 20.2 +2.8
U40A Yellville 3.37 86 Pn Pn 04 45 29.8 +0.7
baz=268
U40A Pb Pb 04 45 36.7 +0.7
baz=268
CBKS Cedar Bluff 3.40 321 Pn Pn 04 45 30.6 +1.1
CBKS Pg Pb 04 45 38.8 +2.3
CBKS Cedar Bluff 3.40 321 Pn Pn 04 45 30.3 +0.8
baz=140
CBKS Pb Pb 04 45 38.8 +2.3
baz=140
CBKS Sb Sb 04 46 22.9 +4.7
baz=140
X40A Basin Creek Fa 3.82 115 Pn Pn 04 45 36.0 +0.8
X40A Pg Pb 04 45 46.1 +2.5
X40A Sg Sb 04 46 33.5 +3.2
X40A Basin Creek Fa 3.82 115 Pn Pn 04 45 36.4 +1.2
baz=298
X40A Pb Pb 04 45 45.1 +1.5
baz=298
MGMO Mountain Grove 3.94 74 Pn 04 45 37.4 +0.4
MGMO LR 04 46 39.1
WHAR Wooly Hollow 3.95 102 Pn Pn 04 45 38.0 +0.9
WHAR Sg Sg 04 46 38.4 -4.2
FCAR Ozark Folk Cen 3.98 93 Pn Pn 04 45 38.0 +0.6
FCAR LR 04 46 39.9
W41B Gary Mavity, V 4.01 103 Pn Pn 04 45 38.8 +0.9
W41B LR 04 46 41.5
W41B Gary Mavity, V 4.01 103 Pn Pn 04 45 38.4 +0.4
baz=286
W41B Pb Pb 04 45 48.6 +1.7
baz=286
W41B S Sn 04 46 25.3 -0.1
baz=286
AMTX Amarillo 4.02 252 Pn 04 45 39.6 +1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AMTX				Sg	Sb	04 46 41.5	+5.4
AMTX	Amarillo	4.02	252	P	Pn	04 45 39.5	+1.4
	baz=70						
AMTX				Sn	Sn	04 46 28.1	+2.5
	baz=70						
AMTX				Sb	Sb	04 46 41.0	+4.9
	baz=70						
WLAR	White Oak Lake	4.07	127	Pn	Pn	04 45 39.3	+0.7
UALR	University of	4.07	109	Pn	Pn	04 45 38.9	+0.2
UALR					LR	04 46 43.0	
ABTX	Abilene, Hawle	4.17	212	Pn	Pn	04 45 39.8	-0.3
ABTX				Pg	Pb	04 45 50.6	+1.0
ABTX				Sg	Sb	04 46 44.8	+4.6
ABTX	Abilene, Hawle	4.17	212	S	Sn	04 46 29.0	-0.2
	baz=31						
WHTX	Lake Whitney,	4.20	185	Pn	Pn	04 45 40.6	+0.1
WHTX	Lake Whitney,	4.20	185	P	Pn	04 45 40.7	+0.2
	baz=5.1						
WHTX				S	Sn	04 46 28.5	-1.5
	baz=5.1						
237A	Washetta, Mont	4.30	166	Pn	Pn	04 45 41.0	-0.8
Z41A	Richland Creek	4.54	129	Pn	Pn	04 45 45.9	+0.7
Z41A	Richland Creek	4.54	129	S	Sn	04 46 37.0	-1.3
	baz=312						
LCAR	Lake Charles	4.75	90	Pn	Pn	04 45 47.5	-0.5
LCAR				Sg	Sb	04 47 02.1	+5.1
CCM	Cathedral Cave	4.98	66	Pn	Pn	04 45 51.3	+0.2
CCM				Sg	Sb	04 47 08.6	+5.1
CCM	Cathedral Cave	4.98	66	S	Sn	04 46 48.9	-0.3
	baz=250						
HBAR	Harrisburg	5.21	95	Pn	Pn	04 45 54.2	-0.1
HBAR					LR	04 47 18.8	
MSTX	Muleshoe	5.21	247	Pn	Pn	04 45 54.2	-0.3
MSTX	Muleshoe	5.21	247	P	Pn	04 45 55.5	+1.0
	baz=63						
MSTX				Sb	Sb	04 47 17.8	+7.4
	baz=63						
KSCO	Kaye Shedlock'	5.27	304	Pn	Pn	04 45 55.6	+0.3
KSCO				Pg	Pb	04 46 13.9	+5.5
BGNE	Belgrade	5.29	351	Pn	Pn	04 45 55.2	-0.2
BGNE	Belgrade	5.29	351	P	Pn	04 45 55.9	+0.5
	baz=170						
BGNE				S	Sn	04 46 55.3	-1.5
	baz=170						
X43A	Marvell	5.29	107	Sb	Sb	04 47 18.3	+5.9
	baz=290						
435B	Jarrell	5.41	185	S	Sn	04 46 58.2	-1.7
	baz=5.1						
LPAR	Lepanto	5.49	94	Pn	Pn	04 45 56.5	-1.6
LPAR					LR	04 47 28.0	
T25A	Trinidad	6.02	281	Pn	Pn	04 46 05.6	-0.1
T25A				Sg	Sg	04 47 44.6	-4.4
JCT	Junction City	6.15	203	Pn	Pn	04 46 06.1	-1.3
JCT				Pg	Pg	04 46 29.7	-3.8
JCT				Sg	Sg	04 47 46.5	-6.8
JCT	Junction City	6.15	203	P	Pn	04 46 07.6	+0.2
	baz=22						
S44A	Carbondale	6.40	74	Pn	Pn	04 46 11.8	+1.2
S44A					LR	04 47 55.3	
SCIA	State Center	6.43	26	Pg	Pg	04 46 36.2	-2.6
SCIA					LR	04 47 59.3	
SCIA	State Center	6.43	26	S	Sn	04 47 21.6	-3.3
	baz=208						
N41A	Harden Midland	6.61	45	Pn	Pn	04 46 14.8	+1.2
P43A	Skaggs, Pawnee	6.86	58	Pn	Pn	04 46 18.4	+1.5
P43A					LR	04 48 12.7	
SDCO	Great Sand Dun	6.97	285	Pn	Pn	04 46 20.6	+1.8
SDCO				Sg	Sg	04 48 14.1	-5.2
SDCO	Great Sand Dun	6.97	285	P	Pn	04 46 20.5	+1.7
	baz=100						
Q24A	Divide	7.03	296	Pn	Pn	04 46 20.6	+1.0
Q24A				Pg	Pg	04 46 47.2	-3.0
Q24A				Sg	Sg	04 48 15.8	-5.5
Q24A	Divide	7.03	296	P	Pn	04 46 20.6	+1.0
	baz=111						
HDIL	Hopedale	7.47	52	S	Sn	04 47 46.6	-3.9
	baz=236						
ECSD	EROS Data Cent	7.54	2	Pn	Pn	04 46 26.6	+0.2
ECSD	EROS Data Cent	7.54	2	P	Pn	04 46 26.2	-0.2
	baz=182						
ECSD				S	Sn	04 47 49.8	-2.5
	baz=182						
ISCO	Idaho Springs	7.68	301	Pn	Pn	04 46 29.9	+1.3
ISCO				Pg	Pb	04 46 57.8	+8.1
T47A	Sharon Grove	8.02	81	Pn	Pn	04 46 33.3	+0.5

IDC 23 04:49:05.5±0.6, 51.72N×175.40W, h0km, mb4.1/23, mb1 4.2/26, mb1mx4.1/61, mbtmp4.1/26, ML3.6/3, Error ellipse: s-maj=20.5km s-min=10.9km az=164.0

AEIC 23 04:49:11.1±2.4, 51.56N±0.07×175.36W±0.06, h26km±4km, ML4.1/38, mb4.2/39(NEIC), Error ellipse: s-maj=10.6km s-min=5.4km az=171.0

NEIC 23 04:49:13.1±1.7, 51.77N±0.09×175.43W±0.05, h55km±4km, Error ellipse: s-maj=13.5km s-min=3.9km az=174.0

ISC 23 04:49:12.6±1.2, 51.7N±0.1×175.44W±0.03, h49km±9km, n213, σ0.97/217, mb4.1/25, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSMY	Great Sitkin M	0.50	310		Pn	04 49 24.2	+0.4
GSCK	Great Sitkin C	0.53	303		Pn	04 49 24.6	+0.4
GSCK					Sn	04 49 34.2	+1.7
GSTR	Great Sitkin T	0.53	314		Pn	04 49 24.6	+0.3
GSTD	Great Sitkin T	0.55	307		Pn	04 49 24.9	+0.4
ETKA	Kagalaska Isla	0.61	283		Pn	04 49 24.9	-0.4
ETKA					Sn	04 49 34.5	+0.1
ADAG	Mount Adagdak	0.76	290		Pn	04 49 27.9	+0.8
ADK	Adak	0.79	282	Pn	Pn	04 49 26.8	-0.7
ATKA	Atka Island	0.91	58	Pn	Pn	04 49 27.3	-1.8
ATKA	Atka Island	0.91	58		Sn	04 49 39.8	-1.3
KOKL	Mount Kliuchef	0.97	52		Pn	04 49 29.6	-0.4
KOFP	Korovin Flat P	0.99	56		Pn	04 49 29.7	-0.6
KOFP					Sn	04 49 44.2	+0.9
KIWB	Kanaga Island	1.07	277	Pn	Pn	04 49 30.9	-0.4
KIKV	Kanaga Island	1.08	279		Pn	04 49 31.4	-0.1
KICM	Kanaga Island	1.11	281		Pn	04 49 31.9	+0.2
KIMD	Kanaga Island	1.12	273		Pn	04 49 31.3	-0.6
KIMD					Sn	04 49 46.3	+0.1
TAPA	Tanaga Point A	1.48	274		Pn	04 49 37.0	+0.2
TAFP	Tanaga Falls P	1.59	277		Pn	04 49 38.7	+0.4
TAFP					Sn	04 49 59.4	+1.7
TASE	Tanaga Southea	1.62	275		Pn	04 49 39.3	+0.5
TANO	Tanaga North	1.68	278		Pn	04 49 40.6	+1.1
TANO					Sn	04 50 02.0	+2.2
GAEA	Gareloi East	2.06	273		Pn	04 49 45.0	+0.3
NIKH	Nikolski High	4.23	70		Pn	04 50 14.7	+0.3
NIKH	Nikolski High	4.23	70		Sn	04 51 03.2	+0.8
OKTU	Okmok Mt. Tuli	4.81	67		Pn	04 50 24.1	+1.7
OKFG	Magazine Ridge	4.89	67		Pn	04 50 25.1	+1.6
MGOD	Makushin Gods	5.60	65		Pn	04 50 34.5	+1.2
MGOD					Sn	04 51 39.3	+3.0
MREP	Makushin Rep't	5.68	65		Pn	04 50 35.5	+1.1
MTBL	Makushin Table	5.76	64		Pn	04 50 36.9	+1.3
UNV	Unalaska Valle	5.82	65		Pn	04 50 37.1	+0.9
UNV	Unalaska Valle	5.82	65		Sn	04 51 44.8	+3.2
SSBA	Shishaldin	7.11	60		Pn	04 51 00.7	+2.2
DT1	Dutton Round H	8.56	62		Pn	04 51 14.8	+1.0
KDAK	Kodiak Island	14.48	56	Pn	Pn	04 52 30.8	-3.6
	0.3nm,0.3s,baz=280,slow=18,SNR=1.4						
KDAK				Sn	Sn	04 55 10.2	-3.1
	0.4nm,0.3s,baz=321,slow=12,SNR=1.7						
PETK	Petropavlovsk-	16.41	285	Pn	Pn	04 52 59.0	-0.4
	0.2nm,0.3s,baz=312,slow=54,SNR=2.6						
KTH	Kantishna Hill	17.53	38	Pn	Pn	04 53 13.1	-0.1
KTH				IAmb	IAmb	04 53 18.6	
	comp=Z,32nm,1.2s						
BPAW	Bear Paw Mtn.	17.80	36		Pn	04 53 17.3	+0.9
RND	Reindeer	18.27	40	P	P	04 53 22.7	+0.8
MCK	McKinley	18.39	39	P	P	04 53 23.7	+0.5
MCK				IAmb	IAmb	04 53 48.7	
	comp=Z,22nm,1.6s						
MLY	Manley	18.41	34	P	P	04 53 25.0	+1.2
DHY	Denali Highway	18.73	42	P	P	04 53 27.8	+0.8
DHY				IAmb	IAmb	04 53 47.7	
	comp=Z,32nm,1.8s						
WRH	Wood River Hil	19.07	38	P	P	04 53 30.8	+0.1
WRH				IAmb	IAmb	04 54 08.7	
	comp=Z,34nm,2.0s						
MDM	Murphy Dome	19.27	36	P	P	04 53 34.1	+1.4
MDM				IAmb	IAmb	04 53 54.3	
	comp=Z,14nm,1.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CCB	Clear Creek Bu	19.27	37	P	P	04 53 32.5	-0.3
TCOL	CIGO, UAF Yank	19.36	37	P	Pn	04 53 38.6	+3.4
	baz=240						
HDA	Harding Lake	19.48	38	P	P	04 53 36.4	+1.3
	baz=243						
PAX	Paxson	19.49	43	P	P	04 53 36.4	+1.2
POKR	Poker Flat Res	19.64	36	P	Pn	04 53 40.2	+1.7
	baz=240						
IL31		19.68	37	P	P	04 53 38.5	+1.3
ILAR	Eielson Array	19.68	37	P	P	04 53 36.0	-1.1
	comp=Z,1.1nm,0.3s,baz=223,slow=9.9,SNR=72						
COLD	Coldfoot	19.90	29	P	Pn	04 53 41.5	-0.1
RIDG	Independent Ri	20.04	41	P	P	04 53 42.1	+0.9
RIDG				IAmb	IAmb	04 54 02.5	
	comp=Z,11nm,0.9s						
DOT	Dot Lake	20.33	42	P	P	04 53 44.0	-0.3
DOT				IAmb	IAmb	04 54 21.6	
	comp=Z,22nm,1.3s						
SEY	Seymchan	20.43	316	P	P	04 53 45.0	-0.4
	comp=Z,4.0nm,0.3s,baz=221,slow=0.7,SNR=14						
MA2	Magadan	20.43	306	P	P	04 53 45.3	-0.1
	comp=Z,0.9nm,0.3s,baz=121,slow=5.9,SNR=1.6						
MA2	Magadan	20.43	306	IAmb	IAmb	04 53 59.0	
	comp=Z,9.4nm,1.1s						
SCRK	Sand Creek	20.48	41	P	P	04 53 45.5	-0.6
PRP	Porcupine Dome	20.53	36	P	P	04 53 48.3	+1.7
PRP				IAmb	IAmb	04 53 56.9	
	comp=Z,28nm,1.9s						
TOLK	Toolik Lake Re	20.99	26	P	P	04 53 53.3	+1.8
TOLK				IAmb	IAmb	04 54 00.9	
	comp=Z,18nm,1.4s						
TOLK	Toolik Lake Re	20.99	26	P	P	04 53 53.8	+2.3
	baz=229						
EGAK	Eagle	21.92	40	IAmb	IAmb	04 54 30.9	
	comp=Z,8.2nm,0.8s						
DAWY	Dawson	22.42	43	P	P	04 54 08.1	+1.2
EPYK	Eagle Plains	24.19	38	P	P	04 54 24.5	+0.4
	baz=252						
INK	Inuvik	25.98	35	P	P	04 54 39.6	-0.5
	comp=Z,1.0nm,0.3s,baz=207,slow=7.2,SNR=12						
INK	Inuvik	25.98	35	IAmb	IAmb	04 55 06.8	
	comp=Z,18nm,1.9s						
TIXI	Tiksi	31.38	330	PcP	PcP	04 58 20.3	-0.2
	comp=Z,2.0nm,0.2s,baz=125,slow=6.3,SNR=9.5						
KLR	Kul'dur	33.09	287	P	P	04 55 43.5	+0.1
	comp=Z,4.7nm,0.5s,baz=68,slow=7.4,SNR=30						
YKA	Yellowknife Ar	33.46	47	P	P	04 55 46.6	+0.1
	comp=Z,0.4nm,0.4s,baz=282,slow=8.5,SNR=9.3						
YKA				PcP	PcP	04 58 25.6	-0.8
	comp=Z,0.3nm,0.4s,baz=284,slow=3.0,SNR=9.1						
H11N2	WAKE ISLAND Hy	34.81	210	T	T	05 32 44.4	
H11N3	WAKE ISLAND Hy	34.82	210	T	T	05 32 51.7	
	baz=20,slow=74,SNR=2.8						
H11N1	WAKE ISLAND Hy	34.83	210	T	T	05 32 51.4	
	baz=133,slow=74,SNR=3.3						
USRK	Ussuriysk Ar.	35.32	279	P	P	04 56 02.7	-0.1
	comp=Z,2.3nm,0.4s,baz=55,slow=10,SNR=16						
MJAR	Matsushiro Arr	35.91	263	P	P	04 56 08.1	+0.2
	comp=Z,0.8nm,0.4s,baz=0.5,slow=14,SNR=4.0						
NEW	Newport	36.79	72	P	P	04 56 16.2	+0.9
	baz=298						
MSO	Missoula	39.37	72	P	P	04 56 37.7	+0.6
	baz=301						
MCMT	McKenzie Canyo	41.07	74	P	P	04 56 51.8	+0.3
EGMT	Eagleton	41.21	68	P	P	04 56 55.2	+2.8
	baz=301						
NVAR	Mina Array Bea	41.43	86	P	P	04 56 54.2	-0.1
	comp=Z,0.3nm,0.6s,baz=283,slow=8.2,SNR=1.9						
KSRS	Korea Array	41.72	273	P	P	04 56 57.9	+1.4
	comp=Z,3.0nm,0.9s,baz=60,slow=7.5,SNR=8.8						
ELK	Elko	41.93	81	P	P	04 56 59.6	+1.1
ELK				IAmb	IAmb	04 58 29.6	
	comp=Z,5.6nm,1.5s						
YHH	Holmes Hill	42.28	73	P	P	04 57 02.1	+0.7
H17A	Grant Village	42.66	73	P	P	04 57 06.6	+2.1
	baz=304						
LKWY	Lake	42.67	73	P	P	04 57 06.0	+1.4
RLMT	Red Lodge	43.04	72	P	P	04 57 08.4	+1.0
RLMT				IAmb	IAmb	04 57 19.4	
	comp=Z,3.9nm,0.9s						
RLMT	Red Lodge	43.04	72	P	P	04 57 08.9	+1.5
	baz=304						
DUG	Dugway, Tooele	43.74	80	P	P	04 57 15.0	+2.0
	baz=307						
BW06	Boulder Array	44.20	75	P	P	04 57 17.4	+0.6
	baz=306						
PD31	Pinedale Array	44.20	75	P	P	04 57 17.2	+0.4
PD31				IAmb	IAmb	04 57 17.9	
	comp=Z,3.5nm,0.8s						
PDAR	Pinedale Array	44.20	75	P	P	04 57 17.1	+0.4
	comp=Z,3.3nm,0.6s,baz=304,slow=4.0,SNR=45						
O20A	White River Ci	46.56	77	P	P	04 57 35.8	+0.3
	baz=308						
ULM	Lac du Bonnet	47.73	59	P	P	04 57 43.7	-0.5
	comp=Z,1.6nm,0.5s,baz=305,slow=8.3,SNR=6.4						
SONM	Songino Array	48.35	298	PcP	PcP	04 59 14.4	-0.7
	comp=Z,1.0nm,0.6s,baz=79,slow=3.3,SNR=6.5						
SDCO	Great Sand Dun	49.73	77	P	P	04 58 01.1	+1.1
	baz=310						
T25A	Trinidad	50.78	77	P	P	04 58 09.6	+1.7
	baz=311						
ECSD	EROS Data Cent	51.19	66	P	P	04 58 09.8	-0.8
	baz=308						
WMOK	Wichita Mounta	55.78	76	P	P	04 58 44.3	-0.1
	baz=313						
D47A	Chapleau	56.35	55	P	P	04 58 48.3	0.0
	baz=312						
TXAR	Lajitas Array	56.53	84	P	P	04 58 49.6	-0.3
	comp=Z,0.3nm,0.5s,baz=303,slow=5.7,SNR=5.7						
G46A	Petoskey	56.60	58	P	P	04 58 50.2	+0.1
	baz=312						
D48A	Paudash Townsh	56.93	54	P	P	04 58 52.3	-0.1
	baz=312						
D50A	G1974 Best Tow	57.92	53	P	P	04 58 59.1	-0.3
	baz=313						
LSQQ	Lebel-sur-Quev	58.02	50	P	P	04 58 59.2	-0.9
	baz=314						
ARCES	ARCESS Array B	58.08	351	P	P	04 58 59.9	-0.3
	comp=Z,2.0nm,0.8s,baz=5.1,slow=7.3,SNR=6.2						
ARCES				PcP	PcP	04 59 51.1	-0.3
	comp=Z,3.6nm,0.9s,baz=15,slow=5.0,SNR=5.4						
SCHQ	Schefferville	58.41	40	P	P	04 59 02.0	-0.6
	comp=Z,4.6nm,1.1s,baz=330,slow=7.2,SNR=4.8						
E51A	G1948 Merrick	58.53	54	P	P	04 59 03.3	-0.4
	baz=314						
SFIN	Lafayette	58.73	63	P	P	04 59 05.0	-0.1
	baz=313						
MIAR	Mount Ida	59.02	72	P	P	04 59 06.9	-0.3
	baz=314						
D53A	Lac Vacive, Po	59.04	52	P	P	04 59 06.8	-0.4
	baz=314						
K49A	Clarkson	59.06	59	P	P	04 59 07.8	+0.4
	baz=314						
F52A	Sundridge	59.13	54	P	P	04 59 07.7	-0.1
	baz=314						
M48A	Edgerton	59.28	61	P	P	04 59 08.6	-0.3
	baz=314						
L49A	Milan	59.36	60	P	P	04 59 09.5	+0.1
	baz=314						
N48A	Decatur	59.54	62	P	P	04 59 10.1	-0.6
	baz=314						
E54A	Lac Daplat, Po	59.75	52	P	P	04 59 11.1	-1.0
	baz=315						
O48A	Farmland	59.89	62	P	P	04 59 12.2	-0.9
	baz=314						
G53A	Haliburton	59.95	54	P	P	04 59 13.6	+0.2
	baz=315						
N49A	Columbus Grove	59.96	61	P	P	04 59 13.1	-0.4
	baz=314						
G54A	Lake Saint Pet	60.03	54	P	P	04 59 13.9	-0.1
	baz=315						
D55A	Sainte-Anne-du	60.17	51	P	P	04 59 14.3	-0.7
	baz=315						
P48A	Milroy	60.29	63	P	P	04 59 15.4	-0.5
	baz=314						
N50A	Nevada	60.63	61	P	P	04 59 18.4	+0.2
	baz=315						
P49A	Miami Univ. Ec	60.63	63	P	P	04 59 17.4	-0.8
	baz=315						
O50A	Cable	60.81	61	P	P	04 59 19.4	0.0
	baz=315						
WMQ	Urumqi	60.89	305	eP	P	04 59 22.8	+2.8
N51A	Ashland	60.94	60	P	P	04 59 20.1	-0.2
	baz=315						
P50A	Jamestown	61.09	62	P	P	04 59 21.1	-0.2
	baz=315						
E57A	Chemin Saint G	61.24	51	P	P	04 59 21.1	-1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=316						
L53A	Girard	61.34	58	P	P	04 59 23.1	+0.2
	baz=315						
O51A	Pataskala	61.36	61	P	P	04 59 23.1	-0.1
	baz=315						
MK31	Makanchi Array	61.44	310	P	P	04 59 23.0	-0.6
MK31				IAmb	IAmb	04 59 55.1	
	comp=Z,3.2nm,1.6s						
MKAR	Makanchi Array	61.44	310	P	P	04 59 22.3	-1.3
	comp=Z,0.5nm,0.4s,baz=48,slow=6.3,SNR=19						
M53A	WI Miller and	61.48	59	P	P	04 59 24.0	0.0
	baz=315						
Q50A	Georgetown	61.53	63	P	P	04 59 24.3	+0.1
	baz=315						
ALLY	Alegheny Colle	61.61	58	P	P	04 59 25.2	+0.3
L54A	Sinclairville	61.63	57	P	P	04 59 25.4	+0.4
	baz=316,SNR=6.3						
Q51A	Peebles	61.75	62	P	P	04 59 25.8	0.0
	baz=315						
G57A	Newington	61.78	52	P	P	04 59 25.2	-0.6
	baz=316						
O52A	Adamsville	61.80	60	P	P	04 59 26.1	0.0
	baz=315						
K55A	Perry	61.93	56	P	P	04 59 27.4	+0.4
	baz=316						
M54A	Oil Creek Stat	61.97	58	P	P	04 59 27.5	+0.3
	baz=316						
O53A	New Philadelph	62.04	60	P	P	04 59 27.6	-0.1
	baz=316						
L55A	Hinsdale	62.13	57	P	P	04 59 28.8	+0.5
	baz=316						
R51A	Hillsboro	62.13	63	P	P	04 59 29.1	+0.8
	baz=315,SNR=7.2						
N54A	Moraine State	62.19	58	P	P	04 59 28.9	+0.2
	baz=316,SNR=7.0						
K56A	Middlesex	62.33	55	P	P	04 59 30.3	+0.7
	baz=316						
M55A	Ridgway	62.47	57	P	P	04 59 30.9	+0.3
	baz=316,SNR=5.8						
P53A	Whipple	62.49	60	P	P	04 59 30.9	+0.2
	baz=316						
O54A	Avella	62.53	59	P	P	04 59 31.2	+0.2
	baz=316,SNR=5.7						
L56A	Greenwood	62.62	56	P	P	04 59 32.1	+0.6
	baz=316,SNR=8.4						
M56A	Emporium	62.76	57	P	P	04 59 32.9	+0.4
	baz=316,SNR=5.1						
N55A	Marion Center	62.84	58	P	P	04 59 33.3	+0.2
	baz=316,SNR=5.6						
S52A	Salyersville	62.85	63	P	P	04 59 33.7	+0.6
	baz=316						
Q53A	Leroy	62.86	61	P	P	04 59 33.4	+0.2
	baz=316						
P54A	Burton	62.90	60	P	P	04 59 33.6	+0.1
	baz=316,SNR=5.9						
L57A	Andrews Acres	63.08	56	P	P	04 59 34.6	0.0
	baz=316						
O55A	Ligonier	63.09	59	P	P	04 59 34.7	0.0
	baz=316						
N56A	West Decatur	63.11	57	P	P	04 59 35.2	+0.4
	baz=316						
Q54A	Coxs Mills	63.15	61	P	P	04 59 35.2	+0.1
Q54A	Coxs Mills	63.15	61	P	P	04 59 35.3	+0.2
	baz=316						
MCWV	Mont Chateau	63.20	59	P	P	04 59 35.9	+0.5
	baz=316						
P55A	Reedsville	63.31	60	P	P	04 59 36.6	+0.4
	baz=316						
M57A	Sunshine Farm,	63.41	56	P	P	04 59 37.3	+0.5
	baz=317						
O56A	Blue Knob Stat	63.44	58	P	P	04 59 37.1	+0.1
	baz=316						
SSPA	Standing Stone	63.53	57	P	P	04 59 37.8	+0.2
SSPA	Standing Stone	63.53	57	P	P	04 59 38.0	+0.4
	baz=317						
Q55A	Buckhannon	63.55	60	P	P	04 59 38.5	+0.7
	baz=316						
L58A	Harry Jones Me	63.56	55	P	P	04 59 38.7	+0.9
	baz=317						
N57A	Milroy	63.62	57	P	P	04 59 38.5	+0.3
	baz=317						
R54A	Victor	63.64	61	P	P	04 59 39.3	+0.9
	baz=316						
T53A	Wise	63.65	63	P	P	04 59 40.3	+1.7
	baz=316						
M58A	Price's Panora	63.73	56	P	P	04 59 39.4	+0.4
	baz=317						
S54A	Dingess, Beckl	63.74	62	P	P	04 59 39.8	+0.7
	baz=316						
P56A	Dayton Farm, R	63.84	59	P	P	04 59 40.2	+0.5
	baz=317,SNR=5.5						
O57A	Amberson	63.97	58	P	P	04 59 41.0	+0.5
	baz=317,SNR=7.1						
R55A	Marlinton	64.04	61	P	P	04 59 41.8	+0.7
	baz=317						
M59A	Waymart	64.14	55	P	P	04 59 42.1	+0.5
	baz=317						
S55A	Lewisburg	64.20	61	P	P	04 59 42.3	+0.1
	baz=317						
P57A	Homestead Farm	64.30	58	P	P	04 59 42.7	+0.1
	baz=317						
R56A	Bull Pasture M	64.34	60	P	P	04 59 43.1	+0.1
	baz=317						
O58A	Lewisberry	64.41	57	P	P	04 59 43.9	+0.5
	baz=317						
Q57A	Strasburg	64.41	59	P	P	04 59 43.9	+0.5
	baz=317						
Z50A	Ashland	64.42	68	P	P	04 59 42.3	-1.3
	baz=316						
N59A	State Game Lan	64.42	56	P	P	04 59 44.0	+0.5
	baz=317						
O59A	Robesonia	64.65	57	P	P	04 59 45.2	+0.2
	baz=317						
BLA	Blacksburg	64.65	62	P	P	04 59 45.9	+0.8
	baz=317						
S56A	Natural Bridge	64.78	61	P	P	04 59 46.8	+1.0
	baz=317						
Q58A	Fox Den Farm,	64.87	59	P	P	04 59 46.6	+0.2
	baz=317,SNR=6.0						
R57A	Stanardsville	64.89	60	P	P	04 59 47.2	+0.6
	baz=317,SNR=5.3						
R58A	Rapidan	65.17	59	P	P	04 59 48.8	+0.5
	baz=317						
T57A	Hurt	65.45	61	P	P	04 59 49.9	-0.3
	baz=317						
R58B	Mineral	65.48	59	P	P	04 59 50.8	+0.4
	baz=318						
X54A	Belton	65.51	65	P	P	04 59 51.6	+1.0
	baz=317						
T58A	Grand View Acr	65.88	61	P	P	04 59 53.4	+0.5
	baz=318						
FINES	FINESS Array B	65.88	349	P	P	04 59 51.3	-1.2
	comp=Z,1.2nm,0.8s,baz=358,slow=5.7,SNR=4.4						
S59A	Mechanicsville	65.94	59	P	P	04 59 53.9	+0.6
	baz=318						
X55A	Gracelyn & Ava	65.98	64	P	P	04 59 54.1	+0.5
	baz=317						
Y55A	Saluda	66.25	65	P	P	04 59 55.0	-0.3
	baz=317						
S60A	Water View	66.33	59	P	P	04 59 57.2	+1.4
	baz=318						
T59A	Double "B" Far	66.39	60	P	P	04 59 56.2	+0.1
T59A	Double "B" Far	66.39	60	P	P	04 59 56.8	+0.6
	baz=318						
W57A	Gilead	66.39	63	P	P	04 59 56.3	0.0
	baz=318						
W58A	Raeford	66.91	62	P	P	05 00 00.1	+0.6
	baz=318						
U60A	Pendleton	66.97	60	P	P	05 00 00.4	+0.5
	baz=318						
NOA	NORSAR Array B	67.46	356	P	P	05 00 02.4	-0.3
	comp=Z,1.0nm,0.8s,baz=213,slow=20,SNR=5.1						
Z58A	St. Stephen	67.84	64	P	P	05 00 06.1	+0.7
	baz=318						
KK31	Karatay Array	69.67	314	P	P	05 00 16.0	-0.7
KKAR	Karatay Array	69.67	314	P	P	05 00 15.5	-1.2
CMAR	Chiang Mai Arr	73.05	278	P	P	05 00 37.8	+0.4
	comp=Z,2.4nm,0.8s,baz=23,slow=7.3,SNR=12						
AKASG	Malin Array Be	75.83	344	P	P	05 00 52.3	-0.7
	comp=Z,0.4nm,0.3s,baz=16,slow=6.2,SNR=5.1						
WRA	Warramunga Arr	83.75	227	P	P	05 01 35.0	-1.2
	comp=Z,1.3nm,0.6s,baz=32,slow=5.6,SNR=6.9						
PSI	Prapat	85.11	268	P	P	05 01 44.5	+1.0
	comp=Z,5.6nm,0.9s,baz=31,slow=5.1,SNR=4.9						
RPSI	Rantau Prapat	85.19	268	P	P	05 01 44.5	+0.7
ASAR	Alice Springs	87.19	225	P	P	05 01 53.1	-0.2
	comp=Z,1.5nm,0.8s,baz=26,slow=5.5,SNR=16						
STKA	Stephens Creek	91.39	215	P	P	05 02 12.8	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
	comp=Z,1.8nm,0.6s,baz=337,slow=7.4,SNR=6.9						
BOSA	Boshof	152.21	318	PKPbc	PKPbc	05 09 02.4	-0.2
	comp=Z,3.8nm,0.7s,baz=359,slow=2.2,SNR=7.7						

NIED 23 04:54:00, 43°50N×147°60E, h29km, Mw5.4 Best double couple: $M_0$1.32000×10^{17} NP1:φs298.00000°, δ74.00000°, λ-18.00000°. NP2:φs33.00000°, δ73.00000°, λ-163.00000°.

IDC 23 04:54:15.5±0.3, 43°54N×147°73E, h0km, mb5.4/32, mb1 5.5/38, mb1mx5.4/50, mbtmp5.4/38, ML4.5/5, MS4.7/34, Ms1 4.7/34, ms1mx4.7/35, Error ellipse: s-maj=12.5km s-min=8.7km az=129.0

BJI 23 04:54:16.2±0.0, 43°56N×147°76E, h7km, mB5.5/63, mb5.7/83, Ms5.2/93, Ms7 5.3/86

KLM 23 04:54:18.0, 43°41N×147°96E, h13km, mb5.7

NEIC 23 04:54:18.6±1.2, 43°51N±0°07×147°77E±0°09, h20km±2km, mb5.9/505, Ms_20 5.0/483, Mwb5.3/45, Mwc5.5(GCMT), Error ellipse: s-maj=10.5km s-min=9.0km az=136.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.29; $M_{\theta\theta}$0.96; $M_{\phi\phi}$-0.67; $M_{r\theta}$0.52; $M_{\theta\phi}$0.58; $M_{\phi r}$-0.44; Fault plane solution: $M_0$1.24000×10^{17} NP1:φs31.19000°, δ55.78000°, λ-165.86000°. NP2:φs293.13000°, δ78.35000°, λ-35.05000°. Principal axes: T 1.2409, Plg15.0000°, Azm346.0000°; N -0.0112, Plg53.0000°, Azm97.0000°; P -1.2296, Plg33.0000°, Azm247.0000°;

JMA 23 04:54:18.8±0.2, 43°37N×147°65E, h12km, M5.5

JMA Felt II J1.

MOS 23 04:54:19.2±1.1, 43°46N×147°77E, h38km, mb6.0/89, MS5.0/52, Error ellipse: s-maj=6.1km s-min=3.6km az=121.6

MOS Felt (III) at Malokuril'skoye, (II) at Goryachiy Plyazh, Yuzhno-Kuril'sk.

SKHL 23 04:54:20.0±0.1, 43°47N×147°87E, h46km±4km, mb5.9/3, Ms5.0/7

SKHL Felt (III) at Malokuril'skoye; (II) at Goryachiy Plyazh.

GCMT 23 04:54:21.8±0.1, 43°50N±0°01×147°79E±0°01, h22km, MW5.4/151, Moment Tensor Solution. s117,c212; s151,c306; Duration: 1s2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.58±.02; $M_{\theta\theta}$1.48±.02; $M_{\phi\phi}$-0.89±.02; $M_{r\theta}$0.61±.03; $M_{\theta\phi}$0.65±.01; $M_{\phi r}$-0.46±.03; Best double couple: $M_0$1.62000×10^{17} NP1:φs35.00000°, δ56.00000°, λ-162.00000°. NP2:φs294.00000°, δ75.00000°, λ-35.00000°. Principal axes: T 1.7500, Plg12.0000°, Azm348.0000°; N -0.2590, Plg52.0000°, Azm94.0000°; P -1.4900, Plg35.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC 23 04:54:22, 43°50N×147°84E, h23km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.47; $M_{\theta\theta}$1.54; $M_{\phi\phi}$-1.07; $M_{r\theta}$0.56; $M_{\theta\phi}$0.76; $M_{\phi r}$-0.44; Fault plane solution: $M_0$1.72000×10^{17} NP1:φs296.00000°, δ78.00000°, λ-29.00000°. NP2:φs33.00000°, δ62.00000°, λ-167.00000°. Principal axes: T 1.8251, Plg11.0000°, Azm347.0000°; N -0.2428, Plg59.0000°, Azm96.0000°; P -1.5823, Plg28.0000°, Azm251.0000°;

BGR 23 04:54:26.2±0.0, 44°39N×147°26E, h40km±4km, mb5.8, Ms5.3

ISC 23 04:54:19.3±0.3, 43°50N±0°03×147°84E±0°03, h30km±1km, h30km:pP-P, n1978, σ1s82/1825, mb5.8/478, MS5.0/316, 92C-142D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.82**	**297**	*i* P	**Pb**	**04 54 35.0**	**0.0**
SHO				*i* S	**Sn**	**04 54 46.3**	**+0.4**
SHO				A	A	04 54 48.0	
	18µm,0.4s						
SHO				A	A	04 54 48.0	
	17µm,0.4s						
SHO	**Shikotan**	**0.82**	**297c**	*i* PN	**Pb**	**04 54 35.1**	**0.0**
SHO				*i* S	**Sn**	**04 54 46.3**	**+0.4**
SHO				smax	smax		
	comp=N,176µm,0.4s						
SHO				smax	smax		
	comp=E,167µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.53**	**291**	*i* P	**Pn**	**04 54 44.9**	**+0.4**
YUK				AMB	AMB	04 54 48.5	
	comp=E,7µm,0.2s						
YUK				*i* S	**Sn**	**04 55 03.6**	**+0.2**
YUK				A	A	04 55 08.5	
	comp=E,17µm,0.5s						
YUK				A	A	04 55 08.5	
	comp=E,87µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.53**	**291d**	*i* PN	**Pn**	**04 54 44.9**	**+0.4**
YUK				*i* S	**Sn**	**04 55 03.3**	**-0.1**
YUK				pmax	pmax		
	comp=Z,7µm,0.2s						
YUK				pmax	pmax		
	comp=N,12µm,0.4s						
YUK				smax	smax		
	comp=E,87µm,0.4s						
YUK				smax	smax		
	comp=N,174µm,0.5s						
NEM2	**Nemuro 2**	**1.54**	**266**	⇓P	**Pn**	**04 54 44.2**	**-0.4**
NEM2				*e* S	**Sn**	**04 55 02.6**	**-0.9**
NMR	**Nemuro--Hokkai**	**1.55**	**266**	*i* P	**Pn**	**04 54 44.2**	**-0.5**
NMR				*i* S	**Sn**	**04 55 02.7**	**-1.1**
NMR	**Nemuro--Hokkai**	**1.55**	**266d**	*i* PN	**Pn**	**04 54 44.2**	**-0.5**
NMR				*i* S	**Sn**	**04 55 02.7**	**-1.1**
GRPR	**Tuman**	**1.58**	**289**	*i* P	**Pn**	**04 54 45.4**	**+0.2**
GRPR				*i* S	**Sn**	**04 55 04.4**	**-0.2**
GRPR				A	A	04 55 05.0	
	comp=N,16µm,0.5s						
GRPR				A	A	04 55 05.0	
	comp=N,52µm,0.5s						
GRPR	**Tuman**	**1.58**	**289d**	*i* PN	**Pn**	**04 54 45.4**	**+0.2**
GRPR				*i* S	**Sn**	**04 55 04.4**	**-0.2**
GRPR				smax	smax		
	comp=N,161µm,0.4s						
GRPR				smax	smax		
	comp=E,52µm,0.2s						
GLVR	**Golovnino**	**1.70**	**279**	*i* P	**Pn**	**04 54 47.2**	**+0.3**
GLVR				AMB	AMB	04 54 49.0	
	comp=E,7µm,0.4s						
GLVR				*i* S	**Sn**	**04 55 07.9**	**+0.2**
GLVR				A	A	04 55 19.0	
	comp=E,14µm,0.6s						
GLVR				A	A	04 55 19.0	
	comp=E,60µm,0.6s						
GLVR	**Golovnino**	**1.70**	**279d**	*i* PN	**Pn**	**04 54 47.2**	**+0.3**
GLVR				*i* S	**Sn**	**04 55 07.9**	**+0.2**
GLVR				pmax	pmax		
	comp=Z,7µm,0.5s						
GLVR				smax	smax		
	comp=N,142µm,0.6s						
GLVR				smax	smax		
	comp=E,60µm,0.6s						
KUR	**Kuril'sk**	**1.73**	**1**	*i* P	**Pn**	**04 54 48.2**	**+0.9**
KUR				AMB	AMB	04 54 49.0	
	comp=E,48µm,1.0s						
KUR				*i* S	**Sn**	**04 55 09.2**	**+0.9**
KUR				A	A	04 55 11.0	
	comp=E,42µm,1.0s						
KUR				A	A	04 55 11.0	
	comp=E,61µm,1.0s						
KUR				A	A	04 55 11.0	
	comp=E,9µm,0.6s						
KUR				A	A	04 55 11.0	
	comp=E,14µm,0.6s						
KUR	**Kuril'sk**	**1.73**	**1c**	*i* PN	**Pn**	**04 54 48.2**	**+0.9**
KUR				*i* S	**Sn**	**04 55 09.2**	**+0.9**
KUR				pmax	pmax		
	comp=Z,48µm,1.4s						
KUR				pmax	pmax		
	comp=N,3µm,0.4s						
KUR				pmax	pmax		
	comp=E,2µm,0.3s						
KUR				smax	smax		
	comp=E,14µm,0.7s						
KUR				smax	smax		
	comp=N,9µm,0.5s						
KUR				smax	smax		
	comp=E,61µm,1.1s						
KUR				smax	smax		
	comp=N,42µm,1.4s						
JKHN	**Kushirohamanak**	**2.00**	**259**	⇓P	**Pn**	**04 54 51.0**	**0.0**
JKHN				*e* S	**Sn**	**04 55 14.5**	**-0.5**
JRA	**Rausu**	**2.02**	**283**	⇓P	**Pn**	**04 54 51.9**	**+0.6**
JRA				*e* S	**Sn**	**04 55 16.1**	**+0.6**
JNSB	**Nemuroshibetsu**	**2.08**	**279**	⇓P	**Pn**	**04 54 52.6**	**+0.5**
JNK	**Nakash**	**2.27**	**273**	⇓P	**Pn**	**04 54 54.8**	**0.0**
JNK				*e* S	**Sn**	**04 55 20.7**	**-1.0**
JAK	**Akkeshi**	**2.35**	**259**	⇓P	**Pn**	**04 54 55.2**	**-0.7**
JTKR	**Abashiri--Toko**	**2.89**	**281**	⇓P	**Pn**	**04 55 04.7**	**+1.5**
JAR	**Ashorobuto**	**2.98**	**267**	⇓P	**Pn**	**04 55 04.9**	**+0.5**
JAR				*e* S	**Sn**	**04 55 38.4**	**-0.7**
JOB	**Onbets**	**2.99**	**260**	⇓P	**Pn**	**04 55 04.7**	**+0.1**
JOB				*e* S	**Sn**	**04 55 38.5**	**-0.9**
JMP	**Maruseppu**	**3.29**	**280**	⇓P	**Pn**	**04 55 10.4**	**+1.7**
JCH	**Churui**	**3.40**	**256**	⇓P	**Pn**	**04 55 09.8**	**-0.5**
JTHR	**Tokachihiroo**	**3.55**	**252**	⇓P	**Pn**	**04 55 13.1**	**+0.8**
JKK2	**Kamakawa 2**	**3.71**	**277**	⇓P	**Pn**	**04 55 16.5**	**+1.9**
JEM	**Erimo**	**3.76**	**248**	⇓P	**Pn**	**04 55 15.6**	**+0.5**
ERM	**Erimo**	**3.76**	**248**		**Pn**	**04 55 16.7**	**+1.6**
ERM	**Erimo**	**3.76**	**248c**	*e* PN	**Pn**	**04 55 16.3**	**+1.2**
JFR	**Furan**	**3.84**	**267**	⇓P	**Pn**	**04 55 17.6**	**+1.2**
JKA	**Kamikawa-asahi**	**3.84**	**281**		**Pn**	**04 55 18.4**	**+2.0**
JKA					**Sn**	**04 56 01.6**	**+1.1**
ASAJ	**Asahikawa**	**3.85**	**281**	P	**Pn**	**04 55 18.5**	**+2.1**
ASAJ	**Asahikawa**	**3.85**	**281**	Pn	**Pn**	**04 55 18.4**	**+2.1**
	comp=N,41nm,0.3s,baz=91,slow=15,SNR=194						
ASAJ				Sn	**Sn**	**04 56 01.6**	**+1.0**
	comp=N,130nm,0.3s,baz=121,slow=11,SNR=3.7						
JNBK	**Urakawa-nobuka**	**3.93**	**254**	⇓P	**Pn**	**04 55 17.5**	**-0.1**
JSE	**Soyaes**	**4.05**	**293**	⇓P	**Pn**	**04 55 21.1**	**+1.9**
JAB	**Ashibetsu**	**4.09**	**272**	⇓P	**Pn**	**04 55 22.3**	**+2.6**
JIAM	**Iburiatsuma**	**4.43**	**261**	⇓P	**Pn**	**04 55 26.7**	**+2.3**
JHR	**Hokuryu**	**4.45**	**275**	⇓P	**Pn**	**04 55 27.2**	**+2.5**
JWK2	**Keihoku**	**4.63**	**295**	⇓P	**Pn**	**04 55 30.3**	**+3.2**
JISS	**Ishikarishitsu**	**4.69**	**269**	P	**Pn**	**04 55 30.7**	**+2.8**
JEW	**Eniwo**	**4.72**	**264**	⇓P	**Pn**	**04 55 30.2**	**+1.8**
JYG	**Yagishiri**	**4.72**	**283**	P	**Pn**	**04 55 31.3**	**+2.9**
YSS	**Yuzh-Sakhalins**	**4.98**	**316**	*i* P	**Pn**	**04 55 34.1**	**+2.1**
YSS				AMB	AMB	04 55 34.8	
	comp=N,180nm,0.7s						
YSS				*e* S	**Sn**	**04 56 31.0**	**+2.5**
YSS				A	A	04 56 32.0	
	comp=N,980nm,1.0s						
YSS				AMS	AMS	04 57 37.0	
	comp=N,9µm,12.0s						
YSS				AMS	AMS	04 57 37.0	
	comp=N,9µm,12.0s						
YSS				AMS	AMS	04 57 37.0	
	comp=N,13µm,12.0s						
YSS	**Yuzh-Sakhalins**	**4.98**	**316**	Pn	**Pn**	**04 55 33.0**	**+1.0**
YSS	**Yuzh-Sakhalins**	**4.98**	**316α**	*i* PN	**Pn**	**04 55 34.1**	**+2.1**
YSS				*e* S	**Sn**	**04 56 31.0**	**+2.5**
YSS				pmax	pmax		
	comp=N,90nm,0.7s						
YSS				pmax	pmax		
	comp=E,90nm,0.7s						
YSS				pmax	pmax		
	comp=Z,180nm,0.7s						
YSS				smax	smax		
	comp=E,980nm,1.0s						
YSS				MLR	MLR		
	comp=Z,13µm,14.0s						
YSS				MLR	MLR		
	comp=N,9µm,12.0s						
YSS				MLR	MLR		
	comp=E,9µm,18.0s						
JNB	**Noboribetsu**	**5.10**	**261**	⇓P	**Pn**	**04 55 34.4**	**+0.8**
JRBN	**Rebuntou**	**5.22**	**294**	⇓P	**Pn**	**04 55 37.5**	**+2.3**
JKB	**Kayabe**	**5.27**	**254**	⇓P	**Pn**	**04 55 36.7**	**+0.7**
JAHD	**Aomorihigashid**	**5.31**	**247**	⇓P	**Pn**	**04 55 36.4**	**-0.1**
JSK	**Shakotan**	**5.37**	**271**	⇓P	**Pn**	**04 55 38.7**	**+1.4**
JARK	**Aomorirokkasho**	**5.41**	**245**	⇓P	**Pn**	**04 55 37.3**	**-0.6**
JOT	**Ohata**	**5.46**	**249**	⇓P	**Pn**	**04 55 38.2**	**-0.3**
JKEN	**Kujiedanarisaw**	**5.64**	**236**	⇓P	**Pn**	**04 55 38.7**	**-2.3**
JANG	**Nango**	**5.66**	**239**	P	**Pn**	**04 55 39.6**	**-1.7**
JYM2	**Yakumo 2**	**5.67**	**258**	⇓P	**Pn**	**04 55 42.4**	**+1.0**
JTH	**Tanohata**	**5.72**	**234**	⇓P	**Pn**	**04 55 40.0**	**-2.1**
JTM	**Tenmabayashi**	**5.72**	**244**	⇓P	**Pn**	**04 55 41.6**	**-0.5**
JSH	**Shimam**	**5.78**	**264**	P	**Pn**	**04 55 43.9**	**+1.0**
JSR	**Shiriuchi**	**5.83**	**253**	⇓P	**Pn**	**04 55 43.6**	**0.0**
MIYJ	**Miyakonagasawa**	**5.98**	**231**	⇓P	**Pn**	**04 55 43.5**	**-2.3**
JKZ	**Kuzumaki**	**6.01**	**236**	⇓P	**Pn**	**04 55 44.6**	**-1.5**
JSI2	**Shiura 2**	**6.03**	**249**	⇓P	**Pn**	**04 55 46.1**	**-0.3**
JOMM	**Oshimamatsumae**	**6.12**	**254**	P	**Pn**	**04 55 47.7**	**+0.1**
JHHS	**Hirosakihyakuz**	**6.25**	**245**	⇓P	**Pn**	**04 55 49.3**	**-0.2**
JOSM	**Okushiri--Mats**	**6.32**	**260**	⇓P	**Pn**	**04 55 51.3**	**+1.0**
JAH	**Hinai**	**6.32**	**241**	P	**Pn**	**04 55 49.4**	**-0.9**
JOM	**Ohasama**	**6.36**	**233**	P	**Pn**	**04 55 49.2**	**-1.7**
JSZI	**Iwateshizukuis**	**6.38**	**236**	⇓P	**Pn**	**04 55 50.2**	**-1.1**
OFUJ	**Ofunato**	**6.41**	**229**	⇓P	**Pn**	**04 55 49.7**	**-2.0**
JNTW	**Noshirotokiwa**	**6.58**	**243**	P	**Pn**	**04 55 53.7**	**-0.2**
JKMT	**Kesennumamotoy**	**6.71**	**228**	⇓P	**Pn**	**04 55 53.5**	**-2.3**
JMK	**Ichinoseki**	**6.75**	**230**	⇓P	**Pn**	**04 55 54.4**	**-1.9**
JRG	**Rokugo**	**6.79**	**235**	P	**Pn**	**04 55 55.3**	**-1.6**
UGL	**Uglegorsk**	**6.86**	**326**	*e* P	**Pn**	**04 56 00.0**	**+2.2**
UGL				AMB	AMB	04 56 02.0	
	comp=E,2µm,5.0s						
UGL				AMB	AMB	04 56 02.0	
	comp=E,330nm,0.9s						
UGL				AMS	AMS	04 58 58.0	
	comp=E,11µm,13.0s						
UGL				AMS	AMS	04 58 58.0	
	comp=E,10µm,13.0s						
UGL				AMS	AMS	04 58 58.0	
	comp=E,9µm,13.0s						
UGL	**Uglegorsk**	**6.86**	**326**	*e* PN	**Pn**	**04 56 00.0**	**+2.2**
UGL				pmax	pmax		
	comp=Z,2µm,5.2s						
UGL				pmax	pmax		
	comp=Z,328nm,0.9s						
UGL				MLR	MLR		
	comp=N,11µm,13.0s						
UGL				MLR	MLR		
	comp=E,10µm,14.0s						
UGL				MLR	MLR		
	comp=Z,9µm,14.0s						
JYW	**Yuwa**	**6.96**	**238**	P	**Pn**	**04 55 58.5**	**-0.7**
JIO	**Ouri**	**7.04**	**226**	P	**Pn**	**04 55 57.7**	**-2.5**
JIKH	**Ishinomakikobu**	**7.08**	**225**	P	**Pn**	**04 55 58.0**	**-2.9**
JOFO	**Osakifurukawao**	**7.17**	**229**	P	**Pn**	**04 56 00.3**	**-1.7**
JYK	**Kaneyama**	**7.26**	**233**	P	**Pn**	**04 56 01.6**	**-1.8**
JOU	**Okura**	**7.47**	**229**	P	**Pn**	**04 56 04.0**	**-2.2**
JMST	**Minamisoumatoc**	**7.83**	**225**	P	**Pn**	**04 56 07.9**	**-3.2**
JYAR	**Yonezawaarcadi**	**8.08**	**229**	P	**Pn**	**04 56 13.1**	**-1.5**
TYV	**Tymovskoe**	**8.16**	**336**	*e* P	**Pn**	**04 56 19.3**	**+3.7**
TYV				AMB	AMB	04 56 20.0	
	comp=Z,70nm,1.0s						
TYV				AMB	AMB	04 56 20.0	
	comp=Z,1µm,3.0s						
TYV				*e* S	**Sn**	**04 57 46.5**	**-0.3**
TYV				A	A	04 57 56.3	
	comp=Z,140nm,1.0s						
TYV				A	A	04 57 58.7	
	comp=Z,2µm,3.0s						
TYV				AMS	AMS	04 59 43.0	
	comp=Z,9µm,14.0s						
TYV				AMS	AMS	04 59 43.0	
	comp=Z,10µm,14.0s						
TYV	**Tymovskoe**	**8.16**	**336**	*e* PN	**Pn**	**04 56 19.3**	**+3.7**
TYV				*e* S	Sn	04 57 55.8	+9.0
TYV				pmax	pmax		
	comp=Z,1µm,3.4s						
TYV				pmax	pmax		
	comp=Z,66nm,1.0s						
TYV				smax	smax		
	comp=N,135nm,1.2s						
TYV				smax	smax		
	comp=N,2µm,3.2s						
TYV				MLR	MLR		
	comp=N,9µm,15.0s						
TYV				MLR	MLR		
	comp=Z,10µm,15.0s						
TEY	**Ternei**	**8.21**	**285**	*e* P	**Pn**	**04 56 18.3**	**+2.0**
TEY				AMB	AMB	04 56 19.2	
	comp=Z,50nm,1.0s						
TEY	**Ternei**	**8.21**	**285⇑**	*e* PN	**Pn**	**04 56 18.3**	**+2.0**
TEY				pmax	pmax		
	comp=E,70nm,1.1s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=Z,50nm,1.0s						
TEY				pmax	pmax		
	comp=Z,310nm,1.0s						
JAW	**Awa shima**	**8.22**	**235**	P	**Pn**	**04 56 16.2**	**-0.3**
ONAJ	**Iwakimizuishiy**	**8.35**	**222**	P	**Pn**	**04 56 15.0**	**-3.4**
JFY	**Yanaizu**	**8.69**	**228**	P	**Pn**	**04 56 21.3**	**-1.6**
JHK	**Hitachi**	**8.86**	**221**	P	**Pn**	**04 56 21.6**	**-3.6**
JSD	**Sado**	**9.09**	**236**	P	**Pn**	**04 56 27.1**	**-1.3**
SKR	**Severo-Kuril's**	**9.13**	**35**	*e* P	**Pn**	**04 56 29.1**	**+0.3**
SKR				AMB	AMB	04 56 29.5	
	comp=Z,300nm,1.0s						
SKR				AMB	AMB	04 56 29.9	
	comp=Z,300nm,1.0s						
SKR				*e* S	**Sn**	**04 58 08.1**	**-2.4**
SKR				A	A	04 58 27.7	
	comp=Z,270nm,0.9s						
SKR				A	A	04 58 27.7	
	comp=Z,350nm,0.9s						
SKR				AMS	AMS	05 00 08.1	
	comp=Z,4µm,14.0s						
SKR				AMS	AMS	05 00 08.1	
	comp=Z,8µm,14.0s						
SKR				AMS	AMS	05 00 08.1	
	comp=Z,10µm,14.0s						
SKR	**Severo-Kuril's**	**9.13**	**35**	*e* PN	**Pn**	**04 56 28.6**	**-0.2**
SKR				pmax	pmax		
	comp=Z,100nm,1.9s						
SKR				pmax	pmax		
	comp=Z,300nm,1.0s						
SKR				pmax	pmax		
	comp=Z,505nm,0.7s						
SKR				MLR	MLR		
	comp=Z,10µm,17.0s						
SKR				MLR	MLR		
	comp=N,4µm,14.0s						
SKR				MLR	MLR		
	comp=E,8µm,17.0s						
SKR				MLR	MLR		
	comp=Z,10µm,14.0s						
SKR				MLR	MLR		
	comp=N,4µm,13.0s						
SKR				MLR	MLR		
	comp=E,8µm,17.0s						
JIZZ	**Izumozaki**	**9.16**	**232**	P	**Pn**	**04 56 29.0**	**-0.3**
JHK	**Hiroka**	**9.18**	**230**	P	**Pn**	**04 56 28.5**	**-1.2**
JAG	**Ashikaga**	**9.56**	**225**	P	**Pn**	**04 56 32.7**	**-2.1**
MJAR	**Matsushiro Arr**	**10.14**	**230**	Pn	**Pn**	**04 56 41.4**	**-1.4**
	comp=E,4.1nm,0.3s,baz=33,slow=15,SNR=480						
MJAR				Sn	**Sn**	**04 58 27.5**	**-8.0**
	comp=E,1.8nm,0.3s,baz=76,slow=11,SNR=4.8						
MJAR				LR	LR	05 00 42.7	
	comp=E,6µm,21.5s,baz=50,slow=38						
MJB9	**Matsu-Tunnel**	**10.14**	**230**		**Pn**	**04 56 41.6**	**-1.2**
MAJO	**Matsushiro**	**10.14**	**230**		**Pn**	**04 56 41.5**	**-1.3**
MAJO	**Matsushiro**	**10.14**	**230d**	*i* PN	**Pn**	**04 56 41.3**	**-1.5**
MAJO				pmax	pmax		
	comp=Z,297nm,0.6s						
MAT	**Matsushiro**	**10.14**	**230**	P	**Pn**	**04 56 41.8**	**-1.0**
MAT	**Matsushiro**	**10.14**	**230**	P	**Pn**	**04 56 41.2**	**-1.6**
MAT				S	**Sn**	**04 58 37.2**	**+1.7**
JNG	**Nsakai**	**10.30**	**230**	P	**Pn**	**04 56 44.2**	**-0.8**
OKH	**Okha**	**10.56**	**344**	*i* P	**Pn**	**04 56 49.5**	**+1.0**
OKH				AMB	AMB	04 57 02.0	
	comp=Z,1µm,9.0s						
OKH				*e* S	**Sn**	**04 58 43.9**	**-1.8**
OKH				AMS	AMS	05 02 02.0	
	comp=Z,11µm,15.0s						
OKH				AMS	AMS	05 02 02.0	
	comp=Z,11µm,15.0s						
OKH				AMS	AMS	05 02 02.0	
	comp=Z,8µm,15.0s						
OKH	**Okha**	**10.56**	**344c**	*i* PN	**Pn**	**04 56 49.5**	**+1.0**
OKH				pmax	pmax		
	comp=Z,1µm,8.7s						
OKH				MLR	MLR		
	comp=E,11µm,14.0s						
OKH				MLR	MLR		
	comp=N,11µm,15.0s						
OKH				MLR	MLR		
	comp=Z,8µm,15.0s						
GRNR	**Gornyy**	**10.64**	**317**	*e* P	**Pn**	**04 56 52.9**	**+3.4**
GRNR				AMB	AMB	04 56 59.1	
	comp=Z,60nm,1.0s						
GRNR				AMS	AMS	05 01 33.7	
	comp=Z,2µm,14.0s						
GRNR				AMS	AMS	05 01 33.7	
	comp=Z,3µm,14.0s						
GRNR				AMS	AMS	05 01 33.7	
	comp=Z,4µm,14.0s						
GRNR	**Gornyy**	**10.64**	**317⇑**	*i* PN	**Pn**	**04 56 52.9**	**+3.4**
GRNR				*e* S	Sn	04 58 57.7	+10
GRNR				pmax	pmax		
	comp=Z,60nm,1.2s						
GRNR				smax	smax		
	comp=N,20nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,4µm,15.0s						
NKL	**Nikolayevsk**	**10.76**	**336**	*e* P	**Pn**	**04 56 53.3**	**+2.1**
NKL				AMB	AMB	04 56 56.0	
	comp=Z,40nm,1.0s						
NKL				AMB	AMB	04 56 56.0	
	comp=Z,300nm,1.0s						
NKL				AMS	AMS	04 58 50.0	
	comp=Z,100nm,13.0s						
NKL				AMS	AMS	04 58 50.0	
	comp=Z,100nm,13.0s						
NKL				AMS	AMS	04 58 50.0	
	comp=Z,6µm,13.0s						
NKL	**Nikolayevsk**	**10.76**	**336**	*e* PN	**Pn**	**04 56 53.2**	**+2.1**
NKL				pmax	pmax		
	comp=E,37nm,1.2s						
NKL				pmax	pmax		
	comp=Z,300nm,1.2s						
NKL				pmax	pmax		
	comp=N,7.0nm,0.8s						
JGN	**Niukaw**	**10.87**	**232**	P	**Pn**	**04 56 52.2**	**-0.6**
USA0B	**Ussuriysk Arra**	**11.47**	**279**		**Pn**	**04 57 00.0**	**-0.9**
USA0B	**Ussuriysk Arra**	**11.47**	**279d**	*i* PN	**Pn**	**04 57 01.1**	**+0.1**
USRK	**Ussuriysk Ar.**	**11.47**	**279**	Pn	**Pn**	**04 57 01.8**	**+0.8**
	baz=90,slow=13,SNR=79						
USRK				LR	LR	05 01 41.6	
	comp=N,5µm,18.7s,baz=83,slow=39						
PEA0B	**Petropavlovsk-**	**11.63**	**31**		**Pn**	**04 57 02.6**	**-0.4**
PEA0B	**Petropavlovsk-**	**11.63**	**31**	*i* PN	**Pn**	**04 57 02.6**	**-0.4**
PETK	**Petropavlovsk-**	**11.63**	**31**	Pn	**Pn**	**04 57 02.5**	**-0.6**
	comp=N,6.7nm,0.3s,baz=195,slow=9.3,SNR=143						
PETK				LR	LR	05 02 10.2	
	comp=N,5µm,18.2s,baz=232,slow=41						
INU	**Inuyama**	**11.67**	**229**		**Pn**	**04 57 02.6**	**-1.1**
PET	**Petropavlovsk**	**11.93**	**33**	*e* P	**Pn**	**04 57 04.8**	**-2.3**
PET	**Petropavlovsk**	**11.93**	**33**		**Pn**	**04 57 04.2**	**-2.9**
PET	**Petropavlovsk**	**11.93**	**33**	*e* PN	**Pn**	**04 57 02.6**	**-4.5**
PET				pmax	pmax		
	comp=Z,600nm,8.6s						
PET				pmax	pmax		
	comp=Z,1µm,5.0s						
PET				pmax	pmax		
	comp=Z,126nm,0.9s						
PET				MLR	MLR		
	comp=Z,15µm,19.0s						
PET				MLR	MLR		
	comp=Z,13µm,18.0s						
JHJ2	**Mitsune**	**12.13**	**214**	Pn	**Pn**	**04 57 08.9**	**-1.1**
JHJ	**Hachijo jima 2**	**12.14**	**214**	Pn	**Pn**	**04 57 09.2**	**-0.9**
	comp=Z,33nm,0.3s,baz=86,slow=23,SNR=9.4						
JHJ				Sn	Sn	04 59 10.2	-14
	comp=Z,250nm,0.3s,baz=261,slow=23,SNR=13						
MSHR	**Mys Shultsa**	**12.25**	**271d**	*i* PN	**Pn**	**04 57 11.4**	**-0.1**
KLR	**Kul'dur**	**12.49**	**303**	Pn	**Pn**	**04 57 16.6**	**+1.7**
	comp=Z,1.1nm,0.3s,baz=111,slow=15,SNR=28						
KLR				LR	LR	05 02 29.0	
	comp=Z,6µm,19.0s,baz=116,slow=40						
KLR	**Kul'dur**	**12.49**	**303**	*e* P	**Pn**	**04 57 15.9**	**+1.0**
KLR	**Kul'dur**	**12.49**	**303**	*i* PN	**Pn**	**04 57 15.9**	**+1.0**
KLR				pmax	pmax		
	comp=Z,94nm,1.1s						
KLR				MLR	MLR		
	comp=Z,6µm,16.0s						
JKY	**Yasaka**	**12.58**	**236**	P	**Pn**	**04 57 15.2**	**-0.9**
JWT	**Wachi**	**12.64**	**234**	P	**Pn**	**04 57 16.0**	**-0.9**
JKSM	**Kasumi**	**12.87**	**237**	P	**Pn**	**04 57 19.2**	**-0.9**
MDJ	**Mudanjiang**	**13.18**	**281**	P	**Pn**	**04 57 24.6**	**+0.4**
MDJ				pP	P	04 57 25.8	-8.1
MDJ				sP		04 57 26.9	
MDJ				S	**Sn**	**04 59 48.3**	**-1.4**
MDJ				sS	S	04 59 50.8	-23
MDJ				SS	**SnSn**	**05 00 02.0**	**+0.4**
MDJ				PcP	**PcP**	**05 02 59.4**	**+5.4**
MDJ				PcS	**PcS**	**05 06 33.9**	**+5.6**
MDJ				ScS	**ScS**	**05 10 09.8**	**+8.4**
MDJ				pmax	pmax		

comp=Z,140nm,1.2s
MDJ pmax pmax
comp=Z,970nm,8.2s
MDJ LR LR
comp=Z,11µm,19.2s
MDJ LR LR
comp=Z,4µm,20.6s
MDJ LR LR
comp=Z,7µm,17.1s
CHJN Chongjin 13.39 269 P P 04 57 33.8 -2.5
EKMR Ekimchan 13.76 319 eP Pn 04 57 33.0 +0.9
EKMR AMB AMB 04 57 52.0
comp=Z,180nm,1.0s
EKMR AMB AMB 04 57 52.0
comp=Z,80nm,1.0s
EKMR AMB AMB 04 57 52.0
comp=Z,260nm,1.0s
KGE Kanggye 15.93 268 P Pn 04 57 59.1 -2.1
WOSN Wonsan 15.93 261 P Pn 04 57 59.5 -1.7
MA2 Magadan 16.20 5 Pn Pn 04 58 03.2 -1.2
comp=Z,8.4nm,0.3s,baz=186,slow=12,SNR=79
MA2 LR LR 05 04 50.5
comp=Z,7µm,18.2s,baz=186,slow=39
MA2 Magadan 16.20 5 Pn 04 58 03.3 -1.2
MA2 Magadan 16.20 5 ceP Pn 04 58 03.4 -1.0
MA2 pmax pmax
comp=Z,586nm,0.9s
MA2 MLR MLR
comp=Z,7µm,18.0s
CN2 Changchun 16.21 279 eP Pn 04 58 02.0 -2.7
CN2 eS Sn 05 00 57.4 -6.1
CN2 pmax pmax
comp=Z,80nm,1.5s
CN2 pmax pmax
comp=Z,330nm,4.3s
CN2 LR LR
comp=Z,7µm,20.0s
CN2 LR LR
comp=Z,3µm,20.0s
CN2 LR LR
comp=Z,4µm,21.0s
KSRS Korea Array 16.30 255 Pn Pn 04 58 05.0 -0.9
comp=Z,2.0nm,0.3s,baz=59,slow=12,SNR=153
KSRS PcP PcP 05 03 00.5 +2.1
baz=122,slow=1.0,SNR=6.2
KS19 Wonju Array Si 16.32 255 Pn 04 58 04.2 -1.9
JFA Akaike 16.50 239 P Pn 04 58 06.0 -2.4
BMKR Bomnak 16.69 319 eP Pn 04 58 10.6 -0.1
BMKR AMB AMB 04 58 44.0
comp=Z,70nm,0.5s
JNU Nakatsue 16.84 238 P Pn 04 58 10.2 -2.6
JNU Nakatsue 16.84 238 Pn Pn 04 58 10.3 -2.5
comp=Z,1.0nm,0.3s,baz=52,slow=9.3,SNR=26
JNU LR LR 05 05 07.3
comp=Z,4µm,20.3s,baz=49,slow=39
JNU Nakatsue 16.84 238 Pn 04 58 10.4 -2.5
JNU IAmb IAmb 04 58 18.1
comp=Z,827nm,1.0s
ZEA Zeya 16.97 314 eP Pn 04 58 14.2 -0.1
ZEA AMB AMB 04 58 26.2
comp=Z,500nm,2.0s
ZEA AMB AMB 04 58 26.2
comp=Z,500nm,2.0s
ZEA AMB AMB 04 58 26.2
comp=Z,770nm,2.0s
ZEA Zeya 16.97 314 eP Pn 04 58 15.0 +0.7
ZEA eS Sn 05 01 23.0 +1.1
ZEA pmax pmax
comp=N,510nm,1.8s
ZEA pmax pmax
comp=E,510nm,1.8s
ZEA pmax pmax
comp=Z,770nm,1.8s
ZEA pmax pmax
comp=N,1µm,5.0s
ZEA pmax pmax
comp=E,2µm,5.0s
ZEA pmax pmax
comp=Z,2µm,5.0s
ZEA smax smax
comp=N,2µm,7.0s
ZEA smax smax
comp=E,2µm,7.0s
ZEA MLR MLR
comp=Z,8µm,14.0s
ZEA MLR MLR
comp=E,6µm,15.0s
JCJ Chichijima 17.00 197 P Pn 04 58 12.6 -2.2
comp=E,21nm,0.3s,baz=248,slow=22,SNR=8.7
JCJ S Sn 05 01 06.2 -17
comp=E,39nm,0.3s,baz=72,slow=22,SNR=9.0
JCJ LR LR 05 05 57.2
comp=E,1µm,18.1s,baz=340,slow=41
PYAG Pyongyang 17.17 263 P Pn 04 58 16.0 -0.9
PYAG pP P 04 58 20.0 +1.7
PYAG sP pP 04 58 23.0 -2.4
PYAG PP pwP 04 58 29.0 0.0
PYAG S Sn 05 01 30.0 +3.1
PYAG sS S 05 01 36.0 +0.5
PYAG SS SnSn 05 01 54.0 +14
INCN Inchon 17.20 257 Pn 04 58 15.3 -2.0
INCN Inchon 17.20 257 P Pn 04 58 16.1 -1.1
INCN Inchon 17.20 257 P Pn 04 58 15.3 -2.0
INCN pmax pmax
comp=Z,208nm,0.9s
TJN Taejon 17.22 253 ceP Pn 04 58 17.3 -0.2
KROS Kirovskiy 17.46 316 eP Pn 04 58 20.0 -0.4
KROS AMB AMB 04 58 32.4
comp=Z,90nm,1.0s
KROS AMB AMB 04 58 32.4
comp=Z,120nm,1.0s
KROS AMB AMB 04 58 32.4
comp=Z,210nm,1.0s
HJU Haeju 17.60 259 P Pn 04 58 21.2 -1.0
SUJ Sinuiju 17.72 267 P Pn 04 58 20.8 -2.9
SNY Shenyang 17.91 273 ⇓P Pn 04 58 23.6 -2.4
SNY S Sn 05 01 45.3 +0.6
SNY pmax pmax
comp=Z,1µm,2.4s
SNY LR LR
comp=Z,2µm,10.2s
SNY LR LR
comp=Z,3µm,14.9s
SNY LR LR
comp=Z,5µm,16.1s
SEY Seymchan 19.64 6 erx P 04 58 44.0 -1.2
SEY Seymchan 19.64 6 d iP P 04 58 44.0 -1.2
SMY Shemya 19.71 53 P P 04 58 44.9 -1.2
SMY Shemya 19.71 53 P P 04 58 44.9 -1.2
SMY pmax pmax
comp=Z,2µm,1.5s
DL2 Dalian 20.22 266 P P 04 58 51.9 +0.2
DL2 S S 05 02 31.4 -5.5
DL2 pmax pmax
comp=Z,630nm,1.2s
DL2 pmax pmax
comp=Z,1µm,4.1s
DL2 LR LR
comp=Z,2µm,18.4s
DL2 LR LR
comp=Z,3µm,19.2s
JAM Amami Oshima 21.02 230 P P 04 59 02.4 +2.0
JAMN Amaminishikomi 21.39 231 P P 04 59 05.5 +1.1
YAK Yakutsk 21.43 336 P P 04 59 01.1 -3.3
comp=Z,196nm,0.7s,baz=160,slow=1.1,SNR=86
YAK S S 05 02 51.0 -9.4
comp=Z,32nm,0.8s,baz=263,slow=9.2,SNR=3.6
YAK Yakutsk 21.43 336 IAmb IAmb 04 59 04.0
comp=Z,296nm,0.7s
YAK Yakutsk 21.43 336 eP P 04 59 00.8 -3.7
YAK e*PP sP 04 59 17.2 +1.2
YAK eS S 05 02 52.3 -8.1
YAK e*SS sS 05 03 15.1 +3.2
YAK pmax pmax
comp=Z,207nm,0.8s
YAK pmax pmax
comp=N,55nm,1.1s
YAK pmax pmax
comp=E,19nm,0.8s
YAK smax smax
comp=N,1µm,2.0s
YAK smax smax
comp=E,848nm,2.1s
YAK MLR MLR
comp=Z,3µm,15.0s
YAK MLR MLR
comp=N,2µm,18.0s
YAK MLR MLR
comp=E,2µm,16.0s
JTK Tokunoshima 21.87 230 P P 04 59 10.8 +1.3
JYRO Yoronjima 22.74 230 P P 04 59 19.6 +0.8
JOW Kunigami 22.98 230 P P 04 59 21.8 +0.4
comp=E,21nm,1.1s,baz=95,slow=18,SNR=22
JOW Kunigami 22.98 230 P P 04 59 22.6 +1.2
BJI Beijing 23.79 273 P P 04 59 28.4 -0.9
BJI S S 05 03 40.5 -2.4
BJI pmax pmax
comp=E,110nm,1.4s
BJI pmax pmax
comp=E,1µm,3.0s
BJI LR LR
comp=E,1µm,19.1s
BJI LR LR
comp=E,3µm,18.7s
CIT Chita 24.38 303 eP P 04 59 49.0 +14
CIT e 04 59 54.1
CIT e 05 00 09.3
CIT e 05 00 15.9
CIT eS S 05 03 51.9 -0.4
CIT pmax pmax
comp=Z,113nm,1.4s
SSE Sheshan 24.44 248 P P 04 59 36.5 +1.2
SSE pmax pmax
comp=Z,140nm,1.1s
SSE pmax pmax
comp=Z,1µm,5.3s
SSE LR LR
comp=Z,2µm,18.3s
SSE LR LR
comp=Z,2µm,17.7s
SSE Sheshan 24.44 248 IAMs_20 IAMs_20 05 09 33.0
comp=Z,4µm,19.0s
TIA Tai'an 24.58 263 P P 04 59 36.8 +0.2
TIA S S 05 03 59.3 +3.7
TIA pmax pmax
comp=Z,220nm,1.0s
TIA pmax pmax
comp=Z,2µm,2.4s
TIA LR LR
comp=Z,2µm,19.9s
TIA LR LR
comp=Z,1µm,17.8s
TIA LR LR
comp=Z,2µm,22.8s
ADK Adak 25.10 58 P P 04 59 42.3 +1.2
ADK IAmb IAmb 04 59 56.4
comp=Z,333nm,1.1s
ADK Adak 25.10 58 P P 04 59 42.3 +1.2
ADK pmax pmax
comp=Z,333nm,1.1s
ADK MLR MLR
comp=Z,3µm,19.0s
BOD Bodaibo 25.46 316 eP P 04 59 40.7 -3.6
BOD pmax pmax
comp=Z,47nm,1.4s
NJ2 Nanjing 25.48 253 ⇓iP P 04 59 45.5 +0.8
NJ2 pP pP 04 59 48.0 -4.5
NJ2 S S 05 04 16.6 +6.6
NJ2 sS sS 05 04 22.6 -0.7
NJ2 pmax pmax
comp=Z,310nm,0.8s
NJ2 pmax pmax
comp=Z,2µm,3.5s
NJ2 LR LR
comp=Z,7µm,16.6s
NJ2 LR LR
comp=Z,6µm,17.1s
NJ2 LR LR
comp=Z,8µm,18.5s
GSTR Great Sitkin T 25.50 58 P P 04 59 45.6 +0.8
BILL Bilibino 26.46 15 eP P 04 59 53.2 -0.1
BILL Bilibino 26.46 15 P P 04 59 51.3 -2.0
BILL Bilibino 26.46 15 d iP P 04 59 53.2 -0.1
BILL i 05 00 07.7
BILL e 05 03 18.6
BILL pmax pmax
comp=Z,104nm,0.8s
BILL MLR MLR
comp=Z,4µm,16.0s
ATKA Atka Island 26.65 58 IAMs_20 IAMs_20 05 09 14.4
comp=Z,4µm,19.0s
TIY Taiyuan 27.36 270 eP P 05 00 02.8 +1.1
TIY S S 05 04 42.4 +2.7
TIY SS SnSn 05 05 56.5 +6.8
TIY pmax pmax
comp=Z,740nm,5.2s
TIY LR LR
comp=Z,570nm,11.8s
TIY LR LR
comp=Z,1µm,15.5s
TIY LR LR
comp=Z,2µm,19.4s
BTO Baotou 28.07 277 eP P 05 00 09.1 +0.9
BTO epP pwP 05 00 17.8 -1.5
BTO S S 05 04 48.3 -2.7
ULN Ulaanbaatar 28.59 293 eP P 05 00 12.8 +0.1
ULN Ulaanbaatar 28.59 293 P P 05 00 12.8 +0.1
ULN IAmb IAmb 05 00 14.9
comp=Z,178nm,0.8s
ULN Ulaanbaatar 28.59 293 P P 05 00 13.6 +0.9
ULN S S 05 04 56.2 -2.9
ULN Ulaanbaatar 28.59 293 P P 05 00 12.8 +0.1
ULN pmax pmax
comp=Z,178nm,0.8s
ULN MLR MLR
comp=Z,6µm,20.0s
H11N2 WAKE ISLAND Hy 28.59 140 T T 05 31 06.8
baz=330,slow=75,SNR=210
H11N1 WAKE ISLAND Hy 28.60 140 T T 05 31 05.3
baz=330,slow=75,SNR=616
H11N3 WAKE ISLAND Hy 28.60 140 T T 05 31 05.1
baz=330,slow=75,SNR=156
NACB Ninganchiao 28.91 237 P P 05 00 16.2 +0.7
NACB IAMs_20 IAMs_20 05 12 18.6
comp=Z,3µm,21.0s
SONM Songino Array 29.03 293 P P 05 00 17.3 +0.6
comp=Z,127nm,0.8s,baz=87,slow=8.7,SNR=541
SONM LR LR 05 13 05.7
comp=Z,5µm,20.1s,baz=87,slow=39
WHN Wuhan 29.50 255 ⇓P P 05 00 21.0 +0.3
WHN pP pwP 05 00 32.5 +0.2
WHN S S 05 05 12.8 -0.5
WHN pmax pmax
comp=Z,730nm,1.7s
WHN LR LR
comp=Z,6µm,17.1s
WHN LR LR
comp=Z,10µm,19.0s
WHN LR LR
comp=Z,10µm,18.4s
H11S1 WAKE ISLAND Hy 29.56 142 T T 05 32 14.2
baz=331,slow=76,SNR=1694
H11S3 WAKE ISLAND Hy 29.57 142 T T 05 32 19.6
baz=331,slow=76,SNR=1539
H11S2 WAKE ISLAND Hy 29.58 142 T T 05 32 15.5
baz=331,slow=76,SNR=2012
TIXI Tiksi 29.70 348 P P 05 00 18.2 -4.0
comp=Z,27nm,0.8s,baz=146,slow=8.0,SNR=72
TIXI Tiksi 29.70 348 P P 05 00 18.6 -3.6
TIXI Tiksi 29.70 348 c iP P 05 00 18.5 -3.6
TIXI pmax pmax
comp=Z,32nm,0.8s
TIXI MLR MLR
comp=Z,2µm,14.0s
GUMO Guam 29.92 186 LR LR 05 10 46.3
comp=Z,1µm,21.2s,baz=17,slow=33
IRK Irkutsk 30.10 302 eP P 05 00 26.1 +0.2
IRK pmax pmax
comp=Z,43nm,1.6s
TPUB Ta-pu 30.15 237 P P 05 00 27.0 +0.4
TPUB IAmb IAmb 05 01 01.6
comp=Z,277nm,1.7s
TPUB IAMs_20 IAMs_20 05 14 30.3
comp=Z,3µm,18.0s
QZH Quanzhou 30.23 242 ⇓iP P 05 00 28.6 +1.3
QZH S S 05 05 31.3 +6.4
QZH pmax pmax
comp=Z,790nm,4.5s
QZH LR LR
comp=Z,1µm,16.7s
QZH LR LR
comp=Z,2µm,18.5s
QZH LR LR
comp=Z,2µm,19.1s
TLY Talaya 30.51 301 eP P 05 00 29.9 +0.4
TLY Talaya 30.51 301 P P 05 00 29.3 -0.3
TLY IAMs_20 IAMs_20 05 13 29.7
comp=Z,2µm,18.0s
TLY Talaya 30.51 301 P P 05 00 30.4 +0.9
TLY Talaya 30.51 301 eP P 05 00 29.9 +0.4
TLY e 05 01 31.3
TLY eS S 05 05 23.4 -5.5
TLY pmax pmax
comp=Z,38nm,0.9s
TLY MLR MLR
comp=Z,7µm,16.0s
GAMB Gambell 30.62 34 P P 05 00 30.3 0.0
GAMB IAMs_20 IAMs_20 05 14 41.5
comp=Z,3µm,20.0s
KNMB Chin-men Tao 30.70 241 P P 05 00 32.2 +0.8
ZAK Zakamensk 30.81 299 eP P 05 00 32.6 +0.3
ZAK Zakamensk 30.81 299 eP P 05 00 32.6 +0.3
ZAK e 05 03 26.9
ZAK pmax pmax
comp=Z,29nm,0.9s
XAN Xi'an 31.54 266 P P 05 00 39.0 +0.2
XAN pP pP 05 00 46.3 -0.4
XAN sP sP 05 00 49.3 -0.7
XAN PP PnPn 05 01 41.8 -0.7
XAN S S 05 05 41.6 -3.8
XAN sS pS 05 05 54.3 -0.3
XAN SS SnSn 05 07 26.1 -5.5
XAN pmax pmax
comp=Z,150nm,0.7s
XAN pmax pmax
comp=Z,390nm,3.6s
XAN LR LR
comp=Z,1µm,16.3s
XAN LR LR
comp=Z,1µm,15.2s
XAN LR LR
comp=Z,1µm,17.3s
BBP Basco 31.56 231 eP P 05 00 38.7 -0.3
MOY Mondy 32.15 301 eP P 05 00 44.7 +0.6
MOY pmax pmax
comp=Z,61nm,1.8s
ENH Enshi 33.10 259 IAMs_20 IAMs_20 05 15 29.0
comp=Z,2µm,19.0s
SGCP Mt. Cagua 33.28 229 eP P 05 00 53.8 -0.3
ANM Nome 33.50 35 P P 05 00 56.5 +0.9
ANM IAmb IAmb 05 01 17.8
comp=Z,220nm,1.3s
ANM IAMs_20 IAMs_20 05 16 25.6
comp=Z,2µm,19.0s
ANM Nome 33.50 35 P P 05 00 56.6 +0.9
ANM pmax pmax
comp=Z,220nm,1.3s
ANM MLR MLR
comp=Z,2µm,19.0s
APYP Conner 34.03 230 eP P 05 00 59.1 -1.5
LZH Lanzhou 34.28 273 ⇓P P 05 01 03.8 +0.9
LZH pP pP 05 01 09.8 -1.2
LZH PP PP 05 02 20.3 -0.4
LZH S S 05 06 26.4 -1.9
LZH sS pS 05 06 35.0 -2.9
LZH pmax pmax
comp=Z,140nm,1.3s
LZH pmax pmax
comp=Z,760nm,4.9s
LZH LR LR
comp=Z,1µm,13.2s
LZH LR LR
comp=Z,3µm,14.1s
LZH LR LR
comp=Z,3µm,14.1s
CAUP Cauayan 34.46 228 eP P 05 01 05.5 +1.1
SZP Santa 34.72 230 P P 05 01 06.7 +0.1
SZP IAmb IAmb 05 01 10.4
comp=Z,111nm,0.8s
HKPS Hong Kong Po S 34.99 244 IAMs_20 IAMs_20 05 16 38.5
comp=Z,3µm,19.0s
RDOG Red Dog Mine 35.49 29 IAmb IAmb 05 01 15.4
comp=Z,185nm,1.2s
BALP Baler 35.58 227 eP P 05 01 14.6 +0.5
SMPP San Manuel, Pa 35.73 229 eP P 05 01 15.2 -0.2
GTA Gaotai 35.83 280 ⇓P P 05 01 17.3 +1.1
GTA pP pP 05 01 23.5 -0.8
GTA sP pwP 05 01 27.5 0.0
GTA PcP PcP 05 03 45.3 +2.1
GTA S S 05 06 52.3 +0.4
GTA sS sS 05 07 04.5 -0.9
GTA ScS ScS 05 11 32.8 +0.5
GTA pmax pmax
comp=Z,180nm,1.1s
GTA pmax pmax
comp=Z,560nm,4.8s
GTA LR LR
comp=Z,2µm,15.9s
GTA LR LR
comp=Z,2µm,14.6s
GTA LR LR
comp=Z,4µm,15.2s
PVCP Virac 36.09 222 eP P 05 01 15.1 -3.3
POLP Polilio Island 36.23 226 eP P 05 01 20.1 +0.5
SCZP Santa Cruz 36.46 229 eP P 05 01 21.5 0.0
CNP Catarman 36.79 220 eP P 05 01 24.5 +0.2
CD2 Chengdu 36.88 265 ⇓P P 05 01 25.5 +0.3
CD2 pP pP 05 01 29.3 -3.8
CD2 PP PnPn 05 02 51.1 +1.5
CD2 S S 05 07 05.8 -2.2
CD2 sS pS 05 07 16.8 -0.4
CD2 pmax pmax
comp=Z,580nm,3.7s
CD2 LR LR
comp=Z,3µm,18.6s
CD2 LR LR
comp=Z,2µm,16.2s
CD2 LR LR
comp=Z,1µm,15.2s
TGY Tagaytay City 37.28 226 P P 05 01 29.9 +1.3
comp=Z,889nm,0.9s,baz=233,slow=2.3,SNR=14
GYA Guiyang 37.35 257 ⇓iP P 05 01 29.3 +0.1
GYA PP PP 05 02 53.4 -1.2
GYA PcP PcP 05 03 47.1 -0.8
GYA S S 05 07 11.9 -3.4
GYA pmax pmax
comp=Z,60nm,0.8s
GYA pmax pmax
comp=Z,340nm,3.5s
GYA LR LR
comp=Z,2µm,19.4s
GYA LR LR
comp=Z,3µm,18.8s
GYA LR LR
comp=Z,4µm,19.4s
BOAC Boac 37.35 225 eP P 05 01 29.5 +0.4
SVW2 Sparrevohn 37.41 42 P P 05 01 30.6 +1.3
SVW2 IAmb IAmb 05 01 45.6
comp=Z,204nm,1.0s
SVW2 IAMs_20 IAMs_20 05 16 40.5
comp=Z,2µm,22.0s
LUBP Lubang 37.96 227 eP P 05 01 32.9 -1.4
OCLP Ormoc 38.09 219 eP P 05 01 36.6 +1.2
OTRP Odiongan 38.19 223 eP P 05 01 37.7 +1.4
RCP Roxas 38.53 222 ⇑eP P 05 01 40.6 +1.5
MSLP Maasin 38.79 218 eP P 05 01 42.1 +0.9
KDAK Kodiak Island 39.05 47 P P 05 01 43.8 +0.8
comp=Z,23nm,0.8s,baz=250,slow=3.6,SNR=9.5
KDAK Kodiak Island 39.05 47 P P 05 01 43.8 +0.8
KDAK IAmb IAmb 05 01 57.8
comp=Z,261nm,0.8s
PPLA Purkeypile 39.05 39 P P 05 01 44.5 +1.3
PPLA IAMs_20 IAMs_20 05 19 42.5
comp=Z,2µm,21.0s
GUIM Jordan 39.41 221 eP P 05 01 47.5 +1.1
BUSP Coron 39.43 226 eP P 05 01 48.0 +1.4
BPAW Bear Paw Mtn. 39.61 37 IAmb IAmb 05 02 02.9
comp=Z,167nm,0.9s
BPAW IAMs_20 IAMs_20 05 20 49.3
comp=Z,2µm,18.0s
KTH Kantishna Hill 39.63 38 IAMs_20 IAMs_20 05 20 43.9
comp=Z,2µm,19.0s
NRIK Noril'sk 39.71 331 P P 05 01 46.6 -1.8
comp=Z,5.4nm,0.5s,baz=99,slow=3.9,SNR=12
NRIK LR LR 05 19 04.7
comp=Z,393nm,20.3s,baz=100,slow=38
SUA Susitna One 39.74 41 P P 05 01 50.1 +1.1

MLY Manley 39.75 36 IAMs_20 IAMs_20 05 20 18.8
comp=Z,2µm,20.0s
TRF Thorofare Moun 39.92 38 IAMs_20 IAMs_20 05 18 02.4
comp=Z,2µm,20.0s
CUYO Cuyo Island 39.99 224 eP P 05 01 51.4 +0.1
COLD Coldfoot 40.09 32 P P 05 01 52.9 +1.3
QIZ Qiongzhong 40.11 245 P P 05 01 54.3 +2.0
QIZ S S 05 08 05.3 +8.5
QIZ pmax pmax
comp=Z,73nm,1.1s
QIZ LR LR
comp=Z,2µm,19.4s
QIZ LR LR
comp=Z,2µm,19.4s
QIZ LR LR
comp=Z,2µm,16.5s
QIZ Qiongzhong 40.11 245 IAMs_20 IAMs_20 05 19 45.2
comp=Z,2µm,19.0s
RC01 Rabbit Creek A 40.25 42 IAmb IAmb 05 02 09.4
comp=Z,206nm,0.9s
RC01 IAMs_20 IAMs_20 05 21 31.3
comp=Z,2µm,21.0s
BWN Browne 40.28 37 IAMs_20 IAMs_20 05 21 11.9
comp=Z,2µm,18.0s
TOLK Toolik Lake Re 40.45 30 IAmb IAmb 05 01 58.5
comp=Z,450nm,1.6s
TOLK IAMs_20 IAMs_20 05 19 13.0
comp=Z,2µm,22.0s
TOLK Toolik Lake Re 40.45 30 P P 05 01 56.3 +1.7
baz=265,SNR=107
NEA Nenana 40.45 36 IAMs_20 IAMs_20 05 21 02.5
comp=Z,2µm,20.0s
SEW Seward 40.46 43 P P 05 01 55.4 +0.7
SEW IAMs_20 IAMs_20 05 20 09.0
comp=Z,2µm,21.0s
PMR Palmer 40.51 41 P P 05 01 56.1 +1.0
PMR Palmer 40.51 41 P P 05 01 56.2 +1.0
PMR pmax pmax
comp=Z,129nm,1.1s
PMR MLR MLR
comp=Z,2µm,22.0s
MCK McKinley 40.52 38 IAmb IAmb 05 02 10.4
comp=Z,223nm,0.9s
MCK IAMs_20 IAMs_20 05 21 11.3
comp=Z,2µm,19.0s
RND Reindeer 40.56 38 P P 05 01 56.5 +0.8
RND IAmb IAmb 05 02 10.6
comp=Z,328nm,1.1s
RND IAMs_20 IAMs_20 05 20 28.4
comp=Z,2µm,20.0s
RND Reindeer 40.56 38 P P 05 01 56.5 +0.8
RND pmax pmax
comp=Z,328nm,1.1s
RND MLR MLR
comp=Z,2µm,20.0s
GHO Glory Hole Cre 40.60 41 IAmb IAmb 05 02 11.3
comp=Z,211nm,1.0s
BUKP Musuan 40.71 216 eP P 05 01 58.1 +0.8
MDM Murphy Dome 40.81 36 P P 05 01 58.8 +1.1
MDM IAmb IAmb 05 02 12.7
comp=Z,204nm,0.9s
SML Sawmill 40.88 41 IAMs_20 IAMs_20 05 21 49.9
comp=Z,2µm,21.0s
WRH Wood River Hil 40.88 37 IAmb IAmb 05 02 19.5
comp=Z,153nm,0.9s
WRH IAMs_20 IAMs_20 05 21 25.7
comp=Z,2µm,20.0s
KMI Kunming 40.96 258 P P 05 01 59.3 -0.2
KMI pP pP 05 02 02.8 -4.7
KMI sP sP 05 02 05.3 -5.5
KMI PP PnPn 05 03 38.5 0.0
KMI S S 05 08 09.1 -0.6
KMI sS pS 05 08 16.5 -2.9
KMI pmax pmax
comp=Z,87nm,1.1s
KMI pmax pmax
comp=Z,890nm,3.8s
KMI LR LR
comp=Z,1µm,20.1s
KMI LR LR
comp=Z,1µm,19.2s
KMI LR LR
comp=Z,2µm,19.7s
KMI Kunming 40.96 258 IAMs_20 IAMs_20 05 20 33.2
comp=Z,2µm,20.0s
TCOL CIGO, UAF Yank 40.97 36 P P 05 02 00.6 +1.7
baz=271,SNR=26
COLA College 40.98 36 P P 05 02 00.7 +1.8
COLA College 40.98 36 P P 05 02 00.7 +1.8
COLA pmax pmax
comp=Z,357nm,0.9s
COLA MLR MLR
comp=Z,2µm,20.0s
CCB Clear Creek Bu 41.00 36 IAMs_20 IAMs_20 05 21 18.9
comp=Z,2µm,20.0s
MATI Mati 41.05 214 eP P 05 01 58.4 -1.7
POKR Poker Plat Res 41.15 36 P P 05 02 02.4 +2.0
baz=271,SNR=64
DHY Denali Highway 41.25 39 IAMs_20 IAMs_20 05 21 01.5
comp=Z,2µm,20.0s
SCM Sheep Creek Mo 41.35 41 IAmb IAmb 05 02 17.7
comp=Z,200nm,1.0s
SCM IAMs_20 IAMs_20 05 22 21.4
comp=Z,2µm,20.0s
HDA Harding Lake 41.38 37 IAmb IAmb 05 02 17.0
comp=Z,268nm,0.9s
HDA Harding Lake 41.38 37 P P 05 02 03.2 +1.0
baz=272,SNR=18
IL31 41.39 36 IAmb IAmb 05 02 17.3
comp=Z,288nm,1.1s
ILAR Eielson Array 41.39 36 P P 05 02 03.1 +0.8
comp=Z,32nm,0.8s,baz=258,slow=7.0,SNR=120
ILAR LR LR 05 21 41.3
comp=Z,908nm,18.7s,baz=289,slow=40
PAGZ Pagadian 41.47 218 eP P 05 02 03.7 +0.1
KCP Kidapawan 41.48 215 ⇓iP P 05 02 04.2 +0.6
ZALV Zalesovo Beam 41.55 307 P P 05 02 04.1 +0.3
comp=Z,12nm,0.6s,baz=84,slow=6.5,SNR=46
ZALV PcP PcP 05 04 01.3 +0.7
comp=Z,17nm,0.7s,baz=92,slow=2.0,SNR=6.1
ZALV LR LR 05 20 00.6
comp=Z,576nm,18.7s,baz=64,slow=37
GLI Glacier Island 41.55 42 IAMs_20 IAMs_20 05 22 30.7
comp=Z,2µm,21.0s
CTBH Cotabato--PC H 41.65 217 ⇓iP P 05 02 06.3 +1.3
FID Port Fidalgo 41.87 42 IAmb IAmb 05 02 21.5
comp=Z,330nm,1.6s
HIN Hinchinbrook I 41.90 43 IAMs_20 IAMs_20 05 22 46.9
comp=Z,2µm,19.0s
PRP Porcupine Dome 41.94 35 IAmb IAmb 05 02 22.6
comp=Z,260nm,1.0s
PAX Paxson 42.12 39 IAMs_20 IAMs_20 05 21 55.6
comp=Z,2µm,20.0s
SKMP Bagumbayan, Su 42.15 216 eP P 05 02 09.4 +0.4
EYAK Cordova Ski Ar 42.25 42 P P 05 02 11.3 +2.0
EYAK IAMs_20 IAMs_20 05 21 33.1
comp=Z,2µm,20.0s
RIDG Independent Ri 42.34 38 IAMs_20 IAMs_20 05 22 16.3
comp=Z,2µm,20.0s
SLVN Son La 42.56 253 P P 05 02 12.9 +0.4
SLVN IAMs_20 IAMs_20 05 21 23.6
comp=Z,2µm,20.0s
WMQ Urumqi 42.65 292 P P 05 02 14.5 +1.5
WMQ sP pwP 05 02 25.9 +1.4
WMQ S S 05 08 33.5 -0.7
WMQ sS sS 05 08 46.8 -1.4
WMQ ScS ScS 05 12 13.6 +1.7
WMQ pmax pmax
comp=Z,120nm,1.3s
WMQ pmax pmax
comp=Z,660nm,3.9s
WMQ LR LR
comp=Z,4µm,21.1s
WMQ LR LR
comp=Z,3µm,17.1s
WMQ LR LR
comp=Z,4µm,21.1s
DOT Dot Lake 42.69 38 IAmb IAmb 05 02 27.1
comp=Z,145nm,0.8s
DOT IAMs_20 IAMs_20 05 22 35.6
comp=Z,2µm,19.0s
SCRK Sand Creek 42.70 37 IAmb IAmb 05 02 27.9
comp=Z,247nm,0.9s
RAGM Ragged Mountai 42.80 42 IAmb IAmb 05 02 30.5
comp=Z,407nm,1.5s
RAGM IAMs_20 IAMs_20 05 23 12.5
comp=Z,2µm,20.0s
MENT Mentasta 42.92 39 IAMs_20 IAMs_20 05 22 49.6
comp=Z,2µm,19.0s
ZSN Zaisan 43.27 298 ⇓iP P 05 02 18.5 +0.5
comp=Z,77nm,1.8s
ZSN eS S 05 08 42.2 -0.8
ZSN eLR LR 05 21 30.7
ZSN Zaisan 43.27 298 diP P 05 02 18.4 +0.5
ZSN eS S 05 08 42.2 -0.8
ZSN pmax pmax
comp=Z,77nm,1.8s
BATP Bataraza 43.38 226 eP P 05 02 19.9 +0.8
CRQM Cirque 43.49 42 IAMs_20 IAMs_20 05 20 58.6
comp=Z,2µm,22.0s
TGL Tana Glacier 43.64 42 IAMs_20 IAMs_20 05 21 04.0
comp=Z,2µm,22.0s
BALM Baldy 43.83 41 IAmb IAmb 05 02 38.5
comp=Z,188nm,1.0s
BARN Barnard Glacie 44.15 41 IAmb IAmb 05 02 41.4
comp=Z,211nm,1.0s
DAWY Dawson 44.69 37 IAMs_20 IAMs_20 05 23 12.4
comp=Z,2µm,20.0s
PCA Pinnacle 45.02 42 IAMs_20 IAMs_20 05 21 59.4
comp=Z,1µm,19.0s
MK31 Makanchi Array 45.14 298 P P 05 02 33.4 +0.5
MK31 IAmb IAmb 05 02 35.8
comp=Z,117nm,0.9s
MK31 Makanchi Array 45.14 298 P P 05 02 33.4 +0.5
MK31 pmax pmax
comp=Z,117nm,0.9s
MKAR Makanchi Array 45.14 298 P P 05 02 33.5 +0.6
comp=Z,106nm,0.7s,baz=79,slow=8.5,SNR=732
MKAR LR LR 05 22 46.3
comp=Z,2µm,19.5s,baz=80,slow=38
MKAR PKPKP P'P'df 05 34 02.8 -12
comp=Z,0.1nm,0.3s,baz=325,slow=6.1,SNR=4.3
MAKZ Makanchi 45.34 298 P P 05 02 35.2 +0.7
MAKZ IAmb IAmb 05 02 37.0
comp=Z,105nm,0.8s
MAKZ Makanchi 45.34 298 P P 05 02 35.2 +0.7
MAKZ pmax pmax
comp=Z,105nm,0.8s
MAKZ MLR MLR
comp=Z,4µm,18.0s
EPYK Eagle Plains 45.45 33 P P 05 02 37.1 +2.0
baz=279,SNR=73
UBPT Khong Chiam 45.70 245 IAMs_20 IAMs_20 05 21 16.9
comp=Z,2µm,22.0s
KURK Kurchatov 46.08 304 eP P 05 02 40.5 +0.3
KURK Kurchatov 46.08 304 P P 05 02 40.0 -0.2
KURK IAmb IAmb 05 02 42.5
comp=Z,73nm,0.7s
KURK Kurchatov 46.08 304 IAMs_20 IAMs_20 05 23 12.7
comp=Z,2µm,19.0s
KURK Kurchatov 46.08 304 P P 05 02 39.5 -0.7
KURK P P 05 02 39.5 -0.7
KURK Kurchatov 46.08 304 ceP P 05 02 40.5 +0.3
KURK pmax pmax
comp=Z,68nm,0.7s
KURBB Kurchatov Arra 46.17 304 P P 05 02 40.0 -0.9
HYT Haines Junctio 46.19 41 IAMs_20 IAMs_20 05 24 05.2
comp=Z,1µm,20.0s
DHAK Deception Hill 46.26 43 IAMs_20 IAMs_20 05 25 35.3
comp=Z,2µm,22.0s
ITAN ITANAGAR 46.27 268 eP P 05 02 43.2 +1.3
TNTI Ternate 46.31 209 P P 05 02 43.0 +0.7
INK Inuvik 46.36 30 P P 05 02 44.0 +1.8
comp=Z,90nm,0.6s,baz=281,slow=7.9,SNR=202
INK Inuvik 46.36 30 IAmb IAmb 05 02 46.2
comp=Z,126nm,0.7s
INK IAMs_20 IAMs_20 05 24 39.3
comp=Z,1µm,20.0s
INK Inuvik 46.36 30 P P 05 02 44.0 +1.8
GENI Genyem 46.40 191 P P 05 02 43.5 +0.4
comp=Z,119nm,1.2s
KKM Kota Kinabalu 46.53 226 P P 05 02 44.6 +0.3
SWI Sorong 46.60 203 P P 05 02 45.1 +0.5
comp=Z,90nm,1.3s
LSA Lhasa 46.70 272 P P 05 02 47.5 +1.6
LSA S S 05 09 31.8 -2.2
LSA sS sS 05 09 49.1 +1.2
LSA pmax pmax
comp=Z,770nm,1.6s
LSA LR LR
comp=Z,2µm,21.4s
LSA LR LR
comp=Z,3µm,23.1s
LSA LR LR
comp=Z,5µm,22.1s
LSA Lhasa 46.70 272 IAMs_20 IAMs_20 05 26 02.4
comp=Z,1µm,18.0s
KOHI KOHIMA 46.82 266 ex P 05 02 47.2 +0.7
TEZP TEZPUR 47.24 268 eP P 05 02 49.6 0.0
LBMI Labuha 47.57 208 P P 05 02 53.1 +0.9
comp=Z,97nm,1.2s
SKAG Skagway 47.59 42 IAMs_20 IAMs_20 05 25 52.4
comp=Z,1µm,20.0s
RABL Rabaul 47.63 174 P P 05 02 54.4 +1.7
RABL IAMs_20 IAMs_20 05 19 27.8
comp=Z,2µm,20.0s
CHTO Chiang Mai 47.70 255 P P 05 02 54.3 +1.0
CHTO IAmb IAmb 05 02 55.5
comp=Z,84nm,0.8s
CHTO Chiang Mai 47.70 255 P P 05 02 54.2 +1.0
CHTO P P 05 02 54.2 +1.0
CHTO Chiang Mai 47.70 255 P P 05 02 54.3 +1.0
CHTO pmax pmax
comp=Z,84nm,0.9s
CHTO MLR MLR
comp=Z,2µm,19.0s
KMSI Cibinong 47.76 213 P P 05 02 54.4 +0.7
comp=Z,160nm,0.9s
PBKT Sadao Pong 47.82 251 IAmb IAmb 05 02 56.7
comp=Z,167nm,1.4s
CM31 Chiang Mai Arr 47.94 254 P P 05 02 55.9 +0.7
CM31 Chiang Mai Arr 47.94 254 P P 05 02 56.8 +1.6
SNR=28
CM31 P P 05 02 56.8 +1.6
SNR=28
CMAR Chiang Mai Arr 47.94 254 P P 05 02 56.4 +1.2
comp=Z,32nm,0.8s,baz=44,slow=7.3,SNR=158
CMAR PcP PcP 05 04 24.8 +1.6
comp=Z,13nm,0.9s,baz=3.3,slow=3.0,SNR=6.3
CMAR LR LR 05 25 10.4
comp=Z,2µm,19.2s,baz=52,slow=39
CMAR Chiang Mai Arr 47.94 254 iP P 05 02 56.4 +1.2
CMAR pmax pmax
comp=Z,31nm,0.8s
GUWA GUWAHATI 48.29 268 eP P 05 02 57.6 -0.2
FAKI Fak Fak 48.30 201 P P 05 02 58.2 +0.3
comp=Z,1µmcomp=Z,110nm,1.4s
FAKI Fak Fak 48.30 201 P P 05 02 58.1 +0.3
FAKI IAmb IAmb 05 02 59.0
comp=Z,219nm,1.5s
PDGK Podgornoye 48.33 295 P P 05 02 57.1 -0.9
TDK Taldyqorghan 48.34 297 ⇑iP P 05 02 59.1 +1.2
TDK eS S 05 09 53.6 -2.5
TDK iS S 05 09 56.7 +0.7
TDK Taldyqorghan 48.34 297 ciP P 05 02 59.1 +1.2
TDK eS S 05 09 53.5 -2.5
JIS Juneau Island 48.41 44 IAmb IAmb 05 03 15.4
comp=Z,95nm,0.9s
SHLS Shalkode 48.42 295 ⇓iP P 05 02 57.0 -1.8
comp=Z,54nm,0.9s
SHLS eS S 05 09 52.2 -5.2
SHLS Shalkode 48.42 295 diP P 05 02 56.9 -1.8
SHLS eS S 05 09 52.2 -5.2
SHLS pmax pmax
comp=Z,54nm,0.9s
SHL Shillong 48.52 267 P P 05 03 00.0 +0.2
SNR=105
MRSI Marisa 48.69 216 P P 05 03 00.8 0.0
comp=Z,3µmcomp=Z,327nm,1.1s
UZB Uzynbulak 48.71 295 ⇓iP P 05 03 01.4 +0.4
comp=Z,68nm,1.1s
UZB eS S 05 09 60.0 -1.7
UZB eLR LR 05 24 51.7
UZB Uzynbulak 48.71 295 diP P 05 03 01.4 +0.4
UZB eS S 05 09 59.9 -1.7
UZB pmax pmax
comp=Z,68nm,1.1s
KPKS Kokpek 48.80 295 ⇓iP P 05 03 02.5 +0.9
comp=Z,150nm,1.1s
KPKS eS S 05 10 01.7 -1.0
KPKS eLR LR 05 24 57.1
KPKS Kokpek 48.80 295 diP P 05 03 02.5 +0.9
KPKS eS S 05 10 01.7 -1.0
KPKS pmax pmax
comp=Z,150nm,1.1s
ZHN Zhinishke 49.09 295 ⇓iP P 05 03 04.7 +0.8
comp=Z,66nm,1.0s
ZHN eS S 05 10 06.2 -0.8
ZHN Zhinishke 49.09 295 diP P 05 03 04.7 +0.8
ZHN eS S 05 10 06.1 -0.8
ZHN pmax pmax
comp=Z,66nm,1.0s
SANI Sanana 49.42 209 P P 05 03 05.1 -1.3
comp=Z,2µmcomp=Z,136nm,1.2s
C36M Paulatuk 49.46 28 P P 05 03 07.7 +1.6
baz=287,SNR=104
SAIH SAIHA 49.59 263 eP P 05 03 07.6 -0.3
MPSI Mapaga 49.70 218 P P 05 03 08.5 -0.1
comp=Z,2µmcomp=Z,43nm,1.0s
LUWI Luwuk 49.72 214 P P 05 03 07.6 -1.1
comp=Z,2µmcomp=Z,132nm,1.1s
LUWI Luwuk 49.72 214 IAmb IAmb 05 03 08.2
comp=Z,154nm,1.2s
CHKK Chushkaly 49.74 296 eP P 05 03 09.1 +0.3
CHKK Chushkaly 49.74 296 eP P 05 03 09.0 +0.3
GTK Tadong 49.89 272 eP P 05 03 10.4 +0.2
BRZS Berezniki 49.90 305 eP P 05 03 09.8 0.0
comp=Z,56nm,0.7s
BRZS eS S 05 10 16.4 -1.4
BRZS Berezniki 49.90 305 eP P 05 03 09.7 0.0
BRZS eS S 05 10 16.3 -1.4
BRZS pmax pmax
comp=Z,56nm,0.7s
AGT Agartala 49.99 266 eP P 05 03 12.7 +1.9
MDOK Medeo 50.01 296 iP P 05 03 10.5 -0.4
MDOK eS S 05 10 18.9 -0.9
MDOK eLR LR 05 25 31.2
MDOK Medeo 50.01 296 iP P 05 03 10.5 -0.4
MDOK eS S 05 10 18.8 -0.9
KNDC Almaty 50.04 296 P P 05 03 10.9 -0.1
WRAK Wrangell Islan 50.07 45 IAMs_20 IAMs_20 05 21 15.2
comp=Z,1µm,22.0s
AAA Alma-Ata 50.07 296 eP P 05 03 11.3 0.0
AAA eS S 05 10 19.4 -1.1
AAA eLR LR 05 25 29.2
AAA Alma-Ata 50.07 296 eP P 05 03 12.4 +1.1
AAA eS S 05 10 19.6 -0.9
AAA pmax pmax
comp=Z,200nm,3.8s
AAA smax smax
comp=N,300nm,9.1s
AAA MLR MLR
comp=Z,900nm,8.0s
BRVK Borovoye 50.09 310 eP P 05 03 11.5 +0.3
BRVK Borovoye 50.09 310 P P 05 03 11.1 -0.1
BRVK Borovoye 50.09 310 P P 05 03 11.7 +0.5
BRVK P P 05 03 11.7 +0.5
BRVK ⇓S S 05 10 17.5 -2.9
BRVK ⇓S S 05 10 17.5 -2.9
BRVK Borovoye 50.09 310 P P 05 03 11.5 +0.3
TNSS Tian-Shan 50.13 295 eP P 05 03 13.1 +1.0
TNSS eS S 05 10 21.8 -0.2
TNSS Tian-Shan 50.13 295 eP P 05 03 13.1 +1.0
TNSS eS S 05 10 21.7 -0.2
KUU Kurty 50.15 297 ⇓iP P 05 03 11.7 -0.1
comp=Z,154nm,1.3s
KUU eS S 05 10 19.0 -2.5
KUU eLR LR 05 25 48.4
KUU Kurty 50.15 297 diP P 05 03 11.7 -0.1
KUU eS S 05 10 18.9 -2.5
KUU pmax pmax
comp=Z,154nm,1.3s
KDJ Kajisay 50.38 294 IAmb IAmb 05 03 16.0
comp=Z,100nm,0.8s
MTBS Maitube 50.43 296 iP P 05 03 15.0 +1.0
MTBS eS S 05 10 23.6 -1.9
MTBS Maitube 50.43 296 iP P 05 03 15.0 +1.0
MTBS eS S 05 10 23.6 -1.9
TAPN Taplejung 50.52 272 eP P 05 03 15.9 +0.8
comp=Z,237nm,0.9s
ULHL Ulahol 50.95 295 P P 05 03 19.4 +1.3
SNR=19
BOOM Boomskoye usch 51.04 295 P P 05 03 19.8 +1.1
BOOM IAMs_20 IAMs_20 05 26 47.9
comp=Z,2µm,19.0s
BOOM Boomskoye usch 51.04 295 P P 05 03 19.8 +1.1
BOOM pmax pmax
comp=Z,200nm,0.9s
BOOM MLR MLR
comp=Z,2µm,19.0s
ODAN Odare 51.04 272 eP P 05 03 19.7 +0.7
BTLS Baital 51.12 299 ⇑iP P 05 03 19.1 0.0
BTLS eS S 05 10 32.1 -2.7
BTLS eLR LR 05 25 56.1
BTLS Baital 51.12 299 ciP P 05 03 19.0 0.0
BTLS eS S 05 10 32.1 -2.7
SIMRM Sittwe 51.15 261 P P 05 03 20.6 +1.1
JIRN Jiri 51.45 273 eP P 05 03 22.9 +0.7
comp=Z,342nm,0.9s
SGDS Sogindy 51.45 297 ⇓iP P 05 03 22.2 +0.5
comp=Z,106nm,1.4s
SGDS eS S 05 10 38.4 -1.2
SGDS eLR LR 05 26 34.0
MOBC Moresby Island 51.52 49 IAMs_20 IAMs_20 05 23 54.8
comp=Z,980nm,18.0s
GUN Gumba 51.53 274 eP P 05 03 23.2 +0.4
comp=Z,294nm,0.7s
RAMN Ramite 51.56 272 eP P 05 03 23.2 +0.3
comp=Z,281nm,0.7s
CHMS Chumysh 51.58 296 P P 05 03 23.5 +0.9
SNR=25
CHMS Chumysh 51.58 296 iP P 05 03 21.6 -1.0
CHMS pmax pmax
comp=Z,73nm,1.2s
KBK Karagaybulak 51.61 296 P P 05 03 24.2 +1.2
SNR=132
USP Ospenovka 51.62 297 P P 05 03 24.1 +1.2
SNR=76
SBUM Sibu 51.68 228 P P 05 03 25.0 +1.5
KZA Kyzart 51.68 295 P P 05 03 25.7 +1.9
SNR=99
FRU1 Bishkek 51.75 296 IAMs_20 IAMs_20 05 23 50.7
comp=Z,2µm,22.0s
AAK Ala-Archa 51.92 296 P P 05 03 25.9 +0.7
SNR=50
AAK Ala-Archa 51.92 296 eP P 05 03 26.0 +0.7
AAK Ala-Archa 51.92 296 P P 05 03 25.7 +0.5
AAK Ala-Archa 51.92 296 IAMs_20 IAMs_20 05 24 03.2
comp=Z,1µm,22.0s
AAK Ala-Archa 51.92 296 P P 05 03 26.0 +0.7
AAK P P 05 03 26.0 +0.7
AAK Ala-Archa 51.92 296 ceP P 05 03 26.0 +0.7
AAK pmax pmax
comp=Z,107nm,1.3s
KKN Kakani 52.03 274 eP P 05 03 27.0 +0.6
comp=Z,188nm,0.8s
PKI Pulchoki 52.07 274 eP P 05 03 27.0 +0.2
PKIN Phulchoki 52.07 274 eP P 05 03 27.0 +0.3
UCH Uchtor 52.09 296 P P 05 03 27.9 +1.0
SNR=25
DMN Daman 52.27 274 eP P 05 03 28.7 +0.5
comp=Z,273nm,0.8s
EKS2 Erkin-Say 52.37 296 P P 05 03 29.5 +0.9
SNR=87
GKN Gorkha 52.38 275 eP P 05 03 29.4 +0.5
comp=Z,406nm,1.0s
KSH Kashi 52.42 292 P P 05 03 33.4 +4.4
KSH sP sP 05 03 39.8 -0.8
KSH PcP PcP 05 04 42.3 +2.8
KSH PcS PcS 05 08 40.4 +2.4
KSH S S 05 10 59.8 +6.7
KSH sS pS 05 11 04.8 +1.5
KSH ScS ScS 05 13 20.3 +3.6
KSH SS SS 05 14 38.8 +8.0
KSH pmax pmax
comp=Z,83nm,0.9s
KSH pmax pmax
comp=Z,400nm,2.8s
KSH LR LR
comp=Z,1µm,14.8s
KSH LR LR
comp=Z,2µm,14.1s
KSH LR LR
comp=Z,9µm,16.9s
BKB Balikpapan 52.49 220 P P 05 03 30.4 +0.9
comp=Z,255nm,1.0s
BKB Balikpapan 52.49 220 P P 05 03 29.4 -0.1

POHA Pohakuloa 52.59 98 P P 05 03 31.3 +0.7
POHA IAmb IAmb 05 03 50.9
comp=Z,140nm,1.0s
PMG Port Moresby 52.66 181 P P 05 03 29.3 -1.4
PMG Port Moresby 52.66 181 P P 05 03 29.3 -1.4
PMG pmax pmax
comp=Z,44nm,1.1s
AML Almayashu 52.68 296 P P 05 03 32.6 +1.4
SNR=108
DANN Dangsing 52.82 276 eP P 05 03 33.3 +1.0
comp=Z,1μm,0.7s
KHU Kahuku 52.86 99 P P 05 03 33.6 +1.0
KHU IAmb IAmb 05 03 58.5
comp=Z,211nm,1.2s
KHU Kahuku 52.86 99 P P 05 03 33.6 +1.0
KHU pmax pmax
comp=Z,211nm,1.2s
SAUI Saumlaki 53.40 201 P P 05 03 37.6 +1.4
comp=Z,444nm,1.2s
SAUI Saumlaki 53.40 201 P P 05 03 37.5 +1.4
KSM Kuching 53.53 229 P P 05 03 37.9 +0.6
KSM IAmb IAmb 05 03 39.8
comp=Z,210nm,1.5s
KSM Kuching 53.53 229 P P 05 03 39.0 +1.7
SPSI Sidrap Palu 53.60 216 P P 05 03 37.3 -0.4
comp=Z,8μmcomp=Z,34nm,1.1s
SVE Sverdlovsk 53.66 317⇑eP P 05 03 37.4 -0.3
SVE pmax pmax
comp=Z,69nm,1.0s
SVE MLR MLR
comp=Z,1μm,17.0s
HNR Honiara 53.82 165 IAMs_20 IAMs_20 05 25 37.3
comp=Z,1μm,19.0s
DZA Taraz 53.85 298 eP P 05 03 39.0 -0.4
DZA eS S 05 11 09.1 -3.2
DZA eLR LR 05 27 55.5
DZA Taraz 53.85 298 eP P 05 03 38.9 -0.4
DZA eS S 05 11 09.0 -3.2
BNSI Bone 53.85 215 P P 05 03 40.2 +0.7
comp=Z,32nm,1.0s
BOK Bokaro 53.95 270 eP P 05 03 40.5 +0.3
STKI Sintang 54.08 227 P P 05 03 42.6 +1.4
comp=Z,39nm,0.8s
KK31 Karatay Array 54.27 298 P P 05 03 43.0 +0.6
KK31 IAmb IAmb 05 03 56.6
comp=Z,194nm,1.5s
KK31 Karatay Array 54.27 298 P P 05 03 43.1 +0.6
KK31 pmax pmax
comp=Z,195nm,1.5s
KKAR Karatay Array 54.27 298 P P 05 03 42.7 +0.3
KKAR IAmb IAmb 05 03 56.6
comp=Z,194nm,1.5s
KKAR Karatay Array 54.27 298 P P 05 03 42.7 +0.3
KKAR pmax pmax
comp=Z,195nm,1.5s
KAPI Kappang 54.55 215 P P 05 03 45.3 +0.6
comp=Z,25nm,0.7s,baz=39,slow=6.4,SNR=5.9
JBG Jabagly 54.58 298 d iP P 05 03 47.1 +2.2
JBG iS S 05 11 22.8 +0.4
JBG pmax pmax
comp=Z,78nm,1.2s
BKSI Bulukumba 54.68 215 P P 05 03 44.8 -0.7
comp=Z,54nm,1.1s
LGTI Lohaghat 54.73 279 eP P 05 03 45.8 -0.1
BRLS Borolday 54.74 299 eS S 05 11 27.0 +2.7
ARU Arti 54.87 317 eP P 05 03 46.1 -0.5
ARU Arti 54.87 317 P P 05 03 45.5 -1.0
ARU IAMs_20 IAMs_20 05 29 25.8
comp=Z,1μm,18.0s
ARU Arti 54.87 317 d iP P 05 03 46.0 -0.5
ARU 05 04 48.5
ARU S S 05 11 23.7 -1.8
ARU 05 13 30.3
ARU pmax pmax
comp=Z,88nm,1.9s
ARU MLR MLR
comp=Z,1μm,16.0s
NOR Nord 54.87 357 iP P 05 03 44.5 -1.7
comp=Z,20nm,0.8s
NOR Nord 54.87 357 iP P 05 03 44.5 -1.7
NOR pmax pmax
comp=Z,20nm,0.8s
IUG Iuzhnay 55.05 298⇓iP P 05 03 49.2 +1.0
IUG eS S 05 11 27.9 -0.7
IUG eLR LR 05 28 40.8
IUG Iuzhnay 55.05 298 d iP P 05 03 49.2 +1.0
IUG eS S 05 11 27.9 -0.7
RES Resolute Bay 55.06 17 P P 05 03 48.6 +1.0
comp=Z,200nm,0.8s,baz=323,slow=7.4,SNR=855
RES Resolute Bay 55.06 17 IAMs_20 IAMs_20 05 30 44.4
comp=Z,1μm,20.0s
KBS Kingsbay 55.11 351 eP P 05 03 47.0 -0.9
KBS Kingsbay 55.11 351 P P 05 03 47.2 -0.7
KBS Kingsbay 55.11 351 c eP P 05 03 47.5 -0.5
KBS pmax pmax
comp=Z,653nm,2.5s
SPA0 Spitsbergen Ar 55.12 349 eP P 05 03 46.7 -1.4
CHM Chimkent 55.24 298 eP P 05 03 49.4 -0.1
CHM eS S 05 11 29.8 -1.3
CHM eLR LR 05 28 29.3
CHM Chimkent 55.24 298 eP P 05 03 49.3 -0.1
CHM eS S 05 11 29.7 -1.3
BTK Batken 55.59 295 IAmb IAmb 05 03 53.8
comp=Z,120nm,1.0s
BTK IAMs_20 IAMs_20 05 27 23.5
comp=Z,2μm,22.0s
YKA Yellowknife Ar 55.73 34 P P 05 03 53.7 +1.1
comp=Z,23nm,0.7s,baz=299,slow=6.7,SNR=254
YKA LR LR 05 31 55.2
comp=Z,615nm,18.7s,baz=0.0,slow=40
YKA PKPPKP P'P'df 05 33 57.5 -3.6
comp=Z,0.5nm,0.9s,baz=150,slow=2.4,SNR=4.2
DGPR DIGLIPUR 55.75 255 eP P 05 03 55.1 +1.8
DDI Dehra Dun 55.81 281 eP P 05 03 53.0 -0.7
TAS Tashkent 55.94 297 IAmb IAmb 05 03 56.8
comp=Z,129nm,0.8s
DHRM DHARAMSHALA 55.98 284 eP P 05 03 55.8 +0.6
SMLA Simla 55.99 283 eP P 05 03 55.8 +0.8
HSPB Hornsund (broa 56.13 348 eP P 05 03 54.9 -0.4
BWNR Bhubaneshwar 56.16 266 eP P 05 03 57.6 +1.3
JRMM Jerantut 56.20 239 P P 05 03 58.0 +1.4
KULM Kulim 56.27 241 IAMs_20 IAMs_20 05 29 21.3
comp=Z,973nm,19.0s
KULM Kulim 56.27 241 P P 05 03 59.0 +1.9
THN Thein Dam 56.29 285 eP P 05 03 58.0 +1.0
THN eS S 05 11 43.7 -1.4
BHK Bhakra 56.36 283 ex P 05 03 59.0 +1.4
IPM Ipoh 56.66 240 P P 05 04 01.0 +1.1
MMRI Maumere 56.87 211 P P 05 04 01.4 +0.1
PBA Port Blair 56.94 253 IAMs_20 IAMs_20 05 29 49.5
comp=Z,1μm,20.0s
PBA Port Blair 56.94 253 P P 05 04 03.2 +1.3
MYKOM Kota Tinggi 57.01 236 IAmb IAmb 05 04 05.1
comp=Z,114nm,1.2s
MYKOM Kota Tinggi 57.01 236 P P 05 04 04.0 +1.7
EDFI Ende, Flores 57.18 211 P P 05 04 01.8 -1.8
comp=Z,503nmcomp=Z,41nm,1.2s
SOEI Soe 57.19 208 P P 05 04 03.2 -0.4
comp=Z,1μmcomp=Z,134nm,1.1s
SOEI pP pP 05 04 10.9 -0.7
comp=Z,1μmcomp=Z,134nm,1.1s
SOEI Soe 57.19 208 IAmb IAmb 05 04 16.4
comp=Z,152nm,1.1s
COEN Coen 57.34 185 P P 05 04 05.5 +1.0
NDI New Delhi 57.34 280 eP P 05 04 04.0 -0.6
NIL Nilore 57.34 287 P P 05 04 05.6 +1.0
NIL Nilore 57.34 287 IAMs_20 IAMs_20 05 32 02.7
comp=Z,1μm,20.0s
NIL Nilore 57.34 287 P P 05 04 05.8 +1.2
NIL P P 05 04 05.8 +1.2
NIL Nilore 57.34 287 P P 05 04 05.6 +1.0
NIL pmax pmax
comp=Z,361nm,0.8s
NIL MLR MLR
comp=Z,1μm,20.0s
AB31 Akbulak array 57.61 309 P P 05 04 06.4 +0.2
ABKAR Akbulak array 57.61 309 IAmb IAmb 05 04 21.0
comp=Z,167nm,1.3s
PRGR Permogore 58.05 327 eP P 05 04 07.1 -1.9
PRGR eS S 05 12 01.8 -5.7
PRGR pmax pmax
comp=Z,85nm,0.9s
LVZ Lovozero 58.23 336 c eP P 05 04 10.9 +0.6
LVZ pmax pmax
comp=Z,43nm,1.7s
LLLB Lillooet 58.23 49 IAmb IAmb 05 04 26.4
comp=Z,78nm,1.1s
LLLB IAMs_20 IAMs_20 05 32 49.3
comp=Z,888nm,19.0s
CHLP Challavanipeta 58.57 266 eP P 05 04 13.9 +0.6
CHLP IAmb IAmb 05 04 14.4
comp=Z,33nm,1.1s
APA Apatity 58.81 336⇑iP P 05 04 11.6 -2.6
APA pmax pmax
comp=Z,17nm,0.8s
APA MLR MLR
comp=Z,1μm,14.0s
PPBI Pangkal Pinang 58.86 231 P P 05 04 15.3 0.0
comp=Z,20μmcomp=Z,171nm,1.1s
WBSI Waikabubak, Su 58.89 213 P P 05 04 12.8 -2.7
comp=Z,771nmcomp=Z,90nm,0.9s
KEV Kevo 59.12 340 P P 05 04 15.5 -0.9
KEV IAmb IAmb 05 04 17.0
comp=Z,251nm,1.9s
KEV Kevo 59.12 340 P P 05 04 15.5 -0.9
KEV pmax pmax
comp=Z,251nm,1.9s
D03D Eldon 59.17 52 P P 05 04 19.0 +1.9
baz=302,SNR=8.1
SRBI Singaraja 59.27 218 P P 05 04 18.2 +0.1
comp=Z,3μmcomp=Z,298nm,0.9s
PSI Prapat 59.28 241 P P 05 04 18.8 +0.4
comp=Z,74nm,1.0s,baz=18,slow=4.8,SNR=41
HAMF Hammerfest 59.30 341 eP P 05 04 16.8 -0.8
B05A Bryant 59.35 51 P P 05 04 20.1 +1.8
baz=302
RPSI Rantau Prapat 59.36 241 IAmb IAmb 05 04 20.3
comp=Z,96nm,1.0s
RPSI IAMs_20 IAMs_20 05 31 28.0
comp=Z,845nm,19.0s
E03A Lebam 59.42 53 IAMs_20 IAMs_20 05 25 14.1
comp=Z,944nm,21.0s
TMCR Tamitsa 59.43 331 eP P 05 04 17.2 -1.4
TMCR pmax pmax
comp=Z,35nm,0.5s
KCSI Kotacane, Aceh 59.47 243 P P 05 04 18.9 -0.7
comp=Z,24nm,1.1s
B06A Marblemount 59.56 50 IAmb IAmb 05 04 35.3
comp=Z,100nm,1.1s
B06A IAMs_20 IAMs_20 05 26 25.4
comp=Z,964nm,20.0s
ARCES ARCESS Array B 59.65 340 P P 05 04 19.1 -0.9
comp=Z,33nm,0.9s,baz=42,slow=6.6,SNR=47
ARCES LR LR 05 34 13.2
comp=Z,666nm,18.8s,baz=38,slow=40
ARE0 ARCESS Array S 59.65 340 eP P 05 04 19.6 -0.5
ARE0 ARCESS Array S 59.65 340 P P 05 04 19.4 -0.7
DAG Danmarks Havn 59.70 356 iP P 05 04 18.9 -1.4
comp=Z,76nm,1.1s
DAG Danmarks Havn 59.70 356 iP P 05 04 18.9 -1.4
DAG pmax pmax
comp=Z,76nm,1.1s
KBL Kabul 59.75 290 P P 05 04 21.1 -0.4
KBL Kabul 59.75 290 P P 05 04 21.0 -0.6
KBL P P 05 04 21.0 -0.6
KBL S S 05 12 25.6 -5.1
KBL S S 05 12 25.6 -5.1
KBL Kabul 59.75 290 P P 05 04 21.1 -0.4
KBL pmax pmax
comp=Z,191nm,0.9s
KBL MLR MLR
comp=Z,2μm,18.0s
MLSI Meulaboh, Aceh 59.80 244 P P 05 04 19.8 -2.0
comp=Z,144nm,1.2s
BKNI Bangkinang 59.87 237 P P 05 04 22.8 +0.5
comp=Z,9μmcomp=Z,808nm,1.0s
D05A Enumclaw 59.99 52 IAmb IAmb 05 04 38.9
comp=Z,119nm,0.9s
E04D Cinebar 60.00 53 P P 05 04 24.8 +2.0
baz=303,SNR=20
JAGI Jajag, Banyuwa 60.10 219 P P 05 04 23.5 -0.3
comp=Z,37nm,1.0s
C06D Leavenworth 60.21 51 P P 05 04 26.0 +1.7
baz=303
G03D McMinnville, O 60.32 54 P P 05 04 27.3 +2.2
baz=303,SNR=6.3
KTK1 Kautokeino 60.59 340 eP P 05 04 26.1 -0.4
SDSI Sungai Dareh 60.63 236 P P 05 04 28.2 +0.8
comp=Z,4μmcomp=Z,345nm,1.1s
SMRI Semarang 60.65 224 P P 05 04 28.9 +1.3
comp=Z,249nm,1.1s
SMRI Semarang 60.65 224 P P 05 04 28.3 +0.7
LTY Liberty 60.70 51 IAmb IAmb 05 04 43.0
comp=Z,59nm,0.9s
B08A Colville Reser 60.84 50 IAmb IAmb 05 04 43.8
comp=Z,72nm,0.8s
KLMR Klimovskoe 60.91 328 eP P 05 04 26.1 -2.7
KLMR S S 05 12 40.3 -4.1
KLMR pmax pmax
comp=Z,131nm,1.3s
KLMR MLR MLR
comp=Z,1μm,16.0s
KLMR Klimovskoe 60.91 328 eP P 05 04 26.1 -2.7
KLMR eP P 05 04 26.1 -2.7
KLMR eP P 05 04 26.1 -2.7
KLMR AMP 05 04 43.8
comp=Z,131nm,1.3s
KLMR S S 05 12 40.4 -4.0
KLMR S S 05 12 40.4 -4.0
KLMR SS SS 05 16 15.5 -28
KLMR LQ LQ 05 23 59.7
KLMR LQ LQ 05 23 59.7
KLMR LR LR 05 27 15.8
KLMR AMP 05 33 21.8
comp=Z,1μm,16.0s
F05D White Salmon 61.01 53 P P 05 04 32.0 +2.2
baz=304
KULLO Kullorsuaq 61.01 7 iP P 05 04 28.6 -0.7
KULLO Kullorsuaq 61.01 7 iP P 05 04 28.6 -0.7
WOJI Wonogiri, Jawa 61.09 223 P P 05 04 30.6 +0.1
comp=Z,48nm,1.3s
PVM Polavaram 61.15 267 eP P 05 04 31.3 +0.3
PVM IAmb IAmb 05 04 31.9
comp=Z,34nm,1.1s
TRO Tromso 61.15 342 eP P 05 04 29.5 -0.7
PDSI Padang 61.20 237 P P 05 04 30.3 -1.1
comp=Z,60nm,1.3s
H04A Detroit Lake 61.25 54 IAmb IAmb 05 04 47.3
comp=Z,108nm,0.9s
SANVU Saraoutou 61.29 159 P P 05 04 32.5 +0.7
SANVU IAmb IAmb 05 04 50.5
comp=Z,156nm,1.2s
UGM Wanagama 61.35 223 P P 05 04 29.0 -3.4
comp=Z,288nm,1.4s
UGM Wanagama 61.35 223 P P 05 04 31.6 -0.8
KNRA Kununurra 61.43 201 P P 05 04 33.1 +0.4
KNRA IAmb IAmb 05 04 34.2
comp=Z,190nm,1.5s
G05D Wamic, OR 61.45 54 P P 05 04 35.1 +2.3
baz=304,SNR=9.6
K02D Willamette Mer 61.47 57 P P 05 04 34.9 +1.9
baz=304,SNR=8.5
KRJI Kerinci 61.52 235 P P 05 04 33.8 +0.1
comp=Z,9μmcomp=Z,718nm,1.1s
E07A Sunnyside 61.56 52 IAmb IAmb 05 04 49.3
comp=Z,120nm,1.0s
I04A Tendick Farm, 61.62 55 P P 05 04 36.9 +3.0
baz=304,SNR=6.4
KPJI Karang Pucung 61.66 225 P P 05 04 34.0 -0.4
comp=Z,1μmcomp=Z,103nm,1.2s
KLSI 61.72 231 P P 05 04 34.5 -0.4
comp=Z,1μmcomp=Z,89nm,1.6s
C09A Chrisman Ranch 61.74 50 IAmb IAmb 05 04 49.9
comp=Z,80nm,0.8s
D08A Wollman Farm, 61.80 51 P P 05 04 36.3 +1.2
D08A IAmb IAmb 05 04 50.3
comp=Z,69nm,0.8s
RPR Rampur 61.81 270 eP P 05 04 35.2 -0.3
RPR IAmb IAmb 05 04 36.7
comp=Z,99nm,1.5s
GGR Gangavaram 61.81 268 eP P 05 04 35.6 +0.1
GGR IAmb IAmb 05 04 36.7
comp=Z,44nm,1.0s
HAWA Hanford 61.83 52 IAmb IAmb 05 04 51.0
comp=Z,101nm,1.0s
G06A Carlson Farm, 61.85 53 IAmb IAmb 05 04 51.5
comp=Z,96nm,1.1s
MDSI Maura Dua 61.87 231 P P 05 04 35.9 +0.1
comp=Z,1μmcomp=Z,99nm,1.6s
PBSI Pulau Batu 61.88 240 P P 05 04 36.3 +0.4
comp=Z,151nm,0.9s
LEM Lembang 61.92 227 P P 05 04 36.5 +0.1
comp=Z,132nm,0.9s,baz=73,slow=6.1,SNR=20
I05D Terrebonne, OR 61.95 54 P P 05 04 38.1 +1.9
baz=305,SNR=5.8
E08A Dider Farm, El 62.05 51 IAmb IAmb 05 04 52.2
comp=Z,95nm,0.9s
KSI Kapahiang 62.10 233 P P 05 04 38.5 +1.0
comp=Z,12μmcomp=Z,69nm,0.8s
J04D Umpqua Nationa 62.11 56 P P 05 04 39.7 +2.2
baz=305,SNR=7.8
NEW Newport 62.12 49 P P 05 04 38.4 +1.1
NEW IAmb IAmb 05 04 53.0
comp=Z,118nm,0.9s
NEW Newport 62.12 49 P P 05 04 38.4 +1.1
NEW pmax pmax
comp=Z,119nm,1.0s
NEW Newport 62.12 49 P P 05 04 38.3 +1.1
baz=305,SNR=23
DBJI Dramaga 62.16 228 P P 05 04 38.0 +0.2
MYLAV Mylavaram 62.19 267 eP P 05 04 38.9 +0.8
MYLAV IAmb IAmb 05 04 39.9
comp=Z,65nm,1.0s
SISI Saibi 62.37 238 P P 05 04 39.5 +0.3
comp=Z,1μmcomp=Z,134nm,1.0s
LWLI Liwa 62.37 231 P P 05 04 38.4 -0.9
comp=Z,105nm,1.0s
SRSP Sriramsagar 62.46 270 eP P 05 04 39.8 -0.1
SRSP IAmb IAmb 05 04 41.5
comp=Z,72nm,0.8s
KASI Kota Agung 62.54 230 P P 05 04 41.0 +0.7
comp=Z,9μmcomp=Z,116nm,1.3s
L04D Klamath Falls 62.57 57 P P 05 04 42.7 +2.2
baz=305,SNR=12
CNJI Cibinong 62.59 227 P P 05 04 40.8 +0.2
comp=Z,110nm,1.2s
YBH Yreka Blue Hor 62.60 57 IAmb IAmb 05 04 57.6
comp=Z,101nm,1.1s
J05D Fort Rock, OR 62.61 55 P P 05 04 43.2 +2.4
baz=305,SNR=12
K04D Chiloquin, OR 62.67 56 P P 05 04 43.5 +2.4
baz=305,SNR=7.4
M02C Callahan 62.71 58 P P 05 04 43.9 +2.5
baz=305,SNR=7.4
PPSI Pulau Pagai 62.93 236 P P 05 04 43.6 +0.6
comp=Z,5μmcomp=Z,480nm,1.4s
N02D Trinity Center 63.04 58 P P 05 04 46.0 +2.4
baz=306,SNR=6.3
M04C Macdoel 63.11 57 P P 05 04 46.3 +2.2
baz=306,SNR=9.5
I07A Izee 63.17 54 P P 05 04 46.4 +2.0
ADKI Addanki 63.26 267 eP P 05 04 45.8 +0.6
ADKI IAmb IAmb 05 04 47.0
comp=Z,41nm,0.9s
HYB Hyderabad 63.27 269 iP P 05 04 45.0 -0.3
HYB epP pP 05 04 53.0 -0.8
HYBB Hyderabad (bro 63.27 269 eP P 05 04 45.3 0.0
HYBB IAmb IAmb 05 04 46.1
comp=Z,57nm,0.8s
NJS Nagarjunasagar 63.28 268 eP P 05 04 45.4 0.0
NJS IAmb IAmb 05 04 46.4
comp=Z,47nm,0.8s
STEI Steigen 63.32 342 eP P 05 04 43.3 -1.5
WDC Whiskeytown Da 63.37 58 IAmb IAmb 05 05 02.2
comp=Z,95nm,1.1s
WALA Waterton Lakes 63.38 47 IAMs_20 IAMs_20 05 33 00.4
comp=Z,1μm,20.0s
O02D Mt. Diablo Mer 63.45 59 P P 05 04 49.0 +2.7
baz=306,SNR=6.3
LOF Lofoten 63.54 343 eP P 05 04 46.0 -0.3
SRLM Srisailam 63.88 268 eP P 05 04 49.2 -0.1
SRLM IAmb IAmb 05 04 50.2
comp=Z,65nm,0.9s
JTMT Jette 63.97 48 IAmb IAmb 05 05 05.3
comp=Z,95nm,0.8s
MOD Modoc Plateau 63.97 56 IAmb IAmb 05 05 05.5
comp=Z,84nm,1.0s
MOD IAMs_20 IAMs_20 05 28 20.6
comp=Z,808nm,21.0s
O03E Paynes Creek 64.00 58 P P 05 04 51.2 +1.4
baz=306,SNR=17
SUMG Summit 64.14 2 iP P 05 04 51.4 +0.7
comp=Z,186nm,0.9s
SUMG Summit 64.14 2 P P 05 04 50.9 +0.3
SUMG Summit 64.14 2 iP P 05 04 51.4 +0.7
SUMG pmax pmax
comp=Z,190nm,0.9s
WB0 Warramunga Arr 64.16 194 IAmb IAmb 05 04 51.6
comp=Z,57nm,0.9s
J08A Circle Bar Ran 64.20 54 IAmb IAmb 05 05 07.7
comp=Z,93nm,1.0s
GDXM Geysers 64.25 60 IAMs_20 IAMs_20 05 25 25.2
comp=Z,1μm,22.0s
KLRI Killari 64.28 271 eP P 05 04 51.7 -0.2
KLRI IAmb IAmb 05 04 53.2
comp=Z,47nm,0.8s
WRAB Tennant Creek 64.33 194 P P 05 04 51.3 -0.7
WRAB Tennant Creek 64.33 194 c eP P 05 04 51.9 -0.1
WRAB pmax pmax
comp=Z,67nm,1.3s
WRA Warramunga Arr 64.34 194 P P 05 04 51.7 -0.4
comp=Z,34nm,0.8s,baz=13,slow=6.7,SNR=64
WRA LR LR 05 33 13.3
comp=Z,228nm,19.3s,baz=335,slow=36
WRA PKP2bc 05 33 44.7
comp=Z,2.1nm,0.9s,baz=195,slow=2.7,SNR=8.2
HRA Herat 64.42 294 P P 05 04 53.4 +0.5
JMIC Jan Mayen 64.56 352 LR LR 05 34 02.6
comp=Z,349nm,19.1s,baz=63,slow=37
FITZ Fitzroy Crossi 64.60 203 P P 05 04 54.5 +0.7
ORV Oroville 64.62 59 IAmb IAmb 05 05 09.7
comp=Z,69nm,1.1s
WVOR Wild Horse Val 64.66 55 IAmb IAmb 05 05 10.0
comp=Z,90nm,1.0s
MSO Missoula 64.70 49 P P 05 04 55.7 +1.3
baz=307,SNR=52
ASHT Ashkhabad 64.82 299 P P 05 04 56.3 +1.1
ASHT IAMs_20 IAMs_20 05 35 34.6
comp=Z,1μm,21.0s
ASHT Ashkhabad 64.82 299 P P 05 04 56.3 +1.1
ASHT pmax pmax
comp=Z,185nm,0.4s
ASHT MLR MLR
comp=Z,1μm,21.0s
SKHT Srikalahasti 64.83 265 eP P 05 04 55.8 +0.3
SKHT IAmb IAmb 05 04 57.4
comp=Z,66nm,1.2s
MOR8 Moi Rana 64.93 341 eP P 05 04 53.8 -1.7
KONS Konsvik 64.97 342 eP P 05 04 55.6 0.0
GEYT Alibeck 65.00 299 P P 05 04 57.3 +0.9
comp=Z,66nm,0.9s,baz=11,slow=3.2,SNR=124
GEYT LR LR 05 35 30.0
comp=Z,1μm,18.2s,baz=50,slow=38
GYA0B ALIBECK ARRAY 65.00 299 P P 05 04 57.0 +0.6
BEKR Beckworth 65.14 58 IAmb IAmb 05 05 13.6
comp=Z,136nm,1.1s
AFDM Forest Hills D 65.31 59 IAmb IAmb 05 05 14.6
comp=Z,85nm,1.2s
FIA1 FINESS Array S 65.32 333 P P 05 04 57.8 -0.2
FINES FINESS Array B 65.32 333 P P 05 04 57.6 -0.4
comp=Z,86nm,0.7s,baz=46,slow=6.6,SNR=235
FINES LR LR 05 36 40.7
comp=Z,1μm,18.8s,baz=49,slow=39
FFC Flin Flon 65.60 37 P P 05 05 00.6 +0.6
FFC Flin Flon 65.60 37 IAMs_20 IAMs_20 05 35 39.2
comp=Z,1μm,20.0s
FFC Flin Flon 65.60 37 P P 05 05 00.6 +0.6
FFC pmax pmax
comp=Z,121nm,0.9s
FFC MLR MLR
comp=Z,1μm,20.0s
RUBR Rubicon Trail 65.76 59 IAmb IAmb 05 05 27.1
comp=Z,93nm,1.0s
OBN Obninsk 65.81 324 LR LR 05 36 09.4
comp=Z,74nm,19.5s,baz=50,slow=38
OBN Obninsk 65.81 324 ⇑P P 05 05 02.2 +0.9
OBN Obninsk 65.81 324 eP P 05 05 01.8 +0.6
OBN Obninsk 65.81 324 P P 05 05 01.8 +0.6
OBN Obninsk 65.81 324 c iP P 05 05 01.1 -0.2
OBN i 05 05 11.0
OBN i 05 05 28.8
OBN i SS SS 05 18 04.3 +4.7
OBN pmax pmax
comp=Z,188nm,1.4s
OBN MLR MLR
comp=Z,880nm,15.0s

URV Uravakonda 65.82 268 eP P 05 05 01.9 -0.1
URV IAmb IAmb 05 05 02.4
comp=Z,68nm,0.9s
VCNR Virginia City 65.92 58 IAmb IAmb 05 05 19.1
comp=Z,104nm,1.1s
POO Poona 65.98 273⇓i/x P 05 05 00.0 -3.0
comp=Z,110nm,1.2s
POO eP P 05 05 02.5 -0.5
VRH Novokhopyorsk 66.04 319 eP P 05 05 03.1 +0.3
VRH eS S 05 13 45.5 -3.1
VRH pmax pmax
comp=Z,160nm,0.7s
VRH pmax pmax
comp=Z,200nm,0.8s
VRH smax smax
comp=N,250nm,1.5s
VRH MLR MLR
comp=Z,820nm,11.0s
PNTR Pine Nut 66.08 58 IAmb IAmb 05 05 34.5
comp=Z,106nm,1.0s
SCO Scoresbysund 66.08 356 i P P 05 05 03.2 +0.5
comp=Z,25nm,1.0s
SCO Scoresbysund 66.08 356 P P 05 05 03.3 +0.5
SCO IAmb IAmb 05 06 00.0
comp=Z,175nm,1.9s
SCO Scoresbysund 66.08 356 P P 05 05 03.3 +0.5
SCO pmax pmax
comp=Z,175nm,1.9s
EGMT Eagleton 66.20 46 IAMs_20 IAMs_20 05 35 35.9
comp=Z,779nm,20.0s
EGMT Eagleton 66.20 46 P P 05 05 05.4 +1.3
baz=309,SNR=52
CMB Columbia Colle 66.23 60 IAmb IAmb 05 05 20.8
comp=Z,85nm,1.1s
DLMT Dillon 66.34 49 IAmb IAmb 05 05 21.2
comp=Z,76nm,1.0s
LPSR Galich'ya Gora 66.44 321 eP P 05 05 05.9 +0.5
LPSR eS S 05 13 50.7 -2.7
LPSR pmax pmax
comp=Z,160nm,0.8s
LPSR pmax pmax
comp=Z,170nm,0.7s
LPSR smax smax
comp=E,90nm,1.4s
LPSR MLR MLR
comp=Z,890nm,16.0s
WAKR Walker 66.53 59 IAmb IAmb 05 05 31.1
comp=Z,90nm,1.1s
ILULI Ilulissat 66.73 7 i P P 05 05 07.1 +0.2
comp=Z,48nm,0.9s
ILULI Ilulissat 66.73 7 P P 05 05 07.3 +0.4
ILULI IAmb IAmb 05 05 20.2
comp=Z,52nm,0.8s
ILULI Ilulissat 66.73 7 P P 05 05 07.3 +0.4
ILULI pmax pmax
comp=Z,52nm,0.8s
NSS Namsos 66.88 341 eP P 05 05 08.4 +0.4
VORR Voronezh 66.92 320 eP P 05 05 07.0 -1.5
VORR pmax pmax
comp=Z,250nm,2.0s
RYN Ryan 67.03 58 IAmb IAmb 05 05 26.0
comp=Z,112nm,1.1s
VSR Storozhevoye 67.25 320 eP P 05 05 11.1 +0.6
VSR eS S 05 14 00.7 -2.5
VSR pmax pmax
comp=Z,230nm,0.8s
VSR pmax pmax
comp=Z,220nm,0.8s
VSR smax smax
comp=E,40nm,0.9s
NVAR Mina Array Bea 67.28 58 P P 05 05 13.2 +1.9
comp=E,11nm,0.8s,baz=288,slow=6.4,SNR=26
NVAR LR LR 05 32 50.9
comp=E,164nm,19.9s,baz=334,slow=34
NVAR PKPPKP P'P'df 05 33 35.9 -5.5
comp=E,0.6nm,0.7s,baz=133,slow=4.6,SNR=4.8
VSU Vasula 67.30 331 eP P 05 05 11.4 +0.7
VSU Vasula 67.30 331ceP P 05 05 11.4 +0.7
VSU pmax pmax
comp=Z,310nm,1.7s
VORD Divnogorie 67.35 319 eP P 05 05 12.3 +1.1
VORD pmax pmax
comp=Z,170nm,0.8s
NV11 Mina Array Sit 67.37 58 IAmb IAmb 05 05 28.3
comp=Z,118nm,1.1s
MLAC Mammoth, Mammo67.44 59 P P 05 05 15.6 +3.2
baz=308,SNR=9.4
NOUC Port Laguerre 67.45 161 P P 05 05 13.9 +1.9
NOUC IAmb IAmb 05 05 32.9
comp=Z,80nm,1.2s
DZM Mont Dzumac 67.45 161 eP P 05 05 11.0 -1.2
comp=Z,152nm,1.3s
DZM eS S 05 14 04.3 -2.0
comp=Z,296nm,26.6s
DZM eSS SS 05 18 27.4 -0.1
comp=Z,444nm,27.6s
DZM eLR LR 05 25 25.7
comp=Z,804nm,20.7s
DZM Mont Dzumac 67.45 161 P P 05 05 14.2 +2.1
DZM IAmb IAmb 05 05 23.7
comp=Z,74nm,1.2s
PAGB Antelope Grade 67.72 61 IAmb IAmb 05 05 30.6
comp=Z,144nm,1.2s
ASAR Alice Springs 68.06 194 P P 05 05 16.3 +0.4
comp=Z,23nm,0.7s,baz=9.4,slow=5.7,SNR=204
ASAR LR LR 05 32 16.2
comp=Z,245nm,21.5s,baz=8.5,slow=34
ASAR PKP2bc 05 33 37.4
comp=Z,1.9nm,1.0s,baz=176,slow=2.6,SNR=7.2
LKWY Lake 68.06 49 IAmb IAmb 05 05 35.6
comp=Z,71nm,1.0s
LKWY IAMs_20 IAMs_20 05 38 46.1
comp=Z,978nm,21.0s
H17A Grant Village 68.07 49 P P 05 05 19.3 +3.1
baz=310,SNR=36
SMMC Simmler 68.14 62 P P 05 05 22.6 +6.0
baz=309,SNR=8.9
TIN Tinemaha, Big 68.18 59 P P 05 05 22.5 +5.7
baz=309,SNR=6.2
FLWY Flagg Ranch 68.20 50 IAmb IAmb 05 05 41.9
comp=Z,70nm,0.9s
MAK Makhachkala 68.29 309 eP P 05 05 15.3 -1.9
MAK e 05 07 45.2
MAK ePPP PPP 05 09 24.8
MAK eS S 05 14 17.2 +1.3
MAK eSS SS 05 18 42.0 +3.5
MAK pmax pmax
comp=Z,395nm,1.1s
FXWY Fox Creek 68.30 50 IAmb IAmb 05 05 33.8
comp=Z,76nm,0.9s
RLMT Red Lodge 68.31 48 IAmb IAmb 05 05 33.5
comp=Z,137nm,1.4s
RLMT Red Lodge 68.31 48 P P 05 05 19.4 +1.7
baz=310,SNR=24
TBLU Trondheim 68.37 341 eP P 05 05 16.4 -1.0
VES Vestal, Richgr 68.40 61 P P 05 05 22.8 +4.7
baz=309,SNR=9.9
PALK Pallekele 68.49 259 P P 05 05 19.2 +0.2
comp=Z,72nm,1.0s,baz=42,slow=7.0,SNR=26
PALK Pallekele 68.49 259 IAMs_20 IAMs_20 05 37 22.4
comp=Z,1µm,21.0s
PALK Pallekele 68.49 259 P P 05 05 19.3 +0.4
PALK P P 05 05 19.3 +0.4
PKM Mcpherson Peak 68.52 62 P P 05 05 21.5 +2.4
baz=309,SNR=9.5
SNOW Snow King Moun 68.57 50 IAmb IAmb 05 05 36.1
comp=Z,158nm,1.2s
EIDS Eidsvold 68.60 177 IAMs_20 IAMs_20 05 32 47.9
comp=Z,919nm,21.0s
CWC Cottonwood Cre 68.66 60 P P 05 05 21.7 +1.8
baz=309
DGMT Dagmar 68.74 43 IAMs_20 IAMs_20 05 33 45.7
comp=Z,1µm,22.0s
DGMT Dagmar 68.74 43 P P 05 05 21.2 +1.2
baz=312,SNR=7.9
GRAC Grapevine Rang 68.75 59 P P 05 05 22.4 +2.0
baz=309,SNR=20
AHID Auburn Hatcher 68.82 51 IAmb IAmb 05 05 36.9
comp=Z,103nm,1.1s
AHID IAMs_20 IAMs_20 05 39 28.5
comp=Z,659nm,19.0s
ISA Isabella, Lake 68.89 61 P P 05 05 25.8 +4.6
baz=309,SNR=12
LAO LASA Array 68.90 45 IAMs_20 IAMs_20 05 39 50.1
comp=Z,805nm,19.0s
LAO LASA Array 68.90 45 P P 05 05 22.8 +1.7
baz=312,SNR=21

SFJD Kangerlussuaq 68.93 8 i P P 05 05 20.9 +0.1
SFJD Kangerlussuaq 68.93 8 P P 05 05 21.3 +0.5
SFJD Kangerlussuaq 68.93 8 P P 05 05 21.3 +0.5
SFJD pmax pmax
comp=Z,46nm,0.8s
R11A Troy Canyon, C 69.00 57 IAmb IAmb 05 05 37.7
comp=Z,98nm,1.1s
R11A Troy Canyon, C 69.00 57 P P 05 05 23.3 +1.3
baz=310,SNR=22
ARVC Arvin 69.00 61 P P 05 05 27.3 +5.5
baz=309,SNR=9.3
AKT Akhty 69.11 308 eP P 05 05 23.8 +1.3
AKT e 05 05 44.8
AKT eS S 05 14 24.3 -1.7
AKT pmax pmax
comp=Z,140nm,0.8s
MPMC Manual Prospec 69.27 60 P P 05 05 25.0 +1.2
baz=309,SNR=20
HWUT Hardware Ranch 69.30 52 IAmb IAmb 05 05 39.6
comp=Z,80nm,1.0s
MBWA Marble Bar 69.33 208 P P 05 05 23.9 +0.1
GOF Gofitskoye 69.38 313⇓iP P 05 05 25.2 +1.2
GOF eS S 05 14 29.5 +0.7
GOF pmax pmax
comp=Z,194nm,0.7s
GOF smax smax
comp=N,62nm,0.8s
GOF smax smax
comp=E,710nm,1.6s
FURC Furnace Creek, 69.40 59 P P 05 05 26.2 +1.9
baz=310,SNR=22
TPNV Topopah Spring 69.48 58 P P 05 05 26.3 +1.3
baz=310,SNR=27
DUG Dugway, Tooele 69.48 54 IAmb IAmb 05 05 40.8
comp=Z,112nm,1.1s
DUG Dugway, Tooele 69.48 54 P P 05 05 26.7 +1.7
baz=310,SNR=26
IZAR Zarasai 69.50 329 eP P 05 05 25.3 +0.7
IZAR IAmb IAmb 05 05 28.5
comp=Z,25nm,0.9s
LRMC Laurel Mtn Rad 69.51 60 P P 05 05 26.8 +1.6
baz=309,SNR=8.7
PSAD1 Pilbara Seismi 69.58 208 P P 05 05 25.7 +0.4
PSAD1 IAmb IAmb 05 05 27.0
comp=Z,111nm,1.1s
PSAD1 IAMs_20 IAMs_20 05 37 40.0
comp=Z,943nm,22.0s
MOL Molde 69.59 342 eP P 05 05 24.9 -0.1
PSAC2 Pilbara Seismi 69.65 208 IAMs_20 IAMs_20 05 29 59.1
comp=Z,798nm,21.0s
PSAA2 Pilbara Seismi 69.67 208 IAMs_20 IAMs_20 05 37 48.5
comp=Z,867nm,20.0s
ISAL Salakas 69.68 329 eP P 05 05 26.6 +1.0
ISAL IAmb IAmb 05 05 29.9
comp=Z,39nm,0.9s
PSA00 Pilbara Seismi 69.68 208 IAmb IAmb 05 05 27.6
comp=Z,86nm,1.1s
BW06 Boulder Array 69.68 50 IAmb IAmb 05 05 41.4
comp=Z,71nm,1.0s
BW06 Boulder Array 69.68 50 P P 05 05 27.3 +1.0
baz=311,SNR=17
PD31 Pinedale Array 69.68 50 IAmb IAmb 05 05 41.4
comp=Z,65nm,1.0s
PDAR Pinedale Array 69.68 50 P P 05 05 27.1 +0.8
comp=Z,5.2nm,0.9s,baz=230,slow=0.8,SNR=37
PDAR LR LR 05 33 03.7
comp=Z,256nm,21.9s,baz=341,slow=33
PDAR PKP2bc 05 33 28.1
comp=Z,1.9nm,1.1s,baz=124,slow=2.7,SNR=7.9
DOMB Dombas 69.69 341 eP P 05 05 25.4 -0.3
EDW2 Edwards Air Fo 69.69 61 P P 05 05 27.8 +1.6
baz=310,SNR=7.1
PSAC3 Pilbara Seismi 69.73 208 P P 05 05 26.2 -0.1
PSAC3 IAmb IAmb 05 05 27.9
comp=Z,104nm,1.1s
MICGM Minsk 69.80 327⇓eP P 05 05 28.0 +1.6
MICGM PM 05 05 29.0
comp=Z,0.7nm,1.5s
MICGM ePcP PcP 05 05 46.0 -2.9
MICGM eS S 05 14 31.0 -2.4
MICGM eLR LR 05 37 46.0
MNK Minsk 69.80 327⇓eP P 05 05 28.0 +1.6
MNK e 05 05 46.0
MNK eS S 05 14 31.0 -2.4
MNK pmax pmax
comp=Z,720nm,1.5s
IIGN Ignalina 69.81 329 eP P 05 05 27.3 +0.9
NC303 NORSAR Array S 69.82 339 eP P 05 05 26.2 -0.3
NACGM Naroch 69.93 328 eP P 05 05 26.0 -1.2
NACGM PM 05 05 40.0
comp=Z,0.8nm,1.0s
NACGM eS S 05 14 32.0 -2.9
NACGM eLQ LQ 05 28 26.0
NACGM eLR LR 05 35 05.0
NB2 NORSAR Subarra 70.01 339 P P 05 05 27.6 -0.1
comp=Z,78nm,0.8s,baz=32,slow=6.5
NB2 NORSAR Subarra 70.01 339 P P 05 05 27.6 -0.1
baz=32,slow=6.5
NOA NORSAR Array B 70.01 339 P P 05 05 27.6 -0.1
comp=Z,47nm,0.8s,baz=32,slow=6.2,SNR=175
NOA LR LR 05 39 30.5
comp=Z,737nm,21.2s,baz=40,slow=39
SHOC Shoshone, Teco 70.13 59 P P 05 05 30.6 +1.8
baz=310,SNR=6.2
GSC Goldstone, Bar 70.18 60 IAmb IAmb 05 05 45.4
comp=Z,89nm,1.3s
GSC Goldstone, Bar 70.18 60 P P 05 05 30.8 +1.6
baz=310,SNR=8.4
NAO01 NORSAR Array S 70.26 339 P P 05 05 29.6 +0.4
NAO01 IAmb IAmb 05 05 48.6
comp=Z,82nm,0.8s
KIV Kislovodsk 70.30 312 ⇑P P 05 05 31.7 +1.9
KIV Kislovodsk 70.30 312 eP P 05 05 31.2 +1.4
KIV Kislovodsk 70.30 312 P P 05 05 31.1 +1.2
KIV IAMs_20 IAMs_20 05 36 06.2
comp=Z,1µm,21.0s
KIV Kislovodsk 70.30 312 P P 05 05 31.6 +1.8
KIV P P 05 05 31.6 +1.8
KIV S S 05 14 41.9 +2.0
KIV S S 05 14 41.9 +2.0
KIV Kislovodsk 70.30 312 eP P 05 05 31.2 +1.4
KIV eS S 05 14 41.2 +1.3
KIV pmax pmax
comp=Z,225nm,4.3s
KIV pmax pmax
comp=Z,491nm,1.1s
BFSC Mount Baldy Ra 70.31 61 P P 05 05 31.8 +1.7
baz=310,SNR=6.0
KBZ Khabaz 70.34 312 P P 05 05 31.1 +1.2
comp=Z,79nm,0.8s,baz=58,slow=4.8,SNR=106
KBZ Khabaz 70.34 312 eP P 05 05 31.4 +1.5
KBZ Khabaz 70.34 312d iP P 05 05 31.4 +1.5
KBZ pmax pmax
comp=Z,104nm,0.9s
CIS Catalina Islan 70.36 62 P P 05 05 31.8 +1.5
baz=310,SNR=6.6
ZEI Tsey 70.41 311 eP P 05 05 28.4 -2.3
ZEI pmax pmax
comp=Z,99nm,0.7s
SHPR Sheep Range 70.44 58 IAmb IAmb 05 05 47.5
comp=Z,154nm,1.3s
PABE Paberze 70.53 330 eP P 05 05 31.7 +0.9
PABE IAmb IAmb 05 05 35.3
comp=Z,116nm,0.9s
TUQ Turquoise Moun 70.64 59 P P 05 05 33.7 +1.6
baz=310,SNR=26
TBLG Delisi 70.65 309 P P 05 05 33.1 +1.2
TBLG Delisi 70.65 309 P P 05 05 33.1 +1.2
TBLG pmax pmax
comp=Z,225nm,0.8s
BBRC Big Bear Solar 70.77 61 P P 05 05 36.3 +3.3
baz=310,SNR=5.8
HEC Hector,Ludlow 70.78 60 P P 05 05 34.7 +1.8
baz=310,SNR=8.5
PBUR Paburge 70.85 331 eP P 05 05 32.8 0.0
MURC Murrieta 71.02 62 P P 05 05 35.8 +1.6
baz=310,SNR=7.4
SKAR Skarslia 71.06 340 eP P 05 05 34.8 +0.7
OSL Oslo 71.08 339 eP P 05 05 34.9 +0.8
GMRC Granite Mounta 71.23 60 P P 05 05 37.3 +1.6
baz=310,SNR=19
Q16A Castle Valley 71.28 54 P P 05 05 37.4 +1.4
ULM Lac du Bonnet 71.39 37 P P 05 05 36.5 +0.3
comp=Z,6.9nm,0.7s,baz=315,slow=6.5,SNR=20
ULM LR LR 05 37 52.8
comp=Z,660nm,21.9s,baz=326,slow=37

ULM Lac du Bonnet 71.39 37 IAMs_20 IAMs_20 05 37 52.4
comp=Z,859nm,20.0s
K22A Casper 71.43 49 IAmb IAmb 05 05 52.5
comp=Z,114nm,0.9s
K22A Casper 71.43 49 P P 05 05 37.8 +1.0
baz=312,SNR=12
PFO Pinyon Flats O 71.48 61 P P 05 05 38.7 +1.5
PFO Pinyon Flats O 71.48 61 P P 05 05 38.7 +1.5
PFO pmax pmax
comp=Z,76nm,1.2s
PFO Pinyon Flats O 71.48 61 P P 05 05 38.3 +1.2
baz=310,SNR=7.3
XPFO Pion Flat 71.48 61 P P 05 05 38.4 +1.2
TPFO Pinon Flats 71.49 61 P P 05 05 38.8 +1.6
baz=310,SNR=12
BELC Belle Mtn. Jos 71.52 61 P P 05 05 38.3 +0.8
baz=310,SNR=14
109C Camp Elliot, M 71.53 62 IAmb IAmb 05 05 53.5
comp=Z,128nm,1.3s
109C Camp Elliot, M 71.53 62 P P 05 05 39.2 +1.9
baz=310,SNR=5.4
AKH Akhalkalaki 71.56 310 ⇓P P 05 05 39.5 +1.9
AKH Akhalkalaki 71.56 310 IAmb IAmb 05 05 52.1
comp=Z,78nm,1.0s
AKH IAMs_20 IAMs_20 05 40 21.7
comp=Z,1µm,20.0s
KONO Kongsberg 71.62 339 eP P 05 05 38.0 +0.5
GNI Garni 71.69 308 P P 05 05 40.1 +1.7
GNI IAmb IAmb 05 06 18.0
comp=Z,148nm,1.0s
GNI Garni 71.69 308 IAMs_20 IAMs_20 05 40 17.3
comp=Z,1µm,19.0s
GNI Garni 71.69 308 P P 05 05 40.7 +2.3
GNI P P 05 05 40.7 +2.3
GNI Garni 71.69 308ceP P 05 05 41.0 +2.6
GNI pmax pmax
comp=Z,353nm,1.7s
RWWY Rawlins 71.70 50 IAmb IAmb 05 05 54.2
comp=Z,112nm,0.9s
BORG Borgarnes 71.75 355 LR LR 05 35 41.9
comp=Z,354nm,21.2s,baz=12,slow=35
RSSD Black Hills 71.77 46 P P 05 05 39.6 +0.7
RSSD IAmb IAmb 05 05 53.7
comp=Z,86nm,0.8s
RSSD Black Hills 71.77 46 IAMs_20 IAMs_20 05 39 18.0
comp=Z,713nm,21.0s
RSSD Black Hills 71.77 46 P P 05 05 39.6 +0.7
RSSD pmax pmax
comp=Z,86nm,0.8s
RSSD MLR MLR
comp=Z,700nm,21.0s
RSSD Black Hills 71.77 46 P P 05 05 39.5 +0.7
baz=314
BAR Barrett 71.94 62 IAMs_20 IAMs_20 05 31 40.9
comp=Z,664nm,19.0s
IRM Iron Mountain 71.96 60 P P 05 05 41.6 +1.6
baz=311,SNR=18
MONP2 Monument Peak 71.97 62 P P 05 05 41.4 +1.2
baz=311,SNR=13
ASK Askoy 71.97 342 eP P 05 05 40.0 +0.5
SUW Suwalki 71.97 329 eP P 05 05 40.0 +0.4
SUW Suwalki 71.97 329 IAmb IAmb 05 05 41.8
comp=Z,147nm,1.1s
SUW IAMs_20 IAMs_20 05 43 05.8
comp=Z,919nm,19.0s
SUW Suwalki 71.97 329 eP P 05 05 40.0 +0.4
BER Bergen 72.03 341 eP P 05 05 40.2 +0.4
AKASG Malin Array Be 72.08 324 P P 05 05 40.6 +0.2
comp=Z,175nm,0.9s,baz=39,slow=6.4,SNR=358
AKASG LR LR 05 40 49.1
comp=Z,677nm,18.6s,baz=50,slow=39
AKASG Malin Array Be 72.08 324 i P P 05 05 40.5 +0.2
AKASG pmax pmax
comp=Z,133nm,0.8s
AKBB Malin Array Si 72.08 324 IAMs_20 IAMs_20 05 40 38.9
comp=Z,811nm,20.0s
TASB TASBURUN-IGDIR 72.09 308 P P 05 05 43.0 +2.3
BC3 Big Chuckawall 72.09 61 P P 05 05 42.4 +1.6
baz=311,SNR=17
ODD1 Odda 72.14 341 eP P 05 05 41.3 +0.7
SOC Sochi 72.14 313 eP P 05 05 41.5 +0.7
SOC Sochi 72.14 313 eP P 05 05 41.6 +0.7
SOC e 05 08 21.5
SOC eS S 05 15 02.2 +1.3
SOC eSS SS 05 19 39.9 +2.3
SOC pmax pmax
comp=Z,66nm,0.7s
SOC MLR MLR
comp=Z,2µm,18.0s
O20A White River Ci 72.17 51 IAmb IAmb 05 05 59.3
comp=Z,82nm,1.0s
O20A IAMs_20 IAMs_20 05 33 08.0
comp=Z,716nm,20.0s
O20A White River Ci 72.17 51 P P 05 05 43.2 +1.9
baz=312,SNR=7.6
U15A North Rim 72.24 57 IAmb IAmb 05 05 58.7
comp=Z,164nm,1.4s
IKP In-Ko-Pah, Jac 72.32 62 P P 05 05 43.8 +1.5
baz=311,SNR=11
SWSC Sam W. Stewart 72.33 61 P P 05 05 44.2 +2.0
baz=311,SNR=8.0
BATM Batumi 72.42 311 ⇑P P 05 05 44.2 +1.6
BATM Batumi 72.42 311 ⇑P P 05 05 44.2 +1.6
ANN Anapa 72.48 316 eP P 05 05 43.2 +0.4
ANN e 05 05 55.2
ANN eS S 05 15 03.8 -0.9
ANN e 05 15 42.4
ANN pmax pmax
comp=E,12nm,0.6s
ANN pmax pmax
comp=N,30nm,0.6s
ANN pmax pmax
comp=Z,68nm,0.6s
BCA Borcka 72.57 311 ⇓P P 05 05 45.0 +1.5
BCA Borcka 72.57 311 P P 05 05 43.8 +0.3
BLS5 Blasjo 72.61 340 eP P 05 05 44.0 +0.6
Y12C Blythe 72.61 60 IAmb IAmb 05 06 00.3
comp=Z,123nm,1.2s
Y12C Blythe 72.61 60 P P 05 05 45.2 +1.4
baz=311,SNR=8.5
GIRL Giralia 72.71 212 P P 05 05 46.0 +1.7
CLDR Caldiran 72.84 308 P P 05 05 47.8 +2.4
GLA Glamis 72.88 61 IAmb IAmb 05 06 01.9
comp=Z,179nm,1.4s
GLA Glamis 72.88 61 P P 05 05 47.0 +1.6
baz=311,SNR=6.0
N23A Red Feather La 72.94 50 IAmb IAmb 05 06 02.3
comp=Z,164nm,1.1s
N23A IAMs_20 IAMs_20 05 39 36.4
comp=Z,691nm,21.0s
N23A Red Feather La 72.94 50 P P 05 05 47.6 +1.6
baz=313,SNR=50
AGRB Hanur-Agry 73.07 309 P P 05 05 49.1 +2.4
D32A Dogwood Acres, 73.13 40 IAMs_20 IAMs_20 05 37 34.7
comp=Z,948nm,22.0s
CHOM Cayeli-Rize 73.28 311 P P 05 05 49.3 +1.6
WUAZ Wupatki 73.40 57 IAmb IAmb 05 06 05.4
comp=Z,138nm,1.4s
WUAZ Wupatki 73.40 57 P P 05 05 51.0 +2.3
baz=312,SNR=10
KOPR Koprukoy-ERZUR 73.43 310 P P 05 05 50.9 +2.1
Y14A Wickenburg 73.44 59 IAmb IAmb 05 06 05.3
comp=Z,119nm,1.2s
SMCO Snowmass 73.53 51 IAMs_20 IAMs_20 05 34 30.2
comp=Z,725nm,21.0s
MLAZ Malazgirt-MUS 73.62 309 P P 05 05 52.1 +2.2
ARMA Armidale 73.64 177 P P 05 05 51.8 +2.0
ARMA IAMs_20 IAMs_20 05 35 33.7
comp=Z,944nm,20.0s
BANOM Banah 73.70 290 P P 05 05 50.9 +0.5
SNR=14
WSAR Wadi Sarin 73.84 287 P P 05 05 52.3 +1.1
SNR=6.0
ISCO Idaho Springs 73.88 50 IAMs_20 IAMs_20 05 40 24.2
comp=Z,597nm,20.0s
ISCO Idaho Springs 73.88 50 P P 05 05 53.0 +1.4
baz=314,SNR=20
AKDM Akdamar-Van 73.93 308 P P 05 05 53.6 +1.9
BSD Bornholm Skovb 73.94 334⇑iP P 05 05 51.9 +0.7
comp=Z,147nm,1.1s
BSD i 05 06 03.9
BSD Bornholm Skovb 73.94 334⇑iP P 05 05 51.9 +0.7
BSD i 05 06 03.9
BSD pmax pmax
comp=Z,150nm,1.1s
GOET G??ttrup 73.98 338 i P P 05 05 52.6 +1.2

comp=Z,276nm,0.9s
MVCO Mesa Verde 73.99 54 IAmb IAmb 05 06 07.7
comp=Z,78nm,0.9s
MVCO IAMs_20 IAMs_20 05 40 58.4
comp=Z,654nm,21.0s
MVCO Mesa Verde 73.99 54 P P 05 05 53.6 +1.5
baz=313,SNR=40
BIDO Bidbid 74.01 287 P P 05 05 53.1 +0.9
SNR=11
WBK Wadi Bani Khal 74.01 286 P P 05 05 53.5 +1.3
SNR=13
WBK P P 05 05 53.5 +1.3
SNR=13
WBK S S 05 15 25.1 +2.3
WBK S S 05 15 25.1 +2.3
SIM Simferopol' 74.03 317 ceP P 05 05 53.0 +1.0
SIM S S 05 15 24.0 +1.6
SIM pmax pmax
comp=Z,149nm,0.9s
X16A Lo Mia Camp, P 74.09 58 IAmb IAmb 05 06 09.7
comp=Z,138nm,1.4s
SUSD Miller 74.14 43 P P 05 05 56.6 +3.9
baz=316,SNR=7.0
COP Copenhagen 74.22 336 ⇑iP P 05 05 53.8 +0.9
comp=Z,127nm,1.2s
COP Copenhagen 74.22 336 ⇑iP P 05 05 53.8 +0.9
COP pmax pmax
comp=Z,130nm,1.2s
VRTB Varto-Mus 74.23 309 P P 05 05 55.8 +2.4
CUKT Cukurca 74.30 307 P P 05 05 55.4 +1.5
GURO Guroymak-BITLI 74.32 308 P P 05 05 56.2 +2.2
SMDO Samad 74.36 287 P P 05 05 55.1 +0.7
SNR=11
SMDO P P 05 05 55.1 +0.7
SNR=11
SORM Soroca 74.37 323 ⇑P P 05 05 55.9 +2.0
SORM Soroca 74.37 323 ⇑P P 05 05 55.9 +2.0
UMQ Umm Al-Quwin 74.40 290 P P 05 05 55.6 +1.2
SNR=5.6
UMQ P P 05 05 55.6 +1.2
SNR=5.6
UMQ S S 05 15 27.6 +0.6
UMQ S S 05 15 27.6 +0.6
MUD Monsted U'grnd 74.50 338 iP P 05 05 55.0 +0.5
comp=Z,83nm,1.2s
MUD i 05 06 06.9
MUD Monsted U'grnd 74.50 338 iP P 05 05 55.0 +0.5
MUD i 05 06 06.9
MUD pmax pmax
comp=Z,83nm,1.2s
ESPY Espiye-Giresun 74.52 312 P P 05 05 54.5 -0.4
HOQ Hoqain 74.53 288 P P 05 05 56.2 +0.9
SNR=17
HOQ P P 05 05 56.2 +0.9
SNR=17
HATD Hatta, Dubai 74.53 290 P P 05 05 50.0 -5.3
SNR=24
HATD P P 05 05 50.0 -5.3
SNR=24
YEDI Yedisu-Bingol 74.55 310 P P 05 05 57.3 +2.0
SEVA Sevastopol 74.55 317 ⇓P P 05 05 56.7 +1.7
BEL Belsk 74.58 329 eP P 05 05 56.3 +1.3
BEL Belsk 74.58 329 eP P 05 05 56.3 +1.3
S22A 4UR Ranch, Cre 74.59 52 P P 05 05 57.7 +1.9
baz=314,SNR=15
W18A Petrified Fore 74.66 56 P P 05 05 57.8 +1.7
W18A Petrified Fore 74.66 56 P P 05 05 58.2 +2.1
baz=313
ASHO Ashiyiah 74.68 289 P P 05 05 58.0 +1.8
SNR=37
GKP Gorka Klasztor 74.69 332 eP P 05 05 56.5 +0.8
GKP Gorka Klasztor 74.69 332 eP P 05 05 56.5 +0.8
SOHO SOHO 74.71 289 P P 05 05 57.0 +0.8
SNR=15
Q24A Divide 74.71 51 IAMs_20 IAMs_20 05 40 53.3
comp=Z,660nm,20.0s
Q24A Divide 74.71 51 P P 05 06 00.9 +4.4
baz=314,SNR=6.0
NAZ Nazwa, Dubai 74.75 290 P P 05 05 57.0 +0.5
SNR=12
NAZ P P 05 05 57.0 +0.5
SNR=12
NAZ S S 05 15 30.5 -0.6
NAZ S S 05 15 30.5 -0.6
JMDO Jabal Madar 74.77 286 P P 05 05 58.0 +1.3
SNR=18
JMDO P P 05 05 58.0 +1.3
SNR=18
BNGB Bingl 74.78 309 P P 05 05 58.7 +2.1
SIRT Sirnak 74.80 307 P P 05 05 58.6 +1.9
214A Organ Pipe Nat 74.88 60 IAmb IAmb 05 06 13.7
comp=Z,106nm,1.3s
214A Organ Pipe Nat 74.88 60 P P 05 05 58.7 +1.5
baz=312,SNR=8.4
LVV L'vov 74.91 326 eP P 05 05 58.5 +1.5
LVV e 05 06 11.9
LVV e 05 08 47.1
LVV eS S 05 15 32.6 +0.5
LVV e 05 16 07.8
LVV eSS SS 05 20 22.1 +2.6
LVV MLR MLR
comp=Z,800nm,16.0s
RGN Rugen 74.91 335 eP P 05 05 59.0 +2.2
comp=Z,228nm,1.3s,baz=30,slow=5.5
RGN epP pwP 05 06 09.3 +0.7
RGN Rugen 74.91 335 eP P 05 05 57.9 +1.0
RGN Rugen 74.91 335 P P 05 05 57.3 +0.4
X18A Snowflake 74.93 57 IAMs_20 IAMs_20 05 42 49.6
comp=Z,568nm,19.0s
KIS Kishinev 75.02 322 eP P 05 05 59.0 +1.3
KIS Kishinev 75.02 322 iPcP PcP 05 06 10.0 -1.3
KIS iS S 05 15 32.0 -1.4
comp=Z,1µm,5.0s
KIS iScS SKSac 05 15 48.0 -16
KIS Kishinev 75.02 322 ⇑P P 05 05 59.2 +1.5
KIS Kishinev 75.02 322 eP P 05 05 59.0 +1.3
KIS i 05 06 10.0
KIS iS S 05 15 32.0 -1.4
KIS ePS PnS 05 16 00.0 -10
KIS smax smax
comp=N,1µm,5.0s
KIS MLR MLR
comp=Z,1µm,18.0s
EYMN Ely 75.03 37 IAmb IAmb 05 06 14.1
comp=Z,194nm,1.6s
EYMN Ely 75.03 37 IAMs_20 IAMs_20 05 43 34.6
comp=Z,704nm,19.0s
EYMN Ely 75.03 37 P P 05 05 58.0 +0.3
baz=320
OGNE Ogallala 75.04 47 IAMs_20 IAMs_20 05 43 43.7
comp=Z,685nm,18.0s
OGNE Ogallala 75.04 47 P P 05 06 02.3 +4.2
baz=315,SNR=7.2
SVAN Silvan-Diyarba 75.07 309 P P 05 06 00.4 +2.2
NRS Narsarsuaq 75.14 7 iP P 05 05 57.6 -0.5
NRS i 05 06 11.4
NRS Narsarsuaq 75.14 7 eP P 05 05 57.6 -0.5
NRS i 05 06 11.4
BSY Bisya 75.16 287 P P 05 05 59.7 +0.8
SNR=25
BSY P P 05 05 59.7 +0.8
SNR=25
STKA Stephens Creek 75.23 185 P P 05 05 59.6 +0.8
comp=Z,18nm,0.7s,baz=349,slow=7.0,SNR=25
STKA Stephens Creek 75.23 185 IAmb IAmb 05 06 01.1
comp=Z,5.3nm,0.8s
ARQ Araqi 75.24 288 P P 05 05 59.9 +0.6
SNR=18
SDCO Great Sand Dun 75.36 52 IAMs_20 IAMs_20 05 41 30.5
comp=Z,752nm,22.0s
SDCO Great Sand Dun 75.36 52 P P 05 06 01.4 +1.2
baz=314,SNR=8.8
LHI Lord Howe Isla 75.36 170 IAMs_20 IAMs_20 05 45 13.4
comp=Z,936nm,20.0s
IAS Iasi 75.44 323 ⇑P P 05 06 01.3 +1.3
IAS Iasi 75.44 323 ⇑P P 05 06 01.3 +1.3
AJN Ajban 75.49 290 P P 05 06 01.4 +0.7
SNR=7.2
AJN P P 05 06 01.4 +0.7
SNR=7.2
KWP Kalwaria Pacla 75.59 327 eP P 05 06 02.7 +1.8
KWP Kalwaria Pacla 75.59 327 eP P 05 06 02.7 +1.8
RSDY Resadiye-TOKAT 75.64 312 P P 05 06 03.3 +1.9
LEOM Leova 75.68 322 ⇓P P 05 06 03.2 +1.8
LEOM Leova 75.68 322 ⇓P P 05 06 03.2 +1.8

VASR Vaslui 75.75 322 ⇑P P 05 06 03.7 +1.8
MHTO MHTO 75.78 285 P P 05 06 03.3 +0.9
SNR=32
MHTO P P 05 06 03.3 +0.9
SNR=32
DYBB Diyarbakir 75.81 309 P P 05 06 04.7 +2.2
ECSD EROS Data Cent 75.81 42 IAmb IAmb 05 06 17.0
comp=Z,90nm,0.8s
ECSD EROS Data Cent 75.81 42 IAMs_20 IAMs_20 05 37 53.8
comp=Z,1µm,22.0s
ECSD EROS Data Cent 75.81 42 P P 05 06 02.8 +0.5
baz=318,SNR=20
KVT Kavak 75.83 314 P P 05 06 04.5 +2.0
DIKM Dikmen 75.83 314 ⇓P P 05 06 04.7 +2.2
DIKM Dikmen 75.83 314 ⇓P P 05 06 04.9 +2.4
PRAR RASCA 75.89 323 ⇑P P 05 06 02.7 0.0
TUC Tucson 75.91 59 P P 05 06 05.0 +1.8
TUC Tucson 75.91 59 P P 05 06 05.0 +1.8
TUC pmax pmax
comp=Z,72nm,1.4s
TUC Tucson 75.91 59 P P 05 06 04.9 +1.8
baz=313
MAZI Mazidag 75.98 308 P P 05 06 05.3 +1.8
SVRC Sivrice-ELAZID 75.98 310 P P 05 06 06.0 +2.4
E38A The Farm, Brul 76.03 38 IAmb IAmb 05 06 18.1
comp=Z,104nm,0.7s
KSCO Kaye Shedlock' 76.08 49 P P 05 06 08.7 +4.6
baz=315,SNR=7.0
TOKT Tokat 76.11 313 P P 05 06 05.9 +1.8
BIR Birlad 76.11 322 ⇑P P 05 06 06.0 +2.0
BIR Birlad 76.11 322 ⇑P P 05 06 06.0 +2.0
FORT Forrest 76.11 197 P P 05 06 04.8 +0.9
BUR08 Bucovina Ar. S 76.12 324 IAmb IAmb 05 06 18.1
comp=Z,105nm,0.8s
BURAR Bucovina Array 76.13 324 ⇓P P 05 06 05.1 +0.9
BURAR Bucovina Array 76.13 324 ⇓P P 05 06 05.1 +0.9
SVSK Karacayir 76.16 312 P P 05 06 06.4 +2.1
BZK Bozkurt 76.26 315 ⇑P P 05 06 05.6 +0.7
KOLS Kolonicke sedl 76.32 326 eP P 05 06 06.4 +1.3
KOLS pmax pmax
comp=Z,105nm,1.0s
KOLS Kolonicke sedl 76.32 326 eP P 05 06 06.4 +1.3
STHS Stebnicka Huta 76.34 327 eP P 05 06 06.2 +1.0
STHS Stebnicka Huta 76.34 327 eP P 05 06 06.2 +1.0
BSEG Bad Segeberg 76.36 336 eP P 05 06 05.8 +0.6
comp=Z,106nm,1.0s,baz=30,slow=5.5
BSEG epP PcP 05 06 17.4 +0.5
TESR Tescani 76.36 323 ⇑P P 05 06 06.7 +1.3
GHRR 76.37 322 ⇑P P 05 06 07.6 +2.2
TLCR 76.39 320 ⇑P P 05 06 06.9 +1.4
TLCR 76.39 320 ⇑P P 05 06 06.9 +1.4
T25A Trinidad 76.40 52 P P 05 06 07.3 +1.2
baz=315,SNR=11
SPMN Marine on St. 76.51 39 IAmb IAmb 05 06 22.2
comp=Z,56nm,0.8s
SPMN IAMs_20 IAMs_20 05 40 22.1
comp=Z,1µm,22.0s
SPMN Marine on St. 76.51 39 P P 05 06 07.7 +1.5
baz=320,SNR=5.5
RUE Ruedersdorf 76.51 333 eP P 05 06 06.7 +0.6
comp=Z,148nm,1.1s,baz=30,slow=5.5
RUE epP pwP 05 06 18.3 +0.3
RUE Ruedersdorf 76.51 333 eP P 05 06 07.3 +1.2
UZH Uzhgorod 76.55 326 ⇓iP P 05 06 08.0 +1.6
UZH i 05 06 19.6
UZH e 05 06 27.0
UZH eS S 05 15 50.0 -0.1
UZH MLR MLR
comp=N,450nm,17.0s
UZH MLR MLR
comp=E,230nm,17.0s
UZH MLR MLR
comp=Z,280nm,17.0s
CRVS Cervenica-Dubn 76.67 327 eP P 05 06 08.6 +1.5
CRVS pmax pmax
comp=Z,108nm,0.9s
CRVS Cervenica-Dubn 76.67 327 eP P 05 06 08.6 +1.5
JURR Jurilovca 76.68 320 ⇑P P 05 06 08.6 +1.4
PETR Petresti 76.71 322 ⇑P P 05 06 08.8 +1.5
NIE Niedzica 76.71 328 eP P 05 06 09.2 +1.9
NIE Niedzica 76.71 328 eP P 05 06 09.2 +1.9
CFR Carcaliu 76.71 321 ⇓P P 05 06 08.5 +1.2
CFR Carcaliu 76.71 321 ⇓P P 05 06 08.5 +1.2
ANMO Albuquerque 76.74 54 P P 05 06 09.7 +1.7
ANMO Albuquerque 76.74 54 IAMs_20 IAMs_20 05 36 20.3
comp=Z,598nm,21.0s
ANMO Albuquerque 76.74 54 ceP P 05 06 08.1 +0.1
ANMO pmax pmax
comp=Z,15nm,1.7s
ANMO Albuquerque 76.74 54 P P 05 06 09.5 +1.5
baz=314
BGNE Belgrade 76.74 45 IAMs_20 IAMs_20 05 45 15.7
comp=Z,794nm,20.0s
BGNE Belgrade 76.74 45 P P 05 06 08.8 +1.1
baz=317,SNR=5.4
ODBI Odobesti 76.75 322 ⇑P P 05 06 09.2 +1.6
BMR Baia Mare 76.81 325 ⇓P P 05 06 09.6 +1.7
BMR Baia Mare 76.81 325 ⇓P P 05 06 09.6 +1.7
VRI Vrincioaia 76.82 322 ⇑P P 05 06 09.6 +1.6
VRI Vrincioaia 76.82 322 ⇑P P 05 06 09.6 +1.6
TOPG Topolog 76.83 321 ⇑P P 05 06 09.6 +1.5
TRPA Tarpa 76.85 326 ⇑P P 05 06 10.0 +1.9
DARE Darende-Malaty 76.85 311 P P 05 06 10.8 +2.4
PLOR Plostina 76.87 322 ⇑P P 05 06 09.7 +1.4
PLOR Plostina 76.87 322 ⇑P P 05 06 09.7 +1.4
URFA Urfa 76.91 309 P P 05 06 11.3 +2.6
ARCR ARCALIA 76.91 324 ⇓P P 05 06 10.6 +2.1
KSP Ksiaz 77.03 331 eP P 05 06 10.2 +1.2
KSP Ksiaz 77.03 331 eP P 05 06 10.2 +1.2
OZUR 77.06 323 ⇓P P 05 06 11.3 +1.9
ILGA Ilgaz 77.06 315 IAmb IAmb 05 06 28.0
comp=Z,120nm,0.9s
ILGA IAMs_20 IAMs_20 05 46 52.1
comp=Z,533nm,18.0s
Y22D IRIS PASSCAL I 77.07 55 IAMs_20 IAMs_20 05 35 09.1
comp=Z,742nm,21.0s
BISRR Bisoca 77.07 322 ⇓P P 05 06 11.4 +1.9
GRER 77.08 322 ⇓P P 05 06 11.6 +2.1
KPL Plockton 77.10 346 eP P 05 06 10.4 +1.1
KPL IAmb IAmb 05 06 12.0
comp=Z,49nm,0.8s
TIRR Tirgusor 77.13 320 ⇓P P 05 06 11.1 +1.4
TIRR Tirgusor 77.13 320 ⇓P P 05 06 11.1 +1.4
TIRR Tirgusor 77.13 320 ⇓P P 05 06 11.1 +1.4
HARR Harsova 77.18 321 ⇑P P 05 06 11.3 +1.3
HARR Harsova 77.18 321 ⇑P P 05 06 11.3 +1.3
OKC Ostrava-Krasne 77.18 329 eP P 05 06 12.2 +2.3
OKC epP PcP 05 06 20.0 -0.6
OKC AMS AMS 05 44 40.0
comp=Z,1µm,17.8s
OKC Ostrava-Krasne 77.18 329 eP P 05 06 12.2 +2.3
OKC e 05 06 20.0
OKC MLR MLR
comp=Z,1µm,17.8s
CORM Corum 77.23 314 P P 05 06 12.7 +2.2
LANS Liptovska Anna 77.24 328 eP P 05 06 12.4 +2.0
LANS pmax pmax
comp=Z,108nm,1.0s
LANS Liptovska Anna 77.24 328 eP P 05 06 12.4 +2.0
YOZ Yozgat 77.25 313 P P 05 06 11.9 +1.2
OSTC Ostas 77.29 331 eP P 05 06 11.8 +1.2
OSTC ex x 05 06 22.3
OSTC AMS AMS 05 44 00.0
comp=Z,2µm,15.8s
EFOR EFORIE 77.31 320 ⇑P P 05 06 12.6 +1.8
CHVC Chvalec 77.32 331 eP P 05 06 12.2 +1.4
CHVC ex x 05 06 20.8
CHVC AMS AMS 05 44 00.0
comp=Z,1µm,15.6s
DOPR Dopca 77.34 323 ⇓P P 05 06 12.9 +2.0
MFTR Murfatlar 77.34 320 ⇓P P 05 06 13.1 +2.2
KECS Kecovo 77.39 327 eP P 05 06 13.8 +2.7
KECS pmax pmax
comp=Z,41nm,0.9s
KECS Kecovo 77.39 327 eP P 05 06 13.8 +2.7
CVDA Cernavoda 77.40 320 ⇑P P 05 06 13.1 +1.9
UPC Upice 77.41 331 eP P 05 06 12.6 +1.4
UPC epP PcP 05 06 21.4 -0.2
UPC AMS AMS 05 44 10.0
comp=Z,1µm,13.0s
UPC Upice 77.41 331 eP P 05 06 12.6 +1.4
UPC e 05 06 21.4
UPC MLR MLR

comp=Z,1µm,13.0s
DPC Dobruska-Polom 77.43 331 eP P 05 06 12.9 +1.5
DPC epP pP 05 06 20.8 +0.8
DPC AMS AMS 05 44 00.0
comp=Z,2µm,17.6s
DPC Dobruska-Polom 77.43 331 eP P 05 06 12.9 +1.5
DPC e 05 06 20.8
DPC MLR MLR
comp=Z,2µm,17.6s
CANT Cankiri 77.44 315 P P 05 06 26.0 +14
MORC Moravsky Berou 77.46 330 eP P 05 06 13.8 +2.2
MORC Moravsky Berou 77.46 330 ⇑P P 05 06 13.7 +2.2
MORC Moravsky Berou 77.46 330 P P 05 06 12.4 +0.9
MORC Moravsky Berou 77.46 330 ⇑P P 05 06 13.7 +2.2
MLR Muntele Rosu 77.46 322 ⇑P P 05 06 13.1 +1.4
MLR Muntele Rosu 77.46 322 IAmb IAmb 05 06 26.4
comp=Z,105nm,0.8s
MLR IAMs_20 IAMs_20 05 46 43.2
comp=Z,976nm,20.0s
MLR Muntele Rosu 77.46 322 ⇑P P 05 06 13.1 +1.4
ISR Istrita 77.48 322 ⇑P P 05 06 13.5 +1.7
ISR Istrita 77.48 322 ⇑P P 05 06 13.5 +1.7
COWI Conover 77.48 37 IAMs_20 IAMs_20 05 41 37.5
comp=Z,978nm,21.0s
319A Douglas 77.48 59 IAmb IAmb 05 06 34.5
comp=Z,126nm,1.1s
KRLC Kraliky 77.49 330 eP P 05 06 13.0 +1.3
KRLC epP PcP 05 06 21.3 -0.7
KRLC AMS AMS 05 44 40.0
comp=Z,1µm,15.1s
KRLC Kraliky 77.49 330 eP P 05 06 13.0 +1.3
KRLC e 05 06 21.3
KRLC MLR MLR
comp=Z,1µm,15.1s
AMRR Amara 77.51 321 ⇑P P 05 06 13.9 +2.0
AMRR Amara 77.51 321 ⇑P P 05 06 13.9 +2.0
BNN Bunyan 77.54 312 P P 05 06 14.0 +1.7
SARI SarD1z-Kayseri 77.55 311 P P 05 06 14.5 +2.1
MZR Muzera 77.55 290 P P 05 06 13.3 +0.9
SNR=14
121A Cookes Peak, D 77.61 57 IAmb IAmb 05 06 29.8
comp=Z,110nm,1.2s
121A Cookes Peak, D 77.61 57 P P 05 06 14.9 +2.0
baz=314,SNR=5.1
MDB Medias 77.64 324 ⇓P P 05 06 13.8 +1.2
MDB Medias 77.64 324 ⇓P P 05 06 13.8 +1.2
INVG Invergeldie, C 77.66 344 eP P 05 06 13.1 +0.7
G40A Rib Lake 77.66 38 IAmb IAmb 05 06 27.4
comp=Z,63nm,0.7s
G40A IAMs_20 IAMs_20 05 43 12.3
comp=Z,782nm,20.0s
NRDL Niedersach Rie 77.67 335 eP P 05 06 13.2 +0.7
comp=Z,65nm,0.9s,baz=30,slow=5.5
NRDL epP pwP 05 06 24.8 +0.3
ICOR Ion Corvin 77.67 320 ⇑P P 05 06 14.9 +2.1
RETH Rethem/Aller, 77.68 336 eP P 05 06 13.3 +0.7
comp=Z,135nm,1.0s,baz=30,slow=5.5
RETH epP pwP 05 06 24.9 +0.3
SCHQ Schefferville 77.69 20 P P 05 06 13.4 +0.8
comp=Z,9.8nm,0.6s,baz=352,slow=5.6,SNR=30
SCHQ LR LR 05 43 53.4
comp=Z,843nm,19.6s,baz=340,slow=38
SCHQ Schefferville 77.69 20 P P 05 06 13.5 +0.8
SCHQ IAmb IAmb 05 06 27.3
comp=Z,111nm,0.8s
SECR 77.76 322 ⇑P P 05 06 14.7 +1.5
CLL Collm 77.76 333 eP P 05 06 14.3 +1.2
comp=Z,127nm,0.8s,baz=30,slow=5.5
CLL epP pwP 05 06 26.0 +0.8
CLL Collm 77.76 333 iP P 05 06 14.8 +1.6
comp=Z,20nm,0.7s
CLL ⇓iPmax 05 06 15.9
comp=Z,127nm,0.8s
CLL ePcP sP 05 06 24.0 -1.0
CLL i 05 06 26.9
comp=Z,199nm,0.8s
CLL iS S 05 16 01.0 -2.3
CLL e(SS) 05 21 42.0
CLL e(SSS) 05 25 12.0
CLL LmH 05 40 00.0
comp=N,400nm,19.8s
CLL LmH 05 40 00.0
comp=E,2µm,19.8s
CLL Collm 77.76 333 iP P 05 06 14.8 +1.6
CLL i 05 06 26.9
CLL iS S 05 16 01.0 -2.3
CLL pmax pmax
comp=Z,127nm,0.8s
CBKS Cedar Bluff 77.80 48 P P 05 06 18.4 +4.8
baz=317,SNR=6.1
ASSE Asse, Remlinge 77.81 335 eP P 05 06 14.0 +0.8
comp=Z,72nm,1.2s,baz=30,slow=5.5
ASSE epP pwP 05 06 25.7 +0.4
BRG Berggiesshubel 77.82 332 eP P 05 06 15.2 +1.7
comp=Z,47nm,1.1s
BRG iPCP PcP 05 06 24.1 +0.7
comp=Z,87nm,1.1s
BRG S S 05 16 03.0 -0.9
BRG SS SS 05 21 08.0 +4.8
BRG Berggiesshubel 77.82 332 eP P 05 06 13.9 +0.4
comp=Z,47nm,1.1s,baz=30,slow=5.5
BRG epP pwP 05 06 25.5 +0.1
BRG Berggiesshubel 77.82 332 eP P 05 06 15.2 +1.7
BRG i 05 06 24.1
BRG S S 05 16 03.0 -0.9
BRG SS SS 05 21 08.0 +4.8
BRG pmax pmax
comp=Z,47nm,1.1s
BRG MLR MLR
comp=N,1µm,16.4s
BRG MLR MLR
comp=E,929nm,21.8s
BRG MLR MLR
comp=Z,1µm,16.7s
PSN Preselentsi 77.83 320 P P 05 06 15.7 +2.1
DRGR 77.84 325 ⇓P P 05 06 14.9 +1.2
DRGR 77.84 325 ⇓P P 05 06 14.9 +1.2
PVCC Panska Ves 77.89 332 eP P 05 06 14.8 +0.9
PVCC ex x 05 06 27.2
PVCC AMS AMS 05 44 10.0
comp=Z,2µm,21.0s
PVCC Panska Ves 77.89 332 eP P 05 06 14.8 +0.9
PVCC e 05 06 27.2
PVCC MLR MLR
comp=Z,2µm,21.0s
VOIR 77.90 323 ⇑P P 05 06 16.0 +1.9
VOIR 77.90 323 ⇑P P 05 06 16.0 +1.9
RASA Rasa 77.90 321 ⇑P P 05 06 15.3 +1.3
KMRS Kahramanmaras 77.93 311 P P 05 06 16.3 +1.9
EAB Aberfoyle 77.94 345 eP P 05 06 15.9 +1.9
SULR 77.95 322 ⇓P P 05 06 15.5 +1.2
FBE Freiberg 77.97 333 eP P 05 06 15.0 +0.7
comp=Z,90nm,1.0s,baz=30,slow=5.5
FBE epP pwP 05 06 26.7 +0.3
GAZ Gaziantep 78.00 310 P P 05 06 16.9 +2.1
GAZ Gaziantep 78.00 310 IAMs_20 IAMs_20 05 45 32.0
comp=Z,646nm,19.0s
VYHS Vyhne 78.02 328 eP P 05 06 15.9 +1.2
VYHS pmax pmax
comp=Z,90nm,0.9s
VYHS Vyhne 78.02 328 eP P 05 06 15.9 +1.2
BR131 Keskin Array S 78.08 314 P P 05 06 16.4 +1.1
SNR=26
BR131 P P 05 06 16.4 +1.1
SNR=26
BR131 Keskin Array S 78.08 314 iP P 05 06 15.7 +0.4
BRTR Keskin Array B 78.08 314 P P 05 06 16.4 +1.1
comp=Z,13nm,0.8s,baz=78,slow=3.9,SNR=94
PSZ Piszkesteto 78.08 327 ⇓P P 05 06 16.8 +1.7
PSZ Piszkesteto 78.08 327 IAmb IAmb 05 06 29.3
comp=Z,98nm,0.8s
PSZ Piszkesteto 78.08 327 ⇓P P 05 06 16.8 +1.7
ARR Arges 78.14 323 ⇓P P 05 06 17.5 +2.1
CLZ Clausthal 78.15 335 eP P 05 06 16.3 +0.9
comp=Z,124nm,0.9s,baz=30,slow=5.5
CLZ epP pwP 05 06 27.9 +0.5
JAVC Velka Javorina 78.17 329 eP P 05 06 18.9 +3.4
E43A Lone Tree Farm 78.18 35 IAmb IAmb 05 06 31.1
comp=Z,64nm,0.8s
F42A Maple Grove Fa 78.18 36 IAMs_20 IAMs_20 05 43 43.0
comp=Z,669nm,20.0s
VRAC Vranov 78.19 330 eP P 05 06 18.1 +2.5
VRAC e 05 06 28.8
VRAC eS S 05 16 07.3 -0.7

VRAC Vranov 78.19 330 ⇓P P 05 06 17.2 +1.6
VRAC Vranov 78.19 330 ⇓P P 05 06 17.2 +1.6
NEUB Neuenburg 78.25 334 eP P 05 06 16.3 +0.4
comp=Z,136nm,1.1s,baz=30,slow=5.5
NEUB eP pwP 05 06 27.9 +0.1
PRA Prague 78.33 331 eP P 05 06 17.6 +1.3
PRA ex x 05 06 29.1
PRA AMS AMS 05 44 20.0
comp=Z,1μm,17.2s
PRA Prague 78.33 331 eP P 05 06 17.6 +1.3
PRA e 05 06 29.1
PRA MLR MLR
comp=Z,1μm,17.2s
GOPC GO Pecny, Ondr 78.33 331 eP P 05 06 17.6 +1.2
GOPC epP PcP 05 06 26.5 +0.8
GOPC AMS AMS 05 46 30.0
comp=Z,1μm,18.0s
GOPC GO Pecny, Ondr 78.33 331 eP P 05 06 17.6 +1.2
GOPC e 05 06 26.5
GOPC MLR MLR
comp=Z,1μm,18.0s
PRU Pruhonice 78.36 331 eP P 05 06 17.5 +1.0
PRU epP PcP 05 06 26.3 +0.6
PRU AMS AMS 05 46 40.0
comp=Z,1μm,13.2s
PRU Pruhonice 78.36 331 eP P 05 06 17.5 +1.0
PRU e 05 06 26.3
PRU MLR MLR
comp=Z,1μm,13.2s
SRIG Santa Rosalia 78.37 63 P P 05 06 18.0 +1.1
SRIG IAmb IAmb 05 06 33.3
comp=Z,206nm,1.6s
GOLR 78.40 322 ⇓P P 05 06 18.5 +1.7
ANTO Ankara 78.41 315 ⇓P P 05 06 18.5 +1.4
ANTO Ankara 78.41 315 P P 05 06 18.2 +1.1
ANTO IAmb IAmb 05 06 33.4
comp=Z,126nm,0.8s
ANTO Ankara 78.41 315 IAMs_20 IAMs_20 05 43 38.7
comp=Z,562nm,20.0s
ANTO Ankara 78.41 315 ⇓P P 05 06 18.5 +1.4
LOD Lodumlu 78.41 315 P P 05 06 18.9 +1.8
SGRR Singureni 78.43 321 ⇑P P 05 06 19.0 +2.1
E44A Grand Marais A 78.43 35 P P 05 06 19.6 +2.7
baz=323
BR231 Keskin MP Arra 78.44 315 IAmb IAmb 05 06 33.6
comp=Z,131nm,0.9s
LOT Lotru 78.45 323 ⇓P P 05 06 18.0 +0.8
CAN Canberra 78.46 179 P P 05 06 18.6 +1.6
CAN Canberra 78.46 179 P P 05 06 18.6 +1.6
KRUC Moravsky 78.47 330 eP P 05 06 19.5 +2.4
KRUC e 05 06 30.1
KRUC eS S 05 16 10.3 -0.7
DEV Deva 78.48 324 ⇓P P 05 06 19.3 +2.1
DEV Deva 78.48 324 ⇓P P 05 06 19.3 +2.1
ESK Eskdalemuir 78.53 344 P P 05 06 18.4 +1.2
ESK IAmb IAmb 05 06 31.1
comp=Z,67nm,0.8s
ESK Eskdalemuir 78.53 344 P P 05 06 18.5 +1.2
ESK pmax pmax
comp=Z,67nm,0.8s
GTTG Gottingen 78.54 335 eP P 05 06 18.2 +0.8
comp=Z,86nm,0.9s,baz=30,slow=5.5
GTTG epP pwP 05 06 29.8 +0.4
IBBN Ibbenburen 78.54 336 eP P 05 06 17.9 +0.6
comp=Z,125nm,0.9s,baz=30,slow=5.5
IBBN epP pwP 05 06 29.6 +0.2
SMOL Smolenice 78.54 329 eP P 05 06 19.6 +2.1
SMOL pmax pmax
comp=Z,54nm,0.8s
SMOL Smolenice 78.54 329 eP P 05 06 19.6 +2.1
KOZT Kozan 78.54 311 P P 05 06 18.8 +1.0
NEF NEVSHA 78.57 320 P P 05 06 19.1 +1.3
AFSR Afar-Bala (An 78.58 314 P P 05 06 20.0 +2.0
TREC Trest 78.61 330 eP P 05 06 19.1 +1.2
TREC ex x 05 06 28.7
TREC AMS AMS 05 45 20.0
comp=Z,1μm,14.3s
TREC Trest 78.61 330 eP P 05 06 19.1 +1.2
TREC e 05 06 28.7
TREC MLR MLR
comp=Z,1μm,14.3s
HUMR Humele 78.64 322 ⇓P P 05 06 17.4 -0.8
SERE Sereflikochisa 78.69 314 P P 05 06 20.6 +1.9
SIRR Siria 78.69 325 ⇓P P 05 06 19.6 +1.2
KAAM Kaadhehdhoo 78.69 260 P P 05 06 19.6 +0.7
RAZG Razgrad 78.69 321 ⇑P P 05 06 19.4 +1.0
TANN Tannenbergstha 78.70 333 eP P 05 06 19.1 +0.6
comp=Z,58nm,1.0s,baz=30,slow=5.5
TANN epP pwP 05 06 30.7 +0.2
MODS Modra-Piesok 78.71 329 eP P 05 06 19.5 +1.0
MODS pmax pmax
comp=Z,125nm,1.1s
MODS Modra-Piesok 78.71 329 eP P 05 06 19.5 +1.0
PLN Plauen 78.75 333 eP P 05 06 19.3 +0.7
comp=Z,44nm,1.0s,baz=30,slow=5.5
PLN epP pwP 05 06 30.9 +0.3
MDUB Mudurnu 78.78 316 P P 05 06 20.8 +1.7
MDUB Mudurnu 78.78 316 P P 05 06 19.7 +0.6
MOX Moxa 78.79 333 eP P 05 06 19.5 +0.7
comp=Z,58nm,1.1s,baz=30,slow=5.5
MOX epP pwP 05 06 31.2 +0.3
GUNZ Gunzen 78.79 333 eP P 05 06 19.6 +0.7
comp=Z,52nm,0.8s,baz=30,slow=5.5
GUNZ epP pwP 05 06 31.2 +0.3
PBCC Pribram 78.80 331 eP P 05 06 20.4 +1.4
PBCC ex x 05 06 31.2
SCIA State Center 78.84 42 IAMs_20 IAMs_20 05 40 11.8
comp=Z,988nm,21.0s
COPA Copaceanca 78.84 322 ⇑P P 05 06 20.2 +1.0
WERN Wernitzgruen 78.84 333 eP P 05 06 20.0 +0.8
comp=Z,57nm,0.8s,baz=30,slow=5.5
WERN epP pwP 05 06 31.6 +0.3
NKC Novy Kostel 78.86 333 eP P 05 06 20.2 +0.9
NKC ex x 05 06 30.8
NKC Novy Kostel 78.86 333 eP P 05 06 20.2 +0.9
NKC e 05 06 30.8
GZR Gura Zlata 78.92 324 ⇑P P 05 06 20.8 +1.0
GZR Gura Zlata 78.92 324 ⇑P P 05 06 20.8 +1.0
ZST Bratislava 78.93 329 eP P 05 06 20.3 +0.7
ZST pmax pmax
comp=Z,85nm,1.1s
ZST Bratislava 78.93 329 eP P 05 06 20.3 +0.7
CEYT Ceyhan 78.93 311 P P 05 06 22.1 +2.3
MATQ Matagami 78.97 28 P P 05 06 21.5 +1.6
baz=328,SNR=13
D46A Sault St. Mari 78.98 33 P P 05 06 20.0 0.0
baz=324,SNR=6.2
ORH Orhaniye 79.05 317 P P 05 06 25.2 +4.7
SPNC Sapanca-Adapaz 79.07 317 P P 05 06 21.7 +1.2
KARA Karaisali 79.12 311 P P 05 06 22.8 +1.9
YURE YUREGIR 79.12 311 P P 05 06 23.6 +2.6
TAHT Tahtakopru-Hat 79.14 310 P P 05 06 22.9 +1.8
ZIMR 79.15 321 ⇓P P 05 06 22.4 +1.5
ZIMR 79.15 321 ⇓P P 05 06 22.4 +1.5
GULT Gulveren 79.15 316 P P 05 06 21.7 +0.6
UBBA Unterbreizbach 79.16 334 eP P 05 06 21.4 +0.7
comp=Z,31nm,0.7s,baz=30,slow=5.5
UBBA epP pwP 05 06 33.1 +0.4
MANZ Manzenberg 79.19 333 eP P 05 06 21.8 +0.7
comp=Z,35nm,0.9s,baz=30,slow=5.5
MANZ epP pwP 05 06 33.3 +0.2
D47A Chapleau 79.22 33 P P 05 06 21.2 -0.1
baz=325,SNR=6.2
BZS Buzias 79.23 325 ⇑P P 05 06 22.4 +1.0
BZS Buzias 79.23 325 ⇑P P 05 06 22.4 +1.0
KSU1 Kansas State U 79.24 46 P P 05 06 22.0 +0.5
baz=318,SNR=6.5
HRT Hereke 79.28 317 P P 05 06 23.3 +1.5
E46A Sault Ste Mari 79.30 34 IAMs_20 IAMs_20 05 42 18.3
comp=Z,993nm,22.0s
I42A Draeger Farm, 79.31 38 IAMs_20 IAMs_20 05 44 03.0
comp=Z,771nm,22.0s
VLAD Vladila 79.31 322 ⇓P P 05 06 23.0 +1.2
CHBY Cihanbeyli 79.31 314 P P 05 06 22.4 +0.3
SRE Strehaia 79.32 323 ⇑P P 05 06 23.2 +1.4
SRE Strehaia 79.32 323 ⇑P P 05 06 23.2 +1.4
ROTZ Rotzenmuhle 79.34 333 eP P 05 06 22.9 +1.0
comp=Z,58nm,1.1s,baz=30,slow=5.5
ROTZ epP pwP 05 06 34.6 +0.6
F45A CMU Biological 79.35 35 P P 05 06 22.8 +0.8
baz=324
H43A Windswept, Lux 79.36 37 IAMs_20 IAMs_20 05 42 33.2
comp=Z,851nm,21.0s
SVRH Sivrihisar-ESK 79.38 315 P P 05 06 23.5 +1.1
SRCK Saricakaya, Es 79.39 316 P P 05 06 24.1 +1.7
ISK Istanbul-Kandi 79.40 318 P P 05 06 34.6 +12
KHC Kasperske Hory 79.42 331 eP P 05 06 23.5 +1.1
KHC ex x 05 06 34.8
KHC AMS AMS 05 44 50.0
comp=Z,2μm,15.7s
KHC Kasperske Hory 79.42 331 IAmb IAmb 05 06 36.8
comp=Z,69nm,0.7s
KHC IAMs_20 IAMs_20 05 45 08.7
comp=Z,621nm,18.0s
KHC Kasperske Hory 79.42 331 eP P 05 06 23.5 +1.1
KHC e 05 06 34.8
KHC MLR MLR
comp=Z,2μm,15.7s
BUG Bochum--Univer 79.44 336 eP P 05 06 22.9 +0.5
comp=Z,100nm,0.9s,baz=30,slow=5.5
BUG epP pwP 05 06 34.5 +0.1
KRTS Karatas 79.45 311 P P 05 06 24.8 +2.1
YESY Yesilyurt 79.45 313 P P 05 06 24.3 +1.4
HPK Haverah Park 79.46 342 eP P 05 06 23.5 +1.1
HPK IAmb IAmb 05 06 25.7
comp=Z,90nm,0.8s
JFWS Jewell Farm 79.47 39 P P 05 06 27.4 +4.7
baz=321
ELND Elena 79.48 321 ⇑P P 05 06 23.9 +1.1
CTKS Kestanelik-??a 79.54 318 P P 05 06 23.7 +0.6
AMTX Amarillo 79.56 52 IAmb IAmb 05 06 41.5
comp=Z,80nm,0.9s
AMTX IAMs_20 IAMs_20 05 37 03.7
comp=Z,593nm,22.0s
AMTX Amarillo 79.56 52 P P 05 06 25.7 +2.2
baz=316
MSTX Muleshoe 79.58 53 IAmb IAmb 05 06 39.5
comp=Z,113nm,1.4s
MSTX IAMs_20 IAMs_20 05 45 30.5
comp=Z,714nm,20.0s
MSTX Muleshoe 79.58 53 P P 05 06 26.4 +2.8
baz=316,SNR=7.0
CONA Conrad Observa 79.61 329 epP P 05 06 25.6 +2.1
comp=Z,35nm,0.8s,SNR=18
GEC2 GERESS Array S 79.62 331 eP P 05 06 24.1 +0.6
comp=Z,37nm,0.9s,baz=30,slow=5.5
GEC2 epP pwP 05 06 35.7 +0.2
GERES GERESS Array B 79.62 331 P P 05 06 24.2 +0.6
comp=Z,23nm,0.8s,baz=35,slow=4.9,SNR=130
GERES PKKPbc PKKPbc 05 25 20.1 +10
comp=Z,0.3nm,0.7s,baz=224,slow=2.7,SNR=3.2
GERES LR LR 05 45 16.6
comp=Z,582nm,18.4s,baz=29,slow=38
KIZT Kizilcal 79.62 314 P P 05 06 24.9 +1.1
D48A Paudash Townsh 79.62 32 P P 05 06 25.6 +2.1
baz=326
YLV Yalova 79.62 317 P P 05 06 24.9 +1.2
E47A Iron Bridge 79.64 33 P P 05 06 23.6 0.0
baz=325
WET Wettzell 79.65 332 eP P 05 06 24.8 +1.2
comp=Z,85nm,0.9s,baz=30,slow=5.5
WET epP pwP 05 06 36.3 +0.7
MNTX Cornudas Mount 79.65 56 P P 05 06 25.4 +1.5
baz=315,SNR=26
CAVI Cavuskoy 79.67 317 P P 05 06 25.9 +2.0
L40A Anamosa 79.67 40 IAmb IAmb 05 06 38.5
comp=Z,80nm,0.8s
L40A IAMs_20 IAMs_20 05 45 52.7
comp=Z,776nm,18.0s
CIFT Ciftеler, Eski 79.68 315 P P 05 06 24.8 +0.8
PLVB Pleven 79.69 322 ⇓P P 05 06 24.9 +1.0
MERS Mersin 79.70 312 P P 05 06 25.5 +1.3
D49A Beulah Townshi 79.71 32 P P 05 06 24.0 0.0
baz=326
GRF Grafenberg Arr 79.74 333 eP P 05 06 25.2 +1.2
comp=Z,158nm,0.8s,baz=30,slow=5.5
GRF epP pwP 05 06 36.8 +0.7
GRF eL L 05 46 36.3
comp=Z,1μm,18.9s
PUNG Punghina 79.74 323 ⇓P P 05 06 25.9 +1.8
LSQQ Lebel-sur-Quev 79.80 28 P P 05 06 24.7 +0.3
baz=329
MDVR Moldovita 79.86 324 ⇑P P 05 06 26.7 +1.8
LADK Ladik-KONYA 79.87 314 P P 05 06 26.2 +1.1
ARMT Armutlu 79.88 317 P P 05 06 26.0 +1.0
EDRB Edirne 79.91 319 P P 05 06 26.3 +1.2
EDRB Edirne 79.91 319 P P 05 06 26.7 +1.6
G46A Petoskey 79.92 35 P P 05 06 26.0 +0.9
baz=324
MORH Mrgy, Hungar 79.96 327 eP P 05 06 25.4 +0.1
U32A Winter Ranch, 79.97 49 IAMs_20 IAMs_20 05 44 43.2
comp=Z,592nm,20.0s
CRLT Corlu 79.99 318 P P 05 06 39.9 +14
LBWR Ladybower, Pea 80.00 342 eP P 05 06 26.7 +1.3
LBWR IAmb IAmb 05 06 28.8
comp=Z,171nm,1.0s
MDNY Mudanya-Bursa 80.02 317 P P 05 06 26.8 +1.1
E48A Lockeyer 80.06 33 P P 05 06 25.8 0.0
baz=326
KONT Konya--Tatoy 80.06 314 P P 05 06 27.3 +1.2
WACR West Acre 80.07 340 eP P 05 06 27.8 +2.0
WACR IAmb IAmb 05 06 29.1
comp=Z,192nm,1.0s
MPEP Malo Peshtene 80.11 322 P P 05 06 27.3 +1.1
TNS Taunus Mts 80.16 335 eP P 05 06 27.1 +0.7
comp=Z,73nm,0.8s,baz=30,slow=5.5
TNS epP pwP 05 06 38.7 +0.3
KIZK Mersin 80.19 312 P P 05 06 27.7 +1.0
MOA Molln 80.26 330 eP P 05 06 28.2 +1.3
comp=Z,16nm,0.8s,SNR=10
AHRW Bad Neuenahr-A 80.30 336 eP P 05 06 27.9 +0.9
comp=Z,93nm,1.1s,baz=30,slow=5.5
AHRW epP pwP 05 06 39.5 +0.4
ARSA Arzberg 80.30 329 epP P 05 06 29.7 +2.5
comp=Z,9.8nm,0.8s,SNR=7.5
DIM Dimitrovgrad 80.32 320 P P 05 06 29.0 +1.7
D50A G1974 Best Tow 80.37 31 P P 05 06 27.3 -0.2
baz=327
F48A Evansville 80.42 33 P P 05 06 28.4 +0.6
baz=326
GLMI Grayling 80.42 35 P P 05 06 30.5 +2.7
baz=324
TVSB Tavsanli 80.43 316 P P 05 06 29.4 +1.3
VLDQ Val d'Or 80.44 29 IAmb IAmb 05 06 42.3
comp=Z,72nm,0.8s
VLDQ IAMs_20 IAMs_20 05 45 43.6
comp=Z,738nm,21.0s
KEBE Keben-Mersin 80.45 312 P P 05 06 29.3 +1.1
G47A Hillman 80.45 34 P P 05 06 30.8 +2.8
baz=325
MRMT Marmara Adasi 80.47 318 P P 05 06 29.5 +1.3
CWF Charnwood Fore 80.52 342 eP P 05 06 29.0 +0.9
EDC Edincik 80.53 318 P P 05 06 29.1 +1.4
SHUT Suhut-Afyon 80.55 315 P P 05 06 30.4 +1.6
WME Myndd Eilian 80.56 344 eP P 05 06 29.0 +0.6
PGB Panagyurishte 80.56 321 iP P 05 06 29.5 +0.8
RKY Sarkoy-Tekirda 80.60 318 P P 05 06 39.3 +10
D51A Lot 18 Range I 80.61 31 P P 05 06 29.5 +0.7
baz=327
IKL Isikli 80.62 312 P P 05 06 29.8 +0.8
F49A Sandfield 80.70 33 P P 05 06 29.5 +0.2
baz=326
TOO Toolangi 80.72 182 P P 05 06 30.5 +1.2
TOO Toolangi 80.72 182 P P 05 06 30.5 +1.2
TOO pmax pmax
comp=Z,31nm,1.1s
AKKU Akkuyu-Mersin 80.75 312 P P 05 06 30.6 +0.9
WHFO Wadi Hawf 80.76 286 P P 05 06 29.6 -0.5
SNR=5.5
WHFO P P 05 06 29.6 -0.5
SNR=5.5
GEDZ Gediz 80.76 316 P P 05 06 31.8 +1.9
KRBG Karabiga-Canak 80.77 318 P P 05 06 31.5 +1.7
H47A Mio 80.78 35 P P 05 06 31.7 +1.9
baz=325
BERE Bereket-Mersin 80.79 312 P P 05 06 30.8 +0.7
FOEL Foel Wylfa 80.80 343 eP P 05 06 31.4 +1.7
FOEL IAmb IAmb 05 06 33.3
comp=Z,98nm,0.9s
EREN Erenkoy 80.88 311 P P 05 06 31.5 +1.1
RJOB Jochberg 80.88 331 eP P 05 06 31.6 +1.3
comp=Z,48nm,0.9s,baz=30,slow=5.5
RJOB epP pwP 05 06 43.2 +0.8
N41A Harden Midland 80.89 41 IAMs_20 IAMs_20 05 42 41.2
comp=Z,830nm,20.0s
VTS Vitosha 80.92 322 ⇓P P 05 06 32.1 +1.3
VTS Vitosha 80.92 322 iP P 05 06 32.0 +1.2
VTS Vitosha 80.92 322 IAmb IAmb 05 06 45.6
comp=Z,129nm,0.9s
VTS Vitosha 80.92 322 ⇓P P 05 06 32.1 +1.3
ERIK Erikli-Kesan 80.94 319 P P 05 06 32.1 +1.5
TEKS Tekeris 80.97 325 eP P 05 06 29.2 -1.6
SOKA Soboth 80.97 329 eP P 05 06 31.9 +1.1
comp=Z,22nm,1.1s,SNR=11
PERS Pernice 80.97 329 eP P 05 06 31.6 +0.8
PERS e 05 06 44.0
ALN Alexandroupoli 80.98 319 P P 05 06 31.6 +0.7
ALN Alexandroupoli 80.98 319 IAmb IAmb 05 06 45.5
comp=Z,73nm,0.9s
TEKE Tekeli-Mersin 81.00 312 P P 05 06 31.6 +0.5
RDO Rodhopi 81.03 320 P P 05 06 32.4 +1.3
E51A G1948 Merrick 81.04 31 P P 05 06 31.2 +0.1
baz=327
FUR Furstenfeldbru 81.04 332 eP P 05 06 32.1 +1.0
comp=Z,100nm,0.9s,baz=30,slow=5.5
FUR epP pwP 05 06 43.7 +0.5
LPK Lapseki 81.05 319 P P 05 06 31.1 -0.2
NWAO Narrogin (SRO) 81.05 206 P P 05 06 31.7 +0.7
NWAO IAmb IAmb 05 06 32.7
comp=Z,125nm,0.9s
NWAO Narrogin (SRO) 81.05 206 P P 05 06 31.7 +0.7
NWAO pmax pmax
comp=Z,125nm,1.0s
H48A Harrisville 81.06 34 IAmb IAmb 05 06 47.0
comp=Z,80nm,0.8s
H48A Harrisville 81.06 34 P P 05 06 32.4 +1.2
baz=325
ENEZ Enez 81.06 319 P P 05 06 32.4 +1.1
BALB Balikesir 81.07 317 P P 05 06 32.2 +0.8
HLM1 Long Mynd 81.08 342 eP P 05 06 33.3 +2.1
HLM1 IAmb IAmb 05 06 34.6
comp=Z,80nm,1.0s
ISP Isparta 81.12 315 P P 05 06 31.7 -0.1
ISP Isparta 81.12 315 P P 05 06 31.7 -0.1
ISP pmax pmax
comp=Z,41nm,0.7s
DIVS Divibare 81.14 325 eP P 05 06 32.1 +0.3
GELI Tayfur-Gelibol 81.17 319 P P 05 06 32.6 +0.7
J46A Howard City 81.18 36 P P 05 06 33.4 +1.5
baz=324
STU Stuttgart 81.20 334 eP P 05 06 32.6 +0.7
comp=Z,83nm,0.9s,baz=30,slow=5.5
STU epP pwP 05 06 44.2 +0.3
STU Stuttgart 81.20 334 IAmb IAmb 05 06 46.1
comp=Z,116nm,0.8s
D53A Lac Vacive, Po 81.23 30 P P 05 06 32.5 +0.4
baz=328
BHL Bhannes 81.24 309 eP P 05 06 33.4 +0.9
KBA Koelnbreinsper 81.25 330 eP P 05 06 33.8 +1.4
comp=Z,60nm,1.1s,SNR=22
OBKA Obir 81.29 329 ePcP P 05 06 34.2 +1.7
comp=Z,12nm,0.8s
WMOK Wichita Mounta 81.30 50 IAMs_20 IAMs_20 05 44 49.6
comp=Z,813nm,21.0s
WMOK Wichita Mounta 81.30 50 P P 05 06 33.3 +0.5
baz=318,SNR=33
WLF Walferdange 81.35 336 eP P 05 06 34.8 +2.2
comp=Z,44nm,1.2s,baz=30,slow=5.5
BCK Bucak 81.36 314 P P 05 06 33.7 +0.7
GAZI Gazipasa 81.36 312 P P 05 06 32.9 -0.1
F51A Arnstein 81.38 32 P P 05 06 33.4 +0.5
baz=327
RCY Rachaya 81.43 308 eP P 05 06 34.7 +1.1
ABTO Aybut 81.47 286 P P 05 06 33.9 0.0
SNR=8.1
ABTO P P 05 06 33.9 0.0
SNR=8.1
MMB Musomiste 81.52 321 iP P 05 06 35.5 +1.7
MYKA Terra Mystica 81.52 330 eP P 05 06 34.5 +0.7
comp=Z,15nm,0.7s,SNR=6.2
CRES Cresnjev 81.52 329 eP P 05 06 34.2 +0.5
D54A Lac Fusel, La 81.54 29 P P 05 06 34.0 +0.2
baz=329
KULA Kula-Manisa 81.54 316 P P 05 06 34.9 +0.9
KULA Kula-Manisa 81.54 316 P P 05 06 33.3 -0.7
E52A Mattawa 81.56 31 P P 05 06 33.3 -0.5
baz=328
BBLS Lazići 81.58 325 ⇓iP P 05 06 34.8 +0.7
HAPS Han Pijesak,Bl 81.58 325 eP P 05 06 33.5 -0.7
MCH1 Michaelchurch 81.59 342 eP P 05 06 35.2 +1.3
MCH1 IAmb IAmb 05 06 37.3
comp=Z,81nm,0.8s
STRD Stroud 81.61 342 eP P 05 06 36.0 +2.0
MANT Manisa 81.61 316 P P 05 06 34.9 +0.3
J47A Sumner 81.62 36 IAmb IAmb 05 06 50.6
comp=Z,106nm,1.0s
J47A Sumner 81.62 36 P P 05 06 35.0 +0.7
baz=324
KAVA Kavala 81.62 320 P P 05 06 35.4 +1.1
NVR Nevrokopi 81.65 321 P P 05 06 35.4 +0.9
WATA Walderalm 81.65 332 eP P 05 06 35.6 +1.1
comp=Z,36nm,0.8s,SNR=16
K46A Dorr 81.65 37 P P 05 06 35.2 +0.8
baz=324
M44A Midewin, Midew 81.68 39 IAMs_20 IAMs_20 05 43 17.7
comp=Z,922nm,22.0s
EZN Ezine 81.68 318 P P 05 06 35.4 +0.9
EZN Ezine 81.68 318 P P 05 06 35.5 +0.9
WTTA Wattenberg 81.69 332 eP P 05 06 35.6 +0.8
comp=Z,32nm,0.7s,SNR=15
LJU Ljubljana 81.69 329 eP P 05 06 36.1 +1.5
LJU e 05 06 47.1
LJU Ljubljana 81.69 329 eP P 05 06 34.9 +0.3
F52A Sundridge 81.72 31 P P 05 06 35.1 +0.3
baz=328
BLY Banja Luka 81.75 327 ⇓P P 05 06 35.9 +1.0
BLY Banja Luka 81.75 327 eP P 05 06 36.4 +1.5
BLY Banja Luka 81.75 327 IAMs_20 IAMs_20 05 46 20.6
comp=Z,809nm,19.0s
HDIL Hopedale 81.75 40 P P 05 06 35.6 +0.6
baz=322,SNR=9.9
CSS Mathiatis 81.76 311 IAMs_20 IAMs_20 05 42 20.5
comp=Z,721nm,22.0s
SWN1 Swindon 81.77 341 eP P 05 06 37.2 +2.3
SWN1 IAmb IAmb 05 06 38.2
comp=Z,231nm,0.8s
RUDO Rudo 81.79 325 eP P 05 06 33.9 -1.3
RETA Reutte 81.80 332 ePcP P 05 06 36.6 +1.4
comp=Z,32nm,0.9s,SNR=12
MOTA Moosalm 81.80 332 eP P 05 06 36.2 +0.9
comp=Z,63nm,1.1s,SNR=18
ABTA Abfaltersbach 81.83 331 eP P 05 06 36.6 +1.2
comp=Z,8.8nm,0.8s
KORT Korkueli 81.83 314 P P 05 06 37.1 +1.5
E53A Dumoine, Ponti 81.84 30 P P 05 06 35.5 +0.2
baz=328
UBR Ueberruh 81.85 333 eP P 05 06 36.3 +0.8
baz=30,slow=5.5
UBR epP sP 05 06 46.5 -0.8
HMNX Herstmonceux 81.85 340 eP P 05 06 37.9 +2.6
HMNX IAmb IAmb 05 06 39.9
comp=Z,397nm,0.9s
BFO Black Forest 81.86 334 eP P 05 06 36.2 +0.7
comp=Z,41nm,1.0s,baz=30,slow=5.5
BFO epP pwP 05 06 47.8 +0.3
BFO Black Forest 81.86 334 P P 05 06 36.1 +0.6
BFO IAmb IAmb 05 06 49.1
comp=Z,69nm,0.8s
BFO Black Forest 81.86 334 P P 05 06 36.1 +0.6
BFO pmax pmax
comp=Z,69nm,0.8s
SQTA Sankt Quirin 81.88 332 eP P 05 06 36.6 +0.9
comp=Z,18nm,0.6s,SNR=13
LEF Lefka 81.88 311 ⇓P P 05 06 36.9 +1.2
LEF Lefka 81.88 311 P P 05 06 36.9 +1.2
I49A Point Hope 81.89 34 P P 05 06 36.7 +1.1
baz=326
X34A Smith Ranch, M 81.92 49 IAmb IAmb 05 06 52.2
comp=Z,144nm,1.2s
SRS Serrai 81.95 321 P P 05 06 36.4 +0.3
E54A Lac Daplat, Po 81.97 30 P P 05 06 36.2 +0.2
baz=329
L46A Eue Claire 81.97 38 IAMs_20 IAMs_20 05 43 28.1
comp=Z,590nm,20.0s
L46A Eue Claire 81.97 38 P P 05 06 36.8 +0.7
baz=324
CEY Cerknica 81.99 329 eP P 05 06 37.0 +0.8
DKL Dikili 81.99 318 P P 05 06 48.7 +12
K47A Vermontville 82.00 36 P P 05 06 36.8 +0.5
baz=324
RSBS Rosebush, Pemb 82.01 343 eP P 05 06 38.0 +1.9
J48A Bridge Port 82.01 35 P P 05 06 37.8 +1.5
baz=325

TUL1 Leonard 82.06 47 IAmb IAmb 05 06 53.9
comp=Z,58nm,0.8s
TUL1 IAMs_20 IAMs_20 05 45 14.4
comp=Z,693nm,21.0s
ALGO Algonquin Park 82.06 30 P P 05 06 38.3 +1.9
baz=328
D55A Sainte-Anne-du 82.07 28 P P 05 06 36.9 +0.3
baz=330
MGRS Mrkonjic Grad 82.07 327 eP P 05 06 37.7 +1.1
STIP Stip 82.13 322 i P P 05 06 36.8 -0.2
PRK Paraskevi 82.16 318 P P 05 06 38.7 +1.6
STAL STALIGIAL 82.17 330 IAmb IAmb 05 06 49.9
comp=Z,80nm,0.7s
LIA Limnos Island 82.17 319 P P 05 06 37.8 +0.6
FETA Feichten 82.21 332 ePcP P 05 06 38.9 +1.4
comp=Z,12nm,0.9s,SNR=5.9
J49A Marlette 82.23 35 P P 05 06 39.1 +1.7
baz=325
KNT Kendrikon 82.24 321 P P 05 06 38.3 +0.8
SKO Skopje 82.24 323 i P P 05 06 39.0 +1.5
ELL Elmali 82.25 314 P P 05 06 38.9 +1.1
TRI Trieste 82.26 329 P P 05 06 38.7 +1.2
TRI IAmb IAmb 05 06 50.5
comp=Z,72nm,0.8s
TRI Trieste 82.26 329 P P 05 06 38.7 +1.2
TRI pmax pmax
comp=Z,72nm,0.8s
VAY Valandovo 82.26 322 i P P 05 06 38.6 +1.0
DAVA Damuels 82.27 333 eP P 05 06 38.7 +0.9
comp=Z,41nm,0.8s,SNR=14
K48A Perry 82.27 36 P P 05 06 39.0 +1.3
baz=325
D56A ZEC Mazanza, M 82.29 28 P P 05 06 38.1 +0.4
baz=330
RIY Rijeka 82.31 329 eP P 05 06 49.0 +11
UPM Unac-Piva 82.33 325 eP P 05 06 38.4 +0.2
ECH Echery 82.33 335 IAmb IAmb 05 06 51.4
comp=Z,70nm,0.8s
E55A Montcerf-Lytto 82.35 29 P P 05 06 41.0 +3.0
baz=330
ABTX Abilene, Hawle 82.36 52 IAMs_20 IAMs_20 05 48 01.0
comp=Z,658nm,20.0s
P43A Skaggs, Pawnee 82.36 41 IAmb IAmb 05 06 53.4
comp=Z,108nm,0.8s
P43A IAMs_20 IAMs_20 05 41 41.1
comp=Z,963nm,22.0s
AYDB Zeytinkoy-Aydi 82.37 316 P P 05 06 39.7 +1.3
TX31 Lajitas Ar. SI 82.37 57 IAmb IAmb 05 06 54.1
comp=Z,62nm,0.8s
TX32 Lajitas Array 82.37 57 P P 05 06 39.3 +0.7
TX32 IAmb IAmb 05 06 54.1
comp=Z,64nm,0.8s
TXAR Lajitas Array 82.37 57 P P 05 06 39.9 +1.3
comp=Z,8.8nm,0.8s,baz=298,slow=4.0,SNR=79
TXAR PP PP 05 10 00.4 +13
comp=Z,3.9nm,1.0s,baz=289,slow=3.8,SNR=3.7
TXAR PKKPbc PKKPbc 05 25 06.5 +3.3
comp=Z,0.9nm,0.8s,baz=146,slow=5.6,SNR=10
TXAR PKP2bc 05 32 49.4
comp=Z,0.3nm,0.8s,baz=216,slow=6.2,SNR=3.6
TXAR LR LR 05 38 30.0
comp=Z,134nm,21.9s,baz=0.0,slow=32
SIGR SIGRI 82.39 318 P P 05 06 38.8 +0.5
OUR Ouranopolis 82.39 320 P P 05 06 38.6 +0.3
U38A Gravette 82.40 46 IAMs_20 IAMs_20 05 46 13.5
comp=Z,619nm,21.0s
BLCB Balcova 82.45 317 P P 05 06 32.2 -6.5
H52A Wyevale 82.47 32 P P 05 06 38.9 +0.3
baz=327
L47A Sherwood 82.48 37 P P 05 06 39.4 +0.6
baz=324
G54A Lake Saint Pet 82.52 31 P P 05 06 39.0 +0.1
baz=328
G53A Haliburton 82.55 31 P P 05 06 39.7 +0.6
baz=328
RAYN Ar Rayn 82.56 295 P P 05 06 40.5 +0.9
RAYN IAmb IAmb 05 06 54.2
comp=Z,94nm,1.3s
RAYN Ar Rayn 82.56 295 P P 05 06 40.5 +0.9
RAYN pmax pmax
comp=Z,94nm,1.3s
RAYN MLR MLR
comp=Z,900nm,20.0s
K49A Clarkson 82.57 35 P P 05 06 41.1 +1.8
baz=325
D57A Chemin Vers le 82.61 27 P P 05 06 40.1 +0.7
baz=331,SNR=9.0
GRG Griva 82.63 322 P P 05 06 39.3 -0.3
E56A St. Veronique 82.63 28 P P 05 06 40.3 +0.9
baz=330
LATQ La Tuque 82.65 26 P P 05 06 43.4 +3.9
baz=332
SADO Sadowa 82.65 32 IAMs_20 IAMs_20 05 44 47.0
comp=Z,568nm,20.0s
URLA Izmir 82.69 317 P P 05 06 40.8 +0.8
FUORN Ofenpass-Fuorn 82.72 332 P P 05 06 41.7 +1.4
FUORN IAmb IAmb 05 06 54.4
comp=Z,88nm,0.8s
BRY Bratogost 82.73 325 eP P 05 06 40.0 -0.2
I51A Listowel 82.73 33 P P 05 06 44.1 +4.0
baz=327
CTI Castel Tesino 82.73 331 IAmb IAmb 05 06 53.1
comp=Z,74nm,0.7s
HHAR Hobbs 82.75 46 IAmb IAmb 05 06 55.4
comp=Z,64nm,1.0s
CCM Cathedral Cave 82.76 43 P P 05 06 40.8 +0.5
CCM Cathedral Cave 82.76 43 IAMs_20 IAMs_20 05 46 11.8
comp=Z,778nm,20.0s
CCM Cathedral Cave 82.76 43 P P 05 06 40.8 +0.5
CCM pmax pmax
comp=Z,128nm,0.9s
CCM MLR MLR
comp=Z,800nm,20.0s
CCM Cathedral Cave 82.76 43 P P 05 06 40.8 +0.5
baz=321
FETY Fethiye 82.76 315 P P 05 06 40.8 +0.4
FETY Fethiye 82.76 315 P P 05 06 33.1 -7.3
F55A Otter Lake 82.78 29 P P 05 06 43.7 +3.5
baz=329
YER Yerkesik 82.79 316 P P 05 06 42.0 +1.4
YER Yerkesik 82.79 316 P P 05 06 42.3 +1.7
AKAS Kas 82.80 314 P P 05 06 39.7 -1.0
PDG Podgorica 82.81 324 ⇑P P 05 06 41.3 +0.8
PDG Podgorica 82.81 324 ⇓ i P P 05 06 40.7 +0.2
PDG Podgorica 82.81 324 IAMs_20 IAMs_20 05 48 50.7
comp=Z,809nm,20.0s
L48A N Adams 82.84 36 P P 05 06 41.5 +0.8
baz=325,SNR=6.2
DALY Dalyan (Mula) 82.85 315 P P 05 06 42.1 +1.4
PAIG Paliouri 82.86 320 P P 05 06 41.2 +0.4
D58A Chemin du LacG 82.87 27 P P 05 06 41.3 +0.6
baz=332
AAM Ann Arbor 82.88 36 IAMs_20 IAMs_20 05 48 09.3
comp=Z,670nm,20.0s
AAM Ann Arbor 82.88 36 P P 05 06 42.1 +1.2
baz=325
GCAM G?zelcaml? 82.89 317 P P 05 06 42.1 +1.2
PHP Peshkopia 82.91 323 P P 05 06 41.3 +0.2
SFIN Lafayette 82.92 39 IAmb IAmb 05 06 56.2
comp=Z,78nm,0.9s
SFIN Lafayette 82.92 39 P P 05 06 41.8 +0.8
baz=323
CHOS Chios island 82.94 318 P P 05 06 42.0 +0.7
MGMO Mountain Grove 82.94 44 IAmb IAmb 05 06 55.7
comp=Z,59nm,0.9s
MGMO IAMs_20 IAMs_20 05 49 10.7
comp=Z,751nm,19.0s
TREB Trebinje 82.96 325 eP P 05 06 40.3 -0.9
L49A Milan 82.99 36 P P 05 06 42.7 +1.2
baz=325
H53A Bobcaygeon 83.03 31 P P 05 06 44.7 +3.1
baz=328
DRME Dracevica, Mon 83.04 324 ⇓ i P P 05 06 42.1 +0.4
E57A Chemin Saint G 83.05 28 P P 05 06 42.5 +0.8
baz=331
SMG Samos 83.08 317 P P 05 06 41.8 -0.2
TURN Turunc 83.09 315 P P 05 06 43.1 +1.1
STON Ston 83.10 326 i Pg P 05 06 41.1 -0.9
STON Ston 83.10 326 eP P 05 06 40.6 -1.3
HCY Herceg Novi 83.12 325 eP P 05 06 41.9 -0.2
G55A Calabogie 83.15 30 P P 05 06 43.0 +0.8
baz=329
N47A Urbana 83.15 38 P P 05 06 42.9 +0.6
baz=324
TUE Stuetta 83.16 333 P P 05 06 43.7 +1.2
TUE IAmb IAmb 05 06 59.4

comp=Z,74nm,0.8s
Z35A Perchaven, San 83.19 50 IAMs_20 IAMs_20 05 45 01.7
comp=Z,584nm,21.0s
PLVO Plevna 83.20 30 IAmb IAmb 05 06 58.1
comp=Z,67nm,0.7s
PLVO IAMs_20 IAMs_20 05 42 56.3
comp=Z,912nm,22.0s
OHR Ohrid 83.22 323 i P P 05 06 43.1 +0.4
U40A Yellville 83.26 45 IAMs_20 IAMs_20 05 46 34.2
comp=Z,698nm,20.0s
U40A Yellville 83.26 45 P P 05 06 43.4 +0.4
baz=320,SNR=20
TAOE Nuku Hiva Isla 83.27 109 eS S 05 16 57.7 -4.3
comp=Z,151nm,26.6s
TAOE Nuku Hiva Isla 83.27 109 eLR LR 05 32 43.5
comp=Z,650nm,22.2s
TAOE Nuku Hiva Isla 83.27 109 eT T 06 38 26.3
comp=Z,16nm,0.2s
LIT Litokhoron 83.27 321 P P 05 06 42.9 0.0
I53A Kortright Cn E 83.28 32 P P 05 06 46.3 +3.5
baz=328
BODT Bodrum 83.34 316 P P 05 06 43.6 +0.2
BODT Bodrum 83.34 316 P P 05 06 42.9 -0.5
AOS Alonnisos 83.37 320 P P 05 06 43.9 +0.5
E58A La Victoria 83.37 27 P P 05 06 43.6 +0.3
baz=331
J52A Paris 83.42 33 P P 05 06 44.7 +1.1
baz=327,SNR=5.2
M49A Liberty Center 83.42 36 P P 05 06 45.0 +1.3
baz=325
K51A Iona Station 83.43 34 P P 05 06 45.3 +1.6
baz=326
KZN Kozani 83.43 322 P P 05 06 43.7 -0.2
TIR Tirane 83.44 323 ⇑P P 05 06 44.9 +1.2
TIR Tirane 83.44 323 P P 05 06 44.6 +0.9
TIR IAMs_20 IAMs_20 05 46 37.3
comp=Z,960nm,22.0s
TIR Tirane 83.44 323 ⇑P P 05 06 44.9 +1.2
DELO Deloro Mine 83.44 31 IAMs_20 IAMs_20 05 47 06.8
comp=Z,855nm,21.0s
L50A Kingsville 83.45 35 P P 05 06 45.2 +1.4
baz=326
N48A Decatur 83.46 37 P P 05 06 44.7 +0.8
baz=324,SNR=11
PPT Papeete 83.46 122 LR LR 05 37 39.9
comp=Z,244nm,21.2s,baz=344,slow=31
PPT2 Papeete2 83.48 122 eS S 05 16 59.4 -4.5
comp=Z,104nm,24.8s
PPT2 Papeete2 83.48 122 eLR LR 05 32 45.7
comp=Z,478nm,22.2s
PPT2 Papeete2 83.48 122 eT T 06 38 41.4
comp=Z,6.0nm,0.3s
SALO Salr 83.50 331 P P 05 06 44.8 +0.7
PAE Paea 83.53 122 eT T 06 38 44.7
comp=Z,1.8nm,0.4s
SKIA Skiathos 83.56 320 P P 05 06 43.1 -1.3
NEO Neokhori 83.57 320 P P 05 06 44.4 -0.1
H55A Tweed 83.58 31 P P 05 06 45.5 +1.1
baz=329
ARG Arkhangelos 83.58 315 P P 05 06 45.4 +0.8
TIAR Tiarei 83.60 121 eT T 06 38 49.7
comp=Z,2.9nm,0.3s
D61A St Aubert, Com 83.63 25 P P 05 06 46.2 +1.6
baz=333
D60A Saint Jean D'O 83.66 26 P P 05 06 45.4 +0.6
baz=333
W39A Magazine 83.66 46 IAmb IAmb 05 07 00.5
comp=Z,94nm,1.1s
W39A IAMs_20 IAMs_20 05 46 14.0
comp=Z,685nm,19.0s
W39A Magazine 83.66 46 P P 05 06 46.3 +1.3
baz=320,SNR=6.1
NEST Nestorio 83.67 322 P P 05 06 45.1 0.0
K52A Tillsonburg 83.71 34 P P 05 06 45.9 +0.8
baz=327,SNR=5.2
OLIL Olney 83.76 41 P P 05 06 47.0 +1.6
OLIL IAmb IAmb 05 07 00.5
comp=Z,73nm,0.8s
OLIL IAMs_20 IAMs_20 05 42 34.9
comp=Z,949nm,22.0s
CCA1 Carnmenellis 83.78 343 eP P 05 06 46.3 +1.0
N49A Columbus Grove 83.78 37 IAmb IAmb 05 07 00.7
comp=Z,82nm,0.8s
N49A Columbus Grove 83.78 37 P P 05 06 45.9 +0.3
baz=325,SNR=12
JCT Junction City 83.84 53 IAMs_20 IAMs_20 05 48 54.3
comp=Z,558nm,19.0s
JCT Junction City 83.84 53 P P 05 06 47.5 +1.4
baz=318,SNR=11
MRKA Markates 83.87 319 P P 05 06 46.1 0.0
M50A Fremont 83.88 36 IAmb IAmb 05 07 01.0
comp=Z,56nm,0.8s
M50A IAMs_20 IAMs_20 05 48 30.8
comp=Z,840nm,20.0s
M50A Fremont 83.88 36 P P 05 06 46.7 +0.7
baz=326
O48A Farmland 83.89 38 P P 05 06 46.6 +0.5
baz=324
G57A Newington 83.89 29 P P 05 06 46.1 +0.2
baz=330,SNR=5.5
SENIN Lac Senin/Sane 83.93 334 IAmb IAmb 05 07 00.6
comp=Z,66nm,0.7s
CLF Chambon-Foret 83.94 338 P P 05 06 47.6 +1.4
E60A Ste Agathe de 83.98 26 P P 05 06 47.8 +1.4
baz=333
FCAR Ozark Folk Cen 83.99 45 IAmb IAmb 05 07 01.2
comp=Z,79nm,0.9s
F59A Saint Guilaume 84.00 27 P P 05 06 47.0 +0.5
baz=332
KARY Karystos 84.00 318 P P 05 06 46.5 -0.2
JVM Valle D.L. Mar 84.00 341 eP P 05 06 48.8 +2.3
JSA Saint Aubin 84.02 341 eP P 05 06 48.5 +1.9
JSA IAmb IAmb 05 06 49.8
comp=Z,109nm,0.9s
WHTX Lake Whitney, 84.07 51 IAmb IAmb 05 07 03.2
comp=Z,143nm,1.4s
WHTX IAMs_20 IAMs_20 05 49 03.2
comp=Z,607nm,20.0s
WHTX Lake Whitney, 84.07 51 P P 05 06 49.4 +2.2
baz=319,SNR=7.7
D62A Allapoint, All 84.08 24 IAmb IAmb 05 07 01.4
comp=Z,56nm,0.7s
D62A Allapoint, All 84.08 24 P P 05 06 47.6 +0.7
baz=334,SNR=7.0
PBMO Poplar Bluff 84.16 43 P P 05 06 48.8 +1.2
PBMO IAMs_20 IAMs_20 05 46 54.9
comp=Z,787nm,19.0s
F60A Warwick 84.17 27 P P 05 06 49.2 +1.9
baz=332
PECO Prince Edward 84.17 31 IAMs_20 IAMs_20 05 47 39.2
comp=Z,729nm,20.0s
G58A Ormstown 84.18 28 P P 05 06 48.0 +0.5
baz=331,SNR=6.8
LKR Lokris 84.19 320 P P 05 06 47.4 -0.3
AGG Agios Georgios 84.21 320 IAMs_20 IAMs_20 05 46 02.9
comp=Z,707nm,19.0s
E61A Lac Etchemin 84.22 26 P P 05 06 50.0 +2.3
baz=333
APE Apeiranthos 84.23 317 P P 05 06 46.4 -1.5
APE Apeiranthos 84.23 317 ⇓P P 05 06 47.9 0.0
APE Apeiranthos 84.23 317 ⇓P P 05 06 47.9 0.0
AMGA Amorgos Island 84.23 317 P P 05 06 47.4 -0.5
PTL Penteli 84.26 319 P P 05 06 47.5 -0.6
MIAR Mount Ida 84.27 47 IAMs_20 IAMs_20 05 47 29.0
comp=Z,744nm,21.0s
MIAR Mount Ida 84.27 47 P P 05 06 49.1 +1.0
baz=320,SNR=30
H57A Richville 84.31 30 P P 05 06 51.6 +3.5
baz=330
MAKR Makrakomi, Fth 84.31 321 P P 05 06 47.5 -0.8
O49A Covington 84.31 37 IAMs_20 IAMs_20 05 42 07.4
comp=Z,682nm,22.0s
O49A Covington 84.31 37 P P 05 06 48.9 +0.6
baz=325
PRMA PARMA 84.31 331 IAmb IAmb 05 07 02.5
comp=Z,84nm,0.9s
LCAR Lake Charles 84.35 44 P P 05 06 50.0 +1.5
LCAR IAmb IAmb 05 07 04.7
comp=Z,69nm,1.3s
LCAR IAMs_20 IAMs_20 05 45 55.0
comp=Z,776nm,22.0s
N50A Nevada 84.35 36 P P 05 06 49.4 +1.0
baz=326
WHAR Wooly Hollow 84.37 45 IAMs_20 IAMs_20 05 47 09.7
comp=Z,666nm,19.0s
JAN Janina 84.37 322 P P 05 06 49.4 +0.8
D63A Stockholm 84.40 24 P P 05 06 48.9 +0.4

baz=335
P48A Milroy 84.42 39 IAmb IAmb 05 07 03.3
comp=Z,43nm,0.8s
P48A IAMs_20 IAMs_20 05 47 31.2
comp=Z,644nm,20.0s
P48A Milroy 84.42 39 P P 05 06 49.5 +0.7
baz=324,SNR=9.5
J55A Hilton 84.44 32 P P 05 06 50.7 +1.9
baz=329
ZCCA Zocca 84.44 330 P P 05 06 50.0 +1.1
F61A St Evariste 84.47 26 P P 05 06 50.3 +1.4
baz=333
M52A Chesterland 84.48 35 IAMs_20 IAMs_20 05 43 46.5
comp=Z,586nm,20.0s
M52A Chesterland 84.48 35 P P 05 06 50.2 +1.1
baz=327
W41B Gary Mavity, V 84.48 46 IAmb IAmb 05 07 04.6
comp=Z,100nm,1.0s
W41B Gary Mavity, V 84.48 46 P P 05 06 50.6 +1.4
baz=321,SNR=21
SOCY Socotra 84.49 281 P P 05 06 48.3 -1.3
SOCY IAmb IAmb 05 06 49.8
comp=Z,91nm,1.2s
EVR Evrytania 84.53 321 P P 05 06 49.3 -0.2
G59A Clarenceville 84.54 28 P P 05 06 52.4 +3.1
baz=332,SNR=6.7
ERPA Erie 84.55 34 IAMs_20 IAMs_20 05 47 05.5
comp=Z,734nm,20.0s
N51A Ashland 84.56 36 IAmb IAmb 05 07 11.2
comp=Z,59nm,0.9s
N51A IAMs_20 IAMs_20 05 47 10.9
comp=Z,877nm,21.0s
N51A Ashland 84.56 36 P P 05 06 50.4 +0.9
baz=326
USIN University of 84.58 41 IAMs_20 IAMs_20 05 45 04.6
comp=Z,756nm,20.0s
L53A Girard 84.58 34 P P 05 06 50.7 +1.1
baz=327,SNR=22
PARMO Parma 84.59 43 IAMs_20 IAMs_20 05 47 29.2
comp=Z,690nm,21.0s
DGAR Diego Garcia 84.60 255 P P 05 06 51.1 +1.1
DGAR Diego Garcia 84.60 255 P P 05 06 51.1 +1.1
DGAR pmax pmax
comp=Z,991nm,1.8s
FRNY Flat Rock 84.61 28 IAMs_20 IAMs_20 05 45 50.6
comp=Z,837nm,22.0s
IOSP Ios island 84.62 317 P P 05 06 48.3 -1.5
MEH Mehetia 84.64 121 eT T 06 40 07.4
comp=Z,39nm,0.3s
K54A Basiliko Farm, 84.66 33 P P 05 06 50.9 +0.9
baz=328
O50A Cable 84.66 37 P P 05 06 51.1 +1.0
baz=325,SNR=5.9
P49A Miami Univ. Ec 84.68 38 P P 05 06 50.6 +0.5
baz=325,SNR=12
HENM Henderson Moun 84.69 43 IAMs_20 IAMs_20 05 45 04.8
comp=Z,732nm,21.0s
Q48A North Vernon 84.71 39 P P 05 06 51.2 +1.0
baz=324,SNR=10
X40A Basin Creek Fa 84.71 46 IAMs_20 IAMs_20 05 47 59.6
comp=Z,688nm,21.0s
IGT Igoumenitsa 84.71 322 P P 05 06 50.2 -0.1
L54A Sinclairville 84.72 33 P P 05 06 51.1 +0.8
baz=328
UALR University of 84.74 46 IAMs_20 IAMs_20 05 47 12.5
comp=Z,645nm,22.0s
ANX Ano Chora 84.74 320 P P 05 06 50.1 -0.5
H59A Cadyville 84.75 28 P P 05 06 50.9 +0.5
baz=331,SNR=6.8
BATG Bathurst New B 84.77 22 IAmb IAmb 05 07 05.2
comp=Z,52nm,0.8s
H58A Gabriels 84.78 29 P P 05 06 51.1 +0.5
baz=331,SNR=5.2
J56A Wolcott 84.79 31 IAMs_20 IAMs_20 05 47 46.5
comp=Z,674nm,20.0s
K55A Perry 84.80 32 P P 05 06 51.4 +0.8
baz=328
KEK Kerkira 84.80 322 P P 05 06 50.8 +0.1
KALE Kalithea 84.81 320 P P 05 06 50.6 -0.2
SANT Santorini 84.81 317 P P 05 06 50.6 -0.3
SANT IAmb IAmb 05 07 02.9
comp=Z,85nm,1.0s
PENMO Penman 84.82 43 IAMs_20 IAMs_20 05 48 33.3
comp=Z,809nm,22.0s
SERG Sergoula 84.83 320 P P 05 06 49.8 -1.1
SGRT San Giovanni R 84.83 326 P P 05 06 50.4 -0.5
SGRT IAmb IAmb 05 07 04.1
comp=Z,72nm,1.1s
SGRT IAMs_20 IAMs_20 05 48 33.1
comp=Z,484nm,18.0s
M53A WI Miller and 84.84 34 P P 05 06 51.9 +1.0
baz=327
TRIZ Trizonia 84.86 320 P P 05 06 50.4 -0.6
WVNY West Valley, N 84.86 33 IAmb IAmb 05 07 06.9
comp=Z,69nm,0.8s
ACSO Alum Creek Sta 84.87 37 IAmb IAmb 05 07 06.3
comp=Z,74nm,0.8s
ACSO IAMs_20 IAMs_20 05 46 23.1
comp=Z,715nm,21.0s
ACSO Alum Creek Sta 84.87 37 P P 05 06 51.8 +0.8
baz=326
ALLY Alegheny Colle 84.88 34 IAMs_20 IAMs_20 05 44 09.2
comp=Z,703nm,20.0s
435B Jarrell 84.90 52 IAMs_20 IAMs_20 05 47 56.0
comp=Z,602nm,22.0s
G61A St-Isidore-de- 84.91 27 P P 05 06 52.3 +1.1
baz=333
PEBM Pemiscott Bayo 84.97 43 IAMs_20 IAMs_20 05 44 51.3
comp=Z,538nm,20.0s
DRLN Deer Lake 84.99 16 IAmb IAmb 05 07 06.9
comp=Z,98nm,1.1s
DID Didima 85.00 319 P P 05 06 49.8 -2.0
J57A Williamstown 85.00 30 IAMs_20 IAMs_20 05 45 28.9
comp=Z,795nm,20.0s
J57A Williamstown 85.00 30 P P 05 06 53.6 +2.0
baz=330
GNAR Gosnell 85.01 44 IAMs_20 IAMs_20 05 46 57.3
comp=Z,745nm,21.0s
WCI Wyandotte Cave 85.01 40 P P 05 06 52.8 +1.0
WCI IAmb IAmb 05 07 07.3
comp=Z,74nm,0.9s
WCI Wyandotte Cave 85.01 40 P P 05 06 52.8 +1.0
WCI Wyandotte Cave 85.01 40 P P 05 06 52.7 +0.9
baz=324
P50A Jamestown 85.02 37 P P 05 06 52.7 +0.8
baz=325,SNR=5.9
Q49A Aurora 85.03 38 P P 05 06 52.8 +1.0
baz=325,SNR=11
E64A Bridgewater 85.05 24 P P 05 06 53.3 +1.5
baz=335
OSSC Osservatorio P 85.06 330 IAmb IAmb 05 07 05.7
comp=Z,73nm,0.9s
OSSC IAMs_20 IAMs_20 05 51 44.0
comp=Z,812nm,20.0s
KLV Kalavryta, Ach 85.08 320 P P 05 06 50.8 -1.4
O51A Pataskala 85.10 36 P P 05 06 53.3 +1.1
baz=326,SNR=7.5
K56A Middlesex 85.11 32 P P 05 06 53.0 +0.8
baz=329
L55A Hinsdale 85.12 33 P P 05 06 55.7 +3.4
baz=328
GLAT Glass 85.13 43 IAMs_20 IAMs_20 05 48 05.5
comp=Z,895nm,22.0s
LPAR Lepanto 85.15 44 IAMs_20 IAMs_20 05 46 52.1
comp=Z,612nm,21.0s
NCB Newcomb 85.15 29 IAMs_20 IAMs_20 05 50 29.8
comp=Z,769nm,20.0s
H60A Morristown 85.16 28 P P 05 06 53.3 +0.8
baz=332,SNR=5.9
WLAR White Oak Lake 85.17 47 IAMs_20 IAMs_20 05 48 07.0
comp=Z,635nm,20.0s
M54A Oil Creek Stat 85.20 34 IAmb IAmb 05 07 08.8
comp=Z,74nm,0.8s
M54A Oil Creek Stat 85.20 34 P P 05 06 53.6 +0.9
baz=328
AQU L'Aquila 85.25 328 eP P 05 06 54.2 +1.2
AQU L'Aquila 85.25 328 P P 05 06 53.8 +0.8
AQU IAmb IAmb 05 07 08.7
comp=Z,67nm,0.8s
AQU L'Aquila 85.25 328 P P 05 06 53.8 +0.8
AQU pmax pmax
comp=Z,67nm,0.8s
BNI Bardonecchia 85.29 334 IAmb IAmb 05 07 07.9
comp=Z,47nm,0.8s
G62A West of Eustis 85.29 26 IAmb IAmb 05 07 09.8
comp=Z,51nm,0.8s
G62A West of Eustis 85.29 26 P P 05 06 56.5 +3.4

	baz=333						
J58A	Remsen	85.30	30	IAmb	IAmb	05 07 08.7	
	comp=Z,58nm,0.8s						
J58A	Remsen	85.30	30	P	P	05 06 56.5	+3.4
	baz=330,SNR=5.3						
N53A	Lisbon	85.31	35	IAmb	IAmb	05 07 15.2	
	comp=Z,118nm,1.2s						
N53A				IAMs_20	IAMs_20	05 45 44.4	
	comp=Z,924nm,22.0s						
N53A	Lisbon	85.31	35	P	P	05 06 54.3	+1.1
	baz=327						
INTR	Introdacqua	85.35	327	IAmb	IAmb	05 07 07.9	
	comp=Z,58nm,0.8s						
DRO	Drossia	85.36	320	P	P	05 06 53.9	+0.3
MATE	Matera	85.36	325	⇑P	P	05 06 54.0	+0.5
K57A	Scipio Center	85.39	31	P	P	05 06 55.4	+1.8
	baz=330						
RLS	Riolos of Patr	85.39	320	P	P	05 06 53.7	0.0
HALT	Halls	85.39	43	IAMs_20	IAMs_20	05 48 02.3	
	comp=Z,592nm,21.0s						
F64A	Sherman	85.39	24	P	P	05 06 55.7	+2.1
	baz=335						
ZKR	Zakros	85.41	316	P	P	05 06 54.9	+1.0
I59A	Olmsteadville	85.42	29	P	P	05 06 54.3	+0.5
	baz=331						
H61A	Lyndonville	85.44	27	P	P	05 06 54.7	+0.8
	baz=332						
P51A	Williamsport	85.45	37	IAmb	IAmb	05 07 08.9	
	comp=Z,72nm,0.8s						
P51A				IAMs_20	IAMs_20	05 46 30.6	
	comp=Z,789nm,21.0s						
P51A	Williamsport	85.45	37	P	P	05 06 54.6	+0.7
	baz=326						
O52A	Adamsville	85.46	36	P	P	05 06 55.0	+1.0
O52A				IAmb	IAmb	05 07 15.8	
	comp=Z,86nm,1.1s						
O52A	Adamsville	85.46	36	P	P	05 06 54.6	+0.6
	baz=326						
FSK	Fiskardo	85.48	321	P	P	05 06 53.7	-0.4
J59A	Piesco	85.49	29	IAmb	IAmb	05 07 09.6	
	comp=Z,55nm,0.8s						
J59A				IAMs_20	IAMs_20	05 45 42.9	
	comp=Z,926nm,22.0s						
J59A	Piesco	85.49	29	P	P	05 06 54.8	+0.6
	baz=331,SNR=6.7						
L56A	Greenwood	85.50	32	IAmb	IAmb	05 07 10.0	
	comp=Z,58nm,0.8s						
L56A	Greenwood	85.50	32	P	P	05 06 54.9	+0.6
	baz=329						
N54A	Moraine State	85.53	34	IAmb	IAmb	05 07 16.4	
	comp=Z,92nm,1.1s						
N54A	Moraine State	85.53	34	P	P	05 06 55.2	+0.8
	baz=327,SNR=7.8						
Q50A	Georgetown	85.57	38	P	P	05 06 55.6	+1.0
	baz=325,SNR=6.7						
I60A	Shoreham	85.59	29	P	P	05 06 57.7	+3.1
	baz=332,SNR=5.9						
M55A	Ridgway	85.59	33	IAmb	IAmb	05 07 10.9	
	comp=Z,77nm,0.8s						
M55A	Ridgway	85.59	33	P	P	05 06 55.6	+0.9
	baz=328						
O53A	New Philadelph	85.61	35	P	P	05 06 55.8	+1.0
	baz=327						
T47A	Sharon Grove	85.62	41	IAMs_20	IAMs_20	05 43 05.4	
	comp=Z,914nm,22.0s						
KFL	Anninata	85.66	321	P	P	05 06 55.0	0.0
H62A	Milan	85.66	27	IAMs_20	IAMs_20	05 46 56.3	
	comp=Z,734nm,20.0s						
H62A	Milan	85.66	27	P	P	05 06 56.4	+1.5
	baz=333,SNR=7.6						
Z41A	Richland Creek	85.67	47	IAMs_20	IAMs_20	05 48 11.1	
	comp=Z,792nm,20.0s						
K58A	Earlville	85.68	31	IAmb	IAmb	05 07 10.9	
	comp=Z,72nm,0.8s						
K58A	Earlville	85.68	31	P	P	05 06 56.0	+0.9
	baz=330						
AMT	Artemida-Makis	85.70	320	P	P	05 06 55.2	-0.1
X43A	Marvell	85.70	45	P	P	05 06 58.0	+2.7
	baz=322						
Q51A	Peebles	85.70	37	P	P	05 06 55.4	+0.2
Q51A	Peebles	85.70	37	P	P	05 06 56.3	+1.1
	baz=326,SNR=6.3						
MET	Memphis--Engin	85.71	44	IAMs_20	IAMs_20	05 51 12.0	
	comp=Z,538nm,20.0s						
P52A	Corning	85.73	36	P	P	05 06 56.1	+0.7
	baz=326,SNR=9.1						
LAST	Lasithi	85.75	316	P	P	05 06 56.5	+0.9
SSB	Saint Sauveur	85.76	335	P	P	05 06 56.4	+0.9
SSB				IAmb	IAmb	05 07 09.7	
	comp=Z,50nm,0.9s						
SSB	Saint Sauveur	85.76	335	P	P	05 06 56.4	+0.9
SSB				pmax	pmax		
	comp=Z,50nm,0.9s						
NATX	Nacogdoches	85.81	49	P	P	05 06 57.9	+2.0
	baz=320,SNR=8.0						
M56A	Emporium	85.81	33	IAmb	IAmb	05 07 11.7	
	comp=Z,50nm,0.8s						
M56A	Emporium	85.81	33	P	P	05 06 59.4	+3.6
	baz=328,SNR=6.2						
G64A	Maxfield	85.82	25	P	P	05 06 58.1	+2.5
	baz=334						
S49A	Springfield	85.84	39	P	P	05 06 57.2	+1.3
	baz=324,SNR=7.2						
R50A	Paris	85.87	39	IAMs_20	IAMs_20	05 43 41.7	
	comp=Z,810nm,22.0s						
R50A	Paris	85.87	39	P	P	05 06 56.8	+0.7
	baz=325,SNR=5.4						
ITM	Ithomi	85.88	320	P	P	05 06 54.9	-1.3
I61A	Oroboro, Fairl	85.88	28	P	P	05 07 00.3	+4.2
	baz=332						
L57A	Andrews Acres	85.89	32	P	P	05 07 00.6	+4.4
	baz=329						
KLMT	Kalamata	85.91	319	P	P	05 06 55.9	-0.4
WVT	Waverly	85.96	42	P	P	05 06 57.5	+0.9
WVT				IAmb	IAmb	05 07 13.4	
	comp=Z,52nm,0.8s						
WVT	Waverly	85.96	42	P	P	05 06 57.5	+0.9
WVT				pmax	pmax		
	comp=Z,52nm,0.8s						
WVT				MLR	MLR		
	comp=Z,900nm,22.0s						
WVT	Waverly	85.96	42	P	P	05 06 57.4	+0.9
	baz=323						
K59A	Cooperstown	85.96	30	P	P	05 06 57.3	+0.8
	baz=330						
O54A	Avella	86.02	35	IAmb	IAmb	05 07 12.3	
	comp=Z,59nm,0.8s						
O54A	Avella	86.02	35	P	P	05 06 57.7	+0.9
	baz=327						
BINY	Binghamton	86.04	31	P	P	05 07 01.7	+4.8
	baz=330						
N55A	Marion Center	86.09	34	P	P	05 06 57.9	+0.8
	baz=328						
WVL	Waterville	86.16	26	IAMs_20	IAMs_20	05 47 48.3	
	comp=Z,808nm,20.0s						
P53A	Whipple	86.17	36	IAmb	IAmb	05 07 12.8	
	comp=Z,46nm,0.8s						
P53A	Whipple	86.17	36	P	P	05 06 58.5	+1.0
	baz=327,SNR=5.2						
R51A	Hillsboro	86.19	38	P	P	05 06 58.7	+1.1
	baz=325						
SIVA	Sivas	86.20	316	P	P	05 06 58.1	+0.4
L58A	Harry Jones Me	86.23	31	P	P	05 06 58.6	+0.8
	baz=330						
N56A	West Decatur	86.25	33	P	P	05 06 58.9	+0.9
	baz=328,SNR=9.7						
IMMV	Iera Moni Meta	86.26	317	P	P	05 06 58.2	+0.1
T49A	Edmonton	86.27	40	IAmb	IAmb	05 07 13.2	
	comp=Z,45nm,0.8s						
T49A	Edmonton	86.27	40	P	P	05 06 59.1	+1.0
	baz=324						
J61A	Chester	86.28	28	P	P	05 07 01.3	+3.3
	baz=332,SNR=6.7						
S50A	Richmond	86.33	39	P	P	05 06 59.3	+0.9
	baz=325						
M57A	Sunshine Farm,	86.35	32	P	P	05 06 59.3	+0.9
	baz=329,SNR=6.5						
L59A	Walton	86.40	30	IAmb	IAmb	05 07 14.6	
	comp=Z,71nm,0.8s						
L59A	Walton	86.40	30	P	P	05 06 59.6	+0.9
	baz=330						
O55A	Ligonier	86.44	34	P	P	05 06 59.5	+0.6
	baz=328						
OXF	Oxford	86.45	44	IAMs_20	IAMs_20	05 51 42.7	
	comp=Z,567nm,20.0s						
OXF	Oxford	86.45	44	P	P	05 07 01.6	+2.6
	baz=322						
P54A	Burton	86.46	35	P	P	05 07 00.0	+1.0
	baz=327,SNR=5.7						
HKT	Hockley	86.52	51	P	P	05 07 00.0	+0.7
HKT	Hockley	86.52	51	P	P	05 07 00.0	+0.7
HKT				pmax	pmax		
	comp=Z,55nm,1.4s						
TIP	Timpagrande	86.56	324	⇑P	P	05 07 00.3	+0.8
TIP	Timpagrande	86.56	324	P	P	05 07 00.6	+1.0
TIP				IAmb	IAmb	05 07 14.0	
	comp=Z,101nm,1.4s						
M58A	Price's Panora	86.58	32	P	P	05 07 00.1	+0.6
	baz=330						
R52A	Catlettsburg	86.58	37	P	P	05 07 00.6	+1.0
	baz=326,SNR=5.0						
U49A	Red Boiling Sp	86.64	41	P	P	05 07 00.7	+0.8
	baz=324,SNR=9.9						
Q53A	Leroy	86.64	36	P	P	05 07 00.9	+1.1
	baz=327,SNR=6.8						
SSPA	Standing Stone	86.65	33	P	P	05 07 00.7	+0.9
SSPA				IAmb	IAmb	05 07 16.2	
	comp=Z,68nm,0.9s						
SSPA	Standing Stone	86.65	33	P	P	05 07 00.8	+0.9
	baz=329						
T50A	Nancy	86.67	40	P	P	05 07 01.0	+1.0
	baz=325,SNR=8.8						
N57A	Milroy	86.68	33	P	P	05 07 01.0	+1.0
	baz=329,SNR=9.9						
O56A	Blue Knob Stat	86.69	34	IAmb	IAmb	05 07 16.4	
	comp=Z,69nm,0.8s						
O56A	Blue Knob Stat	86.69	34	P	P	05 07 01.1	+1.0
	baz=328,SNR=16						
PLAL	Pickwick Lake	86.75	43	IAMs_20	IAMs_20	05 50 11.4	
	comp=Z,683nm,22.0s						
V48A	Smith Brothers	86.76	42	IAMs_20	IAMs_20	05 45 15.5	
	comp=Z,810nm,22.0s						
P55A	Reedsville	86.81	35	P	P	05 07 02.2	+1.4
	baz=328,SNR=6.4						
M59A	Waymart	86.82	31	P	P	05 07 04.1	+3.4
	baz=330						
Q54A	Coxs Mills	86.83	36	P	P	05 07 01.8	+1.0
Q54A				IAmb	IAmb	05 07 16.0	
	comp=Z,70nm,0.7s						
Q54A	Coxs Mills	86.83	36	P	P	05 07 02.0	+1.2
	baz=327,SNR=5.9						
143A	Socs Landing,	86.84	47	IAmb	IAmb	05 07 17.3	
	comp=Z,120nm,1.1s						
143A				IAMs_20	IAMs_20	05 48 41.1	
	comp=Z,609nm,20.0s						
L60A	Shokan	86.88	30	P	P	05 07 01.8	+0.8
	baz=331						
R53A	Hurricane	86.89	37	IAMs_20	IAMs_20	05 52 29.6	
	comp=Z,787nm,20.0s						
S52A	Salyersville	86.93	38	P	P	05 07 03.6	+2.3
	baz=326						
N58A	Sunbury	86.94	32	IAmb	IAmb	05 07 23.1	
	comp=Z,78nm,1.1s						
N58A				IAMs_20	IAMs_20	05 52 46.3	
	comp=Z,681nm,18.0s						
N58A	Sunbury	86.94	32	P	P	05 07 02.5	+1.2
	baz=329						
L61A	Hillsdale 1, H	86.94	29	P	P	05 07 02.6	+1.4
	baz=331						
K62A	Royalston	86.99	28	P	P	05 07 03.5	+2.0
	baz=332						
O57A	Amberson	87.11	33	P	P	05 07 03.0	+0.9
	baz=329						
T51A	Gray	87.12	39	P	P	05 07 06.7	+4.5
	baz=325						
Q55A	Buckhannon	87.14	35	P	P	05 07 03.8	+1.4
	baz=327,SNR=5.9						
U50A	Jamestown	87.16	40	P	P	05 07 03.6	+1.2
	baz=325						
V49A	McMinnville	87.18	41	P	P	05 07 06.0	+3.4
	baz=324						
P56A	Dayton Farm, R	87.23	34	P	P	05 07 04.3	+1.6
	baz=328,SNR=8.0						
N59A	State Game Lan	87.23	32	IAmb	IAmb	05 07 19.7	
	comp=Z,62nm,1.0s						
N59A	State Game Lan	87.23	32	P	P	05 07 04.9	+2.1
	baz=330						
M60A	Port Jervis	87.31	31	P	P	05 07 06.3	+3.2
	baz=331						
S53A	Williamson	87.35	37	P	P	05 07 06.8	+3.4
	baz=326						
HRV	Adam Dziewonsk	87.36	28	P	P	05 07 07.5	+4.2
	baz=333						
342A	Flagon Creek P	87.38	48	IAMs_20	IAMs_20	05 52 20.4	
	comp=Z,763nm,21.0s						
R54A	Victor	87.43	36	P	P	05 07 08.6	+4.8
	baz=327						
T52A	Hallie	87.44	38	P	P	05 07 05.3	+1.5
	baz=326						
PAGS	Pennsylvania G	87.46	33	IAmb	IAmb	05 07 25.4	
	comp=Z,56nm,0.9s						
O58A	Lewisberry	87.47	33	P	P	05 07 04.6	+0.8
	baz=329						
Q56A	Snyder Ridge,	87.47	35	IAmb	IAmb	05 07 28.6	
	comp=Z,42nm,0.9s						
N60A	Cedar Hill Far	87.53	31	P	P	05 07 04.3	+0.2
	baz=330						
W49A	Belvidere	87.53	42	P	P	05 07 05.2	+1.0
	baz=324						
WES	Weston	87.55	28	P	P	05 07 06.2	+2.0
WES				IAmb	IAmb	05 07 19.5	
	comp=Z,51nm,0.9s						
WES	Weston	87.55	28	P	P	05 07 06.2	+2.0
WES				pmax	pmax		
	comp=Z,51nm,0.9s						
U51A	La Follette	87.57	39	P	P	05 07 05.8	+1.3
	baz=325						
P57A	Homestead Farm	87.58	34	IAMs_20	IAMs_20	05 49 37.6	
	comp=Z,734nm,20.0s						
O59A	Robesonia	87.59	32	P	P	05 07 05.3	+0.8
	baz=330						
SWET	Sewanee	87.61	41	IAmb	IAmb	05 07 19.8	
	comp=Z,88nm,1.1s						
SWET				IAMs_20	IAMs_20	05 46 25.0	
	comp=Z,825nm,22.0s						
S54A	Dingess, Beckl	87.61	37	P	P	05 07 05.8	+1.2
	baz=327						
TZTN	Tazewell	87.65	39	IAmb	IAmb	05 07 26.5	
	comp=Z,86nm,1.2s						
TZTN	Tazewell	87.65	39	P	P	05 07 06.2	+1.3
	baz=326						
X48A	Hartselle	87.68	43	IAMs_20	IAMs_20	05 42 36.1	
	comp=Z,805nm,22.0s						
VBMS	Vicksburg	87.68	46	P	P	05 07 07.8	+2.8
	baz=322,SNR=6.6						
CEL	Celeste	87.70	324	IAMs_20	IAMs_20	05 51 28.2	
	comp=Z,780nm,20.0s						
R55A	Marlinton	87.72	36	IAmb	IAmb	05 07 20.8	
	comp=Z,54nm,0.8s						
R55A	Marlinton	87.72	36	P	P	05 07 06.7	+1.5
	baz=327						
T53A	Wise	87.75	38	P	P	05 07 06.5	+1.2
	baz=326						
ZAIG	Zacatecas	87.78	60	P	P	05 07 07.3	+1.3
ZAIG				IAMs_20	IAMs_20	05 40 54.2	
	comp=Z,750nm,21.0s						
MVL	Millersville	87.80	32	IAmb	IAmb	05 07 21.6	
	comp=Z,32nm,0.7s						
MVL				IAMs_20	IAMs_20	05 44 15.2	
	comp=Z,626nm,22.0s						
U52A	Thorn Hill	87.86	39	P	P	05 07 06.8	+1.0
	baz=326						
P58A	Pank, Wackersv	87.86	33	P	P	05 07 06.7	+0.9
	baz=329						
V51A	Loudon	87.88	40	IAmb	IAmb	05 07 21.4	
	comp=Z,59nm,1.0s						
V51A	Loudon	87.88	40	P	P	05 07 07.1	+1.2
	baz=325						
BRNJ	Basking Ridge	87.89	31	IAMs_20	IAMs_20	05 52 53.5	
	comp=Z,646nm,19.0s						
O60A	Telford	87.89	32	P	P	05 07 05.6	-0.3
	baz=330						
TBI	Tubuai	87.91	125	*e*S	S	05 17 42.4	-4.6
	comp=Z,166nm,29.2s						
TBI	Tubuai	87.91	125	*e*LQ	LQ	05 30 55.9	
	comp=Z,626nm,31.5s						
TBI				*e*LR	LR	05 34 48.4	
	comp=Z,582nm,22.2s,baz=322						
TBI	Tubuai	87.91	125	*e*T	T	06 44 13.5	
	comp=Z,10nm,0.4s						
R56A	Bull Pasture M	87.92	35	P	P	05 07 07.1	+1.0
	baz=328						
W50A	Signal Mountai	87.92	41	IAmb	IAmb	05 07 21.0	
	comp=Z,40nm,0.8s						
W50A				IAMs_20	IAMs_20	05 45 24.2	
	comp=Z,618nm,20.0s						
W50A	Signal Mountai	87.92	41	P	P	05 07 06.8	+0.6
	baz=325						
CPCT	Cooper Cave	88.09	40	IAmb	IAmb	05 07 25.1	
	comp=Z,41nm,0.8s						
P59A	Jarrettsville	88.10	33	P	P	05 07 07.9	+1.0
	baz=330						
T54A	Tazewell	88.11	37	P	P	05 07 08.6	+1.5
	baz=327						
SDMD	Soldier's Deli	88.11	33	IAMs_20	IAMs_20	05 54 22.3	
	comp=Z,430nm,18.0s						
V52A	Sevierville	88.20	39	IAmb	IAmb	05 07 30.0	
	comp=Z,108nm,1.3s						
V52A	Sevierville	88.20	39	P	P	05 07 08.3	+0.9
	baz=326						
PSUB	Penn St. - Bra	88.21	32	IAMs_20	IAMs_20	05 49 34.0	
	comp=Z,616nm,21.0s						
P60A	Greenville	88.24	32	IAMs_20	IAMs_20	05 53 47.9	
	comp=Z,605nm,19.0s						
U53A	Fall Branch	88.24	38	P	P	05 07 10.5	+2.8
	baz=326						
TKL	Tuckaleechee C	88.27	40	IAmb	IAmb	05 07 22.8	
	comp=Z,52nm,0.8s						
R57A	Stanardsville	88.38	35	P	P	05 07 10.8	+2.6
	baz=328						
T55A	Pulaski	88.41	37	P	P	05 07 10.0	+1.5
	baz=327						
U54A	Nelsons Funny	88.45	38	IAmb	IAmb	05 07 23.6	
	comp=Z,35nm,0.8s						
U54A				IAMs_20	IAMs_20	05 50 12.9	
	comp=Z,499nm,21.0s						
U54A	Nelsons Funny	88.45	38	P	P	05 07 09.7	+1.0
	baz=326						
S56A	Natural Bridge	88.47	36	P	P	05 07 11.6	+2.9
	baz=328						
Y49A	Blount Mountai	88.47	43	IAmb	IAmb	05 07 24.0	
	comp=Z,52nm,1.1s						
Y49A				IAMs_20	IAMs_20	05 47 19.9	
	comp=Z,622nm,20.0s						
BLA	Blacksburg	88.49	37	IAmb	IAmb	05 07 24.4	
	comp=Z,49nm,0.9s						
BLA	Blacksburg	88.49	37	P	P	05 07 12.8	+4.0
	baz=327						
R58A	Rapidan	88.59	34	P	P	05 07 10.5	+1.3
	baz=329						
X51A	Calhoun	88.65	41	IAMs_20	IAMs_20	05 44 48.6	
	comp=Z,827nm,22.0s						
X51A	Calhoun	88.65	41	P	P	05 07 12.1	+2.5
	baz=325						
S57A	Dark Hollow, R	88.66	35	P	P	05 07 12.2	+2.7
	baz=328						
W52A	Murphy	88.66	40	P	P	05 07 13.4	+3.7
	baz=325						
V53A	Saluda	88.71	39	IAmb	IAmb	05 07 31.5	
	comp=Z,70nm,1.5s						
V53A	Saluda	88.71	39	P	P	05 07 11.5	+1.6
	baz=326						
U55A	TA2, Sparta	88.81	37	P	P	05 07 14.3	+3.9
	baz=327						
LRAL	Lakeview Retre	88.84	43	IAMs_20	IAMs_20	05 52 09.8	
	comp=Z,662nm,21.0s						
LRAL	Lakeview Retre	88.84	43	P	P	05 07 11.2	+0.7
	baz=324						
Q60A	Greensboro	88.86	33	IAMs_20	IAMs_20	05 52 26.3	
	comp=Z,642nm,19.0s						
R58B	Mineral	88.93	34	IAMs_20	IAMs_20	05 50 09.4	
	comp=Z,785nm,20.0s						
W53A	Cullowhee	88.96	40	P	P	05 07 13.3	+2.1
	baz=326						
V54A	Nebo	89.01	38	P	P	05 07 15.2	+3.9
	baz=326						
S58A	Poland Farm, P	89.16	35	IAMs_20	IAMs_20	05 55 16.4	
	comp=Z,702nm,18.0s						
T57A	Hurt	89.17	36	P	P	05 07 12.7	+0.7
	baz=328						
Z50A	Ashland	89.20	43	IAMs_20	IAMs_20	05 47 54.2	
	comp=Z,626nm,22.0s						
Z50A	Ashland	89.20	43	P	P	05 07 12.8	+0.6
	baz=324,SNR=31						
BG3	Lake Jocassee	89.21	40	P	P	05 07 13.6	+1.4
BG3				IAmb	IAmb	05 07 27.6	
	comp=Z,36nm,0.8s						
BG3				IAMs_20	IAMs_20	05 46 35.2	
	comp=Z,773nm,22.0s						
U56A	King	89.23	37	IAMs_20	IAMs_20	05 51 57.6	
	comp=Z,729nm,19.0s						
V55A	Taylorsville	89.28	38	P	P	05 07 13.5	+1.0
	baz=327						
X53A	Estanollee	89.44	40	P	P	05 07 15.0	+1.7
	baz=326						
W54A	Cherokee Point	89.47	39	P	P	05 07 14.6	+1.2
	baz=326						
Z51A	Franklin	89.51	42	IAmb	IAmb	05 07 28.4	
	comp=Z,50nm,0.8s						
T58A	Grand View Acr	89.52	35	P	P	05 07 16.6	+3.0
	baz=328						
Y52A	Lilburn	89.60	41	IAmb	IAmb	05 07 29.9	
	comp=Z,56nm,1.0s						
Y52A	Lilburn	89.60	41	P	P	05 07 15.4	+1.4
	baz=325,SNR=5.5						
U57A	Blanch	89.61	36	P	P	05 07 18.1	+4.0
	baz=328						
V56A	Mocksville	89.63	37	P	P	05 07 15.0	+0.8
	baz=327						
KMSC	Kings Mountain	89.82	38	IAMs_20	IAMs_20	05 51 06.1	
	comp=Z,791nm,21.0s						
KMSC	Kings Mountain	89.82	38	P	P	05 07 16.1	+1.0
	baz=327						
X54A	Belton	89.83	39	P	P	05 07 16.5	+1.3
	baz=326						
V57A	Coltrane Farms	89.88	37	P	P	05 07 17.0	+1.7
	baz=328						
T59A	Double "B" Far	89.91	35	IAMs_20	IAMs_20	05 55 40.3	
	comp=Z,734nm,19.0s						
T59A	Double "B" Far	89.91	35	P	P	05 07 18.4	+3.0
	baz=329						
U58A	Oxford	89.98	36	P	P	05 07 16.9	+1.2
	baz=328						
250A	Grady	90.06	44	IAMs_20	IAMs_20	05 52 58.0	
	comp=Z,655nm,20.0s						
W56A	Indian Trail	90.16	38	P	P	05 07 19.0	+2.4
	baz=327						
V58A	Windy Hill, Pi	90.25	36	IAMs_20	IAMs_20	05 52 36.4	
	comp=Z,702nm,19.0s						
GOGA	Godfrey	90.26	41	P	P	05 07 19.9	+2.8
	baz=326						
U59A	Littleton	90.34	35	IAMs_20	IAMs_20	05 49 24.7	
	comp=Z,760nm,20.0s						
U59A	Littleton	90.34	35	P	P	05 07 20.0	+2.6
	baz=329						
W57A	Gilead	90.41	37	IAMs_20	IAMs_20	05 52 34.7	
	comp=Z,690nm,19.0s						
W57A	Gilead	90.41	37	P	P	05 07 19.2	+1.4
	baz=328						
X56A	White Oak	90.49	38	P	P	05 07 18.6	+0.4
	baz=327						
JSC	Jenkinsville	90.56	39	IAMs_20	IAMs_20	05 51 41.0	
	comp=Z,458nm,19.0s						
Y55A	Saluda	90.58	39	P	P	05 07 20.0	+1.4
	baz=326						
BIRD	Birdtown, Kers	90.62	38	IAMs_20	IAMs_20	05 56 16.5	
	comp=Z,680nm,18.0s						
V59A	Middlesex	90.65	36	P	P	05 07 19.7	+0.8
	baz=329						
W58A	Raeford	90.85	37	P	P	05 07 25.0	+5.2
	baz=328						
U61A	Possum Corner	90.92	34	IAMs_20	IAMs_20	05 51 07.9	
	comp=Z,731nm,20.0s						
X57A	Johnson Farm,	90.94	38	P	P	05 07 24.7	+4.5
	baz=328						
V60A	Jim Taylor Roa	91.06	35	IAMs_20	IAMs_20	05 49 57.9	
	comp=Z,719nm,20.0s						
V60A	Jim Taylor Roa	91.06	35	P	P	05 07 21.4	+0.6
	baz=329						
352A	Blakely	91.13	43	IAMs_20	IAMs_20	05 48 43.3	
	comp=Z,589nm,21.0s						
Y57A	Sumter	91.18	38	IAMs_20	IAMs_20	05 47 58.3	
	comp=Z,809nm,22.0s						
CNNC	Cliffs of the	91.25	36	P	P	05 07 22.1	+0.4
CNNC				IAmb	IAmb	05 07 39.4	
	comp=Z,26nm,0.7s						
X60A	Albert Glenn T	91.77	36	P	P	05 07 28.4	+4.3
	baz=329						
TIGA	Tifton	91.82	42	P	P	05 07 30.1	+5.7
	baz=326						
Y59A	Loris	91.88	37	IAMs_20	IAMs_20	05 52 47.7	
	comp=Z,642nm,19.0s						
255A	Hazlehurst	91.95	41	IAMs_20	IAMs_20	05 49 20.0	

comp=Z,729nm,20.0s
PBRG Braganca 92.05 341 eP P 05 07 38.1 +13
comp=Z,52nm,1.6s
KEST Kesra 92.55 327 P P 05 07 27.9 +0.1
comp=Z,6.7nm,0.9s,baz=331,slow=9.9,SNR=4.5
KEST LR LR 05 55 24.4
comp=Z,524nm,20.9s,baz=340,slow=40
MVO Moncorvo 92.73 341 eP P 05 07 41.9 +13
comp=Z,40nm,1.4s
PVRL Vila Real 92.78 342 eP P 05 07 41.5 +13
comp=Z,60nm,1.9s
PVIS Viseu 93.35 342 eP P 05 07 42.9 +11
ESDC Sonseca Array 93.37 339 P P 05 07 31.8 +0.3
comp=Z,2.9nm,0.8s,baz=27,slow=3.4,SNR=18
ESDC LR LR 05 55 21.7
comp=Z,414nm,18.2s,baz=55,slow=39
MTE Manteigas 93.58 341 eP P 05 07 45.4 +13
comp=Z,44nm,1.3s
PCBR Castelo Branco 94.09 341 eP P 05 07 47.2 +12
PCAS Casmilo, Conde 94.12 342 eP P 05 07 47.1 +12
comp=Z,98nm,1.8s
PMTG Montargil 95.00 342 eP P 05 07 51.5 +13
PNCL Nicolau / Gran 95.98 341 eP P 05 07 56.1 +13
comp=Z,28nm,2.5s
PVAQ Vaqueiros 96.47 341 eP P 05 07 58.3 +13
comp=Z,35nm,1.3s
FURI Furi 97.51 290 IAMs_20 IAMs_20 05 57 14.9
comp=Z,426nm,20.0s
TGUH Tegucigalpa,Un 103.79 55 IAMs_20 IAMs_20 06 01 23.7
comp=Z,328nm,19.0s
SDDR Presa de Saban 108.20 39 IAMs_20 IAMs_20 06 06 00.1
comp=Z,535nm,20.0s
OBIP Obispado Ponce 111.08 35 IAMs_20 IAMs_20 06 00 29.1
comp=Z,381nm,18.0s
SJG San Juan 111.21 35 IAMs_20 IAMs_20 06 00 04.6
comp=Z,462nm,22.0s
SDV Santo Domingo 117.23 44 PKiKP 05 13 02.9 +0.7
SDV Santo Domingo 117.23 44 IAMs_20 IAMs_20 06 10 55.1
comp=Z,360nm,20.0s
OTAV Otavalo 120.00 57 eP PKiKP 05 13 08.3 +0.3
LSZ Lusaka 121.81 279 PKiKP 05 13 11.2 +0.3
LSZ Lusaka 121.81 279 PKIKP PKiKP 05 13 11.2 +0.3
DBIC Dimbokro 124.27 327 PKP PKPdf 05 13 15.4 -0.1
comp=Z,9.6nm,0.9s,baz=1.0,slow=3.5,SNR=10.0
DBIC PP PP 05 15 01.2 +1.5
comp=Z,4.9nm,0.9s,baz=343,slow=7.6,SNR=3.6
DBIC Dimbokro 124.27 327 PKiKP 05 13 15.9 +0.1
TIC Toumodi 124.36 327 ePKIKP PKPdf 05 13 15.5 -0.2
KIC Kosan Boka 124.51 326 ePKIKP PKPdf 05 13 15.8 -0.2
comp=Z,43nm,1.1s
LIC Lamto 124.75 327 ePKIKP PKPdf 05 13 15.3 -1.1
comp=Z,21nm,1.0s
LBTB Lobatse 129.84 272 PKiKP 05 13 27.4 +0.7
LBTB Lobatse 129.84 272 PKIKP PKiKP 05 13 27.4 +0.7
TSUM Tsumeb 131.96 284 PKiKP 05 13 31.1 -0.1
BOSA Boshof 132.17 268 PKhKP PKPpre 05 13 28.2
comp=Z,5.4nm,0.8s,baz=51,slow=1.9,SNR=6.4
BOSA PP PP 05 15 51.5 -1.4
comp=Z,12nm,1.1s,baz=63,slow=6.7,SNR=5.8
BOSA Boshof 132.17 268 PKPdf 05 13 30.2 0.0
BOSA Boshof 132.17 268 PKIKP PKPdf 05 13 30.2 0.0
QSPA South Pole Qui 133.24 180 PKP PKiKP 05 13 32.1 -0.1
comp=Z,9.2nm,0.8s,baz=315,slow=0.8,SNR=21
QSPA South Pole Qui 133.24 180 PKPdf 05 13 31.1 +0.1
SAML Samuel 136.22 47 eP PKPdf 05 13 35.6 -2.4
SAML Samuel 136.22 47 PKiKP 05 13 39.4 -0.4
SAML Samuel 136.22 47 IAMs_20 IAMs_20 06 16 05.8
comp=Z,355nm,21.0s
SAML Samuel 136.22 47 PKIKP PKiKP 05 13 39.4 -0.4
LPAZ La Paz 139.18 60 PKhKP PKPpre 05 13 42.4
comp=Z,3.1nm,0.8s,baz=8.6,slow=6.4,SNR=9.3
LPAZ La Paz 139.18 60 eP PKPdf 05 13 42.6 -1.6
LPAZ La Paz 139.18 60 PKiKP 05 13 45.8 -0.7
LPAZ La Paz 139.18 60 PKIKP PKiKP 05 13 45.8 -0.7
NBMO Morrinhos-CE 139.37 12 eP PKPdf 05 13 35.4 -8.6
NBPS Pedro II - PI 140.19 15 eP PKPdf 05 13 36.6 -9.0
MNMC Minye Minye 140.33 64 PKiKP 05 13 47.6 -0.7
GO01 Chusmiza 140.97 64 PKPdf 05 13 48.0 +0.8
CLDB Colider 141.57 39 eP PKPdf 05 13 41.5 -6.4
NBPB Pedra_Branca-C 141.63 12 eP PKPdf 05 13 39.1 -8.9
PB01 IPOC Station P 141.75 66 PKPdf 05 13 49.1 +1.0
NBPA Parau_RN 142.15 8 eP PKPdf 05 13 39.3 -10
RCBR Riachuelo 142.33 6 eP PKPdf 05 13 38.4 -11
SMTB Santa Maria do 142.95 26 eP PKPdf 05 13 41.7 -8.7
NBPV Pedro Velho 142.96 5 eP PKPdf 05 13 39.4 -11
SIV San Ignacio 143.17 51 PKhKP PKPpre 05 13 47.6
comp=Z,5.4nm,0.7s,baz=278,slow=2.5,SNR=23
SIV PP PP 05 17 17.0 +16
comp=Z,5.8nm,1.1s,baz=349,slow=8.3,SNR=3.5
LVC Limon Verde 143.22 67 eP PKPdf 05 13 49.9 -1.1
NBLI Livramento-PB 143.76 8 eP PKPab 05 13 42.5 -6.2
GO02 Mina Guanaco 144.46 71 PKPdf 05 13 53.5 +0.5
NVL N'lazarevskaya 145.15 204⇓/PKP2 PKPbc 05 13 50.7 -1.4
NVL pmax pmax
comp=Z,235nm,1.1s
NBRF Rio Formoso - 145.21 5 eP PKPbc 05 13 42.4 -11
NBTA Tacaratu-PE 145.37 10 eP PKPbc 05 13 45.0 -9.5
GO03 Copiap 145.53 75 PKPab 05 13 55.7 +0.8
SALV Santo Antonio 145.96 43 eP PKPdf 05 13 50.8 -4.7
NBAN Anadia - AL 146.10 7 eP PKPdf 05 13 45.9 -10
GO04 Tololo Observa 146.64 80 PKPbc PKPbc 05 13 58.5 +0.3
NBPN Ponto Novo - B 146.72 15 eP PKPdf 05 13 49.3 -7.6
NBLA Lagarto - SE 147.24 10 eP PKPdf 05 13 48.5 -9.2
ARAG Araguaiana, MT 147.62 37 eP PKPdf 05 13 54.4 -3.9
PP1B Ponte de Pedra 147.81 44 eP PKPdf 05 13 54.4 -4.2
ROC1 El Roble 147.98 84 PKPbc 05 14 00.8 -1.1
GO05 Huala 148.30 88 PKPbc 05 14 03.2 +0.9
PEL Peldehue 148.31 84 PKPbc PKPbc 05 14 01.9 -0.5
PEL Peldehue 148.31 84 PKP2 PKPbc 05 14 01.9 -0.5
SNAA Sanae 148.37 197 PKPdf PKPbc 05 14 02.2 +0.8
SNAA Sanae 148.37 197 PKPbc 05 14 02.0 +0.6
SNAA Sanae 148.37 197 PKP2 PKPbc 05 14 02.0 +0.6
BDFB Brasilia 149.11 31 PKP PKPbc 05 14 01.1 +0.3
comp=Z,18nm,1.1s,baz=132,slow=6.4,SNR=4.1
BDFB PKPbc PKiKP 05 14 05.7 -0.5
comp=Z,28nm,0.7s,baz=292,slow=1.0,SNR=30
BDFB SKPbc 05 17 46.7
comp=Z,8.8nm,1.0s,baz=348,slow=15,SNR=3.6
BDFB Brasilia 149.11 31 PKPdf 05 14 01.4 +0.6
BDFB PKPbc PKiKP 05 14 06.4 +0.2
CFA Coronel Fontan 149.26 79 PKP PKPdf 05 14 01.1 +0.5
comp=Z,11nm,0.9s
CFA PKPbc PKiKP 05 14 06.0 0.0
comp=Z,28nm,0.9s,baz=299,slow=2.4,SNR=2.2
AQDB Aquidauana 149.77 48 eP PKPdf 05 13 58.6 -3.0
JANB Januaria 149.81 24 eP PKPdf 05 13 55.0 -6.9
C2SB Chapadao do Su 149.81 42 eP PKPdf 05 13 58.1 -3.6
VNA2 Neumayer--Watz 149.89 196 PKPdf PKiKP 05 14 06.3 +0.2
baz=122,slow=2.0
VNA3 Neumayer Olymp 150.06 194 PKPdf PKPdf 05 14 06.4 0.0
VNA1 Neumayer--Stat 150.28 196 PKPdf PKPdf 05 14 07.3 +0.5
NBIT Itapeh - BA 150.85 15 eP PKPdf 05 13 54.5 -8.9
IPMB Ipameri, GO 151.17 33 eP PKPdf 05 13 58.1 -5.8
PLCA Paso Flores 151.55 98 PKP PKPdf 05 14 03.7 -0.2
comp=Z,5.5nm,1.0s,baz=286,slow=2.9,SNR=7.0
PLCA PKPbc PKiKP 05 14 11.2 +0.7
comp=Z,27nm,0.9s,baz=292,slow=2.6,SNR=30
PLCA PKPbc sPKPbc 05 14 20.5 -1.5
comp=Z,14nm,0.9s,baz=226,slow=4.5,SNR=6.2
PLCA Paso Flores 151.55 98 eP PKPdf 05 14 03.8 -0.2
PLCA Paso Flores 151.55 98 PKPdf 05 14 04.5 +0.6
ITRB Iturama 151.78 38 eP PKPdf 05 13 59.6 -5.2
GO09 Cerro Castillo 152.00 120 PKiKP 05 14 11.8 +0.8
GO09 PKPab 05 14 21.2 +0.9
PMSA Palmer Station 152.19 151 eP PKPdf 05 14 00.7 -3.3
PCMB Pacaembu 153.00 42 eP PKPdf 05 14 01.6 -5.0
TRCB Terra Rica 153.29 46 eP PKPdf 05 14 04.0 -3.0
CPUP Villa Florida 153.33 58 PKP PKPdf 05 14 07.0 +0.1
comp=Z,8.6nm,1.1s,baz=7.7,slow=2.6,SNR=10
CPUP PKPbc pPKPdf 05 14 15.3 -0.6
comp=Z,4.8nm,0.7s,baz=283,slow=2.0,SNR=14
CPUP Villa Florida 153.33 58 eP PKPdf 05 14 03.9 -2.9
CPUP Villa Florida 153.33 58 PKPdf 05 14 07.6 +0.8
CPUP pPKPdf 05 14 15.5 -0.4
BB19B Bebedouro 153.79 37 eP PKPdf 05 14 02.7 -5.0
USHA Ushuaia 154.01 129 PKPab PKPab 05 14 31.6 +3.0
comp=Z,26nm,1.1s,baz=294,slow=5.5,SNR=3.6
SJMB Sao Joao De Ma 154.13 20 eP PKPdf 05 13 59.9 -8.3
BSFB Barra de Sao F 154.34 19 eP PKPdf 05 14 01.4 -7.1
PTGB Pitanga 155.15 47 eP PKPdf 05 14 05.0 -4.6
BSCB Bom Sucesso 155.21 29 eP PKPdf 05 14 04.5 -5.3
FRTB Fartura 155.29 41 eP PKPdf 05 14 05.9 -3.8
RCLB Rio Claro- Sao 155.41 36 eP PKPdf 05 14 05.2 -4.8
ITQB Itaqui 156.10 63 eP PKPdf 05 14 06.8 -3.8
VAO Valinhos 156.17 36 eP PKPdf 05 14 07.1 -3.9
TRQA Tornquist 156.84 87 eP PKPdf 05 14 09.2 -2.2
VAS01 Vassouras-RJ 156.85 27 eP PKPdf 05 14 06.7 -5.1
PARB Paraibuna 157.02 33 eP PKPdf 05 14 05.3 -6.8
ITAB Concordia 157.10 51 eP PKPdf 05 14 06.6 -5.3
PET01 Itanhaem-SP 157.16 38 eP PKPdf 05 14 05.9 -6.2
ESAR Angra dos Reis 157.19 30 eP PKPdf 05 14 05.1 -7.0
MAN01 Angra dos Reis 157.22 29 eP PKPdf 05 14 06.0 -6.3
TIJ01 Guaruva-PR 157.23 43 eP PKPdf 05 14 08.2 -4.2
CPSB Cacapava Do Su 158.62 59 eP PKPdf 05 14 08.7 -5.0
CNLB Canela 159.40 53 eP PKPdf 05 14 09.5 -5.3
PLTB Pedras Altas 159.43 62 eP PKPdf 05 14 10.1 -4.6
OGAUY Aigu 160.25 70 eP PKPdf 05 14 10.5 -5.0

JMA 23 04:55:05.9±0.2, 24.°39N×122.°91E, h96km±2km, M2.4
TAP 23 04:55:06.3, 24.°34N×122.°88E, h91km, ML3.0, C
ISC 23 04:55:06.3±1.5, 24.°39N±0.°06×122.°91E±0.°03, h92km±9km, n47, σ0.°62/81, Taiwan region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JYNG Yonagunijimaku 0.07 26 P Pn 04 55 19.5 +0.2
JYNG S Sn 04 55 29.1 +0.2
YOJ Yonaguni jima 0.12 51 P Pn 04 55 19.5 +0.2
baz=40
YOJ S Sn 04 55 29.2 +0.2
baz=40
YOJ Yonaguni jima 0.12 51 P Pn 04 55 19.6 +0.2
YOJ S Sn 04 55 29.2 +0.2
EOS1 EOS1 0.73 283 P Pn 04 55 23.5 +0.2
baz=287
EOS1 S Sn 04 55 36.3 +0.4
baz=287
IRIF Iriomote-Funau 0.75 94 P Pn 04 55 23.7 +0.2
IRIF S Sn 04 55 36.2 -0.1
HATJ Hateruma jima 0.88 112 S Sn 04 55 39.5 +0.8
TWC Suao 0.99 283 eP Pn 04 55 25.9 -0.2
baz=286
TWC eS Sn 04 55 40.4 -0.5
baz=286
JKRS Kuro-shima 1.01 98 P Pn 04 55 26.8 +0.5
JKRS S Sn 04 55 42.1 +0.8
ENA Nanau 1.07 272 P Pn 04 55 27.1 +0.1
baz=274
ENA S Sn 04 55 42.4 -0.1
baz=274
JIJ Ishigaki jima 1.12 91 P Pn 04 55 27.5 -0.1
JIJ S Sn 04 55 42.6 -1.0
TIPB Shuangxi 1.15 301 eS Sn 04 55 42.6 -1.6
baz=303
TWE Neicheng 1.18 287 eP Pn 04 55 28.3 +0.1
baz=289
NACB Ninganchiao 1.22 260 eP Pn 04 55 28.2 -0.5
baz=262
NACB eS Sn 04 55 44.2 -1.4
baz=262
TWD Chiawan 1.24 256 eP Pn 04 55 28.9 -0.1
baz=257
TWD eS Sn 04 55 45.1 -0.9
baz=257
ENTT Nioudou 1.25 282 eP Pn 04 55 29.6 +0.5
baz=284
ENTT eS Sn 04 55 46.3 0.0
baz=284
ENLB Shoufeng 1.29 248 eS Sn 04 55 46.4 -0.8
baz=249
JISG Ishigakijimahi 1.29 81 P Pn 04 55 29.1 -0.5
JISG S Sn 04 55 46.0 -1.1
NDT Datong Townshi 1.29 280 eS Sn 04 55 47.3 +0.1
baz=281
ETLH Xiulin Townshi 1.32 262 eP Pn 04 55 29.9 -0.1
baz=264
ETLH eS Sn 04 55 47.3 -0.6
baz=264
NWLT Wulai 1.34 287 eP Pn 04 55 30.5 +0.3
baz=289
NWLT eS Sn 04 55 47.9 -0.3
baz=289
NNSH Datong 1.39 272 eS Sn 04 55 49.1 -0.5
baz=273
YHNB Yeheng 1.43 282 eP Pn 04 55 31.8 +0.5
baz=283
YHNB eS Sn 04 55 49.8 -0.5
baz=283
NSK Sanguang 1.44 282 eP Pn 04 55 32.0 +0.5
baz=283
NSK eS Sn 04 55 50.6 -0.1
baz=283
ESL Shilin 1.47 247 eP Pn 04 55 31.5 -0.3
baz=248
ESL eS Sn 04 55 50.6 -0.4
baz=248
WHF Hehuan Shan 1.52 261 eP Pn 04 55 32.8 -0.1
baz=262
WHF eS Sn 04 55 52.4 -0.5
baz=262
EGFH Guangfu 1.53 243 eP Pn 04 55 32.5 -0.1
baz=243
EGFH eS Sn 04 55 52.0 -0.5
baz=243
TDCB Techi 1.60 266 eS Sn 04 55 54.0 -0.3
baz=266
CHGB Renai 1.62 259 eP Pn 04 55 34.1 +0.2
baz=259
CHGB eS Sn 04 55 54.1 -0.7
baz=259
HGSD Ruisui 1.63 237 eP Pn 04 55 33.9 +0.1
baz=237
HGSD eS Sn 04 55 53.9 -0.7
baz=237
OWD Renai 1.64 255 eP Pn 04 55 34.5 +0.3
baz=256
OWD eS Sn 04 55 54.5 -0.8
baz=256
JTJ Tarama 1.65 81 P Pn 04 55 34.1 0.0
JTJ S Sn 04 55 54.9 -0.2
EHY Hungye 1.70 239 eP Pn 04 55 34.5 -0.2
baz=239
EHY eS Sn 04 55 55.3 -1.0
baz=239
VWDT VWDT 1.74 249 eP Pn 04 55 36.0 +0.8
baz=249
VWDT eS Sn 04 55 57.3 +0.2
baz=249
LIOB Emei 1.75 279 eS Sn 04 55 57.7 +0.3
baz=280
NSTT Nanjuang 1.76 278 eS Sn 04 55 57.5 -0.1
baz=279
YULB Yu-li 1.78 236 eP Pn 04 55 35.9 +0.1
baz=236
YULB eS Sn 04 55 57.7 -0.4
baz=236
WHP Taichung City 1.80 267 eP Pn 04 55 37.4 +1.4
baz=268
WHP eS Sn 04 55 59.2 +0.5
baz=268
TWF1 Yuli 1.80 235 eP Pn 04 55 36.2 +0.2
baz=235
TWF1 eS Sn 04 55 57.9 -0.8
baz=235
SSLB Suanglung 1.89 252 eP Pn 04 55 37.5 +0.3
baz=252
SSLB eS Sn 04 56 00.0 -0.6
baz=252
FULB Fuli 1.90 232 eP Pn 04 55 37.3 0.0
baz=232
FULB eS Sn 04 56 00.4 -0.5
baz=232
TYC Yuchr 1.94 256 eP Pn 04 55 38.3 +0.6
baz=256
TYC eS Sn 04 56 01.2 -0.6
baz=256
YUS Yu-Shan 2.00 244 eP Pn 04 55 39.9 +0.7
baz=244
YUS eS Sn 04 56 03.6 -0.5
baz=244
WHYT Xinyi Township 2.00 250 eP Pn 04 55 39.6 +0.9
baz=250
WHYT eS Sn 04 56 04.3 +0.9
baz=250
ALS Alishan 2.12 246 eS Sn 04 56 06.0 -0.4
baz=246
TWH Lutao 2.13 219 eS Sn 04 56 05.4 -0.8
baz=217
TPUB Ta-pu 2.35 243 eS Sn 04 56 13.7 +2.1
baz=243
CHN1 Nanshi 2.49 242 eS Sn 04 56 15.9 +1.0
baz=241

IDC 23 04:58:31.1±2.9, 20.°39S×175.°80W, h106km±27km, mb4.0/13, mb1 4.2/16, mb1mx4.0/36, mbtmp4.5/16, MS3.1/1, Ms1 3.1/1, ms1mx2.6/26, Error ellipse: s-maj=19.5km s-min=12.8km az=139.0
NEIC 23 04:58:32.0±2.0, 20.°55S±0.°1×175.°6W±0.°1, h118km±6km, mb4.5/11, Error ellipse: s-maj=20.0km s-min=14.0km az=164.0
ISC 23 04:58:30.5±0.5, 20.°53S±0.°09×175.°65W±0.°07, h100km, n44, σ2.°02/44, mb4.2/13, Tonga Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NIUE Niue 5.58 76 P Pn 04 59 52.2 +1.0
baz=5.2,SNR=48
NIUE Niue 5.58 76 Pn 04 59 52.1 +1.0
MSVF Nonsavu 6.57 294 Pn Pn 05 00 13.1 +8.4
AFI Afiamalu 7.55 30 P Pn 05 00 17.0 -1.0
6.5nm,0.3s,baz=322,slow=2.7,SNR=8.7
AFI S Sn 05 01 28.8 -13
21nm,0.3s,baz=40,slow=24,SNR=12
AFI Afiamalu 7.55 30 Pn 05 00 15.4 -2.6
RAR Rarotonga 14.86 95 P P 05 01 58.5 -0.2
1.9nm,0.3s,baz=252,slow=7.9,SNR=6.4
RAR LR LR 05 07 00.6
comp=Z,74nm,19.1s,baz=259,slow=34
DZM Mont Dzumac 16.76 262 P P 05 02 24.4 +4.5
NOUC Port Laguerre 16.89 261 P P 05 02 25.7 +4.5
SANVU Saraoutou 17.07 284 P P 05 02 26.5 +3.3
SANVU IAmb IAmb 05 02 39.5
comp=Z,24nm,0.8s
URZ Urewera 18.74 198 P P 05 02 42.2 +0.8
comp=Z,11nm,0.3s,baz=342,slow=2.3,SNR=51
URZ S S 05 06 01.0 -8.5
comp=Z,0.7nm,0.3s,baz=300,slow=7.4,SNR=1.6
URZ Urewera 18.74 198 P P 05 02 41.2 -0.2
PPT Papeete 24.81 88 P P 05 03 46.3 +2.8
comp=Z,53nm,0.9s,baz=329,slow=0.8,SNR=4.3
RPZ Rata Peaks 25.64 203 P P 05 03 52.4 +1.6
comp=Z,18nm,0.6s,baz=12,slow=3.5,SNR=12
EIDS Eidsvold 30.96 255 P P 05 04 39.0 +0.7
baz=31,SNR=3.8
ARMA Armidale 31.04 245 P P 05 04 39.8 +0.7
baz=32,SNR=7.0
CNB Canberra Magne 34.04 237 P P 05 05 05.8 +0.6
CMSA Cobar Meteorol 36.25 244 P P 05 05 23.8 -0.4
baz=37,SNR=58
TOO Toolangi 37.66 235 P P 05 05 35.7 -0.4
baz=38,SNR=19
TOO Toolangi 37.66 235 P P 05 05 35.5 -0.5
MTSU Mount Surprise 37.79 267 P P 05 05 37.8 +0.5
baz=38,SNR=13
STKA Stephens Creek 39.76 245 P P 05 05 53.2 -0.4
comp=Z,6.2nm,0.5s,baz=90,slow=10,SNR=31
STKA Stephens Creek 39.76 245 P P 05 05 53.4 -0.3
COEN Coen 39.78 273 P P 05 05 54.4 +0.4
baz=40,SNR=10
ASAR Alice Springs 46.65 256 P P 05 06 48.0 -1.2
comp=Z,7.3nm,0.5s,baz=96,slow=8.3,SNR=24
ASAR PcP PcP 05 08 20.4 -1.2
comp=Z,2.0nm,0.7s,baz=108,slow=3.7,SNR=6.8
WRA Warramunga Arr 46.77 262 P P 05 06 49.4 -0.9
comp=Z,4.3nm,0.8s,baz=135,slow=12,SNR=14
KDU Kakadu 50.15 270 P P 05 07 15.1 -1.0
baz=50,SNR=6.9
WRKA Warakurna 51.57 254 P P 05 07 27.0 +0.2
baz=52,SNR=3.4
KNRA Kununurra 52.85 266 P P 05 07 35.9 -0.4
baz=53,SNR=7.6
KNRA Kununurra 52.85 266 P P 05 07 35.9 -0.4
SOEI Soe 58.70 271 P P 05 08 19.3 +1.0
QSPA South Pole Qui 69.54 180 P P 05 09 29.0 +0.7
comp=Z,2.7nm,0.9s,baz=257,slow=1.6,SNR=5.1
QSPA South Pole Qui 69.54 180 IAmb IAmb 05 10 17.8
comp=Z,30nm,1.9s
MJAR Matsushiro Arr 71.56 322 P P 05 09 39.7 -1.2
comp=Z,0.7nm,0.5s,baz=142,slow=5.5,SNR=2.2
PETK Petropavlovsk- 76.89 344 P P 05 10 10.8 -0.7
comp=Z,4.0nm,1.0s,baz=108,slow=9.3,SNR=3.1
NVAR Mina Array Bea 79.55 42 P P 05 10 26.5 -0.3
comp=Z,0.8nm,0.6s,baz=226,slow=7.5,SNR=5.2
TXAR Lajitas Array 85.23 56 P P 05 10 56.7 +0.3
comp=Z,1.4nm,0.9s,baz=239,slow=5.2,SNR=2.7
PDAR Pinedale Array 87.49 42 P P 05 11 06.6 -0.7
comp=Z,0.3nm,0.7s,baz=290,slow=3.7,SNR=2.0
PLCA Paso Flores 87.64 133 P P 05 11 07.4 -0.7
comp=Z,0.8nm,0.6s,baz=233,slow=21,SNR=4.1
ILAR Eielson Array 87.88 12 P P 05 11 06.8 -1.5
comp=Z,0.4nm,0.8s,baz=204,slow=5.5,SNR=5.2
AKASG Malin Array Be 144.08 333 PKhKP PKPpre 05 17 50.6
comp=Z,0.6nm,0.4s,baz=42,slow=4.1,SNR=7.6
BR131 Keskin Array S 148.47 314 PKPdf 05 18 04.8 +2.6
BRTR Keskin Array B 148.47 314 PKPbc PKPbc 05 18 05.2 -0.8
comp=Z,1.4nm,0.7s,baz=135,slow=4.6,SNR=9.0
KHC Kasperske Hory 150.53 348 ePKP PKPbc 05 18 10.0 -0.5
GERES GERESS Array B 150.77 347 PKPbc PKPbc 05 18 11.1 -0.2
comp=Z,0.3nm,0.5s,baz=90,slow=0.1,SNR=2.1
GERES PKPab PKPab 05 18 18.4 -0.1
comp=Z,0.4nm,0.5s,baz=46,slow=4.2,SNR=4.7

IDC 23 05:01:37.6±9.1, 26.°97N×141.°62E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/35, mbtmp3.9/3, Error ellipse: s-maj=655.6km s-min=33.3km az=84.0, Bonin Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 47.16 189 P P 05 10 10.9 -1.1
0.5nm,0.4s,baz=8.2,slow=8.0,SNR=5.1
ASAR Alice Springs 50.89 189 P P 05 10 41.6 +1.0
0.3nm,0.7s,baz=13,slow=8.7,SNR=1.1
FINES FINESS Array B 77.84 334 P P 05 13 36.7 0.0
3.9nm,0.9s,baz=48,slow=11,SNR=5.0

RSPR 23 05:01:43.9, 18.°67N×68.°45W, h118km±1km, MD3.3/5, 4C-1D, Mona Passage

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PCDR Punta Cana, DR 0.17 157⇑eP Pn 05 01 59.8 -0.4
PCDR Punta Cana, DR 0.17 157 eS Sn 05 02 12.2 -0.3
PCDR Punta Cana, DR 0.17 157 Pn 05 02 00.2 0.0
PCDR Pn 05 02 00.8 +0.6
PCDR Sn 05 02 13.9 +1.4
DR12 Loma Pena Alta 0.89 278 Pn Pn 05 02 04.5 -0.2
DR12 Sn 05 02 19.6 -0.9
AGPR Aguadilla, PR 1.29 99 eS Sn 05 02 27.2 -0.4
AGPR Aguadilla, PR 1.29 99⇓eP Pn 05 02 08.8 +0.1
AGPR Aguadilla, PR 1.29 99 Pn 05 02 08.2 -0.5
AGPR Pn 05 02 09.2 +0.4
CRPR Cabo Rojo, PR 1.44 117 eS Sn 05 02 30.8 +0.2
CRPR Cabo Rojo, PR 1.44 117⇑eP Pn 05 02 09.9 -0.6
CRPR Cabo Rojo, PR 1.44 117 Pn 05 02 09.1 -1.3
MLPR Magueyes Islan 1.51 117 eS Sn 05 02 32.1 0.0
MLPR Magueyes Islan 1.51 117 Pn Pn 05 02 09.0 -2.3
MLPR Pn 05 02 10.1 -1.2
AOPR Arecibo Observ 1.64 101⇑eP Pn 05 02 12.8 0.0
AOPR Arecibo Observ 1.64 101 eS Sn 05 02 34.9 -0.1
AOPR Arecibo Observ 1.64 101 Pn 05 02 14.0 +1.1
AOPR Pn 05 02 14.5 +1.6
BANI BANI 1.83 262 Pn Pn 05 02 14.9 -0.3
OBIP Obispado Ponce 1.86 109 Pn Pn 05 02 13.8 -1.8
OBIP Sn Sn 05 02 39.1 -0.6
SJG San Juan 2.26 104 Pn Pn 05 02 21.2 +0.7
SJG Sn Sn 05 02 49.5 +1.0
GCPR Guaynabo City 2.28 99 Pn Pn 05 02 20.6 -0.1
HUMP Col San Antoni 2.53 102⇑eP Pn 05 02 23.5 -0.4
HUMP Col San Antoni 2.53 102 eS Sn 05 02 55.4 +0.7
HUMP Col San Antoni 2.53 102 Pn 05 02 22.6 -1.3
HUMP Pn 05 02 23.7 -0.2
SDDR Presa de Saban 2.70 277 Pn Pn 05 02 27.2 +0.9

ROM 23 05:03:51.9±0.2, 43.°442N±0.°007×12.°440E±0.°009, h7km±2km, ML1.1/2, 4C-1D, Error ellipse: s-maj=0.9km s-min=0.3km az=31.0, Central Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res	
ATPI	Pietralunga -	0.03	288	P	Pg	05 03 53.3	0.0	
ATPI				S	Sg	05 03 54.2	-0.1	
ATPI				AML	AML			comp=N,505μm,1.2s
ATPI				AML	AML			comp=N,506μm,1.2s
ATPI				AML	AML			comp=E,756μm,0.3s
ATVO	AVT- Monte Val	0.06	202	⇑P	Pg	05 03 54.0	+0.4	
ATVO				AML	AML			comp=E,328μm,0.3s
ATVO				AML	AML			comp=N,166μm,0.2s
ATFO	Monte Foce - G	0.12	128	⇓P	Pg	05 03 55.0	+0.5	
ATFO				S	Sg	05 03 57.3	+0.9	
ATFO				AML	AML			comp=E,72μm,1.1s
ATFO				AML	AML			comp=N,91μm,1.5s
ATFO				AML	AML			comp=E,72μm,1.1s
ATFO				AML	AML			comp=N,91μm,1.5s
CDCA	Citt' di Caste	0.15	276	P	Pg	05 03 53.8	-1.1	
CDCA				S	Sg	05 03 58.5	+1.5	
BADI	Badiali	0.16	296	P	Pg	05 03 55.8	+0.7	
BADI				S	Sg	05 03 58.7	+1.4	
MURB	Monte Urbino	0.19	161	P	Pg	05 03 56.4	+0.7	
MURB				AML	AML			comp=N,190μm,0.9s
MURB				AML	AML			comp=E,208μm,0.6s
NARO	Abbazia di Nar	0.20	31	⇑P	Pg	05 03 56.1	+0.3	
FRON	Frontone	0.22	70	⇑P	Pg	05 03 56.7	+0.4	
FRON				S	Sg	05 04 00.4	+1.2	
PE3	Peglio	0.26	9	P	Pg	05 03 57.9	+0.9	
PE3				S	Sb	05 04 02.6	-1.0	
ATCC	AVT- Casa Cast	0.29	150	⇑P	Pg	05 03 58.4	+0.7	
ATCC				S	Sb	05 04 03.7	-0.9	
CSNT	Castellina Chi	0.84	272	S	Sg	05 04 17.0	-1.8	

JMA 23 05:10:51.8±0.2, 24°.36N×121°.91E, h38km±5km, M2.6
TAP 23 05:10:52.7, 24°.42N×121°.94E, h21km, ML3.5, B
ISC 23 05:10:52.1±0.9, 24°.41N±0°.02×121°.93E±0°.02, h25km±6km, n111, σ0s.85/189, 1C-9D, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res	
TWC	Suao	0.21	339	⇓iP	Pb	05 10 57.7	-0.3	baz=337
TWC				iS	Sb	05 11 01.5	-0.5	baz=337
EOS1	EOS1	0.23	51	⇓eP	Pb	05 10 58.4	+0.3	baz=53
EOS1				eS	Sb	05 11 03.7	+1.5	baz=53
NACB	Ninganchiao	0.39	233	⇓eP	Pb	05 11 00.4	-0.1	baz=232
NACB				eS	Sb	05 11 07.1	+0.9	baz=232
ILA	Ilan	0.39	335	eS	Sb	05 11 06.9	+0.4	baz=333
TWE	Neicheng	0.40	322	⇓P	Pb	05 11 00.4	-0.2	baz=321
TWE				S	Sb	05 11 06.0	-0.5	baz=321
ENTT	Nioudou	0.41	305	⇓P	Pb	05 11 00.6	-0.3	baz=302
ENTT				S	Sb	05 11 06.7	-0.1	baz=302
NDT	Datong Townshi	0.43	297	⇓eP	Pb	05 11 01.1	-0.1	baz=294
NDT				eS	Sb	05 11 07.7	+0.3	baz=294
SLBB	Yuanshan	0.44	322	eP	Pb	05 11 01.2	-0.2	baz=319
TWD	Chiawan	0.45	223	⇓P	Pb	05 11 01.5	-0.1	baz=222
TWD				S	Sn	05 11 09.4	-0.8	baz=222
NTC	Toucheng	0.46	348	eP	Pb	05 11 01.0	-0.6	baz=346
NTC				eS	Sb	05 11 07.8	-0.2	baz=346
ETLH	Xiulin Townshi	0.46	244	⇓eP	Pb	05 11 01.6	-0.2	baz=243
ETLH				eS	Sb	05 11 09.0	+0.7	baz=243
NNSB	Datong	0.50	272	eP	Pb	05 11 02.4	-0.1	baz=270
NNSB				eS	Sb	05 11 09.6	+0.1	baz=270
NNSH	Datong	0.50	272	⇑P	Pb	05 11 02.6	+0.1	baz=270
NNSH				S	Sb	05 11 09.6	+0.1	baz=270
NNS	Nan Shan	0.51	274	eP	Pb	05 11 02.6	0.0	baz=271
NNS				eS	Sb	05 11 09.9	+0.1	baz=271
HWA	Hwalien	0.52	215	eP	Pb	05 11 03.1	+0.3	baz=214
NWLT	Wulai	0.54	313	eP	Pb	05 11 02.9	-0.2	baz=311
NWLT				eS	Sb	05 11 10.3	-0.2	baz=311
TIPB	Shuangxi	0.57	350	eP	Pb	05 11 03.3	-0.3	baz=348
TIPB				eS	Sb	05 11 11.0	-0.3	baz=348
YHNB	Yeheng	0.57	297	eP	Pb	05 11 03.5	-0.2	baz=295
YHNB				eS	Sb	05 11 11.3	-0.1	baz=295
ENLB	Shoufeng	0.59	211	eP	Pb	05 11 03.1	-0.7	baz=211
ENLB				eS	Sn	05 11 13.7	+0.1	baz=211
NSK	Sanguang	0.59	297	eP	Pb	05 11 03.6	-0.3	baz=295
NSK				eS	Sb	05 11 11.7	-0.2	baz=295
TWB1	Santiao Chiao	0.60	5	eP	Pb	05 11 04.2	+0.2	baz=4.0
TWB1				eS	Sb	05 11 11.9	-0.3	baz=4.0
TWA	Mucha	0.65	331	eP	Pb	05 11 04.9	-0.1	baz=330
TWA				eS	Sb	05 11 13.9	+0.2	baz=330
WHF	Hehuan Shan	0.66	247	⇓P	Pb	05 11 05.3	-0.1	baz=245
WHF				S	Sn	05 11 15.7	-0.5	baz=245
NHDH	Xindian Distri	0.67	326	eP	Pb	05 11 05.1	-0.1	baz=324
NHDH				eS	Sb	05 11 14.4	+0.4	baz=324
NWF	Wu-fen Shan	0.68	348	eP	Pb	05 11 05.4	0.0	baz=347
NWF				eS	Sb	05 11 14.4	0.0	baz=347
WFSB	Wu-fen Shan	0.68	348	eP	Pb	05 11 05.2	-0.1	baz=347
WFSB				eS	Sb	05 11 14.4	+0.1	baz=347
TATO	Taipei	0.70	324	eP	Pb	05 11 05.8	+0.1	baz=323
TATO				eS	Sb	05 11 15.1	+0.3	baz=323
TWT	Tachien	0.71	258	eP	Pn	05 11 06.4	-0.3	baz=256
TWT				eS	Sb	05 11 15.8	+0.4	baz=256
TDCB	Techi	0.72	258	eP	Pn	05 11 06.4	-0.5	baz=256
TDCB				eS	Sn	05 11 16.7	-0.6	baz=256
TAP	Taipei	0.74	328	eP	Pb	05 11 06.8	+0.4	baz=327
TAP				eS	Sb	05 11 17.0	+0.9	baz=327
ESL	Shilin	0.75	218	eP	Pb	05 11 05.7	-0.8	baz=217
ESL				eS	Sn	05 11 17.9	+0.2	baz=217
WLTB	Daxi	0.76	306	eP	Pb	05 11 07.5	+0.7	baz=304
WLTB				eS	Sn	05 11 18.3	+0.3	baz=304
CHGB	Renai	0.78	244	eP	Pb	05 11 07.1	0.0	baz=242
CHGB				eS	Sn	05 11 18.4	-0.3	baz=242
YM01	YM01	0.81	336	eP	Pn	05 11 07.5	-0.5	baz=334
YM01				eS	Sb	05 11 18.4	+0.3	baz=334
YM10	YM10	0.82	336	eP	Pn	05 11 08.0	-0.2	baz=334
YM10				eS	Sn	05 11 19.4	-0.2	baz=334
OWD	Renai	0.83	237	eP	Pn	05 11 07.5	-0.8	baz=236
OWD				eS	Sn	05 11 19.3	-0.5	baz=236
YM04	YM04	0.83	334	eP	Pn	05 11 07.9	-0.3	baz=333
YM04				eS	Sb	05 11 19.1	+0.5	baz=333
TWS1	Kuangyinshan	0.83	326	eP	Pn	05 11 08.3	0.0	baz=325
TWS1				eS	Sn	05 11 19.9	+0.1	baz=325
YM03	YM03	0.85	335	eP	Pb	05 11 08.6	+0.3	baz=334
EGFH	Guangfu	0.87	212	eP	Pb	05 11 08.7	+0.1	baz=212
LIOB	Emei	0.87	286	eP	Pb	05 11 09.1	+0.5	baz=284
LIOB				eS	Sn	05 11 21.6	+0.9	baz=284
NTST	Danshui	0.87	330	eP	Pn	05 11 08.7	-0.2	baz=328
NTST				eS	Sn	05 11 21.6	+0.8	baz=328
NSTT	Nanjuang	0.88	285	eP	Pb	05 11 09.1	+0.4	baz=283
NSTT				eS	Sn	05 11 20.9	0.0	baz=283
NCU	National Centr	0.88	310	eP	Pn	05 11 08.7	-0.2	baz=308
NCU				eS	Sn	05 11 22.4	+1.5	baz=308
NCUH	Zhongli	0.88	309	eP	Pn	05 11 08.8	-0.1	baz=308
NCUH				eS	Sn	05 11 22.3	+1.4	baz=308
WHP	Taichung City	0.91	262	eP	Pb	05 11 09.8	+0.4	baz=261
WHP				eS	Sb	05 11 22.2	+1.1	baz=261
TWY	Chenhua	0.92	341	eP	Pn	05 11 09.5	+0.1	baz=340
TWY				eS	Sn	05 11 21.3	-0.5	baz=340
JYNG	Yonagunijimaku	0.92	87	P	Pn	05 11 08.8	-0.7	
JYNG				eS	Sn	05 11 21.5	-0.5	
SBCB	Hsinchu	0.94	294	eP	Pn	05 11 09.4	-0.4	baz=292
SBCB				eS	Sb	05 11 23.5	+1.5	baz=292
HSN	Hsinchu	0.96	294	eP	Pn	05 11 10.0	0.0	baz=295
HSN				eS	Sb	05 11 23.7	+1.3	baz=295
VWDT	VWDT	0.97	228	eP	Pn	05 11 09.6	-0.6	baz=227
VWDT				eS	Sn	05 11 22.5	-0.8	baz=227
YOJ	Yonaguni jima	0.98	87	eP	Pn	05 11 10.0	-0.3	baz=87
YOJ				eS	Sn	05 11 22.6	-0.8	baz=87
YOJ	Yonaguni jima	0.98	87	P	Pn	05 11 10.1	-0.3	
YOJ				eS	Sn	05 11 23.2	-0.3	
DPDB	Guoxing	0.99	248	eP	Pb	05 11 10.8	+0.1	baz=247
DPDB				eS	Sb	05 11 23.9	+0.5	baz=247
HGSD	Ruisui	1.02	207	eP	Pn	05 11 10.2	-0.8	baz=207
HGSD				eS	Sb	05 11 26.0	+1.8	baz=207
NMLH	Miaoli	1.05	277	eP	Pb	05 11 11.6	0.0	baz=276
NMLH				eS	Sb	05 11 27.0	+2.0	baz=276
EHY	Hungye	1.06	212	eP	Pn	05 11 09.3	-2.1	baz=211
TWQ1	Liyutan	1.06	267	eP	Pb	05 11 13.1	+1.3	baz=265
TWQ1				eS	Sb	05 11 27.0	+1.7	baz=265
NSY	Sanyi	1.07	271	eP	Pb	05 11 12.9	+0.9	baz=269
SSLB	Suanglung	1.09	236	eP	Pn	05 11 11.7	-0.1	baz=235
SSLB				eS	Sb	05 11 26.2	+0.1	baz=235
TYC	Yuchr	1.10	243	eP	Pb	05 11 12.3	-0.2	baz=242
TYC				eS	Sb	05 11 27.4	+0.8	baz=242
PTSB	Yuanli	1.12	272	eS	Sb	05 11 29.4	+2.4	baz=271
YULB	Yu-li	1.17	210	eP	Pn	05 11 10.9	-2.0	baz=209
TCU	Taichung	1.18	258	eP	Pb	05 11 13.8	0.0	baz=256
TCU				eS	Sb	05 11 31.8	+3.2	baz=256
WDJ	Dajia District	1.18	267	eP	Pb	05 11 13.7	-0.2	baz=266
WDJ				eS	Sb	05 11 30.2	+1.4	baz=266
TWF1	Yuli	1.20	209	eP	Pn	05 11 11.9	-1.5	baz=208
WHYT	Xinyi Township	1.22	235	eP	Pb	05 11 14.1	-0.4	baz=234
WHYT				eS	Sb	05 11 32.5	+2.7	baz=234
PCYT	Pengchaiyu	1.22	6	eP	Pn	05 11 13.0	-0.7	baz=5.0
WNT	Mingjian	1.26	245	eP	Pb	05 11 14.6	-0.6	baz=244
WNT				eS	Sb	05 11 32.2	+1.3	baz=244
YUS	Yu-Shan	1.28	225	eP	Pn	05 11 14.8	-0.1	baz=224
WCHH	Zhanghua	1.30	256	eS	Sb	05 11 33.3	+1.2	baz=254
FULB	Fuli	1.34	206	eP	Pn	05 11 15.1	-0.2	baz=206
FULB				eS	Sb	05 11 34.5	+1.1	baz=206
ALS	Alishan	1.36	229	eP	Pb	05 11 16.4	-0.8	baz=228
ALS				eS	Sb	05 11 36.0	+1.6	baz=228
CHKT	Chengkung	1.40	202	eP	Pn	05 11 15.3	-0.9	baz=201
CHN5	Tsauling	1.40	235	eP	Pb	05 11 17.7	-0.1	baz=234
CHN5				eS	Sb	05 11 35.8	+0.5	baz=234
WDLH	Douliu	1.46	241	eP	Pb	05 11 18.4	-0.3	baz=240
WDLH				eS	Sb	05 11 38.4	+1.5	baz=240
ELDTW	Lidau	1.48	215	eP	Pn	05 11 17.1	-0.2	baz=214
RLNB	Erlin	1.53	251	eS	Sb	05 11 38.0	-0.7	baz=249
CHN2	Minshiung	1.59	237	eS	Sb	05 11 42.3	+1.7	baz=236
CHN4	Tsaushan	1.62	230	eP	Pb	05 11 20.4	-1.0	baz=229
CHN4				eS	Sb	05 11 42.6	+1.3	baz=229
TPUB	Ta-pu	1.62	228	eP	Pb	05 11 20.5	-1.0	baz=227
TPUB				eS	Sb	05 11 40.7	-0.9	baz=227
IRIF	Iriomote-Funau	1.64	92	P	Pn	05 11 19.2	-0.2	
IRIF				eS	Sn	05 11 40.2	+0.5	
CHY	Chiayi	1.65	237	eP	Pb	05 11 20.8	-1.1	baz=236
CHY				eS	Sb	05 11 43.1	+0.8	baz=236
WTP	Ta-pu	1.67	227	eP	Pb	05 11 21.1	-1.2	baz=225
WSF	Szhu	1.74	244	eP	Pn	05 11 21.3	+0.5	baz=243
TWK	Hsinying	1.74	230	eP	Pn	05 11 21.7	+0.8	baz=228
TWG	Pinlang	1.77	207	eP	Pn	05 11 21.0	-0.2	baz=206
TWGBT	Beinan	1.77	206	eP	Pn	05 11 21.2	+0.1	baz=206
SNST	Tainan City	1.77	228	eP	Pb	05 11 23.2	-0.7	baz=227
CHN1	Nanshi	1.77	227	eP	Pb	05 11 22.9	-1.1	baz=226
CHN1				eS	Sb	05 11 46.5	+0.8	baz=226
SGST	Jiashian	1.81	223	eP	Pn	05 11 22.2	+0.4	baz=222
SGST				eS	Sb	05 11 45.5	-1.4	baz=222
SLGT	Liugui	1.84	220	eP	Pb	05 11 24.1	-1.0	baz=219
JKRS	Kuro-shima	1.90	95	P	Pn	05 11 23.4	+0.4	
JKRS				eS	Sn	05 11 46.7	+0.6	
JIJ	Ishigaki jima	2.02	91	P	Pn	05 11 24.5	0.0	
JIJ				S	Sn	05 11 48.8	-0.1	
SSD	Sandimen	2.04	216	eP	Pb	05 11 26.5	-2.1	baz=215
MASBT	Mashibuluo	2.15	214	eP	Pn	05 11 27.9	+1.4	baz=213
MASBT				eS	Sb	05 11 55.5	-1.2	baz=213
JISG	Ishigakijimahi	2.17	85	P	Pn	05 11 26.8	+0.1	
JISG				S	Sn	05 11 52.6	-0.2	
PTTC	Pingtan	2.25	299	eS	Sn	05 11 53.3	-1.3	baz=298
EAST	Anshuo	2.25	207	eP	Pn	05 11 28.7	+0.9	baz=206
PNG	Penghu	2.33	249	eP	Pn	05 11 28.6	-0.3	baz=248
PNG				eS	Sn	05 11 57.1	+0.3	baz=248
VWUC	VWUC	2.33	285	eP	Pn	05 11 27.9	-1.0	baz=284
VWUC				eS	Sn	05 11 55.2	-1.6	baz=284
PHUB	P'eng-hu	2.34	248	eP	Pn	05 11 28.8	-0.1	baz=247
PHUB				eS	Sn	05 11 57.5	+0.6	baz=247
SCZT	Fangliau	2.36	211	eP	Pn	05 11 30.4	+1.1	baz=210
WDGT	Dungji	2.38	242	eP	Pn	05 11 30.0	+0.5	baz=240
MATB	Ma-tsu	2.50	314	eP	Pn	05 11 30.2	-1.0	baz=313
JTJ	Tarama	2.53	84	P	Pn	05 11 33.1	+1.4	
JTJ				eS	Sn	05 12 02.8	+1.1	
VCHM	Qimei	2.58	243	eP	Pn	05 11 31.6	-0.8	baz=242
VCHM				eS	Sn	05 12 03.9	+0.8	baz=242
PTMZ	Houxiangcun	2.63	284	eP	Pn	05 11 32.7	-0.4	baz=283
PTMZ				eS	Sn	05 12 03.1	-1.2	baz=283
XPSS	Dashiqiu	2.96	328	eP	Pn	05 11 36.5	-1.1	baz=327
MHZQ	Yeshan	3.12	303	eS	Sn	05 12 15.0	-1.3	baz=302
ZZJH	Jiuhuzhen	3.92	272	eS	Sn	05 12 35.4	-0.7	baz=270

IDC 23 05:43:19.9±2.0, 38°.44N×142°.82E, h0km, mb3.2/2, mb1 3.6/5, mb1mx3.3/33, mbtmp3.5/5, ML2.9/3, MS3.8/1, Ms1 4.0/1, ms1mx2.8/18, Error ellipse: s-maj=41.5km s-min=34.1km az=135.0
JMA 23 05:43:31.9, 38°.29N×141°.79E, h56km±1km, M3.6
JMA Felt I J1.
ISC 23 05:43:31.0±1.6, 38°.27N±0°.05×141°.93E±0°.09, h49km±11km, n28, σ1s.46/37, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res	
JIKH	Ishinomakikobu	0.37	276	P	Pn	05 43 41.3	+0.6	
JIKH				S	Sn	05 43 47.9	+0.3	
JIO	Ouri	0.49	292	P	Pn	05 43 42.4	+0.4	
JIO				S	Sn	05 43 49.7	-0.3	
JKMT	Kesennumamotoy	0.65	326	P	Pn	05 43 44.5	+0.5	
JKMT				S	Sn	05 43 53.3	-0.1	
OFUJ	Ofunato	0.83	346	P	Pn	05 43 47.1	+0.7	
OFUJ				S	Sn	05 43 58.0	+0.3	
JOFO	Osakifurukawao	0.87	293	P	Pn	05 43 46.9	+0.1	
JOFO				S	Sn	05 43 58.5	0.0	
JMK	Ichinoseki	0.88	321	P	Pn	05 43 47.5	+0.5	
JMK				S	Sn	05 43 58.4	-0.4	
JMM	Marumori	0.99	246	P	Pn	05 43 48.0	-0.5	
JMM				S	Sn	05 43 59.9	-1.5	
JOU	Okura	1.00	276	P	Pn	05 43 48.5	-0.2	
JOU				S	Sn	05 44 00.7	-1.1	
JFK	Kawauchi	1.23	223	P	Pn	05 43 52.1	+0.2	
JFK				S	Sn	05 44 06.9	-0.5	
JOM	Ohasama	1.30	338	P	Pn	05 43 53.4	+0.7	
JOM				S	Sn	05 44 09.2	+0.3	
JYK	Kaneyama	1.39	298	P	Pn	05 43 53.9	-0.1	
JYK				S	Sn	05 44 10.5	-0.7	
JFT	Otama	1.47	240	P	Pn	05 43 55.4	+0.3	
JFT				S	Sn	05 44 12.3	-0.9	
JYS	Shirataka	1.47	269	P	Pn	05 43 55.2	+0.1	
JYS				S	Sn	05 44 12.5	-0.7	
JRG	Rokugo	1.51	318	P	Pn	05 43 56.1	+0.5	
JRG				S	Sn	05 44 14.6	+0.4	
JYA	Atsumi	1.77	281	P	Pn	05 43 59.2	0.0	
JYA				eS	Sn	05 44 20.4	-0.1	
MJAR	Matsushiro Arr	3.43	241	Pn	Pn	05 44 23.6	+1.7	0.3nm,0.3s,baz=44,slow=13,SNR=17
MJAR				Sn	Sn	05 45 08.7	+7.3	0.1nm,0.3s,baz=104,slow=32,SNR=1.5
MAT	Matsushiro	3.43	241	P	Pn	05 44 23.7	+1.7	
MAT				S	Sn	05 45 01.6	+0.2	
JHJ	Hachijo jima 2	5.43	199	Pn	Pn	05 44 48.6	-0.7	8.7nm,0.3s,baz=57,slow=23,SNR=1.3
USRK	Ussuriysk Ar.	9.54	311	Pn	Pn	05 45 46.0	+0.3	baz=123,slow=14,SNR=5.6
H11N2	WAKE ISLAND Hy	28.46	123	T	T	06 19 35.5		baz=316,slow=75,SNR=39
H11N1	WAKE ISLAND Hy	28.46	123	T	T	06 19 36.5		baz=316,slow=75,SNR=35
H11N3	WAKE ISLAND Hy	28.47	123	T	T	06 19 39.4		baz=316,slow=75,SNR=32
H11S1	WAKE ISLAND Hy	29.21	125	T	T	06 20 36.0		baz=318,slow=76,SNR=19
H11S3	WAKE ISLAND Hy	29.21	125	T	T	06 20 35.3		baz=318,slow=76,SNR=21
H11S2	WAKE ISLAND Hy	29.23	125	T	T	06 20 35.0		baz=318,slow=76,SNR=20
CMAR	Chiang Mai Arr	42.22	254	LR	LR	06 10 08.4		comp=Z,105nm,18.5s,baz=324,slow=38
MKAR	Makanchi Array	43.82	301	P	P	05 51 30.9	-1.1	0.3nm,0.6s,baz=87,slow=10.0,SNR=3.1
TXAR	Lajitas Array	89.04	53	P	P	05 56 14.1	-6.9	0.1nm,0.5s,baz=284,slow=3.6,SNR=1.5

JMA 23 05:43:48.7±0.2, 24°.35N×121°.86E, h48km±3km, M2.6
TAP 23 05:43:49.2, 24°.42N×121°.92E, h27km, ML3.6, B
ISC 23 05:43:49.7±0.9, 24°.40N±0°.02×121°.94E±0°.02, h24km±6km, n109, σ0s.72/178, 1C-18D, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res	
ENA	Nanau	0.18	277	⇓iP	Pb	05 43 54.7	-0.4	baz=270
ENA				S	Sb	05 43 58.4	-0.3	baz=270
TWC	Suao	0.22	338	⇓iP	Pb	05 43 55.1	-0.4	baz=344
TWC				iS	Sb	05 43 58.9	-0.6	

	baz=344						
EOS1	**EOS1**	**0.23**	**50**	⇓P	**Pb**	**05 43 55.9**	**+0.3**
	baz=51						
EOS1				S	**Sb**	**05 44 01.0**	**+1.5**
	baz=51						
NACB	**Ninganchiao**	**0.39**	**234**	⇓P	**Pb**	**05 43 58.0**	**-0.1**
	baz=233						
NACB				S	**Sb**	**05 44 04.4**	**+0.7**
	baz=233						
ILA	**Ilan**	**0.40**	**334**	P	**Pb**	**05 43 57.9**	**-0.3**
	baz=333						
ILA				S	**Sb**	**05 44 04.2**	**+0.2**
	baz=333						
TWE	**Neicheng**	**0.40**	**322**	⇓iP	**Pb**	**05 43 57.8**	**-0.4**
	baz=324						
TWE				S	**Sb**	**05 44 02.7**	**-1.3**
	baz=324						
ENTT	**Nioudou**	**0.41**	**305**	⇓iP	**Pb**	**05 43 58.1**	**-0.3**
	baz=304						
ENTT				S	**Sb**	**05 44 04.0**	**-0.4**
	baz=304						
NDT	**Datong Townshi**	**0.43**	**297**	⇓iP	**Pb**	**05 43 58.6**	**-0.2**
	baz=296						
NDT				S	**Sb**	**05 44 05.1**	**+0.1**
	baz=296						
SLBB	**Yuanshan**	**0.44**	**322**	P	**Pb**	**05 43 58.7**	**-0.2**
	baz=322						
SLBB				eS	**Sb**	**05 44 05.2**	**0.0**
	baz=322						
TWD	**Chiawan**	**0.45**	**224**	⇓iP	**Pb**	**05 43 58.9**	**-0.1**
	baz=223						
TWD				iS	**Sn**	**05 44 06.7**	**-1.2**
	baz=223						
NTC	**Toucheng**	**0.46**	**348**	eP	**Pb**	**05 43 58.8**	**-0.4**
	baz=350						
NTC				eS	**Sb**	**05 44 05.6**	**-0.1**
	baz=350						
ETLH	**Xiulin Townshi**	**0.46**	**245**	⇓iP	**Pb**	**05 43 59.0**	**-0.2**
	baz=244						
ETLH				S	**Sb**	**05 44 06.6**	**+0.8**
	baz=244						
NNSH	**Datong**	**0.51**	**273**	eP	**Pb**	**05 43 59.7**	**-0.4**
	baz=274						
NNSH				S	**Sb**	**05 44 06.9**	**-0.3**
	baz=274						
NNSB	**Datong**	**0.51**	**273**	⇓P	**Pb**	**05 43 59.8**	**-0.3**
	baz=273						
NNSB				S	**Sb**	**05 44 06.9**	**-0.2**
	baz=273						
NNS	**Nan Shan**	**0.52**	**274**	P	**Pb**	**05 43 60.0**	**-0.3**
	baz=275						
NNS				S	**Sb**	**05 44 07.2**	**-0.2**
	baz=275						
HWA	**Hwalien**	**0.52**	**216**	eP	**Pb**	**05 44 00.7**	**+0.4**
	baz=211						
NWLT	**Wulai**	**0.54**	**313**	P	**Pb**	**05 44 00.2**	**-0.4**
	baz=313						
NWLT				S	**Sb**	**05 44 07.7**	**-0.4**
	baz=313						
TIPB	**Shuangxi**	**0.57**	**350**	⇓iP	**Pb**	**05 44 00.7**	**-0.4**
	baz=357						
TIPB				iS	**Sb**	**05 44 08.3**	**-0.6**
	baz=357						
YHNB	**Yeheng**	**0.58**	**297**	⇓eP	**Pb**	**05 44 00.9**	**-0.3**
	baz=296						
YHNB				S	**Sb**	**05 44 08.6**	**-0.5**
	baz=296						
ENLB	**Shoufeng**	**0.59**	**212**	eP	**Pb**	**05 44 00.9**	**-0.4**
	baz=209						
ENLB				eS	**Sn**	**05 44 11.0**	**-0.2**
	baz=209						
NSK	**Sanguang**	**0.59**	**297**	⇓iP	**Pb**	**05 44 01.1**	**-0.4**
	baz=296						
NSK				S	**Sb**	**05 44 09.2**	**-0.3**
	baz=296						
TWB1	**Santiao Chiao**	**0.60**	**4**	P	**Pb**	**05 44 01.2**	**-0.4**
	baz=2.0						
TWB1				S	**Sb**	**05 44 09.6**	**-0.2**
	baz=2.0						
TWA	**Mucha**	**0.66**	**331**	P	**Pb**	**05 44 02.4**	**-0.1**
	baz=325						
TWA				S	**Sb**	**05 44 11.0**	**-0.4**
	baz=325						
WHF	**Hehuan Shan**	**0.67**	**247**	⇓iP	**Pb**	**05 44 02.7**	**-0.2**
	baz=251						
WHF				S	**Sb**	**05 44 12.6**	**+0.7**
	baz=251						
NHDH	**Xindian Distri**	**0.67**	**326**	eP	**Pb**	**05 44 02.4**	**-0.3**
	baz=320						
NHDH				eS	**Sb**	**05 44 11.5**	**-0.2**
	baz=320						
NWF	**Wu-fen Shan**	**0.68**	**348**	⇓P	**Pb**	**05 44 02.7**	**-0.2**
	baz=342						
NWF				S	**Sb**	**05 44 11.7**	**-0.3**
	baz=342						
WFSB	**Wu-fen Shan**	**0.68**	**348**	⇓P	**Pb**	**05 44 02.6**	**-0.3**
	baz=345						
WFSB				S	**Sb**	**05 44 11.9**	**0.0**
	baz=345						
TATO	**Taipei**	**0.70**	**324**	eP	**Pb**	**05 44 03.0**	**-0.3**
	baz=320						
TATO				S	**Sb**	**05 44 12.4**	**-0.1**
	baz=320						
TWT	**Tachien**	**0.71**	**258**	P	**Pb**	**05 44 03.7**	**+0.1**
	baz=256						
TWT				S	**Sn**	**05 44 14.0**	**-0.7**
	baz=256						
TDCB	**Techi**	**0.73**	**258**	P	**Pb**	**05 44 03.6**	**-0.2**
	baz=256						
TDCB				S	**Sb**	**05 44 13.6**	**+0.1**
	baz=256						
TAP	**Taipei**	**0.74**	**328**	P	**Pb**	**05 44 04.0**	**0.0**
	baz=329						
TAP				S	**Sb**	**05 44 14.6**	**+0.8**
	baz=329						
ESL	**Shilin**	**0.75**	**218**	eP	**Pb**	**05 44 03.2**	**-0.8**
	baz=229						
ESL				S	**Sn**	**05 44 14.6**	**-0.7**
	baz=229						
WLTB	**Daxi**	**0.77**	**306**	⇑iP	**Pn**	**05 44 05.0**	**0.0**
	baz=307						
WLTB				S	**Sb**	**05 44 15.2**	**+0.8**
	baz=307						
CHGB	**Renai**	**0.78**	**244**	⇓P	**Pb**	**05 44 04.5**	**-0.1**
	baz=242						
CHGB				eS	**Sn**	**05 44 15.6**	**-0.8**
	baz=242						
YM01	**YM01**	**0.81**	**336**	iP	**Pb**	**05 44 05.2**	**+0.1**
	baz=348						
YM01				S	**Sb**	**05 44 15.9**	**+0.2**
	baz=348						
YM10	**YM10**	**0.82**	**335**	P	**Pb**	**05 44 05.4**	**0.0**
	baz=348						
YM10				S	**Sb**	**05 44 16.1**	**0.0**
	baz=348						
YM11	**YM11**	**0.83**	**336**	eP	**Pb**	**05 44 05.2**	**-0.3**
	baz=349						
YM11				eS	**Sb**	**05 44 16.1**	**-0.1**
	baz=349						
OWD	**Renai**	**0.83**	**237**	P	**Pb**	**05 44 05.0**	**-0.4**
	baz=235						
OWD				S	**Sn**	**05 44 16.9**	**-0.5**
	baz=235						
YM04	**YM04**	**0.83**	**334**	eP	**Pb**	**05 44 05.3**	**-0.2**
	baz=334						
YM04				S	**Sb**	**05 44 16.1**	**-0.1**
	baz=334						
TWS1	**Kuangyinshan**	**0.84**	**326**	P	**Pb**	**05 44 05.9**	**+0.3**
	baz=337						
TWS1				S	**Sn**	**05 44 17.6**	**0.0**
	baz=337						
YM03	**YM03**	**0.85**	**335**	eP	**Pb**	**05 44 05.8**	**-0.1**
	baz=322						
ANP	**Anpu**	**0.87**	**334**	eP	**Pb**	**05 44 05.5**	**-0.7**
	baz=335						
EGFH	**Guangfu**	**0.87**	**213**	eP	**Pb**	**05 44 05.7**	**-0.4**
	baz=198						
LIOB	**Emei**	**0.88**	**286**	P	**Pn**	**05 44 06.6**	**+0.2**
	baz=285						
LIOB				eS	**Sn**	**05 44 18.4**	**-0.1**
	baz=285						
NSTT	**Nanjuang**	**0.88**	**285**	P	**Pn**	**05 44 06.6**	**0.0**
	baz=284						
NSTT				S	**Sn**	**05 44 18.5**	**-0.2**
	baz=284						
NCU	**National Centr**	**0.89**	**310**	eP	**Pb**	**05 44 06.4**	**0.0**
	baz=295						
NCU				eS	**Sn**	**05 44 19.5**	**+0.8**
	baz=295						
NCUH	**Zhongli**	**0.89**	**309**	P	**Pb**	**05 44 06.6**	**+0.2**
	baz=295						
NCUH				eS	**Sn**	**05 44 19.9**	**+1.2**
	baz=295						
WHP	**Taichung City**	**0.92**	**262**	eP	**Pn**	**05 44 07.3**	**+0.2**
	baz=261						
WHP				eS	**Sn**	**05 44 19.7**	**+0.1**
	baz=261						
JYNG	**Yonagunijimaku**	**0.92**	**87**	P	**Pb**	**05 44 06.3**	**-0.6**
JYNG				S	**Sb**	**05 44 19.1**	**+0.4**
TWY	**Chenhua**	**0.92**	**341**	eP	**Pb**	**05 44 07.1**	**+0.1**
	baz=341						
TWY				eS	**Sb**	**05 44 19.4**	**+0.6**
	baz=341						
SBCB	**Hsinchu**	**0.95**	**294**	eP	**Pb**	**05 44 06.9**	**-0.6**
	baz=293						
SBCB				eS	**Sn**	**05 44 21.5**	**+1.2**
	baz=293						
HSN	**Hsinchu**	**0.97**	**294**	eP	**Pb**	**05 44 06.7**	**-1.0**
	baz=296						
HSN				eS	**Sn**	**05 44 21.4**	**+0.7**
	baz=296						
VWDT	**VWDT**	**0.97**	**229**	⇓P	**Pb**	**05 44 07.3**	**-0.5**
	baz=227						
VWDT				S	**Sn**	**05 44 20.9**	**0.0**
	baz=227						
YOJ	**Yonaguni jima**	**0.98**	**86**	P	**Pb**	**05 44 07.4**	**-0.5**
	baz=80						
YOJ				eS	**Sn**	**05 44 21.0**	**0.0**
	baz=80						
YOJ	**Yonaguni jima**	**0.98**	**86**	P	**Pb**	**05 44 07.4**	**-0.5**
YOJ				eS	**Sn**	**05 44 20.9**	**-0.1**
DPDB	**Guoxing**	**0.99**	**248**	eP	**Pb**	**05 44 08.0**	**-0.3**
	baz=247						
DPDB				eS	**Sn**	**05 44 21.3**	**-0.2**
	baz=247						
HGSD	**Ruisui**	**1.02**	**208**	eP	**Pn**	**05 44 08.3**	**-0.2**
	baz=197						
HGSD				eS	**Sn**	**05 44 23.5**	**+1.4**
	baz=197						
NMLH	**Miaoli**	**1.05**	**277**	eP	**Pb**	**05 44 10.0**	**+0.7**
	baz=276						
NMLH				eS	**Sn**	**05 44 25.3**	**+2.4**
	baz=276						
EHY	**Hungye**	**1.06**	**212**	eP	**Pn**	**05 44 07.7**	**-1.2**
	baz=210						
NSY	**Sanyi**	**1.07**	**271**	eP	**Pb**	**05 44 10.0**	**+0.4**
	baz=269						
NSY				eS	**Sn**	**05 44 25.8**	**+2.4**
	baz=269						
SMLT	**Sun Moon Lake**	**1.08**	**242**	eP	**Pb**	**05 44 09.8**	**0.0**
	baz=228						
SMLT				eS	**Sn**	**05 44 25.4**	**+1.7**
	baz=228						
SSLB	**Suanglung**	**1.09**	**236**	P	**Pn**	**05 44 08.8**	**-0.6**
	baz=226						
SSLB				eS	**Sb**	**05 44 23.6**	**-0.1**
	baz=226						
TYC	**Yuchr**	**1.11**	**243**	P	**Pn**	**05 44 09.8**	**+0.1**
	baz=241						
TYC				eS	**Sn**	**05 44 25.3**	**+1.2**
	baz=241						
PTSB	**Yuanli**	**1.13**	**272**	eP	**Pn**	**05 44 08.9**	**-1.0**
	baz=270						
YULB	**Yu-li**	**1.17**	**210**	eP	**Pn**	**05 44 08.9**	**-1.6**
	baz=208						
TCU	**Taichung**	**1.18**	**258**	eP	**Pn**	**05 44 09.8**	**-0.8**
	baz=254						
WDJ	**Dajia District**	**1.19**	**268**	eP	**Pb**	**05 44 11.6**	**+0.2**
	baz=266						
WDJ				eS	**Sb**	**05 44 28.2**	**+1.8**
	baz=266						
TWF1	**Yuli**	**1.20**	**209**	eP	**Pn**	**05 44 09.4**	**-1.6**
	baz=219						
WHYT	**Xinyi Township**	**1.22**	**235**	eP	**Pb**	**05 44 11.8**	**-0.3**
	baz=225						
WJS	**Zhushan**	**1.25**	**243**	eP	**Pb**	**05 44 12.9**	**+0.3**
	baz=226						
WNT	**Mingjian**	**1.26**	**246**	eP	**Pb**	**05 44 12.4**	**-0.3**
	baz=242						
YUS	**Yu-Shan**	**1.28**	**225**	eP	**Pn**	**05 44 12.2**	**-0.3**
	baz=223						
YUS				eS	**Sb**	**05 44 29.9**	**+0.3**
	baz=223						
FULB	**Fuli**	**1.34**	**206**	eP	**Pn**	**05 44 13.0**	**+0.1**
	baz=218						
FULB				eS	**Sb**	**05 44 31.5**	**+0.7**
	baz=218						
ALS	**Alishan**	**1.37**	**230**	eP	**Pb**	**05 44 14.2**	**-0.6**
	baz=217						
WDLH	**Douliu**	**1.47**	**241**	eP	**Pb**	**05 44 15.8**	**-0.4**
	baz=239						
WDLH				eS	**Sb**	**05 44 35.3**	**+0.9**
	baz=239						
RLNB	**Erlin**	**1.53**	**251**	eP	**Pn**	**05 44 15.3**	**-0.1**
	baz=264						
RLNB				eS	**Sb**	**05 44 37.0**	**+0.7**
	baz=264						
CHN4	**Tsaushan**	**1.62**	**230**	eP	**Pb**	**05 44 18.4**	**-0.5**
	baz=227						
TPUB	**Ta-pu**	**1.63**	**228**	eP	**Pb**	**05 44 18.0**	**-1.0**
	baz=226						
TPUB				eS	**Sb**	**05 44 39.9**	**+0.7**
	baz=226						
IRIF	**Iriomote-Funau**	**1.64**	**92**	P	**Pn**	**05 44 16.8**	**-0.1**
IRIF				S	**Sn**	**05 44 37.3**	**+0.1**
STYT	**Tauyuan**	**1.64**	**221**	eP	**Pb**	**05 44 18.1**	**-1.2**
	baz=219						
CHY	**Chiayi**	**1.65**	**237**	eP	**Pb**	**05 44 18.6**	**-0.9**
	baz=234						
WTP	**Ta-pu**	**1.67**	**227**	eP	**Pb**	**05 44 18.7**	**-1.2**
	baz=224						
HATJ	**Hateruma jima**	**1.74**	**101**	P	**Pn**	**05 44 18.8**	**+0.5**
TWH	**Lutao**	**1.74**	**194**	eP	**Pn**	**05 44 16.9**	**-1.4**
	baz=183						
WSF	**Szhu**	**1.75**	**244**	eP	**Pn**	**05 44 18.5**	**+0.1**
	baz=240						
TWK	**Hsinying**	**1.75**	**230**	eP	**Pb**	**05 44 19.9**	**-1.1**
	baz=227						
TWGBT	**Beinan**	**1.77**	**207**	eP	**Pn**	**05 44 17.7**	**-1.0**
	baz=194						
SNST	**Tainan City**	**1.77**	**229**	eP	**Pn**	**05 44 19.5**	**+0.7**
	baz=226						
CHN1	**Nanshi**	**1.77**	**227**	eP	**Pb**	**05 44 20.2**	**-1.3**
	baz=226						
CHN1				eS	**Sb**	**05 44 44.2**	**+0.9**
	baz=226						
SLGT	**Liugui**	**1.84**	**220**	eP	**Pb**	**05 44 21.4**	**-1.2**
	baz=219						
JKRS	**Kuro-shima**	**1.90**	**95**	P	**Pn**	**05 44 21.1**	**+0.6**
JKRS				eS	**Sn**	**05 44 44.1**	**+0.5**
JIJ	**Ishigaki jima**	**2.01**	**91**	P	**Pn**	**05 44 22.2**	**+0.1**
JIJ				eS	**Sn**	**05 44 47.6**	**+1.2**
SSD	**Sandimen**	**2.04**	**216**	eP	**Pb**	**05 44 24.4**	**-1.7**
	baz=202						
MASBT	**Mashibuluo**	**2.15**	**214**	eP	**Pn**	**05 44 25.5**	**+1.5**
	baz=213						
JISG	**Ishigakijimahi**	**2.17**	**85**	S	**Sn**	**05 44 50.2**	**-0.1**
EAST	**Anshuo**	**2.25**	**207**	eP	**Pn**	**05 44 26.0**	**+0.6**
	baz=198						
PTTC	**Pingtan**	**2.25**	**299**	eP	**Pn**	**05 44 24.7**	**-0.7**
	baz=298						
PNG	**Penghu**	**2.33**	**250**	eP	**Pn**	**05 44 26.4**	**-0.1**
	baz=245						
VWUC	**VWUC**	**2.34**	**285**	eP	**Pn**	**05 44 25.5**	**-1.1**
	baz=284						
PHUB	**P'eng-hu**	**2.34**	**248**	eP	**Pn**	**05 44 26.1**	**-0.5**
	baz=245						
PHUB				eS	**Sn**	**05 44 54.8**	**+0.2**
	baz=245						
SCZT	**Fangliau**	**2.36**	**211**	eP	**Pn**	**05 44 28.3**	**+1.5**
	baz=199						
WDGT	**Dungji**	**2.38**	**242**	eP	**Pn**	**05 44 27.2**	**+0.1**
	baz=237						
MATB	**Ma-tsu**	**2.51**	**314**	eP	**Pn**	**05 44 28.5**	**-0.4**
	baz=313						
VCHM	**Qimei**	**2.59**	**243**	eP	**Pn**	**05 44 29.9**	**-0.2**
	baz=239						
PTMZ	**Houxiangcun**	**2.64**	**284**	eP	**Pn**	**05 44 30.2**	**-0.5**
	baz=283						
XPSS	**Dashiqiu**	**2.97**	**328**	eP	**Pn**	**05 44 34.2**	**-1.1**
	baz=327						
MHZQ	**Yeshan**	**3.13**	**303**	eP	**Pn**	**05 44 36.8**	**-0.7**
	baz=302						
KNM	**Kinmen**	**3.20**	**271**	eP	**Pn**	**05 44 40.1**	**+1.7**
	baz=265						
KNMB	**Chin-men Tao**	**3.24**	**272**	eP	**Pn**	**05 44 38.4**	**-0.6**
	baz=266						

*IDC **23** 06:01:39.1±1.0, 17.66N×94.54E, h0km, mb3.8/9, mb1 4.0/10, mb1mx3.7/40, mbtmp3.8/10, ML4.3/1, Error ellipse: s-maj=37.0km s-min=18.2km az=50.0*

ISC 23 06:01:46.8±0.9, **17.9N**±0.1×**94.82E**±0.07, **h53km, n33,** σ**1.01**/38, **mb3.7**/9, **Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHMT	**Maesarieng**	**2.98**	**83**	P	**Pn**	**06 02 32.2**	**+0.7**
CM13	**Chiang Mai Arr**	**3.93**	**81**	P	**Pn**	**06 02 45.4**	**+0.8**
CM15	**Chiang Mai Arr**	**3.95**	**81**	P	**Pn**	**06 02 45.9**	**+1.0**
CM05	**Chiang Mai Arr**	**3.96**	**82**	P	**Pn**	**06 02 45.4**	**+0.3**
CM05				S	**Sn**	**06 03 28.6**	**-1.7**
CM02	**Chiang Mai Arr**	**3.96**	**81**	P	**Pn**	**06 02 46.3**	**+1.2**
CM02				S	**Sn**	**06 03 29.2**	**-1.2**
CMAR	**Chiang Mai Arr**	**3.96**	**81**	Pn	**Pn**	**06 02 46.8**	**+1.7**
	4.2nm,0.3s,baz=258,slow=15,SNR=44						
CMAR				Sn	**Sn**	**06 03 30.1**	**-0.3**
	6.3nm,0.3s,baz=261,slow=24,SNR=15						
CM01	**Chiang Mai Arr**	**3.98**	**81**	P	**Pn**	**06 02 46.1**	**+0.9**
CM04	**Chiang Mai Arr**	**3.99**	**82**	P	**Pn**	**06 02 46.8**	**+1.3**
CM09	**Chiang Mai Arr**	**4.01**	**81**	P	**Pn**	**06 02 47.0**	**+1.3**
CMMT	**Chiang Mai**	**4.03**	**76**	P	**Pn**	**06 02 47.0**	**+1.0**
CMMT				Sg	**Sn**	**06 03 31.3**	**-0.7**
UMPA	**Umpang Tak**	**4.20**	**112**	P	**Pn**	**06 02 49.5**	**+1.2**
UMPA				S	**Sn**	**06 03 35.6**	**-0.5**
LAMP	**Lampang**	**4.62**	**81**	P	**Pn**	**06 02 55.2**	**+1.1**
PHRA	**Phrae**	**5.18**	**82**	P	**Pn**	**06 03 02.5**	**+0.8**
UTTA	**Uttaradit**	**5.46**	**90**	P	**Pn**	**06 03 05.7**	**+0.1**
PBKT	**Sadao Pong**	**6.01**	**101**	P	**Pn**	**06 03 13.5**	**+0.3**
ODAN	**Odare**	**11.29**	**324**	eP	**Pn**	**06 04 23.8**	**-1.8**
	7.0nm,0.2s						
TAPN	**Taplejung**	**11.50**	**326**	eP	**Pn**	**06 04 29.8**	**+1.2**
RAMN	**Ramite**	**11.81**	**321**	eP	**Pn**	**06 04 31.3**	**-1.5**
	9.7nm,0.3s						
JIRN	**Jiri**	**12.59**	**322**	eP	**Pn**	**06 04 41.7**	**-1.8**
	13nm,0.2s						
GUN	**Gumba**	**12.96**	**322**	eP	**Pn**	**06 04 47.2**	**-1.3**
PKI	**Pulchoki**	**12.99**	**320**	eP	**Pn**	**06 04 47.6**	**-1.3**
PKIN	**Phulchoki**	**13.00**	**320**	eP	**Pn**	**06 04 48.9**	**-0.1**
	5.6nm,0.2s						
GKN	**Gorkha**	**13.77**	**319**	eP	**Pn**	**06 05 00.0**	**+0.5**
	20nm,0.3s						
DANN	**Dangsing**	**14.57**	**318**	eP	**Pn**	**06 05 10.5**	**+0.3**
	17nm,0.6s						
MKAR	**Makanchi Array**	**30.66**	**343**	P	**P**	**06 07 57.0**	**+0.8**
	0.3nm,0.5s,baz=165,slow=8.9,SNR=5.9						
SONM	**Songino Array**	**31.36**	**15**	P	**P**	**06 08 03.0**	**+0.5**
	0.4nm,0.3s,baz=196,slow=10.0,SNR=9.5						
ZALV	**Zalesovo Beam**	**36.84**	**350**	P	**P**	**06 08 50.3**	**+0.6**
	0.8nm,0.4s,baz=168,slow=7.5,SNR=5.1						
WRA	**Warramunga Arr**	**53.99**	**132**	P	**P**	**06 11 05.3**	**-0.5**
	0.7nm,0.6s,baz=323,slow=7.4,SNR=4.0						
ASAR	**Alice Springs**	**56.21**	**136**	P	**P**	**06 11 21.6**	**-0.1**
	0.5nm,0.5s,baz=312,slow=6.8,SNR=8.6						
FINES	**FINESS Array B**	**64.33**	**330**	P	**P**	**06 12 16.3**	**-0.4**
	3.5nm,1.1s,baz=110,slow=8.3,SNR=7.2						
GERES	**GERESS Array B**	**70.98**	**316**	P	**P**	**06 12 58.9**	**0.0**
	0.6nm,0.6s,baz=77,slow=5.9,SNR=5.9						
NOA	**NORSAR Array B**	**71.47**	**329**	P	**P**	**06 13 01.3**	**-0.3**
	0.4nm,0.7s,baz=90,slow=6.2,SNR=2.8						
ESDC	**Sonseca Array**	**85.32**	**310**	P	**P**	**06 14 18.4**	**0.0**
	0.2nm,0.4s,baz=46,slow=4.5,SNR=3.5						

*JMA **23** 06:33:51.9±0.2, 24.34N×121.89E, h43km±4km, M2.6*
*TAP **23** 06:33:53.0, 24.40N×121.96E, h9km, ML3.4, C*

ISC 23 06:33:52.9±0.9, **24.41N**±0.02×**121.97E**±0.02, **h21km**±1km, **n78,**σ**0.70**/148, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.20**	**47**	eP	**Pb**	**06 33 59.0**	**+0.4**
	baz=46						
EOS1				eS	**Sb**	**06 34 04.2**	**+1.6**
	baz=46						
ENA	**Nanau**	**0.21**	**275**	eP	**Pb**	**06 33 57.8**	**-0.9**
	baz=277						
ENA				eS	**Sb**	**06 34 01.5**	**-1.2**
	baz=277						
TWC	**Suao**	**0.23**	**332**	eP	**Pb**	**06 33 58.2**	**-0.6**
	baz=336						
TWC				eS	**Sb**	**06 34 02.0**	**-0.8**
	baz=336						
ILA	**Ilan**	**0.41**	**331**	P	**Pb**	**06 34 01.2**	**0.0**
	baz=332						
ILA				eS	**Sb**	**06 34 07.0**	**0.0**
	baz=332						
NACB	**Ninganchiao**	**0.41**	**235**	P	**Pb**	**06 34 00.9**	**-0.5**
	baz=235						
NACB				eS	**Sb**	**06 34 07.7**	**+0.6**
	baz=235						
TWE	**Neicheng**	**0.41**	**319**	P	**Pb**	**06 34 01.0**	**-0.4**
	baz=321						
TWE				eS	**Sb**	**06 34 07.0**	**-0.2**
	baz=321						
ENTT	**Nioudou**	**0.43**	**302**	eP	**Pb**	**06 34 01.2**	**-0.6**
	baz=303						
ENTT				eS	**Sb**	**06 34 07.6**	**-0.1**
	baz=303						
NDT	**Datong Townshi**	**0.46**	**295**	P	**Pb**	**06 34 01.6**	**-0.5**
	baz=296						
NDT				eS	**Sb**	**06 34 08.3**	**-0.2**
	baz=296						
SLBB	**Yuanshan**	**0.46**	**319**	P	**Pb**	**06 34 01.8**	**-0.4**
	baz=319						
SLBB				eS	**Sb**	**06 34 08.4**	**-0.2**
	baz=319						
NTC	**Toucheng**	**0.46**	**344**	P	**Pb**	**06 34 01.8**	**-0.4**
	baz=345						
NTC				eS	**Sb**	**06 34 08.6**	**0.0**
	baz=345						
TWD	**Chiawan**	**0.47**	**226**	P	**Pb**	**06 34 02.0**	**-0.4**
	baz=225						
TWD				eS	**Sb**	**06 34 10.1**	**+1.2**
	baz=225						
ETLH	**Xiulin Townshi**	**0.49**	**246**	eP	**Pb**	**06 34 02.0**	**-0.7**
	baz=246						
ETLH				eS	**Sb**	**06 34 09.9**	**+0.5**
	baz=246						
NNSH	**Datong**	**0.53**	**272**	eP	**Pb**	**06 34 02.9**	**-0.8**
	baz=272						
NNSH				eS	**Sb**	**06 34 10.5**	**-0.5**
	baz=272						
NNSB	**Datong**	**0.53**	**272**	P	**Pb**	**06 34 02.7**	**-0.9**
	baz=272						
NNSB				eS	**Sb**	**06 34 10.3**	**-0.6**
	baz=272						
NNS	**Nan Shan**	**0.54**	**273**	P	**Pb**	**06 34 03.1**	**-0.7**
	baz=273						
NNS				eS	**Sb**	**06 34 10.7**	**-0.6**
	baz=273						
NWLT	**Wulai**	**0.56**	**311**	P	**Pb**	**06 34 03.1**	**-1.0**
	baz=311						
NWLT				eS	**Sb**	**06 34 10.8**	**-0.9**
	baz=311						
TIPB	**Shuangxi**	**0.57**	**347**	eP	**Pb**	**06 34 03.8**	**-0.6**
	baz=347						
TIPB				eS	**Sb**	**06 34 11.6**	**-0.5**
	baz=347						
TWB1	**Santiao Chiao**	**0.60**	**2**	P	**Pb**	**06 34 04.5**	**-0.2**
	baz=3.0						
TWB1				eS	**Sb**	**06 34 14.0**	**+1.2**
	baz=3.0						
YHNB	**Yeheng**	**0.60**	**296**	eP	**Pb**	**06 34 04.0**	**-0.8**
	baz=296						
YHNB				eS	**Sb**	**06 34 11.7**	**-1.2**
	baz=296						
ENLB	**Shoufeng**	**0.60**	**214**	P	**Pb**	**06 34 03.8**	**-1.0**
	baz=213						
ENLB				eS	**Sn**	**06 34 14.8**	**-0.7**
	baz=213						
NSK	**Sanguang**	**0.61**	**296**	P	**Pb**	**06 34 04.3**	**-0.8**
	baz=296						
NSK				eS	**Sb**	**06 34 12.6**	**-0.8**
	baz=296						
TWA	**Mucha**	**0.67**	**329**	P	**Pb**	**06 34 05.7**	**-0.2**
	baz=329						
TWA				eS	**Sb**	**06 34 14.9**	**+0.2**
	baz=329						
WFSB	**Wu-fen Shan**	**0.68**	**346**	P	**Pb**	**06 34 05.9**	**-0.2**
	baz=346						
WFSB				eS	**Sb**	**06 34 16.0**	**+0.9**
	baz=346						
NHDH	**Xindian Distri**	**0.68**	**324**	P	**Pb**	**06 34 06.3**	**+0.1**
	baz=324						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NHDH				eS	Sb	06 34 14.9	-0.2
	baz=324						
WHF	Hehuan Shan	0.69	248	P	Pb	06 34 05.4	-1.2
	baz=247						
WHF				eS	Sb	06 34 16.3	+0.5
	baz=247						
TATO	Taipei	0.71	322	eP	Pb	06 34 06.3	-0.3
	baz=323						
TATO				eS	Sb	06 34 16.1	+0.1
	baz=323						
TDCB	Techi	0.75	258	P	Pb	06 34 06.6	-0.8
	baz=258						
TDCB				eS	Sb	06 34 17.1	-0.2
	baz=258						
ESL	Shilin	0.77	220	eP	Pb	06 34 06.8	-0.7
	baz=218						
ESL				eS	Sb	06 34 18.4	+0.8
	baz=218						
WLTB	Daxi	0.79	304	P	Pb	06 34 08.4	+0.6
	baz=304						
WLTB				S	Sb	06 34 19.1	+1.1
	baz=304						
CHGB	Renai	0.80	244	eP	Pb	06 34 07.7	-0.6
	baz=244						
CHGB				eS	Sb	06 34 19.3	+0.5
	baz=244						
YM01	YM01	0.82	334	P	Pb	06 34 08.5	0.0
	baz=334						
YM01				eS	Sb	06 34 19.7	+0.7
	baz=334						
YM10	YM10	0.83	334	P	Pb	06 34 08.7	0.0
	baz=334						
YM10				eS	Sb	06 34 19.5	+0.1
	baz=334						
YM11	YM11	0.83	335	P	Pb	06 34 08.8	0.0
	baz=335						
YM04	YM04	0.84	332	P	Pb	06 34 08.5	-0.2
	baz=332						
YM04				eS	Sb	06 34 20.1	+0.4
	baz=332						
TWS1	Kuangyinshan	0.85	324	P	Pb	06 34 09.2	+0.3
	baz=325						
TWS1				eS	Sb	06 34 20.6	+0.7
	baz=325						
OWD	Renai	0.85	238	P	Pb	06 34 08.2	-0.9
	baz=238						
OWD				eS	Sb	06 34 19.9	-0.2
	baz=238						
EGFH	Guangfu	0.89	214	eP	Pb	06 34 09.8	+0.2
	baz=213						
EGFH				eS	Sn	06 34 22.3	-0.1
	baz=213						
JYNG	Yonagunijimaku	0.89	87	P	Pb	06 34 09.5	-0.2
JYNG				S	Sb	06 34 22.0	+0.9
LIOB	Emei	0.90	285	P	Pb	06 34 09.2	-0.6
	baz=285						
LIOB				eS	Sn	06 34 22.6	-0.2
	baz=285						
NCUH	Zhongli	0.90	308	eP	Pb	06 34 09.8	-0.1
	baz=308						
NCUH				eS	Sn	06 34 22.8	-0.1
	baz=308						
NSTT	Nanjuang	0.91	284	eP	Pb	06 34 09.7	-0.2
	baz=284						
NSTT				eS	Sb	06 34 21.9	+0.4
	baz=284						
TWY	Chenhua	0.93	339	P	Pb	06 34 10.6	+0.4
	baz=339						
TWY				eS	Sn	06 34 23.2	-0.2
	baz=339						
WHP	Taichung City	0.94	262	P	Pb	06 34 10.3	-0.2
	baz=262						
WHP				eS	Sb	06 34 22.8	+0.2
	baz=262						
YOJ	Yonaguni jima	0.95	87	eP	Pb	06 34 10.6	-0.1
	baz=85						
YOJ				eS	Sn	06 34 23.9	-0.2
	baz=85						
YOJ	Yonaguni jima	0.95	87	P	Pb	06 34 10.4	-0.3
YOJ				eS	Sb	06 34 23.6	+0.7
SBCB	Hsinchu	0.97	293	P	Pb	06 34 11.1	+0.1
	baz=293						
SBCB				eS	Sn	06 34 25.6	+1.1
	baz=293						
HSN	Hsinchu	0.99	294	eS	Sn	06 34 25.5	+0.6
	baz=296						
VWDT	VWDT	1.00	229	P	Pb	06 34 11.1	-0.4
	baz=229						
VWDT				eS	Sn	06 34 25.2	+0.1
	baz=229						
DPDB	Guoxing	1.02	249	P	Pb	06 34 11.5	-0.4
	baz=248						
DPDB				eS	Sb	06 34 25.0	+0.1
	baz=248						
NHW	Xinwu Township	1.03	306	P	Pb	06 34 11.6	-0.4
	baz=306						
NHW				eS	Sn	06 34 27.2	+1.4
	baz=306						
HGSD	Ruisui	1.04	209	P	Pb	06 34 12.2	+0.1
	baz=208						
NMLH	Miaoli	1.08	277	eP	Pb	06 34 13.1	+0.3
	baz=277						
NMLH				eS	Sn	06 34 28.1	+1.0
	baz=277						
TWQ1	Liyutan	1.09	267	eP	Pn	06 34 12.7	-0.3
	baz=267						
TWQ1				eS	Sn	06 34 27.3	-0.1
	baz=267						
NSY	Sanyi	1.10	271	eP	Pn	06 34 12.7	-0.4
	baz=270						
NSY				eS	Sn	06 34 29.9	+2.2
	baz=270						
SMLT	Sun Moon Lake	1.11	242	P	Pn	06 34 12.9	-0.4
	baz=241						
SMLT				eS	Sn	06 34 28.0	0.0
	baz=241						
SSLB	Suanglung	1.11	236	P	Pb	06 34 13.7	+0.2
	baz=236						
SSLB				eS	Sn	06 34 28.3	+0.2
	baz=236						
TYC	Yuchr	1.13	244	P	Pn	06 34 13.2	-0.4
	baz=243						
TYC				eS	Sn	06 34 28.6	+0.1
	baz=243						
PTSB	Yuanli	1.15	272	eS	Sn	06 34 30.7	+1.8
	baz=272						
YULB	Yu-li	1.18	211	eP	Pb	06 34 14.9	+0.3
	baz=211						
YULB				eS	Sn	06 34 30.0	+0.2
	baz=211						
TWF1	Yuli	1.22	210	P	Pb	06 34 15.2	0.0
	baz=209						
TWF1				eS	Sn	06 34 32.1	+1.5
	baz=209						
WHYT	Xinyi Township	1.24	235	P	Pn	06 34 15.1	+0.1
	baz=235						
WHYT				eS	Sb	06 34 32.2	+1.0
	baz=235						
WJS	Zhushan	1.27	243	P	Pb	06 34 16.4	+0.2
	baz=242						
WJS				eS	Sb	06 34 32.9	+0.8
	baz=242						
FULB	Fuli	1.35	207	eP	Pn	06 34 15.7	-1.0
	baz=206						
ALS	Alishan	1.39	230	P	Pb	06 34 18.1	-0.2
	baz=229						
WDLH	Douliu	1.49	242	eP	Pn	06 34 18.8	+0.4
	baz=241						
WDLH				eS	Sb	06 34 39.8	+1.5
	baz=241						
RLNB	Erlin	1.56	251	eP	Pn	06 34 19.2	-0.1
	baz=250						
RLNB				eS	Sb	06 34 40.5	+0.3
	baz=250						
IRIF	Iriomote-Funau	1.61	92	P	Pn	06 34 19.6	-0.5
IRIF				S	Sn	06 34 40.5	+0.2
CHN4	Tsaushan	1.64	230	eP	Pb	06 34 21.8	-0.7
	baz=230						
CHN4				eS	Sb	06 34 42.2	-0.5
	baz=230						
TPUB	Ta-pu	1.65	228	eP	Pn	06 34 21.4	+0.7
	baz=228						
TPUB				eS	Sb	06 34 43.8	+0.8
	baz=228						
WTP	Ta-pu	1.70	227	P	Pn	06 34 22.0	+0.6
	baz=226						
WTP				eS	Sb	06 34 45.3	+1.0
	baz=226						
TWK	Hsinying	1.77	230	eP	Pn	06 34 23.4	+1.1
	baz=229						
TWK				eS	Sb	06 34 47.7	+1.3
	baz=229						
CHN1	Nanshi	1.79	228	eP	Pb	06 34 24.3	-0.8
	baz=227						
CHN1				eS	Sb	06 34 46.1	-1.1
	baz=227						
JKRS	Kuro-shima	1.87	95	P	Pn	06 34 23.2	-0.5
JKRS				S	Sn	06 34 47.1	+0.4
JIJ	Ishigaki jima	1.98	91	P	Pn	06 34 24.5	-0.8
JIJ				eS	Sn	06 34 48.4	-1.1
JISG	Ishigakijimahi	2.14	85	P	Pn	06 34 26.8	-0.6
MASBT	Mashibuluo	2.17	215	eP	Pn	06 34 28.4	+0.6
	baz=214						
MASBT				eS	Sb	06 34 56.4	-1.5
	baz=214						
PHUB	P'eng-hu	2.37	248	eP	Pn	06 34 29.2	-1.3
	baz=247						
PHUB				eS	Sn	06 34 58.2	-0.7
	baz=247						
WDGT	Dungji	2.40	242	eP	Pn	06 34 30.9	-0.1
	baz=241						

AUST 23 06:37:10.9±0.3, 22°.51S×148°.10E, h0km, Error ellipse: s-maj=7.4km s-min=3.2km az=59.0
IDC 23 06:37:11.7±1.8, 22°.43S×148°.04E, h0km, mb3.6/2, mb1 3.6/6, mb1mx3.5/31, mbtmp3.5/6, ML3.3/4, Error ellipse: s-maj=26.6km s-min=19.7km az=74.0
ISC 23 06:37:12.5±1.0, 22°.52S±0°.09×148°.05E±0°.09, h10km, n13, σ0s.79/14, Queensland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	2.94	325	Pn	Pn	06 37 58.9	-0.5
	6.0nm,0.3s,baz=134,slow=17,SNR=68						
CTA				Lg	Lg	06 38 42.5	
	12nm,0.3s,baz=38,slow=18,SNR=11						
EIDS	Eidsvold	3.96	136	P	Pn	06 38 12.7	-0.8
RMQ	Roma	4.00	171	P	Pn	06 38 13.8	-0.1
	baz=4.0,SNR=9.8						
MTSU	Mount Surprise	5.60	321	P	Pn	06 38 36.2	+0.3
	baz=5.6,SNR=8.1						
STKA	Stephens Creek	10.94	210	Pn	Pn	06 39 49.3	+0.1
	0.2nm,0.3s,baz=36,slow=13,SNR=3.7						
STKA				Sn	Sn	06 41 51.1	-0.6
	0.2nm,0.3s,baz=253,slow=19,SNR=3.3						
STKA				Lg	Lg	06 43 02.4	
	0.1nm,0.3s,baz=143,slow=20,SNR=3.0						
YNG	Young	11.74	179	P	Pn	06 40 00.7	+0.6
	baz=12,SNR=6.3						
OOD	Oodnadatta	12.36	242	P	Pn	06 40 08.6	-0.1
	baz=12,SNR=8.1						
WRA	Warramunga Arr	13.04	279	Pn	Pn	06 40 16.2	-1.8
	0.1nm,0.3s,baz=105,slow=11,SNR=3.7						
WRA				Sn	Sn	06 42 43.3	0.0
	0.1nm,0.3s,baz=102,slow=21,SNR=3.3						
WRA				Lg	Lg	06 44 05.7	
	0.4nm,0.3s,baz=105,slow=28,SNR=11						
I07AU	WARRAMUNGA INF	13.05	279	i		07 54 20.0	
	baz=103,slow=305,SNR=3.0						
ASAR	Alice Springs	13.07	262	Pn	Pn	06 40 18.8	+0.3
	0.2nm,0.3s,baz=92,slow=14,SNR=9.6						
ASAR				Lg	Lg	06 44 10.1	
	0.0nm,0.3s,baz=83,slow=27,SNR=4.1						
FITZ	Fitzroy Crossi	21.47	278	P	P	06 42 02.5	+1.2
	2.1nm,1.0s,baz=90,slow=7.1,SNR=3.3						
SONM	Songino Array	79.40	333	P	P	06 49 19.4	+0.5
	0.5nm,0.6s,baz=148,slow=6.6,SNR=4.5						
TORD	Torodi Ar. Bea	146.71	260	PKPbc	PKPbc	06 56 55.6	+0.1
	1.2nm,0.6s,baz=108,slow=4.1,SNR=6.3						

SSNC 23 06:40:23.4±2.5, 19°.92N×74°.41W, h47km±28km, ML0.7, MW1.9, Cuba region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MASC	Masc	0.30	32	eP	Pn	06 40 31.7	-0.6
MASC				eS	Sn	06 40 37.1	-1.5
MASC				IAML		06 40 37.6	
	comp=N,5.7nm,0.2s						
MASC				IAML		06 40 37.6	
	comp=E,5.6nm,0.1s						
MASC	Masc	0.30	32	eP	Sn	06 40 37.0	-1.6
GTMO	Guantanamo	0.71	283	eP	Pn	06 40 35.9	-1.3
GTMO				eS	Sn	06 40 44.7	-2.4
GTMO				IAML		06 40 45.8	
	comp=E,4.0nm,0.1s						
GTMO				IAML		06 40 46.0	
	comp=N,5.5nm,0.1s						
GTMO				IAML		06 40 47.6	
	comp=E,6.7nm,0.1s						
GTMO				IAML		06 40 47.7	
	comp=N,7.7nm,0.1s						
RCC	Rio Carpintero	1.22	274	eP	Pn	06 40 42.5	-1.5
RCC				eS	Sn	06 40 55.4	-4.0
RCC				IAML		06 40 55.8	
	comp=N,0.6nm,0.2s						
RCC				IAML		06 40 55.9	
	comp=E,0.8nm,0.1s						
RCC	Rio Carpintero	1.22	274	eP	Sn	06 40 55.3	-4.1

SSNC 23 06:40:37.2±3.4, 19°.95N×74°.52W, h5km±999km, ML1.2, MW2.5, Cuba region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MASC	Masc	0.35	50	eS	Sg	06 40 48.5	-0.1
MASC				IAML		06 40 48.7	
	comp=E,24nm,0.1s						
MASC				IAML		06 40 48.8	
	comp=N,16nm,0.1s						
GTMO	Guantanamo	0.60	283	eP	Pg	06 40 46.8	-1.9
GTMO				eS	Sg	06 40 55.0	-1.5
GTMO				IAML		06 40 56.8	
	comp=E,17nm,0.3s						
GTMO				IAML		06 40 57.3	
	comp=N,26nm,0.2s						
RCC	Rio Carpintero	1.11	272	eS	Sg	06 41 13.2	+0.3
RCC				IAML		06 41 14.1	
	comp=N,4.2nm,0.3s						
RCC				IAML		06 41 14.1	
	comp=E,8.1nm,0.3s						

ATH 23 06:49:14.8, 38°.22N×20°.43E, h15km±1km, ML3.0/3, Error ellipse: s-maj=2.1km s-min=0.9km az=254.0
THE 23 06:49:15.1, 38°.22N×20°.42E, h14km, ML2.6/4, Error ellipse: s-maj=0.9km s-min=0.4km az=258.0
ISC 23 06:49:14.9±1.2, 38°.22N±0°.03×20°.43E±0°.05, h15km±5km, n29, σ0s.30/50, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LXR1	Lixouri, Cepha	0.02	154	P	Pg	06 49 17.6	+0.1
LXR1				S	Sg	06 49 19.6	+0.3
LXRA	Lixouri, Kepha	0.02	157	P	Pg	06 49 17.6	+0.1
LXRA				S	Sg	06 49 19.1	-0.1
KEF4	Livadi, Kephal	0.04	356	P	Pg	06 49 17.6	-0.1
KEF4				S	Sg	06 49 19.2	-0.3
AGT1	Agia Thekli	0.05	314	P	Pg	06 49 17.7	0.0
AGT1				S	Sg	06 49 19.5	-0.1
ARGA	Argostoli. Kep	0.06	135	P	Pg	06 49 17.6	-0.1
ARGA				S	Sg	06 49 19.2	-0.4
ARG2	Argostoli	0.06	130	P	Pg	06 49 17.7	-0.1
ARG2				S	Sg	06 49 19.6	-0.1
KEF3	Kipouria, Keph	0.06	257	P	Pg	06 49 17.6	-0.2
KEF3				S	Sg	06 49 19.7	-0.1
KEF1	Kardakata, Kep	0.07	30	P	Pg	06 49 17.8	-0.1
KEF1				S	Sg	06 49 19.6	-0.2
KEF2	Argostoli. Kep	0.07	138	P	Pg	06 49 17.7	-0.2
KEF2				S	Sg	06 49 19.3	-0.5
VLS	Valsamata	0.13	108	P	Pg	06 49 18.5	-0.2
VLS				S	Sg	06 49 21.1	0.0
VLS	Valsamata	0.13	108	P	Pg	06 49 18.4	-0.2
VLS				S	Sg	06 49 20.7	-0.3
VLS				AML	AML	06 49 21.1	
	comp=E,20150µm,0.2s						
VLS				AML	AML	06 49 21.1	
	comp=N,12169µm,0.1s						
VSK1	VASILIKIADES	0.22	29	P	Pg	06 49 19.8	-0.1
VSK1				S	Sg	06 49 23.8	+0.6
KONA	Konidatara, Ke	0.24	29	P	Pg	06 49 20.0	-0.1
KONA				S	Sg	06 49 23.5	-0.2
FSK	Fiskardo	0.26	24	P	Pg	06 49 20.5	-0.1
FSK				S	Sg	06 49 24.8	+0.3
	comp=N,3µm,0.2s						
FSK	Fiskardo	0.26	24	P	Pg	06 49 20.5	-0.1
FSK				S	Sg	06 49 24.1	-0.3
FSK				AML	AML	06 49 25.0	
	comp=N,3932µm,0.2s						
FSK				AML	AML	06 49 25.2	
	comp=E,6153µm,0.1s						
KFL	Anninata	0.30	111	P	Pg	06 49 21.3	0.0
VLMS	Volimes, Zakyn	0.39	151	P	Pg	06 49 22.7	-0.1
VLMS				S	Sg	06 49 28.1	0.0
VLMS				AML	AML	06 49 29.6	
	comp=N,8623µm,0.5s						
VLMS				AML	AML	06 49 30.9	
	comp=E,6311µm,0.2s						
EVGI	Lefkada island	0.44	24	P	Pg	06 49 23.5	-0.2
EVGI				S	Sb	06 49 30.6	-0.2
	comp=E,425nm,0.1s						
EVGI	Lefkada island	0.44	24	P	Pg	06 49 23.6	-0.2
EVGI				S	Sg	06 49 30.0	+0.2
MGNA	Meganis	0.52	33	P	Pg	06 49 24.6	-0.7
MGNA				S	Sg	06 49 31.8	-0.4
LKD2	Lefkada island	0.60	18	P	Pg	06 49 26.6	-0.1
LKD2	Lefkada island	0.60	18	P	Pg	06 49 26.3	-0.4
TSLK	Tsoukalades, L	0.63	16	P	Pg	06 49 26.9	-0.4
TSLK	Tsoukalades, L	0.63	16	P	Pg	06 49 26.9	-0.4
KRI1	kERI	0.64	151	P	Pg	06 49 26.9	-0.4
PDO	Prodromos	0.70	57	P	Pg	06 49 28.4	-0.3
PDO				S	Sb	06 49 39.0	+0.6
	comp=E,495nm,0.3s						
PDO	Prodromos	0.70	57	P	Pg	06 49 28.2	-0.5
PVO	Paravola	0.95	65	P	Pb	06 49 33.1	+0.1
PVO				S	Sn	06 49 47.6	+0.7
	comp=E,242nm,0.5s						
PVO	Paravola	0.95	65	P	Pb	06 49 32.9	-0.1

ANF 23 07:23:33.0±0.4, 36°.04N×97°.32W, h5km, ML3.8/13, Error ellipse: s-maj=6.0km s-min=3.8km az=176.0
NEIC 23 07:23:32.7±0.7, 36°.06N±0°.02×97°.31W±0°.02, h4km±3km, Error ellipse: s-maj=2.8km s-min=2.4km az=115.0
TUL 23 07:23:32.7±0.8, 36°.04N±0°.02×97°.34W±0°.02, h5km±1km, ML3.0, Error ellipse: s-maj=3.3km s-min=2.9km az=45.0
ISC 23 07:23:32.0±1.3, 36°.07N±0°.03×97°.32W±0°.03, h1km±11km, n44, σ0s.79/59, Oklahoma

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.42	186		Pg	07 23 40.4	+0.4
OKCFA	Oklahoma City	0.66	189		Pg	07 23 44.8	+0.2
OKCFA				Sg	Sg	07 23 53.7	+0.6
OKCSW	OKLAHOMA CITY	0.67	188		Pg	07 23 45.0	+0.3
OKCSW				Sg	Sg	07 23 54.1	+0.7
FNO	Franklin	0.81	185		Pg	07 23 48.0	+0.5
FNO				Sg	Sb	07 23 58.9	-1.4
W35A	Tecumseh	0.98	158		Pg	07 23 50.4	-0.3
TUL1	Leonard	1.25	97		Pb	07 23 55.8	-0.5
TUL1				Sg	Sn	07 24 13.2	-0.9
TUL1	Leonard	1.25	97	P	Pb	07 23 55.8	-0.5
	baz=276						
TUL1				S	Sn	07 24 13.3	-0.9
	baz=276						
U32A	Winter Ranch,	1.40	283		Pb	07 23 58.3	-0.6
X34A	Smith Ranch, M	1.52	196		Pb	07 24 00.4	-0.6
X34A				Sg	Sg	07 24 21.4	+0.6
WMOK	Wichita Mounta	1.78	222		Pb	07 24 04.2	-1.3
WMOK				Sn	Sb	07 24 27.5	-0.9
WMOK	Wichita Mounta	1.78	222	P	Pb	07 24 04.1	-1.4
	baz=42						
WMOK				S	Sb	07 24 27.8	-0.6
	baz=42						
HHAR	Hobbs	2.74	85		Pn	07 24 18.0	+0.9
W39A	Magazine	3.01	106		Pn	07 24 21.6	+0.8
W39A	Magazine	3.01	106	P	Pn	07 24 21.5	+0.8
	baz=287						
W39A				S	Sn	07 24 58.5	+1.0
	baz=287						
KSU1	Kansas State U	3.08	10	P	Pn	07 24 23.5	+1.7
	baz=191						
KSU1				Sb	Sg	07 25 10.4	-0.5
	baz=191						
CBKS	Cedar Bluff	3.35	326	Pn	Pn	07 24 25.9	+0.4
MIAR	Mount Ida	3.42	115		Pn	07 24 27.2	+0.8
MIAR	Mount Ida	3.42	115	P	Pn	07 24 27.6	+1.2
	baz=297						
MIAR				S	Sn	07 25 08.5	+0.9
	baz=297						
U40A	Yellville	3.62	84		Pn	07 24 29.8	+0.5
U40A	Yellville	3.62	84	P	Pn	07 24 29.7	+0.5
	baz=266						
U40A				S	Sn	07 25 13.6	+0.8
	baz=266						
AMTX	Amarillo	3.75	253		Pn	07 24 31.2	+0.1
AMTX	Amarillo	3.75	253	P	Pn	07 24 31.0	-0.1
	baz=71						
AMTX				S	Sn	07 25 17.3	+1.3
	baz=71						
X40A	Basin Creek Fa	3.99	112	Pn	Pn	07 24 34.5	+0.2
X40A	Basin Creek Fa	3.99	112	P	Pn	07 24 35.2	+0.9
	baz=294						
X40A				S	Sn	07 25 22.5	+0.7
	baz=294						
WHTX	Lake Whitney,	4.07	182	Pn	Pn	07 24 35.4	0.0
WHTX	Lake Whitney,	4.07	182	P	Pn	07 24 36.3	+1.0
	baz=1.4						
WHAR	Wooly Hollow	4.17	99		Pn	07 24 36.8	0.0
FCAR	Ozark Folk Cen	4.22	91	Pn	Pn	07 24 37.8	+0.4
W41B	Gary Mavity, V	4.23	101	Pn	Pn	07 24 38.3	+0.7
W41B	Gary Mavity, V	4.23	101	P	Pn	07 24 38.0	+0.5
	baz=283						
W41B				S	Sn	07 25 27.6	+0.1
	baz=283						
237A	Washetta, Mont	4.25	162	Pn	Pn	07 24 37.6	-0.2
MSTX	Muleshoe	4.94	247	Pn	Pn	07 24 46.9	-0.6
MSTX	Muleshoe	4.94	247	P	Pn	07 24 47.7	+0.3
	baz=64						
LCAR	Lake Charles	5.00	88	Pn	Pn	07 24 48.2	+0.1
KSCO	Kaye Shedlock'	5.14	306	P	Pn	07 24 52.0	+1.8
	baz=124						
CCM	Cathedral Cave	5.25	66	P	Pn	07 24 52.5	+1.0
	baz=249						
BGNE	Belgrade	5.37	353	Pn	Pn	07 24 52.2	-1.2
BGNE	Belgrade	5.37	353	P	Pn	07 24 53.8	+0.4
	baz=173						
T25A	Trinidad	5.80	283		Pn	07 24 59.8	+0.3
T25A	Trinidad	5.80	283	P	Pn	07 24 59.5	+0.1
	baz=99						
OGNE	Ogallala	6.11	324	Pn	Pn	07 25 04.3	+0.8
OXF	Oxford	6.65	101	Pn	Pn	07 25 10.1	-0.7
SDCO	Great Sand Dun	6.77	287	Pn	Pn	07 25 12.9	+0.2
ECSD	EROS Data Cent	7.68	4	Pn	Pn	07 25 24.9	-0.1

IDC 23 07:37:51.6±1.8, 17°.09S×178°.14W, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.7/51, mbtmp3.8/5, MS3.6/2, Ms1 3.6/2, ms1mx2.8/45, Error ellipse: s-maj=156.0km s-min=23.4km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	22.63	287	LR	LR	07 50 15.4	
	comp=Z,57nm,18.2s,baz=285,slow=33						
STKA	Stephens Creek	39.26	240	P	P	07 45 22.6	+0.5
	1.5nm,0.8s,baz=82,slow=7.1,SNR=4.0						
WRA	Warramunga Arr	45.04	259	P	P	07 46 09.1	-0.4
	0.5nm,0.4s,baz=93,slow=7.4,SNR=8.3						
ASAR	Alice Springs	45.27	253	P	P	07 46 11.0	-0.3
	2.8nm,0.4s,baz=88,slow=8.4,SNR=59						
JNU	Nakatsue	69.73	316	LR	LR	08 17 03.0	
	comp=Z,84nm,20.3s,baz=100,slow=34						
NVAR	Mina Array Bea	78.65	44	P	P	07 49 56.8	+0.8
	0.3nm,0.6s,baz=238,slow=5.0,SNR=3.4						
TXAR	Lajitas Array	85.34	58	P	P	07 50 29.7	-1.4
	0.2nm,0.6s,baz=233,slow=5.5,SNR=2.5						

TIF 23 07:41:32.5, 42°.37N×40°.99E, h23km±1km
ISK 23 07:41:32.9, 42°.33N×40°.95E, h11km, ML3.1/7
MOS 23 07:41:33.3±0.0, 42°.43N×41°.01E, h9km, MPVA3.9

NORS 23 07:41:34.4±0.0, 42.54N×41.24E, h10km, MPVA3.6
DDA 23 07:41:34.1, 42.26N×40.94E, h42km±1km, ML2.5
ISC 23 07:41:32.5±1.3, 42.38N±0.02×41.05E±0.02, h9km±11km, n47, σ0.80/84, Western Caucasus

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
BATM Batumi 0.91 148 P Pn 07 41 51.4 -0.1
BATM S Sn 07 42 04.3 +0.2
BATM Batumi 0.91 148 PG Pn 07 41 51.4 -0.1
BATM SG Sn 07 42 04.3 -0.4
BATM Batumi 0.91 148 i Pg Pn 07 41 51.4 -0.1
BATM eSg Sn 07 42 05.1 +0.4
BATM Batumi 0.91 148 i P Pn 07 41 51.4 -0.1
BATM i S Sn 07 42 05.1 +0.4
BCA Borcka 1.02 155 PG Pb 07 41 52.6 +0.2
BCA SG Sn 07 42 07.2 -0.3
DBOC Borcka 1.13 156 i P Pn 07 41 54.3 -0.3
DBOC i S Sb 07 42 09.3 +0.3
DBOC IAML 07 42 10.0
comp=E,255nm,0.2s
ARXR Arkhyz 1.20 8 ePg Pb 07 41 55.0 -0.5
ARXR eSg Sb 07 42 10.3 -0.9
CHOM Cayeli-Rize 1.30 190 PN Pn 07 41 56.8 0.0
CHOM SN Sn 07 42 14.1 -0.2
DBAD Bademkaya 1.44 160 i P Pn 07 41 58.8 0.0
DBAD i S Sn 07 42 17.5 -0.4
DBAD IAML 07 42 20.0
comp=N,122nm,0.5s
DBAD IAML 07 42 23.0
comp=E,123nm,0.4s
TKB Tkibuli 1.44 90 P Pb 07 41 59.7 +0.2
TKB S Sg 07 42 18.9 +0.1
RPOR Krasnaya Polya 1.44 337 ePg Pb 07 41 58.8 -0.8
RPOR eSg Sg 07 42 17.7 -1.3
DAGI Agillar 1.45 153 i P Pn 07 41 59.1 +0.1
DAGI i S Sn 07 42 17.8 -0.4
DAGI IAML 07 42 18.0
comp=N,51nm,0.2s
DAGI IAML 07 42 20.0
comp=E,62nm,0.4s
NEY Neytrino 1.51 54 ePg Pb 07 42 00.2 -0.6
EPOS Posof 1.52 124 i P Pb 07 42 00.9 -0.2
EPOS i S Sb 07 42 21.6 +1.1
EPOS IAML 07 42 28.0
comp=N,131nm,0.8s
EPOS IAML 07 42 28.0
comp=E,53nm,0.4s
SOC Sochi 1.56 321 ePg Pb 07 42 00.8 -0.6
SOC eSg Sb 07 42 20.6 -0.7
DDEM Demirkent 1.57 160 i P Pn 07 42 01.2 +0.5
DDEM i S Sn 07 42 21.1 -0.1
DDEM IAML 07 42 24.0
comp=E,149nm,0.2s
DDEM IAML 07 42 26.0
comp=N,169nm,0.4s
GUZR Guzeripl' 1.76 337 ePg Pb 07 42 04.2 -0.8
GUZR eSg Sb 07 42 26.9 -0.3
ONI Oni 1.79 82 P Pb 07 42 05.2 -0.3
ONI S Sg 07 42 29.4 -0.6
ONI Oni 1.79 82 PN Pb 07 42 05.2 -0.3
ONI SN Sg 07 42 29.6 -0.4
ONI Oni 1.79 82 ePg Pb 07 42 05.2 -0.3
ONI eSg Sg 07 42 29.4 -0.6
SHA1 Shidzhatmaz 1.80 40 i Pg Pb 07 42 05.8 0.0
SHA1 eSg Sb 07 42 28.6 0.0
KBZ Khabaz 1.91 44 ePg Pb 07 42 07.4 -0.2
KBZ eSg Sb 07 42 31.7 +0.2
DIGR Digorskoe uzhe 1.94 73 ePg Pb 07 42 08.0 -0.2
DIGR eSg Sb 07 42 33.2 +0.7
KIV Kislovodsk 1.98 37 PN Pb 07 42 08.9 +0.1
KIV SN Sb 07 42 34.2 +0.6
KIV0 Kislovodsk Arr 1.98 37 i Pg Pb 07 42 08.9 0.0
KIV0 eSg Sb 07 42 34.1 +0.4
KRIK Erzurum-spir 2.04 183 i P Pg 07 42 12.5 +0.9
KRIK i S Sg 07 42 38.3 +0.3
SENK Senkaya-Erzuru 2.06 151 PN Pb 07 42 09.2 -1.0
AKH Akhalkalaki 2.06 117 PN Pb 07 42 09.3 -0.9
AKH Akhalkalaki 2.06 117 ePg Pb 07 42 09.4 -0.9
AKH eSg Sb 07 42 36.5 +0.5
BEYR Belyy Ugol+ 2.08 38 ePg Pb 07 42 10.1 -0.4
BEYR eSg Sb 07 42 36.5 0.0
BAYT Aydıntepe-Bayb 2.10 199 PN Pn 07 42 08.9 +0.9
ZEI Tsey 2.14 78 ePg Pb 07 42 11.6 0.0
ZEI eSg Sb 07 42 39.1 +0.7
NCK Nalchik 2.18 58 ePg Pb 07 42 10.6 -1.5
BAYB BAYBURT 2.20 196 i P Pn 07 42 08.4 -1.0
BAYB i S Sn 07 42 35.8 -1.0
BAYB IAML 07 42 45.0
comp=E,36nm,0.6s
TPSR Tuapse 2.22 321 ePg Pn 07 42 10.0 +0.5
TPSR eSg Sb 07 42 38.6 -1.9
ESPY Espiye-Giresun 2.27 231 PN Pn 07 42 10.1 -0.1
AKDA Akdag 2.28 174 i P Pn 07 42 13.2 -0.8
KORR Kora 2.33 71 ePn Pb 07 42 13.8 -0.9
KORR eSn Sb 07 42 42.1 -1.6
HOMI Horasan 2.42 164 i P Pb 07 42 15.2 -1.1
HOMI IAML 07 42 57.0
comp=E,24nm,0.6s
HOMI IAML 07 42 57.0
comp=N,18nm,0.7s
LACR Lac 2.44 78 ePn Pn 07 42 13.3 +0.7
LACR eSn Sn 07 42 46.4 -0.4
KOPR Koprukoy-ERZUR 2.46 165 PN Pn 07 42 13.9 +1.0
GUDG Gudauri 2.54 87 ePn Pn 07 42 17.5 -0.9
GUDG eSn Sn 07 42 47.8 -2.0
EAK Akyaka 2.55 130 i P Pb 07 42 19.6 +1.0
EAK i S Sb 07 42 49.6 -0.6
EAK IAML 07 43 03.0
comp=N,25nm,1.2s
EAK IAML 07 43 05.0
comp=E,27nm,0.5s
KELT Kelkit 2.60 212 i P Pn 07 42 16.3 +1.3
KELT i S Sn 07 42 47.7 +0.8
KELT IAML 07 42 49.0
comp=N,21nm,0.4s
KELT IAML 07 42 49.0
comp=E,16nm,0.4s
SUSE Susehri 3.05 226 i P Pn 07 42 22.4 +1.3
SUSE i S Sn 07 42 58.1 +0.4
SUSE IAML 07 43 00.0
comp=N,22nm,0.3s
ANN Anapa 3.58 314 ePn Pn 07 42 30.5 +2.3
ANN eSn Sn 07 43 12.7 +2.2
VYHS Vyhne 16.72 299 eP P 07 45 28.4 -0.8

RSPR 23 07:53:38.0, 19.75N×67.15W, h49km±9km, MD3.6/15
IDC 23 07:53:41.3±1.0, 19.30N×66.86W, h0km, mb3.4/3, mb1 3.8/6, mb1mx3.4/56, mbtmp3.7/6, ML2.8/3, MS3.0/6, Ms1 3.0/6, ms1mx2.6/30, Error ellipse: s-maj=27.8km s-min=13.0km az=59.0
OSPL 23 07:53:43.7±1.7, 19.15N×66.68W, h0km±47km, ML3.7
ISC 23 07:53:41.0±1.7, 19.47N±0.06×67.06W±0.05, h17km±11km, n63, σ1.87/65, mb3.6/3, MS2.9/4, 10C-5D, Mona Passage

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
AGPR Aguadilla, PR 1.00 183 i P Pb 07 53 58.3 -1.5
AGPR eS Sb 07 54 08.0 -4.7
AGPR IAML 07 54 16.4
comp=Z,3μm,0.4s
AGPR Aguadilla, PR 1.00 183⇓eP Pb 07 53 58.2 -1.5
AGPR Aguadilla, PR 1.00 183 eS Sb 07 54 14.6 +1.9
AGPR Aguadilla, PR 1.00 183 Pn Pb 07 53 58.3 -1.5
AGPR Sb 07 54 13.1 +0.5
EMPR Esperanza - Ma 1.10 153⇓eP Pb 07 53 60.0 -1.7
EMPR Esperanza - Ma 1.10 153 eS Sb 07 54 17.6 +1.8
EMPR Esperanza - Ma 1.10 153 Pn Pb 07 53 59.9 -1.7
AOPR Arecibo Observ 1.15 166⇑eP Pn 07 54 01.0 -1.4
AOPR Arecibo Observ 1.15 166 eS Sb 07 54 18.9 +1.7
AOPR Arecibo Observ 1.15 166 Pn 07 53 60.0 -2.4
AOPR Pn 07 54 01.1 -1.3
MPR Mayaguez 1.25 184 i P Pn 07 54 02.0 -1.7
MPR eS Sn 07 54 16.5 -3.6
MPR IAML 07 54 22.5
comp=Z,1μm,0.7s
MPR Mayaguez 1.25 184 Pn 07 54 02.0 -1.7
CRPR Cabo Rojo, PR 1.46 182 eS Sn 07 54 25.6 +0.4
CRPR Cabo Rojo, PR 1.46 182⇓eP Pn 07 54 05.0 -1.5
CRPR Cabo Rojo, PR 1.46 182 Pn 07 54 05.1 -1.4
GCPR Guaynabo City 1.48 141 eS Sn 07 54 26.1 +0.5
GCPR Guaynabo City 1.48 141⇑eP Pn 07 54 04.8 -2.0
GCPR Guaynabo City 1.48 141 Pn 07 54 04.8 -2.0
GCPR Pn 07 54 05.3 -1.5
OBIP Obispado Ponce 1.48 163 eS Sn 07 54 26.4 +0.6
OBIP Obispado Ponce 1.48 163⇑eP Pn 07 54 05.4 -1.4
OBIP Obispado Ponce 1.48 163 Pn 07 54 04.2 -2.6
OBIP Pn 07 54 04.6 -2.3
MLPR Magueyes Islan 1.49 180 eS Sn 07 54 27.1 +1.1
MLPR Magueyes Islan 1.49 180⇑eP Pn 07 54 04.9 -2.1
MLPR Magueyes Islan 1.49 180 Pn 07 54 04.3 -2.6
MLPR Pn 07 54 04.9 -2.0
GBPR Guanica, Bosqu 1.50 174 eS Sn 07 54 27.0 +0.9
GBPR Guanica, Bosqu 1.50 174⇓eP Pn 07 54 05.5 -1.5
GBPR Guanica, Bosqu 1.50 174 Pn 07 54 05.5 -1.5
GBPR Sn 07 54 27.0 +0.9
PCDR Punta Cana, DR 1.57 233 i P Pg 07 54 12.3 +0.9
PCDR eS Sg 07 54 35.0 +3.2
PCDR IAML 07 54 44.4
comp=Z,848nm,0.5s
SJG San Juan 1.60 147 Pg Pn 07 54 06.4 -2.1
comp=Z,22nm,0.3s,baz=316,slow=13,SNR=58
SJG Lg Lg 07 54 25.3
comp=Z,112nm,0.3s,baz=37,slow=20,SNR=23
ICMP Isla Caja de M 1.65 162 Pn 07 54 08.0 -1.2
IGPR InterUniversit 1.74 149⇑eP Pn 07 54 08.7 -1.7
IGPR eS Sn 07 54 32.9 +0.6
IGPR InterUniversit 1.74 149 eS Sn 07 54 33.5 +1.2
IGPR InterUniversit 1.74 149⇑eP Pn 07 54 09.0 -1.5
IGPR InterUniversit 1.74 149 Pn 07 54 08.9 -1.5
HUMP Col San Antoni 1.75 139 eS Sn 07 54 33.0 +0.7
HUMP Col San Antoni 1.75 139⇓eP Pn 07 54 08.7 -1.8
HUMP Col San Antoni 1.75 139⇑eP Pn 07 54 09.2 -1.3
HUMP eS Sn 07 54 33.2 +0.9
HUMP Col San Antoni 1.75 139 Pn 07 54 09.1 -1.3
HUMP Pn 07 54 09.3 -1.2
MTP Monte Pirata 1.97 134⇑eP Pn 07 54 11.8 -1.8
MTP Monte Pirata 1.97 134 eS Sn 07 54 38.0 +0.1
MTP Monte Pirata 1.97 134 Pn 07 54 12.0 -1.6
MTP Pn 07 54 12.2 -1.4
CUPR Culebra, Puert 2.04 124⇑eP Pn 07 54 12.7 -1.8
CUPR Culebra, Puert 2.04 124 eS Sn 07 54 39.1 -0.5
CUPR Culebra, Puert 2.04 124 Pn 07 54 12.9 -1.6
CUPR Pn 07 54 13.2 -1.3
STVI Saint Thomas 2.28 119⇑eP Pn 07 54 15.9 -1.9
STVI Saint Thomas 2.28 119 eS Sn 07 54 44.5 -1.0
STVI Saint Thomas 2.28 119 Pn 07 54 15.5 -2.3
DR12 Loma Pena Alta 2.30 253 Pb 07 54 23.1 +1.0
SDD Santo Domingo 2.89 250 i P Pg 07 54 33.9 -2.5
SDDR Presa de Saban 4.03 264 i P Pb 07 54 48.9 -2.7
SDDR IAML 07 56 04.6
comp=Z,175nm,0.6s
PCRV Puerto La Cruz 9.53 165 Pn Pn 07 55 57.3 -0.2
comp=Z,0.3nm,0.3s,baz=275,slow=18,SNR=2.0
PCRV Sn Sn 07 57 40.2 -4.1
comp=Z,0.7nm,0.3s,baz=54,slow=19,SNR=3.5
PLCV Puerto La Cruz 9.55 165 Pn 07 55 57.3 -0.5
SDV Santo Domingo 11.08 199 Pn Pn 07 56 21.6 +2.7
comp=Z,0.1nm,0.3s,baz=24,slow=17,SNR=2.6
SDV Sn Sn 07 58 22.7 +0.2
comp=Z,0.3nm,0.3s,baz=344,slow=19,SNR=2.6
ROSC El Rosal 16.17 207 Pn P 07 57 31.3 +0.2
comp=Z,0.9nm,0.3s,baz=58,slow=19,SNR=3.7
ROSC LR LR 08 04 10.4
comp=Z,61nm,18.7s,baz=87,slow=39
JTS Las Juntas de 19.54 245 LR LR 08 07 25.7
comp=Z,30nm,18.3s,baz=204,slow=42
APG El Apazote 22.79 262 LR LR 08 08 05.7
comp=Z,30nm,21.2s,baz=65,slow=38
CMIG Matias Romero 26.52 269 LR LR 08 10 55.2
comp=Z,25nm,18.7s,baz=114,slow=39
TXAR Lajitas Array 34.63 294 P P 08 00 35.4 +5.8
comp=Z,0.8nm,0.7s,baz=112,slow=9.3,SNR=11
BDFB Brasilia 39.60 150 LR LR 08 19 25.0
comp=Z,18nm,18.2s,baz=134,slow=39
CFA Coronel Fontan 50.79 181 LR LR 08 25 20.4
comp=Z,30nm,18.1s,baz=114,slow=38
TORD Torodi Ar. Bea 65.92 84 P P 08 04 28.8 +2.3
comp=Z,0.2nm,0.4s,baz=279,slow=5.7,SNR=2.5
ILAR Eielson Array 68.24 333 P P 08 04 45.1 +4.7
comp=Z,0.2nm,0.8s,baz=106,slow=4.1,SNR=2.7
ASAR Alice Springs 160.07 254 PKPab PKPab 08 14 21.2 +1.3
comp=Z,0.3nm,0.8s,baz=85,slow=2.1,SNR=3.7

IDC 23 07:57:03.2±3.4, 5.17N×93.43E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.3/55, mbtmp3.4/5, ML3.5/1, Error ellipse: s-maj=145.6km s-min=23.0km az=53.0, Off west coast of northern Sumatera

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
PSI Prapat 5.96 113 Pn Pn 07 58 34.2 +1.3
1.3nm,0.3s,baz=310,slow=11,SNR=6.7
PSI Sn Sn 07 59 32.8 -9.3
0.6nm,0.3s,baz=66,slow=18,SNR=2.9
H08S3 Diego Garcia H 24.46 239 T T 08 28 42.5
baz=58
H08S2 Diego Garcia H 24.46 239 T T 08 28 48.5
baz=58
H08S1 Diego Garcia H 24.48 239 T T 08 28 47.3
baz=58
MKAR Makanchi Array 42.57 349 P P 08 05 00.5 -0.4
0.1nm,0.4s,baz=162,slow=8.0,SNR=5.2
KURBB Kurchatov Arra 46.99 347 P P 08 05 36.2 +0.2
0.1nm,0.4s,baz=176,slow=7.0,SNR=4.3
WRA Warramunga Arr 47.33 123 P P 08 05 38.9 -0.3
0.3nm,0.4s,baz=303,slow=9.1,SNR=3.2
ASAR Alice Springs 48.78 128 P P 08 05 50.1 -0.3
0.3nm,0.5s,baz=299,slow=7.4,SNR=6.5

IDC 23 07:58:07.0±1.0, 11.44S×166.14E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.8/49, mbtmp3.8/9, ML3.6/1, MS3.3/8, Ms1 3.3/8, ms1mx3.0/43, Error ellipse: s-maj=37.9km s-min=22.3km az=130.0
ISC 23 07:58:12.3±0.8, 11.67S±0.09×166.2E±0.2, h37km, n14, σ1.67/13, mb3.7/8, MS3.3/5, Santa Cruz Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
HNR Honiara 6.56 289 LR LR 08 02 26.6
comp=Z,224nm,19.1s,baz=116,slow=40
DZM Mont Dzumac 10.35 179 Pn Pn 08 00 40.8 +2.5
0.5nm,0.3s,baz=303,slow=19,SNR=12
DZM Sn Sn 08 02 29.7 -3.4
0.1nm,0.3s,baz=121,slow=19,SNR=1.9
DZM LR 08 04 17.9
comp=Z,82nm,20.8s,baz=15,slow=35
KRVT Keravat (AS076 15.84 296 LR LR 08 07 58.6
comp=Z,107nm,18.5s,baz=100,slow=38
STKA Stephens Creek 30.32 225 P P 08 04 21.2 +0.8
1.3nm,0.7s,baz=145,slow=23,SNR=3.2
STKA LR LR 08 15 04.4
comp=Z,52nm,20.5s,baz=31,slow=33
WRA Warramunga Arr 31.72 251 P P 08 04 33.7 +0.8
0.3nm,0.5s,baz=83,slow=9.3,SNR=3.3
WRA PcP PcP 08 07 23.3 -0.8
0.6nm,0.7s,baz=78,slow=3.4,SNR=4.0
ASAR Alice Springs 32.94 244 P P 08 04 43.2 -0.4
0.4nm,0.7s,baz=71,slow=9.7,SNR=6.6
ASAR PcP PcP 08 07 26.6 -0.9
0.7nm,0.8s,baz=86,slow=2.1,SNR=6.7
ASAR LR LR 08 16 31.0
comp=Z,33nm,18.1s,baz=352,slow=34
FITZ Fitzroy Crossi 39.68 256 LR LR 08 22 15.9
comp=Z,51nm,18.4s,baz=20,slow=36
ASAJ Asahikawa 59.53 340 LR LR 08 30 46.0
comp=Z,23nm,18.9s,baz=101,slow=33
CMAR Chiang Mai Arr 72.79 294 P P 08 09 37.9 +0.4
0.8nm,0.4s,baz=124,slow=4.2,SNR=6.0
SONM Songino Array 79.44 324 P P 08 10 14.6 -0.3
0.3nm,0.3s,baz=131,slow=4.0,SNR=3.6
ILAR Eielson Array 83.95 18 P P 08 10 36.6 -1.6
0.7nm,1.0s,baz=238,slow=5.2,SNR=4.0
NVAR Mina Array Bea 86.06 50 P P 08 10 51.1 +1.4
0.1nm,0.4s,baz=241,slow=6.9,SNR=2.5
NVAR LR LR 08 45 22.4
comp=Z,31nm,18.2s,baz=244,slow=33
MKAR Makanchi Array 94.29 317 P P 08 11 26.7 -1.2
1.9nm,0.7s,baz=94,slow=6.0,SNR=23
ARCES ARCESS Array B 117.05 346 PKP PKiKP 08 16 53.5 +0.8
1.9nm,0.8s,baz=48,slow=1.3,SNR=3.8

IDC 23 08:18:38.1±1.0, 21.78S×68.15W, h128km±13km, mb3.2/2, mb1 3.2/5, mb1mx3.0/34, mbtmp3.5/5, MS2.9/3, Ms1 2.9/3, ms1mx2.6/10, Error ellipse: s-maj=33.9km s-min=17.9km az=105.0
SJA 23 08:18:38.3±0.9, 21.61S×68.62W, h131km±5km, ML3.2, MW3.2
GUC 23 08:18:39.3±0.7, 21.63S×68.71W, h130km±5km, ML3.3
ISC 23 08:18:38.2±1.0, 21.67S±0.05×68.55W±0.09, h133km±8km, n34, σ1.22/52, 9C-1D, Chile-Bolivia border region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
PB09 IPOC Station P 0.66 259⇓i P Pn 08 18 59.2 +0.4
PB09 i S Sn 08 19 14.2 -0.3
PB09 IAML 08 19 16.3
comp=E,535nm,0.5s
PB09 IPOC Station P 0.66 259 i P Pn 08 18 59.2 +0.4
PB09 i S Sn 08 19 14.1 -0.3
LVC Limon Verde 1.00 200 P Pn 08 19 02.6 +0.8
comp=E,20nm,0.3s,baz=26,slow=7.8,SNR=150
LVC S Sn 08 19 20.3 +0.6
comp=E,49nm,0.3s,baz=109,slow=19,SNR=59
LVC Limon Verde 1.00 200 i P Pn 08 19 02.5 +0.6
LVC i S Sn 08 19 20.0 +0.3
PB03 IPOC Station P 1.18 251⇑i P Pn 08 19 03.7 +0.3
PB03 i S Sn 08 19 22.0 -0.5
PB03 IAML 08 19 22.9
comp=E,710nm,0.2s
PB03 IPOC Station P 1.18 251 i P Pn 08 19 03.7 +0.3
PB03 i S Sn 08 19 22.0 -0.5
PB07 IPOC Station P 1.25 267⇑i P Pn 08 19 04.2 +0.2
PB07 i S Sn 08 19 23.0 -0.6
PB07 IAML 08 19 23.9
comp=E,2μm,0.3s
PB07 IPOC Station P 1.25 267 i P Pn 08 19 04.5 +0.4
PB07 i S Sn 08 19 23.0 -0.6
PB02 IPOC Station P 1.30 285⇑i P Pn 08 19 04.2 -0.3
PB02 i S Sn 08 19 23.3 -1.2
PB02 IAML 08 19 24.8
comp=E,888nm,0.4s
PB02 IPOC Station P 1.30 285 i P Pn 08 19 04.4 -0.1
PB02 i S Sn 08 19 23.1 -1.4
PB06 IPOC Station P 1.40 222⇑i P Pn 08 19 06.5 +0.8
PB06 i S Sn 08 19 27.6 +1.0
PB06 IAML 08 19 28.2
comp=E,624nm,0.2s
PB06 IPOC Station P 1.40 222 i P Pn 08 19 06.5 +0.8
PB06 i S Sn 08 19 27.3 +0.7
PB06 IAML 08 19 28.0
comp=Z,226nm,0.4s
PB08 IPOC Station P 1.62 339⇑eP Pn 08 19 08.1 -0.2
PB08 i S Sn 08 19 30.1 -1.1
PB08 IAML 08 19 32.5
comp=E,245nm,0.2s
PB04 IPOC Station P 1.63 246⇑eP Pn 08 19 08.5 +0.3
PB04 i S Sn 08 19 30.5 -0.5
PB04 IAML 08 19 34.0
comp=N,368nm,0.3s
PB04 IPOC Station P 1.63 246 i P Pn 08 19 08.4 +0.2
PB04 i S Sn 08 19 30.7 -0.4
PB04 IAML 08 19 31.8
comp=Z,256nm,0.3s
PATCX Punta Patache 1.72 299 i P Pn 08 19 09.0 -0.2
PATCX i S Sn 08 19 31.2 -1.5
PB15 IPOC Station P 1.76 209⇑i P Pn 08 19 11.1 +1.4
PB15 i S Sn 08 19 35.0 +1.3
PB15 IPOC Station P 1.76 209 i P Pn 08 19 11.0 +1.3
PB15 i S Sn 08 19 35.1 +1.3
PB15 IAML 08 19 40.9
comp=Z,330nm,0.2s
PB05 IPOC Station P 1.94 232⇑eP Pn 08 19 12.2 +0.5
PB05 i S Sn 08 19 37.2 -0.1
PB05 IPOC Station P 1.94 232 i P Pn 08 19 12.7 +1.0
PB11 IPOC Station P 2.16 331⇑eP Pn 08 19 13.5 -1.1
PB11 i S Sn 08 19 40.6 -1.8
PB11 IAML 08 19 41.9
comp=E,278nm,0.4s
PB10 IPOC Station P 2.61 225 i P Pn 08 19 20.4 +0.4
PB10 IAML 08 19 54.5
comp=Z,26nm,0.4s
LPAZ La Paz 5.37 4 P Pn 08 19 57.0 +0.1
comp=Z,0.6nm,0.3s,baz=174,slow=6.1,SNR=17
GO03 Copiap 6.10 194 i P Pn 08 20 05.0 -1.1
AGUA GUANDACOL 7.79 180 i P Pn 08 20 29.2 +0.3
ACDV Cuesta del Vie 8.48 183 i P Pn 08 20 38.9 +0.6
ACCO Cerro Coronel 8.90 183 i P Pn 08 20 43.5 -0.5
SIV San Ignacio 9.05 53 P Pn 08 20 41.9 -4.0
comp=Z,0.6nm,0.3s,baz=254,slow=11,SNR=14
SIV LR LR 08 23 54.8
comp=Z,24nm,19.1s,baz=103,slow=36
AMOG MOGNA 9.23 180 i P Pn 08 20 47.9 -0.4
CFA Coronel Fontan 9.90 178 P Pn 08 20 55.1 -2.1
comp=Z,0.1nm,0.3s,baz=23,slow=15,SNR=5.9
CFA S Sn 08 22 40.6 -6.0
comp=Z,0.1nm,0.3s,baz=163,slow=18,SNR=3.0
PLCA Paso Flores 19.08 185 LR LR 08 31 01.3
comp=Z,48nm,18.6s,baz=205,slow=39
PMSA Palmer Station 43.19 177 LR LR 08 44 54.8
comp=Z,42nm,19.5s,baz=132,slow=37
TORD Torodi Ar. Bea 77.09 70 P P 08 30 17.1 -0.3
comp=Z,0.1nm,0.3s,baz=251,slow=4.3,SNR=2.7
YKA Yellowknife Ar 91.46 340 P P 08 31 30.2 +1.3
comp=Z,0.2nm,0.6s,baz=139,slow=4.8,SNR=5.5

INET 23 08:44:30.8, 12.82N×87.11W, h6km, ML4.1
SNET 23 08:44:31.2±1.1, 12.76N×87.13W, h16km±8km, ML3.8
UCR 23 08:44:31.4±1.2, 12.80N×87.09W, h19km±8km, ML3.8
ISC 23 08:44:30.8±1.2, 12.8N±0.1×87.10W±0.07, h13km, n12, σ0.56/16, 2C-4D, Near coast of Nicaragua

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
MOMN Momotombo 0.70 128⇓i P Pg 08 44 44.2 -0.2
MOMN Momotombo 0.70 128⇓i P Pg 08 44 44.2 -0.2
CNCH Conchagua 0.83 301 eP Pg 08 44 46.5 -0.5
CNCH eS Sn 08 45 00.3 -0.2
CNCH IAML 08 45 03.8
comp=Z,3μm,0.5s
CNCH Conchagua 0.83 301 eP Pg 08 44 46.5 -0.5
CNCH eS Sn 08 45 00.3 -0.2
CNCH IAML 08 45 03.8
comp=Z,3μm,0.5s
TGUH Tegucigalpa,Un 1.22 352⇓i P Pn 08 44 53.7 0.0
TGUH Tegucigalpa,Un 1.22 352⇓i P Pn 08 44 53.7 0.0
LCY Lacayo 1.30 297 eP Pn 08 44 54.0 -0.7
LCY Lacayo 1.30 297 eP Pn 08 44 54.0 -0.7
PACA Pacayal 1.34 298 eP Pn 08 44 55.3 -0.1
PACA Pacayal 1.34 298 eP Pn 08 44 55.3 -0.1
TECA Tecapa 1.51 296⇑eP Pn 08 44 58.3 +0.6
TECA eS Sb 08 45 18.9 +0.9
TECA Tecapa 1.51 296⇑eP Pn 08 44 58.3 +0.6
TECA eS Sb 08 45 18.9 +0.9

INET 23 08:47:57.1, 12.83N×87.09W, h6km, ML3.5, Near coast of Nicaragua

SKO 23 08:55:53.5, 40.92N×19.98E, h15km
TIR 23 08:55:54.3, 41.05N×20.05E, h8km, Md2.5/4
ISC 23 08:55:53.6±3.1, 41.0N±0.1×20.0E±0.1, h13km±13km, n6, σ0.75/11, Greece-Albania border region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
TIR Tirane 0.40 344 i PG Pg 08 56 01.5 -0.1
TIR i SG Sg 08 56 07.0 0.0
OHR Ohrid 0.62 75 ePg Pb 08 56 06.2 -0.1
OHR i Sg Sb 08 56 15.2 +0.3
PHP Peshkopia 0.80 24 i PG Pg 08 56 07.8 -1.2
PHP i SG Sb 08 56 19.9 -0.1
PUK Puka 1.09 355 i PG Pb 08 56 14.3 0.0
PUK i SG Sb 08 56 29.1 -0.5
BCI Bajram Curri 1.41 2 i PN Pg 08 56 20.5 -0.1
BCI i SN Sg 08 56 40.2 +1.3
STIP Stip 1.80 65 i Pn Pb 08 56 27.1 +0.7

IDC 23 08:58:00.2±0.8, 29.47N×105.62E, h0km, mb3.6/8, mb1 3.8/10, mb1mx3.5/46, mbtmp3.6/10, ML3.8/2, MS3.2/9, Ms1 3.2/9, ms1mx2.9/48, Error ellipse: s-maj=29.3km

s-min=17.7km az=60.0

BJI 23 08:58:02.1±0.0,29.44N×105.54E,h6km,mb3.7/6, ML3.8/17,Ms3.6/10,Ms7 3.6/9

ISC 23 08:58:05.4±0.6,29.45N±0.04×105.63E±0.05,h29km,n24, σ2.20/26,mb3.6/7,MS3.1/7,2D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	2.18	312	⇓iPn	Pn	08 58 39.9	+0.1
CD2				Pg	Pb	08 58 44.3	+0.1
CD2				Sn	Sb	08 59 08.0	-2.8
CD2				Sg	Sn	08 59 10.6	+4.8
CD2				smax	smax		
	comp=N,3µm,0.7s						
CD2				smax	smax		
	comp=E,2µm,0.7s						
GYA	Guiyang	3.11	163	⇓iPn	Pn	08 58 52.3	-0.4
GYA				Pg	Pb	08 59 00.5	+0.4
GYA				Sn	Sn	08 59 31.5	+2.6
GYA				Sg	Sb	08 59 39.4	+1.7
GYA				smax	smax		
	comp=N,770nm,0.7s						
GYA				smax	smax		
	comp=E,840nm,0.9s						
KMI	Kunming	5.01	212	Pn	Pn	08 59 21.9	+3.0
KMI				smax	smax		
	comp=N,40nm,0.9s						
KMI				smax	smax		
	comp=E,32nm,0.7s						
KMI				LR	LR		
	comp=N,420nm,6.5s						
KMI				LR	LR		
	comp=Z,340nm,6.2s						
XAN	Xi'an	5.37	31	Pn	Pn	08 59 23.8	+0.2
XAN				Pg	Pb	08 59 41.3	+2.8
XAN				Sn	Sn	09 00 29.1	+4.6
XAN				Sg	Sb	09 00 53.0	+11
XAN				smax	smax		
	comp=N,250nm,1.0s						
XAN				smax	smax		
	comp=E,120nm,1.0s						
LZH	Lanzhou	6.79	348	ePn	Pn	08 59 37.4	-5.8
LZH				LR	LR		
	comp=N,420nm,10.8s						
LZH				LR	LR		
	comp=Z,540nm,10.9s						
WHN	Wuhan	7.64	80	P	Pn	08 59 47.6	-7.1
WHN				S	Sn	09 01 16.4	-4.0
GTA	Gaotai	11.04	336	eP	Pn	09 00 43.6	+2.2
GTA				pP		09 00 47.1	
GTA				sP		09 00 50.1	
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GTA				LR	LR		
	comp=N,160nm,13.0s						
GTA				LR	LR		
	comp=E,120nm,13.6s						
GTA				LR	LR		
	comp=Z,200nm,16.2s						
CMAR	Chiang Mai Arr	12.53	211	Pn	Pn	09 01 01.9	+0.2
	0.4nm,0.3s,baz=19,slow=12,SNR=12						
CMAR				LR	LR	09 06 18.5	
	comp=Z,43nm,21.2s,baz=325,slow=40						
LSA	Lhasa	12.61	275	P	P	09 01 38.3	+24
SONM	Songino Array	18.37	2	P	P	09 02 16.8	-1.1
	0.1nm,0.3s,baz=187,slow=10,SNR=2.5						
SONM				LR	LR	09 09 08.4	
	comp=Z,38nm,18.1s,baz=20,slow=36						
KSRS	Korea Array	20.21	61	P	P	09 02 37.1	-0.8
	0.5nm,0.6s,baz=244,slow=11,SNR=3.1						
WMQ	Urumqi	20.26	320	eP	Pn	09 02 41.8	+1.2
TLY	Talaya	22.26	357	LR	LR	09 12 27.4	
	comp=Z,72nm,20.6s,baz=172,slow=39						
MKAR	Makanchi Array	25.09	320	P	P	09 03 25.8	-1.6
	0.5nm,0.5s,baz=125,slow=12,SNR=8.5						
MKAR				PcP	PcP	09 07 01.1	-0.2
	0.2nm,0.7s,baz=113,slow=3.3,SNR=2.5						
MKAR				LR	LR	09 14 22.6	
	comp=Z,114nm,18.8s,baz=91,slow=39						
AAK	Ala-Archa	28.24	306	LR	LR	09 17 15.6	
	comp=Z,49nm,21.0s,baz=112,slow=41						
ZALV	Zalesovo Beam	28.78	334	P	P	09 03 59.7	-0.8
	1.1nm,0.6s,baz=126,slow=9.5,SNR=4.7						
ZALV				LR	LR	09 15 44.1	
	comp=Z,24nm,18.2s,baz=20,slow=37						
KURBB	Kurchatov Arra	29.35	324	P	P	09 04 04.6	-1.0
	0.6nm,0.7s,baz=133,slow=9.4,SNR=5.4						
KURBB				PcP	PcP	09 07 10.5	-0.8
	0.1nm,0.3s,baz=108,slow=3.0,SNR=2.6						
ASAJ	Asahikawa	32.73	53	LR	LR	09 19 51.2	
	comp=Z,20nm,18.1s,baz=160,slow=40						
LEM	Lembang	36.11	177	LR	LR	09 20 01.7	
	comp=Z,258nm,18.4s,baz=226,slow=37						
WRA	Warramunga Arr	56.37	147	P	P	09 07 42.6	-1.5
	2.1nm,0.9s,baz=335,slow=7.9,SNR=7.2						
BRTR	Keskin Array B	58.71	301	P	P	09 07 59.5	-1.2
	0.4nm,0.7s,baz=28,slow=6.5,SNR=2.5						
ASAR	Alice Springs	59.40	150	P	P	09 08 05.0	-0.3
	1.2nm,0.8s,baz=334,slow=6.3,SNR=8.2						
STKA	Stephens Creek	69.91	148	LR	LR	09 42 59.1	
	comp=Z,27nm,18.0s,baz=16,slow=39						
YKA	Yellowknife Ar	82.88	18	P	P	09 10 25.7	-1.1
	0.2nm,0.6s,baz=325,slow=4.9,SNR=4.4						

NEIC 23 08:58:41.4±1.1,8.21S±0.06×108.06E±0.06,h64km±8km, mb4.1/17,Error ellipse: s-maj=9.8km s-min=7.6km az=216.0

DJA 23 08:58:41.8±0.6,8°S±4°×10°8E±°,h32km±7km,M4.4/12, mB5.3/1,mb4.5/2,MLv4.3/12,Mw(mB)4.7/1

IDC 23 08:58:43.5±3.5,8.01S×107.87E,h110km±22km,mb3.4/4, mb1 3.6/5,mb1mx3.2/40,mbtmp3.8/5,MS3.3/3,Ms1 3.3/3, ms1mx2.8/29,Error ellipse: s-maj=101.3km s-min=18.3km az=52.0

ISC 23 08:58:41.2±1.0,8.27S±0.06×108.07E±0.04,h49km±12km, n50,σ0.99/54,mb4.1/9,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.75	341	P	Pn	08 58 55.7	0.0
CISI				S	Sn	08 59 05.2	-0.9
CISI	Cisompet, Garu	0.75	341		Pn	08 58 56.0	+0.3
CISI				Sn	Sn	08 59 06.2	0.0
KPJI	Karang Pucung	1.27	43	P	Pn	08 59 02.3	-0.2
CNJI	Cibinong	1.33	316	P	Pn	08 59 03.2	-0.2
CNJI				S	Sn	08 59 19.0	-1.0
LEM	Lembang	1.50	343	P	Pn	08 59 06.1	+0.2
	292nm,0.3s,baz=321,slow=22,SNR=72						
LEM				S	Sn	08 59 25.0	+0.6
	368nm,0.3s,baz=300,slow=20,SNR=26						
LEM	Lembang	1.50	343	P	Pn	08 59 05.9	0.0
LEM				S	Sn	08 59 24.3	-0.1
SKJI	Sukabumi	1.95	310	P	Pn	08 59 12.4	+0.5
SKJI				S	Sn	08 59 35.6	+0.3
DBJI	Dramaga	2.15	323	P	Pn	08 59 15.1	+0.5
UGM	Wanagama	2.46	82	P	Pn	08 59 19.1	+0.2
UGM				S	Sn	08 59 48.3	+0.5
UGM	Wanagama	2.46	82		Pn	08 59 19.4	+0.6
UGM				Sn	Sn	08 59 47.7	-0.1
SMRI	Semarang	2.65	63	P	Pn	08 59 21.9	+0.4
SMRI				S	Sn	08 59 52.8	+0.4
SMRI	Semarang	2.65	63		Pn	08 59 22.6	+1.2
SMRI				Sn	Sn	08 59 52.1	-0.3
WOJI	Wonogiri, Jawa	2.86	82	P	Pn	08 59 24.1	-0.3
PCJI	Pacitan	3.08	89	P	Pn	08 59 28.1	+0.7
PCJI				S	Sn	09 00 03.2	+0.2
XMIS	Christmas Isla	3.24	227	Pn	Pn	08 59 30.6	+1.1
KLSI		4.86	317	P	Pn	08 59 52.0	+0.2
MDSI	Maura Dua	5.39	314	P	Pn	08 59 59.7	+0.6
	0.1nm28nm,0.9s						
JAGI	Jajag, Banyuwa	6.03	92	P	Pn	09 00 09.9	+2.1
JAGI	Jajag, Banyuwa	6.03	92		Pn	09 00 10.4	+2.6
MNAI	Manna	6.39	307	Pn	Pn	09 00 12.3	-0.6
KAPI	Kappang	12.05	75	LR	LR	09 07 04.9	
	comp=Z,59nm,18.2s,baz=263,slow=41						
GIRL	Giralia	15.47	158	Pn	Pn	09 02 16.0	-0.3
PSAD1	Pilbara Seismi	17.34	140	P	Pn	09 02 39.8	0.0
PSAC1	Pilbara Seismi	17.38	141	P	Pn	09 02 40.6	+0.2
PSAC1				IAmb	IAmb	09 02 54.3	
	comp=Z,17nm,1.4s						
PSAB1	Pilbara Seismi	17.41	141	P	Pn	09 02 41.3	+0.5
PSAB1				IAmb	IAmb	09 02 48.4	
	comp=Z,20nm,1.4s						
PSAA2	Pilbara Seismi	17.43	141	P	Pn	09 02 41.6	+0.7
PSA00	Pilbara Seismi	17.43	141	P	Pn	09 02 41.5	+0.5
FITZ	Fitzroy Crossi	19.68	122	P	Pn	09 03 08.2	0.0
	comp=Z,0.1nm,0.3s,baz=306,slow=8.6,SNR=5.2						
FITZ	Fitzroy Crossi	19.68	122	P	P	09 03 05.7	-0.7
KNRA	Kununurra	21.53	112	P	P	09 03 24.9	-1.5
KNRA				IAmb	IAmb	09 03 38.6	
	comp=Z,9.0nm,1.1s						
NWAO	Narrogin (SRO)	25.96	162	P	P	09 04 08.6	-0.6
NWAO				IAmb	IAmb	09 04 09.5	
	comp=Z,15nm,1.2s						
WRA	Warramunga Arr	27.95	117	P	P	09 04 25.8	-1.5
	comp=Z,0.7nm,1.0s,baz=288,slow=12,SNR=8.0						
WRAB	Tennant Creek	27.95	117	P	P	09 04 26.2	-1.2
WRAB				IAmb	IAmb	09 04 44.9	
	comp=Z,3.3nm,0.7s						
WB2	Warramunga Arr	27.96	117	P	P	09 04 26.4	-0.9
WB2				IAmb	IAmb	09 04 35.8	
	comp=Z,7.8nm,1.3s						
CMAR	Chiang Mai Arr	28.04	341	LR	LR	09 15 20.7	
	comp=Z,33nm,18.6s,baz=160,slow=36						
WR0	Warramunga Arr	28.13	117	P	P	09 04 27.1	-1.8
WR0				IAmb	IAmb	09 04 32.9	
	comp=Z,12nm,1.4s						
ASAR	Alice Springs	29.10	125	P	P	09 04 36.0	-1.5
	comp=Z,0.3nm,0.6s,baz=301,slow=8.6,SNR=7.3						
H08S2	Diego Garcia H	35.23	268	T	T	09 42 47.0	
	baz=93,slow=76,SNR=24						
H08S3	Diego Garcia H	35.24	268	T	T	09 42 47.7	
	baz=93,slow=76,SNR=50						
H08S1	Diego Carcia H	35.25	268	T	T	09 42 48.3	
	baz=93,slow=76,SNR=26						
STKA	Stephens Creek	39.01	132	P	P	09 06 02.9	-0.3
	comp=Z,3.5nm,0.5s,baz=307,slow=7.6,SNR=14						
STKA	Stephens Creek	39.01	132	P	P	09 06 02.5	-0.6
STKA				IAmb	IAmb	09 06 03.6	
	comp=Z,0.9nm,0.5s						
WMQ	Urumqi	55.04	342	eP	P	09 08 11.0	+3.0
MKAR	Makanchi Array	59.43	340	P	P	09 08 32.5	-6.4
	comp=Z,0.4nm,0.5s,baz=155,slow=7.8,SNR=7.6						
MAKZ	Makanchi	59.55	339		P	09 08 41.9	+2.2
OPO	Ambohidratompo	59.86	253	LR	LR	09 30 25.3	
	comp=Z,70nm,18.5s,baz=185,slow=32						
BKZ	Black Stump Fm	68.11	129	P	P	09 09 35.2	-1.1
VNDA	Vanda	74.53	170	P	P	09 10 14.2	-0.1
QSPA	South Pole Qui	81.73	180	P	P	09 10 54.0	-0.4
SNAA	Sanae	88.63	197	P	P	09 11 29.0	+0.2

IDC 23 09:14:13.8±6.4,4.37S×141.97E,h0km,mb3.2/2, mb1 3.4/3,mb1mx3.2/44,mbtmp3.3/3,ML3.6/1,Error ellipse: s-maj=229.5km s-min=32.2km az=92.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.17	205	P	Pn	09 18 13.5	-1.8
	0.2nm,0.3s,baz=23,slow=13,SNR=8.2						
ASAR	Alice Springs	20.70	201	P	P	09 18 56.8	+0.9
	0.5nm,0.7s,baz=33,slow=9.4,SNR=8.2						
MKAR	Makanchi Array	73.09	322	P	P	09 25 46.1	0.0
	0.4nm,0.9s,baz=123,slow=5.3,SNR=3.3						

IDC 23 09:15:40.4±1.0,36.15N×97.41W,h0km,mb1 3.7/8, mb1mx3.4/58,mbtmp3.5/8,ML3.7/7,Error ellipse: s-maj=14.7km s-min=11.3km az=158.0

NEIC 23 09:15:41.0±1.5,36.06N±0.03×97.30W±0.04,h5km±2km, Error ellipse: s-maj=6.5km s-min=4.9km az=229.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.08; $M_{\theta\theta}$1.15; $M_{\phi\phi}$-1.23; $M_{r\theta}$-0.23; $M_{r\phi}$0.20; $M_{\theta\phi}$0.33; Fault plane solution: $M_0$1.28000×10^{14} NP1: ϕ_s130.02000°,δ87.61000°,λ-17.67000°. NP2: ϕ_s220.78000°,δ72.35000°,λ-177.50000°. Principal axes: T 1.2096, Plg11.0000°, Azm177.0000°; N 0.1264, Plg72.0000°, Azm303.0000°; P -1.3360, Plg14.0000°, Azm84.0000°;

TUL 23 09:15:41.1±1.4,36.04N±0.03×97.34W±0.06,h5km±2km, ML3.7,Mwr3.3/27(NEIC) Error ellipse: s-maj=8.2km s-min=5.6km az=87.0

ANF 23 09:15:41.4±0.5,36.03N×97.31W,h5km,ML4.3/8,Error ellipse: s-maj=7.2km s-min=4.3km az=171.0

ISC 23 09:15:40.6±0.6,36.10N±0.03×97.30W±0.03,h10km,n85, σ1.55/96,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.45	188		Pg	09 15 48.8	-0.5
ADOK				Sg	Sg	09 15 53.2	-2.0
OK005	Luther M Schoo	0.45	169		Pg	09 15 49.1	-0.2
OK009	Oakdale Elemen	0.52	191		Pg	09 15 50.2	-0.5
OKCFA	Oklahoma City	0.69	190		Pg	09 15 53.3	-0.7
OKCFA				Sg	Sg	09 16 01.9	-1.0
OKCSW	OKLAHOMA CITY	0.70	189		Pg	09 15 53.4	-0.7
OKCSW				Sg	Sg	09 16 02.5	-0.7
FNO	Franklin	0.84	186		Pb	09 15 56.5	-0.8
W35A	Tecumseh	1.00	160		Pg	09 15 58.8	-1.0
W35A				Sg	Sg	09 16 12.1	-0.9
TUL1	Leonard	1.24	98		Pg	09 16 04.1	-0.2
TUL1	Leonard	1.24	98	P	Pg	09 16 04.2	-0.2
	baz=276						
TUL1				S	Sn	09 16 21.7	+1.0
	baz=276						
U32A	Winter Ranch,	1.41	282		Pg	09 16 06.5	-1.0
X34A	Smith Ranch, M	1.55	196		Pb	09 16 08.9	-0.6
WMOK	Wichita Mounta	1.82	222		Pb	09 16 12.7	-1.3
WMOK	Wichita Mounta	1.82	222	P	Pb	09 16 12.6	-1.3
	baz=42						
WMOK				S	Sb	09 16 36.0	-0.8
	baz=42						
U38A	Gravette	2.38	81	Pn	Pb	09 16 21.9	-1.6
HHAR	Hobbs	2.72	85		Pn	09 16 26.3	+1.9
Z35A	Perchaven, San	2.76	179	Pn	Pn	09 16 25.7	+0.8
W39A	Magazine	3.00	106		Pn	09 16 29.8	+1.6
W39A	Magazine	3.00	106	P	Pn	09 16 29.9	+1.7
	baz=287						
W39A				S	Sb	09 17 07.2	-3.6
	baz=287						
KSU1	Kansas State U	3.05	10	P	Pb	09 16 31.7	-3.3
	baz=191						
KSU1				Sb	Sg	09 17 19.0	+0.4
	baz=191						
CBKS	Cedar Bluff	3.33	325		Pn	09 16 34.6	+1.7
CBKS	Cedar Bluff	3.33	325	P	Pn	09 16 34.5	+1.7
	baz=145						
CBKS				S	Sn	09 17 15.1	+2.5
	baz=145						
MIAR	Mount Ida	3.41	116		Pn	09 16 36.1	+2.2
MIAR	Mount Ida	3.41	116	P	Pn	09 16 36.0	+2.1
	baz=297						
MIAR				S	Sn	09 17 16.9	+2.5
	baz=297						
U40A	Yellville	3.60	85	Pn	Pn	09 16 38.0	+1.5
U40A	Yellville	3.60	85	P	Pn	09 16 38.0	+1.5
	baz=266						
U40A				S	Sn	09 17 23.0	+3.9
	baz=266						
AMTX	Amarillo	3.77	253		Pn	09 16 40.4	+1.5
AMTX	Amarillo	3.77	253	P	Pn	09 16 40.5	+1.5
	baz=71						
AMTX				S	Sn	09 17 25.3	+1.8
	baz=71						
ABTX	Abilene, Hawle	3.97	210	Pn	Pn	09 16 42.4	+0.8
X40A	Basin Creek Fa	3.99	112	Pn	Pn	09 16 43.6	+1.8
WHTX	Lake Whitney,	4.10	182		Pn	09 16 43.6	+0.3
WHAR	Wooly Hollow	4.16	100		Pn	09 16 45.8	+1.7
MGMO	Mountain Grove	4.18	74		Pn	09 16 46.5	+2.1
WLAR	White Oak Lake	4.20	124		Pn	09 16 46.3	+1.7
FCAR	Ozark Folk Cen	4.20	91	Pn	Pn	09 16 45.6	+0.9
W41B	Gary Mavity, V	4.22	101	Pn	Pn	09 16 46.8	+1.4
UALR	University of	4.26	107	Pn	Pn	09 16 47.6	+2.1
237A	Washetta, Mont	4.27	163	Pn	Pn	09 16 45.6	0.0
MSTX	Muleshoe	4.97	246		Pn	09 16 55.8	+0.4
LCAR	Lake Charles	4.98	89	Pn	Pn	09 16 56.3	+1.0
KSCO	Kaye Shedlock'	5.14	306		Pn	09 16 59.6	+1.9
CCM	Cathedral Cave	5.22	66		Pn	09 17 00.4	+1.7
435B	Jarrell	5.30	183		Pn	09 16 59.7	-0.2
BGNE	Belgrade	5.35	353	Pn	Pn	09 17 01.8	+1.3
PBMO	Poplar Bluff	5.58	81	Pn	Pn	09 17 04.7	+1.0
T25A	Trinidad	5.81	282		Pn	09 17 07.9	+0.8
JCT	Junction City	5.98	201		Pn	09 17 09.2	0.0
OGNE	Ogallala	6.10	324		Pn	09 17 12.6	+1.8
SCIA	State Center	6.62	27	Pn	Pn	09 17 20.8	+2.9
S44A	Carbondale	6.64	74	Pn	Pn	09 17 18.7	+0.5
OXF	Oxford	6.64	101		Pn	09 17 18.2	0.0
SDCO	Great Sand Dun	6.77	286		Pn	09 17 22.4	+2.0
Q24A	Divide	6.86	297		Pn	09 17 23.1	+1.5
P43A	Skaggs, Pawnee	7.10	58		Pn	09 17 27.0	+2.5
ISCO	Idaho Springs	7.54	302		Pn	09 17 32.0	+1.2
ANMO	Albuquerque	7.55	264	Pn	Pn	09 17 31.9	+0.9
	0.1nm,0.3s,baz=85,slow=17,SNR=4.2						
ANMO				Pg	Pg	09 17 57.8	-7.4
	1.2nm,0.3s,baz=85,slow=14,SNR=26						
ANMO				Lg	Lg	09 19 37.2	
	2.1nm,0.3s,baz=69,slow=21,SNR=5.2						
ANMO	Albuquerque	7.55	264		Pn	09 17 34.0	+3.0
ANMO					Pg	09 17 58.0	-7.3
PLAL	Pickwick Lake	7.60	96		Pn	09 17 31.6	+0.2
L40A	Anamosa	7.60	37	Pn	Pn	09 17 31.2	-0.2
ECSD	EROS Data Cent	7.65	4		Pn	09 17 32.3	+0.2
WVT	Waverly	7.67	87	Pn	Pn	09 17 32.7	+0.4
S22A	4UR Ranch, Cre	7.81	285		Pn	09 17 36.1	+1.5
833A	Chaparral WMA,	7.95	193	Pn	Pn	09 17 35.5	-0.7
MNTX	Cornudas Mount	8.02	239		Pn	09 17 37.4	+0.1
T47A	Sharon Grove	8.25	81		Pn	09 17 41.1	+0.8
N23A	Red Feather La	8.30	308		Pn	09 17 43.0	+1.7
L42A	Oliver, Polo	8.37	43	Pn	Pn	09 17 42.9	+1.0
TX31	Lajitas Ar. Si	8.61	220	Pn	Pn	09 17 46.5	+1.1
TXAR	Lajitas Array	8.61	220	Pn	Pn	09 17 44.3	-1.2
	0.2nm,0.3s,baz=43,slow=12,SNR=10						
TXAR				Pg	Pg	09 18 09.4	-16
	0.6nm,0.3s,baz=39,slow=13,SNR=9.2						
TXAR				Lg	Lg	09 20 10.1	
	4.7nm,0.3s,baz=44,slow=29,SNR=8.9						
TX32	Lajitas Array	8.62	220		Pn	09 17 46.6	+1.2
JFWS	Jewell Farm	8.72	37	Pn	Pn	09 17 48.1	+1.4
P46A	Rosedale	8.72	63	Pn	Pn	09 17 48.4	+1.7
LRAL	Lakeview Retre	9.03	107	Pn	Pn	09 17 51.4	+0.4
WCI	Wyandotte Cave	9.04	73	Pn	Pn	09 17 53.0	+1.8
RSSD	Black Hills	9.53	329		Pn	09 17 58.7	+0.6
SPMN	Marine on St.	9.73	19		Pn	09 18 00.2	-0.4
TKL	Tuckaleechee C	10.98	88	Pn	Pn	09 18 18.3	+0.5
	0.2nm,0.3s,baz=196,slow=9.2,SNR=4.4						
TKL				Lg	Lg	09 21 24.3	
	0.9nm,0.3s,baz=35,slow=12,SNR=4.2						
PDAR	Pinedale Array	11.58	309	Pn	Pn	09 18 26.4	+0.3
	0.2nm,0.3s,baz=127,slow=13,SNR=4.5						
PDAR				Lg	Lg	09 21 44.9	
	0.6nm,0.3s,baz=113,slow=35,SNR=5.0						
ULM	Lac du Bonnet	14.19	4	Pn	Pn	09 18 58.4	-3.1
	0.3nm,0.3s,baz=180,slow=11,SNR=6.5						
ULM				Lg	Lg	09 23 05.3	
	0.3nm,0.3s,baz=297,slow=16,SNR=4.1						
ULM	Lac du Bonnet	14.19	4		Pn	09 18 59.0	-2.5
XPFO	Pion Flat	15.92	267	Pn	Pn	09 19 25.7	+0.9
PFO	Pinyon Flats O	15.93	267	Pn	Pn	09 19 24.8	-0.1
	0.3nm,0.3s,baz=104,slow=8.3,SNR=4.5						
PFO	Pinyon Flats O	15.93	267		Pn	09 19 25.3	+0.4
SADO	Sadowa	16.29	52	Lg	Lg	09 24 11.8	
	0.3nm,0.3s,baz=270,slow=6.2,SNR=3.0						
TEIG	Tepich	17.68	151	P	P	09 19 50.8	+2.9
	0.3nm,0.3s,baz=330,slow=20,SNR=7.2						
CMIG	Matias Romero	19.05	173	P	Pn	09 20 04.9	+1.1
	0.2nm,0.3s,baz=21,slow=8.6,SNR=3.4						

IDC 23 09:17:13.9±1.2,7.20S×104.19E,h0km,mb3.8/10, mb1 4.0/11,mb1mx3.8/50,mbtmp3.9/11,ML4.1/1,Error ellipse: s-maj=39.4km s-min=16.0km az=48.0

DJA 23 09:17:16.3±0.5,7°S±3°×10°4E±°,h10km,M4.0/12, MLv4.0/12

NEIC 23 09:17:18.8±1.6,7.1S±0.1×104.34E±0.09,h30km±5km, mb4.4/8,Error ellipse: s-maj=19.6km s-min=8.7km az=213.0

ISC 23 09:17:17.2±3.0,7.18S±0.07×104.40E±0.06,h19km±20km, n46,σ1.23/52,mb3.9/12,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	Kota Agung	1.65	3	P	Pn	09 17 45.5	+0.3
KASI				S	Sn	09 18 05.3	-0.6
BLSI	Bandar Lampung	1.99	25	P	Pn	09 17 51.2	+1.3
BLSI				S	Sn	09 18 14.0	-0.3
SKJI	Sukabumi	2.15	85	P	Pn	09 17 52.1	+0.1
SKJI				S	Sn	09 18 19.0	+0.8
LWLI	Liwa	2.18	351	P	Pn	09 17 52.7	+0.2
LWLI				S	Sn	09 18 19.9	+0.9
DBJI	Dramaga	2.42	75	P	Pn	09 17 55.4	-0.3
DBJI				S	Sn	09 18 26.4	+1.5
TNG	Tangerang	2.45	66	P	Pn	09 17 57.1	+0.9
KLSI		2.50	8	P	Pn	09 17 57.1	+0.3
KLSI				S	Sn	09 18 28.6	+1.8
MDSI	Maura Dua	2.69	355	P	Pn	09 18 00.8	+1.4
MDSI				S	Sn	09 18 33.6	+2.1
CNJI	Cibinong	2.71	93	P	Pn	09 17 58.9	-0.9
CNJI				S	Sn	09 18 31.7	-0.4
MNAI	Manna	3.15	333	P	Pn	09 18 05.8	0.0
MNAI	Manna	3.15	333	Pn	Pn	09 18 04.0	-1.9
LEM	Lembang	3.22	84	Pn	Pn	09 18 09.7	+2.8
	17nm,0.3s,baz=357,slow=18,SNR=5.2						
LEM				Sn	Sb	09 18 51.2	-1.5
	6.9nm,0.3s,baz=311,slow=19,SNR=2.9						
LEM	Lembang	3.22	84	P	Pn	09 18 07.8	+0.9
CISI	Cisompet, Garu	3.41	96	P	Pn	09 18 08.7	-0.7
CISI	Cisompet, Garu	3.41	96		Pn	09 18 09.4	0.0
KSI	Kapahiang	3.94	333	P	Pn	09 18 16.9	+0.2
UGM	Wanagama	6.12	97	Pn	Pn	09 18 47.7	+1.1
JAGI	Jajag, Banyuwa	9.75	98	Pn	Pn	09 19 37.0	+0.5
LUWI	Luwuk	19.31	72	P	P	09 21 38.3	-3.0
SOEI	Soe	19.82	99	P	P	09 21 47.8	+0.8
SOEI				IAmb	IAmb	09 22 06.1	
	comp=Z,18nm,1.0s						
SOEI					S	09 25 26.4	-3.4
FITZ	Fitzroy Crossi	23.36	120	P	P	09 22 26.1	+1.3
	comp=Z,1.6nm,0.7s,baz=324,slow=8.7,SNR=3.6						
FITZ	Fitzroy Crossi	23.36	120	P	P	09 22 26.9	+2.1
FITZ				IAmb	IAmb	09 22 42.1	
	comp=Z,8.6nm,1.4s						
KNRA	Kununurra	25.31	112	P	P	09 22 43.2	+0.4
KNRA				IAmb	IAmb	09 22 48.5	
	comp=Z,19nm,1.4s						
CMAR	Chiang Mai Arr	26.04	348	P	P	09 22 49.1	-0.3
	comp=Z,0.9nm,0.5s,baz=182,slow=8.0,SNR=5.5						
FAKI	Fak Fak	28.06	83	P	P	09 23 06.5	-1.3
H08S2	Diego Garcia H	31.64	267	T	T	09 57 02.0	
	baz=98,slow=74,SNR=3.9						
H08S3	Diego Garcia H	31.65	267	T	T	09 57 04.3	
	baz=98,slow=74,SNR=9.4						
H08S1	Diego Carcia H	31.66	267	T	T	09 56 57.9	
	baz=98						
WRA	Warramunga Arr	31.68	117	P	P	09 23 40.7	+0.9
	comp=Z,0.3nm,0.4s,baz=291,slow=12,SNR=3.5						
ASAR	Alice Springs	32.72	123	P	P	09 23 49.9	+1.0
	comp=Z,0.2nm,0.5s,baz=300,slow=9.5,SNR=4.1						
STKA	Stephens Creek	42.46	130	P	P	09 25 11.6	+0.4
	comp=Z,1.4nm,0.4s,baz=313,slow=9.6,SNR=5.0						
STKA	Stephens Creek	42.46	130	P	P	09 25 12.5	+1.3
SONM	Songino Array	54.81	2	P	P	09 26 45.7	-0.3
	comp=Z,0.3nm,0.5s,baz=200,slow=7.9,SNR=3.0						
USRK	Ussuriysk Ar.	56.89	23	P	P	09 27 00.6	-0.3
	comp=Z,0.6nm,0.4s,baz=196,slow=3.1,SNR=5.6						
MK31	Makanchi Array	57.22	342	P	P	09 27 03.3	+0.1
MKAR	Makanchi Array	57.22	342	P	P	09 27 02.9	-0.3
	comp=Z,0.6nm,0.5s,baz=146,slow=8.8,SNR=9.2						
ZALV	Zalesovo Beam	63.10	347	P	P	09 27 42.5	-0.8
	comp=Z,0.7nm,0.3s,baz=174,slow=6.5,SNR=4.2						
QSPA	South Pole Qui	82.81	180	P	P	09 29 41.2	+1.1
QSPA				IAmb	IAmb	09 29 57.9	
	comp=Z,6.1nm,1.4s						
FINES	FINESS Array B	90.71	332	P	P	09 30 17.6	-0.9
	comp=Z,3.7nm,1.0s,baz=129,slow=11,SNR=3.2						
TBI	Tubuai	101.81	116	eLR	LR	09 30 45.8	
	comp=Z,111nm,26.8s						
G65A	Princeton	141.49	351	PKPdf	PKPdf	09 36 46.2	-1.0
BDFB	Brasilia	144.49	230	PKP	PKPdf	09 36 53.4	-0.2
	comp=Z,1.2nm,0.4s,baz=114,slow=6.6,SNR=3.8						
BDFB	Brasilia	144.49	230		PKPdf	09 36 53.8	+0.3
WES	Weston	144.74	355	PKPdf	PKPdf	09 36 53.9	+0.8
TXAR	Lajitas Array	145.60	47	PKPbc	PKPab	09 36 56.5	+0.9
	comp=Z,0.3nm,0.6s,baz=236,slow=1.1,SNR=5.3						
TLIG	Tlapa	155.34	63	PKPdf	PKPdf	09 37 11.0	+0.5

MAN 23 09:24:41.8,8.89N×125.77E,h6km,mb4.3,ML3.2,MS2.9, 1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.17**	**298**	eP	Pg	09 24 46.1	+0.8
BUTP				eS	Sg	09 24 50.5	+2.9
CGP	**Cagayan de Oro**	**1.15**	**248**	⇑eP	Pg	09 25 02.8	-1.2
CGP				eS	Sn	09 25 22.7	+2.1
BUKP	**Musuan**	**1.23**	**215**	eP	Pg	09 25 04.6	-0.8
BUKP				eS	Sn	09 25 22.7	+0.2
KCP	**Kidapawan**	**1.99**	**200**	⇓iP	Pn	09 25 16.1	0.0
KCP				iS	Sn	09 25 36.8	-4.5
PAGZ	**Pagadian**	**2.58**	**247**	eP	Pn	09 25 25.0	+0.8
PAGZ				eS	Sn	09 25 47.3	-8.6

IDC 23 09:39:30.0±0.8, 60.°25S×47.°61W, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.9/29, mbtmp4.0/8, ML4.0/1, MS3.4/10, Ms1 3.4/10, ms1mx3.2/24, Error ellipse: s-maj=28.9km s-min=20.5km az=68.0
NEIC 23 09:39:30.4±2.1, 60.°30S±0.°09×47.°2W±0.°2, h10km±1km, mb4.3/9, Error ellipse: s-maj=14.0km s-min=14.0km az=138.0
ISC 23 09:39:31.0±0.6, 60.°29S±0.°10×47.°3W±0.°1, h10km, n43, σ1♀31/32, mb4.1/8, MS3.2/8, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**8.38**	**49**	Pn	**Pn**	**09 41 30.3**	**-2.1**
PMSA	**Palmer Station**	**8.95**	**233**	Pn	**Pn**	**09 41 39.1**	**-1.0**
	1.8nm,0.3s,baz=73,slow=5.9,SNR=4.3						
PMSA				LR	LR	09 45 06.0	
	comp=Z,280nm,18.7s,baz=58,slow=38						
EFI	**East Falkland**	**10.52**	**320**	Pn	**Pn**	**09 42 01.7**	**0.0**
USHA	**Ushuaia**	**12.57**	**286**	LR	LR	09 46 13.9	
	comp=Z,182nm,18.5s,baz=120,slow=33						
SNAA	**Sanae**	**20.76**	**141**	P	Pn	09 44 14.6	+0.6
	3.0nm,0.8s,baz=292,slow=11,SNR=6.4						
SNAA				LR	LR	09 49 49.9	
	comp=Z,92nm,21.0s,baz=335,slow=30						
SNAA	**Sanae**	**20.76**	**141**	P	Pn	09 44 15.1	+1.1
PLCA	**Paso Flores**	**24.30**	**313**	P	**P**	**09 44 48.0**	**-0.4**
	2.2nm,0.8s,baz=211,slow=8.5,SNR=5.1						
PLCA				LR	LR	09 53 50.6	
	comp=Z,74nm,20.3s,baz=186,slow=36						
PLCA	**Paso Flores**	**24.30**	**313**	P	**P**	**09 44 48.1**	**-0.4**
PLCA				IAmb	IAmb	09 44 54.7	
	comp=Z,17nm,1.4s						
QSPA	**South Pole Qui**	**29.95**	**180**	P	**P**	**09 45 39.9**	**+0.9**
	comp=Z,1.7nm,1.0s,baz=268,slow=2.0,SNR=7.7						
QSPA	**South Pole Qui**	**29.95**	**180**	P	**P**	**09 45 39.5**	**+0.5**
CFA	**Coronel Fontan**	**31.89**	**325**	LR	LR	09 58 50.2	
	comp=Z,58nm,19.3s,baz=145,slow=36						
CPUP	**Villa Florida**	**34.64**	**344**	LR	LR	09 59 22.5	
	comp=Z,34nm,21.8s,baz=178,slow=34						
VNDA	**Vanda**	**41.26**	**189**	LR	LR	10 05 35.0	
	comp=Z,58nm,18.1s,baz=149,slow=38						
MAW	**Mawson**	**42.68**	**148**	LR	LR	10 05 41.1	
	comp=Z,56nm,18.1s,baz=239,slow=37						
MNMC	**Minye Minye**	**44.10**	**329**	P	**P**	**09 47 49.9**	**+0.3**
BDFB	**Brasilia**	**44.59**	**359**	P	**P**	**09 47 44.6**	**+1.4**
	comp=Z,1.0nm,0.4s,baz=157,slow=2.2,SNR=3.1						
BDFB	**Brasilia**	**44.59**	**359**	P	**P**	**09 47 46.9**	**+3.7**
BDFB				IAmb	IAmb	09 47 54.7	
	comp=Z,4.6nm,1.5s						
SIV	**San Ignacio**	**45.36**	**341**	P	**P**	**09 47 49.1**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=168,slow=9.2,SNR=4.5						
LPAZ	**La Paz**	**46.47**	**332**	LR	LR	10 08 24.4	
	comp=Z,24nm,18.8s,baz=16,slow=37						
SUR	**Sutherland**	**51.73**	**89**	P	**P**	**09 48 38.4**	**-0.1**
SAML	**Samuel**	**52.60**	**340**	P	**P**	**09 48 45.1**	**+0.3**
SAML				IAmb	IAmb	09 48 53.5	
	comp=Z,2.1nm,0.6s						
BOSA	**Boshof**	**57.01**	**91**	P	**P**	**09 49 19.8**	**+3.0**
	comp=Z,2.7nm,0.8s,baz=180,slow=9.1,SNR=4.4						
BOSA	**Boshof**	**57.01**	**91**	P	**P**	**09 49 16.4**	**-0.4**
BOSA				IAmb	IAmb	09 49 22.0	
	comp=Z,2.9nm,0.8s						
LBTB	**Lobatse**	**60.15**	**89**	P	**P**	**09 49 37.7**	**-1.0**
OTAV	**Otavalo**	**65.00**	**325**	P	**P**	**09 50 11.4**	**-0.1**
OTAV				IAmb	IAmb	09 50 14.9	
	comp=Z,1.4nm,0.7s						
RAR	**Rarotonga**	**82.29**	**240**	LR	LR	10 18 40.3	
	comp=Z,32nm,21.2s,baz=10,slow=29						
TORD	**Torodi Ar. Bea**	**82.96**	**48**	P	**P**	**09 51 56.0**	**0.0**
	comp=Z,0.6nm,0.6s,baz=204,slow=3.2,SNR=3.3						
YKA	**Yellowknife Ar**	**132.75**	**324**	PKP	**PKiKP**	**09 58 45.5**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=132,slow=1.8,SNR=3.7						
OBN	**Obninsk**	**132.77**	**51**	PKP	**PKiKP**	**09 58 47.1**	**+1.4**
	comp=Z,4.6nm,0.4s,baz=145,slow=1.8,SNR=3.1						
GLB	**Gilahina Butte**	**141.97**	**309**	PKPdf	**PKPdf**	**09 59 00.6**	**-1.0**
SUA	**Susitna One**	**144.72**	**306**	PKPdf	**PKPab**	**09 59 04.2**	**-1.1**
IL31		**144.99**	**313**		PKPbc	09 59 05.2	-0.9
ILAR	**Eielson Array**	**144.99**	**313**	PKP	PKPbc	09 59 04.7	-1.5
	comp=Z,1.0nm,0.7s,baz=147,slow=1.6,SNR=12						
RND	**Reindeer**	**145.01**	**310**		**PKPbc**	**09 59 05.3**	**-1.0**
CCB	**Clear Creek Bu**	**145.26**	**312**		**PKPbc**	**09 59 05.2**	**-1.7**
SKT	**Skwentna**	**145.31**	**306**		**PKPbc**	**09 59 06.7**	**-0.5**
TRF	**Thorofare Moun**	**145.59**	**309**	PKPdf	**PKPdf**	**09 59 06.8**	**-1.2**
KTH	**Kantishna Hill**	**145.89**	**309**	PKPdf	**PKPdf**	**09 59 07.3**	**-1.1**
MLY	**Manley**	**146.55**	**312**	PKPdf	**PKPdf**	**09 59 09.5**	**+0.1**
TOLK	**Toolik Lake Re**	**147.74**	**318**	PKPbc	**PKPbc**	**09 59 14.0**	**-0.3**
MK31	**Makanchi Array**	**148.00**	**92**		**PKPbc**	**09 59 14.1**	**-1.5**
MKAR	**Makanchi Array**	**148.00**	**92**	PKPbc	**PKPdf**	**09 59 13.7**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=233,slow=2.7,SNR=8.2						
JHJ2	**Mitsune**	**152.41**	**193**	PKPdf	**PKPdf**	**09 59 21.2**	**+1.5**

TIR 23 09:52:15.5, 41.°95N×20.°75E, h8km, Md2.5/3
PDG 23 09:52:17.3±0.3, 42.°01N×20.°67E, h4km, ML2.6/11, Error ellipse: s-maj=0.4km s-min=0.4km az=0.0
BEO 23 09:52:17.4±0.3, 41.°95N×20.°70E, h6km±6km, ML2.0/15
ISC 23 09:52:16.2±1.1, 41.°97N±0.°03×20.°75E±0.°02, h1km±10km, n45, σ1♀05/86, 6C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.36**	**219**	iPG	**Pg**	**09 52 23.3**	**+0.2**
PHP				iSG	**Sg**	**09 52 28.4**	**+0.5**
SKO	**Skopje**	**0.52**	**89**	ePg	**Pb**	**09 52 27.5**	**-0.6**
SKO				eSg	**Sg**	**09 52 35.7**	**-0.4**
PUK	**Puka**	**0.64**	**277**	iPG	**Pg**	**09 52 28.1**	**-0.4**
PUK				iSG	**Sb**	**09 52 38.1**	**-1.6**
BCI	**Bajram Curri**	**0.64**	**309**	iPG	**Pg**	**09 52 28.3**	**-0.2**
BCI				iSG	**Sb**	**09 52 39.0**	**-0.8**
PVY	**Plav**	**0.86**	**317**	⇓iPg	**Pg**	**09 52 32.0**	**-0.7**
PVY				iSg	**Sg**	**09 52 44.5**	**+0.7**
TIR	**Tirane**	**0.91**	**227**	⇑P	**Pg**	**09 52 33.3**	**-0.2**
IVA	**Berane**	**1.10**	**325**	ePg	**Pg**	**09 52 36.4**	**-1.0**
IVA				iSg	**Sb**	**09 52 52.6**	**-0.5**
ULC	**Ulcinj**	**1.12**	**270**	ePg	**Pg**	**09 52 36.8**	**-0.9**
ULC				eSg	**Sb**	**09 52 53.7**	**+0.2**
BARS	**Barje**	**1.16**	**43**	ePg	**Pg**	**09 52 39.3**	**-0.3**
BARS				eSg	**Sn**	**09 52 56.1**	**0.0**
DRME	**Dracevica, Mon**	**1.18**	**281**	ePg	**Pg**	**09 52 38.0**	**-0.9**
DRME				iSg	**Sn**	**09 52 55.9**	**-0.8**
PDG	**Podgorica**	**1.20**	**293**	ePg	**Pg**	**09 52 39.2**	**0.0**
PDG				eSg	**Sg**	**09 52 54.2**	**-0.6**
PDG	**Podgorica**	**1.20**	**293**	⇓P	**Pg**	**09 52 38.5**	**-0.7**
PDG				⇑S	**Sb**	**09 52 55.5**	**-0.2**
TTG	**Podgorica**	**1.20**	**293**	ePg	**Pg**	**09 52 38.1**	**-1.1**
TTG				eSg	**Sg**	**09 52 56.2**	**-0.9**
KOME	**Kolasin**	**1.27**	**314**	ePg	**Pg**	**09 52 39.1**	**-1.5**
KOME				eSg	**Sn**	**09 52 58.2**	**-0.7**
SELS	**Selova**	**1.28**	**12**	ePg	**Pg**	**09 52 40.4**	**-0.4**
SELS				eSg	**Sn**	**09 52 58.7**	**-0.4**
BOSS	**Bosilegrad**	**1.39**	**67**	ePg	**Pg**	**09 52 43.3**	**+0.4**
BOSS				eSg	**Sn**	**09 53 03.4**	**+1.2**
CEME	**Cevo**	**1.48**	**294**	ePg	**Pn**	**09 52 43.0**	**-1.0**
CEME				eSg	**Sn**	**09 53 05.7**	**+2.1**
VAY	**Valandovo**	**1.51**	**115**	ePg	**Pn**	**09 52 44.5**	**+0.1**
VAY				eSg	**Sn**	**09 53 05.1**	**+0.3**
NKY	**Niksic**	**1.55**	**304**	ePg	**Pn**	**09 52 44.5**	**-0.6**
NKY				eSg	**Sg**	**09 53 07.6**	**+1.6**
NKME	**Niksic**	**1.55**	**302**	ePg	**Pn**	**09 52 44.2**	**-0.8**
NKME				eSg	**Sg**	**09 53 08.0**	**+1.9**
IVAS	**Ivanjica**	**1.67**	**345**	ePg	**Pn**	**09 52 46.7**	**+0.1**
IVAS				eSg	**Sg**	**09 53 10.6**	**+0.8**
HCY	**Herceg Novi**	**1.74**	**287**	⇑iPn	**Pn**	**09 52 48.0**	**+0.4**
HCY				eSn	**Sg**	**09 53 12.9**	**+0.7**
BOVS	**Bovan**	**1.81**	**23**	ePg	**Pb**	**09 52 50.6**	**+0.5**
BOVS				eSg	**Sg**	**09 53 16.0**	**+1.6**
UPM	**Unac-Piva**	**1.84**	**313**	ePn	**Pn**	**09 52 49.5**	**+0.4**
UPM				eSn	**Sg**	**09 53 15.2**	**0.0**
BRY	**Bratogost**	**1.88**	**300**	ePn	**Pb**	**09 52 50.5**	**-1.0**
BRY				iSn	**Sg**	**09 53 16.5**	**-0.2**
ZAPS	**Zavoj**	**1.91**	**46**	ePn	**Pb**	**09 52 50.9**	**-1.0**
ZAPS				eSg	**Sg**	**09 53 20.0**	**+2.5**
GRUS	**Gruza**	**1.92**	**359**	ePg	**Pb**	**09 52 51.4**	**-0.6**
GRUS				eSg	**Sg**	**09 53 19.0**	**+1.1**
TREB	**Trebinje**	**1.93**	**294**	ePg	**Pb**	**09 52 51.9**	**-0.3**
TREB				eSg	**Sg**	**09 53 18.5**	**+0.3**
VTS	**Vitosha**	**1.96**	**70**	ePg	**Pg**	**09 52 53.4**	**-0.3**
VTS				eSg	**Sg**	**09 53 19.8**	**+0.7**
VTS	**Vitosha**	**1.96**	**70**	⇑P	**Pn**	**09 52 49.4**	**-1.3**
VTS				⇓S	**Sn**	**09 53 14.8**	**-1.2**
DBRK	**Dubrovnik**	**2.05**	**291**	ePn	**Pb**	**09 52 53.4**	**-0.8**
DBRK				Sn	**Sb**	**09 53 20.7**	**+0.4**
BBLS	**Lazići**	**2.14**	**333**	ePg	**Pb**	**09 52 55.8**	**0.0**
BBLS				eSg	**Sg**	**09 53 24.8**	**-0.1**
ZAGS	**Zajecar**	**2.14**	**30**	ePg	**Pb**	**09 52 56.1**	**+0.3**
ZAGS				eSg	**Sg**	**09 53 26.1**	**+1.0**
DIVS	**Divibare**	**2.20**	**346**	ePg	**Pb**	**09 52 56.8**	**-0.1**
DIVS				eSg	**Sg**	**09 53 27.9**	**+1.0**
STON	**Ston**	**2.43**	**293**	ePn	**Pn**	**09 52 58.3**	**+1.2**
STON				Sn	**Sb**	**09 53 29.1**	**-2.0**
STON	**Ston**	**2.43**	**293**	ePg	**Pb**	**09 53 00.9**	**+0.2**
STON				eSg	**Sg**	**09 53 33.9**	**-0.4**
MDVR	**Moldovita**	**2.90**	**14**	⇑P	**Pn**	**09 53 02.8**	**-0.8**
MAKA	**Makarska**	**3.05**	**297**	ePn	**Pn**	**09 53 06.9**	**+1.4**
MAKA				Sn	**Sn**	**09 53 44.6**	**+1.9**
BZS	**Buzias**	**3.70**	**9**	⇑P	**Pn**	**09 53 14.6**	**+0.1**
GZR	**Gura Zlata**	**3.73**	**23**	⇓P	**Pn**	**09 53 13.8**	**-1.2**
KIJV	**Kijevo**	**3.78**	**304**	ePn	**Pn**	**09 53 17.5**	**+1.9**
KIJV				Sn	**Sn**	**09 54 04.7**	**+4.0**
ZIRJ	**Zirje**	**4.12**	**296**	ePn	**Pn**	**09 53 21.3**	**+1.1**
ZIRJ				Sn	**Sn**	**09 54 08.5**	**-0.4**
MORI	**Morici**	**4.16**	**299**	ePn	**Pn**	**09 53 22.6**	**+1.8**
MORI				Sn	**Sn**	**09 54 10.5**	**+0.5**
DUGI	**Dugi Otok**	**4.64**	**298**	ePn	**Pn**	**09 53 28.4**	**+1.0**
DUGI				Sn	**Sn**	**09 54 21.9**	**0.0**
NVLJ	**Novalja**	**5.01**	**303**	ePn	**Pn**	**09 53 33.4**	**+0.9**
NVLJ				Sn	**Sn**	**09 54 32.1**	**+1.0**

TIF 23 09:52:49.5, 43.°24N×45.°25E, h6km±2km
MOS 23 09:52:51.5±0.0, 43.°13N×45.°22E, h14km, MPVA4.2
NORS 23 09:52:51.8±0.0, 43.°09N×45.°22E, h16km, MPVA4.0
DDA 23 09:52:52.0, 43.°10N×44.°90E, h1km±2km, ML2.4
DRS 23 09:52:55.3±0.0, 43.°04N×45.°25E, h18km
ISC 23 09:52:52.9±0.9, 43.°18N±0.°02×45.°22E±0.°01, h18km±3km, n112, σ1♀22/190, 11C-9D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMGR	**Komgaron**	**0.28**	**244**	ePg	**Pg**	**09 52 58.3**	**-0.9**
KMGR				eSg	**Sg**	**09 53 03.5**	**-0.1**
KMGR	**Komgaron**	**0.28**	**244**	ePG	**Pg**	**09 52 59.1**	**-0.2**
KMGR				eS	**Sg**	**09 53 03.6**	**0.0**
VLKR	**Vladikavkaz**	**0.42**	**251**	ePg	**Pb**	**09 53 01.8**	**+0.3**
VLKR				eSg	**Sb**	**09 53 08.2**	**+0.4**
VLKR	**Vladikavkaz**	**0.42**	**251**	ePG	**Pb**	**09 53 02.0**	**+0.2**
VLKR				eS	**Sn**	**09 53 11.8**	**+0.5**
GROC	**Groznyy**	**0.42**	**87**	ePg	**Pg**	**09 53 01.8**	**+0.1**
GROC				eSg	**Sb**	**09 53 09.6**	**+1.6**
GROC	**Groznyy**	**0.42**	**87**	ePG	**Pg**	**09 53 01.4**	**-0.2**
GROC				e		09 53 08.3	
GROC				pmax	pmax		
	comp=Z,517nm,0.4s						
GROC				smax	smax		
	comp=N,1μm,0.4s						
GROC				smax	smax		
	comp=N,1μm,0.7s						
GROC				smax	smax		
	comp=E,891nm,0.5s						
BTKR	**Batakoyurt**	**0.53**	**291**	ePg	**Pb**	**09 53 04.6**	**+1.0**
BTKR				eSg	**Sn**	**09 53 13.5**	**-0.5**
BTKR	**Batakoyurt**	**0.53**	**291**	ePG	**Pn**	**09 53 05.2**	**-0.3**
BTKR				eS	**Sn**	**09 53 13.1**	**-0.9**
TRKR	**Terskaya**	**0.65**	**327**	ePg	**Pb**	**09 53 06.5**	**+0.9**
TRKR				eSg	**Sn**	**09 53 17.9**	**+1.1**
TRKR	**Terskaya**	**0.65**	**327**	⇑iPG	**Pn**	**09 53 07.0**	**-0.1**
TRKR				eS	**Sn**	**09 53 18.4**	**+1.6**
ARNR	**Ardon**	**0.68**	**270**	ePg	**Pg**	**09 53 06.7**	**+0.3**
ARNR				eSg	**Sn**	**09 53 17.2**	**-0.6**
ARNR	**Ardon**	**0.68**	**270**	ePG	**Pn**	**09 53 07.9**	**+0.3**
ARNR				eS	**Sn**	**09 53 18.8**	**+1.0**
LACR	**Lac**	**0.76**	**242**	ePg	**Pb**	**09 53 06.8**	**-0.8**
LACR				eSg	**Sg**	**09 53 18.1**	**+0.1**
LACR	**Lac**	**0.76**	**242**	iPG	**Pb**	**09 53 07.0**	**-0.7**
LACR				eS	**Sg**	**09 53 18.2**	**+0.1**
LACR				pmax	pmax		
	comp=Z,398nm,0.3s						
LACR				smax	smax		
	comp=E,237nm,0.3s						
KORR	**Kora**	**0.85**	**264**	ePg	**Pg**	**09 53 09.5**	**+0.1**
KORR				eSg	**Sn**	**09 53 22.1**	**+0.3**
KORR	**Kora**	**0.85**	**264**	ePG	**Pg**	**09 53 09.7**	**+0.3**
KORR				eS	**Sn**	**09 53 25.1**	**+3.2**
STDR	**Stavd-Durt**	**0.86**	**283**	ePg	**Pn**	**09 53 10.4**	**+0.3**
STDR				eSg	**Sn**	**09 53 24.0**	**+1.8**
STDR	**Stavd-Durt**	**0.86**	**283**	ePG	**Pn**	**09 53 10.8**	**+0.7**
STDR				eS	**Sn**	**09 53 24.9**	**+2.7**
PRTR	**Priterechnaya**	**0.89**	**310**	ePg	**Pg**	**09 53 10.4**	**+0.2**
PRTR				eSg	**Sn**	**09 53 25.5**	**+2.7**
PRTR	**Priterechnaya**	**0.89**	**310**	⇓iPG	**Pn**	**09 53 10.8**	**+0.4**
PRTR				iS	**Sn**	**09 53 25.9**	**+3.1**
GUDG	**Gudauri**	**0.90**	**217**	P	**Pb**	**09 53 08.2**	**-1.9**
GUDG	**Gudauri**	**0.90**	**217**	ePg	**Pb**	**09 53 08.3**	**-1.9**
GUDG				eSg	**Sb**	**09 53 21.2**	**-0.6**
GUDG	**Gudauri**	**0.90**	**217**	PG	**Pb**	**09 53 08.2**	**-1.9**
BTLR	**Botlikh**	**0.90**	**125**	ePg	**Pb**	**09 53 09.1**	**-1.0**
BTLR				eSg	**Sb**	**09 53 22.2**	**+0.4**
BTLR	**Botlikh**	**0.90**	**125**	ePG	**Pb**	**09 53 09.4**	**-0.6**
BTLR				eS	**Sn**	**09 53 23.6**	**+0.3**
LSNR	**Lesken**	**1.02**	**276**	ePg	**Pg**	**09 53 13.0**	**+0.3**
LSNR	**Lesken**	**1.02**	**276**	cePG	**Pg**	**09 53 13.0**	**+0.3**
DLMR	**Dylym**	**1.04**	**96**	ePG	**Pg**	**09 53 14.0**	**+0.9**
DLMR				eS	**Sg**	**09 53 31.0**	**+4.2**
DLMR				pmax	pmax		
	comp=Z,91nm,0.3s						
ZEI	**Tsey**	**1.04**	**248**	ePg	**Pb**	**09 53 11.8**	**-0.7**
ZEI				eSg	**Sb**	**09 53 26.6**	**+0.7**
ZEI	**Tsey**	**1.04**	**248**	⇑iPG	**Pb**	**09 53 12.0**	**-0.5**
ZEI				eS	**Sg**	**09 53 26.9**	**0.0**
DBC	**Dubki**	**1.19**	**97**	ePg	**Pn**	**09 53 14.3**	**-0.4**
DBC				eSg	**Sn**	**09 53 30.9**	**+0.4**
DBC	**Dubki**	**1.19**	**97**	⇑iPG	**Pn**	**09 53 14.9**	**+0.2**
DBC				eS	**Sn**	**09 53 31.4**	**+0.9**
DBC				pmax	pmax		
	comp=Z,113nm,0.2s						
NCK	**Nalchik**	**1.22**	**285**	ePg	**Pb**	**09 53 16.1**	**+0.6**
NCK				eSg	**Sg**	**09 53 33.8**	**+1.3**
NCK	**Nalchik**	**1.22**	**285**	ePG	**Pg**	**09 53 17.2**	**+0.7**
NCK				eS	**Sg**	**09 53 34.7**	**+2.1**
DIGR	**Digorskoe uzhe**	**1.23**	**257**	ePg	**Pn**	**09 53 14.5**	**-0.8**
DIGR				eSg	**Sn**	**09 53 31.8**	**+0.2**
DIGR	**Digorskoe uzhe**	**1.23**	**257**	ePG	**Pn**	**09 53 15.0**	**-0.4**
DIGR				eS	**Sn**	**09 53 32.3**	**+0.7**
UNCR	**Uncukul**	**1.25**	**111**	ePg	**Pn**	**09 53 15.5**	**0.0**
UNCR				eSg	**Sn**	**09 53 33.0**	**+1.1**
UNCR	**Uncukul**	**1.25**	**111**	ePG	**Pn**	**09 53 15.5**	**0.0**
UNCR				eS	**Sn**	**09 53 33.0**	**+1.1**
UNCR				pmax	pmax		
	comp=Z,134nm,0.4s						
XNZR	**Khunzakh**	**1.27**	**120**	ePg	**Pn**	**09 53 16.1**	**+0.2**
XNZR				eSg	**Sg**	**09 53 33.8**	**-0.3**
XNZR	**Khunzakh**	**1.27**	**120**	ePG	**Pb**	**09 53 17.1**	**+0.8**
XNZR				eS	**Sn**	**09 53 33.5**	**+1.0**
KRNR	**Karanay**	**1.29**	**105**	iPg	**Pn**	**09 53 16.0**	**-0.1**
KRNR				iSg	**Sn**	**09 53 34.0**	**+1.1**
KRNR	**Karanay**	**1.29**	**105**	⇑iPG	**Pn**	**09 53 16.0**	**-0.1**
KRNR				iS	**Sn**	**09 53 34.0**	**+1.1**
KRNR				pmax	pmax		
	comp=Z,52nm,0.2s						
ONI	**Oni**	**1.43**	**246**	P	**Pn**	**09 53 18.2**	**+0.3**
ONI				S	**Sg**	**09 53 39.0**	**0.0**
ONI	**Oni**	**1.43**	**246**	ePg	**Pn**	**09 53 18.2**	**+0.3**
ONI				eSg	**Sg**	**09 53 39.0**	**0.0**
ONI	**Oni**	**1.43**	**246**	PG	**Pn**	**09 53 18.2**	**+0.3**
ONI				S	**Sg**	**09 53 39.0**	**0.0**
ARKR	**Arakani**	**1.43**	**113**	ePg	**Pb**	**09 53 19.0**	**0.0**
ARKR				eSg	**Sg**	**09 53 40.9**	**+0.9**
ARKR	**Arakani**	**1.43**	**113**	ePG	**Pb**	**09 53 19.0**	**0.0**
ARKR				eS	**Sg**	**09 53 40.0**	**+0.9**
ARKR				pmax	pmax		
	comp=Z,48nm,0.3s						
BUJR	**Buynaksk**	**1.43**	**104**	ePg	**Pb**	**09 53 19.6**	**+0.5**
BUJR				eSg	**Sg**	**09 53 39.9**	**+0.7**
BUJR	**Buynaksk**	**1.43**	**104**	ePG	**Pb**	**09 53 19.6**	**+0.5**
BUJR				eS	**Sg**	**09 53 39.9**	**+0.7**
SEAG	**Tbilisi Sea**	**1.45**	**192**	P	**Pn**	**09 53 18.2**	**0.0**
SEAG				S	**Sg**	**09 53 39.7**	**-0.1**
SEAG	**Tbilisi Sea**	**1.45**	**192**	ePg	**Pn**	**09 53 18.2**	**0.0**
SEAG				eSg	**Sg**	**09 53 39.7**	**-0.1**
SEAG	**Tbilisi Sea**	**1.45**	**192**	PG	**Pn**	**09 53 18.2**	**0.0**
SEAG				S	**Sg**	**09 53 39.7**	**-0.1**
KBTC	**Kuba-Taba**	**1.46**	**296**	ePg	**Pg**	**09 53 21.4**	**+0.4**
KBTC	**Kuba-Taba**	**1.46**	**296**	iPG	**Pg**	**09 53 21.4**	**+0.4**
TBLG	**Delisi**	**1.49**	**194**	P	**Pb**	**09 53 19.8**	**-0.3**
TBLG				S	**Sg**	**09 53 40.6**	**-0.6**
TBLG	**Delisi**	**1.49**	**194**	ePg	**Pb**	**09 53 19.8**	**-0.3**
TBLG				eSg	**Sg**	**09 53 40.6**	**-0.6**
TBLG	**Delisi**	**1.49**	**194**	PG	**Pb**	**09 53 19.8**	**-0.3**
TBLG				S	**Sg**	**09 53 40.6**	**-0.6**
GNBR	**Gunib**	**1.51**	**121**	ePg	**Pn**	**09 53 19.8**	**+0.7**
GNBR				eSg	**Sg**	**09 53 41.2**	**-0.5**
GNBR	**Gunib**	**1.51**	**121**	⇓ePG	**Pn**	**09 53 20.1**	**+1.0**
GNBR				e		09 53 41.2	
GNBR				pmax	pmax		
	comp=Z,97nm,0.4s						
GNBR				smax	smax		
	comp=N,318nm,0.5s						
BTNK	**Botanikuri**	**1.53**	**192**	P	**Pn**	**09 53 20.1**	**+0.8**
BTNK				S	**Sb**	**09 53 41.3**	**+1.6**
BTNK	**Botanikuri**	**1.53**	**192**	ePg	**Pn**	**09 53 20.1**	**+0.8**
BTNK				eSg	**Sb**	**09 53 41.3**	**+1.6**
BTNK	**Botanikuri**	**1.53**	**192**	PG	**Pn**	**09 53 20.1**	**+0.8**
BTNK				S	**Sb**	**09 53 41.3**	**+1.6**
LGD	**Lagodekhi**	**1.55**	**150**	P	**Pb**	**09 53 21.5**	**+0.4**
LGD				S	**Sg**	**09 53 42.3**	**-0.6**
LGD	**Lagodekhi**	**1.55**	**150**	ePg	**Pb**	**09 53 21.4**	**+0.4**
LGD				eSg	**Sb**	**09 53 41.1**	**+0.8**
LGD	**Lagodekhi**	**1.55**	**150**	PG	**Pb**	**09 53 21.4**	**+0.4**
LGD				S	**Sg**	**09 53 42.3**	**-0.6**
MAK	**Makhachkala**	**1.69**	**97**	ePg	**Pb**	**09 53 23.0**	**-0.5**
MAK				eSg	**Sg**	**09 53 46.3**	**-1.1**
MAK	**Makhachkala**	**1.69**	**97**	⇓iPN	**Pb**	**09 53 23.8**	**+0.4**
MAK				e		09 53 49.1	
MAK				pmax	pmax		
	comp=Z,187nm,0.3s						
MAK				smax	smax		
	comp=N,455nm,0.4s						
MAK				smax	smax		
	comp=N,514nm,0.4s						
KMKR	**Kumukh**	**1.74**	**126**	ePg	**Pn**	**09 53 23.0**	**+0.6**
KMKR	**Kumukh**	**1.74**	**126**	ePN	**Pn**	**09 53 23.0**	**+0.6**
KMKR				iS	**Sg**	**09 53 49.0**	**-0.1**
KMKR				pmax	pmax		
	comp=Z,41nm,0.2s						
PYA1	**Pyatigorsk**	**1.77**	**300**	ePg	**Pn**	**09 53 23.4**	**+0.7**
PYA1				eSg	**Sb**	**09 53 47.4**	**+0.6**
PYA1	**Pyatigorsk**	**1.77**	**300**	iPN	**Pn**	**09 53 22.9**	**+0.2**
KBZ	**Khabaz**	**1.77**	**289**	ePg	**Pn**	**09 53 22.7**	**+0.1**
KBZ				eSg	**Sg**	**09 53 48.8**	**-1.3**
KBZ	**Khabaz**	**1.77**	**289**	dePN	**Pn**	**09 53 22.2**	**-0.4**
NEY	**Neytrino**	**1.82**	**273**	ePg	**Pn**	**09 53 24.9**	**+0.9**
NEY	**Neytrino**	**1.82**	**273**	dePN	**Pn**	**09 53 24.2**	**+0.7**
TKB	**Tkibuli**	**1.83**	**244**	P	**Pn**	**09 53 24.9**	**+1.4**
TKB	**Tkibuli**	**1.83**	**244**	ePg	**Pn**	**09 53 24.9**	**+1.4**
TKB	**Tkibuli**	**1.83**	**244**	PN	**Pn**	**09 53 24.9**	**+1.4**
TRLG	**Trialeti**	**1.84**	**207**	P	**Pn**	**09 53 25.0**	**+1.3**
TRLG				S	**Sg**	**09 53 51.1**	**-1.1**
DDFL	**Dedoflistskaro**	**1.86**	**159**	P	**Pb**	**09 53 27.6**	**+1.2**
DDFL	**Dedoflistskaro**	**1.86**	**159**	iP	**Pb**	**09 53 27.6**	**+1.2**
DDFL				iS	**Sg**	**09 53 56.0**	**+3.1**
DDFL	**Dedoflistskaro**	**1.86**	**159**	PN	**Pb**	**09 53 27.6**	**+1.2**
KZRT	**Kazreti**	**1.90**	**199**	P	**Pn**	**09 53 25.3**	**+0.9**
KZRT				S	**Sb**	**09 53 51.5**	**+1.2**
KZRT	**Kazreti**	**1.90**	**199**	ePg	**Pn**	**09 53 25.3**	**+0.9**
KZRT	**Kazreti**	**1.90**	**199**	iP	**Pn**	**09 53 25.3**	**+0.9**
KZRT				iS	**Sb**	**09 53 50.2**	**-0.1**
KZRT	**Kazreti**	**1.90**	**199**	PN	**Pn**	**09 53 25.2**	**+0.9**
BEYR	**Belyy Ugol+**	**1.93**	**296**	ePg	**Pn**	**09 53 24.6**	**-0.2**
BEYR				eSg	**Sb**	**09 53 51.1**	**-0.2**
SHA1	**Shidzhatmaz**	**1.94**	**287**	ePg	**Pn**	**09 53 25.0**	**-0.2**
SHA1				eSg	**Sb**	**09 53 52.8**	**+1.0**
SHA1	**Shidzhatmaz**	**1.94**	**287**	ePN	**Pn**	**09 53 26.4**	**+1.2**
SHA1				eS	**Sb**	**09 53 53.4**	**+1.5**
KIV0	**Kislovodsk Arr**	**1.99**	**294**	ePg	**Pn**	**09 53 26.1**	**+0.4**
KIV0				eSg	**Sb**	**09 53 52.4**	**-0.6**
URKR	**Urkarakh**	**2.05**	**119**	ePg	**Pb**	**09 53 28.8**	**-0.9**
URKR				eSg	**Sb**	**09 53 54.2**	**-0.7**
AKH	**Akhalkalaki**	**2.19**	**216**	P	**Pb**	**09 53 31.1**	**-0.9**
AKH				S	**Sb**	**09 54 01.1**	**+2.3**
AKH	**Akhalkalaki**	**2.19**	**216**	ePg	**Pn**	**09 53 29.3**	**+0.8**
AKH				eSg	**Sn**	**09 53 55.8**	**+0.7**
AKH	**Akhalkalaki**	**2.19**	**216**	PN	**Pb**	**09 53 31.1**	**-0.9**
AKH				S	**Sb**	**09 54 01.0**	**+2.3**
GOF	**Gofitskoye**	**2.44**	**321**	⇑ePN	**Pn**	**09 53 30.4**	**-1.4**
GOF				eS	**Sb**	**09 54 05.9**	**-0.1**
GOF				pmax	pmax		
	comp=Z,75nm,1.4s						
GOF				smax	smax		
	comp=E,210nm,1.8s						
EPOS	**Posof**	**2.49**	**229**	iP	**Pn**	**09 53 33.2**	**+0.5**
AKT	**Akhty**	**2.52**	**132**	⇓ePN	**Pb**	**09 53 37.0**	**-0.7**
AKT				e		09 54 12.5	
AKT				pmax	pmax		
	comp=Z,23nm,0.6s						
AKT				smax	smax		
	comp=N,61nm,0.5s						
EAK	**Akyaka**	**2.77**	**206**	iP	**Pb**	**09 53 41.0**	**-0.9**
EAK				iS	**Sn**	**09 54 12.3**	**+2.8**
EAK					IAML	09 54 23.0	
	comp=E,26nm,0.8s						
EAK					IAML	09 54 24.0	
	comp=N,32nm,0.7s						
ARXR	**Arkhyz**	**2.90**	**279**	cePN	**Pn**	**09 53 39.4**	**+1.2**
GNI	**Garni**	**3.05**	**187**	ePn	**Pn**	**09 53 40.2**	**-0.2**
GNI	**Garni**	**3.05**	**187**	dePN	**Pn**	**09 53 40.2**	**-0.2**
DBOC	**Borcka**	**3.21**	**236**	iP	**Pn**	**09 53 44.1**	**+1.7**
DAGI	**Agillar**	**3.23**	**231**	iP	**Pn**	**09 53 44.0**	**+1.2**
DBAD	**Bademkaya**	**3.40**	**232**	iP	**Pn**	**09 53 46.5**	**+1.4**
DBAD					IAML	09 54 53.0	
	comp=E,13nm,0.9s						
DBAD					IAML	09 54 53.0	
	comp=N,11nm,0.8s						
DDEM	**Demirkent**	**3.45**	**230**	iP	**Pn**	**09 53 48.0**	**+2.2**
GUZR	**Guzeripl'**	**3.79**	**284**	ePn	**Pn**	**09 53 52.4**	**+1.9**
GUZR				eSn	**Sn**	**09 54 34.5**	**-0.1**
ANN	**Anapa**	**5.84**	**289**	eP	**Pn**	**09 54 16.2**	**-2.3**
AKTO	**Aktyubinsk**	**11.37**	**46**	⇑P	**Pn**	**09 55 35.3**	**+1.0**
	comp=N,2.8nm,1.1s						
AKTO				⇑S	**Sn**	**09 57 38.6**	**-2.2**
	comp=N,2.4nm,0.8s						
AB31	**Akbulak array**	**11.86**	**54**	⇑P	**Pn**	**09 55 37.1**	**-3.9**
	comp=N,0.7nm,0.5s,baz=239,slow=13,SNR=13						
AB31				⇓S	**Sn**	**09 57 46.0**	**-6.8**
	comp=N,1.1nm,0.6s,baz=237,slow=24,SNR=4.5						
OBN	**Obninsk**	**13.20**	**338**	iP	**Pn**	**09 56 01.2**	**+2.0**
BRVK	**Borovoye**	**19.34**	**51**	deP	**Pn**	**09 57 18.0**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AAK	**Ala-Archa**	**21.41**	**81**	⇑eP	**P**	**09 57 39.1**	**-0.7**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						

IDC 23 10:12:37.1±0.8, 52.°95N×35.°13W, h0km, mb3.7/12, mb1 3.9/13, mb1mx3.7/47, mbtmp3.7/13, ML2.6/1, MS3.4/18, Ms1 3.4/18, ms1mx3.2/45, Error ellipse: s-maj=30.8km s-min=15.2km az=12.0
NEIC 23 10:12:39.4±2.9, 52.°9N±0.°2×35.°2W±0.°2, h14km±3km, mb4.4/13, Error ellipse: s-maj=23.2km s-min=14.2km az=184.0
ISC 23 10:12:39.1±0.7, 52.°7N±0.°1×35.°23W±0.°09, h13km, n42, σ1♀52/32, mb4.0/16, MS3.4/16, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**14.01**	**25**	LR	LR	10 19 20.6	
	comp=Z,127nm,20.8s,baz=266,slow=29						
SCHQ	**Schefferville**	**18.71**	**289**	P	**P**	**10 16 56.2**	**-0.9**
	0.2nm,0.3s,baz=96,slow=10,SNR=8.8						

SCHQ LR LR 10 23 14.0
comp=Z,49nm,19.0s,baz=32,slow=34
SCHQ Schefferville 18.71 289 P P 10 16 55.9 -1.2
SUMG Summit 19.98 357 i P Pn 10 17 15.0 +2.1
FRB Frobisher Bay 20.45 316 P P 10 17 14.2 -1.6
4.3nm,0.9s,baz=109,slow=11,SNR=5.3
FRB LR LR 10 22 41.2
comp=Z,47nm,19.4s,baz=56,slow=30
BATG Bathurst New B 20.45 267 P Pn 10 17 17.6 -0.6
BATG IAmb IAmb 10 17 31.4
comp=Z,20nm,1.4s
JMIC Jan Mayen 21.88 23 LR LR 10 23 33.7
comp=Z,118nm,19.0s,baz=109,slow=30
ESDC Sonseca Array 25.04 109 LR LR 10 26 06.3
comp=Z,84nm,19.4s,baz=265,slow=32
NOA NORSAR Array B 26.19 53 LR LR 10 27 11.0
comp=Z,74nm,18.2s,baz=270,slow=34
LONY Lake Ozonia 26.93 268 S 10 22 57.1 +0.7
SADO Sadowa 29.63 272 LR LR 10 29 32.7
comp=Z,118nm,20.8s,baz=74,slow=34
GERES GERESS Array B 30.70 77 P P 10 18 52.2 -1.2
comp=Z,0.5nm,0.8s,baz=293,slow=15,SNR=3.2
GERES LR LR 10 30 40.7
comp=Z,66nm,18.4s,baz=296,slow=35
FINES FINESS Array B 33.24 50 LR LR 10 31 02.3
comp=Z,144nm,18.6s,baz=266,slow=33
S51A Beattyville 36.53 265 P P 10 19 44.8 +0.7
S51A IAmb IAmb 10 19 53.0
comp=Z,7.0nm,1.1s
ULM Lac du Bonnet 36.87 291 P P 10 19 47.3 +0.5
comp=Z,2.2nm,1.0s,baz=71,slow=8.2,SNR=3.8
ULM LR LR 10 32 17.2
comp=Z,44nm,19.7s,baz=102,slow=32
ULM Lac du Bonnet 36.87 291 P P 10 19 47.9 +1.1
AKASG Malin Array Be 38.80 66 LR LR 10 35 45.2
comp=Z,51nm,18.5s,baz=5.0,slow=36
ECSD EROS Data Cent 40.72 283 P P 10 20 22.6 +3.5
ECSD IAmb IAmb 10 20 25.4
comp=Z,11nm,1.4s
YKA Yellowknife Ar 40.97 316 P P 10 20 18.6 -2.4
comp=Z,0.5nm,0.8s,baz=62,slow=9.0,SNR=6.8
YKA PcP **PcP 10 22 19.1 -1.8**
comp=Z,1.1nm,0.8s,baz=64,slow=3.6,SNR=3.9
LAO LASA Array 44.59 292 P P 10 20 51.5 +0.8
LAO IAmb IAmb 10 20 56.5
comp=Z,7.7nm,0.9s
INK Inuvik 45.23 329 P P 10 20 55.4 0.0
comp=Z,1.5nm,0.7s,baz=52,slow=5.8,SNR=5.8
INK Inuvik 45.23 329 P P 10 20 56.6 +1.3
EPYK Eagle Plains 47.35 328 P P 10 21 11.2 -0.9
BRTR Keskin Array B 47.60 77 P P 10 21 14.4 -0.1
comp=Z,1.0nm,0.7s,baz=288,slow=5.1,SNR=4.8
BRTR LR LR 10 42 31.6
comp=Z,28nm,19.6s,baz=334,slow=38
YNE Yellowstone No 47.72 292 P P 10 21 16.1 +0.6
N23A Red Feather La 47.94 285 P P 10 21 15.4 -1.9
PDAR Pinedale Array 48.85 290 P P 10 21 24.9 +0.6
comp=Z,0.7nm,0.8s,baz=50,slow=4.6,SNR=5.2
PDAR LR LR 10 40 33.4
comp=Z,37nm,18.5s,baz=42,slow=34
TORD Torodi Ar. Bea 49.23 129 P P 10 21 27.8 +0.7
comp=Z,0.3nm,0.7s,baz=335,slow=7.2,SNR=2.8
WHY Whitehorse 50.16 321 P P 10 21 32.5 -1.3
KBZ Khabaz 50.40 67 LR LR 10 44 01.5
comp=Z,49nm,18.8s,baz=224,slow=38
ILAR Eielson Array 51.62 329 P P 10 21 42.9 -1.7
comp=Z,1.4nm,0.9s,baz=46,slow=6.5,SNR=3.8
TXAR Lajitas Array 54.40 273 P P 10 22 06.8 +1.0
comp=Z,0.6nm,1.0s,baz=67,slow=6.9,SNR=3.2
TXAR PcP **PcP 10 23 09.4 0.0**
comp=Z,0.3nm,0.9s,baz=56,slow=4.8,SNR=2.4
TXAR LR LR 10 43 25.8
comp=Z,27nm,18.2s,baz=0.0,slow=34
TIXI Tiksi 55.42 6 P P 10 22 14.7 +2.3
TIXI IAmb IAmb 10 22 16.2
comp=Z,3.4nm,0.8s
MOD Modoc Plateau 55.45 295 P P 10 22 11.9 -1.4
MOD IAmb IAmb 10 22 18.6
comp=Z,5.5nm,1.4s
NVAR Mina Array Bea 56.71 291 LR LR 10 45 01.1
comp=Z,48nm,18.3s,baz=278,slow=34
GEYT Alibeck 62.76 63 LR LR 10 51 48.0
comp=Z,25nm,19.3s,baz=10.0,slow=38
MK31 Makanchi Array 67.44 41 P P 10 23 36.9 +2.8
MKAR Makanchi Array 67.44 41 P P 10 23 32.8 -1.3
comp=Z,1.2nm,0.8s,baz=329,slow=4.5,SNR=11
SONM Songino Array 74.62 26 P P 10 24 17.6 -0.2
comp=Z,1.2nm,1.0s,baz=303,slow=8.7,SNR=6.5
CMAR Chiang Mai Arr 98.78 44 LR LR 11 12 43.9
comp=Z,18nm,19.4s,baz=125,slow=37
WRA Warramunga Arr 146.30 18 PKPbc **PKPdf 10 32 17.8 -0.4**
comp=Z,1.1nm,0.8s,baz=344,slow=3.3,SNR=3.4
ASAR Alice Springs 149.83 20 PKPbc **PKPbc 10 32 27.0 -1.7**
comp=Z,0.4nm,0.5s,baz=352,slow=2.1,SNR=12

IDC 23 10:17:05.2±2.6,24.°09S×179.°30E,h509km±29km,mb3.5/7, mb1 3.7/10,mb1mx3.4/34,mbtmp4.5/10,Error ellipse: s-maj=30.7km s-min=20.4km az=153.0
NEIC 23 10:17:06.5±1.6,24.°2S±0.°1×179.°2E±0.°1,h526km±10km, mb4.5/24,Error ellipse: s-maj=20.0km s-min=16.9km az=115.0
ISC 23 10:17:06.9±0.7,24.°17S±0.°08×179.°4E±0.°1,h537km,n59, σ1.°19/17/58,mb4.4/17,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.62**	**155**	P	P	10 18 37.3	-4.0
MSVF	**Nonsavu**	**6.51**	**349**	P	**P**	**10 18 49.8**	**-0.1**
DZM	**Mont Dzumac**	**12.06**	**277**	P	**P**	**10 19 45.5**	**-0.7**
	0.4nm,0.3s,baz=204,slow=7.6,SNR=3.0						
DZM	**Mont Dzumac**	**12.06**	**277**	P	**P**	**10 19 47.1**	**+0.9**
OUZ	**Omahuta**	**12.09**	**203**	P	**P**	**10 19 46.8**	**+0.6**
KUZ	**Kuaotunu**	**12.92**	**193**	P	**P**	**10 19 55.4**	**+0.6**
AFI	**Afiamalu**	**13.20**	**41**	P	**P**	**10 19 55.0**	**-3.1**
	2.2nm,0.3s,baz=191,slow=18,SNR=4.4						
AFI	**Afiamalu**	**13.20**	**41**	P	P	10 19 58.6	+0.5
PKGZ	**Pakihiroa**	**13.72**	**184**	P	P	10 20 19.2	+16
URZ	**Urewera**	**14.18**	**187**	P	**P**	**10 20 05.6**	**-2.2**
	2.4nm,0.3s,baz=317,slow=1.8,SNR=18						
URZ	**Urewera**	**14.18**	**187**	P	**P**	**10 20 05.7**	**-2.1**
MWZ	**Matawai**	**14.21**	**186**	P	**P**	**10 20 07.7**	**-0.5**
MWZ				S	**S**	**10 22 36.2**	**-1.5**
SANVU	**Saraoutou**	**14.34**	**305**	P	**P**	**10 20 08.3**	**-1.5**
BKZ	**Black Stump Fm**	**15.15**	**189**	P	**P**	**10 20 15.6**	**-2.4**
BKZ				IAmb	IAmb	10 20 21.8	
	comp=Z,36nm,1.4s						
SNZO	**South Karori**	**17.53**	**192**	P	**P**	**10 20 40.7**	**-0.1**
QRZ	**Quartz Range**	**17.57**	**197**	P	**P**	**10 20 42.4**	**+1.1**
QRZ	**Quartz Range**	**17.57**	**197**	P	**P**	**10 20 42.2**	**+0.9**
QRZ				S	S	10 22 58.6	-37
NNZ	**Nelson**	**17.72**	**195**	P	**P**	**10 20 42.1**	**-0.5**
NNZ				S	S	10 22 55.1	-43
TUWZ	**Tuamarina**	**17.80**	**193**	P	**P**	**10 20 42.7**	**-0.6**
TUWZ	**Tuamarina**	**17.80**	**193**	P	**P**	**10 20 42.8**	**-0.6**
TUWZ				S	S	10 22 42.8	-57
THZ	**Tophouse**	**18.35**	**195**	P	**P**	**10 20 49.4**	**+1.0**
THZ	**Tophouse**	**18.35**	**195**	P	**P**	**10 20 48.1**	**-0.4**
KHZ	**Kahutara**	**18.83**	**193**	P	**P**	**10 20 52.5**	**-0.2**
KHZ	**Kahutara**	**18.83**	**193**	P	**P**	**10 20 52.4**	**-0.2**
LTZ	**Lake Taylor**	**19.47**	**196**	P	**P**	**10 20 59.0**	**+0.4**
LTZ	**Lake Taylor**	**19.47**	**196**	P	**P**	**10 20 59.1**	**+0.4**
INZ	**Inchbonnie**	**19.63**	**198**	P	**P**	**10 20 59.1**	**-0.9**
OXZ	**Oxford**	**20.04**	**196**	P	**P**	**10 21 04.9**	**+1.1**
WVZ	**Waitaha Valley**	**20.16**	**199**	P	**P**	**10 21 06.2**	**+1.5**
MQZ	**McQueen's Vall**	**20.25**	**194**	P	**P**	**10 21 09.4**	**+3.7**
WHZ	**Wether Hill Ro**	**23.55**	**200**	P	**P**	**10 21 36.2**	**+0.9**
EIDS	**Eidsvold**	**25.68**	**261**	P	**P**	**10 21 54.9**	**+0.5**
EIDS				IAmb	IAmb	10 22 10.8	
	comp=Z,29nm,1.4s						
CAN	**Canberra**	**28.49**	**240**	P	**P**	**10 22 20.1**	**+1.1**
CAN				IAmb	IAmb	10 22 33.4	
	comp=Z,24nm,1.5s						
TOO	**Toolangi**	**31.80**	**237**	P	**P**	**10 22 48.2**	**+0.7**
TOO				IAmb	IAmb	10 22 48.5	
	comp=Z,18nm,1.3s						
PMG	**Port Moresby**	**34.02**	**290**	P	**P**	**10 23 06.3**	**-0.3**
	comp=Z,9.2nm,0.6s,baz=120,slow=14,SNR=4.6						
PMG	**Port Moresby**	**34.02**	**290**	P	**P**	**10 23 06.9**	**+0.4**
PMG				IAmb	IAmb	10 23 07.5	
	comp=Z,14nm,0.9s						
STKA	**Stephens Creek**	**34.07**	**248**	P	**P**	**10 23 07.2**	**+0.5**
	comp=Z,3.4nm,0.6s,baz=100,slow=11,SNR=15						
STKA	**Stephens Creek**	**34.07**	**248**	P	**P**	**10 23 07.2**	**+0.5**
COEN	**Coen**	**35.57**	**280**	P	**P**	**10 23 20.1**	**+0.6**
COEN				IAmb	IAmb	10 23 30.9	
	comp=Z,14nm,1.2s						
BBOO	**Buckleboo**	**38.79**	**247**	P	**P**	**10 23 45.1**	**-0.6**
BBOO				IAmb	IAmb	10 23 48.3	
	comp=Z,14nm,1.4s						
AS31	**Alice Springs**	**41.41**	**261**	P	**P**	**10 24 06.5**	**-0.2**
ASAR	**Alice Springs**	**41.41**	**261**	P	**P**	**10 24 06.5**	**-0.2**
	comp=Z,4.7nm,0.6s,baz=95,slow=7.5,SNR=116						
WR0	**Warramunga Arr**	**41.61**	**267**	P	**P**	**10 24 07.5**	**-0.9**
WR0				IAmb	IAmb	10 24 08.3	
	comp=Z,5.6nm,0.7s						
WB2	**Warramunga Arr**	**41.79**	**267**	P	**P**	**10 24 09.0**	**-0.8**
WB2				IAmb	IAmb	10 24 09.8	
	comp=Z,13nm,0.8s						
WRAB	**Tennant Creek**	**41.79**	**267**	P	**P**	**10 24 09.0**	**-0.8**
WRAB				IAmb	IAmb	10 24 09.7	
	comp=Z,12nm,0.9s						
WB0	**Warramunga Arr**	**41.79**	**267**	P	**P**	**10 24 09.0**	**-0.8**
WB0				IAmb	IAmb	10 24 09.7	
	comp=Z,12nm,0.7s						
WRA	**Warramunga Arr**	**41.80**	**267**	P	**P**	**10 24 09.1**	**-0.8**
	comp=Z,9.6nm,0.6s,baz=102,slow=8.2,SNR=6.0						
FORT	**Forrest**	**45.66**	**250**	P	**P**	**10 24 38.7**	**-0.9**
FORT				IAmb	IAmb	10 24 46.1	
	comp=Z,11nm,0.9s						
KNRA	**Kununurra**	**48.09**	**270**	P	**P**	**10 24 57.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**50.22**	**266**	P	**P**	**10 25 14.0**	**+0.2**
SIJI	**Sorong**	**51.96**	**289**	P	**P**	**10 25 26.2**	**-0.4**
	comp=Z,10nm,0.6s,baz=240,slow=21,SNR=5.3						
PSA00	**Pilbara Seismi**	**54.53**	**260**	P	**P**	**10 25 43.8**	**-1.0**
MORW	**Morawa**	**56.23**	**250**	P	**P**	**10 25 55.9**	**-0.6**
MJAR	**Matsushiro Arr**	**71.78**	**326**	P	**P**	**10 27 35.1**	**0.0**
	comp=Z,0.9nm,0.7s,baz=154,slow=6.4,SNR=4.9						
TXAR	**Lajitas Array**	**91.08**	**58**	P	**P**	**10 29 17.4**	**+2.8**
	comp=Z,0.3nm,0.7s,baz=207,slow=8.1,SNR=3.8						
FINES	**FINESS Array B**	**138.51**	**341**	PKP	**PKPdf**	**10 35 32.2**	**+1.3**
	comp=Z,4.5nm,1.0s,baz=90,slow=2.1,SNR=3.9						
AKASG	**Malin Array Be**	**144.87**	**327**	PKP	**PKPdf**	**10 35 43.2**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=42,slow=4.8,SNR=8.4						
AKBB	**Malin Array Si**	**144.87**	**327**	PKPdf	**PKPdf**	**10 35 43.3**	**+0.8**
BRTR	**Keskin Array B**	**147.26**	**307**	PKPbc	**PKPbc**	**10 35 49.9**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=130,slow=4.3,SNR=3.5						

ECX 23 10:43:18.4±0.6,31.°53N×115.°49W,h5km±3km,MD2.1, ML2.3
MEX 23 10:43:19.6±0.4,31.°17N×115.°94W,h5km,MD3.8
ISC 23 10:43:16.9±1.0,31.°55N±0.°03×115.°53W±0.°04, h11km±10km,n18,σ0.°27/31,4C,Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBX	**El Chinero**	**0.41**	**101**	⇑iP	**Pg**	**10 43 25.1**	**+0.1**
ECBX				eS	**Sg**	**10 43 30.5**	**0.0**
SPIG	**San Pedro Mart**	**0.51**	**174**	eP	**Pg**	**10 43 27.2**	**+0.3**
SPIG				eS	**Sg**	**10 43 34.0**	**+0.3**
SPIG	**San Pedro Mart**	**0.51**	**174**	eP	**Pg**	**10 43 27.2**	**+0.3**
SPIG				eS	**Sg**	**10 43 33.6**	**0.0**
SPX	**San Pedro Mart**	**0.52**	**174**	eP	**Pg**	**10 43 27.3**	**+0.2**
SPX				eS	**Sg**	**10 43 33.9**	**+0.1**
SPX	**San Pedro Mart**	**0.52**	**174**	eP	**Pg**	**10 43 27.2**	**+0.2**
SPX				eS	**Sg**	**10 43 34.0**	**+0.1**
ESJX	**Sierra Juarez**	**0.58**	**322**	eP	**Pg**	**10 43 28.0**	**-0.2**
ESJX				eS	**Sg**	**10 43 36.3**	**+0.4**
SVX	**San Vicente**	**0.66**	**250**	⇑iP	**Pb**	**10 43 30.4**	**-0.1**
SVX				eS	**Sb**	**10 43 39.7**	**+0.1**
SFX	**San Felipe**	**0.77**	**131**	eP	**Pg**	**10 43 31.6**	**-0.3**
SFX				eS	**Sg**	**10 43 41.4**	**-0.5**
SQX	**San Quintin**	**1.02**	**197**	eP	**Pg**	**10 43 36.0**	**-0.5**
SQX				eS	**Sg**	**10 43 49.2**	**-0.6**
ERMX	**Rumorosa**	**1.09**	**337**	eP	**Pn**	**10 43 38.3**	**0.0**
ERMX				eS	**Sn**	**10 43 53.2**	**-0.2**
ERMX				IAML		10 43 53.9	
	comp=N,56nm,0.2s						
ERMX				⇑e		10 43 53.9	
IKP	**In-Ko-Pah, Jac**	**1.20**	**336**	eP	**Pb**	**10 43 39.9**	**+0.1**
CBX	**Cerro Bola**	**1.23**	**308**	eP	**Pg**	**10 43 40.6**	**+0.1**
CBX				eS	**Sn**	**10 43 57.1**	**+0.2**
CBX				IAML		10 43 57.7	
	comp=E,73nm,0.2s						
CBX				e		10 43 57.7	
CBX				IAML		10 43 57.8	
	comp=N,146nm,0.2s						
CBX	**Cerro Bola**	**1.23**	**308**	eP	**Pg**	**10 43 40.7**	**+0.1**
CBX				eS	**Sn**	**10 43 57.2**	**+0.2**
TJIG	**Tijuana**	**1.31**	**312**	eP	**Pg**	**10 43 42.2**	**0.0**
TJIG				eS	**Sg**	**10 43 59.0**	**-0.3**
BAR	**Barrett**	**1.49**	**319**	eP	**Pb**	**10 43 44.5**	**-0.1**
MONP2	**Monument Peak**	**1.54**	**331**	eP	**Pg**	**10 43 46.1**	**-0.4**
OLP	**Otay Lakes Par**	**1.59**	**312**	eP	**Pb**	**10 43 46.7**	**+0.3**
SDRC	**San Diego Road**	**1.69**	**315**	eP	**Pb**	**10 43 48.3**	**+0.3**
SDRC				IAML		10 44 10.3	
	comp=E,34nm,0.2s						
SDRC				⇑e		10 44 10.3	

IDC 23 10:44:50.2±1.2,4.°69S×152.°02E,h128km±4km,mb3.3/7, mb1 3.5/8,mb1mx3.3/27,mbtmp3.7/8,Error ellipse: s-maj=43.0km s-min=13.4km az=119.0
ISC 23 10:44:50.5±1.5,4.°8S±0.°2×152.°2E±0.°3,h150km,n10, σ2.°23/14,mb3.7/7,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.49**	**344**	P	**Pn**	**10 45 09.9**	**-1.9**
	154nm,0.3s,baz=142,slow=1.9,SNR=94						
KRVT				S	**Sn**	**10 45 23.7**	**-4.4**
	99nm,0.3s,baz=68,slow=20,SNR=10						
PMG	**Port Moresby**	**6.76**	**227**	P	**Pn**	**10 46 27.6**	**+0.2**
	1.9nm,0.3s,baz=342,slow=3.9,SNR=6.5						
PMG				S	**Sn**	**10 47 41.2**	**-2.2**
	5.2nm,0.3s,baz=3.1,slow=16,SNR=9.4						
WRA	**Warramunga Arr**	**22.98**	**228**	P	**P**	**10 49 43.5**	**+1.2**
	1.6nm,0.5s,baz=50,slow=10,SNR=37						
ASAR	**Alice Springs**	**25.74**	**221**	P	**P**	**10 50 09.1**	**+1.8**
	0.3nm,0.4s,baz=53,slow=9.0,SNR=18						
ASAR				pP	**pP**	**10 50 37.5**	**-1.2**
	1.9nm,0.8s,baz=53,slow=9.4,SNR=13						
ASAR				sP	**sP**	**10 50 52.8**	**-3.2**
	1.1nm,0.8s,baz=59,slow=9.8,SNR=6.4						
FITZ	**Fitzroy Crossi**	**29.11**	**241**	P	**P**	**10 50 36.9**	**-0.5**
	1.8nm,0.8s,baz=165,slow=4.9,SNR=3.6						
CMAR	**Chiang Mai Arr**	**57.29**	**295**	P	**P**	**10 54 25.5**	**+2.5**
	1.1nm,0.7s,baz=120,slow=4.7,SNR=7.8						
SONM	**Songino Array**	**65.97**	**328**	P	**P**	**10 55 21.1**	**+0.3**
	0.3nm,0.5s,baz=107,slow=3.5,SNR=2.2						
MKAR	**Makanchi Array**	**79.89**	**319**	P	**P**	**10 56 43.7**	**+1.0**
	0.2nm,0.5s,baz=122,slow=5.4,SNR=3.6						
ILAR	**Eielson Array**	**82.38**	**22**	P	**P**	**10 56 57.0**	**+1.6**
	0.2nm,0.7s,baz=260,slow=6.2,SNR=4.4						
TORD	**Torodi Ar. Bea**	**149.70**	**288**	PKPbc	**PKiKP**	**11 04 25.2**	**+0.7**
	1.0nm,0.4s,baz=91,slow=2.6,SNR=18						

IDC 23 11:04:55.0±1.2,1.°97S×127.°28E,h0km,mb3.2/3, mb1 3.4/5,mb1mx3.3/46,mbtmp3.3/5,ML3.3/2,Error ellipse: s-maj=43.2km s-min=22.1km az=62.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.13**	**75**	Pn	Pn	11 05 59.9	+0.5
	1.6nm,0.3s,baz=248,slow=23,SNR=12						
WRA	**Warramunga Arr**	**19.15**	**159**	P	P	11 09 19.3	-0.8
	0.1nm,0.3s,baz=339,slow=11,SNR=6.0						
ASAR	**Alice Springs**	**22.51**	**164**	P	P	11 09 56.9	+0.5
	0.6nm,0.6s,baz=346,slow=11,SNR=8.9						
MKAR	**Makanchi Array**	**62.55**	**327**	P	P	11 15 21.1	+0.3
	0.1nm,0.4s,baz=128,slow=6.2,SNR=3.3						
KURBB	**Kurchatov Arra**	**66.83**	**329**	P	P	11 15 48.2	-0.4
	0.1nm,0.4s,baz=146,slow=6.1,SNR=2.5						

IDC 23 11:05:15.0±1.1,1.°9S×127.°33E,h0km,mb3.8/3, mb1 3.9/5,mb1mx3.5/46,mbtmp3.8/5,ML3.8/2,Error ellipse: s-maj=33.3km s-min=21.3km az=59.0
NEIC 23 11:05:19.8±2.0,1.°94S±0.°08×127.°3E±0.°1,h29km±7km, mb4.0/10,Error ellipse: s-maj=17.2km s-min=7.5km az=55.0
ISC 23 11:05:20.8±0.8,1.°94S±0.°10×127.°35E±0.°08,h35km,n17, σ1.°19/18,mb4.0/5,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.69**	**0**	Pn	**Pn**	**11 06 01.4**	**-0.3**
SIJI	**Sorong**	**4.06**	**75**	Pn	**Pn**	**11 06 19.6**	**-0.9**
	6.2nm,0.3s,baz=248,slow=11,SNR=11						
SIJI				Sn	**Sn**	**11 07 08.0**	**+1.1**
	0.2nm,0.3s,baz=37,slow=20,SNR=4.4						
FAKI	**Fak Fak**	**4.99**	**101**	Pn	**Pn**	**11 06 33.7**	**+0.3**
KSM	**Kuching**	**17.37**	**281**	P	**P**	**11 09 20.5**	**-0.2**
KSM				IAmb	IAmb	11 09 33.4	
	comp=Z,16nm,1.2s						
WB0	**Warramunga Arr**	**19.01**	**159**	P	**P**	**11 09 39.9**	**0.0**
WRAB	**Tennant Creek**	**19.15**	**160**	P	**P**	**11 09 40.9**	**-0.4**
WRAB				IAmb	IAmb	11 09 58.6	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**19.16**	**160**	P	**P**	**11 09 39.5**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=340,slow=11,SNR=13						
WR0	**Warramunga Arr**	**19.24**	**159**	P	**P**	**11 09 40.1**	**-2.2**
WR0				IAmb	IAmb	11 09 45.3	
	comp=Z,9.9nm,1.3s						
COEN	**Coen**	**19.68**	**128**	P	**P**	**11 09 46.2**	**-1.0**
COEN				IAmb	IAmb	11 09 50.5	
	comp=Z,4.8nm,0.7s						
CISI	**Cisompet, Garu**	**20.24**	**253**	P	**P**	**11 09 53.8**	**+0.4**
AS31	**Alice Springs**	**22.52**	**164**	P	**P**	**11 10 17.3**	**-0.4**
ASAR	**Alice Springs**	**22.52**	**164**	P	**P**	**11 10 15.9**	**-1.8**
	comp=Z,1.8nm,0.6s,baz=344,slow=11,SNR=15						
MK31	**Makanchi Array**	**62.57**	**327**	P	**P**	**11 15 41.2**	**-0.2**
MK31				IAmb	IAmb	11 15 48.8	
	comp=Z,1.1nm,1.1s						
MKAR	**Makanchi Array**	**62.57**	**327**	P	**P**	**11 15 41.4**	**0.0**
	comp=Z,0.6nm,0.5s,baz=123,slow=8.6,SNR=10						
KURBB	**Kurchatov Arra**	**66.84**	**329**	P	**P**	**11 16 08.7**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=134,slow=6.3,SNR=9.5						
KURK	**Kurchatov**	**66.85**	**329**	P	**P**	**11 16 08.9**	**-0.3**
KURK				IAmb	IAmb	11 16 18.8	
	comp=Z,2.5nm,1.1s						
SBA	**Scott Base**	**78.67**	**172**	P	**P**	**11 17 21.2**	**+2.3**

INET 23 11:06:51.8,13.°04N×89.°00W,h15km,ML3.8
IDC 23 11:06:52.0±2.0,13.°67N×88.°35W,h41km±23km,mb3.2/5, mb1 3.5/8,mb1mx3.3/44,mbtmp3.4/8,ML2.9/3,MS2.1/2, Ms1 2.1/2,ms1mx2.0/20,Error ellipse: s-maj=49.7km s-min=12.5km az=48.0
SNET 23 11:06:52.0±0.8,13.°02N×89.°03W,h48km±11km,ML3.9
UCR 23 11:06:52.1±0.8,13.°02N×89.°03W,h47km±12km,ML3.9
ISC 23 11:06:53.0±1.1,13.°11N±0.°09×88.°97W±0.°05,h58km±8km, n52,σ0.°98/69,mb3.8/5,6C-33D,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.44**	**60**	⇓eP	**Pn**	**11 07 03.9**	**-0.3**
ALJI				eS	**Sn**	**11 07 12.8**	**+0.5**
ALJI				IAML		11 07 13.5	
	comp=Z,5μm,0.1s						
ALJI	**Alcalda de J**	**0.44**	**60**	⇓eP	**Pn**	**11 07 03.9**	**-0.3**
ALJI				eS	**Sn**	**11 07 12.8**	**+0.5**
ALJI				IAML		11 07 13.5	
	comp=Z,5μm,0.1s						
COEG	**Centro de Oper**	**0.52**	**9**	⇓eP	**Pn**	**11 07 04.6**	**-0.5**
COEG				eS	**Sn**	**11 07 14.4**	**+0.6**
COEG				IAML		11 07 18.8	
	comp=Z,7μm,0.3s						
COEG	**Centro de Oper**	**0.52**	**9**	⇓eP	**Pn**	**11 07 04.6**	**-0.5**
COEG				eS	**Sn**	**11 07 14.4**	**+0.6**
COEG				IAML		11 07 18.8	
	comp=Z,7μm,0.3s						
LFRS	**El Faro**	**0.52**	**350**	⇓iP	**Pn**	**11 07 04.5**	**-0.7**
COEB	**Comit de Eme**	**0.57**	**47**	⇓eP	**Pn**	**11 07 05.7**	**-0.1**
COEB				eS	**Sn**	**11 07 16.3**	**+1.2**
COEB				IAML		11 07 18.6	
	comp=Z,6μm,0.2s						
COEB	**Comit de Eme**	**0.57**	**47**	⇓eP	**Pn**	**11 07 05.7**	**-0.1**
COEB				eS	**Sn**	**11 07 16.3**	**+1.2**
COEB				IAML		11 07 18.6	
	comp=Z,6μm,0.2s						
TECA	**Tecapa**	**0.59**	**49**	⇓iP	**Pn**	**11 07 06.0**	**-0.1**
TECA	**Tecapa**	**0.59**	**49**	⇓iP	**Pn**	**11 07 06.0**	**-0.1**
PAVA	**Las Pavas**	**0.60**	**3**	⇓eP	**Pn**	**11 07 05.9**	**-0.2**
PAVA				eS	**Sn**	**11 07 16.9**	**+1.3**
PAVA				IAML		11 07 22.3	
	comp=Z,3μm,0.5s						
PAVA	**Las Pavas**	**0.60**	**3**	⇓eP	**Pn**	**11 07 05.9**	**-0.2**
PAVA				eS	**Sn**	**11 07 16.9**	**+1.3**
PAVA				IAML		11 07 22.3	
	comp=Z,3μm,0.5s						
SNET	**Serv Nac Est T**	**0.63**	**336**	⇓iP	**Pn**	**11 07 05.7**	**-0.7**
SNET				eS	**Sn**	**11 07 15.9**	**-0.2**
SNET				IAML		11 07 17.1	
	comp=Z,3μm,0.2s						
SNET	**Serv Nac Est T**	**0.63**	**336**	⇓iP	**Pn**	**11 07 05.7**	**-0.7**
SNET				eS	**Sn**	**11 07 15.9**	**-0.2**
SNET				IAML		11 07 17.1	
	comp=Z,3μm,0.2s						
LBRS	**Las Brisas**	**0.63**	**353**	⇓iP	**Pn**	**11 07 06.3**	**-0.1**
OPAM	**Oficina de Pla**	**0.64**	**339**	⇓eP	**Pn**	**11 07 06.0**	**-0.5**
OPAM	**Oficina de Pla**	**0.64**	**339**	⇓eP	**Pn**	**11 07 06.0**	**-0.5**
LFU	**La Fuente**	**0.65**	**347**	⇓iP	**Pn**	**11 07 06.4**	**-0.2**
LFU	**La Fuente**	**0.65**	**347**	⇓iP	**Pn**	**11 07 06.4**	**-0.2**
UEES	**Universidad Ev**	**0.66**	**336**	⇓eP	**Pn**	**11 07 06.1**	**-0.6**
UEES	**Universidad Ev**	**0.66**	**336**	⇓eP	**Pn**	**11 07 06.1**	**-0.6**
BOQS	**Boqueron**	**0.69**	**334**	⇓iP	**Pn**	**11 07 06.8**	**-0.5**
BOQS				eS	**Sn**	**11 07 18.2**	**+0.5**
JUCU	**Jucuar¡n**	**0.71**	**78**	⇓eP	**Pn**	**11 07 06.4**	**-0.9**
JUCU				IAML		11 07 25.1	
	comp=Z,3μm,0.3s						
JUCU	**Jucuar¡n**	**0.71**	**78**	⇓eP	**Pn**	**11 07 06.4**	**-0.9**
JUCU				IAML		11 07 25.1	
	comp=Z,3μm,0.3s						
PACA	**Pacayal**	**0.72**	**60**	⇓eP	**Pn**	**11 07 07.6**	**0.0**
PACA				eS	**Sn**	**11 07 20.0**	**+1.9**
PACA	**Pacayal**	**0.72**	**60**	⇓eP	**Pn**	**11 07 07.6**	**0.0**
PACA				eS	**Sn**	**11 07 20.0**	**+1.9**
LCY	**Lacayo**	**0.72**	**64**	eP	**Pn**	**11 07 07.7**	**+0.2**
LCY	**Lacayo**	**0.72**	**64**	eP	**Pn**	**11 07 07.7**	**+0.2**
CEVE	**Cerro Verde**	**0.96**	**318**	eP	**Pn**	**11 07 10.4**	**-0.3**
CEVE				eS	**Sn**	**11 07 25.0**	**+1.2**
CEVE	**Cerro Verde**	**0.96**	**318**	eP	**Pn**	**11 07 10.4**	**-0.3**
CEVE				eS	**Sn**	**11 07 25.0**	**+1.2**
SBLS	**San Blas**	**0.97**	**319**	⇑eP	**Pn**	**11 07 10.6**	**-0.2**
SBLS	**San Blas**	**0.97**	**319**	⇑eP	**Pn**	**11 07 10.6**	**-0.2**
SNJE	**San Jose**	**0.98**	**321**	⇑eP	**Pn**	**11 07 10.6**	**-0.3**
SNJE	**San Jose**	**0.98**	**321**	⇑eP	**Pn**	**11 07 10.6**	**-0.3**
FAGO	**Alcalda de S**	**1.02**	**55**	⇓eP	**Pn**	**11 07 11.3**	**0.0**
FAGO	**Alcalda de S**	**1.02**	**55**	⇓eP	**Pn**	**11 07 11.3**	**0.0**
RTR	**El Retiro**	**1.03**	**320**	⇑eP	**Pn**	**11 07 11.4**	**-0.1**
RTR	**El Retiro**	**1.03**	**320**	⇑eP	**Pn**	**11 07 11.4**	**-0.1**
LCND	**La Caada**	**1.07**	**79**	⇓eP	**Pn**	**11 07 11.6**	**-0.2**
LCND				IAML		11 07 29.2	
	comp=Z,2μm,0.4s						
LCND	**La Caada**	**1.07**	**79**	⇓eP	**Pn**	**11 07 11.6**	**-0.2**
LCND				IAML		11 07 29.2	
	comp=Z,2μm,0.4s						
CNCH	**Conchagua**	**1.11**	**81**	⇓eP	**Pn**	**11 07 12.2**	**-0.3**
CNCH	**Conchagua**	**1.11**	**81**	⇓eP	**Pn**	**11 07 12.2**	**-0.3**
MTO3	**Montecristo**	**1.34**	**343**	⇓iP	**Pn**	**11 07 15.7**	**0.0**
MTO3	**Montecristo**	**1.34**	**343**	⇓iP	**Pn**	**11 07 15.7**	**0.0**
APG	**El Apazote**	**2.38**	**323**	P	**Pn**	**11 07 29.1**	**-0.8**
	comp=Z,1.4nm,0.3s,baz=118,slow=9.3,SNR=12						
APG				LR	LR	11 07 55.7	
	comp=Z,19nm,21.9s,baz=22,slow=26						
JTS	**Las Juntas de**	**4.83**	**125**	P	**Pn**	**11 08 02.6**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=307,slow=20,SNR=6.6						
JTS				S	**Sn**	**11 08 54.3**	**-3.5**
	comp=Z,0.5nm,0.3s,baz=340,slow=19,SNR=2.2						
CMIG	**Matias Romero**	**6.95**	**305**	P	**Pn**	**11 08 34.3**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=133,slow=11,SNR=4.7						
CMIG				S	**Sn**	**11 09 49.9**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=90,slow=20,SNR=3.3						
CMIG				LR	LR	11 11 42.7	
	comp=Z,28nm,20.3s,baz=78,slow=41						
TEIG	**Tepich**	**7.11**	**5**	P	**Pn**	**11 08 35.1**	**+0.7**
	comp=Z,1.7nm,0.3s,baz=12,slow=1.3,SNR=13						
TXAR	**Lajitas Array**	**21.14**	**322**	P	**P**	**11 11 32.9**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=139,slow=9.9,SNR=6.8						
YKA	**Yellowknife Ar**	**52.60**	**345**	P	**P**	**11 15 58.6**	**-2.0**
	comp=Z,0.7nm,0.7s,baz=142,slow=7.5,SNR=11						
PLCA	**Paso Flores**	**56.22**	**163**	P	**P**	**11 16 30.8**	**+3.5**
	comp=Z,0.7nm,0.4s,baz=308,slow=4.6,SNR=6.2						
INK	**Inuvik**	**62.14**	**343**	P	**P**	**11 17 06.0**	**-1.8**
	comp=Z,0.6nm,0.7s,baz=145,slow=4.3,SNR=4.6						
ILAR	**Eielson Array**	**64.83**	**336**	P	**P**	**11 17 24.7**	**-0.9**

comp=Z,0.2nm,1.0s,baz=132,slow=4.8,SNR=3.3

IDC 23 11:20:15.9±57.0,19°47S×179°37W,h0km,mb3.7/3, mb1 3.9/3,mb1mx3.5/38,mbtmp3.7/3,Error ellipse: s-maj=1037.0km s-min=149.1km az=81.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.09	243	P	P	11 27 27.9	-0.2
	0.6nm,0.5s,baz=104,slow=4.2,SNR=2.4						
WRA	Warramunga Arr	43.47	261	P	P	11 28 21.5	+0.2
	0.3nm,0.3s,baz=97,slow=7.9,SNR=15						
ASAR	Alice Springs	43.51	256	P	P	11 28 21.1	-0.4
	0.5nm,0.5s,baz=88,slow=8.1,SNR=17						

IDC 23 11:31:41.5±0.6,11°48N×85°54W,h195km,mb3.1/5, mb1 3.3/7,mb1mx3.1/27,mbtmp3.5/7,MS3.1/1,Ms1 3.1/1, ms1mx2.4/14,Error ellipse: s-maj=47.6km s-min=20.8km az=28.0
INET 23 11:31:41.4,12°96N×84°61W,h15km,ML4.0
UCR 23 11:31:43.3±1.3,11°41N×85°76W,h183km±4km,MD4.1
ISC 23 11:31:41.8±0.8,11°45N±0°08×85°7W±0°1,h194km±7km, n36,σ0§93/43,mb3.3/5,2C,Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUAI	Buenos Aires	0.69	145	⇑iP	Pn	11 32 10.1	+0.9
BUAI				iS	Sn	11 32 30.6	+0.3
GB1A	Borinquen Arri	0.71	152	iP	Pn	11 32 09.8	+0.5
BUEV	Buena Vista	0.72	153	iP	Pn	11 32 09.9	+0.5
BUEV				iS	Sn	11 32 30.6	-0.2
LAPC	Finca la Perla	0.74	156	iP	Pn	11 32 09.6	+0.2
LAPC				iS	Sn	11 32 30.1	-0.7
ACON	Acoyapa	0.76	47	eP	Pn	11 32 10.2	+0.8
GPS3	Bodega del ICE	0.78	152	iP	Pn	11 32 10.1	+0.4
NY14	Universidad de	0.82	166	iP	Pn	11 32 10.3	+0.4
MESS	Mesas	0.88	143	iP	Pn	11 32 10.9	+0.6
MESS				iS	Sn	11 32 32.0	-0.3
LIM1	Limonal	0.89	147	iP	Pn	11 32 10.8	+0.5
GUAB	Guayabo de Bag	0.89	146	iP	Pn	11 32 11.0	+0.6
GUAB				iS	Sn	11 32 32.4	0.0
HORNC	Hornillas	0.92	143	iP	Pn	11 32 11.0	+0.5
COLC	Colonia	0.94	146	iP	Pn	11 32 11.4	+0.8
CUI	Cuipilapa	0.97	144	iP	Pn	11 32 11.8	+0.9
CUI				iS	Sn	11 32 33.1	-0.1
PTEN	Parque Tenorio	1.04	135	⇑iP	Pn	11 32 12.4	+1.1
ACAL	Aguas Claras	1.06	139	iP	Pn	11 32 12.8	+1.3
AMAS	Alto Masis	1.11	139	iP	Pn	11 32 13.0	+1.1
AMAS				iS	Sn	11 32 34.9	-0.2
JTS	Las Juntas de	1.39	146	P	Pn	11 32 14.5	+0.5
	49nm,0.3s,baz=176,slow=19,SNR=533						
JTS				S	Sn	11 32 37.5	-1.5
	157nm,0.3s,baz=0.0,slow=20,SNR=26						
JTS	Las Juntas de	1.39	146	eP	Pn	11 32 14.6	+0.5
CEDE	Laguna Cedeo	1.40	133	eP	Pn	11 32 15.7	+1.5
ARE1	Arenal 1	1.40	134	eP	Pn	11 32 15.6	+1.4
MATN	Matagalpa	1.48	353	eP	Pn	11 32 15.7	+0.7
ESPN	Las Esperanzas	1.59	62	eP	Pn	11 32 16.9	+1.1
ESTN	Estel	1.75	340	eP	Pn	11 32 18.4	+0.9
CRIN	San Cristobal	1.79	314	eP	Pn	11 32 17.9	+0.1
SRA1	San Ramn	1.84	138	eP	Pn	11 32 19.8	+1.4
LCR2	La Lucha 2	2.41	135	eP	Pn	11 32 26.0	+1.4
APG	El Apazote	5.80	308	P	Pn	11 33 08.8	+2.1
	0.3nm,0.3s,baz=119,slow=19,SNR=3.1						
CMIG	Matias Romero	10.49	303	P	Pn	11 34 07.9	+0.4
	0.2nm,0.3s,baz=145,slow=12,SNR=4.9						
TXAR	Lajitas Array	24.41	319	P	P	11 36 43.3	+0.6
	1.0nm,0.7s,baz=142,slow=8.5,SNR=14						
NNA	Nana	24.90	159	LR	LR	11 45 44.9	
	comp=Z,41nm,20.0s,baz=165,slow=34						
NVAR	Mina Array Bea	39.56	318	P	P	11 38 55.4	+1.0
	0.5nm,0.7s,baz=129,slow=7.9,SNR=6.1						
SCHQ	Schefferville	45.78	15	P	P	11 39 43.1	-0.8
	2.3nm,0.5s,baz=214,slow=6.0,SNR=13						
YKA	Yellowknife Ar	55.02	344	P	P	11 40 51.5	-1.5
	0.2nm,0.3s,baz=131,slow=8.2,SNR=6.0						
ILAR	Eielson Array	67.61	336	P	P	11 42 16.4	-1.0
	0.7nm,1.1s,baz=134,slow=4.2,SNR=4.3						
ASAR	Alice Springs	140.43	247	PKP	PKPdf	11 50 49.4	+0.6
	0.4nm,0.6s,baz=83,slow=2.3,SNR=6.2						
WRA	Warramunga Arr	140.59	253	PKP	PKPdf	11 50 49.1	+0.1
	0.8nm,0.9s,baz=95,slow=1.9,SNR=6.7						

GRAL 23 11:35:35.9±0.7,34°64N×35°95E,h4km±6km,MD3.4
DDA 23 11:35:36.7,34°52N×35°66E,h20km±1km,ML2.9
ISK 23 11:35:37.7,34°56N×35°71E,h8km,ML2.9/13
GII 23 11:35:37.3±0.8,34°47N×35°62E,h1km±1km,MD2.3/6
JSO 23 11:35:46.2±3.8,34°N±29'×3°6E±1°3,h0km,M3.0/4, Mjma3.1/4,MLv3.0/4
ISC 23 11:35:36.8±1.2,34°55N±0°02×35°65E±0°04,h5km±11km, n59,σ1§39/79,Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWQ	Hawqa	0.37	137	eP	Pg	11 35 42.0	-2.0
HWQ	Hawqa	0.37	137	Pg	Pg	11 35 45.0	+1.1
BHL	Bhannes	0.64	179	eP	Pg	11 35 49.7	+0.5
BHL	Bhannes	0.64	179	Pg	Pg	11 35 49.1	-0.1
BHL				Sg	Sg	11 35 59.0	+1.5
BEYL	Beirut	0.69	191	eP	Pg	11 35 51.3	+1.3
BEYL	Beirut	0.69	191	Pg	Pg	11 35 51.1	+1.1
DQRL	Deir Qamar	0.84	184	eP	Pg	11 35 53.5	+0.5
DQRL				eS	Sn	11 36 06.9	-1.5
QRWL	Qaraoun	1.00	178	eP	Pb	11 35 55.8	-0.9
RCY	Rachaya	1.06	171	eP	Pb	11 35 56.4	-1.4
RCY				eS	Sb	11 36 11.1	-0.9
NATI	Neve Ativ	1.28	177	Pg	Pg	11 36 00.9	-0.6
NATI				Sg	Sg	11 36 19.2	+1.7
KSDI	Kefar Szold	1.35	180	P	Pn	11 36 01.9	-0.5
KSDI	Kefar Szold	1.35	180	iP	Pn	11 36 02.1	-0.3
KSDI				iS	Sg	11 36 20.7	+0.5
KSDI	Kefar Szold	1.35	180	Pg	Pg	11 36 02.0	-0.5
KSDI				Sg	Sg	11 36 20.8	+0.5
HNTI	Hanita	1.51	195	Pn	Pn	11 36 04.9	+0.2
HNTI				Sn	Sb	11 36 25.3	+0.3
MMA0B	Mount Meron ar	1.54	188	Pn	Pn	11 36 05.0	-0.1
MMA0B				Sn	Sg	11 36 26.6	+0.2
KSHT	Keshet	1.57	175	Pn	Pb	11 36 06.2	-0.2
BLGI	Bet Lehem HaGe	1.85	192	Pn	Pn	11 36 09.9	+0.6
BLGI				Sn	Sb	11 36 33.9	-0.7
TAHT	Tahtakopru-Hat	1.88	13	PN	Pn	11 36 10.4	+0.8
TAHT				SN	Sb	11 36 34.7	-0.7
CSS	Mathiatis	1.95	283	PN	Pb	11 36 12.6	-0.3
CSS	Mathiatis	1.95	283	iP	Pn	11 36 11.5	+0.8
CSS	Mathiatis	1.95	283	Pn	Pn	11 36 11.8	-1.1
OFRI	`Ofer	2.00	196	Pn	Pn	11 36 11.5	+0.1
OFRI				Sn	Sb	11 36 38.4	-0.6
KRTS	Karatas	2.03	354	PN	Pn	11 36 12.9	+1.1
MMLI	Mount Malkishu	2.11	185	PN	Pb	11 36 14.6	-1.1
MMLI	Mount Malkishu	2.11	185	P	Pn	11 36 14.0	+1.1
MMLI	Mount Malkishu	2.11	185	iP	Pn	11 36 13.4	+0.5
MMLI				iS	Sb	11 36 41.5	-0.7
MMLI	Mount Malkishu	2.11	185	Pn	Pn	11 36 14.0	+1.1
MMLI				Sn	Sb	11 36 40.8	-1.5
QRNJ	Al-Qirein	2.21	182	P	Pb	11 36 16.7	-0.5
YURE	YUREGIR	2.27	360	PN	Pn	11 36 17.0	+1.9
HMDT	Nahal Hemdat	2.29	183	Pn	Pn	11 36 14.9	-0.4
HMDT				Sn	Sn	11 36 44.8	+0.8
IKL	Isikli	2.33	317	PN	Pn	11 36 17.0	+1.2
AKKU	Akkuyu-Mersin	2.35	314	PN	Pb	11 36 18.2	-1.5
SLTI	Sal'it	2.36	193	Pn	Pn	11 36 15.7	-0.6
SLTI				Sn	Sb	11 36 47.1	-2.1
GULN	MERSIN_Gulnar	2.37	314	iP	Pn	11 36 17.6	+1.1
GULN				iS	Sn	11 36 44.3	-1.6
KEBE	Keben-Mersin	2.46	321	PN	Pb	11 36 19.9	-1.8
HSUJ	Al Zarqa	2.48	169	P	Pn	11 36 19.0	+1.0
KUZU	Kuzuini	2.51	27	iP	Pn	11 36 19.1	+0.7
KUZU				IAML		11 37 05.0	
	comp=N,173nm,0.4s						
KUZU				IAML		11 37 10.0	
	comp=E,135nm,0.5s						
ASF	Jabal al Asfar	2.59	156	P	Pn	11 36 20.4	+0.9
TEVE	Tevekalti-Mers	2.60	317	PN	Pn	11 36 21.7	+2.0
TEKE	Tekeli-Mersin	2.61	308	PN	Pb	11 36 22.2	-1.9
BERE	Bereket-Mersin	2.67	313	PN	Pn	11 36 22.8	+2.1
KAMA	Osmaniye	2.76	17	iP	Pn	11 36 22.6	+0.7
KAMA				IAML		11 37 23.0	
	comp=N,18nm,1.1s						
GULE	Gulek	2.82	346	iP	Pn	11 36 25.0	+2.2
GULE				iS	Sb	11 36 59.8	-2.9
GULE				IAML		11 37 03.0	
	comp=E,27nm,0.6s						
AKO	Adana	2.91	357	iP	Pb	11 36 27.2	-2.1
DSI	Dead Sea	2.98	184	Pn	Pn	11 36 24.5	-0.3
WALJ	Wala	2.98	177	P	Pb	11 36 30.0	-0.5
KERG	Konya-Eregli	3.12	337	iP	Pn	11 36 29.1	+2.3
KERG				iS	Sn	11 37 06.9	+2.4
KERG				IAML		11 37 10.0	
	comp=N,20nm,0.6s						
KERG				IAML		11 37 13.0	
	comp=E,16nm,0.4s						
CMRD	Camardi-Nigde	3.15	350	PN	Pn	11 36 29.2	+1.9
GZT	Gaziantep	3.20	28	iP	Pn	11 36 28.8	+0.7
GZT				IAML		11 37 20.0	
	comp=N,35nm,0.7s						
GZT				IAML		11 37 22.0	
	comp=E,52nm,0.5s						
GHAJ	Ghor Haditha	3.24	181	P	Pn	11 36 31.0	+2.7
GHAJ	Ghor Haditha	3.24	181	Pn	Pn	11 36 28.5	+0.2
LISJ	El Lisan	3.30	182	P	Pn	11 36 30.1	+0.9
SURC	SANLIURFA_SURC	3.35	45	iP	Pb	11 36 30.9	+0.1
SURC				iS	Sb	11 37 20.2	+2.3
SURC				IAML		11 37 26.0	
	comp=E,52nm,0.4s						
SURC				IAML		11 37 33.0	
	comp=N,53nm,0.5s						
YESY	Yesilyurt	3.58	335	PN	Pn	11 36 35.5	+2.4
SARI	SarD1z-Kayseri	3.90	9	PN	Pn	11 36 39.8	+2.1
AKCD	Akcadag	4.17	25	iP	Pn	11 36 42.5	+1.3
DARE	Darende-Malaty	4.28	20	PN	Pn	11 36 45.3	+2.5
HRFI	Mount Harif	4.53	187	iP	Pb	11 36 57.7	+0.8
ELZG	Elazig	4.77	33	iP	Pn	11 36 51.2	+1.6
ELZG				iS	Sg	11 38 06.8	-3.3
ELZG				IAML		11 38 20.0	
	comp=N,22nm,0.7s						
ELZG				IAML		11 38 20.0	
	comp=E,17nm,0.6s						

NNC 23 11:38:05.2±5.6,36°44N×69°17E,h0km,mb3.9,mpv3.6, 2C-4D,Error ellipse: s-maj=48.4km s-min=41.6km az=129.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.73	8	⇓Pn	Pn	11 39 46.5	+1.3
	0.4nm,0.2s,baz=200,slow=13,SNR=26						
KK31				⇓Sn	Sn	11 41 04.5	+1.9
	1.7nm,0.3s,baz=192,slow=23,SNR=9.2						
AAK	Ala-Archa	7.43	32	⇓Pn	Pn	11 39 54.5	-0.4
	1.8nm,0.4s						
AAK				⇑Sn	Sn	11 41 20.6	+0.6
	7.1nm,1.2s						
CHMS	Chumysh	7.83	32	⇑Pn	Pn	11 39 59.6	-0.8
	5.2nm,0.7s						
CHMS				⇓Sn	Sn	11 41 30.4	+0.6
	2.3nm,0.4s						

IDC 23 11:55:06.2±2.1,3°24N×128°98E,h0km,mb3.4/4, mb1 3.6/4,mb1mx3.3/61,mbtmp3.5/4,Error ellipse: s-maj=108.0km s-min=23.1km az=72.0,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.46	189	P	P	11 59 57.5	+1.2
	0.8nm,0.8s,baz=23,slow=7.7,SNR=3.2						
WRA	Warramunga Arr	23.63	167	P	P	12 00 18.4	-0.8
	0.4nm,0.3s,baz=343,slow=9.8,SNR=14						
ASAR	Alice Springs	27.17	170	P	P	12 00 50.5	-1.2
	0.4nm,0.5s,baz=353,slow=7.8,SNR=20						
MKAR	Makanchi Array	59.25	324	P	P	12 05 10.6	+1.1
	0.2nm,0.4s,baz=110,slow=8.6,SNR=5.7						
PPT2	Papeete2	82.83	108	eLR	LR	12 07 06.6	
	comp=Z,96nm,25.8s						

BGR 23 11:54:48.9±0.0,21°70S×177°84W,h33km
IDC 23 11:55:52.7±1.0,20°43S×178°37W,h568km±11km, mb4.0/32,mb1 4.1/36,mb1mx4.1/57,mbtmp4.9/36,Error ellipse: s-maj=10.0km s-min=8.0km az=162.0
NEIC 23 11:55:53.9±1.8,20°37S±0°09×178°39W±0°10, h584km±6km,mb4.7/107,Error ellipse: s-maj=14.1km s-min=12.6km az=143.0
ISC 23 11:55:53.9±0.3,20°36S±0°06×178°35W±0°05,h587km, n320,σ1§11/352,mb4.7/90,40C-10D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.30	307	P	P	11 57 20.8	0.0
NIUE	Niue	8.03	82	P	P	11 57 51.2	-1.9
NIUE				S	S	11 59 35.6	+4.7
AFI	Afiamalu	8.98	45	P	P	11 57 59.7	-2.8
	5.0nm,0.3s,baz=47,slow=1.5,SNR=8.7						
AFI				S	S	11 59 40.7	-7.2
	14nm,0.3s,baz=355,slow=18,SNR=9.8						
AFI	Afiamalu	8.98	45	P	P	11 57 59.1	-3.4
AFI				S	S	11 59 42.3	-5.5
DZM	Mont Dzumac	14.29	260	P	P	11 58 54.8	-1.1
	1.1nm,0.3s,baz=115,slow=14,SNR=63						
DZM	Mont Dzumac	14.29	260	P	P	11 58 55.8	-0.1
NOUC	Port Laguerre	14.42	260	P	P	11 58 56.4	-0.6
SANVU	Saraoutou	14.59	287	P	P	11 58 58.4	-0.4
RAR	Rarotonga	17.39	96	P	P	11 59 23.8	-0.7
	0.6nm,0.3s,baz=255,slow=9.7,SNR=3.6						
RAR	Rarotonga	17.39	96	IAmb	IAmb	11 59 25.2	
	comp=Z,67nm,1.3s						
URZ	Urewera	18.27	191	P	P	11 59 29.3	-3.0
	comp=Z,2.4nm,0.3s,baz=301,slow=3.0,SNR=20						
URZ	Urewera	18.27	191	P	P	11 59 29.1	-3.2
URZ				IAmb	IAmb	11 59 37.2	
	comp=Z,30nm,0.9s						
KNTN	Kanton	18.64	21	P	P	11 59 35.0	-1.0
BKZ	Black Stump Fm	19.26	192	P	P	11 59 38.4	-3.0
BKZ				IAmb	IAmb	11 59 38.6	
	comp=Z,30nm,1.2s						
SNZO	South Karori	21.70	194	P	P	12 00 00.5	-2.7
QRZ	Quartz Range	21.83	199	P	P	12 00 03.7	-0.8
TUWZ	Tuamarina	22.00	196	P	P	12 00 03.3	-2.6
BSWZ	Blackbirch Sta	22.29	195	P	P	12 00 08.9	+0.4
THZ	Tophouse	22.59	197	P	P	12 00 10.3	-0.9
LTZ	Lake Taylor	23.71	197	P	P	12 00 18.5	-2.7
MLZ	Mavora Lakes	27.33	201	P	P	12 00 52.8	-0.2
MLZ				IAmb	IAmb	12 01 02.5	
	comp=Z,12nm,1.0s						
PPT	Papeete	27.34	89	P	P	12 00 53.2	-0.2
	comp=Z,27nm,0.7s,baz=116,slow=11,SNR=4.2						
PPT	Papeete	27.34	89	P	P	12 00 53.9	+0.4
PPTF	Pamatai, Papee	27.34	89	P	P	12 00 54.2	+0.7
WHZ	Wether Hill Ro	27.85	201	P	P	12 00 58.0	+0.5
EIDS	Eidsvold	28.57	254	P	P	12 01 04.1	0.0
EIDS				IAmb	IAmb	12 01 20.6	
	comp=Z,31nm,1.2s						
ARMA	Armidale	28.84	244	P	P	12 01 05.6	-0.9
ARMA				IAmb	IAmb	12 01 14.3	
	comp=Z,16nm,1.4s						
CTA	Charters Tower	33.18	264	P	P	12 01 44.0	+0.4
	comp=Z,45nm,0.6s,baz=93,slow=10,SNR=69						
PMG	Port Moresby	34.99	283	P	P	12 01 59.2	+0.5
	comp=Z,81nm,0.8s,baz=89,slow=5.4,SNR=24						
PMG	Port Moresby	34.99	283	P	P	12 01 59.0	+0.3
PATS	Pohnpei	35.46	317	P	P	12 02 03.5	+1.0
TOO	Toolangi	35.72	233	P	P	12 02 04.0	-0.5
COEN	Coen	37.25	274	P	P	12 02 17.8	+0.6
STKA	Stephens Creek	37.56	244	P	P	12 02 19.1	-0.4
	comp=Z,6.1nm,0.7s,baz=96,slow=10,SNR=11						
STKA	Stephens Creek	37.56	244	P	P	12 02 19.4	-0.2
BBOO	Buckleboo	42.32	243	P	P	12 02 57.1	-0.4
BBOO				IAmb	IAmb	12 02 57.9	
	comp=Z,13nm,0.6s						
WR0	Warramunga Arr	44.11	262	P	P	12 03 10.8	-0.7
WR0				IAmb	IAmb	12 03 12.5	
	comp=Z,25nm,1.1s						
GENI	Genyem	44.13	288	P	P	12 03 11.8	0.0
	comp=Z,183nm,0.8s						
AS31	Alice Springs	44.23	257	P	P	12 03 12.1	-0.5
ASAR	Alice Springs	44.23	257	P	P	12 03 12.1	-0.5
	comp=Z,33nm,0.8s,baz=98,slow=7.8,SNR=276						
ASAR				PcP	PcP	12 04 43.6	-0.4
	comp=Z,4.1nm,0.8s,baz=98,slow=4.0,SNR=7.3						
ASAR				ScP	ScP	12 07 43.9	+3.2
	comp=Z,1.6nm,0.8s,baz=102,slow=4.4,SNR=6.7						
ASAR				S	S	12 09 01.7	-2.8
	comp=Z,1.2nm,0.7s,baz=96,slow=16,SNR=7.1						
WB0	Warramunga Arr	44.28	262	P	P	12 03 12.1	-0.8
WB0				IAmb	IAmb	12 03 13.0	
	comp=Z,39nm,1.0s						
WB2	Warramunga Arr	44.29	262	P	P	12 03 11.8	-1.2
WB2				IAmb	IAmb	12 03 13.2	
	comp=Z,44nm,1.0s						
WRAB	Tennant Creek	44.29	262	P	P	12 03 12.0	-1.0
WRAB				IAmb	IAmb	12 03 13.1	
	comp=Z,41nm,1.0s						
WRAB				PcP	PcP	12 04 43.3	-1.0
WRA	Warramunga Arr	44.30	262	P	P	12 03 12.0	-1.1
	comp=Z,22nm,0.8s,baz=97,slow=7.6,SNR=112						
WRA				S	S	12 09 04.9	-0.6
	comp=Z,0.9nm,0.8s,baz=93,slow=13,SNR=4.1						
HMH	Humu'ula Sheep	45.60	31	P	P	12 03 24.1	+0.9
SMPI	Sarmi	45.70	288	P	P	12 03 22.6	-1.2
	comp=Z,59nm,0.9s						
HPAH	Hawaii Prepara	45.86	30	P	P	12 03 25.6	+0.7
HPAH				IAmb	IAmb	12 03 26.2	
	comp=Z,23nm,0.6s						
FORT	Forrest	49.05	247	P	P	12 03 47.8	-0.8
KNRA	Kununurra	50.34	266	P	P	12 03 58.3	0.0
KNRA				IAmb	IAmb	12 03 58.4	
	comp=Z,20nm,0.8s						
FAKI	Fak Fak	51.15	283	P	P	12 04 04.0	-0.2
FAKI				IAmb	IAmb	12 04 07.8	
	comp=Z,26nm,0.9s						
FITZ	Fitzroy Crossi	52.72	262	P	P	12 04 15.2	-0.2
	comp=Z,6.4nm,0.6s,baz=110,slow=4.2,SNR=40						
FITZ	Fitzroy Crossi	52.72	262	P	P	12 04 14.9	-0.4
SIJI	Sorong	52.89	285	P	P	12 04 16.4	-0.2
	comp=Z,97nm,0.8s,baz=71,slow=8.2						
SWI	Sorong	52.90	285	P	P	12 04 16.5	-0.1
	comp=Z,1μmcomp=Z,162nm,0.8s						
SOEI	Soe	56.17	272	P	P	12 04 40.7	+1.0
TNTI	Ternate	57.11	285	P	P	12 04 46.1	+0.1
	comp=Z,63nm,1.0s						
TNTI	Ternate	57.11	285	P	P	12 04 46.3	+0.4
TNTI				IAmb	IAmb	12 04 47.1	
	comp=Z,52nm,0.9s						
SANI	Sanana	57.24	281	P	P	12 04 46.4	-0.4
	comp=Z,37nm,1.1s						
PSA00	Pilbara Seismi	57.38	257	P	P	12 04 46.9	-0.8
PSA00				IAmb	IAmb	12 04 47.9	
	comp=Z,28nm,0.8s						
PSA00				PcP	PcP	12 05 33.4	-0.1
VNDA	Vanda	58.02	185	P	P	12 04 51.4	+0.3
	comp=Z,3.2nm,0.9s,baz=358,slow=4.9,SNR=5.6						
VNDA	Vanda	58.02	185	P	P	12 04 52.8	+1.8
EDFI	Ende, Flores	58.90	272	P	P	12 04 57.5	-0.7
	comp=Z,20nm,0.9s						
MORW	Morawa	59.58	248	P	P	12 05 01.7	-0.7
GIRL	Giralia	62.27	255	P	P	12 05 21.1	+1.0
PLAI	Plampang	62.55	270	P	P	12 05 21.7	-0.3
	comp=Z,761nmcomp=Z,63nm,1.1s						
JHJ2	Mitsune	66.51	322	P	P	12 05 47.3	+0.8
JHJ	Hachijo jima 2	66.53	322	P	P	12 05 45.9	-0.8
	comp=Z,66nm,0.5s,baz=76,slow=22,SNR=10						
KKM	Kota Kinabalu	69.41	285	P	P	12 06 05.0	+0.4
KKM				IAmb	IAmb	12 06 06.0	
	comp=Z,25nm,0.9s						
UGM	Wanagama	69.64	269	P	P	12 06 05.7	-0.2
QSPA	South Pole Qui	69.70	180	P	P	12 06 05.8	+0.3
	comp=Z,20nm,0.8s,baz=22,slow=1.0,SNR=83						
QSPA	South Pole Qui	69.70	180	P	P	12 06 06.1	+0.5
QSPA				IAmb	IAmb	12 06 07.0	
	comp=Z,21nm,0.8s						
JOW	Kunigami	69.83	310	P	P	12 06 07.1	+0.4
	comp=Z,0.7nm,0.4s,baz=131,slow=14,SNR=5.1						
JOW	Kunigami	69.83	310	IAmb	IAmb	12 06 21.5	
	comp=Z,20nm,1.0s						
MJAR	Matsushiro Arr	69.91	324	P	P	12 06 06.9	-0.1
	comp=Z,14nm,0.6s,baz=140,slow=6.1,SNR=80						
MAJO	Matsushiro	69.91	324	P	P	12 06 07.3	+0.3
MAJO				IAmb	IAmb	12 06 07.9	
	comp=Z,15nm,0.6s						
MAT	Matsushiro	69.91	324	P	P	12 06 06.8	-0.2
MJB9	Matsu-Tunnel	69.91	324	P	P	12 06 07.7	+0.7
MJB9				IAmb	IAmb	12 06 07.9	
	comp=Z,15nm,0.6s						
STKI	Sintang	71.47	277	P	P	12 06 15.7	-1.0
ADK	Adak	71.95	1	P	P	12 06 18.5	0.0
JNU	Nakatsue	71.95	317	P	P	12 06 19.2	+0.2
	comp=Z,17nm,0.8s,baz=96,slow=4.5,SNR=13						
JNU	Nakatsue	71.95	317	P	P	12 06 19.1	0.0
JNU				IAmb	IAmb	12 06 20.3	
	comp=Z,21nm,0.9s						
ATKA	Atka Island	72.34	3	P	P	12 06 20.4	-0.4
YOJ	Yonaguni jima	72.39	305	P	P	12 06 22.1	+0.4
LEM	Lembang	72.72	269	P	P	12 06 24.9	+0.8
	comp=Z,38nm,0.7s,baz=13,slow=7.6,SNR=6.5						
TWG	Pinlang	73.03	303	P	P	12 06 24.3	-1.2
KSM	Kuching	73.07	278	P	P	12 06 27.0	+1.1
KSM				IAmb	IAmb	12 06 27.0	
	comp=Z,25nm,0.9s						
YULB	Yu-li	73.15	303	P	P	12 06 25.0	-1.1
YULB				IAmb	IAmb	12 06 30.1	
	comp=Z,9.4nm,0.7s						
NACB	Ninganchiao	73.33	304	P	P	12 06 26.6	-0.5
NACB				IAmb	IAmb	12 06 27.5	
	comp=Z,26nm,0.9s						
ASAJ	Asahikawa	73.45	332	P	P	12 06 29.4	+2.0
	comp=Z,45nm,0.8s,baz=217,slow=5.4,SNR=50						
SSLB	Suanglung	73.63	304	P	P	12 06 28.1	-0.8
SSLB				IAmb	IAmb	12 06 28.9	
	comp=Z,20nm,1.1s						
TPUB	Ta-pu	73.63	303	P	P	12 06 28.1	-0.7
UNV	Unalaska Valle	74.60	7	P	P	12 06 33.4	-0.1
UNV				IAmb	IAmb	12 06 33.8	
	comp=Z,25nm,0.6s						
AKUT	Akutan	74.98	8	P	P	12 06 35.1	-0.5
YSS	Yuzh-Sakhalins	75.63	334	P	P	12 06 41.2	+1.8
YSS				IAmb	IAmb	12 06 41.7	
	comp=Z,41nm,0.9s						
PET	Petropavlovsk	75.76	346	P	P	12 06 40.1	+0.1
PET				IAmb	IAmb	12 06 56.0	
	comp=Z,28nm,1.2s						
PEA0B	Petropavlovsk-	76.06	345	P	P	12 06 42.1	+0.4
PEA0B				IAmb	IAmb	12 06 43.0	
	comp=Z,26nm,0.8s						
PETK	Petropavlovsk-	76.06	345	P	P	12 06 42.1	+0.4
	comp=Z,21nm,0.8s,baz=140,slow=9.1,SNR=69						
KSRS	Korea Array	76.57	319	P	P	12 06 46.0	+1.1
	comp=Z,6.5nm,0.7s,baz=127,slow=6.0,SNR=36						
KS19	Wonju Array Si	76.63	319	P	P	12 06 46.5	+1.2
KS19				IAmb	IAmb	12 06 47.0	
	comp=Z,35nm,1.5s						
MDSI	Maura Dua	76.72	270	P	P	12 06 45.1	-1.2
	comp=Z,22nm,0.8s						
KSI	Kapahiang	78.49	270	P	P	12 06 55.3	-0.6
	comp=Z,59nm,0.8s						
USA0B	Ussuriysk Arra	78.67	326	P	P	12 06 57.6	+1.6
USA0B				IAmb	IAmb	12 06 58.4	
	comp=Z,19nm,0.8s						
USRK	Ussuriysk Ar.	78.67	326	P	P	12 06 57.8	+1.7
	comp=Z,15nm,0.7s,baz=133,slow=3.3,SNR=28						
KMRM	Mail Ridge	78.86	40	P	P	12 06 58.2	+1.0
KMRM				IAmb	IAmb	12 07 00.7	
	comp=Z,13nm,0.8s						
JCC	Jacoby Creek,	79.04	39	P	P	12 07 00.2	+2.2
JCC				IAmb	IAmb	12 07 11.2	
	comp=Z,34nm,1.4s						
NJ2	Nanjing	79.54	310	eP	P	12 07 02.4	+1.5
MDJ	Mudanjiang	80.22	325	P	P	12 07 05.4	+1.2
YBH	Yreka Blue Hor	80.39	39	P	P	12 07 06.8	+1.5
	comp=Z,3.3nm,0.6s,baz=211,slow=2.8,SNR=11						
YBH	Yreka Blue Hor	80.39	39	P	P	12 07 07.2	+1.9
PNTR	Pine Nut	80.70	42	P	P	12 07 08.6	+1.5
HUMO	Hull Mountain	80.78	38	P	P	12 07 09.5	+2.3
YERR	Yerington	80.87	43	P	P	12 07 09.6	+1.6
RYN	Ryan	81.12	43	P	P	12 07 10.9	+1.7
NVAR	Mina Array Bea	81.15	44	P	P	12 07 10.8	+1.3
	comp=Z,0.8nm,0.5s,baz=227,slow=8.0,SNR=11						
PAHR	Pah Rah Range	81.19	42	P	P	12 07 11.3	+1.7
KVN	Kaiserville	81.63	43	P	P	12 07 12.9	+1.0
MOD	Modoc Plateau	81.92	40	P	P	12 07 14.7	+1.5
KLR	Kul'dur	82.25	330	P	P	12 07 15.9	+1.5
	comp=Z,5.9nm,0.9s,baz=98,slow=4.2,SNR=20						
PINE	Pine Mountain	82.67	38	P	P	12 07 18.6	+1.6
UBPT	Khong Chiam	82.78	289	P	P	12 07 19.2	+1.4
UBPT				IAmb	IAmb	12 07 19.8	

comp=Z,22nm,1.2s
IPM Ipoh 82.79 277 P P 12 07 18.9 +0.9
IPM IAmb IAmb 12 07 19.6
comp=Z,19nm,0.7s
BRLK Bradley Lake 82.93 14 P P 12 07 18.2 +0.5
RSO Redoubt South 83.17 12 P P 12 07 19.1 0.0
WVOR Wild Horse Val 83.23 40 P P 12 07 21.5 +1.8
KULM Kulim 83.43 278 P P 12 07 22.2 +1.1
KULM IAmb IAmb 12 07 22.9
comp=Z,12nm,0.8s
MA2 Magadan 83.57 345 P P 12 07 20.7 -0.1
MA2 IAmb IAmb 12 07 21.5
comp=Z,11nm,0.9s
I07A Izee 83.68 38 P P 12 07 23.5 +1.6
J08A Circle Bar Ran 83.86 39 P P 12 07 24.8 +2.0
KNB Kanab 84.04 47 P P 12 07 25.6 +1.7
U15A North Rim 84.11 48 P P 12 07 26.5 +2.1
RPSI Rantau Prapat 84.12 275 P P 12 07 25.1 +0.5
RPSI IAmb IAmb 12 07 25.2
comp=Z,15nm,0.9s
PSI Prapat 84.16 275 P P 12 07 24.6 -0.3
comp=Z,4.6nm,0.6s,baz=203,slow=11,SNR=5.3
RC01 Rabbit Creek A 84.38 14 P P 12 07 26.6 +1.9
RC01 IAmb IAmb 12 07 26.8
comp=Z,16nm,1.0s
SUA Susitna One 84.50 13 P P 12 07 26.0 +0.5
SUA IAmb IAmb 12 07 26.5
comp=Z,14nm,0.9s
GLI Glacier Island 84.80 15 P P 12 07 27.4 +0.6
GLI IAmb IAmb 12 07 46.2
comp=Z,31nm,1.0s
BMO Blue Mountains 85.41 39 P P 12 07 31.5 +1.3
F10A Beach Ranch, E 86.09 38 P P 12 07 34.4 +0.9
F10A IAmb IAmb 12 07 35.2
comp=Z,6.8nm,0.8s
SEY Seymchan 86.17 347 P P 12 07 33.8 +0.5
comp=Z,15nm,0.6s,baz=146,slow=6.0,SNR=68
B08A Colville Reser 86.30 35 P P 12 07 35.2 +0.8
TRF Thorofare Moun 86.38 12 P P 12 07 34.2 -0.3
TRF IAmb IAmb 12 07 35.3
comp=Z,15nm,0.8s
RND Reindeer 86.64 13 P P 12 07 36.1 +0.5
RND IAmb IAmb 12 07 36.6
comp=Z,18nm,0.7s
SYO Syowa Base 86.79 193⇑eP P 12 07 34.3 -2.0
SYO Syowa Base 86.79 193⇑epP pP 12 09 41.5 -0.6
TX31 Lajitas Ar. Si 87.25 57 P P 12 07 40.6 +1.3
TX32 Lajitas Array 87.25 57 P P 12 07 40.8 +1.4
TXAR Lajitas Array 87.25 57 P P 12 07 40.9 +1.5
comp=Z,1.6nm,0.8s,baz=218,slow=6.6,SNR=18
TXAR pP pP 12 09 45.9 +0.8
comp=Z,0.6nm,1.0s,baz=198,slow=3.6,SNR=3.2
PBKT Sadao Pong 87.27 289 P P 12 07 40.5 +1.0
PBKT IAmb IAmb 12 07 42.2
comp=Z,9.0nm,1.0s
MLY Manley 87.72 11 P P 12 07 39.5 -1.1
MLY IAmb IAmb 12 07 40.8
comp=Z,6.5nm,0.6s
WRH Wood River Hil 87.74 13 P P 12 07 39.5 -1.1
WRH IAmb IAmb 12 07 41.3
comp=Z,16nm,0.9s
XAN Xi'an 87.79 307 P P 12 07 42.3 +0.6
HDA Harding Lake 87.92 13 P P 12 07 41.6 +0.1
HDA IAmb IAmb 12 07 42.2
comp=Z,13nm,0.7s
CCB Clear Creek Bu 87.95 13 P P 12 07 40.9 -0.7
CCB IAmb IAmb 12 07 42.0
comp=Z,15nm,0.7s
COLA College 88.14 13 P P 12 07 41.5 -1.0
SNAA Sanae 88.16 179 P P 12 07 42.1 -0.7
IL31 88.25 13 P P 12 07 42.2 -0.8
ILAR Eielson Array 88.25 13 P P 12 07 42.6 -0.4
comp=Z,3.8nm,0.5s,baz=216,slow=5.4,SNR=90
ILAR pP pP 12 09 49.1 0.0
comp=Z,0.7nm,0.9s,baz=242,slow=5.1,SNR=4.1
VNA3 Neumayer Olymp 88.30 176 P P 12 07 43.0 -0.3
VNA2 Neumayer--Watz 88.74 177 P P 12 07 45.4 0.0
baz=186,slow=3.2
VNA1 Neumayer--Stat 88.97 177 P P 12 07 46.3 -0.2
PDAR Pinedale Array 89.08 43 P P 12 07 48.5 +0.7
comp=Z,0.8nm,0.5s,baz=197,slow=4.1,SNR=12
PRP Porcupine Dome 89.19 13 P P 12 07 47.3 -0.2
PRP IAmb IAmb 12 07 49.6
comp=Z,5.8nm,1.0s
DAWY Dawson 89.42 16 P P 12 07 48.8 +0.3
DAWY IAmb IAmb 12 07 50.1
comp=Z,8.4nm,1.0s
EGAK Eagle 89.56 15 P P 12 07 49.5 +0.4
EGAK IAmb IAmb 12 07 50.5
comp=Z,8.1nm,0.9s
PLCA Paso Flores 89.60 134 P P 12 07 50.6 +0.5
comp=Z,3.2nm,1.0s,baz=263,slow=9.5,SNR=5.9
PLCA Paso Flores 89.60 134 IAmb IAmb 12 07 51.9
comp=Z,3.1nm,0.8s
CM31 Chiang Mai Arr 89.76 290 P P 12 07 52.8 +1.7
CM31 IAmb IAmb 12 07 53.8
comp=Z,16nm,0.9s
CMAR Chiang Mai Arr 89.76 290 P P 12 07 53.0 +1.8
comp=Z,11nm,0.9s,baz=124,slow=2.9,SNR=63
CHTO Chiang Mai 89.89 290 P P 12 07 52.2 +0.5
CMIG Matias Romero 89.94 72 P P 12 07 53.0 +1.1
comp=Z,0.7nm,0.3s,baz=251,slow=4.3,SNR=4.5
LZH Lanzhou 92.43 308 eP P 12 08 04.4 +1.2
LZH pP pP 12 10 05.8 -4.1
LZH sP sP 12 11 05.6 -2.3
INK Inuvik 94.22 15 P P 12 08 10.7 +0.3
comp=Z,1.1nm,0.8s,baz=258,slow=6.4,SNR=6.0
ULN Ulaanbaatar 95.05 319 P P 12 08 14.1 -0.8
ULN IAmb IAmb 12 08 17.0
comp=Z,2.9nm,0.8s
SONM Songino Array 95.44 319 P P 12 08 16.4 -0.2
comp=Z,1.2nm,0.8s,baz=142,slow=5.5,SNR=6.9
YKA Yellowknife Ar 96.52 25 P P 12 08 20.9 0.0
comp=Z,0.4nm,0.7s,baz=244,slow=4.5,SNR=6.6
GTA Gaotai 96.64 309 eP P 12 08 22.8 +0.6
GTA pP pP 12 10 29.6 +0.5
GTA sP sP 12 11 25.1 -1.9
ZALV Zalesovo Beam 110.18 321 PKiKP PKiKP 12 13 18.3 -1.2
comp=Z,1.4nm,0.6s,baz=182,slow=1.5,SNR=6.9
MKAR Makanchi Array 110.87 313 PKiKP PKiKP 12 13 19.3 -1.7
comp=Z,1.1nm,0.6s,baz=93,slow=1.4,SNR=11
MKAR PKKPbc PKKPbc 12 24 19.4 -2.1
comp=Z,0.1nm,0.6s,baz=270,slow=2.4,SNR=4.1
KURBB Kurchatov Arra 113.72 317 PKiKP PKiKP 12 13 25.2 -1.0
comp=Z,1.7nm,0.7s,baz=93,slow=1.9,SNR=9.6
KURBB SKP 12 16 07.9
comp=Z,0.6nm,0.6s,baz=71,slow=2.3,SNR=4.8
BRVK Borovoye 118.83 320 PKP PKPdf 12 13 34.8 -1.2
SPITS Spitsbergen Ar 121.71 356 PKP PKPdf 12 13 40.1 -0.9
comp=Z,4.2nm,0.7s,baz=147,slow=8.6,SNR=3.5
ARU Arti 124.90 325 PKP PKPdf 12 13 47.6 0.0
comp=Z,1.9nm,0.5s,baz=15,slow=0.3,SNR=10.0
AKTO Aktyubinsk 126.75 318 PKP PKPdf 12 13 51.8 +0.4
comp=Z,2.6nm,0.7s,baz=58,slow=3.2,SNR=10.0
ARCES ARCESS Array B 128.73 349 PKhKP PKPpre 12 13 42.5
comp=Z,1.8nm,0.7s,baz=45,slow=5.8,SNR=3.8
ARCES PKP PKPdf 12 13 54.2 -0.3
comp=Z,2.5nm,0.6s,baz=82,slow=1.1,SNR=19
ARCES SKPbc 12 16 24.2
comp=Z,7.0nm,1.1s,baz=3.4,slow=6.1,SNR=4.2
FINES FINESS Array B 135.55 344 PKhKP PKPpre 12 13 55.7
comp=Z,3.1nm,0.9s,baz=0.0,slow=1.9,SNR=6.6
FINES PKP PKPdf 12 14 07.4 -0.2
comp=Z,1.4nm,0.5s,baz=49,slow=3.7,SNR=8.1
FINES SKPbc SKPbc 12 16 46.5 +2.0
comp=Z,3.7nm,0.8s,baz=56,slow=2.5,SNR=7.2
KBZ Khabaz 138.56 314 SKPbc SKPbc 12 16 55.1 +1.3
comp=Z,0.7nm,0.4s,baz=245,slow=12,SNR=3.5
NB2 NORSAR Subarra138.81 353 PKP PKPdf 12 14 04.8 -8.9
comp=Z,1.5nm,0.9s,baz=16,slow=3.2
NOA NORSAR Array B 138.81 353 PKhKP PKPpre 12 14 05.4
comp=Z,1.5nm,0.7s,baz=16,slow=5.0,SNR=4.8
NOA SKPbc SKiKP 12 16 56.4 -0.7
comp=Z,4.1nm,0.9s,baz=14,slow=4.4,SNR=6.7
HFS Hagfors 139.35 351 PKhKP PKPpre 12 14 06.4
comp=Z,2.9nm,0.4s,baz=54,slow=2.5,SNR=21
HFS SKPbc SKiKP 12 16 57.1 -1.0
comp=Z,5.6nm,0.8s,baz=327,slow=2.5,SNR=5.6
SUW Suwalki 142.59 339 PKPdf 12 14 17.5 -3.1
AKASG Malin Array Be 142.74 331 PKhKP PKPpre 12 14 17.8
comp=Z,17nm,0.5s,baz=42,slow=4.4,SNR=153
AKASG SKPbc SKiKP 12 17 06.2 +0.9
comp=Z,2.0nm,0.8s,baz=44,slow=2.7,SNR=7.6
AKBB Malin Array Si 142.74 331 PKPpre 12 14 17.8
SEVA Sevastopol 144.16 320 ⇓P PKPbc 12 14 20.9 -2.5
DIKM Dikmen 144.56 314 ⇑P PKiKP 12 14 27.4 -1.0
MBAR Mbarara 144.72 237 PKP PKPdf 12 14 26.0 +0.2
comp=Z,4.1nm,0.5s,baz=170,slow=6.1,SNR=7.0
GAZ Gaziantep 144.87 306 PKPbc 12 14 26.4 +0.5
SORM Soroca 144.92 328 ⇓P PKPdf 12 14 24.9 +0.1
BEL Belsk 145.21 339 ePKP PKPbc 12 14 27.2 +0.9
BSEG Bad Segeberg 145.83 351 ePKPbc PKPbc 12 14 28.4 +0.4
baz=15,slow=2.5
ILGA Ilgaz 145.86 314 PKPbc 12 14 29.4 +0.6
LEOM Leova 146.08 326 ⇑P PKPbc 12 14 29.6 +0.6
VASR Vaslui 146.21 327 ⇑P PKPbc 12 14 29.8 +0.5
KWP Kalwaria Pacla 146.32 335 PKPbc 12 14 29.6 0.0
BR131 Keskin Array S 146.51 312 PKPbc 12 14 30.3 -0.3
BRTR Keskin Array B 146.51 312 PKPbc PKPbc 12 14 30.3 -0.3
comp=Z,6.3nm,0.6s,baz=134,slow=4.7,SNR=34
RUE Ruedersdorf 146.59 347 ePKPbc PKPbc 12 14 30.5 +0.4
baz=15,slow=2.5
RUE ePKPab PKPab 12 14 33.4 +0.4
baz=16,slow=4.1
TLCR 146.61 324 ⇑P PKPbc 12 14 30.7 +0.3
BUR08 Bucovina Ar. S 146.77 330 PKPbc 12 14 31.7 +0.7
BURAR Bucovina Array 146.78 330 ⇑P PKPbc 12 14 31.9 +0.9
GHRR 146.79 326 ⇑P PKPbc 12 14 31.5 +0.6
TESR Tescani 146.87 328 ⇑P PKPbc 12 14 30.9 -0.3
CFR Carcaliu 146.98 325 ⇑P PKPbc 12 14 31.4 -0.1
ANTO Ankara 147.03 313 ⇓P PKPbc 12 14 32.2 +0.3
TOPG Topolog 147.04 324 ⇓P PKPbc 12 14 31.9 +0.3
RETH Rethem/Aller, 147.14 351 ePKPbc PKPbc 12 14 32.0 +0.5
baz=15,slow=2.5
NRDL Niedersach Rie 147.26 350 ePKPbc PKPbc 12 14 32.2 +0.4
baz=15,slow=2.5
VRI Vrincioaia 147.28 327 ⇑P PKPbc 12 14 32.5 +0.2
PLOR Plostina 147.32 327 ⇑P PKPbc 12 14 32.1 -0.3
CRVS Cervenica-Dubn 147.39 335 ePKP PKPbc 12 14 33.3 +0.9
CRVS e 12 14 37.0
NIE Niedzica 147.41 337 ePKP PKPbc 12 14 33.3 +0.8
KSP Ksiaz 147.46 343 ePKP PKPbc 12 14 33.5 +1.0
MMAI Mount Meron Ar 147.46 300 PKPbc PKPbc 12 14 33.9 +0.7
comp=Z,10.0nm,0.5s,baz=63,slow=5.7,SNR=14
ASSE Asse, Remlinge 147.52 350 ePKPbc PKPbc 12 14 33.1 +0.6
baz=15,slow=2.5
ARCR ARCALIA 147.57 331 ⇑P PKPbc 12 14 33.5 +0.6
TRPA Tarpa 147.57 334 ⇑P PKPbc 12 14 33.1 +0.2
MANR Mangalia 147.58 322 ⇑P PKPbc 12 14 33.0 -0.1
OSTC Ostas 147.74 343⇑ePKP PKPbc 12 14 34.0 +0.7
CHVC Chvalec 147.76 343⇑ePKP PKPbc 12 14 33.6 +0.3
IBBN Ibbenburen 147.76 353 ePKPbc PKPbc 12 14 33.7 +0.5
baz=15,slow=2.5
IBBN ePKPab PKPab 12 14 37.9 +0.2
baz=16,slow=4.1
OKC Ostrava-Krasne 147.79 340⇑ePKP PKPbc 12 14 33.9 +0.5
OKC ePKPAB PKPab 12 14 39.1 +1.1
MDUB Mudurnu 147.82 315 PKPbc 12 14 33.7 -0.3
UPC Upice 147.84 343⇑ePKP PKPbc 12 14 34.2 +0.7
UPC ePKPAB PKPab 12 14 38.9 +0.7
CLZ Clausthal 147.85 350 ePKPbc PKPbc 12 14 34.2 +0.6
baz=15,slow=2.5
CLL Collm 147.85 347 ePKPbc PKiKP 12 14 34.8 -0.1
baz=15,slow=2.5
CLL Collm 147.85 347⇓iPKPbc PKiKP 12 14 34.8 -0.1
comp=Z,28nm,0.9s
CLL ⇑iPKPab PKPab 12 14 39.4 +1.2
comp=Z,14nm,0.7s
CLL epPKPab pPKPab 12 16 50.0 +1.7
CLL Collm 147.85 347 PKPbc 12 14 34.3 +0.8
DOPR Dopca 147.88 328 ⇓P PKPbc 12 14 34.2 +0.4
DPC Dobruska-Polom 147.90 342⇑ePKP PKPbc 12 14 34.4 +0.7
DPC ePKPAB PKPab 12 14 39.7 +1.2
LANS Liptovska Anna 147.93 338 ePKP PKiKP 12 14 35.2 0.0
LANS e 12 14 40.3
MLR Muntele Rosu 147.93 327 PKPbc PKPbc 12 14 33.9 -0.1
comp=Z,7.2nm,0.6s,baz=18,slow=6.4,SNR=12
MLR Muntele Rosu 147.93 327 ⇑P PKPbc 12 14 34.4 +0.3
KRLC Kraliky 148.01 341⇑ePKP PKPbc 12 14 34.1 +0.1
KRLC ePKPAB PKPab 12 14 39.3 +0.3
MORC Moravsky Berou 148.04 340 ePKP PKPbc 12 14 34.6 +0.5
MORC e 12 14 39.7
MORC Moravsky Berou 148.04 340 ⇑P PKPbc 12 14 34.6 +0.5
MORC Moravsky Berou 148.04 340 PKiKP 12 14 35.6 +0.2
MORC PKPab 12 14 40.0 +0.9
BRG Berggiesshubel 148.04 345 ePKP PKPbc 12 14 34.3 +0.3
comp=Z,13nm,0.7s
BRG i 12 14 39.3
comp=Z,11nm,0.7s
BRG epPKP pPKPdf 12 16 47.5 +1.3
comp=Z,4.3nm,1.3s
BRG Berggiesshubel 148.04 345 ePKPbc PKPbc 12 14 34.6 +0.6
baz=15,slow=2.5
BRG ePKPab PKPab 12 14 39.4 +0.4
baz=16,slow=4.1
KECS Kecovo 148.11 336 ePKP PKPab 12 14 40.4 +1.0
FBE Freiberg 148.14 346 ePKPab PKPab 12 14 40.0 +0.7
baz=16,slow=4.1
SECR 148.18 326 ⇑P PKPbc 12 14 35.1 +0.6
GTTG Gottingen 148.20 350 ePKPbc PKPbc 12 14 35.1 +0.8
baz=15,slow=2.5
GTTG ePKPab PKPab 12 14 40.0 +0.4
baz=16,slow=4.1
NEUB Neuenburg 148.20 348 ePKPab PKPab 12 14 40.3 +0.7
baz=16,slow=4.1
PVCC Panska Ves 148.21 344⇑ePKP PKPbc 12 14 35.2 +0.8
PVCC ePKPAB PKPab 12 14 40.2 +0.5
VOIR 148.42 328 ⇑P PKPbc 12 14 35.6 +0.3
EIL Elat 148.53 294 PKPbc PKPbc 12 14 36.6 +0.7
comp=Z,7.3nm,0.7s,baz=7.5,slow=1.8,SNR=6.8
DRGR 148.53 332 ⇑P PKPbc 12 14 34.4 -1.0
ARR Arges 148.68 328 ⇓P PKPbc 12 14 36.1 +0.2
VYHS Vyhne 148.71 338 ePKP PKPbc 12 14 36.4 +0.6
VYHS e 12 14 42.6
PRU Pruhonice 148.71 344⇑ePKP PKPbc 12 14 35.8 +0.1
PRU ePKPAB PKPab 12 14 42.3 +0.5
GOPC GO Pecny, Ondr 148.72 344⇑ePKP PKPbc 12 14 36.1 +0.4
GOPC ePKPAB PKPab 12 14 42.3 +0.5
VRAC Vranov 148.75 341 ePKP PKPbc 12 14 36.3 +0.5
VRAC e 12 14 42.6
VRAC Vranov 148.75 341 PKPbc PKPbc 12 14 36.5 +0.7
comp=Z,4.1nm,0.8s,baz=221,slow=1.1,SNR=4.5
VRAC PKPab PKPab 12 14 42.8 +0.8
comp=Z,5.2nm,0.7s,baz=24,slow=2.2,SNR=6.4
VRAC Vranov 148.75 341 ⇓P PKPbc 12 14 36.3 +0.5
MOX Moxa 148.77 348 ePKPbc PKPbc 12 14 36.3 +0.5
baz=15,slow=2.5
JAVC Velka Javorina 148.80 339 ePKP PKiKP 12 14 37.7 +0.7
PSZ Piszkesteto 148.80 336 ⇑P PKPbc 12 14 35.8 -0.3
PLN Plauen 148.81 347 ePKPbc PKPbc 12 14 36.5 +0.6
baz=15,slow=2.5
PLN ePKPab PKPab 12 14 42.2 0.0
baz=16,slow=4.1
GUNZ Gunzen 148.89 347 ePKPbc PKPbc 12 14 36.8 +0.7
baz=15,slow=2.5
GUNZ ePKPab PKPab 12 14 42.8 +0.2
baz=16,slow=4.1
WERN Wernitzgruen 148.95 347 ePKPab PKPab 12 14 43.2 +0.4
baz=16,slow=4.1
NKC Novy Kostel 148.99 347⇑ePKP PKPbc 12 14 36.9 +0.5
KRUC Moravsky 149.02 341 ePKP PKPbc 12 14 36.9 +0.4
KRUC e 12 14 43.7
LOT Lotru 149.04 329 ⇑P PKPbc 12 14 36.6 -0.2
PBCC Pribram 149.13 344⇑ePKP PKPbc 12 14 36.7 0.0
PBCC ePKPAB PKPab 12 14 43.1 -0.4
MANZ Manzenberg 149.29 347 ePKPbc PKPbc 12 14 37.5 +0.4
baz=15,slow=2.5
MODS Modra-Piesok 149.35 339 ePKP PKPbc 12 14 37.1 -0.2
SIRR Siria 149.40 332 ⇓P PKPbc 12 14 37.3 -0.2
GZR Gura Zlata 149.56 330 ⇑P PKPbc 12 14 36.1 -1.9
ZST Bratislava 149.56 339 ePKP PKPbc 12 14 37.8 0.0
ELND Elena 149.68 323 ⇑P PKPbc 12 14 38.2 -0.1
KHC Kasperske Hory 149.75 344⇑ePKP PKPbc 12 14 38.3 0.0
KHC ePKPAB PKPab 12 14 46.6 +0.4
KHC Kasperske Hory 149.75 344 PKiKP 12 14 39.0 +0.1
KHC PKPab 12 14 46.3 +0.1
GRF Grafenberg Arr 149.76 348 ePKPbc PKPbc 12 14 38.8 +0.5
baz=15,slow=2.5
BZS Buzias 149.92 331 ⇑P PKPbc 12 14 37.1 -1.6
GEC2 GERESS Array S 149.98 344 ePKPbc PKPbc 12 14 38.9 0.0
baz=15,slow=2.5
GEC2 ePKPab PKPab 12 14 47.7 +0.5
baz=16,slow=4.1
GEC2 GERESS Array S 149.98 344 PKPbc 12 14 38.7 -0.2
GERES GERESS Array B 149.98 344 PKPbc PKPbc 12 14 39.0 +0.2
comp=Z,4.0nm,0.7s,baz=29,slow=2.6,SNR=32
GERES PKPab PKPab 12 14 47.5 +0.3
comp=Z,2.6nm,0.7s,baz=16,slow=4.6,SNR=9.8
PLVB Pleven 150.06 325 ⇓P PKPbc 12 14 39.0 -0.1
CONA Conrad Observa 150.19 341 i PKiKP PKiKP 12 14 40.0 +0.1
comp=Z,8.0nm,0.6s
ELL Elmali 150.44 310 PKPbc PKPbc 12 14 39.0 -1.3
ELL PKPab 12 14 48.8 -0.9
MDVR Moldovita 150.52 330 ⇑P PKPbc 12 14 39.2 -1.0
MANT Manisa 150.57 314 PKPbc 12 14 40.6 -0.2
MOA Molln 150.74 342 ePKiKP PKPbc 12 14 40.7 +0.1
comp=Z,3.1nm,0.5s,SNR=5.8
FUR Furstenfeldbru 151.19 347 ePKPbc PKPbc 12 14 41.8 +0.2
baz=15,slow=2.5
FUR ePKPab PKPab 12 14 52.8 +0.6
baz=16,slow=4.1
RJOB Jochberg 151.24 344 ePKPab PKPab 12 14 53.2 +0.7
baz=16,slow=4.1
VTS Vitosha 151.33 326 ⇑P PKPbc 12 14 41.6 -0.7
VTS Vitosha 151.33 326 PKPbc 12 14 41.9 -0.3
SOKA Soboth 151.56 340 i PKiKP PKPbc 12 14 42.1 -0.5
comp=Z,6.8nm,1.1s
BFO Black Forest 151.58 351 ePKPbc PKPbc 12 14 42.7 +0.3
baz=15,slow=2.5
KBA Koelnbreinsper 151.70 343 ePKiKP PKPbc 12 14 42.4 -0.6
comp=Z,2.3nm,0.5s,SNR=6.9
UBR Ueberruh 151.90 348 ePKPbc PKPbc 12 14 43.5 +0.2
baz=15,slow=2.5
WATA Walderalm 151.91 346 ePKiKP PKPbc 12 14 43.1 -0.3
comp=Z,4.4nm,0.5s,SNR=4.9
RETA Reutte 151.95 347 ePKiKP PKPbc 12 14 43.4 0.0
comp=Z,1.1nm,0.5s
WTTA Wattenberg 151.96 345 ePKiKP PKPbc 12 14 43.5 -0.1
comp=Z,5.1nm,0.4s,SNR=7.8
MOTA Moosalm 152.01 346 ePKiKP PKPbc 12 14 43.5 -0.1
comp=Z,6.5nm,0.8s
MYKA Terra Mystica 152.02 342 i PKiKP PKPbc 12 14 42.9 -0.7
comp=Z,3.2nm,0.5s
SQTA Sankt Quirin 152.10 346 ePKiKP PKPbc 12 14 43.6 -0.1
comp=Z,3.4nm,0.5s,SNR=4.5
VNDS Vrh nad Dolski 152.18 340 i PKPbc PKPbc 12 14 43.6 -0.3
ABTA Abfaltersbach 152.22 344 ePKiKP PKPbc 12 14 43.3 -0.7
comp=Z,9.3nm,0.6s,SNR=10.0
CRNS Crni Vrh 152.34 341 i PKPbc PKPbc 12 14 43.8 -0.4
FETA Feichten 152.40 347 ePKiKP PKPbc 12 14 44.4 -0.1
comp=Z,3.9nm,0.7s,SNR=4.5
DAVOX Davos/Dischmat 152.80 348 PKPbc PKPbc 12 14 45.7 +0.3
comp=Z,5.7nm,0.5s,baz=263,slow=3.4,SNR=17
FUORN Ofenpass-Fuorn 152.88 347 PKPbc 12 14 45.7 +0.1
FUORN PKPab PKPab 12 14 59.9 +0.1
CTI Castel Tesino 153.10 345 PKPbc PKPbc 12 14 45.8 -0.2
CTI PKPab 12 15 00.0 -0.5
LIT Litokhoron 153.45 322 PKPab 12 15 02.0 -0.1
TEOL Teolo 153.73 344 PKPab 12 15 02.2 -0.9
ESDC Sonseca Array 160.16 13 PKPab PKPab 12 15 31.9 +0.8
comp=Z,0.8nm,0.6s,baz=346,slow=3.8,SNR=5.0
LIC Lamto 164.52 154 ePKP2 PKPab 12 15 50.5 -0.4
comp=Z,9.0nm,0.6s
KIC Kosan Boka 164.76 155 ePKP2 PKPab 12 15 51.6 -0.3
comp=Z,22nm,1.1s
TIC Toumodi 164.91 154 ePKP2 PKPab 12 15 52.1 -0.5
DBIC Dimbokro 165.00 154 PKPab PKPab 12 15 53.4 +0.5
comp=Z,8.5nm,1.1s,baz=240,slow=4.4,SNR=5.5
TORD Torodi Ar. Bea 172.83 180 PKPab PKPab 12 16 27.7 +0.2
comp=Z,1.0nm,0.8s,baz=173,slow=2.4,SNR=4.8

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*IDC **23** 12:04:56.5±2.7, 19°.80S×175°.50W, h134km±23km, mb4.1/22, mb1 4.2/24, mb1mx4.0/50, mbtmp4.5/24, Error ellipse: s-maj=21.5km s-min=11.2km az=136.0*
*NEIC **23** 12:04:56.7±1.8, 19°.86S±0°.10×175°.4W±0°.1, h142km±5km, mb4.6/61, Error ellipse: s-maj=14.9km s-min=12.9km az=137.0*
ISC 23 12:04:56.9±0.4, **19°.96S**±0°.07×**175°.20W**±0°.07, **h150km**, **n152**, σ1s.**64**/161, **mb4.5**/47, **12C-3D**, **Tonga Islands**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
NIUE Niue 5.05 81 Pn Pn 12 06 13.5 +2.5
NIUE Sn 12 07 06.8 -1.9
AFI Afiamalu 6.85 29 P Pn 12 06 34.3 -0.8
7.0nm,0.3s,baz=197,slow=6.2,SNR=26
AFI S Sn 12 07 45.7 -6.2
18nm,0.3s,baz=129,slow=22,SNR=7.7
AFI Afiamalu 6.85 29 Pn 12 06 33.8 -1.2
AFI Sn Sn 12 07 47.3 -4.7
DZM Mont Dzumac 17.27 260 P Pn 12 08 49.9 +0.6
2.3nm,0.3s,baz=137,slow=9.2,SNR=23
DZM Mont Dzumac 17.27 260 P Pn 12 08 51.1 +1.9
DZM IAmb IAmb 12 08 54.0
comp=Z,25nm,0.7s
SANVU Saraoutou 17.36 282 P Pn 12 08 52.0 +1.8
SANVU IAmb IAmb 12 08 55.3
comp=Z,39nm,1.0s
NOUC Port Laguerre 17.40 260 P Pn 12 08 52.4 +1.7
NOUC IAmb IAmb 12 08 54.1
comp=Z,31nm,1.2s
HAZ Te Kaha 18.76 198 P Pn 12 09 07.2 +0.6
PUZ Puketiti 18.93 196 P Pn 12 09 09.9 +1.4
RUGZ Raukumara Rang 18.98 198 P Pn 12 09 09.6 +0.3
MWZ Matawai 19.37 197 P Pn 12 09 13.6 -0.1
TKGZ Te Karaka 19.38 197 P Pn 12 09 13.2 -0.6
URZ Urewera 19.42 198 P P 12 09 12.7 +1.1
comp=Z,4.1nm,0.3s,baz=286,slow=3.4,SNR=28
URZ S S 12 12 35.6 -7.4
comp=Z,0.7nm,0.3s,baz=220,slow=20,SNR=6.2
URZ Urewera 19.42 198 P P 12 09 12.7 +1.1
URZ Urewera 19.42 198 P P 12 09 10.0 -1.6
TOZ Tahuroa Road 19.47 203 P Pn 12 09 15.3 +0.4
RIGZ Rimuhau 19.65 197 P Pn 12 09 16.2 -0.9
NMHZ Naumai 20.29 198 P P 12 09 22.4 +1.4
HIZ Hauiti 20.40 203 P Pn 12 09 25.4 -0.5
HIZ Hauiti 20.40 203 P Pn 12 09 25.3 -0.6
BKZ Black Stump Fm 20.44 199 P P 12 09 21.8 -0.8
BKZ IAmb IAmb 12 09 39.8
comp=Z,23nm,1.3s
BKZ Black Stump Fm 20.44 199 P P 12 09 22.2 -0.4
FWVZ Far West T-bar 20.82 201 P P 12 09 27.7 +0.8
BHHZ Black Hill Sta 20.87 199 P P 12 09 26.7 -0.5
TUWZ Tuamarina 23.31 201 P P 12 09 51.6 +0.1
THZ Tophouse 23.97 202 P P 12 10 01.2 +3.7
KHZ Kahutara 24.33 201 P P 12 10 04.3 +3.6
KHZ IAmb IAmb 12 10 16.5
comp=Z,44nm,1.4s
LTZ Lake Taylor 25.09 202 P P 12 10 10.8 +3.2
LTZ IAmb IAmb 12 10 16.5
comp=Z,21nm,1.0s
RPZ Rata Peaks 26.34 203 P P 12 10 22.1 +3.2
comp=Z,17nm,0.7s,baz=30,slow=4.4,SNR=7.2
RPZ Rata Peaks 26.34 203 P P 12 10 22.9 +4.0
FOZ Fox Glacier 26.65 205 P P 12 10 24.9 +3.3
EIDS Eidsvold 31.53 254 P P 12 11 05.1 0.0
EIDS IAmb IAmb 12 11 10.2
comp=Z,9.1nm,1.0s
ARMA Armidale 31.67 244 P P 12 11 05.6 -0.8
ARMA IAmb IAmb 12 11 09.0
comp=Z,22nm,1.5s
CTA Charters Tower 36.17 263 P P 12 11 44.5 -0.7
comp=Z,12nm,0.3s,baz=87,slow=11,SNR=44
PMG Port Moresby 37.81 281 P P 12 11 58.8 -0.3
TOO Toolangi 38.34 234 P P 12 12 02.3 -1.0
TOO IAmb IAmb 12 12 02.8
comp=Z,8.3nm,1.1s
COEN Coen 40.19 272 P P 12 12 17.7 -1.2
COEN IAmb IAmb 12 12 18.9
comp=Z,10nm,1.0s
STKA Stephens Creek 40.39 244 P P 12 12 19.3 -1.1
comp=Z,2.4nm,0.6s,baz=69,slow=12,SNR=8.9
STKA Stephens Creek 40.39 244 P P 12 12 19.1 -1.3
MANU Manus Island 40.67 291 P P 12 12 23.5 +0.6
BBOO Buckleboo 45.14 243 P P 12 12 57.0 -1.7
BBOO IAmb IAmb 12 13 12.1
comp=Z,18nm,1.5s
WR0 Warramunga Arr 47.09 261 P P 12 13 12.5 -1.6
WR0 IAmb IAmb 12 13 28.2
comp=Z,15nm,1.5s
AS31 Alice Springs 47.20 256 P P 12 13 13.7 -1.3
ASAR Alice Springs 47.20 256 P P 12 13 13.6 -1.4
comp=Z,7.0nm,0.8s,baz=87,slow=8.4,SNR=120
ASAR PcP PcP 12 14 43.9 -0.2
comp=Z,3.0nm,0.7s,baz=106,slow=3.7,SNR=11
WB0 Warramunga Arr 47.26 261 P P 12 13 13.8 -1.7
WB0 IAmb IAmb 12 13 14.7
comp=Z,5.6nm,0.6s
WB2 Warramunga Arr 47.27 261 P P 12 13 13.7 -1.8
WRAB Tennant Creek 47.28 261 P P 12 13 13.6 -1.9
WRAB IAmb IAmb 12 13 15.0
comp=Z,14nm,1.4s
WRA Warramunga Arr 47.28 261 P P 12 13 13.6 -2.0

comp=Z,1.8nm,0.3s,baz=97,slow=7.4,SNR=78
WRA PcP PcP 12 14 44.3 -0.1
comp=Z,1.6nm,0.5s,baz=82,slow=3.5,SNR=8.0
FORT Forrest 51.92 246 P P 12 13 48.5 -2.0
FORT IAmb IAmb 12 14 00.6
comp=Z,13nm,1.0s
KNRA Kununurra 53.33 265 P P 12 13 59.8 -1.2
KNRA IAmb IAmb 12 14 15.3
comp=Z,6.9nm,0.9s
SIJI Sorong 55.66 283 P P 12 14 16.9 -1.0
comp=Z,17nm,0.7s,baz=173,slow=22,SNR=9.2
FITZ Fitzroy Crossi 55.71 261 P P 12 14 17.2 -1.0
SOEI Soe 59.12 270 P P 12 14 43.0 +0.6
PSA00 Pilbara Seismi 60.35 256 P P 12 14 49.0 -1.5
PSA00 IAmb IAmb 12 14 53.0
comp=Z,8.6nm,0.9s
QSPA South Pole Qui 70.11 180 P P 12 15 54.7 +1.9
MJAR Matsushiro Arr 71.37 322 P P 12 16 00.2 -0.5
comp=Z,5.5nm,0.7s,baz=136,slow=6.2,SNR=20
MAJO Matsushiro 71.38 322 P P 12 16 00.3 -0.4
MAJO IAmb IAmb 12 16 01.2
comp=Z,9.2nm,1.1s
MAT Matsushiro 71.38 322 P P 12 16 00.0 -0.7
MJB9 Matsu-Tunnel 71.38 322 P P 12 16 00.7 0.0
MJB9 IAmb IAmb 12 16 01.2
comp=Z,9.5nm,1.1s
KKM Kota Kinabalu 72.18 283 P P 12 16 05.3 -0.8
UNV Unalaska Valle 73.88 5 P P 12 16 14.8 -0.1
UNV IAmb IAmb 12 16 16.1
comp=Z,22nm,1.2s
YULB Yu-li 75.43 302 P P 12 16 23.3 -1.4
YULB IAmb IAmb 12 16 31.4
comp=Z,16nm,1.1s
TPUB Ta-pu 75.92 301 P P 12 16 25.8 -1.7
TPUB IAmb IAmb 12 16 40.7
comp=Z,23nm,1.2s
PEA0B Petropavlovsk- 76.46 344 P P 12 16 30.1 +0.3
PETK Petropavlovsk- 76.46 344 P P 12 16 29.9 +0.1
comp=Z,4.9nm,0.7s,baz=122,slow=8.9,SNR=6.5
KMRM Mail Ridge 76.69 38 P P 12 16 34.1 +2.6
KMRM IAmb IAmb 12 16 34.7
comp=Z,8.4nm,0.8s
YBH Yreka Blue Hor 78.24 37 P P 12 16 42.2 +2.1
comp=Z,1.5nm,0.8s,baz=147,slow=5.0,SNR=5.0
KSRS Korea Array 78.26 317 P P 12 16 41.5 +1.4
comp=Z,1.7nm,1.0s,baz=144,slow=6.5,SNR=6.5
YERR Yerington 78.59 41 P P 12 16 44.2 +1.9
NVAR Mina Array Bea 78.84 42 P P 12 16 45.8 +2.1
comp=Z,1.1nm,0.6s,baz=225,slow=7.6,SNR=12
OHAK Old Harbor 79.05 12 P P 12 16 44.6 +0.6
KDAK Kodiak Island 79.71 12 P P 12 16 48.7 +1.1
comp=Z,27nm,1.1s,baz=136,slow=11,SNR=3.3
MOD Modoc Plateau 79.74 38 P P 12 16 50.5 +2.1
PINE Pine Mountain 80.56 37 P P 12 16 55.0 +2.2
I07A Izee 81.55 37 P P 12 16 59.9 +2.0
NJ2 Nanjing 81.59 308 eP P 12 16 59.4 +1.2
RC01 Rabbit Creek A 83.33 12 P P 12 17 08.8 +2.2
RC01 IAmb IAmb 12 17 08.9
comp=Z,12nm,1.0s
KLR Kul'dur 83.43 328 P P 12 17 09.2 +1.9
comp=Z,0.4nm,0.3s,baz=158,slow=5.4,SNR=3.7
SUA Susitna One 83.48 12 P P 12 17 08.3 +0.8
SUA IAmb IAmb 12 17 08.7
comp=Z,7.7nm,0.8s
GLI Glacier Island 83.69 13 P P 12 17 08.0 -0.5
KNK Knik Glacier 83.88 13 P P 12 17 10.2 +0.7
PMR Palmer 83.91 12 P P 12 17 09.9 +0.4
PMR IAmb IAmb 12 17 21.5
comp=Z,12nm,1.3s
F10A Beach Ranch, E 83.99 36 P P 12 17 11.1 +0.6
MA2 Magadan 83.99 343 P P 12 17 09.4 -0.5
comp=Z,1.8nm,0.5s,baz=152,slow=18,SNR=2.9
MA2 Magadan 83.99 343 P P 12 17 09.2 -0.7
MA2 IAmb IAmb 12 17 18.9
comp=Z,10nm,1.4s
GHO Glory Hole Cre 84.11 12 P P 12 17 11.2 +0.6
GHO IAmb IAmb 12 17 19.6
comp=Z,16nm,1.3s
B08A Colville Reser 84.30 34 P P 12 17 12.9 +1.0
SCM Sheep Creek Mo 84.50 13 P P 12 17 13.3 +0.7
TRF Thorofare Moun 85.39 11 P P 12 17 17.2 +0.1
TRF IAmb IAmb 12 17 17.8
comp=Z,11nm,0.8s
MCK McKinley 85.90 11 P P 12 17 19.8 +0.4
SEY Seymchan 86.47 346 P P 12 17 22.2 0.0
comp=Z,5.2nm,0.6s,baz=138,slow=6.7,SNR=26
DLBC Dease Lake 86.55 22 P P 12 17 25.9 +3.0
comp=Z,1.2nm,0.3s,baz=285,slow=0.5,SNR=8.3
DLBC Dease Lake 86.55 22 IAmb IAmb 12 17 26.9
comp=Z,12nm,1.2s
PDAR Pinedale Array 86.78 42 P P 12 17 24.9 +0.3
comp=Z,0.3nm,0.6s,baz=212,slow=5.3,SNR=3.5
CCB Clear Creek Bu 86.94 11 P P 12 17 24.6 +0.2
CCB IAmb IAmb 12 17 35.8
comp=Z,7.3nm,1.4s
IL31 87.23 12 P P 12 17 26.0 +0.2
ILAR Eielson Array 87.23 12 P P 12 17 25.4 -0.5
comp=Z,0.9nm,0.4s,baz=214,slow=5.0,SNR=32
SYO Syowa Base 87.81 192 ⇓P P 12 17 26.6 -2.2
XAN Xi'an 89.92 306 P P 12 17 39.9 +0.6
CMAR Chiang Mai Arr 92.43 289 P P 12 17 52.1 +0.9
comp=Z,0.8nm,0.5s,baz=115,slow=2.8,SNR=8.0
INK Inuvik 93.08 14 P P 12 17 53.5 +0.4
comp=Z,0.9nm,0.7s,baz=209,slow=1.6,SNR=6.0
INK PP PP 12 21 37.1 -1.4
comp=Z,1.3nm,0.9s,baz=154,slow=7.6,SNR=4.1
YKA Yellowknife Ar 94.94 24 P P 12 18 02.3 +0.6
comp=Z,0.6nm,0.7s,baz=239,slow=4.6,SNR=11
SONM Songino Array 97.09 318 P P 12 18 11.7 -0.4
comp=Z,0.2nm,0.4s,baz=129,slow=5.2,SNR=2.9
ZALV Zalesovo Beam 111.72 321 PKiKP PKiKP 12 23 12.4 -1.1
comp=Z,0.4nm,0.4s,baz=66,slow=3.5,SNR=2.9
MKAR Makanchi Array 112.74 313 PKiKP PKiKP 12 23 14.6 -1.1
comp=Z,0.3nm,0.5s,baz=64,slow=0.7,SNR=7.8
KSH Kashi 116.74 305 PKP PKiKP 12 23 26.6 +2.8
KSH sPKP 12 24 03.8
KSH PP PP 12 24 38.3 +4.0
KSH PKS PKSdf 12 27 04.9 +4.3
ARU Arti 126.23 326 PKP PKiKP 12 23 41.0 -0.7
comp=Z,0.7nm,0.4s,baz=86,slow=17,SNR=3.5
ARCES ARCESS Array B 128.84 351 PKP PKiKP 12 23 46.0 -0.6
comp=Z,2.3nm,0.8s,baz=76,slow=1.1,SNR=14
FINES FINESS Array B 135.95 345 PKP PKiKP 12 24 00.8 -0.4
comp=Z,1.2nm,0.6s,baz=2.9,slow=3.8,SNR=5.9
AKASG Malin Array Be 143.76 334 PKhKP PKPpre 12 24 10.8
comp=Z,0.7nm,0.3s,baz=44,slow=4.3,SNR=8.6
SORM Soroca 146.06 331 ⇑P PKPbc 12 24 18.6 -0.6
KWP Kalwaria Pacla 147.12 338 PKPab 12 24 22.5 -1.7
BUR08 Bucovina Ar. S 147.80 334 PKiKP 12 24 25.0 -1.1
BURAR Bucovina Array 147.81 334 ⇓P PKiKP 12 24 25.1 -1.0
KOLS Kolonicke sedl 147.86 338 ePKP PKPab 12 24 27.6 +0.5
TLCR 147.95 327 ⇑P PKiKP 12 24 25.1 -1.2
CLL Collm 148.06 350 iPKPbc PKiKP 12 24 25.8 -0.5
comp=Z,8.0nm,0.8s
CLL iPKPab PKPab 12 24 28.6 +0.8
comp=Z,5.0nm,0.6s
CLL Collm 148.06 350 PKiKP 12 24 25.9 -0.4
OSTC Ostas 148.16 346⇑ePKP PKiKP 12 24 25.7 -0.9
OSTC ePKPAB PKPab 12 24 29.1 +0.9
CRVS Cervenica-Dubn 148.17 339 ePKP PKPbc 12 24 25.1 0.0
CRVS e 12 24 29.1
BRG Berggiesshubel 148.31 349 ePKP PKiKP 12 24 25.6 -1.3
comp=Z,2.4nm,0.9s
BRG i 12 24 29.2
comp=Z,2.8nm,0.8s
DPC Dobruska-Polom 148.32 346⇑ePKP PKiKP 12 24 26.0 -1.0
DPC ePKPAB PKPab 12 24 29.2 +0.2
BR131 Keskin Array S 148.38 315 PKPbc 12 24 26.0 -0.1
BRTR Keskin Array B 148.38 315 PKPbc PKPbc 12 24 25.7 -0.4
comp=Z,3.3nm,0.8s,baz=122,slow=3.6,SNR=7.9
TOPG Topolog 148.39 327 ⇑P PKiKP 12 24 26.7 -0.5
PRU Pruhonice 149.05 348⇑ePKP PKiKP 12 24 27.4 -1.0
PRU ePKPAB PKPab 12 24 32.1 +0.3
MLR Muntele Rosu 149.13 330 ⇑P PKPbc 12 24 27.5 -0.3
VYHS Vyhne 149.36 342 ePKP PKiKP 12 24 28.5 -0.7
JAVC Velka Javorina 149.36 343 ePKP PKiKP 12 24 29.5 +0.3
DRGR 149.49 335 ⇑P PKiKP 12 24 28.4 -1.1
KRUC Moravsky 149.51 345 ePKP PKiKP 12 24 28.5 -0.9
VOIR 149.58 331 ⇓P PKiKP 12 24 28.9 -0.9
MMAI Mount Meron Ar 149.80 302 PKPbc PKPbc 12 24 28.3 -1.5
comp=Z,1.7nm,0.3s,baz=60,slow=5.9,SNR=4.7
ARR Arges 149.82 332 ⇑P PKiKP 12 24 30.2 0.0
MODS Modra-Piesok 149.91 343 ePKP PKPbc 12 24 29.1 -0.3
KHC Kasperske Hory 150.05 348⇑ePKP PKiKP 12 24 30.2 -0.4
KHC Kasperske Hory 150.05 348 PKiKP 12 24 30.6 0.0
GEC2 GERESS Array S 150.30 348 PKiKP 12 24 30.8 -0.5
GERES GERESS Array B 150.30 348 PKPbc PKiKP 12 24 30.7 -0.5
comp=Z,2.9nm,0.7s,baz=31,slow=2.4,SNR=26
GZR Gura Zlata 150.60 334 ⇑P PKiKP 12 24 31.1 -0.8
CONA Conrad Observa 150.69 345 ePKiKP PKiKP 12 24 32.0 0.0
comp=Z,6.3nm,0.6s
BZS Buzias 150.89 335 ⇑P PKiKP 12 24 31.8 -0.6
MOA Molln 151.14 347 ePKiKP PKiKP 12 24 32.5 -0.3
comp=Z,1.6nm,0.5s
KBA Koelnbreinsper 152.06 347 ePKiKP PKPbc 12 24 34.0 -0.7
comp=Z,3.6nm,0.5s
WATA Walderalm 152.14 350 ePKiKP PKiKP 12 24 34.7 -0.4
comp=Z,3.4nm,0.5s,SNR=4.9
WTTA Wattenberg 152.20 350 ePKiKP PKiKP 12 24 35.0 -0.2
comp=Z,4.6nm,0.4s,SNR=15
SQTA Sankt Quirin 152.31 351 ePKiKP PKiKP 12 24 35.1 -0.3
comp=Z,4.4nm,0.7s
DAVA Damuels 152.43 353 ePKiKP PKiKP 12 24 36.2 +0.5
comp=Z,13nm,1.4s
MYKA Terra Mystica 152.43 347 ePKPbc PKPbc 12 24 34.7 -0.7
comp=Z,4.7nm,0.6s,SNR=5.7
ABTA Abfaltersbach 152.54 348 ePKiKP PKPbc 12 24 35.2 -0.4
comp=Z,6.1nm,0.5s,SNR=8.3
IDI Anoyia 156.62 315 PKP PKPdf 12 24 37.1 +2.5
comp=Z,10nm,0.9s,baz=235,slow=1.6,SNR=3.5
ESDC Sonseca Array 158.95 19 PKP PKPdf 12 24 39.9 +2.6
comp=Z,0.3nm,0.3s,baz=307,slow=13,SNR=4.3

IDC 23 12:19:43.9±2.8, 9.73N×124.18E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/45, mbtmp3.3/3, MS3.0/1, Ms1 3.0/1, ms1mx2.5/21, Error ellipse: s-maj=259.0km s-min=25.7km az=64.0, Mindanao
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KAPI Kappang 15.30 197 LR LR 12 29 04.6
comp=Z,65nm,20.8s,baz=202,slow=37
WRA Warramunga Arr 31.14 161 P P 12 26 04.0 -0.6
0.8nm,0.6s,baz=341,slow=9.3,SNR=26
ASAR Alice Springs 34.53 164 P P 12 26 34.8 +0.6
0.3nm,0.6s,baz=344,slow=7.4,SNR=6.6
MKAR Makanchi Array 51.23 324 P P 12 28 49.2 -0.1
0.1nm,0.4s,baz=122,slow=7.1,SNR=2.5

IDC 23 12:28:22.0±2.5, 6.53N×92.57E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.3/46, mbtmp3.4/5, ML3.9/1, Error ellipse: s-maj=93.7km s-min=23.5km az=63.0
NEIC 23 12:28:28.4±0.8, 6.59N±0.10×92.8E±0.2, h32km±8km, mb4.2/6, Error ellipse: s-maj=29.3km s-min=3.1km az=61.0
ISC 23 12:28:28.5±1.0, 6.8N±0.1×92.97E±0.10, h27km, n20, σ1.24/17, mb3.8/8, Nicobar Islands region
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CMBY CAMPBELL BAY 0.99 75 eP Pn 12 28 46.9 +0.3
CMBY eS Sb 12 28 57.7 -1.9
LHMI Lhok Sumawe 4.24 111 Pn Pn 12 29 32.1 +0.8
PBA Port Blair 4.88 357 Pn Pn 12 29 42.1 +2.0
RPSI Rantau Prapat 7.17 124 Pn Pn 12 30 11.8 +0.1
KULM Kulim 7.78 100 Pn Pn 12 30 19.9 -0.1
IPM Ipoh 8.33 105 Pn Pn 12 30 29.2 +1.6
CMAR Chiang Mai Arr 13.01 26 Pn Pn 12 31 34.0 +2.3
0.2nm,0.3s,baz=228,slow=12,SNR=7.4
H08S3 Diego Garcia H 24.93 235 T T 12 59 47.8
baz=56,slow=76,SNR=134
H08S2 Diego Garcia H 24.93 235 T T 12 59 50.3
baz=56,slow=76,SNR=54
H08S1 Diego Garcia H 24.95 235 T T 12 59 44.6
baz=56,slow=76,SNR=54
MKAR Makanchi Array 40.94 349 P P 12 36 06.3 -2.4
0.1nm,0.4s,baz=171,slow=8.4,SNR=4.2
KK31 Karatay Array 41.26 335 P P 12 36 11.3 -0.1
KK31 IAmb IAmb 12 36 19.6
comp=Z,2.2nm,1.1s
KKAR Karatay Array 41.26 335 P P 12 36 11.3 0.0
KKAR IAmb IAmb 12 36 19.6
comp=Z,2.2nm,1.1s
ZALV Zalesovo Beam 47.52 353 P P 12 37 00.9 -0.4
comp=Z,0.2nm,0.3s,baz=186,slow=5.8,SNR=2.2
WB0 Warramunga Arr 48.54 124 P P 12 37 09.3 -0.4
WB0 IAmb IAmb 12 37 20.9
comp=Z,8.4nm,1.4s
WRA Warramunga Arr 48.58 124 P P 12 37 08.5 -1.5
comp=Z,0.6nm,0.4s,baz=305,slow=9.0,SNR=5.3
WB2 Warramunga Arr 48.59 124 P P 12 37 10.1 0.0
WB2 IAmb IAmb 12 37 10.4
comp=Z,7.4nm,1.2s
AS31 Alice Springs 50.11 128 P P 12 37 21.2 -0.5
ASAR Alice Springs 50.11 128 P P 12 37 21.1 -0.7
comp=Z,0.1nm,0.4s,baz=304,slow=8.0,SNR=10
TOO Toolangi 65.84 136 P P 12 39 12.6 +0.8

NEIC 23 12:31:16.3±2.8, 53.47N±0.07×179.27E±0.06, h15km±6km, Error ellipse: s-maj=10.8km s-min=4.9km az=168.0
AEIC 23 12:31:18.7±1.6, 52.7N±0.2×179.4E±0.1, h169km±8km, ML3.3/26, Error ellipse: s-maj=24.8km s-min=9.1km az=183.0
IDC 23 12:31:20.6±4.9, 52.25N×179.11E, h187km±47km, mb3.2/11, mb1 3.5/14, mb1mx3.3/49, mbtmp3.8/14, Error ellipse: s-maj=29.7km s-min=10.0km az=173.0
ISC 23 12:31:19.4±0.7, 52.4N±0.2×179.13E±0.04, h172km±8km, n42, σ1.05/50, mb3.5/11, Rat Islands
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GALAA Gareloi Lava P 1.44 115 Pn 12 31 50.3 +0.2
GALAA Sn 12 32 15.1 +1.3
GAEA Gareloi East 1.44 114 Pn 12 31 50.4 +0.2
TASE Tanaga Southea 1.83 106 Pn 12 31 54.0 -0.1
TASE Sn 12 32 22.6 +1.6
TAFP Tanaga Falls P 1.84 104 Pn 12 31 54.1 -0.2
TAFP Sn 12 32 21.5 +0.3
TAPA Tanaga Point A 1.97 106 Pn 12 31 55.3 -0.3
TAPA Sn 12 32 24.3 +0.6
KIMD Kanaga Island 2.33 104 Pn 12 31 59.0 -0.6
KIMD Sn 12 32 30.1 -0.7
KIKV Kanaga Island 2.34 101 Pn 12 31 59.4 -0.3
KIKV Sn 12 32 30.4 -0.6
KIWB Kanaga Island 2.35 102 Pn 12 31 59.1 -0.8
KIWB Sn 12 32 30.2 -1.1
ADK Adak 2.63 99 Pn 12 32 02.4 -0.7
ADK Sn 12 32 35.7 -1.3
GSTD Great Sitkin T 2.93 95 Pn 12 32 06.2 -0.6
GSTD Sn 12 32 43.1 -0.6
GSTR Great Sitkin T 2.97 94 Pn Pn 12 32 06.2 -1.1
GSMY Great Sitkin M 2.98 95 Pn 12 32 07.0 -0.5
GSMY Sn 12 32 45.4 +0.6
SMY Shemya 3.09 278 Pn Pn 12 32 08.8 +0.1
KOWE Korovin West 4.06 88 Pn 12 32 21.1 +0.1
ATKA Atka Island 4.10 90 Pn Pn 12 32 20.8 -0.8
ATKA Atka Island 4.10 90 Sn 12 33 08.9 -1.1
PET Petropavlovsk 12.43 281 P 12 34 16.9 +1.5
PEA0B Petropavlovsk- 13.00 282 P 12 34 23.5 +1.8
PETK Petropavlovsk- 13.00 282 P Pn 12 34 18.1 +0.4
0.4nm,0.3s,baz=100,slow=14,SNR=10.0
PETK S Sn 12 36 37.2 -4.6
0.5nm,0.3s,baz=231,slow=50,SNR=7.6
KDAK Kodiak Island 17.00 60 P P 12 35 06.1 +0.3
3.2nm,0.3s,baz=258,slow=3.1,SNR=11
SEY Seymchan 17.64 317 ⇑P Pn 12 35 14.1 -0.2
baz=99,slow=19,SNR=2.6
ILAR Eielson Array 21.30 41 P P 12 35 52.6 +0.4
0.6nm,0.5s,baz=246,slow=8.0,SNR=14
INK Inuvik 27.39 36 P P 12 36 49.1 +0.9
0.4nm,0.3s,baz=221,slow=7.3,SNR=6.2
KLR Kul'dur 29.68 283 P P 12 37 08.6 -0.2
1.2nm,0.3s,baz=44,slow=6.0,SNR=9.2
H11N2 WAKE ISLAND Hy 33.96 201 T T 13 13 20.5
baz=11,slow=76,SNR=4.4
H11N3 WAKE ISLAND Hy 33.97 201 T T 13 13 24.7
baz=11,slow=76,SNR=3.2
H11N1 WAKE ISLAND Hy 33.97 201 T T 13 13 18.8
baz=11,slow=76,SNR=4.0
YKA Yellowknife Ar 35.48 47 P P 12 38 00.1 +1.1
1.0nm,0.6s,baz=281,slow=8.1,SNR=16
KSRS Korea Array 38.36 268 P P 12 38 24.2 +0.6
0.6nm,0.6s,baz=58,slow=8.1,SNR=2.9
NVAR Mina Array Bea 44.70 82 P P 12 39 15.7 +0.3
0.9nm,0.5s,baz=292,slow=7.8,SNR=12
SONM Songino Array 45.05 295 P P 12 39 18.4 +0.5
0.9nm,0.6s,baz=59,slow=8.1,SNR=9.1
PDAR Pinedale Array 47.22 72 P P 12 39 34.4 -0.6
1.0nm,0.8s,baz=300,slow=2.8,SNR=9.3
MKAR Makanchi Array 58.40 307 P P 12 40 55.9 -0.7
0.2nm,0.3s,baz=50,slow=6.6,SNR=10
TXAR Lajitas Array 59.76 80 P P 12 41 05.9 -0.3
0.9nm,0.5s,baz=306,slow=5.8,SNR=23
GUN Gumba 70.30 290 eP P 12 42 15.0 +0.5
20nm,0.5s
JIRN Jiri 70.31 290 eP P 12 42 15.3 +0.7
RAMN Ramite 70.61 289 eP P 12 42 16.6 +0.3
12nm,0.4s
KKN Kakani 70.73 291 eP P 12 42 17.7 +0.7
5.2nm,0.3s
PKI Pulchoki 70.82 290 eP P 12 42 18.0 +0.3
PKIN Phulchoki 70.83 290 eP P 12 42 17.9 +0.3
8.2nm,0.5s
DANN Dangsing 71.17 292 eP P 12 42 19.9 +0.2
ASAR Alice Springs 85.38 221 P P 12 43 35.5 -1.7
0.1nm,0.8s,baz=28,slow=6.0,SNR=3.8

MAN 23 13:21:08.8, 15.51N×121.70E, h9km, mb4.5, ML3.3, MS3.1, 1D, Luzon
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BALP Baler 0.26 332 eP Pg 13 21 14.2 +0.2
BALP eS Sb 13 21 20.1 -0.1
PCPH Palayan 0.58 275⇓eP Pb 13 21 21.4 +0.2
PCPH eS Sn 13 21 32.7 -0.2
CAUP Cauayan 1.43 5 eP Pn 13 21 33.3 -1.5
APYP Conner 2.38 349 eP Pn 13 21 48.5 +0.5
APYP eS Sn 13 22 18.7 +1.5

DJA 23 13:29:18.1±2.4, 3°S±9°×12°8E±°, h20km±27km, M3.9/8, mb4.2/1, MLv3.8/8
IDC 23 13:29:22.0±2.2, 2.88S×128.28E, h64km±24km, mb3.5/2, mb1 3.9/6, mb1mx3.4/38, mbtmp3.9/6, ML4.0/4, MS2.8/2, Ms1 2.8/2, ms1mx2.4/41, Error ellipse: s-maj=22.0km s-min=15.8km az=131.0
ISC 23 13:29:19.2±0.8, 2.83S±0.06×128.14E±0.05, h38km, n15, σ1.61/19, Ceram Sea
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AAI Ambon 0.85 176 P Pn 13 29 34.7 0.0
MSAI Masohi 0.94 123 P Pn 13 29 37.3 +1.4
NLAI Namlea 1.11 249 P Pn 13 29 39.3 +1.0
LBMI Labuha 2.27 344 P Pn 13 29 53.7 -0.5
LBMI S Sn 13 30 22.3 +1.3
SANI Sanana 2.29 290 P Pn 13 29 53.1 -1.3
SANI S Sn 13 30 19.0 -2.3
SWI Sorong 3.68 58 P Pn 13 30 14.3 +0.7
SIJI Sorong 3.68 58 P Pn 13 30 14.4 +0.7
12nm,0.3s,baz=246,slow=22,SNR=74
SIJI S Sn 13 30 57.3 +1.4
4.6nm,0.3s,baz=84,slow=22,SNR=7.0
SIJI LR LR 13 32 17.7
comp=Z,133nm,18.0s,baz=118,slow=49
FAKI Fak Fak 4.11 91 P Pn 13 30 20.2 +0.7
KAPI Kappang 8.64 255 P Pn 13 31 26.3 +4.5
1.2nm,0.3s,baz=127,slow=5.1,SNR=2.8
KAPI LR LR 13 34 54.0
comp=Z,64nm,20.6s,baz=62,slow=38
KBKI Kotabaru 11.96 267 P Pn 13 32 06.9 -0.4
FITZ Fitzroy Crossi 15.37 189 P P 13 32 56.5 -1.1
0.3nm,0.3s,baz=26,slow=12,SNR=8.6
WRA Warramunga Arr 18.05 161 P Pn 13 33 26.3 -0.9
0.6nm,0.3s,baz=339,slow=12,SNR=40
ASAR Alice Springs 21.45 165 P P 13 34 04.2 -0.2
6.9nm,0.6s,baz=346,slow=11,SNR=106
ASAR PcP PcP 13 38 06.3 -0.6
0.5nm,0.7s,baz=348,slow=1.6,SNR=6.2
KRVT Keravat (AS076 23.89 94 P P 13 34 28.2 -1.4
70nm,0.4s,baz=295,slow=14,SNR=3.5
MKAR Makanchi Array 63.75 327 P P 13 39 48.2 +0.9
0.1nm,0.4s,baz=134,slow=6.0,SNR=2.8

MOS 23 13:56:38.4±0.9, 52.97N×170.44W, h95km, mb4.3/22, Error ellipse: s-maj=10.0km s-min=6.7km az=70.7
IDC 23 13:56:39.7±0.7, 53.00N×170.50W, h94km±6km, mb3.8/24, mb1 4.0/26, mb1mx3.9/54, mbtmp4.1/26, Error ellipse: s-maj=16.6km s-min=8.9km az=173.0
NEIC 23 13:56:40.3±1.6, 52.94N±0.08×170.37W±0.06, h100km±4km, mb4.7/209, Error ellipse: s-maj=12.5km s-min=4.0km az=164.0
AEIC 23 13:56:41.1±2.6, 53.01N±0.09×170.42W±0.07, h66km±4km, Error ellipse: s-maj=12.7km s-min=5.3km az=168.0
ISC 23 13:56:40.1±0.5, 52.93N±0.07×170.37W±0.03, h99km±4km, n557, σ0.93/572, mb4.6/121, 4C-1D, Fox Islands
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NIKH Nikolski High 0.92 87 Pn 13 56 59.0 -0.5
NIKH Nikolski High 0.92 87 Sn 13 57 13.1 -1.1
OKSP Okmok Steeple 1.30 75 Pn 13 57 04.2 +0.4
OKSP Sn 13 57 22.7 +0.9
OKFG Magazine Ridge 1.56 71 Pn 13 57 07.6 +0.7
OKFG Sn 13 57 29.3 +2.0
MGOD Makushin Gods 2.27 66 Pn 13 57 16.9 +0.7
MGOD Sn 13 57 43.6 -0.1
MCIR Makushin Cirqu 2.32 63 Pn 13 57 17.9 +1.1
MREP Makushin Rep't 2.34 67 Pn 13 57 18.2 +1.1
MREP Sn 13 57 46.9 +1.3
KOFP Korovin Flat P 2.36 255 Pn 13 57 18.6 +1.2
KOFP Sn 13 57 48.3 +2.4
MSW Makushin Switc 2.36 64 Pn 13 57 18.1 +0.8
MNAT Makushin Natee 2.41 65 Pn 13 57 18.9 +1.0
MNAT Sn 13 57 48.1 +1.2
KOKL Mount Kliuchef 2.41 257 Pn 13 57 19.3 +1.3
MTBL Makushin Table 2.44 63 Pn 13 57 19.6 +1.2
ATKA Atka Island 2.44 254 Pn 13 57 18.8 +0.4
UNV Unalaska Valle 2.49 67 Pn 13 57 19.9 +1.0
UNV Unalaska Valle 2.49 67 Sn 13 57 50.6 +1.8
AKRB Akutan Reef Bi 2.84 63 Pn 13 57 25.2 +1.6
AKMO Akutan Morgan 2.85 64 Pn 13 57 25.5 +1.7
AKMO Sn 13 57 59.9 +2.5
AKBBA Akutan Broad B 2.90 64 Pn 13 57 26.1 +1.6
AKGG Akutan Green G 2.91 62 Pn 13 57 26.1 +1.6
AKGG Sn 13 57 59.1 +0.4
AKUT Akutan 3.00 64 Pn 13 57 27.8 +2.1
AKSA Akutan Strait 3.04 65 Pn 13 57 27.4 +1.1
GSTR Great Sitkin T 3.57 259 Pn 13 57 34.9 +1.4
GSMY Great Sitkin M 3.59 258 Pn 13 57 35.0 +1.4
GSTD Great Sitkin T 3.63 258 Pn 13 57 35.5 +1.1
GSTD Sn 13 58 17.4 +1.1
WESP Westdahl Peak 3.71 63 Pn 13 57 37.4 +2.1
ADK Adak 4.00 257 Pn 13 57 40.4 +1.1
ADK Adak 4.00 257 P Pn 13 57 40.4 +1.1
SSBA Shishaldin 4.13 61 Pn 13 57 42.2 +1.1
KIRH Kanaga Island 4.24 259 Pn 13 57 44.4 +1.9
KIWB Kanaga Island 4.29 258 Pn 13 57 44.5 +1.4
FALS False Pass 4.54 62 Pn 13 57 48.4 +1.9
DT1 Dutton Round H 5.25 60 Pn 13 57 57.0 +1.0
SDPT Sand Point 6.30 63 Pn Pn 13 58 10.5 +0.2
CNBA Chernabura Isl 6.65 69 Pn Pn 13 58 14.1 -1.0
CHGN Chignik 7.72 59 Pn Pn 13 58 29.3 -0.3
OHAK Old Harbor 10.69 60 Pn Pn 13 59 08.7 -1.3
KDAK Kodiak Island 11.22 57 P Pn 13 59 14.5 -2.6
2.2nm,0.3s,baz=347,slow=0.7,SNR=12
KDAK Kodiak Island 11.22 57 Pn Pn 13 59 13.2 -3.9
KDAK Kodiak Island 11.22 57 P Pn 13 59 13.2 -3.9
SVW2 Sparrevohn 11.46 39 Pn Pn 13 59 17.4 -3.0
ANM Nome 11.95 10 Pn Pn 13 59 29.7 +2.9
ANM Nome 11.95 10 P Pn 13 59 29.7 +2.9
HOM Homer 12.36 50 Pn Pn 13 59 31.9 -0.5
BRLK Bradley Lake 12.76 50 Pn Pn 13 59 36.9 -0.7
SKT Skwentna 13.55 41 Pn Pn 13 59 47.7 -0.3
SEW Seward 13.55 50 Pn Pn 13 59 45.4 -2.6
SUA Susitna One 13.59 43 Pn Pn 13 59 48.8 +0.1
PPLA Purkeypile 13.84 37 Pn 13 59 51.8 0.0
RC01 Rabbit Creek A 13.84 46 Pn Pn 13 59 51.6 -0.2
PMR Palmer 14.33 44 Pn Pn 13 59 58.2 +0.1
PMR Palmer 14.33 44 P Pn 13 59 58.2 +0.1
GHO Glory Hole Cre 14.51 44 Pn Pn 13 59 59.5 -0.9
KNK Knik Glacier 14.54 46 Pn 13 59 59.2 -1.6
KTH Kantishna Hill 14.69 36 P Pn 14 00 06.2 -0.1
SML Sawmill 14.77 44 Pn Pn 14 00 02.7 -1.1

TRF Thorofare Moun 14.86 37 P P 14 00 07.5 -0.8
GLI Glacier Island 14.93 49 Pn Pn 14 00 02.3 -3.4
BPAW Bear Paw Mtn. 15.01 34 P P 14 00 09.6 -0.2
HIN Hinchinbrook I 15.03 51 Pn Pn 14 00 04.7 -2.4
HIN IAmb IAmb 14 00 14.2
comp=Z,99nm,1.3s
FID Port Fidalgo 15.16 50 Pn Pn 14 00 05.3 -3.4
FID IAmb IAmb 14 00 11.3
comp=Z,57nm,1.2s
SCM Sheep Creek Mo 15.21 45 Pn 14 00 07.9 -1.4
SCM IAmb IAmb 14 00 18.0
comp=Z,92nm,1.6s
SCM Sheep Creek Mo 15.21 45 P Pn 14 00 07.9 -1.4
SCM pmax pmax
comp=Z,92nm,1.6s
RND Reindeer 15.37 39 Pn Pn 14 00 11.7 +0.4
RND IAmb IAmb 14 00 55.9
comp=Z,61nm,1.9s
RND Reindeer 15.37 39 P Pn 14 00 11.7 +0.4
RND pmax pmax
comp=Z,61nm,1.9s
EYAK Cordova Ski Ar 15.44 51 Pn Pn 14 00 09.7 -2.4
EYAK IAmb IAmb 14 00 25.5
comp=Z,119nm,1.9s
MCK McKinley 15.52 37 Pn Pn 14 00 13.5 +0.4
MCK McKinley 15.52 37 P Pn 14 00 13.5 +0.4
MCK pmax pmax
comp=Z,18nm,1.3s
MLY Manley 15.70 32 P Pn 14 00 17.9 +0.5
DHY Denali Highway 15.77 41 Pn Pn 14 00 16.3 -0.1
RAGM Ragged Mountai 15.89 52 Pn Pn 14 00 17.8 -0.1
RAGM IAmb IAmb 14 00 38.2
comp=Z,35nm,0.8s
NEA Nenana 15.96 35 Pn Pn 14 00 18.4 -0.3
WRH Wood River Hil 16.25 36 P P 14 00 23.0 -0.4
CCB Clear Creek Bu 16.45 36 Pn Pn 14 00 23.3 -1.3
MDM Murphy Dome 16.48 34 Pn Pn 14 00 24.3 -0.8
PAX Paxson 16.49 43 Pn 14 00 24.9 -0.4
PAX Paxson 16.49 43 P Pn 14 00 24.9 -0.4
PAX pmax pmax
comp=Z,19nm,1.6s
GLB Gilahina Butte 16.62 49 Pn Pn 14 00 24.7 -2.1
GLB IAmb IAmb 14 01 21.4
comp=Z,60nm,1.8s
HDA Harding Lake 16.62 37 P P 14 00 27.7 +0.1
HDA IAmb IAmb 14 00 53.5
comp=Z,56nm,2.0s
VRDI Verde Repeater 16.72 50 Pn Pn 14 00 26.5 -1.7
VRDI IAmb IAmb 14 00 27.5
comp=Z,59nm,2.0s
CRQM Cirque 16.73 51 Pn Pn 14 00 27.4 -0.9
CRQM IAmb IAmb 14 01 13.2
comp=Z,28nm,1.3s
IL31 16.84 36 P Pn 14 00 29.5 +0.1
ILAR Eielson Array 16.84 36 P Pn 14 00 27.5 -2.0
comp=Z,0.7nm,0.3s,baz=232,slow=10,SNR=43
ILAR PcP PcP 14 05 10.6 -0.2
comp=Z,0.1nm,0.3s,baz=280,slow=2.9,SNR=6.1
ILAR ScP ScP 14 08 35.5 -0.9
comp=Z,0.1nm,0.3s,baz=287,slow=3.9,SNR=5.3
TGL Tana Glacier 16.87 51 Pn 14 00 29.0 -1.0
TGL IAmb IAmb 14 00 35.0
comp=Z,32nm,1.3s
MCARA McCarthy VSAT 16.96 49 Pn 14 00 30.3 -0.7
MCARA IAmb IAmb 14 00 37.7
comp=Z,45nm,1.6s
RIDG Independent Ri 17.09 41 P P 14 00 33.8 +1.0
RIDG IAmb IAmb 14 01 18.0
comp=Z,53nm,1.8s
BALM Baldy 17.18 51 Pn 14 00 32.8 -0.9
DOT Dot Lake 17.36 42 P P 14 00 35.2 -0.5
BARN Barnard Glacie 17.50 51 P Pn 14 00 38.2 +0.4
SCRK Sand Creek 17.53 41 P P 14 00 33.4 -4.3
CTGM Chitina Glacie 17.64 51 P P 14 00 39.2 +0.3
CTGM IAmb IAmb 14 01 07.3
comp=Z,40nm,1.6s
PRP Porcupine Dome 17.74 35 P P 14 00 39.3 -0.7
PCA Pinnacle 17.97 55 P P 14 00 42.9 +0.4
PCA IAmb IAmb 14 00 52.1
comp=Z,91nm,1.8s
FYU Fort Yukon 18.43 33 P P 14 00 47.3 -0.1
FYU IAmb IAmb 14 00 54.9
comp=Z,36nm,1.6s
TOLK Toolik Lake Re 18.57 24 Pn 14 00 50.5 +0.2
TOLK Toolik Lake Re 18.57 24 P Pn 14 00 51.0 +0.7
baz=222
BILL Bilibino 18.82 332 Pn 14 00 53.1 -0.1
BILL Bilibino 18.82 332⇑eP Pn 14 00 52.6 -0.6
BILL pmax pmax
comp=Z,5.0nm,0.8s
BILL MLR MLR
comp=Z,226nm,23.0s
DHAK Deception Hill 18.87 58 Pn Pn 14 00 54.7 +0.7
EGAK Eagle 18.99 40 P P 14 00 53.5 0.0
EGAK IAmb IAmb 14 00 56.8
comp=Z,11nm,0.4s
PEA0B Petropavlovsk- 19.13 283 P P 14 00 55.2 +0.1
PEA0B IAmb IAmb 14 01 20.0
comp=Z,46nm,1.3s
PEA0B Petropavlovsk- 19.13 283 P P 14 00 55.2 +0.1
PEA0B pmax pmax
comp=Z,46nm,1.3s
PETK Petropavlovsk- 19.13 283 P P 14 00 55.7 +0.5
comp=Z,0.5nm,0.3s,baz=92,slow=14,SNR=21
DAWY Dawson 19.42 43 P P 14 00 57.9 -0.4
HYT Haines Junctio 19.44 53 P P 14 00 59.2 +0.6
HYT IAmb IAmb 14 01 03.0
comp=Z,22nm,1.0s
SKAG Skagway 20.37 57 P P 14 01 09.9 +1.4
SKAG IAmb IAmb 14 01 10.7
comp=Z,18nm,0.5s
SIT Sitka 20.38 64 P P 14 01 10.0 +1.4
SIT IAmb IAmb 14 01 20.2
comp=Z,50nm,1.3s
SIT Sitka 20.38 64 P P 14 01 10.0 +1.4
SIT pmax pmax
comp=Z,50nm,1.3s
JIS Juneau Island 20.84 61 P P 14 01 14.5 +1.0
JIS IAmb IAmb 14 01 26.7
comp=Z,14nm,0.8s
EPYK Eagle Plains 21.32 38 P P 14 01 16.8 -1.9
EPYK Eagle Plains 21.32 38 P P 14 01 17.6 -1.1
baz=247
SEY Seymchan 21.84 312 P P 14 01 23.6 -0.5
comp=Z,3.7nm,0.8s,baz=104,slow=9.2,SNR=16
SEY PcP PcP 14 05 20.1 +0.3
comp=Z,0.4nm,0.3s,baz=134,slow=1.5,SNR=6.6
SEY ScP ScP 14 08 48.5 +0.8
comp=Z,2.3nm,0.7s,baz=114,slow=4.5,SNR=9.8
SEY Seymchan 21.84 312⇓eP P 14 01 24.7 +0.6
DLBC Dease Lake 23.13 60 P P 14 01 38.8 +1.3
comp=Z,12nm,0.6s,baz=272,slow=7.0,SNR=24
DLBC Dease Lake 23.13 60 P P 14 01 39.9 +2.4
DLBC IAmb IAmb 14 01 40.8
comp=Z,59nm,1.4s
INK Inuvik 23.22 34 P P 14 01 36.9 -1.2
comp=Z,6.5nm,0.4s,baz=237,slow=9.8,SNR=61
INK PcP PcP 14 05 22.9 +0.5
comp=Z,1.3nm,0.4s,baz=142,slow=2.4,SNR=12
INK Inuvik 23.22 34 P P 14 01 36.7 -1.4
C36M Paulatuk 26.80 35 P P 14 02 10.0 -0.5
C36M Paulatuk 26.80 35 P P 14 02 10.2 -0.3
baz=256
LLLB Lillooet 29.65 75 P P 14 02 35.8 -0.2
LLLB IAmb IAmb 14 02 57.7
comp=Z,17nm,1.7s
YKA Yellowknife Ar 30.34 49 P P 14 02 42.1 +0.3
comp=Z,0.9nm,0.5s,baz=272,slow=7.9,SNR=23
YKA PcP PcP 14 05 40.5 +1.1
comp=Z,0.2nm,0.3s,baz=286,slow=3.2,SNR=4.8
TIXI Tiksi 31.93 328 P P 14 02 56.1 +0.2
comp=Z,1.1nm,0.3s,baz=107,slow=16,SNR=6.3
TIXI PcP PcP 14 05 43.2 -0.3
comp=Z,3.0nm,0.5s,baz=70,slow=0.7,SNR=11
TIXI Tiksi 31.93 328 PcP 14 05 43.1 -0.4
TIXI Tiksi 31.93 328 *i*P P 14 02 57.0 +1.2
TIXI pmax pmax
comp=Z,6.0nm,2.7s
B08A Colville Reser 32.12 77 P P 14 02 58.8 +1.0
B08A IAmb IAmb 14 02 59.8
comp=Z,4.3nm,0.6s
YAK Yakutsk 32.34 310 P P 14 03 00.5 +1.0
YAK IAmb IAmb 14 03 55.5
comp=Z,5.3nm,0.6s
YAK Yakutsk 32.34 310 P P 14 03 00.5 +1.0
YAK pmax pmax
comp=Z,5.0nm,0.6s
KIP Kipapa 32.86 158 P P 14 03 05.2 +0.8
KIP Kipapa 32.86 158 P P 14 03 05.2 +0.8
KIP pmax pmax
comp=Z,45nm,1.2s
HAWA Hanford 32.96 81 P P 14 03 06.8 +1.7
NEW Newport 33.47 76 P P 14 03 10.4 +0.8
NEW IAmb IAmb 14 03 11.4
comp=Z,3.9nm,0.7s
NEW Newport 33.47 76 P P 14 03 10.4 +0.8
NEW pmax pmax
comp=Z,4.0nm,0.7s
NEW Newport 33.47 76 P P 14 03 10.6 +1.0
baz=298,SNR=5.5
I07A Izee 34.20 84 P P 14 03 18.2 +2.2
I07A IAmb IAmb 14 03 24.5
comp=Z,10nm,1.8s
HPAH Hawaii Prepara 34.75 155 P P 14 03 21.4 +0.4
MOD Modoc Plateau 34.95 88 P P 14 03 24.3 +1.7
MOD IAmb IAmb 14 03 29.1
comp=Z,7.2nm,1.5s
WALA Waterton Lakes 34.96 73 P P 14 03 23.5 +0.9
WALA IAmb IAmb 14 03 26.4
comp=Z,19nm,1.8s
BMO Blue Mountains 35.09 81 P P 14 03 24.3 +0.6
BMO Blue Mountains 35.09 81 P P 14 03 24.3 +0.6
BMO pmax pmax
comp=Z,7.0nm,1.7s
JTMT Jette 35.39 75 P P 14 03 27.3 +1.1
JTMT IAmb IAmb 14 03 27.4
comp=Z,17nm,1.3s
MSO Missoula 36.05 76 P P 14 03 32.6 +0.7
MSO Missoula 36.05 76 P P 14 03 33.1 +1.2
baz=301
RES Resolute Bay 36.13 26 P P 14 03 31.3 -0.7
RES PcP 14 05 55.8 +0.3
RES Resolute Bay 36.13 26 P P 14 03 31.3 -0.7
RES 14 05 55.8
RES pmax pmax
comp=Z,7.0nm,1.8s
PAHR Pah Rah Range 36.83 90 P P 14 03 40.1 +1.5
VCNR Virginia City 36.92 91 P P 14 03 43.5 +4.1
PNTR Pine Nut 37.08 91 P P 14 03 42.5 +1.7
PNTR IAmb IAmb 14 03 49.0
comp=Z,5.3nm,0.7s
YERR Yerington 37.37 91 P P 14 03 44.8 +1.6
H11N2 WAKE ISLAND Hy 37.53 217 T T 14 43 29.2
baz=12,slow=76,SNR=12
H11N3 WAKE ISLAND Hy 37.53 217 T T 14 44 35.3
SNR=4.6
H11N1 WAKE ISLAND Hy 37.55 217 T T 14 43 08.9
baz=22,slow=76,SNR=4.2
WAKR Walker 37.55 92 P P 14 03 46.4 +1.6
MCMT McKenzie Canyo 37.77 79 P P 14 03 47.3 +0.7
EGMT Eagleton 37.88 72 P P 14 03 47.9 +0.6
EGMT IAmb IAmb 14 03 50.5
comp=Z,7.9nm,1.2s
EGMT Eagleton 37.88 72 P P 14 03 48.0 +0.7
baz=301
KVN Kaiserville 38.02 90 P P 14 03 50.1 +1.4
KVN Kaiserville 38.02 90 P P 14 03 50.1 +1.4
KVN pmax pmax
comp=Z,6.0nm,1.6s
RYN Ryan 38.03 91 P P 14 03 50.0 +1.3
NVAR Mina Array Bea 38.28 91 P P 14 03 52.6 +1.6
comp=Z,1.6nm,0.7s,baz=296,slow=7.7,SNR=15
NVAR ScP ScP 14 09 42.4 +0.9
comp=Z,0.6nm,0.7s,baz=284,slow=4.1,SNR=5.8
MDPB Devils Postpil 38.33 93 P P 14 03 53.0 +1.6
NV11 Mina Array Sit 38.37 91 P P 14 03 52.2 +0.6
NV11 IAmb IAmb 14 03 54.1
comp=Z,12nm,1.9s
OMMB Old Mammoth Mi 38.39 92 P P 14 03 53.4 +1.4
OMMB IAmb IAmb 14 04 19.1
comp=Z,8.6nm,1.6s
ELK Elko 38.70 86 P P 14 03 55.8 +1.3
ELK Elko 38.70 86 P P 14 03 55.8 +1.3
ELK pmax pmax
comp=Z,1.0nm,0.7s
H11S1 WAKE ISLAND Hy 38.72 216 T T 14 45 02.0
baz=21,slow=74,SNR=109
H11S2 WAKE ISLAND Hy 38.74 216 T T 14 44 37.3
baz=309,slow=74,SNR=28
H11S3 WAKE ISLAND Hy 38.74 216 T T 14 45 12.9
SNR=34
YHL Hebgen Lake 38.74 77 P P 14 03 55.7 +0.9
FFC Flin Flon 38.95 59 P P 14 03 56.7 +0.6
FFC IAmb IAmb 14 03 57.4
comp=Z,6.8nm,0.9s
FFC Flin Flon 38.95 59 P P 14 03 56.7 +0.6
FFC pmax pmax
comp=Z,7.0nm,0.9s
YHH Holmes Hill 38.97 77 P P 14 03 57.6 +0.9
YMR Madison River 38.97 78 P P 14 03 57.8 +1.1
MJAR Matsushiro Arr 39.11 266 P P 14 03 56.7 -0.9
comp=Z,1.0nm,0.7s,baz=57,slow=9.9,SNR=5.2
LKWY Lake 39.36 77 P P 14 04 01.1 +1.2
LKWY Lake 39.36 77 P P 14 04 01.1 +1.2
LKWY pmax pmax
comp=Z,3.0nm,0.8s
RLMT Red Lodge 39.72 76 P P 14 04 03.8 +1.0
RLMT Red Lodge 39.72 76 P P 14 04 04.0 +1.2
baz=304,SNR=5.6
ISA Isabella, Lake 39.99 94 P P 14 04 06.1 +1.1
baz=312
TPNV Topopah Spring 40.48 91 P P 14 04 10.4 +1.2
TPNV Topopah Spring 40.48 91 P P 14 04 10.4 +1.2
TPNV pmax pmax
comp=Z,2.0nm,0.8s
TPNV Topopah Spring 40.48 91 P P 14 04 10.8 +1.6
baz=311
DUG Dugway, Tooele 40.50 85 P P 14 04 09.5 +0.2
DUG Dugway, Tooele 40.50 85 P P 14 04 09.5 +0.2
DUG pmax pmax
comp=Z,10.0nm,1.9s
LAO LASA Array 40.62 72 P P 14 04 11.0 +0.9
LAO IAmb IAmb 14 05 03.5
comp=Z,6.6nm,0.4s
BW06 Boulder Array 40.90 79 P P 14 04 12.9 +0.3
BW06 Boulder Array 40.90 79 P P 14 04 13.4 +0.8
baz=306,SNR=5.1
PD31 Pinedale Array 40.90 79 P P 14 04 12.8 +0.2
PDAR Pinedale Array 40.90 79 P P 14 04 13.3 +0.7
comp=Z,1.5nm,0.6s,baz=294,slow=4.7,SNR=19
PDAR pP pP 14 04 35.5 +0.3
comp=Z,0.6nm,0.6s,baz=291,slow=3.8,SNR=2.5
FCC Fort Churchill 41.05 50 P P 14 04 13.4 +0.1
FCC IAmb IAmb 14 04 14.7
comp=Z,8.6nm,1.1s
FCC Fort Churchill 41.05 50 P P 14 04 13.4 +0.1
FCC pmax pmax
comp=Z,9.0nm,1.2s
GSC Goldstone, Bar 41.24 93 P P 14 04 16.0 +0.7
GSC Goldstone, Bar 41.24 93 P P 14 04 16.0 +0.7
GSC pmax pmax
comp=Z,5.0nm,1.1s
GSC Goldstone, Bar 41.24 93 P P 14 04 16.8 +1.5
baz=312
BFSC Mount Baldy Ra 41.45 95 P P 14 04 18.6 +1.5
baz=313
HEC Hector,Ludlow 41.84 93 P P 14 04 21.4 +1.1
baz=313
TMUT Trail Mountain 42.03 84 P P 14 04 23.4 +1.5
BELC Belle Mtn. Jos 42.61 94 P P 14 04 27.4 +0.8
baz=314
K22A Casper 42.76 77 P P 14 04 28.5 +0.8
baz=307
W13A Hualapai Mount 43.14 91 P P 14 04 31.6 +0.7
U15A North Rim 43.22 88 P P 14 04 32.1 +0.5
O20A White River Ci 43.28 81 P P 14 04 32.5 +0.5
O20A IAmb IAmb 14 04 34.8
comp=Z,4.4nm,0.6s
O20A White River Ci 43.28 81 P P 14 04 32.9 +0.9
baz=309,SNR=6.1
RSSD Black Hills 43.35 74 P P 14 04 32.6 +0.1
RSSD Black Hills 43.35 74 P P 14 04 32.6 +0.1
RSSD pmax pmax
comp=Z,2.0nm,0.6s
IKP In-Ko-Pah, Jac 43.48 96 P P 14 04 34.8 +1.3
baz=314
MDND Maddock 43.73 67 P P 14 04 35.5 +0.2
MDND IAmb IAmb 14 04 36.4
comp=Z,16nm,0.6s
N23A Red Feather La 44.18 79 P P 14 04 40.9 +1.7
baz=308
ULM Lac du Bonnet 44.43 62 P P 14 04 40.9 +0.2
comp=Z,2.5nm,0.4s,baz=302,slow=8.4,SNR=10
ULM Lac du Bonnet 44.43 62 P P 14 04 40.4 -0.4
ULM IAmb IAmb 14 04 42.3
comp=Z,3.0nm,0.6s
KSRS Korea Array 44.73 275 P P 14 04 41.8 -1.5
comp=Z,1.5nm,0.7s,baz=56,slow=7.3,SNR=7.9
KSRS Korea Array 44.73 275 eP P 14 04 43.4 +0.1
KSRS pmax pmax
comp=Z,2.0nm,0.7s
AGMN Agassiz Nation 45.54 64 P P 14 04 49.2 -0.3
AGMN IAmb IAmb 14 04 50.3
comp=Z,5.5nm,0.9s
AGMN Agassiz Nation 45.54 64 P P 14 04 49.7 +0.2
baz=305
JNU Nakatsue 45.86 269 P P 14 04 51.3 -1.0
comp=Z,3.3nm,0.5s,baz=23,slow=4.2,SNR=7.1
JNU Nakatsue 45.86 269 IAmb IAmb 14 04 51.6
comp=Z,30nm,1.5s
214A Organ Pipe Nat 45.95 94 P P 14 04 54.0 +1.0
baz=315
T25A Trinidad 47.50 82 P P 14 05 06.3 +0.9
T25A Trinidad 47.50 82 P P 14 05 07.0 +1.6
baz=312
ECSD EROS Data Cent 47.85 70 P P 14 05 07.0 -0.7
ECSD IAmb IAmb 14 05 07.6
comp=Z,4.4nm,0.5s
ECSD EROS Data Cent 47.85 70 P P 14 05 07.1 -0.6
baz=308,SNR=5.8
EYMN Ely 48.11 62 P P 14 05 09.4 -0.2
EYMN IAmb IAmb 14 05 10.2
comp=Z,4.8nm,0.9s
EYMN Ely 48.11 62 P P 14 05 09.4 -0.2
baz=307
E38A The Farm, Brul 48.89 64 P P 14 05 15.0 -0.6
E38A IAmb IAmb 14 05 15.8
comp=Z,9.5nm,1.0s
SPMN Marine on St. 49.06 66 P P 14 05 16.8 -0.1
SPMN IAmb IAmb 14 05 18.1
comp=Z,7.3nm,0.3s
ULN Ulaanbaatar 50.12 300 P P 14 05 25.2 +0.1
ULN IAmb IAmb 14 06 43.9
comp=Z,3.0nm,0.8s
ULN Ulaanbaatar 50.12 300 P P 14 05 25.2 +0.1
ULN pmax pmax
comp=Z,3.0nm,0.8s
SUMG Summit 50.42 17 P P 14 05 28.1 +0.8
SUMG IAmb IAmb 14 05 29.9
comp=Z,3.6nm,0.7s
SUMG Summit 50.42 17 P P 14 05 28.1 +0.8
SUMG pmax pmax
comp=Z,4.0nm,0.7s
SONM Songino Array 50.49 300 P P 14 05 28.1 +0.3
comp=Z,0.7nm,0.4s,baz=60,slow=5.8,SNR=13
SONM PcP PcP 14 06 44.4 0.0
comp=Z,2.2nm,0.6s,baz=71,slow=2.8,SNR=17
MNTX Cornudas Mount 50.63 88 P P 14 05 29.9 +0.9
MNTX IAmb IAmb 14 05 34.4
comp=Z,2.4nm,0.7s
MNTX Cornudas Mount 50.63 88 P P 14 05 30.5 +1.5
baz=315
I40A Norwalk 51.12 66 P P 14 05 32.1 -0.3
U32A Winter Ranch, 51.24 79 P P 14 05 33.7 +0.2
U32A IAmb IAmb 14 05 38.6
comp=Z,10nm,0.9s
E43A Lone Tree Farm 51.49 62 P P 14 05 35.2 0.0
E43A IAmb IAmb 14 05 36.2
comp=Z,9.3nm,0.7s
L40A Anamosa 51.97 68 P P 14 05 37.9 -0.9
L40A IAmb IAmb 14 05 38.6
comp=Z,16nm,1.2s
I42A Draeger Farm, 52.06 65 P P 14 05 38.8 -0.6
I42A IAmb IAmb 14 07 07.1
comp=Z,22nm,1.2s
SFJD Kangerlussuaq 52.13 26 P P 14 05 39.7 +0.1
SFJD Kangerlussuaq 52.13 26 P P 14 05 39.7 +0.1
SFJD pmax pmax
comp=Z,51nm,1.9s
H43A Windswept, Lux 52.30 64 P P 14 05 40.8 -0.5
D46A Sault St. Mari 52.71 59 P P 14 05 44.4 +0.2
baz=311
E46A Sault Ste Mari 52.91 60 P P 14 05 45.6 -0.1
E46A IAmb IAmb 14 05 46.5
comp=Z,7.4nm,0.7s
N41A Harden Midland 53.07 69 P P 14 05 46.2 -0.7
N41A IAmb IAmb 14 05 47.7
comp=Z,19nm,1.4s
D47A Chapleau 53.09 59 P P 14 05 46.8 -0.3
baz=311
TX31 Lajitas Ar. Si 53.35 89 P P 14 05 49.5 +0.2
TX32 Lajitas Array 53.35 89 P P 14 05 49.5 +0.2
TX32 IAmb IAmb 14 06 29.1
comp=Z,13nm,1.9s
TXAR Lajitas Array 53.35 89 P P 14 05 49.8 +0.5
comp=Z,1.0nm,0.4s,baz=300,slow=6.2,SNR=17
TXAR pP pP 14 06 11.2 -1.8
comp=Z,0.7nm,0.6s,baz=302,slow=5.2,SNR=3.3
E47A Iron Bridge 53.40 59 P P 14 05 49.3 0.0
baz=311
D48A Paudash Townsh 53.68 58 P P 14 05 51.3 -0.1
baz=311,SNR=8.6
D49A Beulah Townshi 53.84 57 P P 14 05 52.8 +0.2
baz=312,SNR=5.7
NJ2 Nanjing 53.87 277 eP P 14 05 52.1 -0.8
E48A Lockeyer 53.95 59 P P 14 05 53.4 0.0
baz=312
MATQ Matagami 54.05 53 P P 14 05 53.5 -0.5
baz=312,SNR=12
HDIL Hopedale 54.05 68 P P 14 05 53.7 -0.5
HDIL IAmb IAmb 14 05 56.1
comp=Z,11nm,0.6s
HDIL Hopedale 54.05 68 P P 14 05 53.7 -0.5
baz=312
P43A Skaggs, Pawnee 54.54 69 P P 14 05 57.0 -0.7
P43A IAmb IAmb 14 05 57.7
comp=Z,16nm,1.2s
D50A G1974 Best Tow 54.69 57 P P 14 05 58.5 -0.1
baz=312,SNR=7.7
LSQQ Lebel-sur-Quev 54.83 53 P P 14 05 59.3 -0.4
baz=312
U40A Yellville 54.87 75 P P 14 05 59.0 -1.2
baz=314
D51A Lot 18 Range I 54.97 57 P P 14 06 00.9 +0.2
baz=312
VLDQ Val d'Or 55.24 55 P P 14 06 00.8 -1.7
VLDQ IAmb IAmb 14 06 02.1
comp=Z,12nm,0.8s
E51A G1948 Merrick 55.29 57 P P 14 06 02.8 -0.2
baz=313,SNR=6.5
SFIN Lafayette 55.40 67 P P 14 06 03.3 -0.6
SFIN Lafayette 55.40 67 P P 14 06 03.6 -0.3
baz=313
SCHQ Schefferville 55.44 43 P P 14 06 03.3 -0.7
comp=Z,6.2nm,0.8s,baz=323,slow=7.1,SNR=17
SCHQ Schefferville 55.44 43 P P 14 06 03.9 -0.1
SCHQ IAmb IAmb 14 06 05.0
comp=Z,9.5nm,1.1s
D53A Lac Vacive, Po 55.82 56 P P 14 06 06.3 -0.5
D53A IAmb IAmb 14 06 07.4
comp=Z,12nm,0.8s
D53A Lac Vacive, Po 55.82 56 P P 14 06 06.7 -0.1
baz=313
F52A Sundridge 55.88 58 P P 14 06 07.4 +0.2
baz=313,SNR=7.7
E52A Mattawa 55.88 57 P P 14 06 07.0 -0.2
baz=313,SNR=5.1
D54A Lac Fusel, La 56.29 55 P P 14 06 09.7 -0.5
baz=314
E53A Dumoine, Ponti 56.32 56 P P 14 06 10.2 -0.1
baz=314
ALGO Algonquin Park 56.42 57 P P 14 06 11.1 0.0
baz=314
E54A Lac Daplat, Po 56.52 56 P P 14 06 11.6 -0.2
baz=314,SNR=9.4
O48A Farmland 56.57 66 P P 14 06 11.1 -1.1
baz=314,SNR=5.7
WLAR White Oak Lake 56.58 77 P P 14 06 12.6 +0.2
WLAR IAmb IAmb 14 06 13.2
comp=Z,9.6nm,0.7s
ZALV Zalesovo Beam 56.59 317 PcP PcP 14 07 07.7 +0.3
comp=Z,0.5nm,0.5s,baz=46,slow=4.2,SNR=3.5
N49A Columbus Grove 56.64 65 P P 14 06 12.0 -0.7
N49A IAmb IAmb 14 07 11.3
comp=Z,27nm,1.6s
N49A Columbus Grove 56.64 65 P P 14 06 12.2 -0.6
baz=314

SADO	Sadowa	56.67	58	P	P	14 06 12.8 -0.1
G53A	Haliburton	56.70	58	P	P	14 06 13.4 +0.3
	baz=314,SNR=7.8					
G54A	Lake Saint Pet	56.78	57	P	P	14 06 13.7 0.0
	baz=314					
D55A	Sainte-Anne-du	56.97	54	P	P	14 06 14.6 -0.3
	baz=314,SNR=7.6					
P48A	Milroy	56.97	67	P	P	14 06 13.8 -1.2
P48A	Milroy	56.97	67	P	P	14 06 14.1 -1.0
	baz=314					
O49A	Covington	57.07	66	P	P	14 06 15.0 -0.7
	baz=314					
E55A	Montcerf-Lytto	57.07	55	P	P	14 06 15.2 -0.4
	baz=314					
ARCES	ARCESS Array B	57.29	353	P	P	14 06 16.9 0.0
	comp=Z,3.2nm,0.8s,baz=16,slow=6.4,SNR=7.0					
ARCES				PcP	PcP	14 07 09.9 0.0
	comp=Z,5.6nm,0.9s,baz=7.3,slow=3.5,SNR=5.1					
ARCES	ARCESS Array B	57.29	353	eP	P	14 06 16.9 0.0
ARCES				pmax	pmax	
	comp=Z,4.0nm,0.9s					
D56A	ZEC Mazanza, M	57.30	54	P	P	14 06 16.7 -0.5
	baz=314,SNR=6.2					
P49A	Miami Univ. Ec	57.31	66	P	P	14 06 16.3 -1.2
	baz=314					
N50A	Nevada	57.31	64	P	P	14 06 17.2 -0.2
	baz=314					
WCI	Wyandotte Cave	57.34	69	P	P	14 06 17.2 -0.5
	baz=314					
O50A	Cable	57.49	65	P	P	14 06 18.1 -0.6
	baz=314					
E56A	St. Veronique	57.52	55	P	P	14 06 18.2 -0.5
	baz=314					
G55A	Calabogie	57.58	57	P	P	14 06 19.4 +0.2
	baz=314,SNR=5.3					
DELO	Deloro Mine	57.63	58	P	P	14 06 19.9 +0.3
DELO				IAmb	IAmb	14 06 20.7
	comp=Z,14nm,0.8s					
N51A	Ashland	57.63	64	P	P	14 06 19.1 -0.6
N51A				IAmb	IAmb	14 06 20.0
	comp=Z,15nm,1.1s					
N51A	Ashland	57.63	64	P	P	14 06 19.3 -0.4
	baz=314					
D57A	Chemin Vers le	57.74	54	P	P	14 06 20.0 -0.4
	baz=315					
M52A	Chesterland	57.75	63	P	P	14 06 19.9 -0.6
M52A				IAmb	IAmb	14 07 10.5
	comp=Z,16nm,1.2s					
M52A	Chesterland	57.75	63	P	P	14 06 20.4 -0.1
	baz=314					
T47A	Sharon Grove	57.75	70	P	P	14 06 20.0 -0.5
T47A				IAmb	IAmb	14 06 20.8
	comp=Z,5.2nm,0.8s					
P50A	Jamestown	57.77	66	P	P	14 06 20.2 -0.4
	baz=314					
I55A	Frankford	57.81	58	P	P	14 06 21.4 +0.5
	baz=314					
H55A	Tweed	57.83	57	P	P	14 06 21.3 +0.3
	baz=314					
WVT	Waverly	57.94	71	P	P	14 06 21.4 -0.5
WVT				IAmb	IAmb	14 06 22.2
	comp=Z,16nm,1.9s					
WVT	Waverly	57.94	71	P	P	14 06 21.4 -0.5
WVT				pmax	pmax	
	comp=Z,16nm,2.0s					
WVT	Waverly	57.94	71	P	P	14 06 21.7 -0.2
	baz=315					
TRQ	Mont Tremblant	57.98	55	P	P	14 06 21.3 -0.8
LATQ	La Tuque	58.02	53	P	P	14 06 21.6 -0.7
LATQ				IAmb	IAmb	14 06 23.0
	comp=Z,5.2nm,1.0s					
LATQ	La Tuque	58.02	53	P	P	14 06 21.8 -0.5
	baz=315					
E57A	Chemin Saint G	58.05	54	P	P	14 06 22.0 -0.6
	baz=315,SNR=8.1					
N52A	McGinn's Farm,	58.08	63	P	P	14 06 22.2 -0.6
	baz=315					
OXF	Oxford	58.17	74	P	P	14 06 23.1 -0.4
OXF				IAmb	IAmb	14 06 27.9
	comp=Z,14nm,1.0s					
OXF	Oxford	58.17	74	P	P	14 06 23.1 -0.4
OXF				pmax	pmax	
	comp=Z,14nm,1.0s					
OXF	Oxford	58.17	74	P	P	14 06 23.2 -0.4
	baz=315					
D58A	Chemin du LacG	58.18	53	P	P	14 06 22.5 -0.9
	baz=315					
M53A	WI Miller and	58.18	62	P	P	14 06 23.5 0.0
	baz=315					
S49A	Springfield	58.22	68	P	P	14 06 23.4 -0.4
	baz=315					
H56A	Elgin	58.27	57	P	P	14 06 24.2 +0.2
	baz=315					
ALLY	Alegheny Colle	58.32	62	P	P	14 06 24.5 0.0
ALLY				IAmb	IAmb	14 06 25.3
	comp=Z,15nm,0.8s					
L54A	Sinclairville	58.35	61	P	P	14 06 24.9 +0.2
	baz=315					
Q51A	Peebles	58.42	66	P	P	14 06 25.0 -0.2
Q51A				IAmb	IAmb	14 06 25.3
	comp=Z,5.4nm,0.6s					
Q51A	Peebles	58.42	66	P	P	14 06 25.0 -0.2
	baz=315					
O52A	Adamsville	58.49	64	P	P	14 06 25.2 -0.5
O52A				IAmb	IAmb	14 06 25.8
	comp=Z,10nm,0.9s					
O52A	Adamsville	58.49	64	P	P	14 06 25.1 -0.5
	baz=315					
E58A	La Victoria	58.50	54	P	P	14 06 24.9 -0.7
	baz=315					
N53A	Lisbon	58.54	63	P	P	14 06 26.1 +0.1
	baz=315					
G57A	Newington	58.55	56	P	P	14 06 25.7 -0.3
	baz=315					
SSLB	Suanglung	58.60	268	P	P	14 06 26.1 -0.6
PLAL	Pickwick Lake	58.61	72	P	P	14 06 25.7 -0.8
PLAL				IAmb	IAmb	14 06 26.5
	comp=Z,3.9nm,0.8s					
M54A	Oil Creek Stat	58.67	62	P	P	14 06 26.8 -0.2
M54A	Oil Creek Stat	58.67	62	P	P	14 06 27.0 0.0
	baz=315					
O53A	New Philadelph	58.73	64	P	P	14 06 26.8 -0.5
	baz=315					
R51A	Hillsboro	58.80	67	P	P	14 06 28.1 +0.3
	baz=315,SNR=9.9					
N54A	Moraine State	58.89	62	P	P	14 06 28.0 -0.4
N54A	Moraine State	58.89	62	P	P	14 06 28.1 -0.4
	baz=315					
G58A	Ormstown	58.98	55	P	P	14 06 28.4 -0.6
	baz=316					
T50A	Nancy	59.01	69	P	P	14 06 29.3 0.0
	baz=315					
K56A	Middlesex	59.06	59	P	P	14 06 30.0 +0.4
	baz=315					
F59A	Saint Guilaume	59.11	54	P	P	14 06 29.4 -0.4
	baz=316					
P53A	Whipple	59.17	64	P	P	14 06 29.7 -0.7
P53A	Whipple	59.17	64	P	P	14 06 30.0 -0.4
	baz=315					
M55A	Ridgway	59.18	61	P	P	14 06 30.6 +0.1
M55A				IAmb	IAmb	14 06 31.4
	comp=Z,11nm,0.9s					
M55A	Ridgway	59.18	61	P	P	14 06 30.8 +0.3
	baz=315					
O54A	Avella	59.23	63	P	P	14 06 30.4 -0.4
O54A	Avella	59.23	63	P	P	14 06 30.7 -0.1
	baz=315					
J57A	Williamstown	59.24	58	P	P	14 06 31.0 +0.2
D60A	Saint Jean D'O	59.25	52	P	P	14 06 30.4 -0.3
	baz=316					
R52A	Catlettsburg	59.30	66	P	P	14 06 30.9 -0.4
	baz=315					
L56A	Greenwood	59.34	60	P	P	14 06 31.7 +0.1
L56A	Greenwood	59.34	60	P	P	14 06 32.1 +0.5
	baz=315,SNR=6.0					
D61A	St Aubert, Com	59.39	51	P	P	14 06 31.4 -0.3
	baz=316					
E60A	Ste Agathe de	59.39	53	P	P	14 06 31.1 -0.6
	baz=316					
F60A	Warwick	59.43	53	P	P	14 06 31.4 -0.7
	baz=316					
U50A	Jamestown	59.44	69	P	P	14 06 33.5 +1.2
	baz=316					
H58A	Gabriels	59.45	56	P	P	14 06 31.9 -0.4
	baz=316					
K57A	Scipio Center	59.46	59	P	P	14 06 32.9 +0.6
	baz=316					

G59A	Clarenceville	59.47	55	P	P	14 06 31.8 -0.5
	baz=316					
M56A	Emporium	59.48	61	P	P	14 06 32.5 -0.1
M56A	Emporium	59.48	61	P	P	14 06 32.8 +0.3
	baz=316					
H59A	Cadyville	59.53	55	P	P	14 06 32.3 -0.4
	baz=316					
Q53A	Leroy	59.55	65	P	P	14 06 32.7 -0.3
	baz=316					
N55A	Marion Center	59.55	62	P	P	14 06 32.8 -0.2
	baz=316					
P54A	Burton	59.59	64	P	P	14 06 33.0 -0.2
	baz=316					
J58A	Remsen	59.64	57	P	P	14 06 33.8 +0.2
J58A	Remsen	59.64	57	P	P	14 06 34.0 +0.4
	baz=316					
R53A	Hurricane	59.69	66	P	P	14 06 33.7 -0.2
R53A				IAmb	IAmb	14 06 34.8
	comp=Z,17nm,1.1s					
R53A	Hurricane	59.69	66	P	P	14 06 34.1 +0.1
	baz=316					
NCB	Newcomb	59.74	56	P	P	14 06 34.4 +0.1
O55A	Ligonier	59.79	62	P	P	14 06 34.2 -0.5
	baz=316					
L57A	Andrews Acres	59.81	59	P	P	14 06 35.2 +0.5
	baz=316					
LZH	Lanzhou	59.81	291	eP	P	14 06 32.4 -2.7
LZH				pP	pP	14 06 58.1 -0.7
LZH				sP	sP	14 07 11.8 +2.3
N56A	West Decatur	59.82	61	P	P	14 06 34.9 +0.1
	baz=316					
Q54A	Coxs Mills	59.84	64	P	P	14 06 35.1 +0.1
Q54A	Coxs Mills	59.84	64	P	P	14 06 34.6 -0.4
	baz=316					
K58A	Earlville	59.88	58	P	P	14 06 35.7 +0.5
K58A	Earlville	59.88	58	P	P	14 06 36.1 +0.8
	baz=316					
MCWV	Mont Chateau	59.89	63	P	P	14 06 35.1 -0.3
MCWV				IAmb	IAmb	14 06 35.9
	comp=Z,5.1nm,0.8s					
MCWV	Mont Chateau	59.89	63	P	P	14 06 35.4 0.0
	baz=316					
F61A	St Evariste	59.89	53	P	P	14 06 35.2 0.0
	baz=316					
U51A	La Follette	59.93	69	P	P	14 06 35.6 -0.1
	baz=316					
J59A	Piesco	59.96	57	P	P	14 06 35.3 -0.6
T52A	Hallie	59.99	67	P	P	14 06 35.6 -0.4
T52A	Hallie	59.99	67	P	P	14 06 36.0 0.0
	baz=316					
P55A	Reedsville	60.01	63	P	P	14 06 36.0 -0.2
	baz=316					
D62A	Allapoint, All	60.01	51	P	P	14 06 35.9 -0.1
D62A	Allapoint, All	60.01	51	P	P	14 06 36.0 -0.1
	baz=317					
TZTN	Tazewell	60.07	68	P	P	14 06 35.8 -0.9
TZTN				IAmb	IAmb	14 06 41.8
	comp=Z,14nm,1.4s					
BINY	Binghamton	60.11	59	P	P	14 06 36.9 0.0
BINY	Binghamton	60.11	59	P	P	14 06 37.7 +0.9
	baz=316					
G61A	St-Isidore-de-	60.13	54	P	P	14 06 36.7 -0.2
	baz=316					
M57A	Sunshine Farm,	60.14	60	P	P	14 06 37.0 0.0
M57A	Sunshine Farm,	60.14	60	P	P	14 06 37.3 +0.3
	baz=316					
O56A	Blue Knob Stat	60.14	62	P	P	14 06 36.6 -0.5
O56A				IAmb	IAmb	14 06 59.0
	comp=Z,21nm,1.6s					
O56A	Blue Knob Stat	60.14	62	P	P	14 06 36.8 -0.3
	baz=316					
Q55A	Buckhannon	60.24	64	P	P	14 06 38.0 +0.2
	baz=316					
SSPA	Standing Stone	60.24	61	P	P	14 06 37.6 -0.1
SSPA				IAmb	IAmb	14 06 38.5
	comp=Z,8.3nm,0.6s					
SSPA	Standing Stone	60.24	61	P	P	14 06 37.9 +0.2
	baz=316					
L58A	Harry Jones Me	60.30	59	P	P	14 06 38.8 +0.7
	baz=316					
T53A	Wise	60.33	67	P	P	14 06 38.7 +0.2
	baz=316					
N57A	Milroy	60.33	61	P	P	14 06 38.6 +0.2
	baz=316					
S54A	Dingess, Beckl	60.42	66	P	P	14 06 38.6 -0.4
S54A				IAmb	IAmb	14 06 41.1
	comp=Z,15nm,1.3s					
S54A	Dingess, Beckl	60.42	66	P	P	14 06 39.1 +0.1
	baz=316					
M58A	Price's Panora	60.46	60	P	P	14 06 39.7 +0.4
	baz=316					
H61A	Lyndonville	60.48	54	P	P	14 06 39.5 +0.2
	baz=317					
D63A	Stockholm	60.48	50	P	P	14 06 39.0 -0.2
	baz=317					
P56A	Dayton Farm, R	60.54	63	P	P	14 06 39.9 +0.1
	baz=316					
L59A	Walton	60.61	58	P	P	14 06 40.6 +0.4
L59A				IAmb	IAmb	14 06 42.0
	comp=Z,13nm,0.8s					
L59A	Walton	60.61	58	P	P	14 06 40.9 +0.7
	baz=316					
G62A	West of Eustis	60.66	53	P	P	14 06 40.4 -0.2
G62A	West of Eustis	60.66	53	P	P	14 06 40.7 +0.2
	baz=317					
J60A	Lant Hill Farm	60.67	56	P	P	14 06 40.2 -0.4
	baz=316					
O57A	Amberson	60.68	61	P	P	14 06 40.8 +0.1
	baz=316					
Q56A	Snyder Ridge,	60.69	63	P	P	14 06 40.6 -0.1
Q56A				IAmb	IAmb	14 07 06.8
	comp=Z,12nm,1.2s					
Q56A	Snyder Ridge,	60.69	63	P	P	14 06 40.7 -0.1
	baz=316					
LBNH	Lisbon	60.69	55	P	P	14 06 40.5 -0.2
LBNH	Lisbon	60.69	55	P	P	14 06 40.5 -0.2
LBNH				pmax	pmax	
	comp=Z,71nm,2.0s					
N58A	Sunbury	60.71	60	P	P	14 06 40.9 0.0
R55A	Marlinton	60.73	64	P	P	14 06 41.1 0.0
R55A				IAmb	IAmb	14 07 20.6
	comp=Z,27nm,1.6s					
R55A	Marlinton	60.73	64	P	P	14 06 41.6 +0.5
	baz=316					
U53A	Fall Branch	60.75	68	P	P	14 06 41.2 -0.1
	baz=316					
E63A	Oxbow	60.79	51	P	P	14 06 40.5 -0.9
E63A				IAmb	IAmb	14 06 41.4
	comp=Z,9.9nm,0.7s					
E63A	Oxbow	60.79	51	P	P	14 06 40.7 -0.6
	baz=317					
PQI	Presque Isle	60.79	50	P	P	14 06 40.6 -0.8
T54A	Tazewell	60.80	66	P	P	14 06 42.0 +0.4
	baz=316,SNR=6.3					
H62A	Milan	60.83	54	P	P	14 06 41.5 -0.2
H62A				IAmb	IAmb	14 06 42.2
	comp=Z,15nm,0.9s					
H62A	Milan	60.83	54	P	P	14 06 41.7 +0.1
	baz=317					
M59A	Waymart	60.88	59	P	P	14 06 42.3 +0.3
	baz=316					
S55A	Lewisburg	60.88	65	P	P	14 06 42.6 +0.4
	baz=316					
F63A	Nahmakanta, Br	60.99	52	P	P	14 06 42.4 -0.3
F63A	Nahmakanta, Br	60.99	52	P	P	14 06 42.7 -0.1
	baz=317					
R56A	Bull Pasture M	61.03	64	P	P	14 06 43.0 -0.2
	baz=316					
U54A	Nelsons Funny	61.06	67	P	P	14 06 43.6 +0.2
	baz=316					
E64A	Bridgewater	61.07	50	P	P	14 06 42.9 -0.3
	baz=318,SNR=5.7					
Z50A	Ashland	61.09	72	P	P	14 06 42.5 -1.1
Z50A				IAmb	IAmb	14 06 43.2
	comp=Z,4.3nm,0.6s					
Z50A	Ashland	61.09	72	P	P	14 06 42.7 -0.9
	baz=317					
Q57A	Strasburg	61.11	63	P	P	14 06 44.1 +0.4
	baz=316					
V53A	Saluda	61.12	68	P	P	14 06 43.4 -0.4
V53A				IAmb	IAmb	14 06 54.1
	comp=Z,12nm,1.4s					
V53A	Saluda	61.12	68	P	P	14 06 43.7 -0.1
	baz=316					
O58A	Lewisberry	61.12	61	P	P	14 06 43.8 +0.1
	baz=316					
N59A	State Game Lan	61.15	60	P	P	14 06 44.1 +0.2

N59A				IAmb	IAmb	14 08 19.7
	comp=Z,21nm,1.6s					
N59A	State Game Lan	61.15	60	P	P	14 06 44.3 +0.4
	baz=316					
K61A	Williamstown	61.16	57	P	P	14 06 45.7 +1.8
	baz=317					
G63A	Kingsbury	61.18	53	P	P	14 06 44.0 0.0
	baz=317					
T55A	Pulaski	61.20	66	P	P	14 06 44.8 +0.4
	baz=316					
F64A	Sherman	61.23	51	P	P	14 06 44.0 -0.3
F64A	Sherman	61.23	51	P	P	14 06 44.1 -0.3
	baz=318					
BATG	Bathurst New B	61.25	49	P	P	14 06 44.4 0.0
BLA	Blacksburg	61.33	65	P	P	14 06 45.3 +0.1
BLA				IAmb	IAmb	14 06 46.1
	comp=Z,8.0nm,0.9s					
BLA	Blacksburg	61.33	65	P	P	14 06 45.3 +0.1
BLA				pmax	pmax	
	comp=Z,8.0nm,0.9s					
BLA	Blacksburg	61.33	65	P	P	14 06 45.3 +0.1
	baz=316					
O59A	Robesonia	61.37	60	P	P	14 06 45.6 +0.2
	baz=317					
M60A	Port Jervis	61.45	59	P	P	14 06 46.2 +0.4
	baz=317					
S56A	Natural Bridge	61.47	65	P	P	14 06 46.5 +0.4
	baz=316					
I63A	Otisfield	61.49	54	P	P	14 06 46.3 +0.2
U55A	TA2, Sparta	61.50	66	P	P	14 06 46.6 +0.2
	baz=317					
MVL	Millersville	61.51	61	P	P	14 06 46.1 -0.2
MVL				IAmb	IAmb	14 08 57.9
	comp=Z,24nm,1.5s					
N60A	Cedar Hill Far	61.53	59	P	P	14 06 46.8 +0.4
	baz=317					
Q58A	Fox Den Farm,	61.57	62	P	P	14 06 46.8 +0.1
	baz=317					
R57A	Stanardsville	61.58	63	P	P	14 06 47.0 +0.2
	baz=317					
T56A	Rocky Mt	61.68	65	P	P	14 06 47.8 +0.3
	baz=317					
K62A	Royalston	61.69	56	P	P	14 06 48.2 +0.7
	baz=317					
S57A	Dark Hollow, R	61.74	64	P	P	14 06 48.4 +0.5
	baz=317					
P59A	Jarrettsville	61.75	61	P	P	14 06 48.0 +0.1
	baz=317					
250A	Grady	61.81	74	P	P	14 06 47.5 -1.0
V55A	Taylorsville	61.88	67	P	P	14 06 48.7 -0.1
V55A				IAmb	IAmb	14 07 18.4
	comp=Z,24nm,1.6s					
V55A	Taylorsville	61.88	67	P	P	14 06 49.0 +0.1
	baz=317					
W54A	Cherokee Point	61.89	68	P	P	14 06 48.6 -0.4
	baz=317					
M61A	Granite Spring	61.90	58	P	P	14 06 49.0 +0.1
	baz=317					
U56A	King	61.98	66	P	P	14 06 49.8 +0.3
	baz=317					
G65A	Princeton	62.09	51	P	P	14 06 50.0 -0.1
	baz=318					
T57A	Hurt	62.13	65	P	P	14 06 50.5 0.0
	baz=317					
H65A	Eastbrook	62.15	52	P	P	14 06 50.5 +0.1
	baz=318					
X54A	Belton	62.17	69	P	P	14 06 50.8 -0.1
	baz=317					
V56A	Mocksville	62.31	67	P	P	14 06 51.8 +0.1
	baz=317					
KMSC	Kings Mountain	62.33	68	P	P	14 06 52.0 +0.1
	baz=317					
S58A	Poland Farm, P	62.34	64	P	P	14 06 52.2 +0.3
	baz=317					
GOGA	Godfrey	62.38	70	P	P	14 06 51.5 -0.7
GOGA				IAmb	IAmb	14 07 37.5
	comp=Z,28nm,1.9s					
GOGA	Godfrey	62.38	70	P	P	14 06 51.5 -0.7
GOGA				pmax	pmax	
	comp=Z,28nm,2.0s					
HODGE	Hodges	62.47	69	P	P	14 06 52.3 -0.5
HODGE				IAmb	IAmb	14 08 33.5
	comp=Z,13nm,1.5s					
GGN	Saint George	62.49	51	P	P	14 06 52.6 -0.1
U57A	Blanch	62.50	65	P	P	14 06 53.2 +0.2
	baz=317					
EMMW	East Machias	62.51	52	P	P	14 06 52.7 -0.1
H66A	Whiting	62.52	51	P	P	14 06 52.8 -0.2
	baz=318					
T58A	Grand View Acr	62.56	64	P	P	14 06 53.2 -0.2
	baz=317					
X55A	Gracelyn & Ava	62.65	68	P	P	14 06 53.9 -0.1
	baz=317					
WMQ	Urumqi	62.70	307	eP	P	14 06 56.9 +2.6
M63A	Gales Ferry	62.71	57	P	P	14 06 54.7 +0.4
	baz=318					
LMN	Caledonia Moun	62.89	49	P	P	14 06 55.4 -0.1
BRVK	Borovoye	62.90	324	P	P	14 06 55.3 -0.1
BRVK	Borovoye	62.90	324⇈	eP	P	14 06 55.7 +0.3
BRVK				pmax	pmax	
	comp=Z,2.0nm,0.9s					
Y55A	Saluda	62.91	69	P	P	14 06 55.5 -0.2
	baz=317					
X56A	White Oak	62.97	68	P	P	14 06 55.9 -0.2
	baz=317					
MKAR	Makanchi Array	62.97	313	P	P	14 06 54.8 -1.2
	comp=Z,0.4nm,0.4s,baz=46,slow=6.5,SNR=2.2					
JSC	Jenkinsville	63.00	68	P	P	14 06 56.0 -0.3
JSC				IAmb	IAmb	14 07 17.4
	comp=Z,16nm,1.9s					
JSC	Jenkinsville	63.00	68	P	P	14 06 56.0 -0.3
JSC				pmax	pmax	
	comp=Z,16nm,1.9s					
W57A	Gilead	63.07	67	P	P	14 06 56.0 -0.8
W57A				IAmb	IAmb	14 08 29.3
	comp=Z,19nm,1.4s					
W57A	Gilead	63.07	67	P	P	14 06 56.4 -0.3
	baz=317					
T59A	Double "B" Far	63.08	64	P	P	14 06 56.9 +0.2
T59A				IAmb	IAmb	14 06 57.5
	comp=Z,7.4nm,0.5s					
T59A	Double "B" Far	63.08	64	P	P	14 06 57.1 +0.3
	baz=317					
DRLN	Deer Lake	63.44	42	P	P	14 06 58.7 -0.2
X57A	Johnson Farm,	63.52	67	P	P	14 07 00.1 +0.4
	baz=318					
V59A	Middlesex	63.59	65	P	P	14 07 00.2 +0.1
	baz=318					
Z56A	Williston	63.64	69	P	P	14 07 00.5 0.0
Z56A	Williston	63.64	69	P	P	14 07 00.8 +0.3
	baz=318					
ARU	Arti	63.84	332	P	P	14 07 01.3 -0.2
ARU				IAmb	IAmb	14 09 10.8
	comp=Z,15nm,1.7s					
ARU	Arti	63.84	332	P	P	14 07 01.3 -0.2
ARU				pmax	pmax	
	comp=Z,15nm,1.7s					
V60A	Jim Taylor Roa	64.12	64	P	P	14 07 02.1 -1.6
Z58A	St. Stephen	64.51	68	P	P	14 07 06.5 +0.3
	baz=318					
GBN	Guysborough	64.72	47	P	P	14 07 07.6 +0.3
RABL	Rabaul	65.08	222	P	P	14 07 09.8 -0.3
FIA1	FINESS Array S	65.22	351	P	P	14 07 10.1 -0.3
FINES	FINESS Array B	65.22	351	P	P	14 07 10.0 -0.4
	comp=Z,2.4nm,0.6s,baz=16,slow=8.8,SNR=11					
FINES	FINESS Array B	65.22	351	iP	P	14 07 10.0 -0.4
FINES				pmax	pmax	
	comp=Z,2.0nm,0.6s					
NC204	NORSAR Array S	66.14	359	P	P	14 07 16.3 -0.1
NC303	NORSAR Array S	66.18	359	P	P	14 07 16.5 -0.1
NC405	NORSAR Array S	66.29	359	P	P	14 07 16.9 -0.4
NB201	NORSAR Array S	66.36	359	P	P	14 07 17.4 -0.4
NB2	NORSAR Subarra	66.37	359	P	P	14 07 17.8 0.0
	comp=Z,1.1nm,0.6s,baz=1.2,slow=6.5					
NOA	NORSAR Array B	66.37	359	P	P	14 07 17.9 0.0
	comp=Z,1.2nm,0.6s,baz=0.9,slow=6.4,SNR=4.9					
OBN	Obninsk	70.03	344	iP	P	14 07 42.4 +1.7
OBN				pmax	pmax	
	comp=Z,6.0nm,1.1s					
KK31	Karatay Array	70.96	317	P	P	14 07 45.5 -1.1
KK31	Karatay Array	70.96	317	P	P	14 07 45.5 -1.1
KK31				pmax	pmax	
	comp=Z,7.0nm,1.7s					
KKAR	Karatay Array	70.96	317	P	P	14 07 45.6 -1.0
KKAR	Karatay Array	70.96	317	P	P	14 07 45.6 -1.0
KKAR				pmax	pmax	

	comp=Z,7.0nm,1.7s						
AKASG	Malin Array Be	75.42	347	P	P	14 08 10.9	-1.8
	comp=Z,1.5nm,0.5s,baz=17,slow=5.9,SNR=12						
AKASG	Malin Array Be	75.42	347	cP	P	14 08 11.6	-1.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	Malin Array Si	75.42	347	P	P	14 08 11.6	-1.1
AKBB				IAmb	IAmb	14 09 52.8	
	comp=Z,26nm,2.0s						
AKBB	Malin Array Si	75.42	347	P	P	14 08 11.6	-1.1
AKBB				pmax	pmax		
	comp=Z,26nm,2.0s						
CHTO	Chiang Mai	75.62	282	P	P	14 08 13.9	-0.4
CHTO	Chiang Mai	75.62	282	P	P	14 08 13.9	-0.4
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CM31	Chiang Mai Arr	75.90	282	P	P	14 08 15.8	-0.1
CM31				IAmb	IAmb	14 08 16.6	
	comp=Z,3.4nm,0.6s						
CMAR	Chiang Mai Arr	75.90	282	P	P	14 08 15.8	-0.2
	comp=Z,2.4nm,0.6s,baz=25,slow=6.8,SNR=18						
CMAR				pP	pP	14 08 40.2	-0.3
	comp=Z,0.9nm,0.5s,baz=28,slow=6.3,SNR=3.0						
PBKT	Sadao Pong	76.16	279	P	P	14 08 17.2	-0.2
MORC	Moravsky Berou	77.45	355	P	P	14 08 24.4	+0.2
MORC				IAmb	IAmb	14 10 04.5	
	comp=Z,11nm,1.7s						
MORC	Moravsky Berou	77.45	355	P	P	14 08 24.4	+0.2
MORC				pmax	pmax		
	comp=Z,11nm,1.7s						
NIL	Nilore	77.60	310	P	P	14 08 24.9	-0.4
NIL	Nilore	77.60	310	P	P	14 08 24.9	-0.4
NIL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GERES	GERESS Array B	78.54	357	P	P	14 08 30.4	+0.1
	comp=Z,0.9nm,0.7s,baz=18,slow=4.8,SNR=9.2						
VYHS	Vyhne	78.65	354	eP	P	14 08 30.6	-0.2
VYHS	Vyhne	78.65	354	eP	P	14 08 30.6	-0.2
BUR08	Bucovina Ar. S	78.92	349	P	P	14 08 32.2	-0.3
BUR08				IAmb	IAmb	14 08 56.5	
	comp=Z,22nm,1.9s						
KIV	Kislovodsk	79.39	336	eP	P	14 08 35.6	+0.5
KIV				pmax	pmax		
	comp=Z,23nm,1.0s						
BRTR	Keskin Array B	85.40	342	P	P	14 09 06.4	-0.1
	comp=Z,1.0nm,0.6s,baz=9.3,slow=3.3,SNR=7.1						
BRTR	Keskin Array B	85.40	342	cP	P	14 09 07.4	+0.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	86.88	231	P	P	14 09 12.8	-0.8
	comp=Z,0.3nm,0.4s,baz=33,slow=5.4,SNR=6.5						
WRA	Warramunga Arr	86.88	231	eP	P	14 09 16.5	+2.9
PSI	Prapat	88.21	272	P	P	14 09 20.1	-0.3
	comp=Z,21nm,0.7s,baz=9.9,slow=5.3,SNR=15						
RPSI	Rantau Prapat	88.29	272	P	P	14 09 20.4	-0.3
RPSI	Rantau Prapat	88.29	272	P	P	14 09 20.1	-0.6
ASAR	Alice Springs	90.29	229	P	P	14 09 29.6	-0.1
	comp=Z,0.9nm,0.7s,baz=24,slow=5.1,SNR=17						
ASAR				pP	pP	14 09 54.8	-1.0
	comp=Z,0.6nm,0.5s,baz=22,slow=4.8,SNR=4.1						
PALK	Pallekele	95.43	289	P	P	14 09 52.9	-0.9
	comp=Z,7.2nm,0.8s,baz=17,slow=11,SNR=3.7						
TORD	Torodi Ar. Bea	113.84	8	PKiKP	PKiKP	14 15 06.3	-1.1
	comp=Z,0.2nm,0.3s,baz=346,slow=2.8,SNR=6.0						
DBIC	Dimbokro	119.36	17	PKP	PKPdf	14 15 17.0	-1.0
	comp=Z,0.9nm,0.3s,baz=6.9,slow=2.2,SNR=5.8						
VNDA	Vanda	131.33	188	PKhKP	PKPpre	14 15 32.4	
	comp=Z,6.1nm,1.1s,baz=5.2,slow=3.9,SNR=4.1						
QSPA	South Pole Qui	142.70	180	PKhKP	PKPpre	14 15 55.5	
	baz=25,slow=1.5						
BOSA	Boshof	153.09	328	PKPbc	PKPbc	14 16 25.8	-0.2
	comp=Z,2.6nm,0.5s,baz=14,slow=2.5,SNR=13						

IDC 23 14:01:47.5±1.4, 35°.64N×24°.66E, h0km, mb3.5/5, mb1 3.5/5, mb1mx3.3/41, mbtmp3.5/5, Error ellipse: s-maj=353.9km s-min=24.4km az=140.0
THE 23 14:01:53.6, 34°.71N×25°.41E, h0km±2km, ML2.4/2, Error ellipse: s-maj=3.3km s-min=0.9km az=190.0
ATH 23 14:01:54.2, 34°.89N×25°.39E, h43km±1km, ML2.7/8, Error ellipse: s-maj=3.4km s-min=1.2km az=356.0
ISC 23 14:01:54.6±1.0, 34°.90N±0°.07×25°.38E±0°.03, h46km±7km, n36, σ1.28/45, mb3.5/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAST	Lasithi	0.28	16	P	Pn	14 02 02.6	-0.7
LAST				S	Sn	14 02 11.2	+1.9
LAST	Lasithi	0.28	16	P	Pn	14 02 02.7	-0.5
LAST				S	Sn	14 02 08.3	-1.0
LAST				AML	AML	14 02 12.2	
	comp=N,2523μm,0.7s						
LAST				AML	AML	14 02 13.7	
	comp=E,1363μm,0.4s						
FRMA	Ierapetra Chan	0.31	68	P	Pn	14 02 04.3	+0.8
FRMA				S	Sn	14 02 12.2	+2.5
	comp=E,525nm,0.4s						
NPS	Neapolis	0.41	27	P	Pn	14 02 04.6	0.0
NPS				S	Sn	14 02 13.9	+2.2
NPS	Neapolis	0.41	27	P	Pn	14 02 04.6	0.0
NPS				S	Sn	14 02 12.7	+1.1
NPS				AML	AML	14 02 17.9	
	comp=N,878μm,0.4s						
NPS				AML	AML	14 02 21.5	
	comp=E,1526μm,0.5s						
HRKL	Herakleio	0.47	331	P	Pn	14 02 06.5	+1.2
KSTL	Kastelli Herak	0.48	328	P	Pn	14 02 03.7	-1.7
SIVA	Sivas	0.49	285	P	Pn	14 02 05.8	+0.4
SIVA	Sivas	0.49	285	P	Pn	14 02 05.8	+0.4
SIVA				S	Sn	14 02 12.9	-0.2
SIVA				AML	AML	14 02 18.8	
	comp=E,8287μm,0.4s						
SIVA				AML	AML	14 02 18.8	
	comp=N,5364μm,0.6s						
TMBK	Timbaki Herakl	0.54	289	P	Pn	14 02 06.8	+0.7
IDI	Anoyia	0.56	314	P	Pn	14 02 06.7	+0.2
IDI				S	Sn	14 02 16.4	+1.4
IDI				AML	AML	14 02 24.4	
	comp=N,852μm,0.5s						
IDI				AML	AML	14 02 24.4	
	comp=E,600μm,0.4s						
STIA	Sitia Lasithi	0.66	62	P	Pn	14 02 08.4	+0.8
ZKR	Zakros	0.72	72	P	Pn	14 02 08.6	+0.1
ZKR				S	Sn	14 02 20.9	+2.4
	comp=E,470nm,0.6s						
ZKR	Zakros	0.72	72	P	Pn	14 02 08.9	+0.5
ZKR				S	Sn	14 02 19.0	+0.6
ZKR				AML	AML	14 02 21.9	
	comp=E,1304μm,0.6s						
ZKR				AML	AML	14 02 29.1	
	comp=N,557μm,0.5s						
GVD	Gavdhos	1.07	267	P	Pn	14 02 14.3	+1.1
GVD	Gavdhos	1.07	267	P	Pn	14 02 14.2	+1.0
GVD				AML	AML	14 02 38.2	
	comp=N,909μm,0.7s						
GVD				AML	AML	14 02 41.1	
	comp=E,786μm,0.4s						
VAM	Vamos	1.10	298	P	Pn	14 02 15.0	+1.4
VAM				S	Sn	14 02 29.4	+1.8
VAM				AML	AML	14 02 41.0	
	comp=N,899μm,0.4s						
VAM				AML	AML	14 02 42.3	
	comp=E,727μm,0.5s						
IMMV	Iera Moni Meta	1.28	297	P	Pn	14 02 19.0	+2.9
IMMV	Iera Moni Meta	1.28	297	P	Pn	14 02 16.3	+0.2
IMMV				AML	AML	14 02 47.9	
	comp=N,573μm,0.5s						
IMMV				AML	AML	14 02 47.9	
	comp=E,788μm,0.9s						
THR6	Thira Island,	1.46	0	P	Pn	14 02 20.3	+1.8
THR3	Thira Island,	1.51	1	P	Pn	14 02 19.8	+0.6
THT2	Imerovigli	1.54	1	P	Pn	14 02 24.3	+4.7
KARP	Karpathos	1.59	65	P	Pn	14 02 21.8	+1.4
IOSP	Ios island	1.82	358	P	Pn	14 02 24.2	+0.6
ANKY	Antikythira Is	1.96	300	P	Pn	14 02 26.7	+1.4
MHLO	Agia Marina, M	1.96	336	P	Pn	14 02 25.8	+0.4
AMGA	Amorgos Island	1.98	12	P	Pn	14 02 27.3	+1.6
APE	Apeiranthos	2.17	3	P	Pn	14 02 28.8	+0.4
KTHA	Kythira Island	2.33	306	P	Pn	14 02 30.7	+0.3
VLI	Veliai	2.69	313	P	Pn	14 02 36.5	+1.0
DID	Didima	3.13	327	P	Pn	14 02 42.2	+0.7
TORD	Torodi Ar. Bea	30.46	231	P	P	14 08 02.3	-0.9
	comp=E,0.4nm,0.4s,baz=32,slow=9.3,SNR=6.9						
KURBB	Kurchatov Arra	41.15	51	P	P	14 09 33.5	-0.7
	comp=E,0.3nm,0.3s,baz=277,slow=8.6,SNR=4.9						
MKAR	Makanchi Array	43.77	56	P	P	14 09 55.0	-0.6
	comp=E,0.1nm,0.3s,baz=269,slow=8.6,SNR=4.7						
ZALV	Zalesovo Beam	45.05	46	P	P	14 10 03.7	-2.0
	comp=E,0.4nm,0.5s,baz=264,slow=8.5,SNR=3.5						
SONM	Songino Array	59.51	51	P	P	14 11 52.6	-0.6
	comp=E,0.2nm,0.4s,baz=260,slow=5.1,SNR=3.5						

JMA 23 14:19:37.7±0.2, 24°.36N×121°.90E, h44km±4km, M2.0
TAP 23 14:19:38.5, 24°.42N×121°.90E, h19km, ML3.0, B
ISC 23 14:19:38.5±0.9, 24°.41N±0°.02×121°.94E±0°.02, h22km±4km, n74, σ0.58/134, 5C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	Nanau	0.18	277	iP	Pb	14 19 43.4	-0.3
	baz=271						
ENA				iS	Sb	14 19 47.2	-0.1
	baz=271						
TWC	Suao	0.22	338	⇓iP	Pb	14 19 43.9	-0.3
	baz=347						
TWC				iS	Sb	14 19 47.7	-0.3
	baz=347						
EOS1	EOS1	0.23	51	P	Pb	14 19 44.7	+0.5
	baz=58						
EOS1				S	Sb	14 19 49.9	+1.8
	baz=58						
NACB	Ninganchiao	0.39	234	⇑P	Pb	14 19 46.8	0.0
	baz=228						
NACB				S	Sb	14 19 53.2	+0.9
	baz=228						
ILA	Ilan	0.40	334	P	Pb	14 19 46.4	-0.5
	baz=338						
ILA				iS	Sb	14 19 53.4	+0.8
	baz=338						
TWE	Neicheng	0.40	322	⇓iP	Pb	14 19 46.7	-0.2
	baz=325						
TWE				S	Sb	14 19 52.1	-0.5
	baz=325						
ENTT	Nioudou	0.41	305	iP	Pb	14 19 47.0	-0.2
	baz=305						
ENTT				S	Sb	14 19 52.7	-0.3
	baz=305						
NDT	Datong Townshi	0.43	297	⇑iP	Pb	14 19 47.4	-0.1
	baz=296						
NDT				iS	Sb	14 19 53.8	+0.2
	baz=296						
SLBB	Yuanshan	0.44	322	iP	Pb	14 19 47.6	-0.1
	baz=323						
SLBB				S	Sb	14 19 53.7	-0.2
	baz=323						
TWD	Chiawan	0.45	224	iP	Pb	14 19 47.7	0.0
	baz=218						
TWD				iS	Sb	14 19 54.8	+0.8
	baz=218						
NTC	Toucheng	0.46	348	eP	Pb	14 19 47.7	-0.2
	baz=350						
NTC				eS	Sb	14 19 54.4	+0.1
	baz=350						
ETLH	Xiulin Townshi	0.46	245	P	Pb	14 19 48.1	+0.1
	baz=240						
ETLH				S	Sb	14 19 55.3	+0.9
	baz=240						
NNSB	Datong	0.51	273	⇑P	Pb	14 19 48.6	-0.2
	baz=270						
NNSB				S	Sb	14 19 55.9	+0.1
	baz=270						
NNSH	Datong	0.51	273	P	Pb	14 19 48.7	-0.1
	baz=270						
NNSH				S	Sb	14 19 55.5	-0.3
	baz=270						
NNS	Nan Shan	0.52	274	iP	Pb	14 19 48.7	-0.3
	baz=271						
NNS				S	Sb	14 19 56.1	0.0
	baz=271						
NWLT	Wulai	0.54	313	eP	Pb	14 19 49.1	-0.3
	baz=313						
NWLT				eS	Sb	14 19 56.4	-0.3
	baz=313						
TIPB	Shuangxi	0.57	350	iP	Pb	14 19 49.6	-0.3
	baz=352						
TIPB				iS	Sb	14 19 57.5	-0.2
	baz=352						
YHNB	Yeheng	0.57	297	⇑P	Pb	14 19 49.6	-0.3
	baz=296						
YHNB				S	Sb	14 19 57.6	-0.2
	baz=296						
ENLB	Shoufeng	0.59	212	eP	Pb	14 19 50.0	-0.1
	baz=208						
ENLB				eS	Sn	14 20 00.2	-0.2
	baz=208						
NSK	Sanguang	0.59	297	⇑iP	Pb	14 19 49.9	-0.3
	baz=296						
NSK				iS	Sb	14 19 58.0	-0.3
	baz=296						
TWB1	Santiao Chiao	0.60	4	iP	Pb	14 19 50.3	-0.1
	baz=8.0						
TWB1				iS	Sb	14 19 58.1	-0.3
	baz=8.0						
TWA	Mucha	0.66	331	P	Pb	14 19 51.3	0.0
	baz=332						
TWA				S	Sb	14 20 00.7	+0.7
	baz=332						
WHF	Hehuan Shan	0.67	247	iP	Pb	14 19 51.7	0.0
	baz=244						
WHF				S	Sb	14 20 01.2	+0.5
	baz=244						
NHDH	Xindian Distri	0.67	326	P	Pb	14 19 51.6	+0.1
	baz=327						
NHDH				S	Sb	14 20 00.8	+0.4
	baz=327						
NWF	Wu-fen Shan	0.68	348	P	Pb	14 19 51.6	-0.1
	baz=350						
NWF				S	Sb	14 20 00.9	+0.2
	baz=350						
WFSB	Wu-fen Shan	0.68	348	eP	Pb	14 19 51.7	+0.1
	baz=350						
TWT	Tachien	0.71	258	P	Pb	14 19 52.6	+0.3
	baz=255						
TWT				S	Sn	14 20 03.1	-0.6
	baz=255						
TDCB	Techi	0.73	258	P	Pb	14 19 52.6	+0.1
	baz=255						
TDCB				S	Sn	14 20 03.4	-0.7
	baz=255						
TAP1	Taipei	0.73	329	eP	Pb	14 19 52.5	-0.1
	baz=329						
TAP1				eS	Sb	14 20 03.5	+1.3
	baz=329						
TAP	Taipei	0.74	328	P	Pb	14 19 52.9	+0.2
	baz=329						
TAP				S	Sb	14 20 03.5	+1.1
	baz=329						
ESL	Shilin	0.75	218	iP	Pb	14 19 52.0	-0.8
	baz=214						
ESL				S	Sn	14 20 03.2	-1.1
	baz=214						
WLTB	Daxi	0.77	306	P	Pn	14 19 53.8	-0.1
	baz=305						
WLTB				eS	Sn	14 20 03.3	+0.2
	baz=305						
CHGB	Renai	0.78	244	P	Pb	14 19 53.6	+0.1
	baz=241						
CHGB				S	Sn	14 20 04.6	-0.8
	baz=241						
YM01	YM01	0.81	336	P	Pb	14 19 54.2	+0.3
	baz=337						
YM01				eS	Sb	14 20 05.1	+0.6
	baz=337						
YM10	YM10	0.82	335	P	Pb	14 19 54.5	+0.4
	baz=336						
YM10				eS	Sb	14 20 05.5	+0.7
	baz=336						
YM11	YM11	0.82	337	P	Pb	14 19 54.6	+0.4
	baz=337						
YM11				eS	Sb	14 20 05.3	+0.3
	baz=337						
OWD	Renai	0.83	237	P	Pb	14 19 54.2	-0.1
	baz=234						
OWD				eS	Sn	14 20 06.1	-0.4
	baz=234						
YM04	YM04	0.83	334	eP	Pn	14 19 54.4	+0.2
	baz=335						
YM04				eS	Sn	14 20 06.2	-0.2
	baz=335						
TWS1	Kuangyinshan	0.84	326	P	Pb	14 19 54.9	+0.5
	baz=327						
TWS1				S	Sn	14 20 06.7	+0.1
	baz=327						
YM03	YM03	0.85	335	P	Pn	14 19 55.0	-0.2
	baz=336						
YM03				S	Sn	14 20 07.2	+0.2
	baz=336						
ANP	Anpu	0.86	334	P	Pb	14 19 54.9	-0.5
	baz=335						
ANP				eS	Sb	14 20 07.1	+1.0
	baz=335						
LIOB	Emei	0.87	286	P	Pb	14 19 55.4	+0.5
	baz=285						
NSTT	Nanjuang	0.88	285	eP	Pb	14 19 55.6	+0.5
	baz=284						
NSTT				eS	Sb	14 20 07.0	+0.5
	baz=284						
NCUH	Zhongli	0.88	309	P	Pb	14 19 55.8	+0.6
	baz=309						
WHP	Taichung City	0.91	262	eP	Pn	14 19 55.8	-0.3
	baz=260						
WHP				eS	Sn	14 20 09.3	+0.8
	baz=260						
TWY	Chenhua	0.92	341	P	Pb	14 19 56.4	+0.6
	baz=342						
TWY				S	Sn	14 20 08.9	+0.3
	baz=342						
JYNG	Yonagunijimaku	0.92	87	P	Pn	14 19 54.3	-1.8
JYNG				S	Sn	14 20 08.5	-0.1
SBCB	Hsinchu	0.95	294	eP	Pn	14 19 56.4	-0.1
	baz=293						
SBCB				eS	Sn	14 20 09.3	0.0
	baz=293						
VWDT	VWDT	0.97	228	eP	Pn	14 19 56.2	-0.6
	baz=226						
VWDT				eS	Sn	14 20 10.5	+0.6
	baz=226						
YOJ	Yonaguni jima	0.98	87	eP	Pn	14 19 56.2	-0.6
	baz=87						
YOJ				eS	Sn	14 20 09.9	-0.2
	baz=87						
YOJ	Yonaguni jima	0.98	87	P	Pn	14 19 56.3	-0.6
YOJ				eS	Sn	14 20 09.3	-0.8
DPDB	Guoxing	0.99	248	eP	Pb	14 19 57.1	0.0
	baz=246						
DPDB				eS	Sn	14 20 10.8	+0.3
	baz=246						
NHW	Xinwu Township	1.01	307	eP	Pb	14 19 57.4	+0.2
	baz=306						
NHW				eS	Sb	14 20 11.1	+1.1
	baz=306						
HGSD	Ruisui	1.02	207	eP	Pb	14 19 57.1	-0.4
	baz=205						
HGSD				eS	Sb	14 20 13.2	+2.7
	baz=205						
NMLH	Miaoli	1.05	277	eP	Pb	14 19 58.1	+0.1
	baz=276						
EHY	Hungye	1.06	212	eP	Pb	14 19 58.3	+0.2
	baz=209						
TWQ1	Liyutan	1.06	267	eP	Pb	14 19 58.6	+0.4
	baz=265						
TWQ1				eS	Sn	14 20 11.7	-0.4
	baz=265						
NSY	Sanyi	1.07	271	eP	Pb	14 19 59.3	+1.0
	baz=269						
SMLT	Sun Moon Lake	1.08	241	eP	Pn	14 19 57.7	-0.7
	baz=239						
SMLT				eS	Sb	14 20 12.5	+0.2
	baz=239						
SSLB	Suanglung	1.09	236	eP	Pn	14 19 58.1	-0.3
	baz=233						
SSLB				eS	Sb	14 20 12.9	+0.5
	baz=233						
TYC	Yuchr	1.11	243	eP	Pn	14 19 58.9	0.0
	baz=241						
TYC				eS	Sb	14 20 14.4	+1.5
	baz=241						
YULB	Yu-li	1.17	210	eP	Pn	14 19 59.3	-0.6
	baz=208						
YULB				eS	Sb	14 20 15.3	+0.6
	baz=208						
TWF1	Yuli	1.20	209	eP	Pb	14 20 00.2	-0.3
	baz=207						
WHYT	Xinyi Township	1.22	235	eP	Pn	14 20 01.1	+0.3
	baz=232						
WJS	Zhushan	1.25	242	eP	Pb	14 20 02.0	+0.7
	baz=240						
YUS	Yu-Shan	1.28	225	eP	Pn	14 20 00.8	-0.6
	baz=223						
YUS				eS	Sb	14 20 19.0	+0.6
	baz=223						
FULB	Fuli	1.34	206	eP	Pn	14 20 01.1	-0.7
	baz=204						
ALS	Alishan	1.37	230	eP	Pn	14 20 02.8	-0.8
	baz=227						
CHN5	Tsauling	1.41	235	eP	Pb	14 20 04.3	+0.2
	baz=233						
ELDTW	Lidau	1.48	215	eP	Pn	14 20 03.2	-0.6
	baz=213						
IRIF	Iriomote-Funau	1.64	92	P	Pn	14 20 05.6	-0.3
IRIF				eS	Sn	14 20 26.1	-0.2
JKRS	Kuro-shima	1.90	95	P	Pn	14 20 10.0	+0.5
JKRS				eS	Sn	14 20 32.9	+0.2
JIJ	Ishigaki jima	2.01	91	P	Pn	14 20 11.3	+0.2
JIJ				eS	Sn	14 20 35.6	0.0
JISG	Ishigakijimahi	2.17	85	eS	Sn	14 20 39.0	-0.5

NEIC 23 14:26:11.2±2.2, 20°.23S±0°.04×68°.7W±0°.1, h118km±7km, mb4.5/6, Error ellipse: s-maj=14.9km s-min=6.4km az=94.0
SJA 23 14:26:11.7±1.1, 20°.24S×68°.79W, h121km±7km, ML3.6, MW3.6
GUC 23 14:26:12.1±0.6, 20°.22S×68°.78W, h116km±3km, ML3.7
IDC 23 14:26:13.1±0.9, 20°.33S×68°.44W, h128km±10km, mb3.5/4, mb1 3.6/8, mb1mx3.4/28, mbtmp3.9/8, MS2.8/1, Ms1 2.8/1, ms1mx2.1/22, Error ellipse: s-maj=27.6km s-min=9.0km az=100.0
ISC 23 14:26:11.6±0.7, 20°.24S±0°.03×68°.77W±0°.06, h123km±6km, n57, σ1.29/79, mb4.2/5, 9C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.37	285	⇑iP	Pn	14 26 29.9	+0.2
PB08				iS	Sn	14 26 43.3	-0.1
PB08				IAML		14 26 44.1	
	comp=E,4μm,0.5s						
PB08	IPOC Station P	0.37	285	iP	Pn	14 26 30.1	+0.4
PB08				iS	Sn	14 26 43.2	-0.1
GO01	Chusmiza	0.69	325	⇓iP	Pn	14 26 31.9	+0.1
GO01				iS	Sn	14 26 46.8	-0.3
GO01				IAML		14 26 48.1	
	comp=E,3μm,0.3s						
GO01	Chusmiza	0.69	325		Pn	14 26 31.9	+0.1
GO01				Sn	Sn	14 26 46.2	-0.8
PB11	IPOC Station P	0.96	300	⇑iP	Pn	14 26 34.0	+0.2
PB11				iS	Sn	14 26 50.7	+0.3
PB11				IAML		14 26 51.3	
	comp=N,4μm,0.3s						
PB11	IPOC Station P	0.96	300		Pn	14 26 33.9	+0.2
PB01	IPOC Station P	1.04	220	⇑iP	Pn	14 26 35.0	+0.5
PB01				iS	Sn	14 26 52.5	+0.8
PB01				IAML		14 26 54.0	
	comp=N,2μm,0.5s						
PB01	IPOC Station P	1.04	220		Pn	14 26 34.9	+0.5
PB01				Sn	Sn	14 26 51.3	-0.4
MNMC	Minye Minye	1.35	325	⇓iP	Pn	14 26 38.7	+0.9
MNMC				iS	Sn	14 26 58.7	+0.9
MNMC	Minye Minye	1.35	325		Pn	14 26 38.6	+0.8
MNMCX	Minye Minye	1.35	325	iP	Pn	14 26 38.8	+0.9
MNMCX				iS	Sn	14 26 58.9	+1.2
TA01	Diego Aracena	1.36	256	⇑iP	Pn	14 26 37.8	+0.2
PATCX	Punta Patache	1.42	246	⇑iP	Pn	14 26 38.8	+0.4
PATCX				iS	Sn	14 26 59.7	+1.0
PATCX	Punta Patache	1.42	246	iP	Pn	14 26 38.9	+0.5
PATCX				iS	Sn	14 27 00.7	+1.9
PSGC	Pisagua	1.42	296	⇑iP	Pn	14 26 38.7	+0.3
PSGC				iS	Sn	14 26 58.8	-0.1
PSGC				IAML		14 27 03.8	
	comp=E,809nm,0.5s						
PB02	IPOC Station P	1.50	224	⇑iP	Pn	14 26 40.0	+0.7
PB02				iS	Sn	14 27 01.6	+1.1
PB02				IAML		14 27 05.1	
	comp=E,2μm,0.4s						

PB02	IPOC Station P	1.50	224	i P	Pn	14 26 40.0	+0.7
PB02				i S	Sn	14 27 01.6	+1.1
PB09	IPOC Station P	1.61	196	⇑i P	Pn	14 26 41.9	+1.2
PB09				i S	Sn	14 27 04.2	+1.3
PB09					IAML	14 27 09.1	
	comp=E,588nm,0.4s						
PB09	IPOC Station P	1.61	196	i P	Pn	14 26 41.9	+1.2
PB09				i S	Sn	14 27 04.4	+1.5
PB09					IAML	14 27 10.2	
	comp=Z,337nm,0.4s						
PB07	IPOC Station P	1.81	215	⇑i P	Pn	14 26 43.4	+0.4
PB07				i S	Sn	14 27 06.9	-0.2
PB07					IAML	14 27 11.8	
	comp=E,718nm,0.4s						
PB07	IPOC Station P	1.81	215	i P	Pn	14 26 43.6	+0.5
PB07				i S	Sn	14 27 07.9	+0.8
PB03	IPOC Station P	2.02	207	eP	Pn	14 26 46.1	+0.5
PB03				i S	Sn	14 27 11.6	-0.1
PB03					IAML	14 27 15.9	
	comp=N,378nm,0.3s						
PB03	IPOC Station P	2.02	207	i P	Pn	14 26 46.4	+0.8
PB03				i S	Sn	14 27 11.5	-0.1
LVC	Limon Verde	2.36	183	P	Pn	14 26 51.7	+1.6
	comp=N,21nm,0.3s,baz=8.9,slow=9.1,SNR=66						
LVC				S	Sn	14 27 20.5	+0.9
	comp=N,14nm,0.3s,baz=328,slow=9.9,SNR=14						
LVC	Limon Verde	2.36	183		Pn	14 26 51.6	+1.5
LVC	Limon Verde	2.36	183	⇑i P	Pn	14 26 51.7	+1.6
LVC				i S	Sn	14 27 20.6	+1.0
PB04	IPOC Station P	2.45	211		Pn	14 26 52.0	+1.1
PB04	IPOC Station P	2.45	211	i P	Pn	14 26 52.1	+1.1
PB04					IAML	14 27 33.0	
	comp=Z,278nm,0.5s						
PB06	IPOC Station P	2.56	197	i P	Pn	14 26 54.0	+1.6
PB06				i S	Sn	14 27 24.2	+0.3
PB06					IAML	14 27 32.5	
	comp=Z,268nm,0.5s						
PB05	IPOC Station P	2.92	207	i P	Pn	14 26 57.6	+0.5
PB15	IPOC Station P	3.02	192	i P	Pn	14 27 00.9	+2.4
YJA	Yavi	3.60	123	i P	Pn	14 27 08.3	+2.0
PB10	IPOC Station P	3.65	207		Pn	14 27 05.8	-0.8
PB10	IPOC Station P	3.65	207	i P	Pn	14 27 06.1	-0.5
LPAZ	La Paz	3.98	9	P	Pn	14 27 13.6	+2.1
	comp=Z,4.2nm,0.3s,baz=224,slow=4.2,SNR=70						
LPAZ				S	Sn	14 28 02.3	+4.4
	comp=Z,0.6nm,0.3s,baz=150,slow=14,SNR=3.5						
LPAZ	La Paz	3.98	9		Pn	14 27 13.7	+2.2
LPAZ	La Paz	3.98	9	i P	Pn	14 27 14.6	+3.0
GO02	Mina Guanaco	4.96	189		Pn	14 27 23.6	-0.7
AZAP	Zapla	5.24	140	i P	Pn	14 27 29.0	+1.0
SIV	San Ignacio	8.45	61	P	Pn	14 28 08.3	-2.9
	comp=Z,2.8nm,0.3s,baz=257,slow=12,SNR=48						
ACCO	Cerro Coronel	10.31	181	i P	Pn	14 28 34.4	-2.0
CPUP	Villa Florida	12.13	122	P	Pn	14 28 58.6	-1.8
	comp=Z,0.1nm,0.3s,baz=290,slow=12,SNR=3.8						
CPUP	Villa Florida	12.13	122		Pn	14 28 58.9	-1.5
SAML	Samuel	12.46	26	Pn	Pn	14 29 03.0	-1.7
PUMA	Malargue	15.21	182	i P	Pn	14 29 40.2	+0.4
PLCA	Paso Flores	20.48	184	P	P	14 30 41.9	+2.2
	comp=Z,3.4nm,0.8s,baz=31,slow=11,SNR=11						
PLCA	Paso Flores	20.48	184	P	P	14 30 40.4	+0.7
SDV	Santo Domingo	29.00	356	LR	LR	14 44 28.0	
	comp=Z,16nm,18.7s,baz=49,slow=38						
SDV	Santo Domingo	29.00	356	P	P	14 31 59.5	-0.6
SDV				IAmb	IAmb	14 32 14.5	
	comp=Z,5.5nm,1.1s						
HUMP	Col San Antoni	38.25	4	P	P	14 33 17.8	-2.0
AGPR	Aguadilla, PR	38.50	3	P	P	14 33 20.4	-1.6
DBIC	Dimbokro	68.26	74	P	P	14 36 58.8	-0.8
	comp=Z,0.8nm,0.4s,baz=243,slow=6.8,SNR=4.0						
DBIC	Dimbokro	68.26	74	IAmb	IAmb	14 39 26.3	
	comp=Z,27nm,1.7s						
TOA0	Torodi Ar. Sit	76.81	71	P	P	14 37 49.6	-0.7
TOA0				IAmb	IAmb	14 38 24.2	
	comp=Z,12nm,1.6s						
TORD	Torodi Ar. Bea	76.81	71	P	P	14 37 49.9	-0.4
	comp=Z,0.8nm,0.3s,baz=248,slow=5.4,SNR=16						
YKA	Yellowknife Ar	90.05	341	P	P	14 38 57.7	+0.9
	comp=Z,0.2nm,0.5s,baz=132,slow=4.3,SNR=4.5						
ASAR	Alice Springs	131.08	208	PKP	PKPdf	14 45 10.5	+0.9
	comp=Z,0.1nm,0.4s,baz=129,slow=1.9,SNR=5.2						

NEIC **23** *14:47:45.9±2.0, 60.86N±0.02×146.25W±0.04, h24km±8km, Error ellipse: s-maj=2.9km s-min=2.5km az=143.0*

AEIC 23 14:47:46.7±1.9, 60.86N±0.02×146.27W±0.04, h18km±1km, ML3.2/85, Error ellipse: s-maj=3.1km s-min=3.0km az=202.0, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FID	Port Fidalgo	0.15	223		Pg	14 47 51.5	+0.6
FID					Sg	14 47 56.4	+2.6
VMT	TAPS TI Valdez	0.23	349		Pg	14 47 51.7	-0.3
VMT					Sg	14 47 56.7	+1.0
JPK	Jack Peak	0.25	322		Pg	14 47 52.0	-0.4
EYAK	Cordova Ski Ar	0.40	140		Pg	14 47 54.6	-0.3
EYAK					Sb	14 48 01.8	+0.7
GLI	Glacier Island	0.40	273		Pg	14 47 53.7	-1.3
HIN	Hinchinbrook I	0.48	194		Pg	14 47 55.5	-0.8
HIN					Sb	14 48 03.6	+0.4
GOAT	Goat Mountain	0.81	109		Pb	14 48 00.8	-1.4
GOAT					Sg	14 48 13.1	-0.1
PS12	TAPS Pump St12	0.83	41		Pb	14 48 00.5	-2.0
PS12					Sb	14 48 11.7	-1.6
RAGM	Ragged Mountai	0.92	120		Pb	14 48 02.7	-1.3
PWL	Port Wells	1.01	271		Pb	14 48 03.2	-2.4
SCM	Sheep Creek Mo	1.10	333		Pb	14 48 04.7	-2.5
SCM					Sb	14 48 19.4	-1.8
KNK	Knik Glacier	1.20	299		Pn	14 48 06.6	-1.9
PS11	TAPS Pump St11	1.28	17		Pn	14 48 08.4	-1.3
PS11					Sn	14 48 25.9	-0.5
GLB	Gilahina Butte	1.33	63		Pn	14 48 08.1	-2.3
GLB					Sn	14 48 25.2	-2.4
BERG	Berg Lake	1.35	109		Pn	14 48 08.3	-2.3
SML	Sawmill	1.38	315		Pn	14 48 09.1	-1.9
VRDI	Verde Repeater	1.42	74		Pn	14 48 09.6	-2.2
VRDI					Sn	14 48 28.1	-2.0
MID	Middleton Isla	1.44	181	Pn	Pn	14 48 09.9	-1.8
CRQM	Cirque	1.54	92		Pn	14 48 11.5	-1.9
PMR	Palmer	1.57	299		Pn	14 48 12.0	-1.5
PMR					Sn	14 48 32.5	-0.8
GHO	Glory Hole Cre	1.57	307		Pn	14 48 12.2	-1.5
MCARA	McCarthy VSAT	1.66	70		Pn	14 48 13.2	-1.6
TGL	Tana Glacier	1.69	92		Pn	14 48 13.5	-1.9
RC01	Rabbit Creek A	1.70	279		Pn	14 48 15.3	-0.1
RC01					Sn	14 48 36.7	0.0
SEW	Seward	1.75	246		Pn	14 48 13.7	-2.3
SEW					Sn	14 48 36.4	-1.3
WAT6	Susitna Watana	1.86	339		Pn	14 48 16.1	-1.7
PTPK	Patty Peak	1.88	78		Pn	14 48 16.8	-1.3
KIAG	Kiagna River	1.92	86		Pn	14 48 16.7	-1.8
BALM	Baldy	1.93	83		Pn	14 48 16.9	-1.7
SLKM	Skilak Lake	1.97	261		Pn	14 48 17.4	-1.7
PAX	Paxson	2.15	10		Pn	14 48 20.9	-0.8
GRNC	Granite Creek	2.22	91		Pn	14 48 20.9	-1.8
SUA	Susitna One	2.25	288		Pn	14 48 21.4	-1.7
WAT1	Susitna Watana	2.25	332		Pn	14 48 22.0	-1.0
BARN	Barnard Glacie	2.26	83		Pn	14 48 21.7	-1.5
DHY	Denali Highway	2.29	347		Pn	14 48 22.7	-0.9
WAT2	Susitna Watana	2.38	334		Pn	14 48 23.9	-1.0
CAPN	Captain Cook N	2.39	270		Pn	14 48 24.8	0.0
MENT	Mentasta	2.41	29		Pn	14 48 24.6	-0.7
CTGM	Chitina Glacie	2.42	85		Pn	14 48 24.2	-1.2
BRSE	Bradley Lake S	2.49	245		Pn	14 48 24.1	-2.2
BRLK	Bradley Lake	2.54	246		Pn	14 48 24.8	-2.2
HUR	Hurricane	2.66	325		Pn	14 48 27.6	-0.9
SKT	Skwentna	2.77	296		Pn	14 48 28.1	-1.9
YUK2	White River	2.78	68		Pn	14 48 29.6	-0.7
RND	Reindeer	2.83	336		Pn	14 48 30.5	-0.5
YUK3	Moose Creek	2.95	69		Pn	14 48 32.1	-0.7
RIDG	Independent Ri	2.97	12		Pn	14 48 32.7	-0.2
DOT	Dot Lake	2.99	19	Pn	Pn	14 48 33.2	+0.2
BVCY	Beaver Creek	3.02	57		Pn	14 48 33.0	+0.5
YUK1	Sand Pete Hill	3.04	62		Pn	14 48 33.6	-0.4
BC03		3.07	42		Pn	14 48 33.5	-0.6
PCA	Pinnacle	3.08	102		Pn	14 48 32.0	-2.3
MCK	McKinley	3.14	338		Pn	14 48 34.9	-0.3
DFR	Drift River	3.16	268		Pn	14 48 33.2	-2.4
TRF	Thorofare Moun	3.21	326		Pn	14 48 35.6	-0.7
RSO	Redoubt South	3.21	266		Pn	14 48 33.2	-2.7
RED	Redoubt Volcan	3.23	265		Pn	14 48 34.4	-2.1
RDWB	Redoubt West	3.25	266		Pn	14 48 34.4	-2.5
SCRK	Sand Creek	3.31	18	Pn	Pn	14 48 37.0	-0.6
PPLA	Purkeypile	3.47	309		Pn	14 48 38.5	-1.3
KTH	Kantishna Hill	3.47	323		Pn	14 48 38.9	-0.8
HDA	Harding Lake	3.58	355		Pn	14 48 41.4	+0.2
BWN	Browne	3.64	337	Pn	Pn	14 48 41.0	-1.0
WRH	Wood River Hil	3.72	348	Pn	Pn	14 48 42.5	-0.7
YUK6	Outpost Mounta	3.87	85		Pn	14 48 44.7	-0.6
CCB	Clear Creek Bu	3.87	350		Pn	14 48 43.3	-1.8
BPAW	Bear Paw Mtn.	3.92	328	Pn	Pn	14 48 43.6	-2.3
IL31		3.94	356		Pn	14 48 43.9	-2.2
COLA	College	4.10	351		Pn	14 48 47.3	-0.9
TCOL	CIGO, UAF Yank	4.10	350		Pn	14 48 46.6	-1.7
YUK5	Granite Creek	4.11	83		Pn	14 48 48.3	-0.3
MDM	Murphy Dome	4.21	349	Pn	Pn	14 48 49.4	-0.5
HYT	Haines Junctio	4.29	87	Pn	Pn	14 48 50.0	-1.1
DHAK	Deception Hill	4.42	110	Pn	Pn	14 48 51.0	-1.7
KDAK	Kodiak Island	4.47	229	Pn	Pn	14 48 51.0	-2.3
DAWY	Dawson	4.53	42		Pn	14 48 53.6	-0.7
EGAK	Eagle	4.58	29		Pn	14 48 53.1	-1.8
MLY	Manley	4.66	336		Pn	14 48 54.8	-1.3
PRP	Porcupine Dome	4.69	4	Pn	Pn	14 48 56.6	0.0
IM03		6.14	330		Pn	14 49 14.6	-1.6

KLM **23** *15:06:48.0, 1.01S×120.51E, h2km, mb5.5*

IDC **23** *15:06:48.1±0.3, 1.07S×120.34E, h0km, mb4.9/36, mb1 4.9/38, mb1mx4.9/45, mbtmp4.9/38, ML4.2/2, MS4.3/30, Ms1 4.3/30, ms1mx4.2/35, Error ellipse: s-maj=14.9km s-min=9.6km az=81.0*

NEIC **23** *15:06:51.2±2.1, 1.10S±0.06×120.20E±0.05, h20km±1km, mb5.5/113, Mwb5.3/13, Error ellipse: s-maj=9.7km s-min=8.8km az=211.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.01; $M_{\theta\theta}$1.09; $M_{\phi\phi}$-1.10; $M_{r\theta}$0.27; $M_{r\phi}$-0.11; $M_{\theta\phi}$0.03; Fault plane solution: $M_0$1.13000×10^{17} NP1:ϕ_s47.10000°, δ82.10000°, λ169.05000°. NP2:ϕ_s138.63000°, δ79.15000°, λ8.05000°. Principal axes: T 1.1560, Plg13.0000°, Azm3.0000°; N -0.0525, Plg77.0000°, Azm192.0000°; P -1.1035, Plg2.0000°, Azm93.0000°;*

MOS **23** *15:06:51.7±1.1, 1.05S×120.21E, h33km, mb5.6/64, MS4.6/5 Error ellipse: s-maj=8.2km s-min=4.5km az=116.5*

DJA **23** *15:06:51.5±0.6, 1°S±1°×12°0E±°, h10km±4km, M5.2/78, mB5.7/61, mb5.3/78, MLv5.6/19, Mw(mB)5.2/61, Mwp5.5/21*

BJI **23** *15:06:52.0±0.0, 1.10S×120.20E, h20km, mB5.3/60, mb5.2/85, Ms4.7/81, Ms7 4.5/77*

GCMT **23** *15:06:53.2±0.1, 1.05S×120.25E, h13km, MW5.4/144, Moment Tensor Solution. s128,c224; s144,c285; Duration: 1.2 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.22±.02; $M_{\theta\theta}$1.18±.01; $M_{\phi\phi}$0.03±.01; $M_{r\theta}$0.90±.04; $M_{\theta\phi}$-0.41±.01; $M_{\phi r}$-0.14±.03; Best double couple: $M_0$1.56300×10^{17} NP1:ϕ_s114.00000°, δ28.00000°, λ-79.00000°. NP2:ϕ_s282.00000°, δ63.00000°, λ-96.00000°. Principal axes: T 1.6030, Plg18.0000°, Azm16.0000°; N -0.0840, Plg5.0000°, Azm285.0000°; P -1.5220, Plg71.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 15:06:52.2±0.4, 1.08S±0.03×120.23E±0.03, h24km±2km, h24km:pP-P, n558, σ1.77/669, mb5.4/175, MS4.4/56, 27C-21D, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPSI	Mapaga	1.45	347	P	Pn	15 07 14.0	-2.9
MPSI				S	Sn	15 07 35.6	+0.5
TTSI	Tana Toraja	1.99	192	P	Pn	15 07 25.7	+1.3
TTSI				S	Sb	15 07 51.3	-0.9
MRSI	Marisa	2.31	48	P	Pn	15 07 25.3	-3.4
MRSI				S	Sb	15 08 01.4	+0.2
LUWI	Luwuk	2.54	89	P	Pn	15 07 34.3	+2.4
LUWI	Luwuk	2.54	89	Pn	Pn	15 07 32.8	+0.9
SPSI	Sidrap Palu	2.90	189	P	Pn	15 07 39.0	+2.1
SMKI	Samarinda	3.09	282	P	Pn	15 07 41.4	+2.0
SMKI				S	Sn	15 08 18.8	+3.2
BNSI	Bone	3.30	182	P	Pn	15 07 44.6	+2.2
BKB	Balikpapan	3.34	267	P	Pn	15 07 44.9	+2.0
BKB				S	Sn	15 08 23.4	+1.6
BKB	Balikpapan	3.34	267		Pn	15 07 43.6	+0.7
KAPI	Kappang	3.94	187	Pn	Pn	15 07 53.1	+2.0
	112nm,0.3s,baz=359,slow=8.7,SNR=243						
KAPI				Sn	Sn	15 08 39.8	+3.2
	86nm,0.3s,baz=142,slow=20,SNR=10						
KMSI	Cibinong	4.09	66	P	Pn	15 07 56.0	+2.7
BKSI	Bulukumba	4.21	181	P	Pn	15 07 55.9	+1.0
KBKI	Kotabaru	4.62	241	P	Pn	15 07 58.9	-1.6
BBSI	Bau Bau	4.96	152	P	Pn	15 08 01.4	-3.8
SANI	Sanana	5.83	100	P	Pn	15 08 16.3	-1.0
	2.1nm4μm4μm324nm,0.7s						
SPMM	Sapulut	6.87	327	P	Pn	15 08 32.0	+0.4
NLAI	Namlea	7.19	107	P	Pn	15 08 39.2	+3.3
	1.0nm4μm245nm,0.8s						
LBMI	Labuha	7.28	87	P	Pn	15 08 37.3	+0.1
	3.6nm6μm726nm,0.9s						
TNTI	Ternate	7.37	76	P	Pn	15 08 41.4	+3.1
	0.5nm4μm1μm111nm,0.6s						
TNTI	Ternate	7.37	76		Pn	15 08 39.3	+1.0
EDFI	Ende, Flores	7.75	169	P	Pn	15 08 42.9	-0.8
	0.2nm6μm784nm44nm,0.7s						
MMRI	Maumere	7.76	165	P	Pn	15 08 45.0	+1.2
	0.9nm10μm3μm257nm,1.4s						
MMRI	Maumere	7.76	165		Pn	15 08 44.0	+0.2
PLAI	Plampang	8.07	198	P	Pn	15 08 49.6	+1.6
	16μm4μm190nm,1.0s						
KKM	Kota Kinabalu	8.14	331		Pn	15 08 50.6	+1.7
AAI	Ambon	8.37	108	P	Pn	15 08 54.1	+2.1
	4μm279nm,1.1s						
WBSI	Waikabubak, Su	8.54	186	P	Pn	15 08 56.1	+1.6
	7μm765nm,1.1s						
SRBI	Singaraja	8.57	216	P	Pn	15 08 53.7	-1.1
	14μm3μm91nm,1.0s						
SKMP	Bagumbayan, Su	8.69	30	eP	Pn	15 08 54.8	-1.7
SKMP				eS	Sn	15 10 34.6	+0.8
SBUM	Sibu	8.74	294		Pn	15 08 59.1	+1.8
SBUM	Sibu	8.74	294	P	Pn	15 08 59.0	+1.8
STKI	Sintang	8.83	277	P	Pn	15 08 58.8	+0.4
	91nm,0.9s						
MSAI	Masohi	8.98	105	P	Pn	15 09 02.7	+2.3
	654nm50nm,1.0s						
DNP	Denpasar	9.05	213	P	Pn	15 09 10.2	+8.8
BASI	Baing, Sumba	9.08	178	P	Pn	15 09 03.3	+1.4
	9μm4μm280nm,1.1s						
CTBH	Cotabato--PC H	9.17	26	⇑i P	Pn	15 09 02.0	-1.1
KCP	Kidapawan	9.39	31	⇓eP	Pn	15 09 10.3	+4.2
PAGZ	Pagadian	9.41	19	eP	Pn	15 09 06.7	+0.3
PAGZ				eS	Sn	15 10 54.9	+3.4
SOEI	Soe	9.51	155	P	Pn	15 09 05.1	-2.7
	10μm5μm284nm,0.9s						
JAGI	Jajag, Banyuwa	9.51	219	P	Pn	15 09 09.9	+2.1
	10μm5μm430nm,1.0s						
JAGI	Jajag, Banyuwa	9.51	219		Pn	15 09 08.6	+0.8
GRJI	Gresik	9.66	233	P	Pn	15 09 12.3	+2.5
	3μm304nm,1.1s						
DAV	Davao City (W)	9.70	33	Pn	Pn	15 09 17.8	+7.5
	baz=134,slow=5.0,SNR=9.1						
DAV				Sn	Sn	15 11 04.7	+6.1
	baz=143,slow=20,SNR=1.7						
DAV				LR	LR	15 13 11.0	
	comp=Z,5μm,21.3s,baz=171,slow=40						
DAV	Davao City (W)	9.70	33	⇑eP	Pn	15 09 15.0	+4.7
GMJI	Gumukmas	9.84	223	P	Pn	15 09 13.3	+1.1
	8μm2μm84nm,1.6s						
MATI	Mati	9.99	37	eP	Pn	15 09 24.3	+10
BATP	Bataraza	10.11	346	eP	Pn	15 09 17.2	+1.2
BUKP	Musuan	10.12	28	eP	Pn	15 09 15.0	-1.1
KSM	Kuching	10.24	284		Pn	15 09 18.2	+0.5
KSM	Kuching	10.24	284	P	Pn	15 09 20.0	+2.2
SWI	Sorong	11.03	89	P	Pn	15 09 20.5	-8.1
SIJI	Sorong	11.04	89	Pn	Pn	15 09 30.8	+2.2
	5.3nm,0.3s,baz=249,slow=23,SNR=11						
SIJI				Sn	Sn	15 11 31.6	+0.1
	0.9nm,0.3s,baz=282,slow=20,SNR=1.9						
SIJI				LR	LR	15 14 14.5	
	comp=Z,1μm,20.0s,baz=290,slow=41						
WOJI	Wonogiri, Jawa	11.45	234	P	Pn	15 09 37.9	+3.6
	5μm3μm172nm,1.5s						
PCJI	Pacitan	11.46	232	P	Pn	15 09 36.1	+1.7
	3μm230nm,1.1s						
UGM	Wanagama	11.81	235	P	Pn	15 09 41.8	+2.5
	8μm7μm394nm,1.4s						
UGM	Wanagama	11.81	235		Pn	15 09 40.1	+0.7
MSLP	Maasin	12.06	22	eP	Pn	15 09 46.2	+3.6
FAKI	Fak Fak	12.15	99	P	Pn	15 09 44.0	+0.1
	130nm,1.1s						
FAKI	Fak Fak	12.15	99		Pn	15 09 44.3	+0.4
RCP	Roxas	12.81	11	⇑eP	P	15 09 59.1	-4.5
OCLP	Ormoc	12.82	20	eP	P	15 10 00.0	-3.7
KPJI	Karang Pucung	12.86	241	P	Pn	15 09 55.9	+2.3
	3μm210nm,1.0s						
OTRP	Odiongan	13.47	8	eP	P	15 10 08.0	-3.0
LEM	Lembang	13.81	245	Pn	Pn	15 10 08.5	+1.7
	1.9nm,0.3s,baz=70,slow=6.4,SNR=8.8						
CISI	Cisompet, Garu	13.95	242	P	Pn	15 10 09.7	+1.2
	5μm6μm361nm,1.5s						
CISI	Cisompet, Garu	13.95	242		Pn	15 10 10.1	+1.6
CNJI	Cibinong	14.45	244	P	Pn	15 10 16.9	+1.5
	6μm333nm,1.3s						
DBJI	Dramaga	14.50	248	P	Pn	15 10 25.4	+2.9
BOAC	Boac	14.54	6	eP	P	15 10 23.7	+0.9
LUBP	Lubang	14.72	0	eP	Pn	15 10 19.4	+0.4
TGY	Tagaytay City	15.10	3	Pn	P	15 10 32.6	+3.4
	15nm,0.3s,baz=241,slow=2.8,SNR=7.1						
TGY				LR	LR	15 17 05.1	
	comp=Z,922nm,19.7s,baz=134,slow=41						
PMBI	Palembang	15.56	263	Pn	Pn	15 10 32.0	+1.9
PMBI				IAmb	IAmb	15 10 38.6	
	comp=Z,372nm,1.1s						
KLSI		15.89	257	P	Pn	15 10 35.0	+0.6
	comp=Z,37μmcomp=Z,1μmcomp=Z,58nm,1.6s						
KASI	Kota Agung	16.31	254	P	P	15 10 41.6	-1.0
	comp=Z,3μmcomp=Z,405nm,1.0s						
MDSI	Maura Dua	16.38	258	P	Pn	15 10 40.9	+0.2
	comp=Z,2μmcomp=Z,96nm,1.4s						
LWLI	Liwa	16.61	256	P	P	15 10 46.6	+0.5
	comp=Z,15μmcomp=Z,105nm,0.6s						
MYKOM	Kota Tinggi	16.62	280	Pn	Pn	15 10 42.9	-0.9
MYKOM	Kota Tinggi	16.62	280	P	P	15 10 46.0	-0.1
I39PW	PALAU INFRASON	16.65	59	i		17 00 00.0	
	baz=232,slow=273,SNR=0.9						
KDU	Kakadu	16.74	134	P	Pn	15 10 43.6	-1.6
	baz=17,SNR=15						
KNRA	Kununurra	16.77	150	P	Pn	15 10 43.9	-1.7
	baz=17,SNR=9.3						
KNRA	Kununurra	16.77	150	Pn	Pn	15 10 43.5	-2.1
BALP	Baler	16.77	4	eP	P	15 10 45.7	+0.1
DLV	T Lat	17.42	318		Pn	15 10 54.0	0.0
MNAI	Manna	17.56	259	P	P	15 10 57.5	+1.0
	comp=Z,10μmcomp=Z,10μmcomp=Z,1μm,0.9s						
MNAI	Manna	17.56	259		Pn	15 10 55.0	-0.5
FITZ	Fitzroy Crossi	17.73	163	P	Pn	15 10 56.0	-1.5
	baz=18,SNR=18						
FITZ	Fitzroy Crossi	17.73	163	P	Pn	15 10 55.8	-1.7
	comp=Z,0.5nm,0.3s,baz=3.0,slow=10,SNR=41						
FITZ	Fitzroy Crossi	17.73	163		Pn	15 10 55.6	-1.9
KSI	Kapahiang	17.80	261	P	P	15 11 00.9	+1.7
	comp=Z,6μmcomp=Z,495nm,1.3s						
CAUP	Cauayan	17.98	5	eP	P	15 11 03.7	+2.7
SMPI	Sarmi	18.50	93	P	Pn	15 11 09.3	+2.3
	comp=Z,3μmcomp=Z,199nm,1.6s						
SZP	Santa	18.52	1	P	Pn	15 11 07.8	+0.6
KRJI	Kerinci	18.79	267	P	Pn	15 11 12.5	+1.8
	comp=Z,6μmcomp=Z,12μmcomp=Z,555nm,1.4s						
SDSI	Sungai Dareh	18.80	270	P	Pn	15 11 10.4	-0.3
	comp=Z,2μmcomp=Z,67nm,1.6s						
APYP	Conner	18.85	3	eP	Pn	15 11 12.2	+1.0
BKNI	Bangkinang	19.24	274	P	Pn	15 11 16.5	+0.4
	comp=Z,3μmcomp=Z,3μmcomp=Z,215nm,1.1s						
BKNI	Bangkinang	19.24	274	P	Pn	15 11 15.6	-0.4
SGCP	Mt. Cagua	19.29	5	eP	Pn	15 11 17.5	+1.0
PDSI	Padang	19.77	270	P	P	15 11 21.4	+0.6
	comp=Z,113nm,1.2s						
MBWA	Marble Bar	19.96	181	P	P	15 11 23.1	+0.4
IPM	Ipoh	19.97	286	P	Pn	15 11 24.0	-0.8
IPM				IAmb	IAmb	15 11 25.6	
	comp=Z,170nm,0.8s						
IPM	Ipoh	19.97	286	P	Pn	15 11 25.0	+0.2
GENI	Genyem	19.98	95	P	Pn	15 11 25.8	+0.9
	comp=Z,4μmcomp=Z,4μmcomp=Z,236nm,1.4s						
PPSI	Pulau Pagai	20.28	265	P	P	15 11 26.7	+0.4
	comp=Z,5μmcomp=Z,410nm,1.2s						
PSA00	Pilbara Seismi	20.37	181	P	P	15 11 27.0	-0.3
KULM	Kulim	20.56	288	P	P	15 11 29.9	+0.6
KULM				IAmb	IAmb	15 11 32.1	
	comp=Z,337nm,1.3s						
KULM	Kulim	20.56	288	P	Pn	15 11 31.0	-0.6
SISI	Saibi	21.14	269	P	P	15 11 35.4	-0.2
	comp=Z,2μmcomp=Z,172nm,1.0s						
MMPI	Merauke	21.37	111	P	P	15 11 43.0	+4.9
BBP	Basco	21.46	4	eP	P	15 11 38.0	-1.0
RPSI	Rantau Prapat	21.63	280	P	P	15 11 41.1	+0.2
RPSI	Rantau Prapat	21.63	280		P	15 11 41.6	+0.7
RPSI					Sn	15 15 46.4	-2.4
PSI	Prapat	21.65	280	P	P	15 11 41.6	+0.4
	comp=Z,83nm,0.9s,baz=97,slow=9.0,SNR=44						
PSI				S	Sn	15 15 46.4	-3.0
	comp=Z,1.7nm,0.3s,baz=221,slow=20,SNR=2.4						
PSI				LR	LR	15 21 31.7	
	comp=Z,2μm,20.4s,baz=116,slow=41						
UBPT	Khong Chiam	21.85	319	P	P	15 11 44.0	+0.8
UBPT				IAmb	IAmb	15 11 49.5	
	comp=Z,193nm,1.4s						
PBSI	Pulau Batu	21.97	273	P	P	15 11 47.7	+3.1
	comp=Z,220nm,1.0s						
GIRL	Giralia	22.21	195	P	P	15 11 47.7	+0.7
	baz=22,SNR=3.8						
QIZ	Qiongzhong	22.44	333	P	P	15 11 52.8	+3.2
QIZ				pP	pP	15 11 55.3	-1.3
QIZ				sP	sP	15 11 57.9	-1.5
QIZ				S	S	15 15 55.9	+1.0
QIZ				sS	Sn	15 16 07.9	-0.2
QIZ				pmax	pmax		
	comp=Z,30nm,1.1s						
QIZ				LR	LR		
	comp=Z,1μm,17.2s						
KCSI	Kotacane, Aceh	22.91	282	P	P	15 11 54.1	-0.5
	comp=Z,1μmcomp=Z,134nm,0.9s						
WB0	Warramunga Arr	23.17	144	P	P	15 11 56.0	-1.3
WRAB	Tennant Creek	23.28	144	P	P	15 11 57.2	-1.0
WRAB	Tennant Creek	23.28	144	d i P	P	15 11 57.8	-0.5
WRAB				pmax	pmax		
	comp=Z,534nm,1.3s						
WRA	Warramunga Arr	23.28	145	P	P	15 11 57.4	-0.9
	comp=Z,259nm,1.1s,baz=318,slow=11,SNR=273						
WRA				S	S	15 16 12.3	+2.9
	comp=Z,1.5nm,1.0s,baz=323,slow=15,SNR=2.5						
WRA				LR	LR	15 23 07.9	
	comp=Z,1μm,18.5s,baz=315,slow=42						
WB2	Warramunga Arr	23.29	145	P	P	15 11 57.2	-1.2
WR0	Warramunga Arr	23.41	144	P	P	15 11 58.4	-1.2
TPTI		23.44	281	P	P	15 12 00.4	+0.5
	comp=Z,488nmcomp=Z,15nm,2.4s						
TWG	Pinlang	23.77	2	P	P	15 12 04.0	+1.0
LHMI	Lhok Sumawe	24.09	285	P	P	15 12 08.0	+1.9
	comp=Z,5μmcomp=Z,558nm,1.2s						
LHMI	Lhok Sumawe	24.09	285	P	P	15 12 06.9	+0.8
SNSI	Sinabang, Aceh	24.15	278	P	P	15 12 07.6	+0.9
	comp=Z,4μmcomp=Z,329nm,1.1s						
TPUB	Ta-pu	24.24	1	P	P	15 12 08.1	+0.6
TPUB				IAmb	IAmb	15 12 14.8	
	comp=Z,149nm,1.0s						
YULB	Yu-li	24.35	2	P	P	15 12 08.4	0.0
YULB				IAmb	IAmb	15 12 15.2	
	comp=Z,99nm,0.9s						
MLSI	Meulaboh, Aceh	24.39	283	P	P	15 12 08.8	-0.2
	comp=Z,4μmcomp=Z,441nm,1.2s						
SSLB	Suanglung	24.73	2	P	P	15 12 12.5	+0.6
SSLB				IAmb	IAmb	15 12 21.9	
	comp=Z,109nm,0.9s						
GZH	Guangzhou	24.94	345	P	P	15 12 18.8	+5.1
GZH				S	S	15 16 47.8	+12
GZH				pmax	pmax		
	comp=Z,110nm,0.9s						
WRKA	Warakurna	25.06	163	P	P	15 12 14.4	-0.5
	baz=25,SNR=82						
NACB	Ninganchiao	25.14	3	P	P	15 12 15.8	+0.2
MEEK	Meekatharra	25.46	183	P	P	15 12 17.5	-1.0
	baz=26,SNR=37						
YOJ	Yonaguni jima	25.54	6	P	P	15 12 20.3	+1.2
YOJ	Yonaguni jima	25.54	6	P	P	15 12 20.3	+1.2
YOJ				pmax	pmax		
	comp=Z,1μm,2.0s						
YHNB	Yeheng	25.62	2	P	P	15 12 21.1	+1.1
YHNB				IAmb	IAmb	15 12 23.9	

comp=Z,237nm,1.0s
PBKT Sadao Pong 25.86 314 P P 15 12 22.9 +0.7
PBKT IAmb IAmb 15 12 29.0
comp=Z,152nm,1.8s
QZH Quanzhou 25.92 357⇓iP P 15 12 24.5 +1.9
QZH S S 15 16 54.4 +2.9
QZH pmax pmax
comp=Z,57nm,1.3s
QZH LR LR
comp=Z,570nm,16.1s
QZH LR LR
comp=Z,450nm,15.2s
QZH LR LR
comp=Z,710nm,14.7s
TATO Taipei 25.93 3 P P 15 12 22.8 +0.1
COEN Coen 26.05 120 P P 15 12 24.0 0.0
baz=26,SNR=16
COEN Coen 26.05 120 P P 15 12 23.9 -0.1
AS31 Alice Springs 26.07 150 P P 15 12 23.0 -1.1
ASAR Alice Springs 26.07 150 P P 15 12 23.6 -0.5
comp=Z,50nm,0.9s,baz=320,slow=7.6,SNR=98
ASAR PcP PcP 15 15 51.4 -0.3
comp=Z,8.7nm,0.8s,baz=352,slow=1.8,SNR=10
ASAR S S 15 17 04.9 +11
comp=Z,2.0nm,1.0s,baz=333,slow=18,SNR=2.8
ASAR ScP ScP 15 19 30.6 +0.5
comp=Z,1.6nm,1.0s,baz=340,slow=2.5,SNR=4.5
ASAR LR LR 15 23 54.7
comp=Z,1µm,18.4s,baz=323,slow=39
QIS Mount Isa 27.07 137 P P 15 12 32.2 -1.0
baz=27,SNR=8.8
SLVN Son La 27.41 325 P P 15 12 35.4 -0.8
PMG Port Moresby 28.04 108 P P 15 12 43.5 +1.6
comp=Z,43nm,1.0s,baz=294,slow=7.6,SNR=6.6
PMG Port Moresby 28.04 108 P P 15 12 42.7 +0.9
PMG Port Moresby 28.04 108⇑eP P 15 12 42.9 +1.0
PMG pmax pmax
comp=Z,210nm,1.0s
MORW Morawa 28.12 188 P P 15 12 41.2 -1.1
baz=28,SNR=13
MORW Morawa 28.12 188 P P 15 12 41.1 -1.3
GUMO Guam 28.44 58 LR LR 15 24 06.3
comp=Z,157nm,19.9s,baz=231,slow=37
CM31 Chiang Mai Arr 28.55 314 P P 15 12 46.2 -0.2
CM31 Chiang Mai Arr 28.55 314 P P 15 12 48.0 +1.6
SNR=14
CMAR Chiang Mai Arr 28.55 314 P P 15 12 47.8 +1.4
comp=Z,5.1nm,0.9s,baz=138,slow=7.2,SNR=40
CMAR PcP PcP 15 15 57.5 -0.2
comp=Z,3.8nm,0.9s,baz=174,slow=1.9,SNR=7.3
CMAR LR LR 15 25 37.0
comp=Z,469nm,20.5s,baz=140,slow=39
CHTO Chiang Mai 28.79 314 P P 15 12 48.3 -0.1
CHTO Chiang Mai 28.79 314 P P 15 12 50.0 +1.5
CHTO Chiang Mai 28.79 314 P P 15 12 48.3 -0.1
CHTO pmax pmax
comp=Z,85nm,1.6s
MTSU Mount Surprise 29.10 127 P P 15 12 51.5 +0.2
baz=29,SNR=7.7
BLDU Ballidu 29.56 186 P P 15 12 54.1 -1.0
baz=30,SNR=5.5
KMBL Kambalda 30.16 177 P P 15 12 59.5 -1.0
baz=30,SNR=15
GYA Guiyang 30.35 335⇑iP P 15 13 05.0 +2.6
GYA PP PP 15 14 06.3 -4.8
GYA S S 15 18 04.6 +3.0
GYA sS sS 15 18 14.8 +1.1
GYA SS ScP 15 19 43.9 +0.5
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,160nm,3.9s
GYA LR LR
comp=Z,580nm,13.2s
GYA LR LR
comp=Z,860nm,16.7s
GYA LR LR
comp=Z,1µm,14.2s
KLBR Kellerberrin 30.43 184 P P 15 13 01.9 -1.0
baz=30,SNR=4.8
FORT Forrest 30.45 167 P P 15 13 02.2 -0.9
baz=30,SNR=26
FORT Forrest 30.45 167 P P 15 13 02.0 -1.1
FORT IAmb IAmb 15 13 04.4
comp=Z,149nm,1.4s
KMI Kunming 31.07 328 P P 15 13 12.5 +3.6
KMI pP pP 15 13 17.3 +1.2
KMI PP PnPn 15 14 14.1 +3.5
KMI S S 15 18 16.8 +3.6
KMI sS sS 15 18 27.1 +1.9
KMI pmax pmax
comp=Z,34nm,1.1s
KMI pmax pmax
comp=Z,280nm,3.2s
KMI LR LR
comp=Z,610nm,12.8s
KMI LR LR
comp=Z,530nm,16.5s
KMI LR LR
comp=Z,630nm,15.4s
NWAO Narrogin (SRO) 31.80 185 P P 15 13 14.5 -0.4
baz=32,SNR=6.3
NWAO Narrogin (SRO) 31.80 185 P P 15 13 13.9 -1.1
NWAO IAmb IAmb 15 13 15.5
comp=Z,76nm,1.4s
NWAO Narrogin (SRO) 31.80 185 P P 15 13 13.9 -1.1
NWAO IAmb IAmb 15 13 15.5
comp=Z,60nm,1.4s
NWAO Narrogin (SRO) 31.80 185 P P 15 13 13.9 -1.1
NWAO pmax pmax
comp=Z,76nm,1.4s
WHN Wuhan 31.95 350 ⇓iP P 15 13 19.4 +3.2
WHN S S 15 18 28.5 +2.3
WHN pmax pmax
comp=Z,100nm,1.1s
WHN LR LR
comp=Z,670nm,10.1s
WHN LR LR
comp=Z,1µm,8.2s
WHN LR LR
comp=Z,2µm,24.7s
NJ2 Nanjing 32.98 358 eP P 15 13 27.0 +1.7
NJ2 pP pP 15 13 31.6 -1.0
NJ2 S S 15 18 46.5 +4.2
NJ2 pmax pmax
comp=Z,67nm,1.1s
NJ2 pmax pmax
comp=Z,400nm,3.5s
NJ2 LR LR
comp=Z,570nm,14.2s
NJ2 LR LR
comp=Z,600nm,14.2s
NJ2 LR LR
comp=Z,640nm,23.7s
SIMRM Sittwe 34.10 310 P P 15 13 36.2 +1.0
SIMRM IAmb IAmb 15 13 41.5
comp=Z,67nm,1.5s
QLP Quilpie 34.28 140 P P 15 13 37.3 +0.5
baz=34,SNR=33
BBOO Buckleboo 34.90 156 P P 15 13 41.0 -1.0
baz=35,SNR=10
BBOO Buckleboo 34.90 156 P P 15 13 40.8 -1.1
BBOO IAmb IAmb 15 13 42.6
comp=Z,145nm,1.9s
JCJ Chichijima 35.10 35 P P 15 13 41.9 -1.8
comp=Z,233nm,0.6s,baz=336,slow=5.7,SNR=9.2
CD2 Chengdu 35.46 335 P P 15 13 48.8 +1.9
CD2 S S 15 19 22.6 +1.7
CD2 pmax pmax
comp=Z,60nm,0.8s
CD2 pmax pmax
comp=Z,240nm,3.3s
CD2 LR LR
comp=Z,1µm,14.9s
CD2 LR LR
comp=Z,900nm,13.3s
CD2 LR LR
comp=Z,1µm,18.0s
JNU Nakatsue 35.47 15 P P 15 13 46.3 -0.6
comp=Z,10.0nm,0.9s,baz=101,slow=6.9,SNR=5.4
JNU LR LR 15 28 27.2
comp=Z,482nm,20.4s,baz=148,slow=37
JNU Nakatsue 35.47 15 P P 15 13 45.8 -1.2
XAN Xi'an 36.52 344 P P 15 13 56.5 +0.6
XAN pP sP 15 14 07.5 +1.3
XAN sP pP 15 14 13.9 +11
XAN PP PnPn 15 15 17.6 -1.4
XAN S S 15 19 29.5 -7.4
XAN sS sS 15 19 50.3 +1.0
XAN ScS ScS 15 24 11.1 -0.1
XAN pmax pmax
comp=Z,15nm,1.2s
XAN pmax pmax
comp=Z,310nm,4.3s
XAN LR LR
comp=Z,540nm,19.0s
XAN LR LR
comp=Z,330nm,19.0s
XAN LR LR
comp=Z,1µm,20.1s
HTT Hallett 36.65 153 P P 15 13 56.7 -0.3
baz=37,SNR=37
STKA Stephens Creek 36.68 149 P P 15 13 56.9 -0.4
baz=37,SNR=56
STKA Stephens Creek 36.68 149 P P 15 13 56.9 -0.4
comp=Z,57nm,0.9s,baz=318,slow=9.0,SNR=88
STKA PcP PcP 15 16 19.8 0.0
comp=Z,18nm,0.8s,baz=343,slow=3.6,SNR=4.5
STKA LR LR 15 31 06.8
comp=Z,1µm,18.0s,baz=320,slow=40
STKA Stephens Creek 36.68 149 P P 15 13 56.4 -0.9
RMQ Roma 37.29 135 P P 15 14 02.7 +0.2
baz=37,SNR=6.8
TJN Taejon 37.86 9⇑eP P 15 14 06.8 -0.3
SHL Shillong 38.12 316 P P 15 14 09.6 -0.2
SHL IAmb IAmb 15 14 14.8
comp=Z,102nm,1.2s
SHL Shillong 38.12 316 P P 15 14 11.2 +1.4
SNR=39
SHL Shillong 38.12 316 P P 15 14 09.6 -0.2
SHL pmax pmax
comp=Z,102nm,1.2s
CMSA Cobar Meteorol 38.69 144 P P 15 14 14.3 0.0
baz=39,SNR=109
KSRS Korea Array 39.00 10 P P 15 14 17.6 +0.8
comp=Z,14nm,0.9s,baz=182,slow=11,SNR=65
KSRS ScP S 15 20 15.6 +1.2
comp=Z,1.6nm,1.0s,baz=173,slow=4.4,SNR=5.1
KSRS LR LR 15 30 08.7
comp=Z,444nm,21.4s,baz=224,slow=36
KS19 Wonju Array Si 39.04 10 P P 15 14 17.4 +0.3
TIY Taiyuan 39.27 350 eP P 15 14 21.3 +2.2
TIY S S 15 20 19.8 +1.2
TIY pmax pmax
comp=Z,30nm,0.9s
TIY LR LR
comp=Z,420nm,11.3s
TIY LR LR
comp=Z,300nm,10.6s
TIY LR LR
comp=Z,600nm,32.3s
INU Inuyama 39.49 22 P P 15 14 19.8 -1.2
DL2 Dalian 39.81 2 P P 15 14 23.9 +0.4
DL2 PP PnPn 15 16 02.6 +4.0
DL2 S S 15 20 26.6 +0.1
DL2 pmax pmax
comp=Z,31nm,0.9s
DL2 pmax pmax
comp=Z,97nm,3.6s
DL2 LR LR
comp=Z,300nm,22.6s
DL2 LR LR
comp=Z,390nm,15.4s
DL2 LR LR
comp=Z,750nm,30.6s
LZH Lanzhou 40.01 339 eP P 15 14 27.5 +2.1
LZH sP sP 15 14 38.6 +2.9
LZH PP PP 15 15 59.1 +1.4
LZH S S 15 20 29.0 -0.9
LZH sS sS 15 20 41.8 -0.5
LZH pmax pmax
comp=Z,38nm,1.1s
LZH pmax pmax
comp=Z,300nm,5.1s
LZH LR LR
comp=Z,810nm,14.3s
LZH LR LR
comp=Z,790nm,14.7s
LZH LR LR
comp=Z,880nm,15.3s
PALK Pallekele 40.30 283 LR LR 15 32 18.9
comp=Z,656nm,19.9s,baz=104,slow=38
PALK Pallekele 40.30 283 P P 15 14 28.3 +0.3
PALK Pallekele 40.30 283⇑eP P 15 14 27.5 -0.5
PALK pmax pmax
comp=Z,12nm,0.8s
HNR Honiara 40.37 103 LR LR 15 33 54.1
comp=Z,182nm,19.0s,baz=273,slow=40
HNR Honiara 40.37 103 P P 15 14 27.8 -0.7
HNR Honiara 40.37 103 P P 15 14 27.8 -0.7
HNR pmax pmax
comp=Z,308nm,1.3s
CHLP Challavanipeta 40.54 300 eP P 15 14 31.1 +1.2
CHLP IAmb IAmb 15 14 34.3
comp=Z,28nm,1.1s
MAJO Matsushiro 41.00 22 P P 15 14 31.2 -2.2
MAJO IAmb IAmb 15 14 33.6
comp=Z,108nm,1.6s
MAJO Matsushiro 41.00 22diP P 15 14 32.0 -1.4
MAJO pmax pmax
comp=Z,37nm,1.4s
MAT Matsushiro 41.00 22 P P 15 14 31.2 -2.2
MAT S S 15 20 48.4 +4.0
MJAR Matsushiro Arr 41.00 22 P P 15 14 31.9 -1.5
comp=Z,17nm,1.0s,baz=195,slow=8.2,SNR=31
MJAR ScP ScP 15 20 22.4 +0.6
comp=Z,5.4nm,1.1s,baz=214,slow=4.8,SNR=9.9
MJAR LR LR 15 29 49.8
comp=Z,782nm,21.8s,baz=215,slow=34
MJB9 Matsu-Tunnel 41.00 22 P P 15 14 31.3 -2.2
MJB9 IAmb IAmb 15 14 33.5
comp=Z,106nm,1.6s
BJI Beijing 41.09 355 P P 15 14 34.8 +0.7
BJI S S 15 20 47.8 +2.2
BJI pmax pmax
comp=Z,32nm,1.6s
BJI pmax pmax
comp=Z,260nm,3.2s
BJI LR LR
comp=Z,330nm,21.0s
BJI LR LR
comp=Z,370nm,18.0s
LSA Lhasa 41.32 320 P P 15 14 39.4 +2.7
LSA pP pP 15 14 45.4 +1.0
LSA S S 15 20 45.8 -4.5
LSA pmax pmax
comp=Z,110nm,1.4s
LSA pmax pmax
comp=Z,1µm,2.6s
LSA LR LR
comp=Z,580nm,14.9s
LSA LR LR
comp=Z,760nm,17.8s
LSA LR LR
comp=Z,2µm,21.4s
ARMA Armidale 41.70 137 P P 15 14 40.4 +0.9
baz=42,SNR=5.5
ARMA Armidale 41.70 137 P P 15 14 38.8 -0.6
ARMA IAmb IAmb 15 14 42.4
comp=Z,131nm,1.4s
ODAN Odare 42.10 314 eP P 15 14 43.6 +0.7
comp=Z,364nm,1.4s
TAPN Taplejung 42.16 315 eP P 15 14 43.6 +0.2
comp=Z,154nm,0.9s
PVM Polavaram 42.18 297 eP P 15 14 44.4 +1.1
PVM IAmb IAmb 15 14 49.4
comp=Z,23nm,1.2s
YNG Young 42.25 144 P P 15 14 44.5 +0.8
baz=42,SNR=20
BTO Baotou 42.52 348 eP P 15 14 48.0 +2.1
BTO S S 15 21 05.9 -1.1
RAMN Ramite 42.72 313 eP P 15 14 49.1 +1.1
comp=Z,214nm,1.2s
SKHT Srikalahasti 42.77 292 eP P 15 14 48.9 +0.8
SKHT IAmb IAmb 15 14 51.2
comp=Z,18nm,0.9s
SNY Shenyang 42.82 4 ⇓iP P 15 14 48.5 +0.3
SNY S S 15 21 11.0 -0.1
SNY pmax pmax
comp=Z,44nm,1.4s
SNY LR LR
comp=Z,480nm,27.9s
SNY LR LR
comp=Z,290nm,20.6s
SNY LR LR
comp=Z,1µm,31.6s
MYLAV Mylavaram 42.88 296 eP P 15 14 50.0 +0.9
MYLAV IAmb IAmb 15 14 55.0
comp=Z,34nm,1.3s
TOO Toolangi 43.13 150 P P 15 14 51.8 +1.0
baz=43,SNR=6.8
TOO Toolangi 43.13 150 P P 15 14 51.2 +0.4
TOO Toolangi 43.13 150 P P 15 14 51.2 +0.4
TOO pmax pmax
comp=Z,42nm,1.2s
ADKI Addanki 43.18 295 eP P 15 14 52.3 +0.9
ADKI IAmb IAmb 15 14 57.3
comp=Z,13nm,0.9s
CAN Canberra 43.32 145 P P 15 14 52.8 +0.3
CAN IAmb IAmb 15 14 54.8
comp=Z,127nm,1.0s
CAN Canberra 43.32 145 P P 15 14 52.8 +0.3
CAN pmax pmax
comp=Z,127nm,1.0s
JIRN Jiri 43.43 314 eP P 15 14 54.6 +0.8
comp=Z,287nm,1.1s
CNB Canberra Magne 43.53 145 P P 15 14 54.4 +0.3
baz=44,SNR=11
GGR Gangavaram 43.65 297 eP P 15 14 55.8 +0.5
GGR IAmb IAmb 15 15 00.2
comp=Z,21nm,1.0s
GUN Gumba 43.80 314 eP P 15 14 57.6 +0.8
comp=Z,331nm,1.1s
PKI Pulchoki 43.95 313 eP P 15 14 58.4 +0.5
PKIN Phulchoki 43.96 313 eP P 15 14 58.4 +0.4
NJS Nagarjunasagar 44.01 295 eP P 15 14 58.6 +0.4
NJS IAmb IAmb 15 15 05.1
comp=Z,12nm,0.9s
KKN Kakani 44.16 313 eP P 15 15 00.3 +0.7
DMN Daman 44.19 313 eP P 15 15 00.5 +0.7
comp=Z,92nm,0.9s
SRLM Srisailam 44.24 294 eP P 15 14 60.0 -0.1
SRLM IAmb IAmb 15 15 06.8
comp=Z,20nm,1.1s
GTA Gaotai 44.44 337 ⇑P P 15 15 03.1 +1.7
GTA pP pP 15 15 07.3 -1.5
GTA sP sP 15 15 10.0 -2.2
GTA PcS PcS 15 20 40.1 +1.8
GTA S S 15 21 36.8 +1.7
GTA sS sS 15 21 45.9 -1.6
GTA SS SS 15 24 52.9 -1.9
GTA pmax pmax
comp=Z,33nm,1.3s
GTA pmax pmax
comp=Z,250nm,4.8s
GTA LR LR
comp=Z,320nm,21.6s
GTA LR LR
comp=Z,380nm,21.9s
GTA LR LR
comp=Z,610nm,21.6s
MSHR Mys Shultsa 44.57 12deP P 15 15 02.8 +0.6
GKN Gorkha 44.75 313 eP P 15 15 04.6 +0.4
RPR Rampur 44.83 298 eP P 15 15 05.2 +0.5
CN2 Changchun 44.93 5 eP P 15 15 04.3 -0.8
CN2 eS S 15 21 38.8 -3.0
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,90nm,5.4s
CN2 LR LR
comp=Z,370nm,29.0s
CN2 LR LR
comp=Z,300nm,29.0s
CN2 LR LR
comp=Z,430nm,32.0s
HYB Hyderabad 44.98 296 iP P 15 15 07.0 +1.0
HYBB Hyderabad (bro 44.98 296 eP P 15 15 06.0 0.0
HYBB IAmb IAmb 15 15 07.4
comp=Z,18nm,1.0s
VLA Vladivostok 45.23 12diP P 15 15 08.3 +0.8
VLA pmax pmax
comp=Z,37nm,1.1s
URV Uravakonda 45.39 292 eP P 15 15 09.3 +0.1
URV IAmb IAmb 15 15 11.6
comp=Z,38nm,1.1s
DANN Dangsing 45.59 313 eP P 15 15 11.3 +0.3
comp=Z,145nm,0.7s
SRSP Sriramsagar 45.69 298 eP P 15 15 11.8 +0.3
SRSP IAmb IAmb 15 15 13.5
comp=Z,9.3nm,0.8s
MDJ Mudanjiang 46.26 9 P P 15 15 15.8 +0.2
MDJ pP pP 15 15 22.1 -1.0
MDJ sP sP 15 15 24.3 -1.8
MDJ PcP PcP 15 16 49.8 -1.1
MDJ PP PP 15 17 05.4 +0.9
MDJ S S 15 22 04.3 +3.3
MDJ sS sS 15 22 14.8 +1.7
MDJ ScS ScS 15 25 11.3 +1.7
MDJ pmax pmax
comp=Z,100nm,1.2s
MDJ LR LR
comp=Z,250nm,13.5s
MDJ LR LR
comp=Z,310nm,13.5s
MDJ LR LR
comp=Z,1µm,29.2s
USA0B Ussuriysk Arra 46.29 12 P P 15 15 15.6 -0.3
USA0B IAmb IAmb 15 15 17.1
comp=Z,60nm,1.4s
USA0B Ussuriysk Arra 46.29 12deP P 15 15 16.0 +0.1
USRK Ussuriysk Ar. 46.29 12 P P 15 15 15.4 -0.4
comp=Z,12nm,0.7s,baz=193,slow=5.9,SNR=30
USRK ScP ScP 15 20 44.2 +1.1
comp=Z,0.6nm,0.6s,baz=153,slow=0.4,SNR=4.2
USRK LR LR 15 34 07.3
comp=Z,244nm,20.8s,baz=170,slow=35
KLRI Killari 46.95 296 eP P 15 15 21.4 -0.2
KLRI IAmb IAmb 15 15 25.8
comp=Z,36nm,1.2s
KAAM Kaadhehdhoo 47.26 272 P P 15 15 22.6 -1.4
KAAM IAmb IAmb 15 15 26.8
comp=Z,74nm,0.8s
LHI Lord Howe Isla 47.55 133 P P 15 15 24.6 -1.3
TAU Tasmania Unive 48.19 153 P P 15 15 31.4 +0.8
TAU Tasmania Unive 48.19 153 P P 15 15 31.5 +0.8
TAU pmax pmax
comp=Z,273nm,1.9s
SANVU Saraoutou 48.48 110 P P 15 15 34.7 +1.3
ASAJ Asahikawa 49.24 21 P P 15 15 37.9 -0.9
comp=Z,17nm,0.8s,baz=225,slow=12,SNR=14
JKA Kamikawa-asahi 49.24 21 P P 15 15 37.9 -0.9
NOUC Port Laguerre 49.44 118 P P 15 15 41.2 +0.6
NOUC IAmb IAmb 15 15 43.6
comp=Z,66nm,1.1s
DZM Mont Dzumac 49.55 118 eP P 15 15 43.9 +2.2
comp=Z,216nm,1.4s
DZM eS S 15 22 52.5 +3.9
comp=Z,183nm,27.4s
DZM eLR LR 15 29 54.7
comp=Z,398nm,30.1s
DZM Mont Dzumac 49.55 118 P P 15 15 40.5 -1.1
DZM IAmb IAmb 15 15 45.0
comp=Z,124nm,1.3s
POO Poona 49.57 296 ex x 15 15 38.4
ULN Ulaanbaatar 50.09 348 P P 15 15 46.0 +0.6
ULN IAmb IAmb 15 15 48.9
comp=Z,46nm,0.9s
ULN Ulaanbaatar 50.09 348 P P 15 15 46.0 +0.6
ULN pmax pmax
comp=Z,46nm,1.0s
SONM Songino Array 50.19 348 P P 15 15 47.6 +1.5
comp=Z,18nm,0.8s,baz=165,slow=7.5,SNR=116
SONM LR LR 15 39 17.2
comp=Z,264nm,19.1s,baz=170,slow=39
YUK Yuzh-Kuril'sk 50.42 24 eP P 15 15 46.0 -1.7
YUK 15 17 43.5
YUK ePPP PPP 15 18 37.8
YUK eS S 15 22 57.3 -2.5
KLR Kul'dur 51.09 10 P P 15 15 52.3 -0.4
comp=Z,5.4nm,0.5s,baz=207,slow=7.6,SNR=18
KLR Kul'dur 51.09 10deP P 15 15 52.3 -0.4
KLR pmax pmax
comp=Z,33nm,1.1s
YSS Yuzh-Sakhalins 51.76 20 eP P 15 15 56.5 -1.2
YSS e*SP sP 15 16 09.5 +1.1
YSS eS S 15 23 10.9 -7.3

Sta	Name	Dist Az	Phase	ISC	Time	Res
YSS			eSS	SS	15 26 57.1	+2.0
YSS			eSSS	SSS	15 28 25.4	
YSS			pmax	pmax		
	comp=Z,10.0nm,0.9s					
YSS			MLR	MLR		
	comp=Z,400nm,16.0s					
YSS			MLR	MLR		
	comp=N,300nm,15.0s					
YSS			MLR	MLR		
	comp=E,100nm,14.0s					
BHK	Bhakra	52.62 312	ex	P	15 16 06.6	+2.1
ZAK	Zakamensk	53.28 347	eP	P	15 16 10.1	+1.0
ZAK			pmax	pmax		
	comp=Z,12nm,1.6s					
WMQ	Urumqi	53.33 331	P	P	15 16 11.8	+2.2
WMQ			pP	pP	15 16 16.9	-0.5
WMQ			sP	sP	15 16 20.4	0.0
WMQ			PcP	PcP	15 17 16.4	-0.5
WMQ			S	S	15 23 43.3	+3.2
WMQ			sS	pS	15 23 50.8	+1.6
WMQ			pmax	pmax		
	comp=Z,42nm,0.9s					
WMQ			pmax	pmax		
	comp=Z,320nm,4.1s					
WMQ			LR	LR		
	comp=Z,270nm,19.9s					
WMQ			LR	LR		
	comp=Z,450nm,19.9s					
WMQ			LR	LR		
	comp=Z,620nm,24.5s					
GRNR	Gornyy	53.47 13⇑	iP	P	15 16 09.7	-0.7
GRNR			eS	S	15 23 42.1	+0.5
GRNR			eSS	SS	15 27 16.8	-5.4
GRNR			pmax	pmax		
	comp=Z,10.0nm,1.2s					
GRNR			smax	smax		
	comp=N,1.0nm,1.7s					
GRNR			MLR	MLR		
	comp=Z,180nm,17.0s					
TLY	Talaya	54.41 347	P	P	15 16 16.7	-0.5
	comp=Z,3.2nm,0.6s,baz=153,slow=9.0,SNR=9.4					
TLY	Talaya	54.41 347	P	P	15 16 16.8	-0.5
TLY	Talaya	54.41 347	eP	P	15 16 19.7	+2.4
TLY			eS	S	15 23 53.7	-0.7
TLY			pmax	pmax		
	comp=Z,66nm,1.5s					
TLY			MLR	MLR		
	comp=Z,380nm,14.0s					
IRK	Irkutsk	54.81 348	eP	P	15 16 21.9	+1.8
IRK			e		15 17 21.3	
IRK			pmax	pmax		
	comp=Z,98nm,2.6s					
ZEA	Zeya	54.94 5	eP	P	15 16 21.0	0.0
ZEA			pmax	pmax		
	comp=N,49nm,1.6s					
ZEA			pmax	pmax		
	comp=Z,73nm,1.6s					
MOY	Mondy	55.02 345	eP	P	15 16 23.4	+1.6
MOY			pmax	pmax		
	comp=Z,128nm,2.9s					
TYV	Tymovskoe	55.17 17	eP	P	15 16 22.8	+0.1
TYV			pmax	pmax		
	comp=Z,9.0nm,1.3s					
TYV			pmax	pmax		
	comp=Z,200nm,4.5s					
NIL	Nilore	56.04 313	P	P	15 16 27.9	-1.5
NIL			IAmb	IAmb	15 16 34.0	
	comp=Z,91nm,1.6s					
NIL	Nilore	56.04 313	P	P	15 16 27.9	-1.5
NIL			pmax	pmax		
	comp=Z,91nm,1.6s					
KSH	Kashi	57.18 320	P	P	15 16 36.9	-0.6
KSH			pP	sP	15 16 51.8	+3.5
KSH			PP	PP	15 18 46.9	+2.2
KSH			PcS	PcS	15 21 34.1	+1.1
KSH			S	S	15 24 25.0	-6.8
KSH			ScS	ScS	15 26 21.8	-3.9
KSH			SS	SS	15 28 26.3	+5.1
KSH			pmax	pmax		
	comp=Z,39nm,1.3s					
KSH			pmax	pmax		
	comp=Z,830nm,3.1s					
KSH			LR	LR		
	comp=Z,330nm,5.6s					
KSH			LR	LR		
	comp=Z,420nm,5.8s					
KSH			LR	LR		
	comp=Z,340nm,16.7s					
SHLS	Shalkode	57.23 325	eP	P	15 16 37.7	-0.1
	comp=Z,31nm,1.1s					
SHLS	Shalkode	57.23 325	eP	P	15 16 37.7	-0.1
SHLS			pmax	pmax		
	comp=Z,31nm,1.1s					
PDGK	Podgornoye	57.32 326	P	P	15 16 38.3	-0.1
ZSN	Zaisan	57.34 332	eP	P	15 16 39.8	+1.4
	comp=Z,15nm,0.8s					
ZSN			eS	S	15 24 32.4	-1.2
ZSN	Zaisan	57.34 332	eP	P	15 16 39.7	+1.4
ZSN			eS	S	15 24 32.3	-1.2
ZSN			pmax	pmax		
	comp=Z,15nm,0.8s					
UZB	Uzynbulak	57.47 325⇑	iP	P	15 16 41.3	+1.8
	comp=Z,62nm,2.2s					
UZB			eS	S	15 24 39.0	+3.4
UZB	Uzynbulak	57.47 325c	iP	P	15 16 41.3	+1.8
UZB			eS	S	15 24 39.0	+3.4
UZB			pmax	pmax		
	comp=Z,62nm,2.2s					
ZHN	Zhinishke	57.82 325	eP	P	15 16 41.6	-0.3
ZHN	Zhinishke	57.82 325	eP	P	15 16 41.6	-0.3
KPKS	Kokpek	57.86 325⇑	iP	P	15 16 43.7	+1.5
	comp=Z,21nm,0.9s					
KPKS			eS	S	15 24 37.6	-3.1
KPKS	Kokpek	57.86 325c	iP	P	15 16 43.7	+1.5
KPKS			eS	S	15 24 37.5	-3.1
KPKS			pmax	pmax		
	comp=Z,21nm,0.9s					
MK31	Makanchi Array	58.12 330	P	P	15 16 44.9	+1.0
MK31			IAmb	IAmb	15 16 47.2	
	comp=Z,41nm,0.8s					
MK31	Makanchi Array	58.12 330	iP	P	15 16 45.0	+1.1
MKAR	Makanchi Array	58.12 330	P	P	15 16 45.0	+1.2
	comp=Z,48nm,0.8s,baz=129,slow=6.6,SNR=358					
MKAR			S	S	15 24 49.8	+6.0
	comp=Z,0.9nm,1.0s,baz=142,slow=7.3,SNR=4.1					
MKAR			LR	LR	15 44 38.9	
	comp=Z,180nm,18.7s,baz=126,slow=39					
MKAR			PKPPKP	P'P'df	15 46 26.2	+1.1
	comp=Z,0.7nm,1.1s,baz=256,slow=4.3,SNR=3.4					
MKAR			PKP2bc		15 46 36.8	
	comp=Z,0.6nm,0.8s,baz=318,slow=1.6,SNR=4.2					
MAKZ	Makanchi	58.29 330	P	P	15 16 45.8	+0.8
MAKZ			IAmb	IAmb	15 16 51.6	
	comp=Z,45nm,1.1s					
MAKZ	Makanchi	58.29 330	P	P	15 16 45.1	+0.1
MDOK	Medeo	58.62 324	eP	P	15 16 44.9	-2.8
MDOK			eS	S	15 24 52.9	+2.2
MDOK	Medeo	58.62 324	eP	P	15 16 44.8	-2.8
MDOK			eS	S	15 24 52.9	+2.2
BOD	Bodaibo	58.93 356	eP	P	15 16 49.2	0.0
BOD			pmax	pmax		
	comp=Z,60nm,1.8s					
MTBS	Maitube	58.97 324	eP	P	15 16 50.9	+1.0
MTBS	Maitube	58.97 324	eP	P	15 16 50.9	+1.0
TDK	Taldyqorghan	58.98 326	eP	P	15 16 51.2	+1.3
TDK			iS	S	15 24 51.1	-3.9
TDK			eS	S	15 24 58.1	+3.1
TDK	Taldyqorghan	58.98 326	eP	P	15 16 51.2	+1.3
TDK			eS	S	15 24 58.1	+3.1
KZA	Kyzart	59.07 322	P	P	15 16 54.6	+3.6
	SNR=7.3					
CHKK	Chushkaly	59.07 325	eS	S	15 24 56.5	+0.3
MSVF	Nonsavu	59.12 110	P	P	15 16 52.1	+0.7
MSVF			IAmb	IAmb	15 16 55.2	
	comp=Z,36nm,0.9s					
MSVF	Nonsavu	59.12 110d	eP	P	15 16 53.8	+2.4
MSVF			pmax	pmax		
	comp=Z,37nm,1.0s					
KUU	Kurty	59.47 324	iS	S	15 24 58.4	-3.0
KUU			eS	S	15 25 04.1	+2.7
KBL	Kabul	59.55 312	P	P	15 16 53.5	-0.8
KBL			IAmb	IAmb	15 17 03.5	
	comp=Z,39nm,0.8s					
KBL	Kabul	59.55 312	P	P	15 16 55.0	+0.7
KBL			P	P	15 16 55.0	+0.7
KBL	Kabul	59.55 312	P	P	15 16 53.5	-0.8
KBL			pmax	pmax		
	comp=Z,39nm,0.8s					
KBK	Karagaybulak	59.58 323	P	P	15 16 57.9	+3.6
	SNR=11					
UCH	Uchtor	59.61 322	P	P	15 16 57.8	+3.0
	SNR=12					
AAK	Ala-Archa	59.85 322	P	P	15 16 59.1	+3.0
	SNR=12					
AAK	Ala-Archa	59.85 322	iP	P	15 16 58.5	+2.4
	SNR=17					
AAK	Ala-Archa	59.85 322	P	P	15 16 58.2	+2.1
AAK			P	P	15 16 58.2	+2.1
AAK	Ala-Archa	59.85 322c	eP	P	15 16 57.9	+1.8
AAK			pmax	pmax		
	comp=Z,84nm,1.8s					
CHMS	Chumysh	59.90 323	P	P	15 16 58.5	+2.2
	SNR=5.5					
CHMS	Chumysh	59.90 323	iP	P	15 16 57.3	+1.0
CHMS			pmax	pmax		
	comp=Z,19nm,1.3s					
AML	Almayashu	60.06 321	P	P	15 17 00.8	+2.9
	SNR=13					
USP	Ospenovka	60.20 323	P	P	15 17 00.7	+2.3
	SNR=9.8					
SGDS	Sogindy	60.23 323	eP	P	15 16 58.4	-0.2
	comp=Z,96nm,2.1s					
EKS2	Erkin-Say	60.30 322	P	P	15 16 59.5	+0.3
	SNR=9.4					
WHZ	Wether Hill Ro	61.10 144	P	P	15 17 03.8	-0.6
WHZ			IAmb	IAmb	15 17 05.4	
	comp=Z,42nm,1.0s					
BTLS	Baital	61.48 324	eP	P	15 17 07.9	+1.0
BTLS			eS	S	15 25 25.7	-1.3
BTLS	Baital	61.48 324	eP	P	15 17 07.9	+1.0
BTLS			eS	S	15 25 25.6	-1.4
QRZ	Quartz Range	61.56 137	P	P	15 17 08.9	+1.2
SEM	Semipalatinsk	61.59 332	eP	P	15 17 05.6	-2.3
SEM			eS	S	15 25 30.4	+1.7
SEM	Semipalatinsk	61.59 332	eP	P	15 17 05.5	-2.3
SEM			eS	S	15 25 30.3	+1.7
RPZ	Rata Peaks	61.91 140	P	P	15 17 09.4	-0.5
DZA	Taraz	61.95 321	eP	P	15 17 09.5	-0.8
DZA	Taraz	61.95 321	eP	P	15 17 09.4	-0.8
ZAA0	Zalesovo Array	62.19 337	P	P	15 17 11.3	-0.2
ZALV	Zalesovo Beam	62.19 337	P	P	15 17 11.6	0.0
	comp=Z,33nm,0.9s,baz=132,slow=5.1,SNR=82					
ZALV			LR	LR	15 44 36.2	
	comp=Z,136nm,21.3s,baz=136,slow=36					
ZALV			PKP2bc		15 46 27.2	
	comp=Z,2.1nm,0.9s,baz=300,slow=2.9,SNR=6.1					
JBG	Jabagly	62.20 320c	iP	P	15 17 13.3	+1.2
JBG			eS	S	15 25 36.9	+0.3
JBG			pmax	pmax		
	comp=Z,31nm,1.1s					
THZ	Tophouse	62.23 138	P	P	15 17 11.9	-0.2
THZ			IAmb	IAmb	15 17 13.6	
	comp=Z,73nm,0.9s					
ODZ	Otahua Downs	62.30 142	P	P	15 17 12.7	+0.3
ODZ			IAmb	IAmb	15 18 06.7	
	comp=Z,37nm,1.3s					
PEA0B	Petropavlovsk-	62.39 24	P	P	15 17 14.6	+1.7
PEA0B			IAmb	IAmb	15 17 39.8	
	comp=Z,67nm,1.4s					
PEA0B	Petropavlovsk-	62.39 24	P	P	15 17 14.6	+1.7
PEA0B			pmax	pmax		
	comp=Z,67nm,1.4s					
PETK	Petropavlovsk-	62.39 24	P	P	15 17 12.3	-0.6
	comp=Z,9.1nm,0.7s,baz=193,slow=6.1,SNR=8.5					
PETK			LR	LR	15 42 42.4	
	comp=Z,446nm,21.7s,baz=238,slow=35					
IUG	Iuzhnay	62.39 320	eP	P	15 17 13.6	+0.3
IUG			eS	S	15 25 42.4	+3.5
IUG	Iuzhnay	62.39 320	eP	P	15 17 13.6	+0.3
KURBB	Kurchatov Arra	62.55 331	P	P	15 17 15.3	+1.3
	comp=Z,34nm,0.9s,baz=135,slow=6.5,SNR=7.7					
KURBB	Kurchatov Arra	62.55 331	P	P	15 17 14.1	+0.1
KURK	Kurchatov	62.56 332	P	P	15 17 14.9	+0.8
KURK	Kurchatov	62.56 332	P	P	15 17 15.7	+1.6
KURK	Kurchatov	62.56 332c	iP	P	15 17 15.1	+1.0
KURK			pmax	pmax		
	comp=Z,156nm,1.3s					
KK31	Karatay Array	62.57 321	P	P	15 17 15.3	+1.0
KK31			IAmb	IAmb	15 17 20.5	
	comp=Z,101nm,1.8s					
KK31	Karatay Array	62.57 321	P	P	15 17 15.4	+1.0
KK31			pmax	pmax		
	comp=Z,101nm,1.8s					
KKAR	Karatay Array	62.57 321	P	P	15 17 15.1	+0.8
KKAR			IAmb	IAmb	15 17 20.5	
	comp=Z,101nm,1.8s					
KKAR	Karatay Array	62.57 321	P	P	15 17 15.1	+0.8
KKAR			pmax	pmax		
	comp=Z,101nm,1.8s					
PET	Petropavlovsk	62.73 25	P	P	15 17 14.8	-0.3
PET			IAmb	IAmb	15 17 16.1	
	comp=Z,51nm,1.3s					
PET	Petropavlovsk	62.73 25	eP	P	15 17 20.0	+4.9
PET			e		15 19 42.2	
PET			eS	S	15 25 46.0	+3.6
PET			pmax	pmax		
	comp=Z,100nm,14.8s					
CHM	Chimkent	62.75 320	eP	P	15 17 15.3	-0.3
CHM			eS	S	15 25 46.7	+3.4
CHM	Chimkent	62.75 320	eP	P	15 17 15.3	-0.3
CHM			eS	S	15 25 46.7	+3.4
TUWZ	Tuamarina	62.78 137	P	P	15 17 15.5	-0.3
BSWZ	Blackbirch Sta	62.86 137	P	P	15 17 15.8	-0.5
KHZ	Kahutara	62.94 138	P	P	15 17 16.6	-0.2
KHZ			IAmb	IAmb	15 17 18.7	
	comp=Z,74nm,1.2s					
SNZO	South Karori	63.26 137	P	P	15 17 17.8	-1.1
YAK	Yakutsk	63.36 5	P	P	15 17 18.8	-0.3
	comp=Z,31nm,0.7s,baz=347,slow=0.9,SNR=40					
YAK	Yakutsk	63.36 5	P	P	15 17 18.3	-0.8
YAK	Yakutsk	63.36 5	eP	P	15 17 18.3	-0.8
YAK			e*PP	sP	15 17 29.6	-0.6
YAK			e		15 17 54.2	
YAK			e		15 19 34.5	
YAK			eS	S	15 25 48.4	-1.6
YAK			e*SS	sS	15 26 13.8	+11
YAK			e		15 27 03.9	
YAK			eSS	SS	15 29 52.9	-4.1
YAK			pmax	pmax		
	comp=Z,54nm,0.8s					
YAK			pmax	pmax		
	comp=N,35nm,1.3s					
YAK			pmax	pmax		
	comp=E,7.0nm,1.4s					
YAK			pmax	pmax		
	comp=Z,72nm,2.8s					
YAK			pmax	pmax		
	comp=N,47nm,2.0s					
YAK			pmax	pmax		
	comp=E,72nm,3.8s					
YAK			smax	smax		
	comp=N,78nm,4.4s					
YAK			smax	smax		
	comp=E,73nm,3.3s					
YAK			MLR	MLR		
	comp=Z,73nm,18.0s					
YAK			MLR	MLR		
	comp=N,111nm,15.0s					
YAK			MLR	MLR		
	comp=E,51nm,17.0s					
BKZ	Black Stump Fm	63.67 134	P	P	15 17 21.3	-0.5
BKZ			IAmb	IAmb	15 17 29.6	
	comp=Z,69nm,1.3s					
MSWZ	Moikau Station	63.67 137	P	P	15 17 21.1	-0.6
PLWZ	Palliser	63.74 137	P	P	15 17 21.6	-0.6
URZ	Urewera	63.79 133	P	P	15 17 21.7	-0.8
MHTO	MHTO	64.65 294	P	P	15 17 28.1	-0.3
MHTO			P	P	15 17 28.1	-0.3
MSEY	Mahe Island	64.75 265	P	P	15 17 28.4	-0.9
MSEY			IAmb	IAmb	15 17 29.6	
	comp=Z,63nm,1.6s					
MSEY	Mahe Island	64.75 265	P	P	15 17 28.4	-0.9
MSEY			pmax	pmax		
	comp=Z,63nm,1.6s					
JMDO	Jabal Madar	64.81 295	P	P	15 17 28.9	-0.7
JMDO			P	P	15 17 28.9	-0.7
MA2	Magadan	65.03 17	P	P	15 17 30.0	-0.2
	comp=Z,17nm,1.0s,baz=188,slow=5.2,SNR=13					
MA2	Magadan	65.03 17	P	P	15 17 30.0	-0.2
MA2			IAmb	IAmb	15 17 31.6	
	comp=Z,30nm,1.1s					
MA2	Magadan	65.03 17d	eP	P	15 17 30.7	+0.5
MA2			pmax	pmax		
	comp=Z,50nm,1.7s					
BRZS	Berezniki	65.08 328⇓	iP	P	15 17 30.6	-0.2
	comp=Z,73nm,1.2s					
BRZS	Berezniki	65.08 328d	iP	P	15 17 30.6	-0.2
BRZS			pmax	pmax		
	comp=Z,73nm,1.2s					
BSY	Bisya	65.71 295	P	P	15 17 34.8	-0.6
BSY			P	P	15 17 34.8	-0.6
SOCY	Socotra	67.05 284	P	P	15 17 42.8	-1.4
SOCY			IAmb	IAmb	15 17 44.9	
	comp=Z,54nm,1.0s					
SOCY	Socotra	67.05 284	P	P	15 17 42.8	-1.4
UOSS	Minazif	67.07 298	P	P	15 17 42.6	-1.4
HATD	Hatta, Dubai	67.11 297	P	P	15 17 43.2	-1.1
ASHO	Ashiyiah	67.14 297	P	P	15 17 46.3	+1.8
ALNE	Al Ain	67.28 297	iP	P	15 17 45.2	-0.2
	SNR=9.2					
RBK	Rabkut	67.54 289	P	P	15 17 47.2	+0.1
RBK			P	P	15 17 47.2	+0.1
WHFO	Wadi Hawf	68.01 290	P	P	15 17 49.7	-0.4
WHFO			P	P	15 17 49.7	-0.4
BRVK	Borovoye	68.08 330	P	P	15 17 49.7	-0.1
BRVK	Borovoye	68.08 330d	eP	P	15 17 49.7	-0.1
BRVK			pmax	pmax		
	comp=Z,99nm,1.2s					
SEY	Seymchan	68.25 15	P	P	15 17 50.2	-0.5
	comp=Z,5.7nm,0.9s,baz=215,slow=5.0,SNR=13					
SEY	Seymchan	68.25 15⇓	eP	P	15 17 51.0	+0.3
ABTO	Aybut	68.37 289	P	P	15 17 52.3	-0.2
	SNR=7.7					
AFI	Afiamalu	68.39 104	P	P	15 17 51.2	-1.4
AFI	Afiamalu	68.39 104	P	P	15 17 51.2	-1.4
AFI			pmax	pmax		
	comp=Z,87nm,1.1s					
GEYT	Alibeck	69.00 312	P	P	15 17 57.3	+1.3
	comp=Z,34nm,1.1s,baz=132,slow=4.4,SNR=54					
GEYT			PKP2bc		15 46 08.4	
	comp=Z,3.9nm,1.1s,baz=286,slow=10,SNR=7.6					
GEYT			LR	LR	15 52 25.7	
	comp=Z,170nm,20.4s,baz=115,slow=40					
GYA0B	ALIBECK ARRAY	69.00 312	P	P	15 17 56.0	+0.1
GYA0B			IAmb	IAmb	15 18 01.3	
	comp=Z,48nm,1.1s					
TIXI	Tiksi	72.82 3	P	P	15 18 16.9	-1.5
	comp=Z,24nm,1.0s,baz=296,slow=1.6,SNR=4.4					
TIXI	Tiksi	72.82 3	P	P	15 18 16.6	-1.9
TIXI			IAmb	IAmb	15 18 22.8	
	comp=Z,40nm,1.1s					
TIXI	Tiksi	72.82 3c	iP	P	15 18 16.9	-1.5
TIXI			pmax	pmax		
	comp=Z,29nm,1.0s					
AKTO	Aktyubinsk	73.52 324	P	P	15 18 23.4	+0.4
NRIK	Noril'sk	73.67 348	P	P	15 18 23.4	-0.1
	comp=Z,21nm,0.8s,baz=132,slow=5.7,SNR=48					
NRIK			LR	LR	15 54 24.8	
	comp=Z,265nm,18.5s,baz=167,slow=39					
SVE	Sverdlovsk	74.78 331⇑	eP	P	15 18 29.8	-0.4
SVE			pmax	pmax		
	comp=Z,90nm,1.3s					
ARU	Arti	75.64 330	P	P	15 18 34.8	-0.4
	comp=Z,13nm,1.0s,baz=115,slow=2.9,SNR=36					
ARU	Arti	75.64 330	P	P	15 18 34.0	-1.1
ARU			IAmb	IAmb	15 18 36.2	
	comp=Z,70nm,1.2s					
ARU	Arti	75.64 330c	iP	P	15 18 34.8	-0.4
ARU			PPP	PPP	15 23 07.7	
ARU			S	S	15 28 14.5	-0.4
ARU			pmax	pmax		
	comp=Z,73nm,1.3s					
BILL	Bilibino	75.90 16d	eP	P	15 18 38.5	+2.1
BILL			i		15 18 51.1	
BILL			e		15 21 29.3	
BILL			iS	SKSac	15 28 38.6	-6.6
BILL			eSS	SS	15 33 07.5	-2.4
BILL			pmax	pmax		
	comp=Z,7.0nm,1.7s					
ATKA	Atka Island	76.13 35	P	P	15 18 37.8	-0.2
RAYN	Ar Rayn	76.45 294	iP	P	15 18 40.1	-0.5
	SNR=13					
RAYN	Ar Rayn	76.45 294	P	P	15 18 39.5	-1.0
RAYN			IAmb	IAmb	15 18 41.2	
	comp=Z,62nm,1.4s					
RAYN	Ar Rayn	76.45 294	P	P	15 18 39.6	-1.0
RAYN			pmax	pmax		
	comp=Z,62nm,1.4s					
MAW	Mawson	77.06 199	P	P	15 18 43.3	+0.4
	comp=Z,15nm,1.0s,baz=45,slow=7.5,SNR=4.0					
MAW			LR	LR	15 46 49.0	
	comp=Z,287nm,21.6s,baz=58,slow=31					
MAW	Mawson	77.06 199	P	P	15 18 43.3	+0.4
MAW			pmax	pmax		
	comp=Z,25nm,1.8s					
AKT	Akhty	77.67 313	eP	P	15 18 46.6	-0.5
AKT			e		15 18 55.7	
AKT			pmax	pmax		
	comp=Z,63nm,1.7s					
MAK	Makhachkala	78.16 314	eP	P	15 18 46.8	-2.8
MAK			e		15 21 42.8	
MAK			eS	S	15 28 37.3	-5.6
MAK			pmax	pmax		
	comp=Z,388nm,1.3s					
GROC	Groznyy	79.43 314	eP	P	15 18 56.6	0.0
GROC			e		15 19 04.5	
GROC			eS	S	15 28 58.4	+1.9
GROC			pmax	pmax		
	comp=Z,68nm,1.3s					
VNDA	Vanda	79.58 172	P	P	15 18 56.6	-0.2
	comp=Z,11nm,0.8s,baz=312,slow=8.0,SNR=13					
VNDA			LR	LR	15 53 19.1	
	comp=Z,174nm,19.4s,baz=328,slow=35					
VNDA	Vanda	79.58 172	P	P	15 18 56.5	-0.2
VNDA			IAmb	IAmb	15 21 39.4	
	comp=Z,110nm,2.0s					
VNDA	Vanda	79.58 172	P	P	15 18 56.6	-0.2
VNDA			pmax	pmax		
	comp=Z,110nm,2.0s					
TBLG	Delisi	79.92 313	P	P	15 18 58.6	-0.8
TBLG			IAmb	IAmb	15 19 04.4	
	comp=Z,60nm,1.1s					
TBLG	Delisi	79.92 313	P	P	15 18 58.6	-0.8
TBLG			pmax	pmax		
	comp=Z,60nm,1.1s					
ZEI	Tsey	80.72 314	eP	P	15 19 00.9	-3.0
ZEI			pmax	pmax		
	comp=Z,47nm,1.2s					
AKH	Akhalkalaki	80.78 312	P	P	15 19 04.5	+0.3
AKH			IAmb	IAmb	15 19 10.6	
	comp=Z,136nm,1.5s					
AKH	Akhalkalaki	80.78 312	P	P	15 19 04.6	+0.3
AKH			pmax	pmax		
	comp=Z,136nm,1.5s					
KIRV	Kirov	81.02 330	P	P	15 19 04.1	-0.7
	comp=Z,20nm,0.8s,baz=93,slow=12,SNR=11					
NCK	Nalchik	81.06 314⇑	eP	P	15 19 05.3	-0.2
NCK			pmax	pmax		
	comp=Z,17nm,1.4s					
GAMB	Gambell	81.42 25	P	P	15 19 07.7	+0.9
KBZ	Khabaz	81.60 314	P	P	15 19 08.4	+0.2
	comp=Z,9.9nm,1.2s,baz=67,slow=3.0,SNR=10					
KBZ			LR	LR	16 00 56.0	
	comp=Z,87nm,21.9s,baz=86,slow=40					
KBZ	Khabaz	81.60 314d	iP	P	15 19 07.5	-0.8
NEY	Neytrino	81.65 314⇑	eP	P	15 19 09.0	+0.2
NEY			pmax	pmax		
	comp=Z,9.0nm,1.8s					
KIV	Kislovodsk	81.79 315	eP	P	15 19 08.4	-1.0
KIV			eS	S	15 29 19.5	-1.9
KIV			pmax	pmax		
	comp=Z,24nm,1.0s					
KIV			MLR	MLR		
	comp=Z,296nm,19.0s					
KIBK	Kibwezi	82.15 268	P	P	15 19 11.4	-0.5
	SNR=7.5					
KMBO	Kilima Mbogo	82.96 269	P	P	15 19 15.9	-0.4
	comp=Z,4.4nm,0.7s,baz=66,slow=7.0,SNR=20					
KMBO			LR	LR	15 55 00.0	
	comp=Z,207nm,19.5s,baz=96,slow=35					
KMBO	Kilima Mbogo	82.96 269	iP	P	15 19 15.8	-0.5
	SNR=12					
KMBO	Kilima Mbogo	82.96 269	P	P	15 19 15.6	-0.8
KMBO	Kilima Mbogo	82.96 269	iP	P	15 19 16.2	-0.1

KMBO pmax pmax
comp=Z,4.0nm,0.7s
VRH Novokhopyorsk 83.64 322 *e*P **P 15 19 16.6 -2.1**
VRH pmax pmax
comp=Z,70nm,1.8s
PRGR Permogore 83.67 332 *e*P **P 15 19 16.7 -1.9**
PRGR *e**PP **pP 15 19 25.6 -1.2**
PRGR pmax pmax
comp=Z,30nm,1.2s
SOC Sochi 83.87 314 *e*P **P 15 19 17.2 -2.9**
SOC *e* 15 22 27.9
SOC *e*PPP PPP 15 24 23.6
SOC *e*S **S 15 29 36.4 -5.9**
SOC *e*SS **SS 15 35 08.5 -1.8**
SOC *e*SSS SSS 15 38 38.9
SOC pmax pmax
comp=Z,20nm,0.7s
LODK Lodwar 84.94 274 P **P 15 19 26.6 +0.3**
SNR=7.5
GAZ Gaziantep 85.08 307 P **P 15 19 26.4 -0.1**
VORD Divnogorie 85.12 321 *e*P **P 15 19 24.4 -1.8**
VORD pmax pmax
comp=Z,50nm,1.3s
VSR Storozhevoye 85.23 321 *e*P **P 15 19 24.1 -2.7**
VSR pmax pmax
comp=Z,100nm,1.7s
VORR Voronezh 85.27 322 *e*P **P 15 19 26.0 -0.9**
VORR pmax pmax
comp=Z,250nm,1.6s
LPSR Galich'ya Gora 85.56 323 *e*P **P 15 19 26.6 -1.8**
LPSR pmax pmax
comp=Z,110nm,1.9s
SYO Syowa Base 85.64 201⇑*i*P **P 15 19 26.0 -2.4**
SYO Syowa Base 85.64 201⇑*e*PcP **PcP 15 19 32.0 +0.7**
ANN Anapa 85.64 315 *e*P **P 15 19 27.3 -1.6**
ANN *e* 15 29 57.2
ANN *e*SS SS 15 35 43.0 +6.7
ANN pmax pmax
comp=Z,62nm,1.1s
KLMR Klimovskoe 86.41 331 *e*P **P 15 19 28.6 -3.8**
KLMR pmax pmax
comp=Z,150nm,1.6s
KLMR Klimovskoe 86.41 331 *e*P **P 15 19 28.7 -3.7**
KLMR AMP 15 19 36.4
comp=Z,150nm,1.6s
MOS Moscow 86.72 326 *e*P **P 15 19 32.5 -1.5**
MOS *e* 15 22 59.5
MOS *e* 15 30 11.9
MOS pmax pmax
comp=Z,51nm,1.5s
OBN Obninsk 87.25 325 P **P 15 19 35.6 -1.0**
comp=Z,1.8nm,0.4s,baz=163,slow=20,SNR=1.9
OBN Obninsk 87.25 325 P **P 15 19 36.2 -0.4**
OBN Obninsk 87.25 325 *c i*P **P 15 19 35.5 -1.0**
OBN *i* 15 19 44.3
OBN pmax pmax
comp=Z,45nm,1.5s
OBN MLR MLR
comp=Z,270nm,23.0s
TMCR Tamitsa 87.56 334 *e*P **P 15 19 35.9 -2.0**
BR131 Keskin Array S 88.06 310 P **P 15 19 39.6 -1.5**
BR131 IAmb IAmb 15 19 44.6
comp=Z,40nm,1.9s
BR131 Keskin Array S 88.06 310 P **P 15 19 42.2 +1.1**
SNR=7.5
BR131 Keskin Array S 88.06 310 *de*P **P 15 19 38.9 -2.2**
BRTR Keskin Array B 88.06 310 P **P 15 19 39.5 -1.6**
comp=Z,4.4nm,0.9s,baz=122,slow=6.0,SNR=18
BRTR PP **PP 15 23 06.0 -1.9**
comp=Z,4.5nm,1.2s,baz=96,slow=6.3,SNR=3.9
BRTR LR LR 16 07 23.5
comp=Z,54nm,18.4s,baz=75,slow=41
BRTR Keskin Array B 88.06 310 *ce*P **P 15 19 40.0 -1.1**
BRTR pmax pmax
comp=Z,4.0nm,0.9s
QSPA South Pole Qui 88.86 180 P **P 15 19 44.0 -0.3**
MBAR Mbarara 89.48 269 P **P 15 19 47.5 -0.9**
MBAR IAmb IAmb 15 19 49.1
comp=Z,43nm,1.3s
MBAR Mbarara 89.48 269 *de*P **P 15 19 47.5 -0.9**
MBAR pmax pmax
comp=Z,45nm,1.5s
APA Apatity 89.78 337⇑*i*P **P 15 19 46.3 -2.0**
APA pmax pmax
comp=Z,8.0nm,1.1s
APA MLR MLR
comp=Z,700nm,19.0s
TBI Tubuai 89.86 113 *e*LR LR 15 48 45.6
comp=Z,134nm,28.5s
PPT2 Papeete2 89.86 107 *e*LR LR 15 48 47.3
comp=Z,163nm,30.5s
MLY Manley 90.56 25 P **P 15 19 51.2 -0.9**
MLY IAmb IAmb 15 20 01.9
comp=Z,44nm,2.0s
TOLK Toolik Lake Re 91.07 21 P **P 15 19 54.1 -0.3**
AKASG Malin Array Be 91.47 321 P **P 15 19 54.8 -1.8**
comp=Z,2.5nm,1.0s,baz=77,slow=4.5,SNR=10
AKASG PKKPbc **PKKPdf 15 37 16.9 +0.9**
comp=Z,2.7nm,0.8s,baz=271,slow=3.2,SNR=12
AKASG LR LR 16 07 09.8
comp=Z,147nm,19.9s,baz=55,slow=40
AKASG Malin Array Be 91.47 321 *i* P **P 15 19 54.5 -2.1**
AKASG pmax pmax
comp=Z,9.0nm,1.2s
AKBB Malin Array Si 91.47 321 P **P 15 19 56.1 -0.4**
AKBB IAmb IAmb 15 20 00.0
comp=Z,25nm,1.6s
AKBB Malin Array Si 91.47 321 P **P 15 19 56.2 -0.4**
AKBB pmax pmax
comp=Z,25nm,1.6s
WRH Wood River Hil 91.70 26 P **P 15 19 57.9 +0.6**
WRH IAmb IAmb 15 20 01.6
comp=Z,36nm,1.6s
CCB Clear Creek Bu 91.82 26 P **P 15 19 56.7 -1.2**
ILAR Eielson Array 92.21 25 P **P 15 19 58.4 -1.3**
comp=Z,0.9nm,1.0s,baz=275,slow=4.2,SNR=5.3
ILAR PKKPbc **PKKPdf 15 37 15.2 0.0**
comp=Z,0.6nm,1.0s,baz=58,slow=1.0,SNR=4.5
ILAR LR LR 16 00 39.1
comp=Z,93nm,21.6s,baz=249,slow=35
ARCES ARCESS Array B 92.67 339 P **P 15 20 02.7 +0.9**
comp=Z,1.2nm,0.7s,baz=82,slow=6.8,SNR=3.5
ARCES LR LR 16 06 56.5
comp=Z,100nm,18.8s,baz=38,slow=39
VSU Vasula 92.75 328⇑*e*P **P 15 20 03.5 +1.2**
VSU pmax pmax
comp=Z,58nm,1.3s
PAX Paxson 92.92 27 P **P 15 20 02.0 -1.2**
PAX IAmb IAmb 15 20 07.5
comp=Z,63nm,1.8s
PAX Paxson 92.92 27 P **P 15 20 02.0 -1.2**
PAX pmax pmax
comp=Z,63nm,1.8s
FINES FINESS Array B 92.94 331 P **P 15 20 02.5 -0.6**
comp=Z,2.9nm,0.8s,baz=151,slow=6.3,SNR=3.2
MLR Muntele Rosu 93.78 315 P **P 15 20 06.1 -1.5**
MLR IAmb IAmb 15 20 11.6
comp=Z,61nm,1.9s
MLR Muntele Rosu 93.78 315 P **P 15 20 06.1 -1.5**
MLR pmax pmax
comp=Z,61nm,1.9s
BOSA Boshof 93.86 241 P **P 15 20 08.8 +0.5**
comp=Z,3.5nm,1.0s,baz=83,slow=3.8,SNR=5.1
BOSA LR LR 15 57 44.4
comp=Z,192nm,18.4s,baz=114,slow=32
BOSA Boshof 93.86 241 IAmb IAmb 15 23 42.6
comp=Z,36nm,1.8s
BOSA Boshof 93.86 241 P **P 15 20 08.8 +0.5**
BOSA pmax pmax
comp=Z,36nm,1.8s
BARN Barnard Glacie 94.88 29 P **P 15 20 12.2 -0.2**
BARN IAmb IAmb 15 20 16.3
comp=Z,47nm,1.7s
NVL N'lazarevskaya 94.98 198 *e*P **P 15 20 11.7 -0.7**
NVL *e*S **SKSac 15 30 45.9 -0.4**
NVL pmax pmax
comp=Z,5.0nm,0.8s
DAWY Dawson 95.51 26 P **P 15 20 14.1 -0.9**
UZH Uzhgorod 96.06 319 *e*P **P 15 20 20.9 +3.1**
UZH *i* 15 20 35.1
INK Inuvik 96.97 21 P **P 15 20 20.0 -1.4**
comp=Z,3.1nm,1.0s,baz=258,slow=5.5,SNR=6.7
INK Inuvik 96.97 21 P **P 15 20 20.0 -1.4**
INK pmax pmax
comp=Z,12nm,1.7s

NOA NORSAR Array B 100.08 332 P **Pdif 15 20 33.9 -1.7**
comp=Z,1.8nm,0.9s,baz=90,slow=5.3,SNR=3.0
CLL Collm 101.56 322 *e*Sdif Sdif 15 32 16.0 -5.8
CLL *e*PS PS 15 33 53.0 -3.6
CLL *e*PPS PPS 15 34 48.0
CLL *e*SS **SS 15 39 25.0 +1.6**
CLL *e*SSS SSS 15 43 00.0
CLL *e*SSSS 15 47 06.0
GERES GERESS Array B 101.65 320 PP **PP 15 24 53.1 -0.1**
comp=Z,2.1nm,1.2s,baz=70,slow=1.6,SNR=3.8
YKA Yellowknife Ar 106.50 23 PKiKP **PKiKP 15 25 14.7 -0.1**
comp=Z,0.6nm,0.7s,baz=310,slow=2.0,SNR=7.5
NVAR Mina Array Bea 114.93 48 PKiKP **PKiKP 15 25 31.6 -0.3**
comp=Z,0.7nm,0.7s,baz=226,slow=3.9,SNR=6.7
NVAR PP **PP 15 26 29.8 -0.7**
comp=Z,0.1nm,0.4s,baz=250,slow=3.9,SNR=3.5
NVAR PKKPbc **PKKPbc 15 36 08.9 -0.4**
comp=Z,0.1nm,0.3s,baz=83,slow=3.9,SNR=2.7
NVAR PKKPab **PKKPab 15 36 14.6 +0.1**
comp=Z,0.8nm,0.8s,baz=136,slow=5.1,SNR=5.6
EGMT Eagleton 116.45 35 PKPdf 15 25 33.7 -0.6
FRB Frobisher Bay 117.14 4 PKP **PKiKP 15 25 35.2 +0.2**
comp=Z,1.6nm,0.7s,baz=270,slow=7.1,SNR=4.1
TORD Torodi Ar. Bea 118.00 284 PKP **PKPdf 15 25 36.2 -1.8**
comp=Z,1.1nm,0.9s,baz=47,slow=1.8,SNR=5.0
TORD PP **PP 15 26 50.0 -2.6**
comp=Z,1.5nm,0.9s,baz=88,slow=2.4,SNR=3.5
TORD PKPbc **PKKPbc 15 35 58.1 +0.5**
comp=Z,2.1nm,0.8s,baz=302,slow=4.3,SNR=7.3
LAO LASA Array 119.20 35 PKPdf 15 25 39.3 -0.3
PDAR Pinedale Array 119.21 40 PKP **PKPdf 15 25 39.3 -0.6**
comp=Z,0.7nm,0.8s,baz=64,slow=3.4,SNR=5.6
PDAR PKKPbc **PKKPbc 15 35 52.0 -2.2**
comp=Z,2.8nm,0.9s,baz=130,slow=4.6,SNR=16
U15A North Rim 120.11 48 PKPdf 15 25 41.6 -0.3
SRU San Rafael Swe 120.26 44 PKPdf 15 25 41.2 -0.7
SRU San Rafael Swe 120.26 44 PKIKP **PKPdf 15 25 41.3 -0.7**
O20A White River Ci 121.35 42 PKPdf 15 25 43.6 -0.5
RSSD Black Hills 121.92 36 PKPdf 15 25 44.4 -0.7
RSSD Black Hills 121.92 36 PKIKP **PKPdf 15 25 44.4 -0.7**
ULM Lac du Bonnet 122.21 27 PKP **PKPdf 15 25 43.9 -1.2**
comp=Z,3.5nm,0.8s,baz=339,slow=2.9,SNR=9.9
ULM Lac du Bonnet 122.21 27⇓*i*PKIKP **PKPdf 15 25 44.9 -0.2**
DBIC Dimbokro 124.96 277 PKP **PKPdf 15 25 50.0 -1.5**
comp=Z,4.4nm,1.0s,baz=63,slow=4.5,SNR=2.8
DBIC Dimbokro 124.96 277 PKIKP **PKPdf 15 25 50.0 -1.5**
ANMO Albuquerque 125.04 47 PKPdf 15 25 50.5 -0.8
ANMO Albuquerque 125.04 47 PKIKP **PKPdf 15 25 50.5 -0.8**
EYMN Ely 125.85 26 PKPdf 15 25 51.8 -0.5
SCHQ Schefferville 126.11 5 PKP **PKPdf 15 25 50.9 -1.6**
comp=Z,3.0nm,0.8s,baz=157,slow=2.6,SNR=4.2
ECSD EROS Data Cent 126.36 33 PKPdf 15 25 52.7 -0.7
BGNE Belgrade 127.01 36 PKPdf 15 25 53.8 -0.8
D41A Chassel 127.79 25 PKPdf 15 25 55.4 -0.5
TXAR Lajitas Array 129.66 52 PKP **PKPdf 15 26 00.1 -0.1**
comp=Z,0.4nm,0.7s,baz=90,slow=0.3,SNR=5.5
JCT Junction City 132.09 48 PKPdf 15 26 04.3 -0.4
JCT Junction City 132.09 48 PKIKP **PKPdf 15 26 04.3 -0.4**
J48A Bridge Port 132.81 24 PKPdf 15 26 05.0 -0.5
CCM Cathedral Cave 133.21 34 PKPdf 15 26 06.6 +0.1
CCM Cathedral Cave 133.21 34 PKIKP **PKPdf 15 26 06.6 +0.1**
U40A Yellville 133.42 37 PKPdf 15 26 06.3 -0.7
MIAR Mount Ida 134.13 40 PKPdf 15 26 08.3 0.0
MIAR Mount Ida 134.13 40 PKIKP **PKPdf 15 26 08.3 0.0**
M54A Oil Creek Stat 135.93 22 PKPdf 15 26 11.8 +0.2
M56A Emporium 136.48 20 PKPdf 15 26 13.3 +0.7
WVT Waverly 136.49 34 PKPdf 15 26 13.2 +0.5
WVT Waverly 136.49 34 PKIKP **PKPdf 15 26 13.2 +0.5**
P53A Whipple 136.99 25 PKPdf 15 26 14.3 +0.8
PLAL Pickwick Lake 137.18 35 PKPdf 15 26 14.2 +0.2
PLCA Paso Flores 137.24 168 PKP **PKiKP 15 26 15.9 -0.1**
comp=Z,9.3nm,1.2s,baz=207,slow=1.5,SNR=6.0
S51A Beattyville 137.52 28 PKPdf 15 26 14.4 -0.1
W50A Signal Mountai 138.55 32 PKPdf 15 26 16.1 -0.5
PEL Peldehue 144.43 164 PKPab 15 26 25.4 0.0
PEL Peldehue 144.43 164 PKIKP **PKPab 15 26 25.4 0.0**
ROC1 El Roble 144.50 164 PKPab 15 26 25.8 -0.1
CCIG Comitan 144.71 63 PKPab 15 26 27.0 0.0
GO04 Tololo Observa 147.19 162 PKPdf **PKPdf 15 26 31.2 -1.0**
GO04 PKPbc **PKPbc 15 26 33.4 -1.0**
GO03 Copiap 149.76 161 PKPbc 15 26 39.9 -1.1
CPUP Villa Florida 152.65 185 PKP **PKPdf 15 26 40.9 +0.3**
comp=Z,3.0nm,0.9s,baz=159,slow=2.9,SNR=6.3
CPUP PKPbc **PKPbc 15 26 47.0 -0.6**
comp=Z,8.1nm,0.8s,baz=188,slow=1.0,SNR=11
CPUP PP **PP 15 30 26.6 -2.5**
comp=Z,3.7nm,1.1s,baz=162,slow=9.6,SNR=2.5
CPUP Villa Florida 152.65 185 PKPbc 15 26 46.6 -1.0
CPUP Villa Florida 152.65 185 PKIKP **PKPbc 15 26 46.6 -1.0**
CPUP 15 30 26.6
BDFB Brasilia 159.72 215 PKP **PKPdf 15 26 49.5 -0.8**
comp=Z,4.2nm,0.9s,baz=32,slow=9.5,SNR=5.2
BDFB PKPab **PKPab 15 27 28.7 -0.1**
comp=Z,15nm,1.0s,baz=138,slow=4.2,SNR=12
LPAZ La Paz 160.87 155 PKP **PKPdf 15 26 52.4 +0.2**
comp=Z,5.3nm,1.1s,baz=271,slow=4.2,SNR=9.7
LPAZ PKPab **PKPab 15 27 35.8 +1.5**
comp=Z,15nm,0.9s,baz=177,slow=3.1,SNR=21
LPAZ PP **PP 15 31 15.7 0.0**
comp=Z,0.7nm,0.7s,baz=170,slow=4.1,SNR=4.3
LPAZ La Paz 160.87 155 PKPdf 15 26 49.3 -2.9
LPAZ La Paz 160.87 155 PKIKP **PKPdf 15 26 49.3 -2.9**
SAML Samuel 169.47 161 PKPab 15 28 10.8 -0.6
SAML Samuel 169.47 161 PKP2 **PKPab 15 28 10.8 -0.6**

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*IDC **23** 15:20:26.6±0.9, 0°.97S×120°.64E, h0^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.5/37, mbtmp3.6/7, ML4.3/1, Error ellipse: s-maj=46.8km s-min=16.5km az=74.0*
*NEIC **23** 15:20:27.6±1.1, 0°.95S±0°.09×120°.57E±0°.06, h10^{km}±2^{km}, mb4.3/6, Error ellipse: s-maj=17.3km s-min=5.0km az=329.0*
*DJA **23** 15:20:28.9±0.3, 1°S±3°×12°0E±°, h10^{km}, M4.2/10, MLv4.2/10*
ISC 23 15:20:28.4±0.7**, 1°.01S**±0°.05×**120°.16E**±0°.06**, h10**^{km}**, n25, σ1**^{s}**96**/28**, mb3.8**/9**, Sulawesi**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MPSI Mapaga 1.36 349 P **Pn 15 20 52.4 -1.1**
TTSI Tana Toraja 2.05 189 P **Pn 15 21 03.6 +0.6**
MRSI Marisa 2.31 50 P **Pn 15 21 08.4 +1.8**
LUWI Luwuk 2.61 91 P **Pn 15 21 10.4 -0.3**
LUWI Luwuk 2.61 91 Pn Pn 15 21 04.9 -5.8
SPSI Sidrap Palu 2.96 188 P **Pn 15 21 16.6 +1.0**
BNSI Bone 3.37 181 P **Pn 15 21 22.4 +1.2**
KAPI Kappang 4.00 186 Pn **Pn 15 21 31.4 +1.5**
16nm,0.3s,baz=344,slow=8.5,SNR=16
KAPI Sn **Sn 15 22 17.9 +1.0**
8.9nm,0.3s,baz=154,slow=20,SNR=6.6
KMSI Cibinong 4.13 68 P **Pn 15 21 33.7 +2.1**
BKSI Bulukumba 4.29 180 P **Pn 15 21 33.9 +0.1**
KBKI Kotabaru 4.59 240 P **Pn 15 21 37.1 -0.9**
TNG Tangerang 14.43 249 P **Pn 15 23 54.1 +1.2**
IPM Ipoh 19.88 286 P **Pn 15 25 03.3 +1.6**
IPM IAmb IAmb 15 25 33.2
comp=Z,22nm,1.5s
WRA Warramunga Arr 23.38 144 P **P 15 25 34.4 -3.1**
comp=Z,1.0nm,0.9s,baz=326,slow=11,SNR=9.0
WRAB Tennant Creek 23.38 144 P **P 15 25 35.3 -2.3**
WRAB IAmb IAmb 15 25 37.5
comp=Z,19nm,1.8s
WB2 Warramunga Arr 23.39 144 P **P 15 25 34.5 -3.1**
WR0 Warramunga Arr 23.51 144 P **P 15 25 36.0 -2.9**
WR0 IAmb IAmb 15 26 07.5
comp=Z,6.3nm,1.1s
ASAR Alice Springs 26.18 150 P **P 15 26 01.2 -2.2**
comp=Z,0.2nm,0.6s,baz=333,slow=10,SNR=4.2
ASAR PcP **PcP 15 29 29.4 -1.2**
comp=Z,0.4nm,0.6s,baz=341,slow=2.0,SNR=5.9
STKA Stephens Creek 36.78 149 P **P 15 27 35.0 -1.5**
comp=Z,2.1nm,0.8s,baz=304,slow=12,SNR=4.8
STKA Stephens Creek 36.78 149 P **P 15 27 34.7 -1.8**
KSRS Korea Array 38.94 10 P **P 15 27 52.8 -1.8**
comp=Z,0.2nm,0.4s,baz=197,slow=8.8,SNR=3.2
KSH Kashi 57.07 320 P **P 15 30 16.8 +1.6**
KSH PcP **PcP 15 31 14.8 +4.7**
KSH S **S 15 38 09.3 -1.0**
MK31 Makanchi Array 58.02 330 P **P 15 30 21.5 -0.1**
MK31 IAmb IAmb 15 31 21.8
comp=Z,6.8nm,1.9s
MKAR Makanchi Array 58.02 330 P **P 15 30 23.3 +1.7**
comp=Z,0.7nm,0.7s,baz=131,slow=8.0,SNR=9.7

ZALV Zalesovo Beam 62.09 337 P **P 15 30 49.5 +0.2**
comp=Z,0.4nm,0.6s,baz=139,slow=9.0,SNR=2.7

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*IDC **23** 15:25:08.5±0.6, 0°.98S×120°.62E, h0^{km}, mb4.0/13, mb1 4.2/15, mb1mx4.0/34, mbtmp4.1/15, ML3.8/2, MS3.7/1, Ms1 3.7/1, ms1mx2.9/32, Error ellipse: s-maj=25.2km s-min=10.7km az=67.0*
*NEIC **23** 15:25:10.7±1.5, 1°.01S±0°.07×120°.5E±0°.1, h16^{km}±5^{km}, mb4.4/16, Error ellipse: s-maj=15.2km s-min=9.6km az=69.0*
*DJA **23** 15:25:10.4±0.2, 1°S±3°×12°0E±°, h10^{km}, M4.7/13, mB5.6/3, mb4.7/10, MLv4.6/4, MLv4.7/13, Mw(mB)5.1/3, Mwp5.9/1*
ISC 23 15:25:10.2±0.5**, 1°.08S**±0°.05×**120°.26E**±0°.06**, h10**^{km}**, n61, σ2**^{s}**04**/65**, mb4.3**/22**, 1D, Sulawesi**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MPSI Mapaga 1.46 346 P **Pn 15 25 33.8 -2.8**
TTSI Tana Toraja 2.00 193 P **Pn 15 25 44.6 +0.5**
MRSI Marisa 2.28 47 P **Pn 15 25 45.2 -2.8**
LUWI Luwuk 2.51 89 P **Pn 15 25 52.1 +1.0**
LUWI Luwuk 2.51 89 Pn 15 25 51.8 +0.7
SPSI Sidrap Palu 2.91 190 P **Pn 15 25 57.4 +0.9**
BNSI Bone 3.30 183 P **Pn 15 26 03.0 +1.0**
BKB Balikpapan 3.37 267 Pn **Pn 15 26 03.4 +0.5**
KAPI Kappang 3.94 187 Pn **Pn 15 26 12.8 +2.1**
31nm,0.3s,baz=354,slow=7.9,SNR=55
KAPI Sn **Sn 15 26 59.9 +2.9**
3.3nm,0.3s,baz=162,slow=19,SNR=4.3
KMSI Cibinong 4.07 66 P **Pn 15 26 16.0 +3.5**
BKSI Bulukumba 4.21 182 P **Pn 15 26 15.2 +0.7**
KBKI Kotabaru 4.65 242 P **Pn 15 26 18.5 -2.0**
SANI Sanana 5.80 100 P **Pn 15 26 36.2 -0.2**
0.2nm0.2nm34nm,0.7s
LBMI Labuha 7.25 87 P Pb 15 27 08.2 -8.1
KKM Kota Kinabalu 8.15 330 Pn **Pn 15 27 11.4 +2.7**
WBSI Waikabubak, Su 8.55 186 P **Pn 15 27 14.0 -0.2**
57nm,0.9s
SOEI Soe 9.49 155 P Pn 15 27 43.1 +16
DAV Davao City (W) 9.68 33 LR LR 15 31 19.5
comp=Z,430nm,19.1s,baz=143,slow=39
FITZ Fitzroy Crossi 17.72 163 P **Pn 15 29 16.6 -0.6**
0.1nm,0.3s,baz=322,slow=17,SNR=4.5
SDSI Sungai Dareh 18.83 270 P **P 15 29 23.4 -7.0**
MMPI Merauke 21.34 111 P **P 15 29 59.9 +2.2**
17μm11μm362nm,0.6s
RPSI Rantau Prapat 21.66 280 P **P 15 30 02.5 +1.4**
RPSI IAmb IAmb 15 30 22.2
comp=Z,18nm,1.3s
RPSI Rantau Prapat 21.66 280 P **P 15 30 03.6 +2.4**
PSI Prapat 21.68 280 P **P 15 30 03.6 +2.1**
comp=Z,2.8nm,0.4s,baz=89,slow=5.4,SNR=6.2
WB0 Warramunga Arr 23.16 144 P **P 15 30 16.1 -1.0**
WB0 IAmb IAmb 15 30 23.8
comp=Z,22nm,1.4s
WRA Warramunga Arr 23.26 145 P **P 15 30 16.9 -1.2**
comp=Z,4.9nm,0.8s,baz=326,slow=10,SNR=23
WRA S **S 15 34 31.0 +0.5**
comp=Z,0.6nm,1.0s,baz=312,slow=20,SNR=3.9
WB2 Warramunga Arr 23.27 145 P **P 15 30 17.4 -0.7**
WB2 IAmb IAmb 15 30 28.0
comp=Z,9.0nm,0.8s
WR0 Warramunga Arr 23.39 144 P **P 15 30 18.1 -1.3**
WR0 IAmb IAmb 15 30 22.5
comp=Z,12nm,0.8s
AS31 Alice Springs 26.06 151 P **P 15 30 42.6 -1.4**
ASAR Alice Springs 26.06 151 P **P 15 30 42.4 -1.6**
comp=Z,1.9nm,0.8s,baz=323,slow=7.8,SNR=22
ASAR PcP **PcP 15 34 11.2 -0.9**
comp=Z,0.7nm,0.6s,baz=336,slow=2.0,SNR=11
CMAR Chiang Mai Arr 28.58 314 P **P 15 31 09.6 +2.9**
comp=Z,0.5nm,0.8s,baz=139,slow=8.4,SNR=5.1
XAN Xi'an 36.53 344 P **P 15 32 16.3 +0.2**
STKA Stephens Creek 36.66 149 P **P 15 32 16.4 -0.8**
comp=Z,5.7nm,0.7s,baz=316,slow=9.6,SNR=13
STKA Stephens Creek 36.66 149 P **P 15 32 16.7 -0.6**
KSRS Korea Array 38.99 10 P **P 15 32 35.3 -1.5**
comp=Z,2.1nm,1.0s,baz=177,slow=12,SNR=8.6
MJAR Matsushiro Arr 40.98 22 P **P 15 32 49.6 -3.8**
comp=Z,1.9nm,0.9s,baz=204,slow=7.8,SNR=6.0
ODAN Odare 42.12 314 *e*P **P 15 33 05.0 +1.8**
TAPN Taplejung 42.18 315 *e*P **P 15 33 05.4 +1.7**
RAMN Ramite 42.75 313 *e*P **P 15 33 10.6 +2.3**
CAN Canberra 43.31 145 P **P 15 33 11.5 -1.0**
JIRN Jiri 43.45 314 *e*P **P 15 33 15.2 +1.1**
comp=Z,11nm,0.6s
GUN Gumba 43.82 314 *e*P **P 15 33 18.2 +1.1**
comp=Z,14nm,0.7s
PKI Pulchoki 43.97 313 *e*P **P 15 33 19.0 +0.7**
GTA Gaotai 44.45 337 ⇓P **P 15 33 23.4 +1.7**
GTA pP sP 15 33 28.3 +1.8
GTA sP pP 15 33 30.4 +5.3
DANN Dangsing 45.61 313 *e*P **P 15 33 32.5 +1.2**
comp=Z,16nm,0.7s
USRK Ussuriysk Ar. 46.28 12 P **P 15 33 34.9 -1.1**
comp=Z,2.7nm,1.0s,baz=198,slow=9.1,SNR=4.1
ULN Ulaanbaatar 50.09 348 P **P 15 34 05.1 -0.5**
SONM Songino Array 50.20 348 P **P 15 34 06.5 +0.2**
comp=Z,1.2nm,0.7s,baz=166,slow=9.2,SNR=11
KSH Kashi 57.20 320 P **P 15 34 59.3 +1.5**
KSH PcP **PcP 15 35 47.3 -5.0**
KSH PP **PP 15 37 06.1 +1.2**
KSH S **S 15 42 50.9 -2.8**
KSH sS sS 15 42 59.3 -0.3
KSH ScS **ScS 15 44 48.8 +1.1**
KSH Kashi 57.20 320 SS **SS 15 46 48.6 +5.6**
MK31 Makanchi Array 58.14 330 P **P 15 35 04.3 +0.2**
MK31 IAmb IAmb 15 35 06.5
comp=Z,3.3nm,0.8s
MKAR Makanchi Array 58.14 330 P **P 15 35 04.9 +0.7**
comp=Z,3.5nm,0.7s,baz=134,slow=7.7,SNR=35
MAKZ Makanchi 58.30 330 P **P 15 35 04.3 -1.0**
MAKZ IAmb IAmb 15 35 07.5
comp=Z,2.9nm,0.8s
KBL Kabul 59.58 312 P **P 15 35 14.7 +0.1**
ZAA0 Zalesovo Array 62.20 337 P **P 15 35 30.1 -1.7**
ZAA0 IAmb IAmb 15 35 31.8
comp=Z,2.9nm,1.0s
ZALV Zalesovo Beam 62.20 337 P **P 15 35 31.1 -0.7**
comp=Z,2.1nm,0.8s,baz=127,slow=5.8,SNR=10
KURK Kurchatov 62.58 332 P **P 15 35 34.1 -0.4**
YAK Yakutsk 63.35 5 P **P 15 35 38.2 -1.1**
GEYT Alibeck 69.03 312 P **P 15 36 17.3 +0.9**
comp=Z,0.8nm,0.5s,baz=90,slow=2.9,SNR=2.8
NRIK Noril'sk 73.68 348 P **P 15 36 44.2 +0.4**
comp=Z,2.8nm,0.8s,baz=137,slow=5.3,SNR=7.3
BRTR Keskin Array B 88.08 310 P **P 15 38 00.1 -1.4**
comp=Z,0.7nm,0.8s,baz=104,slow=2.5,SNR=4.0

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*IDC **23** 15:47:37.0±1.6, 1°.07S×120°.62E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.4/35, mbtmp3.6/4, ML3.9/1, Error ellipse: s-maj=55.8km s-min=23.8km az=70.0*
*DJA **23** 15:47:38.1±0.4, 1°S±4°×12°0E±°, h10^{km}, M3.8/6, MLv3.8/6*
*NEIC **23** 15:47:38.5±1.7, 1°.16S±0°.10×120°.4E±0°.1, h10^{km}±2^{km}, mb4.2/4, Error ellipse: s-maj=22.0km s-min=12.7km az=304.0*
ISC 23 15:47:40.0±1.0**, 0°.99S**±0°.06×**120°.23E**±0°.08**, h28**^{km}**, n15, σ1**^{s}**55**/16**, mb3.6**/5**, Minahassa Peninsula, Sulawesi**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MPSI Mapaga 1.36 346 P **Pn 15 48 01.6 -1.6**
TTSI Tana Toraja 2.08 191 P **Pn 15 48 12.7 -0.3**
MRSI Marisa 2.25 50 P **Pn 15 48 16.9 +1.5**
LUWI Luwuk 2.54 91 P **Pb 15 48 23.6 -1.4**
LUWI Luwuk 2.54 91 Pn **Pn 15 48 19.8 +0.4**
SPSI Sidrap Palu 2.99 189 P **Pn 15 48 25.6 +0.1**
BNSI Bone 3.39 182 P **Pn 15 48 31.6 +0.6**
KAPI Kappang 4.02 187 Pn **Pn 15 48 40.5 +0.8**
7.9nm,0.3s,baz=358,slow=9.2,SNR=15
KAPI Sn **Sn 15 49 26.3 +0.3**
3.8nm,0.3s,baz=90,slow=19,SNR=2.0
WB0 Warramunga Arr 23.25 144 P **P 15 52 43.5 -1.8**
WB0 IAmb IAmb 15 53 26.5
comp=Z,10nm,1.5s
WRAB Tennant Creek 23.35 145 P **P 15 52 45.6 -0.7**
WRA Warramunga Arr 23.35 145 P **P 15 52 44.0 -2.4**
comp=Z,1.7nm,0.9s,baz=322,slow=11,SNR=9.5
WB2 Warramunga Arr 23.36 145 P **P 15 52 45.1 -1.3**
WB2 IAmb IAmb 15 53 20.3
comp=Z,16nm,1.6s

WR0 Warramunga Arr 23.48 144 P P 15 52 46.0 -1.6
ASAR Alice Springs 26.15 151 P P 15 53 11.1 -1.0
comp=Z,0.6nm,0.8s,baz=334,slow=10.0,SNR=13
MKAR Makanchi Array 58.04 330 P P 15 57 33.5 +3.0
comp=Z,0.4nm,0.7s,baz=136,slow=7.5,SNR=4.9

IDC **23** *16:11:40.9±1.5, 11.76N×85.26W, h0km, mb3.4/5, mb1 3.9/5, mb1mx3.5/32, mbtmp3.4/5, Error ellipse: s-maj=101.4km s-min=21.4km az=70.0*
UCR **23** *16:11:41.8±1.8, 10.68N×86.52W, h10km, MD4.2, mb4.3(NEIC)*
INET **23** *16:11:43.3, 10.64N×86.46W, h15km, ML3.8*
NEIC **23** *16:11:46.2±1.9, 10.85N±0.09×86.40W±0.09, h44km±7km, mb4.3/12, Error ellipse: s-maj=16.4km s-min=9.3km az=222.0*
ISC 23 16:11:44.7±0.7, **10.94N**±0.07×**86.37W**±0.06, **h31**km, **n47**, σ1§**82**/52, **mb4.1**/11, **1C, Off coast of Costa Rica**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NY14 Universidad de 0.87 109 iP Pb 16 12 00.2 -1.1
GBS3 Finca Las Img 0.91 100 iP Pb 16 12 01.1 -0.9
LAPC Finca la Perla 0.94 100 iP Pb 16 12 01.1 -1.3
BUEV Buena Vista 0.96 98 iP Pb 16 12 01.7 -1.1
BUEV eS Sb 16 12 18.1 +2.9
GB1A Borinquen Arri 0.96 97 iP Pb 16 12 02.0 -0.9
GB1A iS Sb 16 12 17.9 +2.5
GPS3 Bodega del ICE 1.00 100 iP Pb 16 12 02.6 -1.0
LIM1 Limonal 1.12 102 iP Pb 16 12 03.8 -1.8
MESS Mesas 1.17 100 iP Pb 16 12 04.8 -1.7
COLC Colonia 1.18 103 iP Pb 16 12 04.6 -2.0
HORNC Hornillas 1.19 101 iP Pb 16 12 04.9 -2.0
CUI Cuipilapa 1.22 103 iP Pb 16 12 05.3 -1.9
CUI eS Sb 16 12 23.7 +1.0
ACAL Aguas Claras 1.35 103 iP Pb 16 12 07.4 -2.0
PTEN Parque Tenorio 1.38 99⇑iP Pb 16 12 07.7 -2.3
AMAS Alto Masis 1.39 103 iP Pb 16 12 07.3 -0.8
JTS Las Juntas de 1.54 115 Pn Pn 16 12 08.4 -1.6
11nm,0.3s,baz=179,slow=24,SNR=13
JTS Sn Sb 16 12 34.5 +2.9
23nm,0.3s,baz=200,slow=21,SNR=6.8
JTS Las Juntas de 1.54 115 Pn 16 12 08.3 -1.8
JTS Las Juntas de 1.54 115 eP Pn 16 12 08.4 -1.6
ACON Acoyapa 1.56 49 Pb 16 12 12.4 -0.5
ACON Acoyapa 1.56 49 eP Pb 16 12 12.9 0.0
ARE1 Arenal 1 1.69 106 eP Pb 16 12 12.3 -2.9
CEDE Laguna Cedeo 1.70 105 eP Pb 16 12 13.6 -1.8
MATN Matagalpa 2.03 12 eP Pb 16 12 19.9 -1.1
ESTN Estel 2.15 0 Pn Pb 16 12 20.8 -2.3
ESPN Las Esperanzas 2.38 58 Pb 16 12 23.7 -3.3
ESPN Las Esperanzas 2.38 58 eP Pb 16 12 24.5 -2.4
HDC Heredia 2.41 113 Pb 16 12 25.3 -2.2
LCR2 La Lucha 2 2.62 117 eP Pn 16 12 25.2 +0.2
TGUH Tegucigalpa,Un 3.22 344 Pn Pb 16 12 35.8 -5.6
BCIP Isla Barro Col 6.67 105 Pn Pn 16 13 22.3 +1.7
CMIG Matias Romero 10.28 307 Pn Pn 16 14 11.4 +1.2
0.3nm,0.3s,baz=143,slow=11,SNR=4.1
060A Indiantown 16.98 19 Pn P 16 15 40.5 -1.2
KVTX Kingsville 19.76 328 P Pn 16 16 12.7 -1.1
NATX Nacogdoches 22.09 341 P P 16 16 39.3 +1.9
NATX IAmb IAmb 16 16 42.1
comp=Z,10nm,0.6s
Z50A Ashland 22.21 1 P P 16 16 41.4 +2.7
Z50A IAmb IAmb 16 16 52.2
comp=Z,9.4nm,1.2s
Y49A Blount Mountai 22.81 360 P P 16 16 46.2 +1.1
Y49A IAmb IAmb 16 17 34.0
comp=Z,9.5nm,1.2s
JSC Jenkinsville 23.70 11 P P 16 16 55.8 +1.9
BIRD Birdtown, Kers 24.21 12 P P 16 16 59.7 +1.1
BIRD IAmb IAmb 16 17 12.5
comp=Z,23nm,1.7s
TX32 Lajitas Array 24.41 321 P P 16 17 01.4 +0.8
TXAR Lajitas Array 24.41 321 P P 16 17 01.2 +0.5
comp=Z,0.9nm,0.7s,baz=132,slow=9.8,SNR=10
TXAR PcP PcP 16 20 40.9 +1.5
comp=Z,0.2nm,0.7s,baz=144,slow=4.5,SNR=4.0
TX31 Lajitas Ar. Si 24.41 321 P P 16 17 01.4 +0.7
WMOK Wichita Mounta 26.26 336 P P 16 17 16.2 -1.0
WMOK IAmb IAmb 16 17 21.5
comp=Z,6.7nm,1.1s
GLA Glamis 34.16 315 P P 16 18 28.3 +1.0
GLA IAmb IAmb 16 19 12.1
comp=Z,6.5nm,0.9s
LONY Lake Ozonia 35.06 15 P P 16 18 33.5 -1.4
PDAR Pinedale Array 37.60 332 P P 16 18 55.4 -1.5
comp=Z,0.2nm,0.6s,baz=134,slow=18,SNR=3.1
NVAR Mina Array Bea 39.53 319 P P 16 19 15.2 +2.1
comp=Z,0.9nm,0.9s,baz=138,slow=5.6,SNR=6.5
NVAR PcP PcP 16 21 23.1 +2.7
comp=Z,0.8nm,0.7s,baz=140,slow=5.1,SNR=8.0
YKA Yellowknife Ar 55.34 345 P P 16 21 12.2 -3.2
comp=Z,0.2nm,0.7s,baz=136,slow=7.5,SNR=4.9
ILAR Eielson Array 67.82 336 P P 16 22 38.7 -0.8
comp=Z,0.6nm,1.0s,baz=109,slow=7.0,SNR=3.2

YARS 23 16:17:42.1±0.0, **56.81N**×**129.42E**, **h2**km, **ML4.3**/13, **Southeastern Siberia**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CGD Chagda 2.05 18 iPg Pb 16 18 20.2 +0.1
0.1nm,0.1s
CGD eSg Sb 16 18 46.2 +0.2
2.1nm,0.3s
CGD eSg Sb 16 18 46.2 +0.2
1.3nm,0.3s
BMKR Bomnak 2.12 189 ePn Pn 16 18 18.7 +0.1
BMKR ePg Pb 16 18 21.0 -0.3
0.2nm,0.2s
BMKR eSg Sb 16 18 47.0 -1.1
0.6nm,0.2s
CLNS Chul'man 2.49 273 ePg Pb 16 18 27.5 0.0
0.1nm,0.3s
CLNS eSg Sb 16 18 59.7 +1.1
1.9nm,0.6s
CLNS eSg Sb 16 18 59.7 +1.1
1.0nm,0.5s
ALDR Aldan 2.81 312 ePn Pn 16 18 29.2 +1.1
ALDR ePg Pb 16 18 32.7 -0.3
0.1nm,0.2s
ALDR eSg Sg 16 19 10.2 -2.1
0.2nm,0.1s
ALDR eSg Sg 16 19 10.2 -2.1
0.4nm,0.2s
TNDR Tynda 3.12 240 ePn Pn 16 18 33.0 +0.7
TNDR ePg Pb 16 18 38.9 +0.7
0.0nm,0.2s
TNDR eSn Sn 16 19 10.4 +0.3
TNDR eSg Sg 16 19 20.1 -2.1
0.1nm,0.3s
TNDR eSg Sg 16 19 20.1 -2.1
0.2nm,0.3s
YKLR Yuktali 4.29 270 ePn Pn 16 18 49.7 +1.4
YKLR ePg Pb 16 18 59.5 +1.3
0.0nm,0.5s
YKLR eSg Sg 16 19 57.1 -2.5
0.1nm,0.5s
YKLR eSg Sg 16 19 57.1 -2.5
0.1nm,0.5s
BLSR Buluus 4.57 358 ePn Pn 16 18 52.7 +0.5
BLSR ePg Pb 16 19 04.2 +1.2
BLSR eSn Sn 16 19 45.8 0.0
BLSR eSg Sg 16 20 04.4 -4.5
TBGR Tabaga 5.03 1 ePn Pn 16 18 59.6 +1.1
TBGR ePg Pb 16 19 12.5 +1.7
0.1nm,0.3s
TBGR eSg Sg 16 20 19.4 -4.2
1.1nm,0.7s
TBGR eSg Sg 16 20 19.4 -4.2
1.2nm,0.7s
YAK Yakutsk 5.24 1 ePn Pn 16 19 02.5 +1.1
YAK ePg Pb 16 19 15.9 +1.5
YAK eSg Sg 16 20 25.9 -4.5
KHN Khani 5.29 275 ePn Pn 16 19 00.9 -1.2
KHN ePg Pb 16 19 16.3 +1.2
0.0nm,0.4s
KHN eSg Sb 16 20 24.4 +5.4
0.8nm,1.1s
TUP Tupik 5.87 250 ePn Pn 16 19 10.9 +0.8
TUP ePg Pb 16 19 29.8 +4.7
0.0nm,0.4s
TUP eSn Sn 16 20 16.7 -1.2
TUP eSg Sg 16 20 44.4 -6.1
0.1nm,1.0s
OLMR Olekminsk 5.89 311 ePn Pn 16 19 12.2 +2.0
OLMR ePg Pb 16 19 27.9 +2.5
0.0nm,0.6s
OLMR eSn Sn 16 20 18.2 -0.1
OLMR eSg Sg 16 20 45.8 -5.4
0.1nm,0.8s
OLMR eSg Sg 16 20 45.8 -5.4
0.2nm,0.8s

IDC **23** *16:37:07.9±0.7, 19.08N×145.81E, h129km±5km, mb3.6/16, mb1 3.8/19, mb1mx3.7/34, mbtmp4.0/19, Error ellipse: s-maj=16.5km s-min=9.3km az=95.0*
NEIC **23** *16:37:08.7±1.0, 19.07N±0.06×145.8E±0.1, h134km±5km, mb4.7/140, Error ellipse: s-maj=15.8km s-min=9.4km az=85.0*
BJI **23** *16:37:10.4±0.0, 19.25N×145.48E, h141km, mB4.9/14, mb4.5/18*
ISC 23 16:37:09.9±0.3, **19.09N**±0.04×**145.74E**±0.08, **h150**km, **n181**, σ1§**31**/186, **mb4.6**/82, **Mariana Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GUMO Guam 5.54 189 P Pn 16 38 30.0 -0.4
50nm,0.3s,baz=268,slow=1.9,SNR=20
GUMO S Sn 16 39 32.3 -1.1
5.1nm,0.3s,baz=342,slow=16,SNR=2.6
GUMO Guam 5.54 189 Pn Pn 16 38 30.6 +0.2
GUMO Sn Sn 16 39 32.2 -1.2
JCJ Chichijima 8.61 338 P Pn 16 39 09.5 -1.9
9.3nm,0.3s,baz=9.0,slow=23,SNR=15
JCJ S Sn 16 40 40.8 -6.3
14nm,0.3s,baz=277,slow=24,SNR=5.7
PATS Pohnpei 17.26 133 P Pn 16 41 01.7 -0.3
INU Inuyama 17.94 336 Pn Pn 16 41 11.1 +1.2
MJAR Matsushiro Arr 18.60 341 P Pn 16 41 16.0 -1.7
0.1nm,0.3s,baz=156,slow=9.9,SNR=10.0
MAJO Matsushiro 18.61 341 P Pn 16 41 16.4 -1.4
MAT Matsushiro 18.61 341 P Pn 16 41 17.4 -0.4
MJB9 Matsu-Tunnel 18.61 341 P Pn 16 41 16.6 -1.3
JNU Nakatsue 19.29 319 P P 16 41 22.5 -0.7
H11S3 WAKE ISLAND Hy 19.84 88 T T 17 02 33.8
baz=274,slow=74,SNR=11
H11S1 WAKE ISLAND Hy 19.85 88 T T 17 02 32.7
baz=274,slow=74,SNR=19
H11S2 WAKE ISLAND Hy 19.86 88 T T 17 02 35.1
baz=274,slow=74,SNR=11
H11N1 WAKE ISLAND Hy 19.96 85 T T 17 02 54.9
baz=267,slow=74,SNR=5.7
H11N2 WAKE ISLAND Hy 19.97 85 T T 17 02 46.9
baz=267,slow=74,SNR=5.9
H11N3 WAKE ISLAND Hy 19.98 85 T T 17 02 45.4
baz=267,slow=74,SNR=4.6
MANU Manus Island 21.06 175 P P 16 41 41.4 -0.9
MANU IAmb IAmb 16 42 13.8
comp=Z,78nm,1.4s
KSRS Korea Array 24.03 323 P P 16 42 11.6 +0.6
comp=Z,0.6nm,0.6s,baz=148,slow=9.2,SNR=8.3
KSRS pP pP 16 42 38.0 -1.9
comp=Z,1.9nm,0.8s,baz=148,slow=8.9,SNR=4.5
JKA Kamikawa-asahi 25.09 355 P P 16 42 21.7 +1.2
ASAJ Asahikawa 25.09 355 P P 16 42 21.7 +1.2
comp=Z,9.3nm,0.9s,baz=210,slow=13,SNR=5.5
FAKI Fak Fak 25.58 213 P P 16 42 27.4 +2.2
NJ2 Nanjing 27.39 303 eP P 16 42 42.5 +1.2
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
LUWI Luwuk 30.15 231 P P 16 43 04.4 -1.5
LUWI IAmb IAmb 16 43 21.4
comp=Z,26nm,0.8s
COEN Coen 32.94 185 P P 16 43 29.9 -0.4
COEN IAmb IAmb 16 44 27.2
comp=Z,17nm,1.3s
PEA0B Petropavlovsk- 35.20 13 P P 16 43 50.5 +1.1
PETK Petropavlovsk- 35.20 13 P P 16 43 50.2 +0.8
comp=Z,1.6nm,0.6s,baz=202,slow=9.2,SNR=7.6
SOEI Soe 35.63 218 P P 16 43 52.2 -1.5
SOEI IAmb IAmb 16 44 12.0
comp=Z,34nm,1.3s
KNRA Kununurra 38.38 207 P P 16 44 17.0 +0.4
KNRA IAmb IAmb 16 44 17.8
comp=Z,12nm,0.8s
CD2 Chengdu 39.61 296 eP P 16 44 26.5 -0.5
WB0 Warramunga Arr 40.19 197 P P 16 44 31.6 -0.1
WB0 IAmb IAmb 16 44 33.3
comp=Z,7.3nm,0.6s
WR0 Warramunga Arr 40.33 196 P P 16 44 32.7 -0.2
WR0 IAmb IAmb 16 44 54.6
comp=Z,12nm,1.1s
WRAB Tennant Creek 40.36 197 P P 16 44 33.1 0.0
WRAB IAmb IAmb 16 44 35.4
comp=Z,7.8nm,0.5s
WB2 Warramunga Arr 40.37 197 P P 16 44 33.3 +0.1
WRA Warramunga Arr 40.37 197 P P 16 44 32.7 -0.5
comp=Z,4.2nm,0.4s,baz=17,slow=8.6,SNR=39
FITZ Fitzroy Crossi 41.90 209 P P 16 44 45.8 +0.1
FITZ IAmb IAmb 16 44 47.8
comp=Z,22nm,1.8s
SONM Songino Array 42.86 321 P P 16 44 53.6 +0.2
comp=Z,0.5nm,0.7s,baz=117,slow=8.8,SNR=4.1
AS31 Alice Springs 44.04 196 P P 16 45 03.4 +0.5
ASAR Alice Springs 44.04 196 P P 16 45 03.0 +0.2
comp=Z,1.0nm,0.5s,baz=8.3,slow=7.9,SNR=52
ASAR ScP ScP 16 50 23.7 +0.1
comp=Z,0.4nm,0.7s,baz=6.3,slow=4.1,SNR=4.8
CMAR Chiang Mai Arr 44.21 277 P P 16 45 05.7 +1.4
comp=Z,0.3nm,0.8s,baz=74,slow=6.7,SNR=3.2
CMAR pP pP 16 45 34.4 -2.3
comp=Z,0.7nm,0.8s,baz=63,slow=7.1,SNR=4.4
YAK Yakutsk 44.34 349 P P 16 45 05.0 +0.3
YAK IAmb IAmb 16 45 06.1
comp=Z,19nm,0.6s
NOUC Port Laguerre 45.61 153 P P 16 45 14.6 -0.7
NOUC IAmb IAmb 16 46 57.3
comp=Z,29nm,1.2s
DZM Mont Dzumac 45.65 153 P P 16 45 15.2 -0.5
DZM IAmb IAmb 16 45 43.7
comp=Z,22nm,1.1s
BILL Bilibino 50.63 10 P P 16 45 54.0 +0.8
AKUT Akutan 50.83 35 P P 16 45 55.0 +0.2
STKA Stephens Creek 50.83 185 P P 16 45 54.5 -0.6
comp=Z,0.9nm,0.5s,baz=357,slow=11,SNR=6.9
STKA Stephens Creek 50.83 185 P P 16 45 54.8 -0.4
FORT Forrest 52.42 199 P P 16 46 07.2 +0.3
FORT IAmb IAmb 16 46 54.5
comp=Z,12nm,0.9s
TIXI Tiksi 53.49 353 P P 16 46 15.0 +0.8
WMQ Urumqi 54.08 311 eP P 16 46 21.6 +2.4
WMQ pmax pmax
comp=Z,9.0nm,0.7s
WMQ pmax pmax
comp=Z,120nm,4.7s
MORW Morawa 55.81 212 P P 16 46 32.1 +0.5
MORW IAmb IAmb 16 48 05.5
comp=Z,14nm,1.2s
ANM Nome 55.82 23 P P 16 46 32.3 +1.1
ANM IAmb IAmb 16 47 58.5
comp=Z,28nm,1.9s
ZALV Zalesovo Beam 57.73 322 P P 16 46 45.5 +0.6
comp=Z,0.9nm,0.7s,baz=101,slow=6.0,SNR=4.0
MKAR Makanchi Array 58.22 314 P P 16 46 50.1 +1.7
comp=Z,0.4nm,0.6s,baz=92,slow=8.3,SNR=7.7
MKAR pP pP 16 47 18.7 -3.9
comp=Z,0.4nm,0.6s,baz=92,slow=8.7,SNR=2.9
MAKZ Makanchi 58.44 314 P P 16 46 50.4 +0.5
NWAO Narrogin (SRO) 58.46 208 P P 16 46 50.1 0.0
SKT Skwentna 60.58 29 P P 16 47 04.0 -0.3
KURK Kurchatov 61.01 318 P P 16 47 07.4 0.0
KURK IAmb IAmb 16 47 20.0
comp=Z,8.6nm,1.6s
SEW Seward 61.12 31 P P 16 47 07.7 -0.2
RC01 Rabbit Creek A 61.20 30 P P 16 47 09.7 +1.2
KTH Kantishna Hill 61.27 27 P P 16 47 09.6 +0.6
BPAW Bear Paw Mtn. 61.39 27 P P 16 47 10.4 +0.6
BPAW IAmb IAmb 16 47 11.2
comp=Z,6.6nm,0.8s
TRF Thorofare Moun 61.52 27 P P 16 47 10.4 -0.4
PMR Palmer 61.59 30 P P 16 47 10.8 -0.3
GHO Glory Hole Cre 61.73 29 P P 16 47 11.9 -0.2
MLY Manley 61.75 26 P P 16 47 12.5 +0.3
MLY IAmb IAmb 16 48 59.4
comp=Z,22nm,1.9s
KNK Knik Glacier 61.87 30 P P 16 47 13.1 +0.1
SML Sawmill 62.01 29 P P 16 47 14.4 +0.4
RND Reindeer 62.13 28 P P 16 47 14.8 0.0
MCK McKinley 62.17 27 P P 16 47 15.5 +0.5
SCM Sheep Creek Mo 62.48 29 P P 16 47 17.7 +0.5
HIN Hinchinbrook I 62.62 31 P P 16 47 18.6 +0.5
KSH Kashi 62.67 305 P P 16 47 26.1 +7.2
KSH pP pwP 16 47 57.6 -0.2
KSH sP sP 16 48 12.8 +3.4
KSH PP PP 16 49 44.3 +5.8
KSH PcS PcS 16 52 01.9 +1.9
KSH S S 16 55 42.4 +6.7
KSH sS sS 16 56 38.8 +3.4
KSH pmax pmax
comp=Z,27nm,1.9s
KSH pmax pmax
comp=Z,280nm,6.0s
KSH LR LR
comp=Z,120nm,5.2s
KSH LR LR
comp=Z,110nm,3.7s
KSH LR LR
comp=Z,94nm,6.8s
FID Port Fidalgo 62.69 31 P P 16 47 18.7 +0.3
WRH Wood River Hil 62.70 26 P P 16 47 18.3 -0.2
DHY Denali Highway 62.71 28 P P 16 47 18.7 0.0
DHY IAmb IAmb 16 48 26.3
comp=Z,32nm,1.6s
CCB Clear Creek Bu 62.87 26 P P 16 47 18.7 -0.8
CCB IAmb IAmb 16 48 33.9
comp=Z,24nm,1.9s
TOLK Toolik Lake Re 63.22 22 P P 16 47 22.9 +1.0
TOLK IAmb IAmb 16 47 23.5
comp=Z,5.6nm,0.5s
IL31 63.28 26 P P 16 47 21.3 -0.9
IL31 IAmb IAmb 16 47 53.3
comp=Z,26nm,1.9s
ILAR Eielson Array 63.28 26 P P 16 47 21.2 -1.0
comp=Z,1.7nm,0.5s,baz=251,slow=6.1,SNR=33
ILAR pP pP 16 47 54.5 -2.6
comp=Z,0.7nm,0.8s,baz=276,slow=4.7,SNR=3.0
PAX Paxson 63.54 28 P P 16 47 24.6 +0.4
PAX IAmb IAmb 16 47 55.9
comp=Z,34nm,1.9s
RIDG Independent Ri 63.95 28 P P 16 47 27.0 +0.2
VRDI Verde Repeater 64.22 30 P P 16 47 29.2 +0.4
DOT Dot Lake 64.28 28 P P 16 47 29.1 +0.1
DOT IAmb IAmb 16 47 41.8
comp=Z,17nm,1.4s
CRQM Cirque 64.31 31 P P 16 47 30.1 +0.8
FYU Fort Yukon 64.32 24 P P 16 47 30.0 +1.0
FYU IAmb IAmb 16 49 25.7
comp=Z,27nm,1.6s
SCRK Sand Creek 64.37 27 P P 16 47 29.9 +0.3
SCRK IAmb IAmb 16 47 43.3
comp=Z,35nm,2.0s
MCARA McCarthy VSAT 64.44 30 P P 16 47 30.6 +0.6
TGL Tana Glacier 64.46 31 P P 16 47 30.8 +0.5
BKZ Black Stump Fm 64.70 154 P P 16 47 31.4 -0.6
BALM Baldy 64.73 31 P P 16 47 32.5 +0.5
BALM IAmb IAmb 16 48 31.7
comp=Z,24nm,1.4s
BARN Barnard Glacie 65.06 31 P P 16 47 35.0 +0.7
BARN IAmb IAmb 16 49 45.7
comp=Z,23nm,1.4s
CTGM Chitina Glacie 65.21 31 P P 16 47 35.8 +0.7
EGAK Eagle 65.70 27 P P 16 47 39.3 +1.3
EGAK IAmb IAmb 16 49 11.9
comp=Z,26nm,1.9s
DAWY Dawson 66.39 28 P P 16 47 43.2 +0.8
DAWY IAmb IAmb 16 49 51.1
comp=Z,24nm,1.9s
HYT Haines Junctio 67.07 31 P P 16 47 48.6 +1.6
HYT IAmb IAmb 16 47 51.7
comp=Z,15nm,1.3s
INK Inuvik 69.00 23 P P 16 47 59.0 +0.3
DLBC Dease Lake 70.94 34 P P 16 48 12.3 +1.4
DLBC IAmb IAmb 16 50 00.9
comp=Z,14nm,1.1s
C36M Paulatuk 72.37 22 P P 16 48 19.1 +0.1
C36M IAmb IAmb 16 48 20.1
comp=Z,11nm,0.9s
NLWA Neilton Lookou 76.46 44 P P 16 48 44.7 +1.6
GEYT Alibeck 76.70 306 P P 16 48 45.1 +0.4
comp=Z,0.4nm,0.4s,baz=41,slow=4.6,SNR=2.6
GEYT pP pP 16 49 16.5 -4.1
comp=Z,0.4nm,0.4s,baz=232,slow=47,SNR=1.7
LLLB Lillooet 76.96 41 P P 16 48 47.2 +1.3
LLLB IAmb IAmb 16 49 02.5
comp=Z,18nm,1.6s
F03A Seaside 77.01 46 P P 16 48 48.1 +1.9
YKA Yellowknife Ar 77.62 28 P P 16 48 49.5 +0.2
comp=Z,7.6nm,0.7s,baz=290,slow=5.5,SNR=89
YKA pP pP 16 49 21.6 -3.7
comp=Z,0.8nm,0.7s,baz=291,slow=5.4,SNR=2.9
D05A Enumclaw 77.75 44 P P 16 48 51.1 +0.8
KRMB Red Mountain 77.86 50 P P 16 48 52.3 +1.1
KRMB IAmb IAmb 16 48 53.3
comp=Z,20nm,1.4s
KHMM Horse Mountain 78.15 51 P P 16 48 54.4 +1.5
KHMM IAmb IAmb 16 49 45.8
comp=Z,16nm,1.4s
HUMO Hull Mountain 78.26 49 P P 16 48 55.3 +2.0
HUMO IAmb IAmb 16 48 56.4
comp=Z,23nm,1.8s
KCPM Cahto Peak 78.57 52 P P 16 48 56.8 +1.6
LTY Liberty 78.60 44 P P 16 48 55.6 +0.5
YBH Yreka Blue Hor 78.67 50 P P 16 48 56.9 +1.2
RES Resolute Bay 79.03 14 P P 16 48 57.5 +0.7
B08A Colville Reser 79.16 43 P P 16 48 58.7 +0.6
G06A Carlson Farm, 79.17 46 P P 16 48 59.0 +0.8
G06A IAmb IAmb 16 50 57.6
comp=Z,23nm,1.9s
E07A Sunnyside 79.33 44 P P 16 48 60.0 +0.9
E07A IAmb IAmb 16 49 00.9
comp=Z,8.8nm,0.8s
PINE Pine Mountain 79.36 47 P P 16 49 00.6 +1.1
PINE IAmb IAmb 16 49 01.6
comp=Z,16nm,0.8s
F07A Phinny Hill Vi 79.47 45 P P 16 49 01.0 +1.2
HAWA Hanford 79.59 45 P P 16 49 01.4 +1.0
HAWA IAmb IAmb 16 49 02.1
comp=Z,11nm,1.1s
D08A Wollman Farm, 79.80 44 P P 16 49 02.2 +0.7
C09A Chrisman Ranch 80.00 43 P P 16 49 03.1 +0.5
C09A IAmb IAmb 16 49 04.1
comp=Z,5.7nm,0.7s
ORV Oroville 80.15 52 P P 16 49 03.7 +0.1
MOD Modoc Plateau 80.35 49 P P 16 49 05.3 +0.5
E09A Wood Farm, Sta 80.47 44 P P 16 49 06.1 +0.9
E09A IAmb IAmb 16 49 06.8
comp=Z,9.9nm,0.7s
NEW Newport 80.60 42 P P 16 49 06.4 +0.6
NEW IAmb IAmb 16 49 07.3
comp=Z,7.2nm,0.8s
AFDM Forest Hills D 80.72 52 P P 16 49 07.3 +0.6
BEKR Beckworth 80.91 51 P P 16 49 08.3 +0.5
BEKR IAmb IAmb 16 49 09.1
comp=Z,6.9nm,0.7s
J08A Circle Bar Ran 81.21 47 P P 16 49 10.1 +0.8
J08A IAmb IAmb 16 49 10.9
comp=Z,6.3nm,0.7s
F10A Beach Ranch, E 81.24 44 P P 16 49 10.2 +0.9
WVOR Wild Horse Val 81.38 48 P P 16 49 10.5 +0.3
CMB Columbia Colle 81.43 53 P P 16 49 10.8 +0.3
BMO Blue Mountains 81.54 46 P P 16 49 11.4 +0.4
PAHR Pah Rah Range 81.67 51 P P 16 49 12.2 +0.4
PNTR Pine Nut 81.70 52 P P 16 49 12.8 +0.7
PNTR IAmb IAmb 16 49 14.5
comp=Z,9.8nm,0.6s
YERR Yerington 82.00 52 P P 16 49 14.1 +0.5
YERR IAmb IAmb 16 49 15.2
comp=Z,7.4nm,0.7s
WAKR Walker 82.00 52 P P 16 49 14.5 +0.9
ARCES ARCESS Array B 82.13 342 P P 16 49 13.4 0.0
comp=Z,4.2nm,0.6s,baz=61,slow=9.3,SNR=14
RYN Ryan 82.64 52 P P 16 49 17.7 +0.8
KVN Kaiserville 82.82 51 P P 16 49 18.2 +0.4
KVN IAmb IAmb 16 49 19.4
comp=Z,6.8nm,0.8s
NVAR Mina Array Bea 82.87 52 P P 16 49 19.1 +0.9
comp=Z,7.3nm,0.7s,baz=265,slow=6.0,SNR=66
NV11 Mina Array Sit 82.98 52 P P 16 49 19.2 +0.6

NV11 IAmb IAmb 16 49 20.2
comp=Z,5.8nm,0.8s
MFID Camas Ranch 83.02 47 P P 16 49 19.4 +0.7
MFID IAmb IAmb 16 49 20.4
comp=Z,8.0nm,0.9s
ELK Elko 84.33 49 P P 16 49 26.1 +0.4
ELK IAmb IAmb 16 49 27.2
comp=Z,5.8nm,0.8s
LRM Limekiln Ridge 84.43 43 P P 16 49 26.1 +0.1
MCMT McKenzie Canyo 84.53 44 P P 16 49 27.6 +1.1
TPNV Topopah Spring 84.89 53 P P 16 49 28.9 +0.5
TPNV IAmb IAmb 16 49 29.8
comp=Z,5.7nm,0.7s
R11A Troy Canyon, C 84.91 51 P P 16 49 29.1 +0.7
EGMT Eagleton 85.30 41 P P 16 49 30.6 +0.5
EGMT IAmb IAmb 16 49 31.4
comp=Z,6.9nm,1.1s
QLMT Earthquake Lak 85.47 44 P P 16 49 32.5 +1.3
YHL Hebgen Lake 85.62 44 P P 16 49 33.2 +1.1
YHB Horse Butte 85.65 44 P P 16 49 33.4 +1.3
BGU Big Grassy Mou 85.84 48 P P 16 49 33.4 +0.4
YMR Madison River 85.84 44 P P 16 49 34.7 +1.7
YHH Holmes Hill 85.87 44 P P 16 49 34.5 +1.3
SHPR Sheep Range 85.87 53 P P 16 49 34.0 +0.7
SPUT South Promonto 86.10 48 P P 16 49 34.5 +0.2
PSUT Pine Spring 86.11 51 P P 16 49 35.1 +0.6
FXWY Fox Creek 86.19 45 P P 16 49 35.7 +0.9
FLWY Flagg Ranch 86.24 45 P P 16 49 36.5 +1.5
FLWY IAmb IAmb 16 49 37.5
comp=Z,9.9nm,0.8s
GCMT Greycliff 86.24 43 P P 16 49 35.9 +1.0
DUG Dugway, Tooele 86.26 49 P P 16 49 35.5 +0.4
DUG IAmb IAmb 16 49 36.6
comp=Z,5.2nm,0.7s
FINES FINESS Array B 86.55 335 P P 16 49 35.0 -0.8
comp=Z,1.5nm,0.6s,baz=69,slow=3.7,SNR=15
FFC Flin Flon 86.74 33 P P 16 49 37.4 +0.5
FFC IAmb IAmb 16 49 38.4
comp=Z,6.3nm,0.9s
RLMT Red Lodge 86.77 43 P P 16 49 37.3 -0.2
RLMT PcP PcP 16 49 39.2 -0.5
RLMT IAmb IAmb 16 49 39.9
comp=Z,4.7nm,0.6s
TCUT Toone Canyon 86.90 48 P P 16 49 38.6 +0.3
SZCU Shurtz Canyon 87.02 51 P P 16 49 39.7 +0.8
JLU Jordanelle 87.07 48 P P 16 49 39.9 +0.7
LCMT Little Creek M 87.12 52 P P 16 49 40.0 +0.7
W13A Hualapai Mount 87.34 54 P P 16 49 40.9 +0.4
KNB Kanab 87.43 52 P P 16 49 41.9 +1.0
PDAR Pinedale Array 87.52 45 P P 16 49 41.4 +0.1
comp=Z,0.6nm,0.6s,baz=209,slow=1.8,SNR=8.7
TMUT Trail Mountain 87.74 49 P P 16 49 43.2 +0.7
Q16A Castle Valley 87.92 49 P P 16 49 44.0 +0.9
P17A Butcher Ranch, 88.01 49 P P 16 49 43.6 0.0
U15A North Rim 88.05 52 P P 16 49 44.5 +0.5
U15A IAmb IAmb 16 49 45.4
comp=Z,3.8nm,0.7s
SRU San Rafael Swe 88.31 49 P P 16 49 45.2 +0.3
Y14A Wickenburg 88.44 55 P P 16 49 46.1 +0.5
Y14A IAmb IAmb 16 49 47.1
comp=Z,5.0nm,0.6s
WUAZ Wupatki 89.08 53 P P 16 49 49.6 +1.0
WUAZ IAmb IAmb 16 49 50.8
comp=Z,7.4nm,0.8s
S22A 4UR Ranch, Cre 91.51 49 P P 16 50 00.9 +0.8
ANMO Albuquerque 92.99 52 P P 16 50 07.6 +0.7
ANMO IAmb IAmb 16 50 08.6
comp=Z,3.6nm,1.2s
TXAR Lajitas Array 97.58 56 P Pdif 16 50 28.1 +0.4
comp=Z,0.3nm,0.8s,baz=246,slow=4.5,SNR=2.7
VYHS Vyhne 97.76 328 ePDIFF Pdif 16 50 26.9 -1.1
LPAZ La Paz 147.64 90 PKPbc PKiKP 16 56 39.0 -1.3
comp=Z,0.7nm,0.4s,baz=264,slow=5.7,SNR=3.4

IDC 23 16:54:47.2±0.9, 18.°97S×176.°00W, h0km, mb4.1/10, mb1 4.4/11, mb1mx4.2/35, mbtmp4.1/11, ML3.5/1, MS4.1/23, Ms1 4.1/23, ms1mx4.1/25, Error ellipse: s-maj=42.4km s-min=18.7km az=152.0
NEIC 23 16:54:47.8±2.4, 18.°92S±0.°09×175.°85W±0.°08, h10km±1km, mb4.7/9, Error ellipse: s-maj=15.0km s-min=13.3km az=359.0
GCMT 23 16:54:52.8±0.2, 19.°08S±0.°01×175.°81W±0.°01, h12km, MW5.0/104, Moment Tensor Solution. s46,c58; s104,c160; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-0.13±.09; Mθθ-0.90±.09; Mφφ1.03±.08; Mrθ0.23±.24; Mrφ-3.18±.06; Mθφ0.82±.22; Best double couple: M0 3.43300×10^{16} NP1:φs279.00000°, δ76.00000°, λ-178.00000°. NP2:φs188.00000°, δ88.00000°, λ-14.00000°. Principal axes: T 3.4650, Plg8.0000°, Azm234.0000°; N -0.0650, Plg75.0000°, Azm359.0000°; P -3.4020, Plg12.0000°, Azm143.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 23 16:54:48.0±0.5, 19.°0S±0.°1×175.°84W±0.°08, h10km, n60, σ1.°59/39, mb4.2/13, MS4.1/26, 1C, Tonga Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
NIUE Niue 5.59 91 Pn Pn 16 56 09.8 -1.5
MSVF Nonsavu 5.94 282 Pn Pn 16 56 16.2 0.0
AFI Afiamalu 6.42 38 Pn Pn 16 56 19.9 -2.9
3.1nm,0.3s,baz=309,slow=20,SNR=5.5
AFI Afiamalu 6.42 38 Pn 16 56 19.2 -3.6
DZM Mont Dzumac 16.86 257 eP P 16 58 47.8 +1.3
61nm,1.2s
DZM eLQ LQ 17 02 02.7
3μm,30.5s
DZM eLR LR 17 02 45.7
comp=Z,4μm,24.9s
DZM Mont Dzumac 16.86 257 Pn Pn 16 58 42.8 -1.6
0.2nm,0.3s,baz=107,slow=20,SNR=2.2
DZM LR LR 17 04 06.6
comp=Z,2μm,20.6s,baz=91,slow=33
DZM Mont Dzumac 16.86 257 IAmb IAmb 16 59 32.2
comp=Z,56nm,1.5s
URZ Urewera 20.11 196 P P 16 59 19.0 -3.0
comp=Z,15nm,0.9s,baz=22,slow=9.7,SNR=4.2
URZ LR LR 17 06 05.6
comp=Z,1μm,20.8s,baz=24,slow=34
TBI Tubuai 24.95 105 eLQ LQ 17 05 10.2
comp=Z,2μm,28.2s
TBI eLR LR 17 06 10.0
comp=Z,312nm,29.0s
PAE Paea 24.96 91 eT T 17 25 43.8
comp=Z,1.1nm,0.2s
PPT2 Papeete2 24.97 91 eLQ LQ 17 05 10.4
comp=Z,3μm,25.8s
PPT2 eLR LR 17 06 20.9
comp=Z,1μm,25.0s,baz=263
PPT2 Papeete2 24.97 91 eT T 17 25 44.4
comp=Z,1.8nm,0.4s
PPT Papeete 24.97 91 LR LR 17 07 13.2
comp=Z,476nm,21.4s,baz=257,slow=30
HNR Honiara 25.31 289 LR LR 17 08 33.3
comp=Z,164nm,18.7s,baz=128,slow=33
RPZ Rata Peaks 26.95 201 LR LR 17 10 35.5
comp=Z,902nm,19.6s,baz=24,slow=35
KRVT Keravat (AS076 34.61 291 LR LR 17 14 24.4
comp=Z,243nm,19.6s,baz=128,slow=34
TAOE Nuku Hiva Isla 36.02 79 eLR LR 17 11 33.7
comp=Z,666nm,24.2s
TAOE Nuku Hiva Isla 36.02 79 eT T 17 39 46.7
comp=Z,33nm,0.3s
STKA Stephens Creek 40.25 243 P P 17 02 25.4 +0.1
comp=Z,6.2nm,0.8s,baz=90,slow=11,SNR=7.9
STKA LR LR 17 17 25.6
comp=Z,669nm,18.1s,baz=63,slow=34
STKA Stephens Creek 40.25 243 IAmb IAmb 17 02 32.4
comp=Z,2.7nm,1.0s
BBOO Buckleboo 45.02 242 P P 17 03 04.0 0.0
WB0 Warramunga Arr 46.80 260 P P 17 03 18.2 -0.1
WB2 Warramunga Arr 46.82 260 P P 17 03 17.7 -0.7
WB2 IAmb IAmb 17 03 32.3
comp=Z,15nm,1.4s
WRA Warramunga Arr 46.83 260 P P 17 03 17.9 -0.7
comp=Z,2.2nm,1.0s,baz=93,slow=7.3,SNR=6.7
AS31 Alice Springs 46.84 255 P P 17 03 17.8 -0.8
AS31 IAmb IAmb 17 03 23.5
comp=Z,2.3nm,0.8s
ASAR Alice Springs 46.84 255 P P 17 03 17.9 -0.7
comp=Z,7.8nm,0.9s,baz=91,slow=7.8,SNR=64
GUMO Guam 50.49 307 LR LR 17 21 52.6
comp=Z,99nm,19.7s,baz=130,slow=32
FORT Forrest 51.74 245 P P 17 03 54.5 -1.3
MJAR Matsushiro Arr 70.28 322 P P 17 06 01.2 -0.5
comp=Z,1.2nm,0.9s,baz=121,slow=6.6,SNR=3.7
MJAR LR LR 17 37 13.8
comp=Z,64nm,18.0s,baz=125,slow=36
QSPA South Pole Qui 71.02 180 P P 17 06 06.8 +0.8
QSPA IAmb IAmb 17 06 22.5
comp=Z,15nm,1.2s
PETK Petropavlovsk- 75.41 344 LR LR 17 39 34.6
comp=Z,69nm,18.1s,baz=220,slow=36
KSRS Korea Array 77.17 317 P P 17 06 42.6 +0.5
comp=Z,0.5nm,0.7s,baz=126,slow=6.3,SNR=3.5
KSRS LR LR 17 34 43.3
comp=Z,76nm,21.2s,baz=129,slow=31
NVAR Mina Array Bea 78.58 43 P P 17 06 50.3 +0.1
comp=Z,1.0nm,0.8s,baz=229,slow=7.9,SNR=8.8
NVAR LR LR 17 33 36.2
comp=Z,371nm,21.5s,baz=212,slow=30
USRK Ussuriysk Ar. 78.93 325 LR LR 17 35 43.1
comp=Z,96nm,21.9s,baz=111,slow=31
MAW Mawson 83.61 199 LR LR 17 44 48.4
comp=Z,171nm,18.1s,baz=68,slow=36
USHA Ushuaia 84.22 146 LR LR 17 36 09.0
comp=Z,64nm,21.5s,baz=229,slow=29
TXAR Lajitas Array 84.56 57 P P 17 07 23.8 +1.8
comp=Z,4.0nm,1.1s,baz=212,slow=4.4,SNR=19
TXAR LR LR 17 36 52.2
comp=Z,73nm,21.8s,baz=0.0,slow=30
ILAR Eielson Array 86.46 12 P P 17 07 30.5 0.0
comp=Z,2.1nm,1.1s,baz=204,slow=5.5,SNR=5.1
ILAR LR LR 17 42 15.1
comp=Z,51nm,18.2s,baz=178,slow=33
PDAR Pinedale Array 86.52 42 P P 17 07 32.8 +1.3
comp=Z,0.2nm,0.6s,baz=210,slow=6.3,SNR=3.2
PDAR LR LR 17 40 39.2
comp=Z,242nm,19.1s,baz=234,slow=32
SYO Syowa Base 88.58 192⇑eP P 17 07 39.0 -1.8
PLCA Paso Flores 88.78 133 LR LR 17 38 47.2
comp=Z,97nm,21.1s,baz=278,slow=30
CMAR Chiang Mai Arr 91.56 289 LR LR 17 48 08.1
comp=Z,33nm,20.2s,baz=205,slow=35
YKA Yellowknife Ar 94.35 24 P P 17 08 09.2 +1.8
comp=Z,0.3nm,0.8s,baz=242,slow=4.4,SNR=3.3
YKA LR LR 17 43 30.5
comp=Z,126nm,20.7s,baz=0.0,slow=31
SONM Songino Array 96.00 319 LR LR 17 45 41.9
comp=Z,72nm,22.0s,baz=98,slow=32
ULM Lac du Bonnet 98.21 40 LR LR 17 45 38.0
comp=Z,329nm,22.0s,baz=268,slow=31
KSH Kashi 115.71 305 PKP PKiKP 17 13 35.4 +4.3
KSH PP PP 17 14 42.0 +7.8
KSH PKS PKSdf 17 17 09.3 +1.4
KSH SKS SKSdf 17 20 42.4 -1.1
CLL Collm 147.05 350 ePKiKP PKiKP 17 14 34.0 +0.5
CLL Lm MLR 18 22 00.0
comp=Z,200nm,18.2s
BRG Berggiesshubel 147.30 349 ePKP PKiKP 17 14 34.9 +0.9
comp=Z,8.1nm,1.2s
KRLC Kraliky 147.43 345 ePKPAB PKiKP 17 14 34.5 +0.1
KRLC epPKP sPKPab 17 14 39.8 +2.3
KHC Kasperske Hory 149.04 348 ePKPAB PKPab 17 14 40.2 -0.3
GERES GERESS Array B 149.28 348 PKPbc PKiKP 17 14 38.0 -0.3
comp=Z,0.3nm,0.3s,baz=20,slow=4.3,SNR=4.7
CONA Conrad Observa 149.65 344 pPKPab pPKPab 17 14 46.7 +1.0
comp=Z,5.9nm,1.2s
MOA Molln 150.11 346 pPKPab pPKPab 17 14 46.8 -0.6
comp=Z,6.4nm,1.4s
SOKA Soboth 151.02 344 epPKPab pPKPab 17 14 51.0 -0.3
comp=Z,4.6nm,1.3s
KBA Koelnbreinsper 151.04 347 pPKPab PKPab 17 14 49.1 +0.1
comp=Z,7.0nm,1.2s
WTTA Wattenberg 151.19 349 pPKPab PKPab 17 14 49.5 -0.1
comp=Z,5.0nm,0.8s
MOTA Moosalm 151.20 350 PKPab PKPab 17 14 47.4 -2.2
comp=Z,11nm,1.6s
ABTA Abfaltersbach 151.53 348 ePKPab PKPab 17 14 49.2 -1.7
comp=Z,4.5nm,1.0s
FETA Feichten 151.58 351 PKPab PKPab 17 14 50.2 -1.0
comp=Z,9.0nm,1.1s
TORD Torodi Ar. Bea 173.68 158 PKPab PKPab 17 16 28.6 +0.5
comp=Z,0.2nm,0.4s,baz=201,slow=3.7,SNR=2.4

GCMT 23 17:00:06.0±0.3, 18.°95S±0.°02×175.°88W±0.°02, h12km, MW4.8/82, Moment Tensor Solution. s12,c15; s82,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-0.26±.09; Mθθ-1.06±.09; Mφφ1.31±.07; Mrθ0.90±.27; Mrφ-1.68±.06; Mθφ0.81±.20; Best double couple: M0 2.38100×10^{16} NP1:φs291.00000°, δ65.00000°, λ-166.00000°. NP2: φs195.00000°, δ77.00000°, λ-26.00000°. Principal axes: T 2.2250, Plg8.0000°, Azm245.0000°; N 0.3080, Plg61.0000°, Azm350.0000°; P -2.5380, Plg27.0000°, Azm151.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function
IDC 23 17:00:45.0±83.0, 21.°13S×176.°61E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/40, mbtmp3.7/3, MS3.8/1, Ms1 3.8/1, ms1mx3.1/25 Error ellipse: s-maj=1457.0km s-min=143.3km az=82.0, South of Fiji Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
RAO Raoul Island 9.48 150 LR LR 17 05 28.0
comp=Z,673nm,21.5s,baz=356,slow=30
TBI Tubuai 31.44 100 eLQ LQ 17 10 25.5
1μm,28.5s
PAE Paea 32.04 90 eT T 17 31 11.3
1.4nm,0.4s
PPT2 Papeete2 32.06 90 eLQ LQ 17 10 21.6
1μm,29.0s
PPT2 eLR LR 17 11 32.2
comp=Z,845nm,26.0s
PPT2 Papeete2 32.06 90 eT T 17 31 13.6
2.6nm,0.4s
STKA Stephens Creek 32.98 244 P P 17 07 21.3 -0.5
1.4nm,0.9s,baz=66,slow=8.8,SNR=3.1
ASAR Alice Springs 39.46 258 P P 17 08 17.6 +0.2
1.6nm,0.8s,baz=93,slow=7.8,SNR=13
WRA Warramunga Arr 39.52 264 P P 17 08 17.7 -0.1
0.6nm,1.1s,baz=98,slow=9.4,SNR=1.4
TAOE Nuku Hiva Isla 43.37 80 eLR LR 17 16 44.8
comp=Z,371nm,25.1s

IDC 23 17:01:32.3±60.0, 21.°81S×172.°68E, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.8/39, mbtmp4.2/3, MS3.9/1, Ms1 3.9/1, ms1mx3.1/22, Error ellipse: s-maj=1023.0km s-min=125.4km az=81.0, Southeast of Loyalty Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
STKA Stephens Creek 29.40 243 P P 17 07 37.1 -0.4
5.3nm,0.9s,baz=83,slow=9.0,SNR=7.0
ASAR Alice Springs 35.74 259 P P 17 08 31.5 -1.6
6.7nm,0.9s,baz=86,slow=8.4,SNR=17
WRA Warramunga Arr 35.81 266 P P 17 08 35.4 +1.7
0.9nm,0.8s,baz=98,slow=9.4,SNR=8.3
VNDA Vanda 56.01 183 LR LR 17 31 25.5
comp=Z,105nm,20.3s,baz=1.5,slow=32

BJI 23 17:04:49.6±0.0, 27.°18N×92.°67E, h6km, mB4.5/24, mb4.5/30, ML4.3/6, Ms3.9/19, Ms7 3.8/7
NEIC 23 17:04:52.9±1.9, 27.°01N±0.°05×92.°55E±0.°08, h54km±7km, mb4.4/35, Error ellipse: s-maj=11.1km s-min=7.7km az=76.0
IDC 23 17:04:52.9±0.7, 27.°03N×92.°58E, h52km±6km, mb3.9/30, mb1 4.0/31, mb1mx3.9/59, mbtmp4.2/31, MS3.0/2, Ms1 3.1/2, ms1mx2.7/31, Error ellipse: s-maj=12.1km s-min=8.2km az=77.0
DMN 23 17:04:53.3±0.5, 27.°18N×92.°43E, h10km, Ml5.4/4, Error ellipse: s-maj=33.4km s-min=9.4km az=8.0
NDI 23 17:04:53.1±2.3, 26.°93N×92.°59E, h76km±16km, ML4.5, mb4.4(NEIC)
ISC 23 17:04:52.1±0.5, 27.°04N±0.°03×92.°47E±0.°03, h48km±5km, h48km:pP-P, n118, σ1.°64/136, mb4.3/43, 7C-4D, Eastern Xizang-India border region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
TEZP TEZPUR 0.51 145 eP Pn 17 05 05.2 +1.8
TEZP eS Sn 17 05 13.8 +2.4
TEZP IAML 17 05 14.7
comp=E,65μm,0.1s
SHL Shillong 1.56 200 eP Pn 17 05 19.5 +2.0
SHL eS Sn 17 05 37.8 +1.2
SHL IAML 17 05 39.1
comp=N,11μm,0.2s
SHL IAML 17 05 39.3
comp=E,9μm,0.2s
SHL Shillong 1.56 200 Pn 17 05 19.6 +2.1
SHL Sn Sn 17 05 35.9 -0.7
JORH JORHAT 1.62 100 eP Pn 17 05 18.3 +0.2
JORH eS Sn 17 05 36.0 -1.8
JORH IAML 17 05 42.2
comp=E,10μm,0.3s
JORH IAML 17 06 22.7
comp=Z,2μm,0.2s
KOHI KOHIMA 1.97 131 eP Pn 17 05 24.8 +1.7
KOHI eS Sn 17 05 47.9 +1.2
KOHI IAML 17 05 49.4
comp=E,4μm,0.3s
KOHI IAML 17 05 52.9
comp=N,2μm,0.3s
LSA Lhasa 2.90 337 Pn Pn 17 05 39.4 +3.2
LSA Sn Sn 17 06 13.9 +3.9
LSA Sg 17 06 20.1
LSA smax smax
comp=N,2μm,1.1s
LSA smax smax
comp=E,2μm,0.8s
LSA Lhasa 2.90 337 Pn Pn 17 05 39.3 +3.2
LKP Lekhapani 3.02 84 eP Pn 17 05 37.9 +0.5
LKP eS Sn 17 06 10.4 -1.9
LKP IAML 17 06 11.4
comp=N,5μm,0.3s
LKP IAML 17 06 13.6
comp=E,4μm,0.3s
TAPN Taplejung 4.25 275 ePn Pn 17 05 56.1 +1.5
BRDH Bariadhala 4.41 190 P Pn 17 05 58.5 +2.1
comp=E,68nm,0.3s,baz=262,slow=20,SNR=8.8
BRDH S Sn 17 06 47.6 +1.1
comp=E,660nm,0.3s,baz=164,slow=21,SNR=70
BRDH LR LR 17 08 46.9
comp=E,135nm,19.6s,baz=124,slow=53
ODAN Odare 4.54 269 ePn Pn 17 05 59.6 +1.1
RAMN Ramite 5.24 270 ePn Pn 17 06 09.5 +1.4
JIRN Jiri 5.62 278 ePn Pn 17 06 14.8 +1.3
GUN Gumba 5.92 280 ePn Pn 17 06 18.6 +1.0
PKI Pulchoki 6.31 276 ePn Pn 17 06 23.3 +0.5
PKI eSn Sn 17 07 30.8 -2.9
comp=E,998nm,0.6s
PKIN Phulchoki 6.32 277 ePn Pn 17 06 23.4 +0.5
PKIN eSn Sn 17 07 31.0 -2.9
comp=E,748nm,0.4s
KKN Kakani 6.44 278 ePn Pn 17 06 25.4 +0.9
KKN eSn Sn 17 07 33.5 -3.3
comp=E,526nm,0.2s
DMN Daman 6.58 277 ePn Pn 17 06 27.3 +0.8
DMN eSn Sn 17 07 38.3 -2.0
comp=E,277nm,0.2s
BOK Bokaro 6.77 243 eP Pn 17 06 30.1 +1.2
BOK eS Sn 17 07 42.5 -2.3
BOK IAML 17 07 49.7
comp=N,172nm,0.3s
SIMRM Sittwe 6.88 177 Pn 17 06 32.1 +1.6
SIMRM Sn Sn 17 07 47.5 +0.1
GKN Gorkha 7.02 280 ePn Pn 17 06 33.1 +0.6
DANN Dangsing 7.83 282 ePn Pn 17 06 42.6 -1.1
KMI Kunming 9.43 99 P Pn 17 07 05.8 +0.3
KMI PP PnPn 17 07 14.6 +1.3
KMI S Sn 17 08 50.8 +0.5
KMI SS SnSn 17 09 06.4 +4.4
KMI pmax pmax
comp=N,9.0nm,0.9s
KMI pmax pmax
comp=N,130nm,5.0s
KMI LR LR
comp=N,500nm,10.5s
KMI LR LR
comp=N,110nm,8.1s
CHTO Chiang Mai 10.12 143 Pn 17 07 14.7 -0.2
CHTO Sn Sn 17 09 04.5 -2.6
CM31 Chiang Mai Arr 10.42 144 Pn 17 07 18.7 -0.2
CMAR Chiang Mai Arr 10.42 144 P Pn 17 07 18.8 -0.1
comp=N,2.2nm,0.3s,baz=320,slow=13,SNR=84
CMAR LR LR 17 12 27.6
comp=N,112nm,19.1s,baz=267,slow=44
LGTI Lohaghat 11.04 285 ex Pn 17 07 27.1 -0.3
LGTI eS Sn 17 09 25.4 -4.1
JBP Jabalpur 11.95 254⇑eP Pn 17 07 41.2 +1.4
JBP ex x 17 09 48.4
GYA Guiyang 12.70 89⇑iP Pn 17 07 49.4 -0.7
GYA PP P 17 08 03.6 +3.5
GYA S Sn 17 10 07.5 -2.6
GYA SS SnSn 17 10 21.5 -1.0
GYA pmax pmax
comp=N,80nm,4.1s
GYA LR LR
comp=N,290nm,8.7s
GYA LR LR
comp=N,190nm,7.3s
PBKT Sadao Pong 13.06 141 Pn 17 07 55.8 +0.8
NGP Nagpur 13.58 247 eP Pn 17 08 00.4 -1.7
NGP eS Sn 17 10 18.8 -13
NDI New Delhi 13.60 280 ex Pn 17 08 08.5 +6.2
NDI eS Sn 17 10 21.0 -11
GTA Gaotai 13.78 25 ⇑P Pn 17 08 02.3 -2.5
GTA pP P 17 08 05.4 -6.7
GTA sP 17 08 09.3
GTA pmax pmax
comp=N,14nm,0.9s
GTA pmax pmax
comp=N,70nm,5.1s
GTA LR LR
comp=N,120nm,12.1s
GTA LR LR
comp=N,170nm,12.4s
XAN Xi'an 15.79 60 P Pn 17 08 27.8 -3.4
XAN pP P 17 08 35.3 +0.9
XAN pmax pmax
comp=N,73nm,6.0s
HYB Hyderabad 16.04 236 i P Pn 17 08 31.0 -3.5
HYB esP sP 17 08 53.0 -1.4
HYB eS Sn 17 11 36.0 +4.6
UBPT Khong Chiam 16.83 131 Pn 17 08 43.3 -1.1
WMQ Urumqi 17.19 348 eP Pn 17 08 51.1 +1.3
WMQ pP pP 17 09 00.3 -1.3
WMQ pmax pmax
comp=N,28nm,0.7s
WMQ pmax pmax
comp=N,120nm,4.9s
WMQ LR LR
comp=N,200nm,17.7s
NIL Nilore 17.84 296 Pn 17 08 55.0 -1.8
NIL IAmb IAmb 17 09 12.7
comp=Z,16nm,0.8s
KSH Kashi 18.54 316 P Pn 17 09 09.3 +3.8
KSH pP pP 17 09 18.0 +1.1
KSH S Sn 17 12 29.5 -2.4
KSH PcP PcP 17 13 33.6 +0.7
KSH pmax pmax
comp=Z,5.0nm,0.5s
KSH LR LR
comp=Z,190nm,6.3s
KSH LR LR
comp=Z,320nm,6.2s
POO Poona 19.13 248 ex Pn 17 09 21.6 +9.1
PRZ Przheval'sk 19.22 327 Pn Pn 17 09 14.6 +0.9
WHN Wuhan 19.49 75 P Pn 17 09 15.3 +0.2
KDJ Kajisay 19.58 324 Pn 17 09 18.1 +0.2
BTO Baotou 19.84 43 eP Pn 17 09 17.8 -1.3
BOOM Boomskoye usch 20.49 323 Pn 17 09 28.2 -0.5
MK31 Makanchi Array 21.30 340 P P 17 09 35.0 +0.4
MK31 IAmb IAmb 17 09 36.0
comp=Z,18nm,0.8s
MKAR Makanchi Array 21.30 340 P P 17 09 34.8 +0.2
comp=Z,21nm,0.6s,baz=147,slow=13,SNR=298
AAK Ala-Archa 21.38 321 P P 17 09 37.0 +1.4
comp=Z,5.0nm,0.6s,baz=128,slow=8.6,SNR=19
AAK Ala-Archa 21.38 321 P P 17 09 35.7 0.0
AAK IAmb IAmb 17 09 55.0
comp=Z,14nm,1.1s
MAKZ Makanchi 21.41 340 P P 17 09 35.9 +0.1
MAKZ IAmb IAmb 17 09 36.7
comp=Z,13nm,0.7s

KBL Kabul 21.44 296 P P 17 09 36.8 +0.3
KBL IAmb IAmb 17 09 47.4
comp=Z,11nm,0.6s
BTK Batken 22.16 311 P P 17 09 45.3 +1.3
PALK Pallekele 22.61 212 S S 17 13 52.1 -1.5
comp=Z,2.1nm,0.4s,baz=141,slow=6.5,SNR=5.0
MLSI Meulaboh, Aceh 22.95 170 P P 17 10 00.6 +8.2
KULM Kulim 22.99 159 P P 17 09 54.2 +1.4
KULM IAmb IAmb 17 09 56.6
comp=Z,9.6nm,0.8s
SONM Songino Array 23.45 24 P P 17 09 57.2 -0.1
comp=Z,4.8nm,0.6s,baz=204,slow=11,SNR=25
ULN Ulaanbaatar 23.72 25 P P 17 09 59.1 -0.7
ULN IAmb IAmb 17 10 01.0
comp=Z,11nm,0.8s
IPM Ipoh 23.87 159 P P 17 10 00.7 -0.6
IPM IAmb IAmb 17 10 11.9
comp=Z,7.2nm,0.8s
KK31 Karatay Array 23.98 318 P P 17 10 02.8 +0.8
KKAR Karatay Array 23.98 318 P P 17 10 03.0 +0.9
PSI Prapat 24.88 165 P P 17 10 11.6 +1.0
comp=Z,5.8nm,0.4s,baz=325,slow=7.6,SNR=8.5
PSI pP pP 17 10 23.8 +0.7
comp=Z,15nm,0.8s,baz=336,slow=12,SNR=5.1
RPSI Rantau Prapat 24.98 165 P P 17 10 11.6 +0.2
KURBB Kurchatov Arra 25.85 339 P P 17 10 19.4 +0.5
comp=Z,4.6nm,0.6s,baz=155,slow=9.6,SNR=20
KURK Kurchatov 25.90 340 P P 17 10 20.0 +0.6
ZAA0 Zalesovo Array 27.47 350 P P 17 10 34.7 +1.2
ZALV Zalesovo Beam 27.47 350 P P 17 10 34.9 +1.4
comp=Z,1.4nm,0.5s,baz=163,slow=6.9,SNR=8.2
ZALV pP pP 17 10 48.5 +1.9
comp=Z,3.2nm,0.5s,baz=181,slow=8.5,SNR=8.3
BVAR Borovoye Array 30.73 334 P P 17 11 03.6 +1.1
comp=Z,0.4nm,0.7s,baz=145,slow=13,SNR=3.9
BVAR pP pP 17 11 16.7 +1.1
comp=Z,1.0nm,0.6s,baz=144,slow=13,SNR=6.9
KS19 Wonju Array Si 31.53 62 P P 17 11 08.5 -1.2
KS19 IAmb IAmb 17 11 26.3
comp=Z,9.7nm,1.4s
KSRS Korea Array 31.57 62 P P 17 11 08.4 -1.6
comp=Z,1.3nm,0.5s,baz=260,slow=8.4,SNR=16
AKTO Aktyubinsk 35.12 321 P P 17 11 41.6 +0.8
comp=Z,2.7nm,0.6s,baz=113,slow=10,SNR=10
USRK Ussuriysk Ar. 36.00 51 P P 17 11 49.0 +0.5
comp=Z,1.8nm,0.6s,baz=262,slow=7.2,SNR=3.7
KLR Kul'dur 37.44 43 P P 17 12 00.3 -0.2
comp=Z,0.7nm,0.5s,baz=246,slow=8.9,SNR=3.2
ARU Arti 38.08 330 P P 17 12 06.3 +0.4
comp=Z,0.5nm,0.3s,baz=270,slow=20,SNR=3.1
MAT Matsushiro 39.70 65 P P 17 12 18.9 -0.9
MJAR Matsushiro Arr 39.70 65 P P 17 12 18.8 -1.0
comp=Z,5.0nm,0.9s,baz=273,slow=9.5,SNR=18
RAYN Ar Rayn 42.43 276 P P 17 12 43.1 +0.7
RAYN IAmb IAmb 17 12 43.8
comp=Z,3.4nm,0.7s
KIRV Kirov 43.41 329 P P 17 12 50.9 +1.2
comp=Z,3.0nm,0.5s,baz=46,slow=6.5,SNR=2.6
ASAJ Asahikawa 43.49 53 P P 17 12 51.5 +0.8
comp=Z,6.1nm,0.8s,baz=276,slow=3.6,SNR=5.3
JKA Kamikawa-asahi 43.49 53 P P 17 12 51.5 +0.8
TIXI Tiksi 48.98 14 P P 17 13 33.6 +0.2
comp=Z,3.2nm,0.7s,baz=216,slow=3.6,SNR=16
TIXI Tiksi 48.98 14 P P 17 13 32.9 -0.5
TIXI IAmb IAmb 17 13 34.6
comp=Z,3.6nm,0.8s
BRTR Keskin Array B 49.92 300 P P 17 13 41.0 -0.2
comp=Z,0.4nm,0.6s,baz=114,slow=7.2,SNR=3.7
CSS Mathiatis 50.68 294 P P 17 13 45.0 -1.8
AKASG Malin Array Be 52.82 315 P P 17 14 02.2 -0.4
comp=Z,0.5nm,0.5s,baz=80,slow=6.6,SNR=6.8
PETK Petropavlovsk- 54.12 42 P P 17 14 11.3 -0.7
comp=Z,2.0nm,0.9s,baz=94,slow=1.9,SNR=5.0
TESR Tescani 54.60 309 ⇓P pP 17 14 32.0 +2.2
PLOR Plostina 54.64 309 ⇑P pP 17 14 32.7 +2.5
PSA00 Pilbara Seismi 55.11 149 P P 17 14 19.6 0.0
PSA00 IAmb IAmb 17 14 27.0
comp=Z,8.1nm,1.1s
MLR Muntele Rosu 55.16 308 ⇑P pP 17 14 35.2 +1.3
KNRA Kununurra 55.17 136 P P 17 14 20.0 -0.1
FITZ Fitzroy Crossi 55.21 141 P P 17 14 20.2 -0.1
FITZ IAmb IAmb 17 14 29.4
comp=Z,6.5nm,1.4s
FINES FINESS Array B 55.38 328 P P 17 14 22.2 +1.2
comp=Z,3.2nm,1.0s,baz=101,slow=7.2,SNR=3.8
BURAR Bucovina Array 55.51 311 ⇑P pP 17 14 34.3 -2.2
VOIR 55.79 308 ⇓P pP 17 14 35.3 -3.1
ARR Arges 56.09 308 ⇑P pP 17 14 41.6 +1.0
ARCES ARCESS Array B 56.91 337 P P 17 14 33.1 +1.2
comp=Z,3.6nm,0.9s,baz=94,slow=9.1,SNR=2.5
TRPA Tarpa 57.27 312 ⇓P P 17 14 35.4 +0.7
DRGR 57.28 310 ⇓P P 17 14 36.9 +2.0
VYHS Vyhne 59.68 312 eP P 17 14 46.9 -4.7
KMBO Kilima Mbogo 60.01 251 P P 17 14 55.8 +1.3
comp=Z,3.1nm,0.6s,baz=49,slow=13,SNR=11
KMBO Kilima Mbogo 60.01 251 IAmb IAmb 17 14 56.8
comp=Z,3.0nm,0.8s
WRA Warramunga Arr 61.86 135 P P 17 15 06.8 +0.1
comp=Z,3.9nm,0.5s,baz=342,slow=18,SNR=124
WRAB Tennant Creek 61.86 135 P P 17 15 06.9 +0.2
WB2 Warramunga Arr 61.87 135 P P 17 15 07.3 +0.6
WR0 Warramunga Arr 62.00 134 P P 17 15 07.9 +0.3
WR0 IAmb IAmb 17 15 08.9
comp=Z,5.9nm,0.9s
GERES GERESS Array B 62.99 313 P P 17 15 14.7 +0.7
comp=Z,0.5nm,0.5s,baz=57,slow=6.2,SNR=5.5
GERES pP pP 17 15 29.2 +0.8
comp=Z,1.1nm,0.5s,baz=68,slow=6.5,SNR=4.2
AS31 Alice Springs 64.36 138 P P 17 15 23.2 0.0
ASAR Alice Springs 64.36 138 P P 17 15 23.8 +0.5
comp=Z,2.4nm,0.5s,baz=322,slow=6.7,SNR=100
FORT Forrest 66.79 147 P P 17 15 39.0 +0.3
CTA Charters Tower 70.06 126 P P 17 15 58.6 -0.8
comp=Z,5.3nm,0.7s,baz=315,slow=7.1,SNR=4.8
TOLK Toolik Lake Re 74.48 20 P P 17 16 26.3 +1.2
TOLK IAmb IAmb 17 16 27.1
comp=Z,3.0nm,0.7s
STKA Stephens Creek 74.99 138 P P 17 16 27.4 -1.0
BPAW Bear Paw Mtn. 76.64 24 P P 17 16 36.2 -1.3
BPAW IAmb IAmb 17 16 39.7
comp=Z,5.1nm,1.0s
ILAR Eielson Array 77.66 22 P P 17 16 43.6 +0.4
comp=Z,1.1nm,0.8s,baz=293,slow=4.8,SNR=10
INK Inuvik 79.08 16 P P 17 16 49.9 -1.0
comp=Z,1.7nm,1.1s,baz=320,slow=7.6,SNR=5.1
INK Inuvik 79.08 16 IAmb IAmb 17 16 55.9
comp=Z,4.8nm,1.4s
TORD Torodi Ar. Bea 84.81 282 P P 17 17 23.6 +1.6
comp=Z,0.3nm,0.5s,baz=86,slow=4.5,SNR=2.8
YKA Yellowknife Ar 88.18 12 P P 17 17 37.8 +0.2
comp=Z,0.2nm,0.6s,baz=329,slow=4.4,SNR=4.0

JMA 23 17:11:15.8±0.1, 23°.38N×121°.95E, h39km, M3.0
TAP 23 17:11:16.9, 23°.38N×121°.94E, h31km, ML3.4, D
ISC 23 17:11:15.7±1.1, 23°.36N±0°.02×121°.97E±0°.02, h25km±12km, n100, σ1s.01/177, 1D, Taiwan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HGSD Ruisui 0.52 285 P Pb 17 11 26.4 0.0
baz=284
HGSD S Sb 17 11 33.5 0.0
baz=284
EGFH Guangfu 0.59 301 eP Pb 17 11 27.7 +0.2
baz=311
EGFH eS Sb 17 11 35.7 +0.3
baz=311
EHY Hungye 0.62 284 iP Pb 17 11 27.9 0.0
baz=283
EHY eS Sb 17 11 36.3 +0.1
baz=283
CHKT Chengkung 0.62 245 P Pb 17 11 27.5 -0.4
baz=234
CHKT S Sb 17 11 35.5 -0.7
baz=234
TWF1 Yuli 0.62 269 iP Pb 17 11 28.1 0.0
baz=262
TWF1 S Sb 17 11 37.0 +0.7
baz=262
YULB Yu-li 0.62 273 P Pb 17 11 27.9 -0.1
baz=266
YULB eS Sb 17 11 37.2 +0.8
baz=266
ENLB Shoufeng 0.64 328 eP Pb 17 11 27.3 -1.0
baz=329
ENLB eS Sb 17 11 36.1 -0.8
baz=329
ESL Shilin 0.67 312 ⇓iP Pb 17 11 28.5 -0.3
baz=313
ESL eS Sb 17 11 36.9 -0.8
baz=313
HWA Hwalien 0.70 331 eP Pb 17 11 29.6 +0.3
baz=342
TWH Lutao 0.79 215 eP Pn 17 11 30.2 -1.1
baz=211
TWH eS Sb 17 11 40.0 -1.3
baz=211
TWD Chiawan 0.80 334 P Pn 17 11 30.4 -1.0
baz=336
TWD S Sb 17 11 40.4 -0.9
baz=336
VWDT VWDT 0.86 297 P Pn 17 11 32.0 -0.2
baz=297
VWDT eS Sb 17 11 42.9 -0.2
baz=297
NACB Ninganchiao 0.88 337 P Pn 17 11 31.6 -1.0
baz=346
NACB S Sn 17 11 42.0 -2.6
baz=346
OWD Renai 0.94 309 eP Pn 17 11 32.9 -0.7
baz=309
OWD eS Sn 17 11 44.5 -1.9
baz=309
YUS Yu-Shan 0.95 278 iP Pn 17 11 33.6 -0.3
baz=286
YUS eS Sn 17 11 45.2 -1.7
baz=286
ETLH Xiulin Townshi 0.95 332 eP Pn 17 11 33.1 -0.6
baz=333
ETLH eS Sn 17 11 44.8 -1.7
baz=333
TTN Taitung 0.97 232 eS Sn 17 11 45.4 -1.5
baz=229
TWGBT Beinan 0.99 237 eP Pn 17 11 32.9 -1.1
baz=230
TWGBT eS Sn 17 11 44.7 -2.5
baz=230
TWG Pinlang 0.99 237 eP Pn 17 11 33.1 -1.0
baz=230
TWG eS Sn 17 11 45.3 -2.0
baz=230
CHGB Renai 1.01 314 P Pn 17 11 34.2 -0.4
baz=314
CHGB S Sn 17 11 46.5 -1.6
baz=314
WHF Hehuan Shan 1.01 320 P Pn 17 11 34.1 -0.7
baz=321
WHF S Sn 17 11 46.6 -1.9
baz=321
SSLB Suanglung 1.03 295 eP Pn 17 11 33.9 -0.7
baz=294
WHYT Xinyi Township 1.08 288 eP Pn 17 11 35.5 +0.1
baz=288
ENA Nanau 1.08 349 P Pn 17 11 35.0 -0.3
baz=350
ENA eS Sn 17 11 48.2 -1.4
baz=350
ALS Alishan 1.08 278 P Pn 17 11 35.8 +0.1
baz=277
ALS eS Sn 17 11 49.2 -0.9
baz=277
SMLT Sun Moon Lake 1.11 298 P Pn 17 11 35.8 -0.1
baz=305
SMLT eS Sn 17 11 49.6 -0.9
baz=305
STYT Tauyuan 1.14 260 P Pn 17 11 36.0 -0.2
baz=253
STYT eS Sn 17 11 49.7 -1.3
baz=253
TWT Tachien 1.15 321 P Pn 17 11 36.7 +0.2
baz=321
TWT S Sn 17 11 49.6 -1.9
baz=321
TYC Yuchr 1.16 298 eP Pn 17 11 36.5 +0.1
baz=298
TYC eS Sb 17 11 52.0 +0.3
baz=298
TDCB Techi 1.16 320 P Pn 17 11 36.6 0.0
baz=321
TDCB S Sn 17 11 49.9 -1.9
baz=321
DPDB Guoxing 1.17 305 eP Pn 17 11 36.8 +0.2
baz=305
EOS1 EOS1 1.19 7 eP Pn 17 11 36.6 -0.2
baz=18
EOS1 eS Sn 17 11 52.1 -0.1
baz=18
NNSB Datong 1.19 333 eP Pn 17 11 36.9 -0.1
baz=334
NNSB eS Sn 17 11 51.1 -1.3
baz=334
NNSH Datong 1.19 333 eP Pn 17 11 36.7 -0.3
baz=334
NNSH eS Sn 17 11 50.8 -1.7
baz=334
NNS Nan Shan 1.21 333 P Pn 17 11 37.1 -0.1
baz=334
NNS S Sn 17 11 51.5 -1.4
baz=334
CHN5 Tsauling 1.21 281 P Pb 17 11 38.1 0.0
baz=287
CHN5 eS Sb 17 11 54.1 +0.7
baz=287
WJS Zhushan 1.23 292 eP Pb 17 11 38.6 +0.2
baz=292
TPUB Ta-pu 1.24 267 eP Pn 17 11 38.3 +0.7
baz=267
TPUB eS Sb 17 11 54.7 +0.7
baz=267
TWC Suao 1.25 355 eP Pn 17 11 38.0 +0.3
baz=356
TWC eS Sn 17 11 53.4 -0.3
baz=356
WTP Ta-pu 1.26 265 P Pn 17 11 38.5 +0.7
baz=264
WTP eS Sb 17 11 55.6 +1.0
baz=264
CHN4 Tsaushan 1.27 270 P Pb 17 11 39.0 0.0
baz=269
CHN4 S Sb 17 11 56.6 +1.7
baz=269
SLGT Liugui 1.28 254 eP Pn 17 11 38.3 +0.2
baz=252
SLGT eS Sn 17 11 54.6 +0.2
baz=252
WNT Mingjian 1.29 294 eP Pb 17 11 39.7 +0.4
baz=293
SGST Jiashian 1.31 258 eP Pn 17 11 38.3 -0.2
baz=250
SGST eS Sn 17 11 55.4 +0.1
baz=250
WHP Taichung City 1.31 314 eP Pb 17 11 39.9 +0.1
baz=315
WHP eS Sn 17 11 55.3 0.0
baz=315
ENTT Nioudou 1.33 344 eP Pn 17 11 39.1 +0.4
baz=345
WGK Gukeng 1.34 284 eP Pb 17 11 40.3 +0.2
baz=284
CHN1 Nanshi 1.34 263 P Pb 17 11 40.3 +0.1
baz=262
CHN1 S Sb 17 11 58.7 +1.7
baz=262
WDLH Douliu 1.36 284 eP Pb 17 11 40.3 -0.2
baz=284
WDLH eS Sb 17 11 59.3 +1.9
baz=284
SNST Tainan City 1.36 264 eP Pb 17 11 40.5 -0.1
baz=263
SNST eS Sb 17 11 58.4 +0.7
baz=263
TWK Hsinying 1.37 266 P Pb 17 11 40.4 +1.0
baz=265
TWK S Sb 17 11 58.1 +0.3
baz=265
LAY Lan-yu 1.37 197 eP Pn 17 11 38.0 -1.4
baz=195
LAY eS Sn 17 11 53.5 -3.3
baz=195
SSD Sandimen 1.38 244 eP Pn 17 11 39.7 +0.2
baz=236
TWE Neicheng 1.38 348 eP Pn 17 11 39.9 +0.4
baz=349
TWE eS Sn 17 11 55.9 -1.1
baz=349
CHN2 Minshiung 1.39 277 eP Pb 17 11 42.1 +1.1
baz=277
CHN2 eS Sb 17 12 00.5 +2.2
baz=277
JYNG Yonagunijimaku 1.40 39 P Pn 17 11 40.0 +0.2
JYNG eS Sn 17 11 57.5 0.0
YHNB Yeheng 1.41 337 eP Pn 17 11 40.0 0.0
baz=338
YHNB eS Sn 17 11 57.3 -0.6
baz=338
SLBB Yuanshan 1.42 347 eP Pn 17 11 40.5 +0.4
baz=348
EAST Anshuo 1.42 227 eP Pn 17 11 39.2 -0.9
baz=225
TCU Taichung 1.42 304 eP Pb 17 11 42.0 +0.4
baz=304
TCU eS Sb 17 12 01.3 +2.0
baz=304
NSK Sanguang 1.43 337 P Pn 17 11 40.3 +0.1
baz=338
NSK eS Sn 17 11 57.1 -1.1
baz=338
CHY Chiayi 1.43 276 eP Pb 17 11 41.8 +0.1
baz=275
CHY eS Sb 17 11 59.7 +0.2
baz=275
MASBT Mashibuluo 1.44 239 P Pn 17 11 40.1 -0.2
baz=232
MASBT eS Sn 17 11 58.5 0.0
baz=232
YOJ Yonaguni jima 1.45 41 P Pn 17 11 41.0 +0.6
YOJ eS Sn 17 11 58.7 +0.1
NWLT Wulai 1.47 343 eP Pb 17 11 42.5 0.0
baz=344
NWLT eS Sn 17 11 58.1 -1.2
baz=344
TWQ1 Liyutan 1.47 312 P Pb 17 11 42.6 +0.1
baz=312
TWQ1 eS Sb 17 12 01.4 +0.6
baz=312
WCHH Zhanghua 1.48 299 eP Pb 17 11 42.5 -0.1
baz=299
WCHH eS Sb 17 12 03.0 +2.0
baz=299
CHN3 Shinhua 1.51 259 P Pb 17 11 44.0 +0.9
baz=258
CHN3 S Sb 17 12 04.2 +2.5
baz=258
TWM1 Shoushan 1.53 250 eP Pb 17 11 45.9 +2.5
baz=248
TWM1 eS Sb 17 12 05.6 +3.3
baz=248
NSY Sanyi 1.53 314 eP Pb 17 11 43.3 -0.1
baz=314
WLGB Puzi 1.54 275 eP Pb 17 11 43.0 +1.3
baz=274
WLGB eS Sb 17 12 03.1 +0.4
baz=274
NSTT Nanjuang 1.55 325 eP Pb 17 11 43.4 -0.3
baz=334
NSTT eS Sn 17 12 01.6 +0.6
baz=334
LIOB Emei 1.55 326 eP Pb 17 11 43.6 -0.2
baz=335
LIOB eS Sn 17 12 01.4 +0.2
baz=335
SSPT Xinbi 1.56 236 eP Pn 17 11 43.0 +1.0
baz=230
WDJ Dajia District 1.57 309 eP Pb 17 11 44.0 0.0
baz=309
RLNB Erlin 1.57 290 eP Pb 17 11 43.6 -0.5
baz=290
RLNB eS Sb 17 12 03.5 -0.1
baz=290
SCZT Fangliau 1.59 232 eP Pn 17 11 42.8 +0.5
baz=224
TIPB Shuangxi 1.61 355 eP Pn 17 11 43.7 +1.1
baz=355
TIPB eS Sn 17 12 03.3 +0.6
baz=355
CHN8 Yiju 1.62 270 P Pn 17 11 43.9 +1.2
baz=269
CHN8 S Sb 17 12 04.9 -0.1
baz=269
WSF Szhu 1.63 280 eP Pn 17 11 44.1 +1.2
baz=279
TWA Mucha 1.65 348 eP Pn 17 11 44.5 +1.2
baz=337
TWA eS Sn 17 12 04.3 +0.6
baz=337
NWF Wu-fen Shan 1.71 354 eP Pb 17 11 46.6 +0.1
baz=354
NWF eS Sn 17 12 06.4 +1.1
baz=354
WFSB Wu-fen Shan 1.71 354 eS Sb 17 12 06.7 -0.9
baz=354
HEN Hengchun 1.77 220 eP Pn 17 11 46.5 +1.7
baz=219
HEN eS Sn 17 12 05.6 -0.9
baz=219
TWKBT Hengchun 1.77 217 eP Pn 17 11 45.8 +0.9
baz=216
HATJ Hateruma jima 1.81 67 P Pn 17 11 45.3 -0.1
HATJ S Sn 17 12 06.6 -1.1
YM04 YM04 1.83 347 eP Pn 17 11 46.9 +1.3
baz=348
YM04 eS Sn 17 12 08.1 +0.1
baz=348
IRIF Iriomote-Funau 1.88 59 P Pn 17 11 46.9 +0.6
IRIF eS Sn 17 12 09.6 +0.4
JKRS Kuro-shima 2.06 65 P Pn 17 11 49.1 +0.3
JKRS S Sn 17 12 13.6 -0.1
PHUB P'eng-hu 2.21 274 eP Pn 17 11 51.6 +0.7
baz=273
PHUB eS Sn 17 12 16.9 -0.5
baz=273
JIJ Ishigaki jima 2.22 63 P Pn 17 11 50.9 -0.1
JIJ S Sn 17 12 16.0 -1.7
PNG Penghu 2.23 276 eP Pn 17 11 51.8 +0.6
baz=275
PNG eS Sn 17 12 17.6 -0.3
baz=275
JISG Ishigakijimahi 2.46 60 P Pn 17 11 53.9 -0.4
JISG S Sn 17 12 22.1 -1.5
JTJ Tarama 2.80 62 P Pn 17 11 59.2 +0.2
JTJ eS Sn 17 12 32.0 0.0
VWUC VWUC 2.82 306 eP Pn 17 11 59.5 +0.3
baz=305
PTTC Pingtan 2.93 317 eP Pn 17 12 00.7 0.0
baz=317
PTTC eS Sn 17 12 33.5 -1.7
baz=317
PTMZ Houxiangcun 3.10 303 eP Pn 17 12 03.3 +0.2
baz=303
PTMZ eS Sn 17 12 37.7 -1.6
baz=303
JIRB Irabujima 3.27 63 S Sn 17 12 44.2 +0.7
JMJ2 Miyako jima3 3.36 65 eS Sn 17 12 45.6 -0.2
KNMB Chin-men Tao 3.46 289 eP Pn 17 12 07.9 -0.2
baz=288

ATH 23 17:25:02.9, 38°.42N×20°.47E, h10km±1km, ML2.3/15, Error ellipse: s-maj=1.7km s-min=0.6km az=208.0
THE 23 17:25:03.3, 38°.42N×20°.49E, h7km±1km, ML2.5/1, Error ellipse: s-maj=1.3km s-min=0.4km az=106.0
ISC 23 17:25:02.6±0.8, 38°.42N±0°.02×20°.53E±0°.03, h13km±4km, n42, σ0s.59/66, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VSK1 VASILIKIADES 0.03 111 P Pg 17 25 04.9 -0.1
VSK1 S Sg 17 25 06.6 -0.1
KONA Konidatara, Ke 0.03 79 P Pg 17 25 05.0 0.0
KONA S Sg 17 25 06.6 -0.1
KONA AML AML 17 25 07.2
comp=E,19322μm,0.1s
KONA AML AML 17 25 07.4
comp=N,22545μm,0.1s
FSK Fiskardo 0.05 31 P Pg 17 25 05.1 0.0
FSK S Sg 17 25 06.2 -0.7
FSK Fiskardo 0.05 31 P Pg 17 25 05.1 0.0
FSK S Sg 17 25 06.8 0.0
FSK AML AML 17 25 07.0

comp=N,10163µm,0.3s
FSK AML AML 17 25 07.3
comp=E,13813µm,0.2s
KEF1 Kardakata, Kep 0.15 199 P **Pg 17 25 06.1 -0.1**
KEF1 S **Sg 17 25 08.7 -0.1**
KEF4 Livadi, Kephal 0.18 208 P **Pg 17 25 06.6 -0.1**
KEF4 S **Sg 17 25 09.7 +0.1**
AGT1 Agia Thekli 0.20 215 P **Pg 17 25 06.9 -0.3**
AGT1 S **Sg 17 25 10.1 -0.1**
EVGI Lefkada island 0.22 26 P **Pb 17 25 08.2 -0.4**
EVGI S **Sb 17 25 12.2 -0.4**
EVGI Lefkada island 0.22 26 P **Pb 17 25 08.3 -0.4**
EVGI S **Sb 17 25 12.1 -0.4**
LXR1 Lixouri, Cepha 0.23 199 P **Pg 17 25 07.7 +0.1**
LXR1 S **Sg 17 25 11.6 +0.7**
LXRA Lixouri, Kepha 0.23 199 P **Pg 17 25 07.6 0.0**
LXRA S **Sg 17 25 11.6 +0.6**
ARG2 Argostoli 0.24 188 P **Pg 17 25 07.9 +0.1**
ARG2 S **Sg 17 25 11.9 +0.6**
ARGA Argostoli. Kep 0.24 190 P **Pg 17 25 07.8 -0.1**
ARGA S **Sg 17 25 10.7 -0.6**
VLS Valsamata 0.25 169 P **Pb 17 25 08.0 +0.1**
VLS S **Sb 17 25 12.3 -0.9**
VLS Valsamata 0.25 169 P **Pb 17 25 08.0 +0.1**
VLS S **Sb 17 25 12.3 -0.9**
VLS AML AML 17 25 12.4
comp=N,1805µm,0.2s
VLS AML AML 17 25 13.6
comp=E,2487µm,0.1s
KEF2 Argostoli. Kep 0.26 188 P **Pg 17 25 08.0 -0.1**
KEF2 S **Sg 17 25 12.0 +0.3**
KEF3 Kipouria, Keph 0.26 214 P **Pg 17 25 07.8 -0.3**
KEF3 S **Sg 17 25 12.0 +0.2**
MGNA Meganis 0.31 41 P **Pb 17 25 09.7 -0.4**
MGNA S **Sb 17 25 15.0 -0.1**
MGNA AML AML 17 25 15.8
comp=N,1504µm,0.3s
MGNA AML AML 17 25 18.6
comp=E,1003µm,0.3s
LKD2 Lefkada island 0.38 15 P **Pg 17 25 10.7 +0.3**
LKD2 Lefkada island 0.38 15 P **Pg 17 25 10.6 +0.2**
LKD2 S **Sg 17 25 16.5 +0.9**
LKD2 AML AML 17 25 21.3
comp=E,673µm,0.2s
LKD2 AML AML 17 25 23.9
comp=N,831µm,0.3s
TSLK Tsoukalades, L 0.42 13 P **Pg 17 25 11.5 +0.6**
TSLK Tsoukalades, L 0.42 13 P **Pg 17 25 11.6 +0.6**
TSLK S **Sb 17 25 17.6 -0.5**
TSLK AML AML 17 25 20.5
comp=E,919µm,0.3s
TSLK AML AML 17 25 23.0
comp=N,1045µm,0.4s
PDO Prodromos 0.54 70 P **Pb 17 25 14.2 +0.2**
PDO Prodromos 0.54 70 P **Pb 17 25 14.0 0.0**
PDO S **Sn 17 25 23.0 -2.0**
PDO AML AML 17 25 31.0
comp=E,451µm,0.3s
PDO AML AML 17 25 31.3
comp=N,670µm,0.3s
VLMS Volimes, Zakyn 0.55 169 P **Pg 17 25 13.4 -0.1**
VLMS S **Sb 17 25 22.3 +0.3**
VLMS AML AML 17 25 29.4
comp=E,1556µm,0.4s
VLMS AML AML 17 25 30.0
comp=N,2576µm,0.3s
VTN Vitineika 0.72 134 P **Pb 17 25 17.3 +0.3**
PVO Paravola 0.81 75 P **Pn 17 25 19.0 -0.7**
PVO AML AML 17 25 38.1
comp=E,534µm,0.4s
PVO AML AML 17 25 40.3
comp=N,516µm,0.7s
RLS Riolos of Patr 0.82 116 P **Pn 17 25 18.9 -1.0**
RLS Riolos of Patr 0.82 116 P **Pn 17 25 18.9 -1.0**
RLS AML AML 17 25 40.2
comp=N,215µm,0.3s
RLS AML AML 17 25 41.0
comp=E,145µm,0.3s
DRO Drossia 1.04 116 P **Pn 17 25 22.9 0.0**
DRO S **Sn 17 25 39.4 +2.1**
comp=E,258nm,0.4s
DRO Drossia 1.04 116 P **Pn 17 25 22.7 -0.2**
DRO S **Sn 17 25 37.9 +0.6**
DRO AML AML 17 25 46.0
comp=E,622µm,0.5s
DRO AML AML 17 25 50.9
comp=N,424µm,0.5s
ANX Ano Chora 1.10 80 P **Pg 17 25 24.4 +0.5**
ANX AML AML 17 25 48.9
comp=E,226µm,0.6s
ANX AML AML 17 25 50.9
comp=N,368µm,0.5s
IGT Igoumenitsa 1.12 352 P **Pb 17 25 23.4 -0.6**
TRIZ Trizonia 1.21 92 P **Pn 17 25 24.9 -0.4**
KALE Kalithea 1.26 91 P **Pg 17 25 26.3 -0.7**
KALE AML AML 17 25 56.1
comp=E,119µm,0.3s
KALE AML AML 17 25 57.2
comp=N,212µm,0.5s
AMT Artemida-Makis 1.28 133 P **Pg 17 25 27.9 +0.6**
AMT AML AML 17 25 56.1
comp=N,206µm,0.8s
AMT AML AML 17 25 59.3
comp=E,249µm,0.9s
KLV Kalavryta, Ach 1.33 106 P **Pg 17 25 27.7 -0.5**
KLV Kalavryta, Ach 1.33 106 P **Pg 17 25 27.7 -0.5**
KLV AML AML 17 25 50.5
comp=E,77µm,0.4s
KLV AML AML 17 25 50.7
comp=N,61µm,0.3s
KEK Kerkira 1.41 336 P **Pn 17 25 28.6 +0.5**
AGG Agios Georgios 1.53 66 P **Pg 17 25 32.9 +0.8**
ITM Ithomi 1.66 138 P **Pg 17 25 35.3 +0.8**
DID Didima 2.32 112 P **Pb 17 25 44.1 -0.3**

NNC ***23*** *17:58:14.1±10.0, 36°.41N×81°.42E, h0km, mb3.9, mpv4.0, Error ellipse: s-maj=127.5km s-min=73.8km az=77.0*
IDC ***23*** *17:58:16.1±6.6, 36°.73N×82°.51E, h0km, mb3.1/1, mb1 3.5/4, mb1mx3.1/66, mbtmp3.5/4, ML3.1/3, Error ellipse: s-maj=84.6km s-min=31.5km az=27.0*
ISC 23 17:58:10.8±2.7, 36°.3N±0°.2×81°.8E±0°.2, h10km, n8, σ2°.93/12, 3C-3D, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
PDGK Podgornoye 7.28 347 ⇓Pn **Pn 18 00 01.1 +3.8**
14nm,1.5s
PDGK ⇓Sn **Sn 18 01 23.6 +3.5**
11nm,0.8s
PDGK ⇓Lg Lg 18 01 56.1
20nm,1.0s
AAK Ala-Archa 8.51 321 Pg **Pg 18 00 49.7 -3.9**
0.3nm,0.3s,baz=148,slow=14,SNR=4.6
AAK Lg Lg 18 02 45.5
0.1nm,0.3s,baz=294,slow=20,SNR=1.1
MK31 Makanchi Array 10.53 2 Pn **Pn 18 00 42.3 +0.5**
0.2nm,0.3s,baz=186,slow=12,SNR=24
MK31 ⇑Sn **Sn 18 02 41.3 +1.5**
0.4nm,0.5s,baz=189,slow=23
MKAR Makanchi Array 10.53 2 Pn **Pn 18 00 42.8 +1.0**
0.4nm,0.3s,baz=188,slow=13,SNR=16
MKAR Sn **Sn 18 02 35.4 -4.5**
baz=176,slow=20,SNR=1.3
MAKZ Makanchi 10.54 1 ⇑Pn **Pn 18 00 42.8 +0.9**
1.5nm,0.5s
MAKZ ⇑Sn **Sn 18 02 40.9 +0.8**
2.4nm,1.1s
ZALV Zalesovo Beam 17.82 6 Pn **Pn 18 02 17.4 -1.3**
0.1nm,0.3s,baz=189,slow=8.5,SNR=2.0
BVAR Borovoye Array 18.58 338 Pn **P 18 02 30.6 +2.7**
0.1nm,0.3s,baz=145,slow=11,SNR=5.1
SONM Songino Array 21.53 50 P **P 18 02 58.6 -1.5**
0.9nm,0.8s,baz=242,slow=10,SNR=6.6

NEIC ***23*** *18:04:02.1±1.6, 41°.07N±0°.04×125°.28W±0°.06, h13km±5km, Error ellipse: s-maj=6.6km s-min=6.2km az=93.0*
NCEDC ***23*** *18:04:04.9±1.7, 41°.09N±0°.05×125°.28W±0°.06, h25km±7km, Md3.0/53, Error ellipse: s-maj=8.3km s-min=4.6km az=219.0*
ANF ***23*** *18:04:04.8±1.0, 41°.22N×124°.95W, h8km±9km, ML2.4/11, ML2.4/10, Error ellipse: s-maj=9.1km s-min=3.9km az=61.0*
ISC 23 18:04:02.2±1.8, 41°.09N±0°.04×125°.30W±0°.08, h17km±10km, n86, σ1°.19/96, Off coast of northern California

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KCTM Capetown 0.95 130 **Pg 18 04 21.1 +0.5**
KCTM **Sg 18 04 33.4 +0.3**
KRPM Rodgers 0.96 85 **Pg 18 04 20.8 -0.1**
KRPM **Sg 18 04 32.9 -0.7**
JCC Jacoby Creek, 0.99 105 Pn **Pb 18 04 21.1 +0.1**
JCC Jacoby Creek, 0.99 105 **Sb 18 04 33.2 -1.3**
JCC Jacoby Creek, 0.99 105 **Sg 18 04 33.2 -1.3**
KMPM Mount Pierce 1.11 126 **Pb 18 04 23.2 +0.1**
KRMB Red Mountain 1.13 67 **Pb 18 04 22.8 -0.6**
KHMM Horse Mountain 1.20 100 **Pn 18 04 24.4 0.0**
KSMM Slide Mountain 1.24 136 **Pn 18 04 24.7 -0.1**
KCRM Chalk Rock 1.30 120 **Pn 18 04 26.0 +0.3**
KSXB Camp Six Broad 1.30 55 **Pn 18 04 25.3 -0.5**
KBO Bosley Butte 1.38 35 **Pn 18 04 26.4 -0.4**
KOMM Orleans Mounta 1.41 81 **Pn 18 04 27.4 +0.2**
KCSM Cold Springs 1.46 111 **Pn 18 04 28.4 +0.4**
KMRM Mail Ridge 1.48 125 **Pn 18 04 28.9 +0.7**
KHBM Hayfork Bally 1.63 104 **Pn 18 04 30.6 +0.2**
KPPM Pickett Peak 1.65 116 **Pn 18 04 31.1 +0.6**
KTRM Thompson Ridge 1.66 60 **Pn 18 04 30.6 -0.1**
L02E Cave Junction 1.66 49 **Pn 18 04 30.7 0.0**
L02E Cave Junction 1.66 49 P **Pn 18 04 30.6 0.0**
baz=230,SNR=47
L02E S **Sn 18 04 49.5 -2.1**
baz=230
KBSM Bell Springs 1.74 131 **Pn 18 04 32.5 +0.7**
M02C Callahan 1.87 80 **Pn 18 04 33.9 +0.4**
M02C Callahan 1.87 80 P **Pn 18 04 33.8 +0.4**
baz=262,SNR=10
M02C S **Sn 18 04 55.7 -1.0**
baz=262
LGPM Granite Peak 1.88 94 **Pn 18 04 33.9 +0.2**
KIPM Iron Peak 1.88 132 **Pn 18 04 34.4 +0.7**
KCPM Cahto Peak 1.91 136 **Pn 18 04 34.5 +0.4**
KEBM Edson Butte 1.92 22 Pn **Pn 18 04 34.0 -0.2**
N02D Trinity Center 1.96 92 **Pn 18 04 35.4 +0.6**
N02D Trinity Center 1.96 92 P **Pn 18 04 35.1 +0.3**
baz=274,SNR=10.0
LBKM Bonanza King 1.99 89 **Pn 18 04 35.7 +0.4**
LBPM Beegum Peak 1.99 112 **Pn 18 04 35.8 +0.6**
KBNM Bluenose Ridge 2.00 126 **Pn 18 04 36.7 +1.4**
K02D Willamette Mer 2.02 37 P **Pn 18 04 35.8 +0.3**
baz=217,SNR=70
K02D S **Sn 18 04 58.4 -2.0**
baz=217
KFPM Farley Peak 2.03 135 **Pn 18 04 36.2 +0.4**
YBH Yreka Blue Hor 2.05 71 Pn **Pn 18 04 36.9 +0.9**
LAMM Antelope Mount 2.08 75 **Pn 18 04 37.3 +0.8**
O02D Mt. Diablo Mer 2.11 115 **Pn 18 04 37.4 +0.6**
O02D Mt. Diablo Mer 2.11 115 P **Pn 18 04 37.5 +0.6**
baz=297,SNR=33
GTC Three Chop Rid 2.15 141 **Pn 18 04 37.6 +0.3**
WDC Whiskeytown Da 2.15 103 **Pn 18 04 38.1 +0.8**
WDC Whiskeytown Da 2.15 103 **Pn 18 04 38.2 +0.9**
LCSM College of the 2.21 80 **Pn 18 04 38.5 +0.2**
KRKM Rackout Spring 2.22 133 **Pn 18 04 39.0 +0.6**
GNAM Navarro Ridge 2.28 145 **Pn 18 04 39.3 +0.2**
B040 Montague 2.29 70 **Pn 18 04 40.4 +1.2**
J01E Myrtle Point 2.31 26 P **Pn 18 04 39.4 -0.1**
baz=206,SNR=6.4
J01E S **Sn 18 05 05.6 -1.9**
baz=206
GROM Round Mountain 2.32 119 **Pn 18 04 40.5 +0.8**
HUMO Hull Mountain 2.32 48 Pn **Pn 18 04 40.2 +0.5**
LGBM Gray Butte 2.35 83 **Pn 18 04 42.0 +1.6**
LHEM Herd Peak 2.38 76 **Pn 18 04 42.2 +1.5**
GVV Valley View 2.39 122 **Pn 18 04 42.1 +1.3**
M03C McCloud 2.40 84 **Pn 18 04 42.3 +1.5**
GHMM Hull Mountain 2.41 131 **Pn 18 04 41.6 +0.6**
GASB Alder Springs 2.43 125 **Pn 18 04 42.3 +1.0**
GHOM Hamilton Openi 2.44 146 **Pn 18 04 41.4 0.0**
LSHM Sage Hen Hill 2.48 96 **Pn 18 04 42.9 +0.9**
L04D Klamath Falls 2.51 62 **Pn 18 04 44.6 +2.2**
L04D Klamath Falls 2.51 62 Pb **Pn 18 04 44.4 +2.0**
baz=244,SNR=100
L04D Sb **Sn 18 05 14.3 +1.5**
baz=244
DBO Dodson Butte 2.54 36 **Pn 18 04 43.9 +1.1**
LTCM Tuscan Springs 2.57 109 **Pn 18 04 44.4 +1.3**
LBFM Black Fox Moun 2.58 83 **Pn 18 04 45.3 +1.8**
GGUM Gualala 2.62 148 **Pn 18 04 43.9 +0.1**
LGMM Garner Mountai 2.66 78 **Pn 18 04 46.2 +1.7**
M04C Macdoel 2.69 74 Pb **Pn 18 04 46.6 +1.7**
baz=256,SNR=16
M04C S **Sn 18 05 14.6 -2.5**
baz=256
HOPS Hopland Field 2.70 140 Pn **Pn 18 04 45.3 +0.4**
O03E Paynes Creek 2.77 105 P **Pn 18 04 46.5 +0.6**
baz=288,SNR=51
O03E S **Sn 18 05 18.6 -0.5**
baz=288
I03D Drain, OR 2.98 28 P **Pn 18 04 49.6 +0.8**
baz=209,SNR=11
I03D S **Sn 18 05 24.3 +0.2**
baz=209
K04D Chiloquin, OR 3.06 59 Pb **Pn 18 04 52.2 +2.2**
baz=241,SNR=7.7
I02D Swisshome 3.20 19 P **Pn 18 04 52.4 +0.6**
baz=200
ORV Oroville 3.28 117 **Pn 18 04 53.1 +0.2**
I04A Tendick Farm, 3.45 37 P **Pn 18 04 57.3 +2.1**
baz=219
J05D Fort Rock, OR 3.73 53 P **Pn 18 05 00.9 +1.7**
baz=235,SNR=14
MOD Modoc Plateau 3.84 76 Pn **Pn 18 05 01.3 +0.7**
H04D Lebanon 3.92 28 P **Pn 18 05 03.5 +1.9**
baz=209,SNR=5.5
AFDM Forest Hills D 3.95 121 Pn **Pn 18 05 03.1 +1.1**
BEKR Beckworth 3.96 106 **Pn 18 05 03.6 +1.3**
PINE Pine Mountain 4.21 49 Pn **Pn 18 05 08.4 +2.6**
H04A Detroit Lake 4.26 31 Pn **Pn 18 05 07.7 +1.3**
PAHR Pah Rah Range 4.72 105 Pn **Pn 18 05 14.1 +1.3**
PNTR Pine Nut 4.80 113 Pn **Pn 18 05 15.1 +2.2**
F03A Seaside 5.00 14 Pn **Pn 18 05 18.8 +2.2**
YERR Yerington 5.10 112 Pn **Pn 18 05 20.0 +2.0**
I07A Izee 5.22 53 Pn **Pn 18 05 22.2 +2.6**
SAO San Andreas Ge 5.25 144 Pn **Pn 18 05 19.7 -0.3**
G06A Carlson Farm, 5.37 38 Pn **Pn 18 05 24.2 +2.7**
KVN Kaiserville 5.88 108 Pn **Pn 18 05 30.1 +1.3**

IDC ***23*** *18:04:26.3±1.1, 11°.56N×85°.64W, h0km, mb3.4/3, mb1 3.8/4, mb1mx3.4/42, mbtmp3.5/4, ML3.2/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/30, Error ellipse: s-maj=86.2km s-min=12.8km az=59.0*
UCR ***23*** *18:04:27.5±1.3, 10°.53N×86°.40W, h22km±6km, MD4.1*
INET ***23*** *18:04:27.8, 10°.63N×86°.41W, h15km, ML3.0*
ISC 23 18:04:27.7±0.9, 10°.64N±0°.09×86°.40W±0°.07, h23km, n27, σ1°.06/29, mb3.4/3, 1C, Off coast of Costa Rica

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
NY14 Universidad de 0.85 89 *i* P **Pb 18 04 44.2 +0.5**
GBS3 Finca Las Img 0.94 81 *i* P **Pb 18 04 45.0 -0.3**
GUAI GUAI 0.95 113 *i* P **Pb 18 04 44.3 -1.1**
GUAI *i* S **Sb 18 04 56.3 -1.2**
LAPC Finca la Perla 0.96 82 *i* P **Pb 18 04 45.1 -0.5**
GB1A Borinquen Arri 1.00 80 *i* P **Pb 18 04 46.0 -0.4**
GB1A *i* S **Sn 18 05 01.0 +1.2**
GPS3 Bodega del ICE 1.02 83 *i* P **Pb 18 04 46.2 -0.5**
LIM1 Limonal 1.13 87 *i* P **Pb 18 04 47.7 -0.5**
MESS Mesas 1.19 85 *i* P **Pb 18 04 48.8 -0.1**
HORNC Hornillas 1.20 86 *i* P **Pb 18 04 48.8 -0.4**
CUI Cuipilapa 1.21 89 *e*P **Pn 18 04 49.2 -0.1**
CUI *e*S **Sb 18 05 06.2 +1.0**
ACAL Aguas Claras 1.34 90 *i* P **Pn 18 04 51.4 +0.3**
PTEN Parque Tenorio 1.39 87 ⇑*i* P **Pn 18 04 52.0 +0.3**
JTS Las Juntas de 1.46 104 Pg **Pn 18 04 52.2 -0.5**
26nm,0.3s,baz=9.2,slow=20,SNR=48
JTS LR LR 18 05 05.9
comp=Z,44nm,19.2s,baz=38,slow=28
JTS Lg Lg 18 05 12.2
35nm,0.3s,baz=16,slow=19,SNR=11
JTS Las Juntas de 1.46 104 *e*P **Pn 18 04 52.2 -0.5**
ARE1 Arenal 1 1.66 96 *e*P **Pn 18 04 56.0 +0.5**
CEDE Laguna Cedeo 1.67 95 *e*P **Pn 18 04 56.0 +0.3**
ACON Acoyapa 1.78 42 *e*P **Pn 18 04 56.8 -0.3**
LCR2 La Lucha 2 2.52 111 *e*P **Pn 18 05 09.2 +1.8**
ESPN Las Esperanzas 2.57 53 *e*P **Pn 18 05 08.2 +0.3**
CVTR Volcan Turrial 2.67 103 *e*P **Pb 18 05 14.4 -0.6**
CMIG Matias Romero 10.44 309 Pn **Pn 18 06 56.3 +0.2**
0.2nm,0.3s,baz=119,slow=9.9,SNR=3.6
ATAH Atahualpa 19.37 155 LR LR 18 15 10.6
comp=Z,47nm,22.0s,baz=169,slow=32
TXAR Lajitas Array 24.62 322 P **P 18 09 46.2 -0.4**
0.8nm,0.7s,baz=134,slow=10,SNR=3.9
H06E1 SOCORRO T-PHAS 25.04 292 T T 18 35 44.7
SNR=5.3
NVAR Mina Array Bea 39.74 320 P **P 18 12 01.1 +2.1**
0.6nm,0.9s,baz=127,slow=9.1,SNR=4.5
NVAR PcP **PcP 18 14 07.0 +1.8**
0.7nm,0.7s,baz=141,slow=5.8,SNR=7.6
YKA Yellowknife Ar 55.62 345 P **P 18 13 58.4 -3.1**
0.4nm,1.0s,baz=142,slow=7.1,SNR=2.0
CMAR Chiang Mai Arr 150.61 350 PKPbc **PKPbc 18 24 18.4 -0.4**
0.6nm,0.3s,baz=327,slow=2.8,SNR=2.8

IDC ***23*** *18:04:51.9±1.8, 46°.92N×146°.11E, h362km±21km, mb2.9/8, mb1 3.0/10, mb1mx2.7/62, mbtmp3.6/10, Error ellipse: s-maj=23.7km s-min=18.0km az=149.0*
ISC 23 18:04:51.0±1.1, 47°.0N±0°.1×146°.2E±0°.2, h350km, n11, σ0°.48/11, mb3.0/8, Northwest of Kuril Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
ASAJ Asahikawa 3.79 223 P **Pn 18 05 58.3 +0.4**
0.3nm,0.3s,baz=338,slow=10,SNR=5.0
KLR Kul'dur 9.90 288 P **P 18 07 09.7 +0.5**
0.1nm,0.3s,baz=108,slow=13,SNR=5.3
ZALV Zalesovo Beam 38.56 304 P **P 18 11 40.9 0.0**
0.3nm,0.3s,baz=48,slow=6.8,SNR=2.5
ILAR Eielson Array 39.35 38 P **P 18 11 47.9 +0.6**
0.3nm,0.7s,baz=247,slow=6.2,SNR=5.6
MKAR Makanchi Array 42.55 294 P **P 18 12 13.0 -0.4**
0.2nm,0.6s,baz=72,slow=7.1,SNR=4.4
INK Inuvik 44.00 32 P **P 18 12 24.6 +0.1**
0.3nm,0.3s,baz=284,slow=4.2,SNR=3.6
RES Resolute Bay 52.09 17 P **P 18 13 25.6 0.0**
1.8nm,0.4s,baz=318,slow=6.7,SNR=22
FINES FINESS Array B 61.70 332 P **P 18 14 32.0 -0.5**
1.4nm,0.5s,baz=47,slow=7.5,SNR=14
NB2 NORSAR Subarra 66.35 338 P **P 18 15 02.0 -0.6**
comp=Z,0.4nm,0.4s,baz=32,slow=6.5
NOA NORSAR Array B 66.35 338 P **P 18 15 02.4 -0.3**
comp=Z,0.5nm,0.5s,baz=31,slow=6.7,SNR=4.7
ASAR Alice Springs 71.17 192 P **P 18 15 32.0 -0.4**
comp=Z,0.3nm,1.0s,baz=4.3,slow=5.7,SNR=4.1

IDC ***23*** *18:09:25.5±1.1, 20°.13N×120°.55E, h0km, mb3.4/7, mb1 3.6/8, mb1mx3.4/51, mbtmp3.4/8, ML3.2/1, MS3.0/3, Ms1 3.0/3, ms1mx2.5/33, Error ellipse: s-maj=43.4km s-min=20.2km az=81.0*
ISC 23 18:09:29.6±1.1, 20°.1N±0°.1×120°.5E±0°.2, h28km, n10, σ0°.78/8, mb3.3/7, MS2.6/3, Philippine Islands region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KSRS Korea Array 18.44 19 P **Pn 18 13 43.7 +0.6**
0.1nm,0.3s,baz=203,slow=11,SNR=2.9
CMAR Chiang Mai Arr 20.45 269 LR LR 18 21 45.4
comp=Z,24nm,19.3s,baz=100,slow=36
MJAR Matsushiro Arr 22.52 40 P **P 18 14 27.8 +0.6**
0.2nm,0.3s,baz=251,slow=11,SNR=2.8
MJAR LR LR 18 22 58.3
comp=Z,21nm,19.6s,baz=150,slow=36
SONM Songino Array 29.94 341 P **P 18 15 35.4 0.0**
0.5nm,0.9s,baz=157,slow=10,SNR=3.7
MKAR Makanchi Array 40.94 320 P **P 18 17 10.0 +0.3**
0.2nm,0.5s,baz=102,slow=12,SNR=2.4
WRA Warramunga Arr 42.04 160 P **P 18 17 18.6 -0.3**
0.8nm,0.8s,baz=343,slow=8.7,SNR=5.8
ASAR Alice Springs 45.42 163 P **P 18 17 47.0 +0.8**
1.2nm,1.1s,baz=345,slow=7.1,SNR=7.3
KIRV Kirov 63.23 326 LR LR 18 46 56.4
comp=Z,30nm,18.4s,baz=52,slow=36
ILAR Eielson Array 73.09 27 P **P 18 20 55.9 -1.2**
0.5nm,1.0s,baz=281,slow=6.3,SNR=2.6
YKA Yellowknife Ar 86.94 22 P **P 18 22 11.7 -0.2**
0.1nm,0.5s,baz=319,slow=4.7,SNR=2.3

GUC ***23*** *18:33:36.4±0.8, 28°.24S×70°.84W, h85km±12km, ML4.0*
NEIC ***23*** *18:33:38.7±1.9, 28°.25S±0°.05×70°.9W±0°.1, h82km±8km, Error ellipse: s-maj=17.4km s-min=6.7km az=104.0*
IDC ***23*** *18:33:39.8±0.9, 28°.20S×70°.56W, h81km±6km, mb3.4/1, mb1 3.6/4, mb1mx3.3/22, mbtmp3.4/1, Error ellipse: s-maj=28.8km s-min=11.6km az=77.0*
SJA ***23*** *18:33:47.4±0.3, 28°.70S×69°.90W, h98km±6km, ML3.2, MW3.3*
ISC 23 18:33:38.5±0.8, 28°.27S±0°.04×70°.72W±0°.08, h86km±6km, n32, σ1°.69/45, Central Chile

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
GO03 Copiap 0.80 32 *e*P **Pn 18 33 55.3 -0.4**
GO03 *i* S **Sn 18 34 08.8 +0.3**
GO03 IAML 18 34 10.3
comp=E,6µm,0.1s
GO03 Copiap 0.80 32 **Pn 18 33 56.8 +1.1**
GO03 Sn **Sn 18 34 10.1 +1.5**
GO04 Tololo Observa 1.90 182 *e*P **Pn 18 34 09.5 0.0**
GO04 *i* S **Sn 18 34 33.7 +0.8**
GO04 Tololo Observa 1.90 182 **Pn 18 34 10.3 +0.9**
GO04 Sn **Sn 18 34 33.8 +0.8**
AROD Rodeo 2.18 150 *e*P **Pn 18 34 15.5 +2.3**
AROD *e*S **Sn 18 34 36.6 -3.2**
CO03 El Pedregal 2.56 179 *e*P **Pn 18 34 19.2 +1.0**
CO03 *i* S **Sn 18 34 49.3 +0.8**
ACCO Cerro Coronel 2.72 148 *e*P **Pn 18 34 22.3 +1.8**
ACCO *e*S **Sn 18 34 47.9 -4.9**
ACCO IAML 18 35 03.4
comp=Z,145nm,0.4s
CO02 Combarbal 2.94 185 *e*P **Pn 18 34 23.1 -0.1**
GO02 Mina Guanaco 3.25 18 *e*P **Pn 18 34 28.3 +0.6**
GO02 *i* S **Sn 18 35 06.3 +0.7**
GO02 Mina Guanaco 3.25 18 **Pn 18 34 28.9 +1.2**
GO02 Sn Sn 18 34 53.1 -12
PB14 IPOC Station P 3.64 4 *e*P **Pn 18 34 32.3 -0.6**
RTLS Leoncito 3.73 161 *e*P **Pn 18 34 37.0 +3.0**
RTLS IAML 18 35 48.8
comp=Z,34nm,0.8s
CFA Coronel Fontan 3.96 148 P **Pn 18 34 38.7 +1.7**
comp=Z,39nm,0.3s,baz=355,slow=12,SNR=254
CFA S **Sn 18 35 23.3 +1.0**
comp=Z,21nm,0.3s,baz=178,slow=21,SNR=13
RTCV Cerro Valdivia 4.05 153 *e*P **Pn 18 34 39.5 +1.4**
RTCV IAML 18 35 59.8
comp=Z,43nm,0.6s
CYA Choya 4.33 93 *e*P **Pn 18 34 42.8 +0.8**
CYA IAML 18 35 30.0
comp=Z,48nm,0.8s
ROC1 El Roble 4.70 183 Pn **Pn 18 34 48.0 +0.8**
PEL Peldehue 4.86 180 **Pn 18 34 49.8 +0.6**
ACAN Cantantal 5.02 143 *e*P **Pn 18 34 51.6 +0.2**
ACAN IAML 18 35 48.5
comp=Z,29nm,0.4s
PB15 IPOC Station P 5.16 13 *e*P **Pn 18 34 53.1 -0.4**
LVC Limon Verde 5.87 17 P **Pn 18 35 03.1 -0.2**
comp=Z,0.9nm,0.3s,baz=176,slow=7.8,SNR=9.0
LVC S **Sn 18 36 07.1 -2.2**
comp=Z,3.6nm,0.3s,baz=293,slow=12,SNR=4.1
MRA San Martin 5.98 135 *e*P **Pn 18 35 04.1 -0.4**
GO05 Huala 6.80 188 Pn **Pn 18 35 12.9 -2.7**
PB01 IPOC Station P 7.28 9 Pn **Pn 18 35 20.3 -2.0**
CPUP Villa Florida 12.06 84 P **Pn 18 36 27.9 +0.6**
comp=Z,0.1nm,0.3s,baz=257,slow=14,SNR=2.8
SAML Samuel 20.49 22 P **P 18 38 04.7 -4.8**
SAML IAmb IAmb 18 38 16.1
comp=Z,3.8nm,1.3s
OTAV Otavalo 29.30 344 P P 18 39 22.7 -11
OTAV IAmb IAmb 18 39 27.8
comp=Z,2.8nm,0.6s
TORD Torodi Ar. Bea 81.19 70 P **P 18 45 46.1 +0.9**
comp=Z,0.7nm,0.8s,baz=253,slow=4.3,SNR=2.6
TORD pP **pP 18 46 07.7 -0.7**
comp=Z,0.6nm,0.7s,baz=245,slow=4.8,SNR=3.0
BRTR Keskin Array B 117.94 58 PKP **PKPdf 18 52 16.0 +0.7**

comp=Z,0.2nm,0.7s,baz=302,slow=3.2,SNR=2.8
ASAR Alice Springs 123.17 207 PKP PKPdf 18 52 26.9 +1.1
comp=Z,0.2nm,0.4s,baz=121,slow=1.5,SNR=6.6
WRA Warramunga Arr 126.30 210 PKP PKPdf 18 52 33.5 +1.6
comp=Z,0.5nm,0.5s,baz=157,slow=1.9,SNR=6.8
WRA pPKP pPKPdf 18 52 55.5 -0.6
comp=Z,0.4nm,0.9s,baz=154,slow=1.7,SNR=1.9
ZALV Zalesovo Beam 148.72 28 PKPbc PKiKP 18 53 17.5 +0.8
comp=Z,3.3nm,0.5s,baz=299,slow=3.2,SNR=18
ZALV pPKPbc pPKPbc 18 53 40.2 +0.7
comp=Z,0.9nm,0.5s,baz=309,slow=3.1,SNR=2.6
MKAR Makanchi Array 151.93 42 PKPbc PKiKP 18 53 25.0 +1.3
comp=Z,0.5nm,0.4s,baz=317,slow=1.6,SNR=17
MKAR pPKPbc pPKPbc 18 53 47.4 -0.1
comp=Z,0.3nm,0.5s,baz=304,slow=1.7,SNR=3.2

IDC 23 18:51:32.0±7.0, 19.76S×176.55W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.3/40, mbtmp3.4/2, Error ellipse: s-maj=369.8km s-min=102.7km az=154.0, Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ASAR Alice Springs 46.01 256 P P 18 59 57.4 -0.2
0.6nm,0.8s,baz=92,slow=7.9,SNR=11
WRA Warramunga Arr 46.05 261 P P 18 59 57.9 -0.1
0.2nm,0.3s,baz=98,slow=7.0,SNR=7.2
AKASG Malin Array Be 143.00 333 PKP PKPdf 19 11 07.2 -0.5
0.5nm,0.3s,baz=44,slow=4.3,SNR=5.9

NIED 23 18:57:00, 39.50N×143.80E, h11km, Mw3.8 Best double couple: M0 5.82000×10^14 NP1:φs 10.00000°, δ53.00000°, λ88.00000°. NP2:φs 193.00000°, δ37.00000°, λ93.00000°.
IDC 23 18:57:23.3±0.8, 39.37N×143.65E, h0km, mb3.6/14, mb1 3.7/17, mb1mx3.6/53, mbtmp3.6/17, ML3.1/3, MS3.1/3, Ms1 3.1/3, ms1mx2.5/37, Error ellipse: s-maj=20.5km s-min=16.9km az=120.0
JMA 23 18:57:23.9±0.1, 39.46N×143.82E, h27km, M3.9
ISC 23 18:57:25.1±0.7, 39.49N±0.05×143.72E±0.06, h11km, n44, σ1.20/46, mb3.5/14, Off east coast of Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MIYJ Miyakonagasawa 1.47 274 P Pn 18 57 50.5 -1.0
JTH Tanohata 1.50 288 P Pn 18 57 50.8 -1.1
JTH eS Sn 18 58 10.6 -0.8
OFUJ Ofunato 1.64 256 P Pn 18 57 52.7 -1.2
JOM Ohasama 1.88 270 P Pn 18 57 56.7 -0.4
JOM eS Sn 18 58 19.9 -0.8
JANG Nango 1.91 298 P Pn 18 57 56.5 -1.0
JMK Ichinoseki 2.01 255 P Pn 18 57 58.1 -0.9
JMK eS Sn 18 58 23.0 -1.1
JYK Kaneyama 2.67 259 P Pn 18 58 07.8 -0.2
JOT Ohata 2.78 314 P Pn 18 58 09.4 -0.1
JOT eS Sn 18 58 41.9 -1.0
JNBK Urakawa-nobuka 2.88 346 P Pn 18 58 11.3 +0.4
JNBK eS Sn 18 58 45.9 +0.4
JCH Churui 3.13 355 P Pn 18 58 13.7 -0.6
JCH eS Sn 18 58 50.2 -1.5
JKB Kayabe 3.14 320 P Pn 18 58 15.2 +0.7
JKB eS Sn 18 58 52.2 +0.2
JFT Otama 3.30 234 P Pn 18 58 15.7 -1.0
JFT eS Sn 18 58 54.9 -1.1
JAK Akkeshi 3.58 12 P Pn 18 58 19.3 -1.2
JAK eS Sn 18 59 00.6 -2.1
JEW Eniwo 3.76 334 eS Sn 18 59 05.8 -1.3
JFR Furan 3.76 347 P Pn 18 58 24.2 +1.1
JAR Ashorobuto 3.80 1 P Pn 18 58 22.2 -1.4
JAR eS Sn 18 59 04.1 -4.2
ASAJ Asahikawa 4.70 350 Pn Pn 18 58 36.6 +0.7
1.6nm,0.3s,baz=201,slow=11,SNR=18
ASAJ Sn Sn 18 59 28.5 -1.8
0.7nm,0.3s,baz=227,slow=19,SNR=3.3
MJAR Matsushiro Arr 5.25 238 Pn Pn 18 58 43.2 -0.3
0.4nm,0.3s,baz=44,slow=12,SNR=50
MAT Matsushiro 5.25 238 P Pn 18 58 43.8 +0.3
MAT S Sn 18 59 44.6 +0.5
JHJ Hachijo jima 2 7.11 208 Sn Sn 19 00 18.5 -11
4.8nm,0.3s,baz=61,slow=19,SNR=3.0
USRK Ussuriysk Ar. 9.93 302 Pn Pn 18 59 48.2 +0.5
baz=109,slow=13,SNR=7.2
JNU Nakatsue 12.14 242 LR LR 19 05 32.6
comp=Z,47nm,20.4s,baz=31,slow=41
KSRS Korea Array 12.54 266 Pn Pn 19 00 26.8 +3.3
0.1nm,0.3s,baz=88,slow=14,SNR=5.9
KSRS LR LR 19 04 07.7
comp=Z,34nm,19.8s,baz=202,slow=32
SEY Seymchan 24.05 10 P P 19 02 41.6 +1.7
0.9nm,0.6s,baz=242,slow=23,SNR=4.2
YAK Yakutsk 24.14 344 P P 19 02 41.7 +0.9
5.3nm,0.4s,baz=12,slow=1.4,SNR=4.1
SONM Songino Array 28.03 300 P P 19 03 16.4 +0.1
0.5nm,0.5s,baz=92,slow=7.2,SNR=5.9
H11N2 WAKE ISLAND Hy 28.04 128 T T 19 32 36.6
baz=320
H11N1 WAKE ISLAND Hy 28.05 128 T T 19 32 40.3
baz=320
H11N3 WAKE ISLAND Hy 28.05 128 T T 19 32 39.4
baz=320
H11S1 WAKE ISLAND Hy 28.86 130 T T 19 33 38.0
baz=318
H11S3 WAKE ISLAND Hy 28.86 130 T T 19 33 35.7
baz=318
H11S2 WAKE ISLAND Hy 28.87 130 T T 19 33 40.7
baz=318
ZALV Zalesovo Beam 41.65 310 P P 19 05 13.5 +0.3
1.2nm,0.5s,baz=89,slow=7.7,SNR=6.7
CMAR Chiang Mai Arr 43.88 255 P P 19 05 30.1 -1.6
0.5nm,0.8s,baz=44,slow=7.0,SNR=5.3
MKAR Makanchi Array 44.39 300 P P 19 05 35.6 0.0
1.1nm,0.8s,baz=84,slow=9.3,SNR=13
ILAR Eielson Array 46.45 34 P P 19 05 51.3 -0.3
0.3nm,0.8s,baz=254,slow=6.5,SNR=3.0
WRA Warramunga Arr 59.77 190 P P 19 07 28.4 -1.7
0.4nm,0.6s,baz=8.0,slow=6.8,SNR=2.2
YKA Yellowknife Ar 60.77 31 P P 19 07 37.6 +1.1
0.2nm,0.6s,baz=305,slow=6.6,SNR=5.0
ASAR Alice Springs 63.49 190 P P 19 07 54.7 -0.6
0.1nm,0.5s,baz=6.7,slow=6.7,SNR=3.2
KBZ Khabaz 70.67 311 LR LR 19 40 16.5
comp=Z,46nm,19.3s,baz=354,slow=36
NVAR Mina Array Bea 72.08 55 P P 19 08 50.8 +1.1
0.2nm,0.5s,baz=278,slow=6.2,SNR=3.2
HFS Hagfors 72.58 336 P P 19 08 52.7 +0.7
1.4nm,0.8s,baz=62,slow=16,SNR=3.5
AKASG Malin Array Be 73.45 323 P P 19 08 57.3 0.0
0.1nm,0.2s,baz=46,slow=6.0,SNR=3.5
PDAR Pinedale Array 74.66 47 P P 19 09 06.2 +1.3
0.3nm,0.6s,baz=31,slow=3.5,SNR=3.9

NEIC 23 19:18:25.4±0.9, 51.05N±0.05×176.19W±0.07, h11km±2km, Error ellipse: s-maj=7.3km s-min=6.0km az=173.0
AEIC 23 19:18:27.3±1.1, 51.05N±0.07×176.19W±0.06, h26km±4km, mb4.0/13(NEIC), Error ellipse: s-maj=10.3km s-min=5.1km az=165.0
IDC 23 19:18:40.9±7.1, 51.85N×176.63W, h114km±60km, mb3.2/8, mb1 3.4/9, mb1mx3.1/44, mbtmp3.6/9, Error ellipse: s-maj=68.4km s-min=17.5km az=171.0
ISC 23 19:18:27.5±2.3, 51.1N±0.1×176.20W±0.04, h25km±14km, n46, σ0.90/45, mb3.8/9, Andreanof Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ADK Adak 0.86 340 Pb 19 18 42.7 -1.0
ADK Adak 0.86 340 Pb 19 18 43.3 -0.5
ADAG Mount Adagdak 0.94 345 Pn 19 18 44.9 -0.1
KIMD Kanaga Island 0.94 317 Pn 19 18 44.3 -0.8
KIMD Sn 19 18 58.1 +0.3
GSMY Great Sitkin M 0.97 5 Pn 19 18 45.3 -0.2
KIWB Kanaga Island 0.98 323 Pn 19 18 45.1 -0.5
GSTD Great Sitkin T 0.98 2 Pn 19 18 45.5 -0.2
GSTD Sn 19 18 59.5 +0.7
KIKV Kanaga Island 1.00 323 Pn 19 18 45.5 -0.5
KIKV Sn 19 19 00.3 +0.9
GSTR Great Sitkin T 1.02 5 Pn 19 18 46.3 0.0
KICM Kanaga Island 1.05 324 Pn 19 18 46.6 0.0
KICM Sb 19 19 00.8 +0.7
TAPA Tanaga Point A 1.25 307 Pn 19 18 48.9 -0.6
TAPA Sn 19 19 05.8 +0.3
TASE Tanaga Southea 1.38 304 Pn 19 18 51.1 0.0
TAFP Tanaga Falls P 1.39 307 Pn 19 18 51.1 -0.1
TAFP Sn 19 19 09.3 +0.5
ATKA Atka Island 1.68 47 Pn 19 18 53.9 -1.3
GALAA Gareloi Lava P 1.75 294 Pn 19 18 56.7 +0.5
KOFP Korovin Flat P 1.77 47 Pn 19 18 56.5 -0.1
KOFP Sn 19 19 18.8 +0.5
OHAK Old Harbor 14.72 56 P Pn 19 21 56.7 +2.8
RSO Redoubt South 16.11 45 P P 19 22 15.1 -0.2
PETK Petropavlovsk- 16.14 287 P P 19 22 16.8 +1.2
0.5nm,0.3s,baz=98,slow=16,SNR=15
SEW Seward 17.49 49 Pn 19 22 28.0 -1.4
KTH Kantishna Hill 18.34 37 P P 19 22 39.5 -0.2
KTH IAmb IAmb 19 22 53.1
comp=Z,14nm,1.2s
GHO Glory Hole Cre 18.34 44 P P 19 22 39.7 -0.2
TRF Thorofare Moun 18.53 38 P Pn 19 22 42.2 -0.1
TRF IAmb IAmb 19 22 43.4
comp=Z,12nm,1.4s
BPAW Bear Paw Mtn. 18.60 36 Pn Pn 19 22 44.5 +1.5
GLI Glacier Island 18.85 47 Pn 19 22 46.1 +0.1
SCM Sheep Creek Mo 19.07 45 P Pn 19 22 47.9 +0.1
SCM IAmb IAmb 19 22 58.2
comp=Z,16nm,1.2s
RND Reindeer 19.07 39 P 19 22 47.9 0.0
MLY Manley 19.21 34 Pn Pn 19 22 50.3 0.0
DHY Denali Highway 19.53 41 P 19 22 52.9 -0.1
DHY IAmb IAmb 19 23 05.2
comp=Z,14nm,1.4s
CCB Clear Creek Bu 20.07 37 P P 19 22 55.9 -2.7
CCB IAmb IAmb 19 23 06.2
comp=Z,4.5nm,1.3s
ILAR Eielson Array 20.48 37 P Pn 19 23 04.3 -1.0
comp=Z,0.4nm,0.4s,baz=226,slow=10,SNR=14
SCRK Sand Creek 21.28 40 P P 19 23 11.4 -0.5
SCRK IAmb IAmb 19 23 12.4
comp=Z,4.2nm,0.7s
EGAK Eagle 22.72 40 P P 19 23 27.6 +0.5
EGAK IAmb IAmb 19 23 28.1
comp=Z,9.2nm,1.4s
KLR Kul'dur 32.83 288 P P 19 24 58.3 -0.4
comp=Z,1.1nm,0.4s,baz=78,slow=11,SNR=6.6
H11N2 WAKE ISLAND Hy 34.01 209 T T 20 01 44.9
baz=18,slow=76,SNR=22
H11N3 WAKE ISLAND Hy 34.02 209 T T 20 01 46.6
baz=18,slow=76,SNR=22
H11N1 WAKE ISLAND Hy 34.03 209 T T 20 01 47.0
baz=18,slow=76,SNR=22
YKA Yellowknife Ar 34.25 47 P P 19 25 12.0 +1.1
comp=Z,0.2nm,0.8s,baz=271,slow=7.1,SNR=3.1
H11S1 WAKE ISLAND Hy 35.22 209 T T 20 03 18.3
baz=18,slow=76,SNR=8.9
H11S2 WAKE ISLAND Hy 35.24 209 T T 20 03 18.9
baz=18,slow=76,SNR=4.4
H11S3 WAKE ISLAND Hy 35.24 209 T T 20 03 20.0
baz=18,slow=76,SNR=4.7
PDAR Pinedale Array 44.83 74 P P 19 26 44.2 +4.6
comp=Z,0.4nm,0.7s,baz=316,slow=2.3,SNR=3.8
SONM Songino Array 48.24 298 P P 19 27 05.4 -0.6
comp=Z,0.4nm,0.6s,baz=64,slow=9.1,SNR=3.5
MKAR Makanchi Array 61.49 310 P P 19 28 40.4 -1.4
comp=Z,0.4nm,0.6s,baz=45,slow=6.1,SNR=12
CMAR Chiang Mai Arr 72.67 278 P P 19 29 53.9 +0.7
comp=Z,0.2nm,0.5s,baz=30,slow=7.0,SNR=3.0
BRTR Keskin Array B 85.87 337 P P 19 31 04.5 -0.6
comp=Z,0.7nm,0.8s,baz=90,slow=3.2,SNR=5.5

IDC 23 19:33:31.1±4.4, 4.77S×153.65E, h110km±29km, mb3.2/5, mb1 3.5/6, mb1mx3.2/25, mbtmp3.7/6, Error ellipse: s-maj=46.6km s-min=20.2km az=96.0
ISC 23 19:33:29.5±1.5, 4.7S±0.1×153.8E±0.1, h100km, n8, σ0.72/10, mb3.4/5, New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRVT Keravat (AS076 1.80 284 P Pn 19 33 59.9 +0.3
18nm,0.3s,baz=59,slow=19,SNR=23
KRVT S Sn 19 34 22.2 -0.2
18nm,0.3s,baz=215,slow=21,SNR=7.4
PMG Port Moresby 8.04 234 P Pn 19 35 24.4 +0.8
5.6nm,0.3s,baz=40,slow=11,SNR=16
PMG S Sn 19 36 53.0 +0.1
1.6nm,0.3s,baz=355,slow=12,SNR=3.1
WRA Warramunga Arr 24.22 230 P P 19 38 36.9 -0.2
0.9nm,0.5s,baz=56,slow=10,SNR=12
ASAR Alice Springs 26.86 224 P P 19 38 59.9 -1.1
0.1nm,0.3s,baz=55,slow=9.1,SNR=9.9
STKA Stephens Creek 29.31 202 P P 19 39 23.0 +0.3
0.9nm,0.7s,baz=24,slow=13,SNR=3.7
FITZ Fitzroy Crossi 30.54 242 P P 19 39 32.9 -0.9
0.8nm,0.4s,baz=63,slow=9.5,SNR=6.6
MKAR Makanchi Array 80.92 319 P P 19 45 33.7 +0.8
0.1nm,0.5s,baz=90,slow=7.1,SNR=2.6
TORD Torodi Ar. Bea 151.22 289 PKPbc PKPbc 19 53 12.0 -0.4
0.3nm,0.6s,baz=86,slow=2.9,SNR=4.1

BJI 23 19:43:31.1±0.0, 6.02S×148.18E, h113km, mB5.0/43, mb4.9/61
IDC 23 19:43:34.9±0.7, 5.78S×147.79E, h101km±6km, mb4.4/19, mb1 4.7/24, mb1mx4.6/30, mbtmp4.9/24, MS3.5/14, Ms1 3.5/14, ms1mx3.4/28, Error ellipse: s-maj=12.6km s-min=8.4km az=101.0
DJA 23 19:43:36.5±0.6, 6°S±4°×14°8E±°, h115km±6km, M5.1/16, mb5.1/16, mB5.4/11, MLv5.6/2, Mw(mB)4.8/11, Mwp5.1/1
NEIC 23 19:43:37.6±2.5, 5.88S±0.06×147.79E±0.07, h129km±4km, mb5.1/48, Error ellipse: s-maj=10.3km s-min=7.4km az=127.0
GCMT 23 19:43:37.6±0.2, 5.84S±0.01×147.86E±0.01, h114km±1km, MW5.1/108, Moment Tensor Solution. s53,c63; s108,c164; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.74±.11; Mθθ 3.30±.11; Mφφ -6.04±.12; Mrθ -1.31±.08; Mrφ -0.90±.13; Mθφ 0.10±.10; Best double couple: M0 5.27100×10^16 NP1:φs 327.00000°, δ64.00000°, λ29.00000°. NP2:φs 224.00000°, δ64.00000°, λ151.00000°. Principal axes: T 4.4160, Plg38.0000°, Azm185.0000°; N 1.7110, Plg52.0000°, Azm6.0000°; P -6.1270, Plg0.0000°, Azm275.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 23 19:43:34.7±0.3, 5.79S±0.04×147.78E±0.05, h100km, n375, σ1.00/385, mb5.0/53, 2C, Eastern New Guinea region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 3.65 190 P Pn 19 44 30.2 +1.0
159nm,0.3s,baz=329,slow=4.6,SNR=495
PMG S Sn 19 45 10.8 -0.5
214nm,0.3s,baz=346,slow=14,SNR=9.9
PMG Port Moresby 3.65 190 Pn 19 44 29.8 +0.6
PMG Sn 19 45 11.1 -0.2
MANU Manus Island 3.74 354 Pn 19 44 33.9 +3.4
KRVT Keravat (AS076 4.48 71 P Pn 19 44 42.0 +1.6
311nm,0.3s,baz=230,slow=1.2,SNR=70
RABL Rabaul 4.65 70 Pn 19 44 44.5 +1.8
GENI Genyem 8.23 292 P Pn 19 45 33.8 +2.4
1.1nm3μm3μm140nm,1.1s
COEN Coen 9.30 209 P Pn 19 45 46.3 +0.4
baz=9.3,SNR=205
COEN Coen 9.30 209 Pn 19 45 46.1 +0.1
SMPI Sarmi 9.80 292 P Pn 19 45 56.2 +3.4
1μm101nm,1.2s
HNR Honiara 12.59 107 P Pn 19 46 39.1 +1.3
59nm,0.3s,baz=202,slow=3.2,SNR=19
HNR LR LR 19 51 00.5
comp=Z,69nm,20.4s,baz=276,slow=35
MTSU Mount Surprise 12.73 195 P Pn 19 46 33.9 +1.8
baz=13,SNR=17
CTA Charters Tower 14.29 186 P Pn 19 46 54.5 +2.0
2.6nm,0.3s,baz=356,slow=15,SNR=18
SAUI Saumlaki 16.50 261 P P 19 47 22.4 +1.1
5μm449nm,1.1s
KDU Kakadu 16.58 245 P Pn 19 47 20.7 -0.6
baz=17,SNR=44
QIS Mount Isa 16.69 208 P Pn 19 47 22.8 +0.2
baz=17,SNR=48
SIJI Sorong 17.19 286 P P 19 47 29.9 +1.1
1.1nm,0.3s,baz=123,slow=13,SNR=4.6
SWI Sorong 17.20 286 P Pn 19 47 28.7 -0.2
1μm56nm,1.4s
WB0 Warramunga Arr 19.04 222 Pn Pn 19 47 50.6 -0.4
WB0 IAmb IAmb 19 47 51.4
comp=Z,121nm,1.1s
WR0 Warramunga Arr 19.08 221 Pn 19 47 51.2 -0.2
WRAB Tennant Creek 19.19 222 P Pn 19 47 52.2 -0.5
WB2 Warramunga Arr 19.19 222 P P 19 47 52.1 +1.3
WRA Warramunga Arr 19.20 222 P P 19 47 52.1 +1.3
comp=Z,29nm,0.3s,baz=37,slow=13,SNR=810
WRA S S 19 51 18.7 -4.6
comp=Z,1.3nm,0.3s,baz=44,slow=23,SNR=9.0
WRA LR LR 19 56 19.4
comp=Z,223nm,19.9s,baz=60,slow=40
EIDS Eidsvold 19.73 171 P Pn 19 47 58.5 -0.4
baz=20,SNR=41
EIDS Eidsvold 19.73 171 P Pn 19 47 58.6 -0.4
RMQ Roma 20.61 178 P Pn 19 48 08.2 -1.0
baz=21,SNR=73
QLP Quilpie 20.95 189 P P 19 48 11.1 +1.4
baz=21,SNR=33
KNRA Kununurra 21.09 241 P P 19 48 11.6 +0.3
baz=21,SNR=29
KNRA Kununurra 21.09 241 P P 19 48 11.5 +0.3
KNRA IAmb IAmb 19 48 40.8
comp=Z,169nm,1.2s
SANVU Saraoutou 21.35 118 P P 19 48 13.9 -0.2
SANVU IAmb IAmb 19 48 40.5
comp=Z,84nm,1.1s
SANI Sanana 22.05 279 P P 19 48 27.9 +6.3
AS31 Alice Springs 22.23 216 P P 19 48 24.7 +1.3
ASAR Alice Springs 22.23 216 P P 19 48 24.5 +1.1
comp=Z,52nm,0.7s,baz=52,slow=9.1,SNR=516
ASAR S S 19 52 21.2 -0.6
comp=Z,20nm,0.7s,baz=31,slow=22,SNR=15
ASAR LR LR 19 57 23.0
comp=Z,136nm,18.1s,baz=46,slow=37
SOEI Soe 23.62 259 P P 19 48 37.2 +0.1
comp=Z,1μmcomp=Z,82nm,0.9s
SOEI Soe 23.62 259 P P 19 48 37.6 +0.5
DZM Mont Dzumac 24.24 134 eP P 19 48 43.8 +1.2
comp=Z,54nm,1.1s
DZM epP pP 19 49 04.7 +1.5
comp=Z,90nm,1.4s
DZM eS S 19 52 54.0 -0.3
comp=Z,223nm,22.9s
DZM eLQ LQ 19 53 50.4
comp=Z,2μm,32.6s
DZM eLR LR 19 54 51.7
comp=Z,747nm,25.9s
DZM Mont Dzumac 24.24 134 P P 19 48 43.1 +0.5
comp=Z,24nm,1.0s,baz=259,slow=12,SNR=12
ARMA Armidale 24.77 172 P P 19 48 48.6 +1.3
baz=25,SNR=33
ARMA Armidale 24.77 172 P P 19 48 48.7 +1.3
ARMA IAmb IAmb 19 48 50.7
comp=Z,104nm,1.4s
FITZ Fitzroy Crossi 24.84 239 P P 19 48 49.0 +1.0
baz=25,SNR=225
FITZ Fitzroy Crossi 24.84 239 P P 19 48 49.0 +1.0
comp=Z,84nm,0.6s,baz=69,slow=9.9,SNR=296
FITZ S S 19 53 05.2 +1.5
comp=Z,21nm,1.0s,baz=80,slow=19,SNR=6.5
FITZ Fitzroy Crossi 24.84 239 P P 19 48 49.2 +1.3
FITZ IAmb IAmb 19 48 52.5
comp=Z,84nm,0.7s
CMSA Cobar Meteorol 25.69 184 P P 19 48 57.9 +2.3
baz=26,SNR=20
EDFI Ende, Flores 26.04 262 P P 19 48 57.4 -1.7
comp=Z,281nmcomp=Z,12nm,0.7s
STKA Stephens Creek 26.59 192 P P 19 49 04.1 +0.4
baz=27,SNR=106
STKA Stephens Creek 26.59 192 P P 19 49 04.1 +0.4
comp=Z,18nm,0.5s,baz=0.2,slow=8.3,SNR=98
STKA LR LR 19 59 59.1
comp=Z,176nm,18.6s,baz=19,slow=37
STKA Stephens Creek 26.59 192 P P 19 49 04.2 +0.6
WRKA Warakurna 26.74 222 P P 19 49 05.8 +0.6
baz=27,SNR=76
MGCD Mangrove Creek 27.46 174 P P 19 49 12.5 +1.1
baz=28,SNR=7.9
YNG Young 28.38 179 P P 19 49 20.9 +1.3
baz=28,SNR=10
HTT Hallett 28.71 196 P P 19 49 23.6 +1.0
baz=29,SNR=22
BBOO Buckleboo 29.02 201 P P 19 49 25.7 +0.4
baz=29,SNR=16
BBOO Buckleboo 29.02 201 P P 19 49 25.7 +0.4
CAN Canberra 29.41 178 P P 19 49 29.7 +0.9
CAN IAmb IAmb 19 49 30.5
comp=Z,28nm,0.7s
CNB Canberra Magne 29.42 177 P P 19 49 30.6 +1.7
baz=30,SNR=13
FORT Forrest 31.01 214 P P 19 49 43.5 +0.6
baz=31,SNR=42
FORT Forrest 31.01 214 P P 19 49 43.5 +0.6
MILA Mila 31.15 178 P P 19 49 45.4 +1.3
baz=31,SNR=7.0
PSA00 Pilbara Seismi 31.26 237 P P 19 49 45.7 +0.5
PSA00 IAmb IAmb 19 49 46.7
comp=Z,34nm,0.8s
TOO Toolangi 31.70 183 P P 19 49 50.4 +1.4
baz=32,SNR=5.9
TOO Toolangi 31.70 183 P P 19 49 47.2 -1.8
MEEK Meekatharra 34.68 230 P P 19 50 15.9 +0.8
baz=35,SNR=38
KMBL Kambalda 35.16 220 P P 19 50 19.8 +0.7
baz=35,SNR=11
GIRL Giralia 36.44 239 P P 19 50 30.1 0.0
baz=36,SNR=4.1
GIRL Giralia 36.44 239 P P 19 50 32.1 +2.0
UGM Wanagama 37.04 265 P P 19 50 34.2 -1.2
OUZ Omahuta 37.73 144 P P 19 50 42.3 +1.4
MORW Morawa 37.89 229 P P 19 50 43.1 +0.8
baz=38,SNR=20
MORW Morawa 37.89 229 P P 19 50 42.9 +0.5
KLBR Kellerberrin 38.06 224 P P 19 50 44.0 +0.3
baz=38,SNR=54
BLDU Ballidu 38.24 226 P P 19 50 45.8 +0.6
baz=38,SNR=7.6
YULB Yu-li 38.86 319 P P 19 50 50.4 -0.1
YULB IAmb IAmb 19 50 55.2
comp=Z,98nm,1.9s
NWAO Narrogin (SRO) 39.21 223 P P 19 50 53.8 +0.6
baz=39,SNR=20
NWAO Narrogin (SRO) 39.21 223 P P 19 50 53.2 0.0
NWAO IAmb IAmb 19 50 54.6
comp=Z,26nm,0.7s
NWAO Narrogin (SRO) 39.21 223 IAmb IAmb 19 50 54.6
comp=Z,20nm,0.7s
NACB Ninganchiao 39.22 320 P P 19 50 53.9 +0.4
NACB IAmb IAmb 19 51 24.7
comp=Z,33nm,1.1s
TPUB Ta-pu 39.23 318 P P 19 50 52.9 -0.7
TPUB IAmb IAmb 19 50 54.6
comp=Z,24nm,0.8s
MUN Mundaring 39.36 225 P P 19 50 55.2 +0.7
baz=39,SNR=12
YHNB Yeheng 39.72 321 P P 19 50 58.8 +1.2
RKGY Rocky Gully 40.40 221 P P 19 51 04.4 +1.3
baz=40,SNR=9.8
AFI Afiamalu 40.60 105 LR LR 20 07 01.0
comp=Z,36nm,19.9s,baz=270,slow=35
QZH Quanzhou 41.71 318 ⇑P P 19 51 14.3 +0.4
URZ Urewera 41.87 145 P P 19 51 15.6 +0.5
comp=Z,9.1nm,0.6s,baz=241,slow=5.1,SNR=5.5
URZ Urewera 41.87 145 IAmb IAmb 19 51 49.6
comp=Z,111nm,1.9s
JNU Nakatsue 41.89 339 P P 19 51 16.4 +1.1
JNU IAmb IAmb 19 51 17.0
comp=Z,19nm,0.8s
RPZ Rata Peaks 42.97 155 P P 19 51 25.0 +1.0
RPZ IAmb IAmb 19 51 26.4
comp=Z,37nm,0.7s
MJAR Matsushiro Arr 43.05 349 P P 19 51 25.0 +0.3
comp=Z,18nm,1.0s,baz=168,slow=8.2,SNR=38
MJAR PcP PcP 19 53 12.3 -0.8
comp=Z,2.3nm,0.8s,baz=175,slow=2.9,SNR=4.7
MAJO Matsushiro 43.05 349 P P 19 51 25.0 +0.3
MAJO IAmb IAmb 19 51 26.5
comp=Z,44nm,1.2s
MAT Matsushiro 43.05 349 P P 19 51 25.1 +0.4
MJB9 Matsu-Tunnel 43.06 349 P P 19 51 25.2 +0.5
MJB9 IAmb IAmb 19 51 26.5
comp=Z,45nm,1.2s
HKPS Hong Kong Po S 43.15 311 P P 19 51 24.8 -1.0
NJ2 Nanjing 46.64 326 eP P 19 51 54.4 +1.2
NJ2 pmax pmax
comp=Z,20nm,0.6s
KSRS Korea Array 46.84 338 P P 19 51 55.4 +0.8
comp=Z,5.5nm,0.8s,baz=153,slow=8.7,SNR=26

KSRS PcP PcP 19 53 26.1 0.0
comp=Z,2.9nm,0.9s,baz=165,slow=4.3,SNR=7.9
KSRS LR LR 20 10 22.3
comp=Z,62nm,18.9s,baz=156,slow=34
KS19 Wonju Array Si 46.90 338 P P 19 51 55.2 0.0
KS19 lAmb lAmb 19 53 23.4
comp=Z,54nm,1.8s
WHN Wuhan 48.26 320 P P 19 52 06.1 +0.3
DL2 Dalian 50.64 334 P P 19 52 24.8 +1.1
DL2 pmax pmax
comp=Z,23nm,0.8s
USRK Ussuriysk Ar. 51.76 346 P P 19 52 33.2 +1.3
comp=Z,5.0nm,0.7s,baz=171,slow=7.2,SNR=13
USRK PcP PcP 19 53 43.6 -0.3
comp=Z,2.1nm,0.6s,baz=195,slow=4.1,SNR=4.6
USRK LR LR 20 11 38.0
comp=Z,37nm,21.9s,baz=168,slow=32
MDJ Mudanjiang 52.77 344 P P 19 52 40.3 +0.8
MDJ pmax pmax
comp=Z,7.0nm,0.9s
MDJ pmax pmax
comp=Z,150nm,4.6s
CN2 Changchun 53.32 340 eP P 19 52 44.8 +1.3
CN2 pmax pmax
comp=Z,10.0nm,0.5s
KMI Kunming 53.48 307 P P 19 52 46.1 +0.7
KMI pP pP 19 53 13.8 +4.7
KMI sP sP 19 53 27.1 +7.0
KMI pmax pmax
comp=Z,5.0nm,0.7s
KMI pmax pmax
comp=Z,72nm,3.5s
CMAR Chiang Mai Arr 53.84 298 P P 19 52 48.4 +0.6
comp=Z,1.6nm,0.9s,baz=118,slow=6.0,SNR=12
CMAR LR LR 20 13 56.6
comp=Z,34nm,20.9s,baz=110,slow=34
XAN Xi'an 54.02 320 P P 19 52 48.6 -0.3
XAN pP pP 19 53 14.8 +2.1
XAN pmax pmax
comp=Z,22nm,1.0s
XAN pmax pmax
comp=Z,84nm,4.6s
BJI Beijing 54.10 330 P P 19 52 49.3 0.0
BJI pmax pmax
comp=Z,7.0nm,0.9s
CD2 Chengdu 55.69 314 P P 19 53 01.8 +0.8
CD2 pmax pmax
comp=Z,30nm,0.5s
LZH Lanzhou 58.56 319 eP P 19 53 21.6 +0.3
LZH pP pP 19 53 49.9 +4.5
LZH sP sP 19 54 01.8 +5.5
LZH ePP PP 19 55 30.6 -1.4
LZH pmax pmax
comp=Z,20nm,1.0s
LZH pmax pmax
comp=Z,94nm,5.0s
PETK Petropavlovsk- 59.27 7 P P 19 53 27.4 +1.8
comp=Z,8.5nm,0.7s,baz=172,slow=8.2,SNR=11
PPT2 Papeete2 62.21 107 eS S 20 02 02.6 -2.3
comp=Z,88nm,24.2s
PPT2 Papeete2 62.21 107 eLR LR 20 12 21.3
comp=Z,88nm,25.5s
TBI Tubuai 62.74 113 eLR LR 20 12 34.9
comp=Z,211nm,40.0s
GTA Gaotai 63.08 320 ⇑P P 19 53 52.0 +0.2
GTA pP pP 19 54 18.9 +2.7
GTA sP PcP 19 54 31.9 +3.2
GTA pmax pmax
comp=Z,10.0nm,1.0s
GTA pmax pmax
comp=Z,44nm,6.3s
GTA LR LR
comp=Z,68nm,16.5s
GTA LR LR
comp=Z,62nm,16.5s
GTA LR LR
comp=Z,66nm,16.2s
ULN Ulaanbaatar 64.30 331 P P 19 54 00.6 +0.9
ULN lAmb lAmb 19 54 01.5
comp=Z,18nm,0.8s
SONM Songino Array 64.60 330 P P 19 54 02.2 +0.5
comp=Z,8.0nm,0.7s,baz=148,slow=6.9,SNR=89
SONM pP pP 19 54 27.5 +1.2
comp=Z,2.7nm,0.8s,baz=147,slow=6.2,SNR=2.8
SONM PKP2bc 20 22 53.2
comp=Z,1.0nm,1.0s,baz=329,slow=1.7,SNR=5.7
TAPN Taplejung 66.68 303 eP P 19 54 15.3 -0.4
comp=Z,5.0nm,0.6s
ODAN Odare 66.79 302 eP P 19 54 16.1 -0.1
comp=Z,13nm,0.8s
RAMN Ramite 67.48 302 eP P 19 54 20.5 -0.2
comp=Z,7.3nm,0.6s
JIRN Jiri 68.06 303 eP P 19 54 24.2 -0.2
comp=Z,12nm,0.6s
GUN Gumba 68.40 303 eP P 19 54 26.3 -0.2
comp=Z,11nm,0.4s
TLY Talaya 68.52 332 LR LR 20 23 46.9
comp=Z,51nm,18.5s,baz=145,slow=35
PKI Pulchoki 68.69 302 eP P 19 54 27.7 -0.6
PKIN Phulchoki 68.70 302 eP P 19 54 27.3 -1.0
KKN Kakani 68.86 303 eP P 19 54 28.9 -0.4
comp=Z,11nm,0.7s
DMN Daman 68.95 302 eP P 19 54 29.6 -0.3
comp=Z,15nm,0.7s
YAK Yakutsk 69.05 351 LR LR 20 25 08.6
comp=Z,29nm,18.1s,baz=164,slow=36
GKN Gorkha 69.47 303 eP P 19 54 32.7 -0.2
comp=Z,16nm,0.6s
DANN Dangsing 70.31 303 eP P 19 54 37.5 -0.8
comp=Z,15nm,0.6s
VNDA Vanda 72.08 177 P P 19 54 48.4 +0.8
comp=Z,9.7nm,0.6s,baz=337,slow=6.8,SNR=16
VNDA LR LR 20 22 50.8
comp=Z,34nm,20.8s,baz=349,slow=33
WMQ Urumqi 73.14 319 eP P 19 54 54.8 +0.2
WMQ pP pP 19 55 22.1 +2.4
WMQ pmax pmax
comp=Z,8.0nm,1.1s
WMQ pmax pmax
comp=Z,71nm,4.1s
MK31 Makanchi Array 77.83 320 P P 19 55 20.2 -1.1
MKAR Makanchi Array 77.83 320 P P 19 55 20.9 -0.4
comp=Z,6.4nm,0.8s,baz=102,slow=7.2,SNR=56
MAKZ Makanchi 78.03 320 P P 19 55 21.8 -0.7
TIXI Tiksi 78.28 354 P P 19 55 22.6 -0.6
ZAA0 Zalesovo Array 79.25 328 P P 19 55 28.2 -0.7
ZALV Zalesovo Beam 79.25 328 P P 19 55 27.6 -1.3
comp=Z,8.0nm,0.7s,baz=107,slow=5.2,SNR=33
ZALV LR LR 20 30 43.1
comp=Z,38nm,19.2s,baz=112,slow=36
KSH Kashi 79.81 312 P P 19 55 30.1 -2.4
KSH PP PP 19 58 36.3 +1.1
KSH S S 20 05 18.0 -10
KSH pmax pmax
comp=Z,16nm,1.3s
KSH pmax pmax
comp=Z,310nm,5.6s
KSH LR LR
comp=Z,210nm,5.4s
KSH LR LR
comp=Z,200nm,5.8s
KSH LR LR
comp=Z,370nm,5.5s
NIL Nilore 80.44 305 P P 19 55 35.7 -0.1
BOOM Boomskoye usch 80.68 315 P P 19 55 36.9 -0.2
KURK Kurchatov 81.51 323 P P 19 55 39.3 -1.8
MLY Manley 83.63 22 P P 19 55 52.0 +0.2
MLY lAmb lAmb 19 58 13.2
comp=Z,38nm,2.0s
QSPA South Pole Qui 84.18 180 P P 19 55 54.8 0.0
QSPA lAmb lAmb 19 55 55.8
comp=Z,27nm,1.0s
CCB Clear Creek Bu 84.57 23 P P 19 55 55.6 -0.9
CCB lAmb lAmb 19 56 59.5
comp=Z,36nm,2.0s
TCOL CIGO, UAF Yank 84.65 23 P P 19 55 56.5 -0.4
baz=244
HDA Harding Lake 84.81 23 P P 19 55 57.0 -0.8
baz=245
POKR Poker Flat Res 84.92 23 P P 19 55 57.7 -0.6
baz=245
IL31 84.98 23 P P 19 55 56.9 -1.7
IL31 lAmb lAmb 19 55 58.1
comp=Z,31nm,1.7s
ILAR Eielson Array 84.98 23 P P 19 55 57.3 -1.3
comp=Z,4.8nm,0.6s,baz=251,slow=4.8,SNR=86
ILAR pP pP 19 56 23.0 -1.6
comp=Z,6.4nm,1.1s,baz=256,slow=5.0,SNR=6.3
ILAR LR LR 20 27 33.7
comp=Z,38nm,21.5s,baz=276,slow=31
NRIK Noril'sk 85.31 342 P P 19 55 59.4 -0.8
comp=Z,6.3nm,0.9s,baz=121,slow=3.4,SNR=10
NRIK LR LR 20 33 33.5
comp=Z,30nm,20.4s,baz=83,slow=35
TOLK Toolik Lake Re 85.74 19 P P 19 56 03.2 +0.9
baz=242
DAWY Dawson 87.75 25 P P 19 56 11.9 -0.4
DAWY lAmb lAmb 19 56 42.0
comp=Z,18nm,1.2s
EPYK Eagle Plains 89.50 23 P P 19 56 20.4 0.0
baz=254
ABKAR Akbulak array 92.93 319 P P 19 56 33.0 -3.7
I03D Drain, OR 93.14 47 P P 19 56 38.0 +0.3
baz=265
GEYT Alibeck 93.25 308 P P 19 56 37.1 -1.3
comp=Z,1.3nm,0.5s,baz=116,slow=10,SNR=4.4
O02D Mt. Diablo Mer 93.26 50 P P 19 56 38.5 0.0
baz=265
M02C Callahan 93.31 49 P P 19 56 39.7 +1.1
baz=265
L04D Klamath Falls 93.78 48 P P 19 56 40.4 -0.5
baz=266
O03E Paynes Creek 94.02 50 P P 19 56 41.9 -0.1
baz=266
NVAR Mina Array Bea 96.63 52 P P 19 56 53.9 -0.2
comp=Z,0.7nm,0.8s,baz=248,slow=7.8,SNR=5.3
CWC Cottonwood Cre 96.73 54 P P 19 56 54.0 -0.6
baz=268
BFSC Mount Baldy Ra 96.99 56 P P 19 56 54.8 -1.0
baz=268
LRMC Laurel Mtn Rad 97.02 55 P Pdif 19 56 56.3 +0.4
baz=268
MPMC Manual Prospec 97.19 54 P P 19 56 56.8 +0.1
baz=268
NEW Newport 97.68 42 P P 19 56 58.3 -0.1
baz=270
TPFO Pinon Flats 97.97 57 P P 19 56 59.1 -1.0
baz=268
HEC Hector,Ludlow 98.10 56 P P 19 57 00.2 -0.4
baz=269
TPNV Topopah Spring 98.21 54 P Pdif 19 57 01.9 +0.6
baz=269
YKA Yellowknife Ar 98.62 28 P P 19 57 02.0 -0.2
comp=Z,0.8nm,0.8s,baz=268,slow=4.9,SNR=9.3
YKA pP pP 19 57 27.8 -1.1
comp=Z,0.7nm,0.9s,baz=274,slow=4.9,SNR=4.3
YKA PKiKP PKiKP 20 01 32.1 -1.2
comp=Z,0.3nm,0.8s,baz=286,slow=1.2,SNR=4.7
YKA PKKPbc PKKPbc 20 13 29.6 -4.0
comp=Z,0.5nm,0.6s,baz=90,slow=2.7,SNR=8.4
ARCES ARCESS Array B 106.30 342 PKKPbc PKKPbc 20 13 07.6 -3.6
comp=Z,2.6nm,0.8s,baz=276,slow=2.3,SNR=5.3
ECSD EROS Data Cent 112.38 45 P PKiKP 20 01 58.6 -0.7
baz=284
W39A Magazine 116.46 54 P PKPdf 20 02 06.5 -0.8
baz=282
U40A Yellville 116.94 52 P PKPdf 20 02 07.8 -0.5
baz=284
JFWS Jewell Farm 117.07 44 P PKPdf 20 02 06.6 -1.7
baz=289
W41B Gary Mavity, V 117.69 53 P PKPdf 20 02 09.0 -0.7
baz=283
CCM Cathedral Cave 117.76 50 P PKPdf 20 02 08.9 -0.9
baz=286
HDIL Hopedale 118.49 47 P PKPdf 20 02 10.9 -0.2
baz=288
D47A Chapleau 120.15 38 P PKPdf 20 02 13.2 -0.9
baz=297
E47A Iron Bridge 120.31 39 P PKPdf 20 02 13.7 -0.8
baz=296
D48A Paudash Townsh 120.88 37 P PKPdf 20 02 12.7 -2.8
baz=298
BRG Berggiesshubel 120.94 328 e(P) PKPdf 20 02 14.7 -0.8
comp=Z,5.4nm,1.2s
N47A Urbana 120.95 45 P PKPdf 20 02 15.1 -0.8
baz=291
E48A Lockeyer 120.99 38 P PKPdf 20 02 14.7 -1.0
baz=298
CLL Collm 121.19 329 ePKiKP PKPdf 20 02 16.0 +0.1
CLL ePP PP 20 03 47.0 0.0
K48A Perry 121.31 43 P PKPdf 20 02 16.2 -0.2
baz=294
F49A Sandfield 121.39 39 P PKPdf 20 02 15.6 -0.9
baz=297
N48A Decatur 121.43 45 P PKPdf 20 02 15.7 -1.0
baz=292
WCI Wyandotte Cave 121.43 48 P PKPdf 20 02 16.2 -0.6
baz=289
L48A N Adams 121.44 44 P PKPdf 20 02 16.1 -0.7
baz=293
O48A Farmland 121.56 46 P PKPdf 20 02 16.6 -0.4
baz=291
Q48A North Vernon 121.61 47 P PKPdf 20 02 16.2 -1.0
baz=290
P48A Milroy 121.65 47 P PKPdf 20 02 16.6 -0.6
baz=291
I49A Point Hope 121.70 41 P PKPdf 20 02 16.1 -1.1
baz=296
PLCA Paso Flores 121.87 146 PKP PKPdf 20 02 18.0 +0.2
comp=Z,1.2nm,0.4s,baz=268,slow=3.6,SNR=15
M49A Liberty Center 121.93 44 P PKPdf 20 02 17.0 -0.6
baz=293
MATQ Matagami 121.95 33 P PKPdf 20 02 15.9 -1.6
baz=304
N49A Columbus Grove 122.00 45 P PKPdf 20 02 17.0 -0.8
baz=293
D50A G1974 Best Tow 122.06 36 P PKPdf 20 02 16.7 -1.0
baz=300
KHC Kasperske Hory 122.08 326 ePKPDF PKPdf 20 02 17.0 -0.8
P49A Miami Univ. Ec 122.14 46 P PKPdf 20 02 17.4 -0.7
baz=291
GERES GERESS Array B 122.17 326 PKP PKPdf 20 02 17.3 -0.8
comp=Z,0.7nm,0.7s,baz=80,slow=1.6,SNR=7.8
GERES PKKPbc PKKPab 20 12 14.5 -0.7
comp=Z,0.3nm,0.5s,baz=228,slow=3.4,SNR=4.5
O49A Covington 122.17 46 P PKPdf 20 02 17.4 -0.8
baz=292
S49A Springfield 122.33 49 P PKPdf 20 02 16.8 -1.8
baz=290
T49A Edmonton 122.37 49 P PKPdf 20 02 17.5 -1.2
baz=289
W49A Belvidere 122.43 52 P PKPdf 20 02 17.9 -1.0
baz=288
LRAL Lakeview Retre 122.44 54 P PKPdf 20 02 18.2 -0.7
baz=286
V49A McMinnville 122.52 51 P PKPdf 20 02 18.0 -1.0
baz=288
E51A G1948 Merrick 122.58 37 P PKPdf 20 02 17.9 -0.9
baz=300
M50A Fremont 122.61 44 P PKPdf 20 02 18.5 -0.5
baz=294
F51A Arnstein 122.63 38 P PKPdf 20 02 18.0 -0.9
baz=299
O50A Cable 122.69 45 P PKPdf 20 02 18.5 -0.7
baz=293
LSQQ Lebel-sur-Quev 122.70 33 P PKPdf 20 02 17.3 -1.6
baz=304
P50A Jamestown 122.77 46 P PKPdf 20 02 18.4 -1.0
baz=292
N50A Nevada 122.78 45 P PKPdf 20 02 18.8 -0.6
baz=293
R50A Paris 122.87 48 P PKPdf 20 02 18.8 -0.8
baz=291
T50A Nancy 122.92 49 P PKPdf 20 02 19.1 -0.6
baz=290
I51A Listowel 122.93 40 P PKPdf 20 02 18.9 -0.6
baz=297
S50A Richmond 123.03 48 P PKPdf 20 02 19.2 -0.7
baz=290
F52A Sundridge 123.05 38 P PKPdf 20 02 19.1 -0.6
baz=300
ACSO Alum Creek Sta 123.11 45 P PKPdf 20 02 19.1 -0.9
baz=293
W50A Signal Mountai 123.15 51 P PKPdf 20 02 19.2 -1.1
baz=288
E52A Mattawa 123.21 37 P PKPdf 20 02 19.4 -0.6
baz=301
Z50A Ashland 123.25 54 P PKPdf 20 02 19.6 -0.9
baz=287
H52A Wyevale 123.26 39 P PKPdf 20 02 19.7 -0.4
baz=299
N51A Ashland 123.26 44 P PKPdf 20 02 19.5 -0.7
baz=294
Q51A Peebles 123.31 47 P PKPdf 20 02 19.8 -0.7
baz=292
P51A Williamsport 123.35 46 P PKPdf 20 02 19.3 -1.2
baz=293
D53A Lac Vacive, Po 123.36 36 PKPdf 20 02 19.0 -1.3
D53A Lac Vacive, Po 123.36 36 P PKPdf 20 02 18.8 -1.5
baz=302
O51A Pataskala 123.41 45 P PKPdf 20 02 19.7 -0.8
baz=294
R51A Hillsboro 123.41 47 P PKPdf 20 02 20.2 -0.4
baz=292
K52A Tillsonburg 123.59 41 P PKPdf 20 02 20.6 -0.3
baz=297
T51A Gray 123.61 49 P PKPdf 20 02 20.7 -0.3
baz=290
S51A Beattyville 123.64 48 P PKPdf 20 02 20.6 -0.5
baz=291
V51A Loudon 123.70 50 P PKPdf 20 02 20.3 -1.0
baz=289
X51A Calhoun 123.70 52 P PKPdf 20 02 20.1 -1.2
baz=288
ALGO Algonquin Park 123.74 37 P PKPdf 20 02 20.2 -0.8
baz=301
SCHQ Schefferville 123.74 23 PKP PKPdf 20 02 20.1 -0.7
comp=Z,2.5nm,0.7s,baz=8.0,slow=1.9,SNR=8.1
E53A Dumoine, Ponti 123.75 36 P PKPdf 20 02 20.1 -1.0
baz=302
N52A McGinn's Farm, 123.78 44 P PKPdf 20 02 20.9 -0.3
baz=295
G53A Haliburton 123.81 38 P PKPdf 20 02 20.2 -1.0
baz=300
D54A Lac Fusel, La 123.92 35 P PKPdf 20 02 19.7 -1.7
baz=303
P52A Corning 123.95 45 P PKPdf 20 02 20.8 -0.8
baz=294
G54A Lake Saint Pet 124.00 38 P PKPdf 20 02 20.8 -0.8
baz=301
E54A Lac Daplat, Po 124.00 36 P PKPdf 20 02 20.4 -1.1
baz=302
S52A Salyersville 124.01 48 P PKPdf 20 02 21.3 -0.5
baz=292
H53A Bobcaygeon 124.11 39 P PKPdf 20 02 21.0 -0.7
baz=300
Q52A Bidwell 124.12 46 P PKPdf 20 02 21.0 -1.0
baz=293
M53A Wl Miller and 124.21 43 P PKPdf 20 02 21.3 -0.8
baz=296
W52A Murphy 124.26 51 P PKPdf 20 02 22.1 -0.3
baz=289
V52A Sevierville 124.27 50 P PKPdf 20 02 22.6 +0.2
baz=290
O53A New Philadelph 124.34 44 P PKPdf 20 02 21.9 -0.4
baz=295
N53A Lisbon 124.37 44 P PKPdf 20 02 21.9 -0.5
baz=295
P53A Whipple 124.53 45 P PKPdf 20 02 22.1 -0.7
baz=294
Y52A Lilburn 124.55 53 P PKPdf 20 02 23.1 +0.2
baz=288
E55A Montcerf-Lytto 124.65 36 P PKPdf 20 02 21.8 -0.9
baz=303
T53A Wise 124.67 49 P PKPdf 20 02 23.2 +0.1
baz=292
D55A Sainte-Anne-du 124.67 35 P PKPdf 20 02 21.5 -1.3
baz=304
Q53A Leroy 124.69 46 P PKPdf 20 02 22.3 -0.7
baz=294
L54A Sinclairville 124.76 41 P PKPdf 20 02 22.4 -0.8
baz=298
W53A Cullowhee 124.83 51 P PKPdf 20 02 23.9 +0.3
baz=290
U53A Fall Branch 124.86 49 P PKPdf 20 02 22.8 -0.7
baz=291
M54A Oil Creek Stat 124.86 42 P PKPdf 20 02 22.6 -0.8
baz=297
G55A Calabogie 124.90 37 P PKPdf 20 02 22.2 -1.0
baz=302
V53A Saluda 124.92 50 P PKPdf 20 02 23.7 0.0
baz=290
O54A Avella 124.95 44 P PKPdf 20 02 23.2 -0.3
baz=295
K54A Basiliko Farm, 124.99 41 P PKPdf 20 02 22.7 -0.9
baz=298
D56A ZEC Mazanza, M 125.06 34 P PKPdf 20 02 22.1 -1.4
baz=305
P54A Burton 125.13 45 P PKPdf 20 02 23.2 -0.7
baz=295
Q54A Coxs Mills 125.13 46 P PKPdf 20 02 23.5 -0.4
baz=294
GOGA Godfrey 125.16 53 P PKPdf 20 02 24.1 -0.1
baz=288
E56A St. Veronique 125.19 35 P PKPdf 20 02 22.6 -1.2
baz=304
S54A Dingess, Beckl 125.26 47 P PKPdf 20 02 23.6 -0.6
baz=293
K55A Perry 125.34 40 P PKPdf 20 02 23.2 -1.0
baz=299
T54A Tazewell 125.35 48 P PKPdf 20 02 23.6 -0.9
baz=292
L55A Hinsdale 125.36 41 P PKPdf 20 02 23.3 -1.0
baz=298
M55A Ridgway 125.48 42 P PKPdf 20 02 23.8 -0.7
baz=298
V54A Nebo 125.54 50 P PKPdf 20 02 24.7 -0.1
baz=291
MCWV Mont Chateau 125.55 44 P PKPdf 20 02 24.2 -0.5
baz=296
D57A Chemin Vers le 125.56 34 P PKPdf 20 02 23.5 -1.0
baz=306
W54A Cherokee Point 125.61 51 P PKPdf 20 02 24.7 -0.3
baz=291
N55A Marion Center 125.64 43 P PKPdf 20 02 24.3 -0.6
baz=297
X54A Belton 125.65 51 P PKPdf 20 02 25.3 +0.2
baz=290
TIGA Tifton 125.66 55 P PKPdf 20 02 25.4 +0.3
baz=287
Q55A Buckhannon 125.66 45 P PKPdf 20 02 24.5 -0.5
baz=295
O55A Ligonier 125.68 44 P PKPdf 20 02 24.0 -1.0
baz=296
E57A Chemin Saint G 125.77 35 P PKPdf 20 02 23.9 -1.0
baz=305
J56A Wolcott 125.84 39 P PKPdf 20 02 24.5 -0.6
baz=301
M56A Emporium 125.86 42 P PKPdf 20 02 24.5 -0.7
baz=298
S55A Lewisburg 125.86 47 P PKPdf 20 02 24.8 -0.6
baz=294
R55A Marlinton 125.93 46 PKPdf 20 02 25.6 +0.1
R55A Marlinton 125.93 46 P PKPdf 20 02 25.0 -0.6
baz=294
U55A TA2, Sparta 125.95 49 P PKPdf 20 02 25.1 -0.6
baz=292
L56A Greenwood 125.95 41 P PKPdf 20 02 24.9 -0.5
baz=299
LATQ La Tuque 125.95 33 P PKPdf 20 02 23.8 -1.4
baz=307
G57A Newington 126.02 36 P PKPdf 20 02 24.6 -0.7
baz=304
N56A West Decatur 126.05 42 P PKPdf 20 02 25.0 -0.7
baz=298
V55A Taylorsville 126.07 49 P PKPdf 20 02 25.0 -0.8
baz=292
D58A Chemin du LacG 126.07 33 P PKPdf 20 02 24.4 -1.1
baz=307
H57A Richville 126.12 37 P PKPdf 20 02 24.9 -0.8
baz=303
BLA Blacksburg 126.14 47 P PKPdf 20 02 25.0 -0.9
baz=293
O56A Blue Knob Stat 126.16 43 P PKPdf 20 02 25.4 -0.5
baz=297
KMSC Kings Mountain 126.24 50 P PKPdf 20 02 26.2 +0.1
baz=291
X55A Gracelyn & Ava 126.25 51 P PKPdf 20 02 26.5 +0.4
baz=291
Y55A Saluda 126.25 52 P PKPdf 20 02 26.2 0.0
baz=290
E58A La Victoria 126.28 34 P PKPdf 20 02 25.1 -0.8
baz=306
P56A Dayton Farm, R 126.31 44 P PKPdf 20 02 25.8 -0.4
baz=296
K57A Scipio Center 126.33 40 P PKPdf 20 02 25.3 -0.9
baz=301
SSPA Standing Stone 126.45 43 P PKPdf 20 02 25.6 -0.8
baz=298
L57A Andrews Acres 126.48 41 P PKPdf 20 02 25.9 -0.5
baz=300
T56A Rocky Mt 126.50 48 P PKPdf 20 02 26.4 -0.2

	baz=294						
G58A	Ormstown	126.54	36	P	PKPdf	20 02 25.6	-0.8
	baz=304						
N57A	Milroy	126.62	42	P	PKPdf	20 02 25.5	-1.2
	baz=298						
M57A	Sunshine Farm,	126.62	41	P	PKPdf	20 02 25.7	-1.0
	baz=299						
V56A	Mocksville	126.63	49	P	PKPdf	20 02 26.7	-0.1
	baz=292						
D59A	Saint-Raymond	126.70	33	P	PKPdf	20 02 26.6	-0.1
	baz=308						
X56A	White Oak	126.70	51	P	PKPdf	20 02 26.8	-0.3
	baz=291						
J58A	Remsen	126.78	38	P	PKPdf	20 02 26.4	-0.6
	baz=302						
K58A	Earlville	126.86	39	P	PKPdf	20 02 26.5	-0.7
	baz=301						
H58A	Gabriels	126.88	37	P	PKPdf	20 02 26.6	-0.6
	baz=304						
BINY	Binghamton	126.94	40	P	PKPdf	20 02 27.1	-0.3
	baz=301						
M58A	Price's Panora	127.05	41	P	PKPdf	20 02 27.2	-0.3
	baz=300						
T57A	Hurt	127.08	47	P	PKPdf	20 02 27.2	-0.5
	baz=294						
G59A	Clarenceville	127.09	36	P	PKPdf	20 02 26.7	-0.7
	baz=305						
L58A	Harry Jones Me	127.10	40	P	PKPdf	20 02 26.9	-0.8
	baz=301						
N58A	Sunbury	127.14	42	P	PKPdf	20 02 27.2	-0.5
	baz=299						
V57A	Coltrane Farms	127.14	49	P	PKPdf	20 02 27.3	-0.5
	baz=293						
J59A	Piesco	127.20	38	P	PKPdf	20 02 27.1	-0.7
	baz=303						
D60A	Saint Jean D'O	127.25	33	P	PKPdf	20 02 26.9	-0.8
	baz=309						
W57A	Gilead	127.26	50	P	PKPdf	20 02 28.1	0.0
	baz=292						
F60A	Warwick	127.26	34	P	PKPdf	20 02 27.1	-0.6
	baz=307						
E60A	Ste Agathe de	127.30	33	P	PKPdf	20 02 27.1	-0.7
	baz=308						
O58A	Lewisberry	127.34	43	P	PKPdf	20 02 27.8	-0.3
	baz=298						
Q58A	Fox Den Farm,	127.37	44	P	PKPdf	20 02 27.6	-0.6
	baz=297						
Z57A	Bowman	127.38	52	P	PKPdf	20 02 28.4	0.0
	baz=290						
P58A	Pank, Wackersv	127.38	44	P	PKPdf	20 02 27.7	-0.5
	baz=298						
I59A	Olmsteadville	127.40	37	P	PKPdf	20 02 27.6	-0.6
	baz=304						
L59A	Walton	127.54	40	P	PKPdf	20 02 27.8	-0.7
	baz=302						
G60A	Masonville	127.56	35	P	PKPdf	20 02 27.7	-0.7
	baz=306						
T58A	Grand View Acr	127.63	47	P	PKPdf	20 02 28.1	-0.6
	baz=295						
M59A	Waymart	127.63	40	P	PKPdf	20 02 27.6	-1.0
	baz=301						
V58A	Windy Hill, Pi	127.67	49	P	PKPdf	20 02 28.4	-0.5
	baz=294						
N59A	State Game Lan	127.72	41	P	PKPdf	20 02 28.8	0.0
	baz=300						
I60A	Shoreham	127.73	37	P	PKPdf	20 02 28.6	-0.1
	baz=304						
O59A	Robesonia	127.75	42	P	PKPdf	20 02 27.6	-1.3
	baz=299						
E61A	Lac Etchemin	127.78	33	P	PKPdf	20 02 28.6	-0.2
	baz=309						
F61A	St Evariste	127.79	34	P	PKPdf	20 02 28.5	-0.3
	baz=308						
U58A	Oxford	127.84	48	P	PKPdf	20 02 29.4	+0.2
	baz=294						
Z58A	St. Stephen	128.06	52	P	PKPdf	20 02 29.8	+0.2
	baz=291						
D62A	Allapoint, All	128.13	31	P	PKPdf	20 02 29.1	-0.3
	baz=311						
H61A	Lyndonville	128.13	36	P	PKPdf	20 02 29.6	+0.1
	baz=306						
N60A	Cedar Hill Far	128.19	41	P	PKPdf	20 02 29.4	-0.3
	baz=301						
O60A	Telford	128.26	42	P	PKPdf	20 02 29.5	-0.3
	baz=300						
LBNH	Lisbon	128.30	36	P	PKPdf	20 02 29.9	+0.1
	baz=306						
I61A	Oroboro, Fairl	128.32	36	P	PKPdf	20 02 29.8	-0.1
	baz=306						
T59A	Double "B" Far	128.33	47	P	PKPdf	20 02 29.7	-0.4
	baz=296						
V59A	Middlesex	128.33	48	P	PKPdf	20 02 30.0	-0.1
	baz=294						
P60A	Greenville	128.36	42	P	PKPdf	20 02 29.7	-0.3
	baz=300						
K61A	Williamstown	128.40	38	P	PKPdf	20 02 30.2	+0.1
	baz=304						
J61A	Chester	128.45	37	P	PKPdf	20 02 29.7	-0.4
	baz=305						
L61A	Hillsdale 1, H	128.48	39	P	PKiKP	20 02 31.1	+0.3
	baz=303						
D63A	Stockholm	128.64	31	P	PKPdf	20 02 29.9	-0.4
	baz=312						
M61A	Granite Spring	128.82	40	P	PKPdf	20 02 30.9	0.0
	baz=302						
T60A	Surry	128.84	46	P	PKPdf	20 02 30.7	-0.3
	baz=297						
L61B	Northampton	128.88	38	P	PKPdf	20 02 30.6	-0.4
	baz=304						
E63A	Oxbow	128.88	32	P	PKPdf	20 02 30.5	-0.3
	baz=311						
PAL	Palisades	128.89	40	P	PKPdf	20 02 31.0	0.0
	baz=302						
F63A	Nahmakanta, Br	128.99	33	P	PKPdf	20 02 30.7	-0.4
	baz=310						
G63A	Kingsbury	129.08	34	P	PKPdf	20 02 31.3	+0.1
	baz=309						
ROSC	El Rosal	138.08	89	PKP	PKPdf	20 02 49.7	+0.2
	comp=Z,8.3nm,0.6s,baz=144,slow=5.3,SNR=5.9						
LPAZ	La Paz	138.25	122	PKhKP	PKPpre	20 02 39.4	
	comp=Z,1.1nm,0.6s,baz=1.0,slow=0.8,SNR=5.9						
LPAZ				PKP	PKPdf	20 02 50.2	+0.2
	comp=Z,2.7nm,0.8s,baz=180,slow=1.0,SNR=8.5						
CPUP	Villa Florida	139.85	144	PKP	PKPdf	20 02 52.0	0.0
	comp=Z,3.5nm,0.8s,baz=284,slow=2.8,SNR=5.9						
HUMP	Col San Antoni	144.96	67		PKPbc	20 02 59.9	-0.8
STVI	Saint Thomas	145.72	66	PKPdf	PKPbc	20 03 02.7	+0.2
TOA0	Torodi Ar. Sit	145.79	285		PKPbc	20 03 03.3	0.0
TORD	Torodi Ar. Bea	145.79	285	PKPbc	PKPbc	20 03 02.5	-0.2
	comp=Z,6.7nm,0.5s,baz=53,slow=3.7,SNR=132						
SAML	Samuel	145.84	115		PKPdf	20 03 03.2	+0.4
DBIC	Dimbokro	152.78	273	PKPbc	PKPbc	20 03 21.0	-0.1
	comp=Z,6.3nm,1.0s,baz=134,slow=4.2,SNR=4.9						
DBIC				PKPab	PKPab	20 03 32.6	+0.2
	comp=Z,2.8nm,0.7s,baz=142,slow=5.0,SNR=4.9						
BDFB	Brasilia	153.58	144	PKP	PKPdf	20 03 14.2	-1.0
	comp=Z,3.7nm,0.9s,baz=138,slow=2.6,SNR=4.4						
BDFB				PKPbc	PKPbc	20 03 22.9	0.0
	comp=Z,6.5nm,0.5s,baz=184,slow=2.3,SNR=14						
BDFB				PKPab	PKPab	20 03 35.2	-0.4
	comp=Z,14nm,0.8s,baz=186,slow=3.8,SNR=11						

JMA **23** *20:24:37.2±0.1, 22°.74N×121°.47E, h9km±3km, M3.5*
TAP **23** *20:24:38.0, 22°.66N×121°.31E, h32km, ML3.7, B*
ISC 23 20:24:37.5±0.9, 22°.61N±0.02×121°.36E±0.02, h29km±5km, n128, σ1S16/211, 21C-8D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	Lutao	0.15	46	⇓iP	Pn	20 24 44.1	+0.2
	baz=85						
TWH				iS	Sb	20 24 48.5	+1.5
	baz=85						
TTN	Taitung	0.24	307	P	Pn	20 24 45.2	0.0
	baz=303						
TTN				S	Sn	20 24 50.2	+1.5
	baz=303						
TWGBT	Beinan	0.33	309	⇓P	Pb	20 24 45.2	-0.2
	baz=307						
TWGBT				S	Sb	20 24 50.0	-0.7
	baz=307						
TWG	Pinlang	0.34	309	⇓iP	Pb	20 24 45.2	-0.3
	baz=307						
TWG				iS	Sb	20 24 50.1	-0.8
	baz=307						
ECL	Taimali	0.38	269	⇓iP	Pb	20 24 45.5	-0.5
	baz=265						
ECL				S	Sb	20 24 50.8	-1.0
	baz=265						
CHKT	Chengkung	0.49	1	⇑iP	Pb	20 24 47.7	-0.1
	baz=8.0						
CHKT				S	Sb	20 24 54.7	-0.1
	baz=8.0						
TAW	Tawu	0.50	240	⇑iP	Pb	20 24 47.5	-0.3
	baz=236						
TAW				eS	Sb	20 24 54.5	-0.4
	baz=236						
EAST	Anshuo	0.52	245	⇑iP	Pb	20 24 48.0	-0.3
	baz=236						
EAST				eS	Sb	20 24 54.8	-0.9
	baz=236						
FULB	Fuli	0.59	354	⇑iP	Pn	20 24 49.0	-1.0
	baz=347						
FULB				S	Sb	20 24 57.2	-0.4
	baz=347						
LAY	Lan-yu	0.59	163	eP	Pb	20 24 49.5	+0.1
	baz=160						
LAY				eS	Sb	20 24 59.1	+1.5
	baz=160						
ELDTW	Lidau	0.66	331	⇑iP	Pn	20 24 49.3	-1.8
	baz=334						
ELDTW				S	Sb	20 24 56.9	-2.7
	baz=334						
MASBT	Mashibuluo	0.67	271	⇓P	Pn	20 24 50.3	-0.8
	baz=265						
MASBT				S	Sb	20 24 58.3	-1.5
	baz=265						
SSD	Sandimen	0.69	282	⇓iP	Pn	20 24 50.2	-1.1
	baz=277						
SSD				eS	Sn	20 24 58.1	-2.9
	baz=277						
SCZT	Fangliau	0.72	251	eP	Pn	20 24 51.3	-0.5
	baz=245						
SCZT				S	Sn	20 25 00.3	-1.6
	baz=245						
SSPT	Xinbi	0.74	261	eP	Pn	20 24 52.1	+0.1
	baz=255						
SSPT				eS	Sn	20 25 02.0	-0.3
	baz=255						
TWF1	Yuli	0.74	356	⇑iP	Pn	20 24 50.4	-1.7
	baz=352						
SLGT	Liugui	0.76	300	⇓eP	Pn	20 24 51.6	-0.7
	baz=298						
SLGT				eS	Sn	20 25 01.4	-1.5
	baz=298						
YULB	Yu-li	0.78	356	⇑P	Pn	20 24 50.8	-1.8
	baz=352						
STYT	Tauyuan	0.79	315	⇑iP	Pn	20 24 51.9	-0.8
	baz=321						
STYT				eS	Sn	20 25 01.4	-2.1
	baz=321						
SGLT	Jiouru	0.81	278	eP	Pn	20 24 53.4	+0.4
	baz=275						
TSEB	Hengchuen, Pin	0.82	211	eP	Pn	20 24 53.0	-0.2
	baz=209						
TSEB				eS	Sn	20 25 04.7	+0.4
	baz=209						
HEN	Hengchun	0.83	224	eP	Pn	20 24 53.2	-0.1
	baz=207						
HEN				eS	Sn	20 25 03.9	-0.6
	baz=207						
TWKBT	Hengchun	0.83	218	⇑P	Pn	20 24 52.9	-0.4
	baz=205						
TWKBT				eS	Sn	20 25 03.6	-1.0
	baz=205						
TWK1	Hengchun	0.84	218	P	Pn	20 24 52.9	-0.5
	baz=205						
TWK1				S	Sn	20 25 03.6	-1.1
	baz=205						
SGST	Jiashian	0.86	304	⇑iP	Pn	20 24 53.1	-0.5
	baz=309						
SGST				eS	Sn	20 25 04.2	-1.1
	baz=309						
HGSD	Ruisui	0.88	4	⇑P	Pn	20 24 53.3	-0.7
	baz=18						
HGSD				eS	Sn	20 25 05.5	-0.3
	baz=18						
TWM1	Shoushan	0.89	284	⇓iP	Pn	20 24 55.5	+1.4
	baz=280						
TWM1				eS	Sn	20 25 08.0	+1.9
	baz=280						
EHY	Hungye	0.90	358	P	Pn	20 24 52.5	-1.7
	baz=1.0						
WTP	Ta-pu	0.94	313	⇑iP	Pn	20 24 55.1	+0.3
	baz=312						
WTP				eS	Sn	20 25 06.6	-0.6
	baz=312						
WLCH	Liuqiu	0.94	255	eP	Pb	20 24 57.8	+2.5
	baz=237						
SNJT	Kaohsiung City	0.96	279	eP	Pn	20 24 56.2	+1.2
	baz=276						
CHN1	Nanshi	0.96	307	⇑iP	Pn	20 24 55.9	+0.8
	baz=312						
CHN1				eS	Sn	20 25 07.9	+0.1
	baz=312						
TPUB	Ta-pu	0.96	316	⇑P	Pn	20 24 55.5	+0.4
	baz=315						
TPUB				eS	Sn	20 25 07.4	-0.5
	baz=315						
SNST	Tainan City	1.00	308	eP	Pn	20 24 56.7	+1.1
	baz=313						
SNST				eS	Sn	20 25 09.4	+0.6
	baz=313						
CHN4	Tsaushan	1.02	316	eP	Pn	20 24 56.5	+0.6
	baz=316						
CHN4				eS	Sn	20 25 09.7	+0.4
	baz=316						
CHN3	Shinhua	1.03	297	eP	Pn	20 24 57.2	+1.2
	baz=294						
CHN3				eS	Sb	20 25 12.3	+2.4
	baz=294						
ALS	Alishan	1.03	330	⇑P	Pn	20 24 56.3	-0.1
	baz=331						
ALS				eS	Sn	20 25 09.4	-0.6
	baz=331						
TWK	Hsinying	1.04	309	P	Pn	20 24 56.8	+0.6
	baz=315						
TWK				eS	Sn	20 25 10.9	+1.1
	baz=315						
EGFH	Guangfu	1.06	3	eP	Pn	20 24 55.0	-1.5
	baz=6.0						
VWDT	VWDT	1.16	350	⇑P	Pn	20 24 57.4	-0.4
	baz=4.0						
VWDT				eS	Sn	20 25 10.1	-2.5
	baz=4.0						
CHN5	Tsauling	1.17	328	⇑P	Pn	20 24 58.9	+0.8
	baz=333						
CHN5				eS	Sn	20 25 13.6	+0.6
	baz=333						
WHYT	Xinyi Township	1.18	337	P	Pn	20 24 59.0	+0.8
	baz=343						
WHYT				S	Sn	20 25 13.2	0.0
	baz=343						
ESL	Shilin	1.20	3	eP	Pn	20 24 56.9	-1.5
	baz=6.0						
SCLT	Jiali	1.22	298	eP	Pn	20 24 59.3	+0.8
	baz=295						
SCLT				eS	Sn	20 25 15.4	+1.4
	baz=295						
CHN2	Minshiung	1.23	319	eP	Pn	20 25 00.1	+1.4
	baz=317						
CHN2				eS	Sn	20 25 16.0	+1.6
	baz=317						
SSLB	Suanglung	1.23	342	⇑P	Pn	20 24 58.9	0.0
	baz=350						
SSLB				S	Sn	20 25 13.9	-0.7
	baz=350						
CHY	Chiayi	1.24	316	eP	Pn	20 24 59.8	+0.9
	baz=314						
CHY				eS	Sn	20 25 15.8	+1.2
	baz=314						
CHN8	Yiju	1.29	305	eP	Pn	20 25 00.7	+1.1
	baz=302						
CHN8				eS	Sn	20 25 15.9	+0.1
	baz=302						
WGK	Gukeng	1.30	326	eP	Pn	20 25 00.9	+1.2
	baz=326						
WGK				eS	Sn	20 25 16.8	+0.7
	baz=326						
WLGB	Puzi	1.31	312	eP	Pn	20 25 00.8	+1.0
	baz=310						
WLGB				eS	Sn	20 25 17.6	+1.4
	baz=310						
ENLB	Shoufeng	1.31	10	eP	Pn	20 24 58.7	-1.2
	baz=2.0						
ENLB				eS	Sn	20 25 15.4	-1.0
	baz=2.0						
WDLH	Douliu	1.32	325	eP	Pn	20 25 01.2	+1.3
	baz=325						
SMLT	Sun Moon Lake	1.34	342	eP	Pn	20 25 01.2	+0.8
	baz=351						
SMLT				eS	Sn	20 25 18.3	+1.0
	baz=351						
WJS	Zhushan	1.34	334	eP	Pn	20 25 02.1	+1.7
	baz=335						
WJS				eS	Sn	20 25 19.1	+1.9
	baz=335						
OWD	Renai	1.35	353	eP	Pn	20 25 00.1	-0.5
	baz=2.0						
TYC	Yuchr	1.37	340	P	Pn	20 25 02.0	+1.3
	baz=343						
TYC				eS	Sn	20 25 18.8	+0.9
	baz=343						
HWA	Hwalien	1.38	9	eP	Pn	20 25 00.0	-0.8
	baz=2.0						
WNT	Mingjian	1.41	334	⇑iP	Pn	20 25 03.0	+1.8
	baz=335						
WNT				eS	Sn	20 25 19.8	+1.0
	baz=335						
CHGB	Renai	1.46	353	⇑P	Pn	20 25 01.9	-0.2
	baz=5.0						
CHGB				eS	Sn	20 25 18.6	-1.8
	baz=5.0						
WSF	Szhu	1.47	315	eP	Pn	20 25 02.6	+0.6
	baz=312						
WSF				S	Sn	20 25 21.1	+0.8
	baz=312						
DPDB	Guoxing	1.48	344	⇑iP	Pn	20 25 03.4	+1.2
	baz=336						
DPDB				eS	Sn	20 25 20.9	+0.3
	baz=336						
TWD	Chiawan	1.48	8	eP	Pn	20 25 00.9	-1.4
	baz=3.0						
TWD				eS	Sn	20 25 19.4	-1.2
	baz=3.0						
WHF	Hehuan Shan	1.53	357	eP	Pn	20 25 02.7	-0.6
	baz=10.0						
WHF				eS	Sn	20 25 21.3	-1.2
	baz=10.0						
NACB	Ninganchiao	1.57	8	P	Pn	20 25 02.2	-1.3
	baz=3.0						
NACB				eS	Sn	20 25 20.4	-2.5
	baz=3.0						
RLNB	Erlin	1.57	324	eP	Pn	20 25 04.0	+0.5
	baz=324						
RLNB				eS	Sn	20 25 23.1	+0.2
	baz=324						
ETLH	Xiulin Townshi	1.60	4	eP	Pn	20 25 02.6	-1.3
	baz=5.0						
WCHH	Zhanghua	1.64	333	eP	Pn	20 25 05.5	+1.0
	baz=317						
TWT	Tachien	1.65	354	eP	Pn	20 25 05.2	+0.5
	baz=5.0						
TWT				eS	Sn	20 25 25.2	+0.2
	baz=5.0						
TDCB	Techi	1.65	354	eP	Pn	20 25 05.0	+0.3
	baz=5.0						
TDCB				eS	Sn	20 25 25.1	+0.1
	baz=5.0						
TCU	Taichung	1.66	338	eP	Pn	20 25 06.3	+1.7
	baz=339						
TCU				eS	Sn	20 25 27.0	+2.1
	baz=339						
WDGT	Dungji	1.70	293	eP	Pn	20 25 05.3	+0.1
	baz=288						
WDGT				eS	Sn	20 25 24.8	-1.2
	baz=288						
WHP	Taichung City	1.71	347	P	Pn	20 25 07.4	+2.0
	baz=360						
WHP				eS	Sn	20 25 28.9	+2.6
	baz=360						
NNSB	Datong	1.81	1	eP	Pn	20 25 06.8	-0.1
	baz=12						
NNSB				eS	Sn	20 25 27.3	-1.7
	baz=12						
NNSH	Datong	1.81	1	eP	Pn	20 25 06.8	-0.1
	baz=12						
TWQ1	Liyutan	1.81	343	eP	Pn	20 25 08.6	+1.7
	baz=346						
TWQ1				eS	Sn	20 25 30.4	+1.5
	baz=346						
NNS	Nan Shan	1.82	0	eP	Pn	20 25 07.2	+0.1
	baz=12						
ENA	Nanau	1.85	11	eP	Pn	20 25 06.5	-0.7
	baz=3.0						
WDJ	Dajia District	1.85	339	eP	Pn	20 25 09.4	+2.0
	baz=341						
WDJ				eS	Sn	20 25 31.2	+1.4
	baz=341						
PHUB	P'eng-hu	1.88	299	eP	Pn	20 25 07.6	-0.1
	baz=295						
PHUB				eS	Sn	20 25 27.1	-3.3
	baz=295						
VCHM	Qimei	1.88	289	eP	Pn	20 25 07.7	0.0
	baz=284						
VCHM				eS	Sn	20 25 29.0	-1.4
	baz=284						
NSY	Sanyi	1.88	343	eP	Pn	20 25 10.0	+2.2
	baz=346						
NSY				eS	Sn	20 25 33.0	+2.4
	baz=346						
PNG	Penghu	1.92	300	eP	Pn	20 25 08.2	-0.1
	baz=298						
PTSB	Yuanli	1.93	342	eP	Pn	20 25 10.4	+2.1
	baz=327						
NDT	Datong Townshi	1.99	4	eP	Pn	20 25 09.3	+0.1
	baz=17						
NDT				eS	Sn	20 25 33.0	-0.3
	baz=17						
NMLH	Miaoli	1.99	345	eP	Pn	20 25 11.0	+1.7
	baz=344						
ENTT	Nioudou	2.03	5	eP	Pn	20 25 09.7	-0.1
	baz=6.0						
NSTT	Nanjuang	2.04	351	eP	Pn	20 25 11.4	+1.5
	baz=355						
NSTT				eS	Sn	20 25 36.5	+2.0
	baz=355						
TWC	Suao	2.04	13	eP	Pn	20 25 10.4	+0.4
	baz=7.0						
TWC				eS	Sn	20 25 33.5	-1.0
	baz=7.0						
YHNB	Yeheng	2.05	0	eP	Pn	20 25 10.7	+0.6
	baz=18						
YHNB				eS	Sn	20 25 33.5	-1.3
	baz=18						
LIOB	Emei	2.05	351	eP	Pn	20 25 11.7	+1.5
	baz=355						
LIOB				eS	Sn	20 25 36.4	+1.6
	baz=355						
EOS1	EOS1	2.06	20	eP	Pn	20 25 10.9	+0.8
	baz=34						
EOS1				eS	Sn	20 25 34.4	-0.4
	baz=34						
NSK	Sanguang	2.06	360	eP	Pn	20 25 10.9	+0.7
	baz=17						
NSK				eS	Sn	20 25 34.5	-0.5
	baz=17						
TWE	Neicheng	2.12	8	eP	Pn	20 25 11.0	-0.1
	baz=12						
TWE				eS	Sn	20 25 34.8	-1.6
	baz=12						
SLBB	Yuanshan	2.15	7	eP	Pn	20 25 11.6	+0.1
	baz=8.0						
NWLT	Wulai	2.16	3	eP	Pn	20 25 12.1	+0.4
	baz=16						
NWLT				eS	Sn	20 25 37.2	-0.4
	baz=16						
WLTB	Daxi	2.24	357	eP	Pn	20 25 13.8	+1.2
	baz=341						
NTC	Toucheng	2.28	11	eP	Pn	20 25 14.0	+0.8
	baz=11						
JYNG	Yonagunijimaku	2.34	38	P	Pn	20 25 14.8	+0.7
JYNG				S	Sn	20 25 42.2	+0.3
NHDH	Xindian Distri	2.35	4	eP	Pn	20 25 15.0	+0.8
	baz=15						
NCUH	Zhongli	2.36	356	eP	Pn	20 25 16.6	+2.3
	baz=341						
TWA	Mucha	2.37	5	eP	Pn	20 25 15.2	+0.7
	baz=16						
YOJ	Yonaguni jima	2.39	39	eP	Pn	20 25 15.1	+0.4
	baz=51						
YOJ				S	Sn	20 25 43.9	+0.9
	baz=51						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	2.39	39	P	Pn	20 25 15.4	+0.7
YOJ				eS	Sn	20 25 42.3	-0.7
TIPB	Shuangxi	2.39	10	eP	Pn	20 25 16.1	+1.2
	baz=11						
TAP1	Taipei	2.43	3	eP	Pn	20 25 15.8	+0.6
	baz=15						
TWS1	Kuangyinshan	2.48	1	eP	Pn	20 25 17.2	+1.2
	baz=15						
YM01	YM01	2.54	4	eP	Pn	20 25 17.2	+0.5
	baz=16						
YM10	YM10	2.54	4	eP	Pn	20 25 16.9	0.0
	baz=16						
YM11	YM11	2.56	4	eP	Pn	20 25 17.3	+0.2
	baz=16						
YM03	YM03	2.57	4	eP	Pn	20 25 17.8	+0.6
	baz=16						
ANP	Anpu	2.57	3	eP	Pn	20 25 18.7	+1.4
	baz=16						
TWY	Chenhua	2.67	5	eP	Pn	20 25 19.7	+1.2
	baz=16						
HATJ	Hateruma jima	2.67	57	P	Pn	20 25 19.1	+0.5
HATJ				eS	Sn	20 25 49.7	-0.3
IRIF	Iriomote-Funau	2.77	51	P	Pn	20 25 21.2	+1.2
IRIF				eS	Sn	20 25 53.4	+0.9
JKRS	Kuro-shima	2.92	56	P	Pn	20 25 22.9	+0.8
JKRS				S	Sn	20 25 56.0	-0.2
VWUC	VWUC	2.95	324	eP	Pn	20 25 22.4	-0.1
	baz=324						
JIJ	Ishigaki jima	3.10	55	P	Pn	20 25 24.6	+0.2
JIJ				eS	Sn	20 25 58.0	-2.5
PTMZ	Houxiangcun	3.17	320	eP	Pn	20 25 25.4	-0.1
	baz=319						
PTMZ				eS	Sn	20 26 00.6	-1.8
	baz=319						
PTTC	Pingtan	3.23	334	eP	Pn	20 25 26.0	-0.2
	baz=333						
KNM	Kinmen	3.23	304	eP	Pn	20 25 28.3	+2.0
	baz=299						
KNMB	Chin-men Tao	3.29	305	eP	Pn	20 25 26.5	-0.6
	baz=301						
JISG	Ishigakijimahi	3.35	53	P	Pn	20 25 28.0	+0.1
JISG				eS	Sn	20 26 05.5	-1.2
ZPLA	Ao Xicun	3.57	292	eP	Pn	20 25 31.0	0.0
	baz=288						
JTJ	Tarama	3.67	56	P	Pn	20 25 32.9	+0.5
JTJ				eS	Sn	20 26 15.4	+0.7
MATB	Ma-tsu	3.76	340	eP	Pn	20 25 33.3	-0.3
	baz=339						
MHZQ	Yeshan	4.08	329	eP	Pn	20 25 37.9	0.0
	baz=330						
JMJ	Miyako jima 2	4.22	58	eP	Pn	20 25 41.2	+1.3
	baz=59						
XPSS	Dashiqiu	4.43	346	eP	Pn	20 25 42.7	-0.1
	baz=344						

SOME **23** *20:37:16.1, 38°.92N×75°.80E, h5km*
BJI **23** *20:37:23.6±0.0, 39°.01N×75°.79E, h8km, ML3.5/7*
NNC **23** *20:37:23.4±2.3, 39°.15N×75°.83E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=17.3km s-min=10.3km az=159.0*
ISC 23 20:37:26.5±1.0**, 39°.14N**±0°.05×**75°.74E**±0°.04**, h10km, n43,** σ**2.97**/56**, 10C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	0.41	25	Pg	Pg	20 37 27.0	-7.7
KSH				Sg	Sg	20 37 30.8	-9.4
KSH				smax	smax		
	comp=N,7µm,0.5s						
KSH				smax	smax		
	comp=E,6µm,0.7s						
KZA	Kyzart	2.96	353	P	Pb	20 38 18.9	-0.7
	SNR=12						
ULHL	Ulahol	3.12	7	P	Pb	20 38 21.5	-0.8
	SNR=14						
UCH	Uchtor	3.22	344	P	Pn	20 38 19.1	+1.5
	SNR=18						
AML	Almayashu	3.37	333	P	Pb	20 38 27.3	+0.7
	SNR=7.1						
KBK	Karagaybulak	3.56	351	P	Pb	20 38 28.5	-1.2
	SNR=7.7						
AAK	Ala-Archa	3.62	345	P	Pb	20 38 26.3	-4.4
	SNR=6.1						
AAK	Ala-Archa	3.62	345	⇑Pn	Pn	20 38 23.6	+0.8
	14nm,0.8s						
AAK				⇓Lg	Lg	20 39 17.2	
	53nm,0.6s						
KST	Kastek	3.90	2	eP	Pb	20 38 31.8	-3.7
	9.0nm,0.5s						
KST				eS	Sb	20 39 26.7	+3.9
	34nm,0.9s						
KST	Kastek	3.90	2	Pg	Pb	20 38 31.8	-3.7
	9.0nm,0.5s						
KST				Lg	Lg	20 39 26.7	
	34nm,0.9s						
CHMS	Chumysh	3.93	349	⇑Pn	Pn	20 38 27.1	+0.2
	8.0nm,0.5s						
CHMS				⇑Lg	Lg	20 39 29.8	
	82nm,1.1s						
TNSS	Tian-Shan	4.00	13	eP	Pb	20 38 33.9	-3.3
	19nm,0.6s						
TNSS				eS	Sb	20 39 30.3	+4.5
	25nm,0.9s						
TNSS	Tian-Shan	4.00	13	Pg	Pb	20 38 33.9	-3.3
	19nm,0.6s						
TNSS				Lg	Lg	20 39 30.3	
	25nm,0.9s						
MTBS	Maitube	4.02	7	eP	Pb	20 38 35.0	-2.4
	12nm,0.5s						
MTBS				eS	Sg	20 39 31.9	-3.6
	20nm,0.5s						
MTBS	Maitube	4.02	7	Pg	Pb	20 38 35.0	-2.4
	12nm,0.5s						
MTBS				Lg	Lg	20 39 31.9	
	20nm,0.5s						
MRKS	Merke	4.07	333	eP	Pb	20 38 36.1	-2.3
	12nm,0.5s						
MRKS				eS	Sg	20 39 34.1	-3.2
	14nm,0.6s						
MRKS	Merke	4.07	333	Pg	Pb	20 38 36.1	-2.3
	12nm,0.5s						
MRKS				Lg	Lg	20 39 34.1	
	14nm,0.6s						
DGS	Degeres	4.10	0	eP	Pb	20 38 35.5	-3.3
	10nm,0.5s						
DGS				eS	Sb	20 39 33.0	+4.6
	39nm,0.7s						
MDOK	Medeo	4.14	13	eP	Pb	20 38 36.4	-3.1
	23nm,1.0s						
MDOK				eS	Sb	20 39 34.6	+5.0
	41nm,0.8s						
MDOK	Medeo	4.14	13	⇓Pg	Pb	20 38 38.9	-0.6
	41nm,1.4s						
MDOK				⇓Lg	Lg	20 39 35.0	
	98nm,1.4s						
MDOK	Medeo	4.14	13	Pg	Pb	20 38 36.4	-3.1
	23nm,1.0s						
MDOK				Lg	Lg	20 39 34.6	
	41nm,0.8s						
KNDC	Almaty	4.17	12	⇑Pg	Pb	20 38 40.5	+0.4
	25nm,0.8s						
KNDC				⇑Lg	Lg	20 39 36.3	
	52nm,0.6s						
KOTS	Kotyrbulak	4.22	14	eP	Pb	20 38 37.7	-3.2
	13nm,0.6s						
KOTS				eS	Sb	20 39 37.1	+5.2
	64nm,0.7s						
KOTS	Kotyrbulak	4.22	14	Pg	Pb	20 38 37.7	-3.2
	13nm,0.6s						
KOTS				Lg	Lg	20 39 37.1	
	64nm,0.7s						
KTBS	Karatobe	4.62	8	eP	Pb	20 38 46.0	-1.7
	8.3nm,0.6s						
KTBS				eS	Sg	20 39 51.1	-3.7
	54nm,0.9s						
KTBS	Karatobe	4.62	8	Pg	Pb	20 38 46.0	-1.7
	8.3nm,0.6s						
KTBS				Lg	Lg	20 39 51.1	
	54nm,0.9s						
UZB	Uzynbulak	4.71	31	eP	Pb	20 38 46.5	-2.7
	17nm,1.8s						
UZB				eS	Sb	20 39 51.4	+5.5
	13nm,0.8s						
UZB	Uzynbulak	4.71	31	Pg	Pb	20 38 46.5	-2.7
	17nm,1.8s						
UZB				Lg	Lg	20 39 51.4	
	13nm,0.8s						
KUU	Kurty	4.77	5	eP	Pb	20 38 50.7	+0.5
	6.6nm,0.6s						
KUU				eS	Sg	20 39 59.4	-0.2
	54nm,0.8s						
KUU	Kurty	4.77	5	Pg	Pb	20 38 50.7	+0.5
	6.6nm,0.6s						
KUU				Lg	Lg	20 39 59.4	
	54nm,0.8s						
KPKS	Kokpek	4.85	26	eP	Pb	20 38 49.7	-2.0
	14nm,0.5s						
KPKS				eS	Sg	20 39 57.5	-4.8
	39nm,0.5s						
PDGK	Podgornoye	5.05	33	⇑Pg	Pb	20 38 53.8	-1.2
	9.8nm,0.8s						
PDGK				⇑Lg	Lg	20 40 02.6	
	32nm,0.7s						
JBG	Jabagly	5.13	311	Pg	Pb	20 38 53.1	-3.3
	8.6nm,0.3s						
JBG				Lg	Lg	20 40 03.1	
	14nm,0.2s						
IUG	Iuzhnay	5.28	306	eP	Pb	20 38 57.3	-1.7
	4.1nm,0.6s						
IUG				eS	Sg	20 40 10.1	-5.9
	22nm,0.6s						
IUG	Iuzhnay	5.28	306	Pg	Pb	20 38 57.3	-1.7
	4.1nm,0.6s						
IUG				Lg	Lg	20 40 10.1	
	22nm,0.6s						
KK31	Karatay Array	5.59	317	⇓Pn	Pn	20 38 49.6	-0.1
	0.6nm,0.3s,baz=123,slow=13,SNR=26						
KK31				⇓Pg	Pb	20 39 05.9	+1.7
	0.9nm,0.3s,baz=136,slow=13,SNR=3.6						
KK31				⇑Sn	Sn	20 39 56.2	+2.1
	2.4nm,0.4s						
KK31				⇑Lg	Lg	20 40 20.8	
	8.3nm,0.7s,baz=131,slow=28						
CHCP	Chirah Chowk	5.83	201	⇑P	Pn	20 38 54.8	+1.8
DJR	Jarkent	6.00	29	eP	Pb	20 39 11.1	-0.2
	0.6nm,0.1s						
DJR				eS	Sg	20 40 33.8	-5.4
	10nm,0.9s						
DJR	Jarkent	6.00	29	Pg	Pb	20 39 11.1	-0.2
	0.6nm,0.1s						
DJR				Lg	Lg	20 40 33.8	
	10nm,0.9s						
CEP	Cherat	6.14	211	P	Pn	20 38 58.0	+0.6
CEP				S	Sn	20 40 09.0	+1.2
THW	Thamme Wali	7.12	208	P	Pn	20 39 11.6	+0.9
WMQ	Urumqi	10.11	59	eP	Pn	20 39 52.3	+0.5
GTA	Gaotai	18.63	82	eP	Pn	20 41 42.6	-2.0
GTA				pP	sP	20 41 46.8	-2.3
GTA				sP	pP	20 41 49.6	+2.0

GUC **23** *20:39:54.2±0.8, 29°.86S×70°.13W, h141km±17km, ML3.4*
SJA **23** *20:39:56.4±0.7, 29°.99S×69°.66W, h104km±3km, ML3.3, MW3.3*
ISC 23 20:39:55.6±1.5**, 29°.90S**±0°.04×**69°.78W**±0°.05**, h115km**±11km**, n16,** σ**0.69**/25**, 2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AROD	Rodeo	0.37	135	eP	Pn	20 40 12.6	-0.1
AROD				eS	Sn	20 40 24.9	-0.7
ACDV	Cuesta del Vie	0.63	115	eP	Pn	20 40 13.6	-0.5
ACCO	Cerro Coronel	0.92	138	eP	Pn	20 40 16.6	-0.2
GO04	Tololo Observa	0.92	253	⇑iP	Pn	20 40 16.9	+0.2
GO04				iS	Sn	20 40 33.6	+1.0
GO04					IAML	20 40 36.5	
	comp=N,1µm,0.2s						
AGUA	GUANDACOL	1.20	70	eP	Pn	20 40 20.1	+0.7
AGUA				eS	Sn	20 40 36.5	-0.9
CO03	El Pedregal	1.22	220	⇑iP	Pn	20 40 19.9	+0.3
CO03				iS	Sn	20 40 38.7	+0.9
CO03					IAML	20 40 41.7	
	comp=N,805nm,0.2s						
VCA	Vinchina	1.80	50	eP	Pn	20 40 27.2	+0.7
VCA				eS	Sn	20 40 51.1	+1.0
VCA					IAML	20 40 53.5	
	comp=Z,1µm,0.3s						
RTLS	Leoncito	1.93	168	eP	Pn	20 40 28.7	+0.4
RTLS					IAML	20 40 56.8	
	comp=Z,80nm,0.4s						
CFA	Coronel Fontan	2.15	142	eP	Pn	20 40 30.5	-0.3
RTCV	Cerro Valdivia	2.22	152	eP	Pn	20 40 31.7	0.0
GO03	Copiap	2.34	350	⇓iP	Pn	20 40 32.7	-0.5
GO03				eS	Sn	20 41 01.1	-0.9
GO03					IAML	20 41 03.0	
	comp=E,163nm,0.2s						
CO04	Los Peladeros	2.37	205	eP	Pn	20 40 33.7	0.0
CO04				iS	Sn	20 41 03.1	+0.2
CO04					IAML	20 41 04.4	
	comp=E,192nm,0.3s						
ARCO	CERRO ARCO	3.02	166	eP	Pn	20 40 42.4	+0.3
ARCO					IAML	20 41 22.9	
	comp=Z,51nm,0.4s						
ROCH	El Roble	3.23	199	eP	Pn	20 40 43.9	-1.1
ROCH				eS	Sn	20 41 22.5	-0.7
PEL	Peldehue	3.32	193	eP	Pn	20 40 45.8	-0.2
PEL				eS	Sn	20 41 24.5	-0.5
LMEL	Las Melosas	3.95	185	eP	Pn	20 40 55.5	+1.0

DJA **23** *20:49:05.4±0.7, 1°N±2°×9°9E±°, h92km±11km, M3.2/7, MLv3.2/7*
IDC **23** *20:49:12.6±3.6, 1°.30N×98°.98E, h99km±20km, mb3.2/4, mb1 3.2/5, mb1mx3.0/38, mbtmp3.5/5, Error ellipse: s-maj=69.2km s-min=21.9km az=59.0*
ISC 23 20:49:08.2±0.9**, 0°.96N**±0°.05×**98°.58E**±0°.08**, h100km, n11,** σ**3.66**/13**, mb3.4**/4**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PBSI	Pulau Batu	1.06	197	P	Pn	20 49 26.6	-2.7
PBSI				S	Sn	20 49 42.9	-2.2
PSI	Prapat	1.86	11	P	Pn	20 49 37.1	-2.0
	3.3nm,0.3s,baz=168,slow=12,SNR=10						
PSI				S	Sn	20 49 56.4	-6.2
	5.1nm,0.3s,baz=173,slow=10.0,SNR=16						
SISI	Saibi	2.33	167	P	Pn	20 49 41.8	-3.4
BKNI	Bangkinang	2.54	104	P	Pn	20 49 44.2	-3.6
PDSI	Padang	2.64	135	P	Pn	20 49 45.8	-3.5
SNSI	Sinabang, Aceh	2.67	303	P	Pn	20 49 45.7	-4.0
CMAR	Chiang Mai Arr	17.39	1	P	Pn	20 53 06.2	+1.4
	0.2nm,0.3s,baz=188,slow=13,SNR=5.6						
WRA	Warramunga Arr	40.74	123	P	P	20 56 42.8	+3.1
	0.3nm,0.6s,baz=304,slow=9.1,SNR=2.6						
SONM	Songino Array	47.18	7	P	P	20 57 32.5	+1.6
	0.3nm,0.3s,baz=192,slow=9.2,SNR=5.9						
MKAR	Makanchi Array	47.82	345	P	P	20 57 37.7	+2.0
	0.2nm,0.4s,baz=154,slow=8.9,SNR=8.5						
ZALV	Zalesovo Beam	54.02	350	P	P	20 58 24.9	+2.9
	0.5nm,0.4s,baz=157,slow=9.6,SNR=4.1						

IDC **23** *21:02:10.7±1.7, 60°.50S×25°.81W, h0km, mb4.1/2, mb1 4.2/2, mb1mx3.7/17, mbtmp4.1/2, MS3.1/2, Ms1 3.1/2, ms1mx2.9/16, Error ellipse: s-maj=80.4km s-min=41.0km az=172.0*
ISC 23 21:02:11.6±0.9**, 60°.8S**±0°.2×**25°.7W**±0°.2**, h10km, n11,** σ**0.70**/10**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.18	152	P	Pn	21 05 05.0	+0.2
VNA3	Neumayer Olymp	12.32	155	P	Pn	21 05 07.1	+0.3
VNA2	Neumayer--Watz	12.52	152	P	Pn	21 05 10.4	0.0
	baz=317,slow=14						
SNAA	Sanae	14.18	150	P	Pn	21 05 31.2	-1.0
PLCA	Paso Flores	33.81	286	P	P	21 08 53.2	-0.5
	0.8nm,0.6s,baz=164,slow=9.3,SNR=3.1						
PLCA				LR	LR	21 21 13.8	
	comp=Z,41nm,19.3s,baz=164,slow=34						
CPUP	Villa Florida	40.58	314	LR	LR	21 27 05.6	
	comp=Z,21nm,18.2s,baz=27,slow=37						
TORD	Torodi Ar. Bea	76.84	27	P	P	21 14 02.9	-0.5
	1.8nm,0.6s,baz=199,slow=4.9,SNR=15						
FINES	FINESS Array B	128.18	29	PKP	PKPdf	21 21 17.2	+0.9
	3.4nm,1.0s,baz=173,slow=1.5,SNR=3.3						
YKA	Yellowknife Ar	140.10	314	PKP	PKPdf	21 21 39.6	+1.0
	0.2nm,0.4s,baz=113,slow=2.2,SNR=3.3						
SONM	Songino Array	149.95	94	PKPbc	PKPbc	21 22 01.4	+0.2
	0.7nm,0.7s,baz=210,slow=2.6,SNR=5.4						
ILAR	Eielson Array	153.64	304	PKPbc	PKPbc	21 22 08.7	-0.2
	0.5nm,1.0s,baz=90,slow=2.9,SNR=4.2						

MOS **23** *21:21:13.2±1.0, 9°.66S×117°.99E, h25km, mb5.3/27, Error ellipse: s-maj=9.8km s-min=5.3km az=117.7*
BJI **23** *21:21:13.0±0.0, 9°.80S×118°.00E, h23km, mB5.0/46, mb5.1/69, Ms4.4/28, Ms7 4.2/28*
IDC **23** *21:21:15.3±2.6, 9°.68S×117°.95E, h22km±16km, mb4.8/35, mb1 4.8/38, mb1mx4.7/49, mbtmp4.9/38, ML4.6/3, MS3.9/29, Ms1 3.9/29, ms1mx3.8/39, Error ellipse: s-maj=14.4km s-min=10.2km az=61.0*
NEIC **23** *21:21:15.4±1.5, 9°.82S±0°.06×117°.96E±0°.05, h34km±3km, mb5.0/83, Error ellipse: s-maj=9.0km s-min=7.6km az=202.0*
DJA **23** *21:21:17.9±0.3, 10°S±3°×11°8E±°, h60km±3km, M4.9/48, mb5.1/48, mB5.4/30, MLv5.4/20, Mw(mB)4.8/30, Mwp5.0/3*
GCMT **23** *21:21:18.4±0.3, 10°.12S±0°.02×117°.95E±0°.02, h42km±1km, MW4.9/81, Moment Tensor Solution. s45,c52; s81,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.21±.13; $M_{\theta\theta}$-2.42±.08; $M_{\phi\phi}$0.21±.10; $M_{r\theta}$1.46±.07; $M_{\theta\phi}$0.10±.07; $M_{\phi r}$0.04±.09; Best double couple: $M_0$2.73900×10^{16} NP1:ϕ_s275.00000°,δ29.00000°,λ94.00000°. NP2: ϕ_s90.00000°,δ61.00000°,λ88.00000°. Principal axes: T 2.6340, Plg74.0000°, Azm354.0000°; N 0.2160, Plg2.0000°, Azm91.0000°; P -2.8440, Plg16.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 21:21:17.0±0.7**, 9°.91S**±0°.04×**117°.94E**±0°.04**, h45km**±5km**, n586,** σ**1.50**/599**, mb5.0**/104**, MS4.0**/32**, 18C-7D, Sumbawa region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLAI	Plampang	1.09	351	P	Pn	21 21 35.9	+0.1
WBSI	Waikabubak, Su	1.45	80	P	Pn	21 21 40.6	-0.2
BASI	Baing, Sumba	2.61	97	P	Pn	21 21 58.9	+2.2
DNP	Denpasar	2.96	294	P	Pn	21 22 04.3	+2.7
IGBI	Denpasar	2.97	291	P	Pn	21 22 03.0	+1.4
SRBI	Singaraja	3.25	304	P	Pn	21 22 08.1	+2.6
EDFI	Ende, Flores	3.87	73	P	Pn	21 22 15.6	+1.4
JAGI	Jajag, Banyuwa	4.01	291	P	Pn	21 22 16.3	+0.4
JAGI	Jajag, Banyuwa	4.01	291		Pn	21 22 14.8	-1.1
JAGI				Sn	Sn	21 23 01.1	-0.6
GMJI	Gumukmas	4.73	290	P	Pn	21 22 26.4	+0.5
KMMI	Kalianget	4.85	306	P	Pn	21 22 31.4	+3.9
	2.8nm5µm384nm,0.7s						
BKSI	Bulukumba	5.04	26	P	Pn	21 22 32.1	+2.0
	7.2nm14µm1µm,0.5s						
KAPI	Kappang	5.18	20	Pn	Pn	21 22 34.3	+2.3
	66nm,0.3s,baz=200,slow=7.9,SNR=61						
KAPI				Sn	Sn	21 23 32.0	+1.4
	152nm,0.3s,baz=108,slow=22,SNR=15						
KAPI				LR	LR	21 24 49.5	
	comp=Z,3µm,20.1s,baz=200,slow=43						
BNSI	Bone	5.88	22	P	Pn	21 22 44.9	+3.3
	1.9nm4µm405nm,0.7s						
GRJI	Gresik	6.17	298	P	Pn	21 22 48.0	+2.4
	1.3nm5µm278nm,0.4s						
SPSI	Sidrap Palu	6.18	17	P	Pn	21 22 48.3	+2.6
	0.7nm2µm152nm,0.7s						
SOEI	Soe	6.23	89	P	Pn	21 22 48.1	+1.5
	3.0nm5µm331nm,0.6s						
SOEI	Soe	6.23	89		Pn	21 22 46.8	+0.2
KBKI	Kotabaru	6.80	345	P	Pn	21 22 57.1	+2.8
	0.4nm1µm117nm,0.5s						
PCJI	Pacitan	6.90	284	P	Pn	21 22 57.6	+2.0
	2.6nm4µm278nm,0.6s						
TTSI	Tana Toraja	7.07	15	P	Pn	21 23 02.3	+4.3
WOJI	Wonogiri, Jawa	7.24	286	P	Pn	21 23 02.3	+2.0
	1.1nm2µm85nm,0.4s						
UGM	Wanagama	7.60	285	P	Pn	21 23 06.7	+1.5
	2.4nm293nm,1.1s						
UGM	Wanagama	7.60	285		Pn	21 23 06.4	+1.1
SMRI	Semarang	7.95	290	Pn	Pn	21 23 10.2	+0.1
BKB	Balikpapan	8.65	353		Pn	21 23 18.2	-1.5
KPJI	Karang Pucung	9.27	285	P	Pn	21 23 29.5	+1.3
	98nm,0.6s						
SMKI	Samarinda	9.43	356	P	Pn	21 23 34.1	+3.8
	141nm,0.8s						
LUWI	Luwuk	10.03	29	P	Pn	21 23 56.3	+18
LUWI	Luwuk	10.03	29	Pn	Pn	21 23 34.1	-4.5
CISI	Cisompet, Garu	10.28	282	P	Pn	21 23 41.0	-1.1
	2µm113nm,0.6s						
CISI	Cisompet, Garu	10.28	282		Pn	21 23 40.6	-1.5
CISI				Sn	Sn	21 25 33.5	-2.5
MPSI	Mapaga	10.36	11	P	Pn	21 23 46.8	+3.7
	2µm765nm55nm,1.0s						
LEM	Lembang	10.67	286	Pn	Pn	21 23 47.4	-0.1
	3.1nm,0.3s,baz=345,slow=20,SNR=3.8						
LEM				Sn	Sn	21 25 51.1	+5.5
	1.5nm,0.3s,baz=131,slow=20,SNR=1.9						
LEM				LR	LR	21 28 55.9	
	comp=Z,309nm,20.9s,baz=106,slow=43						
FITZ	Fitzroy Crossi	11.04	138	Pn	Pn	21 23 51.3	-1.1
	4.3nm,0.3s,baz=326,slow=13,SNR=80						
FITZ				Sn	Sn	21 25 48.0	-6.6
	11nm,0.3s,baz=228,slow=17,SNR=14						
FITZ				LR	LR	21 28 40.8	
	comp=Z,758nm,18.2s,baz=315,slow=40						
MRSI	Marisa	11.06	21	P	Pn	21 23 56.8	+4.2
	729nm68nm,0.7s						
SANI	Sanana	11.18	46	P	Pn	21 23 57.9	+3.7
	2µm145nm,1.2s						
PSA00	Pilbara Seismi	11.74	171		Pn	21 24 00.2	-1.8
AAI	Ambon	11.90	59	P	Pn	21 24 05.4	+1.2
	70nm,1.1s						
KNRA	Kununurra	12.01	120		Pn	21 24 04.5	-1.0
GIRL	Giralia	13.15	195		Pn	21 24 19.8	-1.4
LBMI	Labuha	13.24	46	P	Pn	21 24 25.4	+3.0
	2µm126nm,0.8s						
SAUI	Saumlaki	13.33	83	Pn	Pn	21 24 22.8	-1.0
SBUM	Sibu	13.54	335		Pn	21 24 27.0	+0.5
KSM	Kuching	13.63	326		Pn	21 24 27.6	-0.2
KASI	Kota Agung	14.02	287	P	Pn	21 24 34.1	+1.0
	1µm80nm,0.6s						
KLSI		14.09	291	P	Pn	21 24 36.3	+2.2
	13nm,0.6s						
TNTI	Ternate	14.16	42		Pn	21 24 35.3	+0.3
LWLI	Liwa	14.60	288	P	P	21 24 49.4	+2.9
MDSI	Maura Dua	14.68	291	P	P	21 24 45.5	-1.7
	13nm,0.6s						
FAKI	Fak Fak	15.81	65	P	Pn	21 24 55.3	-1.4
	119nm,1.0s						
FAKI	Fak Fak	15.81	65		Pn	21 24 54.3	-2.4
FAKI				IAmb	IAmb	21 25 00.8	
	comp=Z,64nm,0.8s						
FAKI				Sn	Sn	21 27 48.6	-2.5
MNAI	Manna	15.86	289	Pn	Pn	21 24 55.5	-1.8
MNAI				IAmb	IAmb	21 25 14.4	
	comp=Z,187nm,1.1s						
MNAI				Sn	Sn	21 27 51.2	-0.9
KKM	Kota Kinabalu	15.94	354	P	Pn	21 24 56.0	-2.5
SWI	Sorong	16.00	57	P	Pn	21 24 58.2	-0.9
	comp=Z,150nm,1.0s						
SIJI	Sorong	16.01	57	Pn	Pn	21 24 57.0	-2.2
	comp=Z,8.8nm,0.3s,baz=220,slow=12,SNR=18						
SIJI				Sn	Sn	21 27 55.8	+0.1
	comp=Z,0.6nm,0.3s,baz=217,slow=20,SNR=2.7						
KSI	Kapahiang	16.46	291	P	Pn	21 25 02.2	-2.7
	comp=Z,65nm,0.6s						
SKMP	Bagumbayan, Su	17.59	22	eP	P	21 25 20.7	+1.1
KRJI	Kerinci	18.13	294	P	Pn	21 25 25.9	+0.2
	comp=Z,3µmcomp=Z,326nm,0.6s						
CTBH	Cotabato--PC H	18.14	20	⇓iP	Pn	21 25 30.0	+4.3
RKPI	Ransiki, Papua	18.17	64	P	Pn	21 25 27.1	+1.0
	comp=Z,7µmcomp=Z,94nm,0.7s						
MYKOM	Kota Tinggi	18.22	309	P	P	21 25 25.6	-0.9
KCP	Kidapawan	18.25	23	⇓eP	Pn	21 25 30.2	+3.1
PAGZ	Pagadian	18.45	17	eP	Pn	21 25 31.8	+2.3
BATP	Bataraza	18.58	360	eP	Pn	21 25 31.3	+0.2
WB0	Warramunga Arr	18.66	124	P	Pn	21 25 32.0	-0.1
WRA	Warramunga Arr	18.70	124	P	Pn	21 25 31.9	+0.1
	comp=Z,1.4nm,0.3s,baz=295,slow=12,SNR=40						
WRA				S	Sn	21 28 47.1	-14
	comp=Z,1.1nm,0.3s,baz=288,slow=24,SNR=6.4						
WRA				LR	LR	21 33 29.1	
	comp=Z,610nm,19.9s,baz=305,slow=39						
WRAB	Tennant Creek	18.71	124	P	P	21 25 31.8	-0.1
WRAB	Tennant Creek	18.71	124	ceP	P	21 25 31.5	-0.4
WRAB				pmax	pmax		

comp=Z,15nm,0.8s
WB2 Warramunga Arr 18.71 124 P **P 21 25 32.0 0.0**
WR0 Warramunga Arr 18.88 124 P **P 21 25 33.8 +0.1**
BUKP Musuan 19.04 22 eP **Pn 21 25 38.2 +1.5**
MORW Morawa 19.14 185 P **P 21 25 36.8 +0.3**
MORW IAmb IAmb 21 25 45.4
comp=Z,40nm,0.6s
PDSI Padang 19.55 296 P **P 21 25 41.8 +0.7**
comp=Z,368nmcomp=Z,20nm,0.7s
BKNI Bangkinang 19.66 300 P **P 21 25 42.6 +0.3**
comp=Z,1μmcomp=Z,89nm,0.6s
BKNI Bangkinang 19.66 300 P **P 21 25 42.6 +0.3**
BKNI IAmb IAmb 21 25 55.3
comp=Z,54nm,0.6s
BUTP Butuan 20.25 22 eP **P 21 25 49.4 +0.7**
ASAR Alice Springs 20.48 134 P Pn 21 25 53.1 -0.5
comp=Z,31nm,0.8s,baz=305,slow=9.4,SNR=193
ASAR S **S 21 29 33.7 -4.4**
comp=Z,5.9nm,0.6s,baz=306,slow=22,SNR=7.1
ASAR LR LR 21 33 45.0
comp=Z,569nm,22.0s,baz=306,slow=36
AS31 Alice Springs 20.48 134 P **P 21 25 50.4 -0.8**
SISI Saibi 20.59 293 P **P 21 25 51.8 -0.7**
comp=Z,23nm,0.7s
ENPP El Nido 21.03 4 eP **P 21 25 59.6 +2.6**
MSLP Maasin 21.07 19 eP **P 21 25 58.0 +0.5**
OCLP Ormoc 21.85 18 eP **P 21 26 08.1 +2.2**
BUSP Coron 21.88 6 eP **P 21 26 10.0 +3.7**
IPM Ipoh 22.10 310 P **P 21 26 07.2 -1.5**
OTRP Odiongan 22.49 10 eP **P 21 26 15.4 +2.6**
RPSI Rantau Prapat 22.71 303 P **P 21 26 14.0 -1.2**
RPSI IAmb IAmb 21 26 18.8
comp=Z,85nm,1.1s
PSI Prapat 22.77 303 P **P 21 26 14.8 -1.1**
comp=Z,34nm,0.5s,baz=157,slow=8.6,SNR=42
PSI Prapat 22.77 303 P **P 21 26 14.0 -1.9**
PSI pmax pmax
comp=Z,85nm,1.1s
FORT Forrest 22.80 157 P **P 21 26 16.8 +0.8**
FORT IAmb IAmb 21 26 33.4
comp=Z,55nm,0.7s
NWAO Narrogin (SRO) 22.92 182 P **P 21 26 18.5 +1.4**
comp=Z,19nm,0.9s,baz=358,slow=11,SNR=8.6
NWAO S **S 21 30 22.7 -1.2**
comp=Z,10nm,0.4s,baz=286,slow=20,SNR=5.7
NWAO Narrogin (SRO) 22.92 182 P **P 21 26 17.0 -0.2**
NWAO IAmb IAmb 21 26 31.3
comp=Z,54nm,0.8s
NWAO S **S 21 30 25.9 +2.0**
NWAO Narrogin (SRO) 22.92 182 P **P 21 26 18.4 +1.2**
NWAO IAmb IAmb 21 26 31.4
comp=Z,68nm,0.7s
DLV T Lat 23.66 336 P **P 21 26 24.5 -0.2**
DLV IAmb IAmb 21 26 27.4
comp=Z,23nm,0.8s
COEN Coen 25.00 102 P **P 21 26 35.1 -1.8**
COEN IAmb IAmb 21 26 52.7
comp=Z,22nm,0.9s
LHMI Lhok Sumawe 25.76 305 P **P 21 26 42.4 -1.3**
CAUP Cauayan 26.95 8 eP **P 21 26 56.0 +1.6**
BBOO Buckleboo 28.26 146 P **P 21 27 06.9 +0.8**
PMG Port Moresby 28.80 92 P **P 21 27 10.4 -0.7**
PMG IAmb IAmb 21 27 23.0
comp=Z,36nm,1.1s
PMG Port Moresby 28.80 92 P **P 21 27 10.4 -0.7**
PMG pmax pmax
comp=Z,36nm,1.1s
CTA Charters Tower 29.11 114 P **P 21 27 15.8 +2.0**
comp=Z,3.9nm,0.8s,baz=270,slow=6.1,SNR=2.1
STKA Stephens Creek 30.94 138 P **P 21 27 31.6 +1.8**
comp=Z,3.3nm,0.5s,baz=312,slow=9.3,SNR=18
STKA LR LR 21 40 19.6
comp=Z,467nm,22.0s,baz=298,slow=37
STKA Stephens Creek 30.94 138 P **P 21 27 29.5 -0.4**
PBKT Sadao Pong 31.21 327 P **P 21 27 31.3 -0.9**
TPUB Ta-pu 33.11 5 P **P 21 27 47.8 -1.1**
TPUB IAmb IAmb 21 27 56.7
comp=Z,12nm,0.9s
YULB Yu-li 33.26 6 P **P 21 27 47.6 -2.6**
YULB IAmb IAmb 21 27 52.2
comp=Z,15nm,1.0s
SSLB Suanglung 33.62 5 P **P 21 27 53.3 0.0**
SSLB IAmb IAmb 21 28 00.4
comp=Z,9.0nm,0.8s
CM31 Chiang Mai Arr 33.85 326 P **P 21 27 55.0 -0.4**
CM31 IAmb IAmb 21 27 56.8
comp=Z,13nm,1.1s
CM31 PcP **PcP 21 30 33.0 -0.7**
CMAR Chiang Mai Arr 33.85 326 P **P 21 27 55.5 +0.1**
comp=Z,3.1nm,0.4s,baz=154,slow=6.9,SNR=37
CMAR PcP **PcP 21 30 35.8 +2.2**
comp=Z,7.7nm,0.7s,baz=176,slow=2.9,SNR=22
CMAR ScP **ScP 21 34 17.1 +2.1**
comp=Z,1.6nm,0.8s,baz=176,slow=3.3,SNR=9.8
CMAR LR LR 21 43 01.5
comp=Z,267nm,18.2s,baz=161,slow=39
SLVN Son La 33.97 336 P **P 21 27 54.7 -1.8**
SLVN IAmb IAmb 21 27 58.5
comp=Z,15nm,1.0s
CHTO Chiang Mai 34.14 327 P **P 21 27 56.9 -1.0**
CHTO **PcP 21 30 34.3 -0.2**
YOJ Yonaguni jima 34.52 8 P **P 21 28 01.3 +0.2**
YOJ Yonaguni jima 34.52 8 P **P 21 28 01.3 +0.2**
YOJ pmax pmax
comp=Z,43nm,0.9s
YHNB Yeheng 34.53 6 P **P 21 27 60.0 -1.3**
YHNB IAmb IAmb 21 28 07.7
comp=Z,22nm,0.8s
TOO Toolangi 37.07 142 P **P 21 28 25.1 +2.2**
TOO Toolangi 37.07 142 P **P 21 28 25.1 +2.2**
TOO pmax pmax
comp=Z,9.0nm,0.9s
ARMA Armidale 37.41 128 P **P 21 28 29.2 +3.2**
GYA Guiyang 37.77 343⇓iP **P 21 28 29.8 +0.7**
GYA pmax pmax
comp=Z,20nm,0.5s
KMI Kunming 37.84 337 P **P 21 28 31.6 +1.8**
KMI pP pP 21 28 38.4 -2.8
KMI sP pwP 21 28 42.3 -2.5
KMI pmax pmax
comp=Z,40nm,0.7s
KMI pmax pmax
comp=Z,89nm,3.9s
KMI Kunming 37.84 337 P **P 21 28 28.7 -1.1**
KMI Kunming 37.84 337 P **P 21 28 28.7 -1.1**
KMI pmax pmax
comp=Z,31nm,0.8s
JOW Kunigami 37.87 15 P **P 21 28 28.3 -1.5**
WHN Wuhan 40.37 355 ⇓P **P 21 28 51.3 +0.8**
WHN S **S 21 34 47.3 -8.2**
WHN pmax pmax
comp=Z,58nm,0.8s
WHN LR LR
comp=Z,580nm,15.5s
ENH Enshi 40.77 349 P **P 21 28 52.7 -1.1**
PALK Pallekele 40.83 293 P **P 21 28 54.6 -0.1**
comp=Z,13nm,0.7s,baz=115,slow=7.0,SNR=8.6
PALK LR LR 21 45 36.2
comp=Z,96nm,21.2s,baz=113,slow=36
NJ2 Nanjing 41.73 1 eP **P 21 29 02.4 +0.7**
NJ2 pmax pmax
comp=Z,39nm,0.7s
CD2 Chengdu 42.81 342⇑iP **P 21 29 11.8 +1.2**
CD2 S **S 21 35 40.0 +8.2**
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,100nm,5.6s
CD2 LR LR
comp=Z,340nm,17.7s
CD2 LR LR
comp=Z,270nm,17.8s
CD2 LR LR
comp=Z,410nm,9.6s
SHL Shillong 43.44 325 P **P 21 29 14.9 -1.1**
SHL IAmb IAmb 21 29 16.0
comp=Z,26nm,1.0s
SHL Shillong 43.44 325 P **P 21 29 14.9 -1.1**
SHL pmax pmax
comp=Z,26nm,1.0s
JCJ Chichijima 43.66 32 LR LR 21 47 04.2
comp=Z,35nm,21.5s,baz=138,slow=36
JNU Nakatsue 44.53 16 LR LR 21 47 56.4
comp=Z,109nm,21.9s,baz=150,slow=36
JNU Nakatsue 44.53 16 P **P 21 29 23.4 -1.0**
XAN Xi'an 44.54 349 P **P 21 29 23.5 -1.0**
XAN pP pP 21 29 37.9 +1.9
XAN pmax pmax
comp=Z,37nm,0.7s
XAN pmax pmax
comp=Z,86nm,3.8s
XAN LR LR
comp=Z,220nm,18.7s
XAN LR LR
comp=Z,150nm,19.0s
XAN LR LR
comp=Z,280nm,23.0s
XAN Xi'an 44.54 349 P **P 21 29 23.4 -1.0**
XAN Xi'an 44.54 349 P **P 21 29 23.4 -1.0**
XAN pmax pmax
comp=Z,28nm,0.6s
H08S2 Diego Garcia H 44.95 269 T T 22 17 46.1
baz=96,slow=76,SNR=4.3
H08S3 Diego Garcia H 44.96 269 T T 22 17 47.5
baz=96,slow=76,SNR=16
H08S1 Diego Garcia H 44.97 269 T T 22 17 45.7
baz=96,slow=76,SNR=4.4
TJN Taejon 46.88 10ceP **P 21 29 42.7 -0.1**
ODAN Odare 47.07 322 eP **P 21 29 43.3 -1.5**
comp=Z,37nm,0.8s
LSA Lhasa 47.08 328 P **P 21 29 45.0 -0.1**
LSA pmax pmax
comp=Z,42nm,1.4s
LSA Lhasa 47.08 328 P **P 21 29 43.7 -1.4**
LSA IAmb IAmb 21 30 01.0
comp=Z,8.2nm,0.7s
LSA Lhasa 47.08 328 P **P 21 29 43.7 -1.4**
LSA pmax pmax
comp=Z,8.0nm,0.7s
TAPN Taplejung 47.23 322 eP **P 21 29 45.0 -1.1**
comp=Z,48nm,0.8s
RAMN Ramite 47.62 321 eP **P 21 29 48.0 -1.1**
comp=Z,38nm,0.6s
LZH Lanzhou 47.64 345 eP **P 21 29 49.1 +0.1**
LZH pP pP 21 29 57.0 -3.6
LZH sP pwP 21 30 00.3 -4.1
LZH pmax pmax
comp=Z,23nm,1.0s
LZH pmax pmax
comp=Z,130nm,4.9s
LZH LR LR
comp=Z,220nm,14.4s
LZH LR LR
comp=Z,170nm,14.4s
LZH LR LR
comp=Z,260nm,15.8s
NOUC Port Laguerre 47.85 111 P **P 21 29 50.9 +0.2**
NOUC IAmb IAmb 21 29 57.5
comp=Z,25nm,1.1s
KSRS Korea Array 48.03 11 P **P 21 29 52.1 +0.4**
comp=Z,34nm,0.9s,baz=189,slow=8.4,SNR=118
KSRS PcP **PcP 21 31 20.7 +1.5**
comp=Z,2.4nm,0.7s,baz=202,slow=4.1,SNR=3.8
KSRS ScP **ScP 21 35 12.0 +1.9**
comp=Z,0.7nm,0.7s,baz=197,slow=1.3,SNR=4.3
KSRS LR LR 21 51 01.3
comp=Z,83nm,19.4s,baz=188,slow=37
KS19 Wonju Array Si 48.07 11 P **P 21 29 50.5 -1.5**
JIRN Jiri 48.38 321 eP **P 21 29 53.7 -1.4**
comp=Z,128nm,0.7s
INU Inuyama 48.49 21 P **P 21 29 54.2 -1.2**
INU IAmb IAmb 21 29 54.7
comp=Z,17nm,1.0s
GUN Gumba 48.75 321 eP **P 21 29 56.5 -1.4**
comp=Z,70nm,0.7s
PKI Pulchoki 48.80 321 eP **P 21 29 56.3 -2.0**
comp=Z,17nm,0.5s
PKIN Phulchoki 48.81 321 eP **P 21 29 56.3 -2.0**
comp=Z,23nm,0.5s
DMN Daman 49.02 320 eP **P 21 29 57.6 -2.3**
comp=Z,41nm,0.7s
KKN Kakani 49.04 321 eP **P 21 29 58.3 -1.7**
comp=Z,32nm,0.8s
GKN Gorkha 49.59 320 eP **P 21 30 02.5 -1.6**
comp=Z,41nm,0.3s
BJT Baijiatuau 49.70 358 P **P 21 30 03.4 -1.1**
BJT Baijiatuau 49.70 358 P **P 21 30 03.4 -1.1**
BJT pmax pmax
comp=Z,28nm,0.6s
BJI Beijing 49.72 358 P **P 21 30 04.0 -0.7**
BJI pmax pmax
comp=Z,36nm,0.8s
MJAR Matsushiro Arr 49.98 21 P **P 21 30 05.3 -1.5**
comp=Z,17nm,0.8s,baz=195,slow=7.8,SNR=46
MJAR ScP **ScP 21 35 19.5 +0.9**
comp=Z,1.4nm,0.8s,baz=148,slow=5.6,SNR=4.4
MAJO Matsushiro 49.98 21 P **P 21 30 04.5 -2.3**
MAJO IAmb IAmb 21 30 07.9
comp=Z,16nm,0.8s
MAJO Matsushiro 49.98 21 P **P 21 30 04.5 -2.3**
MAJO pmax pmax
comp=Z,16nm,0.8s
MAT Matsushiro 49.98 21 P **P 21 30 05.0 -1.8**
MJB9 Matsu-Tunnel 49.98 21 P **P 21 30 05.0 -1.8**
DANN Dangsing 50.38 320 eP **P 21 30 08.7 -1.6**
comp=Z,132nm,0.7s
BTO Baotou 50.79 352 eP **P 21 30 11.8 -1.1**
GTA Gaotai 51.88 342 ⇑P **P 21 30 21.3 +0.2**
GTA pP pP 21 30 28.6 -4.3
GTA sP pwP 21 30 32.1 -4.5
GTA PcP **PcP 21 31 34.9 +1.4**
GTA S **S 21 37 45.0 +4.2**
GTA ScS **ScS 21 40 06.8 -0.9**
GTA pmax pmax
comp=Z,14nm,1.0s
GTA pmax pmax
comp=Z,97nm,5.6s
GTA LR LR
comp=Z,120nm,18.7s
GTA LR LR
comp=Z,120nm,17.1s
GTA LR LR
comp=Z,200nm,19.4s
CN2 Changchun 53.89 7 eP **P 21 30 33.9 -1.8**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
VLA Vladivostok 54.29 13deP **P 21 30 36.9 -1.7**
VLA pmax pmax
comp=Z,31nm,0.9s
MDJ Mudanjiang 55.28 10 P **P 21 30 45.1 -0.7**
USRK Ussuriysk Ar. 55.34 12 P **P 21 30 46.0 -0.2**
comp=Z,27nm,0.6s,baz=194,slow=6.1,SNR=78
USRK LR LR 21 56 09.0
comp=Z,91nm,18.7s,baz=173,slow=38
RPZ Rata Peaks 56.87 136 P **P 21 30 58.2 +0.9**
KHZ Kahutara 58.19 134 P **P 21 31 05.4 -1.1**
BSWZ Blackbirch Sta 58.23 133 P **P 21 31 05.4 -1.5**
ULN Ulaanbaatar 58.33 351 P **P 21 31 07.4 -0.1**
ULN IAmb IAmb 21 31 08.1
comp=Z,8.8nm,0.7s
ULN Ulaanbaatar 58.33 351 P **P 21 31 07.4 -0.1**
ULN pmax pmax
comp=Z,9.0nm,0.7s
SONM Songino Array 58.40 351 P **P 21 31 07.5 -0.4**
comp=Z,12nm,0.6s,baz=168,slow=8.3,SNR=109
SONM PcP **PcP 21 31 59.0 +0.6**
comp=Z,5.0nm,0.5s,baz=172,slow=4.1,SNR=6.9
SONM LR LR 21 57 56.7
comp=Z,125nm,20.3s,baz=164,slow=38
BHW Baring Head 58.86 133 P **P 21 31 10.9 -0.4**
PLWZ Palliser 59.18 133 P **P 21 31 14.8 +1.2**
BKZ Black Stump Fm 59.52 130 P **P 21 31 17.1 +1.1**
BKZ IAmb IAmb 21 31 34.5
comp=Z,8.4nm,1.0s
KLR Kul'dur 60.12 10 P **P 21 31 19.1 -0.6**
comp=Z,3.1nm,0.4s,baz=192,slow=4.3,SNR=20
KLR PcP **PcP 21 32 05.7 +0.6**
comp=Z,2.9nm,0.6s,baz=243,slow=2.3,SNR=2.2
KLR Kul'dur 60.12 10c iP **P 21 31 18.5 -1.2**
KLR pmax pmax
comp=Z,9.0nm,1.8s
WMQ Urumqi 60.12 335 P **P 21 31 20.3 +0.4**
WMQ pP pP 21 31 28.9 -3.1
WMQ sP pwP 21 31 31.6 -3.9
WMQ PcP **PcP 21 32 05.8 +0.5**
WMQ pmax pmax
comp=Z,22nm,0.7s
WMQ pmax pmax
comp=Z,140nm,5.3s
WMQ LR LR
comp=Z,220nm,25.5s
WMQ LR LR
comp=Z,150nm,29.7s
NIL Nilore 60.66 318 P **P 21 31 22.4 -1.4**
NIL IAmb IAmb 21 31 24.5
comp=Z,7.9nm,0.7s
NIL Nilore 60.66 318 P **P 21 31 22.4 -1.4**
NIL pmax pmax
comp=Z,8.0nm,0.7s
YSS Yuzh-Sakhalins 60.78 19 eP **P 21 31 23.7 -0.5**
YSS pmax pmax
comp=Z,10.0nm,0.9s
ZAK Zakamensk 61.39 349 eP **P 21 31 27.6 -0.8**
ZAK pmax pmax
comp=Z,5.0nm,1.1s
TLY Talaya 62.57 350 P **P 21 31 36.4 +0.2**
comp=Z,2.8nm,0.5s,baz=66,slow=9.8,SNR=3.8
TLY Talaya 62.57 350 P **P 21 31 35.2 -1.0**
TLY IAmb IAmb 21 31 37.2
comp=Z,5.5nm,0.8s
TLY Talaya 62.57 350⇑eP **P 21 31 35.6 -0.6**
TLY pmax pmax
comp=Z,7.0nm,0.8s
KSH Kashi 62.72 324 P **P 21 31 37.5 -0.2**
KSH S **S 21 39 55.8 -7.5**
KSH sS sS 21 40 24.3 +0.5
KSH pmax pmax
comp=Z,16nm,1.3s
KSH pmax pmax
comp=Z,190nm,4.3s
KSH LR LR
comp=Z,140nm,7.2s
KSH LR LR
comp=Z,120nm,3.9s
KSH LR LR
comp=Z,150nm,6.9s
MOY Mondy 63.05 348 eP **P 21 31 38.8 -0.8**
MOY pmax pmax
comp=Z,13nm,1.5s
PDGK Podgornoye 63.50 330 i P **P 21 31 42.6 -0.2**
PDGK pmax pmax
comp=Z,8.0nm,0.8s
KDJ Kajisay 63.84 327 P **P 21 31 44.1 -1.0**
KDJ Kajisay 63.84 327 P **P 21 31 44.1 -1.0**
ZEA Zeya 63.89 6 eP **P 21 31 44.8 -0.1**
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=Z,35nm,1.0s
NRN Naryn 64.00 326 IAmb IAmb 21 31 46.5
comp=Z,6.0nm,0.7s
KBL Kabul 64.01 316 P **P 21 31 45.1 -1.3**
KBL Kabul 64.01 316 P **P 21 31 45.1 -1.3**
KBL pmax pmax
comp=Z,20nm,0.6s
TYV Tymovskoe 64.22 17 eP **P 21 31 46.3 -0.8**
TYV pmax pmax
comp=Z,6.0nm,1.2s
MK31 Makanchi Array 64.80 334 P **P 21 31 50.1 -1.0**
MK31 IAmb IAmb 21 31 51.4
comp=Z,11nm,0.8s
MK31 Makanchi Array 64.80 334 P **P 21 31 50.1 -1.0**
MK31 pmax pmax
comp=Z,11nm,0.8s
MKAR Makanchi Array 64.80 334 P **P 21 31 50.3 -0.7**
comp=Z,12nm,0.4s,baz=151,slow=5.9,SNR=294
MKAR LR LR 22 02 07.8
comp=Z,86nm,21.9s,baz=148,slow=38
MKAR Makanchi Array 64.80 334ceP **P 21 31 50.0 -1.0**
MKAR pmax pmax
comp=Z,12nm,0.4s
MAKZ Makanchi 64.94 334 P **P 21 31 51.3 -0.7**
MAKZ IAmb IAmb 21 31 52.2
comp=Z,6.9nm,0.6s
MAKZ Makanchi 64.94 334 P **P 21 31 51.3 -0.7**
MAKZ pmax pmax
comp=Z,7.0nm,0.6s
AAK Ala-Archa 65.64 326 P **P 21 31 56.4 -0.4**
comp=Z,4.2nm,0.5s,baz=136,slow=5.0,SNR=20
AAK Ala-Archa 65.64 326 P **P 21 31 56.3 -0.4**
AAK IAmb IAmb 21 32 02.5
comp=Z,10nm,0.8s
AAK Ala-Archa 65.64 326ceP **P 21 31 55.5 -1.3**
AAK pmax pmax
comp=Z,11nm,0.9s
BTK Batken 66.11 322 IAmb IAmb 21 32 06.2
comp=Z,7.7nm,0.5s
WSAR Wadi Sarin 66.71 301 P **P 21 32 03.8 -0.1**
comp=Z,14nm,0.6s,baz=136,slow=5.9,SNR=23
SOCY Socotra 67.23 288 P **P 21 32 07.8 +0.4**
SOCY IAmb IAmb 21 32 16.7
comp=Z,14nm,1.0s
BOD Bodaibo 67.57 358 eP **P 21 32 07.4 -1.1**
BOD pmax pmax
comp=Z,11nm,1.4s
MAW Mawson 68.03 200 LR LR 21 55 36.9
comp=Z,219nm,20.3s,baz=60,slow=30
KK31 Karatay Array 68.18 324 P **P 21 32 11.5 -1.2**
KK31 Karatay Array 68.18 324 P **P 21 32 11.5 -1.2**
KKAR Karatay Array 68.18 324 P **P 21 32 11.5 -1.2**
KKAR Karatay Array 68.18 324 P **P 21 32 11.5 -1.2**
KKAR pmax pmax
comp=Z,4.0nm,0.8s
KURBB Kurchatov Arra 69.33 334 P **P 21 32 19.1 -0.5**
comp=Z,11nm,0.5s,baz=143,slow=5.7,SNR=161
KURK Kurchatov 69.36 335 P **P 21 32 19.0 -0.8**
KURK Kurchatov 69.36 335ceP **P 21 32 19.0 -0.8**
KURK pmax pmax
comp=Z,16nm,0.7s
ZALV Zalesovo Beam 69.52 340 P **P 21 32 19.4 -1.4**
comp=Z,12nm,0.6s,baz=145,slow=5.5,SNR=46
ZALV LR LR 22 04 48.1
comp=Z,104nm,19.1s,baz=160,slow=38
VNDA Vanda 71.26 171 P **P 21 32 34.2 +3.1**
comp=Z,6.1nm,0.9s,baz=295,slow=14,SNR=12
VNDA LR LR 22 01 34.5
comp=Z,141nm,21.2s,baz=324,slow=34
PETK Petropavlovsk- 71.32 24 P **P 21 32 32.5 +0.7**
comp=Z,17nm,0.7s,baz=222,slow=4.0,SNR=47
PETK LR LR 22 04 09.4
comp=Z,20nm,20.6s,baz=241,slow=36
YAK Yakutsk 72.30 6 P **P 21 32 37.0 -0.4**
comp=Z,6.8nm,0.5s,baz=112,slow=2.1,SNR=6.8
YAK Yakutsk 72.30 6 P **P 21 32 36.3 -1.2**
YAK IAmb IAmb 21 32 40.7
comp=Z,18nm,0.8s
YAK Yakutsk 72.30 6 eP **P 21 32 36.6 -0.9**
YAK pmax pmax
comp=Z,15nm,1.1s
YAK pmax pmax
comp=N,10.0nm,1.3s
YAK pmax pmax
comp=E,4.0nm,1.5s
GEYT Alibeck 73.33 314 P **P 21 32 44.4 +0.3**
comp=E,3.2nm,0.5s,baz=180,slow=5.9,SNR=11
GEYT LR LR 22 08 46.2
comp=E,56nm,20.8s,baz=175,slow=39
MA2 Magadan 74.08 17⇓eP **P 21 32 48.6 +0.5**
MA2 pmax pmax
comp=Z,10.0nm,1.3s
BVAR Borovoye Array 74.61 332 P **P 21 32 51.0 -0.3**
comp=Z,18nm,0.8s,baz=131,slow=6.7,SNR=130
BVAR Borovoye Array 74.61 332 P **P 21 32 51.0 -0.3**
BRVK Borovoye 74.68 332 P **P 21 32 51.1 -0.5**
BRVK IAmb IAmb 21 32 52.0
comp=Z,11nm,0.8s
BRVK Borovoye 74.68 332ceP **P 21 32 50.4 -1.3**
BRVK pmax pmax
comp=Z,10.0nm,0.7s
SYO Syowa Base 76.64 201⇓ePcP **PcP 21 33 15.4 +1.5**
SEY Seymchan 77.31 15c iP **P 21 33 06.3 -0.1**
AB31 Akbulak array 77.71 325⇑eP **P 21 33 08.4 -0.6**
AB31 pmax pmax
comp=Z,14nm,0.5s
ABKAR Akbulak array 77.71 325 P **P 21 33 08.3 -0.6**
RAYN Ar Rayn 78.17 297 P **P 21 33 10.5 -1.7**
RAYN IAmb IAmb 21 33 13.8
comp=Z,9.0nm,0.8s
RAYN Ar Rayn 78.17 297 P **P 21 33 10.5 -1.7**
RAYN pmax pmax
comp=Z,9.0nm,0.8s
AKTO Aktyubinsk 79.38 326 P **P 21 33 18.1 0.0**
comp=Z,20nm,0.5s,baz=111,slow=6.4,SNR=77
AKTO LR LR 22 14 18.0
comp=Z,69nm,18.3s,baz=129,slow=40
QSPA South Pole Qui 80.09 180 P **P 21 33 24.2 +2.2**
comp=Z,4.7nm,1.0s,baz=303,slow=1.9,SNR=7.8

QSPA South Pole Qui 80.09 180 P P 21 33 23.1 +1.1
QSPA IAmb IAmb 21 33 40.5
comp=Z,16nm,1.1s
KMBO Kilima Mbogo 80.64 270 P P 21 33 28.8 +2.7
comp=Z,7.5nm,0.9s,baz=75,slow=6.7,SNR=20
KMBO Kilima Mbogo 80.64 270 P P 21 33 25.1 -1.0
KMBO IAmb IAmb 21 33 29.8
comp=Z,9.3nm,1.0s
SVE Sverdlovsk 81.39 332 eP P 21 33 28.0 -0.8
SVE pmax pmax
comp=Z,13nm,1.0s
TIXI Tiksi 81.70 3 P P 21 33 29.1 -1.0
TIXI IAmb IAmb 21 33 30.2
comp=Z,23nm,1.1s
TIXI Tiksi 81.70 3c iP P 21 33 28.8 -1.3
TIXI pmax pmax
comp=Z,35nm,1.7s
NRIK Noril'sk 81.85 350 P P 21 33 30.8 -0.2
comp=Z,8.1nm,0.7s,baz=166,slow=6.4,SNR=8.1
NRIK LR LR 22 13 02.1
comp=Z,30nm,18.1s,baz=314,slow=38
AKT Akhty 82.08 314 eP P 21 33 34.0 +1.0
AKT e 21 33 39.0
AKT pmax pmax
comp=Z,27nm,1.0s
ARU Arti 82.15 331 P P 21 33 32.1 -0.7
comp=Z,1.4nm,0.5s,baz=101,slow=5.4,SNR=9.8
ARU LR LR 22 16 45.4
comp=Z,67nm,18.7s,baz=144,slow=41
ARU Arti 82.15 331 P P 21 33 32.3 -0.5
ARU Arti 82.15 331c iP P 21 33 31.8 -1.0
ARU 21 36 34.7
ARU S S 21 43 45.1 +0.9
ARU SS SS 21 49 05.4 +0.5
ARU pmax pmax
comp=Z,4.0nm,0.6s
CUKT Cukurca 83.73 309 eP P 21 33 42.1 +0.5
GNI Garni 83.77 312 P P 21 33 42.1 +0.3
GNI IAmb IAmb 21 33 59.3
comp=Z,14nm,0.9s
GNI Garni 83.77 312 P P 21 33 42.2 +0.3
GNI pmax pmax
comp=Z,14nm,0.9s
GROC Groznyy 84.02 316 eP P 21 33 40.5 -2.3
GROC e 21 36 52.3
GROC pmax pmax
comp=Z,45nm,1.2s
TASB TASBURUN-IGDIR 84.09 312 eP P 21 33 44.7 +1.4
AKDM Akdamar-Van 84.52 310 eP P 21 33 47.5 +1.8
AGRB Hanur-Agry 84.88 311 eP P 21 33 49.3 +1.8
BILL Bilibino 84.95 16 P P 21 33 47.1 +0.2
BILL Bilibino 84.95 16⇑eP P 21 33 46.3 -0.7
BILL i 21 33 49.7
BILL pmax pmax
comp=Z,2.0nm,0.8s
AKH Akhalkalaki 85.07 313 P P 21 33 48.6 +0.2
AKH Akhalkalaki 85.07 313 P P 21 33 48.6 +0.2
AKH pmax pmax
comp=Z,31nm,0.8s
ZEI Tsey 85.20 315 eP P 21 33 49.6 +0.6
ZEI pmax pmax
comp=Z,18nm,0.6s
GURO Guroymak-BITLI 85.30 310 eP P 21 33 51.3 +1.7
SENK Senkaya-Erzuru 85.64 312 eP P 21 33 53.0 +1.7
KOPR Koprukoy-ERZUR 85.84 312 eP P 21 33 54.3 +2.0
VRTB Varto-Mus 85.90 311 eP P 21 33 54.9 +2.3
KBZ Khabaz 86.19 315 P P 21 33 54.5 +0.9
comp=Z,13nm,0.8s,baz=127,slow=4.1,SNR=22
MAZI Mazidag 86.20 309 eP P 21 33 55.5 +1.5
KARO Karliova-Bingo 86.25 311 eP P 21 33 56.4 +2.1
KIV Kislovodsk 86.40 316 P P 21 33 55.6 +0.7
KIV IAmb IAmb 21 33 58.4
comp=Z,5.9nm,0.8s
KIV Kislovodsk 86.40 316 eP P 21 33 54.6 -0.2
KIV pmax pmax
comp=Z,22nm,1.0s
KIV MLR MLR
comp=Z,149nm,20.0s
BNGB Bingl 86.44 310 eP P 21 33 56.7 +1.5
YEDI Yedisu-Bingol 86.66 311 eP P 21 33 58.1 +1.8
LSZ Lusaka 87.20 255 P P 21 33 58.0 -1.4
LSZ IAmb IAmb 21 34 02.6
comp=Z,8.9nm,0.7s
LSZ Lusaka 87.20 255 P P 21 33 58.0 -1.4
LSZ pmax pmax
comp=Z,9.0nm,0.7s
KIRV Kirov 87.52 331 LR LR 22 18 13.1
comp=Z,70nm,18.6s,baz=87,slow=39
BOSA Boshof 87.66 242 P P 21 34 03.1 +1.7
comp=Z,5.8nm,1.1s,baz=112,slow=3.9,SNR=3.7
BOSA LR LR 22 09 24.7
comp=Z,42nm,18.0s,baz=156,slow=33
LBTB Lobatse 87.98 245 P P 21 34 03.1 +0.2
LBTB IAmb IAmb 21 34 06.3
comp=Z,7.1nm,0.8s
LBTB Lobatse 87.98 245 P P 21 34 03.1 +0.2
LBTB pmax pmax
comp=Z,7.0nm,0.8s
SOC Sochi 88.36 315 eP P 21 34 03.5 -0.6
SOC e 21 37 28.8
SOC ePPP PPP 21 39 31.0
SOC eS SKSac 21 44 29.5 0.0
SOC eSS SS 21 50 29.6 -7.3
SOC eSSS SSS 21 54 11.5
SOC pmax pmax
comp=Z,15nm,0.7s
GAZ Gaziantep 88.63 308 P P 21 34 06.5 +0.8
MMAI Mount Meron Ar 89.16 304 P P 21 34 10.4 +2.2
comp=Z,2.2nm,0.5s,baz=88,slow=6.8,SNR=14
VRH Novokhopyorsk 89.16 322 eP P 21 34 06.9 -0.8
VRH pmax pmax
comp=Z,40nm,0.6s
PPT Papeete 89.39 108 LR LR 22 10 46.2
comp=Z,52nm,20.3s,baz=200,slow=33
PRGR Permogore 90.42 333 eP P 21 34 11.7 -1.6
PRGR pmax pmax
comp=Z,12nm,0.9s
VSR Storozhevoye 90.71 322 eP P 21 34 13.8 -1.1
VSR pmax pmax
comp=Z,30nm,1.2s
LPSR Galich'ya Gora 91.20 323 eP P 21 34 16.1 -1.1
LPSR pmax pmax
comp=Z,7.0nm,1.0s
BRTR Keskin Array B 91.92 310 P P 21 34 21.1 0.0
comp=Z,1.7nm,0.8s,baz=139,slow=6.5,SNR=13
BRTR LR LR 22 20 30.7
comp=Z,16nm,18.1s,baz=142,slow=39
BRTR Keskin Array B 91.92 310c eP P 21 34 21.2 +0.2
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BR131 Keskin Array S 91.92 310 P P 21 34 18.6 -2.5
BR131 Keskin Array S 91.92 310 P P 21 34 18.6 -2.5
KLMR Klimovskoe 93.00 331 eP P 21 34 23.0 -2.3
KLMR pmax pmax
comp=Z,13nm,0.8s
KLMR Klimovskoe 93.00 331 eP P 21 34 23.1 -2.3
KLMR AMP 21 34 25.6
comp=Z,13nm,0.8s
OBN Obninsk 93.16 325 iP P 21 34 24.8 -1.3
OBN i 21 38 09.3
OBN pmax pmax
comp=Z,13nm,1.1s
RDOG Red Dog Mine 95.09 22 P P 21 34 33.7 -1.1
RDOG IAmb IAmb 21 34 37.2
comp=Z,5.7nm,0.8s
AKASG Malin Array Be 96.77 320 P P 21 34 42.0 -0.8
comp=Z,1.5nm,0.6s,baz=82,slow=4.7,SNR=12
AKASG LR LR 22 26 25.2
comp=Z,24nm,18.1s,baz=290,slow=40
AKASG Malin Array Be 96.77 320c eP P 21 34 41.7 -1.1
AKASG pmax pmax
comp=Z,2.0nm,0.5s
FINES FINESS Array B 99.52 331 P Pdif 21 34 54.9 0.0
comp=Z,7.3nm,0.8s,baz=100,slow=3.5,SNR=14
FINES PKiKP PKiKP 21 39 25.5 +1.6
comp=Z,1.2nm,0.7s,baz=103,slow=1.2,SNR=5.9
FINES LR LR 22 23 45.8
comp=Z,94nm,18.8s,baz=100,slow=38
FINES FINESS Array B 99.52 331c eP Pdif 21 34 54.7 -0.2
FINES pmax pmax
comp=Z,7.0nm,0.8s
TOLK Toolik Lake Re 100.06 22 Pdiff Pdif 21 34 58.1 +0.8
baz=269
ARCES ARCESS Array B 100.07 339 P Pdif 21 34 56.5 -0.7
comp=Z,5.7nm,0.9s,baz=92,slow=6.6,SNR=9.9
ARCES PKiKP PKiKP 21 39 26.6 +1.9
comp=Z,1.8nm,0.9s,baz=102,slow=2.2,SNR=4.9
ARCES LR LR 22 24 47.0
comp=Z,72nm,18.0s,baz=331,slow=38
ILAR Eielson Array 101.10 26 P Pdif 21 35 01.1 -0.8
comp=Z,0.3nm,0.6s,baz=265,slow=4.3,SNR=8.1
ILAR PP PP 21 39 08.6 -2.2
comp=Z,0.3nm,0.9s,baz=278,slow=8.7,SNR=3.3
KOLS Kolonicke sedl 101.11 318 eP Pdif 21 35 03.7 +1.4
KOLS Kolonicke sedl 101.11 318 ePDIFF Pdif 21 35 03.7 +1.4
INK Inuvik 105.97 22 PKiKP PKiKP 21 39 37.2 +1.8
comp=Z,0.6nm,0.8s,baz=344,slow=3.3,SNR=4.1
GERES GERESS Array B 106.77 318 PKiKP PKiKP 21 39 38.9 +1.3
comp=Z,0.4nm,0.5s,baz=70,slow=1.6,SNR=6.1
YKA Yellowknife Ar 115.44 24 PKP PKPdf 21 39 54.4 +0.9
comp=Z,2.5nm,0.5s,baz=307,slow=1.9,SNR=44
TORD Torodi Ar. Bea 117.59 280 PKP PKiKP 21 40 00.3 +1.2
comp=Z,2.3nm,0.7s,baz=68,slow=1.7,SNR=13
PNT Penticton 118.37 39 PKIKP PKiKP 21 40 03.7 +4.1
L04D Klamath Falls 118.53 47 P PKiKP 21 40 01.8 +1.5
baz=283
NEW Newport 120.28 39 PKP PKiKP 21 40 05.3 +1.9
comp=Z,1.4nm,0.7s,baz=129,slow=2.0,SNR=4.0
ESDC Sonseca Array 120.71 310 PKP PKiKP 21 40 06.0 +1.5
comp=Z,0.5nm,0.4s,baz=22,slow=3.8,SNR=5.6
PNTR Pine Nut 121.25 50 PKPdf 21 40 03.7 -2.0
NVAR Mina Array Bea 122.40 51 PKP PKiKP 21 40 10.1 +1.9
comp=Z,1.2nm,0.6s,baz=284,slow=2.1,SNR=12
MSO Missoula 122.81 40 P PKiKP 21 40 09.6 +1.1
baz=293
CWC Cottonwood Cre 123.03 53 P PKiKP 21 40 11.4 +2.0
baz=283
DBIC Dimbokro 123.36 271 PKP PKiKP 21 40 11.8 +1.4
comp=Z,1.3nm,0.4s,baz=34,slow=1.8,SNR=6.6
EDW2 Edwards Air Fo 123.44 55 P PKiKP 21 40 12.5 +2.4
baz=282
LRMC Laurel Mtn Rad 123.56 54 P PKiKP 21 40 12.8 +2.4
baz=283
MPMC Manual Prospec 123.58 53 P PKiKP 21 40 12.8 +2.3
baz=283,SNR=5.1
ELK Elko 124.04 47 PKPdf 21 40 10.7 -0.4
ELK Elko 124.04 47 PKIKP PKPdf 21 40 10.7 -0.4
GSC Goldstone, Bar 124.30 54 P PKiKP 21 40 13.4 +1.6
baz=283
TPNV Topopah Spring 124.34 52 P PKiKP 21 40 13.8 +1.8
baz=285
R11A Troy Canyon, C 124.48 50 PKiKP 21 40 13.4 +1.2
R11A Troy Canyon, C 124.48 50 P PKiKP 21 40 14.3 +2.1
baz=286
EGMT Eagleton 124.88 37 PKPdf 21 40 11.8 -0.5
EGMT Eagleton 124.88 37 P PKiKP 21 40 13.9 +1.4
baz=297
TPFO Pinon Flats 124.95 56 P PKiKP 21 40 15.3 +2.1
baz=282
BELC Belle Mtn. Jos 125.24 55 P PKiKP 21 40 16.3 +2.5
baz=283
FFC Flin Flon 125.28 27 PKPdf 21 40 11.0 -1.7
FFC Flin Flon 125.28 27 PKIKP PKPdf 21 40 11.0 -1.7
SHPR Sheep Range 125.30 52 PKiKP 21 40 15.0 +1.1
GMRC Granite Mounta 125.33 54 P PKiKP 21 40 16.7 +2.7
baz=284
BC3 Big Chuckawall 125.75 56 P PKiKP 21 40 18.0 +3.2
baz=283
DUG Dugway, Tooele 125.97 47 P PKiKP 21 40 17.2 +2.2
baz=290
PDAR Pinedale Array 127.29 43 PKP PKiKP 21 40 18.6 +0.8
comp=Z,0.3nm,0.5s,baz=175,slow=2.0,SNR=4.5
LAO LASA Array 127.63 37 PKPdf 21 40 14.8 -2.7
LAO LASA Array 127.63 37 P PKiKP 21 40 20.4 +2.3
baz=300
O20A White River Ci 129.25 46 P PKiKP 21 40 24.0 +2.3
baz=294
ULM Lac du Bonnet 131.04 28 PKP PKiKP 21 40 24.7 0.0
comp=Z,2.0nm,0.6s,baz=341,slow=2.0,SNR=7.1
S22A 4UR Ranch, Cre 131.20 48 P PKiKP 21 40 28.3 +2.5
baz=293
ANMO Albuquerque 132.51 51 PKP PKiKP 21 40 29.7 +1.2
comp=Z,0.8nm,0.7s,baz=230,slow=3.1,SNR=4.3
MNTX Cornudas Mount 134.46 55 P PKiKP 21 40 33.3 +1.1
baz=289
SCHQ Schefferville 135.03 4 PKP PKiKP 21 40 32.5 -0.2
comp=Z,2.8nm,0.4s,baz=24,slow=2.0,SNR=18
TXAR Lajitas Array 136.60 58 PKhKP PKPpre 21 40 27.9
comp=Z,0.3nm,0.5s,baz=331,slow=2.3,SNR=5.4
TXAR PKP PKiKP 21 40 35.9 -0.9
comp=Z,0.5nm,0.6s,baz=272,slow=1.7,SNR=5.4
E47A Iron Bridge 139.33 23 P PKiKP 21 40 40.9 -0.8
baz=327
E48A Lockeyer 139.72 22 P PKiKP 21 40 41.5 -1.0
baz=328
D50A G1974 Best Tow 139.92 19 P PKPdf 21 40 40.9 +0.5
baz=332
E51A G1948 Merrick 140.59 19 P PKPdf 21 40 42.8 +1.1
baz=332
D53A Lac Vacive, Po 140.65 17 P PKPdf 21 40 42.5 +0.7
baz=335
D54A Lac Fusel, La 140.87 16 P PKiKP 21 40 45.2 +0.3
baz=337
E53A Dumoine, Ponti 141.29 17 P PKiKP 21 40 45.7 0.0
baz=335
D55A Sainte-Anne-du 141.30 15 P PKiKP 21 40 45.4 -0.3
baz=339
E54A Lac Daplat, Po 141.38 17 P PKiKP 21 40 46.1 +0.2
baz=336
LATQ La Tuque 141.56 12 P PKiKP 21 40 47.1 +0.9
baz=343
E56A St. Veronique 141.85 15 P PKPdf 21 40 44.0 +0.1
baz=339
MIAR Mount Ida 142.17 45 P PKPdf 21 40 41.5 -3.4
baz=303
E58A La Victoria 142.42 13 P PKPdf 21 40 42.7 -2.3
baz=342
L48A N Adams 142.52 28 P PKPdf 21 40 41.7 -3.6
baz=322
CPUP Villa Florida 143.69 187 PKP PKPdf 21 40 46.9 -1.0
comp=Z,2.6nm,1.1s,baz=90,slow=1.0,SNR=3.1
N50A Nevada 144.04 28 P PKPbc 21 40 46.6 +0.6
baz=323
H58A Gabriels 144.05 15 P PKPbc 21 40 46.4 +0.5
baz=339
Q48A North Vernon 144.18 32 P PKPbc 21 40 46.8 +0.4
baz=318
M52A Chesterland 144.19 25 P PKPbc 21 40 46.8 +0.4
baz=326
H60A Morristown 144.27 13 P PKPdf 21 40 47.4 -0.9
baz=342
L53A Girard 144.29 24 P PKPdf 21 40 48.2 -0.3
baz=328
O50A Cable 144.31 29 P PKPbc 21 40 47.5 +0.6
baz=322,SNR=7.2
G64A Maxfield 144.31 8 P PKPdf 21 40 47.9 -0.5
baz=349
K54A Basiliko Farm, 144.32 21 P PKPdf 21 40 47.8 -0.7
baz=331
WCI Wyandotte Cave 144.38 34 PKPbc 21 40 47.8 +0.7
WCI Wyandotte Cave 144.38 34 PKIKP PKPbc 21 40 47.8 +0.7
WCI Wyandotte Cave 144.38 34 P PKPbc 21 40 47.8 +0.7
baz=316
L54A Sinclairville 144.41 22 P PKPdf 21 40 48.0 -0.6
baz=330,SNR=5.8
K55A Perry 144.43 20 P PKPdf 21 40 47.9 -0.7
baz=332
H61A Lyndonville 144.46 12 P PKPdf 21 40 48.6 0.0
baz=343
G65A Princeton 144.52 7 P PKPdf 21 40 48.5 -0.2
baz=351
ACSO Alum Creek Sta 144.54 28 P PKPbc 21 40 48.0 +0.4
baz=323,SNR=5.1
Q49A Aurora 144.55 31 P PKPdf 21 40 48.4 -0.6
baz=319,SNR=5.9
M53A WI Miller and 144.56 24 P PKPdf 21 40 48.3 -0.6
baz=327,SNR=6.7
H62A Milan 144.58 11 P PKPdf 21 40 48.7 -0.1
baz=344
P50A Jamestown 144.64 30 P PKPdf 21 40 48.6 -0.5
baz=321,SNR=14
N52A McGinn's Farm, 144.66 26 P PKPdf 21 40 48.5 -0.6
baz=325
H63A New Sharon 144.69 10 P PKPdf 21 40 48.9 0.0
baz=346,SNR=5.5
I59A Olmsteadville 144.71 15 P PKPdf 21 40 48.6 -0.5
baz=340
L55A Hinsdale 144.78 21 P PKPdf 21 40 49.1 -0.2
baz=331,SNR=8.4
O51A Pataskala 144.78 28 P PKPdf 21 40 49.1 -0.2
baz=323,SNR=8.7
I60A Shoreham 144.81 14 P PKPdf 21 40 49.4 +0.2
baz=341,SNR=6.6
H64A Troy 144.84 9 P PKPdf 21 40 49.2 -0.1
baz=348
J59A Piesco 144.86 16 P PKPdf 21 40 49.3 -0.1
baz=338
M54A Oil Creek Stat 144.91 23 P PKPdf 21 40 49.5 -0.1
baz=329,SNR=12
H65A Eastbrook 144.93 8 P PKPdf 21 40 49.5 +0.1
baz=349
K57A Scipio Center 144.94 19 P PKPdf 21 40 49.5 0.0
baz=335
R49A Shelbyville 144.94 33 P PKPdf 21 40 50.0 +0.3
baz=318,SNR=13
WVT Waverly 144.95 38 PKPdf 21 40 49.6 -0.1
WVT Waverly 144.95 38 PKIKP PKPdf 21 40 49.6 -0.1
WVT Waverly 144.95 38 P PKPdf 21 40 50.0 +0.3
baz=312
H66A Whiting 144.96 7 P PKPdf 21 40 49.7 +0.3
baz=351
I61A Oroboro, Fairl 144.97 13 P PKPdf 21 40 50.2 +0.7
baz=342
OXF Oxford 144.99 41 PKPab 21 40 49.4 +0.2
OXF Oxford 144.99 41 PKIKP PKPab 21 40 49.4 +0.2
OXF Oxford 144.99 41 P PKPdf 21 40 50.3 +0.5
baz=308,SNR=24
N53A Lisbon 145.02 25 P PKPdf 21 40 50.0 +0.3
baz=326,SNR=10
P51A Williamsport 145.10 29 P PKPdf 21 40 49.6 -0.3
baz=322,SNR=9.8
L56A Greenwood 145.13 20 P PKPdf 21 40 50.0 +0.1
baz=333,SNR=9.7
Q50A Georgetown 145.14 31 P PKPdf 21 40 50.2 +0.2
baz=320,SNR=5.8
O52A Adamsville 145.16 27 P PKPdf 21 40 50.4 +0.4
baz=324,SNR=12
K58A Earlville 145.18 18 P PKPdf 21 40 50.6 +0.6
baz=336,SNR=6.8
I63A Otisfield 145.19 11 P PKPdf 21 40 51.0 +1.1
baz=345
N54A Moraine State 145.24 24 P PKPdf 21 40 50.6 +0.5
baz=328,SNR=11
S49A Springfield 145.25 33 P PKPdf 21 40 50.6 +0.5
baz=317,SNR=17
M55A Ridgway 145.28 22 P PKPdf 21 40 50.7 +0.6
baz=330,SNR=14
Q51A Peebles 145.31 30 P PKPdf 21 40 50.7 +0.4
baz=321,SNR=14
O53A New Philadelph 145.32 26 P PKPdf 21 40 50.9 +0.7
baz=326,SNR=16
J60A Lant Hill Farm 145.34 15 P PKPdf 21 40 50.9 +0.7
baz=340
R50A Paris 145.39 32 PKPbc 21 40 49.7 -0.7
R50A Paris 145.39 32 P PKPab 21 40 51.1 +0.6
baz=319,SNR=11
K59A Cooperstown 145.40 17 P PKPab 21 40 51.0 +0.6
baz=338
P52A Corning 145.41 28 P PKPab 21 40 50.8 +0.2
baz=324,SNR=20
J61A Chester 145.46 14 P PKPab 21 40 51.6 +1.0
baz=342
M56A Emporium 145.49 22 PKPab 21 40 50.2 -0.3
M56A Emporium 145.49 22 P PKPab 21 40 51.3 +0.5
baz=331,SNR=22
L57A Andrews Acres 145.49 20 P PKPab 21 40 51.2 +0.4
baz=334,SNR=9.8
VBMS Vicksburg 145.58 46 P PKiKP 21 40 53.3 -1.6
baz=304
BINY Binghamton 145.59 18 P PKPab 21 40 51.8 +0.6
baz=335,SNR=8.0
T49A Edmonton 145.61 34 P PKPab 21 40 51.9 +0.5
baz=316,SNR=18
J62A Henniker 145.74 13 P PKPab 21 40 52.3 +0.6
baz=343
O54A Avella 145.74 25 P PKPab 21 40 52.4 +0.6
baz=327,SNR=21
R51A Hillsboro 145.76 31 P PKPab 21 40 51.9 0.0
baz=320
L58A Harry Jones Me 145.77 18 P PKPab 21 40 52.5 +0.6
baz=335,SNR=16
N55A Marion Center 145.79 23 P PKPab 21 40 51.8 -0.2
baz=329,SNR=7.6
S50A Richmond 145.80 32 P PKPab 21 40 52.1 +0.1
baz=318,SNR=9.1
K60A Five Rivers En 145.81 16 P PKPab 21 40 52.9 +1.0
baz=339,SNR=5.8
J63A Strafford 145.84 12 P PKPab 21 40 52.8 +0.8
baz=344
CLTN Cedars of Leba 145.87 36 PKPdf 21 40 51.0 -0.3
P53A Whipple 145.87 27 PKPdf 21 40 51.2 0.0
P53A Whipple 145.87 27 P PKPab 21 40 52.8 +0.5
baz=325,SNR=19
L59A Walton 145.88 17 PKPdf 21 40 50.6 -0.6
L59A Walton 145.88 17 P PKPab 21 40 52.7 +0.4
baz=337,SNR=12
Q52A Bidwell 145.88 29 P PKPab 21 40 52.4 +0.1
baz=323,SNR=9.5
U49A Red Boiling Sp 145.89 35 P PKPab 21 40 52.9 +0.5
baz=315,SNR=24
K61A Williamstown 145.92 15 P PKPab 21 40 53.1 +0.7
baz=340
N56A West Decatur 145.94 22 P PKPab 21 40 52.8 +0.2
baz=331,SNR=9.5
M57A Sunshine Farm, 145.99 20 PKPdf 21 40 50.5 -0.8
M57A Sunshine Farm, 145.99 20 P PKPab 21 40 53.2 +0.6
baz=333,SNR=22
T50A Nancy 146.05 34 P PKPab 21 40 53.2 +0.2
baz=317,SNR=30
O55A Ligonier 146.16 24 P PKPab 21 40 53.3 0.0
baz=328
K62A Royalston 146.17 14 P PKPab 21 40 53.8 +0.5
baz=342
P54A Burton 146.18 26 P PKPab 21 40 53.8 +0.3
baz=326,SNR=22
M58A Price's Panora 146.18 20 P PKPab 21 40 53.6 +0.2
baz=334,SNR=12
R52A Catlettsburg 146.20 30 P PKPab 21 40 53.6 0.0
baz=322
S51A Beattyville 146.25 32 P PKPab 21 40 53.5 -0.3
baz=320,SNR=11
L61B Northampton 146.27 14 P PKPab 21 40 54.0 +0.3
baz=341
L61A Hillsdale 1, H 146.29 15 P PKPab 21 40 54.1 +0.3
baz=339
K63A Dunstable 146.31 13 P PKPab 21 40 53.8 0.0
baz=343
Q53A Leroy 146.31 28 P PKPab 21 40 53.6 -0.3
baz=324,SNR=7.5
SSPA Standing Stone 146.33 22 PKPab PKPbc 21 40 53.5 +0.3
SSPA Standing Stone 146.33 22 P PKPab 21 40 53.9 -0.1
baz=331
V49A McMinnville 146.34 36 P PKPab 21 40 53.9 -0.3
baz=314,SNR=13
N57A Milroy 146.35 21 P PKPab 21 40 54.1 0.0
baz=332,SNR=7.4
M59A Waymart 146.36 18 P PKPab 21 40 54.1 0.0
baz=336,SNR=13
O56A Blue Knob Stat 146.40 23 P PKPab 21 40 54.1 -0.2
baz=330,SNR=6.3
MCWV Mont Chateau 146.40 25 P PKPab 21 40 54.5 +0.2
baz=327,SNR=5.3
HRV Adam Dziewonsk 146.48 13 PKPab 21 40 54.1 -0.3
HRV Adam Dziewonsk 146.48 13 PKP2 PKPab 21 40 54.1 -0.3
HRV Adam Dziewonsk 146.48 13 P PKPab 21 40 54.8 +0.4
baz=343
S52A Salyersville 146.49 31 P PKPab 21 40 54.4 -0.3
baz=320,SNR=12
Q54A Coxs Mills 146.53 27 P PKPab 21 40 54.7 -0.1
baz=325,SNR=9.5
P55A Reedsville 146.53 25 P PKPab 21 40 54.6 -0.2
baz=327,SNR=9.8
R53A Hurricane 146.54 29 P PKPab 21 40 54.6 -0.3
baz=323,SNR=7.4
N58A Sunbury 146.57 20 P PKPab 21 40 54.6 -0.3
baz=333,SNR=8.1
W49A Belvidere 146.57 38 P PKPab 21 40 54.5 -0.6
baz=313,SNR=9.7
T51A Gray 146.57 33 P PKPab 21 40 54.7 -0.4
baz=318,SNR=8.0
M60A Port Jervis 146.80 17 P PKPab 21 40 55.4 -0.4
baz=337,SNR=7.3
O57A Amberson 146.80 22 P PKPab 21 40 55.3 -0.5
baz=331
N59A State Game Lan 146.82 19 P PKPab 21 40 55.7 -0.2
baz=335,SNR=18
Q55A Buckhannon 146.85 26 P PKPab 21 40 55.5 -0.6
baz=326,SNR=10
P56A Dayton Farm, R 146.94 24 P PKPab 21 40 55.8 -0.5
baz=329,SNR=13
S53A Williamson 146.96 30 P PKPab 21 40 55.9 -0.7

	baz=322,SNR=7.0						
U51A	La Follette	146.97	34	P	PKPab	21 40 56.5	-0.1
	baz=318,SNR=6.7						
T52A	Hallie	146.97	32	P	PKPab	21 40 56.1	-0.5
	baz=320,SNR=6.1						
LVC	Limon Verde	146.99	168		PKPab	21 40 57.5	0.0
LVC	Limon Verde	146.99	168	PKP2	PKPab	21 40 57.5	0.0
M61A	Granite Spring	147.06	16	P	PKPab	21 40 56.2	-0.5
	baz=338,SNR=8.6						
N60A	Cedar Hill Far	147.07	18	P	PKPab	21 40 56.1	-0.7
	baz=336,SNR=9.9						
L63A	North Scituate	147.08	13	P	PKPab	21 40 56.4	-0.5
	baz=342						
W50A	Signal Mountai	147.08	37	P	PKPbc	21 40 56.3	+0.7
	baz=314,SNR=12						
TZTN	Tazewell	147.10	33	P	PKPab	21 40 56.5	-0.6
	baz=318,SNR=7.7						
R54A	Victor	147.11	28	P	PKPab	21 40 56.3	-0.8
	baz=324						
O58A	Lewisberry	147.13	21	P	PKPbc	21 40 56.2	+0.7
	baz=332						
M62A	Hamden	147.17	15	P	PKPbc	21 40 56.0	+0.5
	baz=340						
Q56A	Snyder Ridge,	147.19	25	P	PKPab	21 40 56.5	-0.9
	baz=328,SNR=9.1						
V51A	Loudon	147.21	35	P	PKPab	21 40 56.8	-0.7
	baz=317,SNR=15						
O59A	Robesonia	147.22	20	P	PKPab	21 40 56.6	-0.9
	baz=334,SNR=6.5						
S54A	Dingess, Beckl	147.26	29	P	PKPbc	21 40 56.8	+0.8
	baz=323,SNR=13						
P57A	Homestead Farm	147.29	23	P	PKPab	21 40 56.8	-0.9
	baz=330,SNR=9.0						
T53A	Wise	147.30	31	P	PKPab	21 40 57.0	-0.9
	baz=320,SNR=7.6						
PAL	Palisades	147.30	17	P	PKPab	21 40 57.1	-0.6
	baz=338,SNR=11						
U52A	Thorn Hill	147.31	33	P	PKPab	21 40 57.3	-0.7
	baz=319,SNR=6.3						
M63A	Gales Ferry	147.41	14	P	PKPab	21 40 57.3	-0.8
	baz=342						
R55A	Marlinton	147.42	27	P	PKPbc	21 40 57.3	+0.8
	baz=326,SNR=6.6						
M64A	Tiverton	147.47	13	P	PKPbc	21 40 57.2	+0.9
	baz=343						
O60A	Telford	147.48	19	P	PKPbc	21 40 57.3	+0.9
	baz=335						
LRAL	Lakeview Retre	147.48	41	PKPbc	PKPbc	21 40 55.8	-0.9
LRAL	Lakeview Retre	147.48	41	P	PKPab	21 40 57.7	-1.0
	baz=310,SNR=21						
Q57A	Strasburg	147.52	24	P	PKPbc	21 40 57.2	+0.6
	baz=329,SNR=5.6						
P58A	Pank, Wackersv	147.55	22	P	PKPbc	21 40 57.5	+0.8
	baz=331,SNR=8.8						
V52A	Sevierville	147.60	34	P	PKiKP	21 40 58.2	-0.9
	baz=318,SNR=10						
R56A	Bull Pasture M	147.63	26	P	PKPbc	21 40 57.9	+0.8
	baz=327,SNR=6.3						
S55A	Lewisburg	147.66	28	P	PKPbc	21 40 57.4	+0.3
	baz=324						
T54A	Tazewell	147.72	30	P	PKPbc	21 40 58.1	+0.8
	baz=322,SNR=17						
U53A	Fall Branch	147.75	32	P	PKPbc	21 40 58.1	+0.7
	baz=320						
P59A	Jarrettsville	147.76	21	P	PKPbc	21 40 58.1	+0.8
	baz=333,SNR=6.0						
X51A	Calhoun	147.79	37	P	PKiKP	21 40 58.5	-0.9
	baz=314,SNR=7.2						
P60A	Greenville	147.86	20	P	PKPbc	21 40 58.4	+0.9
	baz=334,SNR=6.1						
Q58A	Fox Den Farm,	147.88	23	P	PKPbc	21 40 58.4	+0.8
	baz=330,SNR=12						
W52A	Murphy	147.96	35	P	PKiKP	21 40 59.2	-0.6
	baz=316						
U54A	Nelsons Funny	148.02	31	P	PKPbc	21 40 58.8	+0.7
	baz=321						
Z50A	Ashland	148.03	40	P	PKPbc	21 40 58.9	+0.7
	baz=311,SNR=14						
T55A	Pulaski	148.06	29	P	PKiKP	21 40 59.2	-0.7
	baz=323						
R57A	Stanardsville	148.10	25	P	PKiKP	21 40 59.4	-0.5
	baz=328,SNR=7.7						
V53A	Saluda	148.15	33	P	PKiKP	21 40 59.8	-0.4
	baz=319,SNR=12						
BLA	Blacksburg	148.16	28	P	PKiKP	21 40 59.3	-0.9
	baz=324						
S56A	Natural Bridge	148.17	27	P	PKPbc	21 40 59.2	+0.8
	baz=326						
R58A	Rapidan	148.31	24	P	PKiKP	21 40 59.7	-0.7
	baz=329,SNR=8.3						
W53A	Cullowhee	148.33	34	P	PKiKP	21 41 00.6	-0.1
	baz=318,SNR=17						
S57A	Dark Hollow, R	148.37	26	P	PKiKP	21 40 59.9	-0.7
	baz=327						
U55A	TA2, Sparta	148.42	30	P	PKiKP	21 41 00.0	-0.7
	baz=322,SNR=13						
T56A	Rocky Mt	148.49	28	P	PKiKP	21 41 00.0	-0.8
	baz=325,SNR=7.3						
Q60A	Greensboro	148.51	21	P	PKiKP	21 41 00.7	0.0
	baz=333						
V54A	Nebo	148.53	32	P	PKiKP	21 41 00.5	-0.5
	baz=320,SNR=12						
BRAL	Brewton	148.60	44	P	PKiKP	21 41 01.6	+0.5
	baz=307						
250A	Grady	148.62	42		PKPbc	21 40 58.5	-1.2
CBN	Corbin Frederi	148.64	24	P	PKiKP	21 41 00.9	-0.1
	baz=330						
R58B	Mineral	148.65	24	P	PKiKP	21 41 00.4	-0.7
	baz=329,SNR=5.0						
X53A	Estanollee	148.74	35	P	PKiKP	21 41 01.6	+0.2
	baz=317,SNR=11						
Y52A	Lilburn	148.75	37	P	PKiKP	21 41 01.5	+0.1
	baz=315,SNR=10						
V55A	Taylorsville	148.85	31	P	PKiKP	21 41 01.2	-0.4
	baz=322,SNR=9.6						
T57A	Hurt	148.87	27	P	PKiKP	21 41 01.0	-0.6
	baz=326,SNR=7.8						
U56A	King	148.87	29	P	PKiKP	21 41 01.2	-0.4
	baz=323						
S58A	Poland Farm, P	148.88	25	P	PKiKP	21 41 01.1	-0.5
	baz=328						
R60A	Leonardtown, M	148.89	22	P	PKiKP	21 41 01.8	+0.3
	baz=332						
W54A	Cherokee Point	148.93	33	P	PKiKP	21 41 01.6	-0.1
	baz=319						
S59A	Mechanicsville	149.06	24	P	PKiKP	21 41 02.0	+0.1
	baz=330						
X54A	Belton	149.22	34	P	PKiKP	21 41 02.6	+0.2
	baz=318,SNR=7.3						
T58A	Grand View Acr	149.23	26	P	PKiKP	21 41 02.1	-0.3
	baz=327,SNR=8.7						
V56A	Mocksville	149.24	30	P	PKiKP	21 41 02.3	0.0
	baz=323,SNR=5.2						
U57A	Blanch	149.29	28	P	PKiKP	21 41 02.3	-0.2
	baz=325,SNR=5.8						
KMSC	Kings Mountain	149.34	32	P	PKiKP	21 41 02.5	-0.1
	baz=321,SNR=5.4						
S60A	Water View	149.36	23	P	PKiKP	21 41 03.0	+0.5
	baz=331						
GOGA	Godfrey	149.42	37	P	PKiKP	21 41 02.8	0.0
	baz=315,SNR=5.0						
V57A	Coltrane Farms	149.53	29	P	PKiKP	21 41 02.9	-0.1
	baz=324,SNR=6.9						
T59A	Double "B" Far	149.63	25	P	PKiKP	21 41 03.4	+0.3
	baz=329,SNR=14						
U58A	Oxford	149.68	27	P	PKiKP	21 41 03.2	0.0
	baz=326,SNR=8.0						
X55A	Gracelyn & Ava	149.69	33	P	PKiKP	21 41 03.6	+0.3
	baz=319						
W56A	Indian Trail	149.73	31	P	PKiKP	21 41 03.9	+0.5
	baz=322						
T60A	Surry	149.82	24	P	PKiKP	21 41 04.2	+0.7
	baz=330,SNR=5.1						
V58A	Windy Hill, Pi	149.92	28	P	PKiKP	21 41 03.7	-0.1
	baz=325						
Y55A	Saluda	149.96	34	P	PKiKP	21 41 04.4	+0.5
	baz=318						
X56A	White Oak	149.99	32	P	PKiKP	21 41 04.1	+0.2
	baz=320						
W57A	Gilead	150.01	30	P	PKiKP	21 41 04.1	+0.2
	baz=323,SNR=5.1						
U59A	Littleton	150.05	26	P	PKiKP	21 41 04.1	+0.1
	baz=328						
U60A	Pendleton	150.22	25	P	PKiKP	21 41 04.8	+0.4
	baz=329,SNR=6.9						
V59A	Middlesex	150.35	27	P	PKiKP	21 41 04.9	+0.3
	baz=326,SNR=6.3						
W58A	Raeford	150.49	29	P	PKiKP	21 41 05.3	+0.3
	baz=324,SNR=5.7						
Z56A	Williston	150.69	34	P	PKiKP	21 41 06.7	+1.3
	baz=318						
Y57A	Sumter	150.70	32	P	PKiKP	21 41 06.2	+0.8
	baz=321						
TIGA	Tifton	150.71	40	P	PKiKP	21 41 06.5	+0.9
	baz=313						
V60A	Jim Taylor Roa	150.78	26	P	PKiKP	21 41 06.2	+0.7
	baz=328,SNR=6.3						
X58A	Rowland	150.81	30	P	PKiKP	21 41 06.3	+0.6
	baz=323						
V61A	Roper	151.04	25	P	PKiKP	21 41 07.1	+1.1
	baz=329						
BDFB	Brasilia	151.05	209	PKPbc	PKiKP	21 41 08.1	+1.3
	comp=Z,2.6nm,0.7s,baz=170,slow=6.1,SNR=4.0						
BDFB	Brasilia	151.05	209		PKPbc	21 41 05.5	-0.7
BDFB	Brasilia	151.05	209	PKIKP	PKPbc	21 41 05.5	-0.7
Z57A	Bowman	151.08	34	P	PKiKP	21 41 07.3	+1.0
	baz=320						
X59A	McDuffie Farm,	151.16	29	P	PKiKP	21 41 07.0	+0.7
	baz=325						
Y58A	Scranton	151.16	31	P	PKiKP	21 41 07.5	+1.1
	baz=322						
W60A	Pink Hill	151.18	27	P	PKiKP	21 41 07.1	+0.7
	baz=327						
X60A	Albert Glenn T	151.45	28	P	PKiKP	21 41 07.7	+0.8
	baz=326						
Y59A	Loris	151.49	30	P	PKiKP	21 41 08.1	+1.0
	baz=324						
V62A	Hyde County Ai	151.50	24	P	PKiKP	21 41 08.4	+1.4
	baz=330						
Z58A	St. Stephen	151.53	32	P	PKiKP	21 41 08.4	+1.3
	baz=321						
LPAZ	La Paz	153.29	167	PKPbc	PKiKP	21 41 13.9	+1.9
	comp=Z,0.8nm,0.5s,baz=153,slow=2.3,SNR=4.3						

NEIC 23 21:22:56.3±1.6, 19°.70N±0°.03×70°.80W±0°.02, h27km±9km, mb3.9/7, Error ellipse: s-maj=4.8km s-min=2.7km az=152.0, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDDR	Presa de Saban	0.85	213		Pn	21 23 13.1	+0.5
SDDR				Sn	Sn	21 23 24.5	+0.4
BANI	BANI	1.37	162		Pb	21 23 20.7	-0.6
SDD	Santo Domingo	1.50	146		Pn	21 23 21.3	0.0
SDD					Sn	21 23 39.7	-0.3
DR12	Loma Pena Alta	1.62	124		Pn	21 23 23.3	+0.1
DR12				Sn	Sn	21 23 43.2	0.0
GRTK	Grand Turk	1.83	350		Pn	21 23 26.0	0.0
GRTK				Sn	Sn	21 23 49.2	+1.0
PCDR	Punta Cana, DR	2.58	117		Pn	21 23 36.3	+0.1
PCDR					Sb	21 24 13.3	+0.2
AGPR	Aguadilla, PR	3.70	109	Pn	Pn	21 23 51.9	+0.1
MPR	Mayaguez	3.77	113	Pn	Pn	21 23 51.5	-1.1
MPR				Sn	Sn	21 24 36.6	+0.4
CRPR	Cabo Rojo, PR	3.88	115	Pn	Pn	21 23 53.8	-0.4
MLPR	Magueyes Islan	3.95	115	Pn	Pn	21 23 56.2	+1.0
AOPR	Arecibo Observ	4.06	109		Pn	21 23 56.5	-0.1
AOPR				Sn	Sn	21 24 41.9	-1.5
GTBY	Guantanamo Bay	4.06	274	Pn	Pn	21 23 56.7	0.0
EMPR	Esperanza - Ma	4.22	106	Pn	Pn	21 24 01.2	+2.4
OBIP	Obispado Ponce	4.30	112		Pn	21 23 59.7	-0.3
GCPR	Guaynabo City	4.67	106		Pn	21 24 03.6	-1.5
SJG	San Juan	4.68	109		Pn	21 24 04.6	-0.5
CBYP	Canovanas	4.89	106	Pn	Pn	21 24 07.4	-0.7
CBYP				Sn	Sn	21 25 03.4	-0.5
HUMP	Col San Antoni	4.94	107		Pn	21 24 09.7	+1.0
HUMP					Sn	21 25 04.0	-1.0
MTP	Monte Pirata	5.22	107	Pn	Pn	21 24 13.2	+0.6
CUPR	Culebra, Puert	5.40	104	Pn	Pn	21 24 14.8	-0.3
STVI	Saint Thomas	5.69	103	Pn	Pn	21 24 18.2	-0.9
STVI				Sn	Sn	21 25 21.8	-1.9
CDVI	St. Croix	6.04	108	Pn	Pn	21 24 24.6	+0.7
MTDJ	Mount Denham	6.54	258	Pn	Pn	21 24 30.2	-0.7
SMRT	St. Maarten	7.50	101		Pn	21 24 43.0	-1.0
SKI	Saint Kitts	8.00	106	Pn	Pn	21 24 51.3	+0.4
SDV	Santo Domingo	10.75	179		Pn	21 25 29.5	+0.7
BBSR	BB Station	13.76	22	Pn	Pn	21 26 09.4	-0.1
V61A	Roper	16.82	344	Pn	Pn	21 26 49.6	-0.2
JSC	Jenkinsville	17.24	330	P	Pn	21 26 55.6	+0.5
W57A	Gilead	17.41	334	P	Pn	21 26 57.4	+0.2
W57A				IAmb	IAmb	21 27 01.7	
	comp=Z,18nm,1.4s						
T59A	Double "B" Far	18.19	342	P	P	21 27 07.6	+0.7
T59A				IAmb	IAmb	21 27 24.8	
	comp=Z,10nm,1.5s						
BRNJ	Basking Ridge	21.16	352	P	P	21 27 40.1	+0.8
BRNJ				IAmb	IAmb	21 27 57.0	
	comp=Z,9.4nm,1.1s						
T49A	Edmonton	21.60	326	P	P	21 27 44.5	+0.5
T49A				IAmb	IAmb	21 27 50.9	
	comp=Z,2.1nm,0.9s						
M57A	Sunshine Farm,	22.23	347	P	P	21 27 51.0	+0.2
M57A				IAmb	IAmb	21 28 08.5	
	comp=Z,6.4nm,1.1s						

NCEDC 23 21:57:45.8±2.2, 36°.750N±0°.009×121°.45W±0°.01, h8km±3km, Md2.6/146, Error ellipse: s-maj=1.4km s-min=1.2km az=73.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAO	San Andreas Ge	0.01	16		Pg	21 57 48.1	+0.8
FRP	Fremont Peak	0.03	277		Pg	21 57 47.3	-0.1
BSLM	Silva Ranch	0.09	73		Pg	21 57 48.7	+0.7
BCGM	Cienega Road	0.10	115		Pg	21 57 48.1	0.0
BSRM	Salinas Radio	0.10	213		Pg	21 57 48.1	0.0
HJGM	San Juan Grade	0.11	296		Pg	21 57 48.3	0.0
HBTM	San Juan Bauti	0.13	322		Pg	21 57 48.8	+0.2
HJSM	John Smith Roa	0.14	62		Pg	21 57 49.4	+0.6
BHRM	Hodges Ranch	0.15	98		Pg	21 57 49.8	+0.7
SCZ	Santa Cruz	0.16	165		Pg	21 57 49.0	-0.1
SCZ					Sg	21 57 51.3	-0.1
BJOM	Mount Johnson	0.17	137		Pg	21 57 49.4	+0.2
BJOM					Sg	21 57 52.1	+0.5
BLRM	Lewis Ranch	0.17	120		Pg	21 57 49.4	+0.2
HTUM	Tustin Road	0.17	297		Pg	21 57 49.4	0.0
HTUM					Sg	21 57 52.2	+0.4
OCR	O'Connell Ranc	0.17	345		Pg	21 57 50.1	+0.8
ANZ	Anzar Road	0.17	320		Pg	21 57 49.4	0.0
HLTM	Lone Tree Road	0.18	41		Pg	21 57 50.1	+0.6
BJCM	Johnson Can.	0.21	167		Pg	21 57 49.9	-0.1
HERM	Elkhorn Road	0.21	283		Pg	21 57 50.5	+0.3
BPCNC	Pine Canyon	0.23	219		Pg	21 57 50.7	+0.3
CSR	Chase Ranch	0.23	333		Pg	21 57 51.2	+0.7
HFEM	San Felipe	0.24	10		Pg	21 57 51.3	+0.7
BEHM	Elkhorn Ranch	0.24	111		Pg	21 57 51.4	+0.8
HCOM	Corn Cob Canyo	0.25	304		Pg	21 57 50.9	+0.2
BVL	Bear Valley	0.27	130		Pg	21 57 51.2	0.0
CDC	Canada Road	0.28	355		Pg	21 57 51.9	+0.6
HCAM	Canada Road	0.28	355		Pg	21 57 52.0	+0.7
PACP	Pacheco Peak	0.29	27		Pg	21 57 52.2	+0.6
BEMM	Emmet	0.30	107		Pg	21 57 52.4	+0.6
HLPM	Lions Peak	0.33	334		Pg	21 57 52.7	+0.5
HPCM	Pacheco Lake	0.34	25		Pg	21 57 53.1	+0.6
GHS	Gilroy Hot Spr	0.34	1		Pg	21 57 53.3	+0.6
BPIM	Pinnacles	0.35	138		Pg	21 57 52.3	-0.3
JELB	Ellicott, Sant	0.35	301		Pg	21 57 52.8	+0.2
BAVM	Antelope Valle	0.35	107		Pg	21 57 53.3	+0.5
BSMM	Soledad Missio	0.37	177		Pg	21 57 53.1	+0.1
HSPM	Sheep	0.37	352		Pg	21 57 53.8	+0.7
HAST	Hastings Reser	0.37	193		Pg	21 57 53.0	0.0
HAST					Sg	21 57 58.2	+0.3
BSGM	Shirttail Gulc	0.37	154		Pg	21 57 52.7	-0.3
BBGB	Big Mountain B	0.37	117		Pg	21 57 53.9	+0.7
BBGB					Sb	21 58 00.4	-0.4
SFJWR	San Luis Fatjo	0.37	37		Pg	21 57 53.6	+0.4
SLD	San Luis Dam	0.37	30		Pg	21 57 53.6	+0.4
SLD					Sb	21 57 59.5	-1.3
BBNM	San Benito	0.39	128		Pg	21 57 53.5	+0.2
HMOM	Monterey	0.40	248		Pg	21 57 53.8	+0.1
CADM	Anderson Res.	0.44	341		Pg	21 57 54.8	+0.5
JTGM	Trout Gulch Ro	0.44	309		Pg	21 57 54.5	+0.1
BCWM	Chews Ridge	0.45	192		Pg	21 57 54.6	0.0
JLAB	Laurel Hill	0.46	331		Pg	21 57 55.4	+0.6
LRV	Little Rabbit	0.48	133		Pg	21 57 55.1	+0.1
JRGM	Rodeo Gulch Ro	0.50	305		Pg	21 57 55.3	-0.2
BRMM	Rolling Bench	0.51	80		Pb	21 57 56.8	-0.3
AMC	Almaden	0.52	322		Pg	21 57 56.1	+0.3
JSTM	Santa Teresa H	0.53	329		Pg	21 57 56.6	+0.4
BMSM	Mercy Hot Spri	0.54	100		Pg	21 57 56.8	+0.6
CCOB	Coe Ranch Numb	0.54	341		Pb	21 57 57.3	-0.2
JUMM	Mount Umunhum	0.54	319		Pg	21 57 56.0	-0.3
MOBB	Monterey Bay O	0.58	264		Pg	21 57 57.4	+0.5
BPOM	Post Ranch	0.58	206		Pg	21 57 56.8	-0.2
BAPM	Anderson Peak	0.59	195		Pg	21 57 57.1	-0.1
LRC	Lone Oak Road	0.60	147		Pg	21 57 56.9	-0.5
ARN	Arnold Ranch	0.60	354		Pg	21 57 57.9	+0.4
MHC	Mount Hamilton	0.61	346		Pg	21 57 58.2	+0.6
JBNB	Ben Lomond Mou	0.68	304		Pg	21 57 58.9	0.0
PCCM	Crazy Canyon	0.70	160		Pg	21 57 59.2	-0.1
CMMM	Mount Mocho	0.70	357		Pb	21 58 00.1	-0.4
CMLM	Mount Lewis	0.74	348		Pb	21 58 00.8	-0.3
PMPB	Monarch Peak	0.75	135		Pg	21 57 59.9	-0.3
PAPM	Alder Peak	0.84	175		Pg	21 58 01.7	-0.2
CMJM	Mission San Jo	0.84	336		Pg	21 58 02.0	0.0
JJRM	Joaquin Road	0.84	315		Pg	21 58 01.9	-0.2
JFP	Foothills Park	0.85	316		Pg	21 58 01.9	-0.3
PSAM	San Ardo	0.85	148		Pg	21 58 01.7	-0.5
JSFB	Stanford Teles	0.87	319		Pg	21 58 02.4	-0.2
WENL	Wente Vineyard	0.90	344		Pb	21 58 03.8	+0.1
JRSC	Jasper Ridge	0.91	316		Pg	21 58 02.8	-0.5
CNIC	Niles Canyon	0.95	335		Pg	21 58 03.6	-0.5
JHPM	Huddart Park	0.97	316		Pg	21 58 03.8	-0.7
PHSB	Hesperia Broad	0.98	161		Pg	21 58 04.0	-0.6
PARM	Anticline Ridg	1.02	119		Pb	21 58 06.1	+0.2
MYLM	Yosemite Lake	1.04	52		Pg	21 58 04.9	-0.9
PWMM	Westland Maint	1.05	107		Pb	21 58 06.1	-0.1
PANM	San Antonio Re	1.06	155		Pg	21 58 05.3	-1.0
PKD	Bear Valley Ra	1.09	137		Pg	21 58 05.5	-1.2
PHCM	Hearst Castle	1.09	167		Pg	21 58 06.6	-0.2
CMOB	Morgan Territo	1.09	345		Pn	21 58 08.4	+0.9
CLCB	Lake Chabot	1.10	334		Pg	21 58 06.2	-0.8
PVCM	Vineyard Canyo	1.11	138		Pg	21 58 06.5	-0.7
PPO	Portuguese Can	1.11	142		Pg	21 58 06.5	-0.7
SAC	San Andreas	1.13	317		Pg	21 58 06.2	-1.4
PWKM	Work Ranch	1.20	141		Pb	21 58 08.2	-0.7
RAMR	Ramage Ranch	1.21	157		Pb	21 58 07.4	-1.6
CTM	Castle Mountai	1.22	132		Pg	21 58 08.7	-0.5
PCMM	Cholame Hills	1.26	138		Pn	21 58 08.3	-1.5
PCBM	Cambria	1.27	165		Pn	21 58 08.6	-1.3
GHC	Gold Hill	1.28	136		Pn	21 58 08.6	-1.4
BKS	Berkeley--Byer	1.29	331		Pn	21 58 08.1	-2.0
CVPM	Vollmer Peak	1.29	332		Pn	21 58 08.0	-2.2
BLDC	Black Mountain	1.29	160		Pn	21 58 08.9	-1.3
BLDC	Black Mountain	1.29	160		Pn	21 58 09.2	-1.0
BRIB	Briones	1.29	335		Pn	21 58 08.6	-1.6
PSRM	Scobie Ranch	1.30	133		Pn	21 58 09.2	-1.1
MHDM	Hidden Dam	1.30	73		Pn	21 58 08.8	-1.5
PKLM	Kerr Lake	1.33	137		Pn	21 58 09.4	-1.3
ARDC	Alexander Ranc	1.34	163		Pn	21 58 09.6	-1.2
PSNM	Stone Corral	1.34	135		Pn	21 58 09.5	-1.4
TCHL	Shandon	1.36	141		Pn	21 58 09.7	-1.5
PMRM	Maxey Ranch	1.38	134		Pn	21 58 10.2	-1.2
CPIM	Pinole Ridge	1.38	334		Pn	21 58 09.8	-1.6
MCUB	Copperopolis B	1.39	28		Pn	21 58 10.1	-1.5
PAGB	Antelope Grade	1.41	136		Pn	21 58 10.4	-1.4
FRI	Friant	1.42	80		Pn	21 58 10.4	-1.5
TRAM	Private Proper	1.44	138		Pn	21 58 11.1	-1.1
MNHB	New Hogan Dam	1.48	20		Pn	21 58 11.3	-1.5
PTAM	Tassajara Cree	1.48	156		Pn	21 58 11.2	-1.7
TSCN	Private Proper	1.50	143		Pn	21 58 11.9	-1.1
MMIM	Miami Mountain	1.52	63		Pn	21 58 12.7	-0.8
CMB	Columbia Colle	1.54	33		Pn	21 58 12.8	-0.8
CMB				Sn	Sn	21 58 32.1	-1.7
SNT	Sears Point	1.64	331		Pn	21 58 13.3	-1.6
CVS	Carmenet Viney	1.78	334		Pn	21 58 15.2	-1.7
MCCM	Marconi Confer	1.80	321		Pn	21 58 14.8	-2.4
KCC	Kaiser Creek	1.80	71		Pn	21 58 16.7	-0.6
HELL	Mitchell Peak,	1.95	91		Pn	21 58 18.2	-1.2
MRHM	Rocky Hill	1.96	103		Pn	21 58 19.1	-0.3
MDPB	Devils Postpil	2.09	64		Pn	21 58 21.6	+0.2
MRDM	Red Cones	2.09	65		Pn	21 58 21.7	+0.2
MINS	Minaret Summit	2.11	64		Pn	21 58 22.0	+0.3
OMMB	Old Mammoth Mi	2.14	66		Pn	21 58 22.4	+0.2
MDCM	Deadman Creek	2.15	63		Pn	21 58 22.8	+0.6
AFDM	Forest Hills D	2.23	10	Pn	Pn	21 58 22.0	-1.1
AFDM				Sn	Sn	21 58 50.5	-0.4
MCMM	Convict Lake	2.23	67		Pn	21 58 24.0	+0.7
MDRNC	Doe Ridge	2.27	66		Pn	21 58 25.0	+1.1
SCHCA	Scheelite	2.29	74		Pn	21 58 25.2	+1.0
WAKR	Walker	2.37	42		Pn	21 58 25.5	+0.3
WAKR				Sn	Sn	21 58 53.8	-0.8
BHPR	Bishop	2.44	76		Pn	21 58 27.3	+1.1
BENR	Benton	2.49	66		Pn	21 58 28.4	+1.4
RUBR	Rubicon Trail	2.52	24	Pn	Pn	21 58 26.8	-0.5
RUBR					Sn	21 58 56.2	-2.0
HCK	Huntoon Valley	2.63	59		Pb	21 58 31.2	-2.0
ISA	Isabella, Lake	2.64	113		Pn	21 58 28.5	-0.3
ISA				Sn	Sn	21 59 00.6	-0.5
GTSM	Trough Springs	2.71	341		Pn	21 58 30.6	+0.8
PNTR	Pine Nut	2.76	32	Pn	Pn	21 58 30.1	-0.5
YERR	Yerington	2.84	37	Pn	Pn	21 58 32.2	+0.6
RYN	Ryan	2.99	50	Pn	Pn	21 58 33.2	-0.5
NV11	Mina Array Sit	3.11	56	Pn	Pn	21 58 34.4	-1.0
KVN	Kaiserville	3.51	48		Pg	21 58 50.9	-2.1

IDC ***23*** *22:02:04.2±0.7, 35°.53N×27°.16E, h0km, mb4.1/15, mb1 4.0/24, mb1mx3.9/45, mbtmp3.9/24, ML3.5/8, MS3.1/1, Ms1 3.1/1, ms1mx2.3/53, Error ellipse: s-maj=17.5km s-min=11.9km az=170.0*

ATH ***23*** *22:02:05.7, 35°.56N×27°.11E, h21km±1km, ML3.8/10, Error ellipse: s-maj=2.5km s-min=0.7km az=143.0*

NIC ***23*** *22:02:05.3±0.0, 35°.48N×27°.17E, h13km±1km, Ml4.6/3*

THE ***23*** *22:02:06.9, 35°.52N×27°.16E, h8km, ML4.0/4, Error ellipse: s-maj=1.7km s-min=0.7km az=138.0*

ISK ***23*** *22:02:06.1, 35°.58N×27°.10E, h7km, ML3.9/20*

GII ***23*** *22:02:07.6±0.0, 35°.25N×27°.29E, h8km, MD3.2/3*

DDA ***23*** *22:02:09.0, 35°.54N×27°.10E, h38km±311km, MW3.9*

ISC 23 22:02:06.3±0.6, 35°.54N±0°.03×27°.17E±0°.02, h13km±3km, n200, σ1§49/264, mb4.0/16, 12C-2D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.01	316	P	Pg	22 02 08.4	-0.3
KARP				S	Sg	22 02 10.0	-0.3
	908µm,0.2s						
KARP	Karpathos	0.01	316	P	Pg	22 02 08.4	-0.3
KARP				S	Sg	22 02 10.2	-0.2
KARP	Karpathos	0.01	316	⇑P	Pg	22 02 08.1	-0.6
KARP				S	Sg	22 02 10.1	-0.3
ZKR	Zakros	0.89	241	P	Pg	22 02 22.3	-1.2
ZKR				S	Sb	22 02 35.4	+0.2
ZKR	Zakros	0.89	241	P	Pg	22 02 22.1	-1.4
ZKR				S	Sg	22 02 34.3	-0.8
ZKR				AML	AML	22 02 39.7	
	comp=N,4442µm,0.7s						
ZKR				AML	AML	22 02 40.3	
	comp=E,11855µm,0.3s						
ZKR	Zakros	0.89	241	PG	Pg	22 02 22.2	-1.2
ZKR				SG	Sb	22 02 35.5	+0.2
ZKR	Zakros	0.89	241	⇑P	Pg	22 02 22.0	-1.4
ZKR				S	Sg	22 02 34.2	-0.8
ARG	Arkhangelos	1.03	49	P	Pb	22 02 25.9	0.0
ARG				S	Sn	22 02 40.7	+0.1
	comp=E,5µm,0.5s						
ARG	Arkhangelos	1.03	49	P	Pg	22 02 26.1	-0.2
ARG				S	Sn	22 02 40.8	+0.1
ARG				AML	AML	22 02 44.0	
	comp=N,9191µm,0.5s						
ARG				AML	AML	22 02 44.4	
	comp=E,10674µm,0.3s						
ARG	Arkhangelos	1.03	49	PG	Pg	22 02 26.0	-0.2
ARG				SG	Sn	22 02 41.4	+0.7
ARG	Arkhangelos	1.03	49	⇑P	Pg	22 02 26.0	-0.2
ARG				S	Sn	22 02 40.8	+0.1
NISR	Nisiros	1.07	358	P	Pn	22 02 27.2	+0.3
NISR				S	Sn	22 02 41.7	+0.1
NISR	Nisiros	1.07	358	P	Pn	22 02 27.0	+0.1
NISR				S	Sg	22 02 40.7	-0.2
NISR				AML	AML	22 02 45.3	
	comp=N,8195µm,0.4s						
NISR				AML	AML	22 02 48.5	
	comp=E,13436µm,0.4s						
KOSK	Kos Island	1.22	353	PN	Pn	22 02 29.0	0.0
KOSK				SN	Sg	22 02 45.6	+0.1
DAT	Datca	1.23	16	PN	Pb	22 02 29.4	-0.1

DAT				SN	Sg	22 02 46.9	+0.9
DATC	**Datca-Mugla**	**1.28**	**18**	PN	**Pn**	**22 02 29.8**	**0.0**
NPS	**Neapolis**	**1.30**	**258**	P	**Pn**	**22 02 30.0**	**-0.2**
NPS				S	**Sn**	**22 02 47.5**	**+0.1**
NPS	**Neapolis**	**1.30**	**258**	P	**Pn**	**22 02 30.2**	**0.0**
NPS				S	**Sb**	**22 02 46.7**	**-0.5**
NPS				AML	AML	22 02 53.6	
	comp=E,8584µm,0.5s						
NPS				AML	AML	22 03 03.0	
	comp=N,5980µm,0.6s						
LAST	**Lasithi**	**1.43**	**255**	P	**Pn**	**22 02 31.9**	**-0.1**
LAST				S	**Sb**	**22 02 51.1**	**+0.1**
LAST	**Lasithi**	**1.43**	**255**	P	**Pn**	**22 02 32.4**	**+0.3**
LAST				S	**Sb**	**22 02 51.5**	**+0.5**
LAST				AML	AML	22 02 58.6	
	comp=N,4818µm,0.5s						
LAST				AML	AML	22 03 00.3	
	comp=E,3031µm,0.6s						
MRSB	**Marmaris-Mugla**	**1.44**	**35**	PN	**Pb**	**22 02 33.2**	**+0.2**
BODT	**Bodrum**	**1.52**	**4**	PN	**Pn**	**22 02 33.7**	**+0.5**
SANT	**Santorini**	**1.61**	**301**	P	**Pn**	**22 02 34.4**	**-0.1**
SANT	**Santorini**	**1.61**	**301**	P	**Pn**	**22 02 34.4**	**-0.1**
SANT				S	**Sn**	**22 02 54.6**	**-0.5**
SANT				AML	AML	22 03 05.5	
	comp=E,9202µm,0.6s						
SANT				AML	AML	22 03 05.6	
	comp=N,2481µm,0.5s						
SANT	**Santorini**	**1.61**	**301**	⇑P	**Pn**	**22 02 34.4**	**-0.1**
SANT	**Santorini**	**1.61**	**301**	PN	**Pn**	**22 02 34.7**	**+0.2**
SANT	**Santorini**	**1.61**	**301**	*i* P	**Pn**	**22 02 34.4**	**-0.1**
SANT				*i* S	Sn	22 02 50.9	-4.3
THR8	**Santorini-Mono**	**1.62**	**303**	P	**Pn**	**22 02 34.5**	**0.0**
THR8	**Santorini-Mono**	**1.62**	**303**	P	**Pn**	**22 02 34.3**	**-0.1**
SAP2K	**Karterados**	**1.64**	**302**	P	**Pn**	**22 02 34.1**	**-0.7**
SAP2K	**Karterados**	**1.64**	**302**	P	**Pn**	**22 02 34.2**	**-0.7**
SAP2K				S	**Sn**	**22 02 55.8**	**0.0**
AMGA	**Amorgos Island**	**1.65**	**322**	P	**Pn**	**22 02 34.8**	**-0.1**
AMGA	**Amorgos Island**	**1.65**	**322**	P	**Pn**	**22 02 34.8**	**-0.1**
AMGA				S	**Sn**	**22 02 55.7**	**-0.3**
AMGA				AML	AML	22 03 05.6	
	comp=N,7479µm,0.4s						
AMGA				AML	AML	22 03 06.2	
	comp=E,4976µm,0.4s						
THR6	**Thira Island,**	**1.65**	**300**	P	**Pn**	**22 02 35.0**	**+0.1**
THR6	**Thira Island,**	**1.65**	**300**	P	**Pn**	**22 02 35.2**	**+0.2**
SAP1	**Santorini-Akro**	**1.65**	**300**	P	**Pn**	**22 02 35.0**	**0.0**
SAP1				S	**Sn**	**22 02 56.2**	**+0.2**
SAP1	**Santorini-Akro**	**1.65**	**300**	P	**Pn**	**22 02 35.1**	**+0.1**
SAP1				S	**Sn**	**22 02 55.9**	**-0.1**
THR7	**Fira-Santorini**	**1.66**	**302**	P	**Pn**	**22 02 35.4**	**+0.2**
THR7	**Fira-Santorini**	**1.66**	**302**	P	**Pn**	**22 02 35.3**	**+0.2**
THR2	**Thira island,**	**1.67**	**303**	P	**Pn**	**22 02 35.3**	**+0.1**
THT2	**Imerovigli**	**1.67**	**303**	PN	**Pn**	**22 02 35.5**	**+0.2**
THR3	**Thira Island,**	**1.67**	**302**	P	**Pn**	**22 02 35.4**	**+0.1**
THR3	**Thira Island,**	**1.67**	**302**	P	**Pn**	**22 02 35.4**	**+0.1**
THR9	**Santorini-Faro**	**1.68**	**300**	P	**Pn**	**22 02 35.6**	**+0.3**
HRKL	**Herakleio**	**1.70**	**263**	PN	**Pn**	**22 02 36.1**	**+0.4**
THR5	**Thira Island,**	**1.71**	**301**	P	**Pn**	**22 02 36.1**	**+0.3**
THR5	**Thira Island,**	**1.71**	**301**	P	**Pn**	**22 02 36.0**	**+0.2**
SAP3	**Santorini-Thir**	**1.72**	**302**	P	**Pn**	**22 02 36.4**	**+0.4**
SAP4	**Santorini-Oia**	**1.73**	**303**	P	**Pn**	**22 02 36.7**	**+0.7**
IACM	**Heraklion**	**1.73**	**263**	P	**Pn**	**22 02 36.0**	**0.0**
IACM	**Heraklion**	**1.73**	**263**	P	**Pn**	**22 02 36.9**	**+0.9**
IACM				S	**Sn**	**22 02 58.2**	**+0.3**
IACM				AML	AML	22 03 14.1	
	comp=E,29961µm,0.6s						
IACM				AML	AML	22 03 18.2	
	comp=N,22185µm,0.5s						
DALY	**Dalyan (Mula)**	**1.75**	**43**	PN	**Pb**	**22 02 37.9**	**-0.4**
TURN	**Turunc**	**1.76**	**41**	PN	**Pn**	**22 02 34.0**	**-2.5**
TURN	**Turunc**	**1.76**	**41**	*i* P	**Pn**	**22 02 33.8**	**-2.7**
TURN				*i* S	Sn	22 02 48.5	-10
YER	**Yerkesik**	**1.83**	**29**	PN	**Pb**	**22 02 38.7**	**-0.9**
DIDI	**Didim-Aydin**	**1.83**	**2**	PN	**Pn**	**22 02 38.3**	**+0.9**
IDI	**Anoyia**	**1.88**	**263**	Pn	**Pn**	**22 02 37.9**	**-0.3**
	comp=N,42nm,0.3s,baz=358,slow=7.6,SNR=178						
IDI				Sn	**Sn**	**22 03 02.8**	**+1.1**
	comp=N,188nm,0.3s,baz=313,slow=21,SNR=12						
IDI				LR	LR	22 03 13.0	
	comp=N,90nm,20.1s,baz=152,slow=37						
IDI	**Anoyia**	**1.88**	**263**	P	**Pn**	**22 02 37.9**	**-0.3**
IDI				S	**Sn**	**22 03 01.7**	**0.0**
IDI				AML	AML	22 03 09.2	
	comp=E,3054µm,0.6s						
IDI				AML	AML	22 03 09.4	
	comp=N,3566µm,0.7s						
IDI	**Anoyia**	**1.88**	**263**	PN	**Pn**	**22 02 38.7**	**+0.6**
FETY	**Fethiye**	**1.90**	**54**	PN	**Pb**	**22 02 40.4**	**-0.4**
IOSP	**Ios island**	**1.92**	**308**	P	**Pn**	**22 02 38.5**	**-0.2**
IOSP				S	**Sn**	**22 03 02.1**	**-0.6**
IOSP	**Ios island**	**1.92**	**308**	P	**Pn**	**22 02 38.6**	**-0.2**
SIVA	**Sivas**	**2.00**	**255**	P	**Pn**	**22 02 40.0**	**+0.3**
SIVA				S	**Sn**	**22 03 04.0**	**-0.6**
	comp=N,2µm,0.7s						
SIVA	**Sivas**	**2.00**	**255**	P	**Pb**	**22 02 41.2**	**-1.2**
APE	**Apeiranthos**	**2.02**	**320**	P	**Pn**	**22 02 40.1**	**0.0**
APE				S	**Sn**	**22 03 04.6**	**-0.5**
	comp=N,740nm,0.2s						
APE	**Apeiranthos**	**2.02**	**320**	P	**Pn**	**22 02 40.1**	**0.0**
APE				AML	AML	22 03 05.7	
	comp=N,1718µm,0.2s						
APE				AML	AML	22 03 06.8	
	comp=E,1201µm,0.2s						
APE	**Apeiranthos**	**2.02**	**320**	⇑P	**Pn**	**22 02 40.0**	**0.0**
APE	**Apeiranthos**	**2.02**	**320**	PN	**Pn**	**22 02 40.3**	**+0.3**
APE	**Apeiranthos**	**2.02**	**320**	*i* P	**Pn**	**22 02 40.3**	**+0.3**
APE				*i* S	**Sn**	**22 03 01.7**	**-3.4**
APE	**Apeiranthos**	**2.02**	**320**	⇑P	**Pn**	**22 02 39.9**	**-0.1**
KSL	**Kastellorizon**	**2.06**	**72**	P	**Pn**	**22 02 40.1**	**-0.4**
AKAS	**Kas**	**2.10**	**70**	PN	**Pb**	**22 02 42.9**	**-1.4**
AKAS	**Kas**	**2.10**	**70**	*i* P	**Pn**	**22 02 42.6**	**+1.4**
AKAS				*i* S	**Sn**	**22 03 04.4**	**-2.8**
AKAS				IAML		22 03 29.0	
	comp=N,313nm,0.9s						
AKAS				IAML		22 03 36.0	
	comp=E,172nm,0.9s						
GCAM	**G?zelcaml?**	**2.15**	**1**	PN	**Pn**	**22 02 42.9**	**+1.0**
GCAM	**G?zelcaml?**	**2.15**	**1**	*i* P	**Pn**	**22 02 42.8**	**+1.0**
GCAM				*i* S	**Sn**	**22 03 09.3**	**+0.9**
SMG	**Samos**	**2.18**	**353**	P	**Pn**	**22 02 41.9**	**-0.3**
SMG	**Samos**	**2.18**	**353**	P	**Pn**	**22 02 42.1**	**-0.1**
AYDN	**Tasoluk**	**2.19**	**15**	*i* S	**Sn**	**22 03 05.7**	**-3.7**
TAVA	**DENIZLI_Tavas**	**2.38**	**36**	*i* P	**Pb**	**22 02 48.5**	**-0.5**
TAVA				*i* S	**Sn**	**22 03 14.3**	**+0.1**
VAM	**Vamos**	**2.42**	**268**	P	**Pn**	**22 02 46.4**	**+0.8**
VAM	**Vamos**	**2.42**	**268**	P	**Pn**	**22 02 45.5**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**2.47**	**13**	PN	**Pn**	**22 02 47.4**	**+1.1**
DGB	**zmir**	**2.52**	**355**	*i* P	**Pn**	**22 02 46.5**	**-0.4**
DGB				*i* S	**Sb**	**22 03 21.4**	**-0.8**
MHLA	**Plaka, Milos I**	**2.52**	**299**	P	**Pn**	**22 02 46.8**	**-0.2**
ELL	**Elmali**	**2.52**	**61**	PN	**Pn**	**22 02 49.2**	**+2.1**
TNSA	**Tinos**	**2.56**	**322**	P	**Pn**	**22 02 49.2**	**+1.7**
IMMV	**Iera Moni Meta**	**2.60**	**269**	P	**Pn**	**22 02 48.6**	**+0.6**
IMMV	**Iera Moni Meta**	**2.60**	**269**	P	**Pn**	**22 02 47.6**	**-0.4**
IMMV	**Iera Moni Meta**	**2.60**	**269**	PN	**Pn**	**22 02 48.7**	**+0.7**
GVDS	**Gavdos**	**2.61**	**255**	PN	**Pn**	**22 02 50.1**	**+1.9**
GVD	**Gavdhos**	**2.62**	**255**	PN	**Pn**	**22 02 49.5**	**+1.2**
DENT	**Denizli**	**2.67**	**34**	PN	**Pn**	**22 02 50.9**	**+1.9**
AKUM	**Antalya-Kumluc**	**2.69**	**72**	*i* P	**Pn**	**22 02 51.0**	**+1.7**
AKUM				*i* S	**Sn**	**22 03 20.1**	**-1.6**
AKUM				IAML		22 03 30.0	
	comp=E,86nm,0.4s						
AKUM				IAML		22 03 50.0	
	comp=N,87nm,0.8s						
SERI	**Serifos**	**2.70**	**308**	P	**Pn**	**22 02 49.6**	**+0.2**
ZEY	**zmir**	**2.74**	**349**	*i* P	**Pn**	**22 02 49.8**	**-0.2**
ZEY				*i* S	Sn	22 03 20.1	-2.9
RODP	**Rodopos**	**2.78**	**271**	PN	**Pn**	**22 02 51.4**	**+0.9**
BLCB	**Balcova**	**2.84**	**358**	PN	**Pn**	**22 02 52.6**	**+1.3**
URLA	**Izmir**	**2.85**	**351**	PN	**Pn**	**22 02 52.7**	**+1.2**
KNDR	**Palaiochora Ch**	**2.86**	**265**	PN	**Pn**	**22 02 53.7**	**+2.1**
KORT	**Korkueli**	**2.96**	**60**	PN	**Pn**	**22 02 55.2**	**+2.2**
KORT	**Korkueli**	**2.96**	**60**	*i* P	**Pb**	**22 02 57.0**	**-1.9**
KORT				*i* S	**Sn**	**22 03 28.4**	**0.0**
CHOS	**Chios island**	**2.98**	**343**	P	**Pn**	**22 02 53.4**	**+0.1**
CHOS	**Chios island**	**2.98**	**343**	PN	**Pn**	**22 02 54.1**	**+0.8**
ANTB	**Antalya**	**3.13**	**63**	PN	**Pn**	**22 02 57.8**	**+2.5**
MANT	**Manisa**	**3.15**	**20**	*i* P	**Pn**	**22 02 56.7**	**+0.9**
MANT				*i* S	Sn	22 03 26.8	-6.5
ANKY	**Antikythira Is**	**3.16**	**277**	P	**Pn**	**22 02 55.4**	**-0.3**
BRDR	**BURDUR-Merkez**	**3.17**	**46**	*i* P	**Pn**	**22 02 58.5**	**+2.5**
BRDR				*i* S	**Sb**	**22 03 40.2**	**-0.9**
PSRA	**Psara**	**3.26**	**337**	P	**Pn**	**22 02 58.5**	**+1.4**
KARY	**Karystos**	**3.31**	**319**	P	**Pn**	**22 02 58.4**	**+0.6**
AKHS	**Akhisar**	**3.37**	**9**	*i* P	**Pn**	**22 03 00.5**	**+1.8**
KHAL	**Karahalli**	**3.38**	**33**	*i* P	**Pn**	**22 03 00.6**	**+1.7**
KHAL				*i* S	**Sn**	**22 03 36.2**	**-2.7**
KTHA	**Kythira Island**	**3.41**	**283**	P	**Pn**	**22 02 59.5**	**+0.3**
USAK	**Uak-Merkez**	**3.49**	**25**	*i* P	**Pn**	**22 03 01.2**	**+0.8**
USAK				*i* S	**Sn**	**22 03 33.2**	**-8.4**
VLY	**Voula,Athens**	**3.56**	**311**	P	**Pn**	**22 03 01.8**	**+0.6**
VLY	**Voula,Athens**	**3.56**	**311**	P	**Pn**	**22 03 02.5**	**+1.3**
KZIL	**AFYON_Kizioren**	**3.61**	**40**	*i* P	**Pn**	**22 03 04.0**	**+1.9**
VLI	**Veliai**	**3.62**	**290**	P	**Pn**	**22 03 02.4**	**+0.4**
VLI				S	**Sn**	**22 03 44.8**	**+0.2**
VLI	**Veliai**	**3.62**	**290**	P	**Pn**	**22 03 02.5**	**+0.5**
ATHU	**Athens Univers**	**3.64**	**313**	P	**Pn**	**22 03 03.4**	**+1.1**
PTL	**Penteli**	**3.64**	**314**	P	**Pn**	**22 03 03.7**	**+1.3**
DEMI	**Demirci**	**3.71**	**19**	*i* P	**Pn**	**22 03 04.3**	**+1.0**
DEMI				*i* S	**Sn**	**22 03 42.2**	**-4.7**
KRND	**KRANIDI**	**3.72**	**301**	P	**Pn**	**22 03 04.9**	**+1.5**
DID	**Didima**	**3.72**	**303**	P	**Pn**	**22 03 04.4**	**+0.9**
SIGR	**SIGRI**	**3.81**	**344**	P	**Pn**	**22 03 05.1**	**+0.5**
KEPZ	**Antalya-Kepez**	**3.84**	**68**	*i* P	**Pn**	**22 03 07.2**	**+2.1**
KEPZ				*i* S	**Sn**	**22 03 48.9**	**-1.1**
OSC1	**CSNet OBS 1**	**3.96**	**120**	S	**Sn**	**22 03 53.1**	**+0.1**
VIL2	**Platees**	**4.11**	**312**	P	**Pn**	**22 03 09.4**	**+0.6**
LOUT	**Loutraki**	**4.16**	**307**	P	**Pn**	**22 03 10.3**	**+0.8**
LTK	**Loutraki**	**4.18**	**308**	P	**Pn**	**22 03 11.3**	**+1.5**
DURS	**Dursunbey**	**4.18**	**14**	*i* P	**Pn**	**22 03 11.1**	**+1.3**
DURS				*i* S	**Sn**	**22 03 51.8**	**-6.8**
BAYC	**CANAKKALE_Bayr**	**4.22**	**353**	*i* P	**Pn**	**22 03 12.2**	**+1.9**
GAZI	**Gazipasa**	**4.24**	**79**	*i* P	**Pn**	**22 03 10.8**	**+0.3**
GAZI				*i* S	**Sn**	**22 03 53.9**	**-6.0**
MRKA	**Markates**	**4.26**	**319**	P	**Pn**	**22 03 10.7**	**-0.1**
AKMS	**Akamas**	**4.26**	**96**	P	**Pn**	**22 03 11.0**	**+0.1**
AKMS				S	**Sn**	**22 04 00.7**	**+0.3**
AKMS				AML	AML	22 04 02.2	
	comp=N,1.6nm,1.0s						
AKMS				AML	AML	22 04 02.2	
	comp=N,1.6nm,1.0s						
AKMS				AML	AML	22 04 03.8	
	comp=N,1.2nm,0.6s						
AKMS				AML	AML	22 04 03.8	
	comp=N,1.2nm,0.6s						
VLX	**Vlachokerasia**	**4.27**	**297**	P	**Pn**	**22 03 12.9**	**+1.9**
PROD	**Prodromos**	**4.36**	**310**	P	**Pn**	**22 03 14.0**	**+1.7**
ALFC	**Alefka**	**4.46**	**93**	⇓P	**Pn**	**22 03 13.1**	**-0.5**
ALFC				AML	AML	22 04 05.8	
	comp=N,1.8nm,1.0s						
ALFC				AML	AML	22 04 05.8	
	comp=N,1.8nm,1.0s						
ALFC				S	**Sn**	**22 04 05.9**	**+0.5**
ALFC				AML	AML	22 04 06.2	
	comp=N,1.8nm,0.7s						
ALFC				AML	AML	22 04 06.2	
	comp=N,1.8nm,0.7s						
NATA	**Nata**	**4.49**	**98**	P	**Pn**	**22 03 13.8**	**-0.2**
NATA				S	**Sn**	**22 04 06.4**	**+0.2**
NATA				AML	AML	22 04 07.3	
	comp=N,1.6nm,0.7s						
NATA				AML	AML	22 04 07.3	
	comp=N,1.6nm,0.7s						
LEF	**Lefka**	**4.70**	**94**	⇑P	**Pn**	**22 03 17.8**	**+1.0**
KLV	**Kalavryta, Ach**	**4.74**	**303**	P	**Pn**	**22 03 17.2**	**-0.2**
KLV				S	**Sn**	**22 04 11.2**	**-1.0**
KLV	**Kalavryta, Ach**	**4.74**	**303**	P	**Pn**	**22 03 19.6**	**+2.1**
SZAC	**Souni**	**4.75**	**98**	⇑P	**Pn**	**22 03 16.8**	**-0.8**
SZAC				S	**Sn**	**22 04 13.4**	**+0.9**
ERMK	**Ermenek**	**4.78**	**75**	*i* P	**Pn**	**22 03 20.3**	**+2.1**
ERMK				*i* S	**Sn**	**22 04 10.8**	**-2.8**
ASGA	**Asgata**	**5.04**	**97**	P	**Pn**	**22 03 20.9**	**-0.6**
CSS	**Mathiatis**	**5.08**	**95**	⇑P	**Pn**	**22 03 21.7**	**-0.4**
CSS				S	**Sn**	**22 04 20.9**	**+0.3**
CSS	**Mathiatis**	**5.08**	**95**	Pn	**Pn**	**22 03 22.6**	**+0.5**
MVOU	**Mavrovouni**	**5.32**	**94**	⇑P	**Pn**	**22 03 25.3**	**0.0**
MVOU				S	**Sn**	**22 04 26.8**	**+0.4**
BRTR	**Keskin Array B**	**6.62**	**49**	Pn	**Pn**	**22 03 45.4**	**+2.1**
	comp=N,0.5nm,0.3s,baz=224,slow=16,SNR=14						
BRTR				Sn	**Sn**	**22 05 00.0**	**+1.3**
	comp=N,0.3nm,0.3s,baz=214,slow=24,SNR=4.0						
MMA0B	**Mount Meron ar**	**7.27**	**108**	Pn	**Pn**	**22 03 51.6**	**-0.7**
MMA0B				Sn	**Sn**	**22 05 13.5**	**-1.2**
MMAI	**Mount Meron Ar**	**7.27**	**108**	Pn	**Pn**	**22 03 51.0**	**-1.3**
	comp=N,2.9nm,0.3s,baz=308,slow=13,SNR=18						
MMAI				Sn	**Sn**	**22 05 09.6**	**-5.0**
	comp=N,2.7nm,0.3s,baz=308,slow=14,SNR=7.4						
SLTI	**Sal'it**	**7.33**	**114**	Pn	**Pn**	**22 03 52.7**	**-0.3**
KSDI	**Kefar Szold**	**7.40**	**106**	Pn	**Pn**	**22 03 53.8**	**-0.2**
KSDI				Sn	**Sn**	**22 05 15.4**	**-2.5**
NATI	**Neve Ativ**	**7.44**	**105**	Pn	**Pn**	**22 03 54.5**	**0.0**
NATI				Sn	**Sn**	**22 05 16.7**	**-2.0**
KZIT	**Kziot**	**7.62**	**125**	Pn	**Pn**	**22 03 55.3**	**-1.7**
HMDT	**Nahal Hemdat**	**7.69**	**113**	Pn	**Pn**	**22 03 57.7**	**-0.2**
HMDT				Sn	**Sn**	**22 05 23.2**	**-1.6**
VTS	**Vitosha**	**7.70**	**338**	⇑P	**Pn**	**22 03 58.3**	**+0.1**
YTIR	**Yattir**	**7.84**	**120**	Pn	**Pn**	**22 03 59.1**	**-1.0**
DSI	**Dead Sea**	**7.92**	**118**	Pn	**Pn**	**22 04 00.5**	**-0.6**
GHAJ	**Ghor Haditha**	**8.20**	**119**	Pn	**Pn**	**22 04 04.5**	**-0.4**
PRNI	**Paran**	**8.38**	**126**	Pn	**Pn**	**22 04 06.1**	**-1.3**
HRFI	**Mount Harif**	**8.60**	**127**	Pn	**Pn**	**22 04 08.9**	**-1.6**
MBRI	**Mt Berech**	**8.69**	**129**	Pn	**Pn**	**22 04 10.4**	**-1.3**
EIL	**Elat**	**8.80**	**130**	Pn	**Pn**	**22 04 12.4**	**-0.8**
	comp=N,0.7nm,0.3s,baz=330,slow=5.1,SNR=11						
EIL				Sn	**Sn**	**22 05 46.8**	**-5.4**
	comp=N,1.5nm,0.3s,baz=338,slow=12,SNR=4.6						
EIL	**Elat**	**8.80**	**130**	Pn	**Pn**	**22 04 11.9**	**-1.3**
TIRR	**Tirgusor**	**8.96**	**6**	⇓P	**Pn**	**22 04 15.9**	**+0.7**
MLR	**Muntele Rosu**	**9.98**	**355**	Pn	**Pn**	**22 04 32.3**	**+2.9**
	comp=N,0.1nm,0.3s,baz=170,slow=18,SNR=2.6						
VOIR		**10.01**	**351**	⇑P	**Pn**	**22 04 30.5**	**+0.6**
KOLS	**Kolonicke sedl**	**13.86**	**346**	*e*PN	**P**	**22 05 32.7**	**+2.1**
SOKA	**Soboth**	**14.38**	**324**	P	**P**	**22 05 37.0**	**+0.4**
	comp=N,8.4nm,1.1s						
KEST	**Kesra**	**14.50**	**276**	Pn	**Pn**	**22 05 32.3**	**+1.1**
	comp=N,0.1nm,0.3s,baz=50,slow=8.3,SNR=3.0						
KEST				LR	LR	22 12 20.6	
	comp=N,77nm,19.2s,baz=270,slow=42						
KVAR	**Kislovodsk Arr**	**14.59**	**50**	Pn	**Pn**	**22 05 35.0**	**+2.5**
	baz=264,slow=19,SNR=2.2						
KBZ	**Khabaz**	**14.60**	**51**	Pn	**P**	**22 05 39.3**	**+0.4**
	comp=N,0.1nm,0.3s,baz=248,slow=8.4,SNR=12						
GNI	**Garni**	**14.62**	**66**	Pn	**P**	**22 05 38.5**	**-0.8**
	comp=N,0.3nm,0.3s,baz=297,slow=4.5,SNR=3.4						
AKASG	**Malin Array Be**	**15.22**	**5**	Pn	**Pn**	**22 05 41.4**	**+0.6**
	comp=N,0.5nm,0.3s,baz=194,slow=12,SNR=5.2						
KBA	**Koelnbreinsper**	**15.48**	**322**	*e*P	**P**	**22 05 49.4**	**+0.5**
	comp=N,8.5nm,0.9s						
MOA	**Molln**	**15.59**	**326**	P	**P**	**22 05 49.9**	**0.0**
	comp=N,6.9nm,1.5s						
KRLC	**Kraliky**	**16.38**	**336**	*e*P	**P**	**22 05 59.6**	**+1.0**
KRLC				*e*x	x	22 06 04.2	
WTTA	**Wattenberg**	**16.48**	**320**	P	**P**	**22 05 59.1**	**-0.9**
	comp=N,2.0nm,0.7s						
WATA	**Walderalm**	**16.56**	**320**	P	**P**	**22 06 01.0**	**+0.2**
	comp=N,3.3nm,0.9s						
GERES	**GERESS Array B**	**16.59**	**327**	Pn	**Pn**	**22 05 58.9**	**+0.4**
	comp=N,0.1nm,0.3s,baz=134,slow=11,SNR=10						
DPC	**Dobruska-Polom**	**16.77**	**335**	*e*P	**P**	**22 06 03.6**	**+0.7**
DPC				*e*x	x	22 06 08.3	
KHC	**Kasperske Hory**	**16.85**	**328**	*e*P	**P**	**22 06 04.4**	**+0.5**
KHC				*e*x	x	22 06 13.5	
PRU	**Pruhonice**	**17.12**	**331**	*e*P	**P**	**22 06 07.2**	**+0.4**
GEYT	**Alibeck**	**24.86**	**75**	P	**P**	**22 07 30.9**	**+2.2**
	comp=N,2.1nm,0.7s,baz=288,slow=10,SNR=3.2						
ESDC	**Sonseca Array**	**24.94**	**289**	P	**P**	**22 07 29.0**	**-0.3**
	comp=N,1.9nm,0.6s,baz=82,slow=9.3,SNR=11						
FINES	**FINESS Array B**	**25.93**	**359**	P	**P**	**22 07 36.8**	**-1.1**
	comp=N,3.6nm,1.0s,baz=163,slow=8.3,SNR=6.1						
HFS	**Hagfors**	**26.11**	**345**	P	**P**	**22 07 39.0**	**-0.6**
	comp=N,3.0nm,0.9s,baz=151,slow=9.9,SNR=3.0						
AKTO	**Aktyubinsk**	**26.79**	**47**	P	**P**	**22 07 45.6**	**-0.3**
	comp=N,0.9nm,0.7s,baz=256,slow=12,SNR=4.0						
TORD	**Torodi Ar. Bea**	**32.01**	**232**	P	**P**	**22 08 32.6**	**+0.2**
	comp=N,1.2nm,0.5s,baz=34,slow=8.6,SNR=13						
ARCES	**ARCESS Array B**	**34.06**	**359**	P	**P**	**22 08 49.5**	**-0.4**
	comp=N,1.7nm,0.9s,baz=165,slow=7.5,SNR=4.9						
MKAR	**Makanchi Array**	**42.19**	**57**	P	**P**	**22 09 59.0**	**+0.3**
	comp=N,1.1nm,0.6s,baz=282,slow=6.1,SNR=17						
MKAR				PcP	**PcP**	**22 11 53.3**	**+0.5**
	comp=N,0.5nm,0.8s,baz=289,slow=3.6,SNR=3.3						
SPITS	**Spitsbergen Ar**	**42.99**	**357**	P	**P**	**22 10 04.7**	**-0.1**
	comp=N,5.1nm,0.9s,baz=142,slow=14,SNR=3.5						
ZALV	**Zalesovo Beam**	**43.55**	**46**	P	**P**	**22 10 09.3**	**-0.3**
	comp=N,1.0nm,0.6s,baz=260,slow=8.3,SNR=4.7						
SONM	**Songino Array**	**57.97**	**51**	P	**P**	**22 11 59.3**	**+0.7**
	comp=N,0.9nm,0.6s,baz=288,slow=7.4,SNR=8.7						
SCHQ	**Schefferville**	**63.95**	**320**	P	**P**	**22 12 38.0**	**-0.9**
	comp=N,2.1nm,0.7s,baz=73,slow=6.8,SNR=7.6						
CMAR	**Chiang Mai Arr**	**64.90**	**85**	P	**P**	**22 12 44.9**	**-0.8**
	comp=N,0.3nm,0.3s,baz=288,slow=8.3,SNR=5.7						
USRK	**Ussuriysk Ar.**	**75.40**	**46**	P	**P**	**22 13 49.8**	**+0.2**
	comp=N,3.5nm,0.7s,baz=266,slow=4.5,SNR=4.6						
KSRS	**Korea Array**	**76.74**	**53**	P	**P**	**22 13 57.6**	**+0.2**
	comp=N,1.5nm,0.7s,baz=309,slow=4.5,SNR=7.4						
MJAR	**Matsushiro Arr**	**83.84**	**49**	P	**P**	**22 14 36.5**	**+0.8**
	comp=N,1.1nm,0.7s,baz=318,slow=3.1,SNR=3.7						
ASAR	**Alice Springs**	**116.51**	**101**	PKP	**PKPdf**	**22 20 50.2**	**0.0**
	comp=N,0.2nm,0.6s,baz=336,slow=2.0,SNR=3.1						

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*JMA **23** 22:46:03.5±0.4, 34°.31N×141°.39E, h36km±2km, M3.1*
*IDC **23** 22:46:08.1±3.4, 34°.30N×141°.19E, h55km±32km, mb3.1/3, mb1 3.4/4, mb1mx3.0/41, mbtmp3.3/4, ML2.2/1, MS2.5/1, Ms1 2.5/1, ms1mx2.0/10, Error ellipse: s-maj=32.9km s-min=10.2km az=89.0*
ISC 23 22:46:04.1±1.1**, 34°.26N**±0°.05×**141°.30E**±0°.09**, h27km, n16, σ1.17**/20**, mb3.4**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.47**	**326**	P	**Pn**	**22 46 13.7**	**-1.0**
BSO1				X		22 46 21.9	
BSO3	**Boso 3**	**0.85**	**310**	P	**Pn**	**22 46 20.0**	**0.0**
BSO3				X		22 46 32.9	
BSO4	**Boso 4**	**1.08**	**313**	P	**Pb**	**22 46 23.9**	**-0.2**
BSO4				*e*S	**Sb**	**22 46 38.5**	**+0.8**
JKUC	**kamogawauchiur**	**1.28**	**315**	S	**Sb**	**22 46 41.9**	**-1.6**
TATJ	**Tateyama 2**	**1.40**	**304**	*e*S	**Sb**	**22 46 46.3**	**-0.6**
JMKN	**Mikurajimanish**	**1.47**	**256**	P	**Pb**	**22 46 29.9**	**-0.8**
CHOJ	**Chosi**	**1.48**	**346**	P	**Pn**	**22 46 28.0**	**-1.1**
CHOJ				*e*S	**Sn**	**22 46 45.9**	**-1.7**
JHJ2	**Mitsune**	**1.69**	**228**	P	**Pb**	**22 46 33.6**	**-0.9**
JHJ	**Hachijo jima 2**	**1.70**	**228**	P	**Pb**	**22 46 33.8**	**-0.9**
	36nm,0.3s,baz=51,slow=16,SNR=18						
JHJ				S	**Sb**	**22 46 55.0**	**-0.7**
	50nm,0.3s,baz=66,slow=20,SNR=8.0						
JOD2	**Odawara 2**	**2.08**	**299**	P	**Pn**	**22 46 36.5**	**-0.7**
MJAR	**Matsushiro Arr**	**3.40**	**313**	P	**Pn**	**22 46 57.1**	**+1.6**
	0.3nm,0.3s,baz=148,slow=9.3,SNR=7.4						
MJAR				S	**Sn**	**22 47 35.5**	**+0.6**
	0.5nm,0.3s,baz=338,slow=14,SNR=5.7						
MAT	**Matsushiro**	**3.40**	**313**	P	**Pn**	**22 46 57.8**	**+2.4**
MAT				S	**Sn**	**22 47 35.9**	**+1.0**
USRK	**Ussuriysk Ar.**	**12.26**	**327**	LR	LR	22 53 32.5	
	comp=Z,24nm,20.5s,baz=335,slow=36						
MKAR	**Makanchi Array**	**45.56**	**304**	P	**P**	**22 54 21.2**	**-0.4**
	0.4nm,0.8s,baz=87,slow=9.5,SNR=4.5						
ILAR	**Eielson Array**	**51.90**	**31**	P	**P**	**22 55 10.5**	**+0.6**
	0.3nm,0.7s,baz=270,slow=6.3,SNR=3.6						
WRA	**Warramunga Arr**	**54.31**	**188**	P	**P**	**22 55 29.4**	**+1.3**
	0.3nm,0.3s,baz=2.7,slow=7.7,SNR=8.4						

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*SJA **23** 22:55:24.3±0.5, 32°.31S×71°.45W, h76km±5km, ML3.5, MW3.3*
*GUC **23** 22:55:24.5±0.5, 32°.43S×71°.35W, h62km±3km, ML3.9*
ISC 23 22:55:23.4±1.4**, 32°.40S**±0°.03×**71°.30W**±0°.05**, h2km**±12km**, n22, σ1.52**/38**, 1C-7D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO04	**Los Peladeros**	**0.45**	**38**	⇓*i*P	**Pn**	**22 55 38.3**	**+1.1**
CO04				*i* S	**Sb**	**22 55 48.5**	**+7.1**
CO04				IAML		22 55 50.4	
	comp=N,7µm,0.2s						
ROCH	**El Roble**	**0.62**	**157**	⇓*i*P	**Pn**	**22 55 39.5**	**0.0**
ROCH				*i* S	**Sn**	**22 55 50.9**	**+0.7**
ROCH				IAML		22 55 51.9	
	comp=N,9µm,0.3s						
VA01	**Torpederas**	**0.69**	**205**	*e*P	**Pb**	**22 55 38.8**	**+0.6**
VA01				*i* S	**Sb**	**22 55 49.6**	**+1.4**
VA01				IAML		22 55 51.0	
	comp=N,13µm,0.1s						
MT02	**Curacav**	**0.87**	**171**	⇓*i*P	**Pb**	**22 55 41.5**	**+0.3**
MT02				*i* S	**Sb**	**22 55 54.3**	**+0.9**
PEL	**Peldehue**	**0.91**	**145**	*e*P	**Pb**	**22 55 42.4**	**+0.5**
PEL				*e*S	**Sn**	**22 55 55.9**	**-1.0**
PEL				IAML		22 55 57.9	
	comp=N,6µm,0.2s						
STL	**Santa Lucia**	**1.17**	**152**	⇓*i*P	**Pg**	**22 55 46.0**	**+0.1**
STL				*i* S	**Sb**	**22 56 02.5**	**+0.3**
STL				IAML		22 56 04.4	
	comp=N,3µm,0.2s						
CLCH	**Cerro Calan**	**1.18**	**148**	⇓*i*P	**Pg**	**22 55 46.6**	**+0.5**
CLCH				*i* S	**Sb**	**22 56 03.0**	**+0.5**
CLCH				IAML		22 56 04.9	
	comp=E,4µm,0.5s						
CO02	**Combarbal**	**1.22**	**12**	⇑*i*P	**Pg**	**22 55 46.0**	**-0.7**
CO02				*e*S	**Sg**	**22 56 01.8**	**-0.7**
FCH	**Farellones**	**1.26**	**138**	⇓*i*P	**Pg**	**22 55 47.7**	**+0.2**
FCH				*i* S	**Sn**	**22 56 05.7**	**-0.3**
FCH				IAML		22 56 09.0	
	comp=E,3µm,0.2s						
MT03	**Universidad Ad**	**1.28**	**149**	⇓*i*P	**Pg**	**22 55 47.8**	**-0.1**
MT03				*i* S	**Sb**	**22 56 05.5**	**+0.2**
MT03				IAML		22 56 06.7	
	comp=N,11µm,0.3s						
ANTU	**Antumapu**	**1.29**	**155**	*e*P	**Pn**	**22 55 48.6**	**0.0**
ANTU				*e*S	**Sb**	**22 56 06.0**	**+0.3**
ANTU				IAML		22 56 07.8	
	comp=E,3µm,0.3s						
CO03	**El Pedregal**	**1.64**	**19**	*e*P	**Pn**	**22 55 50.5**	**-2.9**
CO03				*e*S	**Sn**	**22 56 12.7**	**-2.4**
CO03				IAML		22 56 13.4	
	comp=N,2µm,0.2s						
LMEL	**Las Melosas**	**1.71**	**148**	*i* P	**Pn**	**22 55 53.9**	**-0.6**
LMEL				*e*S	**Sn**	**22 56 16.2**	**-0.9**
LMEL				IAML		22 56 18.6	
	comp=N,2µm,0.2s						
RTLS	**Leoncito**	**1.80**	**71**	*e*P	**Pb**	**22 55 57.0**	**-0.2**
RTLS				*e*S	**Sg**	**22 56 21.4**	**+0.2**
RTLS				IAML		22 56 23.1	
	comp=Z,239nm,0.5s						
ARCO	**CERRO ARCO**	**2.04**	**103**	*e*P	**Pb**	**22 56 00.6**	**-0.8**
ARCO				*e*S	**Sb**	**22 56 27.0**	**-0.3**
ARCO				IAML		22 56 30.1	
	comp=Z,334nm,0.3s						
ASAL	**Salagasta**	**2.09**	**96**	*e*P	**Pb**	**22 56 01.3**	**-0.8**
AAGR	**Agrelo**	**2.19**	**109**	*e*P	**Pb**	**22 56 02.8**	**-1.1**
AAGR				*e*S	**Sb**	**22 56 31.4**	**-0.1**
RTCV	**Cerro Valdivia**	**2.40**	**78**	*e*P	**Pn**	**22 56 04.8**	**+1.0**
ACCO	**Cerro Coronel**	**2.62**	**47**	*e*P	**Pn**	**22 56 08.0**	**+0.8**
AROD	**Rodeo**	**2.72**	**36**	*e*P	**Pn**	**22 56 08.6**	**+0.2**
AMOG	**MOGNA**	**2.80**	**59**	*e*P	**Pn**	**22 56 09.7**	**+0.4**
AGUA	**GUANDACOL**	**3.77**	**40**	*e*P	**Pn**	**22 56 22.3**	**-0.4**

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*NEIC **23** 23:23:17.0±2.1, 35°.09S±0°.06×71°.33W±0°.06, h17km±2km, Error ellipse: s-maj=8.5km s-min=7.1km az=206.0*
*GUC **23** 23:23:17.3±0.6, 35°.12S×71°.31W, h10km±2km, ML4.6*
*SJA **23** 23:23:18.1±0.8, 35°.11S×71°.43W, h49km±9km, ML4.2, MW4.1*
*IDC **23** 23:23:22.5±2.6, 35°.12S×71°.21W, h59km±22km, mb3.9/7, mb1 4.0/11, mb1mx3.8/28, mbtmp4.1/11, ML3.9/4, MS3.0/2, Ms1 3.0/2, ms1mx2.6/31, Error ellipse: s-maj=28.1km s-min=15.7km az=102.0*
ISC 23 23:23:14.8±2.6**, 35°.07S**±0°.03×**71°.49W**±0°.04**, h4km**±17km**, n71, σ1.59**/78**, mb4.3**/11**, 2C-1D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**Huala**	**0.36**	**279**	*e*P	**Pn**	**23 23 26.8**	**-0.2**
GO05				*i* S	**Sb**	**23 23 34.2**	**+4.2**
GO05				IAML		23 23 34.5	
	comp=E,57µm,0.3s						
GO05	**Huala**	**0.36**	**279**		**Pn**	**23 23 26.9**	**0.0**
CCHI	**Chillan**	**1.60**	**197**	*e*P	**Pn**	**23 23 44.5**	**+0.6**
CCHI				*e*S	**Sn**	**23 24 04.9**	**-0.3**
CCHI				IAML		23 24 08.6	
	comp=E,9µm,0.5s						
CCHI	**Chillan**	**1.60**	**197**	*i* P	**Pn**	**23 23 44.6**	**+0.7**
LMEL	**Las Melosas**	**1.61**	**42**	*e*P	**Pn**	**23 23 44.0**	**-0.3**
LMEL				*i* S	**Sn**	**23 24 04.0**	**-1.6**
LMEL				IAML		23 24 08.0	
	comp=N,6µm,0.3s						
ANTU	**Antumapu**	**1.65**	**26**	*e*P	**Pb**	**23 23 46.4**	**+0.5**
ANTU				*i* S	**Sb**	**23 24 07.4**	**+0.3**

ANTU IAML 23 24 09.5
comp=N,24μm,0.4s
RCDM Rinconada Maip 1.67 20 *e*P **Pb 23 23 46.2 0.0**
RCDM *e*S **Sb 23 24 08.0 +0.3**
RCDM IAML 23 24 09.7
comp=E,22μm,0.1s
PUMA Malargue 1.72 105 *i* P **Pn 23 23 46.3 +0.6**
MT03 Universidad Ad 1.77 28 *e*P **Pn 23 23 46.5 +0.2**
MT03 *i* S **Sn 23 24 09.2 0.0**
MT03 IAML 23 24 12.0
comp=N,16μm,0.5s
STL Santa Lucia 1.77 24 *e*P **Pn 23 23 46.9 +0.6**
STL *e*S **Sn 23 24 09.3 0.0**
STL IAML 23 24 11.8
comp=E,7μm,0.6s
FSR Penalolen 1.77 27 *e*P **Pb 23 23 48.5 +0.6**
FSR *e*S **Sb 23 24 10.5 -0.1**
MT02 Curacav 1.83 9⇑*i*P **Pn 23 23 48.0 +1.0**
MT02 *i* S **Sb 23 24 11.8 -0.2**
MT02 IAML 23 24 16.0
comp=E,3μm,0.6s
EDS3 Malargue 1.85 113 *i* P **Pn 23 23 48.2 +0.7**
LAMA Las Malvinas 1.88 87 *i* P **Pn 23 23 48.8 +1.1**
LAMA *i* Sg **Sn 23 24 11.2 -0.6**
PEL Peldehue 2.03 19 *e*P **Pn 23 23 50.6 +0.7**
PEL *i* S **Sb 23 24 17.4 -0.6**
PEL IAML 23 24 19.3
comp=N,8μm,0.5s
PEL Peldehue 2.03 19 Pn 23 23 50.2 +0.4
PEL Peldehue 2.03 19 *i* P **Pb 23 23 52.0 -0.3**
PEL *i* Sg **Sb 23 24 17.3 -0.6**
VA01 Torpederas 2.04 356⇑*i*P **Pn 23 23 51.1 +1.1**
VA01 *i* S **Sb 23 24 18.7 +0.5**
VA01 IAML 23 24 23.9
comp=N,3μm,0.4s
ROC1 El Roble 2.12 11 Pn 23 23 52.2 +0.8
ROC1 El Roble 2.12 11 *i* P **Pb 23 23 53.6 -0.4**
ROC1 *i* Sg **Sb 23 24 20.0 -0.8**
ROCH El Roble 2.13 11 *e*P **Pn 23 23 52.3 +0.9**
ROCH *i* S **Sb 23 24 20.6 -0.4**
ROCH IAML 23 24 27.2
comp=E,6μm,0.6s
CCSP San Pedro de C 2.21 216 *e*P **Pb 23 23 54.6 -0.7**
CCSP *i* S **Sb 23 24 23.1 +0.1**
CCSP IAML 23 24 32.4
comp=E,5μm,0.4s
CANA Caviahue 2.84 173 *i* P **Pn 23 24 03.3 +2.2**
AAGR Agrelo 2.96 49 *i* P **Pn 23 24 04.6 +1.9**
ARCO CERRO ARCO 3.07 44 *i* P **Pn 23 24 06.8 +2.5**
ARCO IAML 23 24 16.8
comp=Z,413nm,0.3s
ASAL Salagasta 3.31 43 *i* P **Pn 23 24 09.9 +2.3**
RTCV Cerro Valdivia 4.04 38⇓*i*P **Pn 23 24 20.3 +2.9**
ZON Zonda 4.23 35 *i* P **Pn 23 24 22.9 +2.8**
CFA Coronel Fontan 4.40 39 P **Pn 23 24 25.1 +2.6**
comp=Z,6.5nm,0.3s,baz=213,slow=14,SNR=29
CFA S **Sn 23 25 16.3 +2.2**
comp=Z,7.8nm,0.3s,baz=218,slow=13,SNR=3.7
RTLL Cerro Villicun 4.50 35 *i* P **Pn 23 24 26.8 +2.9**
ACAN Cantantal 4.54 53⇑*i*P **Pn 23 24 27.2 +2.8**
ACCO Cerro Coronel 4.91 25 *i* P **Pn 23 24 32.3 +2.5**
GO04 Tololo Observa 4.92 7 Pn 23 24 31.1 +1.4
PLCA Paso Flores 5.71 173 P **Pn 23 24 43.4 +3.0**
comp=Z,0.6nm,0.3s,baz=0.6,slow=14,SNR=21
PLCA LR LR 23 27 18.2
comp=Z,77nm,20.2s,baz=344,slow=42
PLCA Paso Flores 5.71 173 Pn 23 24 42.8 +2.4
PLCA Paso Flores 5.71 173 *i* P **Pn 23 24 42.7 +2.3**
VCA Vinchina 6.90 25 *i* P **Pn 23 24 59.6 +2.7**
VCA IAML 23 26 59.8
comp=Z,74nm,0.5s
GO03 Copiap 7.53 9 Pn 23 25 06.0 +0.6
GO02 Mina Guanaco 10.01 10 Pn **Pn 23 25 40.3 +0.6**
PB10 IPOC Station P 11.54 4 Pn **Pn 23 25 59.0 -1.4**
LVC Limon Verde 12.62 11 Pn **Pn 23 26 13.9 -1.6**
CPUP Villa Florida 14.96 58 P **Pn 23 26 47.3 +0.2**
comp=Z,0.2nm,0.3s,baz=225,slow=8.6,SNR=2.7
CPUP Villa Florida 14.96 58 Pn 23 26 46.8 -0.3
PB11 IPOC Station P 15.33 7 Pn Pn 23 26 45.4 -6.9
GO01 Chusmiza 15.47 8 Pn Pn 23 26 44.0 -10
MNMC Minye Minye 15.96 7 Pn **Pn 23 26 54.9 -5.7**
MNMC IAmb IAmb 23 27 12.0
comp=Z,14nm,0.9s
GO09 Cerro Castillo 16.21 182 Pn **Pn 23 27 01.9 -1.4**
GO10 Punta Arenas 18.09 179 Pn 23 27 25.8 -1.1
GO10 IAmb IAmb 23 27 35.8
comp=Z,36nm,0.9s
LPAZ La Paz 18.94 10 P **Pn 23 27 39.2 +1.1**
comp=Z,0.3nm,0.3s,baz=148,slow=7.3,SNR=6.8
LPAZ La Paz 18.94 10 P **P 23 27 36.7 -0.8**
SIV San Ignacio 21.17 29 P **P 23 28 00.3 -0.9**
comp=Z,4.6nm,0.7s,baz=233,slow=11,SNR=24
QSPA South Pole Qui 55.17 180 P **P 23 32 48.8 +0.5**
comp=Z,1.7nm,0.8s,baz=269,slow=1.2,SNR=6.0
QSPA South Pole Qui 55.17 180 IAmb IAmb 23 32 53.9
comp=Z,4.6nm,1.1s
TXAR Lajitas Array 70.88 331 P **P 23 34 34.4 +1.3**
comp=Z,0.6nm,0.6s,baz=159,slow=9.0,SNR=12
V48A Smith Brothers 71.88 347 P **P 23 34 39.4 +0.5**
X40A Basin Creek Fa 72.02 342 pP 23 34 48.0 +6.9
WVT Waverly 72.45 346 P **P 23 34 42.5 +0.2**
LCAR Lake Charles 73.11 343 P **P 23 34 46.4 +0.3**
WMOK Wichita Mounta 73.98 337 IAmb IAmb 23 34 52.0
comp=Z,3.5nm,1.1s
DBIC Dimbokro 75.10 71 P **P 23 34 57.4 -0.9**
comp=Z,4.4nm,0.6s,baz=200,slow=5.8,SNR=4.3
DBIC Dimbokro 75.10 71 IAmb IAmb 23 35 02.7
comp=Z,5.8nm,0.8s
ANMO Albuquerque 76.93 331 LR LR 00 02 53.4
comp=Z,20nm,21.0s,baz=204,slow=31
T25A Trinidad 78.09 334 P **P 23 35 17.1 +2.1**
T25A IAmb IAmb 23 35 17.5
comp=Z,2.7nm,0.7s
BOSA Boshof 79.18 117 P **P 23 35 20.2 -1.1**
comp=Z,2.4nm,0.7s,baz=243,slow=4.2,SNR=3.6
BOSA Boshof 79.18 117 IAmb IAmb 23 35 27.9
comp=Z,6.7nm,1.1s
R11A Troy Canyon, C 83.70 327 IAmb IAmb 23 35 47.7
comp=Z,2.0nm,1.1s
TORD Torodi Ar. Bea 84.15 70 P **P 23 35 46.6 -0.9**
comp=Z,3.5nm,1.1s,baz=257,slow=4.3,SNR=7.5
NVAR Mina Array Bea 85.02 325 P **P 23 35 53.0 +1.4**
comp=Z,1.0nm,0.8s,baz=148,slow=5.3,SNR=6.3
REDW Red Top Meadow 85.69 332 IAmb IAmb 23 35 59.0
comp=Z,3.6nm,0.9s
ZALV Zalesovo Beam 154.87 34 PKPbc **PKPbc 23 43 16.1 -0.8**
comp=Z,0.6nm,0.5s,baz=324,slow=2.9,SNR=3.8
MKAR Makanchi Array 157.10 51 PKPab **PKPab 23 43 41.2 -0.9**
comp=Z,0.2nm,0.5s,baz=269,slow=3.0,SNR=5.4

IDC ***23*** *23:31:41.5±2.5, 5°.29S×133°.83E, h0km, mb3.9/2, mb1 4.0/6, mb1mx3.7/28, mbtmp3.9/6, ML3.7/4, Error ellipse: s-maj=110.3km s-min=24.3km az=81.0*
NEIC ***23*** *23:31:45.9±2.7, 5°.53S±0°.07×133°.32E±0°.04, h38km±10km, mb4.0/5, Error ellipse: s-maj=10.3km s-min=5.0km az=155.0*
ISC 23 23:31:45.5±0.7, 5°.49S±0°.06×133°.3E±0°.1, h35km, n23, σ1§83/26, mb4.0/5, Aru Islands region

Code Station Name Δ° AZ° Phase Op ID ISC Time h m s Res ISC
FAKI Fak Fak 2.76 338 Pn 23 32 28.0 +0.8
SAUI Saumlaki 3.16 218 Pn **Pn 23 32 33.0 +0.2**
SIJI Sorong 5.01 336 Pn **Pn 23 32 58.7 +0.4**
3.7nm,0.3s,baz=158,slow=19,SNR=22
SIJI Sn **Sn 23 33 51.2 -3.8**
7.3nm,0.3s,baz=215,slow=22,SNR=6.7
SOEI Soe 9.89 244 Pn **Pn 23 34 05.1 -0.2**
KNRA Kununurra 11.05 203 Pn **Pn 23 34 20.2 -0.9**
COEN Coen 12.87 132 Pn Pn 23 34 42.7 -3.3
WB0 Warramunga Arr 14.23 176 Pn **Pn 23 35 04.7 +0.1**
PMG Port Moresby 14.30 107 Pn **Pn 23 35 05.3 -0.3**
WRAB Tennant Creek 14.39 176 Pn **Pn 23 35 07.3 +0.5**
WRA Warramunga Arr 14.40 176 Pn **Pn 23 35 07.9 +1.0**
0.2nm,0.3s,baz=360,slow=13,SNR=13
WRA Sn **Sn 23 37 40.2 -5.2**
0.1nm,0.3s,baz=358,slow=23,SNR=2.6
WB2 Warramunga Arr 14.40 176 Pn **Pn 23 35 08.2 +1.2**
WR0 Warramunga Arr 14.43 175 Pn **Pn 23 35 07.7 +0.4**
FITZ Fitzroy Crossi 14.58 210 Pn **P 23 35 14.8 -0.5**
0.4nm,0.3s,baz=34,slow=12,SNR=6.0
FITZ Sn **Sn 23 37 50.0 0.0**
0.3nm,0.3s,baz=205,slow=17,SNR=4.5
FITZ Fitzroy Crossi 14.58 210 Pn 23 35 09.8 +0.4
AS31 Alice Springs 18.08 178 P **Pn 23 35 53.7 -0.3**
ASAR Alice Springs 18.08 178 P **P 23 35 57.4 +3.2**
0.3nm,0.3s,baz=2.7,slow=11,SNR=25
ASAR S **Sn 23 39 15.9 +1.1**
0.1nm,0.3s,baz=2.3,slow=25,SNR=2.9
COCO West Island 36.59 257 PcP 23 41 12.0 +0.5
MK31 Makanchi Array 68.81 325 P **P 23 42 48.1 +1.8**
MK31 IAmb IAmb 23 42 49.4
comp=Z,0.8nm,0.6s
MKAR Makanchi Array 68.81 325 P **P 23 42 49.0 +2.8**
comp=Z,1.0nm,0.6s,baz=120,slow=6.8,SNR=22
MAKZ Makanchi 69.00 325 P **P 23 42 48.6 +1.2**
MAKZ IAmb IAmb 23 42 51.3
comp=Z,1.6nm,1.0s
ZALV Zalesovo Beam 71.73 332 P **P 23 43 05.5 +1.6**
comp=Z,0.4nm,0.4s,baz=118,slow=8.3,SNR=2.3
BTK Batken 73.01 315 P **P 23 43 10.7 -1.3**
BTK IAmb IAmb 23 43 25.8
comp=Z,1.5nm,0.8s
VNDA Vanda 73.56 174 P **P 23 43 13.4 -1.0**

VAO ***23*** *23:39:57.0±0.7, 24°.04S×69°.14W, h102km±6km, mb5.0*
SJA ***23*** *23:40:01.4±0.3, 23°.82S×68°.70W, h109km±5km, ML5.0, MW5.0*
NEIC ***23*** *23:40:02.3±1.7, 23°.84S±0°.04×68°.68W±0°.07, h101km±4km, Error ellipse: s-maj=9.2km s-min=5.8km az=92.0*
NEIC ***23*** *23:40:02.6, 23°.855×68°.79W, h97km, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr-2.21; Mθθ-0.07; Mφφ2.28; Mrθ0.81; Mθφ0.84; Mφr-1.48; Fault plane solution: M0 2.94000×10^16 NP1:φs219.88000°, δ36.43000°, λ-50.55000°. NP2:φs354.23000°, δ62.70000°, λ-115.13000°. Principal axes: T 2.8459, Plg14.0000°, Azm102.0000°; N 0.1725, Plg22.0000°, Azm6.0000°; P -3.0184, Plg63.0000°, Azm222.0000°;*
GUC ***23*** *23:40:02.6±0.7, 23°.85S×68°.79W, h106km±6km, ML5.3*
IDC ***23*** *23:40:03.6±0.3, 23°.78S×68°.48W, h101km±2km, mb4.4/26, mb1 4.5/30, mb1mx4.4/49, mbtmp4.7/30, MS3.7/9, Ms1 3.7/9, ms1mx3.4/28, Error ellipse: s-maj=12.8km s-min=6.1km az=61.0*
BJI ***23*** *23:40:03.5±0.0, 23°.90S×68°.60W, h102km, mB5.2/5*
GCMT ***23*** *23:40:06.6±0.2, 23°.98S±0°.02×69°.02W±0°.02, h108km±2km, MW4.9/106, Moment Tensor Solution. s39,c43; s106,c140; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.08±.09; Mθθ-0.01±.12; Mφφ2.09±.14; Mrθ1.24±.05; Mθφ1.59±.09; Mφr-1.27±.08; Best double couple: M0 3.15600×10^16 NP1:φs238.00000°, δ48.00000°, λ-41.00000°. NP2:φs358.00000°, δ60.00000°, λ-130.00000°. Principal axes: T 3.0110, Plg7.0000°, Azm115.0000°; N 0.2940, Plg34.0000°, Azm21.0000°; P -3.3010, Plg55.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 23:40:02.2±0.3, 23°.84S±0°.03×68°.61W±0°.04, h100km±2km, h100km:pP-P, n771, σ1§20/835, mb4.9/179, 15C, Northern Chile

Code Station Name Δ° AZ° Phase Op ID ISC Time h m s Res ISC
PB15 IPOC Station P 1.00 308⇑*i*P **Pn 23 40 23.1 +0.2**
PB15 *i* S **Sn 23 40 38.8 +0.3**
PB15 IPOC Station P 1.00 308 *e*P **Pn 23 40 23.1 +0.2**
PB15 *e*S **Sn 23 40 38.6 +0.2**
LVC Limon Verde 1.25 347 P **Pn 23 40 26.9 +1.0**
787nm,0.3s,baz=152,slow=9.7,SNR=2337
LVC S **Sn 23 40 44.7 +1.0**
6μm,0.3s,baz=108,slow=20,SNR=101
LVC Limon Verde 1.25 347 *e*S **Sn 23 40 42.8 -0.9**
PB06 IPOC Station P 1.43 322⇑*i*P **Pn 23 40 28.3 +0.5**
PB06 *e*S **Sn 23 40 47.5 +0.4**
PB06 IAML 23 40 50.3
comp=E,52μm,0.2s
PB06 IPOC Station P 1.43 322 *e*P **Pn 23 40 27.6 -0.2**
PB06 *e*S **Sn 23 40 47.1 0.0**
PB06 IAML 23 40 50.5
comp=Z,36μm,0.6s
GO02 Mina Guanaco 1.59 214 *e*P **Pn 23 40 30.5 +0.5**
GO02 *i* S **Sn 23 40 51.4 +0.5**
GO02 Mina Guanaco 1.59 214 Pn 23 40 31.0 +1.1
GO02 Sn **Sn 23 40 51.7 +0.7**
PB05 IPOC Station P 1.76 304⇑*i*P **Pn 23 40 31.7 -0.2**
PB05 *i* S **Sn 23 40 53.8 -0.6**
PB05 IAML 23 41 05.8
comp=E,19μm,0.4s
PB10 IPOC Station P 1.81 280⇑*i*P **Pn 23 40 32.2 -0.2**
PB10 *i* S **Sn 23 40 54.0 -1.3**
PB10 IAML 23 41 01.1
comp=N,44μm,0.5s
PB10 IPOC Station P 1.81 280 Pn 23 40 32.7 +0.4
PB10 Sn **Sn 23 40 52.8 -2.5**
PB14 IPOC Station P 1.81 244⇑*i*P **Pn 23 40 32.4 -0.3**
PB14 *i* S **Sn 23 40 55.0 -0.9**
PB04 IPOC Station P 2.06 316⇑*i*P **Pn 23 40 35.7 0.0**
PB04 *i* S **Sn 23 41 01.2 -0.1**
PB04 IAML 23 41 06.8
comp=N,27μm,0.3s
PB04 IPOC Station P 2.06 316 Pn 23 40 35.9 +0.2
PB04 Sn **Sn 23 40 58.1 -3.2**
PB03 IPOC Station P 2.06 329⇑*i*P **Pn 23 40 36.4 +0.6**
PB03 *e*S **Sn 23 41 02.1 +0.7**
PB03 IAML 23 41 05.7
comp=E,31μm,0.3s
PB09 IPOC Station P 2.11 344⇑*i*P **Pn 23 40 38.1 +1.7**
PB09 IAML 23 41 09.3
comp=E,17μm,0.7s
PB07 IPOC Station P 2.41 331⇑*i*P **Pn 23 40 40.6 +0.3**
PB07 *i* S **Sn 23 41 09.3 -0.1**
PB07 IAML 23 41 14.5
comp=N,17μm,0.4s
PB02 IPOC Station P 2.77 334⇑*i*P **Pn 23 40 45.2 +0.2**
PB01 IPOC Station P 2.89 344⇑*i*P **Pn 23 40 47.1 +0.4**
PB01 *i* S **Sn 23 41 14.8 -6.1**
PB01 IAML 23 41 29.5
comp=E,12μm,0.3s
PB01 IPOC Station P 2.89 344 Pn 23 40 47.1 +0.4
PB01 Sn Pn 23 41 14.9 -6.1
AZAP Zapla 3.27 98 *e*P **Pn 23 40 53.8 +2.0**
PATCX Punta Patache 3.32 334⇑*i*P **Pn 23 40 51.5 -1.0**
PATCX *i* S **Sn 23 41 36.2 +5.1**
TA01 Diego Aracena 3.56 336⇑*i*P **Pn 23 40 54.1 -1.5**
TA01 *i* S **Sn 23 41 40.8 +4.0**
GO03 Copiap 4.02 201 Pn 23 41 00.0 -1.7
PB11 IPOC Station P 4.17 346 Pn **Pn 23 41 03.4 -0.5**
AHML Horco Molle 4.17 135 *e*P **Pn 23 41 05.3 +1.4**
AHML *e*P **Pn 23 41 05.3 +1.4**
AHML *e*S **Sn 23 41 52.6 +0.9**
GO01 Chusmiza 4.18 352 Pn 23 41 04.2 -0.2
MNMC Minye Minye 4.77 349 Pn 23 41 10.9 -1.2
VCA Vinchina 4.89 176 *e*P **Pn 23 41 14.4 +0.7**
VCA IAML 23 41 17.9
comp=Z,636nm,0.3s
VCA IAML 23 42 18.8
comp=Z,722nm,0.3s
GO04 Tololo Observa 6.61 197 Pn 23 41 33.3 -3.7
LPAZ La Paz 7.52 4 P **Pn 23 41 50.6 +0.8**
comp=Z,2.9nm,0.3s,baz=186,slow=6.8,SNR=35
LPAZ La Paz 7.52 4 Pn 23 41 50.4 +0.5
LPAZ La Paz 7.52 4 Pn 23 41 48.5 -1.4
LPAZ La Paz 7.52 4 *e*P **Pn 23 41 50.0 +0.1**
CFA Coronel Fontan 7.75 178 P **Pn 23 41 50.8 -1.5**
comp=Z,87nm,0.3s,baz=5.7,slow=15,SNR=625
CFA S **Sn 23 43 11.6 -6.9**
comp=Z,61nm,0.3s,baz=177,slow=20,SNR=6.5
ROC1 El Roble 9.35 193 Pn 23 42 09.5 -4.8
PEL Peldehue 9.45 191 Pn 23 42 10.4 -5.1
CPUP Villa Florida 10.53 106 P **Pn 23 42 28.9 -1.3**
comp=Z,1.6nm,0.3s,baz=290,slow=12,SNR=28
CPUP LR LR 23 47 12.6
comp=Z,496nm,20.6s,baz=290,slow=41
CPUP Villa Florida 10.53 106 Pn **Pn 23 42 28.1 -2.0**
SIV San Ignacio 10.54 44 P **Pn 23 42 28.4 -2.1**
comp=Z,29nm,0.3s,baz=257,slow=10,SNR=250
SIV S **Sn 23 44 21.5 -5.2**
comp=Z,1.4nm,0.3s,baz=139,slow=20,SNR=3.5
GO05 Huala 11.50 194 Pn 23 42 37.1 -6.2
NNA Nana 14.14 325 P **P 23 43 21.9 -0.7**
comp=Z,1.4nm,0.3s,baz=155,slow=7.9,SNR=15
NNA S **Sn 23 45 56.3 +2.3**
comp=Z,1.3nm,0.3s,baz=318,slow=14,SNR=2.8
NNA LR LR 23 48 27.5
comp=Z,108nm,21.2s,baz=161,slow=36
NNA Nana 14.14 325 Pn 23 43 15.7 -2.4
TRCB Terra Rica 14.72 89 *e*P **Pn 23 43 26.3 +0.7**
PTGB Pitanga 15.12 97 *e*P **Pn 23 43 31.8 +1.2**
ITAB Concordia 15.26 106 *e*P **Pn 23 43 32.5 +0.2**
PLTB Pedras Altas 15.44 124 *e*P **Pn 23 43 32.7 -1.8**
C2SB Chapadao do Su 15.54 74 *e*P **Pn 23 43 36.0 +0.1**
SAML Samuel 15.69 20 Pn 23 43 35.3 -2.5
PCMB Pacaembu 16.16 86 *e*P **Pn 23 43 44.6 -0.4**
CNLB Canela 16.79 113 *e*P **Pn 23 43 50.7 -0.7**
PLCA Paso Flores 16.93 185 P **Pn 23 43 52.0 -0.9**
comp=Z,1.0nm,0.3s,baz=34,slow=16,SNR=19
PLCA Paso Flores 16.93 185 *e*P Pn 23 43 44.0 -8.9
PLCA Paso Flores 16.93 185 IAmb IAmb 23 43 55.9
comp=Z,91nm,1.7s
FRTB Fartura 17.47 92 *e*P **P 23 43 59.4 -0.1**
ARAG Araguaiana, MT 17.75 66 *e*P **Pn 23 44 02.8 -0.2**
CLDB Colider 17.75 46 *e*P **P 23 44 01.4 -1.2**
TER01 Tubaro-SC 18.10 109 *e*P **P 23 44 05.8 -0.5**
ATAH Atahualpa 19.08 329 P **Pn 23 44 19.6 +0.2**
comp=Z,0.6nm,0.3s,baz=163,slow=9.4,SNR=8.5
SPB Sao Paulo 19.40 94 IAmb IAmb 23 44 21.9
comp=Z,45nm,0.7s
RCLB Rio Claro- Sao 19.44 90 *e*P **P 23 44 20.8 -0.3**
PET01 Itanhaem-SP 19.49 96 *e*P **P 23 44 21.0 -0.5**
GO07 Milladeo Hill, 19.68 191 P **P 23 44 23.4 0.0**
VAO Valinhos 19.89 92 *e*P **P 23 44 25.5 -0.3**
IPMB Ipameri, GO 19.92 77 *e*P **P 23 44 25.7 -0.6**
BDFB Brasilia 21.02 71 P **P 23 44 37.0 -1.2**
comp=Z,17nm,0.6s,baz=239,slow=13,SNR=26
PARB Paraibuna 21.08 93 *e*P **P 23 44 38.7 0.0**
BSCB Bom Sucesso 22.21 87 *e*P **P 23 44 50.0 -0.8**
MAN0 Angra dos Reis 22.65 93 *e*P **P 23 44 54.2 -1.1**
VAS01 Vassouras-RJ 23.21 91 *e*P **P 23 45 00.6 -0.1**
JANB Januaria 24.49 74 *e*P **P 23 45 10.2 -2.2**
OTAV Otavalo 25.77 337 P **P 23 45 23.1 -1.3**
SJMB Sao Joao De Ma 26.05 84 *e*P **P 23 45 25.9 -0.5**
FLOC Florencia 26.18 344 *e*P **P 23 45 30.4 +2.8**
GCUF Volcan Galeras 26.32 340 *e*P P 23 45 44.4 +15
BSFB Barra de Sao F 26.32 84 *e*P **P 23 45 28.5 -0.4**
SOTA Rioblanco 26.96 342 *e*P **P 23 45 35.3 +0.2**
BBAC Balboa, Cauca 27.04 341 *e*P **P 23 45 37.7 +2.2**
GO09 Cerro Castillo 27.54 185 P **P 23 45 36.8 -2.7**
GO09 IAmb IAmb 23 45 45.9
comp=Z,38nm,1.2s
EFI East Falkland 28.96 166 P **P 23 45 52.1 +0.1**
ROSC El Rosal 29.04 348 LR LR 23 59 41.8
comp=Z,182nm,18.8s,baz=184,slow=41
CBOC Ciudad Bolivar 30.39 345 *e*P **P 23 46 07.0 +1.7**
USHA Ushuaia 30.96 180 P **P 23 46 10.4 +0.8**
comp=Z,11nm,0.8s,baz=320,slow=7.9,SNR=5.2
USHA LR LR 23 58 23.2
comp=Z,180nm,20.3s,baz=359,slow=36
PAYG Puerto Ayora 31.17 314 P **P 23 46 11.0 -1.1**
SDV Santo Domingo 32.58 356 P **P 23 46 23.6 -0.9**
MDP Montagnes des 32.71 30 P **P 23 46 25.7 +0.2**
comp=Z,14nm,0.9s,baz=195,slow=11,SNR=6.2
MDP LR LR 00 01 39.8
comp=Z,53nm,21.6s,baz=231,slow=40
BCIP Isla Barro Col 34.59 340 P **P 23 46 39.8 -1.9**
TOSP Speyside 35.80 14 P **P 23 46 51.0 -1.1**
RCBR Riachuelo 36.19 66 P **P 23 46 55.4 -0.2**
comp=Z,12nm,0.6s,baz=239,slow=9.7,SNR=9.9
RCBR Riachuelo 36.19 66 P **P 23 46 56.1 +0.5**
GRGR Grenville 36.39 12 P **P 23 46 56.8 -0.4**
RPN Rapa Nui 36.79 256 P **P 23 46 59.4 -1.2**
HDC Heredia 36.89 334 P **P 23 47 00.4 -1.1**
BBGH Gun Hill 37.80 14 P **P 23 47 07.4 -1.7**
HOPE Hope Point 38.72 150 P **P 23 47 17.8 +1.5**
FDF Fort de France 39.02 12 P **P 23 47 17.9 -1.4**
PMSA Palmer Station 41.04 177 LR LR 00 04 26.6
comp=Z,86nm,18.8s,baz=50,slow=36
PMSA Palmer Station 41.04 177 P **P 23 47 35.7 +0.3**
SKI Saint Kitts 41.32 9 P **P 23 47 35.0 -3.2**
MLPR Magueyes Islan 41.58 2 P **P 23 47 39.4 -0.9**
CRPR Cabo Rojo, PR 41.61 2 P **P 23 47 40.0 -0.6**
OBIP Obispado Ponce 41.67 3 P **P 23 47 40.5 -0.6**
OBIP IAmb IAmb 23 48 06.0
comp=Z,31nm,1.1s
ANWB Willy Bob 41.79 10 P **P 23 47 40.9 -1.1**
HUMP Col San Antoni 41.81 4 P **P 23 47 42.3 +0.1**
CBYP Canovanas 41.94 4 P **P 23 47 42.5 -0.8**
CBYP **P 23 47 42.8 -0.5**
CBYP IAmb IAmb 23 48 06.1
comp=Z,23nm,1.1s
GCPR Guaynabo City 41.96 4 P **P 23 47 43.2 -0.3**
GCPR IAmb IAmb 23 48 39.7
comp=Z,18nm,1.0s
AOPR Arecibo Observ 41.97 3 P **P 23 47 43.2 -0.4**
BANI BANI 42.01 358 P **P 23 47 42.7 -1.2**
CUPR Culebra, Puert 42.01 5 P **P 23 47 42.2 -1.7**
SDD Santo Domingo 42.05 358 P **P 23 47 43.4 -0.8**
PCDR Punta Cana, DR 42.09 0 P **P 23 47 41.1 -3.4**
APG El Apazote 44.12 329 P **P 23 48 03.4 +2.2**
comp=Z,2.0nm,0.6s,baz=112,slow=5.4,SNR=3.4
APG pP **pP 23 48 26.9 +1.4**
comp=Z,8.7nm,0.8s,baz=207,slow=3.2,SNR=4.0
TEIG Tepich 47.80 335 P **P 23 48 30.9 +1.2**
comp=Z,3.3nm,0.4s,baz=145,slow=1.7,SNR=6.2
TEIG pP **pP 23 48 54.5 +0.2**
comp=Z,5.3nm,0.4s,baz=61,slow=0.7,SNR=2.7
CMIG Matias Romero 48.09 325 P **P 23 48 33.3 +1.2**
comp=Z,2.8nm,0.6s,baz=162,slow=5.9,SNR=6.2
CMIG pP **pP 23 48 57.4 +0.7**
comp=Z,5.4nm,1.0s,baz=134,slow=7.7,SNR=5.3
UNM Universidad Na 52.24 323 P **P 23 49 01.4 -2.3**
BBSR BB Station 56.02 4 P **P 23 49 29.2 -1.3**
NHSC New Hope 57.69 349 P **P 23 49 44.6 +2.3**
baz=168
VNA3 Neumayer Olymp 57.79 161 P **P 23 49 43.5 +0.8**
Z58A St. Stephen 57.84 349 P **P 23 49 44.8 +1.4**
baz=168
Z57A Bowman 57.97 348 P **P 23 49 45.4 +1.1**
baz=167
250A Grady 58.01 342 P **P 23 49 43.5 -1.1**
Y60A Bolivia 58.24 351 P **P 23 49 46.2 0.0**
Y60A Bolivia 58.24 351 P **P 23 49 47.8 +1.6**
baz=170
VNA2 Neumayer--Watz 58.37 160 P **P 23 49 47.6 +0.9**
baz=294,slow=7.3
GOGA Godfrey 58.66 345 P **P 23 49 48.4 -0.7**
GOGA IAmb IAmb 23 49 49.6
comp=Z,14nm,1.4s
GOGA Godfrey 58.66 345 P **P 23 49 49.4 +0.3**
baz=164
X60A Albert Glenn T 58.77 351 P **P 23 49 50.7 +0.9**
baz=170
Y55A Saluda 58.82 347 P **P 23 49 51.1 +0.9**
baz=166
X59A McDuffie Farm, 58.86 350 P **P 23 49 51.7 +1.3**
baz=170
344A Westbrook Farm 58.91 338 P **P 23 49 50.1 -0.8**
344A IAmb IAmb 23 49 53.2
comp=Z,15nm,0.9s
X58A Rowland 58.96 350 P **P 23 49 50.6 -0.5**
X58A Rowland 58.96 350 P **P 23 49 52.4 +1.3**
baz=169
JSC Jenkinsville 59.03 348 P **P 23 49 51.2 -0.4**
Z50A Ashland 59.12 343 P **P 23 49 51.9 -0.5**
Z50A Ashland 59.12 343 P **P 23 49 52.6 +0.3**
baz=162,SNR=9.0
X56A White Oak 59.19 348 P **P 23 49 53.8 +1.0**
baz=167
LRAL Lakeview Retre 59.21 342 P **P 23 49 52.6 -0.3**
LRAL IAmb IAmb 23 50 18.6
comp=Z,5.5nm,0.8s
LRAL Lakeview Retre 59.21 342 P **P 23 49 53.1 +0.1**
baz=161
Y52A Lilburn 59.23 345 P **P 23 49 52.0 -1.1**
Y52A IAmb IAmb 23 49 54.2
comp=Z,11nm,1.2s
Y52A Lilburn 59.23 345 P **P 23 49 53.2 +0.1**
baz=164
X55A Gracelyn & Ava 59.29 347 P **P 23 49 54.2 +0.7**
baz=166
W58A Raeford 59.39 350 P **P 23 49 55.6 +1.5**
baz=169,SNR=8.9
X54A Belton 59.52 347 P **P 23 49 56.0 +1.0**
baz=166
W57A Gilead 59.65 349 P **P 23 49 55.9 0.0**
W57A IAmb IAmb 23 49 57.7
comp=Z,16nm,1.0s

W57A Gilead 59.65 349 P P 23 49 57.1 +1.2
baz=168
X53A Estanollee 59.67 346 P P 23 49 56.7 +0.6
baz=165
W56A Indian Trail 59.74 349 P P 23 49 57.5 +1.0
baz=168,SNR=6.1
833A Chaparral WMA, 59.74 329 P P 23 49 57.0 +0.3
833A Chaparral WMA, 59.74 329 P P 23 49 58.0 +1.3
baz=147
Y49A Blount Mountai 59.82 343 P P 23 49 57.1 0.0
Y49A IAmb IAmb 23 49 58.0
comp=Z,12nm,1.2s
KMSC Kings Mountain 59.88 348 P P 23 49 58.6 +1.1
baz=167
V59A Middlesex 59.97 351 P P 23 49 59.5 +1.4
baz=170,SNR=7.2
SNAA Sanae 59.99 161 P P 23 49 58.8 +0.8
SNAA Sanae 59.99 161 P P 23 49 58.6 +0.6
comp=Z,16nm,0.8s,baz=276,slow=8.1,SNR=31
W54A Cherokee Point 60.00 347 P P 23 49 59.5 +1.2
baz=166,SNR=5.1
BG3 Lake Jocassee 60.06 346 P P 23 49 58.6 -0.2
BG3 IAmb IAmb 23 50 00.5
comp=Z,9.9nm,1.2s
X51A Calhoun 60.09 345 P P 23 49 58.3 -0.7
X51A Calhoun 60.09 345 P P 23 49 59.6 +0.6
baz=163
V58A Windy Hill, Pi 60.13 350 P P 23 49 59.2 0.0
V58A Windy Hill, Pi 60.13 350 P P 23 50 00.3 +1.1
baz=169,SNR=6.4
FPAL Fort Paine 60.26 344 P P 23 49 59.7 -0.5
W53A Cullowhee 60.28 346 P P 23 50 01.2 +0.8
baz=165,SNR=5.5
143A Socs Landing, 60.28 338 P P 23 49 59.8 -0.5
U61A Possum Corner 60.30 353 P P 23 50 00.9 +0.6
U61A Possum Corner 60.30 353 P P 23 50 01.9 +1.5
baz=172
V57A Coltrane Farms 60.33 350 P P 23 50 01.6 +1.0
baz=168,SNR=5.4
V56A Mocksville 60.38 349 P P 23 50 02.3 +1.4
baz=168,SNR=11
W52A Murphy 60.38 346 IAmb IAmb 23 50 02.5
comp=Z,18nm,1.2s
W52A Murphy 60.38 346 P P 23 50 01.6 +0.6
baz=164
U59A Littleton 60.49 351 P P 23 50 01.3 -0.3
U59A Littleton 60.49 351 P P 23 50 02.9 +1.3
baz=171,SNR=6.1
U60A Pendleton 60.52 352 P P 23 50 02.8 +1.0
baz=171
V55A Taylorsville 60.55 348 P P 23 50 02.0 -0.1
V55A Taylorsville 60.55 348 P P 23 50 03.3 +1.2
baz=167,SNR=7.4
X48A Hartselle 60.55 343 IAmb IAmb 23 50 28.0
comp=Z,15nm,0.8s
V54A Nebo 60.62 348 P P 23 50 03.6 +1.0
baz=166,SNR=7.6
U58A Oxford 60.63 351 P P 23 50 04.0 +1.3
baz=170
NATX Nacogdoches 60.64 335 P P 23 50 03.2 +0.4
V53A Saluda 60.69 347 P P 23 50 02.4 -0.7
V53A IAmb IAmb 23 50 29.5
comp=Z,16nm,1.2s
V53A Saluda 60.69 347 P P 23 50 03.5 +0.4
baz=165
U57A Blanch 60.79 350 P P 23 50 04.7 +1.0
baz=169,SNR=6.7
W50A Signal Mountai 60.81 344 P P 23 50 03.2 -0.7
W50A IAmb IAmb 23 50 05.2
comp=Z,16nm,1.1s
W50A Signal Mountai 60.81 344 P P 23 50 04.2 +0.2
baz=163,SNR=6.6
CPCT Cooper Cave 60.86 345 P P 23 50 04.2 +0.1
CPCT IAmb IAmb 23 50 05.4
comp=Z,15nm,1.2s
U56A King 60.88 349 P P 23 50 04.3 0.0
U56A IAmb IAmb 23 50 31.8
comp=Z,24nm,1.2s
U56A King 60.88 349 P P 23 50 05.8 +1.4
baz=168
TKL Tuckaleechee C 60.89 346 P P 23 50 04.6 +0.2
comp=Z,7.1nm,0.8s,baz=167,slow=8.9,SNR=10.0
TKL pP pP 23 50 29.7 -0.3
comp=Z,8.5nm,0.8s,baz=157,slow=5.9,SNR=6.8
TKL Tuckaleechee C 60.89 346 P P 23 50 03.2 -1.2
TKL IAmb IAmb 23 50 30.4
comp=Z,19nm,1.1s
W49A Belvidere 60.98 343 P P 23 50 05.1 +0.2
baz=162
SWET Sewanee 60.98 344 IAmb IAmb 23 50 31.0
comp=Z,19nm,0.9s
435B Jarrell 61.00 332 P P 23 50 05.6 +0.4
435B IAmb IAmb 23 50 51.1
comp=Z,21nm,1.4s
V52A Sevierville 61.02 346 P P 23 50 05.6 +0.3
baz=164,SNR=5.9
T59A Double "B" Far 61.06 352 P P 23 50 06.3 +0.8
T59A Double "B" Far 61.06 352 P P 23 50 06.7 +1.2
baz=171,SNR=9.3
T60A Surry 61.13 353 P P 23 50 06.4 +0.4
U55A TA2, Sparta 61.15 349 P P 23 50 07.0 +0.8
baz=167
V51A Loudon 61.16 345 P P 23 50 05.8 -0.4
V51A IAmb IAmb 23 50 35.1
comp=Z,6.7nm,0.7s
V51A Loudon 61.16 345 P P 23 50 06.9 +0.7
baz=164
T58A Grand View Acr 61.17 351 P P 23 50 07.6 +1.4
baz=170,SNR=9.1
Z41A Richland Creek 61.28 337 P P 23 50 07.1 0.0
Z41A IAmb IAmb 23 50 09.2
comp=Z,14nm,0.7s
OXF Oxford 61.30 340 P P 23 50 06.1 -1.1
OXF Oxford 61.30 340 P P 23 50 07.0 -0.1
baz=158
237A Washetta, Mont 61.31 334 P P 23 50 07.7 +0.4
237A IAmb IAmb 23 51 54.0
comp=Z,14nm,0.8s
U53A Fall Branch 61.31 347 P P 23 50 07.6 +0.3
baz=166
U54A Nelsons Funny 61.31 348 P P 23 50 08.1 +0.8
baz=166
T57A Hurt 61.33 350 IAmb IAmb 23 50 34.4
comp=Z,20nm,1.1s
T57A Hurt 61.33 350 P P 23 50 08.6 +1.3
baz=169,SNR=5.1
PLAL Pickwick Lake 61.34 342 IAmb IAmb 23 50 08.6
comp=Z,23nm,1.4s
T56A Rocky Mt 61.49 350 P P 23 50 09.7 +1.3
baz=168,SNR=6.0
V49A McMinnville 61.49 344 P P 23 50 08.5 0.0
baz=162,SNR=8.8
U52A Thorn Hill 61.50 346 P P 23 50 08.4 -0.1
baz=165
U51A La Follette 61.63 346 P P 23 50 10.2 +0.8
baz=164
TZTN Tazewell 61.69 346 P P 23 50 08.5 -1.3
TZTN IAmb IAmb 23 50 38.9
comp=Z,8.2nm,1.0s
T55A Pulaski 61.70 349 P P 23 50 10.7 +0.8
baz=168
V48A Smith Brothers 61.71 343 IAmb IAmb 23 50 35.4
comp=Z,12nm,0.8s
BLA Blacksburg 61.73 349 P P 23 50 11.0 +0.9
BLA pP pP 23 50 34.1 -1.7
BLA IAmb IAmb 23 50 38.5
comp=Z,13nm,0.9s
BLA Blacksburg 61.73 349 P P 23 50 11.4 +1.3
baz=168
JCT Junction City 61.74 330 P P 23 50 11.0 +0.7
baz=148
S58A Poland Farm, P 61.76 352 P P 23 50 10.2 0.0
S58A IAmb IAmb 23 50 37.3
comp=Z,29nm,1.6s
X43A Marvell 61.77 339 P P 23 50 10.7 +0.4
WLAR White Oak Lake 61.78 337 P P 23 50 11.5 +1.1
T54A Tazewell 61.79 348 P P 23 50 11.0 +0.5
baz=167
HPIG 61.88 322 P P 23 50 10.6 -0.9
HPIG IAmb IAmb 23 50 39.0
comp=Z,15nm,1.4s
T53A Wise 61.90 347 P P 23 50 11.5 +0.2
baz=166
CLTN Cedars of Leba 61.91 344 P P 23 50 10.6 -0.6
CLTN pP 23 50 36.5 -0.4
CLTN IAmb IAmb 23 50 37.4
comp=Z,7.7nm,1.0s

WHTX Lake Whitney, 61.98 332 P P 23 50 10.9 -0.9
WHTX IAmb IAmb 23 50 14.6
comp=Z,9.1nm,0.8s
S57A Dark Hollow, R 62.03 351 P P 23 50 12.2 +0.2
S57A IAmb IAmb 23 50 39.5
comp=Z,23nm,1.1s
S57A Dark Hollow, R 62.03 351 P P 23 50 13.5 +1.4
baz=170,SNR=6.6
R58B Mineral 62.09 352 P P 23 50 12.7 +0.4
R58B IAmb IAmb 23 50 39.7
comp=Z,19nm,0.9s
R58B Mineral 62.09 352 P P 23 50 13.9 +1.5
baz=171,SNR=6.5
T52A Hallie 62.11 347 P P 23 50 11.9 -0.7
T52A IAmb IAmb 23 50 53.4
comp=Z,9.7nm,1.1s
U49A Red Boiling Sp 62.17 344 P P 23 50 13.0 0.0
baz=162
T51A Gray 62.18 346 P P 23 50 13.0 0.0
baz=164
R59A King George, V 62.22 352 P P 23 50 14.7 +1.5
baz=171
S55A Lewisburg 62.29 349 P P 23 50 14.9 +1.1
baz=168,SNR=5.2
WVT Waverly 62.35 342 P P 23 50 13.7 -0.4
WVT IAmb IAmb 23 50 39.7
comp=Z,13nm,0.8s
WVT Waverly 62.35 342 P P 23 50 13.8 -0.4
baz=160
T50A Nancy 62.43 345 P P 23 50 14.7 0.0
baz=164
S54A Dingess, Beckl 62.46 349 P P 23 50 15.0 +0.1
S54A pP 23 50 40.8 +0.2
S54A IAmb IAmb 23 50 41.7
comp=Z,27nm,1.4s
S54A Dingess, Beckl 62.46 349 P P 23 50 15.3 +0.3
baz=167
UALR University of 62.49 338 P P 23 50 14.9 -0.2
UALR IAmb IAmb 23 50 17.1
comp=Z,11nm,1.1s
R57A Stanardsville 62.50 351 P P 23 50 16.1 +1.0
baz=170
T49A Edmonton 62.68 345 IAmb IAmb 23 50 42.4
comp=Z,24nm,1.1s
T49A Edmonton 62.68 345 P P 23 50 16.4 +0.1
baz=163,SNR=7.4
TXAR Lajitas Array 62.70 326 P P 23 50 18.0 +1.2
comp=Z,1.3nm,0.8s,baz=140,slow=6.6,SNR=11
TXAR pP pP 23 50 43.1 +0.7
comp=Z,1.9nm,0.8s,baz=142,slow=8.2,SNR=7.4
TX31 Lajitas Ar. Si 62.70 326 P P 23 50 16.2 -0.6
TX31 pP 23 50 42.1 -0.3
TX32 Lajitas Array 62.70 326 P P 23 50 16.6 -0.1
TX32 pP pP 23 50 41.2 -1.2
MIAR Mount Ida 62.71 337 P P 23 50 16.9 +0.3
MIAR IAmb IAmb 23 50 18.2
comp=Z,13nm,1.1s
MIAR pP 23 50 42.4 0.0
MIAR Mount Ida 62.71 337 P P 23 50 17.4 +0.8
baz=154,SNR=6.4
R55A Marlinton 62.73 350 P P 23 50 17.0 +0.2
R55A IAmb IAmb 23 50 44.5
comp=Z,21nm,1.2s
R55A Marlinton 62.73 350 P P 23 50 18.5 +1.8
baz=168,SNR=5.1
R56A Bull Pasture M 62.74 350 P P 23 50 18.0 +1.2
baz=169
W41B Gary Mavity, V 62.82 338 P P 23 50 16.4 -0.9
W41B Gary Mavity, V 62.82 338 P P 23 50 17.8 +0.5
baz=156
UTMT University of 62.84 342 P P 23 50 16.8 -0.6
Q60A Greensboro 62.87 354 P P 23 50 17.7 +0.1
Q60A pP pP 23 50 43.1 -0.2
WHAR Wooly Hollow 62.94 338 P P 23 50 16.5 -1.6
WHAR IAmb IAmb 23 50 55.2
comp=Z,18nm,1.5s
T47A Sharon Grove 62.96 343 P P 23 50 17.6 -0.6
S50A Richmond 62.96 346 P P 23 50 18.3 0.0
baz=164
Q58A Fox Den Farm, 63.02 352 P P 23 50 19.7 +1.1
baz=171
Z35A Perchaven, San 63.06 333 P P 23 50 19.3 +0.3
Z35A IAmb IAmb 23 50 58.0
comp=Z,16nm,0.8s
Q57A Strasburg 63.21 351 P P 23 50 21.4 +1.6
baz=170,SNR=6.1
S49A Springfield 63.27 345 P P 23 50 20.6 +0.4
baz=163
LCAR Lake Charles 63.28 340 P P 23 50 19.4 -0.9
Q56A Snyder Ridge, 63.33 351 P P 23 50 20.5 -0.1
Q56A IAmb IAmb 23 50 48.4
comp=Z,22nm,0.9s
Q56A Snyder Ridge, 63.33 351 P P 23 50 22.4 +1.8
baz=169,SNR=7.7
W39A Magazine 63.37 337 P P 23 50 20.8 -0.2
W39A IAmb IAmb 23 50 23.1
comp=Z,18nm,1.1s
W39A Magazine 63.37 337 P P 23 50 22.2 +1.3
baz=154,SNR=8.7
SDMD Soldier's Deli 63.38 353 P P 23 50 21.3 +0.3
R51A Hillsboro 63.38 347 P P 23 50 21.3 +0.3
baz=165
Q55A Buckhannon 63.42 350 P P 23 50 22.6 +1.4
baz=168
FCAR Ozark Folk Cen 63.43 339 P P 23 50 20.7 -0.6
ABTX Abilene, Hawle 63.48 331 P P 23 50 21.3 -0.4
ABTX IAmb IAmb 23 50 23.5
comp=Z,14nm,1.1s
ABTX Abilene, Hawle 63.48 331 P P 23 50 22.9 +1.1
baz=148
P58A Pank, Wackersv 63.52 352 P P 23 50 23.3 +1.5
baz=171
R50A Paris 63.52 346 P P 23 50 21.5 -0.4
R50A IAmb IAmb 23 50 48.1
comp=Z,19nm,1.4s
Q53A Leroy 63.53 349 P P 23 50 23.1 +1.2
baz=167
Q54A Coxs Mills 63.53 349 P P 23 50 22.1 +0.2
Q54A IAmb IAmb 23 50 26.4
comp=Z,53nm,2.0s
Q54A Coxs Mills 63.53 349 P P 23 50 22.4 +0.5
baz=168
P59A Jarrettsville 63.54 353 P P 23 50 23.4 +1.4
baz=172
P57A Homestead Farm 63.60 352 P P 23 50 23.4 +1.0
P57A IAmb IAmb 23 50 50.3
comp=Z,13nm,0.8s
P57A Homestead Farm 63.60 352 P P 23 50 24.3 +2.0
baz=171
P60A Greenville 63.65 354 P P 23 50 22.4 -0.4
P60A pP pP 23 50 48.5 +0.1
P60A IAmb IAmb 23 50 49.8
comp=Z,13nm,1.0s
PBMO Poplar Bluff 63.70 341 P P 23 50 22.4 -0.7
PBMO IAmb IAmb 23 50 24.2
comp=Z,20nm,1.2s
R49A Shelbyville 63.72 346 P P 23 50 22.9 -0.3
R49A IAmb IAmb 23 50 49.0
comp=Z,19nm,1.4s
P56A Dayton Farm, R 63.73 351 P P 23 50 24.9 +1.7
baz=170
P55A Reedsville 63.88 350 P P 23 50 25.6 +1.3
baz=169,SNR=5.0
MVL Millersville 63.91 353 P P 23 50 24.9 +0.5
MVL pP 23 50 51.1 +0.9
MVL IAmb IAmb 23 50 51.8
comp=Z,11nm,0.9s
WCI Wyandotte Cave 63.93 345 P P 23 50 24.4 -0.2
WCI IAmb IAmb 23 50 52.2
comp=Z,11nm,0.8s
WCI Wyandotte Cave 63.93 345 P P 23 50 24.4 -0.2
baz=162
USIN University of 64.03 343 P P 23 50 23.9 -1.4
USIN IAmb IAmb 23 51 02.3
comp=Z,24nm,1.2s
MCWV Mont Chateau 64.03 350 P P 23 50 25.6 +0.4
MCWV Mont Chateau 64.03 350 P P 23 50 26.5 +1.3
baz=169
Q51A Peebles 64.03 347 P P 23 50 24.5 -0.8
Q51A IAmb IAmb 23 50 26.3
comp=Z,7.5nm,0.7s
Q51A Peebles 64.03 347 P P 23 50 26.0 +0.7
baz=165
P54A Burton 64.07 350 P P 23 50 26.6 +1.1
baz=168,SNR=7.4
O58A Lewisberry 64.10 353 P P 23 50 27.2 +1.5

baz=172
U40A Yellville 64.10 338 IAmb IAmb 23 50 27.0
comp=Z,16nm,1.1s
U40A Yellville 64.10 338 P P 23 50 26.0 +0.2
baz=156,SNR=7.9
P53A Whipple 64.11 349 P P 23 50 26.4 +0.6
P53A IAmb IAmb 23 50 52.7
comp=Z,17nm,1.1s
P53A Whipple 64.11 349 P P 23 50 26.7 +0.9
baz=167
PAGS Pennsylvania G 64.18 353 P P 23 50 25.8 -0.4
PAGS pP pP 23 50 51.2 -0.8
PAGS IAmb IAmb 23 50 53.4
comp=Z,13nm,1.0s
S44A Carbondale 64.21 342 P P 23 50 25.6 -0.8
S44A pP pP 23 50 50.6 -1.6
S44A IAmb IAmb 23 51 45.8
comp=Z,11nm,0.7s
Q49A Aurora 64.34 346 P P 23 50 27.2 -0.1
baz=164
P52A Corning 64.39 348 P P 23 50 27.8 +0.2
baz=166
X34A Smith Ranch, M 64.40 333 P P 23 50 27.6 -0.1
X34A IAmb IAmb 23 50 29.5
comp=Z,20nm,1.3s
HHAR Hobbs 64.40 337 P P 23 50 27.4 -0.4
HHAR IAmb IAmb 23 50 29.2
comp=Z,17nm,1.3s
LUPA Lehigh Univers 64.41 354 P P 23 50 27.4 -0.3
P51A Williamsport 64.42 348 P P 23 50 26.7 -1.0
P51A IAmb IAmb 23 50 28.6
comp=Z,18nm,1.3s
BRNJ Basking Ridge 64.42 355 P P 23 50 26.8 -0.9
BRNJ IAmb IAmb 23 50 55.2
comp=Z,14nm,0.8s
O56A Blue Knob Stat 64.44 352 P P 23 50 28.6 +0.6
O56A IAmb IAmb 23 50 55.6
comp=Z,21nm,1.1s
O56A Blue Knob Stat 64.44 352 P P 23 50 29.5 +1.6
baz=170,SNR=6.0
Q48A North Vernon 64.46 345 P P 23 50 27.7 -0.3
baz=163
CPNY Central Park 64.49 356 P P 23 50 29.1 +1.0
CPNY IAmb IAmb 23 50 55.2
comp=Z,11nm,0.9s
O55A Ligonier 64.49 351 P P 23 50 29.5 +1.3
baz=169,SNR=5.2
W35A Tecumseh 64.49 335 P P 23 50 27.9 -0.4
N62A Caumsett State 64.59 356 P P 23 50 30.3 +1.5
baz=175
O54A Avella 64.62 350 P P 23 50 28.8 -0.3
O54A IAmb IAmb 23 50 59.6
comp=Z,48nm,1.9s
MGMO Mountain Grove 64.63 339 IAmb IAmb 23 50 30.5
comp=Z,22nm,1.4s
MGMO pP 23 50 54.8 -0.2
P50A Jamestown 64.69 347 P P 23 50 29.7 +0.1
baz=165
PAL Palisades 64.70 356 P P 23 50 29.3 -0.2
SSPA Standing Stone 64.72 352 P P 23 50 29.6 -0.1
SSPA IAmb IAmb 23 50 31.9
comp=Z,36nm,1.6s
SSPA Standing Stone 64.72 352 P P 23 50 30.5 +0.8
baz=171
TUL1 Leonard 64.75 336 P P 23 50 28.6 -1.4
TUL1 IAmb IAmb 23 50 31.4
comp=Z,11nm,1.0s
TUL1 pP pP 23 50 54.7 -1.1
TUL1 Leonard 64.75 336 P P 23 50 30.6 +0.6
baz=153
N59A State Game Lan 64.76 354 P P 23 50 31.6 +1.6
baz=173
N58A Sunbury 64.78 353 P P 23 50 31.2 +1.1
N58A IAmb IAmb 23 50 57.6
comp=Z,17nm,1.0s
N58A Sunbury 64.78 353 P P 23 50 31.5 +1.4
baz=172
FNO Franklin 64.79 334 P P 23 50 30.5 +0.2
N57A Milroy 64.80 353 P P 23 50 31.1 +0.9
baz=171
O52A Adamsville 64.80 349 P P 23 50 30.2 -0.1
O52A IAmb IAmb 23 50 56.7
comp=Z,24nm,1.2s
O52A Adamsville 64.80 349 P P 23 50 30.7 +0.5
baz=167
P49A Miami Univ. Ec 64.81 346 P P 23 50 30.0 -0.3
baz=164
O53A New Philadelph 64.83 349 P P 23 50 30.8 +0.4
baz=168
ODNJ Ogdensburg 64.83 355 P P 23 50 30.7 +0.3
BLO Bloomington 64.88 345 P P 23 50 29.5 -1.3
BLO IAmb IAmb 23 51 04.9
comp=Z,11nm,0.9s
P48A Milroy 64.90 346 P P 23 50 30.0 -0.9
P48A IAmb IAmb 23 50 31.2
comp=Z,19nm,1.3s
P48A Milroy 64.90 346 P P 23 50 30.4 -0.5
baz=163
O51A Pataskala 64.97 348 P P 23 50 31.5 +0.2
baz=166
N55A Marion Center 65.00 351 P P 23 50 32.8 +1.2
baz=170,SNR=6.6
N56A West Decatur 65.05 352 P P 23 50 33.1 +1.3
baz=170
M60A Port Jervis 65.07 355 P P 23 50 33.3 +1.4
baz=174
ACSO Alum Creek Sta 65.13 348 P P 23 50 31.9 -0.5
ACSO IAmb IAmb 23 50 58.7
comp=Z,24nm,1.1s
ACSO Alum Creek Sta 65.13 348 P P 23 50 32.6 +0.3
baz=166
CCM Cathedral Cave 65.13 340 P P 23 50 31.9 -0.5
CCM IAmb IAmb 23 50 33.5
comp=Z,19nm,1.1s
CCM Cathedral Cave 65.13 340 P P 23 50 32.8 +0.4
baz=157
O50A Cable 65.17 347 P P 23 50 32.7 0.0
baz=165
M58A Price's Panora 65.28 354 P P 23 50 34.9 +1.5
baz=172
N53A Lisbon 65.31 350 P P 23 50 34.0 +0.5
N53A Lisbon 65.31 350 P P 23 50 34.5 +1.0
baz=168
M57A Sunshine Farm, 65.32 353 P P 23 50 33.7 +0.1
M57A IAmb IAmb 23 51 52.7
comp=Z,35nm,1.7s
M57A Sunshine Farm, 65.32 353 P P 23 50 34.9 +1.4
baz=172
N54A Moraine State 65.33 351 P P 23 50 33.9 +0.3
N54A pP pP 23 50 59.6 0.0
M59A Waymart 65.35 354 P P 23 50 35.5 +1.7
baz=173,SNR=5.2
O49A Covington 65.36 347 P P 23 50 32.9 -1.0
O49A IAmb IAmb 23 50 60.0
comp=Z,20nm,1.2s
O49A Covington 65.36 347 P P 23 50 33.5 -0.3
baz=164
SLM Saint Louis 65.37 341 P P 23 50 33.3 -0.6
SLM IAmb IAmb 23 50 34.7
comp=Z,13nm,0.8s
SLM pP pP 23 50 58.7 -1.0
L63A North Scituate 65.42 358 P P 23 50 35.9 +1.7
baz=177,SNR=5.4
MNTX Cornudas Mount 65.47 326 P P 23 50 34.2 -0.5
MNTX pP 23 51 00.6 0.0
MNTX Cornudas Mount 65.47 326 P P 23 50 35.4 +0.6
baz=143,SNR=6.6
BRYW Bryant College 65.48 358 P P 23 50 35.0 +0.4
M56A Emporium 65.59 352 IAmb IAmb 23 51 02.6
comp=Z,12nm,0.8s
M56A Emporium 65.59 352 P P 23 50 36.3 +0.9
baz=171
O48A Farmland 65.60 346 P P 23 50 35.0 -0.4
baz=164
M55A Ridgway 65.65 352 IAmb IAmb 23 51 02.9
comp=Z,22nm,0.9s
M55A Ridgway 65.65 352 P P 23 50 36.6 +0.9
baz=170,SNR=5.6
L60A Shokan 65.70 355 P P 23 50 37.7 +1.7
baz=175
M54A Oil Creek Stat 65.81 351 P P 23 50 37.0 +0.2
M54A IAmb IAmb 23 51 03.9
comp=Z,21nm,0.8s
M54A Oil Creek Stat 65.81 351 P P 23 50 37.5 +0.7
baz=169,SNR=5.6
L61A Hillsdale 1, H 65.85 356 P P 23 50 38.5 +1.5

baz=175
L58A Harry Jones Me 65.89 354 P P 23 50 38.8 +1.6
baz=173
M53A WI Miller and 65.90 350 P P 23 50 37.9 +0.6
baz=168
L57A Andrews Acres 65.94 353 P P 23 50 39.3 +1.7
baz=172
L59A Walton 65.96 355 P P 23 50 38.6 +0.8
L59A Walton 65.96 355 P P 23 50 39.4 +1.7
baz=174,SNR=6.3
ALLY Alegheny Colle 66.02 351 P P 23 50 38.4 +0.3
MSTX Muleshoe 66.03 329 P P 23 50 38.0 -0.4
MSTX IAmb IAmb 23 51 05.2
comp=Z,14nm,0.9s
MSTX Muleshoe 66.03 329 P P 23 50 39.3 +0.9
baz=146
N49A Columbus Grove 66.03 347 P P 23 50 37.4 -0.8
N49A IAmb IAmb 23 51 04.5
comp=Z,27nm,1.1s
N49A Columbus Grove 66.03 347 P P 23 50 38.2 +0.1
baz=165
BINY Binghamton 66.05 354 P P 23 50 39.0 +0.7
BINY IAmb IAmb 23 50 40.7
comp=Z,23nm,1.4s
BINY Binghamton 66.05 354 P P 23 50 39.9 +1.6
baz=173
L61B Northampton 66.06 357 P P 23 50 39.6 +1.3
baz=176
HRV Adam Dziewonsk 66.06 358 P P 23 50 38.1 -0.2
HRV pP pP 23 51 04.8 +0.7
P43A Skaggs, Pawnee 66.10 342 P P 23 50 37.6 -1.0
P43A pP pP 23 51 03.1 -1.3
M52A Chesterland 66.11 350 P P 23 50 39.0 +0.3
M52A IAmb IAmb 23 52 59.2
comp=Z,27nm,1.3s
L56A Greenwood 66.16 353 P P 23 50 39.5 +0.5
L56A pP pP 23 51 04.7 -0.3
L56A IAmb IAmb 23 51 05.8
comp=Z,14nm,0.9s
L56A Greenwood 66.16 353 P P 23 50 40.4 +1.4
baz=171
SFIN Lafayette 66.16 345 P P 23 50 38.5 -0.4
SFIN IAmb IAmb 23 50 39.2
comp=Z,20nm,1.3s
AMTX Amarillo 66.29 331 P P 23 50 39.6 -0.5
K61A Williamstown 66.31 356 P P 23 50 41.4 +1.5
baz=176
N47A Urbana 66.31 346 P P 23 50 40.2 +0.2
N47A IAmb IAmb 23 51 05.8
comp=Z,14nm,1.0s
L53A Girard 66.34 351 P P 23 50 40.8 +0.7
baz=169
QSPA South Pole Qui 66.37 180 P P 23 50 41.2 +0.9
TRY Troy 66.40 356 IAmb IAmb 23 51 08.4
comp=Z,21nm,0.8s
U32A Winter Ranch, 66.41 334 P P 23 50 40.0 -0.7
U32A IAmb IAmb 23 50 41.7
comp=Z,25nm,1.5s
ERPA Erie 66.46 351 P P 23 50 41.0 +0.1
ERPA pP pP 23 51 07.1 +0.3
L54A Sinclairville 66.48 351 P P 23 50 42.0 +1.0
baz=170,SNR=6.2
HSIG 66.49 320 P P 23 50 42.8 +1.4
HSIG IAmb IAmb 23 50 44.5
comp=Z,13nm,1.1s
M49A Liberty Center 66.52 347 P P 23 50 41.4 +0.1
baz=165
K59A Cooperstown 66.53 355 P P 23 50 43.1 +1.7
baz=174,SNR=6.9
WVNY West Valley, N 66.55 352 P P 23 50 41.5 0.0
WVNY IAmb IAmb 23 51 08.9
comp=Z,22nm,0.8s
K58A Earlville 66.58 354 P P 23 50 41.7 0.0
K58A IAmb IAmb 23 51 09.2
comp=Z,21nm,0.8s
K58A Earlville 66.58 354 P P 23 50 43.0 +1.3
baz=173,SNR=6.5
M48A Edgerton 66.68 347 P P 23 50 41.5 -0.8
M48A IAmb IAmb 23 51 38.4
comp=Z,33nm,1.6s
J60A Lant Hill Farm 66.89 356 P P 23 50 45.4 +1.9
baz=175
J61A Chester 66.95 357 P P 23 50 46.1 +2.2
baz=176
ACCN Adirondack Com 67.05 356 P P 23 50 44.6 0.0
ACCN IAmb IAmb 23 51 06.1
comp=Z,42nm,1.7s
L48A N Adams 67.06 347 P P 23 50 44.7 0.0
baz=164
L49A Milan 67.09 348 P P 23 50 45.5 +0.7
baz=165
J58A Remsen 67.14 355 P P 23 50 44.8 -0.4
J58A IAmb IAmb 23 51 12.3
comp=Z,42nm,1.8s
J58A Remsen 67.14 355 P P 23 50 46.6 +1.4
baz=174
J59A Piesco 67.19 355 P P 23 50 46.5 +1.0
J59A Piesco 67.19 355 P P 23 50 47.2 +1.8
baz=174,SNR=7.3
J56A Wolcott 67.21 353 P P 23 50 45.4 -0.2
MEDO Medina 67.28 352 P P 23 50 46.0 0.0
MEDO IAmb IAmb 23 52 25.0
comp=Z,23nm,0.8s
HNH Hanover 67.29 357 P P 23 50 45.1 -1.0
HNH pP pP 23 51 12.1 +0.1
319A Douglas 67.30 323 P P 23 50 46.9 +0.3
319A IAmb IAmb 23 51 27.2
comp=Z,16nm,1.1s
J55A Hilton 67.30 353 P P 23 50 46.3 +0.2
M44A Midewin, Midew 67.35 344 P P 23 50 44.7 -1.8
121A Cookes Peak, D 67.38 325 P P 23 50 46.6 -0.6
121A Cookes Peak, D 67.38 325 P P 23 50 49.5 +2.4
baz=142
J54A Appleton 67.41 352 P P 23 50 45.7 -1.2
I58A Old Forge 67.44 355 P P 23 50 48.5 +1.4
baz=174
N41A Harden Midland 67.46 342 IAmb IAmb 23 50 47.9
comp=Z,19nm,1.1s
I59A Olmsteadville 67.47 356 P P 23 50 48.7 +1.4
baz=175,SNR=6.5
I60A Shoreham 67.48 356 P P 23 50 49.0 +1.7
baz=176,SNR=7.6
I61A Oroboro, Fairl 67.51 357 P P 23 50 49.4 +1.9
baz=177
K50A Casco 67.53 349 P P 23 50 46.3 -1.3
K50A Casco 67.53 349 P P 23 50 47.8 +0.2
baz=166
L46A Eue Claire 67.53 346 P P 23 50 46.9 -0.8
I63A Otisfield 67.58 358 P P 23 50 49.3 +1.5
baz=178
J52A Paris 67.63 351 P P 23 50 49.0 +0.8
baz=168,SNR=6.0
NCB Newcomb 67.67 356 P P 23 50 48.7 +0.2
NCB IAmb IAmb 23 51 16.1
comp=Z,11nm,0.9s
I57A Carthage 67.75 355 P P 23 50 50.3 +1.4
baz=173
LBNH Lisbon 67.81 357 P P 23 50 49.9 +0.6
LBNH IAmb IAmb 23 51 17.6
comp=Z,22nm,0.9s
LBNH Lisbon 67.81 357 P P 23 50 51.1 +1.7
baz=177
K48A Perry 67.83 348 P P 23 50 49.6 +0.1
baz=165,SNR=5.1
PECO Prince Edward 67.87 353 P P 23 50 49.6 -0.1
PECO PcP PcP 23 51 15.5 0.0
H61A Lyndonville 68.10 357 P P 23 50 52.9 +1.7
baz=177
H58A Gabriels 68.11 356 P P 23 50 52.8 +1.5
baz=175,SNR=7.7
Y22D IRIS PASSCAL I 68.14 326 P P 23 50 51.2 -0.7
H60A Morristown 68.16 357 P P 23 50 53.1 +1.5
baz=176
H63A New Sharon 68.17 359 P P 23 50 53.5 +1.9
baz=179
J49A Marlette 68.19 349 P P 23 50 51.5 -0.2
baz=166
H65A Eastbrook 68.20 0 P P 23 50 53.4 +1.7
baz=180
J48A Bridge Port 68.25 348 P P 23 50 51.5 -0.6
J48A IAmb IAmb 23 51 18.4
comp=Z,27nm,1.1s
J48A Bridge Port 68.25 348 P P 23 50 52.2 +0.1
baz=165
H57A Richville 68.25 355 P P 23 50 53.4 +1.3
baz=174,SNR=6.7
I51A Listowel 68.26 350 P P 23 50 52.8 +0.6
baz=168
H59A Cadyville 68.31 356 P P 23 50 54.1 +1.7
baz=175,SNR=9.1
L42A Oliver, Polo 68.34 343 P P 23 50 51.8 -1.0
L42A IAmb IAmb 23 51 21.5
comp=Z,8.7nm,0.8s
J47A Sunmer 68.39 347 P P 23 50 51.9 -1.1
J47A IAmb IAmb 23 51 19.3
comp=Z,26nm,1.1s
FRNY Flat Rock 68.49 356 P P 23 50 53.6 0.0
DELO Deloro Mine 68.52 353 P P 23 50 53.3 -0.4
DELO IAmb IAmb 23 53 17.8
comp=Z,14nm,0.9s
ANMO Albuquerque 68.60 327 P P 23 50 56.8 +2.0
comp=Z,4.3nm,0.9s,baz=145,slow=7.6,SNR=13
ANMO pP pP 23 51 21.4 +0.6
comp=Z,6.2nm,0.7s,baz=147,slow=7.5,SNR=10
ANMO Albuquerque 68.60 327 P P 23 50 54.4 -0.4
ANMO Albuquerque 68.60 327 P P 23 50 56.8 +2.0
baz=143
G63A Kingsbury 68.62 359 P P 23 50 56.1 +1.7
baz=179,SNR=5.1
GGN Saint George 68.64 1 P P 23 50 54.5 0.0
GGN IAmb IAmb 23 51 22.5
comp=Z,28nm,1.0s
G60A Masonville 68.68 357 P P 23 50 57.2 +2.4
baz=176
G65A Princeton 68.71 1 P P 23 50 54.9 0.0
G65A IAmb IAmb 23 51 22.9
comp=Z,24nm,0.9s
G62A West of Eustis 68.74 359 P P 23 50 55.8 +0.6
G62A pP pP 23 51 22.5 +1.3
G62A West of Eustis 68.74 359 P P 23 50 57.2 +2.1
baz=178,SNR=12
PKME Peaks-Kenny Pk 68.77 359 P P 23 50 55.8 +0.5
PKME IAmb IAmb 23 51 25.1
comp=Z,38nm,1.5s
LIC Lamto 68.80 73 eP P 23 50 56.3 +0.1
comp=Z,21nm,0.7s
CBKS Cedar Bluff 68.80 334 P P 23 50 55.2 -0.6
CBKS IAmb IAmb 23 50 58.0
comp=Z,32nm,1.1s
CBKS Cedar Bluff 68.80 334 P P 23 50 57.2 +1.4
baz=150
L40A Anamosa 68.82 342 IAmb IAmb 23 50 56.7
comp=Z,21nm,1.1s
G58A Ormstown 68.83 356 P P 23 50 57.2 +1.5
baz=175,SNR=8.6
TUC Tucson 68.84 322 P P 23 50 56.1 -0.1
TUC Tucson 68.84 322 P P 23 50 58.4 +2.3
baz=139
G57A Newington 68.85 355 P P 23 50 57.2 +1.4
baz=174,SNR=6.9
MOQ Mont Orford 68.89 357 P P 23 50 52.3 -3.9
H52A Wyevale 68.92 351 P P 23 50 57.0 +0.7
baz=169
SADO Sadowa 68.95 352 P P 23 50 57.0 +0.6
comp=Z,5.3nm,0.6s,baz=190,slow=2.2,SNR=8.6
SADO pP pP 23 51 22.8 +0.3
comp=Z,14nm,0.8s,baz=215,slow=1.7,SNR=6.5
SADO Sadowa 68.95 352 P P 23 50 56.2 -0.2
SADO IAmb IAmb 23 51 23.3
comp=Z,21nm,0.9s
PLVO Plevna 68.97 354 P P 23 50 55.7 -0.9
PLVO IAmb IAmb 23 51 23.5
comp=Z,20nm,0.9s
TIC Toumodi 69.00 72 eP P 23 50 57.7 +0.2
I47A Gladwin 69.08 348 P P 23 50 56.8 -0.5
I47A IAmb IAmb 23 50 58.1
comp=Z,24nm,1.1s
I47A Gladwin 69.08 348 P P 23 50 57.6 +0.4
baz=165
I48A Sherman Twp 69.09 348 P P 23 50 57.6 +0.3
baz=165
KIC Kosan Boka 69.11 73 eP P 23 50 58.6 +0.4
comp=Z,20nm,0.6s
DBIC Dimbokro 69.16 72 P P 23 50 59.1 +0.7
comp=Z,13nm,0.7s,baz=221,slow=6.9,SNR=19
DBIC pP pP 23 51 25.3 +1.0
comp=Z,8.8nm,0.6s,baz=226,slow=7.7,SNR=4.8
DBIC LR LR 00 21 39.2
comp=Z,64nm,18.1s,baz=239,slow=36
DBIC Dimbokro 69.16 72 IAmb IAmb 23 51 00.2
comp=Z,14nm,0.8s
I46A Reed City 69.19 347 P P 23 50 57.7 -0.3
baz=164
F63A Nahmakanta, Br 69.21 360 P P 23 50 57.5 -0.5
G53A Haliburton 69.23 352 P P 23 50 59.3 +1.1
baz=170,SNR=6.8
SCIA State Center 69.26 341 P P 23 50 57.8 -0.7
SCIA IAmb IAmb 23 51 27.6
comp=Z,17nm,0.9s
JFWS Jewell Farm 69.35 343 P P 23 50 57.3 -1.6
JFWS IAmb IAmb 23 51 00.2
comp=Z,33nm,1.4s
JFWS Jewell Farm 69.35 343 P P 23 50 59.7 +0.7
baz=159
F64A Sherman 69.36 0 P P 23 50 59.1 +0.1
F64A IAmb IAmb 23 51 26.9
comp=Z,25nm,0.8s
F64A Sherman 69.36 0 P P 23 51 00.7 +1.7
baz=180,SNR=6.6
T25A Trinidad 69.39 330 P P 23 50 58.8 -0.9
T25A Trinidad 69.39 330 P P 23 51 01.6 +1.9
baz=145
G54A Lake Saint Pet 69.44 353 P P 23 51 00.4 +0.9
baz=171
LMN Caledonia Moun 69.44 3 P P 23 50 59.7 +0.2
LMN IAmb IAmb 23 51 26.8
comp=Z,19nm,0.8s
F60A Warwick 69.54 358 P P 23 51 01.2 +1.1
baz=177,SNR=6.0
214A Organ Pipe Nat 69.73 321 P P 23 51 01.0 -0.6
214A Organ Pipe Nat 69.73 321 P P 23 51 04.1 +2.5
baz=137,SNR=5.2
GLMI Grayling 69.87 348 pP pP 23 51 27.5 -0.8
I42A Draeger Farm, 69.92 345 P P 23 51 02.2 -0.2
I42A pP pP 23 51 28.2 -0.4
E63A Oxbow 69.92 0 P P 23 51 02.2 -0.2
E63A IAmb IAmb 23 51 30.4
comp=Z,14nm,0.9s
TRQ Mont Tremblant 69.93 356 P P 23 51 02.9 +0.3
F52A Sundridge 69.98 352 P P 23 51 03.6 +0.9
baz=170,SNR=5.9
ALGO Algonquin Park 69.98 353 P P 23 51 03.6 +0.8
baz=171
E58A La Victoria 70.00 357 P P 23 51 03.9 +1.0
baz=176,SNR=9.2
E57A Chemin Saint G 70.09 356 P P 23 51 05.0 +1.5
baz=175,SNR=5.3
KSCO Kaye Shedlock' 70.16 332 pP pP 23 51 30.5 +0.2
F51A Arnstein 70.19 352 P P 23 51 04.4 +0.3
baz=169
H43A Windswept, Lux 70.20 346 P P 23 51 03.5 -0.6
E56A St. Veronique 70.29 355 P P 23 51 05.5 +0.9
baz=174,SNR=5.6
F49A Sandfield 70.33 350 P P 23 51 05.1 +0.2
baz=167
E53A Dumoine, Ponti 70.36 353 P P 23 51 05.1 0.0
baz=171
E54A Lac Daplat, Po 70.37 354 P P 23 51 05.9 +0.8
baz=172,SNR=9.2
E52A Mattawa 70.38 353 P P 23 51 06.0 +0.9
baz=170
SDCO Great Sand Dun 70.39 330 P P 23 51 06.8 +0.9
SDCO Great Sand Dun 70.39 330 P P 23 51 07.6 +1.8
baz=145,SNR=11
W18A Petrified Fore 70.41 325 P P 23 51 05.8 0.0
W18A Petrified Fore 70.41 325 P P 23 51 07.5 +1.6
baz=140
BGNE Belgrade 70.46 337 P P 23 51 05.7 -0.2
BGNE Belgrade 70.46 337 P P 23 51 06.9 +1.1
baz=152,SNR=9.9
F48A Evansville 70.49 350 P P 23 51 06.7 +0.9
baz=167
D62A Allapoint, All 70.58 360 P P 23 51 06.9 +0.5
D62A IAmb IAmb 23 51 34.3
comp=Z,31nm,0.9s
D62A Allapoint, All 70.58 360 P P 23 51 07.8 +1.4
baz=180,SNR=9.6
D57A Chemin Vers le 70.68 356 P P 23 51 08.2 +1.2
baz=175,SNR=5.2
D58A Chemin du LacG 70.70 357 P P 23 51 08.3 +1.2
baz=176,SNR=5.4
E51A G1948 Merrick 70.73 352 P P 23 51 08.2 +0.9
baz=170,SNR=5.1
D56A ZEC Mazanza, M 70.77 356 P P 23 51 08.6 +1.0
baz=174
X16A Lo Mia Camp, P 70.78 323 P P 23 51 08.8 +0.6
X16A pP pP 23 51 35.0 +0.8
D55A Sainte-Anne-du 70.79 355 P P 23 51 08.5 +0.8
baz=174,SNR=12
BATG Bathurst New B 70.82 2 P P 23 51 08.4 +0.6
BATG IAmb IAmb 23 51 35.6
comp=Z,17nm,1.0s
F45A CMU Biological 70.88 348 P P 23 51 08.5 +0.3
baz=164
113A Mohawk Valley, 70.88 321 P P 23 51 07.9 -0.6
LATQ La Tuque 70.98 357 P P 23 51 09.6 +0.7
LATQ pP pP 23 51 35.4 +0.5
LATQ La Tuque 70.98 357 P P 23 51 10.1 +1.3
baz=176
S22A 4UR Ranch, Cre 71.01 329 P P 23 51 09.7 +0.1
S22A pP pP 23 51 36.1 +0.3
D54A Lac Fusel, La 71.03 354 P P 23 51 09.5 +0.4
baz=172,SNR=6.4
E48A Lockeyer 71.05 350 P P 23 51 09.9 +0.6
baz=167,SNR=6.6
D53A Lac Vacive, Po 71.06 353 P P 23 51 10.3 +1.0
baz=171,SNR=6.2
E47A Iron Bridge 71.21 349 P P 23 51 10.8 +0.6
baz=166
Q24A Divide 71.22 331 P P 23 51 11.0 +0.1
D51A Lot 18 Range I 71.26 352 P P 23 51 11.1 +0.6
baz=170,SNR=6.0
Y14A Wickenburg 71.30 322 P P 23 51 12.0 +0.9
E46A Sault Ste Mari 71.30 349 IAmb IAmb 23 51 11.9
comp=Z,23nm,1.2s
E46A pP pP 23 51 36.0 -1.1
D50A G1974 Best Tow 71.39 352 P P 23 51 12.1 +0.7
baz=169,SNR=6.8
MVCO Mesa Verde 71.40 327 P P 23 51 11.8 -0.1
MVCO Mesa Verde 71.40 327 P P 23 51 13.5 +1.6
baz=142,SNR=5.5
F42A Maple Grove Fa 71.50 346 P P 23 51 10.1 -1.9
F42A IAmb IAmb 23 52 44.1
comp=Z,34nm,1.4s
G40A Rib Lake 71.53 344 P P 23 51 11.7 -0.5
OGNE Ogallala 71.54 334 P P 23 51 12.5 +0.1
OGNE IAmb IAmb 23 51 15.0
comp=Z,15nm,0.9s
WUAZ Wupatki 71.58 324 P P 23 51 12.4 -0.5
WUAZ Wupatki 71.58 324 P P 23 51 15.5 +2.6
baz=139,SNR=8.5
D48A Paudash Townsh 71.67 351 P P 23 51 13.2 +0.2
baz=168,SNR=6.1
GLA Glamis 71.70 320 P P 23 51 12.6 -0.9
D49A Beulah Townshi 71.70 351 P P 23 51 14.0 +0.8
baz=168,SNR=7.2
D46A Sault St. Mari 71.76 349 P P 23 51 13.5 0.0
baz=165
D47A Chapleau 71.76 350 P P 23 51 13.6 0.0
baz=166,SNR=7.1
E43A Lone Tree Farm 71.84 347 P P 23 51 14.0 0.0
E43A pP pP 23 51 38.6 -1.7
E43A IAmb IAmb 23 51 40.1
comp=Z,14nm,1.1s
ECSD EROS Data Cent 71.99 339 P P 23 51 14.2 -0.8
ECSD pP pP 23 51 40.6 -0.6
ECSD EROS Data Cent 71.99 339 P P 23 51 15.6 +0.6
baz=153,SNR=6.3
Y12C Blythe 72.02 321 P P 23 51 15.4 0.0
Y12C IAmb IAmb 23 51 18.8
comp=Z,16nm,1.2s
Y12C Blythe 72.02 321 P P 23 51 18.1 +2.7
baz=136
VLDQ Val d'Or 72.05 354 pP pP 23 51 42.1 +0.8
VLDQ IAmb IAmb 23 51 42.9
comp=Z,23nm,0.9s
COWI Conover 72.06 345 pP pP 23 51 40.7 -0.9
ISCO Idaho Springs 72.11 331 P P 23 51 15.8 -0.4
ISCO pP pP 23 51 42.6 +0.1
ISCO Idaho Springs 72.11 331 P P 23 51 17.9 +1.8
baz=145,SNR=5.8
IKP In-Ko-Pah, Jac 72.17 319 P P 23 51 18.9 +2.4
baz=135
SPMN Marine on St. 72.18 342 pP pP 23 51 41.0 -1.4
SPMN Marine on St. 72.18 342 P P 23 51 16.4 +0.3
baz=157
SMCO Snowmass 72.22 330 P P 23 51 17.9 +0.9
BC3 Big Chuckawall 72.49 320 P P 23 51 20.6 +2.3
baz=136,SNR=6.3
MONP2 Monument Peak 72.53 319 P P 23 51 20.9 +2.2
baz=135
W13A Hualapai Mount 72.64 322 P P 23 51 19.5 +0.2
IRM Iron Mountain 72.67 321 P P 23 51 21.2 +1.9
baz=136,SNR=6.6
U15A North Rim 72.75 324 P P 23 51 20.5 +0.4
D41A Chassel 72.83 346 IAmb IAmb 23 51 49.5
comp=Z,23nm,0.7s
LSQQ Lebel-sur-Quev 72.94 354 P P 23 51 21.1 +0.6
baz=172
TPFO Pinon Flats 73.05 320 P P 23 51 23.9 +2.3
baz=135
XPFO Pion Flat 73.05 320 P P 23 51 21.8 +0.1
PFO Pinyon Flats O 73.06 320 P P 23 51 21.2 -0.5
PFO Pinyon Flats O 73.06 320 P P 23 51 24.0 +2.3
baz=135
BELC Belle Mtn. Jos 73.06 320 P P 23 51 23.9 +2.2
baz=136
N23A Red Feather La 73.15 331 P P 23 51 21.5 -0.7
N23A Red Feather La 73.15 331 P P 23 51 24.2 +2.0
baz=145
GMRC Granite Mounta 73.42 321 P P 23 51 26.2 +2.4
baz=136,SNR=7.1
KNB Kanab 73.47 324 P P 23 51 24.0 -0.1
O20A White River Ci 73.58 329 P P 23 51 25.3 +0.6
O20A IAmb IAmb 23 51 27.7
comp=Z,16nm,1.1s
O20A White River Ci 73.58 329 P P 23 51 26.7 +2.0
baz=143,SNR=7.5
LCMT Little Creek M 73.69 324 P P 23 51 25.6 +0.2
SRU San Rafael Swe 73.88 327 P P 23 51 27.0 +0.5
MTPU Mount Pierson 73.90 326 P P 23 51 26.2 -0.7
SZCU Shurtz Canyon 74.04 325 P P 23 51 28.8 +1.2
Q16A Castle Valley 74.05 327 P P 23 51 28.7 +1.2
CCUT Cedar City 74.16 324 P P 23 51 28.6 +0.4
CCUT pP pP 23 51 57.1 +2.6
BFSC Mount Baldy Ra 74.20 319 P P 23 51 30.6 +2.1
baz=134
SYO Syowa Base 74.23 159⇑ eP P 23 51 27.0 -0.9
SYO Syowa Base 74.23 159⇑ epP pP 23 51 50.4 -4.1
MSU Marysvale 74.25 326 P P 23 51 30.1 +1.7
MSU pP pP 23 51 57.0 +1.9
P17A Butcher Ranch, 74.26 327 P P 23 51 29.2 +0.5
EYMN Ely 74.35 344 P P 23 51 28.4 -0.4
EYMN Ely 74.35 344 P P 23 51 29.5 +0.7
baz=158
SHPR Sheep Range 74.37 323 P P 23 51 30.1 +0.7
MWC Mount Wilson 74.43 319 P P 23 51 27.4 -2.5
GSC Goldstone, Bar 74.45 321 P P 23 51 29.4 -0.4
GSC Goldstone, Bar 74.45 321 P P 23 51 31.9 +2.2
baz=135,SNR=5.4
TCRU Three Creeks R 74.47 326 P P 23 51 29.6 -0.4
RDMU Red Mountain 74.55 329 P P 23 51 29.8 -0.6
VNDA Vanda 74.61 190 P P 23 51 32.2 +2.2
comp=Z,8.2nm,1.0s,baz=143,slow=6.8,SNR=5.9
K22A Casper 74.83 332 P P 23 51 30.9 -1.0
K22A Casper 74.83 332 P P 23 51 33.6 +1.8
baz=145
EDW2 Edwards Air Fo 74.85 320 P P 23 51 33.9 +1.9
baz=134
RSSD Black Hills 75.01 334 P P 23 51 32.7 -0.3
RSSD Black Hills 75.01 334 P P 23 51 34.7 +1.7
baz=147
MPU Maple Canyon 75.12 327 P P 23 51 33.8 +0.1
PSUT Pine Spring 75.14 325 P P 23 51 34.3 +0.4
NLU North Lily Min 75.29 327 P P 23 51 35.3 +0.6
TPNV Topopah Spring 75.30 322 P P 23 51 35.0 +0.3
TPNV IAmb IAmb 23 51 38.4
comp=Z,22nm,1.4s
TPNV Topopah Spring 75.30 322 P P 23 51 37.2 +2.5
baz=136,SNR=14
FURC Furnace Creek, 75.30 322 P P 23 51 37.2 +2.7
baz=135
MPMC Manual Prospec 75.37 321 P P 23 51 37.0 +1.8
baz=135
JLU Jordanelle 75.48 328 P P 23 51 34.9 -0.9
DAC Darwin (Calif) 75.59 321 P P 23 51 37.9 +1.5
ISA Isabella, Lake 75.67 320 P P 23 51 37.3 +0.5

ISA Isabella, Lake 75.67 320 P P 23 51 39.1 +2.3
baz=134,SNR=5.4
DUG Dugway, Tooele 75.85 327 P P 23 51 37.4 -0.4
DUG Dugway, Tooele 75.85 327 P P 23 51 39.9 +2.1
baz=139,SNR=6.9
AGMN Agassiz Nation 75.85 342 P P 23 51 36.9 -0.5
AGMN Agassiz Nation 75.85 342 P P 23 51 38.1 +0.7
baz=155
TCUT Toone Canyon 75.85 328 P P 23 51 38.1 +0.2
R11A Troy Canyon, C 75.94 324 P P 23 51 38.0 -0.4
R11A pP 23 52 06.7 +1.9
R11A Troy Canyon, C 75.94 324 P P 23 51 40.7 +2.3
baz=137,SNR=10.0
PKM Mcpherson Peak 75.94 319 P P 23 51 40.9 +2.4
baz=133,SNR=5.1
CWC Cottonwood Cre 75.98 321 P P 23 51 40.8 +2.2
baz=134
VES Vestal, Richgr 76.16 320 P P 23 51 41.7 +2.3
baz=134
BW06 Boulder Array 76.26 330 P P 23 51 39.5 -0.7
BW06 Boulder Array 76.26 330 P P 23 51 42.2 +2.0
baz=142
PD31 Pinedale Array 76.26 330 P P 23 51 40.2 0.0
PDAR Pinedale Array 76.26 330 P P 23 51 41.2 +1.1
comp=Z,0.9nm,0.5s,baz=130,slow=7.4,SNR=14
PDAR pP pP 23 52 07.0 +0.4
comp=Z,1.1nm,0.7s,baz=143,slow=8.0,SNR=4.2
HWUT Hardware Ranch 76.30 328 P P 23 51 40.5 +0.2
HWUT IAmb IAmb 23 52 10.2
comp=Z,8.9nm,0.7s
SMMC Simmler 76.34 319 P P 23 51 43.3 +2.7
baz=133
BGU Big Grassy Mou 76.50 327 P P 23 51 41.6 +0.2
SPUT South Promonto 76.50 328 P P 23 51 41.7 +0.2
MDND Maddock 76.60 339 P P 23 51 43.1 +1.4
baz=151
PAGB Antelope Grade 76.77 319 P P 23 51 42.1 -0.8
AHID Auburn Hatcher 76.97 329 P P 23 51 44.2 +0.1
AHID IAmb IAmb 23 51 46.7
comp=Z,24nm,1.2s
REDW Red Top Meadow 77.32 330 P P 23 51 45.2 -0.9
OMMB Old Mammoth Mi 77.32 321 P P 23 51 45.0 -1.4
SNOW Snow King Moun 77.35 330 P P 23 51 45.4 -0.9
SNOW IAmb IAmb 23 52 15.4
comp=Z,8.0nm,0.6s
NV11 Mina Array Sit 77.41 322 P P 23 51 46.1 -0.5
ELK Elko 77.49 326 P P 23 51 48.8 +1.6
comp=Z,5.5nm,0.9s,baz=104,slow=1.4,SNR=14
ELK pP pP 23 52 14.6 +1.0
comp=Z,4.3nm,0.9s,baz=210,slow=1.8,SNR=5.8
ELK Elko 77.49 326 P P 23 51 47.6 +0.5
ELK pP pP 23 52 14.1 +0.5
NVAR Mina Array Bea 77.49 322 P P 23 51 49.2 +2.0
comp=Z,0.8nm,0.5s,baz=150,slow=7.0,SNR=8.4
NVAR pP pP 23 52 14.8 +1.1
comp=Z,2.0nm,0.9s,baz=156,slow=7.0,SNR=4.3
ULM Lac du Bonnet 77.62 342 P P 23 51 47.8 +0.6
comp=Z,8.0nm,0.5s,baz=154,slow=6.0,SNR=36
ULM pP pP 23 52 13.6 -0.2
comp=Z,5.4nm,0.5s,baz=152,slow=7.0,SNR=7.2
ULM Lac du Bonnet 77.62 342 IAmb IAmb 23 51 48.0
comp=Z,9.2nm,0.7s
ULM pP pP 23 52 12.8 -1.0
RYN Ryan 77.76 322 P P 23 51 49.0 +0.5
FLWY Flagg Ranch 77.81 330 IAmb IAmb 23 52 21.5
comp=Z,8.9nm,0.7s
KVN Kaiserville 77.81 323 P P 23 51 49.6 +0.7
KVN pP pP 23 52 15.4 +0.1
TOA0 Torodi Ar. Sit 77.89 70 P P 23 51 50.3 +0.7
TORD Torodi Ar. Bea 77.89 70 P P 23 51 50.2 +0.6
comp=Z,32nm,0.7s,baz=259,slow=5.3,SNR=194
TORD pP pP 23 52 16.0 0.0
comp=Z,12nm,0.7s,baz=259,slow=5.2,SNR=4.0
TORD LR LR 00 26 17.9
comp=Z,74nm,18.0s,baz=325,slow=36
RLMT Red Lodge 77.99 332 P P 23 51 51.5 +1.7
baz=143,SNR=6.9
LAO LASA Array 78.00 335 P P 23 51 48.6 -1.0
LAO IAmb IAmb 23 54 34.3
comp=Z,11nm,0.5s
LAO LASA Array 78.00 335 P P 23 51 51.3 +1.7
baz=145
WAKR Walker 78.19 322 P P 23 51 51.1 +0.1
YNE Yellowstone No 78.22 331 P P 23 51 51.5 +0.4
SCHQ Schefferville 78.36 1 P P 23 51 52.1 +0.9
comp=Z,4.9nm,0.6s,baz=182,slow=5.1,SNR=9.8
SCHQ pP pP 23 52 18.1 +0.3
comp=Z,7.2nm,0.8s,baz=186,slow=5.9,SNR=7.0
SCHQ Schefferville 78.36 1 P P 23 51 50.9 -0.4
SCHQ IAmb IAmb 23 52 19.9
comp=Z,59nm,1.9s
YERR Yerington 78.41 322 P P 23 51 51.5 -0.7
YHH Holmes Hill 78.43 331 P P 23 51 53.9 +1.7
PNTR Pine Nut 78.68 322 P P 23 51 53.7 0.0
PNTR pP 23 52 22.6 +2.3
PNTR IAmb IAmb 23 52 38.9
comp=Z,11nm,0.8s
GCMT Greycliff 78.69 332 P P 23 51 54.0 +0.5
DGMT Dagmar 78.72 337 P P 23 51 54.2 +0.8
DGMT IAmb IAmb 23 51 56.3
comp=Z,24nm,1.1s
DGMT Dagmar 78.72 337 P P 23 51 55.2 +1.8
baz=147,SNR=5.2
PAHR Pah Rah Range 78.98 322 P P 23 51 56.0 +0.7
PAHR IAmb IAmb 23 52 35.2
comp=Z,11nm,0.8s
TSUM Tsumeb 79.12 106 i P P 23 51 55.9 -0.6
TSUM Tsumeb 79.12 106 P P 23 51 57.8 +1.3
comp=Z,22nm,0.8s,baz=238,slow=7.2,SNR=26
TSUM pP pP 23 52 24.1 +0.9
comp=Z,6.8nm,0.7s,baz=238,slow=6.9,SNR=3.1
TSUM Tsumeb 79.12 106 i P P 23 51 55.9 -0.6
TSUM Tsumeb 79.12 106 P P 23 51 57.4 +0.8
TSUM IAmb IAmb 23 51 58.9
comp=Z,23nm,0.8s
MCMT McKenzie Canyo 79.37 330 P P 23 51 58.5 +1.2
AFDM Forest Hills D 79.37 321 P P 23 51 58.7 +1.4
DLMT Dillon 79.66 330 P P 23 51 59.4 +0.6
DLMT IAmb IAmb 23 52 01.9
comp=Z,18nm,1.4s
MFID Camas Ranch 79.74 327 P P 23 52 00.5 +1.3
ORV Oroville 80.08 321 P P 23 52 03.1 +2.1
ORV IAmb IAmb 23 52 04.1
comp=Z,25nm,1.4s
EGMT Eagleton 80.50 333 P P 23 52 03.6 +0.4
EGMT Eagleton 80.50 333 P P 23 52 04.4 +1.3
baz=143,SNR=7.2
O03E Paynes Creek 80.75 322 P P 23 52 05.5 +0.8
baz=132
MOD Modoc Plateau 81.00 324 P P 23 52 05.2 -0.9
J08A Circle Bar Ran 81.05 326 P P 23 52 06.4 +0.1
O02D Mt. Diablo Mer 81.23 321 P P 23 52 08.6 +1.3
baz=132
WDC Whiskeytown Da 81.36 321 P P 23 52 07.2 -0.6
WDC IAmb IAmb 23 52 09.1
comp=Z,24nm,1.8s
WDC pP 23 52 34.1 -0.4
MSO Missoula 81.38 330 P P 23 52 09.3 +1.4
N02D Trinity Center 81.71 322 P P 23 52 10.5 +0.8
baz=132
M04C Macdoel 81.76 323 P P 23 52 11.6 +1.5
baz=132
KMRM Mail Ridge 81.79 321 P P 23 52 09.9 -0.3
KMRM IAmb IAmb 23 52 13.5
comp=Z,40nm,1.5s
MAW Mawson 82.03 163 P P 23 52 12.3 +1.4
comp=Z,18nm,0.5s,baz=213,slow=7.2,SNR=22
MAW Mawson 82.03 163 P P 23 52 11.7 +0.8
MAW IAmb IAmb 23 54 06.7
comp=Z,36nm,2.0s
M02C Callahan 82.07 322 P P 23 52 12.7 +1.1
baz=132
I07A Izee 82.08 326 P P 23 52 10.9 -0.8
BOSA Boshof 82.12 118 i P P 23 52 13.8 +1.4
BOSA Boshof 82.12 118 P P 23 52 13.0 +0.6
comp=Z,6.4nm,0.5s,baz=258,slow=3.5,SNR=26
BOSA pP pP 23 52 40.0 +0.7
comp=Z,3.3nm,0.6s,baz=245,slow=6.1,SNR=2.1
BOSA LR LR 00 26 04.3
comp=Z,73nm,18.3s,baz=164,slow=34
BOSA Boshof 82.12 118 i P P 23 52 13.8 +1.4
BOSA Boshof 82.12 118 IAmb IAmb 23 52 13.9
comp=Z,18nm,1.1s
YBH Yreka Blue Hor 82.22 322 P P 23 52 12.6 +0.2
comp=Z,2.1nm,1.0s,baz=152,slow=4.0,SNR=6.6
JTMT Jette 82.22 331 P P 23 52 11.8 -0.5
F10A Beach Ranch, E 82.29 328 P P 23 52 13.1 +0.4
F10A IAmb IAmb 23 52 44.2
comp=Z,23nm,1.6s
J05D Fort Rock, OR 82.45 324 P P 23 52 15.4 +1.8
baz=133,SNR=5.7
PINE Pine Mountain 82.64 325 P P 23 52 15.4 +0.7
PINE IAmb IAmb 23 52 17.8
comp=Z,31nm,1.4s
G08A Pilot Rock 82.65 327 P P 23 52 14.4 -0.2
WALA Waterton Lakes 83.05 332 P P 23 52 16.2 -0.3
WALA IAmb IAmb 23 52 18.9
comp=Z,12nm,1.1s
I05D Terrebonne, OR 83.22 325 P P 23 52 19.5 +2.0
FFC Flin Flon 83.32 341 P P 23 52 17.8 +0.1
FFC pP 23 52 44.7 +0.1
FFC IAmb IAmb 23 52 45.5
comp=Z,15nm,1.4s
HAWA Hanford 83.71 327 P P 23 52 19.2 -0.7
LBTB Lobatse 83.80 114 i P P 23 52 19.5 -1.6
LBTB Lobatse 83.80 114 i P P 23 52 19.5 -1.6
LBTB Lobatse 83.80 114 IAmb IAmb 23 52 22.8
comp=Z,20nm,0.8s
D08A Wollman Farm, 83.88 328 P P 23 52 20.9 +0.1
D08A IAmb IAmb 23 52 23.3
comp=Z,24nm,1.7s
NEW Newport 83.89 330 P P 23 52 19.9 -1.0
NEW IAmb IAmb 23 52 46.3
comp=Z,21nm,1.9s
H04A Detroit Lake 83.90 325 P P 23 52 20.2 -0.7
H04A IAmb IAmb 23 55 18.4
comp=Z,9.9nm,0.8s
C09A Chrisman Ranch 84.10 329 P P 23 52 22.3 +0.4
C09A IAmb IAmb 23 52 24.2
comp=Z,28nm,1.4s
FCC Fort Churchill 84.96 347 P P 23 52 26.4 +0.6
FCC IAmb IAmb 23 52 27.3
comp=Z,6.9nm,0.6s
B08A Colville Reser 84.99 329 P P 23 52 26.4 0.0
B06A Marblemount 86.14 328 P P 23 52 31.1 -0.9
B06A IAmb IAmb 23 52 33.4
comp=Z,19nm,1.2s
FRB Frobisher Bay 87.29 0 P P 23 52 37.7 +0.6
comp=Z,4.2nm,1.0s,baz=181,slow=6.3,SNR=8.7
FRB pP pP 23 53 04.1 -0.1
comp=Z,5.2nm,0.8s,baz=193,slow=5.5,SNR=7.4
TUWZ Tuamarina 93.01 222 P P 23 53 03.8 -0.9
YKA Yellowknife Ar 93.47 340 P P 23 53 06.9 +0.9
comp=Z,5.3nm,0.9s,baz=137,slow=4.8,SNR=60
YKA pP pP 23 53 33.4 +0.1
comp=Z,4.6nm,0.8s,baz=138,slow=4.5,SNR=10
PUH Pauahi 94.66 289 P P 23 53 10.8 -1.9
HATHI Halema'uma'u T 94.72 289 P P 23 53 11.5 -1.5
FINES FINESS Array B 112.86 31 PKKPbc PKKPbc 00 09 15.9 -0.6
comp=Z,3.6nm,1.0s,baz=102,slow=3.3,SNR=7.0
AKASG Malin Array Be 112.93 43 PKiKP PKiKP 23 58 26.6 -0.7
comp=Z,0.8nm,0.4s,baz=265,slow=2.4,SNR=8.9
ARCES ARCESS Array B 113.53 22 PKKPbc PKKPbc 00 09 12.7 -1.8
comp=Z,3.6nm,1.0s,baz=50,slow=9.7,SNR=4.6
MMAI Mount Meron Ar 113.85 63 PKiKP PKiKP 23 58 30.7 +0.9
comp=Z,0.5nm,0.5s,baz=48,slow=2.1,SNR=3.7
BRTR Keskin Array B 113.93 56 PKiKP PKiKP 23 58 29.9 +0.1
comp=Z,1.1nm,0.8s,baz=225,slow=0.9,SNR=8.2
BRTR PKKPbc PKKPbc 00 09 14.3 +1.8
comp=Z,0.2nm,0.7s,baz=50,slow=2.5,SNR=2.9
KLMR Klimovskoe 119.33 32 ePKPdf PKPdf 23 58 38.3 -1.0
KLMR AMP 23 58 48.7
comp=Z,20nm,2.1s
KBZ Khabaz 121.35 52 PKP PKiKP 23 58 44.7 +0.8
comp=Z,5.1nm,0.9s,baz=179,slow=3.7,SNR=6.9
KBZ pPKP pPKPdf 23 59 12.9 +1.0
comp=Z,3.9nm,0.9s,baz=329,slow=3.0,SNR=3.2
GNI Garni 122.44 56 PKP PKiKP 23 58 47.3 +1.0
comp=Z,3.3nm,0.8s,baz=45,slow=2.9,SNR=4.2
ASAR Alice Springs 127.97 206 PKP PKiKP 23 58 57.6 -0.2
comp=Z,6.7nm,0.7s,baz=146,slow=2.1,SNR=57
ASAR pPKP pPKPdf 23 59 25.3 -0.4
comp=Z,2.9nm,0.7s,baz=136,slow=2.1,SNR=5.1
ARU Arti 129.91 35 PKP PKiKP 23 59 01.6 +1.1
comp=Z,1.2nm,0.4s,baz=342,slow=3.3,SNR=8.3
ARU pPKP pPKPdf 23 59 28.1 +0.2
comp=Z,0.8nm,0.6s,baz=76,slow=2.5,SNR=2.6
WRA Warramunga Arr 131.07 209 PKP PKiKP 23 59 03.6 -0.4
comp=Z,5.0nm,0.5s,baz=158,slow=1.6,SNR=78
WRA pPKP pPKPdf 23 59 31.4 -0.2
comp=Z,1.8nm,0.7s,baz=164,slow=1.5,SNR=4.2
WRA SKPbc SKPab 00 02 19.5 +0.4
comp=Z,1.9nm,0.9s,baz=140,slow=4.0,SNR=6.4
WRAB Tennant Creek 131.07 209 PKiKP 23 59 04.1 0.0
TIXI Tiksi 131.13 353 PKP PKiKP 23 59 02.5 -0.1
comp=Z,1.8nm,0.4s,baz=0.5,slow=2.7,SNR=5.3
TIXI Tiksi 131.13 353 PKiKP 23 59 02.8 +0.3
AKTO Aktyubinsk 131.17 43 PKP PKiKP 23 59 03.2 0.0
comp=Z,1.4nm,0.8s,baz=304,slow=3.6,SNR=7.0
AKTO pPKP pPKPdf 23 59 30.7 +0.1
comp=Z,3.0nm,1.0s,baz=251,slow=3.4,SNR=4.1
SEY Seymchan 132.34 336 PKP PKiKP 23 59 05.6 +0.4
comp=Z,5.6nm,0.9s,baz=93,slow=2.9,SNR=11
SEY pPKP pPKPdf 23 59 32.9 +0.6
comp=Z,2.8nm,0.7s,baz=188,slow=1.1,SNR=3.3
ABKAR Akbulak array 132.65 44 pPKPdf pPKPdf 23 59 34.4 +1.0
GEYT Alibeck 132.77 60 PKP PKiKP 23 59 07.1 +0.1
comp=Z,1.2nm,0.5s,baz=318,slow=2.0,SNR=4.7
HRA Herat 136.16 65 PKiKP 23 59 13.7 -0.5
HRA pPKPdf pPKPdf 23 59 41.8 +1.1
BRVK Borovoye 137.47 36 PKiKP 23 59 15.8 -0.1
BVAR Borovoye Array 137.54 36 PKP PKiKP 23 59 15.3 -0.8
comp=Z,2.1nm,0.7s,baz=264,slow=2.5,SNR=16
BVAR pPKP pPKPdf 23 59 43.5 +1.1
comp=Z,2.0nm,0.8s,baz=278,slow=1.7,SNR=5.9
KURK Kurchatov 143.10 35 PKPbc 23 59 21.9 +0.5
KURBB Kurchatov Arra 143.11 35 PKP PKPbc 23 59 22.4 +1.0
comp=Z,2.9nm,0.8s,baz=302,slow=3.1,SNR=27
KURBB pPKP pPKPdf 23 59 52.0 -0.5
comp=Z,2.1nm,0.8s,baz=302,slow=2.8,SNR=4.0
ZALV Zalesovo Beam 143.93 27 PKP PKPdf 23 59 25.1 -0.5
comp=Z,9.4nm,0.5s,baz=309,slow=3.1,SNR=54
ZALV pPKP pPKPdf 23 59 53.4 -0.4
comp=Z,7.7nm,0.7s,baz=284,slow=4.5,SNR=4.0
ZALV SKPbc SKiKP 00 02 57.1 +0.8
comp=Z,1.8nm,0.8s,baz=320,slow=3.8,SNR=4.1
AAK Ala-Archa 144.25 49 PKP PKPdf 23 59 27.1 +0.3
comp=Z,9.1nm,0.9s,baz=276,slow=1.2,SNR=18
AAK pPKP pPKPdf 23 59 55.1 0.0
comp=Z,7.0nm,1.0s,baz=315,slow=2.9,SNR=3.1
AAK Ala-Archa 144.25 49 PKPdf 23 59 27.4 +0.6
SOEI Soe 144.32 202 PKPdf 23 59 28.1 +0.4
NIL Nilore 145.33 65 PKPab 23 59 29.3 +0.3
PALK Pallekele 146.28 114 PKPbc PKPbc 23 59 32.5 +0.3
comp=Z,8.4nm,0.8s,baz=180,slow=6.1,SNR=3.3
KSH Kashi 146.30 54 PKPbc PKPab 23 59 32.5 -0.2
KSH sPKP 00 00 10.3
KSH PP PP 00 02 54.4 -0.7
KSH PKS PKSdf 00 02 59.4 -6.4
KSH SKS SKSdf 00 06 30.1 -0.3
KSH SS SS 00 21 43.8 -0.5
KSH AMB AMB
comp=Z,92nm,5.0s
KSH LR LR
comp=Z,41nm,4.5s
KSH LR LR
comp=Z,48nm,4.8s
KSH LR LR
comp=Z,190nm,9.4s
MAKZ Makanchi 147.14 38 PKPbc 23 59 32.5 -1.2
MKAR Makanchi Array 147.32 38 PKPbc PKPbc 23 59 33.1 -1.1
comp=Z,18nm,0.9s,baz=284,slow=1.7,SNR=64
MKAR pPKPbc pPKPbc 00 00 01.8 -0.5
comp=Z,9.4nm,0.7s,baz=339,slow=2.7,SNR=6.5
JAGI Jajag, Banyuwa 147.78 185 PKPbc 23 59 36.6 +0.2
HYB Hyderabad 148.66 96 i PKP PKPbc 23 59 39.0 +0.4
WMQ Urumqi 152.16 39 ePKPbc PKPdf 23 59 39.3 -0.2
WMQ pPKP pPKPdf 00 00 07.8 0.0
USRK Ussuriysk Ar. 153.60 325 PKP PKPdf 23 59 42.9 +1.5
comp=Z,1.7nm,0.7s,baz=219,slow=4.9,SNR=4.6
USRK PKPbc PKiKP 23 59 50.3 +0.9
comp=Z,3.4nm,0.9s,baz=18,slow=8.6,SNR=4.3
MJAR Matsushiro Arr 153.68 305 PKPbc PKiKP 23 59 50.8 +1.0
comp=Z,0.7nm,0.3s,baz=315,slow=0.2,SNR=5.4
SONM Songino Array 155.72 8 PKP PKPdf 23 59 45.7 +1.2
comp=Z,1.9nm,0.9s,baz=286,slow=2.1,SNR=12
SONM PKPab pPKPdf 00 00 12.6 -0.4
comp=Z,2.4nm,0.8s,baz=326,slow=3.0,SNR=8.8
ULN Ulaanbaatar 155.77 7 PKPdf 23 59 46.5 +1.9
ULN PKPab pPKPdf 00 00 13.2 +0.1
ULN pPKPab pPKPab 00 00 39.9 +1.1
KSRS Korea Array 160.38 318 PKP PKPdf 23 59 50.8 +0.6
comp=Z,4.3nm,1.1s,baz=79,slow=0.4,SNR=14
GTA Gaotai 161.64 30 PKP PKPdf 23 59 53.5 +1.7
GTA pPKP pPKPdf 00 00 21.6 +1.4
GTA LR LR
comp=Z,140nm,17.8s
GTA LR LR
comp=Z,63nm,17.5s
GTA LR LR
comp=Z,77nm,17.5s
CMAR Chiang Mai Arr 167.22 112 PKP PKPdf 23 59 58.4 +1.2
comp=Z,0.9nm,0.3s,baz=264,slow=2.1,SNR=7.2
CMAR PKPab PKPab 00 01 03.0 +0.7
comp=Z,1.1nm,0.4s,baz=252,slow=4.4,SNR=4.2
NJ2 Nanjing 169.49 323 ePKP PKPdf 23 59 58.3 0.0
CD2 Chengdu 170.22 42 PKP PKPdf 23 59 57.8 -1.0

IDC 23 23:50:05.3±5.3, 36.74N×82.62E, h0km, mb3.1/1, mb1 3.3/6, mb1mx3.1/64, mbtmp3.3/6, ML2.7/5, Error ellipse: s-maj=68.1km s-min=31.1km az=22.0
ISC 23 23:50:07.4±2.8, 36.8N±0.2×82.9E±0.2, h10km, n6, σ1§12/7, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	8.69	315	Pn	Pn	23 52 13.7	+0.3
	0.1nm,0.3s,baz=169,slow=10,SNR=2.3						
AAK				Lg	Lg	23 54 36.1	
	0.3nm,0.3s,baz=318,slow=17,SNR=5.0						
MKAR	Makanchi Array	10.01	358	Pn	Pn	23 52 31.2	0.0
	0.4nm,0.3s,baz=182,slow=12,SNR=20						
MKAR				Sn	Sn	23 54 24.6	+1.0
	0.1nm,0.3s,baz=182,slow=23,SNR=3.2						
KURBB	Kurchatov Arra	14.17	349	Pn	Pn	23 53 26.5	-1.6
	0.0nm,0.3s,baz=171,slow=11,SNR=2.9						
ZALV	Zalesovo Beam	17.21	4	P	Pn	23 54 07.5	-0.3
	0.1nm,0.3s,baz=188,slow=12,SNR=8.2						
BVAR	Borovoye Array	18.43	336	P	P	23 54 21.9	-0.9
	0.1nm,0.3s,baz=134,slow=8.5,SNR=6.5						
SONM	Songino Array	20.53	50	P	P	23 54 46.6	+0.6
	1.1nm,1.1s,baz=251,slow=11,SNR=5.6						

TUL 24 00:11:32.5±1.5, 36.17N±0.02×96.98W±0.05, h5km±2km, ML3.1, Error ellipse: s-maj=6.5km s-min=3.2km az=76.0
ANF 24 00:11:33.1±0.5, 36.17N×96.94W, h5km, ML3.9/11, Error ellipse: s-maj=5.6km s-min=3.7km az=12.0
NEIC 24 00:11:33.3±0.7, 36.16N±0.04×97.03W±0.05, h4km±3km, Error ellipse: s-maj=6.7km s-min=4.9km az=116.0
ISC 24 00:11:33.3±0.8, 36.16N±0.03×96.98W±0.03, h10km, n40, σ1§12/49, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	Luther M Schoo	0.53	199		Pg	00 11 43.3	-0.2
OK005				Sg	Sg	00 11 50.9	+0.3
ADOK	Arcadia Dam	0.59	212		Pg	00 11 44.4	-0.4
ADOK				Sg	Sg	00 11 52.9	+0.3
OKCFA	Oklahoma City	0.83	207		Pg	00 11 48.4	-0.9
OKCSW	OKLAHOMA CITY	0.83	206		Pg	00 11 48.5	-0.9
FNO	Franklin	0.96	201		Pg	00 11 51.1	-0.7
TUL1	Leonard	1.00	104		Pg	00 11 51.3	-1.3
TUL1	Leonard	1.00	104	P	Pg	00 11 51.2	-1.3
	baz=286						
TUL1				S	Sg	00 12 04.5	-1.0
	baz=286						
W35A	Tecumseh	1.00	175		Pg	00 11 51.2	-1.5
U32A	Winter Ranch,	1.65	278		Pb	00 12 02.5	-1.2
X34A	Smith Ranch, M	1.70	204		Pb	00 12 03.6	-1.1
WMOK	Wichita Mounta	2.04	227		Pn	00 12 08.1	+0.4
WMOK	Wichita Mounta	2.04	227	P	Pn	00 12 08.4	+0.7
	baz=45						
WMOK				S	Sb	00 12 35.2	-0.7
	baz=45						
U38A	Gravette	2.12	82		Pb	00 12 10.0	-1.8
HHAR	Hobbs	2.46	86	Pn	Pn	00 12 14.5	+0.9
W39A	Magazine	2.78	109		Pn	00 12 19.0	+1.2
W39A	Magazine	2.78	109	P	Pn	00 12 18.3	+0.5
	baz=292						
Z35A	Perchaven, San	2.83	185		Pn	00 12 19.2	+0.6
KSU1	Kansas State U	2.95	6	Pb	Pb	00 12 25.7	-0.4
	baz=186						
KSU1				S	Sn	00 12 57.2	+1.4
	baz=186						
MIAR	Mount Ida	3.21	119		Pn	00 12 24.9	+1.0
MIAR	Mount Ida	3.21	119	P	Pn	00 12 24.4	+0.6
	baz=301						
MIAR				S	Sn	00 13 04.2	+2.0
	baz=301						
U40A	Yellville	3.34	85	Pn	Pn	00 12 26.5	+0.8
U40A	Yellville	3.34	85	P	Pn	00 12 26.3	+0.6
	baz=268						
U40A				S	Sn	00 13 06.8	+1.4
	baz=268						
CBKS	Cedar Bluff	3.44	321	Pn	Pn	00 12 27.1	0.0
CBKS	Cedar Bluff	3.44	321	P	Pn	00 12 27.4	+0.3
	baz=140						
CBKS				S	Sn	00 13 09.5	+1.6
	baz=140						
X40A	Basin Creek Fa	3.78	115		Pn	00 12 32.8	+1.2
X40A	Basin Creek Fa	3.78	115	P	Pn	00 12 32.6	+1.0
	baz=298						
X40A				S	Sn	00 13 18.0	+1.9
	baz=298						
WHAR	Wooly Hollow	3.92	101		Pn	00 12 34.9	+1.4
MGMO	Mountain Grove	3.92	74		Pn	00 12 35.3	+1.7
FCAR	Ozark Folk Cen	3.95	92		Pn	00 12 35.2	+1.2
W41B	Gary Mavity, V	3.98	103		Pn	00 12 35.7	+1.3
W41B	Gary Mavity, V	3.98	103	P	Pn	00 12 35.3	+1.0
	baz=286						
WLAR	White Oak Lake	4.02	127	Pn	Pn	00 12 36.0	+1.1
UALR	University of	4.03	109	Pn	Pn	00 12 36.5	+1.4
AMTX	Amarillo	4.04	253	Pn	Pn	00 12 35.8	+0.5
AMTX	Amarillo	4.04	253	P	Pn	00 12 35.7	+0.5
	baz=70						
ABTX	Abilene, Hawle	4.15	213	P	Pn	00 12 38.6	+1.7
	baz=31						
WHTX	Lake Whitney,	4.17	186	Pn	Pn	00 12 38.2	+1.2
237A	Washetta, Mont	4.26	166	Pn	Pn	00 12 38.4	+0.2
Z41A	Richland Creek	4.50	129	Pn	Pn	00 12 42.7	+1.2
LCAR	Lake Charles	4.72	89	Pn	Pn	00 12 45.7	+1.2

HEL 24 00:19:44.4, 67.81N×20.16E, h0km, ML1.4, Explosion
UPP 24 00:19:45.8±0.1, 67.84N×20.19E, h0km, ML2.6, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	26	P	Pg	00 19 48.4	+0.2
KUA				S	Sg	00 19 50.1	+0.4
KUA	Kurravaara	0.12	26	i P	Pg	00 19 48.4	+0.2
KUA				i S	Sg	00 19 50.1	+0.4
KOVU	Salmi	0.38	358	P	Pg	00 19 53.2	+0.1
KOVU				S	Sg	00 19 58.3	+0.3
KOVU	Salmi	0.38	358	i P	Pg	00 19 53.2	+0.1
KOVU				i S	Sg	00 19 58.3	+0.3
LANU	Lannavaara	0.71	72	P	Pg	00 19 59.2	-0.2
LANU	Lannavaara	0.71	72	eP	Pg	00 19 59.1	-0.3
LANU				eS	Sg	00 20 09.3	+0.8
MASU	Masugnsbyn	0.79	118	P	Pg	00 20 00.7	-0.3
MASU	Masugnsbyn	0.79	118	i P	Pg	00 20 00.7	-0.3
KIF	Kilpisjarvi	1.19	11	ePB	Pg	00 20 08.7	+0.1
KIF				MSG		00 20 22.8	
	comp=Z,4.8nm,0.2s						
KIF				eS	Sg	00 20 23.3	-0.6
HEF	Hetta	1.42	65	ePG	Pn	00 20 12.0	-0.8
	baz=250						
HEF				MSG		00 20 27.9	
	comp=Z,2.3nm,0.2s						
ERTU	Ertsjaerv	1.51	148	P	Pn	00 20 13.4	-0.7
ERTU	Ertsjaerv	1.51	148	eP	Pn	00 20 13.4	-0.6
	baz=329						
HARU	Harads	1.71	169	P	Pn	00 20 17.0	+0.2
HARU	Harads	1.71	169	eP	Pn	00 20 17.0	+0.2
TOF	Tornio	2.40	136	ePB	Pn	00 20 27.8	+1.5
	baz=314						
TOF				MSG		00 20 55.1	
	comp=Z,1.5nm,0.2s						
SGF	Sodankyl	2.46	96	ePB	Pb	00 20 28.9	-1.8
ARE0	ARCESS Array S	2.58	46	ePB	Pn	00 20 30.5	+1.7
	baz=228						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE0				eSG	Sb	00 21 04.7	-0.4

UPP 24 00:19:59.8±0.1,67.84N×20.24E,h0km,ML2.5, Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	18	P	Pg	00 20 02.4	+0.3
	baz=220						
KUA				S	Sg	00 20 04.0	+0.3
KOVU	Salmi	0.39	356	P	Pg	00 20 07.1	0.0
LANU	Lannavaara	0.69	72	P	Pg	00 20 12.7	-0.4
DUNU	Dundret	0.73	170	P	Pg	00 20 13.6	-0.3
MASU	Masugnsbyn	0.78	119	P	Pg	00 20 14.5	-0.1
ERTU	Ertsjaerv	1.50	149	P	Pn	00 20 26.9	-1.0

IDC 24 00:22:17.4±8.4,36.42N×73.13E,h0km,mb1 3.4/5, mb1mx3.1/59,mbtmp3.4/5,ML2.9/5,Error ellipse: s-maj=121.8km s-min=37.7km az=160.0

NNC 24 00:22:35.5±7.9,37.36N×72.62E,h131km±158km,mb2.7, mpv3.2,Error ellipse: s-maj=82.1km s-min=72.8km az=125.0

ISC 24 00:22:26.0±2.3,36.9N±0.2×72.8E±0.1,h42km,n8,σ0.82/9, 4C,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.91	12	⇑P	Pn	00 23 56.1	+4.9
	2.5nm,0.6s						
AAK				⇑S	Sn	00 24 56.6	-1.1
	7.0nm,0.8s						
KK31	Karatay Array	6.49	345	⇑P	Pn	00 24 00.0	+1.1
	0.8nm,0.3s,baz=147,slow=11,SNR=21						
KK31				S	Sn	00 25 11.6	-0.1
	4.9nm,0.6s,baz=157,slow=24,SNR=4.2						
GEYT	Alibeck	11.76	280	Pn	Pn	00 25 10.9	-0.3
	0.2nm,0.3s,baz=87,slow=15,SNR=3.1						
MKAR	Makanchi Array	12.16	32	Pn	Pn	00 25 16.9	+0.3
	0.0nm,0.3s,baz=220,slow=13,SNR=4.4						
AB31	Akbulak array	15.54	327	⇑P	Pn	00 26 01.0	-1.0
	0.8nm,0.7s,baz=140,slow=13,SNR=4.9						
BVAR	Borovoye Array	16.26	355	Pn	Pn	00 26 11.4	+0.2
	0.0nm,0.3s,baz=168,slow=10,SNR=4.3						
AKTO	Aktyubinsk	17.25	327	P	Pn	00 26 24.1	+0.4
	0.1nm,0.3s,baz=124,slow=11,SNR=2.6						
ZALV	Zalesovo Beam	19.00	22	P	P	00 26 43.4	-0.5
	0.1nm,0.3s,baz=208,slow=12,SNR=5.8						

BEO 24 00:22:50.0±3.4,45.97N×27.15E,h81km±4km,ML3.9/11

PRU 24 00:22:50.4±0.0,45.85N×27.34E,h64km,M4.4

MOS 24 00:22:52.2±0.8,45.74N×26.67E,h108km,mb4.3/10,Error ellipse: s-maj=5.7km s-min=3.9km az=113.0

SIGU 24 00:22:53.7±0.1,46°N±1°×2°7E±°,h109km,mb3.9/16

MED_RC 24 00:22:53.0±1.1,45.72N×26.68E,h151km±18km,MW4.5/5, Moment Tensor Solution.Mantle waves: s5,c5; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}4.92±1.04; $M_{\theta\theta}$-3.53±1.37; $M_{\phi\phi}$-1.39±1.32; $M_{r\theta}$-2.49±.78; $M_{r\phi}$-4.96±1.96; $M_{\theta\phi}$2.35±.71; Best double couple: $M_0$7.46000×10^{15} NP1:φs21.00000°,δ53.00000°, λ43.00000°. NP2:φs261.00000°,δ57.00000°,λ134.00000°. Principal axes: T 7.3600, Plg54.0000°, Azm229.0000°; N 0.1900, Plg35.0000°, Azm54.0000°; P -7.5500, Plg2.0000°, Azm322.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.

IDC 24 00:22:53.7±0.3,45.80N×26.55E,h100km±3km,mb3.6/21, mb1 3.7/31,mb1mx3.6/58,mbtmp3.9/31,MS2.5/2, Ms1 2.5/2,ms1mx2.3/41 Error ellipse: s-maj=12.1km s-min=7.5km az=154.0

NEIC 24 00:22:53.5±2.0,45.77N±0.05×26.68E±0.05,h110km±3km, Error ellipse: s-maj=7.5km s-min=4.4km az=149.0

BUC 24 00:22:54.2±0.2,45.74N×26.67E,h104km±2km,ml4.5/61, Error ellipse: s-maj=1.7km s-min=1.4km az=3.0

ISC 24 00:22:53.3±0.4,45.77N±0.02×26.67E±0.02,h107km±3km, h107km:pP-P,n429,σ1.49/601,mb4.2/41,160C-104D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	Plostina	0.09	351	⇑P	Pn	00 23 08.7	+0.5
PLOR				⇑S	Sn	00 23 19.3	-0.2
PLOR	Plostina	0.09	351	⇑P	Pn	00 23 08.7	+0.5
PLOR				⇑S	Sn	00 23 19.3	-0.2
PLOR	Plostina	0.09	351		Pn	00 23 08.7	+0.5
PLOR					Sn	00 23 19.3	-0.2
PLOR	Plostina	0.09	351	P	Pn	00 23 08.7	+0.5
PLOR				S	Sn	00 23 19.2	-0.2
VRI	Vrincioaia	0.11	22	⇑P	Pn	00 23 08.9	+0.6
VRI				⇑S	Sn	00 23 19.8	+0.4
VRI	Vrincioaia	0.11	22	⇑P	Pn	00 23 08.9	+0.6
VRI				⇑S	Sn	00 23 19.8	+0.4
VRI	Vrincioaia	0.11	22		Pn	00 23 08.9	+0.6
VRI					Sn	00 23 19.8	+0.4
VRI	Vrincioaia	0.11	22	P	Pn	00 23 08.8	+0.6
VRI				S	Sn	00 23 19.8	+0.4
BISRR	Bisoca	0.22	172	⇑P	Pn	00 23 09.7	+1.1
BISRR				⇓S	Sn	00 23 21.5	+1.5
BISRR	Bisoca	0.22	172	⇑P	Pn	00 23 09.7	+1.1
BISRR				⇓S	Sn	00 23 21.5	+1.5
BISRR	Bisoca	0.22	172		Pn	00 23 09.7	+1.1
BISRR					Sn	00 23 21.4	+1.5
ODBI	Odobesti	0.27	90	⇑P	Pn	00 23 10.1	+1.5
ODBI				⇑S	Sn	00 23 21.7	+1.6
ODBI	Odobesti	0.27	90	⇑P	Pn	00 23 10.1	+1.5
ODBI				⇑S	Sn	00 23 21.7	+1.6
ODBI	Odobesti	0.27	90		Pn	00 23 10.1	+1.5
ODBI					Sn	00 23 21.7	+1.6
PETR	Petresti	0.40	96	⇑P	Pn	00 23 10.3	+1.1
PETR				⇑S	Sn	00 23 22.1	+1.1
PETR	Petresti	0.40	96	⇑P	Pn	00 23 10.3	+1.1
PETR				⇑S	Sn	00 23 22.1	+1.1
PETR	Petresti	0.40	96		Pn	00 23 10.3	+1.1
PETR					Sn	00 23 22.1	+1.1
GRER		0.44	151	⇑P	Pn	00 23 11.4	+1.9
GRER		0.44	151	⇑P	Pn	00 23 11.4	+1.9
MLR	Muntele Rosu	0.58	242	⇑P	Pn	00 23 11.6	+1.0
MLR				⇑S	Sn	00 23 23.8	+0.3
MLR	Muntele Rosu	0.58	242	P	Pn	00 23 11.6	+1.0
	404nm,0.3s,baz=331,slow=2.0,SNR=8907						
MLR				S	Sn	00 23 23.6	+0.1
	2μm,0.3s,baz=357,slow=18,SNR=113						
MLR	Muntele Rosu	0.58	242	⇑P	Pn	00 23 11.6	+1.0
MLR				⇑S	Sn	00 23 23.8	+0.3
MLR	Muntele Rosu	0.58	242		Pn	00 23 11.4	+0.8
GHRR		0.59	60	⇑P	Pn	00 23 11.4	+0.9
GHRR				⇑S	Sn	00 23 24.0	+0.5
GHRR		0.59	60	⇑P	Pn	00 23 11.4	+0.9
GHRR				⇑S	Sn	00 23 24.0	+0.5
ISR	Istrita	0.65	188	eP	Pn	00 23 12.7	+1.6
OZUR		0.70	299	⇑P	Pn	00 23 11.7	+0.2
OZUR				⇑S	Sn	00 23 24.4	-0.7
OZUR		0.70	299	⇑P	Pn	00 23 11.7	+0.2
OZUR				⇑S	Sn	00 23 24.4	-0.7
TUDR		0.72	103	⇑P	Pn	00 23 11.9	+0.4
TUDR				⇑S	Sn	00 23 25.7	+0.4
TUDR		0.72	103	⇑P	Pn	00 23 11.9	+0.4
TUDR				⇑S	Sn	00 23 25.7	+0.4
TUDR		0.72	103		Pn	00 23 11.9	+0.4
TUDR					Sn	00 23 25.7	+0.4
TESR	Tescani	0.75	359	⇑P	Pn	00 23 11.9	0.0
TESR	Tescani	0.75	359	⇑P	Pn	00 23 11.9	0.0
TESR	Tescani	0.75	359		Pn	00 23 11.9	0.0
BIR	Birlad	0.83	53	⇑P	Pn	00 23 13.4	+0.8
BIR				⇑S	Sn	00 23 26.6	-0.6
BIR	Birlad	0.83	53	⇑P	Pn	00 23 13.4	+0.8
BIR				⇑S	Sn	00 23 26.6	-0.6
BIR	Birlad	0.83	53		Pn	00 23 13.4	+0.8
BIR					Sn	00 23 26.6	-0.6
NEGR	Negresti	0.87	105	⇑P	Pn	00 23 13.7	+0.8
NEGR				⇑S	Sn	00 23 27.8	+0.1
NEGR	Negresti	0.87	105	⇑P	Pn	00 23 13.7	+0.8
NEGR				⇑S	Sn	00 23 27.8	+0.1
PGOR	Pogoanele	0.89	165	⇓P	Pn	00 23 14.6	+1.4
PGOR				⇑S	Sn	00 23 29.6	+1.6
PGOR	Pogoanele	0.89	165	⇓P	Pn	00 23 14.6	+1.4
PGOR				⇑S	Sn	00 23 29.6	+1.6
DOPR	Dopca	0.92	283	⇓P	Pn	00 23 14.2	+0.7
DOPR				⇑S	Sn	00 23 28.7	0.0
DOPR	Dopca	0.92	283	⇓P	Pn	00 23 14.2	+0.7
DOPR				⇑S	Sn	00 23 28.7	0.0
PLAR	PLOIESTI	0.96	208	⇓P	Pn	00 23 15.7	+1.8
PLAR	PLOIESTI	0.96	208	⇓P	Pn	00 23 15.7	+1.8
GISR	Galati	1.02	108	⇑P	Pn	00 23 15.5	+1.0
GISR				⇑S	Sn	00 23 31.0	+0.4
GISR	Galati	1.02	108	⇑P	Pn	00 23 15.5	+1.0
GISR				⇑S	Sn	00 23 31.0	+0.4
GIUM	Giurgiulesti	1.12	104	⇑P	Pn	00 23 16.6	+1.1
GIUM				⇑S	Sn	00 23 32.9	+0.6
GIUM	Giurgiulesti	1.12	104	P	Pn	00 23 16.6	+1.1
GIUM	Giurgiulesti	1.12	104	⇑P	Pn	00 23 16.6	+1.1
GIUM				⇑S	Sn	00 23 32.9	+0.6
SULR		1.12	195	⇓P	Pn	00 23 17.2	+1.6
SULR				⇑S	Sn	00 23 33.0	+0.6
SULR		1.12	195	⇓P	Pn	00 23 17.2	+1.6
SULR				⇑S	Sn	00 23 33.0	+0.6
VASR	Vaslui	1.17	41	⇑P	Pn	00 23 16.7	+0.5
VASR	Vaslui	1.17	41	⇑P	Pn	00 23 16.7	+0.5
VOIR		1.18	254	⇑P	Pn	00 23 17.0	+0.7
VOIR				⇑S	Sn	00 23 33.5	-0.3
VOIR		1.18	254	⇑P	Pn	00 23 17.0	+0.7
VOIR				⇑S	Sn	00 23 33.5	-0.3
VOIR		1.18	254		Pn	00 23 17.0	+0.7
VOIR					Sn	00 23 33.5	-0.3
VOIR		1.18	254	P	Pn	00 23 17.0	+0.7
VOIR						00 23 33.5	
CFR	Carcaliu	1.19	119	⇑P	Pn	00 23 16.8	+0.5
CFR				⇑S	Sn	00 23 33.3	-0.4
CFR	Carcaliu	1.19	119	⇑P	Pn	00 23 16.8	+0.5
CFR				⇑S	Sn	00 23 33.3	-0.4
JOSR	Joseni	1.23	320	⇑P	Pn	00 23 17.2	+0.2
JOSR				⇑S	Sn	00 23 37.0	+2.2
JOSR	Joseni	1.23	320	⇑P	Pn	00 23 17.2	+0.2
JOSR				⇑S	Sn	00 23 37.0	+2.2
MTUR	Matau	1.25	245	⇑P	Pn	00 23 18.5	+1.3
MTUR	Matau	1.25	245	⇑P	Pn	00 23 18.5	+1.3
LEHL	Lehliu	1.30	175	⇓P	Pn	00 23 18.9	+1.4
LEHL				⇓S	Sn	00 23 37.3	+1.5
LEHL	Lehliu	1.30	175	⇓P	Pn	00 23 18.9	+1.4
LEHL				⇓S	Sn	00 23 37.3	+1.5
LEOM	Leova	1.31	57	⇑P	Pn	00 23 18.4	+0.8
LEOM				⇓S	Sn	00 23 36.1	0.0
LEOM	Leova	1.31	57	P	Pn	00 23 17.8	+0.2
LEOM	Leova	1.31	57	⇑P	Pn	00 23 18.4	+0.8
LEOM				⇓S	Sn	00 23 36.1	0.0
LEOM	Leova	1.31	57	P	Pn	00 23 17.8	+0.2
INCR	INCERC-Sediu C	1.37	195	⇑P	Pn	00 23 19.5	+1.1
INCR				⇑S	Sn	00 23 38.2	+0.7
INCR	INCERC-Sediu C	1.37	195	⇑P	Pn	00 23 19.5	+1.1
INCR				⇑S	Sn	00 23 38.2	+0.7
HARR	Harsova	1.40	140	⇓P	Pn	00 23 19.5	+0.8
HARR	Harsova	1.40	140	⇓P	Pn	00 23 19.5	+0.8
ARR	Arges	1.48	255	⇑P	Pn	00 23 21.0	+1.1
ARR				⇑S	Sn	00 23 40.4	+0.4
ARR	Arges	1.48	255	⇑P	Pn	00 23 21.0	+1.1
ARR				⇑S	Sn	00 23 40.4	+0.4
ARR	Arges	1.48	255		Pn	00 23 21.2	+1.4
ARR					Sn	00 23 39.8	-0.2
BUC1	Bucharest	1.49	198	⇓P	Pn	00 23 20.9	+1.1
BUC1				⇓S	Sn	00 23 40.6	+0.7
BUC1	Bucharest	1.49	198	⇓P	Pn	00 23 20.9	+1.1
BUC1				⇓S	Sn	00 23 40.6	+0.7
TOPG	Topolog	1.50	126	⇑P	Pn	00 23 20.5	+0.5
TOPG				⇑S	Sn	00 23 39.9	-0.3
TOPG	Topolog	1.50	126	⇑P	Pn	00 23 20.5	+0.5
TOPG				⇑S	Sn	00 23 39.9	-0.3
GOLR		1.52	233	⇓S	Sn	00 23 41.9	+1.3
GOLR		1.52	233	⇓S	Sn	00 23 41.9	+1.3
IAS	Iasi	1.56	23	⇓P	Pn	00 23 21.0	+0.4
IAS	Iasi	1.56	23	⇓P	Pn	00 23 21.0	+0.4
RASA	Rasa	1.59	167	⇓P	Pn	00 23 22.0	+1.0
RASA				⇑S	Sn	00 23 42.9	+0.9
RASA	Rasa	1.59	167	⇓P	Pn	00 23 22.0	+1.0
RASA				⇑S	Sn	00 23 42.9	+0.9
TLCR		1.62	110	⇓P	Pn	00 23 22.1	+0.7
TLCR				⇓S	Sn	00 23 42.8	+0.1
TLCR		1.62	110	⇓P	Pn	00 23 22.1	+0.7
TLCR				⇓S	Sn	00 23 42.8	+0.1
SGRR	Singureni	1.62	198	⇑P	Pn	00 23 22.3	+0.9
SGRR				⇑S	Sn	00 23 42.9	+0.2
SGRR	Singureni	1.62	198	⇑P	Pn	00 23 22.3	+0.9
SGRR				⇑S	Sn	00 23 42.9	+0.2
PRAR	RASCA	1.63	349	⇑P	Pn	00 23 22.2	+0.7
PRAR	RASCA	1.63	349	⇑P	Pn	00 23 22.2	+0.7
MDB	Medias	1.64	284	⇑P	Pn	00 23 23.1	+1.4
MDB	Medias	1.64	284	⇑P	Pn	00 23 23.1	+1.4
HUMR	Humele	1.72	225	⇓P	Pn	00 23 23.5	+0.8
HUMR				⇓S	Sn	00 23 45.1	+0.1
HUMR	Humele	1.72	225	⇓P	Pn	00 23 23.5	+0.8
HUMR				⇓S	Sn	00 23 45.1	+0.1
CVDA	Cernavoda	1.73	145	⇓P	Pn	00 23 23.8	+1.1
CVDA				⇓S	Sn	00 23 44.8	-0.3
CVDA	Cernavoda	1.73	145	⇓P	Pn	00 23 23.8	+1.1
CVDA				⇓S	Sn	00 23 44.8	-0.3
TIRR	Tirgusor	1.80	136	⇓P	Pn	00 23 23.4	-0.2
TIRR	Tirgusor	1.80	136	⇓P	Pn	00 23 23.4	-0.2
TIRR	Tirgusor	1.80	136		Pn	00 23 23.4	-0.2
TIRR					Sn	00 23 45.0	-1.7
TIRR	Tirgusor	1.80	136	Pn	Pn	00 23 23.4	-0.2
TIRR	Tirgusor	1.80	136	P	Pn	00 23 23.4	-0.2
ICOR	Ion Corvin	1.83	154	⇓P	Pn	00 23 25.3	+1.2
ICOR				⇑S	Sn	00 23 47.8	+0.3
ICOR	Ion Corvin	1.83	154	⇓P	Pn	00 23 25.3	+1.2
ICOR				⇑S	Sn	00 23 47.8	+0.3
JURR	Jurilovca	1.85	122	⇑P	Pn	00 23 25.5	+1.3
JURR	Jurilovca	1.85	122	⇑P	Pn	00 23 25.5	+1.3
COPA	Copaceanca	1.93	213	⇓P	Pn	00 23 26.1	+0.8
COPA				⇑S	Sn	00 23 49.7	+0.1
COPA	Copaceanca	1.93	213	⇓P	Pn	00 23 26.1	+0.8
COPA				⇑S	Sn	00 23 49.7	+0.1
KIS	Kishinev	1.93	50	⇑iP	Pn	00 23 26.0	+0.7
	840nm,0.6s						
KIS				iS	Sn	00 23 48.0	-1.7
	6μm,0.5s						
KIS	Kishinev	1.93	50	⇑P	Pn	00 23 25.9	+0.6
KIS	Kishinev	1.93	50	⇓iP	Pn	00 23 26.0	+0.7
KIS				Pm		00 23 26.5	
KIS				Pm		00 23 26.5	
KIS				iS	Sn	00 23 48.0	-1.7
KIS				Sm		00 23 48.5	
KIS	Kishinev	1.93	50	⇑P	Pn	00 23 25.9	+0.6
KIS				⇑S	Sn	00 23 48.7	-1.0
KIS	Kishinev	1.93	50	⇑iP	Pn	00 23 26.0	+0.7
KIS				iS	Sn	00 23 48.0	-1.7
MFTR	Murfatlar	2.02	141	⇓P	Pn	00 23 27.3	+1.0
MFTR				⇓S	Sn	00 23 51.3	-0.3
MFTR	Murfatlar	2.02	141	⇓P	Pn	00 23 27.3	+1.0
MFTR				⇓S	Sn	00 23 51.3	-0.3
LOT	Lotru	2.06	262	⇓P	Pn	00 23 27.8	+0.8
LOT				⇑S	Sn	00 23 54.7	+1.8
LOT	Lotru	2.06	262	⇓P	Pn	00 23 27.8	+0.8
LOT				⇑S	Sn	00 23 54.7	+1.8
ARCR	ARCALIA	2.08	310	⇓P	Pn	00 23 27.7	+0.5
ARCR	ARCALIA	2.08	310	⇓P	Pn	00 23 27.7	+0.5
ARCR	ARCALIA	2.08	310		Pn	00 23 27.7	+0.5
BURAR	Bucovina Array	2.10	332	⇓P	Pn	00 23 29.3	+1.7
BURAR	Bucovina Array	2.10	332	⇓P	Pn	00 23 29.3	+1.7
BURAR				⇓S	Sn	00 23 55.5	+1.7
BUR08	Bucovina Ar. S	2.13	332		Pn	00 23 29.2	+1.2
TSCT	Constanta Port	2.14	138	⇓P	Pn	00 23 28.9	+1.0
TSCT				⇓S	Sn	00 23 53.6	-0.7
TSCT	Constanta Port	2.14	138	⇓P	Pn	00 23 28.9	+1.0
TSCT				⇓S	Sn	00 23 53.6	-0.7
EFOR	EFORIE	2.19	140	⇑P	Pn	00 23 29.7	+1.1
EFOR				⇑S	Sn	00 23 54.8	-0.7
EFOR	EFORIE	2.19	140	⇑P	Pn	00 23 29.7	+1.1
EFOR				⇑S	Sn	00 23 54.8	-0.7
RAZG	Razgrad	2.20	183	⇓P	Pn	00 23 29.6	+0.8
RAZG				⇓S	Sn	00 23 55.3	-0.6
RAZG	Razgrad	2.20	183	⇓P	Pn	00 23 29.6	+0.8
RAZG				⇓S	Sn	00 23 55.3	-0.6
TSSL	Sulina	2.23	105	⇓S	Sn	00 23 57.6	+1.0
TSSL	Sulina	2.23	105	⇓S	Sn	00 23 57.6	+1.0
ZIMR		2.30	204	⇑S	Sn	00 23 57.9	-0.3
ZIMR		2.30	204	⇑S	Sn	00 23 57.9	-0.3
MANR	Mangalia	2.38	144	⇑P	Pn	00 23 32.1	+1.1
MANR				⇑S	Sn	00 23 59.8	-0.2
MANR	Mangalia	2.38	144	⇑P	Pn	00 23 32.1	+1.1
MANR				⇑S	Sn	00 23 59.8	-0.2
VLAD	Vladila	2.39	223	⇓P	Pn	00 23 31.6	+0.4
VLAD				⇓S	Sn	00 23 59.2	-1.0
VLAD	Vladila	2.39	223	⇓P	Pn	00 23 31.6	+0.4
VLAD				⇓S	Sn	00 23 59.2	-1.0
TSMN	Mangalia Port-	2.40	144	⇑P	Pn	00 23 32.5	+1.2
TSMN				⇑S	Sn	00 23 59.6	-0.7
TSMN	Mangalia Port-	2.40	144	⇑P	Pn	00 23 32.5	+1.2
TSMN				⇑S	Sn	00 23 59.6	-0.7
DEV	Deva	2.64	274	⇓P	Pn	00 23 35.6	+1.2
DEV	Deva	2.64	274	⇓P	Pn	00 23 35.6	+1.2
SORM	Soroca	2.64	25	⇓P	Pn	00 23 34.2	-0.2
SORM	Soroca	2.64	25	⇓P	Pn	00 23 34.2	-0.2
SRE	Strehaia	2.69	247	⇓P	Pn	00 23 35.9	+0.8
SRE				⇓S	Sn	00 24 08.2	+1.1
SRE	Strehaia	2.69	247	⇓P	Pn	00 23 35.9	+0.8
SRE				⇓S	Sn	00 24 08.2	+1.1
GZR	Gura Zlata	2.76	264	⇑P	Pn	00 23 37.2	+1.1
GZR	Gura Zlata	2.76	264	⇑P	Pn	00 23 37.2	+1.1
KSV	Kosov	2.78	337	⇓iP	Pn	00 23 36.0	-0.3
KSV				Pm		00 23 37.5	
KSV				iS	Sn	00 24 09.4	+0.1
KSV				Sm		00 24 28.0	
PLVB	Pleven	2.79	212	⇓P	Pn	00 23 37.1	+0.6
PLVB	Pleven	2.79	212	⇓P	Pn	00 23 37.1	+0.6
KMPD	K-Podol'skiy	2.80	357	⇓iP	Pn	00 23 36.3	-0.3
KMPD				iS	Sn	00 24 07.7	-2.2
RAKU	Rahkiv	2.84	324	iP	Pn	00 23 37.1	0.0
RAKU				Pm		00 23 40.0	
RAKU				iS	Sn	00 24 10.9	+0.1
RAKU				Sm		00 24 22.6	
NSLU	Nyzhne Selyshc	2.87	329	⇑iP	Pn	00 23 43.0	+5.6
NSLU				Pm		00 23 44.2	
NSLU				eS	Sn	00 24 21.9	+11
NSLU				Sm		00 24 41.3	
NDNU	Novodnistrovsk	2.87	9	⇓iP	Pn	00 23 37.7	+0.2
NDNU				Pm		00 23 38.2	
NDNU				iS	Sn	00 24 09.1	-2.4
NDNU				Sm		00 24 15.4	
ELND	Elena	2.89	192	⇓P	Pn	00 23 38.8	+0.9
ELND				⇓S	Sn	00 24 11.5	-0.6
ELND	Elena	2.89	192	⇓P	Pn	00 23 38.8	+0.9
ELND				⇓S	Sn	00 24 11.5	-0.6
BMR	Baia Mare	2.90	312	⇑P	Pn	00 23 38.8	+0.9
BMR	Baia Mare	2.90	312	⇑P	Pn	00 23 38.8	+0.9
DRGR		2.93	292	⇓P	Pn	00 23 38.3	-0.1
DRGR		2.93	292	⇓P	Pn	00 23 38.3	-0.1
BAIL	Bailesti	2.94	235	⇑P	Pn	00 23 39.0	+0.6
BAIL				⇑S	Sn	00 24 13.3	+0.3
BAIL	Bailesti	2.94	235	⇑P	Pn	00 23 39.0	+0.6
BAIL				⇑S	Sn	00 24 13.3	+0.3
BAIL	Bailesti	2.94	235		Pn	00 23 39.0	+0.6
BAIL					Sn	00 24 13.3	+0.3
PUNG	Punghina	3.04	242	⇑P	Pn	00 23 39.6	-0.1
PUNG	Punghina	3.04	242	⇑P	Pn	00 23 39.6	-0.1
PUNG				⇑S	Sn	00 24 13.1	-2.4
DJES	Djerdap	3.13	251	ePn	Pn	00 23 41.4	+0.4
STNU	Starunia	3.30	334	⇑iP	Pn	00 23 43.2	0.0
STNU				iS	Sn	00 24 22.2	+0.6
KORU	Korolevo	3.40	316	⇑iP	Pn	00 23 44.5	-0.1
KORU				eS	Sn	00 24 25.2	+1.0
TRSU	Trosnyk	3.45	314	iP	Pn	00 23 45.3	+0.1
TRSU				Pm		00 23 46.8	
TRSU				iS	Sn	00 24 26.2	+0.9
TRSU				Sm		00 24 38.7	
HORU	Horodok	3.45	357	iP	Pn	00 23 45.6	+0.3
HORU				iS	Sn	00 24 23.9	-1.5
MEZ	Mezhgor'ye	3.49	323	iP	Pn	00 23 46.3	+0.5
MEZ				Pm		00 23 48.3	
MEZ				iS	Sn	00 24 27.3	+1.0
MEZ				Sm		00 24 43.7	
SIRR	Siria	3.53	280	⇓P	Pn	00 23 46.8	+0.5
SIRR	Siria	3.53	280	⇓P	Pn	00 23 46.8	+0.5
BZS	Buzias	3.54	269	ePn	Pn	00 23 46.9	+0.4
BRIU	Brid	3.58	317	⇑iP	Pn	00 23 47.5	+0.5
BRIU				Pm		00 23 47.7	
BRIU				eS	Sn	00 24 29.5	+1.0
BRIU				Sm		00 25 05.3	
MDVR	Moldovita	3.63	256	⇑P	Pn	00 23 48.7	+1.0
MDVR				⇑S	Sn	00 24 29.3	-0.5
MDVR	Moldovita	3.63	256	⇑P	Pn	00 23 48.7	+1.0
MDVR				⇑S	Sn	00 24 29.3	-0.5
BERU	Beregovo	3.70	313	⇓iP	Pn	00 23 48.7	+0.2
BERU				eS	Sn	00 24 31.7	+0.5
ZAGS	Zajecar	3.71	240	ePn	Pn	00 23 47.9	-0.8
ZAGS				eSn	Sn	00 24 28.1	-3.5
ZAPS	Zavoj	3.81	231	ePn	Pn	00 23 50.8	+0.7
ZAPS				eSn	Sn	00 24 30.6	-3.5
MUKU	Mukachevo	3.82	316	⇓iP	Pn	00 23 50.7	+0.5
MUKU				eS	Sn	00 24 35.5	+1.3
MORS	Morshin	3.86	332	iP	Pn	00 23 50.8	+0.1
MORS				iS	Sn	00 24 35.6	+0.5
EDRB	Edirne	3.92	179	P	Pn	00 23 52.6	+1.1
VTS	Vitosha	4.00	219	P	Pn	00 23 54.0	+1.3
VTS	Vitosha	4.00	219	⇑P	Pn	00 23 54.1	+1.3
VTS				⇑S	Sn	00 24 38.6	-0.2
VTS	Vitosha	4.00	219	⇑P	Pn	00 23 54.1	+1.3
VTS				⇑S	Sn	00 24 38.6	-0.2
VTS	Vitosha	4.00	219		Pn	00 23 53.3	+0.6
VTS	Vitosha	4.00	219	P	Pn	00 23 53.3	+0.6
SHIU	Shidnytsya	4.12	328	⇓iP	Pn	00 23 55.2	+1.0
SHIU				Pm		00 23 59.6	
SHIU				eS	Sn	00 24 42.1	+0.6
SHIU				Sm		00 24 57.6	
BOVS	Bovan	4.13	241	ePn	Pn	00 23 54.8	+0.5
BOVS				eSn	Sn	00 24 40.0	-1.7
UZH	Uzhgorod	4.14	315	⇑iP	Pn	00 23 55.1	+0.7
UZH				Pm		00 23 56.3	
UZH				eS	Sn	00 24 42.2	+0.4
UZH				Sm		00 25 13.4	
UZH	Uzhgorod	4.14	315	⇓iP	Pn	00 23 54.5	+0.1
UZH				eS	Sn	00 24 41.3	-0.5
UZH				smax	smax		
	comp=N,10.0nm,1.0s						
UZH				smax	smax		
	comp=E,10.0nm,1.0s						
STZU	Stuzhytsa	4.26	321	iP	Pn	00 23 56.0	0.0
STZU				Pm		00 23 58.6	
STZU				eS	Sn	00 24 45.3	+0.6
STZU				Sm		00 24 48.4	
KOLS	Kolonicke sedl	4.36	318	eP	Pn	00 23 58.6	+1.2
KOLS	Kolonicke sedl	4.36	318	ePN	Pn	00 23 58.6	+1.2
LVV	L'vov	4.43	337	⇑iP	Pn	00 23 59.3	+1.0
LVV				Pm		00 24 01.2	
LVV				iS	Sn	00 24 49.2	+0.4
LVV				Sm		00 24 51.6	
LVV	L'vov	4.43	337	eP	Pn	00 23 59.8	+1.5
LVV				iS	Sn	00 24 50.3	+1.5
LVV				pmax	pmax		
	comp=Z,180nm,1.1s						
BOSS	Bosilegrad	4.45	224	ePn	Pn	00 23 59.9	+1.3
BARS	Barje	4.56	231	ePn	Pn	00 23 47.6	-13
BARS	Barje	4.56	231	ePn	Pn	00 24 01.1	+0.9
BARS				eSn	Sn	00 24 48.3	-3.9
GRUS	Gruza	4.63	248	ePn	Pn	00 24 01.7	+0.6
GRUS				eSn	Sn	00 24 51.3	-2.5
RDO	Rodhopi	4.69	191	P	Pn	00 24 02.6	+0.7
KWP	Kalwaria Pacla	4.70	327	ePn	Pn	00 24 04.4	+2.4
KWP	Kalwaria Pacla	4.70	327		Pn	00 24 03.7	+1.7
KWP	Kalwaria Pacla	4.70	327	P	Pn	00 24 03.7	+1.7
TRUS	Trudelj	4.70	253	ePn	Pn	00 24 02.2	+0.1
TRUS				eSn	Sn	00 24 53.0	-2.5
SELS	Selova	4.72	239	ePn	Pn	00 24 02.5	+0.2
SELS				eSn	Sn	00 24 53.3	-2.6
CRVS	Cervenica-Dubn	4.73	313	eP	Pn	00 24 03.5	+1.1
CRVS	Cervenica-Dubn	4.73	313	ePN	Pn	00 24 03.5	+1.1
CRVS				eSN	Sn	00 24 41.9	-14
NVR	Nevrokopi	4.86	206	P	Pn	00 24 05.0	+0.7
FRGS	Fruska Gora	4.86	265	ePn	Pn	00 24 01.7	-2.6
ALN	Alexandroupoli	4.89	186	P	Pn	00 24 05.4	+0.8
ALN	Alexandroupoli	4.89	186		Pn	00 24 05.3	+0.7
ALN	Alexandroupoli	4.89	186	P	Pn	00 24 05.3	+0.7
ISK	Istanbul-Kandi	5.01	159	P	Pn	00 24 06.6	+0.4
KAVA	Kavala	5.02	199	P	Pn	00 24 06.9	+0.6
KECS	Kecovo	5.02	305	eP	Pn	00 24 07.0	+0.7
KECS	Kecovo	5.02	305	ePN	Pn	00 24 07.0	+0.7
DIVS	Divibare	5.03	253	ePn	Pn	00 24 06.7	+0.2
DIVS				eSn	Sn	00 25 00.5	-2.9

SEV Sevastopol' 5.10 101⇑iP Pn 00 24 06.3 -1.1
SEV Pm 00 24 06.9
SEV iS Sn 00 25 01.5 -3.5
SEV Sm 00 25 07.2
SEV Sevastopol' 5.10 101⇓iP Pn 00 24 06.3 -1.1
SEV iS Sn 00 25 01.5 -3.5
PSZ Piszkesteto 5.12 297 Pn 00 24 07.9 +0.1
PSZ Piszkesteto 5.12 297 P Pn 00 24 07.9 +0.1
IVAS Ivanjica 5.14 247 ePn Pn 00 24 07.8 -0.2
IVAS eSn Sn 00 25 01.6 -4.5
SRS Serrai 5.16 207 P Pn 00 24 08.8 +0.5
STHS Stebnicka Huta 5.18 317 eP Pn 00 24 09.2 +0.7
STHS Stebnicka Huta 5.18 317 ePN Pn 00 24 09.2 +0.7
AKASG Malin Array Be 5.23 18 P Pn 00 24 07.9 -1.1
comp=Z,9.1nm,0.3s,baz=204,slow=11,SNR=36
AKASG S Sn 00 25 03.5 -4.5
comp=Z,32nm,0.3s,baz=196,slow=25,SNR=9.0
AKASG Malin Array Be 5.23 18 iP Pn 00 24 08.3 -0.8
AKASG pmax pmax
comp=Z,5.0nm,0.3s
AKBB Malin Array Si 5.23 18 Pn 00 24 08.5 -0.6
AKBB Malin Array Si 5.23 18 P Pn 00 24 08.5 -0.6
SIM Simferopol' 5.31 96 eP Pn 00 24 09.6 -0.7
SIM Pm 00 24 11.9
SIM iS Sn 00 25 07.9 -2.3
SIM Sm 00 25 08.8
SIM Simferopol' 5.31 96 eP Pn 00 24 10.6 +0.3
SIM iS Sn 00 25 07.1 -3.1
SIM pmax pmax
comp=Z,17nm,0.9s
VAY Valandovo 5.35 215 iPn Pn 00 24 12.1 +1.3
THAS Thassos island 5.35 196 P Pn 00 24 11.0 +0.2
KNT Kendrikon 5.36 212 P Pn 00 24 11.9 +0.9
SMTH Samothraki Isl 5.36 189 P Pn 00 24 11.3 +0.3
SJES Sjenica 5.40 245 ePn Pn 00 24 12.7 +1.1
YAL Yalta 5.45 101 eP Pn 00 24 11.5 -0.6
YAL S Sn 00 25 10.4 -3.1
YAL Yalta 5.45 101⇓eP Pn 00 24 11.5 -0.6
YAL eS Sn 00 25 10.4 -3.1
SOH Sokhos 5.50 207 P Pn 00 24 13.7 +0.8
BBLS Lazići 5.50 252 ePn Pn 00 24 12.9 -0.1
BBLS eSn Sn 00 25 11.7 -3.3
ALU Alushta 5.57 98⇑iP Pn 00 24 13.5 -0.3
ALU Pm 00 24 14.1
ALU eS Sn 00 25 20.0 +3.6
ALU Sm 00 25 20.1
ALU Alushta 5.57 98⇓iP Pn 00 24 13.5 -0.3
NIE Niedzica 5.65 313 ePn Pn 00 24 15.2 +0.3
NIE Niedzica 5.65 313 eP Pn 00 24 15.2 +0.3
OUR Ouranopolis 5.77 201 P Pn 00 24 17.4 +0.8
SUDU Sudak 5.94 96 eP Pn 00 24 17.9 -0.9
SUDU Pm 00 24 18.5
SUDU iS Sn 00 25 22.3 -3.1
SUDU Sm 00 25 25.1
SUDU Sudak 5.94 96 eP Pn 00 24 17.9 -0.9
SUDU iS Sn 00 25 22.3 -3.1
EZN Ezine 5.94 183 P Pn 00 24 19.5 +0.7
LANS Liptovska Anna 5.94 307 eP Pn 00 24 20.5 +1.7
LANS Liptovska Anna 5.94 307 ePN Pn 00 24 20.5 +1.7
LIA Limnos Island 5.96 191 P Pn 00 24 19.5 +0.3
VYHS Vyhne 6.00 300 eP Pn 00 24 20.8 +1.2
VYHS Vyhne 6.00 300 ePN Pn 00 24 20.8 +1.2
VYHS eSN Sn 00 25 14.1 -13
SRO Srobarova 6.09 293 eP Pn 00 24 21.4 +0.6
SRO Srobarova 6.09 293 ePN Pn 00 24 21.4 +0.6
PAIG Paliouri 6.23 202 P Pn 00 24 23.7 +0.9
MDUB Mudurnu 6.24 146 Pn 00 24 22.9 -0.1
PDG Podgorica 6.29 241 Pn Pn 00 24 23.2 -0.4
PDG Sn 00 25 34.7 +0.7
LIT Litokhoron 6.44 210 Pn Pn 00 24 25.1 -0.5
LIT Litokhoron 6.44 210 P Pn 00 24 25.1 -0.5
SIGR SIGRI 6.58 186 P Pn 00 24 28.0 +1.5
BLY Banja Luka 6.77 265 Pn Pn 00 24 30.6 +0.5
JAVC Velka Javorina 6.86 300 ePN Pn 00 24 32.7 +1.5
SMOL Smolenice 6.88 297 eP Pn 00 24 32.6 +1.1
SMOL Smolenice 6.88 297 ePN Pn 00 24 32.6 +1.1
ILGA Ilgaz 6.96 130 Pn 00 24 31.5 -1.5
OKC Ostrava-Krasne 7.04 308 ePN Pn 00 24 33.5 -0.1
OKC Ostrava-Krasne 7.04 308 eP Pn 00 24 33.5 -0.1
BEL Belsk 7.21 330 ePn Pn 00 24 37.0 +1.1
BEL Belsk 7.21 330 eP Pn 00 24 37.0 +1.1
MORC Moravsky Berou 7.34 306 ePN Pn 00 24 38.3 +0.5
MORC Moravsky Berou 7.34 306 Pn 00 24 37.7 -0.1
MORC Moravsky Berou 7.34 306 P Pn 00 24 37.7 -0.1
MANT Manisa 7.40 168 Pn 00 24 38.0 -0.9
ANTO Ankara 7.41 140 Pn Pn 00 24 37.9 -1.0
ANTO Ankara 7.41 140 P Pn 00 24 37.9 -1.0
BR231 Keskin MP Arra 7.43 141 Pn Pn 00 24 38.8 -0.3
AGG Agios Georgios 7.46 207 Pn Pn 00 24 39.3 -0.2
AGG Agios Georgios 7.46 207 P Pn 00 24 39.3 -0.2
ANN Anapa 7.66 93 eP Pn 00 24 39.5 -2.5
ANN eS Sn 00 26 02.1 -5.0
ANN pmax pmax
comp=Z,61nm,1.4s
VRAC Vranov 7.68 301 ePN Pn 00 24 43.0 +0.6
VRAC Vranov 7.68 301 P Pn 00 24 41.3 -1.2
comp=Z,0.2nm,0.3s,baz=102,slow=14,SNR=8.5
KRUC Moravsky 7.71 299 ePN Pn 00 24 43.7 +0.9
CONA Conrad Observa 7.72 290 ePn Pn 00 24 43.0 0.0
comp=Z,0.3nm,0.3s
ARSA Arzberg 7.83 285 iPn Pn 00 24 44.8 +0.3
comp=Z,0.7nm,0.3s
KRLC Kraliky 7.92 307 ePN Pn 00 24 45.3 -0.3
KRLC Kraliky 7.92 307 eP Pn 00 24 45.3 -0.3
BR131 Keskin Array S 7.92 137 Pn 00 24 45.6 -0.1
BR131 Keskin Array S 7.92 137 P Pn 00 24 45.7 -0.1
BRTR Keskin Array B 7.92 137 P Pn 00 24 45.6 -0.1
comp=Z,1.2nm,0.3s,baz=328,slow=13,SNR=57
BRTR S Sn 00 26 11.6 -2.2
comp=Z,0.7nm,0.3s,baz=316,slow=20,SNR=5.1
BRTR LR LR 00 27 44.2
comp=Z,25nm,21.7s,baz=346,slow=36
BRTR Keskin Array B 7.92 137 iP Pn 00 24 45.7 -0.1
BRTR pmax pmax
comp=Z,3.0nm,0.4s
DPC Dobruska-Polom 8.31 307 ePN Pn 00 24 50.5 -0.4
DPC Dobruska-Polom 8.31 307 eP Pn 00 24 50.5 -0.4
SUW Suwalki 8.56 346 ePn Pn 00 24 52.7 -1.4
SUW Suwalki 8.56 346 P Pn 00 24 52.8 -1.4
SUW Suwalki 8.56 346 P Pn 00 24 52.8 -1.4
CHVC Chvalec 8.58 308 ePN Pn 00 24 54.5 0.0
KSP Ksiaz 8.58 310 ePn Pn 00 24 54.9 +0.4
KSP Ksiaz 8.58 310 eP Pn 00 24 54.9 +0.4
APE Apeiranthos 8.73 186deP Pn 00 24 56.6 -0.2
NACGM Naroch 9.15 0 eP Pn 00 25 01.0 -1.2
NACGM eS Sn 00 26 40.0 -3.3
ACER Acerenza 9.27 241 Pn Pn 00 25 01.2 -2.8
KBA Koelnbreinsper 9.30 283 iPn Pn 00 25 05.7 +1.1
comp=Z,0.6nm,0.3s
ELL Elmali 9.33 164 Pn Pn 00 25 03.6 -1.4
ELL Elmali 9.33 164 P Pn 00 25 03.6 -1.4
GEC2 GERESS Array S 9.33 294 Pn Pn 00 25 04.6 -0.3
GERES GERESS Array B 9.33 294 P Pn 00 25 04.4 -0.5
comp=Z,0.1nm,0.3s,baz=119,slow=14,SNR=4.8
SANT Santorini 9.43 186 Pn Pn 00 25 04.4 -1.8
KHC Kasperske Hory 9.49 295⇑eP Pn 00 25 08.7 +1.8
KLNR Kaliningrad 9.77 337ceP Pn 00 25 09.3 -1.3
TIP Timpagrande 9.84 232 Pn Pn 00 25 10.7 -1.1
VORD Divnogorie 9.88 54 eP Pn 00 25 11.7 -0.4
VORD eS Sn 00 26 53.9 -7.1
VORD pmax pmax
comp=Z,6.0nm,0.5s
VORD smax smax
comp=E,2μm,3.2s
VSR Storozhevoye 9.92 52 eP Pn 00 25 12.0 -0.8
VSR eS Sn 00 26 55.3 -6.8
VSR pmax pmax
comp=Z,4.0nm,0.4s
VSR smax smax
comp=E,150nm,0.9s
AQU L'Aquila 10.14 255 Pn Pn 00 25 13.7 -2.1
AQU L'Aquila 10.14 255 P Pn 00 25 13.7 -2.1
WTTA Wattenberg 10.47 284 iPn Pn 00 25 16.5 -3.9
LPSR Galich'ya Gora 10.54 45 eP Pn 00 25 21.3 +0.3
LPSR pmax pmax
comp=Z,6.0nm,0.6s
IDI Anoyia 10.55 188 P Pn 00 25 23.2 +1.7
comp=Z,0.4nm,0.3s,baz=27,slow=9.0,SNR=5.9
SQTA Sankt Quirin 10.76 283 iPn Pn 00 25 21.5 -2.8
comp=Z,1.5nm,0.5s
MOTA Moosalm 10.84 284 iPn Pn 00 25 26.9 +1.5
comp=Z,1.3nm,0.6s
RETA Reutte 11.08 285 iPn Pn 00 25 28.6 +0.1
comp=Z,0.7nm,0.4s
FETA Feichten 11.08 282 iPn Pn 00 25 30.9 +2.3
comp=Z,1.7nm,0.6s
OBN Obninsk 11.28 30 P Pn 00 25 27.4 -3.6
comp=Z,1.6nm,0.3s,baz=318,slow=4.1,SNR=5.9
OBN S Sn 00 27 24.5 -10
comp=Z,2.3nm,0.3s,baz=180,slow=20,SNR=9.7
OBN Obninsk 11.28 30 Pn Pn 00 25 28.2 -2.8
OBN Obninsk 11.28 30deP Pn 00 25 28.1 -2.9
OBN pmax pmax
comp=Z,7.0nm,0.5s
VRH Novokhopyorsk 11.37 56 eP Pn 00 25 29.3 -3.0
VRH eS Sn 00 27 32.2 -4.9
VRH pmax pmax
comp=Z,20nm,1.7s
VRH smax smax
comp=N,60nm,0.8s
KIV Kislovodsk 11.51 93 eP Pn 00 25 33.3 -1.1
KIV eS Sn 00 27 40.2 -0.8
KIV pmax pmax
comp=Z,15nm,1.1s
KVAR Kislovodsk Arr 11.52 93 P Pn 00 25 35.2 +0.7
baz=286,slow=20,SNR=2.5
KVAR S Sn 00 27 35.4 -5.8
baz=330,slow=20,SNR=2.6
GAZ Gaziantep 11.66 134 Pn 00 25 33.0 -3.4
DAVA Damuels 11.67 284 iPn Pn 00 25 37.0 +0.5
comp=Z,2.3nm,0.4s
KBZ Khabaz 11.72 94 P Pn 00 25 37.1 +0.1
comp=Z,0.1nm,0.3s,baz=232,slow=19,SNR=2.3
KBZ S Sn 00 27 40.3 -5.5
comp=Z,0.2nm,0.3s,baz=254,slow=14,SNR=2.1
BSD Bornholm Skovb 11.97 326 iP Pn 00 25 39.1 -1.1
BSD Bornholm Skovb 11.97 326 iP Pn 00 25 39.1 -1.1
VSU Vasula 12.72 0ceP Pn 00 25 47.5 -2.5
SENIN Lac Senin/Sane 13.47 280 Pn 00 26 01.0 +0.8
BNI Bardonecchia 14.06 274 Pn Pn 00 26 07.6 -0.2
BNI Bardonecchia 14.06 274 P Pn 00 26 07.6 -0.2
GNI Garni 14.37 107 LR LR 00 32 36.3
comp=Z,30nm,20.5s,baz=14,slow=40
MMAI Mount Meron Ar 14.40 149 P Pn 00 26 14.3 +2.2
comp=Z,0.2nm,0.3s,baz=325,slow=14,SNR=3.0
FINES FINESS Array B 15.71 359 P Pn 00 26 23.4 -4.9
comp=Z,0.6nm,0.3s,baz=167,slow=14,SNR=18
FINES S Sn 00 29 07.2 -15
comp=Z,0.3nm,0.3s,baz=179,slow=19,SNR=3.8
FIA1 FINESS Array S 15.71 359 Pn Pn 00 26 23.2 -5.1
FIA1 IAmb IAmb 00 26 35.9
comp=Z,20nm,1.2s
HFS Hagfors 16.33 336 P Pn 00 26 32.9 -3.1
comp=Z,0.5nm,0.3s,baz=125,slow=13,SNR=14
HFS S Sn 00 29 30.0 -6.9
comp=Z,0.1nm,0.3s,baz=119,slow=20,SNR=3.6
KEST Kesra 16.48 239 P P 00 26 39.9 +1.0
comp=Z,0.1nm,0.3s,baz=45,slow=20,SNR=4.1
KEST Kesra 16.48 239 P Pn 00 26 38.8 +0.6
KLMR Klimovskoe 16.90 22 eP Pn 00 26 37.6 -5.4
KLMR pmax pmax
comp=Z,22nm,1.5s
KLMR Klimovskoe 16.90 22 ePn Pn 00 26 37.7 -5.3
KLMR ePn Pn 00 26 37.7 -5.3
KLMR ePn Pn 00 26 37.7 -5.3
KLMR AMP 00 26 40.8
comp=Z,22nm,1.5s
KLMR eSn Sn 00 29 30.6 -20
KLMR eSn Sn 00 29 30.6 -20
KONO Kongsberg 17.25 330 P P 00 26 46.5 -0.6
KONO IAmb IAmb 00 26 49.5
comp=Z,43nm,1.3s
KONO Kongsberg 17.25 330⇑eP Pn 00 26 48.8 +1.6
NC602 NORSAR Array S 17.44 335 P P 00 26 48.1 -1.1
NC405 NORSAR Array S 17.69 336 P P 00 26 51.7 -0.3
NB201 NORSAR Array S 17.77 335 P P 00 26 52.2 -0.6
NB2 NORSAR Subarra 17.78 335 P P 00 26 51.6 -1.4
comp=Z,1.5nm,0.6s,baz=144,slow=14
NOA NORSAR Array B 17.78 335 P P 00 26 51.6 -1.4
comp=Z,0.1nm,0.3s,baz=147,slow=12,SNR=7.4
NC303 NORSAR Array S 17.89 335 Pn 00 26 55.2 +0.2
NC303 IAmb IAmb 00 27 02.8
comp=Z,35nm,1.1s
NBO00 NORSAR Array S 17.91 334 P P 00 26 54.3 -0.1
NBO00 IAmb IAmb 00 26 54.9
comp=Z,49nm,1.3s
NC204 NORSAR Array S 18.10 335 P Pn 00 26 56.9 -0.7
NC204 IAmb IAmb 00 26 58.3
comp=Z,32nm,1.2s
PRGR Permogore 19.34 28 eP Pn 00 27 10.8 -1.2
PRGR eS S 00 30 30.5 -12
PRGR pmax pmax
comp=Z,8.0nm,0.6s
EKA Eskdalemuir Ar 21.08 308 P P 00 27 29.5 +0.7
comp=Z,1.4nm,0.6s,baz=114,slow=10,SNR=4.0
ESK Eskdalemuir 21.10 308 P P 00 27 29.5 +0.5
ESK IAmb IAmb 00 27 39.5
comp=Z,31nm,1.3s
ESK Eskdalemuir 21.10 308 P P 00 27 29.5 +0.5
ESK pmax pmax
comp=Z,31nm,1.3s
AKTO Aktyubinsk 21.36 66 P P 00 27 33.6 +1.8
comp=Z,1.1nm,0.5s,baz=275,slow=7.5,SNR=4.3
CART Cartagena 22.14 258 P P 00 27 38.0 -2.2
CART IAmb IAmb 00 27 53.8
comp=Z,31nm,1.1s
ARU Arti 22.49 50 P P 00 27 43.4 -0.1
comp=Z,0.9nm,0.3s,baz=279,slow=9.1,SNR=7.3
ARU Arti 22.49 50 P P 00 27 43.5 -0.1
ARU IAmb IAmb 00 28 01.1
comp=Z,12nm,1.5s
ARU pP 00 28 02.6 -1.6
ARU Arti 22.49 50c iP P 00 27 43.9 +0.3
ARU *PP pP 00 28 02.8 -1.5
ARU S S 00 31 43.9 +1.5
ARU SS SnSn 00 32 27.1 +4.6
ARU pmax pmax
comp=Z,8.0nm,1.5s
ABKAR Akbulak array 22.64 69 P P 00 27 45.2 +0.1
ESBB Sonseca Array 23.22 266 P P 00 27 50.5 -0.5
ESBB IAmb IAmb 00 27 57.5
comp=Z,13nm,1.5s
ESDC Sonseca Array 23.22 266 P P 00 27 50.5 -0.5
comp=Z,1.6nm,0.6s,baz=65,slow=9.4,SNR=9.7
PAB San Pablo 23.55 266 P P 00 27 51.2 -2.7
PAB IAmb IAmb 00 28 08.9
comp=Z,18nm,1.5s
PAB San Pablo 23.55 266 P P 00 27 51.3 -2.7
PAB pmax pmax
comp=Z,18nm,1.5s
ARCES ARCESS Array B 23.84 359 P P 00 27 57.6 +1.4
comp=Z,1.7nm,0.5s,baz=170,slow=8.5,SNR=16
ARE0 ARCESS Array S 23.84 359 P P 00 27 57.3 +1.1
KEV Kevo 24.06 0 P P 00 27 59.3 +1.2
KEV Kevo 24.06 0 P P 00 27 59.3 +1.2
KEV pmax pmax
comp=Z,34nm,1.3s
GEYT Alibeck 24.58 97 P P 00 28 06.7 +3.4
comp=Z,1.2nm,0.7s,baz=282,slow=9.9,SNR=5.5
PESTR Estremoz 26.11 267 P P 00 28 16.3 -0.8
PESTR IAmb IAmb 00 28 26.5
comp=Z,25nm,1.5s
BRVK Borovoye 28.92 59 P P 00 28 43.1 +1.1
BRVK pP 00 29 06.8 +1.1
BRVK Borovoye 28.92 59⇑eP P 00 28 44.2 +2.2
BRVK i *PP pP 00 29 06.5 +0.8
BRVK pmax pmax
comp=Z,10.0nm,3.3s
BVAR Borovoye Array 28.99 59 P P 00 28 44.9 +2.3
comp=Z,0.6nm,0.7s,baz=280,slow=8.6,SNR=5.3
BVAR pP pP 00 29 06.1 -0.2
comp=Z,1.0nm,0.7s,baz=280,slow=8.9,SNR=7.3
UOSS Minazif 31.52 121 P P 00 29 03.6 -1.6
AAK Ala-Archa 34.03 78deP P 00 29 28.3 +1.2
AAK pmax pmax
comp=Z,11nm,1.9s
BOOM Boomskoye usch 35.07 77 pP 00 29 59.4 -0.8
ZAA0 Zalesovo Array 37.40 56 P P 00 29 55.4 -0.2
ZAA0 pP 00 30 20.9 +1.0
ZALV Zalesovo Beam 37.40 56 P P 00 29 57.2 +1.6
comp=Z,1.0nm,0.4s,baz=276,slow=9.2,SNR=6.7
ZALV pP pP 00 30 20.2 +0.3
comp=Z,5.3nm,0.9s,baz=278,slow=9.4,SNR=13
MK31 Makanchi Array 37.77 68 P P 00 29 59.2 +0.5
MK31 pP 00 30 24.4 +1.3
MK31 Makanchi Array 37.77 68 P P 00 29 59.3 +0.5
MK31 *PP pP 00 30 24.4 +1.3
MK31 pmax pmax
comp=Z,2.0nm,1.4s
MKAR Makanchi Array 37.77 68 P P 00 30 01.0 +2.2
comp=Z,1.0nm,0.5s,baz=271,slow=8.3,SNR=31
MKAR pP pP 00 30 23.6 +0.5
comp=Z,1.6nm,0.6s,baz=279,slow=7.6,SNR=12
MKAR PcP PcP 00 32 13.4 +0.1
comp=Z,0.3nm,0.8s,baz=313,slow=3.2,SNR=2.8
TOA0 Torodi Ar. Sit 38.78 221 P P 00 30 07.6 +0.1
TOA0 IAmb IAmb 00 30 09.5
comp=Z,4.8nm,0.8s
TORD Torodi Ar. Bea 38.78 221 P P 00 30 08.7 +1.2
comp=Z,3.1nm,0.4s,baz=31,slow=8.5,SNR=120
TORD pP pP 00 30 32.2 +0.1
comp=Z,1.4nm,0.5s,baz=27,slow=9.3,SNR=4.3
TORD PcP PcP 00 32 16.9 0.0
comp=Z,0.5nm,0.5s,baz=26,slow=2.7,SNR=6.9
CMLA Cha da Macela 39.14 277 P P 00 30 08.9 -1.4
CMLA Cha da Macela 39.14 277 P P 00 30 08.9 -1.4
CMLA pmax pmax
comp=Z,124nm,1.0s
WMQ Urumqi 42.42 70 eP P 00 30 38.3 +1.0
TULEG Thule 47.27 341 P P 00 31 14.0 -1.2
TULEG IAmb IAmb 00 31 16.4
comp=Z,4.2nm,0.9s
DBIC Dimbokro 47.54 225 P P 00 31 18.1 +0.2
comp=Z,5.1nm,0.3s,baz=11,slow=9.6,SNR=32
DBIC Dimbokro 47.54 225 P P 00 31 17.6 -0.4
TIC Toumodi 47.64 225 eP P 00 31 19.5 +0.7
KIC Kosan Boka 47.75 224 eP P 00 31 19.6 0.0
comp=Z,5.0nm,0.5s
LIC Lamto 48.01 225 eP P 00 31 21.6 0.0
comp=Z,4.8nm,0.3s
TIXI Tiksi 50.91 24⇓eP P 00 31 44.8 +1.9
TIXI pmax pmax
comp=Z,5.0nm,1.8s
SONM Songino Array 52.28 57 P P 00 31 55.1 +1.4
comp=Z,1.0nm,0.8s,baz=302,slow=8.1,SNR=7.6
SONM pP pP 00 32 18.8 -0.4
comp=Z,0.2nm,0.5s,baz=307,slow=6.6,SNR=3.7
SONM PcP PcP 00 33 05.3 +1.8
comp=Z,0.2nm,0.6s,baz=315,slow=0.8,SNR=2.6
CD2 Chengdu 60.03 75 P P 00 32 47.4 -1.5
BILL Bilibino 62.54 16 eP P 00 33 04.9 -0.2
BILL e 00 33 43.3
BILL pmax pmax
comp=Z,1.0nm,1.2s
C36M Paulatuk 63.19 349 P P 00 33 10.8 +1.4
SEY Seymchan 63.38 25 P P 00 33 11.7 +1.0
comp=Z,0.8nm,0.4s,baz=343,slow=19,SNR=3.3
CMAR Chiang Mai Arr 64.72 89 P P 00 33 21.2 +1.0
comp=Z,2.8nm,0.3s,baz=305,slow=7.9,SNR=6.4
INK Inuvik 65.29 352 P P 00 33 24.1 +1.0
comp=Z,0.7nm,0.6s,baz=17,slow=5.8
BRYW Bryant College 66.38 306 pP 00 33 58.2 +0.9
YKA Yellowknife Ar 67.73 342 P P 00 33 40.0 +1.2
comp=Z,1.7nm,0.6s,baz=29,slow=6.0,SNR=34
YKA Yellowknife Ar 67.73 342 P P 00 33 40.0 +1.2
J57A Williamstown 67.84 310 P P 00 33 37.2 -2.5
ILAR Eielson Array 69.69 357 P P 00 33 51.9 +1.0
comp=Z,0.3nm,0.6s,baz=358,slow=6.0,SNR=4.6
E46A Sault Ste Mari 70.02 317 P P 00 33 52.0 -1.2
E46A IAmb IAmb 00 33 52.9
comp=Z,7.5nm,1.1s
P60A Greenville 70.09 307 P P 00 33 54.2 +0.4
P60A IAmb IAmb 00 34 11.9
comp=Z,6.0nm,0.9s
KSRS Korea Array 71.11 56 P P 00 34 01.0 +1.1
comp=Z,0.9nm,0.6s,baz=313,slow=6.0,SNR=4.2
ULM Lac du Bonnet 72.19 325 P P 00 34 06.5 +0.3
comp=Z,1.3nm,0.6s,baz=41,slow=6.4,SNR=4.9
ULM Lac du Bonnet 72.19 325 IAmb IAmb 00 34 07.0
comp=Z,1.8nm,0.7s
JFWS Jewell Farm 75.42 317 P P 00 34 25.1 -0.1
JFWS IAmb IAmb 00 34 26.9
comp=Z,8.1nm,1.1s
JFWS Jewell Farm 75.42 317 P P 00 34 25.1 -0.1
JFWS pmax pmax
comp=Z,8.0nm,1.1s
YNE Yellowstone No 81.83 331 PcP 00 35 10.8 +4.7
PDAR Pinedale Array 83.63 329 P P 00 35 10.8 +0.9
comp=Z,0.5nm,0.6s,baz=64,slow=6.0,SNR=6.8
BMO Blue Mountains 84.30 335 P P 00 35 13.9 +0.7
BMO IAmb IAmb 00 35 15.2
comp=Z,1.8nm,0.6s
BMO Blue Mountains 84.30 335 P P 00 35 13.9 +0.7
BMO pmax pmax
comp=Z,2.0nm,0.6s
BDFB Brasilia 90.76 248 P P 00 35 45.5 +1.0
comp=Z,1.1nm,0.4s,baz=74,slow=15,SNR=2.7
BDFB Brasilia 90.76 248 IAmb IAmb 00 35 49.0
comp=Z,4.5nm,1.2s
TXAR Lajitas Array 92.73 318 P P 00 35 53.4 -0.2
comp=Z,0.2nm,0.8s,baz=26,slow=5.0,SNR=2.8

*NIED **24** 00:41:00, 37.°50N×141.°80E, h5km, Mw4.1 Best double couple: M₀1.39000×10^15 NP1:φs78.00000°, δ63.00000°, λ-49.00000°. NP2:φs196.00000°, δ48.00000°, λ-142.00000°.*

*IDC **24** 00:41:55.7±0.5, 37.°50N×141.°75E, h0km, mb4.2/23, mb1 4.3/26, mb1mx4.2/39, mbtmp4.2/26, ML4.2/2, MS3.2/10, Ms1 3.2/10, ms1mx2.9/42, Error ellipse: s-maj=16.2km s-min=12.8km az=111.0*

*JMA **24** 00:41:57.0±0.1, 37.°51N×141.°82E, h25km±2km, M4.4*
JMA Felt II J1.

*BJI **24** 00:41:58.5±0.0, 37.°70N×141.°80E, h7km, mB4.8/18, mb4.5/26, Ms4.6/1*

*NEIC **24** 00:41:59.4±1.4, 37.°51N±0.°06×141.°81E±0.°08, h22km±4km, mb4.4/100, Error ellipse: s-maj=10.6km s-min=7.3km az=124.0*

ISC 24 00:41:56.0±1.6, **37.°52N**±0.°04×**141.°85E**±0.°04, **h2**km±9km, **n179**, σ1.ˢ00/177, **mb4.4**/67, **MS3.9**/4, **7C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.79	259	P	Pg	00 42 11.4	+0.2
JFK				S	Sg	00 42 21.7	+0.3
JMST	Minamisoumatoc	0.79	285	⇑P	Pg	00 42 11.1	-0.1
JMST				S	Sg	00 42 21.7	+0.2
JIKH	Ishinomakikobu	0.85	339	⇑P	Pg	00 42 12.6	+0.3
JIKH				S	Sg	00 42 24.5	+1.2
JMM	Marumori	0.91	293	⇑P	Pg	00 42 13.1	-0.3
JMM				eS	Sg	00 42 25.0	-0.2
ONAJ	Iwakimizuishiy	0.94	244	⇑P	Pg	00 42 13.7	-0.3
JIO	Ouri	1.01	337	⇑P	Pb	00 42 15.3	-1.0
JIO				S	Sb	00 42 28.6	-1.5
JFT	Otama	1.20	270	P	Pb	00 42 18.4	-1.1
JFT				eS	Sb	00 42 33.6	-1.9
JOU	Okura	1.26	312	⇑P	Pn	00 42 19.6	-1.1
JOU				S	Sb	00 42 36.1	-1.1
JKMT	Kesennumamotoy	1.32	347	P	Pn	00 42 20.3	-1.2
JKMT				eS	Sb	00 42 37.2	-1.8
JMK	Ichinoseki	1.51	341	⇓P	Pn	00 42 23.5	-0.6
JMK				S	Sn	00 42 42.9	-1.5
JYS	Shirataka	1.58	297	P	Pn	00 42 25.1	+0.1
JYS				S	Sb	00 42 45.4	-0.9
JFY	Yanaizu	1.71	267	⇑P	Pn	00 42 26.5	-0.3
JFY				S	Sn	00 42 48.5	-0.8
MJAR	Matsushiro Arr	3.07	253	Pn	Pn	00 42 46.0	+0.5
	1.1nm,0.3s,baz=82,slow=16,SNR=19						
MJAR				Sn	Sn	00 43 24.3	+1.4
	2.3nm,0.3s,baz=78,slow=18,SNR=5.5						
MJAR				LR	LR	00 43 32.5	
	comp=Z,42nm,21.4s,baz=75,slow=33						
MAJO	Matsushiro	3.07	253		Pn	00 42 46.5	+0.9
MAT	Matsushiro	3.07	253	P	Pn	00 42 46.2	+0.6
MAT				S	Sn	00 43 25.0	+2.1
MJB9	Matsu-Tunnel	3.08	253		Pn	00 42 46.6	+1.0
INU	Inuyama	4.46	242		Pn	00 43 06.6	+2.0
ERM	Erimo	4.60	12	Pn	Pn	00 43 06.5	0.0
JHJ2	Mitsune	4.70	201	Pn	Pn	00 43 09.1	+1.2
JHJ	Hachijo jima 2	4.70	202	Pn	Pn	00 43 07.4	-0.6
	41nm,0.3s,baz=101,slow=23,SNR=8.9						
JHJ				Sn	Sn	00 43 58.7	-4.4
	32nm,0.3s,baz=111,slow=23,SNR=6.8						
JHJ				LR	LR	00 45 05.4	
	comp=Z,91nm,20.5s,baz=81,slow=41						
ASAJ	Asahikawa	6.62	5	Pn	Pn	00 43 34.2	0.0
	3.7nm,0.3s,baz=225,slow=12,SNR=10.0						
ASAJ				Sn	Sn	00 44 49.6	-0.6
	0.5nm,0.3s,baz=158,slow=19,SNR=1.6						

ASAJ LR LR 00 46 20.6
comp=Z,82nm,19.2s,baz=142,slow=40
JKA Kamikawa-asahi 6.62 5 Pn 00 43 34.2 0.0
JKA Sn 00 44 49.6 -0.6
YSS Yuzh-Sakhalins 9.45 4 Pn Pn 00 44 13.4 +0.3
JNU Nakatsue 9.98 247 LR LR 00 48 26.2
comp=Z,176nm,18.3s,baz=30,slow=40
JNU Nakatsue 9.98 247 Pn Pn 00 44 20.8 +0.4
USRK Ussuriysk Ar. 10.01 315 Pn Pn 00 44 22.1 +1.4
baz=122,slow=14,SNR=3.9
USRK LR LR 00 47 52.2
comp=Z,138nm,19.2s,baz=165,slow=36
USA0B Ussuriysk Arra 10.01 315 Pn Pn 00 44 21.0 +0.3
KSRS Korea Array 11.07 274 Pn Pn 00 44 40.0 +4.7
baz=88,slow=14,SNR=4.7
KSRS LR LR 00 48 13.9
comp=Z,60nm,21.0s,baz=74,slow=34
KS19 Wonju Array Si 11.11 274 Pn Pn 00 44 37.3 +1.4
MDJ Mudanjiang 11.65 311 Pn Pn 00 44 43.7 +0.5
KLR Kul'dur 13.80 331 LR LR 00 50 03.4
comp=Z,100nm,21.0s,baz=154,slow=35
SSE Sheshan 18.22 256 Pn Pn 00 46 08.2 -1.8
SSE IAmb IAmb 00 46 10.5
comp=Z,37nm,0.7s
NJ2 Nanjing 19.64 261 eP Pn 00 46 28.1 +0.9
NJ2 pmax pmax
comp=Z,14nm,0.5s
MA2 Magadan 22.81 12 P P 00 47 00.7 +0.9
comp=Z,3.3nm,0.5s,baz=118,slow=9.1,SNR=4.0
MA2 Magadan 22.81 12 IAmb IAmb 00 47 02.4
comp=Z,8.1nm,1.1s
KNMB Chin-men Tao 23.88 244 P P 00 47 07.8 -3.2
YAK Yakutsk 25.68 347 P P 00 47 26.1 -0.8
comp=Z,11nm,0.6s,baz=276,slow=1.7,SNR=2.7
YAK Yakutsk 25.68 347 IAmb IAmb 00 47 30.9
comp=Z,18nm,0.6s
SEY Seymchan 26.25 11 P P 00 47 32.1 0.0
comp=Z,3.5nm,0.6s,baz=189,slow=7.7,SNR=10
XAN Xi'an 26.86 273 P P 00 47 37.2 -0.9
XAN IAmb IAmb 00 47 40.2
comp=Z,3.6nm,0.5s
SMY Shemya 27.08 45 P P 00 47 38.5 -1.3
SZP Santa 27.37 229 P 00 47 42.1 -0.6
ULN Ulaanbaatar 27.38 303 P P 00 47 42.3 -0.4
ENH Enshi 27.72 265 P P 00 47 44.8 -1.1
ENH IAmb IAmb 00 47 46.3
comp=Z,6.8nm,0.8s
SONM Songino Array 27.81 303 P P 00 47 46.4 -0.2
comp=Z,1.5nm,0.6s,baz=102,slow=8.8,SNR=15
H11N2 WAKE ISLAND Hy 28.10 122 T T 01 17 17.2
baz=315,slow=75,SNR=617
H11N1 WAKE ISLAND Hy 28.11 122 T T 01 17 17.9
baz=315,slow=75,SNR=528
H11N3 WAKE ISLAND Hy 28.12 122 T T 01 17 12.7
baz=315,slow=75,SNR=508
H11S1 WAKE ISLAND Hy 28.84 124 T T 01 18 07.1
baz=316,slow=76,SNR=489
H11S3 WAKE ISLAND Hy 28.84 124 T T 01 18 07.1
baz=316,slow=76,SNR=562
H11S2 WAKE ISLAND Hy 28.85 124 T T 01 18 08.2
baz=316,slow=76,SNR=412
LZH Lanzhou 30.33 279 eP P 00 48 11.9 +2.8
LZH pP sP 00 48 17.8 +7.9
LZH sP pP 00 48 21.4 +12
LZH pmax pmax
comp=Z,17nm,1.2s
KIWB Kanaga Island 32.02 50 P P 00 48 24.2 +0.6
CD2 Chengdu 32.02 270 P P 00 48 23.1 -0.9
CD2 pmax pmax
comp=Z,10.0nm,0.5s
GTA Gaotai 32.76 287 eP P 00 48 31.8 +1.4
GTA pP sP 00 48 35.6 +4.4
GTA sP pP 00 48 38.5 +7.6
MIDW Midway 35.26 93 P P 00 48 52.7 +0.7
WMQ Urumqi 40.93 296 eP P 00 49 41.8 +1.9
WMQ pmax pmax
comp=Z,7.0nm,0.9s
WMQ pmax pmax
comp=Z,52nm,6.7s
WMQ LR LR
comp=Z,690nm,29.1s
WMQ LR LR
comp=Z,730nm,29.2s
WMQ Urumqi 40.93 296 P P 00 49 39.8 -0.1
WMQ IAmb IAmb 00 49 53.6
comp=Z,7.6nm,1.1s
PBKT Sadao Pong 41.55 251 P P 00 49 44.7 -0.4
CHTO Chiang Mai 41.75 256 P P 00 49 47.0 +0.3
ZAA0 Zalesovo Array 41.85 312 P P 00 49 47.2 +0.1
ZALV Zalesovo Beam 41.85 312 P P 00 49 47.0 -0.2
comp=Z,2.1nm,0.7s,baz=93,slow=7.0,SNR=11
ZALV PcP PcP 00 51 42.7 -0.2
comp=Z,0.3nm,0.3s,baz=103,slow=1.9,SNR=2.6
CHGN Chignik 43.38 45 P P 00 49 57.9 -1.6
MK31 Makanchi Array 44.16 302 P P 00 50 06.1 +0.1
MKAR Makanchi Array 44.16 302 P P 00 50 05.8 -0.2
comp=Z,2.6nm,0.8s,baz=287,slow=10,SNR=27
MAKZ Makanchi 44.37 302 P P 00 50 07.5 -0.2
MAKZ IAmb IAmb 00 50 11.9
comp=Z,4.3nm,0.9s
KURK Kurchatov 45.91 308 P P 00 50 19.5 -0.3
OHAK Old Harbor 46.16 43 P P 00 50 22.6 +0.9
RSO Redoubt South 46.31 39 P P 00 50 24.0 +0.9
SAUI Saumlaki 46.33 195 P P 00 50 23.9 +0.5
KDAK Kodiak Island 46.51 42 P P 00 50 23.1 -1.3
comp=Z,33nm,1.0s,baz=288,slow=19,SNR=3.6
KDAK Kodiak Island 46.51 42 P P 00 50 24.7 +0.2
PPLA Purkeypile 46.57 35 P P 00 50 25.2 +0.2
TRF Thorofare Moun 47.44 34 P P 00 50 32.7 +0.9
GHO Glory Hole Cre 48.12 37 P P 00 50 38.0 +1.0
GHO IAmb IAmb 00 50 44.9
comp=Z,8.2nm,1.1s
WRH Wood River Hil 48.39 33 P P 00 50 39.5 +0.5
WRH IAmb IAmb 00 50 46.9
comp=Z,4.0nm,1.1s
SML Sawmill 48.40 37 P P 00 50 37.9 -1.2
CCB Clear Creek Bu 48.51 33 P P 00 50 40.9 +1.0
DHY Denali Highway 48.76 35 P P 00 50 42.4 +0.3
SCM Sheep Creek Mo 48.87 37 P P 00 50 43.8 +0.9
IL31 48.90 33 P P 00 50 42.7 -0.2
ILAR Eielson Array 48.90 33 P P 00 50 43.6 +0.7
comp=Z,1.2nm,0.6s,baz=265,slow=6.2,SNR=15
PRP Porcupine Dome 49.44 32 P P 00 50 48.3 +1.0
FYU Fort Yukon 49.52 30 P P 00 50 49.1 +1.5
BOOM Boomskoye usch 49.59 298 P P 00 50 48.7 -0.1
BOOM IAmb IAmb 00 50 57.4
comp=Z,11nm,1.0s
DOT Dot Lake 50.21 34 P P 00 50 53.4 +0.4
DOT IAmb IAmb 00 50 56.8
comp=Z,7.9nm,1.1s
SCRK Sand Creek 50.21 34 P P 00 50 53.4 +0.3
KSH Kashi 50.53 294 P P 00 51 05.6 +10
KSH sP PcP 00 52 10.8 -3.0
BRVK Borovoye 50.56 312 P P 00 50 56.0 +0.3
BRVK IAmb IAmb 00 51 04.5
comp=Z,2.4nm,0.8s
AAK Ala-Archa 50.57 298 P P 00 50 56.2 +0.1
AAK IAmb IAmb 00 51 05.3
comp=Z,3.4nm,1.0s
PBA Port Blair 50.83 253 P P 00 50 58.4 +0.2
INK Inuvik 53.80 27 P P 00 51 20.6 +1.1
comp=Z,1.5nm,0.6s,baz=272,slow=6.7,SNR=7.4
INK Inuvik 53.80 27 P P 00 51 20.4 +0.9
INK IAmb IAmb 00 51 21.6
comp=Z,4.8nm,1.1s
NIL Nilore 54.80 288 P P 00 51 27.6 +0.2
NIL IAmb IAmb 00 51 36.9
comp=Z,5.3nm,0.9s
WHY Whitehorse 54.99 37 P P 00 51 29.7 +1.1
WHY IAmb IAmb 00 51 36.3
comp=Z,4.5nm,1.1s
SIT Sitka 55.79 41 P P 00 51 33.8 -0.4
ARU Arti 56.23 318 P P 00 51 37.2 -0.2
ARU IAmb IAmb 00 51 45.7
comp=Z,6.9nm,1.1s
C36M Paulatuk 56.84 25 P P 00 51 42.7 +1.2
C36M IAmb IAmb 00 51 43.3
comp=Z,6.6nm,0.9s
MWH Moku'aweowe 56.85 90 P P 00 51 42.6 -0.3
HMH Humu'ula Sheep 56.88 90 P P 00 51 43.8 +1.0
AIN Ainahou 57.02 90 P P 00 51 44.8 +1.1
WRAB Tennant Creek 57.58 188 P P 00 51 47.8 +0.6
WRAB IAmb IAmb 00 51 52.2
comp=Z,3.7nm,0.8s
WR0 Warramunga Arr 57.58 188 P P 00 51 47.1 -0.1
WR0 IAmb IAmb 00 51 51.9
comp=Z,4.2nm,0.7s
WRA Warramunga Arr 57.59 188 P P 00 51 47.0 -0.4
comp=Z,2.8nm,0.5s,baz=4.5,slow=7.3,SNR=19
ASAR Alice Springs 61.32 188 P P 00 52 12.8 -0.2
comp=Z,0.7nm,0.8s,baz=8.1,slow=5.1,SNR=8.2
RES Resolute Bay 62.05 15 P P 00 52 17.1 -0.2
comp=Z,3.0nm,0.8s,baz=299,slow=6.8,SNR=15
RES Resolute Bay 62.05 15 IAmb IAmb 00 52 18.2
comp=Z,3.0nm,0.8s
YKA Yellowknife Ar 63.21 30 P P 00 52 25.8 +0.5
comp=Z,1.2nm,0.7s,baz=304,slow=6.7,SNR=23
FIA1 FINESS Array S 68.55 332 P P 00 52 59.8 +0.1
FINES FINESS Array B 68.55 332 P P 00 52 59.0 -0.7
comp=Z,3.4nm,0.8s,baz=72,slow=6.2,SNR=7.0
FINES LR LR 01 26 24.2
comp=Z,87nm,18.0s,baz=258,slow=39
STKA Stephens Creek 69.04 180 P P 00 53 01.8 -1.2
comp=Z,0.8nm,0.4s,baz=350,slow=9.8,SNR=3.8
FORT Forrest 69.16 193 P P 00 53 04.4 +0.7
PINE Pine Mountain 69.76 50 P P 00 53 07.9 +0.1
WALA Waterton Lakes 70.84 42 P P 00 53 15.0 +0.7
WALA IAmb IAmb 00 53 16.2
comp=Z,3.7nm,0.8s
KBZ Khabaz 70.85 311 LR LR 01 27 48.1
comp=Z,51nm,18.1s,baz=20,slow=39
PAHR Pah Rah Range 73.00 53 P P 00 53 26.7 -0.7
PAHR IAmb IAmb 00 53 30.0
comp=Z,2.9nm,1.1s
FFC Flin Flon 73.11 33 P P 00 53 28.4 +0.9
FFC IAmb IAmb 00 53 29.0
comp=Z,2.9nm,0.9s
PNTR Pine Nut 73.21 53 P P 00 53 29.0 +0.3
PNTR IAmb IAmb 00 53 31.3
comp=Z,2.1nm,0.8s
CMB Columbia Colle 73.31 55 P P 00 53 30.2 +1.1
CMB IAmb IAmb 00 53 31.2
comp=Z,2.4nm,0.8s
YERR Yerington 73.50 53 P P 00 53 31.1 +0.6
YERR IAmb IAmb 00 53 32.4
comp=Z,2.6nm,0.8s
LRM Limekiln Ridge 73.56 45 P P 00 53 26.5 -4.2
WAKR Walker 73.65 54 P P 00 53 32.2 +0.9
EGMT Eagleton 73.68 42 P P 00 53 31.9 +0.7
EGMT IAmb IAmb 00 53 33.0
comp=Z,4.0nm,0.9s
DLMT Dillon 73.75 45 P P 00 53 32.2 +0.4
DLMT IAmb IAmb 00 53 33.9
comp=Z,3.2nm,0.8s
NC204 NORSAR Array S 73.83 338 P P 00 53 32.2 +0.4
NB201 NORSAR Array S 73.84 337 P P 00 53 31.9 +0.1
NB2 NORSAR Subarra 73.87 337 P P 00 53 32.0 0.0
comp=Z,0.8nm,0.7s,baz=40,slow=6.2
NOA NORSAR Array B 73.87 337 P P 00 53 31.0 -1.1
comp=Z,1.6nm,0.8s,baz=39,slow=5.7,SNR=3.9
NOA LR LR 01 28 48.1
comp=Z,28nm,19.4s,baz=270,slow=38
AKASG Malin Array Be 74.13 322 P P 00 53 32.8 -0.8
comp=Z,1.4nm,0.5s,baz=47,slow=5.9,SNR=11
RYN Ryan 74.16 53 P P 00 53 34.7 +0.4
RYN IAmb IAmb 00 53 37.1
comp=Z,3.3nm,1.2s
KVN Kaiserville 74.19 53 P P 00 53 35.6 +1.1
KVN IAmb IAmb 00 53 36.8
comp=Z,5.7nm,1.1s
NVAR Mina Array Bea 74.42 53 P P 00 53 37.4 +1.5
comp=Z,1.9nm,0.8s,baz=292,slow=5.9,SNR=13
PAGB Antelope Grade 74.71 57 P P 00 53 38.2 +0.8
PAGB IAmb IAmb 00 53 39.9
comp=Z,5.5nm,0.8s
YHL Hebgen Lake 74.86 45 P P 00 53 38.2 -0.2
YHB Horse Butte 74.91 45 P P 00 53 39.0 +0.3
YHH Holmes Hill 75.08 45 P P 00 53 40.0 +0.3
GCMT Greycliff 75.11 43 P P 00 53 39.2 -0.4
YNR Norris Junctio 75.22 45 P P 00 53 40.7 +0.3
H17A Grant Village 75.48 45 P P 00 53 43.3 +1.4
H17A IAmb IAmb 00 53 46.0
comp=Z,4.5nm,0.8s
FXWY Fox Creek 75.70 46 P P 00 53 43.9 +0.7
FXWY IAmb IAmb 00 53 46.0
comp=Z,3.6nm,1.1s
RLMT Red Lodge 75.75 44 P P 00 53 44.4 +0.9
R11A Troy Canyon, C 76.19 52 P P 00 53 46.9 +0.9
TPNV Topopah Spring 76.61 54 IAmb IAmb 00 53 50.4
comp=Z,3.0nm,0.8s
BW06 Boulder Array 77.08 46 P P 00 53 51.2 +0.2
BW06 IAmb IAmb 00 53 52.6
comp=Z,2.2nm,0.6s
PD31 Pinedale Array 77.08 46 P P 00 53 51.4 +0.4
PDAR Pinedale Array 77.08 46 P P 00 53 52.0 +0.9
comp=Z,1.5nm,0.6s,baz=78,slow=1.8,SNR=20
PSUT Pine Spring 77.16 51 P P 00 53 51.6 +0.1
NLU North Lily Min 77.37 49 P P 00 53 53.2 +0.5
SHPR Sheep Range 77.57 54 P P 00 53 54.6 +0.8
SHPR IAmb IAmb 00 53 56.3
comp=Z,2.7nm,0.9s
MPU Maple Canyon 77.60 49 P P 00 53 53.2 -0.7
MSU Marysvale 78.20 50 P P 00 53 57.5 +0.1
RDMU Red Mountain 78.47 47 P P 00 53 59.0 +0.2
P17A Butcher Ranch, 78.48 49 P P 00 53 58.1 -0.7
LCMT Little Creek M 78.48 52 P P 00 53 59.5 +0.7
109C Camp Elliot, M 78.49 57 P P 00 53 58.5 -0.2
109C IAmb IAmb 00 54 00.1
comp=Z,3.9nm,0.6s
MTPU Mount Pierson 78.49 51 P P 00 53 60.0 +0.8
SRU San Rafael Swe 78.83 49 P P 00 54 01.0 +0.2
ULM Lac du Bonnet 78.91 34 P P 00 54 00.9 +0.2
comp=Z,0.8nm,0.5s,baz=296,slow=4.2,SNR=3.5
RSSD Black Hills 79.24 42 P P 00 54 02.8 -0.1
U15A North Rim 79.44 52 P P 00 54 05.0 +0.7
WUAZ Wupatki 80.59 52 P P 00 54 10.8 +0.4
WUAZ IAmb IAmb 00 54 12.9
comp=Z,3.1nm,0.9s
BRG Berggiesshubel 80.81 330 e(P) P 00 54 12.1 +1.0
comp=Z,5.6nm,1.4s
CLL Collm 80.85 330 eP P 00 54 12.0 +0.8
comp=Z,15nm,1.4s
X16A Lo Mia Camp, P 81.24 53 P P 00 54 14.3 +0.4
214A Organ Pipe Nat 81.92 56 P P 00 54 17.9 +0.6
GERES GERESS Array B 82.48 328 P P 00 54 19.9 -0.2
comp=Z,0.4nm,0.4s,baz=36,slow=7.0,SNR=4.5
E38A The Farm, Brul 83.54 34 P P 00 54 24.7 -0.8
E38A IAmb IAmb 00 54 41.2
comp=Z,6.3nm,1.1s
T25A Trinidad 83.75 47 P P 00 54 27.9 +0.9
T25A IAmb IAmb 00 54 29.0
comp=Z,2.6nm,0.8s
ANMO Albuquerque 84.01 50 P P 00 54 30.0 +1.7
ANMO IAmb IAmb 00 54 31.0
comp=Z,1.7nm,0.9s
319A Douglas 84.59 54 P P 00 54 30.7 -0.5
319A IAmb IAmb 00 54 34.0
comp=Z,3.7nm,1.0s
SCHQ Schefferville 84.78 16 P P 00 54 32.1 +0.5
comp=Z,1.3nm,0.6s,baz=348,slow=7.4,SNR=4.5
SCHQ Schefferville 84.78 16 IAmb IAmb 00 54 49.9
comp=Z,2.1nm,1.1s
COWI Conover 84.99 33 P P 00 54 30.5 -2.4
TX31 Lajitas Ar. Si 89.55 53 IAmb IAmb 00 54 57.0
comp=Z,1.1nm,0.7s
TX32 Lajitas Array 89.55 53 IAmb IAmb 00 54 57.0
comp=Z,1.1nm,0.7s
TXAR Lajitas Array 89.55 53 P P 00 54 56.3 +1.0
comp=Z,0.8nm,0.6s,baz=303,slow=2.8,SNR=20
BATG Bathurst New B 91.97 19 P P 00 55 06.6 +0.5
LPAZ La Paz 146.15 59 PKPbc PKPbc 01 01 39.1 +0.2
comp=Z,3.7nm,0.7s,baz=321,slow=3.2,SNR=15
LPAZ La Paz 146.15 59 PKPab 01 01 39.5 -0.1

GII **24** *00:52:13.8±0.4, 33.24N×35.40E, h1km, MD3.1/7, Mm2.9/8*
NIC **24** *00:52:13.5±0.0, 33.41N×35.65E, h19km±1km, Ml3.1/3*
GRAL **24** *00:52:14.8±0.4, 33.25N×35.38E, h2km±5km, MD3.5*
ISC 24 00:52:14.3±0.9,**33.26N**±0.02×**35.39E**±0.03,**h10**km±7km,
n42,σ0.67/64,**Jordan-Syria region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSDI Kefar Szold 0.23 107 P Pg 00 52 18.7 -0.4
KSDI S **Sg 00 52 23.1 +0.7**
KSDI AML AML 00 52 23.6
12nm,0.4s
KSDI AML AML 00 52 23.6
12nm,0.4s
KSDI AML AML 00 52 23.9
19nm,0.6s
KSDI AML AML 00 52 23.9
19nm,0.6s
KSDI Kefar Szold 0.23 107 Pg Pg 00 52 18.8 -0.3
KSDI Sg **Sg 00 52 22.5 +0.1**
MMA0B Mount Meron ar 0.25 178 Pg Pg 00 52 19.0 -0.4
MMA0B Sg **Sg 00 52 22.8 0.0**
HNTI Hanita 0.26 226 Pg Pg 00 52 19.2 -0.4
HNTI Sg **Sg 00 52 23.6 +0.5**
NATI Neve Ativ 0.29 90 Pg Pg 00 52 19.8 -0.3
NATI Sg **Sb 00 52 25.0 -1.3**
QRWL Qaraoun 0.37 40 eP Pg 00 52 21.7 -0.1
QRWL eS **Sg 00 52 27.1 +0.4**
RCY Rachaya 0.44 58 eP Pg 00 52 22.9 -0.1
RCY eS **Sg 00 52 29.0 +0.2**
KSHT Keshet 0.45 129 Pg Pg 00 52 23.1 0.0
DQRL Deir Qamar 0.47 18 eP Pg 00 52 23.5 0.0
DQRL eS **Sg 00 52 30.0 +0.3**
BLGI Bet Lehem HaGe 0.55 198 Pg Pg 00 52 24.6 -0.5
BLGI Sg **Sb 00 52 32.9 -1.2**
BEYL Beirut 0.61 8 eP Pg 00 52 26.4 +0.4
BHL Bhannes 0.68 19 eP Pg 00 52 27.3 -0.1
BHL eS **Sg 00 52 36.5 +0.2**
OFRI `Ofer 0.73 208 Pg Pg 00 52 28.0 -0.3
OFRI Sg **Sb 00 52 39.2 +0.2**
MMLI Mount Malkishu 0.82 178 Pg Pg 00 52 29.5 -0.7
MMLI Sg **Sb 00 52 41.0 -0.8**
QRNJ Al-Qirein 0.94 171 Pg Pg 00 52 31.5 -0.8
HMDT Nahal Hemdat 1.01 174 Pg Pg 00 52 32.8 -1.0
HMDT Sg **Sb 00 52 47.6 +0.4**
SLTI Sal'it 1.06 196 Pg Pg 00 52 33.9 -0.8
SLTI Sg **Sb 00 52 48.6 -0.1**
HWQ Hawqa 1.11 24 eP Pg 00 52 35.1 -0.6
DSI Dead Sea 1.69 180 Pn Pn 00 52 43.6 -0.2
DSI Sn **Sn 00 53 05.9 +0.4**
AMAZ Amatzia 1.77 193 P Pn 00 52 46.0 +1.0
AMAZ S **Sg 00 53 10.7 -0.6**
AMAZ Amatzia 1.77 193 Pn Pn 00 52 45.7 +0.7
YTIR Yattir 1.91 187 Pn Pn 00 52 47.4 +0.5
YTIR Sn **Sb 00 53 13.0 -0.1**
GHAJ Ghor Haditha 1.96 176 Pn Pn 00 52 47.9 +0.4
PARAL Paralimni 2.06 327 S Sn 00 53 13.8 -0.9
DAMI2 DAM2 2.08 179 Pn Pn 00 52 50.0 +0.8
KARJ KARJ 2.15 174 Pg Pn 00 52 37.4 -13
KARJ Sg Sn 00 52 55.4 -21
MVOU Mavrovouni 2.28 321 P Pn 00 52 50.4 -1.6
MVOU S **Sn 00 53 20.2 +0.1**
MVOU AML AML 00 53 22.3
0.1nm,0.5s
MVOU AML AML 00 53 22.3
0.1nm,0.5s
MVOU AML AML 00 53 26.5
0.1nm,0.5s
MVOU AML AML 00 53 26.5
0.1nm,0.5s
ASGA Asgata 2.34 311 P Pn 00 52 52.9 +0.1
CSS Mathiatis 2.41 315 P Pn 00 52 52.6 -1.1
CSS Mathiatis 2.41 315 Pn Pn 00 52 54.3 +0.5
KZIT Kziot 2.50 200 P Pn 00 52 56.6 +1.6
KZIT S **Sb 00 53 29.9 -0.1**
KZIT Kziot 2.50 200 Pn Pn 00 52 55.2 +0.2
SZAC Souni 2.56 306 P Pn 00 52 55.3 -0.6
SZAC S **Sn 00 53 28.3 +1.2**
SZAC AML AML 00 53 31.1
0.2nm,0.3s
SZAC AML AML 00 53 31.1
0.2nm,0.3s
SZAC AML AML 00 53 31.3
0.2nm,0.3s
SZAC AML AML 00 53 31.3
0.2nm,0.3s
OSC2 CSNet OBS 4 2.63 267 P Pn 00 52 58.0 +1.2
OSC2 S **Sb 00 53 33.3 -0.5**
ZFRI Zfri 2.71 184 Pn Pn 00 52 58.2 +0.4
PRNI Paran 2.92 187 Pn Pn 00 53 01.6 +0.8
ALFC Alefka 2.99 310 P Pn 00 53 01.7 0.0
ALFC S **Sn 00 53 38.5 +0.8**
AKMS Akamas 3.08 305 P Pn 00 53 03.3 +0.2
AKMS S **Sn 00 53 40.6 +0.6**
KRMI Paran Flat 3.19 190 Pn Pn 00 53 04.8 +0.3
HRFI Mount Harif 3.23 186 Pn Pn 00 53 05.4 +0.3
MBRI Mt Berech 3.48 187 Pn Pn 00 53 09.3 +0.7
EIL Elat 3.60 186 Pn Pn 00 53 11.1 +1.0

IDC **24** *01:03:49.6±1.1, 37.40S×177.06E, h294km±11km, mb3.0/2, mb1 3.3/3, mb1mx3.1/22, mbtmp3.8/3, Error ellipse: s-maj=46.7km s-min=25.0km az=132.0*
WEL **24** *01:03:49.9, 37°S±8°×17°7E±°, h288km±8km, M3.1/27, MLv3.1/27, Error ellipse: s-maj=0.0km s-min=0.0km az=160.4*
ISC 24 01:03:49.5±1.1,**37.15S**±0.08×**176.93E**±0.08,**h293**km±7km,
n118,σ1.58/127,**North Island**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
OPRZ Ohinepanea 0.75 203 P Pn 01 04 28.6 +0.6
MARZ Manawahe 0.85 194 P Pn 01 04 29.7 +1.2
HAZ Te Kaha 0.91 132 P Pn 01 04 28.6 -0.1
HAZ S **S 01 04 56.4 -3.3**
RUGZ Raukumara Rang 1.00 144 P Pn 01 04 28.8 -0.4
RUGZ S **S 01 04 58.8 -2.1**
KARZ Kaharoa 1.02 212 P Pn 01 04 30.5 +1.3
KMRZ Kaimai 1.05 228 P Pn 01 04 30.6 +1.2
MKRZ Makatiti 1.05 200 P Pn 01 04 31.7 +2.2
OMRZ Omania 1.05 205 P Pn 01 04 30.7 +1.3
KUZ Kuaotunu 1.05 292 P Pn 01 04 28.9 -0.5
URZ Urewera 1.11 173 P Pn 01 04 30.0 +0.4
30nm,0.3s,baz=93,slow=17,SNR=130
URZ S **S 01 05 00.1 -1.5**
34nm,0.3s,baz=87,slow=18,SNR=27
URZ Urewera 1.11 173 P Pn 01 04 30.0 +0.4
URZ S **S 01 05 00.4 -1.2**
TARZ Mount Tarawera 1.13 197 P Pn 01 04 31.4 +1.5
MXZ Matakaoa Point 1.17 111 P Pn 01 04 29.6 -0.3
MXZ S **S 01 04 59.5 -2.6**
PKGZ Pakihiroa 1.17 129 P Pn 01 04 30.4 +0.4
PKGZ S **S 01 04 59.6 -2.6**
HLRZ Highlands Stat 1.19 203 P Pn 01 04 31.9 +1.8
RRRZ Republican Roa 1.23 195 P Pn 01 04 31.5 +1.2
MWZ Matawai 1.27 158 P Pn 01 04 31.2 +0.6
MWZ S **S 01 05 02.7 -0.5**
TOZ Tahuroa Road 1.28 243 P Pn 01 04 32.2 +1.6
HSRZ Hossack Road 1.28 205 P Pn 01 04 32.8 +2.3
MUGZ Murupara 1.33 185 P Pn 01 04 31.7 +0.9
WMGZ Waiomatatini S 1.35 120 P Pn 01 04 31.3 +0.3
WMGZ S **S 01 05 02.6 -1.4**
RAGZ Rawiri 1.39 164 P Pn 01 04 32.7 +1.3
PUZ Puketiti 1.40 131 P Pn 01 04 31.7 +0.4
PRRZ Plateau Road 1.41 197 P Pn 01 04 32.9 +1.5
RTZ Ruatahuna 1.46 178 P Pn 01 04 32.6 +0.9
TKGZ Te Karaka 1.48 151 P Pn 01 04 32.8 +1.0
ALRZ Allen Road 1.48 198 P Pn 01 04 33.3 +1.5
WIAZ Waiheke Island 1.48 283 P Pn 01 04 32.1 +0.2
KUTZ Kaahu Road 1.60 213 P Pn 01 04 34.8 +2.2
TLZ Tolley Road 1.61 223 P Pn 01 04 35.0 +2.2
SNGZ Shannon Statio 1.66 169 P Pn 01 04 34.5 +1.5
MBAZ Motutapu North 1.67 283 P Pn 01 04 33.6 +0.4
RIGZ Rimuhau 1.68 157 P Pn 01 04 34.7 +1.5
MTHZ Maungataniwha 1.70 182 P Pn 01 04 34.5 +1.2
MRHZ Matea Rd 1.73 193 P Pn 01 04 34.9 +1.3
RAHZ Arahi 1.76 176 P Pn 01 04 35.5 +1.8
WATZ Wairara 1.82 211 P Pn 01 04 36.3 +2.1
AWAZ Awhitu Peninsu 1.83 272 P Pn 01 04 35.2 +0.8
HATZ Hinemaiaia 1.86 201 P Pn 01 04 36.2 +1.7
WHHZ Waihua 1.94 173 P Pn 01 04 36.9 +1.8
RATZ Rangitukua 1.94 208 P Pn 01 04 37.1 +1.9
NMHZ Naumai 1.94 183 P Pn 01 04 37.3 +2.1
KNZ Kokohu 1.96 163 P Pn 01 04 36.5 +1.3
RITZ Rihia Road 2.01 205 P Pn 01 04 37.8 +2.1
BKZ Black Stump Fm 2.04 190 P Pn 01 04 37.1 +1.1
KATZ Kakaramea 2.06 208 P Pn 01 04 38.7 +2.4
ARHZ Aropaoanui 2.11 179 P Pn 01 04 38.4 +1.9
HIZ Hauiti 2.13 230 P Pn 01 04 39.4 +2.8
MHGZ Mahia Peninsul 2.14 159 P Pn 01 04 38.5 +1.8
KRVZ Karewarewa 2.19 207 P Pn 01 04 39.4 +2.1
WTVZ West Tongariro 2.23 208 P Pn 01 04 39.3 +1.7
TWVZ Taurewa 2.25 211 P Pn 01 04 39.7 +1.9
NGZ Ngauruhoe 2.27 207 P Pn 01 04 40.2 +2.1
MCHZ McNeill Hill 2.29 185 P Pn 01 04 40.1 +2.1

KWHZ Kaweka Forest 2.30 190 P Pn 01 04 39.9 +1.7
TUVZ Tukino 2.34 205 P Pn 01 04 40.5 +1.9
FWVZ Far West T-bar 2.36 207 P Pn 01 04 40.7 +1.8
WHVZ Whangaehu Hut 2.37 206 P Pn 01 04 40.8 +1.8
TRVZ Turoa 2.40 207 P Pn 01 04 41.0 +1.7
BHHZ Black Hill Sta 2.43 196 P Pn 01 04 40.7 +1.3
MOVZ Moawhango 2.43 202 P Pn 01 04 40.7 +1.3
PKVZ Pokaka 2.47 210 P Pn 01 04 41.6 +1.9
CKHZ Cape Kidnapper 2.50 177 P Pn 01 04 41.7 +1.8
MTVZ Mangateitei 2.51 207 P Pn 01 04 41.8 +1.8
KRHZ Kereru 2.52 190 P Pn 01 04 41.5 +1.3
VRZ Vera Road 2.61 220 P Pn 01 04 43.6 +2.7
KAHZ Kahuranaki 2.64 181 P Pn 01 04 43.1 +1.9
PNHZ Pukenui 2.81 192 P Pn 01 04 44.1 +1.2
PXZ Pawanui 2.87 181 P Pn 01 04 45.1 +1.7
WPHZ Waipukurau 2.93 187 P Pn 01 04 46.3 +2.3
TSZ Takapari Road 3.00 194 P Pn 01 04 45.9 +1.2
WAZ Wanganui 3.01 210 P Pn 01 04 46.7 +1.9
PKE Pukeiti 3.09 228 P Pn 01 04 49.0 +3.4
PRHZ Porangahau 3.12 184 P Pn 01 04 47.4 +1.5
KHEZ Kahui Hut 3.14 226 P Pn 01 04 49.3 +3.2
DVHZ Dannevirke 3.20 191 P Pn 01 04 48.1 +1.4
OUZ Omahuta 3.32 305 P Pn 01 04 47.4 -0.7
ANWZ Angora Road 3.32 186 P Pn 01 04 49.6 +1.7
POWZ Post Office Ro 3.36 195 P Pn 01 04 49.8 +1.5
PRWZ Pori Road 3.48 192 P Pn 01 04 51.6 +2.0
BFZ Birch Farm 3.56 188 P Pn 01 04 51.8 +1.3
MRZ Mangatainoka R 3.66 196 P Pn 01 04 52.4 +0.9
TIWZ Tintock 3.71 192 P Pn 01 04 53.7 +1.6
CPWZ Castlepoint 3.79 188 P Pn 01 04 55.2 +2.3
HOWZ Holdsworth Sta 3.90 196 P Pn 01 04 54.8 +0.6
OGWZ Otaki Gorge 3.91 200 P Pn 01 04 55.2 +1.0
KIW Kapiti Island 4.02 202 P Pn 01 04 56.1 +0.6
TMWZ Te Maipa 4.03 191 P Pn 01 04 57.1 +1.5
MTW Mount Morrison 4.15 195 P Pn 01 04 57.5 +0.6
CAW Cannon Point 4.21 200 P Pn 01 04 58.2 +0.7
DUWZ D'Urville Isla 4.33 212 P Pn 01 04 59.5 +0.5
TRWZ Traveller 4.35 192 P Pn 01 05 00.5 +1.4
PAWZ Paruwai Farm 4.38 195 P Pn 01 05 00.5 +0.9
MSWZ Moikau Station 4.45 197 P Pn 01 05 00.8 +0.5
WEL Wellington 4.45 201 P Pn 01 05 01.1 +0.8
BHW Baring Head 4.54 200 P Pn 01 05 02.2 +1.0
TCW Tory Channel 4.55 206 P Pn 01 05 02.2 +0.9
PLWZ Palliser 4.60 196 P Pn 01 05 02.5 +0.5
TUWZ Tuamarina 4.86 208 P Pn 01 05 05.8 +0.8
NNZ Nelson 4.91 213 P Pn 01 05 05.8 +0.3
QRZ Quartz Range 5.02 222 P Pn 01 05 06.7 -0.2
BSWZ Blackbirch Sta 5.13 206 P Pn 01 05 09.2 +1.0
THZ Tophouse 5.56 213 P Pn 01 05 13.4 +0.1
KHZ Kahutara 5.87 205 P Pn 01 05 18.2 +1.3
DSZ Denniston Nort 6.06 219 P Pn 01 05 20.0 +0.7
GVZ Greta Valley S 6.53 206 P Pn 01 05 25.9 +1.0
LTZ Lake Taylor 6.66 211 P Pn 01 05 27.4 +0.8
AMCZ Amberley 6.85 207 P Pn 01 05 29.5 +0.8
INZ Inchbonnie 6.98 215 P Pn 01 05 30.6 +0.2
MQZ McQueen's Vall 7.31 205 P Pn 01 05 34.4 +0.1
AKCZ Akaroa Harbour 7.38 203 P Pn 01 05 36.5 +1.3
RPZ Rata Peaks 7.94 213 P Pn 01 05 41.6 -0.6
1.1nm,0.3s,baz=25,slow=14,SNR=3.7
RPZ S S 01 07 09.1 -4.2
1.3nm,0.3s,baz=312,slow=23,SNR=12
ODZ Otahua Downs 9.20 209 P Pn 01 05 59.4 +1.8
JCZ Jackson Bay 9.28 219 P Pn 01 05 58.8 +0.1
TUZ Tuapeka 10.35 210 P Pn 01 06 13.8 +2.1
ASAR Alice Springs 39.14 278 P P 01 10 51.1 +1.6
0.7nm,0.6s,baz=120,slow=8.0,SNR=8.6
WRA Warramunga Arr 40.78 283 P P 01 11 03.6 +0.7
0.4nm,0.3s,baz=121,slow=7.8,SNR=6.4
FINES FINESS Array B 149.62 332 PKPbc PKPbc 01 23 03.2 -0.3
5.1nm,1.0s,baz=144,slow=1.2,SNR=2.7

IDC 24 01:17:59.6±1.9, 52.94N×153.91E, h419km±19km, mb2.8/8, mb1 3.0/9, mb1mx2.8/41, mbtmp3.6/9, Error ellipse: s-maj=53.9km s-min=16.2km az=175.0
KRSC 24 01:17:59.1±1.5, 52.30N×155.15E, h456km±23km, ML3.9
ISC 24 01:17:58.5±1.0, 52.4N±0.1×154.5E±0.1, h450km, n29, σ1§97/36, mb3.2/8, Northwest of Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
APC Apacha 1.69 69 eP P 01 18 56.4 -0.9
ASAK Asacha 2.06 88 eP P 01 18 59.7 +0.3
PETK Petropavlovsk- 2.06 67 P P 01 18 58.8 -0.5
1.2nm,0.3s,baz=222,slow=7.8,SNR=14
GRL Gorelyy 2.17 84 eP P 01 19 00.5 +0.4
MTVR Mutnovka 2.23 85 eP P 01 19 00.8 +0.3
KRMR Karymshinskiy 2.24 76 eP P 01 19 00.3 0.0
KDTR Khodutka, Kamc 2.25 103 eP P 01 19 00.3 -0.1
KDTR eS S 01 19 47.7 -3.0
RUS Russkaya 2.43 87 eP P 01 19 01.6 +0.1
RUS eS S 01 19 50.2 -2.6
DALK Dalny 2.65 74 eP P 01 19 03.1 +0.2
DALK eS S 01 19 54.4 -0.9
KRX Arik 2.68 67 eP P 01 19 03.9 +0.6
AVH Avacha 2.70 69 eP P 01 19 04.9 +1.5
KRER Koryakskii 2.72 68 eP P 01 19 04.6 +0.9
UGLR Uglovaya 2.73 70 eP P 01 19 04.9 +1.2
SMAR Somma 2.74 69 eP P 01 19 04.8 +1.0
SDLR Sedlovina 2.79 69 eP P 01 19 04.5 +0.5
NLC Nalytchevo 3.03 73 eP P 01 19 06.4 +0.8
NLC eS S 01 19 57.6 -2.6
SPN Mys Shipunski 3.41 75 eP P 01 19 07.8 -0.8
SPN eS S 01 20 00.7 -5.0
KZV Kizimen 4.39 49 eP P 01 19 17.4 +0.3
KZV eS S 01 20 17.2 -4.1
TUMR Tumrok 4.42 46 eP P 01 19 18.1 +0.7
TUMR eS S 01 20 18.9 -2.9
TUMD Tumrok D 4.49 48 eP P 01 19 18.1 +0.2
TUMD eS S 01 20 18.6 -4.2
KMNR Kamenistaya 4.78 42 eP P 01 19 21.7 +1.0
ILAR Eielson Array 31.71 44 P P 01 23 45.0 +1.8
0.3nm,0.8s,baz=264,slow=8.1,SNR=4.0
INK Inuvik 36.49 36 P P 01 24 25.9 +2.5
0.6nm,0.3s,baz=300,slow=8.1,SNR=8.2
MKAR Makanchi Array 45.38 293 P P 01 25 34.4 -0.7
0.7nm,0.5s,baz=58,slow=7.4,SNR=22
YKA Yellowknife Ar 45.94 40 P P 01 25 40.1 +1.1
0.5nm,0.7s,baz=307,slow=7.1,SNR=9.9
FINES FINESS Array B 59.37 334 P P 01 27 14.1 -1.5
2.6nm,0.9s,baz=36,slow=5.2,SNR=3.0
PDAR Pinedale Array 60.79 57 P P 01 27 29.0 +3.3
0.1nm,0.4s,baz=306,slow=6.6,SNR=4.0
AKASG Malin Array Be 67.41 326 P P 01 28 06.3 -1.2
0.6nm,0.5s,baz=32,slow=7.1,SNR=2.6
TXAR Lajitas Array 74.00 63 P P 01 28 51.7 +4.6
0.1nm,0.3s,baz=297,slow=4.0,SNR=2.7

IDC 24 01:19:40.7±0.6, 15.79S×174.85W, h0km, mb4.5/15, mb1 4.7/16, mb1mx4.6/32, mbtmp4.5/16, ML3.8/1, MS4.2/28, Ms1 4.2/28, ms1mx4.2/30, Error ellipse: s-maj=27.2km s-min=16.0km az=142.0
NEIC 24 01:19:40.4±2.5, 15.97S±0.10×174.55W±0.08, h10km±1km, mb4.6/83, Error ellipse: s-maj=18.1km s-min=10.8km az=149.0
GCMT 24 01:19:45.4±0.2, 15.97S±0.02×174.69W±0.01, h14km±1km, MW5.0/113, Moment Tensor Solution. s45,c58; s113,c177; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.91±.12; $M_{\theta\theta}$-2.50±.10; $M_{\phi\phi}$3.42±.11; $M_{r\theta}$-0.35±.23; $M_{r\phi}$-2.52±.09; $M_{\theta\phi}$1.51±.25; Best double couple: $M_0$4.10400×10^{16} NP1:ϕ_s294.00000°, δ76.00000°, λ173.00000°. NP2:ϕ_s25.00000°, δ83.00000°, λ14.00000°. Principal axes: T 4.7640, Plg15.0000°, Azm250.0000°; N -1.3130, Plg74.0000°, Azm51.0000°; P -3.4440, Plg5.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 24 01:19:40.8±0.4, 15.98S±0.08×174.52W±0.06, h10km, n159, σ1§65/106, mb4.6/49, MS4.2/28, 10C-6D, Tonga Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AFI Afiamalu 3.35 52 Pn Pn 01 20 32.2 -1.1
19nm,0.3s,baz=142,slow=5.7,SNR=13
AFI LR LR 01 21 47.1
comp=Z,5μm,19.4s,baz=214,slow=36
AFI T T 01 24 21.7
16nm,0.3s,baz=264,slow=18,SNR=5.8
AFI Afiamalu 3.35 52 Pn 01 20 32.6 -0.7
AFI Sn Sn 01 21 09.6 -3.7
NIUE Niue 5.35 126 Pn Pn 01 21 00.9 +0.2
MSVF Nonsavu 7.33 255 Pn 01 21 26.8 -1.2
RAO Raoul Island 13.57 193 LR LR 01 26 33.7
comp=Z,898nm,21.6s,baz=351,slow=30
RAR Rarotonga 14.91 113 Pn Pn 01 23 09.8 -1.9
SANVU Saraoutou 17.61 269 P Pn 01 23 44.6 -1.9
SANVU IAmb IAmb 01 23 58.8
comp=Z,72nm,1.1s
DZM Mont Dzumac 18.99 248 eP Pn 01 24 02.4 -1.0
comp=Z,347nm,1.4s
DZM eLR LR 01 28 27.9
comp=Z,4μm,25.7s
DZM Mont Dzumac 18.99 248 P P 01 24 02.0 -0.7
comp=Z,0.3nm,0.3s,baz=82,slow=11,SNR=10.0
DZM LR LR 01 30 00.7
comp=Z,2μm,19.9s,baz=51,slow=33
DZM Mont Dzumac 18.99 248 P Pn 01 24 02.6 -0.8
NOUC Port Laguerre 19.12 248 P P 01 24 03.6 -0.5
URZ Urewera 23.39 197 LR LR 01 33 19.0
comp=Z,860nm,19.9s,baz=20,slow=35
PAE Paea 23.92 98 eT T 01 49 42.2
comp=Z,7.9nm,0.4s
PPT Papeete 23.93 97 LR LR 01 31 53.0
comp=Z,428nm,20.3s,baz=254,slow=30
PPT T T 01 50 13.0
comp=Z,14nm,0.3s,baz=97,slow=21,SNR=5.6
PPT2 Papeete2 23.93 97 eLQ LQ 01 29 46.0
comp=Z,2μm,25.5s
PPT2 eLR LR 01 30 47.1
comp=Z,1μm,25.8s
PPT2 Papeete2 23.93 97 eT T 01 49 43.4
comp=Z,12nm,0.4s
TIAR Tiarei 24.15 97 eT T 01 49 58.9
comp=Z,4.8nm,0.3s
TVO Taravao 24.24 98 eT T 01 50 05.7
comp=Z,4.0nm,0.4s
BKZ Black Stump Fm 24.41 197 P P 01 24 59.3 -0.2
TBI Tubuai 24.68 111 eLQ LQ 01 30 07.3
comp=Z,3μm,27.0s
TBI eLR LR 01 31 06.1
comp=Z,867nm,26.2s
TBI Tubuai 24.68 111 eT T 01 50 41.8
comp=Z,22nm,0.4s
MEH Mehetia 25.37 98 eT T 01 51 30.4
comp=Z,12nm,0.3s
HNR Honiara 25.73 282 LR LR 01 33 32.4
comp=Z,1μm,20.5s,baz=120,slow=33
RPZ Rata Peaks 30.25 201 LR LR 01 37 13.1
comp=Z,815nm,20.3s,baz=34,slow=35
TAOE Nuku Hiva Isla 34.26 82 eLR LR 01 35 30.3
comp=Z,2μm,27.5s
TAOE Nuku Hiva Isla 34.26 82 eT T 02 02 33.7
comp=Z,30nm,0.2s
RKT Rikitea 37.84 107 eT T 02 07 07.6
comp=Z,12nm,0.3s
H11S2 WAKE ISLAND Hy 38.93 331 T T 02 08 11.7
baz=150,slow=75,SNR=18
H11S3 WAKE ISLAND Hy 38.94 331 T T 02 08 12.6
baz=150,slow=75,SNR=19
H11S1 WAKE ISLAND Hy 38.94 331 T T 02 08 13.2
baz=150,slow=75,SNR=20
H11N3 WAKE ISLAND Hy 39.90 332 T T 02 09 28.8
baz=151,slow=76,SNR=15
H11N1 WAKE ISLAND Hy 39.91 332 T T 02 09 28.0
baz=151,slow=76,SNR=129
H11N2 WAKE ISLAND Hy 39.92 332 T T 02 09 29.9
baz=151,slow=76,SNR=13
COEN Coen 40.88 267 P P 01 27 23.1 -0.3
TOO Toolangi 41.27 231 P P 01 27 24.4 -2.0
STKA Stephens Creek 42.82 240 P P 01 27 37.5 -1.6
comp=Z,16nm,0.9s,baz=87,slow=8.7,SNR=12
STKA LR LR 01 43 01.2
comp=Z,412nm,21.6s,baz=61,slow=33
STKA Stephens Creek 42.82 240 P P 01 27 37.2 -1.9
BBOO Buckleboo 47.59 240 P P 01 28 15.7 -1.4
WB0 Warramunga Arr 48.63 258 P P 01 28 22.6 -2.7
WB2 Warramunga Arr 48.66 257 P P 01 28 23.5 -2.0
WRA Warramunga Arr 48.67 257 P P 01 28 23.6 -2.0
comp=Z,2.9nm,1.0s,baz=92,slow=7.5,SNR=7.1
WRA PcP PcP 01 29 53.1 +2.1
comp=Z,0.4nm,0.3s,baz=87,slow=3.7,SNR=7.2
WRA LR LR 01 46 55.5
comp=Z,314nm,20.0s,baz=120,slow=34
AS31 Alice Springs 48.91 252 P P 01 28 24.9 -2.5
AS31 IAmb IAmb 01 28 30.3
comp=Z,5.7nm,0.8s
ASAR Alice Springs 48.91 252 P P 01 28 25.1 -2.3
comp=Z,9.7nm,0.7s,baz=86,slow=8.3,SNR=47
ASAR PcP PcP 01 29 54.2 +2.4
comp=Z,1.6nm,0.8s,baz=94,slow=4.7,SNR=4.2
ASAR LR LR 01 47 06.0
comp=Z,1μm,21.6s,baz=89,slow=34
VNDA Vanda 62.69 186 P P 01 30 09.4 +4.1
comp=Z,3.8nm,0.9s,baz=36,slow=5.9,SNR=4.0
VNDA LR LR 01 56 02.1
comp=Z,43nm,18.1s,baz=18,slow=35
MJAR Matsushiro Arr 68.69 321 LR LR 01 55 14.7
comp=Z,104nm,21.5s,baz=120,slow=31
JAGI Jajag, Banyuwa 69.84 267 P P 01 30 50.9 -1.4
PETK Petropavlovsk- 72.86 343 P P 01 31 10.5 +0.8
comp=Z,7.1nm,0.7s,baz=151,slow=9.1,SNR=2.9
PETK LR LR 01 56 56.2
comp=Z,151nm,21.7s,baz=77,slow=31
KMRM Mail Ridge 73.18 38 P P 01 31 12.2 +0.2
ISA Isabella, Lake 73.82 45 P P 01 31 15.1 -0.8
ISA IAmb IAmb 01 31 19.1
comp=Z,7.9nm,1.2s
CMB Columbia Colle 73.91 42 P P 01 31 16.5 +0.2
CMB IAmb IAmb 01 31 19.8
comp=Z,7.9nm,1.2s
QSPA South Pole Qui 74.07 180 LR LR 01 58 20.2
comp=Z,188nm,20.2s,baz=45,slow=31
AFDM Forest Hills D 74.08 41 P P 01 31 16.3 -0.9
AFDM IAmb IAmb 01 31 20.6
comp=Z,8.7nm,1.3s
WDC Whiskeytown Da 74.10 39 P P 01 31 17.6 +0.4
WDC IAmb IAmb 01 31 20.5
comp=Z,6.7nm,1.2s
ORV Oroville 74.11 40 P P 01 31 16.8 -0.6
MDPB Devils Postpil 74.52 43 P P 01 31 18.7 -1.4
MDPB IAmb IAmb 01 31 23.2
comp=Z,6.9nm,1.1s
OMMB Old Mammoth Mi 74.56 43 P P 01 31 21.3 +0.8
OMMB IAmb IAmb 01 31 33.1
comp=Z,6.0nm,1.1s
YBH Yreka Blue Hor 74.71 38 IAmb IAmb 01 31 28.2
comp=Z,3.5nm,0.8s
GSC Goldstone, Bar 74.76 46 P P 01 31 22.2 +0.8
GSC IAmb IAmb 01 31 33.2
comp=Z,8.2nm,1.1s
WAKR Walker 74.79 42 P P 01 31 20.7 -0.9
GLA Glamis 74.98 49 P P 01 31 22.1 -0.6
BEKR Beckworth 75.00 40 IAmb IAmb 01 31 30.1
comp=Z,6.2nm,1.1s
HUMO Hull Mountain 75.11 37 P P 01 31 22.5 -0.7
HUMO IAmb IAmb 01 31 37.3
comp=Z,6.5nm,1.1s
YERR Yerington 75.19 41 IAmb IAmb 01 31 35.2
comp=Z,6.2nm,0.9s
RYN Ryan 75.45 42 IAmb IAmb 01 31 28.4
comp=Z,6.0nm,1.1s
NVAR Mina Array Bea 75.48 42 P P 01 31 27.6 +2.0
comp=Z,5.6nm,0.9s,baz=230,slow=8.9,SNR=26
NVAR LR LR 01 58 38.9
comp=Z,167nm,19.6s,baz=219,slow=31
PAHR Pah Rah Range 75.52 41 IAmb IAmb 01 31 28.7
comp=Z,6.8nm,1.1s
KSRS Korea Array 75.83 316 P P 01 31 28.2 +0.9
comp=Z,2.8nm,0.9s,baz=132,slow=5.6,SNR=4.1
KSRS LR LR 02 01 33.2
comp=Z,72nm,19.5s,baz=125,slow=33
KVN Kaiserville 75.96 42 IAmb IAmb 01 31 39.6
comp=Z,6.3nm,0.9s
TPNV Topopah Spring 76.02 45 IAmb IAmb 01 31 37.1
comp=Z,3.7nm,0.9s
MOD Modoc Plateau 76.24 39 IAmb IAmb 01 31 32.7
comp=Z,6.4nm,1.1s
SHPR Sheep Range 76.53 45 IAmb IAmb 01 31 36.2
comp=Z,4.7nm,1.1s
Y14A Wickenburg 76.74 49 IAmb IAmb 01 31 40.1
comp=Z,4.2nm,1.1s
PINE Pine Mountain 77.00 37 P P 01 31 34.0 -0.1
USRK Ussuriysk Ar. 77.21 324 P P 01 31 36.4 +1.4
comp=Z,0.6nm,0.5s,baz=123,slow=12,SNR=6.0
USRK LR LR 01 59 07.6
comp=Z,273nm,21.9s,baz=124,slow=31
WVOR Wild Horse Val 77.56 39 PcP 01 31 46.7 -0.7
TUC Tucson 77.59 51 P P 01 31 36.6 -0.9
TUC IAmb IAmb 01 31 41.0
comp=Z,4.8nm,1.1s
I07A Izee 78.01 37 IAmb IAmb 01 31 50.4
comp=Z,3.9nm,1.0s
X16A Lo Mia Camp, P 78.10 49 IAmb IAmb 01 31 52.5
comp=Z,5.6nm,1.1s
WUAZ Wupatki 78.68 48 IAmb IAmb 01 31 56.1
comp=Z,7.1nm,1.1s
F10A Beach Ranch, E 80.42 37 IAmb IAmb 01 32 00.1
comp=Z,3.8nm,0.8s
TXAR Lajitas Array 81.83 56 P P 01 32 02.4 +1.8
comp=Z,1.2nm,0.6s,baz=232,slow=6.2,SNR=17
TXAR LR LR 02 00 19.3
comp=Z,123nm,21.8s,baz=0.0,slow=30
ANMO Albuquerque 82.00 50 P P 01 32 00.7 -0.8
ANMO IAmb IAmb 01 32 05.6
comp=Z,4.9nm,1.1s
WHN Wuhan 82.53 305 ⇑P P 01 32 13.9 +10
SEY Seymchan 82.80 345 P P 01 32 04.3 -0.5
comp=Z,3.9nm,0.9s,baz=174,slow=7.1,SNR=6.4
REDW Red Top Meadow 82.88 41 IAmb IAmb 01 32 10.0
comp=Z,6.2nm,1.1s
FXWY Fox Creek 82.90 41 IAmb IAmb 01 32 21.4
comp=Z,5.2nm,1.1s
S22A 4UR Ranch, Cre 82.95 48 IAmb IAmb 01 32 18.3
comp=Z,6.3nm,1.0s
IL31 83.22 12 IAmb IAmb 01 32 14.5
comp=Z,3.8nm,1.1s
ILAR Eielson Array 83.22 12 P P 01 32 06.8 -0.1
comp=Z,5.3nm,1.2s,baz=220,slow=4.7,SNR=12
PD31 Pinedale Array 83.41 42 IAmb IAmb 01 32 19.8
comp=Z,3.1nm,1.0s
PDAR Pinedale Array 83.41 42 P P 01 32 09.9 +1.1
comp=Z,1.5nm,0.8s,baz=229,slow=3.4,SNR=12
PDAR LR LR 02 03 40.2
comp=Z,122nm,18.3s,baz=230,slow=32
SMCO Snowmass 83.49 46 IAmb IAmb 01 32 19.9
comp=Z,5.1nm,0.9s
PMSA Palmer Station 84.08 156 LR LR 02 01 01.9
comp=Z,106nm,20.9s,baz=245,slow=29
PRP Porcupine Dome 84.15 12 IAmb IAmb 01 32 14.5
comp=Z,4.5nm,1.0s
DAWY Dawson 84.25 15 IAmb IAmb 01 32 18.9
comp=Z,4.4nm,0.8s
MSTX Muleshoe 84.36 52 IAmb IAmb 01 32 24.7
comp=Z,4.5nm,0.9s
RLMT Red Lodge 84.73 40 IAmb IAmb 01 32 18.9
comp=Z,3.1nm,1.1s
USHA Ushuaia 86.04 146 LR LR 02 02 02.0
comp=Z,98nm,21.1s,baz=268,slow=29
MAW Mawson 86.90 199 LR LR 02 09 22.5
comp=Z,50nm,19.6s,baz=66,slow=34
XAN Xi'an 88.10 306 P P 01 32 36.8 +4.8
PLCA Paso Flores 89.92 132 LR LR 02 04 39.0
comp=Z,70nm,20.1s,baz=267,slow=30
YKA Yellowknife Ar 91.06 24 P P 01 32 46.3 +1.2
comp=Z,2.7nm,1.1s,baz=239,slow=4.4,SNR=18
YKA LR LR 02 06 44.6
comp=Z,93nm,20.5s,baz=0.0,slow=31
CMAR Chiang Mai Arr 91.78 289 P P 01 32 49.3 -0.2
comp=Z,0.9nm,0.4s,baz=108,slow=2.9,SNR=2.7
SYO Syowa Base 91.82 192 ⇓epP pP 01 32 50.0 -1.3
NNA Nana 93.97 104 LR LR 02 05 31.8
comp=Z,73nm,20.2s,baz=246,slow=29
SONM Songino Array 94.56 318 P P 01 33 02.2 +0.4
comp=Z,0.8nm,0.8s,baz=126,slow=2.9,SNR=5.8
SONM LR LR 02 09 00.0
comp=Z,52nm,20.1s,baz=141,slow=31
CFA Coronel Fontan 95.01 125 LR LR 02 06 10.8
comp=Z,92nm,20.7s,baz=264,slow=29
ULM Lac du Bonnet 95.06 39 LR LR 02 10 07.6
comp=Z,191nm,19.5s,baz=280,slow=32
MKAR Makanchi Array 110.47 314 PKiKP PKiKP 01 38 14.2 +0.7
comp=Z,0.8nm,0.7s,baz=35,slow=1.3,SNR=6.9
KSH Kashi 114.95 306 PKP PKiKP 01 38 31.6 +9.1
KSH PP PP 01 39 29.9 +8.3
KSH PKS 01 42 05.0
KSH SKS SKSdf 01 45 37.4 +2.4
KSH SKKS SKKSac 01 46 31.3 +7.9
AKASG Malin Array Be 140.45 336 PKP PKiKP 01 39 13.0 +0.2
comp=Z,0.1nm,0.3s,baz=40,slow=3.3,SNR=3.0
CLL Collm 144.25 352 ePKiKP PKiKP 01 39 20.0 -0.6
KMBO Kilima Mbogo 144.32 244 PKP PKPdf 01 39 17.8 -0.8
comp=Z,1.8nm,0.9s,baz=114,slow=7.2,SNR=3.9
KMBO Kilima Mbogo 144.32 244 PKPab 01 39 14.5 -2.1
KOLS Kolonicke sedl 144.38 341 ePKP PKiKP 01 39 21.1 +0.1
BURAR Bucovina Array 144.49 337 ⇓P PKiKP 01 39 21.7 +0.3
DPC Dobruska-Polom 144.62 348 ePKP PKiKP 01 39 21.5 +0.1
CRVS Cervenica-Dubn 144.66 342 ePKP PKPdf 01 39 19.2 +1.4
OKC Ostrava-Krasne 144.70 346 ePKP PKiKP 01 39 21.6 +0.1
KRLC Kraliky 144.78 347 ePKP PKiKP 01 39 21.3 -0.5
KRLC ex x 01 39 32.2
MORC Moravsky Berou 144.90 346 ePKP PKiKP 01 39 22.7 +0.7
TRPA Tarpa 145.00 340 ⇑P PKPdf 01 39 18.9 +0.5
BMR Baia Mare 145.07 339 ⇑P PKiKP 01 39 22.1 -0.3
ARCR ARCALIA 145.26 337 ⇑P PKiKP 01 39 21.3 -1.5
PRU Pruhonice 145.29 350 ePKP PKPdf 01 39 19.2 +0.3
PRU ex x 01 39 23.7
GOPC GO Pecny, Ondr 145.32 349 ePKP PKiKP 01 39 23.4 +0.5
VRAC Vranov 145.55 347 ePKP PKiKP 01 39 24.8 +1.5
VRAC Vranov 145.55 347 ⇓P PKPab 01 39 20.2 +0.5
JAVC Velka Javorina 145.73 346 ePKP PKiKP 01 39 26.3 +2.5
DOPR Dopca 145.78 335 ⇓P PKiKP 01 39 23.3 -0.6
TREC Trest 145.79 348 ePKP PKiKP 01 39 25.3 +1.4
KRUC Moravsky 145.82 347 ePKP PKiKP 01 39 25.4 +1.5
BRTR Keskin Array B 145.91 320 PKPbc PKPbc 01 39 20.7 -0.4
comp=Z,5.3nm,0.8s,baz=114,slow=1.3,SNR=8.4
MLR Muntele Rosu 145.93 334 ⇑P PKPab 01 39 21.5 +0.2
GRF Grafenberg Arr 146.06 353 ePKPbc PKiKP 01 39 26.4 +2.0
baz=22,slow=3.1
DRGR 146.10 339 ⇓P PKiKP 01 39 25.6 +1.0
KHC Kasperske Hory 146.28 350 ePKP PKPbc 01 39 21.4 -0.3
KHC epPKP sPKPab 01 39 26.8 +0.7
VOIR 146.35 335 ⇑P PKPab 01 39 23.0 +0.1
GERES GERESS Array B 146.54 350 PKPbc PKPbc 01 39 21.9 -0.6
comp=Z,1.2nm,0.6s,baz=27,slow=2.4,SNR=4.3
ARR Arges 146.57 335 ⇑P PKiKP 01 39 24.3 -1.4
DEV Deva 146.81 338 ⇑P PKiKP 01 39 27.5 +1.5
LOT Lotru 146.85 336 ⇑P PKiKP 01 39 27.5 +1.2
CONA Conrad Observa 147.01 347 i pPKiKP PKiKP 01 39 28.4 +1.9
comp=Z,10nm,0.9s
GZR Gura Zlata 147.27 337 ⇓P PKiKP 01 39 26.8 -0.3
MOA Molln 147.41 349 i sPKiKP PKiKP 01 39 30.3 +3.1
comp=Z,5.6nm,1.0s,SNR=4.2
BZS Buzias 147.50 339 ⇑P PKPab 01 39 25.9 -1.4
ARSA Arzberg 147.73 347 i sPKPab PKPab 01 39 30.9 +2.7
comp=Z,3.2nm,1.1s
RETA Reutte 148.28 353 i pPKiKP PKPab 01 39 30.8 +0.4
comp=Z,5.5nm,1.1s
KBA Koelnbreinsper 148.31 350 i sPKiKP PKPab 01 39 32.4 +1.7
comp=Z,7.1nm,1.4s
WATA Walderalm 148.33 352 i sPKPab PKPab 01 39 33.1 +2.4
comp=Z,3.8nm,0.7s
SOKA Soboth 148.38 347 i pPKPab PKPab 01 39 32.3 +1.4
comp=Z,4.6nm,1.0s
MOTA Moosalm 148.38 353 i sPKiKP PKPab 01 39 32.9 +2.0
comp=Z,7.4nm,1.0s
WTTA Wattenberg 148.39 352 i sPKiKP PKPab 01 39 33.0 +2.0
comp=Z,12nm,1.3s
SQTA Sankt Quirin 148.49 353 i sPKiKP PKPab 01 39 32.9 +1.6
comp=Z,4.5nm,1.1s
DAVA Damuels 148.57 354 i sPKPab PKPab 01 39 33.7 +2.0
comp=Z,6.5nm,0.9s
MYKA Terra Mystica 148.69 349 pPKiKP PKPab 01 39 31.9 -0.1
comp=Z,2.2nm,0.6s
FETA Feichten 148.75 353 i sPKPab PKPab 01 39 34.5 +2.1
comp=Z,8.8nm,1.2s
ABTA Abfaltersbach 148.77 351 i sPKiKP PKPab 01 39 33.2 +0.8
comp=Z,7.1nm,0.8s,SNR=7.4
TORD Torodi Ar. Bea 175.37 127 PKP PKPdf 01 39 53.9 +1.8
comp=Z,1.4nm,0.9s,baz=160,slow=2.5,SNR=5.6
TORD PKPab sPKPab 01 41 32.1 -0.2
comp=Z,1.9nm,1.0s,baz=242,slow=3.8,SNR=4.8

NEIC 24 01:33:36.7±1.1, 51.02N±0.04×176.15W±0.05, h25km±7km, Error ellipse: s-maj=6.2km s-min=4.0km az=213.0
AEIC 24 01:33:36.9±1.3, 51.05N±0.04×176.19W±0.04, h12km±5km, ML2.9/15, Error ellipse: s-maj=5.6km s-min=3.3km az=163.0
IDC 24 01:33:51.0±8.0, 51.92N×176.53W, h116km±67km, mb3.1/5,

mb1 3.2/7,mb1mx3.0/33,mbtmp3.4/7,MS2.9/1,Ms1 2.9/1, ms1mx2.7/5,Error ellipse: s-maj=77.6km s-min=21.2km az=172.0

ISC 24 01:33:39.2±1.1,51°.1N±0°.1×176°.19W±0°.05,h35km,n23, σ1s41/26,mb3.3/5,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
ADK	Adak	0.82	338	Pg	Pn	01 33 53.8	-0.4
ADAG	Mount Adagdak	0.90	343		Pn	01 33 55.1	-0.2
KIMD	Kanaga Island	0.92	315		Pn	01 33 54.9	-0.6
KIMD					Sn	01 34 08.3	+0.9
GSMY	Great Sitkin M	0.93	5		Pn	01 33 55.6	-0.1
GSTD	Great Sitkin T	0.94	2		Pn	01 33 55.9	+0.1
GSTD					Sn	01 34 10.3	+2.2
KIWB	Kanaga Island	0.95	321	Pg	Pn	01 33 55.8	-0.2
GSTR	Great Sitkin T	0.98	5		Pn	01 33 56.6	+0.2
KIKV	Kanaga Island	0.98	321		Pn	01 33 56.0	-0.3
TAPA	Tanaga Point A	1.23	305		Pn	01 33 59.6	-0.3
TASE	Tanaga Southea	1.36	302		Pn	01 34 01.6	0.0
TAFP	Tanaga Falls P	1.37	305		Pn	01 34 01.9	+0.1
TAFP					Sn	01 34 21.0	+4.2
ATKA	Atka Island	1.65	48		Sn	01 34 23.9	-1.5
ATKA	Atka Island	1.65	48		Pn	01 34 04.4	-1.1
NIKH	Nikolski High	4.89	65	Pn	Pn	01 34 50.6	+0.6
UNV	Unalaska Valle	6.51	61	Pn	Pn	01 35 14.0	+1.6
KDAK	Kodiak Island	15.21	55	P	Pn	01 37 08.1	-2.9
	0.2nm,0.3s,baz=239,slow=19,SNR=2.8						
PETK	Petropavlovsk-	16.14	287	P	P	01 37 26.7	+0.7
	0.4nm,0.3s,baz=93,slow=15,SNR=4.7						
PETK				LR	LR	01 43 44.0	
	comp=Z,41nm,19.0s,baz=60,slow=38						
ILAR	Eielson Array	20.44	37	P	P	01 38 13.7	+0.6
	0.1nm,0.3s,baz=226,slow=10,SNR=7.4						
INK	Inuvik	26.74	34	P	P	01 39 14.0	-0.9
	0.3nm,0.4s,baz=232,slow=5.3,SNR=3.1						
PDAR	Pinedale Array	44.81	74	P	P	01 41 53.2	+3.5
	0.1nm,0.6s,baz=304,slow=8.4,SNR=2.4						
SONM	Songino Array	48.22	298	P	P	01 42 14.7	-1.5
	0.1nm,0.4s,baz=76,slow=6.1,SNR=2.2						
MKAR	Makanchi Array	61.47	310	P	P	01 43 50.5	-1.4
	0.2nm,0.4s,baz=42,slow=6.7,SNR=4.7						
BRTR	Keskin Array B	85.84	337	P	P	01 46 14.4	-0.7
	0.3nm,0.4s,baz=30,slow=3.7,SNR=3.8						

THE 24 02:07:27.4,38°.30N×20°.39E,h13km±1km,ML3.0/4,Error ellipse: s-maj=2.2km s-min=0.8km az=244.0
ATH 24 02:07:28.2,38°.29N×20°.42E,h9km±2km,ML2.3/2,Error ellipse: s-maj=3.0km s-min=0.9km az=251.0

ISC 24 02:07:27.6±1.8,38°.30N±0°.04×20°.40E±0°.07,h14km±9km, n16,σ0s37/28,Greece

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.05	151	P	Pg	02 07 29.8	-0.3
KEF4				S	Sg	02 07 31.2	-0.7
AGT1	Agia Thekli	0.05	190	P	Pg	02 07 29.9	-0.2
AGT1				S	Sg	02 07 31.4	-0.5
	20μm,0.2s						
KEF3	Kipouria, Keph	0.10	201	P	Pg	02 07 30.8	+0.2
KEF3				S	Sg	02 07 33.1	+0.3
LXR1	Lixouri, Cepha	0.10	161	P	Pg	02 07 30.7	0.0
LXR1				S	Sg	02 07 32.9	+0.1
	23μm,0.2s						
LXRA	Lixouri, Kepha	0.10	162	P	Pg	02 07 30.8	+0.1
LXRA				S	Sg	02 07 32.7	-0.2
ARGA	Argostoli. Kep	0.14	152	P	Pg	02 07 31.1	0.0
ARGA				S	Sg	02 07 33.3	-0.2
ARG2	Argostoli	0.14	149	P	Pg	02 07 31.2	0.0
KEF2	Argostoli. Kep	0.15	152	P	Pg	02 07 31.3	-0.1
KEF2				S	Sg	02 07 33.8	-0.1
VSK1	VASILIKIADES	0.17	51	P	Pg	02 07 31.6	0.0
KONA	Konidatara, Ke	0.19	48	P	Pg	02 07 31.9	+0.1
KONA				S	Sg	02 07 35.0	+0.2
VLS	Valsamata	0.20	129	P	Pg	02 07 31.7	-0.3
VLS				S	Sg	02 07 34.7	-0.3
	2μm,0.1s						
VLS	Valsamata	0.20	129	P	Pg	02 07 31.7	-0.3
VLS				S	Sg	02 07 34.7	-0.3
VLS				AML	AML	02 07 34.9	
	comp=N,4509μm,0.2s						
VLS				AML	AML	02 07 35.1	
	comp=E,4435μm,0.1s						
FSK	Fiskardo	0.21	40	P	Pg	02 07 32.2	0.0
FSK				S	Sg	02 07 35.6	+0.3
	comp=E,1μm,0.1s						
FSK	Fiskardo	0.21	40	P	Pg	02 07 32.4	+0.2
FSK				S	Sg	02 07 35.6	+0.3
FSK				AML	AML	02 07 36.6	
	comp=E,3456μm,0.1s						
FSK				AML	AML	02 07 37.0	
	comp=N,1095μm,0.2s						
TSLK	Tsoukalades, L	0.56	21	P	Pg	02 07 37.5	-1.1
PVO	Paravola	0.94	70	P	Pb	02 07 46.1	+0.4

NEIC 24 02:08:00.5±2.5,16°.50N±0°.09×94°.11W±0°.03,h115km±9km, Error ellipse: s-maj=12.9km s-min=2.7km az=197.0
MEX 24 02:08:02.3±0.6,16°.49N×94°.09W,h120km±7km,MD4.0

ISC 24 02:08:00.6±1.6,16°.45N±0°.07×94°.12W±0°.04, h116km±15km,n17,σ1s16/31,Oaxaca

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.97	311		Pn	02 08 22.6	+0.6
CMIG					Sn	02 08 38.8	+0.5
CMIG	Matias Romero	0.97	311	eP	Pn	02 08 22.6	+0.6
CMIG				eS	Sn	02 08 38.8	+0.5
TGIG		1.01	71		Pn	02 08 22.7	+0.2
TGIG					Sn	02 08 38.3	-0.7
TGIG		1.01	71	eP	Pn	02 08 22.7	+0.2
TGIG				iS	Sn	02 08 38.7	-0.4
PCIG		1.14	130		Pn	02 08 24.2	+0.4
PCIG					Sn	02 08 41.7	+0.4
PCIG		1.14	130	eP	Pn	02 08 24.2	+0.4
PCIG				eS	Sn	02 08 41.7	+0.4
CCIG	Comitan	1.91	95		Pn	02 08 33.7	+0.7
CCIG				Sn	Sn	02 08 56.2	-1.5
CCIG	Comitan	1.91	95		Pn	02 08 33.6	+0.6
CCIG					Sn	02 08 57.1	-0.6
CCIG	Comitan	1.91	95	eP	Pn	02 08 33.6	+0.6
CCIG				eS	Sn	02 08 57.1	-0.6
HUIG	Huatulco	2.03	251		Pn	02 08 32.8	-1.4
HUIG					Sn	02 08 59.8	-0.2
HUIG	Huatulco	2.03	251	iP	Pn	02 08 32.8	-1.4
HUIG				eS	Sn	02 08 59.8	-0.2
THIG		2.36	130		Sn	02 09 09.0	+1.6
THIG		2.36	130	iS	Sn	02 09 09.0	+1.6
VHO	Vista Hermosa	2.58	284	eP	Pn	02 08 42.8	+1.4
VHO				iS	Sn	02 09 13.7	+0.8
TLIG	Tlapa	4.39	285	Pn	Pn	02 09 05.9	+0.4
TLIG					Sn	02 09 53.3	-2.6
TEIG	Tepich	6.70	55	Pn	Pn	02 09 34.5	-2.0
TEIG				Sn	Sn	02 10 48.8	-2.6
ESTN	Estel	8.20	113	Pn	Pn	02 09 57.3	+0.3

IDC 24 02:11:18.2±1.9,3°.43N×125°.48E,h0km,mb3.4/5, mb1 3.6/5,mb1mx3.4/54,mbtmp3.4/5,Error ellipse: s-maj=122.3km s-min=27.3km az=67.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.39	180	P	P	02 16 07.7	0.0
	2.7nm,0.9s,baz=1.7,slow=13,SNR=2.0						
WRA	Warramunga Arr	24.80	160	P	P	02 16 41.5	-0.8
	0.5nm,0.5s,baz=338,slow=10,SNR=8.6						
ASAR	Alice Springs	28.16	163	P	P	02 17 13.6	+1.1
	0.2nm,0.6s,baz=344,slow=9.6,SNR=3.0						
STKA	Stephens Creek	38.31	158	P	P	02 18 40.6	-0.2
	1.4nm,1.0s,baz=346,slow=4.2,SNR=2.4						
MKAR	Makanchi Array	57.10	326	P	P	02 21 06.4	-0.1
	0.1nm,0.3s,baz=113,slow=7.2,SNR=2.1						

JMA 24 02:12:02.5±0.2,38°.11N×144°.31E,h53km,M3.9,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.25	276	P	Pn	02 12 38.2	+1.0
JIKH				S	Sn	02 13 04.5	+0.7
OFUJ	Ofunato	2.29	296	P	Pn	02 12 38.9	+1.2
OFUJ				S	Sn	02 13 05.9	+1.2
JKMT	Kesennumamotoy	2.33	288	P	Pn	02 12 39.5	+1.1
JKMT				S	Sn	02 13 06.8	+0.9
JIO	Ouri	2.36	279	P	Pn	02 12 39.9	+1.2
JIO				S	Sn	02 13 07.1	+0.7
MIYJ	Miyakonagasawa	2.43	308	P	Pn	02 12 40.6	+0.8
MIYJ				S	Sn	02 13 09.1	+0.7
JMK	Ichinoseki	2.56	290	P	Pn	02 12 43.0	+1.4
JMK				eS	Sn	02 13 12.7	+1.1
JOM	Ohasama	2.72	301	P	Pn	02 12 45.5	+1.8
JOM				S	Sn	02 13 18.1	+2.7
JANG	Nango	3.13	317	P	Pn	02 12 50.2	+0.8
JFT	Otama	3.20	261	S	Sn	02 13 28.6	+1.4
JYK	Kaneyama	3.20	286	P	Pn	02 12 52.1	+1.8
BSO1	Boso 1	4.37	219	P	Pn	02 13 06.2	+0.3
BSO1				eS	Sn	02 13 55.7	+0.4
JKB	Kayabe	4.54	327	P	Pn	02 13 10.4	+1.9
JKB				S	Sn	02 13 58.8	-1.1
JCH	Churui	4.56	351	P	Pn	02 13 08.5	-0.4
JCH				eS	Sn	02 13 58.5	-2.0
JRY	Ryogami san	4.80	246	P	Pn	02 13 13.5	+1.2
MAT	Matsushiro	5.11	254	P	Pn	02 13 17.4	+0.9
NEM2	Nemuro 2	5.36	11	eS	Sn	02 14 14.3	-5.9
JTKR	Abashiri--Toko	5.86	357	eS	Sn	02 14 29.0	-3.6

IDC 24 02:17:03.4±1.6,15°.99S×174°.82W,h0km,mb4.0/7, mb1 4.3/7,mb1mx4.0/32,mbtmp4.0/7,MS3.4/9,Ms1 3.4/9, ms1mx3.2/32,Error ellipse: s-maj=99.5km s-min=22.5km az=148.0

ISC 24 02:17:04.0±1.4,16°.0S±0°.5×174°.6W±0°.3,h10km,n27, σ1s71/11,mb4.0/7,MS3.5/8,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.46	54	Pn	Pn	02 17 55.2	-2.8
	3.2nm,0.3s,baz=227,slow=19,SNR=2.5						
AFI				LR	LR	02 18 41.6	
	comp=Z,65nm,18.5s,baz=234,slow=27						
AFI				T	T	02 21 52.2	
	7.9nm,0.3s,baz=102,slow=17,SNR=4.8						
RAR	Rarotonga	15.02	112	LR	LR	02 24 34.8	
	comp=Z,73nm,20.9s,baz=250,slow=30						
DZM	Mont Dzumac	18.86	248	eLR	LR	02 26 00.5	
	comp=Z,411nm,26.8s						
DZM	Mont Dzumac	18.86	248	LR	LR	02 27 13.7	
	comp=Z,248nm,21.6s,baz=40,slow=33						
PPT	Papeete	24.05	97	LR	LR	02 30 43.9	
	comp=Z,35nm,18.0s,baz=226,slow=34						
PPT				T	T	02 47 38.7	
	7.4nm,0.3s,baz=49,slow=20,SNR=4.3						
PPT2	Papeete2	24.05	97	eLR	LR	02 28 12.0	
	comp=Z,140nm,26.5s						
TBI	Tubuai	24.79	111	eLR	LR	02 28 32.6	
	comp=Z,142nm,27.5s						
RKT	Rikitea	37.96	107	eT	T	03 04 46.9	
	2.6nm,0.3s						
H11S2	WAKE ISLAND Hy	38.88	331	T	T	03 05 49.1	
	baz=150,slow=75,SNR=4.2						
H11S3	WAKE ISLAND Hy	38.89	331	T	T	03 05 48.3	
	baz=150,slow=75,SNR=3.8						
H11S1	WAKE ISLAND Hy	38.90	331	T	T	03 05 48.2	
	baz=150,slow=75,SNR=4.4						
H11N3	WAKE ISLAND Hy	39.86	332	T	T	03 07 00.5	
	baz=151,slow=76,SNR=15						
H11N1	WAKE ISLAND Hy	39.86	332	T	T	03 06 59.7	
	baz=151,slow=76,SNR=19						
H11N2	WAKE ISLAND Hy	39.87	332	T	T	03 07 00.1	
	baz=151,slow=76,SNR=21						
STKA	Stephens Creek	42.70	240	P	P	02 25 00.2	-1.1
	1.2nm,0.7s,baz=129,slow=19,SNR=3.1						
ASAR	Alice Springs	48.79	252	P	P	02 25 49.1	-0.6
	2.3nm,0.7s,baz=85,slow=8.2,SNR=25						
ASAR				LR	LR	02 45 02.2	
	comp=Z,88nm,19.6s,baz=93,slow=34						
NVAR	Mina Array Bea	75.57	42	P	P	02 28 51.9	+2.5
	1.7nm,0.9s,baz=225,slow=9.2,SNR=9.6						
NVAR				LR	LR	02 55 14.6	
	comp=Z,32nm,18.7s,baz=244,slow=30						
TXAR	Lajitas Array	81.94	56	P	P	02 29 26.6	+2.2
	0.8nm,1.1s,baz=241,slow=3.0,SNR=4.9						
ILAR	Eielson Array	83.26	12	P	P	02 29 29.8	-0.6
	1.9nm,1.1s,baz=224,slow=4.1,SNR=3.8						
PDAR	Pinedale Array	83.51	42	P	P	02 29 32.6	+0.2
	1.1nm,1.0s,baz=235,slow=5.2,SNR=5.6						
CMIG	Matias Romero	85.21	71	LR	LR	03 01 49.0	
	comp=Z,29nm,18.6s,baz=236,slow=32						
APG	El Apazote	88.64	74	LR	LR	03 02 07.5	
	comp=Z,39nm,18.9s,baz=90,slow=30						
YKA	Yellowknife Ar	91.12	24	P	P	02 30 09.7	+1.1
	0.5nm,0.9s,baz=235,slow=4.2,SNR=6.3						
NNA	Nana	94.08	104	LR	LR	03 05 20.2	
	comp=Z,14nm,18.8s,baz=9.5,slow=31						
BRTR	Keskin Array B	145.84	319	PKPbc	PKPab	02 36 44.6	+0.2
	1.7nm,1.0s,baz=132,slow=1.8,SNR=9.0						
MLR	Muntele Rosu	145.89	334	PKPbc	PKPab	02 36 45.0	+0.6
	2.0nm,0.8s,baz=18,slow=20,SNR=3.4						
MMAI	Mount Meron Ar	147.99	307	PKPbc	PKiKP	02 36 51.4	-0.7
	0.9nm,0.6s,baz=74,slow=5.1,SNR=4.0						

NEIC 24 02:24:57.8±2.5,4°.4N±0°.1×62°.5E±0°.1,h10km±1km, mb4.5/18,Error ellipse: s-maj=24.2km s-min=15.0km az=120.0
IDC 24 02:24:58.1±0.6,4°.34N×62°.69E,h0km,mb4.0/19, mb1 4.1/19,mb1mx3.9/63,mbtmp4.0/19,MS3.5/10, Ms1 3.5/10,ms1mx3.3/31,Error ellipse: s-maj=17.8km s-min=14.4km az=133.0

ISC 24 02:25:00.3±0.6,4°.39N±0°.09×62°.6E±0°.1,h22km,n49, σ2s08/46,mb4.2/26,MS3.5/9,1D,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MSEY	Mahe Island	11.49	219		Pn	02 27 39.5	-3.7
H08N2	Diego Garcia H	13.53	142	T	T	02 41 49.8	
	baz=322,slow=76,SNR=72						
H08N3	Diego Garcia H	13.54	142	T	T	02 41 47.7	
	baz=322,slow=76,SNR=57						
H08N1	Diego Garcia H	13.55	142	T	T	02 41 49.6	
	baz=322,slow=76,SNR=55						
WSAR	Wadi Sarin	19.14	349	LR	LR	02 35 31.2	
	comp=Z,120nm,18.8s,baz=170,slow=33						
UOSS	Minazif	21.36	344	P	P	02 29 44.3	-1.9
UOSS				IAmb	IAmb	02 29 51.9	
	comp=Z,30nm,1.2s						
KMBO	Kilima Mbogo	25.94	258	P	P	02 30 34.3	+2.6
	comp=Z,5.5nm,0.9s,baz=53,slow=10,SNR=17						
KMBO				LR	LR	02 39 44.6	
	comp=Z,100nm,20.7s,baz=98,slow=34						
KMBO	Kilima Mbogo	25.94	258	P	P	02 30 28.8	-2.8
OPO	Ambohidratompo	27.42	213	LR	LR	02 38 48.0	
	comp=Z,140nm,21.4s,baz=176,slow=30						
KBL	Kabul	30.59	10	P	P	02 31 10.9	-2.0
KBL				IAmb	IAmb	02 31 19.1	
	comp=Z,6.0nm,0.8s						
GEYT	Alibeck	33.64	354	P	P	02 31 42.3	+2.9
	comp=Z,2.1nm,0.8s,baz=195,slow=11,SNR=4.5						
GEYT				LR	LR	02 44 56.9	
	comp=Z,59nm,21.4s,baz=115,slow=36						
GYA0B	ALIBECK ARRAY	33.64	354	P	P	02 31 38.3	-1.1
GYA0B				IAmb	IAmb	02 31 43.4	
	comp=Z,6.0nm,0.9s						
SHL	Shillong	35.08	50	P	P	02 31 50.7	-1.6
SHL				IAmb	IAmb	02 31 55.3	
	comp=Z,13nm,1.3s						
BTK	Batken	36.28	11	P	P	02 32 00.9	-1.3
LSA	Lhasa	36.90	44	P	P	02 32 06.8	-1.3
LSA				IAmb	IAmb	02 32 12.2	
	comp=Z,8.3nm,0.9s						
KSH	Kashi	37.00	17	P	P	02 32 06.9	-1.6
KSH				sP	sP	02 32 16.8	+0.3
KSH				PP	PP	02 33 26.9	-6.1
KSH				S	S	02 37 46.8	-6.2
CMAR	Chiang Mai Arr	38.14	66	P	P	02 32 20.6	+2.3
	comp=Z,1.2nm,0.6s,baz=259,slow=9.1,SNR=10						
CMAR				LR	LR	02 48 46.1	
	comp=Z,41nm,18.2s,baz=200,slow=38						
CHTO	Chiang Mai	38.24	65	P	P	02 32 19.1	0.0
KK31	Karatay Array	39.19	9	P	P	02 32 26.9	+0.2
KKAR	Karatay Array	39.19	9	P	P	02 32 27.1	+0.4
KKAR				IAmb	IAmb	02 32 33.0	
	comp=Z,16nm,1.7s						
LSZ	Lusaka	39.30	239	P	P	02 32 29.9	+1.7
	comp=Z,3.0nm,0.6s,baz=69,slow=8.5,SNR=9.2						
LSZ	Lusaka	39.30	239	P	P	02 32 26.5	-1.7
PBKT	Sadao Pong	39.51	69	P	P	02 32 28.7	-1.1
PBKT				IAmb	IAmb	02 32 33.5	
	comp=Z,20nm,1.7s						
AAK	Ala-Archa	39.53	14	P	P	02 32 30.8	+1.1
	comp=Z,2.1nm,0.8s,baz=229,slow=3.9,SNR=4.2						
AAK	Ala-Archa	39.53	14	P	P	02 32 29.0	-0.8
AAK				IAmb	IAmb	02 32 34.8	
	comp=Z,24nm,1.6s						
BRTR	Keskin Array B	43.86	327	P	P	02 33 07.4	+2.1
	comp=Z,1.0nm,0.9s,baz=138,slow=9.5,SNR=7.6						
ABKAR	Akbulak array	44.77	358	P	P	02 33 11.6	-0.6
MK31	Makanchi Array	45.55	19	P	P	02 33 19.8	+1.3
MKAR	Makanchi Array	45.55	19	P	P	02 33 19.7	+1.2
	comp=Z,1.2nm,0.9s,baz=203,slow=8.4,SNR=10						
MKAR				PcP	PcP	02 34 56.7	-0.2
	comp=Z,0.6nm,0.9s,baz=196,slow=4.1,SNR=3.3						
MKAR				LR	LR	02 53 28.2	
	comp=Z,72nm,18.4s,baz=210,slow=38						
AKTO	Aktyubinsk	46.05	356	P	P	02 33 24.0	+1.6
	comp=Z,6.8nm,1.1s,baz=161,slow=7.9,SNR=19						
AKTO				LR	LR	02 53 27.4	
	comp=Z,58nm,19.9s,baz=176,slow=37						
LBTB	Lobatse	46.35	229	P	P	02 33 26.6	+1.4
	comp=Z,5.5nm,0.9s,baz=95,slow=10,SNR=5.8						
LBTB	Lobatse	46.35	229	P	P	02 33 22.9	-2.3
BOSA	Boshof	48.66	225	P	P	02 33 43.7	+0.5
	comp=Z,1.7nm,0.8s,baz=27,slow=14,SNR=3.2						
BOSA				LR	LR	02 51 38.5	
	comp=Z,75nm,21.1s,baz=337,slow=33						
ARU	Arti	52.00	357	P	P	02 34 09.2	+1.4
	comp=Z,0.5nm,0.3s,baz=206,slow=3.8,SNR=4.2						
XAN	Xi'an	52.09	50	P	P	02 34 10.8	+1.8
ZALV	Zalesovo Beam	52.63	16	P	P	02 34 13.0	+0.5
	comp=Z,0.7nm,0.5s,baz=199,slow=7.8,SNR=5.0						
ZALV				LR	LR	02 57 27.7	
	comp=Z,76nm,18.1s,baz=214,slow=37						
AKASG	Malin Array Be	53.99	334	P	P	02 34 24.5	+1.9
	comp=Z,0.2nm,0.4s,baz=130,slow=6.6,SNR=6.9						
WHN	Wuhan	55.16	56	⇓P	P	02 34 32.4	+0.9
SONM	Songino Array	57.23	34	P	P	02 34 47.7	+1.6
	comp=Z,1.5nm,1.0s,baz=231,slow=8.6,SNR=10						
KLMR	Klimovskoe	58.99	347	e	P	02 34 56.0	-2.0
KLMR					AMP	02 35 01.4	
	comp=Z,35nm,1.6s						
TORD	Torodi Ar. Bea	60.72	283	P	P	02 35 12.0	+1.2
	comp=Z,0.9nm,1.1s,baz=69,slow=7.9,SNR=3.3						
HFS	Hagfors	66.82	336	P	P	02 35 51.9	+1.7
	comp=Z,2.5nm,0.9s,baz=122,slow=1.9,SNR=3.0						
ARCES	ARCESS Array B	69.47	347	P	P	02 36 06.8	+0.1
	comp=Z,3.4nm,0.8s,baz=164,slow=3.7,SNR=4.4						
WRA	Warramunga Arr	74.42	112	P	P	02 36 37.9	+0.6
	comp=Z,1.0nm,0.3s,baz=289,slow=5.2,SNR=27						
ASAR	Alice Springs	74.74	116	P	P	02 36 40.2	+1.0
	comp=Z,1.6nm,1.0s,baz=284,slow=5.2,SNR=10						
PETK	Petropavlovsk-	89.57	37	LR	LR	03 19 43.8	
	comp=Z,30nm,19.8s,baz=66,slow=37						
PDAR	Pinedale Array	132.54	352	PKP	PKiKP	02 44 15.7	+0.8
	comp=Z,0.1nm,0.5s,baz=64,slow=2.1,SNR=2.6						
NVAR	Mina Array Bea	137.39	1	PKP	PKiKP	02 44 25.4	+0.5
	comp=Z,0.1nm,0.3s,baz=48,slow=1.3,SNR=2.7						
TXAR	Lajitas Array	143.98	339	PKP	PKPdf	02 44 35.6	+0.5
	comp=Z,1.0nm,1.0s,baz=28,slow=3.4,SNR=6.5						

IDC 24 02:29:10.5±2.4,1°.74N×88°.95E,h0km,mb3.7/3,mb1 3.9/4, mb1mx3.3/60,mbtmp3.7/4,ML3.8/1,Error ellipse: s-maj=74.4km s-min=28.8km az=49.0,North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
PALK	Pallekele	9.89	304	Pn	Pn	02 31 33.4	-0.7
	0.9nm,0.3s,baz=153,slow=4.5,SNR=3.8						
PALK				Sn	Sn	02 33 14.4	-12
	5.0nm,0.3s,baz=45,slow=11,SNR=10						
H08S2	Diego Garcia H	18.87	240	T	T	02 53 47.7	
	baz=60						
H08S3	Diego Garcia H	18.87	240	T	T	02 53 47.2	
	baz=60,SNR=16						
H08S1	Diego Garcia H	18.89	240	T	T	02 53 46.6	
	baz=60						
MKAR	Makanchi Array	45.25	354	P	P	02 37 30.2	+0.5
	0.3nm,0.6s,baz=165,slow=8.4,SNR=4.9						
SONM	Songino Array	48.34	16	P	P	02 37 53.6	-0.5
	0.9nm,0.6s,baz=198,slow=7.3,SNR=5.2						
WRA	Warramunga Arr	49.45	118	P	P	02 38 02.7	-0.2
	0.5nm,0.3s,baz=295,slow=8.6,SNR=8.5						

BJI 24 02:30:13.6±0.0,40°.47N×122°.31E,h12km,ML3.6/15

ISC 24 02:30:12.9±0.7,40°.49N±0°.04×122°.30E±0°.03,h10km,n12, σ2s41/24,1D,Northeastern China

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SNY	Shenyang	1.65	35	⇓Pn	Pn	02 30 41.6	-0.3
SNY				Pg	Pb	02 30 44.1	+0.7
SNY				Sn	Sn	02 31 02.8	-0.3
SNY				Sg	Sb	02 31 05.8	+1.6
SNY				smax	smax		
	comp=N,690nm,0.7s						
SNY				smax	smax		
	comp=E,430nm,0.5s						
DL2	Dalian	1.66	198	Pg	Pb	02 30 43.6	0.0
DL2				Sg	Sb	02 31 05.1	+0.5
DL2				smax	smax		
	comp=N,990nm,0.6s						
DL2				smax	smax		
	comp=E,910nm,0.6s						
SUJ	Sinuiju	1.72	102	Pg	Pb	02 30 44.9	+0.3
SUJ				Sg	Sb	02 31 06.5	+0.3
PYS	Pyongsong	3.00	113	Pg	Pg	02 31 09.0	-1.4
PYS				Sg	Sg	02 31 47.0	-2.2
PYAG	Pyongyang	3.02	117	Pg	Pb	02 31 09.1	+2.3
PYAG				Sg	Sg	02 31 48.0	-2.0
KGE	Kanggye	3.31	81	Sg	Sg	02 31 56.1	-3.0
HJU	Haeju	3.61	131	Pg	Pb	02 31 18.7	+1.9
HJU				Sg	Sb	02 32 04.8	+4.2
CN2	Changchun	4.05	34	ePg	Pg	02 31 28.4	-2.1
CN2				Sg	Sg	02 32 20.8	-2.2
CN2				smax	smax		
	comp=N,150nm,0.9s						
CN2				smax	smax		
	comp=E,110nm,0.9s						
WOSN	Wonsan	4.16	107	Sg	Sg	02 32 23.5	-2.9
TIA	Tai'an	5.90	225	Pg	Pg	02 32 02.4	-3.4
TIA				Sg	Sg	02 33 19.3	-2.9
TIA				smax	smax		
	comp=N,17nm,0.9s						
TIA				smax	smax		
	comp=E,15nm,0.8s						
GTA	Gaotai	17.27	274	eP	P	02 34 16.5	+0.7
GTA				pP	sP	02 34 21.1	+1.2
GTA				sP	pP	02 34 23.4	+4.8
WMQ	Urumqi	25.76	289	eP	P	02 35 46.6	+2.9

IDC 24 02:33:21.6±1.2,24°.31N×126°.86E,h0km,mb3.7/5, mb1 4.0/6,mb1mx3.5/45,mbtmp3.8/6,ML3.5/2,MS3.3/3, Ms1 3.3/3,ms1mx2.8/33,Error ellipse: s-maj=32.1km s-min=20.4km az=85.0
JMA 24 02:33:24.8±0.1,24°.49N×126°.65E,h100km±4km,M3.4

ISC 24 02:33:20.8±1.9,24°.29N±0°.06×126°.83E±0°.04,h4km±12km, n33,σ1s99/44,mb3.6/5,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JOGS	Gusukube	1.38	290	P	Pg	02 33 47.3	+0.1
JOGS				S	Sg	02 34 03.5	-1.6
JMJ2	Miyako jima3	1.44	288	P	Pb	02 33 48.1	-0.1
JMJ2				eS	Sb	02 34 05.0	-1.8
JIKM	Ikemajima	1.57	294	S	Sn	02 34 08.4	-1.8
JIRB	Irabujima	1.60	290	P	Pn	02 33 49.9	0.0
JIRB				eS	Sn	02 34 08.1	-2.8
JTJ	Tarama	1.97	281	P	Pn	02 33 54.8	-0.1
JTJ				S	Sn	02 34 17.4	-2.7
JKE	Kume jima 2	2.02	359	P	Pn	02 33 56.1	+0.4
JKE				eS	Sn	02 34 18.9	-2.6
JJT3	Tamagusuku3	2.04	25	P	Pn	02 33 56.7	+0.8
JJT3				S	Sn	02 34 21.7	-0.1
JISG	Ishigakijimahi	2.31	278	P	Pn	02 33 59.5	-0.2
JISG				eS	Sn	02 34 25.5	-3.1
JAGN	Aguni-jima	2.32	9	P	Pn	02 34 00.2	+0.5
JIJ	Ishigaki jima	2.45	272	P	Pn	02 34 01.4	-0.2

JIJ				eS	Sn	02 34 28.5	-3.5
JKRS	Kuro-shima	2.57	269	P	Pn	02 34 03.5	+0.2
JKRS				eS	Sn	02 34 32.7	-2.3
HATJ	Hateruma jima	2.77	266	P	Pn	02 34 05.6	-0.4
IRIF	Iriomote-Funau	2.83	271	P	Pn	02 34 06.5	-0.3
JOW	Kunigami	2.85	27	P	Pn	02 34 07.7	+0.6
JOW	Kunigami	2.85	27	Pn	Pn	02 34 07.5	+0.4
	2.2nm,0.3s,baz=200,slow=14,SNR=28						
JOW				Sn	Sn	02 34 37.3	-4.5
	1.9nm,0.3s,baz=230,slow=25,SNR=5.5						
JIH	Iheya	2.92	20	P	Pn	02 34 09.0	+1.0
JIH				eS	Sn	02 34 41.0	-2.5
JYRO	Yoronjima	3.09	28	P	Pn	02 34 11.1	+0.7
JYRO				eS	Sn	02 34 45.9	-1.9
JOKE	Okinoerabujima	3.44	27	P	Pn	02 34 16.5	+1.3
JTK	Tokunoshima	3.97	28	P	Pn	02 34 23.1	+0.6
JMZ	Minamidaito 2	4.26	68	P	Pn	02 34 26.0	-0.5
JMZ				eS	Sn	02 35 11.3	-5.4
JKDJ	Kitadaitoujima	4.37	67	P	Pn	02 34 27.4	-0.6
JKDJ				eS	Sn	02 35 14.9	-4.5
JAMN	Amaminishikomi	4.46	28	P	Pn	02 34 29.3	0.0
JAM	Amami Oshima	4.80	31	P	Pn	02 34 34.0	+0.1
JTAJ	Takarajima	5.29	23	P	Pn	02 34 40.7	+0.1
JNU	Nakatsue	9.49	21	Pn	Pn	02 35 39.3	+1.0
	2.8nm,0.3s,baz=201,slow=18,SNR=12						
KSRS	Korea Array	13.15	4	LR	LR	02 41 30.0	
	comp=Z,41nm,19.1s,baz=253,slow=37						
CMAR	Chiang Mai Arr	26.58	263	P	P	02 39 01.6	+1.4
	1.7nm,0.2s,baz=50,slow=8.4,SNR=4.7						
SONM	Songino Array	28.55	331	P	P	02 39 20.4	+2.6
	0.4nm,0.4s,baz=138,slow=8.9,SNR=7.2						
MKAR	Makanchi Array	41.92	314	P	P	02 41 13.2	+0.7
	0.3nm,0.5s,baz=95,slow=8.5,SNR=7.7						
WRA	Warramunga Arr	44.57	170	P	P	02 41 35.1	+1.0
	0.9nm,0.7s,baz=352,slow=8.6,SNR=3.5						
ASAR	Alice Springs	48.17	171	P	P	02 42 04.3	+1.9
	0.4nm,0.7s,baz=356,slow=11,SNR=5.8						
STKA	Stephens Creek	57.61	165	LR	LR	03 07 55.9	
	comp=Z,31nm,21.4s,baz=204,slow=36						
RAR	Rarotonga	84.49	116	LR	LR	03 16 16.4	
	comp=Z,55nm,20.6s,baz=294,slow=30						

*IDC **24** 03:16:20.8±5.9, 30.°65S×179.°72W, h399km±48km, mb3.7/6, mb1 3.8/7, mb1mx3.4/39, mbtmp4.5/7, Error ellipse: s-maj=62.0km s-min=17.4km az=43.0*

ISC 24 03:16:22.3±0.8, 30.°90S±0.°07×180.°0W±0.°1, h400km, n35, σ2§30/42, mb3.8/6, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.42	48	P	Pn	03 17 21.4	+0.3
GLKZ				S	S	03 18 08.3	-0.3
MXZ	Matakaoa Point	6.79	192	P	P	03 18 06.9	+2.8
MXZ				S	S	03 19 23.6	-2.6
WMGZ	Waiomatatini S	7.03	191	P	P	03 18 09.0	+2.3
WMGZ				S	S	03 19 33.1	+2.1
HAZ	Te Kaha	7.08	195	P	P	03 18 09.4	+2.0
HAZ				S	S	03 19 33.7	+1.5
PKGZ	Pakihiroa	7.15	192	P	P	03 18 10.1	+1.9
PUZ	Puketiti	7.30	191	P	Pn	03 18 10.8	+1.6
PUZ				S	S	03 19 33.4	-3.3
RUGZ	Raukumara Rang	7.31	195	P	Pn	03 18 11.5	+2.1
RUGZ				S	S	03 19 34.1	-2.9
MWZ	Matawai	7.69	195	P	Pn	03 18 14.9	+1.2
MWZ				S	S	03 19 40.6	-4.3
URZ	Urewera	7.72	197	P	Pn	03 18 15.4	+1.5
	8.5nm,0.3s,baz=58,slow=2.7,SNR=28						
URZ				S	S	03 19 42.1	-3.3
	7.5nm,0.3s,baz=291,slow=15,SNR=14						
URZ	Urewera	7.72	197	P	Pn	03 18 15.4	+1.5
TKGZ	Te Karaka	7.73	193	P	Pn	03 18 16.0	+1.9
TKGZ				S	S	03 19 41.9	-3.6
RIGZ	Rimuhau	8.00	193	P	Pn	03 18 18.4	+1.1
RIGZ	Rimuhau	8.00	193	P	S	03 19 47.0	-4.4
MUGZ	Murupara	8.02	199	P	Pn	03 18 19.3	+1.9
SNGZ	Shannon Statio	8.16	195	P	S	03 19 53.4	-1.4
PRGZ	Paritu Road	8.19	192	P	S	03 19 53.8	-1.5
KNZ	Kokohu	8.33	193	P	S	03 19 54.6	-3.4
RAHZ	Arahi	8.35	196	P	S	03 19 57.0	-1.7
MHGZ	Mahia Peninsul	8.41	191	P	S	03 19 55.9	-4.0
WHHZ	Waihua	8.47	195	P	S	03 19 58.6	-2.6
ARHZ	Aropaoanui	8.70	196	P	S	03 20 02.4	-3.7
BKZ	Black Stump Fm	8.74	198	P	S	03 20 03.6	-3.3
MCHZ	McNeill Hill	8.95	197	P	S	03 20 09.4	-1.9
KWHZ	Kaweka Forest	9.00	198	P	S	03 20 10.6	-1.9
BHHZ	Black Hill Sta	9.16	200	P	S	03 20 13.3	-2.6
KRHZ	Kereru	9.22	198	P	S	03 20 13.3	-3.7
CTA	Charters Tower	32.22	281	P	P	03 22 15.9	+0.5
	1.4nm,0.4s,baz=96,slow=11,SNR=7.0						
STKA	Stephens Creek	32.71	258	P	P	03 22 20.8	+1.3
	8.2nm,0.8s,baz=97,slow=11,SNR=19						
ASAR	Alice Springs	41.39	268	P	P	03 23 31.4	-0.4
	2.9nm,0.6s,baz=106,slow=7.5,SNR=31						
WRA	Warramunga Arr	42.43	274	P	P	03 23 39.5	-0.5
	4.1nm,0.4s,baz=111,slow=8.0,SNR=11						
FITZ	Fitzroy Crossi	50.67	271	P	P	03 24 43.1	0.0
	1.3nm,0.5s,baz=112,slow=5.4,SNR=2.3						
QSPA	South Pole Qui	59.21	180	P	P	03 25 43.4	+0.6
	3.3nm,0.7s,baz=31,slow=1.3,SNR=22						
FINES	FINESS Array B	145.01	338	PKP	PKPab	03 35 10.6	-2.3
	1.0nm,0.4s,baz=58,slow=3.8,SNR=12						
BRTR	Keskin Array B	151.33	297	PKPbc	PKPbc	03 35 27.4	-2.1
	0.3nm,0.6s,baz=134,slow=3.7,SNR=4.8						
TORD	Torodi Ar. Bea	162.26	185	PKPab	PKPab	03 36 25.3	-1.5
	0.7nm,0.9s,baz=174,slow=5.7,SNR=2.6						

*DJA **24** 03:18:10.7±0.3, 2°N±3°×12°8E±°, h10km, M4.7/16, mb4.8/16, mB5.2/5, MLv4.6/10, Mw(mB)4.6/5*
*BJI **24** 03:18:11.2±0.0, 2.°16N×128.°41E, h30km, mB4.9/27, mb4.5/33, Ms4.5/4, Ms7 4.2/1*
*NEIC **24** 03:18:12.3±2.6, 2.°12N±0.°08×128.°07E±0.°07, h42km±4km, mb4.5/27, Error ellipse: s-maj=11.5km s-min=9.9km az=178.0*
*IDC **24** 03:18:13.9±1.8, 2.°27N×128.°37E, h47km±17km, mb3.8/18, mb1 3.9/19, mb1mx3.8/47, mbtmp4.1/19, ML4.5/1, MS3.3/10, Ms1 3.3/10, ms1mx3.1/47, Error ellipse: s-maj=25.9km s-min=10.6km az=69.0*

ISC 24 03:18:12.2±0.4, 2.°10N±0.°04×128.°14E±0.°06, h35km, n100, σ1§97/97, mb4.5/36, MS3.3/9, 2C, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.53	210	P	Pn	03 18 37.5	+0.4
TNTI	Ternate	1.53	210		Pn	03 18 37.8	+0.7
TNTI				Sn	Sn	03 18 53.7	-2.0
LBMI	Labuha	2.79	193	P	Pn	03 18 56.2	+1.7
SWI	Sorong	4.29	133	P	Pn	03 19 16.8	+1.7
SIJI	Sorong	4.30	133	P	Pn	03 19 17.2	+2.0
	24nm,0.3s,baz=245,slow=22,SNR=57						
SIJI				S	Sn	03 20 04.8	+0.6
	12nm,0.3s,baz=223,slow=11,SNR=8.5						
SIJI				LR	LR	03 21 12.3	
	comp=Z,445nm,19.6s,baz=128,slow=42						
KMSI	Cibinong	4.42	250	P	Pn	03 19 18.7	+1.8
SANI	Sanana	4.65	208	P	Pn	03 19 21.6	+1.6
DDMP	Don Marcelino,	4.66	329	eP	Pn	03 19 23.6	+3.5
DDMP				eS	Sn	03 20 06.5	-6.4
MSAI	Masohi	5.47	172	P	Pn	03 19 36.3	+5.0
DAV	Davao City (W)	5.56	333	LR	LR	03 21 47.0	
	comp=Z,270nm,20.9s,baz=342,slow=39						
SKMP	Bagumbayan, Su	5.67	321	eP	Pn	03 19 27.7	-6.3
SKMP				eS	Sn	03 20 36.1	-1.8
KCP	Kidapawan	5.75	328	⇑eP	Pn	03 19 36.6	+1.4
KCP				iS	Sn	03 20 53.3	+13
LUWI	Luwuk	6.21	240	Pn	Pn	03 19 42.1	+0.6
MRSI	Marisa	6.40	255	P	Pn	03 19 45.9	+1.8
	0.3nm1μm106nm,0.6s						
FAKI	Fak Fak	6.46	140	P	Pn	03 19 47.4	+2.5
	0.3nm70nm,0.6s						
FAKI	Fak Fak	6.46	140		Pn	03 19 47.1	+2.2
FAKI					Sn	03 20 56.4	-1.1
BUKP	Musuan	6.51	332	eP	Pn	03 19 46.8	+1.2
PAGZ	Pagadian	7.42	320	eP	Pn	03 19 59.0	+1.0
PAGZ				eS	Sn	03 21 06.6	-14
MPSI	Mapaga	8.42	258	P	Pn	03 20 13.9	+2.0
	22nm,0.7s						
TTSI	Tana Toraja	9.76	238	P	Pn	03 20 31.5	+1.3
	36nm,0.6s						
SPSI	Sidrap Palu	10.31	234	P	Pn	03 20 39.6	+1.9
	40nm,0.8s						
KAPI	Kappang	10.96	230	LR	LR	03 26 17.6	
	comp=Z,82nm,20.6s,baz=63,slow=43						
MMRI	Maumere	12.18	209	Pn	Pn	03 21 01.7	-1.7
EDFI	Ende, Flores	12.55	211	P	Pn	03 21 08.3	-0.2
	7.6nm,0.8s						
PLAI	Plampang	14.98	223	P	P	03 21 43.9	-2.7
	41nm,1.4s						
SBUM	Sibu	15.91	272		Pn	03 21 52.7	-0.9
JAGI	Jajag, Banyuwa	17.46	233	P	P	03 22 16.4	+2.3
	42nm,1.0s						
JAGI	Jajag, Banyuwa	17.46	233	P	Pn	03 22 12.4	-0.8
JAGI				IAmb	IAmb	03 22 27.6	
	comp=Z,36nm,1.0s						
KNRA	Kununurra	17.68	178	P	Pn	03 22 15.0	-0.8
KNRA				IAmb	IAmb	03 22 25.2	
	comp=Z,26nm,0.8s						
PCJI	Pacitan	19.77	239	P	Pn	03 22 42.2	+1.0
	comp=Z,75nm,1.3s						
WOJI	Wonogiri, Jawa	19.81	240	P	Pn	03 22 42.0	+0.4
	comp=Z,22nm,1.3s						
UGM	Wanagama	20.19	240	P	P	03 22 40.9	-3.2
FITZ	Fitzroy Crossi	20.22	187	P	Pn	03 22 49.1	+2.7
	comp=Z,3.7nm,0.6s,baz=47,slow=13,SNR=6.1						
FITZ	Fitzroy Crossi	20.22	187	P	P	03 22 40.4	-4.0
DLV	T Lat	21.80	298	P	P	03 23 01.5	-0.1
DLV				IAmb	IAmb	03 23 11.3	
	comp=Z,26nm,1.0s						
COEN	Coen	21.84	137	P	P	03 23 03.0	+1.1
PMG	Port Moresby	22.13	121	LR	LR	03 32 53.8	
	comp=Z,96nm,18.0s,baz=136,slow=40						
YULB	Yu-li	22.18	343	P	P	03 23 02.9	-2.5
YULB				IAmb	IAmb	03 23 16.9	
	comp=Z,31nm,1.5s						
TPUB	Ta-pu	22.30	342	P	P	03 23 03.3	-3.4
LEM	Lembang	22.32	246	LR	LR	03 31 57.2	
	comp=Z,94nm,21.8s,baz=3.0,slow=36						
WB0	Warramunga Arr	22.58	165	P	P	03 23 10.4	+0.6
WB0				IAmb	IAmb	03 23 23.6	
	comp=Z,25nm,1.0s						
WRA	Warramunga Arr	22.74	165	P	P	03 23 12.3	+0.9
	comp=Z,3.4nm,0.6s,baz=340,slow=10,SNR=22						
WRA				ScP	ScP	03 30 36.9	-1.2
	comp=Z,0.5nm,0.8s,baz=347,slow=3.4,SNR=3.0						
WB2	Warramunga Arr	22.74	165	P	P	03 23 10.5	-1.0
WR0	Warramunga Arr	22.81	164	P	P	03 23 10.7	-1.4
WR0				IAmb	IAmb	03 23 26.2	
	comp=Z,14nm,0.8s						
YHNB	Yeheng	23.37	344	P	P	03 23 17.8	-0.1
MDSI	Maura Dua	24.82	255	P	P	03 23 33.3	+1.9
PSA00	Pilbara Seismi	24.89	199	P	P	03 23 32.1	+0.2
PSA00				IAmb	IAmb	03 23 40.2	
	comp=Z,11nm,1.0s						
XMIS	Christmas Isla	25.64	240		P	03 23 38.1	-0.8
AS31	Alice Springs	26.22	168	P	P	03 23 43.5	-0.5
ASAR	Alice Springs	26.22	168	P	P	03 23 45.1	+1.1
	comp=Z,1.6nm,0.7s,baz=354,slow=7.6,SNR=17						
ASAR				PcP	PcP	03 27 10.3	-0.1
	comp=Z,0.4nm,0.6s,baz=348,slow=2.0,SNR=4.4						
ASAR				ScP	ScP	03 30 46.5	-1.2
	comp=Z,0.4nm,0.6s,baz=343,slow=2.9,SNR=4.4						
ASAR				LR	LR	03 35 49.5	
	comp=Z,85nm,20.0s,baz=349,slow=40						
NJ2	Nanjing	31.05	345	eP	P	03 24 31.3	+4.4
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	Chiang Mai Arr	32.91	302	P	P	03 24 43.8	+0.3
	comp=Z,1.0nm,0.4s,baz=121,slow=7.0,SNR=5.3						
MORW	Morawa	33.09	200	P	P	03 24 44.5	-0.4
MORW				IAmb	IAmb	03 24 57.3	
	comp=Z,14nm,1.3s						
KSRS	Korea Array	35.18	360	P	P	03 25 02.3	-0.6
	comp=Z,0.9nm,0.5s,baz=176,slow=9.2,SNR=7.1						
KSRS				LR	LR	03 39 19.3	
	comp=Z,19nm,20.9s,baz=190,slow=36						
MJAR	Matsushiro Arr	35.51	14	P	P	03 25 03.7	-2.2
	comp=Z,1.2nm,0.6s,baz=184,slow=9.5,SNR=4.8						
MJAR				LR	LR	03 38 45.2	
	comp=Z,36nm,21.5s,baz=240,slow=35						
STKA	Stephens Creek	36.13	160	P	P	03 25 12.8	+1.7
	comp=Z,2.7nm,0.5s,baz=336,slow=10,SNR=11						
XAN	Xi'an	36.50	333	P	P	03 25 15.3	+1.0
XAN				pP	pP	03 25 21.6	-2.7
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,97nm,3.7s						
CD2	Chengdu	36.78	324	P	P	03 25 18.5	+1.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	Lanzhou	40.61	329	eP	P	03 25 50.9	+1.9
LZH				pP	sP	03 26 01.8	-1.7
LZH				sP	pP	03 26 05.6	+6.3
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
H11S3	WAKE ISLAND Hy	41.13	64	T	T	04 09 12.3	
	baz=253,slow=75,SNR=42						
H11S2	WAKE ISLAND Hy	41.15	64	T	T	04 09 12.3	
	baz=253,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	41.15	64	T	T	04 09 12.3	
	baz=253,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	41.72	62	T	T	04 09 46.2	
	baz=250,slow=75,SNR=26						
H11N2	WAKE ISLAND Hy	41.73	62	T	T	04 09 47.7	
	baz=250,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	41.74	62	T	T	04 09 49.4	
	baz=250,slow=75,SNR=47						
USRK	Ussuriysk Ar.	42.06	4	P	P	03 25 59.6	-0.9
	comp=Z,1.4nm,0.7s,baz=180,slow=5.8,SNR=3.7						
GTA	Gaotai	45.21	329	eP	P	03 26 27.1	+0.9
GTA				pP	pP	03 26 36.6	0.0
GTA				sP	sP	03 26 40.8	+0.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,84nm,4.6s						
GTA				LR	LR		
	comp=Z,92nm,14.9s						
GTA				LR	LR		
	comp=Z,110nm,16.8s						
TAPN	Taplejung	46.11	307	eP	P	03 26 33.8	+0.1
	comp=Z,30nm,1.0s						
ODAN	Odare	46.16	306	eP	P	03 26 34.7	+0.7
	comp=Z,32nm,0.7s						
RAMN	Ramite	46.83	306	eP	P	03 26 39.9	+0.6
	comp=Z,22nm,0.7s						
KLR	Kul'dur	47.05	3	P	P	03 26 39.7	-0.6
	comp=Z,0.7nm,0.5s,baz=201,slow=17,SNR=3.2						
JIRN	Jiri	47.46	306	eP	P	03 26 44.9	+0.5
	comp=Z,29nm,0.7s						
GUN	Gumba	47.82	307	eP	P	03 26 47.4	+0.3
	comp=Z,50nm,0.8s						
DMN	Daman	48.32	306	eP	P	03 26 51.5	+0.6
ULN	Ulaanbaatar	49.10	341	P	P	03 26 55.8	-0.6
ULN				IAmb	IAmb	03 26 59.6	
	comp=Z,6.7nm,1.1s						
SONM	Songino Array	49.28	341	P	P	03 26 58.1	+0.3
	comp=Z,1.1nm,0.8s,baz=158,slow=8.6,SNR=7.3						
DANN	Dangsing	49.70	306	eP	P	03 27 01.9	+0.4
	comp=Z,46nm,0.7s						
TLY	Talaya	53.51	341	P	P	03 27 27.2	-2.1
TLY				IAmb	IAmb	03 27 38.3	
	comp=Z,2.2nm,0.5s						
WMQ	Urumqi	54.86	325	eP	P	03 27 43.3	+4.0
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,97nm,6.7s						
WMQ				LR	LR		
	comp=Z,210nm,29.2s						
WMQ				LR	LR		
	comp=Z,1μm,29.1s						
MKAR	Makanchi Array	59.69	325	P	P	03 28 13.7	+0.5
	comp=Z,1.9nm,0.4s,baz=116,slow=8.2,SNR=91						
MKAR				LR	LR	03 56 43.3	
	comp=Z,50nm,18.5s,baz=156,slow=39						
MAKZ	Makanchi	59.87	325	P	P	03 28 13.0	-1.6
MAKZ				IAmb	IAmb	03 28 21.6	
	comp=Z,4.4nm,0.8s						
KSH	Kashi	60.18	315	P	P	03 28 24.5	+7.6
KSH				PcP	PcP	03 29 05.8	+3.5
KSH				PP	PP	03 30 38.1	+8.2
KSH				S	S	03 36 35.0	+6.5
KSH				ScS	ScS	03 38 04.9	-0.3
KSH				SS	SS	03 40 31.5	+5.4
KSH				pmax	pmax		
	comp=Z,15nm,1.2s						
KSH				pmax	pmax		
	comp=Z,200nm,5.7s						
ZALV	Zalesovo Beam	62.67	333	P	P	03 28 33.6	+0.3
	comp=Z,1.2nm,0.7s,baz=144,slow=5.2,SNR=3.5						
KURBB	Kurchatov Arra	63.86	327	P	P	03 28 40.8	-0.4
	comp=Z,5.0nm,0.7s,baz=125,slow=6.1,SNR=14						
KURK	Kurchatov	63.86	327	P	P	03 28 39.8	-1.4
KK31	Karatay Array	65.37	317	P	P	03 28 51.0	-0.3
KK31				IAmb	IAmb	03 28 58.7	
	comp=Z,6.4nm,1.2s						
KKAR	Karatay Array	65.37	317	P	P	03 28 50.1	-1.2
KKAR				IAmb	IAmb	03 28 58.8	
	comp=Z,6.4nm,1.2s						
BVAR	Borovoye Array	69.44	327	P	P	03 29 16.5	-0.3
	comp=Z,1.5nm,0.7s,baz=132,slow=8.8,SNR=8.6						
TIXI	Tiksi	69.45	0	P	P	03 29 16.1	-0.4
	comp=Z,0.6nm,0.3s,baz=214,slow=3.6,SNR=2.5						
TIXI	Tiksi	69.45	0	P	P	03 29 15.1	-1.4
TIXI				IAmb	IAmb	03 29 23.5	
	comp=Z,3.0nm,0.6s						
ABKAR	Akbulak array	74.29	321	P	P	03 29 44.5	-1.6
AKTO	Aktyubinsk	75.80	322	LR	LR	04 04 41.4	
	comp=Z,36nm,18.1s,baz=355,slow=37						
ARU	Arti	77.06	328	P	P	03 30 01.1	-0.5
	comp=Z,1.5nm,0.2s,baz=108,slow=20,SNR=3.7						
ARU	Arti	77.06	328	P	P	03 30 00.1	-1.5
ARU				IAmb	IAmb	03 30 14.0	
	comp=Z,4.8nm,0.6s						
ILAR	Eielson Array	85.96	25	P	P	03 30 47.6	-1.1
	comp=Z,0.1nm,0.6s,baz=249,slow=5.0,SNR=2.8						
SYO	Syowa Base	91.42	201	⇑eP	P	03 31 12.0	-2.4
BRTR	Keskin Array B	92.14	310	P	P	03 31 21.0	+2.4
	comp=Z,0.3nm,0.7s,baz=72,slow=4.7,SNR=2.8						
ARCES	ARCESS Array B	92.45	340	P	P	03 31 18.1	-1.1
	comp=Z,2.8nm,0.8s,baz=81,slow=5.6,SNR=3.0						
VYHS	Vyhne	101.10	320	ePDIFF	Pdif	03 32 01.9	+3.1
TORD	Torodi Ar. Bea	124.75	287	PKP	PKPdf	03 37 08.7	-0.6
	comp=Z,0.2nm,0.5s,baz=48,slow=2.1,SNR=2.8						

*KRNET **24** 03:20:55.0±0.1, 39.°79N×73.°63E, mb3.1*
*SOME **24** 03:20:57.3, 40.°00N×73.°68E, h10km*
*NNC **24** 03:20:58.0±1.6, 39.°97N×73.°72E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=11.9km s-min=5.5km az=175.0*

ISC 24 03:20:52.0±1.6, 39.°71N±0.°07×73.°80E±0.°03, h10km, n35, σ1§86/57, 21C-10D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	1.73	339	⇓iP	Pg	03 21 25.3	+0.2
	baz=42						
ARSB				⇓iS	Sg	03 21 47.6	+0.1
	baz=42						
ARLS	Aral	2.18	10	⇑iP	Pg	03 21 33.5	-0.3
	baz=14						
ARLS				⇑iS	Sg	03 22 02.6	+0.5
	baz=14						
BTK	Batken	2.32	279	⇓eP	Pg	03 21 34.7	-1.8
	baz=78						
BTK				⇓iS	Sg	03 22 04.2	-2.4
	baz=78						
NRN	Naryn	2.40	44	⇑iP	Pg	03 21 37.9	-0.1
	baz=47						
NRN				⇑iS	Sg	03 22 09.3	+0.2
	baz=47						
AML	Almayashu	2.42	358	⇓iP	Pg	03 21 37.1	-1.2
	baz=1.0						
AML				⇓iS	Sg	03 22 08.1	-1.6
	baz=1.0						
ARK	Arkit	2.51	327	⇓iP	Pb	03 21 37.0	-0.2
	baz=28						
ARK				⇓iS	Sb	03 22 07.5	-0.6
	baz=28						
UCH	Uchtor	2.57	12	⇑iP	Pg	03 21 40.2	-1.0
	baz=15						
UCH				⇑iS	Sg	03 22 12.2	-2.3
	baz=15						
KZA	Kyzart	2.60	24	⇑iP	Pg	03 21 40.4	-1.5
	baz=28						
KZA				⇑iS	Sg	03 22 13.7	-2.0
	baz=28						
EKS2	Erkin-Say	2.94	360	⇑iP	Pb	03 21 44.6	0.0
	baz=2.0						
EKS2				⇑iS	Sb	03 22 20.5	-0.2
	baz=2.0						
AAK	Ala-Archa	2.97	10	⇑eP	Pb	03 21 45.5	+0.5
	baz=13						
AAK				⇑iS	Sb	03 22 22.0	+0.6
	baz=13						
MRKS	Merke	3.06	352	eP	Pg	03 21 48.6	-2.0
	9.9nm,0.4s						
MRKS				eS	Sb	03 22 25.3	+1.3
	17nm,0.3s						
MRKS	Merke	3.06	352	Pg	Pg	03 21 48.7	-2.0
	11nm,0.3s						
MRKS				Lg	Lg	03 22 25.5	
	17nm,0.4s						
KBK	Karagaybulak	3.06	16	⇑iP	Pb	03 21 47.0	+0.3
	baz=19						
KBK				⇑iS	Sb	03 22 24.6	+0.4
	baz=19						
ULHL	Ulahol	3.13	35	⇑iP	Pb	03 21 48.3	+0.4
	baz=38						
ULHL				⇑iS	Sb	03 22 27.2	+1.0
	baz=38						
BOOM	Boomskoye usch	3.21	30	⇑iP	Pb	03 21 49.0	-0.2
	baz=32						
BOOM				⇑iS	Sb	03 22 28.9	+0.5
	baz=32						
KST	Kastek	3.70	25	eP	Pg	03 22 00.7	-2.2
	16nm,1.5s						
KST				eS	Sb	03 22 45.9	+3.4
	23nm,0.6s						
KST	Kastek	3.70	25	Pg	Pg	03 22 03.7	+0.7
	5.5nm,0.6s						
KST				Lg	Lg	03 22 50.5	
	28nm,0.7s						
DGS	Degeres	3.82	22	eP	Pg	03 22 03.3	-1.9
	3.7nm,0.5s						
DGS				eS	Sg	03 22 50.7	-4.1
	19nm,0.5s						
DGS	Degeres	3.82	22	Pg	Pg	03 22 04.9	-0.3
DGS				Lg	Lg	03 22 53.7	
IZV	Izvestkoviy	3.94	32	eP	Pg	03 22 06.3	-1.1
	9.1nm,1.0s						
IZV				eS	Sg	03 22 55.9	-2.5
	24nm,1.0s						
IZV	Izvestkoviy	3.94	32	Pg	Pg	03 22 07.6	+0.2
	9.1nm,0.6s						
IZV				Lg	Lg	03 22 57.7	
	26nm,0.7s						
MTBS	Maitube	3.94	29	eP	Pg	03 22 06.9	-0.7
	4.1nm,0.2s						
MTBS				eS	Sg	03 22 56.5	-2.1
	11nm,0.5s						
MTBS	Maitube	3.94	29	Pg	Pg	03 22 08.1	+0.6
	8.6nm,0.5s						
MTBS				Lg	Lg	03 22 58.3	
	12nm,0.5s						
TNSS	Tian-Shan	4.08	34	eP	Pg	03 22 09.3	-0.8
	8.7nm,0.5s						
TNSS				eS	Sg	03 23 00.8	-2.1
	15nm,0.8s						
TNSS	Tian-Shan	4.08	34	Pg	Pg	03 22 08.4	-1.7
	12nm,0.8s						
TNSS				Lg	Lg	03 22 59.3	
	14nm,1.1s						
KK31	Karatay Array	4.19	325	⇓Pn	Pn	03 21 58.6	+2.6
	0.5nm,0.7s,baz=128,slow=13,SNR=15						
KK31				⇑Pg	Pg	03 22 09.3	-3.0
	0.7nm,0.3s,baz=136,slow=14,SNR=17						
KK31				⇑Sn	Sn	03 22 49.0	+3.9
	0.9nm,0.3s,baz=151,slow=26,SNR=3.5						
KK31				⇑Lg	Lg	03 23 03.3	
	5.4nm,0.5s,baz=141,slow=31,SNR=8.5						
KRBS	Karabastau	4.22	19	eP	Pg	03 22 10.9	-1.9
	4.0nm,0.6s						
KRBS				eS	Sg	03 23 03.7	-3.7
	4.0nm,0.5s						
KRBS	Karabastau	4.22	19	Pg	Pg	03 22 10.8	-2.0
	4.0nm,0.7s						
KRBS				Lg	Lg	03 23 03.5	
	6.5nm,0.6s						
MDOK	Medeo	4.22	34	Pg	Pg	03 22 10.1	-2.8
	8.6nm,1.1s						
MDOK				Lg	Lg	03 23 04.8	
	17nm,0.9s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDOK	**Medeo**	**4.22**	**34**	Pg	**Pg**	**03 22 12.9**	**0.0**
	6.7nm,0.6s						
MDOK				Lg	Lg	03 23 06.8	
	20nm,1.6s						
KNDC	**Almaty**	**4.23**	**33**	⇓Lg	Lg	03 23 08.2	
	49nm,0.6s						
KOTS	**Kotyrbulak**	**4.31**	**34**	*e*P	**Pg**	**03 22 12.9**	**-1.6**
	6.7nm,0.5s						
KOTS				*e*S	**Sg**	**03 23 07.1**	**-3.2**
	21nm,0.7s						
KOTS	**Kotyrbulak**	**4.31**	**34**	Pg	**Pg**	**03 22 14.0**	**-0.5**
	12nm,0.8s						
KOTS				Lg	Lg	03 23 09.5	
	55nm,1.0s						
PDGK	**Podgornoye**	**5.59**	**48**	Pg	**Pg**	**03 22 36.9**	**-2.2**
	2.3nm,1.1s						
PDGK				Lg	Lg	03 23 48.7	
	8.6nm,1.9s						
KAPS	**Kapalarasan**	**6.92**	**35**	Pg	**Pg**	**03 23 00.8**	**-3.6**
	1.1nm,0.4s						
KAPS				Lg	Lg	03 24 29.2	
	1.5nm,0.4s						

*NCEDC **24** 03:52:57.8±1.1, 40.°23N±0.°02×121.°13W±0.°02, h0km±7km, Md2.2/31, Error ellipse: s-maj=2.6km s-min=1.8km az=218.0*

NEIC 24 03:52:58.0±0.8, **40.°21N**±0.°01×**121.°14W**±0.°01, **h9**km±5km, **Error ellipse: s-maj=2.1km s-min=1.2km az=163.0, Northern California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCMM	**Colby Mountain**	**0.30**	**259**		Pg	03 53 04.4	+0.3
LRDM	**Redding Peak**	**0.36**	**316**		Pg	03 53 05.2	0.0
LMEM	**Manzanita Entr**	**0.47**	**315**		Pg	03 53 07.4	+0.2
MGL	**Magalia**	**0.51**	**220**		Pg	03 53 08.0	+0.1
O03E	**Paynes Creek**	**0.52**	**280**		Pg	03 53 07.7	-0.4
LDBM	**Digger Butte**	**0.55**	**295**		Pg	03 53 08.3	-0.3
LBCM	**Butte Creek Ri**	**0.65**	**346**		Pg	03 53 10.4	-0.3
HATC	**Hat Creek Radi**	**0.66**	**338**		Pg	03 53 10.7	0.0
BEKR	**Beckworth**	**0.69**	**119**		Pg	03 53 11.2	-0.1
BEKR	**Beckworth**	**0.69**	**119**		Sg	03 53 20.8	+0.5
ORV	**Oroville**	**0.71**	**203**	Pg	Pg	03 53 11.4	-0.3
ORV					Sg	03 53 21.1	+0.2
LOY	**Loyalton**	**0.88**	**128**		Pg	03 53 14.7	-0.3
KBF	**Kyburz Flat**	**1.00**	**134**		Pg	03 53 17.0	-0.2
LTIM	**Timbered Crate**	**1.00**	**345**		Pg	03 53 16.8	-0.6
DONR	**Donner Summit**	**1.06**	**143**		Pg	03 53 17.9	-0.5
PEAR	**Peavine Mounta**	**1.08**	**123**		Pg	03 53 18.7	-0.2
OSUM	**Sutter Buttes**	**1.08**	**211**		Pg	03 53 18.9	0.0
SUTB	**Sutter Butte**	**1.10**	**207**		Pg	03 53 18.8	-0.3
VPK	**Verdi Peak**	**1.12**	**130**		Pg	03 53 19.0	-0.6
WDC	**Whiskeytown Da**	**1.14**	**290**		Pg	03 53 19.4	-0.5
AFDM	**Forest Hills D**	**1.26**	**174**		Pn	03 53 20.9	-1.0
AFDM	**Forest Hills D**	**1.26**	**174**		Sb	03 53 38.5	+0.1
TAHR	**Tahoe**	**1.29**	**144**		Pn	03 53 22.4	-0.1
RUBR	**Rubicon Trail**	**1.38**	**146**		Pn	03 53 23.9	+0.1
LGBM	**Gray Butte**	**1.39**	**325**		Pn	03 53 23.4	-0.6
ASMM	**Slate Mountain**	**1.43**	**166**		Pn	03 53 24.5	+0.2
LMHM	**Little Mount H**	**1.43**	**344**		Pn	03 53 24.5	0.0
PAHR	**Pah Rah Range**	**1.44**	**110**		Pb	03 53 24.9	-0.2
PAHR	**Pah Rah Range**	**1.44**	**110**	Sg	Sg	03 53 44.2	0.0
VCNR	**Virginia City**	**1.46**	**128**		Pg	03 53 25.9	-0.3
PNTR	**Pine Nut**	**1.63**	**133**		Pb	03 53 27.9	-0.5
MOD	**Modoc Plateau**	**1.81**	**20**		Pn	03 53 29.8	+0.2
YERR	**Yerington**	**1.91**	**129**		Pn	03 53 31.6	+0.6
KCPM	**Cahto Peak**	**1.95**	**255**	Pn	Pn	03 53 31.5	0.0
KMRM	**Mail Ridge**	**1.97**	**271**	Pn	Pn	03 53 32.3	+0.5
WAKR	**Walker**	**2.15**	**142**		Pn	03 53 34.0	-0.4
JCC	**Jacoby Creek,**	**2.29**	**286**	Pn	Pn	03 53 36.1	+0.1
KRMB	**Red Mountain**	**2.48**	**303**	Pn	Pn	03 53 39.2	+0.4
KVN	**Kaiserville**	**2.61**	**115**		Pn	03 53 41.8	+1.1
HUMO	**Hull Mountain**	**2.76**	**331**	Pn	Pn	03 53 43.2	+0.6
MDPB	**Devils Postpil**	**3.03**	**147**	Pn	Pn	03 53 45.0	-1.5

IDC 24 03:57:29.4±1.8, **24.°87N**×**109.°36W, h0**km, **mb1 3.4**/3, **mb1mx3.2**/59, **mbtmp2.9**/3, **ML3.8**/2, **Error ellipse: s-maj=41.3km s-min=10.5km az=134.0, Gulf of California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**1.16**	**229**	Pg	Pb	03 57 52.5	+0.2
	30nm,0.3s,baz=45,slow=1.4,SNR=16						
LPIG				Lg	Lg	03 58 06.2	
	81nm,0.3s,baz=90,slow=20,SNR=26						
TXAR	**Lajitas Array**	**6.74**	**47**	Pn	Pn	03 59 11.4	+1.6
	0.2nm,0.3s,baz=225,slow=14,SNR=17						
TXAR				Pg	Pg	03 59 34.4	-4.3
	0.1nm,0.3s,baz=230,slow=13,SNR=4.9						
TXAR				Sn	Sn	04 00 27.1	-0.4
	1.1nm,0.3s,baz=222,slow=24,SNR=15						
TXAR				Lg	Lg	04 01 00.3	
	baz=229,slow=28,SNR=2.9						
NVAR	**Mina Array Bea**	**15.51**	**333**	Pn	P	04 01 12.9	-1.4
	0.0nm,0.3s,baz=154,slow=11,SNR=2.1						
PDAR	**Pinedale Array**	**17.86**	**360**	P	Pn	04 01 39.6	+0.1
	0.1nm,0.3s,baz=168,slow=8.9,SNR=3.3						

*MEX **24** 04:04:28.4±4.8, 15.°82N×96.°92W, h9km, MD4.8*
*NEIC **24** 04:04:28.6±1.6, 15.°98N±0.°06×96.°83W±0.°05, h22km±5km, Error ellipse: s-maj=9.8km s-min=5.6km az=202.0*
*IDC **24** 04:04:31.4±3.8, 16.°16N×96.°73W, h33km±28km, mb4.0/21, mb1 4.2/25, mb1mx4.1/48, mbtmp4.2/25, ML3.7/4, MS3.8/22, Ms1 3.8/22, ms1mx3.6/41, Error ellipse: s-maj=22.7km s-min=10.6km az=46.0*

ISC 24 04:04:27.8±0.6, **15.°90N**±0.°04×**96.°92W**±0.°03, **h19**km±2km, **n603**, σ1**§61**/534, **mb4.7**/104, **MS3.9**/22, **1C, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PEIG	**Puerto Escondi**	**0.24**	**294**⇑	*e*P	**Pg**	**04 04 33.2**	**-0.4**
	baz=102,slow=6.9						
PEIG				*i* S	**Sg**	**04 04 36.9**	**-0.6**
PANG	**Puerto Angel**	**0.48**	**118**		**Pb**	**04 04 38.0**	**+0.3**
PANG					**Sg**	**04 04 44.0**	**-0.2**
PANG	**Puerto Angel**	**0.48**	**118**	*e*P	**Pb**	**04 04 38.0**	**+0.3**
PANG				*i* S	**Sg**	**04 04 44.0**	**-0.2**
HUIG	**Huatulco**	**0.79**	**99**		**Pg**	**04 04 43.0**	**-0.3**
HUIG					**Sg**	**04 04 53.4**	**-0.4**
HUIG	**Huatulco**	**0.79**	**99**	*e*P	**Pg**	**04 04 43.0**	**-0.3**
	baz=271,slow=14						
HUIG				*i* S	**Sg**	**04 04 53.4**	**-0.4**
YOIG	**Yosondua**	**1.13**	**328**	*e*P	**Pg**	**04 04 46.7**	**-3.1**
YOIG				*i* S	**Sg**	**04 05 03.6**	**-1.1**
OXBJ	**Oaxaca**	**1.18**	**9**		**Pn**	**04 04 48.2**	**-1.3**
OXBJ					Sb	04 05 02.9	+12
OXBJ	**Oaxaca**	**1.18**	**9**	*e*P	**Pn**	**04 04 48.2**	**-1.3**
OXBJ				*i* S	**Sb**	**04 05 03.5**	**-1.3**
VHO	**Vista Hermosa**	**1.18**	**8**	*e*P	**Pn**	**04 04 48.1**	**-1.4**
	baz=178,slow=16						
VHO				*i* S	**Sb**	**04 05 04.5**	**-0.3**
PNIG	**Pinotepa**	**1.27**	**293**	*e*P	**Pn**	**04 04 48.4**	**-2.1**
PNIG				*i* S	**Sb**	**04 05 05.2**	**-1.9**
HLIG	**Huajuapan de L**	**2.10**	**336**	*e*P	**Pn**	**04 05 01.9**	**-0.4**
HLIG				*e*S	**Sn**	**04 05 28.0**	**0.0**
TOIG	**Toxpalan**	**2.19**	**356**	*e*P	**Pn**	**04 05 03.6**	**+0.3**
TOIG				*e*S	**Sn**	**04 05 30.8**	**+0.7**
CMIG	**Matias Romero**	**2.28**	**58**	Pn	**Pn**	**04 05 03.2**	**-1.3**
	8.1nm,0.3s,baz=248,slow=9.8,SNR=84						
CMIG				Lg	Lg	04 05 36.2	
	238nm,0.3s,baz=186,slow=8.4,SNR=8.3						
CMIG	**Matias Romero**	**2.28**	**58**		**Pn**	**04 05 04.3**	**-0.3**
CMIG					**Sn**	**04 05 34.6**	**+2.5**
CMIG	**Matias Romero**	**2.28**	**58**	*e*P	**Pn**	**04 05 04.3**	**-0.3**
CMIG				*e*S	**Sn**	**04 05 32.9**	**+0.8**
TLIG	**Tlapa**	**2.29**	**317**		**Pn**	**04 05 04.7**	**-0.1**
TLIG					**Sn**	**04 05 33.5**	**+0.9**
TLIG	**Tlapa**	**2.29**	**317**		**Pn**	**04 05 04.2**	**-0.5**
TLIG					**Sn**	**04 05 32.2**	**-0.3**
TLIG	**Tlapa**	**2.29**	**317**	*e*P	**Pn**	**04 05 04.2**	**-0.5**
TLIG				*e*S	**Sn**	**04 05 32.2**	**-0.3**
FTIG	**Fresnillo de T**	**2.31**	**330**	*e*P	**Pn**	**04 05 05.0**	**-0.1**
FTIG				*i* S	**Sn**	**04 05 31.9**	**-1.3**
HMTT	**Tlapaneco**	**2.46**	**320**		**Pn**	**04 05 09.6**	**+2.5**
HMTT					**Sn**	**04 05 37.6**	**+0.9**
HMTT	**Tlapaneco**	**2.46**	**320**	*e*P	**Pn**	**04 05 09.6**	**+2.5**
HMTT				*e*S	**Sn**	**04 05 37.6**	**+0.9**
MEIG	**Mezcala**	**3.28**	**308**		**Pn**	**04 05 18.7**	**+0.3**
MEIG					**Sb**	**04 06 07.3**	**+2.1**
MEIG					LR	04 06 10.4	
MEIG	**Mezcala**	**3.28**	**308**	*e*P	**Pn**	**04 05 18.3**	**-0.1**
MEIG				*e*S	**Sn**	**04 05 57.3**	**+0.3**
CAIG	**El Cayaco**	**3.41**	**290**		**Pn**	**04 05 18.1**	**-2.0**
CAIG					**Sn**	**04 05 54.8**	**-5.3**
CAIG	**El Cayaco**	**3.41**	**290**	*e*P	**Pn**	**04 05 18.1**	**-2.0**
CAIG				*e*S	**Sn**	**04 05 54.8**	**-5.3**
PLIG	**Platanillo**	**3.50**	**315**		**Pn**	**04 05 22.1**	**+0.7**
PLIG					**Sn**	**04 06 09.4**	**+6.9**
PLIG	**Platanillo**	**3.50**	**315**	*e*P	**Pn**	**04 05 22.1**	**+0.7**
PLIG				*e*S	**Sn**	**04 06 09.4**	**+6.9**
PPM	**Popocatepetl**	**3.55**	**333**	*e*P	**Pn**	**04 05 23.5**	**+1.0**
PPM				*e*S	**Sn**	**04 06 12.4**	**+8.3**
PCIG		**3.56**	**93**		**Pn**	**04 05 21.7**	**-0.4**
PCIG					LR	04 06 21.1	
PCIG		**3.56**	**93**	*e*P	**Pn**	**04 05 21.7**	**-0.4**
PCIG				*e*S	**Sn**	**04 06 04.1**	**+0.3**
AMVM	**AMECAMECA**	**3.68**	**331**		**Pn**	**04 05 23.0**	**-1.0**
AMVM	**AMECAMECA**	**3.68**	**331**	*e*P	**Pn**	**04 05 23.0**	**-1.0**
TGIG		**3.75**	**76**		**Pn**	**04 05 25.6**	**+0.8**
TGIG					LR	04 06 21.1	
TGIG		**3.75**	**76**	*e*P	**Pn**	**04 05 25.6**	**+0.8**
TGIG				*e*S	**Sn**	**04 06 11.1**	**+2.7**
LVIG	**Laguna Verde**	**3.83**	**7**		Pn	04 05 23.7	-2.2
LVIG					LR	04 06 23.6	
LVIG	**Laguna Verde**	**3.83**	**7**	*e*P	Pn	04 05 23.7	-2.2
LVIG				*e*S	**Sn**	**04 06 13.6**	**+3.1**
MAVM	**Malinalco, Edo**	**3.92**	**321**		**Pn**	**04 05 28.1**	**+0.9**
MAVM	**Malinalco, Edo**	**3.92**	**321**	*e*P	**Pn**	**04 05 28.1**	**+0.9**
UNM	**Universidad Na**	**4.04**	**328**		**Pn**	**04 05 29.5**	**+0.6**
UNM	**Universidad Na**	**4.04**	**328**	*e*P	**Pn**	**04 05 31.1**	**+2.2**
UNM				*e*S	**Sn**	**04 06 23.6**	**+7.7**
ARIG	**Puente Sto Nin**	**4.05**	**306**		**Pn**	**04 05 30.9**	**+2.0**
ARIG					**Sb**	**04 06 30.7**	**+3.4**
ARIG	**Puente Sto Nin**	**4.05**	**306**	*e*P	**Pn**	**04 05 30.9**	**+2.0**
ARIG				*e*S	**Sn**	**04 06 20.7**	**+4.8**
CVM	**Colonia del Va**	**4.08**	**328**	*e*P	**Pn**	**04 05 29.7**	**+0.4**
VTVM	**Tizayuca**	**4.24**	**336**		**Pn**	**04 05 36.4**	**+4.7**
VTVM	**Tizayuca**	**4.24**	**336**	*e*P	**Pn**	**04 05 36.4**	**+4.7**
TOVM	**TOLUCA**	**4.28**	**322**		**Pn**	**04 05 34.2**	**+2.0**
TOVM	**TOLUCA**	**4.28**	**322**	*e*P	**Pn**	**04 05 34.2**	**+2.0**
AZVM	**Cuida Lopez Ma**	**4.31**	**329**		**Pb**	**04 05 42.5**	**-0.6**
AZVM	**Cuida Lopez Ma**	**4.31**	**329**	*e*P	**Pb**	**04 05 42.5**	**-0.6**
CCIG	**Comitan**	**4.61**	**85**		**Pn**	**04 05 36.0**	**-0.7**
ZIIG	**Zihuatanejo**	**4.68**	**292**		**Pn**	**04 05 37.7**	**+0.2**
ZIIG					**Sn**	**04 06 33.9**	**+2.5**
ZIIG	**Zihuatanejo**	**4.68**	**292**	*e*P	**Pn**	**04 05 37.7**	**+0.2**
ZIIG				*e*S	**Sn**	**04 06 33.9**	**+2.5**
DEIG	**Demacu**	**4.82**	**336**	*e*P	**Pn**	**04 05 43.3**	**+3.6**
DEIG				*e*S	**Sn**	**04 06 34.3**	**-0.9**
ACIG	**Acambay**	**4.95**	**326**	*e*P	Pn	04 05 46.9	+5.6
MOIG	**Morelia**	**5.54**	**313**		**Pn**	**04 05 48.4**	**-1.2**
APG	**El Apazote**	**6.28**	**97**	Pn	**Pn**	**04 06 00.9**	**+1.2**
	1.0nm,0.3s,baz=321,slow=12,SNR=17						
APG				Sn	**Sn**	**04 07 11.3**	**0.0**
	5.1nm,0.3s,baz=356,slow=12,SNR=4.4						
IGIG	**Irapuato, Guan**	**6.39**	**320**		**Pb**	**04 06 20.6**	**+1.9**
IGIG					Sb	04 07 29.1	-5.9
IGIG	**Irapuato, Guan**	**6.39**	**320**	*e*P	Pn	04 06 10.6	+9.3
IGIG				*e*S	**Sn**	**04 07 19.1**	**+5.1**
SNET	**Serv Nac Est T**	**7.75**	**105**	Pn	**Pn**	**04 06 18.1**	**-1.7**
ZAIG	**Zacatecas**	**8.67**	**323**		**Pn**	**04 06 33.1**	**+0.5**
TEIG	**Tepich**	**9.28**	**61**	Pn	Pn	04 06 37.1	-3.6
	5.8nm,0.3s,baz=338,slow=1.7,SNR=39						
TEIG				Sn	**Sn**	**04 08 19.1**	**-5.4**
	1.5nm,0.3s,baz=319,slow=22,SNR=6.1						
TEIG				LR	LR	04 11 18.7	
	comp=Z,180nm,18.3s,baz=320,slow=45						
TEIG	**Tepich**	**9.28**	**61**		**Pn**	**04 06 39.2**	**-1.4**
TEIG					**Sn**	**04 08 21.6**	**-3.0**
TGUH	**Tegucigalpa,Un**	**9.49**	**100**	Pn	**Pn**	**04 06 43.9**	**+0.1**
ESTN	**Estel**	**10.58**	**104**	Pn	**Pn**	**04 06 57.3**	**-1.4**
ACON	**Acoyapa**	**12.05**	**107**	Pn	**Pn**	**04 07 16.4**	**-2.2**
833A	**Chaparral WMA,**	**12.58**	**350**	Pn	**Pn**	**04 07 25.3**	**-0.5**
833A	**Chaparral WMA,**	**12.58**	**350**	P	**Pn**	**04 07 25.4**	**-0.5**
	baz=168						
JTS	**Las Juntas de**	**12.91**	**114**	Pn	**Pn**	**04 07 33.7**	**+3.2**
	0.5nm,0.3s,baz=34,slow=18,SNR=3.1						
JTS	**Las Juntas de**	**12.91**	**114**	Pn	**Pn**	**04 07 30.1**	**-0.4**
HPIG		**13.67**	**325**		**Pn**	**04 07 41.5**	**+0.5**
HKT	**Hockley**	**14.02**	**4**		**Pn**	**04 07 47.0**	**+1.5**
TX31	**Lajitas Ar. Si**	**14.75**	**336**		**Pn**	**04 07 56.2**	**+0.5**
TXAR	**Lajitas Array**	**14.75**	**336**	Pn	**Pn**	**04 07 56.9**	**+1.3**
	0.0nm,0.3s,baz=157,slow=12,SNR=14						
TXAR				Lg	Lg	04 12 13.8	
	0.0nm,0.3s,baz=159,slow=36,SNR=2.9						
TXAR				LR	LR	04 14 09.9	
	comp=Z,503nm,19.1s,baz=0.0,slow=40						
JCT	**Junction City**	**14.76**	**350**	Pn	**Pn**	**04 07 55.7**	**+0.1**
JCT	**Junction City**	**14.76**	**350**	P	**Pn**	**04 07 55.4**	**-0.2**
	baz=168						
435B	**Jarrell**	**14.83**	**358**	P	**Pn**	**04 07 55.6**	**-1.0**
	baz=177						
441A	**DeRidder**	**15.17**	**12**		**Pn**	**04 08 00.7**	**-0.5**
441A				IAmb	IAmb	04 08 15.6	
	comp=Z,54nm,0.8s						
NATX	**Nacogdoches**	**15.93**	**7**		**Pn**	**04 08 10.8**	**-0.2**
NATX	**Nacogdoches**	**15.93**	**7**	P	**Pn**	**04 08 10.0**	**-0.9**
	baz=187						
342A	**Flagon Creek P**	**15.97**	**14**		**Pn**	**04 08 11.7**	**+0.2**
342A				IAmb	IAmb	04 08 25.2	
	comp=Z,104nm,0.9s						
WHTX	**Lake Whitney,**	**16.03**	**358**	IAmb	IAmb	04 08 26.8	
	comp=Z,72nm,1.2s						
WHTX	**Lake Whitney,**	**16.03**	**358**	P	**Pn**	**04 08 11.3**	**-1.0**
	baz=177,SNR=8.1						
237A	**Washetta, Mont**	**16.07**	**3**		**Pn**	**04 08 14.1**	**+1.4**
237A				IAmb	IAmb	04 08 25.8	
	comp=Z,85nm,1.2s						
344A	**Westbrook Farm**	**16.48**	**19**		**Pn**	**04 08 15.8**	**-2.3**
344A				IAmb	IAmb	04 08 26.0	
	comp=Z,49nm,1.1s						
ABTX	**Abilene, Hawle**	**16.84**	**352**	IAmb	IAmb	04 08 35.8	
	comp=Z,71nm,1.1s						
ABTX	**Abilene, Hawle**	**16.84**	**352**	P	**Pn**	**04 08 21.5**	**-1.2**
	baz=170,SNR=9.9						
346A	**Big Creek Wild**	**16.85**	**22**		**Pn**	**04 08 22.8**	**+0.1**
346A				IAmb	IAmb	04 08 32.0	
	comp=Z,67nm,0.8s						
VBMS	**Vicksburg**	**17.26**	**19**	Pn	**Pn**	**04 08 25.5**	**-2.4**
VBMS				IAmb	IAmb	04 08 38.8	
	comp=Z,72nm,1.1s						
Z35A	**Perchaven, San**	**17.36**	**359**		**Pn**	**04 08 29.5**	**+0.4**
Z35A				IAmb	IAmb	04 08 40.9	
	comp=Z,43nm,1.1s						
143A	**Socs Landing,**	**17.46**	**16**	P	**Pn**	**04 08 28.1**	**-2.3**
MNTX	**Cornudas Mount**	**17.52**	**335**	P	**Pn**	**04 08 31.4**	**+0.2**
	baz=151,SNR=17						
Z41A	**Richland Creek**	**17.68**	**11**	P	**Pn**	**04 08 31.7**	**-1.4**
	baz=193,SNR=12						
WLAR	**White Oak Lake**	**18.05**	**10**	P	**Pn**	**04 08 37.1**	**-0.4**
WLAR				IAmb	IAmb	04 08 49.0	
	comp=Z,49nm,0.9s						
HSIG		**18.38**	**318**	P	**P**	**04 08 40.1**	**-1.6**
X34A	**Smith Ranch, M**	**18.64**	**358**	IAmb	IAmb	04 09 03.4	
	comp=Z,110nm,1.3s						
250A	**Grady**	**18.71**	**29**	P	**P**	**04 08 44.5**	**-0.8**
MSTX	**Muleshoe**	**18.75**	**345**	IAmb	IAmb	04 08 47.5	
	comp=Z,36nm,1.0s						
MSTX	**Muleshoe**	**18.75**	**345**	P	**P**	**04 08 45.5**	**-0.4**
	baz=162,SNR=18						
MIAR	**Mount Ida**	**18.81**	**9**	P	**P**	**04 08 45.6**	**-0.7**
MIAR				IAmb	IAmb	04 08 48.5	
	comp=Z,84nm,0.9s						
MIAR	**Mount Ida**	**18.81**	**9**	P	**P**	**04 08 44.8**	**-1.6**
	baz=190,SNR=68						
WMOK	**Wichita Mounta**	**18.84**	**355**	P	**P**	**04 08 45.2**	**-1.5**
	baz=174,SNR=10						
X40A	**Basin Creek Fa**	**18.87**	**10**	P	**P**	**04 08 47.4**	**+0.3**
X40A	**Basin Creek Fa**	**18.87**	**10**	P	**P**	**04 08 45.3**	**-1.8**
	baz=192						
352A	**Blakely**	**18.98**	**33**	P	**P**	**04 08 47.1**	**-1.1**
352A				IAmb	IAmb	04 09 06.0	
	comp=Z,34nm,0.9s						
319A	**Douglas**	**19.10**	**326**	P	**P**	**04 08 50.1**	**+0.4**
UALR	**University of**	**19.24**	**11**	IAmb	IAmb	04 08 52.5	
	comp=Z,46nm,0.9s						
121A	**Cookes Peak, D**	**19.28**	**331**	P	**P**	**04 08 52.5**	**+0.7**
	baz=146,SNR=6.9						
LRAL	**Lakeview Retre**	**19.28**	**26**	P	**P**	**04 08 49.3**	**-2.3**
	baz=210						
X43A	**Marvell**	**19.32**	**15**	P	**P**	**04 08 51.3**	**-0.6**
X43A	**Marvell**	**19.32**	**15**	P	**P**	**04 08 51.0**	**-1.0**
	baz=197						
AMTX	**Amarillo**	**19.39**	**348**	P	**P**	**04 08 52.5**	**-0.2**
AMTX	**Amarillo**	**19.39**	**348**	P	**P**	**04 08 52.7**	**-0.1**
	baz=165						
W39A	**Magazine**	**19.42**	**8**	IAmb	IAmb	04 09 08.8	
	comp=Z,32nm,1.1s						
W39A	**Magazine**	**19.42**	**8**	P	**P**	**04 08 52.7**	**-0.4**
	baz=189,SNR=13						
OKCFA	**Oklahoma City**	**19.44**	**359**	P	**P**	**04 08 52.9**	**-0.5**
OKCFA				IAmb	IAmb	04 09 03.9	
	comp=Z,50nm,1.0s						
W41B	**Gary Mavity, V**	**19.65**	**11**	P	**P**	**04 08 54.9**	**-0.6**
	baz=193						
TIGA	**Tifton**	**19.68**	**36**	IAmb	IAmb	04 09 02.0	
	comp=Z,28nm,0.9s						
TIGA	**Tifton**	**19.68**	**36**	P	**P**	**04 08 53.9**	**-1.9**
	baz=221						
OXF	**Oxford**	**19.73**	**19**	P	**P**	**04 08 54.8**	**-1.5**
	baz=202,SNR=11						
WHAR	**Wooly Hollow**	**19.75**	**11**	IAmb	IAmb	04 09 13.7	
	comp=Z,55nm,1.2s						
Z50A	**Ashland**	**19.94**	**28**	IAmb	IAmb	04 09 14.0	
	comp=Z,46nm,0.9s						
Z50A	**Ashland**	**19.94**	**28**	P	**P**	**04 08 57.2**	**-1.5**
	baz=212,SNR=6.4						
TUL1	**Leonard**	**19.96**	**3**	IAmb	IAmb	04 09 11.1	
	comp=Z,48nm,0.8s						
TUL1	**Leonard**	**19.96**	**3**	P	**P**	**04 08 57.4**	**-1.6**
	baz=183,SNR=6.9						
Y22D	**IRIS PASSCAL I**	**20.22**	**335**	IAmb	IAmb	04 09 12.2	
	comp=Z,47nm,1.1s						
Y22D	**IRIS PASSCAL I**	**20.22**	**335**	P	**P**	**04 09 01.7**	**-0.3**
	baz=150						
HBAR	**Harrisburg**	**20.36**	**15**	P	**P**	**04 09 03.1**	**-0.2**
FCAR	**Ozark Folk Cen**	**20.37**	**11**	IAmb	IAmb	04 09 13.3	
	comp=Z,46nm,0.8s						
HHAR	**Hobbs**	**20.48**	**7**	IAmb	IAmb	04 09 15.5	
	comp=Z,28nm,1.0s						
U32A	**Winter Ranch,**	**20.48**	**355**	IAmb	IAmb	04 09 16.0	
	comp=Z,58nm,1.1s						
LPAR	**Lepanto**	**20.50**	**16**	P	**P**	**04 09 04.3**	**-0.5**
U38A	**Gravette**	**20.58**	**6**	P	**P**	**04 09 04.5**	**-1.2**
PLAL	**Pickwick Lake**	**20.59**	**21**	IAmb	IAmb	04 09 14.1	
	comp=Z,48nm,0.8s						
TUC	**Tucson**	**20.64**	**325**	P	**P**	**04 09 07.7**	**+1.3**
TUC	**Tucson**	**20.64**	**325**	P	**P**	**04 09 07.2**	**+0.8**
	baz=138						
U40A	**Yellville**	**20.70**	**9**	P	**P**	**04 09 06.0**	**-1.0**
	baz=191,SNR=38						
LCAR	**Lake Charles**	**20.74**	**13**	IAmb	IAmb	04 09 16.3	
	comp=Z,30nm,0.9s						
ANMO	**Albuquerque**	**20.81**	**337**	P	**P**	**04 09 09.1**	**+0.7**
	comp=Z,9.8nm,1.0s,baz=147,slow=12,SNR=24						
ANMO	**Albuquerque**	**20.81**	**337**	P	**P**	**04 09 09.4**	**+1.0**
ANMO	**Albuquerque**	**20.81**	**337**	P	**P**	**04 09 08.5**	**0.0**
	baz=153						
154A	**Montrose**	**20.83**	**35**	IAmb	IAmb	04 09 29.2	
	comp=Z,51nm,0.9s						
LNXT	**Lenox**	**21.18**	**17**	P	**P**	**04 09 10.6**	**-1.6**
GOGA	**Godfrey**	**21.26**	**32**	P	**P**	**04 09 10.6**	**-2.4**
	baz=218						
Y52A	**Lilburn**	**21.32**	**31**	IAmb	IAmb	04 09 22.9	
	comp=Z,25nm,0.8s						
Y52A	**Lilburn**	**21.32**	**31**	P	**P**	**04 09 11.2**	**-2.4**
	baz=216,SNR=8.2						
W49A	**Belvidere**	**21.39**	**25**	P	**P**	**04 09 12.5**	**-1.9**
	baz=209,SNR=15						
PVMO	**Portageville**	**21.42**	**16**	P	**P**	**04 09 14.0**	**-0.7**
PENMO	**Penman**	**21.47**	**16**	P	**P**	**04 09 14.7**	**-0.6**
X51A	**Calhoun**	**21.52**	**28**	IAmb	IAmb	04 09 36.0	
	comp=Z,31nm,1.1s						
X51A	**Calhoun**	**21.52**	**28**	P	**P**	**04 09 13.1**	**-2.7**
	baz=213						
214A	**Organ Pipe Nat**	**21.56**	**321**	P	**P**	**04 09 18.6**	**+2.2**
214A	**Organ Pipe Nat**	**21.56**	**321**	P	**P**	**04 09 16.9**	**+0.5**
	baz=133,SNR=9.2						
MGMO	**Mountain Grove**	**21.57**	**10**	IAmb	IAmb	04 09 20.3	
	comp=Z,48nm,0.9s						
SWET	**Sewanee**	**21.61**	**25**	IAmb	IAmb	04 09 25.3	
	comp=Z,68nm,1.2s						
PARMO	**Parma**	**21.64**	**16**	P	**P**	**04 09 16.7**	**-0.4**
HICK	**Hickman**	**21.67**	**17**	P	**P**	**04 09 16.4**	**-1.0**
WVT	**Waverly**	**21.72**	**20**	P	**P**	**04 09 15.7**	**-2.2**
WVT				IAmb	IAmb	04 09 25.9	
	comp=Z,50nm,1.0s						
WVT	**Waverly**	**21.72**	**20**	P	**P**	**04 09 16.2**	**-1.7**
	baz=204						
W50A	**Signal Mountai**	**21.85**	**26**	P	**P**	**04 09 17.0**	**-2.5**
	baz=211						
X18A	**Snowflake**	**21.94**	**330**	P	**P**	**04 09 21.2**	**+0.6**
X18A				IAmb	IAmb	04 09 23.9	
	comp=Z,19nm,0.9s						
157A	**Early Branch**	**22.08**	**38**	P	**P**	**04 09 19.5**	**-2.3**
	baz=224						
V49A	**McMinnville**	**22.10**	**24**	P	**P**	**04 09 19.7**	**-2.4**
	baz=209						
T25A	**Trinidad**	**22.18**	**344**	IAmb	IAmb	04 09 27.4	
	comp=Z,61nm,1.4s						
T25A	**Trinidad**	**22.18**	**344**	P	**P**	**04 09 22.3**	**-0.8**
	baz=160,SNR=24						
X53A	**Estanollee**	**22.20**	**31**	P	**P**	**04 09 20.6**	**-2.6**
	baz=217						
CLTN	**Cedars of Leba**	**22.22**	**23**	IAmb	IAmb	04 09 31.6	
	comp=Z,17nm,0.8s						
W18A	**Petrified Fore**	**22.32**	**331**	P	**P**	**04 09 23.7**	**-1.0**
W18A	**Petrified Fore**	**22.32**	**331**	P	**P**	**04 09 25.0**	**+0.3**
	baz=145						
Z56A	**Williston**	**22.33**	**36**	P	**P**	**04 09 23.1**	**-1.4**
Z56A				IAmb	IAmb	04 09 37.1	
	comp=Z,44nm,0.8s						
Z56A	**Williston**	**22.33**	**36**	P	**P**	**04 09 22.1**	**-2.4**
	baz=223						
W52A	**Murphy**	**22.38**	**29**	P	**P**	**04 09 23.0**	**-2.1**
	baz=214						
CPCT	**Cooper Cave**	**22.41**	**27**	IAmb	IAmb	04 09 36.5	
	comp=Z,24nm,0.8s						
Y55A	**Saluda**	**22.51**	**34**	P	**P**	**04 09 23.9**	**-2.6**
	baz=221						
CCM	**Cathedral Cave**	**22.63**	**12**	P	**P**	**04 09 27.0**	**-0.7**
CCM	**Cathedral Cave**	**22.63**	**12**	P	**P**	**04 09 26.8**	**-0.9**
	baz=194						
X54A	**Belton**	**22.71**	**32**	P	**P**	**04 09 26.7**	**-1.9**
	baz=218						
V51A	**Loudon**	**22.78**	**27**	P	**P**	**04 09 27.7**	**-1.6**
	baz=212,SNR=7.5						
U49A	**Red Boiling Sp**	**22.80**	**24**	P	**P**	**04 09 27.4**	**-2.1**
	baz=208,SNR=6.4						
W53A	**Cullowhee**	**22.81**	**30**	P	**P**	**04 09 27.5**	**-2.2**
	baz=216,SNR=6.4						
NHSC	**New Hope**	**22.87**	**38**	P	**P**	**04 09 27.1**	**-3.1**
	baz=225						
TKL	**Tuckaleechee C**	**22.92**	**28**	P	**P**	**04 09 30.3**	**-0.5**
	comp=Z,10nm,0.9s,baz=207,slow=8.6,SNR=12						
CBKS	**Cedar Bluff**	**22.96**	**354**	IAmb	IAmb	04 09 33.2	
	comp=Z,41nm,0.9s						
CBKS	**Cedar Bluff**	**22.96**	**354**	P	**P**	**04 09 30.3**	**-1.0**
	baz=172,SNR=9.5						
X55A	**Gracelyn & Ava**	**23.04**	**34**	P	**P**	**04 09 28.9**	**-3.1**
	baz=220						
SDCO	**Great Sand Dun**	**23.05**	**342**	P	**P**	**04 09 32.1**	**-0.3**
	baz=158,SNR=15						
Y14A	**Wickenburg**	**23.09**	**324**	IAmb	IAmb	04 09 36.9	
	comp=Z,28nm,1.4s						
KSU1	**Kansas State U**	**23.12**	**1**	P	**P**	**04 09 32.0**	**-0.8**
	baz=180						
V52A	**Sevierville**	**23.15**	**28**	P	**P**	**04 09 31.3**	**-1.8**
	baz=214,SNR=5.3						
PAULI	**Pauline**	**23.21**	**33**	IAmb	IAmb	04 09 42.0	
	comp=Z,19nm,1.0s						
W54A	**Cherokee Point**	**23.23**	**32**	P	**P**	**04 09 31.6**	**-2.3**
	baz=218						
Z58A	**St. Stephen**	**23.25**	**39**	P	**P**	**04 09 32.0**	**-2.1**
	baz=226						
V53A	**Saluda**	**23.38**	**30**	IAmb	IAmb	04 09 45.5	
	comp=Z,20nm,0.9s						
V53A	**Saluda**	**23.38**	**30**	P	**P**	**04 09 33.9**	**-1.6**
	baz=216						
X56A	**White Oak**	**23.38**	**35**	P	**P**	**04 09 33.4**	**-2.1**
	baz=221						
U51A	**La Follette**	**23.41**	**27**	P	**P**	**04 09 34.8**	**-1.0**
	baz=212,SNR=6.2						
T49A	**Edmonton**	**23.41**	**23**	IAmb	IAmb	04 09 45.2	
	comp=Z,38nm,1.2s						
T49A	**Edmonton**	**23.41**	**23**	P	**P**	**04 09 33.9**	**-1.9**
	baz=208,SNR=7.1						

WUAZ	Wupatki	23.43	329	IAmb	IAmb	04 09 49.0	
	comp=Z,38nm,1.2s						
WUAZ	Wupatki	23.43	329	P	P	04 09 37.8	+1.6
	baz=142,SNR=26						
S22A	4UR Ranch, Cre	23.46	340	P	P	04 09 37.2	+0.6
	baz=155,SNR=15						
GLA	Glamis	23.55	320	P	P	04 09 37.9	+0.7
	baz=132						
KSCO	Kaye Shedlock'	23.57	349	IAmb	IAmb	04 09 53.9	
	comp=Z,16nm,1.1s						
KSCO	Kaye Shedlock'	23.57	349	P	P	04 09 37.4	0.0
	baz=166						
MVCO	Mesa Verde	23.58	336	IAmb	IAmb	04 09 50.0	
	comp=Z,38nm,1.1s						
MVCO	Mesa Verde	23.58	336	P	P	04 09 38.2	+0.5
	baz=150,SNR=24						
T50A	Nancy	23.61	25	P	P	04 09 36.1	-1.7
	baz=210						
KMSC	Kings Mountain	23.71	33	IAmb	IAmb	04 09 48.4	
	comp=Z,20nm,0.9s						
KMSC	Kings Mountain	23.71	33	P	P	04 09 37.3	-1.4
	baz=220						
U52A	Thorn Hill	23.71	28	P	P	04 09 37.0	-1.7
	baz=214						
TZTN	Tazewell	23.75	28	IAmb	IAmb	04 09 49.4	
	comp=Z,29nm,0.9s						
TZTN	Tazewell	23.75	28	P	P	04 09 37.5	-1.6
	baz=213,SNR=6.5						
Y12C	Blythe	23.84	321	P	P	04 09 40.8	+0.9
	baz=133						
X57A	Johnson Farm,	23.89	36	P	P	04 09 38.0	-2.4
	baz=223						
V54A	Nebo	23.89	31	P	P	04 09 38.7	-1.8
	baz=218						
T51A	Gray	23.93	26	P	P	04 09 39.2	-1.6
	baz=212						
PDMCI	Parker Dam,Lak	24.00	323	P	P	04 09 42.1	+0.7
	baz=135						
OLIL	Olney	24.03	17	IAmb	IAmb	04 09 41.5	
	comp=Z,31nm,0.9s						
U53A	Fall Branch	24.05	29	P	P	04 09 40.4	-1.5
	baz=216						
Q24A	Divide	24.09	344	IAmb	IAmb	04 09 56.1	
	comp=Z,26nm,1.5s						
Q24A	Divide	24.09	344	P	P	04 09 41.9	-0.7
	baz=160						
SWSC	Sam W. Stewart	24.09	318	P	P	04 09 43.8	+1.5
	baz=130						
S49A	Springfield	24.10	23	P	P	04 09 40.7	-1.7
	baz=208,SNR=14						
IKP	In-Ko-Pah, Jac	24.11	317	P	P	04 09 44.1	+1.5
	baz=129						
W56A	Indian Trail	24.11	34	P	P	04 09 40.2	-2.2
	baz=221						
WCI	Wyandotte Cave	24.14	21	P	P	04 09 41.6	-1.0
WCI	Wyandotte Cave	24.14	21	P	P	04 09 41.2	-1.5
	baz=205						
Y59A	Loris	24.26	39	P	P	04 09 41.7	-2.1
	baz=226						
V55A	Taylorsville	24.32	32	IAmb	IAmb	04 09 53.2	
	comp=Z,12nm,0.8s						
V55A	Taylorsville	24.32	32	P	P	04 09 42.3	-2.0
	baz=219						
BC3	Big Chuckawall	24.34	320	P	P	04 09 45.6	+0.8
	baz=131						
S50A	Richmond	24.36	25	P	P	04 09 43.4	-1.3
	baz=210,SNR=5.1						
X58A	Rowland	24.38	37	IAmb	IAmb	04 09 53.2	
	comp=Z,42nm,1.2s						
X58A	Rowland	24.38	37	P	P	04 09 43.1	-1.9
	baz=225						
W57A	Gilead	24.44	35	P	P	04 09 43.2	-2.3
	baz=222						
MONP2	Monument Peak	24.46	317	P	P	04 09 46.9	+0.9
	baz=128,SNR=7.4						
T52A	Hallie	24.47	28	IAmb	IAmb	04 09 56.0	
	comp=Z,39nm,1.2s						
T52A	Hallie	24.47	28	P	P	04 09 44.1	-1.7
	baz=214,SNR=5.8						
IRM	Iron Mountain	24.49	321	P	P	04 09 47.4	+1.3
	baz=133,SNR=14						
P43A	Skaggs, Pawnee	24.52	14	IAmb	IAmb	04 09 56.2	
	comp=Z,29nm,0.9s						
U54A	Nelsons Funny	24.54	30	IAmb	IAmb	04 09 55.9	
	comp=Z,24nm,0.7s						
U54A	Nelsons Funny	24.54	30	P	P	04 09 44.6	-1.8
	baz=217,SNR=6.1						
T53A	Wise	24.57	29	P	P	04 09 45.5	-1.2
	baz=215						
R49A	Shelbyville	24.59	23	IAmb	IAmb	04 09 55.5	
	comp=Z,27nm,0.9s						
R49A	Shelbyville	24.59	23	P	P	04 09 45.3	-1.5
	baz=208,SNR=6.1						
U15A	North Rim	24.60	329	IAmb	IAmb	04 09 51.4	
	comp=Z,23nm,1.1s						
S51A	Beattyville	24.65	26	IAmb	IAmb	04 09 56.4	
	comp=Z,18nm,0.8s						
S51A	Beattyville	24.65	26	P	P	04 09 45.8	-1.6
	baz=212,SNR=6.7						
V56A	Mocksville	24.66	33	P	P	04 09 45.6	-1.9
	baz=220						
Y60A	Bolivia	24.67	40	P	P	04 09 45.5	-2.1
	baz=228						
W58A	Raeford	24.78	37	P	P	04 09 46.9	-1.6
	baz=224						
SMCO	Snowmass	24.81	341	IAmb	IAmb	04 10 04.1	
	comp=Z,20nm,1.1s						
X59A	McDuffie Farm,	24.83	38	P	P	04 09 46.9	-2.1
	baz=226,SNR=5.8						
R50A	Paris	24.90	24	IAmb	IAmb	04 09 59.4	
	comp=Z,11nm,0.7s						
R50A	Paris	24.90	24	P	P	04 09 48.7	-1.0
	baz=210						
S52A	Salyersville	24.91	27	P	P	04 09 48.4	-1.3
	baz=213						
U55A	TA2, Sparta	24.91	32	P	P	04 09 48.1	-1.7
	baz=218						
BELC	Belle Mtn. Jos	24.91	320	P	P	04 09 51.7	+1.7
	baz=131,SNR=9.5						
XPFO	Pion Flat	24.94	319	P	P	04 09 51.3	+1.1
PFO	Pinyon Flats O	24.95	319	P	P	04 09 52.2	+2.0
	comp=Z,5.5nm,0.9s,baz=121,slow=6.8,SNR=6.2						
PFO	Pinyon Flats O	24.95	319	P	P	04 09 51.3	+1.1
PFO	Pinyon Flats O	24.95	319	P	P	04 09 51.9	+1.7
	baz=130,SNR=5.8						
Q48A	North Vernon	24.96	21	P	P	04 09 48.8	-1.3
	baz=206,SNR=15						
ISCO	Idaho Springs	25.00	344	P	P	04 09 51.7	+0.8
	baz=159,SNR=7.0						
T54A	Tazewell	25.09	30	P	P	04 09 50.2	-1.2
	baz=217,SNR=5.8						
V57A	Coltrane Farms	25.11	34	P	P	04 09 50.4	-1.1
	baz=222						
U56A	King	25.13	33	IAmb	IAmb	04 10 01.3	
	comp=Z,14nm,0.8s						
U56A	King	25.13	33	P	P	04 09 50.5	-1.2
	baz=220						
X60A	Albert Glenn T	25.21	39	P	P	04 09 50.5	-1.9
	baz=227						
R51A	Hillsboro	25.22	25	P	P	04 09 51.3	-1.2
	baz=211						
GMRC	Granite Mounta	25.23	322	P	P	04 09 54.3	+1.5
	baz=133,SNR=7.8						
Q49A	Aurora	25.32	22	P	P	04 09 52.2	-1.2
	baz=208,SNR=12						
S53A	Williamson	25.33	28	P	P	04 09 52.1	-1.5
	baz=215						
OGNE	Ogallala	25.35	351	P	P	04 09 53.9	+0.1
	baz=168,SNR=11						
RUSC	La Rusia	25.40	110	P	P	04 09 55.9	+1.0
V58A	Windy Hill, Pi	25.40	35	IAmb	IAmb	04 10 03.7	
	comp=Z,23nm,0.9s						
MURC	Murrieta	25.41	318	P	P	04 09 55.3	+0.9
	baz=128						
BGNE	Belgrade	25.45	358	IAmb	IAmb	04 09 56.6	
	comp=Z,19nm,0.9s						
BGNE	Belgrade	25.45	358	P	P	04 09 54.1	-0.4
	baz=177						
HDIL	Hopedale	25.45	14	P	P	04 09 53.6	-1.0
	baz=197						
T55A	Pulaski	25.52	31	P	P	04 09 53.8	-1.5
	baz=218						
Q50A	Georgetown	25.53	24	P	P	04 09 53.7	-1.6
	baz=210						
P48A	Milroy	25.54	21	P	P	04 09 53.6	-1.8
	baz=206,SNR=6.0						
R52A	Catlettsburg	25.64	27	P	P	04 09 54.8	-1.6
	baz=213						
HEC	Hector,Ludlow	25.67	321	P	P	04 09 57.6	+0.9
	baz=132						
W60A	Pink Hill	25.69	38	P	P	04 09 55.0	-1.7
	baz=227						
U57A	Blanch	25.75	34	P	P	04 09 55.9	-1.4
	baz=222						
BLA	Blacksburg	25.77	31	IAmb	IAmb	04 10 07.5	
	comp=Z,14nm,0.8s						
BLA	Blacksburg	25.77	31	P	P	04 09 56.3	-1.3
	baz=219						
S54A	Dingess, Beckl	25.81	29	IAmb	IAmb	04 10 07.1	
	comp=Z,30nm,1.0s						
S54A	Dingess, Beckl	25.81	29	P	P	04 09 56.9	-1.0
	baz=216,SNR=5.2						
T56A	Rocky Mt	25.83	32	P	P	04 09 56.7	-1.4
	baz=220						
TUQ	Turquoise Moun	25.84	322	P	P	04 09 59.3	+1.0
	baz=133,SNR=27						
SFIN	Lafayette	25.85	17	P	P	04 09 56.6	-1.5
	baz=202						
P49A	Miami Univ. Ec	25.85	22	P	P	04 09 56.6	-1.7
	baz=208,SNR=20						
V59A	Middlesex	25.88	37	P	P	04 09 56.5	-1.9
	baz=225						
Q51A	Peebles	25.93	25	P	P	04 09 57.6	-1.4
	baz=211,SNR=7.4						
R53A	Hurricane	25.94	28	P	P	04 09 58.0	-1.1
	baz=214						
O20A	White River Ci	26.09	340	IAmb	IAmb	04 10 04.8	
	comp=Z,14nm,0.9s						
O20A	White River Ci	26.09	340	P	P	04 10 01.1	+0.5
	baz=154,SNR=11						
CIS	Catalina Islan	26.09	316	P	P	04 10 01.6	+1.1
	baz=126						
BFSC	Mount Baldy Ra	26.11	318	P	P	04 10 01.1	+0.3
	baz=129						
N23A	Red Feather La	26.11	344	IAmb	IAmb	04 10 15.8	
	comp=Z,16nm,1.3s						
N23A	Red Feather La	26.11	344	P	P	04 10 01.0	+0.1
	baz=159,SNR=5.4						
SCIA	State Center	26.12	6	P	P	04 09 59.9	-0.7
	baz=188						
U58A	Oxford	26.15	35	P	P	04 09 59.4	-1.6
	baz=223						
S55A	Lewisburg	26.17	31	P	P	04 09 59.8	-1.4
	baz=218						
T57A	Hurt	26.21	33	IAmb	IAmb	04 10 18.1	
	comp=Z,16nm,0.9s						
T57A	Hurt	26.21	33	P	P	04 10 00.3	-1.2
	baz=221						
P50A	Jamestown	26.26	23	P	P	04 10 00.9	-1.1
	baz=209,SNR=9.3						
R54A	Victor	26.26	29	P	P	04 10 00.7	-1.3
	baz=216						
GSC	Goldstone, Bar	26.27	321	P	P	04 10 02.8	+0.6
	baz=132						
Q52A	Bidwell	26.33	26	P	P	04 10 01.5	-1.0
	baz=213,SNR=9.2						
O48A	Farmland	26.34	21	P	P	04 10 00.6	-2.1
	baz=206,SNR=12						
SHOC	Shoshone, Teco	26.36	323	P	P	04 10 03.5	+0.5
	baz=134						
P51A	Williamsport	26.44	25	P	P	04 10 02.0	-1.5
	baz=211						
V60A	Jim Taylor Roa	26.44	38	P	P	04 10 01.4	-2.2
	baz=226						
T58A	Grand View Acr	26.56	34	P	P	04 10 02.9	-1.8
	baz=223						
Q53A	Leroy	26.57	28	P	P	04 10 03.3	-1.4
	baz=215,SNR=5.8						
O49A	Covington	26.57	22	P	P	04 10 03.0	-1.7
	baz=208,SNR=7.0						
SDV	Santo Domingo	26.58	102	P	P	04 10 06.8	+1.5
	comp=Z,13nm,0.8s,baz=301,slow=5.9,SNR=16						
SDV	Santo Domingo	26.58	102	P	P	04 10 06.3	+1.0
SDV				IAmb	IAmb	04 10 08.9	
	comp=Z,13nm,0.8s						
N47A	Urbana	26.73	19	P	P	04 10 04.3	-1.8
	baz=204						
R55A	Marlinton	26.76	30	IAmb	IAmb	04 10 16.6	
	comp=Z,11nm,0.8s						
R55A	Marlinton	26.76	30	P	P	04 10 05.1	-1.4
	baz=218						
O50A	Cable	26.80	23	P	P	04 10 05.1	-1.7
	baz=209						
V61A	Roper	26.87	39	P	P	04 10 05.7	-1.7
	baz=228						
LRMC	Laurel Mtn Rad	26.93	320	P	P	04 10 08.9	+0.7
	baz=130						
N48A	Decatur	26.93	20	P	P	04 10 06.2	-1.7
	baz=206						
S57A	Dark Hollow, R	26.94	33	P	P	04 10 06.5	-1.6
	baz=221						
P52A	Corning	26.95	26	P	P	04 10 06.4	-1.8
	baz=213						
BLG	Laguna Peak, P	26.95	316	P	P	04 10 09.2	+1.0
	baz=126						
Q54A	Coxs Mills	26.98	28	IAmb	IAmb	04 10 18.0	
	comp=Z,27nm,1.0s						
Q54A	Coxs Mills	26.98	28	P	P	04 10 06.8	-1.6
	baz=216,SNR=6.4						
U60A	Pendleton	26.99	37	P	P	04 10 06.3	-2.3
	baz=226						
TPNV	Topopah Spring	27.09	324	P	P	04 10 10.8	+1.1
	baz=135,SNR=6.5						
FURC	Furnace Creek,	27.10	323	P	P	04 10 10.6	+1.1
	baz=133						
ACSO	Alum Creek Sta	27.11	24	IAmb	IAmb	04 10 21.3	
	comp=Z,26nm,0.8s						
ACSO	Alum Creek Sta	27.11	24	P	P	04 10 08.1	-1.5
	baz=210						
T59A	Double "B" Far	27.12	36	P	P	04 10 07.7	-2.0
	baz=224						
P53A	Whipple	27.14	27	P	P	04 10 08.7	-1.2
	baz=214,SNR=9.0						
M47A	Cromwell	27.19	19	P	P	04 10 09.7	-0.6
	baz=204						
O51A	Pataskala	27.19	24	P	P	04 10 08.7	-1.6
	baz=211						
MPMC	Manual Prospec	27.19	321	P	P	04 10 11.3	+0.7
	baz=132,SNR=5.6						
R56A	Bull Pasture M	27.21	31	P	P	04 10 09.3	-1.3
	baz=219						
N49A	Columbus Grove	27.27	21	P	P	04 10 10.0	-1.1
	baz=207						
S58A	Poland Farm, P	27.31	34	P	P	04 10 09.4	-2.0
	baz=222						
L44A	Lake County Fo	27.31	15	P	P	04 10 10.2	-1.2
	baz=199						
U61A	Possum Corner	27.31	38	P	P	04 10 09.5	-1.9
	baz=227						
Q55A	Buckhannon	27.34	29	P	P	04 10 10.0	-1.7
	baz=217						
O52A	Adamsville	27.48	26	IAmb	IAmb	04 10 21.3	
	comp=Z,29nm,1.0s						
O52A	Adamsville	27.48	26	P	P	04 10 11.6	-1.3
	baz=213						
N50A	Nevada	27.52	23	P	P	04 10 12.0	-1.2
	baz=209						
JFWS	Jewell Farm	27.53	11	P	P	04 10 12.0	-1.3
	baz=194						
R57A	Stanardsville	27.57	32	P	P	04 10 12.3	-1.5
	baz=221						
P54A	Burton	27.64	28	P	P	04 10 12.9	-1.5
	baz=216,SNR=10.0						
R58B	Mineral	27.66	34	P	P	04 10 13.0	-1.5
	baz=222						
ECSD	EROS Data Cent	27.75	0	IAmb	IAmb	04 10 19.6	
	comp=Z,11nm,1.1s						
ECSD	EROS Data Cent	27.75	0	P	P	04 10 14.9	-0.4
	baz=180,SNR=5.3						
R11A	Troy Canyon, C	27.75	327	P	P	04 10 16.8	+1.1
	baz=138,SNR=6.1						
GRAC	Grapevine Rang	27.76	323	P	P	04 10 16.8	+1.3
	baz=133						
CWC	Cottonwood Cre	27.80	321	P	P	04 10 17.1	+1.1
	baz=131						
Q56A	Snyder Ridge,	27.81	31	IAmb	IAmb	04 10 27.8	
	comp=Z,17nm,1.0s						
Q56A	Snyder Ridge,	27.81	31	P	P	04 10 14.6	-1.2
	baz=219						
S59A	Mechanicsville	27.83	35	P	P	04 10 14.5	-1.5
	baz=224						
M49A	Liberty Center	27.83	21	P	P	04 10 15.1	-0.9
	baz=207						
R58A	Rapidan	27.84	33	P	P	04 10 14.7	-1.5
	baz=222						
O53A	New Philadelph	27.85	26	P	P	04 10 15.0	-1.2
	baz=214,SNR=7.3						
P55A	Reedsville	27.87	29	P	P	04 10 15.0	-1.5
	baz=217						
L47A	Sherwood	27.88	19	P	P	04 10 15.4	-1.1
	baz=204						
DUG	Dugway, Tooele	27.89	333	P	P	04 10 17.0	+0.2
	baz=145						
K22A	Casper	27.91	345	IAmb	IAmb	04 10 31.6	
	comp=Z,13nm,1.2s						
K22A	Casper	27.91	345	P	P	04 10 16.9	0.0
	baz=159						
MCWV	Mont Chateau	27.98	29	IAmb	IAmb	04 10 27.4	
	comp=Z,11nm,1.0s						
MCWV	Mont Chateau	27.98	29	P	P	04 10 16.1	-1.3
	baz=217,SNR=5.0						
VES	Vestal, Richgr	28.03	319	P	P	04 10 18.1	+0.2
	baz=129						
L48A	N Adams	28.10	20	P	P	04 10 17.2	-1.3
	baz=206						
M50A	Fremont	28.10	23	P	P	04 10 16.9	-1.5
	baz=209						
O54A	Avella	28.16	28	P	P	04 10 17.5	-1.5
	baz=215,SNR=7.9						
Q57A	Strasburg	28.19	32	P	P	04 10 18.3	-1.0
	baz=220						
R59A	King George, V	28.24	34	P	P	04 10 18.4	-1.4
	baz=223						
P56A	Dayton Farm, R	28.34	30	P	P	04 10 19.0	-1.5
	baz=219						
L49A	Milan	28.47	21	P	P	04 10 19.7	-2.1
	baz=207						
N53A	Lisbon	28.47	26	P	P	04 10 20.6	-1.2
	baz=214,SNR=11						
Q58A	Fox Den Farm,	28.49	33	P	P	04 10 20.1	-1.8
	baz=222						
K47A	Vermontville	28.57	19	P	P	04 10 20.8	-1.9
	baz=204						
O55A	Ligonier	28.67	29	P	P	04 10 22.2	-1.3
	baz=217,SNR=5.5						
P57A	Homestead Farm	28.73	31	P	P	04 10 22.5	-1.6
	baz=220						
L50A	Kingsville	28.75	22	P	P	04 10 23.0	-1.2
	baz=209						
RSSD	Black Hills	28.78	349	P	P	04 10 25.1	+0.4
	baz=165						
BW06	Boulder Array	28.89	341	P	P	04 10 26.0	+0.2
	baz=154						
PDAR	Pinedale Array	28.89	341	P	P	04 10 26.0	+0.2
	comp=Z,1.5nm,0.8s,baz=163,slow=11,SNR=10						
PDAR				LR	LR	04 22 58.1	
	comp=Z,296nm,18.2s,baz=166,slow=39						
N54A	Moraine State	28.96	27	P	P	04 10 24.9	-1.2
	baz=215,SNR=8.4						
K48A	Perry	28.97	20	P	P	04 10 25.4	-0.8
	baz=206						
MLAC	Mammoth, Mammo	29.05	322	P	P	04 10 27.7	+0.5
	baz=132						
O56A	Blue Knob Stat	29.06	30	P	P	04 10 25.5	-1.6
	baz=218						
M53A	WI Miller and	29.07	26	P	P	04 10 26.2	-0.8
	baz=213						
J47A	Sunmer	29.14	18	P	P	04 10 26.9	-0.8
	baz=204						
NV11	Mina Array Sit	29.20	324	IAmb	IAmb	04 10 31.9	
	comp=Z,13nm,1.1s						
N55A	Marion Center	29.27	29	P	P	04 10 28.2	-0.7
	baz=217						
NVAR	Mina Array Bea	29.29	324	P	P	04 10 31.5	+2.2
	comp=Z,7.8nm,1.0s,baz=148,slow=9.6,SNR=47						
NVAR				LR	LR	04 21 51.5	
	comp=Z,115nm,19.8s,baz=170,slow=36						
ATAH	Atahualpa	29.33	140	LR	LR	04 20 23.9	
	comp=Z,159nm,19.2s,baz=314,slow=32						
ELK	Elko	29.43	331	P	P	04 10 32.0	+1.4
	comp=Z,1.3nm,0.7s,baz=143,slow=5.8,SNR=8.3						
SPMN	Marine on St.	29.44	6	IAmb	IAmb	04 10 30.2	
	comp=Z,18nm,0.8s						
SPMN	Marine on St.	29.44	6	P	P	04 10 29.3	-1.0
	baz=188						
K50A	Casco	29.45	22	P	P	04 10 29.3	-1.2
	baz=209						
J48A	Bridge Port	29.52	20	P	P	04 10 29.7	-1.3
	baz=206						
M54A	Oil Creek Stat	29.55	27		sP	04 10 40.0	+0.5
M54A	Oil Creek Stat	29.55	27	P	P	04 10 30.1	-1.2
	baz=215						
I46A	Reed City	29.61	17	P	P	04 10 31.0	-0.8
	baz=202						
P59A	Jarrettsville	29.64	33	P	P	04 10 30.8	-1.4
	baz=223						
L53A	Girard	29.66	26	P	P	04 10 31.3	-1.1
	baz=214,SNR=10						
SSPA	Standing Stone	29.67	30	P	P	04 10 31.3	-1.2
	baz=219						
N56A	West Decatur	29.70	29	P	P	04 10 31.6	-1.1
	baz=218,SNR=5.6						
O58A	Lewisberry	29.76	32	P	P	04 10 31.7	-1.6
	baz=221						
J49A	Marlette	29.79	20	P	P	04 10 32.4	-1.0
	baz=207						
K51A	Iona Station	29.82	23	P	P	04 10 32.6	-1.1
	baz=211						
SNOW	Snow King Moun	29.90	340	IAmb	IAmb	04 10 37.0	
	comp=Z,15nm,0.9s						
ERPA	Erie	29.91	26	IAmb	IAmb	04 10 35.3	
	comp=Z,24nm,0.9s						
ERPA	Erie	29.91	26	P	P	04 10 33.0	-1.5
	baz=214						
M55A	Ridgway	29.92	28	IAmb	IAmb	04 10 43.9	
	comp=Z,29nm,1.1s						
M55A	Ridgway	29.92	28	P	P	04 10 33.1	-1.5
	baz=217,SNR=6.4						
I47A	Gladwin	29.95	18	P	P	04 10 33.7	-1.2
	baz=204						
K52A	Tillsonburg	30.17	24	P	P	04 10 35.6	-1.2
	baz=212						
M56A	Emporium	30.20	29		sP	04 10 46.0	+0.8
M56A				IAmb	IAmb	04 10 46.2	
	comp=Z,17nm,0.9s						
M56A	Emporium	30.20	29	P	P	04 10 35.8	-1.3
	baz=218						
O59A	Robesonia	30.28	32	P	P	04 10 36.2	-1.6
	baz=222						
L54A	Sinclairville	30.30	26	P	P	04 10 36.2	-1.8
	baz=215						
I48A	Sherman Twp	30.35	19	P	P	04 10 36.6	-1.7
	baz=206,SNR=5.6						
PSUB	Penn St. - Bra	30.39	34	IAmb	IAmb	04 10 41.2	
	comp=Z,10nm,0.8s						
N58A	Sunbury	30.40	31	IAmb	IAmb	04 10 48.1	
	comp=Z,11nm,1.1s						
PNTR	Pine Nut	30.48	324	IAmb	IAmb	04 10 43.2	
	comp=Z,8.4nm,0.9s						
M57A	Sunshine Farm,	30.58	30	P	P	04 10 39.1	-1.4
	baz=220						
L55A	Hinsdale	30.64	28	P	P	04 10 40.0	-1.0
	baz=217						
J52A	Paris	30.66	24	P	P	04 10 40.0	-1.1
	baz=212						
O60A	Telford	30.69	33	P	P	04 10 40.2	-1.2
	baz=224						
RUBR	Rubicon Trail	30.77	323	IAmb	IAmb	04 10 46.1	
	comp=Z,16nm,1.0s						
I51A	Listowel	30.93	23	P	P	04 10 41.8	-1.7
	baz=211						
M58A	Price's Panora	30.93	31	P	P	04 10 42.4	-1.2
	baz=221						
N59A	State Game Lan	30.94	32	IAmb	IAmb	04 10 53.9	
	comp=Z,7.0nm,0.8s						
N59A	State Game Lan	30.94	32	P	P	04 10 41.8	-1.8
	baz=222						
RLMT	Red Lodge	30.94	343	IAmb	IAmb	04 10 45.6	
	comp=Z,13nm,1.0s						
RLMT	Red Lodge	30.94	343	P	P	04 10 44.2	+0.3
	baz=156,SNR=16						
E38A	The Farm, Brul	30.94	7	IAmb	IAmb	04 10 52.6	
	comp=Z,15nm,0.8s						
L56A	Greenwood	31.00	29	IAmb	IAmb	04 10 53.8	
	comp=Z,19nm,0.9s						
L56A	Greenwood	31.00	29	P	P	04 10 42.5	-1.7
	baz=218						
G47A	Hillman	31.19	18	P	P	04 10 45.1	-0.7
	baz=204						
L57A	Andrews Acres	31.22	30	P	P	04 10 44.9	-1.3
	baz=219						
K55A	Perry	31.24	27	P	P	04 10 45.2	-1.0
	baz=217						
N60A	Cedar Hill Far	31.25	33	P	P	04 10 44.9	-1.5

baz=223
K56A Middlesex 31.55 28 P P 04 10 47.6 -1.4
baz=218
LAO LASA Array 31.67 348 P P 04 10 50.1 0.0
baz=162
L58A Harry Jones Me 31.74 31 P P 04 10 49.5 -1.2
baz=221
BINY Binghamton 31.79 30 P P 04 10 49.9 -1.2
baz=221
M60A Port Jervis 31.83 33 P P 04 10 49.9 -1.6
baz=224
ORV Oroville 31.88 322 sP 04 11 02.0 +1.9
K57A Scipio Center 31.94 29 P P 04 10 51.1 -1.4
baz=219
PAL Palisades 31.98 34 P P 04 10 51.5 -1.3
baz=225
H52A Wyevale 32.07 23 P P 04 10 52.0 -1.5
baz=212
DLMT Dillon 32.20 339 IAmb IAmb 04 10 57.6
comp=Z,17nm,0.9s
L59A Walton 32.25 31 IAmb IAmb 04 11 06.4
comp=Z,16nm,1.1s
L59A Walton 32.25 31 P P 04 10 53.9 -1.3
baz=222
M61A Granite Spring 32.27 34 P P 04 10 53.8 -1.5
baz=225
EYMN Ely 32.27 7 IAmb IAmb 04 11 04.1
comp=Z,16nm,1.3s
EYMN Ely 32.27 7 P P 04 10 54.8 -0.5
baz=190
K58A Earlville 32.38 30 IAmb IAmb 04 11 08.7
comp=Z,22nm,1.1s
K58A Earlville 32.38 30 P P 04 10 55.1 -1.2
baz=220
H53A Bobcaygeon 32.52 25 P P 04 10 56.2 -1.3
baz=214,SNR=5.4
E47A Iron Bridge 32.52 18 P P 04 10 56.1 -1.4
baz=205
D46A Sault St. Mari 32.71 16 P P 04 10 57.5 -1.6
baz=203
J57A Williamstown 32.71 29 P P 04 10 57.7 -1.5
baz=219
K59A Cooperstown 32.77 31 P P 04 10 58.3 -1.5
baz=222
G53A Haliburton 32.96 24 P P 04 10 59.9 -1.5
baz=214
J58A Remsen 33.01 30 P P 04 10 59.9 -1.9
baz=220
L61A Hillsdale 1, H 33.01 33 P P 04 11 00.2 -1.6
baz=224
DGMT Dagmar 33.03 351 P P 04 11 01.3 -0.6
baz=167
H55A Tweed 33.08 26 P P 04 11 00.9 -1.5
baz=216
D47A Chapleau 33.12 17 P P 04 11 01.4 -1.3
baz=205
F51A Arnstein 33.16 22 P P 04 11 01.4 -1.6
baz=211
F52A Sundridge 33.26 23 P P 04 11 02.7 -1.2
baz=212
M63A Gales Ferry 33.27 35 P P 04 11 02.5 -1.5
baz=227
I57A Carthage 33.27 29 P P 04 11 02.6 -1.5
baz=219
L62A Suffield 33.37 34 P P 04 11 02.8 -2.1
baz=226
G54A Lake Saint Pet 33.40 24 P P 04 11 03.8 -1.4
baz=214
I58A Old Forge 33.40 29 P P 04 11 03.7 -1.6
baz=221,SNR=5.0
K61A Williamstown 33.50 32 P P 04 11 05.0 -1.1
baz=224
H56A Elgin 33.52 27 P P 04 11 04.6 -1.6
baz=218
M04C Macdoel 33.56 325 P P 04 11 07.6 +0.8
baz=132
D48A Paudash Townsh 33.61 19 P P 04 11 05.8 -1.2
baz=207
EGMT Eagleton 33.74 344 IAmb IAmb 04 11 09.9
comp=Z,17nm,1.1s
EGMT Eagleton 33.74 344 P P 04 11 07.8 -0.4
baz=157,SNR=6.9
H57A Richville 33.80 28 P P 04 11 07.6 -1.0
baz=219
E51A G1948 Merrick 33.83 22 P P 04 11 07.9 -1.0
baz=211
J60A Lant Hill Farm 33.83 32 P P 04 11 07.4 -1.6
baz=223
D49A Beulah Townshi 33.84 19 P P 04 11 07.7 -1.3
baz=207
M02C Callahan 33.87 324 P P 04 11 10.2 +0.8
baz=130
ALGO Algonquin Park 33.88 24 P P 04 11 08.1 -1.2
baz=214
MSO Missoula 33.94 339 IAmb IAmb 04 11 11.6
comp=Z,6.8nm,0.9s
MSO Missoula 33.94 339 P P 04 11 10.3 +0.3
baz=149,SNR=6.5
NCB Newcomb 33.97 30 IAmb IAmb 04 11 19.2
comp=Z,24nm,1.3s
YBH Yreka Blue Hor 34.01 324 P P 04 11 10.2 -0.4
comp=Z,1.0nm,0.8s,baz=81,slow=8.8,SNR=4.9
I59A Olmsteadville 34.01 30 P P 04 11 09.0 -1.6
baz=222
KHMM Horse Mountain 34.04 322 IAmb IAmb 04 11 26.9
comp=Z,13nm,1.3s
NNA Nana 34.09 143 LR LR 04 22 39.2
comp=Z,122nm,18.6s,baz=338,slow=32
L04D Klamath Falls 34.11 325 P P 04 11 11.9 +0.3
baz=132
D50A G1974 Best Tow 34.25 21 P P 04 11 12.0 -0.5
baz=210
ULM Lac du Bonnet 34.28 1 P P 04 11 11.2 -1.5
comp=Z,2.4nm,1.0s,baz=175,slow=12,SNR=4.2
ULM LR LR 04 25 17.6
comp=Z,48nm,19.9s,baz=116,slow=37
LONY Lake Ozonia 34.29 29 P P 04 11 11.7 -1.3
baz=220,SNR=6.2
L64A Middleborough 34.30 36 P P 04 11 11.6 -1.4
baz=228
H58A Gabriels 34.33 29 P P 04 11 12.3 -1.0
baz=221
I60A Shoreham 34.33 31 P P 04 11 12.4 -0.9
baz=223
D51A Lot 18 Range I 34.34 21 P P 04 11 12.6 -0.7
baz=211
E53A Dumoine, Ponti 34.38 24 P P 04 11 12.6 -1.0
baz=214
K63A Dunstable 34.43 34 P P 04 11 12.7 -1.4
baz=227
F10A Beach Ranch, E 34.47 335 IAmb IAmb 04 11 16.4
comp=Z,14nm,1.2s
G57A Newington 34.48 28 P P 04 11 13.8 -0.8
baz=219
E54A Lac Daplat, Po 34.61 24 P P 04 11 14.6 -1.0
baz=215
J62A Henniker 34.65 33 P P 04 11 14.7 -1.3
baz=226
H59A Cadyville 34.73 30 P P 04 11 15.2 -1.6
baz=222
FRNY Flat Rock 34.92 29 IAmb IAmb 04 11 27.6
comp=Z,21nm,1.1s
G58A Ormstown 34.94 29 P P 04 11 17.0 -1.5
baz=221
I61A Oroboro, Fairl 34.94 32 P P 04 11 17.6 -0.9
baz=224
D53A Lac Vacive, Po 34.95 23 P P 04 11 26.4 +7.9
D53A IAmb IAmb 04 11 28.3
comp=Z,13nm,1.0s
E55A Montcerf-Lytto 35.08 25 P P 04 11 18.3 -1.4
baz=216
H60A Morristown 35.15 31 P P 04 11 19.2 -1.1
baz=223
G59A Clarenceville 35.30 30 P P 04 11 20.5 -1.1
baz=222
LBNH Lisbon 35.30 32 P P 04 11 20.4 -1.3
baz=225
D54A Lac Fusel, La 35.41 24 P P 04 11 21.6 -0.9
baz=215
H61A Lyndonville 35.51 31 P P 04 11 22.2 -1.3
baz=224
E56A St. Veronique 35.58 26 P P 04 11 23.2 -0.9
baz=218
G60A Masonville 35.72 30 P P 04 11 24.2 -1.0
baz=223
D55A Sainte-Anne-du 35.77 25 P P 04 11 25.0 -0.7
baz=217,SNR=6.1
E57A Chemin Saint G 35.86 27 P P 04 11 25.6 -1.0
baz=219
F59A Saint Guilaume 36.06 29 P P 04 11 27.2 -0.9
baz=222
D56A ZEC Mazanza, M 36.10 26 P P 04 11 27.5 -1.0
baz=218
E58A La Victoria 36.22 28 P P 04 11 28.8 -0.7
baz=221,SNR=5.8
F05D White Salmon 36.27 331 P P 04 11 31.5 +1.5
baz=137
NEW Newport 36.30 337 P P 04 11 29.5 -0.8
comp=Z,4.3nm,0.9s,baz=149,slow=7.7,SNR=6.2
NEW Newport 36.30 337 P P 04 11 30.4 +0.1
baz=145
D57A Chemin Vers le 36.44 27 P P 04 11 31.0 -0.5
baz=219
G62A West of Eustis 36.70 32 sP 04 11 42.3 +0.6
G62A IAmb IAmb 04 11 43.2
comp=Z,31nm,1.3s
G62A West of Eustis 36.70 32 P P 04 11 32.6 -1.1
baz=226
D58A Chemin du LacG 36.95 28 P P 04 11 34.6 -1.2
baz=220
E60A Ste Agathe de 37.07 30 P P 04 11 36.0 -0.7
baz=223
LATQ La Tuque 37.21 27 P P 04 11 37.5 -0.4
baz=220
MATQ Matagami 37.23 21 P P 04 11 37.6 -0.5
baz=211
D59A Saint-Raymond 37.35 29 P P 04 11 38.6 -0.6
baz=222
F63A Nahmakanta, Br 37.76 32 P P 04 11 41.3 -1.3
baz=227
D04E Lakebay 37.84 331 P P 04 11 44.2 +0.9
baz=136
D03D Eldon 38.25 331 P P 04 11 47.8 +1.1
baz=136
F64A Sherman 38.26 33 P P 04 11 45.8 -0.9
baz=228
E63A Oxbow 38.59 32 P P 04 11 48.7 -0.9
baz=227
D62A Allapoint, All 38.73 31 P P 04 11 59.2 +8.4
D62A IAmb IAmb 04 12 00.4
comp=Z,20nm,1.1s
D62A Allapoint, All 38.73 31 P P 04 11 50.0 -0.8
baz=226
E64A Bridgewater 38.90 32 P P 04 11 51.2 -0.9
baz=228
FFC Flin Flon 38.95 355 P P 04 11 52.0 -0.5
D63A Stockholm 39.17 31 P P 04 11 53.3 -1.2
baz=227
BATG Bathurst New B 40.38 33 P P 04 12 04.2 -0.3
BATG IAmb IAmb 04 12 14.7
comp=Z,10nm,0.8s
LPAZ La Paz 42.77 137 P P 04 12 26.5 +1.3
comp=Z,0.9nm,0.8s,baz=305,slow=12,SNR=3.2
LPAZ LR LR 04 29 10.6
comp=Z,77nm,18.1s,baz=311,slow=34
FCC Fort Churchill 42.85 2 P P 04 12 24.5 -0.1
RPN Rapa Nui 44.43 196 LR LR 04 26 37.9
comp=Z,71nm,19.8s,baz=86,slow=30
SCHQ Schefferville 45.27 24 P P 04 12 42.1 -2.0
comp=Z,5.5nm,0.9s,baz=228,slow=9.0,SNR=7.9
SCHQ LR LR 04 35 09.9
comp=Z,97nm,18.9s,baz=308,slow=41
SCHQ Schefferville 45.27 24 P P 04 12 43.1 -1.0
SCHQ IAmb IAmb 04 12 46.7
comp=Z,13nm,1.1s
YKA Yellowknife Ar 48.19 349 P P 04 13 06.0 -0.8
comp=Z,3.5nm,0.8s,baz=154,slow=7.3,SNR=46
YKA LR LR 04 34 17.9
comp=Z,136nm,19.0s,baz=0.0,slow=37
TAOE Nuku Hiva Isla 49.37 243 eT T 05 05 47.2
comp=Z,26nm,0.2s
CFA Coronel Fontan 54.66 150 P P 04 13 57.7 +1.9
comp=Z,2.0nm,0.9s,baz=339,slow=9.8,SNR=5.1
CFA LR LR 04 31 56.5
comp=Z,44nm,20.1s,baz=266,slow=30
C36M Paulatuk 56.06 349 P P 04 14 04.6 -0.6
baz=148
EPYK Eagle Plains 56.83 342 P P 04 14 10.8 0.0
baz=132
CPUP Villa Florida 56.95 137 LR LR 04 38 24.6
comp=Z,70nm,18.4s,baz=320,slow=36
EGAK Eagle 57.23 339 P P 04 14 13.7 0.0
EGAK IAmb IAmb 04 14 14.6
comp=Z,9.5nm,0.9s
EGAK sP 04 14 23.2 +1.3
BDFB Brasilia 57.56 121 P P 04 14 17.2 +0.4
comp=Z,1.6nm,0.6s,baz=266,slow=20,SNR=3.1
BDFB Brasilia 57.56 121 P P 04 14 16.3 -0.5
BDFB IAmb IAmb 04 14 29.3
comp=Z,4.9nm,0.9s
SCRK Sand Creek 57.77 338 P P 04 14 19.0 +1.4
SCRK IAmb IAmb 04 14 29.1
comp=Z,12nm,1.2s
RES Resolute Bay 58.80 1 P P 04 14 23.9 -0.6
HDA Harding Lake 59.09 337 P P 04 14 26.7 0.0
baz=120
PRP Porcupine Dome 59.16 339 IAmb IAmb 04 14 29.0
comp=Z,8.3nm,0.9s
IL31 59.26 338 IAmb IAmb 04 14 29.7
comp=Z,11nm,1.0s
ILAR Eielson Array 59.26 338 P P 04 14 28.0 +0.1
comp=Z,6.6nm,0.9s,baz=134,slow=4.8,SNR=52
ILAR LR LR 04 42 37.6
comp=Z,236nm,18.8s,baz=139,slow=39
POKR Poker Flat Res 59.64 338 P P 04 14 30.6 +0.2
baz=120,SNR=6.2
COLA College 59.67 337 P P 04 14 31.1 +0.5
TCOL CIGO, UAF Yank 59.67 337 P P 04 14 30.9 +0.2
baz=120
MLY Manley 60.82 337 P P 04 14 38.6 0.0
PLCA Paso Flores 61.43 157 P P 04 14 47.0 +4.0
comp=Z,4.0nm,1.0s,baz=333,slow=12,SNR=4.7
PLCA LR LR 04 35 45.9
comp=Z,96nm,18.7s,baz=352,slow=30
PPT Papeete 61.63 240 LR LR 04 33 22.0
comp=Z,71nm,20.7s,baz=49,slow=28
PPT2 Papeete2 61.65 240 eLR LR 04 32 54.0
comp=Z,137nm,24.5s
COLD Coldfoot 61.66 339 P P 04 14 44.5 +0.3
COLD IAmb IAmb 04 14 52.6
comp=Z,7.1nm,1.4s
TOLK Toolik Lake Re 62.15 341 P P 04 14 47.4 -0.2
TOLK IAmb IAmb 04 14 48.9
comp=Z,8.5nm,1.0s
TOLK Toolik Lake Re 62.15 341 P P 04 14 47.9 +0.3
baz=120,SNR=5.9
TBI Tubuai 64.50 234 eLR LR 04 34 23.6
comp=Z,140nm,27.2s
TBI Tubuai 64.50 234 eT T 05 24 44.9
comp=Z,3.8nm,0.3s
SUMG Summit 65.72 16 iP P 04 15 10.9 -0.5
comp=Z,13nm,0.9s
SUMG Summit 65.72 16 P P 04 15 10.7 -0.7
SUMG IAmb IAmb 04 15 12.1
comp=Z,7.5nm,0.8s
DAG Danmarks Havn 71.94 14 iP P 04 15 48.9 -0.7
comp=Z,2.0nm,0.7s
ESDC Sonseca Array 82.25 51 P P 04 16 48.0 -0.3
comp=Z,1.6nm,0.8s,baz=309,slow=5.7,SNR=5.5
MDT Midelt 83.44 58 LR LR 04 50 02.9
comp=Z,78nm,19.1s,baz=310,slow=33
NOA NORSAR Array B 84.72 28 P P 04 16 59.8 -0.7
comp=Z,1.3nm,0.8s,baz=295,slow=4.6,SNR=3.4
NOA LR LR 04 54 57.0
comp=Z,55nm,19.6s,baz=245,slow=36
SEY Seymchan 85.04 335 P P 04 17 02.1 0.0
comp=Z,1.5nm,0.9s,baz=78,slow=9.5,SNR=3.7
HFS Hagfors 86.21 28 LR LR 04 55 52.2
comp=Z,103nm,18.1s,baz=336,slow=36
FINES FINESS Array B 90.75 24 LR LR 04 59 43.3
comp=Z,86nm,18.4s,baz=90,slow=37
GERES GERESS Array B 91.12 38 P P 04 17 30.3 -1.3
comp=Z,0.8nm,0.7s,baz=342,slow=5.2,SNR=4.9
GERES LR LR 04 59 38.0
comp=Z,92nm,18.3s,baz=277,slow=36
NRIK Noril'sk 94.93 358 LR LR 05 06 28.0
comp=Z,41nm,18.1s,baz=20,slow=39
MKAR Makanchi Array 117.60 1 PKP PKPdf 04 23 12.2 -0.7
comp=Z,0.3nm,0.7s,baz=20,slow=4.6,SNR=3.2
CD2 Chengdu 129.39 337 Pdif Pdif 04 20 21.8 -1.3
CMAR Chiang Mai Arr 142.46 335 PKP PKPdf 04 24 01.1 +0.7
comp=Z,0.6nm,0.4s,baz=345,slow=2.8,SNR=3.7

IDC 24 04:06:45.3±58.0, **16°.19S×173°.94W, h0**km, **mb3.9**/3, **mb1 4.1**/3, **mb1mx3.5**/50, **mbtmp3.9**/3, **Error ellipse: s-maj=1113.0km s-min=199.5km az=79.0, Tonga Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STKA Stephens Creek 43.19 241 P P 04 14 48.4 +0.1
0.4nm,0.3s,baz=86,slow=13,SNR=3.1
WRA Warramunga Arr 49.16 257 P P 04 15 35.0 -0.5
0.4nm,0.5s,baz=96,slow=7.0,SNR=2.1
ASAR Alice Springs 49.37 253 P P 04 15 37.1 0.0
2.5nm,0.6s,baz=88,slow=8.4,SNR=34

IDC 24 04:17:47.0±1.2, **2°.14N×127°.98E, h0**km, **mb3.7**/4, **mb1 3.8**/5, **mb1mx3.5**/43, **mbtmp3.8**/5, **ML3.6**/1, **MS3.9**/1, **Ms1 3.9**/1, **ms1mx2.6**/38, **Error ellipse: s-maj=91.3km s-min=18.3km az=63.0, Northern Molucca Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 4.45 132 Pn Pn 04 18 56.4 +0.6
3.3nm,0.3s,baz=218,slow=22,SNR=8.6
SIJI Sn Sn 04 19 46.2 -2.0
0.7nm,0.3s,baz=17,slow=19,SNR=3.6
WRA Warramunga Arr 22.82 164 P P 04 22 52.2 +0.5
1.6nm,0.9s,baz=344,slow=10,SNR=5.3
ASAR Alice Springs 26.29 168 P P 04 23 24.0 -0.5
0.3nm,0.6s,baz=358,slow=9.3,SNR=4.2
PSI Prapat 29.03 272 LR LR 04 36 20.4
comp=Z,230nm,18.0s,baz=150,slow=38
STKA Stephens Creek 36.22 160 P P 04 24 51.2 -0.5
0.8nm,0.4s,baz=333,slow=8.8,SNR=6.6
MKAR Makanchi Array 59.56 325 P P 04 27 52.9 +0.4
1.0nm,0.4s,baz=117,slow=8.7,SNR=26
KURBB Kurchatov Arra 63.74 327 P P 04 28 20.1 -0.4
29nm,0.5s,baz=125,slow=6.1,SNR=4.9

PDG 24 04:40:58.5±0.3, 34°.62N×23°.55E, h12km±11km, ML4.4/12, Error ellipse: s-maj=56.5km s-min=15.8km az=90.0
NEIC 24 04:41:00.5±3.2, 34°.75N±0°.04×24°.15E±0°.05, h11km±1km, Error ellipse: s-maj=7.7km s-min=5.0km az=133.0
MOS 24 04:41:00.4±1.3, 34°.78N×24°.08E, h22km, mb4.6/18, Error ellipse: s-maj=7.7km s-min=4.3km az=85.5
IDC 24 04:41:02.8±2.0, 34°.89N×24°.14E, h25km±12km, mb4.1/19, mb1 4.1/28, mb1mx3.9/52, mbtmp4.1/28, ML3.8/7, MS3.1/4, Ms1 3.1/4, ms1mx2.6/45, Error ellipse: s-maj=16.2km s-min=12.1km az=171.0
ATH 24 04:41:03.4, 34°.83N×24°.21E, h25km, ML4.0/16, Error ellipse: s-maj=1.7km s-min=0.8km az=192.0
ISK 24 04:41:03.9, 34°.88N×24°.27E, h14km, ML3.8/14
DDA 24 04:41:04.0, 34°.90N×24°.11E, h10km±2km, MW4.0
THE 24 04:41:05.0, 34°.92N×24°.24E, h0km, ML3.9/12, Error ellipse: s-maj=0.9km s-min=0.3km az=164.0
GII 24 04:41:13.0±0.0, 33°.91N×25°.09E, h12km, MD3.5/1
HLW 24 04:41:23.1, 33°.33N×25°.48E, h10km±18km, Md4.1, Ml4.0
ISC 24 04:41:03.0±0.6, **34°.81N**±0°.03×**24°.21E**±0°.02, **h29**km±4km, **n373**, σ**2s.14**/445, **mb4.3**/42, **17C-12D, Crete**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GVDS Gavdos 0.10 287 P Pb 04 41 08.4 +0.2
GVDS S Sb 04 41 11.9 +0.2
174μm,0.2s
GVDS Gavdos 0.10 287 PG Pb 04 41 08.4 +0.2
GVDS SG Sb 04 41 11.9 +0.2
GVD Gavdhos 0.10 284 P Pb 04 41 08.2 0.0
GVD S Sb 04 41 11.5 -0.3
209μm,0.3s
GVD Gavdhos 0.10 284 P Pb 04 41 08.1 -0.1
GVD S Sb 04 41 11.1 -0.6
GVD AML AML 04 41 12.4
GVD AML AML 04 41 14.8
GVD Gavdhos 0.10 284 PG Pb 04 41 08.1 -0.1
GVD SG Sb 04 41 11.4 -0.3
GVD Gavdhos 0.10 284 Pb 04 41 08.1 -0.1
GVD Sb 04 41 11.9 +0.1
TMBK Timbaki Herakl 0.52 60 P Pb 04 41 14.4 +0.6
TMBK S Sb 04 41 21.2 +0.1
8μm,0.5s
SIVA Sivas 0.53 67 P Pn 04 41 14.7 0.0
SIVA S Sn 04 41 22.4 -0.3
50μm,0.7s
SIVA Sivas 0.53 67 P Pn 04 41 14.7 0.0
SIVA S Sn 04 41 22.5 -0.3
SIVA AML AML 04 41 29.6
SIVA AML AML 04 41 29.7
comp=N,87846μm,0.5s
SIVA Sivas 0.53 67 Pn 04 41 14.7 0.0
SIVA Sb 04 41 21.9 +0.5
VAM Vamos 0.59 359 P Pb 04 41 14.9 -0.1
VAM S Sb 04 41 22.6 -0.4
comp=N,23μm,0.5s
VAM Vamos 0.59 359 P Pb 04 41 14.8 -0.1
VAM S Sn 04 41 24.0 -0.2
VAM AML AML 04 41 25.4
comp=E,54762μm,0.5s
VAM AML AML 04 41 27.9
comp=N,31461μm,0.3s
VAM Vamos 0.59 359 Pb 04 41 14.8 -0.1
VAM Sn 04 41 24.1 -0.1
PRNS Prines Rethymn 0.60 23 P Pb 04 41 14.6 -0.4
PRNS S Sb 04 41 21.2 -2.0
KNDR Palaiochora Ch 0.60 314 P Pn 04 41 15.9 +0.2
KNDR S Sn 04 41 26.2 +1.8
comp=N,6μm,0.3s
KNDR Palaiochora Ch 0.60 314 PG Pn 04 41 16.2 +0.5
KNDR SG Sn 04 41 26.2 +1.8
IMMV Iera Moni Meta 0.67 344 P Pb 04 41 16.3 0.0
IMMV S Sn 04 41 26.1 -0.1
comp=N,30μm,0.3s
IMMV Iera Moni Meta 0.67 344 P Pb 04 41 16.2 0.0
IMMV S Sn 04 41 26.6 +0.4
IMMV AML AML 04 41 30.2
comp=N,63091μm,0.3s
IMMV AML AML 04 41 30.4
comp=E,57168μm,0.4s
IMMV Iera Moni Meta 0.67 344 PG Pb 04 41 16.5 +0.2
IMMV SG Sn 04 41 25.9 -0.3
IMMV Iera Moni Meta 0.67 344 Pb 04 41 16.2 0.0
IMMV Sn 04 41 26.9 +0.7
CHAN Chania 0.72 349 P Pb 04 41 17.1 +0.1
CHAN S Sn 04 41 27.2 -0.1
comp=E,5μm,0.7s
IDI Anoyia 0.73 49 Pg Pb 04 41 16.8 -0.4
comp=E,204nm,0.3s,baz=230,slow=12,SNR=1019
IDI Lg Lg 04 41 27.6
comp=E,566nm,0.3s,baz=307,slow=20,SNR=66
IDI LR LR 04 41 55.5
comp=E,632nm,21.4s,baz=300,slow=72
IDI Anoyia 0.73 49 P Pb 04 41 17.2 -0.1
IDI S Sn 04 41 28.7 +0.9
IDI AML AML 04 41 29.2
comp=N,15630μm,0.6s
IDI AML AML 04 41 29.6
comp=E,18413μm,0.5s
IDI Anoyia 0.73 49 PG Pb 04 41 16.9 -0.4
IDI SG Sb 04 41 26.8 -0.2
IDI Anoyia 0.73 49 Pb 04 41 17.2 -0.1
IDI Sn 04 41 28.4 +0.6
RODP Rodopos 0.83 334 P Pb 04 41 19.7 +0.7
RODP Rodopos 0.83 334 PG Pb 04 41 19.7 +0.7
RODP SG Sn 04 41 31.5 +1.3
KSTL Kastelli Herak 0.86 55 P Pb 04 41 23.1 +3.7
IACM Heraklion 0.86 55 P Pb 04 41 20.1 +0.7
IACM S Sn 04 41 31.8 +1.0
comp=E,48μm,0.6s
IACM Heraklion 0.86 55 P Pb 04 41 19.9 +0.5
IACM S Sn 04 41 31.8 +1.0
IACM AML AML 04 41 45.6
IACM AML AML 04 41 46.4
comp=E,91535μm,0.6s
HRKL Herakleio 0.88 56 P Pb 04 41 20.4 +0.6
HRKL Herakleio 0.88 56 PG Pb 04 41 20.2 +0.4
LAST Lasithi 1.10 71 P Pb 04 41 24.4 +1.0
LAST S Sb 04 41 40.6 +3.2
comp=E,3μm,0.9s
LAST Lasithi 1.10 71 P Pb 04 41 24.1 +0.6
LAST S Sb 04 41 40.0 +2.5
NPS Neapolis 1.23 68 P Pb 04 41 27.3 +1.6
NPS Neapolis 1.23 68 P Pb 04 41 26.3 +0.5

NPS S Sb 04 41 43.1 +1.8
NPS AML AML 04 41 55.5
comp=E,12644μm,0.8s
NPS AML AML 04 41 56.0
comp=N,8082μm,1.0s
FRMA Ierapetra Chan 1.27 80 P Pb 04 41 29.6 +3.3
ANKY Antikythira Is 1.29 325 P Pb 04 41 28.2 +1.6
ANKY S Sb 04 41 45.9 +3.1
comp=N,4μm,0.5s
ANKY Antikythira Is 1.29 325 P Pb 04 41 28.0 +1.4
ANKY S Sb 04 41 45.4 +2.6
ANKY AML AML 04 41 53.3
comp=E,11667μm,0.5s
ANKY AML AML 04 41 58.6
comp=N,6200μm,0.5s
STIA Sitia Lasithi 1.59 75 P Pb 04 41 33.3 +1.5
ZKR Zakros 1.68 79 P Pb 04 41 34.2 +1.0
ZKR Zakros 1.68 79 P Pb 04 41 34.2 +1.0
ZKR S Sb 04 41 54.5 +0.7
ZKR AML AML 04 42 13.9
comp=E,3011μm,0.9s
ZKR AML AML 04 42 15.4
comp=N,1567μm,0.5s
ZKR Zakros 1.68 79 PN Pb 04 41 32.9 -0.3
KTHA Kythira Island 1.72 327 P Pb 04 41 34.6 +0.7
KTHA Kythira Island 1.72 327 P Pb 04 41 34.1 +0.2
KTHA S Sb 04 41 55.7 +0.5
KTHA AML AML 04 42 06.3
comp=N,3116μm,0.5s
KTHA AML AML 04 42 07.7
comp=E,8700μm,0.4s
KTHA Kythira Island 1.72 327 PN Pb 04 41 34.1 +0.2
KTHR Kythira 1.75 326 P Pb 04 41 35.1 +0.7
KTHR S Sb 04 41 57.2 +1.2
comp=E,2μm,0.4s
THR6 Thira Island, 1.82 32 P Pb 04 41 35.3 -0.3
THR6 Thira Island, 1.82 32 P Pb 04 41 35.4 -0.2
SAP1 Santorini-Akro 1.82 32 P Pb 04 41 35.1 -0.5
SAP1 Santorini-Akro 1.82 32 P Pb 04 41 35.4 -0.2
THR5 Thira Island, 1.85 30 P Pb 04 41 35.6 -0.6
THR5 Thira Island, 1.85 30 P Pb 04 41 35.8 -0.3
SANT Santorini 1.86 33 P Pb 04 41 35.5 -0.8
SANT Santorini 1.86 33 P Pb 04 41 35.4 -0.8
SANT S Sb 04 41 59.4 +0.2
SANT AML AML 04 42 11.9
comp=E,3495μm,0.5s
SANT AML AML 04 42 12.9
comp=N,1211μm,0.5s
SANT Santorini 1.86 33 ⇑P Pb 04 41 35.5 -0.8
SANT Santorini 1.86 33 PN Pb 04 41 35.2 -1.1
SANT Santorini 1.86 33 Pb 04 41 35.5 -0.8
SANT Santorini 1.86 33 *i* P Pb 04 41 35.8 -0.5
SANT *i* S Sb 04 41 59.1 -0.1
SAP3 Santorini-Thir 1.86 29 P Pb 04 41 35.6 -0.8
THR3 Thira Island, 1.86 31 P Pb 04 41 36.0 -0.4
THR3 Thira Island, 1.86 31 P Pb 04 41 36.0 -0.4
MHLO Agia Marina, M 1.88 5 P Pb 04 41 35.7 -1.0
MHLO Agia Marina, M 1.88 5 P Pb 04 41 36.0 -0.7
MHLO S Sb 04 41 59.5 -0.3
MHLO AML AML 04 42 11.1
comp=N,12290μm,0.6s
MHLO AML AML 04 42 14.8
comp=E,9367μm,0.7s
SAP2K Karterados 1.89 32 P Pb 04 41 35.9 -0.9
SAP2K Karterados 1.89 32 P Pb 04 41 36.2 -0.5
THR7 Fira-Santorini 1.89 31 P Pb 04 41 36.5 -0.3
THR8 Santorini-Mono 1.90 33 P Pb 04 41 36.0 -1.0
THR8 Santorini-Mono 1.90 33 P Pb 04 41 36.0 -1.0
THR2 Thira island, 1.91 31 P Pb 04 41 36.6 -0.6
MHLA Plaka, Milos I 1.94 5 P Pb 04 41 36.4 -1.2
MHLA S Sb 04 42 01.1 -0.2
MHLA AML AML 04 42 18.6
comp=N,5136μm,0.6s
MHLA AML AML 04 42 19.1
comp=E,4370μm,0.8s
IOSP Ios island 2.10 24 P Pn 04 41 38.4 +2.2
IOSP Ios island 2.10 24 P Pn 04 41 38.5 +2.2
IOSP S Sb 04 42 04.3 -1.8
IOSP AML AML 04 42 15.4
comp=E,2122μm,0.6s
IOSP AML AML 04 42 15.8
comp=N,2115μm,0.3s
MNVA Monemvasia 2.10 333 P Pb 04 41 38.4 -2.0
VLI Veliai 2.17 332 P Pb 04 41 39.7 -1.8
VLI Veliai 2.17 332 P Pb 04 41 39.9 -1.7
VLI S Sb 04 42 06.6 -1.4
VLI AML AML 04 42 20.7
comp=E,2608μm,0.6s
VLI AML AML 04 42 28.9
comp=N,2179μm,0.6s
SERI Serifos 2.35 5 P Pn 04 41 42.1 +2.3
AMGA Amorgos Island 2.43 34 P Pn 04 41 43.2 +2.3
APE Apeiranthos 2.49 25 P Pn 04 41 43.7 +1.9
APE Apeiranthos 2.49 25 ⇑P Pn 04 41 43.6 +1.9
APE Apeiranthos 2.49 25 PN Pn 04 41 43.8 +2.1
APE Apeiranthos 2.49 25 *i* P Pn 04 41 43.6 +1.9
APE *i* S Sn 04 42 10.5 -0.8
APE Apeiranthos 2.49 25c *i* P Pn 04 41 43.4 +1.7
KARP Karpathos 2.52 72 P Pb 04 41 45.5 -2.2
KARP Karpathos 2.52 72 P Pn 04 41 44.5 +2.3
KARP S Sb 04 42 16.2 -2.2
KARP AML AML 04 42 44.4
comp=E,1578μm,1.0s
KARP AML AML 04 42 44.7
comp=N,1325μm,0.9s
KARP Karpathos 2.52 72 PN Pn 04 41 44.9 +2.7
KARP Karpathos 2.52 72 Pn 04 41 44.7 +2.6
YDRA Hydra 2.60 347 P Pn 04 41 45.8 +2.7
KRND KRANIDI 2.70 342 P Pn 04 41 47.0 +2.5
DID Didima 2.80 344 P Pn 04 41 48.0 +2.0
PYL PYLOS 2.89 317 P Pn 04 41 48.5 +1.4
VLX Vlachokerasia 2.95 330 P Pb 04 41 51.7 -3.3
KOSK Kos Island 2.97 49 PN Pn 04 41 50.9 +2.7
NISR Nisiros 2.98 52 P Pn 04 41 51.2 +2.9
NISR Nisiros 2.98 52 P Pn 04 41 51.5 +3.2
ITM Ithomi 3.00 323 P Pn 04 41 50.9 +2.2
ITM Ithomi 3.00 323 PN Pn 04 41 52.1 +3.4
ITM Ithomi 3.00 323 Pn 04 41 50.4 +1.7
DAT Datca 3.34 54 PN Pn 04 41 56.3 +2.9
BODT Bodrum 3.37 47 PN Pn 04 41 56.6 +2.8
DATC Datca-Mugla 3.41 54 PN Pn 04 41 57.3 +3.0
ARG Arkhangelos 3.49 65 P Pn 04 41 58.5 +3.1
ARG Arkhangelos 3.49 65 P Pn 04 41 58.5 +3.1
ARG Arkhangelos 3.49 65 PN Pn 04 41 58.4 +3.1
SMG Samos 3.58 36 P Pn 04 41 59.6 +2.9
MRSB Marmaris-Mugla 3.76 58 PN Pn 04 42 02.1 +3.0
GCAM G?zelcaml? 3.78 39 PN Pn 04 42 02.7 +3.4
GCAM G?zelcaml? 3.78 39 *i* P Pn 04 42 02.0 +2.7
CHOS Chios island 3.86 22 PN Pn 04 42 03.6 +3.0
ZEY zmir 3.88 28 *i* P Pn 04 42 02.1 +1.3
ZEY *i* S Sb 04 43 00.9 +3.5
URLA Izmir 4.03 28 *i* P Pn 04 42 04.8 +2.0
YER Yerkesik 4.03 54 PN Pn 04 42 06.3 +3.4
AYDN Tasoluk 4.11 45 *i* P Pn 04 42 06.9 +3.0
AYDN *i* S Sn 04 42 44.4 -6.6
TURN Turunc 4.12 59 PN Pn 04 42 03.1 -0.9
TURN Turunc 4.12 59 *i* P Pn 04 42 02.8 -1.2
TURN *i* S Sn 04 42 44.5 -6.6
TURN IAML 04 42 51.0
comp=Z,46nm,0.5s
DALY Dalyan (Mula) 4.13 60 PN Pn 04 42 07.6 +3.5
BLCB Balcova 4.23 32 PN Pn 04 42 09.1 +3.5
AYDB Zeytinkoy-Aydi 4.31 42 PN Pn 04 42 10.0 +3.2
AOS Alonnisos 4.36 357 PN Pn 04 42 10.9 +3.6
FETY Fethiye 4.36 64 PN Pn 04 42 09.8 +2.4
AGG Agios Georgios 4.46 341 PN Pn 04 42 11.5 +2.7
AGG Agios Georgios 4.46 341 Pn 04 42 11.1 +2.3
AGG Agios Georgios 4.46 341 *i* P Pn 04 42 10.7 +1.9
AGG *i* S Sn 04 42 57.9 -1.9
AGG Agios Georgios 4.46 341 *i* P Pn 04 42 11.1 +2.3
AKAS Kas 4.62 71 *i* P Pn 04 42 12.1 +1.0
AKAS *i* S Sn 04 42 58.2 -5.6
AKAS IAML 04 43 19.0
comp=Z,20nm,0.6s
TAVA DENIZLI_Tavas 4.63 54 *i* P Pn 04 42 14.4 +3.2
TAVA *i* S Sn 04 43 05.0 +0.8
AKHS Akhisar 4.98 34 *i* P Pn 04 42 19.0 +3.1
ELL Elmali 5.02 66 Pn 04 42 19.3 +2.8
ELL Elmali 5.02 66 P Pn 04 42 19.3 +2.8
MANT Manisa 5.07 42 Pn 04 42 16.9 -0.4
MANT Manisa 5.07 42 *i* P Pn 04 42 20.4 +3.1
AKUM Antalya-Kumluc 5.22 71 *i* P Pn 04 42 20.9 +1.8

AKUM IAML 04 43 40.0
comp=Z,28nm,1.0s
STEP BALIKESIR_Sava 5.35 31 *i* P Pn 04 42 24.2 +3.2
KORT Korkueli 5.44 65 *i* P Pn 04 42 26.5 +4.2
KORT IAML 04 43 40.0
comp=Z,19nm,0.6s
LIT Litokhoron 5.45 346 Pn Pn 04 42 24.6 +2.2
LIT Litokhoron 5.45 346 *i* P Pn 04 42 24.3 +1.9
LIT *i* S Sn 04 43 21.0 -3.2
LIT Litokhoron 5.45 346 P Pn 04 42 24.6 +2.2
USAK Uak-Merkez 5.48 43 *i* P Pn 04 42 26.6 +3.8
BRDR BURDUR-Merkez 5.53 57 *i* P Pn 04 42 26.6 +3.0
KHAL Karahalli 5.54 49 *i* P Pn 04 42 26.6 +3.0
SWA2 5.65 169 AMP 04 43 00.0
baz=181
DURS Dursunbey 5.87 34 *i* P Pn 04 42 31.8 +3.7
KZIL AFYON_Kizioren 5.88 53 *i* P Pn 04 42 30.6 +2.2
GDZ Gediz 6.00 43 *i* P Pn 04 42 33.4 +3.4
ALN Alexandroupoli 6.25 13 Pn Pn 04 42 34.0 +0.8
ALN Alexandroupoli 6.25 13 P Pn 04 42 34.0 +0.8
AFYO Afyonkarahisar 6.29 49 *i* P Pn 04 42 37.2 +3.3
AFYO IAML 04 44 06.0
comp=N,19nm,1.0s
AFYO IAML 04 44 21.0
comp=Z,17nm,0.5s
AFYO IAML 04 44 35.0
comp=E,24nm,1.5s
KEPZ Antalya-Kepez 6.36 69 *i* P Pn 04 42 37.3 +2.5
KEPZ IAML 04 44 15.0
comp=Z,15nm,1.4s
BOLV Bolvadin 6.67 52 *i* P Pn 04 42 42.0 +2.9
BOLV IAML 04 43 56.0
comp=Z,6.8nm,0.9s
DOGA KONYA_Doganhis 6.85 59 *i* P Pn 04 42 43.9 +2.2
DOGA IAML 04 44 16.0
comp=Z,7.4nm,0.9s
SCTE Santa Cesarea 6.96 321 Pn Pn 04 42 43.9 +0.9
SCTE Sn 04 43 57.6 -3.6
BORA Eskisehir 7.09 43 *i* P Pn 04 42 48.5 +3.6
LEF Lefka 7.13 85 ⇓P Pn 04 42 50.2 +4.8
SRCK Saricakaya, Es 7.30 42 *i* P Pn 04 42 51.6 +3.9
ERMK Ermenek 7.31 73 *i* P Pn 04 42 50.5 +2.5
ERMK IAML 04 44 22.0
comp=Z,20nm,0.5s
TIR Tirane 7.37 334 Pn Pn 04 42 49.4 +0.8
TIR Tirane 7.37 334 P Pn 04 42 49.4 +0.8
TIP Timpagrande 7.38 308 ⇑P Pn 04 42 48.8 -0.1
TIP ⇓S Sn 04 44 08.9 -2.9
TIP Timpagrande 7.38 308 Pn 04 42 49.2 +0.3
CSS Mathiatis 7.50 86 Pn 04 42 49.6 -0.9
CSS Sn 04 44 13.6 -0.9
CSS Mathiatis 7.50 86 *i* P Pn 04 42 49.5 -0.9
GULN MERSIN_Gulnar 7.73 77 *i* P Pn 04 42 53.9 +0.3
GULN IAML 04 44 38.0
comp=Z,8.8nm,1.2s
VTS Vitosha 7.83 355 ⇑P Pn 04 42 55.5 +0.3
VTS Vitosha 7.83 355 Pn 04 42 54.5 -0.7
VTS Vitosha 7.83 355 ⇑P Pn 04 42 55.5 +0.3
MDUB Mudurnu 7.91 42 Pn 04 42 54.1 -2.1
ULC Ulcinj 8.13 333 *e* Pn Pn 04 42 58.2 -1.0
ULC *e* Sn Sn 04 44 26.7 -3.4
KIBS BOLU 8.25 45 *i* P Pn 04 43 04.4 +3.6
KIBS IAML 04 44 52.0
comp=Z,7.8nm,2.1s
KIZK Mersin 8.26 76 *i* P Pn 04 43 01.2 +0.4
KIZK IAML 04 44 47.0
comp=Z,12nm,0.6s
MATE Matera 8.32 317 ⇑P Pn 04 43 00.6 -1.1
DRME Dracevica, Mon 8.35 333 *e* Pn Pn 04 43 00.4 -1.7
DRME Dracevica, Mon 8.35 333 *e* Pn Pn 04 43 00.7 -1.4
DRME *e* Sn Sn 04 44 31.9 -3.5
VAE Valguarnera 8.36 291 Pn Pn 04 43 00.7 -1.7
baz=120,slow=14,SNR=2.1
VAE Sn Sn 04 44 30.4 -5.3
comp=Z,3.4nm,0.3s,baz=208,slow=15,SNR=4.3
KERG Konya-Eregli 8.43 69 *i* P Pn 04 43 04.5 +1.1
KERG IAML 04 44 53.0
comp=Z,5.0nm,1.6s
PVY Plav 8.45 338 *e* Pn Pn 04 43 03.5 -0.1
PVY *e* Sn Sn 04 44 35.2 -2.8
SG1 Sgolgore (BA) 8.46 318 *e* Pn Pn 04 43 05.4 +1.7
SG1 Sn Sn 04 44 31.1 -7.2
BR231 Keskin MP Arra 8.47 51 Pn 04 43 02.7 -1.1
ANTO Ankara 8.49 51 ⇓P Pn 04 43 06.9 +2.7
ANTO Ankara 8.49 51 Pn 04 43 04.9 +0.8
ANTO Ankara 8.49 51 ⇓P Pn 04 43 06.9 +2.7
PDG Podgorica 8.54 334 ⇑P Pn 04 43 03.8 -0.8
PDG ⇓S Sn 04 44 35.7 -4.2
PDG Podgorica 8.54 334 *e* Pn Pn 04 43 02.7 -1.9
TTG Podgorica 8.54 334 *e* Pn Pn 04 43 03.2 -1.4
TTG *e* Sn Sn 04 44 36.5 -3.4
IVA Berane 8.72 339 *e* Pn Pn 04 43 06.7 -0.6
IVA *e* Sn Sn 04 44 41.2 -3.5
CEME Cevo 8.76 333 *e* Pn Pn 04 43 05.9 -1.9
CEME *e* Sn Sn 04 44 41.2 -4.3
KOME Kolasin 8.82 337 *e* Pn Pn 04 43 08.1 -0.5
KOME *e* Sn Sn 04 44 44.0 -3.1
HCY Herceg Novi 8.84 331 *e* Pn Pn 04 43 06.7 -2.1
HCY *e* Sn Sn 04 44 41.4 -5.9
ACER Acerenza 8.85 315 Pn Pn 04 43 09.4 +0.4
DED Mersin 8.86 73 *i* P Pn 04 43 09.5 +0.4
DED IAML 04 44 50.0
comp=Z,6.6nm,0.9s
GULE Gulek 8.90 71 *i* P Pn 04 43 12.1 +2.2
GULE IAML 04 44 59.0
comp=Z,6.3nm,0.5s
NKME Niksic 8.94 334 *e* Pn Pn 04 43 08.8 -1.4
NKME *e* Sn Sn 04 44 46.0 -3.9
BRTR Keskin Array B 8.97 54 Pn Pn 04 43 11.8 +1.0
comp=Z,0.5nm,0.3s,baz=226,slow=13,SNR=23
BRTR LR LR 04 47 21.1
comp=Z,65nm,18.4s,baz=288,slow=42
BRTR Keskin Array B 8.97 54 *i* P Pn 04 43 13.5 +2.7
BRTR pmax pmax
comp=Z,3.0nm,0.6s
BR131 Keskin Array S 8.97 54 *de* P Pn 04 43 13.3 +2.5
TREB Trebinje 9.12 332 *e* Pn Pn 04 43 10.3 -2.4
BRY Bratogost 9.21 333 *e* Pn Pn 04 43 12.3 -1.7
BRY *e* Sn Sn 04 44 52.3 -4.3
PLE Pljevlja 9.29 338 *e* Pn Pn 04 43 14.0 -1.1
PLE *e* Sn Sn 04 44 54.2 -4.5
CORL Corleone 9.32 292 Pn Pn 04 43 17.3 +1.8
UPM Unac-Piva 9.34 335 *e* Pn Pn 04 43 14.6 -1.2
UPM Unac-Piva 9.34 335 *e* Pn Pn 04 43 14.6 -1.2
UPM *e* Sn Sn 04 44 56.5 -3.4
KZIT Kziot 9.41 112 Pn Pn 04 43 16.3 -0.4
KZIT Sn Sn 04 44 53.4 -8.2
CDAG Cicekdag 9.42 56 *i* P Pn 04 43 19.2 +2.4
MMAI Mount Meron Ar 9.47 98 Pn Pn 04 43 16.6 -1.1
comp=Z,2.9nm,0.3s,baz=302,slow=13,SNR=5.9
MMAI Sn Sn 04 45 01.5 -1.7
comp=Z,2.8nm,0.3s,baz=288,slow=24,SNR=2.9
STON Ston 9.51 330 *e* Pn Pn 04 43 15.4 -2.6
AMAZ Amatzia 9.55 107 Pn Pn 04 43 19.6 +1.0
AMAZ Sn Sn 04 44 58.6 -6.4
YAHY KAYSERI_Yahyal 9.56 67 *i* P Pn 04 43 21.1 +2.2
SGRT San Giovanni R 9.60 319 Pn Pn 04 43 18.9 -0.4
YTIR Yattir 9.77 108 Pn Pn 04 43 22.8 +1.0
YTIR Sn Sn 04 45 02.9 -7.7
BBLS Lazići 9.77 339 *e* Pn Pn 04 43 19.6 -2.1
HMDT Nahal Hemdat 9.78 102 Pn Pn 04 43 23.1 +1.3
QRNJ Al-Qirein 9.80 101 Pn Pn 04 43 23.8 +1.8
PAOL Paolisi 9.82 312 Pn Pn 04 43 21.6 -0.8
DIVS Divibare 9.83 342 *e* Pn Pn 04 43 19.8 -2.6
DSI Dead Sea 9.90 106 Pn Pn 04 43 24.4 +1.0
DSI Sn Sn 04 45 07.2 -6.4
KRMI Paran Flat 10.04 115 Pn Pn 04 43 25.1 -0.2
KRMI Sn Sn 04 45 07.4 -10
HAPS Han Pijesak,Bl 10.11 338 *e* Pn Pn 04 43 23.1 -3.3
PRNI Paran 10.13 113 Pn Pn 04 43 26.2 -0.4
PRNI Sn Sn 04 45 11.9 -7.4
HRFI Mount Harif 10.31 115 Pn Pn 04 43 29.0 -0.1
HRFI Sn Sn 04 45 15.9 -7.8
MBRI Mt Berech 10.35 116 Pn Pn 04 43 29.4 -0.2
EIL Elat 10.44 116 Pn Pn 04 43 29.9 -0.9
comp=Z,1.3nm,0.3s,baz=255,slow=2.7,SNR=14
EIL Sn Sn 04 45 18.2 -8.6
comp=Z,0.8nm,0.3s,baz=198,slow=20,SNR=2.5
EIL Elat 10.44 116 Pn Pn 04 43 30.2 -0.6
EIL Sn Sn 04 45 17.4 -9.4
ARR Arges 10.55 2 ⇑P Pn 04 43 31.6 -0.7
GZR Gura Zlata 10.62 355 ⇑P Pn 04 43 33.9 +0.5

GZR Gura Zlata 10.62 355 ⇑P Pn 04 43 33.9 +0.5
LOT Lotru 10.63 358 ⇑P Pn 04 43 34.1 +0.7
VOIR 10.63 3 ⇑P Pn 04 43 33.4 0.0
VOIR 10.63 3 ⇑P Pn 04 43 33.4 0.0
MLR Muntele Rosu 10.75 7 LR LR 04 48 34.1
comp=Z,86nm,18.8s,baz=120,slow=42
GAZ Gaziantep 10.79 74 Pn Pn 04 43 37.1 +1.4
INTR Introdacqua 10.81 315 Pn Pn 04 43 37.1 +1.2
MGRS Mrkonjic Grad 11.05 332 *e* Pn Pn 04 43 37.0 -2.1
BLY Banja Luka 11.29 334 ⇑P Pn 04 43 40.9 -1.6
BLY Banja Luka 11.29 334 *e* Pn Pn 04 43 39.1 -3.3
BLY Banja Luka 11.29 334 Pn 04 43 39.9 -2.5
NRCA Norcia 11.78 316 Pn Pn 04 43 51.5 +2.3
KEST Kesra 12.19 279 Pn Pn 04 43 56.2 +1.5
MURB Monte Urbino 12.39 316 Pn Pn 04 43 59.8 +2.3
BOJS Bojanci 12.68 330 *e* Pn Pn 04 43 59.6 -1.7
BUR08 Bucovina Ar. S 12.84 3 Pn Pn 04 44 06.5 +2.9
CRES Cresnjev 12.86 331 *e* Pn Pn 04 44 00.7 -3.1
CRES Cresnjev 12.86 331 *e* Pn Pn 04 44 00.9 -2.9
CASP Castiglione de 13.10 311 Pn Pn 04 44 07.7 +0.7
CEY Cerknica 13.21 329 *e* Pn Pn 04 44 05.5 -3.2
TRI Trieste 13.48 327 Pn Pn 04 44 10.0 -2.3
TRI Trieste 13.48 327 P Pn 04 44 10.0 -2.3
SOKA Soboth 13.73 332 *i* Pn Pn 04 44 14.4 -1.4
comp=Z,1.0nm,0.3s
OBKA Obir 13.78 331 *i* Pn Pn 04 44 15.0 -1.4
comp=Z,1.4nm,0.4s
TEOL Teolo 14.23 321 Pn Pn 04 44 21.2 -1.4
VYHS Vyhne 14.24 345 *e* P P 04 44 31.4 +1.7
VYHS Vyhne 14.24 345 *e* PN P 04 44 31.4 +1.7
VYHS *e* PG 04 45 34.7
STAL STALIGIAL 14.38 326 Pn Pn 04 44 25.9 +1.3
MODS Modra-Piesok 14.50 341 *e* P P 04 44 32.9 +0.4
MODS Modra-Piesok 14.50 341 *e* PN P 04 44 32.9 +0.4
CONA Conrad Observa 14.51 337 *i* Pn Pn 04 44 26.9 +0.5
comp=Z,0.2nm,0.3s
KBA Koelnbreinsper 14.73 330 *i* Pn Pn 04 44 28.7 -0.8
comp=Z,0.3nm,0.2s
ABTA Abfaltersbach 14.83 327 *i* Pn Pn 04 44 29.3 -1.5
comp=Z,1.5nm,0.4s
SOC Sochi 14.86 49 *i* P Pn 04 44 32.1 +1.1
SOC *e* 04 47 20.0
SOC MLR MLR
comp=Z,81nm,12.0s
MOA Molln 15.00 333 *i* Pn Pn 04 44 30.9 -2.0
comp=Z,0.1nm,0.1s,SNR=4.1
VRAC Vranov 15.54 341 Pn Pn 04 44 39.1 -0.9
comp=Z,0.3nm,0.3s,baz=159,slow=6.7,SNR=1.8
VRAC LR LR 04 51 22.4
comp=Z,76nm,21.9s,baz=272,slow=40
WTTA Wattenberg 15.62 327 *i* Pn Pn 04 44 41.0 -0.2
comp=Z,3.9nm,0.4s,SNR=4.3
WATA Walderalm 15.70 327 *i* Pn Pn 04 44 42.1 -0.1
comp=Z,1.4nm,0.3s
MORC Moravsky Berou 15.73 344 P Pn 04 44 43.4 +0.8
MORC Moravsky Berou 15.73 344 P Pn 04 44 43.4 +0.8
MORC pmax pmax
comp=Z,5.0nm,0.9s
SQTA Sankt Quirin 15.78 326 *i* Pn Pn 04 44 43.4 +0.1
comp=Z,2.4nm,0.3s,SNR=4.5
FUORN Ofenpass-Fuorn 15.81 322 P 04 44 47.6 +0.2
FUORN IAmb IAmb 04 44 51.6
comp=Z,14nm,0.8s
FETA Feichten 15.86 324 *i* pP P 04 44 50.8 +3.0
comp=Z,2.7nm,0.4s
MOTA Moosalm 15.92 326 *i* Pn Pn 04 44 45.0 -0.1
comp=Z,0.8nm,0.4s
GERES GERESS Array B 16.04 334 Pn Pn 04 44 45.1 -1.4
comp=Z,0.1nm,0.3s,baz=145,slow=12,SNR=3.2
DAVOX Davos/Dischmat 16.11 322 Pn Pn 04 44 46.6 -1.0
comp=Z,0.1nm,0.3s,baz=183,slow=18,SNR=2.0
DAVOX Sn Sn 04 47 37.1 -8.3
comp=Z,0.1nm,0.3s,baz=335,slow=19,SNR=3.0
RETA Reutte 16.18 326 *i* Pn P 04 44 50.9 -0.5
comp=Z,0.7nm,0.3s
KRLC Kraliky 16.19 343 *e* P P 04 44 52.2 +0.8
KRLC Kraliky 16.19 343 *e* P P 04 44 52.2 +0.8
AKASG Malin Array Be 16.29 11 Pn Pn 04 44 48.4 -1.2
comp=Z,4.5nm,0.3s,baz=202,slow=10.0,SNR=28
AKBB Malin Array Si 16.29 11 Pn 04 44 50.9 +1.2
AKBB Malin Array Si 16.29 11⇑*e* P P 04 44 51.7 -0.7
KHC Kasperske Hory 16.32 334 *e* P Pn 04 44 50.9 +0.8
KHC *e* pP P 04 44 54.3 +1.5
KHC Kasperske Hory 16.32 334 Pn 04 44 51.3 +1.2
KHC Kasperske Hory 16.32 334 P Pn 04 44 51.3 +1.2
KHC pmax pmax
comp=Z,3.0nm,0.7s
DAVA Damuels 16.46 324 *i* Pn P 04 44 55.7 +1.2
comp=Z,3.1nm,0.6s
DPC Dobruska-Polom 16.56 342 *e* P P 04 44 56.8 +1.3
DPC Dobruska-Polom 16.56 342 *e* P P 04 44 56.8 +1.3
GOPC GO Pecny, Ondr 16.60 338 *e* P P 04 44 56.5 +0.7
GOPC GO Pecny, Ondr 16.60 338 *e* P P 04 44 56.5 +0.7
NEY Neytrino 16.64 54⇓*e* P P 04 44 56.6 0.0
PRU Pruhonice 16.74 338 *e* P P 04 44 58.4 +1.1
PRU Pruhonice 16.74 338 *e* P P 04 44 58.4 +1.1
KIV Kislovodsk 16.92 52 P Pn 04 44 58.8 +1.0
KIV Kislovodsk 16.92 52 *e* P P 04 45 01.2 +1.7
KIV pmax pmax
comp=Z,51nm,1.0s
KBZ Khabaz 16.96 53 Pn Pn 04 44 59.0 +0.9
comp=Z,0.2nm,0.3s,baz=249,slow=7.5,SNR=11
KBZ Khabaz 16.96 53*de* P P 04 45 01.0 +1.2
GNI Garni 17.13 66 LR LR 04 52 55.5
comp=Z,78nm,18.6s,baz=256,slow=42
STU Stuttgart 17.84 326 Pn Pn 04 45 08.6 -0.4
STU Stuttgart 17.84 326 P Pn 04 45 08.6 -0.4
STU pmax pmax
comp=Z,14nm,1.0s
BFO Black Forest 17.94 324 P 04 45 11.7 +1.0
BFO Black Forest 17.94 324 P P 04 45 11.7 +1.0
BFO pmax pmax
comp=Z,2.0nm,0.7s
CLL Collm 18.37 337 *e* P Pn 04 45 17.0 +1.5
CLL *e* PP PnPn 04 45 30.0 +2.8
CLL Collm 18.37 337 P Pn 04 45 16.7 +1.2
CLL Collm 18.37 337 *e* P Pn 04 45 17.0 +1.5
ECH Echery 18.45 322 P P 04 45 14.6 -1.7
ECH Echery 18.45 322 P P 04 45 14.6 -1.7
ECH pmax pmax
comp=Z,10.0nm,1.4s
SUW Suwalki 19.21 358 P P 04 45 23.3 -1.2
SUW IAmb IAmb 04 45 25.9
comp=Z,41nm,0.7s
SUW Suwalki 19.21 358 P P 04 45 23.3 -1.2
SUW pmax pmax
comp=Z,41nm,0.7s
KLNR Kaliningrad 19.99 353⇓*e* P P 04 45 32.2 -0.8
KLNR pmax pmax
comp=Z,24nm,0.9s
NACGM Naroch 20.17 4 *e* P 04 45 33.0 -2.0
MEM Membach 20.60 326 P Pn 04 45 41.0 -1.1
LPSR Galich'ya Gora 20.65 26 *e* P P 04 45 41.5 +1.3
LPSR pmax pmax
comp=Z,10.0nm,1.0s
DOU Dourbes 20.95 323 P P 04 45 44.4 +1.0
OBN Obninsk 22.04 19 *e* P P 04 45 56.5 +1.4
OBN *e* 04 46 20.2
OBN pmax pmax
comp=Z,3.0nm,1.0s
ESBB Sonseca Array 22.90 291 P P 04 46 05.5 +1.0
ESBB IAmb IAmb 04 46 10.0
comp=Z,8.9nm,1.2s
ESDC Sonseca Array 22.90 291 P P 04 46 03.2 -1.3
comp=Z,0.6nm,0.5s,baz=89,slow=8.6,SNR=2.7
PAB San Pablo 23.19 290 P P 04 46 06.7 -0.8
PAB IAmb IAmb 04 46 07.4
comp=Z,13nm,1.4s
PAB San Pablo 23.19 290 P P 04 46 06.7 -0.8
PAB pmax pmax
comp=Z,13nm,1.4s
PESTR Estremoz 25.70 288 P P 04 46 30.1 -0.6
PESTR IAmb IAmb 04 46 42.9
comp=Z,20nm,1.4s
HFS Hagfors 26.25 348 P P 04 46 35.1 -0.3
comp=Z,4.5nm,0.5s,baz=157,slow=8.0,SNR=15
KONO Kongsberg 26.63 343 P P 04 46 38.7 -0.2
KONO Kongsberg 26.63 343 P P 04 46 38.7 -0.2
KONO pmax pmax
comp=Z,44nm,1.3s
FINES FINESS Array B 26.68 2 P P 04 46 38.0 -1.3
comp=Z,1.4nm,0.5s,baz=164,slow=11,SNR=9.5
FINES PcP PcP 04 50 01.3 -0.9
comp=Z,3.4nm,1.0s,baz=163,slow=5.1,SNR=3.5

FINES	FINESS Array B	26.68	2	iP	P	04 46 38.0	-1.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FIA1	FINESS Array S	26.68	2	P	P	04 46 37.7	-1.5
FIA1				IAmb	IAmb	04 46 46.7	
	comp=Z,15nm,1.2s						
NC602	NORSAR Array S	27.20	346	P	P	04 46 43.6	-0.3
NC602				IAmb	IAmb	04 46 51.7	
	comp=Z,29nm,1.5s						
NAO01	NORSAR Array S	27.43	346	P	P	04 46 45.5	-0.6
NC405	NORSAR Array S	27.52	347	P	P	04 46 48.5	+1.7
NB201	NORSAR Array S	27.54	346	P	P	04 46 46.1	-0.9
NB2	NORSAR Subarra	27.54	346	P	P	04 46 46.6	-0.5
	comp=Z,1.5nm,0.7s,baz=156,slow=9.3						
NOA	NORSAR Array B	27.54	346	P	P	04 46 46.3	-0.8
	comp=Z,1.1nm,0.6s,baz=146,slow=9.0,SNR=14						
NBO00	NORSAR Array S	27.62	346	P	P	04 46 47.5	-0.3
NC303	NORSAR Array S	27.68	347	P	P	04 46 47.7	-0.6
EKR8	Eskdalemuir Ar	27.84	326	P	P	04 46 50.3	+0.5
NC204	NORSAR Array S	27.85	346	P	P	04 46 48.6	-1.2
NC204				IAmb	IAmb	04 46 55.8	
	comp=Z,19nm,1.4s						
EKR4	Eskdalemuir Ar	27.87	326	P	P	04 46 50.6	+0.6
EKA	Eskdalemuir Ar	27.88	326	P	P	04 46 49.4	-0.7
	comp=Z,0.6nm,0.5s,baz=121,slow=8.3,SNR=3.1						
EKB7	Eskdalemuir Ar	27.89	326	P	P	04 46 51.1	+0.9
AKTO	Aktyubinsk	29.06	47	P	P	04 46 59.4	-1.3
	comp=Z,1.2nm,0.5s,baz=268,slow=8.8,SNR=6.7						
TOA0	Torodi Ar. Sit	29.67	229	P	P	04 47 07.7	+1.3
TOA0				IAmb	IAmb	04 47 10.2	
	comp=Z,2.9nm,0.6s						
TORD	Torodi Ar. Bea	29.67	229	P	P	04 47 07.3	+0.8
	comp=Z,1.8nm,0.4s,baz=34,slow=8.8,SNR=81						
PRGR	Permogore	30.10	20	eP	P	04 47 03.6	-6.2
PRGR				pmax	pmax		
	comp=Z,13nm,0.8s						
ARCES	ARCESS Array B	34.78	1	P	P	04 47 49.0	-1.7
	comp=Z,1.4nm,0.5s,baz=171,slow=8.6,SNR=12						
KK31	Karatay Array	36.55	63	P	P	04 48 06.3	+0.1
KK31				IAmb	IAmb	04 48 08.6	
	comp=Z,8.2nm,0.8s						
KK31	Karatay Array	36.55	63	P	P	04 48 06.3	+0.1
KK31				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KKAR	Karatay Array	36.55	63	IAmb	IAmb	04 48 08.6	
	comp=Z,8.2nm,0.8s						
BRVK	Borovoye	37.09	46	P	P	04 48 11.9	+1.3
BRVK				IAmb	IAmb	04 48 12.5	
	comp=Z,3.1nm,0.8s						
BRVK	Borovoye	37.09	46	ceP	P	04 48 11.3	+0.7
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
DBIC	Dimbokro	38.74	230	P	P	04 48 25.1	+0.2
	comp=Z,2.3nm,0.6s,baz=14,slow=11,SNR=5.2						
DBIC	Dimbokro	38.74	230	P	P	04 48 25.2	+0.2
DBIC				IAmb	IAmb	04 48 43.4	
	comp=Z,13nm,1.1s						
DBIC	Dimbokro	38.74	230	P	P	04 48 25.2	+0.2
DBIC				pmax	pmax		
	comp=Z,13nm,1.2s						
AAK	Ala-Archa	39.51	63	P	P	04 48 33.2	+1.8
AAK				IAmb	IAmb	04 48 33.6	
	comp=Z,4.7nm,0.7s						
AAK	Ala-Archa	39.51	63	⇓eP	P	04 48 33.1	+1.8
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	Kurchatov	42.00	51	P	P	04 48 52.1	+0.5
KURK				IAmb	IAmb	04 48 52.6	
	comp=Z,4.9nm,0.8s						
KURK	Kurchatov	42.00	51	deP	P	04 48 52.0	+0.5
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
SCO	Scoresbysund	43.38	339	P	P	04 49 03.8	+1.3
SCO				IAmb	IAmb	04 49 21.0	
	comp=Z,15nm,1.3s						
SCO	Scoresbysund	43.38	339	P	P	04 49 03.8	+1.3
SCO				pmax	pmax		
	comp=Z,15nm,1.3s						
MK31	Makanchi Array	44.62	56	P	P	04 49 13.6	+0.8
MK31				IAmb	IAmb	04 49 14.2	
	comp=Z,5.4nm,0.7s						
MK31	Makanchi Array	44.62	56	P	P	04 49 13.6	+0.8
MK31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MKAR	Makanchi Array	44.62	56	P	P	04 49 13.5	+0.8
	comp=Z,5.0nm,0.5s,baz=271,slow=8.0,SNR=85						
ZAA0	Zalesovo Array	45.80	46	P	P	04 49 21.9	-0.1
ZALV	Zalesovo Beam	45.80	46	P	P	04 49 21.9	-0.1
	comp=Z,9.3nm,0.5s,baz=268,slow=9.2,SNR=44						
NRIK	Noril'sk	48.52	25	P	P	04 49 42.3	-0.7
	comp=Z,1.9nm,0.6s,baz=219,slow=1.3,SNR=3.8						
WMQ	Urumqi	48.85	59	eP	P	04 49 49.0	+3.0
ZAK	Zakamensk	57.56	48	eP	P	04 50 51.2	+1.2
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SONM	Songino Array	60.31	50	P	P	04 51 10.1	+1.0
	comp=Z,3.5nm,0.7s,baz=285,slow=7.7,SNR=21						
ULN	Ulaanbaatar	60.71	50	P	P	04 51 12.3	+0.4
ULN				IAmb	IAmb	04 51 14.0	
	comp=Z,5.0nm,0.8s						
ULN	Ulaanbaatar	60.71	50	P	P	04 51 12.4	+0.4
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BOD	Bodaibo	61.20	38	eP	P	04 51 14.4	-0.5
BOD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TIXI	Tiksi	61.76	20	⇓eP	P	04 51 18.5	+0.1
TIXI				pmax	pmax		
	comp=Z,5.0nm,2.5s						
SCHQ	Schefferville	62.94	319	P	P	04 51 26.9	+0.3
	comp=Z,1.5nm,0.6s,baz=34,slow=5.3,SNR=4.6						
SCHQ	Schefferville	62.94	319	IAmb	IAmb	04 51 35.7	
	comp=Z,2.5nm,0.9s						
CMAR	Chiang Mai Arr	67.39	83	P	P	04 51 56.4	+0.3
	comp=Z,1.1nm,0.3s,baz=282,slow=6.6,SNR=6.7						
C36M	Paulatuk	73.56	349	P	P	04 52 33.8	+0.9
C36M				IAmb	IAmb	04 52 34.2	
	comp=Z,3.4nm,0.5s						
BILL	Bilibino	73.59	14	eP	P	04 52 34.7	+1.6
BILL				e		04 52 51.2	
BILL				e		04 55 16.8	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.4s						
YKA	Yellowknife Ar	77.54	342	P	P	04 52 56.3	+0.6
	comp=Z,1.0nm,0.4s,baz=32,slow=5.2,SNR=20						
USRK	Ussuriysk Ar.	77.64	45	P	P	04 52 56.5	-0.2
	comp=Z,3.2nm,0.7s,baz=310,slow=3.1,SNR=5.5						
KSRS	Korea Array	79.11	52	P	P	04 53 05.7	+0.8
	comp=Z,1.8nm,0.6s,baz=299,slow=4.4,SNR=7.5						
ILAR	Eielson Array	80.50	356	P	P	04 53 12.4	+0.4
	comp=Z,0.5nm,0.8s,baz=6.3,slow=3.6,SNR=5.7						

GRAL 24 04:46:16.5±1.1, 34°.50N×33°.88E, h34km±18km, MD3.2
NIC 24 04:46:16.8±0.0, 34°.51N×33°.78E, h19km±1km, Ml2.8/5
GII 24 04:46:18.7±0.2, 34°.42N×33°.84E, h31km, MD2.4/5, Mm2.7/10
DDA 24 04:46:19.0, 34°.82N×33°.70E, h45km, ML2.4
ISK 24 04:46:21.6, 35°.04N×33°.70E, h13km, ML3.0/20
ISC 24 04:46:14.0±1.1, 34°.51N±0°.02×33°.90E±0°.03, h31km±11km, n68, σ1°64/104, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PARAL	Paralimni	0.50	14	P	Pn	04 46 27.3	+2.3
PARAL				S	Sn	04 46 36.2	+3.7
PARAL				AML	AML	04 46 38.5	
	1.9nm,0.3s						
PARAL				AML	AML	04 46 38.5	
	1.9nm,0.3s						
PARAL				AML	AML	04 46 38.7	
	1.6nm,0.5s						
PARAL				AML	AML	04 46 38.7	
	1.6nm,0.5s						
MVOU	Mavrovouni	0.55	337	P	Pn	04 46 26.9	+1.2
MVOU				S	Sn	04 46 35.4	+1.6
ASGA	Asgata	0.60	297	P	Pn	04 46 27.1	+0.7
ASGA				S	Sn	04 46 36.1	+0.9
ASGA				AML	AML	04 46 36.5	
	2.4nm,0.3s						
ASGA				AML	AML	04 46 36.5	
	2.4nm,0.3s						
ASGA				AML	AML	04 46 37.2	
	2.4nm,0.2s						
ASGA				AML	AML	04 46 37.2	
	2.4nm,0.2s						
CSS	Mathiatis	0.65	314	PG	Pn	04 46 28.5	+1.4
CSS				SG	Sb	04 46 33.4	-2.3
CSS	Mathiatis	0.65	314	P	Pn	04 46 28.1	+1.0
CSS				S	Sn	04 46 37.1	+0.8
CSS	Mathiatis	0.65	314	Pg	Pn	04 46 28.3	+1.2
CSS				Sg	Sn	04 46 37.8	+1.4
ATHAL	Athalassa	0.75	327	P	Pn	04 46 30.8	+2.3
ATHAL				S	Sn	04 46 42.1	+3.2
SZAC	Souni	0.87	287	P	Pn	04 46 31.6	+1.4
SZAC				S	Sn	04 46 43.4	+1.5
SZAC				AML	AML	04 46 43.5	
	2.4nm,0.2s						
SZAC				AML	AML	04 46 43.5	
	2.4nm,0.2s						
LEF	Lefka	1.03	307	PG	Pn	04 46 34.3	+2.0
LEF				SG	Sn	04 46 45.7	+0.1
LEF	Lefka	1.03	307	iP	Pn	04 46 34.2	+1.9
LEF				iS	Sn	04 46 46.5	+0.9
LEF				IAML		04 46 49.0	
	comp=E,117nm,0.4s						
EREN	Erenkoy	1.04	12	PG	Pb	04 46 34.5	+1.1
EREN	Erenkoy	1.04	12	iP	Pb	04 46 35.1	+1.7
EREN				iS	Sn	04 46 47.3	+1.3
EREN				IAML		04 46 53.0	
	comp=N,97nm,0.3s						
EREN				IAML		04 46 53.0	
	comp=E,131nm,0.4s						
AKDN	Akdeniz- Kıbrı	1.10	316	PG	Pb	04 46 34.8	+0.4
NATA	Nata	1.13	284	P	Pb	04 46 35.7	+0.8
NATA				AML	AML	04 46 53.8	
	comp=E,2.1nm,0.5s						
NATA				AML	AML	04 46 55.5	
	comp=E,1.9nm,0.5s						
ALFC	Alefka	1.25	301	P	Pb	04 46 37.0	0.0
ALFC				S	Sb	04 46 53.2	+0.5
ALFC				AML	AML	04 46 54.2	
	comp=E,1.4nm,0.2s						
ALFC				AML	AML	04 46 54.2	
	comp=E,1.4nm,0.2s						
AKMS	Akamas	1.38	292	P	Pb	04 46 39.2	0.0
AKMS				S	Sb	04 46 57.7	+1.2
BHL	Bhannes	1.58	112	eP	Pb	04 46 41.4	-1.1
BHL				eS	Sn	04 46 59.2	-0.1
DQRL	Deir Qamar	1.60	120	eP	Pb	04 46 42.0	-1.0
AKK2	Akkuyu-Mersin	1.65	350	PN	Pb	04 46 42.9	-0.8
AKK2				SN	Sn	04 46 58.9	-2.0
AKK1	Akkuyu-Mersin	1.66	350	PN	Pb	04 46 43.5	-0.3
AKK1				SN	Sn	04 46 59.1	-2.0
TISA	Tisan-Mersin	1.66	354	PN	Pb	04 46 43.5	-0.4
AKKU	Akkuyu-Mersin	1.67	350	PN	Pb	04 46 43.8	-0.3
GULN	MERSIN_Gulnar	1.69	350	iP	Pb	04 46 44.0	-0.4
GULN				iS	Sn	04 47 01.9	-0.2
GULN				IAML		04 47 06.0	
	comp=N,51nm,0.4s						
GULN				IAML		04 47 06.0	
	comp=E,71nm,0.6s						
KARG	Kargicak-Mersi	1.70	355	PN	Pb	04 46 44.2	-0.3
HWQ	Hawqa	1.71	97	eP	Pb	04 46 44.3	-0.5
IKL	Isikli	1.73	354	PN	Pb	04 46 44.7	-0.4
TEPK	Tepekoy-MERSIN	1.73	351	PN	Pb	04 46 44.7	-0.5
TEKE	Tekeli-Mersin	1.75	339	PN	Pb	04 46 44.6	-0.8
QRWL	Qaraoun	1.77	122	eP	Pn	04 46 44.1	+1.6
QRWL				eS	Sn	04 47 04.3	+0.3
HNTI	Hanita	1.78	143	Pn	Pb	04 46 44.7	-1.2
HNTI				Sn	Sn	04 47 04.8	+0.7
SILI	Silifke-Mersin	1.85	1	PN	Pb	04 46 46.4	-0.8
RCY	Rachaya	1.90	122	eP	Pn	04 46 46.2	+1.8
RCY				eS	Sn	04 47 08.0	+0.6
BERE	Bereket-Mersin	1.92	343	PN	Pb	04 46 47.6	-0.7
KEBE	Keben-Mersin	1.94	356	PN	Pb	04 46 47.9	-0.8
MMA0B	Mount Meron ar	1.95	140	Pn	Pb	04 46 47.2	-1.6
MMA0B				Sn	Sn	04 47 09.1	+0.7
TEVE	Tevekalti-Mers	1.96	349	PN	Pb	04 46 47.9	-1.1
KSDI	Kefar Szold	1.97	131	Pn	Pb	04 46 47.6	-1.5
KSDI				Sn	Sn	04 47 09.9	+1.1
NATI	Neve Ativ	1.97	129	Pn	Pb	04 46 47.6	-1.6
NATI				Sn	Sn	04 47 10.0	+1.1
OSC2	CSNet OBS 4	1.97	224	P	Pb	04 46 48.3	-0.8
OSC2				S	Sb	04 47 13.5	+0.1
KIZK	Mersin	1.98	6	PN	Pb	04 46 48.1	-1.2
KIZK	Mersin	1.98	6	iP	Pb	04 46 48.2	-1.0
KIZK				iS	Sn	04 47 09.6	+0.5
BLGI	Bet Lehem HaGe	2.07	148	Sn	Sn	04 47 11.8	+0.3
OFRI	\`Ofer	2.09	154	Pn	Pn	04 46 49.0	+2.1
OFRI				Sn	Sn	04 47 11.6	-0.3
GAZI	Gazipasa	2.15	324	PN	Pb	04 46 50.3	-2.0
GAZI	Gazipasa	2.15	324	iP	Pb	04 46 50.4	-1.9
GAZI				iS	Sn	04 47 12.1	-1.3
GAZI				IAML		04 47 18.0	
	comp=E,75nm,0.7s						
GAZI				IAML		04 47 19.0	
	comp=N,45nm,0.3s						
ERMK	Ermenek	2.27	340	iP	Pb	04 46 53.6	-0.9
ERMK				iS	Sn	04 47 18.0	+1.3
ERMK				IAML		04 47 24.0	
	comp=E,33nm,0.6s						
ERMK				IAML		04 47 26.0	
	comp=N,36nm,0.3s						
MERS	Mersin	2.41	12	PN	Pb	04 46 54.2	-2.4
MMLI	Mount Malkishu	2.43	148	Pn	Pn	04 46 53.9	+2.3
MMLI				Sn	Sn	04 47 21.4	+1.2
SLTI	Sal'it	2.46	157	Sn	Sn	04 47 20.4	-0.5
DED	Mersin	2.55	16	iP	Pn	04 46 56.1	+2.8
DED				iS	Sn	04 47 24.7	+1.3
DED				IAML		04 47 27.0	
	comp=E,22nm,0.7s						
HMDT	Nahal Hemdat	2.63	148	Pn	Pn	04 46 57.1	+2.8
KRMN	Karaman	2.71	349	PN	Pb	04 46 58.6	-3.2
GULE	Gulek	2.86	14	iP	Pb	04 47 01.8	-2.6
GULE				iS	Sn	04 47 33.4	+2.3
GULE				IAML		04 47 43.0	
	comp=N,23nm,0.4s						
GULE				IAML		04 47 44.0	
	comp=E,22nm,0.6s						
KERG	Konya-Eregli	2.91	4	iP	Pb	04 47 02.4	-2.8
KERG				iS	Sn	04 47 34.3	+2.1
KERG				IAML		04 47 41.0	
	comp=E,14nm,0.5s						
KERG				IAML		04 47 46.0	
	comp=N,16nm,0.3s						
KEPZ	Antalya-Kepez	3.03	323	iP	Pb	04 47 03.7	-3.5
KEPZ				iS	Sn	04 47 34.2	-0.9
KEPZ				IAML		04 47 40.0	
	comp=E,20nm,1.0s						
AMAZ	Amatzia	3.09	164	Sn	Sn	04 47 37.6	+1.0
DSI	Dead Sea	3.19	157	Sn	Sn	04 47 39.2	+0.3
YTIR	Yattir	3.30	162	Sn	Sn	04 47 42.6	+0.7
GHAJ	Ghor Haditha	3.49	156	Pn	Pn	04 47 08.4	+2.3
KAMA	Osmaniye	3.49	39	iP	Pn	04 47 09.3	+3.1
KAMA				iS	Sn	04 47 42.6	-4.0
KZIT	Kziot	3.62	173	Sn	Sn	04 47 49.4	-0.2
PRNI	Paran	4.25	167	Pn	Pn	04 47 19.4	+2.8
PRNI				Sn	Sn	04 48 05.3	+0.1
KRMI	Paran Flat	4.43	171	Sn	Sn	04 48 09.9	+0.1
HRFI	Mount Harif	4.56	167	Pn	Pn	04 47 22.9	+2.0
MBRI	Mt Berech	4.78	169	Pn	Pn	04 47 25.9	+1.9
MBRI				Sn	Sn	04 48 18.7	+0.3
EIL	Elat	4.91	169	Pn	Pn	04 47 28.0	+2.4
VYHS	Vyhne	17.91	326	ePN	Pn	04 50 18.6	-2.0
LANS	Liptovska Anna	18.11	328	ePN	Pn	04 50 20.6	-2.5

IDC 24 04:53:04.3±2.1, 33°.17S×179°.00W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.7/25, mbtmp3.7/3, ML3.5/1, Error ellipse: s-maj=49.0km s-min=45.2km az=81.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	5.99	211	Pn	Pn	04 54 33.6	-0.5
	1.4nm,0.3s,baz=275,slow=0.6,SNR=9.7						
URZ				Sn	Sn	04 55 39.9	-3.4
	2.3nm,0.3s,baz=162,slow=18,SNR=7.7						
ASAR	Alice Springs	42.20	270	P	P	05 00 59.5	+0.4
	0.5nm,0.5s,baz=110,slow=7.6,SNR=8.9						
WRA	Warramunga Arr	43.44	276	P	P	05 01 08.6	-0.6
	0.2nm,0.3s,baz=117,slow=7.5,SNR=6.3						
FINES	FINESS Array B	147.41	338	PKPbc	PKPbc	05 12 48.4	-0.9
	2.4nm,0.8s,baz=46,slow=6.0,SNR=4.6						
TORD	Torodi Ar. Bea	160.06	182	PKPab	PKPab	05 13 45.4	-0.2
	0.9nm,1.0s,baz=191,slow=1.5,SNR=2.7						

IDC 24 04:54:23.4±3.0, 7°.90S×113°.32E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.4/29, mbtmp3.4/4, Error ellipse: s-maj=163.5km s-min=23.5km az=52.0
DJA 24 04:54:45.9±0.8, 8°S±8°×11°4E±°, h133km±11km, M3.2/12, MLv3.2/12
ISC 24 04:54:42.3±1.0, 8°.0S±0°.1×113°.66E±0°.07, h150km, n13, σ2°92/13, mb3.4/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	Gumukmas	0.39	213	P	Pn	04 55 05.4	+2.3
JAGI	Jajag, Banyuwa	0.71	137	P	Pn	04 55 07.3	+2.4
KMMI	Kalianget	0.94	19	P	Pn	04 55 10.2	+3.6
SRBI	Singaraja	1.54	95	P	Pn	04 55 15.4	+3.1
GRJI	Gresik	1.56	311	P	Pn	04 55 15.4	+3.0
IGBI	Denpasar	1.71	121	P	Pn	04 55 16.3	+2.2
PCJI	Pacitan	2.47	264	P	Pn	04 55 25.4	+2.4
UGM	Wanagama	3.11	270	P	Pn	04 55 34.6	+3.6
PLAI	Plampang	4.17	102	P	Pn	04 55 47.7	+3.0
WRA	Warramunga Arr	23.31	123	P	P	04 59 36.2	-0.9
	0.2nm,0.3s,baz=302,slow=11,SNR=4.1						
ASAR	Alice Springs	24.92	131	P	P	04 59 51.4	-0.3
	0.5nm,0.5s,baz=305,slow=8.8,SNR=8.7						
SONM	Songino Array	55.91	354	P	P	05 04 02.5	-2.1
	0.2nm,0.4s,baz=177,slow=8.3,SNR=2.8						
MKAR	Makanchi Array	61.23	336	P	P	05 04 39.0	-2.3
	0.2nm,0.3s,baz=152,slow=6.9,SNR=7.5						

TAP 24 05:27:41.5, 24°.60N×122°.79E, h105km, ML3.6, B
JMA 24 05:27:41.4±0.2, 24°.55N×122°.75E, h105km±2km, M3.0
ISC 24 05:27:41.2±1.4, 24°.56N±0°.04×122°.78E±0°.02, h108km±7km, n92, σ0°83/164, 4C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.19	125	P	Pn	05 27 56.4	+0.1
JYNG				S	Sn	05 28 07.6	0.0
YOJ	Yonaguni jima	0.23	114	⇑P	Pn	05 27 56.5	+0.1
	baz=129						
YOJ				S	Sn	05 28 07.6	-0.3
	baz=129						
YOJ	Yonaguni jima	0.23	114	P	Pn	05 27 56.6	+0.1
YOJ				S	Sn	05 28 07.8	-0.1
EOS1	EOS1	0.59	269	P	Pn	05 27 58.8	+0.4
	baz=258						
EOS1				S	Sn	05 28 11.9	+0.6
	baz=258						
TWB1	Santiao Chiao	0.84	302	eP	Pn	05 28 01.0	+0.3
	baz=295						
TWB1				eS	Sn	05 28 15.1	-0.2
	baz=295						
TWC	Suao	0.84	274	⇑iP	Pn	05 28 00.6	-0.1
	baz=270						
TWC				S	Sn	05 28 14.1	-1.3
	baz=270						
IRIF	Iriomote-Funau	0.90	104	P	Pn	05 28 01.6	+0.4
IRIF				S	Sn	05 28 16.1	-0.1
NTC	Toucheng	0.91	289	eP	Pn	05 28 01.7	+0.4
	baz=280						
NTC				eS	Sn	05 28 15.8	-0.6
	baz=280						
ENA	Nanau	0.95	262	P	Pn	05 28 02.1	+0.3
	baz=254						
ENA				eS	Sn	05 28 16.9	-0.3
	baz=254						
TIPB	Shuangxi	0.96	296	P	Pn	05 28 02.1	+0.2
	baz=289						
TIPB				S	Sn	05 28 16.3	-1.1
	baz=289						
TWE	Neicheng	1.02	279	P	Pn	05 28 02.8	+0.4
	baz=273						
TWE				eS	Sn	05 28 17.5	-1.0
	baz=273						
WFSB	Wu-fen Shan	1.04	300	eP	Pn	05 28 03.0	+0.3
	baz=290						
WFSB				eS	Sn	05 28 18.9	0.0
	baz=290						
SLBB	Yuanshan	1.06	281	P	Pn	05 28 03.3	+0.4
	baz=278						
SLBB				eS	Sn	05 28 19.0	-0.3
	baz=278						
HATJ	Hateruma jima	1.06	118	P	Pn	05 28 03.8	+0.9
HATJ				eS	Sn	05 28 19.9	+0.6
ENTT	Nioudou	1.10	274	P	Pn	05 28 04.2	+0.8
	baz=268						
ENTT				eS	Sn	05 28 19.6	-0.5
	baz=268						
NACB	Ninganchiao	1.14	251	P	Pn	05 28 03.4	-0.4
	baz=242						
NACB				S	Sn	05 28 20.2	-0.6
	baz=242						
NDT	Datong Townshi	1.15	272	P	Pn	05 28 04.5	+0.6
	baz=269						
NDT				eS	Sn	05 28 21.2	+0.2
	baz=269						
TWA	Mucha	1.16	291	P	Pn	05 28 04.3	+0.3
	baz=282						
TWA				S	Sn	05 28 20.4	-0.9
	baz=282						
JKRS	Kuro-shima	1.17	106	P	Pn	05 28 04.9	+0.8
JKRS				S	Sn	05 28 21.8	+0.5
TWD	Chiawan	1.18	246	iP	Pn	05 28 04.1	0.0
	baz=237						
TWD				iS	Sn	05 28 20.8	-0.7
	baz=237						
NWLT	Wulai	1.18	281	eP	Pn	05 28 04.8	+0.6
	baz=285						
NWLT				eS	Sn	05 28 21.1	-0.5
	baz=285						
HWA	Hwalien	1.22	242	eP	Pn	05 28 04.6	0.0
	baz=239						
HWA				eS	Sn	05 28 22.2	0.0
	baz=239						
ETLH	Xiulin Townshi	1.23	254	P	Pn	05 28 05.0	+0.1
	baz=251						
ETLH				S	Sn	05 28 22.6	-0.2
	baz=251						
TATO	Taipei	1.24	290	eP	Pn	05 28 04.9	0.0
	baz=279						
TATO				eS	Sn	05 28 22.4	-0.4
	baz=279						
YM01	YM01	1.24	298	P	Pn	05 28 05.4	+0.5
	baz=289						
YM01				eS	Sn	05 28 22.8	-0.1
	baz=289						
PCYT	Pengchaiyu	1.24	329	eP	Pn	05 28 05.3	+0.4
	baz=324						
YM11	YM11	1.25	299	eP	Pn	05 28 05.5	+0.5
	baz=290						
ENLB	Shoufeng	1.25	239	eP	Pn	05 28 04.4	-0.6
	baz=239						
ENLB				eS	Sn	05 28 22.0	-1.0
	baz=239						
YM10	YM10	1.25	299	eP	Pn	05 28 05.5	+0.4
	baz=290						
JIJ	Ishigaki jima	1.26	99	P	Pn	05 28 05.5	+0.4
JIJ				S	Sn	05 28 22.4	-0.8
NNSB	Datong	1.28	264	P	Pn	05 28 05.7	+0.3
	baz=255						
NNSB				S	Sn	05 28 23.3	-0.4
	baz=255						
NNSH	Datong	1.28	264	P	Pn	05 28 05.8	+0.4
	baz=255						
NNSH				S	Sn	05 28 23.4	-0.3
	baz=255						
YHNB	Yeheng	1.28	275	⇑P	Pn	05 28 06.1	+0.7
	baz=266						
YHNB				S	Sn	05 28 23.6	-0.1
	baz=266						
NNS	Nan Shan	1.28	265	P	Pn	05 28 05.9	+0.4
	baz=255						
NNS				eS	Sn	05 28 23.4	-0.4
	baz=255						
TWY	Chenhua	1.28	304	eP	Pn	05 28 05.8	+0.4
	baz=301						
TWY				eS	Sn	05 28 23.8	+0.1
	baz=301						
NSK	Sanguang	1.30	275	P	Pn	05 28 06.2	+0.6
	baz=266						
NSK				S	Sn	05 28 23.8	-0.2
	baz=266						
TWS1	Kuangyinshan	1.35	294	eP	Pn	05 28 06.8	+0.7
	baz=285						
TWS1				eS	Sn	05 28 24.8	-0.1
	baz=285						

JISG	Ishigakijimahi	1.40	89	P	Pn	05 28 07.0	+0.3
JISG				S	Sn	05 28 25.3	-0.7
ESL	Shilin	1.43	239	eP	Pn	05 28 07.1	0.0
	baz=241						
ESL				eS	Sn	05 28 26.0	-0.8
	baz=241						
WHF	Hehuan Shan	1.44	254	⇑iP	Pn	05 28 08.0	+0.4
	baz=256						
WHF				S	Sn	05 28 26.8	-0.8
	baz=256						
TWT	Tachien	1.49	259	eP	Pn	05 28 09.2	+1.2
	baz=253						
TWT				eS	Sn	05 28 28.9	+0.7
	baz=253						
NCUH	Zhongli	1.50	286	eS	Sn	05 28 28.5	+0.3
	baz=292						
TDCB	Techi	1.51	259	P	Pn	05 28 09.2	+1.1
	baz=253						
TDCB				eS	Sn	05 28 28.1	-0.4
	baz=253						
EGFH	Guangfu	1.52	235	eP	Pn	05 28 08.3	+0.2
	baz=236						
EGFH				eS	Sn	05 28 28.2	-0.3
	baz=236						
CHGB	Renai	1.54	252	P	Pn	05 28 09.5	+0.8
	baz=242						
CHGB				eS	Sn	05 28 29.5	0.0
	baz=242						
OWD	Renai	1.58	248	P	Pn	05 28 09.2	+0.2
	baz=240						
OWD				eS	Sn	05 28 29.7	-0.4
	baz=240						
LIOB	Emei	1.60	273	P	Pn	05 28 09.9	+0.7
	baz=271						
LIOB				S	Sn	05 28 30.6	+0.1
	baz=271						
NSTT	Nanjuang	1.62	273	eP	Pn	05 28 09.6	+0.3
	baz=270						
NSTT				eS	Sn	05 28 30.4	-0.3
	baz=270						
HGSD	Ruisui	1.63	230	P	Pn	05 28 09.8	+0.3
	baz=225						
HGSD				eS	Sn	05 28 30.9	-0.1
	baz=225						
SBCB	Hsinchu	1.65	279	eS	Sn	05 28 31.8	+0.5
	baz=276						
WHP	Taichung City	1.69	261	eP	Pn	05 28 12.0	+1.6
	baz=256						
WHP				eS	Sn	05 28 33.0	+0.5
	baz=256						
EHY	Hungye	1.69	232	eP	Pn	05 28 10.4	+0.1
	baz=229						
EHY				eS	Sn	05 28 31.7	-0.7
	baz=229						
VWDT	VWDT	1.69	242	P	Pn	05 28 10.9	+0.6
	baz=234						
VWDT				eS	Sn	05 28 32.6	+0.2
	baz=234						
JTJ	Tarama	1.75	87	P	Pn	05 28 11.7	+0.7
JTJ				S	Sn	05 28 33.1	-0.6
DPDB	Guoxing	1.77	253	eP	Pn	05 28 11.9	+0.7
	baz=248						
DPDB				eS	Sn	05 28 35.2	+1.1
	baz=248						
YULB	Yu-li	1.78	230	P	Pn	05 28 11.4	0.0
	baz=234						
YULB				eS	Sn	05 28 33.2	-1.2
	baz=234						
TWF1	Yuli	1.81	229	P	Pn	05 28 12.0	+0.3
	baz=234						
TWF1				eS	Sn	05 28 35.0	0.0
	baz=234						
SSLB	Suanglung	1.83	246	eP	Pn	05 28 12.8	+0.7
	baz=239						
SSLB				eS	Sn	05 28 35.9	+0.4
	baz=239						
TWQ1	Liyutan	1.84	264	eS	Sn	05 28 36.2	+0.6
	baz=261						
SMLT	Sun Moon Lake	1.84	249	eP	Pn	05 28 13.2	+1.0
	baz=242						
SMLT				eS	Sn	05 28 37.6	+1.8
	baz=242						
NSY	Sanyi	1.84	266	eS	Sn	05 28 34.7	-1.0
	baz=263						
CHKT	Chengkung	1.94	222	eP	Pn	05 28 13.3	-0.1
	baz=216						
CHKT				eS	Sn	05 28 36.7	-1.3
	baz=216						
WHYT	Xinyi Township	1.96	244	P	Pn	05 28 14.8	+1.2
	baz=241						
WHYT				eS	Sn	05 28 39.1	+0.8
	baz=241						
YUS	Yu-Shan	1.98	238	P	Pn	05 28 15.2	+0.8
	baz=230						
YUS				eS	Sn	05 28 39.7	+0.1
	baz=230						
WJS	Zhushan	2.01	249	eP	Pn	05 28 15.8	+1.6
	baz=240						
WJS				eS	Sn	05 28 41.0	+1.6
	baz=240						
WNT	Mingjian	2.03	251	eS	Sn	05 28 39.4	-0.5
	baz=248						
ALS	Alishan	2.08	240	eP	Pn	05 28 17.0	+1.5
	baz=233						
ELDTW	Lidau	2.11	230	eP	Pn	05 28 15.7	+0.1
	baz=224						
ELDTW				eS	Sn	05 28 41.3	-0.7
	baz=224						
CHN5	Tsauling	2.14	244	eP	Pn	05 28 17.6	+1.5
	baz=235						
CHN5				eS	Sn	05 28 44.2	+1.5
	baz=235						
TWH	Lutao	2.19	213	P	Pn	05 28 17.1	+0.5
	baz=208						
TWH				eS	Sn	05 28 42.8	-0.9
	baz=208						
JIRB	Irabujima	2.20	82	eS	Sn	05 28 44.0	+0.3
JMJ	Miyako jima 2	2.30	83	eS	Sn	05 28 45.0	-1.2
	baz=86						
RLNB	Erlin	2.30	254	eS	Sn	05 28 47.3	+1.1
	baz=251						
STYT	Tauyuan	2.31	233	eP	Pn	05 28 19.6	+1.3
	baz=226						
TWGBT	Beinan	2.33	222	eP	Pn	05 28 18.6	+0.2
	baz=226						
TWGBT				S	Sn	05 28 46.2	-0.6
	baz=226						
TPUB	Ta-pu	2.33	238	eP	Pn	05 28 20.4	+2.1
	baz=229						
TPUB				eS	Sn	05 28 48.1	+1.2
	baz=229						
TWG	Pinlang	2.33	222	eP	Pn	05 28 18.6	+0.1
	baz=226						
TWG				eS	Sn	05 28 46.2	-0.6
	baz=226						
CHN4	Tsaushan	2.33	239	eP	Pn	05 28 20.1	+1.7
	baz=237						
WTP	Ta-pu	2.37	237	eP	Pn	05 28 20.6	+1.6
	baz=228						
WTP				eS	Sn	05 28 48.8	+0.9
	baz=228						
TWK	Hsinying	2.46	239	P	Pn	05 28 21.3	+1.2
	baz=235						
TWK				eS	Sn	05 28 50.7	+0.8
	baz=235						
CHN1	Nanshi	2.47	237	eP	Pn	05 28 22.0	+1.7
	baz=243						
CHN1				eS	Sn	05 28 51.4	+1.3
	baz=243						
SLGT	Liugui	2.50	232	eP	Pn	05 28 22.1	+1.5
	baz=236						
SSD	Sandimen	2.67	228	eS	Sn	05 28 54.1	-0.6
	baz=225						
LAY	Lan-yu	2.75	204	eP	Pn	05 28 23.7	-0.2
	baz=196						
LAY				eS	Sn	05 28 53.8	-2.9
	baz=196						
MASBT	Mashibuluo	2.76	226	eS	Sn	05 28 58.1	+1.1
	baz=234						
EAST	Anshuo	2.80	220	eS	Sn	05 28 56.5	-1.3
	baz=220						
VWUC	VWUC	3.06	279	eP	Pn	05 28 27.7	-0.2
	baz=276						
VWUC				eS	Sn	05 29 01.2	-2.6
	baz=276						
PHUB	P'eng-hu	3.11	251	eP	Pn	05 28 28.5	-0.1
	baz=248						
PHUB				eS	Sn	05 29 03.3	-1.9
	baz=248						
WDGT	Dungji	3.13	246	eP	Pn	05 28 29.3	+0.4
	baz=242						
WDGT				eS	Sn	05 29 04.7	-1.0
	baz=242						
VCHM	Qimei	3.34	247	eS	Sn	05 29 09.8	-1.0
	baz=235						
PTMZ	Houxiangcun	3.36	279	eP	Pn	05 28 31.6	-0.3
	baz=276						
PTMZ				eS	Sn	05 29 09.5	-1.5
	baz=276						
KNMB	Chin-men Tao	4.00	270	eP	Pn	05 28 40.2	-0.3
	baz=268						

NNC **24** *05:39:04.4±1.3,36.°19N×83.°40E,h12km±5km,mb4.7, mpv4.6,Error ellipse: s-maj=15.1km s-min=8.2km az=62.0*

IDC **24** *05:39:06.5±0.7,36.°20N×83.°01E,h0km,mb3.9/16, mb1 4.1/21,mb1mx3.9/54,mbtmp3.9/21,ML3.5/6,MS3.1/7, Ms1 3.1/7,ms1mx2.8/48,Error ellipse: s-maj=22.1km s-min=13.7km az=45.0*

BJI **24** *05:39:08.2±0.0,36.°29N×82.°90E,h7km,mB4.2/4, mb4.1/18,ML4.2/8,Ms3.6/9,Ms7 3.4/7*

MOS **24** *05:39:08.0±1.4,36.°37N×83.°04E,h21km,mb4.3/8,Error ellipse: s-maj=10.1km s-min=5.7km az=108.7*

NEIC **24** *05:39:08.0±1.4,36.°31N±0.°07×83.°03E±0.°06,h10km±1km, mb4.3/8,Error ellipse: s-maj=12.2km s-min=2.8km az=145.0*

ISC 24 05:39:08.6±0.5,36.°33N±0.°06×82.°91E±0.°05,h10km,n107, σ1.°66/90,mb4.0/25,MS3.2/4,9C-1D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	6.34	302	Pg	Pb	05 41 04.8	+5.7
KSH				Sg	Sg	05 42 29.0	-3.1
KSH				smax	smax		
	comp=N,680nm,0.9s						
KSH				smax	smax		
	comp=E,790nm,1.2s						
KDJ	Kajisay	7.30	324	Pn	Pn	05 40 57.1	+1.7
KDJ	Kajisay	7.30	324	P	Pn	05 40 57.1	+1.7
SHLS	Shalkode	7.32	340	Pg	Pb	05 41 21.9	+6.1
	30nm,0.3s						
SHLS				Lg	Lg	05 43 04.2	
	114nm,0.7s						
KTMS	Ketmen	7.38	345	Pg	Pg	05 41 24.2	-5.5
	1.4nm,0.1s						
KTMS				Lg	Lg	05 43 08.4	
	42nm,0.6s						
NRN	Naryn	7.42	316	Pn	Pn	05 40 56.8	-0.4
NRN	Naryn	7.42	316	P	Pn	05 40 56.8	-0.4
UZB	Uzynbulak	7.44	337	Pg	Pg	05 41 24.9	-6.1
	13nm,0.3s						
UZB				Lg	Lg	05 43 09.3	
	46nm,0.7s						
PDGK	Podgornoye	7.47	340	⇑Pn	Pn	05 40 58.5	+0.7
	19nm,0.7s						
PDGK				⇑Sn	Sn	05 42 26.3	+3.8
	62nm,0.8s						
PDGK				⇑Lg	Lg	05 43 09.0	
	85nm,0.7s						
DANN	Dangsing	7.99	175	eP	Pn	05 41 04.8	-0.2
TNSS	Tian-Shan	8.12	327	Pg	Pg	05 41 37.7	-6.4
	20nm,0.6s						
TNSS				Lg	Lg	05 43 33.2	
	27nm,0.9s						
BOOM	Boomskoye usch	8.18	321	Pn	Pn	05 41 07.8	+0.3
BOOM	Boomskoye usch	8.18	321	P	Pn	05 41 07.8	+0.3
MDOK	Medeo	8.18	328	Pg	Pg	05 41 39.5	-5.7
	39nm,1.2s						
MDOK				Lg	Lg	05 43 35.9	
	55nm,0.7s						
KOTS	Kotyrbulak	8.21	329	Pg	Pb	05 41 38.5	+7.5
	49nm,0.6s						
KOTS				Lg	Lg	05 43 33.8	
WMQ	Urumqi	8.33	25	eP	Pn	05 41 11.4	+1.9
WMQ				pP	Pb	05 41 13.4	-20
WMQ				sP	Pg	05 41 18.3	-30
WMQ				S	Sn	05 42 46.4	+2.8
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				smax	smax		
	comp=N,46nm,1.1s						
WMQ				smax	smax		
	comp=E,49nm,1.3s						
WMQ				LR	LR		
	comp=N,290nm,12.9s						
WMQ				LR	LR		
	comp=E,220nm,14.9s						
WMQ				LR	LR		
	comp=Z,190nm,11.1s						
WMQ	Urumqi	8.33	25	Pn	Pn	05 41 07.8	-1.7
WMQ	Urumqi	8.33	25	P	Pn	05 41 07.8	-1.7
DJR	Jarkent	8.34	344	Pg	Pg	05 41 41.0	-7.2
	3.1nm,0.5s						
DJR				Lg	Lg	05 43 38.6	
	19nm,0.6s						
NIL	Nilore	8.37	254	Pn	Pn	05 41 10.7	+0.8
NIL	Nilore	8.37	254	P	Pn	05 41 10.7	+0.8
MTBS	Maitube	8.43	326	Pg	Pb	05 41 42.2	+7.6
	5.7nm,0.4s						
MTBS				Lg	Lg	05 43 40.2	
	18nm,0.3s						
KST	Kastek	8.58	324	Pg	Pg	05 41 47.5	-5.3
	46nm,1.4s						
KST				Lg	Lg	05 43 49.0	
	21nm,0.8s						
GUN	Gumba	8.76	162	eP	Pn	05 41 16.2	+0.6
	31nm,0.8s						
CHKK	Chushkaly	8.78	331	Pg	Pg	05 41 50.4	-6.2
	7.0nm,0.3s						
CHKK				Lg	Lg	05 43 54.4	
	24nm,0.5s						
ARXS	Arharly	8.78	335	Pg	Pg	05 41 49.2	-7.4
	6.5nm,0.5s						
ARXS				Lg	Lg	05 43 52.9	
	29nm,0.9s						
KTBS	Karatobe	8.79	329	Pg	Pg	05 41 50.8	-5.9
	4.6nm,0.5s						
KTBS				Lg	Lg	05 43 55.3	
	25nm,0.6s						
DGS	Degeres	8.82	324	Pg	Pg	05 41 50.8	-6.6
	5.8nm,0.7s						
DGS				Lg	Lg	05 43 54.9	
	27nm,0.6s						
DMN	Daman	8.89	167	eP	Pn	05 41 17.9	+0.6
PKIN	Phulchoki	8.97	166	eP	Pn	05 41 19.2	+0.7
	18nm,0.7s						
PKI	Pulchoki	8.98	166	eP	Pn	05 41 19.3	+0.6
	18nm,0.7s						
AAK	Ala-Archa	9.05	317	Pn	Pn	05 41 22.7	+3.3
	0.2nm,0.3s,baz=63,slow=2.3,SNR=2.8						
AAK				Sn	Sn	05 42 57.7	-3.8
	0.2nm,0.3s,baz=144,slow=8.7,SNR=2.0						
AAK				Lg	Lg	05 43 50.2	
	0.8nm,0.3s,baz=73,slow=19,SNR=3.5						
AAK				LR	LR	05 46 02.2	
	comp=Z,31nm,18.2s,baz=130,slow=45						
AAK	Ala-Archa	9.05	317	Pn	Pn	05 41 19.4	0.0
AAK	Ala-Archa	9.05	317	iP	Pn	05 41 20.0	+0.5
KUU	Kurty	9.08	328	Pg	Pn	05 41 56.3	+37
	5.1nm,0.6s						
KUU				Lg	Lg	05 44 05.6	
	26nm,0.8s						
JIRN	Jiri	9.08	161	eP	Pn	05 41 21.1	+1.1
	47nm,0.7s						
KRBS	Karabastau	9.21	325	Pg	Pn	05 41 57.7	+36
	4.5nm,0.7s						
TDK	Taldyqorghan	9.31	340	Pg	Pn	05 42 00.4	+38
	47nm,0.4s						
TDK				Lg	Lg	05 44 12.8	
	78nm,0.8s						
KAPS	Kapalarasan	9.34	344	Pg	Pn	05 42 00.1	+37
	8.7nm,0.6s						
KAPS				Lg	Lg	05 44 11.8	
	13nm,0.5s						
MRKS	Merke	9.85	314	Pg	Pn	05 42 10.3	+40
	8.0nm,0.6s						
MRKS				Lg	Lg	05 44 30.0	
	8.5nm,0.9s						
RAMN	Ramite	9.86	160	eP	Pn	05 41 29.5	-1.1
	55nm,0.8s						
ODAN	Odare	10.18	157	eP	Pn	05 41 34.1	-0.9
BTK	Batken	10.22	295		Pn	05 41 35.9	+0.5
BTK	Batken	10.22	295	P	Pn	05 41 35.9	+0.5
MK31	Makanchi Array	10.47	358	⇑Pn	Pn	05 41 36.4	-2.2
	7.8nm,0.8s,baz=182,slow=11,SNR=113						
MK31				⇑Sn	Sn	05 43 35.5	-0.5
	7.5nm,0.6s,baz=1.6,slow=26,SNR=4.4						
MK31				⇑Lg	Lg	05 44 41.6	
	10.0nm,0.7s,baz=179,slow=23,SNR=3.2						
MK31	Makanchi Array	10.47	358	Pn	Pn	05 41 38.5	-0.2
MK31	Makanchi Array	10.47	358	P	Pn	05 41 38.5	-0.2
MKAR	Makanchi Array	10.47	358	Pn	Pn	05 41 38.7	0.0
	1.5nm,0.3s,baz=184,slow=12,SNR=44						
MKAR				Sn	Sn	05 43 32.5	-3.5
	0.9nm,0.3s,baz=176,slow=24,SNR=3.7						
MKAR				Lg	Lg	05 44 39.9	
	0.7nm,0.3s,baz=37,slow=15,SNR=2.9						
MKAR				LR	LR	05 46 36.0	
	comp=Z,67nm,18.3s,baz=168,slow=42						
MAKZ	Makanchi	10.49	356	⇑Pn	Pn	05 41 37.2	-1.9
	8.8nm,0.6s						
MAKZ				⇑Sn	Sn	05 43 35.9	-0.8
	20nm,1.2s						
MAKZ				⇑Lg	Lg	05 44 41.6	
	14nm,1.1s						
MAKZ	Makanchi	10.49	356	Pn	Pn	05 41 38.9	-0.2
MAKZ	Makanchi	10.49	356	P	Pn	05 41 38.9	-0.2
BTLS	Baital	11.00	325	Pg	Pn	05 42 31.7	+46
	2.1nm,0.5s						
BTLS				Lg	Lg	05 45 07.9	
	6.4nm,1.2s						
ZSN	Zaisan	11.21	7	Lg	Lg	05 45 14.0	
KBL	Kabul	11.46	265	Pn	Pn	05 41 53.5	+1.1
KBL	Kabul	11.46	265	P	Pn	05 41 53.5	+1.1
GTA	Gaotai	13.70	72	eP	Pn	05 42 25.8	+2.8
GTA				pP	P	05 42 30.3	-1.5
GTA				sP		05 42 32.9	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURBB	Kurchatov Arra	14.63	349	Pn	Pn	05 42 34.8	-0.8
	0.0nm,0.3s,baz=161,slow=12,SNR=4.5						
KURK	Kurchatov	14.71	349	Pn	Pn	05 42 36.1	-0.5
KURK	Kurchatov	14.71	349	iP	Pn	05 42 38.0	+1.4
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRDH	Bariadhala	15.57	149	LR	LR	05 50 21.2	
	comp=Z,108nm,20.5s,baz=104,slow=44						
ZALV	Zalesovo Beam	17.67	4	P	Pn	05 43 13.7	-0.9
	comp=Z,0.3nm,0.3s,baz=187,slow=13,SNR=10						
CD2	Chengdu	18.17	101	P	Pn	05 43 18.6	-2.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BVAR	Borovoye Array	18.87	336	P	Pn	05 43 29.6	+0.2
	comp=Z,0.6nm,0.3s,baz=144,slow=10,SNR=15						
BRVK	Borovoye	18.94	336	P	Pn	05 43 30.1	0.0
BRVK	Borovoye	18.94	336	iP	Pn	05 43 29.6	+0.1
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GEYT	Alibeck	19.82	282	P	P	05 43 39.3	-0.1
	comp=Z,0.3nm,0.3s,baz=61,slow=15,SNR=3.9						
GEYT				LR	LR	05 52 52.9	
	comp=Z,60nm,18.7s,baz=50,slow=42						
KMI	Kunming	20.34	118	P	P	05 43 43.8	-1.4
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KMI				LR	LR		
	comp=Z,170nm,5.3s						
KMI				LR	LR		
	comp=Z,140nm,5.3s						
KMI				LR	LR		
	comp=Z,88nm,13.1s						
SONM	Songino Array	20.79	49	P	Pn	05 43 51.2	-1.2
	comp=Z,1.6nm,0.8s,baz=241,slow=10,SNR=10						
ABKAR	Akbulak array	21.14	315	P	P	05 43 53.6	+0.2
ULN	Ulaanbaatar	21.21	50	P	P	05 43 52.5	-2.0
ULN				IAmb	IAmb	05 44 02.1	
	comp=Z,9.2nm,1.4s						
ULN	Ulaanbaatar	21.21	50	P	P	05 43 52.5	-2.0
ULN				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TLY	Talaya	21.29	37	LR	LR	05 52 59.0	
	comp=Z,77nm,18.2s,baz=240,slow=39						
TLY	Talaya	21.29	37	iP	P	05 43 52.4	-2.7
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
XAN	Xi'an	21.36	88	P	P	05 44 00.8	+4.7
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,52nm,4.6s						
CMAR	Chiang Mai Arr	22.73	137	P	P	05 44 10.1	-0.7
	comp=Z,1.7nm,0.9s,baz=319,slow=9.8,SNR=7.2						
AKTO	Aktyubinsk	22.80	316	P	P	05 44 12.8	+1.5
	comp=Z,2.0nm,0.7s,baz=108,slow=12,SNR=4.6						
WSAR	Wadi Sarin	24.70	245	LR	LR	05 56 01.6	
	comp=Z,29nm,18.1s,baz=72,slow=41						
ARU	Arti	25.95	328	P	P	05 44 42.6	+1.6
	comp=Z,2.1nm,0.2s,baz=114,slow=20,SNR=5.0						
ARU	Arti	25.95	328	P	P	05 44 42.2	+1.2
ARU	Arti	25.95	328	d iP	P	05 44 42.8	+1.8
ARU						05 45 18.1	
ARU				S	S	05 49 14.5	+3.4
ARU				SS		05 50 07.7	
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NCK	Nalchik	30.77	296	iP	P	05 45 26.1	+1.9
NCK				pmax	pmax		
	comp=Z,22nm,0.7s						
KIRV	Kirov	31.22	326	LR	LR	05 59 47.9	
	comp=Z,61nm,18.0s,baz=139,slow=40						
OBN	Obninsk	36.58	316	eP	P	05 46 15.7	+1.3
OBN				e		05 47 40.3	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KLR	Kul'dur	37.45	54	iP	P	05 46 20.5	-1.5
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRTR	Keskin Array B	38.58	290	P	P	05 46 31.9	+0.3
	comp=Z,0.9nm,0.9s,baz=108,slow=7.9,SNR=4.2						
BRTR	Keskin Array B	38.58	290	iP	P	05 46 32.0	+0.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKASG	Malin Array Be	40.60	308	P	P	05 46 50.1	+1.9
	comp=Z,0.2nm,0.4s,baz=73,slow=8.1,SNR=3.1						
FINES	FINESS Array B	43.15	324	P	P	05 47 11.4	+2.5
	comp=Z,2.8nm,0.9s,baz=122,slow=14,SNR=3.7						
ARCES	ARCESS Array B	45.16	335	P	P	05 47 25.4	+0.4
	comp=Z,1.9nm,0.9s,baz=92,slow=7.2,SNR=2.6						
NB2	NORSAR Subarra	50.31	323	P	P	05 48 05.7	+0.6
	comp=Z,1.3nm,0.7s,baz=86,slow=7.4						
NOA	NORSAR Array B	50.31	323	P	P	05 48 05.7	+0.6
	comp=Z,1.0nm,0.6s,baz=86,slow=7.5,SNR=4.2						
CLL	Collm	50.71	310	eP	P	05 48 10.0	+1.8
CLL				ePP	PP	05 50 00.0	-4.0
CLL	Collm	50.71	310	eP	P	05 48 10.0	+1.8
GERES	GERESS Array B	50.79	307	P	P	05 48 09.9	+0.9
	comp=Z,2.3nm,0.8s,baz=74,slow=5.8,SNR=9.4						
BILL	Bilibino	54.44	27	eP	P	05 48 33.8	-1.7
BILL				e		05 50 41.0	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ILAR	Eielson Array	71.97	20	P	P	05 50 31.6	-0.3
	comp=Z,1.0nm,0.9s,baz=317,slow=4.4,SNR=6.7						
INK	Inuvik	72.18	13	P	P	05 50 33.2	+0.2
	comp=Z,1.1nm,0.7s,baz=331,slow=4.6,SNR=4.2						
WB0	Warramunga Arr	74.02	130	P	P	05 50 43.7	-0.9
WRA	Warramunga Arr	74.11	130	P	P	05 50 44.0	-1.2
	comp=Z,2.9nm,0.7s,baz=325,slow=6.0,SNR=5.1						
WRA	Warramunga Arr	74.11	130	iP	P	05 50 44.0	-1.2
WRA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WRAB	Tennant Creek	74.11	130	P	P	05 50 44.0	-1.2
WRAB				IAmb	IAmb	05 50 52.8	
	comp=Z,5.9nm,1.1s						
WRAB	Tennant Creek	74.11	130	P	P	05 50 44.0	-1.2
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.2s						
WB2	Warramunga Arr	74.12	130	P	P	05 50 44.0	-1.3
WB2				IAmb	IAmb	05 50 45.0	
	comp=Z,3.9nm,0.9s						
WR0	Warramunga Arr	74.25	130	P	P	05 50 45.2	-0.7
WR0				IAmb	IAmb	05 50 45.6	
	comp=Z,4.2nm,1.1s						
TORD	Torodi Ar. Bea	75.32	276	P	P	05 50 51.1	-1.2
	comp=Z,0.9nm,0.6s,baz=52,slow=4.9,SNR=6.6						
ASAR	Alice Springs	76.67	133	P	P	05 50 58.4	-1.4
	comp=Z,1.1nm,0.7s,baz=315,slow=6.5,SNR=17						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YKA	Yellowknife Ar	80.51	8	P	P	05 51 19.9	-0.6
	comp=Z,1.1nm,0.8s,baz=341,slow=4.9,SNR=9.8						

IDC 24 05:51:26.1±5.5, 6°38S×152°71E, h50km±46km, mb3.3/4, mb1 3.6/5, mb1mx3.2/33, mbtmp3.6/5, ML4.3/1, MS2.8/3, Ms1 2.8/3, ms1mx2.6/11, Error ellipse: s-maj=62.1km s-min=18.9km az=103.0

ISC 24 05:51:24.6±1.5, **6°42S**±0°10×**152°8E**±0°3, **h38**km, **n8**, σ**0.95**/7, **mb3.4**/4, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.23	340	P	Pn	05 51 58.8	-0.3
	91nm,0.3s,baz=211,slow=1.2,SNR=40						
KRVT				S	Sn	05 52 26.2	+0.8
	98nm,0.3s,baz=38,slow=22,SNR=17						
PMG	Port Moresby	6.33	242	LR	LR	05 55 01.8	
	comp=Z,74nm,19.6s,baz=280,slow=34						
HNR	Honiara	7.68	113	LR	LR	05 55 41.1	
	comp=Z,38nm,20.1s,baz=280,slow=33						
WRA	Warramunga Arr	22.41	231	P	P	05 56 19.5	-0.6
	0.4nm,0.5s,baz=57,slow=11,SNR=2.4						
ASAR	Alice Springs	24.99	225	P	P	05 56 44.8	-0.2
	0.9nm,0.8s,baz=58,slow=9.3,SNR=6.9						
ASAR				LR	LR	06 05 10.8	
	comp=Z,38nm,20.6s,baz=206,slow=33						
STKA	Stephens Creek	27.41	201	P	P	05 57 08.1	+1.3
	1.0nm,0.6s,baz=352,slow=14,SNR=3.1						
ILAR	Eielson Array	83.64	22	P	P	06 03 48.9	0.0
	0.2nm,0.6s,baz=256,slow=5.9,SNR=3.7						
TORD	Torodi Ar. Bea	150.78	285	PKPbc	PKPbc	06 11 13.2	-0.8
	0.5nm,0.6s,baz=85,slow=1.9,SNR=3.4						

GCG 24 06:11:12.1±0.8, 14°95N×93°16W, h142km±44km, MD4.0
MEX 24 06:11:14.5±1.1, 14°06N×92°59W, h130km±41km, MD3.8

ISC 24 06:11:14.8±4.0, **14°3N**±0°2×**93°3W**±0°2, **h100**km, **n8**, σ**2.98**/13, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.13	59	eP	Pn	06 11 35.0	-1.8
THIG				iS	Sn	06 11 51.6	-1.7
PCIG		1.38	2	eP	Pn	06 11 39.9	+0.3
PCIG				eS	Sn	06 11 53.1	-5.2
STG3	Santiaguito 3,	1.69	77	eP	Pn	06 11 42.7	-0.9
STG3				eS	Sn	06 12 04.2	-1.3
CCIG	Comitan	2.23	29	eP	Pn	06 11 54.0	+3.3
FUG	Fuego 3	2.36	87	eP	Pn	06 11 53.4	+1.2
FUG				eS	Sn	06 12 21.6	+0.7
TGIG		2.45	3	eP	Pn	06 11 57.2	+3.9
TGIG				iS	Sn	06 12 29.4	+6.5
PCG	Pacaya	2.58	88	eP	Pn	06 11 54.8	-0.5
PCG				eS	Sn	06 12 28.0	+1.7
IXG	Ixpaco	2.75	93	eP	Pn	06 11 56.8	-0.6
IXG				eS	Sn	06 12 32.4	+2.3

NEIC 24 06:18:50.5±2.2, 6°37S±0°05×128°56E±0°04, h286km±6km, mb4.5/30, Error ellipse: s-maj=9.8km s-min=2.2km az=140.0
IDC 24 06:18:50.8±1.8, 6°33S×128°56E, h283km±18km, mb3.8/12, mb1 3.9/14, mb1mx3.7/39, mbtmp4.4/14, Error ellipse: s-maj=20.1km s-min=9.4km az=68.0
DJA 24 06:18:50.8±0.4, 6°S±5°×12°9E±°, h292km±8km, M4.8/9, mb4.8/8, mB5.3/6, MLv5.0/9, Mw(mB)4.7/6

ISC 24 06:18:51.2±0.4, **6°45S**±0°04×**128°63E**±0°05, **h300**km, **n85**, σ**2.30**/102, **mb4.3**/27, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.05	120	Pn	Pn	06 19 47.8	+0.3
SAUI				S	S	06 20 28.2	-4.3
MSAI	Masohi	3.09	5	P	Pn	06 19 46.8	-1.1
MSAI				S	S	06 20 30.1	-3.2
NLAI	Namlea	3.53	334	P	Pn	06 19 52.5	+0.1
NLAI				S	S	06 20 43.0	+1.6
FAKI	Fak Fak	5.03	46	P	Pn	06 20 07.1	-1.9
FAKI				S	S	06 21 05.5	-6.2
FAKI	Fak Fak	5.03	46		Pn	06 20 07.2	-1.9
FAKI				S	S	06 21 06.4	-5.3
SANI	Sanana	5.10	329	P	Pn	06 20 08.7	-1.3
	0.9nm3μm240nm,0.6s						
SANI				S	S	06 21 09.6	-3.7
	0.9nm3μm240nm,0.6s						
SOEI	Soe	5.43	232	P	Pn	06 20 12.4	-1.5
	4.0nm18μm772nm,0.9s						
SOEI	Soe	5.43	232	Pn	Pn	06 20 12.0	-1.9
SOEI				S	S	06 21 15.4	-5.1
LBMI	Labuha	5.88	349	P	Pn	06 20 18.6	-0.5
	0.8nm4μm131nm,0.5s						
LBMI				S	S	06 21 24.8	-5.2
	0.8nm4μm131nm,0.5s						
SIJI	Sorong	6.13	25	P	Pn	06 20 19.6	-2.5
	20nm,0.3s,baz=19,slow=22,SNR=70						
SIJI				S	S	06 21 28.3	-7.2
	18nm,0.3s,baz=91,slow=21,SNR=11						
SWI	Sorong	6.13	25	P	Pn	06 20 19.8	-2.4
	0.6nm4μm137nm,0.6s						
MMRI	Maumere	6.70	251	Pn	Pn	06 20 26.3	-2.7
MMRI				S	S	06 21 45.0	-3.0
RKPI	Ransiki, Papua	7.39	49	P	Pn	06 20 36.9	-0.5
	2.0nm13μm278nm,0.5s						
LUWI	Luwuk	7.94	312	P	Pn	06 20 43.9	-0.2
	0.5nm3μm78nm,0.9s						
LUWI	Luwuk	7.94	312	Pn	Pn	06 20 43.2	-0.9
KAPI	Kappang	8.95	279	P	Pn	06 20 55.3	-1.2
	0.6nm,0.3s,baz=135,slow=10,SNR=5.2						
KNRA	Kununurra	9.18	179		Pn	06 20 58.9	-0.3
KNRA				S	S	06 22 35.6	-7.9
FITZ	Fitzroy Crossi	11.94	194	P	Pn	06 21 31.7	-1.4
	2.3nm,0.3s,baz=29,slow=11,SNR=112						
FITZ				S	S	06 23 40.9	-5.2
	1.9nm,0.3s,baz=212,slow=15,SNR=5.6						
FITZ	Fitzroy Crossi	11.94	194	P	Pn	06 21 31.7	-1.4
FITZ					S	06 23 40.2	-5.9
WB0	Warramunga Arr	14.38	158		Pn	06 22 02.4	+0.1
WRAB	Tennant Creek	14.51	158		Pn	06 22 04.0	+0.1
WRA	Warramunga Arr	14.52	158	P	P	06 22 03.9	+0.9
	16nm,0.3s,baz=330,slow=12,SNR=6.0						
WRA				S	S	06 24 38.0	-4.3
	1.2nm,0.3s,baz=343,slow=20,SNR=6.7						
WB2	Warramunga Arr	14.52	158		Pn	06 22 04.2	+0.1
WR0	Warramunga Arr	14.61	157		Pn	06 22 05.2	+0.1
COEN	Coen	16.13	119	P	Pn	06 22 23.1	+0.2
PSA00	Pilbara Seismi	17.27	209	P	P	06 22 33.6	+0.5
PSA00				IAmb	IAmb	06 22 37.5	
	comp=Z,26nm,0.7s						
KKM	Kota Kinabalu	17.54	315	P	P	06 22 28.3	-7.8
AS31	Alice Springs	17.86	164	P	P	06 22 41.6	+2.2
ASAR	Alice Springs	17.86	164	P	P	06 22 41.4	+1.9
	comp=Z,37nm,0.3s,baz=344,slow=12,SNR=3534						
ASAR				S	S	06 25 48.6	-0.2
	comp=Z,1.1nm,0.3s,baz=345,slow=20,SNR=20						
PMG	Port Moresby	18.58	100	P	P	06 22 45.7	-1.5
PMG				IAmb	IAmb	06 22 59.4	
	comp=Z,34nm,1.1s						
CTA	Charters Tower	21.83	130	P	P	06 23 23.0	+3.2
	comp=Z,9.1nm,0.6s,baz=309,slow=12,SNR=16						
FORT	Forrest	24.21	181	P	P	06 23 42.5	+1.2
FORT				IAmb	IAmb	06 23 43.1	
	comp=Z,20nm,0.8s						
BBOO	Buckleboo	27.13	166	P	P	06 24 08.8	+1.5
BBOO				IAmb	IAmb	06 24 09.4	
	comp=Z,16nm,0.6s						
STKA	Stephens Creek	28.05	156	P	P	06 24 17.4	+1.9
	comp=Z,10.0nm,0.6s,baz=330,slow=9.3,SNR=30						
STKA	Stephens Creek	28.05	156	P	P	06 24 17.1	+1.6
ARMA	Armidale	32.18	141	P	P	06 24 53.8	+1.9
ARMA				IAmb	IAmb	06 24 56.4	
	comp=Z,8.3nm,0.7s						
JOW	Kunigami	33.08	359	P	P	06 24 58.5	-1.0
JOW				IAmb	IAmb	06 25 00.7	
	comp=Z,17nm,1.1s						
CAN	Canberra	34.30	150	P	P	06 25 13.4	+3.4
TOO	Toolangi	34.57	156	P	P	06 25 14.5	+2.3
TOO				IAmb	IAmb	06 25 16.0	
	comp=Z,4.8nm,0.7s						
CMAR	Chiang Mai Arr	38.34	311	P	P	06 25 44.4	+0.3
	comp=Z,0.9nm,0.4s,baz=146,slow=8.3,SNR=4.5						
NJ2	Nanjing	39.40	347	eP	P	06 25 54.4	+1.8
KSRS	Korea Array	43.68	359	P	P	06 26 27.7	+0.7
	comp=Z,4.3nm,0.5s,baz=177,slow=9.3,SNR=25						
MAJO	Matsushiro	43.69	11	P	P	06 26 26.9	-0.3
MAJO				IAmb	IAmb	06 26 27.6	
	comp=Z,7.6nm,0.8s						
MJAR	Matsushiro Arr	43.69	11	P	P	06 26 26.4	-0.8
	comp=Z,5.5nm,0.7s,baz=189,slow=9.6,SNR=12						
MJB9	Matsu-Tunnel	43.70	11	P	P	06 26 26.8	-0.5
KS19	Wonju Array Si	43.73	359	P	P	06 26 27.9	+0.5
CD2	Chengdu	44.12	329	P	P	06 26 30.3	-0.4
XAN	Xi'an	44.38	336	P	P	06 26 31.8	-0.9
XAN	Xi'an	44.38	336	P	P	06 26 32.0	-0.7
BJT	Baijiatuan	47.64	347	P	P	06 26 57.6	-0.2
LZH	Lanzhou	48.29	333	eP	P	06 27 03.3	+0.3
LZH				pP	pP	06 28 03.1	-1.4
LZH				sP	sP	06 28 32.6	-5.1
USRK	Ussuriysk Ar.	50.50	3	P	P	06 27 19.8	+0.6
	comp=Z,3.7nm,0.6s,baz=189,slow=5.6,SNR=8.0						
ODAN	Odare	51.87	312	eP	P	06 27 30.2	+0.1
	comp=Z,9.4nm,0.4s						
TAPN	Taplejung	51.91	312	eP	P	06 27 30.3	-0.1
	comp=Z,13nm,0.4s						
QRZ	Quartz Range	51.97	138	P	P	06 27 33.0	+2.7
RPZ	Rata Peaks	52.50	142	P	P	06 27 36.3	+2.2
RPZ				IAmb	IAmb	06 27 52.8	
	comp=Z,55nm,1.5s						
RAMN	Ramite	52.51	311	eP	P	06 27 35.0	+0.3
	comp=Z,22nm,0.5s						
THZ	Tophouse	52.67	139	P	P	06 27 37.1	+1.7
THZ				IAmb	IAmb	06 27 53.0	
	comp=Z,30nm,1.4s						
GTA	Gaotai	52.84	332	eP	P	06 27 37.3	+0.5
JIRN	Jiri	53.20	312	eP	P	06 27 39.8	-0.1
	comp=Z,10nm,0.4s						
KHZ	Kahutara	53.40	139	P	P	06 27 43.0	+2.3
GUN	Gumba	53.57	312	eP	P	06 27 42.5	0.0
	comp=Z,16nm,0.4s						
BHW	Baring Head	53.81	138	P	P	06 27 44.8	+1.2
BKZ	Black Stump Fm	53.95	135	P	P	06 27 46.8	+2.0
BKZ				IAmb	IAmb	06 27 50.3	
	comp=Z,13nm,1.0s						
URZ	Urewera	54.03	133	P	P	06 27 46.9	+1.6
URZ				IAmb	IAmb	06 28 04.7	
	comp=Z,36nm,1.4s						
ULN	Ulaanbaatar	57.33	343	P	P	06 28 08.9	+0.4
SONM	Songino Array	57.50	342	P	P	06 28 10.8	+1.1
	comp=Z,3.7nm,0.7s,baz=159,slow=6.9,SNR=35						
WMQ	Urumqi	62.20	328	eP	P	06 28 43.5	+2.0
PETK	Petropavlovsk-	64.23	19	P	P	06 28 56.0	+1.5
	comp=Z,2.4nm,0.8s,baz=168,slow=7.4,SNR=3.6						
MK31	Makanchi Array	67.03	327	P	P	06 29 12.9	+0.5
MK31				IAmb	IAmb	06 29 14.0	
	comp=Z,4.0nm,0.8s						
MKAR	Makanchi Array	67.03	327	P	P	06 29 13.2	+0.7
	comp=Z,4.6nm,0.6s,baz=126,slow=7.8,SNR=30						
MAKZ	Makanchi	67.20	327	P	P	06 29 13.9	+0.4
MAKZ				IAmb	IAmb	06 29 14.9	
	comp=Z,3.2nm,0.8s						
ZALV	Zalesovo Beam	70.49	334	P	P	06 29 33.6	+0.1
	comp=Z,5.1nm,0.8s,baz=125,slow=4.0,SNR=15						
KURBB	Kurchatov Arra	71.33	329	P	P	06 29 39.2	+0.6
	comp=Z,5.5nm,0.6s,baz=132,slow=5.0,SNR=64						
KURK	Kurchatov	71.34	329	P	P	06 29 38.9	+0.3
KURK				IAmb	IAmb	06 29 40.1	
	comp=Z,9.4nm,1.0s						
BVAR	Borovoye Array	76.88	328	P	P	06 30 10.9	+0.5
	comp=Z,3.2nm,1.0s,baz=132,slow=6.4,SNR=7.6						
ABKAR	Akbulak array	81.24	322	P	P	06 30 34.5	+0.5
AKUT	Akutan	81.29	33	P	P	06 30 34.6	+0.5
QSPA	South Pole Qui	83.53	180	P	P	06 30 46.5	+0.8
QSPA				IAmb	IAmb	06 30 46.9	
	comp=Z,3.5nm,0.9s						
ILAR	Eielson Array	93.43	25	P	P	06 31 31.9	-0.6
	comp=Z,0.2nm,0.5s,baz=263,slow=4.8,SNR=5.4						
TORD	Torodi Ar. Bea	127.37	282	PKP	PKiKP	06 37 21.2	-0.7
	comp=Z,0.2nm,0.3s,baz=61,slow=3.0,SNR=3.0						
CPUP	Villa Florida	146.91	170	PKPbc	PKPab	06 38 00.7	-0.5
	comp=Z,2.5nm,0.9s,baz=203,slow=1.8,SNR=4.6						
CPUP	Villa Florida	146.91	170	PKPbc	PKPbc	06 37 59.6	+0.4
LPAZ	La Paz	151.97	144	PKPbc	PKiKP	06 38 14.9	+1.9
	comp=Z,0.4nm,0.4s,baz=230,slow=10,SNR=3.4						
LPAZ				PKPab	PKPab	06 38 24.5	+1.4
	comp=Z,1.6nm,0.7s,baz=183,slow=2.8,SNR=5.7						
LPAZ	La Paz	151.97	144	PKPdf	PKPdf	06 38 03.4	-2.4
LPAZ					PKiKP	06 38 13.4	+0.5
LPAZ					PKPab	06 38 23.4	+0.4

NNC 24 06:29:49.2±0.6, 49°31N×83°42E, h12km±3km, mb4.3, mpv4.1, Error ellipse: s-maj=5.5km s-min=2.9km az=85.0
MOS 24 06:29:49.7±1.8, 49°25N×83°30E, h22km, mb4.1/4, Error ellipse: s-maj=12.4km s-min=7.7km az=71.0
BJI 24 06:29:49.0±0.0, 49°04N×83°54E, h6km, ML3.6/5, Ms3.7/2
SOME 24 06:29:50.2, 48°90N×83°00E, h10km
ASRS 24 06:29:51.4±0.2, 49°N±1°×8°4E±°, h10km, MLh4.1/15, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed

ISC 24 06:29:48.9±1.1, **49°05N**±0°02×**83°27E**±0°03, **h3**km±8km, **n86**, σ**2.63**/124, **mb4.1**/3, **11C-9D**, **Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	Zaisan	1.92	146	⇓eP	Pn	06 30 23.4	+1.0
	116nm,0.3s						
ZSN				eS	Sb	06 30 48.4	-0.5
	530nm,0.3s						
ZSN	Zaisan	1.92	146	Pg	Pn	06 30 23.5	+1.0
	116nm,0.3s						
ZSN				Lg	Lg	06 30 49.4	
	530nm,0.3s						
ZSN	Zaisan	1.92	146	ePN	Pn	06 30 23.4	+1.0
ZSN				eS	Sb	06 30 48.4	-0.5
TUNR	Tungur	2.28	60	Pg	Pn	06 30 26.2	-1.3
TUNR				Sg	Sn	06 30 52.4	-3.7
MK31	Makanchi Array	2.35	197	⇓Pn	Pb	06 30 32.0	+0.2
	12nm,0.4s,baz=43,slow=8.5,SNR=1348						
MK31				⇑Pg	Pg	06 30 37.2	+3.3
	10nm,0.2s						
MK31				⇓Sn	Sg	06 31 04.0	-0.3
	175nm,0.5s,baz=30,slow=29,SNR=6.4						
MK31	Makanchi Array	2.35	197	i PN	Pb	06 30 32.1	+0.2
MKAR	Makanchi Array	2.35	197	Pn	Pg	06 30 32.3	-1.6
MKAR				Pg	Pb	06 30 42.2	+10
MKAR				Sg	Sg	06 31 04.7	+0.4
MKAR	Makanchi Array	2.35	197	PN	Pb	06 30 32.0	+0.2
SEM	Semipalatinsk	2.38	306	eP	Pb	06 30 32.5	0.0
	34nm,0.1s						
SEM				eS	Sg	06 31 04.1	-1.3
	413nm,0.2s						
SEM	Semipalatinsk	2.38	306	Pg	Pb	06 30 32.1	-0.4
	53nm,0.2s						
SEM				Lg	Lg	06 31 04.1	
	413nm,0.2s						
SEM	Semipalatinsk	2.38	306	ePN	Pb	06 30 32.5	0.0
SEM				eS	Sg	06 31 04.1	-1.3
MAKZ	Makanchi	2.40	202	Pn	Pg	06 30 33.1	-1.9
MAKZ				Pg	Pb	06 30 41.3	+8.6
MAKZ				Sg	Sg	06 31 15.0	+9.0
MAKZ	Makanchi	2.40	202	⇑Pn	Pb	06 30 32.6	-0.2
	11nm,0.3s						
MAKZ				⇑Pg	Pg	06 30 39.3	+4.4
	26nm,0.3s						
MAKZ				⇑Sn	Sg	06 31 06.5	+0.5
	159nm,0.4s						
MAKZ	Makanchi	2.40	202	PN	Pg	06 30 33.0	-1.9
MAKZ				S	Sg	06 31 05.7	-0.3
DGZ	Jazzator, Alta	2.80	75	Pg	Pn	06 30 35.6	+0.9
DGZ				Sg	Sn	06 31 09.2	+0.3
DGZ	Jazzator, Alta	2.80	75	PN	Pn	06 30 32.5	-2.2
DGZ						06 31 08.1	
ELDR	Elanda	2.83	39	Pg	Pn	06 30 36.1	+1.1
ELDR				Sg	Sn	06 31 09.6	0.0
CHBI	Chibit, Altay	3.03	64	Pn	Pn	06 30 37.0	-0.8
CHBI				Sg	Sb	06 31 20.3	-0.5
CHBI	Chibit, Altay	3.03	64	PN	Pn	06 30 36.5	-1.3
CHBI						06 31 10.9	
AKAR	Aktash	3.10	64	Pn	Pn	06 30 37.8	-1.0
AKAR				Sg	Sn	06 31 20.1	+3.7
AKAR	Aktash	3.10	64	PN	Pn	06 30 37.7	-1.1
AKAR						06 31 13.2	
GALT	Gorno-Altaysk,	3.38	29	Pg	Pb	06 30 49.7	+0.4
GALT				Sg	Sn	06 31 27.3	+4.2
GALT	Gorno-Altaysk,	3.38	29	PN	Pn	06 30 41.1	-1.4
GALT						06 31 16.9	
ULGR	Ulagan, Altay	3.42	61	Pn	Pn	06 30 42.0	-1.1
ULGR				Pg	Pb	06 30 50.7	+0.5
ULGR				Sg	Sb	06 31 31.2	-1.0
ULGR	Ulagan, Altay	3.42	61	PN	Pn	06 30 43.2	0.0
ULGR						06 31 22.1	
KURK	Kurchatov	3.44	301	Pn	Pn	06 30 42.3	-0.9
KURK				Pg	Pg	06 30 53.8	-0.9
KURK				Sg	Sg	06 31 38.9	-0.2
KURK	Kurchatov	3.44	301	d/PN	Pn	06 30 42.2	-1.0
KURBB	Kurchatov Arra	3.45	299	⇓Pn	Pn	06 30 41.6	-1.7
	11nm,0.2s						
KURBB				⇓Pg	Pb	06 30 52.2	+1.7
	34nm,0.4s						
KURBB				⇓Lg	Lg	06 31 37.6	
	777nm,0.8s						
CUR	Chagan-Uzun	3.47	70	Pn	Pn	06 30 42.9	-1.0
CUR				Pg	Pb	06 30 51.6	+0.6
CUR				Sg	Sb	06 31 33.5	-0.1
ARTR	Artybash	3.77	41	Pn	Pn	06 30 46.6	-1.1
ARTR				Pg	Pb	06 30 54.9	-1.0
ARTR				Sg	Sn	06 31 38.5	+6.0
ARTR	Artybash	3.77	41	PN	Pn	06 30 46.2	-1.6
KAPS	Kapalarasan	4.61	217	eP	Pb	06 31 12.0	+1.6
	8.2nm,0.3s						
KAPS				eS	Sg	06 32 11.6	-5.4
	82nm,0.7s						
KAPS	Kapalarasan	4.61	217	Pg	Pg	06 31 17.4	+0.2
	8.2nm,0.3s						
KAPS				Lg	Lg	06 32 21.2	
	82nm,0.7s						
ELT	Eltsovka	4.62	23	Pn	Pn	06 30 57.0	-2.4
ELT				Pg	Pb	06 31 09.4	-1.0
ELT				Sg	Sb	06 32 07.9	+1.6
ELT	Eltsovka	4.62	23	PN	Pn	06 30 56.7	-2.7
ELT						06 31 58.0	
TASR	Tashtagol	4.73	36	Pg	Pb	06 31 12.3	0.0
TASR				Sg	Sb	06 32 08.3	-1.2
TEL	Teeli	4.89	64	Pg	Pb	06 31 15.0	0.0
TEL				Sg	Sb	06 32 15.0	+0.7
ZAA0	Zalesovo Array	5.00	11	⇑Pn	Pn	06 31 01.3	-3.5
	0.4nm,0.5s						
ZAA0				⇑Sn	Sn	06 31 56.1	-6.9
	2.3nm,0.5s						
ZAA0				⇑Lg	Lg	06 32 20.1	
	11nm,0.6s						
TDK	Taldyqorghan	5.24	221	Pg	Pg	06 31 30.0	+0.9
	67nm,0.4s						
TDK				Lg	Lg	06 32 43.7	
	184nm,0.6s						
DJR	Jarkent	5.29	208	Pg	Pg	06 31 30.7	+0.5
	3.8nm,0.2s						
DJR				Lg	Lg	06 32 44.5	
	40nm,0.5s						
BSTK	Bystrovka, Nov	5.54	356	Pg	Pb	06 31 26.5	+0.4
BSTK				Sg	Sg	06 32 42.0	-4.7
KHAR	Kharino, NSO,	5.58	2	Sg	Sb	06 32 40.8	+6.8
SALR	Pechorkino, Sa	5.59	15	Pg	Pb	06 31 28.1	+1.2
SALR				Sg	Sb	06 32 37.0	+2.8
NVS	Novosibirsk	5.80	360	Pg	Pb	06 31 33.5	+2.9
NVS				Sg	Sb	06 32 48.1	+7.7
LUZB	Luzhba, Kemero	5.81	35	Pg	Pb	06 31 30.3	-0.5
LUZB				Sg	Sb	06 32 43.8	+3.0
NHES	Novosibirsk, N	5.82	358	Pg	Pb	06 31 35.5	+4.5
NHES				Sg	Sg	06 32 50.7	-5.1
ALXA	Alekseevka, NS	5.91	356	Sg	Sb	06 32 52.2	+8.8
KTMS	Ketmen	5.96	201	Pg	Pg	06 31 42.7	-0.3
	1.6nm,0.1s						
KTMS				Lg	Lg	06 33 04.3	
	22nm,0.5s						
WMQ	Urumqi	6.06	148	Pn	Pn	06 31 20.3	+1.0
WMQ				Sn	Sn	06 32 30.0	+0.9
WMQ				smax	smax		
	comp=N,21nm,1.0s						
WMQ				smax	smax		
	comp=E,11nm,0.8s						
ARXS	Arharly	6.12	220	Pg	Pg	06 31 45.9	-0.1
	6.1nm,0.2s						
ARXS				Lg	Lg	06 33 10.7	
	38nm,0.4s						
VEH	Verkhnyaya Baz	6.12	44	Pn	Pn	06 31 17.4	-2.7
VEH				Pg	Pb	06 31 34.7	-1.3
VEH				Sg	Sb	06 32 55.8	+6.2
DJO	Djoy, Khakassi	6.26	50	Pn	Pn	06 31 19.8	-2.3
DJO				Pg	Pb	06 31 38.9	+0.4
DJO				Sg	Sb	06 33 03.7	+10
DJOS	Djoyskaya Sosn	6.36	51	Sg	Sb	06 33 02.9	+6.3
CERR	Cheremushki	6.41	50	Sg	Sb	06 33 02.9	+5.2
SHLS	Shalkode	6.46	206	Pg	Pg	06 31 50.7	-1.8
	15nm,0.4s						
SHLS				Lg	Lg	06 33 18.0	
	33nm,0.4s						
KURS	Kuram	6.59	214	Pg	Pg	06 31 55.0	0.0
	11nm,0.9s						
KURS				Lg	Lg	06 33 25.3	
	27nm,0.6s						
UZB	Uzynbulak	6.60	208	Pg	Pg	06 31 55.3	+0.1
	4.9nm,0.3s						
UZB				Lg	Lg	06 33 26.0	
	23nm,0.7s						
CHKK	Chushkaly	6.76	222	Pg	Pg	06 31 58.1	-0.3
	5.9nm,0.3s						
CHKK				Lg	Lg	06 33 31.8	
	33nm,0.5s						
ABNR	Abakan	6.93	44	Sg	Sb	06 33 24.8	+12
BRZS	Berezniki	6.96	282	Pg	Pg	06 31 58.7	-3.4
	5.9nm,0.3s						
BRZS				Lg	Lg	06 33 32.6	
	68nm,0.9s						
KTBS	Karatobe	7.01	223	Pg	Pg	06 32 02.9	-0.2
	4.5nm,0.4s						
KTBS				Lg	Lg	06 33 39.7	
	79nm,0.8s						
KUU	Kurty	7.03	225	Pg	Pg	06 32 02.6	-0.9
	4.2nm,0.4s						
KUU				Lg	Lg	06 33 38.7	
	32nm,0.5s						
KOTS	Kotyrbulak	7.21	219	Pg	Pg	06 32 06.5	-0.5
	13nm,1.1s						
KOTS				Lg	Lg	06 33 46.0	
	73nm,0.7s						
MDOK	Medeo	7.30	219	Pg	Pg	06 32 08.3	-0.4
	4.1nm,0.5s						
MDOK				Lg	Lg	06 33 48.3	
	13nm,0.7s						
ARDR	Aradan	7.34	57	Pn	Pn	06 31 32.9	-4.1
ARDR				Pg	Pb	06 32 02.4	+5.5
ARDR				Sg	Sb	06 33 32.6	+7.7
TNSS	Tian-Shan	7.45	219	Pg	Pg	06 32 11.0	-0.5
	3.2nm,0.2s						
TNSS				Lg	Lg	06 33 53.5	
	16nm,0.5s						
BTLS	Baital	7.46	241	Pg	Pg	06 32 10.7	-1.0
	3.1nm,0.3s						
BTLS				Lg	Lg	06 33 53.6	
	13nm,0.7s						
KRBS	Karabastau	7.50	227	Pg	Pg	06 32 11.3	-1.1
	2.8nm,0.6s						
KRBS				Lg	Lg	06 33 54.3	
	9.9nm,0.7s						
MTBS	Maitube	7.59	221	Pg	Pg	06 32 13.5	-0.6
	6.8nm,0.3s						
MTBS				Lg	Lg	06 33 57.4	
	17nm,0.3s						
KZLR	Kyzyl	7.63	65	Sg	Sg	06 33 43.0	+10
DGS	Degeres	7.79	225	Pg	Pg	06 32 17.6	-0.5
	8.7nm,0.3s						
DGS				Lg	Lg	06 34 05.2	
	28nm,0.7s						
KST	Kastek	7.86	223	Pg	Pg	06 32 18.5	-0.9
	4.4nm,0.2s						
KST				Lg	Lg	06 34 06.5	
	22nm,0.8s						
AAK	Ala-Archa	8.86	227	Sg	Sg	06 34 39.1	+6.0
AAK	Ala-Archa	8.86	227	eP	Pn	06 31 59.7	+1.8
MINR	Mina	8.93	45	Pn	Pn	06 31 56.1	-2.3
MINR				Sg	Sn	06 34 29.9	+50
BRVK	Borovoye	9.11	301	Pn	Pn	06 31 59.6	-1.5
BRVK	Borovoye	9.11	301	⇑Pn	Pn	06 31 59.0	-2.1
	0.5nm,0.2s						
BRVK				⇓Sn	Sn	06 33 39.1	-4.8
	8.2nm,0.6s						
BRVK				⇑Lg	Lg	06 34 34.5	
	22nm,0.9s						
BRVK	Borovoye	9.11	301	i P	Pn	06 31 58.8	-2.3
MRKS	Merke	9.41	232	Pg	Pn	06 32 47.3	+42
	2.6nm,0.3s						

MRKS Lg Lg 06 34 55.6
9.2nm,0.5s
KK31 Karatay Array 10.66 241 ⇓Pn **Pn 06 32 21.9 -0.5**
1.1nm,0.5s,baz=50,slow=14,SNR=24
KK31 ⇑Sn **Sn 06 34 21.5 -0.8**
1.4nm,0.5s,baz=46,slow=22,SNR=6.8
TLY Talaya 13.27 71 *i*P **Pn 06 32 58.6 +0.6**
AB31 Akbulak array 15.25 280 ⇑P **Pn 06 33 23.3 -1.6**
0.4nm,0.6s,baz=81,slow=7.3,SNR=4.8
NRIK Noril'sk 20.46 4 *i*P **P 06 34 23.8 -3.4**
NRIK pmax pmax
comp=Z,2.0nm,1.2s
KBZ Khabaz 28.10 275 *i*P **P 06 35 42.5 +0.9**
KBZ pmax pmax
comp=Z,4.0nm,1.2s
OBN Obninsk 28.88 300 *e*P **P 06 35 46.6 -1.8**
OBN pmax pmax
comp=Z,5.0nm,0.8s
BILL Bilibino 43.29 33 *e*P **P 06 37 50.0 -1.2**
BILL pmax pmax
comp=Z,2.0nm,1.5s

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*NIED **24** 07:26:00,26°.50N×126°.10E,h122km,Mw4.3 Best double couple: $M_0 2.77000\times10^{15}$ NP1:ϕ_s17.00000°, δ66.00000°,λ-66.00000°. NP2:ϕ_s150.00000°,δ34.00000°, λ-132.00000°.*
*BJI **24** 07:26:28.6±0.0,26°.11N×126°.36E,h110km,mB4.6/17, mb4.4/23*
*IDC **24** 07:26:33.6±1.4,26°.50N×126°.12E,h120km±13km, mb3.8/20,mb1 3.9/22,mb1mx3.8/51,mbtmp4.1/22,MS2.7/2, Ms1 2.7/2,ms1mx2.3/48,Error ellipse: s-maj=16.0km s-min=9.9km az=67.0*
*JMA **24** 07:26:34.2±0.2,26°.43N×126°.15E,h130km±3km,M4.3*
JMA Felt I J1.
*NEIC **24** 07:26:34.3±1.2,26°.45N±0°.09×126°.07E±0°.07, h125km±6km,mb4.4/58,Error ellipse: s-maj=13.6km s-min=7.5km az=153.0*
ISC 24 07:26:34.4±0.6,**26°.46N**±0°.05×**126°.09E**±0°.04,**h127**km±6km, **n127**,σ1§**20**/164,**mb4.3**/53,**Ryukyu Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JKE Kume jima 2 0.64 102 P **Pn 07 26 54.1 +0.1**
JKE S **Sn 07 27 08.0 -0.8**
JAGN Aguni-jima 1.04 83 P **Pn 07 26 57.2 -0.2**
JAGN S **Sn 07 27 13.6 -1.2**
JJT3 Tamagusuku3 1.56 101 P **Pn 07 27 02.7 -0.2**
JJT3 *e*S **Sn 07 27 24.1 -0.5**
JIKM Ikemajima 1.71 207 P **Pn 07 27 05.0 +0.3**
JIKM *e*S **Sn 07 27 27.9 +0.1**
JNTH Nagotoyohara 1.73 88 P **Pn 07 27 04.9 -0.1**
JNTH S **Sn 07 27 26.3 -2.0**
JIH Iheya 1.77 71 P **Pn 07 27 05.4 0.0**
JIH S **Sn 07 27 28.0 -1.1**
JOGS Gusukube 1.80 200 P **Pn 07 27 06.6 +0.7**
JOGS S **Sn 07 27 30.2 +0.4**
JIRB Irabujima 1.83 207 P **Pn 07 27 06.2 +0.1**
JIRB *e*S **Sn 07 27 29.8 -0.5**
JMJ2 Miyako jima3 1.85 202 P **Pn 07 27 07.0 +0.6**
JMJ2 S **Sn 07 27 30.8 0.0**
JOW Kunigami 1.99 79 P **Pn 07 27 07.7 -0.3**
JOW S **Sn 07 27 31.5 -2.3**
JOW Kunigami 1.99 79 P **Pn 07 27 07.8 -0.3**
55nm,0.3s,baz=151,slow=12,SNR=778
JOW S **Sn 07 27 31.9 -2.0**
375nm,0.3s,baz=98,slow=17,SNR=82
JYRO Yoronjima 2.19 75 P **Pn 07 27 09.9 -0.6**
JYRO S **Sn 07 27 35.2 -2.9**
JTJ Tarama 2.21 215 P **Pn 07 27 10.8 +0.1**
JTJ S **Sn 07 27 37.6 -1.0**
JOKE Okinoerabujima 2.39 67 P **Pn 07 27 12.3 -0.8**
JOKE *e*S **Sn 07 27 40.9 -1.9**
JISG Ishigakijimahi 2.46 221 P **Pn 07 27 14.0 0.0**
JISG S **Sn 07 27 43.1 -1.3**
JIJ Ishigaki jima 2.73 221 P **Pn 07 27 16.9 -0.6**
JIJ S **Sn 07 27 47.8 -2.8**
JTK Tokunoshima 2.87 62 P **Pn 07 27 18.2 -1.0**
JTK *e*S **Sn 07 27 50.8 -3.0**
JKRS Kuro-shima 2.91 221 P **Pn 07 27 19.2 -0.5**
JKRS S **Sn 07 27 53.8 -0.8**
IRIF Iriomote-Funau 3.01 226 P **Pn 07 27 20.6 -0.4**
IRIF S **Sn 07 27 55.6 -1.3**
HATJ Hateruma jima 3.17 221 P **Pn 07 27 22.4 -0.7**
HATJ S **Sn 07 27 59.3 -1.3**
JAMN Amaminishikomi 3.27 56 P **Pn 07 27 23.1 -1.3**
JAMN *e*S **Sn 07 28 02.0 -1.0**
YOJ Yonaguni jima 3.42 235 P **Pn 07 27 26.7 +0.3**
YOJ Sn **Sn 07 28 05.3 -1.3**
TATO Taipei 4.41 251 P **Pn 07 27 41.6 +2.1**
YHNB Yeheng 4.62 248 P **Pn 07 27 44.3 +1.9**
NACB Ninganchiao 4.66 242 P **Pn 07 27 42.5 -0.5**
NACB Sn **Sn 07 28 35.2 -1.0**
YULB Yu-li 5.32 236 P **Pn 07 27 49.7 -2.0**
YULB Sn **Sn 07 28 46.9 -5.1**
SSLB Suanglung 5.36 241 P **Pn 07 27 51.7 -0.7**
SSLB Sn **Sn 07 28 51.7 -1.4**
TWG Pinlang 5.83 233 Pn **Pn 07 27 55.2 -3.4**
TWG Sn **Sn 07 28 58.6 -5.7**
TPUB Ta-pu 5.87 239 P **Pn 07 27 58.9 -0.3**
TPUB Sn **Sn 07 29 05.1 -0.3**
KNMB Chin-men Tao 7.24 256 Pn **Pn 07 28 17.6 0.0**
JNU Nakatsue 7.83 31 P **Pn 07 28 26.1 +0.5**
7.6nm,0.3s,baz=236,slow=5.4,SNR=39
JNU Nakatsue 7.83 31 **Pn 07 28 25.9 +0.3**
NJ2 Nanjing 8.42 313 *e*P **Pn 07 28 33.1 -0.4**
NJ2 pmax pmax
comp=Z,11nm,0.5s
KSRS Korea Array 11.07 8 P **Pn 07 29 09.4 +0.4**
0.2nm,0.3s,baz=180,slow=13,SNR=5.1
JHJ Hachijo jima 2 13.61 58 LR LR 07 34 43.0
comp=Z,25nm,18.4s,baz=102,slow=36
JCJ Chichijima 14.39 84 LR LR 07 34 25.7
comp=Z,44nm,19.9s,baz=52,slow=33
MJAR Matsushiro Arr 14.40 43 P **P 07 29 56.7 +1.1**
0.1nm,0.3s,baz=178,slow=8.3,SNR=3.8
CD2 Chengdu 20.08 288 P **P 07 30 56.6 -1.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
KMI Kunming 21.06 272 P **P 07 31 06.0 -2.8**
KMI pmax pmax
comp=Z,22nm,0.9s
KMI pmax pmax
comp=Z,130nm,4.7s
LZH Lanzhou 21.25 302 *e*P **P 07 31 11.3 +0.6**
LZH pP pP 07 31 36.0 +2.1
LZH sP sP 07 31 51.5 +1.7
LZH pmax pmax
comp=Z,16nm,1.1s
GTA Gaotai 25.45 307 *e*P **P 07 31 52.1 +1.4**
GTA pmax pmax
comp=Z,2.0nm,0.8s
CMAR Chiang Mai Arr 26.28 258 P **P 07 32 03.0 +4.8**
0.6nm,0.3s,baz=118,slow=9.3,SNR=2.7
CMAR PcP **PcP 07 35 21.8 +0.4**
0.8nm,0.5s,baz=34,slow=1.1,SNR=6.0
SONM Songino Array 26.34 329 P **P 07 31 58.8 +0.2**
0.9nm,0.4s,baz=146,slow=11,SNR=9.6
SONM PcP **PcP 07 35 22.1 +0.9**
0.6nm,0.5s,baz=139,slow=3.3,SNR=3.8
WMQ Urumqi 35.48 309 *e*P **P 07 33 20.8 +2.0**
WMQ pmax pmax
comp=Z,7.0nm,0.8s
WMQ pmax pmax
comp=Z,42nm,4.7s
WMQ LR LR
comp=N,430nm,29.2s
WMQ LR LR
comp=E,1μm,29.3s
WMQ LR LR
comp=Z,39nm,19.1s
MK31 Makanchi Array 39.95 312 P **P 07 33 55.4 -0.9**
MK31 **PcP 07 35 59.7 +0.5**
MKAR Makanchi Array 39.95 312 P **P 07 33 55.2 -1.1**
1.1nm,0.4s,baz=92,slow=10,SNR=30
MKAR PcP **PcP 07 35 59.2 +0.1**
2.4nm,0.6s,baz=86,slow=3.4,SNR=18
MKAR ScP **ScP 07 39 36.4 -0.2**
0.3nm,0.7s,baz=112,slow=4.0,SNR=4.4
MAKZ Makanchi 40.16 312 P **P 07 33 56.3 -1.8**
MAKZ **PcP 07 35 59.9 +0.1**
ZALV Zalesovo Beam 40.91 323 P **P 07 34 02.9 -1.1**
1.5nm,0.4s,baz=114,slow=8.8,SNR=7.1
ZALV PcP **PcP 07 36 01.4 -0.7**
0.8nm,0.4s,baz=121,slow=5.5,SNR=4.4
KNRA Kununurra 41.97 176 P **P 07 34 11.8 -1.2**
KNRA IAmb IAmb 07 34 12.2
comp=Z,11nm,1.1s
KURK Kurchatov 43.33 317 P **P 07 34 24.0 +0.3**
COEN Coen 43.48 156 P **P 07 34 25.1 -0.1**
COEN IAmb IAmb 07 34 26.6
comp=Z,6.1nm,0.9s
FITZ Fitzroy Crossi 44.30 181 P **P 07 34 31.6 -0.2**
comp=Z,5.4nm,0.8s,baz=360,slow=7.6,SNR=9.3
FITZ Fitzroy Crossi 44.30 181 P **P 07 34 31.7 0.0**
FITZ IAmb IAmb 07 34 32.4
comp=Z,4.7nm,0.8s
TIXI Tiksi 45.25 1 PcP **PcP 07 36 16.3 0.0**
comp=Z,1.6nm,0.6s,baz=237,slow=2.0,SNR=6.9
WB0 Warramunga Arr 46.66 169 P **P 07 34 50.2 -0.1**
WRA Warramunga Arr 46.82 169 P **P 07 34 50.7 -0.9**
comp=Z,1.6nm,0.5s,baz=350,slow=8.2,SNR=11
WR0 Warramunga Arr 46.87 169 P **P 07 34 51.9 -0.1**
KK31 Karatay Array 47.71 305 P **P 07 34 58.5 +0.1**
KK31 **PcP 07 36 26.0 +0.3**
KKAR Karatay Array 47.71 305 P **P 07 34 58.1 -0.2**
KKAR **PcP 07 36 26.0 +0.3**
BVAR Borovoye Array 48.83 318 P **P 07 35 06.7 0.0**
comp=Z,1.0nm,0.3s,baz=98,slow=8.7,SNR=12
BVAR PcP **PcP 07 36 29.4 -0.1**
comp=Z,4.0nm,0.7s,baz=92,slow=4.5,SNR=17
BRVK Borovoye 48.89 319 P **P 07 35 07.6 +0.3**
BRVK IAmb IAmb 07 35 08.5
comp=Z,1.9nm,0.5s
AS31 Alice Springs 50.40 171 P **P 07 35 18.1 -0.9**
ASAR Alice Springs 50.41 171 P **P 07 35 19.2 +0.3**
comp=Z,2.0nm,0.6s,baz=358,slow=14,SNR=43
ASAR PcP **PcP 07 36 35.1 -0.5**
comp=Z,0.8nm,0.8s,baz=355,slow=2.5,SNR=5.2
ABKAR Akbulak array 55.09 313 P **P 07 35 53.4 +0.2**
ABKAR IAmb IAmb 07 35 53.8
comp=Z,4.1nm,0.6s
MORW Morawa 56.05 191 P **P 07 36 00.6 +0.4**
AKTO Aktyubinsk 56.30 315 P **P 07 36 03.3 +1.5**
comp=Z,1.2nm,0.6s,baz=94,slow=11,SNR=4.3
ANM Nome 57.22 29 P **P 07 36 08.7 +0.7**
ANM IAmb IAmb 07 36 18.4
comp=Z,7.8nm,1.4s
GEYT Alibeck 57.51 300 P **P 07 36 11.3 +0.8**
comp=Z,1.9nm,0.7s,baz=225,slow=57,SNR=3.2
BBOO Buckleboo 59.70 170 P **P 07 36 26.0 +0.4**
STKA Stephens Creek 59.87 165 P **P 07 36 27.1 +0.4**
comp=Z,3.6nm,0.6s,baz=351,slow=6.8,SNR=17
STKA Stephens Creek 59.87 165 P **P 07 36 26.9 +0.1**
PPLA Purkeypile 63.06 31 P **P 07 36 48.6 +0.6**
SKT Skwentna 63.46 32 P **P 07 36 50.3 -0.2**
SKT IAmb IAmb 07 37 00.5
comp=Z,10nm,1.3s
BPAW Bear Paw Mtn. 63.47 29 P **P 07 36 51.1 +0.6**
BPAW IAmb IAmb 07 37 00.1
comp=Z,4.7nm,1.2s
MLY Manley 63.48 28 P **P 07 36 50.3 -0.4**
MLY IAmb IAmb 07 37 07.0
comp=Z,7.8nm,1.4s
KTH Kantishna Hill 63.56 30 P **P 07 36 51.5 +0.2**
KTH IAmb IAmb 07 37 08.5
comp=Z,14nm,1.4s
TRF Thorofare Moun 63.85 30 P **P 07 36 53.9 +0.6**
SUA Susitna One 63.90 32 P **P 07 36 53.5 -0.1**
SUA IAmb IAmb 07 36 54.7
comp=Z,9.7nm,0.9s
BRLK Bradley Lake 64.06 34 P **P 07 36 54.0 -0.6**
RND Reindeer 64.50 30 P **P 07 36 57.3 -0.1**
MDM Murphy Dome 64.55 28 P **P 07 36 58.5 +0.9**
PMR Palmer 64.64 32 P **P 07 36 57.1 -1.1**
PMR IAmb IAmb 07 37 02.4
comp=Z,5.8nm,1.1s
GHO Glory Hole Cre 64.71 32 P **P 07 36 58.7 -0.1**
CCB Clear Creek Bu 64.77 28 P **P 07 36 59.4 +0.4**
CCB IAmb IAmb 07 37 01.2
comp=Z,3.7nm,1.2s
SML Sawmill 64.98 32 P **P 07 37 01.1 +0.5**
KNK Knik Glacier 64.99 32 P **P 07 37 00.1 -0.4**
IL31 65.14 28 P **P 07 37 01.6 +0.3**
IL31 IAmb IAmb 07 37 11.1
comp=Z,7.1nm,1.5s
ILAR Eielson Array 65.14 28 P **P 07 37 00.3 -1.1**
comp=Z,0.4nm,0.5s,baz=238,slow=5.2,SNR=14
HDA Harding Lake 65.17 29 P **P 07 37 01.6 -0.1**
SCM Sheep Creek Mo 65.45 31 P **P 07 37 03.6 +0.1**
FYU Fort Yukon 65.51 26 P **P 07 37 04.6 +0.9**
FYU IAmb IAmb 07 37 13.3
comp=Z,6.7nm,1.4s
FID Port Fidalgo 66.06 32 P **P 07 37 07.4 0.0**
PAX Paxson 66.08 30 P **P 07 37 08.9 +1.2**
PAX IAmb IAmb 07 37 09.7
comp=Z,3.2nm,0.9s
RAGM Ragged Mountai 67.01 33 P **P 07 37 14.3 +0.8**
GLB Gilahina Butte 67.17 31 P **P 07 37 14.8 +0.3**
GLB IAmb IAmb 07 37 14.9
comp=Z,5.6nm,1.1s
VRDI Verde Repeater 67.39 32 P **P 07 37 16.2 +0.1**
VRDI IAmb IAmb 07 37 29.7
comp=Z,5.9nm,1.1s
MCARA McCarthy VSAT 67.56 31 P **P 07 37 16.3 -0.6**
TGL Tana Glacier 67.80 32 P **P 07 37 17.6 -0.9**
BALM Baldy 67.96 32 P **P 07 37 19.8 +0.2**
BALM IAmb IAmb 07 37 25.5
comp=Z,9.1nm,1.1s
BARN Barnard Glacie 68.28 32 P **P 07 37 21.9 +0.2**
BARN IAmb IAmb 07 37 21.9
comp=Z,12nm,1.4s
CTGM Chitina Glacie 68.45 32 P **P 07 37 23.3 +0.6**
CTGM IAmb IAmb 07 37 23.6
comp=Z,4.9nm,0.9s
DAWY Dawson 68.47 28 P **P 07 37 22.9 +0.3**
DAWY IAmb IAmb 07 37 25.9
comp=Z,5.6nm,1.4s
SOCY Socotra 68.76 273 P **P 07 37 24.2 -1.0**
SOCY IAmb IAmb 07 37 24.8
comp=Z,11nm,0.9s
EPYK Eagle Plains 68.88 25 P **P 07 37 25.6 +0.5**
EPYK IAmb IAmb 07 37 26.1
comp=Z,9.3nm,0.7s
ARCES ARCESS Array B 69.08 338 P **P 07 37 24.8 -1.4**
comp=Z,2.7nm,0.7s,baz=49,slow=6.2,SNR=7.3
ARCES PcP **PcP 07 37 48.9 -0.6**
comp=Z,4.6nm,1.1s,baz=72,slow=5.2,SNR=5.4
INK Inuvik 69.43 23 P **P 07 37 28.6 +0.3**
comp=Z,3.2nm,0.7s,baz=292,slow=7.0,SNR=15
INK Inuvik 69.43 23 P **P 07 37 28.8 +0.4**
INK IAmb IAmb 07 37 29.4
comp=Z,4.0nm,0.9s
HYT Haines Junctio 70.28 31 P **P 07 37 35.0 +1.1**
HYT IAmb IAmb 07 37 36.2
comp=Z,8.6nm,1.3s
WHY Whitehorse 71.55 31 P **P 07 37 42.4 +0.8**
FIA1 FINESS Array S 71.71 330 P **P 07 37 41.7 -0.6**
FINES FINESS Array B 71.71 330 P **P 07 37 41.6 -0.7**
comp=Z,1.3nm,0.4s,baz=55,slow=5.7,SNR=22
RAYN Ar Rayn 71.91 288 P **P 07 37 44.6 +0.3**
C36M Paulatuk 72.15 21 P **P 07 37 44.8 -0.1**
C36M IAmb IAmb 07 37 45.2
comp=Z,9.3nm,0.9s
AKASG Malin Array Be 74.10 319 P **P 07 37 55.3 -1.3**
comp=Z,0.7nm,0.4s,baz=57,slow=6.8,SNR=6.7
BR131 Keskin Array S 75.37 307 P **P 07 38 04.3 0.0**
BRTR Keskin Array B 75.37 307 P **P 07 38 04.0 -0.4**
comp=Z,2.2nm,0.7s,baz=109,slow=5.8,SNR=9.8
RES Resolute Bay 75.67 10 P **P 07 38 05.1 -0.1**
RES IAmb IAmb 07 38 05.6
comp=Z,3.6nm,0.8s
BUR08 Bucovina Ar. S 77.76 317 P **P 07 38 17.3 -0.3**
NC405 NORSAR Array S 78.00 333 P **P 07 38 17.9 -0.7**
NC405 IAmb IAmb 07 38 29.2
comp=Z,12nm,1.0s
NOA NORSAR Array B 78.25 333 P **P 07 38 18.3 -1.6**
comp=Z,0.4nm,0.5s,baz=43,slow=7.0,SNR=3.3
NC204 NORSAR Array S 78.30 334 P **P 07 38 19.8 -0.4**
YKA Yellowknife Ar 79.11 24 P **P 07 38 24.6 0.0**
comp=Z,4.2nm,0.7s,baz=301,slow=5.4,SNR=43
VYHS Vyhne 81.14 320 *e*P **P 07 38 35.9 +0.1**
CLL Collm 82.85 324 *e*P **P 07 38 45.0 +0.4**
GERES GERESS Array B 83.84 322 P **P 07 38 48.9 -1.0**
comp=Z,0.3nm,0.3s,baz=25,slow=4.7,SNR=4.7
FFC Flin Flon 89.22 26 P **P 07 39 16.0 +0.2**
FFC IAmb IAmb 07 39 16.5
comp=Z,3.4nm,0.8s
NVAR Mina Array Bea 91.72 45 P **P 07 39 28.9 +0.8**
comp=Z,0.2nm,0.4s,baz=296,slow=4.9,SNR=2.8

IDC 24 07:30:20.7±2.9,**1°.46N**×**126°.51E,h0**km,**mb3.4**/3, **mb1 3.7**/3,**mb1mx3.3**/48,**mbtmp3.5**/3,**Error ellipse: s-maj=318.9km s-min=25.1km az=66.0,Northern Molucca Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 22.62 161 P P 07 35 21.8 -1.5
2.0nm,0.6s,baz=337,slow=9.5,SNR=9.0
ASAR Alice Springs 25.99 164 P P 07 35 56.1 +0.7
0.5nm,0.3s,baz=350,slow=10,SNR=5.0
MKAR Makanchi Array 59.29 326 P P 07 40 24.7 +0.3
0.1nm,0.4s,baz=128,slow=7.2,SNR=4.1

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*NIED **24** 07:39:00,38°.80N×141°.60E,h68km,Mw3.9 Best double couple: $M_0 6.76000\times10^{14}$ NP1:ϕ_s208.00000°,δ55.00000°, λ72.00000°. NP2:ϕ_s58.00000°,δ39.00000°,λ114.00000°.*
*JMA **24** 07:39:17.9,38°.79N×141°.60E,h69km±1km,M3.9 Broadband fault plane solution: P waves. NP1: ϕ_s73.00000°,δ44.00000°,λ122.00000°. NP2: ϕ_s212.00000°,δ54.00000°,λ63.00000°. Principal axes: T Plg68.0000°, Azm64.0000°; N Plg21.0000°, Azm229.0000°; P Plg5.0000°, Azm321.0000°;*
JMA Felt II J1.
*NEIC **24** 07:39:17.5±2.7,38°.75N±0°.06×141°.7E±0°.1,h66km±7km, mb4.3/8 Error ellipse: s-maj=14.3km s-min=7.3km az=118.0*
*IDC **24** 07:39:18.6±1.7,38°.78N×141°.51E,h74km±15km,mb3.6/19, mb1 3.8/25,mb1mx3.7/51,mbtmp4.0/25,MS2.4/3, Ms1 2.4/3,ms1mx2.2/46,Error ellipse: s-maj=15.0km s-min=11.1km az=112.0*
ISC 24 07:39:17.9±0.7,**38°.76N**±0°.03×**141°.64E**±0°.06,**h69**km±5km, **n64**,σ1§**15**/81,**mb4.1**/24,**7C-4D,Near east coast of eastern Honshu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JKMT Kesennumamotoy 0.14 294 ⇑P **Pn 07 39 28.2 0.0**
JKMT S **Sn 07 39 35.5 -0.2**
OFUJ Ofunato 0.33 5 ⇑P **Pn 07 39 29.0 -0.2**
OFUJ S **Sn 07 39 37.0 -0.5**
JIO Ouri 0.38 217 ⇑P **Pn 07 39 29.7 +0.1**
JIO S **Sn 07 39 38.2 +0.1**
JMK Ichinoseki 0.38 301 ⇑P **Pn 07 39 29.2 -0.4**
JMK S **Sn 07 39 37.3 -0.9**
JOM Ohasama 0.77 340 ⇓P **Pn 07 39 33.1 -0.4**
JOM S **Sn 07 39 44.2 -0.9**
JOU Okura 0.86 243 ⇑P **Pn 07 39 34.7 +0.1**
JOU S **Sn 07 39 47.3 +0.3**
JRG Rokugo 1.01 310 ⇓P **Pn 07 39 36.1 -0.4**
JRG S **Sn 07 39 50.0 -0.3**
JYK Kaneyama 1.01 280 P **Pn 07 39 36.4 -0.1**
JYK S **Sn 07 39 50.3 0.0**
JMM Marumori 1.11 217 ⇑P **Pn 07 39 37.5 -0.2**
JMM S **Sn 07 39 52.1 -0.4**
JYS Shirataka 1.34 247 ⇑P **Pn 07 39 41.2 +0.4**
JYS S **Sn 07 39 58.7 +0.7**
JFK Kawauchi 1.51 204 P **Pn 07 39 43.4 +0.3**
JFK S **Sn 07 40 02.1 +0.1**
JYA Atsumi 1.51 264 P **Pn 07 39 43.2 +0.2**
JYA *e*S **Sn 07 40 02.4 +0.4**
JFT Otama 1.60 220 P **Pn 07 39 45.3 +1.0**
JFT S **Sn 07 40 06.3 +2.1**
JANG Nango 1.62 357 ⇓P **Pn 07 39 43.5 -1.0**
JANG *e*S **Sn 07 40 03.4 -1.1**
JAH Hinai 1.63 332 ⇓P **Pn 07 39 44.5 -0.1**
JAH *e*S **Sn 07 40 05.5 +0.8**
ERM Erimo 3.46 19 Pn **Pn 07 40 08.1 -1.3**
ERM Sn **Sn 07 40 48.2 -0.8**
MJAR Matsushiro Arr 3.50 232 P **Pn 07 40 11.6 +1.6**
0.5nm,0.3s,baz=36,slow=12,SNR=18
MJAR S Sn 07 40 38.0 -12
0.6nm,0.3s,baz=49,slow=12,SNR=7.9
MJAR LR LR 07 41 40.3
comp=Z,47nm,19.4s,baz=125,slow=41
MAJO Matsushiro 3.50 232 **Pn 07 40 11.7 +1.7**
MAJO Sn **Sn 07 40 48.1 -2.2**
MAT Matsushiro 3.50 232 P **Pn 07 40 11.8 +1.8**
MAT *e*S **Sn 07 40 46.4 -3.9**
MJB9 Matsu-Tunnel 3.50 232 **Pn 07 40 11.8 +1.8**
MJB9 Sn **Sn 07 40 48.2 -2.1**
ASAJ Asahikawa 5.41 7 P **Pn 07 40 34.5 -1.4**
4.2nm,0.3s,baz=225,slow=9.6,SNR=19
ASAJ S **Sn 07 41 37.5 +0.7**
1.9nm,0.3s,baz=12,slow=25,SNR=2.6
ASAJ LR LR 07 43 17.4
comp=Z,36nm,20.2s,baz=35,slow=44
JKA Kamikawa-asahi 5.41 7 **Pn 07 40 34.5 -1.4**
JKA **Sn 07 41 37.5 +0.7**
JHJ Hachijo jima 2 5.82 196 P **Pn 07 40 41.2 -0.5**
7.3nm,0.3s,baz=149,slow=24,SNR=7.2
JHJ S **Sn 07 41 43.4 -3.6**
15nm,0.3s,baz=294,slow=22,SNR=4.0
JHJ2 Mitsune 5.82 195 Pn **Pn 07 40 41.1 -0.5**
JHJ2 Sn **Sn 07 41 43.4 -3.6**
USA0B Ussuriysk Arra 9.05 310 **Pn 07 41 26.1 +0.4**
USRK Ussuriysk Ar. 9.05 310 P **Pn 07 41 26.1 +0.4**
baz=122,slow=13,SNR=25
KSRS Korea Array 10.88 267 P **Pn 07 41 52.5 +1.8**
0.5nm,0.3s,baz=81,slow=14,SNR=14
KSRS LR LR 07 45 26.7
comp=Z,24nm,21.8s,baz=130,slow=34
KLR Kul'dur 12.65 329 P **Pn 07 42 14.8 0.0**
0.1nm,0.3s,baz=136,slow=18,SNR=2.5
MA2 Magadan 21.64 13 P **P 07 44 02.7 +0.5**
3.2nm,0.6s,baz=202,slow=11,SNR=4.8
MA2 Magadan 21.64 13 P **P 07 44 02.7 +0.5**
SEY Seymchan 25.07 12 P **P 07 44 36.5 +0.9**
0.6nm,0.4s,baz=217,slow=12,SNR=4.5
SONM Songino Array 27.01 301 P **P 07 44 52.9 -0.5**
0.5nm,0.6s,baz=66,slow=7.0,SNR=2.7
H11N2 WAKE ISLAND Hy 28.92 124 T T 08 15 31.9
baz=316,slow=75,SNR=424
H11N1 WAKE ISLAND Hy 28.93 124 T T 08 15 35.9
baz=316,slow=75,SNR=904
H11N3 WAKE ISLAND Hy 28.93 124 T T 08 15 36.8
baz=316,slow=75,SNR=731
H11S1 WAKE ISLAND Hy 29.68 126 T T 08 16 33.6
baz=318,slow=76,SNR=258
H11S3 WAKE ISLAND Hy 29.68 126 T T 08 16 31.2
baz=318,slow=76,SNR=352
H11S2 WAKE ISLAND Hy 29.70 126 T T 08 16 36.8
baz=318,slow=76,SNR=276
TIXI Tiksi 33.61 353 P **P 07 45 50.2 -0.9**
1.1nm,0.3s,baz=182,slow=4.2,SNR=2.2
ZALV Zalesovo Beam 40.90 311 P **P 07 46 52.4 -0.7**
4.1nm,0.7s,baz=87,slow=8.3,SNR=9.9
MK31 Makanchi Array 43.37 301 P **P 07 47 12.6 -0.8**
MK31 IAmb IAmb 07 47 13.4
comp=Z,4.3nm,0.7s
MKAR Makanchi Array 43.37 301 P **P 07 47 12.4 -0.9**
comp=Z,5.6nm,0.7s,baz=86,slow=9.9,SNR=55
MAKZ Makanchi 43.58 301 P **P 07 47 14.1 -0.9**
MAKZ IAmb IAmb 07 47 15.2
comp=Z,4.5nm,0.8s
KURK Kurchatov 45.03 307 P **P 07 47 25.5 -0.9**
KURBB Kurchatov Arra 45.10 307 P **P 07 47 26.2 -0.8**
comp=Z,7.2nm,0.4s,baz=82,slow=8.4,SNR=50
ILAR Eielson Array 47.95 33 P **P 07 47 49.1 -0.1**
comp=Z,0.4nm,0.6s,baz=262,slow=5.4,SNR=5.7
BVAR Borovoye Array 49.56 311 P **P 07 48 00.7 -0.9**
comp=Z,1.1nm,0.5s,baz=74,slow=8.6,SNR=9.3
KK31 Karatay Array 52.43 299 P **P 07 48 23.2 -0.1**
KK31 IAmb IAmb 07 48 26.3
comp=Z,4.5nm,1.4s
KKAR Karatay Array 52.43 299 P **P 07 48 23.4 +0.1**
KKAR IAmb IAmb 07 48 26.3
comp=Z,4.5nm,1.4s
INK Inuvik 52.78 28 P **P 07 48 26.1 +0.6**
comp=Z,0.6nm,0.6s,baz=318,slow=7.3,SNR=4.4
INK Inuvik 52.78 28 P **P 07 48 26.4 +0.9**
ARU Arti 55.20 318 P **P 07 48 42.4 -0.9**
comp=Z,2.9nm,0.2s,baz=306,slow=23,SNR=5.0
ABKAR Akbulak array 56.98 309 P **P 07 48 55.0 -1.1**
AKTO Aktyubinsk 57.67 311 P **P 07 48 59.5 -1.4**
comp=Z,1.0nm,0.5s,baz=62,slow=13,SNR=4.5

WRA	**Warramunga Arr**	**58.79**	**188**	P	**P**	**07 49 08.7**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=2.1,slow=6.8,SNR=6.2						
YKA	**Yellowknife Ar**	**62.24**	**31**	P	**P**	**07 49 32.8**	**+0.8**
	comp=Z,0.1nm,0.4s,baz=297,slow=5.9,SNR=3.8						
ASAR	**Alice Springs**	**62.51**	**188**	P	**P**	**07 49 33.8**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=7.2,slow=5.7,SNR=7.0						
FINES	**FINESS Array B**	**67.38**	**332**	P	**P**	**07 50 04.9**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=5.2,slow=6.3,SNR=3.6						
AKASG	**Malin Array Be**	**73.05**	**322**	P	**P**	**07 50 41.4**	**+1.1**
	comp=Z,0.6nm,0.4s,baz=46,slow=6.4,SNR=4.2						
NVAR	**Mina Array Bea**	**73.82**	**54**	P	**P**	**07 50 46.5**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=290,slow=5.7,SNR=8.3						
PDAR	**Pinedale Array**	**76.34**	**46**	P	**P**	**07 51 00.2**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=279,slow=2.4,SNR=7.4						
TXAR	**Lajitas Array**	**88.93**	**53**	P	**P**	**07 52 05.6**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=276,slow=3.5,SNR=7.0						
LPAZ	**La Paz**	**145.65**	**58**	PKPbc	**PKPab**	**07 58 50.5**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=328,slow=4.4,SNR=7.6						
LPAZ	**La Paz**	**145.65**	**58**		**PKPdf**	**07 58 49.3**	**-0.2**

*JMA **24** 07:52:02.8±0.2, 34°.53N×140°.22E, h51km±3km, M3.3*
*IDC **24** 07:52:03.2±1.4, 34°.51N×140°.31E, h48km±15km, mb3.4/9, mb1 3.6/13, mb1mx3.4/59, mbtmp3.7/13, ML3.5/4, MS2.9/7, Ms1 2.9/7, ms1mx2.7/33, Error ellipse: s-maj=21.4km s-min=6.2km az=79.0*
ISC 24 07:52:03.6±0.9**, 34°.54N**±0°.04×**140°.22E**±0°.04**, h51**km±8km**, n40,** σ**0s.94**/42**, mb3.6**/9**, MS3.0**/3**, 4C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	**Boso 3**	**0.36**	**42**	⇑P	**Pn**	**07 52 12.7**	**-0.4**
BSO4	**Boso 4**	**0.46**	**12**	P	**Pn**	**07 52 14.3**	**-0.1**
TATJ	**Tateyama 2**	**0.56**	**331**	P	**Pn**	**07 52 15.6**	**-0.1**
TATJ				*e*S	**Sn**	**07 52 25.4**	**+1.0**
KTR	**Katsuura**	**0.62**	**7**	P	**Pn**	**07 52 15.7**	**-0.6**
KTR				S	**Sn**	**07 52 25.1**	**-0.4**
JKUC	**kamogawauchiur**	**0.62**	**358**	P	**Pn**	**07 52 16.0**	**-0.4**
JKUC				S	**Sn**	**07 52 25.5**	**-0.2**
BSO1	**Boso 1**	**0.64**	**79**	⇑P	**Pn**	**07 52 15.2**	**-0.8**
BSO1				X		07 52 24.8	
JIM2	**Oshima 3**	**0.68**	**286**	⇑P	**Pn**	**07 52 16.2**	**-0.9**
JIM2				S	**Sn**	**07 52 25.8**	**-1.1**
JTHY	**Toshimahigashi**	**0.77**	**269**	P	**Pn**	**07 52 18.2**	**-0.1**
JTHY				S	**Sn**	**07 52 29.2**	**+0.2**
JMKN	**Mikurajimanish**	**0.83**	**219**	P	**Pn**	**07 52 18.6**	**-0.5**
JMKN				S	**Sn**	**07 52 29.9**	**-0.5**
JKO	**Kozu shima**	**0.96**	**249**	P	**Pn**	**07 52 20.7**	**-0.2**
KTJ3	**Kamata3**	**1.03**	**293**	P	**Pn**	**07 52 20.5**	**-1.2**
KTJ3				S	**Sn**	**07 52 33.1**	**-2.0**
JIZS	**Izushimoda**	**1.12**	**280**	P	**Pn**	**07 52 22.3**	**-0.7**
JOD2	**Odawara 2**	**1.18**	**308**	⇑P	**Pn**	**07 52 22.6**	**-1.2**
JOD2				*e*S	**Sn**	**07 52 37.4**	**-1.5**
JFNN	**Fujinakano**	**1.42**	**298**	P	**Pn**	**07 52 26.5**	**-0.6**
JFNN				S	**Sn**	**07 52 44.2**	**-0.5**
JHJ	**Hachijo jima 2**	**1.46**	**195**	P	**Pn**	**07 52 27.4**	**-0.2**
	212nm,0.3s,baz=339,slow=2.9,SNR=57						
JHJ				S	**Sn**	**07 52 44.8**	**-0.8**
	252nm,0.3s,baz=93,slow=21,SNR=16						
JHJ				LR	LR	07 52 54.8	
	comp=Z,67nm,19.2s,baz=68,slow=36						
JHJ2	**Mitsune**	**1.46**	**193**	P	**Pn**	**07 52 27.2**	**-0.4**
MJAR	**Matsushiro Arr**	**2.59**	**321**	P	**Pn**	**07 52 43.1**	**+0.1**
	2.4nm,0.3s,baz=145,slow=11,SNR=97						
MJAR				S	**Sn**	**07 53 14.2**	**+0.9**
	2.8nm,0.3s,baz=141,slow=22,SNR=28						
MJAR				LR	LR	07 53 55.6	
	comp=Z,65nm,21.8s,baz=175,slow=43						
MAT	**Matsushiro**	**2.59**	**321**	P	**Pn**	**07 52 43.5**	**+0.4**
MAT				S	**Sn**	**07 53 12.6**	**-0.7**
JCJ	**Chichijima**	**7.61**	**167**	P	**Pn**	**07 53 51.0**	**-0.8**
	3.3nm,0.3s,baz=349,slow=21,SNR=2.8						
JNU	**Nakatsue**	**7.90**	**262**	P	**Pn**	**07 53 56.6**	**+0.7**
	0.8nm,0.3s,baz=110,slow=2.0,SNR=5.3						
JNU				LR	LR	07 57 15.2	
	comp=Z,58nm,19.6s,baz=43,slow=39						
KSRS	**Korea Array**	**10.38**	**290**	P	**Pn**	**07 54 32.5**	**+2.8**
	0.2nm,0.3s,baz=103,slow=13,SNR=7.7						
KSRS				LR	LR	07 58 24.8	
	comp=Z,30nm,19.6s,baz=95,slow=36						
USRK	**Ussuriysk Ar.**	**11.56**	**329**	LR	LR	07 58 59.1	
	comp=Z,45nm,21.1s,baz=11,slow=36						
PETK	**Petropavlovsk-**	**22.34**	**28**	LR	LR	08 07 18.5	
	comp=Z,30nm,18.8s,baz=78,slow=41						
H11N2	**WAKE ISLAND Hy**	**27.84**	**115**	T	T	08 27 33.1	
	baz=308,slow=75,SNR=3.2						
H11N1	**WAKE ISLAND Hy**	**27.84**	**115**	T	T	08 27 33.3	
	baz=308,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**27.85**	**115**	T	T	08 27 35.1	
	baz=308,slow=75,SNR=3.5						
H11S3	**WAKE ISLAND Hy**	**28.45**	**117**	T	T	08 28 19.6	
H11S1	**WAKE ISLAND Hy**	**28.45**	**117**	T	T	08 28 17.5	
	baz=313,slow=74,SNR=3.2						
H11S2	**WAKE ISLAND Hy**	**28.46**	**117**	T	T	08 28 19.5	
	baz=16,slow=74,SNR=3.6						
SONM	**Songino Array**	**28.47**	**308**	P	**P**	**07 57 55.0**	**+1.2**
	0.2nm,0.4s,baz=121,slow=10,SNR=2.3						
CMAR	**Chiang Mai Arr**	**39.96**	**257**	LR	LR	08 17 52.8	
	comp=Z,22nm,18.7s,baz=160,slow=39						
KAPI	**Kappang**	**43.82**	**210**	LR	LR	08 16 17.4	
	comp=Z,135nm,20.4s,baz=338,slow=33						
MKAR	**Makanchi Array**	**44.67**	**304**	P	**P**	**08 00 10.8**	**-0.5**
	0.6nm,0.5s,baz=86,slow=9.6,SNR=18						
BVAR	**Borovoye Array**	**51.56**	**314**	P	**P**	**08 01 04.8**	**+0.5**
	0.4nm,0.6s,baz=82,slow=11,SNR=4.1						
ILAR	**Eielson Array**	**52.12**	**31**	P	**P**	**08 01 06.7**	**-1.7**
	0.5nm,0.8s,baz=266,slow=6.4,SNR=6.7						
WRA	**Warramunga Arr**	**54.46**	**187**	P	**P**	**08 01 25.3**	**-0.7**
	2.0nm,0.6s,baz=3.0,slow=7.6,SNR=4.2						
INK	**Inuvik**	**57.05**	**26**	P	**P**	**08 01 43.9**	**0.0**
	0.3nm,0.7s,baz=291,slow=3.0,SNR=2.4						
ASAR	**Alice Springs**	**58.19**	**187**	P	**P**	**08 01 52.7**	**+0.2**
	0.6nm,1.0s,baz=16,slow=13,SNR=7.6						
YKA	**Yellowknife Ar**	**66.45**	**29**	P	**P**	**08 02 46.6**	**-0.7**
	0.1nm,0.6s,baz=54,slow=7.7,SNR=3.4						
NVAR	**Mina Array Bea**	**77.27**	**52**	P	**P**	**08 03 53.7**	**+0.8**
	0.9nm,0.8s,baz=290,slow=6.2,SNR=8.5						

TAP 24 07:58:09.6, 21°.13N×121°.95E, h169km, ML3.8, 1D, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.98**	**338**	P	Pn	07 58 35.7	-0.3
	baz=338						
LAY				S	Sn	07 58 54.8	-1.6
	baz=338						
TSEB	**Hengchuen, Pin**	**1.24**	**308**	P	Pn	07 58 38.9	+0.8
	baz=303						
TSEB				S	Sn	07 59 01.2	+1.0
	baz=303						
TWKBT	**Hengchun**	**1.33**	**307**	P	Pn	07 58 39.3	+0.3
	baz=304						
TWKBT				S	Sn	07 59 01.2	-0.4
	baz=304						
TWK1	**Hengchun**	**1.34**	**307**	P	Pn	07 58 39.2	+0.2
	baz=304						
TWK1				S	Sn	07 59 01.0	-0.8
	baz=304						
HEN	**Hengchun**	**1.43**	**308**	*e*P	Pn	07 58 39.9	0.0
	baz=301						
HEN				S	Sn	07 59 02.9	-0.3
	baz=301						
TAW	**Tawu**	**1.57**	**321**	P	Pn	07 58 40.9	-0.4
	baz=321						
TAW				*e*S	Sn	07 59 04.4	-1.4
	baz=321						
EAST	**Anshuo**	**1.61**	**321**	*e*P	Pn	07 58 41.4	-0.4
	baz=321						
EAST				S	Sn	07 59 05.3	-1.4
	baz=321						
TWH	**Lutao**	**1.63**	**344**	*e*P	Pn	07 58 40.5	-1.4
	baz=348						
TWH				S	Sn	07 59 05.3	-1.7
	baz=348						
SCZT	**Fangliau**	**1.75**	**315**	*e*P	Pn	07 58 42.9	-0.2
	baz=321						
SCZT				S	Sn	07 59 08.1	-1.1
	baz=321						
SSPT	**Xinbi**	**1.86**	**317**	*e*P	Pn	07 58 45.0	+0.7
	baz=320						
SSPT				S	Sn	07 59 10.3	-0.9
	baz=320						
TWGBT	**Beinan**	**1.86**	**334**	*e*P	Pn	07 58 43.8	-0.6
	baz=329						
TWGBT				S	Sn	07 59 09.6	-1.8
	baz=329						
TWG	**Pinlang**	**1.87**	**334**	*e*P	Pn	07 58 44.0	-0.5
	baz=329						
TWG				*e*S	Sn	07 59 09.3	-2.2
	baz=329						
WLCH	**Liuqiu**	**1.90**	**310**	*e*P	Pn	07 58 46.2	+1.5
	baz=310						
WLCH				*e*S	Sn	07 59 13.9	+1.9
	baz=310						
MASBT	**Mashibuluo**	**1.92**	**320**	⇓P	Pn	07 58 45.1	+0.2
	baz=320						
MASBT				*e*S	Sn	07 59 10.8	-1.6
	baz=320						
SSD	**Sandimen**	**2.02**	**323**	P	Pn	07 58 46.3	+0.2
	baz=323						
SSD				*e*S	Sn	07 59 12.8	-1.7
	baz=323						
FULB	**Fuli**	**2.15**	**344**	*e*P	Pn	07 58 47.8	+0.3
	baz=339						
FULB				S	Sn	07 59 17.3	+0.3
	baz=339						
WSSB	**Gushan**	**2.17**	**314**	*e*P	Pn	07 58 48.8	+0.9
	baz=314						
WSSB				S	Sn	07 59 17.1	-0.4
	baz=314						
TWM1	**Shoushan**	**2.20**	**320**	*e*P	Pn	07 58 49.6	+1.5
	baz=313						
TWM1				*e*S	Sn	07 59 19.0	+0.9
	baz=313						
SNJT	**Kaohsiung City**	**2.21**	**317**	*e*P	Pn	07 58 48.8	+0.6
	baz=309						
SNJT				*e*S	Sn	07 59 18.5	+0.4
	baz=309						
SLGT	**Liugui**	**2.21**	**327**	*e*P	Pn	07 58 48.6	+0.4
	baz=333						
SLGT				S	Sn	07 59 17.6	-0.7
	baz=333						
ELDTW	**Lidau**	**2.23**	**337**	*e*P	Pn	07 58 48.9	+0.4
	baz=340						
TWF1	**Yuli**	**2.29**	**345**	*e*P	Pn	07 58 49.5	+0.3
	baz=335						
TWF1				S	Sn	07 59 19.1	-0.9
	baz=335						
STYT	**Tauyuan**	**2.31**	**331**	*e*P	Pn	07 58 49.9	+0.5
	baz=326						
STYT				S	Sn	07 59 19.4	-1.0
	baz=326						
SGST	**Jiashian**	**2.32**	**327**	*e*P	Pn	07 58 49.1	-0.4
	baz=327						
SGST				S	Sn	07 59 19.1	-1.5
	baz=327						
YULB	**Yu-li**	**2.33**	**345**	*e*P	Pn	07 58 49.2	-0.4
	baz=336						
YULB				S	Sn	07 59 19.4	-1.5
	baz=336						
HGSD	**Ruisui**	**2.40**	**348**	*e*P	Pn	07 58 51.6	+1.1
	baz=350						
HGSD				S	Sn	07 59 22.6	+0.3
	baz=350						
CHN1	**Nanshi**	**2.43**	**327**	*i* P	Pn	07 58 51.2	+0.3
	baz=327						
CHN1				*i* S	Sn	07 59 22.1	-0.8
	baz=327						
WTP	**Ta-pu**	**2.44**	**330**	P	Pn	07 58 51.3	+0.3
	baz=330						
WTP				*e*S	Sn	07 59 22.7	-0.5
	baz=330						
TPUB	**Ta-pu**	**2.48**	**331**	P	Pn	07 58 51.6	+0.2
	baz=330						
TPUB				S	Sn	07 59 22.4	-1.6
	baz=330						
TWK	**Hsinying**	**2.52**	**328**	P	Pn	07 58 52.0	+0.1
	baz=328						
TWK				S	Sn	07 59 23.2	-1.6
	baz=328						
YUS	**Yu-Shan**	**2.52**	**339**	P	Pn	07 58 53.1	+0.7
	baz=331						
YUS				S	Sn	07 59 26.1	+0.4
	baz=331						
CHN4	**Tsaushan**	**2.54**	**331**	P	Pn	07 58 52.3	+0.2
	baz=330						
CHN4				*e*S	Sn	07 59 24.1	-1.2
	baz=330						
SCLT	**Jiali**	**2.61**	**322**	*e*P	Pn	07 58 53.0	+0.2
	baz=327						
SCLT				*e*S	Sn	07 59 26.9	+0.3
	baz=327						
VWDT	**VWDT**	**2.72**	**344**	P	Pn	07 58 55.5	+1.3
	baz=347						
VWDT				S	Sn	07 59 28.2	-0.8
	baz=347						
SSLB	**Suanglung**	**2.80**	**341**	P	Pn	07 58 55.4	+0.1
	baz=333						
SSLB				S	Sn	07 59 29.7	-1.2
	baz=333						
OWD	**Renai**	**2.90**	**346**	P	Pn	07 58 57.6	+1.0
	baz=349						
OWD				*e*S	Sn	07 59 32.6	-0.7
	baz=349						
SMLT	**Sun Moon Lake**	**2.91**	**341**	*e*P	Pn	07 58 57.2	+0.6
	baz=333						
SMLT				S	Sn	07 59 31.9	-1.4
	baz=333						
TYC	**Yuchr**	**2.94**	**340**	*e*P	Pn	07 58 57.4	+0.4
	baz=333						
TYC				S	Sn	07 59 32.4	-1.5
	baz=333						
WDGT	**Dungji**	**3.00**	**315**	P	Pn	07 58 57.6	-0.1
	baz=315						
WDGT				*e*S	Sn	07 59 33.0	-2.2
	baz=315						
CHGB	**Renai**	**3.00**	**346**	*e*P	Pn	07 58 58.8	+0.8
	baz=349						
CHGB				*e*S	Sn	07 59 35.0	-0.6
	baz=349						
NACB	**Ninganchiao**	**3.05**	**354**	*e*P	Pn	07 58 58.1	-0.1
	baz=360						
NACB				*e*S	Sn	07 59 34.3	-1.9
	baz=360						
WHF	**Hehuan Shan**	**3.07**	**348**	*e*P	Pn	07 58 59.9	+1.0
	baz=354						
WHF				S	Sn	07 59 36.4	-0.9
	baz=354						
ETLH	**Xiulin Townshi**	**3.09**	**352**	*e*P	Pn	07 58 59.4	+0.5
	baz=346						
ETLH				*e*S	Sn	07 59 36.1	-1.3
	baz=346						
VCHM	**Qimei**	**3.12**	**312**	*e*P	Pn	07 58 58.5	-0.6
	baz=312						
VCHM				*e*S	Sn	07 59 35.4	-2.4
	baz=312						
PHUB	**P'eng-hu**	**3.24**	**318**	*e*P	Pn	07 59 00.3	-0.3
	baz=323						
PHUB				*e*S	Sn	07 59 38.2	-2.2
	baz=323						
WHP	**Taichung City**	**3.27**	**344**	*e*P	Pn	07 59 01.2	+0.1
	baz=337						
WHP				*e*S	Sn	07 59 41.3	0.0
	baz=337						
PNG	**Penghu**	**3.29**	**318**	*e*P	Pn	07 59 00.9	-0.3
	baz=324						
PNG				S	Sn	07 59 39.2	-2.3
	baz=324						
NNSB	**Datong**	**3.32**	**351**	*e*P	Pn	07 59 02.5	+0.7
	baz=351						
NNSB				*e*S	Sn	07 59 41.7	-0.9
	baz=351						
NNSH	**Datong**	**3.32**	**351**	*e*P	Pn	07 59 02.5	+0.6
	baz=355						
NNSH				*e*S	Sn	07 59 41.6	-1.0
	baz=355						
EOS1	**EOS1**	**3.41**	**3**	*e*P	Pn	07 59 02.9	+0.2
	baz=2.0						
YHNB	**Yeheng**	**3.56**	**352**	*e*P	Pn	07 59 05.6	+0.8
	baz=357						
YHNB				S	Sn	07 59 46.1	-1.8
	baz=357						
VWUC	**VWUC**	**4.48**	**329**	P	Pn	07 59 16.6	+0.1
	baz=329						
KNM	**Kinmen**	**4.61**	**316**	*e*P	Pn	07 59 19.0	+0.9
	baz=314						
PTMZ	**Houxiangcun**	**4.69**	**327**	*e*P	Pn	07 59 19.8	+0.6
	baz=326						
MATB	**Ma-tsu**	**5.33**	**340**	*e*P	Pn	07 59 27.1	-0.4
	baz=340						
MHZQ	**Yeshan**	**5.63**	**332**	*e*P	Pn	07 59 31.5	0.0
	baz=332						

*IDC **24** 08:13:36.4±1.0, 1°.96S×120°.35E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/30, mbtmp3.7/7, ML3.9/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/41, Error ellipse: s-maj=58.3km s-min=16.6km az=70.0*
ISC 24 08:13:42.7±1.0**, 1°.02S**±0°.09×**120°.4E**±0°.3**, h49**km**, n9,** σ**1s.81**/8**, mb3.7**/6**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**4.01**	**189**	Pn	**Pn**	**08 14 39.9**	**-1.8**
	7.6nm,0.3s,baz=351,slow=9.0,SNR=7.7						
KAPI				Sn	**Sn**	**08 15 29.2**	**+1.7**
	2.8nm,0.3s,baz=194,slow=23,SNR=3.4						
WRA	**Warramunga Arr**	**23.26**	**145**	P	**P**	**08 18 44.4**	**-1.7**
	2.9nm,1.1s,baz=329,slow=9.8,SNR=6.5						
ASAR	**Alice Springs**	**26.07**	**151**	P	**P**	**08 19 14.1**	**+2.2**
	0.4nm,0.7s,baz=344,slow=15,SNR=7.0						
JCJ	**Chichijima**	**34.97**	**35**	LR	LR	08 34 46.9	
	comp=Z,12nm,21.5s,baz=60,slow=36						
STKA	**Stephens Creek**	**36.66**	**149**	P	**P**	**08 20 45.3**	**+0.5**
	1.1nm,0.6s,baz=337,slow=12,SNR=5.1						
SONM	**Songino Array**	**50.16**	**348**	P	**P**	**08 22 34.2**	**+0.7**
	0.3nm,0.8s,baz=160,slow=4.6,SNR=3.1						
MKAR	**Makanchi Array**	**58.13**	**330**	P	**P**	**08 23 31.8**	**+0.3**
	0.4nm,0.6s,baz=133,slow=7.6,SNR=6.6						
ZALV	**Zalesovo Beam**	**62.18**	**337**	P	**P**	**08 23 57.8**	**-1.2**
	0.5nm,0.4s,baz=145,slow=5.4,SNR=3.6						
AKTO	**Aktyubinsk**	**73.55**	**324**	LR	LR	08 58 35.2	
	comp=Z,16nm,18.4s,baz=353,slow=37						

*NEIC **24** 08:23:44.8±2.1, 31°.28N±0°.04×115°.88W±0°.03, h4km±7km, Error ellipse: s-maj=6.1km s-min=2.8km az=215.0*
*PAS **24** 08:23:45.0±1.6, 31°.30N±0°.05×115°.88W±0°.04, h6km±2km, Error ellipse: s-maj=10.3km s-min=3.1km az=211.0*
*ECX **24** 08:23:45.3±0.6, 31°.23N×115°.93W, h7km±7km, MD2.9, ML3.1*
*MEX **24** 08:23:45.6±0.4, 31°.07N×115°.96W, h16km±408km, MD3.4*
*ANF **24** 08:23:46.3±1.2, 31°.36N×115°.80W, h14km±5km, ML2.8/10, Error ellipse: s-maj=7.2km s-min=2.6km az=7.0*
ISC 24 08:23:44.3±1.0**, 31°.24N**±0°.03×**115°.92W**±0°.02**, h8**km±9km**, n79,** σ**1s.00**/111**, 4C-4D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVX	**San Vicente**	**0.30**	**288**	⇑*i*P	**Pg**	**08 23 50.8**	**+0.6**
SVX				*e*S	**Sg**	**08 23 54.9**	**+0.8**
SPIG	**San Pedro Mart**	**0.43**	**116**	*e*P	**Pg**	**08 23 53.0**	**+0.2**
SPIG				*e*S	**Sg**	**08 23 59.0**	**+0.4**
SPIG	**San Pedro Mart**	**0.43**	**116**	*e*P	**Pg**	**08 23 53.2**	**+0.4**
SPIG				*e*S	**Sg**	**08 23 58.7**	**+0.1**
SPX	**San Pedro Mart**	**0.44**	**117**	⇑*i*P	**Pg**	**08 23 53.2**	**+0.3**
SPX					IAML	08 23 59.6	
	comp=E,2μm,0.3s						
SPX	**San Pedro Mart**	**0.44**	**117**		**Pg**	**08 23 53.2**	**+0.3**
SPX	**San Pedro Mart**	**0.44**	**117**	*e*P	**Pg**	**08 23 53.0**	**0.0**
SPX				*e*S	**Sg**	**08 23 58.8**	**0.0**
SQX	**San Quintin**	**0.66**	**176**	⇓*e*P	**Pg**	**08 23 56.8**	**-0.2**
SQX				*e*S	**Sg**	**08 24 05.8**	**+0.2**
ESJX	**Sierra Juarez**	**0.77**	**358**	⇓*e*P	**Pg**	**08 23 57.8**	**-1.3**
ESJX				*e*S	**Sg**	**08 24 08.1**	**-1.0**
ESJX	**Sierra Juarez**	**0.77**	**358**		**Pg**	**08 23 57.8**	**-1.3**
ESJX					**Sg**	**08 24 08.2**	**-1.0**
ECBX	**El Chinero**	**0.78**	**72**	⇑*i*P	**Pg**	**08 23 59.6**	**+0.2**
ECBX				*e*S	**Sg**	**08 24 09.5**	**0.0**
CCX	**Cicese**	**0.89**	**315**	⇓*i*P	**Pg**	**08 24 01.2**	**-0.2**
CCX				*e*S	**Sg**	**08 24 13.2**	**+0.2**
CCX	**Cicese**	**0.89**	**315**		**Pg**	**08 24 01.2**	**-0.2**
CCX					**Sg**	**08 24 13.1**	**0.0**
SFX	**San Felipe**	**0.94**	**102**	*e*P	**Pg**	**08 24 02.2**	**-0.1**
SFX				*e*S	**Sg**	**08 24 14.2**	**-0.4**
SFX	**San Felipe**	**0.94**	**102**		**Pg**	**08 24 02.2**	**-0.1**
SFX					**Sg**	**08 24 14.2**	**-0.4**
CBX	**Cerro Bola**	**1.25**	**330**	*e*P	**Pb**	**08 24 06.7**	**-1.5**
CBX				*e*S	**Sg**	**08 24 23.5**	**-0.9**
CBX					IAML	08 24 31.7	
	comp=N,427nm,0.5s						
CBX				⇓*e*		08 24 31.7	
CBX	**Cerro Bola**	**1.25**	**330**		**Pb**	**08 24 06.7**	**-1.5**
CBX	**Cerro Bola**	**1.25**	**330**	*e*P	**Pb**	**08 24 06.6**	**-1.5**
CBX				*e*S	**Sg**	**08 24 23.1**	**-1.3**
ERMX	**Rumorosa**	**1.32**	**356**	*e*P	**Pn**	**08 24 08.4**	**-0.7**
ERMX					IAML	08 24 28.4	
	comp=N,314nm,0.3s						
ERMX				⇑*e*		08 24 28.4	
MBIG	**Mexicali**	**1.32**	**28**	*i* P	**Pn**	**08 24 08.5**	**-0.4**
MBIG				*e*S	**Sb**	**08 24 26.0**	**-0.3**
TJIG	**Tijuana**	**1.35**	**332**	*e*P	**Pn**	**08 24 08.4**	**-1.1**
TJIG				*e*S	**Sb**	**08 24 25.9**	**-1.5**
RMX	**La Rumorosa**	**1.37**	**354**		**Pn**	**08 24 08.7**	**-1.1**
IKP	**In-Ko-Pah, Jac**	**1.42**	**354**		**Pn**	**08 24 10.4**	**-0.1**
IKP					**Sb**	**08 24 28.6**	**-0.7**
IKP	**In-Ko-Pah, Jac**	**1.42**	**354**	P	**Pn**	**08 24 10.3**	**-0.1**
	baz=172,SNR=192						
IKP				S	**Sb**	**08 24 28.4**	**-0.9**
	baz=172						
TKX	**Tecate**	**1.45**	**337**		**Pn**	**08 24 09.2**	**-1.6**
UABX	**UABC, Campus M**	**1.45**	**16**		**Sn**	**08 24 31.1**	**+1.1**
WESC	**Westside Schoo**	**1.53**	**6**		**Sb**	**08 24 34.0**	**+1.7**
BAR	**Barrett**	**1.57**	**336**	*e*P	**Pn**	**08 24 12.1**	**-0.4**
BAR	**Barrett**	**1.57**	**336**		**Pn**	**08 24 11.9**	**-0.6**
BAR	**Barrett**	**1.57**	**336**		**Pn**	**08 24 12.0**	**-0.4**
BAR				Sn	**Sn**	**08 24 31.9**	**-1.1**
TJX	**Tijuana**	**1.59**	**323**		**Sn**	**08 24 34.7**	**+1.2**
OLP	**Otay Lakes Par**	**1.61**	**328**	*e*P	**Pn**	**08 24 12.9**	**-0.1**
CBKC	**Canebrake**	**1.68**	**351**		**Pn**	**08 24 14.6**	**+0.6**
MONP2	**Monument Peak**	**1.71**	**346**	*e*P	**Pn**	**08 24 14.7**	**+0.2**
MONP2	**Monument Peak**	**1.71**	**346**		**Pn**	**08 24 15.3**	**+0.8**
MONP2	**Monument Peak**	**1.71**	**346**	P	**Pn**	**08 24 14.7**	**+0.2**
	baz=164,SNR=104						
MONP2				S	**Sn**	**08 24 36.3**	**-0.3**
	baz=164						
SWSC	**Sam W. Stewart**	**1.71**	**3**	Pb	**Pb**	**08 24 15.5**	**+1.2**
	baz=182,SNR=110						
SWSC				Sg	**Sb**	**08 24 38.9**	**+1.4**
	baz=182						
SDRC	**San Diego Road**	**1.73**	**330**	*e*P	**Pn**	**08 24 14.7**	**+0.1**
EML	**El Monte Cty P**	**1.83**	**335**		**Pn**	**08 24 15.9**	**0.0**
EML					**Sn**	**08 24 39.0**	**-0.3**
109C	**Camp Elliot, M**	**1.93**	**329**		**Pn**	**08 24 17.7**	**+0.3**
109C				Sn	**Sn**	**08 24 42.6**	**+0.8**
109C	**Camp Elliot, M**	**1.93**	**329**	P	**Pn**	**08 24 17.6**	**+0.3**
	baz=147,SNR=19						
109C				S	**Sn**	**08 24 42.6**	**+0.8**
	baz=147						
DPP	**Dos Picos Cty**	**1.96**	**334**		**Pn**	**08 24 17.8**	**0.0**
DPP					**Sn**	**08 24 43.2**	**+0.7**
HWB	**Hans Werner Br**	**1.99**	**334**		**Pn**	**08 24 18.5**	**+0.3**
GLA	**Glamis**	**2.04**	**27**		**Pn**	**08 24 19.1**	**+0.2**
GLA	**Glamis**	**2.04**	**27**	Pb	**Pn**	**08 24 20.4**	**+1.5**
	baz=207						
GLA				Sg	**Sb**	**08 24 48.9**	**+1.9**
	baz=207						
BORC	**Borrego Spring**	**2.07**	**348**		**Pb**	**08 24 22.0**	**-0.1**
PLM	**Palomar**	**2.26**	**340**		**Pn**	**08 24 23.7**	**+1.6**
FRD	**Ford Ranch, An**	**2.33**	**346**		**Pn**	**08 24 25.9**	**+3.0**
FRD	**Ford Ranch, An**	**2.33**	**346**		**Pn**	**08 24 25.7**	**+2.8**
BZNA	**Buzz No.'s Pla**	**2.34**	**345**		**Pn**	**08 24 25.8**	**+2.7**
SNDA	**J Saunders Pla**	**2.38**	**356**		**Pb**	**08 24 27.0**	**-0.5**
113A	**Mohawk Valley,**	**2.38**	**50**		**Pn**	**08 24 23.2**	**-0.4**
113A				Sn	**Sn**	**08 24 52.6**	**-0.4**
DNR	**Dunn Ranch,Anz**	**2.40**	**346**		**Pb**	**08 24 27.9**	**+0.1**
XPFO	**Pion Flat**	**2.41**	**349**		**Pn**	**08 24 23.9**	**-0.1**
XPFO				Sn	**Sn**	**08 24 54.7**	**+0.9**
XPFO	**Pion Flat**	**2.41**	**349**		**Pb**	**08 24 28.2**	**+0.3**
PFO	**Pinyon Flats O**	**2.41**	**349**		**Pn**	**08 24 23.9**	**-0.3**
PFO				Sn	**Sn**	**08 24 54.5**	**+0.6**
PFO	**Pinyon Flats O**	**2.41**	**349**		**Pb**	**08 24 28.3**	**+0.3**
PFO	**Pinyon Flats O**	**2.41**	**349**	P	**Pn**	**08 24 23.8**	**-0.3**
	baz=168,SNR=46						
PFO				Sb	**Sb**	**08 24 58.0**	**0.0**
	baz=168						
CRY	**Cary Ranch**	**2.42**	**344**		**Pb**	**08 24 27.4**	**-0.7**
BC3	**Big Chuckawall**	**2.44**	**9**	P	**Pn**	**08 24 24.0**	**-0.6**
	baz=189						
HAY	**Hayfield**	**2.47**	**5**		**Pg**	**08 24 34.1**	**+2.4**
POB	**Polly Butte**	**2.59**	**341**		**Pb**	**08 24 29.9**	**-1.0**
MURC	**Murrieta**	**2.59**	**336**	P	**Pn**	**08 24 27.2**	**+0.7**
	baz=154						
HMTC	**Hemet**	**2.63**	**340**		**Pb**	**08 24 29.9**	**+2.9**
EW2	**E Wide Canyon**	**2.73**	**351**		**Pb**	**08 24 34.3**	**+1.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
214A	Organ Pipe Nat	2.75	74		Pn	08 24 28.0	-0.7
214A				Sn	Sn	08 25 00.6	-1.5
214A	Organ Pipe Nat	2.75	74	P	Pn	08 24 27.9	-0.7
	baz=257,SNR=11						
214A				S	Sn	08 25 00.6	-1.5
	baz=257						
BELC	Belle Mtn. Jos	2.76	359	P	Pn	08 24 29.2	+0.3
	baz=178,SNR=26						
Y12C	Blythe	2.77	25	Pn	Pn	08 24 30.8	+1.8
BLAC	Blackrock camp	2.85	352		Pb	08 24 36.5	+1.0
MWC	Mount Wilson	3.48	329		Pn	08 24 39.6	+0.8
Y14A	Wickenburg	3.65	42		Pn	08 24 40.5	-0.6
GSC	Goldstone, Bar	4.12	350	Pn	Pn	08 24 47.3	-0.3
TUC	Tucson	4.50	75	Pn	Pn	08 24 52.8	-0.1
X16A	Lo Mia Camp, P	4.93	49		Pn	08 24 59.2	+0.4
TPNV	Topopah Spring	5.71	357	Pn	Pn	08 25 10.0	+0.5
U15A	North Rim	6.00	29		Pn	08 25 13.0	-0.5
X18A	Snowflake	6.00	55		Pn	08 25 14.8	+1.3
LCMT	Little Creek M	6.17	20		Pn	08 25 16.5	+0.6
KNB	Kanab	6.31	23		Pn	08 25 16.6	-1.2

IDC 24 08:40:28.6±0.8, 20°.12N×120°.39E, h0km, mb3.8/11, mb1 4.0/12, mb1mx3.8/50, mbtmp3.8/12, ML3.5/1, MS3.2/11, Ms1 3.2/11, ms1mx3.0/44, Error ellipse: s-maj=26.8km s-min=18.2km az=75.0

NEIC 24 08:40:33.2±1.9, 20°.20N±0°.05×120°.4E±0°.1, h29km±3km, mb4.4/13, Error ellipse: s-maj=16.3km s-min=7.7km az=98.0

ISC 24 08:40:33.1±0.6, 20°.19N±0°.05×120°.4E±0°.1, h28km, n41, σ0§96/36, mb4.0/16, MS3.3/10, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
SZP	Santa	2.63	178	Pn	Pn	08 41 13.2	-0.5
TWG	Pinlang	2.69	14		Pn	08 41 14.0	-0.5
TWG				Sn	Sn	08 41 46.3	+0.1
TPUB	Ta-pu	3.10	4		Pn	08 41 18.1	-2.0
TPUB				Sn	Sn	08 41 53.2	-3.1
YULB	Yu-li	3.29	15		Pn	08 41 22.7	-0.1
YULB				Sn	Sn	08 42 01.5	+0.4
SSLB	Suanglung	3.62	8		Pn	08 41 27.2	-0.1
SSLB				Sn	Sn	08 42 09.6	+0.6
NACB	Ninganchiao	4.12	16	Pn	Pn	08 41 33.3	-0.8
YHNB	Yeheng	4.55	11	Pn	Pn	08 41 39.1	-1.1
JNU	Nakatsue	15.92	34	Pn	P	08 44 19.3	+0.7
	0.2nm,0.3s,baz=176,slow=6.3,SNR=3.6						
JNU				LR	LR	08 49 54.7	
	comp=Z,87nm,20.9s,baz=185,slow=35						
KSRS	Korea Array	18.41	19	P	Pn	08 44 46.0	-0.2
	0.1nm,0.3s,baz=198,slow=13,SNR=8.4						
KSRS				LR	LR	08 51 53.0	
	comp=Z,39nm,20.2s,baz=211,slow=37						
CMAR	Chiang Mai Arr	20.31	269	P	Pn	08 45 07.5	-1.5
	1.0nm,0.7s,baz=63,slow=10.0,SNR=4.5						
CMAR				LR	LR	08 52 27.8	
	comp=Z,124nm,18.8s,baz=130,slow=35						
JCJ	Chichijima	21.11	67	LR	LR	08 51 35.7	
	comp=Z,76nm,21.4s,baz=34,slow=32						
JHJ	Hachijo jima 2	21.55	49	LR	LR	08 52 36.5	
	comp=Z,66nm,21.5s,baz=108,slow=34						
MJAR	Matsushiro Arr	22.55	40	P	P	08 45 31.8	+0.8
	1.8nm,0.7s,baz=233,slow=10,SNR=5.1						
MJAR				LR	LR	08 54 23.9	
	comp=Z,17nm,18.9s,baz=245,slow=37						
GUMO	Guam	24.32	102	LR	LR	08 55 17.7	
	comp=Z,55nm,18.8s,baz=161,slow=37						
SONM	Songino Array	29.81	341	P	P	08 46 38.1	+0.4
	2.4nm,0.9s,baz=158,slow=8.1,SNR=13						
MKAR	Makanchi Array	40.78	320	P	P	08 48 12.4	+0.6
	0.8nm,0.7s,baz=113,slow=11,SNR=7.0						
WB0	Warramunga Arr	42.02	160	P	P	08 48 20.9	-1.3
WRAB	Tennant Creek	42.16	160	P	P	08 48 21.4	-2.0
WRAB				IAmb	IAmb	08 48 39.0	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	42.17	160	P	P	08 48 22.4	-1.0
	comp=Z,1.1nm,0.7s,baz=341,slow=9.1,SNR=4.9						
WR0	Warramunga Arr	42.25	160	P	P	08 48 23.1	-0.9
ZALV	Zalesovo Beam	43.24	330	P	P	08 48 31.6	-0.2
	comp=Z,1.8nm,0.8s,baz=118,slow=8.6,SNR=8.0						
PETK	Petropavlovsk-	43.60	32	LR	LR	09 06 35.5	
	comp=Z,44nm,21.4s,baz=242,slow=36						
NIL	Nilore	43.76	298	P	P	08 48 36.3	0.0
NIL				IAmb	IAmb	08 48 37.2	
	comp=Z,6.4nm,0.8s						
KURK	Kurchatov	44.74	323	P	P	08 48 44.4	+0.5
KURK				IAmb	IAmb	08 48 45.9	
	comp=Z,5.7nm,1.1s						
ASAR	Alice Springs	45.54	163	P	P	08 48 49.7	-0.9
	comp=Z,0.6nm,0.4s,baz=347,slow=8.4,SNR=12						
KBL	Kabul	47.31	299	P	P	08 49 05.6	+1.0
KK31	Karatay Array	47.39	310	P	P	08 49 05.1	+0.2
KKAR	Karatay Array	47.39	310	P	P	08 49 04.9	0.0
KKAR				IAmb	IAmb	08 49 10.5	
	comp=Z,6.7nm,1.4s						
BILL	Bilibino	55.68	19	P	P	08 50 06.7	+0.3
BILL				IAmb	IAmb	08 50 15.7	
	comp=Z,4.0nm,1.0s						
ABKAR	Akbulak array	55.75	316	P	P	08 50 07.5	+0.3
WSAR	Wadi Sarin	57.08	285	LR	LR	09 16 11.4	
	comp=Z,28nm,20.5s,baz=94,slow=38						
ARU	Arti	57.88	325	LR	LR	09 15 57.7	
	comp=Z,376nm,19.9s,baz=232,slow=37						
KBZ	Khabaz	67.42	310	LR	LR	09 26 23.9	
	comp=Z,23nm,18.3s,baz=129,slow=41						
RAYN	Ar Rayn	68.83	288	P	P	08 51 35.5	+0.1
ILAR	Eielson Array	73.09	27	P	P	08 52 01.4	+0.9
	comp=Z,0.6nm,0.9s,baz=240,slow=6.6,SNR=4.7						
C36M	Paulatuk	79.80	19	P	P	08 52 39.1	+0.8
C36M				IAmb	IAmb	08 52 39.2	
	comp=Z,6.0nm,1.3s						
RES	Resolute Bay	82.70	9	P	P	08 52 53.9	+0.2
	comp=Z,2.6nm,0.9s,baz=332,slow=6.5,SNR=10.0						
RES	Resolute Bay	82.70	9	P	P	08 52 53.5	-0.2
RES				IAmb	IAmb	08 52 57.6	
	comp=Z,4.0nm,1.1s						
KMBO	Kilima Mbogo	83.94	267	LR	LR	09 28 25.3	
	comp=Z,33nm,21.6s,baz=94,slow=34						
GERES	GERESS Array B	85.44	321	P	P	08 53 07.7	-0.6
	comp=Z,0.7nm,0.8s,baz=90,slow=6.0,SNR=5.5						
YKA	Yellowknife Ar	86.92	22	P	P	08 53 15.2	+0.1
	comp=Z,1.0nm,0.9s,baz=316,slow=4.8,SNR=16						

NDI 24 08:59:05.2±2.5, 31°.33N×69°.35E, h15km±376km, ML3.6

IDC 24 08:59:11.5±5.2, 31°.62N×70°.06E, h0km, mb3.6/4, mb1 3.7/6, mb1mx3.4/62, mbtmp3.7/6, ML3.6/2, MS2.9/1, Ms1 2.9/1, ms1mx2.3/49, Error ellipse: s-maj=83.7km s-min=46.0km az=150.0

NNC 24 08:59:14.3±22.0, 31°.45N×70°.66E, h46km±203km, mb3.3, Error ellipse: s-maj=187.5km s-min=155.6km az=23.0

ISC 24 08:59:14.9±1.8, 31°.5N±0°.1×69°.89E±0°.10, h35km, n14, σ1§51/18, mb3.6/3, Pakistan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
THN	Thein Dam	5.04	78	eP	Pn	09 00 31.0	+3.1
THN				eS	Sn	09 01 27.0	+2.1
DHRM	DHARAMSHALA	5.51	81	eP	Pn	09 00 31.7	-2.9
DHRM				eS	Sn	09 01 36.6	-0.2
DHRM				IAML		09 01 38.3	
	comp=E,92nm,0.3s						
DHRM				IAML		09 01 38.6	
	comp=N,56nm,0.0s						
SMLA	Simla	6.24	92	eP	Pn	09 00 43.6	-0.8
SMLA				eS	Sn	09 01 54.9	+0.4
SMLA				IAML		09 01 57.2	
	comp=N,56nm,0.3s						
SMLA				IAML		09 01 59.9	
	comp=E,65nm,0.5s						
KK31	Karatay Array	11.59	2	P	Pn	09 01 56.6	-1.2
	comp=E,1.9nm,0.7s,baz=171,slow=11,SNR=20						
KK31				S	Sn	09 04 07.1	+1.2
	comp=E,1.7nm,0.7s,baz=175,slow=20,SNR=4.3						
AAK	Ala-Archa	11.71	17	Pn	Pn	09 01 58.1	-1.4
	comp=E,0.7nm,0.3s,baz=184,slow=15,SNR=8.7						
AAK				Sn	Sn	09 04 08.2	-0.8
	comp=E,0.1nm,0.3s,baz=321,slow=21,SNR=3.4						
MK31	Makanchi Array	18.01	29	P	P	09 03 21.2	-1.1
	comp=E,0.9nm,0.7s,baz=210,slow=12,SNR=9.3						
MKAR	Makanchi Array	18.01	29	P	P	09 03 22.8	+0.2
	comp=E,0.1nm,0.3s,baz=211,slow=12,SNR=8.4						
AB31	Akbulak array	19.25	340	P	P	09 03 36.8	-0.5
	comp=E,0.4nm,0.5s,baz=157,slow=13,SNR=13						
KURBB	Kurchatov Arra	20.16	16	P	P	09 03 44.7	-1.2
	comp=E,1.0nm,0.7s,baz=204,slow=10,SNR=6.0						
AKTO	Aktyubinsk	20.88	338	P	P	09 03 54.1	+0.3
	comp=E,0.6nm,0.5s,baz=163,slow=11,SNR=3.0						
BVAR	Borovoye Array	21.51	1	P	P	09 04 01.4	+0.8
	comp=E,0.8nm,0.6s,baz=183,slow=5.8,SNR=3.3						
ZALV	Zalesovo Beam	24.87	21	P	P	09 04 34.0	0.0
	comp=E,0.7nm,0.4s,baz=224,slow=10,SNR=4.7						
SONM	Songino Array	32.13	49	LR	LR	09 21 39.1	
	comp=E,24nm,21.1s,baz=178,slow=42						
ARCES	ARCESS Array B	45.46	340	P	P	09 07 31.7	+1.6
	comp=E,2.4nm,0.8s,baz=125,slow=9.2,SNR=7.9						

IDC 24 09:21:46.1±1.6, 38°.85N×74°.61E, h0km, mb3.3/3, mb1 3.4/5, mb1mx3.2/48, mbtmp3.3/5, ML2.7/2, MS3.1/1, Ms1 3.0/1, ms1mx2.3/25, Error ellipse: s-maj=35.4km s-min=21.9km az=119.0

NNC 24 09:21:47.9±2.2, 38°.95N×75°.07E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=18.8km s-min=10.5km az=149.0

ISC 24 09:21:48.5±1.5, 39°.0N±0°.1×74°.37E±0°.10, h10km, n14, σ1§77/13, mb3.4/3, 5C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
AAK	Ala-Archa	3.61	1	Pn	Pb	09 22 50.0	-2.5
	0.8nm,0.3s,baz=187,slow=8.1,SNR=10.0						
AAK				Sn	Sb	09 23 35.2	-1.2
	0.1nm,0.3s,baz=310,slow=16,SNR=2.3						
MRKS	Merke	3.81	347	Pg	Pb	09 22 54.5	-1.4
	3.1nm,0.5s						
MRKS				Lg	Lg	09 23 44.9	
	6.1nm,0.7s						
KST	Kastek	4.19	16	Pg	Pb	09 23 03.4	+1.0
	24nm,0.8s						
KST				Lg	Lg	09 23 59.9	
	17nm,0.8s						
DGS	Degeres	4.34	14	Pg	Pb	09 23 06.7	+1.7
	8.3nm,0.9s						
DGS				Lg	Lg	09 24 06.0	
	11nm,0.6s						
IZV	Izvestkoviy	4.35	22	Pg	Pb	09 23 05.2	+0.1
	11nm,0.5s						
IZV				Lg	Lg	09 24 03.5	
	18nm,0.8s						
IUG	Iuzhnay	4.54	315	Pg	Pb	09 23 04.8	-3.5
	0.8nm,0.3s						
IUG				Lg	Lg	09 24 02.6	
	21nm,1.1s						
MDOK	Medeo	4.60	25	⇑Pg	Pb	09 23 11.2	+1.8
MDOK				Lg	Lg	09 24 08.0	
KK31	Karatay Array	5.01	326	⇑Pn	Pn	09 23 09.8	+6.1
	0.4nm,0.3s,baz=131,slow=12,SNR=11						
KK31				⇑Pg	Pg	09 23 25.5	+1.1
	1.5nm,0.5s,baz=159,slow=14,SNR=3.9						
KK31				⇓Lg	Lg	09 24 39.0	
	2.1nm,0.6s,baz=148,slow=13,SNR=3.6						
PDGK	Podgornoye	5.78	40	⇑Pg	Pb	09 23 27.1	-2.4
	12nm,1.1s						
PDGK				⇑Lg	Lg	09 24 41.8	
	21nm,1.2s						
MKAR	Makanchi Array	9.69	34	Pn	Pn	09 24 09.7	+1.7
	0.0nm,0.3s,baz=213,slow=14,SNR=5.8						
KBZ	Khabaz	23.99	291	LR	LR	09 38 37.5	
	comp=Z,41nm,18.8s,baz=34,slow=42						
SONM	Songino Array	24.72	59	P	P	09 27 08.6	-1.4
	0.4nm,0.8s,baz=263,slow=10.0,SNR=3.6						
TORD	Torodi Ar. Bea	68.42	270	P	P	09 32 51.9	+1.0
	0.2nm,0.5s,baz=52,slow=5.7,SNR=3.3						
YKA	Yellowknife Ar	78.57	4	P	P	09 33 48.5	-1.4
	0.2nm,0.6s,baz=347,slow=5.7,SNR=5.9						

ISN 24 09:26:51.2±0.4, 35°.55N×46°.06E, h18km±13km, ML2.5

TEH 24 09:26:52.4, 35°.44N×46°.03E, h5km, ML2.6

ISC 24 09:26:51.9±1.4, 35°.49N±0°.08×46°.04E±0°.06, h10km, n11, σ1§09/14, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
IDHR	Dehrash	0.84	160	e		09 27 24.1	
IDHR				ePg	Pb	09 27 08.3	-0.4
ILIN	Lien	0.94	127	ePg	Pg	09 27 10.1	0.0
ILIN				e		09 27 28.1	
IVIS	Veis	1.17	145	ePn	Pn	09 27 14.5	+0.1
IVIS				e		09 27 39.4	
IGHG	Ghaleghazi	1.24	159	ePg	Pn	09 27 17.3	+1.9
IGHG				e		09 27 43.2	
IKRK	Kirkuk	1.40	267	ePg	Pn	09 27 17.0	-0.4
IKRK				eSg	Sb	09 27 36.0	+0.1
IKRK				AML	AML	09 27 38.1	
	comp=E,81nm,0.4s						
IKRK				AML	AML	09 27 39.5	
	comp=N,96nm,0.2s						
IKOM	Komasi	1.78	137	ePn	Pg	09 27 25.8	-0.3
IKOM				e		09 27 57.1	
HSRG	Sareghieh	1.84	97	ePn	Pg	09 27 27.4	+0.2
HSRG				e		09 28 01.0	
IALM	Almabolaq	1.85	109	ePn	Pg	09 27 27.6	+0.2
IALM				e		09 27 29.0	
IBDR	Badra	2.38	182	ePn	Pn	09 27 32.0	+1.1
IBDR				eSn	Sb	09 28 02.0	-2.2
IKFM	Kafar-mosalman	2.46	142	ePn	Pb	09 27 35.2	-1.0
IKFM				e		09 28 11.4	
BHD	Baghdad	2.61	212	ePn	Pn	09 27 35.0	+0.9
BHD				eSn	Sn	09 28 07.0	+1.2

IDC 24 09:47:15.7±1.9, 2°.45N×126°.61E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/34, mbtmp3.6/4, Error ellipse: s-maj=175.7km s-min=23.1km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
WRA	Warramunga Arr	23.51	162	P	P	09 52 27.1	-0.4
	1.3nm,0.7s,baz=339,slow=10,SNR=16						
ASAR	Alice Springs	26.91	165	P	P	09 52 59.2	+0.5
	0.3nm,0.4s,baz=352,slow=7.5,SNR=7.0						
STKA	Stephens Creek	36.98	159	P	P	09 54 26.8	-0.3
	0.4nm,0.3s,baz=327,slow=12,SNR=2.8						
MKAR	Makanchi Array	58.54	326	P	P	09 57 14.1	0.0
	0.2nm,0.5s,baz=107,slow=7.7,SNR=2.1						

IDC 24 10:06:57.4±3.3, 3°.10S×140°.05E, h0km, mb3.6/3, mb1 4.0/4, mb1mx3.5/52, mbtmp3.8/4, ML4.2/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/34, Error ellipse: s-maj=94.6km s-min=30.3km az=92.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
WRA	Warramunga Arr	17.65	198	P	Pn	10 11 04.4	-0.5
	0.9nm,0.3s,baz=19,slow=12,SNR=40						
WRA				S	Sn	10 14 08.9	-13
	0.3nm,0.3s,baz=9.6,slow=20,SNR=5.2						
FITZ	Fitzroy Crossi	20.54	222	P	P	10 11 36.9	-0.7
	1.1nm,0.3s,baz=51,slow=9.4,SNR=8.7						
FITZ				S	S	10 15 12.2	-16
	3.1nm,0.7s,baz=182,slow=13,SNR=7.8						
ASAR	Alice Springs	21.30	196	P	P	10 11 46.0	+0.2
	2.1nm,0.7s,baz=27,slow=10,SNR=41						
ASAR				S	S	10 15 38.6	-4.8
	0.2nm,0.7s,baz=17,slow=26,SNR=3.8						
JCJ	Chichijima	30.09	4	LR	LR	10 22 07.3	
	comp=Z,18nm,21.5s,baz=80,slow=30						
MKAR	Makanchi Array	70.91	322	P	P	10 18 17.1	+0.5
	0.4nm,0.7s,baz=101,slow=7.5,SNR=3.7						

NEIC 24 10:34:56.9±2.4, 10°.65N±0°.05×72°.61W±0°.05, h23km±1km, mb4.5/44, ML4.2(CAR), Error ellipse: s-maj=7.7km s-min=6.7km az=64.0

RSNC 24 10:34:57.1±1.2, 10°.68N×72°.80W, h3km±7km, ML4.4, Mw4.1

CAR 24 10:34:57.8±3.0, 10°.59N±0°.05×72°.69W±0°.05, h18km±3km, Error ellipse: s-maj=0.0km s-min=0.0km az=151.0

IDC 24 10:34:58.1±2.1, 10°.52N×72°.64W, h33km±16km, mb4.0/24, mb1 4.3/32, mb1mx4.2/41, mbtmp4.3/32, ML3.9/8, MS3.4/17, Ms1 3.4/17, ms1mx3.2/35, Error ellipse: s-maj=10.0km s-min=9.3km az=50.0

UPA 24 10:35:00.1±7.7, 10°.59N×72°.85W, h10km±732km, MW4.5

VAO 24 10:35:03.8±3.0, 10°.11N×72°.50W, h73km±9km, mb4.5

ISC 24 10:34:57.0±0.8, 10°.65N±0°.03×72°.67W±0°.03, h26km±5km, n168, σ2§12/202, mb4.5/42, MS3.4/10, 3C-2D, Venezuela

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
CODC	Agustn Codazz	1.04	227	⇑i/P	Pn	10 35 14.7	-1.2
CODC				eS	Sn	10 35 28.1	-1.7
CODC				i		10 35 30.6	
	comp=Z,7µm,0.4s						
URIC	Uribia, Colomb	1.24	33	⇓i/P	Pb	10 35 19.9	+0.2
URIC				eS	Sb	10 35 37.0	+1.8
SMRC	Santa Marta, M	1.61	289	eP	Pn	10 35 23.3	-0.4
SMRC				eS	Sn	10 35 41.8	-1.9
SMRC				i		10 35 48.4	
	comp=Z,5µm,0.5s						
ARGC	Ariguani, Magd	1.74	243	⇑i/P	Pn	10 35 25.6	+0.1
ARGC				eS	Sn	10 35 47.8	+0.9
ARGC				i		10 36 08.1	
	comp=Z,2µm,0.5s						
SMLC	San Martn de	2.30	217	eP	Pn	10 35 32.5	-0.8
OCAC	Ocana	2.48	195	eP	Pn	10 35 36.4	+0.5
OCAC				eS	Sb	10 36 08.6	-2.7
OCAC				i		10 36 16.5	
	comp=Z,5µm,0.3s						
SJCC	San Jacinto, C	2.58	253	⇑i/P	Pn	10 35 38.9	+1.7
SJCC				eS	Sb	10 36 11.9	-2.0
SJCC				i		10 36 26.6	
	comp=Z,1µm,0.7s						
SDV	Santo Domingo	2.67	131	Pn	Pn	10 35 38.9	+0.5
	comp=Z,46nm,0.3s,baz=291,slow=9.4,SNR=646						
SDV				Pg	Pb	10 35 47.0	+2.8
	comp=Z,581nm,0.3s,baz=321,slow=10,SNR=80						
SDV				Sn	Sn	10 36 10.0	-0.1
	comp=Z,218nm,0.3s,baz=354,slow=19,SNR=6.7						
SDV				Lg	Lg	10 36 20.9	
	comp=Z,539nm,0.3s,baz=292,slow=21,SNR=8.9						
SDV				LR	LR	10 37 00.3	
	comp=Z,518nm,20.0s,baz=272,slow=48						
SDV	Santo Domingo	2.67	131	⇓i/P	Pn	10 35 38.9	+0.5
SDV				i		10 36 23.4	
	comp=Z,1µm,0.4s						
SDV	Santo Domingo	2.67	131	eP	Pn	10 35 39.0	+0.5
SDV	Santo Domingo	2.67	131		Pn	10 35 38.8	+0.3
PAMC	Pamplona, Colo	3.29	180	eP	Pn	10 35 48.6	+1.3
PAMC				eS	Sb	10 36 30.4	-4.5
PAMC				i		10 36 44.1	
	comp=Z,899nm,0.4s						
ZARC	Zaragoza, Cauc	3.81	215	eP	Pn	10 35 53.7	-0.4
ZARC				i		10 37 01.0	
	comp=Z,1µm,0.6s						
UREC	San Jos de Ur	4.04	225	eP	Pn	10 35 58.5	+1.3
UREC				i		10 37 07.9	
	comp=Z,327nm,0.5s						
LCBC	Los crdobas,	4.06	244	eP	Pn	10 35 58.7	+1.2
LCBC				eS	Sn	10 36 44.7	+0.5
LCBC				i		10 36 48.8	
	comp=Z,307nm,0.5s						
BARC	Barichara	4.07	187	eP	Pn	10 35 59.4	+1.6
TAMC	Tame, Arauca	4.28	168	eP	Pn	10 36 01.8	+1.2
PTBC	PUERTO BERRIO,	4.45	204	eP	Pn	10 36 02.4	-0.5
PTBC				eS	Sn	10 36 52.5	-1.4
PTBC				i		10 37 00.4	
	comp=Z,456nm,0.6s						
RUSC	La Rusia	4.75	185	eP	Pn	10 36 08.2	+0.8
RUSC				eS	Sb	10 37 21.1	+4.4
RUSC	La Rusia	4.75	185		Pn	10 36 06.7	-0.7
DBBC	Dabeiba	5.03	224	eP	Pn	10 36 14.4	+3.6
DBBC				i		10 37 32.6	
	comp=Z,349nm,0.6s						
SPBC	San Pablo de B	5.16	196	eP	Pn	10 36 14.5	+1.8
SPBC				eS	Sn	10 37 14.1	+2.6
SPBC				i		10 38 00.5	
	comp=Z,236nm,0.7s						
HELC	Santa Helena	5.26	213	eP	Pn	10 36 17.2	+2.9
HELC				eS	Sn	10 37 19.4	+5.1
HELC				i		10 37 42.2	
	comp=Z,283nm,0.7s						
HELC	Santa Helena	5.26	213	eP	Pn	10 36 16.2	+1.9
NORC	Norcasia	5.51	203	eP	Pn	10 36 19.6	+2.2
NORC				i		10 37 29.6	
	comp=Z,323nm,1.0s						
CBOC	Ciudad Bolivar	5.79	215	eP	Pn	10 36 23.7	+2.2
CBOC				eS	Sn	10 37 32.8	+5.5
CBOC				i		10 37 59.0	
	comp=Z,191nm,0.8s						
ROSC	El Rosal	6.00	196	Pn	Pn	10 36 24.9	+0.4
	comp=Z,12nm,0.3s,baz=32,slow=8.3,SNR=42						
ROSC				Sn	Sn	10 37 32.6	-0.1
	comp=Z,20nm,0.3s,baz=200,slow=22,SNR=1.6						
ROSC				LR	LR	10 39 06.5	
	comp=Z,417nm,20.4s,baz=2.5,slow=42						
ROSC	El Rosal	6.00	196	eP	Pn	10 36 26.2	+1.7
ROSC				i		10 38 17.7	
	comp=Z,299nm,0.6s						
ROSC	El Rosal	6.00	196		Pn	10 36 25.4	+0.9
GUY2C	Guyana, Caldas	6.02	207	eP	Pn	10 36 26.2	+1.3
CHIC	Chingaza	6.08	190	eP	Pn	10 36 27.3	+1.7
CHIC				i		10 38 16.0	
	comp=Z,148nm,1.4s						
PTAC	Punta Ardita,	6.16	236	eP	Pn	10 36 27.0	+0.7
PTAC				i		10 37 39.4	
	comp=Z,167nm,0.3s						
CVER	Cruz Verde, Cu	6.25	193	eP	Pn	10 36 32.4	+4.4
SOLC	Bahia Solano	6.43	227	eP	Pn	10 36 31.5	+1.5
SOLC				i		10 37 47.3	
	comp=Z,66nm,0.4s						
PTGC	Puerto Gaitan,	6.43	175	eP	Pn	10 36 31.0	+0.9
PTGC				i		10 37 55.1	
	comp=Z,226nm,0.6s						
PLMC	San Jos del P	6.74	212	eP	Pn	10 36 36.6	+2.2
PLMC				i		10 38 34.2	
	comp=Z,123nm,0.8s						
ORTC	Ortega, Tolima	7.17	201	eP	Pn	10 36 42.0	+1.7
ORTC				i		10 38 40.2	
	comp=Z,141nm,0.6s						
BCIP	Isla Barro Col	7.21	259	eP	Pn	10 36 40.6	-0.2
BCIP				i		10 38 20.4	
	comp=Z,64nm,2.0s						
BCIP	Isla Barro Col	7.21	259	eP	Pn	10 36 40.6	-0.2
BCIP				eS	Sn	10 37 54.6	-7.4
BCIP	Isla Barro Col	7.21	259		Pn	10 36 41.3	+0.4
PRAC	Prado	7.24	198	eP	Pn	10 36 43.8	+2.6
PRAC				eS	Sn	10 38 06.8	+4.1
YOTC	Yotoco, Valle	7.56	209	eP	Pn	10 36 46.7	+0.9
YOTC				eS	Sn	10 38 13.9	+3.1
YOTC				i		10 38 59.7	
	comp=Z,21nm,0.6s						
LGNH	Logne	7.81	0	Pn	Pn	10 36 48.9	-0.1
PCRV	Puerto La Cruz	7.92	93	Pn	Pn	10 36 51.0	+0.4
	comp=Z,9.2nm,0.3s,baz=244,slow=3.9,SNR=26						
PCRV				Sn	Sn	10 38 21.7	+2.3
	comp=Z,0.8nm,0.3s,baz=90,slow=7.6,SNR=2.4						
PLCV	Puerto La Cruz	7.96	93		Pn	10 36 51.0	-0.2
PLCV					Sn	10 38 21.7	+1.2
BANI	BANI	8.01	16	Pn	Pn	10 36 52.6	+0.7
BANI					Sn	10 38 21.3	-0.5
AZU	Azuero	8.03	250	eP	Pn	10 37 01.9	+10
AZU				eS	Sn	10 38 17.2	-4.8
PCJ	Portland Cotta	8.28	329	i P	Pn	10 36 57.8	+2.3
SDDR	Presa de Saban	8.39	9		Pn	10 37 00.5	+3.5
SDDR				Sn	Sn	10 38 31.5	+0.5
STH	Stony Hill	8.40	332	i P	Pn	10 36 59.5	+2.4
MACC	Macarena, Meta	8.53	188	eP	Pn	10 36 58.3	-0.7
MACC				eP	Pn	10 36 58.7	-0.3
DR12	Loma Pena Alta	8.69	21		Pn	10 37 01.3	+0.1
DR12					Sn	10 38 35.5	-2.9
MCJ	Malvern	8.71	327	i P	Pn	10 37 08.9	+7.5
MCJ				i S	Sn	10 38 32.5	-6.4
CACAO	El Cacao, Vera	8.73	249	eP	Pn	10 37 01.9	+0.2
CACAO				eS	Sn	10 38 40.4	+1.0
MTDJ	Mount Denham	8.88	329		Pn	10 37 04.3	+0.5
MTDJ				Sn	Sn	10 38 39.2	-3.9
PCON	Cinco Dias	9.06	204	eP	Pn	10 37 09.4	+2.7
CRPR	Cabo Rojo, PR	9.08	36	Pn	Pn	10 37 04.3	-2.1
CRPR				Sn	Sn	10 38 41.4	-6.5
MLPR	Magueyes Islan	9.09	36	Pn	Pn	10 37 03.7	-2.8
MLPR				Sn	Sn	10 38 43.1	-4.9
ICMP	Isla Caja de M	9.33	39	Pn	Pn	10 37 08.4	-1.6
ICMP				Sn	Sn	10 38 48.9	-5.2
AGPR	Aguadilla, PR	9.45	34	Pn	Pn	10 37 10.5	-1.0
FLOC	Florencia	9.49	198	eP	Pn	10 37 12.8	+0.7
FLOC				eS	Sn	10 38 58.1	+0.1
GTBY	Guantanamo Bay	9.52	346	Pn	Pn	10 37 13.0	+0.6
AOPR	Arecibo Observ	9.55	36	Pn	Pn	10 37 12.2	-0.7

SJG San Juan 9.74 40 Pn Pn 10 37 16.8 +1.4
comp=Z,1.8nm,0.3s,baz=209,slow=20,SNR=3.7
SJG Sn Sn 10 38 58.1 -5.9
comp=Z,7.8nm,0.3s,baz=36,slow=20,SNR=6.7
SJG LR LR 10 41 04.0
comp=Z,104nm,19.1s,baz=252,slow=37
SJG San Juan 9.74 40 Pn Pn 10 37 13.9 -1.6
GCPR Guaynabo City 9.93 39 Pn Pn 10 37 16.8 -1.2
GCPR Sn 10 39 03.7 -5.0
HUMP Col San Antoni 9.95 41 Pn Pn 10 37 17.1 -1.3
BRU2 Volcan 10.05 260 eP Pn 10 37 21.0 +1.1
BRU2 eS Sn 10 39 10.0 -2.0
MTP Monte Pirata 10.11 42 Pn Pn 10 37 18.3 -2.3
CUPR Culebra, Puert 10.44 42 Pn Pn 10 37 22.8 -2.3
STVI Saint Thomas 10.69 43 Pn Pn 10 37 26.9 -1.6
GRGR Grenville 10.90 81 Pn Pn 10 37 30.0 -1.4
SVB Belmont 11.47 76 Pn 10 37 37.2 -2.0
OTAV Otavalo 11.84 209 eP Pn 10 37 44.4 -0.3
OTAV Otavalo 11.84 209 Pn 10 37 43.2 -1.5
FSCY Frank Sound, G 11.90 317 Pn 10 37 44.2 -0.9
FDF Fort de France 11.95 69 Pn Pn 10 37 42.4 -3.5
JTS Las Juntas de 12.09 269 Pn Pn 10 37 49.7 +2.0
comp=Z,0.7nm,0.3s,baz=96,slow=7.1,SNR=4.6
JTS Sn Sn 10 39 55.9 -5.9
comp=Z,0.9nm,0.3s,baz=137,slow=23,SNR=5.3
JTS LR LR 10 42 26.3
comp=Z,54nm,19.4s,baz=143,slow=37
ACON Acoyapa 12.33 277 Pn Pn 10 37 52.6 +1.6
TEIG Tepich 17.79 304 P P 10 39 05.2 +1.7
comp=Z,0.5nm,0.3s,baz=229,slow=23,SNR=4.2
TEIG LR LR 10 46 07.8
comp=Z,105nm,18.3s,baz=148,slow=37
TEIG Tepich 17.79 304 IAmb IAmb 10 39 14.0
comp=Z,46nm,1.4s
APG El Apazote 17.88 286 P P 10 39 06.3 +1.5
comp=Z,0.9nm,0.3s,baz=96,slow=3.9,SNR=12
APG LR LR 10 46 02.1
comp=Z,104nm,20.1s,baz=78,slow=37
ATAH Atahualpa 18.57 198 P P 10 39 12.4 -0.2
comp=Z,2.1nm,0.3s,baz=18,slow=5.8,SNR=10
ATAH LR LR 10 46 08.6
comp=Z,64nm,20.9s,baz=23,slow=36
CCIG Comitan 19.73 289 P P 10 39 26.3 +1.2
CCIG IAmb IAmb 10 39 40.3
comp=Z,20nm,0.7s
MDP Montagnes des 20.59 104 P P 10 39 35.0 +0.8
comp=Z,15nm,0.8s,baz=279,slow=12,SNR=3.8
MDP LR LR 10 47 42.2
comp=Z,78nm,19.0s,baz=280,slow=37
SAML Samuel 21.64 154 eP P 10 39 42.0 -3.5
SAML Samuel 21.64 154 P P 10 39 44.5 -1.1
SAML IAmb IAmb 10 39 55.2
comp=Z,15nm,0.7s
CMIG Matias Romero 22.48 289 P P 10 39 55.8 +1.1
comp=Z,1.7nm,0.5s,baz=82,slow=11,SNR=6.6
CMIG LR LR 10 49 04.5
comp=Z,66nm,18.8s,baz=76,slow=38
NNA Nana 22.87 191 P P 10 39 58.4 -0.4
comp=Z,36nm,0.6s,baz=9.4,slow=9.8,SNR=26
NNA LR LR 10 49 56.0
comp=Z,122nm,19.8s,baz=359,slow=40
NNA Nana 22.87 191 P P 10 39 58.6 -0.2
GOGA Godfrey 24.73 338 pP 10 40 26.2 +2.0
LRAL Lakeview Retre 25.88 332 pP 10 40 36.3 +1.6
TKL Tuckaleechee C 26.86 340 LR LR 10 51 33.1
comp=Z,60nm,20.5s,baz=142,slow=37
LPAZ La Paz 27.14 170 P P 10 40 37.5 -1.5
comp=Z,1.5nm,0.6s,baz=336,slow=5.9,SNR=8.2
LPAZ LR LR 10 52 22.7
comp=Z,256nm,18.8s,baz=347,slow=39
LPAZ La Paz 27.14 170 eP P 10 40 35.2 -3.7
LPAZ La Paz 27.14 170 P P 10 40 37.7 -1.3
SIV San Ignacio 28.86 156 P P 10 40 52.0 -1.6
comp=Z,3.8nm,0.7s,baz=348,slow=8.5,SNR=14
SIV LR LR 10 52 32.5
comp=Z,67nm,20.0s,baz=278,slow=37
GO01 Chusmiza 30.32 174 P P 10 41 03.9 -3.3
GO01 IAmb IAmb 10 41 13.5
comp=Z,8.7nm,1.2s
PB11 IPOC Station P 30.37 174 P P 10 41 06.0 -1.1
PB11 IAmb IAmb 10 41 08.9
comp=Z,6.2nm,1.0s
SALV Santo Antonio 31.28 147 eP P 10 41 12.9 -2.2
U40A Yellville 31.44 328 P P 10 41 18.2 +1.9
U40A pP 10 41 24.6 +0.3
U40A IAmb IAmb 10 41 25.7
comp=Z,7.0nm,0.7s
CCM Cathedral Cave 31.97 332 pP 10 41 30.2 +1.3
TXAR Lajitas Array 34.38 307 P P 10 41 43.4 +1.1
comp=Z,0.3nm,0.6s,baz=127,slow=7.6,SNR=6.3
TXAR PcP PcP 10 44 19.0 +1.2
comp=Z,1.2nm,0.8s,baz=136,slow=5.7,SNR=9.2
TX31 Lajitas Ar. Si 34.38 307 PcP 10 44 19.2 +1.3
AQDB Aquidauana 35.15 152 eP P 10 41 46.0 -2.8
BDFB Brasilia 35.76 137 P P 10 41 52.9 -1.3
comp=Z,2.1nm,0.5s,baz=269,slow=7.4,SNR=4.1
T25A Trinidad 38.88 318 P P 10 42 23.4 +2.7
CPUP Villa Florida 39.67 158 P P 10 42 24.4 -2.6
comp=Z,0.5nm,0.4s,baz=350,slow=6.1,SNR=2.2
CPUP PcP PcP 10 44 32.7 -1.0
comp=Z,1.3nm,0.6s,baz=336,slow=4.8,SNR=2.9
CPUP LR LR 11 00 30.8
comp=Z,136nm,18.0s,baz=7.5,slow=39
EYMN Ely 40.40 340 P P 10 42 33.6 +0.7
PTGB Pitanga 40.50 150 eP P 10 42 31.6 -2.5
ULM Lac du Bonnet 43.88 339 P P 10 43 01.9 +0.8
comp=Z,3.9nm,0.7s,baz=143,slow=8.7,SNR=11
ULM PcP PcP 10 44 47.5 +0.3
comp=Z,3.5nm,0.6s,baz=154,slow=2.9,SNR=5.7
ULM LR LR 11 02 31.0
comp=Z,43nm,18.5s,baz=48,slow=38
SCHQ Schefferville 44.31 5 P P 10 43 06.4 +1.8
comp=Z,5.4nm,0.6s,baz=198,slow=6.5,SNR=22
SCHQ Schefferville 44.31 5 P P 10 43 06.2 +1.6
SCHQ IAmb IAmb 10 43 07.0
comp=Z,6.1nm,0.8s
PDAR Pinedale Array 45.31 322 P P 10 43 14.2 +1.1
comp=Z,1.3nm,0.7s,baz=116,slow=9.8,SNR=14
PDAR PcP PcP 10 44 52.8 +0.2
comp=Z,2.8nm,0.5s,baz=123,slow=6.1,SNR=21
SPUT South Promonto 46.38 318 P P 10 43 23.0 +1.5
FXWY Fox Creek 46.69 322 IAmb IAmb 10 43 26.4
comp=Z,4.3nm,0.8s
R11A Troy Canyon, C 47.19 313 P P 10 43 30.0 +2.1
R11A IAmb IAmb 10 43 42.4
comp=Z,4.4nm,1.3s
YHH Holmes Hill 47.22 323 P P 10 43 31.4 +3.2
NVAR Mina Array Bea 49.19 312 P P 10 43 45.0 +1.6
comp=Z,1.3nm,0.8s,baz=120,slow=6.7,SNR=12
NVAR PcP PcP 10 45 07.6 +1.2
comp=Z,1.5nm,0.6s,baz=140,slow=4.5,SNR=12
NVAR LR LR 11 08 34.0
comp=Z,49nm,18.1s,baz=296,slow=41
KVN Kaiserville 49.28 313 IAmb IAmb 10 43 46.4
comp=Z,2.9nm,0.9s
MFID Camas Ranch 49.59 319 IAmb IAmb 10 43 50.4
comp=Z,5.2nm,1.0s
YERR Yerington 50.08 312 IAmb IAmb 10 43 52.9
comp=Z,8.7nm,1.4s
PLCA Paso Flores 51.16 178 P P 10 43 56.2 -1.8
comp=Z,3.6nm,1.2s,baz=20,slow=8.8,SNR=6.2
BEKR Beckworth 51.20 313 P P 10 43 59.2 +0.7
WALA Waterton Lakes 51.35 326 P P 10 44 00.4 +0.9
F10A Beach Ranch, E 51.67 321 IAmb IAmb 10 44 13.2
comp=Z,5.7nm,0.8s
G08A Pilot Rock 52.44 320 P P 10 44 09.4 +1.8
G08A IAmb IAmb 10 44 10.0
comp=Z,7.8nm,1.2s
NEW Newport 52.73 324 P P 10 44 11.0 +1.3
KRMB Red Mountain 54.31 314 P P 10 44 22.7 +1.2
LTY Liberty 54.37 321 P P 10 44 23.6 +1.8
LTY IAmb IAmb 10 44 34.8
comp=Z,6.7nm,1.0s
YKA Yellowknife Ar 59.85 339 P P 10 45 00.6 +0.5
comp=Z,4.2nm,0.7s,baz=128,slow=7.3,SNR=63
YKA PcP PcP 10 45 46.9 +0.4
comp=Z,1.5nm,0.6s,baz=120,slow=4.7,SNR=11
SUMG Summit 65.16 11 iP P 10 45 36.7 +0.8
comp=Z,21nm,0.6s
RES Resolute Bay 65.24 354 P P 10 45 36.3 +0.4
comp=Z,0.8nm,0.7s,baz=169,slow=11,SNR=4.2
TIC Toumodi 66.89 87 eP P 10 45 46.5 -1.2
ESDC Sonseca Array 66.90 51 P P 10 45 47.7 +0.3
comp=Z,1.5nm,0.9s,baz=292,slow=7.8,SNR=4.0
LIC Lamto 66.95 88 eP P 10 45 47.1 -0.9
comp=Z,25nm,0.5s
DBIC Dimbokro 67.05 87 P P 10 45 47.9 -0.8
comp=Z,22nm,1.1s,baz=268,slow=6.9,SNR=10
DBIC Dimbokro 67.05 87 IAmb IAmb 10 45 54.9
comp=Z,10nm,0.8s
KIC Kosan Boka 67.21 88 eP P 10 45 48.9 -0.8
comp=Z,24nm,0.6s
HYT Haines Junctio 68.60 332 P P 10 46 00.3 +2.6
HYT IAmb IAmb 10 46 18.4
comp=Z,4.1nm,1.0s
INK Inuvik 69.60 340 IAmb IAmb 10 46 05.3
comp=Z,2.6nm,0.8s
DAWY Dawson 70.38 335 P P 10 46 09.8 +1.3
TORD Torodi Ar. Bea 72.57 79 P P 10 46 21.9 -0.7
comp=Z,2.8nm,0.6s,baz=286,slow=6.8,SNR=16
PRP Porcupine Dome 73.28 335 P P 10 46 27.2 +1.1
PRP pP 10 46 33.2 -1.4
SCM Sheep Creek Mo 73.44 331 P P 10 46 28.4 +1.5
ILAR Eielson Array 73.71 335 P P 10 46 28.8 +0.4
comp=Z,1.2nm,0.6s,baz=104,slow=4.3,SNR=22
ILAR LR LR 11 20 10.2
comp=Z,35nm,19.2s,baz=117,slow=37
RND Reindeer 74.35 333 P P 10 46 34.4 +2.1
MLY Manley 75.37 335 IAmb IAmb 10 46 41.3
comp=Z,3.1nm,0.7s
BPAW Bear Paw Mtn. 75.38 334 P P 10 46 39.6 +1.5
BPAW IAmb IAmb 10 46 40.0
comp=Z,5.5nm,0.8s
BFO Black Forest 76.15 43 pP 10 46 49.3 -2.1
NB2 NORSAR Subarra 77.80 30 P P 10 46 53.3 +1.4
comp=Z,1.4nm,0.6s,baz=270,slow=5.9
NOA NORSAR Array B 77.80 30 P P 10 46 53.5 +1.7
comp=Z,2.2nm,0.7s,baz=271,slow=5.7,SNR=5.7
GERES GERESS Array B 79.69 42 P P 10 47 03.5 +0.9
comp=Z,0.5nm,0.3s,baz=261,slow=7.8,SNR=5.4
ARCES ARCESS Array B 82.95 21 P P 10 47 20.1 +0.7
comp=Z,3.6nm,0.8s,baz=297,slow=5.3,SNR=8.8
FINES FINESS Array B 84.88 28 P P 10 47 30.3 +1.0
comp=Z,3.1nm,0.9s,baz=180,slow=28,SNR=2.8
BRTR Keskin Array B 95.51 48 P P 10 48 20.0 -0.2
comp=Z,1.0nm,0.8s,baz=265,slow=4.0,SNR=5.0
BRTR Keskin Array B 95.51 48 P P 10 48 20.0 -0.2
MKAR Makanchi Array 118.58 19 PKP PKPdf 10 53 42.0 -0.8
comp=Z,0.3nm,0.4s,baz=301,slow=2.5,SNR=6.9
SONM Songino Array 121.77 1 PKP PKPdf 10 53 49.2 +0.1
comp=Z,0.4nm,0.6s,baz=75,slow=1.6,SNR=1.9
KSH Kashi 122.20 28 PKP PKPdf 10 53 48.8 -1.4
KSRS Korea Array 128.39 339 PKP PKPdf 10 54 02.0 +0.1
comp=Z,1.1nm,0.7s,baz=52,slow=1.0,SNR=7.7
CD2 Chengdu 138.53 5 PKP PKPdf 10 54 19.3 -1.9
CTA Charters Tower 141.40 251 PKP PKPdf 10 54 27.3 +0.7
comp=Z,5.1nm,0.8s,baz=251,slow=8.8,SNR=3.3
STKA Stephens Creek 141.97 231 PKP PKPdf 10 54 26.9 -0.4
comp=Z,3.1nm,0.8s,baz=37,slow=0.7,SNR=7.1
STKA Stephens Creek 141.97 231 PKPdf 10 54 28.2 +0.9
CMAR Chiang Mai Arr 149.91 16 PKP PKPdf 10 54 41.9 +0.8
comp=Z,2.4nm,0.6s,baz=303,slow=2.3,SNR=5.3
CMAR PKPbc PKPbc 10 54 46.1 +0.1
comp=Z,2.8nm,0.5s,baz=328,slow=3.8,SNR=15
CMAR PKPab PKPab 10 54 51.1 -0.3
comp=Z,3.6nm,0.8s,baz=319,slow=5.5,SNR=10
ASAR Alice Springs 151.57 239 PKP PKPdf 10 54 43.9 +0.2
comp=Z,1.5nm,0.8s,baz=117,slow=2.4,SNR=45
ASAR PKPbc PKPbc 10 54 49.2 -0.6
comp=Z,16nm,0.7s,baz=111,slow=3.0,SNR=208
WRA Warramunga Arr 152.40 247 PKP PKPdf 10 54 45.6 +0.7
comp=Z,0.8nm,0.6s,baz=91,slow=1.2,SNR=8.8
WRA PKPbc PKPbc 10 54 51.5 -0.2
comp=Z,11nm,0.5s,baz=106,slow=2.9,SNR=91
WRA PKPab PKPab 10 54 59.2 -2.7
comp=Z,4.5nm,0.5s,baz=104,slow=2.7,SNR=16

JMA 24 10:47:41.3±0.6, 20.65N×121.17E, h0km, M3.8
IDC 24 10:47:43.1±1.2, 20.47N×121.88E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.5/47, mbtmp3.6/7, ML2.9/1, MS2.8/2, Ms1 2.8/2, ms1mx2.6/27, Error ellipse: s-maj=37.0km s-min=21.0km az=69.0
ISC 24 10:47:48.9±1.0, 20.4N±0.1×121.7E±0.1, h43km, n14, σ1s59/18, mb3.5/6, Philippine Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
YOJ Yonaguni jima 4.21 17 P Pn 10 48 48.4 -2.1
IRIF Iriomote-Funau 4.34 26 P Pn 10 48 51.3 -1.0
IRIF eS Sn 10 49 42.8 +1.2
JKRS Kuro-shima 4.37 29 P Pn 10 48 52.0 -0.8
JKRS eS Sn 10 49 43.4 +1.0
JIJ Ishigaki jima 4.54 30 P Pn 10 48 54.0 -1.1
JIJ eS Sn 10 49 48.7 +2.1
JISG Ishigakijimahi 4.81 30 P Pn 10 48 56.9 -1.9
JISG S Sn 10 49 55.3 +2.0
JTJ Tarama 5.05 33 P Pn 10 49 02.8 +0.7
JTJ eS Sn 10 50 00.4 +1.3
JNU Nakatsue 15.07 31 LR LR 10 57 11.7
comp=Z,35nm,21.6s,baz=246,slow=38
KSRS Korea Array 17.82 16 P Pn 10 51 51.2 -2.5
0.0nm,0.3s,baz=200,slow=11,SNR=5.2
KSRS LR LR 10 58 34.4
comp=Z,35nm,18.2s,baz=212,slow=37
CMAR Chiang Mai Arr 21.52 269 P P 10 52 34.8 +0.3
0.4nm,0.3s,baz=74,slow=9.5,SNR=4.5
MKAR Makanchi Array 41.40 319 P P 10 55 33.8 +2.7
0.3nm,0.5s,baz=113,slow=11,SNR=4.7
WRA Warramunga Arr 41.99 162 P P 10 55 35.9 -0.1
2.4nm,0.7s,baz=342,slow=8.9,SNR=4.6
ZALV Zalesovo Beam 43.67 329 P P 10 55 49.2 -0.1
0.5nm,0.4s,baz=116,slow=9.8,SNR=2.7
ASAR Alice Springs 45.41 164 P P 10 56 03.9 +0.3
0.3nm,0.4s,baz=350,slow=6.8,SNR=6.1
YKA Yellowknife Ar 86.25 23 P P 11 00 25.1 -0.7
0.2nm,0.6s,baz=314,slow=4.4,SNR=5.9

NORS 24 11:15:55.3±0.0, 42.93N×44.11E, h8km, MPVA4.1
MOS 24 11:15:55.2±0.0, 42.95N×44.07E, h14km, MPVA4.2
TIF 24 11:15:55.9, 42.99N×44.16E, h11km±2km
DRS 24 11:15:57.8±0.0, 43.12N×44.22E, h16km
DDA 24 11:15:58.0, 42.77N×44.08E, h8km±10km, ML2.2
ISC 24 11:15:56.4±0.8, 42.95N±0.01×44.12E±0.01, h18km±4km, n90, σ1s45/160, 8C-2D, Western Caucasus

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KORR Kora 0.14 343 iPg Pg 11 16 00.3 -0.3
KORR eSg Sg 11 16 03.5 +0.1
KORR Kora 0.14 343 ⇑iPG Pg 11 16 00.3 -0.3
KORR eS Sb 11 16 03.8 +0.8
LACR Lac 0.18 135 ePg Pg 11 16 00.3 -0.9
LACR Lac 0.18 135 ⇓iPG Pg 11 16 00.3 -0.9
ZEI Tsey 0.23 225 ePg Pg 11 16 01.7 -0.3
ZEI eSg Sg 11 16 06.0 +0.2
ZEI Tsey 0.23 225 ⇑iPG Pg 11 16 02.2 +0.2
ZEI eS Sg 11 16 06.0 +0.2
ARNR Ardon 0.26 28 ePg Pg 11 16 02.3 +0.1
ARNR eSg Sg 11 16 06.9 +0.7
ARNR Ardon 0.26 28 ePG Pg 11 16 02.5 +0.3
ARNR eS Sb 11 16 07.1 +0.5
LSNR Lesken 0.39 326 ePg Pg 11 16 05.0 +0.5
LSNR eSg Sb 11 16 11.3 +0.7
LSNR Lesken 0.39 326 ePG Pg 11 16 05.0 +0.5
LSNR eS Sb 11 16 11.6 +1.0
DIGR Digorskoe uzhe 0.40 262 ePg Pg 11 16 04.5 -0.3
DIGR eSg Sg 11 16 10.6 +0.1
DIGR Digorskoe uzhe 0.40 262 ePG Pg 11 16 04.9 +0.1
DIGR eS Sg 11 16 10.6 +0.1
STDR Stavd-Durt 0.42 354 ePg Pb 11 16 05.8 +0.4
STDR eSg Sb 11 16 13.6 +2.3
STDR Stavd-Durt 0.42 354 ePG Pb 11 16 05.8 +0.4
STDR eS Sb 11 16 13.6 +2.3
VLKR Vladikavkaz 0.42 77 iPg Pg 11 16 05.8 +0.8
VLKR eSg Sb 11 16 13.0 +1.6
VLKR Vladikavkaz 0.42 77 ePG Pg 11 16 05.0 0.0
BTKR Batakoyurt 0.52 36 ePg Pb 11 16 08.3 +1.2
BTKR eSg Sb 11 16 16.6 +2.3
BTKR Batakoyurt 0.52 36 ePG Pb 11 16 08.4 +1.3
BTKR eS Sn 11 16 17.8 +0.3
GUDG Gudauri 0.55 152 P Pg 11 16 06.7 -0.9
GUDG S Sg 11 16 14.3 -0.7
GUDG Gudauri 0.55 152 PG Pg 11 16 06.7 -0.9
GUDG S Sg 11 16 14.3 -0.7
KMGR Komgaron 0.55 79 ePg Pg 11 16 08.2 +0.7
KMGR Komgaron 0.55 79 ePG Pg 11 16 08.2 +0.7
KMGR eS Sn 11 16 19.1 +0.7
ONI Oni 0.61 234 P Pg 11 16 09.3 +0.6
ONI S Sb 11 16 18.2 +1.2
ONI Oni 0.61 234 ePg Pg 11 16 09.3 +0.6
ONI eSg Sb 11 16 18.2 +1.2
ONI Oni 0.61 234 PG Pg 11 16 09.2 +0.6
ONI S Sb 11 16 18.2 +1.2
NCK Nalchik 0.66 325 ePg Pb 11 16 10.3 +0.7
NCK eSg Sb 11 16 19.6 +1.1
NCK Nalchik 0.66 325 ePG Pb 11 16 10.3 +0.7
NCK eS Sb 11 16 20.1 +1.6
PRTR Priterechnaya 0.81 8 ePg Pb 11 16 13.1 +0.9
PRTR eSg Sn 11 16 25.4 +0.9
PRTR Priterechnaya 0.81 8 ePG Pb 11 16 13.1 +0.9
PRTR eS Sn 11 16 25.4 +0.9
TRKR Terskaya 0.89 30 ePg Pn 11 16 14.6 +0.5
TRKR eSg Sn 11 16 27.9 +1.4
TRKR Terskaya 0.89 30 ePG Pn 11 16 14.7 +0.6
TRKR eS Sn 11 16 27.9 +1.4
KBTC Kuba-Taba 1.01 329 ePg Pn 11 16 16.3 +0.5
KBTC eSg Sn 11 16 30.3 +0.7
KBTC Kuba-Taba 1.01 329 ePG Pn 11 16 16.3 +0.5
KBTC eS Sn 11 16 30.3 +0.7
NEY Neytrino 1.07 286 iPG Pb 11 16 16.3 -0.2
KBZ Khabaz 1.18 311 ePg Pn 11 16 18.2 +0.1
KBZ eSg Sn 11 16 34.5 +0.8
KBZ Khabaz 1.18 311 ePG Pn 11 16 18.2 +0.1
KBZ eS Sn 11 16 34.5 +0.8
GROC Groznyy 1.25 78 ePg Pn 11 16 20.7 +1.2
GROC eSg Sg 11 16 38.3 +1.4
GROC Groznyy 1.25 78 ePG Pb 11 16 20.2 +0.7
GROC e 11 16 38.5
GROC pmax pmax
comp=Z,44nm,0.1s
GROC smax smax
comp=N,291nm,0.4s
GROC smax smax
comp=N,326nm,0.4s
GROC smax smax
comp=E,378nm,0.5s
TBLG Delisi 1.30 159 P Pb 11 16 21.3 +0.9
TBLG S Sg 11 16 39.8 +1.2
TBLG Delisi 1.30 159 ePg Pb 11 16 21.3 +0.9
TBLG eSg Sg 11 16 39.8 +1.2
TBLG Delisi 1.30 159 iP Pn 11 16 20.8 +1.0
TBLG iS Sb 11 16 38.3 +1.4
TBLG Delisi 1.30 159 PG Pb 11 16 21.3 +0.9
TBLG S Sg 11 16 39.8 +1.2
SHA1 Shidzhatmaz 1.33 307 ePg Pn 11 16 20.7 +0.4
SHA1 eSg Sn 11 16 39.0 -0.4
SHA1 Shidzhatmaz 1.33 307 ePG Pb 11 16 21.3 +0.3
SHA1 pmax pmax
comp=Z,34nm,0.2s
PYA1 Pyatigorsk 1.34 326 ePg Pb 11 16 21.4 +0.4
PYA1 Pyatigorsk 1.34 326 ePG Pb 11 16 21.5 +0.4
PYA1 eS Sb 11 16 38.9 +1.1
BTNK Botanikuri 1.36 158 P Pb 11 16 22.3 +0.8
BTNK S Sg 11 16 41.8 +1.2
BTNK Botanikuri 1.36 158 ePg Pb 11 16 22.3 +0.8
BTNK eSg Sg 11 16 41.8 +1.2
BTNK Botanikuri 1.36 158 iP Pb 11 16 22.2 +0.8
BTNK Botanikuri 1.36 158 PG Pb 11 16 22.3 +0.8
BTNK S Sg 11 16 41.8 +1.2
BEYR Belyy Ugol+ 1.42 318 ePg Pb 11 16 22.8 +0.3
BEYR eSg Sb 11 16 41.2 +0.9
BEYR Belyy Ugol+ 1.42 318⇑ePG Pb 11 16 22.9 +0.4
BEYR eS Sb 11 16 41.4 +1.1
KIV0 Kislovodsk Arr 1.44 314 ePg Pb 11 16 23.1 +0.3
KIV0 eSg Sb 11 16 42.0 +1.1
KIV Kislovodsk 1.45 314 ePg Pn 11 16 22.9 +1.0
KIV eSg Sb 11 16 42.2 +1.1
KIV Kislovodsk 1.45 314 ePG Pn 11 16 22.9 +1.0
KIV eS Sb 11 16 42.2 +1.1
BTLR Botlikh 1.57 100 ePg Pb 11 16 25.8 +0.7
BTLR Botlikh 1.57 100 ePG Pb 11 16 25.9 +0.9
BTLR eS Sb 11 16 46.5 +1.9
KZRT Kazreti 1.58 172 P Pb 11 16 26.0 +0.8
KZRT S Sg 11 16 47.4 0.0
KZRT Kazreti 1.58 172 ePg Pb 11 16 26.0 +0.8
KZRT eSg Sg 11 16 47.4 0.0
KZRT Kazreti 1.58 172 iP Pb 11 16 26.1 +1.0
KZRT iS Sb 11 16 46.7 +1.9
KZRT Kazreti 1.58 172 PG Pb 11 16 25.9 +0.8
KZRT S Sg 11 16 47.4 0.0
AKH Akhalkalaki 1.61 197 P Pb 11 16 27.0 +1.2
AKH S Sg 11 16 49.7 +1.2
AKH Akhalkalaki 1.61 197 ePg Pb 11 16 27.1 +1.2
AKH eSg Sb 11 16 47.8 +1.9
AKH Akhalkalaki 1.61 197 PN Pb 11 16 27.0 +1.2
AKH S Sg 11 16 49.7 +1.2
BGD Bogdanovka 1.73 193 P Pb 11 16 29.5 +1.6
BGD S Sg 11 16 52.6 +0.3
BGD Bogdanovka 1.73 193 ePg Pb 11 16 29.5 +1.6
BGD eSg Sg 11 16 52.6 +0.3
BGD Bogdanovka 1.73 193 PN Pb 11 16 29.5 +1.6
BGD S Sg 11 16 52.6 +0.3
EPOS Posof 1.78 216 iP Pb 11 16 29.8 +1.1
EPOS iS Sg 11 16 55.0 +1.1
EPOS IAML 11 16 57.0
comp=N,33nm,0.4s
EPOS IAML 11 16 58.0
comp=E,28nm,0.5s
DLMR Dylym 1.84 86 ePg Pb 11 16 31.0 +1.4
DLMR Dylym 1.84 86 ePN Pb 11 16 31.0 +1.4
DLMR pmax pmax
comp=Z,64nm,0.2s
XNZR Khunzakh 1.95 101 iPg Pb 11 16 33.0 +1.4
XNZR eSg Sb 11 16 58.8 -0.4
XNZR Khunzakh 1.95 101⇑iPN Pb 11 16 32.9 +1.4
XNZR eS Sb 11 16 58.7 -0.4
DBC Dubki 1.99 87⇑iPN Pb 11 16 33.2 +1.1
DBC pmax pmax
comp=Z,19nm,0.2s
KRNR Karanay 2.05 93 PN Pb 11 16 33.0 -0.2
ARKR Arakani 2.14 98 ePg Pb 11 16 36.0 +1.2
ARKR eSg Sb 11 17 04.0 +3.0
ARKR Arakani 2.14 98 PN Pb 11 16 36.0 +1.2
ARKR eS Sb 11 17 04.0 +3.0
GNBR Gunib 2.17 104 ePg Pb 11 16 36.2 +0.9
GNBR eSg Sb 11 17 02.2 +0.3
BUJR Buynaksk 2.20 92 ePn Pb 11 16 37.2 +1.5
BUJR eSn Sg 11 17 05.8 -1.3
BUJR Buynaksk 2.20 92 ePN Pb 11 16 37.2 +1.5
BUJR eS Sg 11 17 05.8 -1.3
GOF Gofitskoye 2.24 340⇑ePN Pg 11 16 45.0 +5.5
GOF eS Sg 11 17 13.6 +5.0
GOF pmax pmax
comp=Z,55nm,0.5s
GOF smax smax
comp=N,45nm,0.4s
GOF smax smax
comp=E,46nm,0.6s
EAK Akyaka 2.30 190 iP Pb 11 16 37.9 +0.4
EAK IAML 11 17 12.0
comp=E,17nm,0.4s
KMKR Kumukh 2.35 110 ePN Pb 11 16 40.0 +1.6
KMKR eS Sb 11 17 10.0 +2.9
DBOC Borcka 2.43 229 iP Pb 11 16 39.1 -0.6
DBOC iS Sb 11 17 11.8 +2.4
DAGI Agillar 2.50 222 iP Pb 11 16 40.3 -0.5
DBAD Bademkaya 2.65 224 iP Pb 11 16 42.7 -0.7
DBAD iS Sb 11 17 18.1 +2.5
AKTO Aktyubinsk 12.11 47 ⇑Pn Pn 11 18 46.6 -1.4
comp=E,2.8nm,1.1s
AKTO ⇓Sn Sn 11 20 55.1 -7.4
comp=E,2.1nm,0.8s
AB31 Akbulak array 12.65 55 Pn Pn 11 18 53.5 -1.8
comp=E,0.3nm,0.3s,baz=236,slow=9.6,SNR=26
AB31 ⇑Sn Sn 11 21 07.6 -8.0
comp=E,0.6nm,0.5s,baz=250,slow=23,SNR=3.9
ARU Arti 16.36 29 iP Pn 11 19 45.0 0.0
ARU pmax pmax
comp=Z,4.0nm,1.3s
VSU Vasula 18.94 331 iP P 11 20 16.5 +0.3
VSU pmax pmax
comp=Z,44nm,1.1s
BRVK Borovoye 20.10 51 iP P 11 20 29.6 +0.6

ANF 24 11:20:49.0±0.7, 35.54N×97.30W, h5km, ML3.8/8, Error ellipse: s-maj=9.7km s-min=5.7km az=156.0
TUL 24 11:20:49.3±1.1, 35.57N±0.01×97.34W±0.05, h4km±4km,

ML2.9, Error ellipse: s-maj=5.3km s-min=1.8km az=96.0
NEIC 24 11:20:49.5±0.8, 35.57N±0.01×97.34W±0.04, h5km±1km, Error ellipse: s-maj=6.2km s-min=2.9km az=276.0
ISC 24 11:20:49.5±0.9, 35.59N±0.03×97.33W±0.03, h6km±5km, n34, σ0§90/47, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK001	Jones High Sch	0.05	131	Pg	Pg	11 20 50.7	-0.2
OK001				Sg	Sg	11 20 52.0	0.0
ADOK	Arcadia Dam	0.07	333	Pg	Pg	11 20 51.5	+0.2
OK009	Oakdale Elemen	0.07	261	Pg	Pg	11 20 51.0	-0.3
OK009				Sg	Sg	11 20 52.5	-0.1
OK005	Luther M Schoo	0.13	62		Pg	11 20 52.7	+0.5
OKCFA	Oklahoma City	0.20	208	Pg	Pg	11 20 53.0	-0.5
OKCFA				Sg	Sg	11 20 55.9	-0.3
OKCSW	OKLAHOMA CITY	0.20	204	Pg	Pg	11 20 53.1	-0.5
OKCSW				Sg	Sg	11 20 56.0	-0.3
FNO	Franklin	0.34	189	Pg	Pg	11 20 56.0	-0.1
FNO				Sg	Sg	11 21 00.8	+0.3
W35A	Tecumseh	0.58	139		Pg	11 21 00.1	-0.6
X34A	Smith Ranch, M	1.07	203	Pg	Pg	11 21 09.3	-0.8
X34A				Sg	Sb	11 21 24.2	-0.5
TUL1	Leonard	1.29	75		Pn	11 21 12.5	-1.6
TUL1	Leonard	1.29	75	P	Pn	11 21 12.5	-1.6
	baz=255						
TUL1				S	Sg	11 21 30.3	-0.8
	baz=255						
WMOK	Wichita Mounta	1.46	235	Pn	Pn	11 21 15.1	-1.3
WMOK	Wichita Mounta	1.46	235	P	Pn	11 21 15.1	-1.3
	baz=54						
WMOK				S	Sb	11 21 34.3	-1.6
	baz=54						
U32A	Winter Ranch,	1.56	301		Pn	11 21 17.7	-0.1
Z35A	Perchaven, San	2.26	178		Pn	11 21 27.6	+0.3
U38A	Gravette	2.54	70		Pn	11 21 31.4	+0.3
HHAR	Hobbs	2.84	75		Pn	11 21 35.5	+0.2
W39A	Magazine	2.93	97		Pn	11 21 36.6	0.0
W39A	Magazine	2.93	97	P	Pn	11 21 36.1	-0.4
	baz=278						
W39A				S	Sn	11 22 12.8	+0.9
	baz=278						
MIAR	Mount Ida	3.25	108		Pn	11 21 41.7	+0.7
MIAR	Mount Ida	3.25	108	P	Pn	11 21 40.3	-0.7
	baz=289						
MIAR				S	Sn	11 22 20.9	+0.8
	baz=289						
ABTX	Abilene, Hawle	3.53	214		Pn	11 21 45.6	+0.7
ABTX	Abilene, Hawle	3.53	214	S	Sn	11 22 26.9	+0.1
	baz=32						
KSU1	Kansas State U	3.55	9	P	Pn	11 21 46.0	+0.9
	baz=190						
KSU1				Sb	Sg	11 22 41.0	-2.5
	baz=190						
WHTX	Lake Whitney,	3.59	182		Pn	11 21 45.8	+0.1
WHTX	Lake Whitney,	3.59	182	P	Pn	11 21 45.6	-0.1
	baz=1.5						
WHTX				Sb	Sb	11 22 39.1	+1.9
	baz=1.5						
AMTX	Amarillo	3.63	260		Pn	11 21 47.1	+0.8
AMTX	Amarillo	3.63	260	P	Pn	11 21 47.0	+0.8
	baz=78						
AMTX				S	Sn	11 22 31.3	+1.8
	baz=78						
U40A	Yellville	3.71	77		Pn	11 21 47.0	-0.3
CBKS	Cedar Bluff	3.74	330		Pn	11 21 48.3	+0.5
237A	Washetta, Mont	3.80	160	Pn	Pn	11 21 48.5	-0.1
X40A	Basin Creek Fa	3.85	105		Pn	11 21 50.7	+1.4
WHAR	Wooly Hollow	4.13	93		Pn	11 21 53.2	+0.1
W41B	Gary Mavity, V	4.18	94		Pn	11 21 54.0	+0.3

IDC 24 11:33:07.3±27.0, 20.43S×178.22W, h550km±274km, mb3.1/4, mb1 3.3/4, mb1mx2.9/30, mbtmp4.1/4, Error ellipse: s-maj=178.4km s-min=37.2km az=54.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.30	264	P	P	11 39 00.6	+0.5
	2.1nm,0.3s,baz=92,slow=12,SNR=7.8						
ASAR	Alice Springs	44.34	257	P	P	11 40 28.9	-0.4
	1.1nm,0.6s,baz=95,slow=7.6,SNR=22						
WRA	Warramunga Arr	44.41	262	P	P	11 40 29.3	-0.5
	0.9nm,0.3s,baz=98,slow=8.0,SNR=16						
QSPA	South Pole Qui	69.63	180	P	P	11 43 21.5	0.0
	1.1nm,0.7s,baz=169,slow=5.2,SNR=9.0						
AKASG	Malin Array Be	142.86	331	PKP	PKPdf	11 51 37.6	-0.7
	1.3nm,0.5s,baz=48,slow=4.0,SNR=5.3						

IDC 24 12:20:59.8±2.2, 2.33N×127.82E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/35, mbtmp3.4/3, Error ellipse: s-maj=159.9km s-min=24.8km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.04	164	P	P	12 26 07.1	+0.2
	0.6nm,0.3s,baz=344,slow=10,SNR=16						
ASAR	Alice Springs	26.51	167	P	P	12 26 38.5	-0.8
	0.1nm,0.4s,baz=351,slow=7.5,SNR=5.3						
MKAR	Makanchi Array	59.32	325	P	P	12 31 04.0	+0.3
	0.3nm,0.4s,baz=114,slow=8.3,SNR=8.2						

SOME 24 12:26:50.1, 41.12N×71.23E, h0km
KRNET 24 12:26:53.1±0.1, 41.28N×71.32E, h8km, mb2.3
NNC 24 12:26:54.1±6.2, 41.38N×71.32E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=44.0km s-min=22.8km az=177.0
ISC 24 12:26:53.3±1.3, 41.27N±0.04×71.29E±0.03, h6km±11km, n14, σ1§12/27, 12C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.73	44	⇑iP	Pg	12 27 07.0	-0.3
	baz=46						
ARK				⇑iS	Sg	12 27 17.0	+0.2
	baz=46						
BTK	Batken	1.27	197	⇑iP	Pg	12 27 17.5	-0.1
	baz=97						
BTK				⇑iS	Sb	12 27 35.4	+1.2
	baz=97						
ARSB	Arslanbob	1.28	87	⇓iP	Pb	12 27 17.5	-0.3
	baz=88						
ARSB				⇓iS	Sn	12 27 35.0	-0.3
	baz=88						
IUG	Iuzhnay	1.28	313	eP	Pg	12 27 16.5	-1.5
	1.5nm,0.1s						
IUG				eS	Sg	12 27 35.6	+1.0
	7.9nm,0.3s						
IUG	Iuzhnay	1.28	313	P	Pg	12 27 16.5	-1.5
	1.5nm,0.1s						
IUG				S	Sg	12 27 35.6	+1.0
	7.9nm,0.3s						
DZA	Taraz	1.62	1	eP	Pb	12 27 23.7	+0.2
	80nm,0.1s						
DZA				eS	Sg	12 27 47.8	+2.5
	32nm,0.1s						
DZA	Taraz	1.62	1	P	Pn	12 27 22.6	+0.2
	84nm,0.1s						
DZA				S	Sg	12 27 46.1	+0.8
	50nm,0.2s						
KK31	Karatay Array	1.92	343	⇑P	Pn	12 27 25.3	-1.2
	9.6nm,0.2s,baz=150,slow=13,SNR=101						
KK31				⇑S	Sn	12 27 51.1	+0.2
	1.1nm,0.2s,baz=158,slow=29,SNR=12						
AML	Almayashu	1.99	64	⇑iP	Pb	12 27 30.2	0.0
	baz=64						
AML				⇑iS	Sg	12 27 58.6	+1.2
	baz=64						
MRKS	Merke	2.06	44	eP	Pb	12 27 31.6	+0.5
	1.8nm,0.2s						
MRKS				eS	Sg	12 28 01.7	+2.2
	2.7nm,0.2s						
MRKS	Merke	2.06	44	Pg	Pb	12 27 31.6	+0.5
	1.8nm,0.2s						
MRKS				Lg	Lg	12 28 01.7	
	2.7nm,0.2s						
EKS2	Erkin-Say	2.32	52	⇓iP	Pb	12 27 35.0	-0.5
	baz=53						
EKS2				⇓iS	Sg	12 28 06.0	-1.7
	baz=53						
ARLS	Aral	2.35	75	⇑iP	Pb	12 27 35.2	-0.9
	baz=75						
ARLS				⇑iS	Sb	12 28 05.7	+0.2
	baz=75						
UCH	Uchtor	2.59	67	⇑iP	Pb	12 27 39.7	-0.8
	baz=68						
UCH				⇑iS	Sb	12 28 13.8	+1.1
	baz=68						

JMA 24 12:36:48.6±0.1, 30.67N×132.18E, h63km±3km, M3.9
IDC 24 12:36:50.6±2.1, 30.67N×132.01E, h40km±24km, mb3.4/4, mb1 3.7/9, mb1mx3.4/39, mbtmp3.7/9, ML3.3/5, MS3.2/4, Ms1 3.2/4, ms1mx2.7/32, Error ellipse: s-maj=27.7km s-min=14.5km az=70.0
ISC 24 12:36:47.7±1.0, 30.65N±0.05×132.26E±0.06, h28km, n25, σ1§48/35, mb3.5/4, MS3.5/3, 7C-2D, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTN	Tanegashima 3	1.11	271	⇑P	Pn	12 37 07.2	-0.2
JTN				S	Sb	12 37 21.6	-0.7
JMTN	Minamitane	1.20	258	⇑P	Pn	12 37 08.9	+0.2
JMTN				S	Sn	12 37 24.0	-0.1
JNAR	Kushima--Naru	1.22	316	⇑P	Pn	12 37 09.1	+0.2
JNAR				S	Sb	12 37 24.5	-1.0
JTSR	Tashiro 2	1.26	294	⇑P	Pn	12 37 09.3	-0.3
JTSR				S	Sb	12 37 25.6	-1.2
JNKG	Nichinankitago	1.26	323	⇑P	Pn	12 37 09.8	+0.3
JNKG				S	Sn	12 37 25.4	-0.2
JYAK	Yakushimahirau	1.57	255	⇓P	Pn	12 37 13.8	+0.1
JYAK				S	Sn	12 37 32.6	-0.5
JTZ	Takazaki	1.60	321	⇑P	Pn	12 37 14.4	+0.2
JTZ				S	Sn	12 37 33.3	-0.7
JNN	Nakanoshima	2.22	249	P	Pn	12 37 23.0	+0.3
JNN				S	Sn	12 37 48.6	-0.6
JTO	Tosashimizu	2.25	12	⇓P	Pn	12 37 22.4	-0.7
JTO				S	Sn	12 37 46.2	-3.8
JIU3	Izumi3	2.26	327	⇑P	Pn	12 37 24.0	+0.7
JIU3				S	Sn	12 37 49.7	-0.6
JSJ	Shimokoshiki	2.41	296	P	Pn	12 37 24.7	-0.7
JSJ				eS	Sn	12 37 52.3	-1.7
UWA2	Uwa jima 2	2.57	7	P	Pn	12 37 27.4	-0.2
UWA2				S	Sn	12 37 54.7	-3.3
JNU	Nakatsue	2.73	335	P	Pn	12 37 31.0	+1.2
	4.5nm,0.3s,baz=194,slow=12,SNR=197						
JNU				S	Sn	12 38 01.6	-0.3
	41nm,0.3s,baz=214,slow=14,SNR=10						
JOW	Kunigami	5.17	224	P	Pn	12 38 03.5	+0.2
	2.9nm,0.3s,baz=90,slow=19,SNR=50						
JOW				S	Sn	12 38 58.2	-3.8
	1.6nm,0.3s,baz=207,slow=18,SNR=3.7						
JHJ	Hachijo jima 2	6.85	67	P	Pn	12 38 32.7	+6.3
	9.9nm,0.3s,baz=263,slow=18,SNR=2.4						
KSRS	Korea Array	7.68	333	P	Pn	12 38 40.1	+2.4
	0.1nm,0.3s,baz=158,slow=14,SNR=2.6						
MAT	Matsushiro	7.69	39	P	Pn	12 38 39.8	+2.0
MJAR	Matsushiro Arr	7.69	39	P	Pn	12 38 40.1	+2.2
	0.5nm,0.3s,baz=241,slow=13,SNR=28						
MJAR				LR	LR	12 41 38.2	
	comp=Z,41nm,20.8s,baz=265,slow=37						
SONM	Songino Array	26.20	318	P	P	12 42 19.5	-0.6
	0.2nm,0.4s,baz=130,slow=9.1,SNR=1.8						
TIXI	Tiksi	41.09	358	LR	LR	13 02 12.8	
	comp=Z,31nm,18.8s,baz=196,slow=37						
WRA	Warramunga Arr	50.34	177	P	P	12 45 43.3	+1.0
	0.5nm,0.8s,baz=354,slow=7.9,SNR=3.2						
ASAR	Alice Springs	54.03	178	P	P	12 46 11.2	+1.5
	0.2nm,0.6s,baz=11,slow=14,SNR=5.8						
OBN	Obninsk	68.53	322	LR	LR	13 18 57.5	
	comp=Z,25nm,18.2s,baz=346,slow=37						
KVAR	Kislovodsk Arr	69.17	309	LR	LR	13 22 50.6	
	comp=Z,52nm,19.3s,baz=106,slow=40						
FINES	FINESS Array B	70.77	331	P	P	12 48 02.3	+1.2
	5.1nm,1.0s,baz=53,slow=5.4,SNR=2.5						

JMA 24 12:56:12.5, 24.18N×122.54E, h46km±2km, M3.2
TAP 24 12:56:12.8, 24.23N×122.54E, h46km, ML4.0, B
ISC 24 12:56:09.9±1.1, 24.17N±0.02×122.54E±0.02, h11km±9km, n129, σ0§72/196, 4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.46	53	P	Pn	12 56 23.1	+0.5
JYNG				eS	Sb	12 56 29.9	+2.8
YOJ	Yonaguni jima	0.52	56	P	Pn	12 56 24.0	+0.6
	baz=53						
YOJ				S	Sn	12 56 31.8	-0.4
	baz=53						
YOJ	Yonaguni jima	0.52	56	P	Pn	12 56 23.8	+0.5
YOJ				S	Sn	12 56 31.8	-0.4
EOS1	EOS1	0.53	315	P	Pn	12 56 24.5	+1.1
	baz=316						
EOS1				eS	Sn	12 56 33.5	+1.1
	baz=316						
TWC	Suao	0.76	305	⇓iP	Pn	12 56 27.0	+0.3
	baz=301						
TWC				iS	Sn	12 56 37.0	-1.2
	baz=301						
ENA	Nanau	0.77	289	⇓iP	Pn	12 56 27.2	+0.4
	baz=291						
ENA				eS	Sn	12 56 38.5	+0.1
	baz=291						
NACB	Ninganchiao	0.86	270	⇓P	Pn	12 56 28.5	+0.5
	baz=266						
NACB				eS	Sn	12 56 39.9	-0.8
	baz=266						
TWD	Chiawan	0.86	264	⇓iP	Pn	12 56 28.6	+0.5
	baz=249						
TWD				S	Sn	12 56 40.4	-0.3
	baz=249						
HWA	Hwalien	0.87	257	eP	Pn	12 56 29.1	+0.8
	baz=253						
HWA				eS	Sn	12 56 41.2	+0.3
	baz=253						
ENLB	Shoufeng	0.90	253	P	Pn	12 56 28.7	+0.1
	baz=240						
ENLB				S	Sn	12 56 41.3	-0.2
	baz=240						
ILA	Ilan	0.93	309	eP	Pn	12 56 30.7	+1.7
	baz=314						
ILA				eS	Sn	12 56 42.4	+0.1
	baz=314						
NTC	Toucheng	0.94	317	P	Pn	12 56 29.3	+0.3
	baz=324						
NTC				eS	Sn	12 56 41.5	-0.9
	baz=324						
TWE	Neicheng	0.96	305	P	Pn	12 56 30.3	+0.9
	baz=301						
TWE				eS	Sn	12 56 42.9	-0.2
	baz=301						
ETLH	Xiulin Townshi	0.96	272	eP	Pn	12 56 30.0	+0.4
	baz=268						
ETLH				eS	Sn	12 56 42.6	-0.8
	baz=268						
TWB1	Santiao Chiao	0.97	329	P	Pn	12 56 29.5	0.0
	baz=327						
TWB1				S	Sb	12 56 41.7	+0.1
	baz=327						
ENTT	Nioudou	1.00	298	P	Pn	12 56 31.1	+1.1
	baz=294						
ENTT				eS	Sn	12 56 44.3	+0.2
	baz=294						
SLBB	Yuanshan	1.00	305	P	Pn	12 56 31.2	+1.1
	baz=310						
TIPB	Shuangxi	1.02	321	P	Pn	12 56 30.4	0.0
	baz=328						
TIPB				eS	Sb	12 56 43.6	+0.3
	baz=328						
NDT	Datong Townshi	1.03	295	iP	Pn	12 56 31.3	+1.0
	baz=281						
NDT				S	Sn	12 56 44.6	-0.2
	baz=281						
ESL	Shilin	1.07	251	P	Pn	12 56 31.3	+0.3
	baz=238						
ESL				S	Sn	12 56 45.7	-0.2
	baz=238						
NNSB	Datong	1.08	284	P	Pn	12 56 31.9	+0.7
	baz=280						
NNSB				eS	Sn	12 56 46.0	-0.4
	baz=280						
NNSH	Datong	1.08	284	P	Pn	12 56 31.9	+0.6
	baz=280						
NNSH				eS	Sn	12 56 45.9	-0.4
	baz=280						
NNS	Nan Shan	1.09	284	P	Pn	12 56 32.0	+0.6
	baz=271						
NNS				eS	Sn	12 56 46.2	-0.4
	baz=271						
IRIF	Iriomote-Funau	1.10	81	P	Pn	12 56 31.8	+0.5
IRIF				eS	Sg	12 56 45.3	-0.1
NWLT	Wulai	1.12	303	P	Pn	12 56 32.8	+1.2
	baz=309						
NWLT				S	Sn	12 56 46.8	-0.3
	baz=309						
NWF	Wu-fen Shan	1.13	323	P	Pn	12 56 32.1	+0.3
	baz=320						
NWF				eS	Sg	12 56 45.5	-0.8
	baz=320						
WFSB	Wu-fen Shan	1.13	323	P	Pn	12 56 32.1	+0.3
	baz=320						
WFSB				eS	Sg	12 56 45.6	-0.7
	baz=320						
EGFH	Guangfu	1.13	244	P	Pn	12 56 32.6	+0.8
	baz=241						
EGFH				eS	Sn	12 56 47.2	-0.2
	baz=241						
WHF	Hehuan Shan	1.16	269	iP	Pn	12 56 33.0	+0.4
	baz=254						
WHF				eS	Sb	12 56 47.9	+0.3
	baz=254						
HATJ	Hateruma jima	1.16	96	P	Pn	12 56 32.8	+0.6
YHNB	Yeheng	1.17	295	P	Pn	12 56 33.4	+1.0
	baz=279						
YHNB				S	Sn	12 56 48.3	-0.1
	baz=279						
TWA	Mucha	1.18	313	iP	Pn	12 56 33.1	+0.6
	baz=310						
TWA				eS	Sg	12 56 47.8	-0.3
	baz=310						
NSK	Sanguang	1.19	295	iP	Pn	12 56 33.5	+0.9
	baz=279						
NSK				S	Sn	12 56 48.5	-0.3
	baz=279						
NHDH	Xindian Distri	1.21	311	P	Pg	12 56 33.7	+0.5
	baz=320						
NHDH				S	Sn	12 56 49.2	-0.1
	baz=320						
HGSD	Ruisui	1.23	237	P	Pg	12 56 33.8	+0.3
	baz=234						
HGSD				eS	Sb	12 56 49.3	+0.3
	baz=234						
TATO	Taipei	1.24	310	P	Pg	12 56 34.0	+0.1
	baz=319						
TATO				S	Sg	12 56 49.9	-0.1
	baz=319						
TWT	Tachien	1.25	274	eP	Pg	12 56 35.0	+1.1
	baz=262						
CHGB	Renai	1.25	265	eP	Pg	12 56 34.4	+0.4
	baz=251						
CHGB				eS	Sg	12 56 50.3	0.0
	baz=251						
TDCB	Techi	1.26	274	eP	Pg	12 56 34.8	+0.6
	baz=270						
TDCB				eS	Sb	12 56 50.4	+0.2
	baz=270						
OWD	Renai	1.26	260	P	Pg	12 56 34.5	+0.2
	baz=257						
OWD				eS	Sb	12 56 50.0	-0.2
	baz=257						
EHY	Hungye	1.30	239	P	Pb	12 56 34.6	+0.3
	baz=247						
EHY				eS	Sb	12 56 50.6	-0.5
	baz=247						
YM01	YM01	1.31	318	eP	Pn	12 56 34.4	+0.1
	baz=315						
YM01				eS	Sb	12 56 50.2	-1.2
	baz=315						
YM10	YM10	1.32	318	eP	Pb	12 56 34.6	-0.2
	baz=315						
YM11	YM11	1.32	319	eP	Pb	12 56 34.6	+0.2
	baz=316						
YM11				eS	Sb	12 56 51.5	-0.3
	baz=316						
YM08	YM08	1.33	320	eP	Pn	12 56 34.4	-0.1
	baz=316						
VWDT	VWDT	1.34	252	eP	Pg	12 56 36.0	+0.2
	baz=249						
VWDT				eS	Sb	12 56 52.4	0.0
	baz=249						
JKRS	Kuro-shima	1.35	87	P	Pb	12 56 35.2	0.0
JKRS				eS	Sb	12 56 52.3	-0.2
YM03	YM03	1.35	318	eP	Pn	12 56 35.1	+0.2
	baz=315						
ANP	Anpu	1.37	318	eP	Pn	12 56 35.3	+0.2
	baz=315						
TWS1	Kuangyinshan	1.37	312	eP	Pb	12 56 35.8	+0.1
	baz=321						
TWS1				eS	Sg	12 56 54.1	-0.1
	baz=321						
YULB	Yu-li	1.38	236	P	Pb	12 56 36.0	+0.3
	baz=245						
YULB				eS	Sb	12 56 52.6	-0.8
	baz=245						
TWY	Chenhua	1.39	322	eP	Pb	12 56 35.8	-0.1
	baz=320						
TWY				eS	Sb	12 56 52.9	-0.8
	baz=320						
TWF1	Yuli	1.40	234	iP	Pn	12 56 36.4	+0.2
	baz=245						
TWF1				eS	Sn	12 56 53.8	-0.2
	baz=245						
WHP	Taichung City	1.46	274	eP	Pg	12 56 38.2	+0.3
	baz=271						
WHP				eS	Sn	12 56 55.6	+0.1
	baz=271						
NCU	National Centr	1.46	303	eS	Sb	12 56 55.7	-0.2
	baz=300						
NCUH	Zhongli	1.46	303	eP	Pg	12 56 37.8	-0.2
	baz=300						
NCUH				eS	Sb	12 56 55.9	0.0
	baz=300						
LIOB	Emei	1.46	289	eP	Pg	12 56 38.1	0.0
	baz=286						
LIOB				eS	Sg	12 56 56.6	-0.5
	baz=286						
NSTT	Nanjuang	1.47	288	eP	Pg	12 56 38.1	-0.1
	baz=285						
JIJ	Ishigaki jima	1.48	82	P	Pn	12 56 36.9	+0.4
JIJ				eS	Sn	12 56 54.9	-1.0
DPDB	Guoxing	1.48	265	eP	Pg	12 56 38.1	-0.2
	baz=262						
FULB	Fuli	1.50	230	eP	Pb	12 56 37.7	-0.2
	baz=227						
FULB				eS	Sn	12 56 55.9	-0.6
	baz=227						
SSLB	Suanglung	1.50	255	eP	Pb	12 56 38.0	+0.2
	baz=243						
PCYT	Pengchaiyu	1.51	344	eP	Pn	12 56 37.1	+0.1
	baz=342						
CHKT	Chengkung	1.52	225	eP	Pn	12 56 37.5	+0.5
	baz=223						
CHKT				eS	Sn	12 56 54.8	-2.0
	baz=223						
SMLT	Sun Moon Lake	1.52	259	eP	Pb	12 56 38.8	+0.5
	baz=256						
SMLT				eS	Sn	12 56 57.6	+0.4
	baz=256						
TYC	Yuchr	1.56	260	eP	Pb	12 56 39.2	+0.4
	baz=248						
YUS	Yu-Shan	1.60	245	eP	Pb	12 56 40.2	+0.3
	baz=242						
YUS				eS	Sn	12 56 59.3	-0.4
	baz=242						
WHYT	Xinyi Township	1.61	253	eP	Pb	12 56 40.3	+0.5
	baz=244						
TWQ1	Liyutan	1.62	276	eP	Pb	12 56 40.5	-0.5
	baz=273						
NMLH	Miaoli	1.63	283	eP	Pb	12 56 40.4	+0.3
	baz=279						
NSY	Sanyi	1.64	279	eP	Pg	12 56 40.9	-0.5
	baz=275						
JISG	Ishigakijimahi	1.67	75	P	Pn	12 56 39.4	+0.2
JISG				S	Sn	12 56 59.6	-1.0
WJS	Zhushan	1.69	258	eP	Pg	12 56 42.1	-0.3
	baz=256						
TCU	Taichung	1.70	269	eP	Pg	12 56 42.0	-0.6
	baz=279						
ELDTW	Lidau	1.70	235	eP	Pn	12 56 40.6	+0.8
	baz=233						
ALS	Alishan	1.72	248	eP	Pn	12 56 42.2	+0.5
	baz=245						
WNT	Mingjian	1.72	261	eP	Pg	12 56 42.6	-0.4
	baz=258						
WDJ	Dajia District	1.74	276	eP	Pb	12 56 41.9	0.0
	baz=273						

WDJ				eS	Sn	12 57 03.1	+0.7
	baz=273						
TWH	Lutao	1.75	214	P	Pn	12 56 41.0	+0.7
	baz=212						
TWH				eS	Sn	12 57 01.2	-1.4
	baz=212						
CHN5	Tsauling	1.80	252	eP	Pb	12 56 43.4	+0.4
	baz=249						
WCHH	Zhanghua	1.81	267	eP	Pb	12 56 43.1	0.0
	baz=276						
WGK	Gukeng	1.87	255	eP	Pb	12 56 44.6	+0.5
	baz=253						
WDLH	Douliu	1.89	256	eP	Pb	12 56 44.9	+0.4
	baz=253						
TWGBT	Beinan	1.90	225	eP	Pn	12 56 43.1	+0.7
	baz=233						
TWG	Pinlang	1.90	225	eP	Pn	12 56 43.1	+0.7
	baz=233						
TTN	Taitung	1.91	222	eS	Sn	12 57 06.1	-0.3
	baz=220						
TPUB	Ta-pu	1.95	244	eP	Pb	12 56 45.6	0.0
	baz=242						
CHN4	Tsaushan	1.96	246	eP	Pb	12 56 46.1	+0.4
	baz=244						
WTP	Ta-pu	1.99	243	eP	Pb	12 56 46.3	0.0
	baz=241						
CHN2	Minshiung	1.99	252	eP	Pb	12 56 46.9	+0.7
	baz=249						
RLNB	Erlin	2.01	262	eP	Pb	12 56 46.1	-0.5
	baz=260						
JTJ	Tarama	2.03	76	P	Pn	12 56 44.9	+0.8
JTJ				eS	Sn	12 57 09.4	-0.1
CHY	Chiayi	2.05	251	eP	Pb	12 56 47.2	0.0
	baz=249						
TWK	Hsinying	2.08	245	eP	Pb	12 56 47.6	-0.3
	baz=243						
CHN1	Nanshi	2.09	242	eP	Pb	12 56 47.7	-0.2
	baz=241						
SGST	Jiashian	2.10	239	eP	Pb	12 56 47.0	-1.1
	baz=230						
SNST	Tainan City	2.10	243	eP	Pb	12 56 48.3	+0.3
	baz=242						
ECL	Taimali	2.14	223	eP	Pn	12 56 46.2	+0.6
	baz=230						
LAY	Lan-yu	2.31	203	eP	Pn	12 56 47.9	-0.1
	baz=203						
MASBT	Mashibuluo	2.34	229	eP	Pb	12 56 50.7	-1.5
	baz=220						
TWM1	Shoushan	2.36	236	eP	Pb	12 56 53.2	+0.6
	baz=245						
EAST	Anshuo	2.37	221	eP	Pn	12 56 49.8	+1.0
	baz=220						
SSPT	Xinbi	2.47	227	eP	Pb	12 56 53.6	-0.8
	baz=222						
JIRB	Irabujima	2.49	74	P	Pn	12 56 50.7	+0.3
JIRB				S	Sn	12 57 19.6	-1.2
SCZT	Fangliau	2.52	225	eP	Pb	12 56 53.6	-1.6
	baz=223						
JIKM	Ikemajima	2.58	73	P	Pn	12 56 52.8	+1.1
JIKM				eS	Sn	12 57 21.9	-1.2
WSSB	Gushan	2.59	234	eP	Pb	12 56 56.2	-0.2
	baz=233						
JMJ	Miyako jima 2	2.59	75	eP	Pn	12 56 53.4	+1.5
	baz=78						
JMJ2	Miyako jima3	2.60	77	P	Pn	12 56 53.4	+1.4
JMJ2				eS	Sn	12 57 23.9	+0.2
JOGS	Gusukube	2.68	77	P	Pn	12 56 54.3	+1.2
WLCH	Liuqiu	2.69	228	eP	Pb	12 56 56.6	-1.5
	baz=239						
HEN	Hengchun	2.72	218	eS	Sn	12 57 27.0	+0.4
	baz=222						
TWKBT	Hengchun	2.73	216	eP	Pn	12 56 55.4	+1.6
	baz=215						
TWKBT				eS	Sn	12 57 27.0	+0.1
	baz=215						
TWK1	Hengchun	2.73	216	eP	Pn	12 56 55.6	+1.8
	baz=215						
TWK1				eS	Sn	12 57 26.7	-0.2
	baz=215						
WDGT	Dungji	2.79	252	eP	Pn	12 56 56.4	+1.8
	baz=248						
WDGT				eS	Sn	12 57 28.2	-0.1
	baz=248						
PHUB	P'eng-hu	2.79	257	eP	Pn	12 56 55.6	+0.9
	baz=254						
PHUB				eS	Sn	12 57 28.0	-0.4
	baz=254						
PNG	Penghu	2.80	258	eP	Pn	12 56 55.6	+1.0
	baz=255						
PNG				eS	Sn	12 57 28.1	-0.3
	baz=255						
PTTC	Pingtan	2.84	298	eP	Pn	12 56 55.5	+0.3
	baz=294						
VWUC	VWUC	2.93	287	eP	Pn	12 56 56.6	+0.1
	baz=282						
VCHM	Qimei	3.01	252	eP	Pn	12 56 59.1	+1.5
	baz=249						
VCHM				eS	Sn	12 57 33.5	-0.2
	baz=249						
MATB	Ma-tsu	3.06	311	eP	Pn	12 56 58.5	+0.1
	baz=315						
PTMZ	Houxiangcun	3.23	286	eP	Pn	12 57 00.8	+0.2
	baz=282						
XPSS	Dashiqiu	3.47	323	eP	Pn	12 57 03.3	-0.6
	baz=318						
MHZQ	Yeshan	3.71	302	eP	Pn	12 57 08.4	+1.1
	baz=296						
KNM	Kinmen	3.75	275	eP	Pn	12 57 10.0	+2.2
	baz=263						
KNMB	Chin-men Tao	3.80	275	eP	Pn	12 57 08.6	+0.2
	baz=264						
ZPLA	Ao Xicun	4.38	268	eP	Pn	12 57 16.9	+0.4
	baz=266						
ZZJH	Jiuhuzhen	4.49	275	eP	Pn	12 57 19.3	+1.4
	baz=264						
JOW	Kunigami	5.82	62	eP	Pn	12 57 35.4	-0.9
	baz=64						

IDC **24** *12:59:05.1±1.3, 0.95N×97.14E, h0km, mb3.9/9, mb1 3.9/11, mb1mx3.7/61, mbtmp3.9/11, ML3.9/2, MS3.1/3, Ms1 3.2/3, ms1mx2.7/49, Error ellipse: s-maj=39.5km s-min=17.2km az=61.0*

NEIC **24** *12:59:05.2±1.6, 0.84N±0.06×97.04E±0.06, h10km±1km, mb4.3/22, Error ellipse: s-maj=12.0km s-min=6.4km az=314.0*

DJA **24** *12:59:08.5±0.9, 1°N±4°×9°7E±°, h16km±5km, M4.2/12, mb4.6/2, MLv4.0/12*

ISC 24 12:59:08.5±0.6**, 0.97N**±0.04×**97.21E**±0.06**, h25**km**, n64,** σ**0.94**/58**, mb4.2**/21**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.49	48	P	Pn	12 59 20.0	0.0
GSI				S	Sb	12 59 25.8	+0.3
GSI	Gunungsitoli	0.49	48		Pb	12 59 19.2	+0.6
GSI				Sg	Sn	12 59 28.1	+0.3
PBSI	Pulau Batu	1.48	134	P	Pb	12 59 34.8	-0.5
SNSI	Sinabang, Aceh	1.68	328	P	Pn	12 59 37.1	+0.8
SNSI				S	Sn	12 59 56.1	-1.0
TPTI		2.27	359	P	Pn	12 59 43.1	-1.4
RPSI	Rantau Prapat	2.42	45		Pn	12 59 47.6	+1.0
RPSI	Rantau Prapat	2.42	45		Pn	12 59 47.5	+1.0
PSI	Prapat	2.50	43	Pn	Pn	12 59 47.5	-0.2
	6.2nm,0.3s,baz=278,slow=8.7,SNR=24						
PSI				LR	LR	13 00 30.9	
	comp=Z,177nm,21.1s,baz=220,slow=34						
KCSI	Kotacane, Aceh	2.59	12	P	Pn	12 59 48.9	-0.1
SISI	Saibi	2.96	141	P	Pn	12 59 56.0	+2.1
PDSI	Padang	3.75	120	P	Pn	13 00 05.6	+0.7
BKNI	Bangkinang	3.88	99	P	Pn	13 00 08.8	+2.1
BKNI	Bangkinang	3.88	99	Pn	Pn	13 00 07.1	+0.5
SDSI	Sungai Dareh	4.62	114	P	Pn	13 00 19.1	+2.3
IPM	Ipoh	5.16	47		Pn	13 00 25.3	+1.0
RGRI	Rengat	5.29	104	P	Pb	13 00 49.8	+9.5
KULM	Kulim	5.50	39		Pn	13 00 29.1	+0.3
MYKOM	Kota Tinggi	6.69	83	Pn	Pn	13 00 45.8	+0.6
MNAI	Manna	7.81	133	Pn	Pn	13 01 00.3	-0.4
MNAI				Sn	Sn	13 02 26.8	-1.6
PMBI	Palembang	8.49	117	Pn	Pn	13 01 07.7	-2.4
MDSI	Maura Dua	8.82	128	P	Pn	13 01 28.5	+14
CISI	Cisompet, Garu	13.55	129	Pn	Pn	13 02 18.3	-1.1
PBKT	Sadao Pong	15.94	13		Pn	13 02 52.8	+1.5
CM31	Chiang Mai Arr	17.46	5	Pn	Pn	13 03 10.0	-0.5
CMAR	Chiang Mai Arr	17.46	5	P	Pn	13 03 10.0	-0.5
	0.3nm,0.3s,baz=195,slow=13,SNR=10.0						
CMAR				LR	LR	13 10 04.0	
	comp=Z,65nm,18.1s,baz=200,slow=38						
CHTO	Chiang Mai	17.81	5	P	P	13 03 15.8	+0.4
KKM	Kota Kinabalu	19.62	75	P	P	13 03 35.0	-0.5
SLVN	Son La	21.27	17	P	P	13 03 53.6	+0.4
SLVN				IAmb	IAmb	13 04 02.3	
	comp=Z,8.3nm,0.8s						
KMI	Kunming	24.60	12	P	P	13 04 29.0	+1.9
SHL	Shillong	24.99	349	P	P	13 04 30.0	-0.6
H08S2	Diego Garcia H	26.10	250	T	T	13 31 47.2	
	baz=72,slow=76,SNR=543						
H08S3	Diego Garcia H	26.10	250	T	T	13 31 46.7	
	baz=72,slow=76,SNR=828						
H08S1	Diego Carcia H	26.11	250	T	T	13 31 47.5	
	baz=72,slow=76,SNR=355						
XAN	Xi'an	34.68	17	P	P	13 05 55.4	-0.9
XAN	Xi'an	34.68	17	P	P	13 05 55.7	-0.6
GTA	Gaotai	38.33	3	eP	P	13 06 28.0	+0.5
GTA				pP	pP	13 06 33.3	-1.8
GTA				sP	sP	13 06 37.4	-0.7
H01W3	Cape Leeuwin H	39.03	158	T	T	13 47 58.0	
	baz=333,slow=76,SNR=19						
H01W2	Cape Leeuwin H	39.04	158	T	T	13 47 59.0	
	baz=333,slow=76,SNR=20						
H01W1	Cape Leeuwin H	39.05	158	T	T	13 47 59.2	
	baz=333,slow=76,SNR=28						
NIL	Nilore	39.52	328	P	P	13 06 37.1	-0.3
NIL				IAmb	IAmb	13 06 50.8	
	comp=Z,4.2nm,0.6s						
WRA	Warramunga Arr	41.91	122	P	P	13 06 57.4	0.0
	comp=Z,0.4nm,0.8s,baz=300,slow=9.2,SNR=5.1						
BJT	Baijiatuau	42.52	22	P	P	13 07 02.7	+0.6
BJT				IAmb	IAmb	13 07 03.7	
	comp=Z,4.4nm,0.6s						
FORT	Forrest	43.10	140	P	P	13 07 05.8	-1.0
FORT				IAmb	IAmb	13 07 10.7	
	comp=Z,6.9nm,0.9s						
AS31	Alice Springs	43.25	127	P	P	13 07 08.2	-0.1
ASAR	Alice Springs	43.25	127	P	P	13 07 09.1	+0.8
	comp=Z,0.6nm,0.8s,baz=298,slow=7.3,SNR=18						
KSRS	Korea Array	46.03	34	P	P	13 07 30.4	+0.2
	comp=Z,1.9nm,0.8s,baz=219,slow=9.3,SNR=13						
SONM	Songino Array	47.35	8	P	P	13 07 41.2	+0.6
	comp=Z,1.6nm,0.5s,baz=191,slow=9.6,SNR=12						
MK31	Makanchi Array	47.47	346	P	P	13 07 41.4	+0.1
MK31				IAmb	IAmb	13 07 48.8	
	comp=Z,3.6nm,1.3s						
MKAR	Makanchi Array	47.47	346	P	P	13 07 41.5	+0.2
	comp=Z,1.3nm,0.7s,baz=154,slow=8.4,SNR=11						
ULN	Ulaanbaatar	47.48	9	P	P	13 07 41.8	+0.2
ULN				IAmb	IAmb	13 07 45.0	
	comp=Z,1.3nm,0.6s						
KK31	Karatay Array	48.27	334	P	P	13 07 47.5	-0.1
KK31				IAmb	IAmb	13 08 05.3	
	comp=Z,4.2nm,1.3s						
TLY	Talaya	50.82	5	LR	LR	13 32 09.5	
	comp=Z,52nm,19.3s,baz=168,slow=39						
KURBB	Kurchatov Arra	51.95	345	P	P	13 08 16.0	+0.6
	comp=Z,47nm,0.7s,baz=165,slow=7.4,SNR=4.7						
KURK	Kurchatov	52.01	345	P	P	13 08 16.0	+0.2
KURK				IAmb	IAmb	13 08 31.2	
	comp=Z,4.4nm,1.2s						
STKA	Stephens Creek	53.20	132	P	P	13 08 26.4	+1.4
	comp=Z,0.9nm,0.7s,baz=313,slow=13,SNR=3.1						
STKA	Stephens Creek	53.20	132	P	P	13 08 24.2	-0.7
ZAA0	Zalesovo Array	53.78	351	P	P	13 08 29.3	+0.5
ZAA0				IAmb	IAmb	13 08 35.4	
	comp=Z,4.0nm,0.8s						
ZALV	Zalesovo Beam	53.78	351	P	P	13 08 29.4	+0.6
	comp=Z,2.2nm,0.4s,baz=174,slow=6.5,SNR=15						
KLR	Kul'dur	56.45	26	P	P	13 08 48.8	+0.6
	comp=Z,1.5nm,0.7s,baz=219,slow=7.6,SNR=4.8						
BVAR	Borovoye Array	56.47	341	P	P	13 08 48.5	+0.2
	comp=Z,0.8nm,0.6s,baz=140,slow=7.2,SNR=4.1						
ABKAR	Akbulak array	57.72	332	P	P	13 08 57.3	+0.1
ABKAR				IAmb	IAmb	13 09 10.9	
	comp=Z,4.5nm,1.4s						
EIDS	Eidsvold	58.26	121	P	P	13 09 01.2	-0.2
TIXI	Tiksi	73.41	10	P	P	13 10 37.0	-1.1
TIXI				IAmb	IAmb	13 10 50.2	
	comp=Z,2.8nm,1.1s						
TXAR	Lajitas Array	143.85	32	PKP	PKPbc	13 18 40.9	+0.7
	comp=Z,0.2nm,0.7s,baz=3.8,slow=3.8,SNR=1.9						

THE **24** *13:00:15.0, 38.30N×20.38E, h10km, ML3.0/5, Error ellipse: s-maj=0.9km s-min=0.4km az=275.0*

ATH **24** *13:00:15.1, 38.30N×20.44E, h12km±1km, ML2.6/11, Error ellipse: s-maj=2.2km s-min=0.6km az=262.0*

ISC 24 13:00:15.1±1.0**, 38.30N**±0.02×**20.42E**±0.05**, h12**km±5km**, n46,** σ**0.38**/72**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.04	171	P	Pg	13 00 17.1	-0.2
KEF4				S	Sg	13 00 18.5	-0.4
AGT1	Agia Thekli	0.06	206	P	Pg	13 00 17.2	-0.2
AGT1				S	Sg	13 00 18.7	-0.3
	23μm,0.3s						
LXR1	Lixouri, Cepha	0.10	170	P	Pg	13 00 17.5	-0.4
LXR1				S	Sg	13 00 20.1	+0.2
LXRA	Lixouri, Kepha	0.10	170	P	Pg	13 00 18.1	+0.2
LXRA				S	Sg	13 00 20.3	+0.4
KEF3	Kipouria, Keph	0.11	208	P	Pg	13 00 18.1	+0.1
KEF3				S	Sg	13 00 20.4	+0.3
ARGA	Argostoli. Kep	0.14	158	P	Pg	13 00 18.4	0.0
ARGA				S	Sg	13 00 20.7	+0.1
ARG2	Argostoli	0.14	155	P	Pg	13 00 18.4	0.0
ARG2				S	Sg	13 00 20.6	-0.1
KEF2	Argostoli. Kep	0.15	158	P	Pg	13 00 18.6	+0.1
KEF2				S	Sg	13 00 21.2	+0.2
VSK1	VASILIKIADES	0.16	48	P	Pg	13 00 18.8	+0.1
VSK1				S	Sg	13 00 21.6	+0.3
KONA	Konidatara, Ke	0.17	45	P	Pg	13 00 19.1	+0.1
KONA				S	Sg	13 00 21.6	-0.1
VLS	Valsamata	0.18	132	P	Pg	13 00 19.1	-0.1
VLS				S	Sg	13 00 22.1	+0.1
VLS	Valsamata	0.18	132	P	Pg	13 00 19.1	-0.1
VLS				S	Sg	13 00 22.1	+0.1
VLS				AML	AML	13 00 22.2	
	comp=N,10416μm,0.2s						
VLS				AML	AML	13 00 22.8	
	comp=E,9035μm,0.1s						
FSK	Fiskardo	0.20	36	P	Pg	13 00 19.4	+0.1
FSK				S	Sg	13 00 22.6	+0.4
FSK	Fiskardo	0.20	36	P	Pg	13 00 19.4	+0.1
FSK				S	Sg	13 00 22.6	+0.4
FSK				AML	AML	13 00 23.9	
	comp=E,4854μm,0.1s						
FSK				AML	AML	13 00 26.3	
	comp=N,2847μm,0.3s						
EVGI	Lefkada island	0.37	31	P	Pg	13 00 22.6	+0.1
EVGI				S	Sb	13 00 28.6	-0.8
EVGI	Lefkada island	0.37	31	P	Pg	13 00 22.7	+0.1
EVGI				S	Sg	13 00 28.5	+1.0
MGNA	Meganis	0.46	40	P	Pg	13 00 24.0	-0.1
MGNA				S	Sg	13 00 29.9	-0.4
MGNA				AML	AML	13 00 31.7	
	comp=E,1573μm,0.2s						
MGNA				AML	AML	13 00 32.5	
	comp=N,1716μm,0.2s						
VLMS	Volimes, Zakyn	0.47	155	P	Pg	13 00 24.2	-0.1
VLMS				S	Sb	13 00 31.7	-0.5
VLMS				AML	AML	13 00 33.1	
	comp=E,9040μm,0.2s						
VLMS				AML	AML	13 00 34.3	
	comp=N,12705μm,0.3s						
LKD2	Lefkada island	0.52	21	P	Pg	13 00 24.8	-0.5
LKD2	Lefkada island	0.52	21	P	Pg	13 00 25.0	-0.3
LKD2				S	Sg	13 00 32.5	+0.2
LKD2				AML	AML	13 00 41.2	
	comp=E,596μm,0.2s						
LKD2				AML	AML	13 00 41.2	
	comp=N,464μm,0.2s						
TSLK	Tsoukalades, L	0.56	20	P	Pg	13 00 26.0	+0.1
TSLK	Tsoukalades, L	0.56	20	P	Pg	13 00 26.0	+0.1
TSLK				S	Sg	13 00 33.5	+0.2
AST1	Astakos	0.58	65	P	Pg	13 00 26.2	-0.2
AST1				S	Sb	13 00 35.9	+0.5
	comp=N,3μm,0.2s						
PDO	Prodromos	0.67	64	P	Pg	13 00 28.1	0.0
PDO				S	Sb	13 00 38.3	+0.2
	comp=N,1μm,0.5s						
PDO	Prodromos	0.67	64	P	Pg	13 00 28.1	0.0
PDO				S	Sg	13 00 36.4	-0.5
PDO				AML	AML	13 00 40.7	
	comp=N,1827μm,0.5s						
PDO				AML	AML	13 00 40.7	
	comp=E,2155μm,0.4s						
KRI1	kERI	0.71	153	P	Pg	13 00 28.6	-0.3
KRI1				S	Sb	13 00 39.5	+0.2
RLS	Riolos of Patr	0.86	106	P	Pg	13 00 31.6	-0.1
RLS				AML	AML	13 00 48.1	
	comp=E,415μm,0.2s						
RLS				AML	AML	13 00 51.4	
	comp=N,349μm,0.3s						
PVO	Paravola	0.93	70	P	Pg	13 00 32.8	-0.2
PVO	Paravola	0.93	70	P	Pg	13 00 33.0	0.0
PVO				AML	AML	13 00 49.2	
	comp=E,1455μm,0.2s						
PVO				AML	AML	13 00 49.3	
	comp=N,650μm,0.2s						
DRO	Drossia	1.08	108	P	Pg	13 00 35.0	-0.8
DRO				S	Sn	13 00 52.1	+1.1
	comp=N,495nm,0.3s						
DRO	Drossia	1.08	108	P	Pg	13 00 35.1	-0.8
DRO				AML	AML	13 00 59.0	
	comp=N,855μm,0.4s						
DRO				AML	AML	13 01 00.7	
	comp=E,1192μm,0.3s						
ANX	Ano Chora	1.22	76	P	Pb	13 00 38.0	-0.1
LAKA	Lakka	1.23	92	P	Pn	13 00 37.8	-0.4
EVR	Evrytania	1.25	60	P	Pg	13 00 39.1	-0.1
AMT	Artemida-Makis	1.28	127	P	Pg	13 00 40.5	+0.8
SERG	Sergoula	1.29	85	P	Pn	13 00 38.6	-0.5
SERG	Sergoula	1.29	85	P	Pn	13 00 38.8	-0.3
SERG				AML	AML	13 01 06.5	
	comp=N,330μm,0.5s						
SERG				AML	AML	13 01 10.6	
	comp=E,292μm,0.6s						
TRIZ	Trizonia	1.30	87	P	Pn	13 00 38.6	-0.6
TRIZ	Trizonia	1.30	87	P	Pn	13 00 38.7	-0.4
ALIK	Aliki, Aigiali	1.33	91	P	Pn	13 00 39.6	0.0
KALE	Kalithea	1.36	86	P	Pn	13 00 39.4	-0.6
KALE	Kalithea	1.36	86	P	Pn	13 00 39.5	-0.5
KLV	Kalavryta, Ach	1.39	100	P	Pn	13 00 40.5	+0.1
KLV				S	Sg	13 01 00.1	+0.2
KLV	Kalavryta, Ach	1.39	100	P	Pn	13 00 40.3	-0.1
KLV				AML	AML	13 01 04.5	
	comp=N,184μm,0.3s						
KLV				AML	AML	13 01 05.8	
	comp=E,146μm,0.3s						
ITM	Ithomi	1.64	133	P	Pb	13 00 45.5	+0.2
AGG	Agios Georgios	1.66	64	P	Pg	13 00 46.6	-0.4

SJA **24** *13:04:59.5±0.9, 20.73S×67.46W, h226km±9km, ML3.2, MW2.9*

GUC **24** *13:05:01.7±0.6, 20.66S×67.88W, h214km±6km, ML3.5*

ISC 24 13:05:00.4±1.8**, 20.67S**±0.05×**67.56W**±0.07**, h211**km±16km**, n28,** σ**1.19**/46**, 5C-1D, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	1.59	289	⇑iP	Pn	13 05 36.7	+0.4
PB08				eS	S	13 06 03.9	+0.1
GO01	Chusmiza	1.84	303	⇑iP	Pn	13 05 38.9	+0.2
GO01				eS	S	13 06 07.3	-0.7
GO01				IAML		13 06 22.3	
	comp=N,213nm,0.1s						
PB01	IPOC Station P	1.84	258	eP	Pn	13 05 38.3	+0.1
PB01				iS	S	13 06 06.2	-1.2
PB01				IAML		13 06 07.5	
	comp=E,154nm,0.2s						
PB09	IPOC Station P	1.93	234	eP	Pn	13 05 40.1	+0.9
PB09	IPOC Station P	1.93	234	iP	Pn	13 05 40.3	+1.1
PB09				eS	S	13 06 10.4	+1.3
PB09				IAML		13 06 13.3	
	comp=Z,28nm,0.2s						
PB11	IPOC Station P	2.17	294	⇑iP	Pn	13 05 41.6	0.0
PB11				iS	S	13 06 11.9	-1.4
PB11				IAML		13 06 13.9	
	comp=N,257nm,0.5s						
PB02	IPOC Station P	2.28	253	eP	Pn	13 05 43.0	+0.3
PB02				eS	S	13 06 13.8	-1.4
PB02				IAML		13 06 15.1	
	comp=N,274nm,0.1s						
LVC	Limon Verde	2.30	213	iP	Pn	13 05 44.0	+0.8
LVC				⇓eS	S	13 06 17.5	+1.3
PB07	IPOC Station P	2.42	244	eP	Pn	13 05 44.6	+0.4
PB07				eS	S	13 06 16.7	-1.3
PB07				IAML		13 06 18.3	
	comp=N,167nm,0.2s						
YJA	Yavi	2.42	129	iP	Pn	13 05 44.1	-0.4
YJA				IAML		13 05 44.8	
	comp=Z,6.6nm,0.5s						
PATCX	Punta Patache	2.44	266	eP	Pn	13 05 45.1	+0.8
PATCX				iS	S	13 06 16.5	-1.7
PATCX				IAML		13 06 19.5	
	comp=N,187nm,0.1s						
MNMC	Minye Minye	2.46	308	eP	Pn	13 05 45.7	+0.9
MNMC				iS	S	13 06 19.1	+0.1
MNMC				IAML		13 06 23.8	
	comp=N,188nm,0.4s						
TA01	Diego Aracena	2.46	272	eP	Pn	13 05 44.5	0.0
TA01				eS	S	13 06 16.3	-2.2
TA01				IAML		13 06 17.9	
	comp=E,142nm,0.2s						
PB03	IPOC Station P	2.46	236	eP	Pn	13 05 45.3	+0.6
PB03				IAML		13 06 18.4	
	comp=E,170nm,0.4s						
PSGC	Pisagua	2.64	293	⇑iP	Pn	13 05 46.5	-0.1
PSGC				eS	S	13 06 20.6	-1.7
PSGC				IAML		13 06 21.5	
	comp=E,104nm,0.6s						
PB06	IPOC Station P	2.76	222	eP	Pn	13 05 49.1	+1.1
PB06				IAML		13 06 25.7	
	comp=E,131nm,0.2s						
PB04	IPOC Station P	2.93	235	eP	Pn	13 05 50.7	+0.8
PB04				IAML		13 06 29.4	
	comp=N,109nm,0.1s						
PB04	IPOC Station P	2.93	235	iP	Pn	13 05 51.1	+1.2
PB04				eS	S	13 06 28.7	+0.5
PB04				IAML		13 06 32.0	
	comp=Z,67nm,0.1s						
PB16	IPOC Station P	2.97	321	⇑eP	Pn	13 05 52.2	+1.4
PB15	IPOC Station P	3.09	215	eP	Pn	13 05 53.4	+1.7
PB15				iS	S	13 06 32.5	+0.8
PB15	IPOC Station P	3.09	215	iP	Pn	13 05 54.1	+2.4
PB15				eS	S	13 06 33.1	+1.4
PB15				IAML		13 06 39.8	
	comp=Z,170nm,0.1s						
PB05	IPOC Station P	3.28	228	eP	Pn	13 05 54.7	+0.7
PB05	IPOC Station P	3.28	228	iP	Pn	13 05 54.8	+0.8
PB05				eS	S	13 06 35.5	-0.1
PB10	IPOC Station P	3.97	224	iP	Pn	13 06 02.6	+0.5
PB10				eS	S	13 06 48.2	-2.1
PB10				IAML		13 06 49.6	
	comp=Z,14nm,0.2s						
AZAP	Zapla	4.22	147	iP	Pn	13 06 05.4	-0.1
LPAZ	La Paz	4.39	353	iP	Pn	13 06 09.4	+1.3
PB14	IPOC Station P	4.73	213	iP	Pn	13 06 12.7	+0.8
PB14				eS	S	13 07 05.4	-2.8
PB14				IAML		13 07 07.5	
	comp=Z,15nm,0.3s						
APLL	PUNTA DE LOS L	9.73	175	⇑iP	Pn	13 07 15.3	-0.6
APLL				IAML		13 07 16.8	
	comp=Z,2.5nm,0.3s						

IDC 24 13:09:04.4±5.5**, 2.97S**×**131.12E, h0**km**, mb3.1**/2**, mb1 3.4**/3**, mb1mx3.2**/40**, mbtmp3.2**/3**, ML3.1**/1**, Error ellipse: s-maj=394.4km s-min=30.5km az=72.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.16	170	P	Pn	13 13 05.9	+0.1
	0.1nm,0.3s,baz=351,slow=12,SNR=5.5						
ASAR	Alice Springs	20.75	173	P	P	13 13 47.0	0.0
	0.5nm,0.6s,baz=347,slow=11,SNR=14						
MKAR	Makanchi Array	65.52	325	P	P	13 19 49.7	0.0
	0.2nm,0.9s,baz=115,slow=6.8,SNR=1.5						

IDC **24** *13:24:53.3±30.0,28°.58N×72°.28E,h0km,mb4.1/2, mb1 3.9/3,mb1mx3.3/50,mbtmp3.8/3,ML3.6/1,Error ellipse: s-maj=584.8km s-min=81.3km az=159.0*
NNC **24** *13:26:14.8±14.0,36°.80N×69°.97E,h0km,mb3.4,mpv3.4, Error ellipse: s-maj=129.9km s-min=121.9km az=61.0*
ISC 24 13:26:14.3±2.6,36°.5N±0°.2×70°.6E±0°.2,h150km,n6, σ2§43/7,3D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
KK31	**Karatay Array**	**6.64**	**360**	P	**Pn**	**13 27 50.9**	**+1.5**
	1.5nm,0.4s,baz=178,slow=13,SNR=19						
KK31				⇓S	**Sn**	**13 29 02.9**	**-1.1**
	4.9nm,0.8s,baz=188,slow=23						
MK31	**Makanchi Array**	**13.53**	**37**	⇓P	**P**	**13 29 25.8**	**+1.7**
	0.1nm,0.3s,baz=199,slow=8.7,SNR=11						
MKAR	**Makanchi Array**	**13.53**	**37**	P	**P**	**13 29 25.4**	**+1.3**
	0.2nm,0.3s,baz=206,slow=8.9,SNR=13						
AB31	**Akbulak array**	**14.95**	**332**	⇓P	**Pn**	**13 29 39.3**	**+1.4**
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**20.10**	**25**	P	**Pn**	**13 30 36.4**	**-3.1**
	1.0nm,0.4s,baz=212,slow=10,SNR=5.1						
ARCES	**ARCESS Array B**	**41.05**	**338**	P	**P**	**13 33 40.5**	**-1.9**
	2.9nm,1.0s,baz=99,slow=5.6,SNR=1.7						

IDC 24 13:31:01.3±53.0,24°.41S×175°.30W,h0km,mb3.8/3, mb1 4.0/3,mb1mx3.6/25,mbtmp3.8/3,Error ellipse: s-maj=983.1km s-min=177.8km az=90.0,South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
STKA	**Stephens Creek**	**38.54**	**249**	P	P	13 38 25.4	-0.3
	0.5nm,0.4s,baz=79,slow=10,SNR=5.0						
ASAR	**Alice Springs**	**46.19**	**260**	P	P	13 39 28.0	-0.3
	0.6nm,0.5s,baz=97,slow=7.1,SNR=38						
WRA	**Warramunga Arr**	**46.65**	**265**	P	P	13 39 32.2	+0.2
	1.0nm,0.6s,baz=104,slow=7.8,SNR=14						

DNK **24** *13:39:18.6±1.2,58°.17N×11°.16E,h0km±11km,ML2.2, Explosion Hypocentre not reviewed by the ISC*
UPP **24** *13:39:18.7±0.2,58°.19N×11°.25E,h0km,ML2.6,Explosion*
BER **24** *13:39:19.6±3.1,58°.16N×11°.21E,h0km,ML1.7, ML2.1(NAO),Suspected explosion*
NAO **24** *13:39:20.2±1.4,58°.30N×10°.97E,ML2.1*
ISC 24 13:39:17.2±0.8,58°.21N±0°.04×11°.19E±0°.03,h0km,n31, σ1§21/49,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
TJOU	**Tjoern**	**0.29**	**128**	P	**Pg**	**13 39 23.8**	**+1.0**
TJOU				S	**Sg**	**13 39 27.1**	**+0.7**
VANU	**Vaenersborg**	**0.54**	**58**	P	**Pb**	**13 39 28.9**	**-0.7**
VANU	**Vaenersborg**	**0.54**	**58**	P		13 39 28.9	
STRU	**Stroemstad**	**0.83**	**360**	P	**Pb**	**13 39 34.6**	**+0.1**
STRU	**Stroemstad**	**0.83**	**360**	eP	**Pb**	**13 39 34.6**	**+0.1**
STRU				eS	**Sb**	**13 39 46.9**	**+0.7**
ONAU	**Onsala**	**0.90**	**154**	P	**Pb**	**13 39 35.0**	**+0.5**
BORU	**Boraas**	**1.02**	**124**	P	**Pb**	**13 39 36.8**	**0.0**
NASU	**Vaermlandsnaes**	**1.27**	**54**	P	**Pb**	**13 39 42.1**	**+0.1**
NASU	**Vaermlandsnaes**	**1.27**	**54**	P		13 39 42.1	
FKPU	**Falk**	**1.34**	**91**	P	**Pg**	**13 39 42.6**	**-0.3**
FKPU	**Falk**	**1.34**	**91**	P		13 39 42.6	
FINU	**Finntorp**	**1.37**	**29**	P	**Pb**	**13 39 44.2**	**+0.5**
FINU	**Finntorp**	**1.37**	**29**	P		13 39 44.2	
HOMB	**Homborsund**	**1.42**	**274**	Pg	**Pg**	**13 39 44.5**	**-0.1**
HOMB				Lg	Lg	13 40 03.1	
HOMB	**Homborsund**	**1.42**	**274**	eP	**Pg**	**13 39 44.4**	**-0.1**
HOMB				eS	**Sg**	**13 40 03.1**	**+0.1**
HOMB					IAML	13 40 05.3	
	comp=Z,20nm,0.2s						
HOMB	**Homborsund**	**1.42**	**274**	*i* P		13 39 44.4	
HOMB					IAML	13 40 14.1	
	comp=Z,9.2nm,0.3s						
GNOU	**Gnosjoe**	**1.65**	**123**	P	**Pb**	**13 39 48.0**	**-0.5**
GNOU	**Gnosjoe**	**1.65**	**123**	P		13 39 48.0	
KON	**Kongsberg**	**1.67**	**331**	Pn	**Pb**	**13 39 48.4**	**-0.4**
KON				Sn	**Sg**	**13 40 10.9**	**+0.2**
KONO	**Kongsberg**	**1.67**	**331**	eP	**Pb**	**13 39 48.3**	**-0.4**
KONO				eS	**Sg**	**13 40 11.3**	**+0.6**
KONO					IAML	13 40 15.0	
	comp=Z,15nm,0.2s						
SNART	**Snartemo**	**2.11**	**275**	eP	**Pn**	**13 39 54.3**	**+0.5**
SNART				eS	**Sn**	**13 40 21.1**	**+0.5**
SNART					IAML	13 40 27.5	
	comp=Z,11nm,0.2s						
SNART	**Snartemo**	**2.11**	**275**	*i* P		13 39 54.5	
SNART					IAML	13 40 27.6	
	comp=Z,7.6nm,0.4s						
HFS	**Hagfors**	**2.32**	**33**	Pn	**Pn**	**13 39 58.1**	**+1.5**
	baz=214,slow=16						
HFS				Sn	**Sn**	**13 40 26.8**	**+1.0**
	baz=219,slow=28						
HFS	**Hagfors**	**2.32**	**33**	Pn	**Pn**	**13 39 58.1**	**+1.5**
	baz=214,slow=16						
HFS				Sn	**Sn**	**13 40 26.8**	**+1.0**
	baz=219,slow=28						
NRA0	**NORESS Array S**	**2.54**	**4**	Pn	**Pn**	**13 40 00.5**	**+0.8**
	baz=185,slow=10						
NRA0				Sn	**Sn**	**13 40 33.1**	**+1.8**
	baz=204,slow=22						
NRA0	**NORESS Array S**	**2.54**	**4**	Pn	**Pn**	**13 40 00.5**	**+0.8**
	baz=185,slow=10						
NRA0				Sn	**Sn**	**13 40 33.1**	**+1.8**
	baz=204,slow=22						
NAO01	**NORSAR Array S**	**2.65**	**357**	eP	**Pn**	**13 40 00.5**	**-0.7**
NAO01				eS	**Sn**	**13 40 33.0**	**-0.9**
NAO01					IAML	13 40 52.5	
	comp=Z,5.8nm,0.2s						
BLS5	**Blasjo**	**2.75**	**298**	Pn	**Pn**	**13 40 04.6**	**+2.0**
BLS5				Sn	**Sn**	**13 40 36.1**	**-0.4**
BLS5	**Blasjo**	**2.75**	**298**	eS	**Sn**	**13 40 38.0**	**+1.5**
BLS5					IAML	13 40 44.7	
	comp=Z,15nm,1.0s						
NBO00	**NORSAR Array S**	**2.84**	**356**	eP	**Pn**	**13 40 04.3**	**+0.5**
NBO00				eS	**Sn**	**13 40 38.7**	**0.0**
NBO00					IAML	13 40 57.0	
	comp=Z,3.3nm,0.3s						
NB2	**NORSAR Subarra**	**2.84**	**0**	Pn	**Pn**	**13 40 04.4**	**+0.5**
	baz=183,slow=16						
NB2				Sn	**Sn**	**13 40 38.1**	**-0.7**
NB2				Lg	Lg	13 40 49.4	
	baz=178,slow=37						
NB2	**NORSAR Subarra**	**2.84**	**0**	Pn	**Pn**	**13 40 04.4**	**+0.5**
	baz=183,slow=16						
NB2				Sn	**Sn**	**13 40 38.1**	**-0.7**
NB2				Sg	**Sg**	**13 40 49.4**	**+0.9**
	baz=178,slow=37						
SKAR	**Skarslia**	**2.89**	**330**	eP	**Pn**	**13 40 05.3**	**+0.8**
SKAR					IAML	13 40 59.6	
	comp=Z,9.5nm,0.3s						
ODD1	**Odda**	**2.91**	**308**	eP	**Pn**	**13 40 06.7**	**+1.9**
ODD1					IAML	13 40 51.2	
	comp=Z,7.4nm,0.2s						
BSD	**Bornholm Skovb**	**3.72**	**145**	*i* P		13 40 24.4	
BSD					IAML	13 41 23.1	
	comp=Z,3.4nm,0.3s						
FIA0	**FINESS Array S**	**8.17**	**60**	Pn	**Pn**	**13 41 18.0**	**+1.2**
	baz=243,slow=12						
FIA0				Sn	**Sn**	**13 42 46.9**	**-2.8**
	baz=257,slow=22						
FIA0	**FINESS Array S**	**8.17**	**60**	Pn	**Pn**	**13 41 18.0**	**+1.2**
	baz=243,slow=12						
FIA0				Sn	**Sn**	**13 42 46.9**	**-2.8**
	baz=257,slow=22						
ARA0	**ARCESS Array S**	**12.95**	**23**	Pn	**Pn**	**13 42 19.4**	**-2.8**
	baz=211,slow=14						
ARA0	**ARCESS Array S**	**12.95**	**23**	Pn	**Pn**	**13 42 19.4**	**-2.8**
	baz=211,slow=14						

ASRS 24 13:46:55.2±0.5,46°N±2°×9°0E±°,h10km,MLh3.8/8, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
DGZ	**Jazzator, Alta**	**4.08**	**334**	Pn	Pn	13 48 00.5	+2.8
DGZ				Pg	Pb	13 48 09.1	+1.9
DGZ				Sg	Sg	13 49 03.0	-3.1
CUR	**Chagan-Uzun**	**4.21**	**344**	Pn	Pn	13 47 59.7	0.0
CUR				Pg	Pb	13 48 11.0	+1.5
CUR				Sg	Sg	13 49 09.7	-0.8
AKAR	**Aktash**	**4.58**	**339**	Pn	Pn	13 48 05.7	+1.0
AKAR				Pg	Pb	13 48 17.4	+1.6
AKAR				Sg	Sg	13 49 22.4	0.0
CHBI	**Chibit, Altay**	**4.61**	**338**	Pn	Pn	13 48 06.6	+1.6
CHBI				Pg	Pb	13 48 17.9	+1.8
CHBI				Sg	Sg	13 49 23.0	-0.1
ULGR	**Ulagan, Altay**	**4.79**	**343**	Pg	Pb	13 48 21.9	+2.6
ULGR				Sg	Sg	13 49 25.5	-3.5
TUNR	**Tungur**	**4.84**	**329**	Pn	Pn	13 48 09.8	+1.7
TUNR				Pg	Pb	13 48 22.5	+2.4
TUNR				Sg	Sg	13 49 29.2	-1.2
MKAR	**Makanchi Array**	**5.50**	**280**	Pg	Pb	13 48 29.7	-1.7
MKAR				Sg	Sb	13 49 42.7	+5.2
MAKZ	**Makanchi**	**5.72**	**280**	Sg	Sg	13 49 52.0	-6.8
ELDR	**Elanda**	**5.82**	**334**	Pn	Pn	13 48 23.1	+1.5
ELDR				Pg	Pb	13 48 40.1	+3.3
ELDR				Sg	Sg	13 49 56.2	-5.7
ARTR	**Artybash**	**6.04**	**343**	Pn	Pn	13 48 27.6	+3.0
ARTR				Pg	Pb	13 48 45.0	+4.4
ARTR				Sg	Sg	13 50 07.4	-1.7
KZLR	**Kyzyl**	**6.30**	**25**	Sg	Sg	13 50 12.9	-4.4
DJO	**Djoy, Khakassi**	**6.75**	**5**	Sg	Sg	13 50 29.2	-2.6
DJOS	**Djoyskaya Sosn**	**6.78**	**6**	Sg	Sg	13 50 30.8	-1.8
CERR	**Cheremushki**	**6.84**	**6**	Sg	Sg	13 50 33.3	-1.2
ARDR	**Aradan**	**6.85**	**17**	Pg	Pb	13 48 56.5	+2.2
ARDR				Sg	Sg	13 50 29.9	-5.0
TASR	**Tashtagol**	**6.86**	**348**	Sg	Sg	13 50 38.8	+3.4
VEH	**Verkhnyaya Baz**	**7.19**	**1**	Pg	Pb	13 49 06.2	+6.1
VEH				Sg	Sg	13 50 46.0	+0.1
TDJR	**Todzha**	**7.42**	**29**	Sg	Sg	13 50 47.1	-6.1
ELT	**Eltsovka**	**7.64**	**342**	Sg	Sg	13 51 01.2	+1.1
LUZB	**Luzhba, Kemero**	**7.64**	**354**	Sg	Sg	13 50 59.8	-0.6
KURK	**Kurchatov**	**8.98**	**305**	Sg	Sg	13 51 37.7	-5.7
ORL	**Orlik**	**9.02**	**41**	Sg	Sn	13 51 38.0	+51
MOY	**Mondy**	**9.06**	**48**	Sg	Sn	13 51 41.0	+53
MINR	**Mina**	**9.20**	**15**	Sg	Sn	13 51 49.1	+58

IDC 24 13:47:46.3±13.0,0°.75S×137°.46E,h0km,mb3.6/2, mb1 3.9/3,mb1mx3.4/20,mbtmp3.7/3,ML3.8/1,MS3.4/1, Ms1 3.3/1,ms1mx2.6/32,Error ellipse: s-maj=190.9km s-min=101.1km az=173.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
WRA	**Warramunga Arr**	**19.32**	**189**	P	P	13 52 12.8	-0.4
	0.3nm,0.3s,baz=12,slow=11,SNR=20						
ASAR	**Alice Springs**	**23.04**	**188**	P	P	13 52 52.5	-0.8
	0.8nm,0.6s,baz=16,slow=10,SNR=24						
STKA	**Stephens Creek**	**31.20**	**173**	P	P	13 54 08.7	+1.3
	0.6nm,0.5s,baz=346,slow=8.3,SNR=2.8						
STKA				LR	LR	14 06 48.5	
	comp=Z,62nm,19.7s,baz=272,slow=37						

NIED **24** *14:05:00,38°.10N×142°.70E,h11km,Mw3.4 Best double couple: Mo1.40000×10^14 NP1:φs324.00000°,δ75.00000°, λ-87.00000°. NP2:φs132.00000°,δ15.00000°, λ-102.00000°.*
JMA 24 14:05:31.2±0.2,38°.13N×142°.70E,h25km±3km,M3.7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
JIKH	**Ishinomakikobu**	**0.99**	**281**	P	Pn	14 05 49.1	-0.4
JIKH				S	Sb	14 06 01.6	-0.7
JIO	**Ouri**	**1.11**	**287**	P	Pn	14 05 51.0	-0.2
JIO				S	Sn	14 06 05.3	-0.4
JKMT	**Kesennumamotoy**	**1.18**	**306**	P	Pn	14 05 52.1	0.0
JKMT				S	Sn	14 06 07.0	-0.3
OFUJ	**Ofunato**	**1.25**	**320**	P	Pn	14 05 53.2	+0.2
OFUJ				S	Sn	14 06 08.8	-0.2
JMK	**Ichinoseki**	**1.42**	**306**	P	Pn	14 05 55.9	+0.5
JMK				eS	Sn	14 06 13.8	+0.5
JMM	**Marumori**	**1.53**	**261**	P	Pn	14 05 56.8	-0.1
JOU	**Okura**	**1.62**	**279**	P	Pn	14 05 59.2	+1.0
JOU				S	Sb	14 06 19.8	-0.6
JFK	**Kawauchi**	**1.64**	**243**	P	Pn	14 05 57.8	-0.6
JFK				eS	Sn	14 06 18.0	-0.7
JOM	**Ohasama**	**1.73**	**321**	P	Pb	14 06 01.1	-1.3
JOM				S	Sb	14 06 22.7	-1.0
JFT	**Otama**	**1.97**	**253**	P	Pn	14 06 04.4	+1.4
JFT				S	Sb	14 06 28.9	-1.6
JYK	**Kaneyama**	**2.00**	**294**	P	Pn	14 06 05.0	+1.6
JRG	**Rokugo**	**2.05**	**309**	P	Pb	14 06 06.6	-1.2
JRG				eS	Sb	14 06 32.4	-0.4
JYA	**Atsumi**	**2.39**	**282**	P	Pb	14 06 11.3	-2.3
JANG	**Nango**	**2.42**	**338**	P	Pb	14 06 12.1	-2.0
MAT	**Matsushiro**	**3.92**	**248**	P	Pn	14 06 32.3	+2.5
MAT				S	Sb	14 07 21.6	-4.9

IDC **24** *14:09:06.9±1.3,11°.24S×117°.34E,h0km,mb3.6/4, mb1 3.7/6,mb1mx3.4/54,mbtmp3.6/6,ML3.6/2,Error ellipse: s-maj=52.5km s-min=20.8km az=59.0*
DJA **24** *14:09:08.9±0.4,11°S±3°×11°7E±°,h10km,M4.3/15, mB4.3/1,mb4.3/7,MLv4.3/15,Mw(mB)3.4/1*
ISC 24 14:09:10.0±0.8,11°.45S±0°.08×117°.11E±0°.05,h26km,n20, σ1§82/25,mb3.7/3,South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
PLAI	**Plampang**	**2.69**	**14**	P	**Pn**	**14 09 52.8**	**+1.1**
PLAI				S	**Sn**	**14 10 21.2**	**-2.3**
WBSI	**Waikabubak, Su**	**2.88**	**52**	P	**Pn**	**14 09 54.5**	**+0.2**
WBSI				S	**Sn**	**14 10 26.3**	**-1.9**
IGBI	**Denpasar**	**3.25**	**323**	P	**Pn**	**14 10 00.5**	**+1.1**
DNP	**Denpasar**	**3.33**	**326**	P	**Pn**	**14 10 01.5**	**+1.0**
DNP				S	**Sn**	**14 10 39.7**	**+0.5**
BASI	**Baing, Sumba**	**3.62**	**71**	P	**Pn**	**14 10 05.5**	**+1.0**
BASI				S	**Sn**	**14 10 45.7**	**-0.8**
SRBI	**Singaraja**	**3.83**	**331**	P	**Pn**	**14 10 10.1**	**+2.7**
JAGI	**Jajag, Banyuwa**	**4.15**	**315**	P	**Pn**	**14 10 11.9**	**+0.1**
GMJI	**Gumukmas**	**4.79**	**311**	P	**Pn**	**14 10 21.0**	**+0.4**
EDFI	**Ende, Flores**	**5.25**	**60**	P	**Pn**	**14 10 27.6**	**+0.6**
	0.1nm280nm6.2nm,1.0s						
PWJI	**Pagerwojo**	**6.24**	**303**	P	**Pn**	**14 10 42.2**	**+1.7**
	0.2nm12nm,0.7s						
PWJI				S	**Sn**	**14 11 46.9**	**-4.1**
	0.2nm12nm,0.7s						
PCJI	**Pacitan**	**6.68**	**298**	P	**Pn**	**14 10 47.8**	**+1.3**
	0.2nm26nm,1.6s						
BKSI	**Bulukumba**	**6.78**	**26**	P	**Pn**	**14 10 49.9**	**+1.9**
	0.1nm28nm,0.5s						
SOEI	**Soe**	**7.24**	**77**	P	**Pn**	**14 10 55.4**	**+1.0**
	0.3nm18nm,2.3s						
UGM	**Wanagama**	**7.38**	**298**	P	**Pn**	**14 10 57.6**	**+1.4**
	0.5nm77nm,0.5s						
FITZ	**Fitzroy Crossi**	**10.57**	**130**	Pn	**Pn**	**14 11 37.1**	**-2.8**
	0.6nm,0.3s,baz=322,slow=13,SNR=15						
FITZ				Sn	Sn	14 13 25.2	-12
	1.8nm,0.3s,baz=214,slow=22,SNR=12						
WRA	**Warramunga Arr**	**18.60**	**119**	P	**P**	**14 13 24.7**	**-0.9**
	0.1nm,0.3s,baz=289,slow=14,SNR=8.5						
WRA				S	Sn	14 16 33.6	-20
	0.1nm,0.3s,baz=289,slow=38,SNR=2.2						
ASAR	**Alice Springs**	**20.07**	**129**	P	**P**	**14 13 42.2**	**+0.5**
	0.7nm,0.6s,baz=301,slow=9.9,SNR=18						
ASAR				S	S	14 17 12.8	-13
	1.2nm,0.8s,baz=304,slow=23,SNR=11						
NWAO	**Narrogin (SRO)**	**21.37**	**180**	P	**P**	**14 13 59.3**	**+3.7**
	4.8nm,0.5s,baz=7.3,slow=12,SNR=7.1						
SONM	**Songino Array**	**59.79**	**352**	P	**P**	**14 19 12.9**	**-0.1**
	0.3nm,0.5s,baz=162,slow=7.6,SNR=2.5						
MKAR	**Makanchi Array**	**65.82**	**335**	P	**P**	**14 19 53.1**	**0.0**
	0.3nm,0.5s,baz=161,slow=6.7,SNR=7.5						

LSZ 24 14:13:29.4±0.3,15°.32S×28°.12E,h10km,Zambia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
ITZ	**Itezhi-Tezhi**	**2.07**	**258**	*i* P	Pn	14 14 04.2	-0.2
ITZ				*i*		14 14 04.3	
	baz=132,slow=11						
ITZ				*i* S	Sn	14 14 29.3	-0.9
ITZ	**Itezhi-Tezhi**	**2.07**	**258**	*i* P	Pn	14 14 04.0	-0.3
ITZ				*i*		14 14 04.2	
	baz=126,slow=11						
ITZ				*i* S	Sn	14 14 29.3	-1.0
ITZ	**Itezhi-Tezhi**	**2.07**	**258**	*i* P	Pn	14 14 04.1	-0.2
ITZ				*i*		14 14 04.1	
	baz=78,slow=28						
ITZ				*i* S	Sn	14 14 29.5	-0.8
ITZ	**Itezhi-Tezhi**	**2.07**	**258**	*i* P	Pn	14 14 04.0	-0.3
ITZ				*i*		14 14 04.2	
	baz=126,slow=11						
ITZ				*i* S	Sn	14 14 29.3	-1.0
ITZ	**Itezhi-Tezhi**	**2.07**	**258**	*i* P	Pn	14 14 04.1	-0.2
ITZ				*i*		14 14 04.1	
	baz=124,slow=11						
ITZ				*i* S	Sn	14 14 29.3	-0.9
ITZ	**Itezhi-Tezhi**	**2.07**	**258**	*i* P	Pn	14 14 04.2	-0.2
ITZ				*i*		14 14 04.3	
	baz=132,slow=11						
ITZ				*i* S	Sn	14 14 29.3	-0.9
ITZ	**Itezhi-Tezhi**	**2.07**	**258**	*i* P	Pn	14 14 04.1	-0.3
ITZ				*i*		14 14 04.1	
	baz=152,slow=12						
ITZ				*i* S	Sn	14 14 29.5	-0.8

IDC **24** *14:14:35.6±19.0,21°.12S×177°.79W,h480km±175km, mb3.5/6,mb1 3.6/6,mb1mx3.1/43,mbtmp4.4/6,Error ellipse: s-maj=120.0km s-min=66.2km az=88.0*
NEIC **24** *14:14:47.8±1.1,21°.1S±0°.1×178°.5W±0°.2,h588km±11km, mb4.5/19,Error ellipse: s-maj=28.3km s-min=18.8km az=71.0*
ISC 24 14:14:49.5±1.1,21°.1S±0°.1×178°.7W±0°.2,h600km,n31, σ0§80/31,mb4.4/16,1C,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
MSVF	**Nonsavu**	**4.54**	**316**	P	**P**	**14 16 18.1**	**-1.0**
URZ	**Urewera**	**17.53**	**191**	P	**P**	**14 18 19.6**	**-1.0**
BKZ	**Black Stump Fm**	**18.52**	**192**	P	**P**	**14 18 28.2**	**-1.5**
BKZ				IAmb	IAmb	14 19 13.2	
	comp=Z,60nm,1.7s						
TUWZ	**Tuamarina**	**21.25**	**196**	P	**P**	**14 18 54.9**	**+0.6**
THZ	**Tophouse**	**21.84**	**197**	P	**P**	**14 18 59.4**	**-0.2**
LTZ	**Lake Taylor**	**22.96**	**197**	P	**P**	**14 19 08.3**	**-1.2**
CTA	**Charters Tower**	**32.84**	**265**	P	**P**	**14 20 35.8**	**+0.3**
	comp=Z,3.2nm,0.4s,baz=91,slow=11,SNR=14						
STKA	**Stephens Creek**	**37.00**	**245**	P	**P**	**14 21 09.4**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=90,slow=18,SNR=3.3						
BBOO	**Buckleboo**	**41.76**	**244**	P	**P**	**14 21 47.9**	**0.0**
BBOO				IAmb	IAmb	14 22 42.0	
	comp=Z,17nm,1.4s						
WAKE	**Wake Island**	**42.60**	**339**	P	**P**	**14 21 54.9**	**+0.4**
WR0	**Warramunga Arr**	**43.73**	**263**	P	**P**	**14 22 03.3**	**-0.1**
WR0				IAmb	IAmb	14 23 06.4	
	comp=Z,33nm,1.9s						
AS31	**Alice Springs**	**43.80**	**257**	P	**P**	**14 22 04.0**	**0.0**
ASAR	**Alice Springs**	**43.80**	**257**	P	**P**	**14 22 04.1**	**+0.1**
	comp=Z,4.9nm,0.7s,baz=98,slow=7.7,SNR=74						
ASAR				PcP	**PcP**	**14 23 36.7**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=101,slow=4.0,SNR=4.5						
WB0	**Warramunga Arr**	**43.91**	**263**	P	**P**	**14 22 04.4**	**-0.4**
WB0				IAmb	IAmb	14 22 05.0	
	comp=Z,28nm,1.7s						
WB2	**Warramunga Arr**	**43.91**	**263**	P	**P**	**14 22 04.3**	**-0.5**
WB2				IAmb	IAmb	14 22 35.9	
	comp=Z,18nm,1.5s						
WRAB	**Tennant Creek**	**43.92**	**263**	P	**P**	**14 22 04.1**	**-0.7**
WRA	**Warramunga Arr**	**43.92**	**263**	P	**P**	**14 22 04.6**	**-0.3**
	comp=Z,2.7nm,0.5s,baz=97,slow=7.3,SNR=74						
FORT	**Forrest**	**48.52**	**247**	P	**P**	**14 22 39.3**	**0.0**
FORT				IAmb	IAmb	14 22 59.0	
	comp=Z,34nm,1.6s						
KNRA	**Kununurra**	**50.02**	**267**	P	**P**	**14 22 50.2**	**-0.3**
KNRA				IAmb	IAmb	14 23 01.5	
	comp=Z,20nm,1.4s						
FITZ	**Fitzroy Crossi**	**52.35**	**263**	P	**P**	**14 23 07.2**	**-0.2**
FITZ				IAmb	IAmb	14 23 47.0	
	comp=Z,28nm,2.0s						
SIJI	**Sorong**	**52.80**	**286**	P	**P**	**14 23 10.6**	**0.0**
	comp=Z,13nm,0.6s,baz=151,slow=22,SNR=5.0						
SOEI	**Soe**	**55.91**	**272**	P	**P**	**14 23 33.5**	**+1.0**
SOEI				IAmb	IAmb	14 23 34.7	
	comp=Z,16nm,0.8s						
PSA00	**Pilbara Seismi**	**56.95**	**257**	P	**P**	**14 23 39.0**	**-0.5**
PSA00				IAmb	IAmb	14 24 40.4	
	comp=Z,34nm,1.9s						
MORW	**Morawa**	**59.05**	**248**	P	**P**	**14 23 53.2**	**-0.2**
QSPA	**South Pole Qui**	**69.01**	**180**	P	**P**	**14 24 57.3**	**+1.4**
QSPA				IAmb	IAmb	14 25 42.2	
	comp=Z,33nm,1.9s						
SYO	**Syowa Base**	**86.05**	**193**	ePcP	**PcP**	**14 26 29.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**89.73**	**290**	P	**P**	**14 26 47.2**	**+1.8**
	comp=Z,0.8nm,0.8s,baz=146,slow=3.0,SNR=6.2						
AKASG	**Malin Array Be**	**143.20**	**330**	PKP	PKPbc	14 33 13.3	-1.2
	comp=Z,0.6nm,0.5s,baz=42,slow=4.3,SNR=14						
BRTR	**Keskin Array B**	**146.76**	**311**	PKPbc	**PKPbc**	**14 33 24.7**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=139,slow=36,SNR=2.2						
CLL	**Collm**	**148.46**	**346**	ePKPbc	**PKiKP**	**14 33 30.0**	**-0.4**
GERES	**GERESS Array B**	**150.57**	**343**	PKPbc	**PKiKP**	**14 33 33.3**	**-1.7**
	comp=Z,0.2nm,0.2s,baz=356,slow=5.4,SNR=3.8						

NDI **24** *14:15:05.9±1.7,30°.46N×79°.22E,h10km±8km,ML3.5*
IDC **24** *14:15:29.6±25.0,33°.71N×77°.70E,h0km,mb3.4/2, mb1 3.4/3,mb1mx3.0/58,mbtmp3.3/3,ML2.9/1,Error ellipse: s-maj=456.1km s-min=66.9km az=145.0*
ISC 24 14:15:06.0±1.0,30°.53N±0°.05×79°.29E±0°.04,h24km±9km, n13,σ2§14/18,Western Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
JOSI	**Joshimath**	**0.23**	**84**	eP	**Pb**	**14 15 11.9**	**-0.2**
JOSI				eS	**Sb**	**14 15 16.3**	**0.0**
JOSI					IAML	14 15 17.0	
	comp=N,7μm,0.3s						
JOSI					IAML	14 15 17.4	
	comp=E,9μm,0.2s						
DDI	**Dehra Dun**	**1.09**	**259**	eP	**Pn**	**14 15 25.3**	**-0.5**
DDI				eS	**Sb**	**14 15 39.6**	**-0.5**
DDI					IAML	14 15 40.5	
	comp=N,2μm,0.3s						
DDI					IAML	14 15 40.8	
	comp=E,856nm,0.4s						
PTH	**Pithoragarh**	**1.27**	**141**	eP	**Pb**	**14 15 28.9**	**-0.4**
PTH				ex	**Sn**	**14 15 44.6**	**-0.1**
LGTI	**Lohaghat**	**1.36**	**142**	ex	Pn	14 15 34.8	+5.4
LGTI				eS	**Sb**	**14 15 48.3**	**+0.6**
SMLA	**Simla**	**1.92**	**288**	eP	**Pb**	**14 15 39.7**	**-0.6**
SMLA				eS	**Sb**	**14 16 04.6**	**+0.6**
SMLA					IAML	14 16 06.2	
	comp=N,523nm,0.2s						
SMLA					IAML	14 16 07.0	
	comp=E,908nm,0.6s						
NDI	**New Delhi**	**2.58**	**225**	eP	**Pb**	**14 15 50.0**	**-1.6**
NDI				ex	**Sb**	**14 16 25.5**	**+2.5**
AYAN	**Aya Nagar**	**2.78**	**223**	ex	**Sb**	**14 16 28.9**	**+0.3**
DHRM	**DHARAMSHALA**	**3.08**	**305**	eP	**Pn**	**14 15 56.3**	**+3.0**
DHRM				eS	**Sn**	**14 16 32.5**	**+2.9**
DHRM				eS	**Sb**	**14 16 33.7**	**-3.7**
DHRM					IAML	14 16 37.7	
	comp=E,72nm,0.3s						
DHRM					IAML	14 16 48.1	
	comp=N,66nm,0.5s						
KUDL	**Kundal**	**3.42**	**226**	eP	Pn	14 15 48.3	-9.4
KUDL				eS	Sn	14 16 19.3	-18
THN	**Thein Dam**	**3.59**	**303**	eP	**Pn**	**14 16 03.0**	**+2.8**
THN				ex	x	14 16 48.5	
MKAR	**Makanchi Array**	**16.40**	**7**	Pn	Pn	14 18 44.2	-10
	comp=N,0.1nm,0.3s,baz=201,slow=15,SNR=1.7						
ZALV	**Zalesovo Beam**	**23.74**	**8**	P	**P**	**14 20 12.4**	**-3.7**
	comp=N,0.2nm,0.3s,baz=191,slow=9.1,SNR=1.6						
FINES	**FINESS Array B**	**46.24**	**328**	P	**P**	**14 23 29.1**	**+0.2**
	comp=N,1.4nm,0.8s,baz=116,slow=13,SNR=3.4						

IDC **24** *14:24:49.0±0.9,36°.52N×3°.00W,h0km,mb3.6/9, mb1 3.8/13,mb1mx3.6/44,mbtmp3.6/13,ML3.6/4,MS3.1/7, Ms1 3.1/7,ms1mx2.8/49,Error ellipse: s-maj=21.2km s-min=16.0km az=84.0*
CNRM **24** *14:24:50.3±0.6,36°.42N×2°.89W,h9km±4km,Error ellipse: s-maj=3.4km s-min=1.9km az=73.0*
CRAAG **24** *14:24:50.0,36°.59N×2°.81W,Ml4.0*
SFS **24** *14:24:51.0,36°.50N×2°.80W,ML4.0,ALBORAN NORTE*
INMG **24** *14:24:52.0±1.5,36°.55N×2°.83W,h6km±2km,ML3.5,Error ellipse: s-maj=2.1km s-min=1.5km az=92.0*

MDD 24 14:24:52.0±0.3, 36.56N×2.82W, h4km±2km, mbLg4.0/32, Error ellipse: s-maj=2.9km s-min=2.6km az=119.0, PRXIMO
MDD EMS: III INTENSIDAD MAXIMA.
NEIC 24 14:24:52.3±2.0, 36.52N±0.06×2.88W±0.07, h18km±5km, Error ellipse: s-maj=9.6km s-min=7.4km az=129.0
LDG 24 14:24:52.3±0.1, 36.54N×2.80W, h3km, Ml4.1/3, Error ellipse: s-maj=2.6km s-min=2.2km az=126.0
IGIL 24 14:24:52.8, 36.56N×2.80W, h22km
ISC 24 14:24:51.3±1.0, 36.55N±0.02×2.82W±0.02, h17km±7km, n176, σ1.71/270, mb3.6/9, 5C-3D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EXEE	**El Ejido**	**0.23**	**1**	Pg	**Pb**	**14 24 56.3**	**-0.6**
	SNR=7.9						
EXEE				Lg	Lg	14 24 59.4	
	SNR=7.9						
EBER	**Berja**	**0.35**	**350**	⇓Pg	**Pb**	**14 24 58.5**	**-0.7**
	519nm,0.1s,SNR=18						
EBER				Lg	Lg	14 25 03.0	
	20µm,0.5s,SNR=5.0						
EALB	**Alboran**	**0.63**	**196**	⇓Pg	**Pb**	**14 25 04.1**	**+0.3**
	815nm,0.2s,SNR=18						
EALB				Lg	Lg	14 25 12.6	
	37µm,0.6s,SNR=5.0						
ENIJ	**Nijar**	**0.65**	**49**	⇑Pg	**Pb**	**14 25 03.7**	**-0.4**
	4µm,0.4s,SNR=18						
ENIJ				Lg	Lg	14 25 11.8	
	16µm,0.4s,SNR=7.9						
ELGU	**Los Guajares,**	**0.72**	**296**	⇑Pg	**Pg**	**14 25 04.8**	**-0.7**
	368nm,0.1s,SNR=18						
ELGU				Lg	Lg	14 25 13.8	
	13µm,0.4s,SNR=7.9						
GORA	**Gorafe**	**0.95**	**349**	⇓Pg	**Pb**	**14 25 09.4**	**+0.1**
	482nm,0.3s,SNR=18						
GORA				Lg	Lg	14 25 21.4	
	6µm,0.6s,SNR=7.9						
EGOR	**Sierra Gorda,**	**1.18**	**299**	Pg	**Pb**	**14 25 12.8**	**-0.4**
	38nm,0.2s,SNR=7.9						
EGOR				Lg	Lg	14 25 29.7	
	1µm,0.4s,SNR=7.9						
MELI	**Melilla**	**1.25**	**184**	Pg	**Pg**	**14 25 15.5**	**0.0**
	49nm,0.2s,SNR=7.9						
MELI				Lg	Lg	14 25 31.8	
	1µm,0.6s,SNR=7.9						
MELI	**Melilla**	**1.25**	**184**	eP	**Pg**	**14 25 15.4**	**-0.1**
MELI				eS	**Sg**	**14 25 35.7**	**+3.8**
EQES	**Quesada**	**1.27**	**351**	Pg	**Pg**	**14 25 15.7**	**-0.1**
	108nm,0.3s,SNR=153						
EQES				Lg	Lg	14 25 33.2	
	2µm,0.7s,SNR=5.0						
EMAL	**Malaga-Limoner**	**1.31**	**280**	eP	**Pn**	**14 25 12.1**	**-2.7**
EMAL				eS	**Sb**	**14 25 28.0**	**-4.0**
GOG	**Mont Gurugu**	**1.33**	**186**	P	**Pn**	**14 25 13.6**	**-1.5**
GOG				S	**Sb**	**14 25 29.5**	**-3.1**
TLOR	**Lorca, Murcia**	**1.43**	**39**	⇑Pg	**Pb**	**14 25 17.0**	**-0.4**
	1µm,0.3s,SNR=18						
TLOR				Lg	Lg	14 25 35.3	
	15µm,0.8s,SNR=7.9						
EMIJ	**Mijas**	**1.57**	**271**	⇑Pn	**Pn**	**14 25 16.0**	**-2.5**
	11nm,0.1s,SNR=18						
EMIJ				Sn	**Sn**	**14 25 33.8**	**-4.6**
	136nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**1.58**	**8**	Pg	**Pb**	**14 25 20.4**	**+0.2**
	61nm,0.3s,SNR=7.9						
SESP				Lg	Lg	14 25 42.6	
	2µm,0.7s,SNR=7.9						
SESP	**Santiago Espad**	**1.58**	**8**	P	**Pg**	**14 25 21.9**	**+0.1**
	SNR=184						
SESP				S	**Sg**	**14 25 43.6**	**+1.1**
PALE	**Palemas**	**1.61**	**215**	P	**Pn**	**14 25 17.2**	**-1.7**
PALE				S	**Sn**	**14 25 38.3**	**-1.0**
CART	**Cartagena**	**1.78**	**54**	Pn	**Pn**	**14 25 19.9**	**-1.4**
CART	**Cartagena**	**1.78**	**54**	⇑P	**Pn**	**14 25 19.9**	**-1.4**
CART				eS	**Sn**	**14 25 41.2**	**-2.3**
EMUR	**La Murta**	**1.80**	**44**	Pn	**Pn**	**14 25 21.5**	**-0.1**
	82nm,0.5s,SNR=49						
EMUR				Sn	**Sn**	**14 25 43.2**	**-0.9**
	611nm,0.4s,SNR=5.0						
REAL	**Reales**	**1.93**	**269**	eP	**Pn**	**14 25 21.0**	**-2.4**
REAL				eS	**Sn**	**14 25 44.9**	**-2.4**
USTO	**Oran**	**2.01**	**113**	P	Pn	14 25 16.0	-8.3
OTSS	**Djebel Tessala**	**2.07**	**127**	P	**Pn**	**14 25 22.0**	**-3.3**
LIJA	**Lijar**	**2.11**	**281**	eP	**Pb**	**14 25 29.7**	**+0.6**
EADA	**Adamuz**	**2.14**	**320**	Pg	**Pb**	**14 25 30.1**	**+0.5**
	49nm,0.3s,SNR=7.9						
EADA				Sn	**Sn**	**14 25 52.9**	**+0.5**
	83nm,0.3s,SNR=7.9						
EADA				Lg	Lg	14 25 59.5	
	742nm,0.9s,SNR=7.9						
CEU	**Ceuta**	**2.17**	**253**	eP	**Pn**	**14 25 24.9**	**-1.7**
CEU				eS	**Sn**	**14 25 52.8**	**-0.1**
ECEU	**Ceuta**	**2.17**	**253**	Pn	**Pn**	**14 25 24.8**	**-1.8**
	2.1nm,0.1s,SNR=7.5						
ETRV	**Los Montesinos**	**2.20**	**47**	Pn	**Pn**	**14 25 27.5**	**+0.5**
	75nm,0.2s,SNR=7.9						
ETRV				Lg	Lg	14 26 02.1	
	3µm,0.7s,SNR=7.9						
AKLM	**AKL**	**2.21**	**203**	P	**Pn**	**14 25 24.4**	**-2.7**
AKLM				S	**Sn**	**14 25 51.2**	**-2.9**
JBK	**JBK**	**2.22**	**175**	P	**Pn**	**14 25 26.4**	**-1.0**
JBK				S	**Sn**	**14 25 53.0**	**-1.5**
SMIR	**Smir Dam**	**2.25**	**248**	P	**Pn**	**14 25 26.9**	**-0.8**
SMIR				S	**Sn**	**14 25 54.8**	**-0.2**
ALJ	**Aljibe**	**2.28**	**270**	eP	**Pb**	**14 25 30.7**	**-1.3**
ETOB	**Tobarra**	**2.32**	**25**	Pn	**Pn**	**14 25 30.6**	**+1.8**
	65nm,0.2s,SNR=4.2						
ETOB				Sn	**Sn**	**14 25 58.3**	**+1.4**
	372nm,0.5s,SNR=5.0						
ETOB				Lg	Lg	14 26 07.4	
	1µm,1.0s,SNR=7.9						
HORN	**Hornachuelos**	**2.34**	**304**	P	**Pn**	**14 25 29.4**	**+0.4**
	SNR=54						
HORN				S	**Sb**	**14 25 59.9**	**-1.7**
ODJA	**Bouhanifia**	**2.48**	**119**	P	**Pn**	**14 25 30.0**	**-0.9**
CHEFC	**Chefchaouen**	**2.50**	**236**	P	**Pn**	**14 25 30.3**	**-1.0**
CHEFC				S	**Sn**	**14 25 59.8**	**-1.7**
ECAB	**El Cabril**	**2.58**	**307**	Pn	**Pn**	**14 25 33.3**	**+1.1**
	4.3nm,0.2s,SNR=7.9						
ECAB				Pg	**Pg**	**14 25 39.4**	**-1.2**
	113nm,0.6s,SNR=7.9						
ECAB				Sn	**Sb**	**14 26 06.7**	**-1.7**
	38nm,0.3s,SNR=7.9						
ECAB				Lg	Lg	14 26 11.6	
	437nm,0.7s,SNR=7.9						
CNIL	**Conil**	**2.62**	**267**	eP	**Pb**	**14 25 36.6**	**-1.0**
OJBR	**Djebel Berber**	**2.74**	**110**	P	Pn	14 25 27.0	-7.4
AFON	**Font Roja**	**2.78**	**40**	Pn	**Pn**	**14 25 35.9**	**+0.8**
	9.6nm,0.3s,SNR=10.0						
AFON				Sn	**Sn**	**14 26 09.3**	**+1.0**
	118nm,0.5s,SNR=6.4						
OKGL	**Djebel Kef Gue**	**2.84**	**99**	P	Pn	14 25 26.0	-10
OKGL	**Djebel Kef Gue**	**2.84**	**99**	Pn	**Pn**	**14 25 36.7**	**+0.9**
	29nm,0.2s,SNR=7.9						
OKGL				Sn	**Sn**	**14 26 10.3**	**+0.7**
	486nm,0.3s,SNR=7.9						
RSA	**Sarsar**	**2.96**	**237**	P	**Pn**	**14 25 36.0**	**-1.4**
RSA				S	**Sn**	**14 26 12.0**	**-0.5**
EBEN2	**Beniarda presa**	**2.98**	**44**	Pn	**Pn**	**14 25 37.8**	**+0.1**
	5.7nm,0.1s,SNR=7.9						
EBEN2				Sn	**Sn**	**14 26 11.1**	**-1.9**
	285nm,0.6s,SNR=7.9						
SICH	**Sidi Chahed**	**3.18**	**221**	P	**Pn**	**14 25 38.3**	**-2.2**
SICH				S	**Sn**	**14 26 16.2**	**-1.8**
EANR	**'Ain N'Sour**	**3.22**	**100**	P	**Pn**	**14 25 40.6**	**-0.5**
PAB	**San Pablo**	**3.23**	**338**	Pn	**Pn**	**14 25 43.5**	**+2.3**
	5.5nm,0.2s,SNR=7.9						
PAB				Pg	**Pg**	**14 25 51.7**	**-1.5**
	14nm,0.3s,SNR=7.9						
PAB				Sn	**Sn**	**14 26 19.6**	**+0.3**
	16nm,0.3s,SNR=7.9						
PAB				Lg	Lg	14 26 34.2	
	530nm,1.1s,SNR=7.9						
PAB	**San Pablo**	**3.23**	**338**		**Pn**	**14 25 43.3**	**+2.1**
ESDC	**Sonseca Array**	**3.25**	**344**	Pn	**Pn**	**14 25 42.8**	**+1.3**
	5.6nm,0.3s,baz=165,slow=12,SNR=28						
ESDC				Pg	**Pg**	**14 25 53.0**	**-0.5**
	26nm,0.3s,baz=162,slow=16,SNR=40						
ESDC				Lg	Lg	14 26 32.5	
	27nm,0.3s,baz=166,slow=26,SNR=4.7						
ESDC				LR	LR	14 27 18.4	
	comp=Z,211nm,20.9s,baz=225,slow=46						
ESDC	**Sonseca Array**	**3.25**	**344**	Pn	**Pn**	**14 25 43.5**	**+2.0**
	9.1nm,0.3s,baz=165,slow=12,SNR=18						
ESDC				Pg	**Pg**	**14 25 52.2**	**-1.3**
	43nm,0.4s,baz=163,slow=17,SNR=7.9						
ESDC				Sn	**Sn**	**14 26 20.8**	**+1.0**
	13nm,0.3s,baz=7.8,slow=25,SNR=7.9						
ESDC				Lg	Lg	14 26 34.9	
	116nm,0.6s,baz=159,slow=28,SNR=7.9						
ESBB	**Sonseca Array**	**3.25**	**344**		**Pn**	**14 25 43.8**	**+2.3**
EMIN	**Mina Concepcio**	**3.31**	**293**	Pn	**Pn**	**14 25 42.2**	**-0.1**
	2.1nm,0.2s,SNR=33						
EMIN				Sn	**Sn**	**14 26 20.1**	**-1.2**
	18nm,0.3s,SNR=5.0						
EMIN				Lg	Lg	14 26 37.7	
	164nm,0.7s,SNR=7.9						
ECHA	**Ech Chlef**	**3.40**	**95**	P	**Pn**	**14 25 46.0**	**+2.5**
EBNR	**Beni Rached**	**3.52**	**93**	P	**Pb**	**14 25 50.3**	**-2.7**
TDRA	**Tendrara**	**3.56**	**169**	P	**Pn**	**14 25 45.1**	**-0.8**
TDRA				S	**Sn**	**14 26 28.1**	**+0.4**
IFR	**Ifrane**	**3.57**	**213**	eP	**Pn**	**14 25 46.1**	**+0.1**
IFR				eS	**Sn**	**14 26 25.3**	**-2.6**
UCM	**Universidad Co**	**3.77**	**355**	eP	**Pg**	**14 26 01.5**	**-1.9**
UCM				eS	**Sg**	**14 26 52.2**	**-0.1**
EGRO	**El Granado**	**3.86**	**286**	Pn	**Pn**	**14 25 50.6**	**+0.8**
	11nm,0.4s,SNR=14						
EGRO				Sn	**Sn**	**14 26 33.2**	**-1.5**
	59nm,0.5s,SNR=8.2						
EBAD	**Badajoz**	**3.99**	**305**	Pn	**Pn**	**14 25 51.9**	**+0.3**
	1.7nm,0.1s,SNR=19						
EBAD				Sn	**Sn**	**14 26 35.6**	**-2.5**
	50nm,0.2s,SNR=5.0						
EBAD				Lg	Lg	14 26 58.1	
	216nm,0.6s,SNR=7.9						
MD31	**MD31**	**4.00**	**204**	P	**Pn**	**14 25 52.5**	**+0.6**
MD31				S	**Sn**	**14 26 34.6**	**-3.9**
MDT	**Midelt**	**4.01**	**202**	Pn	**Pn**	**14 25 52.6**	**+0.7**
	1.2nm,0.3s,baz=40,slow=14,SNR=15						
MDT				Sn	**Sn**	**14 26 37.0**	**-1.5**
	4.8nm,0.3s,baz=158,slow=18,SNR=8.2						
MDT	**Midelt**	**4.01**	**202**	P	**Pn**	**14 25 49.9**	**-2.0**
MDT				S	**Sn**	**14 26 37.6**	**-0.9**
PVAQ	**Vaqueiros**	**4.02**	**284**	ePn	**Pn**	**14 25 52.0**	**0.0**
PVAQ				eSn	**Sn**	**14 26 37.6**	**-1.0**
PVAQ				A	A	14 26 39.4	
	38nm,1.0s						
PVAQ	**Vaqueiros**	**4.02**	**284**	Pn	**Pn**	**14 25 52.0**	**0.0**
PVAQ				Sn	**Sn**	**14 26 37.6**	**-1.0**
	38nm,1.0s						
PVAQ	**Vaqueiros**	**4.02**	**284**	P	**Pn**	**14 25 51.1**	**-0.9**
	SNR=42						
PVAQ				S	**Sn**	**14 26 39.8**	**+1.1**
PVAQ	**Vaqueiros**	**4.02**	**284**		**Pn**	**14 25 51.6**	**-0.4**
EIBI	**Ibiza**	**4.12**	**52**	Pn	**Pn**	**14 25 53.6**	**+0.2**
	26nm,0.3s,SNR=30						
EIBI				Sn	**Sn**	**14 26 38.3**	**-2.9**
	75nm,0.4s						
PBDV	**Barranco-do-Ve**	**4.16**	**281**	ePn	**Pn**	**14 25 54.0**	**0.0**
PBDV				eSn	**Sn**	**14 26 42.1**	**-0.1**
PBDV				A	A	14 27 21.4	
	40nm,0.6s						
PBDV	**Barranco-do-Ve**	**4.16**	**281**	Pn	**Pn**	**14 25 54.0**	**0.0**
PBDV				Sn	**Sn**	**14 26 42.1**	**-0.1**
	40nm,0.6s						
GUD	**Guadarrama**	**4.22**	**346**	Pn	**Pn**	**14 25 56.8**	**+1.9**
	1.8nm,0.3s,SNR=9.5						
GUD				Pg	**Pg**	**14 26 08.9**	**-3.2**
	37nm,0.6s,SNR=7.9						
GUD				Lg	Lg	14 27 06.0	
	215nm,0.9s,SNR=5.0						
EMOS	**Mosqueruela**	**4.23**	**25**	Pn	**Pn**	**14 25 56.6**	**+1.5**
	0.5nm,0.2s,SNR=16						
EMOS				Pg	**Pg**	**14 26 11.5**	**-0.8**
	14nm,0.4s,SNR=7.9						
EMOS				Lg	Lg	14 27 06.9	
	140nm,0.8s,SNR=5.0						
PBEJ	**Beja**	**4.29**	**292**	ePn	**Pn**	**14 25 56.5**	**+0.8**
PBEJ				eSn	**Sn**	**14 26 44.1**	**-1.3**
PBEJ				A	A	14 27 31.5	
	36nm,0.7s						
PBEJ	**Beja**	**4.29**	**292**	Pn	**Pn**	**14 25 56.5**	**+0.8**
PBEJ				Sn	**Sn**	**14 26 44.1**	**-1.3**
	18nm,0.7s						
ETOR	**Torete**	**4.31**	**8**	Pn	**Pn**	**14 25 57.7**	**+1.7**
	9.1nm,0.2s,SNR=7.9						
ETOR				Pg	**Pg**	**14 26 10.7**	**-3.0**
	45nm,0.3s,SNR=7.9						
ETOR				Sn	**Sn**	**14 26 46.1**	**+0.2**
	68nm,0.4s,SNR=7.9						
ETOR				Lg	Lg	14 27 08.5	
	395nm,1.0s,SNR=7.9						
PCVE	**Castro Verde**	**4.31**	**286**	ePn	**Pn**	**14 25 56.7**	**+0.6**
PCVE				eSn	**Sn**	**14 26 45.6**	**-0.4**
PCVE				A	A	14 27 17.9	
	26nm,1.0s						
PCVE	**Castro Verde**	**4.31**	**286**	Pn	**Pn**	**14 25 56.7**	**+0.6**
PCVE				Sn	**Sn**	**14 26 45.6**	**-0.4**
	26nm,1.0s						
EPLA	**Plasencia**	**4.35**	**325**	Pn	**Pn**	**14 25 58.0**	**+1.4**
	6.7nm,0.3s,SNR=19						
EPLA				Sn	**Sn**	**14 26 46.4**	**-0.5**
	7.7nm,0.3s,SNR=6.1						
EPLA				Lg	Lg	14 27 10.7	
	177nm,0.8s,SNR=5.0						
ZHG	**ZHG**	**4.41**	**227**	P	**Pn**	**14 25 57.9**	**+0.5**
ZHG				S	**Sn**	**14 26 50.7**	**+2.3**
PESTR	**Estremoz**	**4.44**	**303**	ePn	**Pn**	**14 25 58.4**	**+0.6**
PESTR				eSn	**Sn**	**14 26 48.6**	**-0.4**
PESTR				eSg	**Sg**	**14 27 12.5**	**-1.2**
PESTR				A	A	14 27 27.7	
	102nm,0.6s						
PESTR	**Estremoz**	**4.44**	**303**	P	**Pn**	**14 25 57.9**	**+0.1**
PESTR				S	**Sn**	**14 26 51.1**	**+2.0**
PESTR	**Estremoz**	**4.44**	**303**		**Pn**	**14 25 58.4**	**+0.6**
EVO	**Evora**	**4.58**	**297**	ePn	**Pn**	**14 26 00.7**	**+1.0**
EVO				eSg	**Sg**	**14 27 21.1**	**+2.8**
EVO				A	A	14 27 28.9	
	66nm,0.7s						
EVO	**Evora**	**4.58**	**297**	Pn	**Pn**	**14 26 00.7**	**+1.0**
EVO				Sn	**Sn**	**14 26 49.1**	**-3.4**
EVO				Lg	Lg	14 27 21.1	
	66nm,0.7s						
EVO	**Evora**	**4.58**	**297**	eP	**Pn**	**14 26 00.3**	**+0.6**
EVO				eS	**Sn**	**14 26 49.1**	**-3.4**
FIGM	**Figuig**	**4.59**	**163**	P	**Pn**	**14 25 58.3**	**-1.6**
FIGM				S	**Sn**	**14 26 52.7**	**-0.3**
PMRV	**Marv??o**	**4.62**	**310**	ePn	**Pn**	**14 26 01.4**	**+1.1**
PMRV				eSg	**Sg**	**14 27 19.6**	**+0.1**
PMRV				A	A	14 27 29.7	
	79nm,0.6s						
PMRV	**Marv??o**	**4.62**	**310**	Pn	**Pn**	**14 26 01.4**	**+1.1**
PMRV				Lg	Lg	14 27 19.6	
	79nm,0.6s						
MORF	**Marmelete**	**4.74**	**281**	eP	**Pn**	**14 26 01.4**	**-0.5**
MORF	**Marmelete**	**4.74**	**281**	ePn	**Pn**	**14 26 02.6**	**+0.7**
MORF				eSn	**Sn**	**14 26 56.5**	**+0.1**
MORF				A	A	14 26 58.0	
	18nm,0.4s						
MORF	**Marmelete**	**4.74**	**281**	Pn	**Pn**	**14 26 02.6**	**+0.7**
MORF				Sn	**Sn**	**14 26 56.5**	**+0.1**
	18nm,0.4s						
PNCL	**Nicolau / Gran**	**4.81**	**291**	ePn	**Pn**	**14 26 03.6**	**+0.7**
PNCL				eSn	**Sn**	**14 26 56.2**	**-2.0**
PNCL				A	A	14 27 32.0	
	31nm,0.7s						
PNCL	**Nicolau / Gran**	**4.81**	**291**	Pn	**Pn**	**14 26 03.6**	**+0.7**
PNCL				Sn	**Sn**	**14 26 56.2**	**-2.0**
	31nm,0.7s						
PTEO	**Sao Teotonio**	**4.83**	**284**	ePn	**Pn**	**14 26 03.6**	**+0.5**
PTEO				eSn	**Sn**	**14 26 56.6**	**-2.1**
PTEO				A	A	14 27 48.6	
	56nm,0.6s						
PTEO	**Sao Teotonio**	**4.83**	**284**	Pn	**Pn**	**14 26 03.6**	**+0.5**
PTEO				Sn	**Sn**	**14 26 56.6**	**-2.1**
	28nm,0.6s						
PFVI	**Vila Bisbo**	**4.86**	**279**	ePn	**Pn**	**14 26 04.7**	**+1.2**
PFVI				eSn	**Sn**	**14 26 58.6**	**-0.7**
PFVI				A	A	14 27 05.5	
	34nm,0.6s						
PFVI	**Vila Bisbo**	**4.86**	**279**	Pn	**Pn**	**14 26 04.7**	**+1.2**
	6.8nm,0.2s,SNR=7.9						
PFVI				Sn	**Sn**	**14 26 57.8**	**-1.5**
	37nm,0.4s,SNR=7.9						
PFVI	**Vila Bisbo**	**4.86**	**279**	P	**Pn**	**14 26 02.0**	**-1.5**
PFVI				S	**Sn**	**14 26 59.3**	**0.0**
PFVI	**Vila Bisbo**	**4.86**	**279**	Pn	**Pn**	**14 26 04.0**	**+0.5**
PCBR	**Castelo Branco**	**4.93**	**313**	eSn	**Sn**	**14 27 00.7**	**-0.4**
PCBR				eSg	**Sg**	**14 27 30.2**	**+0.8**
PCBR				A	A	14 27 42.5	
	54nm,0.6s						
PCBR	**Castelo Branco**	**4.93**	**313**	Sn	**Sn**	**14 27 00.7**	**-0.4**
PCBR				Lg	Lg	14 27 30.2	
	27nm,0.6s						
PMTG	**Montargil**	**4.97**	**302**	ePn	**Pn**	**14 26 04.9**	**-0.1**
PMTG				eSg	**Sg**	**14 27 35.1**	**+4.4**
PMTG				A	A	14 27 40.3	
	65nm,0.7s						
PMTG	**Montargil**	**4.97**	**302**	Pn	**Pn**	**14 26 04.9**	**-0.1**
PMTG				Lg	Lg	14 27 35.1	
	65nm,0.7s						
ERTA	**Horta de San J**	**5.04**	**28**	Pn	**Pn**	**14 26 08.0**	**+1.9**
	14nm,0.5s,SNR=7.9						
ERTA				Sn	**Sn**	**14 27 03.1**	**-0.9**
	18nm,0.4s,SNR=7.9						
GOLM	**Goulmima**	**5.15**	**201**	P	**Pn**	**14 26 08.2**	**+0.6**
GOLM				S	**Sn**	**14 27 08.0**	**+1.4**
MTE	**Manteigas**	**5.34**	**317**	eSg	**Sg**	**14 27 38.7**	**-4.0**
MTE				A	A	14 27 49.9	
	136nm,0.6s						
MTE	**Manteigas**	**5.34**	**317**		**Pn**	**14 26 11.2**	**+0.9**
PTOM	**Tomar**	**5.37**	**306**	ePn	**Pn**	**14 26 11.2**	**+0.6**
PTOM				eSn	**Sn**	**14 27 10.6**	**-1.4**
PTOM				eSg	**Sg**	**14 27 44.0**	**+0.3**
PTOM				A	A	14 28 05.0	
	66nm,0.6s						
PTOM	**Tomar**	**5.37**	**306**	Pn	**Pn**	**14 26 11.2**	**+0.6**
PTOM				Sn	**Sn**	**14 27 10.6**	**-1.4**
PTOM				Lg	Lg	14 27 44.0	
	33nm,0.6s						
ESAC	**San Caprasio**	**5.48**	**19**	Pn	**Pn**	**14 26 14.2**	**+2.1**
	3.8nm,0.4s,SNR=7.7						
ESAC				Pg	**Pb**	**14 26 30.1**	**+3.6**
	14nm,0.4s,SNR=7.9						
ESAC				Sn	**Sn**	**14 27 11.7**	**-3.1**
	37nm,0.4s,SNR=7.9						
ETOS	**Mallorca**	**5.48**	**52**	Pn	**Pn**	**14 26 12.8**	**+0.7**
	31nm,0.4s,SNR=7.9						
ETOS				Sn	**Sn**	**14 27 11.1**	**-3.6**
	16nm,0.5s,SNR=7.9						
PMAFR	**Mafra**	**5.66**	**297**	Pn	**Pn**	**14 26 16.1**	**+1.5**
	6.8nm,0.2s,SNR=7.9						
PMAFR				Sn	**Sn**	**14 27 16.7**	**-2.4**
	67nm,0.5s,SNR=7.9						
PMAFR				Lg	Lg	14 27 53.3	
	753nm,1.4s,SNR=4.0						
MVO	**Moncorvo**	**5.66**	**326**	ePn	**Pn**	**14 26 16.2**	**+1.6**
MVO				eSn	**Sn**	**14 27 18.7**	**-0.6**
MVO				eSg	**Sg**	**14 27 50.6**	**-2.3**
MVO				A	A	14 28 08.1	
	71nm,0.6s						
MVO	**Moncorvo**	**5.66**	**326**	Pn	**Pn**	**14 26 16.0**	**+1.3**
	13nm,0.4s,SNR=7.9						
MVO				Sn	**Sn**	**14 27 17.0**	**-2.2**
	4.2nm,0.2s,SNR=7.9						
PCAS	**Casmilo, Conde**	**5.67**	**310**	ePn	**Pn**	**14 26 15.8**	**+1.0**
PCAS				eSn	**Sn**	**14 27 17.1**	**-2.4**
PCAS				eSg	**Sg**	**14 27 53.3**	**-0.1**
PCAS				A	A	14 28 02.0	
	93nm,0.6s						
PCAS	**Casmilo, Conde**	**5.67**	**310**	Pn	**Pn**	**14 26 15.8**	**+1.0**
PCAS				Sn	**Sn**	**14 27 17.1**	**-2.4**
PCAS				Lg	Lg	14 27 53.3	
	93nm,0.6s						
EPOB	**Poblet**	**5.68**	**31**	Pn	**Pn**	**14 26 16.2**	**+1.3**
	3.8nm,0.3s,SNR=7.9						
EPOB				Sn	**Sn**	**14 27 17.1**	**-2.6**
	3.3nm,0.3s,SNR=7.9						
COI	**Coimbra**	**5.72**	**311**	ePn	**Pn**	**14 26 17.0**	**+1.7**
COI	**Coimbra**	**5.72**	**311**	Pn	**Pn**	**14 26 17.0**	**+1.7**
COI	**Coimbra**	**5.72**	**311**	Pn	**Pn**	**14 26 16.0**	**+0.7**
PVIS	**Viseu**	**5.75**	**318**	ePn	**Pn**	**14 26 17.2**	**+1.3**
PVIS				eSn	**Sn**	**14 27 18.3**	**-3.2**
PVIS				eSg	**Sg**	**14 27 59.1**	**+3.2**
PVIS				A	A	14 28 13.7	
	35nm,0.6s						
PVIS	**Viseu**	**5.75**	**318**	Pn	**Pn**	**14 26 17.2**	**+1.3**
PVIS				Sn	**Sn**	**14 27 18.3**	**-3.2**
PVIS				Lg	Lg	14 27 59.1	
	18nm,0.6s						
PBRG	**Braganca**	**6.07**	**331**	ePn	**Pn**	**14 26 22.1**	**+1.9**
PBRG				eSg	**Sg**	**14 28 07.5**	**+1.5**
PBRG				A	A	14 28 37.8	
	34nm,0.7s						
PBRG	**Braganca**	**6.07**	**331**	Pn	**Pn**	**14 26 22.1**	**+1.9**
PBRG				Lg	Lg	14 28 07.5	
	17nm,0.7s						
PVRL	**Vila Real**	**6.07**	**323**	ePn	**Pn**	**14 26 21.7**	**+1.4**
PVRL				eSg	**Sg**	**14 28 05.9**	**-0.2**
PVRL				A	A	14 28 10.9	
	32nm,0.7s						
PVRL	**Vila Real**	**6.07**	**323**	Pn	**Pn**	**14 26 21.7**	**+1.4**
PVRL				Lg	Lg	14 28 05.9	
	16nm,0.7s						
ECAL	**Calabor**	**6.18**	**332**	Pn	**Pn**	**14 26 23.4**	**+1.5**
	5.7nm,0.5s,SNR=7.9						
ECAL				Lg	Lg	14 28 09.9	
	235nm,1.0s,SNR=7.9						
TZRR	**Tazzarine**	**6.19**	**203**	P	**Pn**	**14 26 19.8**	**-2.1**
TZRR				S	**Sn**	**14 27 31.1**	**-1.2**
EORO	**Oroz-Betelu**	**6.44**	**10**	Pn	**Pn**	**14 26 27.7**	**+2.3**
	2.2nm,0.3s,SNR=8.2						
EORO				Lg	Lg	14 28 17.2	
	220nm,1.2s,SNR=7.9						
OUZM	**OUZ**	**6.51**	**211**	P	**Pn**	**14 26 26.3**	**-0.1**
OUZM				S	**Sn**	**14 27 42.7**	**+2.3**
ECHI	**Chisagues Biel**	**6.54**	**20**	Pn	**Pn**	**14 26 27.9**	**+1.2**
	0.3nm,0.1s,SNR=7.9						
ECHI				Lg	Lg	14 28 19.1	
	25nm,0.9s,SNR=7.9						
PCAB	**Cabril**	**6.55**	**323**	ePn	**Pn**	**14 26 28.4**	**+1.5**
PCAB				eSn	**Sn**	**14 27 40.5**	**-0.7**
PCAB				eSg	**Sg**	**14 28 21.0**	**-0.6**
PCAB				A	A	14 28 37.5	
	53nm,0.6s						
CSOR	**Sort**	**6.57**	**26**	Pn	**Pn**	**14 26 29.2**	**+2.0**
	9.9nm,0.4s,SNR=23						
CSOR				Sn	**Sn**	**14 27 38.7**	**-3.0**
	15nm,0.6s,SNR=7.9						
CSOR				Lg	Lg	14 28 22.1	
	252nm,1.6s,SNR=7.9						
ETSF	**Etsaut**	**6.58**	**15**	ePn	**Pn**	**14 26 27.8**	**+0.6**
ETSF	**Etsaut**	**6.58**	**15**	eP	Pn	14 26 32.6	+5.4
ETSF				eSg	**Sg**	**14 28 18.3**	**-4.0**
	136nm,1.3s						
CFON	**Fontmartina**	**6.62**	**36**	Pn	**Pn**	**14 26 29.1**	**+1.4**
	1.5nm,0.3s,SNR=7.9						
CFON				Sn	**Sn**	**14 27 41.3**	**-1.5**
	5.1nm,0.3s,SNR=7.9						
SJPF	**Ste Jean**	**6.67**	**10**	ePn	**Pn**	**14 26 29.0**	**+0.6**
SJPF	**Ste Jean**	**6.67**	**10**	eP	Pn	14 26 33.4	+5.0
SJPF				eSg	**Sg**	**14 28 21.0**	**-4.2**
	97nm,1.0s						
ELOB	**Lobios**	**6.69**	**324**	Pn	**Pn**	**14 26 29.9**	**+1.1**
	2.4nm,0.2s,SNR=7.9						
ELOB				Sn	**Sn**	**14 27 41.4**	**-3.2**
	3.5nm,0.2s,SNR=7.9						
ELOB				Lg	Lg	14 28 23.8	
	121nm,0.8s,SNR=7.9						
ELAN	**Lanestosa**	**6.69**	**356**	Pn	**Pn**	**14 26 31.0**	**+2.2**
	0.6nm,0.2s,SNR=7.9						
ELAN				Lg	Lg	14 28 25.9	
	154nm,1.1s,SNR=7.9						
ATE	**Arette**	**6.73**	**13**	Pn	**Pn**	**14 26 31.5**	**+2.2**
	0.6nm,0.1s,SNR=7.9						
ATE				Lg	Lg	14 28 26.7	
	27nm,0.8s,SNR=7.9						
EALK	**Alkurrunz**	**6.74**	**8**	Pn	**Pn**	**14 26 31.4**	**+1.9**
	2.1nm,0.2s,SNR=7.1						
EALK				Lg	Lg	14 28 26.2	
	96nm,0.8s,SNR=7.9						
OUK	**Oukaimeden**	**6.78**	**220**	P	**Pn**	**14 26 28.2**	**-2.1**
OUK				S	**Sn**	**14 27 46.0**	**-1.3**
ZGR	**Zagora**	**6.83**	**201**	P	**Pn**	**14 26 29.4**	**-1.3**
ZGR				S	**Sn**	**14 27 47.2**	**-0.9**
EPF	**Esparros**	**6.92**	**20**	ePn	**Pn**	**14 26 32.2**	**+0.4**
EPF	**Esparros**	**6.92**	**20**	eP	Pn	14 26 37.3	+5.5
EPF				eSg	**Sg**	**14 28 28.7**	**-4.4**
	44nm,0.8s						
CLLI	**Llivia**	**6.98**	**31**	Pn	**Pn**	**14 26 34.9**	**+2.0**
	0.4nm,0.2s,SNR=6.9						
EARI	**Arriondas**	**6.99**	**345**	Pn	**Pn**	**14 26 35.1**	**+2.2**
	3.7nm,0.6s,SNR=7.9						
EARI				Lg	Lg	14 28 34.0	

91nm,0.9s,SNR=7.9
EAGO Agolada(Pontev 7.45 329 Pn Pn 14 26 41.0 +1.8
0.9nm,0.2s,SNR=7.9
EAGO Lg Lg 14 28 49.8
294nm,1.5s,SNR=7.9
TTIG Tnine Tigouga, 7.61 220 P Pn 14 26 39.8 -1.6
EMAZ Mazaricos 7.96 325 Pn Pn 14 26 48.0 +1.8
2.3nm,0.2s,SNR=7.9
CAF Calviac 9.15 22 eP Pn 14 27 08.6 +6.1
KEST Kesra 9.87 91 Pn Pn 14 27 14.8 +2.4
0.5nm,0.3s,baz=268,slow=12,SNR=2.6
KEST LR LR 14 30 04.6
comp=Z,41nm,19.3s,baz=239,slow=32
KEST Kesra 9.87 91 Pn 14 27 14.3 +1.9
TCF Toulx Ste Croi 10.44 20 ePn Pn 14 27 20.1 0.0
SBF Sospel 10.71 44 ePn Pn 14 27 23.7 -0.2
SBF Sospel 10.71 44 eP Pn 14 27 29.9 +6.0
BGF Bois d'Agland 10.86 21 ePn Pn 14 27 26.1 +0.3
PGF Pioggiola 10.91 53 ePn Pn 14 27 26.6 0.0
PGF Pioggiola 10.91 53 eP Pn 14 27 32.2 +5.6
LOR Lormes 11.80 23 ePn Pn 14 27 38.8 0.0
CASP Castiglione de 12.24 55 Pn Pn 14 27 48.5 +3.8
DAVOX Davos/Dischmat 13.93 39 LR LR 14 33 27.4
comp=Z,93nm,20.2s,baz=334,slow=37
GERES GERESS Array B 17.23 39 P P 14 28 52.3 -0.2
0.1nm,0.3s,baz=233,slow=13,SNR=1.6
GERES LR LR 14 35 36.4
comp=Z,110nm,21.9s,baz=279,slow=37
VRAC Vranov 19.03 42 LR LR 14 36 35.3
comp=Z,67nm,21.1s,baz=284,slow=37
VYHS Vyhne 19.85 46 eP Pn 14 29 22.7 -0.2
CRVS Cervenica-Dubn 21.58 48 ePN P 14 29 44.1 +4.1
IDI Anoyia 22.45 85 P P 14 29 51.5 +2.0
9.4nm,0.8s,baz=291,slow=18,SNR=2.4
MLR Muntele Rosu 23.37 59 P P 14 30 00.6 +1.6
3.8nm,0.9s,baz=239,slow=12,SNR=2.1
MLR LR LR 14 38 41.7
comp=Z,115nm,18.5s,baz=301,slow=35
TORD Torodi Ar. Bea 23.65 169 P P 14 30 02.2 +0.4
1.7nm,0.9s,baz=354,slow=10.0,SNR=4.4
DBIC Dimbokro 29.80 184 LR LR 14 44 28.5
comp=Z,38nm,21.1s,baz=358,slow=40
ZALV Zalesovo Beam 60.14 43 P P 14 34 58.1 +0.5
0.6nm,0.5s,baz=310,slow=7.4,SNR=2.2
MKAR Makanchi Array 61.45 51 P P 14 35 07.7 +1.0
0.2nm,0.6s,baz=245,slow=6.6,SNR=3.0
YKA Yellowknife Ar 67.27 332 P P 14 35 44.1 -0.4
0.2nm,0.6s,baz=56,slow=6.2,SNR=4.3
SONM Songino Array 74.95 41 P P 14 36 33.4 +1.9
0.3nm,0.5s,baz=249,slow=6.3,SNR=3.5
PDAR Pinedale Array 76.68 314 P P 14 36 41.9 +0.3
0.2nm,0.5s,baz=61,slow=7.3,SNR=2.5
TXAR Lajitas Array 80.99 300 P P 14 37 04.7 -0.6
0.2nm,0.8s,baz=36,slow=3.7,SNR=2.4

IDC 24 14:26:44.0±2.5, 3°33N×61°85E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/50, mbtmp3.5/3, MS3.4/18, Ms1 3.4/18, ms1mx3.3/45, Error ellipse: s-maj=78.3km s-min=37.0km az=35.0, Carlsberg Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
H08N2 Diego Garcia H 13.25 136 T T 14 43 28.7
baz=322,slow=76,SNR=150
H08N3 Diego Garcia H 13.26 136 T T 14 43 34.4
baz=322,slow=76,SNR=216
H08N1 Diego Carcia H 13.27 136 T T 14 43 30.4
baz=322,slow=76,SNR=149
PALK Pallekele 19.18 77 LR LR 14 36 30.9
comp=Z,141nm,18.5s,baz=256,slow=31
WSAR Wadi Sarin 20.04 351 LR LR 14 37 05.6
comp=Z,107nm,19.1s,baz=162,slow=31
ATD Arta Tunnel 20.51 294 LR LR 14 38 18.0
comp=Z,39nm,19.0s,baz=55,slow=34
KMBO Kilima Mbogo 24.98 260 LR LR 14 42 02.6
comp=Z,72nm,18.9s,baz=90,slow=37
GEYT Alibeck 34.61 355 LR LR 14 46 54.5
comp=Z,31nm,19.5s,baz=345,slow=35
CMAR Chiang Mai Arr 39.29 65 P P 14 34 14.9 -0.1
0.6nm,0.8s,baz=260,slow=8.4,SNR=5.0
CMAR LR LR 14 49 15.4
comp=Z,30nm,19.1s,baz=245,slow=34
BRTR Keskin Array B 44.34 329 P P 14 34 56.1 -0.1
0.6nm,0.8s,baz=144,slow=8.2,SNR=3.7
BRTR LR LR 14 53 54.4
comp=Z,33nm,18.9s,baz=46,slow=37
MKAR Makanchi Array 46.80 19 LR LR 14 54 50.3
comp=Z,33nm,20.6s,baz=220,slow=36
BOSA Boshof 47.37 225 LR LR 14 53 27.3
comp=Z,67nm,19.1s,baz=352,slow=34
ZALV Zalesovo Beam 53.86 17 LR LR 14 59 40.8
comp=Z,45nm,19.1s,baz=276,slow=37
KIRV Kirov 55.96 352 LR LR 14 59 57.5
comp=Z,60nm,20.3s,baz=45,slow=36
SONM Songino Array 58.54 34 LR LR 15 01 07.7
comp=Z,76nm,21.2s,baz=244,slow=35
TORD Torodi Ar. Bea 60.19 283 LR LR 15 03 51.5
comp=Z,38nm,18.2s,baz=345,slow=37
DBIC Dimbokro 66.49 276 LR LR 15 07 45.9
comp=Z,26nm,18.9s,baz=52,slow=37
NRIK Noril'sk 68.09 10 LR LR 15 09 50.8
comp=Z,61nm,18.4s,baz=234,slow=38
KSRS Korea Array 69.08 51 LR LR 15 09 54.0
comp=Z,34nm,18.6s,baz=290,slow=38
ASAR Alice Springs 74.99 115 P P 14 38 27.9 0.0
0.8nm,0.9s,baz=291,slow=5.0,SNR=4.1
MJAR Matsushiro Arr 77.07 53 LR LR 15 13 49.0
comp=Z,21nm,20.1s,baz=75,slow=37
JHJ Hachijo jima 2 78.09 57 LR LR 15 11 32.0
comp=Z,34nm,21.0s,baz=60,slow=34

IDC 24 14:32:08.0±1.9, 5°87S×130°77E, h0km, mb3.6/2, mb1 3.8/5, mb1mx3.5/29, mbtmp3.6/5, ML3.6/3, Error ellipse: s-maj=69.0km s-min=28.0km az=72.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FITZ Fitzroy Crossi 13.15 202 Pn Pn 14 35 15.1 -1.1
0.3nm,0.3s,baz=30,slow=9.9,SNR=8.6
FITZ Sn Sn 14 37 22.5 -21
0.7nm,0.3s,baz=185,slow=22,SNR=6.0
WRA Warramunga Arr 14.41 166 Pn Pn 14 35 34.7 +1.2
0.2nm,0.3s,baz=347,slow=11,SNR=14
WRA Sn Sn 14 38 02.1 -12
0.5nm,0.3s,baz=310,slow=6.0,SNR=8.7
ASAR Alice Springs 17.95 171 P P 14 36 19.8 -0.1
0.3nm,0.3s,baz=345,slow=11,SNR=40
STKA Stephens Creek 27.79 160 P P 14 37 58.4 -0.5
1.3nm,0.9s,baz=328,slow=9.5,SNR=2.9
MKAR Makanchi Array 67.71 326 P P 14 43 07.5 +0.2
0.2nm,0.6s,baz=132,slow=7.9,SNR=2.6

IDC 24 14:44:22.7±3.6, 4°84S×153°82E, h98km±25km, mb3.7/10, mb1 3.9/11, mb1mx3.7/38, mbtmp4.1/11, MS2.9/2, Ms1 2.9/2, ms1mx2.5/31, Error ellipse: s-maj=34.1km s-min=14.5km az=96.0
NEIC 24 14:44:23.4±1.1, 4°79S±0°07×153°81E±0°05, h104km±7km, mb4.4/16, Error ellipse: s-maj=12.0km s-min=4.5km az=207.0
ISC 24 14:44:23.6±0.6, 4°81S±0°07×153°80E±0°08, h105km, n38, σ0s63/37, mb4.2/17, New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RABL Rabaul 1.74 291 Pn Pn 14 44 53.0 -0.1
KRVT Keravat (AS076 1.83 286 P Pn 14 44 53.9 -0.4
62nm,0.3s,baz=152,slow=0.5,SNR=73
KRVT S Sn 14 45 17.1 -0.5
100nm,0.3s,baz=8.2,slow=22,SNR=18
HNR Honiara 7.64 127 LR LR 14 48 47.7
comp=Z,88nm,19.6s,baz=276,slow=35
HNR Honiara 7.64 127 Pn Pn 14 46 12.4 +0.2
PMG Port Moresby 8.01 235 P Pn 14 46 18.0 +0.7
12nm,0.3s,baz=33,slow=3.5,SNR=51
PMG S Sn 14 47 46.7 +0.3
2.5nm,0.3s,baz=22,slow=22,SNR=2.6
PMG Port Moresby 8.01 235 Pn 14 46 18.4 +1.1
PATS Pohnpei 12.41 21 Pn Pn 14 47 16.6 -0.1
COEN Coen 13.87 228 Pn Pn 14 47 35.8 +0.1
KWAJ Kwajalein Atol 19.30 46 Pn Pn 14 48 42.0 -0.6
EIDS Eidsvold 20.61 187 P P 14 48 54.8 +0.2
EIDS IAmb IAmb 14 49 14.2
comp=Z,43nm,1.7s
WB0 Warramunga Arr 24.05 230 P P 14 49 29.5 +0.3
WB0 IAmb IAmb 14 49 30.7
comp=Z,7.0nm,0.7s
WR0 Warramunga Arr 24.05 230 P P 14 49 29.5 +0.3
WRAB Tennant Creek 24.18 230 P P 14 49 30.0 -0.3
WRAB IAmb IAmb 14 49 32.0
comp=Z,7.9nm,0.8s
WB2 Warramunga Arr 24.18 230 P P 14 49 30.5 +0.1
WRA Warramunga Arr 24.19 230 P P 14 49 30.5 0.0
comp=Z,7.1nm,0.7s,baz=53,slow=9.8,SNR=63
ARMA Armidale 25.56 184 P P 14 49 43.5 +0.6
ARMA IAmb IAmb 14 50 18.9
comp=Z,30nm,1.5s
AS31 Alice Springs 26.82 224 P P 14 49 54.2 -0.1
ASAR Alice Springs 26.82 224 P P 14 49 54.0 -0.3
comp=Z,1.4nm,0.6s,baz=54,slow=8.6,SNR=30
KNRA Kununurra 26.86 244 P P 14 49 53.8 -0.9
KNRA IAmb IAmb 14 50 25.9
comp=Z,9.9nm,0.9s
STKA Stephens Creek 29.26 202 P P 14 50 15.2 -0.7
comp=Z,3.7nm,0.6s,baz=11,slow=10.0,SNR=16
STKA Stephens Creek 29.26 202 P P 14 50 15.2 -0.7
FITZ Fitzroy Crossi 30.53 242 P P 14 50 26.5 -0.7
comp=Z,2.8nm,0.5s,baz=52,slow=7.5,SNR=13
FITZ Fitzroy Crossi 30.53 242 P P 14 50 26.4 -0.7
FITZ IAmb IAmb 14 50 27.2
comp=Z,3.8nm,0.7s
DAV Davao City (W) 30.53 293 LR LR 15 02 37.5
comp=Z,18nm,19.9s,baz=340,slow=36
BBOO Buckleboo 32.41 209 P P 14 50 43.3 -0.3
FORT Forrest 35.41 220 P P 14 51 09.4 -0.2
MORW Morawa 43.12 232 P P 14 52 13.1 -0.7
CMAR Chiang Mai Arr 58.78 295 P P 14 54 12.9 +1.6
comp=Z,0.9nm,0.9s,baz=110,slow=5.2,SNR=5.7
SONM Songino Array 66.86 327 P P 14 55 05.8 +1.2
comp=Z,0.5nm,0.5s,baz=148,slow=7.1,SNR=4.7
MK31 Makanchi Array 80.98 319 P P 14 56 27.1 +0.4
MK31 IAmb IAmb 14 59 26.4
comp=Z,10nm,1.9s
MKAR Makanchi Array 80.98 319 P P 14 56 26.8 +0.1
comp=Z,0.5nm,0.5s,baz=96,slow=7.7,SNR=11
ZALV Zalesovo Beam 81.71 326 P P 14 56 29.6 -0.7
comp=Z,0.5nm,0.4s,baz=134,slow=6.4,SNR=3.6
ILAR Eielson Array 81.80 22 P P 14 56 30.7 +0.1
comp=Z,0.4nm,0.6s,baz=247,slow=5.5,SNR=6.8
KURK Kurchatov 84.39 322 P P 14 56 43.7 -0.5
KURK Kurchatov 84.39 322 IAmb IAmb 14 59 38.8
comp=Z,16nm,2.0s
KURBB Kurchatov Arra 84.42 322 P P 14 56 43.7 -0.7
comp=Z,115nm,1.1s,baz=111,slow=3.9,SNR=6.1
BVAR Borovoye Array 89.84 323 P P 14 57 11.2 +0.6
comp=Z,1.2nm,0.7s,baz=47,slow=6.5,SNR=5.9
TORD Torodi Ar. Bea 151.25 289 PKPbc PKPbc 15 04 05.1 -0.8
comp=Z,1.0nm,0.6s,baz=45,slow=2.6,SNR=8.1

CNRM 24 15:00:57.5±2.2, 36°32N×2°24W, h122km±22km, Error ellipse: s-maj=17.5km s-min=6.9km az=97.0
MDD 24 15:01:00.2±0.4, 36°57N×2°85W, h3km±5km, mbLg2.7/13, Error ellipse: s-maj=4.4km s-min=3.1km az=99.0, PRXIMO
SFS 24 15:01:00.0, 36°50N×2°80W, ML2.6, ALBORAN NORTE
ISC 24 15:01:00.6±1.2, 36°49N±0°03×2°81W±0°03, h26km±13km, n28, σ2s11/46, 1D, Strait of Gibraltar

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
EBER Berja 0.41 351 ⇓Pg Pb 15 01 06.4 -3.1
103nm,0.1s,SNR=18
EBER Lg Lg 15 01 11.3
312nm,0.2s,SNR=7.9
EALB Alboran 0.58 199 Pg Pb 15 01 12.0 -0.1
24nm,0.1s,SNR=19
EALB Lg Lg 15 01 21.0
575nm,0.3s,SNR=16
ENIJ Nijar 0.68 45 Pg Pb 15 01 11.7 -2.3
39nm,0.2s,SNR=7.9
ENIJ Lg Lg 15 01 19.9
482nm,0.2s,SNR=7.9
ELGU Los Guajares, 0.76 300 Pg Pb 15 01 12.7 -2.6
90nm,0.1s,SNR=7.9
ELGU Lg Lg 15 01 21.7
866nm,0.2s,SNR=7.9
GORA Gorafe 1.01 349 Pg Pb 15 01 17.1 -2.4
24nm,0.2s,SNR=7.9
GORA Lg Lg 15 01 28.9
95nm,0.2s,SNR=7.9
EGOR Sierra Gorda, 1.22 301 Pg Pn 15 01 21.0 -1.1
4.5nm,0.3s,SNR=7.9
EGOR Lg Lg 15 01 37.5
23nm,0.2s,SNR=7.9
GOG Mont Gurugu 1.27 187 P Pn 15 01 23.4 +0.6
GOG S Sb 15 01 40.4 +0.4
EQES Quesada 1.33 351 Pg Pn 15 01 23.6 0.0
2.0nm,0.2s,SNR=23
EQES Lg Lg 15 01 40.4
15nm,0.2s,SNR=5.0
EMIJ Mijas 1.58 273 Pg Pn 15 01 24.3 -2.8
2.6nm,0.1s,SNR=15
EMIJ Sn Sn 15 01 41.8 -4.9
9.2nm,0.3s,SNR=5.6
SESP Santiago Espad 1.64 7 Pg Pb 15 01 29.2 -1.1
18nm,0.2s,SNR=7.9
SESP Lg Lg 15 01 50.3
26nm,0.2s,SNR=7.9
SESP Santiago Espad 1.64 7 P Pn 15 01 28.6 +0.6
SESP S Sb 15 01 54.7 +4.0
CART Cartagena 1.81 52 eP Pn 15 01 29.6 -0.5
CART eS Sn 15 01 48.2 -4.1
EMUR La Murta 1.84 42 Pn Pn 15 01 30.5 -0.1
3.6nm,0.4s,SNR=7.5
EMUR Sn Sn 15 01 51.1 -2.0
21nm,0.5s,SNR=5.0
LIJA Lijar 2.13 282 eP Pn 15 01 36.0 +1.4
LIJA eS Sb 15 02 06.0 +1.5
AKLM AKL 2.15 204 P Pn 15 01 35.1 +0.2
AKLM S Sn 15 02 03.1 +2.3
EADA Adamuz 2.19 320 Pg Pb 15 01 37.7 -1.9
2.7nm,0.2s,SNR=7.9
EADA Sn Sn 15 02 00.1 -1.6
9.7nm,0.4s,SNR=7.9
EADA Lg Lg 15 02 07.4
32nm,0.5s,SNR=7.9
ETOB Tobarra 2.38 25 Pn Pn 15 01 39.0 +1.1
2.2nm,0.2s,SNR=11
ETOB Sn Sn 15 02 06.7 +0.4
4.9nm,0.3s,SNR=5.0
HORN Hornachuelos 2.38 305 P Pn 15 01 39.7 +1.7
HORN S Sb 15 02 17.5 +5.7
ECAB El Cabril 2.62 308 Pn Pn 15 01 41.2 0.0
0.7nm,0.1s,SNR=4.0
ECAB Pg Pb 15 01 46.8 0.0
5.0nm,0.4s,SNR=7.9
ECAB Sn Sn 15 02 11.5 -0.7
2.5nm,0.3s,SNR=7.9
ECAB Lg Lg 15 02 18.4
15nm,0.6s,SNR=7.9
PAB San Pablo 3.29 339 Pn Pn 15 01 51.5 +1.0
0.3nm,0.2s,SNR=7.9
PAB Sn Sn 15 02 27.4 -1.4
1.5nm,0.3s,SNR=7.9
PAB Lg Lg 15 02 42.2
4.1nm,0.3s,SNR=7.9
ESDC Sonseca Array 3.31 344 Pg Pb 15 02 01.1 +2.4
2.3nm,0.2s,baz=162,slow=17,SNR=7.9
ESDC Lg Lg 15 02 42.8
3.8nm,0.4s,baz=166,slow=28,SNR=7.9
EMIN Mina Concepcio 3.34 294 Pn Pn 15 01 50.0 -1.2
0.3nm,0.1s,SNR=7.9
EMIN Sn Sn 15 02 28.9 -1.1
1.3nm,0.3s,SNR=7.9
EBAD Badajoz 4.03 305 Pn Pn 15 01 59.8 -0.9
0.3nm,0.1s,SNR=4.0
EBAD Sn Sn 15 02 46.0 -1.1
2.8nm,0.2s,SNR=4.0
PVAQ Vaqueiros 4.04 285 ePn Pn 15 02 00.5 -0.2
PVAQ eSn Sn 15 02 46.2 -1.0
PVAQ A A 15 02 53.6
3.2nm,0.6s
EIBI Ibiza 4.15 51 Sn Sn 15 02 46.9 -3.1
4.1nm,0.5s,SNR=7.9
ETOR Torete 4.37 8 Pn Pn 15 02 05.9 +0.6
2.2nm,0.3s,SNR=7.9
ETOR Pg Pb 15 02 19.2 +2.6
3.8nm,0.3s,SNR=7.9
ETOR Sn Sn 15 02 53.8 -1.6
2.7nm,0.3s,SNR=7.9
ETOR Lg Lg 15 03 14.9
4.5nm,0.4s,SNR=7.9
PNCL Nicolau / Gran 4.84 291 ePn Pn 15 02 11.7 -0.1
PMTG Montargil 5.01 303 ePn Pn 15 02 13.1 -0.9
PMTG A A 15 03 20.7
3.3nm,0.5s

IDC 24 15:38:28.7±2.6, 5°50S×128°64E, h84km±33km, mb3.1/1, mb1 3.5/5, mb1mx3.2/30, mbtmp3.7/5, Error ellipse: s-maj=35.4km s-min=25.3km az=78.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 5.29 30 P Pn 15 39 45.5 +0.1
1.4nm,0.3s,baz=217,slow=20,SNR=32
SIJI S Sn 15 40 35.6 -9.4
1.5nm,0.3s,baz=239,slow=23,SNR=13
KAPI Kappang 8.87 273 P Pn 15 40 33.9 -0.2
1.0nm,0.3s,baz=103,slow=14,SNR=2.9
WRA Warramunga Arr 15.39 159 P Pn 15 42 00.9 -0.3
0.2nm,0.3s,baz=342,slow=13,SNR=20
WRA S Sn 15 44 43.1 -7.8
0.1nm,0.3s,baz=347,slow=22,SNR=4.6
ASAR Alice Springs 18.76 165 P P 15 42 41.3 +0.2
0.2nm,0.3s,baz=350,slow=12,SNR=41
ASAR S S 15 46 01.9 -8.2
0.0nm,0.3s,baz=355,slow=20,SNR=2.9
MKAR Makanchi Array 66.24 327 P P 15 49 07.8 0.0
0.4nm,0.9s,baz=134,slow=6.2,SNR=3.1

IDC 24 15:39:25.5±1.5, 2°07S×137°96E, h0km, mb3.0/2, mb1 3.3/4, mb1mx3.2/24, mbtmp3.1/4, ML2.9/2, MS3.3/1, Ms1 3.3/1, ms1mx2.5/13, Error ellipse: s-maj=30.9km s-min=26.2km az=44.0, Irian Jaya

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JAY Jayapura 2.78 99 Pn Pn 15 40 11.4 0.0
0.4nm,0.3s,baz=233,slow=18,SNR=2.5
JAY Sn Sn 15 40 46.3 +0.6
0.9nm,0.3s,baz=162,slow=20,SNR=3.2
WRA Warramunga Arr 18.11 191 P P 15 43 39.6 +0.4
0.1nm,0.3s,baz=13,slow=12,SNR=3.3
FITZ Fitzroy Crossi 20.00 216 LR LR 15 52 57.3
comp=Z,86nm,18.2s,baz=0.0,slow=41
ASAR Alice Springs 21.82 190 P P 15 44 19.6 -0.1
0.2nm,0.4s,baz=18,slow=11,SNR=6.3
MKAR Makanchi Array 68.83 323 P P 15 50 31.8 -0.1
0.1nm,0.4s,baz=116,slow=8.2,SNR=3.8

NIED 24 16:04:00, 37°10N×139°40E, h11km, Mw3.4 Best double couple: M0 1.19000×10^14 NP1: φs45.00000°, δ59.00000°, λ115.00000°. NP2: φs183.00000°, δ39.00000°, λ56.00000°.
IDC 24 16:04:55.1±1.2, 36°88N×139°51E, h0km, mb3.3/3, mb1 3.7/5, mb1mx3.3/46, mbtmp3.5/5, ML3.1/2, Error ellipse: s-maj=16.9km s-min=11.7km az=148.0
JMA 24 16:04:56.5, 37°07N×139°35E, h8km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φs171.00000°, δ50.00000°, λ38.00000°. NP2: φs54.00000°, δ62.00000°, λ133.00000°. Principal axes: T Plg52.0000°, Azm16.0000°; N Plg37.0000°, Azm210.0000°; P Plg7.0000°, Azm115.0000°;
JMA Felt III J1.
ISC 24 16:04:56.9±1.1, 37°07N±0°03×139°36E±0°03, h6km±9km, n15, σ1s19/23, mb3.6/3, 3C-3D, Eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JKT Katashina 0.31 196 ⇑P Pg 16 05 02.7 -0.3
JKT S Sg 16 05 07.1 0.0
JHK Hiroka 0.33 304 ⇓P Pg 16 05 03.0 -0.3
JHK S Sg 16 05 07.5 -0.1
JFY Yanaizu 0.44 39 ⇑P Pg 16 05 05.1 -0.4
JFY S Sg 16 05 10.8 -0.5
JSB Shiboa 0.46 102 ⇓P Pg 16 05 05.9 0.0
JSB S Sg 16 05 12.1 +0.2
JAG Ashikaga 0.64 173 ⇑P Pg 16 05 09.2 -0.1
JIZZ Izumozaki 0.69 312 ⇓P Pb 16 05 11.0 -0.5
JIZZ S Sb 16 05 21.6 +0.3
JNS Sasagawa 0.75 358 P Pg 16 05 10.7 -0.7
JNS S Sg 16 05 20.5 -0.7
JFT Otama 0.91 60 P Pg 16 05 13.6 -0.7
JFT S Sg 16 05 25.1 -0.9
MJAR Matsushiro Arr 1.06 241 Pg Pg 16 05 16.3 -0.9
3.9nm,0.3s,baz=68,slow=19,SNR=113
MJAR Lg Lg 16 05 30.1
3.2nm,0.3s,baz=71,slow=29,SNR=21
MAT Matsushiro 1.06 241 P Pg 16 05 16.4 -0.8
MAT S Sg 16 05 30.2 -0.8
ASAJ Asahikawa 7.46 18 Pn Pn 16 06 48.8 +2.5
0.2nm,0.3s,baz=257,slow=14,SNR=2.7
KSRS Korea Array 9.12 276 Pn Pn 16 07 12.1 +2.9
0.6nm,0.3s,baz=88,slow=14,SNR=13
ILAR Eielson Array 50.35 32 P P 16 13 53.7 -0.6
0.2nm,0.8s,baz=266,slow=8.0,SNR=3.3
WRA Warramunga Arr 56.90 186 P P 16 14 40.5 -2.3
0.5nm,0.6s,baz=0.8,slow=7.2,SNR=6.1
YKA Yellowknife Ar 64.60 30 P P 16 15 33.8 -1.0
0.2nm,0.5s,baz=299,slow=5.5,SNR=2.7

KRNET 24 16:12:11.2±0.1, 42°74N×79°82E, mb2.3
SOME 24 16:12:14.6, 42°57N×79°70E, h10km
NNC 24 16:12:14.9±0.8, 42°61N×79°67E, h0km, mb3.0, mpv2.5, Error ellipse: s-maj=5.3km s-min=3.9km az=102.0
ISC 24 16:12:13.9±2.1, 42°58N±0°06×79°73E±0°07, h4km±12km, n16, σ0s86/30, 9C-3D, Lake Issyk-Kul region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
UZB Uzynbulak 0.77 318 eP Pg 16 12 29.0 +0.4
3.0nm,0.1s
UZB eS Sg 16 12 39.2 +0.6
7.3nm,0.2s
UZB Uzynbulak 0.77 318 P Pg 16 12 29.0 +0.4
3.0nm,0.1s
UZB S Sg 16 12 39.3 +0.6
9.8nm,0.3s
PDGK Podgornoye 0.77 347 P Pg 16 12 29.4 +0.7
0.3nm,0.1s
PDGK S Sb 16 12 39.7 -1.2
3.9nm,0.2s
PDGK Podgornoye 0.77 347 ⇓P Pg 16 12 28.9 +0.2
0.4nm,0.4s
PDGK ⇑S Sb 16 12 39.5 -1.3
7.4nm,0.7s
PRZ Przheval'sk 0.98 265 ⇑i/P Pg 16 12 31.2 -1.6
baz=57
PRZ ⇑i/S Sg 16 12 46.0 +0.4
baz=57
KPKS Kokpek 1.17 320 eP Pg 16 12 36.2 -0.1
2.8nm,0.1s
KPKS eS Sg 16 12 51.5 0.0
8.8nm,0.2s
ANVS Anan'yevo 1.53 278 ⇑i/P Pn 16 12 40.6 -1.7
baz=73
ANVS ⇑i/S Sn 16 13 01.8 -0.9
baz=73
DJR Jarkent 1.75 2 eP Pb 16 12 47.1 +0.4
0.5nm,0.2s
DJR eS Sg 16 13 09.8 -0.4
2.6nm,0.2s
DJR Jarkent 1.75 2 P Pb 16 12 47.1 +0.4
0.4nm,0.1s
DJR S Sg 16 13 09.9 -0.4
2.6nm,0.2s
KDJ Kajisay 1.94 257 ⇓i/P Pn 16 12 47.8 -0.1
baz=54
KDJ ⇓i/S Sb 16 13 14.4 -0.2
baz=54
ARXS Arharly 2.14 320 eP Pb 16 12 54.0 +0.7
1.6nm,0.4s
ARXS eS Sg 16 13 21.4 -1.2
4.1nm,0.4s
ARXS Arharly 2.14 320 Pg Pb 16 12 54.0 +0.7
1.6nm,0.4s
ARXS Lg Lg 16 13 21.4
4.1nm,0.4s
CHKK Chushkaly 2.37 303 eP Pb 16 12 57.8 +0.5
0.5nm,0.1s
CHKK eS Sb 16 13 27.9 +1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	2.3nm,0.2s						
CHKK	**Chushkaly**	**2.37**	**303**	Pg	**Pb**	**16 12 57.8**	**+0.5**
	0.5nm,0.1s						
CHKK				Lg	Lg	16 13 27.9	
	2.3nm,0.2s						
BOOM	**Boomskoye usch**	**2.80**	**269**	⇑/P	**Pn**	**16 12 59.4**	**-0.3**
	baz=66						
BOOM				⇑/S	**Sn**	**16 13 34.5**	**+0.5**
	baz=66						
NRN	**Naryn**	**3.00**	**249**	⇑/P	**Pn**	**16 13 03.2**	**+0.6**
	baz=47						
NRN				⇑/S	**Sn**	**16 13 40.9**	**+1.6**
	baz=47						

*IDC **24** 16:22:25.4±0.9, 20.66S×172.58E, h0km, mb3.9/14, mb1 4.1/15, mb1mx4.0/42, mbtmp3.9/15, ML3.5/1, MS3.6/16, Ms1 3.6/16, ms1mx3.5/26, Error ellipse: s-maj=35.5km s-min=18.1km az=152.0*

*NEIC **24** 16:22:30.5±1.9, 20.68S±0.10×172.59E±0.05, h35km±7km, mb4.6/9, Error ellipse: s-maj=15.1km s-min=4.2km az=154.0*

ISC 24 16:22:30.7±0.6, **20.72S**±0.10×**172.58E**±0.09, **h35km, n47,** σ0.82/35, **mb3.9**/16, **MS3.7**/16, **Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.88**	**256**	ePn	**Pn**	**16 23 55.5**	**+0.1**
	21nm,0.6s						
DZM				eLR	LR	16 25 16.4	
	comp=Z,432nm,24.1s						
DZM	**Mont Dzumac**	**5.88**	**256**	Pn	**Pn**	**16 23 55.1**	**-0.3**
	1.2nm,0.3s,baz=98,slow=18,SNR=12						
DZM				LR	LR	16 25 48.1	
	comp=Z,296nm,19.6s,baz=92,slow=34						
DZM	**Mont Dzumac**	**5.88**	**256**		**Pn**	**16 23 55.6**	**+0.1**
MSVF	**Nonsavu**	**5.96**	**61**		**Pn**	**16 23 56.0**	**-0.5**
NOUC	**Port Laguerre**	**6.01**	**256**	Pn	**Pn**	**16 23 57.1**	**-0.1**
SANVU	**Saraoutou**	**7.33**	**315**	Pn	**Pn**	**16 24 15.4**	**+0.1**
RAO	**Raoul Island**	**12.09**	**136**	LR	LR	16 29 05.4	
	comp=Z,491nm,19.2s,baz=303,slow=33						
HNR	**Honiara**	**16.56**	**311**	LR	LR	16 31 41.7	
	comp=Z,218nm,19.9s,baz=149,slow=34						
HNR	**Honiara**	**16.56**	**311**	P	**P**	**16 26 22.2**	**-0.4**
HNR				IAmb	IAmb	16 26 23.6	
	comp=Z,68nm,0.9s						
EIDS	**Eidsvold**	**20.32**	**253**	P	**P**	**16 27 03.1**	**-0.8**
EIDS				IAmb	IAmb	16 27 20.6	
	comp=Z,21nm,1.1s						
MSWZ	**Moikau Station**	**20.76**	**174**	P	**P**	**16 27 08.1**	**-0.4**
PLWZ	**Palliser**	**20.91**	**174**	P	**P**	**16 27 09.7**	**-0.5**
STKA	**Stephens Creek**	**29.82**	**242**	P	**P**	**16 28 35.2**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=60,slow=12,SNR=4.7						
STKA				LR	LR	16 40 06.6	
	comp=Z,88nm,19.1s,baz=55,slow=36						
STKA	**Stephens Creek**	**29.82**	**242**	IAmb	IAmb	16 28 41.6	
	comp=Z,4.9nm,1.9s						
TBI	**Tubuai**	**35.22**	**101**	eLR	LR	16 38 30.9	
	comp=Z,312nm,31.0s						
WR0	**Warramunga Arr**	**35.63**	**264**	P	**P**	**16 29 25.4**	**-0.1**
WR0				IAmb	IAmb	16 30 33.8	
	comp=Z,14nm,1.6s						
WB0	**Warramunga Arr**	**35.79**	**265**	P	**P**	**16 29 25.8**	**-1.1**
WB0				IAmb	IAmb	16 30 25.7	
	comp=Z,28nm,2.0s						
WRA	**Warramunga Arr**	**35.82**	**264**	P	**P**	**16 29 24.9**	**-2.2**
	comp=Z,0.7nm,0.8s,baz=103,slow=8.0,SNR=3.6						
PPT2	**Papeete2**	**35.83**	**92**	eLR	LR	16 38 53.9	
	comp=Z,326nm,26.8s						
PPT	**Papeete**	**35.83**	**92**	LR	LR	16 43 05.5	
	comp=Z,77nm,18.2s,baz=243,slow=35						
AS31	**Alice Springs**	**35.86**	**258**	P	**P**	**16 29 26.8**	**-0.7**
ASAR	**Alice Springs**	**35.86**	**258**	P	**P**	**16 29 26.6**	**-0.9**
	comp=Z,1.5nm,0.9s,baz=96,slow=9.3,SNR=15						
ASAR				LR	LR	16 43 13.8	
	comp=Z,159nm,18.9s,baz=94,slow=35						
FORT	**Forrest**	**41.11**	**247**	P	**P**	**16 30 11.3**	**-0.2**
FITZ	**Fitzroy Crossi**	**44.24**	**265**	P	**P**	**16 30 37.8**	**+0.8**
	comp=Z,4.1nm,0.9s,baz=90,slow=10,SNR=5.5						
FITZ	**Fitzroy Crossi**	**44.24**	**265**	IAmb	IAmb	16 30 44.3	
	comp=Z,7.1nm,1.1s						
TAOE	**Nuku Hiva Isla**	**47.04**	**83**	eLR	LR	16 44 10.2	
	comp=Z,148nm,29.6s						
VNDA	**Vanda**	**57.09**	**183**	LR	LR	16 52 32.1	
	comp=Z,65nm,20.5s,baz=320,slow=32						
MJAR	**Matsushiro Arr**	**65.56**	**330**	LR	LR	16 56 22.1	
	comp=Z,21nm,20.8s,baz=200,slow=31						
QSPA	**South Pole Qui**	**69.34**	**180**	P	**P**	**16 33 34.6**	**0.0**
	comp=Z,1.5nm,1.0s,baz=27,slow=2.3,SNR=3.2						
KSRS	**Korea Array**	**71.52**	**324**	P	**P**	**16 33 48.7**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=153,slow=7.4,SNR=3.9						
KSRS				LR	LR	17 03 54.2	
	comp=Z,23nm,19.4s,baz=167,slow=35						
PETK	**Petropavlovsk-**	**74.64**	**351**	LR	LR	17 04 56.5	
	comp=Z,20nm,18.9s,baz=61,slow=34						
CMAR	**Chiang Mai Arr**	**81.98**	**293**	P	**P**	**16 34 49.1**	**+1.6**
	comp=Z,1.1nm,0.9s,baz=136,slow=3.5,SNR=5.3						
SEY	**Seymchan**	**84.89**	**351**	P	**P**	**16 35 00.7**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=89,slow=8.6,SNR=4.9						
YBH	**Yreka Blue Hor**	**86.21**	**43**	P	**P**	**16 35 09.1**	**+0.4**
	comp=Z,1.9nm,1.0s,baz=180,slow=2.0,SNR=4.1						
NVAR	**Mina Array Bea**	**87.45**	**47**	P	**P**	**16 35 15.0**	**0.0**
	comp=Z,0.5nm,0.7s,baz=236,slow=8.2,SNR=4.7						
NVAR				LR	LR	17 06 22.3	
	comp=Z,30nm,19.4s,baz=343,slow=30						
SONM	**Songino Array**	**90.30**	**322**	P	**P**	**16 35 27.1**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=131,slow=6.6,SNR=2.7						
ILAR	**Eielson Array**	**90.73**	**16**	P	**P**	**16 35 27.9**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=237,slow=5.0,SNR=4.5						
ILAR				LR	LR	17 12 53.3	
	comp=Z,55nm,18.7s,baz=234,slow=33						
NEW	**Newport**	**92.91**	**39**	LR	LR	17 14 55.0	
	comp=Z,27nm,18.0s,baz=210,slow=34						
TXAR	**Lajitas Array**	**94.73**	**61**	P	**P**	**16 35 50.2**	**+1.3**
	comp=Z,0.1nm,0.5s,baz=268,slow=6.3,SNR=2.8						
TXAR				LR	LR	17 09 56.9	
	comp=Z,21nm,20.7s,baz=0.0,slow=30						
PLCA	**Paso Flores**	**95.33**	**137**	LR	LR	17 09 15.2	
	comp=Z,33nm,20.7s,baz=249,slow=30						
PDAR	**Pinedale Array**	**95.33**	**46**	P	**P**	**16 35 52.3**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=226,slow=4.9,SNR=2.6						
PDAR				LR	LR	17 15 28.9	
	comp=Z,22nm,18.1s,baz=358,slow=33						
DPC	**Dobruska-Polom**	**144.99**	**333**	ePKP	**PKPab**	**16 42 03.5**	**0.0**
DPC				ex	x	16 42 06.6	
KRLC	**Kraliky**	**145.00**	**333**	ePKP	**PKPab**	**16 42 03.5**	**-0.1**
KRLC				ex	x	16 42 06.2	
CLL	**Collm**	**145.53**	**337**	ePKPbc	**PKPdf**	**16 42 05.0**	**0.0**
CLL				e(PKiKP)		16 42 08.0	
CLL				esPKPbc	**sPKPdf**	**16 42 19.0**	**0.0**
BRG	**Berggiesshubel**	**145.54**	**336**	ePKP	**PKPdf**	**16 42 05.2**	**+0.2**
	comp=Z,18nm,1.6s						
BRG				i		16 42 07.5	
	comp=Z,6.6nm,1.1s						
KHC	**Kasperske Hory**	**147.06**	**334**	ePKP	**PKPab**	**16 42 12.0**	**+0.6**
GERES	**GERESS Array B**	**147.24**	**334**	PKPbc	**PKPdf**	**16 42 09.5**	**+1.4**
	comp=Z,1.7nm,0.8s,baz=58,slow=3.3,SNR=8.4						

*ATH **24** 16:25:21.9, 38.23N×20.41E, h15km±1km, ML2.5/3, Error ellipse: s-maj=1.8km s-min=0.9km az=251.0*

*THE **24** 16:25:22.5, 38.24N×20.45E, h11km±1km, ML1.7/2, Error ellipse: s-maj=1.4km s-min=0.4km az=209.0*

ISC 24 16:25:22.1±1.0, **38.23N**±0.03×**20.43E**±0.04, **h14km**±5km, **n34,** σ0.37/54, **Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LXRA	**Lixouri, Kepha**	**0.03**	**170**	P	**Pg**	**16 25 24.6**	**0.0**
LXRA				S	**Sg**	**16 25 26.6**	**+0.3**
KEF4	**Livadi, Kephal**	**0.03**	**350**	P	**Pg**	**16 25 24.5**	**-0.1**
KEF4				S	**Sg**	**16 25 26.6**	**+0.3**
AGT1	**Agia Thekli**	**0.04**	**303**	P	**Pg**	**16 25 24.8**	**+0.1**
ARGA	**Argostoli. Kep**	**0.06**	**143**	P	**Pg**	**16 25 24.6**	**-0.2**
ARGA				S	**Sg**	**16 25 26.7**	**0.0**
ARG2	**Argostoli**	**0.07**	**137**	P	**Pg**	**16 25 24.7**	**-0.1**
ARG2				S	**Sg**	**16 25 26.4**	**-0.3**
KEF3	**Kipouria, Keph**	**0.07**	**250**	P	**Pg**	**16 25 24.7**	**-0.2**
KEF3				S	**Sg**	**16 25 27.2**	**+0.4**
KEF2	**Argostoli. Kep**	**0.07**	**144**	P	**Pg**	**16 25 24.8**	**-0.1**
KEF2				S	**Sg**	**16 25 26.4**	**-0.5**
VLS	**Valsamata**	**0.13**	**112**	P	**Pg**	**16 25 25.4**	**-0.3**
VLS				S	**Sg**	**16 25 27.8**	**-0.3**
VLS	**Valsamata**	**0.13**	**112**	P	**Pg**	**16 25 25.3**	**-0.3**
VLS				S	**Sg**	**16 25 28.1**	**0.0**
VLS				AML	AML	16 25 28.1	
	comp=N,7169μm,0.1s						
VLS				AML	AML	16 25 28.1	
	comp=E,6692μm,0.1s						
KONA	**Konidatara, Ke**	**0.23**	**29**	P	**Pg**	**16 25 26.9**	**-0.2**
KONA				S	**Sg**	**16 25 30.7**	**+0.2**
FSK	**Fiskardo**	**0.25**	**24**	P	**Pg**	**16 25 27.3**	**-0.2**
FSK				S	**Sg**	**16 25 31.2**	**0.0**
FSK	**Fiskardo**	**0.25**	**24**	P	**Pg**	**16 25 27.3**	**-0.2**
FSK				S	**Sg**	**16 25 31.4**	**+0.2**
FSK				AML	AML	16 25 31.7	
	comp=N,1600μm,0.2s						
FSK				AML	AML	16 25 31.8	
	comp=E,4764μm,0.1s						
VLMS	**Volimes, Zakyn**	**0.39**	**152**	P	**Pg**	**16 25 29.6**	**-0.4**
VLMS				S	**Sb**	**16 25 36.6**	**-0.2**
VLMS				AML	AML	16 25 36.7	
	comp=E,1138μm,0.2s						
VLMS				AML	AML	16 25 38.1	
	comp=N,1313μm,0.2s						
EVGI	**Lefkada island**	**0.43**	**24**	P	**Pg**	**16 25 30.4**	**-0.3**
EVGI				S	**Sg**	**16 25 36.5**	**-0.1**
EVGI	**Lefkada island**	**0.43**	**24**	P	**Pg**	**16 25 30.4**	**-0.3**
EVGI				S	**Sg**	**16 25 37.0**	**+0.5**
MGNA	**Meganis**	**0.51**	**33**	P	**Pg**	**16 25 31.4**	**-0.8**
MGNA				S	**Sb**	**16 25 39.9**	**-0.3**
LKD2	**Lefkada island**	**0.59**	**17**	P	**Pg**	**16 25 33.4**	**-0.3**
LKD2				S	**Sg**	**16 25 41.6**	**+0.1**
	comp=N,68nm,0.2s						
LKD2	**Lefkada island**	**0.59**	**17**	P	**Pg**	**16 25 33.2**	**-0.4**
LKD2				S	**Sb**	**16 25 42.0**	**-0.4**
TSLK	**Tsoukalades, L**	**0.62**	**16**	P	**Pg**	**16 25 33.8**	**-0.5**
TSLK				S	**Sb**	**16 25 43.3**	**0.0**
TSLK	**Tsoukalades, L**	**0.62**	**16**	P	**Pg**	**16 25 33.6**	**-0.7**
PDO	**Prodromos**	**0.70**	**58**	P	**Pg**	**16 25 35.1**	**-0.6**
PDO				S	**Sb**	**16 25 45.4**	**-0.1**
	comp=N,92nm,0.5s						
PDO	**Prodromos**	**0.70**	**58**	P	**Pg**	**16 25 35.4**	**-0.3**
RLS	**Riolos of Patr**	**0.83**	**101**	P	**Pb**	**16 25 38.9**	**+0.6**
PVO	**Paravola**	**0.94**	**65**	P	**Pg**	**16 25 40.1**	**-0.2**
PVO	**Paravola**	**0.94**	**65**	P	**Pg**	**16 25 40.1**	**-0.2**
DRO	**Drossia**	**1.05**	**105**	P	**Pb**	**16 25 41.6**	**-0.4**
ANX	**Ano Chora**	**1.23**	**72**	P	**Pn**	**16 25 44.6**	**-0.3**
SERG	**Sergoula**	**1.29**	**81**	P	**Pg**	**16 25 46.9**	**0.0**
TRIZ	**Trizonia**	**1.30**	**83**	P	**Pn**	**16 25 45.5**	**-0.2**
TRIZ				S	**Sg**	**16 26 05.3**	**+1.3**
IGT	**Igoumenitsa**	**1.31**	**357**	P	**Pg**	**16 25 47.2**	**0.0**
KALE	**Kalithea**	**1.35**	**83**	P	**Pg**	**16 25 48.4**	**+0.3**
KLV	**Kalavryta, Ach**	**1.37**	**97**	P	**Pn**	**16 25 47.1**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.55**	**59**	P	**Pg**	**16 25 51.9**	**+0.1**
AGG	**Agios Georgios**	**1.69**	**61**	P	**Pb**	**16 25 53.5**	**+0.6**

*NEIC **24** 16:44:59.3±1.2, 35.89N±0.04×96.95W±0.04, h5km±2km, Error ellipse: s-maj=8.5km s-min=3.1km az=317.0*

*TUL **24** 16:44:59.4±1.0, 35.82N±0.04×96.94W±0.05, h4km±7km, ML3.2, Error ellipse: s-maj=6.7km s-min=4.6km az=152.0*

*ANF **24** 16:44:59.8±0.7, 35.83N×96.94W, h5km, ML4.0/8, Error ellipse: s-maj=9.6km s-min=5.7km az=5.0*

ISC 24 16:44:59.7±0.9, **35.83N**±0.04×**96.94W**±0.02, **h4km, n43,** σ0.65/52, **Oklahoma**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.26**	**230**	Pg	**Pg**	**16 45 04.9**	**+0.1**
OK005				Sg	**Sg**	**16 45 08.8**	**+0.5**
OK001	**Jones High Sch**	**0.39**	**227**	Pg	**Pg**	**16 45 07.2**	**0.0**
ADOK	**Arcadia Dam**	**0.39**	**244**		**Pg**	**16 45 07.3**	**+0.1**
OK009	**Oakdale Elemen**	**0.46**	**238**		**Pg**	**16 45 08.6**	**0.0**
OKCSW	**OKLAHOMA CITY**	**0.58**	**224**		**Pg**	**16 45 10.1**	**-0.8**
OKCFA	**Oklahoma City**	**0.58**	**226**		**Pg**	**16 45 10.2**	**-0.7**
W35A	**Tecumseh**	**0.67**	**175**		**Pg**	**16 45 12.0**	**-0.6**
FNO	**Franklin**	**0.68**	**214**		**Pg**	**16 45 12.5**	**-0.3**
TUL1	**Leonard**	**0.94**	**84**		**Pg**	**16 45 17.1**	**-0.7**
TUL1	**Leonard**	**0.94**	**84**	P	**Pg**	**16 45 17.1**	**-0.7**
	baz=265						
TUL1				S	**Sg**	**16 45 29.5**	**-0.4**
	baz=265						
X34A	**Smith Ranch, M**	**1.42**	**211**		**Pn**	**16 45 25.7**	**-0.7**
U32A	**Winter Ranch,**	**1.76**	**289**		**Pn**	**16 45 30.7**	**-0.3**
X37A	**Clayton**	**1.78**	**133**		**Pn**	**16 45 31.4**	**+0.1**
WMOK	**Wichita Mounta**	**1.85**	**235**		**Pn**	**16 45 32.0**	**-0.3**
WMOK	**Wichita Mounta**	**1.85**	**235**	P	**Pn**	**16 45 32.1**	**-0.3**
	baz=54						
WMOK				S	**Sn**	**16 45 56.5**	**+0.3**
	baz=54						
U38A	**Gravette**	**2.16**	**73**	Pn	**Pn**	**16 45 36.9**	**+0.4**
HHAR	**Hobbs**	**2.48**	**79**		**Pn**	**16 45 41.1**	**+0.2**
Z35A	**Perchaven, San**	**2.50**	**186**		**Pn**	**16 45 41.6**	**+0.4**
W39A	**Magazine**	**2.65**	**103**		**Pn**	**16 45 43.3**	**+0.1**
W39A	**Magazine**	**2.65**	**103**	P	**Pn**	**16 45 43.3**	**+0.1**
	baz=284						
W39A				S	**Sn**	**16 46 16.8**	**+0.9**
	baz=284						
MIAR	**Mount Ida**	**3.04**	**114**		**Pn**	**16 45 48.7**	**+0.1**
MIAR	**Mount Ida**	**3.04**	**114**	P	**Pn**	**16 45 49.0**	**+0.4**
	baz=296						
MIAR				S	**Sn**	**16 46 25.8**	**+0.4**
	baz=296						
KSU1	**Kansas State U**	**3.28**	**5**	P	**Pn**	**16 45 51.9**	**-0.1**
	baz=185						
KSU1				S	**Sn**	**16 46 32.7**	**+1.3**
	baz=185						
U40A	**Yellville**	**3.35**	**80**		**Pn**	**16 45 53.1**	**+0.1**
U40A	**Yellville**	**3.35**	**80**	P	**Pn**	**16 45 53.1**	**+0.1**
	baz=262						
U40A				S	**Sn**	**16 46 34.6**	**+1.4**
	baz=262						
X40A	**Basin Creek Fa**	**3.62**	**110**		**Pn**	**16 45 57.2**	**+0.6**
X40A	**Basin Creek Fa**	**3.62**	**110**	P	**Pn**	**16 45 56.6**	**0.0**
	baz=293						
X40A				S	**Sn**	**16 46 40.0**	**+0.2**
	baz=293						
CBKS	**Cedar Bluff**	**3.72**	**324**	Pn	**Pn**	**16 45 57.7**	**-0.3**
CBKS	**Cedar Bluff**	**3.72**	**324**	P	**Pn**	**16 45 58.2**	**+0.1**
	baz=143						
CBKS				S	**Sn**	**16 46 43.6**	**+1.2**
	baz=143						
WHAR	**Wooly Hollow**	**3.83**	**97**		**Pn**	**16 45 59.5**	**0.0**
WHTX	**Lake Whitney,**	**3.85**	**187**	Pn	**Pn**	**16 46 00.2**	**+0.5**
W41B	**Gary Mavity, V**	**3.88**	**98**		**Pn**	**16 46 00.3**	**+0.1**
ABTX	**Abilene, Hawle**	**3.90**	**216**	Pn	**Pn**	**16 46 00.4**	**-0.1**
UALR	**University of**	**3.91**	**104**	Pn	**Pn**	**16 46 00.9**	**+0.5**
FCAR	**Ozark Folk Cen**	**3.91**	**88**	Pn	**Pn**	**16 45 59.6**	**-1.0**
AMTX	**Amarillo**	**3.98**	**258**		**Pn**	**16 46 01.6**	**-0.1**
MGMO	**Mountain Grove**	**3.99**	**69**		**Pn**	**16 46 01.8**	**0.0**
LCAR	**Lake Charles**	**4.70**	**85**	Pn	**Pn**	**16 46 10.6**	**-0.9**
CCM	**Cathedral Cave**	**5.08**	**62**	Pn	**Pn**	**16 46 16.1**	**-0.5**
MSTX	**Muleshoe**	**5.14**	**251**	Pn	**Pn**	**16 46 17.0**	**-0.5**
BGNE	**Belgrade**	**5.65**	**351**	Pn	**Pn**	**16 46 22.9**	**-1.6**
JCT	**Junction City**	**5.85**	**205**	Pn	**Pn**	**16 46 27.8**	**+0.6**
ECSD	**EROS Data Cent**	**7.90**	**2**		**Pn**	**16 46 53.5**	**-1.9**

*IDC **24** 16:47:47.5±1.1, 61.91N×140.37W, h0km, mb3.3/3, mb1 3.7/7, mb1mx3.4/42, mbtmp3.4/7, ML3.3/4, MS2.9/1, Ms1 3.0/1, ms1mx2.4/27, Error ellipse: s-maj=18.2km s-min=9.8km az=34.0*

*NEIC **24** 16:47:47.8±2.6, 61.86N±0.02×140.31W±0.05, h1km±6km, Error ellipse: s-maj=3.4km s-min=2.5km az=123.0*

*AEIC **24** 16:47:48.4±2.9, 61.88N±0.02×140.32W±0.07, h1km±2km, Error ellipse: s-maj=5.0km s-min=2.9km az=90.0*

*PGC **24** 16:47:48.8, 61.85N×140.31W, h5km, ML3.5/12, ML3.3, 192km Wnw of Haines Jct., Yt Southern Yukon Territory, Canada*

ISC 24 16:47:48.4±0.8, **61.84N**±0.02×**140.32W**±0.02, **h10km**±5km, **n125,** σ1.51/162, **Southern Yukon Territory**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YUK3	**Moose Creek**	**0.09**	**228**	P	**Pg**	**16 47 50.9**	**-0.1**
YUK3				S	**Sg**	**16 47 52.7**	**-0.3**
YUK3	**Moose Creek**	**0.09**	**228**		**Pg**	**16 47 50.6**	**-0.4**
YUK3					**Sg**	**16 47 52.6**	**-0.3**
YUK2	**White River**	**0.26**	**259**	P	**Pg**	**16 47 53.4**	**-0.2**
YUK2				S	**Sg**	**16 47 57.2**	**+0.1**
YUK2	**White River**	**0.26**	**259**		**Pg**	**16 47 53.2**	**-0.4**
YUK1	**Sand Pete Hill**	**0.33**	**343**	P	**Pg**	**16 47 54.5**	**-0.6**
YUK1				S	**Sg**	**16 47 58.7**	**-0.9**
YUK1	**Sand Pete Hill**	**0.33**	**343**		**Pg**	**16 47 54.4**	**-0.6**
YUK1					**Sg**	**16 47 58.2**	**-1.4**
BVCY	**Beaver Creek**	**0.63**	**336**	P	**Pg**	**16 47 59.9**	**-0.7**
BVCY				S	**Sg**	**16 48 08.3**	**-0.6**
BVCY	**Beaver Creek**	**0.63**	**336**		**Pg**	**16 47 59.8**	**-0.8**
BVCY					**Sg**	**16 48 08.0**	**-1.0**
YUK4	**Talbot Arm**	**0.94**	**121**	P	**Pg**	**16 48 06.0**	**-0.5**
YUK4				S	**Sg**	**16 48 18.2**	**-0.5**
YUK4	**Talbot Arm**	**0.94**	**121**		**Pg**	**16 48 05.7**	**-0.8**
CTGM	**Chitina Glacie**	**1.00**	**210**	P	**Pg**	**16 48 07.1**	**-0.5**
CTGM				S	**Sb**	**16 48 21.4**	**+0.3**
CTGM	**Chitina Glacie**	**1.00**	**210**		**Pg**	**16 48 07.1**	**-0.5**
CTGM					**Sn**	**16 48 22.3**	**-0.6**
BARN	**Barnard Glacie**	**1.01**	**220**		**Pg**	**16 48 06.8**	**-1.0**
PTPK	**Patty Peak**	**1.22**	**239**	P	**Pg**	**16 48 10.7**	**-1.1**
PTPK				S	**Sg**	**16 48 26.7**	**-0.9**
PTPK	**Patty Peak**	**1.22**	**239**		**Pg**	**16 48 10.6**	**-1.2**
BALM	**Baldy**	**1.26**	**231**	P	**Pb**	**16 48 11.2**	**-1.2**
BALM				S	**Sb**	**16 48 27.6**	**-1.0**
BALM	**Baldy**	**1.26**	**231**		**Pb**	**16 48 11.1**	**-1.2**
YUK6	**Outpost Mounta**	**1.30**	**133**	P	**Pn**	**16 48 12.0**	**-0.8**
YUK6				S	**Sb**	**16 48 29.6**	**-0.2**
YUK6	**Outpost Mounta**	**1.30**	**133**		**Pn**	**16 48 11.7**	**-1.0**
GRNC	**Granite Creek**	**1.31**	**213**	P	**Pn**	**16 48 12.6**	**-0.3**
GRNC				S	**Sg**	**16 48 30.0**	**-0.4**
GRNC	**Granite Creek**	**1.31**	**213**		**Pn**	**16 48 12.5**	**-0.3**
GRNC					**Sn**	**16 48 30.5**	**0.0**
KIAG	**Kiagna River**	**1.34**	**228**	P	**Pn**	**16 48 12.5**	**-0.8**
KIAG				S	**Sb**	**16 48 30.8**	**-0.2**
KIAG	**Kiagna River**	**1.34**	**228**		**Pn**	**16 48 12.5**	**-0.8**
MCARA	**McCarthy VSAT**	**1.37**	**252**		**Pn**	**16 48 13.1**	**-0.4**
YUK5	**Granite Creek**	**1.38**	**120**	Pn	**Pn**	**16 48 13.5**	**-0.3**
YUK5				Sg	**Sb**	**16 48 30.6**	**-1.3**
YUK5	**Granite Creek**	**1.38**	**120**		**Pn**	**16 48 13.4**	**-0.4**
BC03		**1.41**	**332**		**Pn**	**16 48 13.3**	**-0.7**
VRDI	**Verde Repeater**	**1.62**	**249**		**Pn**	**16 48 17.3**	**+0.2**
TGL	**Tana Glacier**	**1.63**	**229**		**Pn**	**16 48 17.6**	**+0.5**
YUK7	**Dusty Glacier**	**1.68**	**140**	Pn	**Pn**	**16 48 18.6**	**+0.6**
YUK7				Sg	**Sg**	**16 48 42.2**	**-0.2**
YUK7	**Dusty Glacier**	**1.68**	**140**		**Pn**	**16 48 18.6**	**+0.6**
HYT	**Haines Junctio**	**1.69**	**126**	Pn	**Pn**	**16 48 18.1**	**0.0**
HYT				Sg	**Sb**	**16 48 41.5**	**+0.4**
HYT	**Haines Junctio**	**1.69**	**126**		**Pn**	**16 48 18.0**	**-0.1**
GLB	**Gilahina Butte**	**1.71**	**258**		**Pn**	**16 48 18.8**	**+0.5**
GLB					**Sb**	**16 48 41.5**	**0.0**
CRQM	**Cirque**	**1.74**	**233**		**Pn**	**16 48 19.3**	**+0.5**
PCA	**Pinnacle**	**1.75**	**179**	Pn	**Pb**	**16 48 20.7**	**+0.1**
PCA				Sg	**Sg**	**16 48 44.5**	**+0.1**
PCA	**Pinnacle**	**1.75**	**179**		**Pb**	**16 48 20.6**	**+0.1**
CHX	**Chaix Hills**	**1.82**	**193**		**Pb**	**16 48 21.1**	**-0.7**
MENT	**Mentasta**	**1.93**	**306**		**Pn**	**16 48 21.2**	**-0.1**
PNL	**Peninsula**	**2.22**	**168**	Pn	**Pn**	**16 48 26.7**	**+1.5**
PNL				Sg	**Sb**	**16 48 57.6**	**+1.5**
PNL	**Peninsula**	**2.22**	**168**		**Pn**	**16 48 26.7**	**+1.5**
DAWY	**Dawson**	**2.28**	**10**	Pn	**Pn**	**16 48 26.0**	**0.0**
DAWY				Sg	**Sb**	**16 48 58.8**	**+1.0**
DAWY	**Dawson**	**2.28**	**10**		**Pn**	**16 48 25.9**	**-0.2**
YKU2	**Yakutat**	**2.35**	**172**	Pn	**Pn**	**16 48 28.3**	**+1.3**
GOAT	**Goat Mountain**	**2.48**	**241**		**Pb**	**16 48 31.3**	**-1.7**
DOT	**Dot Lake**	**2.51**	**318**	Pn	**Pn**	**16 48 28.9**	**-0.2**
DOT				Sg	**Sb**	**16 49 05.3**	**+1.0**
DOT	**Dot Lake**	**2.51**	**318**		**Pn**	**16 48 28.9**	**-0.2**
RAGM	**Ragged Mountai**	**2.57**	**237**		**Pb**	**16 48 32.7**	**-1.8**
PAX	**Paxson**	**2.66**	**298**	Pn	**Pn**	**16 48 31.5**	**+0.3**
PAX	**Paxson**	**2.66**	**298**		**Pn**	**16 48 32.5**	**+1.2**
SCRK	**Sand Creek**	**2.73**	**324**		**Pn**	**16 48 31.9**	**-0.3**
RIDG	**Independent Ri**	**2.83**	**315**		**Pn**	**16 48 33.5**	**0.0**
WHY	**Whitehorse**	**2.88**	**112**	Pn	**Pn**	**16 48 34.0**	**-0.3**
WHY				Pg	**Pb**	**16 48 41.0**	**+1.1**
WHY				Sg	**Sb**	**16 49 18.4**	**+3.2**
WHY	**Whitehorse**	**2.88**	**112**		**Pn**	**16 48 34.0**	**-0.3**
EYAK	**Cordova Ski Ar**	**2.93**	**246**	Pn	**Pn**	**16 48 37.4**	**+2.4**
DHAK	**Deception Hill**	**2.94**	**158**	Pn	**Pn**	**16 48 37.2**	**+2.0**
EGAK	**Eagle**	**2.98**	**353**		**Pn**	**16 48 35.4**	**-0.1**
PLBC	**Pleasant Camp**	**3.08**	**139**	Pn	**Pn**	**16 48 37.7**	**+0.7**
JPK	**Jack Peak**	**3.12**	**258**		**Pn**	**16 48 40.2**	**+2.7**
FID	**Port Fidalgo**	**3.17**	**253**		**Pn**	**16 48 41.2**	**+3.0**
SCM	**Sheep Creek Mo**	**3.33**	**273**		**Pn**	**16 48 42.4**	**+1.9**
HIN	**Hinchinbrook I**	**3.33**	**247**	Pn	**Pn**	**16 48 42.7**	**+2.2**
GLI	**Glacier Island**	**3.40**	**257**	Pn	**Pn**	**16 48 43.2**	**+1.8**
DHY	**Denali Highway**	**3.51**	**294**	Pn	**Pn**	**16 48 44.3**	**+1.3**
WAT6	**Susitna Watana**	**3.56**	**285**		**Pn**	**16 48 46.2**	**+2.5**
SML	**Sawmill**	**3.80**	**273**	Pn	**Pn**	**16 48 48.7**	**+1.7**
KNK	**Knik Glacier**	**3.91**	**267**		**Pn**	**16 48 50.9**	**+2.5**
HDA	**Harding Lake**	**3.97**	**314**		**Pn**	**16 48 48.0**	**-1.1**
HDA	**Harding Lake**	**3.97**	**314**	P	**Pn**	**16 48 48.4**	**-0.8**
	baz=128						
HDA				S	**Sn**	**16 49 36.3**	**+0.6**
	baz=128						
HDA				S	**Sn**	**16 49 36.3**	**+0.6**
	baz=128						
PS08	**TAPS Pump Stn8**	**4.01**	**316**		**Pn**	**16 48 49.4**	**-0.3**
GHO	**Glory Hole Cre**	**4.09**	**273**		**Pn**	**16 48 52.5**	**+1.6**
IL31		**4.18**	**318**		**Pn**	**16 48 50.9**	**-1.1**
ILAR	**Eielson Array**	**4.18**	**318**	Pn	**Pn**	**16 48 51.0**	**-1.1**
	1.9nm,0.3s,baz=138,slow=13,SNR=80						
ILAR				Sn	**Sn**	**16 49 38.2**	**-2.6**
	3.0nm,0.3s,baz=133,slow=16,SNR=8.1						
ILAR				Lg	Lg	16 49 55.5	
	7.4nm,0.3s,baz=127,slow=28,SNR=5.9						
ILAR				LR	LR	16 50 07.0	
	comp=Z,150nm,20.4s,baz=202,slow=34						
RND	**Reindeer**	**4.25**	**296**	Pn	**Pn**	**16 48 55.3**	**+2.2**
BESE	**Bessie Mountai**	**4.25**	**138**	Pn	**Pn**	**16 48 54.2**	**+1.1**
BESE	**Bessie Mountai**	**4.25**	**138**	Pn	**Pn**	**16 48 53.9**	**+0.7**
PRP	**Porcupine Dome**	**4.36**	**330**		**Pn**	**16 48 54.8**	**+0.1**
CCB	**Clear Creek Bu**	**4.41**	**313**		**Pn**	**16 48 53.8**	**-1.4**
WRH	**Wood River Hil**	**4.41**	**310**		**Pn**	**16 48 54.4**	**-0.7**
COLA	**College**	**4.56**	**315**	Pn	**Pn**	**16 48 58.1**	**+0.8**
TCOL	**CIGO, UAF Yank**	**4.56**	**315**	P	**Pn**	**16 48 58.0**	**+0.7**
	baz=128						
TCOL				Sb	**Sb**	**16 50 08.1**	**+4.8**
	baz=128						
RC01	**Rabbit Creek A**	**4.58**	**265**	Pn	**Pn**	**16 48 59.3**	**+1.7**
POKR	**Poker Plat Res**	**4.58**	**319**		**Pn**	**16 48 56.8**	**-0.8**
POKR	**Poker Plat Res**	**4.58**	**319**	P	**Pn**	**16 48 57.1**	**-0.6**
	baz=132						
POKR				Sb	**Sb**	**16 50 08.5**	**+4.5**
	baz=132						
JIS	**Juneau Island**	**4.65**	**138**	Pn	**Pn**	**16 48 59.4**	**+0.9**
MDM	**Murphy Dome**	**4.74**	**315**		**Pn**	**16 48 59.0**	**-0.9**
SEW	**Seward**	**4.78**	**253**	Pn	**Pn**	**16 49 01.1**	**+0.8**
BWN	**Browne**	**4.78**	**303**	Pn	**Pn**	**16 48 60.0**	**-0.4**
EPYK	**Eagle Plains**	**4.82**	**18**		**Pn**	**16 49 00.5**	**-0.3**
EPYK	**Eagle Plains**	**4.82**	**18**	P	**Pn**	**16 49 01.0**	**+0.2**
	baz=201						
NEA	**Nenana**	**4.82**	**309**		**Pn**	**16 49 00.3**	**-0.7**
TRF	**Thorofare Moun**	**4.88**	**294**	Pn	**Pn**	**16 49 04.4**	**+2.6**
SLKM	**Skilak Lake**	**4.98**	**259**		**Pn**	**16 49 05.2**	**+2.1**
SUA	**Susitna One**	**4.99**	**270**	Pn	**Pn**	**16 49 06.0**	**+2.7**
KTH	**Kantishna Hill**	**5.18**	**294**	Pn	**Pn**	**16 49 08.8**	**+2.9**
FYU	**Fort Yukon**	**5.21**	**338**		**Pn**	**16 49 06.8**	**+0.6**
SKT	**Skwentna**	**5.30**	**276**		**Pn**	**16 49 09.7**	**+2.1**
BPAW	**Bear Paw Mtn.**	**5.37**	**300**		**Pn**	**16 49 11.3**	**+2.8**
BRLK	**Bradley Lake**	**5.58**	**253**		**Pn**	**16 49 12.2**	**+0.9**
PPLA	**Purkeypile**	**5.63**	**286**		**Pn**	**16 49 14.9**	**+2.8**
MLY	**Manley**	**5.67**	**309**		**Pn**	**16 49 11.7**	**-0.9**
CNPM	**China Poot**	**5.84**	**251**	Pn	**Pn**	**16 49 15.5**	**+0.5**
DLBC	**Dease Lake**	**6.17**	**119**	Pn	**Pn**	**16 49 19.6**	**+0.2**
	0.5nm,0.3s,baz=309,slow=18,SNR=3.9						
DLBC				Pg	**Pb**	**16 49 39.8**	**+4.0**
	3.4nm,0.3s,baz=317,slow=12,SNR=13						
DLBC				Lg	Lg	16 51 00.5	
	3.0nm,0.3s,baz=240,slow=9.1,SNR=7.4						
DLBC	**Dease Lake**	**6.17**	**119**	Pn	**Pn**	**16 49 19.1**	**-0.4**
DLBC				Pg	**Pb**	**16 49 39.4**	**+3.6**
DLBC				Sg	**Sg**	**16 50 59.7**	**-6.4**
DLBC	**Dease Lake**	**6.17**	**119**		**Pn**	**16 49 20.1**	**+0.7**
RSO	**Redoubt South**	**6.18**	**263**		**Pn**	**16 49 21.8**	**+2.1**
WRAK	**Wrangell Islan**	**6.80**	**139**		**Pn**	**16 49 29.4**	**+1.3**
COLD	**Coldfoot**	**6.88**	**326**	Pn	**Pn**	**16 49 29.5**	**+0.3**
COLD				Sn	**Sn**	**16 50 43.7**	**-3.6**
COLD	**Coldfoot**	**6.88**	**326**		**Pn**	**16 49 29.4**	**+0.3**
INK	**Inuvik**	**7.10**	**21**	Pn	**Pn**	**16 49 31.0**	**-1.1**
	0.4nm,0.3s,baz=208,slow=19,SNR=16						
INK				Sn	**Sn**	**16 50 49.1**	**-3.5**
	2.0nm,0.3s,baz=240,slow=14,SNR=6.0						
INK				Lg	Lg	16 51 31.4	
	baz=200,slow=4.0,SNR=3.3						
INK	**Inuvik**	**7.10**	**21**	Pn	**Pn**	**16 49 31.3**	**-0.7**
INK	**Inuvik**	**7.10**	**21**		**Pn**	**16 49 31.9**	**-0.1**
IM03		**7.23**	**311**		**Pn**	**16 49 33.5**	**-0.4**
SVW2	**Sparrevohn**	**7.35**	**271**	Pn	**Pn**	**16 49 35.9**	**+0.3**

TOLK	Toolik Lake Re	7.85	334		Pn	16 49 43.6	+1.1
TOLK	Toolik Lake Re	7.85	334	P	Pn	16 49 43.7	+1.3
	baz=146						
TOLK				S	Sn	16 51 11.5	+0.2
	baz=146						
C36M	Paulatuk	10.06	35		Pn	16 50 11.6	-1.0
C36M	Paulatuk	10.06	35	P	Pn	16 50 11.7	-1.0
	baz=230						
DHRN	Dharma Camp	10.36	51	Pn	Pn	16 50 15.3	-1.4
YKW3	Yellowknife Ar	11.99	75	Pn	Pn	16 50 38.4	-0.7
YKA	Yellowknife Ar	12.01	76	Pn	Pn	16 50 38.5	-0.8
	0.2nm,0.3s,baz=272,slow=13,SNR=7.7						
YKA				Lg	Lg	16 54 03.6	
	0.0nm,0.3s,baz=285,slow=29,SNR=4.5						
LLLB	Lillooet	15.15	130	Pn	Pn	16 51 20.0	-2.2
RES	Resolute Bay	20.42	33	P	P	16 52 26.1	+0.9
	0.3nm,0.4s,baz=292,slow=5.4,SNR=2.4						
NVAR	Mina Array Bea	27.08	140	P	P	16 53 33.4	+2.2
	0.5nm,0.9s,baz=291,slow=5.7,SNR=3.6						
CMAR	Chiang Mai Arr	87.32	305	P	P	17 00 36.1	+0.8
	0.4nm,0.6s,baz=358,slow=6.3,SNR=5.0						

IASPEI ***24*** *16:50:01.9±0.9, 44.46N±0.01×6.94E±0.02, h9km±6km, Error ellipse: s-maj=2.7km s-min=2.0km az=61.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

GEN ***24*** *16:50:01.9, 44.45N×6.92E, h5km±2km, Ml2.1*

ROM ***24*** *16:50:02.0±0.2, 44.474N±0.006×6.96E±0.01, h10km, ML2.2/18, Error ellipse: s-maj=1.1km s-min=0.2km az=59.0*

STR ***24*** *16:50:01.9±0.6, 44°N±1°×±°, h2km±4km, MLv2.2/6*

LDG ***24*** *16:50:02.0±0.0, 44.46N×6.91E, h2km, Md2.7/3, Ml2.7/16, Error ellipse: s-maj=1.0km s-min=0.7km az=59.0*

ISC 24 16:50:02.0±0.8, 44.46N±0.01×6.93E±0.02, h10km±5km, n65, σ0§90/118, 11C-4D, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SURF	Saint Ours	0.09	283	Pg	Pg	16 50 04.0	-0.7
SURF				Sg	Sg	16 50 05.6	-1.0
PZZ	Stroppo	0.14	71	⇑eP	Pg	16 50 05.3	-0.1
PZZ				S	Sg	16 50 07.6	-0.2
PZZ				AML	AML		
	comp=N,2050µm,0.2s						
PZZ				AML	AML		
	comp=E,1755µm,0.5s						
PZZ	Stroppo	0.14	71	P	Pg	16 50 05.3	-0.1
PZZ				S	Sg	16 50 07.4	-0.4
DOI	San Damiano	0.23	79	⇑P	Pg	16 50 06.8	-0.1
DOI				S	Sg	16 50 10.3	+0.2
DOI				AML	AML		
	comp=E,1570µm,0.2s						
DOI				AML	AML		
	comp=N,1155µm,1.4s						
OGAG	Argentiere	0.28	269	Pg	Pb	16 50 10.3	+1.1
OGAG				Sg	Sb	16 50 16.1	+2.2
MBDF	Montbardon	0.29	337	ePg	Pg	16 50 07.4	-0.6
MBDF				eSg	Sg	16 50 11.9	0.0
	comp=N,80nm,0.2s						
ISO	Isola	0.29	163	Pg	Pg	16 50 07.7	-0.2
ISO				Sg	Sg	16 50 11.4	-0.4
STV	Sant Anna di V	0.36	127	P	Pg	16 50 08.9	-0.2
STV				S	Sg	16 50 13.7	-0.2
ENR	Entracque	0.42	123	⇑eP	Pg	16 50 10.1	-0.3
ENR				S	Sg	16 50 16.5	+0.6
ENR				AML	AML		
	comp=N,701µm,0.7s						
ENR				AML	AML		
	comp=E,705µm,0.1s						
ENR				AML	AML		
	comp=N,702µm,0.7s						
ENR	Entracque	0.42	123	P	Pg	16 50 10.1	-0.3
ENR				S	Sg	16 50 16.2	+0.2
BHB	Bricherasio	0.45	32	⇑eP	Pg	16 50 10.6	-0.3
BHB				S	Sg	16 50 16.3	-0.4
BHB				AML	AML		
	comp=E,213µm,1.2s						
BHB				AML	AML		
	comp=N,234µm,0.3s						
BHB				AML	AML		
	comp=E,214µm,1.2s						
BHB	Bricherasio	0.45	32	P	Pg	16 50 10.6	-0.3
BHB				S	Sg	16 50 16.4	-0.4
RRL	Rocca Remolon	0.47	348	⇑eP	Pg	16 50 11.0	-0.3
RRL				S	Sg	16 50 18.3	+0.7
RRL				AML	AML		
	comp=N,260µm,1.1s						
RRL				AML	AML		
	comp=E,312µm,0.3s						
RRL	Rocca Remolon	0.47	348	P	Pg	16 50 11.0	-0.3
RRL				S	Sg	16 50 18.3	+0.7
OGDI	Digne	0.57	232	Pg	Pb	16 50 14.5	+0.4
TURF	col de Turini	0.59	145	Pg	Pg	16 50 13.4	-0.1
TURF				Sg	Sg	16 50 21.4	+0.1
BNI	Bardonecchia	0.62	343	⇑eP	Pg	16 50 14.0	0.0
BNI				S	Sg	16 50 22.9	+0.7
BNI				AML	AML		
	comp=E,110µm,0.5s						
BNI				AML	AML		
	comp=N,55µm,0.5s						
SAOF	Saorge	0.65	136	Pg	Pg	16 50 14.6	-0.1
SAOF				Sg	Sg	16 50 22.7	-0.6
SAOF	Saorge	0.65	136	⇓eP	Pg	16 50 14.6	-0.1
SAOF				S	Sg	16 50 23.0	-0.3
SAOF				AML	AML		
	comp=N,212µm,1.0s						
SAOF				AML	AML		
	comp=E,184µm,0.4s						
GBOS	Grotte di Boss	0.69	108	⇑eP	Pg	16 50 15.1	-0.3
GBOS				S	Sg	16 50 24.4	0.0
GBOS				AML	AML		
	comp=N,324µm,0.7s						
GBOS				AML	AML		
	comp=E,310µm,0.7s						
GBOS	Grotte di Boss	0.69	108	P	Pg	16 50 15.1	-0.3
GBOS				S	Sg	16 50 24.2	-0.2
SBF	Sospel	0.70	148	ePg	Pg	16 50 15.3	-0.3
SBF				eSg	Sg	16 50 24.4	-0.3
	comp=E,62nm,0.3s						
ESCA	l'Escarene	0.71	153	Pg	Pg	16 50 15.8	+0.1
ESCA				Sg	Sg	16 50 25.4	+0.5
CALF	Calern	0.71	180	Pg	Pg	16 50 15.7	0.0
CALF				Sg	Sg	16 50 25.0	-0.1
RSP	Reno Superiore	0.73	19	⇓eP	Pg	16 50 15.9	-0.3
RSP				S	Sb	16 50 26.5	-0.4
RSP				AML	AML		
	comp=N,148µm,0.2s						
RSP				AML	AML		
	comp=N,148µm,0.2s						
RSP				AML	AML		
	comp=E,146µm,1.4s						
RSP	Reno Superiore	0.73	19	P	Pg	16 50 15.8	-0.3
RSP				S	Sg	16 50 25.6	0.0
MON	Monaco	0.81	154	Pg	Pg	16 50 18.0	+0.3
MON				Sg	Sb	16 50 29.1	-0.1
BLAF	les Blancs	0.81	232	Pg	Pg	16 50 18.4	+0.6
NEGI	Seborga	0.83	137	⇓eP	Pg	16 50 17.9	-0.1
NEGI				S	Sg	16 50 28.8	0.0
NEGI				AML	AML		
	comp=E,260µm,1.1s						
NEGI				AML	AML		
	comp=N,292µm,0.2s						
NEGI	Seborga	0.83	137	P	Pg	16 50 17.9	-0.1
NEGI				S	Sg	16 50 28.8	0.0
ORIF	Oris-en-Rattie	0.88	302	ePg	Pg	16 50 18.6	-0.3
ORIF				eSg	Sg	16 50 29.5	-0.9
	comp=N,23nm,0.2s						
IMI	Imperia	0.89	128	⇑eP	Pg	16 50 18.8	-0.3
IMI				S	Sb	16 50 31.0	-0.4
IMI				AML	AML		
	comp=E,171µm,0.5s						
IMI				AML	AML		
	comp=N,286µm,0.5s						
IMI				AML	AML		
	comp=E,170µm,0.5s						
IMI				AML	AML		
	comp=N,286µm,0.5s						
IMI	Imperia	0.89	128	P	Pg	16 50 18.7	-0.3
IMI				S	Sg	16 50 30.7	+0.1
RORO	Rocca Rossa	0.89	113	⇑eP	Pg	16 50 18.9	-0.3
RORO				S	Sb	16 50 31.0	-0.4
RORO				AML	AML		
	comp=E,152µm,0.7s						
RORO				AML	AML		
	comp=N,218µm,1.1s						
RORO	Rocca Rossa	0.89	113	P	Pg	16 50 18.6	-0.5
RORO				S	Sg	16 50 30.5	-0.2
FRF	La Foret Royal	0.92	193	ePg	Pg	16 50 18.7	-1.1
FRF				eSg	Sg	16 50 30.9	-0.9
FRF				eSn	Sb	16 50 33.2	+0.8
	comp=N,76nm,0.2s						
GDM	Grand'Maison	0.94	322	Pg	Pg	16 50 19.9	-0.3
GDM				Sg	Sg	16 50 32.3	-0.1
LSD	Lago del Serru	1.01	8	⇑eP	Pg	16 50 21.0	-0.5
LSD				S	Sg	16 50 33.9	-0.8
LSD				AML	AML		
	comp=E,112µm,0.2s						
LSD				AML	AML		
	comp=N,110µm,1.1s						
LSD				AML	AML		
	comp=E,112µm,0.2s						
QLNO	Quiliano	1.02	97	⇑eP	Pg	16 50 21.2	-0.5
QLNO				S	Sg	16 50 34.3	-0.7
QLNO				AML	AML		
	comp=N,206µm,0.4s						
QLNO				AML	AML		
	comp=N,206µm,0.4s						
QLNO				AML	AML		
	comp=E,182µm,0.5s						
FINB	Finale Ligure	1.04	105	⇓eP	Pg	16 50 21.5	-0.5
FINB				S	Sg	16 50 34.9	-0.7
FINB				AML	AML		
	comp=N,97µm,0.4s						
FINB				AML	AML		
	comp=E,84µm,0.9s						
LPG	La Plagne	1.04	353	ePg	Pg	16 50 21.5	-0.7
LPG				eSg	Sg	16 50 35.2	-0.6
LPG				eSn	Sb	16 50 36.9	+0.7
	comp=E,34nm,0.3s						
LPL	La Plagne	1.06	353	ePg	Pg	16 50 21.9	-0.6
LPL				eSg	Sg	16 50 35.5	-0.9
LPL				eSn	Sb	16 50 37.0	+0.3
	comp=E,23nm,0.3s						
ROTM	Rocchetta Tana	1.09	69	AML	AML		
	comp=E,347µm,1.1s						
ROTM				AML	AML		
	comp=N,452µm,0.2s						
ROTM				AML	AML		
	comp=N,452µm,0.2s						
SMRF	Simiane la Rot	1.09	244	ePg	Pg	16 50 21.6	-1.3
SMRF				eSn	Sg	16 50 37.1	0.0
	comp=N,26nm,0.3s						
GRN	Grenoble	1.15	313	Pg	Pg	16 50 24.1	-0.1
GRN				Sg	Sg	16 50 39.5	+0.4
PCP	Piancastagn	1.16	85	AML	AML		
	comp=N,126µm,0.3s						
PCP				AML	AML		
	comp=E,156µm,1.6s						
RUSF	Rustrel	1.16	244	Pg	Pb	16 50 25.1	+0.9
LMR	La Mourre	1.17	195	ePg	Pg	16 50 23.0	-1.4
LMR				eSg	Sg	16 50 38.5	-1.1
LMR				eSn	Sb	16 50 38.9	-0.5
	comp=E,68nm,0.2s						
ARTF	Artigues	1.19	223	Pg	Pg	16 50 25.1	+0.2
ARTF				Sg	Sb	16 50 41.7	+1.6
TRAV	Traversella	1.20	29	AML	AML		
	comp=N,47µm,1.6s						
TRAV				AML	AML		
	comp=E,43µm,1.5s						
TRAV				AML	AML		
	comp=N,47µm,1.6s						
OGSM	Saint Maurice	1.44	323	Pg	Pb	16 50 29.4	+0.5
VIVF	Saint-Julien-l	1.66	285	ePn	Pn	16 50 29.9	-1.3
VIVF	Saint-Julien-l	1.66	285	ePg	Pn	16 50 31.8	+0.6
VIVF				eSg	Sn	16 50 53.8	+1.3
	comp=N,8.6nm,0.3s						
ASEAF	Site Antares,	1.76	199	Pn	Pb	16 50 34.4	+0.3
CABF	La Chapelle	2.23	345	ePg	Pg	16 50 44.0	-0.8
CABF				eSg	Sg	16 51 13.0	-0.7
	comp=N,3.7nm,0.4s						
LASF	Ste Croix	2.24	261	ePn	Pn	16 50 37.7	-1.5
LASF	Ste Croix	2.24	261	eP	Pn	16 50 40.6	+1.4
LASF				eSn	Sn	16 51 03.7	-3.1
	comp=N,3.2nm,0.3s						
LASF				eSg	Sb	16 51 12.2	+1.9
	comp=N,1.8nm,0.3s						
PGF	Pioggiola	2.43	141	ePn	Pn	16 50 41.6	-0.3
PGF				eSn	Sn	16 51 11.3	-0.4
	comp=N,5.8nm,0.2s						
SMPL	Sampolo	2.92	143	Pn	Pn	16 50 49.2	+0.7
SMPL				Sn	Sn	16 51 23.4	-0.3
SMF	Signal de Mont	3.08	316	ePn	Pn	16 50 49.3	-1.4
SMF	Signal de Mont	3.08	316	ePg	Pb	16 50 58.9	+2.1
SMF				eSg	Sg	16 51 38.2	-2.7
	comp=N,2.3nm,0.2s						
AVF	Avril sur Loir	3.42	314	eP	Pn	16 50 57.4	+2.0
LOR	Lormes	3.53	324	eP	Pn	16 50 59.4	+2.5
	baz=144						
LOR				eSn	Sn	16 51 35.7	-3.0
	comp=N,2.3nm,0.3s						
MTLF	Montolieu	3.58	253	eP	Pn	16 50 59.0	+1.4
RJF	Les Rejaudoux	3.94	284	ePn	Pn	16 51 01.0	-1.5

JMA ***24*** *17:02:00.5±0.1, 23.64N×123.03E, h50km, M1.7*

TAP ***24*** *17:02:02.5, 23.64N×122.92E, h62km±3km, ML2.5, D*

ISC 24 17:01:56.2±1.1, 23.49N±0.03×122.99E±0.02, h12km±9km, n56, σ0§77/93, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.93	53	P	Pn	17 02 16.0	+0.9
HATJ				eS	Sg	17 02 27.2	+0.7
JYNG	Yonagunijimaku	0.95	358	P	Pn	17 02 16.0	+0.6
JYNG				eS	Sg	17 02 26.5	-0.6
YOJ	Yonaguni jima	0.96	1	P	Pn	17 02 16.0	+0.4
YOJ				S	Sg	17 02 27.1	-0.3
IRIF	Iriomote-Funau	1.08	39	P	Pn	17 02 17.8	+0.7
IRIF				S	Sg	17 02 30.7	-0.3
JKRS	Kuro-shima	1.19	51	P	Pn	17 02 19.8	+0.6
JKRS				eS	Sb	17 02 33.8	-0.3
EOS1	EOS1	1.31	323	P	Pg	17 02 23.0	+1.5
	baz=310						
EOS1				eS	Sg	17 02 38.6	0.0
	baz=310						
JIJ	Ishigaki jima	1.36	50	P	Pn	17 02 22.0	+0.9
JIJ				eS	Sb	17 02 37.2	-1.9
TWD	Chiawan	1.40	295	eP	Pg	17 02 23.3	+0.1
	baz=282						
HGSD	Ruisui	1.44	270	P	Pg	17 02 24.6	+0.8
	baz=263						
HGSD				S	Sg	17 02 41.9	-0.6
	baz=263						
NACB	Ninganchiao	1.45	298	P	Pg	17 02 23.7	-0.3
	baz=293						
NACB				eS	Sn	17 02 41.2	+0.1
	baz=293						
ESL	Shilin	1.46	283	P	Pg	17 02 24.5	+0.2
	baz=269						
ESL				eS	Sn	17 02 41.2	-0.3
	baz=269						
ENA	Nanau	1.47	309	eP	Pg	17 02 25.0	+0.5
	baz=306						
EHY	Hungye	1.53	271	P	Pg	17 02 26.4	+0.8
	baz=264						
EHY				eS	Sg	17 02 44.4	-1.2
	baz=264						
ETLH	Xiulin Townshi	1.55	298	eP	Pb	17 02 25.1	+0.2
	baz=293						
ETLH				eS	Sn	17 02 44.2	+0.3
	baz=293						
YULB	Yu-li	1.56	267	eP	Pg	17 02 27.1	+1.0
	baz=254						
YULB				eS	Sg	17 02 45.1	-1.3
	baz=254						
TWF1	Yuli	1.56	265	P	Pg	17 02 26.9	+0.7
	baz=253						
TWF1				eS	Sg	17 02 45.7	-0.8
	baz=253						
FULB	Fuli	1.59	260	P	Pg	17 02 27.1	+0.4
	baz=247						
FULB				eS	Sb	17 02 45.7	+0.2
	baz=247						
TWH	Lutao	1.60	241	eP	Pg	17 02 27.6	+0.8
	baz=239						
TWH				eS	Sg	17 02 46.2	-1.4
	baz=239						
JISG	Ishigakijimahi	1.63	48	P	Pn	17 02 25.1	+0.4
JISG				eS	Sn	17 02 42.5	-3.0
WHF	Hehuan Shan	1.71	293	P	Pg	17 02 28.5	-0.6
	baz=288						
WHF				eS	Sn	17 02 48.0	-0.2
	baz=288						
VWDT	VWDT	1.71	279	P	Pg	17 02 29.2	+0.1
	baz=273						
VWDT				eS	Sb	17 02 49.5	+0.3
	baz=273						
TWE	Neicheng	1.72	316	eP	Pb	17 02 28.1	+0.4
	baz=313						
OWD	Renai	1.72	286	eP	Pg	17 02 28.6	-0.8
	baz=273						
OWD				eS	Sb	17 02 48.9	-0.7
	baz=273						
ENTT	Nioudou	1.73	312	eP	Pb	17 02 27.7	-0.2
	baz=299						
NNSB	Datong	1.74	303	P	Pb	17 02 28.8	+0.6
	baz=299						
NNSB				eS	Sn	17 02 48.8	+0.2
	baz=299						
NNSH	Datong	1.74	303	eP	Pb	17 02 28.8	+0.7
	baz=299						
NNSH				eS	Sn	17 02 49.3	+0.8
	baz=299						
NDT	Datong Townshi	1.74	310	eP	Pb	17 02 28.8	+0.7
	baz=306						
NNS	Nan Shan	1.75	303	P	Pg	17 02 29.3	-0.6
	baz=299						
NNS				eS	Sb	17 02 50.0	-0.5
	baz=299						
CHGB	Renai	1.76	289	P	Pg	17 02 29.5	-0.4
	baz=276						
CHGB				eS	Sn	17 02 49.8	+0.7
	baz=276						
TIPB	Shuangxi	1.81	324	eP	Pg	17 02 30.7	-0.4
	baz=323						
ELDTW	Lidau	1.84	261	P	Pg	17 02 31.1	-0.4
	baz=255						
ELDTW				eS	Sb	17 02 52.6	-0.2
	baz=255						
TDCB	Techi	1.84	295	P	Pg	17 02 31.0	-0.5
	baz=297						
TDCB				eS	Sb	17 02 52.0	-0.9
	baz=297						
YUS	Yu-Shan	1.87	270	eP	Pg	17 02 31.9	-0.2
	baz=265						
YUS				eS	Sb	17 02 53.7	-0.5
	baz=265						
TWGBT	Beinan	1.88	249	P	Pg	17 02 32.1	-0.3
	baz=244						
TWGBT				eS	Sb	17 02 54.2	+0.3
	baz=244						
YHNB	Yeheng	1.88	309	P	Pb	17 02 30.8	+0.2
	baz=306						
TWG	Pinlang	1.89	250	eP	Pg	17 02 32.4	-0.1
	baz=244						
TWG				eS	Sb	17 02 54.4	+0.3
	baz=244						
SSLB	Suanglung	1.89	279	eP	Pb	17 02 31.2	+0.5
	baz=274						
SSLB				eS	Sb	17 02 53.6	-0.6
	baz=274						
NSK	Sanguang	1.90	309	eP	Pb	17 02 31.2	+0.3
	baz=306						
JTJ	Tarama	1.94	54	P	Pb	17 02 31.5	0.0
SMLT	Sun Moon Lake	1.96	282	eP	Pg	17 02 33.0	-0.8
	baz=271						
DPDB	Guoxing	1.96	286	eP	Pg	17 02 33.3	-0.7
	baz=275						
WHYT	Xinyi Township	1.97	276	eP	Pg	17 02 33.3	-0.7
	baz=271						
TYC	Yuchr	2.00	282	eP	Pb	17 02 33.3	+0.9
	baz=271						
ALS	Alishan	2.01	271	eP	Pg	17 02 34.3	-0.4
	baz=259						
WHP	Taichung City	2.03	293	eP	Pg	17 02 35.3	+0.2
	baz=296						
WHP				eS	Sb	17 02 58.2	0.0
	baz=296						
ECL	Taimali	2.08	245	eP	Pb	17 02 34.0	+0.1
	baz=249						
ECL				eS	Sb	17 02 58.4	-1.2
	baz=249						
CHN5	Tsauling	2.12	273	eP	Pg	17 02 36.0	-1.0
	baz=264						
CHN5				eS	Sb	17 03 00.5	-0.6
	baz=264						
LIOB	Emei	2.14	303	eP	Pb	17 02 35.2	+0.3
	baz=299						
LIOB				eS	Sb	17 02 59.9	-1.5
	baz=299						
NSTT	Nanjuang	2.14	302	eP	Pb	17 02 35.5	+0.5
	baz=299						
NSTT				eS	Sn	17 02 59.8	+1.5
	baz=299						
TPUB	Ta-pu	2.18	265	eP	Pg	17 02 37.4	-0.6
	baz=260						
WTP	Ta-pu	2.20	264	eP	Pg	17 02 37.4	-1.0
	baz=259						
CHN4	Tsaushan	2.21	267	eP	Pg	17 02 38.2	-0.3
	baz=256						
SLGT	Liugui	2.21	257	eP	Pg	17 02 37.4	-1.3
	baz=249						
EAST	Anshuo	2.26	241	eP	Pg	17 02 37.2	+0.2
	baz=236						
EAST				eS	Sn	17 03 02.6	+1.3
	baz=236						
CHN1	Nanshi	2.28	263	eP	Pg	17 02 39.4	-0.6
	baz=258						
MASBT	Mashibuluo	2.34	248	P	Pb	17 02 39.0	+0.6
	baz=240						
MASBT				eS	Sb	17 03 06.6	-0.6
	baz=240						

SOME ***24*** *17:32:20.1, 39.12N×73.68E, h15km*

KRNET ***24*** *17:32:31.8±0.1, 39.51N×73.79E, mb3.3*

NNC ***24*** *17:32:32.1±3.8, 39.73N×74.14E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=29.2km s-min=14.3km az=170.0*

ISC 24 17:32:33.8±1.6, 39.69N±0.08×73.89E±0.04, h10km, n33, σ1§56/55, 26C-5D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	1.78	337	⇑iP	Pg	17 33 07.1	-0.8
	baz=41						
ARSB				⇑iS	Sg	17 33 33.7	+2.8
	baz=41						
ARLS	Aral	2.20	8	⇑eP	Pg	17 33 14.2	-1.7
	baz=10.0						
ARLS				⇑iS	Sg	17 33 45.2	+0.8
	baz=10.0						
NRN	Naryn	2.37	42	⇑eP	Pb	17 33 16.5	-0.3
	baz=40						
NRN				⇑iS	Sg	17 33 48.8	-1.2
	baz=40						
BTK	Batken	2.39	280	⇑iP	Pn	17 33 13.9	+0.8
	baz=84						
BTK				⇑iS	Sb	17 33 44.6	-2.0
	baz=84						
AML	Almayashu	2.45	357	⇑iP	Pb	17 33 17.3	-0.8
	baz=58						
AML				⇑iS	Sg	17 33 51.1	-1.3
	baz=58						
AML	Almayashu	2.45	357	P	Pb	17 33 17.6	-0.5
	SNR=12						
ARK	Arkit	2.57	326	⇑iP	Pb	17 33 17.9	-2.1
	baz=29						
ARK				⇑iS	Sb	17 33 51.4	-0.3
	baz=29						
UCH	Uchtor	2.58	10	⇑iP	Pb	17 33 19.6	-0.9
	baz=11						
UCH				⇑iS	Sg	17 33 54.8	-2.0
	baz=11						
UCH	Uchtor	2.58	10	P	Pb	17 33 20.4	-0.1
	SNR=22						
KZA	Kyzart	2.60	23	⇑iP	Pb	17 33 20.0	-0.8
	baz=23						
KZA				⇑iS	Sg	17 33 55.3	-2.1
	baz=23						
KZA	Kyzart	2.60	23	P	Pb	17 33 21.4	+0.6
	SNR=7.1						

EKS2	**Erkin-Say**	**2.97**	**358**	⇑iP	**Pb**	**17 33 25.1**	**-1.8**
	baz=60						
EKS2				⇑iS	**Sb**	**17 34 03.3**	**-0.1**
	baz=60						
EKS2	**Erkin-Say**	**2.97**	**358**	P	**Pb**	**17 33 25.2**	**-1.8**
	SNR=9.1						
AAK	**Ala-Archa**	**2.98**	**9**	⇑iP	**Pb**	**17 33 25.2**	**-1.9**
	baz=9.0						
AAK				⇑iS	**Sb**	**17 34 04.0**	**+0.3**
	baz=9.0						
KBK	**Karagaybulak**	**3.07**	**15**	⇑iP	**Pb**	**17 33 26.6**	**-2.0**
	baz=15						
KBK				⇑iS	**Sb**	**17 34 06.4**	**+0.1**
	baz=15						
MRKS	**Merke**	**3.10**	**351**	eP	**Pb**	**17 33 26.2**	**-2.8**
	8.4nm,0.2s						
MRKS				eS	**Sg**	**17 34 12.5**	**-0.7**
	20nm,0.6s						
MRKS	**Merke**	**3.10**	**351**	Pg	**Pb**	**17 33 26.2**	**-2.8**
MRKS				Lg	Lg	17 34 12.5	
ULHL	**Ulahol**	**3.12**	**34**	⇑iP	**Pb**	**17 33 27.2**	**-2.2**
	baz=33						
ULHL				⇑iS	**Sb**	**17 34 07.3**	**-0.2**
	baz=33						
ULHL	**Ulahol**	**3.12**	**34**	P	**Pb**	**17 33 28.8**	**-0.6**
	SNR=5.0						
BOOM	**Boomskoye usch**	**3.20**	**28**	⇓eP	**Pb**	**17 33 28.2**	**-2.6**
	baz=28						
BOOM				⇓iS	**Sb**	**17 34 09.4**	**-0.5**
	baz=28						
KST	**Kastek**	**3.70**	**24**	eP	**Pb**	**17 33 37.8**	**-1.5**
	26nm,1.9s						
KST				eS	**Sg**	**17 34 32.4**	**-0.2**
	23nm,0.8s						
KST	**Kastek**	**3.70**	**24**	Pg	**Pb**	**17 33 37.2**	**-2.0**
KST				Lg	Lg	17 34 31.8	
IUG	**Iuzhnay**	**3.82**	**311**	eP	**Pn**	**17 33 34.6**	**+1.8**
	2.0nm,0.3s						
IUG				eS	**Sb**	**17 34 26.7**	**-1.0**
	27nm,0.6s						
IUG	**Iuzhnay**	**3.82**	**311**	Pg	**Pn**	**17 33 34.6**	**+1.8**
	2.0nm,0.3s						
IUG				Lg	Lg	17 34 27.0	
	27nm,0.6s						
DGS	**Degeres**	**3.82**	**21**	eP	**Pb**	**17 33 40.6**	**-0.8**
	4.5nm,0.5s						
DGS				eS	**Sg**	**17 34 36.9**	**+0.3**
	15nm,0.6s						
DGS	**Degeres**	**3.82**	**21**	Pg	**Pb**	**17 33 40.7**	**-0.7**
	4.5nm,0.5s						
DGS				Lg	Lg	17 34 37.9	
	15nm,0.6s						
IZV	**Izvestkoviy**	**3.92**	**31**	eP	**Pb**	**17 33 43.4**	**+0.3**
	6.4nm,0.7s						
IZV				eS	**Sg**	**17 34 41.9**	**+2.1**
	16nm,0.6s						
MTBS	**Maitube**	**3.93**	**28**	eP	**Pb**	**17 33 43.5**	**+0.3**
	2.4nm,0.1s						
MTBS				eS	**Sg**	**17 34 42.0**	**+1.8**
	8.4nm,0.3s						
TNSS	**Tian-Shan**	**4.06**	**34**	eP	**Pb**	**17 33 46.2**	**+0.6**
	4.1nm,0.6s						
TNSS				eS	**Sg**	**17 34 46.7**	**+2.5**
	9.1nm,0.6s						
MDOK	**Medeo**	**4.21**	**33**	Pg	**Pb**	**17 33 46.0**	**-2.0**
	10nm,1.0s						
MDOK				Lg	Lg	17 34 44.7	
	13nm,0.8s						
KK31	**Karatay Array**	**4.25**	**324**	Pn	**Pn**	**17 33 39.3**	**+0.7**
	1.0nm,0.3s,baz=134,slow=12,SNR=50						
KK31				⇑Pg	**Pb**	**17 33 49.8**	**+1.1**
	4.1nm,0.8s,baz=137,slow=15,SNR=5.7						
KK31				⇓Sn	**Sn**	**17 34 31.7**	**+3.3**
	1.7nm,0.3s,baz=139,slow=25,SNR=4.5						
KK31				⇑Lg	Lg	17 34 49.8	
	9.3nm,0.6s,baz=135,slow=29,SNR=5.5						
CHKK	**Chushkaly**	**4.76**	**28**	Pg	**Pb**	**17 33 58.0**	**+0.6**
	0.8nm,0.1s						
CHKK				Lg	Lg	17 35 07.1	
	8.0nm,0.7s						
PDGK	**Podgornoye**	**5.56**	**47**	⇓Pg	**Pb**	**17 34 09.6**	**-1.4**
	2.4nm,1.1s						
PDGK				⇓Lg	Lg	17 35 25.5	
	11nm,1.0s						

IDC ***24*** *17:40:43.1±1.2, 7.27S×105.60E, h0km, mb3.9/9, mb1 4.1/10, mb1mx3.8/36, mbtmp3.9/10, ML4.6/1, Error ellipse: s-maj=46.2km s-min=15.5km az=50.0*
NEIC ***24*** *17:40:56.9±0.9, 7.0S±0.1×106.32E±0.05, h93km±7km, mb4.2/7, Error ellipse: s-maj=19.4km s-min=5.7km az=196.0*
DJA ***24*** *17:40:57.6±0.4, 7°S±6°×10°6E±°, h55km±6km, M4.1/16, mb4.2/2, MLv4.1/16, MLv4.0/5*
ISC 24 17:40:55.9±1.1**, 7.18S**±0.09×**106.30E**±0.09**, h82**km±7km**, n44, σ1.43**/44**, mb3.9**/12**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.31**	**56**	P	**Pn**	**17 41 08.4**	**0.0**
SKJI				S	**Sn**	**17 41 18.1**	**+0.4**
DBJI	**Dramaga**	**0.76**	**36**	P	**Pn**	**17 41 12.4**	**0.0**
DBJI				S	**Sn**	**17 41 24.2**	**-0.5**
CNJI	**Cibinong**	**0.83**	**99**	P	**Pn**	**17 41 12.7**	**-0.4**
CNJI				S	**Sn**	**17 41 24.4**	**-1.6**
TNG	**Tangerang**	**1.06**	**19**	P	**Pn**	**17 41 16.8**	**+1.1**
LEM	**Lembang**	**1.35**	**75**	Pn	**Pn**	**17 41 20.1**	**+0.5**
	229nm,0.3s,baz=300,slow=20,SNR=109						
LEM				Sn	**Sn**	**17 41 38.9**	**+1.5**
	175nm,0.3s,baz=300,slow=20,SNR=15						
LEM	**Lembang**	**1.35**	**75**	P	**Pn**	**17 41 20.6**	**+1.0**
CISI	**Cisompet, Garu**	**1.55**	**104**	P	**Pn**	**17 41 21.9**	**-0.1**
CISI	**Cisompet, Garu**	**1.55**	**104**		**Pn**	**17 41 21.6**	**-0.4**
CISI				Sn	**Sn**	**17 41 40.1**	**-1.7**
KASI	**Kota Agung**	**2.43**	**312**	P	**Pn**	**17 41 35.8**	**+2.2**
KPJI	**Karang Pucung**	**2.62**	**94**	P	**Pn**	**17 41 37.5**	**+1.4**
KLSI		**2.92**	**328**	P	**Pn**	**17 41 42.5**	**+2.2**
LWLI	**Liwa**	**3.09**	**314**	P	**Pn**	**17 41 45.4**	**+2.7**
MDSI	**Maura Dua**	**3.41**	**322**	P	**Pn**	**17 41 49.3**	**+2.5**
UGM	**Wanagama**	**4.25**	**100**	P	**Pn**	**17 41 59.4**	**+1.1**
UGM	**Wanagama**	**4.25**	**100**		**Pn**	**17 41 59.3**	**+0.9**
MNAI	**Manna**	**4.35**	**310**	P	**Pn**	**17 42 01.7**	**+2.1**
MNAI	**Manna**	**4.35**	**310**	Pn	**Pn**	**17 42 01.4**	**+1.8**
TPI	**Tanjungpandan**	**4.59**	**17**	P	**Pn**	**17 42 03.3**	**+0.3**
PCJI	**Pacitan**	**4.94**	**102**	P	**Pn**	**17 42 08.4**	**+0.7**
JAGI	**Jajag, Banyuwa**	**7.89**	**100**	P	**Pn**	**17 42 49.3**	**+1.4**
	0.2nm17nm,0.5s						
JAGI	**Jajag, Banyuwa**	**7.89**	**100**		**Pn**	**17 42 49.5**	**+1.6**
FITZ	**Fitzroy Crossi**	**21.75**	**122**	P	**P**	**17 45 41.7**	**+0.8**
	1.5nm,0.5s,baz=316,slow=5.2,SNR=6.9						
FITZ	**Fitzroy Crossi**	**21.75**	**122**	P	**P**	**17 45 42.0**	**+1.1**
FITZ				IAmb	IAmb	17 46 18.4	
	comp=Z,4.4nm,1.1s						
KNRA	**Kununurra**	**23.56**	**113**	P	**P**	**17 45 59.5**	**+0.1**
KNRA				IAmb	IAmb	17 45 59.5	
	comp=Z,30nm,1.6s						
CMAR	**Chiang Mai Arr**	**26.48**	**344**	P	**P**	**17 46 22.1**	**-3.6**
	comp=Z,0.3nm,0.6s,baz=180,slow=8.4,SNR=5.3						
H01W3	**Cape Leeuwin H**	**28.50**	**166**	T	T	18 16 31.9	
	baz=345,slow=76,SNR=9.7						
H01W1	**Cape Leeuwin H**	**28.52**	**166**	T	T	18 16 29.8	
	baz=345,slow=76,SNR=12						
H01W2	**Cape Leeuwin H**	**28.52**	**166**	T	T	18 16 28.5	
	baz=345,slow=76,SNR=10						
WRA	**Warramunga Arr**	**30.00**	**118**	P	**P**	**17 46 57.7**	**+0.5**
	comp=Z,2.2nm,0.6s,baz=303,slow=9.0,SNR=34						
WRA				PcP	**PcP**	**17 49 57.4**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=304,slow=2.2,SNR=4.5						
WRAB	**Tennant Creek**	**30.01**	**118**	P	**P**	**17 46 57.6**	**+0.4**
WB2	**Warramunga Arr**	**30.02**	**118**	P	**P**	**17 46 57.7**	**+0.5**
WB2				IAmb	IAmb	17 46 58.5	
	comp=Z,4.4nm,0.7s						
WR0	**Warramunga Arr**	**30.19**	**118**	P	**P**	**17 46 59.3**	**+0.5**
WR0				IAmb	IAmb	17 47 00.2	
	comp=Z,4.2nm,0.6s						
ASAR	**Alice Springs**	**31.16**	**125**	P	**P**	**17 47 08.2**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=301,slow=7.8,SNR=31						
ASAR				PcP	**PcP**	**17 50 01.0**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=296,slow=2.4,SNR=3.7						
AS31	**Alice Springs**	**31.16**	**125**	P	**P**	**17 47 08.1**	**+0.7**
H08S2	**Diego Garcia H**	**33.52**	**267**	T	T	18 23 13.1	
	baz=92,slow=76,SNR=31						
H08S3	**Diego Garcia H**	**33.53**	**267**	T	T	18 23 13.9	
	baz=92,slow=76,SNR=47						
H08S1	**Diego Carcia H**	**33.54**	**267**	T	T	18 23 14.5	
	baz=92,slow=76,SNR=16						
STKA	**Stephens Creek**	**41.04**	**132**	P	**P**	**17 48 33.2**	**+1.8**
	comp=Z,6.5nm,0.4s,baz=313,slow=7.3,SNR=40						
STKA	**Stephens Creek**	**41.04**	**132**	P	**P**	**17 48 33.3**	**+1.8**
STKA				IAmb	IAmb	17 48 33.9	
	comp=Z,1.4nm,0.6s						
SONM	**Songino Array**	**54.77**	**0**	P	**P**	**17 50 15.2**	**-2.1**
	comp=Z,0.2nm,0.4s,baz=173,slow=8.5,SNR=2.9						
SONM				PcP	**PcP**	**17 51 18.6**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=176,slow=5.8,SNR=3.6						
MKAR	**Makanchi Array**	**57.82**	**341**	P	P	17 50 34.4	-4.4
	comp=Z,0.1nm,0.5s,baz=152,slow=6.5,SNR=4.5						
ZALV	**Zalesovo Beam**	**63.53**	**346**	P	P	17 51 13.5	-4.0
	comp=Z,0.3nm,0.3s,baz=140,slow=6.5,SNR=2.8						
ARCES	**ARCESS Array B**	**93.46**	**340**	P	**P**	**17 54 01.0**	**-1.0**
	comp=Z,2.8nm,1.0s,baz=96,slow=6.4,SNR=2.4						
TXAR	**Lajitas Array**	**144.20**	**48**	PKP	**PKPab**	**18 00 22.4**	**+1.3**
	comp=Z,0.1nm,0.4s,baz=260,slow=1.6,SNR=2.9						

IDC ***24*** *18:01:18.2±1.5, 18.69S×177.99W, h557km±18km, mb3.1/10, mb1 3.4/11, mb1mx3.2/31, mbtmp4.0/11, Error ellipse: s-maj=26.5km s-min=11.4km az=147.0*
NEIC ***24*** *18:01:21.2±1.1, 19.2S±0.2×177.9W±0.1, h600km±5km, mb4.4/14, Error ellipse: s-maj=23.4km s-min=17.2km az=161.0*
ISC 24 18:01:21.1±0.6**, 19.0S**±0.1×**177.96W**±0.09**, h600**km**, n34, σ1.07**/36**, mb4.1**/18**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.98**	**287**	P	**P**	**18 02 46.1**	**-0.5**
AFI	**Afiamalu**	**7.78**	**51**	P	P	18 03 11.6	-6.9
	5.7nm,0.3s,baz=246,slow=1.5,SNR=6.9						
AFI				S	S	18 04 44.6	-10
	0.5nm,0.3s,baz=238,slow=22,SNR=2.0						
AFI	**Afiamalu**	**7.78**	**51**	P	P	18 03 11.5	-7.0
SANVU	**Saraoutou**	**14.60**	**282**	P	**P**	**18 04 23.0**	**-2.7**
RPZ	**Rata Peaks**	**26.34**	**198**	P	**P**	**18 06 12.3**	**+1.4**
	19nm,0.9s,baz=24,slow=6.5,SNR=4.3						
WHZ	**Wether Hill Ro**	**29.27**	**200**	P	**P**	**18 06 34.0**	**-2.3**
TOO	**Toolangi**	**36.84**	**232**	P	**P**	**18 07 39.6**	**-0.5**
TOO				IAmb	IAmb	18 07 40.3	
	comp=Z,44nm,1.8s						
STKA	**Stephens Creek**	**38.51**	**242**	P	**P**	**18 07 54.2**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=89,slow=8.3,SNR=7.9						
STKA	**Stephens Creek**	**38.51**	**242**	P	**P**	**18 07 53.9**	**+0.3**
BBOO	**Buckleboo**	**43.28**	**242**	P	**P**	**18 08 31.4**	**+0.1**
BBOO				IAmb	IAmb	18 08 31.9	
	comp=Z,8.9nm,0.7s						
PTCN	**Pitcairn Islan**	**44.61**	**107**	P	**P**	**18 08 41.6**	**-0.1**
WR0	**Warramunga Arr**	**44.68**	**261**	P	**P**	**18 08 42.3**	**0.0**
WR0				IAmb	IAmb	18 08 46.1	
	comp=Z,16nm,1.7s						
WB0	**Warramunga Arr**	**44.84**	**261**	P	**P**	**18 08 44.0**	**+0.4**
WB0				IAmb	IAmb	18 08 44.6	
	comp=Z,8.1nm,1.2s						
WRA	**Warramunga Arr**	**44.87**	**261**	P	**P**	**18 08 44.2**	**+0.5**
	comp=Z,1.2nm,0.3s,baz=98,slow=7.8,SNR=53						
WRA				PcP	**PcP**	**18 10 12.6**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=87,slow=3.4,SNR=5.5						
WRA				S	**S**	**18 14 40.3**	**+1.2**
	comp=Z,0.5nm,0.9s,baz=97,slow=12,SNR=4.1						
AS31	**Alice Springs**	**44.92**	**255**	P	**P**	**18 08 44.4**	**+0.3**
AS31				PcP	**PcP**	**18 10 13.0**	**+0.6**
ASAR	**Alice Springs**	**44.92**	**255**	P	**P**	**18 08 44.7**	**+0.5**
	comp=Z,2.7nm,0.4s,baz=86,slow=8.2,SNR=103						
ASAR				PcP	**PcP**	**18 10 12.8**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=102,slow=3.9,SNR=8.6						
ASAR				S	**S**	**18 14 42.0**	**+2.2**
	comp=Z,0.9nm,0.8s,baz=90,slow=16,SNR=9.1						
FORT	**Forrest**	**49.95**	**245**	P	**P**	**18 09 20.8**	**-0.7**
FORT				IAmb	IAmb	18 09 21.6	
	comp=Z,10.0nm,0.6s						
KNRA	**Kununurra**	**50.81**	**265**	P	**P**	**18 09 28.7**	**+0.7**
KNRA				IAmb	IAmb	18 10 50.4	
	comp=Z,14nm,1.2s						
FAKI	**Fak Fak**	**51.21**	**282**	P	**P**	**18 09 30.4**	**-0.4**
FITZ	**Fitzroy Crossi**	**53.28**	**261**	P	**P**	**18 09 46.7**	**+1.1**
PSA00	**Pilbara Seismi**	**58.06**	**256**	P	**P**	**18 10 18.6**	**0.0**
PSA00				IAmb	IAmb	18 10 19.6	
	comp=Z,9.7nm,0.8s						
VNDA	**Vanda**	**59.43**	**185**	P	**P**	**18 10 28.9**	**+2.3**
	comp=Z,5.4nm,0.9s,baz=40,slow=7.0,SNR=2.8						
QSPA	**South Pole Qui**	**71.09**	**180**	P	**P**	**18 11 37.7**	**-2.1**
QSPA				IAmb	IAmb	18 11 38.0	
	comp=Z,25nm,1.6s						
NVAR	**Mina Array Bea**	**79.89**	**44**	P	**P**	**18 12 29.0**	**0.0**
	comp=Z,0.1nm,0.4s,baz=216,slow=4.3,SNR=3.5						
319A	**Douglas**	**82.71**	**53**		pwP	18 14 53.2	+0.7
TXAR	**Lajitas Array**	**86.20**	**57**	P	**P**	**18 13 00.7**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=213,slow=6.7,SNR=4.6						
ILAR	**Eielson Array**	**86.82**	**13**	P	**P**	**18 13 02.8**	**+0.4**
	comp=Z,0.1nm,0.4s,baz=243,slow=4.0,SNR=4.0						
PDAR	**Pinedale Array**	**87.83**	**43**	P	**P**	**18 13 07.4**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=201,slow=4.8,SNR=2.9						
CMAR	**Chiang Mai Arr**	**89.64**	**290**	P	**P**	**18 13 17.8**	**+1.2**
	comp=Z,0.5nm,0.9s,baz=130,slow=2.8,SNR=3.9						
MKAR	**Makanchi Array**	**110.18**	**314**	PKiKP	**PKiKP**	**18 18 45.0**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=100,slow=1.6,SNR=9.5						
ARCES	**ARCESS Array B**	**127.43**	**350**	PKP	**PKPdf**	**18 19 18.4**	**+0.3**
	comp=Z,5.3nm,0.9s,baz=29,slow=2.1,SNR=4.4						
BRTR	**Keskin Array B**	**145.83**	**314**	PKPbc	**PKPbc**	**18 19 55.4**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=107,slow=4.8,SNR=4.9						
CLL	**Collm**	**146.59**	**347**	ePKPbc	**PKiKP**	**18 19 58.0**	**-0.2**
GERES	**GERESS Array B**	**148.74**	**345**	PKPbc	**PKPbc**	**18 20 02.2**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=17,slow=1.8,SNR=6.7						

IDC ***24*** *18:18:48.1±0.7, 5.28S×133.69E, h0km, mb3.9/9, mb1 4.1/14, mb1mx4.0/34, mbtmp4.0/14, ML4.1/5, MS3.3/3, Ms1 3.3/3, ms1mx2.8/30, Error ellipse: s-maj=36.0km s-min=14.6km az=71.0*
NEIC ***24*** *18:18:48.2±1.7, 5.23S±0.06×133.94E±0.08, h6km±4km, mb4.6/14, Error ellipse: s-maj=12.1km s-min=9.3km az=92.0*
DJA ***24*** *18:18:51.2±1.6, 5°S±3°×13°4E±°, h15km±13km, M4.6/13, mB4.9/4, mb4.8/10, MLv4.5/13, Mw(mB)4.2/4*
ISC 24 18:18:51.3±0.5**, 5.30S**±0.05×**133.89E**±0.07**, h28**km**, n58, σ2.25**/66**, mb4.3**/17**, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**1.64**	**353**	P	**Pn**	**18 19 16.3**	**-2.0**
KMPI				S	**Sn**	**18 19 36.8**	**-1.7**
FAKI	**Fak Fak**	**2.88**	**325**	P	**Pn**	**18 19 34.1**	**-1.3**
FAKI				S	**Sn**	**18 20 05.4**	**-3.7**
FAKI	**Fak Fak**	**2.88**	**325**		**Pn**	**18 19 34.3**	**-1.0**
SAUI	**Saumlaki**	**3.71**	**224**	P	**Pn**	**18 19 48.4**	**+1.7**
SAUI	**Saumlaki**	**3.71**	**224**	Pn	**Pn**	**18 19 49.0**	**+2.2**
RKPI	**Ransiki, Papua**	**3.78**	**4**	P	**Pn**	**18 19 47.3**	**-0.4**
RKPI				S	**Sn**	**18 20 28.7**	**-2.6**
BNDI	**Bandanaira**	**4.05**	**281**	P	**Pn**	**18 19 51.3**	**-0.2**
BNDI				S	**Sn**	**18 20 37.4**	**-0.6**
WAMI	**Wamena**	**5.00**	**74**	P	Pn	18 20 10.6	+6.0
	2.4nm3μm280nm,0.8s						
SIJI	**Sorong**	**5.13**	**329**	Pn	**Pn**	**18 20 04.8**	**-1.5**
	6.7nm,0.3s,baz=58,slow=6.5,SNR=54						
SIJI				Sn	**Sn**	**18 20 57.5**	**-7.1**
	12nm,0.3s,baz=303,slow=22,SNR=9.5						
SWI	**Sorong**	**5.13**	**329**	P	**Pn**	**18 20 04.7**	**-1.7**
MSAI	**Masohi**	**5.32**	**291**	P	**Pn**	**18 20 08.9**	**0.0**
	0.2nm490nm20nm,0.5s						
SMPI	**Sarmi**	**5.83**	**56**	P	**Pn**	**18 20 16.3**	**+0.4**
	0.2nm30nm,1.1s						
AAI	**Ambon**	**5.90**	**286**	P	**Pn**	**18 20 17.4**	**+0.4**
	0.5nm2μm150nm,0.8s						
LBMI	**Labuha**	**7.89**	**306**	P	**Pn**	**18 20 43.1**	**-1.1**
	0.2nm56nm,0.6s						
SANI	**Sanana**	**8.52**	**292**	P	**Pn**	**18 20 51.7**	**-1.3**
	34nm,0.8s						
SOEI	**Soe**	**10.52**	**245**	P	**Pn**	**18 21 20.4**	**0.0**
	46nm,0.7s						
SOEI	**Soe**	**10.52**	**245**		**Pn**	**18 21 20.4**	**0.0**
KNRA	**Kununurra**	**11.47**	**206**		**Pn**	**18 21 33.0**	**-0.4**
KMSI	**Cibinong**	**11.49**	**300**	P	**Pn**	**18 21 33.2**	**-0.5**
COEN	**Coen**	**12.55**	**134**	Pn	**Pn**	**18 21 46.9**	**-1.3**
PMG	**Port Moresby**	**13.77**	**108**	LR	LR	18 28 51.5	
	comp=Z,85nm,18.7s,baz=276,slow=43						
WB0	**Warramunga Arr**	**14.39**	**178**		**Pn**	**18 22 10.6**	**-2.6**
WRAB	**Tennant Creek**	**14.55**	**178**	P	**Pn**	**18 22 12.2**	**-3.3**
WB2	**Warramunga Arr**	**14.56**	**178**		**Pn**	**18 22 12.9**	**-2.7**
WRA	**Warramunga Arr**	**14.56**	**178**	Pn	**Pn**	**18 22 13.7**	**-1.9**
	0.6nm,0.3s,baz=355,slow=13,SNR=33						
WRA				Sn	Sn	18 24 44.5	-12
	0.4nm,0.3s,baz=358,slow=25,SNR=3.2						
WR0	**Warramunga Arr**	**14.58**	**178**	P	**Pn**	**18 22 13.2**	**-2.8**
FITZ	**Fitzroy Crossi**	**15.06**	**212**	Pn	**Pn**	**18 22 19.3**	**-3.0**
	1.3nm,0.3s,baz=30,slow=10,SNR=36						
FITZ				Sn	Sn	18 24 56.4	-12
	1.1nm,0.3s,baz=38,slow=23,SNR=7.1						
FITZ	**Fitzroy Crossi**	**15.06**	**212**		**Pn**	**18 22 18.9**	**-3.4**
AS31	**Alice Springs**	**18.26**	**180**	P	**Pn**	**18 23 02.2**	**-0.6**
ASAR	**Alice Springs**	**18.26**	**180**	P	**Pn**	**18 23 01.3**	**-1.5**
	1.1nm,0.3s,baz=2.0,slow=11,SNR=37						
ASAR				S	**Sn**	**18 26 17.4**	**-8.6**
	0.2nm,0.3s,baz=2.4,slow=31,SNR=3.4						
CTA	**Charters Tower**	**18.99**	**142**	P	**Pn**	**18 23 13.3**	**+1.6**
	0.2nm,0.3s,baz=319,slow=11,SNR=4.1						
FORT	**Forrest**	**25.93**	**192**	P	**P**	**18 24 21.4**	**+0.1**
STKA	**Stephens Creek**	**27.41**	**166**	P	**P**	**18 24 36.4**	**+1.8**
	3.5nm,0.8s,baz=343,slow=8.5,SNR=9.1						
STKA				LR	LR	18 36 44.6	
	comp=Z,118nm,18.3s,baz=9.2,slow=39						
STKA	**Stephens Creek**	**27.41**	**166**	P	**P**	**18 24 36.1**	**+1.5**
BBOO	**Buckleboo**	**27.44**	**176**	P	**P**	**18 24 35.6**	**+0.7**
BBOO				IAmb	IAmb	18 25 20.7	
	comp=Z,13nm,1.3s						
JNU	**Nakatsue**	**38.32**	**356**	P	**P**	**18 26 09.9**	**+0.1**
JNU				IAmb	IAmb	18 26 11.2	
	comp=Z,17nm,0.9s						
CMAR	**Chiang Mai Arr**	**41.77**	**305**	P	**P**	**18 26 37.6**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=128,slow=7.1,SNR=3.4						
CMAR				PcP	**PcP**	**18 28 36.2**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=141,slow=3.5,SNR=4.2						
KSRS	**Korea Array**	**42.90**	**353**	P	**P**	**18 26 47.4**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=177,slow=10.0,SNR=6.4						
KSRS				LR	LR	18 46 03.1	
	comp=Z,25nm,18.9s,baz=236,slow=38						
USRK	**Ussuriysk Ar.**	**49.30**	**358**	P	**P**	**18 27 38.6**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=152,slow=41,SNR=4.5						
GTA	**Gaotai**	**54.49**	**328**	eP	**P**	**18 28 17.8**	**+1.1**
GTA				pP	sP	18 28 26.0	-1.2
GTA				sP	pwP	18 28 30.3	+1.5
SONM	**Songino Array**	**58.18**	**339**	P	**P**	**18 28 43.7**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=151,slow=9.1,SNR=2.9						
YAK	**Yakutsk**	**67.22**	**358**	P	**P**	**18 29 41.6**	**-1.1**
MK31	**Makanchi Array**	**69.01**	**325**	P	**P**	**18 29 55.3**	**+1.0**
MK31				IAmb	IAmb	18 29 56.1	
	comp=Z,3.3nm,0.9s						
MKAR	**Makanchi Array**	**69.01**	**325**	P	**P**	**18 29 55.2**	**+0.9**
	comp=Z,4.8nm,0.7s,baz=115,slow=8.0,SNR=70						
MAKZ	**Makanchi**	**69.20**	**325**	P	**P**	**18 29 55.5**	**0.0**
MAKZ				IAmb	IAmb	18 29 57.1	
	comp=Z,4.6nm,0.8s						
KSH	**Kashi**	**69.46**	**316**	P	**P**	**18 29 59.8**	**+2.4**
KSH				PcP	**PcP**	**18 30 24.8**	**+4.2**
KSH				PP	**PP**	**18 32 37.8**	**+6.5**
KSH				S	**S**	**18 39 02.8**	**-0.5**
KSH				sS	sS	18 39 21.6	+5.6
ZALV	**Zalesovo Beam**	**71.85**	**332**	P	**P**	**18 30 11.3**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=81,slow=3.3,SNR=6.5						
KURK	**Kurchatov**	**73.16**	**327**	P	**P**	**18 30 19.7**	**+0.4**
KURK				IAmb	IAmb	18 30 20.7	
	comp=Z,3.7nm,1.0s						
BRVK	**Borovoye**	**78.82**	**327**	P	**P**	**18 30 52.0**	**+0.4**
BRVK				IAmb	IAmb	18 30 52.9	
	comp=Z,3.5nm,0.8s						
GEYT	**Alibeck**	**82.11**	**309**	P	**P**	**18 31 10.4**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=110,slow=12,SNR=2.8						
ABKAR	**Akbulak array**	**83.62**	**321**	P	**P**	**18 31 17.1**	**-0.1**
ABKAR				IAmb	IAmb	18 31 17.8	
	comp=Z,1.6nm,0.7s						
QSPA	**South Pole Qui**	**84.66**	**180**	P	**P**	**18 31 23.4**	**+1.0**
QSPA				IAmb	IAmb	18 31 25.1	
	comp=Z,13nm,1.4s						
RND	**Reindeer**	**89.03**	**26**	P	**P**	**18 31 43.6**	**+0.1**
ILAR	**Eielson Array**	**90.18**	**25**	P	**P**	**18 31 48.4**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=258,slow=4.5,SNR=3.1						
TORD	**Torodi Ar. Bea**	**132.25**	**283**	PKP	**PKiKP**	**18 38 04.1**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=97,slow=1.5,SNR=3.0						
CPUP	**Villa Florida**	**146.73**	**161**	PKPbc	**PKiKP**	**18 38 33.6**	**-0.5**
	comp=Z,5.3nm,0.6s,baz=268,slow=3.0,SNR=8.5						
LPAZ	**La Paz**	**149.42**	**135**	PKPbc	**PKiKP**	**18 38 41.7**	**+1.0**
	comp=Z,2.2nm,0.8s,baz=154,slow=2.3,SNR=7.1						
LPAZ	**La Paz**	**149.42**	**135**		**PKPdf**	**18 38 35.5**	**+0.3**

IDC 24 18:40:34.0±3.1**, 5.24S×133.89E, h0**km**, mb3.0**/1**, mb1 3.4**/5**, mb1mx3.3**/26**, mbtmp3.3**/5**, ML3.0**/4**, Error ellipse: s-maj=119.4km s-min=25.9km az=80.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.07**	**329**	Pn	Pn	18 41 52.9	+1.5
	0.8nm,0.3s,baz=156,slow=20,SNR=8.4						
SIJI				Sn	Sn	18 42 45.1	-5.7
	1.0nm,0.3s,baz=205,slow=22,SNR=4.8						
WRA	**Warramunga Arr**	**14.62**	**178**	Pn	Pn	18 44 01.3	-1.0
	0.0nm,0.3s,baz=355,slow=13,SNR=2.3						
FITZ	**Fitzroy Crossi**	**15.11**	**212**	Pn	Pn	18 44 08.5	-0.4
	0.1nm,0.3s,baz=31,slow=11,SNR=4.4						
FITZ				Sn	Sn	18 46 45.5	-12
	0.1nm,0.3s,baz=264,slow=15,SNR=3.3						
ASAR	**Alice Springs**	**18.32**	**180**	P	P	18 44 50.7	+0.8
	0.1nm,0.3s,baz=1.0,slow=10,SNR=5.9						
MKAR	**Makanchi Array**	**68.96**	**325**	P	P	18 51 40.7	-0.4
	0.1nm,0.4s,baz=112,slow=7.0,SNR=2.8						

IDC ***24*** *18:55:12.1±1.2, 19.43S×177.62W, h562km±14km, mb3.9/26, mb1 4.0/30, mb1mx3.8/53, mbtmp4.9/30, Error ellipse: s-maj=12.7km s-min=8.3km az=160.0*
NEIC ***24*** *18:55:12.2±1.7, 19.29S±0.10×177.68W±0.08, h565km±6km, mb4.8/124, Error ellipse: s-maj=15.2km s-min=9.2km az=151.0*
ISC 24 18:55:14.0±0.3**, 19.34S**±0.06×**177.57W**±0.05**, h600**km**, n228, σ1.76**/236**, mb4.8**/72**, 12C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.45**	**290**	P	**P**	**18 56 41.5**	**-1.3**
NIUE	**Niue**	**7.23**	**89**	P	**P**	**18 57 05.2**	**-0.9**
	baz=7.2,SNR=3.8						
NIUE	**Niue**	**7.23**	**89**	P	**P**	**18 57 04.6**	**-1.5**
AFI	**Afiamalu**	**7.74**	**47**	P	**P**	**18 57 08.3**	**-2.7**
	124nm,0.3s,baz=159,slow=0.6,SNR=119						
AFI				S	**S**	**18 58 40.0**	**-6.9**
	8.0nm,0.3s,baz=239,slow=4.3,SNR=2.1						
GLKZ	**Green Lake**	**9.89**	**182**	P	P	18 57 22.7	-8.8
GLKZ				S	**S**	**18 59 21.1**	**-3.2**
SANVU	**Saraoutou**	**15.04**	**283**	P	**P**	**18 58 20.9**	**-1.7**
DZM	**Mont Dzumac**	**15.20**	**257**	P	**P**	**18 58 23.8**	**-0.4**
	2.2nm,0.3s,baz=86,slow=16,SNR=21						
DZM	**Mont Dzumac**	**15.20**	**257**	P	**P**	**18 58 24.3**	**+0.1**
DZM				IAmb	IAmb	18 58 26.1	
	comp=Z,18nm,0.6s						
NOUC	**Port Laguerre**	**15.34**	**257**	P	**P**	**18 58 25.2**	**-0.1**
NOUC				IAmb	IAmb	18 58 28.4	
	comp=Z,30nm,1.1s						
RAR	**Rarotonga**	**16.80**	**99**	P	**P**	**18 58 38.4**	**-0.3**
	comp=Z,2.3nm,0.3s,baz=264,slow=6.5,SNR=5.3						
RAR	**Rarotonga**	**16.80**	**99**	P	**P**	**18 58 39.5**	**+0.8**
RAR				IAmb	IAmb	18 58 42.1	
	comp=Z,80nm,1.1s						
KNTN	**Kanton**	**17.43**	**20**	P	**P**	**18 58 41.8**	**-2.7**
OUZ	**Omahuta**	**17.65**	**205**	P	**P**	**18 58 48.1**	**+1.9**
GRZ	**Great Barrier**	**17.93**	**199**	P	**P**	**18 58 50.2**	**+1.4**
KUZ	**Kuaotunu**	**18.32**	**197**	P	**P**	**18 58 53.5**	**+1.2**
MXZ	**Matakaoa Point**	**18.52**	**190**	P	**P**	**18 58 52.7**	**-1.3**
MXZ				IAmb	IAmb	18 59 19.6	
	comp=Z,36nm,0.9s						
MXZ	**Matakaoa Point**	**18.52**	**190**	P	**P**	**18 58 53.1**	**-1.0**
WIAZ	**Waiheke Island**	**18.53**	**199**	P	**P**	**18 58 55.8**	**+1.5**
WMGZ	**Waiomatatini S**	**18.75**	**190**	P	**P**	**18 58 56.4**	**+0.2**
HAZ	**Te Kaha**	**18.80**	**191**	P	**P**	**18 58 56.5**	**-0.1**
RUGZ	**Raukumara Rang**	**19.02**	**192**	P	**P**	**18 58 57.6**	**-1.2**
RUGZ				S	**S**	**19 01 58.3**	**-2.6**
TOZ	**Tahuroa Road**	**19.30**	**197**	P	**P**	**18 59 02.8**	**+1.6**
MWZ	**Matawai**	**19.41**	**192**	P	**P**	**18 59 00.3**	**-1.9**
URZ	**Urewera**	**19.42**	**193**	P	**P**	**18 58 59.8**	**-2.4**
	comp=Z,20nm,0.3s,baz=258,slow=1.6,SNR=58						
URZ				S	**S**	**19 02 01.4**	**-5.6**
	comp=Z,0.2nm,0.3s,baz=53,slow=20,SNR=5.4						
URZ	**Urewera**	**19.42**	**193**	P	**P**	**18 58 59.4**	**-2.9**
URZ	**Urewera**	**19.42**	**193**	P	**P**	**18 59 00.3**	**-1.9**

URZ S S 19 01 56.7 -10
TKGZ Te Karaka 19.45 191 P P 18 59 02.8 +0.3
RAGZ Rawiri 19.58 192 P P 18 59 03.8 -0.1
HIZ Hauiti 20.21 197 P P 18 59 10.2 +0.8
BKZ Black Stump Fm 20.42 193 P P 18 59 09.4 -2.0
BKZ IAmb IAmb 18 59 31.9
comp=Z,118nm,1.8s
BFZ Birch Farm 21.93 193 P P 18 59 22.1 -2.7
BFZ IAmb IAmb 18 59 28.9
comp=Z,49nm,1.0s
MSWZ Moikau Station 22.85 194 P P 18 59 32.6 -0.4
SNZO South Karori 22.88 195 P P 18 59 32.4 -0.8
BHW Baring Head 22.93 195 P P 18 59 31.8 -1.8
PLWZ Palliser 22.99 194 P P 18 59 32.4 -1.9
QRZ Quartz Range 23.04 199 P P 18 59 34.4 -0.2
NNZ Nelson 23.14 198 P P 18 59 34.5 -1.0
TUWZ Tuamarina 23.18 196 P P 18 59 34.5 -1.4
CMWZ Cape Campbell 23.41 196 P P 18 59 37.0 -1.0
BSWZ Blackbirch Sta 23.47 196 P P 18 59 37.5 -0.9
THZ Tophouse 23.78 198 P P 18 59 40.9 -0.4
KHZ Kahutara 24.21 196 P P 18 59 43.4 -1.6
KHZ IAmb IAmb 18 59 44.5
comp=Z,45nm,0.9s
LTZ Lake Taylor 24.90 198 P P 18 59 49.5 -1.6
LTZ IAmb IAmb 18 59 52.9
comp=Z,57nm,1.0s
OXZ Oxford 25.47 198 P 18 59 54.5 -1.6
MQZ McQueen's Vall 25.65 197 P P 18 59 56.1 -1.5
RPZ Rata Peaks 26.12 199 P P 19 00 00.6 -1.2
comp=Z,19nm,0.6s,baz=274,slow=1.9,SNR=14
RPZ Rata Peaks 26.12 199 P P 19 00 01.2 -0.6
FOZ Fox Glacier 26.35 201 P P 19 00 03.2 -0.6
PPT Papeete 26.60 91 P P 19 00 06.5 +0.1
comp=Z,76nm,0.9s,baz=246,slow=20,SNR=5.3
PPTF Pamatai, Papee 26.61 91 P P 19 00 06.8 +0.2
LBZ Lake Benmore 26.99 200 P P 19 00 07.8 -1.6
LBZ IAmb IAmb 19 00 26.2
comp=Z,102nm,1.7s
ODZ Otahua Downs 27.45 198 P P 19 00 11.6 -1.8
WKZ Wanaka 27.77 201 P P 19 00 14.7 -1.5
MLZ Mavora Lakes 28.54 201 P P 19 00 23.0 0.0
DCZ Deep Cove 28.97 203 P P 19 00 26.6 0.0
WHZ Wether Hill Ro 29.06 201 P P 19 00 27.2 -0.2
EIDS Eidsvold 29.56 253 P P 19 00 29.9 -2.1
baz=30,SNR=4.2
ARMA Armidale 29.95 242 P P 19 00 36.1 +0.7
baz=30,SNR=16
ARMA Armidale 29.95 242 P P 19 00 35.3 -0.1
ARMA IAmb IAmb 19 00 36.9
comp=Z,48nm,1.6s
MGCD Mangrove Creek 31.16 237 P P 19 00 47.4 +1.8
baz=31,SNR=4.9
RMQ Roma 31.75 251 P P 19 00 51.6 +0.8
baz=32,SNR=5.6
CNB Canberra Magne 33.22 235 P P 19 01 03.7 +0.7
baz=33,SNR=17
CAN Canberra 33.50 235 P P 19 01 05.1 -0.3
CAN IAmb IAmb 19 01 06.8
comp=Z,67nm,1.7s
MILA Mila 34.00 232 P P 19 01 09.7 +0.2
baz=34,SNR=4.7
CTA Charters Tower 34.02 263 P P 19 01 10.0 +0.1
comp=Z,25nm,0.8s,baz=93,slow=10,SNR=22
CTAO Charters Tower 34.02 263 P P 19 01 10.0 +0.1
CTAO IAmb IAmb 19 01 11.0
comp=Z,35nm,0.9s
CMSA Cobar Meteorol 35.17 242 P P 19 01 19.2 0.0
baz=35,SNR=75
PMG Port Moresby 35.50 281 P P 19 01 22.5 +0.4
comp=Z,10nm,0.8s,baz=81,slow=7.9,SNR=4.0
PMG Port Moresby 35.50 281 P P 19 01 20.9 -1.2
PMG IAmb IAmb 19 02 27.4
comp=Z,82nm,1.6s
QLP Quilpie 35.80 251 P P 19 01 24.3 -0.2
baz=36,SNR=7.4
MTSU Mount Surprise 36.07 266 P P 19 01 27.0 +0.2
baz=36,SNR=11
JOHN Johnston Islan 36.70 13 P P 19 01 31.4 -0.5
TOO Toolangi 36.91 233 P P 19 01 34.1 +0.6
baz=37,SNR=40
TOO Toolangi 36.91 233 P P 19 01 34.0 +0.4
TOO IAmb IAmb 19 01 35.0
comp=Z,44nm,0.7s
MOO Moorlands 37.61 224 P P 19 01 39.8 +0.8
baz=38,SNR=3.5
TAOE Nuku Hiva Isla 37.68 79 P P 19 01 41.3 +1.1
TAU Tasmania Unive 37.74 224 P P 19 01 38.7 -1.4
TAU IAmb IAmb 19 01 41.4
comp=Z,76nm,1.4s
COEN Coen 37.93 272 P P 19 01 41.9 -0.2
COEN IAmb IAmb 19 01 43.4
comp=Z,14nm,0.8s
STKA Stephens Creek 38.67 243 P P 19 01 48.5 +0.7
comp=Z,23nm,0.6s,baz=91,slow=9.8,SNR=86
STKA Stephens Creek 38.67 243 P P 19 01 48.5 +0.7
STKA IAmb IAmb 19 01 49.5
comp=Z,14nm,1.1s
BBOO Buckleboo 43.43 242 P P 19 02 25.6 +0.2
JAY Jayapura 44.07 287 P P 19 02 31.6 +1.0
comp=Z,19nm,0.5s
SDHHI Sand Hill 44.26 31 P P 19 02 31.6 -0.3
WR0 Warramunga Arr 44.98 261 P P 19 02 36.6 -0.9
WR0 IAmb IAmb 19 02 38.7
comp=Z,23nm,1.2s
WB0 Warramunga Arr 45.15 261 P P 19 02 38.0 -0.7
WB0 IAmb IAmb 19 02 39.1
comp=Z,57nm,1.4s
WB2 Warramunga Arr 45.16 261 P P 19 02 38.2 -0.7
WB2 IAmb IAmb 19 02 39.4
comp=Z,42nm,1.2s
WRAB Tennant Creek 45.16 261 P P 19 02 38.1 -0.8
WRAB IAmb IAmb 19 02 39.3
comp=Z,42nm,1.4s
WRA Warramunga Arr 45.17 261 P P 19 02 38.4 -0.6
comp=Z,7.0nm,0.4s,baz=97,slow=8.0,SNR=66
WRA PcP PcP 19 04 07.2 +1.0
comp=Z,3.3nm,0.6s,baz=100,slow=3.7,SNR=5.8
WRA S S 19 08 34.0 -2.3
comp=Z,2.5nm,0.8s,baz=14,slow=8.0,SNR=6.8
AS31 Alice Springs 45.19 256 P P 19 02 39.0 -0.1
AS31 IAmb IAmb 19 02 40.4
comp=Z,9.1nm,0.8s
ASAR Alice Springs 45.19 256 P P 19 02 39.0 0.0
comp=Z,23nm,0.5s,baz=87,slow=8.1,SNR=376
ASAR PcP PcP 19 04 07.1 +0.9
comp=Z,5.5nm,0.7s,baz=98,slow=4.5,SNR=8.5
ASAR ScP ScP 19 07 07.3 +4.9
comp=Z,0.9nm,0.7s,baz=99,slow=5.0,SNR=3.5
ASAR S S 19 08 35.5 -0.9
comp=Z,6.5nm,0.8s,baz=91,slow=16,SNR=26
GUMO Guam 49.38 309 P P 19 03 11.3 +0.9
comp=Z,105nm,0.9s,baz=102,slow=9.3,SNR=3.0
FORT Forrest 50.13 246 P P 19 03 15.2 -0.5
SIJI Sorong 53.34 284 P P 19 03 39.6 +0.6
comp=Z,29nm,0.7s,baz=112,slow=5.4,SNR=8.1
FITZ Fitzroy Crossi 53.59 261 P P 19 03 41.0 +0.4
comp=Z,7.5nm,0.4s,baz=92,slow=3.6,SNR=10.0
SOEI Soe 56.88 271 P P 19 04 05.1 +1.5
SOEI IAmb IAmb 19 04 06.2
comp=Z,70nm,0.8s
PSAD2 Pilbara Seismi 58.22 256 P P 19 04 11.8 -0.7
PSAD2 IAmb IAmb 19 04 13.2
comp=Z,44nm,0.7s
PSAC2 Pilbara Seismi 58.28 256 P P 19 04 12.4 -0.4
PSAC2 IAmb IAmb 19 04 13.7
comp=Z,51nm,0.7s
PSAB2 Pilbara Seismi 58.32 256 P P 19 04 12.9 -0.2
PSAB2 IAmb IAmb 19 04 13.9
comp=Z,52nm,0.7s
PSAB3 Pilbara Seismi 58.32 256 P P 19 04 12.9 -0.2
PSAB3 IAmb IAmb 19 04 13.9
comp=Z,53nm,0.7s
PSAA3 Pilbara Seismi 58.32 256 P P 19 04 13.1 -0.1
PSAA3 IAmb IAmb 19 04 13.9
comp=Z,54nm,0.7s
PSA00 Pilbara Seismi 58.33 256 P P 19 04 13.1 -0.1
PSA00 IAmb IAmb 19 04 14.0
comp=Z,52nm,0.8s
PSAA2 Pilbara Seismi 58.33 256 P P 19 04 13.3 +0.1
PSAA2 IAmb IAmb 19 04 14.0
comp=Z,50nm,0.8s
PSAA1 Pilbara Seismi 58.34 256 P P 19 04 13.1 -0.2
PSAA1 IAmb IAmb 19 04 14.0
comp=Z,55nm,0.7s
PSAC3 Pilbara Seismi 58.34 256 P P 19 04 13.2 -0.1
PSAC3 IAmb IAmb 19 04 14.1
comp=Z,62nm,0.7s
PSAB1 Pilbara Seismi 58.35 256 P P 19 04 13.4 0.0
PSAB1 IAmb IAmb 19 04 14.1
comp=Z,52nm,0.7s
PSAD1 Pilbara Seismi 58.37 256 P P 19 04 13.6 +0.2
PSAD1 IAmb IAmb 19 04 14.2
comp=Z,51nm,0.7s
PSAC1 Pilbara Seismi 58.37 256 P P 19 04 13.3 -0.2
PSAC1 IAmb IAmb 19 04 14.2
comp=Z,49nm,0.7s
PSAD3 Pilbara Seismi 58.38 256 P P 19 04 13.6 +0.1
PSAD3 IAmb IAmb 19 04 14.3
comp=Z,59nm,0.7s
SBA Scott Base 59.05 184 P P 19 04 20.4 +3.4
VNDA Vanda 59.10 185 P P 19 04 19.7 +2.3
comp=Z,3.5nm,0.6s,baz=356,slow=8.0,SNR=6.1
VNDA Vanda 59.10 185 P P 19 04 19.5 +2.2
VNDA IAmb IAmb 19 05 53.8
comp=Z,107nm,1.9s
MMRI Maumere 59.12 271 P P 19 04 18.4 -0.2
MMRI IAmb IAmb 19 04 20.1
comp=Z,39nm,1.1s
NWAO Narrogin (SRO) 59.25 243 P P 19 04 19.2 0.0
comp=Z,12nm,0.8s,baz=125,slow=5.9,SNR=8.5
NWAO Narrogin (SRO) 59.25 243 P P 19 04 19.2 0.0
NWAO IAmb IAmb 19 06 00.0
comp=Z,46nm,1.4s
NWAO Narrogin (SRO) 59.25 243 P P 19 04 19.3 +0.1
NWAO IAmb IAmb 19 06 00.0
comp=Z,33nm,1.4s
MORW Morawa 60.65 247 P P 19 04 28.6 +0.1
MORW IAmb IAmb 19 04 29.3
comp=Z,22nm,0.9s
GIRL Giralia 63.26 254 P P 19 04 46.9 +1.5
JAGI Jajag, Banyuwa 66.80 269 P P 19 05 07.1 -0.6
JAGI IAmb IAmb 19 05 07.9
comp=Z,27nm,0.7s
KKM Kota Kinabalu 69.86 284 P P 19 05 26.3 0.0
KKM IAmb IAmb 19 05 36.6
comp=Z,16nm,1.0s
UGM Wanagama 70.40 268 P P 19 05 29.9 +0.5
QSPA South Pole Qui 70.73 180 P P 19 05 32.5 +1.9
QSPA IAmb IAmb 19 05 33.5
comp=Z,23nm,0.9s
CISI Cisompet, Garu 73.06 268 P P 19 05 44.6 -0.3
TWG Pinlang 73.10 302 P P 19 05 43.9 -0.9
YULB Yu-li 73.21 303 P P 19 05 45.5 +0.1
YULB IAmb IAmb 19 08 31.5
comp=Z,75nm,1.9s
LEM Lembang 73.47 268 P P 19 05 48.3 +0.9
comp=Z,39nm,0.6s,baz=98,slow=7.1,SNR=14
KSM Kuching 73.66 277 P P 19 05 48.9 +0.6
KSM IAmb IAmb 19 07 26.3
comp=Z,24nm,1.2s
SSLB Suanglung 73.68 303 P P 19 05 48.1 0.0
SSLB IAmb IAmb 19 08 23.8
comp=Z,28nm,1.4s
TPUB Ta-pu 73.69 302 P P 19 05 47.8 -0.4
TPUB IAmb IAmb 19 06 13.9
comp=Z,100nm,1.7s
KMRM Mail Ridge 77.60 39 P P 19 06 11.9 +2.4
CMB Columbia Colle 78.34 43 P P 19 06 15.7 +2.2
PFO Pinyon Flats O 78.50 48 P P 19 06 16.5 +2.0
comp=Z,0.7nm,0.4s,baz=225,slow=4.3,SNR=3.6
MDPB Devils Postpil 78.95 44 P P 19 06 19.1 +2.2
YBH Yreka Blue Hor 79.13 39 P P 19 06 20.2 +2.5
comp=Z,1.9nm,0.5s,baz=150,slow=4.2,SNR=6.7
YBH Yreka Blue Hor 79.13 39 P P 19 06 20.0 +2.4
WAKR Walker 79.22 43 P P 19 06 20.1 +1.8
BEKR Beckworth 79.43 41 P P 19 06 21.7 +2.4
PNTR Pine Nut 79.45 42 P P 19 06 21.7 +2.2
HUMO Hull Mountain 79.53 38 P P 19 06 22.4 +2.8
YERR Yerington 79.62 42 P P 19 06 22.6 +2.2
MYKOM Kota Tinggi 79.82 276 P P 19 06 23.3 +1.5
MYKOM IAmb IAmb 19 06 55.2
comp=Z,42nm,1.4s
RYN Ryan 79.88 43 P P 19 06 23.6 +1.9
NVAR Mina Array Bea 79.91 43 P P 19 06 24.5 +2.6
comp=Z,1.4nm,0.7s,baz=223,slow=8.5,SNR=12
PAHR Pah Rah Range 79.94 42 P P 19 06 24.2 +2.2
214A Organ Pipe Nat 80.27 51 P P 19 06 25.2 +1.5
214A IAmb IAmb 19 06 31.9
comp=Z,9.8nm,0.7s
KVN Kaiserville 80.39 43 P P 19 06 25.7 +1.3
MOD Modoc Plateau 80.67 40 P P 19 06 27.9 +2.2
PINE Pine Mountain 81.42 38 P P 19 06 31.6 +2.0
PINE IAmb IAmb 19 07 06.3
comp=Z,21nm,1.8s
R11A Troy Canyon, C 81.64 45 P P 19 06 32.7 +1.9
WVOR Wild Horse Val 81.98 40 P P 19 06 34.6 +2.2
I07A Izee 82.43 38 P P 19 06 36.8 +2.3
X16A Lo Mia Camp, P 82.49 50 P P 19 06 36.7 +1.5
LCMT Little Creek M 82.52 47 P P 19 06 37.5 +2.3
J08A Circle Bar Ran 82.61 39 P P 19 06 37.7 +2.2
CCUT Cedar City 82.72 46 P P 19 06 38.3 +2.0
MAW Mawson 82.79 200 P P 19 06 37.4 +1.5
comp=Z,8.7nm,0.8s,baz=135,slow=1.4,SNR=3.5
KNB Kanab 82.81 47 P P 19 06 39.2 +2.4
U15A North Rim 82.88 48 P P 19 06 39.8 +2.5
PSUT Pine Spring 82.89 45 P P 19 06 39.6 +2.4
ELK Elko 83.16 43 P P 19 06 40.3 +1.9
comp=Z,1.4nm,0.8s,baz=229,slow=3.2,SNR=6.3
ELK Elko 83.16 43 P P 19 06 40.4 +1.9
IPM Ipoh 83.39 277 P P 19 06 40.8 +0.8
IPM IAmb IAmb 19 06 42.1
comp=Z,17nm,0.6s
G08A Pilot Rock 83.45 37 P P 19 06 41.6 +2.0
PSI Prapat 84.80 275 P P 19 06 47.7 +0.8
comp=Z,5.1nm,0.8s,baz=138,slow=3.4,SNR=5.6
F10A Beach Ranch, E 84.84 37 P P 19 06 48.2 +1.8
TMUT Trail Mountain 85.06 46 P P 19 06 49.1 +1.2
SRU San Rafael Swe 85.43 46 P P 19 06 51.2 +1.7
MNTX Cornudas Mount 85.75 54 P P 19 06 53.2 +2.2
TX31 Lajitas Ar. Si 86.09 57 P P 19 06 55.2 +2.4
TX32 Lajitas Array 86.09 57 P P 19 06 55.2 +2.4
TXAR Lajitas Array 86.09 57 P P 19 06 55.9 +3.1
comp=Z,3.3nm,0.7s,baz=217,slow=6.8,SNR=36
ANMO Albuquerque 86.36 51 P P 19 06 56.7 +2.6
comp=Z,2.1nm,0.7s,baz=214,slow=5.4,SNR=6.6
ANMO Albuquerque 86.36 51 P P 19 06 56.4 +2.3
IL31 87.09 13 P P 19 06 56.0 -0.5
IL31 IAmb IAmb 19 08 57.1
comp=Z,21nm,1.9s
YHL Hebgen Lake 87.84 41 P P 19 07 03.5 +2.6
PD31 Pinedale Array 87.84 43 P P 19 07 02.5 +1.7
PDAR Pinedale Array 87.84 43 P P 19 07 02.8 +1.9
comp=Z,1.4nm,0.7s,baz=211,slow=3.1,SNR=14
SYO Syowa Base 87.94 193⇓eP P 19 07 00.0 -0.6
SYO Syowa Base 87.94 193⇓ePcP PcP 19 07 02.0 +0.2
YNE Yellowstone No 88.64 41 P P 19 07 05.8 +1.2
MSTX Muleshoe 88.70 53 P P 19 07 05.4 +0.5
MSTX IAmb IAmb 19 07 07.8
comp=Z,5.6nm,0.8s
SNAA Sanae 89.16 178 P P 19 07 07.2 +0.9
VNA3 Neumayer Olymp 89.27 176 P P 19 07 08.0 +1.2
VNA2 Neumayer--Watz 89.72 177 P P 19 07 10.4 +1.5
baz=188,slow=4.1
PLCA Paso Flores 89.78 133 P P 19 07 11.9 +2.1
comp=Z,0.7nm,0.6s,baz=246,slow=12,SNR=2.8
PLCA Paso Flores 89.78 133 IAmb IAmb 19 10 28.9
comp=Z,31nm,1.9s
AMTX Amarillo 89.89 53 P P 19 07 11.6 +1.2
AMTX IAmb IAmb 19 07 13.1
comp=Z,10nm,1.1s
CM31 Chiang Mai Arr 90.11 289 P P 19 07 12.2 +0.5
CM31 IAmb IAmb 19 07 14.9
comp=Z,4.8nm,0.9s
CMAR Chiang Mai Arr 90.11 289 P P 19 07 13.6 +2.0
comp=Z,2.9nm,0.8s,baz=123,slow=3.1,SNR=25
CHTO Chiang Mai 90.23 290 P P 19 07 13.5 +1.3
CHTO IAmb IAmb 19 07 15.0
comp=Z,4.0nm,0.8s
YKA Yellowknife Ar 95.29 25 P P 19 07 35.5 +1.2
comp=Z,0.1nm,0.5s,baz=240,slow=4.2,SNR=2.9
ZALV Zalesovo Beam 109.84 321 PKiKP PKiKP 19 12 37.4 -0.2
comp=Z,0.7nm,0.5s,baz=11,slow=1.5,SNR=3.9
MKAR Makanchi Array 110.69 314 PKiKP PKiKP 19 12 39.7 +0.2
comp=Z,0.7nm,0.5s,baz=78,slow=1.9,SNR=11
KSH Kashi 114.55 305 PKP PKPdf 19 12 42.0 -5.2
KSH PP PP 19 14 02.1 +6.0
KSH sPKP 19 16 12.3
KSH PKS PKSdf 19 16 19.8 -4.2
BVAR Borovoye Array 118.45 320 PKP PKiKP 19 12 54.6 +0.4
comp=Z,1.7nm,0.4s,baz=126,slow=2.0,SNR=16
BOSA Boshof 127.47 205 PKP PKiKP 19 13 14.0 +0.9
comp=Z,1.0nm,0.5s,baz=165,slow=3.3,SNR=3.7
ARCES ARCESS Array B 127.85 350 PKP PKiKP 19 13 12.7 +0.3
comp=Z,1.7nm,0.5s,baz=52,slow=1.8,SNR=11
FINES FINESS Array B 134.77 344 PKP PKiKP 19 13 27.2 +0.7
comp=Z,2.0nm,0.9s,baz=90,slow=0.3,SNR=3.5
AKASG Malin Array Be 142.19 332 PKhKP PKPpre 19 13 35.5
comp=Z,1.2nm,0.5s,baz=45,slow=4.3,SNR=11
AKASG PKP PKiKP 19 13 42.3 +0.3
comp=Z,0.1nm,0.3s,baz=46,slow=3.7,SNR=4.4
MBAR Mbarara 145.88 238 PKPab 19 13 50.1 -0.8
BUR08 Bucovina Ar. S 146.23 332 PKPab 19 13 50.2 -0.6
BURAR Bucovina Array 146.24 332 ⇑P PKPab 19 13 50.4 -0.4
GHRR 146.33 328 ⇑P PKPab 19 13 49.6 -1.5
BR131 Keskin Array S 146.34 314 PKPab 19 13 50.1 -1.5
BRTR Keskin Array B 146.34 314 PKPbc PKPab 19 13 50.0 -1.5
comp=Z,3.2nm,0.7s,baz=136,slow=5.0,SNR=20
TRPA Tarpa 146.97 335 ⇑P PKPab 19 13 51.8 -1.8
CLL Collm 147.02 348 i PKPbc PKPab 19 13 52.5 -1.2
comp=Z,5.0nm,0.9s
DPC Dobruska-Polom 147.14 344⇑ePKP PKPab 19 13 52.1 -2.2
DOPR Dopca 147.38 330 ⇑P PKPab 19 13 53.5 -1.9
PRU Pruhonice 147.92 345⇑ePKP PKPab 19 13 53.7 -3.7
VYHS Vyhne 148.03 339 ePKP PKPab 19 13 54.4 -3.5
ARR Arges 148.18 330 ⇑P PKPab 19 13 55.7 -3.1
MODS Modra-Piesok 148.64 341 ePKP PKiKP 19 13 55.6 +0.2
SIRR Siria 148.82 334 ⇑P PKiKP 19 13 56.3 +0.5
LEF Lefka 148.84 307 ⇓P PKiKP 19 13 55.6 -0.6
KHC Kasperske Hory 148.95 346⇑ePKP PKPab 19 13 57.0 -4.7
KHC ePKPAB PKiKP 19 14 05.7 +10
GZR Gura Zlata 149.03 332 ⇑P PKiKP 19 13 56.5 +0.2
GEC2 GERESS Array S 149.19 345 PKPbc 19 13 54.2 -1.7
GERES GERESS Array B 149.19 345 PKPbc PKiKP 19 13 57.0 +0.4
comp=Z,2.1nm,0.7s,baz=29,slow=3.0,SNR=16
BZS Buzias 149.36 333 ⇑P PKiKP 19 13 57.4 +0.4
CONA Conrad Observa 149.46 342 i PKPbc PKiKP 19 13 57.4 +0.2
comp=Z,3.9nm,0.7s
SOKA Soboth 150.83 342 i PKPbc PKiKP 19 14 00.5 +0.4
comp=Z,3.3nm,0.8s
KBA Koelnbreinsper 150.92 345 i PKPbc PKiKP 19 14 00.2 -0.1
comp=Z,3.1nm,0.6s
WATA Walderalm 151.09 347 i PKPbc PKiKP 19 14 01.3 +0.6
comp=Z,2.7nm,0.5s
WTTA Wattenberg 151.14 347 i PKiKP PKiKP 19 14 01.7 +0.9
comp=Z,5.2nm,0.6s
SQTA Sankt Quirin 151.27 347 i PKPbc PKiKP 19 14 01.5 +0.4
comp=Z,4.8nm,0.7s
ABTA Abfaltersbach 151.43 345 i PKPbc PKiKP 19 14 01.5 +0.2
comp=Z,5.1nm,0.6s
FUORN Ofenpass-Fuorn 152.04 348 PKiKP 19 14 03.9 +1.1
TORD Torodi Ar. Bea 173.81 173 PKP PKPdf 19 14 16.8 +0.4
comp=Z,0.8nm,0.9s,baz=126,slow=2.0,SNR=2.6
TORD PKPab PKPab 19 15 52.1 +1.3
comp=Z,0.6nm,0.6s,baz=180,slow=5.3,SNR=3.3

IDC 24 18:58:59.7±1.8, 7.36S×127.06E, h0km, mb3.3/2, mb1 3.9/5, mb1mx3.5/46, mbtmp3.7/5, ML3.9/3, MS3.8/1, Ms1 3.8/1, ms1mx2.6/21, Error ellipse: s-maj=78.1km s-min=24.4km az=69.0
NEIC 24 18:59:10.8±1.7, 7.81S±0.08×127.60E±0.10, h137km±10km, mb4.6/1, Error ellipse: s-maj=15.6km s-min=9.6km az=51.0
DJA 24 18:59:15.5±1.6, 8°S±6°×12°7E±°, h20km±14km, M3.5/7, mb3.1/1, MLv3.7/7
ISC 24 18:59:01.0±0.7, 7.51S±0.06×127.08E±0.05, h10km, n21, σ2.30/22, Banda Sea

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res
SOEI Soe 3.56 231 P Pg 19 00 08.5 -0.9
SOEI S Sb 19 00 49.5 +1.8
SOEI Soe 3.56 231 Pg 19 00 08.5 -0.9
SOEI Sb 19 00 50.4 +2.7
AAI Ambon 3.96 16 P Pg 19 00 18.4 +1.6
SAUI Saumlaki 4.21 97 P Pb 19 00 16.8 +1.6
SAUI Saumlaki 4.21 97 Pn Pn 19 00 07.1 +1.9
MSAI Masohi 4.53 24 P Pg 19 00 27.0 -0.8
MMRI Maumere 4.92 257 P Pb 19 00 29.0 +1.6
EDFI Ende, Flores 5.48 257 P Pb 19 00 35.8 -1.0
KNRA Kununurra 8.28 169 Pn 19 01 05.4 +4.2
KNRA Sn 19 02 29.2 -5.8
FITZ Fitzroy Crossi 10.62 187 Pn Pn 19 01 35.5 +2.2
0.3nm,0.3s,baz=3.9,slow=11,SNR=9.9
FITZ Sn Sn 19 03 25.4 -7.0
1.2nm,0.3s,baz=122,slow=23,SNR=7.5
FITZ Fitzroy Crossi 10.62 187 Pn 19 01 35.7 +2.4
WB0 Warramunga Arr 14.10 151 P Pn 19 02 22.6 +1.6
WRAB Tennant Creek 14.22 151 P Pn 19 02 23.1 +0.5
WRA Warramunga Arr 14.22 151 Pn Pn 19 02 23.7 +1.1
0.6nm,0.3s,baz=321,slow=12,SNR=24
WRA Sn Sn 19 04 45.8 -15
1.2nm,0.3s,baz=333,slow=22,SNR=7.5
WB2 Warramunga Arr 14.23 151 P Pn 19 02 23.5 +0.7
WR0 Warramunga Arr 14.34 150 P Pn 19 02 24.2 0.0
ASAR Alice Springs 17.35 159 P P 19 03 05.7 +0.9
1.3nm,0.3s,baz=338,slow=12,SNR=5.7
ASAR S Sn 19 06 05.1 -12
0.3nm,0.3s,baz=323,slow=15,SNR=4.6
MORW Morawa 23.84 205 P P 19 04 11.3 -3.1
PSI Prapat 29.90 289 LR LR 19 18 08.7
comp=Z,172nm,18.3s,baz=325,slow=39
CMAR Chiang Mai Arr 37.90 313 P P 19 06 18.1 -0.6
0.6nm,0.7s,baz=140,slow=7.1,SNR=8.2
SONM Songino Array 58.06 344 P P 19 08 53.3 -1.2
0.1nm,0.5s,baz=140,slow=5.6,SNR=2.6

IDC 24 19:10:54.3±2.7, 9.95S×119.62E, h0km, mb3.3/1, mb1 3.3/4, mb1mx3.1/49, mbtmp3.1/4, ML2.8/3, Error ellipse: s-maj=236.4km s-min=28.2km az=53.0
DJA 24 19:10:58.9±1.0, 10°S±8°×11°9E±°, h13km±6km, M3.5/9, mb3.9/1, MLv3.9/9
ISC 24 19:10:58.0±1.0, 10.35S±0.08×119.31E±0.06, h35km, n12, σ3.23/15, Sumba region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res
WBSI Waikabubak, Su 0.71 6 P Pn 19 11 09.6 -2.0
WSI Waingapu 1.19 55 P Pn 19 11 18.9 +0.8
WSI S Sn 19 11 34.7 +1.7
BASI Baing, Sumba 1.25 84 P Pn 19 11 22.1 +3.1
PLAI Plampang 2.14 315 P Pn 19 11 32.5 +1.2
EDFI Ende, Flores 2.84 56 P Pn 19 11 42.1 +1.2
MMRI Maumere 3.35 60 P Pn 19 11 50.0 +2.1
BKSI Bulukumba 5.06 9 P Pn 19 12 11.3 -0.1
JAGI Jajag, Banyuwa 5.42 290 P Pn 19 12 17.7 +1.3
FITZ Fitzroy Crossi 9.85 142 Pn Pn 19 13 18.4 +1.2
0.1nm,0.3s,baz=330,slow=14,SNR=5.1
FITZ Sn Sn 19 15 01.6 -4.8
0.2nm,0.3s,baz=180,slow=23,SNR=7.3
WRA Warramunga Arr 17.35 125 P Pn 19 14 56.6 -1.0
0.0nm,0.3s,baz=297,slow=9.5,SNR=1.0
WRA S Sn 19 18 01.3 -8.3
0.1nm,0.3s,baz=300,slow=26,SNR=4.8
ASAR Alice Springs 19.21 135 P Pn 19 15 22.2 +1.9
0.0nm,0.3s,baz=305,slow=11,SNR=2.2
ASAR S Sn 19 18 43.9 -11
baz=310,slow=23,SNR=2.7
MKAR Makanchi Array 65.79 333 P P 19 21 39.8 +0.2
0.2nm,0.5s,baz=132,slow=8.4,SNR=3.0

KRSC 24 19:20:39.4±1.6, 48.29N×154.75E, h111km±29km, ML3.9
IDC 24 19:20:44.1±2.9, 48.24N×154.24E, h98km±27km, mb3.1/9, mb1 3.3/11, mb1mx3.0/71, mbtmp3.5/11, MS2.9/1, Ms1 2.9/1, ms1mx2.2/24, Error ellipse: s-maj=26.8km s-min=15.4km az=135.0
ISC 24 19:20:42.4±0.9, 48.4N±0.1×154.6E±0.2, h100km, n26, σ0.94/16, mb3.3/10, Kuril Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res
SKR Severo-Kuril's 2.53 22 eS Sn 19 21 52.6 +0.6
PAU Pauzhetka 3.42 24 S Sn 19 22 14.5 +1.2
KDTR Khodutka, Kamc 4.11 31 eP Pn 19 21 42.7 -0.2
KDTR eS Sn 19 22 29.7 -0.2
ASAK Asacha 4.54 26 P Pn 19 21 47.6 -1.3
MTVR Mutnovka 4.72 27 P Pn 19 21 52.1 +0.8
RUS Russkaya 4.78 30 P Pn 19 21 51.6 -0.4
RUS S Sn 19 22 44.4 -1.7

PETK Petropavlovsk- 5.14 21 P Pn 19 22 00.3 +3.3
0.7nm,0.3s,baz=202,slow=15,SNR=5.0
ASAJ Asahikawa 9.35 248 P Pn 19 22 53.2 -0.9
0.3nm,0.3s,baz=84,slow=10,SNR=4.7
KSRS Korea Array 22.28 251 P P 19 25 30.6 -0.5
0.6nm,0.6s,baz=43,slow=10,SNR=3.5
H11N2 WAKE ISLAND Hy 30.23 157 T T 19 58 24.0
baz=345,slow=76,SNR=21
H11N1 WAKE ISLAND Hy 30.24 157 T T 19 58 19.3
baz=345,slow=76,SNR=36
H11N3 WAKE ISLAND Hy 30.24 157 T T 19 58 25.1
baz=345,slow=76,SNR=20
H11S1 WAKE ISLAND Hy 31.35 158 T T 19 59 49.2
baz=344,slow=76,SNR=142
H11S3 WAKE ISLAND Hy 31.36 158 T T 19 59 50.0
baz=344,slow=76,SNR=155
H11S2 WAKE ISLAND Hy 31.36 158 T T 19 59 45.5
baz=344,slow=76,SNR=97
TLY Talaya 32.39 295 LR LR 19 42 59.5
comp=Z,20nm,18.3s,baz=170,slow=42
MKAR Makanchi Array 47.13 297 P P 19 29 04.4 +0.1
0.2nm,0.6s,baz=68,slow=8.0,SNR=2.8
YKA Yellowknife Ar 49.02 38 P P 19 29 22.7 +4.1
0.3nm,0.8s,baz=299,slow=7.7,SNR=3.5
BVAR Borovoye Array 50.64 309 P P 19 29 31.3 +0.4
0.3nm,0.4s,baz=55,slow=8.6,SNR=4.7
CMAR Chiang Mai Arr 53.75 256 P P 19 29 54.8 +0.5
0.4nm,0.7s,baz=41,slow=6.2,SNR=3.7
PMG Port Moresby 57.88 189 P P 19 30 23.1 -0.6
8.1nm,0.8s,baz=344,slow=7.4,SNR=3.0
NVAR Mina Array Bea 60.79 64 P P 19 30 48.4 +4.5
0.1nm,0.4s,baz=302,slow=5.2,SNR=2.3
ULM Lac du Bonnet 64.64 42 P P 19 31 12.9 +3.9
0.7nm,0.4s,baz=323,slow=5.1,SNR=2.6
WRA Warramunga Arr 70.37 200 P P 19 31 45.8 +0.5
0.4nm,0.7s,baz=13,slow=5.9,SNR=5.9
ASAR Alice Springs 74.06 200 P P 19 32 08.6 +1.4
0.2nm,0.5s,baz=8.8,slow=5.6,SNR=5.2
TORD Torodi Ar. Bea 114.22 331 PKP PKPdf 19 39 11.4 +1.1
0.3nm,0.6s,baz=59,slow=3.1,SNR=3.8

IDC 24 19:26:08.3±1.1, 53°28N×164°59W, h0km, mb3.8/18, mb1 3.9/19, mb1mx3.7/83, mbtmp3.8/19, ML3.0/1, Error ellipse: s-maj=29.3km s-min=14.9km az=4.0
NEIC 24 19:26:10.8±2.1, 53°03N±0°08×164°55W±0°03, h32km±6km, Error ellipse: s-maj=11.6km s-min=1.9km az=169.0
AEIC 24 19:26:10.5±2.3, 53°04N±0°08×164°57W±0°09, h61km±6km, ML3.5/33, Error ellipse: s-maj=11.1km s-min=7.9km az=170.0
ISC 24 19:26:07.6±1.9, 53°09N±0°08×164°41W±0°04, h7km±11km, n82, σ1°26/81, mb3.8/18, Unimak Island region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
AKSA Akutan Strait 1.30 324 Pg 19 26 32.8 +0.3
AKSA Akutan Strait 1.30 324 Pg 19 26 32.7 +0.3
AKSA Sb 19 26 49.0 -0.2
AKUT Akutan 1.32 323 Pg 19 26 33.2 +0.2
AKUT Akutan 1.32 323 Sg 19 26 51.0 +0.8
AKBBA Akutan Broad B 1.36 319 Pg 19 26 33.7 +0.1
AKBBA Sb 19 26 51.1 +0.1
WESE West Dahl East 1.39 356 Pg 19 26 34.6 +0.4
AKLV Akutan Long Va 1.42 320 Pg 19 26 34.4 -0.3
AKLV Sn 19 26 52.0 -0.7
WESP Westdahl Peak 1.42 353 Pg 19 26 35.4 +0.6
UNV Unalaska Valle 1.46 302 Pb 19 26 34.4 -0.7
UNV Unalaska Valle 1.46 302 Sn 19 26 51.5 -2.3
MREP Makushin Rep't 1.57 298 Pb 19 26 36.1 -0.9
MNAT Makushin Natee 1.57 301 Pb 19 26 36.3 -0.7
MNAT Sn 19 26 55.1 -1.5
MTBL Makushin Table 1.61 304 Pb 19 26 37.2 -0.6
MGOD Makushin Gods 1.63 297 Pb 19 26 36.8 -1.2
MSW Makushin Switc 1.64 301 Pb 19 26 37.3 -0.9
MSW Sn 19 26 57.4 -0.9
SSBA Shishaldin 1.70 6 Pb 19 26 39.1 0.0
MCIR Makushin Cirqu 1.71 301 Pb 19 26 38.7 -0.7
FALS False Pass 1.87 18 Pb 19 26 41.7 -0.3
OKFG Magazine Ridge 2.13 280 Pn 19 26 43.3 -0.2
OKTU Okmok Mt. Tuli 2.20 279 Pn 19 26 44.4 -0.2
OKSP Okmok Steeple 2.34 276 Pb 19 26 45.9 -0.6
DT1 Dutton Round H 2.38 31 Pb 19 26 49.2 -1.6
NIKH Nikolski High 2.69 269 Pn 19 26 50.0 -1.2
SDPT Sand Point 3.24 44 Pn Pb 19 27 01.4 -4.0
CNBA Chernabura Isl 3.34 57 Pn Pn 19 27 01.9 +1.8
CHGN Chignik 4.74 45 Pn Pn 19 27 21.3 +1.9
KOFP Korovin Flat P 5.95 266 Pn 19 27 36.5 +0.4
ATKA Atka Island 6.02 265 Pn Pn 19 27 36.7 -0.3
GSMY Great Sitkin M 7.18 266 Pn 19 27 53.3 +0.4
ADK Adak 7.59 266 Pn Pn 19 27 58.7 +0.1
KIWB Kanaga Island 7.88 266 Pn Pn 19 28 02.6 +0.1
SUA Susitna One 11.16 36 Pn Pn 19 28 47.6 0.0
SKT Skwentna 11.26 33 Pn Pn 19 28 51.8 +3.0
RC01 Rabbit Creek A 11.29 39 Pn Pn 19 28 49.9 +0.7
PPLA Purkeypile 11.75 28 Pn 19 28 54.1 -1.6
KNK Knik Glacier 11.98 40 Pn Pn 19 28 59.0 +0.4
GHO Glory Hole Cre 12.03 38 Pn Pn 19 28 59.1 -0.2
HIN Hinchinbrook I 12.23 46 Pn Pn 19 29 02.5 +0.5
SML Sawmill 12.27 38 Pn Pn 19 29 02.1 -0.5
FID Port Fidalgo 12.41 45 Pn Pn 19 29 05.6 +1.1
EYAK Cordova Ski Ar 12.63 46 Pn Pn 19 29 07.3 -0.1
SCM Sheep Creek Mo 12.66 39 Pn Pn 19 29 07.3 -0.7
RAGM Ragged Mountai 13.03 48 Pn Pn 19 29 14.3 +1.3
DHY Denali Highway 13.42 35 Pn Pn 19 29 18.3 0.0
MLY Manley 13.84 25 Pn Pn 19 29 23.5 -0.6
CRQM Cirque 13.87 48 Pn Pn 19 29 24.0 -0.7
GLB Gilahina Butte 13.88 45 Pn Pn 19 29 23.8 -0.8
VRDI Verde Repeater 13.94 46 Pn Pn 19 29 25.7 +0.2
TGL Tana Glacier 14.01 48 Pn Pn 19 29 27.6 +1.1
PAX Paxson 14.03 38 Pn Pn 19 29 27.1 +0.4
BALM Baldy 14.34 48 Pn Pn 19 29 32.1 +1.1
BARN Barnard Glacie 14.66 48 Pn Pn 19 29 33.5 -1.9
MENT Mentasta 14.68 40 Pn Pn 19 29 36.1 +0.7
ILAR Eielson Array 14.73 31 Pn Pn 19 29 33.7 -2.4
0.1nm,0.3s,baz=224,slow=13,SNR=3.2
INK Inuvik 21.11 32 P P 19 30 53.2 +0.8
1.8nm,0.4s,baz=249,slow=9.9,SNR=12
INK Inuvik 21.11 32 P P 19 30 52.5 +0.1
PETK Petropavlovsk- 22.58 285 P P 19 31 08.7 +0.4
1.2nm,0.6s,baz=78,slow=10,SNR=3.3
SEY Seymchan 24.44 311 P P 19 31 26.4 -0.2
1.4nm,0.6s,baz=117,slow=8.2,SNR=7.5
MA2 Magadan 25.27 303 P P 19 31 34.2 +0.1
1.5nm,0.3s,baz=106,slow=11,SNR=4.0
YKA Yellowknife Ar 27.48 50 P P 19 31 56.4 +2.4
0.2nm,0.4s,baz=273,slow=8.9,SNR=6.1
TIXI Tiksi 33.69 328 P P 19 32 47.9 -0.8
0.5nm,0.7s,baz=95,slow=8.2,SNR=2.1
TIXI Tiksi 33.69 328 P P 19 32 45.3 -3.4
NVAR Mina Array Bea 34.70 96 P P 19 33 01.7 +3.5
0.5nm,0.7s,baz=289,slow=8.2,SNR=3.5
H11N2 WAKE ISLAND Hy 39.99 225 T T 20 16 13.0
baz=26,slow=76,SNR=8.0
H11N3 WAKE ISLAND Hy 40.00 225 T T 20 16 11.0
baz=26,slow=76,SNR=8.0
H11N1 WAKE ISLAND Hy 40.01 225 T T 20 16 15.2
baz=26,slow=76,SNR=7.4
ULM Lac du Bonnet 41.13 65 P P 19 33 53.5 +1.6
1.4nm,0.4s,baz=304,slow=11,SNR=4.4
H11S1 WAKE ISLAND Hy 41.16 224 T T 20 17 35.9
baz=26,slow=76,SNR=7.4
H11S2 WAKE ISLAND Hy 41.18 224 T T 20 17 39.2
baz=26,slow=76,SNR=7.6
H11S3 WAKE ISLAND Hy 41.18 224 T T 20 17 42.3
baz=26,slow=76,SNR=7.5
TX31 Lajitas Ar. Si 49.75 93 P P 19 34 59.2 -1.5
TX32 Lajitas Array 49.75 93 P P 19 34 57.0 -3.7
TXAR Lajitas Array 49.75 93 P P 19 35 02.8 +2.1
0.8nm,0.6s,baz=301,slow=5.9,SNR=12
SONM Songino Array 53.48 303 P P 19 35 29.4 +1.1
0.5nm,0.8s,baz=42,slow=6.6,SNR=4.7
SONM PcP PcP 19 36 34.2 -1.0
0.1nm,0.5s,baz=67,slow=4.8,SNR=3.4
ARCES ARCESS Array B 57.47 356 P P 19 35 56.8 +0.2
3.7nm,0.9s,baz=10,slow=6.4,SNR=3.2
BVAR Borovoye Array 64.81 327 P P 19 36 47.6 +1.0
1.2nm,0.6s,baz=44,slow=6.6,SNR=9.4
ARU Arti 65.29 335 P P 19 36 50.0 +0.4
0.4nm,0.5s,baz=321,slow=18,SNR=3.2
MKAR Makanchi Array 65.44 316 P P 19 36 50.9 0.0
0.5nm,0.7s,baz=49,slow=4.4,SNR=5.8
FINES FINESS Array B 65.51 354 P P 19 36 52.2 +1.2
1.1nm,0.5s,baz=18,slow=6.6,SNR=9.2
AKTO Aktyubinsk 70.82 333 P P 19 37 26.1 +1.6
1.7nm,0.4s,baz=16,slow=4.1,SNR=4.1
AKASG Malin Array Be 75.95 351 P P 19 37 54.5 -0.2
0.2nm,0.4s,baz=17,slow=6.6,SNR=4.1
CMAR Chiang Mai Arr 79.35 286 P P 19 38 14.5 +0.3
0.4nm,0.5s,baz=30,slow=5.6,SNR=4.4

IDC 24 19:40:36.2±1.5, 1°81N×126°24E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.4/40, mbtmp3.6/5, ML3.1/1, Error ellipse: s-maj=116.7km s-min=19.7km az=70.0, Northern Molucca Sea

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
FITZ Fitzroy Crossi 19.79 182 P P 19 45 07.6 -0.6
0.0nm,0.3s,baz=4.4,slow=13,SNR=2.0
WRA Warramunga Arr 23.03 160 P P 19 45 42.9 -0.2
1.3nm,0.5s,baz=339,slow=11,SNR=23
ASAR Alice Springs 26.39 164 P P 19 46 15.0 +0.4
0.7nm,0.8s,baz=347,slow=13,SNR=12
MKAR Makanchi Array 58.86 326 P P 19 50 37.6 +0.8
0.3nm,0.5s,baz=109,slow=7.8,SNR=8.6
ZALV Zalesovo Beam 62.08 334 P P 19 50 57.5 -1.1
0.6nm,0.5s,baz=129,slow=11,SNR=3.5

IDC 24 19:56:14.2±3.3, 6°28S×150°09E, h32km±39km, mb3.3/4, mb1 3.6/6, mb1mx3.3/39, mbtmp3.6/6, ML2.5/2, Error ellipse: s-maj=75.3km s-min=16.2km az=125.0
ISC 24 19:56:14.3±1.5, 6°4S±0°3×150°3E±0°3, h43km, n7, σ1°73/8, mb3.4/3, New Britain region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KRVT Keravat (AS076 2.70 41 Pn Pn 19 56 55.1 -0.1
4.0nm,0.3s,baz=230,slow=17,SNR=1.9
KRVT Pg 19 57 03.4
20nm,0.3s,baz=240,slow=20,SNR=5.4
KRVT Lg Lg 19 57 43.1
4.6nm,0.3s,baz=197,slow=19,SNR=1.9
PMG Port Moresby 4.31 225 Pn Pn 19 57 18.7 +1.3
5.7nm,0.3s,baz=35,slow=12,SNR=17
PMG Sn Sn 19 58 03.6 -2.8
8.7nm,0.3s,baz=222,slow=23,SNR=8.4
WRA Warramunga Arr 20.53 227 P P 20 00 49.0 -0.2
0.5nm,0.3s,baz=52,slow=11,SNR=21
ASAR Alice Springs 23.31 221 P P 20 01 20.3 +1.7
0.4nm,0.6s,baz=54,slow=9.3,SNR=4.8
FITZ Fitzroy Crossi 26.70 242 P P 20 01 48.3 -1.4
0.9nm,0.4s,baz=56,slow=7.6,SNR=8.4
SONM Songino Array 66.34 329 P P 20 06 59.5 +0.8
0.2nm,0.6s,baz=143,slow=5.6,SNR=2.6
TORD Torodi Ar. Bea 148.33 285 PKPbc PKPbc 20 15 56.5 -0.5
0.4nm,0.7s,baz=85,slow=1.4,SNR=3.9

IDC 24 20:08:31.7±0.7, 8°15S×125°15E, h0km, mb4.1/8, mb1 4.2/11, mb1mx4.0/32, mbtmp4.1/11, ML4.1/3, MS3.4/4, Ms1 3.3/4, ms1mx2.9/23, Error ellipse: s-maj=34.5km s-min=15.8km az=68.0
DJA 24 20:08:35.7±0.3, 8°S±3°×12°5E±°, h10km, M4.5/19, mB5.1/6, mb4.8/13, MLv4.4/19, MLv4.6/8, Mw(mB)4.4/6
NEIC 24 20:08:36.2±2.3, 8°13S±0°04×125°35E±0°08, h45km±9km, mb4.4/11, Error ellipse: s-maj=11.8km s-min=4.7km az=113.0
ISC 24 20:08:32.8±0.5, 8°28S±0°05×125°37E±0°06, h10km, n68, σ2°13/73, mb4.4/15, Timor region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
SOEI Soe 1.83 216 P Pg 20 09 09.3 +1.4
SOEI Soe 1.83 216 Pb 20 09 08.1 +1.6
MMRI Maumere 3.12 263 P Pn 20 09 22.5 +0.4
MMRI Maumere 3.12 263 Pn 20 09 22.3 +0.2
EDFI Ende, Flores 3.67 262 P Pn 20 09 30.8 +1.1
BBSI Bau Bau 3.92 315 P Pn 20 09 32.1 -1.0
KDI Kendari 5.08 327 P Pn 20 09 47.7 -1.4
BASI Baing, Sumba 5.11 247 P Pn 20 09 51.8 +2.4
WSI Waingapu 5.20 254 P Pn 20 09 52.5 +1.8
1.0nm234nm,0.7s
NLAI Namlea 5.29 19 P Pn 20 09 55.0 +3.0
0.4nm131nm,0.9s
BKSI Bulukumba 5.98 299 P Pn 20 09 59.8 -1.6
0.1nm0.1nm356nm21nm,0.5s
WBSI Waikabubak, Su 6.06 257 P Pn 20 10 04.5 +1.9
0.2nm48nm,0.7s
SANI Sanana 6.21 6 P Pn 20 10 05.5 +0.8
0.3nm0.3nm2μm63nm,0.5s
KAPI Kappang 6.45 300 Pn Pn 20 10 06.5 -1.4
3.4nm,0.3s,baz=50,slow=2.4,SNR=4.8
KAPI LR LR 20 12 36.4
comp=Z,189nm,18.4s,baz=84,slow=40
BNSI Bone 6.49 306 P Pn 20 10 07.9 -0.6
0.5nm0.5nm2μm163nm,0.7s
SPSI Sidrap Palu 7.02 307 P Pn 20 10 15.6 -0.2
0.2nm0.2nm37nm,0.8s
PLAI Plampang 7.53 265 P Pn 20 10 25.4 +2.7
0.2nm0.2nm59nm,0.9s
TTSI Tana Toraja 7.58 313 P Pn 20 10 23.8 +0.4
0.1nm0.1nm582nm29nm,0.5s
LUWI Luwuk 7.64 340 P Pn 20 10 23.4 -0.8
0.5nm0.5nm2μm106nm,0.5s
LUWI Luwuk 7.64 340 Pn 20 10 22.9 -1.3
LBMI Labuha 7.88 16 P Pn 20 10 31.3 +3.7
0.1nm26nm,1.2s
KNRA Kununurra 8.07 156 Pn 20 10 34.0 +3.8
APSI Ampana 8.20 333 P Pn 20 10 31.4 -0.5
MRSI Marisa 9.34 338 P Pn 20 10 47.2 -0.4
FITZ Fitzroy Crossi 9.77 178 Pn Pn 20 10 54.4 +0.9
1.9nm,0.3s,baz=346,slow=8.9,SNR=37
FITZ Sn Sn 20 12 38.4 -4.9
7.1nm,0.3s,baz=81,slow=7.7,SNR=15
FITZ LR LR 20 15 41.4
comp=Z,144nm,18.5s,baz=348,slow=43
FITZ Fitzroy Crossi 9.77 178 Pn 20 10 55.5 +2.1
PSA00 Pilbara Seismi 14.25 201 Pn Pn 20 11 54.7 -0.1
WB0 Warramunga Arr 14.39 144 Pn 20 11 57.4 +0.7
WRAB Tennant Creek 14.49 144 Pn 20 11 58.7 +0.6
WRA Warramunga Arr 14.49 144 Pn Pn 20 11 58.6 +0.4
1.5nm,0.3s,baz=316,slow=13,SNR=46
WRA Sn Sn 20 14 34.3 -4.7
1.5nm,0.3s,baz=326,slow=22,SNR=13
WB2 Warramunga Arr 14.50 144 Pn 20 11 58.4 +0.1
WR0 Warramunga Arr 14.62 144 Pn 20 11 59.3 -0.6
AS31 Alice Springs 17.35 153 P P 20 12 37.8 +1.1
ASAR Alice Springs 17.35 153 P Pn 20 12 36.8 +1.4
0.7nm,0.3s,baz=320,slow=11,SNR=38
ASAR Sn Sn 20 15 43.8 -4.9
0.5nm,0.3s,baz=314,slow=17,SNR=9.8
ASAR LR LR 20 20 29.7
comp=Z,159nm,19.4s,baz=320,slow=41
CISI Cisompet, Garu 17.40 271 Pn Pn 20 12 33.3 -2.6
CISI IAmb IAmb 20 13 28.4
comp=Z,34nm,1.1s
STKA Stephens Creek 27.92 149 P P 20 14 26.3 +3.0
comp=Z,0.8nm,0.5s,baz=318,slow=12,SNR=6.0
STKA LR LR 20 25 59.8
comp=Z,79nm,18.4s,baz=9.7,slow=37
CMAR Chiang Mai Arr 37.22 316 P P 20 15 44.1 -0.6
comp=Z,1.0nm,0.7s,baz=139,slow=6.6,SNR=8.5
CHTO Chiang Mai 37.47 316 P P 20 15 45.4 -1.4
MJAR Matsushiro Arr 46.18 14 P P 20 16 58.2 +0.3
comp=Z,1.6nm,0.8s,baz=186,slow=9.3,SNR=4.6
SHL Shillong 46.83 317 P P 20 17 01.1 -2.3
ODAN Odare 50.75 315 eP P 20 17 32.4 -1.2
TAPN Taplejung 50.83 316 eP P 20 17 32.7 -1.6
comp=Z,17nm,0.9s
RAMN Ramite 51.36 314 eP P 20 17 37.3 -0.9
comp=Z,11nm,0.7s
GUN Gumba 52.45 315 eP P 20 17 45.0 -1.5
PKI Pulchoki 52.58 314 eP P 20 17 45.5 -1.9
comp=Z,7.0nm,0.9s
PKIN Phulchoki 52.59 314 eP P 20 17 45.5 -1.9
DMN Daman 52.82 314 eP P 20 17 47.3 -1.8
GKN Gorkha 53.39 314 eP P 20 17 51.7 -1.4
DANN Dangsing 54.22 314 eP P 20 17 57.8 -1.6
comp=Z,17nm,0.9s
MNCI Minicoy 54.66 286 PcP 20 19 02.0 -3.4
PLWZ Palliser 55.04 136 P P 20 18 03.8 -1.1
SONM Songino Array 58.34 345 P P 20 18 27.3 -0.9
comp=Z,0.9nm,0.9s,baz=160,slow=6.4,SNR=5.8
KSH Kashi 65.94 320 P P 20 19 23.8 +4.3
KSH PcP PcP 20 19 56.1 +5.9
KSH S S 20 28 10.5 +3.3
KSH ScS ScS 20 29 18.4 +2.4
MK31 Makanchi Array 66.87 329 P P 20 19 23.5 -1.6
MK31 IAmb IAmb 20 19 24.7
comp=Z,2.8nm,0.9s
MKAR Makanchi Array 66.87 329 P P 20 19 24.0 -1.1
comp=Z,2.9nm,0.8s,baz=134,slow=7.7,SNR=32
MAKZ Makanchi 67.04 329 P P 20 19 24.3 -1.9
MAKZ IAmb IAmb 20 19 25.6
comp=Z,1.8nm,0.8s
PETK Petropavlovsk- 67.04 20 P P 20 19 26.9 +0.8
comp=Z,1.8nm,0.7s,baz=208,slow=6.7,SNR=5.0
KBL Kabul 68.14 312 P P 20 19 30.6 -3.0
KBL IAmb IAmb 20 19 45.9
comp=Z,3.0nm,0.8s
AAK Ala-Archa 68.63 322 P P 20 19 35.0 -1.5
AAK IAmb IAmb 20 19 36.4
comp=Z,3.5nm,0.8s
ZAA0 Zalesovo Array 70.78 336 P P 20 19 47.1 -2.2
ZAA0 IAmb IAmb 20 19 47.8
comp=Z,5.2nm,1.1s
ZALV Zalesovo Beam 70.78 336 P P 20 19 47.2 -2.1
comp=Z,2.1nm,0.6s,baz=129,slow=4.2,SNR=13
KURBB Kurchatov Arra 71.27 331 P P 20 19 51.0 -1.3
comp=Z,2.5nm,0.8s,baz=136,slow=5.1,SNR=22
KURK Kurchatov 71.29 331 P P 20 19 50.7 -1.8
SEY Seymchan 73.97 12 P P 20 20 08.3 +0.2
comp=Z,0.8nm,0.2s,baz=140,slow=14,SNR=7.3
TIXI Tiksi 79.79 1 P P 20 20 38.4 -2.3
TIXI IAmb IAmb 20 20 40.1
comp=Z,2.7nm,0.5s
CPUP Villa Florida 145.50 176 PKPbc PKPbc 20 28 12.5 +0.5
comp=Z,1.9nm,0.6s,baz=135,slow=2.6,SNR=4.2
LPAZ La Paz 152.18 151 PKPbc PKPbc 20 28 31.8 +1.3
comp=Z,0.8nm,0.5s,baz=93,slow=2.8,SNR=3.5
SIV San Ignacio 155.06 165 PKPab PKPab 20 28 52.3 +0.9
comp=Z,1.3nm,0.5s,baz=231,slow=6.7,SNR=6.3

WEL 24 20:13:36.4±1.1, 34°S±15°×17°8W±2°2, h197km±23km, M4.2/19, mB4.7/10, ML4.4/6, MLv4.5/19, Mw(mB)3.9/10, South of Kermadec Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
MXZ Matakaoa Point 4.36 216 P Pn 20 14 40.9 -1.6
MXZ S Sn 20 15 34.9 +0.3
WMGZ Waiomatatini S 4.52 214 P Pn 20 14 44.0 -0.5
WMGZ S Sn 20 15 36.2 -1.9
PKGZ Pakihiroa 4.73 216 P Pn 20 14 46.5 -0.7
PKGZ S Sn 20 15 43.5 +0.4
HAZ Te Kaha 4.78 219 P Pn 20 14 48.3 +0.5
PUZ Puketiti 4.79 213 P Pn 20 14 48.6 +0.5
PUZ S Sn 20 15 44.3 -0.3
RUGZ Raukumara Rang 4.99 218 P Pn 20 14 48.8 -1.8
RUGZ S Sn 20 15 49.7 +0.5
TKGZ Te Karaka 5.28 214 P Pn 20 14 54.1 -0.1
TKGZ S Sn 20 15 57.1 +1.5
WHRZ Whale Island 5.29 223 P Pn 20 14 54.9 +0.5
MWZ Matawai 5.35 216 P Pn 20 14 54.7 -0.5
MWZ S Sn 20 15 59.0 +1.6
RAGZ Rawiri 5.53 216 P Pn 20 14 58.2 +0.6
RIGZ Rimuhau 5.54 213 P Pn 20 14 58.9 +1.3
RIGZ S Sn 20 16 02.3 +0.6
PRGZ Paritu Road 5.66 210 P Pn 20 15 00.2 +1.0
PRGZ S Sn 20 16 04.5 -0.2
RTZ Ruatahuna 5.84 218 P Pn 20 15 01.1 -0.4
RAHZ Arahi 6.02 216 P Pn 20 15 04.4 +0.6
WHHZ Waihua 6.08 214 P Pn 20 15 05.3 +0.8
MTHZ Maungataniwha 6.09 217 P Pn 20 15 04.2 -0.5
MRHZ Matea Rd 6.29 220 P Pn 20 15 06.1 -1.3
ARHZ Aropaoanui 6.34 214 P Pn 20 15 07.7 -0.2
BKZ Black Stump Fm 6.50 217 P Pn 20 15 09.7 -0.4
CKHZ Cape Kidnapper 6.62 212 P Pn 20 15 11.3 -0.3
MCHZ McNeill Hill 6.62 215 P Pn 20 15 11.6 +0.1
KWHZ Kaweka Forest 6.74 216 P Pn 20 15 12.3 -0.9
KAHZ Kahuranaki 6.82 212 P Pn 20 15 14.1 -0.1
WTVZ West Tongariro 6.95 222 P Pn 20 15 15.6 -0.3
BHHZ Black Hill Sta 6.97 218 P Pn 20 15 15.3 -0.8

DJA 24 20:36:50.5±1.9, 1°S±2°×12°5E±°, h16km±17km, M4.0/19, mB4.8/3, mb4.2/7, MLv3.9/19, Mw(mB)4.1/3, Southern Molucca Sea

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KMSI Cibinong 1.52 339 P Pn 20 37 16.3 -0.7
KMSI S Sn 20 37 36.0 -0.5
LUWI Luwuk 1.77 264 P Pn 20 37 20.9 +0.4
LUWI S Sn 20 37 43.5 +0.9
SANI Sanana 1.88 129 P Pn 20 37 20.9 -1.1
APSI Ampana 2.88 269 P Pn 20 37 35.8 0.0
MRSI Marisa 2.91 297 P Pn 20 37 35.2 -0.9
LBMI Labuha 2.98 86 P Pn 20 37 36.7 -0.4
TNTI Ternate 3.26 60 P Pn 20 37 41.9 +0.9
NLAI Namlea 3.50 133 P Pn 20 37 44.5 +0.2
KDI Kendari 3.63 212 P Pn 20 37 45.6 -0.5
AAI Ambon 4.62 128 P Pn 20 37 59.5 -0.2
MPSI Mapaga 4.78 284 P Pn 20 38 02.6 +0.7
BBSI Bau Bau 5.00 203 P Pn 20 38 05.7 +0.7
0.1nm4μm18nm,0.9s
MSAI Masohi 5.05 119 P Pn 20 38 05.9 +0.3
0.0nm614nm8.1nm,0.4s
TTSI Tana Toraja 5.19 245 P Pn 20 38 08.2 +0.7
0.1nm11nm,0.6s
BNSI Bone 5.65 231 P Pn 20 38 13.3 -0.6
0.1nm9.8nm,0.6s
SPSI Sidrap Palu 5.67 237 P Pn 20 38 14.6 +0.4
0.1nm423nm22nm,0.4s
BKSI Bulukumba 6.25 225 P Pn 20 38 22.4 +0.2
0.1nm12nm,0.5s
SWI Sorong 6.73 90 P Pn 20 38 29.8 +1.1
0.2nm29nm,0.8s
FAKI Fak Fak 7.98 105 P Pn 20 38 44.7 -1.3

IDC 24 21:00:49.8±2.3, 29°21N×139°14E, h408km±38km, mb3.3/3, mb1 3.3/5, mb1mx2.6/66, mbtmp4.0/5, Error ellipse: s-maj=97.5km s-min=17.1km az=79.0
JMA 24 21:00:49.9±0.1, 29°24N×139°85E, h460km, M3.5
ISC 24 21:00:50.3±1.1, 29°18N±0°10×139°2E±0°2, h414km, n12, σ0°96/12, mb3.8/3, Southeast of Honshu

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
CBIJ Chichi jima 3.36 127 P P 21 01 58.0 +0.5
CBIJ eS S 21 02 51.0 -1.1
JCJ Chichijima 3.36 127 P P 21 01 58.2 +0.7
10nm,0.3s,baz=350,slow=17,SNR=43
JCJ S S 21 02 51.5 -0.6
41nm,0.3s,baz=271,slow=22,SNR=20
JHH2 Haha-jima-NKT2 3.66 133 eS S 21 02 56.4 -0.5
JHJ2 Mitsune 3.96 8 P P 21 02 05.2 +2.6
JIE Ise 5.61 338 P P 21 02 23.6 +4.6
BSO1 Boso 1 5.66 15 P P 21 02 20.4 +1.5
BSO1 eS S 21 03 31.3 -0.4
JOD2 Odawara 2 6.07 359 P P 21 02 25.6 +1.8
JRY Ryogami san 6.82 358 P P 21 02 33.1 +0.5
MJAR Matsushiro Arr 7.39 354 P P 21 02 37.4 -1.4
0.4nm,0.3s,baz=173,slow=11,SNR=15
WRA Warramunga Arr 49.06 186 P P 21 08 58.0 +0.1
0.4nm,0.3s,baz=1.2,slow=7.7,SNR=9.0
ARCES ARCESS Array B 70.70 340 P P 21 11 22.0 -0.5
3.3nm,0.9s,baz=69,slow=9.0,SNR=6.2
FINES FINESS Array B 74.91 333 P P 21 11 46.8 -0.1
1.1nm,0.6s,baz=46,slow=6.0,SNR=5.2

IDC 24 21:08:17.2±1.5, 43°66N×105°43W, h0km, mb3.8/1, mb1 3.7/7, mb1mx3.4/49, mbtmp3.5/7, ML3.1/5, MS2.5/1, Ms1 2.5/1, ms1mx2.0/64, Error ellipse: s-maj=39.6km s-min=8.2km az=149.0
NEIC 24 21:08:18.1±1.4, 43°78N±0°04×105°28W±0°08, h0km±2km, ML3.3/67, Error ellipse: s-maj=9.7km s-min=6.1km az=75.0
ISC 24 21:08:17.0±0.8, 43°78N±0°06×105°22W±0°06, h0km, n47, σ1°27/43, Wyoming

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
RSSD Black Hills 0.92 68 Pn 21 08 37.2 -0.2
K22A Casper 1.48 221 Pn 21 08 43.6 -1.4
K22A IAML 21 09 07.2
comp=E,256nm,0.3s

K22A IAML 21 09 08.1
comp=N,313nm,0.4s
PHWY Pilot Hill 2.48 184 Pn 21 08 59.7 +0.8
RWWY Rawlins 2.55 216 Pn 21 09 00.4 +0.5
RWWY IAML 21 09 37.1
comp=N,134nm,0.7s
RWWY IAML 21 09 38.3
comp=N,179nm,0.8s
N23A Red Feather La 2.93 191 Pn 21 09 06.7 +1.6
N23A IAML 21 09 51.2
comp=N,110nm,0.6s
N23A IAML 21 09 57.3
comp=E,96nm,0.9s
LAO LASA Array 3.00 347 Pn 21 09 06.7 +0.9
RLMT Red Lodge 3.19 296 Pn 21 09 09.2 +0.5
RLMT IAML 21 10 02.5
comp=E,76nm,0.9s
RLMT IAML 21 10 02.5
comp=E,70nm,0.4s
PD31 Pinedale Array 3.33 254 Pn 21 09 11.1 +0.6
PDAR Pinedale Array 3.33 254 Pn Pn 21 09 10.7 +0.2
comp=E,7.0nm,0.3s,baz=78,slow=16,SNR=32
PDAR Lg Lg 21 09 55.8
comp=E,11nm,0.3s,baz=75,slow=32,SNR=7.9
BW06 Boulder Array 3.33 254 Pn 21 09 10.8 +0.4
BW06 Sn Sn 21 09 49.7 -1.1
YNE Yellowstone No 3.65 291 Pn 21 09 15.1 +0.3
YMP Mirror Lake Pl 3.67 287 Pn 21 09 15.9 +0.6
OGNE Ogallala 3.69 139 Pn 21 09 17.7 +2.4
GCMT Greycliff 3.75 304 Pn 21 09 16.9 +0.7
LKWY Lake 3.81 284 Pn 21 09 18.7 +1.6
LKWY IAML 21 09 48.5
comp=E,35nm,0.6s
H17A Grant Village 3.91 281 Pn 21 09 17.3 -1.2
H17A IAML 21 10 23.9
comp=N,34nm,0.8s
FLWY Flagg Ranch 3.97 276 IAML 21 10 34.9
comp=N,53nm,1.6s
FLWY IAML 21 10 35.4
comp=N,41nm,1.6s
ISCO Idaho Springs 3.99 184 Pn 21 09 21.4 +1.8
SNOW Snow King Moun 4.03 267 Pn 21 09 20.8 +0.7
SNOW IAML 21 10 26.3
comp=N,37nm,1.5s
SNOW IAML 21 10 49.3
comp=N,37nm,1.4s
YNR Norris Junctio 4.03 285 Pn Pn 21 09 22.2 +2.1
YPP Pitchstone Pla 4.06 279 Pn 21 09 21.0 +0.4
REDW Red Top Meadow 4.11 266 Pn 21 09 22.6 +1.3
REDW IAML 21 10 28.6
comp=N,36nm,0.8s
REDW IAML 21 10 42.2
comp=N,48nm,0.8s
YHH Holmes Hill 4.17 286 Pn 21 09 22.8 +0.7
TPAW Teton Pass 4.17 268 Pn 21 09 22.6 +0.5
TPAW IAML 21 10 37.8
comp=N,42nm,0.8s
TPAW IAML 21 10 44.9
comp=N,25nm,1.2s
O20A White River Ci 4.28 213 IAML 21 10 40.8
comp=E,39nm,0.7s
O20A IAML 21 10 47.1
comp=N,34nm,1.3s
AHID Auburn Hatcher 4.41 259 IAML 21 10 44.1
comp=N,36nm,1.3s
AHID IAML 21 10 53.0
comp=E,28nm,1.3s
RDMU Red Mountain 4.55 227 Pn 21 09 28.2 +0.9
DGMT Dagmar 4.75 8 Pn 21 09 31.4 +1.6
SMCO Snowmass 4.78 197 IAML 21 10 58.1
comp=E,24nm,0.8s
SMCO IAML 21 10 58.7
comp=E,18nm,1.1s
KSCO Kaye Shedlock' 5.15 157 Pn 21 09 35.9 +0.6
KSCO Pg Pg 21 09 53.2 -2.3
HWUT Hardware Ranch 5.16 247 IAML 21 11 22.6
comp=E,21nm,1.0s
EGMT Eagleton 5.30 325 Pn 21 09 37.1 -0.3
MDND Maddock 5.65 42 Pn Pn 21 09 42.6 +0.4
MDND Pg 21 10 03.6 -1.7
ECSD EROS Data Cent 6.23 87 Pn 21 09 51.3 +1.1
NLU North Lily Min 6.38 236 Pn Pn 21 09 53.0 +0.5
BGU Big Grassy Mou 6.45 246 Pn Pn 21 09 53.7 +0.4
CBKS Cedar Bluff 6.45 138 Pn Pn 21 09 54.2 +1.0
AGMN Agassiz Nation 7.92 52 Pn Pn 21 10 15.2 +1.9
ELK Elko 8.03 251 Pn Pn 21 10 14.7 -0.3
comp=E,0.3nm,0.3s,baz=95,slow=10.0,SNR=3.9
ANMO Albuquerque 8.87 187 LR LR 21 13 42.7
comp=E,28nm,19.6s,baz=54,slow=37
I10CA LAC DU BONNET 8.98 41 *i* 22 02 00.0
baz=222,slow=338,SNR=0.6
ULM Lac du Bonnet 9.09 41 Pn Pn 21 10 30.2 +1.0
comp=E,1.9nm,0.3s,baz=231,slow=12,SNR=17
ULM Pg 21 11 04.3
comp=E,0.7nm,0.3s,baz=224,slow=15,SNR=6.3
ULM Lg Lg 21 13 01.6
comp=E,0.3nm,0.3s,baz=139,slow=20,SNR=3.8
FFC Flin Flon 11.16 10 Pn 21 10 57.6 -0.1
NVAR Mina Array Bea 11.22 246 Pn Pn 21 11 00.2 +1.4
comp=E,0.1nm,0.3s,baz=52,slow=10,SNR=3.6
YBH Yreka Blue Hor 13.02 267 Pn Pn 21 11 26.9 +3.7
comp=E,0.1nm,0.3s,baz=50,slow=4.4,SNR=3.8
YKA Yellowknife Ar 19.54 347 P P 21 12 45.7 0.0
comp=E,0.1nm,0.3s,baz=156,slow=12,SNR=4.1
MKAR Makanchi Array 89.57 355 P P 21 21 16.6 +0.4
comp=E,0.4nm,0.7s,baz=20,slow=3.9,SNR=5.0

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*SOME **24** 21:18:11.4, 41.50N×79.25E, h15km*
*NNC **24** 21:18:12.3±1.1, 41.51N×79.19E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=7.5km s-min=4.8km az=158.0*
*KRNET **24** 21:18:12.8±0.1, 41.52N×79.18E, h12km, mb2.4*
ISC 24 21:18:10.2±2.4, 41.48N±0.08×79.26E±0.06, h1km±13km, n40, σ1S20/66, 15C, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.19**	**328**	⇑*i*P	**Pn**	**21 18 34.0**	**-0.2**
PRZ	baz=30			⇑*i*S	Sn	21 18 49.8	-1.4
UZB	**Uzynbulak** baz=19	**1.68**	**354**	*e*P	**Pb**	**21 18 41.5**	**-0.5**
UZB	1.2nm,0.2s			*e*S	Sb	21 19 03.2	-0.5
UZB	**Uzynbulak** 3.1nm,0.1s	**1.68**	**354**	P	**Pb**	**21 18 41.8**	**-0.2**
UZB	3.6nm,0.5s			S	Sg	21 19 04.0	-0.1
KDJ	**Kajisay** 5.7nm,0.3s	**1.69**	**293**	⇑*i*P	**Pg**	**21 18 43.1**	**+0.6**
KDJ	baz=93			⇑*i*S	Sg	21 19 04.8	+0.5
ANVS	**Anan'yevo** baz=93	**1.76**	**318**	⇑*i*P	**Pb**	**21 18 44.6**	**+0.6**
ANVS	baz=19			⇑*i*S	Sg	21 19 07.7	+0.9
PDGK	**Podgornoye** baz=19	**1.86**	**5**	P	**Pb**	**21 18 45.1**	**0.0**
PDGK	0.8nm,0.2s			S	Sg	21 19 09.7	-0.2
PDGK	**Podgornoye** 5.4nm,0.5s	**1.86**	**5**	⇑P	**Pb**	**21 18 44.9**	**-0.2**
PDGK	4.4nm,0.9s			⇑S	Sg	21 19 10.6	+0.7
KPKS	**Kokpek** 11nm,0.9s	**2.03**	**348**	*e*P	**Pb**	**21 18 48.8**	**+0.8**
KPKS	9.1nm,0.1s			*e*S	Sg	21 19 15.9	+0.5
KURS	**Kuram** 19nm,0.4s	**2.17**	**339**	*e*P	**Pg**	**21 18 51.4**	**-0.3**
KURS	1.2nm,0.2s			*e*S	Sg	21 19 20.1	+0.4
KURS	**Kuram** 5.3nm,0.3s	**2.17**	**339**	Pg	**Pb**	**21 18 51.0**	**+0.8**
KURS	1.9nm,0.4s			Lg	Lg	21 19 20.1	
TNSS	**Tian-Shan** 5.5nm,0.5s	**2.32**	**313**	*e*P	**Pb**	**21 18 53.7**	**+0.6**
TNSS	2.2nm,0.3s			*e*S	Sg	21 19 24.0	-0.7
TNSS	**Tian-Shan** 6.5nm,0.2s	**2.32**	**313**	Pg	**Pb**	**21 18 53.5**	**+0.4**
TNSS	3.2nm,0.6s			Lg	Sg	21 19 24.0	
MDOK	**Medeo** 6.6nm,0.3s	**2.35**	**316**	*e*P	**Pb**	**21 18 54.0**	**+0.6**
MDOK	3.0nm,0.2s			*e*S	Sg	21 19 24.9	-0.9
MDOK	**Medeo** 7.8nm,0.7s	**2.35**	**316**	P	**Pb**	**21 18 52.1**	**-1.4**
MDOK	10nm,1.0s			S	Sb	21 19 23.0	-0.1
MDOK	**Medeo** 8.7nm,0.7s	**2.35**	**316**	Pg	**Pb**	**21 18 54.0**	**+0.6**
MDOK	3.2nm,0.2s			Lg	Lg	21 19 24.9	
KOTS	**Kotyrbulak** 6.6nm,0.5s	**2.37**	**319**	⇑*e*P	**Pb**	**21 18 54.9**	**+1.2**
KOTS	7.9nm,0.3s			*e*S	Sg	21 19 25.8	-0.5
KOTS	**Kotyrbulak** 17nm,0.3s	**2.37**	**319**	Pg	**Pb**	**21 18 54.7**	**+0.9**
KOTS	7.9nm,0.3s			Lg	Lg	21 19 25.8	
ULHL	**Ulahol** 19nm,0.7s	**2.38**	**290**	⇑*i*P	**Pb**	**21 18 54.3**	**+0.3**
ULHL	baz=89			⇑*i*S	Sb	21 19 24.4	+0.4
NRN	**Naryn** baz=89	**2.45**	**270**	⇑*i*P	**Pb**	**21 18 55.0**	**-0.3**
NRN	baz=69			⇑*i*S	Sb	21 19 26.6	+0.5
IZV	**Izvestkoviy** baz=69	**2.51**	**309**	*e*P	**Pb**	**21 18 57.6**	**+1.5**
IZV	5.6nm,0.4s			*e*S	Sg	21 19 30.8	+0.1
IZV	**Izvestkoviy** 22nm,0.5s	**2.51**	**309**	Pg	**Pb**	**21 18 57.6**	**+1.5**
IZV	8.5nm,0.8s			Lg	Lg	21 19 30.8	
BOOM	**Boomskoye usch** 22nm,0.5s	**2.67**	**293**	⇑*i*P	**Pb**	**21 18 58.2**	**-0.8**
BOOM	baz=93			⇑*i*S	Sb	21 19 31.2	-1.2
DJR	**Jarkent** baz=93	**2.88**	**8**	*e*P	**Pb**	**21 19 02.9**	**+0.4**
DJR	0.8nm,0.3s			*e*S	Sb	21 19 39.9	+1.7
DJR	**Jarkent** 3.0nm,0.3s	**2.88**	**8**	Pg	**Pb**	**21 19 02.9**	**+0.4**
DJR	0.8nm,0.3s			Lg	Lg	21 19 39.9	
KST	**Kastek** 3.0nm,0.3s	**2.90**	**304**	*e*P	**Pb**	**21 19 04.2**	**+1.3**
KST	1.3nm,0.1s			*e*S	Sg	21 19 42.4	-1.1
KST	**Kastek** 22nm,0.5s	**2.90**	**304**	Pg	**Pb**	**21 19 04.2**	**+1.3**
KST	3.5nm,0.4s			Lg	Lg	21 19 42.4	
CHKK	**Chushkaly** 22nm,0.5s	**2.91**	**326**	*e*P	**Pb**	**21 19 03.6**	**+0.7**
CHKK	1.5nm,0.2s			*e*S	Sb	21 19 41.0	+2.1
CHKK	**Chushkaly** 18nm,0.3s	**2.91**	**326**	Pg	**Pb**	**21 19 03.6**	**+0.7**
CHKK	1.5nm,0.2s			Lg	Lg	21 19 41.7	
ARXS	**Arharly** 18nm,0.3s	**2.93**	**339**	*e*P	**Pb**	**21 19 04.1**	**+0.8**
ARXS	3.3nm,0.7s			*e*S	Sg	21 19 41.9	-2.4
ARXS	**Arharly** 4.0nm,0.3s	**2.93**	**339**	Pg	**Pb**	**21 19 04.1**	**+0.8**
ARXS	3.3nm,0.7s			Lg	Lg	21 19 41.9	
KTBS	**Karatobe** 4.0nm,0.3s	**2.93**	**320**	*e*P	**Pb**	**21 19 04.2**	**+0.8**
KTBS	1.9nm,0.6s			*e*S	Sg	21 19 42.2	-2.2
KTBS	**Karatobe** 10nm,0.6s	**2.93**	**320**	Pg	**Pb**	**21 19 04.2**	**+0.8**
KTBS	1.9nm,0.6s			Lg	Lg	21 19 42.2	
DGS	**Degeres** 10nm,0.6s	**3.13**	**305**	*e*P	**Pb**	**21 19 07.2**	**+0.6**
DGS	1.0nm,0.4s			*e*S	Sb	21 19 47.4	+2.0
DGS	**Degeres** 4.8nm,0.5s	**3.13**	**305**	Pg	**Pb**	**21 19 07.3**	**+0.6**
DGS	1.2nm,0.7s			Lg	Lg	21 19 47.4	
KUU	**Kurty** 5.3nm,0.5s	**3.23**	**319**	*e*P	**Pb**	**21 19 09.6**	**+1.1**
KUU	1.2nm,0.3s			*e*S	Sg	21 19 51.5	-2.6
KUU	**Kurty** 9.3nm,0.3s	**3.23**	**319**	Pg	**Pb**	**21 19 09.6**	**+1.1**
KUU	1.5nm,0.6s			Lg	Lg	21 19 51.5	
KRBS	**Karabastau** 9.3nm,0.3s	**3.45**	**311**	*e*P	**Pb**	**21 19 13.7**	**+1.5**
KRBS	0.5nm,0.2s			*e*S	Sg	21 19 58.5	-2.6
KRBS	**Karabastau** 1.7nm,0.2s	**3.45**	**311**	Pg	**Pb**	**21 19 13.7**	**+1.5**
KRBS	0.8nm,0.4s			Lg	Lg	21 19 58.4	
KAPS	**Kapalarasan** 2.3nm,0.3s	**3.81**	**1**	*e*P	**Pb**	**21 19 19.6**	**+1.4**
KAPS	0.3nm,0.3s			*e*S	Sg	21 20 08.8	-3.7
KAPS	**Kapalarasan** 0.4nm,0.2s	**3.81**	**1**	Pg	**Pb**	**21 19 19.6**	**+1.4**
KAPS	0.5nm,0.5s			Lg	Lg	21 20 08.8	
	0.8nm,0.5s						

IDC 24 21:30:04.8±342.0, 38.12N×118.06W, h0km, Error ellipse: s-maj=153.0km s-min=103.7km az=159.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVAR	**Mina Array Bea**	**0.36**	**328**	*i*		21 31 35.0	
	3.9nm,0.3s,baz=236,slow=21,SNR=51						
I57US	**PINON FLAT INF**	**4.69**	**163**	*i*		22 01 20.0	
	baz=342,slow=310,SNR=2.8						
I56US	**NEWPORT INFRAS**	**10.16**	**4**	*i*		22 31 40.0	
	baz=184,slow=332,SNR=2.1						
I10CA	**LAC DU BONNET**	**19.80**	**45**	*i*		23 34 20.0	
	baz=235,slow=338,SNR=2.4						

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*IDC **24** 21:35:29.9±0.7, 4.26N×62.83E, h0km, mb4.1/22, mb1 4.3/22, mb1mx4.1/47, mbtmp4.1/22, MS3.8/18, Ms1 3.7/18, ms1mx3.5/50, Error ellipse: s-maj=17.7km s-min=14.8km az=3.0*
*NEIC **24** 21:35:29.7±2.4, 4.1N±0.1×62.8E±0.1, h10km±1km, mb4.5/24, Error ellipse: s-maj=21.4km s-min=14.4km az=138.0*
*BJI **24** 21:35:33.0±0.0, 4.20N×63.10E, h20km, mB4.9/10, mb4.4/17, Ms4.6/4, Ms7 4.7/3*
ISC 24 21:35:30.4±0.6, 4.20N±0.09×62.79E±0.09, h10km, n81, σ1S55/67, mb4.5/41, MS3.7/18, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSEY	**Mahe Island**	**11.45**	**220**	Pn	**Pn**	**21 38 10.9**	**-3.2**
MSEY				Sn	Sn	21 40 12.4	-10
H08N2	**Diego Garcia H**	**13.28**	**142**	T	T	21 52 18.5	
	baz=322,slow=76,SNR=497						
H08N3	**Diego Garcia H**	**13.29**	**142**	T	T	21 52 19.5	
	baz=322,slow=76,SNR=557						
H08N1	**Diego Carcia H**	**13.30**	**142**	T	T	21 52 20.1	
	baz=322,slow=76,SNR=302						
PALK	**Pallekele**	**18.08**	**79**	LR	LR	21 45 14.4	
	comp=Z,430nm,18.5s,baz=266,slow=32						
WSAR	**Wadi Sarin**	**19.36**	**348**	LR	LR	21 46 19.3	
	comp=Z,246nm,18.1s,baz=189,slow=34						
ATD	**Arta Tunnel**	**21.05**	**291**	P	**P**	**21 40 17.5**	**+2.7**
	22nm,1.0s,baz=86,slow=7.0,SNR=4.6						
ATD				LR	LR	21 46 51.1	
	comp=Z,90nm,21.5s,baz=92,slow=32						
ATD	**Arta Tunnel**	**21.05**	**291**	P	**P**	**21 40 12.7**	**-2.1**
UOSS	**Minazif**	**21.58**	**344**	P	**P**	**21 40 20.0**	**-0.4**
UOSS				IAmb	IAmb	21 40 26.7	
	comp=Z,41nm,1.3s						
RAYN	**Ar Rayn**	**25.45**	**321**	P	**P**	**21 40 59.2**	**+0.5**
RAYN				IAmb	IAmb	21 41 08.0	
	comp=Z,27nm,1.4s						
KMBO	**Kilima Mbogo**	**26.06**	**259**	P	**P**	**21 41 07.9**	**+3.3**
	comp=Z,7.0nm,1.1s,baz=58,slow=11,SNR=14						
KMBO	**Kilima Mbogo**	**26.06**	**259**	P	**P**	**21 41 02.8**	**-1.8**
OPO	**Ambohidratompo**	**27.35**	**214**	LR	LR	21 49 32.1	
	comp=Z,262nm,20.0s,baz=179,slow=31						
KBL	**Kabul**	**30.75**	**10**	P	**P**	**21 41 44.8**	**-1.3**
KBL				IAmb	IAmb	21 41 51.1	
	comp=Z,7.7nm,1.4s						
NIL	**Nilore**	**30.89**	**17**	P	**P**	**21 41 46.1**	**-1.1**
NIL				IAmb	IAmb	21 41 56.6	
	comp=Z,7.1nm,1.1s						
MBAR	**Mbarara**	**32.38**	**262**	P	**P**	**21 41 58.7**	**-2.1**
MBAR				IAmb	IAmb	21 42 05.2	
	comp=Z,3.2nm,0.8s						
BRDH	**Bariadhala**	**33.42**	**54**	LR	LR	21 56 53.7	
	comp=Z,456nm,18.6s,baz=292,slow=38						
GEYT	**Alibeck**	**33.85**	**353**	P	**P**	**21 42 15.2**	**+2.2**
	comp=Z,0.6nm,0.6s,baz=217,slow=9.1,SNR=4.5						
GEYT				LR	LR	21 55 49.7	
	comp=Z,52nm,18.5s,baz=80,slow=36						
LSA	**Lhasa**	**36.92**	**43**	P	**P**	**21 42 41.6**	**+1.4**
LSA				pmax	pmax		
	comp=Z,11nm,0.9s						
LSA				LR	LR		
	comp=Z,750nm,21.4s						
LSA				LR	LR		
	comp=Z,580nm,24.2s						
LSA				LR	LR		
	comp=Z,1μm,21.4s						
LSA	**Lhasa**	**36.92**	**43**	P	**P**	**21 42 38.5**	**-1.7**
LSA				IAmb	IAmb	21 42 50.0	
	comp=Z,6.6nm,0.9s						
KSH	**Kashi**	**37.13**	**17**	P	**P**	**21 42 41.1**	**-0.4**
KSH				pP	pwP	21 42 52.0	+3.9
KSH				PP	**PP**	**21 44 06.1**	**-0.1**
KSH				PcP	**PcP**	**21 45 04.4**	**+2.6**
KSH				S	**S**	**21 48 21.3**	**-6.7**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,110nm,3.5s						
KSH				LR	LR		
	comp=Z,260nm,5.2s						
KSH				LR	LR		
	comp=Z,300nm,8.0s						
KSH				LR	LR		
	comp=Z,630nm,9.9s						
CM31	**Chiang Mai Arr**	**38.07**	**65**	P	**P**	**21 42 47.3**	**-2.3**
CMAR	**Chiang Mai Arr**	**38.07**	**65**	P	**P**	**21 42 51.9**	**+2.3**
	comp=Z,1.2nm,0.8s,baz=260,slow=9.5,SNR=12						
CHTO	**Chiang Mai**	**38.18**	**65**	P	**P**	**21 42 50.8**	**+0.4**
MMAI	**Mount Meron Ar**	**38.42**	**322**	LR	LR	21 58 12.7	
	comp=Z,113nm,18.2s,baz=95,slow=36						
GNI	**Garni**	**39.33**	**338**	P	**P**	**21 43 02.0**	**+2.0**
	comp=Z,3.2nm,0.8s,baz=102,slow=6.0,SNR=4.3						
GNI				LR	LR	22 00 29.9	
	comp=Z,58nm,19.5s,baz=138,slow=38						
GNI	**Garni**	**39.33**	**338**	P	**P**	**21 43 01.8**	**+1.8**
GNI				IAmb	IAmb	21 43 16.6	
	comp=Z,21nm,1.4s						
KK31	**Karatay Array**	**39.35**	**9**	P	**P**	**21 43 01.5**	**+1.6**
KK31				IAmb	IAmb	21 43 09.5	
	comp=Z,9.4nm,1.4s						
KKAR	**Karatay Array**	**39.35**	**9**	P	**P**	**21 42 59.2**	**-0.7**
KKAR				IAmb	IAmb	21 43 09.5	
	comp=Z,9.4nm,1.4s						
LSZ	**Lusaka**	**39.35**	**240**	P	**P**	**21 42 59.6**	**-0.9**
LSZ				IAmb	IAmb	21 43 10.6	
	comp=Z,17nm,1.5s						
AAK	**Ala-Archa**	**39.67**	**14**	P	**P**	**21 43 04.5**	**+1.7**
	comp=Z,1.9nm,0.9s,baz=148,slow=13,SNR=3.1						
AAK	**Ala-Archa**	**39.67**	**14**	P	**P**	**21 43 01.6**	**-1.2**
AKH	**Akhalkalaki**	**40.89**	**338**	P	**P**	**21 43 12.7**	**-0.3**
KBZ	**Khabaz**	**43.12**	**339**	LR	LR	22 00 54.2	
	comp=Z,64nm,20.6s,baz=140,slow=35						
BR131	**Keskin Array S**	**44.11**	**327**	P	**P**	**21 43 39.1**	**0.0**
BRTR	**Keskin Array B**	**44.11**	**327**	P	**P**	**21 43 39.9**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=144,slow=11,SNR=8.3						
BRTR				LR	LR	22 02 30.3	
	comp=Z,84nm,19.3s,baz=120,slow=37						
ABKAR	**Akbulak array**	**44.96**	**357**	P	**P**	**21 43 45.8**	**+0.2**
WMQ	**Urumqi**	**45.18**	**25**	P	**P**	**21 43 48.1**	**+0.6**
MAKZ	**Makanchi**	**45.59**	**18**	P	**P**	**21 43 49.9**	**-0.8**
MK31	**Makanchi Array**	**45.67**	**19**	P	**P**	**21 43 50.8**	**-0.6**
MKAR	**Makanchi Array**	**45.67**	**19**	P	**P**	**21 43 51.3**	**0.0**
	comp=Z,1.3nm,1.0s,baz=194,slow=7.1,SNR=7.5						
MKAR				LR	LR	22 03 57.4	
	comp=Z,49nm,20.6s,baz=204,slow=37						
AKTO	**Aktyubinsk**	**46.25**	**356**	LR	LR	22 03 57.7	
	comp=Z,86nm,21.1s,baz=162,slow=37						
LBTB	**Lobatse**	**46.35**	**229**	P	**P**	**21 43 58.7**	**+1.6**
	comp=Z,4.7nm,1.0s,baz=56,slow=11,SNR=2.7						
IDI	**Anoyia**	**46.72**	**316**	LR	LR	22 03 32.9	
	comp=Z,48nm,20.4s,baz=66,slow=36						
GTA	**Gaotai**	**48.48**	**39**	*e*P	P	21 44 19.9	+6.3
GTA				pP	pwP	21 44 26.4	+6.2
GTA				sP	sP	21 44 29.3	+13
BOSA	**Boshof**	**48.65**	**226**	LR	LR	22 02 33.0	
	comp=Z,151nm,19.8s,baz=36,slow=33						
XAN	**Xi'an**	**52.09**	**49**	P	**P**	**21 44 40.6**	**-0.3**
XAN				pmax	pmax		
	comp=Z,110nm,5.7s						
XAN	**Xi'an**	**52.09**	**49**	P	**P**	**21 44 40.8**	**-0.1**
ARU	**Arti**	**52.19**	**357**	LR	LR	22 07 10.0	
	comp=Z,72nm,20.9s,baz=147,slow=36						
ARU	**Arti**	**52.19**	**357**	P	**P**	**21 44 40.9**	**-0.2**
ARU				IAmb	IAmb	21 44 43.1	
	comp=Z,15nm,1.4s						
ZALV	**Zalesovo Beam**	**52.76**	**16**	P	**P**	**21 44 45.4**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=233,slow=6.9,SNR=4.4						
ZALV				LR	LR	22 08 06.4	
	comp=Z,112nm,19.4s,baz=247,slow=37						
AKASG	**Malin Array Be**	**54.23**	**334**	P	**P**	**21 44 56.4**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=132,slow=6.2,SNR=6.7						
KOLS	**Kolonicke sedl**	**56.32**	**329**	*e*P	**P**	**21 45 13.1**	**+1.7**
SONM	**Songino Array**	**57.30**	**34**	P	**P**	**21 45 19.5**	**+1.0**
	comp=Z,1.2nm,1.0s,baz=230,slow=5.8,SNR=7.2						
VYHS	**Vyhne**	**57.87**	**327**	*e*P	**P**	**21 45 22.5**	**+0.1**
SOKA	**Soboth**	**59.05**	**324**	*i* P	**P**	**21 45 30.7**	**0.0**
	comp=Z,5.2nm,1.4s						
KLMR	**Klimovskoe**	**59.21**	**347**	*e*	**P**	**21 45 29.4**	**-2.1**
KLMR				AMP		21 45 32.7	
	comp=Z,36nm,1.3s						
CONA	**Conrad Observa**	**59.21**	**325**	*i* P	**P**	**21 45 31.6**	**-0.3**
	comp=Z,3.0nm,0.9s						
MYKA	**Terra Mystica**	**59.85**	**323**	*i* P	**P**	**21 45 36.6**	**+0.2**
	comp=Z,8.8nm,1.4s						
MOA	**Molln**	**60.09**	**324**	*i* P	**P**	**21 45 37.1**	**-0.7**
	comp=Z,3.9nm,1.0s						
KBA	**Koelnbreinsper**	**60.25**	**323**	*i* P	**P**	**21 45 39.1**	**-0.1**
	comp=Z,6.4nm,1.1s						
ABTA	**Abfaltersbach**	**60.59**	**323**	*i* P	**P**	**21 45 40.9**	**-0.5**
	comp=Z,6.1nm,1.3s						
TORD	**Torodi Ar. Bea**	**60.92**	**283**	P	**P**	**21 45 45.3**	**+1.2**
	comp=Z,4.5nm,1.3s,baz=64,slow=7.0,SNR=7.7						
MOTA	**Moosalm**	**61.72**	**323**	*i* P	**P**	**21 45 48.6**	**-0.5**
	comp=Z,4.9nm,1.3s						
FETA	**Feichten**	**61.80**	**322**	*i* P	**P**	**21 45 50.1**	**+0.4**
	comp=Z,7.3nm,1.4s						
DAVOX	**Davos/Dischmat**	**62.22**	**322**	P	**P**	**21 45 52.4**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=162,slow=20,SNR=2.5						
CLL	**Collm**	**62.56**	**327**	*e*P	**P**	**21 45 56.0**	**+1.5**
HFS	**Hagfors**	**67.06**	**336**	P	**P**	**21 46 24.3**	**+0.6**
	comp=Z,3.2nm,0.7s,baz=49,slow=4.4,SNR=13						
DBIC	**Dimbokro**	**67.35**	**275**	LR	LR	22 15 46.4	
	comp=Z,65nm,19.7s,baz=119,slow=36						
KSRS	**Korea Array**	**67.80**	**51**	P	**P**	**21 46 28.4**	**-0.4**
	comp=Z,1.4nm,1.1s,baz=265,slow=5.9,SNR=4.1						
NOA	**NORSAR Array B**	**68.58**	**336**	P	**P**	**21 46 33.0**	**-0.4**
	comp=Z,4.2nm,1.1s,baz=118,slow=6.9,SNR=4.3						
ESDC	**Sonseca Array**	**69.51**	**311**	P	**P**	**21 46 40.9**	**+1.3**
	comp=Z,3.3nm,0.9s,baz=82,slow=5.4,SNR=6.0						
ARCES	**ARCESS Array B**	**69.69**	**347**	P	**P**	**21 46 40.2**	**+0.2**
	comp=Z,3.8nm,0.8s,baz=155,slow=8.8,SNR=5.2						
EKA	**Eskdalemuir Ar**	**73.03**	**327**	P	**P**	**21 47 00.4**	**0.0**
	comp=Z,2.7nm,0.9s,baz=110,slow=7.3,SNR=4.0						
WRA	**Warramunga Arr**	**74.20**	**112**	P	**P**	**21 47 09.3**	**+1.3**
	comp=Z,5.0nm,1.1s,baz=287,slow=5.7,SNR=10						
ASAR	**Alice Springs**	**74.51**	**116**	P	**P**	**21 47 10.3**	**+0.5**
	comp=Z,2.4nm,1.0s,baz=283,slow=6.0,SNR=11						
ASAR				LR	LR	22 14 09.2	
	comp=Z,446nm,21.3s,baz=350,slow=31						

STKA	Stephens Creek	82.73	123	LR	LR	22 20 43.8	
	comp=Z,628nm,21.8s,baz=337,slow=33						
LPAZ	La Paz	130.37	252	PKP	PKiKP	21 54 43.9	+0.1
	comp=Z,1.1nm,0.9s,baz=77,slow=8.8,SNR=3.5						
PDAR	Pinedale Array	132.75	352	PKP	PKPdf	21 54 46.7	+0.4
	comp=Z,0.3nm,0.8s,baz=116,slow=6.1,SNR=2.6						
NVAR	Mina Array Bea	137.58	1	PKP	PKiKP	21 54 57.0	-0.4
	comp=Z,0.5nm,0.7s,baz=0.0,slow=0.6,SNR=4.6						
TXAR	Lajitas Array	144.22	340	PKP	PKPbc	21 55 06.3	+0.8
	comp=Z,0.8nm,0.9s,baz=44,slow=4.0,SNR=5.0						

WEL 24 21:39:06.5, 44°S±5°×16°8E±°, h5km, M4.2/12, ML4.4/12, MLv4.2/12, Error ellipse: s-maj=0.0km s-min=0.0km az=50.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCZ	Jackson Bay	0.43	51	P	Pb	21 39 16.4	-0.3
JCZ				S	Sb	21 39 22.3	-1.2
MSZ	Milford Sound	0.43	220	P	Pb	21 39 15.9	-0.7
MSZ				S	Sg	21 39 21.6	+1.1
WKZ	Wanaka	0.69	134	P	Pb	21 39 21.0	-0.1
WKZ				S	Sg	21 39 29.7	+0.8
MLZ	Mavora Lakes	1.03	188	P	Pg	21 39 26.5	+0.2
MLZ				S	Sg	21 39 39.8	+0.1
EAZ	Earnscleugh	1.13	142	P	Pb	21 39 28.7	+0.1
LBZ	Lake Benmore	1.34	92	P	Pg	21 39 33.5	+1.4
LBZ				S	Sg	21 39 49.5	0.0
FOZ	Fox Glacier	1.35	54	P	Pn	21 39 32.1	+0.1
FOZ				S	Sn	21 39 50.9	+0.5
DCZ	Deep Cove	1.39	216	P	Pb	21 39 32.1	-0.5
DCZ				S	Sb	21 39 50.4	-0.6
WHZ	Wether Hill Ro	1.57	189	P	Pn	21 39 35.3	+0.3
WHZ				S	Sb	21 39 56.3	+0.1
ODZ	Otahua Downs	1.80	114	P	Pb	21 39 39.5	-0.4
TUZ	Tuapeka	1.86	150	P	Pn	21 39 39.9	+0.9
RPZ	Rata Peaks	2.07	73	P	Pn	21 39 43.1	+1.2
PYZ	Puysegur Point	2.16	212	P	Pb	21 39 46.1	+0.1
WVZ	Waitaha Valley	2.17	55	P	Pn	21 39 43.2	0.0
HHSZ	Highcliff Hill	2.23	134	P	Pb	21 39 45.8	-1.6
SYZ	Scrubby Hill	2.27	166	P	Pb	21 39 46.6	-1.3
APZ	The Paps	2.50	185	P	Pn	21 39 48.8	+1.0
INZ	Inchbonnie	2.79	56	P	Pn	21 39 52.0	+0.2
OXZ	Oxford	2.88	71	P	Pn	21 39 52.7	-0.3
MQZ	McQueen's Vall	3.19	80	P	Pn	21 39 57.5	+0.2
LTZ	Lake Taylor	3.27	63	P	Pn	21 39 58.6	+0.1
AKCZ	Akaroa Harbour	3.34	83	P	Pn	21 39 59.7	+0.3
AMCZ	Amberley	3.35	71	P	Pn	21 40 00.1	+0.6
OKCZ	Okains Bay	3.48	81	P	Pn	21 40 01.7	+0.4
DSZ	Denniston Nort	3.64	46	P	Pn	21 40 04.4	+0.8
GVZ	Greta Valley S	3.69	70	P	Pn	21 40 04.7	+0.5
THZ	Tophouse	4.24	54	P	Pn	21 40 12.3	+0.6
KHZ	Kahutara	4.27	65	P	Pn	21 40 13.0	+0.9
QRZ	Quartz Range	4.69	43	P	Pn	21 40 18.3	+0.3
BSWZ	Blackbirch Sta	4.85	59	P	Pn	21 40 24.7	+4.6
NNZ	Nelson	4.86	52	P	Pn	21 40 21.4	+1.2
TUWZ	Tuamarina	5.06	57	P	Pn	21 40 25.2	+2.3
TCW	Tory Channel	5.39	57	P	Pn	21 40 29.6	+2.1
DUWZ	D'Urville Isla	5.45	51	P	Pn	21 40 29.6	+1.2
BHW	Baring Head	5.64	61	P	Pn	21 40 32.3	+1.3
MSWZ	Moikau Station	5.87	63	P	Pn	21 40 34.5	+0.3
CAW	Cannon Point	5.93	59	P	Pn	21 40 34.7	-0.2
KIW	Kapiti Island	5.98	57	P	Pn	21 40 36.6	+0.9
OGWZ	Otaki Gorge	6.17	57	P	Pn	21 40 39.1	+0.9
MTW	Mount Morrison	6.17	61	P	Pn	21 40 38.2	-0.1
HOWZ	Holdsworth Sta	6.33	60	P	Pn	21 40 41.8	+1.4
MRZ	Mangatainoka R	6.51	58	P	Pn	21 40 42.6	-0.3
NBEZ	Newall Road No	6.55	41	P	Pn	21 40 44.1	+0.6
KHEZ	Kahui Hut	6.60	42	P	Pn	21 40 45.1	+0.8
PKE	Pukeiti	6.67	41	P	Pn	21 40 46.0	+0.9
PRWZ	Pori Road	6.81	59	P	Pn	21 40 54.3	+7.3
BFZ	Birch Farm	6.91	61	P	Pn	21 40 48.4	0.0
VRZ	Vera Road	7.10	45	P	Pn	21 40 52.2	+1.2
TSZ	Takapari Road	7.11	56	P	Pn	21 40 54.8	+3.6
PKVZ	Pokaka	7.28	49	P	Pn	21 40 55.4	+1.8
TRVZ	Turoa	7.38	49	P	Pn	21 40 57.5	+2.4
FWVZ	Far West T-bar	7.42	49	P	Pn	21 40 57.1	+1.4
MOVZ	Moawhango	7.42	51	P	Pn	21 40 57.9	+2.3
TUVZ	Tukino	7.47	50	P	Pn	21 40 59.7	+3.5
TWVZ	Taurewa	7.49	48	P	Pn	21 40 55.5	-0.9
WTVZ	West Tongariro	7.54	49	P	Pn	21 40 59.2	+2.1
KRVZ	Karewarewa	7.58	49	P	Pn	21 41 00.4	+2.7
KRHZ	Kereru	7.62	55	P	Pn	21 41 04.5	+6.3
HIZ	Hauiti	7.62	42	P	Pn	21 40 59.0	+0.8
KATZ	Kakaramea	7.70	48	P	Pn	21 41 01.7	+2.3
KWHZ	Kaweka Forest	7.79	54	P	Pn	21 41 05.9	+5.3
BKZ	Black Stump Fm	8.01	53	P	Pn	21 41 07.8	+4.3
TLZ	Tolley Road	8.10	45	P	Pn	21 41 06.0	+1.3
MTHZ	Maungataniwha	8.42	52	P	Pn	21 41 14.4	+5.2
TOZ	Tahuroa Road	8.55	42	P	Pn	21 41 11.4	+0.5
AWAZ	Awhitu Peninsu	8.71	36	P	Pn	21 41 13.9	+0.8
WTAZ	Waiatarua	8.80	35	P	Pn	21 41 15.5	+1.1
MKAZ	Moumakai	8.90	38	P	Pn	21 41 16.9	+1.2
RAGZ	Rawiri	8.99	53	P	Pn	21 41 18.9	+1.9
WIAZ	Waiheke Island	9.15	37	P	Pn	21 41 20.3	+1.2
WCZ	Waipu Caves	9.58	31	P	Pn	21 41 25.3	+0.3
OUZ	Omahuta	9.97	26	P	Pn	21 41 31.3	+0.9

*NAO **24** 21:49:00.7±3.9, 72.70°N×4.91°E, ML2.7*
*IDC **24** 21:49:01.5±1.7, 72.66°N×5.15°E, h0km, mb3.2/2, mb1 3.6/7, mb1mx3.2/67, mbtmp3.6/7, ML2.8/5, MS3.1/8, Ms1 3.1/8, ms1mx2.9/34, Error ellipse: s-maj=24.1km s-min=21.2km az=120.0*
*BER **24** 21:49:04.7±2.9, 72.84°N×4.96°E, h10km, ML2.4, ML2.7(NAO), Confirmed Earthquake*
ISC 24 21:49:01.3±0.9, 72.74°N±0.07°×5.06°E±0.07°, h10km, n35, σ1.70s/42, MS3.1/3, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	5.08	28	eP	Pn	21 50 18.6	+1.3
LOF	Lofoten	5.43	144	eP	Pn	21 50 24.6	+2.5
LOF				eS	Sn	21 51 24.8	+0.2
LOF				IAML		21 51 28.6	
	comp=Z,12nm,0.8s						
TRO	Tromso	5.46	118	eP	Pn	21 50 24.0	+1.5
TRO				eS	Sn	21 51 24.4	-0.8
TRO				IAML		21 51 27.8	
	comp=Z,5.5nm,0.7s						
STEI	Steigen	5.92	140	eP	Pn	21 50 30.0	+1.2
STEI				eS	Sn	21 51 34.1	-2.5
STEI				IAML		21 51 39.7	
	comp=Z,32nm,1.3s						
SPA0	Spitsbergen Ar	6.15	22	Pn	Pn	21 50 32.0	0.0
	baz=197,slow=22						
SPA0	Spitsbergen Ar	6.15	22	Pn	Pn	21 50 32.0	0.0
	baz=197,slow=22						
SPITS	Spitsbergen Ar	6.15	22	Pn	Pn	21 50 32.2	+0.2
	baz=207,slow=14,SNR=15						
SPITS				LR	LR	21 52 31.4	
	comp=Z,79nm,18.5s,baz=100,slow=34						
HAMF	Hammerfest	6.22	101	Pn	Pn	21 50 33.5	+0.5
HAMF				Sn	Sn	21 51 41.1	-3.0
HAMF	Hammerfest	6.22	101	eP	Pn	21 50 33.8	+0.8
KIF	Kilpisjarvi	6.38	118	eP	Pn	21 50 36.8	+1.8
KIF				eS	Sn	21 51 45.8	-1.9
KBS	Kingsbay	6.44	12	eP	Pn	21 50 36.6	+0.6
KONS	Konsvik	6.86	152	eP	Pn	21 50 43.3	+1.5
KONS				eS	Sn	21 51 57.0	-2.9
KONS				IAML		21 52 00.9	
	comp=Z,5.4nm,0.6s						
STOK	Stokkvaagen	7.01	153	eP	Pn	21 50 45.2	+1.5
STOK				eS	Sn	21 52 00.7	-2.6
KTK1	Kautokeino	7.03	113	eP	Pn	21 50 46.5	+2.5
ARA0	ARCESS Array S	7.34	106	Pn	Pn	21 50 49.2	+0.9
	baz=318,slow=12						
ARA0				Sn	Sn	21 52 09.9	-1.7
	baz=308,slow=22						
ARA0	ARCESS Array S	7.34	106	Pn	Pn	21 50 49.2	+0.9
	baz=318,slow=12						
ARA0				Sn	Sn	21 52 09.9	-1.7
	baz=308,slow=22						
ARCES	ARCESS Array B	7.34	106	Pn	Pn	21 50 49.5	+1.2
	comp=Z,0.3nm,0.3s,baz=319,slow=13,SNR=13						
ARCES				Sn	Sn	21 52 09.8	-1.8
	comp=Z,0.2nm,0.3s,baz=310,slow=20,SNR=2.4						
MOR8	Moi Rana	7.37	149	eP	Pn	21 50 50.5	+1.8
MOR8				eS	Sn	21 52 08.6	-3.6
MOR8				IAML		21 52 14.4	
	comp=Z,3.5nm,0.6s						
HEF	Hetta	7.54	116	eP	Pn	21 50 53.0	+1.8
KEV	Kevo	7.65	102	eP	Pn	21 50 53.1	+0.5
NSS	Namsos	8.62	160	eP	Pn	21 51 07.8	+2.0
SCO	Scoresbysund	8.78	268	iP	Pn	21 51 05.9	-2.2
NOA	NORSAR Array B	11.99	165	Pn	Pn	21 51 52.6	+0.6
	comp=Z,0.0nm,0.3s,baz=352,slow=13,SNR=2.5						
NOA				LR	LR	21 56 08.6	
	comp=Z,72nm,19.8s,baz=355,slow=36						
BORG	Borgarnes	12.35	243	LR	LR	21 55 22.8	
	comp=Z,80nm,18.6s,baz=47,slow=31						
HFS	Hagfors	13.10	161	Pn	Pn	21 52 08.0	+0.9
	baz=352,slow=16						
HFS	Hagfors	13.10	161	Pn	Pn	21 52 08.7	+1.6
	comp=Z,0.4nm,0.3s,baz=354,slow=13,SNR=14						
HFS				LR	LR	21 56 52.5	
	comp=Z,116nm,18.1s,baz=323,slow=36						
HFS	Hagfors	13.10	161	Pn	Pn	21 52 08.0	+0.9
	baz=352,slow=16						
FIA0	FINESS Array S	13.86	134	Pn	Pn	21 52 18.4	+1.1
	baz=341,slow=14						
FIA0	FINESS Array S	13.86	134	Pn	Pn	21 52 18.4	+1.1
	baz=341,slow=14						
FINES	FINESS Array B	13.86	134	Pn	Pn	21 52 17.6	+0.2
	comp=Z,0.1nm,0.3s,baz=335,slow=8.4,SNR=3.7						
FINES				LR	LR	21 57 21.6	
	comp=Z,101nm,20.1s,baz=50,slow=36						
GERES	GERESS Array B	24.29	166	P	P	21 54 20.2	+1.7
	comp=Z,0.1nm,0.3s,baz=354,slow=8.9,SNR=2.4						
RES	Resolute Bay	24.99	322	LR	LR	22 03 39.0	
	comp=Z,59nm,18.5s,baz=313,slow=35						
FRB	Frobisher Bay	26.84	289	LR	LR	22 05 29.0	
	comp=Z,24nm,20.0s,baz=242,slow=37						
YKA	Yellowknife Ar	39.04	320	LR	LR	22 11 53.4	
	comp=Z,51nm,18.0s,baz=0.0,slow=35						
TORD	Torodi Ar. Bea	59.60	184	P	P	21 59 06.1	+1.2
	comp=Z,0.4nm,0.7s,baz=353,slow=4.8,SNR=3.1						

*IDC **24** 21:49:17.6±0.9, 11.94°N×143.17°E, h0km, mb3.8/8, mb1 4.1/9, mb1mx3.6/63, mbtmp3.8/9, ML3.8/1, Error ellipse: s-maj=32.4km s-min=18.0km az=110.0*
ISC 24 21:49:22.3±1.0, 11.9°N±0.2°×143.2°E±0.2°, h31km, n15, σ1.14s/10, mb3.8/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.34	44	Pn	Pn	21 49 58.4	-0.2
	26nm,0.3s,baz=318,slow=10,SNR=5.5						
GUMO				Sn	Sn	21 50 26.5	+0.1
	21nm,0.3s,baz=174,slow=22,SNR=3.8						
H11S3	WAKE ISLAND Hy	23.59	71	T	T	22 19 09.7	
	SNR=8.0						
H11S1	WAKE ISLAND Hy	23.61	71	T	T	22 19 02.0	
	SNR=6.0						
H11S2	WAKE ISLAND Hy	23.61	71	T	T	22 19 14.5	
	SNR=6.8						
H11N1	WAKE ISLAND Hy	24.07	68	T	T	22 19 41.5	
	baz=255,slow=75,SNR=12						
H11N2	WAKE ISLAND Hy	24.08	68	T	T	22 19 43.2	
	baz=255,slow=75,SNR=9.7						
H11N3	WAKE ISLAND Hy	24.09	68	T	T	22 19 48.5	
	baz=255,slow=75,SNR=8.2						
WRA	Warramunga Arr	32.83	195	P	P	21 55 52.8	-0.5
	1.2nm,0.7s,baz=18,slow=9.6,SNR=11						
ASAR	Alice Springs	36.51	194	P	P	21 56 25.7	+0.6
	0.4nm,0.5s,baz=18,slow=11,SNR=9.3						
SONM	Songino Array	47.18	327	P	P	21 57 52.9	+0.7
	0.3nm,0.5s,baz=154,slow=8.0,SNR=4.2						
MKAR	Makanchi Array	61.56	317	P	P	21 59 36.9	+0.2
	0.5nm,1.1s,baz=112,slow=6.1,SNR=2.9						
ILAR	Eielson Array	70.78	25	P	P	22 00 34.4	-1.1
	0.5nm,0.5s,baz=251,slow=6.0,SNR=9.7						
YKA	Yellowknife Ar	85.09	27	P	P	22 01 56.9	+1.9
	0.2nm,0.4s,baz=286,slow=5.3,SNR=2.5						
ARCES	ARCESS Array B	88.16	342	P	P	22 02 09.1	-0.7
	4.3nm,1.1s,baz=83,slow=7.4,SNR=3.1						
FINES	FINESS Array B	91.97	335	P	P	22 02 26.2	-1.6
	1.9nm,0.8s,baz=48,slow=2.8,SNR=5.1						

KRSC 24 21:55:57.3±1.5, 48.74°N×155.78E, h127km±25km, ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	2.81	13	eP	Pn	21 56 42.3	+1.0
PAU				eS	Sn	21 57 15.7	+0.5
KDTR	Khodutka, Kamc	3.41	25	eP	Pn	21 56 51.2	+2.1
KDTR				eS	Sn	21 57 31.3	+2.2
ASAK	Asacha	3.89	20	eP	Pn	21 56 57.6	+2.1
RUS	Russkaya	4.09	24	eP	Pn	21 56 59.6	+1.6
RUS				eS	Sn	21 57 46.2	+1.0
UGLR	Uglovaya	4.87	22	eP	Pn	21 57 10.6	+2.0
AVH	Avacha	4.90	21	eP	Pn	21 57 12.5	+3.5
KOK	Koryaka	4.90	20	eP	Pn	21 57 11.8	+2.8
SMAR	Somma	4.91	22	eP	Pn	21 57 11.5	+2.2
SDLR	Sedlovina	4.95	22	eP	Pn	21 57 11.8	+2.1
SPN	Mys Shipunski	5.12	30	eP	Pn	21 57 14.6	+2.7

*MOS **24** 21:56:00.3±1.1, 0.57°N×126.10°E, h29km, mb5.6/41, MS4.5/17, Error ellipse: s-maj=7.8km s-min=4.4km az=109.5*
*NEIC **24** 21:56:01.6±2.1, 0.56°N±0.05°×126.19°E±0.05°, h30km±3km, mb5.3/157, Ms_20 4.6/98, Mwb5.3/28, Error ellipse: s-maj=8.1km s-min=6.6km az=159.0*
*NEIC **24** 21:56:01.8, 0.56°N×126.20°E, h36km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.02; $M_{\theta\theta}$0.05; $M_{\phi\phi}$-1.07; $M_{r\theta}$-0.17; $M_{\theta\phi}$-0.23; $M_{\phi r}$-0.25; Fault plane solution: $M_0$1.11000×10^{17} NP1:ϕ_s4.60000°, δ38.02000°, λ79.50000°. NP2:ϕ_s197.83000°, δ52.73000°, λ98.11000°. Principal axes: T 1.0675, Plg80.0000°, Azm144.0000°; N 0.0836, Plg6.0000°, Azm13.0000°; P -1.1512, Plg7.0000°, Azm282.0000°;*
*IDC **24** 21:56:02.1±1.9, 0.54°N×126.09°E, h28km±12km, mb5.0/34, mb1 5.0/39, mb1mx5.0/47, mbtmp5.2/39, ML5.0/5, MS4.4/19, Ms1 4.4/19, ms1mx4.3/31 Error ellipse: s-maj=12.0km s-min=8.2km az=72.0*
*BJI **24** 21:56:02.0±0.0, 0.35°N×126.09°E, h58km, mB5.1/65, mb5.0/78, Ms4.9/77, Ms7 4.7/72*
*KLM **24** 21:56:04.0, 0.47°N×126.30°E, h62km, mb5.1*
*DJA **24** 21:56:05.6±0.2, 1°N±2°×12°6E±°, h49km±2km, M5.2/59, mB5.6/44, mb5.4/59, MLv5.4/19, Mw(mB)5.1/44, Mwp5.5/13*
*GCMT **24** 21:56:05.6±0.1, 0.65°N±0.01°×126.11°E±0.01°, h34km, MW5.4/138, Moment Tensor Solution. s129,c214; s138,c246; Duration: 1.3s Moment tensor: Scale 10^{17} Nm; M_{rr}1.56±.03; $M_{\theta\theta}$0.18±.02; $M_{\phi\phi}$-1.74±.02; $M_{r\theta}$-0.33±.03; $M_{\theta\phi}$-0.55±.02; $M_{\phi r}$-0.37±.03; Best double couple: $M_0$1.79600×10^{17} NP1:ϕ_s5.00000°, δ39.00000°, λ75.00000°. NP2:ϕ_s204.00000°, δ53.00000°, λ102.00000°. Principal axes: T 1.6510, Plg78.0000°, Azm158.0000°; N 0.2890, Plg9.0000°, Azm17.0000°; P -1.9420, Plg7.0000°, Azm286.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 24 21:56:04.4±0.4, 0.56°N±0.03°×126.14°E±0.03°, h52km±3km, h52km:pP-P, n530, σ1.88s/545, mb5.3/171, MS4.6/92, 26C-12D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.24	80	P	Pn	21 56 23.7	-1.7
TNTI				S	Sn	21 56 44.9	+3.8
TNTI	Ternate	1.24	80		Pn	21 56 23.4	-2.0
TNTI					Sn	21 56 35.6	-5.5
LBMI	Labuha	1.81	131	P	Pn	21 56 31.7	-1.5
KMSI	Cibinong	2.16	270	P	Pn	21 56 37.0	-1.0
SANI	Sanana	2.60	183	P	Pn	21 56 43.4	-0.6
SANI				S	Sn	21 57 14.7	+0.3
LUWI	Luwuk	3.73	245	P	Pn	21 57 03.1	+3.6
LUWI	Luwuk	3.73	245		Pn	21 56 59.7	+0.2
NLAI	Namlea	3.90	166	P	Pn	21 57 01.3	-0.5
NLAI				S	Sn	21 57 45.0	-1.3
MRSI	Marisa	4.20	269	P	Pn	21 57 06.1	+0.1
AAI	Ambon	4.69	154	P	Pn	21 57 13.8	+1.1
APSI	Ampana	4.73	252	P	Pn	21 57 14.7	+1.5
MSAI	Masohi	4.78	144	P	Pn	21 57 16.0	+2.1
SWI	Sorong	5.31	105	P	Pn	21 57 24.0	+2.8
	1.2nm20μm3μm341nm,0.7s						
SIJI	Sorong	5.32	106	Pn	Pn	21 57 22.0	+0.7
	12nm,0.3s,baz=284,slow=8.0,SNR=23						
SIJI				LR	LR	21 59 49.8	
	comp=Z,9μm,21.2s,baz=273,slow=42						
DDMP	Don Marcelino,	5.52	356	eP	Pn	21 57 23.8	-0.4
KDI	Kendari	5.71	218	P	Pn	21 57 28.6	+2.0
	3.1nm8μm796nm,0.7s						
SKMP	Bagumbayan, Su	6.13	345	eP	Pn	21 57 31.4	-1.0
SKMP				eS	Sn	21 58 41.5	+0.2
MPSI	Mapaga	6.25	268	P	Pn	21 57 36.3	+2.2
	1.8nm24μm6μm282nm,0.9s						
BNDI	Bandanaira	6.29	143	P	Pn	21 57 35.8	+1.1
	3.1nm18μm723nm,0.5s						
DAV	Davao City (W)	6.49	355⇓	eP	Pn	21 57 40.3	+2.9
DAV	Davao City (W)	6.49	355	Pn	Pn	21 57 36.0	-1.4
KCP	Kidapawan	6.49	351⇑	eP	Pn	21 57 40.8	+3.4
CTBH	Cotabato--PC H	6.88	344⇑	eP	Pn	21 57 44.2	+1.4
BBSI	Bau Bau	6.99	211	P	Pn	21 57 47.1	+2.9
	0.5nm1μm154nm,0.9s						
FAKI	Fak Fak	7.01	120	P	Pn	21 57 46.2	+1.6
	1.0nm14μm3μm266nm,0.9s						
FAKI	Fak Fak	7.01	120		Pn	21 57 41.5	-3.2
FAKI					Sn	21 58 53.5	-10
TTSI	Tana Toraja	7.27	240	P	Pn	21 57 48.9	+0.9
	2.5nm10μm6μm762nm,0.7s						
BUKP	Musuan	7.35	352	eP	Pn	21 57 53.5	+4.3
PAGZ	Pagadian	7.74	339	eP	Pn	21 57 53.4	-1.2
BNSI	Bone	7.79	231	P	Pn	21 57 55.7	+0.5
	1.5nm4μm510nm,1.0s						
SPSI	Sidrap Palu	7.80	235	P	Pn	21 57 56.3	+1.0
	1.8nm10μm7μm307nm,0.4s						
CGP	Cagayan de Oro	7.97	350⇓	eP	Pn	21 58 02.1	+4.3
BUTP	Butuan	8.37	356	eP	Pn	21 58 11.5	+8.4
BKSI	Bulukumba	8.38	226	P	Pn	21 58 04.7	+1.3
	6μm4μm383nm,0.7s						
KAPI	Kappang	8.45	229	Pn	Pn	21 58 04.0	-0.3
	26nm,0.3s,baz=53,slow=8.4,SNR=76						
KAPI				Sn	Sn	21 59 39.2	+0.9
	11nm,0.3s,baz=300,slow=20,SNR=3.7						
SMKI	Samarinda	8.99	264	P	Pn	21 58 11.3	-0.4
	15μm5μm166nm,1.1s						
BKB	Balikpapan	9.42	259	P	Pn	21 58 19.3	+1.7
	12μm2μm163nm,0.8s						
BKB	Balikpapan	9.42	259		Pn	21 58 16.6	-0.9
MSLP	Maasin	9.60	352	eP	Pn	21 58 22.5	+2.5
SAUI	Saumlaki	9.92	149	P	Pn	21 58 24.3	-0.2
	9μm725nm,0.6s						
SAUI	Saumlaki	9.92	149		Pn	21 58 22.5	-1.9
SAUI				Sn	Sn	22 00 09.3	-5.2
MMRI	Maumere	9.93	203	P	Pn	21 58 27.7	+3.1
	3μm2μm135nm,1.0s						
MMRI	Maumere	9.93	203		Pn	21 58 19.8	-4.7
BAKI	Biak	10.12	100	P	Pn	21 58 32.0	+4.9
	52μm588nm,1.9s						
EDFI	Ende, Flores	10.26	206	P	Pn	21 58 31.7	+2.6
	2μm800nm63nm,0.7s						
SOEI	Soe	10.42	190	P	Pn	21 58 39.3	+8.0
SOEI	Soe	10.42	190		Pn	21 58 31.0	-0.3
SOEI				Sn	Sn	22 00 19.3	-7.5
SPMM	Sapulut	10.51	293	P	Pn	21 58 35.0	+2.5
OCLP	Ormoc	10.53	352	eP	Pn	21 58 37.1	+4.4
GUIM	Jordan	10.60	341	eP	Pn	21 58 38.3	+4.6
KKM	Kota Kinabalu	11.31	299		Pn	21 58 41.3	-2.1
CUYO	Cuyo Island	11.42	334	eP	Pn	21 58 49.4	+4.5
BATP	Bataraza	11.66	315	eP	Pn	21 58 51.1	+2.9
WBSI	Waikabubak, Su	12.16	213	P	P	21 59 01.6	-4.7
OTRP	Odiongan	12.42	341	eP	Pn	21 59 01.5	+2.9
ENPP	El Nido	12.50	328	eP	Pn	21 58 58.2	-1.5
PLAI	Plampang	12.51	222	P	P	21 59 08.0	-2.1
SMPI	Sarmi	12.82	101	P	P	21 59 17.2	+3.7
PVCP	Virac	13.10	351	eP	Pn	21 59 09.8	+1.9
SRBI	Singaraja	13.88	232	P	Pn	21 59 19.8	+1.3
	1μm143nm,1.0s						
SBUM	Sibu	14.04	278		Pn	21 59 21.2	+0.4
SBUM	Sibu	14.04	278	P	Pn	21 59 22.0	+1.3
LQP	Lukban	14.21	342	eP	Pn	21 59 23.9	+0.8
DNP	Denpasar	14.24	230	P	P	21 59 33.9	+4.5
KMMI	Kalianget	14.31	238	P	P	21 59 34.1	+4.0
LUBP	Lubang	14.33	336	eP	P	21 59 27.7	-2.6
GENI	Genyem	14.37	103	P	P	21 59 40.5	+10
IGBI	Denpasar	14.38	229	P	P	21 59 34.6	+3.7
TGY	Tagaytay City	14.41	339	Pn	Pn	21 59 25.8	+0.2
	14nm,0.3s,baz=259,slow=4.8,SNR=4.2						
KDU	Kakadu	14.58	155	P	Pn	21 59 24.8	-3.0
	baz=15,SNR=15						
JAGI	Jajag, Banyuwa	14.94	233	P	P	21 59 37.0	-0.2
	3μm182nm,1.3s						
JAGI	Jajag, Banyuwa	14.94	233		Pn	21 59 32.9	+0.3
GRJI	Gresik	15.52	241	P	P	21 59 46.4	+2.8
KSM	Kuching	15.86	273	P	Pn	21 59 42.6	-1.8
KNRA	Kununurra	16.34	171	P	Pn	21 59 50.0	-0.4
	baz=16,SNR=48						
KNRA	Kununurra	16.34	171	P	Pn	21 59 50.1	-0.4
KNRA				IAmb	IAmb	21 59 52.8	
	comp=Z,288nm,1.1s						
PCJI	Pacitan	17.27	239	P	P	22 00 04.6	+1.7
	comp=Z,5μmcomp=Z,383nm,1.0s						
WOJI	Wonogiri, Jawa	17.32	241	P	P	22 00 05.5	+2.0
	comp=Z,2μmcomp=Z,70nm,0.9s						
SMRI	Semarang	17.39	244	P	P	22 00 06.7	+2.3
	comp=Z,5μmcomp=Z,256nm,1.6s						
SMRI	Semarang	17.39	244	P	Pn	22 00 03.0	-0.6
SMRI				IAmb	IAmb	22 00 09.2	
	comp=Z,166nm,0.9s						
UGM	Wanagama	17.70	241	P	P	22 00 10.1	+2.3
	comp=Z,169nm,0.7s						
UGM	Wanagama	17.70	241	P	Pn	22 00 07.3	-0.2
UGM				IAmb	IAmb	22 00 26.2	
	comp=Z,434nm,1.5s						
SZP	Santa	17.79	342	P	Pn	22 00 07.6	-0.8
APYP	Conner	17.85	345	eP	Pn	22 00 08.9	-0.3
SGCP	Mt. Cagua	18.02	347	eP	P	22 00 10.8	-0.5
FITZ	Fitzroy Crossi	18.55	182	P	P	22 00 16.5	-0.5
	baz=19,SNR=34						
FITZ	Fitzroy Crossi	18.55	182	P	P	22 00 16.0	-1.0
	comp=Z,2.8nm,0.3s,baz=13,slow=8.7,SNR=57						
FITZ	Fitzroy Crossi	18.55	182	P	P	22 00 15.9	-1.1
FITZ				Sn	Sn	22 03 43.7	-0.7
KPJI	Karang Pucung	18.88	245	P	Pn	22 00 21.3	-0.4
	comp=Z,3μmcomp=Z,170nm,0.7s						
LEM	Lembang	19.89	248	P	P	22 00 31.6	-0.3
	comp=Z,5.0nm,0.3s,baz=62,slow=8.9,SNR=12						
CISI	Cisompet, Garu	19.98	246	P	P	22 00 32.1	-0.7
	comp=Z,3μmcomp=Z,326nm,0.9s						
CISI	Cisompet, Garu	19.98	246	P	P	22 00 31.1	-1.7
CNJI	Cibinong	20.51	247	P	Pn	22 00 41.1	0.0
	comp=Z,2μmcomp=Z,240nm,1.0s						
DBJI	Dramaga	20.60	250	P	Pn	22 00 42.9	+0.7
	comp=Z,3μmcomp=Z,93nm,0.8s						
MANU	Manus Island	21.38	97	IAMs_20	IAMs_20	22 09 20.2	
	comp=Z,2μm,21.0s						
PMBI	Palembang	21.64	261	P	P	22 00 50.3	-0.4
WB0	Warramunga Arr	21.76	159	P	P	22 00 50.8	-1.1
WRAB	Tennant Creek	21.90	159	P	P	22 00 52.2	-1.2
WRAB	Tennant Creek	21.90	159	ceP	P	22 00 52.2	-1.2
WRAB				pmax	pmax		
	comp=Z,246nm,0.9s						
WRA	Warramunga Arr	21.90	159	P	P	22 00 52.1	-1.3
	comp=Z,65nm,0.7s,baz=340,slow=11,SNR=347						
WRA				S	S	22 04 52.0	-0.7
	comp=Z,17nm,1.0s,baz=335,slow=17,SNR=7.2						
WRA				ScP	ScP	22 08 26.8	+2.3
	comp=Z,3.4nm,1.0s,baz=344,slow=2.5,SNR=6.1						
WRA				LR	LR	22 09 58.1	
	comp=Z,1μm,20.1s,baz=355,slow=38						
WB2	Warramunga Arr	21.91	159	P	P	22 00 52.4	-1.1
WR0	Warramunga Arr	21.99	158	P	P	22 00 53.4	-1.0
WR0				IAmb	IAmb	22 01 02.0	
	comp=Z,133nm,0.9s						
KLSI		22.02	256	P	P	22 00 54.6	-0.1
	comp=Z,19nm,1.0s						
COEN	Coen	22.20	131	P	P	22 00 55.2	-1.5
	baz=22,SNR=25						
COEN	Coen	22.20	131	P	P	22 00 55.1	-1.5
MYKOM	Kota Tinggi	22.32	273	IAmb	IAmb	22 01 02.6	
	comp=Z,118nm,1.4s						
MYKOM				IAMs_20	IAMs_20	22 10 20.0	
	comp=Z,2μm,21.0s						
MYKOM	Kota Tinggi	22.32	273	P	P	22 00 55.0	-3.0
MDSI	Maura Dua	22.51	257	P	P	22 01 03.3	+3.3
	comp=Z,862nmcomp=Z,57nm,0.9s						
GUMO	Guam	22.61	54	P	P	22 01 01.7	+0.6
	comp=Z,219nm,0.8s,baz=172,slow=11,SNR=9.0						
GUMO				LR	LR	22 09 09.9	
	comp=Z,1μm,21.2s,baz=226,slow=35						
GUMO	Guam	22.61	54	P	P	22 00 58.9	-2.2

PSAD1 Pilbara Seismi 22.73 195 P P 22 01 00.7 -1.6
LWLI Liwa 22.74 256 P P 22 01 03.3 +0.7
PSA00 Pilbara Seismi 22.84 195 P P 22 01 02.1 -1.3
PSA00 PcP PcP 22 04 54.1 +1.0
PSAD2 Pilbara Seismi 22.86 195 IAMs_20 IAMs_20 22 09 17.2
comp=Z,3µm,21.0s
PSAD3 Pilbara Seismi 22.93 195 IAMs_20 IAMs_20 22 10 02.9
comp=Z,2µm,22.0s
XMIS Christmas Isla 23.15 241 P P 22 01 04.2 -2.3
PMG Port Moresby 23.15 116 P P 22 01 06.6 0.0
comp=Z,43nm,0.7s,baz=281,slow=4.7,SNR=11
PMG LR LR 22 11 36.9
comp=Z,2µm,20.8s,baz=316,slow=40
PMG Port Moresby 23.15 116 P P 22 01 06.0 -0.6
PMG IAmb IAmb 22 01 08.9
comp=Z,59nm,0.8s
YULB Yu-li 23.18 349 P P 22 01 04.1 -2.6
YULB IAMs_20 IAMs_20 22 11 19.7
comp=Z,2µm,22.0s
TPUB Ta-pu 23.23 347 P P 22 01 04.6 -2.7
TPUB IAmb IAmb 22 01 15.4
comp=Z,162nm,0.9s
TPUB IAMs_20 IAMs_20 22 10 41.1
comp=Z,2µm,21.0s
SSLB Suanglung 23.63 348 P P 22 01 09.5 -1.6
SSLB IAmb IAmb 22 01 21.6
comp=Z,74nm,0.9s
SSLB IAMs_20 IAMs_20 22 11 32.7
comp=Z,2µm,22.0s
MNAI Manna 23.68 258 P P 22 01 09.2 -2.4
NACB Ninganchiao 23.88 350 P P 22 01 10.9 -2.5
NACB IAMs_20 IAMs_20 22 11 46.4
comp=Z,1µm,21.0s
KSI Kapahiang 23.91 260 P P 22 01 13.3 -0.5
comp=Z,14µmcomp=Z,97nm,0.8s
QIZ Qiongzhong 24.34 320 P P 22 01 18.8 +1.2
QIZ pP pP 22 01 29.6 -0.6
QIZ sP sP 22 01 35.1 -1.0
QIZ S S 22 05 33.8 +0.2
QIZ pmax pmax
comp=Z,31nm,1.0s
QIZ LR LR
comp=Z,970nm,21.0s
QIZ LR LR
comp=Z,2µm,26.7s
QIZ Qiongzhong 24.34 320 IAMs_20 IAMs_20 22 10 19.1
comp=Z,2µm,21.0s
YHNB Yeheng 24.41 349 IAmb IAmb 22 01 24.4
comp=Z,103nm,0.9s
YHNB IAMs_20 IAMs_20 22 12 01.3
comp=Z,2µm,22.0s
HKPS Hong Kong Po S 24.55 332 IAMs_20 IAMs_20 22 09 54.3
comp=Z,2µm,20.0s
TATO Taipei 24.68 350 IAMs_20 IAMs_20 22 12 33.5
comp=Z,2µm,21.0s
SDSI Sungai Dareh 24.76 267 P P 22 01 21.6 +0.1
comp=Z,1µmcomp=Z,109nm,0.7s
QIS Mount Isa 24.78 149 P P 22 01 21.8 +0.2
baz=25,SNR=54
KRJI Kerinci 24.82 264 P P 22 01 23.8 +1.6
comp=Z,3µmcomp=Z,280nm,0.9s
BKNI Bangkinang 25.10 270 P P 22 01 25.8 +1.2
comp=Z,1µmcomp=Z,58nm,0.8s
BKNI Bangkinang 25.10 270 P P 22 01 22.7 -1.9
BKNI IAmb IAmb 22 01 26.1
comp=Z,111nm,1.2s
BKNI IAMs_20 IAMs_20 22 12 05.7
comp=Z,2µm,20.0s
AS31 Alice Springs 25.24 163 P P 22 01 25.4 -0.4
AS31 IAmb IAmb 22 01 30.9
comp=Z,44nm,0.3s
ASAR Alice Springs 25.24 163 P P 22 01 26.6 +0.8
comp=Z,64nm,0.5s,baz=346,slow=12,SNR=303
ASAR PcP PcP 22 04 58.8 +0.4
comp=Z,5.2nm,0.7s,baz=328,slow=1.8,SNR=4.6
ASAR S S 22 05 56.2 +8.3
comp=Z,15nm,1.1s,baz=348,slow=20,SNR=9.2
ASAR ScP ScP 22 08 35.6 +2.2
comp=Z,1.6nm,0.6s,baz=346,slow=2.8,SNR=4.5
QZH Quanzhou 25.31 344 P P 22 01 28.5 +2.1
QZH S S 22 05 48.1 -0.9
QZH LR LR
comp=Z,1µm,21.2s
QZH LR LR
comp=Z,650nm,18.8s
QZH LR LR
comp=Z,2µm,23.3s
IPM Ipoh 25.39 279 IAmb IAmb 22 01 28.8
comp=Z,78nm,0.7s
IPM Ipoh 25.39 279 P P 22 01 27.0 -0.3
WRKA Warakurna 25.53 175 P P 22 01 28.3 -0.2
baz=26,SNR=380
PDSI Padang 25.72 267 P P 22 01 31.4 +1.1
comp=Z,695nmcomp=Z,90nm,1.0s
MTSU Mount Surprise 25.78 137 P P 22 01 30.7 -0.1
baz=26,SNR=22
GIRL Giralia 25.82 206 P P 22 01 31.6 +0.6
baz=26,SNR=9.1
KULM Kulim 25.88 281 P P 22 01 31.0 -0.7
JOW Kunigami 26.20 4 P P 22 01 35.8 +1.3
comp=Z,9.8nm,0.8s,baz=168,slow=13,SNR=16
RABL Rabaul 26.43 101 P P 22 01 33.6 -3.1
RABL IAMs_20 IAMs_20 22 10 15.0
comp=Z,2µm,21.0s
SISI Saibi 27.12 266 P P 22 01 45.2 +2.4
comp=Z,49nm,0.7s
RPSI Rantau Prapat 27.29 275 PcP PcP 22 05 03.8 +0.5
RPSI ScP ScP 22 08 42.2 +2.6
RPSI Rantau Prapat 27.29 275 IAmb IAmb 22 01 45.1
comp=Z,78nm,1.1s
RPSI IAMs_20 IAMs_20 22 13 13.6
comp=Z,2µm,22.0s
PSI Prapat 27.30 275 P P 22 01 43.1 -1.5
comp=Z,48nm,1.0s,baz=116,slow=4.2,SNR=30
PSI PcP PcP 22 05 03.8 +0.3
comp=Z,3.7nm,0.4s,baz=78,slow=5.0,SNR=4.4
PSI ScP ScP 22 08 42.2 +2.4
comp=Z,6.5nm,0.9s,baz=208,slow=3.7,SNR=5.5
PSI LR LR 22 14 52.8
comp=Z,666nm,18.6s,baz=77,slow=42
MEEK Meekatharra 28.00 194 P P 22 01 50.5 -0.1
baz=28,SNR=11
CTA Charters Tower 28.45 137 P P 22 01 54.0 -0.6
comp=Z,8.9nm,0.7s,baz=319,slow=11,SNR=11
CTAO Charters Tower 28.45 137 P P 22 01 53.0 -1.7
CTAO Charters Tower 28.45 137 P P 22 01 53.0 -1.7
CTAO pmax pmax
comp=Z,44nm,1.3s
CTAO MLR MLR
comp=Z,700nm,20.0s
PBKT Sadao Pong 29.47 304 P P 22 02 02.7 -1.0
PBKT PcP 22 05 10.0 +1.4
PBKT IAMs_20 IAMs_20 22 13 13.0
comp=Z,1µm,21.0s
LHMI Lhok Sumawe 29.52 280 P P 22 02 02.8 -1.4
SLVN Son La 29.95 315 P P 22 02 06.8 -1.3
JCJ Chichijima 30.55 29 P P 22 02 13.5 +0.3
comp=Z,121nm,0.8s,baz=240,slow=2.2,SNR=8.6
SSE Sheshan 30.73 352 P P 22 02 15.6 +0.9
SSE S S 22 07 15.5 +1.4
SSE pmax pmax
comp=Z,16nm,0.8s
SSE pmax pmax
comp=Z,150nm,3.5s
SSE LR LR
comp=Z,460nm,26.8s
SSE LR LR
comp=Z,170nm,21.3s
SSE Sheshan 30.73 352 IAMs_20 IAMs_20 22 14 06.6
comp=Z,1µm,22.0s
MORW Morawa 31.01 197 P P 22 02 16.7 -0.5
baz=31,SNR=9.2
MORW Morawa 31.01 197 P P 22 02 17.1 -0.1
FORT Forrest 31.22 177 P P 22 02 18.7 -0.4
baz=31,SNR=140
FORT Forrest 31.22 177 P P 22 02 18.4 -0.6
FORT PcP PcP 22 05 14.1 +1.2
FORT IAMs_20 IAMs_20 22 16 08.1
comp=Z,843nm,21.0s
GYA Guiyang 31.85 325⇑iP P 22 02 25.4 +0.6
GYA pP pwP 22 02 39.5 -0.9
GYA PP PnPn 22 03 33.1 +2.1
GYA PcP PcP 22 05 16.3 +1.4
GYA S S 22 07 27.0 -5.1
GYA sS sS 22 07 55.0 +1.7
GYA SS ScP 22 09 22.4 +28
GYA pmax pmax
comp=Z,10.0nm,0.9s
GYA pmax pmax
comp=Z,130nm,4.1s
GYA LR LR
comp=Z,830nm,18.9s
GYA LR LR
comp=Z,640nm,17.6s
GYA LR LR
comp=Z,1µm,19.6s
WHN Wuhan 31.85 340 ⇓P P 22 02 25.4 +0.8
WHN S S 22 07 26.8 -4.9
WHN pmax pmax
comp=Z,30nm,0.7s
WHN LR LR
comp=Z,670nm,9.3s
WHN LR LR
comp=Z,840nm,14.2s
WHN LR LR
comp=Z,4µm,26.0s
KMBL Kambalda 32.01 187 P P 22 02 25.4 -0.6
baz=32,SNR=28
NJ2 Nanjing 32.07 348 eP P 22 02 27.4 +0.9
NJ2 S S 22 07 35.6 +0.5
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
NJ2 pmax pmax
comp=Z,200nm,3.9s
NJ2 LR LR
comp=Z,670nm,20.5s
NJ2 LR LR
comp=Z,510nm,20.3s
NJ2 LR LR
comp=Z,750nm,20.6s
CM31 Chiang Mai Arr 32.09 305 P P 22 02 25.1 -1.8
CM31 PcP PcP 22 05 17.3 +1.8
CMAR Chiang Mai Arr 32.09 305 P P 22 02 26.9 0.0
comp=Z,3.8nm,0.8s,baz=133,slow=7.7,SNR=17
CMAR PcP PcP 22 05 17.4 +1.9
comp=Z,9.8nm,1.0s,baz=166,slow=1.6,SNR=16
CMAR LR LR 22 15 04.7
comp=Z,566nm,21.8s,baz=133,slow=36
QLP Quilpie 32.13 148 P P 22 02 27.9 +0.7
baz=32,SNR=4.9
CHTO Chiang Mai 32.27 306 P P 22 02 27.2 -1.3
CHTO PcP 22 05 16.1 +0.2
BLDU Ballidu 32.28 195 P P 22 02 27.9 -0.4
baz=32,SNR=26
JNU Nakatsue 32.69 7 P P 22 02 32.0 0.0
comp=Z,46nm,0.9s,baz=133,slow=2.3,SNR=20
JNU Nakatsue 32.69 7 IAmb IAmb 22 02 35.6
comp=Z,52nm,0.9s
KMI Kunming 33.28 319 P P 22 02 36.8 -0.7
KMI pP pwP 22 02 53.3 +0.4
KMI sP sP 22 02 58.9 +2.9
KMI PP PP 22 03 52.8 -0.8
KMI S S 22 07 49.9 -4.7
KMI pmax pmax
comp=Z,19nm,1.4s
KMI pmax pmax
comp=Z,170nm,3.9s
KMI LR LR
comp=Z,820nm,21.0s
KMI LR LR
comp=Z,860nm,24.2s
KMI LR LR
comp=Z,2µm,24.4s
KMI Kunming 33.28 319 P P 22 02 36.1 -1.4
KMI IAmb IAmb 22 02 39.8
comp=Z,52nm,1.5s
KMI PcP PcP 22 05 18.9 -0.1
KMI Kunming 33.28 319 IAMs_20 IAMs_20 22 15 42.0
comp=Z,2µm,21.0s
KMI Kunming 33.28 319 P P 22 02 36.1 -1.4
KMI 22 05 18.9
KMI pmax pmax
comp=Z,52nm,1.5s
KMI MLR MLR
comp=Z,2µm,21.0s
ENH Enshi 33.52 333 IAmb IAmb 22 02 42.9
comp=Z,48nm,0.9s
ENH IAMs_20 IAMs_20 22 16 38.1
comp=Z,2µm,22.0s
MUN Mundaring 33.70 195 P P 22 02 41.6 +0.8
baz=34,SNR=8.6
NWAO Narrogin (SRO) 34.35 193 P P 22 02 47.8 +1.4
baz=34,SNR=9.3
NWAO Narrogin (SRO) 34.35 193 P P 22 02 45.8 -0.6
comp=Z,18nm,0.5s,baz=26,slow=7.5,SNR=19
NWAO LR LR 22 17 14.5
comp=Z,280nm,21.8s,baz=12,slow=37
NWAO Narrogin (SRO) 34.35 193 P P 22 02 46.8 +0.4
NWAO IAmb IAmb 22 03 09.5
comp=Z,51nm,1.2s
NWAO Narrogin (SRO) 34.35 193 IAmb IAmb 22 03 09.5
comp=Z,41nm,1.2s
NWAO Narrogin (SRO) 34.35 193 P P 22 02 46.8 +0.4
NWAO pmax pmax
comp=Z,51nm,1.3s
BBOO Buckleboo 34.49 165 P P 22 02 47.1 -0.5
baz=35,SNR=60
BBOO Buckleboo 34.49 165 P P 22 02 47.1 -0.5
BBOO IAmb IAmb 22 03 14.9
comp=Z,21nm,0.7s
HNR Honiara 35.09 107 P P 22 02 52.7 -0.3
comp=Z,223nm,0.8s,baz=196,slow=1.9,SNR=9.2
HNR Honiara 35.09 107 P P 22 02 50.7 -2.4
EIDS Eidsvold 35.30 139 P P 22 02 53.5 -1.2
baz=35,SNR=4.5
EIDS Eidsvold 35.30 139 P P 22 02 52.7 -2.0
EIDS IAMs_20 IAMs_20 22 19 26.3
comp=Z,1µm,21.0s
STKA Stephens Creek 35.43 157 P P 22 02 55.5 -0.2
baz=36,SNR=110
STKA Stephens Creek 35.43 157 P P 22 02 55.5 -0.2
comp=Z,24nm,0.5s,baz=327,slow=9.3,SNR=102
STKA Stephens Creek 35.43 157 P P 22 02 54.8 -0.9
TJN Taejon 35.65 2 iP P 22 02 57.6 +0.1
HTT Hallett 35.89 162 P P 22 02 59.6 -0.1
baz=36,SNR=14
RKGY Rocky Gully 36.03 193 P P 22 03 02.2 +1.5
baz=36,SNR=16
INU Inuyama 36.06 15 IAMs_20 IAMs_20 22 17 53.6
comp=Z,685nm,21.0s
TIA Tai'an 36.45 348 P P 22 03 03.4 -1.0
TIA S S 22 08 38.1 -4.5
TIA pmax pmax
comp=Z,12nm,1.8s
TIA LR LR
comp=Z,630nm,25.6s
TIA LR LR
comp=Z,370nm,28.4s
TIA LR LR
comp=Z,1µm,25.5s
INCN Inchon 36.74 1 P P 22 03 06.2 -0.7
INCN Inchon 36.74 1 P P 22 03 06.2 -0.7
INCN pmax pmax
comp=Z,17nm,0.7s
INCN MLR MLR
comp=Z,500nm,21.0s
KSRS Korea Array 36.75 2 P P 22 03 07.6 +0.7
comp=Z,12nm,0.8s,baz=177,slow=9.7,SNR=30
KSRS PcP PcP 22 05 30.1 +1.6
comp=Z,3.5nm,0.7s,baz=189,slow=2.5,SNR=7.8
KSRS ScP ScP 22 09 13.6 +2.4
comp=Z,0.9nm,0.7s,baz=196,slow=2.4,SNR=5.0
KS19 Wonju Array Si 36.79 2 P P 22 03 06.7 -0.6
CD2 Chengdu 36.90 327⇑iP P 22 03 07.9 -0.5
CD2 sP sP 22 03 27.3 +0.4
CD2 PP PnPn 22 04 34.8 +0.9
CD2 S S 22 08 45.6 -4.2
CD2 sS ScP 22 09 14.1 +2.1
CD2 pmax pmax
comp=Z,20nm,0.7s
CD2 pmax pmax
comp=Z,210nm,3.7s
CD2 LR LR
comp=Z,2µm,19.0s
CD2 LR LR
comp=Z,2µm,22.9s
CD2 LR LR
comp=Z,2µm,23.9s
CMSA Cobar Meteorol 36.91 152 P P 22 03 08.7 +0.3
baz=37,SNR=9.5
XAN Xi'an 37.01 336 P P 22 03 08.3 -0.9
XAN pP pP 22 03 19.6 -2.6
XAN sP sP 22 03 25.3 -2.8
XAN PP PP 22 04 31.6 -2.8
XAN S S 22 08 43.3 -8.0
XAN pmax pmax
comp=Z,27nm,1.0s
XAN pmax pmax
comp=Z,120nm,5.7s
XAN LR LR
comp=Z,580nm,23.9s
XAN LR LR
comp=Z,620nm,20.6s
XAN LR LR
comp=Z,1µm,23.0s
XAN Xi'an 37.01 336 IAMs_20 IAMs_20 22 17 16.1
comp=Z,1µm,21.0s
MJAR Matsushiro Arr 37.51 16 P P 22 03 12.7 -0.7
comp=Z,40nm,0.8s,baz=188,slow=9.3,SNR=59
MJAR PcP PcP 22 05 32.5 +1.6
comp=Z,3.5nm,0.7s,baz=196,slow=3.5,SNR=5.0
MJAR ScP ScP 22 09 17.1 +3.1
comp=Z,1.7nm,0.8s,baz=207,slow=3.8,SNR=4.1
MJAR LR LR 22 17 04.7
comp=Z,419nm,21.7s,baz=200,slow=34
MAJO Matsushiro 37.51 16 P P 22 03 11.0 -2.4
MAJO IAmb IAmb 22 03 14.9
comp=Z,38nm,0.8s
MAJO Matsushiro 37.51 16 IAMs_20 IAMs_20 22 20 59.8
comp=Z,834nm,20.0s
MAJO Matsushiro 37.51 16 P P 22 03 11.0 -2.4
MAJO pmax pmax
comp=Z,38nm,0.8s
MAJO MLR MLR
comp=Z,800nm,20.0s
MAT Matsushiro 37.51 16 P P 22 03 12.6 -0.8
MAT S S 22 08 54.2 -4.6
MJB9 Matsu-Tunnel 37.51 16 P P 22 03 12.1 -1.4
MJB9 IAmb IAmb 22 03 14.8
comp=Z,40nm,0.8s
MJB9 IAMs_20 IAMs_20 22 20 59.8
comp=Z,913nm,21.0s
DL2 Dalian 38.38 354 P P 22 03 21.8 +1.1
DL2 pP pP 22 03 36.0 +2.3
DL2 S S 22 09 12.5 +0.6
DL2 pmax pmax
comp=Z,63nm,1.0s
DL2 pmax pmax
comp=Z,140nm,5.1s
DL2 LR LR
comp=Z,250nm,19.0s
DL2 LR LR
comp=Z,520nm,20.7s
DL2 LR LR
comp=Z,760nm,27.1s
TIY Taiyuan 39.07 343 eP P 22 03 26.0 -0.6
ARMA Armidale 39.21 144 P P 22 03 28.8 +0.8
baz=39,SNR=9.6
ARMA Armidale 39.21 144 P P 22 03 27.2 -0.7
KOHI KOHIMA 39.75 312 eP P 22 03 29.0 -3.5
KOHI IAmb IAmb 22 03 40.2
comp=Z,17nm,0.7s
BJI Beijing 40.33 348 P P 22 03 36.8 -0.1
BJI S S 22 09 40.5 -0.6
BJI pmax pmax
comp=Z,14nm,0.7s
BJI LR LR
comp=Z,370nm,23.1s
BJI LR LR
comp=Z,330nm,19.9s
BJI LR LR
comp=Z,950nm,29.2s
ZIRO ZIRO 40.96 314 eP P 22 03 42.4 -0.2
ZIRO IAmb IAmb 22 03 47.9
comp=Z,31nm,1.0s
LZH Lanzhou 40.97 332 eP P 22 03 42.8 +0.3
LZH sP sP 22 04 04.8 +3.3
LZH PcP PcP 22 05 43.5 +1.5
LZH S S 22 09 46.6 -4.5
LZH pmax pmax
comp=Z,35nm,1.2s
LZH pmax pmax
comp=Z,120nm,4.8s
LZH LR LR
comp=Z,830nm,16.9s
LZH LR LR
comp=Z,1µm,16.8s
LZH LR LR
comp=Z,1µm,17.5s
MGCD Mangrove Creek 41.00 147 P P 22 03 44.1 +1.5
baz=41,SNR=5.1
SHL Shillong 41.35 310 eP P 22 03 44.7 -1.1
SHL IAmb IAmb 22 03 59.1
SHL ix x 22 05 46.0
CAN Canberra 41.59 151 P P 22 03 48.1 +0.6
CAN Canberra 41.59 151 P P 22 03 48.1 +0.6
CAN pmax pmax
comp=Z,17nm,0.6s
CNB Canberra Magne 41.76 151 P P 22 03 50.5 +1.6
baz=42,SNR=4.5
TOO Toolangi 41.95 157 P P 22 03 51.6 +1.3
baz=42,SNR=5.2
TOO Toolangi 41.95 157 P P 22 03 50.6 +0.3
TOO Toolangi 41.95 157 P P 22 03 50.6 +0.3
TOO pmax pmax
comp=Z,18nm,1.0s
MSHR Mys Shultsa 42.07 6 iP P 22 03 52.5 +1.3
VLA Vladivostok 42.68 6 iP P 22 03 56.7 +0.6
VLA pmax pmax
comp=Z,45nm,1.1s
CN2 Changchun 43.06 359 eP P 22 03 59.8 +0.6
CN2 eS S 22 10 23.9 +2.6
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,210nm,7.0s
CN2 LR LR
comp=Z,370nm,21.0s
CN2 LR LR
comp=Z,450nm,21.0s
CN2 LR LR
comp=Z,490nm,22.0s
SANVU Saraoutou 43.57 113 P P 22 04 02.9 -0.8
SANVU IAmb IAmb 22 04 08.7
comp=Z,58nm,0.6s
SANVU IAMs_20 IAMs_20 22 22 20.5
comp=Z,2µm,20.0s
USA0B Ussuriysk Arra 43.76 6 P P 22 04 03.4 -1.5
USA0B IAmb IAmb 22 04 08.1
comp=Z,40nm,0.9s
USA0B Ussuriysk Arra 43.76 6 iP P 22 04 05.4 +0.6
USRK Ussuriysk Ar. 43.76 6 P P 22 04 06.2 +1.4
comp=Z,37nm,0.8s,baz=162,slow=5.9,SNR=54
MDJ Mudanjiang 43.97 4 P P 22 04 07.3 +0.8
MDJ pP pwP 22 04 22.1 +2.3
MDJ sP sP 22 04 31.1 +5.5
MDJ ScP ScP 22 09 34.4 -4.9
MDJ S S 22 10 37.4 +2.7
MDJ ScS SS 22 13 56.6 +3.4
MDJ pmax pmax
comp=Z,22nm,1.0s
MDJ pmax pmax
comp=Z,310nm,4.1s
MDJ LR LR
comp=Z,560nm,21.9s
MDJ LR LR
comp=Z,310nm,19.9s
MDJ LR LR
comp=Z,790nm,19.6s
MDJ Mudanjiang 43.97 4 IAmb IAmb 22 04 10.9
comp=Z,59nm,0.9s
MDJ IAMs_20 IAMs_20 22 23 48.0
comp=Z,647nm,22.0s
ERM Erimo 44.02 18 iP P 22 04 07.9 +0.9
ERM pmax pmax
comp=Z,28nm,0.9s
LSA Lhasa 44.15 314 P P 22 04 09.0 +0.2
LSA sP sP 22 04 33.3 +5.8
LSA S S 22 10 39.6 +0.9
LSA pmax pmax
comp=Z,58nm,1.0s
LSA LR LR
comp=Z,1µm,29.9s
LSA LR LR
comp=Z,1µm,34.2s
LSA LR LR
comp=Z,4µm,35.6s
TEY Ternei 45.24 10⇑eP P 22 04 17.7 +1.1

TEY e 22 04 22.2
TEY pmax pmax
comp=N,30nm,0.7s
TEY pmax pmax
comp=Z,80nm,0.7s
DZM Mont Dzumac 45.27 122 eP **P 22 04 21.0 +3.6**
comp=Z,62nm,1.4s
DZM Mont Dzumac 45.27 122 eLR LR 22 17 45.0
comp=Z,2µm,25.4s
TAPN Taplejung 45.48 309 eP **P 22 04 18.1 -1.1**
comp=Z,46nm,0.8s
ODAN Odare 45.49 308 eP **P 22 04 18.1 -1.1**
comp=Z,55nm,0.7s
GTA Gaotai 45.54 331 ⇑P **P 22 04 19.1 -0.1**
GTA pP pP 22 04 29.8 -2.8
GTA PcP **PcP 22 05 58.8 +1.5**
GTA S **S 22 10 57.8 0.0**
GTA SS **ScS 22 14 14.6 +3.2**
GTA pmax pmax
comp=Z,11nm,1.0s
GTA pmax pmax
comp=Z,260nm,5.7s
GTA LR LR
comp=Z,610nm,18.1s
GTA LR LR
comp=Z,730nm,21.6s
GTA LR LR
comp=Z,1µm,20.6s
PALK Pallekele 45.79 280 IAMs_20 IAMs_20 22 26 59.9
comp=Z,940nm,22.0s
RAMN Ramite 46.16 308 eP **P 22 04 23.5 -1.0**
comp=Z,54nm,0.5s
YUK Yuzh-Kuril'sk 46.71 20 eP P 22 04 20.5 -7.7
YUK ePPP PPP 22 06 59.7
YUK pmax pmax
comp=Z,203nm,0.3s
JIRN Jiri 46.81 309 eP **P 22 04 28.8 -1.0**
comp=Z,53nm,0.7s
MOO Moorlands 46.82 159 P **P 22 04 30.5 +1.4**
baz=47,SNR=3.1
GUN Gumba 47.17 309 eP **P 22 04 31.5 -1.0**
comp=Z,36nm,0.5s
PKI Pulchoki 47.38 308 eP **P 22 04 32.7 -1.5**
comp=Z,18nm,0.6s
PKIN Phulchoki 47.39 308 eP **P 22 04 32.4 -1.8**
comp=Z,15nm,0.4s
KKN Kakani 47.58 308 eP **P 22 04 34.3 -1.3**
DMN Daman 47.64 308 eP **P 22 04 35.3 -0.8**
GKN Gorkha 48.19 308 eP **P 22 04 39.0 -1.2**
YSS Yuzh-Sakhalins 48.43 15 P **P 22 04 40.0 -1.5**
YSS IAmb IAmb 22 04 44.6
comp=Z,32nm,0.7s
YSS Yuzh-Sakhalins 48.43 15 eP **P 22 04 41.8 +0.3**
YSS e 22 04 46.6
YSS e 22 06 34.5
YSS eS **S 22 11 39.0 +0.4**
YSS eSS **SS 22 15 03.5 -5.5**
YSS pmax pmax
comp=Z,40nm,1.1s
YSS MLR MLR
comp=Z,300nm,14.0s
YSS MLR MLR
comp=N,200nm,15.0s
YSS MLR MLR
comp=E,200nm,15.0s
KUR Kuril'sk 48.45 20 eP **P 22 04 40.9 -0.8**
KUR e 22 06 05.9
KUR S **S 22 11 40.5 +1.6**
KLR Kul'dur 48.72 5c iP **P 22 04 43.4 -0.3**
KLR pmax pmax
comp=Z,27nm,1.0s
KLR MLR MLR
comp=Z,592nm,22.0s
HIA Hailar 48.83 354 IAmb IAmb 22 04 48.0
comp=Z,28nm,0.9s
HIA Hailar 48.83 354 IAMs_20 IAMs_20 22 28 26.8
comp=Z,583nm,20.0s
DANN Dangsing 49.03 308 eP **P 22 04 45.6 -1.3**
comp=Z,139nm,0.8s
HYB Hyderabad 49.70 292 iP **P 22 04 50.0 -1.8**
HYB Hyderabad 49.70 292 eP **P 22 04 51.4 -0.4**
HYB IAmb IAmb 22 04 57.3
comp=Z,33nm,0.8s
ULN Ulaanbaatar 49.95 343 P **P 22 04 52.7 -0.6**
ULN IAmb IAmb 22 04 57.5
comp=Z,34nm,0.9s
ULN Ulaanbaatar 49.95 343 IAMs_20 IAMs_20 22 28 35.5
comp=Z,487nm,21.0s
ULN Ulaanbaatar 49.95 343 P **P 22 04 52.7 -0.6**
ULN pmax pmax
comp=Z,34nm,1.0s
ULN MLR MLR
comp=Z,500nm,21.0s
SONM Songino Array 50.11 343 P **P 22 04 54.9 +0.4**
comp=Z,18nm,0.8s,baz=154,slow=8.7,SNR=58
SONM PcP **PcP 22 06 14.9 +1.4**
comp=Z,7.0nm,0.9s,baz=155,slow=3.3,SNR=4.2
SONM LR LR 22 28 42.5
comp=Z,484nm,20.2s,baz=157,slow=39
TYV Tymovskoe 52.04 13 eP **P 22 05 11.8 +3.0**
TYV pmax pmax
comp=Z,8.0nm,1.0s
CIT Chita 52.36 350 eP **P 22 05 13.3 +2.1**
CIT e 22 05 25.1
CIT pmax pmax
comp=Z,220nm,1.2s
BHPL Bhopal 52.36 299 eP **P 22 05 11.3 -0.5**
BHPL IAmb IAmb 22 05 14.3
comp=Z,20nm,0.5s
ZEA Zeya 53.00 1 eP **P 22 05 16.9 +1.1**
ZEA pmax pmax
comp=Z,29nm,1.0s
ZEA MLR MLR
comp=Z,500nm,17.0s
ZEA MLR MLR
comp=N,400nm,18.0s
ZAK Zakamensk 53.32 342 eP **P 22 05 18.0 -0.4**
ZAK pmax pmax
comp=Z,8.0nm,1.1s
DGAR Diego Garcia 54.13 260 P **P 22 05 23.6 -1.2**
DGAR Diego Garcia 54.13 260 P **P 22 05 23.6 -1.2**
DGAR pmax pmax
comp=Z,121nm,1.2s
MSVF Nonsavu 54.20 112 P **P 22 05 22.3 -3.0**
MSVF IAmb IAmb 22 05 54.8
comp=Z,40nm,1.2s
MSVF Nonsavu 54.20 112 iP **P 22 05 25.0 -0.3**
MSVF pmax pmax
comp=Z,13nm,1.0s
POO Poona 54.31 292 eP **P 22 05 23.0 -3.1**
TLY Talaya 54.35 343 P **P 22 05 25.1 -0.7**
TLY Talaya 54.35 343 eP **P 22 05 27.1 +1.3**
TLY pmax pmax
comp=Z,29nm,0.6s
TLY MLR MLR
comp=Z,396nm,14.0s
IRK Irkutsk 54.67 344 eP **P 22 05 29.2 +1.1**
IRK e 22 06 28.0
IRK pmax pmax
comp=Z,47nm,3.4s
WMQ Urumqi 55.00 327 eP **P 22 05 31.1 +0.4**
WMQ pP pwP 22 05 47.4 +3.1
WMQ sP sP 22 05 52.9 +2.8
WMQ pmax pmax
comp=Z,35nm,0.9s
WMQ pmax pmax
comp=Z,130nm,3.8s
WMQ LR LR
comp=Z,510nm,15.5s
WMQ LR LR
comp=Z,610nm,19.7s
WMQ LR LR
comp=Z,1µm,26.9s
WMQ Urumqi 55.00 327 IAmb IAmb 22 05 34.6
comp=Z,42nm,0.8s
WMQ Urumqi 55.00 327 IAMs_20 IAMs_20 22 28 41.6
comp=Z,1µm,21.0s
MOY Mondy 55.16 341 eP **P 22 05 32.9 +1.2**
MOY pmax pmax
comp=Z,73nm,4.2s
SMLA Simla 55.40 308 eP **P 22 05 33.8 +0.1**
SMLA IAmb IAmb 22 05 42.8
DHRM DHARAMSHALA 56.52 309 eP **P 22 05 40.4 -1.6**
DHRM IAmb IAmb 22 05 44.2
comp=Z,62nm,0.6s
BOD Bodaibo 57.90 352 eP **P 22 05 51.4 +0.4**
BOD pmax pmax
comp=Z,34nm,1.2s
PEA0B Petropavlovsk- 58.57 22 P **P 22 05 55.8 0.0**
PEA0B Petropavlovsk- 58.57 22 P **P 22 05 55.8 0.0**
PEA0B pmax pmax
comp=Z,42nm,0.8s
PETK Petropavlovsk- 58.57 22 P **P 22 05 56.7 +1.0**
comp=Z,35nm,0.8s,baz=191,slow=5.8,SNR=23
PET Petropavlovsk 58.86 22 eP **P 22 05 59.7 +2.0**
PET eS **S 22 14 02.8 +3.2**
QRZ Quartz Range 58.86 140 P **P 22 05 56.7 -1.3**
NIL Nilore 59.43 309 P **P 22 06 01.2 -0.9**
NIL IAmb IAmb 22 06 04.0
comp=Z,18nm,0.7s
NIL Nilore 59.43 309 IAMs_20 IAMs_20 22 33 12.1
comp=Z,440nm,21.0s
NIL Nilore 59.43 309 P **P 22 06 01.2 -0.9**
NIL pmax pmax
comp=Z,19nm,0.7s
NIL MLR MLR
comp=Z,400nm,21.0s
PDGK Podgornoye 59.50 322 P **P 22 06 01.8 -0.8**
MK31 Makanchi Array 59.83 327 P **P 22 06 04.4 -0.3**
MK31 IAmb IAmb 22 06 07.7
comp=Z,17nm,0.7s
MK31 Makanchi Array 59.83 327 P **P 22 06 04.4 -0.3**
MK31 pmax pmax
comp=Z,17nm,0.7s
MKAR Makanchi Array 59.83 327 P **P 22 06 04.3 -0.3**
comp=Z,25nm,0.4s,baz=122,slow=7.4,SNR=267
MKAR PcP **PcP 22 06 52.9 +2.1**
comp=Z,11nm,0.7s,baz=116,slow=5.5,SNR=4.0
MKAR LR LR 22 32 27.5
comp=Z,1µm,21.2s,baz=122,slow=36
KSH Kashi 59.89 317 P **P 22 06 06.3 +1.0**
KSH pP sP 22 06 25.5 +1.2
KSH sP pwP 22 06 32.5 +10
KSH PcP **PcP 22 06 49.8 -1.5**
KSH PP **PP 22 08 22.1 +4.1**
KSH S **S 22 14 10.8 -3.0**
KSH sS sS 22 14 40.6 +3.8
KSH ScS **ScS 22 15 43.1 -8.6**
KSH SS **SS 22 18 09.3 -1.6**
KSH pmax pmax
comp=Z,7.0nm,0.7s
KSH pmax pmax
comp=Z,180nm,6.0s
KSH LR LR
comp=Z,190nm,6.6s
KSH LR LR
comp=Z,170nm,5.6s
KSH LR LR
comp=Z,810nm,13.6s
MAKZ Makanchi 60.02 326 P **P 22 06 05.5 -0.4**
MAKZ IAmb IAmb 22 06 08.8
comp=Z,28nm,0.7s
MAKZ Makanchi 60.02 326 P **P 22 06 05.5 -0.4**
MAKZ pmax pmax
comp=Z,28nm,0.7s
MAKZ MLR MLR
comp=Z,1µm,20.0s
TUWZ Tuamarina 60.09 140 P **P 22 06 05.6 -0.8**
BKZ Black Stump Fm 60.67 137 P **P 22 06 09.9 -0.6**
BKZ IAmb IAmb 22 06 48.2
comp=Z,23nm,0.9s
BHW Baring Head 60.68 140 P **P 22 06 09.2 -1.3**
URZ Urewera 60.68 135 P **P 22 06 10.1 -0.4**
comp=Z,5.8nm,0.4s,baz=353,slow=6.5,SNR=4.2
URZ Urewera 60.68 135 P **P 22 06 10.1 -0.4**
URZ IAmb IAmb 22 06 30.5
comp=Z,24nm,1.0s
MSWZ Moikau Station 60.93 139 P **P 22 06 10.1 -2.1**
PLWZ Palliser 61.01 140 P **P 22 06 10.8 -2.0**
YAK Yakutsk 61.37 2 P **P 22 06 15.6 +0.8**
YAK Yakutsk 61.37 2c iP **P 22 06 15.1 +0.4**
YAK e*PP **pP 22 06 24.2 -4.4**
YAK e 22 06 56.3
YAK e 22 08 30.8
YAK eS **S 22 14 35.8 +4.3**
YAK e*SS **sS 22 14 54.0 -0.2**
YAK e 22 16 00.4
YAK eSS **SS 22 18 29.8 -3.1**
YAK pmax pmax
comp=Z,70nm,0.9s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=N,22nm,1.0s
YAK pmax pmax
comp=Z,69nm,2.7s
YAK pmax pmax
comp=N,57nm,2.6s
YAK pmax pmax
comp=E,32nm,2.8s
YAK smax smax
comp=E,194nm,2.2s
YAK smax smax
comp=N,117nm,1.9s
YAK MLR MLR
comp=Z,437nm,24.0s
YAK MLR MLR
comp=N,419nm,23.0s
YAK MLR MLR
comp=E,77nm,25.0s
KZA Kyzart 61.57 319 P **P 22 06 17.7 +0.6**
SNR=6.4
MA2 Magadan 61.90 14 P **P 22 06 18.5 +0.1**
MA2 Magadan 61.90 14c eP **P 22 06 19.6 +1.2**
MA2 pmax pmax
comp=Z,61nm,1.0s
KBK Karagaybulak 62.04 319 P **P 22 06 20.3 +0.4**
SNR=7.7
UCH Uchtor 62.12 319 P **P 22 06 21.4 +0.6**
SNR=21
AAK Ala-Archa 62.33 319 P **P 22 06 25.0 +3.2**
SNR=5.8
AAK Ala-Archa 62.33 319 iP **P 22 06 22.1 +0.3**
SNR=12
AAK Ala-Archa 62.33 319 P **P 22 06 22.0 +0.3**
AAK IAmb IAmb 22 06 26.8
comp=Z,13nm,0.8s
AAK Ala-Archa 62.33 319c eP **P 22 06 22.2 +0.3**
AAK pmax pmax
comp=Z,16nm,0.8s
USP Ospenovka 62.62 320 P **P 22 06 23.4 -0.2**
SNR=19
AML Almayashu 62.62 318 P **P 22 06 24.4 +0.3**
SNR=24
EKS2 Erkin-Say 62.81 319 P **P 22 06 25.5 +0.5**
SNR=16
KBL Kabul 63.01 309 P **P 22 06 25.3 -1.3**
KBL IAmb IAmb 22 06 31.3
comp=Z,22nm,0.8s
KBL Kabul 63.01 309 P **P 22 06 25.3 -1.3**
KBL pmax pmax
comp=Z,22nm,0.8s
ZAA0 Zalesovo Array 63.14 334 IAmb IAmb 22 06 30.1
comp=Z,16nm,0.9s
ZAA0 IAMs_20 IAMs_20 22 33 50.0
comp=Z,427nm,21.0s
ZALV Zalesovo Beam 63.14 334 P **P 22 06 26.1 -0.7**
comp=Z,14nm,0.8s,baz=135,slow=6.2,SNR=24
ZALV LR LR 22 35 42.1
comp=Z,303nm,20.8s,baz=134,slow=38
KURK Kurchatov 64.10 329 P **P 22 06 32.9 -0.2**
KURK Kurchatov 64.10 329 P **P 22 06 32.9 -0.2**
KURK pmax pmax
comp=Z,131nm,0.8s
KK31 Karatay Array 65.16 318 IAmb IAmb 22 06 44.6
comp=Z,18nm,0.8s
KK31 Karatay Array 65.16 318 P **P 22 06 39.4 -0.9**
KKAR Karatay Array 65.16 318 P **P 22 06 39.7 -0.6**
KKAR IAmb IAmb 22 06 44.6
comp=Z,18nm,0.8s
KKAR Karatay Array 65.16 318 P **P 22 06 39.7 -0.6**
KKAR pmax pmax
comp=Z,18nm,0.9s
SEY Seymchan 65.23 13 iP **P 22 06 41.4 +1.1**
TAS Tashkent 65.27 316 P **P 22 06 40.2 -0.8**
TAS Tashkent 65.27 316 P **P 22 06 40.3 -0.8**
TAS pmax pmax
comp=Z,67nm,1.0s
HRA Herat 68.33 307 P **P 22 06 59.8 -1.0**
HRA IAMs_20 IAMs_20 22 39 37.2
comp=Z,482nm,21.0s
BRVK Borovoye 69.73 328 P **P 22 07 08.7 -0.2**
BRVK IAmb IAmb 22 07 12.2
comp=Z,25nm,0.8s
BRVK Borovoye 69.73 328 P **P 22 07 08.7 -0.2**
BRVK pmax pmax
comp=Z,25nm,0.8s
ADK Adak 69.90 34 P **P 22 07 09.1 -0.9**
ADK IAmb IAmb 22 07 16.7
comp=Z,40nm,0.9s
ADK Adak 69.90 34 P **P 22 07 09.1 -0.9**
ADK pmax pmax
comp=Z,40nm,0.9s
GSTR Great Sitkin T 70.34 34 P **P 22 07 12.0 -0.7**
MSEY Mahe Island 70.78 265 P **P 22 07 17.3 +1.1**
TIXI Tiksi 71.00 1 P **P 22 07 16.5 +0.2**
comp=Z,6.4nm,0.4s,baz=189,slow=3.4,SNR=25
TIXI Tiksi 71.00 1 P **P 22 07 15.5 -0.8**
TIXI IAmb IAmb 22 07 26.4
comp=Z,23nm,1.0s
TIXI IAMs_20 IAMs_20 22 44 06.7
comp=Z,296nm,20.0s
TIXI Tiksi 71.00 1 iP **P 22 07 15.2 -1.1**
TIXI pmax pmax
comp=Z,22nm,1.1s
TIXI MLR MLR
comp=Z,565nm,24.0s
SHAO Shalim 71.32 289 iP **P 22 07 21.2 +1.9**
SNR=5.5
ATKA Atka Island 71.43 34 P **P 22 07 19.1 -0.1**
UOSS Minazif 71.61 296 P **P 22 07 20.9 -0.1**
UOSS Minazif 71.61 296 P **P 22 07 19.9 -1.1**
HATD Hatta, Dubai 71.66 296 P **P 22 07 22.8 +1.5**
ASHO Ashiyiah 71.70 296 iP **P 22 07 24.0 +2.4**
SNR=8.1
ALNE Al Ain 71.90 295 iP **P 22 07 24.9 +2.2**
SNR=10
NAZ Nazwa, Dubai 72.10 296 P **P 22 07 25.3 +1.4**
ASHT Ashkhabad 72.23 310 P **P 22 07 22.8 -1.6**
ASHT Ashkhabad 72.23 310 P **P 22 07 22.8 -1.6**
ASHT pmax pmax
comp=Z,99nm,0.4s
GEYT Alibeck 72.43 310 P **P 22 07 25.9 +0.2**
comp=Z,7.4nm,0.8s,baz=132,slow=6.2,SNR=16
GYA0B ALIBECK ARRAY 72.43 310 IAMs_20 IAMs_20 22 41 22.7
comp=Z,332nm,22.0s
SOCY Socotra 72.44 283 IAMs_20 IAMs_20 22 40 43.7
comp=Z,429nm,22.0s
BILL Bilibino 72.75 15 P **P 22 07 26.3 -0.5**
BILL Bilibino 72.75 15 eP **P 22 07 26.2 -0.7**
BILL e 22 07 42.8
BILL e 22 10 06.0
BILL pmax pmax
comp=Z,12nm,1.0s
NRIK Noril'sk 73.35 347 P **P 22 07 31.1 +0.7**
comp=Z,33nm,0.8s,baz=130,slow=7.1,SNR=49
NRIK LR LR 22 43 23.0
comp=Z,323nm,19.8s,baz=148,slow=39
AB31 Akbulak array 74.23 321 P **P 22 07 35.4 -0.6**
ABKAR Akbulak array 74.23 321 IAmb IAmb 22 07 38.7
comp=Z,21nm,0.9s
AKTO Aktyubinsk 75.78 322 P **P 22 07 45.4 +0.5**
comp=Z,31nm,0.7s,baz=106,slow=7.5,SNR=104
SVE Sverdlovsk 76.35 329d iP **P 22 07 48.3 +0.4**
SVE pmax pmax
comp=Z,111nm,1.1s
UNV Unalaska Valle 76.35 34 P **P 22 07 47.3 -0.7**
XMAS Kiritimati 76.40 88 P **P 22 07 46.4 -2.8**
AKUT Akutan 76.85 34 P **P 22 07 50.1 -0.7**
ARU Arti 77.29 328 P **P 22 07 53.3 0.0**
comp=Z,11nm,0.7s,baz=122,slow=3.1,SNR=91
ARU Arti 77.29 328 P **P 22 07 53.5 +0.2**
ARU IAmb IAmb 22 07 55.9
comp=Z,45nm,0.8s
ARU Arti 77.29 328c iP **P 22 07 53.3 0.0**
ARU *PP **pwP 22 08 08.4 -1.3**
ARU 22 10 43.0
ARU S **S 22 17 40.8 +1.5**
ARU pmax pmax
comp=Z,56nm,0.8s
FALS False Pass 78.37 34 P **P 22 07 59.6 +0.3**
SDPT Sand Point 80.13 34 P **P 22 08 09.5 +0.6**
VNDA Vanda 80.38 173 P **P 22 08 10.2 +0.3**
comp=Z,9.1nm,0.7s,baz=323,slow=6.3,SNR=9.6
AKT Akhty 80.95 312 eP **P 22 08 14.7 +0.9**
AKT e 22 08 19.9
AKT pmax pmax
comp=Z,42nm,0.8s
RAYN Ar Rayn 81.19 294 iP **P 22 08 15.7 +0.3**
SNR=27
RAYN Ar Rayn 81.19 294 P **P 22 08 15.6 +0.3**
RAYN IAmb IAmb 22 08 16.3
comp=Z,21nm,0.8s
RAYN Ar Rayn 81.19 294 P **P 22 08 15.6 +0.3**
RAYN pmax pmax
comp=Z,21nm,0.9s
MAK Makhachkala 81.30 313 eP **P 22 08 14.7 -0.7**
MAK eS **S 22 18 19.6 -2.7**
MAK pmax pmax
comp=Z,295nm,1.0s
MAK MLR MLR
comp=Z,291nm,21.0s
DAMY Dhamar 81.87 285 P **P 22 08 19.2 -0.2**
DAMY IAmb IAmb 22 08 24.1
comp=Z,58nm,1.1s
RDOG Red Dog Mine 82.43 21 IAmb IAmb 22 08 25.1
comp=Z,33nm,1.2s
GROC Groznyy 82.57 313 eP **P 22 08 23.0 +0.9**
GROC e 22 08 28.6
GROC e 22 11 33.0
GROC pmax pmax
comp=Z,78nm,1.2s
GNI Garni 83.06 310 P **P 22 08 25.2 +0.3**
GNI IAmb IAmb 22 08 52.6
comp=Z,39nm,0.9s
GNI Garni 83.06 310 P **P 22 08 25.2 +0.3**
GNI pmax pmax
comp=Z,39nm,0.9s
TBLG Delisi 83.20 312 IAmb IAmb 22 08 27.4
comp=Z,34nm,0.8s
SVW2 Sparrevohn 83.84 29 IAmb IAmb 22 08 31.2
comp=Z,25nm,0.7s
ZEI Tsey 83.92 313 eP **P 22 08 28.0 -1.3**
ZEI pmax pmax
comp=Z,62nm,1.4s
NCK Nalchik 84.20 314 iP **P 22 08 29.6 -0.9**
NCK pmax pmax
comp=Z,13nm,0.9s
PPT Papeete 84.71 108 LR LR 22 40 21.3
comp=Z,116nm,21.6s,baz=318,slow=31
PPT2 Papeete2 84.72 108 eS **S 22 18 58.5 +0.4**
comp=Z,204nm,28.5s
PPT2 Papeete2 84.72 108 eLQ LQ 22 31 55.3
comp=Z,5µm,35.5s
PPT2 eLR LR 22 35 55.2
comp=Z,419nm,24.8s
GOF Gofitskoye 84.72 315⇑eP **P 22 08 33.7 +0.6**
GOF pmax pmax
comp=Z,27nm,0.8s
KBZ Khabaz 84.72 314 P **P 22 08 33.9 +0.8**
comp=Z,23nm,1.0s,baz=92,slow=4.0,SNR=18
KBZ LR LR 22 50 59.5
comp=Z,158nm,20.1s,baz=78,slow=39
KBZ Khabaz 84.72 314c iP **P 22 08 33.7 +0.6**
KBZ pmax pmax
comp=Z,35nm,1.1s
KIV Kislovodsk 84.89 314 iP **P 22 08 35.0 +0.9**
SNR=6.8
KIV Kislovodsk 84.89 314 P **P 22 08 33.0 -1.1**
KIV IAmb IAmb 22 08 48.5
comp=Z,30nm,1.0s
KIV Kislovodsk 84.89 314 eP **P 22 08 34.5 +0.4**
KIV e 22 18 53.5
KIV pmax pmax
comp=Z,70nm,1.1s
KIV pmax pmax
comp=Z,185nm,4.4s
SHA1 Shidzhatmaz 84.90 314c iP **P 22 08 35.0 +0.7**
PRGR Permogore 85.00 332 eP **P 22 08 33.5 -0.6**
PRGR pmax pmax
comp=Z,44nm,0.8s
TBI Tubuai 85.07 113 eLR LR 22 36 11.7
comp=Z,563nm,28.0s
SKT Skwentna 85.89 28 IAmb IAmb 22 09 03.7
comp=Z,46nm,1.7s
VRH Novokhopyorsk 86.06 321 eP **P 22 08 39.9 +0.3**

VRH pmax pmax
comp=Z,50nm,0.6s
SUA Susitna One 86.21 29 IAmb IAmb 22 08 41.7
comp=Z,21nm,0.8s
BPAW Bear Paw Mtn. 86.37 26 IAmb IAmb 22 11 32.1
comp=Z,40nm,2.0s
MLY Manley 86.58 25 IAmb IAmb 22 08 45.6
comp=Z,16nm,0.8s
PMR Palmer 86.99 28 IAmb IAmb 22 08 52.4
comp=Z,14nm,0.8s
COLD Coldfoot 87.02 23 IAmb IAmb 22 08 48.2
comp=Z,13nm,0.9s
SOC Sochi 87.02 313 c iP P 22 08 43.7 -0.8
SOC eS S 22 19 06.6 -13
SOC eSS SS 22 25 08.1 +4.7
SOC pmax pmax
comp=Z,24nm,0.9s
MCK McKinley 87.24 26 IAmb IAmb 22 08 47.4
comp=Z,14nm,0.9s
RND Reindeer 87.25 27 IAmb IAmb 22 08 47.3
comp=Z,12nm,0.9s
KNK Knik Glacier 87.30 29 IAmb IAmb 22 08 48.5
comp=Z,17nm,0.8s
TOLK Toolik Lake Re 87.39 21 IAmb IAmb 22 08 50.0
comp=Z,19nm,0.8s
TOLK Toolik Lake Re 87.39 21 P P 22 08 46.6 +0.8
baz=265
VORD Divnogorie 87.58 321 eP P 22 08 46.5 -0.5
VORD pmax pmax
comp=Z,30nm,0.6s
VSR Storozhevoye 87.67 321 eP P 22 08 47.0 -0.4
VSR pmax pmax
comp=Z,30nm,0.7s
CCB Clear Creek Bu 87.80 25 IAmb IAmb 22 08 50.1
comp=Z,10nm,0.8s
LPSR Galich'ya Gora 87.86 322 eP P 22 08 49.6 +1.3
KLMR Klimovskoe 87.86 331 eP P 22 08 46.4 -1.7
KLMR pmax pmax
comp=Z,47nm,1.0s
KLMR Klimovskoe 87.86 331 eP P 22 08 45.8 -2.3
KLMR AMP 22 08 54.6
comp=Z,47nm,1.0s
KLMR LR LR 22 46 04.2
KLMR AMP 22 49 13.8
comp=Z,814nm,15.9s
KLMR LRM MLR 22 49 46.1
KLMR Klimovskoe 87.86 331 eP P 22 08 46.5 -1.7
KLMR AMP 22 08 54.6
comp=Z,47nm,1.0s
POKR Poker Flat Res 87.98 25 P P 22 08 50.7 +2.0
baz=267
HDA Harding Lake 88.16 26 IAmb IAmb 22 08 51.0
comp=Z,14nm,0.8s
HDA Harding Lake 88.16 26 P P 22 08 48.5 -1.0
baz=267
ILAR Eielson Array 88.20 25 P P 22 08 48.5 -1.2
comp=Z,2.4nm,0.6s,baz=238,slow=5.1,SNR=42
ILAR PP PP 22 12 20.1 +2.9
comp=Z,0.8nm,0.9s,baz=242,slow=6.3,SNR=4.1
ILAR PKKPbc PKKPbc 22 26 35.5 -1.0
comp=Z,0.7nm,0.8s,baz=45,slow=1.5,SNR=6.4
ILAR LR LR 22 44 26.0
comp=Z,116nm,19.9s,baz=280,slow=33
TMCR Tamitsa 88.67 334 eP P 22 08 50.5 -1.4
TMCR pmax pmax
comp=Z,17nm,0.7s
ANN Anapa 88.69 315 eP P 22 08 53.2 +0.8
ANN e*PP pP 22 09 06.2 -0.6
ANN e 22 19 13.6
ANN pmax pmax
comp=Z,78nm,1.4s
MOS Moscow 88.70 326 eP P 22 08 49.9 -2.3
MOS e 22 19 32.8
MOS pmax pmax
comp=Z,40nm,1.0s
PRP Porcupine Dome 88.80 25 IAmb IAmb 22 10 16.8
comp=Z,26nm,2.0s
GAZ Gaziantep 88.81 307 IAmb IAmb 22 09 03.5
comp=Z,17nm,0.9s
GAZ IAMs_20 IAMs_20 22 47 06.5
comp=Z,247nm,20.0s
KMBO Kilima Mbogo 88.90 269 P P 22 08 55.3 +0.9
comp=Z,6.0nm,0.8s,baz=61,slow=6.9,SNR=16
KMBO Kilima Mbogo 88.90 269 P P 22 08 56.5 +2.1
KMBO Kilima Mbogo 88.90 269 P P 22 08 55.1 +0.7
KMBO IAmb IAmb 22 09 02.2
comp=Z,14nm,1.0s
RIDG Independent Ri 89.06 26 IAmb IAmb 22 08 56.4
comp=Z,19nm,0.8s
ASF Jabal al Asfar 89.06 302 P P 22 08 55.7 +1.1
baz=39,slow=3.6
SYO Syowa Base 89.28 201 ⇑eP P 22 08 53.0 -1.6
SYO Syowa Base 89.28 201 ⇓ePcP PcP 22 08 56.3 +0.3
SYO Syowa Base 89.28 201 ⇑epP pP 22 09 04.6 -4.2
OBN Obninsk 89.30 325 eP P 22 08 54.4 -0.6
OBN e 22 12 23.7
OBN ePPP PPP 22 14 21.4
OBN eS SKSac 22 19 20.9 +0.2
OBN eSS SS 22 25 36.6 +0.7
OBN pmax pmax
comp=Z,94nm,1.7s
OBN MLR MLR
comp=Z,376nm,21.0s
MENT Mentasta 89.57 27 IAmb IAmb 22 09 03.6
comp=Z,12nm,0.8s
QSPA South Pole Qui 90.49 180 P P 22 09 01.2 +0.7
QSPA IAmb IAmb 22 09 03.5
comp=Z,16nm,0.8s
APA Apatity 90.53 337 ⇓iP P 22 09 10.8 +10
APA pmax pmax
comp=Z,6.0nm,0.8s
APA MLR MLR
comp=Z,800nm,17.0s
BARN Barnard Glacie 90.58 29 IAmb IAmb 22 09 05.6
comp=Z,9.9nm,0.6s
EGAK Eagle 90.65 25 P P 22 09 00.9 -0.3
CTGM Chitina Glacie 90.74 29 IAmb IAmb 22 09 12.2
comp=Z,15nm,0.7s
DAWY Dawson 91.46 26 IAmb IAmb 22 09 08.5
comp=Z,9.1nm,0.8s
BR131 Keskin Array S 91.58 310 iP P 22 09 05.6 -0.6
BRTR Keskin Array B 91.58 310 P P 22 09 05.9 -0.3
comp=Z,4.1nm,0.8s,baz=130,slow=5.6,SNR=20
BRTR LR LR 22 57 29.8
comp=Z,86nm,19.8s,baz=76,slow=40
EPYK Eagle Plains 92.36 24 IAmb IAmb 22 09 11.7
comp=Z,17nm,1.1s
EPYK Eagle Plains 92.36 24 P P 22 09 09.4 +0.3
baz=277
HYT Haines Junctio 92.62 29 IAmb IAmb 22 09 30.4
comp=Z,33nm,1.6s
ARCES ARCESS Array B 93.20 340 P P 22 09 12.8 -0.1
comp=Z,13nm,1.1s,baz=77,slow=3.9,SNR=8.3
INK Inuvik 93.30 21 IAmb IAmb 22 09 15.6
comp=Z,11nm,1.0s
TAOE Nuku Hiva Isla 93.75 99 eLR LR 22 40 18.9
comp=Z,676nm,23.6s
WHY Whitehorse 93.92 29 IAmb IAmb 22 09 19.3
comp=Z,9.3nm,0.8s
AKASG Malin Array Be 93.96 321 P P 22 09 17.0 +0.3
comp=Z,3.2nm,0.7s,baz=71,slow=4.4,SNR=11
AKASG LR LR 22 54 54.3
comp=Z,266nm,21.7s,baz=60,slow=38
FINES FINESS Array B 94.33 332 P P 22 09 19.6 +1.4
comp=Z,5.2nm,0.8s,baz=66,slow=4.8,SNR=8.2
FINES LR LR 22 55 14.2
comp=Z,301nm,20.6s,baz=70,slow=38
VSU Vasula 94.45 329 iP P 22 09 19.8 +1.0
VSU pmax pmax
comp=Z,53nm,1.1s
SORM Soroca 94.79 318 ⇓P P 22 09 20.3 -0.3
SORM Soroca 94.79 318 ⇓P P 22 09 20.3 -0.3
MANR Mangalia 95.07 314 ⇑P P 22 09 19.6 -2.4
TESR Tescani 96.14 317 ⇑P P 22 09 26.2 -0.6
VRI Vrincioaia 96.16 316 ⇓P P 22 09 28.9 +1.9
VRI Vrincioaia 96.16 316 ⇓P P 22 09 28.9 +1.9
C36M Paulatuk 96.37 20 P P 22 09 27.4 +0.1
baz=289
BURAR Bucovina Array 96.95 318 ⇓P P 22 09 31.4 +0.8
BURAR Bucovina Array 96.95 318 ⇓P P 22 09 31.4 +0.8
BUR08 Bucovina Ar. S 96.96 318 IAmb IAmb 22 09 34.1
comp=Z,13nm,1.1s
NVL N'lazarevskaya 98.37 198 eP Pdif 22 09 51.6 +15
NVL pmax pmax
comp=Z,8.0nm,0.8s
TRPA Tarpa 98.65 319 ⇑P Pdif 22 09 38.8 +0.7
KOLS Kolonicke sedl 98.67 320 eP Pdif 22 09 38.1 -0.1
KOLS Kolonicke sedl 98.67 320 ePDIFF Pdif 22 09 38.1 -0.1
UZH Uzhgorod 98.71 319 eP Pdif 22 09 38.7 +0.3
UZH e 22 09 48.1
DRGR 98.77 317 ⇑P P 22 09 38.6 -0.2
DRGR 98.77 317 ⇑P P 22 09 38.6 -0.2
VTS Vitosha 99.11 313 ⇑P Pdif 22 09 40.9 +0.4
VTS Vitosha 99.11 313 ⇑P Pdif 22 09 40.9 +0.4
CRVS Cervenica-Dubn 99.20 320 eP Pdif 22 09 42.4 +1.8
CRVS Cervenica-Dubn 99.20 320 ePDIFF Pdif 22 09 42.4 +1.8
SIRR Siria 99.58 317 ⇑P Pdif 22 09 38.9 -3.5
BOSA Boshof 99.83 241 LR LR 22 50 51.1
comp=Z,118nm,21.8s,baz=94,slow=33
LANS Liptovska Anna 100.43 320 eP Pdif 22 09 48.3 +2.2
LANS Liptovska Anna 100.43 320 ePDIFF Pdif 22 09 48.3 +2.2
NOA NORSAR Array B 101.34 333 P Pdif 22 09 49.5 -0.3
comp=Z,1.1nm,0.8s,baz=68,slow=4.7,SNR=2.8
NOA PP PP 22 14 02.6 +3.2
comp=Z,1.2nm,0.8s,baz=74,slow=7.7,SNR=3.4
YKA Yellowknife Ar 102.61 25 P Pdif 22 09 56.1 +0.7
comp=Z,1.3nm,0.7s,baz=296,slow=4.6,SNR=14
YKA PP PKiKP 22 14 12.8 -3.4
comp=Z,0.8nm,0.9s,baz=297,slow=7.0,SNR=4.4
YKA PKKPbc PKKPbc 22 25 54.5 -3.2
comp=Z,0.9nm,0.7s,baz=114,slow=2.4,SNR=12
SCTE Santa Cesarea 103.10 311 IAMs_20 IAMs_20 23 01 30.4
comp=Z,256nm,19.0s
BRG Berggiesshubel 103.41 323 e(P) Pdif 22 10 05.6 +6.4
comp=Z,3.2nm,0.8s
BRG Berggiesshubel 103.41 323 eP Pdif 22 10 05.6 +6.4
BRG pmax pmax
comp=Z,3.0nm,0.8s
GERES GERESS Array B 104.17 321 Pdiff Pdif 22 10 04.5 +1.6
comp=Z,0.8nm,0.8s,baz=66,slow=2.5,SNR=4.0
BEKR Beckworth 107.50 48 IAMs_20 IAMs_20 22 53 32.8
comp=Z,421nm,22.0s
BMO Blue Mountains 108.12 42 IAMs_20 IAMs_20 22 58 29.3
comp=Z,306nm,20.0s
NVAR Mina Array Bea 109.44 49 Pdiff Pdif 22 10 28.1 +1.5
comp=Z,0.8nm,0.8s,baz=252,slow=5.5,SNR=5.3
NVAR PKiKP PKiKP 22 14 30.2 +0.4
comp=Z,0.7nm,0.7s,baz=273,slow=2.1,SNR=5.3
PDAR Pinedale Array 114.10 42 PKP PKiKP 22 14 41.0 +2.3
comp=Z,0.5nm,0.6s,baz=111,slow=0.8,SNR=5.7
PDAR PKKPbc PKKPbc 22 25 20.1 -0.9
comp=Z,0.5nm,0.5s,baz=126,slow=7.5,SNR=4.6
RSSD Black Hills 117.03 38 PKiKP 22 14 44.4 +0.2
RSSD Black Hills 117.03 38 PKIKP PKiKP 22 14 44.4 +0.2
ULM Lac du Bonnet 118.00 29 PKP PKPdf 22 14 45.5 -0.1
comp=Z,5.3nm,0.6s,baz=318,slow=4.0,SNR=14
ULM PKKPbc PKKPbc 22 25 08.0 +0.8
comp=Z,0.6nm,0.5s,baz=177,slow=4.2,SNR=3.5
ISCO Idaho Springs 118.08 43 IAMs_20 IAMs_20 22 59 19.8
comp=Z,267nm,19.0s
MNTX Cornudas Mount 121.68 52 PKiKP 22 14 54.7 +1.3
TOA0 Torodi Ar. Sit 123.28 286 PKiKP 22 14 57.4 +0.4
TORD Torodi Ar. Bea 123.28 286 PKP PKiKP 22 14 57.0 +0.1
comp=Z,8.6nm,0.7s,baz=58,slow=1.9,SNR=42
TORD PKKPbc PKKPab 22 24 47.9 +1.1
comp=Z,4.5nm,0.7s,baz=272,slow=3.9,SNR=19
SCHQ Schefferville 123.77 9 PKP PKiKP 22 14 56.9 +0.1
comp=Z,5.7nm,0.8s,baz=348,slow=2.1,SNR=14
SCHQ PKKPbc PKKPab 22 24 43.1 -1.1
comp=Z,1.7nm,0.6s,baz=74,slow=16,SNR=6.7
TXAR Lajitas Array 123.97 54 PKP PKiKP 22 14 58.7 +0.6
comp=Z,2.7nm,0.7s,baz=221,slow=1.1,SNR=34
TXAR PKKPab PKKPbc 22 24 45.0 +0.8
comp=Z,0.6nm,0.8s,baz=114,slow=7.5,SNR=5.2
MGMO Mountain Grove 128.33 39 IAMs_20 IAMs_20 23 12 16.8
comp=Z,226nm,18.0s
CCM Cathedral Cave 128.41 38 PKPdf 22 15 06.0 +0.2
CCM Cathedral Cave 128.41 38 PKIKP PKPdf 22 15 06.1 +0.2
L46A Eue Claire 128.49 31 IAMs_20 IAMs_20 23 12 38.3
comp=Z,225nm,18.0s
KIC Kosan Boka 130.50 279 eP PKiKP 22 15 11.5 +0.1
comp=Z,5.3nm,0.7s
DBIC Dimbokro 130.58 279 PKP PKPdf 22 15 11.1 +0.5
comp=Z,10nm,1.1s,baz=84,slow=5.3,SNR=4.9
DBIC SKPbc SKPab 22 18 32.6 +2.3
comp=Z,12nm,1.1s,baz=16,slow=4.4,SNR=5.3
USIN University of 130.60 35 IAMs_20 IAMs_20 23 14 45.4
comp=Z,249nm,20.0s
TIC Toumodi 130.74 279 eP PKiKP 22 15 13.5 +1.6
LIC Lamto 130.80 279 eP PKiKP 22 15 12.0 0.0
comp=Z,12nm,0.7s
WVT Waverly 131.73 37 PKPdf 22 15 12.7 +0.4
WVT Waverly 131.73 37 PKIKP PKPdf 22 15 12.7 +0.4
O54A Avella 132.78 28 PKiKP 22 15 14.9 -0.4
BG3 Lake Jocassee 135.40 35 IAMs_20 IAMs_20 23 16 33.1
comp=Z,229nm,21.0s
PLCA Paso Flores 137.24 161 PKP PKiKP 22 15 23.9 -0.5
comp=Z,2.9nm,0.8s,baz=196,slow=6.5,SNR=3.9
JTS Las Juntas de 147.24 70 PKPab 22 15 44.1 -0.9
JTS Las Juntas de 147.24 70 PKP2 PKPab 22 15 44.1 -0.9
JTS MLR MLR
comp=Z,400nm,22.0s
CPUP Villa Florida 154.16 173 PKP PKPdf 22 15 52.8 +1.5
comp=Z,3.5nm,0.8s,baz=159,slow=1.9,SNR=6.8
CPUP PKPbc PKiKP 22 16 00.8 +1.2
comp=Z,10nm,0.9s,baz=177,slow=1.8,SNR=14
CPUP PKPab PKPab 22 16 12.6 -0.4
comp=Z,12nm,0.9s,baz=178,slow=2.2,SNR=8.1
CPUP Villa Florida 154.16 173 PKPdf 22 15 50.5 -0.8
CPUP PKPab 22 16 12.4 -0.6
ROSC El Rosal 158.87 75 PKPab PKPab 22 16 36.6 +2.3
comp=Z,7.9nm,0.5s,baz=87,slow=11,SNR=3.7
LPAZ La Paz 158.97 139 PKP PKPdf 22 16 00.4 +1.9
comp=Z,3.6nm,1.0s,baz=107,slow=0.3,SNR=9.0
LPAZ PKPab PKPab 22 16 36.3 +1.5
comp=Z,4.4nm,0.7s,baz=120,slow=1.0,SNR=6.9
SDV Santo Domingo 160.83 60 PKPdf 22 15 58.5 -1.6
SDV PKPab 22 16 43.1 +0.5
BDFB Brasilia 163.94 201 PKP PKPdf 22 16 03.3 +0.1
comp=Z,2.6nm,0.6s,baz=219,slow=13,SNR=3.8
BDFB PKPab PKPab 22 16 56.3 +0.5
comp=Z,2.9nm,0.7s,baz=144,slow=6.2,SNR=3.6
SAML Samuel 167.52 132 PKPdf 22 16 05.8 -0.1
SAML PKPab PKPab 22 17 10.3 -1.4
SAML Samuel 167.52 132 PKP2 PKPab 22 17 10.3 -1.4
SAML 23 16 05.9

JMA 24 22:01:04.3±0.1,**24°.60N**×**123°.47E**,**h4**km,**Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.35	138	P	Pg	22 01 11.2	+0.1
IRIF				S	Sg	22 01 16.3	+0.5
YOJ	Yonaguni jima	0.44	252	P	Pg	22 01 13.1	+0.3
YOJ				S	Sg	22 01 18.5	0.0
YOJ	Yonaguni jima	0.44	252	P	Pg	22 01 13.1	+0.3
YOJ				IAmb	IAmb	22 01 20.8	
	comp=Z,118nm,1.0s						
YOJ				IAMs_20	IAMs_20	22 12 14.3	
	comp=Z,1μm,20.0s						
YOJ	Yonaguni jima	0.44	252	P	Pg	22 01 13.1	+0.3
YOJ				pmax	pmax		
	comp=Z,118nm,1.0s						
YOJ				MLR	MLR		
	comp=Z,1μm,20.0s						
JYNG	Yonagunijimaku	0.50	253	P	Pg	22 01 14.3	+0.4
JYNG				S	Sg	22 01 20.7	+0.3
JKRS	Kuro-shima	0.61	126	P	Pg	22 01 16.3	+0.3
JKRS				eS	Sg	22 01 24.6	+0.7
HATJ	Hateruma jima	0.62	150	P	Pg	22 01 16.7	+0.5
HATJ				eS	Sg	22 01 24.6	+0.3
JIJ	Ishigaki jima	0.66	111	P	Pg	22 01 16.7	-0.2
JIJ				S	Sg	22 01 25.6	+0.2
JISG	Ishigakijimahi	0.77	91	P	Pg	22 01 19.2	+0.2
JISG				eS	Sb	22 01 30.4	-0.5
JTJ	Tarama	1.12	88	P	Pg	22 01 25.6	-0.2
JTJ				S	Sg	22 01 40.7	+0.3

*NCEDC **24** 22:16:24.7±2.2, 35°.53N±0°.04×121°.28W±0°.04, h5km±6km, Md2.9/99, Error ellipse: s-maj=6.5km s-min=2.6km az=220.0*

NEIC 24 22:16:23.1±1.4,**35°.48N**±0°.04×**121°.40W**±0°.04,**h10**km±5km, **Error ellipse: s-maj=6.2km s-min=4.3km az=208.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCBM	Cambria	0.28	82		Pg	22 16 28.7	0.0
PHCM	Hearst Castle	0.28	45		Pg	22 16 28.8	0.0
ARDC	Alexander Ranc	0.34	92		Pg	22 16 30.1	+0.2
ARDC					Sg	22 16 38.0	-0.5
BLDC	Black Mountain	0.41	82		Pg	22 16 31.4	+0.3
BLDC	Black Mountain	0.41	82		Pg	22 16 31.3	+0.3
BLDC					Sg	22 16 36.1	-0.3
PAPM	Alder Peak	0.43	4		Pb	22 16 32.3	-0.6
PHSB	Hesperia Broad	0.45	39		Pg	22 16 31.9	+0.2
RAMR	Ramage Ranch	0.46	70		Pg	22 16 32.1	+0.1
RAMR					Sg	22 16 37.7	-0.4
LSDC	Los Osos Digit	0.49	112		Pb	22 16 33.2	-0.6
VPDC	Valencia Peak	0.49	119		Pb	22 16 34.0	+0.2
PANM	San Antonio Re	0.50	53		Pg	22 16 32.8	0.0
DPD	Davis Peak	0.56	116		Pb	22 16 35.0	0.0
PTAM	Tassajara Cree	0.57	98		Pg	22 16 34.5	+0.4
EFD	Emergency Oper	0.57	106		Pg	22 16 34.5	+0.4
PCCM	Crazy Canyon	0.64	17		Pb	22 16 36.1	-0.3
PSAM	San Ardo	0.69	37		Pg	22 16 36.4	0.0
BAPM	Anderson Peak	0.72	344		Pn	22 16 38.8	-0.8
PPO	Portuguese Can	0.75	58		Pg	22 16 37.6	+0.1
PWKM	Work Ranch	0.80	65		Pb	22 16 38.6	+0.1
BPOM	Post Ranch	0.81	338		Pb	22 16 39.8	+0.6
LRC	Lone Oak Road	0.82	21		Pg	22 16 38.9	+0.1
PVCM	Vineyard Canyo	0.83	58		Pg	22 16 38.8	-0.3
BCWM	Chews Ridge	0.84	351		Pb	22 16 40.1	+0.3
PKD	Bear Valley Ra	0.84	56		Pg	22 16 38.7	-0.5
TCHL	Shandon	0.84	75		Pb	22 16 39.8	0.0
PSTM	Stockdale Moun	0.85	58		Pb	22 16 39.0	-0.6
TSCN	Private Proper	0.86	85		Pb	22 16 40.1	0.0
PCMM	Cholame Hills	0.87	68		Pb	22 16 39.9	+0.1
PMCM	McMillan Canyo	0.87	73		Pg	22 16 40.0	+0.2
PMPB	Monarch Peak	0.88	33		Pb	22 16 40.0	0.0
BSMM	Soledad Missio	0.90	359		Pb	22 16 41.1	+0.2
PKLM	Kerr Lake	0.91	71		Pb	22 16 40.5	-0.1
HAST	Hastings Reser	0.92	352		Pb	22 16 41.1	0.0
GHC	Gold Hill	0.92	67		Pg	22 16 40.5	-0.3
BSGM	Shirttail Gulc	0.94	7		Pb	22 16 41.4	-0.1
TRAM	Private Proper	0.94	78		Pb	22 16 41.0	-0.1
PSNM	Stone Corral	0.95	71		Pb	22 16 41.1	-0.3
PAGB	Antelope Grade	0.97	75		Pg	22 16 41.2	-0.6
PAGB					Sg	22 16 54.0	-0.4
CTM	Castle Mountai	0.97	62		Pg	22 16 41.9	+0.1
THIS	South End of C	0.98	75		Pg	22 16 41.9	-0.1
PSRM	Scobie Ranch	0.99	67		Pg	22 16 41.7	-0.4
LRV	Little Rabbit	0.99	18		Pb	22 16 42.4	0.0
PMRM	Maxey Ranch	0.99	72		Pb	22 16 41.8	-0.4
BPIM	Pinnacles	1.03	10		Pb	22 16 42.7	-0.1
BBNM	San Benito	1.06	14		Pb	22 16 43.5	0.0
BJCM	Johnson Can.	1.07	0		Pb	22 16 43.8	+0.2
PBPM	Bitterwater Pu	1.08	84		Pb	22 16 43.2	-0.6
BVL	Bear Valley	1.11	9		Pb	22 16 44.0	-0.4
BPCNC	Pine Canyon	1.11	350		Pn	22 16 45.2	+0.5
SCZ	Santa Cruz	1.12	360		Pn	22 16 44.1	-0.4
BBGB	Big Mountain B	1.14	15		Pn	22 16 45.0	+0.1
BJOM	Mount Johnson	1.15	3		Pn	22 16 44.3	-0.7
PARM	Anticline Ridg	1.15	48		Pg	22 16 44.2	-0.9
SMMC	Simmler	1.16	98		Pg	22 16 44.6	-0.6
GATR	Gnd/Air Tx Cnt	1.18	141		Pg	22 16 46.0	+0.3
BLRM	Lewis Ranch	1.19	5		Pn	22 16 45.6	-0.2
BSRM	Salinas Radio	1.19	355		Pn	22 16 46.4	+0.5
HMOM	Monterey	1.20	340		Pn	22 16 46.5	+0.5
BAVM	Antelope Valle	1.20	14		Pn	22 16 46.5	+0.3
BEMM	Emmet	1.21	12		Pn	22 16 46.7	+0.5
BCGM	Cienega Road	1.23	2		Pn	22 16 46.8	+0.2
BHRM	Hodges Ranch	1.25	5		Pn	22 16 48.0	+0.9
BVYM	Vineyard	1.27	359		Pn	22 16 46.6	-0.3
BMSM	Mercy Hot Spri	1.27	22		Pg	22 16 48.2	+0.7
FRP	Fremont Peak	1.27	357		Pn	22 16 46.6	-0.4
CARC	Carrizo Plain	1.28	97		Pn	22 16 46.5	-0.6
SAO	San Andreas Ge	1.28	358		Pn	22 16 46.7	-0.4
SAO	San Andreas Ge	1.28	358		Pg	22 16 47.6	-0.1
SAO					Sb	22 17 02.8	-1.1
BSLM	Silva Ranch	1.29	2		Pb	22 16 47.7	+0.1
HJGM	San Juan Grade	1.32	354		Pn	22 16 47.6	-0.1
HERM	Elkhorn Road	1.34	349		Pn	22 16 49.1	+0.3
HTUM	Tustin Road	1.36	352		Pn	22 16 49.7	+0.5
HBTM	San Juan Bauti	1.37	355		Pb	22 16 50.0	+0.6
FIGC	Figueroa Mtn.	1.38	122		Pb	22 16 48.8	-0.2
HLTM	Lone Tree Road	1.41	3		Pb	22 16 49.2	-0.1
PKM	Mcpherson Peak	1.43	114		Pn	22 16 48.8	-0.4
HCOM	Corn Cob Canyo	1.43	350		Pg	22 16 50.9	+0.4
BRMM	Rolling Bench	1.43	19		Pn	22 16 50.7	+0.2
HFEM	San Felipe	1.50	360		Pn	22 16 49.8	-0.3
SFJWR	San Luis Fatjo	1.58	7		Pn	22 16 51.2	0.0
SLD	San Luis Dam	1.60	5		Pn	22 16 51.9	+0.4
JRGM	Rodeo Gulch Ro	1.62	344		Pn	22 16 51.7	0.0
MHDM	Hidden Dam	2.04	36		Pn	22 16 57.4	0.0
OSI	Osito Audit: C	2.36	111	Pn	Pn	22 17 01.9	0.0
ISA	Isabella, Lake	2.39	85		Pn	22 17 01.7	-0.7
CMB	Columbia Colle	2.68	17		Pn	22 17 06.0	-0.3
SNCC	San Nicolas Is	2.71	145	Pn	Pn	22 17 06.6	-0.1
MDPB	Devils Postpil	2.85	40		Pn	22 17 07.3	-1.6
OMMB	Old Mammoth Mi	2.88	41		Pn	22 17 09.4	+0.2
MWC	Mount Wilson	3.02	114	Pn	Pn	22 17 11.9	+0.8
DAC	Darwin (Calif)	3.19	74	Pn	Pn	22 17 14.0	+0.5
WAKR	Walker	3.40	27		Pn	22 17 19.4	+3.0
WAKR					Sn	22 17 53.5	-3.5
AFDM	Forest Hills D	3.48	5	Pn	Pn	22 17 19.4	+2.1
AFDM					Sn	22 17 56.3	-2.3
HOPS	Hopland Field	3.75	340	Pn	Pn	22 17 22.1	+1.1
PNTR	Pine Nut	3.88	21	Pn	Pn	22 17 23.2	+0.3
RYN	Ryan	3.90	35	Pn	Pn	22 17 23.0	-0.2
ORV	Oroville	4.07	359	Pn	Pn	22 17 27.3	+1.9
TPNV	Topopah Spring	4.42	69	Pn	Pn	22 17 32.0	+1.7
KVN	Kaiserville	4.43	35	Pn	Pn	22 17 31.8	+1.3
KEBM	Edson Butte	7.73	344	Pn	Pn	22 18 15.1	-0.6

*MOS **24** 22:17:47.2±1.1, 4°.07N×62°.57E, h10km, mb4.6/10, Error ellipse: s-maj=10.6km s-min=6.4km az=91.0*

*BJI **24** 22:17:48.0±0.0, 4°.10N×62°.80E, h5km, mB4.9/20, mb4.4/33, Ms4.7/9, Ms7 4.4/5*

*NEIC **24** 22:17:48.5±2.9, 4°.04N±0°.04×62°.77E±0°.07, h10km±1km, mb4.7/51, Error ellipse: s-maj=12.3km s-min=5.6km az=249.0*

*IDC **24** 22:17:49.1±0.7, 4°.23N×62°.72E, h0km, mb4.0/22, mb1 4.1/22, mb1mx3.9/49, mbtmp4.0/22, MS4.0/11, Ms1 4.0/11, ms1mx3.7/40, Error ellipse: s-maj=20.0km s-min=15.4km az=20.0*

ISC 24 22:17:48.3±0.4,**3°.99N**±0°.06×**62°.77E**±0°.06,**h10**km,**n138**, σ**1**9**72**/134,**mb4.6**/66,**MS4.1**/12,**3C-1D,Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAAM	Kaadhehdhoo	10.79	109	Pn	Pn	22 20 22.4	-0.6
MSEY	Mahe Island	11.28	220	Pn	Pn	22 20 29.1	-0.6
MSEY				Sn	Sn	22 22 31.1	-4.8
MSEY	Mahe Island	11.28	220	P	Pn	22 20 29.1	-0.6
MSEY						22 22 31.2	
SOCY	Socotra	11.90	314	Pn	Pn	22 20 39.0	+0.7
H08N2	Diego Garcia H	13.14	141	T	T	22 34 39.7	
	baz=322,slow=76,SNR=322						
H08N3	Diego Garcia H	13.15	141	T	T	22 34 34.7	
	baz=322,slow=76,SNR=301						
H08N1	Diego Garcia H	13.16	141	T	T	22 34 41.3	
	baz=322,slow=76,SNR=245						
PALK	Pallekele	18.14	79		Pn	22 21 58.9	-1.7
PALK	Pallekele	18.14	79	P	Pn	22 21 58.9	-1.7
PALK				pmax	pmax		
	comp=Z,41nm,1.4s						
WSAR	Wadi Sarin	19.55	349	LR	LR	22 28 10.5	
	comp=Z,334nm,21.0s,baz=133,slow=32						
DAMY	Dhamar	20.94	301	P	P	22 22 30.7	-1.1
DAMY				IAmb	IAmb	22 22 55.6	
	comp=Z,50nm,1.4s						
UOSS	Minazif	21.77	344	P	P	22 22 36.5	-3.9
UOSS				IAmb	IAmb	22 22 47.6	
	comp=Z,42nm,1.2s						
RAYN	Ar Rayn	25.59	321	P	P	22 23 15.9	-2.1
RAYN				IAmb	IAmb	22 23 26.9	
	comp=Z,25nm,1.4s						
RAYN	Ar Rayn	25.59	321	P	P	22 23 15.9	-2.1
RAYN				pmax	pmax		
	comp=Z,25nm,1.4s						
RER	Riviere de l'E	25.93	195	P	P	22 23 20.0	-1.0
KMBO	Kilima Mbogo	26.00	259	P	P	22 23 25.1	+3.0
	comp=Z,2.2nm,0.8s,baz=56,slow=8.8,SNR=11						
KMBO	Kilima Mbogo	26.00	259	P	P	22 23 22.7	+0.7
KMBO				IAmb	IAmb	22 23 40.4	
	comp=Z,37nm,1.5s						

OPO	Ambohidratompo	27.17	214	LR	LR	22 32 02.0	
	comp=Z,325nm,21.6s,baz=178,slow=31						
KBL	Kabul	30.95	10	P	P	22 24 05.2	-0.6
KBL				IAmb	IAmb	22 24 16.2	
	comp=Z,15nm,1.6s						
KBL	Kabul	30.95	10	P	P	22 24 05.3	-0.6
KBL				pmax	pmax		
	comp=Z,15nm,1.7s						
NIL	Nilore	31.09	17	P	P	22 24 05.9	-1.0
NIL				IAmb	IAmb	22 24 16.3	
	comp=Z,9.6nm,1.1s						
NIL	Nilore	31.09	17	P	P	22 24 05.9	-1.0
NIL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MBAR	Mbarara	32.33	263	P	P	22 24 17.5	-0.8
MBAR				IAmb	IAmb	22 24 23.5	
	comp=Z,12nm,1.6s						
MBAR	Mbarara	32.33	263	P	P	22 24 17.5	-0.8
MBAR				pmax	pmax		
	comp=Z,12nm,1.6s						
SHL	Shillong	35.23	50	P	P	22 24 43.2	-0.2
SHL	Shillong	35.23	50	P	P	22 24 43.2	-0.2
SHL				pmax	pmax		
	comp=Z,38nm,1.8s						
LSA	Lhasa	37.09	43	P	P	22 24 59.4	-0.2
LSA				IAmb	IAmb	22 25 09.3	
	comp=Z,20nm,1.5s						
LSA	Lhasa	37.09	43	P	P	22 24 59.4	-0.2
LSA				pmax	pmax		
	comp=Z,20nm,1.5s						
KSH	Kashi	37.34	17	P	P	22 25 00.0	-1.1
KSH				pP	sP	22 25 05.3	+1.1
KSH				PcP	PcP	22 27 22.1	+1.8
KSH				S	S	22 30 43.1	-5.9
KSH				sS	sS	22 30 53.9	+1.5
KSH				pmax	pmax		
	comp=Z,30nm,1.8s						
KSH				pmax	pmax		
	comp=Z,120nm,2.6s						
KSH				LR	LR		
	comp=Z,200nm,6.3s						
KSH				LR	LR		
	comp=Z,290nm,6.7s						
KSH				LR	LR		
	comp=Z,630nm,16.4s						
IPM	Ipoh	38.15	88	P	P	22 25 07.2	-1.1
IPM				IAmb	IAmb	22 25 24.9	
	comp=Z,37nm,1.7s						
CM31	Chiang Mai Arr	38.17	65	P	P	22 25 07.8	-0.6
CM31				IAmb	IAmb	22 25 26.6	
	comp=Z,33nm,1.9s						
CMAR	Chiang Mai Arr	38.17	65	P	P	22 25 11.7	+3.3
	comp=Z,1.6nm,0.8s,baz=261,slow=9.6,SNR=17						
CMAR				LR	LR	22 40 46.3	
	comp=Z,102nm,19.8s,baz=194,slow=36						
CMAR	Chiang Mai Arr	38.17	65	*i* P	P	22 25 11.6	+3.2
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CHTO	Chiang Mai	38.28	64	P	P	22 25 09.8	+0.5
CHTO	Chiang Mai	38.28	64	P	P	22 25 09.8	+0.5
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GNI	Garni	39.51	338	P	P	22 25 21.2	+1.8
	comp=Z,1.7nm,0.6s,baz=254,slow=5.5,SNR=4.1						
GNI	Garni	39.51	338	P	P	22 25 20.3	+0.8
GNI				IAmb	IAmb	22 25 28.9	
	comp=Z,40nm,1.6s						
GNI	Garni	39.51	338	P	P	22 25 20.3	+0.8
GNI				pmax	pmax		
	comp=Z,41nm,1.6s						
PBKT	Sadao Pong	39.52	69	P	P	22 25 18.2	-1.4
KK31	Karatay Array	39.55	9	P	P	22 25 21.2	+1.6
KK31	Karatay Array	39.55	9	P	P	22 25 21.2	+1.6
KK31				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KKAR	Karatay Array	39.55	9	P	P	22 25 20.9	+1.3
KKAR	Karatay Array	39.55	9	P	P	22 25 20.9	+1.3
KKAR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
AAK	Ala-Archa	39.87	14	P	P	22 25 24.3	+1.9
	comp=Z,1.5nm,0.9s,baz=163,slow=15,SNR=3.3						
AAK	Ala-Archa	39.87	14	P	P	22 25 22.5	0.0
AAK	Ala-Archa	39.87	14 *ce*	P	P	22 25 23.6	+1.1
AAK				pmax	pmax		
	comp=Z,12nm,2.5s						
GAZ	Gaziantep	40.49	328	P	P	22 25 25.7	-1.9
TBLG	Delisi	40.90	339	P	P	22 25 29.3	-1.5
TBLG	Delisi	40.90	339	P	P	22 25 29.3	-1.5
AKH	Akhalkalaki	41.07	338	P	P	22 25 31.0	-1.4
AKH				IAmb	IAmb	22 25 42.5	
	comp=Z,28nm,1.7s						
AKH	Akhalkalaki	41.07	338	P	P	22 25 31.0	-1.4
AKH				pmax	pmax		
	comp=Z,28nm,1.7s						
KBZ	Khabaz	43.30	339	P	P	22 25 50.3	0.0
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.4s						
SLVN	Son La	43.49	63	P	P	22 25 51.8	-0.6
KIV	Kislovodsk	43.57	339	P	P	22 25 53.3	+0.7
KIV				IAmb	IAmb	22 26 01.4	
	comp=Z,19nm,1.4s						
KIV	Kislovodsk	43.57	339	*e*P	P	22 25 52.2	-0.4
KIV				pmax	pmax		
	comp=Z,23nm,1.0s						
BR131	Keskin Array S	44.27	327	P	P	22 25 56.1	-2.3
BR131	Keskin Array S	44.27	327	P	P	22 25 56.1	-2.3
BR131				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BRTR	Keskin Array B	44.27	327	P	P	22 25 59.4	+1.0
	comp=Z,1.2nm,0.8s,baz=141,slow=8.0,SNR=7.3						
BRTR				PP	PP	22 27 47.5	+5.8
	comp=Z,0.9nm,0.8s,baz=144,slow=8.0,SNR=4.1						
ANTO	Ankara	44.83	327	P	P	22 26 02.8	0.0
ANTO				IAmb	IAmb	22 27 23.1	
	comp=Z,7.8nm,0.8s						
ANTO	Ankara	44.83	327	P	P	22 26 02.8	0.0
ANTO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ABKAR	Akbulak array	45.16	357	P	P	22 26 06.1	+0.9
ABKAR				IAmb	IAmb	22 26 21.6	
	comp=Z,15nm,1.4s						
WMQ	Urumqi	45.37	25	*e*P	P	22 26 09.8	+2.8
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,150nm,5.9s						
WMQ				LR	LR		
	comp=Z,650nm,25.3s						
WMQ				LR	LR		
	comp=Z,2µm,29.0s						
WMQ				LR	LR		
	comp=Z,420nm,27.7s						
KARP	Karpathos	45.46	318	P	P	22 26 09.3	+1.5
MAKZ	Makanchi	45.78	18	P	P	22 26 10.8	+0.6
MAKZ				IAmb	IAmb	22 26 23.6	
	comp=Z,12nm,1.9s						
MAKZ	Makanchi	45.78	18	P	P	22 26 10.8	+0.6
MAKZ				pmax	pmax		
	comp=Z,12nm,1.9s						
MK31	Makanchi Array	45.87	19	P	P	22 26 09.8	-1.1
MK31	Makanchi Array	45.87	19	P	P	22 26 09.8	-1.1
MK31				pmax	pmax		
	comp=Z,5.0nm,1.5s						
MKAR	Makanchi Array	45.87	19	P	P	22 26 11.7	+0.8
	comp=Z,0.8nm,0.9s,baz=206,slow=8.1,SNR=7.9						
MKAR				PcP	PcP	22 27 50.1	+2.0
	comp=Z,1.1nm,1.0s,baz=224,slow=3.3,SNR=5.4						
MDUB	Mudurnu	46.12	326	P	P	22 26 12.6	-0.4
AKTO	Aktyubinsk	46.45	356	P	P	22 26 16.8	+1.4
	comp=Z,2.8nm,0.8s,baz=174,slow=9.3,SNR=7.1						
CD2	Chengdu	46.96	50	P	P	22 26 19.8	+0.1
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
KURBB	Kurchatov Arra	48.33	13	P	P	22 26 30.8	+0.8
	comp=Z,0.8nm,0.9s,baz=213,slow=7.8,SNR=5.8						
KURK	Kurchatov	48.44	13	P	P	22 26 30.2	-0.6
KURK				IAmb	IAmb	22 26 37.8	
	comp=Z,4.6nm,1.1s						
KURK	Kurchatov	48.44	13 *ce*	P	P	22 26 31.7	+0.9
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
SMRI	Semarang	48.83	103	P	P	22 26 33.9	-0.5
BRVK	Borovoye	49.30	6	P	P	22 26 37.2	-0.2
BRVK	Borovoye	49.30	6	P	P	22 26 37.2	-0.2
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ALN	Alexandroupoli	49.36	323	P	P	22 26 38.4	+0.3
ALN	Alexandroupoli	49.36	323	P	P	22 26 38.4	+0.3
ALN				pmax	pmax		
	comp=Z,66nm,1.9s						
SBUM	Sibu	49.39	90	P	P	22 26 39.5	+0.8
SBUM				IAmb	IAmb	22 26 56.6	
	comp=Z,16nm,1.8s						
LZH	Lanzhou	49.48	44	*e*P	P	22 26 43.3	+4.0
LZH				pP	pwP	22 26 48.0	+2.6
LZH				sP	sP	22 26 51.4	+9.0
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
XAN	Xi'an	52.24	49	P	P	22 27 00.8	+0.8
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,130nm,4.3s						
XAN	Xi'an	52.24	49	P	P	22 26 57.9	-2.0
XAN	Xi'an	52.24	49	P	P	22 26 57.9	-2.0
XAN				pmax	pmax		
	comp=Z,32nm,1.6s						
ARU	Arti	52.39	357	P	P	22 27 00.1	-0.5
	comp=Z,0.5nm,0.5s,baz=166,slow=4.9,SNR=6.5						
ARU	Arti	52.39	357	P	P	22 26 60.0	-0.7
ARU				IAmb	IAmb	22 27 02.1	
	comp=Z,22nm,1.5s						
ARU	Arti	52.39	357 *d*	*i*P	P	22 27 00.8	+0.2
ARU						22 28 54.6	
ARU				S	S	22 34 24.9	-1.5
ARU				SS	SS	22 37 57.4	-7.0
ARU				pmax	pmax		
	comp=Z,17nm,1.5s						
JAGI	Jajag, Banyuwa	52.72	104	P	P	22 27 04.1	+0.3
JAGI				IAmb	IAmb	22 28 18.9	
	comp=Z,14nm,1.0s						
ZAA0	Zalesovo Array	52.96	16	P	P	22 27 04.2	-0.6
ZALV	Zalesovo Beam	52.96	16	P	P	22 27 04.5	-0.3
	comp=Z,0.3nm,0.3s,baz=232,slow=7.3,SNR=4.0						
AKASG	Malin Array Be	54.40	334	P	P	22 27 15.4	-0.1
	comp=Z,0.8nm,0.7s,baz=135,slow=6.6,SNR=7.8						
CEL	Celeste	54.58	315	P	P	22 27 16.7	-0.5
OBN	Obninsk	55.19	342	*e*P	P	22 27 19.9	-1.2
OBN				*e*		22 29 22.2	
OBN				*e*PPP	PPP	22 30 34.5	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MOS	Moscow	55.40	343	*e*P	P	22 27 22.1	-0.5
KIRV	Kirov	55.44	352	P	P	22 27 23.0	+0.2
	comp=Z,5.4nm,0.6s,baz=302,slow=23,SNR=3.7						
SONM	Songino Array	57.48	33	P	P	22 27 39.3	+1.5
	comp=Z,1.0nm,0.9s,baz=234,slow=8.2,SNR=6.4						
SONM				LR	LR	22 52 23.3	
	comp=Z,232nm,21.4s,baz=198,slow=36						
VYHS	Vyhne	58.02	327	*e*P	P	22 27 41.8	+0.3
VYHS	Vyhne	58.02	327	*e*P	P	22 27 41.8	+0.3
TLY	Talaya	58.41	29	*i* P	P	22 27 47.1	+3.0
TLY				pmax	pmax		
	comp=Z,2.0nm,1.1s						
PRGR	Permogore	58.94	351	*e*P	P	22 27 44.8	-2.7
PRGR				pmax	pmax		
	comp=Z,17nm,1.1s						
NJ2	Nanjing	59.39	55	*e*P	P	22 27 52.3	+1.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJT	Baijiatuau	59.93	45	P	P	22 27 55.5	+0.7
BJT				IAmb	IAmb	22 28 03.0	
	comp=Z,6.1nm,1.1s						
BJT	Baijiatuau	59.93	45	P	P	22 27 55.5	+0.7
BJT				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VLC	Villacollemand	60.90	319	P	P	22 27 59.5	-2.0
TORD	Torodi Ar. Bea	60.94	283	P	P	22 28 04.3	+2.2
	comp=Z,1.6nm,1.1s,baz=108,slow=12,SNR=5.0						
GERES	GERESS Array B	61.07	325	P	P	22 28 04.0	+1.4
	comp=Z,0.6nm,0.9s,baz=205,slow=4.3,SNR=2.3						
VSU	Vasula	61.13	339	*i* P	P	22 28 02.1	-0.5
VSU				pmax	pmax		
	comp=Z,49nm,1.2s						
KHC	Kasperske Hory	61.29	325	*i* P	P	22 28 03.9	-0.1
KHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SENIN	Lac Senin/Sane	63.80	321	P	P	22 28 21.1	+0.1
SENIN				IAmb	IAmb	22 28 28.2	
	comp=Z,6.6nm,0.9s						
BFO	Black Forest	63.98	323	P	P	22 28 21.9	-0.1
BFO	Black Forest	63.98	323	P	P	22 28 21.9	-0.1
BFO				pmax	pmax		
	comp=Z,23nm,1.3s						
JOW	Kunigami	66.38	63	P	P	22 28 36.1	-1.9
HFS	Hagfors	67.23	336	P	P	22 28 43.0	+0.3
	comp=Z,5.0nm,0.9s,baz=159,slow=8.6,SNR=3.0						
KSRS	Korea Array	67.95	51	P	P	22 28 48.4	+0.7
	comp=Z,0.5nm,0.5s,baz=260,slow=6.1,SNR=3.4						
KSRS				LR	LR	23 00 23.9	
	comp=Z,84nm,19.5s,baz=258,slow=38						
NOA	NORSAR Array B	68.76	336	P	P	22 28 51.7	-0.6
	comp=Z,1.7nm,1.0s,baz=114,slow=7.3,SNR=2.9						
NOA				LR	LR	23 00 20.2	
	comp=Z,126nm,21.3s,baz=70,slow=37						
ESDC	Sonseca Array	69.62	311	P	P	22 28 59.1	+1.0
	comp=Z,1.1nm,0.8s,baz=86,slow=5.3,SNR=5.2						
ARCES	ARCESS Array B	69.88	347	P	P	22 29 00.2	+1.1
	comp=Z,3.5nm,0.9s,baz=342,slow=15,SNR=4.1						
MAW	Mawson	71.43	180	P	P	22 29 08.6	+0.1
MAW				IAmb	IAmb	22 30 43.5	
	comp=Z,6.0nm,1.1s						
MAW	Mawson	71.43	180	P	P	22 29 08.6	+0.1
MAW				pmax	pmax		
	comp=Z,6.0nm,1.1s						
USRK	Ussuriysk Ar.	72.39	45	LR	LR	23 02 46.2	
	comp=Z,108nm,19.2s,baz=236,slow=37						
WRA	Warramunga Arr	74.14	112	P	P	22 29 28.4	+2.8
	comp=Z,6.4nm,1.0s,baz=286,slow=5.5,SNR=19						
WRAB	Tennant Creek	74.15	112 *ce*	P	P	22 29 29.7	+4.0
WRAB				pmax	pmax		
	comp=Z,25nm,2.5s						
WB2	Warramunga Arr	74.16	112	P	P	22 29 25.4	-0.3
WB0	Warramunga Arr	74.16	112	P	P	22 29 26.2	+0.4
WB0				IAmb	IAmb	22 29 36.1	
	comp=Z,16nm,1.2s						
WR0	Warramunga Arr	74.33	112	P	P	22 29 25.9	-0.9
WR0				IAmb	IAmb	22 29 37.0	
	comp=Z,16nm,1.3s						
ASAR	Alice Springs	74.45	116	P	P	22 29 30.8	+3.4
	comp=Z,3.1nm,0.9s,baz=282,slow=5.8,SNR=18						
MJAR	Matsushiro Arr	75.94	53	LR	LR	23 04 32.8	
	comp=Z,61nm,20.4s,baz=130,slow=37						
TIXI	Tiksi	78.83	17	P	P	22 29 51.2	0.0
	comp=Z,0.6nm,0.4s,baz=284,slow=3.1,SNR=4.6						
TIXI	Tiksi	78.83	17	IAmb	IAmb	22 30 16.7	
	comp=Z,14nm,1.7s						
STKA	Stephens Creek	82.64	123	LR	LR	23 06 11.7	
	comp=Z,68nm,18.0s,baz=218,slow=35						
PETK	Petropavlovsk-	89.80	37	LR	LR	23 12 34.5	
	comp=Z,77nm,20.8s,baz=240,slow=37						
BILL	Bilibino	91.35	21	*e*P	P	22 30 55.0	+0.9
BILL				*e*PPP	PPP	22 36 28.9	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
VNDA	Vanda	95.84	168	LR	LR	23 07 43.5	
	comp=Z,118nm,20.8s,baz=278,slow=31						
PDAR	Pinedale Array	132.94	352	PKP	PKiKP	22 37 06.0	+0.2
	comp=Z,0.2nm,0.4s,baz=32,slow=5.3,SNR=3.3						
NVAR	Mina Array Bea	137.78	1	PKP	PKiKP	22 37 15.9	+0.1
	comp=Z,1.4nm,1.1s,baz=51,slow=2.8,SNR=4.2						
TXAR	Lajitas Array	144.40	339	PKP	PKPdf	22 37 26.0	+0.2
	comp=Z,0.7nm,0.9s,baz=66,slow=1.5,SNR=7.0						
TXAR	Lajitas Array	144.40	339	PKIKP	PKPdf	22 37 26.0	+0.2
APG	El Apazote	147.45	306	PKPbc	PKPab	22 37 35.5	-0.3
	comp=Z,8.9nm,0.3s,baz=261,slow=5.7,SNR=6.4						

WEL 24 22:36:35.0,45°S±3°×16°7E±°,h82km±3km,M3.5/8,ML3.8/7, MLv3.5/8,Error ellipse: s-maj=0.0km s-min=0.0km az=52.1,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.19	206	P	Pn	22 36 47.5	+0.6
DCZ				S	Sn	22 36 56.5	+0.8
MLZ	Mavora Lakes	0.60	98	P	Pn	22 36 50.5	+0.6
MLZ				S	Sn	22 37 01.5	+0.7
WHZ	Wether Hill Ro	0.77	142	P	Pn	22 36 52.5	+1.1
WHZ				S	Sn	22 37 05.3	+1.6
MSZ	Milford Sound	0.77	37	P	Pn	22 36 51.7	+0.2
MSZ				S	Sn	22 37 04.2	+0.5
PYZ	Puysegur Point	0.97	205	P	Pn	22 36 55.6	+1.9
PYZ				S	Sn	22 37 10.0	+2.3
WKZ	Wanaka	1.32	70	P	Pn	22 36 58.6	+0.5
EAZ	Earnscleugh	1.44	88	P	Pn	22 37 00.2	+0.6
APZ	The Paps	1.62	162	P	Pn	22 37 03.0	+1.1
JCZ	Jackson Bay	1.63	42	P	Pn	22 37 01.4	-0.7
TUZ	Tuapeka	1.78	113	P	Pn	22 37 04.7	+0.7
SYZ	Scrubby Hill	1.80	134	P	Pn	22 37 05.4	+1.2
LBZ	Lake Benmore	2.26	67	P	Pn	22 37 09.2	-1.2
ODZ	Otahua Downs	2.40	85	P	Pn	22 37 11.5	-0.7
HHSZ	Highcliff Hill	2.41	105	P	Pn	22 37 12.8	+0.5
FOZ	Fox Glacier	2.53	47	P	Pn	22 37 12.3	-1.6
RPZ	Rata Peaks	3.13	61	P	Pn	22 37 20.0	-2.1
WVZ	Waitaha Valley	3.33	50	P	Pn	22 37 23.6	-1.2
OXZ	Oxford	3.94	62	P	Pn	22 37 30.2	-2.9
INZ	Inchbonnie	3.95	51	P	Pn	22 37 31.4	-1.8
LTZ	Lake Taylor	4.39	57	P	Pn	22 37 36.2	-3.0
OKCZ	Okains Bay	4.43	71	P	Pn	22 37 38.6	-1.1
DSZ	Denniston Nort	4.84	45	P	Pn	22 37 43.2	-2.2
THZ	Tophouse	5.40	51	P	Pn	22 37 49.9	-3.1
QRZ	Quartz Range	5.89	43	P	Pn	22 37 58.1	-1.6
TLZ	Tolley Road	9.29	44	P	Pn	22 38 50.0	+3.9

IDC **24** *22:40:13.0±2.8, 13.°27N×91.°34W, h0km, mb3.5/4, mb1 3.9/7, mb1mx3.7/34, mbtmp3.6/7, ML3.8/3, MS3.3/1, Ms1 3.3/1, ms1mx2.6/29, Error ellipse: s-maj=46.4km s-min=19.7km az=138.0*
SNET **24** *22:40:19.6±1.5, 13.°64N×91.°40W, h5km±33km, ML3.4*
GCG **24** *22:40:22.3±0.7, 14.°12N×91.°36W, h102km±12km, MD4.1*
ISC 24 22:40:20.6±1.3**, 13.°63N**±0.°09×**91.°45W**±0.°05**, h28**km**, n19, σ1^{s}60**/22**, mb3.6**/4**, 1C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	Fuego 3	1.00	36	*e*P	Pb	22 40 40.0	+0.5
STG3	Santiaguito 3,	1.08	354	*e*P	Pn	22 40 40.0	-0.1
STG3				*e*S	Sn	22 40 53.7	-0.5
PCG	Pacaya	1.12	47	*e*P	Pb	22 40 41.6	+0.2
PCG				*e*S	Sb	22 40 56.5	+0.8
IXG	Ixpaco	1.12	61	*e*P	Pn	22 40 40.8	+0.2
NBG	Las Nubes	1.43	48	*e*P	Pn	22 40 44.4	-0.6
NBG				*e*S	Sn	22 41 02.7	-0.3
APG	El Apazote	1.67	35	Pn	Pn	22 40 49.1	+0.9
	21nm,0.3s,baz=253,slow=3.0,SNR=38						
APG				Lg	Lg	22 41 13.3	
	14nm,0.3s,baz=231,slow=12,SNR=3.8						
CEVE	Cerro Verde	1.79	84	*e*P	Pn	22 40 50.1	+0.3
CEVE				IAML		22 41 23.9	
	comp=Z,1µm,0.5s						
SBLS	San Blas	1.79	83	*e*P	Pn	22 40 50.2	+0.3
SNJE	San Jose	1.81	82	*e*P	Pn	22 40 50.5	+0.3
MTO3	Montecristo	2.17	69⇑	*e*P	Pn	22 40 56.2	+1.1
COEG	Centro de Oper	2.50	90	*e*P	Pn	22 41 01.4	+1.9
CMIG	Matias Romero	4.77	317	Pn	Pn	22 41 30.0	-0.7
	comp=Z,1.1nm,0.3s,baz=130,slow=9.6,SNR=12						
CMIG				Sn	Sn	22 42 30.3	+5.2
	comp=Z,2.8nm,0.3s,baz=263,slow=12,SNR=4.5						
TEIG	Tepich	7.23	24	Pn	Pn	22 42 05.8	+1.4
	comp=Z,2.5nm,0.3s,baz=140,slow=1.1,SNR=21						
TXAR	Lajitas Array	19.30	326	P	Pn	22 44 45.4	+0.7
	comp=Z,0.1nm,0.3s,baz=156,slow=12,SNR=8.7						
TKL	Tuckaleechee C	23.00	16	P	P	22 45 21.6	-1.6
	comp=Z,1.6nm,0.5s,baz=188,slow=10,SNR=4.7						
ANMO	Albuquerque	25.18	330	LR	LR	22 55 16.7	
	comp=Z,64nm,21.1s,baz=300,slow=35						
NVAR	Mina Array Bea	34.29	321	P	P	22 47 05.8	+1.0
	comp=Z,0.3nm,0.7s,baz=133,slow=11,SNR=2.7						
YKA	Yellowknife Ar	51.50	347	P	P	22 49 21.0	-2.4
	comp=Z,0.3nm,0.3s,baz=152,slow=7.6,SNR=5.7						
ILAR	Eielson Array	63.38	337	P	P	22 50 46.0	-1.2
	comp=Z,0.3nm,0.6s,baz=168,slow=5.8,SNR=5.4						

IDC **24** *22:43:38.6±2.3, 13.°41N×91.°54W, h0km, mb3.6/5, mb1 3.9/8, mb1mx3.7/34, mbtmp3.6/8, ML3.5/3, Error ellipse: s-maj=40.4km s-min=17.8km az=142.0*
GCG **24** *22:43:44.5±0.4, 13.°61N×91.°73W, h36km±999km, MD4.1*
SNET **24** *22:43:44.1±0.9, 13.°66N×91.°38W, h6km±18km, ML3.4*
ISC 24 22:43:42.9±1.2**, 13.°4N**±0.°1×**91.°63W**±0.°07**, h28**km**, n23, σ1^{s}22**/24**, mb3.6**/5**, 1C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	Fuego 3	1.26	37	*e*P	Pn	22 44 05.2	+0.4
STG3	Santiaguito 3,	1.27	2	*e*P	Pn	22 44 04.2	-0.8
STG3				*e*S	Sn	22 44 19.6	-1.6
IXG	Ixpaco	1.36	57	*e*P	Pn	22 44 05.2	-1.1
PCG	Pacaya	1.37	46	*e*P	Pn	22 44 06.0	-0.4
NBG	Las Nubes	1.69	47	*e*P	Pn	22 44 12.0	+1.2
APG	El Apazote	1.92	36	Pn	Pn	22 44 14.2	+0.2
	17nm,0.3s,baz=339,slow=14,SNR=20						
APG				Lg	Lg	22 44 38.3	
	28nm,0.3s,baz=127,slow=12,SNR=6.8						
CEVE	Cerro Verde	1.98	79	*e*P	Pn	22 44 14.3	-0.5
CEVE				IAML		22 44 47.8	
	comp=Z,2µm,0.5s						
SBLS	San Blas	1.99	78	*e*P	Pn	22 44 14.4	-0.5
SNJE	San Jose	2.01	77	*e*P	Pn	22 44 14.9	-0.3
MTO3	Montecristo	2.40	66⇑	*e*P	Pn	22 44 20.5	-0.1
LFU	La Fuente	2.46	82	*e*P	Pn	22 44 21.5	+0.2
MRL	Marmol	2.49	49	*e*P	Pn	22 44 23.4	+1.5
COEG	Centro de Oper	2.68	86	*e*P	Pn	22 44 24.7	+0.4
CMIG	Matias Romero	4.80	320	Pn	Pn	22 44 51.9	-1.5
	comp=Z,0.3nm,0.3s,baz=104,slow=12,SNR=2.0						
CMIG				Sn	Sn	22 45 51.9	+3.7
	comp=Z,1.4nm,0.3s,baz=80,slow=18,SNR=5.1						
JTS	Las Juntas de	7.24	115	Lg	Lg	22 47 24.0	
	comp=Z,0.4nm,0.3s,baz=151,slow=18,SNR=3.8						
TEIG	Tepich	7.47	25	Pn	Pn	22 45 30.4	+0.2
	comp=Z,2.0nm,0.3s,baz=152,slow=3.2,SNR=9.4						
TXAR	Lajitas Array	19.36	327	P	Pn	22 48 08.3	+0.5
	comp=Z,0.1nm,0.3s,baz=155,slow=12,SNR=11						
TKL	Tuckaleechee C	23.23	16	P	P	22 48 46.4	-1.4
	comp=Z,2.0nm,0.6s,baz=176,slow=10,SNR=4.3						
PDAR	Pinedale Array	33.08	335	P	P	22 50 16.4	-0.2
	comp=Z,0.2nm,0.5s,baz=153,slow=8.1,SNR=2.5						
NVAR	Mina Array Bea	34.33	321	P	P	22 50 29.2	+1.7
	comp=Z,0.5nm,0.6s,baz=126,slow=10,SNR=3.1						
YKA	Yellowknife Ar	51.65	347	P	P	22 52 46.1	-0.8
	comp=Z,0.5nm,0.6s,baz=147,slow=7.9,SNR=6.1						
ILAR	Eielson Array	63.50	337	P	P	22 54 10.5	+0.2
	comp=Z,0.9nm,1.0s,baz=145,slow=4.4,SNR=5.7						
CMAR	Chiang Mai Arr	146.64	342	PKPbc	PKPbc	23 03 22.4	-0.5
	comp=Z,1.1nm,0.9s,baz=347,slow=4.3,SNR=6.2						

HEL 24 23:17:42.1±0.2**, 67.°88N×20.°31E, h0**km**, ML1.4, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	Lannavaara	0.66	74	*e*P	Pg	23 17 53.7	-0.9
LANU				*e*S	Sg	23 18 01.8	-1.3
KIF	Kilpisjarvi	1.14	9	PN	Pg	23 18 02.9	-1.1
KIF				MSG		23 18 20.5	
	comp=Z,12nm,0.2s						
KIF				SN	Sn	23 18 23.4	+1.7
KIF	Kilpisjarvi	1.14	9	*e*P	Pg	23 18 02.9	-1.1
KIF				*e*S	Sg	23 18 19.1	+0.3
KIF	Kilpisjarvi	1.14	9	*e*P	Pg	23 18 03.6	-0.4
HEF	Hetta	1.36	66	PG	Pg	23 18 06.6	-1.5
	baz=246						
HEF				MSG		23 18 27.5	
	comp=Z,6.1nm,0.2s						
HEF				SG	Sn	23 18 28.2	+1.1
HEF	Hetta	1.36	66	*e*P	Pg	23 18 06.3	-1.8
HEF				*e*S	Sg	23 18 24.5	-1.3
HEF				MSG		23 18 37.3	
	comp=Z,2.8nm,0.2s						
HEF	Hetta	1.36	66	*e*P	Pg	23 18 07.3	-0.9
ERTU	Ertsjaerv	1.52	150	PG	Pg	23 18 01.4	-9.0
TOF	Tornio	2.40	137	*e*P	Pn	23 18 22.8	+0.2
TOF				*e*S	Sn	23 18 52.6	+0.1
TOF				MSG		23 18 59.0	
	comp=Z,2.0nm,0.2s						
SGF	Sodankyl	2.42	98	PG	Pn	23 18 23.9	+1.1
	baz=275						
SGF				SG	Sg	23 18 59.8	+0.2
SGF	Sodankyl	2.42	98	*e*P	Pn	23 18 23.1	+0.3
SGF				*e*S	Sg	23 18 52.3	-0.7
ARE0	ARCESS Array S	2.52	46	PB	Pn	23 18 25.1	+0.8

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=225						
ARE0	**ARCESS Array S**	**2.52**	**46**	*e*P	Pn	23 18 24.1	-0.1
ARE0				*e*S	Sn	23 18 55.6	0.0
RNF	**Rovaniemi**	**2.56**	**117**	*e*P	Pn	23 18 24.5	-0.2
RNF				*e*S	Sn	23 18 55.6	-0.9
MSF	**Maaselka**	**3.97**	**116**	PN	Pn	23 18 37.2	-6.9

*SOME **24** 23:23:15.4, 40°72N×79°18E, h5km*
*KRNET **24** 23:23:17.4±0.1, 40°68N×79°07E, mb3.2*
*NNC **24** 23:23:17.2±0.7, 40°72N×79°09E, h3km±10km, mb3.7, mpv3.4, Error ellipse: s-maj=4.7km s-min=3.6km az=163.0*
ISC 24 23:23:22.4±2.1, **40°91N**±0°09×**79°02E**±0°05, **h10**km, **n47**, σ**1s35**/74, **20C-10D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.64**	**344**	⇑*i*P	**Pb**	**23 23 52.0**	**-0.8**
	baz=45						
PRZ				⇑*i*S	**Sg**	**23 24 17.8**	**+2.8**
	baz=45						
KDJ	**Kajisay**	**1.84**	**312**	⇑*i*P	**Pb**	**23 23 55.2**	**-1.1**
	baz=16						
KDJ				⇑*i*S	**Sg**	**23 24 22.6**	**+1.0**
	baz=16						
ANVS	**Anan'yevo**	**2.12**	**332**	⇑*i*P	**Pb**	**23 24 00.0**	**-1.1**
	baz=34						
ANVS				⇑*i*S	**Sg**	**23 24 30.7**	**0.0**
	baz=34						
UZB	**Uzynbulak**	**2.23**	**0**	*e*P	**Pb**	**23 24 01.3**	**-1.6**
	14nm,0.5s						
UZB				*e*S	**Sg**	**23 24 34.6**	**+0.5**
	23nm,0.5s						
UZB	**Uzynbulak**	**2.23**	**0**	Pg	**Pb**	**23 24 01.3**	**-1.6**
	14nm,0.5s						
UZB				Lg	Lg	23 24 34.6	
	23nm,0.5s						
NRN	**Naryn**	**2.34**	**284**	⇓*i*P	**Pn**	**23 24 01.0**	**-0.2**
	baz=88						
NRN				⇓*i*S	**Sb**	**23 24 32.4**	**-1.5**
	baz=88						
PDGK	**Podgornoye**	**2.44**	**8**	Pg	**Pb**	**23 24 04.2**	**-2.2**
	3.4nm,0.4s						
PDGK				Lg	Lg	23 24 39.5	
	20nm,0.8s						
PDGK	**Podgornoye**	**2.44**	**8**	⇑Pg	**Pb**	**23 24 05.0**	**-1.4**
	7.4nm,0.6s						
PDGK				⇑Lg	Lg	23 24 40.0	
	56nm,0.9s						
ULHL	**Ulahol**	**2.47**	**303**	⇓*e*P	**Pn**	**23 24 03.8**	**+0.8**
	baz=7.0						
ULHL				⇓*i*S	**Sb**	**23 24 37.3**	**-0.3**
	baz=7.0						
KPKS	**Kokpek**	**2.56**	**355**	*e*P	**Pb**	**23 24 07.7**	**-0.8**
	21nm,0.3s						
KPKS				*e*S	**Sg**	**23 24 45.6**	**+0.9**
	83nm,0.8s						
TNSS	**Tian-Shan**	**2.62**	**325**	⇓*e*P	**Pb**	**23 24 09.1**	**-0.6**
	13nm,0.4s						
TNSS				*e*S	**Sg**	**23 24 47.7**	**+1.0**
	44nm,0.9s						
TNSS	**Tian-Shan**	**2.62**	**325**	Pg	**Pb**	**23 24 08.8**	**-0.9**
	13nm,0.4s						
TNSS				Lg	Lg	23 24 47.4	
	44nm,0.9s						
MDOK	**Medeo**	**2.69**	**327**	⇓*e*P	**Pb**	**23 24 10.1**	**-0.5**
	12nm,0.3s						
MDOK				*e*S	**Sg**	**23 24 49.3**	**+0.7**
	43nm,0.8s						
MDOK	**Medeo**	**2.69**	**327**	Pg	**Pb**	**23 24 09.3**	**-1.3**
	9.2nm,0.6s						
MDOK				⇑Lg	Lg	23 24 48.6	
	72nm,1.0s						
MDOK	**Medeo**	**2.69**	**327**	Pg	**Pb**	**23 24 09.6**	**-1.0**
	12nm,0.5s						
MDOK				Lg	Lg	23 24 48.7	
	43nm,0.8s						
KOTS	**Kotyrbulak**	**2.72**	**329**	*e*P	**Pb**	**23 24 10.6**	**-0.6**
	30nm,0.5s						
KOTS				*e*S	**Sg**	**23 24 50.7**	**+1.0**
	51nm,0.8s						
KOTS	**Kotyrbulak**	**2.72**	**329**	Pg	**Pb**	**23 24 10.6**	**-0.6**
	30nm,0.5s						
KOTS				Lg	Lg	23 24 50.7	
	51nm,0.8s						
KNDC	**Almaty**	**2.76**	**327**	⇑Pg	**Pb**	**23 24 12.1**	**+0.2**
	13nm,0.6s						
KNDC				⇓Lg	Lg	23 24 51.4	
	133nm,0.8s						
IZV	**Izvestkoviy**	**2.78**	**321**	*e*P	**Pb**	**23 24 11.0**	**-1.2**
	10nm,0.5s						
IZV				*e*S	**Sg**	**23 24 51.4**	**-0.2**
	35nm,0.7s						
IZV	**Izvestkoviy**	**2.78**	**321**	Pg	**Pb**	**23 24 11.0**	**-1.2**
	8.1nm,0.5s						
IZV				Lg	Lg	23 24 51.4	
	35nm,0.7s						
BOOM	**Boomskoye usch**	**2.79**	**305**	⇑*e*P	**Pn**	**23 24 08.0**	**+0.7**
	baz=9.0						
BOOM				⇑*i*S	**Sb**	**23 24 44.7**	**-2.1**
	baz=9.0						
MTBS	**Maitube**	**2.94**	**320**	*e*P	**Pb**	**23 24 14.4**	**-0.5**
	3.7nm,0.3s						
MTBS				*e*S	**Sg**	**23 24 56.6**	**-0.1**
	16nm,0.6s						
MTBS	**Maitube**	**2.94**	**320**	Pg	**Pb**	**23 24 14.4**	**-0.5**
	3.7nm,0.3s						
MTBS				Lg	Lg	23 24 56.7	
	16nm,0.6s						
KZA	**Kyzart**	**3.06**	**294**	⇑*e*P	**Pn**	**23 24 11.6**	**+0.4**
	baz=97						
KZA				⇑*i*S	**Sb**	**23 24 50.8**	**-4.0**
	baz=97						
KST	**Kastek**	**3.12**	**314**	*e*P	**Pb**	**23 24 16.9**	**-1.1**
	6.3nm,0.4s						
KST				*e*S	**Sg**	**23 25 01.2**	**-1.3**
	21nm,0.6s						
KST	**Kastek**	**3.12**	**314**	Pg	**Pb**	**23 24 16.9**	**-1.1**
	6.5nm,0.4s						
KST				Lg	Lg	23 25 01.2	
	21nm,0.8s						
KTBS	**Karatobe**	**3.29**	**329**	*e*P	**Pb**	**23 24 20.6**	**-0.3**
	3.5nm,0.5s						
KTBS				*e*S	**Sg**	**23 25 07.5**	**-0.6**
	17nm,0.8s						
KTBS	**Karatobe**	**3.29**	**329**	Pg	**Pb**	**23 24 20.6**	**-0.3**
	4.4nm,0.7s						
KTBS				Lg	Lg	23 25 07.5	
	17nm,0.8s						
CHKK	**Chushkaly**	**3.30**	**334**	*e*P	**Pb**	**23 24 20.6**	**-0.5**
	5.8nm,0.3s						
CHKK				*e*S	**Sg**	**23 25 08.1**	**-0.3**
	32nm,0.5s						
CHKK	**Chushkaly**	**3.30**	**334**	Pg	**Pb**	**23 24 20.6**	**-0.5**
	5.8nm,0.3s						
CHKK				Lg	Lg	23 25 08.1	
	32nm,0.5s						
DGS	**Degeres**	**3.35**	**315**	*e*P	**Pb**	**23 24 20.9**	**-1.2**
	5.7nm,0.5s						
DGS				*e*S	**Sg**	**23 25 08.3**	**-1.9**
	16nm,0.6s						
DGS	**Degeres**	**3.35**	**315**	Pg	**Pb**	**23 24 20.8**	**-1.2**
	5.7nm,0.5s						
DGS				Lg	Lg	23 25 08.3	
	16nm,0.6s						
DJR	**Jarkent**	**3.46**	**9**	*e*P	**Pb**	**23 24 24.0**	**+0.2**
	1.5nm,0.5s						
DJR				*e*S	**Sg**	**23 25 13.4**	**-0.2**
	14nm,1.1s						
DJR	**Jarkent**	**3.46**	**9**	Pg	**Pb**	**23 24 24.0**	**+0.2**
	1.5nm,0.5s						
DJR				Lg	Lg	23 25 13.4	
	14nm,1.1s						
KBK	**Karagaybulak**	**3.51**	**301**	⇑*i*P	**Pn**	**23 24 17.9**	**+0.8**
	baz=4.0						
KBK				⇑*i*S	**Sn**	**23 25 02.0**	**+3.2**
	baz=4.0						
UCH	**Uchtor**	**3.63**	**293**	⇑*i*P	**Pn**	**23 24 19.5**	**+0.5**
	baz=96						
UCH				⇑*i*S	**Sn**	**23 25 04.3**	**+2.2**
	baz=96						
KRBS	**Karabastau**	**3.73**	**319**	*e*P	**Pb**	**23 24 27.3**	**-1.0**
	2.1nm,0.3s						
KRBS				*e*S	**Sg**	**23 25 19.3**	**-2.7**
	6.1nm,0.8s						
KRBS	**Karabastau**	**3.73**	**319**	Pg	**Pb**	**23 24 27.3**	**-1.0**
	2.1nm,0.3s						
KRBS				Lg	Lg	23 25 19.3	
	6.1nm,0.8s						
AAK	**Ala-Archa**	**3.80**	**298**	⇓*i*P	**Pn**	**23 24 21.9**	**+0.8**
	baz=1.0						
AAK				⇓*i*S	**Sn**	**23 25 08.7**	**+2.8**
	baz=1.0						
TDK	**Taldyqorghan**	**4.11**	**354**	*e*P	**Pb**	**23 24 35.8**	**+1.0**
	6.8nm,0.2s						
TDK				*e*S	**Sg**	**23 25 33.6**	**-0.8**
	51nm,1.2s						
TDK	**Taldyqorghan**	**4.11**	**354**	Pg	**Pb**	**23 24 35.8**	**+1.0**
	6.8nm,0.2s						
TDK				Lg	Lg	23 25 33.6	
	43nm,0.9s						
EKS2	**Erkin-Say**	**4.29**	**296**	⇑*i*P	**Pn**	**23 24 28.5**	**+0.6**
	baz=98						
EKS2				⇑*i*S	**Sn**	**23 25 20.0**	**+2.0**
	baz=98						
KAPS	**Kapalarasan**	**4.38**	**3**	*e*P	**Pb**	**23 24 41.2**	**+1.8**
	2.2nm,0.7s						
KAPS				*e*S	**Sg**	**23 25 43.2**	**+0.3**
	4.1nm,0.7s						
KAPS	**Kapalarasan**	**4.38**	**3**	Pg	**Pb**	**23 24 41.2**	**+1.8**
	2.2nm,0.7s						
KAPS				Lg	Lg	23 25 43.2	
	4.1nm,0.7s						
MRKS	**Merke**	**4.70**	**295**	*e*P	**Pb**	**23 24 46.1**	**+1.2**
	2.1nm,0.3s						
MRKS				*e*S	**Sg**	**23 25 51.5**	**-1.7**
	2.8nm,0.8s						
MRKS	**Merke**	**4.70**	**295**	Pg	**Pb**	**23 24 46.1**	**+1.2**
	2.1nm,0.3s						
MRKS				Lg	Lg	23 25 51.5	
	2.8nm,0.8s						
MK31	**Makanchi Array**	**6.33**	**21**	Pn	**Pn**	**23 24 53.7**	**-2.1**
	0.1nm,0.3s,baz=203,slow=12,SNR=10						
MK31				⇓Lg	Lg	23 26 43.8	
	1.5nm,0.8s,baz=209,slow=2.9,SNR=4.0						

*IDC **24** 23:23:30.2±2.0, 53°39N×174°28W, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.4/62, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=386.4km s-min=26.4km az=131.0*
*AEIC **24** 23:23:46.0±1.5, 53°0N±0°2×172°3W±0°1, h132km±7km, ML3.4/31, Error ellipse: s-maj=36.5km s-min=6.9km az=162.0*
*NEIC **24** 23:23:46.6±1.0, 52°7N±0°3×172°1W±0°1, h148km±9km, Error ellipse: s-maj=37.1km s-min=5.4km az=167.0*
ISC 24 23:23:46.5±1.0, **52°6N**±0°2×**172°04W**±0°09, **h150**km, **n37**, σ**0s74**/42, **mb3.6**/3, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**1.31**	**255**		**Pn**	**23 24 13.9**	**-0.2**
KOKL	**Mount Kliuchef**	**1.36**	**258**		**Pn**	**23 24 14.3**	**-0.3**
ATKA	**Atka Island**	**1.39**	**253**		**Pn**	**23 24 14.2**	**-0.6**
ATKA					**Sn**	**23 24 35.4**	**-1.1**
NIKH	**Nikolski High**	**1.96**	**79**		**Pn**	**23 24 21.1**	**0.0**
NIKH	**Nikolski High**	**1.96**	**79**	Sn	**Sn**	**23 24 47.1**	**-0.5**
OKSP	**Okmok Steeple**	**2.35**	**73**		**Pn**	**23 24 26.2**	**+0.5**
GSTR	**Great Sitkin T**	**2.52**	**259**		**Pn**	**23 24 27.5**	**-0.4**
GSMY	**Great Sitkin M**	**2.54**	**258**		**Pn**	**23 24 27.6**	**-0.4**
GSTD	**Great Sitkin T**	**2.59**	**259**		**Pn**	**23 24 28.3**	**-0.3**
GSTD					**Sn**	**23 25 01.1**	**-0.1**
OKFG	**Magazine Ridge**	**2.61**	**71**		**Pn**	**23 24 29.0**	**+0.1**
OKFG					**Sn**	**23 25 03.1**	**+1.5**
ADAG	**Mount Adagdak**	**2.88**	**259**		**Pn**	**23 24 32.5**	**+0.3**
ADK	**Adak**	**2.95**	**257**	Pn	**Pn**	**23 24 32.8**	**-0.4**
ADK	**Adak**	**2.95**	**257**		**Pn**	**23 24 33.1**	**-0.1**
ADK					**Sn**	**23 25 09.2**	**0.0**
KIWB	**Kanaga Island**	**3.24**	**258**		**Pn**	**23 24 36.7**	**-0.1**
KIKV	**Kanaga Island**	**3.24**	**259**		**Pn**	**23 24 36.7**	**-0.2**
MGOD	**Makushin Gods**	**3.31**	**67**		**Pn**	**23 24 38.0**	**+0.2**
MGOD					**Sn**	**23 25 17.5**	**-0.1**
MREP	**Makushin Rep't**	**3.39**	**68**		**Pn**	**23 24 38.9**	**+0.1**
MSW	**Makushin Switc**	**3.41**	**66**		**Pn**	**23 24 38.8**	**-0.1**
MNAT	**Makushin Natee**	**3.45**	**67**		**Pn**	**23 24 39.7**	**+0.2**
UNV	**Unalaska Valle**	**3.54**	**68**		**Pn**	**23 24 40.9**	**+0.3**
TAPA	**Tanaga Point A**	**3.65**	**259**		**Pn**	**23 24 42.0**	**-0.1**
TAFP	**Tanaga Falls P**	**3.73**	**261**		**Pn**	**23 24 43.1**	**0.0**
TASE	**Tanaga Southea**	**3.77**	**260**		**Pn**	**23 24 44.2**	**+0.4**
AKBBA	**Akutan Broad B**	**3.94**	**66**		**Pn**	**23 24 46.5**	**+0.6**
AKUT	**Akutan**	**4.04**	**66**	Pn	**Pn**	**23 24 45.7**	**-1.4**
AKSA	**Akutan Strait**	**4.08**	**66**		**Pn**	**23 24 48.5**	**+0.8**
WESP	**Westdahl Peak**	**4.74**	**64**		**Pn**	**23 24 57.2**	**+0.7**
WESE	**West Dahl East**	**4.81**	**65**		**Pn**	**23 24 57.7**	**+0.4**
SSBA	**Shishaldin**	**5.17**	**62**		**Pn**	**23 25 01.8**	**-0.2**
FALS	**False Pass**	**5.58**	**63**		**Pn**	**23 25 06.0**	**-1.4**
SDPT	**Sand Point**	**7.34**	**64**		**Pn**	**23 25 29.7**	**-1.1**
CNBA	**Chernabura Isl**	**7.70**	**69**	Pn	**Pn**	**23 25 33.7**	**-2.0**
CHGN	**Chignik**	**8.74**	**60**	Pn	**Pn**	**23 25 47.5**	**-2.0**
ILAR	**Eielson Array**	**17.68**	**37**	P	**P**	**23 27 41.9**	**0.0**
	0.3nm,0.3s,baz=234,slow=9.1,SNR=20						
INK	**Inuvik**	**24.04**	**35**	P	**P**	**23 28 47.0**	**-0.1**
	1.0nm,0.5s,baz=249,slow=8.6,SNR=10.0						
WRA	**Warramunga Arr**	**85.91**	**229**	P	**P**	**23 36 09.6**	**+0.2**
	0.5nm,1.0s,baz=32,slow=5.5,SNR=6.7						
ASAR	**Alice Springs**	**89.34**	**228**	P	**P**	**23 36 26.2**	**+0.6**
	0.6nm,0.7s,baz=27,slow=4.7,SNR=5.5						

*BGR **24** 23:26:50.9±0.0, 4°01N×65°04E, h33km, mb5.6, Ms4.9*
*BJI **24** 23:26:54.0±0.0, 4°00N×62°90E, h5km, mB5.5/70, mb4.9/42, Ms5.6/75, Ms7 5.4/70*
*IDC **24** 23:26:55.1±0.5, 4°21N×62°89E, h0km, mb4.5/35, mb1 4.5/36, mb1mx4.4/59, mbtmp4.5/36, ML3.7/1, MS5.2/13, Ms1 5.2/13, ms1mx5.0/19, Error ellipse: s-maj=12.9km s-min=10.7km az=138.0*
*NEIC **24** 23:26:55.1±2.7, 4°13N±0°08×62°88E±0°07, h4km±1km, mb5.3/107, Ms_20 5.4/2, Mwb5.5/28, Mww5.6, Mwc5.7(GCMT), Error ellipse: s-maj=13.9km s-min=11.3km az=191.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.61; $M_{\theta\theta}$1.22; $M_{\phi\phi}$0.39; $M_{r\theta}$0.72; $M_{\theta\phi}$-1.22; $M_{\phi r}$0.37; Fault plane solution: $M_0$2.07000×10^{17} NP1:ϕ_s149.49000°, δ44.94000°, λ-52.77000°. NP2:ϕ_s282.46000°, δ55.78000°, λ-121.12000°. Principal axes: T 2.1359, Plg6.0000°, Azm34.0000°; N -0.1432, Plg25.0000°, Azm301.0000°; P -1.9927, Plg64.0000°, Azm136.0000°;*
*MOS **24** 23:26:55.4±1.1, 4°18N×62°82E, h16km, mb5.3/43, MS5.0/23 Error ellipse: s-maj=6.7km s-min=3.7km az=103.8*
*GCMT **24** 23:26:59.1±0.1, 4°20N±0°01×62°67E±0°01, h12km, MW5.6/161, Moment Tensor Solution. s131,c215; s161,c359; Duration: 1s6 Moment tensor: Scale 10^{17} Nm; M_{rr}-3.22±.03; $M_{\theta\theta}$2.55±.04; $M_{\phi\phi}$0.67±.04; $M_{r\theta}$1.52±.10; $M_{\theta\phi}$-1.54±.03; $M_{\phi r}$0.21±.10; Best double couple: $M_0$3.65900×10^{17} NP1:ϕ_s134.00000°, δ37.00000°, λ-66.00000°. NP2:ϕ_s285.00000°, δ57.00000°, λ-107.00000°. Principal axes: T 3.6400, Plg10.0000°, Azm27.0000°; N 0.0380, Plg14.0000°, Azm294.0000°; P -3.6770, Plg72.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **24** 23:27:00, 4°18N×62°62E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-3.52; $M_{\theta\theta}$2.75; $M_{\phi\phi}$0.78; $M_{r\theta}$0.86; $M_{\theta\phi}$-1.73; $M_{\phi r}$0.19; Fault plane solution: $M_0$3.75000×10^{17} NP1:ϕ_s291.00000°, δ51.00000°, λ-103.00000°. NP2:ϕ_s130.00000°, δ41.00000°, λ-75.00000°. Principal axes: T 3.8108, Plg5.0000°, Azm29.0000°; N -0.1270, Plg10.0000°, Azm299.0000°; P -3.6837, Plg79.0000°, Azm147.0000°;*
*NEIC **24** 23:27:03, 3°91N×62°71E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-2.84; $M_{\theta\theta}$2.07; $M_{\phi\phi}$0.77; $M_{r\theta}$1.05; $M_{\theta\phi}$-1.35; $M_{\phi r}$0.52; Fault plane solution: $M_0$3.11000×10^{17} NP1:ϕ_s285.00000°, δ54.00000°, λ-111.00000°. NP2:ϕ_s139.00000°, δ41.00000°, λ-63.00000°. Principal axes: T 2.9923, Plg6.0000°, Azm30.0000°; N 0.2300, Plg17.0000°, Azm298.0000°; P -3.2223, Plg72.0000°, Azm140.0000°;*
ISC 24 23:26:56.2±0.3, **4°05N**±0°04×**62°78E**±0°04, **h10**km, **n514**, σ**1s98**/586, **mb5.2**/180, **MS5.2**/66, **50C-18D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAAM	**Kaadhehdhoo**	**10.80**	**109**	Pn	**Pn**	**23 29 29.4**	**-1.7**
MSEY	**Mahe Island**	**11.33**	**220**	P	**Pn**	**23 29 36.1**	**-2.3**
MSEY	**Mahe Island**	**11.33**	**220**		**Pn**	**23 29 35.2**	**-3.2**
MSEY	**Mahe Island**	**11.33**	**220**	P	**Pn**	**23 29 35.8**	**-2.6**
MSEY				P	**Pn**	**23 29 35.8**	**-2.6**
MSEY				S	Sn	23 31 58.5	+13
MSEY				S	Sn	23 31 58.5	+13
MSEY	**Mahe Island**	**11.33**	**220**	P	**Pn**	**23 29 35.2**	**-3.2**
SOCY	**Socotra**	**11.87**	**313**		Pn	23 29 51.8	+6.0
SOCY	**Socotra**	**11.87**	**313**	P	Pn	23 29 52.1	+6.2
	SNR=9.1						
H08N2	**Diego Garcia H**	**13.18**	**141**	T	T	23 43 45.6	
	baz=322,slow=76,SNR=1448						
H08N3	**Diego Garcia H**	**13.19**	**142**	T	T	23 43 47.5	
	baz=322,slow=76,SNR=187						
H08N1	**Diego Garcia H**	**13.20**	**141**	T	T	23 43 44.1	
	baz=322,slow=76,SNR=193						
TRD	**Trivandrum**	**14.77**	**72**	*e*P	**Pn**	**23 30 24.4**	**-1.0**
TRD				IAmb	IAmb	23 30 26.5	
	comp=Z,93nm,1.5s						
DGAR	**Diego Garcia**	**14.93**	**140**	Pn	**Pn**	**23 30 26.2**	**-1.3**
DGAR	**Diego Garcia**	**14.93**	**140**	*i* P	**Pn**	**23 30 27.0**	**-0.5**
DGAR				pmax	pmax		
	comp=Z,64nm,1.1s						
SHAO	**Shalim**	**15.55**	**334**	P	**P**	**23 30 38.1**	**-2.0**
	SNR=7.8						
SHAO				P	**P**	**23 30 38.1**	**-2.0**
	SNR=7.8						
SHAO				S	**S**	**23 33 37.2**	**-6.7**
SHAO				S	**S**	**23 33 37.2**	**-6.7**
DMTO	**DMTO**	**15.60**	**331**	P	**P**	**23 30 39.2**	**-1.4**
	SNR=6.6						
DMTO				P	**P**	**23 30 39.2**	**-1.4**
	SNR=6.6						
DMTO				S	**S**	**23 33 36.6**	**-8.2**
DMTO				S	**S**	**23 33 36.6**	**-8.2**
GOA	**Goa**	**15.72**	**43**	⇑*i*P	**P**	**23 30 39.6**	**-2.4**
GOA				IAmb	IAmb	23 30 46.7	
	comp=Z,20nm,0.7s						
RBK	**Rabkut**	**15.79**	**328**	P	**P**	**23 30 41.7**	**-1.1**
	SNR=15						
RBK				P	**P**	**23 30 41.7**	**-1.1**
	SNR=15						
ABTO	**Aybut**	**16.16**	**326**	P	**P**	**23 30 46.2**	**-0.7**
	SNR=27						
ABTO				P	**P**	**23 30 46.2**	**-0.7**
	SNR=27						
ABTO				S	**S**	**23 33 56.3**	**-0.1**
ABTO				S	**S**	**23 33 56.3**	**-0.1**
WHFO	**Wadi Hawf**	**16.36**	**328**	P	**P**	**23 30 48.9**	**-0.3**
	SNR=22						
WHFO				P	**P**	**23 30 48.9**	**-0.3**
	SNR=22						
WHFO				S	**S**	**23 34 01.5**	**+1.0**
WHFO				S	**S**	**23 34 01.5**	**+1.0**
DQM	**DQM**	**16.59**	**342**	P	**Pn**	**23 30 49.4**	**+0.3**
DQM				P	**Pn**	**23 30 49.4**	**+0.3**
MHTO	**MHTO**	**17.47**	**345**	P	**P**	**23 31 00.6**	**-0.7**
	SNR=24						
MHTO				P	**P**	**23 31 00.6**	**-0.7**
	SNR=24						
MHTO				S	**Sn**	**23 34 17.9**	**+3.1**
MHTO				S	**Sn**	**23 34 17.9**	**+3.1**
POO	**Poona**	**18.00**	**36**	⇑*i*P	**P**	**23 31 06.9**	**-0.5**
POO				IAmb	IAmb	23 31 14.4	
	comp=Z,47nm,1.2s						
PALK	**Pallekele**	**18.12**	**79**	P	**P**	**23 31 10.6**	**+2.0**
PALK	**Pallekele**	**18.12**	**79**	Pn	**Pn**	**23 31 05.2**	**-3.1**
PALK	**Pallekele**	**18.12**	**79**	*i* P	**Pn**	**23 31 05.8**	**-2.5**
PALK				pmax	pmax		
	comp=Z,22nm,1.1s						
MDRS	**Chennai**	**19.44**	**61**	⇑*i*P	**P**	**23 31 23.2**	**+0.1**
MDRS				IAmb	IAmb	23 31 26.2	
	comp=Z,108nm,1.6s						
WSAR	**Wadi Sarin**	**19.49**	**348**	P	**P**	**23 31 22.9**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=184,slow=12,SNR=8.9						
BHUJ	**Bhuj**	**20.21**	**19**	⇑*i*P	Pn	23 31 34.0	+0.6
BHUJ				IAmb	IAmb	23 31 44.2	
	comp=Z,62nm,1.3s						
HYB	**Hyderabad**	**20.38**	**48**	*i* P	Pn	23 31 35.0	-0.5
HYB				*e*S	Sn	23 35 24.0	-1.3
HYB				*e*LR	LR		
	comp=Z,10nm,18.0s						
HYB	**Hyderabad**	**20.38**	**48**	⇑*e*x	**P**	**23 31 35.0**	**+1.6**
HYB				⇑*i*P	**P**	**23 31 35.0**	**+1.6**
HYB				IAmb	IAmb	23 31 46.0	
	comp=Z,214nm,2.2s						
DAMY	**Dhamar**	**20.92**	**301**		Pn	23 31 41.8	-0.2
DAMY				IAmb	IAmb	23 32 17.7	
	comp=Z,198nm,1.3s						
ALNE	**Al Ain**	**21.01**	**342**	*i* P	**P**	**23 31 39.9**	**-0.2**
	SNR=19						
ATD	**Arta Tunnel**	**21.09**	**292**	P	**P**	**23 31 43.0**	**+1.9**
	comp=Z,160nm,1.1s,baz=86,slow=7.4,SNR=16						
ATD	**Arta Tunnel**	**21.09**	**292**	P	**P**	**23 31 42.7**	**+1.6**
ATD				IAmb	IAmb	23 31 57.2	
	comp=Z,281nm,1.2s						
ASHO	**Ashiyiah**	**21.51**	**343**	*i* P	**P**	**23 31 45.7**	**+0.1**
	SNR=22						
HATD	**Hatta, Dubai**	**21.62**	**343**	*i* P	**P**	**23 31 47.9**	**+1.2**
	SNR=32						
FAQ	**Al Faqa, Dubai**	**21.70**	**342**	*i* P	**P**	**23 31 48.5**	**+0.9**
	SNR=20						
UOSS	**Minazif**	**21.71**	**344**	*i* P	**P**	**23 31 47.9**	**+0.2**
	SNR=27						
UOSS	**Minazif**	**21.71**	**344**	P	**P**	**23 31 47.7**	**0.0**
UOSS				IAmb	IAmb	23 31 51.0	
	comp=Z,161nm,1.3s						
AJN	**Ajban**	**21.73**	**341**	*i* P	**P**	**23 31 48.3**	**+0.5**
	SNR=46						
NAZ	**Nazwa, Dubai**	**21.91**	**342**	*i* P	**P**	**23 31 49.3**	**-0.5**
	SNR=22						
MSFE	**Esma-Masafi**	**22.12**	**344**	*i* P	**P**	**23 31 52.7**	**+0.7**
	SNR=13						
UMQ	**Umm Al-Quwin**	**22.42**	**343**	*i* P	**P**	**23 31 56.4**	**+1.2**
	SNR=10						
BANOM	**Banah**	**22.62**	**345**	*i* P	**P**	**23 31 58.1**	**+0.7**
	SNR=7.2						
SHME	**Shamm**	**22.78**	**344**	*i* P	**P**	**23 32 00.0**	**+0.9**
	SNR=7.0						
NGP	**Nagpur**	**23.21**	**42**	*e*P	**P**	**23 32 04.3**	**+0.7**
NGP				IAmb	IAmb	23 32 12.8	
	comp=Z,16nm,1.0s						
BHPL	**Bhopal**	**23.75**	**35**	⇑*i*P	**P**	**23 32 11.5**	**+2.5**
BHPL				IAmb	IAmb	23 32 29.1	
	comp=Z,186nm,1.7s						
FURI	**Furi**	**24.42**	**283**	P	**P**	**23 32 18.6**	**+3.0**
KIBK	**Kibwezi**	**25.52**	**256**	P	**P**	**23 32 27.8**	**+2.4**
	SNR=19						
RAYN	**Ar Rayn**	**25.55**	**321**	P	**P**	**23 32 26.0**	**+0.5**
RAYN	**Ar Rayn**	**25.55**	**321**	P	**P**	**23 32 23.8**	**-1.7**
RAYN				IAmb	IAmb	23 32 30.2	
	comp=Z,88nm,1.2s						
RAYN	**Ar Rayn**	**25.55**	**321**	P	**P**	**23 32 23.8**	**-1.7**
RAYN				pmax	pmax		
	comp=Z,88nm,1.3s						
KMBO	**Kilima Mbogo**	**26.02**	**259**	P	**P**	**23 32 33.5**	**+3.3**
	comp=Z,60nm,1.3s,baz=58,slow=11,SNR=21						
KMBO	**Kilima Mbogo**	**26.02**	**259**	P	**P**	**23 32 30.7**	**+0.5**
KMBO				IAmb	IAmb	23 32 48.9	
	comp=Z,103nm,1.4s						
KMBO	**Kilima Mbogo**	**26.02**	**259**		sP	23 32 32.2	-1.3
OPO	**Ambohidratompo**	**27.23**	**214**	P	**P**	**23 32 43.7**	**+2.9**
	comp=Z,3.4nm,0.8s,baz=8.6,slow=6.6,SNR=4.9						
LODK	**Lodwar**	**27.37**	**270**	P	**P**	**23 32 46.5**	**+4.4**
	SNR=15						
BWNR	**Bhubaneshwar**	**27.63**	**52**	*e*P	**P**	**23 32 45.4**	**+1.2**
BOK	**Bokaro**	**29.70**	**47**	*e*P	**P**	**23 33 03.1**	**+0.4**
BOK				IAmb	IAmb	23 33 09.6	
	comp=Z,28nm,1.9s						
DDI	**Dehra Dun**	**29.85**	**27**	*e*P	**P**	**23 33 06.2**	**+2.3**
SMLA	**Simla**	**30.15**	**25**	⇑*i*P	**P**	**23 33 10.1**	**+3.6**
SMLA				IAmb	IAmb	23 33 26.6	
	comp=Z,77nm,2.2s						
HRA	**Herat**	**30.18**	**359**	P	**P**	**23 33 05.6**	**-1.4**
DHRM	**DHARAMSHALA**	**30.78**	**23**	*e*P	**P**	**23 33 11.8**	**-0.6**
KBL	**Kabul**	**30.89**	**10**	P	**P**	**23 33 13.2**	**-0.1**
KBL				IAmb	IAmb	23 33 19.6	
	comp=Z,77nm,1.9s						
KBL	**Kabul**	**30.89**	**10**	P	**P**	**23 33 13.2**	**-0.1**
KBL				pmax	pmax		
	comp=Z,77nm,2.0s						
NIL	**Nilore**	**31.02**	**17**	P	**P**	**23 33 13.6**	**-0.6**
NIL				IAmb	IAmb	23 33 25.4	
	comp=Z,116nm,1.9s						
NIL	**Nilore**	**31.02**	**17**	P	**P**	**23 33 13.6**	**-0.6**

NIL pmax pmax
comp=Z,116nm,2.0s
DGPR DIGLIPUR 31.12 71 eP P 23 33 17.8 +2.5
DANN Dangsing 31.34 37 eP P 23 33 18.3 +0.9
comp=Z,19nm,0.8s
GKN Gorkha 31.63 39 eP P 23 33 20.6 +0.7
DMN Daman 31.66 40 eP P 23 33 21.5 +1.3
PKIN Phulchoki 31.82 40 eP P 23 33 22.3 +0.7
PKI Pulchoki 31.82 40 eP P 23 33 22.3 +0.6
KKN Kakani 31.89 40 eP P 23 33 23.5 +1.3
RAMN Ramite 32.20 43 eP P 23 33 26.7 +1.8
MBAR Mbarara 32.35 262 P P 23 33 28.7 +2.4
comp=Z,2.5nm,0.5s,baz=78,slow=6.6,SNR=12
MBAR LR LR 23 46 02.4
comp=Z,5µm,20.3s,baz=86,slow=35
MBAR Mbarara 32.35 262 P P 23 33 28.8 +2.4
MBAR IAmb IAmb 23 33 32.8
comp=Z,27nm,1.4s
MBAR Mbarara 32.35 262 P P 23 33 28.8 +2.4
MBAR pmax pmax
comp=Z,27nm,1.4s
GUN Gumba 32.36 40 eP P 23 33 25.4 -1.1
comp=Z,72nm,1.2s
JIRN Jiri 32.39 41 eP P 23 33 26.8 0.0
ODAN Odare 32.68 44 eP P 23 33 29.8 +0.7
comp=Z,44nm,1.2s
TAPN Taplejung 33.21 43 eP P 23 33 34.3 +0.4
BRDH Bariadhala 33.51 54 LR LR 23 47 21.1
comp=Z,11µm,20.4s,baz=257,slow=37
GTK Tadong 33.80 44 eP P 23 33 39.7 +0.8
GTK IAmb IAmb 23 33 45.8
comp=Z,20nm,1.0s
GEYT Alibeck 33.98 353 P P 23 33 40.8 +0.6
comp=Z,5.7nm,1.1s,baz=180,slow=10,SNR=11
GYA0B ALIBECK ARRAY 33.98 353 P P 23 33 39.0 -1.2
GYA0B PP PnPn 23 34 53.1 -0.2
SHL Shillong 35.18 50 eP P 23 33 51.6 +0.7
SHL IAmb IAmb 23 34 02.8
comp=Z,10nm,1.1s
SHL Shillong 35.18 50 P P 23 33 50.3 -0.5
SHL Shillong 35.18 50 P P 23 33 53.2 +2.4
SNR=10
SHL Shillong 35.18 50 P P 23 33 50.3 -0.5
SHL pmax pmax
comp=Z,26nm,1.3s
PSI Prapat 36.10 91 LR LR 23 47 15.2
comp=Z,4µm,18.9s,baz=254,slow=34
PSI Prapat 36.10 91 P P 23 34 00.1 +1.3
PSI pmax pmax
comp=Z,31nm,1.5s
RPSI Rantau Prapat 36.10 91 P P 23 34 00.1 +1.3
EIL Elat 36.65 317 LR LR 23 48 20.6
comp=Z,4µm,18.6s,baz=130,slow=35
ASF Jabal al Asfar 37.03 322 LR LR 23 48 42.7
comp=Z,2µm,18.2s,baz=88,slow=35
LSA Lhasa 37.03 43 P P 23 34 08.3 +1.3
LSA S S 23 39 57.9 +4.6
LSA pmax pmax
comp=Z,63nm,1.7s
LSA pmax pmax
comp=Z,3µm,5.2s
LSA LR LR
comp=Z,17µm,24.2s
LSA LR LR
comp=Z,12µm,27.1s
LSA LR LR
comp=Z,31µm,28.5s
KSH Kashi 37.27 17 P P 23 34 05.3 -3.2
KSH PP PP 23 35 28.5 -5.1
KSH S S 23 39 47.8 -8.2
KSH SS SS 23 42 14.1 -25
KSH ScS ScS 23 44 20.3 -3.1
KSH pmax pmax
comp=Z,18nm,1.2s
KSH pmax pmax
comp=Z,2µm,5.6s
KSH LR LR
comp=Z,3µm,10.4s
KSH LR LR
comp=Z,2µm,8.8s
KSH LR LR
comp=Z,6µm,17.9s
TAS Tashkent 37.57 8 P P 23 34 09.1 -1.8
TAS IAmb IAmb 23 35 15.8
comp=Z,120nm,1.6s
TAS Tashkent 37.57 8 P P 23 34 09.1 -1.8
TAS pmax pmax
comp=Z,120nm,1.6s
ZIRO ZIRO 37.72 49 ex P 23 34 11.7 -0.8
ZIRO IAmb IAmb 23 34 20.7
comp=Z,63nm,1.6s
CM31 Chiang Mai Arr 38.14 65 P P 23 34 16.0 0.0
CMAR Chiang Mai Arr 38.14 65 P P 23 34 16.6 +0.6
comp=Z,1.4nm,0.3s,baz=258,slow=8.5,SNR=21
CMAR LR LR 23 49 33.0
comp=Z,1µm,18.3s,baz=266,slow=36
CHTO Chiang Mai 38.25 65 P P 23 34 17.3 +0.4
CHTO Chiang Mai 38.25 65 P P 23 34 17.3 +0.4
CHTO pmax pmax
comp=Z,31nm,1.6s
IUG Iuzhnay 38.48 9 eP P 23 34 20.4 +1.7
IUG ePP PnPn 23 35 55.6 +7.0
IUG eS S 23 40 13.5 -0.7
IUG Iuzhnay 38.48 9 eP P 23 34 20.3 +1.7
IUG e 23 35 55.6
IUG eS S 23 40 13.4 -0.7
MMAI Mount Meron Ar 38.53 322 LR LR 23 49 29.6
comp=Z,3µm,18.9s,baz=165,slow=35
CHM Chimkent 38.59 8 eP P 23 34 19.0 -0.5
comp=Z,126nm,2.9s
CHM eS S 23 40 14.6 -1.1
CHM Chimkent 38.59 8 eP P 23 34 18.9 -0.5
CHM eS S 23 40 14.5 -1.1
CHM pmax pmax
comp=Z,126nm,2.9s
JBG Jabagly 38.83 9 eP P 23 34 22.9 +1.3
JBG e 23 35 54.6
JBG eS S 23 40 13.1 -6.4
JBG pmax pmax
comp=Z,192nm,5.3s
LSZ Lusaka 39.27 240 P P 23 34 28.7 +3.0
comp=Z,4.7nm,0.7s,baz=73,slow=7.0,SNR=12
LSZ LR LR 23 49 30.6
comp=Z,5µm,18.8s,baz=81,slow=34
LSZ Lusaka 39.27 240 P P 23 34 23.1 -2.6
LSZ Lusaka 39.27 240 P P 23 34 23.1 -2.6
LSZ pmax pmax
comp=Z,18nm,1.2s
BRLS Borolday 39.31 8 eS S 23 40 26.2 -0.4
GNI Garni 39.45 338 P P 23 34 27.5 +0.6
comp=Z,50nm,1.4s,baz=168,slow=6.0,SNR=7.0
GNI Garni 39.45 338 P P 23 34 27.1 +0.2
GNI Garni 39.45 338 P P 23 34 27.5 +0.6
GNI pmax pmax
comp=Z,282nm,1.9s
PBKT Sadao Pong 39.49 69 P P 23 34 28.3 +1.0
KK31 Karatay Array 39.49 9 P P 23 34 24.6 -2.4
KK31 Karatay Array 39.49 9 P P 23 34 24.6 -2.4
KK31 pmax pmax
comp=Z,52nm,1.7s
KKAR Karatay Array 39.49 9 P P 23 34 26.8 -0.2
KKAR Karatay Array 39.49 9 P P 23 34 26.8 -0.2
KKAR pmax pmax
comp=Z,52nm,1.7s
AKT Akhty 39.63 342 eP P 23 34 31.0 +2.7
AKT e 23 36 03.0
AKT e 23 36 37.1
AKT pmax pmax
comp=Z,66nm,1.9s
AAK Ala-Archa 39.81 14 P P 23 34 30.0 +0.2
comp=Z,4.5nm,0.9s,baz=191,slow=8.2,SNR=11
AAK LR LR 23 51 00.2
comp=Z,5µm,21.7s,baz=190,slow=36
AAK Ala-Archa 39.81 14 P P 23 34 29.9 +0.1
AAK Ala-Archa 39.81 14 P P 23 34 31.4 +1.6
AAK Ala-Archa 39.81 14ceP P 23 34 28.9 -1.0
AAK pmax pmax
comp=Z,40nm,2.5s
GAZ Gaziantep 40.45 328 P P 23 34 35.9 +0.8
GAZ IAmb IAmb 23 34 48.2
comp=Z,88nm,1.8s
SGDS Sogindy 40.62 13⇑iP P 23 34 36.9 +0.4
comp=Z,272nm,5.4s
TNSS Tian-Shan 40.81 16 eP P 23 34 38.0 -0.5
TNSS Tian-Shan 40.81 16 eP P 23 34 37.9 -0.5
TBLG Delisi 40.84 339 P P 23 34 38.1 -0.2
TBLG IAmb IAmb 23 34 47.9
comp=Z,108nm,1.9s
TBLG Delisi 40.84 339 P P 23 34 38.1 -0.2
TBLG pmax pmax
comp=Z,108nm,1.9s
MDOK Medeo 40.95 16 eP P 23 34 38.5 -0.8
MDOK ePP PP 23 36 16.7 +2.9
MDOK eS S 23 40 31.9 -19
MDOK eLR LR 23 50 03.8
comp=Z,2µm,19.3s
MDOK Medeo 40.95 16 eP P 23 34 38.5 -0.8
MDOK e 23 36 16.7
MDOK MLR MLR
comp=Z,2µm,19.0s
AAA Alma-Ata 40.96 16 eP P 23 34 37.9 -1.3
comp=Z,555nm,2.9s
AAA ePP PP 23 36 16.9 +3.1
AAA eS S 23 40 56.8 +5.5
AAA Alma-Ata 40.96 16 eP P 23 34 37.9 -1.3
AAA e 23 36 16.8
AAA eS S 23 40 56.8 +5.5
AAA pmax pmax
comp=Z,555nm,2.9s
AKH Akhalkalaki 41.02 338 IAmb IAmb 23 34 51.0
comp=Z,106nm,1.7s
MAK Makhachkala 41.05 343d iP P 23 34 38.6 -1.3
MAK e 23 36 13.6
MAK ePPP PPP 23 36 44.3
MAK eS S 23 40 51.6 -0.9
MAK eSS SS 23 43 53.5 -1.4
MAK eSSS SSS 23 44 22.4
MAK pmax pmax
comp=Z,493nm,1.4s
MAK MLR MLR
comp=Z,1µm,16.0s
ZHN Zhinishke 41.35 17 eP P 23 34 43.1 +0.5
comp=Z,144nm,5.1s
ZHN ePP PP 23 36 19.6 +1.4
ZHN eS S 23 40 57.6 +0.3
ZHN Zhinishke 41.35 17 eP P 23 34 43.1 +0.5
ZHN e 23 36 19.5
ZHN eS S 23 40 57.6 +0.3
ZHN pmax pmax
comp=Z,144nm,5.1s
ITZ Itezhi-Tezhi 41.36 241 iP P 23 34 48.5 +5.6
ITZ i 23 36 26.4
ITZ i 23 36 26.4
ITZ i 23 40 44.5
ITZ Itezhi-Tezhi 41.36 241 iP P 23 34 41.1 -1.9
ITZ i 23 34 46.4
baz=20,slow=16
ITZ i 23 40 54.7
ITZ i 23 44 33.4
ITZ Itezhi-Tezhi 41.36 241 iP P 23 34 48.5 +5.6
ITZ i 23 36 26.4
ITZ i 23 36 26.4
ITZ i 23 40 44.5
ITZ Itezhi-Tezhi 41.36 241 iP P 23 34 41.1 -1.9
ITZ i 23 34 46.4
baz=20,slow=16
ITZ i 23 40 54.7
ITZ i 23 44 33.4
KUU Kurty 41.45 15 eP P 23 34 42.7 -0.5
comp=Z,425nm,5.4s
KUU ePP PnPn 23 36 23.4 -0.3
KUU eS S 23 40 35.9 -23
KUU Kurty 41.45 15 eP P 23 34 42.6 -0.6
KUU e 23 36 23.3
KUU pmax pmax
comp=Z,425nm,5.4s
UZB Uzynbulak 41.51 18 eP P 23 34 43.8 -0.2
comp=Z,113nm,4.6s
UZB ePP PnPn 23 36 25.5 +0.9
UZB eS S 23 41 04.5 +4.8
UZB Uzynbulak 41.51 18 eP P 23 34 43.7 -0.2
UZB e 23 36 25.4
UZB eS S 23 41 04.5 +4.8
UZB pmax pmax
comp=Z,113nm,4.6s
KPKS Kokpek 41.70 17 eP P 23 34 42.7 -2.7
comp=Z,129nm,3.2s
KPKS ePP PP 23 36 23.2 +1.3
KPKS eS S 23 40 35.9 -26
KPKS Kokpek 41.70 17 eP P 23 34 42.7 -2.7
KPKS e 23 36 23.1
KPKS pmax pmax
comp=Z,129nm,3.2s
GROC Groznyy 41.80 341 eP P 23 34 47.2 +1.2
GROC e 23 36 24.6
GROC e 23 36 44.1
GROC pmax pmax
comp=Z,79nm,1.4s
BTLS Baital 42.00 12 eP P 23 34 48.5 +0.7
BTLS ePP 23 36 30.4
BTLS eS S 23 41 05.4 -1.2
BTLS Baital 42.00 12 eP P 23 34 48.4 +0.7
BTLS e 23 36 30.4
BTLS eS S 23 41 05.4 -1.2
ZEI Tsey 42.07 339 eP P 23 34 48.2 -0.3
ZEI pmax pmax
comp=Z,22nm,1.6s
MDSI Maura Dua 42.22 101 P P 23 34 55.3 +5.4
NCK Nalchik 42.80 339 iP P 23 34 54.3 +0.1
NCK pmax pmax
comp=Z,8.0nm,1.0s
KLSI 42.80 101 P P 23 34 55.9 +1.2
comp=Z,11nm,1.7s
NEY Neytrino 42.90 338 iP P 23 34 54.3 -0.9
NEY pmax pmax
comp=Z,3.0nm,1.2s
TDK Taldyqorghan 43.03 16 eP P 23 34 55.7 -0.4
comp=Z,298nm,3.0s
TDK ePP PP 23 36 37.9 +1.8
TDK eS S 23 41 22.8 +1.0
TDK eLR LR 23 50 02.5
comp=Z,2µm,21.3s
TDK Taldyqorghan 43.03 16 eP P 23 34 55.6 -0.4
TDK e 23 36 37.8
TDK eS S 23 41 22.7 +1.0
TDK pmax pmax
comp=Z,298nm,3.0s
TDK MLR MLR
comp=Z,2µm,21.0s
KBZ Khabaz 43.25 339 P P 23 34 59.0 +1.2
comp=Z,9.3nm,1.1s,baz=100,slow=2.7,SNR=7.6
KBZ PP PP 23 36 40.3 +2.0
comp=Z,12nm,1.1s,baz=140,slow=12,SNR=4.5
KBZ Khabaz 43.25 339 iP P 23 34 58.1 +0.3
KBZ pmax pmax
comp=Z,13nm,1.3s
SHA1 Shidzhatmaz 43.34 339c iP P 23 34 58.2 -0.7
SLVN Son La 43.45 63 P P 23 35 00.3 +0.3
KIV Kislovodsk 43.52 339 ⇑P PP 23 36 41.4 -0.1
KIV Kislovodsk 43.52 339 P P 23 35 01.4 +1.2
KIV Kislovodsk 43.52 339 P P 23 35 00.5 +0.3
KIV IAmb IAmb 23 35 18.5
comp=Z,108nm,2.0s
KIV Kislovodsk 43.52 339 eP P 23 35 00.4 +0.3
KIV e 23 36 41.8
KIV eS S 23 41 29.7 +0.6
KIV pmax pmax
comp=Z,27nm,0.9s
KIV MLR MLR
comp=Z,2µm,16.0s
KMI Kunming 43.72 57 P P 23 35 01.5 -0.7
KMI pP pwP 23 35 06.8 -1.1
KMI S S 23 41 30.5 -2.3
KMI sS sS 23 41 39.5 +3.2
KMI pmax pmax
comp=Z,430nm,7.0s
KMI LR LR
comp=Z,2µm,15.8s
KMI LR LR
comp=Z,3µm,17.0s
KMI LR LR
comp=Z,4µm,18.6s
KMI Kunming 43.72 57 P P 23 34 59.3 -2.9
KMI Kunming 43.72 57 P P 23 34 59.3 -2.9
KMI pmax pmax
comp=Z,23nm,1.3s
BR131 Keskin Array S 44.22 327 IAmb IAmb 23 35 15.0
comp=Z,48nm,1.7s
BR131 Keskin Array S 44.22 327 iP P 23 35 05.1 -0.8
BRTR Keskin Array B 44.22 327 P P 23 35 05.8 -0.2
comp=Z,5.3nm,1.0s,baz=150,slow=8.5,SNR=15
BRTR PP PcP 23 36 51.3 +0.7
comp=Z,9.0nm,1.1s,baz=146,slow=9.0,SNR=7.0
BRTR LR LR 23 53 57.0
comp=Z,3µm,19.1s,baz=107,slow=37
SOC Sochi 44.34 336c iP P 23 35 06.5 -0.1
SOC e 23 36 47.1
SOC eS S 23 41 39.0 -1.9
SOC eSS SS 23 44 59.1 -0.6
SOC eSSS SSS 23 45 48.7
SOC pmax pmax
comp=Z,7.0nm,0.6s
SOC MLR MLR
comp=Z,1µm,19.0s
GOF Gofitskoye 44.36 340⇑eP P 23 35 21.2 +14
ELL Elmali 44.38 321 P P 23 35 07.9 +0.7
ELL Elmali 44.38 321 P P 23 35 07.9 +0.7
ELL pmax pmax
comp=Z,298nm,1.7s
BR231 Keskin MP Arra 44.77 327 P P 23 35 09.9 -0.4
BR231 IAmb IAmb 23 35 19.9
comp=Z,86nm,1.9s
ANTO Ankara 44.78 327 P P 23 35 10.6 +0.3
ANTO IAmb IAmb 23 35 14.6
comp=Z,28nm,1.1s
ANTO Ankara 44.78 327 P P 23 35 10.6 +0.3
ANTO pmax pmax
comp=Z,28nm,1.1s
ABKAR Akbulak array 45.10 357 P P 23 35 12.0 -0.6
ABKAR IAmb IAmb 23 35 31.0
comp=Z,95nm,1.8s
ILGA Ilgaz 45.14 329 P P 23 35 11.6 -1.7
WMQ Urumqi 45.31 25 eP P 23 35 15.8 +1.4
WMQ pP pwP 23 35 19.0 -2.1
WMQ sP sP 23 35 22.9 +5.6
WMQ pmax pmax
comp=Z,510nm,5.3s
WMQ LR LR
comp=Z,3µm,16.3s
WMQ LR LR
comp=Z,2µm,19.3s
WMQ LR LR
comp=Z,5µm,21.3s
WMQ Urumqi 45.31 25 P P 23 35 12.4 -2.0
WMQ IAmb IAmb 23 35 19.1
comp=Z,61nm,2.0s
WMQ Urumqi 45.31 25 P P 23 35 12.4 -2.0
WMQ pmax pmax
comp=Z,61nm,2.0s
MAKZ Makanchi 45.72 18 P P 23 35 16.6 -1.0
MAKZ Makanchi 45.72 18 P P 23 35 16.6 -1.0
MAKZ pmax pmax
comp=Z,17nm,1.3s
MK31 Makanchi Array 45.81 19 iP P 23 35 16.8 -1.5
MKAR Makanchi Array 45.81 19 P P 23 35 17.8 -0.6
comp=Z,3.7nm,1.0s,baz=205,slow=8.0,SNR=20
MKAR PP PP 23 37 11.0 +5.3
comp=Z,2.6nm,1.0s,baz=243,slow=5.3,SNR=3.6
LEM Lembang 46.04 103 LR LR 23 51 17.8
comp=Z,1µm,20.7s,baz=252,slow=32
MDUB Mudurnu 46.08 326 P P 23 35 18.2 -2.4
LBTB Lobatse 46.25 229 P P 23 35 24.0 +1.8
comp=Z,6.6nm,0.8s,baz=69,slow=10,SNR=6.1
LBTB LR LR 23 52 38.9
comp=Z,3µm,19.1s,baz=50,slow=33
LBTB Lobatse 46.25 229 P P 23 35 23.4 +1.2
LBTB Lobatse 46.25 229 P P 23 35 23.4 +1.2
LBTB pmax pmax
comp=Z,105nm,2.0s
ANN Anapa 46.28 335 eP P 23 35 22.7 +0.7
ANN eS S 23 42 17.1 +8.2
ANN pmax pmax
comp=Z,93nm,2.0s
ANN MLR MLR
comp=Z,2µm,22.0s
BRZS Berezniki 46.53 9 eP P 23 35 23.0 -0.9
comp=Z,220nm,4.7s
BRZS ePP PP 23 37 16.1 +2.8
BRZS eS S 23 42 18.3 +5.9
BRZS Berezniki 46.53 9 eP P 23 35 23.0 -0.9
BRZS e 23 37 16.0
BRZS eS S 23 42 18.2 +5.9
BRZS pmax pmax
comp=Z,220nm,4.7s
CD2 Chengdu 46.91 51⇑iP P 23 35 28.0 +0.8
CD2 sP pwP 23 35 34.1 +1.1
CD2 PP PP 23 37 16.8 -0.8
CD2 S S 23 42 15.5 -3.0
CD2 sS sS 23 42 27.6 +5.6
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,280nm,6.5s
CD2 LR LR
comp=Z,3µm,16.1s
CD2 LR LR
comp=Z,5µm,18.4s
CD2 LR LR
comp=Z,6µm,17.9s
SANT Santorini 47.02 318 P P 23 35 26.5 -1.5
ZSN Zaisan 47.24 20 eP P 23 35 28.3 -1.2
comp=Z,214nm,4.8s
ZSN eS S 23 42 25.9 +3.2
ZSN Zaisan 47.24 20 eP P 23 35 28.3 -1.2
ZSN eS S 23 42 25.8 +3.2
ZSN pmax pmax
comp=Z,214nm,4.8s
GYA Guiyang 47.50 57⇑iP P 23 35 32.8 +0.8
GYA S S 23 42 27.9 +0.8
GYA pmax pmax
comp=Z,400nm,5.0s
GYA LR LR
comp=Z,2µm,15.1s
GYA LR LR
comp=Z,1µm,16.7s
GYA LR LR
comp=Z,2µm,14.4s
SIM Simferopol' 47.86 333 eP P 23 35 35.8 +1.5
SIM eS S 23 42 38.0 +6.6
SIM pmax pmax
comp=Z,15nm,1.5s
SIM MLR MLR
comp=N,2µm,26.0s
KURBB Kurchatov Arra 48.27 13 P P 23 35 36.2 -1.1
comp=N,2.1nm,0.9s,baz=211,slow=8.6,SNR=8.8
QIZ Qiongzhong 48.27 68 P P 23 35 39.9 +1.9
QIZ sP sP 23 35 41.9 +0.7
QIZ S S 23 42 38.8 +0.7
QIZ sS sS 23 42 42.6 +1.0
QIZ pmax pmax
comp=N,410nm,3.5s
QIZ LR LR
comp=N,1µm,15.3s
QIZ LR LR
comp=N,2µm,18.6s
QIZ LR LR
comp=N,3µm,19.0s
KURK Kurchatov 48.37 13 P P 23 35 38.5 +0.3
KURK IAmb IAmb 23 35 55.9
comp=Z,34nm,1.6s
KURK Kurchatov 48.37 13ceP P 23 35 38.0 -0.2
KURK pmax pmax
comp=Z,19nm,1.7s
SEM Semipalatinsk 48.49 15 eP P 23 35 38.5 -0.9
comp=Z,98nm,4.3s
SEM ePP PP 23 37 32.7 +0.5
SEM eS S 23 42 39.5 -1.2
SEM eLR LR 23 54 12.8
comp=Z,1µm,23.5s
SEM Semipalatinsk 48.49 15 eP P 23 35 38.4 -0.9
SEM e 23 37 32.6
SEM eS S 23 42 39.4 -1.2
SEM pmax pmax
comp=Z,98nm,4.3s
BOSA Boshof 48.54 226 P P 23 35 41.9 +1.9
comp=Z,4.8nm,0.8s,baz=42,slow=7.2,SNR=5.6
BOSA LR LR 23 54 19.1
comp=Z,4µm,19.5s,baz=51,slow=34
BOSA Boshof 48.54 226 IAmb IAmb 23 35 59.8
comp=Z,86nm,2.0s
BOSA Boshof 48.54 226 P P 23 35 41.9 +1.9
BOSA pmax pmax
comp=Z,86nm,2.0s
GTA Gaotai 48.60 38 ⇓P P 23 35 40.9 +0.5

GTA pP pwP 23 35 44.9 -2.1
GTA sP sP 23 35 48.3 +5.1
GTA PP PP 23 37 32.0 -1.3
GTA S S 23 42 40.4 -2.0
GTA sS sS 23 42 48.8 +2.9
GTA pmax pmax
comp=Z,400nm,5.7s
GTA LR LR
comp=Z,5µm,18.1s
GTA LR LR
comp=Z,7µm,19.0s
GTA LR LR
comp=Z,11µm,20.6s
BVAR Borovoye Array 49.22 6 P P 23 35 43.9 -0.8
comp=Z,1.4nm,0.8s,baz=222,slow=1.9,SNR=8.6
BVAR PcP PcP 23 37 07.7 0.0
comp=Z,6.3nm,1.2s,baz=207,slow=4.8,SNR=3.2
BRVK Borovoye 49.24 6 P P 23 35 44.3 -0.5
BRVK IAmb IAmb 23 36 03.6
comp=Z,78nm,2.0s
BRVK Borovoye 49.24 6 eP P 23 35 44.2 -0.6
BRVK pmax pmax
comp=Z,22nm,1.7s
SBUM Sibu 49.38 90 P P 23 35 43.5 -3.0
LZH Lanzhou 49.43 44 eP P 23 35 47.4 +0.6
LZH pP sP 23 35 51.0 +0.9
LZH sP pwP 23 35 54.3 +1.7
LZH PP PP 23 37 43.3 +2.3
LZH S S 23 42 54.0 -0.2
LZH pmax pmax
comp=Z,23nm,1.1s
LZH pmax pmax
comp=Z,430nm,6.0s
LZH LR LR
comp=Z,2µm,15.7s
LZH LR LR
comp=Z,2µm,12.5s
LZH LR LR
comp=Z,2µm,15.7s
ITM Ithomi 49.84 317 P P 23 35 48.1 -1.6
TSUM Tsumeb 50.11 241 P P 23 35 52.9 +0.7
VRH Novokhopyorsk 50.19 343 eP P 23 35 52.3 +0.2
VRH pmax pmax
comp=Z,40nm,1.3s
AGG Agios Georgios 50.55 319 P P 23 35 54.7 -0.5
AGG IAmb IAmb 23 35 55.9
comp=Z,60nm,1.6s
AGG Agios Georgios 50.55 319 P P 23 35 54.7 -0.5
AGG pmax pmax
comp=Z,60nm,1.6s
VORD Divnogorie 50.73 341 eP P 23 35 55.3 -0.9
VORD pmax pmax
comp=Z,20nm,1.2s
PLD Plovdiv 50.86 324 eP P 23 35 58.8 +1.5
CFR Carcaliu 50.94 329 ⇑P P 23 35 56.3 -1.6
CFR Carcaliu 50.94 329 ⇑P P 23 35 56.3 -1.6
VSR Storozhevoye 50.99 341 eP P 23 35 57.0 -1.1
VSR pmax pmax
comp=Z,40nm,1.2s
LIT Litokhoron 51.05 320 IAmb IAmb 23 36 02.3
comp=Z,53nm,1.6s
ENH Enshi 51.17 54 P P 23 36 01.2 +1.2
PLVB Pleven 51.69 325 ⇑P P 23 36 02.3 -1.3
COPA Copaceanca 51.82 326 ⇓P P 23 36 03.6 -0.9
KIS Kishinev 51.87 331 eP P 23 36 04.0 -0.8
comp=Z,400nm,4.0s
KIS Kishinev 51.87 331 ePP PP 23 37 58.0 -4.7
KIS iS S 23 43 27.0 -0.4
comp=Z,700nm,18.0s
KIS eSS SS 23 47 00.0 -4.3
KIS eL L 23 52 28.0
KIS LRM MLR 23 59 56.0
comp=Z,2µm,20.0s
KIS Kishinev 51.87 331 eP P 23 36 04.0 -0.8
KIS e 23 37 58.0
KIS iS S 23 43 27.0 -0.4
KIS eSS SS 23 47 00.0 -4.3
KIS pmax pmax
comp=Z,400nm,4.0s
KIS smax smax
comp=N,700nm,18.0s
KIS MLR MLR
comp=Z,2µm,20.0s
KIS MLR MLR
comp=N,1µm,19.0s
VTS Vitosha 52.04 323 ⇑P P 23 36 07.3 +1.0
VTS Vitosha 52.04 323 eP P 23 36 06.9 +0.6
VTS Vitosha 52.04 323 IAmb IAmb 23 36 15.4
comp=Z,104nm,1.8s
VTS Vitosha 52.04 323 ⇑P P 23 36 07.3 +1.0
VRI Vrincioaia 52.14 329 ⇑P P 23 36 09.0 +2.1
VRI Vrincioaia 52.14 329 ⇑P P 23 36 09.0 +2.1
PLOR Plostina 52.17 329 ⇑P P 23 36 08.0 +0.9
PLOR Plostina 52.17 329 ⇑P P 23 36 08.0 +0.9
XAN Xi'an 52.19 49 P P 23 36 05.8 -1.7
XAN PP PP 23 38 07.0 +1.0
XAN S S 23 43 29.3 -3.1
XAN pmax pmax
comp=Z,15nm,1.3s
XAN pmax pmax
comp=Z,560nm,5.7s
XAN LR LR
comp=Z,1µm,21.7s
XAN LR LR
comp=Z,1µm,20.1s
XAN LR LR
comp=Z,2µm,22.5s
XAN Xi'an 52.19 49 P P 23 36 06.8 -0.7
XAN PcP PcP 23 37 14.2 -5.0
LPSR Galich'ya Gora 52.26 342 eP P 23 36 08.1 +0.5
LPSR pmax pmax
comp=Z,20nm,1.5s
MLR Muntele Rosu 52.30 328 ⇓P P 23 36 09.7 +1.5
MLR Muntele Rosu 52.30 328 IAmb IAmb 23 36 19.4
comp=Z,103nm,1.5s
MLR Muntele Rosu 52.30 328 ⇓P P 23 36 09.7 +1.5
ARU Arti 52.33 357 P P 23 36 06.8 -1.3
comp=Z,2.6nm,0.7s,baz=182,slow=9.1,SNR=13
ARU Arti 52.33 357 P P 23 36 06.4 -1.7
ARU IAmb IAmb 23 36 23.0
comp=Z,28nm,1.1s
ARU Arti 52.33 357 d iP P 23 36 06.8 -1.3
ARU 23 38 02.0
ARU S S 23 43 33.4 -0.1
ARU SS SS 23 47 06.4 -4.9
ARU pmax pmax
comp=Z,34nm,1.5s
ARU MLR MLR
comp=Z,2µm,21.0s
TESR Tescani 52.61 329 ⇑P P 23 36 09.2 -1.1
IAS Iasi 52.62 330 ⇑P P 23 36 11.1 +0.7
IAS Iasi 52.62 330 ⇑P P 23 36 11.1 +0.7
SVE Sverdlovsk 52.65 359 eP P 23 36 10.0 -0.4
SVE eS S 23 43 36.6 -1.2
SVE pmax pmax
comp=Z,27nm,1.5s
SVE MLR MLR
comp=Z,3µm,19.0s
VOIR 52.75 327 ⇓P P 23 36 10.7 -0.8
VOIR 52.75 327 ⇓P P 23 36 10.7 -0.8
SORM Soroca 52.89 332 ⇓P P 23 36 10.6 -1.8
SORM Soroca 52.89 332 ⇓P P 23 36 10.6 -1.8
ZAA0 Zalesovo Array 52.90 16 P P 23 36 11.3 -1.1
ZALV Zalesovo Beam 52.90 16 P P 23 36 11.2 -1.1
comp=Z,1.7nm,0.5s,baz=223,slow=8.1,SNR=13
DOPR Dopca 52.91 328 ⇓P P 23 36 12.0 -0.6
ARR Arges 52.93 327 ⇑P P 23 36 12.4 -0.4
PRAR RASCA 53.40 330 ⇑P P 23 36 11.8 -4.4
LOT Lotru 53.45 327 ⇓P P 23 36 15.6 -1.1
GZR Gura Zlata 53.97 326 ⇓P P 23 36 19.2 -1.3
GZR Gura Zlata 53.97 326 ⇓P P 23 36 19.2 -1.3
BURAR Bucovina Array 54.08 329 ⇓P P 23 36 20.1 -1.1
BURAR Bucovina Array 54.08 329 ⇓P P 23 36 20.1 -1.1
BUR08 Bucovina Ar. S 54.10 329 P P 23 36 20.8 -0.7
BUR08 IAmb IAmb 23 36 40.0
comp=Z,27nm,1.4s
ARCR ARCALIA 54.18 328 ⇑P P 23 36 22.0 +0.2
DEV Deva 54.20 326 ⇑P P 23 36 26.2 +4.2
DEV Deva 54.20 326 ⇑P P 23 36 26.2 +4.2
MDVR Moldovita 54.20 325 ⇑P P 23 36 21.2 -1.0
AKASG Malin Array Be 54.35 334 P P 23 36 22.0 -1.0
comp=Z,5.8nm,1.0s,baz=128,slow=6.7,SNR=22
AKBB Malin Array Si 54.35 334 IAmb IAmb 23 36 31.3
comp=Z,77nm,1.7s

BZS Buzias 54.75 326 ⇑P P 23 36 25.5 -0.6
BZS Buzias 54.75 326 ⇑P P 23 36 25.5 -0.6
DRGR 54.86 327 ⇑P P 23 36 25.8 -1.1
DRGR 54.86 327 ⇑P P 23 36 25.8 -1.1
SIRR Siria 55.12 326 ⇑P P 23 36 28.9 +0.1
OBN Obninsk 55.13 342 eP P 23 36 27.9 -0.7
OBN e 23 37 29.1
OBN e 23 38 31.1
OBN ePPP PPP 23 39 42.2
OBN pmax pmax
comp=Z,59nm,2.5s
WHN Wuhan 55.22 55 ⇑P P 23 36 30.3 +0.6
WHN pmax pmax
comp=Z,83nm,1.3s
WHN pmax pmax
comp=Z,640nm,5.2s
WHN LR LR
comp=Z,4µm,16.3s
WHN LR LR
comp=Z,3µm,14.4s
WHN LR LR
comp=Z,10µm,21.5s
MOS Moscow 55.35 343 eP P 23 36 28.7 -1.5
MOS eS S 23 44 11.9 -2.4
MOS eSS SS 23 47 59.7 +0.8
MOS pmax pmax
comp=Z,73nm,1.3s
MOS MLR MLR
comp=Z,2µm,18.0s
MOS MLR MLR
comp=E,1µm,19.0s
MOS MLR MLR
comp=N,2µm,18.0s
KIRV Kirov 55.38 352 P P 23 36 29.5 -0.8
comp=N,25nm,0.7s,baz=350,slow=1.9,SNR=12
ACER Acerenza 55.68 318 P P 23 36 32.1 -0.8
TRPA Tarpa 55.79 328 ⇓P P 23 36 33.5 0.0
BTO Baotou 55.87 42 eP P 23 36 32.6 -1.7
BTO S S 23 44 15.8 -6.2
LVV L'vov 56.12 331 eP P 23 36 34.9 -1.0
LVV e 23 37 34.7
LVV eS S 23 44 27.4 +2.5
LVV MLR MLR
comp=Z,900nm,21.0s
UZH Uzhgorod 56.23 329 eP P 23 36 37.0 +0.4
UZH e 23 36 43.0
CORL Corleone 56.24 314 P P 23 36 37.3 +0.3
KOLS Kolonicke sedl 56.43 329 eP P 23 36 38.7 +0.6
KOLS pmax pmax
comp=Z,53nm,1.6s
KOLS Kolonicke sedl 56.43 329 eP P 23 36 38.7 +0.6
KWP Kalwaria Pacla 56.65 330 eP P 23 36 39.6 -0.1
KWP Kalwaria Pacla 56.65 330 eP P 23 36 39.6 -0.1
CRVS Cervenica-Dubn 56.83 329 eP P 23 36 40.6 -0.3
CRVS pmax pmax
comp=Z,273nm,2.5s
CRVS Cervenica-Dubn 56.83 329 eP P 23 36 40.6 -0.3
BLY Banja Luka 56.86 323 IAmb IAmb 23 36 50.5
comp=Z,66nm,1.7s
PSZ Piszkesteto 57.07 327 P P 23 36 41.6 -1.1
PSZ IAmb IAmb 23 36 51.1
comp=Z,50nm,1.9s
PSZ Piszkesteto 57.07 327 P P 23 36 41.6 -1.1
PSZ pmax pmax
comp=Z,50nm,1.9s
MOY Mondy 57.11 27 eP P 23 36 44.4 +1.4
ZAK Zakamensk 57.35 30 eP P 23 36 43.1 -1.6
ZAK pmax pmax
comp=Z,4.0nm,1.4s
SONM Songino Array 57.42 33 P P 23 36 44.6 -0.7
comp=Z,4.2nm,1.1s,baz=242,slow=5.1,SNR=18
QZH Quanzhou 57.43 63 ⇑iP P 23 36 48.8 +3.2
QZH S S 23 44 39.8 -3.2
QZH pmax pmax
comp=Z,320nm,5.8s
QZH LR LR
comp=Z,1µm,17.8s
QZH LR LR
comp=Z,1µm,20.9s
QZH LR LR
comp=Z,2µm,16.3s
NIE Niedzica 57.75 329 eP P 23 36 46.9 -0.5
NIE Niedzica 57.75 329 eP P 23 36 46.9 -0.5
VYHS Vyhne 57.98 327 eP P 23 36 48.2 -0.9
VYHS pmax pmax
comp=Z,55nm,1.7s
VYHS Vyhne 57.98 327 eP P 23 36 48.2 -0.9
LANS Liptovska Anna 58.03 328 eP P 23 36 48.9 -0.5
LANS pmax pmax
comp=Z,11nm,1.1s
LANS Liptovska Anna 58.03 328 eP P 23 36 48.9 -0.5
TAM Tamanrasset 58.33 294 IAmb IAmb 23 36 57.2
comp=Z,42nm,1.9s
TLY Talaya 58.36 29 eP P 23 36 51.7 0.0
TLY e 23 39 08.5
TLY ePPP PPP 23 40 30.9
TLY eS S 23 44 57.4 +3.1
TLY pmax pmax
comp=Z,18nm,1.3s
TLY MLR MLR
comp=Z,11µm,20.0s
KEST Kesra 58.38 310 IAmb IAmb 23 37 52.9
comp=Z,20nm,1.2s
BOJS Bojanci 58.43 322 eP P 23 36 51.8 -0.4
OJC Ojcow 58.49 329 eP P 23 36 51.7 -0.9
OJC Ojcow 58.49 329 P P 23 36 51.3 -1.3
OJC IAmb IAmb 23 37 00.6
comp=Z,30nm,1.5s
OJC Ojcow 58.49 329 eP P 23 36 51.7 -0.9
NRCA Norcia 58.50 319 IAmb IAmb 23 37 00.5
comp=Z,32nm,1.3s
DOBS Dobrina 58.62 323 eP P 23 36 52.8 -0.8
SMOL Smolenice 58.76 326 eP P 23 36 55.5 +1.0
SMOL Smolenice 58.76 326 eP P 23 36 55.5 +1.0
MODS Modra-Piesok 58.77 326 eP P 23 36 53.7 -0.9
MODS Modra-Piesok 58.77 326 eP P 23 36 53.7 -0.9
JAVC Velka Javorina 58.82 327 eP P 23 36 56.0 +1.0
PRGR Permogore 58.88 351 eP P 23 36 52.4 -2.6
PRGR pmax pmax
comp=Z,31nm,1.0s
BEL Belsk 59.00 331 eP P 23 36 57.4 +1.4
BEL Belsk 59.00 331 eP P 23 36 57.4 +1.4
OKC Ostrava-Krasne 59.13 328 AMS AMS 00 02 40.0
comp=Z,2µm,28.9s
SOKA Soboth 59.15 324 iP P 23 36 56.4 -0.9
comp=Z,14nm,1.3s
ARSA Arzberg 59.16 324 iP P 23 36 57.5 +0.2
comp=Z,6.2nm,0.9s
LATE Laterza 59.27 318 IAmb IAmb 23 37 01.4
comp=Z,42nm,1.3s
SUW Suwalki 59.31 334 eP P 23 36 56.8 -1.4
SUW Suwalki 59.31 334 IAmb IAmb 23 37 08.6
comp=Z,48nm,1.1s
SUW Suwalki 59.31 334 eP P 23 36 56.8 -1.4
CONA Conrad Observa 59.32 325 iP P 23 36 57.2 -1.4
comp=Z,18nm,1.2s,SNR=9.6
KLMR Klimovskoe 59.34 347 eP P 23 36 54.7 -3.6
KLMR S S 23 45 04.5 -2.2
KLMR SS SS 23 49 00.3 -1.3
KLMR pmax pmax
comp=Z,127nm,1.4s
KLMR MLR MLR
comp=Z,2µm,17.0s
KLMR Klimovskoe 59.34 347 eP P 23 36 54.7 -3.6
KLMR eP P 23 36 54.7 -3.6
KLMR eP P 23 36 54.7 -3.6
KLMR AMP 23 37 07.1
comp=Z,127nm,1.4s
KLMR S S 23 45 04.6 -2.2
KLMR S S 23 45 04.6 -2.2
KLMR SS SS 23 49 00.4 -1.2
KLMR SS SS 23 49 00.4 -1.2
KLMR LQ LQ 23 59 52.4
KLMR LQ LQ 23 59 52.4
KLMR LR LR 00 01 46.9
KLMR AMP 00 04 40.2
comp=Z,2µm,16.9s
NJ2 Nanjing 59.35 55 eP P 23 36 58.9 0.0
NJ2 S S 23 45 12.3 +4.5
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NJ2 pmax pmax
comp=Z,490nm,5.1s
NJ2 LR LR

comp=Z,1µm,24.6s
NJ2 LR LR
comp=Z,2µm,23.7s
NJ2 LR LR
comp=Z,2µm,20.8s
OBKA Obir 59.35 323 iP P 23 36 58.7 -0.1
comp=Z,18nm,1.1s,SNR=5.8
MORC Moravsky Berou 59.41 328 eP P 23 36 57.8 -1.3
MORC Moravsky Berou 59.41 328 ⇑P P 23 36 56.5 -2.6
MORC Moravsky Berou 59.41 328 P P 23 36 57.7 -1.4
MORC IAmb IAmb 23 37 13.4
comp=Z,16nm,1.1s
MORC Moravsky Berou 59.41 328 ⇑P P 23 36 56.5 -2.6
TRI Trieste 59.44 322 P P 23 36 58.6 -0.6
TRI IAmb IAmb 23 37 07.3
comp=Z,40nm,1.5s
TRI Trieste 59.44 322 P P 23 36 58.6 -0.6
TRI pmax pmax
comp=Z,40nm,1.5s
KRUC Moravsky 59.64 327 eP P 23 36 59.5 -1.1
VRAC Vranov 59.66 327 eP P 23 36 59.6 -1.2
VRAC Vranov 59.66 327 ⇑P P 23 37 01.2 +0.4
VRAC Vranov 59.66 327 ⇑P P 23 37 01.2 +0.4
BJT Baijiatuau 59.88 45 P P 23 37 01.6 -0.8
BJT IAmb IAmb 23 37 07.0
comp=Z,35nm,1.8s
BJT Baijiatuau 59.88 45 P P 23 37 01.6 -0.8
BJT pmax pmax
comp=Z,35nm,1.8s
BJI Beijing 59.89 45 P P 23 37 03.3 +0.8
BJI S S 23 45 16.3 +1.8
BJI LR LR
comp=Z,3µm,18.1s
BJI LR LR
comp=Z,2µm,18.5s
BJI LR LR
comp=Z,2µm,19.9s
MYKA Terra Mystica 59.96 323 iP P 23 37 02.8 -0.1
comp=Z,20nm,1.1s
CASP Castiglione de 59.97 318 P P 23 37 01.9 -1.1
CASP IAmb IAmb 23 37 11.4
comp=Z,53nm,1.5s
KRLC Kraliky 59.99 328 eP P 23 37 01.3 -1.7
KRLC ex x 23 37 09.0
KRLC AMS AMS 00 03 40.0
comp=Z,1µm,21.4s
KRLC Kraliky 59.99 328 eP P 23 37 01.3 -1.7
KRLC e 23 37 09.0
KRLC MLR MLR
comp=Z,1µm,21.4s
MOA Molln 60.20 324 iP P 23 37 03.5 -1.0
comp=Z,32nm,1.5s
TREC Trest 60.26 326 eP P 23 37 04.2 -0.7
TREC AMS AMS 00 01 20.0
comp=Z,2µm,32.1s
TREC Trest 60.26 326 eP P 23 37 04.2 -0.7
TREC MLR MLR
comp=Z,2µm,32.1s
STAL STALIGIAL 60.34 322 IAmb IAmb 23 37 13.7
comp=Z,36nm,1.4s
KBA Koelnbreinsper 60.36 323 iP P 23 37 05.2 -0.6
comp=Z,14nm,1.3s
DPC Dobruska-Polom 60.39 328 eP P 23 37 03.8 -1.9
DPC ex x 23 37 18.8
DPC AMS AMS 00 04 10.0
comp=Z,1µm,20.2s
DPC Dobruska-Polom 60.39 328 eP P 23 37 03.8 -1.9
DPC MLR MLR
comp=Z,1µm,20.2s
OSTC Ostas 60.56 328 eP P 23 37 05.7 -1.2
OSTC ex x 23 37 13.1
OSTC AMS AMS 00 08 50.0
comp=Z,2µm,19.2s
UPC Upice 60.64 328 eP P 23 37 07.0 -0.4
UPC AMS AMS 00 08 50.0
comp=Z,2µm,22.4s
UPC Upice 60.64 328 eP P 23 37 07.0 -0.4
UPC MLR MLR
comp=Z,2µm,22.4s
CHVC Chvalec 60.66 328 eP P 23 37 06.4 -1.2
CHVC ex x 23 37 14.3
CHVC ex x 23 37 20.3
CHVC AMS AMS 00 08 50.0
comp=Z,2µm,19.1s
KSP Ksiaz 60.68 328 eP P 23 37 06.7 -1.0
KSP Ksiaz 60.68 328 eP P 23 37 06.7 -1.0
ABTA Abfaltersbach 60.70 323 iP P 23 37 07.2 -0.8
comp=Z,16nm,1.3s
VLC Villacollemand 60.87 319 P P 23 37 08.7 -0.4
VLC IAmb IAmb 23 37 22.3
comp=Z,58nm,1.6s
CTI Castel Tesino 60.90 322 IAmb IAmb 23 37 17.7
comp=Z,54nm,1.7s
TOA0 Torodi Ar. Sit 60.94 283 P P 23 37 09.1 -1.0
TOA0 IAmb IAmb 23 37 25.5
comp=Z,26nm,1.4s
TORD Torodi Ar. Bea 60.94 283 P P 23 37 09.7 -0.4
comp=Z,10.0nm,1.1s,baz=100,slow=5.0,SNR=17
GOPC GO Pecny, Ondr 60.98 327 eP P 23 37 10.4 +0.6
GOPC ex x 23 37 17.7
GOPC AMS AMS 00 03 50.0
comp=Z,2µm,23.7s
GOPC GO Pecny, Ondr 60.98 327 eP P 23 37 10.4 +0.6
GOPC e 23 37 17.7
GOPC MLR MLR
comp=Z,2µm,23.7s
KLNR Kaliningrad 61.02 333 iP P 23 37 08.3 -1.6
KLNR pmax pmax
comp=Z,72nm,1.4s
SSE Sheshan 61.03 57 P P 23 37 10.1 -0.3
SSE S S 23 45 31.3 +1.9
SSE pmax pmax
comp=Z,17nm,0.8s
SSE pmax pmax
comp=Z,150nm,3.6s
SSE LR LR
comp=Z,410nm,17.0s
SSE LR LR
comp=Z,680nm,17.2s
GEC2 GERESS Array S 61.03 325 P P 23 37 07.3 -2.9
GERES GERESS Array B 61.03 325 P P 23 37 08.8 -1.4
comp=Z,0.8nm,0.7s,baz=134,slow=7.6,SNR=7.5
VSU Vasula 61.07 339 iP P 23 37 10.4 +0.2
VSU pmax pmax
comp=Z,46nm,1.2s
PRU Pruhonice 61.15 327 eP P 23 37 11.0 +0.1
PRU AMS AMS 00 04 00.0
comp=Z,1µm,21.0s
PRU Pruhonice 61.15 327 eP P 23 37 11.0 +0.1
PRU MLR MLR
comp=Z,1µm,21.0s
PRMA PARMA 61.17 320 P P 23 37 10.2 -0.9
KHC Kasperske Hory 61.24 325 eP P 23 37 09.5 -2.1
KHC ex x 23 37 19.0
KHC AMS AMS 00 04 20.0
comp=Z,1µm,24.5s
KHC Kasperske Hory 61.24 325 IAmb IAmb 23 37 19.0
comp=Z,24nm,1.9s
KHC Kasperske Hory 61.24 325 iP P 23 37 09.6 -2.1
KHC pmax pmax
comp=Z,19nm,1.1s
PRA Prague 61.26 327 AMS AMS 00 04 00.0
comp=Z,1µm,20.7s
PVCC Panska Ves 61.42 327 AMS AMS 00 06 00.0
comp=Z,1µm,19.3s
WTTA Wattenberg 61.47 323 iP P 23 37 11.8 -1.5
comp=Z,17nm,1.1s
WATA Walderalm 61.54 323 iP P 23 37 12.5 -1.2
comp=Z,23nm,1.4s,SNR=6.3
GKP Gorka Klasztor 61.59 331 eP P 23 37 13.6 -0.2
GKP Gorka Klasztor 61.59 331 eP P 23 37 13.6 -0.2
SQTA Sankt Quirin 61.71 323 iP P 23 37 13.0 -1.9
comp=Z,24nm,1.5s,SNR=6.7
MOTA Moosalm 61.83 323 iP P 23 37 14.1 -1.6
comp=Z,20nm,1.2s
FETA Feichten 61.91 322 iP P 23 37 15.0 -1.2
comp=Z,12nm,1.2s
BRG Berggiesshubel 61.95 327 eP P 23 37 15.3 -0.9
comp=Z,18nm,1.6s
BRG ePP PP 23 39 33.9 +1.3
comp=Z,12nm,1.4s
BRG Berggiesshubel 61.95 327 eP P 23 37 15.3 -0.9
BRG e 23 39 33.9
BRG pmax pmax
comp=Z,18nm,1.6s

BRG pmax pmax
comp=Z,12nm,1.4s
FUORN Ofenpass-Fuorn 62.01 322 P P 23 37 15.7 -1.4
RETA Reutte 62.10 323 i P P 23 37 17.7 +0.2
comp=Z,16nm,1.3s
NKC Novy Kostel 62.44 326 eP P 23 37 18.8 -0.8
NKC ex x 23 37 26.8
NKC AMS AMS 00 05 40.0
comp=Z,1µm,18.2s
NKC Novy Kostel 62.44 326 eP P 23 37 18.8 -0.8
NKC e 23 37 26.8
NKC MLR MLR
comp=Z,1µm,18.2s
MANZ Manzenberg 62.50 326 eP P 23 37 21.2 +1.1
comp=Z,17nm,1.4s,baz=117,slow=6.5
WERN Wernitzgruen 62.50 326 eP P 23 37 20.3 +0.3
comp=Z,76nm,1.6s,baz=117,slow=6.5
DAVA Damuels 62.54 322 i P P 23 37 19.3 -1.2
comp=Z,19nm,0.9s
GUNZ Gunzen 62.56 326 eP P 23 37 19.7 -0.8
comp=Z,101nm,1.8s,baz=117,slow=6.5
UBR Ueberruh 62.58 323 eP P 23 37 22.2 +1.5
comp=Z,61nm,1.5s,baz=117,slow=6.5
TMCR Tamitsa 62.61 348 eP P 23 37 19.2 -1.2
TMCR pmax pmax
comp=Z,52nm,1.0s
CLL Collm 62.68 327 eP P 23 37 20.9 -0.2
comp=Z,82nm,1.9s,baz=117,slow=6.5
CLL Collm 62.68 327 i P P 23 37 20.8 -0.3
comp=Z,54nm,1.7s
CLL i 23 37 28.7
CLL e(PP) 23 39 30.0
CLL eS S 23 45 53.0 +3.4
CLL eSS SS 23 50 00.0 +5.8
CLL eSSS SSS 23 52 42.0
CLL e 23 53 06.0
CLL LmV 00 10 00.0
comp=Z,1µm,21.6s
CLL Collm 62.68 327 i P P 23 37 20.8 -0.3
CLL i 23 37 28.7
CLL eS S 23 45 53.0 +3.4
CLL pmax pmax
comp=Z,54nm,1.7s
CLL MLR MLR
comp=Z,1µm,21.6s
GRF Grafenberg Arr 62.86 325 eP P 23 37 22.1 -0.4
comp=Z,71nm,1.6s,baz=117,slow=6.5
GRF eL L 00 10 23.8
comp=Z,735nm,19.8s
RUE Ruedersdorf 62.88 329 eP P 23 37 22.0 -0.4
comp=Z,77nm,1.4s,baz=117,slow=6.5
DL2 Dalian 63.48 48 P P 23 37 28.4 +1.7
DL2 S S 23 45 58.3 -1.7
DL2 pmax pmax
comp=Z,270nm,5.7s
DL2 LR LR
comp=Z,2µm,17.7s
DL2 LR LR
comp=Z,2µm,22.0s
DL2 LR LR
comp=Z,2µm,22.7s
FINES FINESS Array B 63.52 341 P P 23 37 27.2 +0.7
comp=Z,13nm,1.2s,baz=241,slow=5.7,SNR=5.2
BFO Black Forest 63.94 323 eP P 23 37 28.2 -1.4
comp=Z,113nm,1.6s,baz=117,slow=6.5
BFO Black Forest 63.94 323 P P 23 37 28.6 -1.0
BFO Black Forest 63.94 323 P P 23 37 28.6 -1.0
BFO pmax pmax
comp=Z,93nm,1.5s
ASSE Asse, Remlinge 64.34 327 eP P 23 37 31.6 -0.5
comp=Z,106nm,1.8s,baz=117,slow=6.5
CLZ Clausthal 64.37 327 eP P 23 37 31.4 -1.0
comp=Z,69nm,1.5s,baz=117,slow=6.5
TNS Taunus Mts 64.69 325 eP P 23 37 33.3 -1.3
comp=Z,48nm,1.5s,baz=117,slow=6.5
NRDL Niedersach Rie 64.83 328 eP P 23 37 33.7 -1.5
comp=Z,62nm,1.6s,baz=117,slow=6.5
BSEG Bad Segeberg 65.42 329 eP P 23 37 38.8 -0.3
comp=Z,49nm,1.4s,baz=117,slow=6.5
AHRW Bad Neuenahr-A 65.62 325 eP P 23 37 42.9 +2.4
comp=Z,121nm,2.1s,baz=117,slow=6.5
SNY Shenyang 65.77 46 ⇑P P 23 37 41.9 +0.3
SNY S S 23 46 34.6 +6.4
SNY pmax pmax
comp=Z,11nm,0.7s
SNY pmax pmax
comp=Z,490nm,5.6s
SNY LR LR
comp=Z,1µm,16.5s
SNY LR LR
comp=Z,2µm,18.4s
SNY LR LR
comp=Z,3µm,20.2s
WLF Walferdange 65.80 323 IAmb IAmb 23 37 56.3
comp=Z,29nm,1.1s
HIA Hailar 65.84 37 P P 23 37 39.9 -2.1
HIA IAmb IAmb 23 38 30.3
comp=Z,46nm,1.9s
HIA Hailar 65.84 37 P P 23 37 39.9 -2.1
HIA pmax pmax
comp=Z,46nm,1.9s
APA Apatity 66.52 348 ⇓iP P 23 37 44.6 -1.3
APA pmax pmax
comp=Z,10.0nm,1.3s
APA MLR MLR
comp=Z,3µm,22.0s
BOD Bodaibo 66.82 27 eP P 23 37 36.6 -11
NRIK Noril'sk 67.23 9 P P 23 37 50.5 +0.1
comp=Z,1.4nm,0.8s,baz=165,slow=3.4,SNR=5.9
KIC Kosan Boka 67.24 275 eP P 23 37 54.6 +3.0
comp=Z,20nm,1.1s
KIC Kosan Boka 67.24 275 P P 23 37 54.6 +3.0
UCC Uccle 67.31 324 P P 23 37 50.3 -1.0
UCC IAmb IAmb 23 37 54.3
comp=Z,22nm,1.1s
UCC Uccle 67.31 324 P P 23 37 50.3 -1.0
UCC pmax pmax
comp=Z,22nm,1.1s
DBIC Dimbokro 67.35 276 P P 23 37 52.2 0.0
comp=Z,4.5nm,0.7s,baz=97,slow=6.5,SNR=5.1
DBIC Dimbokro 67.35 276 IAmb IAmb 23 38 07.4
comp=Z,36nm,1.4s
DBIC Dimbokro 67.35 276 P P 23 37 52.3 0.0
DBIC pmax pmax
comp=Z,36nm,1.5s
TIC Toumodi 67.51 275 eP P 23 37 56.3 +3.0
LIC Lamto 67.53 275 eP P 23 37 56.2 +2.8
comp=Z,35nm,0.9s
LIC Lamto 67.53 275 P P 23 37 56.2 +2.8
CN2 Changchun 67.66 44 eP P 23 37 53.1 -0.6
CN2 PP PP 23 40 23.4 +0.5
CN2 eS S 23 46 53.4 +2.3
CN2 pmax pmax
comp=Z,350nm,6.0s
CN2 LR LR
comp=Z,1µm,19.0s
CN2 LR LR
comp=Z,1µm,19.0s
KSRS Korea Array 67.90 51 P P 23 37 53.0 -2.2
comp=Z,1.7nm,0.8s,baz=264,slow=7.2,SNR=10
KNRA Kununurra 68.15 109 P P 23 37 55.0 -2.2
KNRA IAmb IAmb 23 38 22.5
comp=Z,23nm,1.4s
NB2 NORSAR Subarra 68.71 336 P P 23 37 57.7 -2.2
comp=Z,94nm,2.0s,baz=120,slow=6.2
NB2 NORSAR Subarra 68.71 336 P P 23 37 57.7 -2.2
baz=120,slow=6.2
NOA NORSAR Array B 68.71 336 P P 23 37 58.0 -1.9
comp=Z,3.7nm,0.8s,baz=119,slow=6.8,SNR=11
NC204 NORSAR Array S 69.02 336 P P 23 38 01.1 -0.9
ESBB Sonseca Array 69.59 311 P P 23 38 05.0 -0.9
ESBB IAmb IAmb 23 38 09.4
comp=Z,30nm,1.2s
ESDC Sonseca Array 69.60 311 P P 23 38 05.4 -0.5
comp=Z,6.8nm,0.8s,baz=94,slow=5.4,SNR=13
KEV Kevo 69.66 347 P P 23 38 06.1 +0.5
KEV Kevo 69.66 347 P P 23 38 06.1 +0.5
KEV pmax pmax
comp=Z,161nm,1.8s
ARCES ARCESS Array B 69.82 347 P P 23 38 06.3 -0.4
comp=Z,9.2nm,0.8s,baz=141,slow=5.4,SNR=17
PAB San Pablo 69.86 311 P P 23 38 07.9 +0.3
PAB IAmb IAmb 23 38 16.5
comp=Z,53nm,1.6s
PAB San Pablo 69.86 311 P P 23 38 07.9 +0.3
PAB pmax pmax
comp=Z,53nm,1.6s
MDJ Mudanjiang 70.75 44 P P 23 38 13.8 +1.0
MDJ pmax pmax
comp=Z,11nm,1.2s
MDJ pmax pmax
comp=Z,610nm,5.8s
ZEA Zeya 71.83 34 eP P 23 38 19.0 -0.1
ZEA eS S 23 47 41.0 +1.3
ZEA e 23 48 16.0
ZEA pmax pmax
comp=Z,300nm,7.0s
ZEA smax smax
comp=E,600nm,12.0s
ZEA MLR MLR
comp=N,3µm,18.0s
ZEA MLR MLR
comp=E,6µm,18.0s
ZEA MLR MLR
comp=Z,8µm,18.0s
PCBR Castelo Branco 72.29 310 eP P 23 38 22.2 0.0
comp=Z,41nm,1.6s
PCVE Castro Verde 72.37 308 eP P 23 38 21.9 -0.8
comp=Z,41nm,1.7s
MTE Manteigas 72.43 311 eP P 23 38 23.5 +0.3
comp=Z,74nm,1.5s
ESK Eskdalemuir 73.16 327 P P 23 38 27.3 +0.2
ESK Eskdalemuir 73.16 327 P P 23 38 27.3 +0.2
ESK pmax pmax
comp=Z,86nm,1.6s
KLR Kul'dur 73.28 40 P P 23 38 28.0 +0.1
comp=Z,1.1nm,0.6s,baz=246,slow=11,SNR=2.8
KLR Kul'dur 73.28 40 i P P 23 38 27.0 -0.9
KLR pmax pmax
comp=Z,3.0nm,1.1s
WRA Warramunga Arr 74.15 112 P P 23 38 33.5 -0.2
comp=Z,4.7nm,1.0s,baz=291,slow=5.3,SNR=12
WRAB Tennant Creek 74.16 112 ceP P 23 38 33.7 0.0
WRAB pmax pmax
comp=Z,24nm,1.7s
WB0 Warramunga Arr 74.17 112 P P 23 38 33.8 +0.1
WB0 IAmb IAmb 23 38 44.2
comp=Z,28nm,1.4s
WR0 Warramunga Arr 74.34 112 P P 23 38 34.8 +0.1
ASAR Alice Springs 74.46 116 P P 23 38 36.0 +0.6
comp=Z,2.0nm,0.9s,baz=286,slow=5.4,SNR=14
AS31 Alice Springs 74.46 116 P P 23 38 34.2 -1.2
SYO Syowa Base 74.64 188⇑epP pP 23 38 38.8 +1.1
YAK Yakutsk 75.73 27 eP P 23 38 53.1 +11
YAK pmax pmax
comp=Z,17nm,1.3s
YAK pmax pmax
comp=N,5.0nm,1.2s
YAK pmax pmax
comp=E,9.0nm,1.3s
MJAR Matsushiro Arr 75.89 53 P P 23 38 42.9 -0.5
comp=E,0.9nm,0.5s,baz=277,slow=10.0,SNR=4.5
NKL Nikolayevsk 79.51 37 eP P 23 39 02.1 -1.1
NKL e 23 39 17.2
NKL e 23 42 04.3
NKL eS S 23 49 09.8 +5.1
NKL e 23 49 51.6
NKL pmax pmax
comp=Z,6.0nm,1.2s
NKL pmax pmax
comp=N,4.0nm,1.0s
NKL pmax pmax
comp=E,3.0nm,1.1s
NKL pmax pmax
comp=Z,20nm,4.8s
YSS Yuzh-Sakhalins 80.21 43 eP P 23 39 03.1 -4.0
YSS e*SP pP 23 39 08.6 -0.9
YSS e 23 42 15.6
YSS eS S 23 49 07.8 -4.5
YSS pmax pmax
comp=Z,300nm,5.0s
YSS MLR MLR
comp=Z,1µm,17.0s
YSS MLR MLR
comp=N,1µm,18.0s
NVL N'lazarevskaya 81.83 195 eP P 23 39 27.5 +12
NVL pmax pmax
comp=Z,11nm,1.1s
YUK Yuzh-Kuril'sk 82.22 46 eP P 23 39 13.9 -4.0
YUK e 23 42 21.2
YUK eS S 23 49 21.8 -12
YUK eSSS SSS 23 58 18.7
YUK pmax pmax
comp=N,47nm,0.3s
YUK pmax pmax
comp=E,44nm,0.3s
YUK pmax pmax
comp=Z,53nm,0.3s
YUK pmax pmax
comp=Z,101nm,1.4s
STKA Stephens Creek 82.66 123 P P 23 39 20.8 +0.4
comp=Z,0.4nm,0.3s,baz=293,slow=13,SNR=3.0
STKA Stephens Creek 82.66 123 P P 23 39 20.8 +0.4
STKA pmax pmax
comp=Z,4.0nm,1.6s
KUR Kuril'sk 83.68 45 eP P 23 39 27.6 +2.2
KUR e 23 39 30.6
KUR e 23 42 43.1
KUR S S 23 49 42.7 -5.5
KUR eSS SS 23 55 20.9 +6.1
KUR MLR MLR
comp=Z,988nm,19.0s
KUR MLR MLR
comp=N,403nm,15.0s
KUR MLR MLR
comp=E,826nm,16.0s
MA2 Magadan 85.51 31 i P P 23 39 34.9 +0.5
MA2 pmax pmax
comp=Z,5.0nm,1.1s
SEY Seymchan 86.24 27 i P P 23 39 36.0 -1.9
PET Petropavlovsk 90.33 37 eP P 23 39 57.6 +0.1
PET e 23 43 39.9
PET eS S 23 50 49.1 -2.9
PET ePS PS 23 52 02.4 +2.7
PET eSS SS 23 56 47.2 -4.3
BILL Bilibino 91.29 21 P P 23 40 01.6 -0.1
BILL IAmb IAmb 23 40 20.2
comp=Z,28nm,1.6s
BILL Bilibino 91.29 21 eP P 23 40 01.1 -0.6
BILL e 23 43 37.8
BILL ePPP PPP 23 45 35.0
BILL pmax pmax
comp=Z,5.0nm,1.3s
DZM Mont Dzumac 104.17 112 ePP PKiKP 23 45 20.9 +2.7
comp=Z,275nm,24.0s
DZM Mont Dzumac 104.17 112 ePS PS 23 54 28.7 -2.9
comp=Z,122nm,27.1s
DZM eSS SS 00 00 10.8 +1.8
comp=Z,313nm,28.9s
DZM Mont Dzumac 104.17 112 eLR LR 00 15 09.3
comp=Z,1µm,23.4s
YKA Yellowknife Ar 113.61 359 PKiKP PKiKP 23 45 35.9 +1.3
comp=Z,0.3nm,0.7s,baz=342,slow=2.1,SNR=5.5
YKA PP PP 23 46 26.5 +0.7
comp=Z,0.9nm,0.9s,baz=2.8,slow=7.9,SNR=9.2
ULM Lac du Bonnet 122.86 344 PKP PKPdf 23 45 50.9 -1.9
comp=Z,1.7nm,0.8s,baz=3.1,slow=0.6,SNR=3.6
LPAZ La Paz 130.31 252 PKP PKPdf 23 46 08.8 +0.1
comp=Z,2.8nm,1.1s,baz=23,slow=4.6,SNR=8.0
LPAZ La Paz 130.31 252 PKiKP 23 46 09.1 -0.5
LPAZ La Paz 130.31 252 PKIKP PKiKP 23 46 09.1 -0.5
RSSD Black Hills 130.60 348 PKPdf 23 46 08.3 +0.2
RSSD Black Hills 130.60 348 PKIKP PKPdf 23 46 08.3 +0.2
GO01 Chusmiza 130.71 248 PKPdf 23 46 08.3 -1.0
FXWY Fox Creek 132.20 354 PKPdf 23 46 11.5 +0.3
MFID Camas Ranch 132.73 359 PKPdf 23 46 09.4 -2.6
PDAR Pinedale Array 132.88 352 PKP PKPdf 23 46 12.3 -0.2
comp=Z,1.1nm,0.7s,baz=61,slow=1.8,SNR=9.2
NVAR Mina Array Bea 137.72 1 PKP PKPdf 23 46 22.0 +0.4
comp=Z,1.6nm,0.9s,baz=11,slow=1.3,SNR=11
NV11 Mina Array Sit 137.72 1 PKPdf 23 46 20.8 -0.7
ANMO Albuquerque 139.91 346 PKPdf 23 46 22.8 -2.9
ANMO Albuquerque 139.91 346 i PKIKP PKPdf 23 46 23.8 -1.9
MNTX Cornudas Mount 142.70 343 PKPdf 23 46 30.5 -0.1
TBI Tubuai 143.43 125 eLR LR 00 33 29.7
comp=Z,513nm,29.0s
TX31 Lajitas Ar. Si 144.34 339 PKPab 23 46 30.6 -1.0
TX32 Lajitas Array 144.34 339 PKPab 23 46 31.0 -0.5
TXAR Lajitas Array 144.34 339 PKP PKPab 23 46 31.2 -0.3
comp=Z,1.5nm,0.8s,baz=48,slow=1.9,SNR=8.7
TGUH Tegucigalpa,Un 145.27 302 PKPbc 23 46 33.6 -1.7
PPT2 Papeete2 145.57 115 eLR LR 00 34 24.2
comp=Z,847nm,25.8s
HPIG 147.23 341 PKPdf 23 46 39.4 +0.6

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*IDC **24** 23:28:45.3±1.8, 4.41N×62.84E, h0km, mb4.3/4, mb1 4.4/4, mb1mx3.7/58, mbtmp4.3/4, Error ellipse: s-maj=64.5km s-min=39.1km az=67.0*
ISC 24 23:28:46.4±1.6, 4.4N±0.3×62.8E±0.4, h10km, n7, σ1.20/7, mb4.4/4, Carlsberg Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ZALV Zalesovo Beam 52.60 16 P P 23 37 59.7 -0.6
1.5nm,0.6s,baz=232,slow=7.1,SNR=2.5
SONM Songino Array 57.16 34 P P 23 38 34.6 +1.0
2.9nm,1.1s,baz=224,slow=8.1,SNR=3.3
ARCES ARCESS Array B 69.51 347 P P 23 39 54.2 -0.7
7.0nm,1.0s,baz=140,slow=7.1,SNR=4.3
ASAR Alice Springs 74.61 116 P P 23 40 25.9 -0.5
6.3nm,1.1s,baz=275,slow=5.3,SNR=4.2
ULM Lac du Bonnet 122.55 344 PKP PKiKP 23 47 44.1 +1.5
0.6nm,0.4s,baz=338,slow=7.3,SNR=3.7
NVAR Mina Array Bea 137.40 1 PKP PKiKP 23 48 12.2 -0.9
0.7nm,0.7s,baz=34,slow=1.5,SNR=3.6
TXAR Lajitas Array 144.04 340 PKP PKPdf 23 48 24.0 +0.8
1.3nm,1.0s,baz=56,slow=2.3,SNR=3.5

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*GUC **24** 23:30:35.2±0.6, 19.49S×70.43W, h43km±1km, ML3.9*
*IDC **24** 23:30:40.7±2.9, 19.52S×70.10W, h86km±24km, mb3.5/2, mb1 3.8/7, mb1mx3.5/32, mbtmp3.9/7, Error ellipse: s-maj=43.8km s-min=16.6km az=94.0*
ISC 24 23:30:36.7±1.1, 19.48S±0.03×70.42W±0.08, h42km±11km, n20, σ1.35/33, 1D, Near coast of northern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PSGC Pisagua 0.30 112 eP Pn 23 30 43.9 -1.4
PSGC i S Sn 23 30 50.0 -1.5
PB11 IPOC Station P 0.77 111 eP Pn 23 30 50.8 -0.6
PB11 i S Sn 23 31 01.7 -0.3
PB11 IAML 23 31 04.5
comp=E,5µm,0.3s
MNMC Minye Minye 0.85 66 eP Pn 23 30 52.4 -0.2
MNMC i S Sn 23 31 04.2 +0.2
MNMC IAML 23 31 05.6
comp=N,29µm,0.2s
TA01 Diego Aracena 1.10 168 eP Pn 23 30 54.8 -0.9
TA01 i S Sn 23 31 09.8 0.0
TA01 IAML 23 31 12.0
comp=E,4µm,0.4s
AP01 Chacalluta 1.11 4 eP Pn 23 30 54.8 -1.0
AP01 i S Sn 23 31 09.5 -0.3
AP01 IAML 23 31 11.3
comp=E,5µm,0.2s
GO01 Chusmiza 1.17 99 eP Pn 23 30 57.4 +0.2
GO01 i S Sn 23 31 13.9 +1.7
GO01 IAML 23 31 15.2
comp=N,6µm,0.3s
PATCX Punta Patache 1.36 169 ⇓iP Pn 23 30 58.6 -0.7
PATCX i S Sn 23 31 15.2 -1.0
PATCX IAML 23 31 19.4
comp=E,2µm,0.3s
PB08 IPOC Station P 1.36 119 eP Pn 23 30 59.7 0.0
PB08 i S Sn 23 31 18.1 +1.4
PB16 IPOC Station P 1.43 37 eP Pn 23 31 01.4 +0.6
PB16 i S Sn 23 31 20.8 +2.2
PB01 IPOC Station P 1.79 151 eP Pn 23 31 04.9 -0.3
PB01 i S Sn 23 31 27.6 +0.9
PB01 IAML 23 31 31.5
comp=E,918nm,0.2s
PB02 IPOC Station P 1.90 165 eP Pn 23 31 06.8 +0.1
PB02 i S Sn 23 31 30.2 +0.8
PB07 IPOC Station P 2.29 167 eP Pn 23 31 11.9 -0.3
PB07 i S Sn 23 31 39.9 +0.7
LVC Limon Verde 3.42 156 P Pn 23 31 28.7 +0.8
comp=E,12nm,0.3s,baz=326,slow=8.3,SNR=32
LVC S Sn 23 32 08.9 +1.5
comp=E,17nm,0.3s,baz=310,slow=7.4,SNR=5.4
LPAZ La Paz 3.85 35 P Pn 23 31 37.5 +3.4
comp=E,3.1nm,0.3s,baz=327,slow=2.5,SNR=28
SIV San Ignacio 9.56 70 P Pn 23 32 50.9 -1.0
comp=E,1.8nm,0.3s,baz=273,slow=10,SNR=26
CFA Coronel Fontan 12.23 171 P Pn 23 33 31.2 +2.8
comp=E,0.4nm,0.3s,baz=18,slow=20,SNR=2.8
CPUP Villa Florida 13.85 122 P Pn 23 33 50.2 -0.3
comp=E,0.1nm,0.3s,baz=295,slow=12,SNR=9.7
TORD Torodi Ar. Bea 78.04 71 P P 23 42 28.9 -2.6
comp=E,1.2nm,0.9s,baz=237,slow=4.2,SNR=5.4
YKA Yellowknife Ar 88.82 341 P P 23 43 25.3 -0.5
comp=E,0.1nm,0.5s,baz=133,slow=4.7,SNR=3.1
MKAR Makanchi Array 144.78 33 PKP PKPdf 23 50 07.6 -1.4
comp=E,0.3nm,0.6s,baz=328,slow=2.9,SNR=5.0

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*IDC **24** 23:31:40.9±0.6, 4.32N×62.71E, h0km, mb4.2/21, mb1 4.3/21, mb1mx4.1/53, mbtmp4.2/21, Error ellipse: s-maj=17.2km s-min=13.3km az=122.0*
*BJI **24** 23:31:41.0±0.0, 4.10N×62.80E, h10km, mB5.3/22, mb4.7/28, Ms5.4/15, Ms7 5.3/15*
*NEIC **24** 23:31:41.1±2.7, 4.05N±0.09×62.71E±0.08, h10km±1km, mb4.9/44, Error ellipse: s-maj=15.0km s-min=13.1km az=184.0*
ISC 24 23:31:42.1±0.4, 4.25N±0.07×62.68E±0.06, h10km, n98, σ2.25/93, mb4.8/47, 2D, Carlsberg Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KAAM Kaadhehdhoo 10.96 110 Pn Pn 23 34 16.1 -3.0
MSEY Mahe Island 11.42 219 Pn 23 34 20.5 -4.9
SOCY Socotra 11.67 313 Pn Pn 23 34 35.1 +6.3
H08N2 Diego Garcia H 13.39 142 T T 23 48 23.8
H08N3 Diego Garcia H 13.40 142 T T 23 48 26.5
H08N1 Diego Garcia H 13.41 142 T T 23 48 25.4
DGAR Diego Garcia 15.14 140 Pn Pn 23 35 12.4 -3.8
HYB Hyderabad 20.33 49 i P Pn 23 36 23.0 +2.4
ATD Arta Tunnel 20.92 291 P P 23 36 24.8 -0.3
ATD IAmb IAmb 23 36 40.8
comp=Z,79nm,1.3s
UOSS Minazif 21.50 344 P P 23 36 31.1 -0.1
UOSS IAmb IAmb 23 36 39.5
comp=Z,144nm,1.6s
RAYN Ar Rayn 25.34 321 P P 23 37 10.6 +1.2
RAYN IAmb IAmb 23 37 13.9
comp=Z,45nm,1.6s
KMBO Kilima Mbogo 25.96 259 P P 23 37 17.4 +2.0
comp=Z,20nm,1.2s,baz=58,slow=9.6,SNR=12
KMBO Kilima Mbogo 25.96 259 P P 23 37 18.4 +2.9
OPO Ambohidratompo 27.34 213 P P 23 37 29.0 +1.4
comp=Z,10nm,1.1s,baz=6.1,slow=6.6,SNR=4.2
KBL Kabul 30.71 10 P P 23 37 59.6 +2.1
KBL IAmb IAmb 23 38 11.9
comp=Z,22nm,1.5s
NIL Nilore 30.87 17 P P 23 38 00.5 +1.7
NIL IAmb IAmb 23 38 07.7
comp=Z,33nm,1.5s
MBAR Mbarara 32.28 262 P P 23 38 10.3 -1.2
GEYT Alibeck 33.78 354 P P 23 38 25.8 +1.6
comp=Z,0.9nm,0.8s,baz=192,slow=21,SNR=2.2
GYA0B ALIBECK ARRAY 33.78 354 P P 23 38 24.6 +0.4
GYA0B IAmb IAmb 23 38 42.6
comp=Z,32nm,2.0s
SHL Shillong 35.13 50 P P 23 38 38.6 +2.3
SHL IAmb IAmb 23 38 39.9
comp=Z,50nm,1.7s
RPSI Rantau Prapat 36.21 91 P P 23 38 45.0 -0.5
LSA Lhasa 36.96 44 P P 23 38 52.6 +0.4
LSA IAmb IAmb 23 38 56.6
comp=Z,41nm,1.6s
KSH Kashi 37.12 17 P P 23 38 50.8 -2.2
KSH sP pwP 23 38 57.8 -1.3
KSH PP PP 23 40 12.3 -5.4
KSH S S 23 44 33.6 -5.8
KSH SS SnSn 23 47 03.5 -10
KSH ScS ScS 23 49 01.6 -6.7
KSH pmax pmax
comp=Z,55nm,2.0s
KSH pmax pmax
comp=Z,510nm,7.1s
KSH LR LR
comp=Z,540nm,7.2s
KSH LR LR

comp=Z,920nm,11.7s
KSH LR LR
comp=Z,3µm,13.8s
CM31 Chiang Mai Arr 38.15 65 P P 23 38 59.3 -2.6
CMAR Chiang Mai Arr 38.15 65 P P 23 39 03.4 +1.5
comp=Z,1.1nm,0.3s,baz=257,slow=8.0,SNR=9.2
CHTO Chiang Mai 38.25 65 P P 23 39 01.3 -1.5
CHTO IAmb IAmb 23 39 06.4
comp=Z,49nm,1.9s
GNI Garni 39.24 338 P P 23 39 11.4 +0.4
LSZ Lusaka 39.28 240 P P 23 39 13.0 +1.4
comp=Z,4.8nm,1.0s,baz=95,slow=12,SNR=3.8
LSZ Lusaka 39.28 240 P P 23 39 08.4 -3.2
LSZ IAmb IAmb 23 39 26.9
comp=Z,20nm,1.4s
KK31 Karatay Array 39.31 9 P P 23 39 12.2 +0.8
KKAR Karatay Array 39.31 9 P P 23 39 12.9 +1.6
PBKT Sadao Pong 39.51 69 P P 23 39 11.7 -1.7
AAK Ala-Archa 39.65 14 P P 23 39 15.5 +1.2
AAK IAmb IAmb 23 39 30.9
comp=Z,21nm,1.5s
GAZ Gaziantep 40.23 328 P P 23 39 21.2 +2.0
GAZ IAmb IAmb 23 39 29.4
comp=Z,38nm,1.7s
AKH Akhalkalaki 40.80 338 P P 23 39 24.9 +0.9
AKH IAmb IAmb 23 39 33.3
comp=Z,64nm,1.9s
MDSI Maura Dua 42.36 101 P P 23 39 40.2 +3.3
comp=Z,13nm,1.3s
KLSI 42.94 101 P P 23 39 43.2 +1.6
comp=Z,8.9nm,1.7s
KBZ Khabaz 43.03 339 P P 23 39 42.4 +0.6
comp=Z,2.2nm,0.9s,baz=171,slow=16,SNR=2.3
SLVN Son La 43.45 63 P P 23 39 45.8 0.0
BR131 Keskin Array S 44.01 327 P P 23 39 50.7 +0.6
BRTR Keskin Array B 44.01 327 P P 23 39 50.4 +0.3
comp=Z,1.3nm,0.8s,baz=143,slow=10,SNR=4.6
ABKAR Akbulak array 44.91 357 P P 23 39 57.9 +1.1
WMQ Urumqi 45.17 26 eP P 23 40 02.6 +3.4
WMQ pmax pmax
comp=Z,5.0nm,0.7s
WMQ pmax pmax
comp=Z,130nm,5.3s
WMQ LR LR
comp=Z,4µm,20.3s
WMQ LR LR
comp=Z,3µm,22.9s
WMQ LR LR
comp=Z,4µm,27.9s
MKAR Makanchi Array 45.66 19 P P 23 40 03.0 0.0
comp=Z,0.9nm,0.8s,baz=224,slow=8.0,SNR=5.2
LBTB Lobatse 46.30 229 P P 23 40 09.6 +1.2
comp=Z,9.1nm,1.1s,baz=84,slow=13,SNR=3.7
LBTB Lobatse 46.30 229 P P 23 40 09.0 +0.6
LBTB IAmb IAmb 23 40 18.1
comp=Z,16nm,1.1s
GYA Guiyang 47.48 58 eP P 23 40 25.0 +7.3
KURBB Kurchatov Arra 48.10 14 P P 23 40 21.9 -0.1
comp=Z,0.6nm,0.7s,baz=220,slow=8.5,SNR=4.2
KURK Kurchatov 48.21 14 P P 23 40 21.9 -0.9
KURK Kurchatov 48.21 14 IAmb IAmb 23 40 29.2
comp=Z,15nm,1.6s
GTA Gaotai 48.51 39 ⇓P P 23 40 27.3 +1.8
GTA pP pwP 23 40 31.8 +0.2
GTA sP sP 23 40 34.4 +5.8
GTA pmax pmax
comp=Z,280nm,5.2s
GTA LR LR
comp=Z,3µm,17.1s
GTA LR LR
comp=Z,6µm,18.1s
GTA LR LR
comp=Z,9µm,18.7s
BOSA Boshof 48.60 225 P P 23 40 26.9 +0.5
comp=Z,4.9nm,0.9s,baz=79,slow=7.1,SNR=5.5
BOSA Boshof 48.60 225 P P 23 40 23.2 -3.2
BOSA IAmb IAmb 23 40 32.7
comp=Z,24nm,1.4s
SBUM Sibu 49.48 90 P P 23 40 34.0 +0.8
SBUM IAmb IAmb 23 40 36.8
comp=Z,21nm,1.6s
WOJI Wonogiri, Jawa 49.60 104 P P 23 40 36.0 +1.9
TSUM Tsumeb 50.12 241 P P 23 40 36.6 -1.5
TSUM IAmb IAmb 23 40 42.8
comp=Z,19nm,1.2s
MLR Muntele Rosu 52.08 328 P P 23 40 54.0 +1.5
ARU Arti 52.13 357 P P 23 40 51.8 -0.6
comp=Z,0.5nm,0.4s,baz=168,slow=9.5,SNR=3.6
ARU Arti 52.13 357 P P 23 40 52.5 0.0
ARU IAmb IAmb 23 41 00.9
comp=Z,22nm,1.3s
XAN Xi'an 52.14 49 P P 23 40 54.3 +1.3
XAN pP pwP 23 41 02.4 +3.4
XAN pmax pmax
comp=Z,15nm,1.4s
XAN Xi'an 52.14 49 P P 23 40 53.5 +0.5
XAN IAmb IAmb 23 40 55.3
comp=Z,42nm,1.5s
ZAA0 Zalesovo Array 52.74 16 P P 23 40 56.5 -0.5
ZALV Zalesovo Beam 52.74 16 P P 23 40 55.9 -1.1
comp=Z,1.3nm,0.5s,baz=208,slow=8.6,SNR=5.7
AKASG Malin Array Be 54.13 334 P P 23 41 06.8 -0.4
comp=Z,0.4nm,0.4s,baz=138,slow=6.1,SNR=4.2
KIRV Kirov 55.17 352 P P 23 41 14.7 +0.1
comp=Z,9.3nm,0.5s,baz=180,slow=1.0,SNR=2.7
SONM Songino Array 57.31 34 P P 23 41 30.2 -0.1
comp=Z,0.5nm,0.5s,baz=230,slow=8.9,SNR=4.9
TAM Tamanrasset 58.16 294 P P 23 41 36.1 -0.7
TAM IAmb IAmb 23 41 47.5
comp=Z,19nm,1.8s
NJ2 Nanjing 59.32 55 eP P 23 41 45.8 +1.3
NJ2 S S 23 49 59.3 +6.1
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 LR LR
comp=Z,690nm,16.1s
NJ2 LR LR
comp=Z,2µm,18.9s
NJ2 LR LR
comp=Z,1µm,19.9s
TORD Torodi Ar. Bea 60.80 283 P P 23 41 55.2 +0.2
comp=Z,3.6nm,1.2s,baz=106,slow=5.0,SNR=6.1
BRG Berggiesshubel 61.73 327 eP P 23 42 04.0 +3.3
comp=Z,39nm,1.9s
BRG e 23 43 07.3
comp=Z,36nm,1.7s
FUORN Ofenpass-Fuorn 61.80 322 P P 23 42 01.4 -0.1
CLL Collm 62.46 327 eP P 23 42 06.0 +0.5
comp=Z,63nm,2.2s
CLL e 23 42 19.0
SENIN Lac Senin/Sane 63.55 320 P P 23 42 13.3 +0.1
BFO Black Forest 63.72 323 P P 23 42 14.4 +0.3
MEM Membach 66.06 324 P P 23 42 28.4 -0.7
UCC Uccle 67.09 324 P P 23 42 35.0 -0.8
CN2 Changchun 67.59 44 eP P 23 42 36.3 -2.8
NB2 NORSAR Subarra 68.49 336 P P 23 42 42.9 -1.5
comp=Z,137nm,2.5s,baz=120,slow=6.2
NB2 NORSAR Subarra 68.49 336 P P 23 42 42.9 -1.5
baz=120,slow=6.2
NOA NORSAR Array B 68.49 336 P P 23 42 42.7 -1.7
comp=Z,1.0nm,0.8s,baz=113,slow=6.9,SNR=4.8
ESBB Sonseca Array 69.39 311 P P 23 42 52.4 +1.9
ESDC Sonseca Array 69.39 311 P P 23 42 49.6 -0.9
comp=Z,2.6nm,0.7s,baz=88,slow=5.2,SNR=7.5
ARCES ARCESS Array B 69.61 347 P P 23 42 51.1 -0.1
comp=Z,3.5nm,0.8s,baz=138,slow=5.8,SNR=7.3
MDJ Mudanjiang 70.68 44 P P 23 42 59.3 +1.1
MDJ pmax pmax
comp=Z,17nm,2.0s
MDJ pmax pmax
comp=Z,540nm,5.6s
WRA Warramunga Arr 74.32 112 P P 23 43 20.4 0.0
comp=Z,4.1nm,1.1s,baz=289,slow=5.3,SNR=8.0
WRAB Tennant Creek 74.33 112 P P 23 43 19.6 -0.9
WB0 Warramunga Arr 74.34 112 P P 23 43 19.9 -0.7
WR0 Warramunga Arr 74.51 112 P P 23 43 18.8 -2.7
WR0 IAmb IAmb 23 43 25.9
comp=Z,18nm,1.4s
ASAR Alice Springs 74.64 116 P P 23 43 22.1 -0.1
comp=Z,1.4nm,0.7s,baz=288,slow=5.2,SNR=9.9
AS31 Alice Springs 74.64 116 P P 23 43 21.6 -0.7
SYO Syowa Base 74.82 188⇓eX P 23 43 16.4 -5.8
CFA Coronel Fontan 126.56 233 PKP PKPdf 23 50 46.5 +0.2
comp=Z,2.8nm,0.7s,baz=118,slow=1.5,SNR=7.8
SCIA State Center 129.09 337 PKPdf 23 50 48.2 -2.6
PDAR Pinedale Array 132.68 352 PKP PKPdf 23 50 58.2 +0.3
comp=Z,0.4nm,0.7s,baz=66,slow=3.6,SNR=3.6
NVAR Mina Array Bea 137.53 1 PKP PKiKP 23 51 09.5 +0.5
comp=Z,0.6nm,0.8s,baz=213,slow=2.0,SNR=3.8
TX31 Lajitas Ar. Si 144.13 339 PKPab 23 51 16.7 +0.2
TX32 Lajitas Array 144.13 339 PKPbc 23 51 17.0 0.0
TXAR Lajitas Array 144.13 339 PKP PKPdf 23 51 18.1 -1.0
comp=Z,0.7nm,0.6s,baz=60,slow=3.2,SNR=9.6

MOS 24 23:32:46.4±1.1, 4.25N×62.68E, h8km, mb5.4/37, Error ellipse: s-maj=7.7km s-min=4.4km az=109.4
IDC 24 23:32:47.1±0.4, 4.28N×62.76E, h0km, mb4.6/38, mb1 4.6/39, mb1mx4.5/54, mbtmp4.6/39, ML3.3/1, Error ellipse: s-maj=11.5km s-min=11.1km az=136.0
BJI 24 23:32:47.5±0.0, 4.07N×62.85E, h6km, mB5.5/41, mb4.9/46, Ms5.4/35, Ms7 5.3/33
NEIC 24 23:32:47.5±1.8, 4.13N±0.08×62.63E±0.08, h10km±1km, mb5.3/115, Mwb5.6/15, Mwc5.6(GCMT), Error ellipse: s-maj=14.5km s-min=12.9km az=125.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-2.34; $M_{\theta\theta}$0.69; $M_{\phi\phi}$1.66; $M_{r\theta}$1.74; $M_{r\phi}$-1.39; $M_{\theta\phi}$0.71; Fault plane solution: $M_0$3.13000×10^{17} NP1:ϕ_s169.70000°, δ46.62000°, λ-47.14000°. NP2:ϕ_s296.20000°, δ57.81000°, λ-125.75000°. Principal axes: T 2.6919, Plg6.0000°, Azm51.0000°; N 0.7449, Plg30.0000°, Azm317.0000°; P -3.4368, Plg60.0000°, Azm152.0000°;
GCMT 24 23:32:50.5±0.2, 4.24N±0.01×62.61E±0.01, h12km, MW5.6/151, Moment Tensor Solution. s88,c119; s151,c298; Duration: 1.5s Moment tensor: Scale 10^{17} Nm; M_{rr}-2.53±.04; $M_{\theta\theta}$1.92±.04; $M_{\phi\phi}$0.60±.04; $M_{r\theta}$1.30±.13; $M_{r\phi}$-1.22±.03; $M_{\theta\phi}$0.30±.14; Best double couple: $M_0$2.91200×10^{17} NP1:ϕ_s137.00000°, δ37.00000°, λ-62.00000°. NP2:ϕ_s283.00000°, δ58.00000°, λ-110.00000°. Principal axes: T 2.8320, Plg11.0000°, Azm27.0000°; N 0.1570, Plg17.0000°, Azm294.0000°; P -2.9910, Plg70.0000°, Azm149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC 24 23:32:50, 4.21N×62.56E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-2.75; $M_{\theta\theta}$2.00; $M_{\phi\phi}$0.75; $M_{r\theta}$0.86; $M_{r\phi}$-1.35; $M_{\theta\phi}$0.14; Fault plane solution: $M_0$2.94000×10^{17} NP1:ϕ_s291.00000°, δ53.00000°, λ-104.00000°. NP2:ϕ_s134.00000°, δ40.00000°, λ-72.00000°. Principal axes: T 2.9385, Plg7.0000°, Azm31.0000°; N 0.0040, Plg11.0000°, Azm121.0000°; P -2.9425, Plg77.0000°, Azm300.0000°;
ISC 24 23:32:48.3±0.6, 4.10N±0.05×62.71E±0.04, h13km±3km, h13km:pP-P, n388, σ1.47/400, mb5.2/157, 41C-12D, Carlsberg Ridge

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
MSEY Mahe Island 11.32 220 Pn Pn 23 35 27.8 -2.3
MSEY Sn Sn 23 37 30.6 -6.1
SOCY Socotra 11.79 313 Pn Pn 23 35 37.9 +1.4
H08N2 Diego Garcia H 13.26 141 T T 23 49 41.6
baz=321,slow=76,SNR=164
H08N3 Diego Garcia H 13.27 141 T T 23 49 43.4
baz=321,slow=76,SNR=10
H08N1 Diego Garcia H 13.28 141 T T 23 49 41.1
baz=321,slow=76,SNR=10
DGAR Diego Garcia 15.01 140 iP P 23 36 23.4 -2.4
DGAR pmax pmax
comp=Z,76nm,1.1s
PALK Pallekele 18.17 79 P 23 37 02.0 +1.0
PALK Pallekele 18.17 79 iP Pn 23 36 59.5 -1.2
PALK pmax pmax
comp=Z,57nm,1.4s
WSAR Wadi Sarin 19.43 349 P P 23 37 13.6 -1.1
comp=Z,0.1nm,0.3s,baz=195,slow=13,SNR=3.6
HYB Hyderabad 20.40 48 iP P 23 37 26.0 +0.7
ATD Arta Tunnel 21.01 292 P P 23 37 32.6 +0.6
comp=Z,126nm,1.1s,baz=93,slow=6.5,SNR=11
ATD Arta Tunnel 21.01 292 P P 23 37 32.9 +1.0
ATD IAmb IAmb 23 37 36.2
comp=Z,216nm,1.2s
UOSS Minazif 21.65 344 P 23 37 39.3 +0.6
RAYN Ar Rayn 25.48 321 P P 23 38 17.1 +0.6
RAYN IAmb IAmb 23 38 20.1
comp=Z,78nm,1.3s
RAYN Ar Rayn 25.48 321 P P 23 38 17.1 +0.6
RAYN pmax pmax
comp=Z,78nm,1.3s
KMBO Kilima Mbogo 25.97 259 P P 23 38 24.5 +3.2
comp=Z,29nm,1.1s,baz=57,slow=11,SNR=9.6
KMBO Kilima Mbogo 25.97 259 P P 23 38 20.6 -0.7
KMBO IAmb IAmb 23 38 28.3
comp=Z,147nm,1.5s
KMBO Kilima Mbogo 25.97 259 P P 23 38 20.6 -0.7
KMBO pmax pmax
comp=Z,147nm,1.5s
RER Riviere de l'E 26.02 195 P P 23 38 20.7 -0.8
RER IAmb IAmb 23 38 37.1
comp=Z,78nm,1.2s
OPO Ambohidratompo 27.23 214 P P 23 38 35.8 +3.3
comp=Z,4.6nm,0.9s,baz=57,slow=9.8,SNR=3.6
HRA Herat 30.14 359 P P 23 38 58.1 -0.2
KBL Kabul 30.85 10 P P 23 39 04.1 -0.6
KBL IAmb IAmb 23 39 16.9
comp=Z,106nm,1.7s
KBL Kabul 30.85 10 P P 23 39 04.1 -0.6
KBL pmax pmax
comp=Z,106nm,1.7s
NIL Nilore 31.00 17 P P 23 39 06.4 +0.7
NIL Nilore 31.00 17 P P 23 39 06.4 +0.7
NIL pmax pmax
comp=Z,104nm,1.6s
DANN Dangsing 31.34 37 eP P 23 39 10.7 +1.5
comp=Z,32nm,0.9s
GKN Gorkha 31.64 39 eP P 23 39 13.3 +1.7
PKIN Phulchoki 31.83 40 eP P 23 39 15.0 +1.6
comp=Z,104nm,1.7s
PKI Pulchoki 31.83 40 eP P 23 39 14.4 +0.9
KKN Kakani 31.90 40 eP P 23 39 14.8 +0.8
RAMN Ramite 32.20 43 eP P 23 39 19.3 +2.6
MBAR Mbarara 32.29 262 P P 23 39 19.1 +1.6
comp=Z,5.2nm,0.9s,baz=77,slow=8.4,SNR=5.1
MBAR Mbarara 32.29 262 P P 23 39 18.9 +1.3
MBAR IAmb IAmb 23 39 34.0
comp=Z,36nm,1.4s
MBAR Mbarara 32.29 262 iP P 23 39 19.0 +1.5
MBAR pmax pmax
comp=Z,13nm,1.2s
GUN Gumba 32.37 41 eP P 23 39 18.2 0.0
JIRN Jiri 32.40 41 eP P 23 39 18.7 +0.1
ODAN Odare 32.69 44 eP P 23 39 22.4 +1.5
TAPN Taplejung 33.22 43 eP P 23 39 24.7 -1.0
GEYT Alibeck 33.93 353 P P 23 39 32.1 +0.7
comp=Z,2.0nm,0.8s,baz=134,slow=4.2,SNR=3.3
GYA0B ALIBECK ARRAY 33.93 353 P P 23 39 32.6 +1.2
SHL Shillong 35.20 50 P P 23 39 42.6 0.0
SHL IAmb IAmb 23 39 58.0
comp=Z,48nm,1.4s
SHL Shillong 35.20 50 P P 23 39 42.7 0.0
SHL pmax pmax
comp=Z,47nm,1.4s
PSI Prapat 36.17 91 P P 23 39 53.9 +2.8
PSI pmax pmax
comp=Z,31nm,1.4s
RPSI Rantau Prapat 36.17 91 P P 23 39 53.9 +2.9
LSA Lhasa 37.04 43 IAmb IAmb 23 40 10.5
comp=Z,63nm,1.4s
KSH Kashi 37.25 17 P P 23 39 57.8 -2.2
KSH PP PnPn 23 41 27.3 +1.8
KSH PcP PcP 23 42 23.5 +3.9
KSH pmax pmax
comp=Z,47nm,1.6s
KSH pmax pmax
comp=Z,1µm,7.5s
KSH LR LR
comp=Z,1µm,12.3s
KSH LR LR
comp=Z,960nm,11.8s
KSH LR LR
comp=Z,3µm,13.8s
KULM Kulim 37.82 87 P P 23 40 05.6 +0.5
CM31 Chiang Mai Arr 38.18 65 P P 23 40 10.3 +2.3
CMAR Chiang Mai Arr 38.18 65 P P 23 40 08.9 +0.9
comp=Z,5.3nm,1.0s,baz=158,slow=8.9,SNR=7.7
CHTO Chiang Mai 38.29 65 P P 23 40 09.0 +0.1
CHTO Chiang Mai 38.29 65 P P 23 40 09.0 +0.1
CHTO pmax pmax
comp=Z,42nm,1.3s
LSZ Lusaka 39.24 240 P P 23 40 19.9 +2.8
comp=Z,4.5nm,0.6s,baz=49,slow=5.8,SNR=8.5
LSZ Lusaka 39.24 240 P P 23 40 19.1 +2.1
LSZ Lusaka 39.24 240 P P 23 40 19.2 +2.1
LSZ pmax pmax
comp=Z,38nm,1.4s
GNI Garni 39.39 338 P P 23 40 18.9 +0.9
comp=Z,19nm,1.0s,baz=166,slow=2.8,SNR=6.5
GNI Garni 39.39 338 P P 23 40 18.4 +0.4
GNI IAmb IAmb 23 40 27.9
comp=Z,156nm,1.6s
GNI Garni 39.39 338 P P 23 40 18.4 +0.4
GNI pmax pmax
comp=Z,156nm,1.6s
KK31 Karatay Array 39.45 9 P P 23 40 18.3 -0.1
KK31 IAmb IAmb 23 40 29.4
comp=Z,81nm,1.6s
KK31 Karatay Array 39.45 9 P P 23 40 18.3 -0.1
KK31 pmax pmax
comp=Z,81nm,1.6s
KKAR Karatay Array 39.45 9 P P 23 40 18.8 +0.4
KKAR IAmb IAmb 23 40 29.4
comp=Z,81nm,1.6s
KKAR Karatay Array 39.45 9 P P 23 40 18.8 +0.4
KKAR pmax pmax
comp=Z,81nm,1.6s
AKT Akhty 39.56 342 eP P 23 40 20.7 +1.2
AKT e 23 41 52.1
AKT pmax pmax
comp=Z,52nm,1.3s
AAK Ala-Archa 39.78 14 P P 23 40 21.5 +0.2
comp=Z,5.9nm,1.0s,baz=177,slow=5.8,SNR=5.5
AAK Ala-Archa 39.78 14 P P 23 40 19.9 -1.4
AAK Ala-Archa 39.78 14 ceP P 23 40 20.3 -1.0
AAK pmax pmax
comp=Z,33nm,1.7s
GAZ Gaziantep 40.37 328 P P 23 40 26.2 0.0
GAZ IAmb IAmb 23 40 35.6
comp=Z,90nm,1.8s
TBLG Delisi 40.77 339 P P 23 40 28.8 -0.6
TBLG Delisi 40.77 339 P P 23 40 28.8 -0.6
TBLG pmax pmax
comp=Z,50nm,1.4s
AKH Akhalkalaki 40.95 338 P P 23 40 30.0 -1.0
AKH IAmb IAmb 23 40 39.8
comp=Z,95nm,1.6s
AKH Akhalkalaki 40.95 338 P P 23 40 30.0 -1.0
AKH pmax pmax
comp=Z,95nm,1.6s
GROC Groznyy 41.73 341 eP P 23 40 39.0 +1.8
GROC e 23 42 16.5
GROC e 23 42 39.5
GROC pmax pmax
comp=Z,143nm,1.4s
NCK Nalchik 42.73 339 iP P 23 40 45.0 -0.3
NCK pmax pmax
comp=Z,14nm,1.2s
NEY Neytrino 42.83 338 iP P 23 40 45.5 -0.8
NEY pmax pmax
comp=Z,6.0nm,1.4s
KBZ Khabaz 43.18 339 P P 23 40 49.0 +0.1
comp=Z,16nm,1.3s,baz=117,slow=6.5,SNR=6.5
KBZ PP PP 23 42 31.6 +2.2
comp=Z,17nm,1.1s,baz=130,slow=8.3,SNR=5.1
KBZ Khabaz 43.18 339 iP P 23 40 48.6 -0.3
KBZ pmax pmax
comp=Z,28nm,1.3s
SHA1 Shidzhatmaz 43.27 339 iP P 23 40 50.3 +0.3
KIV Kislovodsk 43.45 339 P P 23 40 52.3 +1.1
KIV IAmb IAmb 23 41 00.5
comp=Z,60nm,1.4s
KIV Kislovodsk 43.45 339 eP P 23 40 52.4 +1.1
KIV pmax pmax
comp=Z,69nm,0.9s
SLVN Son La 43.49 63 P P 23 40 50.1 -1.8
UBPT Khong Chiam 43.49 72 P P 23 40 51.4 -0.5
KMI Kunming 43.75 57 P P 23 40 55.9 +1.8
KMI pP pwP 23 41 01.3 -0.2
KMI sP sP 23 41 04.1 +5.6
KMI PP PcP 23 42 41.6 +0.6
KMI S S 23 47 26.5 +1.8
KMI pmax pmax
comp=Z,12nm,1.0s
KMI pmax pmax
comp=Z,370nm,5.0s
KMI LR LR
comp=Z,2µm,20.4s
KMI LR LR
comp=Z,2µm,20.5s
KMI LR LR
comp=Z,2µm,18.9s
KMI Kunming 43.75 57 P P 23 40 52.6 -1.5
KMI IAmb IAmb 23 41 04.7
comp=Z,88nm,1.9s
KMI Kunming 43.75 57 P P 23 40 52.6 -1.5
KMI pmax pmax
comp=Z,88nm,1.9s
BRTR Keskin Array B 44.15 327 P P 23 40 57.6 +0.6
comp=Z,4.7nm,0.9s,baz=146,slow=8.3,SNR=9.0
BRTR PP PcP 23 42 43.7 +1.7
comp=Z,8.0nm,1.2s,baz=155,slow=9.5,SNR=5.0
BR131 Keskin Array S 44.15 327 P P 23 40 57.0 0.0
BR131 Keskin Array S 44.15 327 P P 23 40 57.0 0.0
BR131 pmax pmax
comp=Z,17nm,1.1s
SOC Sochi 44.27 336 eP P 23 40 54.9 -2.8
SOC e 23 42 39.9
SOC ePPP PPP 23 43 13.9
SOC eS S 23 47 29.3 -2.0
SOC pmax pmax
comp=Z,20nm,1.1s
GOF Gofitskoye 44.29 340⇑eP P 23 41 05.2 +7.3
ELL Elmali 44.30 321 P P 23 40 56.9 -1.4
ELL Elmali 44.30 321 P P 23 40 56.9 -1.4
ELL pmax pmax
comp=Z,255nm,1.4s
ISP Isparta 44.61 323 P P 23 41 00.1 -0.7
ISP Isparta 44.61 323 P P 23 41 00.1 -0.7
ISP pmax pmax
comp=Z,25nm,1.0s
BR231 Keskin MP Arra 44.70 327 P P 23 41 00.4 -1.0
BR231 IAmb IAmb 23 41 09.5
comp=Z,59nm,1.4s
ANTO Ankara 44.70 327 P P 23 41 00.0 -1.4
ANTO IAmb IAmb 23 41 09.5
comp=Z,53nm,1.4s
ANTO Ankara 44.70 327 P P 23 41 00.0 -1.4
ANTO pmax pmax
comp=Z,53nm,1.4s
ABKAR Akbulak array 45.05 357 P P 23 41 03.1 -0.7
ABKAR IAmb IAmb 23 41 12.2
comp=Z,40nm,1.2s
ILGA Ilgaz 45.06 329 P P 23 41 03.3 -1.2
WMQ Urumqi 45.29 25 eP P 23 41 09.6 +3.6
WMQ pP pwP 23 41 12.3 -0.2
WMQ pmax pmax
comp=Z,9.0nm,1.1s
WMQ pmax pmax
comp=Z,220nm,5.5s
WMQ LR LR
comp=Z,2µm,18.7s
WMQ LR LR
comp=Z,2µm,20.7s
WMQ LR LR
comp=Z,4µm,24.9s
WMQ Urumqi 45.29 25 P P 23 41 04.7 -1.3
WMQ IAmb IAmb 23 41 19.1
comp=Z,79nm,1.6s
WMQ Urumqi 45.29 25 P P 23 41 04.7 -1.3
WMQ pmax pmax
comp=Z,79nm,1.6s
MAKZ Makanchi 45.70 18 P P 23 41 06.7 -2.4
MAKZ IAmb IAmb 23 41 17.9
comp=Z,39nm,1.5s
MAKZ Makanchi 45.70 18 P P 23 41 06.7 -2.4
MAKZ pmax pmax
comp=Z,39nm,1.5s
MK31 Makanchi Array 45.79 19 P P 23 41 08.8 -1.0
MK31 Makanchi Array 45.79 19 P P 23 41 08.8 -1.0
MK31 pmax pmax
comp=Z,28nm,1.7s
MKAR Makanchi Array 45.79 19 P P 23 41 09.6 -0.2

comp=Z,2.8nm,0.9s,baz=214,slow=8.4,SNR=8.1
MKAR PcP PcP 23 42 46.9 -0.4
comp=Z,4.9nm,0.9s,baz=240,slow=4.9,SNR=8.2
MDUB Mudurnu 46.00 326 P P 23 41 10.2 -1.6
LEM Lembang 46.12 103 P P 23 41 15.0 +1.9
comp=Z,9.2nm,0.3s,baz=221,slow=5.4,SNR=5.0
ANN Anapa 46.21 335 eP P 23 41 15.1 +2.0
ANN eS S 23 48 05.4 +6.1
ANN pmax pmax
comp=Z,67nm,1.5s
LBTB Lobatse 46.23 229 P P 23 41 16.4 +2.6
comp=Z,8.0nm,0.8s,baz=64,slow=7.5,SNR=6.0
LBTB Lobatse 46.23 229 P P 23 41 13.6 -0.1
LBTB IAmb IAmb 23 41 28.3
comp=Z,59nm,1.4s
LBTB Lobatse 46.23 229 P P 23 41 13.6 -0.1
LBTB pmax pmax
comp=Z,59nm,1.4s
IDI Anoyia 46.73 316 P P 23 41 18.1 +0.6
comp=Z,36nm,0.9s,baz=95,slow=9.4,SNR=5.9
CD2 Chengdu 46.93 51 ⇑iP P 23 41 20.0 +0.9
CD2 S S 23 48 07.8 -2.4
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,460nm,5.5s
CD2 LR LR
comp=Z,3µm,17.5s
CD2 LR LR
comp=Z,3µm,19.2s
CD2 LR LR
comp=Z,4µm,16.9s
GYA Guiyang 47.53 58 ⇑iP P 23 41 24.4 +0.5
GYA PP PP 23 43 14.3 -1.2
GYA S S 23 48 21.3 +2.3
GYA SS SS 23 51 44.5 -2.6
GYA pmax pmax
comp=Z,20nm,1.4s
GYA pmax pmax
comp=Z,420nm,5.5s
GYA LR LR
comp=Z,690nm,13.7s
GYA LR LR
comp=Z,1µm,15.0s
GYA LR LR
comp=Z,2µm,15.1s
KURBB Kurchatov Arra 48.23 13 P P 23 41 28.2 -0.6
comp=Z,41nm,0.7s,baz=214,slow=7.7,SNR=9.4
KURBB PcP PcP 23 42 55.8 0.0
comp=Z,1.7nm,0.9s,baz=214,slow=3.4,SNR=4.8
KURK Kurchatov 48.34 13 P P 23 41 29.2 -0.5
KURK Kurchatov 48.34 13 PcP 23 42 55.8 -0.4
KURK Kurchatov 48.34 13 P P 23 41 29.2 -0.5
KURK 23 42 55.8
KURK pmax pmax
comp=Z,27nm,1.5s
BOSA Boshof 48.52 226 P P 23 41 33.9 +2.3
comp=Z,5.1nm,0.9s,baz=66,slow=9.3,SNR=4.2
BOSA Boshof 48.52 226 P P 23 41 32.8 +1.2
BOSA Boshof 48.52 226 P P 23 41 32.8 +1.2
BOSA pmax pmax
comp=Z,14nm,1.0s
GTA Gaotai 48.60 39 ⇑P P 23 41 32.8 +0.7
GTA pP pwP 23 41 37.3 -1.3
GTA sP sP 23 41 39.8 +3.4
GTA S S 23 48 33.8 -0.1
GTA sS sS 23 48 42.1 +2.9
GTA SS SS 23 51 56.0 -8.2
GTA pmax pmax
comp=Z,300nm,5.6s
GTA LR LR
comp=Z,3µm,17.5s
GTA LR LR
comp=Z,6µm,19.0s
GTA LR LR
comp=Z,9µm,19.0s
BVAR Borovoye Array 49.17 6 P P 23 41 35.3 -0.7
comp=Z,0.9nm,0.5s,baz=174,slow=5.5,SNR=4.1
BRVK Borovoye 49.20 6 P P 23 41 34.7 -1.5
BRVK IAmb IAmb 23 41 45.4
comp=Z,26nm,1.2s
BRVK Borovoye 49.20 6 ceP P 23 41 36.5 +0.3
BRVK pmax pmax
comp=Z,18nm,1.7s
SBUM Sibu 49.45 90 P P 23 41 38.5 -0.3
ITM Ithomi 49.76 317 P P 23 41 39.2 -1.6
ITM IAmb IAmb 23 41 47.9
comp=Z,46nm,1.2s
TSUM Tsumeb 50.07 241 P P 23 41 43.1 -0.5
VRH Novokhopyorsk 50.12 343 eP P 23 41 43.0 -0.3
VRH pmax pmax
comp=Z,60nm,1.5s
AGG Agios Georgios 50.47 319 IAmb IAmb 23 41 52.7
comp=Z,33nm,1.2s
VORD Divnogorie 50.67 341 eP P 23 41 46.7 -0.7
VORD pmax pmax
comp=Z,50nm,1.4s
CFR Carcaliu 50.87 329 ⇑P P 23 41 48.5 -0.5
CFR Carcaliu 50.87 329 ⇑P P 23 41 48.5 -0.5
VSR Storozhevoye 50.92 341 eP P 23 41 48.5 -0.8
VSR pmax pmax
comp=Z,70nm,1.4s
LIT Litokhoron 50.97 320 IAmb IAmb 23 41 57.3
comp=Z,56nm,1.6s
ENH Enshi 51.20 54 IAmb IAmb 23 42 00.9
comp=Z,86nm,1.6s
COPA Copaceanca 51.75 326 ⇓P P 23 41 56.2 +0.5
KIS Kishinev 51.79 331 eP P 23 41 58.0 +2.1
KIS eS S 23 49 28.0 +10
KIS LRM MLR 00 05 44.0
comp=Z,700nm,20.0s
KIS Kishinev 51.79 331 eP P 23 41 58.0 +2.1
KIS i 23 42 04.0
KIS eS S 23 49 28.0 +10
KIS MLR MLR
comp=Z,700nm,20.0s
GHRR 51.84 329 ⇑P P 23 41 54.7 -1.6
VTS Vitosha 51.96 323 ⇑P P 23 41 58.3 +0.9
VTS Vitosha 51.96 323 P P 23 41 56.4 -1.1
VTS IAmb IAmb 23 42 05.2
comp=Z,46nm,1.3s
VTS Vitosha 51.96 323 ⇑P P 23 41 58.3 +0.9
VRI Vrincioaia 52.06 329 ⇑P P 23 41 58.7 +0.7
VRI Vrincioaia 52.06 329 ⇑P P 23 41 58.7 +0.7
PLOR Plostina 52.09 329 ⇑P P 23 41 59.2 +1.0
PLOR Plostina 52.09 329 ⇑P P 23 41 59.2 +1.0
HUMR Humele 52.13 326 ⇑P P 23 41 59.7 +1.2
LPSR Galich'ya Gora 52.19 342 eP P 23 41 58.7 -0.1
LPSR pmax pmax
comp=Z,40nm,1.4s
XAN Xi'an 52.21 49 P P 23 41 59.8 +0.5
XAN pP pwP 23 42 11.6 +5.7
XAN S S 23 49 22.0 -2.0
XAN ScS ScS 23 51 42.4 -7.2
XAN SS SS 23 52 59.1 -2.6
XAN pmax pmax
comp=Z,18nm,1.4s
XAN pmax pmax
comp=Z,370nm,5.4s
XAN LR LR
comp=Z,1µm,21.7s
XAN LR LR
comp=Z,1µm,19.5s
XAN LR LR
comp=Z,2µm,23.6s
XAN Xi'an 52.21 49 P P 23 41 59.1 -0.2
XAN IAmb IAmb 23 42 09.4
comp=Z,53nm,1.3s
XAN Xi'an 52.21 49 P P 23 41 59.1 -0.2
XAN pmax pmax
comp=Z,53nm,1.3s
ARU Arti 52.28 357 P P 23 41 58.7 -0.7
comp=Z,2.2nm,0.5s,baz=172,slow=4.4,SNR=12
ARU Arti 52.28 357 P P 23 41 58.3 -1.1
ARU IAmb IAmb 23 42 06.5
comp=Z,56nm,1.3s
ARU Arti 52.28 357 c iP P 23 41 59.4 0.0
ARU 23 43 07.2
ARU 23 43 56.2
ARU S S 23 49 26.9 +2.7
ARU 23 51 47.2
ARU SS SS 23 52 56.6 -5.3
ARU pmax pmax
comp=Z,24nm,1.2s
TESR Tescani 52.54 329 ⇑P P 23 42 01.3 -0.2

SVE Sverdlovsk 52.60 359 eP P 23 42 02.4 +0.6
SVE eS S 23 49 30.9 +2.4
SVE pmax pmax
comp=Z,51nm,1.6s
SVE MLR MLR
comp=Z,3µm,18.0s
VOIR 52.67 327 ⇓P P 23 42 02.9 +0.3
VOIR 52.67 327 ⇓P P 23 42 02.9 +0.3
SORM Soroca 52.82 332 ⇑P P 23 42 02.6 -0.9
SORM Soroca 52.82 332 ⇑P P 23 42 02.6 -0.9
DOPR Dopca 52.83 328 ⇑P P 23 42 04.2 +0.5
ARR Arges 52.85 327 ⇓P P 23 42 04.5 +0.6
ZAA0 Zalesovo Array 52.87 16 P P 23 42 02.5 -1.3
ZAA0 PcP PcP 23 43 12.9 0.0
ZALV Zalesovo Beam 52.87 16 P P 23 42 03.1 -0.7
comp=Z,4.7nm,0.9s,baz=223,slow=7.5,SNR=9.1
PRAR RASCA 53.32 330 ⇑P P 23 42 07.8 +0.5
LOT Lotru 53.37 327 ⇓P P 23 42 07.5 -0.3
GZR Gura Zlata 53.89 326 ⇓P P 23 42 13.0 +1.4
GZR Gura Zlata 53.89 326 ⇓P P 23 42 13.0 +1.4
BURAR Bucovina Array 54.00 329 ⇑P P 23 42 10.7 -1.7
BURAR Bucovina Array 54.00 329 ⇑P P 23 42 10.7 -1.7
BUR08 Bucovina Ar. S 54.03 329 IAmb IAmb 23 42 33.7
comp=Z,33nm,1.6s
ARCR ARCALIA 54.10 328 ⇑P P 23 42 12.7 -0.3
MDVR Moldovita 54.13 325 ⇑P P 23 42 13.8 +0.5
AKASG Malin Array Be 54.28 334 P P 23 42 13.4 -0.8
comp=Z,3.6nm,0.8s,baz=127,slow=6.3,SNR=10.0
AKASG PcP PcP 23 43 17.5 -0.8
comp=Z,1.7nm,0.8s,baz=108,slow=2.7,SNR=6.0
BZS Buzias 54.68 326 ⇑P P 23 42 17.8 +0.6
BZS Buzias 54.68 326 ⇑P P 23 42 17.8 +0.6
DRGR 54.79 327 ⇑P P 23 42 18.2 +0.2
DRGR 54.79 327 ⇑P P 23 42 18.3 +0.2
SIRR Siria 55.04 326 ⇓P P 23 42 20.7 +0.9
OBN Obninsk 55.07 342 P P 23 42 18.7 -1.1
OBN Obninsk 55.07 342 eP P 23 42 18.6 -1.2
OBN e 23 43 25.9
OBN e 23 44 20.3
OBN pmax pmax
comp=Z,15nm,1.3s
WHN Wuhan 55.25 55 ⇓P P 23 42 22.6 +1.0
MOS Moscow 55.28 343 eP P 23 42 21.2 -0.2
MOS e 23 42 26.8
MOS pmax pmax
comp=Z,80nm,1.4s
KIRV Kirov 55.32 352 P P 23 42 21.6 +0.1
comp=Z,20nm,0.8s,baz=204,slow=3.5,SNR=5.5
ACER Acerenza 55.60 318 P P 23 42 22.9 -1.2
TRPA Tarpa 55.71 328 ⇓P P 23 42 24.2 -0.4
UZH Uzhgorod 56.16 329 eP P 23 42 24.0 -3.8
UZH e 23 42 31.6
KOLS Kolonicke sedl 56.35 329 eP P 23 42 30.9 +1.7
KOLS pmax pmax
comp=Z,33nm,1.3s
KOLS Kolonicke sedl 56.35 329 eP P 23 42 30.9 +1.7
KWP Kalwaria Pacla 56.58 330 eP P 23 42 32.1 +1.3
KWP Kalwaria Pacla 56.58 330 P P 23 42 29.8 -1.0
KWP Kalwaria Pacla 56.58 330 eP P 23 42 32.1 +1.3
CRVS Cervenica-Dubn 56.75 329 eP P 23 42 33.7 +1.6
CRVS pmax pmax
comp=Z,63nm,1.5s
CRVS Cervenica-Dubn 56.75 329 eP P 23 42 33.7 +1.6
BLY Banja Luka 56.78 323 IAmb IAmb 23 42 40.2
comp=Z,28nm,1.3s
PSZ Piszkesteto 56.99 327 P P 23 42 33.6 -0.3
PSZ Piszkesteto 56.99 327 P P 23 42 33.6 -0.3
PSZ pmax pmax
comp=Z,24nm,1.4s
MOY Mondy 57.09 27 eP P 23 42 35.0 +0.4
MOY pmax pmax
comp=Z,41nm,2.0s
ZAK Zakamensk 57.34 30 eP P 23 42 36.5 +0.2
ZAK pmax pmax
comp=Z,7.0nm,1.3s
SONM Songino Array 57.42 34 P P 23 42 37.4 +0.5
comp=Z,3.7nm,1.0s,baz=223,slow=7.9,SNR=7.6
NIE Niedzica 57.67 329 eP P 23 42 39.5 +0.9
NIE Niedzica 57.67 329 eP P 23 42 39.5 +0.9
ULN Ulaanbaatar 57.80 34 P P 23 42 39.6 -0.1
ULN Ulaanbaatar 57.80 34 P P 23 42 39.6 -0.1
ULN pmax pmax
comp=Z,14nm,1.3s
VYHS Vyhne 57.90 327 eP P 23 42 40.4 +0.2
VYHS pmax pmax
comp=Z,40nm,1.5s
VYHS Vyhne 57.90 327 eP P 23 42 40.4 +0.2
LANS Liptovska Anna 57.95 328 eP P 23 42 40.7 +0.1
LANS pmax pmax
comp=Z,15nm,1.3s
LANS Liptovska Anna 57.95 328 eP P 23 42 40.7 +0.1
TAM Tamanrasset 58.25 294 P P 23 42 42.2 -1.1
TAM Tamanrasset 58.25 294 P P 23 42 42.2 -1.1
TAM pmax pmax
comp=Z,20nm,1.4s
KEST Kesra 58.29 310 P P 23 42 42.5 -0.7
comp=Z,6.6nm,1.2s,baz=150,slow=8.1,SNR=2.4
KEST Kesra 58.29 310 P P 23 42 42.1 -1.2
KEST IAmb IAmb 23 42 49.4
comp=Z,84nm,2.0s
TLY Talaya 58.34 29 P P 23 42 43.9 +0.7
comp=Z,0.7nm,0.4s,baz=235,slow=12,SNR=4.7
TLY Talaya 58.34 29 IAmb IAmb 23 42 52.9
comp=Z,33nm,1.5s
TLY Talaya 58.34 29 eP P 23 42 44.6 +1.3
TLY eS S 23 50 56.7 +11
TLY pmax pmax
comp=Z,52nm,1.4s
TLY MLR MLR
comp=Z,8µm,14.0s
OJC Ojcow 58.42 329 eP P 23 42 42.6 -1.2
OJC Ojcow 58.42 329 IAmb IAmb 23 42 49.6
comp=Z,35nm,1.5s
OJC Ojcow 58.42 329 eP P 23 42 42.6 -1.2
NRCA Norcia 58.42 319 IAmb IAmb 23 42 51.7
comp=Z,41nm,1.5s
MODS Modra-Piesok 58.69 326 eP P 23 42 44.4 -1.3
MODS pmax pmax
comp=Z,36nm,1.4s
MODS Modra-Piesok 58.69 326 eP P 23 42 44.4 -1.3
JAVC Velka Javorina 58.75 327 eP P 23 42 52.1 +5.9
PRGR Permogore 58.82 351 eP P 23 42 45.3 -1.0
PRGR pmax pmax
comp=Z,65nm,1.2s
BEL Belsk 58.92 331 eP P 23 42 48.4 +1.2
BEL Belsk 58.92 331 eP P 23 42 48.4 +1.2
IRK Irkutsk 59.00 28 eP P 23 42 49.3 +1.5
IRK e 23 43 39.3
IRK pmax pmax
comp=Z,55nm,3.3s
SOKA Soboth 59.07 324 iP P 23 42 47.6 -0.9
comp=Z,15nm,1.4s,SNR=6.1
ARSA Arzberg 59.08 324 ipP P 23 42 50.1 +1.6
comp=Z,16nm,1.2s
SUW Suwalki 59.24 334 eP P 23 42 49.3 -0.1
SUW Suwalki 59.24 334 P P 23 42 48.7 -0.7
SUW Suwalki 59.24 334 eP P 23 42 49.3 -0.1
CONA Conrad Observa 59.24 325 iP P 23 42 49.1 -0.6
comp=Z,21nm,1.4s
OBKA Obir 59.28 323 ipP P 23 42 50.7 +0.8
comp=Z,29nm,1.4s
KLMR Klimovskoe 59.28 347 eP P 23 42 47.9 -1.6
KLMR pmax pmax
comp=Z,249nm,1.4s
KLMR Klimovskoe 59.28 347 eP P 23 42 47.9 -1.6
KLMR AMP 23 42 56.9
comp=Z,249nm,1.4s
MORC Moravsky Berou 59.34 328 eP P 23 42 49.9 -0.3
MORC Moravsky Berou 59.34 328 ⇓P P 23 42 49.1 -1.1
MORC Moravsky Berou 59.34 328 IAmb IAmb 23 42 57.2
comp=Z,27nm,1.3s
MORC Moravsky Berou 59.34 328 ⇓P P 23 42 49.1 -1.1
NJ2 Nanjing 59.37 55 eP P 23 42 51.6 +0.9
NJ2 S S 23 51 03.9 +4.4
NJ2 pmax pmax
comp=Z,28nm,1.3s
NJ2 pmax pmax
comp=Z,400nm,5.0s
NJ2 LR LR
comp=Z,1µm,17.1s
NJ2 LR LR
comp=Z,1µm,20.8s
NJ2 LR LR
comp=Z,1µm,22.7s

KRUC Moravsky 59.56 327 eP P 23 42 51.0 -0.7
VRAC Vranov 59.59 327 eP P 23 42 51.6 -0.3
VRAC Vranov 59.59 327 ⇑P P 23 42 50.9 -1.0
VRAC Vranov 59.59 327 ⇑P P 23 42 50.9 -1.0
MYKA Terra Mystica 59.88 323 ipP P 23 42 55.7 +1.6
comp=Z,33nm,1.6s,SNR=7.5
CASP Castiglione de 59.89 318 IAmb IAmb 23 43 01.1
comp=Z,39nm,1.3s
BJT Baijiatuau 59.89 45 IAmb IAmb 23 42 56.1
comp=Z,15nm,0.8s
KRLC Kraliky 59.91 328 eP P 23 42 54.0 -0.2
KRLC ex x 23 42 58.8
KRLC Kraliky 59.91 328 eP P 23 42 54.0 -0.2
KRLC e 23 42 58.8
MOA Molln 60.12 324 iP P 23 42 55.2 -0.5
comp=Z,21nm,1.1s,SNR=9.0
TREC Trest 60.19 326 eP P 23 42 55.7 -0.3
TREC epP pwP 23 43 01.8 -1.2
TREC Trest 60.19 326 eP P 23 42 55.7 -0.3
TREC e 23 43 01.8
STAL STALIGIAL 60.27 322 P P 23 42 55.6 -1.0
STAL IAmb IAmb 23 43 04.0
comp=Z,30nm,1.3s
KBA Koelnbreinsper 60.28 323 iP P 23 42 57.2 +0.3
comp=Z,12nm,1.3s
DPC Dobruska-Polom 60.31 328 eP P 23 42 56.7 -0.2
DPC ex x 23 43 02.4
DPC Dobruska-Polom 60.31 328 eP P 23 42 56.7 -0.2
DPC e 23 43 02.4
OSTC Ostas 60.48 328 eP P 23 42 58.1 +0.1
OSTC ex x 23 43 03.6
OSTC ex x 23 43 11.9
TEOL Teolo 60.49 321 P P 23 42 57.4 -0.8
CHVC Chvalec 60.58 328 eP P 23 42 57.9 -0.9
CHVC ex x 23 43 03.3
KSP Ksiaz 60.60 328 eP P 23 42 59.3 +0.5
KSP Ksiaz 60.60 328 eP P 23 42 59.3 +0.5
ABTA Abfaltersbach 60.62 323 ipP P 23 42 59.8 +0.7
comp=Z,34nm,1.5s
CTI Castel Tesino 60.82 322 P P 23 42 59.6 -0.9
CTI IAmb IAmb 23 43 07.5
comp=Z,23nm,1.3s
CTI Castel Tesino 60.82 322 P P 23 42 59.6 -0.9
CTI pmax pmax
comp=Z,23nm,1.3s
MORW Morawa 60.84 126 P P 23 43 00.8 -0.1
MORW IAmb IAmb 23 43 04.7
comp=Z,34nm,1.1s
TORD Torodi Ar. Bea 60.87 283 P P 23 43 01.7 +0.4
comp=Z,10nm,1.1s,baz=76,slow=5.8,SNR=9.9
GOPC GO Pecny, Ondr 60.90 327 eP P 23 43 00.4 -0.5
GOPC epP sP 23 43 04.3 -1.0
GOPC GO Pecny, Ondr 60.90 327 eP P 23 43 00.4 -0.5
GOPC e 23 43 04.3
KLNR Kaliningrad 60.95 333 iP P 23 43 01.2 +0.2
KLNR pmax pmax
comp=Z,95nm,1.3s
GERES GERESS Array B 60.95 325 P P 23 42 60.0 -1.4
comp=Z,1.5nm,1.0s,baz=222,slow=1.8,SNR=5.4
GERES GERESS Array B 60.95 325 P P 23 43 00.0 -1.4
VSU Vasula 61.01 339 iP P 23 43 01.7 +0.3
VSU pmax pmax
comp=Z,70nm,1.3s
PRU Pruhonice 61.08 327 eP P 23 43 01.3 -0.8
PRU ex x 23 43 07.4
PRU Pruhonice 61.08 327 eP P 23 43 01.3 -0.8
PRU e 23 43 07.4
PRMA PARMA 61.09 320 P P 23 43 03.2 +0.9
KHC Kasperske Hory 61.17 325 eP P 23 43 00.6 -2.2
KHC epP sP 23 43 07.3 +0.2
KHC Kasperske Hory 61.17 325 P P 23 43 01.3 -1.5
KHC Kasperske Hory 61.17 325 eP P 23 43 00.6 -2.2
KHC e 23 43 07.3
WTTA Wattenberg 61.39 323 ipP P 23 43 05.1 +0.6
comp=Z,27nm,1.1s
PSAA1 Pilbara Seismi 61.45 117 P P 23 43 06.0 +0.9
PSAA1 IAmb IAmb 23 43 09.1
comp=Z,47nm,1.5s
PSA00 Pilbara Seismi 61.45 117 P P 23 43 06.0 +0.9
PSA00 IAmb IAmb 23 43 16.6
comp=Z,36nm,1.3s
WATA Walderalm 61.46 323 ipP P 23 43 05.4 +0.5
comp=Z,34nm,1.3s
GKP Gorka Klasztor 61.52 331 eP P 23 43 05.7 +0.8
GKP Gorka Klasztor 61.52 331 eP P 23 43 05.7 +0.8
SQTA Sankt Quirin 61.63 323 iP P 23 43 04.7 -1.3
comp=Z,28nm,1.2s
MOTA Moosalm 61.75 323 iP P 23 43 05.9 -0.9
comp=Z,26nm,1.2s
FETA Feichten 61.83 322 iP P 23 43 07.4 -0.1
comp=Z,18nm,1.2s
FUORN Ofenpass-Fuorn 61.93 322 P P 23 43 07.0 -1.3
FUORN IAmb IAmb 23 43 15.1
comp=Z,44nm,1.4s
RETA Reutte 62.02 323 ipP P 23 43 09.6 +1.0
comp=Z,12nm,1.3s
NKC Novy Kostel 62.36 326 eP P 23 43 10.7 0.0
NKC epP pwP 23 43 16.8 -0.9
NKC Novy Kostel 62.36 326 eP P 23 43 10.7 0.0
NKC e 23 43 16.8
DAVA Damuels 62.46 322 ipP P 23 43 12.4 +0.8
comp=Z,48nm,1.7s
TMCR Tamitsa 62.55 348 eP P 23 43 11.3 -0.4
TMCR pmax pmax
comp=Z,119nm,1.2s
CLL Collm 62.60 327 ⇑iP P 23 43 12.3 0.0
comp=Z,75nm,1.9s
CLL i 23 43 18.5
comp=Z,39nm,1.4s
CLL Collm 62.60 327 IAmb IAmb 23 43 20.6
comp=Z,37nm,1.4s
CLL Collm 62.60 327 ⇑iP P 23 43 13.1 +0.8
CLL i 23 43 18.5
CLL pmax pmax
comp=Z,75nm,1.9s
GRF Grafenberg Arr 62.78 325 eP P 23 43 17.9 +4.4
comp=Z,15nm,1.3s,baz=119,slow=8.0
SOEI Soe 62.85 103 P P 23 43 16.6 +1.8
NWAO Narrogin (SRO) 63.35 130 P P 23 43 19.3 +1.7
comp=Z,12nm,0.7s,baz=260,slow=7.7,SNR=5.2
NWAO Narrogin (SRO) 63.35 130 P P 23 43 18.4 +0.7
NWAO Narrogin (SRO) 63.35 130 P P 23 43 18.4 +0.7
NWAO pmax pmax
comp=Z,55nm,1.3s
FINES FINESS Array B 63.45 341 P P 23 43 16.8 -0.9
comp=Z,5.3nm,1.0s,baz=122,slow=9.8,SNR=5.6
BFO Black Forest 63.86 323 P P 23 43 18.9 -1.9
BFO Black Forest 63.86 323 P P 23 43 18.9 -1.9
BFO pmax pmax
comp=Z,60nm,1.2s
ECH Echery 64.52 322 IAmb IAmb 23 43 32.1
comp=Z,28nm,1.2s
SSB Saint Sauveur 65.06 319 IAmb IAmb 23 43 35.6
comp=Z,38nm,1.2s
WLF Walferdange 65.72 323 IAmb IAmb 23 43 40.6
comp=Z,35nm,1.2s
SNY Shenyang 65.78 46 ⇑P P 23 43 32.6 -0.8
SNY pmax pmax
comp=Z,9.0nm,0.8s
FITZ Fitzroy Crossi 65.80 112 P P 23 43 34.4 +0.5
FITZ IAmb IAmb 23 43 37.1
comp=Z,26nm,1.4s
MEM Membach 66.19 324 ⇑P P 23 43 35.6 -0.2
APA Apatity 66.46 348 ⇑iP P 23 43 36.1 -1.1
APA pmax pmax
comp=Z,10.0nm,1.0s
APA MLR MLR
comp=Z,2µm,21.0s
BCLA Clavier 66.53 324 P P 23 43 38.6 +0.6
BCLA sP pwP 23 43 44.4 -0.6
BCLA PcP PcP 23 44 09.2 +1.8
BMRD Maredsous 66.80 324 ⇑P P 23 43 39.3 -0.4
comp=Z,30nm,2.9s
BOD Bodaibo 66.81 27 eP P 23 43 34.9 -4.7
DOU Dourbes 66.82 323 P P 23 43 40.3 +0.4
DOU pP pP 23 43 43.0 -0.1
DOU sP pwP 23 43 45.6 -1.3
SNF Seneffe 67.16 324 PcP PcP 23 44 13.1 +3.1
KIC Kosan Boka 67.17 275 ePKIKP P 23 43 45.4 +2.6
comp=Z,42nm,1.2s
NRIK Noril'sk 67.19 9 P P 23 43 41.4 -0.5
comp=Z,4.8nm,1.0s,baz=218,slow=10,SNR=5.5
DBIC Dimbokro 67.28 275 P P 23 43 44.5 +1.1
comp=Z,6.0nm,0.9s,baz=53,slow=9.9,SNR=5.0

DBIC Dimbokro 67.28 275 P P 23 43 42.6 -0.8
DBIC IAmb IAmb 23 43 55.7
comp=Z,58nm,1.9s
DBIC Dimbokro 67.28 275 P P 23 43 42.7 -0.8
DBIC pmax pmax
comp=Z,58nm,1.9s
TIC Toumodi 67.44 275 ePKIKP P 23 43 45.6 +1.1
LIC Lamto 67.46 275 ePKIKP P 23 43 45.7 +1.1
comp=Z,17nm,0.8s
KSRS Korea Array 67.92 51 P P 23 43 46.7 -0.4
comp=Z,1.2nm,0.7s,baz=274,slow=6.9,SNR=2.5
KONO Kongsberg 68.58 334 ceP P 23 43 52.2 +1.4
KONO pmax pmax
comp=Z,77nm,1.3s
NB2 NORSAR Subarra 68.64 336 P P 23 43 49.9 -1.3
comp=Z,55nm,1.2s,baz=120,slow=6.2
NB2 NORSAR Subarra 68.64 336 P P 23 43 49.9 -1.3
baz=120,slow=6.2
NOA NORSAR Array B 68.64 336 P P 23 43 49.7 -1.5
comp=Z,14nm,1.1s,baz=115,slow=7.0,SNR=9.8
NC204 NORSAR Array S 68.95 336 P P 23 43 52.4 -0.8
ESBB Sonseca Array 69.51 311 P P 23 43 57.2 +0.1
ESBB IAmb IAmb 23 44 05.1
comp=Z,40nm,1.2s
ESDC Sonseca Array 69.51 311 P P 23 43 56.5 -0.6
comp=Z,11nm,1.1s,baz=90,slow=5.1,SNR=12
ARCES ARCESS Array B 69.76 347 P P 23 43 56.7 -1.3
comp=Z,14nm,0.8s,baz=152,slow=4.6,SNR=14
PAB San Pablo 69.78 311 P P 23 43 59.5 +0.7
PAB IAmb IAmb 23 44 06.3
comp=Z,25nm,1.1s
PAB San Pablo 69.78 311 P P 23 43 59.5 +0.7
PAB pmax pmax
comp=Z,25nm,1.2s
FORT Forrest 71.22 124 P P 23 44 08.7 +1.1
FORT IAmb IAmb 23 44 17.8
comp=Z,15nm,0.9s
ZEA Zeya 71.83 34 eP P 23 44 11.1 +0.3
ZEA pmax pmax
comp=Z,63nm,2.0s
ZEA pmax pmax
comp=Z,400nm,10.0s
ZEA MLR MLR
comp=N,3μm,20.0s
ZEA MLR MLR
comp=E,6μm,20.0s
ZEA MLR MLR
comp=Z,7μm,20.0s
KLR Kul'dur 73.29 40 iP P 23 44 20.0 +0.4
KLR pmax pmax
comp=Z,8.0nm,1.1s
WRA Warramunga Arr 74.23 112 P P 23 44 26.0 +0.3
comp=Z,12nm,1.0s,baz=291,slow=5.1,SNR=12
WRAB Tennant Creek 74.24 112 P P 23 44 25.3 -0.5
WRAB Tennant Creek 74.24 112 iP P 23 44 25.9 +0.1
WRAB pmax pmax
comp=Z,26nm,1.2s
WB2 Warramunga Arr 74.25 112 P P 23 44 24.6 -1.3
WB0 Warramunga Arr 74.25 112 P P 23 44 25.8 -0.1
WB0 IAmb IAmb 23 44 29.3
comp=Z,37nm,1.2s
WR0 Warramunga Arr 74.42 112 IAmb IAmb 23 44 29.6
comp=Z,49nm,1.4s
ASAR Alice Springs 74.54 116 P P 23 44 27.9 +0.4
comp=Z,8.8nm,1.1s,baz=283,slow=5.4,SNR=14
ASAR Alice Springs 74.54 116 P P 23 44 28.0 +0.4
AS31 Alice Springs 74.54 116 P P 23 44 28.4 +0.9
SYO Syowa Base 74.68 188 ⇑ePcP PcP 23 44 42.6 +1.2
YAK Yakutsk 75.72 27 eP P 23 44 30.5 -3.0
YAK pmax pmax
comp=Z,16nm,0.9s
YAK pmax pmax
comp=N,2.0nm,1.0s
YAK pmax pmax
comp=E,10.0nm,1.0s
BBOO Buckleboo 78.32 125 P P 23 44 48.3 -0.5
BBOO IAmb IAmb 23 45 01.0
comp=Z,46nm,1.6s
YSS Yuzh-Sakhalins 80.22 43 iP P 23 44 58.3 -0.5
YSS pmax pmax
comp=Z,21nm,1.1s
STKA Stephens Creek 82.74 123 P P 23 45 13.1 +0.6
comp=Z,3.7nm,1.0s,baz=305,slow=11,SNR=5.5
STKA Stephens Creek 82.74 123 P P 23 45 11.8 -0.7
STKA Stephens Creek 82.74 123 P P 23 45 11.8 -0.7
STKA pmax pmax
comp=Z,13nm,2.0s
MA2 Magadan 85.50 31 ceP P 23 45 24.9 -1.1
MA2 pmax pmax
comp=Z,19nm,1.7s
SEY Seymchan 86.23 27 iP P 23 45 29.1 -0.4
CAN Canberra 89.32 125 P P 23 45 45.5 +0.6
CAN Canberra 89.32 125 P P 23 45 45.6 +0.6
CAN pmax pmax
comp=Z,52nm,1.3s
SUMG Summit 89.45 343 P P 23 45 43.5 -1.8
SUMG IAmb IAmb 23 45 53.2
comp=Z,19nm,1.2s
SUMG Summit 89.45 343 P P 23 45 43.5 -1.8
SUMG pmax pmax
comp=Z,19nm,1.2s
BILL Bilibino 91.27 21 P P 23 45 53.0 -0.3
BILL IAmb IAmb 23 46 03.7
comp=Z,24nm,1.4s
BILL Bilibino 91.27 21 eP P 23 45 53.6 +0.3
BILL ePPP PPP 23 51 28.8
BILL pmax pmax
comp=Z,18nm,1.7s
YKA Yellowknife Ar 113.56 359 PP PP 23 52 18.2 +1.2
comp=Z,1.8nm,1.2s,baz=1.5,slow=7.0,SNR=5.5
ULM Lac du Bonnet 122.80 344 PKP PKPdf 23 51 43.0 -1.3
comp=Z,1.4nm,0.7s,baz=41,slow=7.6,SNR=3.8
ULM PP PP 23 53 21.1 -0.2
comp=Z,1.2nm,0.7s,baz=341,slow=6.6,SNR=4.4
EYMN Ely 123.45 339 PKPdf 23 51 41.1 -4.6
PLCA Paso Flores 124.45 222 PKP PKPdf 23 51 47.6 -0.3
comp=Z,6.6nm,1.2s,baz=352,slow=22,SNR=4.8
PLCA Paso Flores 124.45 222 PKPdf 23 51 46.4 -1.5
PLCA Paso Flores 124.45 222 PKIKP PKPdf 23 51 46.4 -1.5
AGMN Agassiz Nation 124.55 343 PKPdf 23 51 47.4 -0.3
CFA Coronel Fontan 126.50 233 PKP PKiKP 23 51 53.1 +0.7
comp=Z,7.7nm,0.9s,baz=349,slow=0.2,SNR=12
LPAZ La Paz 130.26 252 PKP PKPdf 23 52 00.5 +0.2
comp=Z,0.7nm,0.4s,baz=54,slow=8.3,SNR=3.8
LPAZ La Paz 130.26 252 PKiKP 23 52 01.4 +0.3
LPAZ La Paz 130.26 252 PKIKP PKiKP 23 52 01.4 +0.3
RSSD Black Hills 130.54 347 PKiKP 23 52 01.2 +0.7
RSSD Black Hills 130.54 347 PKIKP PKiKP 23 52 01.2 +0.7
GO01 Chusmiza 130.66 248 PKiKP 23 52 01.8 +0.1
PB11 IPOC Station P 131.07 247 PKiKP 23 52 02.1 0.0
PDAR Pinedale Array 132.83 352 PKP PKPdf 23 52 02.4 -1.6
comp=Z,0.9nm,0.8s,baz=48,slow=2.2,SNR=7.1
HUMO Hull Mountain 133.23 6 PKiKP 23 52 05.3 -0.4
ELK Elko 135.33 358 PKP PKPdf 23 52 09.4 +0.6
comp=Z,0.5nm,0.4s,baz=59,slow=17,SNR=4.4
BEKR Beckworth 136.16 3 PKPdf 23 52 08.2 -2.1
NVAR Mina Array Bea 137.67 1 PKP PKPdf 23 52 13.8 +0.7
comp=Z,2.7nm,0.9s,baz=239,slow=0.7,SNR=8.8
NV11 Mina Array Sit 137.67 1 PKiKP 23 52 14.5 -0.5
MNTX Cornudas Mount 142.64 343 PKPdf 23 52 20.2 -1.9
TX31 Lajitas Ar. Si 144.28 339 PKPdf 23 52 24.6 -0.5
TX32 Lajitas Array 144.28 339 PKPab 23 52 22.9 -0.1
TXAR Lajitas Array 144.28 339 PKP PKPbc 23 52 23.5 +0.2
comp=Z,1.9nm,0.8s,baz=52,slow=2.9,SNR=11
TLIG Tlapa 151.63 320 PKPbc 23 52 43.5 -0.2

NNC 24 23:36:39.2±0.1, 42.73N×69.98E, h0km, mpv2.5, Error ellipse: s-maj=0.5km s-min=0.4km az=45.0, Suspected Mining explosion.
KRNET 24 23:36:39.3±0.1, 42.70N×69.97E, mb2.9
ISC 24 23:36:38.2±1.8, 42.74N±0.03×70.07E±0.08, h0km, n19, σ0.91/38, 26C-12D, Central Kazakhstan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

KK07 Karatay Array 0.47 42 ⇑P Pb 23 36 49.6 +0.1
KK07 ⇓S Sb 23 36 57.0 0.0
KK08 Karatay Array 0.48 40 ⇑P Pb 23 36 49.6 +0.1
KK08 ⇓S Sb 23 36 57.0 -0.1
KK03 Karatay Array 0.48 41 ⇓P Pb 23 36 49.8 +0.1
KK03 ⇓S Sb 23 36 57.2 -0.1
KK01 Karatay Array 0.49 41 ⇑P Pb 23 36 49.8 +0.1
KK01 ⇑S Sb 23 36 57.4 0.0
KK02 Karatay Array 0.49 42 ⇑P Pb 23 36 49.9 +0.2
KK02 ⇑S Sb 23 36 57.4 0.0
KK31 Karatay Array 0.49 42 ⇑P Pb 23 36 49.9 +0.2
5.1nm,0.3s,baz=226,slow=17,SNR=282
KK31 ⇑S Sb 23 36 57.5 0.0
3.6nm,0.2s,baz=226,slow=33,SNR=30
KK06 Karatay Array 0.49 43 ⇑P Pb 23 36 49.8 +0.1
KK06 ⇓S Sb 23 36 57.5 0.0
KK04 Karatay Array 0.49 41 ⇑P Pb 23 36 49.9 +0.1
KK04 ⇓S Sb 23 36 57.5 0.0
KK09 Karatay Array 0.50 39 ⇑P Pb 23 36 49.9 0.0
KK09 ⇓S Sb 23 36 57.6 -0.1
KK05 Karatay Array 0.51 41 ⇑P Pb 23 36 50.1 +0.1
KK05 ⇓S Sb 23 36 57.8 -0.1
ARK Arkit 1.69 123 ⇑iP Pg 23 37 11.9 +1.3
baz=21
ARK ⇑iS Sg 23 37 36.4 +3.8
baz=21
ARSB Arslanbob 2.59 122 ⇑iP Pb 23 37 25.7 +0.1
baz=20
ARSB ⇑iS Sb 23 37 58.9 +0.8
baz=20
EKS2 Erkin-Say 2.74 90 ⇑iP Pg 23 37 29.6 -1.0
baz=89
EKS2 ⇑iS Sg 23 38 05.1 -1.0
baz=89
BTK Batken 2.74 168 ⇑iP Pb 23 37 27.2 -0.9
baz=66
BTK ⇑iS Sb 23 38 01.5 -0.7
baz=66
AML Almayashu 2.75 102 ⇑iP Pg 23 37 30.4 -0.6
baz=0.0
AML ⇑iS Sg 23 38 06.3 -0.3
baz=0.0
AAK Ala-Archa 3.27 90 ⇑iP Pb 23 37 37.1 0.0
baz=89
AAK ⇑iS Sb 23 38 17.9 +0.4
baz=89
ARLS Aral 3.28 104 ⇑iP Pb 23 37 35.3 -2.0
baz=3.0
ARLS ⇑iS Sb 23 38 15.9 -1.9
baz=3.0
USP Ospenovka 3.29 79 ⇓iP Pb 23 37 37.2 -0.3
baz=79
USP ⇓iS Sb 23 38 18.2 0.0
baz=79
UCH Uchtor 3.33 97 ⇓iP Pb 23 37 38.2 -0.2
baz=96
UCH ⇓iS Sb 23 38 19.9 +0.3
baz=96

IDC 24 23:38:16.4±0.7, 4.29N×62.65E, h0km, mb4.1/17, mb1 4.2/17, mb1mx4.0/49, mbtmp4.1/17, Error ellipse: s-maj=19.8km s-min=16.4km az=175.0
NEIC 24 23:38:16.8±2.1, 4.0N±0.1×62.53E±0.06, h10km±1km, mb4.2/9, Error ellipse: s-maj=17.4km s-min=10.5km az=193.0
ISC 24 23:38:17.5±0.7, 4.2N±0.1×62.6E±0.1, h10km, n34, σ1.25/31, mb4.1/19, Carlsberg Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

MSEY Mahe Island 11.28 219 Pn Pn 23 40 57.6 -1.4
SOCY Socotra 11.63 314 Pn Pn 23 41 11.4 +7.7
H08N2 Diego Garcia H 13.41 141 T T 23 55 14.1
baz=322,slow=76,SNR=15
H08N3 Diego Garcia H 13.42 141 T T 23 55 18.5
baz=322,slow=76,SNR=14
H08N1 Diego Carcia H 13.44 141 T T 23 55 15.7
baz=322,slow=76,SNR=15
ATD Arta Tunnel 20.84 292 P P 23 43 01.9 +2.3
24nm,0.9s,baz=304,slow=3.0,SNR=4.2
ATD Arta Tunnel 20.84 292 P P 23 42 59.3 -0.3
RAYN Ar Rayn 25.32 321 P P 23 43 43.5 -1.2
KMBO Kilima Mbogo 25.83 259 P P 23 43 52.4 +2.7
4.7nm,1.0s,baz=52,slow=12,SNR=5.4
GEYT Alibeck 33.84 354 P P 23 45 01.3 +1.2
0.8nm,0.6s,baz=202,slow=11,SNR=2.6
LSA Lhasa 37.10 44 P P 23 45 29.5 +0.7
LSA IAmb IAmb 23 45 31.9
comp=Z,5.6nm,1.1s
CMAR Chiang Mai Arr 38.29 65 P P 23 45 39.3 +0.8
comp=Z,2.0nm,0.9s,baz=264,slow=8.7,SNR=7.1
LSZ Lusaka 39.14 240 P P 23 45 47.6 +1.7
comp=Z,5.5nm,1.1s,baz=79,slow=4.7,SNR=4.9
LSZ Lusaka 39.14 240 P P 23 45 43.8 -2.1
LSZ IAmb IAmb 23 45 50.1
comp=Z,5.0nm,1.1s
AAK Ala-Archa 39.74 14 P P 23 45 50.8 +0.3
comp=Z,2.1nm,0.9s,baz=156,slow=10,SNR=3.6
AKH Akhalkalaki 40.82 338 P P 23 45 59.9 +0.3
BR131 Keskin Array S 44.00 328 P P 23 46 25.9 +0.5
BR131 IAmb IAmb 23 46 27.7
comp=Z,5.1nm,1.1s
BRTR Keskin Array B 44.00 328 P P 23 46 25.9 +0.5
comp=Z,3.1nm,1.1s,baz=152,slow=7.7,SNR=7.9
ABKAR Akbulak array 44.97 358 P P 23 46 33.6 +0.8
ABKAR IAmb IAmb 23 46 43.2
comp=Z,2.2nm,1.1s
MKAR Makanchi Array 45.76 19 P P 23 46 39.6 +0.4
comp=Z,1.4nm,1.0s,baz=202,slow=9.2,SNR=3.9
MKAR PcP PcP 23 48 15.9 -1.0
comp=Z,1.8nm,1.0s,baz=205,slow=2.6,SNR=4.5
ZAA0 Zalesovo Array 52.84 16 IAmb IAmb 23 47 38.3
comp=Z,3.5nm,1.1s
ZALV Zalesovo Beam 52.84 16 P P 23 47 31.4 -1.7
comp=Z,1.4nm,0.8s,baz=212,slow=5.1,SNR=3.8
ZALV PcP PcP 23 48 41.4 -1.0
comp=Z,1.7nm,1.0s,baz=232,slow=3.5,SNR=3.3
AKASG Malin Array Be 54.14 334 P P 23 47 42.3 -0.5
comp=Z,0.6nm,0.4s,baz=121,slow=5.8,SNR=5.8
SONM Songino Array 57.44 34 P P 23 48 06.2 -0.5
comp=Z,1.1nm,0.9s,baz=248,slow=6.2,SNR=3.5
KLMR Klimovskoe 59.17 347 eP P 23 48 15.9 -2.5
KLMR AMP 23 48 26.4
comp=Z,42nm,1.3s
TORD Torodi Ar. Bea 60.70 283 P P 23 48 30.9 +1.1
comp=Z,3.5nm,1.0s,baz=107,slow=7.0,SNR=8.1
NOA NORSAR Array B 68.50 336 P P 23 49 19.0 -1.0
comp=Z,2.3nm,0.9s,baz=114,slow=6.9,SNR=3.1
ESDC Sonseca Array 69.35 311 P P 23 49 24.9 -0.8
comp=Z,0.3nm,0.3s,baz=74,slow=5.0,SNR=5.6
ARCES ARCESS Array B 69.65 347 P P 23 49 26.2 -0.6
comp=Z,9.2nm,1.0s,baz=117,slow=4.8,SNR=6.4
WRA Warramunga Arr 74.41 112 P P 23 49 56.5 +0.2
comp=Z,3.9nm,1.1s,baz=290,slow=5.0,SNR=5.8
ASAR Alice Springs 74.72 116 P P 23 49 58.5 +0.4
comp=Z,3.5nm,1.0s,baz=288,slow=5.5,SNR=9.0
CFA Coronel Fontan 126.42 233 PKP PKPdf 23 57 21.9 +0.4
comp=Z,0.8nm,0.4s,baz=205,slow=1.7,SNR=3.9
NVAR Mina Array Bea 137.60 1 PKP PKPdf 23 57 43.5 +0.9
comp=Z,2.0nm,1.1s,baz=335,slow=0.8,SNR=6.5
TXAR Lajitas Array 144.15 339 PKP PKPab 23 57 52.7 +0.6
comp=Z,1.5nm,1.0s,baz=52,slow=2.1,SNR=7.1

NIED 24 23:39:00, 31.30N×130.40E, h165km, Mw4.3 Best double couple: M0 3.45000×10^15 NP1:φs11.00000°, δ59.00000°, λ94.00000°. NP2:φs184.00000°, δ32.00000°, λ84.00000°.
BGR 24 23:39:12.1±0.0, 30.49N×130.73E, h33km, mb5.2
BJI 24 23:39:27.6±0.0, 31.19N×130.55E, h166km, mB5.0/16, mb4.5/29
IDC 24 23:39:29.2±0.7, 31.31N×130.43E, h155km±6km, mb4.0/30, mb1 4.1/35, mb1mx4.0/55, mbtmp4.4/35, MS3.0/1, Ms1 3.0/1, ms1mx2.5/37, Error ellipse: s-maj=10.7km s-min=6.9km az=103.0
NEIC 24 23:39:29.5±1.6, 31.30N±0.06×130.38E±0.10, h160km±5km, mb4.6/51, Error ellipse: s-maj=12.6km s-min=7.7km az=111.0
JMA 24 23:39:30.3±0.1, 31.30N×130.42E, h152km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs218.00000°, δ42.00000°, λ122.00000°. NP2: φs358.00000°, δ55.00000°, λ65.00000°. Principal axes: T Plg68.0000°, Azm214.0000°; N Plg21.0000°, Azm13.0000°; P Plg7.0000°, Azm106.0000°;
JMA Felt I J1.
ISC 24 23:39:29.4±0.5, 31.30N±0.04×130.43E±0.05, h158km±5km, n219, σ0.97/238, mb4.4/74, 35C-8D, Kyushu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

JSU Suzuyama 0.20 7 ⇑P Pn 23 39 51.0 +0.3
JSU eS Sn 23 40 07.0 -0.1
JTSR Tashiro 2 0.45 107 ⇑P Pn 23 39 51.8 +0.4
JTSR S Sn 23 40 07.5 -0.7
JSJ Shimokoshiki 0.71 302 ⇑P Pn 23 39 52.7 -0.1
JSJ S Sn 23 40 10.1 -0.7
JTN Tanegashima 3 0.80 143 ⇑P Pn 23 39 53.9 +0.5
JTN S Sn 23 40 11.3 -0.5
JTZ Takazaki 0.82 43 ⇑P Pn 23 39 54.0 +0.5
JTZ S Sn 23 40 12.2 +0.1
JMTN Minamitane 0.99 155 ⇑P Pn 23 39 55.3 +0.4
JMTN S Sn 23 40 14.3 -0.1
JYAK Yakushimahirau 1.06 176 ⇑P Pn 23 39 55.7 +0.2
JYAK S Sn 23 40 14.1 -1.3
JIU3 Izumi3 1.29 15 ⇑P Pn 23 39 58.1 +0.7
JIU3 eS Sn 23 40 18.8 -0.3
JNN Nakanoshima 1.53 198 ⇑P Pn 23 40 00.5 +0.6
JNN S Sn 23 40 23.3 0.0
JNU Nakatsue 1.85 12 P Pn 23 40 03.9 +0.5
baz=172,slow=8.0
JNU S Sn 23 40 29.4 -0.3
70nm,0.3s,baz=180,slow=20,SNR=9.1
JNU LR LR 23 40 56.4
comp=Z,281nm,21.2s,baz=204,slow=47
JNU Nakatsue 1.85 12 Sn Sn 23 40 29.5 -0.2
JTAJ Takarajima 2.39 207 ⇓P Pn 23 40 10.2 +0.7
JOW Kunigami 4.83 203 P Pn 23 40 40.2 -0.5
0.6nm,0.3s,baz=106,slow=14,SNR=5.3
JOW S Sn 23 41 33.8 -2.8
2.2nm,0.3s,baz=236,slow=28,SNR=14
JOW Kunigami 4.83 203 Pn Pn 23 40 40.0 -0.7
JOW Sn 23 41 32.7 -3.8
KSRS Korea Array 6.48 342 P Pn 23 41 03.0 +0.6
1.2nm,0.3s,baz=170,slow=14,SNR=28
KS19 Wonju Array Si 6.54 342 Pn Pn 23 41 02.6 -0.6
INU Inuyama 6.83 52 Pn 23 41 09.6 +2.4
INU Sn 23 42 24.0 0.0
INCN Inchon 6.92 334 Pn 23 41 08.1 -0.2
JHJ2 Mitsune 8.16 75 Pn Pn 23 41 24.6 -0.2
MJB9 Matsu-Tunnel 8.31 49 Pn Pn 23 41 26.1 -0.8
MJB9 Sn 23 43 00.2 +0.7
MAJO Matsushiro 8.31 49 Pn Pn 23 41 26.1 -0.8
MAJO Sn 23 42 59.9 +0.5
MAT Matsushiro 8.31 49 P Pn 23 41 27.9 +1.0
MAT S Sn 23 42 58.9 -0.6
MJAR Matsushiro Arr 8.31 49 P Pn 23 41 28.1 +1.2
0.5nm,0.3s,baz=239,slow=13,SNR=15
MJAR S Sn 23 42 56.0 -3.5
0.1nm,0.3s,baz=223,slow=16,SNR=5.5
JCJ Chichijima 11.10 109 P Pn 23 42 04.7 +1.1
3.2nm,0.3s,baz=293,slow=6.6,SNR=6.1
JCJ LR LR 23 45 36.1
comp=Z,72nm,18.9s,baz=106,slow=33
SSLB Suanglung 11.25 231 Pn Pn 23 42 05.4 -0.3
BJI Beijing 14.48 311 P P 23 42 51.8 +2.7
BJI pmax pmax
comp=Z,5.0nm,0.9s
BJI pmax pmax
comp=Z,220nm,5.4s
BJI LR LR
comp=N,450nm,17.8s
BJI LR LR
comp=E,660nm,13.8s
ASAJ Asahikawa 15.99 33 P Pn 23 43 03.9 -1.5
0.5nm,0.3s,baz=230,slow=15,SNR=4.4
JKA Kamikawa-asahi 15.99 33 P Pn 23 43 03.9 -1.5
KLR Kul'dur 17.94 3 P P 23 43 27.9 +0.7
0.7nm,0.3s,baz=181,slow=8.8,SNR=12
ENH Enshi 18.02 272 P Pn 23 43 29.8 -0.1
GYA Guiyang 21.34 263 ⇑iP P 23 44 04.8 +0.5
GYA pmax pmax
comp=Z,20nm,0.6s
CD2 Chengdu 22.82 276 ⇑iP P 23 44 18.8 0.0
CD2 S S 23 48 13.6 -2.4
CD2 pmax pmax
comp=Z,20nm,0.7s
CD2 pmax pmax
comp=Z,330nm,8.3s
CD2 LR LR
comp=N,2μm,16.9s
CD2 LR LR
comp=E,3μm,17.0s
CD2 LR LR
comp=Z,3μm,18.4s
ULN Ulaanbaatar 24.31 320 P P 23 44 32.8 +0.5
SONM Songino Array 24.66 319 P P 23 44 35.5 0.0
3.3nm,0.7s,baz=138,slow=10.0,SNR=10
GTA Gaotai 26.15 296 ⇑P P 23 44 48.9 -0.1
GTA pP pP 23 45 25.0 +3.5
GTA sP sP 23 45 43.1 +3.3
GTA pmax pmax
comp=Z,4.0nm,0.9s
UBPT Khong Chiam 27.82 241 P P 23 45 04.3 +0.3
UBPT IAmb IAmb 23 45 05.4
comp=Z,6.6nm,0.6s
TLY Talaya 28.32 324 P P 23 45 07.7 -0.3
CHTO Chiang Mai 31.00 254 P P 23 45 30.3 -1.8
CHTO IAmb IAmb 23 45 33.9
comp=Z,6.6nm,0.7s
CMAR Chiang Mai Arr 31.17 253 P P 23 45 34.0 +0.5
comp=Z,1.8nm,0.5s,baz=48,slow=8.5,SNR=12
MA2 Magadan 31.41 20 P P 23 45 32.4 -2.7
MA2 IAmb IAmb 23 45 49.5
comp=Z,6.3nm,1.1s
SHL Shillong 34.25 270 P P 23 45 58.5 -2.0
SHL IAmb IAmb 23 46 08.2
comp=Z,11nm,1.2s
WMQ Urumqi 35.72 303 eP P 23 46 14.5 +1.7
WMQ pmax pmax
comp=Z,6.0nm,0.9s
WMQ pmax pmax
comp=Z,400nm,11.6s
WMQ LR LR
comp=Z,3μm,21.9s
WMQ LR LR
comp=Z,3μm,25.9s
WMQ LR LR
comp=Z,4μm,21.9s
TAPN Taplejung 37.28 275 eP P 23 46 29.9 +3.5
ODAN Odare 37.70 274 eP P 23 46 30.5 +0.6
comp=Z,13nm,0.4s
IPM Ipoh 38.41 232 P P 23 46 36.1 +0.4
JIRN Jiri 38.49 276 eP P 23 46 39.0 +2.3
comp=Z,10nm,0.3s
GUN Gumba 38.68 277 eP P 23 46 39.8 +1.6
comp=Z,19nm,0.5s
PKIN Phulchoki 39.19 276 eP P 23 46 43.7 +1.3
comp=Z,5.0nm,0.4s
ZALV Zalesovo Beam 39.56 318 P P 23 46 44.0 -0.7
comp=Z,1.2nm,0.6s,baz=101,slow=6.4,SNR=5.2
ZALV PcP PcP 23 48 48.0 -0.8
comp=Z,1.3nm,0.5s,baz=121,slow=3.7,SNR=5.0
GKN Gorkha 39.71 277 eP P 23 46 47.5 +0.9
MK31 Makanchi Array 39.81 307 P P 23 46 46.3 -0.7
MK31 PcP PcP 23 48 49.7 -0.2
MKAR Makanchi Array 39.81 307 P P 23 46 46.9 -0.1
comp=Z,2.5nm,0.8s,baz=92,slow=9.7,SNR=15
MKAR PcP PcP 23 48 49.7 -0.1
comp=Z,0.9nm,0.5s,baz=74,slow=4.3,SNR=11
DANN Dangsing 40.36 278 eP P 23 46 53.2 +1.1
comp=Z,17nm,0.5s
PSI Prapat 41.05 233 P P 23 46 58.8 +1.2
comp=Z,11nm,0.8s,baz=6.3,slow=7.0,SNR=11
RPSI Rantau Prapat 41.13 233 P P 23 46 57.0 -1.2
RPSI IAmb IAmb 23 46 59.6
comp=Z,13nm,0.9s
RPSI Rantau Prapat 41.13 233 P P 23 46 58.8 +0.7
KURK Kurchatov 42.65 312 P P 23 47 10.1 +0.1
KURK IAmb IAmb 23 47 12.6
comp=Z,5.2nm,0.6s
LEM Lembang 43.74 214 P P 23 47 20.3 +1.0
comp=Z,20nm,0.5s,baz=316,slow=22,SNR=5.9
MTN Manton Dam 43.90 179 P P 23 47 19.5 -0.8
MTN IAmb IAmb 23 47 20.9
comp=Z,20nm,0.7s
NRIK Noril'sk 45.09 340 P P 23 47 28.8 -0.4
comp=Z,1.9nm,0.5s,baz=84,slow=8.7,SNR=4.5
AAK Ala-Archa 45.35 301 P P 23 47 31.8 -0.1
comp=Z,0.7nm,0.5s,baz=101,slow=6.6,SNR=5.0
AAK Ala-Archa 45.35 301 IAmb IAmb 23 47 32.3
comp=Z,3.8nm,1.1s
KNRA Kununurra 46.74 182 P P 23 47 41.7 -0.9
KNRA IAmb IAmb 23 47 43.9
comp=Z,24nm,0.8s
NIL Nilore 47.76 289 P P 23 47 52.3 +1.7
BRVK Borovoye 47.98 315 P P 23 47 51.9 -0.1

BRVK				IAmb	IAmb	23 47 52.8	
	comp=Z,4.0nm,0.6s						
KK31	Karatay Array	48.22	302	P	P	23 47 54.0	0.0
FITZ	Fitzroy Crossi	49.33	186	P	P	23 48 03.2	+0.7
FITZ				IAmb	IAmb	23 48 04.1	
	comp=Z,6.9nm,0.7s						
WB0	Warramunga Arr	50.92	175	P	P	23 48 14.7	+0.2
WRA	Warramunga Arr	51.09	175	P	P	23 48 15.9	+0.2
	comp=Z,3.2nm,0.5s,baz=352,slow=8.2,SNR=4.2						
PSA00	Pilbara Seismi	53.54	192	P	P	23 48 33.6	-0.2
PSA00				IAmb	IAmb	23 48 34.8	
	comp=Z,12nm,0.8s						
PSA00				PcP	PcP	23 49 38.6	+0.1
ABKAR	Akbulak array	54.69	311	P	P	23 48 42.0	+0.1
AS31	Alice Springs	54.76	176	P	P	23 48 42.8	+0.2
ASAR	Alice Springs	54.76	176	P	P	23 48 43.1	+0.5
	comp=Z,4.7nm,0.7s,baz=7.6,slow=14,SNR=50						
GEYT	Alibeck	58.52	298	P	P	23 49 09.3	+0.1
	comp=Z,1.6nm,0.6s,baz=45,slow=0.8,SNR=5.2						
ILAR	Eielson Array	59.08	30	P	P	23 49 13.2	+0.6
	comp=Z,0.7nm,0.7s,baz=286,slow=7.3,SNR=7.9						
FORT	Forrest	61.78	182	P	P	23 49 31.9	+0.7
INK	Inuvik	63.49	24	P	P	23 49 42.5	+0.5
	comp=Z,0.6nm,0.4s,baz=286,slow=5.3,SNR=6.2						
INK	Inuvik	63.49	24	P	P	23 49 42.8	+0.8
STKA	Stephens Creek	63.72	169	P	P	23 49 44.9	+0.9
	comp=Z,4.9nm,0.5s,baz=355,slow=7.1,SNR=18						
STKA	Stephens Creek	63.72	169	P	P	23 49 44.8	+0.9
SPA0	Spitsbergen Ar	64.28	348	eP	P	23 49 47.0	-0.1
ARCES	ARCESS Array B	66.02	338	P	P	23 49 58.0	-0.4
	comp=Z,3.5nm,0.6s,baz=60,slow=7.0,SNR=21						
ARE0	ARCESS Array S	66.02	338	eP	P	23 49 58.0	-0.5
HAMF	Hammerfest	66.10	340	eP	P	23 49 58.0	-0.9
KTK1	Kautokeino	66.97	338	eP	P	23 50 04.1	-0.4
KBZ	Khabaz	67.49	308	P	P	23 50 09.3	+1.2
	comp=Z,10.0nm,0.8s,baz=144,slow=1.4,SNR=26						
KIV	Kislovodsk	67.54	309	P	P	23 50 08.5	-0.2
KIV				IAmb	IAmb	23 50 11.0	
	comp=Z,13nm,0.9s						
GNI	Garni	67.58	304	P	P	23 50 10.4	+1.4
	comp=Z,4.6nm,0.7s,baz=38,slow=4.6,SNR=7.2						
GNI	Garni	67.58	304	P	P	23 50 09.9	+0.9
GNI				IAmb	IAmb	23 50 11.5	
	comp=Z,5.1nm,0.8s						
TRO	Tromso	68.01	339	eP	P	23 50 09.4	-1.6
DLBC	Dease Lake	68.59	34	P	P	23 50 14.7	-0.2
	comp=Z,5.8nm,0.7s,baz=190,slow=3.7,SNR=5.8						
FIA1	FINESS Array S	69.42	330	P	P	23 50 19.4	-0.4
FINES	FINESS Array B	69.42	330	P	P	23 50 19.4	-0.5
	comp=Z,8.6nm,0.4s,baz=66,slow=5.4,SNR=102						
STEI	Steigen	70.06	339	eP	P	23 50 23.0	-0.6
RES	Resolute Bay	70.22	12	P	P	23 50 24.3	-0.2
	comp=Z,1.8nm,0.7s,baz=308,slow=7.6,SNR=12						
MOR8	Moi Rana	71.33	337	eP	P	23 50 29.1	-2.3
AKASG	Malin Array Be	72.95	319	P	P	23 50 40.8	-0.5
	comp=Z,3.9nm,0.3s,baz=56,slow=6.5,SNR=40						
AKBB	Malin Array Si	72.95	319	P	P	23 50 40.9	-0.3
AKBB				IAmb	IAmb	23 50 41.5	
	comp=Z,13nm,0.8s						
YKA	Yellowknife Ar	73.14	26	P	P	23 50 42.2	0.0
	comp=Z,1.0nm,0.6s,baz=304,slow=5.7,SNR=16						
YKA				pP	pP	23 51 21.2	+0.6
	comp=Z,1.1nm,0.8s,baz=305,slow=5.8,SNR=10						
NSS	Namsos	73.15	337	eP	P	23 50 41.2	-0.9
GAZ	Gaziantep	74.17	304	P	P	23 50 49.3	+0.5
GAZ				IAmb	IAmb	23 50 51.0	
	comp=Z,13nm,0.8s						
SORM	Soroca	74.70	317	⇓P	P	23 50 50.3	-1.2
NC303	NORSAR Array S	75.44	334	eP	P	23 50 55.2	-0.3
BR131	Keskin Array S	75.46	308	IAmb	IAmb	23 50 57.3	
	comp=Z,12nm,0.9s						
BRTR	Keskin Array B	75.46	308	P	P	23 50 56.5	+0.2
	comp=Z,9.6nm,0.8s,baz=97,slow=5.6,SNR=53						
NB2	NORSAR Subarra	75.62	334	P	P	23 50 55.2	-1.4
	comp=Z,2.6nm,0.5s,baz=47,slow=5.6						
NB2	NORSAR Subarra	75.62	334	P	P	23 50 55.2	-1.4
	baz=47,slow=5.6						
NOA	NORSAR Array B	75.62	334	P	P	23 50 55.5	-1.0
	comp=Z,3.4nm,0.5s,baz=49,slow=5.5,SNR=20						
DOMB	Dombas	75.76	335	eP	P	23 50 56.7	-0.7
TLCR		75.89	314	⇓P	P	23 50 57.7	-0.6
BR231	Keskin MP Arra	75.98	308	P	P	23 50 59.2	0.0
BR231				IAmb	IAmb	23 51 00.4	
	comp=Z,12nm,1.2s						
SUMG	Summit	76.12	357	i P	P	23 51 00.0	+0.3
	comp=Z,29nm,0.9s						
SUMG	Summit	76.12	357	P	P	23 50 58.8	-0.9
SUMG				IAmb	IAmb	23 51 01.1	
	comp=Z,10nm,0.8s						
CFR	Carcaliu	76.31	315	⇑P	P	23 50 59.8	-0.9
OSL	Oslo	76.52	333	eP	P	23 51 00.9	-0.7
TESR	Tescani	76.52	316	⇑P	P	23 51 01.9	0.0
ASF	Jabal al Asfar	76.74	300	P	P	23 51 04.3	+0.7
	comp=Z,5.0nm,0.8s,baz=24,slow=2.0,SNR=11						
BUR08	Bucovina Ar. S	76.77	318	P	P	23 51 02.8	-0.6
BUR08				IAmb	IAmb	23 51 04.9	
	comp=Z,11nm,1.1s						
BURAR	Bucovina Array	76.78	318	⇑P	P	23 51 03.5	-0.1
VRI	Vrincioaia	76.81	316	⇑P	P	23 51 03.6	+0.1
ICOR	Ion Corvin	77.06	314	⇑P	P	23 51 04.3	-0.6
KWP	Kalwaria Pacla	77.09	321	eP	P	23 51 05.4	+0.4
PGOR	Pogoanele	77.15	315	⇑P	P	23 51 03.6	-1.8
MMAI	Mount Meron Ar	77.44	301	P	P	23 51 07.8	+0.4
	comp=Z,3.3nm,0.7s,baz=74,slow=9.8,SNR=8.1						
MLR	Muntele Rosu	77.47	316	⇑P	P	23 51 07.1	-0.3
MLR	Muntele Rosu	77.47	316	P	P	23 51 07.0	-0.4
MLR				IAmb	IAmb	23 51 08.4	
	comp=Z,5.8nm,0.6s						
DOPR	Dopca	77.55	316	⇓P	P	23 51 08.5	+0.8
KOLS	Kolonicke sedl	77.71	320	eP	P	23 51 08.6	+0.1
TRPA	Tarpa	78.01	319	⇑P	P	23 51 10.9	+0.8
BUC1	Bucharest	78.03	315	⇑P	P	23 51 01.2	-9.1
VOIR		78.03	316	⇑P	P	23 51 10.8	+0.3
RAZG	Razgrad	78.15	314	⇑P	P	23 51 10.2	-0.8
CRVS	Cervenica-Dubn	78.17	320	eP	P	23 51 10.0	-1.1
OJC	Ojcow	78.32	322	eP	P	23 51 12.3	+0.5
ARR	Arges	78.32	316	⇓P	P	23 51 13.0	+1.0
NIE	Niedzica	78.51	321	eP	P	23 51 13.8	+0.9
HUMR	Humele	78.56	315	⇑P	P	23 51 12.7	-0.6
COPA	Copaceanca	78.63	315	⇑P	P	23 51 12.9	-0.7
DRGR		78.66	316	⇑P	P	23 51 14.2	+0.4
LOT	Lotru	78.78	317	⇑P	P	23 51 14.1	-0.5
ELND	Elena	78.88	314	⇑P	P	23 51 15.7	+0.6
DEV	Deva	79.05	317	⇑P	P	23 51 17.0	+1.1
LANS	Liptovska Anna	79.11	321	eP	P	23 51 17.5	+1.3
VLAD	Vladila	79.20	315	⇑P	P	23 51 16.8	0.0
GZR	Gura Zlata	79.40	317	⇓P	P	23 51 17.5	-0.4
EIL	Elat	79.42	298	P	P	23 51 19.0	+0.8
	comp=Z,4.1nm,0.8s,baz=110,slow=12,SNR=2.6						
ELL	Elmali	79.48	307	P	P	23 51 16.9	-1.7
SIRR	Siria	79.55	318	⇑P	P	23 51 18.3	-0.4
KSP	Ksiaz	79.75	324	eP	P	23 51 19.8	+0.2
MORC	Moravsky Berou	79.75	323	eP	P	23 51 20.1	+0.4
MORC	Moravsky Berou	79.75	323	⇑P	P	23 51 20.3	+0.6
MORC	Moravsky Berou	79.75	323	IAmb	IAmb	23 51 21.1	
	comp=Z,6.2nm,0.9s						
VYHS	Vyhne	79.83	321	eP	P	23 51 21.0	+0.9
BZS	Buzias	79.95	318	⇑P	P	23 51 20.5	-0.2
KRLC	Kraliky	79.97	323	eP	P	23 51 21.1	+0.2
KRLC				ePCP	PcP	23 51 28.2	+0.4
DPC	Dobruska-Polom	80.04	324	eP	P	23 51 22.0	+0.8
DPC				ePCP	PcP	23 51 25.9	-2.2
JAVC	Velka Javorina	80.24	322	eP	P	23 51 23.9	+1.6
VRAC	Vranov	80.53	323	eP	P	23 51 24.7	+0.9
VRAC	Vranov	80.53	323	⇓P	P	23 51 23.8	-0.1
SMOL	Smolenice	80.57	322	eP	P	23 51 25.4	+1.3
VTS	Vitosha	80.67	314	⇑P	P	23 51 24.2	-0.7
VTS	Vitosha	80.67	314	IAmb	IAmb	23 51 26.4	
	comp=Z,7.1nm,0.9s						
MODS	Modra-Piesok	80.74	322	eP	P	23 51 25.0	0.0
KRUC	Moravsky	80.78	323	eP	P	23 51 25.6	+0.4
CLL	Collm	81.08	326	P	P	23 51 27.2	+0.5
CLL				IAmb	IAmb	23 51 28.6	
	comp=Z,12nm,0.7s						
GOPC	GO Pecny, Ondr	81.08	324	eP	P	23 51 27.3	+0.5
PRU	Pruhonice	81.16	324	eP	P	23 51 27.7	+0.6
MORH	Mrgy, Hungar	81.29	319	eP	P	23 51 27.9	+0.1
CONA	Conrad Observa	81.76	322	i PcP	P	23 51 31.6	+1.1
	comp=Z,8.7nm,0.7s						
DIVS	Divibare	81.77	317	eP	P	23 51 30.2	-0.4
NKC	Novy Kostel	82.04	325	eP	P	23 51 32.7	+0.9
KHC	Kasperske Hory	82.19	324	eP	P	23 51 32.9	+0.3
GERES	GERESS Array B	82.31	323	P	P	23 51 33.5	+0.2
	comp=Z,1.7nm,0.6s,baz=49,slow=5.5,SNR=16						
ARSA	Arzberg	82.36	321	i P	P	23 51 33.2	-0.3
	comp=Z,2.8nm,0.7s						
HAPS	Han Pijesak,Bl	82.38	317	eP	P	23 51 33.0	-0.8
LIT	Litokhoron	82.56	313	P	P	23 51 33.6	-1.1
LIT				IAmb	IAmb	23 51 35.2	
	comp=Z,11nm,0.7s						
J08A	Circle Bar Ran	82.59	43	P	P	23 51 33.8	-1.2
MOA	Molln	82.65	322	i PcP	P	23 51 36.1	+1.1
	comp=Z,3.3nm,0.6s						
SOKA	Soboth	82.98	321	i PcP	P	23 51 37.2	+0.4
	comp=Z,19nm,1.3s,SNR=5.8						
BLY	Banja Luka	82.99	319	⇑P	P	23 51 37.5	+0.8
BLY	Banja Luka	82.99	319	eP	P	23 51 37.2	+0.4
BLY	Banja Luka	82.99	319	P	P	23 51 36.7	-0.1
BLY				IAmb	IAmb	23 51 38.7	
	comp=Z,9.1nm,0.7s						
GRA1	Grafenberg Arr	83.00	325	P	P	23 51 34.5	-2.3
GRF	Grafenberg Arr	83.00	325	eP	P	23 51 37.3	+0.5
	comp=Z,13nm,0.9s,baz=56,slow=4.7						
PDG	Podgorica	83.18	316	⇑P	P	23 51 37.8	0.0
PDG	Podgorica	83.18	316	eP	P	23 51 37.3	-0.5
PDG	Podgorica	83.18	316	P	P	23 51 35.4	-2.3
PDG				IAmb	IAmb	23 51 38.6	
	comp=Z,14nm,0.8s						
MGRS	Mrkonjic Grad	83.25	319	eP	P	23 51 39.0	+0.8
CRES	Cresnjev	83.28	320	eP	P	23 51 37.7	-0.6
BRY	Bratogost	83.33	317	eP	P	23 51 38.2	-0.5
OBKA	Obir	83.35	321	i PcP	P	23 51 39.1	+0.4
	comp=Z,11nm,0.7s,SNR=5.4						
DRME	Dracevica, Mon	83.37	316	eP	P	23 51 38.4	-0.4
PDKS	Podkum	83.39	321	eP	P	23 51 39.0	+0.2
TREB	Trebinje	83.55	317	eP	P	23 51 39.3	-0.4
KBA	Koelnbreinsper	83.62	322	i PcP	P	23 51 40.2	0.0
	comp=Z,8.8nm,0.7s,SNR=5.8						
HCY	Herceg Novi	83.63	316	eP	P	23 51 39.7	-0.4
LJU	Ljubljana	83.65	321	eP	P	23 51 40.2	0.0
MYKA	Terra Mystica	83.75	322	i PcP	P	23 51 40.6	-0.1
	comp=Z,11nm,0.6s,SNR=5.5						
GBAS	Gorenja Brezov	83.77	321	i P	P	23 51 40.7	0.0
CEY	Cerknica	83.90	321	eP	P	23 51 41.2	-0.2
JAVS	Javornik	84.00	321	i P	P	23 51 41.7	-0.3
ABTA	Abfaltersbach	84.27	322	i P	P	23 51 42.7	-0.6
	comp=Z,10.0nm,0.7s,SNR=5.3						
WATA	Walderalm	84.37	323	i P	P	23 51 43.3	-0.7
	comp=Z,7.9nm,1.2s						
WTTA	Wattenberg	84.39	323	i P	P	23 51 42.0	-2.1
	comp=Z,1.9nm,0.6s						
STAL	STALIGIAL	84.48	322	P	P	23 51 42.5	-1.9
MOTA	Moosalm	84.61	323	i PcP	P	23 51 44.9	-0.3
	comp=Z,6.3nm,1.0s						
SQTA	Sankt Quirin	84.64	323	i PcP	P	23 51 45.2	-0.1
	comp=Z,4.9nm,0.8s						
RETA	Reutte	84.69	324	i PcP	P	23 51 46.5	+1.0
	comp=Z,3.1nm,0.6s						
FETA	Feichten	85.01	323	i PcP	P	23 51 46.6	-0.6
	comp=Z,3.7nm,0.9s						
TEOL	Teolo	85.62	322	P	P	23 51 49.5	-0.5
NVAR	Mina Array Bea	85.64	47	P	P	23 51 50.5	0.0
	comp=Z,1.2nm,0.6s,baz=301,slow=5.2,SNR=9.6						
NRCA	Norcia	86.48	319	P	P	23 51 53.8	-0.6
AQU	L'Aquila	86.63	319	eP	P	23 51 55.7	+0.6
AQU	L'Aquila	86.63	319	P	P	23 51 55.0	-0.2
OSSC	Osservatorio P	87.06	321	IAmb	IAmb	23 51 57.7	
	comp=Z,4.0nm,0.7s						
ULM	Lac du Bonnet	89.04	28	P	P	23 52 05.2	-1.0
	comp=Z,1.8nm,0.6s,baz=249,slow=4.3,SNR=4.1						
QSPA	South Pole Qui	121.06	180	PKP	PKPdf	23 58 01.1	-1.2
	comp=Z,5.2nm,1.2s,baz=76,slow=2.5,SNR=7.8						
QSPA	South Pole Qui	121.06	180		PKPdf	23 58 02.1	-0.2
SIV	San Ignacio	161.50	37	PKP	PKPdf	23 59 11.6	-0.2
	comp=Z,1.0nm,0.8s,baz=105,slow=2.7,SNR=5.7						

LJU 24 23:40:55.3, 45.75N×14.87E, h2km, ML0.4, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VISS	Visnje	0.06	338	⇓i Pg	Pg	23 40 56.5	0.0
VISS				i Sg	Sg	23 40 57.3	+0.1
	comp=Z,9.0nm,0.0s						

NEIC **24** *23:42:52.4±2.4, 4.0N±0.1×62.7E±0.1, h10km±1km, mb4.3/14, Error ellipse: s-maj=21.8km s-min=19.3km az=148.0*

IDC **24** *23:42:53.1±0.9, 3.99N×62.95E, h0km, mb3.8/12, mb1 4.0/12, mb1mx3.8/46, mbtmp3.9/12, Error ellipse: s-maj=28.0km s-min=17.7km az=2.0*

ISC 24 23:42:54.7±0.9, 4.2N±0.1×62.9E±0.1, h10km, n41, σ1.93/40, mb4.2/19, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSEY	Mahe Island	11.51	220		Pn	23 45 32.8	-6.4
ATD	Arta Tunnel	21.13	291	P	P	23 47 42.7	+2.6
	26nm,1.0s,baz=84,slow=10,SNR=3.8						
ATD	Arta Tunnel	21.13	291	P	P	23 47 35.9	-4.2
UOSS	Minazif	21.61	343	P	P	23 47 42.3	-2.6
RAYN	Ar Rayn	25.51	320	P	P	23 48 21.2	-2.4
RAYN				IAmb	IAmb	23 48 29.5	
	comp=Z,9.2nm,1.2s						
KMBO	Kilima Mbogo	26.16	259	P	P	23 48 30.3	+0.5
	comp=Z,3.1nm,0.9s,baz=48,slow=11,SNR=4.9						
NIL	Nilore	30.85	17	P	P	23 49 11.0	-0.2
GYA0B	ALIBECK ARRAY	33.85	353	P	P	23 49 36.6	-0.9
GYA0B				IAmb	IAmb	23 49 42.9	
	comp=Z,3.1nm,0.7s						
LSA	Lhasa	36.85	43	P	P	23 50 02.6	-1.3
LSA				IAmb	IAmb	23 50 11.4	
	comp=Z,9.8nm,1.4s						
KSH	Kashi	37.10	17	P	P	23 50 05.8	+0.3
KSH				sP	pwP	23 50 13.3	+1.3
KSH				PP	PP	23 51 30.9	+0.8
CMAR	Chiang Mai Arr	37.98	65	P	P	23 50 13.1	0.0
	comp=Z,0.4nm,0.3s,baz=271,slow=8.9,SNR=4.2						
CMAR	Chiang Mai Arr	37.98	65	P	P	23 50 13.1	0.0
ABKAR	Akbulak array	44.97	357	P	P	23 51 08.3	-1.6
ABKAR				IAmb	IAmb	23 51 10.7	
	comp=Z,9.5nm,1.5s						
MAKZ	Makanchi	45.55	18	P	P	23 51 14.0	-0.7
MAKZ				IAmb	IAmb	23 51 22.5	
	comp=Z,3.7nm,1.4s						
MK31	Makanchi Array	45.64	19	P	P	23 51 14.9	-0.5
MKAR	Makanchi Array	45.64	19	P	P	23 51 18.2	+2.8
	comp=Z,0.6nm,0.8s,baz=186,slow=4.9,SNR=3.5						
MKAR	Makanchi Array	45.64	19	P	P	23 51 18.2	+2.8
BRVK	Borovoye	49.08	6	P	P	23 51 40.8	-1.2
ZAA0	Zalesovo Array	52.73	16	P	P	23 52 08.1	-1.4
ZAA0				IAmb	IAmb	23 52 16.6	
	comp=Z,4.8nm,1.2s						
ZALV	Zalesovo Beam	52.73	16	P	P	23 52 09.6	+0.1
	comp=Z,0.5nm,0.4s,baz=224,slow=6.2,SNR=5.6						
ZALV	Zalesovo Beam	52.73	16	P	P	23 52 09.6	+0.1
AKASG	Malin Array Be	54.27	334	P	P	23 52 21.1	+0.3
	comp=Z,0.2nm,0.3s,baz=136,slow=6.0,SNR=3.0						
AKASG	Malin Array Be	54.27	334	P	P	23 52 21.1	+0.3
SONM	Songino Array	57.24	33	P	P	23 52 43.4	+0.9
	comp=Z,0.5nm,0.5s,baz=318,slow=1.9,SNR=2.6						
SONM	Songino Array	57.24	33	P	P	23 52 43.4	+0.9
KLMR	Klimovskoe	59.23	347	e	P	23 52 50.7	-5.2
KLMR				AMP		23 53 01.6	
	comp=Z,19nm,1.2s						
TORD	Torodi Ar. Bea	61.02	283	P	P	23 53 09.5	+0.5
	comp=Z,2.3nm,1.0s,baz=102,slow=9.2,SNR=5.6						
TORD	Torodi Ar. Bea	61.02	283	P	P	23 53 09.5	+0.5
KSRS	Korea Array	67.73	51	P	P	23 53 53.9	+1.3
	comp=Z,0.4nm,0.3s,baz=269,slow=8.5,SNR=3.5						
KSRS	Korea Array	67.73	51	P	P	23 53 53.9	+1.3
ESDC	Sonseca Array	69.58	311	P	P	23 54 05.3	+1.0
	comp=Z,2.3nm,0.9s,baz=83,slow=5.8,SNR=5.7						
ESDC	Sonseca Array	69.58	311	P	P	23 54 05.3	+1.0
WRA	Warramunga Arr	74.11	112	P	P	23 54 30.7	-1.1
	comp=Z,0.7nm,0.8s,baz=290,slow=4.9,SNR=3.9						
WRA	Warramunga Arr	74.11	112	P	P	23 54 30.7	-1.1
WB0	Warramunga Arr	74.13	112	P	P	23 54 28.3	-3.6
WB0				IAmb	IAmb	23 54 37.7	
	comp=Z,2.5nm,0.9s						
WR0	Warramunga Arr	74.30	112	P	P	23 54 30.2	-2.7
ASAR	Alice Springs	74.43	116	P	P	23 54 32.5	-1.1
	comp=Z,0.3nm,0.4s,baz=294,slow=6.0,SNR=4.6						
ASAR	Alice Springs	74.43	116	P	P	23 54 32.5	-1.1
YKA	Yellowknife Ar	113.47	359	PP	PP	00 02 29.5	+6.3
	comp=Z,0.4nm,0.9s,baz=360,slow=7.6,SNR=3.8						
TXAR	Lajitas Array	144.25	340	PKP	PKPdf	00 02 33.0	+1.1
	comp=Z,0.5nm,0.8s,baz=30,slow=2.9,SNR=5.1						
TXAR	Lajitas Array	144.25	340		PKPdf	00 02 33.0	+1.1

PDG **24** *23:43:31.4±0.2, 42.88N×18.30E, h10km, MD2.7/2, ML2.6/13, Error ellipse: s-maj=0.4km s-min=0.4km az=0.0*

BEO **24** *23:43:32.4±0.3, 42.87N×18.31E, h6km±2km, ML2.3/12*

RHSSO **24** *23:43:32.0±0.2, 42.90N×18.32E, h5km±2km, ML2.3/10*

ISC 24 23:43:32.2±0.9, 42.90N±0.02×18.33E±0.01, h9km±6km, n59, σ0.93/113, 2C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRY	Bratogost	0.15	91	⇑i Pg	Pg	23 43 35.3	-0.3
BRY				eSg	Sg	23 43 38.2	+0.3
BRY	Bratogost	0.15	91	ePg	Pg	23 43 35.2	-0.3
BRY				eSg	Sg	23 43 38.2	+0.3
TREB	Trebinje	0.19	176	ePg	Pg	23 43 35.6	-0.5
TREB				eSg	Sg	23 43 39.0	+0.3
TREB	Trebinje	0.19	176	⇑i Pg	Pg	23 43 35.5	-0.5
TREB				Sg	Sg	23 43 38.8	+0.1
DBRK	Dubrovnik	0.27	210	i Pg	Pg	23 43 37.0	-0.6
DBRK				Sg	Sg	23 43 41.4	+0.2
STON	Ston	0.47	266	i Pg	Pg	23 43 40.2	-1.0
STON				Sg	Sg	23 43 47.4	+0.1
STON	Ston	0.47	266	ePg	Pg	23 43 40.1	-1.1
STON				eSg	Sg	23 43 48.0	+0.7
STON	Ston	0.47	266	⇓i Pg	Pg	23 43 39.9	-1.3
STON				eSg	Sg	23 43 47.4	+0.1
HCY	Herceg Novi	0.47	165	⇓i Pg	Pg	23 43 40.3	-1.0
HCY				eSg	Sg	23 43 47.9	+0.4
HCY	Herceg Novi	0.47	165	ePg	Pg	23 43 40.1	-1.2
HCY				eSg	Sg	23 43 47.4	-0.1
NKME	Niksic	0.48	106	ePg	Pg	23 43 40.4	-1.0
NKME				eSg	Sg	23 43 48.3	+0.6
NKY	Niksic	0.49	100	ePg	Pg	23 43 41.4	-0.4
NKY				eSg	Sg	23 43 49.1	+0.8
UPM	Unac-Piva	0.52	54	⇓i Pg	Pg	23 43 41.3	-0.9
UPM				eSg	Sg	23 43 49.9	+0.9
UPM	Unac-Piva	0.52	54	ePg	Pg	23 43 41.3	-0.9
UPM				eSg	Sg	23 43 49.9	+0.9
CEME	Cevo	0.56	129	ePg	Pg	23 43 41.7	-1.3
CEME				eSg	Sg	23 43 50.7	+0.3
PDG	Podgorica	0.83	124	ePg	Pg	23 43 46.7	-1.4
PDG				eSg	Sb	23 43 59.7	-0.3
PDG	Podgorica	0.83	124	ePg	Pg	23 43 46.5	-1.6
PDG				eSg	Sg	23 43 59.3	+0.4
TTG	Podgorica	0.83	124	ePg	Pg	23 43 46.7	-1.4
TTG				eSg	Sb	23 44 00.1	+0.1
KOME	Kolasin	0.87	93	ePg	Pg	23 43 47.8	-1.1
KOME				eSg	Sb	23 44 01.9	+0.5
PLE	Pljevlja	0.88	61	ePg	Pg	23 43 48.5	-0.7
PLE				eSg	Sb	23 44 02.8	+1.1
DRME	Dracevica, Mon	0.95	138	⇓i Pg	Pg	23 43 49.2	-1.3
DRME				eSg	Sg	23 44 02.7	-0.2
DRME	Dracevica, Mon	0.95	138	ePg	Pg	23 43 49.0	-1.5
DRME				eSg	Sb	23 44 04.3	+0.7
MAKA	Makarska	1.03	292	i Pg	Pg	23 43 50.4	-1.6
MAKA				Sg	Sb	23 44 06.5	+0.6
RUDO	Rudo	1.04	46	ePg	Pg	23 43 50.8	-1.4
RUDO				eSg	Sg	23 44 06.2	+0.5
IVA	Berane	1.15	91	ePg	Pg	23 43 53.1	-1.1
IVA				eSg	Sn	23 44 11.6	+1.2
ULC	Ulcinj	1.16	144	ePg	Pg	23 43 52.1	-2.3
ULC				eSg	Sn	23 44 10.4	-0.2
PVY	Plav	1.24	104	ePg	Pb	23 43 54.8	-1.0
PVY				eSg	Sn	23 44 14.2	+1.5
BBLS	Lazići	1.24	39	ePg	Pn	23 43 55.4	-0.6
BBLS				eSg	Sn	23 44 13.8	+1.1
BBLS	Lazići	1.24	39	⇓i Pg	Pn	23 43 54.5	-1.3
BBLS				eSg	Sb	23 44 12.1	+0.1
SJES	Sjenica	1.25	73	ePg	Pn	23 43 55.4	-0.6
SJES				eSg	Sn	23 44 13.5	+0.4
HAPS	Han Pijesak,Bl	1.27	21	ePg	Pn	23 43 54.9	-1.3
HAPS				eSg	Sg	23 44 13.2	+0.3
HAPS	Han Pijesak,Bl	1.27	21	ePg	Pn	23 43 54.7	-1.5
HAPS				eSg	Sn	23 44 11.9	-0.8
IVAS	Ivanjica	1.49	63	ePg	Pn	23 43 59.8	+0.6
IVAS				eSg	Sg	23 44 20.3	+0.2
DIVS	Divibare	1.70	45	ePn	Pn	23 44 02.2	+0.1
DIVS				eSn	Sg	23 44 26.5	-0.3
DIVS	Divibare	1.70	45	ePn	Pn	23 44 02.1	0.0
DIVS				eSn	Sn	23 44 24.6	+0.6
MGRS	Mrkonjic Grad	1.76	330	ePn	Pn	23 44 02.9	0.0
MGRS				eSn	Sn	23 44 25.7	+0.2
KIJV	Kijevo	1.78	309	i Pn	Pb	23 44 04.6	-0.4
KIJV				Sn	Sg	23 44 28.6	-0.9
TEKS	Tekeris	1.86	27	ePn	Pn	23 44 04.4	+0.1
TEKS				eSn	Sn	23 44 28.6	+0.7
GRUS	Gruza	2.00	60	ePn	Pn	23 44 06.9	+0.8
GRUS				eSn	Sb	23 44 32.9	-0.8
TRUS	Trudelj	2.00	48	ePn	Pn	23 44 07.1	+0.9
TRUS				eSn	Sn	23 44 33.1	-0.8
BLY	Banja Luka	2.02	336	ePn	Pb	23 44 08.7	-0.4
BLY				eSn	Sb	23 44 33.7	-0.7
BLY	Banja Luka	2.02	336	ePn	Pn	23 44 07.1	+0.6
BLY				eSn	Sn	23 44 33.1	+1.2
SELS	Selova	2.07	80	ePn	Pn	23 44 06.9	-0.2
SELS				eSn	Sn	23 44 33.5	+0.5
ZIRJ	Zirje	2.10	292	ePn	Pn	23 44 08.4	+0.9
ZIRJ				Sn	Sb	23 44 36.1	-0.5
MORI	Morici	2.14	298	i Pg	Pg	23 44 12.4	-0.8
MORI				Sn	Sb	23 44 38.0	+0.2
UDBI	Udbina	2.47	312	i Pg	Pb	23 44 17.4	+0.6
UDBI				Sn	Sb	23 44 46.7	-0.6
FRGS	Fruska Gora	2.49	25	ePn	Pn	23 44 13.9	+0.9
FRGS				eSn	Sn	23 44 45.8	+2.3
BARS	Barje	2.56	91	ePn	Pn	23 44 14.7	+0.8
BARS				eSn	Sn	23 44 46.2	+1.0
BOVS	Bovan	2.57	72	ePn	Pn	23 44 15.7	+1.7
DUGI	Dugi Otok	2.62	296	ePn	Pn	23 44 16.4	+1.7
DUGI				Sn	Sn	23 44 49.0	+2.4
MOSL	Moslavina	2.94	338	ePn	Pn	23 44 19.8	+0.7
MOSL				Sn	Sn	23 44 56.5	+2.1
ZAGS	Zajecar	2.99	71	ePn	Pn	23 44 21.2	+1.5
NVLJ	Novalja	3.01	305	i Pn	Pn	23 44 20.6	+0.6
NVLJ				Sn	Sn	23 44 57.4	+1.3
ZAPS	Zavoj	3.17	82	ePn	Pn	23 44 22.6	+0.3
MORH	Mrgy, Hungar	3.32	4	ePn	Pn	23 44 23.9	-0.4
MORH				eSn	Sn	23 45 03.5	-0.3
PTJ	Puntijarka	3.45	331	ePn	Pn	23 44 27.1	+1.0
KALN	Kalnik	3.49	338	ePn	Pn	23 44 27.6	+0.9
CRES	Cresnjev	3.58	326	⇓i Pn	Pn	23 44 27.9	+0.1
CRES				eSn	Sn	23 45 09.9	-0.3
CEY	Cerknica	3.98	317	ePn	Pn	23 44 33.7	+0.2
CEY				eSn	Sn	23 45 20.1	-0.2

IDC **24** *23:43:52.7±0.7, 4.32N×62.65E, h0km, mb4.1/17, mb1 4.3/17, mb1mx4.0/47, mbtmp4.1/17, Error ellipse: s-maj=20.7km s-min=15.4km az=175.0*

MOS **24** *23:43:54.9±1.2, 3.70N×62.58E, h9km, mb4.8/16, Error ellipse: s-maj=10.5km s-min=6.7km az=88.4*

NEIC **24** *23:43:57.0±2.6, 3.77N±0.09×62.53E±0.08, h10km±1km, mb5.1/61, Error ellipse: s-maj=15.6km s-min=13.2km az=189.0*

BJI **24** *23:43:58.0±0.0, 4.10N×62.50E, h5km, mB5.4/21, mb4.7/37, Ms5.2/18, Ms7 5.1/17*

GCMT **24** *23:44:04.0±0.3, 4.17N±0.02×62.67E±0.03, h12km, MW5.3/120, Moment Tensor Solution. s8,c8; s120,c194; Duration: 1.1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.98±.04; $M_{\theta\theta}$0.76±.03; $M_{\phi\phi}$0.21±.03; $M_{r\theta}$-0.18±.13; $M_{r\phi}$-0.49±.03; $M_{\theta\phi}$-0.33±.15; Best double couple: $M_0$1.08500×10^{17} NP1:ϕ_s102.00000°, δ48.00000°, λ-117.00000°. NP2:ϕ_s319.00000°, δ49.00000°, λ-63.00000°. Principal axes: T 1.0510, Plg0.0000°, Azm31.0000°; N 0.0660, Plg20.0000°, Azm121.0000°; P -1.1180, Plg70.0000°, Azm300.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 23:43:57.3±0.4, 3.74N±0.07×62.51E±0.06, h10km, n182, σ1.88/148, mb4.9/92, 9C-3D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSEY	Mahe Island	10.92	220	Pn	Pn	23 46 34.0	+0.2

MSEY Mahe Island 10.92 220 P Pn 23 46 34.0 +0.2
KAAM Kaadhehdhoo 10.96 107 Pn Pn 23 46 34.1 -0.2
SOCY Socotra 11.90 315 Pn Pn 23 46 49.6 +2.4
H08N2 Diego Garcia H 13.11 140 T T 00 01 00.0
baz=321,slow=76,SNR=6.9
H08N3 Diego Garcia H 13.12 140 T T 00 00 56.1
baz=321,slow=76,SNR=40
H08N1 Diego Garcia H 13.13 140 T T 00 00 55.3
baz=321,slow=76,SNR=6.9
DAMY Dhamar 20.85 302 P P 23 48 41.1 +1.3
DAMY IAmb IAmb 23 48 52.1
comp=Z,112nm,1.6s
ATD Arta Tunnel 20.96 293 P P 23 48 37.9 -2.8
comp=Z,15nm,0.9s,baz=289,slow=7.5,SNR=3.6
ATD Arta Tunnel 20.96 293 P P 23 48 38.5 -2.2
ATD IAmb IAmb 23 48 47.9
comp=Z,102nm,1.2s
UOSS Minazif 21.94 345 P P 23 48 50.1 -1.0
UOSS IAmb IAmb 23 48 56.0
comp=Z,53nm,1.1s
RER Riviere de l'E 25.62 195 P P 23 49 32.0 +4.9
RAYN Ar Rayn 25.63 322 P P 23 49 27.5 +0.3
RAYN IAmb IAmb 23 49 31.8
comp=Z,40nm,1.3s
RAYN Ar Rayn 25.63 322 P P 23 49 27.5 +0.3
RAYN pmax pmax
comp=Z,40nm,1.3s
KMBO Kilima Mbogo 25.71 260 P P 23 49 28.9 +0.6
comp=Z,2.7nm,0.7s,baz=56,slow=14,SNR=3.5
KMBO Kilima Mbogo 25.71 260 P P 23 49 30.9 +2.6
KMBO IAmb IAmb 23 49 40.3
comp=Z,83nm,1.6s
HRA Herat 30.49 360 P P 23 50 11.2 +0.4
PBA Port Blair 30.94 74 P P 23 50 16.9 +2.2
KBL Kabul 31.24 10 P P 23 50 18.5 +1.1
KBL IAmb IAmb 23 50 28.7
comp=Z,32nm,1.6s
KBL Kabul 31.24 10 P P 23 50 18.5 +1.1
KBL pmax pmax
comp=Z,32nm,1.7s
NIL Nilore 31.40 17 P P 23 50 20.3 +1.7
NIL IAmb IAmb 23 50 21.7
comp=Z,58nm,1.8s
NIL Nilore 31.40 17 P P 23 50 20.3 +1.7
NIL pmax pmax
comp=Z,58nm,1.8s
MBAR Mbarara 32.05 263 *i* P P 23 50 31.1 +6.4
MBAR pmax pmax
comp=Z,4.0nm,1.1s
GYA0B ALIBECK ARRAY 34.26 354 P P 23 50 44.4 +0.8
LHMI Lhok Sumawe 34.36 86 P P 23 50 44.2 -0.5
SHL Shillong 35.58 50 P P 23 50 52.9 -2.4
SHL IAmb IAmb 23 51 05.8
comp=Z,58nm,1.8s
SHL Shillong 35.58 50 P P 23 50 52.9 -2.4
SHL pmax pmax
comp=Z,58nm,1.8s
LSA Lhasa 37.44 43 P P 23 51 10.5 -1.0
LSA IAmb IAmb 23 51 21.3
comp=Z,68nm,1.9s
LSA Lhasa 37.44 43 P P 23 51 10.5 -1.0
LSA pmax pmax
comp=Z,68nm,1.9s
KSH Kashi 37.65 17 P P 23 51 09.3 -3.4
KSH PP PP 23 52 33.3 -5.4
KSH PcP PcP 23 53 33.9 +3.7
KSH S S 23 56 46.9 -16
KSH sS pS 23 57 02.1 -3.2
KSH ScS ScS 00 01 21.3 -5.2
KSH pmax pmax
comp=Z,33nm,1.5s
KSH pmax pmax
comp=Z,1μm,11.5s
KSH LR LR
comp=Z,1μm,9.1s
KSH LR LR
comp=Z,2μm,16.7s
KSH LR LR
comp=Z,2μm,14.7s
KULM Kulim 38.05 86 P P 23 51 16.6 +0.3
CM31 Chiang Mai Arr 38.51 65 P P 23 51 20.1 0.0
CMAR Chiang Mai Arr 38.51 65 P P 23 51 14.4 -5.7
comp=Z,0.4nm,0.3s,baz=262,slow=4.5,SNR=3.0
CHTO Chiang Mai 38.62 64 P P 23 51 21.9 +0.8
CHTO IAmb IAmb 23 51 31.6
comp=Z,49nm,1.8s
CHTO Chiang Mai 38.62 64 P P 23 51 21.9 +0.8
CHTO pmax pmax
comp=Z,49nm,1.8s
KK31 Karatay Array 39.83 9 P P 23 51 31.1 +0.2
KK31 Karatay Array 39.83 9 P P 23 51 31.1 +0.2
KK31 pmax pmax
comp=Z,46nm,2.0s
KKAR Karatay Array 39.83 9 P P 23 51 30.8 -0.1
KKAR Karatay Array 39.83 9 P P 23 51 30.8 -0.1
KKAR pmax pmax
comp=Z,46nm,2.0s
PBKT Sadao Pong 39.85 69 P P 23 51 33.7 +2.4
AAK Ala-Archa 40.17 14 P P 23 51 36.5 +2.6
AAK Ala-Archa 40.17 14 *i* P P 23 51 33.6 -0.3
AAK pmax pmax
comp=Z,4.0nm,1.0s
GAZ Gaziantep 40.57 328 P P 23 51 40.5 +3.3
GAZ IAmb IAmb 23 51 42.5
comp=Z,72nm,1.8s
TBLG Delisi 41.04 340 P P 23 51 39.8 -1.1
TBLG Delisi 41.04 340 P P 23 51 39.8 -1.1
TBLG pmax pmax
comp=Z,31nm,1.5s
AKH Akhalkalaki 41.20 338 IAmb IAmb 23 51 46.7
comp=Z,92nm,1.9s
KBZ Khabaz 43.44 339 *i* P P 23 52 00.9 +0.5
KBZ pmax pmax
comp=Z,11nm,1.8s
SHA1 Shidzhatmaz 43.53 339 *i* P P 23 52 01.6 +0.2
KIV Kislovodsk 43.71 339 P P 23 52 02.9 +0.2
KIV IAmb IAmb 23 52 07.5
comp=Z,32nm,1.5s
KIV Kislovodsk 43.71 339 *e*P P 23 52 03.1 +0.4
KIV pmax pmax
comp=Z,25nm,1.1s
KMI Kunming 44.11 57 P P 23 52 07.9 +1.5
KMI pP pwP 23 52 12.3 -0.2
KMI pmax pmax
comp=Z,8.0nm,0.6s
KMI pmax pmax
comp=Z,450nm,5.0s
KMI LR LR
comp=Z,1μm,16.4s
KMI LR LR
comp=Z,2μm,16.6s
KMI LR LR
comp=Z,2μm,19.5s
BR131 Keskin Array S 44.34 328 *i* P P 23 52 09.9 +2.0
BRTR Keskin Array B 44.34 328 P P 23 52 03.0 -4.9
comp=Z,2.5nm,0.8s,baz=151,slow=10.0,SNR=6.1
BRTR Keskin Array B 44.34 328 P P 23 52 03.0 -4.9
ELL Elmali 44.45 322 P P 23 52 08.8 0.0
ELL Elmali 44.45 322 P P 23 52 08.8 0.0
ELL pmax pmax
comp=Z,305nm,1.9s
ILGA Ilgaz 45.27 329 P P 23 52 16.1 +0.7
ILGA IAmb IAmb 23 52 24.0
comp=Z,15nm,0.6s
WMQ Urumqi 45.70 25 *e*P P 23 52 19.9 +1.3
WMQ pP pwP 23 52 25.3 +0.6
WMQ pmax pmax
comp=Z,12nm,1.3s
WMQ pmax pmax
comp=Z,1μm,11.7s
WMQ LR LR
comp=Z,1μm,18.9s
WMQ LR LR
comp=Z,2μm,18.9s
WMQ LR LR
comp=Z,3μm,25.3s
LBTB Lobatse 45.85 229 P P 23 52 22.0 +1.9
LBTB Lobatse 45.85 229 P P 23 52 22.0 +1.9
LBTB pmax pmax
comp=Z,75nm,1.9s
MAKZ Makanchi 46.10 19 P P 23 52 21.6 0.0
MAKZ IAmb IAmb 23 52 29.6
comp=Z,27nm,1.6s
MAKZ Makanchi 46.10 19 P P 23 52 21.6 0.0
MAKZ pmax pmax
comp=Z,27nm,1.7s
MK31 Makanchi Array 46.19 19 P P 23 52 20.3 -2.0
MK31 Makanchi Array 46.19 19 P P 23 52 20.3 -2.0
MK31 pmax pmax
comp=Z,17nm,2.0s
MKAR Makanchi Array 46.19 19 P P 23 52 14.9 -7.4
comp=Z,0.3nm,0.7s,baz=216,slow=5.7,SNR=2.9
MKAR PcP PcP 23 53 53.6 -4.5
comp=Z,2.3nm,0.9s,baz=242,slow=4.9,SNR=6.4
MANT Manisa 46.39 323 P P 23 52 24.3 +0.1
ANN Anapa 46.45 335 *e*P P 23 52 23.7 -0.6
ANN pmax pmax
comp=Z,100nm,1.7s
CD2 Chengdu 47.31 50 P P 23 52 32.4 +1.0
CD2 pmax pmax
comp=Z,20nm,0.5s
GYA Guiyang 47.89 57⇑*i*P P 23 52 38.3 +2.2
GYA pmax pmax
comp=Z,10.0nm,1.0s
BOSA Boshof 48.13 226 P P 23 52 38.5 +0.6
comp=Z,2.1nm,0.7s,baz=50,slow=9.4,SNR=3.5
BOSA Boshof 48.13 226 IAmb IAmb 23 52 47.9
comp=Z,62nm,1.9s
KURK Kurchatov 48.73 14 *i* P P 23 52 41.8 -0.2
KURK pmax pmax
comp=Z,6.0nm,1.2s
GTA Gaotai 49.01 38 ⇑P P 23 52 46.3 +1.8
GTA pP pwP 23 52 51.8 +1.1
GTA sP sP 23 52 55.0 +7.4
GTA pmax pmax
comp=Z,290nm,5.2s
GTA LR LR
comp=Z,2μm,17.8s
GTA LR LR
comp=Z,4μm,17.1s
GTA LR LR
comp=Z,5μm,20.0s
BRVK Borovoye 49.57 6 P P 23 52 49.0 +0.6
BRVK IAmb IAmb 23 52 51.0
comp=Z,46nm,1.8s
BRVK Borovoye 49.57 6 *i* P P 23 52 48.1 -0.3
BRVK pmax pmax
comp=Z,6.0nm,1.1s
TSUM Tsumeb 49.73 241 P P 23 52 50.5 +0.2
VSR Storozhevoye 51.20 341 *i* P P 23 53 00.4 -0.3
VSR pmax pmax
comp=Z,21nm,1.4s
VTS Vitosha 52.12 324 ⇓P P 23 53 01.6 -6.4
VTS Vitosha 52.12 324 P P 23 53 08.6 +0.6
VTS IAmb IAmb 23 53 12.2
comp=Z,71nm,2.0s
VTS Vitosha 52.12 324 P P 23 53 08.6 +0.6
VTS pmax pmax
comp=Z,71nm,2.0s
VRI Vrincioaia 52.26 329 ⇑P P 23 53 11.7 +2.8
PLOR Plostina 52.29 329 ⇑P P 23 53 12.0 +2.9
MLR Muntele Rosu 52.42 328 ⇑P P 23 53 14.1 +4.0
ARU Arti 52.63 357 P P 23 53 11.7 +0.4
ARU Arti 52.63 357*c i*P P 23 53 11.4 +0.1
ARU 23 55 06.9
ARU S S 00 00 38.6 +0.1
ARU pmax pmax
comp=Z,44nm,1.9s
TESR Tescani 52.74 329 ⇓P P 23 53 15.1 +2.8
VOIR 52.86 328 ⇑P P 23 53 08.3 -5.0
JAGI Jajag, Banyuwa 52.90 103 P P 23 53 13.6 -0.5
JAGI IAmb IAmb 23 53 24.9
comp=Z,56nm,1.7s
SVE Sverdlovsk 52.95 359 *e*P P 23 53 07.2 -6.5
SVE pmax pmax
comp=Z,29nm,1.8s
ZAA0 Zalesovo Array 53.27 16 P P 23 53 15.1 -0.9
ZALV Zalesovo Beam 53.27 16 P P 23 53 07.6 -8.5
comp=Z,1.5nm,0.6s,baz=213,slow=6.9,SNR=2.7
AKASG Malin Array Be 54.51 335 P P 23 53 19.1 -6.1
comp=Z,0.3nm,0.4s,baz=122,slow=6.2,SNR=5.2
OBN Obninsk 55.34 342 *e*P P 23 53 31.5 +0.4
OBN pmax pmax
comp=Z,9.0nm,1.7s
MOS Moscow 55.57 343 *e*P P 23 53 32.1 -0.6
MOS pmax pmax
comp=Z,72nm,1.6s
ACER Acerenza 55.73 318 P P 23 53 34.1 -0.2
CORL Corleone 56.26 314 P P 23 53 39.4 +1.3
UZH Uzhgorod 56.36 329 *e*P P 23 53 39.7 +1.1
UZH *e* 23 53 45.0
BLY Banja Luka 56.95 323 P P 23 53 41.7 -1.2
BLY IAmb IAmb 23 53 47.1
comp=Z,22nm,1.5s
PSZ Piszkesteto 57.18 327 P P 23 53 44.0 -0.6
PSZ IAmb IAmb 23 53 47.8
comp=Z,34nm,2.0s
PSZ Piszkesteto 57.18 327 P P 23 53 44.0 -0.6
PSZ pmax pmax
comp=Z,34nm,2.0s
INTR Introdacqua 57.66 319 P P 23 53 47.7 -0.3
ZAK Zakamensk 57.75 30 *e*P P 23 53 48.9 +0.4
ZAK pmax pmax
comp=Z,5.0nm,1.5s
SONM Songino Array 57.82 33 P P 23 53 42.8 -6.4
comp=Z,1.4nm,1.0s,baz=190,slow=4.4,SNR=2.7
ULN Ulaanbaatar 58.20 34 P P 23 53 49.5 -2.4
ULN Ulaanbaatar 58.20 34 P P 23 53 49.5 -2.4
ULN pmax pmax
comp=Z,7.0nm,1.3s
TLY Talaya 58.75 29 P P 23 53 53.6 -1.8
TLY IAmb IAmb 23 54 05.5
comp=Z,17nm,1.5s
TLY Talaya 58.75 29 *e*P P 23 53 57.2 +1.8
TLY pmax pmax
comp=Z,35nm,1.5s
TLY MLR MLR
comp=Z,5μm,17.0s
JAVC Velka Javorina 58.94 327 *e* P 23 53 59.9 +3.1
SOKA Soboth 59.24 324 *i* pP P 23 54 01.0 +2.0
comp=Z,9.0nm,1.6s
ARSA Arzberg 59.26 325 *i* pP P 23 53 59.9 +0.9
comp=Z,3.8nm,0.8s
LATE Laterza 59.32 318 P P 23 53 58.8 -0.8
LATE IAmb IAmb 23 54 03.3
comp=Z,51nm,1.9s
CONA Conrad Observa 59.42 325 *i* P P 23 53 54.8 -5.5
comp=Z,20nm,1.6s
OBKA Obir 59.44 323 *i* pP P 23 54 03.9 +3.5
comp=Z,13nm,1.6s
TRI Trieste 59.52 322 P P 23 53 59.4 -1.4
TRI IAmb IAmb 23 54 04.0
comp=Z,17nm,1.1s
TRI Trieste 59.52 322 P P 23 53 59.4 -1.4
TRI pmax pmax
comp=Z,17nm,1.1s
MORC Moravsky Berou 59.53 328 *e*P P 23 53 55.2 -5.7
MORC *e* 23 54 02.9
MORC Moravsky Berou 59.53 328 P P 23 54 02.9 +2.0
MORC IAmb IAmb 23 54 11.7
comp=Z,35nm,1.9s
MORC Moravsky Berou 59.53 328 P P 23 54 02.9 +2.0
MORC pmax pmax
comp=Z,35nm,1.9s
KLMR Klimovskoe 59.59 347 *e*P P 23 53 52.5 -8.5
KLMR pmax pmax
comp=Z,108nm,1.6s
KLMR Klimovskoe 59.59 347 *e*P P 23 53 52.5 -8.5
KLMR AMP 23 54 09.1
comp=Z,108nm,1.6s
NJ2 Nanjing 59.74 55 *e*P P 23 54 04.9 +2.3
NJ2 pmax pmax
comp=Z,11nm,0.6s
NJ2 pmax pmax
comp=Z,280nm,4.0s
NJ2 LR LR
comp=Z,620nm,17.1s
NJ2 LR LR
comp=Z,870nm,17.6s
NJ2 LR LR
comp=Z,920nm,17.5s
KRUC Moravsky 59.75 327 *e*P P 23 53 56.7 -5.6
KRUC *e* 23 54 04.1
VRAC Vranov 59.77 327 *e*P P 23 53 56.9 -5.7
VRAC *e* 23 54 04.7
CASP Castiglione de 60.02 318 P P 23 54 03.2 -1.1
CASP IAmb IAmb 23 54 07.8
comp=Z,17nm,1.1s
MYKA Terra Mystica 60.05 323 *i* pP P 23 54 07.4 +2.8
comp=Z,13nm,1.2s
KRLC Kraliky 60.11 328 *e*P P 23 53 59.0 -5.9
KRLC Kraliky 60.11 328 *e*P P 23 53 59.0 -5.9
MOA Molln 60.30 325 *i* P P 23 54 00.9 -5.2
comp=Z,19nm,1.6s
KBA Koelnbreinsper 60.45 324 *i* P P 23 54 02.2 -5.2
comp=Z,4.7nm,1.1s
TOA0 Torodi Ar. Sit 60.75 283 P P 23 54 07.4 -2.4
TOA0 IAmb IAmb 23 54 17.4
comp=Z,48nm,2.0s
TORD Torodi Ar. Bea 60.75 283 P P 23 54 07.1 -2.8
comp=Z,3.4nm,1.1s,baz=69,slow=4.8,SNR=5.4
ABTA Abfaltersbach 60.78 323 *i* pP P 23 54 11.6 +2.0
comp=Z,9.3nm,1.2s
PRMA PARMA 61.23 320 P P 23 54 12.6 0.0
KHC Kasperske Hory 61.35 326 *e*P P 23 54 14.4 +1.1
KHC Kasperske Hory 61.35 326 *i* P P 23 54 13.7 +0.4
KHC pmax pmax
comp=Z,13nm,1.7s
WTTA Wattenberg 61.55 323 *i* pP P 23 54 17.2 +2.2
comp=Z,12nm,1.7s
WATA Walderalm 61.62 323 *i* pP P 23 54 17.5 +2.1
comp=Z,15nm,1.7s
SQTA Sankt Quirin 61.79 323 *i* pP P 23 54 18.3 +1.8
comp=Z,6.6nm,0.9s
FETA Feichten 61.99 322 *i* P P 23 54 17.5 -0.4
comp=Z,10nm,1.7s
RETA Reutte 62.18 323 *i* pP P 23 54 20.0 +0.9
comp=Z,16nm,1.8s
NKC Novy Kostel 62.54 326 *e*P P 23 54 16.2 -5.1
NKC *ex* x 23 54 23.0
NKC Novy Kostel 62.54 326 *e*P P 23 54 16.2 -5.1
NKC *e* 23 54 23.0
TUE Stuetta 62.59 321 P P 23 54 21.3 -0.7
TUE IAmb IAmb 23 54 26.3
comp=Z,29nm,1.4s
CLL Collm 62.79 328 *e*P P 23 54 19.0 -3.9
CLL *i* 23 54 25.6
comp=Z,45nm,1.9s
CLL *i* 23 54 32.6
TMCR Tamitsa 62.85 348 *e*P P 23 54 24.2 +1.1
TMCR pmax pmax
comp=Z,70nm,1.4s
BNI Bardonecchia 63.71 319 P P 23 54 28.1 -1.2
BNI Bardonecchia 63.71 319 P P 23 54 28.1 -1.2
BNI pmax pmax
comp=Z,51nm,1.9s
SENIN Lac Senin/Sane 63.83 321 P P 23 54 30.2 0.0
SENIN IAmb IAmb 23 54 34.5
comp=Z,16nm,1.1s
BFO Black Forest 64.02 323 P P 23 54 30.9 -0.3
BFO Black Forest 64.02 323 P P 23 54 30.9 -0.3
BFO pmax pmax
comp=Z,57nm,1.5s
WLF Walferdange 65.89 324 PcP PcP 23 55 17.1 +3.0
SNY Shenyang 66.18 46 ⇑P P 23 54 47.3 +2.1
SNY pmax pmax
comp=Z,6.0nm,0.5s
DBIC Dimbokro 67.11 276 P P 23 54 48.4 -3.4
comp=Z,3.1nm,0.7s,baz=62,slow=11,SNR=3.0
NRIK Noril'sk 67.57 9 *i* P P 23 54 54.5 +0.9
NRIK pmax pmax
comp=Z,4.0nm,1.2s
KSRS Korea Array 68.30 51 P P 23 54 53.2 -5.6
comp=Z,0.4nm,0.3s,baz=255,slow=6.9,SNR=2.8
NB2 NORSAR Subarra 68.88 336 P P 23 54 55.2 -6.8
comp=Z,72nm,1.7s,baz=120,slow=6.2
NB2 NORSAR Subarra 68.88 336 P P 23 54 55.2 -6.8
baz=120,slow=6.2
NOA NORSAR Array B 68.88 336 P P 23 54 55.7 -6.3
comp=Z,3.0nm,0.9s,baz=118,slow=6.7,SNR=4.4
NAO01 NORSAR Array S 68.91 336 P P 23 55 01.6 -0.6
ESDC Sonseca Array 69.60 311 P P 23 55 01.6 -5.3
comp=Z,2.5nm,0.7s,baz=89,slow=5.0,SNR=7.1
ARCES ARCESS Array B 70.06 347 P P 23 55 02.2 -6.9
comp=Z,9.7nm,0.8s,baz=140,slow=5.9,SNR=9.5
KLR Kul'dur 73.69 40 *i* P P 23 55 32.0 +0.7
KLR pmax pmax
comp=Z,4.0nm,1.1s
WRA Warramunga Arr 74.29 112 P P 23 55 33.1 -2.3
comp=Z,4.3nm,1.1s,baz=288,slow=5.5,SNR=3.4
WRAB Tennant Creek 74.30 112 P P 23 55 33.7 -1.8
WRAB IAmb IAmb 23 55 41.9
comp=Z,42nm,1.7s
WRAB Tennant Creek 74.30 112 P P 23 55 33.7 -1.8
WRAB pmax pmax
comp=Z,42nm,1.7s
SYO Syowa Base 74.30 188⇓*i*P P 23 55 35.2 +0.8
SYO Syowa Base 74.30 188⇑*i*sP sP 23 55 40.0 +2.5
WB2 Warramunga Arr 74.30 112 IAmb IAmb 23 55 43.8
comp=Z,64nm,1.9s
WB0 Warramunga Arr 74.31 112 IAmb IAmb 23 55 48.6
comp=Z,38nm,1.6s
ASAR Alice Springs 74.57 116 P P 23 55 34.5 -2.5
comp=Z,4.2nm,1.1s,baz=285,slow=5.8,SNR=6.8
AS31 Alice Springs 74.57 116 P P 23 55 35.1 -1.9
YAK Yakutsk 76.13 27 *e*P P 23 55 46.3 +1.2
YAK pmax pmax
comp=Z,8.0nm,1.0s
MA2 Magadan 85.91 31 *i* P P 23 56 38.5 +1.1
MA2 pmax pmax
comp=Z,5.0nm,1.6s
SEY Seymchan 86.63 27 *i* P P 23 56 41.3 +0.5
BILL Bilibino 91.67 21 *i* P P 23 57 04.7 +0.2
BILL pmax pmax
comp=Z,5.0nm,1.3s
CFA Coronel Fontan 126.13 233 PKP PKPdf 00 02 58.6 -2.1
comp=Z,2.3nm,0.8s,baz=152,slow=1.8,SNR=5.8
KSCO Kaye Shedlock' 135.30 343 PKPpre PKPpre 00 03 03.2
KSCO PKPdf PKPdf 00 03 14.8 -3.2
NVAR Mina Array Bea 138.03 1 PKP PKPdf 00 03 19.2 -4.0
comp=Z,1.3nm,0.9s,baz=13,slow=0.1,SNR=4.2
X16A Lo Mia Camp, P 141.62 352 PKPpre 00 03 19.7
214A Organ Pipe Nat 144.22 353 PKPab 00 03 31.6 -0.3
TXAR Lajitas Array 144.54 339 PKP PKPab 00 03 29.1 -4.2
comp=Z,1.4nm,1.0s,baz=90,slow=3.8,SNR=6.7
HPIG 147.43 340 PKPdf 00 03 38.1 -2.0

MOS 24 23:47:05.3±1.0, 4.23N×62.59E, h8km, mb5.3/22, MS5.2/5, Error ellipse: s-maj=8.3km s-min=5.4km az=99.1
NEIC 24 23:47:06.1±2.5, 4.06N±0.08×62.60E±0.08, h10km±1km, mb5.3/80, Mwc5.5(GCMT), Error ellipse: s-maj=13.9km s-min=13.5km az=119.0
IDC 24 23:47:06.2±0.5, 4.18N×62.64E, h0km, mb4.3/30, mb1 4.4/32, mb1mx4.3/47, mbtmp4.3/32, ML3.6/1, MS4.8/15, Ms1 4.8/15, ms1mx4.6/43, Error ellipse: s-maj=14.4km s-min=12.0km az=179.0
GCMT 24 23:47:09.1±0.1, 4.22N±0.01×62.57E±0.01, h12km, MW5.4/150, Moment Tensor Solution. s59,c77; s150,c306; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr-1.71±.03; Mθθ1.26±.02; Mφφ0.45±.03; Mrθ0.45±.09; Mrφ-0.82±.02; Mθφ0.01±.10; Best double couple: M0 1.79500×10^17 NP1:φs130.00000°, δ39.00000°, λ-78.00000°. NP2:φs294.00000°, δ52.00000°, λ-100.00000°. Principal axes: T 1.8070, Plg6.0000°, Azm31.0000°; N -0.0230, Plg8.0000°, Azm300.0000°; P -1.7840, Plg80.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC 24 23:47:09, 4.20N×62.56E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr-1.80; Mθθ1.31; Mφφ0.49; Mrθ0.30; Mrφ-0.87; Mθφ-0.28; Fault plane solution: M0 1.88000×10^17 NP1:φs305.00000°, δ51.00000°, λ-87.00000°. NP2:φs120.00000°, δ39.00000°, λ-94.00000°. Principal axes: T 1.9048, Plg6.0000°, Azm33.0000°; N -0.0562, Plg2.0000°, Azm123.0000°; P -1.8486, Plg83.0000°, Azm233.0000°;
ISC 24 23:47:06.9±0.3, 4.03N±0.05×62.62E±0.05, h10km, n277, σ1s63/280, mb5.0/120, MS5.0/28, 21C-12D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSEY	Mahe Island	11.21	220	Pn	Pn	23 49 47.4	0.0
MSEY					Sn	23 51 49.5	-3.3
MSEY	Mahe Island	11.21	220	P	Pn	23 49 47.0	-0.4
SOCY	Socotra	11.77	314		Pn	23 50 01.7	+6.6
SOCY	Socotra	11.77	314	P	Pn	23 50 00.8	+5.8
	SNR=12						
SOCY				S	Sn	23 52 49.7	+43
H08N2	Diego Garcia H	13.26	141	T	T	00 04 05.3	

baz=321,slow=76,SNR=33
H08N3 Diego Garcia H 13.27 141 T T 00 04 14.6
baz=321,slow=76,SNR=32
H08N1 Diego Garcia H 13.28 141 T T 00 04 07.0
baz=321,slow=76,SNR=31
DGAR Diego Garcia 15.02 139 *i* P P 23 50 43.6 -1.2
DGAR pmax pmax
comp=Z,57nm,1.0s
SHAO Shalim 15.50 334 P Pn 23 50 47.3 +1.6
DMTO DMTO 15.54 332 P Pn 23 50 48.0 +1.8
DMTO S S 23 53 50.2 -4.0
RBK Rabkut 15.72 329 P Pn 23 50 50.5 +1.8
SNR=10.0
RBK S S 23 54 01.5 +3.3
ABTO Aybut 16.09 326 P P 23 50 55.2 -1.5
SNR=21
ABTO S S 23 54 10.0 +4.4
WHFO Wadi Hawf 16.30 329 P P 23 50 58.2 -0.8
SNR=11
WHFO S S 23 54 07.8 -2.1
DQM DQM 16.56 343 P Pn 23 50 59.9 +0.5
DQM S S 23 54 09.4 -5.7
MHTO MHTO 17.45 345 P Pn 23 51 10.0 -0.5
SNR=25
POO Poona 18.12 36 *e*P Pn 23 51 19.0 +0.1
PALK Pallekele 18.28 79 P P 23 51 21.3 +0.3
comp=Z,0.2nm,0.3s,baz=295,slow=12,SNR=2.3
PALK LR LR 23 56 45.2
comp=Z,7µm,20.6s,baz=272,slow=32
PALK Pallekele 18.28 79 Pn 23 51 19.1 -1.8
PALK Pallekele 18.28 79 *i* P P 23 51 21.2 +0.2
PALK pmax pmax
comp=Z,43nm,1.5s
WSAR Wadi Sarin 19.48 349 P P 23 51 34.2 +0.1
baz=195,slow=12,SNR=5.2
WSAR LR LR 23 57 16.0
comp=Z,3µm,22.0s,baz=184,slow=32
HYB Hyderabad 20.52 48 *i* P Pn 23 51 47.0 -0.7
DAMY Dhamar 20.79 301 P P 23 51 46.0 -2.8
DAMY IAmb IAmb 23 51 58.9
comp=Z,234nm,1.8s
ATD Arta Tunnel 20.94 292 P P 23 51 51.1 +0.9
comp=Z,70nm,1.1s,baz=176,slow=7.0,SNR=7.8
ATD LR LR 23 58 24.1
comp=Z,1µm,20.4s,baz=96,slow=32
ATD Arta Tunnel 20.94 292 P P 23 51 47.3 -2.9
ATD IAmb IAmb 23 52 00.8
comp=Z,132nm,1.3s
UOSS Minazif 21.69 344 P P 23 51 55.9 -2.1
FURI Furi 24.27 283 P P 23 52 25.0 +0.1
RAYN Ar Rayn 25.47 321 P P 23 52 34.6 -0.8
RAYN IAmb IAmb 23 52 44.5
comp=Z,153nm,1.8s
RAYN Ar Rayn 25.47 321 P P 23 52 34.6 -0.8
RAYN pmax pmax
comp=Z,153nm,1.8s
KMBO Kilima Mbogo 25.86 259 P P 23 52 41.6 +2.4
comp=Z,11nm,1.0s,baz=64,slow=11,SNR=15
KMBO Kilima Mbogo 25.86 259 P P 23 52 41.4 +2.1
KMBO Kilima Mbogo 25.86 259 sP sP 23 52 42.0 -0.5
KBL Kabul 30.94 10 P P 23 53 23.3 -1.0
KBL IAmb IAmb 23 53 34.4
comp=Z,75nm,1.8s
KBL Kabul 30.94 10 P P 23 53 23.3 -1.0
KBL pmax pmax
comp=Z,75nm,1.8s
NIL Nilore 31.09 17 P P 23 53 24.2 -1.3
NIL Nilore 31.09 17 P P 23 53 24.2 -1.3
NIL pmax pmax
comp=Z,119nm,1.8s
MBAR Mbarara 32.19 262 P P 23 53 35.9 +0.3
comp=Z,0.8nm,0.3s,baz=70,slow=9.8,SNR=7.0
MBAR LR LR 00 06 40.0
comp=Z,2µm,18.6s,baz=86,slow=36
MBAR Mbarara 32.19 262 P P 23 53 36.5 +0.9
MBAR Mbarara 32.19 262 P P 23 53 36.5 +0.9
MBAR pmax pmax
comp=Z,3.0nm,1.2s
GEYT Alibeck 33.99 354 P P 23 53 51.1 +0.2
comp=Z,4.0nm,1.0s,baz=201,slow=11,SNR=4.6
GEYT LR LR 00 07 07.1
comp=Z,729nm,22.0s,baz=170,slow=36
GYA0B ALIBECK ARRAY 33.99 354 P P 23 53 48.6 -2.2
SHL Shillong 35.32 50 P P 23 54 01.8 -0.8
SHL IAmb IAmb 23 54 11.6
comp=Z,73nm,1.9s
SHL Shillong 35.32 50 P P 23 54 01.8 -0.8
SHL pmax pmax
comp=Z,73nm,1.9s
PSI Prapat 36.26 91 LR LR 00 07 20.1
comp=Z,3µm,18.9s,baz=260,slow=34
PSI Prapat 36.26 91 P P 23 54 11.2 +0.3
PSI pmax pmax
comp=Z,29nm,1.7s
RPSI Rantau Prapat 36.27 91 P P 23 54 11.2 +0.5
EIL Elat 36.55 317 LR LR 00 08 28.6
comp=Z,2µm,18.1s,baz=130,slow=35
ASF Jabal al Asfar 36.95 322 P P 23 54 17.7 +1.3
comp=Z,2.6nm,0.8s,baz=117,slow=1.8,SNR=4.0
ASF LR LR 00 08 30.3
comp=Z,2µm,18.9s,baz=78,slow=35
LSA Lhasa 37.16 43 P P 23 54 18.8 +0.1
LSA Lhasa 37.16 43 P P 23 54 18.8 +0.1
LSA pmax pmax
comp=Z,55nm,1.6s
KSH Kashi 37.34 17 P P 23 54 18.4 -1.3
KSH sP pwP 23 54 28.3 +3.0
KSH PcP PcP 23 56 42.8 +3.9
KSH pmax pmax
comp=Z,30nm,1.3s
KSH pmax pmax
comp=Z,2µm,8.9s
KSH LR LR
comp=Z,2µm,10.8s
KSH LR LR
comp=Z,690nm,8.9s
TAS Tashkent 37.61 8 P P 23 54 20.9 -0.9
TAS IAmb IAmb 23 54 31.2
comp=Z,53nm,1.1s
TAS Tashkent 37.61 8 P P 23 54 20.9 -0.9
TAS pmax pmax
comp=Z,53nm,1.1s
CM31 Chiang Mai Arr 38.29 65 P P 23 54 27.6 -0.4
CMAR Chiang Mai Arr 38.29 65 P P 23 54 29.9 +1.9
comp=Z,2.5nm,0.8s,baz=257,slow=9.2,SNR=12
CHTO Chiang Mai 38.40 65 P P 23 54 28.9 0.0
CHTO Chiang Mai 38.40 65 P P 23 54 28.9 0.0
CHTO pmax pmax
comp=Z,22nm,1.3s
MMAI Mount Meron Ar 38.44 322 P P 23 54 31.0 +1.9
comp=Z,5.0nm,1.0s,baz=116,slow=13,SNR=4.4
MMAI LR LR 00 09 46.1
comp=Z,1µm,18.1s,baz=155,slow=36
LSZ Lusaka 39.12 240 P P 23 54 37.7 +2.7
comp=Z,2.8nm,0.8s,baz=56,slow=8.4,SNR=6.3
LSZ LR LR 00 09 49.4
comp=Z,2µm,18.4s,baz=86,slow=35
LSZ Lusaka 39.12 240 P P 23 54 33.7 -1.3
LSZ Lusaka 39.12 240 P P 23 54 33.7 -1.3
LSZ pmax pmax
comp=Z,72nm,2.0s
GNI Garni 39.41 338 P P 23 54 38.2 +1.0
comp=Z,12nm,1.0s,baz=167,slow=6.0,SNR=6.9
GNI LR LR 00 10 51.2
comp=Z,900nm,20.5s,baz=142,slow=36
GNI Garni 39.41 338 P P 23 54 36.2 -1.0
GNI IAmb IAmb 23 54 51.6
comp=Z,126nm,1.6s
GNI Garni 39.41 338 P P 23 54 36.2 -1.0
GNI pmax pmax
comp=Z,126nm,1.6s
UCH Uchtor 39.49 14 P P 23 54 42.0 +3.9
SNR=10
KZA Kyzart 39.53 15 P P 23 54 41.2 +2.8
SNR=9.5
KK31 Karatay Array 39.53 9 P P 23 54 36.9 -1.1
KK31 IAmb IAmb 23 54 46.9
comp=Z,80nm,1.8s
KK31 Karatay Array 39.53 9 P P 23 54 36.9 -1.1
KK31 pmax pmax
comp=Z,80nm,1.8s
KKAR Karatay Array 39.53 9 P P 23 54 36.9 -1.1
KKAR IAmb IAmb 23 54 46.9
comp=Z,80nm,1.8s
KKAR Karatay Array 39.53 9 P P 23 54 36.9 -1.1
KKAR pmax pmax
comp=Z,80nm,1.8s
AKT Akhty 39.60 342 *e*P P 23 54 39.9 +1.2
AKT *e* 23 56 11.2
AKT *e* 23 56 49.9
AKT pmax pmax
comp=Z,42nm,1.4s
PBKT Sadao Pong 39.65 69 P P 23 54 40.0 +0.8
EKS2 Erkin-Say 39.73 13 P P 23 54 43.1 +3.3
SNR=14
AAK Ala-Archa 39.87 14 P P 23 54 41.8 +0.8
comp=Z,4.9nm,0.9s,baz=165,slow=6.4,SNR=9.6
AAK LR LR 00 11 09.1
comp=Z,3µm,20.1s,baz=188,slow=36
AAK Ala-Archa 39.87 14 P P 23 54 43.3 +2.3
SNR=5.5
AAK Ala-Archa 39.87 14 P P 23 54 41.1 +0.1
AAK IAmb IAmb 23 54 50.3
comp=Z,80nm,1.8s
AAK Ala-Archa 39.87 14 *ce*P P 23 54 40.0 -1.0
AAK pmax pmax
comp=Z,41nm,1.7s
KBK Karagaybulak 40.00 14 P P 23 54 44.5 +2.5
SNR=6.9
GAZ Gaziantep 40.38 328 IAmb IAmb 23 54 55.2
comp=Z,113nm,2.0s
TBLG Delisi 40.81 339 P P 23 54 47.3 -1.3
TBLG Delisi 40.81 339 P P 23 54 47.3 -1.3
TBLG pmax pmax
comp=Z,67nm,1.8s
AKH Akhalkalaki 40.98 338 P P 23 54 49.0 -1.2
AKH IAmb IAmb 23 54 59.3
comp=Z,67nm,1.6s
AKH Akhalkalaki 40.98 338 P P 23 54 49.0 -1.2
AKH pmax pmax
comp=Z,67nm,1.6s
GROC Groznyy 41.77 341 *e*P P 23 54 56.5 +0.1
GROC *e* 23 56 30.6
GROC *e* 23 56 55.4
GROC *e*S S 00 01 14.0 +0.3
GROC pmax pmax
comp=Z,51nm,1.4s
KBZ Khabaz 43.21 339 P P 23 55 09.2 +1.1
comp=Z,6.5nm,1.1s,baz=157,slow=0.6,SNR=4.9
KBZ PP PP 23 56 51.7 +3.2
comp=Z,12nm,1.2s,baz=153,slow=6.1,SNR=6.4
KBZ LR LR 00 14 27.3
comp=Z,718nm,18.1s,baz=142,slow=38
KBZ Khabaz 43.21 339 *i* P P 23 55 08.6 +0.5
KBZ pmax pmax
comp=Z,19nm,1.4s
SHA1 Shidzhatmaz 43.30 339 P P 23 55 08.8 -0.4
KIV Kislovodsk 43.48 339 P P 23 55 09.8 -0.6
KIV IAmb IAmb 23 55 20.2
comp=Z,75nm,1.8s
KIV Kislovodsk 43.48 339 *e*P P 23 55 10.2 -0.3
KIV pmax pmax
comp=Z,38nm,1.0s
KMI Kunming 43.87 57 P P 23 55 17.5 +3.5
KMI sP pwP 23 55 21.9 +2.3
KMI pmax pmax
comp=Z,9.0nm,1.1s
KMI LR LR
comp=Z,1µm,16.4s
KMI LR LR
comp=Z,2µm,16.6s
BR131 Keskin Array S 44.15 328 *i* P P 23 55 16.6 +0.6
BRTR Keskin Array B 44.15 328 P P 23 55 15.7 -0.4
comp=Z,4.3nm,0.7s,baz=144,slow=9.9,SNR=17
BRTR PP PcP 23 57 05.3 +4.3
comp=Z,2.1nm,1.0s,baz=128,slow=8.0,SNR=4.7
BRTR LR LR 00 13 55.0
comp=Z,1µm,20.0s,baz=104,slow=36
GOF Gofitskoye 44.32 340⇑*e*P P 23 55 18.4 +1.3
BR231 Keskin MP Arra 44.70 327 P P 23 55 19.0 -1.4
BR231 IAmb IAmb 23 55 24.4
comp=Z,104nm,1.9s
ANTO Ankara 44.71 327 P P 23 55 19.4 -1.0
ANTO IAmb IAmb 23 55 24.2
comp=Z,97nm,1.9s
ANTO Ankara 44.71 327 P P 23 55 19.4 -1.0
ANTO pmax pmax
comp=Z,97nm,1.9s
ILGA Ilgaz 45.08 329 P P 23 55 21.6 -1.8
ILGA IAmb IAmb 23 55 34.7
comp=Z,82nm,1.6s
ABKAR Akbulak array 45.12 358 P P 23 55 23.1 -0.2
WMQ Urumqi 45.40 26 *e*P P 23 55 27.0 +1.2
WMQ pP pwP 23 55 33.0 +1.7
WMQ sP sP 23 55 36.9 +7.8
WMQ pmax pmax
comp=Z,7.0nm,0.9s
WMQ pmax pmax
comp=Z,290nm,4.3s
WMQ LR LR
comp=Z,1µm,17.5s
WMQ LR LR
comp=Z,2µm,19.7s
WMQ LR LR
comp=Z,3µm,21.9s
MAKZ Makanchi 45.80 19 P P 23 55 28.1 -0.7
MAKZ IAmb IAmb 23 55 36.3
comp=Z,60nm,1.8s
MAKZ Makanchi 45.80 19 P P 23 55 28.1 -0.7
MAKZ pmax pmax
comp=Z,60nm,1.8s
MK31 Makanchi Array 45.88 19 P P 23 55 27.8 -1.7
MK31 Makanchi Array 45.88 19 P P 23 55 27.8 -1.7
MK31 pmax pmax
comp=Z,31nm,1.9s
MKAR Makanchi Array 45.88 19 P P 23 55 29.0 -0.5
comp=Z,1.8nm,0.7s,baz=208,slow=8.3,SNR=9.9
MKAR PcP PcP 23 57 07.1 +0.4
comp=Z,4.7nm,1.0s,baz=244,slow=5.3,SNR=7.8
LBTB Lobatse 46.11 229 P P 23 55 33.7 +2.0
comp=Z,4.6nm,1.0s,baz=101,slow=12,SNR=3.5
LEM Lembang 46.20 103 LR LR 00 11 21.4
comp=Z,913nm,21.3s,baz=252,slow=32
MANT Manisa 46.23 323 P P 23 55 32.6 0.0
ANN Anapa 46.23 335 *e*P P 23 55 28.0 -4.2
ANN *e*S S 00 02 18.4 -0.4
ANN pmax pmax
comp=Z,78nm,1.4s
CD2 Chengdu 47.05 51 P P 23 55 39.3 +0.3
CD2 pmax pmax
comp=Z,30nm,0.6s
CD2 LR LR
comp=Z,2µm,15.5s
CD2 LR LR
comp=Z,3µm,16.9s
CD2 LR LR
comp=Z,3µm,17.8s
GYA Guiyang 47.65 57⇑*i*P P 23 55 51.4 +7.6
GYA pmax pmax
comp=Z,10.0nm,0.9s
GYA LR LR
comp=Z,860nm,13.9s
GYA LR LR
comp=Z,1µm,15.7s
GYA LR LR
comp=Z,2µm,16.9s
KURK Kurchatov 48.43 14 P P 23 55 48.4 -0.9
KURK IAmb IAmb 23 55 56.9
comp=Z,37nm,1.6s
KURK Kurchatov 48.43 14 *ce*P P 23 55 48.2 -1.1
KURK pmax pmax
comp=Z,18nm,1.7s
GTA Gaotai 48.72 39 ⇓P P 23 55 54.0 +2.1
GTA pP pwP 23 55 58.8 +1.3
GTA sP sP 23 56 01.0 +5.8
GTA LR LR
comp=Z,2µm,18.1s
GTA LR LR
comp=Z,4µm,18.4s
GTA LR LR
comp=Z,5µm,20.6s
BRVK Borovoye 49.28 6 P P 23 55 55.7 0.0
BRVK Borovoye 49.28 6 *ce*P P 23 55 55.5 -0.2
BRVK pmax pmax
comp=Z,69nm,2.5s
SBUM Sibu 49.54 90 P P 23 55 59.6 +1.2
LZH Lanzhou 49.56 45 *e*P P 23 55 59.3 +0.9
LZH pP pwP 23 56 04.5 +0.5
LZH sP sP 23 56 08.8 +7.0
LZH pmax pmax
comp=Z,15nm,1.2s
LZH LR LR
comp=Z,480nm,12.5s
LZH LR LR
comp=Z,510nm,13.6s
LZH LR LR
comp=Z,520nm,13.0s
TSUM Tsumeb 49.95 241 P P 23 56 01.1 -0.5
TSUM IAmb IAmb 23 56 13.0
comp=Z,73nm,1.9s
AGG Agios Georgios 50.47 319 P P 23 56 04.3 -0.8
AGG IAmb IAmb 23 56 11.5
comp=Z,61nm,1.5s
AGG Agios Georgios 50.47 319 P P 23 56 04.3 -0.8
AGG pmax pmax
comp=Z,61nm,1.5s
VSR Storozhevoye 50.96 341 *i* P P 23 56 07.3 -1.2
VSR pmax pmax
comp=Z,24nm,1.4s
COPA Copaceanca 51.75 326 ⇑P P 23 56 16.1 +1.5
KIS Kishinev 51.81 331 *e*P P 23 56 18.0 +3.0
KIS Kishinev 51.81 331 *e*P P 23 56 18.0 +3.0
KIS *e* 23 56 23.0
VTS Vitosha 51.96 324 ⇓P P 23 56 16.9 +0.5
VTS Vitosha 51.96 324 P P 23 56 15.3 -1.0
VTS IAmb IAmb 23 56 24.1
comp=Z,63nm,1.7s
VTS Vitosha 51.96 324 P P 23 56 15.4 -1.0
VTS pmax pmax
comp=Z,63nm,1.7s
VRI Vrincioaia 52.07 329 ⇑P P 23 56 18.3 +1.3
PLOR Plostina 52.10 329 ⇓P P 23 56 18.6 +1.3
HUMR Humele 52.13 326 ⇑P P 23 56 18.0 +0.5
LPSR Galich'ya Gora 52.23 342 *e*P P 23 56 16.9 -1.1
LPSR pmax pmax
comp=Z,8.0nm,0.9s
MLR Muntele Rosu 52.23 328 ⇓P P 23 56 20.2 +1.8
XAN Xi'an 52.33 49 P P 23 56 20.3 +1.1
XAN pP pwP 23 56 31.4 +6.7
XAN pmax pmax
comp=Z,13nm,1.0s
XAN Xi'an 52.33 49 P P 23 56 18.8 -0.4
XAN Xi'an 52.33 49 P P 23 56 18.8 -0.4
XAN pmax pmax
comp=Z,113nm,1.9s
ARU Arti 52.35 357 P P 23 56 17.4 -1.5
ARU IAmb IAmb 23 56 21.4
comp=Z,71nm,1.6s
ARU Arti 52.35 357 *d i*P P 23 56 18.1 -0.7
ARU S S 00 03 45.1 +0.8
ARU SS SS 00 07 17.2 -5.0
ARU pmax pmax
comp=Z,48nm,1.7s
SVE Sverdlovsk 52.67 359 *e*P P 23 56 21.3 +0.1
SVE pmax pmax
comp=Z,44nm,2.0s
SVE MLR MLR
comp=Z,2µm,19.0s
VOIR 52.68 327 ⇓P P 23 56 22.5 +0.9
SORM Soroca 52.84 332 ⇑P P 23 56 21.9 -0.7
DOPR Dopca 52.84 328 ⇑P P 23 56 22.9 +0.2
ARR Arges 52.86 327 ⇑P P 23 56 23.0 +0.1
ZAA0 Zalesovo Array 52.97 16 IAmb IAmb 23 56 31.1
comp=Z,83nm,2.0s
ZALV Zalesovo Beam 52.97 16 P P 23 56 22.3 -1.1
comp=Z,6.1nm,0.8s,baz=217,slow=6.5,SNR=18
PRAR RASCA 53.33 330 ⇑P P 23 56 27.2 +0.9
LOT Lotru 53.38 327 ⇑P P 23 56 27.7 +0.9
GZR Gura Zlata 53.90 326 ⇑P P 23 56 30.2 -0.3
BURAR Bucovina Array 54.01 329 ⇑P P 23 56 31.1 -0.3
BUR08 Bucovina Ar. S 54.04 329 P P 23 56 29.6 -2.0
BUR08 IAmb IAmb 23 56 39.5
comp=Z,43nm,1.7s
AKASG Malin Array Be 54.30 334 P P 23 56 32.2 -1.1
comp=Z,5.0nm,1.0s,baz=122,slow=6.4,SNR=10.0
AKASG Malin Array Be 54.30 334 *i* P P 23 56 33.0 -0.3
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKBB Malin Array Si 54.30 334 IAmb IAmb 23 56 37.1
comp=Z,33nm,1.7s
BZS Buzias 54.68 326 ⇑P P 23 56 36.2 +0.1
DRGR 54.79 327 ⇓P P 23 56 38.5 +1.4
OBN Obninsk 55.10 342 *e*P P 23 56 38.3 -0.7
OBN pmax pmax
comp=Z,12nm,1.8s
MOS Moscow 55.32 343 *e*P P 23 56 38.1 -2.5
MOS pmax pmax
comp=Z,64nm,1.5s
TRPA Tarpa 55.72 329 ⇑P P 23 56 44.3 +0.7
CLTB Caltabellotta 56.07 313 P P 23 56 43.8 -2.7
CLTB IAmb IAmb 23 56 53.5
comp=Z,46nm,1.8s
CORL Corleone 56.14 314 P P 23 56 44.3 -2.6
UZH Uzhgorod 56.16 329 *e*P P 23 56 46.5 -0.3
UZH *e* 23 56 53.0
BLY Banja Luka 56.78 323 ⇓P P 23 56 51.6 +0.3
BLY Banja Luka 56.78 323 P P 23 56 49.2 -2.1
BLY IAmb IAmb 23 56 54.8
comp=Z,68nm,1.8s
PSZ Piszkesteto 57.00 327 P P 23 56 50.0 -2.9
PSZ Piszkesteto 57.00 327 P P 23 56 50.0 -2.9
PSZ pmax pmax
comp=Z,28nm,1.6s
ZAK Zakamensk 57.45 30 *e*P P 23 56 55.8 -0.2
ZAK pmax pmax
comp=Z,5.0nm,1.4s
SONM Songino Array 57.53 34 P P 23 56 56.6 -0.1
comp=Z,2.8nm,0.8s,baz=228,slow=7.8,SNR=12
ULN Ulaanbaatar 57.91 34 P P 23 56 57.3 -2.1
ULN Ulaanbaatar 57.91 34 P P 23 56 57.3 -2.1
ULN pmax pmax
comp=Z,24nm,2.0s
AQU L'Aquila 58.00 319 P P 23 56 58.2 -1.8
AQU IAmb IAmb 23 57 12.2
comp=Z,29nm,1.4s
AQU L'Aquila 58.00 319 P P 23 56 58.2 -1.8
AQU pmax pmax
comp=Z,29nm,1.4s
NRCA Norcia 58.41 319 P P 23 57 00.4 -2.5
TLY Talaya 58.45 29 P P 23 57 02.7 -0.3
TLY Talaya 58.45 29 *i* P P 23 57 02.0 -1.0
TLY pmax pmax
comp=Z,5.0nm,1.1s
JAVC Velka Javorina 58.75 327 *e*P P 23 57 05.3 +0.1
PRGR Permogore 58.87 351 *e*P P 23 57 03.8 -1.8
PRGR pmax pmax
comp=Z,50nm,1.5s
MURB Monte Urbino 58.99 319 P P 23 57 06.0 -0.9
MURB IAmb IAmb 23 57 22.0
comp=Z,67nm,1.9s
SOKA Soboth 59.07 324 *i* P P 23 57 08.0 +0.5
comp=Z,16nm,1.9s
ARSA Arzberg 59.08 324 *i* P P 23 57 07.8 +0.4
comp=Z,8.7nm,1.4s
CONA Conrad Observa 59.25 325 *i* P P 23 57 08.9 +0.3
comp=Z,19nm,1.4s
OBKA Obir 59.27 323 *i* pP P 23 57 10.1 +1.2
comp=Z,16nm,1.4s
KLMR Klimovskoe 59.33 347 *e*P P 23 57 05.8 -3.0
KLMR pmax pmax
comp=Z,143nm,1.6s
KLMR Klimovskoe 59.33 347 *e*P P 23 57 05.9 -2.9
KLMR AMP 23 57 16.6
comp=Z,143nm,1.6s
MORC Moravsky Berou 59.34 328 *e*P P 23 57 09.0 -0.3
MORC Moravsky Berou 59.34 328 ⇑P P 23 57 08.9 -0.3
NJ2 Nanjing 59.49 55 *e*P P 23 57 11.3 +0.8
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NJ2 LR LR
comp=Z,820nm,17.1s
NJ2 LR LR
comp=Z,590nm,19.9s
NJ2 LR LR
comp=Z,700nm,19.9s
KRUC Moravsky 59.56 327 *e*P P 23 57 10.5 -0.2
VRAC Vranov 59.59 327 *e*P P 23 57 10.9 0.0
VRAC Vranov 59.59 327 ⇑P P 23 57 10.5 -0.4
CASP Castiglione de 59.88 318 P P 23 57 10.3 -2.7
CASP IAmb IAmb 23 57 20.9
comp=Z,22nm,1.2s
MYKA Terra Mystica 59.88 323 *i* P P 23 57 13.2 +0.2
comp=Z,20nm,1.3s
KRLC Kraliky 59.92 328 *e*P P 23 57 13.2 0.0
KRLC *e*pP pwP 23 57 18.7 0.0
KRLC Kraliky 59.92 328 *e*P P 23 57 13.2 0.0

KRLC				e		23 57 18.7	
BJI	Beijing	60.02	45	P	P	23 57 15.4	+1.4
BJI				pmax	pmax		
	comp=Z,280nm,4.2s						
BJI				LR	LR		
	comp=Z,1µm,12.9s						
BJI				LR	LR		
	comp=Z,2µm,16.6s						
MOA	Molln	60.12	325	iP	P	23 57 14.9	+0.3
	comp=Z,6.1nm,0.8s						
STAL	STALIGIAL	60.26	322	P	P	23 57 13.4	-2.2
STAL				IAmb	IAmb	23 57 22.2	
	comp=Z,28nm,1.4s						
KBA	Koelnbreinsper	60.28	323	iP	P	23 57 16.3	+0.4
	comp=Z,9.2nm,1.4s						
TEOL	Teolo	60.49	321	P	P	23 57 14.5	-2.6
OSTC	Ostas	60.49	328	eP	P	23 57 16.9	-0.2
OSTC				ex	x	23 57 22.7	
CHVC	Chvalec	60.59	328	eP	P	23 57 17.7	-0.1
CHVC				epP	pwP	23 57 23.1	-0.2
ABTA	Abfaltersbach	60.62	323	iP	P	23 57 16.3	-1.8
	comp=Z,21nm,1.7s						
TORD	Torodi Ar. Bea	60.79	283	P	P	23 57 20.2	+0.5
	comp=Z,2.1nm,0.8s,baz=86,slow=6.6,SNR=9.3						
GOPC	GO Pecny, Ondr	60.91	327	eP	P	23 57 20.0	+0.1
GOPC				epP	pwP	23 57 25.2	-0.2
GOPC	GO Pecny, Ondr	60.91	327	eP	P	23 57 20.0	+0.1
GOPC				e		23 57 25.2	
GERES	GERESS Array B	60.95	325	P	P	23 57 20.4	+0.1
	comp=Z,0.4nm,0.7s,baz=126,slow=3.4,SNR=3.7						
PRMA	PARMA	61.08	320	P	P	23 57 19.5	-1.6
KHC	Kasperske Hory	61.17	326	eP	P	23 57 26.1	+4.4
KHC				ex	x	23 57 33.6	
KHC	Kasperske Hory	61.17	326	P	P	23 57 19.0	-2.8
KHC	Kasperske Hory	61.17	326	eP	P	23 57 26.1	+4.4
KHC				e		23 57 33.6	
WTTA	Wattenberg	61.39	323	iP	P	23 57 20.6	-2.8
	comp=Z,15nm,1.2s						
PSA00	Pilbara Seismi	61.51	117		P	23 57 23.2	-1.2
PSA00				IAmb	IAmb	23 57 40.0	
	comp=Z,59nm,1.9s						
SQTA	Sankt Quirin	61.62	323	iP	P	23 57 24.9	-0.1
	comp=Z,13nm,1.1s						
MOTA	Moosalm	61.75	323	iP	P	23 57 25.0	-0.8
	comp=Z,14nm,1.4s						
FETA	Feichten	61.82	322	iP	P	23 57 24.1	-2.2
	comp=Z,12nm,1.5s						
BRG	Berggiesshubel	61.88	327	eP	P	23 57 28.7	+2.3
	comp=Z,96nm,2.4s						
BRG				ePP	PP	23 59 46.1	+3.5
	comp=Z,38nm,1.9s						
BRG	Berggiesshubel	61.88	327	eP	P	23 57 28.7	+2.3
BRG				e		23 59 46.1	
BRG				pmax	pmax		
	comp=Z,96nm,2.4s						
BRG				pmax	pmax		
	comp=Z,39nm,1.9s						
FUORN	Ofenpass-Fuorn	61.93	322	P	P	23 57 25.9	-1.3
RETA	Reutte	62.02	323	ipP	P	23 57 32.8	+5.3
	comp=Z,5.4nm,1.1s						
NKC	Novy Kostel	62.36	326	eP	P	23 57 30.2	+0.5
NKC				ex	x	23 57 42.8	
NKC	Novy Kostel	62.36	326	eP	P	23 57 30.2	+0.5
TUE	Stuetta	62.43	321	P	P	23 57 28.6	-1.9
TUE				IAmb	IAmb	23 57 39.5	
	comp=Z,19nm,1.0s						
DAVA	Damuels	62.46	322	iP	P	23 57 29.1	-1.5
	comp=Z,18nm,2.0s						
TMCR	Tamitsa	62.60	348	eP	P	23 57 30.9	0.0
TMCR				pmax	pmax		
	comp=Z,51nm,1.1s						
CLL	Collm	62.61	327	eP	P	23 57 29.0	-2.3
	comp=Z,169nm,3.0s						
CLL				i		23 57 38.1	
	comp=Z,68nm,1.9s						
CLL				ePP	PP	23 59 50.0	+0.9
CLL				LmV		00 23 00.0	
	comp=Z,500nm,21.0s						
CLL	Collm	62.61	327	P	P	23 57 28.9	-2.4
CLL				IAmb	IAmb	23 57 39.3	
	comp=Z,38nm,1.6s						
CLL	Collm	62.61	327	eP	P	23 57 29.0	-2.3
CLL				pmax	pmax		
	comp=Z,169nm,3.0s						
CLL				MLR	MLR		
	comp=Z,500nm,21.0s						
FINES	FINESS Array B	63.49	341	P	P	23 57 35.9	-1.0
	comp=Z,3.2nm,0.9s,baz=155,slow=7.6,SNR=3.2						
FINES	FINESS Array B	63.49	341	P	P	23 57 36.0	-1.0
BFO	Black Forest	63.86	323	P	P	23 57 38.1	-1.6
BFO	Black Forest	63.86	323	P	P	23 57 38.1	-1.6
BFO				pmax	pmax		
	comp=Z,49nm,1.5s						
SNY	Shenyang	65.90	46	⇓P	P	23 57 55.0	+1.9
SNY				pmax	pmax		
	comp=Z,9.0nm,0.5s						
APA	Apatity	66.51	348	⇓iP	P	23 58 00.4	+3.9
APA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
APA				MLR	MLR		
	comp=Z,2µm,21.0s						
BOD	Bodaibo	66.91	27	eP	P	23 57 58.7	-0.5
KIC	Kosan Boka	67.08	275	ePKP1	P	23 58 03.0	+1.8
	comp=Z,112nm,1.8s						
KIC	Kosan Boka	67.08	275	P	P	23 58 03.0	+1.8
DBIC	Dimbokro	67.19	276	P	P	23 58 02.1	+0.3
	comp=Z,3.8nm,0.7s,baz=79,slow=6.2,SNR=5.1						
NRIK	Noril'sk	67.27	9	P	P	23 58 01.4	0.0
	comp=Z,1.4nm,0.3s,baz=189,slow=5.1,SNR=4.5						
TIC	Toumodi	67.35	275	ePKP1	P	23 58 04.2	+1.3
TIC	Toumodi	67.35	275	P	P	23 58 04.2	+1.3
TIC	Toumodi	67.35	275	P	P	23 58 04.2	+1.3
LIC	Lamto	67.37	275	ePKP1	P	23 58 03.5	+0.5
	comp=Z,22nm,0.8s						
LIC	Lamto	67.37	275	P	P	23 58 03.5	+0.5
KSRS	Korea Array	68.04	51	P	P	23 58 05.3	-1.4
	comp=Z,0.8nm,0.6s,baz=252,slow=6.4,SNR=5.2						
NB2	NORSAR Subarra	68.66	336	P	P	23 58 08.7	-1.6
	comp=Z,1.4nm,0.6s,baz=122,slow=5.9						
NOA	NORSAR Array B	68.66	336	P	P	23 58 09.5	-0.8
	comp=Z,3.5nm,0.9s,baz=115,slow=7.0,SNR=8.2						
ESDC	Sonseca Array	69.49	311	P	P	23 58 15.5	-0.4
	comp=Z,0.9nm,0.4s,baz=89,slow=5.2,SNR=12						
JNU	Nakatsue	69.63	56	P	P	23 58 16.1	-0.8
JNU				IAmb	IAmb	23 58 25.8	
	comp=Z,62nm,1.9s						
KEV	Kevo	69.65	348	P	P	23 58 14.8	-1.4
KEV	Kevo	69.65	348	P	P	23 58 14.8	-1.4
KEV				pmax	pmax		
	comp=Z,101nm,1.6s						
ARCES	ARCESS Array B	69.81	347	P	P	23 58 16.6	-0.6
	comp=Z,12nm,0.7s,baz=138,slow=6.2,SNR=18						
SFS	San Fernando	70.62	307	P	P	23 58 21.4	-1.4
SFS	San Fernando	70.62	307	P	P	23 58 21.4	-1.4
SFS				pmax	pmax		
	comp=Z,167nm,1.1s						
ZEA	Zeya	71.94	34	eP	P	23 58 30.0	-0.4
ZEA				e		23 58 54.0	
ZEA				pmax	pmax		
	comp=Z,84nm,2.0s						
ZEA				MLR	MLR		
	comp=Z,4µm,17.0s						
ZEA				MLR	MLR		
	comp=N,2µm,18.0s						
ZEA				MLR	MLR		
	comp=E,3µm,18.0s						
KLR	Kul'dur	73.40	40	iP	P	23 58 38.6	-0.6
KLR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WRA	Warramunga Arr	74.30	112	P	P	23 58 46.0	+1.0
	comp=Z,8.2nm,0.9s,baz=287,slow=5.4,SNR=18						
WRAB	Tennant Creek	74.31	112	P	P	23 58 45.6	+0.5
WRAB	Tennant Creek	74.31	112	ceP	P	23 58 47.0	+1.9
WRAB				pmax	pmax		
	comp=Z,26nm,1.7s						
WB0	Warramunga Arr	74.31	112	P	P	23 58 44.3	-0.9
WB0				IAmb	IAmb	23 58 55.1	
	comp=Z,61nm,1.8s						
WR0	Warramunga Arr	74.49	112	P	P	23 58 45.3	-0.9
WR0				IAmb	IAmb	23 58 56.2	
	comp=Z,32nm,1.6s						
SYO	Syowa Base	74.59	188	⇓iX	P	23 58 43.6	-2.1
ASAR	Alice Springs	74.60	116	P	P	23 58 48.5	+1.7
	comp=Z,5.9nm,0.9s,baz=286,slow=5.7,SNR=25						
AS31	Alice Springs	74.60	116	P	P	23 58 46.4	-0.5
YSS	Yuzh-Sakhalins	80.33	43	eP	P	23 59 24.4	+6.0
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				MLR	MLR		
	comp=Z,900nm,17.0s						
YSS				MLR	MLR		
	comp=N,400nm,19.0s						
YSS				MLR	MLR		
	comp=E,800nm,18.0s						
STKA	Stephens Creek	82.79	123	P	P	23 59 33.1	+1.4
	comp=E,2.2nm,0.9s,baz=309,slow=7.0,SNR=5.5						
MA2	Magadan	85.61	31	P	P	23 59 43.7	-1.8
MA2				IAmb	IAmb	23 59 54.2	
	comp=Z,21nm,1.3s						
MA2	Magadan	85.61	31	ceP	P	23 59 44.3	-1.2
MA2				pmax	pmax		
	comp=Z,25nm,1.7s						
SEY	Seymchan	86.33	27	P	P	23 59 49.2	+0.3
	comp=Z,0.8nm,0.3s,baz=264,slow=8.6,SNR=5.9						
SEY	Seymchan	86.33	27	iP	P	23 59 47.7	-1.3
BILL	Bilibino	91.37	21	P	P	00 00 12.2	-0.5
BILL				IAmb	IAmb	00 00 21.2	
	comp=Z,36nm,1.8s						
BILL	Bilibino	91.37	21	⇓eP	P	00 00 12.9	+0.2
BILL				e		00 03 52.1	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,706nm,18.0s						
YKA	Yellowknife Ar	113.63	359	PKiKP	PKiKP	00 05 44.9	-0.4
	comp=Z,0.3nm,0.8s,baz=0.7,slow=1.8,SNR=4.6						
YKA				PP	PP	00 06 37.3	+0.8
	comp=Z,1.3nm,1.1s,baz=359,slow=7.3,SNR=7.9						
MSO	Missoula	129.27	357		PKiKP	00 06 16.4	-0.3
PDAR	Pinedale Array	132.88	352	PKP	PKiKP	00 06 24.1	-0.2
	comp=Z,0.7nm,0.7s,baz=63,slow=2.1,SNR=4.8						
NVAR	Mina Array Bea	137.74	1	PKP	PKiKP	00 06 34.0	-0.2
	comp=Z,1.6nm,0.9s,baz=352,slow=1.4,SNR=5.4						
TX31	Lajitas Ar. Si	144.31	339		PKPab	00 06 40.8	-1.2
TX32	Lajitas Array	144.31	339		PKPab	00 06 40.8	-1.2
TXAR	Lajitas Array	144.31	339	PKP	PKPbc	00 06 42.5	+0.1
	comp=Z,0.7nm,0.7s,baz=66,slow=3.4,SNR=8.5						
HPIG		147.20	340		PKPdf	00 06 49.2	-0.1
CMIG	Matias Romero	149.43	314	PKPbc	PKPbc	00 06 57.8	+0.5
	comp=Z,2.8nm,1.0s,baz=83,slow=2.8,SNR=5.1						

JMA 24 23:55:26.5±0.1, 24°.21N×122°.39E, h64km±2km, M2.8
TAP 24 23:55:26.6, 24°.26N×122°.39E, h73km, ML3.2, C
ISC 24 23:55:27.3±1.2, 24°.25N±0°.03×122°.43E±0°.02, h60km±9km, n77, σ0.83/149, 1C-9D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.40	318	P	Pn	23 55 38.6	+0.4
	baz=320						
EOS1				S	Sn	23 55 47.8	+1.7
	baz=320						
JYNG	Yonagunijimaku	0.51	67	P	Pn	23 55 39.6	+0.2
JYNG				S	Sn	23 55 48.7	+0.5
YOJ	Yonaguni jima	0.57	68	P	Pn	23 55 40.2	+0.2
YOJ				eS	Sn	23 55 49.6	+0.3
TWC	Suao	0.64	304	iP	Pn	23 55 40.7	-0.1
	baz=308						
TWC				S	Sn	23 55 50.2	-0.4
	baz=308						
ENA	Nanau	0.65	286	iP	Pn	23 55 40.8	-0.1
	baz=290						
ENA				S	Sn	23 55 51.2	+0.3
	baz=290						
NACB	Ninganchiao	0.76	265	⇓P	Pn	23 55 41.8	-0.5
	baz=263						
NACB				S	Sn	23 55 53.0	-0.3
	baz=263						
TWD	Chiawan	0.78	258	⇓P	Pn	23 55 41.9	-0.5
	baz=250						
TWD				S	Sn	23 55 53.3	-0.3
	baz=250						
HWA	Hwalien	0.80	250	P	Pn	23 55 42.7	0.0
	baz=248						
HWA				S	Sn	23 55 54.6	+0.6
	baz=248						
ILA	Ilan	0.80	310	eP	Pn	23 55 42.6	-0.2
	baz=318						
ILA				eS	Sn	23 55 55.3	+1.1
	baz=318						
NTC	Toucheng	0.81	318	eP	Pn	23 55 42.7	-0.2
	baz=327						
NTC				eS	Sn	23 55 53.8	-0.5
	baz=327						
ENLB	Shoufeng	0.83	246	eP	Pn	23 55 42.0	-1.1
	baz=240						
ENLB				eS	Sn	23 55 54.0	-0.7
	baz=240						
TWE	Neicheng	0.84	304	P	Pn	23 55 43.5	+0.3
	baz=310						
TWE				S	Sn	23 55 55.4	+0.5
	baz=310						
TWB1	Santiao Chiao	0.85	332	P	Pn	23 55 42.9	-0.5
	baz=325						
TWB1				S	Sn	23 55 54.4	-0.9
	baz=325						
ETLH	Xiulin Townshi	0.86	267	⇓P	Pn	23 55 43.2	-0.5
	baz=267						
ETLH				eS	Sn	23 55 55.4	-0.2
	baz=267						
ENTT	Nioudou	0.88	297	⇓iP	Pn	23 55 43.9	+0.2
	baz=291						
ENTT				S	Sn	23 55 56.3	+0.4
	baz=291						
SLBB	Yuanshan	0.88	305	eP	Pn	23 55 44.2	+0.4
	baz=313						
SLBB				eS	Sn	23 55 56.6	+0.7
	baz=313						
NDT	Datong Townshi	0.90	293	P	Pn	23 55 44.2	+0.1
	baz=289						
NDT				S	Sn	23 55 56.9	+0.5
	baz=289						
TIPB	Shuangxi	0.90	323	⇓iP	Pn	23 55 43.5	-0.6
	baz=330						
TIPB				S	Sn	23 55 55.2	-1.3
	baz=330						
NNSB	Datong	0.97	281	P	Pn	23 55 44.7	-0.3
	baz=280						
NNSB				S	Sn	23 55 57.7	-0.4
	baz=280						
NNSH	Datong	0.97	281	⇑P	Pn	23 55 44.8	-0.2
	baz=280						
NNSH				S	Sn	23 55 57.8	-0.3
	baz=280						
NNS	Nan Shan	0.98	281	eP	Pn	23 55 44.8	-0.4
	baz=281						
NNS				S	Sn	23 55 58.1	-0.3
	baz=281						
NWLT	Wulai	0.99	302	P	Pn	23 55 45.5	+0.2
	baz=308						
NWLT				S	Sn	23 55 58.9	+0.3
	baz=308						
ESL	Shilin	1.01	245	P	Pn	23 55 44.5	-0.9
	baz=250						
ESL				S	Sn	23 55 58.3	-0.5
	baz=250						
NWF	Wu-fen Shan	1.01	324	eP	Pn	23 55 44.9	-0.6
	baz=325						
NWF				eS	Sn	23 55 58.0	-1.0
	baz=325						
WFSB	Wu-fen Shan	1.01	324	P	Pn	23 55 44.7	-0.7
	baz=326						
YHNB	Yeheng	1.04	294	⇓P	Pn	23 55 46.0	+0.1
	baz=288						
YHNB				S	Sn	23 55 59.6	-0.2
	baz=288						
NSK	Sanguang	1.06	294	⇓P	Pn	23 55 46.2	0.0
	baz=288						
NSK				S	Sn	23 55 60.0	-0.2
	baz=288						
WHF	Hehuan Shan	1.06	265	⇓iP	Pn	23 55 46.1	-0.5
	baz=256						
WHF				eS	Sn	23 56 00.1	-0.7
	baz=256						
EGFH	Guangfu	1.08	238	eP	Pn	23 55 45.8	-0.5
	baz=232						
EGFH				eS	Sn	23 56 00.2	-0.4
	baz=232						
TWT	Tachien	1.14	270	P	Pn	23 55 47.9	+0.6
	baz=270						
TWT				S	Sn	23 56 02.6	+0.4
	baz=270						
TDCB	Techi	1.16	270	P	Pn	23 55 47.8	+0.3
	baz=270						
TDCB				S	Sn	23 56 02.3	-0.3
	baz=270						
CHGB	Renai	1.16	261	P	Pn	23 55 47.3	-0.3
	baz=254						
CHGB				eS	Sn	23 56 02.2	-0.6
	baz=254						
OWD	Renai	1.18	256	eP	Pn	23 55 47.5	-0.3
	baz=255						
OWD				eS	Sn	23 56 02.1	-1.0
	baz=255						
YM01	YM01	1.19	319	eP	Pn	23 55 46.7	-1.1
	baz=320						
YM01				eS	Sn	23 56 02.0	-1.1
	baz=320						
HGSD	Ruisui	1.19	231	eP	Pn	23 55 47.0	-0.8
	baz=226						
HGSD				S	Sn	23 56 02.6	-0.5
	baz=226						
IRIF	Iriomote-Funau	1.19	86	P	Pn	23 55 47.8	0.0
IRIF				S	Sn	23 56 03.2	0.0
YM10	YM10	1.20	319	P	Pn	23 55 47.1	-0.9
	baz=319						
YM10				S	Sn	23 56 01.5	-1.9
	baz=319						
YM04	YM04	1.21	318	eP	Pn	23 55 47.1	-1.0
	baz=319						
YM04				eS	Sn	23 56 02.1	-1.6
	baz=319						
TWS1	Kuangyinshan	1.25	313	P	Pn	23 55 48.3	-0.3
	baz=322						
TWS1				eS	Sn	23 56 04.0	-0.5
	baz=322						
EHY	Hungye	1.25	234	iP	Pn	23 55 47.8	-0.9
	baz=232						
EHY				iS	Sn	23 56 03.4	-1.2
	baz=232						
TWY	Chenhua	1.27	324	eP	Pn	23 55 48.1	-0.8
	baz=325						
TWY				eS	Sn	23 56 04.2	-0.8
	baz=325						
HATJ	Hateruma jima	1.27	98	P	Pn	23 55 49.5	+0.6
HATJ				eS	Sn	23 56 06.1	+1.0
VWDT	VWDT	1.27	248	⇓P	Pn	23 55 49.0	+0.1
	baz=240						
VWDT				eS	Sn	23 56 04.5	-0.6
	baz=240						
YULB	Yu-li	1.34	231	P	Pn	23 55 49.0	-0.8
	baz=239						
LIOB	Emei	1.34	287	P	Pn	23 55 50.3	+0.4
	baz=287						
LIOB				eS	Sn	23 56 07.5	+0.6
	baz=287						
WHP	Taichung City	1.35	272	eP	Pn	23 55 50.8	+0.8
	baz=268						
WHP				eS	Sn	23 56 07.8	+0.7
	baz=268						
NSTT	Nanjuang	1.35	287	eP	Pn	23 55 50.3	+0.3
	baz=286						
NSTT				S	Sn	23 56 08.0	+0.9
	baz=286						
TWF1	Yuli	1.37	229	P	Pn	23 55 49.6	-0.6
	baz=237						
TWF1				eS	Sn	23 56 06.3	-1.0
	baz=237						
DPDB	Guoxing	1.39	261	eP	Pn	23 55 50.4	-0.1
	baz=259						
DPDB				eS	Sn	23 56 07.8	-0.1
	baz=259						
SSLB	Suanglung	1.42	251	P	Pn	23 55 50.8	-0.1
	baz=255						
SSLB				eS	Sn	23 56 08.0	-0.8
	baz=255						
SMLT	Sun Moon Lake	1.44	256	P	Pn	23 55 51.5	+0.2
	baz=251						
SMLT				S	Sn	23 56 09.1	-0.2
	baz=251						
JKRS	Kuro-shima	1.45	90	P	Pn	23 55 51.7	+0.5
JKRS				S	Sn	23 56 10.0	+0.8
FULB	Fuli	1.47	225	eP	Pn	23 55 51.1	-0.5
	baz=216						
FULB				S	Sn	23 56 09.1	-0.8
	baz=216						
TYC	Yuchr	1.48	257	P	Pn	23 55 52.0	+0.4
	baz=252						
TYC				eS	Sn	23 56 10.1	+0.2
	baz=252						
CHKT	Chengkung	1.50	221	eP	Pn	23 55 52.2	+0.2
	baz=213						
CHKT				eS	Sn	23 56 08.6	-2.0
	baz=213						
WHYT	Xinyi Township	1.54	249	eP	Pn	23 55 52.9	+0.3
	baz=247						
WHYT				S	Sn	23 56 11.9	+0.3
	baz=247						
YUS	Yu-Shan	1.55	241	P	Pn	23 55 53.1	0.0
	baz=233						
YUS				S	Sn	23 56 11.5	-0.9
	baz=233						
JIJ	Ishigaki jima	1.57	85	P	Pn	23 55 52.6	-0.3
JIJ				S	Sn	23 56 11.6	-0.6
PTSB	Yuanli	1.58	278	eP	Pn	23 55 53.0	-0.1
	baz=278						
PTSB				eS	Sn	23 56 13.1	+0.5
	baz=278						
WJS	Zhushan	1.61	255	eP	Pn	23 55 54.6	+1.2
	baz=253						
WJS				S	Sn	23 56 15.1	+1.9
	baz=253						
WNT	Mingjian	1.64	257	eP	Pn	23 55 54.9	+1.1
	baz=257						
WNT				S	Sn	23 56 15.8	+2.0
	baz=257						
ELDTW	Lidau	1.67	231	P	Pn	23 55 53.8	-0.5
	baz=224						
ELDTW				S	Sn	23 56 13.4	-1.4
	baz=224						
CHN5	Tsauling	1.73	248	eP	Pn	23 55 56.0	+0.9
	baz=241						
CHN5				eS	Sn	23 56 17.3	+1.1
	baz=241						
JISG	Ishigakijimahi	1.75	79	P	Pn	23 55 55.1	-0.2
JISG				S	Sn	23 56 16.0	-0.6
TWH	Lutao	1.76	210	eP	Pn	23 55 54.8	-0.7
	baz=202						
TWH				eS	Sn	23 56 15.1	-1.7
	baz=202						
WDLH	Douliu	1.81	252	eP	Pn	23 55 57.1	+0.9
	baz=243						
WDLH				eS	Sn	23 56 19.6	+1.4
	baz=243						
STYT	Tauyuan	1.87	235	P	Pn	23 55 57.6	+0.5
	baz=229						
STYT				eS	Sn	23 56 19.8	+0.1
	baz=229						
TWGBT	Beinan	1.89	221	eP	Pn	23 55 56.3	-0.9
	baz=225						
TWG	Pinlang	1.89	221	eP	Pn	23 55 56.2	-1.0
	baz=226						
TWG				eS	Sn	23 56 18.3	-1.7
	baz=226						
TPUB	Ta-pu	1.90	241	P	Pn	23 55 58.5	+1.2
	baz=239						
TPUB				eS	Sn	23 56 21.5	+1.3
	baz=239						
CHN4	Tsaushan	1.90	242	P	Pn	23 55 59.0	+1.6
	baz=234						
CHN4				eS	Sn	23 56 22.6	+2.3
	baz=234						
WTCT	Ta-ch'eng	2.00	259	eP	Pn	23 56 00.1	+1.4
	baz=259						
TWK	Hsinying	2.03	242	eP	Pn	23 56 00.5	+1.4
	baz=240						
TWK				S	Sn	23 56 24.6	+1.2
	baz=240						
CHN1	Nanshi	2.04	239	eP	Pn	23 56 00.1	+0.9
	baz=238						
CHN1				S	Sn	23 56 24.4	+0.8
	baz=238						
SLGT	Liugui	2.06	233	eP	Pn	23 56 00.4	+0.9
	baz=240						
SLGT				S	Sn	23 56 26.1	+2.1
	baz=240						
JTJ	Tarama	2.11	79	P	Pn	23 56 00.4	+0.2
JTJ				eS	Sn	23 56 24.7	-0.7
JIRB	Irabujima	2.57	76	P	Pn	23 56 06.6	+0.2

IDC **24** 23:59:44.5±0.4, 4°.29N×62°.54E, h0km, mb4.4/38, mb1 4.5/40, mb1mx4.5/44, mbtmp4.4/40, ML3.7/2, MS4.9/35, Ms1 4.9/35, ms1mx4.9/41, Error ellipse: s-maj=9.3km s-min=8.3km az=9.0

MOS **24** 23:59:44.0±1.1, 4°.33N×62°.54E, h9km, mb5.3/52, MS5.2/7, Error ellipse: s-maj=7.5km s-min=5.2km az=93.3

NEIC **24** 23:59:45.8±1.9, 4°.23N±0°.07×62°.52E±0°.05, h10km±1km, mb5.2/79, Mwc5.5(GCMT), Error ellipse: s-maj=12.6km s-min=8.1km az=168.0

BJI **24** 23:59:46.0±0.0, 4°.40N×62°.60E, h10km, mB5.6/35, mb4.8/60, Ms5.3/44, Ms7 5.1/44

GCMT **24** 23:59:47.8±0.1, 4°.25N±0°.01×62°.54E±0°.01, h12km, MW5.4/154, Moment Tensor Solution. s72,c95; s154,c309; Duration: 1s.3 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.78±.02; $M_{\theta\theta}$1.06±.02; $M_{\phi\phi}$0.72±.02; $M_{r\theta}$0.49±.07; $M_{r\phi}$-0.85±.01; $M_{\theta\phi}$-0.01±.07; Best double couple: $M_0$1.83300×10^{17} NP1:ϕ_s138.00000°, δ39.00000°, λ-76.00000°. NP2:ϕ_s300.00000°, δ52.00000°, λ-101.00000°. Principal axes: T 1.7970, Plg6.0000°, Azm38.0000°; N 0.0760, Plg9.0000°, Azm307.0000°; P -1.8700, Plg79.0000°, Azm163.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC **24** 23:59:49, 4°.24N×62°.53E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.87; $M_{\theta\theta}$1.09; $M_{\phi\phi}$0.78; $M_{r\theta}$0.51; $M_{r\phi}$-0.91; $M_{\theta\phi}$-0.17; Fault plane solution: $M_0$1.94000×10^{17} NP1:ϕ_s304.00000°, δ53.00000°, λ-97.00000°. NP2:ϕ_s136.00000°, δ38.00000°, λ-81.00000°. Principal axes: T 1.9212, Plg8.0000°, Azm39.0000°; N 0.0360, Plg6.0000°, Azm309.0000°; P -1.9572, Plg81.0000°, Azm182.0000°;

KLM **24** 23:59:58.0, 4°.43N×62°.27E, h96km, mb5.0

ISC 24 23:59:46.6±0.9, 4°.14N±0°.04×62°.55E±0°.04, h16km±5km, n366, σ1s.79/372, mb5.0/135, MS5.0/50, 29C-7D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAAM	Kaadhehdhoo	11.05	109		Pn	00 02 25.0	+0.9
MSEY	Mahe Island	11.25	219	i P	Pn	00 02 24.6	-2.3
	SNR=20						
MSEY	Mahe Island	11.25	219	Pn	Pn	00 02 25.0	-1.9
MSEY					Sn	00 04 27.9	-4.5
MSEY	Mahe Island	11.25	219	P	Pn	00 02 25.3	-1.6
MSEY	Mahe Island	11.25	219	P	Pn	00 02 25.0	-1.9
SOCY	Socotra	11.64	314		Pn	00 02 34.0	+1.6
SOCY	Socotra	11.64	314	P	Pn	00 02 39.2	+6.9
H08N2	Diego Garcia H	13.39	141	T	T	00 16 50.7	
	baz=321,slow=76,SNR=84						
H08N3	Diego Garcia H	13.40	141	T	T	00 16 48.5	
	baz=321,slow=76,SNR=85						
H08N1	Diego Carcia H	13.41	141	T	T	00 16 52.2	
	baz=321,slow=76,SNR=79						
DGAR	Diego Garcia	15.15	139		Pn	00 03 20.2	+0.2
DGAR				IAmb	IAmb	00 03 55.8	
	comp=Z,158nm,1.1s						
DGAR	Diego Garcia	15.15	139	P	Pn	00 03 20.3	+0.2
DGAR				pmax	pmax		
	comp=Z,158nm,1.1s						
SHAO	Shalim	15.37	334	P	P	00 03 25.7	-1.9
SHAO	Shalim	15.37	334	P	P	00 03 25.6	-2.0
SHAO				S	S	00 06 22.7	-6.6
DMTO	DMTO	15.41	332	P	P	00 03 26.2	-1.8
DMTO				S	S	00 06 25.3	-4.7
RBK	Rabkut	15.60	329	P	P	00 03 29.9	-0.2
	SNR=6.3						
RBK				S	S	00 06 45.3	+11
ABTO	Aybut	15.96	326	P	P	00 03 34.0	-0.2
	SNR=7.7						
ABTO				S	S	00 06 51.3	+10
WHFO	Wadi Hawf	16.17	329	P	P	00 03 35.2	-1.3
WHFO				S	S	00 06 57.2	+12
DQM	DQM	16.43	343	P	P	00 03 42.1	+2.7
MHTO	MHTO	17.33	345	P	P	00 03 48.5	-0.8
	SNR=21						
POO	Poona	18.07	37	eP	Pn	00 03 55.0	-2.3
PALK	Pallekele	18.33	79	P	P	00 04 01.6	+1.1
	comp=Z,0.3nm,0.3s,baz=258,slow=9.1,SNR=4.0						
PALK				LR	LR	00 09 33.6	
	comp=Z,7µm,18.9s,baz=265,slow=32						
PALK	Pallekele	18.33	79	IAmb	IAmb	00 04 12.1	
	comp=Z,232nm,2.0s						
PALK	Pallekele	18.33	79	P	P	00 04 01.6	+1.1
PALK				pmax	pmax		
	comp=Z,232nm,2.0s						
JMDO	Jabal Madar	18.63	347	P	Pn	00 04 04.5	+0.6
	SNR=11						
WBK	Wadi Bani Khal	18.68	350	P	Pn	00 04 06.6	+1.9
BSY	Bisya	19.21	345	P	Pn	00 04 12.5	+1.5
	SNR=20						
SMDO	Samad	19.30	347	P	Pn	00 04 16.0	+3.7
	SNR=8.7						
WSAR	Wadi Sarin	19.36	349	P	P	00 04 11.6	-0.2
	comp=Z,0.2nm,0.3s,baz=222,slow=7.2,SNR=4.1						
WSAR				S	Sn	00 07 49.5	-0.3
	comp=Z,0.1nm,0.3s,baz=258,slow=12,SNR=1.5						
WSAR				LR	LR	00 10 04.2	
	comp=Z,3µm,20.4s,baz=187,slow=32						
WSAR	Wadi Sarin	19.36	349	P	Pn	00 04 14.4	+1.6
BIDO	Bidbid	19.74	348	P	Pn	00 04 18.7	+1.4
	SNR=6.9						
ARQ	Araqi	19.95	344	P	Pn	00 04 22.0	+2.1
	SNR=25						
ARQ				S	Sn	00 08 13.1	+9.0
HOQ	Hoqain	19.98	346	P	Pn	00 04 20.4	+0.1
	SNR=13						
HOQ				S	Sn	00 08 11.3	+6.5
HYB	Hyderabad	20.50	49	i P	Pn	00 04 26.0	-0.4
DAMY	Dhamar	20.68	301	P	P	00 04 25.6	-0.8
SOHO	SOHO	20.71	344	P	Pn	00 04 27.9	-0.8
	SNR=21						
SOHO				S	Sn	00 08 26.1	+3.9
ATD	Arta Tunnel	20.84	292	P	P	00 04 27.5	-0.4
	comp=Z,14nm,0.8s,baz=76,slow=9.9,SNR=4.9						
ATD				S	S	00 08 20.9	+0.8
	comp=Z,6.0nm,0.8s,baz=106,slow=15,SNR=2.1						
ATD				LR	LR	00 11 12.5	
	comp=Z,1µm,19.9s,baz=102,slow=33						
ATD	Arta Tunnel	20.84	292	P	P	00 04 26.8	-1.2
ATD				IAmb	IAmb	00 04 43.3	
	comp=Z,106nm,1.2s						
ALNE	Al Ain	20.86	342	i P	P	00 04 28.9	+0.9
	SNR=14						
ASHO	Ashiyiah	21.36	344	i P	P	00 04 34.3	+0.8
	SNR=9.3						
ASHO	Ashiyiah	21.36	344	P	P	00 04 40.1	+6.6
	SNR=9.0						
ASHO				P	P	00 04 40.1	+6.6
	SNR=9.0						
HATD	Hatta, Dubai	21.47	344	i P	P	00 04 36.8	+2.2
	SNR=9.6						
HATD	Hatta, Dubai	21.47	344	P	P	00 04 37.4	+2.8
	SNR=14						
HATD				P	P	00 04 37.4	+2.8
	SNR=14						
HATD				S	Sn	00 08 40.8	+0.2
HATD				S	Sn	00 08 40.8	+0.2
SBV	Sambava	21.51	215	P	P	00 04 42.6	+7.6
	SNR=6.2						
FAQ	Al Faqa, Dubai	21.55	343	P	P	00 04 39.2	+3.7
FAQ				P	P	00 04 39.2	+3.7
UOSS	Minazif	21.57	344	i P	P	00 04 35.5	-0.1
	SNR=14						
UOSS	Minazif	21.57	344	P	P	00 04 35.7	+0.1
UOSS				IAmb	IAmb	00 04 47.8	
	comp=Z,114nm,1.1s						
UOSS	Minazif	21.57	344	P	P	00 04 36.2	+0.6
AJN	Ajban	21.57	341	P	P	00 04 36.4	+0.8
	SNR=13						
AJN				P	P	00 04 36.4	+0.8
	SNR=13						
AJN				S	Sn	00 08 38.9	-4.0
AJN				S	Sn	00 08 38.9	-4.0
NAZ	Nazwa, Dubai	21.76	343	i P	P	00 04 41.0	+3.3
	SNR=6.8						
NAZ	Nazwa, Dubai	21.76	343	P	P	00 04 39.9	+2.2
	SNR=17						
NAZ				P	P	00 04 39.9	+2.2
	SNR=17						
MSFE	Esma-Masafi	21.97	344	i P	P	00 04 42.5	+2.5
	SNR=5.7						
UMQ	Umm Al-Quwin	22.27	343	P	P	00 04 50.4	+7.3
	SNR=6.2						
UMQ				S	Sn	00 08 58.7	-1.0
FURI	Furi	24.17	282	P	P	00 05 04.2	+1.3
KIBK	Kibwezi	25.32	256	P	P	00 05 16.2	+3.2
	SNR=14						
RAYN	Ar Rayn	25.34	321	i P	P	00 05 13.9	+0.9
	SNR=11						
RAYN	Ar Rayn	25.34	321	P	P	00 05 11.4	-1.7
RAYN				IAmb	IAmb	00 05 23.9	
	comp=Z,140nm,1.9s						
RAYN	Ar Rayn	25.34	321	P	P	00 05 11.4	-1.7
RAYN				pmax	pmax		
	comp=Z,140nm,1.9s						
KMBO	Kilima Mbogo	25.81	259	P	P	00 05 19.8	+2.1
	comp=Z,8.9nm,1.0s,baz=62,slow=11,SNR=24						
KMBO				S	S	00 09 51.1	+4.1
	comp=Z,0.3nm,0.3s,baz=74,slow=16,SNR=1.9						
KMBO				LR	LR	00 14 29.6	
	comp=Z,4µm,20.7s,baz=79,slow=34						
KMBO	Kilima Mbogo	25.81	259	i P	P	00 05 21.6	+3.9
	SNR=22						
KMBO	Kilima Mbogo	25.81	259		P	00 05 21.6	+3.9
KMBO	Kilima Mbogo	25.81	259	P	P	00 05 20.2	+2.5
KMBO				IAmb	IAmb	00 05 37.6	
	comp=Z,170nm,1.7s						
KMBO	Kilima Mbogo	25.81	259	i P	P	00 05 21.6	+3.9
KMBO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LODK	Lodwar	27.14	269	P	P	00 05 34.1	+4.7
	SNR=13						
OPO	Ambohidratompo	27.17	213	P	P	00 05 32.6	+2.9
	comp=Z,2.8nm,0.8s,baz=59,slow=5.0,SNR=5.7						
OPO				LR	LR	00 13 57.9	
	comp=Z,3µm,19.7s,baz=181,slow=31						
HRA	Herat	30.10	360	P	P	00 05 55.9	+0.1
KBL	Kabul	30.84	10	P	P	00 06 00.8	-1.6
KBL				IAmb	IAmb	00 06 08.1	
	comp=Z,80nm,1.9s						
KBL	Kabul	30.84	10	P	P	00 06 00.8	-1.6
KBL				pmax	pmax		
	comp=Z,80nm,1.9s						
NIL	Nilore	31.01	18	P	P	00 06 04.0	+0.4
NIL				IAmb	IAmb	00 06 12.6	
	comp=Z,44nm,1.2s						
NIL	Nilore	31.01	18	P	P	00 06 04.0	+0.4
NIL				pmax	pmax		
	comp=Z,44nm,1.3s						
DANN	Dangsing	31.41	38	eP	P	00 06 08.5	+1.0
	comp=Z,45nm,0.8s						
GKN	Gorkha	31.71	39	eP	P	00 06 10.9	+0.9
	comp=Z,170nm,1.7s						
DMN	Daman	31.74	40	eP	P	00 06 11.5	+1.1
	comp=Z,38nm,1.0s						
PKIN	Phulchoki	31.91	41	eP	P	00 06 12.8	+0.9
	comp=Z,94nm,1.7s						
PKI	Pulchoki	31.91	41	eP	P	00 06 13.5	+1.5
	comp=Z,101nm,1.7s						
KKN	Kakani	31.98	40	eP	P	00 06 14.1	+1.7
	comp=Z,59nm,1.3s						
MBAR	Mbarara	32.13	262	P	P	00 06 13.9	0.0
	comp=Z,0.7nm,0.3s,baz=139,slow=19,SNR=2.2						
MBAR	Mbarara	32.13	262	P	P	00 06 14.4	+0.5
MBAR				IAmb	IAmb	00 06 31.9	
	comp=Z,26nm,1.4s						
MBAR	Mbarara	32.13	262	P	P	00 06 14.4	+0.5
MBAR				pmax	pmax		
	comp=Z,26nm,1.4s						
RAMN	Ramite	32.29	43	eP	P	00 06 16.5	+1.3
	comp=Z,59nm,1.0s						
GUN	Gumba	32.45	41	eP	P	00 06 17.6	+0.9
	comp=Z,84nm,1.0s						
JIRN	Jiri	32.48	41	eP	P	00 06 18.4	+1.4
ODAN	Odare	32.77	44	eP	P	00 06 20.5	+1.0
	comp=Z,188nm,1.8s						
TAPN	Taplejung	33.30	44	eP	P	00 06 25.3	+1.1
	comp=Z,259nm,2.1s						
BRDH	Bariadhala	33.65	54	P	P	00 06 26.2	-0.7
	comp=Z,56nm,0.3s,baz=72,slow=20,SNR=2.1						
BRDH				LR	LR	00 21 02.3	
	comp=Z,8µm,19.2s,baz=266,slow=38						
GEYT	Alibeck	33.87	354	P	P	00 06 27.6	-1.0
	comp=Z,0.6nm,0.4s,baz=174,slow=4.3,SNR=4.9						
GEYT				LR	LR	00 19 53.5	
	comp=Z,418nm,19.2s,baz=170,slow=36						
GYA0B	ALIBECK ARRAY	33.87	354	P	P	00 06 28.4	-0.3
GYA0B				IAmb	IAmb	00 06 38.8	
	comp=Z,47nm,1.8s						
SHL	Shillong	35.30	50	P	P	00 06 41.7	+0.3
SHL				IAmb	IAmb	00 06 44.5	
	comp=Z,36nm,1.2s						
SHL	Shillong	35.30	50	P	P	00 06 44.7	+3.4
	SNR=14						
SHL	Shillong	35.30	50	P	P	00 06 41.7	+0.3
SHL				pmax	pmax		
	comp=Z,36nm,1.2s						
PSI	Prapat	36.33	91	P	P	00 06 51.9	+1.6
	comp=Z,2.7nm,0.8s,baz=251,slow=6.0,SNR=4.8						
RPSI	Rantau Prapat	36.34	91	P	P	00 06 49.9	-0.3
RPSI				IAmb	IAmb	00 07 01.3	
	comp=Z,76nm,1.7s						
RPSI	Rantau Prapat	36.34	91	P	P	00 06 51.9	+1.7
EIL	Elat	36.42	317	LR	LR	00 21 06.1	
	comp=Z,2µm,18.6s,baz=134,slow=35						
ASF	Jabal al Asfar	36.82	322	P	P	00 06 52.9	-1.3
	comp=Z,1.5nm,0.6s,baz=23,slow=9.5,SNR=4.1						
LSA	Lhasa	37.13	44	P	P	00 06 58.6	+1.3
LSA				pP	pwP	00 07 05.6	0.0
LSA				pmax	pmax		
	comp=Z,52nm,1.4s						
LSA	Lhasa	37.13	44	P	P	00 06 55.2	-2.0
LSA	Lhasa	37.13	44	P	P	00 06 55.3	-2.0
LSA				pmax	pmax		
	comp=Z,26nm,1.0s						
KSH	Kashi	37.26	17	P	P	00 06 54.8	-3.1
KSH				pP	pP	00 07 01.1	-0.9
KSH				PP	PP	00 08 17.6	-5.4
KSH				PcP	PcP	00 09 16.5	-0.9
KSH				S	S	00 12 35.0	-10
KSH				SS	SnSn	00 15 02.0	-19
KSH				pmax	pmax		
	comp=Z,36nm,1.3s						
KSH				LR	LR		
	comp=Z,2µm,12.8s						
KSH				LR	LR		
	comp=Z,2µm,13.3s						
KSH				LR	LR		
	comp=Z,2µm,17.9s						
TAS	Tashkent	37.51	8	P	P	00 06 58.9	-0.9
TAS	Tashkent	37.51	8	P	P	00 06 58.9	-0.9
TAS				pmax	pmax		
	comp=Z,42nm,0.5s						
KULM	Kulim	37.99	87	P	P	00 07 08.0	+3.8
CM31	Chiang Mai Arr	38.31	65	P	P	00 07 07.3	+0.3
CM31				IAmb	IAmb	00 07 11.4	
	comp=Z,38nm,1.2s						
CM31	Chiang Mai Arr	38.31	65	P	P	00 07 10.3	+3.4
	SNR=8.9						
CMAR	Chiang Mai Arr	38.31	65	P	P	00 07 06.7	-0.2
	comp=Z,10.0nm,1.0s,baz=262,slow=8.5,SNR=32						
CMAR				PcP	PcP	00 09 20.8	-0.1
	comp=Z,1.8nm,0.4s,baz=245,slow=4.1,SNR=5.0						
CMAR				LR	LR	00 22 33.2	
	comp=Z,1µm,18.2s,baz=276,slow=36						
MMAI	Mount Meron Ar	38.31	322	PcP	PcP	00 09 20.5	-0.2
	comp=Z,3.0nm,0.8s,baz=124,slow=1.0,SNR=3.2						
IPM	Ipoh	38.37	88	P	P	00 07 15.0	+7.5
CHTO	Chiang Mai	38.42	65	P	P	00 07 08.1	+0.3
CHTO	Chiang Mai	38.42	65	P	P	00 07 08.1	+0.3
CHTO				pmax	pmax		
	comp=Z,37nm,1.3s						
BKNI	Bangkinang	38.64	95	P	P	00 07 09.9	+0.2
BKNI				IAmb	IAmb	00 07 15.6	
	comp=Z,83nm,1.2s						
LSZ	Lusaka	39.11	240	P	P	00 07 15.7	+1.9
	comp=Z,2.0nm,0.6s,baz=50,slow=9.9,SNR=6.6						
LSZ	Lusaka	39.11	240	P	P	00 07 15.5	+1.7
LSZ	Lusaka	39.11	240	P	P	00 07 15.5	+1.7
LSZ				pmax	pmax		
	comp=Z,16nm,1.2s						
GNI	Garni	39.29	338	P	P	00 07 14.2	-0.8
	comp=Z,9.5nm,0.9s,baz=196,slow=4.6,SNR=9.8						
GNI	Garni	39.29	338	P	P	00 07 16.6	+1.6
GNI	Garni	39.29	338	P	P	00 07 15.8	+0.8
GNI				IAmb	IAmb	00 07 26.3	
	comp=Z,110nm,1.4s						
GNI	Garni	39.29	338	P	P	00 07 15.8	+0.8
GNI				pmax	pmax		
	comp=Z,110nm,1.5s						
UCH	Uchtor	39.40	14	P	P	00 07 17.6	+1.4
	SNR=13						
KK31	Karatay Array	39.44	9	P	P	00 07 16.8	+0.8
KK31	Karatay Array	39.44	9	P	P	00 07 16.8	+0.8
KK31				pmax	pmax		
	comp=Z,54nm,1.8s						
KKAR	Karatay Array	39.44	9	P	P	00 07 15.8	-0.2
KKAR	Karatay Array	39.44	9	P	P	00 07 15.8	-0.2
KKAR				pmax	pmax		
	comp=Z,54nm,1.8s						
KZA	Kyzart	39.44	15	P	P	00 07 17.7	+1.2
	SNR=27						
EKS2	Erkin-Say	39.64	13	P	P	00 07 20.1	+2.2
	SNR=26						
PBKT	Sadao Pong	39.67	69	P	P	00 07 19.2	+0.9
AAK	Ala-Archa	39.78	14	P	P	00 07 18.5	-0.6
	comp=Z,5.6nm,0.8s,baz=190,slow=5.3,SNR=14						
AAK				PcP	PcP	00 09 25.1	-0.2
	comp=Z,2.5nm,0.7s,baz=191,slow=5.2,SNR=5.2						
AAK	Ala-Archa	39.78	14	i P	P	00 07 20.5	+1.4
	SNR=9.0						
AAK	Ala-Archa	39.78	14	P	P	00 07 18.4	-0.6
AAK				IAmb	IAmb	00 07 29.9	
	comp=Z,89nm,1.9s						
AAK	Ala-Archa	39.78	14	ceP	P	00 07 15.9	-3.2
AAK				pmax	pmax		
	comp=Z,61nm,2.5s						
KBK	Karagaybulak	39.91	14	P	P	00 07 21.3	+1.2
	SNR=13						
GAZ	Gaziantep	40.25	328	P	P	00 07 24.8	+1.9
GAZ				IAmb	IAmb	00 07 43.2	
	comp=Z,87nm,2.0s						
USP	Ospenovka	40.38	14	P	P	00 07 24.4	+0.5
	SNR=9.1						
TBLG	Delisi	40.68	339	P	P	00 07 26.4	0.0
TBLG				IAmb	IAmb	00 07 35.8	
	comp=Z,85nm,1.9s						
TBLG	Delisi	40.68	339	P	P	00 07 26.4	0.0
TBLG				pmax	pmax		
	comp=Z,85nm,1.9s						
AKH	Akhalkalaki	40.85	338	P	P	00 07 28.7	+0.8
AKH				IAmb	IAmb	00 07 38.9	
	comp=Z,130nm,1.9s						
AKH	Akhalkalaki	40.85	338	P	P	00 07 28.7	+0.8
AKH				pmax	pmax		
	comp=Z,130nm,1.9s						
MYKOM	Kota Tinggi	41.31	92	P	P	00 07 36.0	+4.1
GROC	Groznyy	41.64	342	eP	P	00 07 35.5	+1.3
GROC				e		00 09 10.9	
GROC				e		00 09 36.0	
GROC				pmax	pmax		
	comp=Z,65nm,1.4s						
ZEI	Tsey	41.91	339	eP	P	00 07 38.2	+1.6
ZEI				pmax	pmax		
	comp=Z,20nm,1.7s						
NCK	Nalchik	42.63	340	i P	P	00 07 40.6	-1.7
NCK				pmax	pmax		
	comp=Z,11nm,1.5s						
KBZ	Khabaz	43.08	339	P	P	00 07 45.8	-0.1
	comp=Z,3.8nm,0.9s,baz=151,slow=7.7,SNR=5.2						
KBZ				PP	PP	00 09 26.5	+0.4
	comp=Z,3.6nm,0.9s,baz=148,slow=8.9,SNR=2.6						
KBZ				LR	LR	00 27 06.5	
	comp=Z,548nm,19.0s,baz=136,slow=38						
KBZ	Khabaz	43.08	339	i P	P	00 07 44.6	-1.3
KBZ				pmax	pmax		
	comp=Z,16nm,1.6s						
SHA1	Shidzhatmaz	43.18	339	i P	P	00 07 44.5	-2.5
KIV	Kislovodsk	43.36	339	P	P	00 07 49.3	+1.0
KIV				IAmb	IAmb	00 07 58.9	
	comp=Z,117nm,2.0s						
KIV	Kislovodsk	43.36	339	eP	P	00 07 45.6	-2.7
KIV				pmax	pmax		
	comp=Z,28nm,1.0s						
SLVN	Son La	43.62	63	P	P	00 07 50.1	-0.7
KMI	Kunming	43.87	58	P	P	00 07 53.1	+0.2
KMI				pP	sP	00 07 58.6	+0.3
KMI				sP	pwP	00 08 00.5	-0.7
KMI				pmax	pmax		
	comp=Z,18nm,1.5s						
KMI				pmax	pmax		
	comp=Z,240nm,4.8s						
KMI				LR	LR		
	comp=Z,1µm,19.3s						
KMI				LR	LR		
	comp=Z,1µm,20.9s						
KMI				LR	LR		
	comp=Z,2µm,17.1s						
KMI	Kunming	43.87	58	P	P	00 07 53.4	+0.5
KMI				IAmb	IAmb	00 08 01.5	
	comp=Z,81nm,1.9s						
KMI	Kunming	43.87	58	P	P	00 07 53.4	+0.5
KMI				pmax	pmax		
	comp=Z,81nm,1.9s						
BR131	Keskin Array S	44.02	328	P	P	00 07 53.2	-0.6
BR131	Keskin Array S	44.02	328	eP	P	00 07 53.0	-0.8
BRTR	Keskin Array B	44.02	328	P	P	00 07 53.6	-0.2
	comp=Z,5.1nm,0.8s,baz=146,slow=9.8,SNR=39						
BRTR				PP	PP	00 09 34.6	-1.9
	comp=Z,2.1nm,1.1s,baz=124,slow=13,SNR=2.8						
BRTR				LR	LR	00 26 43.2	
	comp=Z,1µm,19.2s,baz=106,slow=37						
ELL	Elmali	44.16	322	P	P	00 07 55.9	+0.9
ELL	Elmali	44.16	322	P	P	00 07 55.9	+0.9
ELL				pmax	pmax		
	comp=Z,102nm,1.4s						
GOF	Gofitskoye	44.20	340	⇑eP	P	00 07 52.0	-2.9
ABKAR	Akbulak array	45.01	358	P	P	00 08 01.5	+0.2
ABKAR				IAmb	IAmb	00 08 08.9	
	comp=Z,40nm,1.4s						
WMQ	Urumqi	45.33	26	eP	P	00 08 04.8	+0.7
WMQ				pP	pP	00 08 08.6	+0.4
WMQ				sP	pwP	00 08 12.0	+0.3
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,290nm,4.3s						
WMQ				LR	LR		
	comp=Z,1µm,20.3s						
WMQ				LR	LR		
	comp=Z,1µm,16.9s						
WMQ				LR	LR		
	comp=Z,3µm,21.9s						
WMQ	Urumqi	45.33	26	P	P	00 08 03.6	-0.5
WMQ				IAmb	IAmb	00 08 13.7	
	comp=Z,22nm,1.2s						
WMQ	Urumqi	45.33	26	P	P	00 08 03.6	-0.5
WMQ				pmax	pmax		
	comp=Z,22nm,1.2s						
MAKZ	Makanchi	45.72	19	P	P	00 08 06.3	-0.7
MAKZ				IAmb	IAmb	00 08 14.3	
	comp=Z,24nm,1.2s						
MAKZ	Makanchi	45.72	19	P	P	00 08 06.3	-0.7
MAKZ				pmax	pmax		
	comp=Z,24nm,1.3s						
MK31	Makanchi Array	45.80	19		PcP	00 09 45.4	+0.3
MK31	Makanchi Array	45.80	19	i P	P	00 08 03.4	-4.3
MKAR	Makanchi Array	45.80	19	P	P	00 08 07.2	-0.6
	comp=Z,2.2nm,0.8s,baz=208,slow=8.2,SNR=29						
MKAR				PcP	PcP	00 09 45.1	0.0
	comp=Z,3.4nm,0.8s,baz=226,slow=3.9,SNR=7.7						
MKAR				LR	LR	00 29 39.6	
	comp=Z,868nm,18.0s,baz=211,slow=39						
LBTB	Lobatse	46.13	229	P	P	00 08 13.5	+2.8
LBTB	Lobatse	46.13	229	P	P	00 08 13.5	+2.8
LBTB				pmax	pmax		
	comp=Z,80nm,1.7s						
LEM	Lembang	46.29	103	P	P	00 08 12.8	+0.6
	comp=Z,19nm,0.6s,baz=219,slow=6.7,SNR=7.5						
IDI	Anoyia	46.59	317	P	P	00 08 15.1	+0.9
	comp=Z,23nm,0.9s,baz=139,slow=8.2,SNR=4.6						
SANT	Santorini	46.80	318	P	P	00 08 17.0	+1.3
CD2	Chengdu	47.03	51	P	P	00 08 17.4	-0.3
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,2µm,15.1s						
CD2				LR	LR		
	comp=Z,3µm,18.8s						
CD2				LR	LR		
	comp=Z,4µm,18.0s						
GYA	Guiyang	47.65	58	⇑i P	P	00 08 22.6	0.0

GYA PP PP 00 10 13.8 -0.5
GYA S S 00 15 20.1 +2.0
GYA pmax pmax
comp=Z,20nm,1.3s
GYA pmax pmax
comp=Z,290nm,4.6s
GYA LR LR
comp=Z,980nm,14.8s
GYA LR LR
comp=Z,1μm,16.7s
GYA LR LR
comp=Z,2μm,17.3s
KURBB Kurchatov Arra 48.24 14 P P 00 08 26.2 -0.4
comp=Z,43nm,0.7s,baz=204,slow=8.0,SNR=15
KURK Kurchatov 48.34 14 P P 00 08 26.2 -1.2
KURK IAmb IAmb 00 08 34.0
comp=Z,16nm,1.2s
KURK Kurchatov 48.34 14ceP P 00 08 24.3 -3.1
KURK pmax pmax
comp=Z,21nm,1.7s
BOSA Boshof 48.43 225 P P 00 08 29.6 +1.0
comp=Z,3.3nm,0.6s,baz=47,slow=9.6,SNR=3.0
BOSA LR LR 00 27 17.7
comp=Z,2μm,19.2s,baz=52,slow=34
BOSA Boshof 48.43 225 IAmb IAmb 00 08 43.6
comp=Z,45nm,1.5s
BOSA Boshof 48.43 225 P P 00 08 29.6 +1.0
BOSA pmax pmax
comp=Z,45nm,1.5s
GTA Gaotai 48.68 39 ⇑P P 00 08 31.9 +1.5
GTA pP pwP 00 08 37.0 -1.8
GTA sP sP 00 08 39.9 +3.7
GTA pmax pmax
comp=Z,8.0nm,1.5s
GTA pmax pmax
comp=Z,370nm,4.6s
GTA LR LR
comp=Z,3μm,17.1s
GTA LR LR
comp=Z,4μm,19.4s
GTA LR LR
comp=Z,6μm,20.0s
BVAR Borovoye Array 49.16 6 P P 00 08 33.0 -0.6
comp=Z,2.4nm,1.0s,baz=198,slow=4.2,SNR=12
BVAR PcP PcP 00 09 56.3 -0.5
comp=Z,2.4nm,1.0s,baz=191,slow=4.4,SNR=2.9
BRVK Borovoye 49.18 6 P P 00 08 33.3 -0.5
BRVK IAmb IAmb 00 08 37.3
comp=Z,74nm,1.9s
BRVK Borovoye 49.18 6ceP P 00 08 31.6 -2.2
BRVK pmax pmax
comp=Z,47nm,2.5s
LZH Lanzhou 49.53 45 ⇑P P 00 08 38.8 +1.8
LZH pP sP 00 08 42.6 -0.2
LZH sP pwP 00 08 44.8 -0.7
LZH PP PP 00 10 33.8 +2.4
LZH sS sS 00 15 50.1 -1.3
LZH pmax pmax
comp=Z,27nm,1.3s
LZH pmax pmax
comp=Z,220nm,6.2s
LZH LR LR
comp=Z,2μm,14.1s
LZH LR LR
comp=Z,1μm,14.6s
LZH LR LR
comp=Z,2μm,16.8s
SBUM Sibu 49.61 90 P P 00 08 38.2 +0.4
SBUM IAmb IAmb 00 08 42.2
comp=Z,24nm,1.2s
HARR Harsova 50.52 328 ⇓P P 00 08 44.9 +0.8
VSR Storozhevoye 50.84 341 eP P 00 08 44.8 -1.6
VSR pmax pmax
comp=Z,40nm,1.4s
ENH Enshi 51.31 54 P P 00 08 48.3 -2.1
ENH IAmb IAmb 00 08 52.2
comp=Z,75nm,1.7s
ODBI Odobesti 51.70 329 ⇑P P 00 08 53.2 +0.2
VTS Vitosha 51.83 323 ⇑P P 00 08 54.8 +0.5
VTS Vitosha 51.83 323 IAmb IAmb 00 09 03.4
comp=Z,42nm,1.6s
VRI Vrincioaia 51.95 329 ⇑P P 00 08 55.1 +0.2
PLOR Plostina 51.98 329 ⇓P P 00 08 56.3 +1.2
HUMR Humele 52.00 326 ⇑P P 00 08 55.9 +0.6
LPSR Galich'ya Gora 52.10 342 eP P 00 08 54.1 -1.8
LPSR pmax pmax
comp=Z,8.0nm,1.0s
MLR Muntele Rosu 52.10 328 ⇑P P 00 08 56.3 +0.1
MLR Muntele Rosu 52.10 328 P P 00 08 56.8 +0.6
MLR IAmb IAmb 00 09 07.3
comp=Z,50nm,1.4s
MLR Muntele Rosu 52.10 328 P P 00 08 56.8 +0.6
MLR pmax pmax
comp=Z,50nm,1.4s
ARU Arti 52.24 357 P P 00 08 56.1 -0.7
comp=Z,3.0nm,0.7s,baz=176,slow=5.0,SNR=21
ARU Arti 52.24 357 P P 00 08 54.4 -2.4
ARU IAmb IAmb 00 09 04.0
comp=Z,24nm,0.9s
ARU Arti 52.24 357diP P 00 08 55.8 -1.0
ARU 00 10 08.1
ARU 00 10 53.8
ARU S S 00 16 19.6 -1.4
ARU SS SS 00 19 55.7 -3.0
ARU pmax pmax
comp=Z,40nm,1.7s
ARU MLR MLR
comp=Z,947nm,18.0s
XAN Xi'an 52.31 49 P P 00 08 57.6 -0.3
XAN pP pwP 00 09 10.4 +4.1
XAN S S 00 16 19.6 -3.2
XAN pmax pmax
comp=Z,22nm,1.3s
XAN pmax pmax
comp=Z,860nm,11.0s
XAN LR LR
comp=Z,900nm,23.8s
XAN LR LR
comp=Z,800nm,19.5s
XAN LR LR
comp=Z,1μm,21.1s
XAN Xi'an 52.31 49 P P 00 08 57.5 -0.3
XAN Xi'an 52.31 49 P P 00 08 57.5 -0.3
XAN pmax pmax
comp=Z,133nm,1.9s
TESR Tescani 52.42 329 ⇑P P 00 08 59.1 +0.7
VOIR 52.55 327 ⇑P P 00 08 59.6 +0.2
SVE Sverdlovsk 52.56 359 eP P 00 08 58.4 -0.8
SVE pmax pmax
comp=Z,41nm,1.7s
SVE MLR MLR
comp=Z,2μm,18.0s
SORM Soroca 52.71 332 ⇑P P 00 09 00.3 -0.1
DOPR Dopca 52.71 328 ⇑P P 00 09 01.1 +0.5
ARR Arges 52.73 327 ⇑P P 00 09 01.0 +0.2
ZAA0 Zalesovo Array 52.88 16 P P 00 09 00.2 -1.6
ZALV Zalesovo Beam 52.88 16 P P 00 09 00.6 -1.0
comp=Z,10nm,0.8s,baz=214,slow=7.4,SNR=49
ZALV PcP PcP 00 10 10.1 -0.5
comp=Z,1.7nm,0.8s,baz=222,slow=1.9,SNR=2.2
ZALV LR LR 00 32 30.3
comp=Z,1μm,18.1s,baz=220,slow=37
JAGI Jajag, Banyuwa 52.96 104 P P 00 09 02.4 -0.6
JAGI IAmb IAmb 00 09 05.2
comp=Z,25nm,1.1s
LOT Lotru 53.25 327 ⇓P P 00 09 05.0 +0.3
GZR Gura Zlata 53.77 326 ⇑P P 00 09 09.9 +1.5
BURAR Bucovina Array 53.88 329 ⇑P P 00 09 10.2 +1.0
ARCR ARCALIA 53.98 329 ⇑P P 00 09 10.5 +0.7
AKASG Malin Array Be 54.17 334 P P 00 09 09.3 -1.9
comp=Z,0.6nm,0.4s,baz=129,slow=5.9,SNR=17
AKASG PcP PcP 00 10 14.8 -0.8
comp=Z,0.5nm,0.4s,baz=126,slow=3.0,SNR=6.7
AKASG PP PP 00 11 12.3 -0.7
comp=Z,0.2nm,0.4s,baz=139,slow=7.5,SNR=3.2
AKASG Malin Array Be 54.17 334 iP P 00 09 10.3 -0.9
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKBB Malin Array Si 54.17 334 IAmb IAmb 00 09 21.4
comp=Z,65nm,1.9s
BZS Buzias 54.55 326 ⇑P P 00 09 14.4 +0.3
SIRR Siria 54.92 326 ⇑P P 00 09 17.3 +0.6
OBN Obninsk 54.98 342⇑eP P 00 09 15.7 -1.2
OBN e 00 11 20.8
OBN eS S 00 17 20.3 +22
OBN pmax pmax
comp=Z,8.0nm,1.1s
MOS Moscow 55.20 343 eP P 00 09 17.0 -1.5
MOS pmax pmax
comp=Z,66nm,1.5s
KIRV Kirov 55.26 352 P P 00 09 17.9 -0.9
comp=Z,14nm,0.8s,baz=156,slow=6.4,SNR=7.3
WHN Wuhan 55.36 55 P P 00 09 20.3 +0.1
WHN S S 00 17 08.3 +4.1
WHN pmax pmax
comp=Z,110nm,1.4s
WHN LR LR
comp=Z,3μm,18.7s
TRPA Tarpa 55.59 329 ⇑P P 00 09 22.1 +0.6
BTO Baotou 55.96 43 eP P 00 09 25.1 +0.7
UZH Uzhgorod 56.04 329 eP P 00 09 25.3 +0.6
UZH i 00 09 30.6
KWP Kalwaria Pacla 56.46 330 P P 00 09 27.6 -0.1
KWP IAmb IAmb 00 09 37.8
comp=Z,61nm,1.7s
KWP Kalwaria Pacla 56.46 330 P P 00 09 27.6 -0.1
KWP pmax pmax
comp=Z,61nm,1.7s
BLY Banja Luka 56.66 323 ⇑P P 00 09 29.8 +0.6
PSZ Piszkesteto 56.87 327 ⇓P P 00 09 31.6 +0.8
MOY Mondy 57.14 27 eP P 00 09 31.8 -0.8
MOY pmax pmax
comp=Z,50nm,2.7s
KNMB Chin-men Tao 57.33 64 P P 00 09 32.8 -1.5
ZAK Zakamensk 57.39 30 eP P 00 09 33.7 -0.7
ZAK pmax pmax
comp=Z,7.0nm,1.2s
SONM Songino Array 57.48 34 P P 00 09 35.1 0.0
comp=Z,6.8nm,1.1s,baz=230,slow=6.0,SNR=26
SONM PcP PcP 00 10 27.8 -0.9
comp=Z,2.0nm,0.9s,baz=218,slow=2.3,SNR=2.1
SONM PP PP 00 11 42.7 0.0
comp=Z,0.9nm,0.9s,baz=223,slow=7.9,SNR=2.2
SONM LR LR 00 34 20.4
comp=Z,3μm,21.6s,baz=228,slow=36
ULN Ulaanbaatar 57.86 34 P P 00 09 37.8 0.0
ULN Ulaanbaatar 57.86 34 P P 00 09 37.8 0.0
ULN pmax pmax
comp=Z,14nm,1.3s
KEST Kesra 58.14 310 LR LR 00 34 33.5
comp=Z,269nm,18.3s,baz=14,slow=36
NRCA Norcia 58.28 319 P P 00 09 40.0 -0.8
NRCA IAmb IAmb 00 09 44.7
comp=Z,34nm,1.7s
TLY Talaya 58.39 29 P P 00 09 41.5 +0.1
TLY IAmb IAmb 00 09 45.0
comp=Z,50nm,1.8s
TLY Talaya 58.39 29 eP P 00 09 42.0 +0.7
TLY pmax pmax
comp=Z,36nm,1.1s
TLY MLR MLR
comp=Z,4μm,16.0s
JAVC Velka Javorina 58.62 327 eP P 00 09 42.0 -1.0
PRGR Permogore 58.76 351 eP P 00 09 41.3 -2.3
PRGR pmax pmax
comp=Z,36nm,1.5s
SOKA Soboth 58.95 324 eP P 00 09 44.9 -0.4
comp=Z,7.3nm,1.0s
ARSA Arzberg 58.95 324 iP P 00 09 45.5 +0.1
comp=Z,13nm,1.6s
LATE Laterza 59.05 318 P P 00 09 45.5 -0.6
CONA Conrad Observa 59.12 325 iP P 00 09 46.4 -0.1
comp=Z,16nm,1.3s
OBKA Obir 59.15 323 epP P 00 09 48.0 +1.2
comp=Z,13nm,1.4s
KLMR Klimovskoe 59.21 347 eP P 00 09 41.8 -5.0
KLMR pmax pmax
comp=Z,104nm,1.4s
KLMR Klimovskoe 59.21 347 eP P 00 09 41.9 -4.9
KLMR AMP 00 09 55.4
comp=Z,104nm,1.4s
MORC Moravsky Berou 59.22 328 eP P 00 09 46.6 -0.5
MORC Moravsky Berou 59.22 328 ⇑P P 00 09 47.1 -0.1
MORC Moravsky Berou 59.22 328 IAmb IAmb 00 10 04.8
comp=Z,40nm,2.0s
TIA Tai'an 59.35 50 P P 00 09 48.4 +0.1
TIA pmax pmax
comp=Z,7.0nm,1.5s
KRUC Moravsky 59.44 327 eP P 00 09 48.2 -0.4
VRAC Vranov 59.46 327 eP P 00 09 48.5 -0.3
NJ2 Nanjing 59.49 55 eP P 00 09 49.1 -0.1
NJ2 pmax pmax
comp=Z,18nm,1.1s
NJ2 LR LR
comp=Z,790nm,22.7s
NJ2 LR LR
comp=Z,740nm,22.7s
NJ2 LR LR
comp=Z,1μm,24.6s
CASP Castiglione de 59.75 318 P P 00 09 50.3 -0.6
MYKA Terra Mystica 59.75 323 eP P 00 09 51.0 +0.1
comp=Z,20nm,1.6s
MOA Molln 59.99 325 iP P 00 09 51.9 -0.6
comp=Z,22nm,1.5s
BJI Beijing 60.00 46 P P 00 09 52.6 0.0
BJI S S 00 18 04.8 +0.1
BJI pmax pmax
comp=Z,15nm,1.2s
BJI LR LR
comp=Z,990nm,14.5s
BJI LR LR
comp=Z,1μm,16.1s
BJI LR LR
comp=Z,2μm,21.6s
TREC Trest 60.06 326 eP P 00 09 52.3 -0.6
TREC Trest 60.06 326 eP P 00 09 52.3 -0.6
KBA Koelnbreinsper 60.15 323 eP P 00 09 53.2 -0.5
comp=Z,4.5nm,1.1s
TEOL Teolo 60.36 321 P P 00 09 55.5 +0.5
OSTC Ostas 60.36 328 eP P 00 09 54.4 -0.6
OSTC ex x 00 10 02.4
CHVC Chvalec 60.46 328 eP P 00 09 55.0 -0.7
CHVC ex x 00 10 02.1
ABTA Abfaltersbach 60.49 323 eP P 00 09 54.3 -1.7
comp=Z,11nm,1.3s
TORD Torodi Ar. Bea 60.70 283 P P 00 09 58.0 +0.2
comp=Z,5.2nm,1.0s,baz=97,slow=6.5,SNR=11
TORD LR LR 00 36 28.6
comp=Z,912nm,19.7s,baz=55,slow=36
GOPC GO Pecny, Ondr 60.78 327 eP P 00 09 58.3 +0.5
GOPC ex x 00 10 02.4
GOPC GO Pecny, Ondr 60.78 327 eP P 00 09 58.3 +0.5
GOPC e 00 10 02.4
GERES GERESS Array B 60.83 325 P P 00 09 56.7 -1.6
comp=Z,0.4nm,0.7s,baz=123,slow=4.8,SNR=3.5
MORW Morawa 61.00 126 P P 00 09 59.9 +0.2
KHC Kasperske Hory 61.04 326 eP P 00 09 58.0 -1.7
KHC ex x 00 10 06.8
KHC ex x 00 10 17.7
KHC Kasperske Hory 61.04 326 eP P 00 09 58.0 -1.7
KHC e 00 10 06.8
WTTA Wattenberg 61.26 323 iP P 00 10 00.8 -0.5
comp=Z,11nm,1.4s
WATA Walderalm 61.33 323 iP P 00 10 01.4 -0.3
comp=Z,6.6nm,0.8s
SQTA Sankt Quirin 61.50 323 eP P 00 10 02.0 -0.9
comp=Z,14nm,1.5s
MOTA Moosalm 61.62 323 eP P 00 10 02.6 -1.1
comp=Z,12nm,1.3s
FETA Feichten 61.70 322 ipP P 00 10 05.8 +1.5
comp=Z,5.0nm,1.2s
BRG Berggiesshubel 61.75 327 e(P) P 00 10 05.8 +1.5
comp=Z,1.3nm,0.8s
BRG Berggiesshubel 61.75 327 eP P 00 10 05.8 +1.5
BRG pmax pmax
comp=Z,1.0nm,0.8s
RETA Reutte 61.89 323 ipP P 00 10 06.4 +0.9
comp=Z,5.8nm,1.2s
NKC Novy Kostel 62.23 326 eP P 00 10 07.4 -0.3
NKC ex x 00 10 18.8
NKC Novy Kostel 62.23 326 eP P 00 10 07.4 -0.3
DAVA Damuels 62.33 322 ipP P 00 10 09.3 +0.8
comp=Z,28nm,1.8s
TMCR Tamitsa 62.48 348 eP P 00 10 06.1 -2.8
TMCR pmax pmax
comp=Z,56nm,1.4s
CLL Collm 62.48 327 eP P 00 10 10.0 +0.8
CLL i 00 10 16.6
comp=Z,76nm,2.3s
CLL Collm 62.48 327 eP P 00 10 10.0 +0.8
CLL i 00 10 16.6
GRF Grafenberg Arr 62.66 325 eP P 00 10 08.7 -1.8
comp=Z,24nm,1.9s,baz=118,slow=7.7
FINES FINESS Array B 63.37 341 P P 00 10 13.9 -1.0
comp=Z,3.6nm,0.9s,baz=134,slow=4.0,SNR=3.5
SENIN Lac Senin/Sane 63.55 321 IAmb IAmb 00 10 24.7
comp=Z,20nm,1.0s
BFO Black Forest 63.73 323 P P 00 10 17.4 -0.3
BFO Black Forest 63.73 323 P P 00 10 17.4 -0.3
BFO pmax pmax
comp=Z,56nm,1.5s
HIA Hailar 65.91 37 P P 00 10 32.3 +0.5
HIA IAmb IAmb 00 10 41.1
comp=Z,34nm,1.4s
HIA Hailar 65.91 37 P P 00 10 32.3 +0.5
HIA pmax pmax
comp=Z,34nm,1.4s
FITZ Fitzroy Crossi 65.97 112 P P 00 10 33.8 +1.0
APA Apatity 66.39 348⇓iP P 00 10 32.4 -2.1
APA pmax pmax
comp=Z,6.0nm,1.1s
APA MLR MLR
comp=Z,2μm,19.0s
BOD Bodaibo 66.85 27 eP P 00 10 36.4 -1.2
BOD pmax pmax
comp=Z,17nm,2.2s
KIC Kosan Boka 67.00 275 eP P 00 10 40.0 +0.5
comp=Z,16nm,1.0s
DBIC Dimbokro 67.11 275 P P 00 10 39.4 -0.7
comp=Z,5.9nm,0.8s,baz=84,slow=4.8,SNR=6.1
DBIC LR LR 00 40 07.7
comp=Z,1μm,19.1s,baz=84,slow=36
NRIK Noril'sk 67.18 9 P P 00 10 38.6 -0.9
comp=Z,7.4nm,1.1s,baz=217,slow=5.3,SNR=8.8
TIC Toumodi 67.27 275 eP P 00 10 41.8 +0.6
LIC Lamto 67.29 275 eP P 00 10 42.3 +1.0
comp=Z,26nm,0.8s
KSRS Korea Array 68.03 51 P P 00 10 45.0 -0.5
comp=Z,2.3nm,0.8s,baz=263,slow=7.4,SNR=11
KSRS LR LR 00 42 32.5
comp=Z,941nm,20.4s,baz=272,slow=38
KSRS Korea Array 68.03 51 P P 00 10 45.0 -0.5
NB2 NORSAR Subarra 68.53 336 P P 00 10 46.8 -1.5
comp=Z,94nm,2.0s,baz=120,slow=6.2
NB2 NORSAR Subarra 68.53 336 P P 00 10 46.8 -1.5
baz=120,slow=6.2
NOA NORSAR Array B 68.53 336 P P 00 10 47.0 -1.2
comp=Z,2.2nm,0.8s,baz=117,slow=6.9,SNR=13
ESDC Sonseca Array 69.36 311 P P 00 10 53.2 -0.7
comp=Z,3.3nm,0.8s,baz=85,slow=5.2,SNR=13
PAB San Pablo 69.63 311 P P 00 10 53.3 -2.2
PAB IAmb IAmb 00 10 59.4
comp=Z,44nm,1.6s
PAB San Pablo 69.63 311 P P 00 10 53.3 -2.2
PAB pmax pmax
comp=Z,44nm,1.6s
ARCES ARCESS Array B 69.69 347 P P 00 10 54.6 -0.7
comp=Z,16nm,0.8s,baz=142,slow=6.0,SNR=25
ARCES LR LR 00 45 10.3
comp=Z,702nm,18.9s,baz=132,slow=39
MAW Mawson 71.58 180 P P 00 11 08.3 +1.7
comp=Z,11nm,0.8s,baz=315,slow=4.3,SNR=4.4
MAW LR LR 00 37 08.1
comp=Z,1μm,18.2s,baz=14,slow=31
PVAQ Vaqueiros 71.84 308 eP P 00 11 24.9 +16
comp=Z,43nm,2.1s
PBRG Braganca 71.86 313 eP P 00 11 06.5 -2.6
comp=Z,76nm,1.9s
PMRV Marv??o 71.92 310 eP P 00 11 17.1 +7.7
comp=Z,54nm,1.7s
USRK Ussuriysk Ar. 72.44 45 P P 00 11 11.7 -0.7
comp=Z,2.0nm,0.8s,baz=238,slow=8.3,SNR=2.9
PTEO Sao Teotonio 72.66 308 eP P 00 11 24.3 +10
KLR Kul'dur 73.36 40 iP P 00 11 15.8 -2.0
KLR pmax pmax
comp=Z,7.0nm,0.9s
WRA Warramunga Arr 74.40 112 P P 00 11 25.6 +1.1
comp=Z,14nm,0.9s,baz=289,slow=5.4,SNR=37
WRA LR LR 00 40 40.3
comp=Z,520nm,20.2s,baz=305,slow=33
WRAB Tennant Creek 74.41 112 P P 00 11 24.9 +0.4
WRAB Tennant Creek 74.41 112ceP P 00 11 25.4 +0.9
WRAB pmax pmax
comp=Z,68nm,1.7s
WB0 Warramunga Arr 74.42 112 P P 00 11 24.8 +0.3
SYO Syowa Base 74.69 188⇑eX P 00 11 35.0 +10
ASAR Alice Springs 74.71 116 P P 00 11 27.2 +1.0
comp=Z,6.5nm,0.8s,baz=286,slow=5.4,SNR=46
ASAR LR LR 00 39 36.7
comp=Z,352nm,21.9s,baz=293,slow=32
YAK Yakutsk 75.76 27 LR LR 00 46 09.5
comp=Z,1μm,18.4s,baz=245,slow=37
YAK Yakutsk 75.76 27 eP P 00 11 30.0 -1.4
YAK e*PP pP 00 11 35.7 -0.1
YAK e 00 11 42.7
YAK e 00 14 18.3
YAK ePPP PPP 00 16 11.7
YAK eS S 00 21 12.4 -0.1
YAK e 00 21 41.9
YAK eSS SS 00 26 03.3 -0.9
YAK pmax pmax
comp=Z,17nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.0s
YAK pmax pmax
comp=E,16nm,1.3s
YAK pmax pmax
comp=Z,588nm,9.5s
YAK pmax pmax
comp=N,336nm,9.8s
YAK pmax pmax
comp=E,401nm,10.3s
YAK smax smax
comp=N,56nm,3.8s
YAK smax smax
comp=E,64nm,3.9s
YAK MLR MLR
comp=Z,1μm,18.0s
YAK MLR MLR
comp=N,589nm,18.0s
YAK MLR MLR
comp=E,556nm,19.0s
MJAR Matsushiro Arr 76.03 54 P P 00 11 33.6 +0.1
comp=E,0.8nm,0.3s,baz=273,slow=7.2,SNR=4.9
MJAR LR LR 00 46 50.3
comp=E,776nm,19.4s,baz=255,slow=37
SPITS Spitsbergen Ar 77.73 351 LR LR 00 49 39.3
comp=E,826nm,20.1s,baz=150,slow=39
JMIC Jan Mayen 79.99 342 LR LR 00 48 48.2
comp=E,374nm,20.4s,baz=66,slow=37
YSS Yuzh-Sakhalins 80.30 43 eP P 00 11 57.0 0.0
YSS e 00 12 02.9
YSS pmax pmax
comp=Z,20nm,1.2s
YSS MLR MLR
comp=Z,900nm,18.0s
YSS MLR MLR
comp=N,400nm,20.0s
YSS MLR MLR
comp=E,600nm,17.0s
NVL N'lazarevskaya 81.86 195 eP P 00 11 51.1 -14
NVL pmax pmax
comp=Z,6.0nm,0.7s
STKA Stephens Creek 82.90 123 P P 00 12 12.1 +1.1
comp=Z,4.8nm,0.9s,baz=299,slow=8.4,SNR=7.9
STKA LR LR 00 44 38.1
comp=Z,730nm,21.1s,baz=264,slow=32
STKA Stephens Creek 82.90 123 P P 00 12 09.1 -2.0
STKA Stephens Creek 82.90 123 P P 00 12 09.1 -2.0
STKA pmax pmax
comp=Z,10.0nm,1.9s
NOR Nord 84.36 352 iP P 00 12 17.2 -0.4
NOR Nord 84.36 352 iP P 00 12 17.2 -0.4
PMG Port Moresby 85.37 100 LR LR 00 49 34.2
comp=Z,210nm,20.6s,baz=212,slow=35
CTA Charters Tower 85.51 110 LR LR 00 47 17.2
comp=Z,724nm,19.2s,baz=282,slow=33
MA2 Magadan 85.56 31 LR LR 00 52 40.9
comp=Z,2μm,18.6s,baz=266,slow=37
MA2 Magadan 85.56 31ceP P 00 12 21.8 -2.2
MA2 pmax pmax
comp=Z,25nm,1.7s
SEY Seymchan 86.27 27 LR LR 00 52 30.5
comp=Z,2μm,20.0s,baz=322,slow=37
SEY Seymchan 86.27 27 iP P 00 12 26.0 -1.4
SUMG Summit 89.37 343 iP P 00 12 43.0 +0.4

comp=Z,19nm,0.9s
SUMG Summit 89.37 343 i P P 00 12 43.0 +0.4
SUMG pmax pmax
comp=Z,19nm,0.9s
PETK Petropavlovsk- 89.82 37 LR LR 00 54 20.7
comp=Z,1μm,21.0s,baz=254,slow=36
BILL Bilibino 91.29 21 P P 00 12 51.4 +0.3
BILL Bilibino 91.29 21 deP P 00 12 51.3 +0.2
BILL eS S 00 23 38.0 -11
BILL pmax pmax
comp=Z,14nm,1.1s
BILL MLR MLR
comp=Z,983nm,21.0s
QSPA South Pole Qui 94.10 180 LR LR 00 49 20.3
comp=Z,997nm,20.1s,baz=254,slow=32
VNDA Vanda 96.03 168 LR LR 00 49 52.6
comp=Z,957nm,21.6s,baz=250,slow=31
ILAR Eielson Array 107.91 13 PP PP 00 18 32.7 -1.6
comp=Z,0.4nm,0.9s,baz=348,slow=3.8,SNR=4.1
YKA Yellowknife Ar 113.52 359 PKiKP PKiKP 00 18 23.2 -0.6
comp=Z,0.3nm,0.7s,baz=354,slow=2.2,SNR=5.1
YKA PP PP 00 19 13.6 -0.9
comp=Z,0.2nm,0.5s,baz=3.0,slow=6.9,SNR=7.1
ULM Lac du Bonnet 122.72 344 PKP PKPdf 00 18 41.0 -0.8
comp=Z,1.0nm,0.7s,baz=26,slow=6.3,SNR=3.4
EYMN Ely 123.36 339 PKPdf 00 18 42.0 -1.2
LPAZ La Paz 130.12 252 PKP PKPdf 00 18 56.9 -0.8
comp=Z,0.6nm,0.7s,baz=66,slow=6.5,SNR=2.4
RSSD Black Hills 130.47 347 PKPdf 00 18 56.9 -0.3
RSSD Black Hills 130.47 347 PKIKP PKPdf 00 18 56.9 -0.3
PDAR Pinedale Array 132.77 352 PKP PKPdf 00 19 00.6 -1.0
comp=Z,1.4nm,0.7s,baz=72,slow=1.6,SNR=11
HUMO Hull Mountain 133.21 6 PKiKP 00 19 03.5 +0.2
NVAR Mina Array Bea 137.64 1 PKP PKP 00 19 11.0 +0.2
comp=Z,1.4nm,0.8s,baz=180,slow=0.4,SNR=9.4
MNTX Cornudas Mount 142.55 343 PKPdf 00 19 18.9 -0.7
TXAR Lajitas Array 144.18 339 PKP PKPdf 00 19 20.1 -0.3
comp=Z,2.0nm,0.9s,baz=59,slow=3.0,SNR=7.4
TGUH Tegucigalpa,Un 145.03 302 PKPbc 00 19 21.1 -2.7
HPIG 147.07 340 PKPbc 00 19 29.3 -0.6
ZAIG Zacatecas 149.56 332 PKPdf 00 19 34.1 +2.0

IDC 25 00:32:45.1±1.0, 7.65S×68.02E, h0km, mb3.7/9, mb1 3.8/9, mb1mx3.6/55, mbtmp3.7/9, MS4.0/8, Ms1 4.0/8, ms1mx3.6/38, Error ellipse: s-maj=29.6km s-min=26.6km az=67.0
NEIC 25 00:32:46.7±2.8, 7.5S±0.1×68.20E±0.08, h10km±1km, mb4.2/4, Error ellipse: s-maj=19.2km s-min=12.4km az=167.0
ISC 25 00:32:46.6±0.7, 7.5S±0.1×68.17E±0.06, h12km, n35, σ1§54/28, mb4.0/12, MS4.0/8, Chagos Archipelago region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
H08N3 Diego Garcia H 3.04 67 Pn Pn 00 33 32.4 -1.9
H08N3 Sn Sn 00 34 07.4 -3.0
H08N3 T T 00 36 58.3
baz=244,slow=75,SNR=483
H08N2 Diego Garcia H 3.05 67 Pn Pn 00 33 32.9 -1.6
H08N2 Sn Sn 00 34 07.6 -3.2
H08N2 T T 00 36 54.0
baz=244,slow=75,SNR=414
H08N1 Diego Carcia H 3.06 68 Pn Pn 00 33 33.0 -1.6
H08N1 Sn Sn 00 34 09.7 -1.2
H08N1 T T 00 36 48.3
baz=244,slow=75,SNR=360
DGAR Diego Garcia 4.25 89 Pn 00 33 51.4 +0.2
DGAR Sn 00 34 40.0 -0.8
H08S1 Diego Carcia H 4.27 92 Pn Pn 00 33 51.2 -0.1
baz=241,slow=15,SNR=37
H08S1 T T 00 38 52.3
baz=263
H08S3 Diego Garcia H 4.28 92 Pn Pn 00 33 50.9 -0.5
baz=241,slow=15,SNR=251
H08S3 T T 00 38 55.7
baz=263
H08S2 Diego Garcia H 4.29 92 Pn Pn 00 33 51.6 +0.1
baz=241,slow=15,SNR=58
H08S2 T T 00 38 49.9
baz=263
MSEY Mahe Island 12.93 282 Pn 00 35 50.8 +0.4
KMBO Kilima Mbogo 31.46 280 LR LR 00 50 24.2
comp=Z,320nm,19.9s,baz=96,slow=34
KMBO Kilima Mbogo 31.46 280 P P 00 39 07.1 -1.6
ATD Arta Tunnel 31.51 307 LR LR 00 50 51.6
comp=Z,145nm,18.5s,baz=53,slow=34
WSAR Wadi Sarin 31.97 343 LR LR 00 48 36.9
comp=Z,141nm,18.4s,baz=224,slow=30
PSI Prapat 32.36 73 LR LR 00 51 06.6
comp=Z,391nm,19.6s,baz=230,slow=34
CMAR Chiang Mai Arr 39.86 49 P P 00 40 22.2 +1.8
1.3nm,0.3s,baz=224,slow=7.6,SNR=3.6
LSZ Lusaka 39.89 255 P P 00 40 18.8 -2.1
LSZ IAmb IAmb 00 40 23.0
comp=Z,5.5nm,1.2s
BOSA Boshof 45.54 237 P P 00 41 05.2 -1.4
comp=Z,1.7nm,0.8s,baz=45,slow=7.1,SNR=2.6
BOSA Boshof 45.54 237 P P 00 41 05.5 -1.2
H01W3 Cape Leeuwin H 50.16 130 T T 01 35 33.8
baz=292,slow=75,SNR=17
H01W2 Cape Leeuwin H 50.16 130 T T 01 35 32.3
baz=292,slow=75,SNR=12
H01W1 Cape Leeuwin H 50.17 130 T T 01 35 33.4
baz=292,slow=75,SNR=14
MKAR Makanchi Array 55.52 12 P P 00 42 22.3 +0.6
comp=Z,0.4nm,0.9s,baz=205,slow=8.2,SNR=4.9
BRTR Keskin Array B 56.83 329 P P 00 42 31.3 0.0
comp=Z,0.6nm,0.8s,baz=131,slow=7.9,SNR=3.6
KURBB Kurchatov Arra 58.61 8 P P 00 42 44.4 +1.1
comp=Z,42nm,0.7s,baz=199,slow=6.6,SNR=2.8
KURK Kurchatov 58.71 8 P P 00 42 44.4 +0.4
KURK Kurchatov 58.71 8 IAmb IAmb 00 42 55.1
comp=Z,2.3nm,0.9s
MAW Mawson 60.10 182 LR LR 01 01 53.8
comp=Z,141nm,19.0s,baz=41,slow=29
ZALV Zalesovo Beam 62.84 11 P P 00 43 14.6 +2.5
comp=Z,0.6nm,0.8s,baz=204,slow=6.1,SNR=2.0
ZALV LR LR 01 10 09.1
comp=Z,168nm,19.0s,baz=81,slow=36
ARU Arti 64.22 354 P P 00 43 21.8 +0.6
comp=Z,0.4nm,0.3s,baz=240,slow=8.1,SNR=1.8
SONM Songino Array 64.62 27 P P 00 43 26.2 +2.0
comp=Z,0.3nm,0.4s,baz=219,slow=6.6,SNR=2.5
ASAR Alice Springs 64.81 113 P P 00 43 26.3 +0.4
comp=Z,0.4nm,0.8s,baz=280,slow=6.7,SNR=3.3
WRA Warramunga Arr 65.10 108 P P 00 43 29.0 +1.2
comp=Z,0.9nm,0.9s,baz=277,slow=6.4,SNR=3.9
TORD Torodi Ar. Bea 69.14 287 LR LR 01 13 11.1
comp=Z,88nm,18.0s,baz=330,slow=35
DBIC Dimbokro 74.19 279 LR LR 01 15 44.2
comp=Z,76nm,20.0s,baz=48,slow=35
PDAR Pinedale Array 144.85 357 PKP PKPdf 00 52 25.1 +0.8
comp=Z,0.2nm,0.5s,baz=105,slow=2.1,SNR=2.5
NVAR Mina Array Bea 148.69 10 PKPbc PKiKP 00 52 36.8 +0.8
comp=Z,0.5nm,0.6s,baz=326,slow=0.3,SNR=3.2

NCEDC 25 00:33:16.9±1.2, 35.53N±0.02×121.28W±0.02, h5km±7km, Md2.8/97, Error ellipse: s-maj=2.9km s-min=2.7km az=78.0
NEIC 25 00:33:16.7±1.7, 35.56N±0.04×121.33W±0.05, h11km±6km, Error ellipse: s-maj=6.6km s-min=3.7km az=225.0, Central California

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PHCM Hearst Castle 0.19 50 Pg 00 33 21.0 +0.1
PCBM Cambria 0.23 100 Pg 00 33 20.8 -0.6
ARDC Alexander Ranc 0.30 108 Pg 00 33 22.3 -0.6
ARDC Sg 00 33 26.2 -0.8
BLDC Black Mountain 0.35 94 Pg 00 33 23.6 -0.1
BLDC Black Mountain 0.35 94 Pg 00 33 23.5 -0.1
BLDC Sg 00 33 28.4 0.0
PHSB Hesperia Broad 0.35 41 Pg 00 33 24.1 +0.5
PAPM Alder Peak 0.35 356 Pb 00 33 24.5 -0.5
RAMR Ramage Ranch 0.39 78 Pg 00 33 24.3 0.0
PANM San Antonio Re 0.41 58 Pg 00 33 25.0 +0.2
LSDC Los Osos Digit 0.48 123 Pg 00 33 25.9 -0.2
VPDC Valencia Peak 0.50 130 Pg 00 33 26.2 -0.2
PTAM Tassajara Cree 0.54 108 Pg 00 33 26.7 -0.5
PCCM Crazy Canyon 0.55 15 Pb 00 33 28.3 0.0
EFD Emergency Oper 0.55 115 Pg 00 33 26.7 -0.7
DPD Davis Peak 0.56 126 Pg 00 33 27.1 -0.4
PSAM San Ardo 0.59 38 Pg 00 33 28.4 +0.2
PPO Portuguese Can 0.66 62 Pg 00 33 29.8 +0.3
BAPM Anderson Peak 0.66 338 Pb 00 33 30.9 +0.5
PWKM Work Ranch 0.72 69 Pg 00 33 30.8 +0.2
LRC Lone Oak Road 0.72 19 Pb 00 33 31.1 -0.2
PVCM Vineyard Canyo 0.74 61 Pg 00 33 30.9 -0.2
PKD Bear Valley Ra 0.75 59 Pg 00 33 30.9 -0.3
BPOM Post Ranch 0.76 332 Pb 00 33 32.0 +0.2
PSTM Stockdale Moun 0.77 61 Pg 00 33 31.2 -0.3
BCWM Chews Ridge 0.77 346 Pb 00 33 32.1 -0.1
TCHL Shandon 0.77 80 Pg 00 33 31.9 -0.3
PMPB Monarch Peak 0.79 33 Pb 00 33 32.2 -0.2
PCMM Cholame Hills 0.79 72 Pg 00 33 31.9 0.0
PMCM McMillan Canyo 0.80 78 Pg 00 33 32.2 0.0
TSCN Private Proper 0.80 91 Pg 00 33 32.4 +0.2
PHFM Heflinger Ranc 0.82 67 Pg 00 33 32.3 -0.3
BSMM Soledad Missio 0.83 355 Pb 00 33 33.3 +0.2
PKLM Kerr Lake 0.84 75 Pg 00 33 32.7 -0.1
GHC Gold Hill 0.84 71 Pg 00 33 32.6 -0.3
HAST Hastings Reser 0.85 348 Pb 00 33 33.3 -0.2
BSGM Shirttail Gulc 0.85 4 Pb 00 33 33.5 0.0
TRAM Private Proper 0.87 82 Pg 00 33 33.2 -0.3
PSNM Stone Corral 0.88 75 Pg 00 33 33.2 -0.3
PMLM Mount Lospe 0.89 138 Pg 00 33 32.4 -1.5
CTM Castle Mountai 0.89 65 Pb 00 33 34.1 -0.1
PAGB Antelope Grade 0.90 79 Pg 00 33 33.5 -0.5
LRV Little Rabbit 0.90 16 Pb 00 33 34.7 +0.4
PSRM Scobie Ranch 0.91 71 Pg 00 33 33.9 -0.3
PMRM Maxey Ranch 0.92 76 Pg 00 33 34.0 -0.5
BPIM Pinnacles 0.94 8 Pb 00 33 34.9 -0.1
BBNM San Benito 0.97 12 Pb 00 33 35.7 +0.2
BJCM Johnson Can. 0.99 357 Pb 00 33 36.0 +0.2
BVL Bear Valley 1.02 6 Pb 00 33 36.1 -0.2
PBPM Bitterwater Pu 1.02 89 Pg 00 33 35.4 -1.0
SCZ Santa Cruz 1.04 357 Pb 00 33 36.3 -0.4
BBGB Big Mountain B 1.04 13 Pb 00 33 37.1 +0.2
PARM Anticline Ridg 1.06 49 Pn 00 33 37.6 +0.1
BJOM Mount Johnson 1.07 1 Pb 00 33 36.5 -0.7
BLRM Lewis Ranch 1.10 3 Pb 00 33 37.5 -0.4
BEHM Elkhorn Ranch 1.11 7 Pn 00 33 38.4 +0.2
BAVM Antelope Valle 1.11 13 Pb 00 33 37.8 -0.1
BSRM Salinas Radio 1.11 352 Pb 00 33 37.8 -0.2
BEMM Emmet 1.12 10 Pb 00 33 37.9 -0.1
HMOM Monterey 1.14 336 Pg 00 33 38.7 0.0
BCGM Cienega Road 1.15 360 Pb 00 33 38.2 -0.3
BMSM Mercy Hot Spri 1.18 22 Pg 00 33 39.4 0.0
BVYM Vineyard 1.19 357 Pb 00 33 38.4 -0.9
FRP Fremont Peak 1.20 354 Pb 00 33 38.4 -1.0
SAO San Andreas Ge 1.21 356 Pg Pn 00 33 38.8 -0.7
SAO Sb 00 33 55.0 -0.1
BSLM Silva Ranch 1.21 359 Pb 00 33 39.8 +0.1
GATR Gnd/Air Tx Cnt 1.21 146 Pn 00 33 37.8 -1.8
CARC Carrizo Plain 1.24 101 Pn 00 33 38.7 -1.3
HJGM San Juan Grade 1.25 351 Pn 00 33 39.9 -0.2
HTUM Tustin Road 1.29 349 Pn 00 33 40.5 -0.1
HLTM Lone Tree Road 1.32 1 Pn 00 33 40.9 -0.2
BRMM Rolling Bench 1.34 18 Pg 00 33 42.1 -0.3
HCOM Corn Cob Canyo 1.36 347 Pb 00 33 41.9 -0.3
FIGC Figueroa Mtn. 1.38 127 Pn 00 33 40.2 -1.8
PKM Mcpherson Peak 1.41 118 Pn 00 33 40.7 -1.8
HFEM San Felipe 1.42 358 Pn 00 33 42.4 -0.1
SFJWR San Luis Fatjo 1.49 5 Pn 00 33 43.3 -0.1
HPCM Pacheco Lake 1.50 2 Pb 00 33 44.9 +0.3
SLD San Luis Dam 1.52 3 Pn 00 33 43.7 -0.1
MRHM Rocky Hill 1.96 68 Pn 00 33 49.1 -0.8
ISA Isabella, Lake 2.33 87 Pn 00 33 53.9 -1.1
CMB Columbia Colle 2.58 17 Pn 00 33 58.5 0.0
CMB Sn 00 34 27.1 -2.8
MDPB Devils Postpil 2.75 41 Pn 00 34 02.3 +1.3
OMMB Old Mammoth Mi 2.78 42 Pn 00 34 02.8 +1.4
MWC Mount Wilson 3.00 115 Pn Pn 00 34 04.0 -0.4
WAKR Walker 3.31 27 Pn 00 34 11.9 +3.4
AFDM Forest Hills D 3.40 5 Pn Pn 00 34 11.0 +1.3
HOPS Hopland Field 3.70 338 Pn Pn 00 34 14.5 +0.8
GSC Goldstone, Bar 3.71 93 Pn Pn 00 34 14.1 +0.1
YERR Yerington 3.81 25 Pn Pn 00 34 17.0 +1.6

PRU 25 00:52:39.2±0.0, 46.21N×7.53E, h0km
IASPEI 25 00:52:44.7±0.8, 46.23N±0.01×7.83E±0.01, h8km±4km, Error ellipse: s-maj=2.2km s-min=1.9km az=120.5, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009
GEN 25 00:52:45.0, 46.24N×7.82E, h7km±1km, Ml2.8
ROM 25 00:52:45.0±0.3, 46.22N±0.01×7.82E±0.01, h10km±1km, ML2.7/27, Error ellipse: s-maj=1.1km s-min=0.9km az=140.0
LDG 25 00:52:45.1±0.0, 46.23N×7.84E, h6km, Md3.2/3, Ml3.0/55, Error ellipse: s-maj=0.9km s-min=0.7km az=114.0
STR 25 00:52:45.7±0.4, 46.N±1.×.±., h3km±3km, MLv2.9/6
ZUR 25 00:52:45.1, 46.24N×7.84E, h6km, MLh3.0/64, Error ellipse: s-maj=0.8km s-min=0.4km az=135.0
BGR 25 00:52:50.4±0.8, 46.48N×8.01E, h10km, ML3.1/5, Error ellipse: s-maj=10.0km s-min=6.7km az=20.0
ISC 25 00:52:44.6±0.7, 46.23N±0.01×7.82E±0.01, h11km±3km, n209, σ1§63/373, 78C-7D, Switzerland

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
EMBD Embd, Matterta 0.02 148 ⇓Pg Pg 00 52 46.6 -0.2
40nm,SNR=390
EMBD Sg Sg 00 52 47.4 -0.9
SGRA Graechen Ausbl 0.04 162 ⇑Pg Pg 00 52 47.1 +0.1
41nm,SNR=93
SGRA Sg Sg 00 52 48.3 -0.4
SNIB St. Niklaus Ba 0.06 190 ⇑Pg Pg 00 52 47.3 +0.2
49nm,SNR=290
SNIB Sg Sg 00 52 48.6 -0.2
SVIO Visp Obere Sta 0.07 38 ⇓Pg Pg 00 52 46.8 -0.3
139nm,SNR=806
SVIO Sg Sg 00 52 47.8 -1.2
SVIT Visp-Terbiners 0.07 40 ⇓Pg Pg 00 52 46.9 -0.3
108nm,SNR=739
SVIT Sg Sg 00 52 47.9 -1.1
SVIL Visp Littennar 0.08 40 ⇓Pg Pg 00 52 46.9 -0.3
95nm,SNR=16
SVIL Sg Sg 00 52 48.1 -1.0
BIBA Brigerbad 0.10 49 ⇑Pg Pg 00 52 47.4 -0.1
24nm,SNR=236
BIBA Sg Sg 00 52 48.7 -0.9
SBRS Brig, Spital 0.14 54 ⇑Pg Pg 00 52 48.1 0.0
32nm,SNR=266
SBRS Sg Sg 00 52 50.0 -0.4
SIMPL Simplonpass 0.14 88 ⇓Pg Pg 00 52 48.2 +0.1
15nm,SNR=172
SIMPL ⇓Pg Pg 00 52 48.2 +0.1
SIMPL Sg Sg 00 52 50.1 -0.5
VANNI Vissoie, Val d 0.15 261 ⇑Pg Pg 00 52 48.7 +0.4
VANNI ⇑Pg Pg 00 52 48.7 +0.4
6.1nm,SNR=69
VANNI Sg Sg 00 52 50.9 0.0
LAUCH Lauchernalp 0.18 350 ⇑Pg Pg 00 52 49.1 +0.2
LAUCH ⇑Pg Pg 00 52 49.1 +0.2
6.6nm,SNR=60
LAUCH Sg Sg 00 52 51.5 -0.3
LKBD Leukerbad 0.20 319 ⇑Pg Pg 00 52 49.4 +0.3
2.8nm,SNR=30
LKBD ⇑Pg Pg 00 52 49.4 +0.3
LKBD Sg Sg 00 52 52.2 0.0
SIEB Ecole de Borzu 0.20 288 ⇓Pg Pg 00 52 49.6 +0.6
2.7nm,SNR=25
SIEB Sg Sg 00 52 52.8 +0.7
MMK Mattmark 0.21 151 ⇑Pg Pg 00 52 49.8 +0.5
5.9nm,SNR=77
MMK ⇑Pg Pg 00 52 49.8 +0.5
MMK Sg Sg 00 52 52.5 +0.1
MMK Mattmark 0.21 151 ⇑iP Pg 00 52 49.8 +0.5
MMK S Sg 00 52 52.4 0.0
MMK AML AML
comp=E,3785μm,0.2s
MMK AML AML
comp=N,5080μm,0.4s
MMK AML AML
comp=N,5080μm,0.5s
MMK AML AML
comp=E,3785μm,0.2s
FIESA Fiescheralp 0.29 45 ⇑Pg Pg 00 52 50.8 +0.1
FIESA ⇑Pg Pg 00 52 50.8 +0.1
comp=E,1.9nm,SNR=18
SIOO Sion-Ophtalmol 0.30 270 ⇑Pg Pg 00 52 51.5 +0.7
comp=E,5.0nm,SNR=39
SIOV Sion-Valere 0.31 270 ⇑Pg Pg 00 52 51.5 +0.5
comp=E,2.1nm,SNR=17
DIX Grande Dixence 0.32 242 ⇑Pg Pg 00 52 51.7 +0.4
comp=E,1.8nm,SNR=25
DIX ⇑Pg Pg 00 52 51.7 +0.4
DIX Grande Dixence 0.32 242 ⇑iP Pg 00 52 51.7 +0.4
DIX S Sg 00 52 56.0 +0.3
DIX AML AML
comp=N,1665μm,0.5s
DIX AML AML
comp=E,947μm,0.2s
DIX AML AML
comp=E,947μm,0.2s
SATI Passo dei Sala 0.36 174 ⇑Pg Pg 00 52 52.4 +0.5
comp=E,1.8nm,SNR=29
SATI ⇑Pg Pg 00 52 52.4 +0.5
SATI Passo dei Sala 0.36 174 ⇑iP Pg 00 52 52.4 +0.5
SATI S Sg 00 52 57.0 +0.2
SATI AML AML
comp=N,1165μm,1.2s
SATI AML AML
comp=E,1535μm,0.3s
SATI Passo dei Sala 0.36 174 P Pg 00 52 52.4 +0.5
SATI S Sg 00 52 57.1 +0.2
WIMIS Wimmis 0.45 343 ⇑Pg Pg 00 52 54.0 +0.4
comp=E,1.5nm,SNR=16
WIMIS ⇑Pg Pg 00 52 54.0 +0.4
SINS Interlaken, Sc 0.45 4 ⇑Pg Pg 00 52 54.0 +0.4
comp=E,4.9nm,SNR=24
SINS Sg Sg 00 53 00.4 +0.8
GRIMS Grimsel Gerste 0.49 45 ⇑Pg Pg 00 52 54.4 +0.1
GRIMS ⇑Pg Pg 00 52 54.4 +0.1
comp=E,1.3nm,SNR=12
GRYON Gryon 0.49 272 ⇑Pg Pg 00 52 54.7 +0.5
GRYON ⇑Pg Pg 00 52 54.7 +0.5
comp=E,0.7nm,SNR=7.5
GRYON Sg Sg 00 53 01.6 +0.8
HASLI Hasliberg/Brie 0.57 24 ⇑Pg Pg 00 52 55.9 +0.1
comp=E,0.7nm,SNR=4.1
HASLI ⇑Pg Pg 00 52 55.9 +0.1
SALAN Lac Salanfe 0.59 262 ⇑Pg Pg 00 52 56.7 +0.5
comp=E,0.5nm,SNR=3.7
SALAN ⇑Pg Pg 00 52 56.7 +0.5
REMY Saint-Rhmy-en 0.61 229 ⇑Pn Pg 00 52 56.6 +0.1
comp=E,1.7nm,SNR=15
REMY ⇑Pn Pg 00 52 56.6 +0.1
REMY Saint-Rhmy-en 0.61 229 ⇑eP Pg 00 52 56.5 +0.1
REMY AML AML
comp=N,1870μm,0.3s
REMY AML AML
comp=N,1875μm,0.3s
REMY AML AML
comp=E,2970μm,0.2s
REMY Saint-Rhmy-en 0.61 229 P Pg 00 52 56.6 +0.1
REMY S Sg 00 53 04.6 0.0
FUSIO Fusio 0.63 69 ⇑Pg Pg 00 52 56.7 -0.1
FUSIO ⇑Pg Pg 00 52 56.7 -0.1
comp=E,0.9nm,SNR=13
FUSIO Fusio 0.63 69 ⇑eP Pg 00 52 56.7 -0.1
FUSIO S Sg 00 53 05.4 +0.3
FUSIO AML AML
comp=E,512μm,0.1s
FUSIO AML AML
comp=E,512μm,0.1s
FUSIO AML AML
comp=N,551μm,0.3s
SEMOS Emosson Stauma 0.64 255 ⇑Pg Pg 00 52 57.5 +0.5
comp=N,0.6nm,SNR=3.4
CIRO Champorcher 0.66 195 ⇑Pg Pg 00 52 57.2 -0.2
CIRO ⇑Pg Pg 00 52 57.2 -0.2
comp=N,1.0nm,SNR=15
CIRO ⇑Pn Pg 00 52 57.3 -0.2
CIRO Champorcher 0.66 195 P Pg 00 52 57.3 -0.2
CIRO AML AML
comp=E,439μm,1.3s
CIRO AML AML
comp=E,438μm,1.3s
CIRO AML AML
comp=N,513μm,1.3s
CIRO Champorcher 0.66 195 P Pg 00 52 57.4 0.0
CIRO S Sg 00 53 06.3 +0.2
SARK Sarnen Kantons 0.72 24 Pg Pg 00 52 58.7 +0.1
comp=N,1.0nm,SNR=4.5
TRAV Traversella 0.72 184 ⇑Pg Pg 00 52 58.8 +0.1
comp=N,1.3nm,SNR=15
TRAV ⇑Pg Pg 00 52 58.8 +0.1
TRAV Traversella 0.72 184 ⇑iP Pg 00 52 58.9 +0.3
TRAV S Sg 00 53 08.2 0.0
TRAV AML AML
comp=E,1195μm,0.8s
TRAV AML AML
comp=N,1295μm,0.2s
TRAV Traversella 0.72 184 P Pg 00 52 59.0 +0.3
TRAV S Sg 00 53 08.4 +0.3
NALPS Val Nalps 0.74 60 ⇑Pg Pg 00 52 58.7 -0.2
comp=N,0.8nm,SNR=10
NALPS ⇑Pg Pg 00 52 58.7 -0.2
OGSI Sixt 0.76 258 ⇑Pg Pg 00 52 59.8 +0.5
comp=N,0.5nm,SNR=4.0
VARE Varese 0.76 119 P Pg 00 52 59.6 +0.2
VARE S Sg 00 53 09.2 -0.1
VARE AML AML
comp=E,488μm,0.7s
VARE AML AML
comp=E,488μm,0.7s
VARE AML AML
comp=E,488μm,0.7s
VARE AML AML
comp=N,453μm,0.1s
BNALP Bannalp 0.76 33 ⇑Pg Pg 00 52 59.5 +0.1
comp=N,0.6nm,SNR=4.7
BNALP ⇑Pg Pg 00 52 59.5 +0.1
BNALP Bannalp 0.76 33 ⇑iP Pg 00 52 59.5 +0.1
BNALP S Sg 00 53 08.8 -0.6
BNALP AML AML
comp=E,457μm,0.8s
BNALP AML AML
comp=N,390μm,0.2s
BNALP AML AML
comp=E,456μm,0.8s
BNALP AML AML
comp=E,457μm,0.8s
BNALP AML AML
comp=N,390μm,0.2s
SALTS Altdorf, Kanto 0.86 41 Pg Pg 00 53 01.4 +0.1
comp=N,1.3nm,SNR=7.7
SALTS Pg Pg 00 53 01.4 +0.1
SLUW Luzern Werkhof 0.88 23 ⇑Pg Pb 00 53 02.5 +0.6
comp=N,4.4nm,SNR=19
SLUB Luzern Bramber 0.89 22 ⇑Pg Pb 00 53 02.6 +0.5
comp=N,0.9nm,SNR=5.9
MUGIO Muggio 0.91 110 Pg Pg 00 53 02.4 +0.2
MUGIO Pg Pg 00 53 02.4 +0.2
comp=N,0.9nm,SNR=12
MUGIO Muggio 0.91 110 P Pg 00 53 02.4 +0.2
MUGIO S Sg 00 53 13.9 -0.1
MUGIO AML AML
comp=E,350μm,0.4s
MUGIO AML AML
comp=N,658μm,0.4s
MUGIO AML AML
comp=E,350μm,0.4s
LSD Lago del Serru 0.91 212 ⇑Pn Pg 00 53 01.7 -0.5
comp=E,0.7nm,SNR=9.0
LSD ⇑Pn Pg 00 53 01.7 -0.5
LSD Lago del Serru 0.91 212 P Pg 00 53 01.7 -0.5
LSD AML AML
comp=N,352μm,0.6s
LSD AML AML
comp=E,375μm,0.4s
LSD Lago del Serru 0.91 212 P Pg 00 53 01.7 -0.5
LSD S Sg 00 53 13.9 -0.2
MUO Muotathal 0.93 37 ⇑Pg Pg 00 53 02.8 +0.2
MUO ⇑Pg Pg 00 53 02.8 +0.2
comp=E,0.9nm,SNR=6.0
RSL Roselend 0.99 237 Pg Pg 00 53 04.0 +0.2
RSL Sg Sg 00 53 17.8 +1.0
DAGMA Lutertal, Dagm 1.01 8 ⇑Pg Pb 00 53 04.8 +0.7
DAGMA ⇑Pg Pb 00 53 04.8 +0.7
comp=E,1.4nm,SNR=8.1

LPL La Plagne 1.04 227 ePg Pg 00 53 04.3 -0.4
LPL La Plagne 1.04 227 eP Pn 00 53 06.7 +1.3
LPL eSg Sg 00 53 19.1 +0.8
comp=E,93nm,0.3s
LPG La Plagne 1.05 226 ePg Pg 00 53 04.3 -0.5
LPG La Plagne 1.05 226 eP Pn 00 53 06.9 +1.4
LPG eSg Sg 00 53 19.3 +0.8
comp=E,83nm,0.3s
HAMIK Hmikon, Dlik 1.06 17 ⇑Pg Pb 00 53 05.6 +0.6
comp=E,2.1nm,SNR=2.4
HAMIK ⇑Pg Pb 00 53 05.6 +0.6
PANIX Pigniu (Panix) 1.07 56 ⇑Pn Pg 00 53 04.8 -0.5
TUE Stuetta 1.09 77 P Pg 00 53 05.8 +0.2
TUE AML AML
comp=E,222μm,0.2s
TUE AML AML
comp=E,292μm,0.2s
TUE AML AML
comp=N,290μm,1.3s
TUE AML AML
comp=N,232μm,1.3s
TUE AML AML
comp=N,290μm,1.3s
TUE AML AML
comp=E,222μm,0.2s
BALST Balsthal 1.10 356 ⇑Pn Pg 00 53 06.4 +0.5
BALST ⇑Pn Pg 00 53 06.4 +0.5
comp=E,1.7nm,SNR=12
BALST Balsthal 1.10 356 ePg Pg 00 53 06.4 +0.5
BALST eSn Sb 00 53 21.8 +1.5
GIMEL St. Georges / 1.11 286 AML AML
comp=E,220μm,1.0s
GIMEL AML AML
comp=E,220μm,1.0s
GIMEL AML AML
comp=N,257μm,1.3s
RSP Reno Superiore 1.15 200 P Pg 00 53 06.3 -0.5
RSP S Sg 00 53 21.7 -0.1
RSP AML AML
comp=N,369μm,0.2s
RSP AML AML
comp=N,380μm,0.2s
RSP AML AML
comp=N,370μm,0.2s
RSP AML AML
comp=E,464μm,1.1s
RSP AML AML
comp=E,436μm,1.1s
RSP AML AML
comp=N,381μm,0.2s
MONC Moncucco Torin 1.16 176 P Pb 00 53 07.6 +0.9
MONC AML AML
comp=E,448μm,0.3s
MONC AML AML
comp=N,500μm,0.5s
EMMET Emmethof 1.21 6 ⇑Pn Pg 00 53 08.2 +0.3
EMMET ⇑Pn Pg 00 53 08.2 +0.3
comp=N,1.2nm,SNR=9.5
BOURR Bourrignon 1.23 341 ⇑Pn Pg 00 53 08.7 +0.5
comp=N,2.0nm,SNR=11
BOURR ⇑Pn Pg 00 53 08.7 +0.5
ROTHE Rothenfluh 1.25 3 ⇑Pn Pg 00 53 09.0 +0.4
ROTHE ⇑Pn Pg 00 53 09.0 +0.4
comp=N,1.9nm,SNR=14
ZUR Degenried 1.25 25 ⇑Pn Pn 00 53 09.1 +1.1
ZUR ⇑Pn Pn 00 53 09.1 +1.1
comp=N,1.0nm,SNR=7.2
CABF La Chapelle 1.25 288 ePg Pg 00 53 08.9 +0.2
CABF La Chapelle 1.25 288 eP Pn 00 53 09.5 +1.3
CABF eSg Sg 00 53 25.4 +0.3
comp=N,61nm,0.2s
CHMF Charmoille 1.29 322 Pg Pg 00 53 10.2 +0.7
CHMF Pn Pb 00 53 11.3 +2.3
CHMF Sg Sn 00 53 27.8 +1.8
LOMF Lomont 1.31 329 Pg Pg 00 53 10.6 +0.9
LOMF Pn Pb 00 53 11.7 +2.5
LOMF Sg Sn 00 53 28.6 +2.2
LOMF Sn Sb 00 53 29.6 +3.6
SULZ Cheisacher 1.31 9 ePg Pn 00 53 09.9 +1.0
PLONS Plons/SG 1.35 52 ⇑Pn Pn 00 53 10.1 +0.6
comp=N,0.4nm,SNR=4.0
PLONS ⇑Pn Pn 00 53 10.1 +0.6
PLONS Plons/SG 1.35 52 ePg Pn 00 53 10.1 +0.6
PLONS Plons/SG 1.35 52 P Pn 00 53 10.1 +0.6
PLONS AML AML
comp=E,416μm,0.4s
PLONS AML AML
comp=N,396μm,0.5s
WILA Wila 1.40 32 ⇑Pn Pg 00 53 11.9 +0.4
WILA ⇑Pn Pg 00 53 11.9 +0.4
comp=N,1.0nm,SNR=7.4
WILA Wila 1.40 32 ePg Pg 00 53 11.9 +0.4
BNI Bardonecchia 1.43 214 P Pn 00 53 11.5 +0.9
BNI S Sb 00 53 30.6 +1.1
BNI AML AML
comp=N,106μm,1.0s
BNI AML AML
comp=N,106μm,1.0s
BNI AML AML
comp=E,111μm,0.4s
ROTM Rocchetta Tana 1.44 165 P Pb 00 53 12.3 +0.9
ROTM AML AML
comp=E,346μm,1.3s
ROTM AML AML
comp=N,444μm,1.2s
BHB Bricherasio 1.45 196 P Pn 00 53 10.6 -0.1
BHB AML AML
comp=E,100μm,0.2s
BHB AML AML
comp=N,173μm,0.2s
BHB AML AML
comp=N,174μm,0.2s
BHB AML AML
comp=E,101μm,0.2s
RRL Rocca Remolon 1.50 209 P Pn 00 53 12.8 +1.1
RRL AML AML
comp=N,197μm,1.2s
RRL AML AML
comp=E,218μm,0.6s
DAVOX Davos/Dischmat 1.53 68 P Pb 00 53 13.7 +0.6
DAVOX AML AML
comp=E,212μm,0.3s
DAVOX AML AML
comp=N,290μm,0.4s
DAVOX AML AML
comp=N,290μm,0.4s
DAVOX AML AML
comp=E,212μm,0.3s
OG35 Corcelles 1.57 264 Pn Pb 00 53 14.6 +0.9
OG35 Pg Pg 00 53 16.4 +1.6
OG35 Sg Sg 00 53 37.7 +2.5
GDM Grand'Maison 1.57 230 Pn Pb 00 53 14.9 +1.0
SLE Schleitheim 1.60 17 ePn Pn 00 53 13.5 +0.6
SLE eSg Sn 00 53 33.6 +0.1
OGSM Saint Maurice 1.61 248 Pn Pb 00 53 15.5 +1.2
OGSM Sg Sg 00 53 38.7 +2.4
MBDF Montbardon 1.68 206 eP Pn 00 53 15.8 +1.8
MBDF eSn Sn 00 53 34.2 -1.4
comp=E,152nm,0.6s
MBDF eSg Sb 00 53 38.3 +1.6
comp=E,140nm,0.5s
MOF Molkenrain 1.68 344 Pn Pn 00 53 15.5 +1.4
MOF Pg Pg 00 53 17.8 +0.8
MOF Sn Sg 00 53 39.5 +0.7
HINF Hinteralfeld 1.71 338 eP Pn 00 53 15.4 +0.9
HINF Hinteralfeld 1.71 338 ePg Pb 00 53 17.4 +1.2
HINF eSg Sb 00 53 39.1 +1.4
comp=E,51nm,0.2s
KIZ Kirchzarten 1.72 2 Pn Pn 00 53 15.7 +1.1
KIZ Pg Pg 00 53 18.0 +0.3
KIZ Sn Sg 00 53 40.0 -0.1
DAVA Damuels 1.77 53 ePn Pb 00 53 17.9 +0.7
comp=E,6.3nm,0.2s,SNR=39
DAVA eSn Sb 00 53 40.8 +1.5
comp=E,17nm,0.2s
PCP Piancastagn 1.77 163 P Pb 00 53 17.2 +0.1
PCP AML AML
comp=E,117μm,0.6s
PCP AML AML
comp=N,68μm,0.4s
PCP AML AML
comp=E,116μm,0.6s
BRMO Bormio 1.79 81 P Pb 00 53 17.9 +0.4
BRMO AML AML
comp=N,49μm,0.5s
BRMO AML AML
comp=E,47μm,1.6s
PZZ Stroppo 1.80 196 P Pn 00 53 15.6 0.0
PZZ AML AML
comp=N,182μm,0.9s
PZZ AML AML
comp=N,182μm,0.9s
PZZ AML AML
comp=E,211μm,1.0s
ORIF Oris-en-Rattie 1.89 227 eP Pn 00 53 18.8 +1.9
ORIF Oris-en-Rattie 1.89 227 ePg Pb 00 53 20.6 +1.4
ORIF eSn Sn 00 53 39.3 -1.5
ORIF eSg Sg 00 53 45.4 -0.1
comp=E,38nm,0.4s
ORIF Oris-en-Rattie 1.89 227 Pn Pb 00 53 20.7 +1.4
MOSI Grossmontoni 1.93 78 P Pb 00 53 20.1 +0.2
GBOS Grotte di Boss 1.99 180 P Pn 00 53 20.0 +1.7
GBOS AML AML
comp=N,109μm,1.6s
GBOS AML AML
comp=E,104μm,1.4s
OGAG Argentiere 1.99 207 Pn Pn 00 53 17.2 -1.2
MAGA Magasa 2.01 102 P Pn 00 53 20.2 +1.6
MAGA AML AML
comp=E,297μm,0.5s
MAGA AML AML
comp=N,226μm,1.6s
ENR Entracque 2.03 188 P Pn 00 53 18.9 +0.1
ENR AML AML
comp=E,54μm,0.5s
ENR AML AML
comp=N,50μm,0.9s
ECH Echery 2.03 347 Pn Pn 00 53 19.6 +0.8
ECH Pg Pg 00 53 23.7 +0.1
HAU Haudompre 2.04 331 eP Pn 00 53 20.1 +1.2
HAU Haudompre 2.04 331 ePg Pb 00 53 23.2 +1.6
HAU eSn Sn 00 53 42.3 -2.0
comp=N,28nm,0.3s
HAU eSg Sb 00 53 49.1 +2.1
comp=N,60nm,0.3s
ISO Isola 2.12 195 Pn Pn 00 53 20.9 +0.9
ISO Pg Pg 00 53 24.9 -0.4
BFO Black Forest 2.13 9 ePg Pg 00 53 25.0 -0.4
UBR Ueberruh 2.13 46 ePn Pn 00 53 22.3 +2.0
UBR ePg Pg 00 53 25.8 +0.2
UBR eSg Sn 00 53 48.7 +2.0
FETA Feichten 2.16 68 ePn Pb 00 53 24.9 +1.1
comp=N,2.7nm,0.2s,SNR=16
FETA eSn Sb 00 53 51.0 +0.4
comp=N,18nm,0.5s
GAGG Gaggia 2.19 93 ePn Pb 00 53 25.2 +0.9
GAGG eSn Sb 00 53 52.9 +1.4
WLS Welschbruch 2.20 352 Pn Pn 00 53 22.2 +1.0
WLS Pg Pg 00 53 26.8 0.0
CDF Champ du Feu 2.21 351 eP Pn 00 53 22.3 +1.0
CDF Champ du Feu 2.21 351 ePg Pg 00 53 26.9 -0.1
CDF eSn Sn 00 53 46.0 -2.7
comp=N,8.7nm,0.2s
CDF eSg Sb 00 53 54.4 +2.4
comp=N,31nm,0.3s
SAOF Saorge 2.25 185 Pn Pn 00 53 23.6 +1.7
OPP Oppenau 2.28 6 Pn Pn 00 53 22.4 +0.2
OPP Pg Pg 00 53 27.9 -0.4
TURF col de Turini 2.28 188 Pn Pn 00 53 23.7 +1.3
IMI Imperia 2.32 179 P Pn 00 53 25.2 +2.4
IMI AML AML
comp=E,76μm,0.8s
IMI AML AML
comp=N,92μm,0.7s
RETA Reutte 2.38 57 ePn Pn 00 53 26.3 +2.7
comp=N,0.1nm,0.1s
RETA ePg Pg 00 53 29.6 -0.6
comp=N,1.6nm,0.1s
RETA Sn Sn 00 53 54.7 +1.9
comp=N,8.7nm,0.2s
OGDI Digne 2.38 207 Pn Pb 00 53 27.9 +0.4
SBF Sospel 2.39 187 eP Pn 00 53 25.4 +1.7
SBF Sospel 2.39 187 ePg Pb 00 53 29.6 +2.0
SBF eSn Sn 00 53 50.7 -2.3
comp=N,14nm,0.3s
SBF eSg Sg 00 54 00.3 -1.0
comp=N,51nm,0.4s
SSB Saint Sauveur 2.48 249 Pg Pg 00 53 32.5 +0.3
MOTA Moosalm 2.52 63 ePn Pb 00 53 29.0 -0.9
comp=N,1.0nm,0.1s
MOTA eSn Sn 00 53 59.5 +3.1
comp=N,3.5nm,0.3s
SQTA Sankt Quirin 2.53 66 Pn Pb 00 53 29.7 -0.4
comp=N,0.8nm,0.1s
SQTA Sn Sn 00 53 59.0 +2.3
comp=N,1.8nm,0.2s
CALF Calern 2.56 195 Pn Pn 00 53 29.1 +2.9
VIVF Saint-Julien-l 2.60 239 eP Pn 00 53 28.6 +1.9
VIVF Saint-Julien-l 2.60 239 ePg Pg 00 53 33.9 -0.6
VIVF eSn Sn 00 53 56.4 -1.9
VIVF eSg Sg 00 54 07.6 -0.7
comp=N,38nm,0.3s
BLAF les Blancs 2.60 209 Pn Pn 00 53 30.0 +3.4
MLYF Mely 2.67 214 Pn Pn 00 53 30.5 +2.9
SUBF Surbourg 2.68 0 Pn Pn 00 53 28.9 +1.2
STU Stuttgart 2.71 20 ePg Pg 00 53 35.8 -0.7
PAGF Fort de Pagny 2.72 329 eP Pn 00 53 30.2 +1.9
baz=154
PAGF Fort de Pagny 2.72 329 ePg Pb 00 53 35.5 +2.2
PAGF eSn Sn 00 53 58.9 -2.3
comp=N,10nm,0.2s,baz=155
PAGF eSg Sg 00 54 10.4 -1.7
comp=N,27nm,0.3s,baz=143
EILF Villa Eilenroc 2.73 191 Pn Pn 00 53 31.5 +3.2
SFTF Sexfontaines 2.73 317 eP Pn 00 53 30.1 +1.7
baz=136
SFTF eSn Sn 00 53 59.1 -2.3
baz=134
SFTF eSg Sb 00 54 10.6 +3.6
comp=N,19nm,0.2s,baz=129
SMRF Simiane la Rot 2.76 216 eP Pn 00 53 31.3 +2.5
SMRF Simiane la Rot 2.76 216 ePg Pg 00 53 37.0 -0.5
SMRF eSg Sg 00 54 12.5 -0.8
comp=N,14nm,0.5s
SMF Signal de Mont 2.78 280 eP Pn 00 53 30.7 +1.6
SMF Signal de Mont 2.78 280 ePg Pg 00 53 37.0 -0.9
SMF eSn Sn 00 53 59.8 -2.8
comp=N,6.8nm,0.2s
SMF eSg Sg 00 54 13.1 -0.8
comp=N,22nm,0.2s
FRF La Foret Royal 2.80 198 eP Pn 00 53 32.4 +3.1
FRF La Foret Royal 2.80 198 ePg Pg 00 53 37.4 -0.9
FRF eSn Sn 00 54 00.1 -2.9
FRF eSg Sg 00 54 12.9 -1.6
comp=N,9.6nm,0.3s
WATA Walderalm 2.81 66 Pn Pb 00 53 34.9 0.0
comp=N,0.7nm,0.1s
WATA Sn Sn 00 54 07.1 +3.6
comp=N,2.4nm,0.2s
BSTF la Bastide-des 2.81 214 Pn Pb 00 53 33.6 -1.2
WTTA Wattenberg 2.82 67 ePn Pb 00 53 33.7 -1.4
comp=N,1.0nm,0.2s
WTTA Sn Sn 00 54 07.5 +3.6
comp=N,1.0nm,0.1s
RUSF Rustrel 2.83 217 Pn Pn 00 53 33.5 +3.7
RUSF Pg Pg 00 53 38.9 +0.1
LOR Lormes 2.91 292 eP Pn 00 53 32.7 +1.9
baz=112
LOR Lormes 2.91 292 ePg Pg 00 53 39.6 -0.8
baz=112
LOR eSg Sg 00 54 16.7 -1.4
comp=N,15nm,0.2s,baz=116
LOR Lormes 2.91 292 Pn Pn 00 53 32.8 +1.9
LOR Pg Pg 00 53 40.6 +0.2
MEZF Maizieres J'vi 2.95 321 eP Pn 00 53 34.2 +2.9
baz=142
MEZF eSn Sn 00 54 03.9 -2.7
MEZF eSg Sg 00 54 17.5 -1.7
comp=N,46nm,0.4s,baz=140
LMR La Mourre 3.05 198 eP Pn 00 53 35.3 +2.6
LMR La Mourre 3.05 198 ePg Pg 00 53 41.7 -1.3
LMR eSn Sn 00 54 06.6 -2.5
comp=N,4.7nm,0.2s
LMR eSg Sg 00 54 20.9 -1.5
comp=N,7.3nm,0.3s
FUR Furstenfeldbru 3.05 49 ePn Pn 00 53 34.6 +1.8
SSF Saint Saulge 3.08 287 eP Pn 00 53 35.5 +2.3
SSF Saint Saulge 3.08 287 ePg Pg 00 53 42.8 -0.9
SSF eSn Sn 00 54 07.4 -2.6
SSF eSg Sg 00 54 21.9 -1.7
comp=N,11nm,0.3s
AVF Avril sur Loir 3.13 282 eP Pn 00 53 35.7 +1.8
AVF Avril sur Loir 3.13 282 ePg Pg 00 53 43.8 -0.8
AVF eSn Sn 00 54 09.1 -2.1
comp=N,7.3nm,0.4s
AVF eSg Sg 00 54 24.1 -1.1
comp=N,7.1nm,0.3s
NORI Noerdlinger Ri 3.13 36 ePg Pg 00 53 43.7 -0.9
AGO Saint Agoulin 3.26 268 Pn Pn 00 53 37.1 +1.4
ABTA Abfaltersbach 3.28 79 i Pn Pb 00 53 41.3 -1.6
comp=N,0.2nm,0.1s
ABTA eSn Sb 00 54 25.2 +2.3
comp=N,0.3nm,0.1s
LBL Lubilhac 3.35 254 Pn Pn 00 53 39.3 +2.3
LBL Pg Pg 00 53 49.5 +0.6
PYM Petit Puy Mans 3.39 264 Pn Pn 00 53 38.7 +1.2
BGF Bois d'Agland 3.46 277 eP Pn 00 53 40.1 +1.8
BGF Bois d'Agland 3.46 277 ePg Pg 00 53 49.8 -1.0
BGF eSn Sn 00 54 16.8 -2.4
comp=N,12nm,0.3s
BGF eSg Sg 00 54 34.7 -0.8
comp=N,21nm,0.4s
LASF Ste Croix 3.54 234 eP Pn 00 53 41.7 +2.2
LASF Ste Croix 3.54 234 ePg Pg 00 53 50.9 -1.5
LASF eSn Sn 00 54 18.3 -2.9
comp=N,9.6nm,0.4s
LASF eSg Sg 00 54 36.2 -1.9
comp=N,12nm,0.4s
WLF Walferdange 3.61 343 ePg Pg 00 53 53.7 0.0
HYF Humbligny 3.71 288 eP Pn 00 53 44.2 +2.4
HYF eSn Sn 00 54 21.7 -3.7
HYF eSg Sg 00 54 41.8 -1.8
PGF Pioggiola 3.78 167 ePn Pn 00 53 42.9 0.0
PGF eSn Sn 00 54 24.5 -2.9
comp=N,1.8nm,0.3s
PGF Pioggiola 3.78 167 Pn Pn 00 53 44.4 +1.4
TCF Toulx Ste Croi 3.89 273 ePn Pn 00 53 43.6 -0.7
TCF Toulx Ste Croi 3.89 273 eP Pn 00 53 46.2 +1.9
TCF Toulx Ste Croi 3.89 273 ePg Pg 00 53 57.6 -1.5
TCF eSn Sn 00 54 26.8 -3.2
TCF eSg Sg 00 54 48.2 -1.3
comp=N,4.1nm,0.3s
KBA Koelnbreinsper 3.90 75 i Pn Pn 00 53 49.7 +5.1
comp=N,0.3nm,0.1s
KBA eSn Sb 00 54 36.7 -4.0
comp=N,0.7nm,0.2s
TNS Taunus Mts 4.01 6 ePn Pn 00 53 46.8 +0.7
CLF Chambon-Foret 4.20 297 Pn Pn 00 53 51.3 +2.9
CAF Calviac 4.25 254 eP Pn 00 53 51.3 +2.1
CAF eSg Sg 00 54 58.3 -2.6
comp=N,8.2nm,0.5s
SMPL Sampolo 4.27 165 Pn Pn 00 53 52.2 +2.6
GIVF Givet 4.36 334 eP Pn 00 53 53.1 +2.4
GIVF eSn Sn 00 54 38.2 -3.3
GIVF eSg Sg 00 55 00.6 -3.9
comp=N,5.8nm,0.3s
RJF Les Rejaudoux 4.51 260 eP Pn 00 53 55.0 +2.2
RJF eSg Sg 00 55 07.4 -1.8
comp=N,8.0nm,0.4s
BAIF Baives 4.53 329 eP Pn 00 53 55.2 +2.2
BAIF eSn Sn 00 54 42.2 -3.4
comp=N,5.2nm,0.5s
BAIF eSg Sg 00 55 05.9 -4.0
comp=N,2.5nm,0.3s
OBKA Obir 4.67 84 ePn Pn 00 54 00.5 +5.4
comp=N,0.5nm,0.2s
MOA Molln 4.70 68 i Pn Pn 00 53 58.3 +2.9
comp=N,0.2nm,0.1s
MOA eSn Sn 00 54 50.4 +0.6
comp=N,1.4nm,0.1s
KHC Kasperske Hory 4.85 51 eSN Sn 00 54 50.9 -2.8
KHC eSG Sg 00 55 20.7 +0.4
comp=N,4.8nm,0.3s
MTLF Montolieu 4.92 236 ePn Pn 00 53 57.6 -0.9
MTLF Montolieu 4.92 236 eP Pn 00 54 01.7 +3.2
MTLF eSg Sg 00 55 19.8 -2.9
comp=N,1.3nm,0.3s
NKC Novy Kostel 5.06 36 eSN Sn 00 54 56.0 -2.7
NKC eSG Sg 00 55 25.8 -1.1
comp=N,6.3nm,0.5s
LFF La Frestale 5.13 258 eP Pn 00 54 04.0 +2.6
LFF eSn Sn 00 54 58.6 -2.0
LFF eSg Sg 00 55 27.0 -2.4
comp=N,4.9nm,0.4s
MFF Saint Martin d 5.52 277 eP Pn 00 54 08.7 +2.0
MFF eSn Sn 00 55 05.8 -4.3
comp=N,1.0nm,0.2s
MFF eSg Sg 00 55 38.4 -3.3
comp=N,0.7nm,0.2s
CONA Conrad Observa 5.75 70 ePn Pn 00 54 13.1 +3.2
comp=N,0.1nm,0.1s
CONA eSn Sn 00 55 15.9 0.0
comp=N,1.3nm,0.2s
PRU Pruhonice 5.86 48 eSN Sn 00 55 15.5 -3.0
PRU eSG Sg 00 55 52.6 -0.1
LDF La Druitiere 5.88 297 ePn Pn 00 54 11.4 -0.3
LDF eSn Sn 00 55 14.5 -4.5
LDF eSg Sg 00 55 49.2 -4.2
comp=N,1.1nm,0.3s
GOPC GO Pecny, Ondr 5.95 49 eSN Sn 00 55 17.5 -3.1
FLN La Foliniere 6.17 297 ePn Pn 00 54 15.1 -0.4
baz=117
FLN eSn Sn 00 55 21.2 -4.8
comp=N,3.4nm,0.3s,baz=118
BRG Berggiesshubel 6.17 39 PG Pg 00 54 42.5 -0.2
BRG SG Sg 00 56 02.8 +0.2
comp=N,2.6nm,0.6s
EPF Esparros 6.22 242 ePn Pn 00 54 15.7 -0.7
EPF eSg Sg 00 56 00.3 -4.0
comp=N,1.0nm,0.3s
GRR Gorron 6.28 293 ePn Pn 00 54 16.6 -0.5
GRR Gorron 6.28 293 ePg Pg 00 54 41.2 -3.6
GRR eSn Sn 00 55 24.2 -4.6
comp=N,8.4nm,0.4s
KRUC Moravsky 6.45 61 ePN Pn 00 54 20.1 +0.7
KRUC eSN Sn 00 55 30.9 -2.1
ETSF Etsaut 6.85 244 ePn Pn 00 54 24.4 -0.6
ETSF Etsaut 6.85 244 eP Pn 00 54 29.0 +4.0
ETSF eSg Sg 00 56 19.8 -4.5
comp=N,1.1nm,0.3s
QUIF Quistinic 7.69 287 ePn Pn 00 54 36.2 -0.2
QUIF eSn Sn 00 55 58.4 -5.0
comp=N,1.3nm,0.3s

IDC 25 00:57:25.6±1.3, 34°.25N×138°.92E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.2/34, mbtmp3.3/3, ML2.4/1, Error ellipse: s-maj=51.4km s-min=10.5km az=85.0
JMA 25 00:57:26.5±0.1, 34°.93N×140°.54E, h68km±2km, M3.1
ISC 25 00:57:27.6±1.1, 34°.93N±0°.05×140°.51E±0°.06, h64km±7km, n24, σ0.49/30, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	Boso 3	0.12	179	P	Pn	00 57 36.6	-0.3
BSO3				eX		00 57 44.8	
BSO4	Boso 4	0.15	295	P	Pn	00 57 37.1	-0.1
BSO4				X		00 57 45.4	
KTR	Katsuura	0.27	325	P	Pn	00 57 37.4	-0.5
KTR				S	Sn	00 57 45.3	-0.2
JKUC	kamogawauchiur	0.35	313	P	Pn	00 57 37.9	-0.6
JKUC				S	Sn	00 57 46.3	-0.1
BSO1	Boso 1	0.47	125	P	Pn	00 57 38.8	-0.2
TATJ	Tateyama 2	0.52	282	P	Pn	00 57 40.3	+0.2
TATJ				S	Sn	00 57 50.7	+1.5
JCN	Nagara	0.55	333	P	Pn	00 57 40.3	-0.1
JCN				S	Sn	00 57 50.4	+0.6
JSMT	Sammumatsuo	0.72	356	P	Pn	00 57 41.8	-0.5
JSMT				eS	Sn	00 57 53.4	+0.3
JIM2	Oshima 3	0.91	257	P	Pn	00 57 44.1	-0.6
JTHY	Toshimahigashi	1.08	249	P	Pn	00 57 46.7	-0.1
JTHY				S	Sn	00 58 01.4	+0.2
JOD2	Odawara 2	1.21	287	P	Pn	00 57 47.8	-0.8
JOD2				S	Sn	00 58 03.5	-0.8
JMKN	Mikurajimanish	1.28	217	P	Pn	00 57 49.5	+0.1
JMKN				S	Sn	00 58 05.9	+0.1
JIZS	Izushimoda	1.36	262	P	Pn	00 57 50.1	-0.3
JIZS				S	Sn	00 58 07.4	-0.2
JFNN	Fujinakano	1.52	281	P	Pn	00 57 52.6	0.0
JFNN				S	Sn	00 58 11.3	-0.2
MJAR	Matsushiro Arr	2.47	311	Pn	Pn	00 58 05.7	+0.1
	1.0nm,0.3s,baz=161,slow=15,SNR=10						
MJAR				Sn	Sn	00 58 34.3	-0.3
	0.4nm,0.3s,baz=153,slow=19,SNR=1.6						

MAT Matsushiro 2.47 311 P Pn 00 58 05.9 +0.4
MAT S Sn 00 58 34.7 +0.1
H11N2 WAKE ISLAND Hy 27.79 116 T T 01 32 26.1
baz=309,slow=75,SNR=11
H11N1 WAKE ISLAND Hy 27.80 116 T T 01 32 33.2
baz=309,slow=75,SNR=11
H11N3 WAKE ISLAND Hy 27.81 116 T T 01 32 47.3
baz=309,slow=75,SNR=11
H11S3 WAKE ISLAND Hy 28.42 118 T T 01 33 12.2
baz=311,slow=76,SNR=9.9
H11S1 WAKE ISLAND Hy 28.42 118 T T 01 33 14.6
baz=311,slow=76,SNR=9.4
H11S2 WAKE ISLAND Hy 28.43 118 T T 01 33 16.7
baz=311,slow=76,SNR=7.7
MKAR Makanchi Array 44.65 304 P P 01 05 34.2 +0.5
0.2nm,0.6s,baz=78,slow=7.5,SNR=2.2
WRA Warramunga Arr 54.88 187 P P 01 06 51.2 -0.4
0.6nm,0.9s,baz=3.3,slow=7.6,SNR=2.5

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*BJI **25** 01:03:15.5±0.0, 35°.87N×82°.43E, h7km, ML3.5/5*
*IDC **25** 01:03:16.3±0.7, 36°.02N×82°.79E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.4/43, mbtmp3.7/4, ML3.4/2, MS3.7/1, Ms1 3.7/1, ms1mx3.0/21, Error ellipse: s-maj=29.5km s-min=6.2km az=82.0*
ISC 25 01:03:20.9±1.5, 36°.11N±0°.08×82°.6E±0°.3, h35km, n12, σ1s.14/12, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DANN Dangsing 7.80 173 eP Pn 01 05 12.7 +0.5
4.1nm,0.4s
GKN Gorkha 8.26 168 eP Pn 01 05 19.1 +0.7
4.0nm,0.2s
KKN Kakani 8.60 164 eP Pn 01 05 23.4 +0.3
6.5nm,0.5s
GUN Gumba 8.63 160 eP Pn 01 05 25.1 +1.5
16nm,0.9s
PKIN Phulchoki 8.83 164 eP Pn 01 05 24.5 -1.8
7.1nm,0.5s
PKI Pulchoki 8.84 164 eP Pn 01 05 24.7 -1.8
7.5nm,0.5s
JIRN Jiri 8.95 159 eP Pn 01 05 28.1 0.0
19nm,0.5s
MKAR Makanchi Array 10.68 359 Pn Pn 01 05 51.9 +0.6
1.1nm,0.3s,baz=182,slow=13,SNR=89
MKAR Sn Sn 01 07 49.3 -0.2
0.1nm,0.3s,baz=183,slow=24,SNR=4.3
MKAR Lg Lg 01 08 58.5
0.1nm,0.3s,baz=186,slow=28,SNR=2.3
ZALV Zalesovo Beam 17.90 4 P Pn 01 07 25.6 -1.3
0.2nm,0.3s,baz=187,slow=10,SNR=6.2
SONM Songino Array 21.10 49 P P 01 08 03.0 +0.5
0.3nm,0.4s,baz=242,slow=11,SNR=2.2
PSI Prapat 36.41 152 LR LR 01 28 19.1
comp=Z,114nm,19.3s,baz=342,slow=41
ASAR Alice Springs 76.69 133 P P 01 15 08.2 -0.2
0.4nm,0.5s,baz=325,slow=4.7,SNR=3.8

IDC 25 01:11:45.8±2.3, 2°.13N×127°.30E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/34, mbtmp3.4/3, Error ellipse: s-maj=184.3km s-min=25.5km az=67.0, Northern Molucca Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 22.99 163 P P 01 16 52.3 -0.1
0.8nm,0.5s,baz=342,slow=11,SNR=8.6
ASAR Alice Springs 26.43 166 P P 01 17 24.7 +0.2
0.3nm,0.5s,baz=347,slow=11,SNR=1.5
MKAR Makanchi Array 59.19 326 P P 01 21 48.6 -0.1
0.2nm,0.5s,baz=118,slow=8.2,SNR=8.0

IDC 25 01:19:02.4±1.2, 5°.74S×125°.58E, h0km, mb3.2/1, mb1 3.4/5, mb1mx3.3/37, mbtmp3.3/5, ML3.1/4, Error ellipse: s-maj=27.9km s-min=11.5km az=47.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KAPI Kappang 5.85 277 Pn Pn 01 20 29.9 -0.5
2.0nm,0.3s,baz=158,slow=8.6,SNR=3.5
KAPI Sn Sn 01 21 36.9 -1.3
0.4nm,0.3s,baz=195,slow=19,SNR=1.5
FITZ Fitzroy Crossi 12.29 180 Pn Pn 01 21 59.8 +1.1
0.1nm,0.3s,baz=3.4,slow=17,SNR=1.1
WRA Warramunga Arr 16.49 150 Pn Pn 01 22 53.8 -1.5
0.1nm,0.3s,baz=318,slow=14,SNR=2.5
ASAR Alice Springs 19.55 157 P P 01 23 32.3 +0.5
0.1nm,0.3s,baz=335,slow=12,SNR=2.0
MKAR Makanchi Array 64.82 329 P P 01 29 43.6 +0.5
0.2nm,0.8s,baz=134,slow=8.2,SNR=2.0

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*MOS **25** 01:21:46.4±0.0, 41°.92N×46°.18E, h22km, MPVA2.7*
*NORS **25** 01:21:48.1±0.0, 41°.86N×46°.28E, h21km, MPVA2.7*
ISC 25 01:21:48.6±1.3, 41°.92N±0°.05×46°.19E±0°.03, h24km±15km, n15, σ1s.36/30, Eastern Caucasus

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DDFL Dedoflistskaro 0.48 187 P Pn 01 21 58.1 -1.9
DDFL S Sn 01 22 10.4 +2.7
XNZR Khunzakh 0.73 31 ePg Pb 01 22 01.7 -1.1
XNZR eSg Sb 01 22 11.5 -0.3
GNBR Gunib 0.74 50 iPg Pn 01 22 02.4 -1.2
GNBR eSg Sn 01 22 13.3 -0.9
BTLR Botlikh 0.74 2 ePg Pb 01 22 01.7 -1.3
BTLR eSg Sb 01 22 12.5 -0.3
BTNK Botanikuri 1.07 258 P Pn 01 22 07.2 -0.9
BTNK S Sn 01 22 22.6 +0.4
BTNK Botanikuri 1.07 258 ePg Pn 01 22 07.2 -0.9
BTNK eSg Sn 01 22 22.6 +0.4
TBLG Delisi 1.10 261 P Pn 01 22 07.8 -0.8
TBLG S Sn 01 22 23.2 +0.2
TBLG Delisi 1.10 261 ePg Pn 01 22 07.8 -0.8
TBLG eSg Sn 01 22 23.2 +0.2
DBC Dubki 1.20 23 ePg Pb 01 22 12.4 +1.7
DBC eSg Sb 01 22 27.6 +1.9
AKT Akhty 1.23 110 ePg Pb 01 22 10.7 -0.5
AKT eSg Sn 01 22 28.3 +2.0
GROC Groznyy 1.31 347 ePg Pb 01 22 13.9 +1.3
GROC eSg Sb 01 22 31.9 +2.8
GUDG Gudauri 1.39 294 P Pn 01 22 11.1 -1.5
GUDG S Sn 01 22 29.9 -0.4
LACR Lac 1.67 303 ePg Pb 01 22 18.3 -0.5
LACR eSg Sb 01 22 40.3 +0.9
ZEI Tsey 1.91 298 ePg Pb 01 22 21.7 -1.1
ZEI eSg Sb 01 22 47.9 +1.6
BATM Batumi 3.38 266 ePn Pn 01 22 40.0 +0.1
BATM eSn Sn 01 23 18.8 -0.4

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*CRAAG **25** 01:28:45.7, 36°.47N×3°.12E, Ml2.6*
*MDD **25** 01:28:47.6±0.4, 36°.48N×3°.12E, h6km±7km, mb3.6/7, Error ellipse: s-maj=7.1km s-min=4.8km az=92.0, PRXIMO*
ISC 25 01:28:46.8±0.9, 36°.49N±0°.04×3°.12E±0°.05, h18km, n19, σ1s.47/24, Northern Algeria

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
EMHD Djebel Mahouad 0.31 205 P Pg 01 28 53.2 -0.4
EMHD Djebel Mahouad 0.31 205 P Pg 01 28 53.2 -0.4
ABA Alger-Bouzarea 0.32 348 P Pg 01 28 53.6 -0.2
ABA Alger-Bouzarea 0.32 348 P Pg 01 28 53.6 -0.2
ABMS Boumerdes 0.39 48 P Pg 01 28 55.0 0.0
ABMS Boumerdes 0.39 48 P Pg 01 28 55.0 0.0
ADJB Djebel Djouab 0.42 141 P Pg 01 28 55.1 -0.3
ADJB Djebel Djouab 0.42 141 P Pg 01 28 55.1 -0.3
AKET Djebel Ketaf 0.76 125 P Pb 01 29 01.6 0.0
AKET Djebel Ketaf 0.76 125 P Pb 01 29 01.6 0.0
EIBI Ibiza 2.90 332 P Pn 01 29 33.7 +1.6
1.0nm,0.1s,SNR=13
EIBI S Sn 01 30 05.8 -0.7
0.7nm,0.1s,SNR=6.6
ETOS Mallorca 3.29 356 P Pn 01 29 38.2 +0.8
0.6nm,0.1s,SNR=7.4
ETOS S Sn 01 30 14.2 -1.8
0.1nm,0.0s,SNR=7.9
EBEN2 Beniarda presa 3.42 311 S Sn 01 30 16.7 -2.6
0.1nm,0.1s,SNR=7.9
ETOB Tobarra 4.29 302 P Pn 01 29 53.1 +1.9
0.8nm,0.2s,SNR=7.9
ETOB S Sn 01 30 40.6 -0.2
0.1nm,0.1s,SNR=7.9
ECHE Chera 4.47 315 P Pn 01 29 55.6 +1.9
1.0nm,0.3s,SNR=7.9
EMOS Mosqueruela 4.79 325 P Pn 01 30 00.2 +2.0
0.6nm,0.2s,SNR=7.4
EMOS S Sn 01 30 51.4 -1.9
0.1nm,0.1s,SNR=7.9
ERTA Horta de San J 4.97 335 S Sn 01 30 54.7 -2.8
0.2nm,0.2s,SNR=7.9
CFON Fontmartina 5.30 354 P Pn 01 30 06.1 +1.0
0.7nm,0.1s,SNR=7.9
EMIR Miracle 5.56 348 P Pn 01 30 10.6 +1.9
2.0nm,0.2s,SNR=7.9
EMIR S Sn 01 31 10.2 -2.0
0.2nm,0.1s,SNR=7.9

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*BJI **25** 01:48:58.4±0.0, 0°.24N×120°.84E, h65km, mB5.1/45, mb5.0/62, Ms4.9/38, Ms7 4.7/35*
*MOS **25** 01:49:02.1±0.9, 0°.65N×120°.57E, h72km, mb5.4/34, Error ellipse: s-maj=10.2km s-min=5.4km az=113.6*
*DJA **25** 01:49:03.9±0.2, 1°N±2°×12°1E±°, h55km±2km, M4.9/58, mb5.0/58, mB5.3/27, MLv5.3/19, Mw(mB)4.8/27*
*NEIC **25** 01:49:04.7±1.9, 0°.60N±0°.07×120°.50E±0°.06, h89km±5km, mb5.0/66, Error ellipse: s-maj=10.8km s-min=8.4km az=197.0*
*IDC **25** 01:49:04.2±1.2, 0°.62N×120°.63E, h74km±11km, mb4.5/35, mb1 4.5/39, mb1mx4.4/56, mbtmp4.8/39, MS3.6/11, Ms1 3.7/11, ms1mx3.5/37, Error ellipse: s-maj=12.3km s-min=7.7km az=73.0*
*KLM **25** 01:49:05.0, 0°.81N×120°.81E, h92km, mb5.2*
ISC 25 01:49:04.1±0.4, 0°.56N±0°.04×120°.51E±0°.04, h76km±3km, h77km:pP-P, n293, σ1s.68/323, mb5.0/107, 6C-11D, Minahassa Peninsula, Sulawesi

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MPSI Mapaga 0.65 251 P Pn 01 49 17.1 -1.9
MRSI Marisa 1.43 93 P Pn 01 49 26.6 -1.7
MRSI S Sn 01 49 46.1 -0.5
APSI Ampana 1.85 142 P Pn 01 49 32.9 -1.0
LUWI Luwuk 2.76 125 P Pn 01 49 47.3 +1.2
LUWI Luwuk 2.76 125 Pn 01 49 47.2 +1.0
LUWI Sn Sn 01 50 20.3 +1.8
SMKI Samarinda 3.45 253 P Pn 01 49 55.6 0.0
KMSI Cibinong 3.47 90 P Pn 01 49 58.0 +2.3
TTSI Tana Toraja 3.65 191 P Pn 01 50 00.5 +2.3
BKB Balikpapan 4.04 243 P Pn 01 50 03.3 -0.3
BKB Balikpapan 4.04 243 Pn 01 50 03.5 -0.1
BKB Sn Sn 01 50 49.7 -0.1
SPSI Sidrap Palu 4.55 189 P Pn 01 50 12.1 +1.5
BNSI Bone 4.94 185 P Pn 01 50 17.8 +1.9
3.0nm5μm524nm,0.9s
KDI Kendari 4.95 155 P Pn 01 50 16.0 0.0
6μm877nm,0.8s
KAPI Kappang 5.59 188 P Pn 01 50 26.7 +2.0
13nm,0.3s,baz=331,slow=8.2,SNR=41
KAPI S Sn 01 51 31.2 +3.6
9.0nm,0.3s,baz=78,slow=23,SNR=7.2
KAPI LR LR 01 52 33.5
comp=Z,507nm,18.8s,baz=340,slow=37
SPMM Sapulut 5.78 316 P Pn 01 50 26.0 -1.3
BKSI Bulukumba 5.85 184 P Pn 01 50 30.5 +2.2
1.1nm2μm250nm,0.7s
SANI Sanana 6.05 115 P Pn 01 50 30.1 -1.0
1.0nm1μm91nm,0.8s
BBSI Bau Bau 6.35 161 P Pn 01 50 35.9 +0.8
0.5nm1μm140nm,0.8s
KKM Kota Kinabalu 6.94 322 P Pn 01 50 42.2 -1.0
LBMI Labuha 7.09 100 P Pn 01 50 45.5 +0.3
2.8nm2μm81nm,0.6s
NLAI Namlea 7.59 120 P Pn 01 50 52.8 +0.8
1.2nm3μm185nm,0.7s
DAV Davao City (W) 8.21 38 LR LR 01 54 13.1
comp=Z,202nm,18.7s,baz=272,slow=38
SBUM Sibu 8.50 283 P Pn 01 51 04.7 +0.2
SBUM Sibu 8.50 283 P Pn 01 51 05.0 +0.5
STKI Sintang 9.05 267 P Pn 01 51 14.5 +2.5
26μm89nm,1.0s
MSAI Masohi 9.26 115 P Pn 01 51 16.1 +1.2
857nm36nm,0.9s
EDFI Ende, Flores 9.32 173 P Pn 01 51 17.0 +1.2
14nm,0.7s
KSM Kuching 10.24 275 P Pn 01 51 29.8 +1.4
KSM Kuching 10.24 275 P Pn 01 51 30.0 +1.7
SIJI Sorong 10.85 97 P Pn 01 51 35.8 -0.7
1.1nm,0.3s,baz=275,slow=12,SNR=3.6
SIJI S Sn 01 53 41.9 +5.7
1.8nm,0.3s,baz=182,slow=23,SNR=1.8
SIJI LR LR 01 56 56.3
comp=Z,243nm,18.0s,baz=130,slow=44
SOEI Soe 10.90 160 P Pn 01 51 44.1 +6.7
SOEI Soe 10.90 160 P Pn 01 51 37.7 +0.2
JAGI Jajag, Banyuwa 10.98 215 P Pn 01 51 43.1 +4.7
74nm,1.5s
JAGI Jajag, Banyuwa 10.98 215 P Pn 01 51 39.5 +1.1
GMJI Gumukmas 11.25 219 P Pn 01 51 48.2 +6.1
55nm,0.8s
PWJI Pagerwojo 12.17 225 P P 01 52 01.6 -2.5
WOJI Wonogiri, Jawa 12.69 229 P Pn 01 52 05.6 +4.0
42nm,1.2s
PCJI Pacitan 12.74 227 P P 01 52 07.0 -3.5
96nm,1.0s
UGM Wanagama 13.04 230 P P 01 52 10.8 -3.1
104nm,1.3s
UGM Wanagama 13.04 230 Pn 01 52 06.9 +0.5
TGY Tagaytay City 13.46 2 LR LR 01 57 20.0
comp=Z,138nm,21.1s,baz=26,slow=37
KPJI Karang Pucung 13.96 236 P P 01 52 25.1 +1.0
2μm176nm,0.8s
LEM Lembang 14.81 240 P Pn 01 52 31.4 +1.7
2.2nm,0.3s,baz=94,slow=15,SNR=2.5
LEM LR LR 01 58 46.6
comp=Z,241nm,18.9s,baz=52,slow=39
CISI Cisompet, Garu 15.01 237 P P 01 52 37.5 +1.6
2μm88nm,0.7s
CISI Cisompet, Garu 15.01 237 P P 01 52 34.5 -1.3
CISI IAmb IAmb 01 52 42.1
comp=Z,88nm,0.9s
DBJI Dramaga 15.45 243 P P 01 52 45.6 +4.9
CNJI Cibinong 15.47 239 P P 01 52 44.4 +3.5
comp=Z,3μmcomp=Z,305nm,1.1s
DLV T Lat 16.45 314 P Pn 01 52 50.4 0.0
KLSI 16.61 252 P P 01 52 55.2 +1.7
comp=Z,503nmcomp=Z,48nm,1.5s
MYKOM Kota Tinggi 16.70 274 P Pn 01 52 53.3 -0.2
MYKOM Kota Tinggi 16.70 274 P P 01 52 57.0 +2.4
MTN Manton Dam 16.98 142 P P 01 52 58.0 +0.4
baz=17,SNR=8.0
MTN Manton Dam 16.98 142 P P 01 52 57.4 -0.1
MTN IAmb IAmb 01 53 16.8
comp=Z,61nm,0.8s
MDSI Maura Dua 17.07 253 P P 01 53 00.4 +1.7
comp=Z,780nmcomp=Z,78nm,0.9s
LWLI Liwa 17.34 251 P P 01 53 06.0 +4.2
comp=Z,97nm,0.8s
KDU Kakadu 17.72 138 P P 01 53 05.7 -0.1
baz=18,SNR=19
KNRA Kununurra 18.07 154 P Pn 01 53 11.2 +1.0
baz=18,SNR=8.4
KNRA Kununurra 18.07 154 P Pn 01 53 10.5 +0.3
KSI Kapahiang 18.39 257 P Pn 01 53 16.6 +2.4
comp=Z,152nm,1.0s
SDSI Sungai Dareh 19.14 266 P P 01 53 25.0 +2.0
comp=Z,2μmcomp=Z,63nm,0.8s
FITZ Fitzroy Crossi 19.21 165 P P 01 53 23.7 -0.1
baz=19,SNR=35
FITZ Fitzroy Crossi 19.21 165 P Pn 01 53 23.9 +0.1
comp=Z,1.7nm,0.3s,baz=4.7,slow=6.6,SNR=38
FITZ LR LR 02 01 58.7
comp=Z,154nm,18.5s,baz=336,slow=40
FITZ Fitzroy Crossi 19.21 165 P Pn 01 53 23.3 -0.5
KRJI Kerinci 19.23 262 P Pn 01 53 30.9 +6.7
BKNI Bangkinang 19.48 269 P Pn 01 53 28.0 +1.0
comp=Z,3μmcomp=Z,318nm,0.9s
BKNI Bangkinang 19.48 269 P P 01 53 25.4 +0.3
IPM Ipoh 19.85 282 P P 01 53 28.6 -0.6
IPM IAmb IAmb 01 53 32.7
comp=Z,80nm,0.9s
IPM Ipoh 19.85 282 P Pn 01 53 32.0 +0.6
PDSI Padang 20.11 266 P Pn 01 53 33.8 -0.6
comp=Z,1μmcomp=Z,69nm,0.7s
KULM Kulim 20.38 284 P P 01 53 33.6 -1.3
KULM Kulim 20.38 284 P Pn 01 53 37.0 -0.6
PPSI Pulau Pagai 20.76 261 P Pn 01 53 44.3 +2.2
comp=Z,4μmcomp=Z,408nm,0.7s
QIZ Qiongzhong 21.13 331 P P 01 53 43.5 +0.6
QIZ sP sP 01 54 07.9 +1.0
QIZ S S 01 57 35.5 +1.6
SISI Saibi 21.50 265 P P 01 53 48.2 +1.3
comp=Z,1μmcomp=Z,154nm,0.7s
RPSI Rantau Prapat 21.68 276 P P 01 53 48.6 -0.3
RPSI IAmb IAmb 01 53 52.1
comp=Z,40nm,0.8s
PSI Prapat 21.69 276 P P 01 53 50.1 +1.0
comp=Z,43nm,0.8s,baz=101,slow=9.1,SNR=29
TPUB Ta-pu 22.61 0 P P 01 53 58.1 -0.6
TPUB IAmb IAmb 01 54 03.6
comp=Z,44nm,1.0s
YULB Yu-li 22.71 2 P P 01 53 59.5 -0.3
KCSI Kotacane, Aceh 22.92 278 P P 01 54 02.0 0.0
comp=Z,2μmcomp=Z,200nm,1.1s
GSI Gunungsitoli 22.95 272 P P 01 54 02.8 +0.5
WB0 Warramunga Arr 24.36 147 P P 01 54 14.0 -1.1
WB0 IAmb IAmb 01 54 35.9
comp=Z,48nm,1.1s
WRAB Tennant Creek 24.47 147 P P 01 54 15.3 -0.8
WRAB Tennant Creek 24.47 147 ceP P 01 54 15.7 -0.4
WRAB pmax pmax
comp=Z,29nm,1.7s
WRA Warramunga Arr 24.47 147 P P 01 54 15.5 -0.6
comp=Z,12nm,0.8s,baz=330,slow=9.5,SNR=36
WRA PcP PcP 01 57 52.5 -0.8
comp=Z,2.7nm,0.9s,baz=313,slow=2.3,SNR=2.2
WRA ScP ScP 02 01 25.6 +0.1
comp=Z,1.6nm,0.8s,baz=332,slow=3.0,SNR=5.7
WR0 Warramunga Arr 24.59 147 P P 01 54 16.4 -0.8
WR0 IAmb IAmb 01 54 38.1
comp=Z,58nm,1.1s
PBKT Sadao Pong 24.98 311 P P 01 54 19.4 -1.4
SLVN Son La 26.25 323 P P 01 54 30.5 -1.9
WRKA Warakurna 26.54 163 P P 01 54 35.9 +1.0
baz=27,SNR=16
COEN Coen 26.68 124 P P 01 54 39.4 +3.1
baz=27,SNR=4.8
MEEK Meekatharra 27.10 184 P P 01 54 42.7 +2.8
baz=27,SNR=7.2
ASAR Alice Springs 27.37 152 P P 01 54 42.9 +0.5
comp=Z,3.6nm,0.7s,baz=333,slow=8.5,SNR=40
ASAR PcP PcP 01 57 59.9 -0.1
comp=Z,0.9nm,0.5s,baz=350,slow=2.1,SNR=4.8
ASAR ScP ScP 02 01 33.0 -0.9
comp=Z,1.7nm,0.8s,baz=338,slow=2.9,SNR=8.5
GUMO Guam 27.37 61 LR LR 02 04 26.2
comp=Z,102nm,20.3s,baz=288,slow=34
CMAR Chiang Mai Arr 27.66 311 P P 01 54 45.5 +0.5
comp=Z,4.2nm,0.8s,baz=138,slow=7.2,SNR=21
CMAR PcP PcP 01 58 00.5 -0.2
comp=Z,0.8nm,0.3s,baz=146,slow=2.0,SNR=5.1
CMAR ScP ScP 02 01 35.5 +0.7
comp=Z,1.1nm,0.3s,baz=155,slow=3.0,SNR=3.1
CMAR LR LR 02 06 24.4
comp=Z,260nm,20.6s,baz=124,slow=38
CHTO Chiang Mai 27.88 312 P P 01 54 45.5 -1.4
CHTO Chiang Mai 27.88 312 P P 01 54 45.5 -1.4
CHTO pmax pmax
comp=Z,25nm,1.2s
QIS Mount Isa 28.10 139 P P 01 54 49.8 +0.9
baz=28,SNR=4.6
GYA Guiyang 29.00 334 ⇓iP P 01 54 57.8 +0.8
GYA pP pP 01 55 15.5 +0.8
GYA PP PnPn 01 55 54.3 +1.7
GYA S S 01 59 44.5 +1.7
GYA SS SnSn 02 01 20.1 +6.4
GYA pmax pmax
comp=Z,10.0nm,0.5s
GYA pmax pmax
comp=Z,130nm,3.9s
MORW Morawa 29.77 188 P P 01 55 04.2 +0.6
baz=30,SNR=4.2
KMI Kunming 29.86 326 P P 01 55 06.8 +2.1
KMI pP pP 01 55 25.0 +2.4
KMI pmax pmax
comp=Z,19nm,1.2s
KMI LR LR
comp=Z,180nm,15.5s
KMI LR LR
comp=Z,160nm,26.6s
WHN Wuhan 30.39 349 P P 01 55 11.1 +2.0
ENH Enshi 31.36 341 P P 01 55 17.4 -0.2
ENH IAmb IAmb 01 55 19.5
comp=Z,33nm,1.1s
NJ2 Nanjing 31.36 357 eP P 01 55 19.8 +2.2
NJ2 pmax pmax
comp=Z,13nm,0.7s
FORT Forrest 31.98 168 P P 01 55 23.0 0.0
FORT IAmb IAmb 01 56 14.9
comp=Z,19nm,0.9s
CTA Charters Tower 32.51 131 P P 01 55 27.9 +0.1
comp=Z,2.1nm,0.4s,baz=280,slow=6.1,SNR=2.7
NWAO Narrogin (SRO) 33.45 185 P P 01 55 36.1 +0.3
comp=Z,9.9nm,0.8s,baz=13,slow=8.7,SNR=3.6
NWAO Narrogin (SRO) 33.45 185 P P 01 55 36.5 +0.6
NWAO IAmb IAmb 01 55 50.8
comp=Z,38nm,1.3s
NWAO Narrogin (SRO) 33.45 185 P P 01 55 36.5 +0.6
NWAO pmax pmax
comp=Z,38nm,1.3s
JCJ Chichijima 33.61 36 P P 01 55 36.9 -0.5
comp=Z,36nm,0.6s,baz=203,slow=13,SNR=3.5
JNU Nakatsue 33.83 16 P P 01 55 41.1 +1.9
comp=Z,6.4nm,0.8s,baz=244,slow=2.1,SNR=5.1
CD2 Chengdu 34.12 334 ⇓iP P 01 55 42.0 +0.2
CD2 S S 02 01 03.4 +0.9
CD2 pmax pmax
comp=Z,90nm,0.8s
CD2 pmax pmax
comp=Z,200nm,5.1s
CD2 LR LR
comp=Z,450nm,8.0s
CD2 LR LR
comp=Z,550nm,7.6s
CD2 LR LR
comp=Z,880nm,8.8s
XAN Xi'an 35.04 343 P P 01 55 49.5 -0.2
XAN pmax pmax
comp=Z,14nm,0.8s
XAN pmax pmax
comp=Z,59nm,5.7s
XAN Xi'an 35.04 343 P P 01 55 49.2 -0.5
XAN IAmb IAmb 01 55 50.8
comp=Z,10nm,0.7s
XAN Xi'an 35.04 343 P P 01 55 49.2 -0.5
XAN pmax pmax
comp=Z,10.0nm,0.7s
BRDH Bariadhala 35.66 310 P P 01 55 56.3 +1.2
comp=Z,58nm,0.4s,baz=107,slow=7.6,SNR=5.2
BBOO Buckleboo 36.29 158 P P 01 56 01.0 +0.6
baz=36,SNR=7.1
BBOO Buckleboo 36.29 158 P P 01 55 59.1 -1.2
BBOO IAmb IAmb 01 56 16.1
comp=Z,17nm,0.8s
KSRS Korea Array 37.35 10 P P 01 56 08.5 -0.7
comp=Z,2.2nm,0.6s,baz=200,slow=7.5,SNR=15
STKA Stephens Creek 37.93 150 P P 01 56 15.2 +0.9
baz=38,SNR=8.8
STKA Stephens Creek 37.93 150 P P 01 56 14.7 +0.3
comp=Z,6.7nm,0.7s,baz=311,slow=9.2,SNR=17
STKA LR LR 02 13 49.9
comp=Z,83nm,19.0s,baz=10,slow=39
STKA Stephens Creek 37.93 150 P P 01 56 14.3 0.0
HTT Hallett 37.99 155 P P 01 56 16.0 +1.2
baz=38,SNR=19
DL2 Dalian 38.18 1 P P 01 56 16.5 +0.3
DL2 pmax pmax
comp=Z,38nm,0.9s
MAJO Matsushiro 39.38 23 iP P 01 56 26.3 -0.1
MAJO pmax pmax
comp=Z,5.0nm,0.9s
MJAR Matsushiro Arr 39.38 23 P P 01 56 24.8 -1.6
comp=Z,1.1nm,0.3s,baz=167,slow=7.5,SNR=4.4
MJAR LR LR 02 11 02.1
comp=Z,66nm,21.7s,baz=65,slow=34
BJT Baijiatuau 39.48 355 P P 01 56 24.2 -2.9
BJT IAmb IAmb 01 56 28.8
comp=Z,21nm,0.7s
BJT Baijiatuau 39.48 355 P P 01 56 24.2 -2.9
BJT pmax pmax

comp=Z,21nm,0.7s
BJI Beijing 39.50 355 P P 01 56 28.0 +0.8
BJI pmax pmax
comp=Z,28nm,0.7s
BJI LR LR
comp=Z,95nm,4.7s
BJI LR LR
comp=Z,100nm,5.1s
CMSA Cobar Meteorol 39.85 145 P P 01 56 32.3 +1.9
baz=40,SNR=9.6
LSA Lhasa 40.27 319 P P 01 56 34.1 -0.2
LSA IAmb IAmb 01 56 37.5
comp=Z,28nm,0.9s
LSA Lhasa 40.27 319 P P 01 56 34.2 -0.2
LSA pmax pmax
comp=Z,28nm,0.9s
SNY Shenyang 41.18 3 ⇓P P 01 56 41.0 -0.1
SNY pmax pmax
comp=Z,27nm,1.0s
ODAN Odare 41.20 312 eP P 01 56 42.9 +1.1
comp=Z,79nm,0.9s
TAPN Taplejung 41.24 313 eP P 01 56 43.5 +1.3
comp=Z,61nm,0.7s
RAMN Ramite 41.83 312 eP P 01 56 48.8 +1.8
comp=Z,164nm,1.0s
JIRN Jiri 42.53 312 eP P 01 56 54.2 +1.4
comp=Z,130nm,0.7s
GUN Gumba 42.89 312 eP P 01 56 57.1 +1.3
comp=Z,164nm,0.8s
GTA Gaotai 43.05 336 ⇓P P 01 56 58.0 +1.4
GTA pP pP 01 57 10.0 -5.1
GTA PcP PcP 01 58 46.3 +0.8
GTA pmax pmax
comp=Z,18nm,1.0s
GTA pmax pmax
comp=Z,80nm,4.8s
GTA LR LR
comp=Z,240nm,18.1s
GTA LR LR
comp=Z,810nm,19.0s
GTA LR LR
comp=Z,520nm,18.7s
PKI Pulchoki 43.06 312 eP P 01 56 57.9 +0.8
comp=Z,68nm,0.7s
PKIN Phulchoki 43.07 312 eP P 01 56 57.9 +0.8
comp=Z,53nm,0.7s
KKN Kakani 43.27 312 eP P 01 56 59.8 +1.1
comp=Z,87nm,0.9s
DMN Daman 43.31 311 eP P 01 57 00.2 +1.2
comp=Z,228nm,1.1s
GKN Gorkha 43.87 312 eP P 01 57 04.5 +1.1
comp=Z,165nm,0.7s
CAN Canberra 44.51 146 P P 01 57 09.2 +1.0
CAN IAmb IAmb 01 57 26.6
comp=Z,17nm,0.8s
CAN Canberra 44.51 146 P P 01 57 09.2 +1.0
CAN pmax pmax
comp=Z,17nm,0.8s
HYB Hyderabad 44.54 294 iP P 01 57 09.0 +0.3
HYB esP sP 01 57 41.0 +4.5
MDJ Mudanjiang 44.60 9 P P 01 57 09.5 +0.7
MDJ S S 02 03 45.8 +6.7
MDJ pmax pmax
comp=Z,34nm,0.9s
MDJ pmax pmax
comp=Z,140nm,3.6s
MDJ LR LR
comp=Z,120nm,4.3s
MDJ LR LR
comp=Z,190nm,4.1s
MDJ LR LR
comp=Z,280nm,5.1s
MDJ Mudanjiang 44.60 9 P P 01 57 07.7 -1.0
MDJ IAmb IAmb 01 57 10.1
comp=Z,24nm,0.9s
USRK Ussuriysk Ar. 44.64 12 P P 01 57 09.2 +0.2
comp=Z,9.7nm,0.6s,baz=199,slow=6.3,SNR=18
DANN Dangsing 44.71 311 eP P 01 57 11.4 +1.2
comp=Z,260nm,0.7s
TEY Ternei 46.52 16⇓eP P 01 57 38.2 +14
TEY pmax pmax
comp=N,20nm,1.5s
TEY pmax pmax
comp=Z,30nm,1.0s
ASAJ Asahikawa 47.62 22 P P 01 57 31.4 -1.1
comp=Z,8.5nm,0.8s,baz=212,slow=16,SNR=5.8
JKA Kamikawa-asahi 47.62 22 P P 01 57 31.4 -1.1
ULN Ulaanbaatar 48.55 348 P P 01 57 39.8 0.0
ULN IAmb IAmb 01 57 41.8
comp=Z,25nm,0.9s
ULN Ulaanbaatar 48.55 348 P P 01 57 39.8 0.0
ULN pmax pmax
comp=Z,25nm,0.9s
SONM Songino Array 48.66 347 P P 01 57 41.6 +1.0
comp=Z,13nm,0.7s,baz=169,slow=8.5,SNR=68
SONM PcP PcP 01 59 04.7 -0.2
comp=Z,5.8nm,0.8s,baz=166,slow=4.4,SNR=6.0
KLR Kul'dur 49.44 10 P P 01 57 46.0 -0.4
comp=Z,4.6nm,0.7s,baz=212,slow=4.4,SNR=18
KLR Kul'dur 49.44 10 iP P 01 57 43.5 -2.9
KLR pmax pmax
comp=Z,6.0nm,0.9s
ZAK Zakamensk 51.77 346 eP P 01 58 04.1 +0.1
ZAK pmax pmax
comp=Z,8.0nm,1.1s
GRNR Gornyy 51.82 13⇓iP P 01 58 04.5 +0.2
GRNR pmax pmax
comp=Z,10.0nm,1.1s
WMQ Urumqi 52.05 330 eP P 01 58 07.9 +1.7
WMQ pP pP 01 58 25.9 +0.5
WMQ pmax pmax
comp=Z,14nm,1.3s
WMQ pmax pmax
comp=Z,73nm,6.5s
WMQ LR LR
comp=Z,840nm,18.5s
WMQ LR LR
comp=Z,1µm,20.5s
WMQ LR LR
comp=Z,2µm,25.7s
TLY Talaya 52.89 347 P P 01 58 13.0 +0.8
comp=Z,13nm,0.7s,baz=193,slow=4.0,SNR=32
TLY Talaya 52.89 347 P P 01 58 11.0 -1.1
TLY Talaya 52.89 347 eP P 01 58 13.6 +1.4
TLY pmax pmax
comp=Z,37nm,0.7s
MOY Mondy 53.52 345 eP P 01 58 18.2 +1.3
MOY pmax pmax
comp=Z,34nm,1.9s
NIL Nilore 55.15 312 P P 01 58 27.9 -1.2
NIL IAmb IAmb 01 58 52.0
comp=Z,16nm,0.8s
NIL Nilore 55.15 312 P P 01 58 27.9 -1.2
NIL pmax pmax
comp=Z,16nm,0.9s
KSH Kashi 56.12 319 P P 01 58 37.9 +1.9
KSH pP pP 01 58 51.0 -4.4
KSH sP sP 01 59 00.0 -3.9
KSH PcP PcP 01 59 30.9 -2.3
KSH PP PP 02 00 44.8 +3.0
KSH S S 02 06 18.9 -0.6
KSH ScS ScS 02 08 17.3 -1.1
KSH SS SS 02 10 08.4 +1.4
KSH pmax pmax
comp=Z,16nm,0.8s
KSH pmax pmax
comp=Z,110nm,4.0s
KSH LR LR
comp=Z,480nm,10.2s
KSH LR LR
comp=Z,410nm,13.0s
KSH LR LR
comp=Z,4µm,23.0s
PDGK Podgornoye 56.14 325 P P 01 58 37.0 +0.9
MK31 Makanchi Array 56.86 329 P P 01 58 39.2 -1.7
MK31 Makanchi Array 56.86 329 eP P 01 58 41.7 +0.8
MKAR Makanchi Array 56.86 329 P P 01 58 42.1 +1.2
comp=Z,23nm,0.8s,baz=130,slow=8.6,SNR=192
MKAR PcP PcP 01 59 36.0 +0.3
comp=Z,11nm,0.7s,baz=116,slow=5.5,SNR=8.3
MAKZ Makanchi 57.02 329 P P 01 58 41.1 -1.0
MAKZ IAmb IAmb 01 58 44.2
comp=Z,22nm,1.1s
MAKZ Makanchi 57.02 329 P P 01 58 42.8 +0.7
BOD Bodaibo 57.33 356⇓iP P 01 58 44.7 +0.7
BOD pmax pmax

comp=Z,24nm,0.9s
KZA Kyzart 57.97 321 P P 01 58 51.3 +2.0
SNR=12
KBK Karagaybulak 58.47 322 P P 01 58 54.6 +2.0
SNR=18
UCH Uchtor 58.51 321 P P 01 58 55.1 +1.9
SNR=10
KBL Kabul 58.69 311 P P 01 58 53.5 -0.8
KBL Kabul 58.69 311 P P 01 58 53.5 -0.8
KBL pmax pmax
comp=Z,40nm,0.8s
AAK Ala-Archa 58.74 322 P P 01 58 56.3 +1.9
comp=Z,14nm,0.6s,baz=117,slow=4.9,SNR=15
AAK PcP PcP 01 59 44.6 +1.1
comp=Z,8.1nm,0.7s,baz=123,slow=5.8,SNR=5.2
AAK Ala-Archa 58.74 322 P P 01 58 56.3 +1.9
SNR=12
AAK Ala-Archa 58.74 322 P P 01 58 51.8 -2.6
AAK Ala-Archa 58.74 322 ceP P 01 58 55.1 +0.7
AAK pmax pmax
comp=Z,35nm,1.7s
AML Almayashu 58.97 321 P P 01 58 58.0 +1.7
SNR=12
USP Ospenovka 59.08 322 P P 01 58 58.0 +1.4
SNR=8.4
EKS2 Erkin-Say 59.20 321 P P 01 58 59.5 +1.9
SNR=6.5
MSVF Nonsavu 59.43 111 iP P 01 58 59.4 0.0
MSVF pmax pmax
comp=Z,8.0nm,0.9s
ZALV Zalesovo Beam 60.80 337 P P 01 59 08.1 0.0
comp=Z,21nm,0.9s,baz=123,slow=5.5,SNR=58
KURBB Kurchatov Arra 61.26 331 P P 01 59 11.8 +0.6
comp=Z,57nm,0.8s,baz=134,slow=6.3,SNR=13
KURBB PcP PcP 01 59 53.0 -0.1
comp=Z,7.8nm,0.8s,baz=125,slow=4.1,SNR=5.0
KURK Kurchatov 61.27 331 P P 01 59 10.3 -1.0
KURK PcP 01 59 51.7 -1.5
KURK Kurchatov 61.27 331 P P 01 59 11.8 +0.5
KURK 01 59 53.0
KK31 Karatay Array 61.49 320 iP P 01 59 13.2 +0.2
KKAR Karatay Array 61.49 320 IAmb IAmb 01 59 14.9
comp=Z,7.3nm,0.9s
YAK Yakutsk 61.71 5 P P 01 59 13.5 -0.5
YAK Yakutsk 61.71 5 eP P 01 59 13.7 -0.3
YAK e 01 59 56.9
YAK eS S 02 07 33.1 +2.4
YAK e*SS pS 02 07 51.8 -0.3
YAK eSS SS 02 11 35.1 +1.5
YAK pmax pmax
comp=Z,34nm,0.8s
YAK pmax pmax
comp=N,8.0nm,0.9s
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK pmax pmax
comp=Z,28nm,2.3s
YAK pmax pmax
comp=N,41nm,2.4s
YAK pmax pmax
comp=E,21nm,2.7s
YAK smax smax
comp=N,38nm,2.5s
YAK smax smax
comp=E,62nm,3.3s
RPZ Rata Peaks 62.99 141 P P 01 59 24.0 +1.0
comp=E,17nm,0.8s,baz=330,slow=5.1,SNR=5.7
RPZ Rata Peaks 62.99 141 P P 01 59 23.4 +0.4
MA2 Magadan 63.39 17 P P 01 59 25.2 -0.1
MA2 IAmb IAmb 01 59 26.6
comp=Z,11nm,0.8s
MA2 Magadan 63.39 17 ceP P 01 59 25.0 -0.3
MA2 pmax pmax
comp=Z,31nm,2.5s
WSAR Wadi Sarin 64.07 296 P P 01 59 30.3 -0.2
comp=Z,15nm,0.8s,baz=132,slow=5.0,SNR=4.9
URZ Urewera 64.70 133 P P 01 59 34.6 +0.3
comp=Z,3.9nm,0.5s,baz=289,slow=17,SNR=2.8
URZ Urewera 64.70 133 P P 01 59 33.8 -0.4
URZ IAmb IAmb 01 59 53.9
comp=Z,32nm,1.4s
SEY Seymchan 66.61 15 iP P 01 59 45.0 -1.1
BRVK Borovoye 66.81 330 P P 01 59 47.2 -0.4
BRVK Borovoye 66.81 330 P P 01 59 48.0 +0.4
SOCY Socotra 66.95 283 IAmb IAmb 01 59 49.5
comp=Z,25nm,1.0s
GEYT Alibeck 68.14 311 P P 01 59 56.6 +0.2
comp=Z,8.9nm,0.9s,baz=141,slow=5.0,SNR=17
GYA0B ALIBECK ARRAY 68.14 311 IAmb IAmb 01 59 58.7
comp=Z,17nm,1.1s
AB31 Akbulak array 70.78 323 iP P 02 00 12.9 +0.6
ABKAR Akbulak array 70.78 323 P P 02 00 10.8 -1.5
ABKAR IAmb IAmb 02 00 13.7
comp=Z,13nm,0.7s
NRIK Noril'sk 72.13 348 P P 02 00 20.1 0.0
comp=Z,5.0nm,0.5s,baz=145,slow=7.0,SNR=5.8
SVE Sverdlovsk 73.50 330⇑eP P 02 00 29.1 +0.7
SVE pmax pmax
comp=Z,63nm,1.0s
SVE MLR MLR
comp=Z,1µm,19.0s
BILL Bilibino 74.25 16⇑eP P 02 00 33.8 +1.2
BILL e 02 00 52.3
BILL e 02 03 24.6
BILL ePPP PPP 02 05 02.3
BILL eS S 02 10 05.4 +5.3
BILL pmax pmax
comp=Z,2.0nm,1.1s
ARU Arti 74.38 329 P P 02 00 33.4 -0.1
ARU Arti 74.38 329 diP P 02 00 33.7 +0.1
ARU 02 03 15.1
ARU S S 02 10 03.2 +1.2
ARU SS SS 02 14 43.8 -5.8
ARU pmax pmax
comp=Z,49nm,1.0s
OPO Ambohidratompo 74.39 251 P P 02 00 35.1 +0.5
comp=Z,22nm,0.8s,baz=85,slow=3.8,SNR=22
ABPO Ambohimpanom 74.40 250 P P 02 00 34.0 -0.7
ABPO IAmb IAmb 02 00 37.0
comp=Z,18nm,0.7s
ABPO Ambohimpanom 74.40 250 P P 02 00 34.0 -0.7
ABPO pmax pmax
comp=Z,17nm,0.7s
RAYN Ar Rayn 76.04 294 P P 02 00 43.2 -0.7
RAYN Ar Rayn 76.04 294 P P 02 00 43.2 -0.7
RAYN pmax pmax
comp=Z,9.0nm,0.9s
AKT Akhty 76.78 312 eP P 02 00 48.8 +1.0
AKT e*PP pP 02 01 03.9 -4.5
AKT e*SP sP 02 01 10.1 -6.7
AKT e 02 03 40.4
AKT pmax pmax
comp=Z,35nm,1.1s
ATD Arta Tunnel 77.81 282 P P 02 00 54.6 +0.7
comp=Z,15nm,1.0s,baz=237,slow=17,SNR=1.9
TBLG Delisi 79.03 312 P P 02 00 58.8 -1.4
TBLG Delisi 79.03 312 P P 02 00 58.8 -1.4
TBLG pmax pmax
comp=Z,24nm,0.8s
ZEI Tsey 79.81 313 eP P 02 01 04.8 +0.2
ZEI pmax pmax
comp=Z,12nm,0.9s
AKH Akhalkalaki 79.91 312 P P 02 01 04.0 -1.1
AKH IAmb IAmb 02 01 08.0
comp=Z,28nm,1.0s
AKH Akhalkalaki 79.91 312 P P 02 01 04.0 -1.1
AKH pmax pmax
comp=Z,28nm,1.0s
NCK Nalchik 80.14 314 iP P 02 01 06.4 +0.3
NCK pmax pmax
comp=Z,10.0nm,0.9s
KBZ Khabaz 80.67 314 P P 02 01 09.4 +0.5
comp=Z,9.5nm,0.8s,baz=131,slow=3.9,SNR=14
NEY Neytrino 80.73 314 iP P 02 01 09.8 +0.3
NEY pmax pmax
comp=Z,3.0nm,0.9s
SHA1 Shidzhatmaz 80.84 314 iP P 02 01 09.8 -0.4
KIV Kislovodsk 80.85 314 eP P 02 01 10.2 +0.2
KIV pmax pmax
comp=Z,18nm,1.0s
VNDA Vanda 81.15 172 P P 02 01 11.1 +0.3
comp=Z,3.1nm,0.7s,baz=311,slow=7.1,SNR=3.8
PRGR Permogore 82.36 332 eP P 02 01 13.7 -3.7
PRGR e 02 01 31.6
PRGR pmax pmax

comp=Z,37nm,0.8s
VRH Novokhopyorsk 82.54 322 eP P 02 01 18.2 -0.4
VRH pmax pmax
comp=Z,20nm,0.8s
SOC Sochi 82.94 314 eP P 02 01 21.2 +0.3
SOC e 02 04 26.5
SOC ePPP PPP 02 06 23.5
SOC eS S 02 11 33.5 -0.4
SOC eS SKKSac 02 11 38.9 -1.3
SOC pmax pmax
comp=Z,15nm,0.9s
SOC MLR MLR
comp=Z,207nm,16.0s
KMBO Kilima Mbogo 83.27 269 P P 02 01 24.5 +1.0
comp=Z,8.6nm,0.8s,baz=54,slow=7.8,SNR=36
KMBO Kilima Mbogo 83.27 269 P P 02 01 21.9 -1.6
KMBO IAmb IAmb 02 01 26.1
comp=Z,15nm,1.1s
VORD Divnogorie 84.03 321 eP P 02 01 25.9 -0.4
VORD pmax pmax
comp=Z,30nm,1.1s
VSR Storozhevoye 84.14 321 eP P 02 01 26.4 -0.4
VSR pmax pmax
comp=Z,40nm,1.0s
LPSR Galich'ya Gora 84.44 323 eP P 02 01 28.0 -0.3
LPSR pmax pmax
comp=Z,60nm,1.0s
KLMR Klimovskoe 85.12 331 eP P 02 01 29.9 -1.6
KLMR pmax pmax
comp=Z,58nm,1.1s
KLMR Klimovskoe 85.12 331 eP P 02 01 30.0 -1.6
KLMR AMP 02 01 32.2
comp=Z,58nm,1.1s
MOS Moscow 85.53 326 eP P 02 01 32.7 -1.0
MOS pmax pmax
comp=Z,33nm,0.6s
OBN Obninsk 86.07 325 P P 02 01 36.0 -0.3
OBN Obninsk 86.07 325 diP P 02 01 35.7 -0.7
OBN e 02 04 54.6
OBN ePPP PPP 02 06 53.2
OBN eS S 02 12 00.5 -3.9
OBN pmax pmax
comp=Z,43nm,0.8s
OBN MLR MLR
comp=Z,431nm,18.0s
TMCR Tamitsa 86.21 334 eP P 02 01 31.9 -5.0
TMCR pmax pmax
comp=Z,13nm,0.5s
BR131 Keskin Array S 87.24 310 IAmb IAmb 02 01 43.5
comp=Z,10nm,0.8s
BR131 Keskin Array S 87.24 310 diP P 02 01 42.0 -0.7
SYO Syowa Base 87.26 201⇓eP P 02 01 40.0 -1.9
MBAR Mbarara 89.78 269 P P 02 01 56.4 +1.2
comp=Z,5.7nm,0.2s,baz=42,slow=2.5,SNR=4.4
MBAR Mbarara 89.78 269 P P 02 01 53.4 -1.8
MBAR IAmb IAmb 02 04 58.7
comp=Z,7.1nm,0.7s
AKASG Malin Array Be 90.39 321 P P 02 01 55.8 -1.3
comp=Z,5.4nm,0.7s,baz=72,slow=4.6,SNR=37
AKBB Malin Array Si 90.39 321 IAmb IAmb 02 01 56.9
comp=Z,7.5nm,0.8s
ILAR Eielson Array 90.61 25 P P 02 01 55.8 -2.0
comp=Z,0.7nm,0.7s,baz=254,slow=5.0,SNR=13
ARCES ARCESS Array B 91.24 339 P P 02 02 01.2 +0.5
comp=Z,4.8nm,0.8s,baz=60,slow=7.2,SNR=4.5
FINES FINESS Array B 91.64 331 P P 02 02 02.1 -0.5
comp=Z,1.6nm,0.6s,baz=67,slow=5.0,SNR=9.7
LSZ Lusaka 92.39 255 P P 02 02 04.9 -2.3
LSZ IAmb IAmb 02 02 08.8
comp=Z,7.0nm,0.9s
LSZ Lusaka 92.39 255 P P 02 02 04.9 -2.3
LSZ pmax pmax
comp=Z,7.0nm,1.0s
BUR08 Bucovina Ar. S 93.18 318 P P 02 02 08.5 -1.7
BUR08 IAmb IAmb 02 02 11.3
comp=Z,9.2nm,1.1s
KOLS Kolonicke sedl 95.01 319 eP P 02 02 17.8 -0.6
KOLS Kolonicke sedl 95.01 319 eP P 02 02 17.8 -0.6
UZH Uzhgorod 95.03 319 eP P 02 02 24.0 +5.5
HYT Haines Junctio 95.35 29 P P 02 02 18.6 -1.2
HYT IAmb IAmb 02 02 21.0
comp=Z,4.8nm,0.7s
NB2 NORSAR Subarra 98.77 332 P P 02 02 33.3 -1.9
comp=Z,2.7nm,1.0s,baz=76,slow=4.6
NOA NORSAR Array B 98.77 332 P P 02 02 33.2 -1.9
comp=Z,1.0nm,0.7s,baz=75,slow=4.4,SNR=4.2
NOA LR LR 02 50 08.9
comp=Z,238nm,19.2s,baz=125,slow=37
YKA Yellowknife Ar 104.89 23 PKiKP PKiKP 02 07 16.9 -0.1
comp=Z,0.2nm,0.5s,baz=309,slow=1.8,SNR=5.1
NVAR Mina Array Bea 113.62 47 PKiKP PKiKP 02 07 35.0 +0.6
comp=Z,0.6nm,0.3s,baz=252,slow=2.4,SNR=5.5
PDAR Pinedale Array 117.78 40 PKP PKPdf 02 07 41.8 -0.5
comp=Z,0.5nm,0.8s,baz=48,slow=2.2,SNR=4.0
PDAR PKKPbc PKKPbc 02 18 03.2 -1.7
comp=Z,0.5nm,0.8s,baz=114,slow=7.2,SNR=5.1
TORD Torodi Ar. Bea 117.86 285 PKP PKPdf 02 07 42.2 -0.7
comp=Z,0.6nm,0.7s,baz=134,slow=2.0,SNR=4.9
TORD PP PP 02 09 00.7 +3.1
comp=Z,1.6nm,1.0s,baz=72,slow=6.0,SNR=4.2
TORD SKP 02 11 14.2
comp=Z,1.3nm,0.7s,baz=72,slow=2.2,SNR=4.7
X16A Lo Mia Camp, P 120.27 49 PKPdf 02 07 46.0 -1.3
ULM Lac du Bonnet 120.62 26 PKP PKPdf 02 07 46.1 -1.2
comp=Z,1.0nm,0.7s,baz=270,slow=1.0,SNR=2.8
ULM Lac du Bonnet 120.62 26 PKPdf 02 07 46.2 -1.1
ULM Lac du Bonnet 120.62 26 PKIKP PKPdf 02 07 46.2 -1.1
ANMO Albuquerque 123.71 46 PKPdf 02 07 52.7 -1.3
ANMO Albuquerque 123.71 46c iPKIKP PKPdf 02 07 52.6 -1.3
ANMO pmax pmax
comp=Z,3.0nm,1.3s
SCHQ Schefferville 124.47 5 PKP PKPdf 02 07 54.5 -0.1
comp=Z,1.5nm,0.8s,baz=119,slow=2.0,SNR=5.9
MNTX Cornudas Mount 126.03 49 PKPdf 02 07 57.1 -1.1
TXAR Lajitas Array 128.42 51 PKP PKiKP 02 08 03.5 -0.1
comp=Z,0.8nm,0.7s,baz=241,slow=0.5,SNR=12
TXAR SKPbc SKPbc 02 11 17.4
comp=Z,0.9nm,1.0s,baz=222,slow=1.2,SNR=6.1
U40A Yellville 131.95 37 PKPdf 02 08 09.3 0.0
MIAR Mount Ida 132.70 39 PKPdf 02 08 10.1 -0.7
MIAR Mount Ida 132.70 39 PKIKP PKPdf 02 08 10.1 -0.7
PLCA Paso Flores 138.77 167 PKP PKPdf 02 08 22.3 +0.3
comp=Z,1.6nm,0.9s,baz=308,slow=4.2,SNR=3.1
PLCA Paso Flores 138.77 167 PKPdf 02 08 21.4 -0.6
CMIG Matias Romero 140.96 62 PKP PKiKP 02 08 28.6 -0.6
comp=Z,2.3nm,1.0s,baz=355,slow=3.9,SNR=4.1
ROC1 El Roble 145.97 163 PKPdf 02 08 34.1 -1.2
CPUP Villa Florida 154.29 184 PKPbc PKPbc 02 08 56.2 -0.1
comp=Z,1.2nm,0.6s,baz=102,slow=2.7,SNR=3.9
CPUP Villa Florida 154.29 184 PKPbc 02 08 54.9 -1.5
CPUP Villa Florida 154.29 184 PKIKP PKPbc 02 08 54.9 -1.5
BDFB Brasilia 161.22 217 PKP PKPdf 02 08 57.6 +0.5
comp=Z,2.8nm,0.8s,baz=105,slow=11,SNR=3.3
BDFB PKPab PKPab 02 09 41.2 +0.5
comp=Z,3.5nm,0.7s,baz=190,slow=6.3,SNR=5.3
BDFB Brasilia 161.22 PKPdf 02 08 55.1 -1.9
BDFB PKPab 02 09 38.7 -2.0
BDFB Brasilia 161.22 217 PKIKP PKPdf 02 08 55.1 -1.9
BDFB 02 09 38.7
LPAZ La Paz 162.19 152 PKP PKPdf 02 08 57.4 -1.2
comp=Z,1.1nm,0.8s,baz=183,slow=1.8,SNR=3.4
LPAZ PKPab PKPab 02 09 44.5 -1.0
comp=Z,1.2nm,0.8s,baz=180,slow=3.0,SNR=3.0

IDC **25** *02:00:49.0±0.6, 38.21N×90.89E, h0km, mb4.1/22, mb1 4.3/27, mb1mx4.1/54, mbtmp4.2/27, ML4.0/5, MS3.8/4, Ms1 3.9/4, ms1mx3.2/50, Error ellipse: s-maj=18.9km s-min=11.8km az=43.0*
NEIC **25** *02:00:50.7±1.4, 38.24N±0.03×90.79E±0.10, h10km±1km, mb4.6/32, Error ellipse: s-maj=12.6km s-min=5.7km az=92.0*
BJI **25** *02:00:51.0±0.0, 38.22N×90.78E, h12km, mB4.5/6, mb4.6/24, ML4.3/17, Ms3.9/20, Ms7 3.8/17*
MOS **25** *02:00:51.8±1.3, 38.32N×90.72E, h29km, mb4.5/15, Error ellipse: s-maj=11.1km s-min=5.9km az=118.5*
ISC 25 02:00:52.4±0.5, **38.39N**±0.06×**90.66E**±0.04, **h10km, n126, σ1.49**/127, **mb4.3**/51, **MS3.8**/5, **1C-2D, Southern Xinjiang**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
WMQ Urumqi 5.87 339 Pn Pn 02 02 22.3 +2.8
WMQ Sn Sn 02 03 30.8 +4.0
WMQ smax smax

comp=N,260nm,1.0s
WMQ smax smax
comp=E,260nm,0.9s
WMQ LR LR
comp=N,770nm,9.9s
WMQ LR LR
comp=E,340nm,8.7s
WMQ LR LR
comp=Z,780nm,9.1s
WMQ Urumqi 5.87 339 Pn 02 02 20.4 +0.9
WMQ Sn **Sn 02 03 26.4 -0.4**
GTA Gaotai 7.21 79 Pn **Pn 02 02 36.3 -1.7**
GTA Pg **Pb 02 03 00.3 +2.5**
GTA Sn **Sn 02 03 57.3 -2.8**
GTA Sg Sb 02 04 34.8 +11
GTA smax smax
comp=N,78nm,1.0s
GTA smax smax
comp=E,67nm,0.9s
GTA LR LR
comp=N,660nm,13.7s
GTA LR LR
comp=E,480nm,12.7s
GTA LR LR
comp=Z,370nm,14.6s
LSA Lhasa 8.68 177 P Pn 02 03 05.5 +7.0
MK31 Makanchi Array 10.41 326 Pn 02 03 22.9 +1.1
MK31 Sn **Sn 02 05 18.3 -0.2**
MK31 Makanchi Array 10.41 326 P **Pn 02 03 22.9 +1.1**
MK31 02 05 18.3
MKAR Makanchi Array 10.41 326 Pn **Pn 02 03 22.6 +0.8**
9.7nm,0.3s,baz=129,slow=14,SNR=173
MKAR Sn **Sn 02 05 16.5 -2.0**
0.8nm,0.3s,baz=138,slow=24,SNR=4.3
MKAR Lg Lg 02 06 24.7
baz=136,slow=30,SNR=2.8
MKAR Makanchi Array 10.41 326 eP **Pn 02 03 22.9 +1.1**
MKAR pmax pmax
comp=Z,10.0nm,0.3s
MAKZ Makanchi 10.56 326 Pn 02 03 22.9 -0.9
MAKZ Sn **Sn 02 05 23.9 +1.8**
MAKZ Makanchi 10.56 326 P **Pn 02 03 22.9 -0.9**
MAKZ 02 05 23.9
LZH Lanzhou 10.76 98 eP **Pn 02 03 25.8 -0.9**
LZH pP 02 03 28.0
LZH sP 02 03 30.1
LZH ePP **PnPn 02 03 34.6 +0.3**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH LR LR
comp=Z,530nm,10.8s
LZH LR LR
comp=Z,510nm,12.8s
KSH Kashi 11.49 280 P Pn 02 03 41.8 +5.1
KSH pP 02 03 47.6
KSH S **Sn 02 05 50.8 +5.7**
KSH PcP **PcP 02 09 31.0 +2.2**
KSH pmax pmax
comp=Z,12nm,0.6s
KSH LR LR
comp=Z,620nm,6.2s
KSH LR LR
comp=Z,960nm,11.9s
AAK Ala-Archa 13.01 294 Pn **Pn 02 03 58.9 +1.5**
comp=Z,0.9nm,0.3s,baz=118,slow=11,SNR=13
AAK Lg Lg 02 08 00.0
comp=Z,0.1nm,0.3s,baz=230,slow=19,SNR=1.3
AAK Ala-Archa 13.01 294 Pn **Pn 02 03 57.5 +0.1**
AAK Sn **Sn 02 06 23.2 +1.0**
AAK Ala-Archa 13.01 294 *i* P **Pn 02 03 56.2 -1.2**
CD2 Chengdu 13.11 121 P **Pn 02 03 58.5 -0.2**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
SONM Songino Array 14.85 45 Pn **Pn 02 04 21.1 -1.4**
comp=Z,0.8nm,0.3s,baz=231,slow=14,SNR=17
SONM Lg Lg 02 08 29.5
comp=Z,0.3nm,0.3s,baz=241,slow=32,SNR=4.2
NIL Nilore 14.86 257 Pn 02 04 20.8 -1.8
NIL Sn **Sn 02 07 03.8 -3.4**
KURBB Kurchatov Arra 14.95 329 Pn Pn 02 04 21.7 -2.0
comp=Z,0.5nm,0.3s,baz=145,slow=12,SNR=27
KURBB Sn Sn 02 07 02.4 -7.0
baz=144,slow=27,SNR=2.6
KURBB Lg Lg 02 08 41.0
baz=149,slow=26,SNR=2.6
ZAK Zakamensk 14.98 33 eP Pn 02 04 29.0 +4.8
ZAK pmax pmax
comp=Z,6.0nm,0.9s
KURK Kurchatov 14.99 329 Pn 02 04 22.4 -1.8
KURK IAmb IAmb 02 04 31.8
comp=Z,19nm,0.9s
KURK **Sn 02 07 06.9 -3.3**
KURK Kurchatov 14.99 329 P **Pn 02 04 21.7 -2.5**
KURK 02 07 02.4
MOY Mondy 15.13 25 eP **P 02 04 32.7 +1.3**
MOY pmax pmax
comp=Z,24nm,1.6s
ULN Ulaanbaatar 15.23 46 Pn 02 04 24.4 -3.2
ULN Sn **Sn 02 07 14.2 -2.3**
ULN Ulaanbaatar 15.23 46 P **Pn 02 04 24.5 -3.2**
ULN 02 07 14.2
ULN pmax pmax
comp=Z,9.0nm,0.8s
XAN Xi'an 15.37 101 P **P 02 04 34.1 0.0**
XAN pP pP 02 04 38.1 +0.4
XAN S S 02 07 57.8 +22
XAN sS sS 02 08 04.8 +23
KK31 Karatay Array 15.97 294 Pn 02 04 36.3 -0.8
KK31 Karatay Array 15.97 294 P **Pn 02 04 36.3 -0.8**
KK31 pmax pmax
comp=Z,4.0nm,0.9s
KKAR Karatay Array 15.97 294 Pn 02 04 35.6 -1.5
KKAR Karatay Array 15.97 294 P **Pn 02 04 35.6 -1.5**
KKAR pmax pmax
comp=Z,4.0nm,0.9s
ZAA0 Zalesovo Array 16.07 347 Pn 02 04 38.1 -0.2
ZALV Zalesovo Beam 16.07 347 Pn **Pn 02 04 37.2 -1.0**
comp=Z,0.4nm,0.3s,baz=171,slow=12,SNR=12
ZALV Lg Lg 02 09 27.3
comp=Z,0.1nm,0.3s,baz=176,slow=25,SNR=2.5
TLY Talaya 16.11 30 Pn **Pn 02 04 39.8 +0.9**
comp=Z,0.0nm,0.3s,baz=241,slow=13,SNR=2.2
TLY Talaya 16.11 30 eP **P 02 04 43.2 +0.9**
TLY pmax pmax
comp=Z,11nm,0.9s
IRK Irkutsk 16.80 30 eP **P 02 04 51.3 +1.5**
IRK pmax pmax
comp=Z,25nm,0.9s
TIY Taiyuan 17.16 85 eP **Pn 02 04 54.8 +2.4**
GYA Guiyang 17.97 127⇓*i*P **Pn 02 05 04.8 +2.3**
GYA pmax pmax
comp=Z,20nm,0.8s
BJI Beijing 19.82 77 eP **P 02 05 22.5 -0.6**
BJI pmax pmax
comp=Z,5.0nm,0.6s
BJI LR LR
comp=Z,150nm,5.8s
BJI LR LR
comp=Z,170nm,8.6s
BJI LR LR
comp=Z,210nm,26.5s
BVAR Borovoye Array 20.26 323 P **P 02 05 29.0 +1.2**
comp=Z,3.2nm,0.5s,baz=125,slow=11,SNR=27
BVAR Borovoye Array 20.26 323 P **P 02 05 29.0 +1.2**
BRVK Borovoye 20.33 323 P **P 02 05 29.3 +0.7**
BRVK Borovoye 20.33 323 *i* P **P 02 05 29.1 +0.6**
BRVK pmax pmax
comp=Z,10.0nm,0.9s
CMAR Chiang Mai Arr 21.14 158 P **P 02 05 33.8 -3.7**
comp=Z,3.1nm,0.3s,baz=335,slow=8.9,SNR=4.2
TIA Tai'an 21.14 88 P **P 02 05 39.3 +1.8**
TIA pmax pmax
comp=Z,12nm,0.8s
NJ2 Nanjing 23.83 97 eP **P 02 06 05.3 -0.4**
NJ2 pmax pmax
comp=Z,11nm,0.9s
ABKAR Akbulak array 24.51 306 P **P 02 06 12.1 +0.2**
ABKAR IAmb IAmb 02 06 24.4
comp=Z,8.8nm,0.9s
BOD Bodaibo 24.69 31 eP **P 02 06 14.1 +0.7**
BOD pmax pmax
comp=Z,14nm,1.0s
GEYT Alibeck 25.52 279 P **P 02 06 21.4 +0.2**
comp=Z,1.1nm,0.4s,baz=72,slow=6.4,SNR=5.8
AKTO Aktyubinsk 26.02 308 P **P 02 06 25.7 +0.2**
comp=Z,3.7nm,0.8s,baz=104,slow=8.0,SNR=11
SVE Sverdlovsk 27.04 323 eP **P 02 06 35.7 +1.1**
ARU Arti 27.86 321 P **P 02 06 42.6 +0.6**
comp=Z,1.0nm,0.4s,baz=175,slow=4.6,SNR=6.6
ARU Arti 27.86 321 *d i*P **P 02 06 40.6 -1.4**
ARU S **S 02 11 22.9 -2.2**
ARU pmax pmax
comp=Z,7.0nm,1.0s
KSRS Korea Array 29.29 80 P P 02 06 52.0 -2.8
comp=Z,2.2nm,0.6s,baz=278,slow=8.7,SNR=4.1
NRIK Noril'sk 31.05 358 P **P 02 07 09.9 -0.2**
comp=Z,5.4nm,0.6s,baz=142,slow=4.4,SNR=4.0
KLR Kul'dur 31.21 56 *i* P **P 02 07 14.5 +2.8**
KLR pmax pmax
comp=Z,2.0nm,0.8s
KIRV Kirov 33.25 321 P **P 02 07 30.5 +1.1**
comp=Z,16nm,0.7s,baz=20,slow=1.6,SNR=6.8
KBZ Khabaz 36.01 294 P **P 02 07 53.7 +0.2**
comp=Z,2.0nm,0.9s,baz=284,slow=4.2,SNR=2.6
KBZ Khabaz 36.01 294 *i* P **P 02 07 53.2 -0.3**
KBZ pmax pmax
comp=Z,3.0nm,1.0s
VSR Storozhevoye 37.95 307 *i* P **P 02 08 09.1 -0.9**
VSR pmax pmax
comp=Z,7.0nm,1.1s
KLMR Klimovskoe 38.68 322 eP **P 02 08 15.6 -0.4**
KLMR pmax pmax
comp=Z,26nm,1.4s
KLMR Klimovskoe 38.68 322 eP **P 02 08 15.7 -0.3**
KLMR AMP 02 08 17.4
comp=Z,26nm,1.4s
ASAJ Asahikawa 38.93 64 LR LR 02 26 34.1
comp=Z,60nm,21.5s,baz=149,slow=40
OBN Obninsk 39.56 313 *i* P **P 02 08 22.0 -1.3**
OBN e 02 09 56.1
OBN eS S 02 14 19.9 -5.8
OBN pmax pmax
comp=Z,4.0nm,0.8s
OBN MLR MLR
comp=Z,132nm,17.0s
MA2 Magadan 42.97 40 *i* P **P 02 08 54.1 +2.7**
MA2 pmax pmax
comp=Z,3.0nm,0.8s
BR131 Keskin Array S 43.65 290 *i* P **P 02 08 56.3 -1.0**
BRTR Keskin Array B 43.65 290 P **P 02 08 57.8 +0.5**
comp=Z,3.3nm,0.7s,baz=97,slow=8.1,SNR=24
ASF Jabal al Asfar 43.81 279 P **P 02 08 58.7 +0.1**
comp=Z,1.8nm,0.8s,baz=45,slow=2.9,SNR=2.9
SEY Seymchan 43.93 36 *i* P **P 02 08 59.2 +0.2**
AKASG Malin Array Be 44.25 307 P **P 02 09 01.6 -0.2**
comp=Z,0.5nm,0.5s,baz=64,slow=8.2,SNR=6.1
JCJ Chichijima 44.27 89 LR LR 02 27 54.6
comp=Z,108nm,21.0s,baz=352,slow=37
FINES FINESS Array B 45.22 322 P **P 02 09 09.4 +0.1**
comp=Z,2.5nm,0.6s,baz=89,slow=8.3,SNR=15
FINES FINESS Array B 45.22 322 *i* P **P 02 09 09.0 -0.3**
FINES pmax pmax
comp=Z,3.0nm,0.6s
KEV Kevo 45.48 334 P **P 02 09 11.7 +0.4**
KEV IAmb IAmb 02 09 20.6
comp=Z,11nm,1.0s
KEV Kevo 45.48 334 P **P 02 09 11.7 +0.4**
KEV pmax pmax
comp=Z,11nm,1.0s
ARCES ARCESS Array B 45.97 334 P **P 02 09 15.6 +0.4**
comp=Z,1.1nm,0.3s,baz=93,slow=8.1,SNR=20
ARE0 ARCESS Array S 45.97 334 P P 02 09 12.1 -3.2
ELL Elmali 47.40 288 P **P 02 09 26.2 -0.9**
ELL Elmali 47.40 288 P **P 02 09 26.2 -0.9**
ELL pmax pmax
comp=Z,24nm,0.9s
MLR Muntele Rosu 47.49 300 LR LR 02 32 56.5
comp=Z,361nm,21.6s,baz=118,slow=40
BILL Bilibino 49.72 29⇑eP **P 02 09 44.2 -0.1**
BILL e 02 11 02.0
BILL pmax pmax
comp=Z,2.0nm,1.3s
NB201 NORSAR Array S 52.35 323 P **P 02 10 04.2 0.0**
NB2 NORSAR Subarra 52.39 323 P **P 02 10 03.8 -0.7**
comp=Z,1.3nm,0.5s,baz=76,slow=7.4
NOA NORSAR Array B 52.39 323 P **P 02 10 04.1 -0.4**
comp=Z,1.9nm,0.5s,baz=78,slow=7.7,SNR=15
NC204 NORSAR Array S 52.55 323 P **P 02 10 05.8 +0.1**
NAO01 NORSAR Array S 52.59 323 P **P 02 10 05.1 -0.8**
NBO00 NORSAR Array S 52.60 323 P **P 02 10 06.5 +0.5**
NBO00 IAmb IAmb 02 10 25.0
comp=Z,5.7nm,0.8s
CONA Conrad Observa 53.40 306 epP **P 02 10 12.8 +0.6**
comp=Z,7.1nm,2.0s
KONO Kongsberg 53.50 321 P **P 02 10 12.0 -0.7**
KONO IAmb IAmb 02 10 12.2
comp=Z,8.4nm,0.8s
KONO Kongsberg 53.50 321 P **P 02 10 12.0 -0.7**
KONO pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm 54.06 311 eP **P 02 10 18.0 +1.1**
CLL Collm 54.06 311 eP **P 02 10 18.0 +1.1**
SOKA Soboth 54.35 305 epP **P 02 10 18.8 -0.4**
comp=Z,4.3nm,1.4s
GERES GERESS Array B 54.45 308 P **P 02 10 20.4 +0.6**
comp=Z,0.8nm,0.8s,baz=60,slow=5.3,SNR=5.9
SQTA Sankt Quirin 56.59 307 eP **P 02 10 34.3 -1.0**
comp=Z,7.3nm,1.4s
MOTA Moosalm 56.61 307 *i* P **P 02 10 34.1 -1.4**
comp=Z,8.2nm,1.1s
FUORN Ofenpass-Fuorn 57.42 306 P **P 02 10 41.2 -0.2**
BNI Bardonecchia 60.35 306 P **P 02 11 00.3 -1.4**
BNI IAmb IAmb 02 11 17.5
comp=Z,6.1nm,1.1s
BNI Bardonecchia 60.35 306 P **P 02 11 00.3 -1.4**
BNI pmax pmax
comp=Z,6.0nm,1.1s
TOLK Toolik Lake Re 64.37 21 P **P 02 11 26.6 -1.4**
KNRA Kununurra 64.56 139 P P 02 11 27.3 -2.6
MLY Manley 66.40 24 P **P 02 11 40.3 -0.9**
MLY IAmb IAmb 02 11 48.6
comp=Z,4.8nm,1.1s
PPLA Purkeypile 67.33 26 P **P 02 11 47.2 -0.1**
CCB Clear Creek Bu 67.59 23 P **P 02 11 47.9 -0.8**
CCB IAmb IAmb 02 11 48.6
comp=Z,4.0nm,1.1s
TRF Thorofare Moun 67.60 25 P **P 02 11 48.3 -0.8**
TRF IAmb IAmb 02 11 59.8
comp=Z,2.5nm,1.0s
WRH Wood River Hil 67.62 24 P **P 02 11 47.9 -1.1**
PRP Porcupine Dome 67.67 22 P **P 02 11 49.1 -0.4**
PRP IAmb IAmb 02 11 54.5
comp=Z,2.8nm,0.9s
IL31 67.79 23 IAmb IAmb 02 11 54.7
comp=Z,3.2nm,0.8s
ILAR Eielson Array 67.79 23 P **P 02 11 48.5 -1.5**
comp=Z,2.4nm,0.9s,baz=300,slow=4.9,SNR=22
RND Reindeer 68.11 25 P **P 02 11 50.9 -1.2**
RND IAmb IAmb 02 12 02.2
comp=Z,2.9nm,1.0s
RND Reindeer 68.11 25 P **P 02 11 50.9 -1.2**
RND pmax pmax
comp=Z,3.0nm,1.0s
SKT Skwentna 68.16 27 P **P 02 11 51.3 -1.2**
SKT IAmb IAmb 02 11 52.5
comp=Z,5.2nm,0.9s
INK Inuvik 68.62 16 P **P 02 11 54.7 -0.4**
INK IAmb IAmb 02 11 59.7
comp=Z,2.5nm,0.9s
INK Inuvik 68.62 16 P **P 02 11 54.7 -0.4**
INK pmax pmax
comp=Z,3.0nm,0.9s
DHY Denali Highway 68.82 24 P **P 02 11 55.2 -1.5**
DHY IAmb IAmb 02 12 04.2
comp=Z,5.3nm,1.0s
SML Sawmill 69.39 26 P **P 02 11 59.5 -0.7**
C36M Paulatuk 69.57 12 P **P 02 11 59.4 -1.6**
C36M IAmb IAmb 02 12 05.0
comp=Z,4.3nm,0.9s
ESDC Sonseca Array 69.86 305 P **P 02 12 03.1 -0.3**
comp=Z,0.3nm,0.5s,baz=52,slow=5.8,SNR=4.5
ESDC LR LR 02 45 03.5
comp=Z,76nm,19.3s,baz=295,slow=38
OHAK Old Harbor 70.66 31 P **P 02 12 07.3 -0.6**
WRA Warramunga Arr 71.04 137 P P 02 12 07.4 -3.3
comp=Z,2.0nm,0.8s,baz=327,slow=6.1,SNR=2.3
MCARA McCarthy VSAT 71.46 24 P **P 02 12 12.1 -0.6**
ASAR Alice Springs 73.86 139 P P 02 12 24.6 -2.9
comp=Z,1.8nm,0.7s,baz=327,slow=6.0,SNR=16
YKA Yellowknife Ar 77.42 12 P **P 02 12 45.8 -1.5**
comp=Z,0.9nm,0.8s,baz=332,slow=5.4,SNR=10
TORD Torodi Ar. Bea 81.16 280 P **P 02 13 07.1 -1.4**
comp=Z,1.5nm,0.6s,baz=45,slow=3.2,SNR=18
FCC Fort Churchill 83.12 2 P **P 02 13 17.3 -0.8**
FCC Fort Churchill 83.12 2 P **P 02 13 17.3 -0.8**
FCC pmax pmax
comp=Z,1.0nm,0.7s
CPUP Villa Florida 150.55 285 PKPbc **PKPdf 02 20 41.7 +2.5**
comp=Z,3.6nm,0.8s,baz=56,slow=3.5,SNR=9.4

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*IDC **25** 02:01:22.5±0.5, 4°.39N×62°.69E, h0km, mb4.2/34, mb1 4.3/35, mb1mx4.2/49, mbtmp4.2/35, ML3.2/1, MS4.8/10, Ms1 4.8/10, ms1mx4.6/16, Error ellipse: s-maj=13.0km s-min=11.7km az=141.0*
*MOS **25** 02:01:22.4±1.1, 4°.36N×62°.60E, h10km, mb5.2/54, MS4.7/8, Error ellipse: s-maj=8.1km s-min=5.4km az=101.3*
*NEIC **25** 02:01:24.5±1.7, 4°.36N±0°.10×62°.56E±0°.08, h10km±1km, mb5.1/90, Mwc5.4(GCMT), Error ellipse: s-maj=16.8km s-min=13.0km az=200.0*
*GCMT **25** 02:01:25.5±0.1, 4°.32N±0°.01×62°.53E±0°.01, h12km, MW5.4/154, Moment Tensor Solution. s89,c129; s154,c286; Duration: 1s.2 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.18±.01; $M_{\theta\theta}$0.65±.01; $M_{\phi\phi}$0.53±.01; $M_{r\theta}$0.70±.04; $M_{r\phi}$-0.60±.01; $M_{\theta\phi}$-0.01±.04; Best double couple: $M_0$1.36900×10^{17} NP1:ϕ_s148.00000°, δ35.00000°, λ-61.00000°. NP2:ϕ_s294.00000°, δ60.00000°, λ-109.00000°. Principal axes: T 1.3060, Plg13.0000°, Azm38.0000°; N 0.1270, Plg16.0000°, Azm304.0000°; P -1.4330, Plg69.0000°, Azm164.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **25** 02:01:25.0±0.0, 4°.40N×62°.70E, h5km, mB5.3/44, mb4.8/49, Ms5.2/48, Ms7 5.0/45*
*NEIC **25** 02:01:26, 4°.28N×62°.50E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.29; $M_{\theta\theta}$0.69; $M_{\phi\phi}$0.59; $M_{r\theta}$0.36; $M_{r\phi}$-0.65; $M_{\theta\phi}$0.09; Fault plane solution: $M_0$1.35000×10^{17} NP1:ϕ_s300.00000°, δ51.00000°, λ-106.00000°. NP2:ϕ_s145.00000°, δ42.00000°, λ-71.00000°. Principal axes: T 1.3147, Plg5.0000°, Azm42.0000°; N 0.0601, Plg13.0000°, Azm311.0000°; P -1.3747, Plg77.0000°, Azm152.0000°;*
ISC 25 02:01:26.1±0.7, **4°.31N**±0°.05×**62°.52E**±0°.04, **h19**km±2km, **n310**, σ2s.13/330, **mb4.9**/135, **MS4.9**/34, **23C-11D, Carlsberg Ridge**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KAAM Kaadhehdhoo 11.13 110 Pn **Pn 02 04 02.4 -1.9**
MSEY Mahe Island 11.37 218 P Pn 02 04 00.1 -7.5
MSEY P Pn 02 04 00.1 -7.5
SOCY Socotra 11.51 313 Pn 02 04 12.0 +2.5
SOCY Socotra 11.51 313 P Pn 02 04 15.7 +6.1
H08N2 Diego Garcia H 13.54 141 T T 02 18 31.7
baz=321,slow=76,SNR=612
H08N3 Diego Garcia H 13.55 141 T T 02 18 23.3
baz=321,slow=76,SNR=761
H08N1 Diego Carcia H 13.56 141 T T 02 18 33.5
baz=321,slow=76,SNR=630
TRD Trivandrum 14.94 73 eP **Pn 02 04 58.5 +2.1**
SHAO Shalim 15.20 334 P **P 02 05 08.1 +3.3**
DMTO DMTO 15.24 331 P **P 02 05 07.8 +2.6**
DMTO S **S 02 08 03.1 -2.3**
DGAR Diego Garcia 15.29 140 P 02 05 03.9 -1.9
DGAR Diego Garcia 15.29 140 P **Pn 02 05 00.8 -0.3**
DGAR Diego Garcia 15.29 140 P **P 02 05 03.9 -1.9**
DGAR pmax pmax
comp=Z,786nm,2.0s
RBK Rabkut 15.43 329 P **P 02 05 09.4 +2.0**
SNR=8.3
RBK P **P 02 05 09.4 +2.0**
SNR=8.3
ABTO Aybut 15.80 326 P **P 02 05 11.7 +0.2**
SNR=14
WHFO Wadi Hawf 16.01 328 P **P 02 05 14.2 +0.5**
WHFO S **S 02 08 22.1 +1.1**
MHTO MHTO 17.15 345 P **P 02 05 26.5 +0.1**
SNR=9.5
MHTO P **P 02 05 26.5 +0.1**
SNR=9.5
MHTO S **S 02 08 49.8 +5.4**
MHTO S **S 02 08 49.8 +5.4**
PALK Pallekele 18.32 80 LR LR 02 11 02.2
comp=Z,6µm,20.8s,baz=265,slow=32
WBK Wadi Bani Khal 18.51 350 P **Pn 02 05 42.8 +1.2**
WSAR Wadi Sarin 19.19 349 P **P 02 05 48.3 -0.5**
comp=Z,0.1nm,0.3s,baz=176,slow=15,SNR=2.1
WSAR LR LR 02 12 20.6
comp=Z,2µm,18.2s,baz=186,slow=34
WSAR Wadi Sarin 19.19 349 P **Pn 02 05 51.2 +1.5**
MDRS Chennai 19.55 62⇑*i*P **P 02 05 51.9 -0.9**
ARQ Araqi 19.78 344 P **Pn 02 05 57.9 +1.1**
SNR=18
ARQ P **Pn 02 05 57.9 +1.1**
SNR=18
HYB Hyderabad 20.41 49 *i* P **P 02 06 00.0 -2.2**
HYB eS Sn 02 10 00.0 +6.0
SOHO SOHO 20.53 344 P Pn 02 06 05.9 +0.2
SNR=8.4
SOHO P Pn 02 06 05.9 +0.2
SNR=8.4
SOHO P Pn 02 06 05.9 +0.2
SNR=8.4
SOHO S Sn 02 10 02.6 +5.8
SOHO S Sn 02 10 02.6 +5.8
SOHO S Sn 02 10 02.6 +5.8
DAMY Dhamar 20.56 301 P **P 02 06 02.4 -1.9**
ATD Arta Tunnel 20.75 291 P **P 02 06 06.7 +0.7**
comp=Z,10nm,0.6s,baz=137,slow=19,SNR=3.4
ATD LR LR 02 12 39.7
comp=Z,1µm,20.7s,baz=97,slow=32
ATD Arta Tunnel 20.75 291 P **P 02 06 06.0 +0.1**
ATD IAmb IAmb 02 06 21.5
comp=Z,101nm,1.2s
ASHO Ashiyiah 21.19 344 P **P 02 06 12.1 +1.5**
SNR=15
ASHO P **P 02 06 12.1 +1.5**
SNR=15
HATD Hatta, Dubai 21.30 344 P P 02 06 19.1 +7.3
SNR=15
HATD P P 02 06 19.1 +7.3
SNR=15
UOSS Minazif 21.39 344 P **P 02 06 12.1 -0.7**
UOSS IAmb IAmb 02 06 24.5
comp=Z,64nm,1.1s
AJN Ajban 21.40 341 P **P 02 06 17.4 +4.6**
SNR=9.0
AJN P **P 02 06 17.4 +4.6**
SNR=9.0
NAZ Nazwa, Dubai 21.59 343 P **P 02 06 21.0 +6.1**
SNR=12
NAZ P **P 02 06 21.0 +6.1**
SNR=12
NGP Nagpur 23.19 42 *ex* **P 02 06 35.1 +3.2**
NGP IAmb IAmb 02 06 41.2
comp=Z,11nm,0.5s
RAYN Ar Rayn 25.19 321 P **P 02 06 50.1 -0.6**
RAYN IAmb IAmb 02 07 05.1
comp=Z,46nm,1.4s
RAYN Ar Rayn 25.19 321 P **P 02 06 50.1 -0.6**
RAYN pmax pmax
comp=Z,46nm,1.5s
KIBK Kibwezi 25.33 255 P **P 02 06 53.1 +0.9**
SNR=13
KMBO Kilima Mbogo 25.82 258 P **P 02 06 59.4 +2.6**
comp=Z,7.5nm,0.9s,baz=53,slow=12,SNR=9.7
KMBO LR LR 02 16 07.2
comp=Z,3µm,20.7s,baz=80,slow=34
KMBO Kilima Mbogo 25.82 258 P **P 02 06 56.3 -0.4**
KMBO Kilima Mbogo 25.82 258 P **P 02 06 56.3 -0.4**
KMBO pmax pmax
comp=Z,178nm,2.0s
LODK Lodwar 27.11 269 P **P 02 07 12.1 +3.9**
SNR=7.6
OPO Ambohidratompo 27.30 213 P **P 02 07 11.3 +1.4**
comp=Z,5.3nm,0.9s,baz=14,slow=10,SNR=2.3
OPO LR LR 02 15 26.2
comp=Z,2µm,21.0s,baz=182,slow=31
ABPO Ambohimpanom 27.64 213 P **P 02 07 12.3 -0.7**
ABPO IAmb IAmb 02 07 27.5
comp=Z,103nm,1.9s

ABPO Ambohimpanom 27.64 213 P P 02 07 12.3 -0.7
ABPO pmax pmax
comp=Z,103nm,1.9s
HRA Herat 29.92 360 P P 02 07 32.1 -1.1
KBL Kabul 30.68 11 P P 02 07 39.4 -0.5
KBL IAmb IAmb 02 07 50.6
comp=Z,70nm,1.9s
KBL Kabul 30.68 11 P P 02 07 39.4 -0.5
KBL pmax pmax
comp=Z,70nm,1.9s
NIL Nilore 30.85 18 P P 02 07 38.8 -2.4
NIL IAmb IAmb 02 07 51.7
comp=Z,71nm,1.6s
NIL Nilore 30.85 18 P P 02 07 38.8 -2.4
NIL pmax pmax
comp=Z,71nm,1.6s
DANN Dangsing 31.29 38 eP P 02 07 45.9 +0.4
comp=Z,34nm,0.9s
GKN Gorkha 31.59 39 eP P 02 07 48.6 +0.6
DMN Daman 31.62 41 eP P 02 07 49.9 +1.6
PKI Pulchoki 31.80 41 eP P 02 07 51.0 +1.1
KKN Kakani 31.86 40 eP P 02 07 50.2 -0.2
MBAR Mbarara 32.13 262 P P 02 07 54.6 +1.8
comp=Z,1.9nm,0.2s,baz=63,slow=9.4,SNR=4.4
MBAR LR LR 02 19 55.7
comp=Z,2µm,20.5s,baz=87,slow=34
MBAR Mbarara 32.13 262 P P 02 07 52.5 -0.3
MBAR IAmb IAmb 02 08 08.6
comp=Z,24nm,1.4s
MBAR Mbarara 32.13 262 P P 02 07 52.6 -0.3
MBAR pmax pmax
comp=Z,24nm,1.4s
RAMN Ramite 32.18 43 eP P 02 07 54.5 +1.3
comp=Z,41nm,1.0s
GUN Gumba 32.33 41 eP P 02 07 51.9 -2.8
comp=Z,62nm,1.2s
JIRN Jiri 32.37 42 eP P 02 07 53.3 -1.7
comp=Z,44nm,1.2s
ODAN Odare 32.67 44 eP P 02 07 55.3 -2.2
comp=Z,51nm,1.3s
TAPN Taplejung 33.20 44 eP P 02 07 57.3 -4.9
BRDH Bariadhala 33.57 54 LR LR 02 22 50.1
comp=Z,5µm,19.0s,baz=258,slow=39
GEYT Alibeck 33.70 354 P P 02 08 05.0 -1.1
comp=Z,1.6nm,0.8s,baz=161,slow=5.8,SNR=2.5
GYA0B ALIBECK ARRAY 33.70 354 P P 02 08 05.5 -0.6
GYA0B IAmb IAmb 02 08 15.1
comp=Z,27nm,1.6s
LHMI Lhok Sumawe 34.32 87 P P 02 08 09.4 -2.4
KCSI Kotacane, Aceh 35.18 90 P P 02 08 20.1 +0.9
comp=Z,648nmcomp=Z,27nm,1.3s
SHL Shillong 35.21 50 P P 02 08 16.2 -3.4
SHL IAmb IAmb 02 08 27.2
comp=Z,31nm,1.2s
SHL Shillong 35.21 50 P P 02 08 22.0 +2.4
SNR=10.0
SHL Shillong 35.21 50 P P 02 08 16.2 -3.4
SHL pmax pmax
comp=Z,31nm,1.2s
PSI Prapat 36.36 91 P P 02 08 28.0 -1.5
comp=Z,1.6nm,0.3s,baz=269,slow=11,SNR=2.9
RPSI Rantau Prapat 36.37 91 P P 02 08 30.0 +0.6
RPSI IAmb IAmb 02 08 44.1
comp=Z,26nm,1.5s
RPSI Rantau Prapat 36.37 91 P P 02 08 28.0 -1.4
ASF Jabal al Asfar 36.67 322 P P 02 08 32.8 +1.0
comp=Z,0.7nm,0.4s,baz=80,slow=6.1,SNR=2.0
LSA Lhasa 37.02 44 P P 02 08 32.6 -2.8
LSA IAmb IAmb 02 08 44.4
comp=Z,32nm,1.2s
LSA Lhasa 37.02 44 P P 02 08 32.6 -2.8
LSA pmax pmax
comp=Z,32nm,1.2s
KSH Kashi 37.10 17 P P 02 08 33.8 -1.7
KSH PP PP 02 09 58.0 -2.2
KSH PcP PcP 02 10 55.4 -0.4
KSH S S 02 14 16.3 -4.6
KSH SS SnSn 02 16 44.4 -11
KSH ScS ScS 02 18 45.4 -4.2
KSH pmax pmax
comp=Z,49nm,1.6s
KSH pmax pmax
comp=Z,310nm,3.9s
KSH LR LR
comp=Z,2µm,17.6s
KSH LR LR
comp=Z,500nm,8.9s
KSH LR LR
comp=Z,2µm,18.4s
TAS Tashkent 37.35 8 P P 02 08 37.2 -0.2
TAS Tashkent 37.35 8 P P 02 08 37.2 -0.2
TAS pmax pmax
comp=Z,40nm,0.4s
KULM Kulim 38.01 87 P P 02 08 43.5 +0.2
CM31 Chiang Mai Arr 38.27 66 P P 02 08 44.1 -1.4
CM31 IAmb IAmb 02 08 54.1
comp=Z,26nm,1.1s
CM31 Chiang Mai Arr 38.27 66 P P 02 08 47.8 +2.3
SNR=6.6
CMAR Chiang Mai Arr 38.27 66 P P 02 08 41.9 -3.5
comp=Z,1.6nm,0.3s,baz=265,slow=11,SNR=4.4
CMAR PcP PcP 02 10 59.5 -0.1
comp=Z,0.7nm,0.3s,baz=258,slow=4.5,SNR=3.5
CMAR LR LR 02 24 11.2
comp=Z,746nm,18.3s,baz=268,slow=36
CMAR Chiang Mai Arr 38.27 66 i P P 02 08 44.5 -1.0
CMAR pmax pmax
comp=Z,2.0nm,0.3s
CHTO Chiang Mai 38.37 65 P P 02 08 44.3 -2.1
CHTO Chiang Mai 38.37 65 P P 02 08 44.3 -2.1
CHTO pmax pmax
comp=Z,24nm,1.2s
BKNI Bangkinang 38.68 95 P P 02 08 49.2 +0.2
BKNI IAmb IAmb 02 08 58.5
comp=Z,46nm,0.6s
GNI Garni 39.12 338 P P 02 08 52.9 +0.4
comp=Z,1.8nm,0.7s,baz=172,slow=7.1,SNR=4.6
GNI Garni 39.12 338 P P 02 08 52.3 -0.2
GNI IAmb IAmb 02 09 07.3
comp=Z,148nm,1.8s
GNI Garni 39.12 338 P P 02 08 52.3 -0.2
GNI pmax pmax
comp=Z,148nm,1.8s
LSZ Lusaka 39.18 239 P P 02 08 53.5 +0.2
comp=Z,1.9nm,0.5s,baz=47,slow=7.0,SNR=5.6
LSZ Lusaka 39.18 239 P P 02 08 53.5 +0.2
LSZ IAmb IAmb 02 09 07.4
comp=Z,43nm,1.5s
LSZ Lusaka 39.18 239 P P 02 08 53.5 +0.2
LSZ pmax pmax
comp=Z,43nm,1.5s
KK31 Karatay Array 39.27 9 P P 02 08 50.9 -2.7
KK31 Karatay Array 39.27 9 P P 02 08 50.9 -2.7
KK31 pmax pmax
comp=Z,30nm,1.6s
KKAR Karatay Array 39.27 9 P P 02 08 54.3 +0.7
KKAR Karatay Array 39.27 9 P P 02 08 54.3 +0.7
KKAR pmax pmax
comp=Z,30nm,1.6s
AAK Ala-Archa 39.62 14 P P 02 08 54.6 -2.0
comp=Z,3.9nm,0.9s,baz=227,slow=18,SNR=2.0
AAK Ala-Archa 39.62 14 P P 02 08 56.9 +0.2
AAK Ala-Archa 39.62 14 i P P 02 08 56.7 0.0
AAK pmax pmax
comp=Z,47nm,1.9s
PBKT Sadao Pong 39.64 69 P P 02 08 57.0 +0.1
TBLG Delisi 40.51 339 P P 02 09 02.5 -1.4
TBLG Delisi 40.51 339 P P 02 09 02.5 -1.4
TBLG pmax pmax
comp=Z,40nm,1.9s
MAK Makhachkala 40.73 343 eP P 02 08 59.9 -5.7
MAK e 02 10 43.5
MAK ePPP PPP 02 11 00.6
MAK eS S 02 15 07.3 -7.8
MAK eSS SS 02 18 11.9 -4.3
MAK pmax pmax
comp=Z,508nm,1.2s
MAK MLR MLR
comp=Z,167nm,10.0s
MYKOM Kota Tinggi 41.34 92 P P 02 09 10.1 -1.0
MYKOM IAmb IAmb 02 09 13.8
comp=Z,116nm,2.0s
GROC Groznyy 41.47 341 eP P 02 09 12.7 +1.0
GROC e 02 10 50.8
GROC e 02 11 09.5
GROC eS S 02 15 25.5 -0.7
GROC pmax pmax
comp=Z,41nm,1.1s
KBZ Khabaz 42.91 339 P P 02 09 21.5 -2.0
comp=Z,2.9nm,1.0s,baz=142,slow=12,SNR=3.2
KVAR Kislovodsk Arr 43.18 339 LR LR 02 27 00.7
comp=Z,430nm,18.3s,baz=96,slow=36
KIV Kislovodsk 43.19 339 P P 02 09 26.6 +0.8
KIV IAmb IAmb 02 09 35.3
comp=Z,59nm,1.8s
KIV Kislovodsk 43.19 339 eP P 02 09 26.0 +0.2
KIV 02 16 00.1
KIV pmax pmax
comp=Z,30nm,1.1s
KIV MLR MLR
comp=Z,535nm,16.0s
SLVN Son La 43.57 63 P P 02 09 27.7 -1.5
KMI Kunming 43.80 58 P P 02 09 32.8 +1.6
KMI pP pP 02 09 36.1 -0.5
KMI sP sP 02 09 38.1 -0.4
KMI PP PcP 02 11 17.4 -0.4
KMI S S 02 16 05.0 +3.6
KMI sS sS 02 16 10.9 +1.2
KMI SS SS 02 19 13.3 -4.4
KMI pmax pmax
comp=Z,11nm,1.5s
KMI pmax pmax
comp=Z,260nm,5.0s
KMI LR LR
comp=Z,520nm,21.8s
KMI LR LR
comp=Z,1µm,20.0s
KMI LR LR
comp=Z,1µm,16.8s
BRTR Keskin Array B 43.87 327 P P 02 09 31.2 -0.3
comp=Z,2.6nm,0.9s,baz=151,slow=8.4,SNR=6.9
SOC Sochi 44.00 336 eP P 02 09 32.7 +0.4
SOC e 02 11 15.2
SOC eS S 02 16 03.6 +0.2
SOC eSS SS 02 19 11.7 -9.0
SOC pmax pmax
comp=Z,10.0nm,0.7s
SOC MLR MLR
comp=Z,426nm,17.0s
BR231 Keskin MP Arra 44.41 327 P P 02 09 36.6 +0.8
BR231 IAmb IAmb 02 09 49.7
comp=Z,72nm,1.9s
ANTO Ankara 44.42 327 P P 02 09 34.7 -1.1
ANTO IAmb IAmb 02 09 44.4
comp=Z,21nm,1.1s
ANTO Ankara 44.42 327 P P 02 09 34.7 -1.1
ANTO pmax pmax
comp=Z,21nm,1.2s
ILGA Ilgaz 44.78 329 P P 02 09 40.1 +1.2
ILGA IAmb IAmb 02 09 47.2
comp=Z,24nm,1.3s
ABKAR Akbulak array 44.83 358 IAmb IAmb 02 09 48.0
comp=Z,48nm,1.6s
WMQ Urumqi 45.19 26 eP P 02 09 44.3 +2.4
WMQ pP pP 02 09 46.4 -0.6
WMQ sP sP 02 09 49.1 0.0
WMQ PP PP 02 11 28.8 +1.1
WMQ S S 02 16 27.6 +6.8
WMQ pmax pmax
comp=Z,20nm,1.7s
WMQ pmax pmax
comp=Z,190nm,5.1s
WMQ LR LR
comp=Z,790nm,21.1s
WMQ LR LR
comp=Z,1µm,21.7s
WMQ LR LR
comp=Z,2µm,26.3s
MAKZ Makanchi 45.56 19 P P 02 09 44.3 -0.4
MAKZ IAmb IAmb 02 09 52.6
comp=Z,36nm,1.6s
MAKZ Makanchi 45.56 19 P P 02 09 44.3 -0.4
MAKZ pmax pmax
comp=Z,36nm,1.6s
MK31 Makanchi Array 45.65 19 P P 02 09 45.6 +0.1
MK31 Makanchi Array 45.65 19 P P 02 09 45.6 +0.1
MK31 pmax pmax
comp=Z,10.0nm,1.4s
MKAR Makanchi Array 45.65 19 P P 02 09 44.4 -1.0
comp=Z,3.3nm,1.0s,baz=215,slow=9.7,SNR=2.9
MKAR PcP PcP 02 11 22.5 -1.0
comp=Z,1.2nm,0.8s,baz=216,slow=4.6,SNR=3.2
MDUB Mudurnu 45.72 326 P P 02 09 43.9 -2.3
AKTO Aktyubinsk 46.12 356 P P 02 09 48.6 -0.4
comp=Z,13nm,1.2s,baz=162,slow=10,SNR=9.0
LBTB Lobatse 46.22 229 P P 02 09 50.4 0.0
comp=Z,5.4nm,1.0s,baz=47,slow=11,SNR=4.0
LBTB Lobatse 46.22 229 P P 02 09 51.1 +0.7
LBTB Lobatse 46.22 229 P P 02 09 51.1 +0.7
LBTB pmax pmax
comp=Z,127nm,1.7s
LEM Lembang 46.35 104 LR LR 02 26 19.5
comp=Z,909nm,19.9s,baz=252,slow=32
CISI Cisompet, Garu 46.71 105 P P 02 09 54.0 -0.3
CD2 Chengdu 46.94 51 P P 02 09 54.3 -1.6
CD2 S S 02 16 43.3 -3.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,660nm,5.9s
CD2 LR LR
comp=Z,2µm,17.1s
CD2 LR LR
comp=Z,4µm,18.0s
CD2 LR LR
comp=Z,4µm,17.7s
SIM Simferopol' 47.51 333 eP P 02 09 59.0 -1.0
SIM e 02 11 46.0
SIM eS S 02 16 50.4 -3.5
SIM pmax pmax
comp=Z,15nm,1.1s
SIM pmax pmax
comp=Z,150nm,9.2s
GYA Guiyang 47.58 58⇓i P P 02 10 03.0 +2.0
GYA PP PP 02 11 56.6 +3.9
GYA S S 02 16 58.9 +3.2
GYA pmax pmax
comp=Z,20nm,1.2s
GYA pmax pmax
comp=Z,270nm,3.9s
GYA LR LR
comp=Z,710nm,16.9s
GYA LR LR
comp=Z,700nm,18.0s
GYA LR LR
comp=Z,1µm,16.7s
KSM Kuching 47.80 92 P P 02 10 02.4 -0.4
KURBB Kurchatov Arra 48.08 14 P P 02 10 02.8 -1.5
comp=Z,3.7nm,1.0s,baz=218,slow=5.9,SNR=2.7
QIZ Qiongzhong 48.42 68 P P 02 10 07.5 0.0
QIZ PP PP 02 12 00.0 -0.3
QIZ S S 02 17 13.6 +6.0
QIZ LR LR
comp=Z,560nm,17.8s
QIZ LR LR
comp=Z,1µm,16.3s
QIZ LR LR
comp=Z,1µm,18.0s
BOSA Boshof 48.53 225 P P 02 10 09.1 +0.8
comp=Z,2.4nm,0.7s,baz=54,slow=9.4,SNR=6.5
BOSA Boshof 48.53 225 P P 02 10 09.2 +0.9
BOSA Boshof 48.53 225 P P 02 10 09.2 +0.9
BOSA pmax pmax
comp=Z,54nm,1.5s
GTA Gaotai 48.56 39 ⇑P P 02 10 09.8 +1.4
GTA pP sP 02 10 15.3 -0.4
GTA sP pwP 02 10 18.1 +0.3
GTA PcP PcP 02 11 41.6 +7.5
GTA S S 02 17 13.8 +4.5
GTA sS sS 02 17 21.8 +4.2
GTA pmax pmax
comp=Z,5.0nm,1.4s
GTA pmax pmax
comp=Z,210nm,4.9s
GTA LR LR
comp=Z,2µm,17.5s
GTA LR LR
comp=Z,3µm,19.4s
GTA LR LR
comp=Z,4µm,21.3s
BVAR Borovoye Array 48.99 6 P P 02 10 10.5 -0.8
comp=Z,1.8nm,0.9s,baz=212,slow=5.1,SNR=6.5
BVAR PcP PcP 02 11 34.0 -1.1
comp=Z,0.7nm,0.8s,baz=186,slow=5.8,SNR=2.2
BRVK Borovoye 49.01 6 P P 02 10 10.9 -0.5
BRVK IAmb IAmb 02 10 21.0
comp=Z,28nm,1.8s
BRVK Borovoye 49.01 6 P P 02 10 10.9 -0.5
BRVK pmax pmax
comp=Z,28nm,1.8s
LZH Lanzhou 49.43 45 eP P 02 10 14.9 -0.3
LZH pP pP 02 10 18.3 -2.0
LZH PP PP 02 12 09.5 +0.1
LZH sS sS 02 17 27.1 -3.2
LZH pmax pmax
comp=Z,23nm,1.2s
LZH pmax pmax
comp=Z,230nm,5.4s
LZH LR LR
comp=Z,1µm,14.6s
LZH LR LR
comp=Z,700nm,14.2s
LZH LR LR
comp=Z,1µm,17.4s
SBUM Sibu 49.64 90 IAmb IAmb 02 10 25.8
comp=Z,29nm,1.3s
TSUM Tsumeb 50.01 241 P P 02 10 23.0 +3.2
comp=Z,2.1nm,0.8s,baz=86,slow=14,SNR=2.7
TSUM Tsumeb 50.01 241 P P 02 10 19.8 0.0
ELND Elena 50.33 325 ⇓P P 02 10 28.8 +7.1
VORD Divnogorie 50.41 341 eP P 02 10 24.5 +2.4
VORD pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 50.66 341 eP P 02 10 23.7 -0.3
VSR pmax pmax
comp=Z,20nm,1.1s
VTS Vitosha 51.67 323 ⇑P P 02 10 31.9 -0.1
VTS Vitosha 51.67 323 IAmb IAmb 02 10 40.8
comp=Z,64nm,1.8s
VTS Vitosha 51.67 323 ⇑P P 02 10 31.9 -0.1
VRI Vrincioaia 51.78 329 ⇑P P 02 10 32.2 -0.4
VRI Vrincioaia 51.78 329 ⇑P P 02 10 32.2 -0.4
PLOR Plostina 51.81 329 ⇑P P 02 10 31.1 -1.8
PLOR Plostina 51.81 329 ⇑P P 02 10 31.1 -1.8
LPSR Galich'ya Gora 51.93 342 eP P 02 10 35.0 +1.5
LPSR pmax pmax
comp=Z,8.0nm,0.9s
MLR Muntele Rosu 51.95 328 ⇓P P 02 10 32.3 -1.6
MLR Muntele Rosu 51.95 328 P P 02 10 34.2 +0.3
MLR IAmb IAmb 02 10 43.7
comp=Z,35nm,1.4s
MLR Muntele Rosu 51.95 328 P P 02 10 34.3 +0.3
MLR pmax pmax
comp=Z,35nm,1.4s
ARU Arti 52.06 357 P P 02 10 33.7 -0.8
comp=Z,0.8nm,0.3s,baz=191,slow=6.6,SNR=9.1
ARU Arti 52.06 357 P P 02 10 33.0 -1.4
ARU Arti 52.06 357c i P P 02 10 33.8 -0.6
ARU 02 12 27.0
ARU S S 02 17 56.5 -0.7
ARU SS SS 02 21 35.0 +0.5
ARU pmax pmax
comp=Z,38nm,1.8s
ARU MLR MLR
comp=Z,651nm,21.0s
TESR Tescani 52.26 329 ⇑P P 02 10 36.3 +0.2
SVE Sverdlovsk 52.39 359 eP P 02 10 40.4 +3.5
SVE pmax pmax
comp=Z,31nm,1.5s
VOIR 52.39 327 ⇑P P 02 10 37.0 -0.2
VOIR 52.39 327 ⇑P P 02 10 37.0 -0.2
SORM Soroca 52.54 332 ⇑P P 02 10 37.7 -0.4
SORM Soroca 52.54 332 ⇑P P 02 10 37.7 -0.4
DOPR Dopca 52.55 328 ⇓P P 02 10 37.1 -1.2
ARR Arges 52.57 327 ⇓P P 02 10 38.1 -0.4
ZAA0 Zalesovo Array 52.73 16 P P 02 10 39.2 -0.2
ZAA0 IAmb IAmb 02 10 46.2
comp=Z,15nm,0.9s
ZALV Zalesovo Beam 52.73 16 P P 02 10 37.9 -1.5
comp=Z,3.2nm,0.5s,baz=215,slow=9.0,SNR=8.4
ZALV PcP PcP 02 11 47.3 -1.6
comp=Z,2.3nm,1.0s,baz=224,slow=4.0,SNR=1.7
GZR Gura Zlata 53.61 326 ⇑P P 02 10 46.2 0.0
GZR Gura Zlata 53.61 326 ⇑P P 02 10 46.2 0.0
ARCR ARCALIA 53.82 328 ⇑P P 02 10 49.0 +1.3
AKASG Malin Array Be 54.01 334 P P 02 10 47.8 -1.1
comp=Z,0.3nm,0.3s,baz=127,slow=6.0,SNR=10
AKBB Malin Array Si 54.01 334 P P 02 10 49.0 +0.1
AKBB Malin Array Si 54.01 334 P P 02 10 49.0 +0.1
AKBB pmax pmax
comp=Z,11nm,1.1s
BZS Buzias 54.39 326 ⇓P P 02 10 53.2 +1.4
BZS Buzias 54.39 326 ⇓P P 02 10 53.2 +1.4
DRGR 54.51 327 ⇓P P 02 10 54.8 +2.1
DRGR 54.51 327 ⇓P P 02 10 54.8 +2.1
OBN Obninsk 54.81 342⇑eP P 02 10 58.5 +3.9
OBN e 02 12 57.2
OBN i S S 02 18 41.3 +6.8
OBN i SS SS 02 22 21.8 +3.9
OBN pmax pmax
comp=Z,44nm,1.8s
MOS Moscow 55.03 343 eP P 02 10 56.5 +0.3
MOS e 02 12 58.1
MOS pmax pmax
comp=Z,35nm,1.1s
KIRV Kirov 55.08 352 P P 02 10 55.3 -1.2
comp=Z,4.2nm,0.5s,baz=135,slow=2.9,SNR=5.1
WHN Wuhan 55.29 56 ⇑P P 02 11 01.4 +2.8
WHN pP sP 02 11 05.0 -0.9
WHN sP pwP 02 11 10.3 +2.3
WHN S S 02 18 44.0 +2.2
WHN LR LR
comp=Z,2µm,16.5s
WHN LR LR
comp=Z,2µm,19.4s
WHN LR LR
comp=Z,2µm,18.2s
TRPA Tarpa 55.43 328 ⇑P P 02 11 02.3 +3.0
LVV L'vov 55.77 331 eP P 02 11 07.3 +5.6
UZH Uzhgorod 55.88 329 eP P 02 11 03.0 +0.6
UZH i 02 11 09.4
UZH eS S 02 18 46.1 -2.9
UZH i PS PnS 02 19 07.9 +7.7
KOLS Kolonicke sedl 56.08 329 eP P 02 11 04.1 +0.2
KOLS Kolonicke sedl 56.08 329 eP P 02 11 04.1 +0.2
CRVS Cervenica-Dubn 56.48 329 eP P 02 11 14.1 +7.3
CRVS Cervenica-Dubn 56.48 329 eP P 02 11 14.1 +7.3
SONM Songino Array 57.35 34 P P 02 11 12.4 -0.7
comp=Z,5.0nm,1.1s,baz=217,slow=7.5,SNR=3.8
ULN Ulaanbaatar 57.73 34 P P 02 11 16.3 +0.4
ULN Ulaanbaatar 57.73 34 P P 02 11 16.3 +0.4
ULN pmax pmax
comp=Z,8.0nm,1.2s
TAM Tamanrasset 57.99 294 P P 02 11 16.3 -1.9
TAM Tamanrasset 57.99 294 P P 02 11 16.3 -1.9
TAM pmax pmax
comp=Z,10.0nm,1.4s
NRCA Norcia 58.13 319 P P 02 11 19.3 +0.6
NRCA IAmb IAmb 02 11 27.4
comp=Z,18nm,1.3s
OJC Ojcow 58.14 329 P P 02 11 17.3 -1.2
OJC Ojcow 58.14 329 P P 02 11 17.3 -1.2
OJC pmax pmax
comp=Z,8.0nm,1.2s
SZP Santa 58.17 72 P P 02 11 17.1 -2.1
TLY Talaya 58.25 29 P P 02 11 19.5 +0.2
TLY IAmb IAmb 02 11 27.6
comp=Z,20nm,1.3s
TLY Talaya 58.25 29 i P P 02 11 20.1 +0.8
TLY pmax pmax
comp=Z,22nm,1.5s
JAVC Velka Javorina 58.47 327 eP P 02 11 22.1 +1.2
PRGR Permogore 58.58 351 eP P 02 11 23.1 +1.8
PRGR pmax pmax
comp=Z,52nm,1.5s
MURB Monte Urbino 58.71 319 P P 02 11 21.1 -1.7
MURB IAmb IAmb 02 11 35.5
comp=Z,30nm,1.6s
SOKA Soboth 58.79 324 eP P 02 11 22.4 -0.8
comp=Z,4.4nm,1.2s
ARSA Arzberg 58.80 324 eP P 02 11 21.5 -1.7
comp=Z,12nm,1.6s
LATE Laterza 58.90 318 P P 02 11 24.7 +0.6
LATE IAmb IAmb 02 11 40.3

comp=Z,15nm,1.2s
CONA Conrad Observa 58.96 325 eP P 02 11 23.6 -0.7
comp=Z,16nm,1.8s
OBKA Obir 58.99 323 eP P 02 11 25.1 +0.5
comp=Z,12nm,1.5s
KLMR Klimovskoe 59.03 347 eP P 02 11 21.7 -2.8
KLMR pmax pmax
comp=Z,103nm,1.5s
KLMR Klimovskoe 59.03 347 eP P 02 11 21.7 -2.8
KLMR AMP 02 11 31.9
comp=Z,103nm,1.5s
MORC Moravsky Berou 59.06 328 eP P 02 11 25.2 +0.2
MORC Moravsky Berou 59.06 328 P P 02 11 25.9 +0.9
MORC Moravsky Berou 59.06 328 P P 02 11 25.9 +0.9
MORC pmax pmax
comp=Z,5.0nm,1.0s
TIA Tai'an 59.26 50 P P 02 11 26.3 -0.3
TIA S S 02 19 35.3 +1.3
TIA pmax pmax
comp=Z,8.0nm,2.0s
TIA LR LR
comp=Z,1μm,18.9s
TIA LR LR
comp=Z,520nm,17.0s
TIA LR LR
comp=Z,610nm,16.1s
KRUC Moravsky 59.28 327 eP P 02 11 26.6 +0.2
VRAC Vranov 59.30 327 eP P 02 11 27.0 +0.4
NJ2 Nanjing 59.41 55 eP P 02 11 27.8 +0.1
NJ2 pmax pmax
comp=Z,11nm,0.9s
NJ2 LR LR
comp=Z,900nm,20.8s
NJ2 LR LR
comp=Z,840nm,19.9s
NJ2 LR LR
comp=Z,810nm,20.8s
MYKA Terra Mystica 59.60 323 i P P 02 11 29.3 +0.5
comp=Z,8.6nm,1.1s
MOA Molln 59.84 324 eP P 02 11 29.6 -0.8
comp=Z,14nm,1.6s
BJI Beijing 59.89 46 eP P 02 11 32.9 +2.1
BJI S S 02 19 44.0 +2.1
BJI SS SS 02 23 39.1 +0.6
BJI pmax pmax
comp=Z,8.0nm,0.7s
BJI pmax pmax
comp=Z,310nm,4.9s
BJI LR LR
comp=Z,1μm,16.3s
NACB Ninganchiao 60.10 65 P P 02 11 32.5 -0.1
NACB IAmb IAmb 02 11 43.9
comp=Z,21nm,0.9s
ABTA Abfaltersbach 60.33 323 eP P 02 11 33.2 -0.7
comp=Z,4.7nm,1.3s
VLC Villacollemand 60.50 319 P P 02 11 35.5 +0.5
VLC IAmb IAmb 02 11 47.7
comp=Z,27nm,1.4s
CTI Castel Tesino 60.53 322 P P 02 11 35.9 +0.6
CTI Castel Tesino 60.53 322 P P 02 11 35.9 +0.6
CTI pmax pmax
comp=Z,10.0nm,1.2s
TOA0 Torodi Ar. Sit 60.63 283 P P 02 11 36.4 +0.1
TOA0 IAmb IAmb 02 11 45.5
comp=Z,16nm,1.2s
TORD Torodi Ar. Bea 60.63 283 P P 02 11 36.5 +0.1
comp=Z,4.0nm,1.2s,baz=98,slow=5.2,SNR=5.9
PRMA PARMA 60.81 320 P P 02 11 37.6 +0.6
KHC Kasperske Hory 60.88 325 eP P 02 11 36.6 -0.9
KHC epP pP 02 11 42.0 -0.9
KHC Kasperske Hory 60.88 325 eP P 02 11 36.6 -0.9
KHC e 02 11 42.0
SALO Salr 61.04 321 P P 02 11 38.9 +0.2
WTTA Wattenberg 61.11 323 eP P 02 11 38.6 -0.6
comp=Z,20nm,1.6s
WATA Walderalm 61.17 323 eP P 02 11 39.3 -0.4
comp=Z,12nm,1.3s
SQTA Sankt Quirin 61.34 323 eP P 02 11 40.5 -0.2
comp=Z,10nm,1.8s
MOTA Moosalm 61.46 323 i P P 02 11 39.6 -2.0
comp=Z,8.1nm,1.5s
FETA Feichten 61.54 322 eP P 02 11 41.0 -1.2
comp=Z,7.6nm,1.5s
BRG Berggiesshubel 61.59 327 eP P 02 11 43.8 +1.6
comp=Z,4.6nm,1.4s
BRG Berggiesshubel 61.59 327 eP P 02 11 43.8 +1.6
BRG pmax pmax
comp=Z,5.0nm,1.4s
TUE Stuetta 62.15 321 P P 02 11 46.6 +0.3
DAVA Damuels 62.18 322 eP P 02 11 46.7 +0.3
comp=Z,17nm,1.5s
H01W3 Cape Leeuwin H 62.19 133 T T 03 19 08.4
baz=298
H01W2 Cape Leeuwin H 62.20 133 T T 03 19 14.9
baz=298
H01W1 Cape Leeuwin H 62.21 133 T T 03 19 20.6
baz=298
TMCR Tamitsa 62.30 348 eP P 02 11 44.3 -2.4
TMCR pmax pmax
comp=Z,24nm,1.0s
CLL Collm 62.32 327 eP P 02 11 49.0 +1.9
comp=Z,25nm,1.9s
CLL eSSS SSS 02 27 18.0
CLL Collm 62.32 327 P P 02 11 47.3 +0.2
CLL IAmb IAmb 02 11 50.0
comp=Z,22nm,1.7s
CLL Collm 62.32 327 P P 02 11 47.3 +0.2
CLL pmax pmax
comp=Z,22nm,1.7s
SOEI Soe 63.08 103 P 02 11 53.2 +0.2
BFO Black Forest 63.58 323 P P 02 11 54.0 -1.6
BFO IAmb IAmb 02 12 03.5
comp=Z,19nm,1.3s
BFO Black Forest 63.58 323 P P 02 11 54.0 -1.6
BFO pmax pmax
comp=Z,19nm,1.3s
TNTI Ternate 64.86 91 P P 02 12 04.5 -0.1
FITZ Fitzroy Crossi 66.06 112 P P 02 12 12.9 +0.7
FITZ IAmb IAmb 02 12 14.6
comp=Z,20nm,1.4s
APA Apatity 66.21 348⇓iP P 02 12 07.5 -4.8
APA pmax pmax
comp=Z,6.0nm,1.1s
APA MLR MLR
comp=Z,1μm,18.0s
BOD Bodaibo 66.71 27 eP P 02 12 09.3 -6.3
BOD pmax pmax
comp=Z,13nm,1.7s
NRIK Noril'sk 67.01 9 P P 02 12 16.4 -1.0
comp=Z,1.7nm,0.4s,baz=165,slow=8.2,SNR=4.4
DBIC Dimbokro 67.07 275 P P 02 12 19.1 +0.3
comp=Z,2.6nm,0.7s,baz=64,slow=4.6,SNR=5.4
DBIC Dimbokro 67.07 275 P P 02 12 19.1 +0.3
DBIC Dimbokro 67.07 275 P P 02 12 19.1 +0.3
DBIC pmax pmax
comp=Z,89nm,2.0s
KSRS Korea Array 67.94 51 P P 02 12 22.7 -1.2
comp=Z,0.6nm,0.5s,baz=253,slow=7.3,SNR=3.8
NB2 NORSAR Subarra 68.36 336 P P 02 12 25.0 -1.2
comp=Z,108nm,2.5s,baz=117,slow=6.9
NB2 NORSAR Subarra 68.36 336 P P 02 12 25.0 -1.2
baz=117,slow=6.9
NOA NORSAR Array B 68.36 336 P P 02 12 24.9 -1.2
comp=Z,1.2nm,0.9s,baz=120,slow=6.8,SNR=5.3
ESDC Sonseca Array 69.23 311 P P 02 12 30.9 -1.1
comp=Z,0.9nm,0.6s,baz=85,slow=5.1,SNR=5.9
ARCES ARCESS Array B 69.51 347 P P 02 12 32.6 -0.5
comp=Z,6.9nm,0.8s,baz=159,slow=6.4,SNR=9.4
MDJ Mudanjiang 70.75 44 P P 02 12 42.3 +1.2
MDJ S S 02 21 58.3 +3.4
MDJ SS SS 02 26 26.1 -1.1
MDJ pmax pmax
comp=Z,3.0nm,0.5s
MDJ pmax pmax
comp=Z,370nm,4.8s
MDJ LR LR
comp=Z,480nm,17.7s
MDJ LR LR
comp=Z,740nm,17.1s
MDJ LR LR
comp=Z,1μm,18.3s
KLR Kul'dur 73.25 40 i P P 02 12 53.5 -2.5
KLR pmax pmax
comp=Z,8.0nm,1.0s
WRA Warramunga Arr 74.49 112 P P 02 13 03.3 -0.6
comp=Z,9.5nm,1.0s,baz=290,slow=5.2,SNR=22
WRAB Tennant Creek 74.50 112 P P 02 13 02.6 -1.4
WRAB IAmb IAmb 02 13 11.4
comp=Z,33nm,1.1s
WRAB Tennant Creek 74.50 112 ceP P 02 13 04.2 +0.2
WRAB pmax pmax
comp=Z,52nm,1.7s
WB2 Warramunga Arr 74.50 112 IAmb IAmb 02 13 11.3
comp=Z,32nm,1.1s
WR0 Warramunga Arr 74.68 112 IAmb IAmb 02 13 12.9
comp=Z,29nm,1.2s
ASAR Alice Springs 74.81 116 P P 02 13 05.0 -0.7
comp=Z,4.9nm,0.9s,baz=286,slow=5.6,SNR=14
ASAR Alice Springs 74.81 116 P P 02 13 05.0 -0.7
SYO Syowa Base 74.86 188⇑ipP pP 02 13 12.0 +1.8
YAK Yakutsk 75.62 27 P P 02 13 09.1 -0.5
YAK Yakutsk 75.62 27 eP P 02 13 14.0 +4.5
YAK pmax pmax
comp=Z,23nm,1.2s
YAK pmax pmax
comp=N,6.0nm,1.3s
YAK pmax pmax
comp=E,20nm,1.4s
YAK MLR MLR
comp=Z,386nm,20.0s
YAK MLR MLR
comp=N,320nm,18.0s
YAK MLR MLR
comp=E,292nm,18.0s
MJB9 Matsu-Tunnel 75.94 54 P P 02 13 11.6 -0.4
MJB9 IAmb IAmb 02 13 13.1
comp=Z,48nm,1.8s
MAJO Matsushiro 75.95 54 P P 02 13 11.6 -0.4
MAJO IAmb IAmb 02 13 13.1
comp=Z,47nm,1.8s
MAJO Matsushiro 75.95 54 P P 02 13 11.6 -0.4
MAJO pmax pmax
comp=Z,47nm,1.8s
MJAR Matsushiro Arr 75.95 54 P P 02 13 10.3 -1.8
comp=Z,0.6nm,0.3s,baz=269,slow=4.3,SNR=4.1
YSS Yuzh-Sakhalins 80.19 43 P P 02 13 35.8 +0.5
YSS IAmb IAmb 02 13 42.2
comp=Z,48nm,1.3s
YSS Yuzh-Sakhalins 80.19 43 eP P 02 13 26.7 -8.6
YSS pmax pmax
comp=Z,20nm,1.4s
YSS MLR MLR
comp=Z,700nm,17.0s
YSS MLR MLR
comp=N,300nm,18.0s
YSS MLR MLR
comp=E,500nm,15.0s
YUK Yuzhno-Kuril'sk 82.23 46 eP P 02 13 52.6 +6.4
YUK 02 16 54.8
YUK S S 02 23 59.0 -1.8
YUK MLR MLR
comp=Z,367nm,20.0s
YUK MLR MLR
comp=E,377nm,18.0s
STKA Stephens Creek 83.02 123 P P 02 13 48.8 -1.8
comp=E,2.7nm,0.9s,baz=221,slow=1.4,SNR=6.2
MA2 Magadan 85.42 31 ceP P 02 14 01.2 -1.0
MA2 pmax pmax
comp=Z,19nm,1.7s
SEY Seymchan 86.13 27 i P P 02 14 07.6 +2.0
TOO Toolangi 87.04 128 P P 02 14 11.2 +0.5
TOO IAmb IAmb 02 14 14.5
comp=Z,27nm,1.4s
TOO Toolangi 87.04 128 P P 02 14 11.2 +0.5
TOO pmax pmax
comp=Z,27nm,1.4s
CAN Canberra 89.59 125 P P 02 14 23.2 +0.3
CAN IAmb IAmb 02 14 31.5
comp=Z,25nm,1.2s
CAN Canberra 89.59 125 P P 02 14 23.2 +0.3
CAN pmax pmax
comp=Z,25nm,1.2s
BILL Bilibino 91.14 21 P P 02 14 27.6 -1.7
BILL Bilibino 91.14 21⇓eP P 02 14 29.3 -0.1
BILL e 02 18 10.1
BILL pmax pmax
comp=Z,9.0nm,1.3s
BILL MLR MLR
comp=Z,567nm,22.0s
ARMA Armidale 91.39 120 P P 02 14 32.0 +0.5
ARMA IAmb IAmb 02 14 39.7
comp=Z,24nm,1.4s
DZM Mont Dzumac 104.51 112 eLR LR 02 49 39.8
comp=Z,610nm,25.4s
YKA Yellowknife Ar 113.34 359 PKiKP PKiKP 02 20 01.2 -1.2
comp=Z,0.2nm,0.4s,baz=334,slow=1.7,SNR=5.8
YKA PP PP 02 20 51.8 -0.5
comp=Z,1.6nm,1.1s,baz=1.1,slow=6.8,SNR=6.5
PDAR Pinedale Array 132.59 352 PKP PKPdf 02 20 37.0 -3.2
comp=Z,0.5nm,0.7s,baz=74,slow=2.7,SNR=5.5
NVAR Mina Array Bea 137.47 1 PKP PKPdf 02 20 49.0 -0.4
comp=Z,0.6nm,0.7s,baz=354,slow=1.9,SNR=6.2
TBI Tubuai 143.79 125 eLR LR 03 08 03.1
comp=Z,240nm,31.0s
TXAR Lajitas Array 144.01 339 PKhKP PKPpre 02 20 57.3
comp=Z,0.7nm,0.7s,baz=73,slow=3.0,SNR=6.4
PPT2 Papeete2 145.92 115 eLR LR 03 08 59.9
comp=Z,573nm,31.5s
HPIG 146.90 340 PKPdf PKPdf 02 21 04.4 -2.1
TAOE Nuku Hiva Isla 157.04 102 eLR LR 03 14 05.4
comp=Z,218nm,28.4s

IDC 25 02:02:49.7±1.1, 4°.25N×62°.46E, h0km, mb4.1/12, mb1 4.2/12, mb1mx3.9/52, mbtmp4.1/12, Error ellipse: s-maj=38.4km s-min=20.5km az=36.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	38.35	65	P	P	02 10 13.7	+1.0
	1.0nm,0.8s,baz=259,slow=9.1,SNR=2.8						
GNI	Garni	39.15	338	P	P	02 10 20.5	+1.1
	3.1nm,0.7s,baz=181,slow=5.9,SNR=2.1						
BRTR	Keskin Array B	43.88	328	P	P	02 10 58.2	0.0
	1.9nm,0.8s,baz=152,slow=9.8,SNR=4.2						
MKAR	Makanchi Array	45.73	19	P	P	02 11 12.8	+0.1
	0.9nm,0.8s,baz=207,slow=9.7,SNR=2.6						
MKAR				PcP	PcP	02 12 50.6	0.0
	1.1nm,0.8s,baz=228,slow=4.2,SNR=4.4						
ZALV	Zalesovo Beam	52.80	16	P	P	02 12 06.0	-0.6
	1.7nm,0.7s,baz=214,slow=4.9,SNR=2.5						
AKASG	Malin Array Be	54.03	334	P	P	02 12 15.4	-0.3
	0.4nm,0.4s,baz=132,slow=6.6,SNR=2.7						
SONM	Songino Array	57.44	34	P	P	02 12 39.9	-0.5
	2.2nm,1.0s,baz=215,slow=6.3,SNR=2.8						
NOA	NORSAR Array B	68.39	336	P	P	02 13 52.8	-0.3
	0.9nm,0.8s,baz=120,slow=6.8,SNR=3.4						
ESDC	Sonseca Array	69.22	311	P	P	02 13 59.2	+0.5
	0.4nm,0.5s,baz=73,slow=5.2,SNR=2.9						
ARCES	ARCESS Array B	69.56	347	P	P	02 13 58.2	-1.9
	4.5nm,0.8s,baz=147,slow=5.1,SNR=4.6						
WRA	Warramunga Arr	74.53	112	P	P	02 14 30.6	-0.3
	4.1nm,0.9s,baz=291,slow=4.7,SNR=5.2						
ASAR	Alice Springs	74.84	116	P	P	02 14 32.3	-0.4
	3.0nm,0.8s,baz=288,slow=5.8,SNR=5.7						
ULM	Lac du Bonnet	122.58	344	PKP	PKPdf	02 21 47.5	+0.1
	1.0nm,0.8s,baz=153,slow=4.5,SNR=2.6						
PDAR	Pinedale Array	132.64	352	PKP	PKPdf	02 22 07.6	+0.4
	0.6nm,0.7s,baz=57,slow=3.7,SNR=4.1						
NVAR	Mina Array Bea	137.53	1	PKP	PKPdf	02 22 17.2	+0.8
	0.6nm,0.8s,baz=321,slow=2.3,SNR=2.9						
TXAR	Lajitas Array	144.05	339	PKhKP	PKPpre	02 22 25.0	
	0.7nm,0.8s,baz=62,slow=2.1,SNR=2.1						

PRU 25 02:10:45.6±0.0, 49°.81N×18°.55E, h0km
ISC 25 02:10:45.4±1.2, 49°.80N±0°.06×18°.54E±0°.05, h0km, n13, σ0s.57/21, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.26	279	ePG	Pg	02 10 50.6	+0.3
OKC				eSG	Sg	02 10 55.1	+1.5
	comp=Z,6.5nm,0.3s						
MORC	Moravsky Berou	0.65	269	ePG	Pg	02 10 58.2	+0.4
MORC				eSG	Sg	02 11 05.8	-0.3
LANS	Liptovska Anna	0.89	137	eP	Pg	02 11 02.2	-0.1
LANS	Liptovska Anna	0.89	137	ePG	Pg	02 11 02.2	-0.1
LANS				eSG	Sg	02 11 14.6	+0.8
JAVC	Velka Javorina	1.10	212	ePG	Pg	02 11 07.1	+0.7
KRLC	Kraliky	1.17	284	ePG	Pg	02 11 06.8	-1.0
KRLC				eSG	Sg	02 11 23.1	+0.2
VYHS	Vyhne	1.32	171	eP	Pg	02 11 10.1	-0.5
VYHS	Vyhne	1.32	171	ePG	Pg	02 11 10.1	-0.5
VRAC	Vranov	1.36	250	ePG	Pg	02 11 10.9	-0.5
VRAC				eSG	Sg	02 11 28.6	-0.4
DPC	Dobruska-Polom	1.53	292	ePG	Pn	02 11 14.0	0.0
DPC				eSG	Sg	02 11 34.5	-0.1
KRUC	Moravsky	1.58	243	ePG	Pn	02 11 14.4	-0.3
KRUC				eSG	Sn	02 11 35.7	-0.1
OSTC	Ostas	1.68	298	ePG	Pn	02 11 16.1	+0.1
OSTC				eSG	Sb	02 11 39.1	+0.3
CHVC	Chvalec	1.78	297	eSG	Sb	02 11 41.7	-0.1

IDC 25 02:18:29.9±1.2, 1°.62N×126°.59E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.6/43, mbtmp3.8/7, ML3.3/1, Error ellipse: s-maj=101.1km s-min=16.2km az=69.0
NEIC 25 02:18:34.3±1.8, 1°.54N±0°.07×126°.5E±0°.1, h35km±2km, mb4.0/12, Error ellipse: s-maj=23.9km s-min=7.9km az=66.0
ISC 25 02:18:35.5±0.8, 1°.6N±0°.1×126°.7E±0°.2, h47km, n21, σ0s.94/22, mb3.9/12, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.09	141		Pn	02 18 54.5	+0.1
TNTI				Sn	Sn	02 19 09.3	+1.0
MTN	Manton Dam	15.03	163	Pn	Pn	02 22 03.5	-1.5
MTN				IAmb	IAmb	02 22 03.7	
	comp=Z,10nm,1.1s						
FITZ	Fitzroy Crossi	19.62	183	P	P	02 23 00.5	+0.4
	comp=Z,0.1nm,0.3s,baz=8.2,slow=10,SNR=1.3						
FITZ	Fitzroy Crossi	19.62	183	P	P	02 22 59.6	-0.5
WB0	Warramunga Arr	22.56	161	P	P	02 23 31.8	-0.1
WB0				IAmb	IAmb	02 23 41.2	
	comp=Z,5.9nm,0.8s						
WRAB	Tennant Creek	22.70	161	P	P	02 23 32.1	-1.3
WRAB				IAmb	IAmb	02 23 45.1	
	comp=Z,5.8nm,0.7s						
WRA	Warramunga Arr	22.71	161	P	P	02 23 33.3	-0.2
	comp=Z,2.8nm,0.5s,baz=338,slow=11,SNR=37						
WB2	Warramunga Arr	22.71	161	P	P	02 23 32.6	-0.9
WB2				IAmb	IAmb	02 23 38.7	
	comp=Z,4.2nm,0.6s						
WR0	Warramunga Arr	22.79	161	P	P	02 23 33.8	-0.5
WR0				IAmb	IAmb	02 23 41.5	
	comp=Z,5.9nm,1.0s						
TATO	Taipei	23.76	348	P	P	02 23 42.3	-1.4
AS31	Alice Springs	26.10	165	P	P	02 24 05.0	-0.1
ASAR	Alice Springs	26.10	165	P	P	02 24 06.1	+1.1
	comp=Z,0.9nm,0.4s,baz=348,slow=14,SNR=15						
STKA	Stephens Creek	36.19	158	P	P	02 25 34.6	+0.8
	comp=Z,0.6nm,0.5s,baz=321,slow=13,SNR=3.6						
STKA	Stephens Creek	36.19	158	P	P	02 25 32.2	-1.6
ARMA	Armidale	39.76	145	P	P	02 26 04.4	+0.4
SONM	Songino Array	49.27	342	P	P	02 27 20.0	+0.3
	comp=Z,0.4nm,0.6s,baz=157,slow=7.8,SNR=2.4						
MK31	Makanchi Array	59.26	326	P	P	02 28 30.7	-1.6
MK31				IAmb	IAmb	02 28 43.8	
	comp=Z,0.9nm,0.9s						
MKAR	Makanchi Array	59.26	326	P	P	02 28 33.0	+0.8
	comp=Z,0.3nm,0.4s,baz=118,slow=6.9,SNR=9.9						
KURBB	Kurchatov Arra	63.48	328	P	P	02 29 01.5	+0.8
	comp=Z,28nm,0.5s,baz=122,slow=5.4,SNR=4.7						
KURK	Kurchatov	63.49	328	P	P	02 29 00.8	+0.1
AKTO	Aktyubinsk	75.28	322	P	P	02 30 14.4	+0.8
	comp=Z,0.4nm,0.3s,baz=71,slow=9.6,SNR=5.2						

IDC 25 02:24:52.6±2.4, 51°.33N×174°.03E, h0km, mb3.5/7, mb1 3.8/8, mb1mx3.5/43, mbtmp3.6/5, ML2.8/1, Error ellipse: s-maj=74.3km s-min=19.8km az=180.0
NEIC 25 02:24:55.5±1.4, 51°.26N±0°.08×174°.1E±0°.1, h23km±6km, ML3.6/12(AEIC), Error ellipse: s-maj=12.5km s-min=10.1km az=48.0
ISC 25 02:24:55.2±1.0, 51°.3N±0°.1×174°.12E±0°.07, h19km, n17, σ1s.16/21, mb3.6/8, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	Shemya	1.41	360		Pb	02 25 20.5	-0.4
SMY					Sb	02 25 39.1	+0.5
GALAA	Gareloi Lava P	4.46	82		Sn	02 26 52.4	-0.7
TASE	Tanaga Southea	4.92	81		Pn	02 26 08.9	+0.8
TAFP	Tanaga Falls P	4.96	80		Pn	02 26 09.1	+0.5
TAFP					Sn	02 27 02.9	-2.5
TAPA	Tanaga Point A	5.06	81		Pn	02 26 10.9	+0.9
TAPA					Sn	02 27 06.3	-1.6
KIMD	Kanaga Island	5.42	82		Pn	02 26 15.8	+0.9
ADK	Adak	5.76	81		Pn	02 26 19.6	0.0
ADK				Sn	Sn	02 27 22.6	-2.5
GSMY	Great Sitkin M	6.16	79		Pn	02 26 25.4	+0.4
PETK	Petropavlovsk-	10.24	286	Pn	Pn	02 27 19.2	-1.8
	0.4nm,0.3s,baz=102,slow=18,SNR=3.8						
ILAR	Eielson Array	24.15	41	P	P	02 30 09.7	-0.1
	0.8nm,0.6s,baz=245,slow=7.6,SNR=20						
YKA	Yellowknife Ar	38.45	45	P	P	02 32 16.4	+1.1
	1.1nm,0.7s,baz=288,slow=8.3,SNR=9.6						
PDAR	Pinedale Array	50.51	68	P	P	02 33 52.2	+0.1
	0.2nm,0.5s,baz=287,slow=3.5,SNR=3.2						
KURBB	Kurchatov Arra	55.86	310	P	P	02 34 31.1	+0.1
	61nm,0.8s,baz=44,slow=8.1,SNR=11						
MKAR	Makanchi Array	56.50	305	P	P	02 34 35.7	-0.1
	0.2nm,0.6s,baz=57,slow=7.7,SNR=3.2						
SCHQ	Schefferville	62.69	35	P	P	02 35 18.8	+0.5
	0.8nm,0.5s,baz=350,slow=7.2,SNR=5.6						
TXAR	Lajitas Array	63.02	76	P	P	02 35 21.9	+0.9
	0.1nm,0.4s,baz=325,slow=5.5,SNR=4.8						
BRTR	Keskin Array B	82.98	330	P	P	02 37 19.5	+0.5
	0.5nm,0.6s,baz=56,slow=3.1,SNR=3.6						

IDC 25 02:36:11.2±4.7, 22°.24N×143°.31E, h311km±29km, mb3.1/3, mb1 3.3/4, mb1mx2.8/36, mbtmp3.9/4, Error ellipse: s-maj=53.5km s-min=42.9km az=9.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	4.95	348	P	Pn	02 37 28.6	+0.1
	5.5nm,0.3s,baz=180,slow=20,SNR=1.9						
JCJ				S	S	02 38 31.0	+0.3
	2.6nm,0.3s,baz=253,slow=23,SNR=1.6						
MKAR	Makanchi Array	54.42	312	P	P	02 45 06.6	-0.4
	0.2nm,0.5s,baz=96,slow=7.2,SNR=1.8						
YKA	Yellowknife Ar	75.93	28	P	P	02 47 23.8	0.0
	0.1nm,0.4s,baz=289,slow=5.8,SNR=2.3						
ARCES	ARCESS Array B	78.45	341	P	P	02 47 38.0	+0.3
	8.5nm,1.2s,baz=76,slow=7.5,SNR=2.0						

VIE 25 02:40:08.8±1.0, 49°.67N×18°.47E, h0km, mb2.1/2, ml2.5/4, Error ellipse: s-maj=8.6km s-min=4.2km az=82.0 24 km SE of Ostrava Suspected Mining induced.
IPEC 25 02:40:08.0±0.2, 49°.85N×18°.56E, h0km, ML2.1/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0
ISC 25 02:40:07.9±0.7, 49°.81N±0°.03×18°.48E±0°.02, h0km, n42, σ0s.87/78, 8C-5D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.22	278	ePG	Pg	02 40 13.5	+1.4
OKC				eSG	Sg	02 40 16.4	+1.4
	comp=Z,127nm,0.6s						
MORC	Moravsky Berou	0.61	268	ePG	Pb	02 40 20.7	-0.8
MORC				eSG	Sg	02 40 28.8	+1.2
MORC	Moravsky Berou	0.61	268	⇓P	Pb	02 40 21.4	0.0
MORC				⇓S	Sb	02 40 29.5	-1.1
MORC	Moravsky Berou	0.61	268	ePg	Pb	02 40 20.7	-0.8
	baz=83						
MORC				eSg	Sg	02 40 28.7	+1.2
	52nm,0.4s,baz=83						
LANS	Liptovska Anna	0.92	135	ePG	Pb	02 40 26.2	-0.5
LANS				eSG	Sn	02 40 40.9	-1.1
LANS				eLG	Lg	02 40 44.5	
OJC	Ojcow	0.94	63	ePg	Pg	02 40 24.9	-1.1
OJC				eSg	Sg	02 40 37.3	-0.9
JAVC	Velka Javorina	1.09	210	ePG	Pn	02 40 30.9	+0.5
KRLC	Kraliky	1.13	284	ePG	Pg	02 40 29.6	0.0
KRLC				eSG	Sb	02 40 45.0	-0.7
	comp=Z,40nm,0.3s						
NIE	Niedzica	1.24	107	ePg	Pg	02 40 31.7	0.0
NIE				eSg	Sn	02 40 49.0	-0.5
VRAC	Vranov	1.33	249	ePG	Pn	02 40 33.6	-0.1

VRAC eSG Sn 02 40 51.6 -0.5
VRAC Vranov 1.33 249 ⇓P Pn 02 40 33.9 +0.2
VRAC ⇓S Sn 02 40 51.7 -0.5
VRAC Vranov 1.33 249 ePg Pn 02 40 33.6 -0.1
baz=66
VRAC eSg Sn 02 40 51.6 -0.5
25nm,0.3s,baz=66
VYHS Vyhne 1.33 170 ePG Pn 02 40 33.6 -0.2
VYHS eSG Sn 02 40 52.4 +0.2
SMOL Smolenice 1.47 209 ePG Pb 02 40 36.0 -0.1
SMOL eSG Sb 02 40 54.8 -0.4
DPC Dobruska-Polom 1.50 292 ePG Pn 02 40 35.9 -0.2
DPC eSG Sg 02 40 55.9 0.0
comp=Z,14nm,0.4s
KRUC Moravsky 1.55 242 ePG Pb 02 40 37.3 -0.2
KRUC eSG Sb 02 40 58.7 +1.0
KRUC Moravsky 1.55 242 ePg Pb 02 40 37.3 -0.2
baz=60
KRUC eSg Sb 02 40 58.7 +1.0
14nm,0.2s,baz=60
MODS Modra-Piesok 1.64 209 ePG Pn 02 40 37.4 -0.6
MODS eSG Sn 02 40 58.8 -1.0
OSTC Ostas 1.64 298 ePG Pn 02 40 38.5 +0.5
OSTC eSG Sg 02 41 00.9 +0.3
comp=Z,34nm,1.0s
UPC Upice 1.74 295 ePG Pb 02 40 40.2 -0.5
UPC eSG Sg 02 41 04.2 +0.5
comp=Z,21nm,0.7s
CHVC Chvalec 1.75 298 ePG Pn 02 40 40.0 +0.5
CHVC eSG Sg 02 41 05.0 +1.0
comp=Z,8.5nm,0.4s
KSP Ksiaz 1.75 307 ePg Pb 02 40 41.0 +0.2
KSP eSg Sn 02 41 02.9 +0.5
STHS Stebnicka Huta 1.84 101 ePN Pb 02 40 42.8 +0.4
STHS eSN Sg 02 41 07.1 +0.2
STHS eLG Lg 02 41 10.8
ZST Bratislava 1.85 210 ePN Pn 02 40 39.5 -1.4
ZST eSN Sn 02 41 02.7 -2.2
KECS Kecovo 1.87 134 ePN Pn 02 40 40.6 -0.5
KECS eSN Sn 02 41 04.2 -1.2
KECS eLG Lg 02 41 10.2
TREC Trest 2.02 256 ePG Pb 02 40 45.3 -0.2
TREC eSG Sg 02 41 12.2 -0.5
comp=Z,14nm,0.3s
PSZ Piszkesteto 2.11 153 ⇑P Pn 02 40 45.3 +0.8
PSZ ⇑S Sb 02 41 13.8 +0.1
CRVS Cervenica-Dubn 2.15 114 ePN Pb 02 40 48.0 +0.3
GOPC GO Pecny, Ondr 2.39 274 ePG Pb 02 40 51.6 -0.3
GOPC eSG Sg 02 41 24.0 -0.8
comp=Z,10.0nm,0.5s
CONA Conrad Observa 2.56 224 ePn Pn 02 40 49.9 -0.8
0.2nm,0.1s
CONA Sn Sn 02 41 21.2 -1.3
0.6nm,0.2s
PRU Pruhonice 2.56 276 ePG Pb 02 40 54.5 -0.1
PRU eSG Sg 02 41 29.3 -0.7
comp=Z,17nm,1.0s
PVCC Panska Ves 2.62 288 eSG Sg 02 41 31.3 -0.7
comp=Z,12nm,0.3s
KOLS Kolonicke sedl 2.63 108 ePG Pn 02 40 58.3 +0.1
BRG Berggiesshubel 3.10 292 PG Pb 02 41 05.5 +1.6
BRG SG Sg 02 41 46.1 -1.3
7.8nm,0.6s
TRPA Tarpa 3.15 121 ⇑S Pg 02 41 10.9 +2.5
KHC Kasperske Hory 3.27 260 ePN Pn 02 41 00.0 -0.4
KHC ePG Pb 02 41 07.7 +0.9
KHC eSG Sg 02 41 51.7 -1.2
comp=Z,9.5nm,0.8s
MOA Molln 3.41 237 iPn Pn 02 41 02.5 +0.2
0.4nm,0.2s
MOA iSn Sn 02 41 42.6 -0.8
0.6nm,0.2s
CLL Collm 3.80 295 eSg Sg 02 42 09.0 -1.1
NKC Novy Kostel 3.92 279 eSG Sg 02 42 12.8 -0.8
comp=Z,5.2nm,0.4s
DRGR 4.13 135 ⇑P Pn 02 41 12.4 +0.1
DRGR ⇑S Sn 02 42 00.5 -0.8
BZS Buzias 4.70 152 ⇑P Pn 02 41 20.1 +0.1
BZS ⇓S Sn 02 42 14.8 -0.3
GZR Gura Zlata 5.28 145 ⇑P Pn 02 41 28.5 +0.4
GZR ⇑S Sn 02 42 32.1 +2.4

IDC 25 02:50:11.2±3.6, 37.39N×69.80E, h0km, mb3.5/1, mb1 3.4/3, mb1mx3.2/37, mbtmp3.4/3, ML2.9/2, Error ellipse: s-maj=126.2km s-min=15.3km az=145.0
NNC 25 02:50:20.0±5.1, 37.01N×70.22E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=71.3km s-min=34.0km az=117.0
ISC 25 02:50:12.4±3.7, 36.6N±0.3×71.2E±0.2, h10km, n6, σ2§76/5, 3C, Afghanistan-Tajikistan border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KK31 Karatay Array 6.57 355 P Pn 02 51 51.5 +2.4
2.6nm,0.3s,baz=177,slow=12,SNR=92
KK31 ⇑S Sn 02 53 02.8 -1.2
1.6nm,0.3s,baz=177,slow=21,SNR=7.6
MKAR Makanchi Array 13.15 35 Pn Pn 02 53 19.8 +0.6
0.0nm,0.3s,baz=244,slow=13,SNR=2.5
AB31 Akbulak array 15.12 331 ⇑P Pn 02 53 43.4 -2.6
1.0nm,0.4s,baz=141,slow=13,SNR=48
AKTO Aktyubinsk 16.82 330 ⇑P Pn 02 54 06.9 -1.0
0.6nm,0.6s
ZALV Zalesovo Beam 19.80 24 P P 02 54 40.2 -2.5
0.5nm,0.3s,baz=218,slow=12,SNR=5.6
TORD Torodi Ar. Bea 65.89 269 P P 03 00 51.9 -6.7
0.5nm,1.1s,baz=51,slow=6.8,SNR=2.1

KRSC 25 02:52:57.3±1.8, 50.77N×155.42E, h198km±16km, ML3.7
IDC 25 02:52:58.9±1.5, 51.14N×154.82E, h208km±10km, mb3.3/18, mb1 3.4/20, mb1mx3.4/38, mbtmp3.8/20, Error ellipse: s-maj=19.7km s-min=10.6km az=171.0
ISC 25 02:52:56.8±0.9, 50.9N±0.1×155.05E±0.09, h197km±7km, n40, σ1§43/51, mb3.5/18, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ALID Alaid 0.32 91 P Pn 02 53 24.2 +1.1
KDTR Khodutka, Kamc 2.11 63 P Pn 02 53 35.9 -0.2
KDTR S S 02 54 04.2 -2.6
ASAK Asacha 2.33 49 P Pn 02 53 39.5 +0.9
ASAK S S 02 54 11.0 -0.2
APC Apacha 2.43 32 P Pn 02 53 40.1 +0.5
APC S S 02 54 12.1 -1.0
GRL Gorelyy 2.52 47 P Pn 02 53 41.7 +1.0
GRL S S 02 54 14.9 -0.2
MTVR Mutnovka 2.53 49 P Pn 02 53 41.6 +0.8
RUS Russkaya 2.66 53 P Pn 02 53 42.6 +0.5
RUS S S 02 54 15.9 -1.8
KRMR Karymshinskiy 2.73 43 S S 02 54 19.7 +0.5
PETK Petropavlovsk- 2.77 35 P Pn 02 53 44.5 +1.1
3.1nm,0.3s,baz=209,slow=12,SNR=27
PETK S S 02 54 21.3 +1.3
0.5nm,0.3s,baz=230,slow=22,SNR=2.4
DALK Dalny 3.15 45 S S 02 54 26.3 -1.6
KOK Koryaka 3.27 41 P Pn 02 53 51.4 +1.9
UGLR Uglovaya 3.30 43 P Pn 02 53 51.5 +1.7
UGLR S S 02 54 32.4 +1.0
AVH Avacha 3.30 42 P Pn 02 53 51.6 +1.8
AVH S S 02 54 32.2 +0.8
SMAR Somma 3.33 43 P Pn 02 53 52.1 +1.9
KRX Arik 3.33 40 P Pn 02 53 52.5 +2.3
KRER Koryakskii 3.33 42 P Pn 02 53 52.3 +2.0
KRER S S 02 54 32.4 +0.1
SDLR Sedlovina 3.37 43 P Pn 02 53 52.5 +1.8
SDLR S S 02 54 33.3 +0.3
NLC Nalytchevo 3.51 47 S S 02 54 32.6 -3.1
SPN Mys Shipunski 3.79 52 P Pn 02 53 55.3 -0.4
SPN S S 02 54 38.1 -3.9
TUMR Tumrok 5.37 33 P Pn 02 54 17.5 +1.7
KBTR Krutoberegovo 7.06 38 P Pn 02 54 38.4 +0.8
KLR Kul'dur 15.05 273 P Pn 02 56 20.4 +0.9
0.1nm,0.3s,baz=94,slow=5.9,SNR=2.2
SONM Songino Array 31.38 284 P P 02 58 58.3 -0.7
0.5nm,0.5s,baz=67,slow=8.7,SNR=3.0
ILAR Eielson Array 32.57 42 P P 02 59 09.4 +0.5
1.0nm,0.6s,baz=263,slow=6.1,SNR=17
INK Inuvik 37.51 35 P P 02 59 50.7 -0.3
0.6nm,0.3s,baz=282,slow=7.6,SNR=14
ZALV Zalesovo Beam 41.35 303 P P 03 00 22.4 -0.5
0.6nm,0.4s,baz=56,slow=7.7,SNR=3.5
MKAR Makanchi Array 46.28 295 P P 03 01 01.8 -0.5
0.5nm,0.3s,baz=60,slow=6.3,SNR=12
YKA Yellowknife Ar 46.88 39 P P 03 01 07.2 +0.6
1.1nm,0.7s,baz=299,slow=7.5,SNR=11
ARCES ARCESS Array B 54.38 341 P P 03 02 01.3 -1.3
1.8nm,0.8s,baz=35,slow=8.0,SNR=4.4
NVAR Mina Array Bea 59.47 66 P P 03 02 40.3 +1.4
0.3nm,0.6s,baz=297,slow=8.0,SNR=3.3
FINES FINESS Array B 60.85 335 P P 03 02 46.5 -1.2
0.8nm,0.3s,baz=33,slow=8.5,SNR=12
PDAR Pinedale Array 61.34 57 P P 03 02 52.4 +0.8
0.4nm,0.6s,baz=320,slow=2.9,SNR=5.3
NOA NORSAR Array B 64.72 341 P P 03 03 12.7 -0.6
0.5nm,0.8s,baz=21,slow=7.6,SNR=2.7
AKASG Malin Array Be 68.82 326 P P 03 03 37.4 -1.9
0.3nm,0.4s,baz=33,slow=6.7,SNR=2.9
KBZ Khabaz 68.92 314 P P 03 03 39.7 -0.2
1.9nm,0.9s,baz=228,slow=16,SNR=2.9
SCHQ Schefferville 69.01 24 P P 03 03 40.4 0.0
1.2nm,0.3s,baz=0.7,slow=6.1,SNR=16
TXAR Lajitas Array 74.40 63 P P 03 04 14.3 +1.2
0.5nm,0.5s,baz=305,slow=5.2,SNR=10.0
GERES GERESS Array B 75.28 335 P P 03 04 17.4 -0.4
0.2nm,0.3s,baz=46,slow=7.3,SNR=2.6
BRTR Keskin Array B 76.24 317 P P 03 04 22.1 -1.3
0.4nm,0.7s,baz=54,slow=7.5,SNR=2.6
ASAR Alice Springs 76.53 200 P P 03 04 26.8 +1.9
0.2nm,0.5s,baz=11,slow=4.7,SNR=3.8

NEIC 25 03:04:15.9±3.2, 14.27N±0.05×93.41W±0.06, h16km±8km, Error ellipse: s-maj=9.3km s-min=6.0km az=47.0
IDC 25 03:04:16.8±3.2, 14.65N×93.27W, h0km, mb3.4/2, mb1 3.6/6, mb1mx3.4/35, mbtmp3.3/6, ML3.2/4, MS2.9/1, Ms1 2.9/1, ms1mx2.4/21, Error ellipse: s-maj=54.8km s-min=24.7km az=14.0
MEX 25 03:04:16.5±0.5, 14.10N×93.44W, h20km, MD4.2
GCG 25 03:04:17.0±0.7, 15.42N×92.91W, h153km±13km, MD4.1
ISC 25 03:04:17.6±2.3, 14.47N±0.06×93.33W±0.05, h14km±12km, n22, σ1§19/38, Near coast of Chiapas

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
THIG 1.12 67 Pb 03 04 38.0 -0.7
THIG Sn 03 04 54.4 +0.5
THIG 1.12 67 iP Pb 03 04 38.0 -0.7
THIG eS Sn 03 04 54.4 +0.5
PCIG 1.24 5 Pn 03 04 39.7 -0.7
PCIG Sg 03 04 58.7 +1.2
PCIG 1.24 5 eP Pn 03 04 39.7 -0.7
PCIG eS Sg 03 04 58.7 +1.2
ERG Entre ros, C 1.71 91 eS Sg 03 05 13.0 +0.5
STG3 Santiaguito 3, 1.72 82 eP Pn 03 04 47.2 -0.1
STG3 eS Sb 03 05 11.6 +0.9
CCIG Comitan 2.14 32 Pb 03 04 55.6 -0.7
CCIG Sn Sb 03 05 24.7 +2.0
CCIG Comitan 2.14 32 Sg 03 05 26.4 -0.2
CCIG Comitan 2.14 32 eP Pb 03 04 55.4 -0.9
CCIG eS Sg 03 05 26.4 -0.2
TGIG 2.31 5 Pb 03 04 57.2 -1.8
TGIG Sb 03 05 28.6 +1.1
TGIG 2.31 5 eP Pb 03 04 57.2 -1.8
TGIG eS Sb 03 05 28.6 +1.1
FUG Fuego 3 2.41 90 eP Pn 03 04 58.0 +1.3
IXG Ixpaco 2.82 96 eP Pn 03 05 02.3 0.0
IXG eS Sn 03 05 36.8 +0.7
APG El Apazote 2.82 79 Pn Pn 03 05 02.5 +0.1
2.8nm,0.3s,baz=282,slow=9.3,SNR=13
APG Sn Sn 03 05 34.5 -1.9
3.5nm,0.3s,baz=324,slow=23,SNR=1.7
CMIG Matias Romero 3.01 330 Pn Pn 03 05 04.8 0.0
1.9nm,0.3s,baz=144,slow=15,SNR=22
CMIG Sn Sn 03 05 40.7 0.0
3.6nm,0.3s,baz=128,slow=11,SNR=4.8
CMIG Matias Romero 3.01 330 Pn 03 05 04.8 0.0
CMIG Sn 03 05 42.3 +1.7
CMIG Matias Romero 3.01 330 eP Pn 03 05 04.8 0.0
CMIG eS Sn 03 05 42.3 +1.7
TEIG Tepich 7.49 39 Pn Pn 03 06 06.1 -0.3
2.3nm,0.3s,baz=325,slow=1.4,SNR=14
TEIG Sn Sn 03 07 28.5 -2.7
0.4nm,0.3s,baz=139,slow=11,SNR=1.4
TEIG LR LR 03 09 26.1
comp=Z,96nm,19.4s,baz=320,slow=42
TEIG Tepich 7.49 39 Pn Pn 03 06 06.4 0.0
TEIG Sn Sn 03 07 33.5 +2.3
TXAR Lajitas Array 17.62 329 P Pn 03 08 21.6 -1.2
0.0nm,0.3s,baz=148,slow=16,SNR=2.4
NVAR Mina Array Bea 32.51 322 P P 03 10 49.3 +1.2
0.1nm,0.4s,baz=121,slow=8.5,SNR=2.4
YKA Yellowknife Ar 50.29 347 P P 03 13 12.3 -1.0
0.8nm,0.7s,baz=153,slow=7.4,SNR=10

IDC 25 03:05:27.8±0.6, 11.26S×77.06W, h95km±8km, mb3.3/6, mb1 3.5/9, mb1mx3.3/43, mbtmp3.6/9, MS3.8/1, Ms1 3.8/1, ms1mx3.0/12, Error ellipse: s-maj=40.1km s-min=12.5km az=65.0
NEIC 25 03:05:27.2±1.1, 11.25S±0.1×77.0W±0.1, h85km±13km, Error ellipse: s-maj=25.0km s-min=16.1km az=224.0
ARE 25 03:05:28±2.0, 11.2S±0.1×77.1W±0.2, h72km±8km, ML4.4, mb4.3/2(NEIC), Error ellipse: s-maj=28.1km s-min=11.8km az=63.0
ISC 25 03:05:28.0±0.7, 11.27S±0.07×77.0W±0.1, h100km, n27, σ1§02/23, mb3.4/7, Central Peru

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NNA Nana 0.73 171 P Pn 03 05 45.9 +0.1
194nm,0.3s,baz=1.8,slow=6.2,SNR=898
NNA S Sn 03 05 59.6 +0.6
871nm,0.3s,baz=321,slow=22,SNR=50
NNA LR LR 03 06 01.6
comp=Z,47nm,19.4s,baz=38,slow=45
NNA Nana 0.73 171 Pn 03 05 44.6 -1.2
NNA Sn 03 05 57.6 -1.4
ATAH Atahualpa 4.34 341 P Pn 03 06 32.9 +0.7
4.7nm,0.3s,baz=169,slow=4.5,SNR=22
ATAH S Sn 03 07 21.0 -1.0
6.8nm,0.3s,baz=327,slow=6.2,SNR=3.7
LPAZ La Paz 9.93 121 P Pn 03 07 50.0 +1.7
0.6nm,0.3s,baz=299,slow=10.0,SNR=19
LPAZ La Paz 9.93 121 Pn 03 07 48.6 +0.3
MNMC Minye Minye 10.57 139 Pn Pn 03 07 57.8 +1.1
PB11 IPOC Station P 10.99 141 Pn Pn 03 08 03.0 +0.6
GO01 Chusmiza 11.21 139 Pn Pn 03 08 06.2 +0.5
OTAV Otavalo 11.53 353 Pn 03 08 08.7 -1.2
SAML Samuel 13.76 82 Pn Pn 03 08 37.1 -1.8
SIV San Ignacio 16.14 109 P Pn 03 09 11.2 +2.0
0.2nm,0.3s,baz=271,slow=16,SNR=3.6
PCRV Puerto La Cruz 24.58 30 LR LR 03 22 17.2
comp=Z,226nm,18.6s,slow=41
TGUH Tegucigalpa,Un 27.16 338 P P 03 11 01.7 -0.6
TGUH IAmb IAmb 03 11 07.9
comp=Z,12nm,1.1s
TXAR Lajitas Array 47.89 328 P P 03 13 56.8 +0.5
comp=Z,0.1nm,0.4s,baz=155,slow=11,SNR=3.3
PDAR Pinedale Array 61.49 333 P P 03 15 35.0 +0.5
comp=Z,0.2nm,0.5s,baz=127,slow=6.0,SNR=3.2
ULM Lac du Bonnet 63.45 347 P P 03 15 46.8 -0.3
comp=Z,1.3nm,0.5s,baz=165,slow=5.8,SNR=5.3
ULM Lac du Bonnet 63.45 347 P P 03 15 46.9 -0.2
ULM IAmb IAmb 03 15 47.5
comp=Z,2.1nm,0.8s
YKA Yellowknife Ar 79.12 343 P P 03 17 20.9 -0.3
comp=Z,0.3nm,0.5s,baz=140,slow=6.1,SNR=5.9
TORD Torodi Ar. Bea 81.72 75 P P 03 17 36.8 +0.7
comp=Z,0.4nm,0.8s,baz=247,slow=5.1,SNR=2.6
INK Inuvik 88.81 342 P P 03 18 10.7 +0.5
comp=Z,0.4nm,0.6s,baz=128,slow=1.8,SNR=5.8
H11N3 WAKE ISLAND Hyl 18.17 286 T T 05 32 41.8
baz=91
H11N2 WAKE ISLAND Hyl 18.18 286 T T 05 32 45.1
baz=91,slow=74
H11N1 WAKE ISLAND Hyl 18.19 286 T T 05 32 46.2
baz=91,slow=74
H11S2 WAKE ISLAND Hyl 18.30 285 T T 05 32 53.7
baz=94,slow=75,SNR=7.7
H11S1 WAKE ISLAND Hyl 18.31 285 T T 05 32 58.3
baz=94,slow=75,SNR=9.6
H11S3 WAKE ISLAND Hyl 18.32 285 T T 05 32 55.3
baz=94,slow=75,SNR=11
WRA Warramunga Arr 136.28 225 PKP PKPdf 03 24 39.5 +0.7
comp=Z,0.5nm,0.9s,baz=128,slow=1.9,SNR=3.7

LDG 25 03:12:48.2±0.1, 43.05N×0.19W, h2km, Md2.9/3, Ml2.8/19, Error ellipse: s-maj=1.1km s-min=1.0km az=155.0
MRB 25 03:12:48.0±0.4, 43.05N×0.20W, h5km±3km, ML2.2/18, Error ellipse: s-maj=1.5km s-min=1.1km az=177.0
STR 25 03:12:49.0±0.3, 43.N±2.×.±., h0km, MLv2.1/7
MDD 25 03:12:48.2±0.2, 43.06N×0.19W, h3km±4km, mbLg2.5/15, 2D, Error ellipse: s-maj=3.0km s-min=1.7km az=6.0, PRXIMO, Pyrenees

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PYLO Lourdes 0.11 68 Pg Pg 03 12 50.6 +0.1
PYLO Sg Sg 03 12 52.5 +0.6
PYLO Lourdes 0.11 68 P Pg 03 12 50.5 +0.1
PYLO S Sg 03 12 52.3 +0.4
408nm,0.3s
ETSF Etsaut 0.32 240 ePg Pg 03 12 53.7 -0.7
ETSF eSg Sg 03 12 57.6 -0.9
233nm,0.2s
ETSF Etsaut 0.32 240 Pg Pg 03 12 53.7 -0.7
ETSF Lg Lg 03 12 57.6
117nm,0.2s
ETSF Etsaut 0.32 240 Pg Pg 03 12 53.7 -0.7
ATE Arette 0.38 274 ⇓Pg Pg 03 12 55.1 -0.4
3.6nm,0.1s,SNR=18
ATE Lg Lg 03 13 00.7
160nm,0.1s,SNR=7.9
ATE Arette 0.38 274 P Pg 03 12 54.9 -0.6
ATE S Sg 03 13 00.7 +0.2
100nm,0.1s
EPF Esparros 0.39 94 ePg Pg 03 12 55.2 -0.5
EPF eSg Sg 03 13 00.5 -0.2
182nm,0.4s
EPF Esparros 0.39 94 Pg Pg 03 12 55.2 -0.5
EPF Lg Lg 03 13 00.5
91nm,0.4s
EPF Esparros 0.39 94 Pg Pg 03 12 55.2 -0.5
FMON Montouss 0.44 89 P Pg 03 12 56.8 +0.1
FMON S Sg 03 13 03.2 +0.8
48nm,0.3s
ECHI Chisagues Biel 0.48 144 Pg Pg 03 12 56.9 -0.6
ECHI Sg Sg 03 13 02.9 -0.9
ECHI Chisagues Biel 0.48 144 ⇓Pg Pg 03 12 56.8 -0.7
7.1nm,0.1s,SNR=18
ECHI Lg Lg 03 13 02.8
73nm,0.1s,SNR=7.9
ECHI Chisagues Biel 0.48 144 P Pg 03 12 56.8 -0.7
URDF Urds 0.48 322 Pg Pb 03 12 59.6 +0.3
URDF Sg Sb 03 13 06.8 -0.1
SJPF Ste Jean 0.76 275 ePg Pg 03 13 02.5 -0.4
SJPF eSg Sg 03 13 11.2 -1.6
33nm,0.3s
SJPF Ste Jean 0.76 275 Pg Pg 03 13 02.5 -0.4
SJPF Lg Lg 03 13 11.2
16nm,0.3s
SJPF Ste Jean 0.76 275 Pg Pg 03 13 02.5 -0.4
CARA Val d'Aran 0.82 115 P Pg 03 13 03.4 -0.5
CARA S Sg 03 13 15.0 +0.5
82nm,0.2s
EORO Oroz-Betelu 0.84 259 Pg Pg 03 13 03.6 -0.8
2.6nm,0.1s,SNR=15
EORO Lg Lg 03 13 15.2
44nm,0.2s,SNR=19
EORO Oroz-Betelu 0.84 259 Pg Pg 03 13 03.6 -0.8
TERF Tercis-les-Bai 0.92 313 Pg Pn 03 13 07.5 -0.5
MLS Moulis 0.94 96 Pg Pg 03 13 05.6 -0.8
MLS Sg Sb 03 13 19.6 -0.5
MLS Moulis 0.94 96 Pg Pg 03 13 05.6 -0.8
MLS Lg Lg 03 13 19.2
0.4nm,0.3s
MLS Moulis 0.94 96 P Pg 03 13 05.6 -0.7
MLS S Sg 03 13 19.3 +0.7
EALK Alkurruntz 0.98 280 Pg Pb 03 13 08.2 +0.3
EALK Alkurruntz 0.98 280 Pg Pg 03 13 06.8 -0.3
1.2nm,0.1s,SNR=4.0
EALK Lg Lg 03 13 19.2
26nm,0.2s
CTRE Tremp 1.02 136 Pg Pg 03 13 07.1 -0.7
CTRE Lg Lg 03 13 21.1
31nm,0.3s
CTRE Tremp 1.02 136 P Pg 03 13 07.1 -0.7
CTRE S Sg 03 13 21.2 +0.2
31nm,0.3s
EARA Aranguren 1.06 255 Pg Pg 03 13 08.1 -0.5
2.4nm,0.2s,SNR=4.0
EARA Lg Lg 03 13 22.9
19nm,0.2s,SNR=7.9
CEST Esterri de Car 1.15 113 Pg Pg 03 13 09.1 -1.3
CEST Lg Lg 03 13 25.5
23nm,1.4s
CEST Esterri de Car 1.15 113 P Pg 03 13 09.1 -1.2
CEST S Sg 03 13 25.5 +0.2
23nm,1.4s
CSOR Sort 1.19 125 Pg Pg 03 13 10.3 -0.7
0.6nm,0.1s,SNR=14
CSOR Lg Lg 03 13 26.7
18nm,0.1s
CSOR Sort 1.19 125 P Pg 03 13 10.0 -1.0
CSOR S Sg 03 13 26.6 +0.2
34nm,0.3s
ESAC San Caprasio 1.35 189 Pg Pn 03 13 13.7 -0.4
25nm,0.2s,SNR=32
ESAC Lg Lg 03 13 32.2
225nm,0.3s,SNR=18
CAVN Les Avellanes 1.36 149 Pg Pn 03 13 12.7 -1.5
CAVN Lg Lg 03 13 31.4
30nm,0.2s
CAVN Les Avellanes 1.36 149 P Pn 03 13 12.7 -1.5
CAVN S Sg 03 13 31.4 -0.6
60nm,0.2s
CORG Organya 1.38 126 Pg Pn 03 13 13.4 -1.1
CORG Lg Lg 03 13 32.3
CORG Organya 1.38 126 P Pn 03 13 13.4 -1.0
CORG S Sg 03 13 32.3 -0.4
MONQ Montcuq 1.65 37 Pn Pn 03 13 19.2 0.0
MONQ Sn Sb 03 13 40.7 +0.3
FNEB Nbias 1.69 94 Pg Pb 03 13 20.1 +0.1
CLLI Llivia 1.69 109 Pg Pb 03 13 20.0 0.0
0.1nm,0.2s,SNR=17
CLLI Lg Lg 03 13 42.8
14nm,0.2s,SNR=18
CLLI Llivia 1.69 109 P Pn 03 13 18.3 -0.5
CLLI S Sn 03 13 40.4 -0.6
12nm,0.3s
EMIR Miracle 1.71 131 Pg Pb 03 13 19.8 -0.5
1.3nm,0.1s,SNR=17
EMIR Lg Lg 03 13 42.9
15nm,0.2s,SNR=10
EMIR Miracle 1.71 131 Pg Pb 03 13 19.8 -0.5
MTLF Montolieu 1.78 80 eP Pn 03 13 20.1 +0.2
MTLF Montolieu 1.78 80 ePg Pb 03 13 21.5 0.0
MTLF eSg Sb 03 13 44.0 -0.2
15nm,0.3s
MTLF Montolieu 1.78 80 Pg Pb 03 13 21.6 +0.1
MTLF Montolieu 1.78 80 Pg Pb 03 13 21.5 0.0
MTLF Lg Lg 03 13 44.0
7.7nm,0.3s
MTLF Montolieu 1.78 80 Pg Pb 03 13 21.5 0.0
CBRU Bruguera 1.91 113 Pg Pn 03 13 21.6 -0.1
CBRU Lg Lg 03 13 46.3
12nm,0.4s
CBRU Bruguera 1.91 113 P Pn 03 13 21.2 -0.6
CBRU S Sn 03 13 45.5 -0.8
23nm,0.4s
EPOB Poblet 1.95 151 Pg Pb 03 13 24.1 -0.3
0.8nm,0.1s,SNR=11
EPOB Lg Lg 03 13 48.6
7.1nm,0.1s,SNR=9.4
EPOB Poblet 1.95 151 P Pn 03 13 21.4 -0.8
EPOB S Sn 03 13 46.6 -0.6
9.3nm,0.2s
CORI Orista 1.98 122 Pg Pn 03 13 22.0 -0.6
CORI Lg Lg 03 13 48.0
23nm,0.4s
CORI Orista 1.98 122 P Pn 03 13 22.1 -0.5
CORI S Sn 03 13 47.7 -0.1
23nm,0.4s
LFF La Frestale 2.00 19 ePn Pn 03 13 21.8 -1.0
LFF La Frestale 2.00 19 ePg Pb 03 13 25.6 +0.4
LFF eSn Sn 03 13 45.0 -3.3
34nm,0.3s
LFF eSg Sn 03 13 51.5 -0.9
37nm,0.3s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LFF	La Frestale	2.00	19	Pn	Pn	03 13 21.8	-1.0
LFF				Pg	Pb	03 13 25.6	+0.4
LFF				Sn	Sn	03 13 45.0	-3.3
	17nm,0.3s						
LFF				Lg	Lg	03 13 51.5	
	19nm,0.3s						
ERTA	Horta de San J	2.13	169	Pg	Pb	03 13 26.6	-0.9
	1.2nm,0.2s,SNR=13						
ERTA				Lg	Lg	03 13 54.7	
	12nm,0.2s,SNR=5.0						
ERTA	Horta de San J	2.13	169	P	Pn	03 13 24.4	-0.4
ERTA				S	Sn	03 13 51.1	-0.7
	8.2nm,0.2s						
CBEU	Beuda	2.26	110	Pn	Pn	03 13 26.3	-0.2
CBEU				Lg	Lg	03 13 54.9	
	32nm,0.4s						
CBEU	Beuda	2.26	110	P	Pn	03 13 26.4	-0.1
CBEU				S	Sn	03 13 54.3	-0.5
	32nm,0.4s						
SJAF	Saint Jean de	2.33	103	Pg	Pg	03 13 32.0	-0.9
	0.4nm,0.1s,SNR=7.9						
SJAF				Lg	Lg	03 14 03.8	
	5.9nm,0.3s,SNR=7.9						
CFON	Fontmartina	2.33	123	Pn	Pn	03 13 28.1	+0.5
	0.1nm,0.1s,SNR=7.9						
CFON				Lg	Lg	03 14 00.4	
	37nm,0.2s,SNR=5.0						
CFON	Fontmartina	2.33	123	P	Pn	03 13 26.9	-0.6
CFON				S	Sn	03 13 56.2	-0.5
	33nm,0.3s						
EJON	La Jonquera	2.34	104	Pg	Pb	03 13 31.7	+0.6
	2.1nm,0.2s,SNR=7.9						
EJON				Lg	Lg	03 14 03.5	
	7.9nm,0.3s,SNR=9.0						
CMAS	Mas de Barbera	2.36	171	P	Pn	03 13 27.0	-0.8
CMAS				S	Sn	03 13 56.2	-1.1
	13nm,0.2s						
ELAN	Lanestosa	2.38	275	Pg	Pb	03 13 32.8	+1.0
	0.4nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	03 13 57.0	-0.9
	0.5nm,0.2s,SNR=7.9						
ELAN				Lg	Lg	03 14 01.2	
	5.2nm,0.4s,SNR=7.9						
CAF	Calviac	2.48	40	ePg	Pb	03 13 34.2	+0.9
CAF				eSn	Sn	03 13 56.6	-3.6
CAF				eSg	Sg	03 14 06.5	-1.2
	11nm,0.2s						
CAF	Calviac	2.48	40	Pg	Pb	03 13 34.2	+0.9
CAF				Sn	Sn	03 13 56.6	-3.6
CAF				Lg	Lg	03 14 06.5	
	5.3nm,0.2s						
RJF	Les Rejaudoux	2.56	28	ePn	Pn	03 13 29.0	-1.6
RJF	Les Rejaudoux	2.56	28	ePg	Pb	03 13 35.5	+0.7
RJF				eSn	Sn	03 13 59.0	-3.2
RJF				eSg	Sg	03 14 08.8	-1.6
	16nm,0.3s						
RJF	Les Rejaudoux	2.56	28	Pn	Pn	03 13 29.0	-1.6
RJF				Pg	Pb	03 13 35.5	+0.7
RJF				Sn	Sn	03 13 59.0	-3.2
RJF				Lg	Lg	03 14 08.8	
	7.8nm,0.3s						
CCAS	Cassa de la Se	2.57	116	P	Pn	03 13 30.2	-0.6
CCAS				S	Sn	03 14 01.9	-0.6
	13nm,0.7s						
ETOR	Torete	2.64	213	Pn	Pn	03 13 31.4	-0.3
	4.8nm,0.2s,SNR=14						
ETOR				Pg	Pb	03 13 37.4	+1.3
	8.6nm,0.3s,SNR=7.9						
ETOR				Sn	Sn	03 14 02.4	-1.8
	17nm,0.2s,SNR=7.9						
ETOR				Lg	Lg	03 14 11.9	
	18nm,0.3s						
EMOS	Mosqueruela	2.70	185	Pg	Pb	03 13 37.3	+0.1
	1.1nm,0.2s,SNR=94						
EMOS				Lg	Lg	03 14 11.4	
	11nm,0.5s,SNR=5.0						
LASF	Ste Croix	3.11	70	ePn	Pn	03 13 36.4	-1.8
LASF				eSn	Sn	03 14 11.7	-4.1
LASF				eSg	Sg	03 14 25.9	-2.2
	4.3nm,0.3s						
LASF	Ste Croix	3.11	70	Pn	Pn	03 13 36.4	-1.8
LASF				Sn	Sn	03 14 11.7	-4.1
LASF				Lg	Lg	03 14 25.9	
	2.2nm,0.3s						
MFF	Saint Martin d	3.54	0	ePn	Pn	03 13 42.2	-1.9
MFF	Saint Martin d	3.54	0	ePg	Pg	03 13 54.6	-1.5
MFF				eSg	Sg	03 14 39.5	-2.6
	9.0nm,0.4s						
TCF	Toulx Ste Croi	3.65	27	ePn	Pn	03 13 43.4	-2.3
TCF	Toulx Ste Croi	3.65	27	ePg	Pb	03 13 55.8	+2.4
TCF				eSg	Sg	03 14 42.9	-2.7
	5.7nm,0.3s						
TCF	Toulx Ste Croi	3.65	27	Pn	Pn	03 13 43.4	-2.3
EARI	Arriondas	3.68	276	Pn	Pn	03 13 47.6	+1.5
	0.1nm,0.2s,SNR=7.9						
EARI				Sn	Sn	03 14 28.2	-1.8
	0.1nm,0.1s,SNR=7.9						
GUD	Guadarrama	3.82	232	Pn	Pn	03 13 47.3	-0.8
	0.3nm,0.2s,SNR=7.9						
GUD				Sn	Sn	03 14 31.0	-2.5
	1.2nm,0.2s,SNR=7.9						
VIVF	Saint-Julien-l	3.94	61	ePn	Pn	03 13 47.7	-1.9
VIVF	Saint-Julien-l	3.94	61	ePg	Pb	03 14 00.8	+2.5
VIVF				eSn	Sn	03 14 32.0	-4.3
VIVF				eSg	Sg	03 14 51.8	-3.0
	3.2nm,0.4s						
VIVF	Saint-Julien-l	3.94	61	Pn	Pn	03 13 47.7	-1.9
VIVF				Pg	Pb	03 14 00.8	+2.5
VIVF				Sn	Sn	03 14 32.0	-4.3
VIVF				Lg	Lg	03 14 51.8	
	1.6nm,0.4s						
ETOS	Mallorca	3.99	145	Sn	Sn	03 14 33.5	-3.9
	0.3nm,0.1s,SNR=7.9						
BGF	Bois d'Agland	4.11	31	ePn	Pn	03 13 50.0	-1.9
BGF	Bois d'Agland	4.11	31	ePg	Pb	03 14 04.5	-2.5
BGF				eSg	Sg	03 14 57.0	-3.3
	7.5nm,0.3s						
BGF	Bois d'Agland	4.11	31	Pn	Pn	03 13 50.0	-1.9
EIBI	Ibiza	4.19	163	Sn	Sn	03 14 37.6	-4.8
	0.4nm,0.2s,SNR=7.9						
SMRF	Simiane la Rot	4.29	76	ePn	Pn	03 13 52.9	-1.5
SMRF				eSg	Sg	03 15 02.6	-3.4
	0.9nm,0.3s						
ESDC	Sonseca Array	4.42	221	Sn	Sn	03 14 42.0	-6.1
	baz=40,slow=24,SNR=7.9						
AVF	Avril sur Loir	4.50	33	ePn	Pn	03 13 55.0	-2.2
AVF				eSn	Sn	03 14 45.6	-4.4
AVF				eSg	Sg	03 15 10.2	-2.5
	2.8nm,0.3s						
AVF	Avril sur Loir	4.50	33	Pn	Pn	03 13 55.0	-2.2
AVF				Sn	Sn	03 14 45.6	-4.4
SMF	Signal de Mont	4.59	37	ePn	Pn	03 13 56.7	-1.8
SMF				eSn	Sn	03 14 47.1	-5.2
SMF				eSg	Sg	03 15 12.3	-3.3
	2.4nm,0.3s						
SMF	Signal de Mont	4.59	37	Pn	Pn	03 13 56.7	-1.8
SMF				Sn	Sn	03 14 47.1	-5.2
PAB	San Pablo	4.71	223	Pn	Pn	03 13 57.3	-2.9
	0.1nm,0.2s,SNR=7.9						
PAB				Sn	Sn	03 14 50.8	-4.5
	1.7nm,0.2s,SNR=7.9						
SSF	Saint Saulge	4.78	32	ePn	Pn	03 13 58.9	-2.2
SSF	Saint Saulge	4.78	32	ePg	Pb	03 14 17.1	-2.7
SSF				eSg	Sg	03 15 18.3	-3.5
	2.0nm,0.3s						
SSF	Saint Saulge	4.78	32	Pn	Pn	03 13 58.9	-2.2
ECAL	Calabor	4.97	259	Sn	Sn	03 14 59.2	-2.6
	0.2nm,0.1s,SNR=7.9						
LOR	Lormes	5.09	33	ePn	Pn	03 14 03.7	-1.7
LOR	Lormes	5.09	33	ePg	Pg	03 14 23.0	-2.7
	baz=211						
LOR				eSg	Sg	03 15 28.0	-3.6
	3.8nm,0.4s,baz=209						
QUIF	Quistinic	5.29	338	ePn	Pn	03 14 06.4	-1.7
LDF	La Druitiere	5.54	0	ePn	Pn	03 14 09.8	-1.7
LDF	La Druitiere	5.54	0	ePg	Pg	03 14 30.5	-3.8
LDF				eSg	Sg	03 15 41.9	-4.1
	0.9nm,0.2s						
ROSF	Rostrenen	5.71	339	ePn	Pn	03 14 12.0	-1.8
FLN	La Foliniere	5.71	358	eSg	Sg	03 15 47.4	-4.1
	2.5nm,0.3s						

LDG 25 03:13:12.9±0.1, 43.06N×0.20W, h2km, Md2.3/2, Ml2.5/15, Error ellipse: s-maj=1.9km s-min=1.6km az=146.0

STR 25 03:13:14.0±0.5, 43°N±2°×°±°, h0km, MLv1.9/4

MDD 25 03:13:13.2±0.4, 43.04N×0.19W, h0km, mbLg2.2/10, Error ellipse: s-maj=5.1km s-min=2.5km az=7.0, PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PYLO	Lourdes	0.12	62	Pg	Pg	03 13 15.6	+0.1
PYLO				Sg	Sg	03 13 17.6	+0.6
ETSF	Etsaut	0.30	242	ePg	Pg	03 13 18.5	-0.5
ETSF				eSg	Sg	03 13 21.9	-1.0
	98nm,0.3s						
ETSF	Etsaut	0.30	242	Pg	Pg	03 13 18.5	-0.5
ETSF				Lg	Lg	03 13 21.9	
	49nm,0.3s						
ATE	Arette	0.37	277	Pg	Pg	03 13 20.3	0.0
	6.4nm,0.1s,SNR=7.9						
ATE				Lg	Lg	03 13 25.5	
	53nm,0.1s,SNR=7.9						
EPF	Esparros	0.39	91	ePg	Pg	03 13 20.4	-0.3
EPF				eSg	Sg	03 13 26.2	+0.4
	102nm,0.3s						
EPF	Esparros	0.39	91	Pg	Pg	03 13 20.4	-0.3
EPF				Lg	Lg	03 13 26.2	
	51nm,0.3s						
ECHI	Chisagues Biel	0.47	143	Pg	Pg	03 13 22.1	-0.1
ECHI				Sg	Sg	03 13 27.8	-0.6
ECHI	Chisagues Biel	0.47	143	Pg	Pg	03 13 22.1	-0.2
	7.3nm,0.0s,SNR=7.9						
ECHI				Lg	Lg	03 13 27.5	
	23nm,0.0s,SNR=7.9						
URDF	Urds	0.49	324	Pg	Pb	03 13 24.6	-0.1
URDF				Sg	Sb	03 13 33.1	+0.6
SJPF	Ste Jean	0.76	276	ePg	Pg	03 13 27.5	-0.2
SJPF				eSg	Sg	03 13 37.1	-0.5
	10nm,0.2s						
SJPF	Ste Jean	0.76	276	Pg	Pg	03 13 27.5	-0.2
SJPF				Lg	Lg	03 13 37.1	
	5.2nm,0.2s						
EORO	Oroz-Betelu	0.83	260	Lg	Lg	03 13 40.5	
	12nm,0.1s,SNR=7.9						
EALK	Alkurruntz	0.98	281	Lg	Lg	03 13 44.9	
	5.5nm,0.1s,SNR=7.9						
CSOR	Sort	1.18	124	Lg	Lg	03 13 52.1	
	12nm,0.2s,SNR=7.9						
ESAC	San Caprasio	1.33	189	Lg	Lg	03 13 57.5	
	35nm,0.1s,SNR=7.9						
MONQ	Montcuq	1.67	37	Sn	Sg	03 14 06.9	+0.2
CLLI	Llivia	1.69	109	Lg	Lg	03 14 08.4	
	3.4nm,0.1s,SNR=7.9						
FNEB	Nbias	1.69	94	Sg	Sb	03 14 07.1	0.0
EMIR	Miracle	1.70	131	Lg	Lg	03 14 08.3	
	4.6nm,0.1s,SNR=7.9						
MTLF	Montolieu	1.79	80	ePg	Pn	03 13 45.2	-0.1
MTLF				eSg	Sn	03 14 08.5	-0.3
	4.5nm,0.2s						
MTLF	Montolieu	1.79	80	Sg	Sg	03 14 10.5	-0.1
MTLF	Montolieu	1.79	80	Lg	Lg	03 14 08.5	
	2.2nm,0.2s						
MTLF	Montolieu	1.79	80	Sg	Pn	03 13 45.2	-0.1
EPOB	Poblet	1.93	150	Lg	Lg	03 14 14.3	
	2.9nm,0.1s,SNR=7.9						
LFF	La Frestale	2.01	19	ePg	Pb	03 13 50.0	-0.7
LFF				eSg	Sb	03 14 16.4	+0.1
	15nm,0.3s						
LFF	La Frestale	2.01	19	Lg	Lg	03 14 16.4	
	7.4nm,0.3s						
ERTA	Horta de San J	2.12	169	Lg	Lg	03 14 20.4	
	4.7nm,0.2s,SNR=7.9						
CFON	Fontmartina	2.33	122	Lg	Lg	03 14 27.0	
	11nm,0.2s,SNR=7.9						
CAF	Calviac	2.49	40	ePg	Pb	03 13 58.3	-0.5
CAF				eSg	Sb	03 14 31.3	+1.2
	0.8nm,0.1s						
CAF	Calviac	2.49	40	Lg	Lg	03 14 31.3	
	0.4nm,0.1s						
RJF	Les Rejaudoux	2.58	28	ePg	Pb	03 14 00.5	+0.2
RJF				eSg	Sb	03 14 33.5	+1.0
	4.9nm,0.2s						
RJF	Les Rejaudoux	2.58	28	Lg	Lg	03 14 33.5	
	2.5nm,0.2s						
LASF	Ste Croix	3.12	69	eSg	Sb	03 14 49.9	+1.7
	2.3nm,0.3s						
LASF	Ste Croix	3.12	69	Lg	Lg	03 14 49.9	
	1.2nm,0.3s						
MFF	Saint Martin d	3.56	1	ePg	Pb	03 14 18.8	+1.8
MFF				eSg	Sb	03 15 03.6	+2.8
	1.6nm,0.2s						
MFF	Saint Martin d	3.56	1	Lg	Lg	03 15 03.6	
	0.8nm,0.2s						
TCF	Toulx Ste Croi	3.67	27	ePg	Pg	03 14 21.4	-2.1
TCF				eSg	Sb	03 15 07.4	+3.4
	2.2nm,0.2s						
TCF	Toulx Ste Croi	3.67	27	Lg	Lg	03 15 07.4	
	1.1nm,0.2s						
BGF	Bois d'Agland	4.13	31	ePn	Pn	03 14 14.1	-3.4
BGF				eSg	Sg	03 15 21.7	-4.1
	4.0nm,0.3s						
BGF	Bois d'Agland	4.13	31	Lg	Lg	03 15 21.7	
	2.0nm,0.3s						
AVF	Avril sur Loir	4.52	33	eSg	Sg	03 15 34.7	-3.5
	1.1nm,0.3s						
SMF	Signal de Mont	4.61	37	ePn	Pn	03 14 21.2	-2.9
SMF				eSg	Sg	03 15 37.7	-3.4
	1.3nm,0.3s						
SSF	Saint Saulge	4.80	32	ePg	Pb	03 14 41.0	+2.9
SSF				eSg	Sg	03 15 43.3	-4.0
	1.4nm,0.4s						
LOR	Lormes	5.11	33	ePg	Pb	03 14 47.0	+3.6
LOR				eSg	Sg	03 15 51.9	-5.3
	1.1nm,0.3s,baz=215						

IDC 25 03:34:28.8±0.8, 48.31N×157.62E, h0km, mb3.4/5, mb1 3.7/6, mb1mx3.4/41, mbtmp3.4/6, ML2.6/1, Error ellipse: s-maj=20.3km s-min=9.5km az=102.0

KRSC 25 03:34:32.3±1.7, 48.67N×157.96E, h38km±47km, ML3.7

ISC 25 03:34:34.1±1.1, 48.50N±0.08×157.7E±0.1, h35km, n33, σ1§64/37, mb3.4/5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAU	Pauzhetka	3.03	349	P	Pn	03 35 19.3	-0.2
PAU				S	Sn	03 35 54.3	-0.2
KDTR	Khodutka, Kamc	3.33	4	P	Pn	03 35 22.9	-0.7
KDTR				S	Sn	03 36 00.3	-1.5
ASAK	Asacha	3.89	2	P	Pn	03 35 30.6	-0.9
ASAK				S	Sn	03 36 14.1	-1.9
RUS	Russkaya	3.98	7	P	Pn	03 35 31.6	-0.9
RUS				S	Sn	03 36 16.3	-1.5
MTVR	Mutnovka	4.00	4	P	Pn	03 35 33.0	0.0
GRL	Gorelyy	4.07	3	P	Pn	03 35 34.2	+0.3
GRL				S	Sn	03 36 20.6	+0.3
KRMR	Karymshinskiy	4.35	3	P	Pn	03 35 37.3	-0.3
KRMR				S	Sn	03 36 25.5	-1.5
APC	Apacha	4.45	356	P	Pn	03 35 39.4	+0.4
DALK	Dalny	4.59	8	P	Pn	03 35 40.7	-0.2
DALK				S	Sn	03 36 32.1	-0.8
PETK	Petropavlovsk-	4.62	0	Pn	Pn	03 35 41.9	+0.6
	1.2nm,0.3s,baz=164,slow=16,SNR=5.8						
PETK				Sn	Sn	03 36 40.4	+6.7
	baz=216,slow=24,SNR=1.1						
UGLR	Uglovaya	4.77	8	P	Pn	03 35 44.7	+1.1
AVH	Avacha	4.82	7	P	Pn	03 35 45.2	+1.0
AVH				S	Sn	03 36 36.9	-1.9
SMAR	Somma	4.82	8	P	Pn	03 35 44.9	+0.5
SPN	Mys Shipunski	4.84	17	S	Sn	03 36 37.5	-1.6
KOK	Koryaka	4.84	7	P	Pn	03 35 45.3	+0.8
SDLR	Sedlovina	4.85	8	P	Pn	03 35 43.7	-0.9
KRER	Koryakskii	4.86	7	P	Pn	03 35 43.1	-1.7
KRER				S	Sn	03 36 38.1	-1.8
KRX	Arik	4.91	7	P	Pn	03 35 46.2	+0.8
KZV	Kizimen	6.82	13	P	Pn	03 36 11.8	+0.1
TUMD	Tumrok D	6.92	13	P	Pn	03 36 15.4	+2.4
TUMR	Tumrok	6.96	12	P	Pn	03 36 15.4	+1.8
KBTR	Krutoberegovo	8.33	20	P	Pn	03 36 31.3	-1.0
KSRS	Korea Array	24.27	254	P	P	03 39 48.0	+0.1
	0.7nm,0.7s,baz=50,slow=11,SNR=2.1						
H11N2	WAKE ISLAND Hy	29.64	162	T	T	04 11 28.9	
	baz=345						
H11N3	WAKE ISLAND Hy	29.66	162	T	T	04 11 33.6	
	baz=345						
H11N1	WAKE ISLAND Hy	29.66	162	T	T	04 11 33.5	
	baz=345						
H11S1	WAKE ISLAND Hy	30.80	163	T	T	04 12 59.4	
	baz=348						
H11S3	WAKE ISLAND Hy	30.80	163	T	T	04 13 01.6	
	baz=348						
H11S2	WAKE ISLAND Hy	30.81	163	T	T	04 13 01.0	
	baz=348						
YKA	Yellowknife Ar	47.64	39	P	P	03 43 08.0	+1.6
	0.3nm,0.8s,baz=300,slow=7.7,SNR=3.3						
MKAR	Makanchi Array	48.88	298	P	P	03 43 15.1	-1.0
	0.2nm,0.5s,baz=68,slow=6.2,SNR=2.4						
TXAR	Lajitas Array	73.94	64	P	P	03 46 06.6	+0.8
	0.3nm,0.6s,baz=291,slow=5.4,SNR=3.2						
ASAR	Alice Springs	74.93	203	P	P	03 46 10.4	-1.0
	0.2nm,0.3s,baz=24,slow=7.1,SNR=2.1						

NIED 25 03:36:00, 43.40N×147.60E, h32km, Mw3.7 Best double couple: M_0 4.59000×10[14] NP1:φs272.00000°, δ71.00000°, λ-22.00000°. NP2:φs10.00000°, δ69.00000°, λ-160.00000°.

MOS 25 03:36:13.7±1.2, 43.38N×147.96E, h25km, mb4.1/1, Error ellipse: s-maj=12.5km s-min=10.7km az=125.5

JMA 25 03:36:15.0±0.4, 43.42N×147.65E, h3km, M3.7

SKHL 25 03:36:16.8±0.5, 43.42N×147.85E, h45km±5km, mb4.4/4

IDC 25 03:36:19.0±4.0, 43.43N×147.79E, h50km±36km, mb3.3/7, mb1 3.5/10, mb1mx3.3/39, mbtmp3.6/10, ML3.0/3, MS2.8/3, Ms1 2.8/3, ms1mx2.5/24, Error ellipse: s-maj=33.8km s-min=19.4km az=107.0

ISC 25 03:36:13.1±2.7, 43.48N±0.06×147.76E±0.06, h3km±16km, n48, σ1§39/52, mb3.7/7, 3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.47	266	P	Pn	03 36 41.0	+0.5
NEM2				eS	Sn	03 37 00.0	-0.2
NMR	Nemuro--Hokkai	1.48	267	iP	Pn	03 36 41.1	+0.5
NMR				eS	Sg	03 36 59.8	-0.9
NMR	Nemuro--Hokkai	1.48	267⇓	iPN	Pn	03 36 41.1	+0.5
NMR				eS	Sg	03 36 59.8	-0.9
YUK	Yuzh-Kuril'sk	1.48	293	iP	Pn	03 36 41.9	+1.3
YUK				AMB	AMB	03 36 42.2	
	40nm,0.2s						
YUK				iS	Sb	03 37 00.4	-0.1
YUK				A	A	03 37 06.1	
	170nm,0.4s						
YUK				A	A	03 37 06.1	
	1μm,0.4s						
YUK	Yuzh-Kuril'sk	1.48	293d	iPN	Pn	03 36 41.9	+1.3
YUK				iS	Sb	03 37 00.2	-0.3
YUK				pmax	pmax		
	comp=N,42μm,0.2s						
YUK				pmax	pmax		
	comp=E,86μm,0.2s						
YUK				pmax	pmax		
	comp=Z,430μm,0.2s						
YUK				smax	smax		
	comp=E,1μm,0.2s						
YUK				smax	smax		
	comp=N,2μm,0.4s						
YUK				smax	smax		
	comp=N,2μm,0.9s						
YUK				smax	smax		
	comp=E,2μm,1.1s						
GRPR	Tuman	1.53	290	eP	Pn	03 36 42.1	+0.8
GRPR				AMB	AMB	03 36 42.8	
	comp=E,300nm,0.4s						
GRPR				eS	Sb	03 37 01.0	-0.8
GRPR				A	A	03 37 03.0	
	comp=E,260nm,0.3s						
GRPR				A	A	03 37 03.0	
	comp=E,640nm,0.3s						
GRPR	Tuman	1.53	290	ePN	Pn	03 36 42.1	+0.8
GRPR				eS	Sb	03 37 01.0	-0.8
GRPR				pmax	pmax		
	comp=Z,291nm,0.4s						
GRPR				pmax	pmax		
	comp=N,85nm,0.3s						
GRPR				pmax	pmax		
	comp=E,69nm,0.1s						
GRPR				smax	smax		
	comp=E,644nm,0.2s						
GRPR				smax	smax		
	comp=N,3μm,0.3s						
GLVR	Golovnino	1.65	280	eP	Pn	03 36 44.1	+1.2
GLVR				AMB	AMB	03 36 45.0	
	comp=N,110nm,0.3s						
GLVR				eS	Sb	03 37 05.1	-0.1
GLVR				A	A	03 37 12.0	
	comp=N,240nm,0.2s						
GLVR				A	A	03 37 12.0	
	comp=N,120nm,0.2s						
GLVR	Golovnino	1.65	280	PN	Pn	03 36 44.1	+1.2
GLVR				eS	Sb	03 37 05.1	-0.1
GLVR				pmax	pmax		
	comp=Z,105nm,0.3s						
GLVR				smax	smax		
	comp=N,236nm,0.1s						
GLVR				smax	smax		
	comp=E,1μm,0.2s						
KUR	Kuril'sk	1.76	3	iP	Pn	03 36 46.1	+1.6
KUR				AMB	AMB	03 36 47.0	
	comp=E,180nm,0.3s						
KUR				iS	Sn	03 37 06.4	-0.9
KUR				A	A	03 37 08.0	
	comp=E,270nm,0.2s						
KUR				A	A	03 37 08.0	
	comp=E,340nm,0.2s						
KUR	Kuril'sk	1.76	3d	iPN	Pn	03 36 46.0	+1.6
KUR				iS	Sn	03 37 06.3	-1.0
KUR				pmax	pmax		
	comp=Z,181nm,0.3s						
KUR				pmax	pmax		
	comp=E,92nm,0.2s						
KUR				pmax	pmax		
	comp=N,120nm,0.3s						
KUR				smax	smax		
	comp=N,273nm,0.2s						
KUR				smax	smax		
	comp=E,339nm,0.2s						
JKHN	Kushirohamanak	1.94	259	P	Pb	03 36 48.8	-0.2
JRA	Rausu	1.97	285	P	Pn	03 36 48.5	+1.2
JNSB	Nemuroshibetsu	2.02	280	P	Pn	03 36 49.7	+1.7
JNK	Nakash	2.21	274	P	Pn	03 36 51.8	+1.1
JNK				eS	Sn	03 37 18.6	+0.1
JAK	Akkeshi	2.29	259	P	Pn	03 36 52.5	+0.8
JTKR	Abashiri--Toko	2.83	281	P	Pn	03 37 01.6	+2.4
JAR	Ashorobuto	2.91	268	P	Pn	03 37 02.1	+1.8
JOB	Onbets	2.92	260	P	Pn	03 37 02.5	+2.1
JMP	Maruseppu	3.23	281	P	Pn	03 37 08.0	+3.3
JCH	Churui	3.33	257	P	Pn	03 37 07.7	+1.6
JCH				eS	Sn	03 37 46.0	-0.2
ERM	Erimo	3.69	248	iPN	Pn	03 37 12.9	+2.0
JFR	Furan	3.78	267	P	Pn	03 37 15.1	+2.9
JKA	Kamikawa-asahi	3.79	282	eP	Pn	03 37 13.6	+1.3
ASAJ	Asahikawa	3.79	282	P	Pn	03 37 16.6	+4.2
	comp=E,1.1nm,0.3s,baz=112,slow=12,SNR=5.9						
JNBK	Urakawa-nobuka	3.87	254	P	Pn	03 37 15.1	+1.7
YSS	Yuzh-Sakhalins	4.96	316	eP	Pn	03 37 29.0	+0.6
YSS	Yuzh-Sakhalins	4.96	316	iPN	Pn	03 37 29.0	+0.6
MJAR	Matsushiro Arr	10.07	230	P	Pn	03 38 39.5	+0.9
	comp=E,0.0nm,0.3s,baz=30,slow=13,SNR=4.3						
MA2	Magadan	16.23	5	LR	LR	03 46 18.1	
	comp=E,44nm,19.4s,baz=294,slow=37						
KSRS	Korea Array	16.23	255	LR	LR	03 46 38.9	
	comp=E,29nm,18.4s,baz=15,slow=38						
JNU	Nakatsue	16.77	238	LR	LR	03 45 31.8	
	comp=E,32nm,22.0s,baz=160,slow=33						
SEY	Seymchan	19.68	6	P	P	03 40 43.1	+0.1
	comp=E,0.1nm,0.3s,baz=175,slow=7.6,SNR=6.5						
H11N2	WAKE ISLAND Hy	28.61	140	T	T	04 13 05.7	
	baz=330,slow=75,SNR=31						
H11N1	WAKE ISLAND Hy	28.62	140	T	T	04 13 03.3	
	baz=330,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	28.62	140	T	T	04 13 07.2	
	baz=330,slow=75,SNR=36						
H11S1	WAKE ISLAND Hy	29.58	141	T	T	04 14 07.8	
	baz=332,slow=76,SNR=76						
H11S3	WAKE ISLAND Hy	29.58	141	T	T	04 14 08.1	
	baz=332,slow=76,SNR=45						
H11S2	WAKE ISLAND Hy	29.59	141	T	T	04 14 14.7	
	baz=332,slow=76,SNR=35						
ILAR	Eielson Array	41.45	36	P	P	03 44 00.8	+0.1
	comp=E,0.4nm,0.7s,baz=266,slow=7.4,SNR=3.5						
MKAR	Makanchi Array	45.10	298	P	P	03 44 30.7	+0.3
	comp=E,0.5nm,0.6s,baz=81,slow=8.5,SNR=7.5						

MKAR	Makanchi Array	45.10	298	eP	P	03 44 31.1	+0.7
MKAR	Makanchi Array	45.10	298	iP	P	03 44 31.1	+0.7
YKA	Yellowknife Ar	55.79	34	P	P	03 45 50.9	0.0
	comp=E,0.2nm,0.5s,baz=301,slow=7.2,SNR=3.3						
ARCES	ARCESS Array B	59.66	340	P	P	03 46 17.2	-0.9
	comp=E,2.1nm,0.9s,baz=33,slow=7.5,SNR=2.9						
WRA	Warramunga Arr	64.30	194	P	P	03 46 48.2	-1.6
	comp=E,0.4nm,0.7s,baz=14,slow=6.7,SNR=4.1						
FINES	FINESS Array B	65.32	333	P	P	03 46 55.4	-0.6
	comp=E,2.0nm,0.9s,baz=34,slow=10,SNR=3.8						
ASAR	Alice Springs	68.01	194	P	P	03 47 13.5	-0.1
	comp=E,0.2nm,0.3s,baz=18,slow=6.2,SNR=3.8						

*BJI **25** 04:42:35.8±0.0, 0.78S×125.42E, h72km, mB5.0/44, mb5.0/63, Ms4.6/16, Ms7 4.4/6*
*MOS **25** 04:42:36.9±1.0, 0.31S×125.11E, h47km, mb5.3/32, Error ellipse: s-maj=10.7km s-min=5.5km az=111.5*
*DJA **25** 04:42:39.2±0.7, 0.S±2.×12.5E±., h26km±6km, M4.9/22, mb5.2/15, mB5.3/12, MLv5.2/22, Mw(mB)4.7/12*
*NEIC **25** 04:42:39.5±1.7, 0.34S±0.06×125.16E±0.05, h63km±6km, mb5.0/78, Error ellipse: s-maj=9.8km s-min=7.6km az=154.0*
*IDC **25** 04:42:39.8±1.8, 0.29S×125.07E, h57km±16km, mb4.5/23, mb1 4.5/26, mb1mx4.5/33, mbtmp4.7/26, MS3.5/19, Ms1 3.5/19, ms1mx3.4/35, Error ellipse: s-maj=13.1km s-min=9.8km az=74.0*
*KLM **25** 04:42:42.0, 0.25S×125.35E, h70km, mb5.0*
ISC 25 04:42:40.0±0.5, 0.38S±0.03×125.17E±0.03, h64km±4km, n281, σ1.61/284, mb5.0/98, 11C-7D, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	1.52	309	P	Pn	04 43 04.2	-1.0
KMSI				S	Sn	04 43 25.8	+1.7
SANI	Sanana	1.85	154	P	Pn	04 43 08.1	-1.4
SANI				S	Sn	04 43 29.2	-2.7
LBMI	Labuha	2.34	96	P	Pn	04 43 15.7	-0.5
LBMI				S	Sn	04 43 42.7	-1.2
TNTI	Ternate	2.47	62	P	Pn	04 43 18.1	+0.1
TNTI				S	Sn	04 43 46.8	-0.4
TNTI	Ternate	2.47	62		Pn	04 43 17.8	-0.2
TNTI				Sn	Sn	04 43 47.3	+0.1
LUWI	Luwuk	2.49	255	P	Pn	04 43 18.5	+0.3
LUWI				S	Sn	04 43 52.3	+4.8
LUWI	Luwuk	2.49	255		Pn	04 43 18.6	+0.3
MRSI	Marisa	3.34	285	P	Pn	04 43 29.2	-0.7
NLAI	Namlea	3.43	146	P	Pn	04 43 29.7	-1.4
NLAI				S	Sn	04 44 09.4	-1.1
APSI	Ampana	3.56	262	P	Pn	04 43 33.8	+0.9
KDI	Kendari	4.37	216	P	Pn	04 43 43.3	-0.7
MSAI	Masohi	4.77	128	P	Pn	04 43 49.8	+0.4
MSAI				S	Sn	04 44 44.5	+1.1
MPSI	Mapaga	5.32	278	P	Pn	04 43 58.3	+1.3
	1.7nm5μm439nm,0.8s						
BBSI	Bau Bau	5.70	207	P	Pn	04 44 04.0	+1.8
	0.3nm746nm81nm,0.7s						
TTSI	Tana Toraja	5.97	244	P	Pn	04 44 06.7	+0.8
	2.5nm6μm703nm,0.6s						
SIJI	Sorong	6.11	95	P	Pn	04 44 08.6	+0.8
	4.2nm,0.3s,baz=238,slow=21,SNR=5.2						
SIJI				S	Sn	04 45 19.1	+2.7
	2.9nm,0.3s,baz=222,slow=22,SNR=1.3						
BNDI	Bandanaira	6.26	131	P	Pn	04 44 09.8	-0.1
	1.8nm286nm,0.7s						
BNSI	Bone	6.45	232	P	Pn	04 44 13.2	+0.8
	0.9nm3μm311nm,0.6s						
DDMP	Don Marcelino,	6.46	5	eP	Pn	04 44 14.9	+2.2
DDMP				eS	Sn	04 45 29.1	+4.1
SPSI	Sidrap Palu	6.47	237	P	Pn	04 44 14.2	+1.5
	1.7nm5μm512nm,0.6s						
SKMP	Bagumbayan, Su	6.88	355	eP	Pn	04 44 18.6	+0.2
SKMP				eS	Sn	04 45 39.7	+4.3
BKSI	Bulukumba	7.04	226	P	Pn	04 44 22.1	+1.6
	0.5nm2μm139nm,0.4s						
KAPI	Kappang	7.11	230	P	Pn	04 44 23.0	+1.5
	18nm,0.3s,baz=43,slow=5.4,SNR=30						
KAPI				S	Sn	04 45 40.4	-0.4
	baz=196,slow=20,SNR=1.0						
KCP	Kidapawan	7.34	359	⇓iP	Pn	04 44 27.7	+3.0
MATI	Mati	7.36	8	eP	Pn	04 44 26.1	+1.1
MATI				eS	Sn	04 45 49.3	+2.3
DAV	Davao City (W)	7.41	3	P	Pn	04 44 32.0	+6.3
	67nm,0.3s,baz=32,slow=13,SNR=3.4						
DAV				LR	LR	04 47 40.9	
	comp=Z,995nm,19.3s,baz=154,slow=41						
DAV	Davao City (W)	7.41	3		Pn	04 44 23.5	-2.1
FAKI	Fak Fak	7.51	110	P	Pn	04 44 25.0	-1.9
	0.3nm66nm,1.1s						
FAKI	Fak Fak	7.51	110	Pn	Pn	04 44 25.5	-1.5
CTBH	Cotabato--PC H	7.61	353	⇓iP	Pn	04 44 31.0	+2.7
SMKI	Samarinda	7.96	270	P	Pn	04 44 42.7	+9.5
BUKP	Musuan	8.21	359	eP	Pn	04 44 39.6	+3.1
BKB	Balikpapan	8.32	264	Pn	Pn	04 44 36.9	-1.2
PAGZ	Pagadian	8.37	348	eP	Pn	04 44 38.6	-0.1
MMRI	Maumere	8.71	200	Pn	Pn	04 44 44.2	+0.9
EDFI	Ende, Flores	9.01	203	P	Pn	04 44 48.9	+1.3
	358nm40nm,0.9s						
SOEI	Soe	9.36	186	P	Pn	04 44 50.7	-1.6
	2μm209nm,1.0s						
SOEI	Soe	9.36	186		Pn	04 44 51.7	-0.7
KKM	Kota Kinabalu	10.99	306		Pn	04 45 13.6	-1.0
SBUM	Sibu	13.25	282		Pn	04 45 45.6	+0.1
SBUM	Sibu	13.25	282	P	Pn	04 45 55.0	+2.0
JAGI	Jajag, Banyuwa	13.61	234		Pn	04 45 49.4	-0.8
MTN	Manton Dam	13.72	155	P	Pn	04 45 52.2	+0.6
	baz=14,SNR=11						
MTN	Manton Dam	13.72	155		Pn	04 45 51.3	-0.3
KDU	Kakadu	14.21	150	P	Pn	04 45 57.4	-0.7
	baz=14,SNR=20						
KSM	Kuching	14.98	277	P	P	04 46 10.2	-2.0
KSM	Kuching	14.98	277	P	P	04 46 14.0	+1.7
TGY	Tagaytay City	14.99	344	P	Pn	04 46 09.7	+1.3
	78nm,0.3s,baz=246,slow=8.7,SNR=3.6						
TGY				LR	LR	04 51 51.2	
	comp=Z,94nm,20.0s,baz=100,slow=37						
KNRA	Kununurra	15.61	167	P	Pn	04 46 16.9	+0.7
	baz=16,SNR=39						
KNRA	Kununurra	15.61	167		Pn	04 46 16.4	+0.2
KNRA				IAmb	IAmb	04 46 17.7	
	comp=Z,141nm,0.8s						
SMRI	Semarang	16.12	245		P	04 46 23.9	-1.0
SMRI				IAmb	IAmb	04 46 34.3	
	comp=Z,128nm,1.0s						
FITZ	Fitzroy Crossi	17.61	179	P	P	04 46 41.9	+0.6
	baz=18,SNR=41						
FITZ	Fitzroy Crossi	17.61	179	P	P	04 46 42.1	+0.8
	comp=Z,2.1nm,0.3s,baz=14,slow=8.3,SNR=52						
FITZ				LR	LR	04 53 50.5	
	comp=Z,107nm,21.7s,baz=8.5,slow=38						
FITZ	Fitzroy Crossi	17.61	179	P	P	04 46 40.8	-0.4
SZP	Santa	18.41	346	P	P	04 46 50.1	-0.1
LEM	Lembang	18.65	250	LR	LR	04 55 23.2	
	comp=Z,318nm,19.2s,baz=58,slow=41						
CISI	Cisompet, Garu	18.72	247	P	P	04 46 52.6	-1.1
CISI				IAmb	IAmb	04 46 57.9	
	comp=Z,75nm,0.6s						
CNJI	Cibinong	19.26	249	P	Pn	04 47 00.3	-0.9
DLV	T Lat	20.60	307	P	P	04 47 13.1	-1.2
WB0	Warramunga Arr	21.28	155	P	P	04 47 20.7	-0.6
WB0				IAmb	IAmb	04 47 22.2	
	comp=Z,31nm,0.6s						
WRAB	Tennant Creek	21.41	156	P	P	04 47 22.4	-0.4
WRAB	Tennant Creek	21.41	156	ceP	P	04 47 22.6	-0.1
WRAB				pmax	pmax		
	comp=Z,32nm,1.7s						
WRA	Warramunga Arr	21.41	156	P	P	04 47 22.6	-0.2
	comp=Z,15nm,0.5s,baz=334,slow=11,SNR=29						
WRA				PcP	PcP	04 51 25.6	+1.2
	comp=Z,0.6nm,0.4s,baz=348,slow=2.0,SNR=2.7						
WB2	Warramunga Arr	21.42	156	P	P	04 47 22.4	-0.4
MYKOM	Kota Tinggi	21.43	276	P	P	04 47 21.8	-1.2
MYKOM	Kota Tinggi	21.43	276	P	P	04 47 32.0	+9.0
WR0	Warramunga Arr	21.51	155	P	P	04 47 23.4	-0.4
PSA00	Pilbara Seismi	21.69	194	P	P	04 47 26.3	+0.5
COEN	Coen	22.35	128	P	P	04 47 32.9	+0.1
	baz=22,SNR=14						
COEN	Coen	22.35	128	P	P	04 47 33.3	+0.4
TWG	Pinlang	23.41	350	P	P	04 47 41.2	-2.3
YULB	Yu-li	23.93	351	P	P	04 47 44.5	-3.8
YULB				IAmb	IAmb	04 47 51.0	
	comp=Z,34nm,0.6s						
SSLB	Suanglung	24.37	351	IAmb	IAmb	04 47 57.8	
	comp=Z,44nm,0.7s						
QIS	Mount Isa	24.52	146	P	P	04 47 55.6	+1.9
	baz=25,SNR=129						
GIRL	Giralia	24.55	205	P	P	04 47 56.3	+2.4
	baz=25,SNR=6.3						
GIRL	Giralia	24.55	205	P	P	04 47 55.0	+1.0
GIRL				IAmb	IAmb	04 47 57.5	
	comp=Z,69nm,0.8s						
IPM	Ipoh	24.60	282	P	P	04 47 54.4	-0.2
IPM	Ipoh	24.60	282	P	P	04 47 58.0	+3.4
ASAR	Alice Springs	24.65	161	P	P	04 47 56.2	+1.4
	comp=Z,12nm,0.6s,baz=348,slow=13,SNR=84						
ASAR				pP	pP	04 48 07.7	-1.9
	comp=Z,17nm,0.6s,baz=329,slow=10,SNR=20						
ASAR				PcP	PcP	04 51 32.9	+1.7
	comp=Z,2.4nm,0.4s,baz=351,slow=2.0,SNR=10						
ASAR				ScP	ScP	04 55 05.0	+0.4
	comp=Z,1.7nm,1.2s,baz=353,slow=3.7,SNR=3.1						
ASAR				LR	LR	04 59 14.2	
	comp=Z,55nm,20.8s,baz=326,slow=40						
NACB	Ninganchiao	24.66	352	P	P	04 47 55.4	+0.6
NACB				IAmb	IAmb	04 48 07.4	
	comp=Z,40nm,1.2s						
WRKA	Warakurna	24.70	173	P	P	04 47 56.8	+1.6
	baz=25,SNR=46						
YOJ	Yonaguni jima	24.79	355	P	P	04 47 56.2	+0.2
YOJ				IAmb	IAmb	04 48 02.2	
	comp=Z,110nm,1.3s						
YOJ	Yonaguni jima	24.79	355	P	P	04 47 56.2	+0.2
YOJ				pmax	pmax		
	comp=Z,110nm,1.3s						
YHNB	Yeheng	25.17	352	IAmb	IAmb	04 48 01.1	
	comp=Z,49nm,1.1s						
TATO	Taipei	25.46	352	P	P	04 48 02.1	0.0
KNMB	Chin-men Tao	25.56	346	P	P	04 48 01.5	-1.5
KNMB				IAmb	IAmb	04 48 05.8	
	comp=Z,40nm,0.8s						
MTSU	Mount Surprise	25.79	134	P	P	04 48 07.3	+2.0
	baz=26,SNR=8.7						
RPSI	Rantau Prapat	26.42	277	P	P	04 48 09.8	-1.3
PSI	Prapat	26.43	277	LR	LR	04 59 07.1	
	comp=Z,350nm,19.6s,baz=64,slow=38						
PSI	Prapat	26.43	277	P	P	04 48 09.8	-1.5
PSI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MEEK	Meekatharra	26.86	193	P	P	04 48 15.4	+0.5
	baz=27,SNR=14						
JOW	Kunigami	27.22	6	P	P	04 48 18.9	+0.8
	comp=Z,4.6nm,0.5s,baz=170,slow=12,SNR=14						
JOW	Kunigami	27.22	6	IAmb	IAmb	04 48 22.8	
	comp=Z,75nm,1.2s						
CTA	Charters Tower	28.45	135	P	P	04 48 30.1	+1.0
	comp=Z,3.9nm,0.8s,baz=325,slow=12,SNR=1.9						
MORW	Morawa	29.83	196	P	P	04 48 42.2	+1.0
	baz=30,SNR=4.3						
MORW	Morawa	29.83	196	P	P	04 48 41.2	0.0
FORT	Forrest	30.36	175	P	P	04 48 47.2	+1.4
	baz=30,SNR=40						
FORT	Forrest	30.36	175	P	P	04 48 45.8	0.0
KMBL	Kambalda	30.97	185	P	P	04 48 52.3	+1.0
	baz=31,SNR=5.5						
BLDU	Ballidu	31.12	194	P	P	04 48 53.3	+0.7
	baz=31,SNR=15						
KLBR	Kellerberrin	31.83	192	P	P	04 48 59.9	+1.1
	baz=32,SNR=5.6						
CMAR	Chiang Mai Arr	31.86	307	P	P	04 48 59.1	-0.2
	comp=Z,1.5nm,0.3s,baz=137,slow=7.1,SNR=17						
CMAR				LR	LR	05 01 41.3	
	comp=Z,109nm,21.8s,baz=144,slow=36						
CMAR	Chiang Mai Arr	31.86	307	ceP	P	04 48 59.5	+0.2
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CHTO	Chiang Mai	32.05	308	P	P	04 48 59.9	-1.1
CHTO				IAmb	IAmb	04 49 01.9	
	comp=Z,20nm,1.3s						
CHTO	Chiang Mai	32.05	308	P	P	04 48 59.9	-1.1
CHTO				pmax	pmax		
	comp=Z,20nm,1.3s						
GYA	Guiyang	32.10	328	⇑iP	P	04 49 03.4	+2.0
GYA				pmax	pmax		
	comp=Z,20nm,0.7s						
WHN	Wuhan	32.43	342	⇓P	P	04 49 06.3	+2.2
MUN	Mundaring	32.55	194	P	P	04 49 06.0	+0.8
	baz=33,SNR=3.2						
NJ2	Nanjing	32.81	350	eP	P	04 49 08.9	+1.5
NJ2				pmax	pmax		
	comp=Z,13nm,0.7s						
KMI	Kunming	33.38	321	P	P	04 49 15.8	+3.1
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
JNU	Nakatsue	33.76	9	LR	LR	05 02 59.1	
	comp=Z,39nm,21.5s,baz=204,slow=36						
JNU	Nakatsue	33.76	9	P	P	04 49 14.9	-0.8
JNU				IAmb	IAmb	04 49 18.3	
	comp=Z,28nm,0.9s						
BBOO	Buckleboo	33.85	163	P	P	04 49 17.6	+1.1
	baz=34,SNR=7.3						
STKA	Stephens Creek	34.96	155	P	P	04 49 28.1	+1.9
	baz=35,SNR=24						
STKA	Stephens Creek	34.96	155	P	P	04 49 28.0	+1.9
	comp=Z,29nm,0.9s,baz=327,slow=8.6,SNR=48						
STKA	Stephens Creek	34.96	155	P	P	04 49 26.4	+0.3
HTT	Hallett	35.32	160	P	P	04 49 31.3	+2.1
	baz=36,SNR=4.9						
CMSA	Cobar Meteorol	36.57	150	P	P	04 49 42.4	+2.5
	baz=37,SNR=18						
TJN	Taejon	36.63	3	ceP	P	04 49 40.8	+0.5
INU	Inuyama	37.23	16	IAmb	IAmb	04 49 47.4	
	comp=Z,26nm,0.9s						
XAN	Xi'an	37.49	338	P	P	04 49 48.0	+0.3
XAN				pmax	pmax		
	comp=Z,25nm,1.0s						
XAN				pmax	pmax		
	comp=Z,66nm,4.3s						
XAN	Xi'an	37.49	338	IAmb	IAmb	04 49 48.9	
	comp=Z,20nm,0.8s						
KSRS	Korea Array	37.73	4	P	P	04 49 50.3	+0.7
	comp=Z,8.5nm,0.6s,baz=182,slow=9.7,SNR=32						
KSRS				LR	LR	05 05 24.4	
	comp=Z,59nm,21.1s,baz=196,slow=36						
KS19	Wonju Array Si	37.78	3	P	P	04 49 49.4	-0.6
KS19				IAmb	IAmb	04 50 05.0	
	comp=Z,10.0nm,0.8s						
MAJO	Matsushiro	38.68	17	P	P	04 49 57.8	+0.1
MAJO	Matsushiro	38.68	17	P	P	04 49 57.8	+0.1
MAJO				pmax	pmax		
	comp=Z,25nm,0.7s						
MAT	Matsushiro	38.68	17	P	P	04 49 57.0	-0.7
MJAR	Matsushiro Arr	38.68	17	P	P	04 49 57.4	-0.3
	comp=Z,19nm,0.6s,baz=190,slow=8.7,SNR=39						
MJAR				LR	LR	05 03 48.7	
	comp=Z,28nm,21.9s,baz=245,slow=33						
ARMA	Armidale	39.04	142	P	P	04 50 03.5	+2.6
	baz=39,SNR=4.9						
ARMA	Armidale	39.04	142	P	P	04 50 01.5	+0.6
DL2	Dalian	39.23	356	P	P	04 50 04.4	+2.2
DL2				pmax	pmax		
	comp=Z,51nm,0.7s						
YNG	Young	40.14	150	P	P	04 50 13.0	+3.1
	baz=40,SNR=10						
BJT	Baijiatuau	41.04	349	IAmb	IAmb	04 50 19.6	
	comp=Z,19nm,0.9s						
BJI	Beijing	41.06	349	P	P	04 50 18.6	+1.3
BJI				pmax	pmax		
	comp=Z,22nm,0.9s						
BJI				LR	LR		
	comp=Z,81nm,5.4s						
BJI				LR	LR		
	comp=Z,74nm,5.3s						
SHL	Shillong	41.23	311	P	P	04 50 18.9	-0.2
SHL	Shillong	41.23	311	P	P	04 50 18.9	-0.2
SHL				pmax	pmax		
	comp=Z,13nm,1.0s						
CAN	Canberra	41.25	150	P	P	04 50 19.0	0.0
CAN				IAmb	IAmb	04 50 24.3	
	comp=Z,28nm,1.2s						
CAN	Canberra	41.25	150	P	P	04 50 19.0	0.0
CAN				pmax	pmax		
	comp=Z,28nm,1.2s						
LZH	Lanzhou	41.36	334	eP	P	04 50 20.8	+0.8
LZH				pP	pwP	04 50 37.3	-1.4
LZH				sP	sP	04 50 44.8	+2.3
LZH				PP	PP	04 51 57.3	+0.6
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,130nm,6.2s						
LZH				LR	LR		
	comp=Z,160nm,16.3s						
LZH				LR	LR		
	comp=Z,180nm,15.7s						
TOO	Toolangi	41.48	155	P	P	04 50 24.3	+3.4
	baz=42,SNR=9.7						
TOO	Toolangi	41.48	155	P	P	04 50 21.4	+0.5
TOO				IAmb	IAmb	04 50 25.4	
	comp=Z,29nm,0.9s						
TOO	Toolangi	41.48	155	P	P	04 50 21.4	+0.5
TOO				pmax	pmax		
	comp=Z,29nm,0.9s						
KWAJ	Kwajalein Atol	43.25	77	P	P	04 50 34.8	-0.8
KWAJ	Kwajalein Atol	43.25	77	P	P	04 50 34.8	-0.8
KWAJ				pmax	pmax		
	comp=Z,654nm,1.5s						
VLA	Vladivostok	43.72	7	iP	P	04 50 40.9	+2.0
VLA				pmax	pmax		
	comp=Z,45nm,0.8s						
SANVU	Saraoutou	44.11	112	P	P	04 50 41.3	-1.1
SANVU				IAmb	IAmb	04 50 46.4	
	comp=Z,55nm,1.3s						
LSA	Lhasa	44.12	316	P	P	04 50 42.1	-0.8
LSA	Lhasa	44.12	316	P	P	04 50 42.1	-0.8
LSA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LHI	Lord Howe Isla	44.57	137	P	P	04 50 46.2	+0.3
USA0B	Ussuriysk Arra	44.80	7	P	P	04 50 48.2	+0.8
USA0B				IAmb	IAmb	04 50 51.4	
	comp=Z,27nm,0.9s						
USA0B	Ussuriysk Arra	44.80	7	iP	P	04 50 48.3	+0.8
USRK	Ussuriysk Ar.	44.80	7	P	P	04 50 48.0	+0.5
	comp=Z,17nm,0.7s,baz=191,slow=5.8,SNR=20						
USRK				LR	LR	05 09 23.3	
	comp=Z,38nm,21.4s,baz=180,slow=36						
MDJ	Mudanjiang	44.98	4	P	P	04 50 50.0	+1.1
MDJ				pmax	pmax		
	comp=Z,27nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,69nm,3.5s						
MDJ	Mudanjiang	44.98	4	P	P	04 50 49.7	+0.8
PALK	Pallekele	45.00	281	LR	LR	05 10 12.9	
	comp=Z,83nm,20.4s,baz=102,slow=37						
ODAN	Odare	45.33	310	eP	P	04 50 51.2	-1.1
	comp=Z,17nm,0.6s						
TAPN	Taplejung	45.34	310	eP	P	04 50 51.5	-0.9
	comp=Z,18nm,0.4s						
NOUC	Port Laguerre	45.49	121	P	P	04 50 52.6	-0.8
GTA	Gaotai	45.91	332	⇑P	P	04 50 56.6	+0.1
GTA				pP	pP	04 51 11.0	-1.0
GTA				pmax	pmax		
	comp=Z,41nm,0.8s						
GTA				pmax	pmax		
	comp=Z,78nm,5.6s						
GTA				LR	LR		
	comp=Z,120nm,17.8s						
GTA				LR	LR		
	comp=Z,460nm,19.0s						
RAMN	Ramite	45.98	309	eP	P	04 50 57.0	-0.5
	comp=Z,30nm,0.5s						
TEY	Ternei	46.35	11	⇓eP	P	04 51 00.0	+0.3
TEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=N,20nm,0.6s						
TEY				pmax	pmax		
	comp=Z,30nm,0.6s						
JIRN	Jiri	46.65	310	eP	P	04 51 02.0	-0.9
	comp=Z,34nm,0.4s						
GUN	Gumba	47.02	310	eP	P	04 51 04.5	-1.2
	comp=Z,38nm,0.5s						
PKIN	Phulchoki	47.22	309	eP	P	04 51 06.7	-0.5
	comp=Z,8.9nm,0.4s						
KKN	Kakani	47.42	309	eP	P	04 51 07.5	-1.1
	comp=Z,11nm,0.4s						
DMN	Daman	47.46	309	eP	P	04 51 09.4	+0.3
	comp=Z,15nm,0.5s						
GKN	Gorkha	48.02	309	eP	P	04 51 12.5	-0.7
	comp=Z,18nm,0.4s						
DANN	Dangsing	48.86	309	eP	P	04 51 18.6	-1.3
	comp=Z,69nm,0.5s						
YSS	Yuzh-Sakhalins	49.59	16	eP	P	04 51 21.4	-3.3
KLR	Kul'dur	49.74	6	iP	P	04 51 25.7	-0.1
KLR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ULN	Ulaanbaatar	50.58	344	P	P	04 51 31.7	-0.7
ULN				IAmb	IAmb	04 51 35.3	
	comp=Z,23nm,1.4s						
ULN	Ulaanbaatar	50.58	344	P	P	04 51 31.7	-0.7
ULN				pmax	pmax		
	comp=Z,23nm,1.4s						
SONM	Songino Array	50.73	344	P	P	04 51 33.0	-0.5
	comp=Z,7.8nm,0.6s,baz=160,slow=9.2,SNR=25						
SONM	Songino Array	50.73	344	P	P	04 51 33.0	-0.5
GRNR	Gornyy	51.85	9	⇑iP	P	04 51 42.7	+1.0
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,40nm,17.0s						
ZAK	Zakamensk	53.92	343	eP	P	04 51 55.5	-1.6
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TLY	Talaya	54.97	344	P	P	04 52 04.4	-0.1
TLY	Talaya	54.97	344	eP	P	04 52 05.7	+1.1
TLY				pmax	pmax		
	comp=Z,50nm,0.9s						
WMQ	Urumqi	55.26	328	eP	P	04 52 09.4	+2.5
WMQ				sP	sP	04 52 32.1	+2.3
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,68nm,6.3s						
WMQ				LR	LR		
	comp=Z,220nm,22.3s						
BOD	Bodaibo	58.71	353	eP	P	04 52 31.5	+0.7
BOD				pmax	pmax		
	comp=Z,29nm,1.1s						
NIL	Nilore	59.28	310	P	P	04 52 34.0	-1.4
NIL				IAmb	IAmb	04 52 37.1	
	comp=Z,8.5nm,0.5s						
NIL	Nilore	59.28	310	P	P	04 52 34.0	-1.4
NIL				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PDGK	Podgornoye	59.65	323	P	P	04 52 38.0	+0.1
PETK	Petropavlovsk-	59.80	22	P	P	04 52 39.6	+1.1
	comp=Z,21nm,0.7s,baz=181,slow=5.3,SNR=22						
PETK				PP	PP	04 54 54.0	+2.9
	comp=Z,1.7nm,0.6s,baz=249,slow=12,SNR=4.8						
KSH	Kashi	59.92	317	P	P	04 52 42.1	+2.3
KSH				PP	PP	04 55 00.4	+7.7
KSH				ScP	ScP	04 57 17.4	-3.8
KSH				S	S	05 00 40.3	-7.0
KSH				ScS	ScS	05 02 18.8	-6.0
KSH				SS	SS	05 04 43.6	-1.2
KSH				pmax	pmax		
	comp=Z,19nm,1.4s						
KSH				pmax	pmax		
	comp=Z,380nm,5.1s						
KSH				LR	LR		
	comp=Z,330nm,5.9s						
KSH				LR	LR		
	comp=Z,440nm,5.0s						
KSH				LR	LR		
	comp=Z,180nm,6.9s						
MK31	Makanchi Array	60.09	327	IAmb	IAmb	04 52 43.1	
	comp=Z,11nm,0.9s						
MK31	Makanchi Array	60.09	327	P	P	04 52 39.6	-1.1
MKAR	Makanchi Array	60.09	327	P	P	04 52 39.7	-1.0
	comp=Z,12nm,0.5s,baz=124,slow=8.1,SNR=122						
MKAR				LR	LR	05 20 06.6	
	comp=Z,54nm,19.8s,baz=110,slow=38						
MAKZ	Makanchi	60.27	327	P	P	04 52 41.5	-0.3
MAKZ	Makanchi	60.27	327	P	P	04 52 40.8	-1.1
BHW	Baring Head	60.60	139	P	P	04 52 44.4	+0.2
KZA	Kyzart	61.65	320	P	P	04 52 52.0	+0.1
	SNR=6.2						
UCH	Uchtor	62.20	320	P	P	04 52 58.3	+2.7
	SNR=13						
YAK	Yakutsk	62.34	2	P	P	04 52 56.0	+0.5
YAK	Yakutsk	62.34	2	eP	P	04 52 55.8	+0.3
YAK				e*PP	pP	04 53 06.8	-5.1
YAK				e		04 53 36.1	
YAK				e		04 55 12.3	

YAK ePPP PPP 04 56 44.1
YAK eS S 05 01 17.7 +0.7
YAK e*SS sS 05 01 43.9 -0.7
YAK e 05 02 41.7
YAK eSS SS 05 05 21.3 -0.3
YAK pmax pmax
comp=Z,27nm,0.7s
YAK pmax pmax
comp=N,11nm,1.0s
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK pmax pmax
comp=Z,53nm,3.3s
YAK pmax pmax
comp=E,18nm,2.4s
YAK pmax pmax
comp=N,55nm,3.0s
YAK smax smax
comp=N,46nm,2.3s
YAK smax smax
comp=E,26nm,2.0s
AAK Ala-Archa 62.41 320 P P 04 52 59.2 +2.6
SNR=6.1
AAK Ala-Archa 62.41 320 P P 04 52 56.7 0.0
AAK IAmb IAmb 04 52 59.8
comp=Z,9.7nm,0.9s
AAK Ala-Archa 62.41 320ceP P 04 52 57.2 +0.6
AAK pmax pmax
comp=Z,20nm,1.7s
AML Almayashu 62.69 319 P P 04 53 00.9 +2.1
SNR=15
USP Ospenovka 62.72 321 P P 04 53 00.7 +2.2
SNR=12
KBL Kabul 62.85 310 P P 04 52 58.3 -1.5
KBL IAmb IAmb 04 53 03.0
comp=Z,12nm,0.8s
KBL Kabul 62.85 310 P P 04 52 58.3 -1.5
KBL pmax pmax
comp=Z,12nm,0.8s
EKS2 Erkin-Say 62.89 320 P P 04 53 02.1 +2.3
SNR=9.0
MA2 Magadan 63.05 14 P P 04 53 00.5 +0.2
MA2 Magadan 63.05 14ceP P 04 53 02.1 +1.8
MA2 pmax pmax
comp=Z,34nm,1.3s
ZAA0 Zalesovo Array 63.57 335 IAmb IAmb 04 53 05.8
comp=Z,9.1nm,0.9s
ZALV Zalesovo Beam 63.57 335 P P 04 53 02.4 -1.4
comp=Z,4.7nm,0.5s,baz=119,slow=5.2,SNR=25
ZALV LR LR 05 22 04.5
comp=Z,45nm,18.1s,baz=120,slow=37
KURK Kurchatov 64.40 329 P P 04 53 09.0 -0.3
KURK Kurchatov 64.40 329 P P 04 53 09.0 -0.3
KURK pmax pmax
comp=Z,29nm,0.9s
KK31 Karatay Array 65.22 319 P P 04 53 13.6 -1.3
KK31 IAmb IAmb 04 53 17.4
comp=Z,11nm,1.1s
KK31 Karatay Array 65.22 319 iP P 04 53 14.9 0.0
KKAR Karatay Array 65.22 319 P P 04 53 13.7 -1.2
KKAR IAmb IAmb 04 53 17.4
comp=Z,11nm,1.1s
KKAR Karatay Array 65.22 319 P P 04 53 13.7 -1.2
KKAR pmax pmax
comp=Z,11nm,1.1s
SEY Seymchan 66.36 13 iP P 04 53 23.9 +2.1
BRVK Borovoye 70.01 328 P P 04 53 44.5 -0.4
BRVK IAmb IAmb 04 53 47.2
comp=Z,14nm,1.0s
BRVK Borovoye 70.01 328 P P 04 53 44.5 -0.4
BRVK pmax pmax
comp=Z,14nm,1.0s
GEYT Alibeck 72.29 310 P P 04 53 58.8 -0.3
comp=Z,1.6nm,0.6s,baz=131,slow=4.0,SNR=2.7
BILL Bilibino 73.90 15⇓eP P 04 54 09.0 +1.2
BILL e 04 54 24.8
BILL e 04 56 58.6
BILL pmax pmax
comp=Z,2.0nm,1.1s
NRIK Noril'sk 74.04 347 P P 04 54 07.8 -0.8
comp=Z,12nm,0.5s,baz=140,slow=4.7,SNR=14
NRIK LR LR 05 31 15.8
comp=Z,42nm,18.2s,baz=142,slow=39
AB31 Akbulak array 74.36 322 eP P 04 54 10.8 -0.1
ABKAR Akbulak array 74.36 322 IAmb IAmb 04 54 11.9
comp=Z,8.2nm,0.6s
AKTO Aktyubinsk 75.93 323 P P 04 54 19.4 -0.5
ARU Arti 77.58 329 P P 04 54 28.7 -0.4
ARU IAmb IAmb 04 54 32.1
comp=Z,14nm,1.0s
ARU Arti 77.58 329c iP P 04 54 28.1 -1.0
ARU S S 05 04 13.6 -1.9
ARU pmax pmax
comp=Z,15nm,1.0s
MAW Mawson 79.39 200 LR LR 05 30 09.3
comp=Z,12nm,18.1s,baz=62,slow=36
VNDA Vanda 79.58 172 LR LR 05 29 24.4
comp=Z,37nm,19.3s,baz=351,slow=35
KIRV Kirov 82.92 329 iP P 04 54 58.5 +0.8
ZEI Tsey 83.84 313 eP P 04 55 03.7 +0.6
ZEI pmax pmax
comp=Z,12nm,0.7s
AKH Akhalkalaki 84.00 312 IAmb IAmb 04 55 06.7
comp=Z,14nm,0.8s
KBZ Khabaz 84.67 314 P P 04 55 06.8 -0.1
comp=Z,4.7nm,0.9s,baz=153,slow=6.7,SNR=7.4
NEY Neytrino 84.75 313 iP P 04 55 07.7 0.0
NEY pmax pmax
comp=Z,2.0nm,1.5s
KIV Kislovodsk 84.84 314 eP P 04 55 06.1 -1.9
KIV pmax pmax
comp=Z,22nm,1.0s
PPT Papeete 85.36 107 P P 04 55 11.6 +0.7
comp=Z,44nm,0.9s,baz=294,slow=18,SNR=2.2
PRGR Permogore 85.36 332 eP P 04 55 08.8 -1.3
PRGR pmax pmax
comp=Z,39nm,0.8s
VRH Novokhopyorsk 86.18 321 eP P 04 55 14.2 -0.1
VRH pmax pmax
comp=Z,40nm,0.6s
VORD Divnogorie 87.69 321 eP P 04 55 21.2 -0.5
VORD pmax pmax
comp=Z,70nm,1.7s
VSR Storozhevoye 87.78 321 eP P 04 55 21.3 -0.8
VSR pmax pmax
comp=Z,20nm,1.2s
KMBO Kilima Mbogo 87.92 269 P P 04 55 25.1 +1.2
comp=Z,1.7nm,0.5s,baz=56,slow=7.8,SNR=5.5
KMBO Kilima Mbogo 87.92 269 P P 04 55 22.7 -1.2
LPSR Galich'ya Gora 88.01 322 eP P 04 55 23.1 -0.1
LPSR pmax pmax
comp=Z,10.0nm,0.5s
SYO Syowa Base 88.06 201⇑eX P 04 55 30.6 +7.6
KLMR Klimovskoe 88.20 331 eP P 04 55 19.9 -4.0
KLMR pmax pmax
comp=Z,22nm,1.4s
KLMR Klimovskoe 88.20 331 eP P 04 55 20.0 -4.0
KLMR AMP 04 55 28.4
comp=Z,22nm,1.4s
TOLK Toolik Lake Re 88.62 21 IAmb IAmb 04 55 28.7
comp=Z,9.9nm,1.4s
ANN Anapa 88.66 315 eP P 04 55 23.1 -3.3
ANN e*PP pP 04 55 41.4 -1.9
ANN eS SKSac 05 05 44.9 -5.4
ANN pmax pmax
comp=Z,63nm,0.9s
TMCR Tamitsa 89.09 334 eP P 04 55 26.7 -1.3
TMCR pmax pmax
comp=Z,21nm,0.6s
ILAR Eielson Array 89.46 25 P P 04 55 28.8 -0.9
comp=Z,0.8nm,0.6s,baz=244,slow=5.2,SNR=14
OBN Obninsk 89.51 325⇓eP P 04 55 30.3 +0.2
OBN e 04 58 57.4
OBN eSS SS 05 12 14.2 +1.9
OBN pmax pmax
comp=Z,14nm,0.5s
OBN MLR MLR
comp=Z,97nm,18.0s
APA Apatity 91.03 337⇓iP P 04 55 43.8 +6.8
APA pmax pmax
comp=Z,5.0nm,1.1s
APA MLR MLR
comp=Z,700nm,28.0s
BR131 Keskin Array S 91.42 310 IAmb IAmb 04 55 47.8
comp=Z,6.7nm,1.4s
BRTR Keskin Array B 91.42 310 P P 04 55 38.6 -1.1
comp=Z,1.1nm,0.6s,baz=123,slow=3.1,SNR=8.3
BRTR LR LR 05 43 58.6
comp=Z,21nm,19.1s,baz=356,slow=40
BRTR Keskin Array B 91.42 310 iP P 04 55 39.5 -0.2
BRTR pmax pmax
comp=Z,1.0nm,0.6s
DAWY Dawson 92.73 26 IAmb IAmb 04 55 48.4
comp=Z,9.6nm,1.3s
EPYK Eagle Plains 93.61 24 IAmb IAmb 04 55 51.3
comp=Z,5.5nm,0.8s
ARCES ARCESS Array B 93.74 340 P P 04 55 48.2 -1.3
comp=Z,2.6nm,0.8s,baz=91,slow=4.8,SNR=5.3
AKASG Malin Array Be 94.07 321 P P 04 55 50.7 -0.7
comp=Z,1.8nm,0.5s,baz=68,slow=4.8,SNR=10.0
INK Inuvik 94.53 21 P P 04 55 53.8 +0.7
INK IAmb IAmb 04 55 54.9
comp=Z,9.8nm,1.4s
INK Inuvik 94.53 21 P P 04 55 53.8 +0.7
INK pmax pmax
comp=Z,10.0nm,1.4s
FINES FINESS Array B 94.69 332 P P 04 55 53.0 -1.0
comp=Z,1.7nm,0.7s,baz=96,slow=4.3,SNR=2.8
BUR08 Bucovina Ar. S 97.01 318 IAmb IAmb 04 56 06.6
comp=Z,4.9nm,0.9s
BOSA Boshof 98.53 241 LR LR 05 35 09.1
comp=Z,31nm,21.0s,baz=139,slow=32
KOLS Kolonicke sedl 98.75 319 eP Pdif 04 56 13.8 +1.1
KOLS Kolonicke sedl 98.75 319 ePDIFF Pdif 04 56 13.8 +1.1
UZH Uzhgorod 98.79 319⇑iP Pdif 04 56 14.3 +1.4
CRVS Cervenica-Dubn 99.29 319 eP Pdif 04 56 16.0 +0.9
CRVS Cervenica-Dubn 99.29 319 ePDIFF Pdif 04 56 16.0 +0.9
LANS Liptovska Anna 100.53 320 eP Pdif 04 56 21.8 +1.1
LANS Liptovska Anna 100.53 320 ePDIFF Pdif 04 56 21.8 +1.1
MODS Modra-Piesok 102.11 320 eP Pdif 04 56 27.4 -0.3
MODS Modra-Piesok 102.11 320 ePDIFF Pdif 04 56 27.4 -0.3
YKA Yellowknife Ar 103.86 24 PP PKiKP 05 00 57.9 +5.4
comp=Z,0.2nm,0.9s,baz=301,slow=7.3,SNR=3.8
TORD Torodi Ar. Bea 122.61 285 PKP PKiKP 05 01 29.6 0.0
comp=Z,1.0nm,0.6s,baz=54,slow=2.0,SNR=5.9
TORD PKKPbc PKKPab 05 11 26.1 +2.3
comp=Z,0.6nm,0.9s,baz=214,slow=4.1,SNR=2.3
SCHQ Schefferville 124.84 8 PKP PKiKP 05 01 34.1 +1.1
comp=Z,1.7nm,0.7s,baz=338,slow=3.4,SNR=7.3
TXAR Lajitas Array 125.30 54 PKP PKiKP 05 01 36.3 +1.5
comp=Z,0.2nm,0.8s,baz=241,slow=1.9,SNR=2.7
DBIC Dimbokro 129.76 278 PKP PKiKP 05 01 44.1 +0.2
comp=Z,1.5nm,0.5s,baz=304,slow=3.6,SNR=3.0
PLCA Paso Flores 136.65 163 PKP PKPdf 05 01 56.3 +0.8
comp=Z,1.6nm,0.9s,baz=228,slow=15,SNR=3.5
PLCA Paso Flores 136.65 163 PKiKP 05 01 56.7 -0.6
CFA Coronel Fontan 145.74 159 PKPbc PKiKP 05 02 14.6 -1.5
comp=Z,3.4nm,0.4s,baz=186,slow=2.2,SNR=28
CPUP Villa Florida 153.33 175 PKPbc PKiKP 05 02 31.9 +0.1
comp=Z,1.1nm,0.7s,baz=230,slow=3.1,SNR=4.5
CPUP PKPab PKPab 05 02 43.7 +0.1
comp=Z,2.0nm,0.7s,baz=128,slow=1.6,SNR=5.6
CPUP Villa Florida 153.33 175 PKPbc 05 02 31.2 -0.5
CPUP PKPab 05 02 43.3 -0.4
LPAZ La Paz 158.86 142 PKPab PKPab 05 03 10.5 +2.1
comp=Z,0.6nm,0.6s,baz=164,slow=6.6,SNR=5.0

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*VIE **25** 04:46:34.0±0.8, 51.31N×16.21E, h0km, mb2.1/2, ml2.5/5, Error ellipse: s-maj=7.4km s-min=5.2km az=66.0 60 km WNW of Wroclaw Suspected Mining induced.*

ISC 25 04:46:32.2±1.2, 51.43N±0.05×16.19E±0.03, h0km, n28, σ0.97/60, Poland

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSP Ksiaz 0.59 174 ePg Pb 04 46 44.5 -0.9
KSP eSg Sb 04 46 52.4 -1.9
CHVC Chvalec 0.85 186 ePG Pb 04 46 49.2 -0.6
CHVC eSG Sb 04 47 00.9 -0.8
comp=Z,25nm,0.4s
OSTC Ostas 0.88 179 ePG Pb 04 46 49.8 -0.4
OSTC eSG Sb 04 47 02.0 -0.5
comp=Z,38nm,0.6s
UPC Upice 0.93 187 ePG Pb 04 46 50.5 -0.7
UPC eSG Sb 04 47 03.6 -0.5
comp=Z,50nm,0.4s
DPC Dobruska-Polom 1.09 176 ePG Pb 04 46 53.3 -0.5
DPC eSG Sb 04 47 07.8 -0.8
comp=Z,26nm,0.5s
PVCC Panska Ves 1.37 229 ePG Pg 04 46 57.9 -0.4
PVCC eSG Sn 04 47 17.5 +0.2
comp=Z,52nm,0.5s
KRLC Kraliky 1.41 164 ePG Pb 04 46 59.4 +0.1
KRLC eSG Sn 04 47 18.4 0.0
comp=Z,19nm,0.6s
BRG Berggiesshubel 1.52 249 PG Pn 04 47 00.7 +0.1
BRG SG Sn 04 47 21.2 +0.1
33nm,0.2s
PRA Prague 1.76 220 ePG Pn 04 47 04.0 +0.1
PRA eSG Sg 04 47 29.4 +0.7
comp=Z,11nm,0.6s
GOPC GO Pecny, Ondr 1.76 211 ePG Pb 04 47 05.3 -0.1
GOPC eSG Sg 04 47 28.9 +0.2
comp=Z,14nm,0.2s
PRU Pruhonice 1.79 217 ePG Pn 04 47 04.3 +0.1
PRU eSG Sg 04 47 30.2 +0.7
comp=Z,21nm,0.3s
MORC Moravsky Berou 1.87 152 ePN Pn 04 47 05.2 -0.2
MORC eSG Sn 04 47 29.2 -0.5
CLL Collm 2.00 268 ePg Pb 04 47 09.0 -0.4
CLL i 04 47 13.7
CLL i Sg Sg 04 47 37.4 +1.0
comp=Z,14nm,0.6s
OKC Ostrava-Krasne 2.02 141 ePN Pn 04 47 08.2 +0.7
OKC ePG Pg 04 47 10.2 -0.7
OKC eSG Sg 04 47 36.8 -0.4
comp=Z,13nm,0.5s
VRAC Vranov 2.14 173 ePN Pn 04 47 09.8 +0.7
VRAC eSG Sg 04 47 40.5 -0.4
TREC Trest 2.19 192 ePN Pn 04 47 10.8 +1.0
TREC ePG Pg 04 47 13.3 -0.7
TREC eSG Sg 04 47 42.3 0.0
comp=Z,9.3nm,0.4s
PBCC Pribram 2.24 220 ePG Pb 04 47 13.9 +0.4
PBCC eSG Sg 04 47 44.0 0.0
KRUC Moravsky 2.38 177 ePN Pn 04 47 11.9 -0.5
KRUC eSG Sg 04 47 49.1 +0.7
OJC Ojcow 2.59 117 ePg Pg 04 47 21.8 0.0
OJC eSg Sg 04 47 57.1 +1.8
NKC Novy Kostel 2.66 245 ePN Pn 04 47 16.3 0.0
NKC ePG Pb 04 47 20.5 -0.1
NKC eSG Sg 04 47 58.4 +0.9
comp=Z,18nm,0.5s
KHC Kasperske Hory 2.85 217 ePN Pn 04 47 18.9 0.0
KHC ePG Pb 04 47 24.6 +0.7
KHC eSN Sn 04 47 53.7 -0.2
KHC eSG Sg 04 48 03.1 -0.5
comp=Z,9.1nm,0.5s
SMOL Smolenice 3.03 164 ePN Pn 04 47 19.7 -1.6
SMOL eSG Sg 04 48 08.8 -0.6
LANS Liptovska Anna 3.10 136 ePN Pn 04 47 22.6 +0.2
LANS eSG Sg 04 48 12.6 +0.8
MODS Modra-Piesok 3.14 167 ePG Pg 04 47 34.5 +2.2
MODS eSG Sg 04 48 16.0 +3.0
VYHS Vyhne 3.40 149 ePN Pn 04 47 25.6 -0.9
VYHS ePG Pg 04 47 37.6 +0.3
CONA Conrad Observa 3.51 184 iPn Pn 04 47 29.1 +1.0
comp=Z,0.6nm,0.2s
CONA Sg Sg 04 48 26.6 +1.6
comp=Z,7.4nm,0.5s
MOA Molln 3.80 200 iPn Pn 04 47 32.2 +0.3
comp=Z,0.5nm,0.1s
MOA Sg Sg 04 48 33.7 -0.4
comp=Z,5.5nm,0.5s
ARSA Arzberg 4.21 186 Sg Sg 04 48 50.8 +3.5
comp=Z,4.0nm,0.5s

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*SJA **25** 05:25:39.9±0.6, 22.82S×66.32W, h253km±5km, ML3.1, MW3.3*
*GUC **25** 05:25:41.6±0.5, 22.72S×66.90W, h276km±17km, ML3.5*

ISC 25 05:25:38.0±1.7, 22.86S±0.06×66.36W±0.06, h262km±14km, n21, σ1.81/34, 5C-4D, Jujuy Province

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HJA Humahuaca 0.94 112 iP Pn 05 26 16.3 +1.8
HJA eS S 05 26 42.5 -0.8
YJA Yavi 1.03 49 iP Pn 05 26 16.6 +1.4
YJA eS S 05 26 43.0 -1.3
AZAP Zapla 1.80 139 iP Pn 05 26 21.6 +1.5
AZAP eS S 05 26 52.7 -0.7
LVC Limon Verde 2.37 276⇓iP Pn 05 26 27.1 +1.8
LVC IAML 05 26 27.4
comp=Z,22nm,0.3s
PB09 IPOC Station P 2.87 291⇑iP Pn 05 26 32.3 +2.2
PB09 IAML 05 27 15.5
comp=N,24nm,0.2s
PB09 IPOC Station P 2.87 291 iP Pn 05 26 32.2 +2.0
PB09 IAML 05 27 15.6
comp=Z,28nm,0.1s
PB15 IPOC Station P 2.89 262⇑iP Pn 05 26 32.2 +1.9
PB15 iS S 05 27 11.2 -0.6
PB15 IPOC Station P 2.89 262 iP Pn 05 26 32.4 +2.1
PB15 eS S 05 27 11.5 -0.3
PB06 IPOC Station P 2.97 272⇓iP Pn 05 26 32.9 +1.8
PB06 iS S 05 27 12.3 -0.9
PB06 IAML 05 27 14.4
comp=E,98nm,0.1s
PB06 IPOC Station P 2.97 272 iP Pn 05 26 33.3 +2.1
PB06 IAML 05 27 15.4
comp=Z,44nm,0.1s
PB03 IPOC Station P 3.24 284⇑iP Pn 05 26 35.6 +1.5
PB03 iS S 05 27 16.6 -2.0
PB03 IAML 05 27 18.1
comp=E,89nm,0.2s
PB01 IPOC Station P 3.42 301⇓iP Pn 05 26 37.5 +1.5
PB01 iS S 05 27 20.2 -1.8
PB07 IPOC Station P 3.46 288⇑iP Pn 05 26 38.0 +1.5
PB07 iS S 05 27 20.5 -2.4
PB04 IPOC Station P 3.54 278⇓iP Pn 05 26 39.2 +1.8
PB04 iS S 05 27 22.4 -2.2
PB04 IPOC Station P 3.54 278 iP Pn 05 26 39.1 +1.8
GO02 Mina Guanaco 3.74 232 eP Pn 05 26 41.8 +2.1
GO02 eS S 05 27 28.8 0.0
PB08 IPOC Station P 3.75 316⇑iP Pn 05 26 42.4 +2.4
PB08 iS S 05 27 28.7 -0.6
PB10 IPOC Station P 3.92 260 iP Pn 05 26 43.6 +2.2
PB10 IAML 05 27 36.0
comp=Z,26nm,0.3s
PB14 IPOC Station P 4.10 244 iP Pn 05 26 46.2 +2.3
PB14 IAML 05 27 37.9
comp=Z,28nm,0.1s
GO01 Chusmiza 4.13 320 eP Pn 05 26 46.6 +2.1
GO01 eS S 05 27 37.0 -0.4
GO05 Huala 13.05 201 iP Pn 05 28 32.3 -1.8

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*ISK **25** 06:19:01.8, 40.78N×25.57E, h1km, ML2.9/17*
*THE **25** 06:19:02.9, 40.77N×25.54E, h2km±2km, ML2.4/9, Error ellipse: s-maj=2.3km s-min=1.0km az=37.0*
*DDA **25** 06:19:02.8, 40.73N×25.60E, h8km±2km, ML2.9*
*ATH **25** 06:19:02.2, 40.78N×25.55E, h19km±3km, ML2.4/8, Error ellipse: s-maj=3.1km s-min=1.0km az=64.0*
*BEO **25** 06:19:05.0±1.0, 40.75N×25.52E, h9km±4km, ML2.7/7*

ISC 25 06:19:02.9±1.0, 40.76N±0.02×25.56E±0.02, h7km±9km, n61, σ0.75/96, Aegean Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SMTH Samothraki Isl 0.29 184 P Pg 06 19 08.7 +0.1
SMTH Samothraki Isl 0.29 184 P Pg 06 19 08.7 +0.1
SMTH S Sg 06 19 13.6 +1.2
SMTH AML AML 06 19 14.3
comp=E,1233μm,0.1s
SMTH AML AML 06 19 14.6
comp=N,1109μm,0.1s
RDO Rodhopi 0.39 358 P Pg 06 19 10.2 -0.3
RDO S Sg 06 19 15.5 -0.1
comp=N,395nm,0.2s
RDO Rodhopi 0.39 358 P Pg 06 19 10.2 -0.3
RDO S Sg 06 19 15.5 -0.1
RDO AML AML 06 19 17.5
comp=E,942μm,0.2s
RDO AML AML 06 19 20.7
comp=N,616μm,0.2s
RDO Rodhopi 0.39 358 PG Pg 06 19 10.2 -0.3
RDO SG Sg 06 19 15.9 +0.3
ALN Alexandroupoli 0.39 69 P Pg 06 19 10.4 -0.2
ALN S Sg 06 19 16.2 +0.4
comp=N,848nm,0.4s
ALN Alexandroupoli 0.39 69 P Pg 06 19 10.4 -0.2
ALN S Sg 06 19 16.1 +0.3
ALN AML AML 06 19 16.5
comp=E,1854μm,0.5s
ALN AML AML 06 19 16.8
comp=N,1436μm,0.4s
ALN Alexandroupoli 0.39 69 PG Pg 06 19 10.4 -0.2
ALN SG Sg 06 19 16.2 +0.4
ENEZ Enez 0.45 93 PG Pg 06 19 11.6 -0.1
ENEZ SG Sg 06 19 18.8 +1.2
THAS Thassos island 0.66 257 P Pg 06 19 15.3 -0.3
THAS Thassos island 0.66 257 P Pg 06 19 15.3 -0.3
THAS S Sg 06 19 24.1 0.0
THAS AML AML 06 19 27.7
comp=N,1033μm,0.2s
THAS AML AML 06 19 28.3
comp=E,889μm,0.2s
ERIK Erikli-Kesan 0.73 97 PG Pg 06 19 16.2 -0.8
GELI Tayfur-Gelibol 0.79 117 PG Pg 06 19 17.8 -0.2
GELI SG Sb 06 19 30.0 +0.3
KAVA Kavala 0.83 287 P Pg 06 19 18.3 -0.5
KAVA S Sg 06 19 29.5 -0.1
comp=E,455nm,0.3s
KAVA Kavala 0.83 287 P Pg 06 19 18.2 -0.5
KAVA S Sg 06 19 29.4 -0.2
KAVA AML AML 06 19 33.0
comp=N,951μm,0.3s
KAVA AML AML 06 19 33.4
comp=E,845μm,0.2s
KESN Edirne-Kesan 0.85 85 iP Pg 06 19 18.0 -1.3
KESN iS Sg 06 19 30.7 +0.2
KESN IAML 06 19 34.0
comp=E,526nm,0.3s
UKOP Uzunkopru-Edir 0.89 65 PG Pg 06 19 19.7 -0.4
KDZ Kurdzhali 0.90 353 PG Pg 06 19 19.7 -0.4
LIA Limnos Island 0.91 199 P Pg 06 19 20.0 -0.3
LIA S Sb 06 19 33.0 -0.2
comp=E,200nm,0.3s
LIA Limnos Island 0.91 199 P Pg 06 19 20.4 +0.1
LIA S Sg 06 19 32.1 0.0
LIA AML AML 06 19 36.2
comp=E,408μm,0.4s
LIA AML AML 06 19 36.5
comp=N,374μm,0.3s
BOZC Bozcaada 0.99 157 PG Pg 06 19 22.0 +0.1
BOZC Bozcaada 0.99 157 iP Pg 06 19 21.4 -0.6
BOZC iS Sg 06 19 34.9 +0.1
BOZC IAML 06 19 37.0
comp=E,260nm,0.2s
LPK Lapseki 0.99 112 PG Pg 06 19 21.5 -0.5
EZN Ezine 1.10 148 P Pg 06 19 23.4 -0.6
EZN S Sg 06 19 38.5 +0.2
comp=E,138nm,0.1s
EZN Ezine 1.10 148 PN Pg 06 19 24.1 +0.1
RKY Sarkoy-Tekirda 1.23 93 PN Pb 06 19 25.7 -0.8
SART Tekirdag 1.23 93 iP Pn 06 19 25.4 -1.2
BAYC CANAKKALE_Bayr 1.27 143 iP Pn 06 19 27.0 -0.1
BAYC iS Sb 06 19 43.5 -0.1
OUR Ouranopolis 1.27 251 P Pn 06 19 26.2 -0.9
OUR S Sb 06 19 43.2 -0.6
comp=E,418nm,0.4s
OUR Ouranopolis 1.27 251 P Pn 06 19 25.9 -1.2
OUR AML AML 06 19 46.2
comp=E,948μm,0.5s
OUR AML AML 06 19 46.5
comp=N,765μm,0.3s
OUR Ouranopolis 1.27 251 PN Pn 06 19 27.4 +0.1
EDRB Edirne 1.41 39 PN Pn 06 19 28.9 0.0
NVR Nevrokopi 1.41 295 P Pn 06 19 28.7 -0.4
NVR S Sn 06 19 47.7 -0.2
comp=N,75nm,0.3s
NVR Nevrokopi 1.41 295 P Pn 06 19 28.7 -0.4
NVR AML AML 06 19 50.8
comp=N,159μm,0.5s
NVR AML AML 06 19 52.8
comp=E,139μm,0.2s
PLD Plovdiv 1.49 335 ePg Pg 06 19 31.6 +0.1
PLD eSg Sg 06 19 52.3 +1.5
PLD Plovdiv 1.49 335 PN Pb 06 19 30.4 -0.5
SRS Serrai 1.53 284 P Pb 06 19 29.9 -0.8
SRS Serrai 1.53 284 ePg Pb 06 19 31.6 0.0

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
SRS				eSg	Sg	06 19 53.2	+1.0
SRS	Serrai	1.53	284	P	Pn	06 19 29.7	-1.0
MRMT	Marmara Adasi	1.56	95	PN	Pn	06 19 30.5	-0.6
SIGR	SIGRI	1.56	172	P	Pb	06 19 32.2	+0.1
SIGR				S	Sg	06 19 53.9	+0.8
SIGR	SIGRI	1.56	172	P	Pb	06 19 32.0	-0.1
SIGR	SIGRI	1.56	172	PN	Pb	06 19 31.8	-0.3
PRK	Paraskevi	1.61	160	P	Pb	06 19 33.0	+0.1
PRK				S	Sn	06 19 52.9	+0.3
	comp=E,318nm,0.5s						
PAIG	Paliouri	1.66	241	P	Pn	06 19 31.4	-1.0
PAIG				S	Sb	06 19 55.2	+0.3
	comp=E,85nm,0.7s						
PAIG	Paliouri	1.66	241	P	Pn	06 19 31.5	-0.9
AYVA	Ayvalik	1.69	149	iP	Pb	06 19 34.7	+0.4
AYVA				iS	Sg	06 19 56.6	-0.6
AYVA				IAML		06 19 59.0	
	comp=N,243nm,0.5s						
EDC	Edincik	1.80	102	PN	Pn	06 19 34.8	+0.4
BALY	Balya	1.88	122	iP	Pb	06 19 36.9	-0.7
BALY				iS	Sb	06 20 00.3	-0.8
DKL	Dikili	1.98	148	PN	Pn	06 19 37.6	+0.8
SLVT	Silivri	2.06	76	PN	Pn	06 19 38.4	+0.5
BALB	Balikesir	2.10	121	PN	Pn	06 19 39.3	+0.9
ZEDA	zmir-Bergama	2.14	146	iP	Pn	06 19 36.4	-2.5
ZEDA				iS	Sb	06 20 08.6	0.0
STEP	BALIKESIR_Sava	2.16	129	iP	Pb	06 19 41.5	-0.8
STEP				iS	Sb	06 20 10.1	+0.9
STEP				IAML		06 20 15.0	
	comp=E,69nm,0.6s						
CHOS	Chios island	2.40	171	PN	Pn	06 19 43.5	+0.8
VTS	Vitosha	2.54	318	ePn	Pb	06 19 46.8	-2.2
VTS				eSn	Sn	06 20 17.1	+1.1
VTS				eSg	Sg	06 20 24.4	-0.3
BOSS	Bosilegrad	2.89	308	ePn	Pn	06 19 50.6	+1.3
ZAPS	Zavoj	3.33	320	ePn	Pn	06 19 56.7	+1.3
ZAPS				eSn	Sn	06 20 35.8	+0.7
ZAPS				eSg	Sg	06 20 50.6	+0.9
BARS	Barje	3.47	308	ePn	Pn	06 19 58.7	+1.3
BARS				eSg	Sg	06 20 54.2	-0.2
ZAGS	Zajecar	3.92	322	ePn	Pn	06 20 04.5	+1.0
ZAGS				eSg	Sg	06 21 09.7	+0.8
BOVS	Bovan	4.06	316	ePn	Pn	06 20 07.5	+2.2

NNC 25 06:30:37.7±3.3, 53.88N×86.34E, h0km, mb3.5, mpv3.1, 5C-4D, Error ellipse: s-maj=29.8km s-min=21.2km az=171.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	Kurchatov	5.70	239	⇑Pn	Pn	06 32 03.4	-0.1
	0.8nm,0.4s						
KURK				⇓Sn	Sn	06 33 10.2	+0.7
	0.8nm,0.7s						
KURK				⇓Lg	Lg	06 33 43.2	
	2.6nm,0.7s						
KURBB	Kurchatov Arra	5.80	239	⇓Pn	Pn	06 32 04.8	-0.1
	2.1nm,0.4s						
KURBB				⇑Sn	Sn	06 33 12.7	+0.7
	1.4nm,0.5s						
KURBB				⇑Lg	Lg	06 33 43.9	
	5.2nm,0.8s						
MK31	Makanchi Array	7.55	202	⇑Pn	Pn	06 32 30.1	+1.1
	0.2nm,0.3s,baz=26,slow=14,SNR=37						
MK31				⇓Sn	Sn	06 33 55.2	0.0
	0.3nm,0.5s,baz=153,slow=15,SNR=5.8						
MK31				⇑Lg	Lg	06 34 38.3	
	0.6nm,0.6s,baz=339,slow=5.7,SNR=3.2						

IDC 25 06:36:11.0±1.2, 4.00N×71.38W, h0km, mb3.2/4, mb1 3.7/7, mb1mx3.5/35, mbtmp3.5/7, ML2.4/2, Error ellipse: s-maj=20.4km s-min=16.9km az=66.0
RSNC 25 06:36:15.3±2.5, 3.91N×71.59W, h4km±10km, ML3.5, Mw3.6
ISC 25 06:36:11.6±2.0, 3.92N±0.04×71.47W±0.06, h5km±12km, n19, σ1.68/32, mb3.2/3, 2C-1D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTGC	Puerto Gaitan,	0.72	293	⇑iP	Pg	06 36 25.2	-0.2
PTGC				eSg	Sg	06 36 34.4	-0.4
PTGC				eS	Sg	06 36 34.4	-0.4
PTGC				i		06 36 47.7	
	comp=Z,1µm,0.4s						
GUVC	San Jose del G	1.79	220	eP	Pn	06 36 43.1	-0.1
GUVC				eS	Sn	06 37 06.1	-0.4
GUVC				i		06 37 12.1	
	comp=Z,642nm,0.2s						
CHIC	Chingaza	2.37	287	⇓eP	Pn	06 36 52.1	+0.6
CHIC				eS	Sn	06 37 22.5	+1.3
CHIC				i		06 37 26.8	
	comp=Z,359nm,0.4s						
TAMC	Tame, Arauca	2.52	353	⇑eP	Pn	06 36 55.6	+2.3
TAMC				eS	Sb	06 37 28.1	-0.6
TAMC				i		06 38 06.0	
	comp=Z,150nm,0.9s						
RUSC	La Rusia	2.54	321	eP	Pn	06 36 55.3	+1.3
RUSC				eS	Sb	06 37 28.1	-1.6
RUSC				i		06 37 44.0	
	comp=Z,153nm,0.5s						
MACC	Macarena, Meta	2.96	234	eP	Pn	06 37 01.2	+1.8
MACC				eS	Sb	06 37 40.2	-1.3
ROSC	El Rosal	2.99	288	Pn	Pn	06 37 02.2	+2.2
	comp=Z,4.5nm,0.3s,baz=150,slow=23,SNR=9.4						
ROSC				Pg	Pg	06 37 10.0	+1.1
	comp=Z,18nm,0.3s,baz=110,slow=17,SNR=22						
ROSC				Lg	Lg	06 37 50.1	
	comp=Z,24nm,0.3s,baz=87,slow=21,SNR=4.5						
BARC	Barichara	3.16	327	eP	Pn	06 37 04.7	+2.4
BARC				eS	Sn	06 37 38.1	-2.3
BARC				i		06 38 05.6	
	comp=Z,350nm,0.6s						
PAMC	Pamplona, Colo	3.61	340	eP	Pn	06 37 10.9	+2.2
PAMC				eS	Sn	06 37 50.8	-1.3
PAMC				i		06 38 16.0	
	comp=Z,73nm,0.4s						
ORTC	Ortega, Tolima	3.77	270	eP	Pn	06 37 11.2	+0.7
ORTC				eS	Sg	06 38 09.7	-3.1
ORTC				i		06 38 22.0	
	comp=Z,143nm,0.5s						
PTBC	PUERTO BERRIO,	3.95	311	eP	Pn	06 37 13.6	+0.6
PTBC				eS	Sb	06 38 13.0	+3.0
PTBC				i		06 38 15.2	
	comp=Z,30nm,0.3s						
FLOC	Florencia	4.78	241	eP	Pn	06 37 26.5	+2.1
FLOC				eS	Sb	06 38 32.3	-1.7
FLOC				i		06 38 46.7	
	comp=Z,114nm,0.8s						
SDV	Santo Domingo	5.00	9	Pn	Pn	06 37 27.5	-0.1
	comp=Z,4.0nm,0.3s,baz=224,slow=2.2,SNR=12						
SDV				Sn	Sn	06 38 23.8	-2.2
	comp=Z,10nm,0.3s,baz=68,slow=21,SNR=12						
SDV				Lg	Lg	06 38 49.5	
	comp=Z,11nm,0.3s,baz=59,slow=16,SNR=5.7						
PCRV	Puerto La Cruz	9.20	47	Pn	Pn	06 38 25.4	+0.3
	comp=Z,1.0nm,0.3s,baz=221,slow=11,SNR=1.7						
LPAZ	La Paz	20.35	171	P	Pn	06 40 52.1	+0.4
	comp=Z,1.1nm,0.7s,baz=332,slow=15,SNR=4.6						
SIV	San Ignacio	22.30	153	P	P	06 41 11.9	+1.7
	comp=Z,0.6nm,0.7s,baz=308,slow=12,SNR=2.5						
TXAR	Lajitas Array	39.62	313	P	P	06 43 44.5	-0.2
	comp=Z,0.3nm,0.8s,baz=125,slow=8.2,SNR=4.8						
YKA	Yellowknife Ar	66.54	340	P	P	06 47 00.7	-1.6
	comp=Z,0.1nm,0.5s,baz=135,slow=5.8,SNR=2.9						
ASAR	Alice Springs	148.61	229	PKPbc	PKPdf	06 55 58.4	+1.2
	comp=Z,0.2nm,0.4s,baz=132,slow=3.9,SNR=1.7						

IDC 25 06:37:57.5±3.3, 49.87S×122.59E, h0km, mb3.8/3, mb1 4.1/4, mb1mx3.9/25, mbtmp4.0/4, ML2.3/1, MS3.4/1, Ms1 3.4/1, ms1mx2.8/14, Error ellipse: s-maj=71.6km s-min=57.7km az=83.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	16.20	334	T	T	06 58 15.5	
	baz=157,slow=74,SNR=6.2						
H01W2	Cape Leeuwin H	16.20	334	T	T	06 58 29.6	
	baz=157,slow=74,SNR=5.4						
H01W3	Cape Leeuwin H	16.21	334	T	T	06 58 25.9	
	baz=157,slow=74,SNR=5.8						
NWAO	Narrogin (SRO)	17.39	345	P	P	06 42 02.7	-0.2
	0.6nm,0.3s,baz=184,slow=11,SNR=6.5						
STKA	Stephens Creek	22.90	45	P	P	06 43 03.3	+0.5
	1.4nm,0.7s,baz=194,slow=8.9,SNR=3.4						
ASAR	Alice Springs	27.61	23	P	P	06 43 46.4	-0.2
	3.3nm,0.8s,baz=194,slow=9.5,SNR=28						
WRA	Warramunga Arr	31.30	22	P	P	06 44 18.6	-0.7
	0.9nm,0.9s,baz=197,slow=7.8,SNR=2.6						
VNDA	Vanda	31.44	165	LR	LR	06 55 20.4	
	comp=Z,69nm,21.4s,baz=322,slow=33						
YKA	Yellowknife Ar	146.93	46	PKPbc	PKPbc	06 57 39.9	-0.7
	0.7nm,0.6s,baz=275,slow=2.8,SNR=12						

IDC 25 06:45:38.1±1.5, 11.07S×34.58E, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.6/35, mbtmp4.0/4, ML3.6/1, Error ellipse: s-maj=47.1km s-min=27.0km az=96.0, Malawi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	10.22	15	Pn	Pn	06 48 06.5	+0.1
	0.5nm,0.3s,baz=195,slow=15,SNR=3.6						
KMBO				Sn	Sn	06 49 58.5	-3.4
	0.5nm,0.3s,baz=39,slow=22,SNR=2.3						
KMBO				Lg	Lg	06 51 03.3	
	0.5nm,0.3s,baz=261,slow=24,SNR=3.8						
TORD	Torodi Ar. Bea	40.55	306	P	P	06 53 19.4	-0.1
	0.8nm,1.1s,baz=123,slow=9.2,SNR=2.5						
MAW	Mawson	59.51	168	P	P	06 55 42.8	0.0
	16nm,0.9s,baz=308,slow=6.0,SNR=2.8						
MKAR	Makanchi Array	71.62	32	P	P	06 57 01.4	-0.1
	0.5nm,0.7s,baz=224,slow=5.7,SNR=4.9						

SKO 25 07:14:31.9, 41.04N×20.05E, h27km
ATH 25 07:14:32.6, 41.13N×20.02E, h26km±3km, ML2.6/4, Error ellipse: s-maj=5.1km s-min=1.0km az=336.0
TIR 25 07:14:32.6, 41.14N×20.12E, h12km, Md3.0/6
THE 25 07:14:33.7, 41.15N×20.13E, h0km±2km, ML2.5/9, Error ellipse: s-maj=2.1km s-min=0.7km az=305.0
PDG 25 07:14:33.4±0.5, 41.18N×19.99E, h19km±1km, ML2.8/13, Error ellipse: s-maj=0.8km s-min=1.4km az=0.0
BEO 25 07:14:33.3±0.5, 41.10N×20.05E, h9km±1km, ML2.4/12
ISC 25 07:14:32.8±1.0, 41.13N±0.02×20.03E±0.02, h12km±9km, n74, σ0.77/123, 10C-2D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.25	331	P	Pb	07 14 38.9	-0.5
TIR				S	Sb	07 14 44.2	+0.4
	2µm,0.3s						
TIR	Tirane	0.25	331	ePg	Pb	07 14 38.9	-0.5
TIR				eSg	Sb	07 14 44.0	+0.3
TIR	Tirane	0.25	331	iPG	Pb	07 14 38.8	-0.5
TIR				iSG	Sb	07 14 43.4	-0.4
TIR	Tirane	0.25	331	P	Pb	07 14 38.9	-0.5
TIR				S	Sb	07 14 44.2	+0.4
TIR				AML	AML	07 14 44.5	
	comp=N,11534µm,0.3s						
TIR				AML	AML	07 14 47.4	
	comp=E,7600µm,0.2s						
TIR	Tirane	0.25	331	⇑P	Pb	07 14 39.1	-0.3
TIR				⇑S	Sb	07 14 44.1	+0.4
OHR	Ohrid	0.58	91	iPg	Pg	07 14 44.3	+0.1
OHR				eSg	Sb	07 14 53.0	-0.2
OHR				eLg	Lg	07 14 54.3	
	comp=E,145nm,0.5s						
OHR				eLg	Lg	07 14 55.6	
	comp=N,140nm,0.5s						
PHP	Peshkopia	0.64	29	P	Pg	07 14 44.6	-0.7
PHP				S	Sg	07 14 54.0	+0.2
PHP	Peshkopia	0.64	29	iPG	Pg	07 14 44.6	-0.7
PHP				iSG	Sg	07 14 53.7	-0.1
VLO	Vlora	0.77	212	P	Pn	07 14 49.5	0.0
VLO				S	Sn	07 15 01.5	+0.5
	comp=N,1µm,0.5s						
VLO	Vlora	0.77	212	iPG	Pn	07 14 48.8	-0.7
VLO				iSG	Sn	07 15 01.2	+0.2
TPE	Tepelena	0.83	181	P	Pb	07 14 49.6	+0.4
TPE				S	Sn	07 15 02.8	+0.3
	comp=N,590nm,0.6s						
TPE	Tepelena	0.83	181	iPG	Pb	07 14 49.5	+0.4
TPE				iSG	Sn	07 15 02.1	-0.4
PUK	Puka	0.92	354	iPG	Pg	07 14 50.6	0.0
PUK				iSG	Sn	07 15 04.3	-0.6
ULC	Ulcinj	1.02	325	ePg	Pb	07 14 51.5	-1.0
ULC				eSg	Sn	07 15 07.4	+0.1
NEST	Nestorio	1.05	132	P	Pb	07 14 52.8	-0.2
NEST				S	Sn	07 15 07.9	-0.3
	comp=N,270nm,0.5s						
NEST	Nestorio	1.05	132	P	Pb	07 14 52.7	-0.4
NEST				AML	AML	07 15 11.5	
	comp=E,566µm,0.5s						
NEST				AML	AML	07 15 12.4	
	comp=N,439µm,0.4s						
DRME	Dracevica, Mon	1.23	329	⇑iPg	Pn	07 14 55.6	-0.3
DRME				eSg	Sg	07 15 13.9	+1.3
BCI	Bajram Curri	1.24	1	iPN	Pg	07 14 56.9	+0.2
BCI				iSN	Sg	07 15 14.4	+1.5
PENT	Pentalofos	1.26	137	P	Pn	07 14 56.0	-0.3
PENT				S	Sg	07 15 13.2	-0.1
	comp=N,178nm,0.5s						
PENT	Pentalofos	1.26	137	P	Pn	07 14 56.0	-0.3
PENT				AML	AML	07 15 17.9	
	comp=E,379µm,0.5s						
PENT				AML	AML	07 15 17.9	
	comp=N,342µm,0.5s						
SKO	Skopje	1.36	51	ePg	Pb	07 14 57.8	-0.4
SKO				eSg	Sg	07 15 16.5	0.0
SKO	Skopje	1.36	51	iPg	Pn	07 14 57.3	-0.3
SKO				eSg	Sg	07 15 16.6	+0.1
SKO				eLg	Lg	07 15 16.7	
	comp=N,7.0nm,0.3s						
SKO				eLg	Lg	07 15 17.8	
	comp=E,11nm,0.9s						
KASA	Kassiopi	1.38	183	P	Pb	07 14 58.8	+0.3
KEK	Kerkira	1.42	187	P	Pb	07 14 59.7	-0.5
KEK				S	Sg	07 15 20.9	+2.3
	comp=E,152nm,0.6s						
KEK	Kerkira	1.42	187	P	Pn	07 14 57.9	-0.6
KEK				AML	AML	07 15 24.2	
	comp=N,278µm,0.4s						
KEK				AML	AML	07 15 30.3	
	comp=E,330µm,0.7s						
PDG	Podgorica	1.43	336	ePg	Pn	07 14 58.8	+0.3
PDG				eSg	Sg	07 15 19.4	+0.7
PDG	Podgorica	1.43	336	⇓P	Pb	07 14 59.2	-0.1
PDG				⇑S	Sg	07 15 19.4	+0.7
TTG	Podgorica	1.43	336	ePg	Pn	07 14 58.1	-0.4
TTG				eSg	Sg	07 15 18.8	+0.1
PVY	Plav	1.47	358	ePg	Pn	07 14 59.0	-0.3
PVY				eSg	Sg	07 15 20.1	0.0
KPRO	Kipourio	1.55	139	P	Pb	07 15 01.3	-0.2
KPRO				S	Sg	07 15 23.6	+0.8
KPRO	Kipourio	1.55	139	P	Pb	07 15 01.3	-0.2
KZN	Kozani	1.56	121	P	Pb	07 15 01.6	-0.1
KZN				S	Sg	07 15 22.6	-0.4
	comp=E,140nm,0.5s						
KZN	Kozani	1.56	121	P	Pb	07 15 01.6	-0.1
JAN	Janina	1.60	157	P	Pg	07 15 02.9	-0.6
IGT	Igoumenitsa	1.61	172	P	Pg	07 15 03.1	-0.6
IGT				S	Sg	07 15 26.6	+2.0
	comp=E,98nm,0.6s						
IGT	Igoumenitsa	1.61	172	P	Pb	07 15 01.9	-0.6
CEME	Cevo	1.64	330	ePn	Pn	07 15 01.5	-0.1
CEME				eSn	Sb	07 15 23.7	-0.1
STIP	Stip	1.72	70	iPn	Pb	07 15 04.8	+0.4
IVA	Berane	1.75	357	ePn	Pn	07 15 03.0	-0.1
IVA				eSn	Sb	07 15 27.0	+0.2
HCY	Herceg Novi	1.75	320	ePn	Pn	07 15 02.3	-0.7
HCY				iSn	Sb	07 15 26.1	-0.7
KOME	Kolasin	1.77	348	ePn	Pn	07 15 03.8	+0.5
KOME				eSn	Sb	07 15 27.0	-0.4
GRG	Griva	1.80	95	P	Pn	07 15 03.6	-0.2
GRG				S	Sb	07 15 28.3	-0.1
	comp=E,70nm,0.6s						
GRG	Griva	1.80	95	P	Pn	07 15 03.7	0.0
NKME	Niksic	1.82	334	ePn	Pn	07 15 04.0	-0.1
NKME				eSn	Sn	07 15 28.1	+0.9
NKY	Niksic	1.85	336	ePn	Pn	07 15 04.1	-0.5
NKY				eSn	Sn	07 15 28.8	+0.8
TREB	Trebinje	2.02	322	ePn	Pb	07 15 09.0	-0.6
TREB				eSn	Sb	07 15 34.1	-0.6
BRY	Bratogost	2.09	328	ePn	Pn	07 15 07.2	-0.7
BRY				eSn	Sn	07 15 34.4	+0.5
SJES	Sjenica	2.13	359	ePn	Pn	07 15 08.5	+0.1
SJES				eSn	Sb	07 15 37.1	-0.9
BARS	Barje	2.15	38	ePn	Pn	07 15 08.4	-0.2
BARS				eSn	Sb	07 15 36.8	-1.6
KNT	Kendrikon	2.17	88	P	Pn	07 15 08.7	-0.1
UPM	Unac-Piva	2.24	338	ePn	Pn	07 15 09.9	0.0
UPM				eSn	Sn	07 15 38.2	+0.7
SELS	Selova	2.24	21	ePn	Pn	07 15 10.7	+0.9
PLE	Pljevlja	2.25	348	ePn	Pn	07 15 10.3	+0.3
PLE				eSn	Sn	07 15 38.7	+0.9
BOSS	Bosilegrad	2.29	52	ePn	Pn	07 15 11.3	+0.9
BOSS				eSn	Sn	07 15 38.7	+0.1
LKD2	Lefkada island	2.38	168	P	Pn	07 15 11.5	-0.3
IVAS	Ivanjica	2.45	2	ePn	Pn	07 15 13.2	+0.5
IVAS				eSn	Sn	07 15 44.3	+1.7
STON	Ston	2.46	316	ePn	Pn	07 15 14.7	+2.0
STON				eSn	Sn	07 15 45.2	-2.0
MATE	Matera	2.56	260	⇑P	Pb	07 15 19.8	+1.0
MATE				⇑S	Sg	07 15 53.8	-1.4
AGG	Agios Georgios	2.75	139	P	Pn	07 15 18.2	+1.4
BBLS	Lazići	2.78	351	ePn	Pn	07 15 17.6	+0.4
BOVS	Bovan	2.80	26	ePn	Pn	07 15 17.7	+0.3
BOVS				eSn	Sn	07 15 52.4	+1.3
GRUS	Gruza	2.81	10	ePn	Pn	07 15 19.2	+1.6
VTS	Vitosha	2.82	57	ePn	Pn	07 15 17.9	0.0
VTS				eSn	Sn	07 15 52.3	+0.4
VTS	Vitosha	2.82	57	⇑P	Pn	07 15 18.1	+0.2
VTS				⇑S	Sn	07 15 51.8	-0.1
ZAPS	Zavoj	2.89	41	ePn	Pn	07 15 20.3	+1.6
ZAPS				eSn	Sn	07 15 54.6	+1.2
DIVS	Divibare	2.97	360	ePn	Pn	07 15 21.2	+1.3
HAPS	Han Pijesak,BI	3.06	345	ePn	Pn	07 15 20.5	-0.7
TRUS	Trudelj	3.11	5	ePn	Pn	07 15 22.5	+0.8
ZAGS	Zajecar	3.14	31	ePn	Pn	07 15 22.2	+0.1
BLKB	Belogradchik	3.17	37	⇑S	Sn	07 15 59.6	-0.8
BZS	Buzias	4.64	14	⇓P	Pn	07 15 43.5	+0.8
GZR	Gura Zlata	4.71	24	⇑P	Pn	07 15 43.9	+0.1
VYHS	Vyhne	7.42	354	ePN	Pn	07 16 18.8	-2.0
MODS	Modra-Piesok	7.51	346	ePN	Pn	07 16 20.2	-1.9

BJI 25 07:21:47.4±0.0, 52.26N×171.94W, h52km, mB5.0/34, mb5.0/54, Ms4.8/9, Ms7 4.6/7
AEIC 25 07:21:48.7±1.8, 52.1N±0.1×171.74W±0.07, h43km±4km, ML4.4/41, mb4.8/302(NEIC), Error ellipse: s-maj=15.6km s-min=5.6km az=169.0
MOS 25 07:21:48.3±0.9, 52.15N×171.78W, h57km, mb5.0/35, Error ellipse: s-maj=8.3km s-min=5.9km az=108.0
NEIC 25 07:21:50.0±1.2, 52.1N±0.1×171.79W±0.05, h56km±5km, Error ellipse: s-maj=15.8km s-min=3.9km az=174.0
IDC 25 07:21:50.5±2.1, 52.20N×171.74W, h60km±16km, mb4.4/41, mb1 4.5/43, mb1mx4.4/72, mbtmp4.7/43, MS3.6/32, Ms1 3.6/32, ms1mx3.5/52, Error ellipse: s-maj=14.6km s-min=8.4km az=171.0
BGR 25 07:21:52.1±0.0, 52.60N×173.87W, h33km, mb4.9
ISC 25 07:21:49.4±0.9, 52.06N±0.07×171.74W±0.03, h54km±7km, n825, σ0.76/737, mb4.8/207, MS3.7/38, 22C-5D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOSE	Korovin Southe	1.45	282		Pn	07 22 13.6	+0.3
KOFP	Korovin Flat P	1.47	279		Pn	07 22 13.7	+0.1
ATKA	Atka Island	1.52	276		Pn	07 22 13.6	-0.6
ATKA				Sn	Sn	07 22 32.5	-0.4
KOKL	Mount Kliuchef	1.54	281		Pn	07 22 14.7	+0.1
NIKH	Nikolski High	1.98	61		Pn	07 22 19.4	-1.1
NIKH				Sn	Sn	07 22 44.8	+0.6
OKSP	Okmok Steeple	2.42	59		Pn	07 22 26.3	-0.1
OKSP					Sn	07 22 55.6	+0.7
OKWE	Okmok W'ng Wal	2.55	55		Pn	07 22 29.2	+0.9
GSMY	Great Sitkin M	2.67	271		Pn	07 22 29.8	-0.1
GSTR	Great Sitkin T	2.67	272		Pn	07 22 30.0	+0.1
GSTR				Sn	Sn	07 23 01.9	+0.9
GSTD	Great Sitkin T	2.72	272		Pn	07 22 30.9	+0.2
GSTD					Sn	07 23 02.3	-0.1
ADAG	Mount Adagdak	3.01	270		Pn	07 22 35.0	+0.5
ADK	Adak	3.07	269		Pn	07 22 34.8	-0.5
ADK				Sn	Sn	07 23 10.5	-0.2
ADK	Adak	3.07	269	P	Pn	07 22 34.8	-0.5
ADK						07 23 10.5	
KIWB	Kanaga Island	3.36	269		Pn	07 22 39.1	-0.2
KIKV	Kanaga Island	3.37	269		Pn	07 22 39.8	+0.4
MCIR	Makushin Cirqu	3.49	55		Pn	07 22 41.8	+0.7
MREP	Makushin Rep't	3.49	58		Pn	07 22 41.6	+0.4
MSW	Makushin Switc	3.52	56		Pn	07 22 42.0	+0.4
MNAT	Makushin Natee	3.56	57		Pn	07 22 42.5	+0.4
MTBL	Makushin Table	3.60	56		Pn	07 22 43.4	+0.7
UNV	Unalaska Valle	3.63	58		Pn	07 22 43.2	+0.1
UNV	Unalaska Valle	3.63	58		Sn	07 23 26.0	+1.3
TAPA	Tanaga Point A	3.77	269		Pn	07 22 45.5	+0.5
TAFP	Tanaga Falls P	3.87	270		Pn	07 22 46.8	+0.5
TASE	Tanaga Southea	3.91	269		Pn	07 22 47.7	+0.8
AKRB	Akutan Reef Bi	4.00	56		Pn	07 22 49.0	+0.9
AKMO	Akutan Morgan	4.01	57		Pn	07 22 49.5	+1.2
AKBBA	Akutan Broad B	4.05	57		Pn	07 22 49.6	+0.8
AKGG	Akutan Green G	4.07	56		Pn	07 22 49.4	+0.4
AKUT	Akutan	4.15	58		Pn	07 22 51.5	+1.3
AKUT				Sn	Sn	07 23 38.5	+1.1
GALAA	Gareloi Lava P	4.37	269		Pn	07 22 53.9	+0.8
WESE	West Dahl East	4.93	58		Pn	07 23 01.8	+1.0
FALS	False Pass	5.71	57		Pn	07 23 12.3	+0.9
DT1	Dutton Round H	6.41	58		Pn	07 23 21.0	0.0
SDPT	Sand Point	7.45	59		Pn	07 23 35.0	-0.3
CNBA	Chernabura Isl	7.76	64	Pn	Pn	07 23 38.4	-1.2
VNFG	Fog Glacier, M	8.30	55		Pn	07 23 46.7	-0.4
SMY	Shemya	8.69	280	Pn	Pn	07 23 52.2	-0.1
SMY	Shemya	8.69	280	P	Pn	07 23 52.2	-0.1
CHGN	Chignik	8.89	56		Pn	07 23 54.1	-0.9
SVW2	Sparrevohn	12.66	38		Pn	07 24 46.3	-0.3
ANM	Nome	12.97	12	Pn	Pn	07 24 52.5	+1.9
ANM	Nome	12.97	12	P	Pn	07 24 52.5	+1.9
BRLK	Bradley Lake	13.96	48		Pn	07 25 03.0	-1.2
SKT	Skwentna	14.76	40		Pn	07 25 14.6	0.0
SUA	Susitna One	14.80	42		Pn	07 25 16.0	+0.7
PPLA	Purkeypile	15.04	36		Pn	07 25 17.7	-0.7
GHO	Glory Hole Cre	15.71	43		Pn	07 25 26.3	-0.7
KNK	Knik Glacier	15.75	44		Pn	07 25 26.6	-0.9
SCM	Sheep Creek Mo	16.42	44	IAmb	IAmb	07 25 42.2	
	comp=Z,29nm,0.7s						
RND	Reindeer	16.57	38		Pn	07 25 38.0	+0.2
RND	Reindeer	16.57	38	P	Pn	07 25 38.0	+0.2
RND				pmax	pmax		
	comp=Z,20nm,1.0s						
RDOG	Red Dog Mine	16.61	12	P	Pn	07 25 38.8	+0.6
RAGM	Ragged Mountai	17.09	50		Pn	07 25 43.4	-0.9
MDM	Murphy Dome	17.67	34	IAmb	IAmb	07 26 02.0	
	comp=Z,16nm,0.4s						
TCOL	CIGO, UAF Yank	17.75	35	P	Pn	07 25 51.9	-0.4
HDA	Harding Lake	17.82	37	P	P	07 25 53.9	+0.6
	baz=238,SNR=8.5						
CRQM	Cirque	17.93	50	IAmb	IAmb	07 25 60.0	
	comp=Z,36nm,0.6s						
PET	Petropavlovsk	17.98	285	⇑iP	P	07 25 53.3	-1.8
IL31		18.04	36	P	P	07 25 54.0	-1.6
ILAR	Eielson Array	18.04	36	P	P	07 25 53.6	-2.1
	comp=Z,1.7nm,0.3s,baz=243,slow=11,SNR=81						
ILAR				S	Sn	07 29 13.6	-2.4
	comp=Z,0.0nm,0.3s,baz=230,slow=18,SNR=1.6						
ILAR				LR	LR	07 33 22.6	
	comp=Z,152nm,18.2s,baz=245,slow=39						
POKR	Poker Plat Res	18.04	34	P	P	07 25 55.2	-0.5
	baz=235						
RIDG	Independent Ri	18.29	40	P	P	07 25 58.7	+0.2
COLD	Coldfoot	18.53	27	P	Pn	07 26 01.7	0.0
PEA0B	Petropavlovsk-	18.54	285		Pn	07 26 02.0	0.0
PEA0B				IAmb	IAmb	07 26 04.2	
	comp=Z,41nm,1.1s						
PEA0B	Petropavlovsk-	18.54	285	⇑iP	Pn	07 26 02.6	+0.6
PETK	Petropavlovsk-	18.54	285	P	Pn	07 26 02.7	+0.7
	comp=Z,1.2nm,0.3s,baz=93,slow=14,SNR=18						
SCRK	Sand Creek	18.74	40	IAmb	IAmb	07 26 09.8	
	comp=Z,15nm,0.4s						
CTGM	Chitina Glacie	18.83	50	P	P	07 26 05.1	+0.5
CTGM				IAmb	IAmb	07 26 08.2	
	comp=Z,80nm,0.8s						
PCA	Pinnacle	19.16	53	IAmb	IAmb	07 26 12.3	

comp=Z,72nm,0.6s
BILL Bilibino 19.23 335 P P 07 26 09.0 +0.3
BILL IAmb IAmb 07 26 21.5
comp=Z,25nm,0.8s
BILL Bilibino 19.23 335 d iP Pn 07 26 10.7 +0.6
BILL eS S 07 29 41.2 -2.2
BILL pmax pmax
comp=Z,52nm,1.7s
BILL MLR MLR
comp=Z,149nm,16.0s
TOLK Toolik Lake Re 19.71 24 IAmb IAmb 07 26 19.7
comp=Z,30nm,0.6s
TOLK Toolik Lake Re 19.71 24 P Pn 07 26 15.5 -0.4
baz=224,SNR=38
DHAK Deception Hill 20.05 56 P P 07 26 18.1 +0.4
DHAK IAmb IAmb 07 26 20.6
comp=Z,69nm,0.8s
EGAK Eagle 20.20 39 IAmb IAmb 07 26 23.6
comp=Z,21nm,0.8s
HYT Haines Junctio 20.63 51 P P 07 26 24.8 +0.7
HYT IAmb IAmb 07 26 27.8
comp=Z,49nm,0.8s
SKAG Skagway 21.55 56 IAmb IAmb 07 26 35.8
comp=Z,52nm,0.6s
SEY Seymchan 21.82 314 P P 07 26 37.9 +1.2
comp=Z,10nm,0.7s,baz=105,slow=9.2,SNR=37
SEY PcP PcP 07 30 35.3 +0.9
comp=Z,2.3nm,0.6s,baz=102,slow=5.5,SNR=8.4
WHY Whitehorse 21.89 52 IAmb IAmb 07 26 54.6
comp=Z,22nm,0.8s
MA2 Magadan 22.11 305 P P 07 26 40.5 +0.6
comp=Z,1.6nm,0.3s,baz=107,slow=8.1,SNR=4.2
MA2 Magadan 22.11 305 P P 07 26 39.9 +0.1
EPYK Eagle Plains 22.52 37 P P 07 26 43.1 -1.2
baz=248,SNR=10
H02S1 DAWSON INLET T 23.66 72 T T 07 51 34.4
SNR=16
DLBC Dease Lake 24.29 58 P P 07 27 03.2 +1.8
comp=Z,34nm,0.8s,baz=260,slow=7.3,SNR=60
DLBC Dease Lake 24.29 58 IAmb IAmb 07 27 05.0
comp=Z,67nm,1.1s
INK Inuvik 24.41 34 P P 07 27 01.9 -0.3
comp=Z,17nm,0.5s,baz=238,slow=8.0,SNR=217
INK PcP PcP 07 30 40.5 +0.8
comp=Z,4.9nm,0.6s,baz=310,slow=1.6,SNR=10
INK Inuvik 24.41 34 P P 07 27 01.9 -0.3
INK IAmb IAmb 07 27 02.7
comp=Z,55nm,1.4s
C36M Paulatuk 28.00 34 P P 07 27 34.1 -0.4
C36M IAmb IAmb 07 27 35.2
comp=Z,16nm,1.1s
C36M Paulatuk 28.00 34 P P 07 27 33.7 -0.8
baz=256,SNR=10
YUK Yuzh-Kuril'sk 29.11 271 ⇑iP P 07 27 44.4 -0.3
YSS Yuzh-Sakhalins 29.60 278 eP P 07 27 43.7 -5.3
YSS MLR MLR
comp=Z,300nm,16.0s
LLLB Lillooet 30.69 73 P P 07 27 59.8 +1.1
B05A Bryant 31.52 77 P P 07 28 07.5 +1.5
baz=296
YKA Yellowknife Ar 31.54 48 P P 07 28 06.1 +0.1
comp=Z,4.5nm,0.4s,baz=274,slow=7.9,SNR=110
YKA PcP PcP 07 30 58.0 +0.8
comp=Z,2.7nm,0.7s,baz=283,slow=2.7,SNR=16
YKA LR LR 07 42 48.3
comp=Z,170nm,18.2s,baz=0.0,slow=40
ERM Erimo 31.86 270 P P 07 28 10.0 +1.0
ERM IAmb IAmb 07 28 11.3
comp=Z,20nm,0.7s
ERM Erimo 31.86 270 c iP P 07 28 10.2 +1.2
ERM pmax pmax
comp=Z,15nm,0.9s
E04D Cinebar 32.02 80 P P 07 28 12.3 +1.9
baz=298
D05A Enumclaw 32.07 79 P P 07 28 12.3 +1.5
D05A IAmb IAmb 07 28 13.7
comp=Z,12nm,0.8s
TIXI Tiksi 32.26 329 PcP PcP 07 30 59.4 +0.4
comp=Z,8.2nm,0.6s,baz=83,slow=1.5,SNR=16
YAK Yakutsk 32.28 311 iP P 07 28 10.8 -1.6
YAK pmax pmax
comp=Z,7.0nm,0.7s
B08A Colville Reser 33.14 75 IAmb IAmb 07 28 21.9
comp=Z,8.6nm,0.6s
KBO Bosley Butte 33.24 88 P P 07 28 22.7 +1.5
KBO IAmb IAmb 07 28 38.8
comp=Z,30nm,1.3s
G05D Wamic, OR 33.42 81 P P 07 28 24.3 +1.6
baz=300
I04A Tendick Farm, 33.50 84 P P 07 28 24.5 +1.1
baz=302
L02E Cave Junction 33.65 88 P P 07 28 25.7 +1.0
baz=304
I05D Terrebonne, OR 33.87 83 P P 07 28 27.5 +0.9
baz=301
HAWA Hanford 33.94 78 IAmb IAmb 07 28 29.3
comp=Z,5.9nm,0.7s
J04D Umpqua Nationa 33.98 85 P P 07 28 28.8 +1.1
baz=303
C09A Chrisman Ranch 34.02 75 IAmb IAmb 07 28 30.7
comp=Z,12nm,1.1s
PINE Pine Mountain 34.40 83 IAmb IAmb 07 28 34.8
comp=Z,8.2nm,1.1s
L04D Klamath Falls 34.42 87 P P 07 28 31.1 -0.5
baz=304
YBH Yreka Blue Hor 34.44 88 P P 07 28 33.0 +1.3
YBH Yreka Blue Hor 34.44 88 P P 07 28 33.0 +1.3
YBH pmax pmax
comp=Z,5.0nm,1.1s
J05D Fort Rock, OR 34.49 84 P P 07 28 34.0 +1.8
baz=303,SNR=7.5
NEW Newport 34.50 74 IAmb IAmb 07 28 48.5
comp=Z,11nm,0.8s
NEW Newport 34.50 74 P P 07 28 32.8 +0.8
baz=297,SNR=14
K04D Chiloquin, OR 34.53 86 P P 07 28 33.5 +1.0
baz=304
M02C Callahan 34.55 88 P P 07 28 33.7 +1.1
baz=305
E09A Wood Farm, Sta 34.71 77 IAmb IAmb 07 28 40.1
comp=Z,6.5nm,0.7s
N02D Trinity Center 34.88 89 P P 07 28 37.0 +1.6
baz=305
M04C Macdoel 34.95 87 P P 07 28 37.0 +0.9
baz=304
I07A Izee 35.13 82 IAmb IAmb 07 28 39.9
comp=Z,7.3nm,1.0s
KLR Kul'dur 35.18 288 LR LR 07 44 27.3
comp=Z,68nm,18.3s,baz=58,slow=39
KLR Kul'dur 35.18 288 ⇑eP P 07 28 36.9 -0.9
KLR pmax pmax
comp=Z,2.0nm,0.8s
WDC Whiskeytown Da 35.21 89 P P 07 28 39.1 +0.9
WDC Whiskeytown Da 35.21 89 P P 07 28 39.1 +0.9
WDC pmax pmax
comp=Z,4.0nm,1.0s
O02D Mt. Diablo Mer 35.30 90 P P 07 28 41.0 +2.0
baz=306,SNR=6.9
MOD Modoc Plateau 35.83 86 IAmb IAmb 07 28 46.0
comp=Z,5.1nm,0.7s
O03E Paynes Creek 35.83 89 P P 07 28 44.6 +1.0
baz=306,SNR=9.2
WALA Waterton Lakes 36.02 71 IAmb IAmb 07 28 46.6
comp=Z,6.2nm,0.8s
J08A Circle Bar Ran 36.15 82 IAmb IAmb 07 28 48.5
comp=Z,13nm,1.2s
H11N2 WAKE ISLAND Hy 36.33 215 T T 08 07 17.1
baz=20,slow=75,SNR=60
H11N3 WAKE ISLAND Hy 36.34 215 T T 08 07 26.4
baz=20,slow=75,SNR=59
H11N1 WAKE ISLAND Hy 36.35 215 T T 08 07 24.7
baz=20,slow=75,SNR=61
JTMT Jette 36.42 73 IAmb IAmb 07 28 49.9
comp=Z,5.6nm,0.8s
WVOR Wild Horse Val 36.56 84 IAmb IAmb 07 28 52.0
comp=Z,6.2nm,0.9s
RES Resolute Bay 37.28 25 P P 07 28 54.8 -0.6
RES Resolute Bay 37.28 25 P P 07 28 54.8 -0.6
RES pmax pmax
comp=Z,6.0nm,1.2s
H11S1 WAKE ISLAND Hy 37.52 215 T T 08 08 54.7
SNR=173
USRK Ussuriysk Ar. 37.53 281 P P 07 28 57.9 0.0
comp=Z,1.2nm,0.5s,baz=60,slow=11,SNR=4.2
USRK LR LR 07 42 59.0
comp=Z,68nm,21.9s,baz=39,slow=34
H11S2 WAKE ISLAND Hy 37.54 215 T T 08 08 53.5
baz=186,slow=74,SNR=179
H11S3 WAKE ISLAND Hy 37.54 215 T T 08 08 57.2
baz=22,slow=74,SNR=104
PAHR Pah Rah Range 37.68 88 IAmb IAmb 07 29 01.5
comp=Z,9.5nm,1.0s
VCNR Virginia City 37.76 89 IAmb IAmb 07 29 03.2
comp=Z,7.5nm,0.9s
PNTR Pine Nut 37.92 89 IAmb IAmb 07 29 08.7
comp=Z,12nm,0.7s
YERR Yerington 38.20 89 IAmb IAmb 07 29 06.2
comp=Z,8.2nm,0.9s
MAJO Matsushiro 38.23 266 P P 07 29 04.4 +0.6
MAJO IAmb IAmb 07 29 06.5
comp=Z,23nm,0.8s
MAJO Matsushiro 38.23 266 P P 07 29 04.4 +0.6
MAJO pmax pmax
comp=Z,23nm,0.9s
MAT Matsushiro 38.23 266 P P 07 29 05.0 +1.1
MJAR Matsushiro Arr 38.23 266 P P 07 29 03.9 0.0
comp=Z,7.8nm,0.7s,baz=47,slow=8.9,SNR=19
MJAR LR LR 07 43 43.7
comp=Z,43nm,20.6s,baz=140,slow=34
MJB9 Matsu-Tunnel 38.23 266 P P 07 29 04.6 +0.7
MJB9 IAmb IAmb 07 29 06.4
comp=Z,24nm,0.8s
KVN Kaiserville 38.87 88 P P 07 29 10.2 +0.9
KVN Kaiserville 38.87 88 P P 07 29 10.3 +0.9
KVN pmax pmax
comp=Z,6.0nm,1.1s
EGMT Eagleton 38.95 71 IAmb IAmb 07 29 12.0
comp=Z,18nm,0.8s
EGMT Eagleton 38.95 71 P P 07 29 10.4 +0.6
baz=300,SNR=12
NVAR Mina Array Bea 39.12 89 P P 07 29 12.7 +1.1
comp=Z,4.8nm,0.8s,baz=293,slow=8.6,SNR=38
NVAR PcP PcP 07 31 21.3 +1.1
comp=Z,1.4nm,0.7s,baz=277,slow=2.4,SNR=5.3
NVAR ScP ScP 07 35 04.6 +0.8
comp=Z,1.4nm,0.8s,baz=280,slow=4.1,SNR=9.0
MDPB Devils Postpil 39.14 90 IAmb IAmb 07 29 14.3
comp=Z,7.4nm,0.9s
TIN Tinemaha, Big 40.03 90 P P 07 29 20.5 +1.5
baz=310
FFC Flin Flon 40.12 58 P P 07 29 20.0 +0.5
FFC IAmb IAmb 07 29 20.3
comp=Z,13nm,0.6s
FFC Flin Flon 40.12 58 P P 07 29 20.0 +0.5
FFC pmax pmax
comp=Z,13nm,0.6s
VES Vestal, Richgr 40.28 92 P P 07 29 21.4 +0.5
baz=311
H17A Grant Village 40.36 76 P P 07 29 23.5 +1.6
baz=303,SNR=6.2
PKM Mcpherson Peak 40.45 94 P P 07 29 23.2 +0.5
baz=312
CWC Cottonwood Cre 40.51 91 P P 07 29 23.7 +0.6
baz=310
GRAC Grapevine Rang 40.60 90 P P 07 29 24.7 +1.1
baz=310
RLMT Red Lodge 40.75 74 IAmb IAmb 07 29 27.5
comp=Z,13nm,0.8s
RLMT Red Lodge 40.75 74 P P 07 29 25.9 +0.9
baz=303,SNR=15
ISA Isabella, Lake 40.77 92 P P 07 29 25.6 +0.5
baz=311,SNR=5.2
R11A Troy Canyon, C 40.85 87 P P 07 29 26.5 +0.7
baz=308,SNR=7.1
DAC Darwin (Calif) 40.92 91 P P 07 29 27.8 +1.3
DAC Darwin (Calif) 40.92 91 P P 07 29 27.8 +1.3
DAC pmax pmax
comp=Z,6.0nm,1.1s
BOD Bodaibo 41.05 308 eP P 07 29 26.7 -0.3
BOD pmax pmax
comp=Z,3.0nm,1.1s
MPMC Manual Prospec 41.12 91 P P 07 29 28.3 +0.1
baz=310
FURC Furnace Creek, 41.25 90 P P 07 29 30.1 +1.2
baz=310,SNR=8.8
TPNV Topopah Spring 41.32 89 P P 07 29 30.3 +0.6
TPNV Topopah Spring 41.32 89 P P 07 29 30.3 +0.6
TPNV pmax pmax
comp=Z,7.0nm,0.8s
TPNV Topopah Spring 41.32 89 P P 07 29 30.6 +0.9
baz=310,SNR=12
LRMC Laurel Mtn Rad 41.38 92 P P 07 29 31.1 +0.9
baz=311
DUG Dugway, Tooele 41.42 83 P P 07 29 31.5 +0.9
baz=307,SNR=6.9
EDW2 Edwards Air Fo 41.58 93 P P 07 29 32.6 +0.9
baz=312
CN2 Changchun 41.69 284 eP P 07 29 34.5 +2.1
CN2 pmax pmax
comp=Z,10.0nm,0.5s
LAO LASA Array 41.69 70 IAmb IAmb 07 29 34.0
comp=Z,12nm,0.6s
LAO LASA Array 41.69 70 P P 07 29 33.5 +0.9
baz=302,SNR=9.9
BW06 Boulder Array 41.89 77 P P 07 29 34.8 +0.4
baz=305,SNR=8.9
PDAR Pinedale Array 41.89 77 P P 07 29 34.9 +0.5
comp=Z,3.6nm,0.5s,baz=316,slow=3.7,SNR=51
PDAR ScP ScP 07 35 14.1 -0.5
comp=Z,0.7nm,0.9s,baz=288,slow=1.4,SNR=3.6
PDAR LR LR 07 46 36.4
comp=Z,56nm,18.4s,baz=30,slow=36
SHOC Shoshone, Teco 41.98 90 P P 07 29 35.9 +1.0
baz=311,SNR=6.2
GSC Goldstone, Bar 42.04 91 IAmb IAmb 07 29 37.4
comp=Z,12nm,1.0s
GSC Goldstone, Bar 42.04 91 P P 07 29 36.3 +0.8
baz=311,SNR=13
HIA Hailar 42.06 295 P P 07 29 35.1 -0.4
HIA IAmb IAmb 07 29 35.5
comp=Z,8.6nm,0.7s
HIA Hailar 42.06 295 P P 07 29 35.1 -0.4
HIA pmax pmax
comp=Z,9.0nm,0.7s
BFSC Mount Baldy Ra 42.21 93 P P 07 29 38.0 +1.0
baz=312,SNR=6.4
FCC Fort Churchill 42.25 49 IAmb IAmb 07 29 38.0
comp=Z,18nm,0.7s
CIS Catalina Islan 42.31 95 P P 07 29 37.9 +0.3
baz=313
JCJ Chichijima 42.42 252 LR LR 07 43 31.7
comp=Z,108nm,20.7s,baz=112,slow=31
TUQ Turquoise Moun 42.49 90 P P 07 29 39.7 +0.4
baz=311
TULEG Thule 42.91 20 P P 07 29 42.0 0.0
TULEG IAmb IAmb 07 29 42.7
comp=Z,12nm,0.6s
MURC Murrieta 42.92 93 P P 07 29 43.5 +0.8
baz=312
GMRC Granite Mounta 43.08 91 P P 07 29 44.8 +0.8
baz=312,SNR=7.0
PFO Pinyon Flats O 43.37 93 LR LR 07 43 42.0
comp=Z,48nm,19.5s,baz=312,slow=30
PFO Pinyon Flats O 43.37 93 ⇑iP P 07 29 46.5 +0.1
PFO pmax pmax
comp=Z,5.0nm,0.8s
PFO Pinyon Flats O 43.37 93 P P 07 29 46.8 +0.4
baz=312
BELC Belle Mtn. Jos 43.40 92 P P 07 29 46.9 +0.3
baz=312
NEE2 Needles Airpor 43.74 90 P P 07 29 49.5 +0.3
baz=312
K22A Casper 43.78 75 P P 07 29 49.5 -0.1
baz=306
IRM Iron Mountain 43.82 91 P P 07 29 50.1 +0.3
baz=312
MONP2 Monument Peak 43.88 94 P P 07 29 51.3 +0.7
baz=313
BC3 Big Chuckawall 43.96 92 P P 07 29 50.8 -0.3
baz=312
KSRS Korea Array 43.99 275 P P 07 29 52.0 +0.9
comp=Z,7.7nm,0.7s,baz=55,slow=7.6,SNR=41
KSRS PcP PcP 07 31 36.2 +0.3
comp=Z,0.6nm,0.3s,baz=55,slow=3.7,SNR=4.4
KSRS LR LR 07 49 20.0
comp=Z,44nm,18.2s,baz=62,slow=38
KS19 Wonju Array Si 43.99 275 P P 07 29 51.7 +0.5
KS19 IAmb IAmb 07 29 52.6
comp=Z,9.0nm,0.8s
U15A North Rim 44.09 86 IAmb IAmb 07 29 53.9
comp=Z,5.9nm,0.6s
SWSC Sam W. Stewart 44.23 93 P P 07 29 53.4 +0.3
baz=313
IKP In-Ko-Pah, Jac 44.24 94 P P 07 29 53.6 +0.3
baz=313
O20A White River Ci 44.25 79 IAmb IAmb 07 29 59.1
comp=Z,18nm,1.1s
O20A White River Ci 44.25 79 P P 07 29 53.7 +0.2
baz=308,SNR=14
PDMCI Parker Dam,Lak 44.34 90 P P 07 29 54.4 +0.5
baz=312
RSSD Black Hills 44.40 72 P P 07 29 54.4 -0.2
RSSD IAmb IAmb 07 29 56.1
comp=Z,6.1nm,0.6s
RSSD Black Hills 44.40 72 P P 07 29 54.4 -0.2
RSSD pmax pmax
comp=Z,6.0nm,0.6s
RSSD Black Hills 44.40 72 P P 07 29 54.5 -0.2
baz=305
Y12C Blythe 44.47 91 IAmb IAmb 07 29 56.7
comp=Z,7.7nm,0.9s
Y12C Blythe 44.47 91 P P 07 29 55.3 +0.2
baz=312
GLA Glamis 44.76 92 P P 07 29 58.1 +0.8
baz=313
INCN Inchon 44.76 276 P P 07 29 57.7 +0.4
INCN IAmb IAmb 07 29 59.0
comp=Z,30nm,1.1s
INCN Inchon 44.76 276 P P 07 29 57.7 +0.4
INCN pmax pmax
comp=Z,30nm,1.2s
MDND Maddock 44.85 65 P P 07 29 58.2 +0.3
baz=304,SNR=5.7
JNU Nakatsue 45.00 268 P P 07 30 00.0 +0.7
JNU IAmb IAmb 07 30 06.9
comp=Z,9.6nm,1.0s
TJN Taejon 45.02 275 c iP P 07 29 59.7 +0.3
N23A Red Feather La 45.18 77 P P 07 30 01.5 +0.6
baz=308
WUAZ Wupatki 45.25 87 IAmb IAmb 07 30 03.3
comp=Z,7.5nm,0.8s
WUAZ Wupatki 45.25 87 P P 07 30 02.1 +0.7
baz=311,SNR=7.1
ULM Lac du Bonnet 45.58 61 P P 07 30 03.6 0.0
comp=Z,5.7nm,0.5s,baz=306,slow=9.3,SNR=22
ULM PcP PcP 07 31 41.0 -0.1
comp=Z,1.7nm,0.4s,baz=285,slow=4.8,SNR=2.5
ULM LR LR 07 51 37.7
comp=Z,74nm,18.0s,baz=7.0,slow=39
ULM Lac du Bonnet 45.58 61 IAmb IAmb 07 30 04.6
comp=Z,23nm,1.4s
MVCO Mesa Verde 45.92 83 P P 07 30 06.7 -0.1
baz=310
NRIK Noril'sk 46.00 331 P P 07 30 07.0 +0.4
comp=Z,6.3nm,0.6s,baz=85,slow=8.2,SNR=14
NRIK PcP PcP 07 31 42.6 +0.3
comp=Z,5.1nm,0.5s,baz=57,slow=4.7,SNR=6.1
NRIK LR LR 07 51 57.7
comp=Z,38nm,18.3s,baz=54,slow=39
ISCO Idaho Springs 46.05 78 P P 07 30 08.8 +1.0
baz=308
W18A Petrified Fore 46.52 86 IAmb IAmb 07 30 24.2
comp=Z,4.7nm,0.8s
W18A Petrified Fore 46.52 86 P P 07 30 12.2 +0.8
baz=311,SNR=5.4
S22A 4UR Ranch, Cre 46.60 81 P P 07 30 12.3 +0.2
baz=310
214A Organ Pipe Nat 46.75 92 IAmb IAmb 07 30 30.4
comp=Z,6.2nm,1.1s
214A Organ Pipe Nat 46.75 92 P P 07 30 13.5 +0.5
baz=314,SNR=5.7
Q24A Divide 46.85 79 P P 07 30 14.2 +0.1
baz=309
SUSD Miller 47.17 69 P P 07 30 15.9 -0.3
baz=307
SDCO Great Sand Dun 47.41 80 P P 07 30 18.9 +0.4
baz=310,SNR=6.5
TUC Tucson 47.76 90 P P 07 30 21.6 +0.6
TUC IAmb IAmb 07 30 23.6
comp=Z,6.0nm,1.1s
TUC Tucson 47.76 90 P P 07 30 21.6 +0.6
TUC pmax pmax
comp=Z,6.0nm,1.1s
TUC Tucson 47.76 90 P P 07 30 21.3 +0.3
baz=313
KSCO Kaye Shedlock' 48.34 77 IAmb IAmb 07 30 27.9
comp=Z,22nm,1.1s
KSCO Kaye Shedlock' 48.34 77 P P 07 30 26.3 +0.8
baz=310,SNR=7.2
T25A Trinidad 48.46 80 IAmb IAmb 07 30 32.9
comp=Z,11nm,1.0s
T25A Trinidad 48.46 80 P P 07 30 27.3 +0.8
baz=310,SNR=11
ANMO Albuquerque 48.65 84 P P 07 30 28.5 +0.6
ANMO Albuquerque 48.65 84 ⇑iP P 07 30 28.1 +0.1
ANMO pmax pmax
comp=Z,2.0nm,1.1s
ANMO Albuquerque 48.65 84 P P 07 30 27.7 -0.2
baz=312
ECSD EROS Data Cent 48.94 68 IAmb IAmb 07 30 29.9
comp=Z,19nm,1.2s
ECSD EROS Data Cent 48.94 68 P P 07 30 29.1 -0.8
baz=308,SNR=11
EYMN Ely 49.26 61 IAmb IAmb 07 30 33.4
comp=Z,10nm,0.7s
EYMN Ely 49.26 61 P P 07 30 31.6 -0.6
baz=307,SNR=15
TLY Talaya 49.34 305 P P 07 30 32.9 0.0
TLY IAmb IAmb 07 30 34.0
comp=Z,6.7nm,0.7s
TLY Talaya 49.34 305 eP P 07 30 33.9 +1.1
TLY pmax pmax
comp=Z,19nm,0.8s
121A Cookes Peak, D 49.45 87 P P 07 30 33.5 -0.6
baz=313
BJI Beijing 49.47 286 eP P 07 30 34.0 +0.1
BJI pmax pmax
comp=Z,9.0nm,0.6s
BJI LR LR
comp=Z,90nm,7.6s
BJI LR LR
comp=Z,78nm,5.0s
BJT Baijiatuau 49.49 286 P P 07 30 34.0 -0.1
BJT IAmb IAmb 07 30 34.7
comp=Z,6.3nm,0.7s
BJT Baijiatuau 49.49 286 P P 07 30 34.0 -0.1
BJT pmax pmax
comp=Z,6.0nm,0.7s
BGNE Belgrade 49.49 72 P P 07 30 33.8 -0.3
baz=309
ULN Ulaanbaatar 49.83 299 P P 07 30 36.8 0.0
ULN IAmb IAmb 07 30 37.5
comp=Z,5.7nm,0.9s
ULN Ulaanbaatar 49.83 299 P P 07 30 36.8 0.0
ULN pmax pmax
comp=Z,6.0nm,1.0s
SPA0 Spitsbergen Ar 49.93 358 eP P 07 30 36.5 -0.4
E38A The Farm, Brul 50.03 62 IAmb IAmb 07 30 38.5
comp=Z,11nm,0.8s
FRB Frobisher Bay 50.07 34 P P 07 30 38.0 -0.1
comp=Z,20nm,0.6s,baz=309,slow=8.7,SNR=48
SPMN Marine on St. 50.19 65 P P 07 30 38.9 -0.4
baz=308
SONM Songino Array 50.20 300 P P 07 30 39.8 +0.3
comp=Z,2.0nm,0.7s,baz=51,slow=7.6,SNR=9.9
SONM PcP PcP 07 31 58.3 +0.3
comp=Z,2.0nm,0.5s,baz=88,slow=1.1,SNR=7.2
CBKS Cedar Bluff 50.20 75 P P 07 30 39.5 -0.1
baz=310
ZAK Zakamensk 50.29 304 eP P 07 30 40.0 -0.2
ZAK e 07 31 58.6
ZAK pmax pmax
comp=Z,3.0nm,1.2s
ZAK pmax pmax
comp=Z,7.0nm,1.0s
MOY Mondy 50.67 306 eP P 07 30 43.5 +0.5
D41A Chassel 51.37 60 IAmb IAmb 07 30 49.2
comp=Z,12nm,0.8s
TIA Tai'an 51.38 282 P P 07 30 48.5 +0.1
TIA pmax pmax
comp=Z,12nm,0.7s
MNTX Cornudas Mount 51.51 86 P P 07 30 49.9 +0.5
baz=314,SNR=6.7
MSTX Muleshoe 51.56 82 IAmb IAmb 07 30 51.5
comp=Z,7.0nm,0.9s
MSTX Muleshoe 51.56 82 P P 07 30 49.9 0.0
baz=313
G40A Rib Lake 51.60 63 IAmb IAmb 07 30 50.4
comp=Z,11nm,1.1s
COWI Conover 51.66 62 IAmb IAmb 07 30 50.8
comp=Z,18nm,1.4s

KSU1 Kansas State U 51.87 73 P P 07 30 52.0 0.0
baz=311
SCIA State Center 52.04 68 P P 07 30 52.8 -0.4
baz=310
E44A Grand Marais A 53.06 59 P P 07 31 01.0 +0.3
baz=310,SNR=5.4
JFWS Jewell Farm 53.07 65 IAmb IAmb 07 31 00.6
comp=Z,12nm,0.8s
JFWS Jewell Farm 53.07 65 P P 07 30 59.6 -1.3
baz=310
L40A Anamosa 53.07 67 IAmb IAmb 07 31 03.8
comp=Z,14nm,1.1s
NJ2 Nanjing 53.14 277 eP P 07 31 01.5 0.0
NJ2 pmax pmax
comp=Z,15nm,0.7s
WMOK Wichita Mounta 53.47 78 P P 07 31 03.8 -0.1
baz=313,SNR=5.9
F45A CMU Biological 53.88 60 P P 07 31 06.3 -0.4
baz=310
D46A Sault St. Mari 53.88 58 P P 07 31 06.4 -0.3
baz=310,SNR=5.5
L42A Oliver, Polo 53.99 66 IAmb IAmb 07 31 07.3
comp=Z,18nm,1.1s
N41A Harden Midland 54.16 68 IAmb IAmb 07 31 08.9
comp=Z,16nm,0.9s
TX31 Lajitas Ar. Si 54.21 87 P P 07 31 09.8 +0.3
TX31 IAmb IAmb 07 31 11.1
comp=Z,5.3nm,1.0s
TX32 Lajitas Array 54.21 87 IAmb IAmb 07 31 10.2
comp=Z,4.1nm,0.6s
TXAR Lajitas Array 54.21 87 P P 07 31 09.6 +0.1
comp=Z,5.2nm,0.7s,baz=305,slow=5.9,SNR=64
TXAR PcP PcP 07 32 14.0 +0.7
comp=Z,1.3nm,0.6s,baz=282,slow=0.7,SNR=5.5
TXAR ScP ScP 07 36 05.7 -0.8
comp=Z,0.8nm,0.8s,baz=267,slow=2.7,SNR=6.2
G45A Suttons Bay 54.22 61 P P 07 31 08.8 -0.4
baz=311
D47A Chapleau 54.26 57 P P 07 31 09.0 -0.5
baz=311
ABTX Abilene, Hawle 54.39 81 P P 07 31 10.4 -0.3
baz=314
G46A Petoskey 54.47 60 P P 07 31 10.6 -0.4
baz=311,SNR=11
TUL1 Leonard 54.47 75 P P 07 31 10.4 -0.8
baz=313
E47A Iron Bridge 54.56 58 P P 07 31 11.4 -0.2
baz=311,SNR=5.2
I45A Fountain 54.56 62 P P 07 31 11.1 -0.6
baz=311
D48A Paudash Townsh 54.85 57 P P 07 31 13.6 -0.2
baz=311,SNR=9.4
GLMI Grayling 54.92 60 P P 07 31 13.9 -0.4
baz=311
U38A Gravette 54.95 74 IAmb IAmb 07 31 14.4
comp=Z,8.9nm,1.0s
I46A Reed City 55.05 62 P P 07 31 14.9 -0.4
baz=311
G47A Hillman 55.10 60 P P 07 31 14.2 -1.3
baz=311
E48A Lockeyer 55.12 57 P P 07 31 15.3 -0.4
baz=311
HDIL Hopedale 55.16 67 P P 07 31 15.3 -0.8
baz=312,SNR=7.9
MATQ Matagami 55.24 52 P P 07 31 15.8 -0.7
baz=312,SNR=12
H47A Mio 55.29 60 P P 07 31 16.9 -0.1
baz=312
F48A Evansville 55.32 58 P P 07 31 16.8 -0.3
baz=311
HHAR Hobbs 55.33 74 IAmb IAmb 07 31 16.5
comp=Z,4.9nm,0.7s
J46A Howard City 55.34 62 P P 07 31 16.9 -0.4
baz=312
I47A Gladwin 55.51 61 P P 07 31 18.4 -0.2
baz=312
F49A Sandfield 55.66 58 P P 07 31 19.4 -0.2
baz=312
H48A Harrisville 55.69 60 P P 07 31 19.9 0.0
baz=312
K46A Dorr 55.70 63 P P 07 31 18.8 -1.2
baz=312
CCM Cathedral Cave 55.71 70 P P 07 31 18.9 -1.2
baz=313
MGMO Mountain Grove 55.72 72 IAmb IAmb 07 31 19.2
comp=Z,8.9nm,0.9s
JCT Junction City 55.78 83 IAmb IAmb 07 31 31.7
comp=Z,4.7nm,0.7s
JCT Junction City 55.78 83 P P 07 31 20.5 -0.2
baz=315
I48A Sherman Twp 55.83 60 P P 07 31 20.8 -0.1
baz=312
SCO Scoresbysund 55.84 12 iP P 07 31 20.0 -0.5
comp=Z,4.1nm,0.4s
SCO Scoresbysund 55.84 12 P P 07 31 20.0 -0.5
SCO IAmb IAmb 07 31 24.3
comp=Z,22nm,1.3s
SCO Scoresbysund 55.84 12 P P 07 31 20.0 -0.5
SCO pmax pmax
comp=Z,22nm,1.3s
J47A Sunmer 55.86 62 P P 07 31 20.2 -0.8
baz=312
D50A G1974 Best Tow 55.87 55 P P 07 31 20.8 -0.3
baz=312,SNR=11
U40A Yellville 55.92 73 IAmb IAmb 07 31 21.0
comp=Z,27nm,1.4s
U40A Yellville 55.92 73 P P 07 31 20.1 -1.5
baz=313,SNR=12
LSQQ Lebel-sur-Quev 56.03 52 P P 07 31 21.5 -0.7
baz=312
K47A Vermontville 56.14 62 P P 07 31 22.2 -0.8
baz=312
D51A Lot 18 Range I 56.15 55 P P 07 31 22.8 -0.3
baz=312,SNR=7.7
W39A Magazine 56.16 75 IAmb IAmb 07 31 38.9
comp=Z,12nm,1.4s
W39A Magazine 56.16 75 P P 07 31 22.7 -0.6
baz=314,SNR=5.6
WHTX Lake Whitney, 56.16 80 P P 07 31 23.4 0.0
baz=314
J48A Bridge Port 56.38 61 P P 07 31 23.9 -0.8
baz=312
VLDQ Val d'Or 56.43 53 IAmb IAmb 07 31 24.3
comp=Z,12nm,0.8s
I49A Point Hope 56.47 60 P P 07 31 25.0 -0.4
baz=312
E51A G1948 Merrick 56.47 56 P P 07 31 24.9 -0.5
baz=312,SNR=12
L47A Sherwood 56.50 63 P P 07 31 24.8 -0.8
baz=312
SFIN Lafayette 56.52 66 P P 07 31 25.4 -0.3
baz=313,SNR=7.4
K48A Perry 56.53 62 P P 07 31 24.9 -1.0
baz=312
SCHQ Schefferville 56.65 42 P P 07 31 26.3 -0.2
comp=Z,11nm,0.6s,baz=353,slow=13,SNR=4.0
SCHQ Schefferville 56.65 42 P P 07 31 26.2 -0.4
SCHQ IAmb IAmb 07 31 27.2
comp=Z,17nm,0.9s
F51A Arnstein 56.66 57 P P 07 31 25.9 -0.8
baz=312
ZAA0 Zalesovo Array 56.66 317 P P 07 31 27.6 +1.0
ZALV Zalesovo Beam 56.66 317 P P 07 31 26.1 -0.5
comp=Z,2.3nm,0.6s,baz=34,slow=4.7,SNR=11
ZALV PcP PcP 07 32 22.8 +0.5
comp=Z,6.6nm,0.6s,baz=31,slow=3.8,SNR=16
ZALV LR LR 07 59 48.8
comp=Z,50nm,18.1s,baz=46,slow=40
FCAR Ozark Folk Cen 56.67 73 IAmb IAmb 07 31 26.3
comp=Z,11nm,0.9s
J49A Marlette 56.69 61 P P 07 31 26.6 -0.4
baz=312
MIAR Mount Ida 56.73 75 IAmb IAmb 07 31 28.1
comp=Z,10nm,0.9s
MIAR Mount Ida 56.73 75 P P 07 31 27.2 -0.1
baz=314,SNR=9.4
K49A Clarkson 56.91 61 P P 07 31 28.2 -0.3
baz=313
L48A N Adams 56.94 63 P P 07 31 28.1 -0.7
baz=313
WHN Wuhan 56.95 279 ⇑P P 07 31 28.8 -0.2
N47A Urbana 56.96 64 P P 07 31 27.7 -1.3
baz=313,SNR=5.8
WHAR Wooly Hollow 56.98 74 IAmb IAmb 07 31 29.5
comp=Z,8.9nm,1.2s
D53A Lac Vacive, Po 57.01 54 P P 07 31 28.5 -0.7
baz=313
F52A Sundridge 57.05 56 P P 07 31 29.4 -0.1
baz=313,SNR=16
E52A Mattawa 57.06 56 P P 07 31 29.3 -0.2
baz=313,SNR=5.3
W41B Gary Mavity, V 57.09 74 IAmb IAmb 07 31 30.3
comp=Z,8.9nm,1.1s
W41B Gary Mavity, V 57.09 74 P P 07 31 28.8 -1.0
baz=314,SNR=6.8
M48A Edgerton 57.10 63 P P 07 31 28.8 -1.1
baz=313
L49A Milan 57.19 62 P P 07 31 30.2 -0.4
baz=313
X40A Basin Creek Fa 57.21 75 IAmb IAmb 07 31 31.6
comp=Z,8.4nm,1.2s
X40A Basin Creek Fa 57.21 75 P P 07 31 30.0 -0.8
baz=314
N48A Decatur 57.35 64 P P 07 31 30.5 -1.2
baz=313
K50A Casco 57.36 61 P P 07 31 30.9 -0.8
baz=313
D54A Lac Fusel, La 57.48 54 P P 07 31 31.8 -0.7
baz=313
E53A Dumoine, Ponti 57.50 55 P P 07 31 32.5 -0.2
baz=313,SNR=10
M49A Liberty Center 57.51 63 P P 07 31 32.1 -0.7
baz=313
H06E1 SOCORRO T-PHAS 57.52 101 T T 08 33 56.9
SNR=5.6
I51A Listowel 57.52 59 P P 07 31 33.2 +0.4
baz=313
H52A Wyevale 57.54 58 P P 07 31 32.9 -0.1
baz=313
833A Chaparral WMA, 57.56 84 P P 07 31 33.1 -0.2
baz=316
ALGO Algonquin Park 57.59 56 P P 07 31 32.8 -0.6
baz=313
BLO Bloomington 57.66 66 IAmb IAmb 07 31 34.1
comp=Z,19nm,1.1s
O48A Farmland 57.69 65 P P 07 31 32.5 -1.6
baz=313,SNR=8.2
E54A Lac Daplat, Po 57.70 55 P P 07 31 33.6 -0.5
baz=313,SNR=6.9
L50A Kingsville 57.76 62 P P 07 31 34.2 -0.4
baz=313
N49A Columbus Grove 57.77 64 P P 07 31 33.8 -0.8
baz=313
XAN Xi'an 57.78 285 P P 07 31 34.8 -0.1
XAN pmax pmax
comp=Z,16nm,1.0s
XAN pmax pmax
comp=Z,120nm,4.3s
XAN Xi'an 57.78 285 P P 07 31 34.6 -0.3
XAN IAmb IAmb 07 31 35.5
comp=Z,15nm,1.0s
XAN Xi'an 57.78 285 P P 07 31 34.6 -0.3
XAN pmax pmax
comp=Z,15nm,1.0s
G53A Haliburton 57.87 57 P P 07 31 35.1 -0.2
baz=313,SNR=5.4
ARCES ARCESS Array B 58.06 353 P P 07 31 35.1 -1.2
comp=Z,2.0nm,0.4s,baz=11,slow=6.8,SNR=25
ARCES PcP PcP 07 32 27.3 -0.2
comp=Z,3.1nm,0.5s,baz=24,slow=4.9,SNR=10
ARCES LR LR 07 56 14.4
comp=Z,48nm,21.9s,baz=325,slow=36
ARE0 ARCESS Array S 58.06 353 eP P 07 31 35.4 -0.9
ARE0 ARCESS Array S 58.06 353 P P 07 31 35.4 -0.9
M50A Fremont 58.07 62 P P 07 31 35.9 -0.8
baz=313
P48A Milroy 58.08 66 P P 07 31 35.7 -1.2
baz=314,SNR=5.9
D55A Sainte-Anne-du 58.16 53 P P 07 31 36.8 -0.5
baz=314,SNR=7.1
O49A Covington 58.19 64 P P 07 31 36.4 -1.2
baz=314
J52A Paris 58.19 59 P P 07 31 37.5 -0.1
baz=314
H53A Bobcaygeon 58.27 57 P P 07 31 38.0 -0.1
baz=314
Q48A North Vernon 58.28 66 P P 07 31 37.3 -0.9
baz=314
X43A Marvell 58.35 73 P P 07 31 37.8 -1.0
baz=314
TRO Tromso 58.37 356 eP P 07 31 37.8 -0.6
P49A Miami Univ. Ec 58.43 65 P P 07 31 38.0 -1.3
baz=314,SNR=5.4
WCI Wyandotte Cave 58.44 67 P P 07 31 38.9 -0.5
WCI Wyandotte Cave 58.44 67 P P 07 31 38.9 -0.5
WCI pmax pmax
comp=Z,15nm,0.9s
WCI Wyandotte Cave 58.44 67 P P 07 31 38.5 -0.9
baz=314
N50A Nevada 58.45 63 P P 07 31 38.9 -0.5
baz=314,SNR=5.1
D56A ZEC Mazanza, M 58.49 53 P P 07 31 38.8 -0.8
baz=314,SNR=5.7
F55A Otter Lake 58.54 55 P P 07 31 38.3 -1.6
baz=314
M51A Elyria 58.59 62 P P 07 31 39.6 -0.7
baz=314
O50A Cable 58.62 64 P P 07 31 39.9 -0.7
baz=314,SNR=7.0
Q49A Aurora 58.70 66 P P 07 31 41.2 +0.1
baz=314
E56A St. Veronique 58.70 53 P P 07 31 40.6 -0.5
baz=314
KTK1 Kautokeino 58.74 354 eP P 07 31 39.9 -1.1
LVZ Lovozero 58.75 349 P P 07 31 40.6 -0.5
LVZ Lovozero 58.75 349 P P 07 31 40.6 -0.5
LVZ pmax pmax
comp=Z,47nm,1.4s
G55A Calabogie 58.76 55 P P 07 31 41.3 -0.1
baz=314
N51A Ashland 58.77 62 P P 07 31 40.9 -0.7
baz=314
P50A Jamestown 58.89 64 P P 07 31 41.5 -1.0
baz=314,SNR=6.7
M52A Chesterland 58.89 61 P P 07 31 42.0 -0.5
baz=314
ACSO Alum Creek Sta 58.91 63 P P 07 31 41.9 -0.7
baz=314
D57A Chemin Vers le 58.94 52 P P 07 31 42.1 -0.6
baz=314
I55A Frankford 58.98 57 P P 07 31 43.3 +0.3
baz=314
H55A Tweed 59.01 56 P P 07 31 43.2 0.0
baz=314
WVT Waverly 59.01 70 P P 07 31 43.0 -0.4
WVT IAmb IAmb 07 31 43.8
comp=Z,6.0nm,0.7s
WVT Waverly 59.01 70 P P 07 31 43.0 -0.4
WVT pmax pmax
comp=Z,6.0nm,0.7s
WVT Waverly 59.01 70 P P 07 31 42.6 -0.7
baz=314
J54A Appleton 59.14 58 P P 07 31 43.0 -1.1
baz=314
O51A Pataskala 59.18 63 P P 07 31 43.6 -0.8
baz=314
L53A Girard 59.20 60 P P 07 31 44.2 -0.4
baz=314
LATQ La Tuque 59.22 51 IAmb IAmb 07 31 45.1
comp=Z,7.5nm,0.6s
LATQ La Tuque 59.22 51 P P 07 31 43.8 -0.8
baz=315,SNR=5.4
N52A McGinn's Farm, 59.22 62 P P 07 31 43.8 -1.0
baz=314
OXF Oxford 59.22 72 P P 07 31 44.1 -0.7
baz=315,SNR=6.3
ERPA Erie 59.23 60 P P 07 31 44.7 -0.1
baz=314
E57A Chemin Saint G 59.23 53 P P 07 31 43.9 -0.9
baz=315,SNR=5.3
GTA Gaotai 59.31 296 ⇓P P 07 31 45.5 -0.1
GTA pP pP 07 31 57.0 -3.3
GTA sP sP 07 32 02.8 -3.6
GTA pmax pmax
comp=Z,6.0nm,0.6s
GTA pmax pmax
comp=Z,53nm,5.4s
GTA LR LR
comp=Z,140nm,19.7s
GTA LR LR
comp=Z,710nm,18.7s
S49A Springfield 59.32 67 P P 07 31 44.7 -0.8
baz=314,SNR=6.9
Q50A Georgetown 59.32 65 P P 07 31 44.9 -0.6
baz=314
M53A WI Miller and 59.33 61 P P 07 31 45.1 -0.4
baz=314,SNR=5.1
LZH Lanzhou 59.34 290 eP P 07 31 46.3 +0.5
LZH pP pP 07 32 01.3 +0.7
LZH ePP PP 07 33 59.5 +2.5
LZH pmax pmax
comp=Z,22nm,1.3s
LZH pmax pmax
comp=Z,130nm,6.5s
LZH LR LR
comp=Z,310nm,15.5s
LZH LR LR
comp=Z,310nm,16.2s
LZH LR LR
comp=Z,460nm,17.4s
D58A Chemin du LacG 59.37 52 P P 07 31 44.8 -0.8
baz=315
H56A Elgin 59.45 56 P P 07 31 46.1 -0.1
baz=315
L54A Sinclairville 59.51 59 P P 07 31 46.7 0.0
baz=314
R50A Paris 59.52 66 IAmb IAmb 07 31 48.0
comp=Z,18nm,1.2s
R50A Paris 59.52 66 P P 07 31 46.4 -0.4
baz=314
Q51A Peebles 59.55 65 P P 07 31 46.6 -0.5
baz=314,SNR=5.5
K54A Basiliko Farm, 59.58 59 P P 07 31 46.9 -0.3
baz=314
O52A Adamsville 59.62 63 P P 07 31 47.0 -0.5
baz=314,SNR=5.2
T49A Edmonton 59.65 68 P P 07 31 47.2 -0.6
baz=315,SNR=8.0
N53A Lisbon 59.69 62 IAmb IAmb 07 31 48.0
comp=Z,13nm,0.9s
N53A Lisbon 59.69 62 P P 07 31 47.4 -0.5
baz=314
E58A La Victoria 59.69 52 P P 07 31 47.4 -0.5
baz=315
G57A Newington 59.74 55 P P 07 31 47.5 -0.7
baz=315
K55A Perry 59.82 58 P P 07 31 48.3 -0.6
baz=315
M54A Oil Creek Stat 59.83 60 P P 07 31 48.8 -0.1
baz=315
V48A Smith Brothers 59.87 70 IAmb IAmb 07 31 49.4
comp=Z,9.2nm,1.1s
O53A New Philadelph 59.87 62 P P 07 31 48.7 -0.5
baz=315
S50A Richmond 59.90 66 P P 07 31 49.2 -0.2
baz=315
CLTN Cedars of Leba 59.91 69 IAmb IAmb 07 31 50.2
comp=Z,8.4nm,1.1s
R51A Hillsboro 59.92 65 P P 07 31 49.2 -0.3
baz=315,SNR=19
D59A Saint-Raymond 59.94 51 P P 07 31 49.0 -0.6
baz=315
H57A Richville 59.98 55 P P 07 31 49.9 0.0
baz=315
L55A Hinsdale 60.01 59 P P 07 31 49.9 -0.2
baz=315
N54A Moraine State 60.04 61 P P 07 31 50.0 -0.4
baz=315,SNR=5.6
T50A Nancy 60.11 67 P P 07 31 50.4 -0.5
baz=315
G58A Ormstown 60.17 54 P P 07 31 50.7 -0.4
baz=315
Q52A Bidwell 60.19 64 P P 07 31 50.6 -0.8
baz=315
I57A Carthage 60.22 56 P P 07 31 51.3 -0.2
baz=315
STEI Steigen 60.22 357 eP P 07 31 50.0 -1.1
K56A Middlesex 60.23 58 P P 07 31 51.3 -0.4
baz=315
F59A Saint Guilaume 60.30 53 P P 07 31 51.5 -0.6
baz=316
P53A Whipple 60.31 63 P P 07 31 51.9 -0.4
baz=315
M55A Ridgway 60.34 60 P P 07 31 52.3 -0.1
baz=315,SNR=5.4
O54A Avella 60.37 62 P P 07 31 52.3 -0.4
baz=315,SNR=5.6
S51A Beattyville 60.38 66 IAmb IAmb 07 31 53.0
comp=Z,7.1nm,0.8s
S51A Beattyville 60.38 66 P P 07 31 52.1 -0.7
baz=315
R52A Catlettsburg 60.42 65 P P 07 31 52.3 -0.7
baz=315
D60A Saint Jean D'O 60.44 51 P P 07 31 52.6 -0.4
baz=316,SNR=5.9
L56A Greenwood 60.51 58 P P 07 31 53.8 +0.2
baz=315,SNR=5.4
E60A Ste Agathe de 60.58 51 P P 07 31 53.5 -0.5
baz=316
D61A St Aubert, Com 60.59 50 P P 07 31 53.6 -0.4
baz=316,SNR=5.5
F60A Warwick 60.62 52 P P 07 31 54.0 -0.2
baz=316
K57A Scipio Center 60.63 57 P P 07 31 54.4 0.0
baz=315
M56A Emporium 60.64 59 P P 07 31 54.4 -0.1
baz=315
X48A Hartselle 60.65 71 IAmb IAmb 07 31 53.9
comp=Z,8.4nm,0.7s
G59A Clarenceville 60.66 53 P P 07 31 54.1 -0.3
baz=316
T51A Gray 60.66 67 P P 07 31 53.9 -0.8
baz=315,SNR=6.1
Q53A Leroy 60.68 64 P P 07 31 54.5 -0.2
baz=315,SNR=5.4
N55A Marion Center 60.70 60 P P 07 31 54.7 -0.2
baz=315
H59A Cadyville 60.71 54 P P 07 31 55.1 +0.2
baz=316
P54A Burton 60.73 62 P P 07 31 54.9 -0.2
baz=315,SNR=5.6
R53A Hurricane 60.81 64 P P 07 31 55.6 -0.1
baz=315
J58A Remsen 60.82 56 P P 07 31 55.8 +0.1
baz=315
O55A Ligonier 60.94 61 P P 07 31 56.2 -0.3
baz=315
Q54A Coxs Mills 60.97 63 IAmb IAmb 07 31 59.1
comp=Z,12nm,0.9s
Q54A Coxs Mills 60.97 63 P P 07 31 56.4 -0.4
baz=315
L57A Andrews Acres 60.97 58 P P 07 31 56.9 +0.1
baz=315
N56A West Decatur 60.98 60 P P 07 31 56.7 -0.1
baz=315
E61A Lac Etchemin 61.00 51 P P 07 31 56.8 -0.1
baz=316
U51A La Follette 61.03 67 P P 07 31 56.4 -0.8
baz=315
MCWV Mont Chateau 61.03 62 IAmb IAmb 07 31 57.6
comp=Z,6.2nm,0.7s
MCWV Mont Chateau 61.03 62 P P 07 31 57.1 0.0
baz=315
F61A St Evariste 61.09 52 P P 07 31 57.1 -0.3
baz=316
T52A Hallie 61.10 66 P P 07 31 57.5 -0.1
baz=315
W50A Signal Mountai 61.12 69 P P 07 31 57.1 -0.8
baz=315
P55A Reedsville 61.15 62 P P 07 31 57.9 -0.1
baz=315
S53A Williamson 61.17 65 P P 07 31 57.8 -0.4
baz=315
TZTN Tazewell 61.18 67 P P 07 31 58.0 -0.2
baz=315
D62A Allapoint, All 61.21 50 P P 07 31 58.2 0.0
baz=317,SNR=8.9
I59A Olmsteadville 61.23 55 P P 07 31 58.1 -0.4
baz=316
V51A Loudon 61.25 68 P P 07 31 58.6 -0.1
baz=315
H60A Morristown 61.27 54 P P 07 31 58.2 -0.5
baz=316
BINY Binghamton 61.28 57 P P 07 31 59.0 +0.1
baz=316
O56A Blue Knob Stat 61.29 61 P P 07 31 58.6 -0.3
baz=315
M57A Sunshine Farm, 61.30 59 P P 07 31 59.1 +0.2
baz=316
Q55A Buckhannon 61.37 63 P P 07 31 59.7 +0.2
baz=315,SNR=5.9
U52A Thorn Hill 61.39 67 P P 07 31 59.2 -0.5
baz=315
SSPA Standing Stone 61.40 60 P P 07 31 59.7 +0.1

SSPA Standing Stone 61.40 60 P P 07 31 59.4 -0.2
baz=316
CPCT Cooper Cave 61.40 68 IAmb IAmb 07 31 59.6
comp=Z,18nm,1.4s
FPAL Fort Paine 61.42 70 IAmb IAmb 07 31 59.9
comp=Z,12nm,0.8s
Y49A Blount Mountai 61.44 71 IAmb IAmb 07 32 01.6
comp=Z,8.2nm,1.1s
T53A Wise 61.44 66 P P 07 31 59.7 -0.3
baz=315
R54A Victor 61.45 64 P P 07 32 00.1 +0.1
baz=315,SNR=6.8
L58A Harry Jones Me 61.47 57 P P 07 32 00.2 +0.1
baz=316
N57A Milroy 61.49 60 P P 07 32 00.4 +0.2
baz=316
S54A Dingess, Beckl 61.54 64 P P 07 32 00.5 -0.2
baz=316
KURK Kurchatov 61.62 317 P P 07 32 00.8 -0.2
KURK PcP 07 32 42.3 +0.3
KURK Kurchatov 61.62 317 *c i*P P 07 32 01.0 +0.1
KURK pmax pmax
comp=Z,14nm,0.8s
M58A Price's Panora 61.63 58 P P 07 32 01.2 0.0
baz=316
V52A Sevierville 61.65 67 P P 07 32 00.9 -0.5
baz=316,SNR=5.5
H61A Lyndonville 61.67 53 P P 07 32 01.6 +0.2
baz=316
TKL Tuckaleechee C 61.68 68 IAmb IAmb 07 32 01.8
comp=Z,12nm,1.0s
LRAL Lakeview Retre 61.68 72 IAmb IAmb 07 32 01.3
comp=Z,6.7nm,0.8s
LRAL Lakeview Retre 61.68 72 P P 07 32 00.6 -1.0
baz=316
D63A Stockholm 61.68 49 P P 07 32 01.1 -0.3
baz=317,SNR=6.0
P56A Dayton Farm, R 61.69 61 P P 07 32 01.6 +0.1
baz=316,SNR=6.4
KURBB Kurchatov Arra 61.73 317 P P 07 32 01.7 +0.1
comp=Z,12nm,0.6s,baz=44,slow=7.0,SNR=22
KURBB PcP PcP 07 32 41.9 -0.5
comp=Z,4.5nm,0.6s,baz=37,slow=4.3,SNR=5.3
L59A Walton 61.78 57 P P 07 32 02.6 +0.4
baz=316
O57A Amberson 61.83 60 P P 07 32 02.5 -0.1
baz=316
X51A Calhoun 61.84 69 P P 07 32 02.0 -0.6
baz=316
J60A Lant Hill Farm 61.85 55 P P 07 32 02.6 0.0
baz=316
G62A West of Eustis 61.86 52 P P 07 32 02.6 0.0
baz=317
U53A Fall Branch 61.86 66 P P 07 32 02.5 -0.3
baz=316,SNR=5.1
R55A Marlinton 61.86 63 P P 07 32 02.9 0.0
baz=316
N58A Sunbury 61.87 59 P P 07 32 03.2 +0.4
baz=316
T54A Tazewell 61.92 65 P P 07 32 03.4 +0.2
baz=316,SNR=12
I61A Oroboro, Fairl 61.96 54 P P 07 32 03.1 -0.2
baz=316
E63A Oxbow 61.99 50 P P 07 32 02.9 -0.6
baz=317,SNR=6.1
W52A Murphy 61.99 68 P P 07 32 03.0 -0.8
baz=316,SNR=6.0
MOR8 Moi Rana 62.01 357 *e*P P 07 32 01.3 -2.0
S55A Lewisburg 62.01 64 P P 07 32 04.0 +0.1
baz=316,SNR=7.7
H62A Milan 62.02 53 P P 07 32 03.5 -0.3
baz=317
M59A Waymart 62.04 58 P P 07 32 04.1 +0.1
baz=316
P57A Homestead Farm 62.15 61 P P 07 32 04.9 +0.2
baz=316
Z50A Ashland 62.15 71 P P 07 32 03.9 -0.9
Z50A Ashland 62.15 71 P P 07 32 03.7 -1.1
baz=316,SNR=9.6
R56A Bull Pasture M 62.16 63 P P 07 32 04.6 -0.3
baz=316
U54A Nelsons Funny 62.17 66 P P 07 32 05.0 +0.1
baz=316
F63A Nahmakanta, Br 62.19 51 P P 07 32 04.6 -0.3
baz=317,SNR=5.0
V53A Saluda 62.22 67 P P 07 32 05.0 -0.2
baz=316
Q57A Strasburg 62.26 61 P P 07 32 05.4 0.0
baz=316
E64A Bridgewater 62.27 49 P P 07 32 04.9 -0.4
baz=318,SNR=13
O58A Lewisberry 62.28 60 P P 07 32 05.2 -0.3
baz=316
N59A State Game Lan 62.32 58 P P 07 32 05.8 0.0
baz=316
T55A Pulaski 62.33 64 P P 07 32 06.2 +0.2
baz=316,SNR=7.8
G63A Kingsbury 62.37 51 P P 07 32 05.8 -0.3
baz=317
W53A Cullowhee 62.38 68 P P 07 32 06.1 -0.3
baz=316
PKME Peaks-Kenny Pk 62.42 51 P P 07 32 06.3 -0.1
baz=317
F64A Sherman 62.43 50 P P 07 32 06.2 -0.2
baz=317
BLA Blacksburg 62.46 64 P P 07 32 07.0 +0.1
baz=316,SNR=7.6
P58A Pank, Wackersv 62.53 60 P P 07 32 06.8 -0.4
baz=316
O59A Robesonia 62.53 59 P P 07 32 07.4 +0.2
baz=316
L61A Hillsdale 1, H 62.54 56 P P 07 32 07.3 0.0
baz=317
WMQ Urumqi 62.56 307 *e*P P 07 32 08.0 +0.5
WMQ sP sP 07 32 28.5 +0.1
WMQ pmax pmax
WMQ pmax pmax
comp=Z,14nm,0.7s
comp=Z,89nm,4.9s
S56A Natural Bridge 62.60 63 P P 07 32 07.9 +0.1
baz=316,SNR=5.1
M60A Port Jervis 62.62 57 P P 07 32 08.1 +0.3
baz=316,SNR=6.2
U55A TA2, Sparta 62.62 65 P P 07 32 08.0 0.0
baz=316,SNR=7.8
V54A Nebo 62.63 66 P P 07 32 07.9 -0.1
baz=316
BG3 Lake Jocassee 62.63 68 IAmb IAmb 07 32 08.6
comp=Z,7.8nm,1.0s
I63A Otisfield 62.68 53 P P 07 32 08.2 0.0
baz=317
N60A Cedar Hill Far 62.70 58 P P 07 32 08.6 +0.3
baz=316
Q58A Fox Den Farm, 62.72 61 P P 07 32 08.3 -0.1
baz=316
R57A Stanardsville 62.73 62 P P 07 32 08.8 +0.3
baz=316,SNR=5.9
X53A Estanollee 62.77 68 P P 07 32 08.6 -0.4
baz=316
Y52A Lilburn 62.80 69 P P 07 32 08.7 -0.4
baz=316
L61B Northampton 62.80 55 P P 07 32 08.9 -0.1
baz=317
T56A Rocky Mt 62.81 64 P P 07 32 09.2 +0.1
baz=316
K62A Royalston 62.87 55 P P 07 32 09.7 +0.2
baz=317
S57A Dark Hollow, R 62.88 63 P P 07 32 09.8 +0.2
baz=316
P59A Jarrettsville 62.91 60 P P 07 32 09.8 +0.1
baz=316
O60A Telford 62.94 59 P P 07 32 10.0 +0.1
baz=317
MK31 Makanchi Array 62.95 312 P P 07 32 09.5 -0.4
MK31 IAmb IAmb 07 32 09.8
comp=Z,4.8nm,0.9s
MK31 Makanchi Array 62.95 312 P P 07 32 09.5 -0.4
MK31 pmax pmax
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 62.95 312 P P 07 32 09.2 -0.7
comp=Z,4.8nm,0.4s,baz=44,slow=6.6,SNR=69
MKAR LR LR 08 01 54.5
comp=Z,27nm,18.2s,baz=16,slow=38
BRAL Brewton 62.99 73 P P 07 32 10.2 -0.1
baz=316
V55A Taylorsville 62.99 66 IAmb IAmb 07 32 11.2
comp=Z,13nm,1.1s
V55A Taylorsville 62.99 66 P P 07 32 10.3 0.0
baz=316,SNR=5.3
W54A Cherokee Point 62.99 67 P P 07 32 10.1 -0.3
baz=316
R58A Rapidan 63.01 62 P P 07 32 10.5 +0.1
baz=316
CD2 Chengdu 63.07 286 P P 07 32 09.3 -1.7
CD2 pmax pmax
comp=Z,20nm,0.5s
M61A Granite Spring 63.08 57 P P 07 32 11.0 +0.2
baz=317
MAKZ Makanchi 63.08 312 P P 07 32 10.2 -0.6
MAKZ IAmb IAmb 07 32 10.7
comp=Z,12nm,1.1s
MAKZ Makanchi 63.08 312 P P 07 32 10.2 -0.6
MAKZ pmax pmax
comp=Z,12nm,1.2s
U56A King 63.10 65 P P 07 32 10.9 -0.2
baz=316
BRVK Borovoye 63.11 323 P P 07 32 11.2 +0.4
BRVK Borovoye 63.11 323 *c i*P P 07 32 11.0 +0.2
BRVK pmax pmax
comp=Z,14nm,0.9s
N61A South Mountain 63.21 58 P P 07 32 12.2 +0.5
baz=317
PAL Palisades 63.22 57 P P 07 32 12.3 +0.5
baz=317
T57A Hurt 63.26 64 IAmb IAmb 07 32 12.9
comp=Z,12nm,0.8s
T57A Hurt 63.26 64 P P 07 32 11.9 -0.2
baz=316,SNR=6.0
X54A Belton 63.27 68 P P 07 32 11.9 -0.3
baz=316,SNR=7.5
152A Waverly Hall 63.28 71 IAmb IAmb 07 32 11.7
comp=Z,6.6nm,0.8s
G65A Princeton 63.29 50 P P 07 32 12.0 -0.1
baz=318
R58B Mineral 63.32 62 IAmb IAmb 07 32 13.2
comp=Z,8.8nm,0.8s
R58B Mineral 63.32 62 P P 07 32 12.8 +0.4
baz=316
H65A Eastbrook 63.34 51 P P 07 32 12.5 0.0
baz=318
PAULI Pauline 63.40 67 IAmb IAmb 07 32 13.5
comp=Z,15nm,0.9s
CBN Corbin Frederi 63.42 61 P P 07 32 12.3 -0.8
baz=317
V56A Mocksville 63.42 65 P P 07 32 13.1 -0.1
baz=316,SNR=7.0
KMSC Kings Mountain 63.44 66 P P 07 32 12.9 -0.3
baz=316,SNR=9.7
GOGA Godfrey 63.47 69 IAmb IAmb 07 32 13.4
comp=Z,12nm,0.8s
GOGA Godfrey 63.47 69 P P 07 32 12.4 -1.1
baz=316,SNR=6.8
S58A Poland Farm, P 63.48 62 P P 07 32 13.6 +0.1
baz=317
O61A Allentown 63.55 58 P P 07 32 13.9 0.0
baz=317
R59A King George, V 63.56 61 P P 07 32 14.4 +0.4
baz=317
U57A Blanch 63.62 64 P P 07 32 14.4 -0.1
baz=317,SNR=5.8
T58A Grand View Acr 63.70 63 P P 07 32 14.8 -0.2
baz=317,SNR=7.1
H66A Whiting 63.72 50 P P 07 32 14.5 -0.4
baz=318
X55A Gracelyn & Ava 63.75 67 P P 07 32 15.1 -0.3
baz=317,SNR=12
V57A Coltrane Farms 63.77 65 P P 07 32 15.2 -0.3
baz=317
S59A Mechanicsville 63.78 62 P P 07 32 15.6 +0.1
baz=317
W56A Indian Trail 63.87 66 P P 07 32 15.7 -0.4
baz=317
Y55A Saluda 64.01 68 P P 07 32 16.6 -0.4
baz=317,SNR=7.1
X56A White Oak 64.08 67 P P 07 32 17.3 -0.2
baz=317,SNR=6.1
U58A Oxford 64.09 64 P P 07 32 17.2 -0.3
baz=317
JSC Jenkinsville 64.10 67 IAmb IAmb 07 32 18.3
comp=Z,7.7nm,0.9s
L64A Middleborough 64.11 55 P P 07 32 17.6 +0.1
baz=318
S60A Water View 64.17 61 P P 07 32 18.0 -0.1
baz=317
W57A Gilead 64.18 65 P P 07 32 18.0 -0.1
baz=317
V58A Windy Hill, Pi 64.21 64 IAmb IAmb 07 32 19.4
comp=Z,13nm,0.9s
V58A Windy Hill, Pi 64.21 64 P P 07 32 18.4 0.0
baz=317,SNR=5.3
T59A Double "B" Far 64.21 63 P P 07 32 18.7 +0.4
baz=317,SNR=6.2
ARU Arti 64.22 332 P P 07 32 18.1 0.0
comp=Z,8.1nm,0.4s,baz=22,slow=4.3,SNR=34
ARU LR LR 08 07 24.0
comp=Z,40nm,18.0s,baz=148,slow=43
ARU Arti 64.22 332 P P 07 32 18.1 0.0
ARU Arti 64.22 332 *c i*P P 07 32 17.2 -0.9
ARU 07 32 47.6
ARU S S 07 40 49.8 -1.2
ARU pmax pmax
comp=Z,20nm,0.6s
BIRD Birdtown, Kers 64.29 66 IAmb IAmb 07 32 19.6
comp=Z,11nm,0.6s
U59A Littleton 64.53 63 P P 07 32 20.4 -0.1
baz=317
T60A Surry 64.54 62 P P 07 32 20.4 -0.1
baz=317
X57A Johnson Farm, 64.63 66 P P 07 32 21.2 +0.1
baz=317,SNR=10.0
W58A Raeford 64.71 65 P P 07 32 21.6 0.0
baz=317
V59A Middlesex 64.72 64 P P 07 32 21.7 0.0
baz=317,SNR=6.4
Z56A Williston 64.73 68 P P 07 32 21.6 -0.1
baz=317,SNR=7.6
KIRV Kirov 64.75 338 LR LR 08 05 21.4
comp=Z,35nm,18.4s,baz=101,slow=40
Y57A Sumter 64.79 67 P P 07 32 22.1 0.0
baz=317,SNR=6.7
U60A Pendleton 64.80 63 P P 07 32 22.5 +0.4
baz=317
Z57A Bowman 65.13 67 P P 07 32 24.5 +0.1
baz=317,SNR=8.8
V60A Jim Taylor Roa 65.26 63 P P 07 32 25.6 +0.4
baz=317
Y58A Scranton 65.28 66 P P 07 32 25.4 +0.1
baz=317
U61A Possum Corner 65.29 62 P P 07 32 25.2 -0.2
baz=318
X59A McDuffie Farm, 65.39 65 P P 07 32 26.0 0.0
baz=317
157A Early Branch 65.42 68 P P 07 32 26.5 +0.3
baz=317
W60A Pink Hill 65.53 64 P P 07 32 26.9 0.0
baz=318
NHSC New Hope 65.57 67 P P 07 32 27.7 +0.5
baz=317,SNR=5.5
Z58A St. Stephen 65.61 67 P P 07 32 27.9 +0.4
baz=318,SNR=5.7
Y59A Loris 65.66 66 P P 07 32 27.9 +0.1
baz=318
AFI Afiamalu 65.69 180 LR LR 07 54 50.6
comp=Z,48nm,20.3s,baz=334,slow=30
X60A Albert Glenn T 65.73 65 P P 07 32 28.2 0.0
baz=318
W61A Ground Anchor 65.84 63 P P 07 32 29.7 +0.8
baz=318
FIA1 FINESS Array S 65.96 351 P P 07 32 28.5 -0.8
FIA1 IAmb IAmb 07 32 29.9
comp=Z,17nm,1.1s
FINES FINESS Array B 65.96 351 P P 07 32 28.1 -1.2
comp=Z,5.9nm,0.7s,baz=13,slow=7.4,SNR=20
FINES PcP PcP 07 32 58.5 -1.1
comp=Z,3.4nm,0.7s,baz=39,slow=4.6,SNR=5.8
FINES LR LR 08 02 55.3
comp=Z,64nm,20.3s,baz=30,slow=38
Z59A Georgetown, SC 65.98 66 P P 07 32 30.1 +0.2
baz=318
Y60A Bolivia 66.02 65 P P 07 32 30.0 -0.1
baz=318
TAOE Nuku Hiva Isla 66.45 146 *e*LR LR 07 52 32.9
comp=Z,111nm,23.3s
TAOE Nuku Hiva Isla 66.45 146 *e*T T 08 44 58.8
comp=Z,24nm,0.2s
NB2 NORSAR Subarra 67.23 358 P P 07 32 36.4 -1.0
comp=Z,2.4nm,0.6s,baz=0.4,slow=6.5
NB2 NORSAR Subarra 67.23 358 P P 07 32 36.4 -1.0
baz=0.4,slow=6.5
NOA NORSAR Array B 67.23 358 P P 07 32 36.8 -0.7
comp=Z,2.8nm,0.6s,baz=1.5,slow=6.4,SNR=16
NOA PcP PcP 07 33 04.2 -0.8
comp=Z,1.4nm,0.7s,baz=353,slow=3.1,SNR=3.2
NOA LR LR 08 03 01.3
comp=Z,31nm,18.2s,baz=245,slow=37
NC602 NORSAR Array S 67.53 358 *e*P P 07 32 38.7 -0.6
SKAR Skarslia 67.61 360 *e*P P 07 32 39.5 -0.4
DAV Davao City (W) 67.83 252 LR LR 07 58 02.4
comp=Z,24nm,21.4s,baz=341,slow=32
KMI Kunming 67.92 283 P P 07 32 41.8 -0.8
KMI pmax pmax
comp=Z,22nm,1.4s
KMI Kunming 67.92 283 P P 07 32 42.4 -0.2
KMI Kunming 67.92 283 P P 07 32 42.4 -0.2
KMI pmax pmax
comp=Z,24nm,0.5s
HFS Hagfors 68.08 357 P P 07 32 41.7 -1.1
comp=Z,9.7nm,0.5s,baz=7.6,slow=2.2,SNR=61
DWPF Disney Wildern 68.54 72 P P 07 32 46.4 +0.3
baz=319
USP Ospenovka 69.18 314 P P 07 32 50.4 +0.4
SNR=20
ULHL Ulahol 69.21 313 P P 07 32 50.9 +0.5
SNR=7.9
CHMS Chumysh 69.28 314 P P 07 32 51.0 +0.4
SNR=9.8
KBK Karagaybulak 69.46 314 P P 07 32 52.3 +0.4
SNR=20
AKTO Aktyubinsk 69.53 329 P P 07 32 51.7 -0.3
comp=Z,33nm,0.6s,baz=46,slow=6.6,SNR=83
AKTO LR LR 08 06 54.0
comp=Z,44nm,19.2s,baz=1.2,slow=39
AAK Ala-Archa 69.68 314 P P 07 32 53.6 +0.4
comp=Z,24nm,0.6s,baz=107,slow=3.2,SNR=80
AAK Ala-Archa 69.68 314 P P 07 32 53.7 +0.4
SNR=24
AAK Ala-Archa 69.68 314 P P 07 32 53.6 +0.4
AAK Ala-Archa 69.68 314 P P 07 32 52.8 -0.4
KZA Kyzart 69.79 313 P P 07 32 54.5 +0.3
SNR=15
AB31 Akbulak array 69.92 327 P P 07 32 53.8 -0.5
ABKAR Akbulak array 69.92 327 P P 07 32 54.2 -0.1
ABKAR IAmb IAmb 07 32 55.1
comp=Z,12nm,0.6s
EKS2 Erkin-Say 69.98 314 P P 07 32 55.5 +0.5
SNR=21
UCH Uchtor 70.00 314 P P 07 32 56.2 +0.7
SNR=8.5
SLVN Son La 70.06 279 P P 07 32 56.1 +0.4
SLVN IAmb IAmb 07 32 57.4
comp=Z,22nm,1.4s
AML Almayashu 70.44 314 P P 07 32 58.9 +0.7
SNR=16
OBN Obninsk 70.64 343 LR LR 08 08 11.6
comp=Z,11nm,18.3s,baz=0.0,slow=39
KK31 Karatay Array 71.03 317 P P 07 33 01.1 -0.2
KK31 IAmb IAmb 07 33 01.7
comp=Z,13nm,0.7s
KK31 Karatay Array 71.03 317 P P 07 33 01.1 -0.2
KK31 pmax pmax
comp=Z,13nm,0.7s
KKAR Karatay Array 71.03 317 IAmb IAmb 07 33 01.7
comp=Z,13nm,0.7s
LSA Lhasa 71.26 294 P P 07 33 04.5 +1.0
LSA pmax pmax
comp=Z,110nm,1.1s
LSA Lhasa 71.26 294 P P 07 33 04.4 +1.0
LSA Lhasa 71.26 294 P P 07 33 04.4 +1.0
LSA pmax pmax
comp=Z,21nm,0.8s
KSH Kashi 71.50 311 P P 07 33 08.0 +3.7
KSH pP PcP 07 33 22.5 -1.0
KSH PP PP 07 35 46.8 +3.9
KSH S S 07 42 20.5 +1.7
KSH sS sS 07 42 49.3 +4.9
KSH SS SS 07 47 01.0 +7.5
KSH pmax pmax
comp=Z,27nm,0.5s
KSH pmax pmax
comp=Z,180nm,5.2s
KSH LR LR
comp=Z,100nm,6.1s
KSH LR LR
comp=Z,130nm,6.3s
KSH LR LR
comp=Z,400nm,5.9s
PPT Papeete 71.97 158 LR LR 08 00 03.7
comp=Z,45nm,20.8s,baz=7.0,slow=32
PPT2 Papeete2 71.99 158 *e*LR LR 07 54 22.9
comp=Z,71nm,23.0s
PPT2 Papeete2 71.99 158 *e*T T 08 51 51.7
comp=Z,2.0nm,0.3s
EKA Eskdalemuir Ar 72.56 7 P P 07 33 09.6 -0.6
comp=Z,1.2nm,0.4s,baz=351,slow=4.3,SNR=7.3
VSR Storozhevoye 73.84 340 *e*P P 07 33 16.5 -1.3
VSR pmax pmax
comp=Z,10.0nm,0.7s
SHL Shillong 74.00 291 P P 07 33 18.9 -0.5
SHL Shillong 74.00 291 P P 07 33 18.9 -0.5
SHL pmax pmax
comp=Z,18nm,0.6s
VORD Divnogorie 74.05 340 *e*P P 07 33 17.7 -1.3
VORD pmax pmax
comp=Z,10.0nm,0.8s
CHTO Chiang Mai 74.98 281 P P 07 33 25.0 +0.1
CHTO IAmb IAmb 07 33 25.6
comp=Z,6.4nm,0.8s
CHTO Chiang Mai 74.98 281 P P 07 33 25.0 +0.1
CHTO pmax pmax
comp=Z,6.0nm,0.8s
TAPN Taplejung 75.00 295 *e*P P 07 33 25.4 +0.1
comp=Z,49nm,0.8s
CM31 Chiang Mai Arr 75.26 281 P P 07 33 27.1 +0.6
CM31 IAmb IAmb 07 33 28.2
comp=Z,13nm,0.8s
CMAR Chiang Mai Arr 75.26 281 P P 07 33 27.1 +0.6
comp=Z,9.4nm,0.8s,baz=27,slow=7.0,SNR=41
CMAR LR LR 08 10 02.1
comp=Z,16nm,18.2s,baz=55,slow=38
ODAN Odare 75.56 295 *e*P P 07 33 28.3 -0.1
comp=Z,21nm,0.8s
GUN Gumba 75.58 297 *e*P P 07 33 28.4 -0.3
comp=Z,31nm,0.4s
JIRN Jiri 75.60 296 *e*P P 07 33 29.0 +0.2
comp=Z,82nm,0.7s
RAMN Ramite 75.93 296 *e*P P 07 33 30.6 0.0
comp=Z,74nm,0.7s
KKN Kakani 76.00 297 *e*P P 07 33 31.0 +0.1
comp=Z,28nm,0.7s
AKASG Malin Array Be 76.09 346 P P 07 33 29.8 -1.0
comp=Z,2.5nm,0.4s,baz=16,slow=5.9,SNR=14
AKASG LR LR 08 08 36.1
comp=Z,59nm,21.7s,baz=285,slow=37
PKI Pulchoki 76.10 297 *e*P P 07 33 30.9 -0.7
PKIN Phulchoki 76.10 297 *e*P P 07 33 31.2 -0.4
GKN Gorkha 76.19 298 *e*P P 07 33 31.8 -0.1
DMN Daman 76.24 297 *e*P P 07 33 32.2 -0.1
DZM Mont Dzumac 76.24 201 *e*LR LR 07 57 14.1
comp=Z,83nm,22.2s
DANN Dangsing 76.39 299 *e*P P 07 33 33.3 +0.1
comp=Z,115nm,0.8s
CLL Collm 76.93 357 *e*P P 07 33 36.0 +0.5
comp=Z,4.0nm,0.5s
CLL Collm 76.93 357 *e*P P 07 33 36.0 +0.5
CLL pmax pmax
comp=Z,4.0nm,0.5s
BRG Berggiesshubel 77.33 356 *i* P P 07 33 37.4 -0.4
comp=Z,6.1nm,0.6s
BRG Berggiesshubel 77.33 356 *i* P P 07 33 37.3 -0.4
BRG pmax pmax
comp=Z,6.0nm,0.6s
NIL Nilore 77.52 309 P P 07 33 39.0 -0.2
NIL Nilore 77.52 309 P P 07 33 39.0 -0.2
NIL pmax pmax
comp=Z,38nm,0.8s
TBI Tubuai 77.58 159 *e*T T 08 58 49.8
comp=Z,6.9nm,0.3s
LVV L'vov 77.62 350 *e*P P 07 33 33.2 -6.2
DPC Dobruska-Polom 77.74 355 *e*P P 07 33 39.9 -0.2
DPC Dobruska-Polom 77.74 355 *e*P P 07 33 39.9 -0.2
KRLC Kraliky 77.99 354 *e*P P 07 33 41.4 -0.1
KRLC Kraliky 77.99 354 *e*P P 07 33 41.4 -0.1

GRF Grafenberg Arr 78.60 358 eP P 07 33 45.4 +0.6
comp=Z,13nm,1.3s,baz=5.9,slow=5.0
LANS Liptovska Anna 78.72 353 eP P 07 33 46.5 +0.9
LANS pmax pmax
comp=Z,4.0nm,0.6s
LANS Liptovska Anna 78.72 353 eP P 07 33 46.5 +0.9
SORM Soroca 78.72 346 ⇓P P 07 33 44.2 -1.3
SORM Soroca 78.72 346 ⇓P P 07 33 44.2 -1.3
KBL Kabul 78.75 313 P P 07 33 45.3 -0.9
KBL Kabul 78.75 313 P P 07 33 45.3 -0.9
KBL pmax pmax
comp=Z,17nm,0.7s
VRAC Vranov 78.76 354 P P 07 33 45.4 -0.3
comp=Z,4.7nm,0.5s,baz=18,slow=5.7,SNR=5.5
VRAC Vranov 78.76 354 ⇑P P 07 33 45.7 -0.1
VRAC Vranov 78.76 354 ⇑P P 07 33 45.7 -0.1
KHC Kasperske Hory 79.09 356 eP P 07 33 47.8 +0.2
KHC Kasperske Hory 79.09 356 P P 07 33 47.8 +0.2
KHC Kasperske Hory 79.09 356⇑iP P 07 33 48.6 +1.0
KHC pmax pmax
comp=Z,9.0nm,0.9s
GERES GERESS Array B 79.37 356 P P 07 33 48.8 -0.4
comp=Z,2.4nm,0.6s,baz=16,slow=5.8,SNR=15
VYHS Vyhne 79.42 353 eP P 07 33 49.7 +0.3
VYHS Vyhne 79.42 353 eP P 07 33 49.7 +0.3
TRPA Tarpa 79.45 350 ⇓P P 07 33 48.5 -0.9
BUR08 Bucovina Ar. S 79.62 348 P P 07 33 50.3 -0.3
BURAR Bucovina Array 79.65 348 ⇑P P 07 33 50.3 -0.4
BURAR Bucovina Array 79.65 348 ⇑P P 07 33 50.3 -0.4
KIV Kislovodsk 79.85 335 P P 07 33 52.2 +0.3
KIV IAmb IAmb 07 33 54.7
comp=Z,14nm,1.0s
KIV Kislovodsk 79.85 335 eP P 07 33 52.1 +0.3
KIV pmax pmax
comp=Z,39nm,1.0s
KIV MLR MLR
comp=Z,165nm,19.0s
KBZ Khabaz 80.01 335 P P 07 33 52.9 +0.4
comp=Z,3.2nm,0.7s,baz=128,slow=6.9,SNR=6.1
KBZ LR LR 08 13 07.8
comp=Z,53nm,19.6s,baz=359,slow=38
CONA Conrad Observa 80.18 355 eP P 07 33 53.6 0.0
comp=Z,2.1nm,0.5s
MOA Molln 80.34 356 iP P 07 33 55.0 +0.6
comp=Z,0.5nm,0.3s
GEYT Alibeck 80.40 322 P P 07 33 55.0 0.0
comp=Z,4.8nm,0.8s,baz=6.5,slow=5.2,SNR=7.9
GEYT LR LR 08 13 37.6
comp=Z,44nm,18.0s,baz=0.0,slow=39
GYA0B ALIBECK ARRAY 80.40 322 P P 07 33 55.1 +0.2
GYA0B IAmb IAmb 07 33 55.8
comp=Z,4.9nm,0.7s
DRGR 80.75 350 ⇑P P 07 33 55.7 -1.0
DRGR 80.75 350 ⇑P P 07 33 55.7 -1.0
RETA Reutte 80.81 358 iP P 07 33 57.6 +0.7
comp=Z,3.0nm,0.5s
WATA Walderalm 80.94 358 iP P 07 33 58.0 +0.3
comp=Z,2.1nm,0.2s
MOTA Moosalm 80.95 358 iP P 07 33 58.5 +0.7
comp=Z,1.9nm,0.5s
WTTA Wattenberg 81.02 358 iP P 07 33 58.7 +0.5
comp=Z,4.8nm,0.5s
SQTA Sankt Quirin 81.07 358 iP P 07 33 59.1 +0.7
comp=Z,6.1nm,0.6s
KBA Koelnbreinsper 81.15 356 iP P 07 33 59.1 +0.2
comp=Z,2.9nm,0.3s
FETA Feichten 81.28 358 iP P 07 34 00.5 +0.9
comp=Z,4.8nm,0.8s
SOKA Soboth 81.47 355 iP P 07 34 01.4 +0.9
comp=Z,1.6nm,0.2s
DAVOX Davos/Dischmat 81.53 359 P P 07 34 01.1 +0.1
comp=Z,5.4nm,0.5s,baz=190,slow=4.8,SNR=9.9
OBKA Obir 81.66 356 iPcP P 07 34 02.4 +0.9
comp=Z,2.6nm,0.5s
HRA Herat 81.84 317 P P 07 34 02.5 -0.3
HRA IAmb IAmb 07 34 03.5
comp=Z,9.2nm,0.8s
GZR Gura Zlata 82.13 350 ⇑P P 07 34 03.2 -0.8
GZR Gura Zlata 82.13 350 ⇑P P 07 34 03.2 -0.8
GNI Garni 82.84 333 LR LR 08 17 37.6
comp=Z,25nm,18.1s,baz=19,slow=40
BNI Bardonecchia 83.26 1 P P 07 34 10.8 +0.9
BNI IAmb IAmb 07 34 11.8
comp=Z,12nm,1.3s
BNI Bardonecchia 83.26 1 P P 07 34 10.8 +0.9
BNI pmax pmax
comp=Z,12nm,1.3s
KNRA Kununurra 84.80 236 P P 07 34 17.5 -0.3
KNRA IAmb IAmb 07 34 18.3
comp=Z,14nm,1.0s
TPRI Tanjung Pinang 85.42 266 P P 07 34 17.4 -3.7
WB0 Warramunga Arr 85.50 230 P P 07 34 20.7 -0.6
WB0 IAmb IAmb 07 34 28.7
comp=Z,9.1nm,1.5s
WR0 Warramunga Arr 85.60 230 P P 07 34 22.2 +0.4
WRA Warramunga Arr 85.68 230 P P 07 34 21.4 -0.8
comp=Z,0.5nm,0.5s,baz=34,slow=5.8,SNR=8.7
BR131 Keskin Array S 85.96 341 P P 07 34 23.5 -0.1
BR131 IAmb IAmb 07 34 25.2
comp=Z,2.5nm,0.8s
BR131 Keskin Array S 85.96 341⇑iP P 07 34 23.3 -0.3
BRTR Keskin Array B 85.96 341 P P 07 34 23.8 +0.2
comp=Z,2.3nm,0.6s,baz=34,slow=3.4,SNR=11
BRTR LR LR 08 18 55.8
comp=Z,33nm,18.0s,baz=338,slow=40
PSI Prapat 87.41 271 P P 07 34 31.6 +0.7
comp=Z,12nm,0.7s,baz=320,slow=1.9,SNR=11
PSI Prapat 87.41 271 P P 07 34 32.0 +1.0
PSI pmax pmax
comp=Z,14nm,0.7s
RPSI Rantau Prapat 87.49 271 P P 07 34 31.9 +0.7
ESDC Sonseca Array 88.02 9 P P 07 34 32.8 -0.8
comp=Z,2.7nm,0.6s,baz=355,slow=4.3,SNR=9.4
FITZ Fitzroy Crossi 88.44 238 P P 07 34 35.7 +0.2
FITZ IAmb IAmb 07 34 36.8
comp=Z,8.6nm,1.3s
AS31 Alice Springs 89.09 228 P P 07 34 38.9 +0.3
ASAR Alice Springs 89.09 228 P P 07 34 38.8 +0.2
comp=Z,2.6nm,0.7s,baz=29,slow=4.6,SNR=28
ASAR LR LR 08 10 58.4
comp=Z,27nm,20.0s,baz=356,slow=33
SDV Santo Domingo 89.81 76 P P 07 34 42.7 +0.3
SDV IAmb IAmb 07 34 43.6
comp=Z,4.4nm,0.8s
STKA Stephens Creek 93.03 218 LR LR 08 10 45.5
comp=Z,74nm,21.4s,baz=26,slow=32
WSAR Wadi Sarin 93.08 315 P P 07 34 56.8 -0.5
comp=Z,2.7nm,0.4s,baz=50,slow=4.9,SNR=5.3
MDT Midelt 94.74 11 P P 07 35 04.3 -0.6
comp=Z,1.8nm,0.7s,baz=319,slow=1.3,SNR=4.4
EIL Elat 95.32 337 LR LR 08 21 14.1
comp=Z,22nm,21.6s,baz=300,slow=37
RAYN Ar Rayn 97.99 326 P P 07 35 18.5 -1.2
RAYN Ar Rayn 97.99 326 P P 07 35 18.5 -1.2
RAYN pmax pmax
comp=Z,5.0nm,0.8s
NWAO Narrogin (SRO) 104.88 235 Pdiff Pdif 07 35 50.3 +0.5
comp=Z,14nm,0.9s,baz=262,slow=2.2,SNR=4.0
TORD Torodi Ar. Bea 114.82 7 PKP PKiKP 07 40 23.0 -1.0
comp=Z,0.8nm,0.4s,baz=351,slow=2.5,SNR=9.4
DBIC Dimbokro 120.43 15 PKP PKPdf 07 40 32.7 -2.1
comp=Z,4.6nm,0.9s,baz=51,slow=9.1,SNR=1.9
DBIC Dimbokro 120.43 15 PKPdf 07 40 34.2 -0.6
DBIC Dimbokro 120.43 15 PKIKP PKPdf 07 40 34.2 -0.6
CPUP Villa Florida 125.17 89 PKP PKPdf 07 40 42.8 -0.6
comp=Z,1.2nm,0.5s,baz=276,slow=3.3,SNR=3.9
CPUP Villa Florida 125.17 89 PKPdf 07 40 43.2 -0.2
CPUP Villa Florida 125.17 89 PKIKP PKPdf 07 40 43.2 -0.2
PLCA Paso Flores 127.04 111 PKP PKPdf 07 40 46.2 -0.6
comp=Z,1.8nm,0.7s,baz=230,slow=1.4,SNR=5.0
PLCA Paso Flores 127.04 111 PKPdf 07 40 46.7 0.0
PLCA Paso Flores 127.04 111 PKIKP PKPdf 07 40 46.7 0.0
QSPA South Pole Qui 141.82 180 PKhKP PKPpre 07 41 07.7
comp=Z,1.4nm,0.5s,baz=222,slow=1.9,SNR=27
QSPA South Pole Qui 141.82 180 PKPpre 07 41 09.2
TSUM Tsumeb 146.41 344 PKPbc 07 41 24.8 +0.4

IDC 25 07:25:42.5±1.1,60.64N×43.67W,h0km,mb3.5/8, mb1 3.8/11,mb1mx3.6/63,mbtmp3.6/11,ML3.1/3,MS3.5/1, Ms1 3.5/1,ms1mx2.6/43,Error ellipse: s-maj=32.0km s-min=19.6km az=177.0
DNK 25 07:25:44.3±2.1,60.56N×43.92W,h15km±25km,ML3.4, Hypocentre not reviewed by the ISC

ISC 25 07:25:44.2±0.9,60.76N±0.10×43.84W±0.08,h10km,n17, σ1§36/16,mb3.4/8,Western Kalaallit Nunaat
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NRS Narsarsuaq 0.87 298 iP Pg 07 26 00.9 0.0
NRS Narsarsuaq 0.87 298 e 07 25 58.6
baz=128,slow=22
NRS iP 07 26 00.9
NRS IAML 07 26 14.7
comp=Z,1μm,0.3s
NUUK Nuuk 5.01 317 iP 07 27 00.6
NUUK eS 07 27 56.8
NUUK IAML 07 28 20.8
comp=Z,76nm,0.4s
ISOG Isortoq, Green 5.28 23 iP 07 27 06.1
ISOG IAML 07 28 34.0
comp=Z,39nm,0.4s
ANGG Ammassalik, Gr 5.62 27 iP 07 27 08.9
SFJD Kangerlussuaq 6.93 337 iP Pn 07 27 26.0 +0.3
SFJD i 07 27 32.6
SFJD iS Sn 07 28 41.4 -3.0
SFJD Kangerlussuaq 6.93 337 iP 07 27 26.0
SFJD i 07 27 32.7
SFJD iS 07 28 41.5
SFJD IAML 07 28 48.2
comp=Z,1.4nm,0.3s
ILULI Ilulissat 9.01 343 iP Pn 07 27 56.7 +2.5
ILULI Ilulissat 9.01 343 eP 07 27 56.7
BORG Borgarnes 11.03 59 Pn Pn 07 28 22.4 +0.6
comp=Z,1.3nm,0.3s,baz=260,slow=6.2,SNR=7.7
FRB Frobisher Bay 11.86 295 Pn Pn 07 28 33.4 +0.2
comp=Z,0.2nm,0.3s,baz=98,slow=12,SNR=9.9
SUMG Summit 12.05 8 iP Pn 07 28 34.8 -1.2
SUMG Summit 12.05 8 iP 07 28 34.9
SUMG IAML 07 30 51.4
comp=Z,9.3nm,0.3s
SCHQ Schefferville 13.58 254 Pn Pn 07 28 56.1 -0.5
comp=Z,0.3nm,0.3s,baz=54,slow=9.1,SNR=10
YKA Yellowknife Ar 32.15 305 P P 07 32 11.4 0.0
comp=Z,0.2nm,0.7s,baz=57,slow=10,SNR=3.5
INK Inuvik 35.93 321 P P 07 32 45.0 +0.9
comp=Z,1.2nm,0.8s,baz=27,slow=7.7,SNR=3.1
KEST Kesra 41.77 102 LR LR 07 48 02.3
comp=Z,52nm,18.2s,baz=294,slow=32
ILAR Eielson Array 42.30 322 P P 07 33 38.9 +1.4
comp=Z,0.8nm,0.8s,baz=41,slow=6.7,SNR=7.5
PDAR Pinedale Array 42.43 276 P P 07 33 39.8 +0.7
comp=Z,0.3nm,0.5s,baz=46,slow=7.7,SNR=4.3
NVAR Mina Array Bea 50.02 279 P P 07 34 38.8 +0.1
comp=Z,0.1nm,0.5s,baz=54,slow=6.8,SNR=2.8
TXAR Lajitas Array 50.20 259 P P 07 34 40.3 +0.2
comp=Z,0.1nm,0.6s,baz=24,slow=8.9,SNR=2.9
TORD Torodi Ar. Bea 57.87 125 P P 07 35 34.4 -1.6
comp=Z,0.5nm,0.6s,baz=330,slow=8.9,SNR=2.2
MKAR Makanchi Array 64.27 38 P P 07 36 19.6 +0.5
comp=Z,0.4nm,0.5s,baz=340,slow=5.5,SNR=4.5
ASAR Alice Springs 142.89 3 PKhKP PKPpre 07 45 13.6
comp=Z,0.3nm,0.8s,baz=341,slow=2.8,SNR=4.6

IDC 25 07:27:35.6±1.3,28.45S×62.55E,h0km,mb4.0/4, mb1 4.1/4,mb1mx3.6/70,mbtmp4.0/4,MS3.7/4,Ms1 3.7/4, ms1mx3.1/37,Error ellipse: s-maj=47.4km s-min=34.4km az=84.0,Southwest Indian Ridge
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MAW Mawson 39.18 180 LR LR 07 48 23.2
comp=Z,52nm,18.0s,baz=140,slow=32
BRDH Bariadhala 58.06 32 LR LR 08 02 05.7
comp=Z,338nm,20.5s,baz=135,slow=36
CMAR Chiang Mai Arr 58.42 41 LR LR 07 59 45.6
comp=Z,21nm,18.0s,baz=220,slow=33
QSPA South Pole Qui 61.70 180 P P 07 37 55.4 0.0
3.0nm,1.0s,baz=227,slow=1.5,SNR=8.6
ASAR Alice Springs 63.43 104 P P 07 38 07.5 0.0
0.6nm,0.6s,baz=245,slow=6.3,SNR=10.0
VNDA Vanda 64.43 166 LR LR 08 03 43.4
comp=Z,32nm,18.4s,baz=292,slow=34
WRA Warramunga Arr 65.19 100 P P 07 38 19.1 0.0
0.6nm,0.8s,baz=247,slow=5.8,SNR=3.0
ZALV Zalesovo Beam 84.29 13 P P 07 40 08.9 0.0
1.7nm,0.7s,baz=204,slow=3.2,SNR=5.7
YKA Yellowknife Ar 145.90 358 PKPbc PKPdf 07 47 15.4 -0.3
1.0nm,0.8s,baz=348,slow=3.6,SNR=16

NNC 25 07:35:46.7±6.0,36.77N×70.81E,h0km,mb3.9,mpv3.7, 5C,Error ellipse: s-maj=63.4km s-min=35.0km az=144.0, Hindu Kush region
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KK31 Karatay Array 6.33 358 ⇑P Pn 07 37 23.0 +1.8
4.4nm,0.3s,baz=176,slow=12,SNR=95
KK31 ⇑S Sn 07 38 36.7 +2.5
1.6nm,0.4s,baz=181,slow=21,SNR=6.5
AAK Ala-Archa 6.51 25 ⇑P Pn 07 37 24.1 +0.3
1.5nm,0.4s
AAK ⇑S Sn 07 38 39.0 +0.1
1.6nm,0.5s
AB31 Akbulak array 14.78 331 P Pn 07 39 14.2 -2.6
0.3nm,0.3s,baz=14,slow=76,SNR=29
AKTO Aktyubinsk 16.47 330 ⇑P Pn 07 39 37.7 -1.4
2.9nm,0.9s

IDC 25 07:41:11.4±0.9,31.69N×142.07E,h0km,mb3.8/9, mb1 3.9/12,mb1mx3.7/51,mbtmp3.8/12,ML3.5/3,MS3.5/2, Ms1 3.5/2,ms1mx2.7/44,Error ellipse: s-maj=27.7km s-min=17.4km az=69.0
NEIC 25 07:41:15.3±1.1,31.73N±0.08×141.83E±0.10,h27km±5km, mb4.2/8,Error ellipse: s-maj=14.9km s-min=5.8km az=47.0
ISC 25 07:41:15.9±0.7,31.73N±0.07×141.9E±0.1,h29km,n26, σ1§47/26,mb4.0/13,Southeast of Honshu
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JHJ2 Mitsune 2.23 309 Pn Pn 07 41 49.8 -1.0
JHJ Hachijo jima 2 2.25 308 Pn Pn 07 41 50.6 -0.6
32nm,0.3s,baz=242,slow=14,SNR=6.8
JHJ Sn Sn 07 42 15.2 -2.8
14nm,0.3s,baz=58,slow=13,SNR=1.6
JCJ Chichijima 4.63 177 Pn Pn 07 42 23.9 0.0
14nm,0.3s,baz=84,slow=12,SNR=14
JCJ Sn Sn 07 43 14.4 -2.2
10nm,0.3s,baz=288,slow=22,SNR=2.2
MJAR Matsushiro Arr 5.68 329 Pn Pn 07 42 39.7 +1.3
0.1nm,0.3s,baz=145,slow=11,SNR=6.2
MAJO Matsushiro 5.69 329 Pn Pn 07 42 37.5 -0.9
JNU Nakatsue 9.41 281 LR LR 07 46 56.9
comp=Z,95nm,21.3s,baz=58,slow=36
KSRS Korea Array 12.84 300 Pn Pn 07 44 20.1 +3.8
0.1nm,0.3s,baz=102,slow=14,SNR=1.7
MDJ Mudanjiang 16.07 327 Pn 07 45 00.6 +1.0
YOJ Yonaguni jima 18.14 251 Pn 07 45 25.3 -0.4
SONM Songino Array 31.33 311 P P 07 47 36.6 +2.8
0.9nm,0.5s,baz=115,slow=8.7,SNR=4.9
ZALV Zalesovo Beam 45.89 316 P P 07 49 36.4 +0.9
0.7nm,0.3s,baz=124,slow=7.2,SNR=1.7
MK31 Makanchi Array 47.42 306 P P 07 49 47.5 -0.2
MKAR Makanchi Array 47.42 306 P P 07 49 47.9 +0.2
1.1nm,0.7s,baz=90,slow=9.4,SNR=13
WB0 Warramunga Arr 51.71 189 P P 07 50 20.2 -0.3
WB0 IAmb IAmb 07 50 34.6
comp=Z,2.3nm,0.8s
WB2 Warramunga Arr 51.88 189 P P 07 50 21.4 -0.4
WB2 IAmb IAmb 07 50 31.6
comp=Z,5.5nm,1.2s
WRA Warramunga Arr 51.89 189 P P 07 50 21.7 -0.2
comp=Z,1.3nm,0.3s,baz=184,slow=12,SNR=36
AAK Ala-Archa 53.49 302 LR LR 08 16 22.0
comp=Z,169nm,19.4s,baz=354,slow=39
DHY Denali Highway 53.56 32 P P 07 50 34.0 +0.1
ILAR Eielson Array 53.81 30 P P 07 50 33.9 -1.7
comp=Z,0.6nm,0.9s,baz=284,slow=7.3,SNR=2.5
BVAR Borovoye Array 54.52 315 P P 07 50 41.7 +0.8
comp=Z,0.4nm,0.4s,baz=122,slow=7.9,SNR=4.7
ASAR Alice Springs 55.61 189 P P 07 50 47.4 -1.7
comp=Z,0.3nm,0.6s,baz=4.6,slow=6.3,SNR=4.1
KK31 Karatay Array 56.24 303 P P 07 50 52.5 -1.0
KK31 IAmb IAmb 07 50 57.5
comp=Z,3.1nm,1.3s
ABKAR Akbulak array 61.73 313 P P 07 51 30.8 -0.6
ABKAR IAmb IAmb 07 51 37.6
comp=Z,2.2nm,1.2s
WRAK Wrangell Islan 61.96 39 P P 07 51 32.5 -0.3
NVAR Mina Array Bea 77.88 52 P P 07 53 11.2 -0.1
comp=Z,0.2nm,0.6s,baz=274,slow=6.2,SNR=1.5
TXAR Lajitas Array 93.03 53 P P 07 54 27.8 +0.7
comp=Z,0.3nm,0.7s,baz=248,slow=1.3,SNR=5.2

UCR 25 07:50:01.5±1.8,8.69N×83.09W,h28km±2km
UPA 25 07:50:01.3±0.5,8.72N×83.02W,h26km±3km,MW3.6
ISC 25 07:50:01.2±1.0,8.70N±0.03×83.04W±0.03,h33km±4km, n20,σ0§73/35,10C-5D,Costa Rica
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
EDSV San Vito 0.13 29⇓iP Pb 07 50 07.3 0.0
EDSV eS Sb 07 50 12.3 +0.8
PTJ1 Puerto Jimnez 0.31 238⇑iP Pb 07 50 08.4 -0.7
PTJ1 eS Sn 07 50 14.8 +0.2
PTJ1 Puerto Jimnez 0.31 238⇑eP Pb 07 50 08.5 -0.5
PTJ1 eS Sn 07 50 14.6 0.0
BRU2 Volcan 0.35 75⇓iP Pb 07 50 09.4 -0.4
BRU2 eS Sb 07 50 15.8 +0.1
BRU2 Volcan 0.35 75⇓iP Pb 07 50 09.4 -0.4
BRU2 eS Sb 07 50 15.6 0.0
SBAR3 San Bartolo, C 0.41 158⇑iP Pb 07 50 10.3 -0.1
PIRO Carate, Puerto 0.42 225 eP Pb 07 50 10.0 -0.6
PIRO eS Sb 07 50 17.2 +0.3
EDPN Palmar Norte 0.49 302⇑iP Pb 07 50 10.9 -0.7
EDPN eS Sb 07 50 18.3 -0.5
BCO2 Palmira 0.50 88⇓iP Pb 07 50 11.6 -0.4
BCO2 eS Sb 07 50 19.3 -0.1
EDBA Buenos Aires 0.52 333⇑iP Pb 07 50 11.9 -0.2
EDBA eS Sb 07 50 19.7 +0.2
PEDE3 Pedregal, Chir 0.69 117⇑iP Pb 07 50 14.1 -0.7
PEDE3 eS Sb 07 50 23.7 -0.4
LOMA3 Las Lomas, Chi 0.69 113⇑iP Pb 07 50 14.3 -0.6
EDLM Las Mercedes 0.79 316 eP Pb 07 50 15.6 -1.1
EDLM eS Sb 07 50 26.9 -0.2
CNI2 El Empalme, Bo 0.91 38⇑iP Pb 07 50 17.6 -0.1
CNI2 eS Sb 07 50 28.1 -2.3
EDDO Dominical 0.98 304 eP Pb 07 50 19.0 +0.3
EDDO eS Sb 07 50 31.5 -0.9
LCR2 La Lucha 2 1.41 317⇑eP Pn 07 50 24.3 -0.4
CVTR Volcan Turrial 1.49 331⇑iP Pn 07 50 26.8 +0.8
CVTR eS Sn 07 50 46.0 +1.4
HDC Heredia 1.67 321 eP Pn 07 50 29.1 +0.8
HDC eS Sn 07 50 49.6 +0.9
HDC Heredia 1.67 321⇓eP Pn 07 50 29.1 +0.8
GMAL Guarumal, Vera 2.02 117 eP Pn 07 50 33.3 +0.4

ATA 25 08:00:27.6±1.3,39.69N×39.46E,h31km±9km,ML1.1, Turkey
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
EUZM Uzumlu 0.18 84 eP Pn 08 00 35.3 +0.9
EUZM Uzumlu 0.18 84 eP Pn 08 00 35.0 +0.7
EUZM eS Sn 08 00 39.2 +0.6
EUZM IAML 08 00 42.5
comp=N,17nm,0.4s
KELT Kelkit 0.48 341 eP Pb 08 00 36.5 -1.5
KELT eS Sn 08 00 45.9 -0.2
KELT IAML 08 00 50.4
comp=Z,9.6nm,0.6s
KELT Kelkit 0.48 341 eP Pb 08 00 37.9 -0.2
KELT eS Sn 08 00 47.6 +1.5
KELT IAML 08 00 49.6
comp=Z,10nm,0.5s
BAYB BAYBURT 0.84 47 eP Pb 08 00 44.4 +0.6
KEMA Kemaliye 0.86 241 eP Pn 08 00 42.7 -0.9

INET 25 08:05:12.2,12.72N×88.67W,h16km,MD3.1,ML3.0
SNET 25 08:05:13.3±0.9,12.80N×88.67W,h51km±12km,ML3.7
UCR 25 08:05:13.9±1.0,12.83N×88.67W,h52km±12km,ML3.7
GCG 25 08:05:17.5±0.3,12.76N×88.92W,h50km,MD4.0
ISC 25 08:05:15.5±1.9,12.9N±0.1×88.63W±0.04,h47km±17km, n44,σ1§08/71,4D,Off coast of central America
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ALJI Alcalda de J 0.45 8 iP Pn 08 05 25.2 -0.8
ALJI eS Sn 08 05 34.9 +1.4
ALJI IAML 08 05 35.5
comp=Z,2μm,0.2s
ALJI Alcalda de J 0.45 8 iP Pn 08 05 25.2 -0.8
ALJI eS Sn 08 05 34.9 +1.4
ALJI IAML 08 05 35.5
comp=Z,2μm,0.2s
JUCU Jucuar¡n 0.53 45 eP Pn 08 05 25.9 -1.2
JUCU eS Sn 08 05 35.6 +0.3
JUCU IAML 08 05 39.3
comp=Z,8μm,0.3s
JUCU Jucuar¡n 0.53 45 eP Pn 08 05 25.9 -1.2
JUCU eS Sn 08 05 35.6 +0.3
JUCU IAML 08 05 39.3
comp=Z,8μm,0.3s
COEB Comit de Eme 0.63 9 eP Pn 08 05 27.4 -0.9
COEB eS Sn 08 05 38.7 +1.1
COEB IAML 08 05 42.2
comp=Z,3μm,0.3s
COEB Comit de Eme 0.63 9 eP Pn 08 05 27.4 -0.9
COEB eS Sn 08 05 38.7 +1.1
COEB IAML 08 05 42.2
comp=Z,3μm,0.3s
TECA Tecapa 0.63 12 eP Pn 08 05 27.6 -0.8
TECA Tecapa 0.63 12 eP Pn 08 05 27.6 -0.8
LCY Lacayo 0.64 31 eP Pn 08 05 27.7 -0.8
LCY Lacayo 0.64 31 eP Pn 08 05 27.7 -0.8
PACA Pacayal 0.66 27 eP Pn 08 05 27.9 -0.9
PACA eS Sn 08 05 39.3 +0.9
PACA Pacayal 0.66 27 eP Pn 08 05 27.9 -0.9
PACA eS Sn 08 05 39.3 +0.9
BLLM Bellamira 0.68 34 eP Pn 08 05 28.2 -0.8
BLLM Bellamira 0.68 34 eP Pn 08 05 28.2 -0.8
COEG Centro de Oper 0.78 342 eP Pn 08 05 29.1 -1.2
COEG eS Sn 08 05 41.5 +0.5
COEG Centro de Oper 0.78 342 eP Pn 08 05 29.1 -1.2
COEG eS Sn 08 05 41.5 +0.5
LCND La Caada 0.84 59 eP Pn 08 05 29.8 -1.3
LCND eS Sn 08 05 42.4 0.0
LCND IAML 08 05 44.2
comp=Z,5μm,0.3s
LCND La Caada 0.84 59 eP Pn 08 05 29.8 -1.3
LCND eS Sn 08 05 42.4 0.0
LCND IAML 08 05 44.2
comp=Z,5μm,0.3s
LFRS El Faro 0.85 331⇓iP Pn 08 05 30.0 -1.3
CNCH Conchagua 0.87 63 eP Pn 08 05 30.8 -0.9
CNCH eS Sn 08 05 45.0 +1.6
CNCH
CNCH Conchagua 0.87 63 eP Pn 08 05 30.8 -0.9
CNCH eS Sn 08 05 45.0 +1.6
PAVA Las Pavas 0.88 340 eP Pn 08 05 30.8 -0.9
PAVA eS Sn 08 05 44.9 +1.3
PAVA Las Pavas 0.88 340 eP Pn 08 05 30.8 -0.9
PAVA eS Sn 08 05 44.9 +1.3
LBRS Las Brisas 0.94 335 eP Pn 08 05 31.5 -1.1
FAGO Alcalda de S 0.96 32 eP Pn 08 05 31.8 -1.0
FAGO eS Sn 08 05 46.5 +1.2
FAGO Alcalda de S 0.96 32 eP Pn 08 05 31.8 -1.0
FAGO eS Sn 08 05 46.5 +1.2
LFU La Fuente 0.98 332⇓iP Pn 08 05 32.1 -1.0
LFU eS Sn 08 05 46.2 +0.2
LFU La Fuente 0.98 332⇓iP Pn 08 05 32.1 -1.0
LFU eS Sn 08 05 46.2 +0.2
SNET Serv Nac Est T 0.99 324 eP Pn 08 05 31.8 -1.4
SNET eS Sn 08 05 45.8 -0.4
SNET IAML 08 05 49.5
comp=Z,793nm,0.3s
SNET Serv Nac Est T 0.99 324 eP Pn 08 05 31.8 -1.4
SNET eS Sn 08 05 45.8 -0.4
SNET IAML 08 05 49.5
comp=Z,793nm,0.3s
OPAM Oficina de Pla 1.00 327 eP Pn 08 05 31.9 -1.3
OPAM eS Sn 08 05 46.0 -0.2
OPAM IAML 08 05 49.5
comp=Z,812nm,0.2s
OPAM Oficina de Pla 1.00 327 eP Pn 08 05 31.9 -1.3
OPAM eS Sn 08 05 46.0 -0.2

OPAM				IAML		08 05 49.5	
	comp=Z,812nm,0.2s						
BOQS	**Boqueron**	**1.06**	**324**	*e*P	**Pn**	**08 05 33.1**	**-1.1**
BOQS				*e*S	**Sn**	**08 05 48.1**	**+0.1**
CEVE	**Cerro Verde**	**1.35**	**315**	*e*P	**Pn**	**08 05 37.2**	**-1.1**
CEVE				*e*S	**Sn**	**08 05 56.1**	**+1.0**
CEVE				IAML		08 05 59.2	
	comp=Z,2μm,0.3s						
CEVE	**Cerro Verde**	**1.35**	**315**	*e*P	**Pn**	**08 05 37.2**	**-1.1**
CEVE				*e*S	**Sn**	**08 05 56.1**	**+1.0**
CEVE				IAML		08 05 59.2	
	comp=Z,2μm,0.3s						
SBLS	**San Blas**	**1.36**	**315**	*e*P	**Pn**	**08 05 37.2**	**-1.1**
SBLS	**San Blas**	**1.36**	**315**	*e*P	**Pn**	**08 05 37.2**	**-1.1**
SNJE	**San Jose**	**1.37**	**316**	*e*P	**Pn**	**08 05 37.2**	**-1.2**
SNJE	**San Jose**	**1.37**	**316**	*e*P	**Pn**	**08 05 37.2**	**-1.2**
IXG	**Ixpaco**	**2.18**	**306**	⇓*e*P	**Pn**	**08 05 49.0**	**-0.5**
PCG	**Pacaya**	**2.44**	**308**	*e*S	**Sn**	**08 06 22.7**	**+0.8**
FUG	**Fuego 3**	**2.66**	**306**	*e*P	**Pn**	**08 05 59.4**	**+3.3**
FUG				*e*S	**Sn**	**08 06 27.3**	**+0.2**
STG3	**Santiaguito 3,**	**3.39**	**303**	*e*S	**Sn**	**08 06 45.0**	**-0.2**
EDLM	**Las Mercedes**	**6.11**	**125**	*e*P	Pn	08 06 41.9	-1.5

DJA 25 08:11:03.3±1.0,3°S±3°×12°3E±°,h29km±12km,M3.6/11, mb3.6/1,MLv3.6/11,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**0.86**	**185**	P	Pn	08 11 19.4	-0.2
LUWI	**Luwuk**	**2.04**	**2**	P	Pn	08 11 35.7	0.0
LUWI				S	Sn	08 12 01.2	+1.1
APSI	**Ampana**	**2.41**	**334**	P	Pn	08 11 39.9	-0.9
APSI				S	Sn	08 12 09.6	+0.3
TTSI	**Tana Toraja**	**2.88**	**271**	P	Pn	08 11 44.3	-2.9
BNSI	**Bone**	**2.90**	**243**	P	Pn	08 11 48.5	+1.0
SPSI	**Sidrap Palu**	**3.05**	**253**	P	Pn	08 11 49.6	0.0
SPSI				S	Sn	08 12 25.6	+0.4
BKSI	**Bulukumba**	**3.40**	**229**	P	Pn	08 11 55.2	+0.8
MRSI	**Marisa**	**3.62**	**348**	P	Pn	08 11 57.1	-0.4
MRSI				S	Sn	08 12 38.3	-1.0
MPSI	**Mapaga**	**4.41**	**321**	P	Pn	08 12 07.4	-0.9
MPSI				S	Sn	08 12 55.1	-3.6
EDFI	**Ende, Flores**	**5.71**	**190**	P	Pn	08 12 25.3	-1.0

KRAR 25 08:19:21.6±0.1,53°55N×87°98E,M2.2,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)
NNC 25 08:19:17.8±4.5,53°66N×87°44E,h0km,mb3.6,mpv3.3, 5C-3D,Error ellipse: s-maj=43.7km s-min=29.4km az=171.0,Suspected Mining explosion.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**6.17**	**245**	⇓Pn	Pn	08 20 51.4	+0.6
	5.0nm,1.4s						
KURK				⇑Sn	Sn	08 22 02.4	+1.1
	2.0nm,0.7s						
KURK				⇓Lg	Lg	08 22 38.4	
	7.9nm,0.9s						
KURBB	**Kurchatov Arra**	**6.27**	**245**	⇑Pn	Pn	08 20 51.0	-0.5
	2.1nm,0.5s						
KURBB				⇑Sn	Sn	08 22 02.9	-0.8
	5.7nm,0.7s						
KURBB				⇑Lg	Lg	08 22 42.9	
	5.9nm,0.7s						
MK31	**Makanchi Array**	**7.62**	**208**	Pn	Pn	08 21 10.2	+0.2
	0.4nm,0.6s,baz=28,slow=13,SNR=13						
MK31				⇓Sn	Sn	08 22 38.0	+1.0
	0.5nm,0.5s,baz=257,slow=21,SNR=4.5						
MK31				⇑Lg	Lg	08 23 20.5	
	2.0nm,0.7s,baz=24,slow=28,SNR=4.5						

JMA 25 08:31:25.6±0.2,35°67N×140°09E,h70km±2km,M3.2
JMA Felt I J1.
IDC 25 08:31:28.5±2.3,35°42N×139°76E,h84km±16km,mb3.1/2, mb1 3.3/3,mb1mx3.0/35,mbtmp3.5/3,Error ellipse: s-maj=42.8km s-min=7.6km az=68.0
ISC 25 08:31:26.2±1.1,35°57N±0°05×140°06E±0°06,h73km±7km, n19,σ0°61/25,1C-4D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.19**	**142**	⇑P	**Pn**	**08 31 37.0**	**-0.1**
JCN				S	**Sn**	**08 31 46.0**	**+0.9**
TOK	**Tokyo**	**0.27**	**296**	P	**Pn**	**08 31 37.6**	**+0.1**
TOK				*e*S	**Sn**	**08 31 46.5**	**+0.7**
JSMT	**Sammumatsuo**	**0.33**	**77**	P	**Pn**	**08 31 37.0**	**-0.9**
JSMT				S	**Sn**	**08 31 46.9**	**+0.4**
JOD2	**Odawara 2**	**0.85**	**249**	⇓P	**Pn**	**08 31 42.6**	**-0.5**
JOD2				S	**Sn**	**08 31 54.7**	**-0.9**
BSO3	**Boso 3**	**0.85**	**154**	P	**Pn**	**08 31 42.5**	**-0.3**
JAG	**Ashikaga**	**0.98**	**330**	⇓P	**Pn**	**08 31 43.5**	**-1.2**
JIM2	**Oshima 3**	**0.99**	**211**	P	**Pn**	**08 31 44.1**	**-0.7**
JRY	**Ryogami san**	**1.04**	**296**	⇓P	**Pn**	**08 31 45.2**	**-0.2**
JFNN	**Fujinakano**	**1.18**	**252**	P	**Pn**	**08 31 47.1**	**0.0**
JFNN				S	**Sn**	**08 32 02.8**	**0.0**
JYN	**Shimob**	**1.24**	**267**	⇓P	**Pn**	**08 31 47.7**	**-0.2**
JIZS	**Izushimoda**	**1.29**	**229**	P	**Pn**	**08 31 48.4**	**-0.1**
JIZS				S	**Sn**	**08 32 04.8**	**-0.4**
MJAR	**Matsushiro Arr**	**1.79**	**303**	P	**Pn**	**08 31 55.0**	**-0.1**
	2.2nm,0.3s,baz=144,slow=14,SNR=54						
MJAR				S	**Sn**	**08 32 17.3**	**+0.3**
	1.6nm,0.3s,baz=113,slow=17,SNR=3.2						
MAT	**Matsushiro**	**1.79**	**303**	P	**Pn**	**08 31 55.1**	**0.0**
MAT				S	**Sn**	**08 32 18.1**	**+1.1**
JHJ	**Hachijo jima 2**	**2.45**	**185**	P	**Pn**	**08 32 04.8**	**+0.8**
	27nm,0.3s,baz=340,slow=20,SNR=9.9						
JHJ				S	**Sn**	**08 32 32.7**	**-0.3**
	31nm,0.3s,baz=240,slow=23,SNR=9.8						
H11N2	**WAKE ISLAND Hy**	**28.41**	**117**	T	T	09 07 07.4	
	baz=309,slow=75,SNR=3.3						
H11N1	**WAKE ISLAND Hy**	**28.41**	**117**	T	T	09 07 01.0	
	baz=309,slow=75,SNR=4.7						
H11N3	**WAKE ISLAND Hy**	**28.42**	**117**	T	T	09 07 08.3	
	baz=309,slow=75,SNR=3.4						
MKAR	**Makanchi Array**	**43.99**	**303**	P	**P**	**08 39 26.5**	**+0.3**
	0.2nm,0.5s,baz=83,slow=9.4,SNR=1.8						
WRA	**Warramunga Arr**	**55.47**	**187**	P	**P**	**08 40 53.2**	**-0.3**
	0.4nm,0.4s,baz=1.2,slow=7.6,SNR=4.6						

IDC 25 08:33:07.0±2.4,5°76S×131°01E,h0km,mb3.5/1, mb1 3.4/3,mb1mx3.3/29,mbtmp3.3/3,ML3.3/2,Error ellipse: s-maj=120.0km s-min=33.1km az=71.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.46**	**167**	Pn	Pn	08 36 34.8	+1.6
	0.2nm,0.3s,baz=348,slow=11,SNR=13						
WRA				Sn	Sn	08 38 59.1	-15
	0.3nm,0.3s,baz=215,slow=7.0,SNR=3.9						
ASAR	**Alice Springs**	**18.02**	**171**	P	Pn	08 37 17.9	-1.1
	0.0nm,0.3s,baz=348,slow=9.2,SNR=2.2						
MKAR	**Makanchi Array**	**67.75**	**326**	P	P	08 44 06.7	0.0
	0.3nm,0.5s,baz=116,slow=8.3,SNR=4.1						

MEX 25 08:55:55.8±0.6,13°75N×92°48W,h10km,MD3.9
GCG 25 08:55:59.4±0.6,15°02N×92°34W,h124km±2km,MD3.8
ISC 25 08:55:55.6±2.9,14°2N±0°1×92°72W±0°07,h1km±15km,n9, σ1°42/16,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.85**	**31**	*i*P	**Pn**	**08 56 14.9**	**+0.1**
THIG				*e*S	**Sn**	**08 56 29.4**	**+1.5**
STG3	**Santiaguito 3,**	**1.24**	**64**	*e*P	**Pb**	**08 56 20.7**	**+0.8**
STG3				*e*S	**Sg**	**08 56 36.0**	**+0.6**
PCIG		**1.59**	**343**	*e*P	**Pb**	**08 56 25.6**	**-0.3**
PCIG				*i*S	**Sg**	**08 56 48.5**	**+1.6**
FUG	**Fuego 3**	**1.84**	**81**	*e*S	**Sn**	**08 56 51.0**	**-1.6**
PCG	**Pacaya**	**2.06**	**84**	*e*P	**Pn**	**08 56 31.8**	**+0.2**
CCIG	**Comitan**	**2.17**	**15**	*e*P	**Pg**	**08 56 36.7**	**-0.6**
CCIG				*i*S	**Sg**	**08 57 07.0**	**+1.6**
IXG	**Ixpaco**	**2.21**	**90**	*e*P	**Pn**	**08 56 34.0**	**+0.3**
IXG				*e*S	**Sn**	**08 57 01.6**	**-0.2**
TGIG		**2.62**	**352**	*i*P	**Pb**	**08 56 41.8**	**-1.6**
TGIG				*i*S	**Sg**	**08 57 18.1**	**-1.7**
CMIG	**Matias Romero**	**3.57**	**325**	*e*P	**Pn**	**08 56 54.6**	**+2.4**
CMIG				*e*S	**Sb**	**08 57 42.1**	**-1.4**

KRAR 25 08:58:11.3±0.1,53°70N×88°11E,M2.3,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)
NNC 25 08:58:13.2±2.5,53°59N×87°87E,h0km,mb3.7,mpv3.3, 6C-3D,Error ellipse: s-maj=23.8km s-min=16.0km az=176.0,Suspected Mining explosion.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**6.37**	**247**	⇑Pn	Pn	08 59 47.9	-0.4
	0.9nm,0.5s						
KURK				⇓Sn	Sn	09 01 02.1	+0.4
	1.3nm,0.6s						
KURK				⇑Lg	Lg	09 01 34.3	
	4.1nm,0.8s						
KURBB	**Kurchatov Arra**	**6.47**	**246**	⇓Pn	Pn	08 59 49.3	-0.3
	3.1nm,0.4s						
KURBB				⇑Sn	Sn	09 01 06.2	+2.1
	4.3nm,0.6s						
KURBB				⇑Lg	Lg	09 01 40.8	
	4.2nm,0.6s						
MK31	**Makanchi Array**	**7.68**	**210**	⇓Pn	Pn	09 00 07.0	+0.8
	0.5nm,0.6s,baz=30,slow=12,SNR=18						
MK31				⇑Sn	Sn	09 01 35.4	+1.5
	0.3nm,0.5s,baz=32,slow=25,SNR=4.9						
MK31				⇑Lg	Lg	09 02 14.1	
	1.4nm,0.7s,baz=27,slow=32,SNR=4.3						

KRNET 25 08:59:10.5±0.1,41°01N×74°00E,h15km,mb1.9,14C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.83**	**292**	⇑*e*P	Pg	08 59 26.0	-0.6
	baz=92						
ARSB				⇑*i*S	Sb	08 59 37.9	+0.2
	baz=92						
ARLS	**Aral**	**0.88**	**16**	⇑*i*P	Pb	08 59 27.2	-0.4
	baz=16						
ARLS				⇑*i*S	Sb	08 59 40.0	+0.7
	baz=16						
AML	**Almayashu**	**1.14**	**348**	⇑*i*P	Pn	08 59 32.3	0.0
	baz=48						
AML				⇑*i*S	Sg	08 59 47.4	-0.1
	baz=48						
UCH	**Uchtor**	**1.27**	**17**	⇑*i*P	Pb	08 59 34.6	+0.2
	baz=17						
UCH				⇑*i*S	Sn	08 59 51.4	+0.2
	baz=17						
NRN	**Naryn**	**1.57**	**74**	⇑*i*P	Pb	08 59 39.1	-0.2
	baz=74						
NRN				⇑*i*S	Sb	08 59 59.6	+0.5
	baz=74						
KBK	**Karagaybulak**	**1.79**	**23**	⇑*i*P	Pb	08 59 43.6	+0.5
	baz=23						
KBK				⇑*i*S	Sg	09 00 07.1	-1.0
	baz=23						
ULHL	**Ulahol**	**2.08**	**53**	⇑*i*P	Pb	08 59 48.0	-0.1
	baz=53						
ULHL				⇑*i*S	Sb	09 00 15.1	+1.2
	baz=53						

KRNET 25 08:59:16.4±0.1,40°93N×73°91E,h35km,mb1.9,8C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.80**	**300**	⇓*i*P	Pn	08 59 32.1	+0.8
	baz=0.0						
ARSB				⇓*i*S	Sn	08 59 43.5	+1.4
	baz=0.0						
ARLS	**Aral**	**0.98**	**18**	⇓*i*P	Pn	08 59 35.0	+1.2
	baz=19						
ARLS				⇓*i*S	Sn	08 59 48.8	+2.3
	baz=19						
AML	**Almayashu**	**1.21**	**352**	⇑*i*P	Pn	08 59 38.7	+1.6
	baz=52						
AML				⇑*i*S	Sn	08 59 54.3	+1.8
	baz=52						
UCH	**Uchtor**	**1.37**	**19**	⇑*i*P	Pn	08 59 40.7	+1.3
	baz=19						
UCH				⇑*i*S	Sn	08 59 57.9	+1.3
	baz=19						
NRN	**Naryn**	**1.66**	**72**	⇑*i*P	Pn	08 59 43.8	+0.6
	baz=72						
NRN				⇑*i*S	Sn	09 00 04.6	+1.1
	baz=72						
ULHL	**Ulahol**	**2.19**	**52**	⇑*i*P	Pn	08 59 51.4	+1.0
	baz=52						
ULHL				⇑*i*S	Sn	09 00 16.7	+0.3
	baz=52						

IDC 25 09:11:15.8±3.1,26°63N×126°26E,h123km±31km,mb2.9/3, mb1 3.1/3,mb1mx2.8/50,mbtmp3.2/3,Error ellipse: s-maj=40.3km s-min=29.2km az=65.0
JMA 25 09:11:16.2±0.2,26°44N×126°27E,h122km±2km,M2.8
ISC 25 09:11:15.3±1.0,26°6N±0°1×126°16E±0°10,h121km±10km, n18,σ0°85/32,mb3.0/3,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.61**	**113**	P	**Pn**	**09 11 34.5**	**+0.5**
JKE				*e*S	**Sn**	**09 11 47.5**	**-0.6**
JAGN	**Aguni-jima**	**0.96**	**89**	P	**Pn**	**09 11 37.4**	**+0.4**
JAGN				S	**Sn**	**09 11 53.3**	**-0.1**
JNTH	**Nagotoyohara**	**1.67**	**91**	P	**Pn**	**09 11 44.7**	**0.0**
JNTH				S	**Sn**	**09 12 05.9**	**-1.2**
JIH	**Iheya**	**1.68**	**73**	P	**Pn**	**09 11 45.8**	**+1.0**
JIH				*e*S	**Sn**	**09 12 07.4**	**+0.1**
JIKM	**Ikemajima**	**1.83**	**207**	P	**Pn**	**09 11 47.6**	**+0.9**
JIKM				S	**Sn**	**09 12 11.3**	**+0.6**
JOW	**Kunigami**	**1.91**	**82**	P	**Pn**	**09 11 48.0**	**+0.5**
JOW				S	**Sn**	**09 12 11.1**	**-1.2**
JOW	**Kunigami**	**1.91**	**82**	P	**Pn**	**09 11 48.1**	**+0.5**
	0.5nm,0.3s,baz=127,slow=12,SNR=12						
JOW				S	**Sn**	**09 12 11.1**	**-1.2**
	7.6nm,0.3s,baz=110,slow=15,SNR=31						
JOGS	**Gusukube**	**1.93**	**201**	P	**Pn**	**09 11 48.0**	**+0.1**
JOGS				*e*S	**Sn**	**09 12 12.4**	**-0.3**
JIRB	**Irabujima**	**1.95**	**208**	P	**Pn**	**09 11 48.4**	**+0.2**
JIRB				S	**Sn**	**09 12 12.6**	**-0.6**
JMJ2	**Miyako jima3**	**1.97**	**203**	P	**Pn**	**09 11 49.0**	**+0.6**
JMJ2				S	**Sn**	**09 12 13.7**	**0.0**
JYRO	**Yoronjima**	**2.09**	**77**	P	**Pn**	**09 11 50.3**	**+0.4**
JYRO				*e*S	**Sn**	**09 12 15.2**	**-1.2**
JOKE	**Okinoerabujima**	**2.29**	**69**	P	**Pn**	**09 11 53.4**	**+1.0**
JOKE				S	**Sn**	**09 12 20.9**	**0.0**
JISG	**Ishigakijimahi**	**2.59**	**221**	S	**Sn**	**09 12 26.9**	**-0.8**
JTK	**Tokunoshima**	**2.76**	**63**	P	**Pn**	**09 11 58.9**	**+0.4**
JTK				S	**Sn**	**09 12 29.9**	**-1.8**
JIJ	**Ishigaki jima**	**2.86**	**220**	P	**Pn**	**09 11 59.7**	**0.0**
JIJ				S	**Sn**	**09 12 31.7**	**-2.2**
MKAR	**Makanchi Array**	**39.93**	**312**	P	**P**	**09 18 37.5**	**-0.1**
	0.1nm,0.4s,baz=92,slow=11,SNR=4.5						
ASAR	**Alice Springs**	**50.50**	**171**	P	**P**	**09 20 01.6**	**+0.4**
	0.1nm,0.5s,baz=355,slow=14,SNR=4.1						
YKA	**Yellowknife Ar**	**78.99**	**24**	P	**P**	**09 23 05.6**	**+0.1**
	0.2nm,0.5s,baz=303,slow=5.3,SNR=4.2						

IDC 25 09:16:22.6±1.0,13°41N×120°50E,h0km,mb3.6/6, mb1 3.9/6,mb1mx3.5/55,mbtmp3.6/6,Error ellipse: s-maj=21.8km s-min=11.2km az=116.0
MAN 25 09:16:24.4,13°51N×120°53E,h9km,MS3.3
NEIC 25 09:16:27.8±0.5,13°56N±0°06×120°7E±0°2,h41km±13km, mb4.3/7,Error ellipse: s-maj=26.1km s-min=5.6km az=104.0
ISC 25 09:16:24.1±1.5,13°50N±0°04×120°53E±0°04,h10km±11km, n24,σ0°78/31,mb3.9/11,2D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.36**	**311**	*e*P	**Pb**	**09 16 32.1**	**-0.5**
LUBP				*e*S	**Sb**	**09 16 37.8**	**-0.6**
PGP	**Puerto Galera**	**0.41**	**89**	⇓*e*P	**Pg**	**09 16 32.7**	**+0.4**
PGP				*e*S	**Sg**	**09 16 37.5**	**-0.3**
TGY	**Tagaytay City**	**0.72**	**34**	Pn	**Pb**	**09 16 39.5**	**+0.7**
	256nm,0.3s,baz=322,slow=1.4,SNR=16						
TGY				Lg	Lg	09 16 51.0	
	558nm,0.3s,baz=79,slow=23,SNR=6.7						
TGY	**Tagaytay City**	**0.72**	**34**	⇓*e*P	**Pn**	**09 16 40.4**	**-0.1**
LQP	**Lukban**	**1.16**	**58**	*e*P	**Pg**	**09 16 46.1**	**-0.4**
LQP				*e*S	**Sg**	**09 17 01.2**	**-0.3**
BOAC	**Boac**	**1.28**	**92**	*e*P	**Pn**	**09 16 46.9**	**-1.2**
BOAC				*e*S	**Sb**	**09 17 04.4**	**-0.5**
BUSP	**Coron**	**1.52**	**192**	*e*P	**Pn**	**09 16 51.8**	**+0.4**
BUSP				*e*S	**Sn**	**09 17 11.9**	**+0.6**
OTRP	**Odiongan**	**1.84**	**128**	*e*P	**Pn**	**09 16 57.1**	**+1.2**
OTRP				*e*S	**Sb**	**09 17 21.3**	**+0.1**
BALP	**Baler**	**2.45**	**24**	*e*P	**Pn**	**09 17 05.7**	**+1.4**
BALP				*e*S	**Sb**	**09 17 38.8**	**+0.2**
ENPP	**El Nido**	**2.52**	**205**	*e*P	**Pn**	**09 17 05.5**	**+0.3**
SMPP	**San Manuel, Pa**	**2.64**	**3**	*e*P	**Pn**	**09 17 07.4**	**+0.5**
CMAR	**Chiang Mai Arr**	**21.32**	**286**	P	**P**	**09 21 13.3**	**+1.9**
	0.6nm,0.3s,baz=96,slow=8.4,SNR=1.1						
FITZ	**Fitzroy Crossi**	**31.80**	**171**	P	**P**	**09 22 47.8**	**-1.2**
FITZ				IAmb	IAmb	09 22 58.6	
	comp=Z,4.8nm,1.2s						
WB0	**Warramunga Arr**	**35.76**	**157**	P	**P**	**09 23 22.7**	**-0.9**
WB0				IAmb	IAmb	09 23 26.5	
	comp=Z,4.9nm,1.1s						
WRAB	**Tennant Creek**	**35.90**	**157**	P	**P**	**09 23 23.9**	**-0.9**
WRA	**Warramunga Arr**	**35.90**	**157**	P	**P**	**09 23 23.9**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=336,slow=9.5,SNR=6.8						
WB2	**Warramunga Arr**	**35.91**	**157**	P	**P**	**09 23 24.4**	**-0.4**
WB2				IAmb	IAmb	09 23 29.0	
	comp=Z,3.8nm,0.8s						
WR0	**Warramunga Arr**	**35.99**	**157**	P	**P**	**09 23 25.0**	**-0.6**
WR0				IAmb	IAmb	09 23 43.6	
	comp=Z,5.5nm,1.3s						
ASAR	**Alice Springs**	**39.19**	**160**	P	**P**	**09 23 52.6**	**0.0**
	comp=Z,1.0nm,0.6s,baz=341,slow=7.5,SNR=12						
MKAR	**Makanchi Array**	**46.09**	**324**	P	**P**	**09 24 48.3**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=112,slow=9.0,SNR=2.4						
KURBB	**Kurchatov Arra**	**50.26**	**326**	P	**P**	**09 25 20.9**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=121,slow=7.8,SNR=4.4						
KURK	**Kurchatov**	**50.26**	**326**	P	**P**	**09 25 20.6**	**0.0**
KURK				IAmb	IAmb	09 25 23.5	
	comp=Z,2.8nm,1.0s						
BVAR	**Borovoye Array**	**55.84**	**326**	P	**P**	**09 26 01.9**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=119,slow=8.6,SNR=3.9						
ABKAR	**Akbulak array**	**60.77**	**319**	P	**P**	**09 26 35.6**	**-0.7**

MOS 25 09:21:00.0±1.2,43°72N×146°26E,h112km,mb4.0/2,Error ellipse: s-maj=24.7km s-min=13.5km az=67.6
SKHL 25 09:21:03.4±0.1,43°77N×146°14E,h74km±3km,mb4.0/5
JMA 25 09:21:03.6±0.2,43°77N×146°22E,h85km±2km,M3.1
ISC 25 09:21:01.9±0.9,43°77N±0°06×146°21E±0°04,h91km±6km, n36,σ1°52/54,6C-6D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.36**	**316**	*i*P	**Pn**	**09 21 16.7**	**+0.9**
YUK				AMB	AMB	09 21 17.0	
	60nm,0.2s						
YUK				*i*S	**Sn**	**09 21 26.6**	**+0.3**
YUK				A	A	09 21 27.0	
	1μm,0.3s						
YUK				A	A	09 21 27.0	
	350nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.36**	**316**	*d i*PN	**Pn**	**09 21 16.8**	**+0.9**
YUK				*i*S	**Sn**	**09 21 26.5**	**+0.3**
YUK				pmax	pmax		
	comp=Z,589μm,0.2s						
YUK				pmax	pmax		
	comp=N,80μm,0.1s						
YUK				pmax	pmax		
	comp=E,47μm,0.1s						
YUK				smax	smax		
	comp=N,1μm,0.3s						
YUK				smax	smax		
	comp=E,4μm,0.4s						
GRPR	**Tuman**	**0.39**	**305**	*i*P	**Pn**	**09 21 16.8**	**+0.8**
GRPR				AMB	AMB	09 21 17.0	
	comp=E,110nm,0.3s						
GRPR				AMB	AMB	09 21 17.0	
	comp=E,50nm,0.3s						
GRPR				AMB	AMB	09 21 17.0	
	comp=E,170nm,0.3s						
GRPR				*i*S	**Sn**	**09 21 26.1**	**-0.4**
GRPR				A	A	09 21 28.0	
	comp=E,2μm,0.5s						
GRPR				A	A	09 21 28.0	
	comp=E,1μm,0.5s						
GRPR	**Tuman**	**0.39**	**305**	*d i*PN	**Pn**	**09 21 16.8**	**+0.8**
GRPR				*i*S	**Sn**	**09 21 26.1**	**-0.4**
GRPR				pmax	pmax		
	comp=N,105nm,0.1s						
GRPR				pmax	pmax		
	comp=E,51nm,0.1s						
GRPR				pmax	pmax		
	comp=Z,169nm,0.1s						
GRPR				smax	smax		
	comp=N,2μm,0.2s						
GRPR				smax	smax		
	comp=E,1μm,0.2s						
SHO	**Shikotan**	**0.46**	**78**	*i*P	**Pn**	**09 21 17.8**	**+1.4**
SHO				AMB	AMB	09 21 18.0	
	comp=E,80nm,0.2s						
SHO				*i*S	**Sn**	**09 21 28.3**	**+1.0**
SHO				A	A	09 21 28.9	
	comp=E,100nm,0.2s						
SHO				A	A	09 21 28.9	
	comp=E,370nm,0.2s						
SHO	**Shikotan**	**0.46**	**78**	*d i*PN	**Pn**	**09 21 17.8**	**+1.4**
SHO				*i*S	**Sn**	**09 21 28.2**	**+1.0**
SHO				pmax	pmax		
	comp=N,100μm,0.2s						
SHO				pmax	pmax		
	comp=Z,798μm,0.2s						
SHO				pmax	pmax		
	comp=E,43μm,0.1s						
SHO				smax	smax		
	comp=E,4μm,0.4s						
SHO				smax	smax		
	comp=N,1μm,0.1s						
GLVR	**Golovnino**	**0.51**	**266**	*i*P	**Pn**	**09 21 18.2**	**+1.4**
GLVR				AMB	AMB	09 21 18.4	
	comp=N,20nm,0.2s						
GLVR				AMB	AMB	09 21 18.4	
	comp=N,20nm,0.2s						
GLVR				AMB	AMB	09 21 18.4	
	comp=N,50nm,0.2s						
GLVR				*i*S	**Sn**	**09 21 29.4**	**+1.5**
GLVR				A	A	09 21 30.0	
	comp=N,420nm,0.3s						
GLVR				A	A	09 21 30.0	
	comp=N,410nm,0.3s						
GLVR	**Golovnino**	**0.51**	**266**	⇑*i*PN	**Pn**	**09 21 18.2**	**+1.4**
GLVR				*i*S	**Sn**	**09 21 29.4**	**+1.5**
GLVR				pmax	pmax		
	comp=N,22nm,0.1s						
GLVR				pmax	pmax		
	comp=E,20nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,320nm,0.1s						
GLVR				smax	smax		
	comp=N,4μm,0.3s						
GLVR				smax	smax		
	comp=E,4μm,0.3s						
NEM2	**Nemuro 2**	**0.53**	**220**	P	**Pn**	**09 21 18.2**	**+1.2**
NEM2				*e*S	**Sn**	**09 21 28.9**	**+0.6**
NMR	**Nemuro--Hokkai**	**0.54**	**221**	*i*P	**Pn**	**09 21 18.3**	**+1.2**
NMR				*i*S	**Sn**	**09 21 29.0**	**+0.7**
NMR	**Nemuro--Hokkai**	**0.54**	**221**	⇑*i*PN	**Pn**	**09 21 18.2**	**+1.2**
NMR				*i*S	**Sn**	**09 21 28.8**	**+0.5**
JRA	**Rausu**	**0.81**	**282**	P	**Pn**	**09 21 20.8**	**+1.2**
JRA				*e*S	**Sn**	**09 21 33.6**	**+0.8**
JNSB	**Nemuroshibetsu**	**0.88**	**271**	P	**Pn**	**09 21 21.9**	**+1.6**
JNSB				*e*S	**Sn**	**09 21 35.8**	**+1.7**
JKHN	**Kushirohamanak**	**1.03**	**228**	P	**Pn**	**09 21 23.5**	**+1.4**
JKHN				*e*S	**Sn**	**09 21 38.1**	**+0.9**
JNK	**Nakash**	**1.10**	**261**	P	**Pn**	**09 21 24.0**	**+1.1**
JAK	**Akkeshi**	**1.35**	**235**	P	**Pn**	**09 21 27.2**	**+1.3**
JAK				*e*S	**Sn**	**09 21 45.0**	**+1.1**
JTKR	**Abashiri--Toko**	**1.68**	**278**	P	**Pn**	**09 21 31.5**	**+1.5**
JTKR				*e*S	**Sn**	**09 21 52.0**	**+0.7**
JAR	**Ashorobuto**	**1.84**	**256**	P	**Pn**	**09 21 34.3**	**+2.2**
JAR				*e*S	**Sn**	**09 21 58.0**	**+3.0**
KUR	**Kuril'sk**	**1.88**	**38**	*i*P	**Pn**	**09 21 34.9**	**+2.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR				AMB	AMB	09 21 35.0	
	comp=E,30nm,0.3s						
KUR				i S	Sn	09 21 59.1	+3.2
KUR				A	A	09 22 00.0	
	comp=E,240nm,0.2s						
KUR				A	A	09 22 00.0	
	comp=E,210nm,0.2s						
KUR	Kuril'sk	1.88	38c	iPN	Pn	09 21 34.9	+2.4
KUR				i S	Sn	09 21 59.1	+3.2
KUR				pmax	pmax		
	comp=Z,26nm,0.3s						
KUR				pmax	pmax		
	comp=E,12nm,0.2s						
KUR				smax	smax		
	comp=N,238nm,0.2s						
KUR				smax	smax		
	comp=E,209nm,0.2s						
JOB	Onbets	1.94	244	P	Pn	09 21 35.4	+2.0
JOB				eS	Sn	09 21 58.9	+1.6
JMP	Maruseppu	2.08	277	P	Pn	09 21 37.0	+1.8
JMP				eS	Sn	09 22 01.9	+1.3
JCH	Churui	2.39	242	P	Pn	09 21 40.6	+1.4
ERM	Erimo	2.85	233⇑	iPN	Pn	09 21 46.4	+0.9
YSS	Yuzh-Sakhalins	4.01	324	erx	Pn	09 21 46.9	-14
YSS	Yuzh-Sakhalins	4.01	324	ePN	Pn	09 21 46.9	-14
YSS				MLR	MLR		
	comp=Z,200nm,11.0s						
YSS				MLR	MLR		
	comp=E,200nm,16.0s						
SKR	Severo-Kuril's	9.64	41	erx	Pn	09 23 12.7	-5.0
SKR	Severo-Kuril's	9.64	41⇓	ePN	Pn	09 23 16.5	-1.2
PET	Petropavlovsk	12.39	37	erx	Pn	09 23 52.7	-2.1
PET	Petropavlovsk	12.39	37⇓	iPN	Pn	09 23 52.7	-2.1
YAK	Yakutsk	20.71	338	eP	P	09 25 34.1	-0.5
YAK	Yakutsk	20.71	338⇑	eP	P	09 25 34.1	-0.5
TIK	Tiksi	29.19	349	eP	P	09 26 54.5	+0.3
TIXI	Tiksi	29.20	349⇑	eP	P	09 26 54.5	+0.2
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TLY	Talaya	29.35	301	eP	P	09 26 54.4	-1.6
TLY	Talaya	29.35	301⇓	eP	P	09 26 54.4	-1.6
TLY				pmax	pmax		
	comp=Z,1.0nm,0.8s						

NNC 25 09:28:57.8±5.9, 53.°63N×88.°18E, h0km, mb3.7, mpv3.4, 5C-3D, Error ellipse: s-maj=43.3km s-min=40.2km az=3.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURK	Kurchatov	6.56	247	⇓Pn	Pn	09 30 34.3	-1.1
	1.6nm,0.8s						
KURK				⇓Sn	Sn	09 31 54.8	+3.9
	0.8nm,0.7s						
KURK				⇑Lg	Lg	09 32 20.8	
	3.5nm,1.1s						
KURBB	Kurchatov Arra	6.66	247	⇑Pn	Pn	09 30 36.5	-0.3
	1.4nm,0.3s						
KURBB				⇓Sn	Sn	09 31 53.4	+0.1
	3.2nm,0.6s						
KURBB				⇑Lg	Lg	09 32 29.3	
	2.4nm,0.7s						
MK31	Makanchi Array	7.81	211	⇑Pn	Pn	09 30 54.4	+1.8
	baz=31,slow=12,SNR=5.6						
MK31				⇑Sn	Sn	09 32 23.4	+1.7
	0.3nm,0.6s						
MK31				Lg	Lg	09 32 59.6	
	baz=160,slow=36,SNR=4.4						

NIED 25 09:31:00, 40.°70N×142.°70E, h38km, Mw3.5 Best double couple: Mo2.30000×10^14 NP1:φs348.00000°, δ70.00000°, λ93.00000°. NP2:φs160.00000°, δ20.00000°, λ83.00000°.
JMA 25 09:31:12.0±0.2, 40.°69N×142.°71E, h20km±4km, M3.7
IDC 25 09:31:18.8±3.7, 40.°64N×142.°32E, h76km±21km, mb3.4/3, mb1 3.4/6, mb1mx3.1/34, mbtmp3.6/6, MS2.8/2, Ms1 2.8/2, ms1mx2.3/34, Error ellipse: s-maj=63.1km s-min=17.6km az=111.0
ISC 25 09:31:10.9±1.5, 40.°72N±0.°04×142.°76E±0.°06, h16km±11km, n24, σ1.°09/33, mb3.7/3, 9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	0.96	238	⇓P	Pb	09 31 28.7	-0.4
JKEN				eS	Sb	09 31 39.9	-1.6
JANG	Nango	1.01	250	⇓P	Pb	09 31 29.9	-0.2
JANG				eS	Sb	09 31 42.1	-1.1
JTH	Tanohata	1.04	222	⇓P	Pb	09 31 30.1	-0.5
JARK	Aomorirokkasho	1.10	285	⇓P	Pb	09 31 31.3	-0.2
JARK				eS	Sb	09 31 45.1	-0.5
JTM	Tenmabayashi	1.29	273	⇓P	Pn	09 31 34.4	+0.1
JTM				eS	Sn	09 31 50.7	-0.4
JEM	Erimo	1.32	13	P	Pg	09 31 36.4	0.0
JEM				eS	Sg	09 31 53.4	-0.3
JOT	Ohata	1.45	297	⇓P	Pn	09 31 36.6	+0.1
JNBK	Urakawa-nobuka	1.55	360	P	Pb	09 31 39.8	+0.5
JNBK				eS	Sg	09 32 01.5	+0.4
JOM	Ohasama	1.68	223	⇓P	Pn	09 31 40.1	+0.4
JAH	Hinai	1.71	252	⇓P	Pn	09 31 41.0	+1.0
JAH				eS	Sn	09 32 02.1	+0.5
JKB	Kayabe	1.75	312	P	Pn	09 31 41.1	+0.5
JCH	Churui	1.94	13	⇓P	Pb	09 31 45.1	-0.8
JCH				eS	Sb	09 32 09.1	-0.8
JSR	Shiriuchi	1.95	295	P	Pn	09 31 44.4	+1.1
JSR				eS	Sn	09 32 07.9	+0.5
JIAM	Iburiatsuma	2.00	342	P	Pb	09 31 47.3	+0.4
JIAM				eS	Sb	09 32 12.5	+1.0
JRG	Rokugo	2.10	232	P	Pn	09 31 47.2	+1.7
ASAJ	Asahikawa	3.39	358	P	Pb	09 32 09.4	-1.2
	3.7nm,0.3s,baz=223,slow=11,SNR=9.6						
ASAJ				S	Sb	09 32 51.9	+0.2
	2.9nm,0.3s,baz=9.5,slow=30,SNR=6.4						
MAT	Matsushiro	5.49	222	P	Pn	09 32 35.2	+3.1
MJAR	Matsushiro Arr	5.49	222	P	Pn	09 32 34.8	+2.7
	0.2nm,0.3s,baz=34,slow=14,SNR=8.8						
JHJ	Hachijo jima 2	7.96	198	LR	LR	09 36 12.5	
	comp=Z,225nm,21.8s,baz=78,slow=38						
USRK	Ussuriysk Ar.	8.69	297	P	Pn	09 33 16.9	+1.0
	baz=96,slow=14,SNR=5.6						
KSRS	Korea Array	11.99	259	LR	LR	09 38 20.6	
	comp=Z,17nm,20.0s,baz=230,slow=36						
ZALV	Zalesovo Beam	40.30	309	P	P	09 38 46.7	-0.4
	0.7nm,0.4s,baz=86,slow=10,SNR=3.7						
MKAR	Makanchi Array	43.15	299	P	P	09 39 10.0	-0.6
	0.3nm,0.4s,baz=84,slow=8.2,SNR=5.1						
FINES	FINESS Array B	66.05	332	P	P	09 41 55.9	-0.6
	1.0nm,0.7s,baz=46,slow=5.5,SNR=3.9						

IDC 25 09:46:37.5±2.9, 10.°39S×113.°34E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.6/32, mbtmp3.5/4, MS2.8/2, Ms1 3.2/2, ms1mx2.7/22, Error ellipse: s-maj=152.1km s-min=23.8km az=47.0
DJA 25 09:46:41.3±0.6, 10.°S±6.°×11.°3E±.°, h53km±66km, M3.8/13, mb3.6/2, MLv3.8/13
ISC 25 09:46:39.7±1.2, 10.°5S±0.°1×113.°24E±0.°05, h23km, n17, σ1.°74/23, mb3.4/4, South of Jawa

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	2.18	25	P	Pn	09 47 14.7	+0.1
JAGI				S	Sn	09 47 39.7	-1.2
GMJI	Gumukmas	2.19	5	P	Pn	09 47 14.4	-0.3
IGBI	Denpasar	2.49	49	P	Pn	09 47 19.0	+0.1
IGBI				S	Sn	09 47 47.5	-1.2
PWJI	Pagerwojo	2.81	330	P	Pn	09 47 23.3	0.0
PWJI				S	Sn	09 47 55.8	-0.7
PCJI	Pacitan	3.04	318	P	Pn	09 47 26.3	-0.1
PCJI				S	Sn	09 48 00.0	-2.1
SRBI	Singaraja	3.06	40	P	Pn	09 47 28.4	+1.6
SRBI				S	Sn	09 48 02.9	+0.1
WOJI	Wonogiri, Jawa	3.47	319	P	Pn	09 47 33.1	+0.7
WOJI				S	Sn	09 48 10.9	-1.8
UGM	Wanagama	3.69	313	P	Pn	09 47 36.9	+1.5
UGM				S	Sn	09 48 15.4	-2.8
PLAI	Plampang	4.76	70	P	Pn	09 47 50.2	0.0
PLAI				S	Sn	09 48 39.5	-5.2
KPJI	Karang Pucung	5.27	306	P	Pn	09 47 54.8	-2.3
	0.2nm14nm,1.6s						
KAPI	Kappang	8.43	50	LR	LR	09 52 12.1	
	comp=Z,64nm,19.6s,baz=139,slow=40						
EDFI	Ende, Flores	8.51	79	P	Pn	09 48 41.8	0.0
WRA	Warramunga Arr	22.41	117	P	P	09 51 37.5	+0.5
	0.5nm,0.6s,baz=292,slow=11,SNR=2.5						
ASAR	Alice Springs	23.68	126	P	P	09 51 50.5	+0.5
	0.4nm,0.7s,baz=294,slow=9.2,SNR=5.5						
CMAR	Chiang Mai Arr	32.01	334	P	P	09 53 05.8	+1.1
	1.5nm,0.3s,baz=165,slow=8.4,SNR=4.9						
USRK	Ussuriysk Ar.	57.01	16	LR	LR	10 22 26.3	
	comp=Z,53nm,18.6s,baz=0.4,slow=38						
MKAR	Makanchi Array	63.35	337	P	P	09 57 08.3	+1.1
	0.2nm,0.4s,baz=138,slow=8.4,SNR=0.9						

IDC 25 09:58:12.3±1.1, 16.°26N×61.°19W, h0km, mb3.5/6, mb1 3.9/9, mb1mx3.6/37, mbtmp3.7/9, ML3.7/3, Error ellipse: s-maj=27.4km s-min=21.8km az=62.0
TRN 25 09:58:14.4, 16.°10N×61.°31W, h22km, MD4.1
ISC 25 09:58:16.3±1.0, 16.°11N±0.°02×61.°28W±0.°04, h26km±8km, n54, σ0.°85/80, mb3.7/6, 1C, Leeward Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DEG	La Desirade	0.29	47⇑	i P	Pb	09 58 22.4	-0.8
DEG	La Desirade	0.29	47	e	Pn	09 58 26.5	+1.6
DEG				eS	Sn	09 58 29.8	-0.7
CBE	Ff, Capester	0.32	262	eP	Pb	09 58 23.5	-0.1
ABD	La Joyeuse, An	0.41	331	eP	Pb	09 58 24.5	-0.5
TDBA	Terre de Bas,	0.43	232	eP	Pb	09 58 25.0	-0.4
MDPV	Dominica, Penn	0.50	196	eP	Pb	09 58 26.5	-0.1
MDPV				eS	Sb	09 58 34.1	+0.6
DWS	Wesley	0.54	183	i P	Pb	09 58 26.8	-0.4
DWS				eS	Sb	09 58 35.4	+0.7
MDPO	Dominica; Chan	0.56	197	eP	Pb	09 58 27.1	-0.3
MDPO				eS	Sb	09 58 35.4	+0.3
MLYT	Lee's Yard	1.06	305	eP	Pn	09 58 35.5	0.0
MLYT				eS	Sn	09 58 50.2	+0.7
BPA	Boggy Peak	1.08	329	eP	Pb	09 58 36.2	-0.1
BPA				eS	Sb	09 58 50.8	+0.8
SVN	Savane Anatole	1.27	175	eP	Pn	09 58 37.8	-0.6
PCM	Pelee Case Pet	1.29	177	eP	Pn	09 58 38.1	-0.6
BAMF	Morne Balai	1.30	174	eP	Pn	09 58 38.1	-0.7
CXM	Morne La Croix	1.30	175	eP	Pn	09 58 38.3	-0.6
PML	Morne Lenard	1.33	176	eP	Pn	09 58 38.6	-0.6
FDF	Fort de France	1.38	175	i P	Pn	09 58 39.2	-0.7
FDF	Fort de France	1.38	175	e	Sn	09 58 56.0	-1.4
FDF				eS	Sn	09 58 57.5	+0.2
ILAM	Ilet Lapin Mar	1.39	164	eP	Pn	09 58 39.3	-0.7
ZAM	Aeronautique	1.55	171	eP	Pn	09 58 41.4	-0.8
LPMF	Morne Lapointe	1.56	169	eP	Pn	09 58 41.5	-0.9
TRMF	Trois Ilets	1.58	172	eP	Pn	09 58 42.4	-0.3
BIM	Bigot	1.60	173	eP	Pn	09 58 42.8	-0.2
NEV	Hard Times	1.60	310	eP	Pn	09 58 43.8	+0.9
NEV				eS	Sb	09 59 04.4	-0.6
ANWB	Willy Bob	1.62	343	eP	Pn	09 58 43.0	-0.2
ANWB				eS	Sn	09 59 04.1	+0.9
MPOM	Morne Pois Mar	1.71	166	eP	Pn	09 58 44.1	-0.3
SKI	Saint Kitts	1.85	311	eP	Pn	09 58 46.9	+0.5
SKI				eS	Sb	09 59 11.9	-0.3
SLBI	Saint Lucia, B	2.10	172	eP	Pn	09 58 50.0	+0.2
SLBI				eS	Sn	09 59 15.6	+0.5
SEUS	St. Eustatius	2.13	310	eP	Pn	09 58 50.9	+0.7
SEUS				eS	Sn	09 59 16.4	+0.6
SLB	Belfond	2.28	174	eP	Pn	09 58 53.4	+1.0
SLB				eS	Sn	09 59 20.6	+0.8
SABA	Saba	2.40	309	eP	Pn	09 58 54.7	+0.7
SABA				eS	Sn	09 59 23.3	+0.6
MCLT	Moule a Chique	2.41	172	eP	Pn	09 58 54.3	+0.1
MCLT				eS	Sn	09 59 23.9	+1.0
SMRT	St. Maarten	2.58	319	eP	Pn	09 58 56.7	+0.3
SMRT				eS	Sn	09 59 26.9	-0.1
SSV	Crater Summit	2.77	178	eP	Pn	09 59 00.4	+1.3
SSV				eS	Sn	09 59 32.9	+1.1
SVV	Soufriere Volc	2.78	179	eP	Pn	09 59 00.4	+1.2
SVV				eS	Sn	09 59 33.0	+1.1
SVB	Belmont	2.83	179	eP	Pn	09 58 59.9	+0.1
SVB				eS	Sn	09 59 34.0	+0.9
SVCV	St. Vincent, C	2.83	177	eP	Pn	09 59 00.3	+0.5
SVCV				eS	Sn	09 59 32.9	-0.2
BBGH	Gun Hill	3.39	150	eP	Pn	09 59 08.9	+1.3
BBGH				eS	Sn	09 59 48.9	+1.9
BBSP	Saint Philip	3.47	149	eP	Pn	09 59 10.2	+1.5
BBSP				eS	Sn	09 59 50.0	+1.0
GRSS	Sisters	3.81	185	eP	Pn	09 59 14.5	+1.2
GRSS				eS	Sn	09 59 58.1	+0.9
GRHS	Sauteurs	3.88	185	eP	Pn	09 59 15.4	+1.1
GRHS				eS	Sn	09 59 59.3	+0.2
GRGR	Grenville	3.97	185	eP	Pn	09 59 16.6	+1.0
GRGR				eS	Sn	10 00 00.9	-0.5
TOSP	Speyside	4.84	171	eP	Pn	09 59 28.4	+0.9
TOSP	Speyside	4.84	171	eS	Sn	10 00 21.9	-0.9
SJG	San Juan	5.06	294	Pn	Pn	09 59 31.3	+0.8
	11nm,0.3s,baz=93,slow=17,SNR=8.6						
SJG				Sn	Sn	10 00 28.3	+0.1
	7.8nm,0.3s,baz=336,slow=20,SNR=2.4						
TRN	Trinidad (W)	5.43	181	eP	Pn	09 59 36.5	+0.8
TRN	Trinidad (W)	5.43	181	eS	Sn	10 00 35.7	-1.8
PCRV	Puerto La Cruz	6.75	209	Pn	Pn	09 59 55.2	+1.4
	1.7nm,0.3s,baz=30,slow=3.7,SNR=12						
SDV	Santo Domingo	11.61	233	Pn	Pn	10 00 59.9	-0.7
	1.2nm,0.3s,baz=63,slow=8.1,SNR=11						
SIV	San Ignacio	31.90	180	P	P	10 04 41.2	+1.4
	0.7nm,0.4s,baz=15,slow=7.8,SNR=6.4						
PDAR	Pinedale Array	48.88	313	P	P	10 07 00.5	+0.3
	0.5nm,0.5s,baz=119,slow=11,SNR=9.8						
NVAR	Mina Array Bea	54.43	306	P	P	10 07 42.0	+0.2
	0.2nm,0.5s,baz=93,slow=9.0,SNR=2.3						
YKA	Yellowknife Ar	59.28	334	P	P	10 08 15.4	0.0
	0.3nm,0.6s,baz=105,slow=7.5,SNR=3.3						
TORD	Torodi Ar. Bea	60.80	84	P	P	10 08 26.1	-0.6
	0.9nm,0.9s,baz=278,slow=5.7,SNR=2.8						
ILAR	Eielson Array	73.69	334	P	P	10 09 45.5	-2.1
	0.1nm,0.5s,baz=83,slow=4.2,SNR=1.4						

IDC 25 10:00:32.0±4.0, 64.°59N×32.°40E, h0km, mb1 3.2/3, mb1mx3.0/34, mbtmp3.0/3, ML2.3/3, Error ellipse: s-maj=57.2km s-min=11.7km az=99.0
NAO 25 10:00:35.4±0.7, 64.°77N×31.°18E, ML2.3
HEL 25 10:00:36.2±0.1, 64.°74N×30.°76E, h0km, ML2.1, Explosion
BER 25 10:00:37.6±3.7, 64.°73N×30.°75E, h0km, ML2.3(NAO), Suspected explosion
ISC 25 10:00:35.8±0.9, 64.°77N±0.°03×30.°59E±0.°05, h0km, n35, σ1.°83/60, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KU6	Riekki	1.30	347	PG	Pg	10 01 00.1	-0.6
	baz=164						
KU6				MSG		10 01 16.6	
	comp=Z,7.1nm,0.2s						
KU6				SN	Sn	10 01 20.9	+1.6
JOF	Joensuu	1.88	170	PG	Pn	10 01 09.2	+0.1
JOF				SG	Sb	10 01 36.5	+1.5
OUL	Oulu	2.03	281	PB	Pn	10 01 12.8	+1.7
OUL				SG	Sb	10 01 39.6	+0.5
OUF	Merijarvi	2.56	264	PN	Pn	10 01 20.0	+1.5
	baz=84						
OUF				MSG		10 01 53.7	
	comp=Z,21nm,0.2s						
OUF				SB	Sb	10 01 55.4	+0.9
SUF	Sumiainen	2.85	226	PB	Pn	10 01 25.4	+2.9
SUF				MSG		10 02 00.9	
	comp=Z,6.0nm,0.2s						
SUF				SG	Sb	10 02 04.7	+1.9
APA0	Apatity Array	3.02	18	Pn	Pn	10 01 23.8	-0.9
	baz=195,slow=14						
APA0				Sn	Sn	10 02 01.4	-0.1
	baz=207,slow=22						
APA0	Apatity Array	3.02	18	Pn	Pn	10 01 23.8	-0.9
	baz=195,slow=14						
APA0				Sn	Sn	10 02 01.4	-0.1
	baz=207,slow=22						
VRF	Varrio	3.02	353	PN	Pn	10 01 26.2	+1.4
	baz=173						
VRF				MSG		10 02 06.1	
	comp=Z,3.4nm,0.2s						
SGF	Sodankyl	3.16	330	PB	Pb	10 01 31.5	-1.2
	baz=145						
KAF	Kangasniemi	3.29	218	PB	Pb	10 01 34.1	-0.8
KAF				SB	Sb	10 02 14.2	-1.2
KEF	Keuruu	3.66	227	PN	Pn	10 01 36.5	+2.9
VAF	Ylistaro	3.90	247	PN	Pn	10 01 39.6	+2.7
FIA0	FINESS Array S	3.91	214	Pn	Pn	10 01 38.5	+1.5
	baz=35,slow=14						
FIA0				Pg	Pb	10 01 47.0	+1.4
	baz=32,slow=18						
FIA0				Lg	Lg	10 02 39.5	
	baz=22,slow=37						
FIA0	FINESS Array S	3.91	214	PN	Pn	10 01 40.5	+3.4
	baz=27						
FIA0				SG	Sg	10 02 39.8	-1.6
FIA0	FINESS Array S	3.91	214	Pn	Pn	10 01 38.5	+1.5
	baz=35,slow=14						
FIA0				Pg	Pb	10 01 47.0	+1.4
	baz=32,slow=18						
FIA0				Sg	Sg	10 02 39.5	-1.8
	baz=22,slow=37						
FINES	FINESS Array B	3.91	214	Pn	Pn	10 01 36.8	-0.3
	comp=Z,0.1nm,0.3s,baz=37,slow=14,SNR=2.0						
FINES				Pg	Pb	10 01 45.9	+0.3
	comp=Z,0.4nm,0.3s,baz=36,slow=14,SNR=6.6						
FINES				Lg	Lg	10 02 39.1	
	comp=Z,1.5nm,0.3s,baz=26,slow=28,SNR=14						
ERTU	Ertsjaerv	3.92	301	PN	Pn	10 01 40.4	+3.3
BURU	Burvik	3.96	272	SG	Sg	10 02 42.2	-0.8
HEF	Hetta	4.58	326	Pn	Pn	10 01 47.8	+1.6
HEF				Sn	Sn	10 02 41.4	+1.3
HEF				Lg	Lg	10 02 58.2	
HEF	Hetta	4.58	326	SG	Sg	10 02 58.5	-4.4
HEF	Hetta	4.58	326	Pn	Pn	10 01 47.8	+1.6
HEF				Sn	Sn	10 02 41.4	+1.3
ARA0	ARCESS Array S	5.18	340	Pn	Pn	10 01 54.9	+0.4
	baz=152,slow=14						
ARA0				Sn	Sn	10 02 53.3	-1.6
	baz=158,slow=28						
ARA0				Lg	Lg	10 03 16.3	
	baz=160,slow=37						
ARA0	ARCESS Array S	5.18	340	Pn	Pn	10 01 54.9	+0.4
	baz=152,slow=14						
ARA0				Sn	Sn	10 02 53.3	-1.6
	baz=158,slow=28						
ARCES	ARCESS Array B	5.18	340	Pn	Pn	10 01 54.7	+0.2
	comp=Z,0.4nm,0.3s,baz=152,slow=12,SNR=17						
ARCES				Sn	Sn	10 02 57.0	+2.0
	comp=Z,0.5nm,0.3s,baz=158,slow=24,SNR=8.5						
ARCES				Lg	Lg	10 03 16.2	
	comp=Z,0.9nm,0.3s,baz=162,slow=28,SNR=7.9						
KEV	Kevo	5.20	346	Pn	Pn	10 01 54.4	-0.4
KEV				Sn	Sn	10 02 54.0	-1.4
KEV				Lg	Lg	10 03 15.9	
KEV	Kevo	5.20	346	Pn	Pn	10 01 54.4	-0.4
KEV				Sn	Sn	10 02 54.0	-1.4
KEV				Sg	Sb	10 03 15.9	+5.5
KIF	Kilpisjarvi	5.74	322	Pn	Pn	10 02 03.0	+0.9
KIF				Sn	Sn	10 03 10.0	+1.5
KIF	Kilpisjarvi	5.74	322	Pn	Pn	10 02 03.0	+0.9
KIF				Sn	Sn	10 03 10.0	+1.5
HFS	Hagfors	9.09	247	Pn	Pn	10 02 48.4	+0.4
	baz=45,slow=11						
HFS				Sn	Sn	10 04 27.9	-3.0
	baz=46,slow=28						
HFS				Lg	Lg	10 05 20.5	
	baz=52,slow=28						
HFS	Hagfors	9.09	247	Pn	Pn	10 02 48.4	+0.4
	baz=45,slow=11						
HFS				Sn	Sn	10 04 27.9	-3.0
	baz=46,slow=28						
HFS				Sg		10 05 20.5	
	baz=52,slow=28						
NB2	NORSAR Subarra	9.58	256	Pn	Pn	10 02 56.6	+1.8
	baz=66,slow=18						
NB2	NORSAR Subarra	9.58	256	Pn	Pn	10 02 56.6	+1.8
	baz=66,slow=18						
NOA	NORSAR Array B	9.58	256	Pn	Pn	10 02 56.8	+2.0
	comp=Z,0.0nm,0.3s,baz=56,slow=13,SNR=1.9						
NOA				Lg	Lg	10 05 36.7	
	comp=Z,0.0nm,0.3s,baz=126,slow=19,SNR=3.8						
NRA0	NORESS Array S	9.61	254	Pn	Pn	10 02 55.3	+0.1
	baz=56,slow=14						
NRA0	NORESS Array S	9.61	254	Pn	Pn	10 02 55.3	+0.1
	baz=56,slow=14						

IDC 25 10:28:02.3±4.2, 18.°95N×121.°50E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/44, mbtmp3.4/3, Error ellipse: s-maj=349.5km s-min=29.6km az=61.0, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.65	161	P	P	10 35 44.0	-0.5
	0.7nm,0.7s,baz=342,slow=9.1,SNR=7.9						
MKAR	Makanchi Array	42.41	320	P	P	10 35 58.5	-0.1
	0.2nm,0.7s,baz=111,slow=8.0,SNR=2.3						
ASAR	Alice Springs	44.05	164	P	P	10 36 12.6	+0.4
	0.2nm,0.3s,baz=346,slow=8.0,SNR=3.9						

IDC 25 10:30:09.1±63.0, 18.°64S×179.°97E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/30, mbtmp3.9/3, Error ellipse: s-maj=1133.0km s-min=154.0km az=79.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.93	242	P	P	10 37 20.4	+0.5
	1.1nm,0.5s,baz=60,slow=8.1,SNR=4.2						
WRA	Warramunga Arr	42.98	260	P	P	10 38 10.8	+0.3
	0.6nm,0.4s,baz=97,slow=7.7,SNR=22						
ASAR	Alice Springs	43.11	255	P	P	10 38 10.4	-1.0
	0.8nm,0.5s,baz=87,slow=8.0,SNR=16						

ATA 25 10:33:55.3±2.0, 38.°77N×40.°43E, h15km±21km, ML2.1, MW3.2
DDA 25 10:33:56.7, 39.°02N×40.°44E, h5km±2km, ML1.7
ISK 25 10:33:56.6, 39.°05N×40.°51E, h5km, ML2.1/6
ISC 25 10:33:56.9±1.0, 38.°93N±0.°03×40.°50E±0.°02, h7km±9km, n27, σ1.°49/39, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNGB	Bingl	0.15	66	PG	Pg	10 33 59.9	-0.2
BNGB				SG	Sg	10 34 02.5	+0.1
BNGL	BINGOL	0.51	87	eP	Pb	10 34 08.0	-0.2
BNGL				eS	Sb	10 34 16.2	+0.4
BNGL				IAML		10 34 20.0	
	comp=Z,348nm,0.4s						
BNGL	BINGOL	0.51	87	i P	Pb	10 34 07.3	-0.9
BNGL				i S	Sb	10 34 15.9	0.0
YEDI	Yedisu-Bingol	0.51	4	PG	Pg	10 34 04.9	-1.9
HANI	Diyarbakir_Han	0.52	189	i P	Pb	10 34 08.4	0.0
HANI				IAML		10 34 16.0	
	comp=N,38nm,0.5s						
HANI				i S	Sn	10 34 18.0	-1.9
HANI				IAML		10 34 23.0	
	comp=E,40nm,0.4s						
KARO	Karliova-Bingo	0.57	48	PG	Pg	10 34 07.8	-0.2
TNCL	Tunceli-Merkez	0.77	284	eP	Pg	10 34 10.6	-1.2
TNCL				eS	Sg	10 34 21.7	-0.1
TNCL				IAML		10 34 24.2	
	comp=Z,64nm,0.3s						
TNCL	Tunceli-Merkez	0.77	284	i P	Pg	10 34 10.5	-1.3
TNCL				i S	Sg	10 34 21.7	-0.1
TNCL				IAML		10 34 22.0	
	comp=N,106nm,0.2s						
MUSM	Mu-Merkez	0.81	104	eP	Pb	10 34 12.6	-0.9
MUSM				eS	Sb	10 34 24.0	-0.7
MUSM				IAML		10 34 28.0	
	comp=E,16nm,0.2s						
MUSM	Mu-Merkez	0.81	104	i P	Pb	10 34 12.2	-1.2
MUSM				i S	Sn	10 34 24.5	-2.8
MUSM				IAML		10 34 26.0	
	comp=E,15nm,0.2s						
MUSM				IAML		10 34 33.0	
	comp=N,19nm,0.5s						
ERZN	Erzincan	0.89	318	PG	Pg	10 34 13.6	-0.5
SVAN	Silvan-Diyarba	0.95	145	PG	Pn	10 34 17.8	+1.1
SVAN	Silvan-Diyarba	0.95	145	i P	Pb	10 34 17.3	+0.6
SVAN				IAML		10 34 31.0	
	comp=E,19nm,0.4s						
SVAN				IAML		10 34 32.0	
	comp=N,7.7nm,0.3s						
SVAN				i S	Sn	10 34 32.2	+1.8
EMRE	Erzurum,Aziziy	1.16	18	i P	Pb	10 34 17.0	-2.4
GURO	Guroymak-BITLI	1.25	107	PN	Pg	10 34 22.9	+1.9
BAYB	BAYBURT	1.34	352	eP	Pg	10 34 25.8	+3.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
AKDA	Akdag	1.35	29	eP	Pn	10 34 21.3	-1.0
BLIS	Bitlis-Merkez	1.36	112	eP	Pg	10 34 22.2	-0.9
REFA	Refahiye_ERZN	1.43	290	eP	Pg	10 34 27.3	+3.0
KRIK	Erzurum-spir	1.44	13	eP	Pg	10 34 26.5	+1.9
KRIK	Erzurum-spir	1.44	13	iP	Pg	10 34 26.2	+1.6
KRIK				iS	Sg	10 34 47.0	+3.6
KELT	Kelkit	1.55	322	eP	Pb	10 34 25.8	-0.3
HOMI	Horasan	1.56	44	eP	Pb	10 34 25.9	-0.3
HOMI					IAML	10 35 02.5	
	comp=Z,13nm,1.2s						
KEMA	Kemaliye	1.60	283	eP	Pn	10 34 25.6	-0.1
KEMA				eS	Sb	10 34 48.0	+0.8
KEMA					IAML	10 34 51.2	
	comp=N,2.9nm,0.4s						
KEMA	Kemaliye	1.60	283	iP	Pn	10 34 25.3	-0.3
KEMA				iS	Sg	10 34 48.6	+0.3
KEMA					IAML	10 34 49.0	
	comp=N,9.4nm,0.6s						
KEMA					IAML	10 34 52.0	
	comp=E,14nm,0.4s						
AGRB	Hanur-Agry	2.04	71	PN	Pb	10 34 33.6	-0.7
GEVA	Gevas	2.10	106	eP	Pb	10 34 34.8	-0.5

NNC 25 10:39:32.9±4.6,37°.58N×71°.28E,h0km,mb4.2,mpv3.9, Error ellipse: s-maj=44.6km s-min=27.4km az=145.0
ISC 25 10:39:32.6±3.3,37°.2N±0°.2×71°.4E±0°.1,h106km,n15, σ0§77/14,2C-4D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
AML	Almayashu	5.21	19	P	Pn	10 40 49.3	+0.8
	SNR=23						
UCH	Uchtor	5.54	25	P	Pn	10 40 53.6	+0.5
	SNR=6.5						
EKS2	Erkin-Say	5.73	18	P	Pn	10 40 56.2	+0.9
	SNR=7.2						
KK31	Karatay Array	5.90	354	P	Pn	10 40 59.0	+1.5
	3.7nm,0.2s,baz=176,slow=12,SNR=264						
KK31				⇓S	Sn	10 42 03.3	-0.5
	3.0nm,0.3s,baz=167,slow=16,SNR=10						
AAK	Ala-Archa	5.90	23	P	Pn	10 40 58.5	+0.7
	SNR=11						
AAK	Ala-Archa	5.90	23	⇓P	Pn	10 40 58.4	+0.7
	5.1nm,0.4s						
AAK				⇑S	Sn	10 42 04.2	+0.1
	6.6nm,0.7s						
CHMS	Chumysh	6.31	23	P	Pn	10 41 03.6	+0.5
	SNR=6.3						
CHMS	Chumysh	6.31	23	⇓P	Pn	10 41 03.1	0.0
	3.8nm,0.3s						
CHMS				⇑S	Sn	10 42 13.2	-0.6
	6.5nm,0.7s						
USP	Ospenovka	6.48	21	P	Pn	10 41 05.9	+0.5
	SNR=5.2						
DANN	Dangsing	13.66	127	eP	Pn	10 42 30.8	-11
	7.0nm,0.4s						
AB31	Akbulak array	14.60	329	P	Pn	10 42 53.2	-0.6
	0.6nm,0.3s,baz=163,slow=8.6,SNR=58						
GUN	Gumba	15.34	123	eP	Pn	10 42 52.7	-11
	5.9nm,0.4s						
JIRN	Jiri	15.71	123	eP	Pn	10 42 58.1	-10
	11nm,0.3s						
AKTO	Aktyubinsk	16.31	328	⇓P	P	10 43 15.8	-0.4
	2.2nm,0.6s						
RAMN	Ramite	16.46	124	eP	Pn	10 43 07.5	-10
	7.8nm,0.6s						

NIED 25 10:54:00,36°.50N×141°.10E,h41km,Mw3.8 Best double couple: M0 5.37000×10^14 NP1:φs34.00000°,δ78.00000°, λ-67.00000°. NP2:φs151.00000°,δ26.00000°, λ-150.00000°.
IDC 25 10:54:47.7±2.2,36°.40N×141°.15E,h50km±21km,mb3.4/7, mb1 3.6/12,mb1mx3.4/43,mbtmp3.7/12,ML3.6/4,MS2.7/3, Ms1 2.7/3,ms1mx2.5/29,Error ellipse: s-maj=18.1km s-min=11.2km az=74.0
JMA 25 10:54:47.0±0.1,36°.45N×141°.01E,h45km±1km,M3.7 JMA Felt II J1.
ISC 25 10:54:45.2±1.6,36°.42N±0°.04×141°.16E±0°.06,h25km±11km, n27,σ1§16/36,mb3.6/7,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
JHYU	Hitachinakayam	0.47	260	P	Pn	10 54 56.4	+0.1
JHYU				S	Sn	10 55 02.8	-1.0
JHO	Hitachi	0.51	292	P	Pn	10 54 56.5	-0.4
JHO				S	Sb	10 55 03.0	+0.3
JIHU	Itakohorinouch	0.68	229	P	Pn	10 55 00.1	+0.8
ONAJ	Iwakimizuishiy	0.74	337	P	Pn	10 54 59.9	-0.2
ONAJ				S	Sb	10 55 08.9	-0.3
JYT	Yasato	0.80	256	P	Pb	10 55 00.4	-0.1
JYT				S	Sb	10 55 09.8	-1.1
JSMT	Sammumatsuo	0.97	217	P	Pn	10 55 04.0	+0.8
JSMT				S	Sn	10 55 16.0	-0.1
JFK	Kawauchi	0.97	347	P	Pb	10 55 03.1	-0.3
JFT	Otama	1.28	329	P	Pb	10 55 08.4	-0.2
JAG	Ashikaga	1.37	271	P	Pn	10 55 08.4	-0.4
JMM	Marumori	1.47	349	P	Pn	10 55 10.7	+0.6
JMM				S	Sn	10 55 27.9	-0.7
JFY	Yanaizu	1.52	311	P	Pn	10 55 11.2	+0.3
JKT	Katashina	1.57	283	P	Pn	10 55 11.8	+0.2
MJAR	Matsushiro Arr	2.38	274	P	Pn	10 55 23.3	+0.6
	6.8nm,0.3s,baz=114,slow=8.3,SNR=506						
MJAR				S	Sn	10 55 52.8	+1.7
	2.3nm,0.3s,baz=91,slow=12,SNR=4.3						
MJAR				LR	LR	10 56 33.3	
	comp=Z,90nm,19.0s,baz=70,slow=45						
MAT	Matsushiro	2.38	274	P	Pn	10 55 23.4	+0.7
MAT				S	Sb	10 55 54.2	-2.2
JHJ	Hachijo jima 2	3.48	199	P	Pn	10 55 40.0	+2.1
	14nm,0.3s,baz=321,slow=23,SNR=7.6						
JHJ				S	Sn	10 56 18.7	+0.5
	43nm,0.3s,baz=133,slow=23,SNR=7.9						
ASAJ	Asahikawa	7.76	8	P	Pn	10 56 36.8	+0.2
	1.7nm,0.3s,baz=216,slow=10,SNR=5.3						
JNU	Nakatsue	9.07	252	LR	LR	11 00 56.9	
	comp=Z,57nm,18.1s,baz=8.0,slow=41						
JCJ	Chichijima	9.34	174	P	Pn	10 56 56.7	-1.5
	5.9nm,0.3s,baz=325,slow=23,SNR=2.0						
USRK	Ussuriysk Ar.	10.45	321	P	Pn	10 57 16.8	+3.3
	baz=118,slow=10,SNR=4.6						
KSRS	Korea Array	10.64	280	P	Pn	10 57 18.8	+2.7
	0.2nm,0.3s,baz=90,slow=14,SNR=5.5						
KSRS				S	Sn	10 59 14.2	-0.2
	0.5nm,0.3s,baz=267,slow=30,SNR=5.5						
KSRS				LR	LR	11 01 08.7	
	comp=Z,37nm,19.7s,baz=225,slow=36						
SONM	Songino Array	27.96	305	P	P	11 00 33.3	-0.4
	0.5nm,0.4s,baz=105,slow=4.3,SNR=2.5						
ZALV	Zalesovo Beam	42.18	313	P	P	11 02 34.5	-1.1
	0.6nm,0.3s,baz=90,slow=7.4,SNR=6.0						
MKAR	Makanchi Array	44.27	303	P	P	11 02 51.6	-1.0
	0.2nm,0.5s,baz=90,slow=8.3,SNR=5.7						
ILAR	Eielson Array	50.12	32	P	P	11 03 37.8	-0.2
	0.6nm,0.8s,baz=255,slow=7.1,SNR=5.9						
INK	Inuvik	55.02	27	P	P	11 04 14.0	-0.1
	2.1nm,1.2s,baz=300,slow=2.6,SNR=2.3						
WRA	Warramunga Arr	56.43	188	P	P	11 04 24.1	-0.7
	0.3nm,0.6s,baz=4.5,slow=7.4,SNR=1.8						
ASAR	Alice Springs	60.15	188	P	P	11 04 51.3	+0.6
	0.4nm,0.9s,baz=20,slow=12,SNR=1.5						

DNK 25 11:12:15.3±0.8,56°.39N×11°.69E,h0km,ML1.8,Suspected explosion Hypocentre not reviewed by the ISC
UPP 25 11:12:15.2±0.4,56°.43N×11°.68E,h0km,ML2.3, Explosion,Denmark

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
FABU	Falkenberg	0.81	44	P	Pg	11 12 30.6	-0.2
BJUU	Bjuv	0.83	115	P	Pg	11 12 30.7	-0.4
COP	Copenhagen	0.85	150	eP		11 12 30.4	
ONAU	Onsala	0.98	8	P	Pg	11 12 33.4	-0.6
DEL	Delary	1.22	87	P	Pg	11 12 37.6	-0.9
DEL				S	Sg	11 12 53.9	-0.4
BORU	Boraas	1.35	26	P	Pg	11 12 39.9	-1.1
GNOU	Gnosjoe	1.43	52	P	Pn	11 12 41.5	-1.0
GNOU	Gnosjoe	1.43	52	P		11 12 41.5	
TJOU	Tjoern	1.61	359	P	Pn	11 12 44.4	-0.4
VXJU	Vaexsjoe	1.87	73	P	Pn	11 12 48.5	+0.1
VXJU	Vaexsjoe	1.87	73	P		11 12 48.5	
FKPU	Falk	2.06	32	P	Pb	11 12 52.4	-1.1
FKPU	Falk	2.06	32	P		11 12 52.4	
VANU	Vaenersborg	2.08	6	P	Pn	11 12 52.2	+0.9
VANU	Vaenersborg	2.08	6	P		11 12 52.2	
BSD	Bornholm Skovb	2.25	124	iP	Pn	11 12 53.0	-0.6
BSD	Bornholm Skovb	2.25	124	eP		11 12 53.0	
BSD				eS		11 13 23.5	
BSD					IAML	11 13 34.9	
	comp=Z,2.1nm,0.4s						

DNK 25 11:13:12.1±1.2,59°.37N×5°.87E,h0km±15km,ML1.8, Hypocentre not reviewed by the ISC
BER 25 11:13:11.1±1.0,59°.33N×5°.67E,h0km,ML1.4,1C, Suspected explosion,Southern Norway

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
KMY	Karmoy	0.24	243	⇑iP	Pg	11 13 15.4	-0.4
KMY				eS	Sg	11 13 18.9	0.0
KMY					IAML	11 13 21.7	
	comp=Z,83nm,0.6s						
BLS5	Blasjo	0.41	76	eP	Pg	11 13 18.4	-0.6
BLS5				eS	Sg	11 13 24.1	-0.3
BLS5					IAML	11 13 25.4	
	comp=Z,21nm,0.4s						
ODD1	Odda	0.76	39	eP	Pg	11 13 24.6	-1.1
ODD1				eS	Sg	11 13 34.5	-1.2
ODD1					IAML	11 13 37.9	
	comp=Z,14nm,0.9s						
BER	Bergen	1.08	351	eP	Pg	11 13 31.1	-0.5
BER				eS	Sg	11 13 45.2	-0.4
BER					IAML	11 13 47.7	
	comp=Z,15nm,0.2s						
ASK	Askoy	1.19	349	eP	Pg	11 13 31.8	-2.0
ASK				eS	Sg	11 13 47.4	-1.7
ASK					IAML	11 13 49.8	
	comp=Z,12nm,0.2s						
SNART	Snartemo	1.27	140	eP	Pg	11 13 33.7	-1.8
SNART				eS	Sg	11 13 50.7	-1.2
SNART					IAML	11 13 51.0	
	comp=Z,8.4nm,0.5s						
SNART	Snartemo	1.27	140	e		11 13 33.6	
	baz=329,slow=16						
SNART				iP		11 13 34.0	
SNART				iS		11 13 51.0	
SNART					IAML	11 13 51.5	
	comp=Z,5.5nm,0.4s						
SUE	Sulen	1.80	346	eP	Pn	11 13 41.3	-2.0
SUE				eS	Sn	11 14 03.3	-3.5
SUE					IAML	11 14 08.8	
	comp=Z,7.3nm,0.7s						
HOMB	Homborsund	1.82	124	eP	Pn	11 13 41.7	-1.8
HOMB				eS	Sn	11 14 04.1	-3.1
HOMB					IAML	11 14 09.4	
	comp=Z,8.8nm,0.6s						
HOMB	Homborsund	1.82	124	eP		11 13 44.0	
HOMB				iS		11 14 06.8	
HOMB					IAML	11 14 08.0	
	comp=Z,4.4nm,0.4s						
HYA	Hoyanger	1.86	8	eP	Pn	11 13 42.4	-1.9
HYA				eS	Sn	11 14 06.4	-2.1
HYA					IAML	11 14 11.7	
	comp=Z,6.8nm,0.6s						
SKAR	Skarslia	1.90	43	eP	Pn	11 13 42.0	-2.7
SKAR				eS	Sn	11 14 06.2	-3.2
SKAR					IAML	11 14 11.1	
	comp=Z,8.7nm,0.2s						
AKN	Aaknes	2.94	12	eP	Pn	11 13 56.6	-2.4
AKN				eS	Sn	11 14 31.7	-3.2
AKN					IAML	11 14 50.5	
	comp=Z,4.5nm,0.6s						

SJA 25 11:26:00.4±1.0,22°.48S×68°.71W,h106km±5km,ML3.5, MW3.4
GUC 25 11:26:01.0±0.6,22°.50S×68°.73W,h102km±3km,ML3.7
ISC 25 11:26:01.4±1.4,22°.48S±0°.04×68°.75W±0°.04,h107km±9km, n31,σ0§80/59,9C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
LVC	Limon Verde	0.19	229	⇓iP	Pn	11 26 16.1	-0.8
LVC				iS	Sn	11 26 27.3	-1.1
LVC	Limon Verde	0.19	229	iP	Pn	11 26 16.1	-0.8
LVC				eS	Sn	11 26 27.4	-1.0
PB06	IPOC Station P	0.79	254	⇑iP	Pn	11 26 20.3	-0.2
PB06				iS	Sn	11 26 34.9	+0.2
PB06					IAML	11 26 37.5	
	comp=E,1μm,0.2s						
PB06	IPOC Station P	0.79	254	iP	Pn	11 26 20.4	0.0
PB06				eS	Sn	11 26 35.4	+0.6
PB06					IAML	11 26 38.7	
	comp=Z,763nm,0.3s						
PB09	IPOC Station P	0.82	326	⇑iP	Pn	11 26 20.9	+0.1
PB09				iS	Sn	11 26 35.7	+0.4
PB09					IAML	11 26 37.5	
	comp=N,894nm,0.2s						
PB09	IPOC Station P	0.82	326	iP	Pn	11 26 21.1	+0.3
PB09				eS	Sn	11 26 36.2	+0.9
PB09					IAML	11 26 38.5	
	comp=Z,750nm,0.2s						
PB15	IPOC Station P	0.98	222	⇑iP	Pn	11 26 22.4	+0.1
PB15				iS	Sn	11 26 38.2	+0.1
PB15	IPOC Station P	0.98	222	iP	Pn	11 26 22.6	+0.2
PB15				eS	Sn	11 26 39.0	+0.9
PB03	IPOC Station P	1.02	295	⇑iP	Pn	11 26 22.8	0.0
PB03				iS	Sn	11 26 39.3	+0.4
PB03					IAML	11 26 40.0	
	comp=E,5μm,0.2s						
PB03	IPOC Station P	1.02	295	iP	Pn	11 26 22.9	+0.1
PB03				eS	Sn	11 26 39.5	+0.6
PB07	IPOC Station P	1.29	305	⇑iP	Pn	11 26 25.9	+0.1
PB07				iS	Sn	11 26 44.8	+0.6
PB07					IAML	11 26 46.2	
	comp=N,2μm,0.1s						
PB07	IPOC Station P	1.29	305	eP	Pn	11 26 25.9	+0.1
PB07				eS	Sn	11 26 44.9	+0.7
PB04	IPOC Station P	1.30	276	⇑iP	Pn	11 26 25.9	0.0
PB04				iS	Sn	11 26 45.0	+0.7
PB04					IAML	11 26 49.2	
	comp=E,1μm,0.3s						
PB04	IPOC Station P	1.30	276	iP	Pn	11 26 25.9	0.0
PB04				eS	Sn	11 26 45.4	+1.1
PB04					IAML	11 26 48.5	
	comp=Z,779nm,0.1s						
PB05	IPOC Station P	1.39	254	⇑iP	Pn	11 26 26.7	-0.1
PB05				iS	Sn	11 26 46.3	+0.3
PB05	IPOC Station P	1.39	254	iP	Pn	11 26 26.8	0.0
PB05				eS	Sn	11 26 46.8	+0.7
PB02	IPOC Station P	1.57	317	⇑iP	Pn	11 26 29.2	+0.2
PB02				iS	Sn	11 26 50.5	+0.6
PB02	IPOC Station P	1.57	317	iP	Pn	11 26 29.4	+0.3
PB02				eS	Sn	11 26 50.6	+0.6
PB01	IPOC Station P	1.59	334	⇑iP	Pn	11 26 29.2	0.0
PB01				iS	Sn	11 26 50.7	+0.4
PB01					IAML	11 26 52.0	
	comp=N,2μm,0.3s						
PB01	IPOC Station P	1.59	334	eP	Pn	11 26 29.3	+0.1
PB01				eS	Sn	11 26 50.9	+0.6
PB10	IPOC Station P	1.95	238	eP	Pn	11 26 34.4	+0.8
PB10				iS	Sn	11 26 55.9	-2.3
PATCX	Punta Patache	2.10	322	⇓iP	Pn	11 26 35.1	-0.6
PATCX				iS	Sn	11 27 02.1	+0.2
PATCX					IAML	11 27 07.3	
	comp=E,630nm,0.4s						
PATCX	Punta Patache	2.10	322	eP	Pn	11 26 35.1	-0.6
PATCX				eS	Sn	11 27 02.0	+0.1
PB08	IPOC Station P	2.36	351	eP	Pn	11 26 39.6	+0.3
PB08				eS	Sn	11 27 10.5	+2.2
PB11	IPOC Station P	2.84	343	eP	Pn	11 26 44.3	-1.1
PB11				eS	Sn	11 27 19.1	0.0
YJA	Yavi	3.02	85	iP	Pn	11 26 48.3	+0.4
YJA				eS	Sn	11 27 24.7	+1.0
PSGCX	Pisagua	3.14	336	eP	Pn	11 26 47.2	-2.2
PSGCX				eS	Sn	11 27 26.4	-0.8
HJA	Humahuaca	3.17	104	iP	Pn	11 26 50.8	+0.9
HJA				eS	Sn	11 27 27.0	-0.3
MNMCX	Minye Minye	3.43	347	eP	Pn	11 26 52.2	-1.2
MNMCX				eS	Sn	11 27 31.6	-1.8
AZAP	Zapla	3.81	118	iP	Pn	11 26 57.9	-0.5
AHML	Horco Molle	5.29	145	iP	Pn	11 27 18.1	-0.1

IDC 25 11:26:31.9±1.5,2°.14N×123°.32E,h0km,mb3.9/4, mb1 4.0/4,mb1mx3.6/42,mbtmp3.9/4,Error ellipse: s-maj=207.4km s-min=22.3km az=62.0
NEIC 25 11:26:38.1±2.6,1°.3N±0°.1×121°.9E±0°.1,h41km±9km, mb4.0/8,Error ellipse: s-maj=22.7km s-min=12.8km az=49.0
ISC 25 11:26:37.6±1.1,1°.3N±0°.2×121°.8E±0°.1,h35km,n14, σ1§56/16,mb4.1/8,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
TNTI	Ternate	5.58	96	Pn	Pn	11 27 59.9	+1.7
TNTI				Sn	Sn	11 28 59.1	-2.1
FAKI	Fak Fak	11.26	112	Pn	Pn	11 29 18.4	+2.4
KNRA	Kununurra	18.24	158	P	Pn	11 30 48.7	+0.6
WB0	Warramunga Arr	24.33	150	P	P	11 31 51.5	-0.7
WB0				IAmb	IAmb	11 32 08.5	
	comp=Z,9.4nm,1.4s						
WRA	Warramunga Arr	24.45	150	P	P	11 31 52.8	-0.6
	comp=Z,0.9nm,0.4s,baz=329,slow=11,SNR=34						
WB2	Warramunga Arr	24.46	150	P	P	11 31 50.3	-3.2
WB2				IAmb	IAmb	11 31 52.5	
	comp=Z,5.1nm,0.8s						
WB2				PcP	PcP	11 35 30.2	-1.7
WR0	Warramunga Arr	24.57	150	P	P	11 31 50.5	-0.8
WR0				IAmb	IAmb	11 32 16.1	
	comp=Z,7.8nm,1.4s						
AS31	Alice Springs	27.49	155	P	P	11 32 22.0	+1.2
ASAR	Alice Springs	27.49	155	P	P	11 32 21.9	+1.1
	comp=Z,0.5nm,0.5s,baz=339,slow=7.5,SNR=23						
STKA	Stephens Creek	37.98	152	P	P	11 33 51.4	-0.9
	comp=Z,2.3nm,0.7s,baz=334,slow=7.6,SNR=4.7						
STKA	Stephens Creek	37.98	152	P	P	11 33 51.9	-0.4
MK31	Makanchi Array	56.86	329	P	P	11 36 19.5	+0.6
MK31				IAmb	IAmb	11 36 20.5	
	comp=Z,0.8nm,0.9s						
MKAR	Makanchi Array	56.86	329	P	P	11 36 19.2	+0.3
	comp=Z,0.7nm,0.3s,baz=120,slow=8.0,SNR=14						
KURK	Kurchatov	61.24	330	P	P	11 36 48.9	-0.1

JMA 25 11:29:40.5±0.1,40°.35N×142°.08E,h51km±1km,M3.7 JMA Felt I J1.
IDC 25 11:29:41.6±2.2,40°.36N×142°.29E,h75km±18km,mb3.5/7, mb1 3.6/11,mb1mx3.3/41,mbtmp3.8/11,MS2.3/3, Ms1 2.3/3,ms1mx2.2/45,Error ellipse: s-maj=28.1km s-min=13.7km az=105.0
NEIC 25 11:29:41.6±1.2,40°.34N±0°.08×142°.2E±0°.1,h74km±8km, mb4.1/7,Error ellipse: s-maj=16.7km s-min=8.3km az=123.0
ISC 25 11:29:40.4±0.8,40°.35N±0°.04×142°.00E±0°.06,h56km±7km, n39,σ1§39/43,mb4.0/12,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
JKEN	Kujiedanarisaw	0.26	237	P	Pn	11 29 50.0	+0.3
JKEN				S	Sn	11 29 56.4	0.0
JANG	Nango	0.37	274	P	Pn	11 29 51.0	+0.4
JANG				S	Sn	11 29 58.3	+0.3
JTH	Tanohata	0.42	194	P	Pn	11 29 51.2	0.0
JTH				S	Sn	11 29 58.6	-0.3
JKZ	Kuzumaki	0.63	235	P	Pn	11 29 54.4	+0.9
JKZ				S	Sn	11 30 04.0	+0.9
JARK	Aomorirokkasho	0.81	324	P	Pn	11 29 55.8	0.0
JARK				S	Sn	11 30 07.1	0.0
JTM	Tenmabayashi	0.83	302	P	Pn	11 29 56.4	+0.4
JTM				S	Sn	11 30 08.0	+0.5
JOM	Ohasama	1.03	212	P	Pn	11 29 59.5	+0.9
JOM				S	Sn	11 30 12.9	+0.8
JAH	Hinai	1.05	262	P	Pn	11 30 00.0	+1.1
JAH				S	Sn	11 30 14.3	+1.6
JOT	Ohata	1.26	325	P	Pn	11 30 01.7	0.0
JOT				eS	Sn	11 30 17.7	+0.1
JRG	Rokugo	1.42	228	P	Pn	11 30 05.4	+1.6
ERM	Erimo	1.88	27		Pn	11 30 10.9	+0.8
ERM				Sn	Sn	11 30 36.3	+3.6
ASAJ	Asahikawa	3.79	7	P	Pn	11 30 37.3	+1.0
	4.3nm,0.3s,baz=221,slow=9.1,SNR=21						
ASAJ				S	Sn	11 31 20.3	+0.7
	1.7nm,0.3s,baz=137,slow=18,SNR=5.5						
ASAJ				LR	LR	11 32 28.7	
	comp=Z,43nm,20.4s,baz=332,slow=44						
JKA	Kamikawa-asahi	3.79	7		Pn	11 30 37.3	+1.0
JKA					Sn	11 31 20.3	+0.7
MJB9	Matsu-Tunnel	4.82	219		Pn	11 30 53.6	+3.1
MAJO	Matsushiro	4.83	219		Pn	11 30 53.4	+3.0
MJAR	Matsushiro Arr	4.83	219	P	Pn	11 30 53.7	+3.3
	0.1nm,0.3s,baz=30,slow=14,SNR=13						
MJAR				LR	LR	11 32 37.3	
	comp=Z,16nm,20.4s,baz=295,slow=35						
USRK	Ussuriysk Ar.	8.36	301	P	Pn	11 31 42.3	+3.5
	baz=88,slow=14,SNR=6.7						
KSRS	Korea Array	11.34	260	P	Pn	11 32 26.2	+6.6
	baz=58,slow=15,SNR=3.2						
KSRS				LR	LR	11 36 51.1	
	comp=Z,22nm,18.6s,baz=308,slow=37						
H11N2	WAKE ISLAND Hy	29.61	127	T	T	12 06 33.1	
	baz=318,slow=75,SNR=110						
H11N1	WAKE ISLAND Hy	29.62	127	T	T	12 06 33.8	
	baz=318,slow=75,SNR=95						
H11N3	WAKE ISLAND Hy	29.62	127	T	T	12 06 32.7	
	baz=318,slow=75,SNR=62						
H11S1	WAKE ISLAND Hy	30.42	128	T	T	12 07 38.6	
	baz=321,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	30.42	128	T	T	12 07 37.5	
	baz=321,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	30.44	128	T	T	12 07 38.6	
	baz=321,slow=76,SNR=11.0						
ZAA0	Zalesovo Array	40.09	310	P	P	11 37 10.4	+0.3
ZAA0				IAmb	IAmb	11 37 11.0	
	comp=Z,1.7nm,0.6s						
ZALV	Zalesovo Beam	40.09	310	P	P	11 37 10.6	+0.4
	comp=Z,1.4nm,0.4s,baz=93,slow=8.8,SNR=7.2						
MK31	Makanchi Array	42.82	299	P	P	11 37 33.0	+0.3
MKAR	Makanchi Array	42.82	299	P	P	11 37 33.1	+0.5
	comp=Z,0.8nm,0.6s,baz=86,slow=9.6,SNR=9.3						
CMAR	Chiang Mai Arr	42.86	252	LR	LR	11 57 48.1	
	comp=Z,63nm,18.1s,baz=89,slow=39						
MAKZ	Makanchi	43.03	299	P	P	11 37 33.8	-0.5
MAKZ				IAmb	IAmb	11 37 36.2	
	comp=Z,4.8nm,1.5s						
KURK	Kurchatov	44.31	306	P	P	11 37 45.4	+0.9
KURK				IAmb	IAmb	11 37 46.0	
	comp=Z,2.7nm,0.8s						
INK	Inuvik	51.24	28	P	P	11 38 37.1	-0.8
	comp=Z,2.0nm,1.2s,baz=302,slow=8.5,SNR=4.0						
INK	Inuvik	51.24	28	P	P	11 38 37.5	-0.4
ABKAR	Akbulak array	56.19	309	P	P	11 39 14.2	-0.2
ABKAR				IAmb	IAmb	11 39 17.1	
	comp=Z,1.9nm,1.1s						
WRA	Warramunga Arr	60.40	188	P	P	11 39 42.7	-1.3
	comp=Z,0.2nm,0.5s,baz=5.4,slow=6.9,SNR=3.7						
ASAR	Alice Springs	64.13	188	P	P	11 40 08.2	-0.7
	comp=Z,0.6nm,0.9s,baz=349,slow=5.7,SNR=4.1						
FINES	FINESS Array B	66.10	332	P	P	11 40 21.0	-0.3
	comp=Z,3.3nm,1.1s,baz=20,slow=4.4,SNR=5.3						
AKASG	Malin Array Be	71.96	322	P	P	11 40 57.6	-0.1
	comp=Z,0.2nm,0.3s,baz=41,slow=6.4,SNR=4.8						
WUAZ	Wupatki	78.78	53	P	P	11 41 35.8	-1.6
WUAZ				IAmb	IAmb	11 41 36.3	
	comp=Z,1.9nm,0.7s						

BJI 25 11:44:13.3±0.0,13°.53N×120°.92E,h140km,mB4.8/36, mb4.7/57
IDC 25 11:44:16.4±0.4,13°.69N×120°.89E,h143km±2km,mb4.0/23, mb1 4.0/24,mb1mx3.9/54,mbtmp4.4/24,MS3.5/6, Ms1 3.5/6,ms1mx3.1/51,Error ellipse: s-maj=16.7km s-min=9.4km az=70.0
MAN 25 11:44:16.5,13°.65N×120°.59E,h126km,MS4.5
MAN INTENSITY II - LOOC AND LUBANG OCCIDENTAL MINDORO.
DJA 25 11:44:17.8±0.8,14°N±7°×12°1E±1°0,h194km±12km, M4.5/9,mb4.2/9,mB4.8/3,MLv4.8/1,Mw(mB)4.1/3
NEIC 25 11:44:17±1.6,13°.65N±0°.07×120°.80E±0°.10,h148km±4km, mb4.5/71,Error ellipse: s-maj=14.0km s-min=9.7km az=97.0
GCMT 25 11:44:18.0±0.4,13°.73N±0°.03×120°.77E±0°.04,

h139km±4km, MW4.8/78, Moment Tensor Solution. s17,c17; s78,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.81±.08; $M_{\theta\theta}$-0.17±.12; $M_{\phi\phi}$-1.63±.16; $M_{r\theta}$-0.03±.07; $M_{r\phi}$1.14±.08; $M_{\theta\phi}$0.81±.10; Best double couple: $M_0$2.19700×10^{16} NP1:ϕ_s138.00000°, δ37.00000°, λ69.00000°. NP2:ϕ_s343.00000°, δ56.00000°, λ105.00000°. Principal axes: T 2.0150, Plg74.0000°, Azm295.0000°; N 0.3720, Plg12.0000°, Azm155.0000°; P -2.3800, Plg10.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 25 11:44:16.4±0.5, 13.70N±0.03×120.67E±0.04, h137km±4km, n172, σ1.55/196, mb4.5/66, 5C-5D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.34	125	⇑eP	Pn	11 44 35.8	+0.3
PGP				eS	Sn	11 44 50.1	+0.2
LUBP	Lubang	0.41	275	eP	Pn	11 44 33.0	-2.7
LUBP				eS	Sn	11 44 49.8	-0.5
TGY	Tagaytay City	0.48	33	P	Pn	11 44 38.0	+1.8
	6µm,0.3s,baz=230,slow=2.4,SNR=362						
TGY				S	Sn	11 44 53.5	+2.3
	1µm,0.3s,baz=127,slow=20,SNR=20						
TGY	Tagaytay City	0.48	33	⇓eP	Pn	11 44 38.0	+1.8
LQP	Lukban	0.94	64	⇑iP	Pn	11 44 41.1	+1.5
LQP				iS	Sn	11 45 00.2	+3.0
BOAC	Boac	1.17	102	eP	Pn	11 44 41.5	0.0
BOAC				eS	Sn	11 45 03.1	+2.6
POLP	Polilio Island	1.60	50	eP	Pn	11 44 47.9	+1.8
POLP				eS	Sn	11 45 11.3	+2.5
GQP	Guinayangan	1.74	83	⇑iP	Pn	11 44 49.0	+1.4
GQP				iS	Sn	11 45 13.5	+1.9
BUSP	Coron	1.75	195	eP	Pn	11 44 47.6	-0.1
BUSP				eS	Sn	11 45 11.4	-0.3
OTRP	Odiongan	1.87	135	eP	Pn	11 44 48.6	-0.6
OTRP				eS	Sn	11 45 13.6	-0.7
PCPH	Palayan	1.90	13	⇓eP	Pn	11 44 50.1	+0.7
BALP	Baler	2.21	23	eP	Pn	11 44 54.5	+1.2
BALP				eS	Sn	11 45 23.8	+2.1
SMPP	San Manuel, Pa	2.44	0	eP	Pn	11 44 55.6	-0.5
ENPP	El Nido	2.76	206	eP	Pn	11 45 00.2	+0.1
ENPP				eS	Sn	11 45 39.1	+5.3
BOLP	Bolinao	2.77	345	eP	Pn	11 45 00.6	+0.4
BOLP				eS	Sn	11 45 35.2	+1.2
CUYO	Cuyo Island	2.85	173	eP	Pn	11 45 01.3	-0.1
CUYO				eS	Sn	11 45 42.8	+6.8
RCP	Roxas	2.94	136	⇓eP	Pn	11 45 03.9	+1.5
PVCP	Virac	3.39	91	eP	Pn	11 45 09.1	+0.8
CAUP	Cauayan	3.42	19	eP	Pn	11 45 09.8	+1.2
GUIM	Jordan	3.58	148	eP	Pn	11 45 12.5	+1.6
GUIM				eS	Sn	11 45 57.2	+4.1
APYP	Conner	4.18	8	eP	Pn	11 45 19.6	+1.0
APYP				eS	Sn	11 46 10.7	+3.7
SIPP	Brgy, Tapao	4.21	357	⇓eP	Pn	11 45 22.8	+3.8
SIPP				eS	Sn	11 45 46.3	-21
BATP	Bataraza	5.62	210	eP	Pn	11 45 38.6	+0.7
BATP				eS	Sn	11 46 41.7	+0.1
KKM	Kota Kinabalu	8.78	210	Pn	Pn	11 46 20.7	+0.3
KKM				Sn	Sn	11 47 59.3	+1.5
TWG	Pinlang	9.08	2	Pn	Pn	11 46 24.2	-0.1
YULB	Yu-li	9.66	3	Pn	Pn	11 46 30.2	-1.9
YHNB	Yeheng	10.94	3	Pn	Pn	11 46 50.9	+1.8
UBPT	Khong Chiam	14.80	278		P	11 47 40.7	-0.6
WHN	Wuhan	17.75	342	⇓P	Pn	11 48 16.5	+1.6
WHN				sP	sP	11 48 51.5	-3.8
WHN				S	Sn	11 51 36.0	+2.3
NJ2	Nanjing	18.34	355	eP	P	11 48 20.8	+0.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KAPI	Kappang	18.61	183	P	P	11 48 23.9	+0.6
	2.2nm,0.3s,baz=6.3,slow=5.8,SNR=9.1						
PBKT	Sadao Pong	19.23	281	P	Pn	11 48 31.5	-1.0
PBKT				IAmb	IAmb	11 48 34.2	
	comp=Z,41nm,1.3s						
ENH	Enshi	19.46	330	P	P	11 48 33.7	+1.2
ENH				IAmb	IAmb	11 48 34.9	
	comp=Z,28nm,1.1s						
KMI	Kunming	20.34	307	P	P	11 48 44.0	+1.7
KMI				pP	pwP	11 49 09.8	+0.3
KMI				sP	sP	11 49 31.5	+8.4
KMI				pmax	pmax		
	comp=Z,20nm,1.4s						
KMI				pmax	pmax		
	comp=Z,110nm,3.1s						
CM31	Chiang Mai Arr	21.40	286	P	P	11 48 54.6	+1.2
CMAR	Chiang Mai Arr	21.40	286	P	P	11 48 55.7	+2.3
	comp=Z,15nm,0.8s,baz=95,slow=7.4,SNR=97						
CMAR				PcP	PcP	11 52 52.8	+0.9
	comp=Z,0.8nm,0.5s,baz=147,slow=1.8,SNR=4.3						
KULM	Kulim	21.42	249	P	P	11 48 54.7	+1.0
CHTO	Chiang Mai	21.46	287	P	P	11 48 54.2	+0.2
CHTO				IAmb	IAmb	11 48 57.8	
	comp=Z,17nm,0.9s						
EDFI	Ende, Flores	22.32	177	P	P	11 49 02.6	-0.5
	comp=Z,405nmcomp=Z,28nm,0.7s						
XAN	Xi'an	22.89	334	P	P	11 49 08.0	-0.3
XAN				S	S	11 53 03.5	-4.2
XAN				pmax	pmax		
	comp=Z,27nm,0.9s						
XAN				LR	LR		
	comp=Z,150nm,15.5s						
XAN				LR	LR		
	comp=Z,180nm,13.0s						
XAN	Xi'an	22.89	334	P	P	11 49 08.0	-0.3
XAN				IAmb	IAmb	11 49 09.2	
	comp=Z,22nm,0.9s						
JAGI	Jajag, Banyuwa	22.95	197	P	P	11 49 10.1	+1.1
JAGI				IAmb	IAmb	11 49 15.8	
	comp=Z,36nm,1.3s						
CD2	Chengdu	23.14	321	P	P	11 49 11.0	+0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PSI	Prapat	24.06	245	P	P	11 49 20.8	+1.5
	comp=Z,6.0nm,0.6s,baz=32,slow=6.6,SNR=5.5						
RPSI	Rantau Prapat	24.11	245	P	P	11 49 20.8	+1.2
RPSI	Rantau Prapat	24.11	245	P	P	11 49 20.6	+1.0
RPSI				IAmb	IAmb	11 49 23.6	
	comp=Z,18nm,1.2s						
KLSI		24.16	222	P	P	11 49 21.8	+1.7
	comp=Z,9.6nm,0.6s						
KSRS	Korea Array	24.53	14	P	P	11 49 23.1	-0.1
	comp=Z,2.0nm,0.9s,baz=196,slow=11,SNR=11						
CISI	Cisompet, Garu	24.67	212	P	P	11 49 25.5	+0.8
CISI				IAmb	IAmb	11 49 32.5	
	comp=Z,23nm,1.0s						
KRJI	Kerinci	24.67	232	P	P	11 49 17.3	-7.5
KCSI	Kotacane, Aceh	24.76	248	P	P	11 49 25.0	-0.6
LHMI	Lhok Sumawe	24.84	252	P	P	11 49 26.1	-0.1
LZH	Lanzhou	26.93	329	⇑P	P	11 49 46.8	+1.7
LZH				pP	pP	11 50 16.0	+2.3
LZH				sP	sP	11 50 32.5	+3.0
LZH				PP	PnPn	11 50 39.8	+4.0
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
LZH				pmax	pmax		
	comp=Z,85nm,4.9s						
MTN	Manton Dam	28.34	158	P	P	11 49 55.8	-1.8
MTN				IAmb	IAmb	11 50 12.6	
	comp=Z,16nm,1.1s						
BRDH	Bariadhala	28.94	292	LR	LR	12 02 42.2	
	comp=Z,62nm,19.0s,baz=124,slow=38						
SHL	Shillong	29.50	298	P	P	11 50 08.7	+0.7
CN2	Changchun	30.28	7	eP	P	11 50 17.0	+2.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GTA	Gaotai	31.52	328	⇑P	P	11 50 26.8	+1.1
GTA				pmax	pmax		
	comp=Z,25nm,1.0s						
GTA				pmax	pmax		
	comp=Z,100nm,4.3s						
GTA				LR	LR		
	comp=Z,100nm,16.8s						
GTA				LR	LR		
	comp=Z,100nm,17.8s						
GTA				LR	LR		
	comp=Z,89nm,19.0s						
LSA	Lhasa	31.58	305	P	P	11 50 28.5	+1.8
LSA				pmax	pmax		
	comp=Z,87nm,1.1s						
LSA	Lhasa	31.58	305	P	P	11 50 28.9	+2.1
MDJ	Mudanjiang	31.74	12	P	P	11 50 26.8	-0.5
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,120nm,5.0s						
USRK	Ussuriysk Ar.	31.91	15	LR	LR	12 04 36.0	
	comp=Z,52nm,18.2s,baz=101,slow=38						
FITZ	Fitzroy Crossi	31.97	171	P	P	11 50 28.5	-1.1
TAPN	Taplejung	33.60	299	eP	P	11 50 45.1	+1.0
ODAN	Odare	33.73	298	eP	P	11 50 46.1	+0.9
	comp=Z,105nm,0.9s						
RAMN	Ramite	34.44	298	eP	P	11 50 52.2	+0.9
	comp=Z,50nm,0.7s						
JIRN	Jiri	34.98	299	eP	P	11 50 56.9	+0.8
	comp=Z,118nm,0.4s						
PSA00	Pilbara Seismi	35.06	181	P	P	11 50 55.2	-1.1
GUN	Gumba	35.32	299	eP	P	11 50 59.6	+0.6
	comp=Z,70nm,0.4s						
COEN	Coen	35.38	140	P	P	11 50 57.6	-1.5
COEN				IAmb	IAmb	11 50 59.2	
	comp=Z,8.2nm,1.3s						
PKI	Pulchoki	35.62	298	eP	P	11 51 01.7	+0.1
	comp=Z,31nm,0.5s						
PKIN	Phulchoki	35.64	298	eP	P	11 51 02.0	+0.4
	comp=Z,28nm,0.4s						
KKN	Kakani	35.79	299	eP	P	11 51 03.0	+0.1
	comp=Z,16nm,0.4s						
DMN	Daman	35.89	298	eP	P	11 51 04.0	+0.2
WB0	Warramunga Arr	35.89	158	P	P	11 51 01.0	-2.5
WB0				IAmb	IAmb	11 51 04.0	
	comp=Z,8.8nm,1.4s						
ULN	Ulaanbaatar	35.90	344	P	P	11 51 03.6	+0.2
WRA	Warramunga Arr	36.03	158	P	P	11 51 02.6	-2.1
	comp=Z,1.4nm,0.5s,baz=336,slow=9.4,SNR=32						
WB2	Warramunga Arr	36.04	158	P	P	11 51 02.3	-2.5
SONM	Songino Array	36.05	344	P	P	11 51 04.4	-0.3
	comp=Z,2.8nm,0.6s,baz=156,slow=10,SNR=7.7						
SONM				PcP	PcP	11 53 27.2	-0.8
	comp=Z,0.5nm,0.5s,baz=167,slow=4.1,SNR=2.4						
WR0	Warramunga Arr	36.12	158	P	P	11 51 02.8	-2.7
WR0				IAmb	IAmb	11 51 17.7	
	comp=Z,11nm,1.5s						
GKN	Gorkha	36.40	299	eP	P	11 51 08.4	+0.4
	comp=Z,26nm,0.3s						
KLR	Kul'dur	36.59	12	LR	LR	12 07 30.9	
	comp=Z,90nm,18.5s,baz=170,slow=38						
DANN	Dangsing	37.24	299	eP	P	11 51 15.3	+0.1
	comp=Z,26nm,0.3s						
AS31	Alice Springs	39.33	161	P	P	11 51 30.4	-2.0
ASAR	Alice Springs	39.33	161	P	P	11 51 30.7	-1.7
	comp=Z,1.7nm,0.3s,baz=334,slow=7.5,SNR=78						
ASAR				PcP	PcP	11 53 37.6	-0.8
	comp=Z,0.4nm,0.4s,baz=340,slow=3.1,SNR=4.2						
TLY	Talaya	40.29	344	LR	LR	12 11 11.4	
	comp=Z,39nm,18.0s,baz=144,slow=40						
TLY	Talaya	40.29	344	P	P	11 51 39.9	-0.2
WMQ	Urumqi	41.19	323	eP	P	11 51 49.0	+1.4
WMQ				pmax	pmax		
	comp=Z,11nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.7s						
MORW	Morawa	42.75	186	P	P	11 51 59.5	-0.7
MORW				IAmb	IAmb	11 52 18.6	
	comp=Z,9.2nm,1.0s						
FORT	Forrest	44.79	171	P	P	11 52 14.1	-2.4
FORT				IAmb	IAmb	11 52 16.6	
	comp=Z,11nm,0.7s						
MK31	Makanchi Array	46.01	324	P	P	11 52 26.6	+0.5
MK31				IAmb	IAmb	11 52 28.1	
	comp=Z,9.0nm,0.9s						
MKAR	Makanchi Array	46.01	324	P	P	11 52 27.0	+0.9
	comp=Z,2.3nm,0.3s,baz=123,slow=8.8,SNR=33						
MKAR				PcP	PcP	11 53 59.1	-1.3
	comp=Z,0.3nm,0.4s,baz=126,slow=2.0,SNR=1.8						
MAKZ	Makanchi	46.20	323	P	P	11 52 28.6	+1.0
MAKZ				IAmb	IAmb	11 52 29.7	
	comp=Z,23nm,1.4s						
NWAO	Narrogin (SRO)	46.48	184	P	P	11 52 28.8	-0.9
NWAO				IAmb	IAmb	11 52 29.7	
	comp=Z,18nm,1.3s						
KSH	Kashi	46.88	312	P	P	11 52 36.3	+3.2
KSH				sP	sP	11 53 23.5	+4.8
KSH				PcP	PcP	11 54 04.8	+1.0
KSH				PP	PP	11 54 28.0	+3.2
KSH				S	S	11 59 16.3	+2.6
KSH				sS	sS	12 00 13.8	+6.6
KSH				ScS	ScS	12 02 11.5	-2.3
KSH				pmax	pmax		
	comp=Z,16nm,1.2s						
KSH				pmax	pmax		
	comp=Z,100nm,7.3s						
KSH				LR	LR		
	comp=Z,78nm,6.7s						
KSH				LR	LR		
	comp=Z,210nm,5.2s						
KSH				LR	LR		
	comp=Z,500nm,5.7s						
NIL	Nilore	47.28	303	P	P	11 52 34.8	-1.4
ULHL	Ulahol	47.70	315	P	P	11 52 41.3	+1.7
	SNR=9.5						
KZA	Kyzart	48.32	315	P	P	11 52 46.6	+2.1
	SNR=9.1						
BBOO	Buckleboo	48.53	163	P	P	11 52 43.5	-2.2
BBOO				IAmb	IAmb	11 52 57.5	
	comp=Z,10nm,1.1s						
KBK	Karagaybulak	48.74	315	P	P	11 52 49.4	+1.9
	SNR=11						
UCH	Uchtor	48.88	315	P	P	11 52 51.0	+2.1
	SNR=15						
CHMS	Chumysh	49.01	316	P	P	11 52 50.3	+1.0
	SNR=5.9						
PETK	Petropavlovsk-	49.04	29	P	P	11 52 48.5	-0.9
	comp=Z,3.0nm,1.0s,baz=202,slow=11,SNR=3.6						
PETK				PcP	PcP	11 54 09.9	-1.1
	comp=Z,3.0nm,0.9s,baz=221,slow=5.7,SNR=4.2						
ZAA0	Zalesovo Array	49.04	333	P	P	11 52 49.1	-0.2
ZAA0				IAmb	IAmb	11 52 50.1	
	comp=Z,14nm,1.2s						
ZALV	Zalesovo Beam	49.04	333	P	P	11 52 49.3	0.0
	comp=Z,4.9nm,0.3s,baz=120,slow=6.4,SNR=32						
AAK	Ala-Archa	49.05	315	P	P	11 52 51.5	+1.7
AAK				IAmb	IAmb	11 52 52.4	
	comp=Z,9.6nm,1.2s						
USP	Ospenovka	49.28	316	P	P	11 52 52.6	+1.3
	SNR=7.1						
AML	Almayashu	49.41	314	P	P	11 52 54.6	+1.8
	SNR=13						
EKS2	Erkin-Say	49.55	315	P	P	11 52 55.2	+1.7
	SNR=8.8						
STKA	Stephens Creek	49.56	156	P	P	11 52 51.4	-2.2
	comp=Z,1.1nm,0.4s,baz=333,slow=8.1,SNR=6.4						
STKA	Stephens Creek	49.56	156	P	P	11 52 51.1	-2.4
KURBB	Kurchatov Arra	50.17	326	P	P	11 52 58.8	+0.9
	comp=Z,25nm,1.0s,baz=105,slow=11,SNR=63						
KURK	Kurchatov	50.17	326	P	P	11 52 59.0	+1.1
KK31	Karatay Array	51.95	314	P	P	11 53 11.4	0.0
KK31				IAmb	IAmb	11 53 13.0	
	comp=Z,16nm,1.2s						
KKAR	Karatay Array	51.95	314	P	P	11 53 12.2	+0.8
KKAR				IAmb	IAmb	11 53 13.0	
	comp=Z,16nm,1.2s						
BVAR	Borovoye Array	55.76	326	P	P	11 53 39.4	+0.6
	comp=Z,1.1nm,0.3s,baz=70,slow=7.8,SNR=16						
BRVK	Borovoye	55.83	326	P	P	11 53 40.6	+1.3
TIXI	Tiksi	58.14	3	P	P	11 53 54.9	-0.3
NRIK	Noril'sk	59.41	347	P	P	11 54 03.9	-0.2
	comp=Z,2.9nm,0.3s,baz=144,slow=7.3,SNR=7.8						
GEYT	Alibeck	60.11	306	P	P	11 54 10.8	+1.2
	comp=Z,6.8nm,0.8s,baz=131,slow=4.1,SNR=15						
GYA0B	ALIBECK ARRAY	60.11	306	P	P	11 54 10.5	+1.0
ABKAR	Akbulak array	60.71	319	P	P	11 54 13.1	-0.3
BILL	Bilibino	61.72	18	P	P	11 54 19.9	+0.1
BILL				IAmb	IAmb	11 54 20.6	
	comp=Z,11nm,1.2s						
AKTO	Aktyubinsk	62.20	320	P	P	11 54 22.6	-0.8
	comp=Z,6.0nm,1.0s,baz=99,slow=6.9,SNR=10						
ARU	Arti	63.37	327	P	P	11 54 30.5	-0.5
	comp=Z,1.5nm,0.3s,baz=76,slow=7.5,SNR=5.1						
ARU	Arti	63.37	327	P	P	11 54 30.8	-0.1
ARU				IAmb	IAmb	11 54 31.3	
	comp=Z,15nm,1.3s						
SOCY	Socotra	64.81	277	P	P	11 54 40.5	-0.7
RAYN	Ar Rayn	71.23	290	P	P	11 55 21.0	-0.1
KBZ	Khabaz	71.86	312	P	P	11 55 24.4	-0.1
	comp=Z,3.3nm,0.9s,baz=92,slow=16,SNR=3.5						
SKT	Skwentna	77.00	29	P	P	11 55 53.9	0.0
SKT				IAmb	IAmb	11 55 54.0	
	comp=Z,16nm,1.5s						
BPAW	Bear Paw Mtn.	77.07	27	P	P	11 55 53.9	-0.4
BPAW				IAmb	IAmb	11 55 54.9	
	comp=Z,7.2nm,1.1s						
MLY	Manley	77.11	26	P	P	11 55 54.4	-0.1
COLD	Coldfoot	77.15	24	P	P	11 55 55.0	+0.4
TRF	Thorofare Moun	77.44	27	P	P	11 55 56.7	+0.2
RC01	Rabbit Creek A	77.94	30	P	P	11 55 58.7	-0.4
RC01				IAmb	IAmb	11 56 02.3	
	comp=Z,9.5nm,1.1s						
MCK	McKinley	78.01	27	P	P	11 55 59.5	0.0
MCK				IAmb	IAmb	11 55 59.8	
	comp=Z,16nm,1.4s						
RND	Reindeer	78.09	27	P	P	11 55 59.8	-0.2
RND				IAmb	IAmb	11 56 01.7	
	comp=Z,11nm,1.4s						
PMR	Palmer	78.17	29	P	P	11 55 59.8	-0.6
PMR				IAmb	IAmb	11 56 11.4	
	comp=Z,15nm,1.4s						
SEW	Seward	78.19	31	P	P	11 56 00.4	-0.1
GHO	Glory Hole Cre	78.25	29	P	P	11 56 00.8	-0.1
GHO				IAmb	IAmb	11 56 12.5	
	comp=Z,8.3nm,1.2s						
WRH	Wood River Hil	78.29	26	P	P	11 56 01.0	0.0
CCB	Clear Creek Bu	78.39	26	P	P	11 56 00.6	-0.9
KNK	Knik Glacier	78.51	29	P	P	11 56 02.2	-0.1
KNK				IAmb	IAmb	11 56 13.8	
	comp=Z,20nm,1.4s						
KEV	Kevo	78.52	339	P	P	11 56 01.9	-0.2
IL31		78.77	26	P	P	11 56 01.9	-1.6
ILAR	Eielson Array	78.77	26	P	P	11 56 01.8	-1.8
	comp=Z,0.2nm,0.4s,baz=270,slow=4.3,SNR=10						
DHY	Denali Highway	78.79	28	P	P	11 56 03.8	-0.2
DHY				IAmb	IAmb	11 56 22.3	
	comp=Z,9.7nm,1.3s						
SCM	Sheep Creek Mo	78.99	29	P	P	11 56 04.7	-0.3
ARCES	ARCESS Array B	79.08	339	P	P	11 56 04.8	-0.4
	comp=Z,1.4nm,0.4s,baz=77,slow=6.6,SNR=24						
ARE0	ARCESS Array S	79.08	339	eP	P	11 56 04.7	-0.5
ARE0	ARCESS Array S	79.08	339	P	P	11 56 05.0	-0.1
HAMF	Hammerfest	79.49	340	eP	P	11 56 06.6	-0.8
SPA0	Spitsbergen Ar	79.59	348	eP	P	11 56 07.2	-0.6
SPA0	Spitsbergen Ar	79.59	348	P	P	11 56 07.9	+0.1
SPITS	Spitsbergen Ar	79.59	348	P	P	11 56 07.4	-0.5
	comp=Z,1.6nm,0.3s,baz=119,slow=8.7,SNR=23						
KTK1	Kautokeino	79.97	339	eP	P	11 56 09.6	-0.4
SCRK	Sand Creek	80.14	26	P	P	11 56 10.8	-0.4
BARN	Barnard Glacie	81.81	29	P	P	11 56 19.9	-0.3
BARN				IAmb	IAmb	11 56 22.3	
	comp=Z,16nm,1.5s						
CTGM	Chitina Glacie	81.99	29	P	P	11 56 21.6	+0.6
CTGM				IAmb	IAmb	11 56 28.0	
	comp=Z,15nm,1.4s						
DAWY	Dawson	82.09	26	P	P	11 56 22.3	+0.8
EPYK	Eagle Plains	82.54	23	P	P	11 56 23.9	+0.2
EPYK				IAmb	IAmb	11 56 24.2	
	comp=Z,12nm,1.4s						
STEI	Steigen	83.10	338	eP	P	11 56 24.6	-1.8
INK	Inuvik	83.11	21	P	P	11 56 25.9	-0.6
INK				IAmb	IAmb	11 56 26.9	
	comp=Z,11nm,1.4s						
BUR08	Bucovina Ar. S	83.64	317	P	P	11 56 30.8	+1.0
MOR8	Moi Rana	83.99	337	eP	P	11 56 28.5	-2.6
NSS	Namsos	85.56	336	eP	P	11 56 37.6	-1.3
HFS	Hagfors	86.46	331	P	P	11 56 42.2	-1.3
	comp=Z,2.3nm,0.3s,baz=132,slow=3.4,SNR=23						
NOA	NORSAR Array B	87.25	333	P	P	11 56 45.6	-1.8
	comp=Z,1.6nm,0.9s,baz=67,slow=4.7,SNR=3.7						
NOA				LR	LR	12 39 18.2	
	comp=Z,38nm,18.8s,baz=10.0,slow=38						
YKA	Yellowknife Ar	92.79	22	P	P	11 57 12.7	-0.4
	comp=Z,0.8nm,0.4s,baz=308,slow=4.6,SNR=18						
YKA				LR	LR	12 42 23.6	
	comp=Z,25nm,19.3s,baz=0.0,slow=38						
TORD	Torodi Ar. Bea	113.92	291	PKP	PKiKP	12 02 39.5	-0.5
	comp=Z,0.3nm,0.4s,baz=59,slow=2.6,SNR=4.2						
TXAR	Lajitas Array	119.50	45	PKP	PKPdf	12 02 50.5	-0.1
	comp=Z,0.4nm,0.3s,baz=208,slow=0.9,SNR=25						
PLCA	Paso Flores	151.33	162	PKPbc	PKPbc	12 03 54.5	+0.2
	comp=Z,0.8nm,0.4s,baz=263,slow=0.8,SNR=13						

ATH 25 11:50:06.0, 38.22N×20.40E, h14km±1km, ML2.9/3, Error ellipse: s-maj=2.2km s-min=1.1km az=261.0
THE 25 11:50:06.0, 38.21N×20.37E, h9km±2km, ML2.1/6, Error ellipse: s-maj=2.3km s-min=0.9km az=217.0
ISC 25 11:50:06.6±1.1, 38.22N±0.03×20.43E±0.05, h11km±5km, n22, σ0.61/41, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXRA	Lixouri, Kepha	0.02	171	P	Pg	11 50 08.5	-0.1
LXRA				S	Sg	11 50 10.5	+0.4
KEF4	Livadi, Kephal	0.04	350	P	Pg	11 50 08.6	-0.2
KEF4				S	Sg	11 50 10.4	+0.1
AGT1	Agia Thekli	0.05	305	P	Pg	11 50 08.6	-0.2
ARGA	Argostoli. Kep	0.06	142	P	Pg	11 50 08.6	-0.3
ARGA				S	Sg	11 50 10.4	-0.1
ARG2	Argostoli	0.06	136	P	Pg	11 50 08.7	-0.2
ARG2				S	Sg	11 50 10.1	-0.5
KEF1	Kardakata, Kep	0.06	29	P	Pg	11 50 08.7	-0.2
KEF1				S	Sg	11 50 10.6	0.0
KEF3	Kipouria, Keph	0.07	253	P	Pg	11 50 08.8	-0.2
KEF3				S	Sg	11 50 10.9	+0.1
KEF2	Argostoli. Kep	0.07	143	P	Pg	11 50 08.8	-0.2
KEF2				S	Sg	11 50 10.6	-0.2
VLS	Valsamata	0.13	110	P	Pg	11 50 09.4	-0.4
VLS				S	Sg	11 50 12.1	-0.1
	9µm,0.1s						
VLS	Valsamata	0.13	110	P	Pg	11 50 09.4	-0.4
VLS				S	Sg	11 50 12.0	-0.2
VLS				AML	AML	11 50 12.2	
	comp=E,18995µm,0.1s						
VLS				AML	AML	11 50 12.4	
	comp=N,12723µm,0.1s						
KONA	Konidatara, Ke	0.23	28	P	Pg	11 50 11.2	-0.3
KONA				S	Sg	11 50 15.1	+0.4
KONA				AML	AML	11 50 15.4	
	comp=N,3997µm,0.2s						
KONA				AML	AML	11 50 15.5	
	comp=E,2830µm,0.2s						
VLMS	Volimes, Zakyn	0.39	152	P	Pg	11 50 13.9	-0.5
VLMS				S	Sb	11 50 20.5	-1.0
VLMS				AML	AML	11 50 20.7	
	comp=E,5874µm,0.3s						
VLMS				AML	AML	11 50 24.4	
	comp=N,5189µm,0.3s						
EVGI	Lefkada island	0.43	24	P	Pg	11 50 14.6	-0.6
EVGI				S	Sb	11 50 22.2	-0.6
EVGI	Lefkada island	0.43	24	P	Pg	11 50 14.6	-0.6
EVGI				S	Sb	11 50 22.2	-0.6
MGNA	Meganis	0.52	33	P	Pg	11 50 16.1	-0.7
MGNA				S	Sg	11 50 24.3	+0.8
LKD2	Lefkada island	0.59	17	P	Pg	11 50 17.2	-1.0
LKD2				S	Sb	11 50 26.9	-0.5
	comp=N,135nm,0.5s						
TSLK	Tsoukalades, L	0.63	16	P	Pg	11 50 18.4	-0.4
TSLK				S	Sb	11 50 27.8	-0.5
	comp=N,135nm,0.5s						
PDO	Prodromos	0.70	57	P	Pg	11 50 19.6	-0.6
PDO				S	Sb	11 50 31.2	+0.8
	comp=N,265nm,0.4s						
PDO	Prodromos	0.70	57	P	Pg	11 50 19.6	-0.6
PVO	Paravola	0.94	65	P	Pg	11 50 24.3	-0.5
PVO				S	Sn	11 50 40.1	+0.9
	comp=N,195nm,0.6s						
PVO	Paravola	0.94	65	P	Pg	11 50 24.3	-0.5
DRO	Drossia	1.04	105	P	Pb	11 50 26.6	-0.1
DRO				S	Sn	11 50 43.8	+2.1
	comp=N,122nm,0.4s						

SOME 25 11:50:18.5, 43.27N×81.92E, h0km, 2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	1.77	273	⇓Pn	Pg	11 50 52.9	+0.4
	0.8nm,0.3s						
PDGK				⇓Sn	Sg	11 51 19.6	+4.1
	1.4nm,0.4s						
UZB	Uzynbulak	2.12	268	eP	Pn	11 50 54.8	-0.6
	1.9nm,0.2s						
UZB				eS	Sn	11 51 22.1	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
	4.0nm,0.3s						
UZB	Uzynbulak	2.12	268	eP	Pg	11 50 59.2	+0.1
	1.1nm,0.3s						
UZB				eS	Sg	11 51 28.4	+1.8
	4.4nm,0.3s						
KPKS	Kokpek	2.37	276	eP	Pb	11 51 02.1	+0.1
	3.7nm,0.1s						
KPKS				eS	Sg	11 51 35.0	+0.5
	9.8nm,0.3s						
KPKS	Kokpek	2.37	276	eP	Pg	11 51 03.6	-0.2
	5.1nm,0.3s						
KPKS				eS	Sg	11 51 36.1	+1.6
	8.4nm,0.4s						

NIED 25 11:59:00,38.40N×141.80E,h65km,Mw3.9 Best double couple: M0 8.96000×10^14 NP1:φs206.00000°,δ55.00000°,λ62.00000°. NP2:φs69.00000°,δ44.00000°,λ124.00000°.
IDC 25 11:59:35.5±2.0,38.42N×142.00E,h47km±19km,mb3.5/12,mb1 3.7/17,mb1mx3.6/55,mbtmp3.8/17,ML3.4/5,MS3.3/2,Ms1 3.3/2,ms1mx2.5/43,Error ellipse: s-maj=24.9km s-min=13.7km az=113.0
JMA 25 11:59:36.2,38.40N×141.82E,h55km±1km,M3.9
JMA Felt II J1.
NEIC 25 11:59:36.5±2.2,38.37N±0.05×141.99E±0.05,h57km±8km,mb4.2/9,Error ellipse: s-maj=7.8km s-min=6.0km az=178.0
ISC 25 11:59:35.9±1.0,38.38N±0.05×141.92E±0.09,h51km±9km,n53,σ1^{s}12/64,mb3.8/15,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
JIKH	Ishinomakikobu	0.37	259	P	Pn	11 59 45.8	+0.1
JIKH				S	Sn	11 59 52.5	-0.2
JIO	Ouri	0.46	280	P	Pn	11 59 46.5	-0.1
JIO				S	Sn	11 59 53.7	-0.7
JKMT	Kesennumamotoy	0.56	321	P	Pn	11 59 47.8	0.0
JKMT				S	Sn	11 59 55.9	-0.5
OFUJ	Ofunato	0.73	344	P	Pn	11 59 50.0	0.0
OFUJ				S	Sn	11 59 59.9	-0.4
JMK	Ichinoseki	0.79	316	P	Pn	11 59 50.8	0.0
JMK				S	Sn	12 00 01.2	-0.6
JOU	Okura	0.99	270	P	Pn	11 59 53.0	-0.5
JOU				S	Sn	12 00 05.4	-1.0
JMM	Marumori	1.03	240	P	Pn	11 59 53.4	-0.5
JMM				S	Sn	12 00 06.1	-1.2
JOM	Ohasama	1.20	336	P	Pn	11 59 56.3	0.0
JOM				S	Sn	12 00 11.6	+0.2
JFK	Kawauchi	1.31	220	P	Pn	11 59 57.6	-0.2
JFK				S	Sn	12 00 13.5	-0.7
JYK	Kaneyama	1.34	294	P	Pn	11 59 57.8	-0.3
JYK				S	Sn	12 00 14.0	-0.8
JRG	Rokugo	1.43	316	P	Pn	11 59 59.2	-0.2
JYS	Shirataka	1.47	264	P	Pn	11 59 59.9	-0.1
JYS				S	Sn	12 00 17.5	-0.6
JFT	Otama	1.52	236	P	Pn	12 00 00.7	0.0
JFT				S	Sn	12 00 18.7	-0.6
MAJO	Matsushiro	3.48	239		Pn	12 00 28.9	+1.5
MJAR	Matsushiro Arr	3.48	239	P	Pn	12 00 28.6	+1.2
	0.9nm,0.3s,baz=36,slow=14,SNR=42						
MJB9	Matsu-Tunnel	3.48	239		Pn	12 00 29.1	+1.6
ERM	Erimo	3.75	14		Pn	12 00 30.5	-0.7
ERM				Sn	Sn	12 01 12.9	-1.1
INU	Inuyama	4.96	234		Pn	12 00 49.6	+1.8
JHJ2	Mitsune	5.53	199	Pn	Pn	12 00 55.9	+0.3
JHJ2				Sn	Sn	12 01 56.0	-1.8
JHJ	Hachijo jima 2	5.53	199	P	Pn	12 00 55.7	+0.1
	14nm,0.3s,baz=72,slow=20,SNR=5.8						
JHJ				S	Sn	12 01 54.4	-3.4
	16nm,0.3s,baz=44,slow=16,SNR=3.8						
ASAJ	Asahikawa	5.75	5	P	Pn	12 00 57.3	-1.3
	2.9nm,0.3s,baz=334,slow=12,SNR=7.4						
ASAJ				S	Sn	12 02 00.6	-2.7
	1.9nm,0.3s,baz=165,slow=12,SNR=3.1						
JKA	Kamikawa-asahi	5.75	5		Pn	12 00 57.3	-1.3
JKA					Sn	12 02 00.6	-2.7
USRK	Ussuriysk Ar.	9.47	311	P	Pn	12 01 50.1	+0.6
	baz=118,slow=14,SNR=13						
USA0B	Ussuriysk Arra	9.47	311		Pn	12 01 50.4	+0.9
KSRS	Korea Array	11.10	270	P	Pn	12 02 14.6	+2.8
	0.1nm,0.3s,baz=85,slow=15,SNR=3.2						
MA2	Magadan	21.96	12	P	P	12 04 25.0	0.0
	5.6nm,0.7s,baz=195,slow=11,SNR=7.1						
MA2				LR	LR	12 12 57.8	
	comp=Z,39nm,19.9s,baz=216,slow=37						
MA2	Magadan	21.96	12	P	P	12 04 26.4	+1.5
MA2				IAmb	IAmb	12 04 27.4	
	comp=Z,6.2nm,0.8s						
SSLB	Suanglung	23.04	237	P	P	12 04 37.7	+0.9
SSLB				IAmb	IAmb	12 04 56.3	
	comp=Z,9.0nm,1.0s						
SEY	Seymchan	25.39	11	P	P	12 04 57.9	-0.2
	comp=Z,0.7nm,0.5s,baz=153,slow=14,SNR=2.3						
H11N2	WAKE ISLAND Hy	28.52	124	T	T	12 35 41.7	
	baz=316,slow=75,SNR=488						
H11N1	WAKE ISLAND Hy	28.53	124	T	T	12 35 42.4	
	baz=316,slow=75,SNR=379						
H11N3	WAKE ISLAND Hy	28.54	124	T	T	12 35 43.0	
	baz=316,slow=75,SNR=482						
H11S1	WAKE ISLAND Hy	29.28	126	T	T	12 36 38.3	
	baz=318,slow=76,SNR=179						
H11S3	WAKE ISLAND Hy	29.28	126	T	T	12 36 42.9	
	baz=318,slow=76,SNR=221						
H11S2	WAKE ISLAND Hy	29.30	126	T	T	12 36 42.6	
	baz=318,slow=76,SNR=141						
ZALV	Zalesovo Beam	41.32	311	P	P	12 07 16.5	+0.2
	comp=Z,0.5nm,0.3s,baz=95,slow=7.3,SNR=3.3						
MKAR	Makanchi Array	43.76	301	P	P	12 07 36.5	+0.2
	comp=Z,0.5nm,0.5s,baz=81,slow=8.9,SNR=2.0						
RND	Reindeer	47.34	35	P	P	12 08 05.2	+0.8
RND				IAmb	IAmb	12 08 06.8	
	comp=Z,4.9nm,1.3s						
IL31		48.15	33	P	P	12 08 11.1	+0.7
ILAR	Eielson Array	48.15	33	P	P	12 08 10.6	+0.2
	comp=Z,0.7nm,0.7s,baz=262,slow=6.1,SNR=11						
SCM	Sheep Creek Mo	48.15	37	P	P	12 08 11.6	+1.0
SCRK	Sand Creek	49.46	34	P	P	12 08 21.0	+0.3
SCRK				IAmb	IAmb	12 08 21.2	
	comp=Z,2.6nm,1.3s						
MCARA	McCarthy VSAT	50.24	37	P	P	12 08 28.0	+1.5
INK	Inuvik	53.01	28	P	P	12 08 46.9	-0.1
	comp=Z,0.3nm,0.5s,baz=310,slow=8.0,SNR=5.7						
INK				LR	LR	12 32 21.7	
	comp=Z,59nm,18.3s,baz=37,slow=37						
INK	Inuvik	53.01	28	P	P	12 08 47.9	+1.0
INK				IAmb	IAmb	12 08 54.2	
	comp=Z,3.7nm,1.5s						
C36M	Paulatuk	56.04	25	P	P	12 09 09.3	+0.4
ASAR	Alice Springs	62.17	188	P	P	12 09 50.6	-1.3
	comp=Z,0.3nm,0.8s,baz=0.7,slow=5.2,SNR=5.1						
YKA	Yellowknife Ar	62.45	31	P	P	12 09 51.3	-2.0
	comp=Z,0.4nm,0.6s,baz=302,slow=6.6,SNR=6.7						
HFS	Hagfors	73.03	336	P	P	12 10 59.4	-0.6
	comp=Z,0.8nm,0.5s,baz=46,slow=6.2,SNR=5.9						
NVAR	Mina Array Bea	73.86	54	P	P	12 11 06.5	+0.9
	comp=Z,0.1nm,0.4s,baz=292,slow=4.8,SNR=4.4						
PDAR	Pinedale Array	76.44	46	P	P	12 11 20.2	-0.1
	comp=Z,0.7nm,0.6s,baz=213,slow=1.4,SNR=7.1						
TXAR	Lajitas Array	88.98	53	P	P	12 12 25.6	+0.2
	comp=Z,0.3nm,0.7s,baz=350,slow=3.5,SNR=5.0						
LPAZ	La Paz	145.66	58	PKPbc	PKPdf	12 19 09.7	0.0
	comp=Z,0.6nm,0.5s,baz=353,slow=6.0,SNR=4.0						

KRNET 25 12:06:38.0±0.1,41.53N×70.60E,h35km,mb2.5
ISC 25 12:06:42.4±2.1,41.26N±0.07×71.07E±0.06,h4km±14km,n7,σ1^{s}82/12,9C-4D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
ARK	Arkit	0.86	51	⇓iP	Pg	12 06 57.9	-0.9
	baz=76						
ARK				⇓iS	Sg	12 07 12.0	+2.1
	baz=76						
BTK	Batken	1.22	189	⇑iP	Pg	12 07 04.2	-2.1
	baz=74						
BTK				⇑iS	Sb	12 07 23.8	+1.6
	baz=74						
ARSB	Arslanbob	1.44	87	⇑iP	Pn	12 07 08.5	-1.0
	baz=96						
ARSB				⇑iS	Sb	12 07 31.3	+2.6
	baz=96						
KK31	Karatay Array	1.89	347	⇑P	Pn	12 07 14.3	-1.2
	4.3nm,0.7s,baz=152,slow=14,SNR=20						
KK31				S	Sn	12 07 41.3	+1.5
	5.7nm,0.6s,baz=156,slow=26,SNR=15						
AML	Almayashu	2.15	65	⇑iP	Pn	12 07 17.0	-2.4
	baz=74						
AML				⇑iS	Sn	12 07 46.2	-0.5
	baz=74						
ARLS	Aral	2.51	75	⇓eP	Pn	12 07 23.0	-1.2
	baz=82						
ARLS				⇓iS	Sn	12 07 55.7	+0.3
	baz=82						
UCH	Uchtor	2.75	68	⇑iP	Pn	12 07 25.5	-2.2
	baz=75						
UCH				⇑iS	Sn	12 08 00.9	-0.8
	baz=75						

ISC 25 12:07:24.6±1.2,49.68N±0.05×17.42E±0.05,h4km±12km,n7,σ0^{s}68/11,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
MORC	Moravsky Berou	0.12	41	ePG	Pg	12 07 26.7	-0.4
MORC				eSG	Sg	12 07 28.8	0.0
VRAC	Vranov	0.65	235	ePG	Pb	12 07 38.2	-0.4
JAVC	Velka Javorina	0.84	168	ePG	Pb	12 07 42.2	+0.4
KRUC	Moravsky	0.91	227	ePG	Pg	12 07 42.1	+0.1
KSP	Ksiaz	1.37	329	ePg	Pn	12 07 50.5	+0.1
KSP				eSg	Sb	12 08 09.2	+0.7
LANS	Liptovska Anna	1.44	111	ePG	Pn	12 07 51.7	+0.2
LANS				eSG	Sg	12 08 12.0	+1.1
VYHS	Vyhne	1.51	141	ePG	Pn	12 07 51.6	-0.9
VYHS				eSG	Sn	12 08 12.1	-0.5

IDC 25 12:08:32.0±2.1,0.82S×98.19E,h0km,mb3.6/6,mb1 3.8/8,mb1mx3.6/40,mbtmp3.7/8,ML4.1/2,MS3.5/1,Ms1 3.5/1,ms1mx2.6/39,Error ellipse: s-maj=66.2km s-min=22.1km az=64.0
ISC 25 12:08:37.1±2.1,0.6S±0.2×98.5E±0.4,h26km,n16,σ0^{s}91/9,mb3.9/6,Southern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
PSI	Prapat	3.43	8	Pn	Pn	12 09 28.4	-0.6
	12nm,0.3s,baz=218,slow=9.8,SNR=32						
CMAR	Chiang Mai Arr	18.96	1	P	Pn	12 12 57.0	-0.4
	0.3nm,0.3s,baz=192,slow=9.5,SNR=7.4						
TGY	Tagaytay City	26.63	56	LR	LR	12 25 52.7	
	comp=Z,87nm,18.9s,baz=50,slow=39						
H08S2	Diego Garcia H	26.81	254	T	T	12 41 54.9	
	baz=76,slow=76,SNR=75						
H08S3	Diego Garcia H	26.82	254	T	T	12 41 53.1	
	baz=76,slow=76,SNR=533						
H08S1	Diego Garcia H	26.83	254	T	T	12 41 55.9	
	baz=76,slow=76,SNR=91						
H08N1	Diego Garcia H	27.97	258	T	T	12 44 02.4	
	baz=132,slow=75,SNR=30						
H08N2	Diego Garcia H	27.98	258	T	T	12 44 07.3	
	baz=132,slow=75,SNR=26						
H08N3	Diego Garcia H	27.99	258	T	T	12 44 10.0	
	baz=132,slow=75,SNR=37						
WRA	Warramunga Arr	40.01	121	P	P	12 16 10.5	+0.2
	0.3nm,0.5s,baz=304,slow=8.8,SNR=3.3						
ASAR	Alice Springs	41.30	126	P	P	12 16 20.6	-0.3
	0.2nm,0.5s,baz=298,slow=7.7,SNR=2.9						
KSRS	Korea Array	46.66	33	P	P	12 17 04.0	+0.5
	0.6nm,0.5s,baz=225,slow=8.9,SNR=4.9						
SONM	Songino Array	48.75	7	P	P	12 17 21.1	+1.3
	1.7nm,0.5s,baz=191,slow=10,SNR=6.6						
MKAR	Makanchi Array	49.31	345	P	P	12 17 24.2	+0.2
	0.7nm,0.5s,baz=160,slow=9.2,SNR=10						
ZALV	Zalesovo Beam	55.55	350	P	P	12 18 10.0	0.0
	0.5nm,0.3s,baz=169,slow=7.9,SNR=3.7						
TXAR	Lajitas Array	144.49	34	PKP	PKPab	12 28 08.8	-1.6
	0.1nm,0.4s,baz=270,slow=0.1,SNR=5.2						

IDC 25 12:25:44.5±0.8,52.52N×169.13W,h0km,mb3.9/30,mb1 4.0/32,mb1mx3.9/71,mbtmp3.9/32,ML3.6/2,MS2.6/1,Ms1 2.6/1,ms1mx2.3/36,Error ellipse: s-maj=21.9km s-min=11.6km az=178.0
AEIC 25 12:25:48.7±2.5,52.39N±0.10×169.01W±0.09,h26km±5km,ML3.7/34,mb3.9/44(NEIC),Error ellipse: s-maj=15.0km s-min=5.7km az=154.0
NEIC 25 12:25:50.4±2.4,52.5N±0.1×169.07W±0.05,h42km±7km,Error ellipse: s-maj=15.8km s-min=6.2km az=157.0
ISC 25 12:25:48.7±1.7,52.46N±0.08×169.05W±0.05,h27km±11km,n141,σ1^{s}25/146,mb4.0/35,Fox Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
NIKH	Nikolski High	0.52	13	Pn	Pn	12 26 00.9	+0.5
NIKH				Sn	Sn	12 26 10.5	+2.2
OKSP	Okmok Steeple	0.91	30		Pn	12 26 05.8	+0.1
OKER	Okmok East Rim	1.16	31		Pb	12 26 10.2	0.0
OKFG	Magazine Ridge	1.17	36		Pn	12 26 10.0	-0.3
MGOD	Makushin Gods	1.87	44		Pn	12 26 19.8	+0.9
MGOD					Sb	12 26 44.0	-1.2
MREP	Makushin Rep't	1.94	45		Pn	12 26 20.3	+0.5
MCIR	Makushin Cirqu	1.98	40		Pn	12 26 21.6	+1.2
MSW	Makushin Switc	1.99	42		Pn	12 26 21.2	+0.6
MSW					Sb	12 26 46.7	-2.0
MNAT	Makushin Natee	2.01	44		Pn	12 26 21.5	+0.7
MNAT					Sb	12 26 47.2	-1.9
UNV	Unalaska Valle	2.06	47		Pn	12 26 22.3	+0.8
UNV				Sn	Sn	12 26 47.0	+0.7
MTBL	Makushin Table	2.08	42		Pn	12 26 23.1	+1.3
AKMO	Akutan Morgan	2.45	47		Pn	12 26 28.2	+1.4
AKMO					Sn	12 26 58.0	+2.2
AKRB	Akutan Reef Bi	2.45	46		Pn	12 26 28.6	+1.8
AKBBA	Akutan Broad B	2.49	48		Pn	12 26 28.6	+1.3
AKGG	Akutan Green G	2.53	45		Pn	12 26 29.8	+1.9
AKUT	Akutan	2.58	48		Pn	12 26 28.3	-0.3
AKUT				Sn	Sn	12 27 00.7	+1.6
KOFP	Korovin Flat P	3.10	268		Pn	12 26 37.6	+1.7
KOKL	Mount Kliuchef	3.16	269		Pn	12 26 37.6	+1.0
ATKA	Atka Island	3.17	267	Pn	Pn	12 26 37.7	+1.0
ATKA				Sn	Sn	12 27 15.3	+1.8
SSBA	Shishaldin	3.73	50		Pn	12 26 47.0	+2.4
FALS	False Pass	4.12	52	Pn	Pn	12 26 49.9	+0.2
GSTR	Great Sitkin T	4.32	268	Pn	Pn	12 26 52.5	-0.1
GSTR				Sn	Sn	12 27 43.5	+1.4
GSMY	Great Sitkin M	4.33	267		Pn	12 26 53.5	+0.9
GSTD	Great Sitkin T	4.38	267		Pn	12 26 54.2	+0.8
ADAG	Mount Adagdak	4.67	267		Pn	12 26 58.9	+1.5
ADK	Adak	4.74	266	Pn	Pn	12 26 59.5	+1.3
ADK				Sn	Sn	12 27 51.2	-1.0
KIWB	Kanaga Island	5.03	266		Pn	12 27 03.5	+1.3
KIKV	Kanaga Island	5.03	267		Pn	12 27 04.1	+1.8
TAPA	Tanaga Point A	5.44	267		Pn	12 27 09.5	+1.6
TASE	Tanaga Southea	5.57	267		Pn	12 27 12.1	+2.4
SDPT	Sand Point	5.83	57	Pn	Pn	12 27 15.2	+1.9
CNBA	Chernabura Isl	6.10	64	Pn	Pn	12 27 18.0	+1.1
CHGN	Chignik	7.30	54	Pn	Pn	12 27 35.2	+1.8
OHAK	Old Harbor	10.26	56	Pn	Pn	12 28 13.6	-0.2
KDAK	Kodiak Island	10.82	54	Pn	Pn	12 28 21.1	-0.5
	0.8nm,0.3s,baz=164,slow=2.6,SNR=11						
KDAK				Sn	Sn	12 30 15.7	-5.8
	0.1nm,0.3s,baz=166,slow=19,SNR=2.1						
KDAK	Kodiak Island	10.82	54		Pn	12 28 21.0	-0.5
SVW2	Sparrevohn	11.35	35	Pn	Pn	12 28 30.0	+1.1
GAMB	Gambell	11.43	354		Pn	12 28 33.5	+3.6
ANM	Nome	12.28	7	Pn	Pn	12 28 45.7	+4.1
BRLK	Bradley Lake	12.46	47	Pn	Pn	12 28 46.2	+2.1
SEW	Seward	13.26	47	Pn	Pn	12 28 55.0	+0.1
SKT	Skwentna	13.40	38	Pn	Pn	12 28 56.6	-0.3
SUA	Susitna One	13.40	41	Pn	Pn	12 28 56.1	-0.9
RC01	Rabbit Creek A	13.61	43	Pn	Pn	12 28 58.8	-0.9
PPLA	Purkeypile	13.75	34	Pn	Pn	12 29 02.4	+0.6
PMR	Palmer	14.12	42	Pn	Pn	12 29 06.5	-0.2
GHO	Glory Hole Cre	14.30	41	Pn	Pn	12 29 09.9	+0.7
KNK	Knik Glacier	14.31	43	Pn	Pn	12 29 08.7	-0.6
SML	Sawmill	14.56	42	Pn	Pn	12 29 13.1	+0.4
KTH	Kantishna Hill	14.62	34	Pn	Pn	12 29 14.6	+1.1
HIN	Hinchinbrook I	14.72	49	Pn	Pn	12 29 14.2	-0.7
TRF	Thorofare Moun	14.77	35	Pn	Pn	12 29 17.1	+1.4
FID	Port Fidalgo	14.87	47	Pn	Pn	12 29 14.5	-2.4
BPAW	Bear Paw Mtn.	14.96	32		Pn	12 29 20.2	+2.1
BPAW				IAmb	IAmb	12 29 30.5	
	comp=Z,3.7nm,0.8s						
SCM	Sheep Creek Mo	14.99	43	Pn	Pn	12 29 17.9	-0.6
SCM				IAmb	IAmb	12 29 24.4	
	comp=Z,10nm,0.8s						
EYAK	Cordova Ski Ar	15.13	49	Pn	Pn	12 29 19.7	-0.5
RND	Reindeer	15.25	36	Pn	Pn	12 29 22.3	+0.4
RAGM	Ragged Mountai	15.57	50	Pn	Pn	12 29 26.0	-0.1
DHY	Denali Highway	15.61	39	Pn	Pn	12 29 26.2	-0.5
DHY				IAmb	IAmb	12 29 40.0	
	comp=Z,8.2nm,1.3s						
MLY	Manley	15.69	30	P	P	12 29 30.8	-0.6
MLY				IAmb	IAmb	12 29 47.4	
	comp=Z,4.7nm,0.9s						
WRH	Wood River Hil	16.17	34	Pn	Pn	12 29 33.6	-0.1
WRH				IAmb	IAmb	12 29 50.0	
	comp=Z,8.5nm,1.4s						
PAX	Paxson	16.30	41	Pn	Pn	12 29 35.7	+0.2
GLB	Gilahina Butte	16.34	47	Pn	Pn	12 29 34.5	-1.5
GLB				IAmb	IAmb	12 29 42.6	
	comp=Z,9.5nm,1.1s						
CCB	Clear Creek Bu	16.37	34	Pn	Pn	12 29 36.0	-0.3
CRQM	Cirque	16.40	49	Pn	Pn	12 29 36.5	-0.4
CRQM				IAmb	IAmb	12 29 45.8	
	comp=Z,8.9nm,0.8s						
VRDI	Verde Repeater	16.42	48	Pn	Pn	12 29 36.8	-0.4
VRDI				IAmb	IAmb	12 29 51.0	
	comp=Z,14nm,1.5s						
TGL	Tana Glacier	16.55	50	Pn	Pn	12 29 37.8	-0.8
TGL				IAmb	IAmb	12 29 49.6	
	comp=Z,14nm,1.0s						
MCARA	McCarthy VSAT	16.67	47	Pn	Pn	12 29 40.4	+0.3
MCARA				IAmb	IAmb	12 29 48.3	
	comp=Z,7.5nm,0.9s						
IL31		16.76	34	Pn	Pn	12 29 39.7	-1.5
ILAR	Eielson Array	16.76	34	Pn	Pn	12 29 39.6	-1.6
	comp=Z,0.1nm,0.3s,baz=218,slow=9.6,SNR=9.5						
BALM	Baldy	16.86	49	Pn	Pn	12 29 43.1	+0.5
BALM				IAmb	IAmb	12 29 54.7	
	comp=Z,7.1nm,0.9s						
MENT	Mentasta	16.99	42	Pn	Pn	12 29 43.9	-0.3
BARN	Barnard Glacie	17.19	49		P	12 29 47.6	-0.6
BARN				IAmb	IAmb	12 29 59.7	
	comp=Z,6.4nm,0.8s						
CTGM	Chitina Glacie	17.31	50	Pn	Pn	12 29 48.8	+0.5
CTGM				IAmb	IAmb	12 30 05.6	
	comp=Z,5.8nm,0.8s						
SCRK	Sand Creek	17.38	39	Pn	Pn	12 29 48.6	-0.4
PCA	Pinnacle	17.60	53	Pn	Pn	12 29 50.1	-1.6
PCA				IAmb	IAmb	12 30 05.0	
	comp=Z,17nm,1.2s						
FYU	Fort Yukon	18.41	31	P	Pn	12 30 02.0	+0.5
FYU				IAmb	IAmb	12 30 18.7	
	comp=Z,10nm,1.5s						
TOLK	Toolik Lake Re	18.68	22	P	Pn	12 30 06.5	+1.6
EGAK	Eagle	18.84	38	P	Pn	12 30 06.8	0.0
HYT	Haines Junctio	19.09	52	P	Pn	12 30 11.1	+1.1
HYT				IAmb	IAmb	12 30 25.6	
	comp=Z,8.3nm,0.7s						
DAWY	Dawson	19.23	41	P	Pn	12 30 11.5	0.0
PEA0B	Petropavlovsk-	20.03	285	P	P	12 30 19.4	+0.2
PETK	Petropavlovsk-	20.03	285	P	P	12 30 19.5	+0.3
	comp=Z,1.5nm,0.3s,baz=91,slow=14,SNR=27						
WHY	Whitehorse	20.33	53	P	P	12 30 22.9	+0.4
WHY				IAmb	IAmb	12 30 42.0	
	comp=Z,6.7nm,1.1s						
EPYK	Eagle Plains	21.21	37	P	P	12 30 30.5	-1.4
EPYK				IAmb	IAmb	12 30 44.7	
	comp=Z,6.1nm,0.7s						
SEY	Seymchan	22.75	312	P	P	12 30 48.3	-0.1
	comp=Z,1.6nm,0.8s,baz=109,slow=9.3,SNR=5.9						
INK	Inuvik	23.16	33	P	P	12 30 51.1	-1.3
	comp=Z,0.8nm,0.4s,baz=215,slow=6.4,SNR=9.5						
INK	Inuvik	23.16	33	P	P	12 30 51.4	-1.1
INK				IAmb	IAmb	12 30 56.9	
	comp=Z,4.3nm,1.3s						
MA2	Magadan	23.25	304	P	P	12 30 54.2	+0.7
	comp=Z,1.9nm,0.3s,baz=109,slow=7.2,SNR=3.9						
C36M	Paulatuk	26.74	34	P	P	12 31 26.4	+1.0
YKA	Yellowknife Ar	30.03	49	P	P	12 31 55.0	+0.2
	comp=Z,0.8nm,0.5s,baz=272,slow=7.5,SNR=17						
TIXI	Tiksi	32.76	329	P	P	12 32 19.0	+0.3
	comp=Z,1.7nm,0.4s,baz=148,slow=19,SNR=3.8						
TIXI	Tiksi	32.76	329	P	P	12 32 19.1	+0.5
NVAR	Mina Array Bea	37.47	91	P	P	12 33 02.0	+2.1
	comp=Z,0.2nm,0.7s,baz=292,slow=8.5,SNR=2.3						
H11N2	WAKE ISLAND Hy	37.65	219	T	T	13 13 13.9	
	baz=24,slow=74,SNR=28						
H11N3	WAKE ISLAND Hy	37.66	219	T	T	13 13 14.4	
	baz=24,slow=74,SNR=31						
H11N1	WAKE ISLAND Hy	37.67	219	T	T	13 13 11.8	
	baz=24,SNR=25						
H11S1	WAKE ISLAND Hy	38.84	218	T	T	13 14 43.2	
	baz=23,slow=76,SNR=179						
H11S2	WAKE ISLAND Hy	38.85	218	T	T	13 14 44.3	
	baz=23,slow=76,SNR=147						
H11S3	WAKE ISLAND Hy	38.85	218	T	T	13 14 44.4	
	baz=23,slow=76,SNR=133						
PDAR	Pinedale Array	40.19	79	P	P	12 33 22.7	0.0
	comp=Z,0.1nm,0.3s,baz=308,slow=4.4,SNR=3.6						
RDMU	Red Mountain	41.48	82	P	P	12 33 34.8	+1.5
ULM	Lac du Bonnet	43.93	62	P	P	12 33 52.1	-0.7
	comp=Z,0.4nm,0.4s,baz=310,slow=7.9,SNR=2.6						
KSRS	Korea Array	45.59	277	P	P	12 34 06.4	+0.3
	comp=Z,0.7nm,0.5s,baz=56,slow=7.4,SNR=5.7						
KSRS				LR	LR	12 53 57.7	
	comp=Z,7.2nm,18.8s,baz=345,slow=37						
JNU	Nakatsue	46.66	270	P	P	12 34 14.7	0.0
	comp=Z,2.6nm,0.6s,baz=3.6,slow=16,SNR=3.1						
SPITS	Spitsbergen Ar	49.58	359	P	P	12 34 36.1	-0.5
	comp=Z,3.9nm,0.7s,baz=90,slow=4.2,SNR=6.2						
SONM	Songino Array	51.42	301	P	P	12 34 51.0	-0.1
	comp=Z,0.8nm,0.5s,baz=74,slow=5.1,SNR=3.6						
TX31	Lajitas Ar. Si	52.55	89	P	P	12 35 00.2	+0.6
TX31				IAmb	IAmb	12 35 10.5	
	comp=Z,1.8nm,1.4s						
TX32	Lajitas Array	52.55	89	P	P	12 35 00.4	+0.7
TX32				IAmb	IAmb	12 35 10.5	
	comp=Z,2.0nm,1.4s						
TXAR	Lajitas Array	52.55	89	P	P	12 35 00.8	+1.1
	comp=Z,0.2nm,0.6s,baz=309,slow=4.3,SNR=4.3						
SCHQ	Schefferville	55.23	44	P	P	12 35 18.1	-0.7
	comp=Z,2.0nm,0.9s,baz=338,slow=8.2,SNR=3.7						
SCHQ	Schefferville	55.23	44	P	P	12 35 19.5	+0.7
WHAR	Wooly Hollow	55.28	76	P	P	12 35 22.0	+2.6
ZALV	Zalesovo Beam	57.48	318	P	P	12 35 34.2	-0.7
	comp=Z,0.4nm,0.5s,baz=70,slow=6.3,SNR=2.8						
ARCES	ARCESS Array B	57.85	354	P	P	12 35 36.4	-0.8
	comp=Z,3.7nm,0.9s,baz=6.7,slow=7.0,SNR=7.1						
KURK	Kurchatov	62.43	318	P	P	12 36 08.7	-0.1
KURBB	Kurchatov Arra	62.54	318	P	P	12 36 09.2	-0.4
	comp=Z,1.1nm,0.5s,baz=44,slow=8.0,SNR=19						
BVAR	Borovoye Array	63.74	325	P	P	12 36 17.2	-0.3
	comp=Z,2.7nm,0.5s,baz=53,slow=6.8,SNR=23						
BRVK	Borovoye	63.75	325	P	P	12 36 17.8	+0.3
MK31	Makanchi Array	63.88	314	P	P	12 36 17.8	-0.8
MK31				IAmb	IAmb	12 36 27.0	
	comp=Z,2.6nm,1.4s						
MKAR	Makanchi Array	63.88	314	P	P	12 36 17.5	-1.1
	comp=Z,0.4nm,0.5s,baz=60,slow=7.2,SNR=5.1						
ARU	Arti	64.62	333	P	P	12 36 22.9	-0.4
	comp=Z,0.9nm,0.3s,baz=319,slow=5.3,SNR=5.1						
ARU	Arti	64.62	333	P	P	12 36 23.5	+0.3
FINES	FINESS Array B	65.80	352	P	P	12 36 29.5	-1.3
	comp=Z,3.1nm,0.9s,baz=23,slow=6.9,SNR=4.9						
NOA	NORSAR Array B	66.84	360	P	P	12 36 37.5	0.0
	comp=Z,0.6nm,0.5s,baz=0.8,slow=3.1,SNR=3.2						
HFS	Hagfors	67.73	359	P	P	12 36 42.4	-0.7
	comp=Z,2.9nm,0.4s,baz=26,slow=3.8,SNR=20						
AKTO	Aktyubinsk	70.03	330	P	P	12 36 56.9	-0.7
	comp=Z,1.6nm,0.5s,baz=46,slow=9.5,SNR=7.3						
ABKAR	Akbulak array	70.46	328	P	P	12 36 59.9	-0.2
ABKAR				IAmb	IAmb	12 37 00.9	
	comp=Z,1.4nm,0.8s						
AAK	Ala-Archa	70.57	316	P	P	12 37 01.0	-0.2
	comp=Z,0.7nm,0.4s,baz=41,slow=7.1,SNR=4.2						
AAK	Ala-Archa	70.57	316	P	P	12 37 01.2	0.0
AKASG	Malin Array Be	76.05	348	P	P	12 37 32.0	-1.1
	comp=Z,0.9nm,0.5s,baz=12,slow=4.9,SNR=5.6						
TAPN	Taplejung	76.30	297	eP	P	12 37 34.9	-0.4
	comp=Z,6.4nm,0.6s						
CMAR	Chiang Mai Arr	76.79	283	P	P	12 37 37.2	-0.6
	comp=Z,1.2nm,0.8s,baz=24,slow=7.1,SNR=7.7						
GUN	Gumba	76.85	299	eP	P	12 37 38.3	-0.2
	comp=Z,5.9nm,0.5s						
JIRN	Jiri	76.88	298	eP	P	12 37 38.5	-0.2
	comp=Z,8.6nm,0.4s						
RAMN	Ramite	77.22	298	eP	P	12 37 40.0	-0.5
	comp=Z,5.5nm,0.5s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
DANN	Dangsing	77.63	300	eP	P	12 37 42.5	-0.3
	comp=Z,13nm,0.6s						
GERES	GERESS Array B	79.04	358	P	P	12 37 49.5	-0.5
	comp=Z,0.8nm,0.7s,baz=3.4,slow=6.7,SNR=3.6						
BUR08	Bucovina Ar. S	79.53	350	P	P	12 37 53.0	+0.3
ESDC	Sonseca Array	87.32	11	P	P	12 38 32.1	-0.7
	comp=Z,0.3nm,0.4s,baz=343,slow=4.8,SNR=4.1						
ASAR	Alice Springs	90.61	230	P	P	12 38 46.8	-1.5
	comp=Z,0.2nm,0.5s,baz=28,slow=4.9,SNR=5.5						

IDC 25 12:52:48.3±550.0,65.89N×43.86E,h0km,Error ellipse: s-maj=236.7km s-min=51.5km az=119.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
I37NO	I37NO	10.16	300	i		13 51 50.0	
	baz=96,slow=320,SNR=0.5						
I31KZ	AKTYUBINSK INF	17.16	148	i		14 44 48.8	
	baz=343,slow=331,SNR=7.3						
I18DK	QAANAAQ INFRAS	31.30	337	i		16 05 20.0	
	baz=40,slow=351,SNR=2.2						

ATA 25 12:58:34.1±0.4,39.83N×42.53E,h19km±3km,ML1.6
DDA 25 12:58:36.1,39.77N×42.52E,h13km±2km,ML1.7,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
EATA	Eleskirt	0.10	347	eP	Pg	12 58 38.8	-0.7
EATA				IAML		12 58 46.1	
	comp=Z,57nm,0.3s						
EATA				eS	Sg	12 58 46.7	+4.9
EATA	Eleskirt	0.10	347	eP	Pg	12 58 38.5	-0.9
EATA				eS	Sg	12 58 41.7	-0.1
EATA				IAML		12 58 42.3	
	comp=Z,75nm,0.3s						
EATA	Eleskirt	0.10	347	iP	Pg	12 58 38.8	-0.6
EATA				iS	Sg	12 58 41.6	-0.2
EATA				IAML		12 58 42.0	
	comp=N,1μm,0.3s						
TUTA	Tutak	0.43	148	eP	Pg	12 58 44.6	-0.1
TUTA				eS	Sb	12 58 52.5	+0.3
TUTA	Tutak	0.43	148	eP	Pg	12 58 44.3	-0.5
TUTA				eS	Sb	12 58 52.6	+0.5
TUTA				IAML		12 58 57.5	
	comp=N,89nm,0.5s						
TUTA	Tutak	0.43	148	iP	Pg	12 58 44.6	-0.2
TUTA				iS	Sb	12 58 51.8	-0.4
TUTA				IAML		12 58 55.0	
	comp=N,79nm,0.2s						
HOMI	Horasan	0.55	300	eP	Pg	12 58 45.8	-1.1
HOMI	Horasan	0.55	300	eP	Pg	12 58 45.2	-1.7
HOMI	Horasan	0.55	300	iP	Pg	12 58 46.2	-0.7
HOMI				iS	Sb	12 58 55.7	+0.2
HOMI				IAML		12 59 02.0	
	comp=E,41nm,0.4s						

INMG 25 13:10:07.4±1.3,32.12N×8.10W,h56km±16km,ML2.7, Error ellipse: s-maj=13.1km s-min=9.7km az=73.0
SFS 25 13:10:08.0,32.38N×7.82W,ML3.7,BENGUERIR (MARRUECOS)
MDD 25 13:10:07.8±3.3,32.32N×7.67W,h0km,mb3.8/5,Error ellipse: s-maj=45.6km s-min=29.5km az=100.0,PRXIMO, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
AVE	Averroes	1.00	12	eP	Pb	13 10 28.1	+0.1
AVE				eS	Sn	13 10 45.0	+1.1
PBDV	Barranco-do-Ve	4.92	358	eP	Pn	13 11 21.7	-1.2
PBDV				eS	Sn	13 12 16.4	-4.1
PBDV				A	A	13 12 29.8	
	4.8nm,0.5s						
PBDV	Barranco-do-Ve	4.92	358	P	Pn	13 11 21.7	-1.2
PBDV				S	Sn	13 12 16.4	-4.1
	4.8nm,0.5s						
PVAQ	Vaqueiros	5.07	360	eP	Pn	13 11 23.5	-1.5
PVAQ				eS	Sn	13 12 20.3	-4.0
PVAQ				A	A	13 12 21.1	
	9.5nm,0.7s						
PVAQ	Vaqueiros	5.07	360	P	Pn	13 11 23.5	-1.5
PVAQ				S	Sn	13 12 20.3	-4.0
	9.5nm,0.7s						
EGRO	El Granado	5.20	2	P	Pn	13 11 25.6	-1.2
	0.8nm,0.2s,SNR=7.9						
EGRO				S	Sn	13 12 22.2	-5.3
	1.8nm,0.2s,SNR=7.9						
PTEO	Sao Teotonio	5.28	351	eP	Pn	13 11 26.9	-1.1
PTEO	Sao Teotonio	5.28	351	P	Pn	13 11 26.9	-1.1
PCVE	Castro Verde	5.31	357	eP	Pn	13 11 27.3	-1.0
PCVE				eS	Sn	13 12 25.6	-4.5
PCVE				A	A	13 12 40.2	
	6.8nm,0.6s						
PCVE	Castro Verde	5.31	357	P	Pn	13 11 27.3	-1.0
PCVE				S	Sn	13 12 25.6	-4.5
	6.8nm,0.6s						
EMIN	Mina Concepcio	5.49	8	P	Pn	13 11 29.6	-1.2
	0.6nm,0.1s,SNR=9.7						
EMIN				S	Sn	13 12 29.5	-5.3
	3.6nm,0.3s,SNR=16						
PNCL	Nicolau / Gran	5.82	353	eP	Pn	13 11 34.0	-1.3
PNCL	Nicolau / Gran	5.82	353	P	Pn	13 11 34.0	-1.3
ECAB	El Cabril	6.03	17	P	Pn	13 11 36.6	-1.6
	0.4nm,0.2s,SNR=7.0						
ECAB				S	Sn	13 12 42.1	-5.9
	2.6nm,0.4s						
EADA	Adamuz	6.36	23	P	Pn	13 11 42.1	-0.7
	0.8nm,0.2s,SNR=7.9						
EADA				S	Sn	13 12 50.7	-5.3
	8.3nm,0.7s,SNR=7.9						
EBAD	Badajoz	6.44	5	P	Pn	13 11 42.5	-1.4
	0.4nm,0.1s,SNR=7.9						

KRSC 25 13:16:59.4±1.9,52.01N×159.91E,h41km±23km,ML4.2
MOS 25 13:17:01.9±0.8,52.06N×159.74E,h49km,mb4.5/1,Error ellipse: s-maj=8.8km s-min=3.7km az=93.1
NEIC 25 13:17:03.4±1.8,52.18N±0.09×159.7E±0.1,h46km±2km, mb4.3/7,Error ellipse: s-maj=13.5km s-min=9.6km az=190.0
IDC 25 13:17:06.2±2.3,52.21N×159.62E,h71km±19km,mb3.4/16, mb1 3.6/18,mb1mx3.5/46,mbtmp3.8/18,MS2.9/1, Ms1 2.9/1,ms1mx2.3/39,Error ellipse: s-maj=20.7km s-min=13.5km az=134.0
ISC 25 13:17:02.9±1.1,52.07N±0.04×159.73E±0.04,h41km±11km, n121,σ1§61/150,mb3.9/19,1D,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
RUS	Russkaya	0.83	296	iP	Pn	13 17 17.0	-1.1
RUS				eS	Sn	13 17 28.6	-0.6
RUS	Russkaya	0.83	296	PN	Pn	13 17 17.0	-1.1
RUS				S	Sn	13 17 28.6	-0.5
MTVR	Mutnovka	1.04	294	eP	Pn	13 17 20.7	-0.4
MTVR				eS	Sn	13 17 34.9	+0.4
MTVR	Mutnovka	1.04	294	PN	Pn	13 17 20.7	-0.4
MTVR				S	Sn	13 17 34.9	+0.4
SPN	Mys Shipunski	1.05	10	eP	Pn	13 17 20.2	-0.9
SPN				eS	Sn	13 17 35.1	+0.6
SPN	Mys Shipunski	1.05	10	PN	Pn	13 17 20.2	-0.9
SPN				S	Sn	13 17 35.1	+0.6
KDTR	Khodutka, Kamc	1.06	256	iP	Pn	13 17 20.7	-0.5
KDTR				eS	Sn	13 17 34.8	+0.1
KDTR	Khodutka, Kamc	1.06	256	PN	Pn	13 17 20.7	-0.5
KDTR				S	Sn	13 17 34.8	+0.1
GRL	Gorelyy	1.13	296	eP	Pn	13 17 22.5	+0.2
GRL				eS	Sn	13 17 38.0	+1.4
GRL	Gorelyy	1.13	296	PN	Pn	13 17 22.5	+0.2
GRL				S	Sn	13 17 38.0	+1.4
NLC	Nalytchevo	1.13	348	eP	Pn	13 17 20.8	-1.4
NLC				eS	Sn	13 17 35.8	-0.7
NLC	Nalytchevo	1.13	348	PN	Pn	13 17 20.8	-1.4
NLC				S	Sn	13 17 35.8	-0.7
DALK	Dalny	1.13	329	eP	Pn	13 17 21.3	-1.0
DALK				eS	Sn	13 17 37.8	+1.2
DALK	Dalny	1.13	329	PN	Pn	13 17 21.3	-1.0
DALK				S	Sn	13 17 37.8	+1.2
PET	Petropavlovsk	1.16	326	eP	Pn	13 17 21.7	-0.9
PET	Petropavlovsk	1.16	326⇓	iPN	Pn	13 17 21.9	-0.7
PET				eS	Sn	13 17 38.3	+1.0
PET				pmax	pmax		
	comp=Z,267nm,0.4s						
PET				smax	smax		
	comp=E,799nm,0.6s						
PET				smax	smax		
	comp=N,2μm,0.5s						
ASAK	Asacha	1.17	286	eP	Pn	13 17 22.9	+0.1
ASAK				eS	Sn	13 17 39.2	+1.6
ASAK	Asacha	1.17	286	PN	Pn	13 17 22.9	+0.1
ASAK				S	Sn	13 17 39.2	+1.6
KRMR	Karymshinskiy	1.24	309	eP	Pn	13 17 22.7	-1.0
KRMR				eS	Sn	13 17 39.3	+0.1
KRMR	Karymshinskiy	1.24	309	PN	Pn	13 17 22.7	-1.0
KRMR				S	Sn	13 17 39.3	+0.1
UGLR	Uglovaya	1.27	335	eP	Pn	13 17 23.7	-0.5
UGLR	Uglovaya	1.27	335	PN	Pn	13 17 23.7	-0.5
SDLR	Sedlovina	1.32	337	eP	Pn	13 17 24.1	-0.8
SDLR	Sedlovina	1.32	337	PN	Pn	13 17 24.1	-0.8
SMAR	Somma	1.32	335	eP	Pn	13 17 23.8	-1.3
SMAR	Somma	1.32	335	PN	Pn	13 17 23.8	-1.3
AVH	Avacha	1.34	334	eP	Pn	13 17 24.8	-0.4
AVH	Avacha	1.34	334	PN	Pn	13 17 24.8	-0.4
KRER	Koryakskii	1.37	335	eP	Pn	13 17 24.9	-0.9
KRER	Koryakskii	1.37	335	PN	Pn	13 17 24.9	-0.9
KOK	Koryaka	1.40	332	eP	Pn	13 17 25.2	-0.8
KOK	Koryaka	1.40	332	PN	Pn	13 17 25.2	-0.8
KRX	Arik	1.45	333	eP	Pn	13 17 25.9	-0.9
KRX	Arik	1.45	333	PN	Pn	13 17 25.9	-0.9
PEA0B	Petropavlovsk-	1.62	311		Pn	13 17 29.1	+0.1
PEA0B	Petropavlovsk-	1.62	311	PN	Pn	13 17 29.1	+0.1
PETK	Petropavlovsk-	1.62	311	P	Pn	13 17 29.2	+0.3
	comp=N,60nm,0.3s,baz=109,slow=21,SNR=941						
PETK				S	Sn	13 17 50.0	+1.4
	comp=N,27nm,0.3s,baz=118,slow=18,SNR=7.5						
PETK				LR	LR	13 18 20.5	
	comp=N,338nm,19.0s,baz=63,slow=50						
APC	Apacha	1.79	300	eP	Pn	13 17 32.6	+1.3
APC	Apacha	1.79	300	PN	Pn	13 17 32.6	+1.3
PAU	Pauzhetka	1.91	253	eP	Pn	13 17 34.3	+1.4
PAU				eS	Sn	13 17 58.3	+2.6
PAU	Pauzhetka	1.91	253	PN	Pn	13 17 34.3	+1.4
PAU				S	Sn	13 17 58.3	+2.6
KII	Karymskiy	1.98	355	eP	Pn	13 17 34.7	+0.8
KII				eS	Sn	13 17 59.2	+1.7
KII	Karymskiy	1.98	355	PN	Pn	13 17 34.7	+0.8
KII				S	Sn	13 17 59.2	+1.7
SKR	Severo-Kuril's	2.66	240	eP	Pn	13 17 43.9	+0.8
SKR				eS	Sn	13 18 15.2	+1.1
SKR	Severo-Kuril's	2.66	240	ePN	Pn	13 17 44.5	+1.4
SKR				eS	Sn	13 18 17.1	+3.0
SKR				pmax	pmax		
	comp=Z,67nm,0.6s						
SKR				smax	smax		
	comp=N,268nm,0.7s						
SKR				smax	smax		
	comp=E,156nm,0.8s						
ALID	Alaid	2.88	247	eP	Pn	13 17 47.1	+0.8
ALID	Alaid	2.88	247	PN	Pn	13 17 47.1	+0.8
KZV	Kizimen	3.07	6	eP	Pn	13 17 49.4	+0.4
KZV				eS	Sn	13 18 27.2	+2.7
KZV	Kizimen	3.07	6	PN	Pn	13 17 49.4	+0.4
KZV				S	Sn	13 18 27.2	+2.7
TUMD	Tumrok D	3.17	7	eP	Pn	13 17 52.1	+1.9
TUMR	Tumrok	3.23	4	eP	Pn	13 17 52.5	+1.4
TUMR	Tumrok	3.23	4	PN	Pn	13 17 52.1	+1.0
KMNR	Kamenistaya	3.71	4	eP	Pn	13 17 59.8	+2.1
KMNR				eS	Sn	13 18 43.3	+3.2
KMNR	Kamenistaya	3.71	4	PN	Pn	13 17 59.8	+2.1
KMNR				S	Sn	13 18 43.3	+3.2
KIRR	Kirishev	3.91	5	eP	Pn	13 18 01.8	+1.3
KIRR	Kirishev	3.91	5	PN	Pn	13 18 01.8	+1.3
ESO	Esso	3.91	351	eP	Pn	13 18 03.9	+3.5
ESO	Esso	3.91	351	PN	Pn	13 18 03.9	+3.5
BZGR	Bezymyannyi-Gr	3.92	8	eP	Pn	13 18 02.4	+1.8
BZGR	Bezymyannyi-Gr	3.92	8	PN	Pn	13 18 02.4	+1.8
KOZ	Kozyrevsk	4.00	1	eP	Pn	13 18 02.3	+0.7
KOZ	Kozyrevsk	4.00	1	PN	Pn	13 18 02.3	+0.7
ZLN	Zelenaya	4.01	9	eP	Pn	13 18 04.6	+2.8
ZLN	Zelenaya	4.01	9	PN	Pn	13 18 04.6	+2.8
CIRR	Tsirk	4.10	8	eP	Pn	13 18 04.1	+1.0
CIRR	Tsirk	4.10	8	PN	Pn	13 18 04.1	+1.0
KRSR	Krestovskiy	4.19	6	eP	Pn	13 18 05.6	+1.4
KRSR	Krestovskiy	4.19	6	PN	Pn	13 18 05.6	+1.4
SRDR	Sredinnyy	4.26	360	eP	Pn	13 18 08.8	+3.6
SRDR	Sredinnyy	4.26	360	PN	Pn	13 18 08.8	+3.6
KLY	Klyuchi	4.29	7	eP	Pn	13 18 08.2	+2.7
KLY	Klyuchi	4.29	7	PN	Pn	13 18 08.2	+2.7
KBTR	Krutoberegovo	4.53	22	eP	Pn	13 18 09.4	+0.6
KBTR				eS	Sn	13 19 03.7	+3.6
KBTR	Krutoberegovo	4.53	22	PN	Pn	13 18 09.4	+0.6
KBTR				S	Sn	13 19 03.7	+3.6
KBG	Krutoberegovo	4.54	21	eP	Pn	13 18 09.9	+0.9
KBG				eS	Sn	13 19 02.2	+1.7
KBG	Krutoberegovo	4.54	21	PN	Pn	13 18 09.9	+0.9
KBG				S	Sn	13 19 02.2	+1.7
BDR	Baidarnaya	4.59	10	eP	Pn	13 18 09.5	-0.3
BDR				eS	Sn	13 19 04.2	+2.4
BDR	Baidarnaya	4.59	10	PN	Pn	13 18 09.5	-0.3
BDR				S	Sn	13 19 04.2	+2.4
SMKR	Semkarok	4.63	12	eP	Pn	13 18 11.4	+1.0
SMKR	Semkarok	4.63	12	PN	Pn	13 18 11.4	+1.0
SRKR	Sorokina	4.67	10	eP	Pn	13 18 12.9	+2.0
SRKR				eS	Sn	13 19 05.7	+1.9
SRKR	Sorokina	4.67	10	PN	Pn	13 18 12.9	+2.0
SRKR				S	Sn	13 19 05.7	+1.9
BKI	Bering	4.86	47	eS	Sn	13 19 00.9	-7.5
SMY	Shemya	8.81	80	Pn	Pn	13 19 07.0	-0.5
SMY	Shemya	8.81	80	PN	Pn	13 19 07.1	-0.5
MA2	Magadan	9.05	330	LR	LR	13 23 07.0	
	comp=E,65nm,18.3s,baz=218,slow=41						
JKA	Kamikawa-asahi	13.92	242		Pn	13 20 18.2	+0.8
ASAJ	Asahikawa	13.92	242	P	Pn	13 20 18.2	+0.8
	comp=E,0.1nm,0.3s,baz=323,slow=20,SNR=1.9						
GSTR	Great Sitkin T	14.87	80	P	P	13 20 36.1	+0.9
BILL	Bilibino	16.33	9	Pn	Pn	13 20 48.8	-0.1
BILL	Bilibino	16.33	9	P	Pn	13 20 48.8	-0.1
BILL				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KLR	Kul'dur	17.92	272	P	Pn	13 21 08.1	-0.7
	comp=Z,0.1nm,0.3s,baz=18,slow=20,SNR=2.3						
MJAR	Matsushiro Arr	21.74	233	P	P	13 21 50.7	+0.1
	comp=Z,2.9nm,0.8s,baz=25,slow=9.6,SNR=8.5						
TIXI	Tiksi	23.93	336	P	P	13 22 11.1	-1.4
	comp=Z,3.1nm,0.6s,baz=123,slow=11,SNR=14						
TIXI	Tiksi	23.93	336	P	P	13 22 11.3	-1.2
TIXI				IAmb	IAmb	13 22 12.3	
	comp=Z,3.3nm,0.7s						
HIA	Hailar	25.28	280	P	P	13 22 25.0	-0.1
HIA				IAmb	IAmb	13 22 25.7	
	comp=Z,5.2nm,0.6s						
HIA	Hailar	25.28	280	P	P	13 22 25.0	-0.1
HIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
JNU	Nakatsue	28.17	239	P	P	13 22 52.3	+1.0
	comp=Z,6.9nm,1.0s,baz=58,slow=9.5,SNR=2.5						
JNU	Nakatsue	28.17	239	IAmb	IAmb	13 22 58.5	
	comp=Z,26nm,1.6s						
TOLK	Toolik Lake Re	28.92	36	P	P	13 22 56.9	-0.8
TOLK				IAmb	IAmb	13 23 14.9	
	comp=Z,26nm,2.0s						
ILAR	Eielson Array	29.70	44	P	P	13 23 06.2	+1.7
	comp=Z,0.2nm,0.8s,baz=260,slow=8.0,SNR=4.0						
H11N2	WAKE ISLAND Hy	32.76	167	T	T	13 58 36.7	
	baz=352,slow=76,SNR=34						
H11N3	WAKE ISLAND Hy	32.77	167	T	T	13 58 35.5	
	baz=352,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	32.77	167	T	T	13 58 36.7	
	baz=352,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	33.94	168	T	T	14 00 09.5	
	baz=351						
H11S3	WAKE ISLAND Hy	33.95	168	T	T	14 00 09.5	
	baz=351						
H11S2	WAKE ISLAND Hy	33.95	168	T	T	14 00 07.8	
	baz=351						
INK	Inuvik	34.82	37	P	P	13 23 49.7	+0.5
	comp=Z,0.5nm,0.6s,baz=302,slow=6.4,SNR=4.1						
INK	Inuvik	34.82	37	IAmb	IAmb	13 24 08.7	
	comp=Z,4.2nm,1.4s						
YKA	Yellowknife Ar	44.07	42	P	P	13 25 04.2	-2.1
	comp=Z,0.2nm,0.5s,baz=300,slow=8.5,SNR=3.5						
MKAR	Makanchi Array	48.41	296	P	P	13 25 38.4	-2.2
	comp=Z,0.3nm,0.4s,baz=64,slow=6.7,SNR=14						
ARCES	ARCESS Array B	54.19	342	P	P	13 26 22.4	-1.2
	comp=Z,3.7nm,0.9s,baz=18,slow=9.7,SNR=5.0						
CMAR	Chiang Mai Arr	57.76	258	P	P	13 26 51.0	+1.3
	comp=Z,0.8nm,0.5s,baz=26,slow=6.9,SNR=6.3						
PDAR	Pinedale Array	58.22	60	P	P	13 26 52.6	-0.4
	comp=Z,0.2nm,0.8s,baz=282,slow=4.5,SNR=2.7						
FINES	FINESS Array B	60.97	337	P	P	13 27 11.1	-0.2
	comp=Z,1.9nm,0.9s,baz=59,slow=12,SNR=3.3						
NOA	NORSAR Array B	64.46	344	P	P	13 27 33.4	-1.2
	comp=Z,0.8nm,0.8s,baz=23,slow=6.8,SNR=2.6						
AKASG	Malin Array Be	69.38	329	P	P	13 28 04.6	-1.3
	comp=Z,1.9nm,0.8s,baz=30,slow=6.2,SNR=4.1						
TXAR	Lajitas Array	71.25	66	P	P	13 28 18.7	+0.9
	comp=Z,0.2nm,0.7s,baz=301,slow=5.5,SNR=3.7						
BUR08	Bucovina Ar. S	73.33	330	P	P	13 28 29.5	-0.5
BUR08				IAmb	IAmb	13 30 52.2	
	comp=Z,4.4nm,0.7s						
WRA	Warramunga Arr	75.06	205	P	P	13 28 40.7	+0.6
	comp=Z,0.8nm,0.8s,baz=2.0,slow=5.1,SNR=3.6						
ASAR	Alice Springs	78.73	204	P	P	13 29 02.0	+1.2
	comp=Z,0.5nm,0.8s,baz=16,slow=4.9,SNR=5.9						

NEIC 25 13:18:07.8±1.8,3.86N±0.09×71.28W±0.08,h15km±5km, mb4.0/5,Mwr3.5(RSNC),Error ellipse: s-maj=12.9km s-min=11.8km az=177.0
IDC 25 13:18:10.2±3.8,3.94N×71.32W,h28km±26km,mb3.3/3, mb1 3.8/5,mb1mx3.4/38,mbtmp3.7/5,ML2.7/2,MS2.9/2, Ms1 2.9/2,ms1mx2.3/29,Error ellipse: s-maj=22.7km s-min=19.9km az=134.0
RSNC 25 13:18:10.9±0.8,3.90N×71.60W,h0km±4km,ML3.5,Mw3.5
ISC 25 13:18:05.9±1.9,3.89N±0.04×71.34W±0.06,h1km±12km, n36,σ1§49/42,mb3.9/5,1C-1D,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
PTGC	Puerto Gaitan,	0.85	292	eP	Pg	13 18 21.8	-0.4
PTGC				eS	Sg	13 18 30.9	-2.2
PTGC				i		13 18 45.0	
	comp=Z,2μm,0.3s						
GUVC	San Jose del G	1.85	224	eP	Pn	13 18 39.8	+1.1
GUVC				eS	Sn	13 19 02.9	+0.2
GUVC				i		13 19 07.1	
	comp=Z,1μm,0.2s						
GUVC				i		13 19 07.2	
	comp=Z,1μm,0.2s						
CHIC	Chingaza	2.49	287⇓	eP	Pn	13 18 48.7	+0.7
CHIC				eS	Sn	13 19 18.3	-0.9
CHIC				i		13 19 23.3	
	comp=Z,410nm,0.4s						
TAMC	Tame, Arauca	2.57	350	eP	Pn	13 18 52.2	+3.5
TAMC				eS	Sb	13 19 24.0	-1.0
TAMC				i		13 19 45.7	
	comp=Z,296nm,0.5s						
RUSC	La Rusia	2.64	319	eP	Pn	13 18 51.7	+1.7
RUSC				eS	Sn	13 19 23.8	+0.8
RUSC				i		13 19 40.5	
	comp=Z,166nm,0.7s						
MACC	Macarena, Meta	3.04	235	eP	Pn	13 18 57.2	+2.0
MACC				i		13 19 47.6	
	comp=Z,453nm,0.6s						
ROSC	El Rosal	3.12	288	Pn	Pn	13 18 59.1	+2.6
	comp=Z,15nm,0.3s,baz=113,slow=15,SNR=11						
ROSC				Pg	Pg	13 19 07.2	+1.5
	comp=Z,44nm,0.3s,baz=83,slow=17,SNR=33						
ROSC				Sn	Sn	13 19 36.2	+1.6
	comp=Z,11nm,0.3s,baz=18,slow=23,SNR=4.4						
ROSC				Lg	Lg	13 19 49.9	
	comp=Z,32nm,0.3s,baz=191,slow=22,SNR=4.3						
ROSC	El Rosal	3.12	288	eP	Pn	13 18 58.8	+2.3
ROSC				i		13 19 59.7	
	comp=Z,100nm,0.5s						
ROSC				i		13 20 00.0	
	comp=Z,85nm,0.5s						
ROSC	El Rosal	3.12	288		Pn	13 18 58.4	+1.9
SPBC	San Pablo de B	3.24	303	eP	Pn	13 18 58.7	+0.8
SPBC				i		13 19 47.8	
	comp=Z,125nm,0.4s						
BARC	Barichara	3.25	326	eP	Pn	13 18 59.6	+1.3
PRAC	Prado	3.54	267	eP	Pn	13 19 03.9	+1.9
PRAC				i		13 20 13.7	
	comp=Z,127nm,0.5s						
PAMC	Pamplona, Colo	3.69	339	eP	Pn	13 19 06.7	+2.2
PAMC				i		13 20 12.4	
	comp=Z,126nm,0.6s						
NORC	Norcasia	3.89	296	eP	Pn	13 19 07.3	+0.4
NORC				i		13 20 08.1	
	comp=Z,61nm,0.7s						
ORTC	Ortega, Tolima	3.89	270	eP	Pn	13 19 07.8	+0.9
ORTC				i		13 20 18.7	
	comp=Z,148nm,1.2s						
GUY2C	Guyana, Caldas	4.22	288	eP	Pn	13 19 13.2	+1.4
GUY2C				i		13 20 28.1	
	comp=Z,54nm,0.6s						
YOTC	Yotoco, Valle	4.99	271⇑	eP	Pn	13 19 22.2	+0.2
YOTC				i		13 20 41.5	
	comp=Z,20nm,0.6s						
ZARC	Zaragoza, Cauc	5.01	316	eP	Pn	13 19 25.1	+2.9
ZARC				eS	Sn	13 20 19.1	-1.6
ZARC				i		13 20 43.5	
	comp=Z,28nm,0.5s						
SDV	Santo Domingo	5.02	8	Pn	Pn	13 19 23.3	+0.8
	comp=Z,3.9nm,0.3s,baz=190,slow=11,SNR=15						
SDV				Sn	Sn	13 20 20.4	-0.9
	comp=Z,13nm,0.3s,baz=270,slow=17,SNR=4.7						
SDV				Lg	Lg	13 20 47.0	
	comp=Z,20nm,0.3s,baz=44,slow=13,SNR=5.3						
SDV	Santo Domingo	5.02	8		Pn	13 19 23.4	+0.9
DBBC	Dabeiba	5.76	303	eP	Pn	13 19 34.5	+1.9
DBBC				i		13 20 48.7	
	comp=Z,25nm,0.9s						
BANI	BANI	14.45	4	P	P	13 21 37.6	-1.2
SDD	Santo Domingo	14.55	5	P	P	13 21 39.1	-0.6
LGNH	Logne	14.59	355	P	P	13 21 39.8	-0.5
SAML	Samuel	15.12	147	Pn	Pn	13 21 40.4	-0.4
MDP	Montagnes des	18.68	86	LR	LR	13 29 32.6	
	comp=Z,39nm,19.9s,baz=134,slow=37						
LPAZ	La Paz	20.29	171	P	Pn	13 22 45.6	-0.2
	comp=Z,1.3nm,0.6s,baz=349,slow=13,SNR=2.2						
LPAZ	La Paz	20.29	171	P	P	13 22 43.8	-0.1
SIV	San Ignacio	22.21	153	LR	LR	13 32 44.9	
	comp=Z,29nm,20.5s,baz=280,slow=39						
TXAR	Lajitas Array	39.73	313	P	P	13 25 40.5	+0.2
	comp=Z,0.6nm,0.7s,baz=126,slow=8.9,SNR=9.0						
TX31	Lajitas Ar. Si	39.74	313	P	P	13 25 40.5	+0.2
TX31				IAmb	IAmb	13 26 35.0	
	comp=Z,6.8nm,1.9s						
TX32	Lajitas Array	39.74	313	P	P	13 25 40.7	+0.3
TX32				IAmb	IAmb	13 26 35.0	
	comp=Z,6.3nm,1.9s						
MNTX	Cornudas Mount	42.27	315	P	P	13 26 01.8	+0.6
MNTX				IAmb	IAmb	13 26 02.6	
	comp=Z,3.0nm,0.8s						
TORD	Torodi Ar. Bea	72.62	78	P	P	13 29 36.0	+0.3
	comp=Z,0.3nm,0.7s,baz=286,slow=5.6,SNR=3.5						
ASAR	Alice Springs	148.68	229	PKPbc	PKPbc	13 37 54.6	-1.2
	comp=Z,0.3nm,0.5s,baz=120,slow=3.6,SNR=6.5						
WRA	Warramunga Arr	150.31	235	PKPbc	PKPbc	13 37 59.0	-1.0
	comp=Z,0.1nm,0.3s,baz=110,slow=2.9,SNR=5.1						

GUC 25 13:23:00.4±0.6,21.09S×68.98W,h96km±3km,ML3.9
IDC 25 13:23:00.4±1.9,21.12S×68.85W,h118km±15km,mb3.5/2, mb1 3.2/5,mb1mx3.1/31,mbtmp3.6/5,Error ellipse: s-maj=47.1km s-min=16.6km az=104.0
ISC 25 13:22:58.7±0.9,21.09S±0.03×69.05W±0.07,h109km±8km, n29,σ1§03/40,7C-6D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
PB01	IPOC Station P	0.41	276⇑	iP	Pn	13 23 15.0	0.0
PB01				iS	Sn	13 23 26.2	-1.0
PB01				IAML		13 23 27.7	
	comp=E,10μm,0.3s						
PB09	IPOC Station P	0.73	194⇑	iP	Pn	13 23 18.1	+0.7
PB09				iS	Sn	13 23 31.6	+0.1
PB09				IAML		13 23 33.9	
	comp=E,3μm,0.3s						
PB02	IPOC Station P	0.82	253⇑	iP	Pn	13 23 18.7	+0.6
PB02				iS	Sn	13 23 33.1	+0.3
PB02				IAML		13 23 34.3	
	comp=E,5μm,0.1s						
PB08	IPOC Station P	0.95	354⇓	iP	Pn	13 23 20.5	+0.8
PB08				iS	Sn	13 23 35.7	+0.2

PB08 IAML 13 23 37.1
comp=E,4µm,0.2s
PB07 IPOC Station P 1.00 230⇑iP Pn 13 23 20.5 +0.5
PB07 iS **Sn 13 23 36.5 +0.4**
PB07 IAML 13 23 36.9
comp=N,2µm,0.2s
PATCX Punta Patache 1.06 284⇑iP Pn 13 23 21.4 +0.9
PATCX iS **Sn 13 23 37.7 +0.7**
PATCX IAML 13 23 39.0
comp=E,4µm,0.2s
PB03 IPOC Station P 1.16 214 eP Pn 13 23 22.4 +0.7
PB03 iS **Sn 13 23 39.2 +0.2**
PB03 IAML 13 23 40.8
comp=E,2µm,0.2s
TA01 Diego Aracena 1.18 296⇑iP Pn 13 23 22.3 +0.6
TA01 iS **Sn 13 23 39.2 +0.2**
TA01 IAML 13 23 41.0
comp=N,3µm,0.2s
GO01 Chusmiza 1.42 355⇓iP Pn 13 23 26.1 +1.1
GO01 eS **Sn 13 23 45.1 +0.3**
GO01 IAML 13 23 47.5
comp=N,5µm,0.2s
PB11 IPOC Station P 1.44 337⇓iP Pn 13 23 25.6 +0.7
PB11 iS **Sn 13 23 45.1 +0.4**
PB11 IAML 13 23 46.5
comp=N,2µm,0.3s
LVC Limon Verde 1.52 175 eP Pn 13 23 26.8 +0.7
LVC eS **Sn 13 23 47.4 +0.6**
LVC Limon Verde 1.52 175 P Pn 13 23 27.6 +1.5
comp=N,39nm,0.3s,baz=360,slow=7.8,SNR=158
LVC S **Sn 13 23 48.6 +1.8**
comp=N,126nm,0.3s,baz=73,slow=23,SNR=32
PB04 IPOC Station P 1.61 219⇓iP Pn 13 23 28.4 +1.5
PB04 iS **Sn 13 23 48.0 -0.3**
PB04 IAML 13 23 56.0
comp=E,800nm,0.3s
PB06 IPOC Station P 1.68 197⇓iP Pn 13 23 28.6 +0.8
PB06 eS **Sn 13 23 50.8 +0.8**
PB06 IAML 13 23 52.5
comp=E,1µm,0.2s
PSGC Pisagua 1.79 326⇑iP Pn 13 23 29.5 +0.3
PSGC iS **Sn 13 23 51.8 -0.5**
PSGC IAML 13 23 54.3
comp=N,809nm,0.4s
MNMC Minye Minye 2.01 345⇓iP Pn 13 23 33.2 +1.1
MNMC iS **Sn 13 23 58.5 +1.0**
MNMC IAML 13 24 06.4
comp=N,2µm,0.2s
PB05 IPOC Station P 2.06 211 eP Pn 13 23 33.3 +0.9
PB05 iS **Sn 13 23 57.6 -0.7**
LPAZ La Paz 4.85 11 P Pn 13 24 12.3 +2.2
comp=N,0.7nm,0.3s,baz=188,slow=8.9,SNR=19
SIV San Ignacio 9.11 58 P Pn 13 25 05.5 -1.8
comp=N,0.6nm,0.3s,baz=247,slow=9.8,SNR=13
CFA Coronel Fontan 10.50 176 P Pn 13 25 23.1 -3.0
comp=N,0.6nm,0.3s,baz=334,slow=16,SNR=11
CFA S Sn 13 27 11.4 -10
comp=N,0.2nm,0.3s,baz=282,slow=20,SNR=2.4
PLCA Paso Flores 19.63 183 P P 13 27 18.3 -0.4
comp=N,0.0nm,0.3s,baz=10.0,slow=17,SNR=2.9
BDFB Brasilia 20.68 78 P P 13 27 29.9 -0.4
comp=N,2.4nm,0.3s,baz=245,slow=5.9,SNR=3.6
TORD Torodi Ar. Bea 77.34 70 P P 13 34 42.2 +0.2
comp=N,0.3nm,0.3s,baz=258,slow=5.4,SNR=4.0
H11S2 WAKE ISLAND Hy127.69 278 T T 16 01 53.7
baz=101,slow=74,SNR=12
H11S1 WAKE ISLAND Hy127.70 278 T T 16 01 55.9
baz=101,slow=74,SNR=9.1
H11S3 WAKE ISLAND Hy127.71 278 T T 16 01 54.9
baz=101,slow=74,SNR=7.0
H11N3 WAKE ISLAND Hy127.76 279 T T 16 01 59.9
baz=106,slow=75,SNR=7.9
H11N2 WAKE ISLAND Hy127.78 279 T T 16 02 00.7
baz=106,slow=75,SNR=7.9
H11N1 WAKE ISLAND Hy127.78 279 T T 16 01 57.9
baz=106,slow=75,SNR=5.6

IDC 25 13:39:11.0±4.0, 6°.88S×130°.67E, h184km±59km, mb2.7/1, mb1 2.6/4, mb1mx2.5/40, mbtmp3.1/4, Error ellipse: s-maj=133.2km s-min=19.7km az=81.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 6.00 6 P Pn 13 40 39.0 +0.8
0.3nm,0.3s,baz=198,slow=20,SNR=5.8
SIJI S Sn 13 41 46.9 -0.1
0.4nm,0.3s,baz=252,slow=19,SNR=3.2
WRA Warramunga Arr 13.46 165 P Pn 13 42 13.4 -1.6
0.1nm,0.3s,baz=345,slow=11,SNR=5.4
WRA S Sn 13 44 33.0 -12
0.1nm,0.3s,baz=342,slow=23,SNR=7.4
ASAR Alice Springs 16.98 170 P Pn 13 42 58.1 +0.2
0.0nm,0.3s,baz=339,slow=8.9,SNR=6.5
MKAR Makanchi Array 68.49 326 P P 13 49 53.2 -0.1
0.1nm,0.6s,baz=111,slow=7.9,SNR=2.8

ROM 25 14:10:39.8±0.2, 43°.89N×0°.01×7°.93E±0°.01, h12km±1km, ML1.9/8, Error ellipse: s-maj=1.3km s-min=0.6km az=322.0
LDG 25 14:10:39.0±0.1, 43°.81N×7°.97E, h10km, Md2.7/2, Ml2.4/14, Error ellipse: s-maj=1.5km s-min=1.3km az=161.0
GEN 25 14:10:40.0, 43°.86N×7°.96E, h10km, Ml1.7
STR 25 14:10:40.1±0.7, 44°N±3°×°±°, h13km±2km, MLv2.0/6
ISC 25 14:10:38.5±0.9, 43°.80N±0°.03×8°.01E±0°.02, h16km±5km, n51, σ1.°28/90, 1C-5D, Corsica

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
IMI Imperia 0.14 324⇓iP Pg 14 10 42.5 +0.1
IMI S **Sg 14 10 44.1 -0.9**
IMI AML AML
comp=E,1845µm,0.2s
IMI AML AML
comp=E,1840µm,0.2s
IMI AML AML
comp=N,1655µm,0.3s
IMI AML AML
comp=N,1660µm,0.3s
IMI Imperia 0.14 324 P Pg 14 10 42.5 +0.1
IMI S **Sg 14 10 44.2 -0.9**
NEGI Seborga 0.22 283⇑iP Pg 14 10 44.0 +0.4
NEGI S **Sg 14 10 46.9 -0.3**
NEGI AML AML
comp=E,1080µm,0.1s
NEGI AML AML
comp=N,871µm,0.1s
NEGI Seborga 0.22 283 P Pg 14 10 44.1 +0.4
NEGI S **Sg 14 10 46.8 -0.3**
RORO Rocca Rossa 0.32 8 P Pg 14 10 45.6 +0.4
RORO S **Sg 14 10 49.1 -0.6**
RORO AML AML
comp=E,860µm,0.1s
RORO AML AML
comp=N,608µm,0.1s
RORO Rocca Rossa 0.32 8 P Pg 14 10 45.6 +0.4
RORO S **Sg 14 10 49.2 -0.5**
SAOF Saorge 0.38 300 Pg Pg 14 10 46.5 +0.3
SAOF Sg **Sg 14 10 50.6 -0.9**
SAOF Saorge 0.38 300 P Pg 14 10 46.2 0.0
SAOF S **Sg 14 10 50.6 -0.9**
SAOF AML AML
comp=N,348µm,0.3s
SAOF AML AML
comp=E,562µm,0.7s
SBF Sospel 0.42 279 ePg Pg 14 10 47.5 +0.5
SBF eSg **Sg 14 10 52.3 -0.5**
comp=E,263nm,0.4s
MON Monaco 0.43 261 Pg Pg 14 10 48.2 +1.1
FINB Finale Ligure 0.44 31⇓iP Pg 14 10 48.2 +0.8
FINB S **Sg 14 10 53.6 +0.1**
FINB AML AML
comp=E,122µm,0.3s
FINB AML AML
comp=E,122µm,0.3s
FINB AML AML
comp=N,148µm,1.3s
FINB AML AML
comp=N,148µm,1.3s
ESCA l'Escarene 0.46 274 Pg Pg 14 10 48.5 +0.8
GBOS Grotte di Boss 0.46 345⇓iP Pg 14 10 47.6 -0.1
GBOS S **Sg 14 10 52.9 -1.1**
GBOS AML AML
comp=N,94µm,0.1s
GBOS AML AML
comp=E,152µm,0.4s
GBOS Grotte di Boss 0.46 345 P Pg 14 10 47.7 -0.1
GBOS S **Sg 14 10 53.1 -0.9**
TURF col de Turini 0.48 292 Pg Pg 14 10 48.3 +0.2
TURF Sg **Sg 14 10 54.3 -0.3**
QLNO Quiliano 0.58 25⇓iP Pg 14 10 50.5 +0.5
QLNO S **Sg 14 10 57.5 -0.3**
QLNO AML AML
comp=E,142µm,0.6s
QLNO AML AML
comp=N,150µm,0.7s
ENR Entracque 0.60 316 AML AML
comp=E,214µm,1.2s
ENR AML AML
comp=N,231µm,0.8s
ENR Entracque 0.60 316 P Pg 14 10 50.1 -0.3
ENR S **Sg 14 10 57.1 -1.3**
STV Sant Anna di V 0.66 313⇓iP Pg 14 10 51.2 -0.3
STV S **Sg 14 10 58.6 -1.7**
STV AML AML
comp=N,150µm,0.2s
STV AML AML
comp=E,189µm,0.3s
STV Sant Anna di V 0.66 313 P Pg 14 10 51.2 -0.3
STV S **Sg 14 10 58.8 -1.6**
CALF Calern 0.79 267 Pg Pg 14 10 54.4 +0.6
CALF Sg **Sg 14 11 04.6 +0.4**
ISO Isola 0.79 299 Pg Pg 14 10 53.9 -0.1
ISO Sg **Sg 14 11 03.0 -1.4**
PCP Piancastagn 0.84 27 AML AML
comp=N,105µm,0.2s
PCP AML AML
comp=E,110µm,1.5s
PCP Piancastagn 0.84 27 P Pg 14 10 55.2 +0.3
PCP S **Sg 14 11 05.6 -0.3**
DOI San Damiano 0.89 323 AML AML
comp=N,106µm,0.6s
DOI AML AML
comp=E,98µm,1.6s
PZZ Stroppo 0.95 318 AML AML
comp=E,106µm,0.2s
PZZ AML AML
comp=N,130µm,0.3s
PZZ Stroppo 0.95 318 P Pg 14 10 56.5 -0.6
PZZ S **Sg 14 11 07.9 -1.7**
FRF La Foret Royal 1.01 257 ePg Pb 14 10 57.7 0.0
FRF eSg **Sg 14 11 10.4 -1.0**
comp=N,16nm,0.2s
SURF Saint Ours 1.10 309 Pg Pb 14 10 59.4 +0.1
SURF Sg **Sb 14 11 13.3 0.0**
LMR La Mourre 1.18 247 ePn Pn 14 10 58.6 -1.8
LMR La Mourre 1.18 247 ePg Pb 14 10 59.9 -0.5
LMR eSn **Sb 14 11 14.4 -1.2**
comp=N,18nm,0.3s
OGAG Argentiere 1.24 302 Pg Pg 14 11 06.1 +3.6
OGAG Sn **Sn 14 11 22.3 +4.4**
OGDI Digne 1.27 285 Pg Pg 14 11 04.3 +1.3
OGDI Sg **Sg 14 11 20.0 +0.4**
MBDF Montbardon 1.28 317 ePn Pn 14 11 02.3 +0.3
MBDF Montbardon 1.28 317 ePg Pb 14 11 03.0 +0.6
MBDF eSn **Sb 14 11 17.1 -1.6**
comp=N,3.9nm,0.2s
MBDF eSg **Sn 14 11 19.5 +0.6**
comp=N,11nm,0.2s
BLAF les Blancs 1.43 277 Pg Pb 14 11 05.7 +0.9
BLAF Sg **Sg 14 11 25.0 +0.4**
PGF Pioggiola 1.45 149 ePn Pn 14 11 03.8 -0.3
PGF eSn **Sn 14 11 21.4 -1.4**
comp=N,1.8nm,0.2s
PGF Pioggiola 1.45 149 Pn Pn 14 11 04.0 -0.2
ARTF Artigues 1.61 263 Pn Pn 14 11 07.7 +1.4
ARTF Sg **Sb 14 11 29.8 +1.9**
MLYF Mely 1.63 277 Pg Pb 14 11 09.4 +1.1
MLYF Sg **Sg 14 11 30.9 -0.1**
BSTF la Bastide-des 1.71 274 Pn Pn 14 11 08.2 +0.5
BSTF Pg **Pg 14 11 11.8 +0.5**
BSTF Sg **Sg 14 11 33.2 -0.4**
SMRF Simiane la Rot 1.77 277 ePn Pn 14 11 07.4 -1.1
SMRF Simiane la Rot 1.77 277 eP Pn 14 11 09.3 +0.8
SMRF eSn **Sn 14 11 28.3 -2.4**
SMRF eSg **Sb 14 11 33.8 +1.3**
comp=N,8.4nm,0.2s
ORIF Oris-en-Rattie 1.89 307 ePg Pb 14 11 14.0 +1.3
ORIF eSg **Sg 14 11 38.5 -0.9**
comp=N,9.0nm,0.3s
ORIF Oris-en-Rattie 1.89 307 Pg Pg 14 11 14.7 -0.2
ORIF Sg **Sg 14 11 39.6 +0.2**
LPG La Plagne 1.92 333 eP Pn 14 11 12.3 +1.5
LPG eSg **Sg 14 11 39.5 -0.9**
comp=N,2.0nm,0.2s
LPL La Plagne 1.94 333 eP Pn 14 11 12.8 +1.7
LPL eSn **Sn 14 11 33.7 -1.6**
comp=N,3.0nm,0.3s
VIVF Saint-Julien-l 2.62 295 ePn Pn 14 11 19.5 -0.7
VIVF eSn **Sn 14 11 48.9 -2.7**
comp=N,0.9nm,0.2s
VIVF eSg **Sg 14 12 00.3 -2.2**
comp=N,2.6nm,0.2s
LASF Ste Croix 3.01 277 eP Pn 14 11 27.0 +1.4
LASF Ste Croix 3.01 277 ePg Pb 14 11 34.6 +2.9
LASF eSn **Sn 14 11 57.4 -3.9**
comp=N,1.2nm,0.3s
MTLF Montolieu 4.23 266 ePn Pn 14 11 40.2 -2.1

NEIC 25 14:11:19.5±1.1, 21°.7S±0°.4×177°.2W±0°.4, h261km±20km, mb4.2/10, Error ellipse: s-maj=69.5km s-min=34.6km az=147.0
IDC 25 14:11:34.1±38.0, 21°.23S×177°.94W, h367km±330km, mb3.3/3, mb1 3.6/3, mb1mx3.1/28, mbtmp4.1/3, Error ellipse: s-maj=199.4km s-min=136.4km az=98.0
ISC 25 14:11:31.1±2.6, 21°.6S±0°.5×177°.7W±0°.4, h350km, n15, σ0.°85/15, mb4.0/7, Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
COEN Coen 37.97 275 P P 14 18 17.4 +0.6
BBOO Buckleboo 42.36 245 P P 14 18 53.9 +1.6
WR0 Warramunga Arr 44.58 263 P P 14 19 09.4 -0.6
AS31 Alice Springs 44.58 258 P P 14 19 10.1 0.0
ASAR Alice Springs 44.58 258 P P 14 19 10.3 +0.3
2.3nm,0.8s,baz=93,slow=8.1,SNR=62
ASAR PcP **PcP 14 20 46.0 -0.3**
0.3nm,0.5s,baz=101,slow=3.0,SNR=4.2
WB0 Warramunga Arr 44.75 263 P P 14 19 10.6 -0.7
WB0 IAmb IAmb 14 20 54.1
comp=Z,21nm,1.9s
WB2 Warramunga Arr 44.76 263 P P 14 19 10.6 -0.8
WB2 IAmb IAmb 14 20 04.3
comp=Z,22nm,1.8s
WRAB Tennant Creek 44.76 263 P P 14 19 10.6 -0.8
WRAB IAmb IAmb 14 20 04.3
comp=Z,14nm,1.6s
WRA Warramunga Arr 44.77 263 P P 14 19 11.0 -0.5
comp=Z,0.8nm,0.3s,baz=97,slow=7.5,SNR=23
FITZ Fitzroy Crossi 53.20 263 P P 14 20 14.9 +0.1
FITZ IAmb IAmb 14 20 38.5
comp=Z,15nm,1.6s
PSA00 Pilbara Seismi 57.73 257 P P 14 20 45.4 -1.4
NWAO Narrogin (SRO) 58.17 244 P P 14 20 48.8 -0.8
CMAR Chiang Mai Arr 90.76 289 P P 14 23 55.6 0.0
comp=Z,0.5nm,0.3s,baz=140,slow=5.7,SNR=5.2
BVAR Borovoye Array 120.10 320 PKP PKPdf 14 29 41.0 +0.6
comp=Z,0.8nm,0.3s,baz=124,slow=3.5,SNR=4.0
AKASG Malin Array Be 144.10 331 PKP PKPab 14 30 24.4 +0.4
comp=Z,1.3nm,0.5s,baz=44,slow=4.4,SNR=7.4

IDC 25 14:50:50.8±1.7, 8°.18S×120°.55E, h0km, mb2.9/2, mb1 3.5/5, mb1mx3.3/47, mbtmp3.3/5, ML3.3/3, Error ellipse: s-maj=125.2km s-min=21.4km az=60.0, Flores region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KAPI Kappang 3.25 346 Pn Pn 14 51 44.0 +1.0
2.9nm,0.3s,baz=169,slow=16,SNR=5.0
FITZ Fitzroy Crossi 11.03 154 Pn Pn 14 53 30.5 +0.6
0.1nm,0.3s,baz=330,slow=14,SNR=4.4
WRA Warramunga Arr 17.75 133 P Pn 14 54 58.8 -0.7
0.1nm,0.3s,baz=307,slow=12,SNR=12
ASAR Alice Springs 20.02 142 P P 14 55 25.8 +0.4
0.4nm,0.9s,baz=328,slow=12,SNR=13
MKAR Makanchi Array 64.45 332 P P 15 01 28.8 -0.3
0.1nm,0.4s,baz=144,slow=7.3,SNR=2.4

SJA 25 14:54:47.2±0.8, 24°.16S×69°.44W, h88km±11km, ML3.5, MW3.4
GUC 25 14:54:48.9±0.6, 24°.12S×69°.47W, h78km±7km, ML3.6
ISC 25 14:54:48.2±1.6, 24°.13S±0°.05×69°.51W±0°.07, h97km±16km, n18, σ0.°83/27, 5C-1D, Northern Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PB15 IPOC Station P 0.92 2⇓iP Pn 14 55 07.7 -0.1
PB15 iS **Sn 14 55 21.6 -0.9**
PB15 IPOC Station P 0.92 2 iP Pn 14 55 07.8 -0.1
PB15 iS **Sn 14 55 22.0 -0.5**
PB14 IPOC Station P 0.95 238 iP Pn 14 55 08.6 +0.4
PB14 iS **Sn 14 55 23.4 +0.1**
PB14 IAML 14 55 27.7
comp=Z,546nm,0.5s
GO02 Mina Guanaco 1.03 184⇑iP Pn 14 55 09.3 +0.2
GO02 iS **Sn 14 55 24.7 -0.2**
GO02 IAML 14 55 27.3
comp=E,3µm,0.1s
PB10 IPOC Station P 1.13 303⇑iP Pn 14 55 10.4 +0.5
PB10 iS **Sn 14 55 26.5 +0.2**
PB10 IAML 14 55 29.4
comp=E,960nm,0.2s
PB10 IPOC Station P 1.13 303 iP Pn 14 55 10.4 +0.5
PB10 iS **Sn 14 55 27.1 +0.8**
PB10 IAML 14 55 29.3
comp=Z,1µm,0.3s
PB06 IPOC Station P 1.42 358⇑iP Pn 14 55 13.7 +0.1
PB06 iS **Sn 14 55 32.3 -0.3**
PB06 IAML 14 55 33.7
comp=E,2µm,0.2s
PB05 IPOC Station P 1.42 333⇑iP Pn 14 55 13.7 +0.2
PB05 iS **Sn 14 55 32.8 +0.3**
PB05 IAML 14 55 35.0
comp=E,1µm,0.3s
LVC Limon Verde 1.61 20⇑iP Pn 14 55 16.6 +0.5
LVC iS **Sn 14 55 37.2 0.0**
PB04 IPOC Station P 1.88 342 IAML 14 55 49.5
comp=E,622nm,0.6s
GO03 Copiap 3.51 191 iP Pn 14 55 40.4 -0.4
VCA Vinchina 4.74 166 iP Pn 14 55 59.8 +2.3
AROD Rodeo 6.01 180 iP Pn 14 56 15.7 +0.7
GO04 Tololo Observa 6.13 190 iP Pn 14 56 14.2 -2.3
GO04 iS **Sn 14 57 25.9 +0.6**
ACCO Cerro Coronel 6.45 177 iP Pn 14 56 21.1 +0.2
RTLL Cerro Villicun 7.23 173 iP Pn 14 56 30.8 -0.5
RTCV Cerro Valdivia 7.75 174 iP Pn 14 56 37.6 -0.8
ACAN Cantantal 8.37 166 iP Pn 14 56 46.0 -0.8

IDC 25 15:08:07.4±1.2, 20°.22N×120°.52E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.3/49, mbtmp3.4/5, ML3.1/1, MS2.6/1, Ms1 2.8/1, ms1mx2.2/38, Error ellipse: s-maj=57.1km s-min=22.3km az=74.0, Philippine Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSRS Korea Array 18.35 19 P Pn 15 12 22.9 -0.4
0.1nm,0.3s,baz=198,slow=12,SNR=2.9
CMAR Chiang Mai Arr 20.44 269 LR LR 15 20 38.5
comp=Z,16nm,18.3s,baz=130,slow=37
MKAR Makanchi Array 40.85 319 P P 15 15 50.6 -0.4
0.2nm,0.6s,baz=116,slow=8.3,SNR=2.8
WRA Warramunga Arr 42.14 160 P P 15 16 01.1 -0.6
0.4nm,0.7s,baz=342,slow=9.0,SNR=5.1
ASAR Alice Springs 45.52 163 P P 15 16 29.2 +0.2
0.4nm,0.5s,baz=347,slow=7.2,SNR=19
YKA Yellowknife Ar 86.85 22 P P 15 20 54.1 +0.4
0.5nm,1.0s,baz=316,slow=4.8,SNR=3.8

SJA 25 15:11:50.7±1.0, 32°.16S×69°.47W, h112km±7km, ML3.0, MW3.2
GUC 25 15:11:51.5±0.6, 32°.11S×69°.77W, h120km±10km, ML3.2
ISC 25 15:11:51.4±2.2, 32°.15S±0°.04×69°.50W±0°.05, h114km±21km, n18, σ0.°74/32, 2C-5D, Mendoza Province

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ARCO CERRO ARCO 0.84 145 iP Pn 15 12 11.8 +0.3
ARCO eS **Sn 15 12 27.1 +0.4**
ARCO IAML 15 12 28.2
comp=Z,677nm,0.7s
RTCV Cerro Valdivia 0.86 71 iP Pn 15 12 11.5 -0.1
RTCV eS **Sn 15 12 26.7 -0.2**
RTCV IAML 15 12 27.0
comp=Z,252nm,0.3s
AAGR Agrelo 1.09 149 iP Pn 15 12 14.4 +0.4
AAGR eS **Sn 15 12 30.7 -0.3**
AAGR IAML 15 12 33.3
comp=Z,233nm,0.3s
RTLL Cerro Villicun 1.20 47 iP Pn 15 12 14.9 -0.2
RTLL eS **Sn 15 12 32.7 -0.2**
RTLL IAML 15 12 34.2
comp=Z,111nm,0.3s
RTLL IAML 15 12 34.2
comp=Z,115nm,0.3s
CFA Coronel Fontan 1.21 63 iP Pn 15 12 14.8 -0.4
CFA eS **Sn 15 12 32.5 -0.6**
FCH Farellones 1.35 209⇓iP Pn 15 12 17.5 +0.5
FCH iS **Sn 15 12 38.0 +1.6**
FCH IAML 15 12 38.5
comp=E,337nm,0.2s
PEL Peldehue 1.41 225⇑iP Pn 15 12 17.3 -0.1
PEL iS **Sn 15 12 36.7 -0.5**
PEL IAML 15 12 37.8
comp=E,332nm,0.2s
PEL Peldehue 1.41 225 iP Pn 15 12 17.3 -0.1
PEL eS **Sn 15 12 36.8 -0.3**
AMOG MOGNA 1.48 36 iP Pn 15 12 18.6 +0.2
AMOG eS **Sn 15 12 37.8 -1.0**
AMOG IAML 15 12 41.2
comp=Z,92nm,0.4s
ROCH El Roble 1.52 237⇑iP Pn 15 12 18.3 -0.5
ROCH iS **Sn 15 12 39.0 -0.7**
ROCH IAML 15 12 40.9
comp=N,562nm,0.2s
CLCH Cerro Calan 1.52 215⇓iP Pn 15 12 19.0 +0.3
CLCH iS **Sn 15 12 40.0 +0.5**
CLCH IAML 15 12 41.7
comp=E,622nm,0.4s
MT03 Universidad Ad 1.59 212⇓iP Pn 15 12 20.0 +0.4
MT03 iS **Sn 15 12 42.0 +1.0**
MT02 Curacav 1.77 231⇓iP Pn 15 12 20.9 -0.8
MT02 iS **Sn 15 12 43.4 -1.4**
ACAN Cantantal 1.96 94 iP Pn 15 12 24.1 -0.1
ACAN eS **Sn 15 12 48.6 -0.5**
AROD Rodeo 1.98 1 iP Pn 15 12 25.7 +1.0
AROD eS **Sn 15 12 51.9 +1.9**
GO04 Tololo Observa 2.26 330⇓iP Pn 15 12 28.1 -0.1
GO04 iS **Sn 15 12 55.6 -0.7**
PB14 IPOC Station P 7.54 354 iP Pn 15 13 44.9 +5.9
PB09 IPOC Station P 10.32 1 eP Pn 15 14 05.2 -11

IDC 25 15:18:56.7±8.2, 14°.27S×174°.44W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/39, mbtmp3.7/3, Error ellipse: s-maj=363.9km s-min=36.8km az=138.0, Samoa Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
H11S2 WAKE ISLAND Hy 37.48 330 T T 16 07 03.7
baz=149,slow=76,SNR=8.2
H11S3 WAKE ISLAND Hy 37.50 330 T T 16 07 18.8
baz=149,slow=76,SNR=10.0
H11S1 WAKE ISLAND Hy 37.50 330 T T 16 07 24.8
baz=149,slow=76,SNR=7.4
H11N3 WAKE ISLAND Hy 38.44 331 T T 16 08 18.8
baz=150,slow=76,SNR=10
H11N1 WAKE ISLAND Hy 38.45 331 T T 16 08 20.0
baz=150,slow=76,SNR=9.3
H11N2 WAKE ISLAND Hy 38.46 331 T T 16 08 28.4
baz=150,slow=76,SNR=8.9
WRA Warramunga Arr 49.13 256 P P 15 27 46.8 +0.1
0.5nm,0.8s,baz=90,slow=7.3,SNR=7.8
ASAR Alice Springs 49.51 251 P P 15 27 49.2 -0.3
1.5nm,0.6s,baz=88,slow=7.8,SNR=25
ILAR Eielson Array 81.54 12 P P 15 31 15.8 0.0

	0.4nm,0.8s,baz=207,slow=5.8,SNR=4.6						

NIED **25** *15:35:00,37.80N×141.70E,h56km,Mw3.8 Best double couple: M0 5.06000×10^14 NP1:φs24.00000°,δ74.00000°, λ81.00000°. NP2:φs232.00000°,δ18.00000°,λ117.00000°.*
JMA **25** *15:35:31.6±0.1,37.84N×141.73E,h43km±1km,M3.8*
JMA Felt I J1.
IDC **25** *15:35:32.6±2.0,37.83N×141.73E,h47km±19km,mb3.4/11, mb1 3.6/15,mb1mx3.5/44,mbtmp3.7/15,ML2.9/4,MS2.5/4, Ms1 2.5/4,ms1mx2.3/34,Error ellipse: s-maj=23.1km s-min=12.9km az=110*
ISC 25 15:35:29.2±1.3,37.79N±0.04×141.81E±0.07,h20km±9km, n40,σ0.94/51,mb3.7/11,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.58	333	P	Pn	15 35 42.7	+0.3
JIKH				S	Sb	15 35 50.0	+1.4
JMST	Minamisoumatoc	0.73	265	P	Pn	15 35 44.8	+0.4
JMST				S	Sn	15 35 54.0	-0.9
JIO	Ouri	0.75	332	P	Pn	15 35 45.0	+0.3
JIO				S	Sb	15 35 53.9	+0.5
JMM	Marumori	0.81	276	P	Pn	15 35 45.8	+0.4
JMM				S	Sn	15 35 55.8	-1.0
JFK	Kawauchi	0.85	240	P	Pn	15 35 46.7	+0.6
JFK				S	Sn	15 35 57.2	-0.8
JKMT	Kesennumamotoy	1.05	346	P	Pn	15 35 49.0	+0.2
JKMT				S	Sb	15 36 01.0	-1.0
ONAJ	Iwakimizuishiy	1.06	230	P	Pn	15 35 49.6	+0.7
ONAJ				S	Sb	15 36 02.4	+0.2
JOU	Okura	1.07	303	P	Pn	15 35 49.5	+0.5
JOU				S	Sb	15 36 02.5	0.0
JFT	Otama	1.20	257	P	Pb	15 35 52.2	+1.0
JFT				S	Sn	15 36 07.1	+0.6
JMK	Ichinoseki	1.25	339	P	Pb	15 35 52.0	0.0
JMK				S	Sn	15 36 06.3	-1.4
JYS	Shirataka	1.44	288	P	Pb	15 35 55.1	-0.2
JYS				eS	Sn	15 36 12.5	0.0
JYK	Kaneyama	1.60	315	P	Pn	15 35 57.0	+0.7
JFY	Yanaizu	1.71	258	P	Pb	15 35 59.2	-0.8
JFY				eS	Sn	15 36 19.6	+0.4
JOM	Ohasama	1.73	347	P	Pn	15 35 58.9	+0.8
JOM				S	Sn	15 36 19.2	-0.3
JYA	Atsumi	1.83	297	P	Pn	15 36 00.4	+0.9
JYA				S	Sn	15 36 22.8	+0.7
JRG	Rokugo	1.85	331	P	Pn	15 36 00.9	+1.2
JRG				S	Sn	15 36 22.8	+0.3
MJAR	Matsushiro Arr	3.13	248	P	Pn	15 36 19.6	+2.2
	0.2nm,0.3s,baz=53,slow=10,SNR=16						
MJAR				S	Sb	15 37 02.2	+0.2
	0.4nm,0.3s,baz=88,slow=29,SNR=4.5						
MJAR				LR	LR	15 37 46.8	
	comp=Z,71nm,19.9s,baz=75,slow=44						
MAT	Matsushiro	3.13	248	P	Pb	15 36 21.3	-2.9
MAT				S	Sb	15 37 02.3	+0.3
JHJ	Hachijo jima 2	4.95	200	P	Pn	15 36 44.7	+2.4
	8.6nm,0.3s,baz=42,slow=15,SNR=2.6						
JHJ				S	Sn	15 37 37.8	-1.2
	11nm,0.3s,baz=253,slow=19,SNR=3.2						
ASAJ	Asahikawa	6.35	5	P	Pn	15 37 01.8	+0.2
	0.7nm,0.3s,baz=213,slow=18,SNR=12						
ASAJ				S	Sn	15 38 13.4	-0.1
	0.3nm,0.3s,baz=127,slow=20,SNR=2.2						
ASAJ				LR	LR	15 39 45.4	
	comp=Z,30nm,18.8s,baz=174,slow=40						
USRK	Ussuriysk Ar.	9.80	314	P	Pn	15 37 50.4	+1.6
	baz=118,slow=14,SNR=6.1						
JNU	Nakatsue	10.05	246	LR	LR	15 41 34.0	
	comp=Z,36nm,21.6s,baz=64,slow=36						
KSRS	Korea Array	11.02	272	P	Pn	15 38 11.4	+5.8
	0.1nm,0.3s,baz=83,slow=14,SNR=5.3						
KSRS				LR	LR	15 41 38.7	
	comp=Z,32nm,19.1s,baz=308,slow=33						
SEY	Seymchan	25.99	11	P	P	15 41 01.4	+1.1
	0.6nm,0.6s,baz=198,slow=20,SNR=3.0						
H11N2	WAKE ISLAND Hy	28.28	123	T	T	16 11 38.8	
	baz=316,slow=75,SNR=78						
H11N1	WAKE ISLAND Hy	28.29	123	T	T	16 11 39.5	
	baz=316,slow=75,SNR=57						
H11N3	WAKE ISLAND Hy	28.30	123	T	T	16 11 40.1	
	baz=316,slow=75,SNR=53						
H11S1	WAKE ISLAND Hy	29.02	125	T	T	16 12 35.8	
	baz=318,slow=76,SNR=48						
H11S3	WAKE ISLAND Hy	29.02	125	T	T	16 12 38.8	
	baz=318,slow=76,SNR=38						
H11S2	WAKE ISLAND Hy	29.04	125	T	T	16 12 40.3	
	baz=318,slow=76,SNR=39						
ZALV	Zalesovo Beam	41.64	312	P	P	15 43 15.3	-0.5
	2.0nm,0.8s,baz=84,slow=6.2,SNR=8.0						
MKAR	Makanchi Array	43.98	302	P	P	15 43 34.6	-0.4
	1.1nm,0.9s,baz=88,slow=9.1,SNR=9.5						
ILAR	Eielson Array	48.69	33	P	P	15 44 11.7	+0.1
	0.2nm,0.5s,baz=264,slow=5.5,SNR=5.0						
WRA	Warramunga Arr	57.85	188	P	P	15 45 19.2	-0.2
	0.6nm,0.4s,baz=4.2,slow=7.2,SNR=16						
ASAR	Alice Springs	61.58	188	P	P	15 45 45.2	0.0
	0.4nm,0.7s,baz=15,slow=6.7,SNR=7.2						
YKA	Yellowknife Ar	63.00	30	P	P	15 45 54.3	+0.2
	0.2nm,0.6s,baz=305,slow=6.5,SNR=3.7						
FINES	FINESS Array B	68.29	332	P	P	15 46 27.6	-0.7
	1.6nm,0.8s,baz=80,slow=10,SNR=3.8						
AKASG	Malin Array Be	73.89	322	P	P	15 47 01.5	-1.0
	0.4nm,0.4s,baz=47,slow=6.2,SNR=4.4						
PDAR	Pinedale Array	76.91	46	P	P	15 47 20.7	+0.4
	0.1nm,0.5s,baz=282,slow=4.3,SNR=2.2						
TXAR	Lajitas Array	89.41	53	P	P	15 48 24.9	+0.1
	0.2nm,0.6s,baz=306,slow=2.1,SNR=3.0						

IDC 25 15:39:41.9±1.9,28.53N×43.70W,h0km,mb3.7/5, mb1 4.0/5,mb1mx3.6/38,mbtmp3.7/5,Error ellipse: s-maj=79.9km s-min=25.0km az=12.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	44.83	100	P	P	15 47 57.6	-0.4
	0.8nm,0.7s,baz=297,slow=7.3,SNR=4.0						
H10N2	ASCENSION HYDR	45.84	138	T	T	16 37 02.5	
	baz=323,slow=75,SNR=38						
H10N3	ASCENSION HYDR	45.84	138	T	T	16 37 06.8	
	baz=323,slow=75,SNR=38						
H10N1	ASCENSION HYDR	45.86	138	T	T	16 37 08.7	
	baz=323,slow=75,SNR=60						
H10S3	ASCENSION HYDR	46.64	139	T	T	16 37 59.1	
	baz=323,slow=74,SNR=42						
H10S2	ASCENSION HYDR	46.65	139	T	T	16 38 00.3	
	baz=257,slow=74,SNR=37						
TXAR	Lajitas Array	51.96	286	P	P	15 48 53.0	0.0
	0.6nm,0.8s,baz=93,slow=10.0,SNR=6.7						
PDAR	Pinedale Array	54.09	304	P	P	15 49 08.9	+0.2
	1.2nm,0.8s,baz=87,slow=9.1,SNR=13						
BRTR	Keskin Array B	63.18	57	P	P	15 50 12.6	+0.5
	0.6nm,0.6s,baz=297,slow=6.3,SNR=3.6						
ILAR	Eielson Array	69.92	334	P	P	15 50 54.0	-0.5
	0.6nm,0.9s,baz=76,slow=3.8,SNR=5.0						

IDC **25** *15:43:30.4±0.6,59.35S×59.88W,h0km,mb4.6/11, mb1 4.7/14,mb1mx4.5/31,mbtmp4.6/14,ML4.8/3,MS4.3/20, Ms1 4.3/20,ms1mx4.2/24,Error ellipse: s-maj=23.6km s-min=13.4km az=74.0*
NEIC **25** *15:43:31.9±1.8,59.40S±0.04×60.00W±0.2,h15km±3km, mb5.1/25,Error ellipse: s-maj=11.6km s-min=4.8km az=104.0*
GCMT **25** *15:43:34.9±0.1,59.36S±0.01×59.87W±0.02,h19km, MW5.3/137,Moment Tensor Solution. s102,c145; s137,c226; Duration: 1.1 Moment tensor: Scale 10^17 Nm; Mrr-0.20±.02; Mθθ1.02±.02; Mφφ-0.81±.02; Mrθ0.02±.03; Mrφ0.31±.01; Mθφ0.48±.04; Best double couple: M0 1.09600×10^17 NP1:φs122.00000°,δ67.00000°, λ-17.00000°. NP2:φs219.00000°,δ75.00000°, λ-157.00000°. Principal axes: T 1.0800, Plg5.0000°, Azm349.0000°; N 0.0280, Plg62.0000°, Azm250.0000°; P -1.1110, Plg27.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 25 15:43:31.1±0.3,59.45S±0.05×60.23W±0.07,h10km,n122, σ1.38/103,mb4.9/22,MS4.4/24,2D,Drake Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	Palmer Station	5.64	197	Pn	Pn	15 44 56.1	+1.3
	105nm,0.3s,baz=34,slow=8.6,SNR=117						
PMSA				Sn	Sn	15 45 56.1	-3.4
	12nm,0.3s,baz=168,slow=20,SNR=5.0						
PMSA				LR	LR	15 47 04.6	
	comp=Z,2μm,19.7s,baz=60,slow=37						
PMSA	Palmer Station	5.64	197	eP	Pn	15 45 00.9	+6.1
USHA	Ushuaia	6.43	312	Pn	Pn	15 45 06.7	+1.1
	3.5nm,0.3s,baz=320,slow=12,SNR=20						
USHA				Sn	Sn	15 46 18.5	-0.5
	14nm,0.3s,baz=253,slow=16,SNR=9.8						
EFI	East Falkland	7.88	10		Pn	15 45 25.0	-0.6
GO10	Punta Arenas	8.71	312		Pn	15 45 38.5	+1.6
GO09	Cerro Castillo	10.69	315		Pn	15 46 05.2	+1.1
HOPE	Hope Point	13.93	79		Pn	15 46 46.6	-1.7
PLCA	Paso Flores	19.82	336	P	Pn	15 48 03.0	-0.3
	0.8nm,0.3s,baz=188,slow=10,SNR=47						
PLCA				LR	LR	15 54 55.3	
	comp=Z,1μm,21.3s,baz=194,slow=35						
PLCA	Paso Flores	19.82	336	eP	Pn	15 48 03.1	-0.3
PLCA	Paso Flores	19.82	336	P	Pn	15 48 02.8	-0.5
PLCA				IAmb	IAmb	15 48 14.0	
	comp=Z,124nm,1.1s						
VNA3	Neumayer Olymp	23.30	141	P	P	15 48 40.1	+1.4
VNA1	Neumayer--Stat	23.74	139	P	P	15 48 43.6	+0.8
VNA2	Neumayer--Watz	24.03	140	P	P	15 48 48.0	+2.3
	baz=270,slow=9.4						
SNAA	Sanae	25.50	142	P	P	15 49 00.4	+1.3
SNAA	Sanae	25.50	142	P	P	15 49 00.3	+1.2
	comp=Z,51nm,0.8s,baz=275,slow=7.4,SNR=102						
SNAA				LR	LR	15 56 51.4	
	comp=Z,791nm,21.1s,baz=272,slow=32						
SNAA	Sanae	25.50	142	P	P	15 49 00.0	+0.9
GO05	Huala	25.63	337	P	P	15 48 59.9	-0.6
GO05				IAmb	IAmb	15 49 12.7	
	comp=Z,37nm,0.9s						
PEL	Peldehue	27.21	341	P	P	15 49 14.5	-0.4
ROC1	El Roble	27.43	340	P	P	15 49 17.0	-0.1
PLTB	Pedras Altas	28.04	12	eP	P	15 49 21.6	-0.7
CFA	Coronel Fontan	28.36	346	P	P	15 49 24.8	-0.4
	comp=Z,9.9nm,0.5s,baz=172,slow=9.5,SNR=22						
CFA				LR	LR	16 00 21.4	
	comp=Z,817nm,18.6s,baz=195,slow=36						
GO04	Tololo Observa	30.14	342	P	P	15 49 40.7	-0.4
QSPA	South Pole Qui	30.79	180	P	P	15 49 48.4	+1.9
	comp=Z,113nm,0.7s,baz=159,slow=3.6,SNR=400						
QSPA	South Pole Qui	30.79	180	P	P	15 49 48.1	+1.6
GO03	Copiap	32.58	343	P	P	15 50 01.3	-1.2
GO03				IAmb	IAmb	15 50 26.0	
	comp=Z,19nm,1.1s						
CPUP	Villa Florida	33.16	5	P	P	15 50 07.5	+0.1
	comp=Z,10nm,1.0s,baz=184,slow=7.5,SNR=12						
CPUP				LR	LR	16 03 17.0	
	comp=Z,698nm,20.3s,baz=177,slow=36						
CPUP	Villa Florida	33.16	5	P	P	15 50 06.7	-0.7
CPUP				IAmb	IAmb	15 50 18.0	
	comp=Z,19nm,1.1s						
GO02	Mina Guanaco	34.88	345	P	P	15 50 22.6	-0.2
GO02				IAmb	IAmb	15 50 33.3	
	comp=Z,22nm,0.8s						
PB10	IPOC Station P	36.64	344	P	P	15 50 38.1	+0.7
SPB	Sao Paulo	36.95	20	P	P	15 50 38.6	-1.5
SPB				IAmb	IAmb	15 50 51.6	
	comp=Z,64nm,1.7s						
LVC	Limon Verde	37.32	347	eP	P	15 50 44.0	+0.3
LVC	Limon Verde	37.32	347	P	P	15 50 41.3	-2.4
LVC				IAmb	IAmb	15 50 56.3	
	comp=Z,20nm,0.8s						
PB04	IPOC Station P	37.74	345	P	P	15 50 47.1	0.0
PCMB	Pacaembu	38.34	14	eP	P	15 50 52.8	+0.9
PB01	IPOC Station P	38.93	346	P	P	15 50 57.4	+0.4
SYO	Syowa Base	39.60	146	⇓iP	P	15 50 59.0	-3.0
SYO	Syowa Base	39.60	146	⇓epP	P	15 51 01.0	-1.0
PB11	IPOC Station P	40.22	346	P	P	15 51 07.8	0.0
GO01	Chusmiza	40.25	347	P	P	15 51 08.9	+0.4
GO01				IAmb	IAmb	15 51 20.7	
	comp=Z,42nm,0.9s						
MNMC	Minye Minye	40.83	346	P	P	15 51 13.1	+0.1
MNMC				IAmb	IAmb	15 51 25.7	
	comp=Z,38nm,0.9s						
C2SB	Chapadao do Su	40.98	11	eP	P	15 51 14.4	+0.6
IPMB	Ipameri, GO	42.32	17	eP	P	15 51 24.7	-0.3
LPAZ	La Paz	43.48	349	P	P	15 51 35.6	+0.6
	comp=Z,4.2nm,0.9s,baz=163,slow=5.7,SNR=12						
LPAZ				PP	PP	15 53 18.1	+2.0
	comp=Z,5.5nm,1.0s,baz=158,slow=8.7,SNR=4.9						
LPAZ				LR	LR	16 11 38.5	
	comp=Z,724nm,18.5s,baz=160,slow=39						
LPAZ	La Paz	43.48	349	eP	P	15 51 35.0	-0.1
LPAZ	La Paz	43.48	349	P	P	15 51 34.7	-0.4
SALV	Santo Antonio	43.60	6	eP	P	15 51 35.2	-0.1
ARAG	Araguaiana, MT	44.11	12	eP	P	15 51 39.9	+0.6
BDFB	Brasilia	44.65	17	P	P	15 51 43.1	-0.7
	comp=Z,6.5nm,0.7s,baz=198,slow=4.9,SNR=8.4						
BDFB				LR	LR	16 10 55.2	
	comp=Z,482nm,20.0s,baz=177,slow=37						
BDFB	Brasilia	44.65	17	P	P	15 51 42.6	-1.2
JANB	Januaria	45.84	22	eP	P	15 51 53.0	-0.2
RPN	Rapa Nui	46.53	292	LR	LR	16 06 31.7	
	comp=Z,246nm,20.8s,baz=130,slow=30						
MAW	Mawson	46.60	154	LR	LR	16 10 36.6	
	comp=Z,1μm,21.0s,baz=220,slow=35						
CLDB	Colider	48.59	6	eP	P	15 52 13.4	-1.2
SAML	Samuel	50.44	356	eP	P	15 52 28.5	-0.2
SAML	Samuel	50.44	356	P	P	15 52 27.9	-0.7
H10S3	ASCENSION HYDR	60.90	54	T	T	16 59 54.0	
	baz=205,slow=74,SNR=88						
H10S2	ASCENSION HYDR	60.91	54	T	T	16 59 55.4	
	baz=15,slow=74,SNR=81						
OTAV	Otavalo	61.20	339	eP	P	15 53 48.4	+2.0
OTAV	Otavalo	61.20	339	P	P	15 53 46.6	+0.2
H10N3	ASCENSION HYDR	61.97	53	T	T	17 01 19.4	
	baz=204,slow=75,SNR=61						
H10N1	ASCENSION HYDR	61.98	54	T	T	17 01 18.9	
	baz=204,slow=75,SNR=76						
H10N2	ASCENSION HYDR	61.99	53	T	T	17 01 19.9	
	baz=204,slow=75,SNR=90						
FLOC	Florencia	62.05	342	P	P	15 53 51.8	+0.2
BOSA	Boshof	63.58	102	P	P	15 54 00.5	-1.4
	comp=Z,5.0nm,0.9s,baz=187,slow=4.8,SNR=3.6						
BOSA				LR	LR	16 15 24.3	
	comp=Z,196nm,20.9s,baz=169,slow=30						
ROSC	El Rosal	65.06	344	LR	LR	16 24 14.3	
	comp=Z,454nm,18.9s,baz=202,slow=38						
LBTB	Lobatse	66.72	100	P	P	15 54 22.1	-0.2
	comp=Z,6.2nm,0.7s,baz=223,slow=8.0,SNR=8.6						
LBTB	Lobatse	66.72	100	P	P	15 54 22.1	-0.2
TSUM	Tsumeb	67.48	90	P	P	15 54 26.9	-0.3
MSWZ	Moikau Station	69.59	221	P	P	15 54 39.9	0.0
CMWZ	Cape Campbell	69.64	220	P	P	15 54 40.3	+0.1
TBI	Tubuai	69.81	258	eS	S	16 03 44.4	-6.3
	comp=Z,167nm,27.5s						
TBI	Tubuai	69.81	258	eLR	LR	16 15 31.9	
	comp=Z,753nm,29.8s,baz=152						
URZ	Urewera	71.76	224	LR	LR	16 19 02.8	
	comp=Z,208nm,19.0s,baz=161,slow=30						
MEH	Mehetia	73.70	263	eT	T	17 15 52.5	
	comp=Z,12nm,0.2s						
TVO	Taravao	74.38	262	eT	T	17 16 43.6	
	comp=Z,1.6nm,0.3s						
PPT2	Papeete2	74.71	261	eS	S	16 04 41.9	-5.2
	comp=Z,771nm,27.8s						
PPT2	Papeete2	74.71	261	eLR	LR	16 17 50.6	
	comp=Z,636nm,30.5s,baz=146						
PPT	Papeete	74.73	261	LR	LR	16 19 19.5	
	comp=Z,158nm,19.0s,baz=154,slow=29						
LSZ	Lusaka	76.19	97	P	P	15 55 19.6	+0.1
	comp=Z,4.0nm,0.7s,baz=170,slow=5.2,SNR=7.0						
LSZ	Lusaka	76.19	97	IAmb	IAmb	15 56 19.5	
	comp=Z,41nm,2.0s						
TAOE	Nuku Hiva Isla	77.30	274	eLR	LR	16 18 56.7	
	comp=Z,469nm,27.7s						
BANI	BANI	78.00	350	P	P	15 55 29.2	-0.2
LIC	Lamto	78.62	56	eP	P	15 55 33.2	+0.3
	comp=Z,24nm,0.7s						
LIC	Lamto	78.62	56	P	P	15 55 33.2	+0.3
KIC	Kosan Boka	78.86	57	eP	P	15 55 34.6	+0.3
	comp=Z,17nm,0.9s						
KIC	Kosan Boka	78.86	57	P	P	15 55 34.6	+0.3
TIC	Toumodi	79.00	56	eP	P	15 55 35.1	+0.1
	comp=Z,3.4nm,0.2s						
TIC	Toumodi	79.00	56	P	P	15 55 35.1	+0.1
DBIC	Dimbokro	79.09	56	LR	LR	16 23 17.2	
	comp=Z,110nm,19.6s,baz=190,slow=30						
STKA	Stephens Creek	87.23	198	LR	LR	16 31 29.9	
	comp=Z,131nm,18.7s,baz=178,slow=33						
TORD	Torodi Ar. Bea	87.71	59	P	P	15 56 19.8	0.0
	comp=Z,1.8nm,1.0s,baz=228,slow=4.3,SNR=3.2						
TORD				LR	LR	16 30 44.7	
	comp=Z,92nm,19.3s,baz=200,slow=32						
DZM	Mont Dzumac	90.23	222	eLR	LR	16 25 11.2	
	comp=Z,294nm,26.8s						
DZM	Mont Dzumac	90.23	222	LR	LR	16 31 46.2	
	comp=Z,79nm,18.1s,baz=195,slow=32						
KMBO	Kilima Mbogo	92.85	97	LR	LR	16 33 05.7	
	comp=Z,257nm,21.9s,baz=88,slow=32						
TXAR	Lajitas Array	95.45	323	P	P	15 56 57.7	+2.1
	comp=Z,0.1nm,0.3s,baz=158,slow=2.9,SNR=2.2						
TXAR				LR	LR	16 33 00.8	
	comp=Z,84nm,19.5s,baz=0.0,slow=31						
ASAR	Alice Springs	96.38	193	P	P	15 57 00.7	+0.6
	comp=Z,0.5nm,0.8s,baz=167,slow=4.1,SNR=9.6						
ASAR				PP	PP	16 01 03.0	+10
	comp=Z,0.8nm,0.9s,baz=175,slow=8.9,SNR=4.5						
ASAR				LR	LR	16 38 44.2	
	comp=Z,94nm,19.5s,baz=168,slow=34						
WRA	Warramunga Arr	100.00	194	P	Pdif	15 57 16.6	+0.3
	comp=Z,0.7nm,0.7s,baz=177,slow=4.2,SNR=6.3						
GERES	GERESS Array B	123.50	50	PKP	PKiKP	16 02 28.1	+0.4
	comp=Z,0.4nm,0.5s,baz=226,slow=2.6,SNR=3.0						
BRTR	Keskin Array B	125.01	70	PKP	PKiKP	16 02 31.3	+0.2
	comp=Z,1.5nm,0.9s,baz=197,slow=1.5,SNR=4.0						
H11S2	WAKE ISLAND Hy	127.02	240	T	T	18 23 18.0	
	baz=147,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	127.03	240	T	T	18 23 23.7	
	baz=147,slow=76,SNR=9.6						
H11S1	WAKE ISLAND Hy	127.04	240	T	T	18 23 16.3	
	baz=147,slow=76,SNR=8.2						
AKASG	Malin Array Be	131.32	58	PKP	PKPdf	16 02 42.6	+0.4
	comp=Z,0.2nm,0.2s,baz=251,slow=2.5,SNR=3.2						
CMAR	Chiang Mai Arr	136.37	151	PKP	PKiKP	16 02 55.2	+0.8
	comp=Z,0.7nm,0.8s,baz=204,slow=3.6,SNR=3.5						
QIZ	Qiongzhong	139.00	166	PKP	PKPdf	16 02 57.5	0.0
QIZ				PP	PP	16 05 49.0	-0.3
QIZ				SS	SS	16 24 07.3	+2.3
QIZ				LR	LR		
	comp=Z,200nm,17.5s						
KMI	Kunming	143.69	153	PKP	PKPab	16 03 02.8	0.0
KMI				pPKP	PKiKP	16 03 11.0	+1.5
KMI				LR	LR		
	comp=Z,120nm,24.9s						
ABKAR	Akbulak array	144.85	80		PKPab	16 03 05.0	-1.2
KIRV	Kirov	145.31	60	PKPbc	PKPbc	16 03 07.5	+0.1
	comp=Z,4.2nm,0.5s,baz=243,slow=4.5,SNR=3.5						
KSH	Kashi	146.10	106	PKPbc	PKPbc	16 03 10.5	-0.1
KSH				PP	PP	16 06 37.0	+3.9
KSH				PKS	PKSdf	16 06 43.5	-1.6
KSH				SKS	SKSdf	16 10 19.3	+0.9
KSH				AMB	AMB		
	comp=Z,80nm,4.9s						
KSH				LR	LR		
	comp=Z,51nm,5.2s						
KSH				LR	LR		
	comp=Z,57nm,4.9s						
KSH				LR	LR		
	comp=Z,120nm,9.1s						
AAK	Ala-Archa	147.72	101	PKPbc	PKPbc	16 03 15.5	+0.4
	comp=Z,2.6nm,0.8s,baz=166,slow=4.2,SNR=4.3						
AAK	Ala-Archa	147.72	101		PKPbc	16 03 16.0	+0.8
ARU	Arti	148.37	68		PKPbc	16 03 16.4	+0.2
CD2	Chengdu	149.48	152	PKPbc	PKPdf	16 03 14.5	-1.0
BRVK	Borovoye	152.34	81		PKPbc	16 03 24.5	-1.3
NJ2	Nanjing	152.60	178	ePKPbc	PKPdf	16 03 21.0	+0.9
JNU	Nakatsue	152.65	201	PKPbc	PKPbc	16 03 26.3	-1.0
	comp=Z,7.3nm,1.2s,baz=224,slow=5.5,SNR=3.9						
LZH	Lanzhou	154.43	149	ePKPbc	PKPdf	16 03 23.0	+0.1
LZH				pPKP	sPKPdf	16 03 28.0	+2.4
LZH				sPKP		16 03 29.5	
LZH				LR	LR		
	comp=Z,170nm,18.1s						
LZH				LR	LR		
	comp=Z,150nm,18.2s						
LZH				LR	LR		
	comp=Z,200nm,20.0s						
MKAR	Makanchi Array	154.58	103	PKPbc	PKPbc	16 03 30.4	-0.5
	comp=Z,0.6nm,0.8s,baz=257,slow=3.6,SNR=6.1						
WMQ	Urumqi	155.02	114	ePKPbc	PKPdf	16 03 24.0	+0.7
KSRS	Korea Array	157.37	197	PKPab	PKPab	16 04 00.5	+2.7
	comp=Z,0.6nm,0.7s,baz=208,slow=3.5,SNR=3.3						
CN2	Changchun	163.95	195	ePKP	PKPdf	16 03 32.0	-1.4
SONM	Songino Array	165.96	140	PKPab	PKPab	16 04 37.2	+1.8
	comp=Z,2.1nm,0.7s,baz=196,slow=4.3,SNR=6.6						

BGR **25** *15:56:25.3±0.0,57.23N×152.60W,h18km,mb4.9*
MOS **25** *15:56:26.4±0.9,57.35N×155.10W,h58km,mb5.2/70, Error ellipse: s-maj=7.0km s-min=4.1km az=88.7*
BJI **25** *15:56:26.0±0.0,57.40N×155.10W,h60km,mB5.1/35, mb4.8/53,Ms4.5/8,Ms7 4.2/7*
IDC **25** *15:56:27.5±1.3,57.38N×155.16W,h50km±11km,mb4.6/42, mb1 4.7/46,mb1mx4.6/63,mbtmp4.8/46,ML4.6/4,MS3.6/17, Ms1 3.6/17,ms1mx3.5/39,Error ellipse: s-maj=13.1km s-min=7.1km az=7.0*
NEIC **25** *15:56:28.7±1.8,57.24N±0.03×154.94W±0.06,h67km±4km, Error ellipse: s-maj=4.9km s-min=4.6km az=188.0*
AEIC **25** *15:56:29.5±1.9,57.21N±0.03×154.93W±0.06,h60km±4km, ML4.7/155,mb5.2/451(NEIC),Error ellipse: s-maj=4.8km s-min=4.7km az=183.0*
ISC 25 15:56:28.2±0.4,57.27N±0.03×154.99W±0.03,h63km±3km, h63km:pP-P,n1357,σ1.07/1417,mb5.1/313,21C-25D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLK3	Peulik 3	0.81	302		Pn	15 56 45.5	+1.5
SII	Sitkinak Islan	0.84	148		Pn	15 56 44.2	-0.1
SII				Sn	Sn	15 56 55.5	-0.7
OHAK	Old Harbor	0.93	92		Pn	15 56 45.5	+0.1
OHAK				Sn	Sn	15 56 57.2	-0.8
ACHA	Angle Creek He	0.96	349		Pn	15 56 47.0	+1.1
ANCK	Angle Creek	0.97	344		Pn	15 56 47.3	+1.2
PLK1	Peulik 1	1.02	302		Pn	15 56 48.0	+1.4
PLBL	Peulik Blue Cr	1.08	294		Pn	15 56 48.8	+1.4
KELA	Mount Kelaz	1.24	341		Pn	15 56 50.6	+1.1
KAHG	Katmai Hook Gl	1.25	11		Pn	15 56 51.0	+1.3
PLK5	Peulik 5	1.25	306		Pn	15 56 50.8	+1.2
KAHC	Katmai Hardscr	1.38	360		Pn	15 56 52.5	+1.0
KDAK	Kodiak Island	1.39	67	P	Pn	15 56 51.6	+0.1
	2μm,0.3s,baz=240,slow=6.3						
KDAK				S	Sn	15 57 08.7	-0.3
	2μm,0.3s,baz=307,slow=20,SNR=70						
KDAK				LR	LR	15 57 37.9	
	comp=Z,2μm,18.4s,baz=256,slow=49						
KDAK	Kodiak Island	1.39	67		Pn	15 56 51.8	+0.3
CHIR	Chirikof Islan	1.50	194		Pn	15 56 52.5	-0.4
CHIR				Sn	Sn	15 57 09.7	-1.7
FOSS	Fourpeaked Sta	1.68	24		Pn	15 56 56.4	+1.0
CHGN	Chignik	2.12	244		Pn	15 57 01.7	+0.4
CHGN				Sn	Sn	15 57 25.5	-1.0
AUH	Augustine H	2.25	21		Pn	15 57 05.0	+1.8
AUW	Augustine West	2.25	20		Pn	15 57 04.8	+1.7
AUP	Augustine Pinn	2.25	21		Pn	15 57 04.9	+1.7
AUP	Augustine Pinn	2.25	21	P	Pn	15 57 04.9	+1.7
AUL	Augustine Lava	2.27	20		Pn	15 57 05.1	+1.7
AU22	Augustine Moun	2.27	22		Pn	15 57 05.0	+1.6
AU22					Sn	15 57 31.3	+1.1
VNHG	Veniaminof 1	2.53	247		Pn	15 57 08.2	+1.2
VNNF	Veniaminof 3	2.58	249		Pn	15 57 08.9	+1.3
VNSS	Veniaminof 8	2.67	249		Pn	15 57 10.1	+1.1
VNFG	Fog Glacier, M	2.70	250		Pn	15 57 10.3	+1.0
VNWF	Veniaminof 8	2.76	248		Pn	15 57 11.2	+1.0
ILS	Iliamna Low So	2.88	20		Pn	15 57 13.2	+1.5
IVE	Iliamna Volcan	2.94	20		Pn	15 57 14.0	+1.5
ILW	Iliamna West	2.96	18		Pn	15 57 14.4	+1.5
HOM	Homer	2.97	35		Pn	15 57 13.8	+1.0
HOM	Homer	2.97	35		Sn	15 57 47.8	+0.5
BRLK	Bradley Lake	3.30	39		Pn	15 57 17.5	+0.1
BRLK	Bradley Lake	3.30	39		Sn	15 57 52.8	-2.6
BRSE	Bradley Lake S	3.33	40		Pn	15 57 18.2	+0.4
RED	Redoubt Volcan	3.36	19		Pn	15 57 19.7	+1.4
RED					Sn	15 57 56.2	-0.8
RSO	Redoubt South	3.41	19		Pn	15 57 20.3	+1.3
RDWB	Redoubt West	3.41	18		Pn	15 57 20.6	+1.5
RDWB					Sn	15 57 59.0	+0.7
RDN	Redoubt North	3.45	19		Pn	15 57 21.4	+1.9

RDJH Redoubt Jeurge 3.52 18 Pn 15 57 22.1 +1.6
DFR Drift River 3.54 19 Pn 15 57 22.2 +1.5
CNBA Chernabura Isl 3.56 228 Pn 15 57 20.3 -0.7
CNBA Chernabura Isl 3.56 228 Sn 15 57 59.9 -1.9
SDPT Sand Point 3.61 240 Pn Pn 15 57 22.1 +0.4
SDPT Sand Point 3.61 240 Sn 15 58 01.2 -1.8
SVW2 Sparrevohn 3.85 356 Pn 15 57 25.8 +0.9
SVW2 Sparrevohn 3.85 356 Sn 15 58 10.5 +1.7
CAPN Captain Cook N 4.03 28 Pn 15 57 29.6 +2.3
CAPN Sn 15 58 13.7 +0.6
SEW Seward 4.05 43 Pn 15 57 27.1 -0.5
SLKM Skilak Lake 4.08 35 Pn 15 57 28.0 0.0
SLKM Sn 15 58 12.9 -1.6
CKL Chakachamna La 4.17 18 Pn 15 57 30.9 +1.6
PS1A Pavlof South-1 4.19 247 Pn 15 57 30.7 +1.2
SPCR Spurr Chakacha 4.19 19 Pn 15 57 31.0 +1.3
SPCR Sn 15 58 18.6 +1.3
CKT Bend 4.19 19 Pn 15 57 31.1 +1.4
CKN Chakachatna No 4.22 19 Pn 15 57 31.7 +1.7
SPBG Spurr Blockage 4.22 17 Pn 15 57 31.7 +1.7
PVV Pavlof Volcano 4.24 246 Pn 15 57 30.8 +0.7
CRP Crater Peak 4.26 19 Pn 15 57 32.2 +1.5
HAG Hague Volcano 4.32 246 Pn 15 57 32.2 +0.8
HAG Hague Volcano 4.32 246 P Pn 15 57 32.2 +0.8
DT1 Dutton Round H 4.62 245 Pn 15 57 35.6 +0.3
RC01 Rabbit Creek A 4.69 33 Pn 15 57 36.6 +0.4
SUA Susitna One 4.73 25 Pn 15 57 37.5 +0.5
BALA Baldy Mountain 4.82 248 Pn 15 57 37.1 -1.1
PWL Port Wells 4.97 41 Pn 15 57 39.9 -0.3
SKT Skwentna 5.04 19 Pn 15 57 41.3 +0.2
MID Middleton Isla 5.04 61 Pn Pn 15 57 41.6 +0.5
MID Middleton Isla 5.04 61 P Pn 15 57 41.6 +0.5
PMR Palmer 5.26 32 Pn 15 57 43.6 -0.6
PMR Palmer 5.26 32 P Pn 15 57 43.6 -0.6
FALS False Pass 5.31 246 Pn 15 57 45.0 +0.2
KNK Knik Glacier 5.33 36 Pn 15 57 44.5 -0.6
HIN Hinchinbrook I 5.41 51 Pn 15 57 45.9 -0.3
GLI Glacier Island 5.44 45 Pn 15 57 45.5 -1.1
GHO Glory Hole Cre 5.47 32 Pn 15 57 46.7 -0.4
FID Port Fidalgo 5.61 48 Pn 15 57 47.6 -1.3
SML Sawmill 5.67 34 Pn Pn 15 57 49.4 -0.4
TT01 Tatalina 5.68 355 Pn 15 57 51.0 +1.1
TTA Tatalina 5.70 355 Pn Pn 15 57 51.4 +1.2
TTA Tatalina 5.70 355 P Pn 15 57 51.4 +1.2
SSBA Shishaldin 5.70 248 Pn 15 57 50.4 +0.1
JPK Jack Peak 5.74 45 Pn 15 57 50.1 -0.8
EYAK Cordova Ski Ar 5.80 52 Pn 15 57 51.0 -0.5
PPLA Purkeypile 5.81 13 Pn 15 57 53.4 +1.5
VMT TAPS Tl Valdez 5.85 46 Pn 15 57 52.0 -0.2
SCM Sheep Creek Mo 6.01 37 Pn 15 57 54.3 -0.1
SCM Sheep Creek Mo 6.01 37 P Pn 15 57 54.3 -0.1
WESE West Dahl East 6.09 247 Pn 15 57 56.3 +0.8
RAGM Ragged Mountai 6.20 55 Pn 15 57 56.6 -0.4
GOAT Goat Mountain 6.26 54 Pn 15 57 57.8 -0.1
HUR Hurricane 6.32 23 Pn 15 57 59.2 +0.6
WAT1 Susitna Watana 6.44 27 Pn 15 57 59.8 -0.5
WAT6 Susitna Watana 6.45 31 Pn 15 58 00.1 -0.5
WAT2 Susitna Watana 6.54 27 Pn 15 58 01.6 -0.2
KTH Kantishna Hill 6.62 16 Pn 15 58 02.9 +0.1
TRF Thorofare Moun 6.62 19 Pn 15 58 02.6 -0.3
PS11 TAPS Pump St11 6.81 41 Pn 15 58 06.2 +0.8
RND Reindeer 6.86 24 Pn 15 58 05.7 -0.5
RND Reindeer 6.86 24 P Pn 15 58 05.7 -0.5
DHY Denali Highway 6.95 30 Pn 15 58 06.9 -0.4
AKBBA Akutan Broad B 6.96 247 Pn 15 58 07.8 +0.4
CRQM Cirque 7.04 55 Pn 15 58 08.2 -0.5
GLB Gilahina Butte 7.08 49 Pn 15 58 08.4 -0.7
VRDI Verde Repeater 7.12 51 Pn 15 58 09.1 -0.6
BPAW Bear Paw Mtn. 7.13 14 Pn 15 58 09.0 -0.7
MCK McKinley 7.13 22 Pn 15 58 09.5 -0.3
MCK McKinley 7.13 22 P Pn 15 58 09.5 -0.3
TGL Tana Glacier 7.18 56 Pn 15 58 10.0 -0.5
MCARA McCarthy VSAT 7.37 51 Pn Pn 15 58 13.0 0.0
UNV Unalaska Valle 7.38 247 Pn 15 58 12.2 -0.9
PAX Paxson 7.43 36 Pn 15 58 13.2 -0.7
PAX Paxson 7.43 36 P Pn 15 58 13.2 -0.7
BWN Browne 7.43 19 Pn Pn 15 58 13.3 -0.5
MNAT Makushin Natee 7.45 248 Pn 15 58 14.0 -0.1
KIAG Kiagna River 7.46 55 Pn 15 58 14.0 -0.4
MSW Makushin Switc 7.48 248 Pn 15 58 14.3 -0.3
BALM Baldy 7.51 55 Pn Pn 15 58 14.0 -1.0
MCIR Makushin Cirqu 7.52 249 Pn 15 58 15.5 +0.4
MREP Makushin Rep't 7.52 248 Pn 15 58 14.9 -0.2
PTPK Patty Peak 7.52 53 Pn 15 58 15.2 0.0
GRNC Granite Creek 7.66 58 Pn 15 58 16.9 -0.2
PS10 TAPS Pump St10 7.67 33 Pn 15 58 18.2 +1.0
CHX Chaix Hills 7.75 63 Pn 15 58 18.4 +0.1
BARN Barnard Glacie 7.83 55 Pn 15 58 19.0 -0.4
NEA Nenana 7.87 19 Pn 15 58 18.7 -1.1
CTGM Chitina Glacie 7.94 57 Pn 15 58 20.6 -0.3
WRH Wood River Hil 7.96 22 Pn 15 58 19.9 -1.2
MENT Mentasta 7.99 40 Pn 15 58 22.3 +0.8
MLY Manley 8.05 13 Pn 15 58 21.5 -0.8
HDA Harding Lake 8.16 25 Pn 15 58 22.6 -1.2
HDA Harding Lake 8.16 25 P Pn 15 58 23.0 -0.8
baz=212,SNR=50
CCB Clear Creek Bu 8.18 22 Pn 15 58 22.4 -1.6
PCA Pinnacle 8.18 64 Pn 15 58 23.7 -0.4
RIDG Independent Ri 8.19 33 Pn 15 58 23.8 -0.3
PS08 TAPS Pump Stn8 8.30 25 Pn 15 58 24.4 -1.3
YKU2 Yakutat 8.35 68 Pn Pn 15 58 26.2 -0.2
DOT Dot Lake 8.36 36 Pn 15 58 26.2 -0.4
TCOL CIGO, UAF Yank 8.37 21 Pn 15 58 25.2 -1.4
TCOL CIGO, UAF Yank 8.37 21 P Pn 15 58 25.2 -1.4
baz=207,SNR=9.7
COLA College 8.37 21 Pn 15 58 24.9 -1.7
COLA College 8.37 21 P Pn 15 58 24.9 -1.7
MDM Murphy Dome 8.37 20 Pn 15 58 24.9 -1.8
IL31 8.48 24 Pn 15 58 26.7 -1.5
ILAR Eielson Array 8.48 24 P Pn 15 58 26.5 -1.7
8.1nm,0.3s,baz=218,slow=14,SNR=184
ILAR S Sn 15 59 56.8 -5.5
12nm,0.3s,baz=143,slow=16,SNR=8.5
ILAR LR LR 16 02 05.1
comp=Z,229nm,18.7s,baz=239,slow=40
YUK2 White River 8.49 52 Pn 15 58 29.1 +0.8
PNL Peninsula 8.52 67 Pn 15 58 27.8 -0.8
OKSP Okmok Steeple 8.60 248 Pn 15 58 28.9 -0.9
SCRK Sand Creek 8.62 34 Pn 15 58 29.1 -1.1
YUK3 Moose Creek 8.65 52 Pn 15 58 31.4 +0.8
POKR Poker Flat Res 8.67 22 Pn 15 58 29.9 -0.8
POKR Poker Flat Res 8.67 22 P Pn 15 58 29.5 -1.3
baz=208,SNR=24
IM03 8.76 3 Pn 15 58 32.8 +0.8
BC03 8.77 43 Pn 15 58 32.3 +0.3
BVCY Beaver Creek 8.77 48 Pn 15 58 32.6 +0.4
YUK1 Sand Pete Hill 8.79 50 Pn 15 58 33.1 +0.6
ANM Nome 8.88 330 Pn Pn 15 58 34.7 +1.1
ANM Nome 8.88 330 P Pn 15 58 34.7 +1.1
PS06 TAPS Pump Stn6 8.97 14 Pn 15 58 34.1 -0.7
NIKH Nikolski High 9.03 247 Pn Pn 15 58 34.8 -0.9
DHAK Deception Hill 9.05 71 Pn 15 58 34.8 -1.2
PRP Porcupine Dome 9.42 25 Pn 15 58 40.3 -0.9
HYT Haines Junctio 9.68 61 Pn 15 58 44.7 +0.1
EGAK Eagle 10.06 36 Pn 15 58 49.3 -0.4
DAWY Dawson 10.22 42 Pn 15 58 51.8 -0.1
COLD Coldfoot 10.23 11 Pn 15 58 51.8 -0.3
FYU Fort Yukon 10.38 22 Pn 15 58 52.4 -1.7
GAMB Gambell 10.48 315 Pn 15 58 56.0 +0.6
SKAG Skagway 10.55 70 Pn 15 58 56.0 -0.4
SIT Sitka 10.68 83 Pn 15 58 55.5 -2.6
SIT Sitka 10.68 83 P Pn 15 58 55.5 -2.6
BESE Bessie Mountai 10.78 75 Pn 15 58 58.6 -1.0
WHY Whitehorse 10.91 63 Pn 15 59 00.6 -0.8
JIS Juneau Island 11.04 76 Pn Pn 15 59 01.8 -1.3
RDOG Red Dog Mine 11.40 345 Pn 15 59 09.2 +1.2
TOLK Toolik Lake Re 11.67 10 Pn 15 59 11.2 -0.4
TOLK Toolik Lake Re 11.67 10 P Pn 15 59 12.2 +0.6
baz=194,SNR=7.2
ATKA Atka Island 12.19 254 Pn 15 59 16.6 -2.2
CRAG Craig 12.24 89 Pn Pn 15 59 16.8 -2.7
WRAK Wrangell Islan 12.41 84 Pn 15 59 20.2 -1.6
EPYK Eagle Plains 12.50 36 Pn 15 59 21.9 -1.1
EPYK Eagle Plains 12.50 36 P Pn 15 59 24.4 +1.4
baz=232
GSTR Great Sitkin T 13.22 256 Pn Pn 15 59 32.0 -0.9
DLBC Dease Lake 13.32 74 P Pn 15 59 34.8 +0.6
3.4nm,0.3s,baz=231,slow=11,SNR=20
DLBC S Sn 16 01 55.8 -4.6
2.7nm,0.3s,baz=90,slow=18,SNR=5.3

DLBC Dease Lake 13.32 74 Pn 15 59 34.5 +0.3
DIB Dawson Inlet, 13.45 98 Pn Pn 15 59 34.9 -1.0
ADK Adak 13.66 256 Pn 15 59 37.2 -1.5
ADK Adak 13.66 256 P Pn 15 59 37.2 -1.5
MOBC Moresby Island 13.75 98 Pn Pn 15 59 38.9 -1.1
KIWB Kanaga Island 13.92 257 Pn 15 59 40.7 -1.5
INK Inuvik 14.68 32 P Pn 15 59 51.1 -0.8
1.8nm,0.3s,baz=226,slow=16,SNR=71
INK LR LR 16 05 51.3
comp=Z,171nm,21.5s,baz=226,slow=38
INK Inuvik 14.68 32 P Pn 15 59 50.8 -1.2
BBB Bella Bella 16.27 97 P P 16 00 14.7 +0.2
0.5nm,0.3s,baz=309,slow=9.1,SNR=2.8
BBB S Sn 16 03 06.5 -5.4
0.4nm,0.3s,baz=204,slow=18,SNR=3.5
BBB Bella Bella 16.27 97 IAmb IAmb 16 00 40.4
comp=Z,118nm,1.2s
C36M Paulatuk 18.14 36 P P 16 00 33.6 -1.3
C36M IAmb IAmb 16 00 35.0
comp=Z,57nm,0.7s
C36M Paulatuk 18.14 36 P P 16 00 34.3 -0.6
baz=244,SNR=91
BILL Bilibino 20.40 318 P P 16 00 59.3 -0.2
BILL IAmb IAmb 16 01 00.4
comp=Z,161nm,1.2s
BILL Bilibino 20.40 318 c iP P 16 00 59.3 -0.2
BILL e 16 01 17.3
BILL i S S 16 04 44.8 +0.6
BILL pmax pmax
comp=Z,88nm,1.1s
BILL MLR MLR
comp=Z,183nm,19.0s
LLLB Lillooet 20.44 95 P Pn 16 01 02.6 -0.2
LLLB IAmb IAmb 16 01 29.4
comp=Z,182nm,1.9s
YKA Yellowknife Ar 20.65 59 P P 16 01 02.6 +0.3
comp=Z,31nm,0.7s,baz=272,slow=10,SNR=251
YKA PcP PcP 16 05 09.9 +0.1
comp=Z,5.5nm,0.5s,baz=276,slow=1.7,SNR=24
YKA ScP ScP 16 08 40.1 -0.5
comp=Z,0.5nm,0.8s,baz=292,slow=2.7,SNR=4.8
YKA LR LR 16 10 40.4
comp=Z,85nm,18.1s,baz=0.0,slow=41
PGC Sidney 20.70 101 Pn 16 01 05.1 -0.6
PGC IAmb IAmb 16 01 32.2
comp=Z,131nm,1.6s
A04D Lummi Island 21.05 100 P P 16 01 10.7 +4.0
baz=306
D03D Eldon 21.57 103 P P 16 01 15.7 +3.4
baz=309
B05A Bryant 21.65 100 P P 16 01 16.5 +3.4
baz=307
D04E Lakebay 21.96 104 P P 16 01 17.0 +0.5
baz=309
E04D Cinebar 22.47 105 P P 16 01 22.7 +0.8
baz=310
F04D Rainier, OR 22.55 106 P P 16 01 24.9 +2.2
baz=311
G03D McMinnville, O 23.00 108 P P 16 01 29.9 +2.5
baz=313
LTY Liberty 23.03 101 P P 16 01 29.7 +1.9
B08A Colville Reser 23.08 97 P P 16 01 29.8 +1.5
I02D Swisshome 23.47 111 P P 16 01 34.7 +2.8
baz=315
F05D White Salmon 23.49 105 P P 16 01 34.7 +2.5
baz=311
H04D Lebanon 23.75 109 P P 16 01 37.3 +2.8
baz=314,SNR=7.3
E07A Sunnyside 23.90 101 P P 16 01 37.0 +1.1
E07A IAmb IAmb 16 02 03.5
comp=Z,110nm,1.7s
G05D Wamic, OR 23.99 106 P P 16 01 39.1 +2.4
baz=312,SNR=5.5
I03D Drain, OR 24.02 111 P P 16 01 39.3 +2.4
baz=316
D08A Wollman Farm, 24.09 100 P P 16 01 37.7 +0.2
J01E Myrtle Point 24.11 112 P P 16 01 40.3 +2.6
baz=317,SNR=6.6
HAWA Hanford 24.18 101 P P 16 01 38.6 +0.3
F07A Phinny Hill Vi 24.29 103 P P 16 01 40.6 +1.3
F07A IAmb IAmb 16 02 06.8
comp=Z,34nm,0.8s
NEW Newport 24.33 95 P P 16 01 42.0 +2.2
comp=Z,6.2nm,0.7s,baz=297,slow=8.7,SNR=9.8
NEW Newport 24.33 95 P P 16 01 41.4 +1.6
NEW Newport 24.33 95 P P 16 01 42.0 +2.2
NEW Newport 24.33 95 P P 16 01 41.9 +2.2
baz=306
E08A Dider Farm, El 24.37 101 P P 16 01 40.1 +0.1
I04A Tendick Farm, 24.42 109 P P 16 01 43.0 +2.4
baz=315,SNR=6.7
K02D Willamette Mer 24.58 113 P P 16 01 45.0 +2.9
baz=317,SNR=5.5
I05D Terrebonne, OR 24.60 107 P P 16 01 44.8 +2.5
baz=314
E09A Wood Farm, Sta 24.84 100 P P 16 01 44.1 -0.4
J04D Umpqua Nationa 24.97 110 P P 16 01 48.8 +2.9
baz=316
HUMO Hull Mountain 25.00 112 P P 16 01 48.3 +2.4
L02E Cave Junction 25.01 114 P P 16 01 49.0 +3.0
baz=318
PINE Pine Mountain 25.18 108 P P 16 01 50.0 +2.3
J05D Fort Rock, OR 25.39 109 P P 16 01 52.4 +2.8
baz=315,SNR=18
WALA Waterton Lakes 25.61 91 P P 16 01 52.2 +0.7
L04D Klamath Falls 25.61 112 P P 16 01 54.5 +2.9
baz=317
F10A Beach Ranch, E 25.68 100 P P 16 01 52.8 +0.7
I07A Izee 25.73 106 P P 16 01 53.5 +0.9
YBH Yreka Blue Hor 25.77 113 P P 16 01 55.8 +2.9
comp=Z,6.3nm,0.8s,baz=9.6,slow=2.4,SNR=17
YBH Yreka Blue Hor 25.77 113 P P 16 01 55.4 +2.4
M02C Callahan 25.95 114 P P 16 01 57.8 +3.2
baz=319,SNR=5.4
M04C Macdoel 26.17 112 P P 16 01 59.8 +3.2
baz=318
JTMT Jette 26.17 94 P P 16 01 57.7 +1.1
JTMT IAmb IAmb 16 02 25.9
comp=Z,95nm,1.5s
SEY Seymchan 26.18 305 P P 16 01 54.9 -1.5
comp=Z,7.6nm,0.8s,baz=96,slow=7.7,SNR=46
SEY Seymchan 26.18 305⇓eP P 16 01 55.2 -1.1
N02D Trinity Center 26.34 114 P P 16 02 01.6 +3.5
baz=319
BMO Blue Mountains 26.37 102 P P 16 01 59.5 +1.1
BMO Blue Mountains 26.37 102 P P 16 01 59.5 +1.1
BMO pmax pmax
comp=Z,18nm,1.3s
PET Petropavlovsk 26.42 281 P P 16 01 57.6 -0.9
PET IAmb IAmb 16 01 59.5
comp=Z,56nm,1.0s
PET Petropavlovsk 26.42 281 eP P 16 01 57.8 -0.8
PET eS S 16 06 27.4 +0.1
PET MLR MLR
comp=Z,200nm,19.0s
J08A Circle Bar Ran 26.77 106 P P 16 02 01.7 -0.3
MOD Modoc Plateau 26.86 110 P P 16 02 05.3 +2.5
PEA0B Petropavlovsk- 26.89 282 P P 16 02 01.8 -1.0
PEA0B IAmb IAmb 16 02 57.0
comp=Z,51nm,1.3s
PEA0B Petropavlovsk- 26.89 282 P P 16 02 01.8 -1.0
PEA0B pmax pmax
comp=Z,51nm,1.3s
PETK Petropavlovsk- 26.89 282 P P 16 02 01.3 -1.6
comp=Z,12nm,0.5s,baz=70,slow=13,SNR=43
PETK PcP PcP 16 05 23.8 +0.4
comp=Z,1.7nm,0.7s,baz=110,slow=8.3,SNR=5.5
PETK LR LR 16 13 12.9
comp=Z,41nm,18.2s,baz=61,slow=38
O02D Mt. Diablo Mer 26.91 116 P P 16 02 05.6 +2.4
baz=320
O03E Paynes Creek 27.30 114 P P 16 02 08.8 +2.0
baz=320
WVOR Wild Horse Val 27.34 107 P P 16 02 09.3 +2.2
WVOR Wild Horse Val 27.34 107 P P 16 02 09.3 +2.2
WVOR pmax pmax
comp=Z,20nm,1.2s
MA2 Magadan 27.84 298 P P 16 02 10.4 -0.9
comp=Z,8.1nm,0.6s,baz=87,slow=15,SNR=20
MA2 PcP PcP 16 05 25.3 -0.2
comp=Z,2.3nm,0.3s,baz=54,slow=5.7,SNR=4.3
MA2 LR LR 16 14 43.6
comp=Z,94nm,18.0s,baz=88,slow=40
MA2 Magadan 27.84 298 P P 16 02 10.4 -0.9
MA2 Magadan 27.84 298⇑iP P 16 02 10.7 -0.6
MA2 pmax pmax

comp=Z,5.0nm,0.7s
ORV Oroville 28.02 115 P P 16 02 13.8 +0.8
ORV Oroville 28.02 115 P P 16 02 13.8 +0.8
ORV pmax pmax
comp=Z,6.0nm,1.0s
MFID Camas Ranch 28.12 103 P P 16 02 15.7 +1.5
RES Resolute Bay 28.19 29 P P 16 02 14.3 +0.1
comp=Z,4.8nm,0.4s,baz=258,slow=12,SNR=29
RES Resolute Bay 28.19 29 P P 16 02 14.3 +0.1
BEKR Beckworth 28.35 113 P P 16 02 15.8 -0.4
EGMT Eagleton 28.46 89 P P 16 02 17.9 +0.8
EGMT Eagleton 28.46 89 P P 16 02 17.9 +0.8
baz=306,SNR=11
MCMT McKenzie Canyo 28.77 97 P P 16 02 21.5 +1.5
PAHR Pah Rah Range 28.96 112 P P 16 02 23.6 +2.0
FFC Flin Flon 29.13 72 P P 16 02 22.7 -0.1
FFC Flin Flon 29.13 72 P P 16 02 22.7 -0.1
FFC pmax pmax
comp=Z,5.0nm,1.0s
VCNR Virginia City 29.14 113 P P 16 02 25.6 +2.4
PNTR Pine Nut 29.32 113 P P 16 02 27.2 +2.3
QLMT Earthquake Lak 29.54 96 P P 16 02 28.5 +1.8
YERR Yerington 29.58 113 P P 16 02 29.1 +1.9
YHL Hebgen Lake 29.66 96 P P 16 02 29.6 +1.7
YHB Horse Butte 29.71 96 P P 16 02 29.9 +1.6
WAKR Walker 29.85 114 P P 16 02 31.6 +2.1
GCMT Greycliff 29.88 93 P P 16 02 32.1 +2.5
YHH Holmes Hill 29.88 95 P P 16 02 31.7 +1.8
YMR Madison River 29.89 96 P P 16 02 32.0 +2.1
YNR Norris Junctio 30.02 95 P P 16 02 33.0 +2.0
KVN Kaiserville 30.10 111 P P 16 02 33.6 +1.8
KVN Kaiserville 30.10 111 P P 16 02 33.6 +1.8
KVN pmax pmax
comp=Z,12nm,1.3s
YNE Yellowstone No 30.19 94 P P 16 02 34.2 +1.6
RYN Ryan 30.21 112 P P 16 02 34.5 +1.8
YPP Pitchstone Pla 30.24 96 P P 16 02 35.7 +2.6
LKWY Lake 30.27 95 P P 16 02 36.0 +2.7
LKWY Lake 30.27 95 P P 16 02 36.0 +2.7
LKWY pmax pmax
comp=Z,16nm,1.0s
H17A Grant Village 30.28 96 P P 16 02 36.2 +2.8
H17A IAmb IAmb 16 03 05.3
comp=Z,24nm,1.0s
H17A Grant Village 30.28 96 P P 16 02 36.7 +3.3
baz=311,SNR=17
YMP Mirror Lake Pl 30.28 95 P P 16 02 35.5 +2.0
ELK Elko 30.32 106 P P 16 02 35.7 +2.0
ELK Elko 30.32 106 P P 16 02 35.7 +2.0
ELK pmax pmax
comp=Z,7.0nm,0.9s
FLWY Flagg Ranch 30.42 96 P P 16 02 37.1 +2.6
FLWY IAmb IAmb 16 02 38.2
comp=Z,37nm,0.7s
NVAR Mina Array Bea 30.48 112 P P 16 02 37.1 +2.0
comp=Z,5.8nm,0.7s,baz=308,slow=9.0,SNR=50
NVAR PcP PcP 16 05 33.3 +0.4
comp=Z,2.2nm,0.6s,baz=338,slow=1.0,SNR=6.5
NVAR LR LR 16 13 11.1
comp=Z,162nm,18.7s,baz=328,slow=33
RLMT Red Lodge 30.52 94 P P 16 02 37.4 +2.0
RLMT Red Lodge 30.52 94 P P 16 02 37.5 +2.1
baz=310,SNR=7.0
FXWY Fox Creek 30.54 97 P P 16 02 37.8 +2.2
NV11 Mina Array Sit 30.55 112 P P 16 02 37.9 +2.2
MDPB Devils Postpil 30.70 114 P P 16 02 39.5 +2.3
OMMB Old Mammoth Mi 30.76 114 P P 16 02 40.3 +2.6
LAO LASA Array 31.19 89 P P 16 02 42.2 +1.1
LAO LASA Array 31.19 89 P P 16 02 42.6 +1.5
baz=308
DGMT Dagmar 31.22 84 P P 16 02 42.5 +1.2
baz=306
FCC Fort Churchill 31.32 61 P P 16 02 42.9 +0.9
FCC IAmb IAmb 16 02 44.1
comp=Z,48nm,1.1s
FCC Fort Churchill 31.32 61 P P 16 02 42.9 +0.9
FCC pmax pmax
comp=Z,48nm,1.1s
HWUT Hardware Ranch 31.65 101 P P 16 02 47.2 +1.8
R11A Troy Canyon, C 31.92 109 P P 16 02 49.2 +1.5
R11A PcP 16 05 37.2 +0.5
R11A Troy Canyon, C 31.92 109 P P 16 02 49.7 +2.0
baz=319,SNR=22
BW06 Boulder Array 31.92 97 P P 16 02 49.2 +1.4
BW06 IAmb IAmb 16 02 50.1
comp=Z,14nm,0.6s
BW06 Boulder Array 31.92 97 P P 16 02 49.2 +1.4
baz=313,SNR=15
PD31 Pinedale Array 31.92 97 P P 16 02 49.2 +1.4
PD31 IAmb IAmb 16 02 50.2
comp=Z,12nm,0.6s
PDAR Pinedale Array 31.92 97 P P 16 02 49.4 +1.5
comp=Z,13nm,0.5s,baz=316,slow=4.7,SNR=180
PDAR PcP PcP 16 05 35.9 -0.8
comp=Z,0.5nm,0.5s,baz=345,slow=3.2,SNR=2.7
PDAR LR LR 16 15 48.2
comp=Z,49nm,18.3s,baz=282,slow=36
DUG Dugway, Tooele 31.99 104 P P 16 02 49.6 +1.3
DUG Dugway, Tooele 31.99 104 P P 16 02 49.6 +1.3
DUG pmax pmax
comp=Z,9.0nm,1.1s
DUG Dugway, Tooele 31.99 104 P P 16 02 50.2 +1.8
baz=316
GRAC Grapevine Rang 32.05 113 P P 16 02 50.9 +2.1
baz=321
TCUT Toone Canyon 32.08 101 P P 16 02 51.1 +1.9
SMMC Simmler 32.10 118 P P 16 02 52.0 +2.8
baz=324
CWC Cottonwood Cre 32.13 114 P P 16 02 51.8 +2.2
baz=322
CTU Camp Tracy 32.20 102 P P 16 02 51.8 +1.7
JLU Jordanelle 32.42 102 P P 16 02 54.1 +1.9
PKM Mcpherson Peak 32.53 118 P P 16 02 55.9 +2.7
baz=324,SNR=5.9
NLU North Lily Min 32.56 103 P P 16 02 54.5 +1.2
NLU PcP 16 05 38.3 -0.1
ISA Isabella, Lake 32.56 116 P P 16 02 54.9 +1.7
ISA Isabella, Lake 32.56 116 P P 16 02 54.9 +1.7
ISA pmax pmax
comp=Z,10.0nm,0.9s
ISA Isabella, Lake 32.56 116 P P 16 02 55.2 +1.9
baz=323,SNR=6.6
TPNV Topopah Spring 32.65 112 P P 16 02 55.9 +1.7
TPNV Topopah Spring 32.65 112 P P 16 02 55.9 +1.7
TPNV pmax pmax
comp=Z,15nm,1.0s
TPNV Topopah Spring 32.65 112 P P 16 02 56.4 +2.3
baz=321,SNR=16
PSUT Pine Spring 32.67 107 P P 16 02 56.5 +2.1
FURC Furnace Creek, 32.72 113 P P 16 02 56.9 +2.4
baz=322
MPMC Manual Prospec 32.73 114 P P 16 02 57.0 +2.1
baz=322,SNR=6.6
MPU Maple Canyon 32.75 103 P P 16 02 56.8 +1.8
LRMC Laurel Mtn Rad 33.09 115 P P 16 03 00.1 +2.1
baz=323,SNR=11
TIXI Tiksi 33.12 326 P P 16 02 57.0 -0.7
comp=Z,10nm,0.7s,baz=84,slow=8.7,SNR=34
TIXI PcP PcP 16 05 38.7 -0.4
comp=Z,8.1nm,0.6s,baz=53,slow=2.9,SNR=8.9
TIXI ScP ScP 16 09 17.5 -0.1
comp=Z,3.9nm,0.7s,baz=61,slow=2.6,SNR=10
TIXI Tiksi 33.12 326 P P 16 02 56.7 -0.9
TIXI PcP 16 05 38.9 -0.2
TIXI Tiksi 33.12 326 d iP P 16 02 56.8 -0.9
TIXI pmax pmax
comp=Z,12nm,0.8s
TCRU Three Creeks R 33.35 106 P P 16 03 02.7 +2.3
EDW2 Edwards Air Fo 33.42 116 P P 16 03 02.4 +1.7
baz=324
RDMU Red Mountain 33.45 100 P P 16 03 02.6 +1.5
SHOC Shoshone, Teco 33.46 113 P P 16 03 03.5 +2.5
baz=322
TMUT Trail Mountain 33.49 103 P P 16 03 03.8 +2.2
SHPR Sheep Range 33.55 111 P P 16 03 03.9 +2.0
MSU Marysvale 33.56 105 P P 16 03 04.2 +2.0
MSU PcP 16 05 42.4 +1.1
MSU Marysvale 33.56 105 P P 16 03 04.2 +2.0
P17A Butcher Ranch, 33.61 103 P P 16 03 04.7 +2.2
K22A Casper 33.64 95 P P 16 03 03.9 +1.2
K22A Casper 33.64 95 P P 16 03 04.8 +1.3
baz=313
GSC Goldstone, Bar 33.66 114 P P 16 03 05.1 +2.2
GSC Goldstone, Bar 33.66 114 P P 16 03 05.1 +2.2

GSC pmax pmax
comp=Z,12nm,1.0s
GSC Goldstone, Bar 33.66 114 P P 16 03 05.1 +2.2
baz=323
CCUT Cedar City 33.67 108 P P 16 03 04.5 +1.4
SZCU Shurtz Canyon 33.77 107 P P 16 03 05.5 +1.5
Q16A Castle Valley 33.79 104 P P 16 03 05.2 +1.1
MTPU Mount Pierson 33.91 106 P P 16 03 07.1 +1.8
RWWY Rawlins 33.93 96 P P 16 03 06.6 +1.2
RWWY pP pP 16 03 20.5 -0.3
SRU San Rafael Swe 33.99 103 P P 16 03 07.8 +2.0
SRU San Rafael Swe 33.99 103 P P 16 03 07.8 +2.0
SRU pmax pmax
comp=Z,66nm,0.8s
TUQ Turquoise Moun 34.00 113 P P 16 03 08.2 +2.3
baz=322,SNR=5.8
RSSD Black Hills 34.01 90 P P 16 03 06.9 +1.0
RSSD pP pP 16 03 23.8 +2.2
RSSD Black Hills 34.01 90 P P 16 03 07.7 +1.7
baz=311
MDND Maddock 34.06 82 P P 16 03 07.6 +1.4
MDND Maddock 34.06 82 P P 16 03 07.6 +1.4
baz=307
BFSC Mount Baldy Ra 34.10 116 P P 16 03 08.8 +2.1
baz=324
LCMT Little Creek M 34.14 108 P P 16 03 09.0 +2.0
LCMT PcP 16 05 43.2 +0.4
HEC Hector,Ludlow 34.27 114 P P 16 03 10.3 +2.1
baz=323,SNR=8.3
PKCU Pink Cliffs 34.29 107 P P 16 03 11.1 +2.5
KNB Kanab 34.35 108 P P 16 03 10.9 +1.9
KNB Kanab 34.35 108 P P 16 03 10.9 +1.9
KNB pmax pmax
comp=Z,9.0nm,0.9s
TULEG Thule 34.44 24 P P 16 03 09.0 0.0
TULEG IAmb IAmb 16 03 09.8
comp=Z,14nm,0.7s
O20A White River Ci 34.47 99 P P 16 03 11.2 +1.3
O20A IAmb IAmb 16 03 12.5
comp=Z,38nm,1.0s
O20A White River Ci 34.47 99 P P 16 03 11.7 +1.7
baz=316,SNR=12
ULM Lac du Bonnet 34.64 76 P P 16 03 11.9 +0.9
comp=Z,19nm,0.7s,baz=307,slow=8.5,SNR=44
ULM LR LR 16 17 17.8
comp=Z,127nm,20.6s,baz=338,slow=36
ULM Lac du Bonnet 34.64 76 P P 16 03 11.6 +0.5
ULM IAmb IAmb 16 03 12.9
comp=Z,29nm,1.0s
ULM Lac du Bonnet 34.64 76 d iP P 16 03 11.7 +0.6
GMRC Granite Mounta 34.65 113 P P 16 03 13.6 +2.2
baz=323,SNR=5.6
SCI2 San Clemente I 34.70 119 P P 16 03 13.9 +2.2
baz=326
U15A North Rim 35.08 108 P P 16 03 17.2 +1.9
BELC Belle Mtn. Jos 35.10 115 P P 16 03 17.3 +1.9
baz=324,SNR=9.4
N23A Red Feather La 35.17 96 P P 16 03 17.4 +1.3
N23A pP pP 16 03 32.6 +1.0
N23A Red Feather La 35.17 96 P P 16 03 17.4 +1.3
baz=315
PFO Pinyon Flats O 35.19 116 P P 16 03 17.2 +1.1
PFO Pinyon Flats O 35.19 116 ⇓ iP P 16 03 17.7 +1.6
PFO pmax pmax
comp=Z,6.0nm,0.9s
PFO Pinyon Flats O 35.19 116 P P 16 03 17.8 +1.6
baz=324
XPFO Pion Flat 35.19 116 P P 16 03 17.0 +0.8
W13A Hualapai Mount 35.29 111 P P 16 03 18.8 +1.7
W13A PcP 16 05 46.6 +0.3
IRM Iron Mountain 35.40 113 P P 16 03 20.2 +2.4
baz=323,SNR=15
BC3 Big Chuckawall 35.65 114 P P 16 03 21.8 +1.7
baz=324,SNR=5.7
MONP2 Monument Peak 35.79 116 P P 16 03 23.6 +2.2
baz=325,SNR=9.4
AGMN Agassiz Nation 35.79 78 P P 16 03 21.6 +0.6
AGMN IAmb IAmb 16 03 22.6
comp=Z,34nm,0.7s
AGMN pP pP 16 03 36.9 +0.3
AGMN Agassiz Nation 35.79 78 P P 16 03 21.8 +0.8
baz=307,SNR=19
BAR Barrett 35.84 117 P P 16 03 23.6 +2.0
TYV Tymovskoe 35.98 287 eP P 16 03 22.4 -0.2
TYV pmax pmax
comp=Z,39nm,1.1s
Y12C Blythe 36.04 113 P P 16 03 24.3 +1.1
Y12C IAmb IAmb 16 03 26.5
comp=Z,17nm,0.8s
Y12C pP pP 16 03 41.5 +2.7
Y12C Blythe 36.04 113 P P 16 03 25.4 +2.2
baz=323,SNR=6.3
SWSC Sam W. Stewart 36.05 115 P P 16 03 25.4 +2.0
baz=324
ISCO Idaho Springs 36.12 97 P P 16 03 25.7 +1.4
baz=316
IKP In-Ko-Pah, Jac 36.14 116 P P 16 03 26.0 +1.7
baz=325
WUAZ Wupatki 36.25 108 P P 16 03 26.8 +1.6
WUAZ IAmb IAmb 16 03 28.1
comp=Z,11nm,0.7s
WUAZ Wupatki 36.25 108 P P 16 03 27.5 +2.2
baz=321,SNR=10.0
YAK Yakutsk 36.36 310 P P 16 03 24.4 -1.3
comp=Z,28nm,0.7s,baz=78,slow=1.3,SNR=22
YAK Yakutsk 36.36 310 P P 16 03 23.9 -1.8
YAK Yakutsk 36.36 310 c iP P 16 03 24.2 -1.5
YAK e*PP pP 16 03 38.1 -3.1
YAK e 16 04 46.6
YAK e 16 05 48.1
YAK eS S 16 09 00.5 -1.4
YAK e*SS sS 16 09 27.9 -0.4
YAK eSS SnSn 16 11 32.2 -2.2
YAK e 16 13 35.0
YAK pmax pmax
comp=Z,20nm,0.6s
YAK pmax pmax
comp=N,3.0nm,0.9s
YAK pmax pmax
comp=E,14nm,1.1s
YAK pmax pmax
comp=Z,32nm,2.3s
YAK pmax pmax
comp=N,24nm,2.2s
YAK pmax pmax
comp=E,27nm,1.9s
YAK smax smax
comp=N,21nm,1.9s
YAK smax smax
comp=E,14nm,2.0s
GLA Glamis 36.45 114 P P 16 03 28.4 +1.6
GLA Glamis 36.45 114 P P 16 03 28.4 +1.6
GLA pmax pmax
comp=Z,8.0nm,0.6s
GLA Glamis 36.45 114 P P 16 03 28.8 +2.0
baz=324
MVCO Mesa Verde 36.47 103 P P 16 03 28.2 +1.0
MVCO IAmb IAmb 16 03 29.3
comp=Z,12nm,0.7s
MVCO Mesa Verde 36.47 103 P P 16 03 28.4 +1.2
baz=318,SNR=11
SUSD Miller 36.56 86 P P 16 03 28.4 +0.8
SUSD IAmb IAmb 16 03 29.4
comp=Z,39nm,0.8s
SUSD Miller 36.56 86 P P 16 03 28.3 +0.8
baz=311
Y14A Wickenburg 36.65 111 P P 16 03 30.4 +1.9
S22A 4UR Ranch, Cre 36.96 101 P P 16 03 32.9 +1.5
S22A 4UR Ranch, Cre 36.96 101 P P 16 03 33.3 +1.9
baz=318,SNR=10.0
Q24A Divide 36.97 98 P P 16 03 33.0 +1.4
Q24A IAmb IAmb 16 03 51.4
comp=Z,16nm,0.8s
X16A Lo Mia Camp, P 37.07 109 P P 16 03 34.3 +2.1
X16A IAmb IAmb 16 03 35.9
comp=Z,16nm,0.8s
X16A PcP 16 05 52.5 +0.9
113A Mohawk Valley, 37.20 113 P P 16 03 34.9 +1.7
OGNE Ogallala 37.25 93 P P 16 03 35.2 +1.6
OGNE IAmb IAmb 16 03 35.9
comp=Z,23nm,0.8s
OGNE Ogallala 37.25 93 P P 16 03 35.0 +1.4
baz=314
W18A Petrified Fore 37.41 107 P P 16 03 37.1 +2.0
W18A IAmb IAmb 16 03 38.1
comp=Z,12nm,0.7s
W18A Petrified Fore 37.41 107 P P 16 03 37.2 +2.1
baz=321,SNR=11
SDCO Great Sand Dun 37.67 100 P P 16 03 38.9 +1.5
SDCO Great Sand Dun 37.67 100 P P 16 03 39.3 +1.9
baz=318,SNR=12
X18A Snowflake 37.75 107 P P 16 03 40.6 +2.6
X18A IAmb IAmb 16 03 41.2
comp=Z,20nm,0.7s
AIN Ainahou 37.84 181 P P 16 03 40.6 +1.7
KULLO Kullorsuaq 37.88 26 iP P 16 03 38.8 +0.4
comp=Z,27nm,0.7s
KULLO Kullorsuaq 37.88 26 iP P 16 03 38.8 +0.4
KULLO pmax pmax
comp=Z,27nm,0.7s
KHU Kahuku 37.97 181 P P 16 03 41.5 +1.5
KHU Kahuku 37.97 181 P P 16 03 41.5 +1.5
KHU pmax pmax
comp=Z,252nm,1.8s
ECSD EROS Data Cent 38.29 85 P P 16 03 42.1 -0.2
ECSD EROS Data Cent 38.29 85 P P 16 03 42.3 0.0
baz=312,SNR=9.3
YSS Yuzh-Sakhalins 38.29 282 P P 16 03 43.7 +1.5
YSS IAmb IAmb 16 03 44.1
comp=Z,22nm,0.9s
YSS Yuzh-Sakhalins 38.29 282 eP P 16 03 42.2 0.0
YSS pmax pmax
comp=Z,20μm,0.7s
KSCO Kaye Shedlock' 38.30 95 P P 16 03 44.2 +1.7
KSCO IAmb IAmb 16 03 45.3
comp=Z,30nm,0.8s
KSCO Kaye Shedlock' 38.30 95 P P 16 03 44.3 +1.9
baz=316,SNR=5.3
EYMN Ely 38.32 76 P P 16 03 43.2 +0.7
EYMN IAmb IAmb 16 03 44.2
comp=Z,43nm,0.8s
EYMN pP pP 16 03 59.4 +1.2
EYMN Ely 38.32 76 P P 16 03 43.3 +0.9
baz=308,SNR=41
214A Organ Pipe Nat 38.33 113 P P 16 03 44.7 +2.0
214A PcP 16 05 55.9 +0.6
214A Organ Pipe Nat 38.33 113 P P 16 03 44.7 +2.0
baz=324,SNR=12
T25A Trinidad 38.70 99 P P 16 03 47.5 +1.5
T25A Trinidad 38.70 99 P P 16 03 47.6 +1.5
baz=318
BGNE Belgrade 39.04 89 P P 16 03 49.7 +1.2
BGNE Belgrade 39.04 89 P P 16 03 49.6 +1.1
baz=314
TUC Tucson 39.07 110 P P 16 03 50.5 +1.5
TUC Tucson 39.07 110 P P 16 03 50.5 +1.5
TUC pmax pmax
comp=Z,7.0nm,0.9s
TUC Tucson 39.07 110 P P 16 03 51.2 +2.2
baz=323
E38A The Farm, Brul 39.14 78 P P 16 03 49.6 +0.4
GRNR Gornyy 39.24 291 ⇑ iP P 16 03 48.9 -1.2
GRNR eS S 16 09 45.6 -0.2
GRNR pmax pmax
comp=Z,20nm,0.6s
GRNR smax smax
comp=E,2.0nm,0.8s
GRNR MLR MLR
comp=Z,70nm,15.0s
ANMO Albuquerque 39.26 103 P P 16 03 51.9 +1.3
ANMO PcP 16 05 59.2 +0.8
ANMO Albuquerque 39.26 103 ⇓ iP P 16 03 52.0 +1.3
ANMO pmax pmax
comp=Z,2.0nm,0.8s
ANMO Albuquerque 39.26 103 P P 16 03 52.0 +1.3
baz=320
SPMN Marine on St. 39.36 80 P P 16 03 51.9 +0.8
SPMN Marine on St. 39.36 80 P P 16 03 52.0 +0.9
baz=311,SNR=8.3
CBKS Cedar Bluff 40.00 93 P P 16 03 57.4 +0.8
CBKS IAmb IAmb 16 03 59.0
comp=Z,23nm,0.8s
CBKS Cedar Bluff 40.00 93 P P 16 03 57.4 +0.8
CBKS pmax pmax
comp=Z,23nm,0.8s
CBKS Cedar Bluff 40.00 93 P P 16 03 57.9 +1.3
baz=316,SNR=5.2
JKA Kamikawa-asahi 40.22 279 P P 16 03 58.2 -0.1
ASAJ Asahikawa 40.22 279 P P 16 03 58.2 -0.1
comp=Z,39nm,0.7s,baz=359,slow=6.4,SNR=29
D41A Chassel 40.42 75 P P 16 04 00.1 +0.2
D41A IAmb IAmb 16 04 02.0
comp=Z,20nm,0.7s
121A Cookes Peak, D 40.44 107 P P 16 04 02.4 +2.0
121A Cookes Peak, D 40.44 107 P P 16 04 02.7 +2.3
baz=322,SNR=9.3
319A Douglas 40.58 110 P P 16 04 02.8 +1.3
G40A Rib Lake 40.72 78 P P 16 04 02.6 +0.2
G40A IAmb IAmb 16 04 04.0
comp=Z,21nm,0.8s
COWI Conover 40.74 77 P P 16 04 02.9 +0.3
COWI IAmb IAmb 16 04 04.0
comp=Z,96nm,1.9s
ERM Erimo 41.34 276 ⇓ iP P 16 04 07.8 +0.3
ERM pmax pmax
comp=Z,62nm,0.8s
I40A Norwalk 41.41 80 P P 16 04 08.6 +0.5
I40A IAmb IAmb 16 04 09.3
comp=Z,34nm,0.6s
F42A Maple Grove Fa 41.49 76 P P 16 04 09.7 +0.9
F42A IAmb IAmb 16 04 10.9
comp=Z,52nm,0.9s
KSU1 Kansas State U 41.50 90 P P 16 04 09.5 +0.6
baz=316
E43A Lone Tree Farm 41.69 75 P P 16 04 11.0 +0.7
E43A IAmb IAmb 16 04 12.1
comp=Z,60nm,0.8s
AMTX Amarillo 41.85 99 P P 16 04 12.7 +0.7
AMTX IAmb IAmb 16 04 31.9
comp=Z,41nm,1.6s
AMTX Amarillo 41.85 99 P P 16 04 13.2 +1.3
baz=319
MSTX Muleshoe 41.96 101 P P 16 04 13.6 +0.7
MSTX pP pP 16 04 30.1 +1.4
MSTX Muleshoe 41.96 101 P P 16 04 13.9 +1.0
baz=320,SNR=5.5
E44A Grand Marais A 42.09 74 P P 16 04 15.1 +1.4
E44A IAmb IAmb 16 04 16.0
comp=Z,41nm,0.8s
E44A Grand Marais A 42.09 74 P P 16 04 14.9 +1.3
baz=311
U32A Winter Ranch, 42.18 95 P P 16 04 15.3 +0.9
U32A IAmb IAmb 16 04 16.1
comp=Z,21nm,0.6s
JFWS Jewell Farm 42.27 81 P P 16 04 14.9 -0.2
JFWS pP pP 16 04 31.7 +0.7
JFWS IAmb IAmb 16 04 32.8
comp=Z,26nm,0.7s
JFWS Jewell Farm 42.27 81 P P 16 04 14.9 -0.2
JFWS *PP pP 16 04 31.7 +0.7
JFWS pmax pmax
comp=Z,26nm,0.7s
JFWS Jewell Farm 42.27 81 P P 16 04 15.0 -0.2
baz=313,SNR=7.7
I42A Draeger Farm, 42.33 79 P P 16 04 15.9 +0.3
I42A pP pP 16 04 32.4 +0.9
I42A IAmb IAmb 16 04 33.9
comp=Z,20nm,0.8s
L40A Anamosa 42.34 83 P P 16 04 15.5 -0.2
L40A IAmb IAmb 16 04 16.5
comp=Z,28nm,0.8s
MNTX Cornudas Mount 42.34 105 P P 16 04 17.4 +1.5
MNTX Cornudas Mount 42.34 105 P P 16 04 17.7 +1.9
baz=322,SNR=21
H43A Windswept, Lux 42.54 77 P P 16 04 17.6 +0.3
KLR Kul'dur 42.56 292 P P 16 04 16.6 -0.8
comp=Z,8.3nm,0.4s,baz=59,slow=7.2,SNR=66
KLR Kul'dur 42.56 292 c iP P 16 04 16.4 -1.0
KLR pmax pmax
comp=Z,20nm,0.9s
D46A Sault St. Mari 42.89 72 P P 16 04 20.7 +0.6
baz=311,SNR=21
F45A CMU Biological 42.92 75 P P 16 04 21.0 +0.7
baz=312,SNR=22
E46A Sault Ste Mari 43.10 73 P P 16 04 22.2 +0.5
L42A Oliver, Polo 43.21 82 P P 16 04 22.4 -0.4
L42A pP pP 16 04 38.8 +0.2
L42A IAmb IAmb 16 04 40.1
comp=Z,20nm,0.8s
D47A Chapleau 43.27 71 P P 16 04 23.5 +0.3
baz=311,SNR=28
G45A Suttons Bay 43.28 75 P P 16 04 23.8 +0.5
G45A IAmb IAmb 16 04 25.4
comp=Z,37nm,0.7s
G45A Suttons Bay 43.28 75 P P 16 04 23.7 +0.5
baz=312
SUMG Summit 43.33 23 iP P 16 04 24.1 +0.4
comp=Z,75nm,0.7s
SUMG Summit 43.33 23 P P 16 04 24.1 +0.4
SUMG IAmb IAmb 16 04 25.1
comp=Z,29nm,0.7s
SUMG Summit 43.33 23 P P 16 04 24.1 +0.4
SUMG pmax pmax
comp=Z,29nm,0.7s
K43A Burlington 43.45 80 P P 16 04 24.7 +0.1
K43A IAmb IAmb 16 04 25.5
comp=Z,32nm,0.8s
N41A Harden Midland 43.48 84 P P 16 04 24.4 -0.4
N41A IAmb IAmb 16 04 25.8
comp=Z,55nm,1.1s
N41A pP pP 16 04 41.0 +0.2
G46A Petoskey 43.51 75 P P 16 04 25.9 +0.9
baz=312,SNR=9.4
WMOK Wichita Mounta 43.52 96 P P 16 04 25.8 +0.4
WMOK Wichita Mounta 43.52 96 P P 16 04 25.8 +0.4
WMOK pmax pmax
comp=Z,12nm,0.8s
WMOK Wichita Mounta 43.52 96 P P 16 04 26.4 +1.0
baz=319,SNR=13
E47A Iron Bridge 43.57 72 P P 16 04 25.8 +0.2
baz=312,SNR=21
I45A Fountain 43.65 77 P P 16 04 26.5 +0.3
I45A Fountain 43.65 77 P P 16 04 26.7 +0.5
baz=313
OKCFA Oklahoma City 43.73 95 P P 16 04 27.9 +0.8
OKCFA IAmb IAmb 16 04 28.8
comp=Z,62nm,1.2s
KBS Kingsbay 43.83 4 P P 16 04 28.3 +1.1
KBS IAmb IAmb 16 05 59.9
comp=Z,104nm,1.9s
KBS Kingsbay 43.83 4 P P 16 04 28.3 +1.1
KBS pmax pmax
comp=Z,104nm,1.9s
D48A Paudash Townsh 43.85 70 P P 16 04 28.1 +0.3
baz=311,SNR=24
FNO Franklin 43.88 95 P P 16 04 29.3 +1.1
GLMI Grayling 43.97 75 P P 16 04 29.4 +0.6
GLMI Grayling 43.97 75 P P 16 04 29.5 +0.6
baz=312
SFJD Kangerlussuaq 44.02 33 iP P 16 04 29.0 +0.1
SFJD Kangerlussuaq 44.02 33 iP P 16 04 29.2 +0.3
comp=Z,1.5nm,0.7s
SFJD Kangerlussuaq 44.02 33 P P 16 04 29.2 +0.3
SFJD IAmb IAmb 16 04 30.4
comp=Z,22nm,0.7s
SFJD Kangerlussuaq 44.02 33 P P 16 04 29.2 +0.3
SFJD pmax pmax
comp=Z,22nm,0.7s
L44A Lake County Fo 44.03 80 P P 16 04 29.4 +0.1
L44A IAmb IAmb 16 04 30.4
comp=Z,83nm,1.5s
E48A Lockeyer 44.13 71 P P 16 04 30.2 +0.2
baz=312,SNR=23
I46A Reed City 44.13 76 P P 16 04 30.7 +0.6
baz=313
G47A Hillman 44.13 74 P P 16 04 30.5 +0.4
baz=312
X34A Smith Ranch, M 44.14 96 P P 16 04 31.5 +1.3
W35A Tecumseh 44.24 94 P P 16 04 31.6 +0.5
MATQ Matagami 44.26 65 P P 16 04 31.0 0.0
baz=311,SNR=13
TUL1 Leonard 44.27 93 P P 16 04 31.4 +0.2
TUL1 IAmb IAmb 16 04 32.5
comp=Z,17nm,0.7s
TUL1 Leonard 44.27 93 P P 16 04 31.7 +0.4
baz=318
F48A Evansville 44.33 72 P P 16 04 32.1 +0.4
baz=312,SNR=11
H47A Mio 44.34 75 P P 16 04 32.3 +0.5
baz=313
HDIL Hopedale 44.43 83 P P 16 04 32.2 -0.2
HDIL Hopedale 44.43 83 P P 16 04 32.5 0.0
baz=315,SNR=6.7
M44A Midewin, Midew 44.51 81 P P 16 04 33.1 0.0
M44A IAmb IAmb 16 04 34.2
comp=Z,43nm,1.1s
I47A Gladwin 44.57 76 P P 16 04 34.2 +0.6
I47A Gladwin 44.57 76 P P 16 04 34.3 +0.7
baz=313
U38A Gravette 44.64 91 P P 16 04 33.9 -0.4
U38A IAmb IAmb 16 04 34.9
comp=Z,29nm,0.8s
ABTX Abilene, Hawle 44.67 99 P P 16 04 34.0 -0.6
ABTX IAmb IAmb 16 04 36.2
comp=Z,16nm,0.7s
ABTX Abilene, Hawle 44.67 99 P P 16 04 35.5 +0.9
baz=321
F49A Sandfield 44.68 72 P P 16 04 34.7 +0.3
baz=312,SNR=13
SPA0 Spitsbergen Ar 44.70 3 P P 16 04 33.7 -0.5
H48A Harrisville 44.73 74 P P 16 04 35.3 +0.5
H48A IAmb IAmb 16 04 36.1
comp=Z,20nm,0.7s
H48A Harrisville 44.73 74 P P 16 04 35.3 +0.5
baz=313
K46A Dorr 44.82 78 P P 16 04 35.7 +0.2
baz=314
D50A G1974 Best Tow 44.86 69 P P 16 04 36.2 +0.3
baz=312,SNR=24
I48A Sherman Twp 44.88 75 P P 16 04 37.0 +1.0
baz=313,SNR=17
J47A Sunmer 44.94 77 P P 16 04 36.9 +0.4
J47A IAmb IAmb 16 04 38.1
comp=Z,29nm,0.9s
J47A Sunmer 44.94 77 P P 16 04 37.1 +0.5
baz=314
P43A Skaggs, Pawnee 44.95 84 P P 16 04 36.5 -0.2
P43A IAmb IAmb 16 04 37.6
comp=Z,38nm,0.8s
HHAR Hobbs 45.00 91 P P 16 04 36.5 -0.7
HHAR IAmb IAmb 16 04 37.5
comp=Z,14nm,0.6s
L46A Eue Claire 45.01 79 P P 16 04 37.5 +0.4
L46A IAmb IAmb 16 04 38.3
comp=Z,44nm,0.9s
L46A Eue Claire 45.01 79 P P 16 04 37.6 +0.5
baz=314
LSQQ Lebel-sur-Quev 45.04 65 P P 16 04 37.3 +0.1
baz=311
TX31 Lajitas Ar. Si 45.12 106 P P 16 04 39.0 +0.8
TX32 Lajitas Array 45.12 106 P P 16 04 38.9 +0.7
TXAR Lajitas Array 45.12 106 P P 16 04 39.6 +1.4
comp=Z,5.0nm,0.8s,baz=313,slow=5.6,SNR=45
TXAR PcP PcP 16 06 18.1 +0.3
comp=Z,2.1nm,0.6s,baz=148,slow=0.2,SNR=6.9
D51A Lot 18 Range I 45.15 69 P P 16 04 38.4 +0.2
baz=312,SNR=12
O44A Mansfield 45.16 83 P P 16 04 38.0 -0.3
O44A IAmb IAmb 16 04 38.6
comp=Z,14nm,0.6s
CCM Cathedral Cave 45.16 87 P P 16 04 37.8 -0.5
CCM IAmb IAmb 16 04 38.8
comp=Z,17nm,0.8s
CCM Cathedral Cave 45.16 87 P P 16 04 37.8 -0.5
CCM pmax pmax
comp=Z,17nm,0.8s
CCM Cathedral Cave 45.16 87 P P 16 04 37.9 -0.5
baz=317
BOD Bodaibo 45.24 311 ⇑ iP P 16 04 37.4 -1.3
BOD eS S 16 11 10.0 -3.8
BOD pmax pmax
comp=Z,15nm,1.0s
K47A Vermontville 45.24 77 P P 16 04 39.1 +0.2
baz=314
MGMO Mountain Grove 45.26 88 P P 16 04 38.2 -1.0
VLDQ Val d'Or 45.43 67 P P 16 04 38.5 -1.9
VLDQ IAmb IAmb 16 04 40.8
comp=Z,22nm,1.0s
J48A Bridge Port 45.45 76 P P 16 04 40.9 +0.4
J48A IAmb IAmb 16 04 41.5
comp=Z,21nm,0.7s
J48A Bridge Port 45.45 76 P P 16 04 41.1 +0.5
baz=314
E51A G1948 Merrick 45.47 70 P P 16 04 40.5 -0.2
baz=312,SNR=13
X37A Clayton 45.48 93 P P 16 04 41.5 +0.5

X37A IAmb IAmb 16 04 42.7
comp=Z,27nm,0.7s
I49A Point Hope 45.51 75 P P 16 04 41.7 +0.6
I49A Point Hope 45.51 75 P P 16 04 41.6 +0.6
baz=314,SNR=8.5
U40A Yellville 45.53 90 P P 16 04 40.1 -1.3
U40A IAmb IAmb 16 04 41.5
comp=Z,10nm,0.6s
U40A Yellville 45.53 90 P P 16 04 40.7 -0.6
baz=318,SNR=7.9
K48A Perry 45.62 77 P P 16 04 42.2 +0.3
baz=314,SNR=6.0
L47A Sherwood 45.62 78 P P 16 04 41.9 0.0
baz=314,SNR=11
F51A Arnstein 45.66 71 P P 16 04 42.1 -0.1
baz=313,SNR=6.0
SFIN Lafayette 45.73 81 P P 16 04 43.1 +0.3
SFIN IAmb IAmb 16 04 43.6
comp=Z,23nm,0.6s
SFIN Lafayette 45.73 81 P P 16 04 43.2 +0.3
baz=315,SNR=8.7
J49A Marlette 45.75 75 P P 16 04 43.5 +0.5
baz=314,SNR=12
USRK Ussuriysk Ar. 45.78 286 P P 16 04 41.2 -2.0
comp=Z,3.6nm,0.8s,baz=55,slow=10.0,SNR=10
USRK LR LR 16 23 12.0
comp=Z,64nm,21.5s,baz=39,slow=35
M47A Cromwell 45.83 79 P P 16 04 43.6 0.0
baz=315,SNR=6.8
W39A Magazine 45.89 92 P P 16 04 43.8 -0.3
W39A IAmb IAmb 16 04 44.7
comp=Z,14nm,0.8s
W39A Magazine 45.89 92 P P 16 04 44.1 0.0
baz=318,SNR=13
NRIK Noril'sk 45.89 334 P P 16 04 43.2 -0.5
comp=Z,14nm,0.5s,baz=52,slow=6.7,SNR=36
NRIK LR LR 16 27 50.5
comp=Z,91nm,18.3s,baz=20,slow=41
SCHQ Schefferville 45.98 54 P P 16 04 45.0 +0.4
comp=Z,20nm,0.6s,baz=314,slow=7.5,SNR=62
SCHQ Schefferville 45.98 54 P P 16 04 44.8 +0.2
SCHQ IAmb IAmb 16 04 45.6
comp=Z,22nm,0.7s
K49A Clarkson 45.98 76 P P 16 04 45.3 +0.5
baz=314
D53A Lac Vacive, Po 46.00 68 P P 16 04 45.0 +0.1
HPIG 46.02 110 P P 16 04 46.7 +1.2
L48A N Adams 46.05 78 P P 16 04 45.5 +0.1
baz=315,SNR=7.5
F52A Sundridge 46.05 70 P P 16 04 45.4 +0.1
baz=313,SNR=13
E52A Mattawa 46.06 69 P P 16 04 45.3 0.0
baz=313,SNR=12
N47A Urbana 46.13 80 P P 16 04 45.5 -0.5
N47A Urbana 46.13 80 P P 16 04 45.7 -0.3
baz=315,SNR=13
AAM Ann Arbor 46.21 77 P P 16 04 46.7 +0.1
baz=314
P46A Rosedale 46.22 82 P P 16 04 46.7 0.0
M48A Edgerton 46.22 78 P P 16 04 46.1 -0.5
M48A IAmb IAmb 16 04 47.0
comp=Z,22nm,0.6s
M48A Edgerton 46.22 78 P P 16 04 46.5 -0.2
baz=315
JCT Junction City 46.25 101 P P 16 04 47.3 +0.2
JCT IAmb IAmb 16 05 06.3
comp=Z,35nm,0.8s
JCT Junction City 46.25 101 P P 16 04 47.3 +0.2
JCT pmax pmax
comp=Z,35nm,0.8s
JCT Junction City 46.25 101 P P 16 04 47.9 +0.8
baz=322
FCAR Ozark Folk Cen 46.27 90 P P 16 04 46.2 -1.0
FCAR IAmb IAmb 16 04 47.0
comp=Z,20nm,1.2s
L49A Milan 46.29 77 P P 16 04 47.6 +0.4
baz=315
WHTX Lake Whitney, 46.33 98 P P 16 04 48.4 +0.7
WHTX IAmb IAmb 16 04 49.4
comp=Z,20nm,0.8s
WHTX Lake Whitney, 46.33 98 P P 16 04 48.4 +0.7
baz=321
OLIL Olney 46.37 84 P P 16 04 48.0 +0.1
K50A Casco 46.43 76 P P 16 04 48.8 +0.5
D54A Lac Fusel, La 46.48 67 P P 16 04 48.6 -0.1
baz=313,SNR=10
MIAR Mount Ida 46.49 92 P P 16 04 48.7 -0.2
MIAR IAmb IAmb 16 04 50.3
comp=Z,25nm,0.8s
MIAR Mount Ida 46.49 92 P P 16 04 48.7 -0.2
MIAR pmax pmax
comp=Z,25nm,0.8s
MIAR Mount Ida 46.49 92 P P 16 04 49.0 +0.1
baz=319,SNR=21
E53A Dumoine, Ponti 46.50 69 P P 16 04 48.9 +0.1
baz=313,SNR=13
N48A Decatur 46.50 79 P P 16 04 48.6 -0.3
baz=315,SNR=12
S44A Carbondale 46.50 85 P P 16 04 48.7 -0.2
S44A IAmb IAmb 16 04 49.8
comp=Z,69nm,1.5s
PBMO Poplar Bluff 46.54 87 P P 16 04 48.4 -0.8
PBMO IAmb IAmb 16 04 50.5
comp=Z,17nm,0.9s
I51A Listowel 46.55 73 P P 16 04 50.1 +0.9
baz=314,SNR=14
H52A Wyevale 46.55 72 P P 16 04 49.5 +0.3
baz=314
ALGO Algonquin Park 46.59 69 P P 16 04 49.7 +0.1
baz=313,SNR=6.3
M49A Liberty Center 46.62 78 P P 16 04 49.8 0.0
baz=315
WHAR Wooly Hollow 46.63 90 P P 16 04 49.1 -0.8
LCAR Lake Charles 46.67 89 P P 16 04 48.9 -1.3
LCAR PcP 16 06 22.0 -1.0
E54A Lac Daplat, Po 46.70 68 P P 16 04 50.3 0.0
baz=313,SNR=18
MDJ Mudanjiang 46.74 288 P P 16 04 49.8 -0.9
MDJ pmax pmax
comp=Z,10.0nm,0.8s
MDJ pmax pmax
comp=Z,86nm,4.7s
W41B Gary Mavity, V 46.74 90 P P 16 04 50.1 -0.7
W41B IAmb IAmb 16 04 51.4
comp=Z,32nm,1.7s
W41B Gary Mavity, V 46.74 90 P P 16 04 50.9 +0.1
baz=318
I52A Shelburne 46.80 73 P P 16 04 51.4 +0.2
baz=314
L50A Kingsville 46.84 76 P P 16 04 51.9 +0.4
baz=315
SADO Sadowa 46.85 71 P P 16 04 51.5 0.0
SADO IAmb IAmb 16 04 52.6
comp=Z,26nm,0.8s
O48A Farmland 46.86 80 P P 16 04 51.0 -0.7
baz=316,SNR=10
G53A Haliburton 46.87 71 P P 16 04 52.1 +0.3
baz=314,SNR=16
N49A Columbus Grove 46.91 79 P P 16 04 51.8 -0.3
N49A Columbus Grove 46.91 79 P P 16 04 51.9 -0.1
baz=315,SNR=13
BLO Bloomington 46.91 82 P P 16 04 51.9 -0.2
BLO Bloomington 46.91 82 P P 16 04 51.9 -0.2
BLO pmax pmax
comp=Z,32nm,0.6s
X40A Basin Creek Fa 46.94 91 P P 16 04 52.2 -0.1
X40A Basin Creek Fa 46.94 91 P P 16 04 52.3 -0.1
baz=319
G54A Lake Saint Pet 46.95 70 P P 16 04 52.5 +0.1
baz=314,SNR=5.4
PARMO Parma 46.99 87 P P 16 04 52.7 0.0
K51A Iona Station 47.05 75 P P 16 04 53.3 +0.2
baz=315
HENM Henderson Moun 47.10 87 P P 16 04 54.1 +0.5
D55A Sainte-Anne-du 47.16 67 P P 16 04 54.1 +0.2
baz=313
USIN University of 47.16 84 P P 16 04 53.5 -0.6
M50A Fremont 47.17 77 P P 16 04 53.8 -0.3
M50A IAmb IAmb 16 04 54.9
comp=Z,12nm,0.8s
M50A Fremont 47.17 77 P P 16 04 54.5 +0.4
baz=315
435B Jarrell 47.20 99 P P 16 04 55.2 +0.8
435B IAmb IAmb 16 04 56.6
comp=Z,33nm,0.8s
435B Jarrell 47.20 99 P P 16 04 55.7 +1.3

baz=322
J52A Paris 47.22 74 P P 16 04 55.0 +0.5
baz=314,SNR=5.9
E55A Montcerf-Lytto 47.26 68 P P 16 04 54.9 +0.3
baz=313
H53A Bobcaygeon 47.27 71 P P 16 04 55.0 +0.2
baz=314,SNR=5.6
P48A Milroy 47.29 81 P P 16 04 54.4 -0.7
P48A Milroy 47.29 81 P P 16 04 54.6 -0.5
baz=316,SNR=16
MSHR Mys Shultsa 47.35 285 ⇓iP P 16 04 55.0 -0.4
O49A Covington 47.35 79 P P 16 04 54.8 -0.6
O49A IAmb IAmb 16 04 55.4
comp=Z,12nm,0.5s
O49A Covington 47.35 79 P P 16 04 54.9 -0.6
baz=316
GNAR Gosnell 47.36 88 P P 16 04 56.5 +0.9
HICK Hickman 47.36 87 P P 16 04 56.0 +0.4
WLAR White Oak Lake 47.39 92 P P 16 04 56.5 +0.7
WLAR IAmb IAmb 16 04 57.3
comp=Z,69nm,1.4s
D56A ZEC Mazanza, M 47.50 66 P P 16 04 56.5 -0.1
baz=313,SNR=26
Q48A North Vernon 47.51 82 P P 16 04 56.4 -0.4
baz=316
F55A Otter Lake 47.54 68 P P 16 04 56.7 -0.1
baz=314
LNXT Lenox 47.55 87 P P 16 04 57.5 +0.5
N50A Nevada 47.56 78 P P 16 04 57.2 0.0
baz=316
P49A Miami Univ. Ec 47.62 80 P P 16 04 56.7 -0.9
baz=316,SNR=5.1
E56A St. Veronique 47.71 67 P P 16 04 58.0 -0.2
baz=314,SNR=6.4
WCI Wyandotte Cave 47.71 83 P P 16 04 58.3 0.0
WCI PcP 16 06 26.1 -0.6
WCI IAmb IAmb 16 06 27.3
comp=Z,18nm,0.6s
WCI Wyandotte Cave 47.71 83 P P 16 04 58.3 0.0
WCI pmax pmax
comp=Z,18nm,0.6s
WCI Wyandotte Cave 47.71 83 P P 16 04 58.0 -0.3
baz=317
PLVO Plevna 47.72 70 P P 16 04 58.4 +0.1
PLVO IAmb IAmb 16 04 59.6
comp=Z,29nm,1.0s
G55A Calabogie 47.75 69 P P 16 04 58.7 +0.1
baz=314,SNR=14
O50A Cable 47.76 79 P P 16 04 58.5 -0.2
baz=316,SNR=7.1
DELO Deloro Mine 47.81 70 P P 16 04 59.2 +0.2
DELO IAmb IAmb 16 05 00.3
comp=Z,40nm,1.2s
N51A Ashland 47.87 77 P P 16 04 59.3 -0.2
N51A IAmb IAmb 16 04 59.7
comp=Z,21nm,0.6s
N51A Ashland 47.87 77 P P 16 04 59.1 -0.5
baz=316
Z41A Richland Creek 47.88 92 P P 16 05 00.2 +0.6
Z41A Richland Creek 47.88 92 P P 16 05 00.0 +0.4
baz=320
Q49A Aurora 47.90 81 P P 16 04 59.2 -0.6
baz=316,SNR=5.5
MJAR Matsushiro Arr 47.93 274 P P 16 04 59.8 -0.3
comp=Z,6.7nm,0.7s,baz=46,slow=7.8,SNR=17
MJAR LR LR 16 24 56.5
comp=Z,22nm,21.0s,baz=270,slow=36
MJB9 Matsu-Tunnel 47.93 274 P P 16 05 00.1 0.0
MJB9 IAmb IAmb 16 05 02.0
comp=Z,22nm,0.9s
MAJO Matsushiro 47.93 274 P P 16 04 60.0 -0.1
MAJO IAmb IAmb 16 05 02.0
comp=Z,22nm,0.9s
MAJO Matsushiro 47.93 274 ⇑iP P 16 04 59.4 -0.7
MAJO pmax pmax
comp=Z,22nm,0.9s
MAT Matsushiro 47.93 274 P P 16 04 59.9 -0.2
CCAR Cane Creek 47.94 91 P P 16 05 01.1 +0.9
D57A Chemin Vers le 47.95 66 P P 16 04 59.8 -0.2
baz=314,SNR=10
M52A Chesterland 47.96 76 P P 16 05 00.2 0.0
M52A IAmb IAmb 16 05 00.8
comp=Z,20nm,0.7s
M52A Chesterland 47.96 76 P P 16 05 00.2 0.0
baz=315
I55A Frankford 47.99 71 P P 16 05 00.5 +0.2
baz=314
H55A Tweed 48.01 70 P P 16 05 00.9 +0.4
baz=314,SNR=5.6
NATX Nacogdoches 48.02 95 P P 16 05 00.9 +0.1
NATX IAmb IAmb 16 05 02.7
comp=Z,31nm,0.8s
NATX Nacogdoches 48.02 95 P P 16 05 01.4 +0.6
baz=321
ACSO Alum Creek Sta 48.04 78 P P 16 05 00.6 -0.3
ACSO IAmb IAmb 16 05 01.2
comp=Z,17nm,0.7s
ACSO Alum Creek Sta 48.04 78 P P 16 05 00.7 -0.1
baz=316,SNR=5.2
P50A Jamestown 48.05 79 P P 16 05 00.5 -0.4
baz=316,SNR=5.9
J54A Appleton 48.16 72 P P 16 05 02.2 +0.6
J54A Appleton 48.16 72 P P 16 05 02.3 +0.6
baz=315
TRQ Mont Tremblant 48.17 67 P P 16 05 01.6 -0.2
833A Chaparral WMA, 48.17 103 P P 16 05 02.7 +0.7
baz=323
T47A Sharon Grove 48.18 84 P P 16 05 02.0 0.0
T47A IAmb IAmb 16 05 03.1
comp=Z,24nm,1.0s
SCO Scoresbysund 48.23 19 iP P 16 05 02.0 +0.2
comp=Z,17nm,0.5s
SCO Scoresbysund 48.23 19 P P 16 05 02.1 +0.2
SCO IAmb IAmb 16 05 03.8
comp=Z,14nm,0.7s
SCO Scoresbysund 48.23 19 P P 16 05 02.1 +0.2
SCO pmax pmax
comp=Z,14nm,0.7s
E57A Chemin Saint G 48.24 66 P P 16 05 02.2 -0.2
baz=314,SNR=15
LATQ La Tuque 48.24 64 P P 16 05 02.0 -0.4
LATQ La Tuque 48.24 64 P P 16 05 01.9 -0.4
baz=314,SNR=8.0
L53A Girard 48.24 75 P P 16 05 02.7 +0.3
baz=315,SNR=7.7
ERPA Erie 48.27 74 P P 16 05 02.9 +0.3
ERPA Erie 48.27 74 P P 16 05 03.0 +0.4
baz=315,SNR=6.3
R49A Shelbyville 48.27 82 P P 16 05 02.3 -0.3
R49A IAmb IAmb 16 05 03.4
comp=Z,23nm,1.2s
R49A Shelbyville 48.27 82 P P 16 05 02.5 -0.1
baz=317
O51A Pataskala 48.30 78 P P 16 05 02.5 -0.3
baz=316,SNR=5.8
N52A McGinn's Farm, 48.31 77 P P 16 05 02.3 -0.6
baz=316
MEDO Medina 48.33 72 P P 16 05 03.4 +0.4
D58A Chemin du LacG 48.39 65 P P 16 05 03.1 -0.4
baz=314,SNR=11
M53A WI Miller and 48.39 75 P P 16 05 03.5 -0.1
baz=316,SNR=6.7
HIA Hailar 48.42 299 P P 16 05 02.6 -1.1
HIA Hailar 48.42 299 P P 16 05 02.6 -1.1
HIA pmax pmax
comp=Z,4.0nm,0.8s
WVT Waverly 48.43 86 P P 16 05 04.0 +0.1
WVT IAmb IAmb 16 05 05.2
comp=Z,31nm,0.8s
WVT Waverly 48.43 86 P P 16 05 04.0 +0.1
WVT pmax pmax
comp=Z,31nm,0.8s
WVT Waverly 48.43 86 P P 16 05 04.2 +0.4
baz=318
H56A Elgin 48.45 69 P P 16 05 04.2 +0.3
baz=315,SNR=8.1
Q50A Georgetown 48.51 80 P P 16 05 04.2 -0.3
baz=317,SNR=5.9
ALLY Alegheny Colle 48.52 75 P P 16 05 04.6 +0.1
PECO Prince Edward 48.54 71 P P 16 05 04.9 +0.3
PECO IAmb IAmb 16 05 05.8
comp=Z,26nm,0.7s
P51A Williamsport 48.54 79 P P 16 05 05.2 +0.5
baz=316
L54A Sinclairville 48.54 74 P P 16 05 05.2 +0.5
baz=315,SNR=13

S49A Springfield 48.58 82 P P 16 05 04.7 -0.3
baz=317
J55A Hilton 48.59 72 P P 16 05 05.4 +0.4
J55A Hilton 48.59 72 P P 16 05 05.3 +0.4
baz=315
K54A Basiliko Farm, 48.60 73 P P 16 05 05.5 +0.3
baz=315,SNR=10
ANGG Ammassalik, Gr 48.69 29 P P 16 05 04.6 -0.8
E58A La Victoria 48.70 66 P P 16 05 05.4 -0.4
baz=314
Q51A Peebles 48.72 80 P P 16 05 05.9 -0.2
Q51A Peebles 48.72 80 P P 16 05 06.1 +0.1
baz=317,SNR=11
O52A Adamsville 48.73 78 P P 16 05 05.9 -0.3
O52A IAmb IAmb 16 05 06.8
comp=Z,30nm,1.1s
O52A Adamsville 48.73 78 P P 16 05 05.8 -0.3
baz=316
R50A Paris 48.73 81 P P 16 05 06.1 -0.1
R50A Paris 48.73 81 P P 16 05 06.3 +0.1
baz=317,SNR=24
G57A Newington 48.73 68 P P 16 05 05.7 -0.4
baz=315,SNR=7.1
N53A Lisbon 48.76 76 P P 16 05 06.0 -0.3
N53A IAmb IAmb 16 05 07.1
comp=Z,19nm,0.8s
N53A Lisbon 48.76 76 P P 16 05 06.2 -0.2
baz=316
OXF Oxford 48.78 88 P P 16 05 06.7 +0.1
OXF Oxford 48.78 88 P P 16 05 06.7 +0.1
OXF pmax pmax
comp=Z,99nm,0.9s
OXF Oxford 48.78 88 P P 16 05 06.8 +0.2
baz=319,SNR=14
WVNY West Valley, N 48.79 73 P P 16 05 06.8 +0.2
HKT Hockley 48.79 98 iP P 16 05 07.9 +1.3
HKT pmax pmax
comp=Z,11nm,1.0s
K55A Perry 48.84 72 P P 16 05 07.1 +0.1
baz=315,SNR=7.3
M54A Oil Creek Stat 48.88 75 P P 16 05 07.2 0.0
M54A IAmb IAmb 16 05 08.3
comp=Z,29nm,0.7s
M54A Oil Creek Stat 48.88 75 P P 16 05 07.4 +0.1
baz=316,SNR=10
P52A Corning 48.92 78 P P 16 05 07.3 -0.3
baz=316
T49A Edmonton 48.95 83 P P 16 05 07.6 -0.2
T49A IAmb IAmb 16 05 08.8
comp=Z,20nm,1.2s
T49A Edmonton 48.95 83 P P 16 05 07.8 0.0
baz=318,SNR=5.1
O53A New Philadelph 48.97 77 P P 16 05 07.7 -0.3
baz=316
H57A Richville 48.98 69 P P 16 05 07.8 -0.2
baz=315,SNR=5.5
L55A Hinsdale 49.03 73 P P 16 05 08.9 +0.4
baz=316,SNR=10
J56A Wolcott 49.07 71 P P 16 05 08.8 +0.1
J56A IAmb IAmb 16 05 09.9
comp=Z,21nm,0.8s
J56A Wolcott 49.07 71 P P 16 05 09.0 +0.3
baz=315
N54A Moraine State 49.10 75 P P 16 05 08.5 -0.4
N54A IAmb IAmb 16 05 09.4
comp=Z,17nm,0.6s
N54A Moraine State 49.10 75 P P 16 05 08.8 -0.1
baz=316
R51A Hillsboro 49.12 81 P P 16 05 09.5 +0.3
baz=317,SNR=34
S50A Richmond 49.13 82 P P 16 05 09.2 -0.1
baz=317,SNR=10
PLAL Pickwick Lake 49.15 87 P P 16 05 09.5 +0.1
G58A Ormstown 49.17 67 P P 16 05 09.0 -0.4
baz=315,SNR=14
I57A Carthage 49.22 70 P P 16 05 10.0 +0.2
baz=315,SNR=11
K56A Middlesex 49.24 72 P P 16 05 10.5 +0.4
baz=316,SNR=6.8
V48A Smith Brothers 49.26 85 P P 16 05 10.2 0.0
V48A IAmb IAmb 16 05 11.1
comp=Z,18nm,0.8s
CLTN Cedars of Leba 49.27 85 P P 16 05 10.9 +0.6
CLTN IAmb IAmb 16 05 12.0
comp=Z,21nm,0.9s
LONY Lake Ozonia 49.28 68 P P 16 05 09.8 -0.5
LONY IAmb IAmb 16 05 10.8
comp=Z,21nm,0.8s
LONY Lake Ozonia 49.28 68 P P 16 05 09.9 -0.4
baz=315,SNR=8.5
F59A Saint Guilaume 49.31 66 P P 16 05 10.2 -0.3
baz=315
Q52A Bidwell 49.34 79 P P 16 05 10.2 -0.6
baz=317
M55A Ridgway 49.37 74 P P 16 05 11.1 0.0
M55A Ridgway 49.37 74 P P 16 05 11.4 +0.4
baz=316,SNR=14
T50A Nancy 49.38 83 P P 16 05 11.3 +0.1
baz=318,SNR=6.9
J57A Williamstown 49.42 70 P P 16 05 11.4 +0.1
J57A IAmb IAmb 16 05 12.5
comp=Z,34nm,0.9s
J57A Williamstown 49.42 70 P P 16 05 11.6 +0.3
baz=315
P53A Whipple 49.42 78 P P 16 05 10.9 -0.6
P53A IAmb IAmb 16 05 11.5
comp=Z,20nm,0.6s
P53A Whipple 49.42 78 P P 16 05 11.0 -0.4
baz=317,SNR=5.9
CN2 Changchun 49.43 290 ⇑P P 16 05 10.5 -1.0
CN2 epP pP 16 05 26.5 -1.1
CN2 eS S 16 12 12.3 -1.4
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 LR LR
comp=Z,100nm,17.0s
CN2 LR LR
comp=Z,100nm,17.0s
CN2 LR LR
comp=Z,100nm,18.0s
O54A Avella 49.45 76 P P 16 05 11.3 -0.4
O54A Avella 49.45 76 P P 16 05 11.4 -0.4
baz=316,SNR=8.7
INU Inuyama 49.46 274 P P 16 05 12.3 +0.5
INU IAmb IAmb 16 05 21.9
comp=Z,46nm,1.8s
D60A Saint Jean D'O 49.48 64 P P 16 05 11.4 -0.3
baz=315,SNR=6.8
L56A Greenwood 49.52 73 P P 16 05 12.4 +0.2
L56A Greenwood 49.52 73 P P 16 05 12.7 +0.5
baz=316,SNR=23
342A Flagon Creek P 49.58 94 P P 16 05 13.7 +1.0
R52A Catlettsburg 49.59 80 P P 16 05 12.5 -0.3
baz=317
S51A Beattyville 49.60 81 P P 16 05 12.7 -0.1
S51A IAmb IAmb 16 05 13.8
comp=Z,36nm,0.9s
S51A pP 16 05 29.9 +0.9
S51A Beattyville 49.60 81 P P 16 05 12.7 -0.1
baz=318
E60A Ste Agathe de 49.60 65 P P 16 05 12.2 -0.5
baz=315
H58A Gabriels 49.62 68 P P 16 05 12.7 -0.3
baz=315,SNR=6.9
FRNY Flat Rock 49.63 67 P P 16 05 12.1 -0.8
D61A St Aubert, Com 49.63 63 P P 16 05 12.9 0.0
baz=315,SNR=9.5
K57A Scipio Center 49.64 71 P P 16 05 12.9 -0.1
baz=316
F60A Warwick 49.64 65 P P 16 05 12.4 -0.6
baz=315,SNR=7.0
G59A Clarenceville 49.66 67 P P 16 05 12.8 -0.3
baz=315,SNR=12
M56A Emporium 49.67 74 P P 16 05 13.3 0.0
M56A Emporium 49.67 74 P P 16 05 13.6 +0.2
baz=316,SNR=12
H59A Cadyville 49.71 68 P P 16 05 13.3 -0.3
baz=315,SNR=12
I58A Old Forge 49.74 69 P P 16 05 14.1 +0.2
baz=316,SNR=11
N55A Marion Center 49.75 75 P P 16 05 14.0 0.0
baz=316,SNR=7.2
NRS Narsarsuaq 49.75 37 P P 16 05 13.9 +0.3
NRS Narsarsuaq 49.75 37 P P 16 05 13.9 +0.3

NRS pmax pmax
comp=Z,38nm,0.8s
Q53A Leroy 49.81 78 P P 16 05 14.0 -0.4
baz=317
J58A Remsen 49.82 70 P P 16 05 14.7 +0.3
J58A Remsen 49.82 70 P P 16 05 14.8 +0.4
baz=316,SNR=17
P54A Burton 49.82 77 P P 16 05 14.1 -0.4
baz=317,SNR=6.4
T51A Gray 49.91 82 P P 16 05 15.0 -0.2
baz=318,SNR=10
NCB Newcomb 49.92 69 P P 16 05 15.2 0.0
NCB IAmb IAmb 16 05 16.3
comp=Z,35nm,1.2s
R53A Hurricane 49.97 79 P P 16 05 15.2 -0.4
R53A Hurricane 49.97 79 P P 16 05 15.3 -0.4
baz=317,SNR=6.1
L57A Andrews Acres 49.99 72 P P 16 05 16.0 +0.3
baz=316,SNR=21
O55A Ligonier 50.00 76 P P 16 05 15.6 -0.3
baz=317,SNR=5.1
N56A West Decatur 50.02 74 P P 16 05 16.0 0.0
baz=316,SNR=8.5
E61A Lac Etchemin 50.03 64 P P 16 05 15.9 -0.1
baz=315
K58A Earlville 50.06 71 P P 16 05 16.5 +0.3
K58A IAmb IAmb 16 05 17.7
comp=Z,19nm,0.8s
K58A Earlville 50.06 71 P P 16 05 16.7 +0.4
baz=316
G60A Masonville 50.07 66 P P 16 05 15.9 -0.4
baz=315,SNR=5.3
Q54A Coxs Mills 50.09 78 P P 16 05 16.1 -0.4
Q54A IAmb IAmb 16 05 16.5
comp=Z,14nm,0.6s
Q54A Coxs Mills 50.09 78 P P 16 05 16.0 -0.4
baz=317,SNR=6.1
X48A Hartselle 50.10 87 P P 16 05 16.3 -0.4
X48A IAmb IAmb 16 05 17.4
comp=Z,24nm,0.9s
F61A St Evariste 50.11 65 P P 16 05 16.3 -0.2
baz=315
MCWV Mont Chateau 50.12 77 P P 16 05 16.4 -0.3
MCWV IAmb IAmb 16 05 17.0
comp=Z,12nm,0.6s
MCWV Mont Chateau 50.12 77 P P 16 05 16.5 -0.3
baz=317
SWET Sewanee 50.13 85 P P 16 05 16.5 -0.4
J59A Piesco 50.14 69 P P 16 05 16.9 0.0
J59A IAmb IAmb 16 05 17.8
comp=Z,23nm,0.8s
J59A Piesco 50.14 69 P P 16 05 16.9 0.0
baz=316,SNR=5.5
I59A Olmsteadville 50.22 69 P P 16 05 17.5 0.0
baz=316
P55A Reedsville 50.24 77 P P 16 05 17.4 -0.2
baz=317
D62A Allapoint, All 50.27 62 P P 16 05 17.6 -0.1
D62A IAmb IAmb 16 05 18.8
comp=Z,34nm,1.1s
D62A Allapoint, All 50.27 62 P P 16 05 17.9 +0.2
baz=315,SNR=7.3
H60A Morristown 50.27 67 P P 16 05 17.4 -0.4
baz=316
BINY Binghamton 50.29 71 P P 16 05 18.2 +0.2
BINY Binghamton 50.29 71 P P 16 05 18.4 +0.4
baz=316,SNR=10
U51A La Follette 50.30 83 P P 16 05 18.1 -0.1
baz=318
T52A Hallie 50.31 81 P P 16 05 18.4 +0.1
T52A IAmb IAmb 16 05 19.8
comp=Z,44nm,1.2s
T52A Hallie 50.31 81 P P 16 05 18.5 +0.3
baz=318,SNR=6.9
M57A Sunshine Farm, 50.32 73 P P 16 05 18.3 0.0
M57A Sunshine Farm, 50.32 73 P P 16 05 18.6 +0.4
baz=316,SNR=12
G61A St-Isidore-de- 50.34 66 P P 16 05 18.2 -0.1
baz=316
O56A Blue Knob Stat 50.35 75 P P 16 05 18.0 -0.5
O56A IAmb IAmb 16 05 19.0
comp=Z,27nm,0.9s
O56A Blue Knob Stat 50.35 75 P P 16 05 18.2 -0.3
baz=317,SNR=6.8
S53A Williamson 50.35 80 P P 16 05 18.6 0.0
baz=318
344A Westbrook Farm 50.39 92 P P 16 05 19.7 +0.9
TZTN Tazewell 50.43 82 P P 16 05 19.1 0.0
TZTN IAmb IAmb 16 05 19.9
comp=Z,18nm,0.9s
TZTN Tazewell 50.43 82 P P 16 05 19.3 +0.2
baz=318,SNR=6.2
SSPA Standing Stone 50.43 74 P P 16 05 19.2 +0.1
SSPA Standing Stone 50.43 74 P P 16 05 19.2 +0.1
baz=317
K59A Cooperstown 50.46 70 P P 16 05 19.7 +0.4
baz=316,SNR=9.7
L58A Harry Jones Me 50.47 72 P P 16 05 20.0 +0.6
baz=316,SNR=9.3
Q55A Buckhannon 50.48 77 P P 16 05 19.3 -0.2
baz=317
W50A Signal Mountai 50.48 85 P P 16 05 19.6 0.0
W50A IAmb IAmb 16 05 20.7
comp=Z,23nm,0.8s
W50A Signal Mountai 50.48 85 P P 16 05 19.3 -0.3
baz=319,SNR=8.6
I60A Shoreham 50.48 68 P P 16 05 19.3 -0.1
baz=316
N57A Milroy 50.52 74 P P 16 05 20.0 +0.2
baz=317,SNR=8.1
V51A Loudon 50.55 83 P P 16 05 20.2 +0.1
V51A IAmb IAmb 16 05 20.9
comp=Z,8.3nm,0.7s
V51A Loudon 50.55 83 P P 16 05 20.0 0.0
baz=318
R54A Victor 50.59 79 P P 16 05 20.0 -0.4
baz=318,SNR=8.6
ACCN Adirondack Com 50.62 69 P P 16 05 20.6 +0.1
ACCN IAmb IAmb 16 05 21.6
comp=Z,54nm,1.6s
U52A Thorn Hill 50.64 82 P P 16 05 20.9 +0.1
baz=318,SNR=8.6
M58A Price's Panora 50.64 73 P P 16 05 21.0 +0.3
baz=316,SNR=9.2
T53A Wise 50.65 81 P P 16 05 21.0 +0.2
baz=318,SNR=8.1
H61A Lyndonville 50.67 67 P P 16 05 20.8 -0.1
baz=316
S54A Dingess, Beckl 50.70 79 P P 16 05 20.9 -0.3
S54A IAmb IAmb 16 06 38.1
comp=Z,13nm,0.6s
S54A Dingess, Beckl 50.70 79 P P 16 05 21.0 -0.3
baz=318
CPCT Cooper Cave 50.72 84 P P 16 05 21.0 -0.4
CPCT IAmb IAmb 16 05 21.6
comp=Z,10nm,0.8s
D63A Stockholm 50.75 62 P P 16 05 21.2 -0.1
baz=316
P56A Dayton Farm, R 50.76 76 P P 16 05 21.5 0.0
baz=317
L59A Walton 50.78 71 P P 16 05 22.3 +0.5
L59A Walton 50.78 71 P P 16 05 22.4 +0.7
baz=316,SNR=9.4
FPAL Fort Paine 50.81 85 P P 16 05 21.7 -0.4
FPAL IAmb IAmb 16 05 22.9
comp=Z,13nm,0.8s
J60A Lant Hill Farm 50.85 69 P P 16 05 22.7 +0.5
baz=316,SNR=10
G62A West of Eustis 50.87 65 P P 16 05 21.9 -0.5
G62A IAmb IAmb 16 05 23.4
comp=Z,33nm,0.8s
G62A West of Eustis 50.87 65 P P 16 05 22.3 -0.1
baz=316,SNR=6.1
O57A Amberson 50.88 74 P P 16 05 22.6 +0.1
baz=317,SNR=14
LBNH Lisbon 50.88 67 P P 16 05 22.4 0.0
LBNH IAmb IAmb 16 05 34.8
comp=Z,34nm,1.2s
LBNH Lisbon 50.88 67 P P 16 05 22.4 0.0
LBNH pmax pmax
comp=Z,34nm,1.3s
LBNH Lisbon 50.88 67 P P 16 05 22.6 +0.1
baz=316
N58A Sunbury 50.90 73 P P 16 05 22.3 -0.3
N58A Sunbury 50.90 73 P P 16 05 22.7 +0.1
baz=317,SNR=8.6
Y49A Blount Mountai 50.90 87 P P 16 05 22.1 -0.6
Y49A IAmb IAmb 16 05 23.2
comp=Z,28nm,0.7s
V52A Sevierville 50.93 83 P P 16 05 22.3 -0.5
V52A IAmb IAmb 16 05 24.0
comp=Z,27nm,1.2s
V52A Sevierville 50.93 83 P P 16 05 22.8 -0.1
baz=318
I61A Oroboro, Fairl 50.96 67 P P 16 05 23.4 +0.3
baz=316
TKL Tuckaleechee C 50.97 83 P P 16 05 23.0 -0.2
TKL IAmb IAmb 16 05 24.0
comp=Z,13nm,0.8s
TKL Tuckaleechee C 50.97 83 P P 16 05 23.0 -0.2
TKL pmax pmax
comp=Z,13nm,0.9s
R55A Marlinton 50.98 78 P P 16 05 22.9 -0.5
R55A Marlinton 50.98 78 P P 16 05 23.2 -0.1
baz=318
H62A Milan 51.03 66 P P 16 05 23.6 +0.1
H62A IAmb IAmb 16 05 24.4
comp=Z,32nm,0.8s
H62A Milan 51.03 66 P P 16 05 23.5 0.0
baz=316
E63A Oxbow 51.04 63 P P 16 05 22.8 -0.7
E63A IAmb IAmb 16 05 23.7
comp=Z,26nm,0.7s
E63A Oxbow 51.04 63 P P 16 05 23.0 -0.6
baz=316,SNR=5.6
M59A Waymart 51.05 72 P P 16 05 23.9 +0.1
baz=317,SNR=6.6
PQI Presque Isle 51.05 62 P P 16 05 23.2 -0.5
K60A Five Rivers En 51.06 70 P P 16 05 24.0 +0.2
baz=316
U53A Fall Branch 51.09 81 P P 16 05 24.1 0.0
baz=318,SNR=8.8
HNH Hanover 51.09 68 P P 16 05 23.9 -0.1
HNH IAmb IAmb 16 05 43.1
comp=Z,65nm,1.6s
TRY Troy 51.09 69 P P 16 05 23.9 -0.1
TRY IAmb IAmb 16 05 25.3
comp=Z,22nm,0.8s
T54A Tazewell 51.10 80 P P 16 05 24.4 +0.1
baz=318
346A Big Creek Wild 51.12 91 P P 16 05 25.0 +0.6
S55A Lewisburg 51.15 79 P P 16 05 24.5 0.0
baz=318,SNR=8.2
LRAL Lakeview Retre 51.20 88 P P 16 05 24.4 -0.5
LRAL IAmb IAmb 16 05 25.2
comp=Z,7.9nm,0.6s
LRAL Lakeview Retre 51.20 88 P P 16 05 24.5 -0.5
baz=320
X51A Calhoun 51.20 85 P P 16 05 24.9 -0.1
X51A IAmb IAmb 16 05 26.1
comp=Z,23nm,1.0s
X51A Calhoun 51.20 85 P P 16 05 24.7 -0.3
baz=319
P57A Homestead Farm 51.21 75 P P 16 05 24.9 -0.1
P57A IAmb IAmb 16 05 25.9
comp=Z,40nm,1.0s
P57A Homestead Farm 51.21 75 P P 16 05 24.8 -0.1
baz=317,SNR=7.5
J61A Chester 51.21 68 P P 16 05 25.3 +0.4
baz=316
F63A Nahmakanta, Br 51.23 64 P P 16 05 24.7 -0.3
F63A IAmb IAmb 16 05 25.6
comp=Z,28nm,0.7s
F63A Nahmakanta, Br 51.23 64 P P 16 05 24.7 -0.3
baz=316
W52A Murphy 51.31 84 P P 16 05 25.6 -0.2
W52A IAmb IAmb 16 05 26.7
comp=Z,24nm,0.9s
W52A Murphy 51.31 84 P P 16 05 25.6 -0.2
baz=319
O58A Lewisberry 51.31 74 P P 16 05 25.8 +0.1
baz=317,SNR=10
E64A Bridgewater 51.33 62 P P 16 05 25.1 -0.6
baz=316,SNR=7.2
Q57A Strasburg 51.33 76 P P 16 05 25.7 -0.2
baz=317,SNR=8.2
N59A State Game Lan 51.33 72 P P 16 05 25.9 0.0
N59A IAmb IAmb 16 05 27.0
comp=Z,25nm,1.1s
N59A State Game Lan 51.33 72 P P 16 05 26.2 +0.3
baz=317
PAGS Pennsylvania G 51.34 74 P P 16 05 25.6 -0.3
PAGS IAmb IAmb 16 05 26.4
comp=Z,22nm,0.6s
K61A Williamstown 51.34 69 P P 16 05 26.2 +0.3
baz=316
L60A Shokan 51.35 70 P P 16 05 26.6 +0.7
baz=317,SNR=7.6
U54A Nelsons Funny 51.38 81 P P 16 05 25.9 -0.4
U54A IAmb IAmb 16 05 28.3
comp=Z,38nm,1.3s
U54A Nelsons Funny 51.38 81 P P 16 05 26.6 +0.3
baz=318
G63A Kingsbury 51.40 65 P P 16 05 26.2 -0.1
baz=316
I62A Tamworth 51.44 67 P P 16 05 26.7 +0.1
baz=316
PKME Peaks-Kenny Pk 51.45 64 P P 16 05 26.6 0.0
PKME Peaks-Kenny Pk 51.45 64 P P 16 05 26.9 +0.3
baz=316
F64A Sherman 51.48 63 P P 16 05 26.5 -0.4
F64A Sherman 51.48 63 P P 16 05 26.4 -0.4
baz=316
V53A Saluda 51.48 82 P P 16 05 27.0 0.0
V53A IAmb IAmb 16 05 28.3
comp=Z,34nm,0.8s
V53A Saluda 51.48 82 P P 16 05 27.3 +0.3
baz=319,SNR=16
T55A Pulaski 51.49 79 P P 16 05 27.0 -0.1
baz=318
H63A New Sharon 51.52 65 P P 16 05 26.8 -0.3
baz=316
L61A Hillsdale 1, H 51.54 70 P P 16 05 28.3 +0.9
baz=317,SNR=7.7
BATG Bathurst New B 51.55 60 P P 16 05 27.4 0.0
O59A Robesonia 51.56 73 P P 16 05 27.7 +0.2
baz=317,SNR=16
FFD Franklin Falls 51.58 67 P P 16 05 28.1 +0.5
P58A Pank, Wackersv 51.58 75 P P 16 05 27.4 -0.3
baz=317
BLA Blacksburg 51.61 79 P P 16 05 27.7 -0.3
BLA IAmb IAmb 16 05 28.4
comp=Z,14nm,0.7s
BLA Blacksburg 51.61 79 P P 16 05 27.7 -0.3
BLA pmax pmax
comp=Z,14nm,0.7s
BLA Blacksburg 51.61 79 P P 16 05 28.0 0.0
baz=318
Z50A Ashland 51.62 87 P P 16 05 27.5 -0.6
Z50A IAmb IAmb 16 05 28.2
comp=Z,21nm,0.5s
Z50A Ashland 51.62 87 P P 16 05 27.7 -0.4
baz=320,SNR=13
M60A Port Jervis 51.62 71 P P 16 05 28.4 +0.4
baz=317,SNR=8.9
W53A Cullowhee 51.66 83 P P 16 05 28.6 0.0
baz=319,SNR=6.6
J62A Henniker 51.67 68 P P 16 05 28.6 +0.2
baz=317
I63A Otisfield 51.69 66 P P 16 05 28.6 +0.1
I63A Otisfield 51.69 66 P P 16 05 28.8 +0.3
baz=316
MVL Millersville 51.70 74 P P 16 05 28.6 0.0
N60A Cedar Hill Far 51.71 72 P P 16 05 29.0 +0.3
baz=317,SNR=5.9
G64A Maxfield 51.72 64 P P 16 05 28.6 -0.1
baz=316
S56A Natural Bridge 51.72 78 P P 16 05 29.0 +0.1
baz=318
LUPA Lehigh Univers 51.77 72 P P 16 05 29.3 +0.2
WVL Waterville 51.77 65 P P 16 05 29.0 -0.1
WVL IAmb IAmb 16 05 29.7
comp=Z,31nm,1.0s
Q58A Fox Den Farm, 51.78 76 P P 16 05 28.9 -0.3
baz=318,SNR=13
L61B Northampton 51.80 69 P P 16 05 29.6 +0.3
baz=317
U55A TA2, Sparta 51.80 80 P P 16 05 29.6 +0.1
baz=318,SNR=9.4
ODNJ Ogdensburg 51.81 71 P P 16 05 29.6 +0.2
ODNJ IAmb IAmb 16 05 30.5
comp=Z,19nm,0.7s
R57A Stanardsville 51.81 77 P P 16 05 29.4 0.0
baz=318,SNR=6.6
V54A Nebo 51.86 81 P P 16 05 30.1 +0.2
baz=319
K62A Royalston 51.87 68 P P 16 05 30.2 +0.4
K62A Royalston 51.87 68 P P 16 05 30.3 +0.5
baz=317,SNR=6.8
SDMD Soldier's Deli 51.88 75 P P 16 05 29.6 -0.3
KSCT Kent School, K 51.92 70 P P 16 05 30.2 0.0
BG3 Lake Jocassee 51.92 83 P P 16 05 30.4 0.0
BG3 IAmb IAmb 16 05 31.4
comp=Z,16nm,1.0s
P59A Jarrettsville 51.94 74 P P 16 05 30.2 -0.2
baz=318
T56A Rocky Mt 51.95 79 P P 16 05 30.5 0.0
baz=318
O60A Telford 51.96 73 P P 16 05 30.8 +0.3
baz=317,SNR=5.5
Z51A Franklin 51.98 86 P P 16 05 30.1 -0.7
Z51A IAmb IAmb 16 05 30.9
comp=Z,28nm,0.9s
S57A Dark Hollow, R 51.98 77 P P 16 05 30.8 +0.1
baz=318
J63A Strafford 52.00 67 P P 16 05 31.2 +0.4
baz=317
M61A Granite Spring 52.08 71 P P 16 05 31.8 +0.4
baz=317
QUA2 Belchertown 52.09 69 P P 16 05 30.9 -0.5
QUA2 IAmb IAmb 16 05 32.6
comp=Z,34nm,0.9s
X53A Estanollee 52.09 84 P P 16 05 31.4 -0.1
baz=319,SNR=6.5
BRNJ Basking Ridge 52.13 72 P P 16 05 32.0 +0.3
BRNJ IAmb IAmb 16 05 32.7
comp=Z,36nm,0.9s
Y52A Lilburn 52.16 85 P P 16 05 31.8 -0.3
Y52A IAmb IAmb 16 05 32.5
comp=Z,11nm,0.8s
Y52A Lilburn 52.16 85 P P 16 05 31.9 -0.3
baz=320
V55A Taylorsville 52.20 81 P P 16 05 32.0 -0.3
V55A IAmb IAmb 16 05 33.5
comp=Z,22nm,1.1s
V55A Taylorsville 52.20 81 P P 16 05 32.3 -0.1
baz=319,SNR=6.7
K63A Dunstable 52.21 68 P P 16 05 32.5 +0.3
baz=317
P60A Greenville 52.21 73 P P 16 05 32.2 -0.2
baz=318
N61A South Mountain 52.21 72 P P 16 05 32.8 +0.4
baz=317
PAL Palisades 52.23 71 P P 16 05 32.8 +0.3
PAL IAmb IAmb 16 05 33.8
comp=Z,28nm,1.0s
PAL Palisades 52.23 71 P P 16 05 32.8 +0.3
PAL pmax pmax
comp=Z,28nm,1.0s
PAL Palisades 52.23 71 P P 16 05 32.6 +0.2
baz=317
W54A Cherokee Point 52.25 82 P P 16 05 32.8 0.0
baz=319
I64A Boothbay 52.26 66 P P 16 05 32.6 0.0
baz=317
U56A King 52.27 80 P P 16 05 32.8 -0.2
U56A IAmb IAmb 16 05 33.5
comp=Z,17nm,0.6s
U56A King 52.27 80 P P 16 05 32.7 -0.2
baz=319
HRV Adam Dziewonsk 52.33 68 P P 16 05 33.3 +0.2
HRV Adam Dziewonsk 52.33 68 P P 16 05 33.3 +0.2
HRV pmax pmax
comp=Z,121nm,1.8s
HRV Adam Dziewonsk 52.33 68 P P 16 05 33.4 +0.2
baz=317
G65A Princeton 52.34 63 P P 16 05 33.0 -0.2
G65A Princeton 52.34 63 P P 16 05 33.1 -0.2
baz=317
H65A Eastbrook 52.37 64 P P 16 05 33.4 0.0
baz=317
HAMF Hammerfest 52.38 1 eP P 16 05 32.8 -0.4
T57A Hurt 52.39 78 P P 16 05 33.4 -0.3
T57A Hurt 52.39 78 P P 16 05 33.6 -0.2
baz=318
R58B Mineral 52.40 77 P P 16 05 33.9 +0.1
baz=318
250A Grady 52.41 88 P P 16 05 33.5 -0.4
250A IAmb IAmb 16 05 35.3
comp=Z,28nm,0.9s
M62A Hamden 52.43 70 P P 16 05 34.2 +0.2
baz=317,SNR=7.3
YLE Yale 52.50 70 P P 16 05 35.2 +0.7
WES Weston 52.53 68 P P 16 05 34.0 -0.7
WES Weston 52.53 68 P P 16 05 34.0 -0.7
WES pmax pmax
comp=Z,34nm,0.7s
X54A Belton 52.56 83 P P 16 05 34.9 -0.1
baz=319,SNR=7.4
S58A Poland Farm, P 52.57 77 P P 16 05 34.9 -0.1
S58A IAmb IAmb 16 05 55.9
comp=Z,30nm,0.9s
S58A Poland Farm, P 52.57 77 P P 16 05 34.9 -0.1
baz=318
V56A Mocksville 52.62 80 P P 16 05 35.4 -0.1
baz=319,SNR=5.5
R59A King George, V 52.63 76 P P 16 05 35.4 -0.1
baz=318
PAULI Pauline 52.65 82 P P 16 05 35.2 -0.6
PAULI IAmb IAmb 16 05 35.9
comp=Z,12nm,0.9s
KMSC Kings Mountain 52.67 81 P P 16 05 35.4 -0.4
KMSC IAmb IAmb 16 05 36.6
comp=Z,24nm,0.9s
KMSC Kings Mountain 52.67 81 P P 16 05 35.7 -0.1
baz=319,SNR=6.2
152A Waverly Hall 52.72 86 P P 16 05 35.3 -1.0
152A IAmb IAmb 16 05 36.1
comp=Z,10nm,0.8s
EMMW East Machias 52.74 64 P P 16 05 36.1 -0.1
EMMW IAmb IAmb 16 05 36.4
comp=Z,28nm,0.7s
GGN Saint George 52.74 63 P P 16 05 35.8 -0.4
H66A Whiting 52.76 63 P P 16 05 36.1 -0.2
baz=317
BRYW Bryant College 52.77 69 P P 16 05 36.6 +0.1
KS19 Wonju Array Si 52.77 283 P P 16 05 36.7 +0.2
KS19 IAmb IAmb 16 05 37.8
comp=Z,17nm,0.8s
U57A Blanch 52.77 79 P P 16 05 36.4 -0.2
baz=319,SNR=5.2
L63A North Scituate 52.77 69 P P 16 05 35.5 -0.9
baz=317
KSRS Korea Array 52.77 283 P P 16 05 37.0 +0.4
comp=Z,12nm,0.7s,baz=42,slow=6.9,SNR=69
KSRS LR LR 16 29 02.5
comp=Z,27nm,18.1s,baz=62,slow=37
KSRS Korea Array 52.77 283 P P 16 05 37.0 +0.4
T58A Grand View Acr 52.81 78 P P 16 05 36.2 -0.7
baz=318,SNR=5.1
GOGA Godfrey 52.83 85 P P 16 05 35.9 -1.1
GOGA IAmb IAmb 16 05 37.2
comp=Z,14nm,0.9s
GOGA Godfrey 52.83 85 P P 16 05 35.9 -1.1
GOGA pmax pmax
comp=Z,14nm,0.9s
GOGA Godfrey 52.83 85 P P 16 05 36.2 -0.9
baz=320,SNR=5.5
HODGE Hodges 52.86 83 P P 16 05 36.6 -0.7
HODGE IAmb IAmb 16 05 37.9
comp=Z,26nm,0.7s
S59A Mechanicsville 52.86 76 P P 16 05 37.2 0.0
baz=318
M63A Gales Ferry 52.89 69 P P 16 05 37.7 +0.3
baz=318,SNR=6.1
V57A Coltrane Farms 52.94 80 P P 16 05 37.6 -0.3
baz=319
X55A Gracelyn & Ava 53.02 82 P P 16 05 38.1 -0.3
baz=319,SNR=10
W56A Indian Trail 53.08 81 P P 16 05 38.6 -0.3
baz=319
L64A Middleborough 53.11 68 P P 16 05 38.8 -0.2
baz=318
LMN Caledonia Moun 53.18 61 P P 16 05 39.0 -0.5
M64A Tiverton 53.20 69 P P 16 05 39.5 -0.1
baz=318
U58A Oxford 53.22 78 P P 16 05 39.7 -0.2
baz=319
S60A Water View 53.24 76 P P 16 05 39.6 -0.4
baz=318

KEV Kevo 53.27 359 P P 16 05 39.4 -0.3
KEV Kevo 53.27 359 P P 16 05 39.4 -0.3
KEV pmax pmax
comp=Z,80nm,1.6s
Y55A Saluda 53.30 83 P P 16 05 40.1 -0.4
baz=320,SNR=7.6
T59A Double "B" Far 53.31 77 P P 16 05 40.0 -0.5
T59A IAmb IAmb 16 05 41.7
comp=Z,44nm,1.4s
T59A Double "B" Far 53.31 77 P P 16 05 40.5 0.0
baz=319,SNR=5.3
TRO Tromso 53.32 3 eP P 16 05 39.5 -0.7
X56A White Oak 53.32 82 P P 16 05 40.4 -0.3
baz=319,SNR=5.3
JSC Jenkinsville 53.36 82 P P 16 05 40.0 -0.9
JSC IAmb IAmb 16 05 41.6
comp=Z,9.7nm,0.8s
JSC Jenkinsville 53.36 82 P P 16 05 40.0 -0.9
JSC pmax pmax
comp=Z,10.0nm,0.8s
V58A Windy Hill, Pi 53.37 79 P P 16 05 40.7 -0.3
V58A IAmb IAmb 16 05 41.9
comp=Z,23nm,1.0s
V58A Windy Hill, Pi 53.37 79 P P 16 05 40.7 -0.3
baz=319
W57A Gilead 53.38 80 P P 16 05 40.2 -0.8
W57A IAmb IAmb 16 05 41.2
comp=Z,14nm,0.9s
W57A Gilead 53.38 80 P P 16 05 40.6 -0.5
baz=319
ARCES ARCESS Array B 53.50 360 P P 16 05 40.8 -0.6
comp=Z,5.0nm,0.7s,baz=31,slow=7.9,SNR=25
ARCES PcP PcP 16 06 47.5 0.0
comp=Z,6.6nm,0.6s,baz=3.7,slow=3.8,SNR=8.3
ARE0 ARCESS Array S 53.50 360 eP P 16 05 41.1 -0.4
ARE0 ARCESS Array S 53.50 360 P P 16 05 41.0 -0.5
BIRD Birdtown, Kers 53.51 81 P P 16 05 41.6 -0.4
BIRD IAmb IAmb 16 05 42.8
comp=Z,11nm,0.9s
352A Blakely 53.52 87 P P 16 05 40.9 -1.2
352A IAmb IAmb 16 05 42.0
comp=Z,22nm,0.6s
154A Montrose 53.63 85 P P 16 05 42.0 -1.0
U59A Littleton 53.65 78 P P 16 05 43.1 +0.1
U59A IAmb IAmb 16 05 44.1
comp=Z,36nm,1.2s
U59A Littleton 53.65 78 P P 16 05 43.2 +0.2
baz=319
451A Vernon 53.74 89 P P 16 05 43.5 -0.2
S61A Accomac 53.77 75 P P 16 05 44.0 +0.1
baz=319
TLY Talaya 53.82 311 P P 16 05 43.9 -0.2
comp=Z,4.5nm,0.6s,baz=28,slow=5.1,SNR=3.8
TLY Talaya 53.82 311 P P 16 05 44.1 0.0
TLY IAmb IAmb 16 05 45.0
comp=Z,37nm,1.8s
TLY Talaya 53.82 311 eP P 16 05 44.3 +0.2
TLY pmax pmax
comp=Z,12nm,0.6s
X57A Johnson Farm, 53.85 81 P P 16 05 44.6 +0.1
baz=320
V59A Middlesex 53.86 79 P P 16 05 44.2 -0.3
baz=319,SNR=5.9
TJN Taejon 53.88 283⇓iP P 16 05 45.1 +0.5
W58A Raeford 53.89 80 P P 16 05 44.9 +0.1
baz=319
U60A Pendleton 53.90 77 P P 16 05 45.0 +0.2
baz=319
DRLN Deer Lake 53.99 53 P P 16 05 44.7 -0.7
KTK1 Kautokeino 54.02 1 eP P 16 05 45.0 -0.2
X58A Rowland 54.18 80 P P 16 05 47.6 +0.7
U61A Possum Corner 54.38 77 P P 16 05 48.5 +0.2
U61A Possum Corner 54.38 77 P P 16 05 48.5 +0.2
baz=319
Z57A Bowman 54.41 82 P P 16 05 48.4 -0.2
baz=320
JNU Nakatsue 54.46 277 P P 16 05 49.1 +0.1
comp=Z,9.0nm,0.7s,baz=276,slow=1.5,SNR=12
JNU Nakatsue 54.46 277 P P 16 05 48.8 -0.3
JNU IAmb IAmb 16 05 49.9
comp=Z,11nm,0.8s
255A Hazlehurst 54.50 85 P P 16 05 47.8 -1.5
LOF Lofoten 54.62 5 eP P 16 05 49.8 +0.2
HAL Halifax 54.66 61 P P 16 05 49.9 -0.3
HAL Halifax 54.66 61 P P 16 05 49.9 -0.3
HAL pmax pmax
comp=Z,61nm,1.2s
W60A Pink Hill 54.67 79 P P 16 05 50.6 +0.2
baz=320
157A Early Branch 54.72 83 P P 16 05 51.0 +0.1
baz=320
553A Crawfordville 54.78 88 P P 16 05 50.6 -0.7
Z58A St. Stephen 54.86 82 P P 16 05 51.9 +0.1
baz=320
X60A Albert Glenn T 54.90 79 P P 16 05 52.1 0.0
baz=320
STEI Steigen 54.90 4 eP P 16 05 51.8 +0.2
LVZ Lovozero 54.94 356 P P 16 05 51.6 -0.3
LVZ IAmb IAmb 16 06 16.7
comp=Z,35nm,1.2s
LVZ Lovozero 54.94 356 P P 16 05 51.7 -0.3
LVZ pmax pmax
comp=Z,35nm,1.2s
ZAK Zakamensk 54.95 310 eP P 16 05 51.4 -1.0
ZAK pmax pmax
comp=Z,3.0nm,0.9s
ZAK pmax pmax
comp=Z,4.0nm,0.9s
W61A Ground Anchor 54.97 78 P P 16 05 52.9 +0.4
baz=320
GBN Guysborough 55.06 59 P P 16 05 53.0 -0.1
ULN Ulaanbaatar 55.25 306 P P 16 05 54.1 -0.6
ULN Ulaanbaatar 55.25 306 P P 16 05 54.1 -0.6
ULN pmax pmax
comp=Z,5.0nm,0.8s
257A Skidaway Islan 55.25 84 P P 16 05 54.7 +0.1
SONM Songino Array 55.56 306 P P 16 05 56.8 -0.1
comp=Z,10nm,0.6s,baz=46,slow=6.8,SNR=26
SONM PcP PcP 16 06 56.8 +0.8
comp=Z,4.6nm,0.5s,baz=77,slow=1.3,SNR=4.7
SONM LR LR 16 31 18.9
comp=Z,148nm,19.1s,baz=38,slow=38
KONS Konsvik 56.23 6 eP P 16 06 00.5 -0.7
STOK Stokkvaagen 56.38 6 eP P 16 06 02.0 -0.2
MOR8 Moi Rana 56.62 5 eP P 16 06 02.5 -1.5
NSS Namsos 58.12 7 eP P 16 06 14.3 -0.2
ZAA0 Zalesovo Array 58.96 323 P P 16 06 20.1 -0.5
ZAA0 IAmb IAmb 16 06 21.1
comp=Z,8.3nm,0.7s
ZALV Zalesovo Beam 58.96 323 P P 16 06 20.2 -0.3
comp=Z,8.9nm,0.6s,baz=35,slow=7.0,SNR=33
ZALV LR LR 16 34 36.2
comp=Z,97nm,18.1s,baz=70,slow=39
060A Indiantown 59.46 87 P P 16 06 24.1 -0.3
MOL Molde 59.73 9 eP P 16 06 26.2 +0.5
DOMB Dombas 60.37 9 eP P 16 06 30.2 0.0
NC204 NORSAR Array S 61.27 8 eP P 16 06 36.4 +0.1
NC204 NORSAR Array S 61.27 8 P P 16 06 36.3 0.0
NC303 NORSAR Array S 61.36 7 P P 16 06 37.0 +0.1
NC405 NORSAR Array S 61.49 7 P P 16 06 37.9 +0.1
NBO00 NORSAR Array S 61.51 8 P P 16 06 37.9 0.0
NB201 NORSAR Array S 61.53 8 P P 16 06 38.2 +0.2
NB2 NORSAR Subarra 61.53 8 P P 16 06 37.9 -0.2
comp=Z,10nm,0.6s,baz=352,slow=6.9
NB2 NORSAR Subarra 61.53 8 P P 16 06 37.9 -0.2
baz=352,slow=6.9
NOA NORSAR Array B 61.53 8 P P 16 06 38.1 +0.1
comp=Z,16nm,0.7s,baz=352,slow=6.8,SNR=73
FIA1 FINESS Array S 61.62 359 P P 16 06 38.3 -0.2
FINES FINESS Array B 61.62 359 P P 16 06 38.3 -0.3
comp=Z,7.0nm,0.5s,baz=14,slow=8.3,SNR=89
KLMR Klimovskoe 61.66 352 eP P 16 06 35.4 -3.5
KLMR pmax pmax
comp=Z,18nm,1.3s
KLMR Klimovskoe 61.66 352 eP P 16 06 35.4 -3.5
KLMR AMP 16 06 44.5
comp=Z,18nm,1.3s
NJ2 Nanjing 61.69 286 eP P 16 06 39.3 -0.1
NJ2 pmax pmax
comp=Z,13nm,0.9s
NAO01 NORSAR Array S 61.70 8 P P 16 06 39.2 +0.1
NC602 NORSAR Array S 61.86 7 P P 16 06 40.1 -0.1
KONO Kongsberg 62.79 9 eP P 16 06 47.2 +0.8
KONO Kongsberg 62.79 9 P P 16 06 47.0 +0.6
KONO IAmb IAmb 16 06 47.9
comp=Z,27nm,0.8s
KONO Kongsberg 62.79 9⇓iP P 16 06 47.7 +1.3
KONO pmax pmax
comp=Z,25nm,0.9s
ARU Arti 63.48 340 P P 16 06 50.1 -0.9
ARU IAmb IAmb 16 06 50.9
comp=Z,12nm,0.6s
ARU Arti 63.48 340c iP P 16 06 50.1 -0.9
ARU 16 07 24.0
ARU S S 16 15 20.1 +1.2
ARU SS SS 16 19 29.0 +3.4
ARU pmax pmax
comp=Z,9.0nm,0.6s
BBSR BB Station 63.58 71 P P 16 06 50.9 -1.1
KURK Kurchatov 63.69 325 P P 16 06 51.9 -0.6
KURK Kurchatov 63.69 325⇓iP P 16 06 52.4 -0.1
KURK pmax pmax
comp=Z,7.0nm,0.9s
BRVK Borovoye 63.98 332 P P 16 06 53.8 -0.7
BRVK IAmb IAmb 16 06 55.4
comp=Z,8.5nm,0.6s
BRVK Borovoye 63.98 332d iP P 16 06 54.2 -0.2
BRVK pmax pmax
comp=Z,6.0nm,0.8s
VSU Vasula 64.61 359⇓iP P 16 06 59.1 +0.8
GTA Gaotai 65.13 305 P P 16 07 01.5 -0.8
GTA pmax pmax
comp=Z,4.0nm,0.9s
GTA pmax pmax
comp=Z,29nm,5.1s
GTA LR LR
comp=Z,93nm,17.8s
GTA LR LR
comp=Z,99nm,16.2s
GTA LR LR
comp=Z,140nm,17.1s
XAN Xi'an 65.17 295 P P 16 07 02.0 -0.5
XAN pmax pmax
comp=Z,6.0nm,0.7s
XAN pmax pmax
comp=Z,94nm,4.3s
FSCY Frank Sound, G 65.22 93 P P 16 07 02.9 0.0
ESK Eskdalemuir 65.46 17 P P 16 07 04.4 +0.4
ESK Eskdalemuir 65.46 17 P P 16 07 04.4 +0.4
ESK pmax pmax
comp=Z,113nm,1.7s
MK31 Makanchi Array 65.90 321 P P 16 07 06.1 -0.9
MK31 Makanchi Array 65.90 321 P P 16 07 06.1 -0.9
MK31 pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 65.90 321 P P 16 07 06.3 -0.7
comp=Z,3.8nm,0.5s,baz=48,slow=6.6,SNR=40
MKAR LR LR 16 40 01.0
comp=Z,62nm,18.4s,baz=360,slow=40
MUD Monsted U'grnd 65.91 10 iP P 16 07 07.5 +0.7
MUD Monsted U'grnd 65.91 10 eP P 16 07 07.5 +0.7
LZH Lanzhou 65.98 300 eP P 16 07 08.3 +0.5
LZH pP pP 16 07 23.5 -1.1
LZH sP sP 16 07 30.0 -1.6
LZH ePP PP 16 09 36.5 +3.3
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,65nm,7.4s
LZH LR LR
comp=Z,160nm,16.4s
LZH LR LR
comp=Z,160nm,16.5s
LZH LR LR
comp=Z,260nm,17.8s
MAKZ Makanchi 66.00 321 P P 16 07 06.9 -0.7
MAKZ Makanchi 66.00 321 P P 16 07 06.9 -0.7
MAKZ pmax pmax
comp=Z,6.0nm,1.0s
WMQ Urumqi 66.50 315 eP P 16 07 15.3 +4.4
NACB Ninganchiao 66.50 278 P P 16 07 10.9 -0.2
NACB IAmb IAmb 16 07 12.1
comp=Z,22nm,0.9s
OBN Obninsk 67.58 353⇓eP P 16 07 16.8 -0.6
OBN e 16 09 50.1
OBN pmax pmax
comp=Z,7.0nm,0.7s
OBN MLR MLR
comp=Z,79nm,15.0s
BSD Bornholm Skovb 67.67 6 iP P 16 07 18.4 +0.4
comp=Z,31nm,1.0s
BSD Bornholm Skovb 67.67 6 iP P 16 07 18.4 +0.4
BSD pmax pmax
comp=Z,31nm,1.0s
MTDJ Mount Denham 68.09 90 P P 16 07 21.4 0.0
ABKAR Akbulak array 69.97 336 P P 16 07 32.1 -0.4
CD2 Chengdu 70.24 296 P P 16 07 35.0 +0.5
CD2 pmax pmax
comp=Z,10.0nm,0.5s
SDDR Presa de Saban 70.86 85 P P 16 07 38.0 -0.4
SDDR IAmb IAmb 16 07 39.3
comp=Z,26nm,0.7s
VSR Storozhevoye 71.25 351 eP P 16 07 38.6 -1.6
VSR pmax pmax
comp=Z,10.0nm,0.4s
CLL Collm 71.33 8⇓iP P 16 07 42.0 +1.3
comp=Z,8.0nm,0.8s
CLL i 16 07 46.6
comp=Z,11nm,0.9s
CLL epP PcP 16 07 59.0 -1.1
CLL Collm 71.33 8 P P 16 07 41.6 +0.9
CLL Collm 71.33 8⇓iP P 16 07 42.0 +1.3
CLL pmax pmax
comp=Z,8.0nm,0.8s
VORD Divnogorie 71.49 351 eP P 16 07 40.3 -1.3
VORD pmax pmax
comp=Z,10.0nm,0.5s
USP Ospenovka 71.60 324 P P 16 07 42.5 -0.1
SNR=7.5
CHMS Chumysh 71.76 324 P P 16 07 44.5 +1.0
SNR=7.1
BRG Berggiesshubel 71.83 7 eP P 16 07 44.2 +0.5
comp=Z,9.6nm,1.0s
BRG i 16 07 49.2
comp=Z,13nm,1.1s
BRG epP pP 16 08 00.6 -0.1
comp=Z,5.9nm,1.0s
BRG Berggiesshubel 71.83 7 eP P 16 07 44.2 +0.5
BRG e*PP pP 16 08 00.6 -0.1
BRG pmax pmax
comp=Z,10.0nm,1.0s
BRG pmax pmax
comp=Z,13nm,1.1s
BRG pmax pmax
comp=Z,6.0nm,1.0s
BANI BANI 71.84 84 P P 16 07 45.3 +1.0
KBK Karagaybulak 72.01 324 P P 16 07 46.1 +1.0
SNR=11
DR12 Loma Pena Alta 72.05 83 P P 16 07 45.6 +0.1
AAK Ala-Archa 72.17 324 P P 16 07 46.8 +0.8
comp=Z,12nm,0.5s,baz=120,slow=3.1,SNR=36
AAK Ala-Archa 72.17 324 P P 16 07 46.6 +0.5
SNR=11
AAK Ala-Archa 72.17 324 P P 16 07 46.6 +0.5
AAK IAmb IAmb 16 07 51.8
comp=Z,14nm,0.7s
AAK Ala-Archa 72.17 324⇓iP P 16 07 47.3 +1.2
AAK pmax pmax
comp=Z,6.0nm,0.8s
PVCC Panska Ves 72.22 7 eP P 16 07 46.9 +0.9
PVCC ex x 16 07 51.8
PVCC Panska Ves 72.22 7 eP P 16 07 46.9 +0.9
CHVC Chvalec 72.25 6 eP P 16 07 46.8 +0.5
CHVC ex x 16 07 51.9
UPC Upice 72.33 6 eP P 16 07 47.3 +0.6
UPC ex x 16 07 52.1
UPC Upice 72.33 6 eP P 16 07 47.3 +0.6
AKASG Malin Array Be 72.34 357 P P 16 07 46.0 -0.7
comp=Z,11nm,0.5s,baz=7.7,slow=6.0,SNR=65
AKASG Malin Array Be 72.34 357 P P 16 07 46.0 -0.7
AKBB Malin Array Si 72.34 357 P P 16 07 46.0 -0.6
AKBB IAmb IAmb 16 07 46.9
comp=Z,17nm,0.8s
AKBB Malin Array Si 72.34 357⇓iP P 16 07 46.1 -0.6
NKC Novy Kostel 72.36 8 eP P 16 07 47.6 +0.7
NKC ex x 16 07 52.7
NKC Novy Kostel 72.36 8 eP P 16 07 47.6 +0.7
EKS2 Erkin-Say 72.38 324 P P 16 07 48.3 +1.0
SNR=15
KZA Kyzart 72.43 323 P P 16 07 49.1 +1.2
SNR=7.9
DPC Dobruska-Polom 72.50 6 eP P 16 07 48.8 +1.0
DPC ex x 16 07 53.9
DPC Dobruska-Polom 72.50 6 eP P 16 07 48.8 +1.0
PRU Pruhonice 72.76 7 eP P 16 07 49.7 +0.5
PRU ex x 16 07 54.6
PRU Pruhonice 72.76 7 eP P 16 07 49.7 +0.5
GRF Grafenberg Arr 72.79 9 eP P 16 07 49.7 +0.2
comp=Z,8.3nm,0.8s,baz=348,slow=5.4
GRF epP PcP 16 07 54.9 -11
KRLC Kraliky 72.80 6 eP P 16 07 50.3 +0.7
KRLC ex x 16 07 55.0
KRLC Kraliky 72.80 6 eP P 16 07 50.3 +0.7
AML Almayashu 72.88 324 P P 16 07 51.7 +1.1
SNR=16
KK31 Karatay Array 72.98 327 P P 16 07 50.9 +0.2
KK31 Karatay Array 72.98 327 P P 16 07 50.9 +0.2
KK31 pmax pmax
comp=Z,9.0nm,0.8s
KKAR Karatay Array 72.98 327 P P 16 07 50.8 +0.1
KKAR Karatay Array 72.98 327 P P 16 07 50.8 +0.1
KKAR pmax pmax
comp=Z,9.0nm,0.8s
PBCC Pribram 73.02 7 eP P 16 07 51.5 +0.7
OKC Ostrava-Krasne 73.11 5 eP P 16 07 51.9 +0.6
OKC ex x 16 07 56.8
OKC Ostrava-Krasne 73.11 5 eP P 16 07 51.9 +0.6
MORC Moravsky Berou 73.14 5 eP P 16 07 51.7 +0.1
MORC Moravsky Berou 73.14 5 ⇑P P 16 07 51.6 0.0
MORC Moravsky Berou 73.14 5 P P 16 07 51.5 0.0
MORC IAmb IAmb 16 08 56.0
comp=Z,14nm,0.5s
MORC Moravsky Berou 73.14 5 P P 16 07 51.5 0.0
MORC pmax pmax
comp=Z,14nm,0.5s
CLF Chambon-Foret 73.38 16 P P 16 07 53.0 +0.1
KWP Kalwaria Pacla 73.45 2 P P 16 07 53.4 +0.1
KWP IAmb IAmb 16 07 59.3
comp=Z,16nm,0.7s
KWP Kalwaria Pacla 73.45 2 P P 16 07 53.4 +0.1
KWP pmax pmax
comp=Z,16nm,0.7s
TREC Trest 73.51 6 eP P 16 07 54.2 +0.5
TREC ex x 16 07 59.1
TREC Trest 73.51 6 eP P 16 07 54.2 +0.5
KHC Kasperske Hory 73.54 8 eP P 16 07 55.0 +1.1
KHC ex x 16 07 59.9
KHC Kasperske Hory 73.54 8 P P 16 07 54.4 +0.5
KHC Kasperske Hory 73.54 8⇑iP P 16 07 55.3 +1.4
KHC pmax pmax
comp=Z,22nm,1.0s
VRAC Vranov 73.56 6 eP P 16 07 54.5 +0.5
KRUC Moravsky 73.79 6 eP P 16 07 55.5 +0.2
GEC2 GERESS Array S 73.83 8 P P 16 07 56.1 +0.4
GERES GERESS Array B 73.83 8 P P 16 07 56.1 +0.4
comp=Z,4.4nm,0.7s,baz=356,slow=4.7,SNR=38
ECH Echery 73.84 12 P P 16 07 56.0 +0.3
ECH IAmb IAmb 16 07 57.1
comp=Z,21nm,1.2s
ECH Echery 73.84 12 P P 16 07 56.0 +0.3
ECH pmax pmax
comp=Z,21nm,1.2s
LANS Liptovska Anna 73.84 4 eP P 16 07 57.0 +1.3
LANS pmax pmax
comp=Z,7.0nm,0.7s
LANS Liptovska Anna 73.84 4 eP P 16 07 57.0 +1.3
BFO Black Forest 73.86 12 P P 16 07 55.9 +0.1
BFO IAmb IAmb 16 08 01.5
comp=Z,49nm,1.7s
BFO Black Forest 73.86 12 P P 16 07 55.9 +0.1
BFO pmax pmax
comp=Z,49nm,1.7s
CRPR Cabo Rojo, PR 73.91 82 P P 16 07 55.5 -1.0
JAVC Velka Javorina 74.06 5 eP P 16 07 58.3 +1.3
CRVS Cervenica-Dubn 74.15 2 eP P 16 07 57.9 +0.4
CRVS pmax pmax
comp=Z,11nm,1.0s
CRVS Cervenica-Dubn 74.15 2 eP P 16 07 57.9 +0.4
OBIP Obispado Ponce 74.15 81 P P 16 07 56.8 -1.1
OBIP IAmb IAmb 16 07 57.7
comp=Z,20nm,0.7s
SJG San Juan 74.34 81 P P 16 07 59.2 +0.2
SJG IAmb IAmb 16 08 00.3
comp=Z,18nm,0.8s
SJG San Juan 74.34 81 P P 16 07 59.2 +0.2
SJG pmax pmax
comp=Z,18nm,0.8s
UZH Uzhgorod 74.44 2 eP P 16 07 59.4 +0.3
UZH e 16 08 10.2
VYHS Vyhne 74.48 4 eP P 16 07 59.6 +0.2
VYHS pmax pmax
comp=Z,15nm,1.2s
VYHS Vyhne 74.48 4 eP P 16 07 59.6 +0.2
KSH Kashi 74.49 321 P P 16 08 03.5 +3.8
KSH pP pP 16 08 19.8 +3.0
KSH sP sP 16 08 26.0 +2.3
KSH PP PP 16 10 54.0 +7.8
KSH pmax pmax
comp=Z,11nm,1.0s
KSH pmax pmax
comp=Z,110nm,4.0s
MODS Modra-Piesok 74.53 5 eP P 16 07 59.9 +0.2
MODS pmax pmax
comp=Z,14nm,0.9s
MODS Modra-Piesok 74.53 5 eP P 16 07 59.9 +0.2
MTP Monte Pirata 74.67 80 P P 16 08 00.5 -0.4
MTP IAmb IAmb 16 08 01.6
comp=Z,43nm,1.2s
STVI Saint Thomas 74.78 80 P P 16 08 01.0 -0.5
STVI IAmb IAmb 16 08 52.2
comp=Z,26nm,1.0s
CONA Conrad Observa 74.89 6 eP P 16 08 02.7 +0.9
comp=Z,7.6nm,0.9s
SORM Soroca 74.92 358 ⇓P P 16 08 01.4 -0.5
TRPA Tarpa 74.94 2 ⇑P P 16 08 02.0 0.0
PSZ Piszkesteto 75.09 4 ⇓P P 16 08 02.6 -0.4
PSZ Piszkesteto 75.09 4 P P 16 08 03.4 +0.4
PSZ Piszkesteto 75.09 4 P P 16 08 03.4 +0.4
PSZ pmax pmax
comp=Z,13nm,1.0s
MOTA Moosalm 75.11 10 eP P 16 08 03.6 +0.4
comp=Z,10.0nm,1.0s
WATA Walderalm 75.16 9 eP P 16 08 04.3 +0.8
comp=Z,16nm,1.3s
WTTA Wattenberg 75.24 9 eP P 16 08 04.9 +1.0
comp=Z,16nm,0.9s,SNR=5.6
SQTA Sankt Quirin 75.24 10 eP P 16 08 04.7 +0.7
comp=Z,7.1nm,0.6s,SNR=6.0
FETA Feichten 75.40 10 eP P 16 08 05.4 +0.5
comp=Z,10nm,0.9s,SNR=5.1
BUR08 Bucovina Ar. S 75.45 360 P P 16 08 05.1 0.0
BURAR Bucovina Array 75.48 360 ⇑P P 16 08 04.4 -0.9
ARSA Arzberg 75.55 7 eP P 16 08 06.5 +0.9
comp=Z,4.6nm,0.8s
KBA Koelnbreinsper 75.56 8 eP P 16 08 06.8 +0.9
comp=Z,6.0nm,0.4s,SNR=8.3
FUORN Ofenpass-Fuorn 75.75 10 P P 16 08 07.8 +0.8
FUORN IAmb IAmb 16 08 13.9
comp=Z,20nm,1.3s
ABTA Abfaltersbach 75.83 9 eP P 16 08 08.0 +0.8
comp=Z,8.8nm,1.2s
MYKA Terra Mystica 76.03 8 eP P 16 08 09.1 +0.7
comp=Z,2.6nm,0.5s
SOKA Soboth 76.08 7 eP P 16 08 09.7 +1.0
comp=Z,3.4nm,0.5s
PERS Pernice 76.13 7 iP P 16 08 09.7 +0.7
OBKA Obir 76.22 7 eP P 16 08 10.0 +0.5
comp=Z,18nm,0.6s,SNR=9.0
DRGR 76.29 2 ⇑P P 16 08 09.3 -0.5
SSB Saint Sauveur 76.39 15 P P 16 08 10.7 +0.3
SSB IAmb IAmb 16 10 57.4
comp=Z,86nm,2.0s
SSB Saint Sauveur 76.39 15 P P 16 08 10.7 +0.3
SSB pmax pmax
comp=Z,86nm,2.0s
CADS Cadrg 76.44 8 iP P 16 08 10.2 -0.5
CTI Castel Tesino 76.45 10 P P 16 08 11.8 +1.0
CTI IAmb IAmb 16 08 35.9
comp=Z,38nm,2.0s
CTI Castel Tesino 76.45 10 P P 16 08 11.8 +1.0
CTI pmax pmax
comp=Z,38nm,2.0s
SALO Salr 76.77 10 P P 16 08 12.4 -0.1
SALO IAmb IAmb 16 08 13.2

	comp=Z,16nm,0.7s						
SIRR	Siria	76.79	2	⇓P	P	16 08 12.0	-0.6
BNI	Bardonecchia	76.90	13	P	P	16 08 15.0	+1.6
BNI	Bardonecchia	76.90	13	P	P	16 08 15.0	+1.6
BNI				pmax	pmax		
	comp=Z,11nm,1.0s						
LSA	Lhasa	77.14	305	P	P	16 08 16.5	+1.1
LSA				pmax	pmax		
	comp=Z,11nm,1.1s						
LSA	Lhasa	77.14	305	P	P	16 08 16.8	+1.4
LSA	Lhasa	77.14	305	P	P	16 08 16.8	+1.4
LSA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BZS	Buzias	77.44	2	⇑P	P	16 08 15.9	-0.4
VOIR		77.66	360	⇑P	P	16 08 15.6	-1.9
GZR	Gura Zlata	77.69	2	⇑P	P	16 08 16.9	-0.8
ARR	Arges	77.73	0	⇑P	P	16 08 16.5	-1.5
CFR	Carcaliu	77.89	358	⇓P	P	16 08 17.2	-1.5
PYA1	Pyatigorsk	77.90	347	⇓eP	P	16 08 19.8	+0.9
MSSA	Maissana	77.95	11	P	P	16 08 19.0	-0.2
MSSA				IAmb	IAmb	16 08 19.8	
	comp=Z,16nm,0.7s						
KIV	Kislovodsk	78.06	347	⇑P	P	16 08 16.7	-3.1
KIV	Kislovodsk	78.06	347	P	P	16 08 19.7	-0.1
KIV				IAmb	IAmb	16 08 25.9	
	comp=Z,16nm,0.7s						
KIV	Kislovodsk	78.06	347	eP	P	16 08 19.7	-0.1
KIV				pmax	pmax		
	comp=Z,72nm,1.1s						
SLVN	Son La	78.11	291	P	P	16 08 20.3	-0.1
VLC	Villacollemand	78.20	11	P	P	16 08 21.0	+0.4
VLC				IAmb	IAmb	16 08 22.7	
	comp=Z,11nm,0.8s						
KBZ	Khabaz	78.26	347	P	P	16 08 21.5	+0.8
	comp=Z,16nm,0.9s,baz=34,slow=1.9,SNR=13						
KBZ	Khabaz	78.26	347	⇑iP	P	16 08 20.7	-0.1
RAR	Rarotonga	78.28	185	LR	LR	16 35 41.4	
	comp=Z,136nm,19.3s,baz=77,slow=30						
MVO	Moncorvo	78.30	24	eP	P	16 08 22.4	+1.2
NCK	Nalchik	78.40	346	⇑iP	P	16 08 22.8	+1.2
NCK				pmax	pmax		
	comp=Z,21nm,0.9s						
TIRR	Tirgusor	78.60	358	P	P	16 08 22.9	+0.3
TIRR	Tirgusor	78.60	358	P	P	16 08 22.9	+0.3
MTE	Manteigas	78.91	25	eP	P	16 08 25.6	+1.1
PCAS	Casmilo, Conde	79.02	26	eP	P	16 08 26.3	+1.2
SDV	Santo Domingo	79.53	90	P	P	16 08 27.6	-0.8
PMRV	Marv??o	79.87	25	eP	P	16 08 30.4	+0.7
PMAFR	Mafra	79.88	27	eP	P	16 08 31.2	+1.5
PMTG	Montargil	80.02	26	eP	P	16 08 30.6	+0.1
	comp=Z,52nm,2.0s						
ESBB	Sonseca Array	80.38	22	P	P	16 08 33.4	+0.9
ESBB				IAmb	IAmb	16 08 34.0	
	comp=Z,13nm,0.8s						
ESDC	Sonseca Array	80.38	22	P	P	16 08 33.4	+0.8
	comp=Z,7.9nm,0.6s,baz=342,slow=5.1,SNR=19						
PDG	Podgorica	80.55	4	⇓P	P	16 08 31.7	-1.5
TAPN	Taplejung	80.67	307	eP	P	16 08 35.0	+0.4
	comp=Z,28nm,0.7s						
RUSC	La Rusia	80.69	94	P	P	16 08 34.1	-0.9
NIL	Nilore	80.72	321	P	P	16 08 34.8	+0.4
NIL				IAmb	IAmb	16 08 40.2	
	comp=Z,22nm,0.7s						
NIL	Nilore	80.72	321	P	P	16 08 34.8	+0.4
NIL				pmax	pmax		
	comp=Z,22nm,0.7s						
PNCL	Nicolau / Gran	80.86	26	eP	P	16 08 36.1	+1.1
	comp=Z,45nm,1.3s						
GUN	Gumba	80.97	308	eP	P	16 08 36.6	+0.4
JIRN	Jiri	81.06	308	eP	P	16 08 37.0	+0.3
	comp=Z,38nm,0.4s						
DIKM	Dikmen	81.07	352	⇓P	P	16 08 33.3	-2.8
GEYT	Alibeck	81.14	334	P	P	16 08 36.9	+0.3
	comp=Z,6.2nm,0.7s,baz=316,slow=4.1,SNR=12						
GYA0B	ALIBECK ARRAY	81.14	334	P	P	16 08 37.1	+0.5
ODAN	Odare	81.24	307	eP	P	16 08 38.1	+0.6
	comp=Z,25nm,1.0s						
KBL	Kabul	81.29	325	P	P	16 08 36.9	-0.7
KBL	Kabul	81.29	325	P	P	16 08 36.9	-0.7
KBL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KKN	Kakani	81.33	309	eP	P	16 08 38.0	0.0
GKN	Gorkha	81.42	310	eP	P	16 08 38.5	+0.1
PCVE	Castro Verde	81.43	26	eP	P	16 08 39.1	+1.0
PKI	Pulchoki	81.47	309	eP	P	16 08 38.7	-0.2
	comp=Z,12nm,0.6s						
PKIN	Phulchoki	81.47	309	eP	P	16 08 38.5	-0.3
	comp=Z,9.8nm,0.6s						
DANN	Dangsing	81.48	310	eP	P	16 08 39.2	+0.4
	comp=Z,91nm,0.8s						
RAMN	Ramite	81.50	307	eP	P	16 08 38.9	0.0
DMN	Daman	81.57	309	eP	P	16 08 39.3	0.0
	comp=Z,20nm,0.6s						
MORF	Marmelete	81.59	27	eP	P	16 08 40.0	+1.0
MORF				AMb	AMB	16 08 44.6	
	comp=Z,52nm,1.0s						
MORF	Marmelete	81.59	27	eP	P	16 08 39.9	+1.0
MORF	Marmelete	81.59	27	eP	P	16 08 40.0	+1.0
PVAQ	Vaqueiros	81.73	26	eP	P	16 08 40.9	+1.3
PBDV	Barranco-do-Ve	81.83	26	eP	P	16 08 41.6	+1.4
SIJI	Sorong	81.99	256	P	P	16 08 41.3	+0.1
	comp=Z,14nm,0.7s,baz=37,slow=8.9,SNR=4.7						
UBPT	Khong Chiam	82.36	286	P	P	16 08 43.2	0.0
UBPT				IAmb	IAmb	16 08 48.6	
	comp=Z,12nm,0.7s						
LIT	Litokhoron	82.97	2	P	P	16 08 45.9	-0.2
LIT				IAmb	IAmb	16 08 47.0	
	comp=Z,14nm,1.0s						
LIT	Litokhoron	82.97	2	P	P	16 08 45.9	-0.2
LIT				pmax	pmax		
	comp=Z,14nm,1.0s						
CM31	Chiang Mai Arr	83.02	293	P	P	16 08 46.0	-0.7
CMAR	Chiang Mai Arr	83.02	293	P	P	16 08 46.1	-0.5
	comp=Z,6.1nm,0.7s,baz=11,slow=5.5,SNR=64						
BR131	Keskin Array S	83.09	353	⇓iP	P	16 08 47.4	+0.5
BRTR	Keskin Array B	83.09	353	P	P	16 08 47.1	+0.2
	comp=Z,6.8nm,0.9s,baz=39,slow=1.4,SNR=16						
PBKT	Sadao Pong	83.60	291	P	P	16 08 48.9	-0.7
TIP	Timpagrande	83.66	6	P	P	16 08 49.6	-0.1
CORL	Corleone	84.68	9	P	P	16 08 54.6	-0.3
CLTB	Caltabellotta	84.99	9	P	P	16 08 56.4	-0.1
CLTB				IAmb	IAmb	16 08 57.4	
	comp=Z,21nm,0.7s						
KEST	Kesra	86.41	13	P	P	16 09 04.3	+0.7
	comp=Z,8.0nm,0.9s,baz=19,slow=3.9,SNR=7.2						
KEST	Kesra	86.41	13	IAmb	IAmb	16 09 11.8	
	comp=Z,16nm,1.1s						
ATAH	Atahualpa	88.77	105	P	P	16 09 16.4	+1.0
	comp=Z,5.7nm,0.7s,baz=284,slow=1.9,SNR=3.7						
CTA	Charters Tower	91.25	233	P	P	16 09 26.7	+0.4
	comp=Z,6.1nm,0.8s,baz=28,slow=8.2,SNR=4.7						
KAPI	Kappang	91.62	263	LR	LR	16 47 13.6	
	comp=Z,96nm,21.7s,baz=186,slow=33						
WRA	Warramunga Arr	96.64	243	P	P	16 09 49.8	-1.3
	comp=Z,1.1nm,0.9s,baz=33,slow=5.5,SNR=5.7						
RAYN	Ar Rayn	97.69	341	P	P	16 09 56.0	-0.1
RAYN				IAmb	IAmb	16 09 57.0	
	comp=Z,5.5nm,0.9s						
RAYN	Ar Rayn	97.69	341	P	P	16 09 56.0	-0.1
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ASAR	Alice Springs	100.01	242	P	Pdif	16 10 06.2	0.0
	comp=Z,0.4nm,0.8s,baz=30,slow=5.4,SNR=4.1						
ASAR				PKKPbc	PKKPbc	16 26 20.9	-1.9
	comp=Z,0.2nm,0.2s,baz=196,slow=2.3,SNR=4.2						
TORD	Torodi Ar. Bea	107.23	24	PKKPbc	PKKPbc	16 26 01.0	+0.2
	comp=Z,1.3nm,0.7s,baz=146,slow=2.1,SNR=6.8						
KMBO	Kilima Mbogo	123.17	345	PKP	PKiKP	16 15 19.1	+0.8
	comp=Z,4.1nm,0.6s,baz=29,slow=5.6,SNR=17						
KMBO	Kilima Mbogo	123.17	345		PKiKP	16 15 18.6	+0.4
KMBO	Kilima Mbogo	123.17	345	PKIKP	PKiKP	16 15 18.6	+0.4
QSPA	South Pole Qui	147.06	180	PKPbc	PKPbc	16 16 02.4	0.0
	comp=Z,41nm,0.8s,baz=51,slow=1.3,SNR=130						
QSPA	South Pole Qui	147.06	180	PKPdf	PKPbc	16 16 02.1	-0.3
LBTB	Lobatse	147.77	359	i P	PKPbc	16 16 06.1	+0.5
LBTB	Lobatse	147.77	359	i P	PKPbc	16 16 06.1	+0.5
LBTB	Lobatse	147.77	359		PKPbc	16 16 05.7	+0.1
LBTB	Lobatse	147.77	359	PKP2	PKPbc	16 16 05.7	+0.1
BOSA	Boshof	151.36	360	i	PKiKP	16 16 14.7	-0.2
	baz=18,slow=3.8						
BOSA				i P	PKiKP	16 16 14.7	-0.2
BOSA	Boshof	151.36	360	PKPbc	PKPbc	16 16 14.2	-0.2
	comp=Z,14nm,0.6s,baz=16,slow=2.3,SNR=26						
BOSA	Boshof	151.36	360	i	PKiKP	16 16 14.7	-0.2
	baz=18,slow=3.8						
BOSA				i P	PKiKP	16 16 14.7	-0.2
BOSA	Boshof	151.36	360		PKPbc	16 16 14.1	-0.3
VNA3	Neumayer Olymp	159.88	148	P	PKPab	16 16 57.2	-0.7
SNAA	Sanae	161.52	152	P	PKPab	16 17 04.3	-0.9
SNAA	Sanae	161.52	152		PKPab	16 17 04.1	-1.1
SNAA	Sanae	161.52	152	PKP2	PKPab	16 17 04.1	-1.1

IDC 25 16:00:33.0±0.9, 23°.55S×68°.61W, h73km±13km, mb3.6/2, mb1 3.7/6, mb1mx3.4/29, mbtmp3.8/6, MS3.9/3, Ms1 3.9/3, ms1mx3.3/22, Error ellipse: s-maj=30.4km s-min=14.4km az=85.0
SJA 25 16:00:32.5±0.8, 23°.48S×69°.02W, h92km±5km, ML3.5, MW3.4
NEIC 25 16:00:32.7±1.8, 23°.49S±0°.05×68°.89W±0°.03, h91km±7km, Error ellipse: s-maj=7.8km s-min=4.2km az=195.0
GUC 25 16:00:33.7±0.5, 23°.43S×69°.11W, h92km±3km, ML3.3
ISC 25 16:00:33.1±0.8, 23°.45S±0°.04×69°.03W±0°.05, h91km±7km, n52, σ1s.19/70, mb4.5/4, 7C-7D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	IPOC Station P	0.48	301	⇓iP	Pn	16 00 48.7	+0.6
PB15				i S	Sn	16 00 59.8	+0.6
PB15	IPOC Station P	0.48	301	i P	Pn	16 00 48.4	+0.3
PB15				eS	Sn	16 01 00.1	+0.9
LVC	Limon Verde	0.85	7	P	Pn	16 00 52.0	+0.3
	55nm,0.3s,baz=179,slow=8.2,SNR=370						
LVC				S	Sn	16 01 05.9	+0.4
	145nm,0.3s,baz=333,slow=18,SNR=58						
LVC	Limon Verde	0.85	7		Pn	16 00 51.8	+0.1
LVC				Sn	Sn	16 01 05.5	0.0
LVC	Limon Verde	0.85	7	⇓iP	Pn	16 00 52.0	+0.3
LVC				eS	Sn	16 01 07.0	+1.6
PB06	IPOC Station P	0.90	326	⇓iP	Pn	16 00 52.7	+0.7
PB06				i S	Sn	16 01 06.5	+0.4
PB06				IAML		16 01 07.8	
	comp=E,2μm,0.4s						
PB06	IPOC Station P	0.90	326	i P	Pn	16 00 52.3	+0.3
PB06				eS	Sn	16 01 07.0	+0.9
PB06				IAML		16 01 08.1	
	comp=Z,1μm,0.6s						
PB05	IPOC Station P	1.24	299	⇑iP	Pn	16 00 56.4	+0.6
PB05				i S	Sn	16 01 13.1	+0.2
PB05				IAML		16 01 20.9	
	comp=E,682nm,0.3s						
PB05	IPOC Station P	1.24	299	i P	Pn	16 00 56.4	+0.6
PB05				⇓eS	Sn	16 01 14.1	+1.1
PB10	IPOC Station P	1.41	267	⇑iP	Pn	16 00 58.7	+1.0
PB10				i S	Sn	16 01 16.4	-0.1
PB10				IAML		16 01 22.2	
	comp=E,412nm,0.6s						
PB10	IPOC Station P	1.41	267		Pn	16 00 58.9	+1.1
PB10	IPOC Station P	1.41	267	i P	Pn	16 00 58.7	+1.0
PB10				eS	Sn	16 01 17.3	+0.9
PB10				IAML		16 01 21.8	
	comp=Z,389nm,0.4s						
PB04	IPOC Station P	1.52	317	⇑iP	Pn	16 00 59.9	+0.5
PB04				i S	Sn	16 01 19.6	+0.4
PB04				IAML		16 01 27.3	
	comp=N,564nm,0.2s						
PB04	IPOC Station P	1.52	317		Pn	16 00 59.8	+0.3
PB04	IPOC Station P	1.52	317	i P	Pn	16 01 00.0	+0.5
PB04				IAML		16 01 26.1	
	comp=Z,362nm,0.3s						
PB03	IPOC Station P	1.55	334	⇓iP	Pn	16 01 00.6	+0.7
PB03				eS	Sn	16 01 20.5	+0.6
PB03				IAML		16 01 21.5	
	comp=N,668nm,0.4s						
PB09	IPOC Station P	1.66	353	⇓iP	Pn	16 01 02.8	+1.6
PB09				i S	Sn	16 01 22.6	+0.1
PB09				IAML		16 01 27.6	
	comp=N,494nm,0.4s						
PB09	IPOC Station P	1.66	353	i P	Pn	16 01 02.8	+1.6
PB09				eS	Sn	16 01 24.2	+1.8
PB09				IAML		16 01 29.0	
	comp=Z,392nm,0.4s						
PB14	IPOC Station P	1.72	227	⇑iP	Pn	16 01 02.9	+0.9
PB14				i S	Sn	16 01 25.1	+1.2
PB14	IPOC Station P	1.72	227	i P	Pn	16 01 02.5	+0.5
PB14				eS	Sn	16 01 25.4	+1.4
GO02	Mina Guanaco	1.78	197	⇑iP	Pn	16 01 04.4	+1.6
GO02				i S	Sn	16 01 27.7	+2.4
GO02	Mina Guanaco	1.78	197		Pn	16 01 01.9	-0.9
PB07	IPOC Station P	1.90	335	⇑iP	Pn	16 01 04.9	+0.7
PB07				i S	Sn	16 01 28.8	+1.0
PB07				IAML		16 01 35.4	
	comp=E,324nm,0.3s						
PB02	IPOC Station P	2.27	339	eP	Pn	16 01 09.7	+0.6
PB02				i S	Sn	16 01 37.9	+1.3
PB02				IAML		16 01 48.2	
	comp=E,473nm,0.2s						
PB01	IPOC Station P	2.44	350	⇑iP	Pn	16 01 11.8	+0.5
PB01				i S	Sn	16 01 41.8	+1.3
PB01				IAML		16 01 47.8	
	comp=N,230nm,0.4s						
PB01	IPOC Station P	2.44	350		Pn	16 01 11.6	+0.3
YJA	Yavi	3.48	69	⇓iP	Pn	16 01 28.9	+3.3
PB11	IPOC Station P	3.72	351		Pn	16 01 28.2	-0.4
GO01	Chusmiza	3.77	358		Pn	16 01 28.8	-0.8
GO03	Copiap	4.26	195		Pn	16 01 35.6	-0.3
GO03	Copiap	4.26	195	i P	Pn	16 01 36.0	+0.2
MNMC	Minye Minye	4.33	353		Pn	16 01 36.0	-1.0
AROD	Rodeo	6.70	183	i P	Pn	16 02 10.4	+1.2
GO04	Tololo Observa	6.88	193	Pn	Pn	16 02 10.0	-1.5
ACCO	Cerro Coronel	7.11	180	i P	Pn	16 02 14.9	+0.2
LPAZ	La Paz	7.18	7	P	Pn	16 02 17.5	+1.4
	comp=N,0.2nm,0.3s,baz=186,slow=10,SNR=4.1						
LPAZ	La Paz	7.18	7		Pn	16 02 17.1	+1.1
RTLL	Cerro Villicun	7.86	177	i P	Pn	16 02 23.9	-0.8
RTLL				IAML		16 02 25.7	
	comp=Z,5.7nm,0.5s						
CFA	Coronel Fontan	8.15	175	P	Pn	16 02 27.8	-0.9
	comp=Z,0.7nm,0.3s,baz=346,slow=12,SNR=16						
CFA				S	Sn	16 03 54.6	-4.6
	comp=Z,0.4nm,0.3s,baz=265,slow=12,SNR=2.1						
ASAL	Salagasta	9.10	179	i P	Pn	16 02 40.9	-0.8
SIV	San Ignacio	10.54	47	P	Pn	16 02 59.1	-2.3
	comp=Z,3.1nm,0.3s,baz=242,slow=12,SNR=58						
CPUP	Villa Florida	11.00	107	P	Pn	16 03 02.1	-5.4
	comp=Z,0.2nm,0.3s,baz=251,slow=18,SNR=2.5						
USHA	Ushuaia	31.34	179	LR	LR	16 19 34.1	
	comp=Z,100nm,19.0s,baz=205,slow=36						
ESPN	Las Esperanzas	38.45	336	P	P	16 07 46.3	0.0
PDPR	Patillas Dam,	41.32	4	P	P	16 08 08.7	-1.3
PDPR				IAmb	IAmb	16 08 09.1	
	comp=Z,11nm,0.8s						
T49A	Edmonton	62.21	345	P	P	16 10 44.9	-0.1
T49A				IAmb	IAmb	16 11 05.9	
	comp=Z,12nm,1.2s						
QSPA	South Pole Qui	66.75	180	P	P	16 11 16.2	+1.8
	comp=Z,0.8nm,0.5s,baz=162,slow=3.2,SNR=12						
QSPA	South Pole Qui	66.75	180	IAmb	IAmb	16 11 21.0	
	comp=Z,10nm,1.5s						
SCHQ	Schefferville	77.99	1	LR	LR	16 49 08.6	
	comp=Z,103nm,21.9s,baz=148,slow=37						
TORD	Torodi Ar. Bea	78.12	70	P	P	16 12 22.1	-0.5
	comp=Z,0.5nm,0.5s,baz=247,slow=5.8,SNR=5.4						
RPZ	Rata Peaks	93.42	219	LR	LR	16 46 02.5	
	comp=Z,104nm,19.0s,baz=350,slow=29						
MKAR	Makanchi Array	147.26	38	PKPbc	PKPbc	16 20 06.4	+0.4
	comp=Z,0.2nm,0.7s,baz=298,slow=3.1,SNR=2.4						
MKAR				pPKPbc	pPKPdf	16 20 29.8	-0.1
	comp=Z,0.3nm,0.7s,baz=328,slow=1.9,SNR=3.2						

NEIC 25 16:05:01.2±1.1, 18°.6S±0°.1×174°.7W±0°.1, h83km±6km, mb4.7/23, Error ellipse: s-maj=20.1km s-min=15.0km az=165.0
IDC 25 16:05:02.0±3.0, 18°.64S×174°.70W, h87km±27km, mb3.9/13, mb1 4.1/14, mb1mx4.0/32, mbtmp4.2/14, Error ellipse: s-maj=30.5km s-min=14.4km az=138.0
ISC 25 16:05:01.3±0.5, 18°.58S±0°.08×174°.63W±0°.09, h83km, n49, σ1s.00/51, mb4.5/21, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	4.48	97	Pn	Pn	16 06 07.4	+0.5
AFI	Afiamalu	5.39	31	P	Pn	16 06 20.9	+1.6
	20nm,0.3s,baz=212,slow=3.9,SNR=39						
AFI				S	Sn	16 07 16.0	-4.1
	19nm,0.3s,baz=202,slow=4.3,SNR=4.4						
URZ	Urewera	20.89	198	P	P	16 09 36.8	+0.1
	9.8nm,0.6s,baz=59,slow=5.5,SNR=12						
URZ	Urewera	20.89	198	IAmb	IAmb	16 09 41.0	
	comp=Z,43nm,1.6s						
BKZ	Black Stump Fm	21.91	199	P	P	16 09 47.9	+0.1
BKZ				IAmb	IAmb	16 09 59.6	
	comp=Z,94nm,2.0s						
TUWZ	Tuamarina	24.78	201	P	P	16 10 15.6	+0.2
WHZ	Wether Hill Ro	30.83	204	P	P	16 11 09.5	+0.2
EIDS	Eidsvold	32.44	252	P	P	16 11 23.5	-0.3
EIDS				IAmb	IAmb	16 11 35.2	
	comp=Z,21nm,1.4s						
CTA	Charters Tower	36.88	261	P	P	16 12 02.2	+0.1
	comp=Z,7.3nm,0.7s,baz=93,slow=11,SNR=9.4						
COEN	Coen	40.70	270	P	P	16 12 33.9	-0.1
COEN				IAmb	IAmb	16 13 35.3	
	comp=Z,9.2nm,1.2s						
STKA	Stephens Creek	41.48	243	P	P	16 12 39.9	-0.4
	comp=Z,1.5nm,0.8s,baz=105,slow=12,SNR=4.7						
WR0	Warramunga Arr	47.85	260	P	P	16 13 30.0	-1.2
WB0	Warramunga Arr	48.02	260	P	P	16 13 31.1	-1.3
WB0				IAmb	IAmb	16 13 32.1	
	comp=Z,9.1nm,1.2s						
WB2	Warramunga Arr	48.03	260	P	P	16 13 31.6	-0.9
WRAB	Tennant Creek	48.03	260	P	P	16 13 31.5	-1.0
WRA	Warramunga Arr	48.04	260	P	P	16 13 31.7	-0.9
	comp=Z,2.9nm,0.4s,baz=98,slow=5.9,SNR=110						
WRA				PcP	PcP	16 14 58.8	-0.6
	comp=Z,0.3nm,0.5s,baz=89,slow=3.6,SNR=2.5						
AS31	Alice Springs	48.07	255	P	P	16 13 32.0	-0.8
ASAR	Alice Springs	48.07	255	P	P	16 13 32.1	-0.7
	comp=Z,4.6nm,0.6s,baz=88,slow=8.0,SNR=104						
ASAR				PcP	PcP	16 14 59.1	-0.4
	comp=Z,0.7nm,0.6s,baz=105,slow=4.0,SNR=5.1						
MTN	Manton Dam	52.37	268	P	P	16 14 04.4	-0.9
FORT	Forrest	52.98	245	P	P	16 14 08.6	-1.0
KNRA	Kununurra	53.99	264	P	P	16 14 16.7	-0.5
FITZ	Fitzroy Crossi	56.46	260	P	P	16 14 33.6	-1.4
FITZ				IAmb	IAmb	16 16 26.5	
	comp=Z,11nm,1.4s						
SOEI	Soe	59.66	269	P	P	16 14 58.5	+1.0
SBA	Scott Base	60.01	184	P	P	16 14 57.9	-0.8
INU	Inuyama	70.56	320	P	P	16 16 08.1	+0.6
MJAR	Matsushiro Arr	70.63	321	P	P	16 16 08.2	+0.2
	comp=Z,1.9nm,0.6s,baz=139,slow=6.4,SNR=5.7						
MAJO	Matsushiro	70.63	321	P	P	16 16 08.3	+0.4
MJB9	Matsu-Tunnel	70.64	321	P	P	16 16 08.4	+0.4
PETK	Petropavlovsk-	75.30	343	P	P	16 16 35.3	+0.2
	comp=Z,5.3nm,0.9s,baz=128,slow=10,SNR=6.1						
NVAR	Mina Array Bea	77.47	42	P	P	16 16 48.9	+0.9
	comp=Z,0.2nm,0.5s,baz=217,slow=7.9,SNR=4.6						
KSRS	Korea Array	77.62	317	P	P	16 16 50.4	+1.8
	comp=Z,1.2nm,0.8s,baz=140,slow=5.1,SNR=6.5						
TXAR	Lajitas Array	83.35	56	P	P	16 17 21.5	+1.9
	comp=Z,0.5nm,0.6s,baz=217,slow=8.7,SNR=7.3						
DOT	Dot Lake	85.35	13	P	P	16 17 28.8	0.0
DOT				IAmb	IAmb	16 17 30.6	
	comp=Z,10nm,1.2s						
HDA	Harding Lake	85.44	12	P	P	16 17 29.2	0.0
HDA				IAmb	IAmb	16 17 29.8	
	comp=Z,4.6nm,0.6s						
CCB	Clear Creek Bu	85.49	11	P	P	16 17 29.4	-0.1
CCB				IAmb	IAmb	16 17 30.2	
	comp=Z,6.5nm,0.7s						
IL31		85.78	12	P	P	16 17 30.2	-0.6
IL31				IAmb	IAmb	16 17 36.8	
	comp=Z,20nm,1.9s						
ILAR	Eielson Array	85.78	12	P	P	16 17 30.8	-0.1
	comp=Z,1.4nm,0.7s,baz=228,slow=6.3,SNR=45						
CMAR	Chiang Mai Arr	92.50	289	P	P	16 18 05.3	+1.6
	comp=Z,0.8nm,0.8s,baz=102,slow=3.6,SNR=5.5						
YKA	Yellowknife Ar	93.47	24	P	P	16 18 07.3	+0.2
	comp=Z,0.3nm,0.7s,baz=241,slow=4.8,SNR=3.8						
MKAR	Makanchi Array	112.19	314	PKiKP	PKiKP	16 23 26.2	-1.1
	comp=Z,0.3nm,0.5s,baz=93,slow=1.3,SNR=9.2						
ARCES	ARCESS Array B	127.57	351	PKP	PKPdf	16 23 55.4	-0.7
	comp=Z,4.5nm,1.1s,baz=5.2,slow=1.0,SNR=8.0						
CLL	Collm	146.79	351	ePKPbc	PKPab	16 24 35.0	0.0
	comp=Z,5.0nm,1.0s						
BRTR	Keskin Array B	147.77	317	PKPbc	PKPbc	16 24 36.5	-0.5
	comp=Z,1.5nm,0.7s,baz=131,slow=3.4,SNR=6.9						
GERES	GERESS Array B	149.06	349	PKPbc	PKPbc	16 24 39.9	0.0
	comp=Z,1.1nm,0.6s,baz=22,slow=4.3,SNR=7.2						
CONA	Conrad Observa	149.50	346	i PKiKP	PKPbc	16 24 41.5	+0.5
	comp=Z,1.1nm,0.4s						
KBA	Koelnbreinsper	150.83	349	i PKiKP	PKPbc	16 24 44.2	-0.2
	comp=Z,2.7nm,0.5s						
WTTA	Wattenberg	150.93	351	ePKiKP	PKPbc	16 24 44.5	-0.2
	comp=Z,5.3nm,0.3s						
FETA	Feichten	151.29	352	i PKiKP	PKiKP	16 24 45.8	-0.2
	comp=Z,6.0nm,1.1s						
ABTA	Abfaltersbach	151.30	350	ePKPbc	PKPbc	16 24 44.8	-0.6
	comp=Z,4.7nm,0.6s						

JMA 25 16:16:12.5±0.2, 22°.83N×122°.54E, h44km, M2.9
TAP 25 16:16:14.0, 22°.88N×122°.43E, h71km±1km, ML3.1, D
ISC 25 16:16:09.1±1.4, 22°.86N±0°.03×122°.56E±0°.03, h2km±10km, n91, σ1s.67/153, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	Lutao	1.01	262	P	Pg	16 16 29.8	+1.4
	baz=257						
TWH				eS	Sg	16 16 40.9	-0.6
	baz=257						
CHKT	Chengkung	1.12	282	eP	Pg	16 16 31.4	+0.7
	baz=284						
CHKT				eS	Sg	16 16 45.0	-0.2
	baz=284						
FULB	Fuli	1.21	286	P	Pg	16 16 32.8	+0.5
	baz=293						
FULB				eS	Sg	16 16 46.9	-1.1
	baz=293						
HGSD	Ruisui	1.22	301	eP	Pg	16 16 32.9	+0.5
	baz=303						
HGSD				eS	Sg	16 16 46.4	-1.8
	baz=303						
LAY	Lan-yu	1.24	229	eP	Pg	16 16 32.8	-0.1
	baz=228						
TWF1	Yuli	1.26	293	P	Pg	16 16 33.9	+0.7
	baz=294						
TWF1				eS	Sg	16 16 48.7	-0.8
	baz=294						
YULB	Yu-li	1.27	295	eP	Pg	16 16 34.2	+0.7
	baz=292						
YULB				eS	Sg	16 16 48.9	-1.1
	baz=292						
EHY	Hungye	1.30	300	P	Pg	16 16 34.7	+0.6
	baz=301						
EHY				S	Sg	16 16 50.8	-0.2
	baz=301						
EGFH	Guangfu	1.31	308	eP	Pg	16 16 34.8	+0.5
	baz=310						
EGFH				eS	Sg	16 16 50.5	-0.8
	baz=310						
TWGBT	Beinan	1.36	268	eP	Pg	16 16 35.1	-0.1
	baz=267						
TWGBT				eS	Sg	16 16 52.0	-0.9
	baz=267						
TWG	Pinlang	1.37	269	P	Pg	16 16 35.8	+0.4
	baz=267						
TWG				S	Sg	16 16 52.5	-0.7
	baz=267						
ESL	Shilin	1.40	313	P	Pn	16 16 35.7	0.0
	baz=320						
ESL				S	Sg	16 16 51.4	-2.7
	baz=320						
ELDTW	Lidau	1.46	283	P	Pn	16 16 36.7	+0.3
	baz=291						
ELDTW				eS	Sg	16 16 53.6	-2.3
	baz=291						
TWD	Chiawan	1.50	324	eP	Pn	16 16 36.3	-0.6
	baz=334						
TWD				eS	Sg	16 16 54.8	-2.5
	baz=334						
ECL	Taimali	1.50	260	P	Pn	16 16 37.5	+0.5
	baz=258						
ECL				eS	Sg	16 16 54.7	-2.7
	baz=258						
VWDT	VWDT	1.57	305	eP	Pn	16 16 39.5	+1.5
	baz=306						
VWDT				eS	Sn	16 16 57.8	-1.1
	baz=306						
NACB	Ninganchiao	1.58	326	eP	Pn	16 16 38.5	+0.5
	baz=334						
NACB				eS	Sn	16 16 56.7	-2.2

baz=334
YUS Yu-Shan 1.60 293 eP Pn 16 16 40.0 +1.2
baz=294
JYNG Yonagunijimaku 1.62 13 P Pn 16 16 40.4 +1.8
JYNG eS Sn 16 17 01.0 +0.9
YOJ Yonaguni jima 1.65 15 eP Pn 16 16 40.6 +1.6
baz=11
YOJ eS Sn 16 16 59.9 -0.8
baz=11
YOJ Yonaguni jima 1.65 15 P Pn 16 16 40.9 +1.9
EAST Anshuo 1.65 254 P Pn 16 16 40.0 +0.9
baz=257
EAST eS Sn 16 16 59.4 -1.5
baz=257
HATJ Hateruma jima 1.65 44 P Pn 16 16 40.2 +1.2
ETLH Xiulin Townshi 1.66 324 eP Pn 16 16 40.0 +0.8
baz=331
ETLH eS Sn 16 16 59.3 -2.0
baz=331
OWD Renai 1.67 311 P Pn 16 16 40.3 +0.8
baz=312
OWD S Sn 16 16 59.0 -2.5
baz=312
STYT Tauyuan 1.69 281 eP Pn 16 16 41.2 +1.6
baz=280
STYT eS Sn 16 17 00.5 -1.3
baz=280
EOS1 EOS1 1.72 347 eP Pn 16 16 41.2 +1.2
baz=344
EOS1 eS Sn 16 17 03.2 +0.6
baz=344
ENA Nanau 1.73 335 P Pn 16 16 41.8 +1.7
baz=332
ENA S Sn 16 17 01.7 -1.0
baz=332
ALS Alishan 1.74 292 eP Pn 16 16 42.2 +1.7
baz=297
SSLB Suanglung 1.74 302 eP Pn 16 16 41.5 +1.3
baz=303
SSLB eS Sn 16 17 00.6 -2.5
baz=303
CHGB Renai 1.74 313 eP Pn 16 16 41.8 +1.3
baz=315
CHGB eS Sn 16 17 01.2 -2.2
baz=315
WHF Hehuan Shan 1.74 317 eP Pn 16 16 41.4 +0.7
baz=326
WHF eS Sn 16 17 00.4 -3.3
baz=326
SLGT Liugui 1.77 275 P Pn 16 16 42.3 +1.7
baz=272
WHYT Xinyi Township 1.77 298 eP Pn 16 16 42.8 +2.0
baz=302
SSD Sandimen 1.78 267 eP Pn 16 16 42.2 +1.3
baz=263
MASBT Mashibuluo 1.79 262 eP Pn 16 16 42.2 +1.2
baz=258
IRIF Iriomote-Funau 1.82 36 P Pn 16 16 42.8 +1.5
TPUB Ta-pu 1.83 284 eP Pn 16 16 43.7 +2.2
baz=288
TPUB eS Sn 16 17 05.7 +0.5
baz=288
SMLT Sun Moon Lake 1.83 304 eP Pn 16 16 43.4 +1.8
baz=309
WTP Ta-pu 1.83 282 eP Pn 16 16 44.0 +2.5
baz=282
SGST Jiashian 1.83 277 eP Pn 16 16 43.7 +2.2
baz=279
SCZT Fangliau 1.85 255 eP Pn 16 16 43.9 +2.1
baz=255
SCZT eS Sn 16 17 05.5 -0.4
baz=255
TWC Suao 1.86 340 eP Pn 16 16 43.4 +1.5
baz=348
TWC eS Sn 16 17 05.1 -0.8
baz=348
TWKBT Hengchun 1.86 241 eP Pn 16 16 43.2 +1.3
baz=237
TWKBT eS Sn 16 17 03.5 -2.4
baz=237
CHN4 Tsaushan 1.87 285 P Pn 16 16 44.8 +2.7
baz=289
CHN4 eS Sn 16 17 05.9 -0.4
baz=289
TYC Yuchr 1.87 304 eP Pn 16 16 43.9 +1.8
baz=309
CHN5 Tsauling 1.88 293 P Pn 16 16 45.2 +3.0
baz=293
HEN Hengchun 1.89 243 eP Pn 16 16 43.3 +1.0
baz=234
HEN eS Sn 16 17 03.8 -2.8
baz=234
TDCB Techi 1.89 317 eP Pn 16 16 42.8 +0.3
baz=324
TDCB eS Sn 16 17 04.6 -2.3
baz=324
NNSB Datong 1.89 326 eP Pn 16 16 43.9 +1.4
baz=320
NNSB eS Sn 16 17 06.4 -0.7
baz=320
NNSH Datong 1.89 326 P Pn 16 16 43.5 +1.0
baz=327
NNSH eS Sn 16 17 05.7 -1.3
baz=327
CHN1 Nanshi 1.90 280 eP Pn 16 16 44.8 +2.4
baz=282
CHN1 eS Sn 16 17 08.6 +1.7
baz=282
DPDB Guoxing 1.90 308 P Pn 16 16 44.4 +1.9
baz=313
DPDB eS Sn 16 17 06.9 -0.1
baz=313
NNS Nan Shan 1.91 326 P Pn 16 16 44.2 +1.5
baz=328
NNS S Sn 16 17 05.6 -1.8
baz=328
JKRS Kuro-shima 1.91 44 P Pn 16 16 44.1 +1.5
JKRS eS Sn 16 17 06.8 -0.4
WJS Zhushan 1.93 300 eP Pn 16 16 44.8 +1.9
baz=300
TWK Hsinying 1.95 282 eP Pn 16 16 45.2 +2.0
baz=288
TWM1 Shoushan 1.97 269 eP Pn 16 16 47.5 +4.1
baz=268
NDT Datong Townshi 1.98 331 P Pn 16 16 44.6 +1.0
baz=338
NDT S Sn 16 17 07.8 -1.1
baz=338
ENTT Nioudou 1.99 333 P Pn 16 16 45.9 +2.2
baz=335
ENTT eS Sn 16 17 07.7 -1.5
baz=335
WNT Mingjian 2.00 301 eP Pn 16 16 47.0 +3.2
baz=301
TWE Neicheng 2.02 336 eP Pn 16 16 46.2 +2.1
baz=339
TWE eS Sn 16 17 08.8 -1.1
baz=339
WDLH Douliu 2.03 294 eP Pn 16 16 47.0 +2.8
baz=301
WDLH eS Sn 16 17 11.6 +1.4
baz=301
WHP Taichung City 2.04 314 eP Pn 16 16 44.7 +0.2
baz=315
WHP eS Sn 16 17 10.5 -0.1
baz=315
WLCH Liuqiu 2.08 256 eP Pn 16 16 48.2 +3.3
baz=245
JIJ Ishigaki jima 2.08 44 P Pn 16 16 46.0 +1.0
JIJ eS Sn 16 17 10.0 -1.5
NTC Toucheng 2.09 342 eP Pn 16 16 46.5 +1.4
baz=351
NTC eS Sn 16 17 11.0 -0.7
baz=351
YHNB Yeheng 2.10 329 eP Pn 16 16 46.6 +1.4
baz=331
YHNB eS Sn 16 17 10.1 -1.9
baz=331
NSK Sanguang 2.11 329 P Pn 16 16 47.5 +2.1
baz=331
NSK eS Sn 16 17 11.0 -1.3
baz=331
NWLT Wulai 2.14 333 eP Pn 16 16 47.8 +2.0
baz=328
NWLT eS Sn 16 17 12.1 -0.8
baz=328
TIPB Shuangxi 2.20 342 P Pn 16 16 48.2 +1.5
baz=350
TIPB S Sn 16 17 13.2 -1.3
baz=350
TWQ1 Liyutan 2.21 312 eP Pn 16 16 49.5 +2.8
baz=322
TWQ1 eS Sn 16 17 16.7 +2.2
baz=322
NSTT Nanjuang 2.27 321 eP Pn 16 16 50.4 +2.9
baz=311
NSTT eS Sn 16 17 17.0 +1.0
baz=311
LIOB Emei 2.27 322 eP Pn 16 16 50.2 +2.7
baz=312
LIOB eS Sn 16 17 15.7 -0.4
baz=312
NWF Wu-fen Shan 2.31 342 eP Pn 16 16 49.7 +1.6
baz=344
NWF eS Sn 16 17 16.6 -0.6
baz=344
WFSB Wu-fen Shan 2.31 342 eP Pn 16 16 49.1 +1.0
baz=344
WFSB eS Sn 16 17 16.3 -0.8
baz=344
JISG Ishigakijimahi 2.35 43 P Pn 16 16 49.3 +0.6
JISG eS Sn 16 17 17.3 -0.8
YM01 YM01 2.45 339 eP Pn 16 16 51.3 +1.3
baz=340
YM01 eS Sn 16 17 19.5 -1.0
baz=340
YM10 YM10 2.46 338 eP Pn 16 16 52.2 +2.0
baz=340
YM10 eS Sn 16 17 21.7 +0.9
baz=340
YM11 YM11 2.46 339 eP Pn 16 16 51.9 +1.6
baz=341
YM11 eS Sn 16 17 19.3 -1.7
baz=341
YM04 YM04 2.46 338 eP Pn 16 16 51.5 +1.3
baz=340
YM04 eS Sn 16 17 20.4 -0.5
baz=340
YM05 YM05 2.46 339 eP Pn 16 16 52.5 +2.2
baz=340
YM05 eS Sn 16 17 20.7 -0.3
baz=340
JTJ Tarama 2.65 48 P Pn 16 16 54.2 +1.5
JTJ eS Sn 16 17 24.3 -1.0
PHUB P'eng-hu 2.82 284 eP Pn 16 16 56.2 +1.1
baz=283
PHUB eS Sn 16 17 27.5 -2.2
baz=283
JIRB Irabujima 3.09 50 P Pn 16 17 00.0 +1.1
JMJ2 Miyako jima3 3.15 53 P Pn 16 17 00.8 +1.1
JMJ2 eS Sn 16 17 37.0 -0.9
JIKM Ikemajima 3.21 50 P Pn 16 17 01.6 +1.2
VWUC VWUC 3.55 307 eP Pn 16 17 06.2 +1.2
baz=307
VWUC eS Sn 16 17 45.7 -1.8
baz=307
PTTC Pingtan 3.66 316 eP Pn 16 17 08.3 +1.7
baz=316
PTTC eS Sn 16 17 47.8 -2.5
baz=316
PTMZ Houxiangcun 3.82 305 eP Pn 16 17 11.0 +2.2
baz=305
MATB Ma-tsu 4.05 325 eP Pn 16 17 13.7 +1.7
baz=335
MATB eS Sn 16 17 57.0 -3.0
baz=335

NNC **25** *16:35:31.3±6.8, 37.66N×71.84E, h183km±107km, mb2.5, mpv3.2, Error ellipse: s-maj=71.1km s-min=43.9km az=13.0*
ISC 25 16:35:25.5±1.2, 37.25N±0.08×71.9E±0.1, h130km, n6, σ2.59/10, 4C-2D, Afghanistan-Tajikistan border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AAK Ala-Archa 5.73 19 ⇑P Pn 16 36 50.5 +1.9
1.9nm,0.3s
AAK ⇓S Sn 16 37 54.6 +1.3
16nm,0.7s
THN Thein Dam 5.73 146 eP Pn 16 36 51.0 +2.6
THN eS Sn 16 37 49.0 -4.1
KK31 Karatay Array 5.94 350 ⇑P Pn 16 36 52.7 +1.5
0.9nm,0.3s,baz=173,slow=13,SNR=25
KK31 S Sn 16 37 55.6 -2.5
7.2nm,0.5s,baz=161,slow=16,SNR=17
CHMS Chumysh 6.14 20 ⇑P Pn 16 36 53.9 0.0
0.8nm,0.4s
CHMS ⇓S Sn 16 38 00.4 -2.4
6.2nm,0.8s
AB31 Akbulak array 14.81 328 P Pn 16 38 48.4 0.0
0.5nm,0.5s,baz=132,slow=12,SNR=11
AKTO Aktyubinsk 16.52 327 ⇑P Pn 16 39 07.4 -2.0
3.2nm,0.5s

IDC **25** *16:44:15.1±3.3, 4.95S×102.33E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.4/39, mbtmp3.4/5, Error ellipse: s-maj=155.5km s-min=22.2km az=55.0*
DJA **25** *16:44:19.2±0.5, 5°S±3°×10°2E±°, h14km±5km, M3.5/7, MLv3.5/7*
ISC 25 16:44:16.6±1.1, 5.09S±0.08×102.27E±0.08, h10km, n16, σ1.00/18, mb3.3/5, Southern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MNAI Manna 0.99 43 P Pg 16 44 36.1 +0.3
MNAI S Sb 16 44 48.4 -0.8
KSI Kapahiang 1.46 13 P Pn 16 44 43.2 0.0
LWLI Liwa 1.78 88 P Pn 16 44 48.6 +1.0
LWLI S Sn 16 45 10.0 -0.4
MDSI Maura Dua 1.99 73 P Pn 16 44 50.9 +0.5
MDSI S Sn 16 45 15.0 -0.5
KASI Kota Agung 2.26 101 P Pn 16 44 55.1 +1.0
KASI S Sn 16 45 21.7 -0.3
KLSI 2.48 81 P Pn 16 44 57.8 +0.6
KRJI Kerinci 3.08 345 P Pb 16 45 14.2 +2.5
CMAR Chiang Mai Arr 23.63 352 P P 16 49 26.6 -1.6
0.3nm,0.4s,baz=193,slow=7.4,SNR=3.6
H08S2 Diego Garcia H 29.70 264 T T 17 21 13.5
baz=85,slow=74,SNR=4.4
H08S3 Diego Garcia H 29.71 264 T T 17 21 17.4
baz=85,slow=74,SNR=8.0
H08S1 Diego Garcia H 29.72 264 T T 17 21 23.9
baz=85
WRA Warramunga Arr 34.51 118 P P 16 51 05.0 -0.4
0.3nm,0.8s,baz=296,slow=8.8,SNR=3.9
WRA PcP PcP 16 53 40.0 -0.6
0.1nm,0.4s,baz=300,slow=1.9,SNR=3.3
ASAR Alice Springs 35.63 124 P P 16 51 15.5 +0.5
0.3nm,0.8s,baz=292,slow=7.1,SNR=4.2
MKAR Makanchi Array 54.61 343 P P 16 53 44.6 -0.7
0.4nm,0.6s,baz=152,slow=8.3,SNR=4.5
ZALV Zalesovo Beam 60.62 348 P P 16 54 26.5 -1.0
0.6nm,0.5s,baz=168,slow=5.2,SNR=4.1
TXAR Lajitas Array 145.60 43 PKPbc PKPbc 17 03 55.8 -0.5
0.4nm,0.5s,baz=280,slow=0.6,SNR=7.1

DDA **25** *17:16:48.7, 39.39N×44.44E, h2km±1km, ML3.0*
ISK **25** *17:16:49.7, 39.39N×44.38E, h6km, ML3.3/14*
TEH **25** *17:16:50.0, 39.39N×44.39E, h6km, ML3.5*
THR **25** *17:16:50.3±0.3, 39.39N×44.43E, h6km±3km, ML3.2*
ISC 25 17:16:50.4±0.9, 39.40N±0.02×44.40E±0.02, h15km±7km, n81, σ1.49/96, 2C, Iran-Armenia-Azerbaijan border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MAKU Maku 0.23 101 ePg Pg 17 16 54.6 -1.1
MAKU eSg Sg 17 16 57.7 -1.5
MAKU IAML 17 17 01.3
comp=N,6μm,0.3s
MAKU Maku 0.23 101 ePg Pg 17 16 54.6 -1.1
CLDR Caldiran 0.45 236 PG Pg 17 16 58.6 -1.0
CLDR SG Sg 17 17 05.5 -0.2
CLDR Caldiran 0.45 236 i P Pg 17 16 58.5 -1.0
CLDR i S Sg 17 17 06.0 +0.3
CLDR IAML 17 17 07.0
comp=E,2μm,0.3s
CLDR IAML 17 17 08.0
comp=N,3μm,0.3s
CLDR Caldiran 0.45 236 ePg Pg 17 16 58.5 -1.0
HYR Heyderabad 0.48 48 ePg Pg 17 16 59.9 -0.1
IGDI IGDIR 0.53 332 i P Pg 17 17 00.1 -0.9
IGDI i S Sg 17 17 08.6 +0.5
IGDI IAML 17 17 09.0
comp=N,3μm,0.3s
IGDI IAML 17 17 09.0
comp=E,3μm,0.3s
IGDI IGDIR 0.53 332 ePg Pg 17 17 00.1 -0.9
DYDN Diyadin 0.57 285 i P Pg 17 17 01.1 -0.6
DYDN IAML 17 17 18.0
comp=N,1μm,0.4s
DYDN IAML 17 17 24.0
comp=E,983nm,0.6s
DYDN Diyadin 0.57 285 ePg Pg 17 17 01.1 -0.6
TASB TASBURUN-IGDIR 0.60 348 PG Pg 17 17 01.8 -0.5
TASB SG Sb 17 17 11.1 +0.2
TASB TASBURUN-IGDIR 0.60 348 ePg Pg 17 17 01.7 -0.5
VMUR Van-Muradiye 0.76 238 i P Pg 17 17 04.3 -1.0
VMUR IAML 17 17 18.0
comp=N,632nm,0.4s
VMUR IAML 17 17 20.0
comp=E,624nm,0.5s
VMUR Van-Muradiye 0.76 238 ePg Pg 17 17 04.2 -1.0
GNI Garni 0.80 19 PG Pg 17 17 05.8 -0.2
NAX Nakhchivan 0.88 104 ePg Pg 17 17 07.1 -0.5
SBZ Shahbuz 0.90 90 ePn Pg 17 17 07.6 -0.2
AGRB Hanur-Agry 1.10 280 PN Pg 17 17 10.3 -1.4
AGRB Hanur-Agry 1.10 280 ePn Pg 17 17 10.1 -1.6
IMRD Marand 1.23 123 ePg Pn 17 17 12.4 -0.8
IMRD e 17 17 34.5
DIGO Kars 1.28 323 i P Pn 17 17 13.7 -0.3
DIGO IAML 17 17 38.0
comp=N,588nm,0.5s
DIGO IAML 17 17 44.0
comp=E,939nm,0.6s
DIGO Kars 1.28 323 ePn Pn 17 17 13.7 -0.3
ORD Ordubad 1.33 110 ePn Pn 17 17 14.5 0.0
BASK Baskale_VAN 1.38 193 i P Pn 17 17 15.7 +0.4
BASK i S Sg 17 17 37.2 +2.3
BASK IAML 17 17 41.0
comp=E,402nm,0.5s
BASK IAML 17 17 42.0
comp=N,368nm,0.8s
BASK Baskale_VAN 1.38 193 ePn Pn 17 17 15.6 +0.4
EAK Akyaka 1.42 335 i P Pb 17 17 17.1 +0.3
EAK IAML 17 17 45.0
comp=N,858nm,0.5s
EAK IAML 17 17 45.0
comp=E,712nm,0.6s
EAK Akyaka 1.42 335 ePn Pb 17 17 17.0 +0.3
ADCV BITLIS_Adilcev 1.43 246 i P Pb 17 17 17.0 +0.2
ADCV IAML 17 17 38.0
comp=N,137nm,0.4s
ADCV i S Sg 17 17 38.0 +1.5
ADCV IAML 17 17 41.0
comp=E,150nm,0.5s
ADCV BITLIS_Adilcev 1.43 246 ePn Pb 17 17 17.0 +0.2
MLAZ Malazgirt-MUS 1.46 260 PN Pn 17 17 17.2 +0.9
MLAZ Malazgirt-MUS 1.46 260 ePn Pn 17 17 17.1 +0.8
GEVA Gevas 1.50 224 i P Pn 17 17 17.8 +0.8
GEVA IAML 17 17 46.0
comp=N,86nm,0.8s
GEVA IAML 17 17 47.0
comp=E,78nm,0.7s
GEVA Gevas 1.50 224 ePn Pn 17 17 17.1 +0.1
AKDM Akdamar-Van 1.54 226 PN Pn 17 17 18.2 +0.8
AKDM Akdamar-Van 1.54 226 ePn Pn 17 17 18.2 +0.8
EATA Eleskirt 1.54 288 i P Pb 17 17 19.2 +0.3
EATA i S Sg 17 17 42.5 +2.3
EATA IAML 17 17 43.0
comp=E,231nm,0.4s
EATA IAML 17 17 53.0
comp=N,205nm,0.9s
EATA Eleskirt 1.54 288 ePn Pb 17 17 19.2 +0.3
STE Stepanavan 1.60 359 ⇑eP Pb 17 17 17.0 -1.3
STE ⇑eS Sg 17 17 45.0 +2.9
GDB GEDABAY 1.68 38 ePn Pb 17 17 21.4 +0.2
ITBZ Tabriz 1.79 130 ePn Pn 17 17 22.1 +1.1
ITBZ e 17 17 26.1
YOVA Hakkari_Yksek 1.81 183 i P Pb 17 17 24.3 +0.9
YOVA i S Sg 17 17 52.1 +3.3
YOVA IAML 17 18 03.0
comp=N,91nm,0.9s
YOVA Hakkari_Yksek 1.81 183 ePn Pb 17 17 24.3 +0.9
EKAR Karacoban 1.81 266 i P Pb 17 17 25.0 -0.3
EKAR IAML 17 17 58.0
comp=E,153nm,0.7s
EKAR IAML 17 18 03.0
comp=N,222nm,1.2s
EKAR Karacoban 1.81 266 ePn Pg 17 17 25.0 -0.3
QZX Qazax, Azerbai 1.82 24 ePn Pb 17 17 23.4 0.0
GANJ Ganja 1.93 49 ePn Pb 17 17 25.7 +0.3
SENK Senkaya-Erzuru 1.96 307 ePn Pn 17 17 23.9 +0.7
BGD Bogdanovka 1.96 342 P Pb 17 17 26.2 +0.3
BGD S Sg 17 17 55.7 +2.1
BGD Bogdanovka 1.96 342 ePn Pb 17 17 26.3 +0.3
TVRZ Varzaqan 1.98 116 ePn Pb 17 17 26.6 +0.3
TVRZ e 17 18 07.4
KZRT Kazreti 1.99 0 P Pb 17 17 26.6 +0.3
KZRT S Sb 17 17 52.4 +1.6
KZRT Kazreti 1.99 0 i P Pb 17 17 26.8 +0.5
GURO Guroymak-BITLI 2.03 246 PN Pn 17 17 25.2 +1.1
HOMI Horasan 2.03 289 i P Pg 17 17 28.6 -0.8
HOMI IAML 17 18 09.0
comp=N,195nm,1.0s
HOMI IAML 17 18 15.0
comp=E,201nm,1.6s
BLIS Bitlis-Merkez 2.03 242 i P Pb 17 17 26.3 -0.8
BLIS i S Sg 17 17 56.4 +0.5
BLIS IAML 17 18 01.0
comp=E,45nm,0.9s
BLIS IAML 17 18 02.0
comp=N,49nm,0.4s
KOPR Koprukoy-ERZUR 2.05 288 PN Pn 17 17 25.4 +0.9
AKH Akhalkalaki 2.12 341 P Pn 17 17 29.1 +0.3
AKH Akhalkalaki 2.12 341 ePn Pn 17 17 27.1 -1.6
TRLG Trialeti 2.15 354 P Pb 17 17 29.2 +0.1
CUKT Cukurca 2.23 196 PN Pn 17 17 27.9 +0.9
AHAR Ahar 2.26 113 ePn Pb 17 17 30.7 -0.3
AHAR e 17 18 05.2
VRTB Varto-Mus 2.29 265 PN Pn 17 17 28.5 +0.7
VRTB Varto-Mus 2.29 265 i P Pg 17 17 33.2 -1.3
VRTB IAML 17 18 26.0
comp=N,104nm,1.8s
VRTB IAML 17 18 30.0
comp=E,131nm,1.4s
BTNK Botanikuri 2.30 8 P Pb 17 17 32.3 +0.7
BTNK S Sg 17 18 04.1 -0.4
IHRS Heris 2.33 117 ePn Pn 17 17 30.4 +2.0
IHRS e 17 17 40.2
MUSM Mu-Merkez 2.34 254 i P Pb 17 17 32.6 +0.2
TBLG Delisi 2.34 6 P Pb 17 17 32.2 -0.2
TBLG S Sg 17 18 04.7 -1.1
TBLG Delisi 2.34 6 PN Pn 17 17 30.1 +1.7
DDFL Dedoflistskaro 2.43 32 P Pg 17 17 36.4 -0.7
AKDA Akdag 2.44 288 i P Pg 17 17 35.8 -1.4
IHSH Hashtrud 2.49 115 e Sn 17 17 53.0 -7.9
GRMI Germi 2.78 101 ePn Pn 17 17 37.1 +2.6
GRMI Germi 2.78 101 ePn Pn 17 17 37.1 +2.6
SVAN Silvan-Diyarba 2.79 245 PN Pn 17 17 36.0 +1.4
MAHB Mahabad 2.82 158 ePn Pn 17 17 37.6 +2.5
BNGB Bingl 2.92 263 PN Pn 17 17 37.7 +1.4
ISRB Sarab 3.00 120 ePn Pn 17 17 40.4 +2.7
ISRB e 17 17 48.7
ONI Oni 3.27 348 P Pb 17 17 49.5 +1.4
ONI Oni 3.27 348 PN Pn 17 17 43.2 +2.1
SNGE Sanandaj 4.90 150 ePn Pn 17 18 06.5 +2.8
SNGE Sanandaj 4.90 150 ePn Pn 17 18 06.5 +2.8

NIED **25** *17:38:00, 37.40N×142.40E, h5km, Mw3.6 Best double couple: M0 2.84000×10^14 NP1:φs58.00000°, δ46.00000°, λ-103.00000°. NP2:φs255.00000°, δ46.00000°, λ-77.00000°.*
IDC **25** *17:38:16.4±1.1, 37.33N×142.60E, h0km, mb3.5/6, mb1 3.6/9, mb1mx3.4/48, mbtmp3.5/9, ML2.8/3, MS3.8/2, Ms1 3.8/2, ms1mx2.6/41, Error ellipse: s-maj=26.5km s-min=19.2km az=89.0*
JMA **25** *17:38:18.0±0.2, 37.37N×142.44E, h22km±4km, M3.6*

ISC 25 17:38:19.3±1.0,37.38N±0.05×142.39E±0.07,h21km,n32, σ1§38/31,mb3.5/6,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.19	322	P	Pn	17 38 39.5	-1.1
JIKH				eS	Sn	17 38 55.3	-0.8
JFK	Kawauchi	1.21	270	P	Pn	17 38 40.2	-0.8
JMST	Minamisoumatoc	1.24	287	P	Pn	17 38 40.4	-1.0
JMST				eS	Sn	17 38 57.0	-0.5
ONAJ	Iwakimizuishiy	1.30	258	P	Pn	17 38 41.6	-0.7
JIO	Ouri	1.35	323	P	Pn	17 38 42.1	-0.9
JIO				eS	Sn	17 39 00.1	-0.2
JMM	Marumori	1.36	292	P	Pn	17 38 42.3	-0.7
JFT	Otama	1.64	276	P	Pn	17 38 47.1	+0.2
JOU	Okura	1.69	306	P	Pn	17 38 47.8	+0.3
JOU				eS	Sn	17 39 09.2	+0.7
JMK	Ichinoseki	1.82	330	P	Pn	17 38 49.5	+0.1
JFY	Yanaizu	2.14	272	P	Pb	17 38 55.0	-2.3
JYK	Kaneyama	2.22	314	P	Pn	17 38 55.7	+0.8
JOM	Ohasama	2.26	338	P	Pn	17 38 55.7	+0.2
JAG	Ashikaga	2.54	249	P	Pn	17 38 59.9	+0.6
MJAR	Matsushiro Arr	3.45	257	Pn	Pn	17 39 14.6	+2.7
	0.2nm,0.3s,baz=99,slow=14,SNR=12						
MJAR				Sn	Sb	17 39 59.2	-2.0
	0.2nm,0.3s,baz=74,slow=14,SNR=4.1						
MAT	Matsushiro	3.45	257	P	Pn	17 39 11.8	-0.1
MAT				S	Sb	17 40 03.6	+2.4
JHJ	Hachijo jima 2	4.75	207	Pn	Pn	17 39 29.4	-0.3
	4.6nm,0.3s,baz=36,slow=17,SNR=5.9						
JHJ				Sn	Sn	17 40 21.9	-2.3
	4.5nm,0.3s,baz=107,slow=19,SNR=3.0						
ASAJ	Asahikawa	6.73	1	Pn	Pn	17 39 56.7	-0.2
	0.2nm,0.3s,baz=216,slow=14,SNR=3.6						
ASAJ				Sn	Sn	17 41 09.5	-3.4
	0.4nm,0.3s,baz=81,slow=19,SNR=2.0						
KSRS	Korea Array	11.51	275	Pn	Pn	17 41 09.0	+6.7
	0.1nm,0.3s,baz=96,slow=14,SNR=3.7						
H11N2	WAKE ISLAND Hy	27.66	123	T	T	18 12 54.0	
	baz=315,slow=75,SNR=129						
H11N1	WAKE ISLAND Hy	27.67	123	T	T	18 12 51.1	
	baz=315,slow=75,SNR=122						
H11N3	WAKE ISLAND Hy	27.68	123	T	T	18 12 52.7	
	baz=315,slow=75,SNR=102						
SONM	Songino Array	28.25	303	P	P	17 44 12.2	+1.3
	0.8nm,0.7s,baz=106,slow=11,SNR=3.2						
H11S1	WAKE ISLAND Hy	28.40	125	T	T	18 13 50.1	
	baz=317,slow=76,SNR=162						
H11S3	WAKE ISLAND Hy	28.40	125	T	T	18 13 50.2	
	baz=317,slow=76,SNR=142						
H11S2	WAKE ISLAND Hy	28.42	125	T	T	18 13 49.8	
	baz=317,slow=76,SNR=153						
TLY	Talaya	30.70	310	LR	LR	17 58 14.4	
	comp=Z,38nm,18.0s,baz=87,slow=39						
ZALV	Zalesovo Beam	42.26	312	P	P	17 46 12.2	+1.3
	0.4nm,0.4s,baz=77,slow=6.4,SNR=2.7						
MKAR	Makanchi Array	44.60	302	P	P	17 46 31.3	+1.4
	0.5nm,0.8s,baz=80,slow=7.9,SNR=3.2						
ILAR	Eielson Array	48.79	33	P	P	17 47 03.2	+0.8
	0.2nm,0.5s,baz=263,slow=7.2,SNR=4.4						
INK	Inuvik	53.72	27	LR	LR	18 13 01.8	
	comp=Z,327nm,19.8s,baz=260,slow=39						
WRA	Warramunga Arr	57.52	189	P	P	17 48 07.0	0.0
	0.5nm,0.7s,baz=11,slow=7.2,SNR=4.1						
ASAR	Alice Springs	61.24	189	P	P	17 48 33.1	+0.3
	0.5nm,0.8s,baz=16,slow=7.9,SNR=4.1						

IDC 25 17:38:22.1±3.9,5.49S×132.61E,h0km,mb3.0/1, mb1 3.3/4,mb1mx3.2/34,mbtmp3.2/4,ML3.4/3,Error ellipse: s-maj=256.6km s-min=26.9km az=77.0,Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.78	344	Pn	Pn	17 39 35.5	+0.1
	3.0nm,0.3s,baz=151,slow=17,SNR=56						
SIJI				Sn	Sn	17 40 24.6	-6.8
	10nm,0.3s,baz=276,slow=22,SNR=12						
WRA	Warramunga Arr	14.47	173	Pn	Pn	17 41 47.4	-0.9
	0.1nm,0.3s,baz=353,slow=13,SNR=13						
WRA				Sn	Sn	17 44 17.9	-12
	0.3nm,0.3s,baz=352,slow=23,SNR=6.7						
ASAR	Alice Springs	18.12	176	P	P	17 42 36.0	+0.2
	0.1nm,0.3s,baz=356,slow=13,SNR=8.4						
ASAR				S	Sn	17 45 45.8	-13
	0.1nm,0.3s,baz=1.6,slow=27,SNR=6.6						
MKAR	Makanchi Array	68.42	325	P	P	17 49 25.8	-0.1
	0.1nm,0.6s,baz=107,slow=9.7,SNR=2.2						

DDA 25 18:00:30.1,39.38N×44.45E,h7km±1km,ML2.4
TEH 25 18:00:30.5,39.20N×44.22E,h6km,ML2.8
ISK 25 18:00:31.2,39.43N×44.31E,h9km,ML2.8/10
ISC 25 18:00:30.8±1.1,39.37N±0.02×44.44E±0.03,h7km±11km, n32,σ1§47/45,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLDR	Caldiran	0.46	241	PG	Pg	18 00 39.5	-0.3
CLDR				SG	Sg	18 00 46.3	+0.4
CLDR	Caldiran	0.46	241	iP	Pg	18 00 39.6	-0.3
CLDR				iS	Sb	18 00 46.9	-1.7
CLDR					IAML	18 00 49.0	
	comp=N,377nm,0.3s						
CLDR					IAML	18 00 51.0	
	comp=E,287nm,0.4s						
IGDI	IGDIR	0.57	331	iP	Pg	18 00 41.4	-0.4
IGDI				iS	Sb	18 00 49.6	-1.9
DYDN	Diyadin	0.60	287	iP	Pg	18 00 42.4	-0.1
DYDN					IAML	18 01 07.0	
	comp=N,200nm,0.9s						
DYDN					IAML	18 01 09.0	
	comp=E,200nm,1.2s						
TASB	TASBURUN-IGDIR	0.63	346	PG	Pg	18 00 42.7	-0.3
VMUR	Van-Muradiye	0.77	241	iP	Pg	18 00 45.5	-0.1
VMUR				iS	Sg	18 00 56.2	+0.5
VMUR					IAML	18 00 59.0	
	comp=N,148nm,0.4s						
VMUR					IAML	18 01 00.0	
	comp=E,96nm,0.4s						
GNI	Garni	0.81	17	PG	Pb	18 00 46.6	-0.8
GNI				SG	Sb	18 00 58.4	-0.3
VANB	Van	1.12	227	PN	Pn	18 00 54.1	+1.0
AGRB	Hanur-Agry	1.14	281	PG	Pn	18 00 51.4	-1.2
TVAN	Van	1.16	224	iP	Pn	18 00 54.0	+0.3
TVAN				iS	Sn	18 01 13.0	+3.0
TVAN					IAML	18 01 17.0	
	comp=E,91nm,0.6s						
TVAN					IAML	18 01 23.0	
	comp=N,90nm,0.8s						
IMRD	Marand	1.19	123	ePg	Pn	18 00 54.0	0.0
IMRD				eSg	Sn	18 01 11.5	+1.0
IMRD				e		18 01 19.9	
DIGO	Kars	1.32	322	iP	Pn	18 00 55.1	-0.9
DIGO					IAML	18 01 24.0	
	comp=N,94nm,0.6s						
BASK	Baskale_VAN	1.36	194	iP	Pg	18 00 57.3	+0.4
BASK					IAML	18 01 23.0	
	comp=N,87nm,1.0s						
BASK					IAML	18 01 23.0	
	comp=E,69nm,0.8s						
ADCV	BITLIS_Adilcev	1.45	248	iP	Pg	18 00 58.6	+0.1
ADCV				iS	Sg	18 01 18.9	+1.6
ADCV					IAML	18 01 19.0	
	comp=E,38nm,0.7s						
ADCV					IAML	18 01 20.0	
	comp=N,44nm,0.9s						
EAK	Akyaka	1.46	334	iP	Pg	18 00 58.3	-0.5
EAK				iS	Sg	18 01 23.9	+6.2
MLAZ	Malazgirt-MUS	1.48	262	PN	Pn	18 00 57.6	-0.5
GEVA	Gevas	1.51	226	iP	Pg	18 00 59.4	-0.4
AKDM	Akdamar-Van	1.54	228	PN	Pb	18 00 59.2	-0.6
EATA	Eleskirt	1.58	289	iP	Pb	18 00 60.0	-0.6
EATA					IAML	18 01 31.0	
	comp=E,35nm,0.5s						
EATA					IAML	18 01 41.0	
	comp=N,50nm,0.9s						
ITBZ	Tabriz	1.75	130	e		18 01 08.0	
ITBZ				ePn	Pg	18 01 03.5	-1.0
SENK	Senkaya-Erzuru	2.00	307	PN	Pn	18 01 04.5	-0.7
BGD	Bogdanovka	2.00	342	P	Pg	18 01 09.6	+0.5
BGD				S	Sg	18 01 37.0	+2.0
KZRT	Kazreti	2.01	359	P	Pg	18 01 07.8	-1.6
KZRT				S	Sg	18 01 35.2	-0.3
KZRT	Kazreti	2.01	359	iP	Pg	18 01 07.9	-1.5
GURO	Guroymak-BITLI	2.04	247	PN	Pn	18 01 05.8	0.0
HOMI	Horasan	2.06	290	iP	Pg	18 01 09.6	-0.8
HOMI					IAML	18 01 46.0	
	comp=E,38nm,1.1s						
HOMI					IAML	18 01 50.0	
	comp=N,37nm,0.7s						
KOPR	Koprukoy-ERZUR	2.09	288	PN	Pn	18 01 05.6	-0.8
TRLG	Trialeti	2.18	353	P	Pb	18 01 10.2	-0.5
TRLG				S	Sg	18 01 40.3	-0.6
CUKT	Cukurca	2.22	197	PN	Pb	18 01 09.7	-1.6
IHRS	Heris	2.29	117	ePn	Pb	18 01 12.3	-0.3
IHRS				e		18 01 16.9	
TBLG	Delisi	2.37	6	P	Pg	18 01 19.3	+3.1
TBLG				S	Sg	18 01 46.2	-0.7
DDFL	Dedoflistskaro	2.44	31	P	Pg	18 01 17.6	+0.1

IDC 25 18:02:18.4±3.5,30.24S×177.75W,h0km,mb3.4/2, mb1 3.6/2,mb1mx3.4/33,mbtmp3.4/2,Error ellipse: s-maj=73.5km s-min=23.2km az=106.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.00	351	Pn	Pn	18 02 40.5	+0.9
	76nm,0.3s,baz=137,slow=19,SNR=2.3						
RAO				Sn	Sn	18 02 54.0	-0.4
	244nm,0.3s,baz=15,slow=22,SNR=6.4						
ASAR	Alice Springs	43.33	267	P	P	18 10 22.3	-0.2
	0.2nm,0.7s,baz=109,slow=8.2,SNR=3.0						
WRA	Warramunga Arr	44.31	272	P	P	18 10 30.2	-0.1
	0.4nm,0.5s,baz=110,slow=8.1,SNR=9.2						
FINES	FINESS Array B	145.07	340	PKPbc	PKPbc	18 21 55.0	-1.4
	2.2nm,0.9s,baz=40,slow=3.2,SNR=3.4						

IDC 25 18:18:46.9±1.7,0.75N×122.50E,h0km,mb3.3/3, mb1 3.6/4,mb1mx3.3/43,mbtmp3.4/4,ML3.3/1,MS3.0/1, Ms1 3.0/1,ms1mx2.4/28,Error ellipse: s-maj=155.0km s-min=25.2km az=64.0
DJA 25 18:19:12.3±0.8,0°N±5°×12°2E±°,h184km±6km,M2.8/7, MLv2.8/7
ISC 25 18:19:09.7±1.0,0.27N±0.09×121.90E±0.07,h207km±7km, n11,σ1§07/15,mb3.3/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.21	12	P	Pn	18 19 37.0	+0.1
MRSI				S	S	18 19 57.3	-1.0
APSI	Ampana	1.20	192	P	Pn	18 19 42.8	+1.2
APSI				S	S	18 20 05.5	-0.8
LUWI	Luwuk	1.57	146	P	Pn	18 19 45.5	+0.9
LUWI				S	S	18 20 11.0	-0.6
MPSI	Mapaga	2.00	272	P	Pn	18 19 49.7	+1.0
MPSI				S	S	18 20 18.4	-0.3
KMSI	Cibinong	2.10	82	P	Pn	18 19 51.0	+1.2
KMSI				S	S	18 20 21.3	+0.8
TTSI	Tana Toraja	3.90	212	P	Pn	18 20 12.1	+1.7
FITZ	Fitzroy Crossi	18.62	169	P	P	18 23 11.2	-0.6
	0.1nm,0.3s,baz=5.2,slow=11,SNR=3.1						
WRA	Warramunga Arr	23.50	149	P	P	18 23 59.7	-1.3
	0.5nm,0.4s,baz=318,slow=8.7,SNR=14						
ASAR	Alice Springs	26.50	155	P	P	18 24 27.5	-0.7
	0.4nm,0.6s,baz=343,slow=14,SNR=7.8						
MKAR	Makanchi Array	57.81	329	P	P	18 28 39.6	+0.2
	0.1nm,0.3s,baz=125,slow=8.5,SNR=4.3						
PETK	Petropavlovsk-	60.48	24	LR	LR	18 54 30.0	
	comp=Z,12nm,20.9s,baz=66,slow=36						

IDC 25 18:24:15.9±1.9,40.89N×142.00E,h119km±22km,mb2.9/3, mb1 3.0/5,mb1mx2.8/52,mbtmp3.2/5,Error ellipse: s-maj=40.5km s-min=17.8km az=96.0
JMA 25 18:24:15.3±0.1,40.86N×141.79E,h104km±1km,M3.2
ISC 25 18:24:15.3±0.9,40.85N±0.03×141.78E±0.05,h104km±6km, n21,σ0§71/37,mb3.2/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JARK	Aomorirokkasho	0.35	297	P	Pn	18 24 30.8	+0.3
JARK				S	Sn	18 24 42.0	+0.1
JANG	Nango	0.52	203	P	Pn	18 24 31.6	0.0
JANG				S	Sn	18 24 43.6	-0.2
JAHD	Aomorihigashid	0.53	321	P	Pn	18 24 32.0	+0.4
JAHD				S	Sn	18 24 44.2	+0.3
JTM	Tenmabayashi	0.54	263	P	Pn	18 24 31.7	0.0
JTM				S	Sn	18 24 44.0	-0.1
JKEN	Kujiedanarisaw	0.65	185	P	Pn	18 24 32.9	+0.3
JKEN				S	Sn	18 24 45.6	+0.1
JOT	Ohata	0.77	314	P	Pn	18 24 33.7	+0.1
JOT				S	Sn	18 24 47.3	-0.1
JAH	Hinai	1.09	233	P	Pn	18 24 37.6	+0.6
JAH				S	Sn	18 24 54.4	+1.1
JKB	Kayabe	1.18	332	P	Pn	18 24 38.1	+0.2
JKB				S	Sn	18 24 54.8	-0.2
JSR	Shiriuchi	1.23	304	P	Pn	18 24 38.4	-0.1
JSR				S	Sn	18 24 55.4	-0.6
JIW	Iwasaki	1.37	260	P	Pn	18 24 40.6	+0.4
JIW				eS	Sn	18 24 59.9	+0.9
JOM	Ohasama	1.43	195	P	Pn	18 24 40.9	0.0
JOM				S	Sn	18 24 59.9	-0.3
JOMM	Oshimamatsumae	1.50	297	P	Pn	18 24 41.5	-0.1
JEM	Erimo	1.56	41	P	Pn	18 24 42.7	+0.3
JEM				S	Sn	18 25 03.3	+0.3
JNBK	Urakawa-nobuka	1.60	27	P	Pn	18 24 43.3	+0.3
JNBK				S	Sn	18 25 05.8	+1.8
JMK	Ichinoseki	1.95	193	P	Pn	18 24 47.3	0.0
JMK				eS	Sn	18 25 10.4	-1.3
JEW	Eniwo	2.00	353	P	Pn	18 24 48.3	+0.3
JEW				S	Sn	18 25 12.8	-0.2
ASAJ	Asahikawa	3.32	10	P	Pn	18 25 05.4	+0.1
	3.2nm,0.3s,baz=214,slow=10,SNR=47						
ASAJ				S	Sn	18 25 44.2	+0.3
	1.5nm,0.3s,baz=288,slow=32,SNR=6.3						
MJAR	Matsushiro Arr	5.13	214	P	Pn	18 25 32.3	+2.5
	0.1nm,0.3s,baz=26,slow=13,SNR=6.0						
MKAR	Makanchi Array	42.43	299	P	P	18 31 59.6	0.0
	0.2nm,0.7s,baz=67,slow=8.1,SNR=3.1						
WRA	Warramunga Arr	60.88	188	P	P	18 34 15.8	-1.2
	0.5nm,1.0s,baz=7.8,slow=4.8,SNR=4.7						
ASAR	Alice Springs	64.60	188	P	P	18 34 41.2	-0.4
	0.2nm,0.7s,baz=4.6,slow=7.3,SNR=4.2						

NNC 25 18:27:31.4±8.6,37.01N×69.82E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=93.7km s-min=52.7km az=149.0
ISC 25 18:27:31.2±2.0,36.9N±0.1×72.0E±0.2,h10km,n8,σ2§86/8, 2C-2D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	6.02	18	⇓P	Pb	18 29 10.7	-5.5
	1.6nm,0.4s						
AAK				⇑S	Sb	18 30 27.9	-0.5
	4.1nm,0.6s						
KK31	Karatay Array	6.29	350	P	Pn	18 29 04.7	+0.7
	0.9nm,0.3s,baz=184,slow=12,SNR=29						
KK31				⇓S	Sn	18 30 16.0	+0.1
	3.3nm,0.7s,baz=187,slow=22,SNR=3.8						
KKN	Kakani	14.41	125	eP	P	18 30 59.0	-3.4
	8.2nm,0.5s						
PKIN	Phulchoki	14.63	126	eP	P	18 31 01.7	+3.2
PKI	Pulchoki	14.64	126	eP	P	18 31 02.1	-3.0
	1.9nm,0.2s						
GUN	Gumba	14.72	124	eP	P	18 31 02.7	+2.8
	5.0nm,0.4s						
AB31	Akbulak array	15.15	328	⇑P	Pn	18 30 49.4	-16
	0.3nm,0.3s,baz=148,slow=12,SNR=8.2						
ODAN	Odare	16.42	123	eP	Pn	18 31 23.0	+1.0
	5.3nm,0.6s						

IDC 25 18:37:09.8±1.9,17.57S×167.93E,h0km,mb3.8/4, mb1 3.9/5,mb1mx3.7/45,mbtmp3.8/5,ML3.9/1,Error ellipse: s-maj=43.8km s-min=29.3km az=82.0
NEIC 25 18:37:13.0±1.3,17.54S±0.06×167.9E±0.1,h21km±10km, mb4.6/8,Error ellipse: s-maj=18.3km s-min=8.8km az=93.0
ISC 25 18:37:13.9±1.3,17.6S±0.1×167.9E±0.2,h27km,n15, σ1§06/17,mb4.4/7,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.67	196	Pn	Pn	18 38 22.8	0.0
	4.8nm,0.3s,baz=45,slow=8.9,SNR=55						
DZM				Sn	Sn	18 39 16.4	+0.2
	5.3nm,0.3s,baz=143,slow=22,SNR=12						
DZM	Mont Dzumac	4.67	196		Pn	18 38 22.5	-0.3
DZM					Sn	18 39 16.1	-0.1
NOUC	Port Laguerre	4.74	198	Pn	Pn	18 38 23.9	+0.2
URZ	Urewera	22.14	160	P	P	18 42 07.2	-0.3
URZ					IAmb	18 42 30.5	
	comp=Z,46nm,1.6s						
BKZ	Black Stump Fm	22.79	162	P	P	18 42 12.1	-2.4
WR0	Warramunga Arr	31.62	260	P	P	18 43 33.4	-1.5
WB0	Warramunga Arr	31.76	261	P	P	18 43 34.5	-1.6
WB0				IAmb	IAmb	18 43 41.0	
	comp=Z,8.1nm,1.3s						
WB2	Warramunga Arr	31.80	260	P	P	18 43 36.7	+0.2
WB2				IAmb	IAmb	18 43 55.2	
	comp=Z,12nm,1.6s						
WRA	Warramunga Arr	31.81	260	P	P	18 43 37.0	+0.4
	comp=Z,0.7nm,1.0s,baz=98,slow=5.7,SNR=3.7						
AS31	Alice Springs	32.31	253	P	P	18 43 40.1	-0.9
ASAR	Alice Springs	32.31	253	P	P	18 43 41.4	+0.4
	comp=Z,0.7nm,0.6s,baz=78,slow=9.0,SNR=17						
MCQ	Macquarie Isla	37.49	189	P	P	18 44 27.0	+1.8
QSPA	South Pole Qui	72.47	180	P	P	18 48 38.3	+0.3
	comp=Z,2.5nm,0.9s,baz=18,slow=2.4,SNR=8.1						
QSPA	South Pole Qui	72.47	180	P	P	18 48 38.0	+0.1
QSPA				IAmb	IAmb	18 48 41.5	
	comp=Z,8.6nm,1.4s						
SONM	Songino Array	85.11	324	P	P	18 49 47.8	+0.3
	comp=Z,1.3nm,0.8s,baz=140,slow=5.1,SNR=8.7						

TEH 25 18:37:19.4,35.50N×45.80E,h5km,ML3.7
ISN 25 18:37:26.7±0.8,35.58N×45.61E,h18km±28km,ML3.7
ISC 25 18:37:19.8±0.9,35.52N±0.04×45.86E±0.04,h10km,n48, σ2§17/51,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	Dehrash	0.92	152	ePg	Pb	18 37 37.8	-0.3
IDHR				e		18 37 55.0	
ILIN	Lien	1.08	123	ePg	Pg	18 37 39.7	-1.0
ILIN				e		18 37 58.8	
IKRK	Kirkuk	1.25	265	ePg	Pg	18 37 46.0	+2.2
IKRK				eSg	Sn	18 38 00.5	+0.3
IKRK				AML	AML	18 38 08.5	
	comp=E,2μm,0.7s						
IKRK				AML	AML	18 38 09.2	
	comp=N,2μm,0.4s						
MAHB	Mahabad	1.25	354	ePg	Pn	18 37 43.0	-0.5
MAHB				e		18 38 03.5	
IVIS	Veis	1.28	140	ePg	Pb	18 37 44.1	0.0
IGHG	Ghaleghazi	1.32	154	ePg	Pg	18 37 45.0	-0.2
KER	Kermanshah	1.54	137	ePn	Pb	18 37 48.4	-0.1
KCHF	Cheshme Sefid,	1.57	142	ePn	Pg	18 37 50.0	0.0
IKOM	Komasi	1.91	134	ePn	Pg	18 37 56.1	-0.3
HSRG	Sareghieh	2.00	97	ePn	Pb	18 37 56.2	-0.2
HSRG				e		18 38 30.9	
IALM	Almabolaq	2.00	109	ePn	Pg	18 37 55.9	-0.6
IBDR	Badra	2.40	179	ePn	Pg	18 38 08.0	+2.1
IBDR				eSn	Sg	18 38 38.0	+1.0
IBDR				AML	AML	18 38 43.9	
	comp=E,356nm,0.6s						
IBDR				AML	AML	18 38 44.7	
	comp=N,461nm,0.4s						
IBDR	Badra	2.40	179	ePn	Pg	18 38 08.0	+2.1
BHD	Baghdad	2.56	209	ePn	Pg	18 38 09.0	+0.2
BHD				eSn	Sg	18 38 39.0	-2.9
BHD	Baghdad	2.56	209	ePn	Pg	18 38 09.0	+0.2
IDOB	Doab	2.58	131	e		18 38 12.4	
IDOB				ePn	Pb	18 38 05.1	-1.1
IKFM	Kafar-mosalman	2.58	140	e		18 38 41.2	
IKFM				ePn	Pb	18 38 05.2	-0.9
HSAM	Samen	2.60	119	e		18 38 08.9	
HSAM				ePn	Pb	18 38 05.8	-0.9
ITBZ	Tabriz	2.72	5	ePn	Pn	18 38 05.9	+2.2
ISRB	Sarab	2.72	32	ePn	Pn	18 38 05.8	+2.0
ISRB				e		18 38 55.5	
HAGD	Aghdareh	2.77	104	e		18 38 52.5	
HAGD				ePn	Pb	18 38 07.6	-2.0
IKMR	Kamar-syah	2.88	133	ePn	Pb	18 38 09.2	-2.1
IKMR				e		18 39 03.2	
BDRS	Dareh Seyedi	2.94	121	ePn	Pb	18 38 10.0	-2.4
BDRS				e		18 39 08.9	
IHRS	Heris	2.95	18	ePn	Pn	18 38 09.6	+2.7
IHRS				e		18 39 02.8	
IHSH	Hashtrud	3.00	22	ePn	Pn	18 37 57.7	-10
IHSH				e		18 38 01.2	
QABG	Abgarm-Qazvin	3.04	85	ePn	Pn	18 38 10.6	+2.4
QABG				e		18 39 08.3	
BMDN	Meydan	3.06	126	ePn	Pn	18 38 11.3	+2.9
BMDN				e		18 39 06.0	
IMRD	Marand	3.19	358	ePn	Pn	18 38 11.7	+1.5
IMRD				e		18 39 08.2	
IRAZ	Razeghan	3.32	91	ePn	Pn	18 38 15.0	+2.9
IRAZ				e		18 39 13.5	
ORD	Ordubad	3.40	2	ePn	Pb	18 38 16.8	-3.5
LRK	Lerik	3.69	32	ePn	Pn	18 38 19.8	+2.7
ASTR	Astara	3.83	37	ePn	Pn	18 38 22.0	+3.1
SBZ	Shahbuz	3.88	356	ePn	Pn	18 38 22.8	+3.2
YRD	Yardimli	3.89	29	ePn	Pn	18 38 22.2	+2.4
LKRN	Lenkeran, Azer	3.95	35	ePn	Pn	18 38 23.3	+2.9
QALM	Alamut, Qazvin	3.99	75	ePn	Pn	18 38 23.4	+2.2
QALM				e		18 39 39.8	
BLQ	Beylaqan	4.41	17	ePn	Pn	18 38 30.3	+3.6
NSR	Nassriya	4.50	177	ePn	Pb	18 38 37.0	-1.9
NSR				eSn	Sb	18 39 29.0	-4.3
NSR	Nassriya	4.50	177	ePn	Pb	18 38 37.0	-1.9
QAM	Ghamsar	4.92	109	ePn	Pn	18 38 37.2	+3.2
QAM				e		18 39 46.9	
IPIR	Pirpir	5.04	123	ePn	Pn	18 38 37.8	+2.0
JHBN	Jahan bin	5.17	128	ePn	Pn	18 38 39.6	+2.1
IKLH	Kolahrood	5.21	113	ePn	Pn	18 38 41.1	+3.0
IZEF	Zefreh	5.96	114	ePn	Pn	18 38 51.5	+3.1
IRAM	Ramesheh	6.58	122	ePn	Pn	18 38 58.6	+1.8
KLNJ	Kolanjah	6.58	132	ePn	Pn	18 38 58.7	+1.8
IKAZ	Kazeroun	7.63	137	ePn	Pn	18 39 12.1	+0.8
ISRV	Sarvestan	8.66	133	ePn	Pn	18 39 26.2	+0.8

IDC 25 18:45:21.9±1.7,4.26S×154.17E,h0km,mb3.6/5, mb1 3.7/6,mb1mx3.5/50,mbtmp3.6/6,ML3.2/1,MS2.8/2, Ms1 2.8/2,ms1mx2.4/42,Error ellipse: s-maj=41.3km s-min=27.3km az=125.0
ISC 25 18:45:26.7±1.5,4.3S±0.3×154.2E±0.1,h35km,n9,σ1§76/9, mb3.8/6,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.17	270	Pn	Pn	18 45 58.2	-2.1
	7.2nm,0.3s,baz=166,slow=3.8,SNR=6.0						
KRVT				Sn	Sn	18 46 27.7	+1.7
	24nm,0.3s,baz=224,slow=20,SNR=6.4						
KRVT				LR	LR	18 47 07.1	
	comp=Z,155nm,18.1s,baz=129,slow=49						
WRA	Warramunga Arr	24.82	230	P	P	18 50 45.5	-0.3
	0.9nm,0.3s,baz=147,slow=37,SNR=23						
ASAR	Alice Springs	27.46	224	P	P	18 51 11.6	+1.9
	0.2nm,0.7s,baz=57,slow=10,SNR=2.6						
DAV	Davao City (W)	30.72	291	LR	LR	19 01 00.0	
	comp=Z,27nm,20.5s,baz=333,slow=31						
CMAR	Chiang Mai Arr	58.94	294	P	P	18 55 22.6	-0.4
	0.6nm,0.7s,baz=127,slow=5.3,SNR=5.6						
MKAR	Makanchi Array	80.88	319	P	P	18 57 38.7	+1.4
	0.6nm,0.7s,baz=93,slow=7.8,SNR=4.4						
ZALV	Zalesovo Beam	81.52	326	P	P	18 57 41.7	+1.2
	0.5nm,0.4s,baz=113,slow=9.8,SNR=3.5						
KURBB	Kurchatov Arra	84.28	322	P	P	18 57 55.8	+1.0
	0.4nm,0.5s,baz=110,slow=4.3,SNR=4.9						
TORD	Torodi Ar. Bea	151.47	290	PKPbc	PKPbc	19 05 16.3	-1.8
	0.8nm,0.8s,baz=76,slow=2.4,SNR=3.9						

NEIC 25 18:53:39.2±1.2,16.5S±0.1×175.9W±0.1,h293km±9km, mb4.4/20,Error ellipse: s-maj=22.8km s-min=15.3km az=130.0
IDC 25 18:53:40.3±1.6,16.06S×176.13W,h294km±29km,mb3.4/5, mb1 3.6/6,mb1mx3.2/46,mbtmp4.1/6,Error ellipse:

s-maj=103.8km s-min=17.0km az=145.0

ISC 25 18:53:39.8±0.6,16.5S±0.1×175.85W±0.10,h300km,n29, σ0.92/31,mb4.3/15,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.72	57	P	Pn	18 54 56.1	+1.9
	12nm,0.3s,baz=235,slow=16,SNR=15						
AFI				S	S	18 55 53.1	-0.8
	4.8nm,0.3s,baz=35,slow=22,SNR=2.7						
AFI	Afiamalu	4.72	57		Pn	18 54 54.1	-0.1
AFI					S	18 55 52.5	-1.4
NIUE	Niue	6.19	115	Pn	Pn	18 55 11.9	+0.5
OUZ	Omahuta	20.87	205	P	P	18 58 01.1	+1.8
BFZ	Birch Farm	25.03	194	P	P	18 58 37.4	+0.3
WHZ	Wether Hill Ro	32.26	201	P	P	18 59 40.5	-0.6
ARMA	Armidale	32.74	239	P	P	18 59 44.4	-1.0
ARMA				IAmb	IAmb	19 00 10.9	
	comp=Z,18nm,1.4s						
CAN	Canberra	36.48	232	P	P	19 00 16.4	-0.6
TOO	Toolangi	39.93	231	P	P	19 00 44.6	-1.0
TOO				IAmb	IAmb	19 00 47.4	
	comp=Z,37nm,1.6s						
STKA	Stephens Creek	41.43	240	P	P	19 00 58.6	+0.8
	comp=Z,3.4nm,0.5s,baz=97,slow=9.0,SNR=14						
BBOO	Buckleboo	46.21	240	P	P	19 01 34.8	-0.8
BBOO				IAmb	IAmb	19 01 36.0	
	comp=Z,45nm,1.8s						
WR0	Warramunga Arr	47.11	258	P	P	19 01 42.3	-0.4
WB0	Warramunga Arr	47.26	258	P	P	19 01 43.2	-0.7
WB2	Warramunga Arr	47.28	258	P	P	19 01 43.5	-0.6
WRA	Warramunga Arr	47.30	258	P	P	19 01 44.1	-0.1
	comp=Z,0.3nm,0.4s,baz=92,slow=7.6,SNR=15						
AS31	Alice Springs	47.52	253	P	P	19 01 45.6	-0.3
ASAR	Alice Springs	47.52	253	P	P	19 01 45.8	-0.2
	comp=Z,3.5nm,0.5s,baz=89,slow=8.0,SNR=92						
MTN	Manton Dam	51.30	267	P	P	19 02 15.2	+0.9
MTN				IAmb	IAmb	19 02 43.9	
	comp=Z,25nm,1.4s						
FORT	Forrest	52.80	244	P	P	19 02 24.4	-0.7
FORT				IAmb	IAmb	19 02 42.4	
	comp=Z,20nm,0.9s						
KNRA	Kununurra	53.07	263	P	P	19 02 28.1	+0.8
KNRA				IAmb	IAmb	19 02 42.1	
	comp=Z,35nm,1.6s						
FITZ	Fitzroy Crossi	55.67	259	P	P	19 02 46.0	+0.1
FITZ				IAmb	IAmb	19 02 52.6	
	comp=Z,8.8nm,1.3s						
SOEI	Soe	58.53	269	P	P	19 03 07.9	+2.0
PSAD2	Pilbara Seismi	60.51	254	P	P	19 03 18.7	-0.5
PSAD2				IAmb	IAmb	19 03 22.0	
	comp=Z,8.5nm,1.0s						
PSAB2	Pilbara Seismi	60.62	254	P	P	19 03 19.6	-0.3
PSAB2				IAmb	IAmb	19 03 40.3	
	comp=Z,12nm,1.2s						
PSAD1	Pilbara Seismi	60.66	254	P	P	19 03 19.5	-0.7
PSAD1				IAmb	IAmb	19 03 29.5	
	comp=Z,18nm,1.4s						
QSPA	South Pole Qui	73.52	180	P	P	19 04 39.7	-0.3
WAKR	Walker	76.05	42	P	P	19 04 56.0	+1.1
NVAR	Mina Array Bea	76.75	43	P	P	19 04 59.4	+0.5
	comp=Z,0.4nm,0.6s,baz=222,slow=7.8,SNR=3.5						
ILAR	Eielson Array	84.02	12	P	P	19 05 35.4	-1.0
	comp=Z,0.9nm,0.6s,baz=226,slow=5.9,SNR=6.0						

IDC 25 18:54:18.0±6.9,36.95N×72.78E,h0km,mb1 3.5/6, mb1mx3.2/57,mbtmp3.5/6,ML3.3/6,Error ellipse: s-maj=97.2km s-min=33.3km az=158.0
NNC 25 18:54:39.4±2.5,38.65N×71.15E,h0km,mb3.9,mpv3.6, Error ellipse: s-maj=19.7km s-min=14.9km az=173.0

ISC 25 18:54:37.4±2.0,38.5N±0.1×71.25E±0.09,h10km,n18, σ1.78/22,5C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.12	26	P	Pn	18 55 38.5	-2.2
	SNR=11						
UCH	Uchtor	4.51	32	P	Pn	18 55 46.7	+0.5
	SNR=9.4						
EKS2	Erkin-Say	4.62	24	P	Pn	18 55 48.5	+1.1
	SNR=19						
KK31	Karatay Array	4.67	353	Pn	Pn	18 55 47.9	-0.1
	2.5nm,0.3s,baz=173,slow=13,SNR=91						
KK31				Pg	Pb	18 56 00.3	+0.9
	3.8nm,0.4s,baz=169,slow=16,SNR=9.6						
KK31				⇑Sn	Sn	18 56 42.3	0.0
	4.2nm,0.5s						
KK31				⇑Lg	Lg	18 57 01.6	
	5.5nm,0.5s,baz=178,slow=15,SNR=5.4						
AAK	Ala-Archa	4.85	30	Pn	Pn	18 55 51.6	+1.1
	2.5nm,0.3s,baz=195,slow=5.3,SNR=48						
AAK				Pg	Pb	18 55 59.1	-3.3
	1.6nm,0.3s,baz=213,slow=12,SNR=16						
AAK				Sn	Sn	18 56 50.1	+3.3
	1.0nm,0.3s,baz=59,slow=21,SNR=3.5						
AAK	Ala-Archa	4.85	30	P	Pn	18 55 52.2	+1.7
	SNR=11						
AAK	Ala-Archa	4.85	30	⇓Pn	Pn	18 55 52.2	+1.7
	3.1nm,0.4s						
AAK				⇑Sn	Sn	18 56 49.2	+2.4
	10nm,0.8s						
KBK	Karagaybulak	5.05	33	P	Pn	18 55 55.0	+1.7
	SNR=6.7						
CHMS	Chumysh	5.26	29	P	Pn	18 55 56.7	+0.7
	SNR=23						
CHMS	Chumysh	5.26	29	⇑Pn	Pn	18 55 57.0	+1.0
	11nm,0.4s						
CHMS				⇓Sn	Sn	18 56 58.6	+1.9
	13nm,0.8s						
USP	Ospenovka	5.40	26	P	Pn	18 55 59.0	+1.0
	SNR=8.3						
GEYT	Alibeck	10.36	271	Pn	Pn	18 57 07.4	+2.4
	0.3nm,0.3s,baz=95,slow=12,SNR=3.7						
MKAR	Makanchi Array	11.63	41	Pn	Pn	18 57 12.6	-11
	0.1nm,0.3s,baz=225,slow=17,SNR=3.5						
AB31	Akbulak array	13.51	327	⇑P	Pn	18 57 47.0	-2.0
	0.3nm,0.4s,baz=142,slow=12,SNR=4.4						
BVAR	Borovoye Array	14.58	358	Pn	Pn	18 58 02.0	-1.7
	0.1nm,0.3s,baz=170,slow=9.0,SNR=5.5						
AKTO	Aktyubinsk	15.22	326	P	P	18 58 17.1	-0.2
	0.2nm,0.3s,baz=130,slow=13,SNR=4.5						
AKTO	Aktyubinsk	15.22	326	⇓P	P	18 58 16.9	-0.4
	2.6nm,0.8s						
ZALV	Zalesovo Beam	18.06	27	P	Pn	18 58 40.5	-7.8
	0.1nm,0.3s,baz=214,slow=11,SNR=3.3						

IDC 25 19:00:58.0±3.8,50.86N×138.27W,h0km,mb2.6/1, mb1 3.7/6,mb1mx3.4/45,mbtmp3.5/6,ML3.2/5,Error ellipse: s-maj=56.6km s-min=25.9km az=31.0
NEIC 25 19:01:05.7±2.3,51.2N±0.1×138.1W±0.1,h15km±8km, mb3.8/6,Error ellipse: s-maj=21.5km s-min=6.3km az=201.0
PGC 25 19:01:08.0±2.7,51.47N×137.64W,h10km,mb3.8, MLSn3.7/5,Mw4.3/5,442km Wsw of Sandspit, Bc West Of Vancouver Island

ISC 25 19:01:07.8±1.5,51.46N±0.10×137.64W±0.08,h10km,n95, σ2.04/103,West of Vancouver Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H02N1	VAN INLET T-PH	3.60	58	Pn	Pn	19 02 03.0	-0.7
H02N1				Sn	Sn	19 02 42.9	-4.3
	SNR=9308						
H02N1				T	T	19 06 13.4	
	SNR=8.8						
VIB	Van Inlet	3.60	58	Pn	Pn	19 02 02.9	-0.9
VIB				Sn	Sn	19 02 42.5	-4.0
DIB	Dawson Inlet,	3.62	59	Pn	Pn	19 02 02.9	-0.9
DIB				Sn	Sn	19 02 42.9	-3.6
DIB	Dawson Inlet,	3.62	59		Pn	19 02 02.9	-0.9
DIB				Sn	Sn	19 02 43.1	-3.4
H02S1	DAWSON INLET T	3.62	59	Pn	Pn	19 02 03.0	-0.9
H02S1				Sn	Sn	19 02 43.0	-3.5
H02S1				T	T	19 06 04.7	
	SNR=8.4						
NDB	Naden	3.80	47	Pn	Pn	19 02 06.7	+0.4
NDB				Sn	Sn	19 02 48.5	-2.6
MOBC	Moresby Island	3.87	62	Pn	Pn	19 02 06.4	-1.0
MOBC				Sn	Sn	19 02 49.5	-3.3
MOBC	Moresby Island	3.87	62	Pn	Pn	19 02 06.2	-1.1
MOBC				Sn	Sn	19 02 49.8	-3.0
HG3B	Hotspring	3.99	71	Pn	Pn	19 02 07.6	-1.3
HG3B				Sn	Sn	19 02 51.9	-3.7
CRAG	Craig	4.84	32	Pn	Pn	19 02 22.5	+1.9
RUBB	Prince Rupert	5.31	54	Pn	Pn	19 02 27.1	0.0
RUBB				Sn	Sn	19 03 25.8	-2.5
SIT	Sitka	5.77	13	Pn	Pn	19 02 34.5	+1.2
SIT				Sn	Sn	19 03 36.7	-2.9
WRAK	Wrangell Islan	5.87	30	Pn	Pn	19 02 37.2	+2.5
BBB	Bella Bella	5.95	79	Pn	Pn	19 02 34.4	-1.5
	0.5nm,0.3s,baz=265,slow=6.5,SNR=8.6						
BBB				Sn	Sn	19 03 42.4	-1.7
	baz=167,slow=24,SNR=3.8						
BBB	Bella Bella	5.95	79	Pn	Pn	19 02 35.5	-0.3
BBB				Sn	Sn	19 03 40.1	-4.0
BBB	Bella Bella	5.95	79	Pn	Pn	19 02 35.5	-0.3
JIS	Juneau Island	7.08	14	Pn	Pn	19 02 53.7	+2.3
BESE	Bessie Mountai	7.31	12	Pn	Pn	19 02 57.7	+3.1
BESE				Sn	Sn	19 04 16.1	-1.6
BESE	Bessie Mountai	7.31	12	Pn	Pn	19 02 58.3	+3.7
DHAK	Deception Hill	7.66	358		Pn	19 03 01.4	+2.1
SKAG	Skagway	8.13	8	Pn	Pn	19 03 09.1	+3.4
YKU2	Yakutat	8.15	353	Pn	Pn	19 03 03.2	-2.8
PNL	Peninsula	8.29	354	Pn	Pn	19 03 09.7	+1.7
UBRB	Upper Baezaeko	8.46	75	Pn	Pn	19 03 10.4	0.0
PCA	Pinnacle	8.78	351	Pn	Pn	19 03 16.2	+1.4
PCA	Pinnacle	8.78	351		Pn	19 03 15.7	+1.0
YUK7	Dusty Glacier	9.10	358	Pn	Pn	19 03 22.5	+3.3
WHY	Whitehorse	9.35	8	Pn	Pn	19 03 26.1	+3.5
WHY				Sn	Sn	19 05 06.7	-1.0
WHY	Whitehorse	9.35	8		Pn	19 03 26.0	+3.5
MID	Middleton Isla	9.38	332	Pn	Pn	19 03 22.6	-0.3
HYT	Haines Junctio	9.39	0	Pn	Pn	19 03 26.2	+3.1
HYT	Haines Junctio	9.39	0		Pn	19 03 26.2	+3.1
YUK6	Outpost Mounta	9.52	358	Pn	Pn	19 03 28.0	+3.1
GRNC	Granite Creek	9.57	348	Pn	Pn	19 03 26.4	+0.6
YUK5	Granite Creek	9.70	359	Pn	Pn	19 03 30.9	+3.5
CTGM	Chitina Glacie	9.75	349	Pn	Pn	19 03 28.8	+0.8
CTGM	Chitina Glacie	9.75	349		Pn	19 03 28.9	+0.8
TGL	Tana Glacier	9.76	345	Pn	Pn	19 03 27.9	-0.3
RAGM	Ragged Mountai	9.77	339	Pn	Pn	19 03 26.9	-1.4
CRQM	Cirque	9.81	344	Pn	Pn	19 03 27.9	-1.0
KIAG	Kiagna River	9.84	346	Pn	Pn	19 03 29.9	+0.5
BARN	Barnard Glacie	9.88	349		Pn	19 03 30.9	+1.0
BALM	Baldy	9.95	347	Pn	Pn	19 03 31.3	+0.5
BALM	Baldy	9.95	347		Pn	19 03 31.2	+0.5
PTPK	Patty Peak	10.11	347	Pn	Pn	19 03 33.8	+0.7
EYAK	Cordova Ski Ar	10.17	337	Pn	Pn	19 03 32.1	-1.6
HIN	Hinchinbrook I	10.23	334	Pn	Pn	19 03 32.8	-1.8
VRDI	Verde Repeater	10.30	344	Pn	Pn	19 03 35.5	-0.3
MCARA	McCarthy VSAT	10.38	345	Pn	Pn	19 03 36.9	+0.3
YUK3	Moose Creek	10.46	353	Pn	Pn	19 03 40.2	+2.4
FID	Port Fidalgo	10.53	336	Pn	Pn	19 03 38.0	-0.6
GLB	Gilahina Butte	10.57	344		Pn	19 03 38.8	-0.4
KDAK	Kodiak Island	10.72	312	Pn	Pn	19 03 34.9	-6.3
	1.9nm,0.3s,baz=135,slow=6.6,SNR=12						
GLI	Glacier Island	10.80	335	Pn	Pn	19 03 41.6	-0.7
YUK1	Sand Pete Hill	10.84	353	Pn	Pn	19 03 45.8	+2.9
BVCY	Beaver Creek	11.12	352	Pn	Pn	19 03 49.3	+2.6
BRLK	Bradley Lake	11.18	323	Pn	Pn	19 03 42.9	-4.6
KNK	Knik Glacier	11.62	333	Pn	Pn	19 03 52.5	-0.9
SCM	Sheep Creek Mo	11.67	337	Pn	Pn	19 03 53.9	-0.4
RC01	Rabbit Creek A	11.74	330	Pn	Pn	19 03 53.7	-1.4
SML	Sawmill	11.90	335	Pn	Pn	19 03 57.4	-0.1
MENT	Mentasta	11.96	346	Pn	Pn	19 03 60.0	+1.7
GHO	Glory Hole Cre	12.04	334		Pn	19 03 58.6	-0.7
PAX	Paxson	12.28	343		Pn	19 04 01.9	-0.8
RSO	Redoubt South	12.34	323	Pn	Pn	19 03 59.5	-4.0
SUA	Susitna One	12.34	329	Pn	Pn	19 04 02.1	-1.4
DAWY	Dawson	12.68	356	Pn	Pn	19 04 11.2	+3.3
DAWY	Dawson	12.68	356		Pn	19 04 10.2	+2.3
DOT	Dot Lake	12.69	347	Pn	Pn	19 04 10.5	+2.4
DOT	Dot Lake	12.69	347		Pn	19 04 08.8	+0.7
DHY	Denali Highway	12.76	340	Pn	Pn	19 04 09.0	-0.3
RIDG	Independent Ri	12.89	346	Pn	Pn	19 04 11.1	+0.1
SCRK	Sand Creek	12.99	347		Pn	19 04 12.3	-0.1
RND	Reindeer	13.38	338	Pn	Pn	19 04 18.0	+0.4
EGAK	Eagle	13.48	354		Pn	19 04 21.1	+2.2
MCK	McKinley	13.68	338	Pn	Pn	19 04 22.8	+1.1
TRF	Thorofare Moun	13.78	336		Pn	19 04 22.6	-0.5
SVW2	Sparrevohn	13.82	321	Pn	Pn	19 04 20.1	-3.5
PPLA	Purkeypile	13.87	331	Pn	Pn	19 04 22.8	-1.5
KTH	Kantishna Hill	14.03	335		Pn	19 04 26.3	-0.1
IL31		14.19	344		Pn	19 04 27.5	-1.1
ILAR	Eielson Array	14.19	344	Pn	Pn	19 04 28.3	-0.3
	0.2nm,0.3s,baz=165,slow=13,SNR=21						
NEA	Nenana	14.44	340	Pn	Pn	19 04 32.1	+0.1
BPAW	Bear Paw Mtn.	14.49	336		Pn	19 04 31.9	-0.8
F10A	Beach Ranch, E	14.53	104		Pn	19 04 33.9	+0.4
MLY	Manley	15.20	338		Pn	19 04 40.9	-1.5
MLY				IAmb	IAmb	19 04 53.2	
	comp=Z,6.9nm,1.2s						
JTMT	Jette	15.57	95		Pn	19 04 53.1	+5.8
JTMT				IAmb	IAmb	19 04 54.6	
	comp=Z,6.9nm,1.2s						
FYU	Fort Yukon	15.63	349		P	19 04 53.2	+1.2
YKA	Yellowknife Ar	16.61	39	P	Pn	19 05 02.6	+2.1
	comp=Z,0.0nm,0.3s,baz=236,slow=11,SNR=5.4						
INK	Inuvik	17.02	5	P	Pn	19 05 06.6	+1.0
	comp=Z,0.0nm,0.3s,baz=210,slow=11,SNR=2.6						
TOLK	Toolik Lake Re	18.17	346		Pn	19 05 21.0	+1.1
TOLK				IAmb	IAmb	19 05 24.2	
	comp=Z,25nm,1.9s						
BW06	Boulder Array	20.89	104	P	P	19 05 50.8	+0.5
BW06				IAmb	IAmb	19 06 00.8	
	comp=Z,3.8nm,1.1s						
PD31	Pinedale Array	20.89	104	P	P	19 05 51.3	+1.0
PDAR	Pinedale Array	20.89	104	P	P	19 05 45.1	-5.2
	comp=Z,0.1nm,0.3s,baz=324,slow=5.9,SNR=2.2						
CLL	Collm	74.63	19	ePKPdf	P	19 12 41.0	-5.8

OMAN 25 19:14:20.3±1.4,28.31N×56.83E,h32km,ml3.5/10,Error ellipse: s-maj=16.2km s-min=10.1km az=74.0
IDC 25 19:14:20.9±3.1,28.13N×56.76E,h0km,mb3.8/6, mb1 3.9/6,mb1mx3.4/50,mbtmp3.8/6,Error ellipse: s-maj=74.3km s-min=29.9km az=150.0
TEH 25 19:14:21.7,28.05N×56.84E,h8km,ML3.6
THR 25 19:14:22.8±0.3,27.88N×56.80E,h18km±8km,ML3.5
DSN 25 19:14:23.8±1.5,27.87N×57.19E,h10km,ML3.9/6,Error ellipse: s-maj=37.8km s-min=9.8km az=128.0

ISC 25 19:14:24.2±0.7,27.96N±0.03×56.80E±0.04,h24km,n71, σ1.45/77,mb3.8/6,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIAN	Nian	0.40	175	ePg	Pb	19 14 31.8	-1.0
IBND	Bandar-abas	0.56	204	ePg	Pb	19 14 35.4	0.0
IBND				e		19 14 57.6	
GENO	Geno	0.79	225	ePg	Pb	19 14 39.1	-0.3
GENO				e		19 15 01.3	
KHNJ	Kahnooj	0.81	91	ePg	Pb	19 14 36.8	-2.8
NGRK	Negar Kerman	1.68	358	ePn	Pn	19 14 51.1	-1.4
NGRK				e		19 15 19.4	
SHME	Shamm	1.99	197	eP	Pn	19 14 57.6	+1.2
	SNR=10						
SHME				S	Sb	19 15 24.7	+0.5
SHME	Shamm	1.99	197	ePn	Pn	19 14 57.7	+1.2
CHMN	Cheshme madani	2.00	19	ePn	Pn	19 14 56.7	-0.2
CHMN				e		19 15 27.6	
KRBR	Kerman	2.01	359	ePn	Pn	19 14 59.3	+2.3
KRBR				eSg	Sb	19 15 29.0	+3.9
KRBR				IAML		19 15 38.5	
	comp=N,295nm,0.4s						
KRBR	Kerman	2.01	359	ePn	Pn	19 14 59.3	+2.3
TVBK	TV Kerman	2.02	359	ePn	Pn	19 14 57.2	+0.1
TVBK				e		19 14 59.7	
BANOM	Banah	2.08	192	eP	Pn	19 14 58.7	+1.1
	SNR=51						
BANOM	Banah	2.08	192	P	Pn	19 14 58.9	+1.2
BANOM				S	Sb	19 15 25.7	-1.0
BANOM	Banah	2.08	192	ePn	Pn	19 14 58.5	+0.8
LAR1	LAR	2.16	263	ePn	Pb	19 15 01.3	-1.5
KHGB	Koh Gabri	2.42	353	ePn	Pn	19 15 03.6	+1.0
KHGB				e		19 15 40.7	
MSFE	Esma-Masafi	2.65	193	P	Pn	19 15 06.5	+0.9
MSFE	Esma-Masafi	2.65	193	ePn	Pn	19 15 06.9	+1.3
MDH	Madha	2.69	190	P	Pn	19 15 07.0	+0.9
MDH	Madha	2.69	190	P	Pn	19 15 06.1	+0.1
MDH	Madha	2.69	190	ePn	Pn	19 15 06.3	+0.3
UOSS	Minazif	3.05	190	P	Pn	19 15 12.8	+1.8
UOSS	Minazif	3.05	190	P	Pn	19 15 11.2	+0.2
UOSS	Minazif	3.05	190	ePn	Pn	19 15 12.0	+1.0
NAZ	Nazwa, Dubai	3.13	199	P	Pn	19 15 14.2	+2.1
HATD	Hatta, Dubai	3.18	191	P	Pn	19 15 12.8	0.0
HATD				S	Sn	19 15 52.6	+2.6
ASHO	Ashiyiah	3.33	192	iP	Pn	19 15 17.0	+2.0
	SNR=19						
ASHO	Ashiyiah	3.33	192	P	Pn	19 15 16.5	+1.6
ASHO				S	Sn	19 15 57.4	+3.7
ASHO	Ashiyiah	3.33	192	ePn	Pn	19 15 16.9	+2.0
FAQ	Al Faqa, Dubai	3.38	199	ePn	Pn	19 15 17.0	+1.5
ISRV	Sarvestan	3.53	294	ePn	Pn	19 15 17.9	0.0
IBAF	Bafgh	3.77	344	ePn	Pn	19 15 22.0	+1.0
SOHO	SOHO	3.82	184	P	Pn	19 15 21.8	+0.3
SOHO	SOHO	3.82	184	ePn	Pn	19 15 21.2	-0.4
SZD1	Zahedan-tmp	3.88	66	ePn	Pn	19 15 24.4	+1.8
IMEH	Mehriz	3.91	331	ePn	Pn	19 15 23.6	+0.6
CHBR	Chabahar	4.05	125	ePn	Pn	19 15 25.4	+0.6
CHBR	Chabahar	4.05	125	ePn	Pn	19 15 25.4	+0.6
HOQ	Hoqain	4.39	174	P	Pn	19 15 29.4	0.0
NHDN	Nehbandan	4.44	39	ePn	Pn	19 15 30.9	+0.7
NHDN				e		19 16 52.8	
BSRN	Basiran	4.47	26	ePn	Pn	19 15 32.9	+2.2
BSRN	Basiran	4.47	26	ePn	Pn	19 15 32.9	+2.2
BIDO	Bidbid	4.58	165	P	Pn	19 15 31.7	-0.4
IKAZ	Kazeroun	4.71	294	ePn	Pn	19 15 33.8	-0.3
ISAD	Sadrabad	4.77	326	ePn	Pn	19 15 35.7	+0.8
IKOO	Kooshah	4.84	23	ePn	Pn	19 15 37.9	+2.1
WSAR	Wadi Sarin	4.99	160	P	Pn	19 15 37.8	+0.2
	SNR=78						
WSAR				S	Sn	19 16 33.8	-0.7
SMDO	Samad	5.01	167	P	Pn	19 15 38.3	+0.2
TPRV	Parvadeh(Tabas	5.05	359	ePn	Pn	19 15 38.7	+0.1
ITEG	Tejag	5.20	18	ePn	Pn	19 15 43.3	+2.6
BSY	Bisya	5.21	176	P	Pn	19 15 41.0	+0.3
IRAM	Ramesheh	5.42	316	ePn	Pn	19 15 44.2	+0.4
IDAH	Dahanechah	5.45	28	ePn	Pn	19 15 47.3	+3.1
KLNJ	Kolanjah	5.46	305	ePn	Pn	19 15 45.5	+1.1
TKDS	Koohdasht(Taba	5.64	3	ePn	Pn	19 15 47.4	+0.7
WBK	Wadi Bani Khal	5.68	159	P	Pn	19 15 46.6	-0.6
	SNR=12						
JMDO	Jabal Madar	5.69	168	P	Pn	19 15 48.3	+0.9
IMON	Monand	5.77	25	ePn	Pn	19 15 51.6	+3.0
IZEF	Zefreh	6.25	323	ePn	Pn	19 15 54.9	-0.3
JLN	Jalan Bani Buh	6.25	157	P	Pn	19 15 55.0	-0.1
IPIR	Pirpir	6.94	314	ePn	Pn	19 16 04.7	0.0
MHTO	MHTO	7.03	171	P	Pn	19 16 06.5	+0.8
SHAO	Shalim	9.95	186	iP	Pn	19 16 46.0	+0.2
	SNR=8.4						
WHFO	Wadi Hawf	10.38	196	P	Pn	19 16 49.9	-1.8
	SNR=8.0						
ABTO	Aybut	11.04	198	P	Pn	19 16 59.4	-1.4
BVAR	Borovoye Array	26.99	18	P	P	19 20 02.5	-1.5
	comp=N,0.4nm,0.4s,baz=210,slow=8.3,SNR=4.9						
MKAR	Makanchi Array	27.44	40	P	P	19 20 07.9	-0.3
	comp=N,0.2nm,0.5s,baz=230,slow=7.1,SNR=3.8						
ZALV	Zalesovo Beam	33.09	31	P	P	19 20 56.8	-1.2
	comp=N,0.6nm,0.4s,baz=238,slow=8.5,SNR=4.9						
FINES	FINESS Array B	39.24	337	P	P	19 21 48.7	-1.8
	comp=N,2.0nm,0.9s,baz=145,slow=9.9,SNR=3.5						
ARCES	ARCESS Array B	45.37	345	P	P	19 22 40.0	-0.4
	comp=N,8.5nm,1.3s,baz=137,slow=7.0,SNR=2.7						
TORD	Torodi Ar. Bea	53.24	266	P	P	19 23 41.4	+0.1
	comp=N,0.7nm,0.5s,baz=62,slow=7.2,SNR=3.8						

ISC 25 19:30:31.4±1.7,51.49N±0.08×16.21E±0.04,h0km,n17, σ0.97/30,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.65	175	ePg	Pg	19 30 44.5	+0.7
KSP				eSg	Sg	19 30 52.8	+0.7
CHVC	Chvalec	0.90	186	ePG	Pg	19 30 49.2	+0.5
CHVC				eSG	Sg	19 31 01.1	+0.7
	comp=Z,24nm,1.2s						
OSTC	Ostas	0.93	180	ePG	Pb	19 30 49.9	-0.5
OSTC				eSG	Sg	19 31 02.6	+1.3
	comp=Z,5.5nm,0.3s						
UPC	Upice	0.99	187	ePG	Pg	19 30 50.9	+0.6
UPC				eSG	Sg	19 31 04.3	+1.2
	comp=Z,13nm,0.4s						
DPC	Dobruska-Polom	1.14	176	ePG	Pg	19 30 53.2	0.0
DPC				eSG	Sg	19 31 08.2	+0.2
	comp=Z,5.7nm,0.7s						
PVCC	Panska Ves	1.41	228	ePG	Pn	19 30 58.1	-0.2
PVCC				eSG	Sg	19 31 16.9	+0.2
	comp=Z,22nm,0.2s						
KRLC	Kraliky	1.46	165	ePG	Pg	19 30 59.4	+0.1
KRLC				eSG	Sg	19 31 18.4	+0.2
	comp=Z,5.2nm,0.5s						
BRG	Berggiesshubel	1.55	248	PG	Pg	19 31 00.1	-0.2
BRG				SG	Sn	19 31 20.1	-1.0
	6.2nm,0.3s						
GOPC	GO Pecny, Ondr	1.81	210	ePG	Pb	19 31 05.5	0.0
GOPC				eSG	Sb	19 31 29.5	+0.7
PRU	Pruhonice	1.83	216	eSG	Sg	19 31 31.4	+1.1
MORC	Moravsky Berou	1.91	153	ePN	Pn	19 31 05.2	-0.1
MORC				eSG	Sb	19 31 32.1	+0.6
CLL	Collm	2.02	266	eSG	Sg	19 31 37.0	+0.9
OKC	Ostrava-Krasne	2.06	142	eSG	Sg	19 31 37.9	+0.3
	comp=Z,5.1nm,0.5s						
NKC	Novy Kostel	2.69	244	ePG	Pb	19 31 21.1	+0.6
NKC				eSG	Sg	19 31 57.4	-0.5
	comp=Z,5.3nm,0.3s						
KHC	Kasperske Hory	2.90	217	ePG	Pb	19 31 23.9	-0.1
KHC				eSN	Sn	19 31 53.0	-1.4
KHC				eSG	Sg	19 32 05.0	+0.5
LANS	Liptovska Anna	3.13	137	eSG	Sg	19 32 13.9	+1.8
MODS	Modra-Piesok	3.19	167	eSN	Sn	19 31 58.5	-3.1

JMA 25 19:44:00.2±0.2,25.41N×122.47E,h239km±4km,M2.9, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	1.05	156	P	Pn	19 44 34.4	0.0
IRIF	Iriomote-Funau	1.57	133	P	Pn	19 44 38.1	+0.1
IRIF				eS	S	19 45 07.1	-0.5
HATJ	Hateruma jima	1.81	138	P	Pn	19 44 39.9	-0.2
JKRS	Kuro-shima	1.82	130	P	Pn	19 44 40.7	+0.5
JKRS				S	S	19 45 12.1	+0.6
JIJ	Ishigaki jima	1.84	124	P	Pn	19 44 40.3	0.0
JIJ				S	S	19 45 11.3	-0.5
JISG	Ishigakijimahi	1.86	116	P	Pn	19 44 40.8	+0.3
JISG				eS	S	19 45 12.0	-0.1
JTJ	Tarama	2.17	110	P	Pn	19 44 43.7	+0.4
JTJ				S	S	19 45 17.3	+0.2
JIRB	Irabujima	2.52	103	P	Pn	19 44 46.8	0.0
JIRB				eS	S	19 45 22.8	-0.7

JMA 25 19:44:56.4±0.1,24.40N×121.75E,h9km±4km,M2.3
TAP 25 19:44:56.2,24.41N×121.76E,h8km,ML2.9,B

ISC 25 19:44:56.2±0.8,24.40N±0.01×121.77E±0.02,h10km±5km, n104,σ0.55/155,20C-5D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.04	317	⇓iP	Pg	19 44 58.0	-0.1
	baz=331						
ENA				iS	Sg	19 44 58.9	-0.5
	baz=331						
TWC	Suao	0.22	20	⇑iP	Pg	19 45 00.9	+0.2
	baz=19						
TWC				iS	Sg	19 45 03.8	0.0
	baz=19						
NACB	Ninganchiao	0.28	215	⇓P	Pg	19 45 01.9	+0.2
	baz=212						
NACB				S	Sg	19 45 05.7	+0.2
	baz=212						
ENTT	Nioudou	0.30	322	⇑iP	Pg	19 45 02.6	+0.3
	baz=323						
ENTT				S	Sg	19 45 06.5	+0.2
	baz=323						
NDT	Datong Townshi	0.30	311	⇑iP	Pg	19 45 02.8	+0.5
	baz=311						
NDT				S	Sg	19 45 06.7	+0.3
	baz=311						
ETLH	Xiulin Townshi	0.33	233	⇓P	Pg	19 45 02.9	+0.2
	baz=231						
ETLH				eS	Sg	19 45 07.3	+0.3
	baz=231						
TWE	Neicheng	0.33	344	⇑iP	Pg	19 45 03.1	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
	baz=347						
TWE	baz=347			S	Sg	19 45 07.4	+0.2
NNSB	Datong baz=273	0.35	274	⇑P	Pg	19 45 03.5	+0.3
NNSB	baz=273			eS	Sg	19 45 07.7	-0.2
NNSH	Datong baz=273	0.35	274	⇑P	Pg	19 45 03.5	+0.2
NNSH	baz=273			eS	Sg	19 45 07.8	-0.1
TWD	Chiawan baz=203	0.36	206	P	Pg	19 45 03.5	+0.2
TWD	baz=203			eS	Sg	19 45 08.2	+0.2
EOS1	EOS1 baz=57	0.36	66	P	Pg	19 45 04.1	+0.8
EOS1	baz=57			eS	Sg	19 45 09.6	+1.4
NNS	Nan Shan baz=275	0.36	276	⇑iP	Pg	19 45 03.6	+0.2
NNS	baz=275			S	Sg	19 45 08.1	-0.1
ILA	Ilan baz=352	0.36	357	P	Pg	19 45 03.9	+0.5
ILA	baz=352			iS	Sg	19 45 09.1	+0.9
SLBB	Yuanshan baz=342	0.37	341	⇑iP	Pg	19 45 04.1	+0.6
SLBB	baz=342			eS	Sg	19 45 08.8	+0.4
NWLT	Wulai baz=328	0.44	327	⇑P	Pg	19 45 05.4	+0.5
NWLT	baz=328			eS	Sg	19 45 10.9	+0.1
YHNB	Yeheng baz=313	0.45	307	⇑P	Pg	19 45 05.5	+0.5
YHNB	baz=313			eS	Sg	19 45 10.6	-0.3
HWA	Hwalien baz=197	0.45	199	eP	Pb	19 45 05.8	-0.3
HWA	baz=197			eS	Sb	19 45 12.2	-0.7
NTC	Toucheng baz=8.0	0.45	7	eP	Pg	19 45 05.3	+0.2
NTC	baz=8.0			eS	Sb	19 45 12.2	-0.9
NSK	Sanguang baz=307	0.46	306	⇑iP	Pg	19 45 05.7	+0.4
NSK	baz=307			eS	Sg	19 45 11.2	-0.2
ENLB	Shoufeng baz=195	0.52	197	eP	Pb	19 45 07.0	-0.4
ENLB	baz=195			eS	Sb	19 45 15.2	+0.2
WHF	Hehuan Shan baz=250	0.53	241	⇓iP	Pg	19 45 06.7	+0.2
WHF	baz=250			eS	Sg	19 45 13.7	+0.2
TWT	Tachien baz=254	0.56	255	eP	Pb	19 45 07.8	-0.3
TWT	baz=254			eS	Sg	19 45 15.1	+0.5
TIPB	Shuangxi baz=356	0.57	5	⇑P	Pg	19 45 07.5	+0.2
TIPB	baz=356			S	Sg	19 45 14.3	-0.5
TDCB	Techi baz=254	0.57	255	eP	Pg	19 45 07.8	+0.4
TDCB	baz=254			eS	Sg	19 45 14.7	-0.3
TWA	Mucha baz=345	0.60	344	⇑P	Pb	19 45 08.4	-0.3
TWA	baz=345			S	Sg	19 45 15.7	-0.1
NHDH	Xindian Distri baz=339	0.60	339	eP	Pb	19 45 08.3	-0.4
NHDH	baz=339			eS	Sg	19 45 15.8	+0.1
TWB1	Santiao Chiao baz=10.0	0.64	18	eP	Pg	19 45 09.0	+0.5
TWB1	baz=10.0			eS	Sg	19 45 16.0	-0.8
CHGB	Renai baz=246	0.64	238	eP	Pg	19 45 08.9	+0.3
CHGB	baz=246			eS	Sg	19 45 16.7	-0.3
WLTB	Daxi baz=313	0.65	314	eP	Pb	19 45 09.6	0.0
ESL	Shilin baz=206	0.66	208	eP	Pg	19 45 08.9	-0.1
ESL	baz=206			eS	Sg	19 45 17.3	-0.3
NWF	Wu-fen Shan baz=353	0.67	1	eP	Pb	19 45 09.7	-0.2
NWF	baz=353			eS	Sg	19 45 17.4	-0.5
WFSB	Wu-fen Shan baz=353	0.67	1	eP	Pg	19 45 09.6	+0.5
WFSB	baz=353			eS	Sg	19 45 18.0	+0.2
TAP	Taipei baz=340	0.68	340	eP	Pb	19 45 10.1	0.0
TAP	baz=340			eS	Sb	19 45 19.0	-0.5
OWD	Renai baz=221	0.70	231	eP	Pg	19 45 09.7	0.0
OWD	baz=221			eS	Sg	19 45 18.8	-0.1
LIOB	Emei baz=290	0.73	290	P	Pb	19 45 11.2	+0.3
LIOB	baz=290			eS	Sb	19 45 20.3	-0.7
NSTT	Nanjuang baz=288	0.73	288	⇑iP	Pb	19 45 11.2	+0.2
NSTT	baz=288			S	Sg	19 45 20.1	-0.2
WHP	Taichung City baz=260	0.76	261	⇑P	Pb	19 45 11.7	+0.1
WHP	baz=260			eS	Sb	19 45 21.4	-0.6
YM01	YM01 baz=347	0.76	346	⇑P	Pb	19 45 11.8	+0.2
YM01	baz=347			eS	Sg	19 45 20.6	-0.3
TWS1	Kuangyinshan baz=336	0.76	336	⇑P	Pb	19 45 12.2	+0.7
NCU	National Centr baz=317	0.77	317	eP	Pg	19 45 11.2	+0.1
NCUH	Zhongli baz=317	0.77	317	eP	Pb	19 45 12.5	+0.8
NCUH	baz=317			eS	Sn	19 45 24.0	-0.8
YM10	YM10 baz=346	0.77	346	eP	Pb	19 45 11.8	+0.1
YM10	baz=346			eS	Sg	19 45 21.4	+0.1
YM11	YM11 baz=348	0.78	347	⇑P	Pb	19 45 12.1	+0.2
YM11	baz=348			eS	Sg	19 45 21.4	-0.1
EGFH	Guangfu baz=208	0.79	203	eP	Pg	19 45 11.6	+0.1
YM08	YM08 baz=349	0.80	348	P	Pb	19 45 12.1	-0.1
YM03	YM03 baz=346	0.80	345	⇑P	Pb	19 45 12.4	+0.1
YM03	baz=346			eS	Sb	19 45 22.8	-0.4
SBCB	Hsinchu baz=298	0.81	299	eP	Pn	19 45 13.2	-0.5
ANP	Anpu baz=345	0.81	344	⇑P	Pb	19 45 12.5	+0.1
ANP	baz=345			eS	Sb	19 45 23.9	+0.4
NTST	Danshui baz=326	0.81	339	eP	Pn	19 45 13.3	-0.4
HSN	Hsinchu baz=301	0.83	299	eP	Pb	19 45 13.2	+0.5
DPDB	Guoxing baz=249	0.85	245	eP	Pb	19 45 13.1	+0.1
DPDB	baz=249			eS	Sg	19 45 23.6	-0.1
VWDT	VWDT baz=212	0.86	222	eP	Pg	19 45 12.8	0.0
VWDT	baz=212			eS	Sg	19 45 24.5	+0.4
NMLH	Miaoli baz=278	0.90	279	eP	Pn	19 45 14.5	-0.4
TWQ1	Liyutan baz=265	0.91	267	eP	Pn	19 45 14.9	-0.1
NSY	Sanyi baz=270	0.92	271	eP	Pb	19 45 14.7	+0.5
SMLT	Sun Moon Lake baz=236	0.95	237	eP	Pb	19 45 14.8	+0.1
SMLT	baz=236			eS	Sb	19 45 27.1	-0.3
HGSD	Ruisui baz=205	0.96	199	eP	Pb	19 45 15.4	+0.5
SSLB	Suanglung baz=230	0.96	231	⇓P	Pg	19 45 14.7	0.0
SSLB	baz=230			eS	Sg	19 45 26.4	-0.9
EHY	Hungye baz=208	0.98	205	eP	Pg	19 45 14.6	-0.5
TCU	Taichung baz=255	1.03	256	eP	Pn	19 45 17.8	+1.2
WDJ	Dajia District baz=277	1.03	267	eP	Pn	19 45 17.5	+0.8
JYNG	Yonagunijimaku	1.07	87	P	Pg	19 45 16.9	0.0
JYNG				eS	Sg	19 45 30.7	-0.1
WHYT	Xinyi Township baz=229	1.09	230	eP	Pb	19 45 17.4	+0.2
YULB	Yu-li baz=202	1.09	203	eP	Pg	19 45 16.9	-0.3
WJS	Zhushan baz=228	1.11	239	eP	Pn	19 45 18.9	+1.1
WNT	Mingjian baz=241	1.12	242	eP	Pn	19 45 18.2	+0.3
TWF1	Yuli baz=207	1.13	202	eP	Pg	19 45 17.7	-0.2
YOJ	Yonaguni jima baz=87	1.14	87	P	Pb	19 45 17.9	0.0
YOJ	baz=87			eS	Sg	19 45 33.0	+0.2
YOJ	Yonaguni jima	1.14	87	P	Pb	19 45 18.0	+0.1
YOJ				eS	Sg	19 45 32.9	+0.1
YUS	Yu-Shan baz=228	1.18	220	eP	Pg	19 45 18.9	0.0
ALS	Alishan baz=224	1.25	225	eP	Pg	19 45 20.9	+0.7
FULB	Fuli baz=211	1.27	200	eP	Pn	19 45 19.9	-0.1
CHN5	Tsauling baz=230	1.28	231	eP	Pg	19 45 21.4	+0.7
WGK	Gukeng baz=236	1.31	237	eP	Pg	19 45 21.8	+0.4
WDLH	Douliu baz=250	1.33	238	eP	Pg	19 45 22.5	+0.8
RLNB	Erlin baz=247	1.38	249	eP	Pb	19 45 22.4	+0.3
ELDTW	Lidau baz=196	1.39	210	eP	Pn	19 45 21.6	-0.1
WTCT	Ta-ch'eng baz=247	1.46	249	eP	Pb	19 45 23.2	-0.2
CHN4	Tsaushan baz=224	1.50	226	eP	Pg	19 45 25.5	+0.5
TPUB	Ta-pu baz=223	1.51	224	eP	Pg	19 45 25.1	-0.1
WTP	Ta-pu baz=234	1.56	223	eP	Pg	19 45 26.4	+0.2
TWK	Hsinying baz=224	1.63	226	eP	Pg	19 45 27.5	+0.1
WLGB	Puzi baz=250	1.63	236	eP	Pb	19 45 26.1	-0.2
CHN1	Nanshi baz=234	1.66	223	eP	Pg	19 45 28.5	+0.5
SGST	Jiashian baz=205	1.70	220	eP	Pg	19 45 28.4	-0.5
SLGT	Liugui baz=215	1.74	216	eP	Pb	19 45 28.8	+0.6
IRIF	Iriomote-Funau	1.79	92	P	Pn	19 45 27.1	0.0
IRIF				eS	Sn	19 45 49.2	-0.7
HATJ	Hateruma jima	1.89	100	P	Pn	19 45 29.7	+1.2
SSD	Sandimen baz=211	1.95	212	eP	Pb	19 45 32.2	+0.4
JKRS	Kuro-shima	2.05	94	eS	Sn	19 45 56.5	+0.1
MASBT	Mashibuluo baz=209	2.06	211	eP	Pn	19 45 32.5	+1.6
JIJ	Ishigaki jima	2.17	91	P	Pn	19 45 31.9	-0.4
JIJ				eS	Sn	19 45 57.9	-1.3
EAST	Anshuo baz=189	2.18	203	eP	Pn	19 45 34.2	+1.7
PNG	Penghu baz=247	2.19	248	eP	Pb	19 45 34.4	-1.4
VWUC	VWUC baz=286	2.19	286	eP	Pn	19 45 33.3	+0.7
PHUB	P'eng-hu baz=245	2.19	247	eP	Pn	19 45 33.9	+1.2
WDGT	Dungji baz=252	2.24	240	eP	Pb	19 45 35.4	-1.3
MATB	Ma-tsu baz=315	2.40	317	eP	Pn	19 45 35.9	+0.4
VCHM	Qimei baz=239	2.45	241	eP	Pn	19 45 37.7	+1.5
PTMZ	Houxiangcun baz=285	2.49	285	eP	Pn	19 45 37.8	+1.1
XPSS	Dashiqiu baz=328	2.89	331	eP	Pn	19 45 42.1	-0.2
KNMB	Chin-men Tao baz=272	3.08	272	eP	Pn	19 45 45.4	+0.5
AXDP	Jialang baz=279	3.49	279	eP	Pn	19 45 51.3	+0.8
ZPLA	Ao Xicun baz=263	3.70	264	eP	Pn	19 45 54.5	+1.1

TAP 25 19:45:39.0, 24.45N×121.78E, h5km±1km, ML1.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
ENA	Nanau baz=226	0.04	234	iP	Pg	19 45 40.8	+0.5
ENA	baz=226			iS	Sg	19 45 41.8	+0.6
TWC	Suao baz=25	0.17	22	P	Pg	19 45 43.2	+0.9
TWC	baz=25			eS	Sg	19 45 46.6	+2.0
ENTT	Nioudou baz=314	0.27	314	P	Pg	19 45 45.0	+0.7
ENTT	baz=314			eS	Sb	19 45 50.2	-1.0
NACB	Ninganchiao baz=211	0.33	211	eP	Pb	19 45 46.7	-0.6

IDC 25 19:57:40.8±2.3, 19.98S×175.11W, h0km, mb3.9/7, mb1 4.2/7, mb1mx4.0/30, mbtmp3.9/7, MS3.0/1, Ms1 3.0/1, ms1mx2.5/35, Error ellipse: s-maj=139.5km s-min=20.9km az=154.0

NEIC 25 19:57:52.1±1.7, 20.3S±0.1×174.68W±0.10, h95km±8km, mb4.7/15, Error ellipse: s-maj=17.9km s-min=13.2km az=183.0

ISC 25 19:57:48.1±0.6, 20.5S±0.1×174.74W±0.07, h57km, n31, σ1.85/30, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
NIUE	Niue	4.74	74		Pn	19 58 59.6	+2.6
NIUE					Sn	19 59 49.2	-1.6
AFI	Afiamalu	7.11	24	Pn	Pn	19 59 32.5	+2.8
MSVF	Nonsavu	7.33	291		Pn	19 59 37.0	+4.3
RAR	Rarotonga	14.02	96	Pn	P	20 01 08.2	-1.8
DZM	Mont Dzumac	17.61	261	P	P	20 01 53.4	+3.4
DZM	comp=Z,58nm,1.5s			IAmb	IAmb	20 02 20.5	
NOUC	Port Laguerre	17.74	261	P	P	20 01 54.7	+3.4
SANVU	Saraoutou	17.88	283	P	P	20 01 55.2	+2.3
SANVU	comp=Z,48nm,1.5s			IAmb	IAmb	20 01 59.2	
PPT	Papeete comp=Z,30nm,18.5s,baz=182,slow=34	23.96	87	LR	LR	20 11 35.3	
CTA	Charters Tower comp=Z,5.9nm,0.5s,baz=94,slow=11,SNR=15	36.53	264	P	P	20 04 46.9	-1.6
COEN	Coen	40.63	272	P	P	20 05 21.7	-1.2
ASAR	Alice Springs comp=Z,1.1nm,0.6s,baz=93,slow=8.0,SNR=20	47.49	256	P	P	20 06 15.9	-1.9
WRA	Warramunga Arr comp=Z,1.2nm,0.6s,baz=98,slow=9.0,SNR=18	47.62	261	P	P	20 06 16.5	-2.3
MTN	Manton Dam	52.22	269	P	P	20 06 52.0	-1.7
MTN	comp=Z,25nm,1.4s			IAmb	IAmb	20 07 23.9	
SAUI	Saumlaki	53.53	275	P	P	20 07 02.0	-1.4
KNRA	Kununurra	53.70	265	P	P	20 07 04.0	-0.6
KNRA	comp=Z,29nm,1.4s			IAmb	IAmb	20 07 35.8	
FAKI	Fak Fak	54.48	281	P	P	20 07 09.2	-1.1
FITZ	Fitzroy Crossi	56.05	262	P	P	20 07 21.9	+0.2
FITZ	comp=Z,11nm,1.6s			IAmb	IAmb	20 07 57.8	
SOEI	Soe	59.55	271		P	20 07 47.2	+0.8
QSPA	South Pole Qui	69.60	180	P	P	20 08 54.0	+2.9
NVAR	Mina Array Bea comp=Z,0.4nm,0.5s,baz=225,slow=7.7,SNR=4.4	78.93	42	P	P	20 09 46.6	+0.8
TXAR	Lajitas Array comp=Z,0.4nm,0.9s,baz=231,slow=5.7,SNR=3.8	84.49	56	P	P	20 10 16.4	+1.2
SCM	Sheep Creek Mo	84.89	13	P	P	20 10 15.2	-1.2
SCM	comp=Z,39nm,1.7s			IAmb	IAmb	20 10 52.4	
TRF	Thorofare Moun	85.81	11	P	P	20 10 19.3	-1.7
TRF	comp=Z,8.8nm,1.4s			IAmb	IAmb	20 10 36.2	
RND	Reindeer	86.03	11	P	P	20 10 21.1	-0.9
RND	comp=Z,6.2nm,1.2s			IAmb	IAmb	20 10 36.2	
DOT	Dot Lake	87.20	13	P	P	20 10 26.8	-0.9
DOT	comp=Z,10nm,1.7s			IAmb	IAmb	20 10 47.1	
ILAR	Eielson Array comp=Z,0.4nm,0.7s,baz=211,slow=4.6,SNR=5.8	87.64	12	P	P	20 10 28.4	-1.3
YKA	Yellowknife Ar comp=Z,0.3nm,0.7s,baz=246,slow=5.2,SNR=4.0	95.23	24	P	P	20 11 04.4	-0.6
ARCES	ARCESS Array B comp=Z,2.2nm,0.8s,baz=35,slow=3.0,SNR=6.5	129.40	351	PKP	PKPdf	20 16 48.6	-0.9
CLL	Collm	148.62	351	ePKPbc	PKPbc	20 17 28.0	-0.6
KHC	Kasperske Hory	150.63	349	ePKP	PKPbc	20 17 32.0	-1.6
GERES	GERESS Array B comp=Z,1.3nm,0.7s,baz=40,slow=2.3,SNR=12	150.88	348	PKPbc	PKPbc	20 17 33.3	-1.1

IDC 25 20:24:38.0±0.5, 61.05N×138.33W, h0km, mb4.1/18, mb1 4.3/25, mb1mx4.1/44, mbtmp4.1/25, ML3.8/7, MS3.3/16, Ms1 3.3/16, ms1mx3.1/60, Error ellipse: s-maj=11.6km s-min=6.3km az=37.0

PGC 25 20:24:38.4, 60.91N×138.37W, h9km, ML4.2/12, Mw4.2, 49km west of Haines Jct., Yt Southern Yukon Territory, Canada

NEIC 25 20:24:38.9±2.4, 60.97N±0.03×138.39W±0.04, h11km±3km, Error ellipse: s-maj=4.5km s-min=3.0km az=166.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.75; $M_{\theta\theta}$-0.70; $M_{\phi\phi}$-0.05; $M_{r\theta}$1.14; $M_{r\phi}$0.32; $M_{\theta\phi}$-0.79; Fault plane solution: $M_0$1.60000×10^{15} NP1: ϕ_s279.59000°, δ15.86000°, λ67.31000°. NP2: ϕ_s123.09000°, δ75.40000°, λ96.25000°. Principal axes: T 1.5718, Plg59.0000°, Azm42.0000°; N 0.0523, Plg6.0000°, Azm302.0000°; P -1.6242, Plg30.0000°, Azm208.0000°;

AEIC 25 20:24:38.1±2.4, 60.91N±0.02×138.31W±0.05, h9km±3km Error ellipse: s-maj=4.3km s-min=1.7km az=127.0

ISC 25 20:24:38.9±0.5, 60.96N±0.02×138.23W±0.02, h11km±3km, n266, σ1.77/301, mb4.3/39, MS3.2/13, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
YUK6	Outpost Mounta	0.07	253	P	Pg	20 24 40.3	-1.2
YUK6				S	Sg	20 24 41.9	-1.5
YUK6	Outpost Mounta	0.07	253		Pg	20 24 41.8	+0.3
YUK5	Granite Creek	0.25	47	P	Pb	20 24 45.1	-0.5
YUK5				S	Sb	20 24 49.7	+2.1
YUK5	Granite Creek	0.25	47		Pb	20 24 45.1	-0.5
YUK5					Sb	20 24 49.7	+2.1
HYT	Haines Junctio	0.38	111	P	Pg	20 24 46.2	-0.3
HYT				S	Sg	20 24 51.7	+0.1
HYT	Haines Junctio	0.38	111		Pg	20 24 46.1	-0.5
HYT	Haines Junctio	0.38	111		Sg	20 24 51.7	+0.1
YUK4	Talbot Arm	0.43	333	P	Pb	20 24 48.6	-0.2
YUK4				S	Sb	20 24 55.8	+0.5
YUK4	Talbot Arm	0.43	333		Pb	20 24 48.5	-0.2
YUK4					Sb	20 24 55.5	+0.2
YUK7	Dusty Glacier	0.43	174	P	Pg	20 24 45.8	-1.8
YUK7				S	Sg	20 24 51.1	-2.2
YUK7	Dusty Glacier	0.43	174		Pg	20 24 45.7	-1.8
YUK7					Sg	20 24 51.0	-2.3
PCA	Pinnacle	1.32	230	P	Pn	20 25 01.1	-2.3
PCA				S	Sb	20 25 17.0	-3.8
PCA	Pinnacle	1.32	230		Pn	20 25 00.9	-2.5
PCA	Pinnacle	1.32	230		Sb	20 25 18.5	-2.3
YUK3	Moose Creek	1.35	308	P	Pn	20 25 01.3	-2.5
YUK3				S	Sb	20 25 19.5	-2.1
YUK3	Moose Creek	1.35	308		Pn	20 25 01.0	-2.9
PNL	Peninsula	1.42	205	P	Pn	20 25 03.2	-1.5
PNL				S	Sn	20 25 21.0	-2.4
PNL	Peninsula	1.42	205		Pn	20 25 03.1	-1.5
PNL					Sn	20 25 21.2	-2.2
YUK2	White River	1.50	305	Pn	Pn	20 25 03.8	-2.1
YUK2				Sg	Sn	20 25 24.3	-1.3
YUK2	White River	1.50	305		Pn	20 25 03.8	-2.1
CTGM	Chitina Glacie	1.51	271	Pn	Pn	20 25 04.1	-1.9
CTGM				Sg	Sn	20 25 23.8	-2.0
CTGM	Chitina Glacie	1.51	271		Pn	20 25 03.9	-2.2
CTGM	Chitina Glacie	1.51	271		Sn	20 25 23.8	-2.0
YKU2	Yakutat	1.62	207		Pn	20 25 07.2	-0.1
YUK1	Sand Pete Hill	1.62	318	Pn	Pn	20 25 06.5	-1.1
YUK1				Sg	Sn	20 25 28.4	-0.1
YUK1	Sand Pete Hill	1.62	318		Pn	20 25 06.5	-1.1
BARN	Barnard Glacie	1.67	275	Pn	Pn	20 25 07.0	-1.3
BARN	Barnard Glacie	1.67	275		Sn	20 25 29.2	-0.6
WHY	Whitehorse	1.67	99	Pn	Pn	20 25 08.4	+0.2
WHY				Sg	Sn	20 25 32.2	-0.4
WHY	Whitehorse	1.67	99		Pn	20 25 08.4	+0.2
WHY	Whitehorse	1.67	99		Sb	20 25 31.6	+0.8
CHX	Chaix Hills	1.69	239		Pn	20 25 08.6	+0.2
GRNC	Granite Creek	1.74	264	Pn	Pn	20 25 07.8	-1.5
GRNC				Sg	Sn	20 25 29.7	-1.8
GRNC	Granite Creek	1.74	264		Pn	20 25 07.7	-1.5
GRNC					Sn	20 25 29.6	-1.9
DHAK	Deception Hill	1.88	180		Pn	20 25 10.2	-0.8
DHAK	Deception Hill	1.88	180		Sn	20 25 34.4	-0.2
BVCY	Beaver Creek	1.92	320	Pn	Pn	20 25 10.4	-1.2
BVCY				Sg	Sb	20 25 37.9	0.0
BVCY	Beaver Creek	1.92	320		Pn	20 25 10.4	-1.2
BALM	Baldy	2.00	274	Pn	Pn	20 25 12.5	-0.2
BALM				Sg	Sn	20 25 38.4	+0.6
BALM	Baldy	2.00	274	Pn	Pn	20 25 12.1	-0.6
BALM	Baldy	2.00	274		Sn	20 25 38.5	+0.6
KIAG	Kiagna River	2.01	271	Pn	Pn	20 25 12.2	-0.8
KIAG				Sg	Sn	20 25 38.1	-0.1
KIAG	Kiagna River	2.01	271		Pn	20 25 12.2	-0.8
KIAG					Sn	20 25 38.7	+0.5
PTPK	Patty Peak	2.07	278	Pn	Pn	20 25 13.6	-0.2
PTPK	Patty Peak	2.07	278		Pn	20 25 13.5	-0.2
SKAG	Skagway	2.09	135		Pn	20 25 13.7	-0.2
TGL	Tana Glacier	2.26	267		Pn	20 25 15.8	-0.5
MCARA	McCarthy VSAT	2.36	282	Pn	Pn	20 25 17.8	+0.2
CRQM	Cirque	2.41	267		Pn	20 25 17.8	-0.6
CRQM	Cirque	2.41	267		Sn	20 25 48.8	+0.9
VRDI	Verde Repeater	2.55	278		Pn	20 25 20.5	+0.2
BC03		2.69	323		Pn	20 25 20.9	-1.3
GLB	Gilahina Butte	2.74	283		Pn	20 25 23.6	+0.7
BERG	Berg Lake	2.75	260		Pn	20 25 22.7	-0.3
BESE	Bessie Mountai	2.94	143	Pn	Pn	20 25 25.4	-0.2
BESE				Sg	Sb	20 26 09.3	+2.1
BESE	Bessie Mountai	2.94	143		Pn	20 25 26.0	+0.5
DAWY	Dawson	3.16	351	Pn	Pn	20 25 29.0	+0.4
DAWY				Sg	Sg	20 26 17.5	-2.8
DAWY	Dawson	3.16	351		Pn	20 25 28.8	+0.2
GOAT	Goat Mountain	3.21	266		Pn	20 25 28.8	-0.5
RAGM	Ragged Mountai	3.22	263		Pn	20 25 29.1	-0.3
MENT	Mentasta	3.26	310		Pn	20 25 28.5	-1.5
JIS	Juneau Island	3.33	142	Pn	Pn	20 25 32.0	+1.2
EYAK	Cordova Ski Ar	3.71	267		Pn	20 25 36.3	+0.2
DOT	Dot Lake	3.83	317	Pn	Pn	20 25 36.5	-1.3
DOT				Sg	Sg	20 26 37.8	-3.9
DOT	Dot Lake	3.83	317		Pn	20 25 36.2	-1.6
PAX	Paxson	3.96	304	Pn	Pn	20 25 38.7	-1.0
PAX	Paxson	3.96	304		Pn	20 25 38.8	-0.9
SCRK	Sand Creek	4.04	321		Pn	20 25 39.5	-1.2
FID	Port Fidalgo	4.04	271		Pn	20 25 40.9	+0.3
EGAK	Eagle	4.06	342		Pn	20 25 40.9	+0.1
HIN	Hinchinbrook I	4.11	266		Pn	20 25 41.0	-0.6
RIDG	Independent Ri	4.15	315		Pn	20 25 40.8	-0.5
SIT	Sitka	4.20	158		Pn	20 25 41.7	-1.1

GLI Glacier Island 4.33 273 Pn 20 25 43.6 -0.9
MID Middleton Isla 4.33 253 Pn Pn 20 25 42.0 -2.5
SCM Sheep Creek Mo 4.46 285 Pn 20 25 46.1 -0.4
WAT6 Susitna Watana 4.80 294 Pn 20 25 51.7 +0.5
DHY Denali Highway 4.80 300 Pn 20 25 50.3 -0.9
DLBC Dease Lake 4.87 118 Pn Pn 20 25 52.6 +0.5
1.3nm,0.3s,baz=299,slow=8.2,SNR=9.2
DLBC Pg Pb 20 26 07.7 +3.6
14nm,0.3s,baz=295,slow=12,SNR=19
DLBC Sn Sn 20 26 52.6 +4.2
17nm,0.3s,baz=204,slow=17,SNR=4.4
DLBC Lg Lg 20 27 14.2
56nm,0.3s,baz=66,slow=19,SNR=9.5
DLBC Dease Lake 4.87 118 Pn Pn 20 25 51.9 -0.1
DLBC Sg Sg 20 27 10.6 -4.4
DLBC Dease Lake 4.87 118 Pn 20 25 52.0 -0.1
SML Sawmill 4.93 284 Pn Pn 20 25 51.3 -1.6
KNK Knik Glacier 4.97 280 Pn 20 25 53.5 +0.1
GHO Glory Hole Cre 5.21 284 Pn 20 25 57.0 +0.3
WAT1 Susitna Watana 5.22 295 Pn 20 25 58.2 +1.3
WAT2 Susitna Watana 5.28 297 Pn 20 25 58.9 +1.1
PMR Palmer 5.29 282 Pn 20 25 57.9 +0.1
HDA Harding Lake 5.30 315 Pn 20 25 55.5 -2.4
EPYK Eagle Plains 5.47 6 Pn 20 26 01.0 +0.7
WRAK Wrangell Islan 5.49 143 Pn 20 26 00.9 +0.4
IL31 5.50 318 Pn 20 25 58.4 -2.2
ILAR Eielson Array 5.50 318 Pn Pn 20 25 58.4 -2.3
0.5nm,0.3s,baz=139,slow=13,SNR=40
ILAR Pg Pb 20 26 07.0 -7.9
0.9nm,0.3s,baz=138,slow=13,SNR=19
ILAR Sn Sn 20 27 01.7 -2.2
4.7nm,0.3s,baz=119,slow=22,SNR=5.6
ILAR Lg Lg 20 27 30.6
11nm,0.3s,baz=131,slow=30,SNR=14
RND Reindeer 5.54 301 Pn 20 26 02.7 +1.4
RC01 Rabbit Creek A 5.59 276 Pn 20 26 02.4 +0.4
SEW Seward 5.61 266 Pn 20 26 01.7 -0.4
PRP Porcupine Dome 5.63 327 Pn 20 26 01.4 -1.3
MCK McKinley 5.71 304 Pn 20 26 04.2 +0.7
CCB Clear Creek Bu 5.74 314 Pn 20 26 01.2 -2.6
WRH Wood River Hil 5.74 312 Pn 20 26 01.6 -2.4
COLA College 5.89 316 Pn 20 26 07.2 +1.3
MDM Murphy Dome 6.07 316 Pn 20 26 08.5 0.0
SUA Susitna One 6.07 280 Pn 20 26 08.2 -0.4
BWN Browne 6.11 307 Pn Pn 20 26 08.8 -0.2
NEA Nenana 6.16 311 Pn 20 26 09.6 0.0
TRF Thorofare Moun 6.17 299 Pn 20 26 09.7 -0.3
BRLK Bradley Lake 6.39 265 Pn Pn 20 26 11.0 -1.9
FYU Fort Yukon 6.42 334 Pn 20 26 13.6 +0.3
SKT Skwentna 6.45 285 Pn 20 26 13.6 -0.2
KTH Kantishna Hill 6.47 299 Pn 20 26 14.3 +0.3
BPAW Bear Paw Mtn. 6.68 304 Pn 20 26 16.8 -0.1
HOM Homer 6.79 265 Pn Pn 20 26 18.4 +0.1
PPLA Purkeypile 6.87 292 Pn 20 26 19.2 -0.3
MLY Manley 7.00 311 Pn 20 26 19.3 -2.0
BM03 Burnt Mountain 7.05 340 Pn 20 26 22.3 +0.3
RSO Redoubt South 7.14 272 Pn 20 26 22.3 -1.0
NBC1 NorthernBC 1 7.28 94 Pn Pn 20 26 26.3 +1.3
NBC1 Sg Sg 20 28 27.7 -4.5
INK Inuvik 7.64 13 Pn Pn 20 26 29.1 -0.9
0.7nm,0.3s,baz=179,slow=14,SNR=24
INK Sn Sn 20 27 54.6 -1.8
2.0nm,0.3s,baz=149,slow=20,SNR=4.7
INK Lg Lg 20 28 39.3
7.9nm,0.3s,baz=124,slow=29,SNR=8.2
INK LR LR 20 28 59.9
comp=Z,101nm,20.7s,baz=196,slow=35
INK Inuvik 7.64 13 Pn Pn 20 26 29.7 -0.3
INK Sn Sn 20 27 52.7 -3.7
INK Sg Sg 20 28 37.4 -6.5
INK Inuvik 7.64 13 Pn 20 26 29.8 -0.3
NBC2 NorthernBC 2 7.89 92 Pn Pn 20 26 34.3 +0.7
NBC2 Sn Sn 20 27 58.2 -4.5
RUBB Prince Rupert 7.91 144 Sg Sg 20 28 46.8 -5.6
KDAK Kodiak Island 7.99 253 Pn Pn 20 26 34.2 -0.5
2.2nm,0.3s,baz=53,slow=8.7,SNR=16
KDAK LR LR 20 30 20.3
comp=Z,228nm,18.6s,baz=120,slow=43
KDAK Kodiak Island 7.99 253 Pn Pn 20 26 36.4 +1.6
COLD Coldfoot 8.17 325 Pn Pn 20 26 36.7 -0.5
COLD Coldfoot 8.17 325 Pn 20 26 37.1 -0.2
DIB Dawson Inlet, 8.38 156 Pn Pn 20 26 39.1 -1.1
DIB Dawson Inlet, 8.38 156 Pn Pn 20 26 39.2 -1.0
SVW2 Sparrevohn 8.42 279 Pn Pn 20 26 39.2 -1.5
MOBC Moresby Island 8.54 154 Pn 20 26 42.0 -0.5
OHAK Old Harbor 8.60 251 Pn Pn 20 26 42.2 -1.0
NBC5 NorthernBC 5 8.68 107 Pn Pn 20 26 44.7 +0.3
NBC5 Sg Sg 20 29 08.9 -8.3
NBC3 NorthernBC 3 8.82 91 Sn Sn 20 28 21.6 -3.9
NBC3 Sg Sg 20 29 16.6 -5.0
NBC6 NorthernBC 6 8.85 98 Pn Pn 20 26 47.1 +0.5
NBC6 Sg Sg 20 29 16.4 -6.2
TOLK Toolik Lake Re 9.08 333 Pn 20 26 51.4 +1.6
BMBC Bull Mountain 9.75 113 Sg Sn 20 29 42.9 +54
FSB Fort Saint Jam 9.86 125 Sg 20 29 52.7
DHRN Dharma Camp 10.20 45 Pn Pn 20 27 03.8 -1.1
C36M Paulatuk 10.28 29 Pn 20 27 05.4 -0.7
BBB Bella Bella 10.41 143 Pn Pn 20 27 09.7 +1.9
0.4nm,0.3s,baz=323,slow=14,SNR=2.8
NBC4 NorthernBC 4 10.63 112 Sg Sn 20 30 08.4 +58
HILA High Level 10.95 93 Pn Pn 20 27 14.1 -1.2
HILA Sn Sn 20 29 10.2 -7.5
UBRB Upper Baezaeko 11.16 130 Sg 20 30 24.8
YKW3 Yellowknife Ar 11.28 72 Pn Pn 20 27 19.0 -0.9
YKW3 Sn Sn 20 29 19.7 -6.0
YKA Yellowknife Ar 11.29 72 Pn Pn 20 27 19.1 -0.8
2.7nm,0.3s,baz=269,slow=13,SNR=73
YKA Sn Sn 20 29 20.7 -5.2
0.4nm,0.3s,baz=267,slow=23,SNR=5.3
YKA Lg Lg 20 30 29.5
0.3nm,0.3s,baz=271,slow=29,SNR=5.1
YKA LR LR 20 32 09.8
comp=Z,200nm,20.2s,baz=0.0,slow=40
YKW1 Yellowknife Ar 11.34 72 Pn Pn 20 27 20.3 -0.2
CHGN Chignik 11.48 255 Pn Pn 20 27 22.6 +0.1
KUKN Kugluktuk,NWT 12.08 46 Pn Pn 20 27 30.0 -0.7
KUKN Sn Sn 20 29 39.7 -5.4
ANM Nome 12.89 298 Pn Pn 20 27 41.6 -0.1
MNB Mounoet Dainar 13.97 120 P Pn 20 27 59.9 +3.0
LTY Liberty 17.07 136 P P 20 28 40.5 +1.3
C09A Chrisman Ranch 17.47 130 Pn 20 28 42.3 0.0
NEW Newport 17.53 127 P P 20 28 45.5 +1.3
0.1nm,0.3s,baz=322,slow=9.9,SNR=5.3
NEW Lg Lg 20 33 57.7
0.3nm,0.3s,baz=350,slow=11,SNR=2.8
NEW Newport 17.53 127 P P 20 28 44.9 +0.7
E07A Sunnyside 17.96 135 P P 20 28 48.9 0.0
WALA Waterton Lakes 18.21 120 P P 20 28 52.9 +1.2
WALA Waterton Lakes 18.21 120 P P 20 28 52.8 +1.0
WALA IAmb IAmb 20 28 56.6
comp=Z,13nm,1.1s
BSMT Bassoo Peak 18.79 124 P Pn 20 29 00.4 +1.7
JTMT Jette 19.08 123 P Pn 20 29 03.1 +1.0
JTMT Jette 19.08 123 P P 20 29 01.5 +0.2
JTMT IAmb IAmb 20 29 10.7
comp=Z,12nm,1.0s
YBMT Yellow Bay 19.10 122 P Pn 20 29 02.5 +0.2
FBMT Ferry Basin 19.30 124 P Pn 20 29 05.4 +0.7
F10A Beach Ranch, E 19.40 131 P P 20 29 04.7 -0.1
MSO Missoula 19.96 124 P P 20 29 10.7 -0.2
MSO IAmb IAmb 20 29 17.8
comp=Z,5.6nm,0.7s
PINE Pine Mountain 20.06 141 P P 20 29 12.2 +0.1
PINE IAmb IAmb 20 29 17.3
comp=Z,7.6nm,1.1s
FFC Flin Flon 20.07 92 P P 20 29 12.6 +0.7
BPMT Black Pine Rid 20.47 124 P Pn 20 29 18.5 -0.3
RES Resolute Bay 20.64 31 P Pn 20 29 19.1 -1.2
comp=Z,9.3nm,0.7s,baz=261,slow=9.4,SNR=24
RES Lg Lg 20 35 29.1
comp=Z,7.9nm,1.1s,baz=310,slow=14,SNR=3.7
RES LR LR 20 37 03.1
comp=Z,59nm,21.9s,baz=262,slow=36
RES Resolute Bay 20.64 31 P P 20 29 18.8 +0.8
RES Resolute Bay 20.64 31 P P 20 29 18.5 +0.6
RES IAmb IAmb 20 29 31.0
comp=Z,12nm,0.8s
EGMT Eagleton 20.79 116 P P 20 29 21.1 +1.1
EGMT IAmb IAmb 20 29 28.9
comp=Z,22nm,1.5s
J08A Circle Bar Ran 21.24 137 P P 20 29 26.5 +1.7
HBMT Mount Humbug 21.34 124 P P 20 29 27.7 +1.7
LRM Limekiln Ridge 21.38 123 P P 20 29 28.1 +1.6
YBH Yreka Blue Hor 21.45 147 LR LR 20 37 11.1
comp=Z,62nm,21.7s,baz=343,slow=35
DLMT Dillon 21.70 124 P P 20 29 29.8 0.0
DLMT IAmb IAmb 20 29 35.1
comp=Z,12nm,1.2s
FCC Fort Churchill 21.96 76 P P 20 29 33.7 +1.4
FCC Fort Churchill 21.96 76 P P 20 29 33.7 +1.4
FCC IAmb IAmb 20 29 35.4
comp=Z,17nm,1.1s
WVOR Wild Horse Val 22.01 139 P P 20 29 34.4 +1.2
MCMT McKenzie Canyo 22.04 126 P P 20 29 34.0 +0.5
MFID Camas Ranch 22.11 132 P P 20 29 33.1 -1.0
MFID IAmb IAmb 20 30 11.0
comp=Z,7.0nm,1.4s
GCMT Greycliff 22.56 119 P P 20 29 38.9 -0.1
WDC Whiskeytown Da 22.57 148 P P 20 29 41.6 +2.6
QLMT Earthquake Lak 22.60 123 P P 20 29 40.2 +0.6
YHL Hebgen Lake 22.69 123 P P 20 29 42.3 +1.8
YHB Horse Butte 22.76 123 P P 20 29 41.3 +0.1
YHH Holmes Hill 22.88 123 P P 20 29 43.3 +0.8
YMR Madison River 22.93 123 P P 20 29 43.7 +0.8
DGMT Dagmar 22.99 107 P P 20 29 40.8 -2.5
YNR Norris Junctio 23.00 122 P P 20 29 41.5 -2.2
YNE Yellowstone No 23.05 121 P P 20 29 44.3 +0.1
YMP Mirror Lake Pl 23.20 122 P P 20 29 45.1 -0.8
RLMT Red Lodge 23.27 120 P P 20 29 46.6 +0.2
RLMT IAmb IAmb 20 29 54.2
comp=Z,9.4nm,1.0s
H17A Grant Village 23.31 123 P P 20 29 48.0 +1.2
H17A IAmb IAmb 20 29 59.5
comp=Z,8.3nm,1.1s
YPP Pitchstone Pla 23.32 123 P P 20 29 47.7 +0.7
LAO LASA Array 23.37 113 P P 20 29 47.2 -0.1
LAO IAmb IAmb 20 30 29.5
comp=Z,23nm,1.4s
FLWY Flagg Ranch 23.52 123 P P 20 29 48.3 -0.6
FXWY Fox Creek 23.75 124 P P 20 29 51.7 +0.5
FXWY IAmb IAmb 20 30 01.8
comp=Z,14nm,1.3s
EUNU Eureka 24.21 19 P P 20 29 58.1 +3.0
ILON Igloolik, Nuna 24.23 46 P P 20 29 56.9 +1.7
ELK Elko 24.66 135 P P 20 30 02.8 +3.1
comp=Z,1.1nm,0.8s,baz=273,slow=12,SNR=3.3
ELK LR LR 20 40 31.9
comp=Z,50nm,19.6s,baz=156,slow=38
ELK Elko 24.66 135 IAmb IAmb 20 30 08.3
comp=Z,13nm,1.7s
BW06 Boulder Array 25.07 123 P P 20 30 02.4 -0.9
BW06 IAmb IAmb 20 30 08.0
comp=Z,4.7nm,0.9s
PD31 Pinedale Array 25.07 123 P P 20 30 03.1 -0.3
PD31 IAmb IAmb 20 30 08.0
comp=Z,4.2nm,0.9s
PDAR Pinedale Array 25.07 123 P P 20 30 05.5 +2.1
comp=Z,3.2nm,0.8s,baz=322,slow=7.6,SNR=19
ULM Lac du Bonnet 25.75 95 LR LR 20 40 43.4
comp=Z,81nm,20.1s,baz=296,slow=37
NVAR Mina Array Bea 25.77 142 LR LR 20 40 18.9
comp=Z,65nm,20.5s,baz=327,slow=36
RSSD Black Hills 26.34 114 P P 20 30 15.9 +1.2
K22A Casper 26.43 119 P P 20 30 16.5 +0.9
K22A IAmb IAmb 20 30 23.6
comp=Z,6.3nm,0.8s
MSU Marysvale 27.73 132 P P 20 30 25.9 -1.4
TPNV Topopah Spring 27.76 140 P P 20 30 27.0 -0.6
TPNV IAmb IAmb 20 30 51.8
comp=Z,2.1nm,0.7s
PHWY Pilot Hill 27.99 120 P P 20 30 29.1 -0.7
PHWY IAmb IAmb 20 30 40.0
comp=Z,4.7nm,1.0s
SDCO Great Sand Dun 30.97 124 P P 20 30 57.1 +0.9
SDCO IAmb IAmb 20 31 31.3
comp=Z,12nm,1.6s
FRB Frobisher Bay 31.00 54 P P 20 30 57.5 +1.6
LG4Q La Grande 4 34.11 73 P P 20 31 23.7 +0.5
PETK Petropavlovsk- 34.41 286 P P 20 31 27.4 +1.7
comp=Z,1.3nm,0.6s,baz=73,slow=10,SNR=4.9
PETK LR LR 20 46 35.7
comp=Z,28nm,19.0s,baz=63,slow=38
MIAR Mount Ida 38.81 112 P P 20 32 01.8 -1.7
MIAR IAmb IAmb 20 32 05.7
comp=Z,8.5nm,1.1s
TXAR Lajitas Array 39.08 128 P P 20 32 08.3 +2.4
comp=Z,0.9nm,0.8s,baz=323,slow=6.4,SNR=11
TXAR LR LR 20 49 45.1
comp=Z,39nm,19.4s,baz=0.0,slow=38
NRIK Noril'sk 45.95 339 LR LR 20 52 49.6
comp=Z,30nm,21.6s,baz=332,slow=37
KLR Kul'dur 48.77 299 LR LR 20 56 51.8
comp=Z,52nm,18.2s,baz=15,slow=40
ARCES ARCESS Array B 49.28 7 P P 20 33 25.6 -1.3
comp=Z,2.8nm,0.6s,baz=342,slow=6.4,SNR=16
CMIG Matias Romero 53.54 125 P P 20 34 00.9 +1.5
comp=Z,2.4nm,0.7s,baz=341,slow=8.3,SNR=4.8
MJAR Matsushiro Arr 55.84 285 P P 20 34 16.6 +0.7
comp=Z,1.1nm,0.8s,baz=277,slow=40,SNR=3.3
NB2 NORSAR Subarra 56.08 17 P P 20 34 17.4 0.0
comp=Z,1.1nm,0.7s,baz=345,slow=7.4
NOA NORSAR Array B 56.08 17 P P 20 34 17.3 0.0
comp=Z,2.9nm,0.9s,baz=344,slow=7.3,SNR=6.1
NOA LR LR 20 58 24.2
comp=Z,31nm,19.6s,baz=245,slow=36
FINES FINESS Array B 57.33 9 P P 20 34 25.9 -0.3
comp=Z,3.4nm,0.8s,baz=359,slow=9.7,SNR=12
KSRS Korea Array 59.83 293 P P 20 34 45.0 +1.0
comp=Z,1.6nm,0.7s,baz=31,slow=7.4,SNR=7.9
KSRS LR LR 21 01 32.7
comp=Z,16nm,19.5s,baz=290,slow=37
ZALV Zalesovo Beam 60.44 332 P P 20 34 47.2 -0.6
comp=Z,0.5nm,0.5s,baz=10,slow=8.8,SNR=2.8
ZALV LR LR 21 05 48.3
comp=Z,34nm,18.6s,baz=351,slow=41
CLL Collm 65.73 19 iP P 20 35 24.7 +1.6
CLL e(sP) sP 20 35 29.0 +0.5
BRG Berggiesshubel 66.30 19 eP P 20 35 27.7 +1.0
comp=Z,8.1nm,1.2s
DPC Dobruska-Polom 67.17 17 eP P 20 35 33.7 +1.3
DPC epP sP 20 35 38.5 +0.7
MKAR Makanchi Array 67.70 331 P P 20 35 34.5 -1.3
comp=Z,0.5nm,0.5s,baz=48,slow=7.2,SNR=5.5
MKAR LR LR 21 06 39.6
comp=Z,33nm,18.9s,baz=339,slow=37
KHC Kasperske Hory 67.93 20 eP P 20 35 37.8 +0.6
KHC epP sP 20 35 41.8 -0.8
GERES GERESS Array B 68.23 20 P P 20 35 40.0 +0.9
comp=Z,1.2nm,0.9s,baz=344,slow=3.3,SNR=6.7
AKASG Malin Array Be 68.23 9 P P 20 35 38.9 -0.1
comp=Z,1.8nm,0.5s,baz=354,slow=6.2,SNR=7.8
WMQ Urumqi 69.10 326 eP P 20 35 47.3 +2.7
ABKAR Akbulak array 69.16 347 P P 20 35 44.0 -0.8
MOTA Moosalm 69.23 22 epP P 20 35 46.1 +0.6
comp=Z,0.7nm,0.4s
WATA Walderalm 69.33 21 epP P 20 35 47.0 +1.0
comp=Z,3.4nm,0.8s
VYHS Vyhne 69.34 16 eP P 20 35 46.6 +0.7
WTTA Wattenberg 69.41 21 epP P 20 35 47.7 +1.1
comp=Z,7.8nm,0.9s
CONA Conrad Observa 69.46 18 epP P 20 35 47.9 +1.1
comp=Z,9.3nm,1.9s
FETA Feichten 69.47 22 epP P 20 35 48.7 +1.7
comp=Z,0.7nm,0.5s
KBA Koelnbreinsper 69.88 20 epP P 20 35 50.8 +1.3
comp=Z,3.5nm,0.7s
ARSA Arzberg 70.07 19 epP P 20 35 51.2 +0.7
comp=Z,4.8nm,1.1s
OBKA Obir 70.63 20 epP P 20 35 54.8 +0.8
comp=Z,7.4nm,0.9s
ESDC Sonseca Array 73.01 35 P P 20 36 09.6 +1.3
comp=Z,4.1nm,0.7s,baz=335,slow=6.1,SNR=14
KSH Kashi 76.05 333 P P 20 36 29.3 +3.2
KSH PcP PcP 20 36 37.5 -0.9
KSH PP PP 20 39 19.5 +3.5
KSH S S 20 46 10.0 +0.9
KSH sS sS 20 46 21.3 +5.6
BRTR Keskin Array B 79.45 6 P P 20 36 47.1 +2.1
comp=Z,0.9nm,0.8s,baz=38,slow=7.3,SNR=2.9
NIL Nilore 82.28 334 P P 20 36 58.8 -1.3
TAPN Taplejung 84.42 320 eP P 20 37 11.7 +0.1
comp=Z,20nm,1.2s
GUN Gumba 84.46 322 eP P 20 37 11.8 -0.1
JIRN Jiri 84.60 321 eP P 20 37 12.7 +0.1
comp=Z,48nm,1.0s
DANN Dangsing 84.68 324 eP P 20 37 12.7 -0.2
comp=Z,24nm,0.8s
GKN Gorkha 84.75 323 eP P 20 37 12.8 -0.3
KKN Kakani 84.76 322 eP P 20 37 13.3 +0.1
PKIN Phulchoki 84.92 322 eP P 20 37 13.5 -0.6
comp=Z,4.2nm,0.5s
PKI Pulchoki 84.92 322 eP P 20 37 13.8 -0.4
DMN Daman 84.98 322 eP P 20 37 14.4 0.0
ODAN Odare 84.98 320 eP P 20 37 14.2 -0.2
comp=Z,13nm,0.9s
RAMN Ramite 85.14 321 eP P 20 37 14.6 -0.6
comp=Z,12nm,0.7s
CHTO Chiang Mai 88.32 307 P P 20 37 29.8 -0.7
CM31 Chiang Mai Arr 88.64 307 P P 20 37 31.6 -0.4
CMAR Chiang Mai Arr 88.64 307 P P 20 37 32.4 +0.4
comp=Z,6.8nm,0.8s,baz=1.2,slow=5.5,SNR=49
PBKT Sadao Pong 89.55 305 P P 20 37 36.4 +0.2
SAML Samuel 90.61 107 P P 20 37 40.8 -0.3
BOSA Boshof 145.81 26 PKPbc PKPab 20 44 18.6 +0.5
comp=Z,2.2nm,0.7s,baz=162,slow=14,SNR=3.0

ATA 25 20:31:45.6±0.6, 38.36N×42.46E, h7km±3km, ML1.8, MW2.8
DDA 25 20:31:46.7, 38.33N×42.44E, h7km±3km, ML1.8
ISK 25 20:31:46.2, 38.34N×42.47E, h7km, ML2.0/8
ISC 25 20:31:46.4±0.9, 38.34N±0.03×42.47E±0.02, h13km±8km, n21, σ0.76/33, Turkey

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BLIS Bitlis-Merkez 0.28 284 eP Pg 20 31 51.9 -0.6
BLIS eS Sg 20 31 56.4 0.0
BLIS IAML 20 31 58.4
comp=Z,95nm,0.3s
BLIS Bitlis-Merkez 0.28 284 iP Pg 20 31 52.1 -0.3
BLIS iS Sg 20 31 56.5 0.0
BLIS IAML 20 31 58.0
comp=N,221nm,0.4s
GURO Guroymak-BITLI 0.40 301 PG Pg 20 31 54.7 +0.2
GURO SG Sg 20 32 00.4 +0.5
AKDM Akdamar-Van 0.40 92 PG Pg 20 31 54.4 -0.2
AKDM SG Sg 20 32 00.5 +0.5
GEVA Gevas 0.47 94 eP Pg 20 31 55.8 0.0
GEVA eS Sg 20 32 02.8 +0.9
GEVA IAML 20 32 05.6
comp=Z,87nm,0.3s
GEVA Gevas 0.47 94 iP Pg 20 31 55.9 +0.2
GEVA iS Sb 20 32 03.5 -0.1
GEVA IAML 20 32 06.0
comp=E,119nm,0.4s
GEVA IAML 20 32 06.0
comp=N,88nm,0.3s
ADCV BITLIS_Adilcev 0.51 23 iP Pb 20 31 58.3 +1.0
ADCV iS Sn 20 32 07.3 -1.0
SRTM Siirt_Merkez 0.56 231 iP Pg 20 31 56.9 -0.5
SRTM iS Sb 20 32 05.7 -0.3
SRTM IAML 20 32 09.0
comp=N,80nm,0.6s
SRTM IAML 20 32 10.0
comp=E,87nm,0.7s
TVAN Van 0.76 76 eP Pg 20 32 00.9 -0.3
TVAN Van 0.76 76 iP Pb 20 32 01.8 +0.1
MLAZ Malazgirt-MUS 0.80 5 PG Pb 20 32 02.2 -0.1
MUSM Mu-Merkez 0.84 297 iP Pb 20 32 03.3 +0.3
MUSM iS Sb 20 32 15.0 +0.7
SIRT Sirnak 0.84 181 PG Pb 20 32 02.9 -0.1
SVAN Silvan-Diyarba 1.02 259 PG Pb 20 32 06.1 +0.1
SVAN Silvan-Diyarba 1.02 259 iP Pn 20 32 06.8 +0.3
SVAN iS Sn 20 32 20.5 -0.2
SVAN IAML 20 32 21.0
comp=E,20nm,1.7s
VMUR Van-Muradiye 1.08 53 iP Pn 20 32 08.2 +0.7
VMUR iS Sg 20 32 18.1 -3.3
VMUR IAML 20 32 32.0
comp=E,22nm,0.9s
VMUR IAML 20 32 33.0
comp=N,19nm,0.6s
VRTB Varto-Mus 1.14 316 PN Pb 20 32 08.1 0.0
AGRB Hanur-Agry 1.30 18 PN Pg 20 32 11.4 0.0
CUKT Cukurca 1.42 140 PN Pn 20 32 12.7 +0.6
BNGB Bingl 1.54 295 PN Pb 20 32 14.9 -0.1
HANI Diyarbakir_Han 1.63 273 iP Pb 20 32 16.4 0.0
HANI iS Sg 20 32 38.6 -0.2
HANI IAML 20 32 39.0
comp=N,15nm,0.4s
HANI IAML 20 32 40.0
comp=E,14nm,0.5s

KRSC 25 20:41:05.3±1.8, 50.06N×156.87E, h48km±23km, ML4.4, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SKR Severo-Kuril's 0.79 323 iP Pn 20 41 20.3 +0.1
SKR eS Sn 20 41 30.3 -0.6
ALID Alaid 1.17 314 iP Pn 20 41 25.2 -0.2
PAU Pauzhetka 1.41 359 eP Pn 20 41 30.7 +2.1
PAU eS Sn 20 41 48.7 +2.7
KDTR Khodutka, Kamc 1.91 23 eP Pn 20 41 38.1 +2.7
KDTR eS Sn 20 42 01.4 +3.1
ASAK Asacha 2.42 15 eP Pn 20 41 45.9 +3.5
ASAK eS Sn 20 42 15.1 +4.3
MTVR Mutnovka 2.56 18 eP Pn 20 41 47.9 +3.4
MTVR eS Sn 20 42 18.6 +4.1
RUS Russkaya 2.59 23 eP Pn 20 41 47.5 +2.8
RUS eS Sn 20 42 18.1 +3.1
GRL Gorelyy 2.61 16 eP Pn 20 41 48.6 +3.5
GRL eS Sn 20 42 19.4 +3.8
APC Apacha 2.88 3 eP Pn 20 41 50.8 +2.2
KRMR Karymshinskiy 2.89 15 eP Pn 20 41 51.1 +2.3
KRMR eS Sn 20 42 25.5 +3.3
DALK Dalny 3.20 21 eP Pn 20 41 56.5 +3.4
DALK eS Sn 20 42 34.5 +4.6
UGLR Uglovaya 3.38 20 eP Pn 20 41 59.9 +4.2
AVH Avacha 3.42 19 eP Pn 20 42 00.9 +4.8
AVH eS Sn 20 42 41.3 +5.9
KOK Koryaka 3.42 18 eP Pn 20 42 01.1 +4.9
KOK eS Sn 20 42 39.7 +4.2
SMAR Somma 3.43 20 eP Pn 20 42 01.2 +4.8
KRER Koryakskii 3.46 19 eP Pn 20 42 01.4 +4.6
KRER eS Sn 20 42 40.4 +3.9
SDLR Sedlovina 3.46 20 eP Pn 20 42 00.5 +3.7
SDLR eS Sn 20 42 40.8 +4.3
NLC Nalytchevo 3.48 25 eP Pn 20 41 59.0 +2.1
NLC eS Sn 20 42 39.7 +3.0
KRX Arik 3.49 18 eP Pn 20 42 01.7 +4.6
KRX eS Sn 20 42 41.0 +3.8
SPN Mys Shipunski 3.62 32 eP Pn 20 42 02.7 +3.8
SPN eS Sn 20 42 44.2 +3.8
KII Karymskiy 4.29 21 P Pn 20 42 12.2 +4.1
KII eS Sn 20 43 02.1 +5.2
KZV Kizimen 5.48 21 eP Pn 20 42 28.3 +3.9
TUMD Tumrok D 5.58 21 eP Pn 20 42 30.5 +4.7
TUMD eS Sn 20 43 32.1 +3.5
TUMR Tumrok 5.60 20 eP Pn 20 42 31.4 +5.3
KMNR Kamenistaya 6.06 18 eP Pn 20 42 38.5 +6.1
KBTR Krutoberegovo 7.12 28 eP Pn 20 42 49.9 +3.1
KBG Krutoberegovo 7.13 27 P Pn 20 42 51.3 +4.4
BKI Bering 7.56 44 S Sn 20 44 17.6 +0.5

IDC 25 20:48:32.5±5.4, 7.18S×148.69E, h102km±38km, mb3.1/3, mb1 3.2/5, mb1mx3.0/35, mbtmp3.3/5, Error ellipse: s-maj=108.2km s-min=39.4km az=115.0, Eastern New Guinea region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 2.68 214 P Pn 20 49 13.9 -0.1
3.9nm,0.3s,baz=356,slow=13,SNR=4.9
PMG S Sn 20 49 46.8 +0.8
7.1nm,0.3s,baz=346,slow=21,SNR=3.7
WRA Warramunga Arr 18.83 226 P P 20 52 44.6 +0.1
0.1nm,0.3s,baz=52,slow=11,SNR=4.9
ASAR Alice Springs 21.68 219 P P 20 53 15.4 +0.2
0.4nm,0.7s,baz=57,slow=9.3,SNR=5.6
FITZ Fitzroy Crossi 24.94 242 P P 20 53 46.1 -0.3
0.8nm,0.3s,baz=58,slow=11,SNR=8.7
MKAR Makanchi Array 79.47 320 P P 21 00 28.0 +0.2
0.1nm,0.4s,baz=94,slow=8.0,SNR=5.6

INET 25 20:50:04.5, 12.95N×89.03W, h15km, ML3.2
SNET 25 20:50:05.3±0.7, 12.99N×89.06W, h44km±31km, ML3.5
UCR 25 20:50:05.3±0.8, 12.99N×89.06W, h49km±27km, ML3.5
ISC 25 20:50:05.4±2.6, 13.0N±0.1×89.05W±0.07, h55km, n31, σ0.27/35, 8C-11D, Off coast of central America

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
LFRS	El Faro	0.64	359	⇓iP	Pn	20 50 18.1	-0.7
COEB	Comit de Eme	0.72	45	⇑eP	Pn	20 50 19.8	0.0
COEB					IAML	20 50 33.2	
	comp=Z,4μm,0.4s						
COEB	Comit de Eme	0.72	45	⇑eP	Pn	20 50 19.8	0.0
COEB					IAML	20 50 33.2	
	comp=Z,4μm,0.4s						
PAVA	Las Pavas	0.73	9	⇓eP	Pn	20 50 19.6	-0.4
PAVA					IAML	20 50 33.1	
	comp=Z,718nm,0.4s						
PAVA	Las Pavas	0.73	9	⇓eP	Pn	20 50 19.6	-0.4
PAVA					IAML	20 50 33.1	
	comp=Z,718nm,0.4s						
TECA	Tecapa	0.74	47	⇓eP	Pn	20 50 20.0	-0.1
TECA				eS	Sn	20 50 31.1	+0.3
TECA	Tecapa	0.74	47	⇓eP	Pn	20 50 20.0	-0.1
TECA				eS	Sn	20 50 31.1	+0.3
LBRS	Las Brisas	0.75	1	eP	Pn	20 50 19.9	-0.2
LFU	La Fuente	0.76	356	⇓iP	Pn	20 50 20.0	-0.3
LFU				eS	Sn	20 50 31.2	+0.1
LFU	La Fuente	0.76	356	⇓iP	Pn	20 50 20.0	-0.3
LFU				eS	Sn	20 50 31.2	+0.1
BOOS	Boqueron	0.78	344	eP	Pn	20 50 20.2	-0.4
JUCU	Jucuar¡n	0.83	71	⇑eP	Pn	20 50 20.6	-0.5
JUCU					IAML	20 50 36.1	
	comp=Z,1μm,0.3s						
JUCU	Jucuar¡n	0.83	71	⇑eP	Pn	20 50 20.6	-0.5
JUCU					IAML	20 50 36.1	
	comp=Z,1μm,0.3s						
LCY	Lacayo	0.86	59	⇑iP	Pn	20 50 21.7	+0.1
LCY	Lacayo	0.86	59	⇑iP	Pn	20 50 21.7	+0.1
PACA	Pacayal	0.86	56	⇓iP	Pn	20 50 21.6	+0.1
PACA	Pacayal	0.86	56	⇓iP	Pn	20 50 21.6	+0.1
CEVE	Cerro Verde	1.00	327	eP	Pn	20 50 23.5	-0.1
CEVE					IAML	20 50 44.1	
	comp=Z,1μm,0.3s						
CEVE	Cerro Verde	1.00	327	eP	Pn	20 50 23.5	-0.1
CEVE					IAML	20 50 44.1	
	comp=Z,1μm,0.3s						
SBLS	San Blas	1.01	327	eP	Pn	20 50 23.7	0.0
SBLS	San Blas	1.01	327	eP	Pn	20 50 23.7	0.0
SNJE	San Jose	1.03	329	eP	Pn	20 50 23.8	-0.1
SNJE	San Jose	1.03	329	eP	Pn	20 50 23.8	-0.1
RTR	El Retiro	1.07	328	eP	Pn	20 50 24.6	+0.2
RTR	El Retiro	1.07	328	eP	Pn	20 50 24.6	+0.2
LCND	La Caada	1.18	74	⇑eP	Pn	20 50 25.8	+0.1
LCND					IAML	20 50 43.9	
	comp=Z,989nm,0.5s						
LCND	La Caada	1.18	74	⇑eP	Pn	20 50 25.8	+0.1
LCND					IAML	20 50 43.9	
	comp=Z,989nm,0.5s						
CNCH	Conchagua	1.22	76	⇓eP	Pn	20 50 26.1	-0.3
CNCH	Conchagua	1.22	76	⇓eP	Pn	20 50 26.1	-0.3
MTO3	Montecristo	1.44	348	eP	Pn	20 50 29.3	-0.1
MTO3	Montecristo	1.44	348	eP	Pn	20 50 29.3	-0.1

NEIC 25 21:01:45.7±0.9, 18.74N±0.05×67.37W±0.03, h28km±10km, Error ellipse: s-maj=7.9km s-min=3.7km az=198.0
RSPR 25 21:01:46.2, 18.80N×67.35W, h7km, MD3.3/16
ISC 25 21:01:44.5±1.1, 18.80N±0.05×67.39W±0.03, h27km, n64, σ0.64/75, 13C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
AGPR	Aguadilla, PR	0.42	141	⇑iP	Pb	21 01 54.2	+0.7
AGPR	Aguadilla, PR	0.42	141	eS	Sb	21 02 00.3	+0.6
AGPR	Aguadilla, PR	0.42	141		Pb	21 01 54.2	+0.7
AGPR					Sb	21 02 00.3	+0.6
AGPR	Aguadilla, PR	0.42	141		Pb	21 01 53.6	0.0
MPR	Mayaguez	0.63	158		Pn	21 01 57.6	-0.1
LSP	Las Mesas	0.68	155	⇑eP	Pn	21 01 58.6	+0.1
LSP	Las Mesas	0.68	155	eS	Sn	21 02 08.0	-0.2
LSP	Las Mesas	0.68	155		Pn	21 01 58.6	+0.1
LSP					Sn	21 02 08.0	-0.2
AOPR	Arecibo Observ	0.75	126	⇑iP	Pb	21 01 58.9	-0.1
AOPR	Arecibo Observ	0.75	126	⇑eP	Pb	21 01 58.9	-0.1
AOPR				eS	Sn	21 02 09.4	-0.5
AOPR	Arecibo Observ	0.75	126		Pb	21 01 58.9	-0.1
AOPR	Arecibo Observ	0.75	126		Sb	21 02 08.8	-0.2
CRPR	Cabo Rojo, PR	0.83	161	⇑eP	Pn	21 02 00.8	+0.3
CRPR	Cabo Rojo, PR	0.83	161	eS	Sn	21 02 11.9	+0.1
CRPR	Cabo Rojo, PR	0.83	161		Pn	21 02 00.8	+0.3
CRPR					Sn	21 02 11.9	+0.1
EMPR	Esperanza - Ma	0.88	111	⇑eP	Pb	21 02 01.0	-0.1
EMPR	Esperanza - Ma	0.88	111	eS	Sb	21 02 12.6	+0.2
EMPR	Esperanza - Ma	0.88	111		Pb	21 02 01.0	-0.1
EMPR	Esperanza - Ma	0.88	111		Sb	21 02 12.6	+0.2
MLPR	Magueyes Islan	0.89	158	⇑iP	Pb	21 02 00.6	-0.7
MLPR	Magueyes Islan	0.89	158	eS	Sb	21 02 12.1	-0.6
MLPR	Magueyes Islan	0.89	158		Pb	21 02 00.6	-0.7
MLPR					Sb	21 02 12.1	-0.6
GBPR	Guanica, Bosqu	0.95	149	eS	Sn	21 02 15.3	+0.5
GBPR	Guanica, Bosqu	0.95	149	⇓eP	Pb	21 02 02.7	+0.3
GBPR	Guanica, Bosqu	0.95	149		Pb	21 02 02.7	+0.3
GBPR					Sn	21 02 15.3	+0.5
PCDR	Punta Cana, DR	0.98	253	eS	Sn	21 02 16.5	+1.0
PCDR	Punta Cana, DR	0.98	253	⇑eP	Pb	21 02 03.6	+0.8
PCDR				eS	Sn	21 02 17.4	+1.9
PCDR	Punta Cana, DR	0.98	253	⇑eP	Pb	21 02 03.7	+0.8
PCDR	Punta Cana, DR	0.98	253		Pb	21 02 03.7	+0.8
OBIP	Obispado Ponce	1.06	135	eS	Sn	21 02 17.2	-0.2
OBIP	Obispado Ponce	1.06	135	⇑iP	Pn	21 02 03.9	+0.3
OBIP	Obispado Ponce	1.06	135		Pn	21 02 03.9	+0.3
OBIP					Sn	21 02 17.2	-0.2
ICMP	Isla Caja de M	1.22	138	eS	Sn	21 02 21.8	-0.6
ICMP	Isla Caja de M	1.22	138	⇑eP	Pn	21 02 05.8	0.0
ICMP	Isla Caja de M	1.22	138		Pn	21 02 05.8	0.0
GCPR	Guaynabo City	1.33	111	⇑eP	Pn	21 02 07.9	+0.5
GCPR	Guaynabo City	1.33	111		Pn	21 02 07.9	+0.5
SJG	San Juan	1.36	120		Pn	21 02 08.0	+0.3
IGPR	InterUniversit	1.47	124	⇓eP	Pn	21 02 09.7	+0.4
IGPR				eS	Sn	21 02 27.9	+0.2
IGPR	InterUniversit	1.47	124	⇓eP	Pn	21 02 09.7	+0.4
IGPR	InterUniversit	1.47	124		Pn	21 02 09.9	+0.6
PDPR	Patillas Dam,	1.51	121	⇓eP	Pn	21 02 10.5	+0.6
PDPR	Patillas Dam,	1.51	121	eS	Sn	21 02 28.6	0.0
PDPR	Patillas Dam,	1.51	121		Pn	21 02 10.5	+0.6
PDPR	Patillas Dam,	1.51	121		Sn	21 02 28.8	+0.2
CBYP	Canovanas	1.55	110	⇑eP	Pn	21 02 10.5	+0.1
CBYP	Canovanas	1.55	110	⇑eP	Pn	21 02 10.7	+0.3
CBYP	Canovanas	1.55	110		Pn	21 02 10.7	+0.3
HUMP	Col San Antoni	1.60	114	⇑eP	Pn	21 02 11.3	+0.2
HUMP	Col San Antoni	1.60	114	eS	Sn	21 02 30.6	-0.2
HUMP	Col San Antoni	1.60	114	⇑eP	Pn	21 02 11.3	+0.2
HUMP	Col San Antoni	1.60	114		Pn	21 02 11.3	+0.2
HUMP					Sn	21 02 30.6	-0.2
MTP	Monte Pirata	1.88	111	⇓eP	Pn	21 02 15.1	+0.2
MTP	Monte Pirata	1.88	111	eS	Sn	21 02 38.1	+0.4
MTP	Monte Pirata	1.88	111		Pn	21 02 15.3	+0.4
MTP	Monte Pirata	1.88	111		Sn	21 02 38.1	+0.4
DR12	Loma Pena Alta	1.89	270		Pn	21 02 19.0	+0.7
CUPR	Culebra, Puert	2.06	103	⇓eP	Pn	21 02 17.4	+0.1
CUPR	Culebra, Puert	2.06	103	eS	Sn	21 02 42.2	0.0
CUPR	Culebra, Puert	2.06	103		Pn	21 02 17.4	+0.1
STVI	Saint Thomas	2.35	100	⇑eP	Pn	21 02 21.9	+0.5
STVI	Saint Thomas	2.35	100	eS	Sn	21 02 50.0	+0.5
STVI	Saint Thomas	2.35	100		Pn	21 02 21.9	+0.5
STVI					Sn	21 02 50.0	+0.5
BANI	BANI	2.84	262	Pn	Pb	21 02 32.4	-2.3
SDDR	Presa de Saban	3.69	273		Pb	21 02 46.5	-2.7

IDC 25 21:16:36.6±0.7, 62.96S×162.11W, h0km, mb4.3/8, mb1 4.4/8, mb1mx4.2/31, mbtmp4.3/8, MS4.5/19, Ms1 4.4/19, ms1mx4.4/26, Error ellipse: s-maj=32.1km s-min=19.6km az=27.0
GCMT 25 21:16:43.0±0.2, 62.87S±0.01×161.00W±0.03, h12km±1km, MW5.1/125, Moment Tensor Solution. s58,c66; s125,c193; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.08±.18; $M_{\theta\theta}$6.14±.18; $M_{\phi\phi}$-4.06±.13; $M_{r\theta}$-0.61±.35; $M_{\theta\phi}$2.84±.12; $M_{\phi r}$1.34±.39; Best double couple: $M_0$6.15600×10^{16} NP1:ϕ_s213.00000°, δ72.00000°, λ-164.00000°. NP2:ϕ_s118.00000°, δ75.00000°, λ-18.00000°. Principal axes: T 6.8850, Plg2.0000°, Azm166.0000°; N -1.4580, Plg66.0000°, Azm259.0000°; P -5.4270, Plg23.0000°, Azm75.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function
ISC 25 21:16:38.5±0.7, 63.0S±0.2×162.2W±0.2, h10km, n40, σ1.24/17, mb4.4/8, MS4.5/22, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
VNDA	Vanda	18.40	204	LR	LR	21 26 19.3	
	comp=Z,2μm,21.2s,baz=62,slow=32						
RPZ	Rata Peaks	24.75	309	LR	LR	21 30 22.3	
	comp=Z,688nm,18.5s,baz=144,slow=33						
QSPA	South Pole Qui	27.10	180	P	P	21 22 21.9	+0.7
	8.8nm,1.1s,baz=49,slow=4.7,SNR=9.0						
QSPA				LR	LR	21 31 15.2	
	comp=Z,1μm,20.5s,baz=55,slow=32						
URZ	Urewera	27.79	323	LR	LR	21 31 05.7	
	comp=Z,1μm,21.2s,baz=166,slow=31						
TBI	Tubuai	40.56	18	eS	S	21 30 06.8	-20
	158nm,25.8s						
TBI				eLQ	LQ	21 33 17.2	
	637nm,32.2s						
TBI				eLR	LR	21 34 59.7	
	comp=Z,2μm,27.8s,baz=186						
TBI	Tubuai	40.56	18	eT	T	22 06 44.2	
	23nm,0.3s						
SNAA	Sanae	44.84	171	P	P	21 24 50.9	-1.2
	12nm,1.1s,baz=209,slow=6.2,SNR=6.5						
SNAA				LR	LR	21 42 56.3	
	comp=Z,1μm,18.1s,baz=208,slow=35						
USHA	Ushuaia	44.88	125	LR	LR	21 38 30.9	
	comp=Z,514nm,20.7s,baz=218,slow=29						
MAW	Mawson	45.70	202	LR	LR	21 42 38.0	
	comp=Z,408nm,19.9s,baz=156,slow=34						
TVO	Taravao	46.07	17	eT	T	22 13 36.7	
	2.0nm,0.3s						
DZM	Mont Dzumac	46.07	318	eLR	LR	21 37 51.4	
	comp=Z,1μm,23.2s						
PAE	Paea	46.15	17	eT	T	22 13 43.1	
	3.0nm,0.2s						
MEH	Mehetia	46.15	19	eT	T	22 13 41.6	
	29nm,0.3s						
PPT2	Papeete2	46.22	17	eS	S	21 31 29.5	-20
	253nm,26.0s						
PPT2				eLQ	LQ	21 35 41.6	
	2μm,29.2s						
PPT2				eLR	LR	21 37 45.8	
	comp=Z,2μm,25.0s,baz=190						
PPT2	Papeete2	46.22	17	eT	T	22 13 48.6	
	7.3nm,0.3s						
PPT	Papeete	46.24	17	LR	LR	21 38 44.4	
	comp=Z,638nm,21.8s,baz=190,slow=29						
STKA	Stephens Creek	46.89	284	LR	LR	21 41 29.5	
	comp=Z,241nm,20.3s,baz=155,slow=32						
RPN	Rapa Nui	49.52	69	LR	LR	21 41 03.2	
	comp=Z,816nm,21.1s,baz=226,slow=30						
PLCA	Paso Flores	55.35	113	P	P	21 26 13.1	+0.9
	0.7nm,0.7s,baz=315,slow=2.9,SNR=3.2						
PLCA				LR	LR	21 45 25.5	
	comp=Z,195nm,19.3s,baz=234,slow=31						
TAOE	Nuku Hiva Isla	56.36	26	eLR	LR	21 42 18.6	
	comp=Z,767nm,26.1s						
H01W1	Cape Leeuwin H	56.76	258	T	T	22 29 04.8	
	baz=146,slow=76,SNR=9.2						
H01W2	Cape Leeuwin H	56.77	258	T	T	22 29 04.3	
	baz=146,slow=76,SNR=10						
H01W3	Cape Leeuwin H	56.78	258	T	T	22 29 07.0	
	baz=146,slow=76,SNR=12						
ASAR	Alice Springs	57.38	282	P	P	21 26 27.8	+0.9
	2.7nm,0.9s,baz=149,slow=7.3,SNR=15						
ASAR				LR	LR	21 47 38.5	
	comp=Z,421nm,21.2s,baz=152,slow=32						
WRA	Warramunga Arr	60.44	285	P	P	21 26 48.3	+0.2
	1.4nm,0.9s,baz=163,slow=6.3,SNR=6.4						
WRA				LR	LR	21 50 52.0	
	comp=Z,250nm,18.1s,baz=160,slow=34						
LVC	Limon Verde	71.57	103	P	P	21 28 01.2	+1.1
	4.9nm,0.7s,baz=234,slow=2.1,SNR=3.6						
CPUP	Villa Florida	73.28	115	LR	LR	21 57 39.4	
	comp=Z,200nm,18.1s,baz=212,slow=34						
LPAZ	La Paz	77.46	101	P	P	21 28 33.7	-1.0
	2.6nm,0.8s,baz=181,slow=5.4,SNR=7.6						
LPAZ				LR	LR	21 55 26.4	
	comp=Z,100nm,19.9s,baz=198,slow=30						
LEM	Lembang	84.06	267	LR	LR	21 59 55.0	
	comp=Z,160nm,22.0s,baz=134,slow=31						
BDFB	Brasilia	86.65	118	LR	LR	22 04 10.8	
	comp=Z,381nm,21.7s,baz=179,slow=33						
BOSA	Boshof	88.50	187	P	P	21 29 31.1	0.0
	4.8nm,0.9s,baz=266,slow=5.2,SNR=3.6						
BOSA				LR	LR	22 06 07.0	
	comp=Z,590nm,19.5s,baz=158,slow=34						
ROSC	El Rosal	93.30	86	LR	LR	22 05 21.0	
	comp=Z,110nm,18.5s,baz=190,slow=31						
ILAR	Eielson Array	127.98	8	PKP	PKPdf	21 35 41.8	-1.0
	0.8nm,0.9s,baz=230,slow=1.4,SNR=6.8						
MKAR	Makanchi Array	141.41	276	PKP	PKPdf	21 36 09.1	+0.6
	0.2nm,0.7s,baz=118,slow=2.1,SNR=2.9						
FRB	Frobisher Bay	144.09	49	PKP	PKPab	21 36 10.6	+0.5
	1.3nm,0.6s,baz=149,slow=4.4,SNR=3.8						
RES	Resolute Bay	144.20	25	PKP	PKPab	21 36 09.4	-0.9
	2.6nm,0.8s,baz=244,slow=8.9,SNR=4.9						
GEYT	Alibeck	145.07	243	PKPbc	PKPbc	21 36 14.5	-0.2
	1.8nm,1.1s,baz=269,slow=5.8,SNR=3.0						
ZALV	Zalesovo Beam	145.40	287	PKPbc	PKPdf	21 36 13.0	-2.2
	0.3nm,0.3s,baz=142,slow=3.6,SNR=4.0						
MDT	Midelt	146.62	144	PKPbc	PKPdf	21 36 18.2	+0.1
	2.4nm,0.9s,baz=285,slow=4.1,SNR=1.9						
BVAR	Borovoye Array	151.24	274	PKPbc	PKPbc	21 36 29.9	-0.8
	1.0nm,0.8s,baz=103,slow=6.4,SNR=4.2						
BVAR				PKPab	sPKPbc	21 36 36.8	+2.8
	1.7nm,0.8s,baz=132,slow=4.4,SNR=10.0						

IDC 25 21:30:33.8±1.1, 22.59S×66.03W, h249km±14km, mb3.8/3, mb1 3.6/9, mb1mx3.4/28, mbtmp4.1/9, Error ellipse: s-maj=20.8km s-min=13.2km az=101.0
NEIC 25 21:30:33.5±2.2, 22.62S±0.02×66.0W±0.1, h247km±10km, mb4.0/2, Md3.6(SJA), Error ellipse: s-maj=17.2km s-min=2.9km az=95.0
GUC 25 21:30:35.0, 22.61S×66.13W, h240km, ML4.5
SJA 25 21:30:36.4±0.7, 22.67S×66.18W, h245km±6km, ML3.3, MW3.6
ISC 25 21:30:34.4±0.7, 22.62S±0.05×66.15W±0.05, h258km±7km, n46, σ1.38/67, mb4.0/4, 7C-4D, Jujuy Province

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
YJA	Yavi	0.73	53	iP	Pn	21 31 10.9	+1.3
YJA					IAML	21 31 11.3	
	comp=Z,184nm,0.2s						
YJA				eS	S	21 31 36.7	-0.4
AZAP	Zapla	1.88	148	iP	Pn	21 31 18.0	+1.3
AZAP				eS	S	21 31 48.6	-1.6
SLA	San Lorenzo	2.18	164	iP	Pn	21 31 20.7	+1.4
SLA				eS	S	21 31 52.7	-2.1
LVC	Limon Verde	2.56	270	P	Pn	21 31 24.7	+1.5
	comp=Z,18nm,0.3s,baz=93,slow=3.0,SNR=93						
LVC				S	S	21 32 01.9	+0.2
	comp=Z,12nm,0.3s,baz=4.2,slow=4.5,SNR=31						
LVC	Limon Verde	2.56	270		Pn	21 31 24.6	+1.4
PB09	IPOC Station P	2.98	285	⇑iP	Pn	21 31 29.1	+1.7
PB09				iS	S	21 32 09.0	-0.3
PB09					IAML	21 32 12.5	
	comp=N,234nm,0.2s						
PB09	IPOC Station P	2.98	285	iP	Pn	21 31 29.1	+1.6
PB09				eS	S	21 32 07.5	-1.8
PB15	IPOC Station P	3.12	258	⇑iP	Pn	21 31 30.3	+1.4
PB15				iS	S	21 32 12.3	+0.3
PB15	IPOC Station P	3.12	258	iP	Pn	21 31 30.6	+1.7
PB06	IPOC Station P	3.17	268	⇑iP	Pn	21 31 30.4	+1.0
PB06				iS	S	21 32 11.7	-1.1
PB06					IAML	21 32 16.4	
	comp=N,359nm,0.2s						
PB03	IPOC Station P	3.39	279	⇑iP	Pn	21 31 32.6	+0.9
PB01	IPOC Station P	3.48	296	⇓iP	Pn	21 31 33.4	+0.7
PB01	IPOC Station P	3.48	296		Pn	21 31 33.0	+0.3
PB01				S	S	21 32 17.9	-1.0
PB07	IPOC Station P	3.58	284	⇑iP	Pn	21 31 35.0	+1.1
PB07	IPOC Station P	3.58	284	iP	Pn	21 31 35.1	+1.1
PB02	IPOC Station P	3.71	290	⇓iP	Pn	21 31 36.1	+0.7
PB02				iS	S	21 32 21.5	-2.3
PB04	IPOC Station P	3.71	274	eP	Pn	21 31 36.4	+1.0
PB04	IPOC Station P	3.71	274		Pn	21 31 35.4	-0.1
PB04				S	S	21 32 22.5	-1.4
PB08	IPOC Station P	3.73	311	⇓iP	Pn	21 31 37.2	+1.3
PB08				iS	S	21 32 23.7	-1.0
PB05	IPOC Station P	3.75	266	⇓iP	Pn	21 31 36.7	+0.9
PB05	IPOC Station P	3.75	266	iP	Pn	21 31 36.9	+1.1
GO02	Mina Guanaco	4.05	231	⇑iP	Pn	21 31 41.0	+1.6
GO02				iS	S	21 32 31.3	+0.3
GO02	Mina Guanaco	4.05	231		Pn	21 31 41.0	+1.6
GO02				S	S	21 32 31.9	+0.8
GO01	Chusmiza	4.09	315		Pn	21 31 40.8	+0.7
GO01				S	S	21 32 31.5	-0.7
PB10	IPOC Station P	4.16	257	⇑iP	Pn	21 31 41.2	+0.9
PB10				iS	S	21 32 30.6	-2.3
PB10	IPOC Station P	4.16	257		Pn	21 31 41.7	+1.4
PB10				S	S	21 32 30.7	-2.2
AHML	Horco Molle	4.22	170	iP	Pn	21 31 42.4	+1.3
PB11	IPOC Station P	4.34	310		Pn	21 31 41.7	-1.0
MNMC	Minye Minye	4.74	316	Pn	Pn	21 31 48.0	+0.4
GO03	Copiap	6.19	216		Pn	21 32 05.3	+0.2
GO03					S	21 33 16.1	-1.7
LPAZ	La Paz	6.57	343	P	Pn	21 32 10.7	+0.2
	comp=N,1.4nm,0.3s,baz=104,slow=4.0,SNR=28						
LPAZ				S	S	21 33 24.3	-3.0
	comp=N,0.2nm,0.3s,baz=332,slow=16,SNR=4.3						
LPAZ	La Paz	6.57	343		Pn	21 32 10.7	+0.2
LPAZ					S	21 33 27.1	-0.3
SIV	San Ignacio	8.14	37	P	Pn	21 32 27.7	-1.9
	comp=N,1.1nm,0.3s,baz=246,slow=9.5,SNR=13						
GO04	Tololo Observa	8.60	208	Pn	Pn	21 32 35.2	-0.3
CFA	Coronel Fontan	9.15	191	P	Pn	21 32 42.0	-0.2
	comp=N,1.8nm,0.3s,baz=4.7,slow=11,SNR=100						
CFA				S	S	21 34 21.1	-4.5
	comp=N,3.6nm,0.3s,baz=315,slow=23,SNR=11						
ROC1	El Roble	11.18	202	Pn	Pn	21 33 09.6	+1.7
GO05	Huala	13.35	201	Pn	Pn	21 33 34.6	+0.3
PLCA	Paso Flores	18.44	191	P	P	21 34 32.8	+1.5
	comp=N,0.1nm,0.3s,baz=31,slow=11,SNR=4.4						
PLCA	Paso Flores	18.44	191	P	P	21 34 32.2	+0.9
PLCA				IAmb	IAmb	21 34 33.7	
	comp=Z,4.8nm,1.1s						
BDFB	Brasilia	18.47	71	P	P	21 34 32.4	+0.5
	comp=Z,0.8nm,0.3s,baz=253,slow=7.5,SNR=4.6						
RUSC	La Rusia	29.14	346	P	P	21 36 12.5	0.0
SDV	Santo Domingo	31.61	352	P	P	21 36 33.4	-0.4
SDV				IAmb	IAmb	21 36 36.3	
	comp=Z,4.9nm,1.1s						
TORD	Torodi Ar. Bea	75.34	69	P	P	21 41 49.0	-1.1
	comp=Z,2.1nm,0.5s,baz=257,slow=5.8,SNR=42						
SCHQ	Schefferville	77.13	360	P	P	21 41 59.4	+0.1
	comp=Z,3.3nm,1.1s,baz=260,slow=6.1,SNR=3.9						
YKA	Yellowknife Ar	93.10	340	P	P	21 43 19.4	+0.8
	comp=Z,0.5nm,0.5s,baz=134,slow=4.5,SNR=8.7						
MKAR	Makanchi Array	144.96	39	PKP	PKPab	21 49 41.5	+0.6
	comp=Z,2.5nm,0.7s,baz=332,slow=3.1,SNR=37						

NEIC 25 21:45:12.0±1.5, 16.0N±0.1×97.51W±0.06, h29km±13km, Error ellipse: s-maj=19.1km s-min=4.0km az=204.0
MEX 25 21:45:13.7±0.9, 16.01N×97.55W, h25km±18km, MD4.0
ISC 25 21:45:11.7±1.6, 16.11N±0.06×97.51W±0.03, h26km±15km, n21, σ1.37/40, Oaxaca

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
PEIG	Puerto Escondi	0.36	108	eP	Pn	21 45 20.5	-0.8
PEIG				iS	Sn	21 45 26.4	-1.3
PNIG	Pinotepa	0.66	295		Pn	21 45 24.5	-0.9
PNIG					Sn	21 45 33.0	-1.9
PNIG	Pinotepa	0.66	295	eP	Pn	21 45 24.5	-0.9
PNIG				iS	Sn	21 45 33.9	-1.0
YOIG	Yosondua	0.74	357	iP	Pn	21 45 26.9	0.0
YOIG				iS	Sn	21 45 37.1	-0.3
VHO	Vista Hermosa	1.21	38	eP	Pb	21 45 34.9	+0.7
VHO				eS	Sb	21 45 50.2	+0.7
OXBJ	Oaxaca	1.21	38		Pb	21 45 34.1	-0.1
OXBJ	Oaxaca	1.21	38	eP	Pb	21 45 34.1	-0.1
HUIG	Huatulco	1.39	104		Pn	21 45 35.1	-0.3
HUIG					Sn	21 45 51.6	-1.3
HUIG	Huatulco	1.39	104	iP	Pn	21 45 35.1	-0.3
HUIG				iS	Sn	21 45 51.6	-1.3
HLIG	Huajuapan de L	1.73	351	eP	Pb	21 45 42.4	-0.7
HLIG				iS	Sb	21 46 04.0	-0.6
TLIG	Tlapa	1.77	325		Pb	21 45 42.6	-1.0
TLIG					Sb	21 46 04.7	-0.6
TLIG	Tlapa	1.77	325		Pb	21 45 42.3	-1.3
TLIG					Sb	21 46 03.6	-1.8
TLIG	Tlapa	1.77	325	eP	Pb	21 45 42.3	-1.3
TLIG				eS	Sb	21 46 03.6	-1.8
FTIG	Fresnillo de T	1.89	342	iP	Pb	21 45 43.6	-2.0
FTIG				eS	Sb	21 46 09.1	+0.3
TOIG	Toxpalan	2.02	12	iP	Pn	21 45 46.7	-1.2
TOIG				iS	Sn	21 46 12.1	-0.6
CMIG	Matias Romero	2.70	68		Pn	21 45 54.6	+1.1
CMIG					Sn	21 46 27.2	+1.9
CMIG	Matias Romero	2.70	68	eP	Pn	21 45 54.6	+1.1
CMIG				iS	Sn	21 46 27.2	+1.9
MEIG	Mezcala	2.71	312		Pb	21 46 01.9	+2.3
MEIG					Sb	21 46 35.3	+2.8
MEIG	Mezcala	2.71	312	eP	Pb	21 46 01.9	+2.3
MEIG				eS	Sb	21 46 35.3	+2.8
CAIG	El Cayaco	2.81	290		Pn	21 45 55.6	+0.7
CAIG					Sn	21 46 28.2	+0.3
CAIG	El Cayaco	2.81	290	iP	Pn	21 45 55.6	+0.7
CAIG				eS	Sn	21 46 28.2	+0.3

TAP 25 22:16:40.7, 24.80N×122.42E, h8km±1km, ML2.8, C
JMA 25 22:16:40.2, 24.75N×122.40E, h3km, M2.3
ISC 25 22:16:40.5±1.1, 24.77N±0.03×122.41E±0.02, h6km±10km, n46, σ0.34/79, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
EOS1	EOS1	0.34	230	eP	Pb	22 16 48.3	-0.6
	baz=226						
EOS1				eS	Sb	22 16 54.4	-0.1
	baz=226						
TWB1	Santiao Chiao	0.45	302	P	Pg	22 16 49.0	-0.3
	baz=297						
TWB1				eS	Sg	22 16 54.6	-0.6
	baz=297						
TWC	Suao	0.53	253	eP	Pg	22 16 50.6	-0.2
	baz=249						
TWC				eS	Sg	22 16 58.1	+0.3
	baz=249						
TIPB	Shuangxi	0.57	291	P	Pg	22 16 51.5	0.0
	baz=287						
TIPB				S	Sg	22 16 59.3	+0.3
	baz=287						
JYNG	Yonagunijimaku	0.58	123	P	Pg	22 16 51.7	+0.1
JYNG				eS	Sg	22 16 59.6	+0.4
YOJ	Yonaguni jima	0.62	119	eP	Pg	22 16 52.5	-0.1
	baz=122						
YOJ				eS	Sg	22 17 00.6	0.0
	baz=122						
YOJ	Yonaguni jima	0.62	119	P	Pg	22 16 52.4	-0.1
YOJ				S	Sg	22 17 00.6	0.0
NWF	Wu-fen Shan	0.65	298	iP	Pg	22 16 53.3	+0.3
	baz=294						
NWF				S	Sg	22 17 02.2	+0.7
	baz=294						
WFSB	Wu-fen Shan	0.65	298	P	Pg	22 16 53.0	+0.1
	baz=294						
WFSB				eS	Sg	22 17 02.1	+0.7
	baz=294						
TWE	Neicheng	0.68	266	P	Pg	22 16 53.5	-0.1
	baz=262						
TWE				eS	Sg	22 17 02.9	+0.5
	baz=262						
ENA	Nanau	0.70	241	P	Pg	22 16 53.8	-0.1
	baz=238						
ENA				eS	Sb	22 17 04.4	-0.5
	baz=238						
SLBB	Yuanshan	0.70	269	P	Pg	22 16 54.2	+0.1
	baz=266						
SLBB				eS	Sg	22 17 03.8	+0.6
	baz=266						
ENTT	Nioudou	0.78	261	P	Pg	22 16 55.7	+0.3
	baz=257						
NWLT	Wulai	0.83	271	P	Pg	22 16 56.5	+0.1
	baz=268						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NWLT				eS	Sg	22 17 07.0	-0.2
	baz=268						
NDT	Datong Townshi	0.83	259	P	Pg	22 16 56.8	+0.3
	baz=256						
NDT				eS	Sb	22 17 08.2	-0.7
	baz=256						
YM01	YM01	0.85	297	P	Pg	22 16 57.0	+0.1
	baz=293						
YM01				eS	Sg	22 17 08.4	+0.4
	baz=293						
YM11	YM11	0.86	298	eS	Sg	22 17 08.4	+0.2
	baz=295						
TATO	Taipei	0.86	284	eS	Sg	22 17 08.3	0.0
	baz=281						
YM05	YM05	0.86	298	eP	Pg	22 16 57.1	0.0
	baz=294						
YM05				eS	Sg	22 17 08.2	-0.1
	baz=294						
YM10	YM10	0.86	297	eP	Pg	22 16 57.1	-0.1
	baz=294						
YM10				eS	Sg	22 17 08.3	-0.1
	baz=294						
YM04	YM04	0.88	296	eP	Pg	22 16 57.6	+0.1
	baz=293						
TWY	Chenhua	0.90	305	eP	Pg	22 16 57.5	-0.2
	baz=302						
TWY				eS	Sg	22 17 09.3	-0.1
	baz=302						
YHNB	Yeheng	0.95	264	P	Pg	22 16 58.4	-0.3
	baz=262						
YHNB				eS	Sg	22 17 10.9	-0.1
	baz=262						
NACB	Ninganchiao	0.95	232	eP	Pg	22 16 58.6	-0.1
	baz=230						
NACB				eS	Sb	22 17 11.8	-0.4
	baz=230						
NSK	Sanguang	0.96	265	P	Pg	22 16 58.7	-0.2
	baz=262						
NSK				eS	Sg	22 17 10.9	-0.6
	baz=262						
NNSB	Datong	0.99	250	eP	Pg	22 16 59.2	-0.4
	baz=248						
NNSB				eS	Sg	22 17 13.0	+0.5
	baz=248						
NNSH	Datong	0.99	250	eP	Pg	22 16 59.1	-0.5
	baz=248						
NNSH				eS	Sb	22 17 13.6	0.0
	baz=248						
NNS	Nan Shan	1.00	251	eP	Pg	22 16 59.8	+0.1
	baz=248						
NNS				eS	Sg	22 17 13.2	+0.5
	baz=248						
TWD	Chiawan	1.01	228	eP	Pg	22 16 59.8	-0.1
	baz=226						
TWD				eS	Sb	22 17 14.3	+0.4
	baz=226						
ETLH	Xiulin Townshi	1.01	237	P	Pg	22 16 59.6	-0.3
	baz=235						
ETLH				eS	Sb	22 17 14.5	+0.3
	baz=235						
WHF	Hehuan Shan	1.21	240	P	Pg	22 17 03.6	-0.2
	baz=237						
WHF				eS	Sg	22 17 19.7	+0.1
	baz=237						
TWT	Tachien	1.23	246	eS	Sn	22 17 21.2	-0.3
	baz=244						
TDCB	Techi	1.25	246	eP	Pg	22 17 04.5	0.0
	baz=244						
TDCB				eS	Sb	22 17 21.2	+0.2
	baz=244						
IRIF	Iriomote-Funau	1.27	109	P	Pn	22 17 04.5	-0.3
IRIF				eS	Sg	22 17 21.2	-0.3
LIOB	Emei	1.27	265	eP	Pb	22 17 04.9	0.0
	baz=263						
CHGB	Renai	1.33	238	eP	Pn	22 17 05.3	-0.5
	baz=236						
CHGB				eS	Sb	22 17 23.5	+0.1
	baz=236						
OWD	Renai	1.39	235	eP	Pb	22 17 06.8	-0.1
	baz=233						
WHP	Taichung City	1.42	250	eP	Pn	22 17 07.1	+0.1
	baz=248						
VWDT	VWDT	1.54	229	eP	Pn	22 17 08.8	+0.4
	baz=228						
VWDT				eS	Sg	22 17 30.5	+0.6
	baz=228						
JKRS	Kuro-shima	1.55	110	P	Pb	22 17 09.3	-0.3
HGSD	Ruisui	1.56	216	eP	Pn	22 17 08.2	-0.5
	baz=214						
HGSD				eS	Sg	22 17 29.9	+0.3
	baz=214						
JIJ	Ishigaki jima	1.63	104	P	Pn	22 17 10.2	+0.5
SMLT	Sun Moon Lake	1.64	238	eP	Pb	22 17 11.2	+0.1
	baz=236						
SSLB	Suanglung	1.65	234	eP	Pb	22 17 11.2	-0.1
	baz=232						
YULB	Yu-li	1.70	217	eP	Pn	22 17 10.9	+0.1
	baz=216						
YULB				eS	Sn	22 17 33.4	+0.5
	baz=216						
JISG	Ishigakijimahi	1.74	95	eS	Sn	22 17 34.2	+0.5

WEL 25 22:24:18.7,41.5S$\pm$0.6×174.4E$\pm$0.8,h14km$\pm$2km,ML4.1/11, MLv3.8/11,Error ellipse: s-maj=0.0km s-min=0.0km az=121.4,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.27	211	P	Pb	22 24 24.9	-0.4
CMWZ				S	Sb	22 24 29.9	+0.2
TCW	Tory Channel	0.32	343	P	Pb	22 24 26.3	+0.1
TUWZ	Tuamarina	0.35	285	P	Pb	22 24 26.6	-0.2
TUWZ				S	Sb	22 24 31.7	-0.5
WEL	Wellington	0.36	50	S	Sb	22 24 32.8	+0.3
BHW	Baring Head	0.37	72	P	Pb	22 24 26.9	-0.1
BHW				S	Sb	22 24 32.6	-0.1
BSWZ	Blackbirch Sta	0.44	244	P	Pb	22 24 27.9	-0.3
BSWZ				S	Sb	22 24 34.3	-0.3
PLWZ	Palliser	0.64	95	P	Pb	22 24 31.8	0.0
MSWZ	Moikau Station	0.65	81	P	Pb	22 24 31.9	+0.2
CAW	Cannon Point	0.65	51	P	Pb	22 24 31.9	+0.1
KIW	Kapiti Island	0.77	30	P	Pb	22 24 34.0	+0.2
PAWZ	Paruwai Farm	0.79	80	P	Pb	22 24 34.3	+0.2
DUWZ	D'Urville Isla	0.80	333	P	Pb	22 24 34.8	+0.4
NNZ	Nelson	0.82	291	P	Pb	22 24 34.9	+0.1
MTW	Mount Morrison	0.91	67	P	Pb	22 24 36.7	-0.3
OGWZ	Otaki Gorge	0.91	40	P	Pg	22 24 36.5	+0.1
TRWZ	Traveller	0.98	83	P	Pb	22 24 37.4	0.0
HOWZ	Holdsworth Sta	1.05	54	P	Pg	22 24 38.9	0.0
KHZ	Kahutara	1.10	215	P	Pb	22 24 39.4	-0.1
THZ	Tophouse	1.15	257	P	Pn	22 24 40.5	+0.1
TMWZ	Te Maipa	1.20	70	P	Pn	22 24 40.5	-0.5
MRZ	Mangatainoka R	1.24	46	P	Pn	22 24 42.1	+0.2
TIWZ	Tintock	1.35	57	P	Pn	22 24 42.9	-0.2
OHWZ	Ohakea	1.49	28	P	Pg	22 24 47.2	-0.1
CPWZ	Castlepoint	1.49	66	P	Pn	22 24 44.8	-0.2
PRWZ	Pori Road	1.53	51	P	Pn	22 24 45.7	+0.1
POWZ	Post Office Ro	1.53	43	P	Pn	22 24 46.1	+0.4
QRZ	Quartz Range	1.57	296	P	Pb	22 24 47.7	+0.1
BFZ	Birch Farm	1.63	60	P	Pn	22 24 46.1	-0.8
GVZ	Greta Valley S	1.76	215	P	Pn	22 24 48.2	-0.7
DVHZ	Dannevirke	1.81	48	P	Pn	22 24 49.0	-0.5
WAZ	Wanganui	1.82	14	P	Pb	22 24 52.7	+0.9
TSZ	Takapari Road	1.88	40	P	Pn	22 24 50.8	+0.3
ANWZ	Angora Road	1.90	57	P	Pn	22 24 49.7	-0.9
DSZ	Denniston Nort	1.96	263	P	Pb	22 24 53.5	-0.6
LTZ	Lake Taylor	2.02	231	P	Pn	22 24 52.1	-0.3
AMCZ	Amberley	2.10	217	P	Pn	22 24 52.4	-1.0
PRHZ	Porangahau	2.11	54	P	Pn	22 24 52.6	-0.9
PNHZ	Pukenui	2.13	41	P	Pn	22 24 53.6	0.0
WPHZ	Waipukurau	2.13	47	P	Pn	22 24 53.4	-0.4
NMEZ	Namu Road	2.14	349	P	Pg	22 24 59.1	-0.6
PREZ	Palmer Road	2.19	355	P	Pb	22 24 58.9	+0.9
KHEZ	Kahui Hut	2.24	352	P	Pb	22 24 59.3	+0.2
MTVZ	Mangateitei	2.29	21	P	Pb	22 25 01.1	+1.4
NBEZ	Newall Road No	2.29	350	P	Pb	22 24 59.8	+0.1
DREZ	Durham Road	2.33	356	P	Pb	22 25 01.0	+0.5
PKVZ	Pokaka	2.34	18	P	Pn	22 24 59.3	-1.4
PKE	Pukeiti	2.35	352	P	Pb	22 25 00.5	-0.2
MOVZ	Moawhango	2.35	26	P	Pn	22 24 58.0	+1.0
TRVZ	Turoa	2.39	22	P	Pb	22 25 00.8	-0.7
PXZ	Pawanui	2.39	52	P	Pn	22 24 56.0	-1.4
BHHZ	Black Hill Sta	2.39	33	P	Pn	22 24 58.3	+0.8
KRHZ	Kereru	2.40	39	P	Pn	22 24 57.4	-0.3
VRZ	Vera Road	2.41	7	P	Pb	22 25 01.0	-0.8
OKCZ	Okains Bay	2.41	204	P	Pb	22 24 56.0	-1.8
WHVZ	Whangaehu Hut	2.41	22	P	Pb	22 24 60.0	-2.0
FWVZ	Far West T-bar	2.43	22	P	Pb	22 25 00.4	-1.9
TUVZ	Tukino	2.45	23	P	Pn	22 25 00.2	+1.8
INZ	Inchbonnie	2.50	240	P	Pn	22 24 59.0	+0.1
OXZ	Oxford	2.51	223	P	Pn	22 24 57.4	-1.7
MQZ	McQueen's Vall	2.54	210	P	Pn	22 24 57.1	-2.3
KAHZ	Kahuranaki	2.56	48	P	Pn	22 24 58.7	-1.1
WTVZ	West Tongariro	2.57	21	P	Pn	22 25 01.9	+1.9
TWVZ	Taurewa	2.57	18	P	Pb	22 25 02.4	-2.2
AKCZ	Akaroa Harbour	2.59	205	P	Pn	22 24 58.5	-1.7
KWHZ	Kaweka Forest	2.60	37	P	Pn	22 25 00.2	-0.2
KRVZ	Karewarewa	2.60	22	P	Pb	22 25 04.9	-0.3
KATZ	Kakaramea	2.73	22	P	Pb	22 25 06.0	-1.4
RITZ	Rihia Road	2.78	24	P	Pb	22 25 09.2	+1.1
BKZ	Black Stump Fm	2.85	35	P	Pn	22 25 03.3	-0.5
RATZ	Rangitukua	2.85	22	P	Pb	22 25 10.8	+1.4
HATZ	Hinemaiaia	2.93	27	P	Pb	22 25 11.7	+1.0
WATZ	Wairara	2.99	20	P	Pb	22 25 11.8	+0.1
HIZ	Hauiti	3.03	7	P	Pn	22 25 09.2	+3.1
WVZ	Waitaha Valley	3.13	239	P	Pn	22 25 07.8	+0.3
RPZ	Rata Peaks	3.30	227	P	Pn	22 25 08.6	-1.4
TLZ	Tolley Road	3.31	16	P	Pb	22 25 16.0	-1.1
ALRZ	Allen Road	3.31	27	P	Pb	22 25 15.3	-1.9
TOZ	Tahuroa Road	3.88	13	P	Pb	22 25 22.9	-4.0
FOZ	Fox Glacier	3.94	238	P	Pn	22 25 19.1	+0.4
LBZ	Lake Benmore	4.21	226	P	Pn	22 25 22.2	-0.3
MKAZ	Moumakai	4.45	8	P	Pn	22 25 29.7	+4.0
AWAZ	Awhitu Peninsu	4.46	3	P	Pn	22 25 29.3	+3.5
ODZ	Otahua Downs	4.46	217	P	Pn	22 25 23.9	-2.0
WIAZ	Waiheke Island	4.76	7	P	Pn	22 25 33.5	+3.5
JCZ	Jackson Bay	4.85	236	P	Pn	22 25 31.3	-0.1
TUZ	Tuapeka	5.62	216	P	Pn	22 25 40.5	-1.2

IDC 25 22:35:33.6$\pm$1.3, 45.09N×106.91W, h0km, mb1 3.6/2, mb1mx3.2/57, mbtmp3.4/2, ML2.9/2, Error ellipse: s-maj=46.4km s-min=8.3km az=135.0

NEIC 25 22:35:34.2$\pm$1.6, 45.16N$\pm$0.05×106.93W$\pm$0.07, h0km$\pm$2km, ML2.8/63, Error ellipse: s-maj=8.1km s-min=7.7km az=120.0

ISC 25 22:35:33.7$\pm$0.9, 45.19N$\pm$0.04×106.90W$\pm$0.05, h0km, n36, σ1.06/37, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAO	LASA Array	1.57	17		Pn	22 36 03.8	+0.8
LAO					Sn	22 36 25.0	+0.9
LAO				IAML		22 36 31.6	
	151nm,0.8s						
LAO				IAML		22 36 35.0	
	108nm,0.8s						
RLMT	Red Lodge	1.68	269		Pn	22 36 04.5	0.0
RLMT				IAML		22 36 35.2	
	74nm,0.7s						
GCMT	Greycliff	2.04	288	Pn	Pn	22 36 09.6	+0.1
YNE	Yellowstone No	2.21	266		Pn	22 36 12.2	+0.3
RSSD	Black Hills	2.30	117		Pn	22 36 14.5	+1.3
RSSD				IAML		22 36 50.4	
	55nm,0.8s						
RSSD				IAML		22 36 51.8	
	90nm,0.6s						
YMP	Mirror Lake Pl	2.35	260		Pn	22 36 13.8	-0.1
K22A	Casper	2.55	174		Pn	22 36 16.9	+0.4
K22A				IAML		22 36 59.3	
	comp=N,56nm,0.9s						
K22A				IAML		22 37 00.9	
	comp=E,45nm,0.8s						
LKWY	Lake	2.57	257		Pn	22 36 16.6	-0.2
LKWY				IAML		22 37 03.1	
	comp=E,27nm,1.4s						
LKWY				IAML		22 37 28.2	
	comp=E,36nm,0.9s						
YUF	Upper Falls	2.61	261		Pn	22 36 16.6	-0.8
YNR	Norris Junctio	2.73	261		Pn	22 36 19.5	+0.5
H17A	Grant Village	2.73	255		Pn	22 36 19.4	+0.3
YNM	Yellowstone No	2.74	262	Pn	Pn	22 36 19.1	-0.1
YHH	Holmes Hill	2.83	263		Pn	22 36 20.8	+0.3
FLWY	Flagg Ranch	2.93	249		Pn	22 36 21.9	+0.1
FLWY				IAML		22 37 17.8	
	comp=E,32nm,0.8s						
FLWY				IAML		22 37 31.5	
	comp=E,38nm,1.4s						
YPP	Pitchstone Pla	2.93	253		Pn	22 36 23.4	+1.5
YMR	Madison River	2.94	261		Pn	22 36 21.7	-0.2
YHL	Hebgen Lake	3.06	265		Pn	22 36 24.3	+0.7
PDAR	Pinedale Array	3.09	219	Pn	Pn	22 36 25.1	+1.1
	comp=E,1.3nm,0.3s,baz=49,slow=17,SNR=35						
PDAR				Sn	Sn	22 37 04.1	+2.4
	comp=E,1.5nm,0.3s,baz=44,slow=25,SNR=8.4						
PDAR				Lg	Lg	22 37 07.3	
	comp=E,2.1nm,0.3s,baz=43,slow=31,SNR=17						
SNOW	Snow King Moun	3.26	239		Pn	22 36 26.7	+0.4
SNOW				IAML		22 37 23.0	
	comp=E,25nm,3.6s						
SNOW				IAML		22 37 32.7	
	comp=E,18nm,0.7s						
TPAW	Teton Pass	3.37	241	IAML		22 37 29.2	
	comp=E,16nm,4.1s						
EGMT	Eagleton	3.46	326		Pn	22 36 30.4	+1.5
EGMT				IAML		22 37 43.3	
	comp=E,33nm,0.9s						
RWWY	Rawlins	3.50	184	IAML		22 37 43.3	
	comp=E,24nm,3.2s						
RWWY				IAML		22 38 10.1	
	comp=E,19nm,4.0s						
DGMT	Dagmar	3.77	28		Pn	22 36 34.7	+1.5
LRM	Limekiln Ridge	3.96	281	Pn	Pn	22 36 37.1	+1.2
DLMT	Dillon	4.03	275		Pn	22 36 36.4	-0.4
DLMT				IAML		22 37 51.4	
	comp=E,17nm,3.2s						
DLMT				IAML		22 37 52.9	
	comp=E,22nm,3.1s						
N23A	Red Feather La	4.34	170	Pn	Pn	22 36 40.3	-1.0
N23A					Pb	22 36 52.7	+1.6
HWUT	Hardware Ranch	4.94	225	IAML		22 38 16.1	
	comp=E,8.5nm,0.9s						
HWUT				IAML		22 38 32.8	
	comp=E,10nm,4.1s						
O20A	White River Ci	5.14	192	Pn	Pn	22 36 52.7	+0.5
MSO	Missoula	5.17	291	Pn	Pn	22 36 51.9	-0.6
MSO					Pg	22 37 11.4	-1.4
OGNE	Ogallala	5.54	138	Pn	Pn	22 36 57.5	0.0
OGNE					Pg	22 37 17.7	-2.1
SPUT	South Promonto	5.61	228	Pn	Pn	22 36 56.3	-2.2
WALA	Waterton Lakes	6.16	311	Pn	Pn	22 37 06.8	+0.8
SRU	San Rafael Swe	6.64	205	Pn	Pn	22 37 13.6	+0.8
I10CA	LAC DU BONNET	8.88	52	i		23 31 30.0	
	baz=234,slow=337,SNR=5.9						
ULM	Lac du Bonnet	8.99	52	Pn	Pn	22 37 43.9	-0.9
	comp=E,0.3nm,0.3s,baz=238,slow=13,SNR=7.4						
ULM				Lg	Lg	22 40 11.9	
	comp=E,0.1nm,0.3s,baz=151,slow=19,SNR=2.7						
ULM	Lac du Bonnet	8.99	52		Pn	22 37 45.3	+0.6

IDC 25 22:45:37.6$\pm$0.6, 48.36N×104.79W, h0km, mb3.7/5, mb1 3.8/12, mb1mx3.6/51, mbtmp3.6/12, ML3.8/6, Error ellipse: s-maj=12.8km s-min=7.4km az=142.0

NEIC 25 22:45:38.8$\pm$2.9, 48.36N$\pm$0.05×104.88W$\pm$0.06, h5km$\pm$1km, mb_Lg3.8/74, Error ellipse: s-maj=9.2km s-min=5.3km az=145.0

ANF 25 22:45:38.8$\pm$0.5, 48.26N×104.74W, h5km, ML5.0/6, Error ellipse: s-maj=8.1km s-min=4.3km az=156.0

ISC 25 22:45:39.1$\pm$0.5, 48.33N$\pm$0.04×104.74W$\pm$0.03, h10km, n107, σ1.77/115, mb3.7/5, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGMT	Dagmar	0.39	68		Pg	22 45 47.1	+0.3
DGMT				Sg	Sg	22 45 53.9	+1.8
DGMT	Dagmar	0.39	68	P	Pg	22 45 47.2	+0.3
	baz=237						
DGMT				S	Sg	22 45 54.0	+1.9
	baz=237						
LAO	LASA Array	1.92	212		Pn	22 46 11.8	-0.2
LAO					Sn	22 46 36.1	-0.1
LAO	LASA Array	1.92	212	P	Pn	22 46 11.9	0.0
	baz=33						
LAO				S	Sn	22 46 35.6	-0.6
	baz=33						
EGMT	Eagleton	3.37	267		Pn	22 46 32.5	+0.7
EGMT	Eagleton	3.37	267	P	Pn	22 46 32.1	+0.2
	baz=84						
EGMT				S	Sn	22 47 13.5	+1.6
	baz=84						
MDND	Maddock	3.48	96		Pn	22 46 34.4	+1.1
MDND					Sn	22 47 18.5	+4.0
MDND	Maddock	3.48	96	P	Pn	22 46 34.2	+0.9
	baz=279						
MDND				S	Sn	22 47 17.0	+2.5
	baz=279						
GCMT	Greycliff	4.21	235		Pn	22 46 43.2	-0.3
RSSD	Black Hills	4.24	173		Pn	22 46 44.8	+0.9
RSSD				Pg	Pb	22 46 56.2	+2.4
RSSD					Sn	22 47 33.4	-0.1
RSSD	Black Hills	4.24	173	P	Pn	22 46 44.1	+0.2
	baz=354						
RSSD				S	Sn	22 47 33.4	-0.1
	baz=354						
RLMT	Red Lodge	4.47	226		Pn	22 46 47.0	0.0
RLMT	Red Lodge	4.47	226	P	Pn	22 46 48.1	+1.0
	baz=43						
RLMT				Sb	Sb	22 47 53.6	+1.8
	baz=43						
YNE	Yellowstone No	4.92	229		Pn	22 46 52.4	-0.9
HRY	Holter Researc	5.07	254	Pn	Pn	22 46 54.9	-0.3
YMP	Mirror Lake Pl	5.18	228		Pn	22 46 58.3	+1.3
YMP					Sn	22 47 51.9	-5.0
D32A	Dogwood Acres,	5.35	100	Pn	Pn	22 46 58.9	-0.1
YUF	Upper Falls	5.38	230		Pn	22 46 58.7	-1.0
LKWY	Lake	5.42	228		Pn	22 47 01.9	+1.6
LKWY				IAmb_Lg		22 48 36.6	
	comp=Z,153nm,1.0s						
YNM	Yellowstone No	5.47	231		Pn	22 47 04.2	+3.4
YHH	Holmes Hill	5.50	232		Pn	22 47 01.2	-0.1
SUSD	Miller	5.58	132		Pn	22 47 01.8	-0.4
SUSD					Sn	22 48 06.1	-0.2
SUSD	Miller	5.58	132	P	Pn	22 47 02.8	+0.6
	baz=316						
SUSD				S	Sn	22 48 05.9	-0.4
	baz=316						
H17A	Grant Village	5.63	228		Pn	22 47 05.6	+2.4
H17A	Grant Village	5.63	228	P	Pn	22 47 03.0	-0.2
	baz=44						
YHL	Hebgen Lake	5.64	234		Pn	22 47 02.8	-0.5
YHB	Horse Butte	5.71	234		Pn	22 47 04.1	-0.1
K22A	Casper	5.81	193	P	Pn	22 47 05.4	-0.1
	baz=12						
K22A				S	Sn	22 48 11.2	-1.2
	baz=12						
LRM	Limekiln Ridge	5.83	247		Pn	22 47 05.1	-0.8
YPP	Pitchstone Pla	5.84	228		Pn	22 47 07.4	+1.4
FLWY	Flagg Ranch	5.92	226	IAmb_Lg		22 48 50.5	
	comp=Z,169nm,0.8s						
AGMN	Agassiz Nation	5.92	87		Pn	22 47 06.1	-0.8
AGMN	Agassiz Nation	5.92	87	P	Pn	22 47 06.1	-0.8
	baz=273						
AGMN				S	Sn	22 48 17.4	+2.6
	baz=273						
ULM	Lac du Bonnet	6.11	68	Pn	Pn	22 47 08.3	-1.1
	comp=Z,1.3nm,0.3s,baz=251,slow=12,SNR=12						
ULM				Pg	Pb	22 47 27.9	+2.3
	comp=Z,6.8nm,0.3s,baz=252,slow=14,SNR=28						
ULM				Sn	Sn	22 48 17.8	-1.6
	comp=Z,2.1nm,0.3s,baz=321,slow=18,SNR=1.8						
ULM				Lg	Lg	22 48 47.6	
	comp=Z,16nm,0.3s,baz=164,slow=17,SNR=7.7						
ULM	Lac du Bonnet	6.11	68		Pn	22 47 11.1	+1.7
ULM	Lac du Bonnet	6.11	68	IAmb_Lg		22 48 54.6	
	comp=Z,155nm,1.1s						
WALA	Waterton Lakes	6.12	280		Pn	22 47 08.9	-0.8
WALA				IAmb_Lg		22 49 04.9	
	comp=Z,208nm,0.9s						
MSO	Missoula	6.40	260	IAmb_Lg		22 49 10.9	
	comp=Z,136nm,1.0s						
MSO	Missoula	6.40	260	P	Pn	22 47 12.4	-1.1
	baz=74						
MSO				Sb	Sb	22 48 52.9	+5.7
	baz=74						
SNOW	Snow King Moun	6.42	223	Pn	Pn	22 47 14.5	+0.5
SNOW				IAmb_Lg		22 49 14.9	
	comp=Z,138nm,1.2s						
JTMT	Jette	6.42	268	IAmb_Lg		22 49 12.4	
	comp=Z,130nm,0.8s						
BW06	Boulder Array	6.51	213	IAmb_Lg		22 49 11.0	
	comp=Z,146nm,0.8s						
BW06	Boulder Array	6.51	213	P	Pn	22 47 15.2	+0.1
	baz=30						
BW06				Sb	Sb	22 48 53.7	+3.3
	baz=30						
PD31	Pinedale Array	6.51	213		Pn	22 47 16.7	+1.6
PD31					Sn	22 48 30.6	+1.1
PDAR	Pinedale Array	6.51	213	Pn	Pn	22 47 15.1	0.0
	comp=Z,1.0nm,0.3s,baz=37,slow=14,SNR=17						
PDAR				Pg	Pb	22 47 32.5	0.0
	comp=Z,4.3nm,0.3s,baz=41,slow=18,SNR=26						
PDAR				Sn	Sn	22 48 29.9	+0.4
	comp=Z,7.1nm,0.3s,baz=46,slow=20,SNR=5.0						
PDAR				Lg	Lg	22 48 53.2	
	comp=Z,26nm,0.3s,baz=43,slow=33,SNR=8.8						
FFC	Flin Flon	6.63	14		Pn	22 47 15.4	-1.2
FFC				IAmb_Lg		22 49 12.0	
	comp=Z,128nm,0.7s						
PHWY	Pilot Hill	7.04	184	IAmb_Lg		22 49 17.3	
	comp=Z,104nm,0.8s						
ECSD	EROS Data Cent	7.29	126		Pn	22 47 24.5	-1.1
ECSD				IAmb_Lg		22 49 36.9	
	comp=Z,123nm,1.0s						
ECSD	EROS Data Cent	7.29	126	P	Pn	22 47 24.4	-1.2
	baz=312						
ECSD				S	Sn	22 48 46.0	-2.4
	baz=312						
N23A	Red Feather La	7.48	187		Pn	22 47 30.0	+1.5
N23A					Sn	22 48 52.0	-1.6
N23A	Red Feather La	7.48	187	P	Pn	22 47 28.6	+0.1
	baz=6.4						
N23A				S	Sn	22 48 51.5	-2.0
	baz=6.4						
OGNE	Ogallala	7.63	164		Pn	22 47 30.8	+0.4
OGNE	Ogallala	7.63	164	P	Pn	22 47 30.7	+0.3
	baz=346						
NEW	Newport	8.26	274	Pn	Pn	22 47 36.8	-2.1
	comp=Z,0.7nm,0.3s,baz=89,slow=14,SNR=4.0						
NEW				Pg	Pb	22 48 04.5	+2.3
	comp=Z,3.5nm,0.3s,baz=72,slow=13,SNR=14						
NEW				Lg	Lg	22 49 51.3	
	comp=Z,3.9nm,0.3s,baz=109,slow=10,SNR=5.3						
NEW	Newport	8.26	274	IAmb_Lg		22 50 05.4	
	comp=Z,71nm,0.9s						
NEW	Newport	8.26	274	P	Pn	22 47 37.9	-1.1
	baz=86						
BGNE	Belgrade	8.35	144	Pn	Pn	22 47 41.3	+1.1
BGNE	Belgrade	8.35	144	P	Pn	22 47 38.3	-1.9
	baz=328						
BGNE				S	Sn	22 49 14.1	-0.4
	baz=328						
ISCO	Idaho Springs	8.55	185		Pn	22 47 45.5	+2.3
ISCO				IAmb_Lg		22 50 08.4	
	comp=Z,66nm,0.9s						
ISCO	Idaho Springs	8.55	185	P	Pn	22 47 43.6	+0.4
	baz=4.1						
ISCO				S	Sn	22 49 17.7	-2.1
	baz=4.1						
O20A	White River Ci	8.57	198	IAmb_Lg		22 50 34.8	
	comp=Z,98nm,1.1s						
O20A	White River Ci	8.57	198	P	Pn	22 47 44.6	+1.2
	baz=16						
HVU	Hansel Valley	8.67	224	Pn	Pn	22 47 46.7	+2.0
SPMN	Marine on St.	8.76	106	IAmb_Lg		22 50 32.8	
	comp=Z,63nm,1.0s						
SPMN	Marine on St.	8.76	106	P	Pn	22 47 44.1	-1.7
	baz=295						
F10A	Beach Ranch, E	8.83	259	IAmb_Lg		22 50 27.7	
	comp=Z,91nm,1.1s						
EYMN	Ely	8.87	88		Pn	22 47 45.4	-2.0
EYMN				IAmb_Lg		22 50 38.1	
	comp=Z,58nm,1.1s						
EYMN	Ely	8.87	88	P	Pn	22 47 45.3	-2.0
	baz=277						
C09A	Chrisman Ranch	9.08	272	IAmb_Lg		22 50 27.2	
	comp=Z,69nm,0.8s						
E38A	The Farm, Brul	9.10	96	IAmb_Lg		22 50 31.0	
	comp=Z,53nm,1.1s						
E09A	Wood Farm, Sta	9.27	264	IAmb_Lg		22 50 43.0	
	comp=Z,74nm,1.0s						
SMCO	Snowmass	9.29	191	IAmb_Lg		22 50 34.2	

comp=Z,70nm,1.1s
Q24A Divide 9.37 182 IAmb_Lg 22 50 39.2
comp=Z,62nm,0.8s
KSCO Kaye Shedlock' 9.44 170 IAmb_Lg 22 50 45.1
comp=Z,77nm,0.7s
D08A Wollman Farm, 9.65 268 Pn 22 47 57.3 -0.7
B08A Colville Reser 9.72 276 IAmb_Lg 22 51 04.4
comp=Z,98nm,1.3s
E08A Dider Farm, El 9.88 265 IAmb_Lg 22 50 59.4
comp=Z,72nm,1.2s
DUG Dugway, Tooele 9.97 218 P Pn 22 48 01.2 -1.4
baz=33
CBKS Cedar Bluff 10.18 157 Pn 22 48 05.7 +0.5
HAWA Hanford 10.22 265 Pn 22 48 05.0 -0.9
E07A Sunnyside 10.39 266 Pn 22 48 07.2 -1.0
ELK Elko 10.65 228 Pn Pn 22 48 13.2 +1.3
comp=Z,0.1nm,0.3s,baz=38,slow=8.9,SNR=4.6
I07A Izee 11.07 253 Pn 22 48 17.9 +0.3
JFWS Jewell Farm 11.50 113 Pn 22 48 21.0 -2.3
E43A Lone Tree Farm 12.20 93 Pn 22 48 32.0 -0.8
FCC Fort Churchill 12.20 27 Pn 22 48 30.1 -2.7
CCUT Cedar City 12.47 213 Pn 22 48 38.7 +1.8
NVAR Mina Array Bea 13.95 230 Pn Pn 22 48 59.2 +2.2
comp=Z,0.1nm,0.3s,baz=38,slow=8.2,SNR=5.7
PNTR Pine Nut 14.15 235 P Pn 22 48 57.0 -2.7
O44A Mansfield 14.22 119 P Pn 22 48 57.9 -2.6
WMOK Wichita Mounta 14.29 160 Pn 22 48 59.9 -1.5
HHAR Hobbs 14.43 143 Pn 22 48 59.0 -4.3
OMMB Old Mammoth Mi 14.93 229 P Pn 22 49 04.3 -6.1
YKA Yellowknife Ar 15.23 342 Pn Pn 22 49 08.3 -5.7
comp=Z,0.7nm,0.3s,baz=153,slow=13,SNR=41
YKA Sn Sn 22 51 48.5 -14
comp=Z,0.6nm,0.3s,baz=148,slow=23,SNR=7.4
YKA Lg Lg 22 53 34.5
comp=Z,0.3nm,0.3s,baz=150,slow=27,SNR=4.3
OLIL Olney 15.39 122 P Pn 22 49 12.7 -3.5
LCAR Lake Charles 15.82 136 Pn 22 49 20.2 -1.7
BLO Bloomington 16.00 118 P Pn 22 49 21.6 -2.5
ISA Isabella, Lake 16.23 224 P Pn 22 49 22.8 -4.4
WVT Waverly 17.43 128 Pn Pn 22 49 40.2 -2.0
Q51A Peebles 18.00 113 P Pn 22 49 49.5 +0.1
TXAR Lajitas Array 18.98 177 P P 22 50 02.0 +1.2
comp=Z,0.1nm,0.3s,baz=13,slow=9.4,SNR=3.0
TXAR Lg Lg 22 55 29.8
comp=Z,0.1nm,0.3s,baz=334,slow=28,SNR=3.5
SCHQ Schefferville 24.21 60 P P 22 50 56.0 +0.3
comp=Z,2.4nm,0.9s,baz=296,slow=8.9,SNR=3.7
FRB Frobisher Bay 24.97 38 P P 22 51 03.0 +0.6
comp=Z,1.2nm,0.6s,baz=233,slow=10.0,SNR=4.0
ILAR Eielson Array 27.76 322 P P 22 51 26.6 -0.9
comp=Z,0.7nm,0.8s,baz=102,slow=8.7,SNR=8.8
LANS Liptovska Anna 71.62 35 eP P 22 56 54.3 -6.2
SONM Songino Array 80.47 339 P P 22 57 52.1 +1.0
comp=Z,0.6nm,0.8s,baz=15,slow=4.2,SNR=5.0
MKAR Makanchi Array 85.06 355 P P 22 58 14.8 0.0
comp=Z,0.3nm,0.6s,baz=2.8,slow=5.0,SNR=5.4

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*ANF **25** 23:03:09.4±1.0, 43.86N×125.46W, h0km, ML3.2/16, Error ellipse: s-maj=11.3km s-min=5.2km az=85.0*
*IDC **25** 23:03:10.3±2.0, 43.98N×125.24W, h0km, mb3.1/3, mb1 3.6/6, mb1mx3.3/53, mbtmp3.2/6, ML2.7/4, MS2.3/2, Ms1 2.4/2, ms1mx2.2/16, Error ellipse: s-maj=36.0km s-min=13.1km az=70.0*
*NEIC **25** 23:03:10.5±0.9, 43.88N±0.05×125.5W±0.1, h10km±3km, ML2.9/52, Error ellipse: s-maj=15.6km s-min=6.6km az=79.0*
*SEA **25** 23:03:11±1.5, 43.88N±0.05×126.0W±0.2, h5km±7km, Error ellipse: s-maj=18.3km s-min=6.9km az=87.0*
ISC 25 23:03:09.4±1.2, 43.86N±0.03×125.53W±0.06, h10km, n60, σ1.13/70, mb3.2/3, Off coast of Oregon

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

I02D Swisshome 1.24 78 P Pb 23 03 32.3 -0.7
baz=260,SNR=55
I02D S Sg 23 03 49.0 -0.4
baz=260
KEBM Edson Butte 1.32 138 Pn 23 03 32.8 -1.1
KEBM IAML 23 03 50.5
comp=N,177nm,0.5s
KEBM IAML 23 04 04.5
comp=E,235nm,0.6s
J01E Myrtle Point 1.36 120 P Pn 23 03 33.7 -0.7
baz=300,SNR=49
J01E S Sb 23 03 51.8 -0.5
baz=300
I03D Drain, OR 1.59 95 P Pb 23 03 37.6 -1.3
baz=276,SNR=45
I03D S Sb 23 03 58.5 -0.5
baz=276
COR Corvallis 1.76 65 Pn 23 03 39.4 -0.5
COR IAML 23 04 04.5
comp=E,124nm,0.7s
COR IAML 23 04 07.4
comp=E,127nm,0.6s
K02D Willamette Mer 1.79 130 P Pn 23 03 40.0 -0.4
baz=309,SNR=105
K02D S Sn 23 04 02.5 -0.8
baz=309
KBO Bosley Butte 1.90 149 Pn Pn 23 03 40.8 -1.2
G03D McMinnville, O 2.11 49 S Sn 23 04 09.7 -1.4
baz=233
H04D Lebanon 2.12 71 P Pn 23 03 45.5 +0.7
baz=254,SNR=48
H04D S Sn 23 04 11.9 +0.7
baz=254
L02E Cave Junction 2.21 140 P Pn 23 03 46.2 0.0
baz=319,SNR=13
L02E S Sn 23 04 12.6 -1.0
baz=319
HUMO Hull Mountain 2.26 123 Pn Pn 23 03 46.8 -0.1
I04A Tendick Farm, 2.26 91 P Pn 23 03 47.7 +0.8
baz=273,SNR=38
I04A S Sb 23 04 16.2 -2.1
baz=273
F03A Seaside 2.50 33 Pn Pn 23 03 50.0 -0.2
H04A Detroit Lake 2.54 70 Pn 23 03 51.4 +0.7
J04D Umpqua Nationa 2.56 103 P Pb 23 03 52.8 -2.8
baz=285,SNR=22
F04D Rainier, OR 2.86 38 S Sn 23 04 29.6 +0.1
baz=221
L04D Klamath Falls 2.88 124 P Pn 23 03 57.0 +1.5
baz=305,SNR=9.4
YBH Yreka Blue Hor 2.97 135 Pn Pn 23 03 58.1 +1.4
comp=E,0.3nm,0.3s,baz=325,slow=12,SNR=6.8
YBH Sn Sn 23 04 33.7 +1.2
comp=E,0.9nm,0.3s,baz=40,slow=13,SNR=6.3
YBH LR LR 23 04 48.4
comp=E,30nm,19.1s,baz=42,slow=34
YBH Yreka Blue Hor 2.97 135 Pn 23 03 58.0 +1.3
YBH Yreka Blue Hor 2.97 135 IAML 23 04 39.7
comp=N,9.3nm,4.0s
YBH IAML 23 05 08.2
comp=E,12nm,4.9s
E03A Lebam 3.03 27 Pn Pn 23 03 56.8 -0.6
F04A Amboy 3.03 46 Pn 23 03 58.3 +0.9
I05D Terrebonne, OR 3.06 80 P Pn 23 03 59.2 +1.3
baz=263,SNR=11
M02C Callahan 3.16 140 P Pn 23 04 00.4 +1.1
baz=321,SNR=9.1
J05D Fort Rock, OR 3.18 99 P Pn 23 04 00.5 +0.9
baz=282,SNR=12
KHMM Horse Mountain 3.27 155 Pn Pn 23 04 02.1 +1.2
KHMM IAML 23 05 53.0
comp=E,33nm,4.5s
KHMM IAML 23 06 03.2
comp=N,34nm,4.9s
G05D Wamic, OR 3.32 64 P Pn 23 04 02.8 +1.4
baz=248,SNR=26
PINE Pine Mountain 3.33 90 Pn 23 04 02.6 +1.0
PINE IAML 23 05 40.4
comp=N,22nm,4.6s
E04D Cinebar 3.42 37 P Pn 23 04 03.3 +0.5
baz=220,SNR=12
E04D S Sn 23 04 43.1 -0.2
baz=220
F05D White Salmon 3.54 54 P Pn 23 04 05.8 +1.4
baz=237
F05D S Sn 23 04 48.1 +1.8
baz=237
NLWA Neilton Lookou 3.72 18 Pn Pn 23 04 07.0 0.0
NLWA IAML 23 04 53.9
comp=N,27nm,2.6s
G06A Carlson Farm, 3.76 67 Pn 23 04 08.2 +0.6
G06A IAML 23 05 08.2
comp=E,15nm,2.6s
D04E Lakebay 3.85 29 P Pn 23 04 09.2 +0.6
baz=213,SNR=5.4
D04E S Sn 23 04 54.1 +0.2
baz=213
LON Longmire 3.91 41 Pn 23 04 10.7 +1.1
LON IAML 23 04 58.3
comp=E,22nm,1.2s
WDC Whiskeytown Da 3.96 145 Pn Pn 23 04 11.2 +1.1
D03D Eldon 4.06 24 P Pn 23 04 11.0 -0.5
baz=207,SNR=9.0
D03D S Sn 23 04 57.2 -1.8
baz=207
D05A Enumclaw 4.16 36 Pn Pn 23 04 13.8 +0.8
MOD Modoc Plateau 4.31 115 Pn Pn 23 04 16.9 +1.7
MOD IAML 23 04 52.6
comp=E,9.7nm,4.8s
MOD IAML 23 06 22.4
comp=N,9.3nm,4.6s
I07A Izee 4.36 85 Pn 23 04 17.1 +1.3
I07A IAML 23 06 04.3
comp=E,11nm,4.3s
I07A IAML 23 07 05.4
comp=N,12nm,4.8s
F07A Phinny Hill Vi 4.47 61 Pn Pn 23 04 18.4 +1.2
F07A IAML 23 05 27.0
comp=N,14nm,1.6s
F07A IAML 23 06 35.2
comp=E,12nm,2.4s
LTY Liberty 4.82 43 Pn 23 04 23.2 +1.2
LTY IAML 23 05 01.9
comp=E,11nm,4.8s
LTY IAML 23 05 17.2
comp=N,11nm,4.3s
E07A Sunnyside 4.84 54 Pn 23 04 23.2 +0.9
E07A IAML 23 06 11.2
comp=E,12nm,4.5s
HAWA Hanford 4.95 57 Pn Pn 23 04 24.7 +1.0
HAWA IAML 23 06 31.1
comp=E,7.5nm,3.8s
HAWA IAML 23 07 28.5
comp=E,11nm,4.5s
J08A Circle Bar Ran 5.15 93 Pn Pn 23 04 27.4 +0.8
J08A IAML 23 05 20.8
comp=E,8.9nm,4.3s
J08A IAML 23 07 39.8
comp=N,6.8nm,5.0s
WVOR Wild Horse Val 5.24 103 Pn Pn 23 04 29.9 +1.9
WVOR IAML 23 05 53.5
comp=N,8.1nm,4.5s
WVOR IAML 23 07 15.3
comp=N,9.1nm,5.0s
E08A Dider Farm, El 5.28 58 Pn 23 04 29.0 +0.7
E08A IAML 23 06 14.5
comp=N,6.2nm,2.4s
B06A Marblemount 5.44 30 Pn Pn 23 04 31.2 +0.7
D08A Wollman Farm, 5.64 53 Pn Pn 23 04 34.4 +1.1
BMO Blue Mountains 5.98 78 Pn 23 04 39.3 +1.2
B08A Colville Reser 6.23 42 Pn Pn 23 04 41.9 +0.5
F10A Beach Ranch, E 6.27 67 Pn Pn 23 04 43.4 +1.4
RUBR Rubicon Trail 6.27 138 Pn Pn 23 04 43.0 +0.8
C09A Chrisman Ranch 6.42 50 Pn 23 04 44.6 +0.6
PNTR Pine Nut 6.52 135 Pn Pn 23 04 47.1 +1.4
NEW Newport 7.32 50 Pn Pn 23 04 56.2 -0.3
comp=N,0.2nm,0.3s,baz=254,slow=16,SNR=2.4
NVAR Mina Array Bea 7.69 132 Pn Pn 23 05 05.7 +4.0
comp=N,0.1nm,0.3s,baz=307,slow=15,SNR=3.0
NVAR LR LR 23 08 22.7
comp=N,49nm,21.7s,baz=204,slow=41
YKA Yellowknife Ar 19.73 15 P Pn 23 07 39.6 -0.8
comp=N,0.0nm,0.3s,baz=205,slow=12,SNR=9.0
ULM Lac du Bonnet 21.10 62 P P 23 07 54.3 +0.4
comp=N,1.4nm,0.7s,baz=259,slow=13,SNR=3.3
TXAR Lajitas Array 22.67 122 P P 23 08 13.3 +2.3
comp=N,0.3nm,0.7s,baz=319,slow=12,SNR=3.2
ILAR Eielson Array 24.14 338 P P 23 08 26.9 +1.7
comp=N,0.5nm,0.8s,baz=121,slow=8.7,SNR=5.4

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*BJI **25** 23:52:57.0±0.0, 28.40N×43.80W, h10km, mb4.9/5, Ms4.9/2, Ms7 4.7/2*
*IDC **25** 23:52:57.4±0.6, 28.54N×43.77W, h0km, mb4.3/32, mb1 4.5/32, mb1mx4.3/59, mbtmp4.3/32, MS4.2/42, Ms1 4.2/42, ms1mx4.1/64, Error ellipse: s-maj=17.3km s-min=12.1km az=173.0*
*NEIC **25** 23:53:00.3±1.8, 28.5N±0.1×43.8W±0.1, h10km±2km, mb4.8/159, Error ellipse: s-maj=16.0km s-min=14.3km az=134.0*
*GCMT **25** 23:53:04.3±0.2, 28.76N±0.02×43.64W±0.01, h12km, MW5.1/145, Moment Tensor Solution. s67,c79; s145,c213; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-4.85±.09; Mθθ0.07±.10; Mφφ4.77±.07; Mrθ0.84±.34; Mrφ1.35±.08; Mθφ-1.58±.25; Best double couple: M0 5.30700×10^16 NP1:φs208.00000°, δ39.00000°, λ-69.00000°. NP2:φs2.00000°, δ54.00000°, λ-106.00000°. Principal axes: T 5.3040, Plg8.0000°, Azm103.0000°; N 0.0000, Plg13.0000°, Azm12.0000°; P -5.3090, Plg75.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 25 23:53:00.5±0.4, 28.51N±0.08×43.77W±0.07, h14km, n191, σ1.52/120, mb4.7/105, MS4.2/47, 2C, Northern Mid-Atlantic Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

SJG San Juan 22.98 248 LR LR 00 05 26.1
comp=Z,484nm,20.5s,baz=68,slow=33
DRLN Deer Lake 23.24 337 P P 23 58 07.7 +0.5
AOPR Arecibo Observ 23.35 249 P P 23 58 07.5 -1.2
AOPR IAmb IAmb 23 58 59.6
comp=Z,34nm,1.1s
LMN Caledonia Moun 23.97 322 P P 23 58 15.2 +0.8
MDP Montagnes des 24.76 202 LR LR 00 05 57.6
comp=Z,248nm,19.1s,baz=20,slow=32
LATQ La Tuque 29.38 318 P P 23 59 02.8 -0.3
GTBY Guantanamo Bay 29.76 260 P P 23 59 06.6 -0.2
SCHQ Schefferville 31.15 334 LR LR 00 11 02.3
comp=Z,532nm,19.1s,baz=136,slow=35
SADO Sadowa 32.38 310 LR LR 00 10 18.4
comp=Z,1μm,21.5s,baz=162,slow=32
TKL Tuckaleechee C 34.45 292 P P 23 59 47.9 +0.1
comp=Z,4.7nm,1.0s,baz=86,slow=19,SNR=2.3
TKL LR LR 00 11 21.8
comp=Z,1μm,20.5s,baz=96,slow=32
TKL Tuckaleechee C 34.45 292 P P 23 59 48.2 +0.3
ESDC Sonseca Array 34.54 61 LR LR 00 10 36.7
comp=Z,333nm,20.2s,baz=265,slow=31
CLTN Cedars of Leba 36.53 293 P P 00 00 06.5 +0.8
ROSC El Rosal 37.34 237 LR LR 00 15 12.0
comp=Z,493nm,21.6s,baz=36,slow=36
WVT Waverly 37.74 293 P P 00 00 16.3 +0.3
PLAL Pickwick Lake 37.98 291 P P 00 00 19.2 +1.2
PLAL IAmb IAmb 00 00 22.0
comp=Z,20nm,1.3s
FRB Frobisher Bay 38.67 343 P P 00 00 23.6 +0.3
comp=Z,8.7nm,1.0s,baz=136,slow=7.8,SNR=8.9
LCAR Lake Charles 40.44 293 P P 00 00 39.3 +0.8
FCAR Ozark Folk Cen 41.23 293 P P 00 00 46.3 +1.3
W41B Gary Mavity, V 41.39 292 P P 00 00 47.8 +1.5
WHAR Wooly Hollow 41.41 292 P P 00 00 46.6 0.0
EYMN Ely 41.45 311 P P 00 00 48.1 +1.4
UALR University of 41.50 291 P P 00 00 47.7 +0.4
UALR IAmb IAmb 00 00 51.8
comp=Z,27nm,1.1s
SAML Samuel 41.70 210 P P 00 00 48.9 -0.1
U40A Yellville 41.79 294 P P 00 00 49.7 0.0
MIAR Mount Ida 42.53 291 P P 00 00 56.5 +0.7
MIAR IAmb IAmb 00 01 06.2
comp=Z,19nm,1.4s
DBIC Dimbokro 42.70 113 LR LR 00 15 55.9
comp=Z,1μm,20.7s,baz=272,slow=32
U38A Gravette 43.02 294 P P 00 01 00.3 +0.6
U38A IAmb IAmb 00 01 03.1
comp=Z,17nm,1.2s
OTAV Otavalo 43.48 236 P P 00 01 04.5 +0.4
BDFB Brasilia 44.09 186 P P 00 01 07.3 -1.2
comp=Z,1.6nm,0.5s,baz=40,slow=13,SNR=2.8
BDFB LR LR 00 18 26.6
comp=Z,194nm,19.3s,baz=349,slow=35
BDFB Brasilia 44.09 186 P P 00 01 08.4 -0.1
TUL1 Leonard 44.20 293 P P 00 01 08.5 -0.7
SUMG Summit 44.21 2 iP P 00 01 10.0 +0.8
comp=Z,55nm,1.1s
SUMG Summit 44.21 2 P P 00 01 08.8 -0.4
SUMG IAmb IAmb 00 01 18.3
comp=Z,21nm,1.1s
TAM Tamanrasset 44.55 86 P P 00 01 13.2 +0.9
TAM IAmb IAmb 00 01 22.0
comp=Z,13nm,1.2s
ULM Lac du Bonnet 44.67 314 P P 00 01 10.7 -2.0
comp=Z,8.2nm,1.1s,baz=80,slow=6.2,SNR=4.1
ULM LR LR 00 20 06.9
comp=Z,225nm,18.2s,baz=101,slow=36
ULM Lac du Bonnet 44.67 314 P P 00 01 13.7 +1.0
ULM IAmb IAmb 00 01 16.1
comp=Z,17nm,1.4s
TOA0 Torodi Ar. Sit 44.88 100 P P 00 01 16.0 +1.2
TOA0 IAmb IAmb 00 01 22.4
comp=Z,16nm,1.4s
TORD Torodi Ar. Bea 44.88 100 P P 00 01 12.8 -2.1
comp=Z,1.9nm,0.9s,baz=311,slow=6.7,SNR=6.0
TORD LR LR 00 18 08.2
comp=Z,1μm,20.8s,baz=315,slow=34
KEST Kesra 45.10 67 P P 00 01 15.1 -1.4
comp=Z,8.9nm,0.9s,baz=257,slow=7.2,SNR=9.2
KEST LR LR 00 17 08.1
comp=Z,435nm,21.1s,baz=206,slow=32
KEST Kesra 45.10 67 IAmb IAmb 00 01 30.8
comp=Z,23nm,1.2s
DAVA Damuels 45.34 50 eP P 00 01 18.9 +0.6
comp=Z,7.9nm,1.1s
FCC Fort Churchill 45.72 326 P P 00 01 20.9 0.0
FCC IAmb IAmb 00 01 30.2
comp=Z,12nm,1.1s
H10N2 ASCENSION HYDR 45.87 138 T T 00 50 18.7
baz=323,slow=75,SNR=135
H10N3 ASCENSION HYDR 45.87 138 T T 00 50 20.1
baz=323,slow=75,SNR=108
H10N1 ASCENSION HYDR 45.89 138 T T 00 50 20.0
baz=323,slow=75,SNR=124
FETA Feichten 45.89 51 epP P 00 01 23.9 +1.2
comp=Z,7.1nm,1.3s
RETA Reutte 45.95 50 eP P 00 01 23.3 +0.3
comp=Z,13nm,1.3s
OSSC Osservatorio P 46.14 56 IAmb IAmb 00 01 26.5
comp=Z,12nm,1.1s
WATA Walderalm 46.49 50 eP P 00 01 27.1 -0.2
comp=Z,10.0nm,1.4s
LATE Laterza 46.56 57 P P 00 01 27.4 -0.4
H10S3 ASCENSION HYDR 46.67 139 T T 00 51 14.6
baz=322,slow=74,SNR=109
H10S2 ASCENSION HYDR 46.68 139 T T 00 51 15.7
baz=258,slow=74,SNR=102
WMOK Wichita Mounta 46.77 292 IAmb IAmb 00 01 32.9
comp=Z,18nm,1.3s
JMIC Jan Mayen 46.83 15 LR LR 00 16 18.8
comp=Z,190nm,18.8s,baz=238,slow=30
ABTA Abfaltersbach 47.10 51 P P 00 01 31.9 -0.2
comp=Z,7.6nm,1.2s
KBA Koelnbreinsper 47.68 51 pP P 00 01 39.2 +2.5
comp=Z,5.7nm,1.8s
AQU L'Aquila 47.75 57 P P 00 01 38.5 +1.4
CLL Collm 47.75 45 eP P 00 01 38.0 +1.1
CLL eS S 00 08 34.0 +1.2
CLL eSS SS 00 12 12.0 +11
CLL eSSS SSS 00 13 06.0
KHC Kasperske Hory 47.94 48 eP P 00 01 39.9 +1.4
KHC ex x 00 01 45.7
GERES GERESS Array B 48.00 49 P P 00 01 39.5 +0.5
comp=Z,1.2nm,0.9s,baz=269,slow=8.0,SNR=6.8
GERES LR LR 00 18 36.7
comp=Z,148nm,19.6s,baz=264,slow=32
MOA Molln 48.33 50 pP P 00 01 42.7 +1.2
comp=Z,7.8nm,1.4s
OBKA Obir 48.50 52 eP P 00 01 41.7 -1.2
comp=Z,16nm,1.4s
NOA NORSAR Array B 48.65 32 P P 00 01 44.5 +0.6
comp=Z,1.8nm,0.9s,baz=255,slow=7.8,SNR=3.3
NOA LR LR 00 18 54.4
comp=Z,68nm,21.2s,baz=250,slow=32
PAOL Paolisi 48.70 59 IAmb IAmb 00 01 59.6
comp=Z,14nm,1.2s
SOKA Soboth 48.83 51 P P 00 01 45.5 0.0
comp=Z,2.5nm,1.0s
FFC Flin Flon 49.02 319 P P 00 01 47.4 +0.7
FFC IAmb IAmb 00 01 54.5
comp=Z,29nm,1.9s
ARSA Arzberg 49.17 51 P P 00 01 48.0 0.0
comp=Z,4.2nm,1.1s
CONA Conrad Observa 49.41 50 P P 00 01 50.3 +0.4
comp=Z,6.6nm,1.8s
TULEG Thule 49.57 353 P P 00 01 52.3 +1.7
UPC Upice 49.59 46 eP P 00 01 52.9 +1.8
HFS Hagfors 49.61 34 LR LR 00 21 14.5
comp=Z,108nm,18.7s,baz=257,slow=34
OSTC Ostas 49.72 46 eP P 00 01 54.3 +2.2
OSTC ex x 00 02 00.4
VRAC Vranov 49.92 48 LR LR 00 20 55.8
comp=Z,198nm,18.6s,baz=260,slow=34
KRLC Kraliky 50.06 47 eP P 00 01 55.7 +0.9
KRLC ex x 00 02 02.4
MSTX Muleshoe 50.15 292 IAmb IAmb 00 01 59.6
comp=Z,19nm,1.2s
LPAZ La Paz 50.39 211 P P 00 01 58.0 -0.3
comp=Z,3.4nm,0.9s,baz=13,slow=8.6,SNR=8.3
LPAZ LR LR 00 22 24.1
comp=Z,240nm,19.9s,baz=18,slow=35
N23A Red Feather La 51.60 301 IAmb IAmb 00 02 10.2
comp=Z,10.0nm,1.2s
K22A Casper 51.84 303 IAmb IAmb 00 02 10.6
comp=Z,13nm,1.2s
TXAR Lajitas Array 51.91 286 P P 00 02 08.1 -1.0
comp=Z,3.2nm,0.9s,baz=98,slow=7.8,SNR=15
TXAR LR LR 00 24 51.1
comp=Z,183nm,18.3s,baz=0.0,slow=37
PDG Podgorica 52.06 57 P P 00 02 11.1 +1.2
RES Resolute Bay 52.80 345 P P 00 02 13.9 -0.9
comp=Z,7.9nm,1.1s,baz=114,slow=6.0,SNR=12
RES LR LR 00 22 25.7
comp=Z,372nm,22.0s,baz=112,slow=34
RES Resolute Bay 52.80 345 IAmb IAmb 00 02 25.1
comp=Z,13nm,1.1s
ANMO Albuquerque 52.95 294 P P 00 02 16.4 -0.4
comp=Z,5.5nm,1.1s,baz=87,slow=12,SNR=8.5
ANMO Albuquerque 52.95 294 P P 00 02 17.4 +0.6
ANMO IAmb IAmb 00 02 27.2
comp=Z,20nm,1.6s
BZS Buzias 53.45 53 ⇑P P 00 02 19.2 -0.8
RLMT Red Lodge 53.57 307 IAmb IAmb 00 02 36.2
comp=Z,13nm,1.4s
GO01 Chusmiza 53.84 210 P P 00 02 22.9 -0.7
GO01 IAmb IAmb 00 02 25.7
comp=Z,12nm,1.1s
BW06 Boulder Array 54.05 304 IAmb IAmb 00 02 27.9
comp=Z,15nm,1.0s
PD31 Pinedale Array 54.05 304 IAmb IAmb 00 02 27.9
comp=Z,13nm,0.9s
PDAR Pinedale Array 54.05 304 P P 00 02 23.5 -1.4
comp=Z,8.9nm,0.9s,baz=80,slow=8.1,SNR=24
PDAR LR LR 00 23 45.4
comp=Z,938nm,20.7s,baz=94,slow=34
MVCO Mesa Verde 54.13 297 IAmb IAmb 00 02 29.6
comp=Z,12nm,1.1s
NOR Nord 54.20 5 iP P 00 02 24.4 -0.6
comp=Z,8.5nm,0.9s
LKWY Lake 54.43 306 IAmb IAmb 00 02 37.6
comp=Z,9.0nm,1.0s
FLWY Flagg Ranch 54.71 306 IAmb IAmb 00 02 33.2
comp=Z,8.9nm,1.1s
YPP Pitchstone Pla 54.76 306 P P 00 02 32.0 +2.0
REDW Red Top Meadow 54.91 305 IAmb IAmb 00 02 39.9
comp=Z,15nm,1.4s
TPAW Teton Pass 54.97 305 IAmb IAmb 00 02 39.5
comp=Z,20nm,1.2s
FXWY Fox Creek 55.00 305 IAmb IAmb 00 02 35.1
comp=Z,6.4nm,0.9s
AHID Auburn Hatcher 55.17 304 IAmb IAmb 00 02 35.6
comp=Z,13nm,1.1s
HWUT Hardware Ranch 55.70 303 P P 00 02 37.2 +0.5
HWUT IAmb IAmb 00 02 45.3
comp=Z,21nm,1.4s
FINES FINESS Array B 55.79 33 P P 00 02 35.1 -1.7
comp=Z,5.1nm,1.0s,baz=252,slow=5.4,SNR=5.9
FINES LR LR 00 22 14.0
comp=Z,167nm,20.6s,baz=263,slow=32
DLMT Dillon 55.88 307 IAmb IAmb 00 02 42.8
comp=Z,12nm,1.3s

CPUP Villa Florida 56.06 195 LR LR 00 26 38.4
comp=Z,80nm,18.2s,baz=24,slow=36
319A Douglas 56.08 290 IAmb IAmb 00 02 43.7
comp=Z,22nm,1.5s
SPITS Spitsbergen Ar 56.29 12 LR LR 00 22 11.6
comp=Z,102nm,18.1s,baz=80,slow=31
YKA Yellowknife Ar 56.31 328 P **P** **00 02 38.6 -1.9**
comp=Z,3.4nm,1.0s,baz=90,slow=7.4,SNR=19
YKA LR LR 00 26 39.4
comp=Z,757nm,18.3s,baz=0.0,slow=36
ARCES ARCESS Array B 56.35 23 P **P** **00 02 41.6 +0.9**
comp=Z,4.4nm,0.8s,baz=284,slow=7.3,SNR=5.2
ARCES LR LR 00 22 03.9
comp=Z,68nm,19.4s,baz=327,slow=31
MLR Muntele Rosu 56.48 52 ⇑P **P** **00 02 44.0 +1.8**
MLR Muntele Rosu 56.48 52 P **P** **00 02 42.0 -0.2**
WUAZ Wupatki 56.76 296 IAmb IAmb 00 02 48.5
comp=Z,12nm,1.2s
DUG Dugway, Tooele 56.88 301 IAmb IAmb 00 02 54.4
comp=Z,20nm,1.3s
TUC Tucson 57.07 292 P **P** **00 02 46.9 +0.4**
X16A Lo Mia Camp, P 57.07 294 IAmb IAmb 00 02 53.4
comp=Z,8.5nm,1.2s
U15A North Rim 57.27 297 IAmb IAmb 00 02 57.7
comp=Z,18nm,1.5s
AKASG Malin Array Be 57.98 46 P **P** **00 02 50.0 -2.5**
comp=Z,2.5nm,0.7s,baz=277,slow=5.9,SNR=11
AKASG LR LR 00 26 07.4
comp=Z,359nm,18.3s,baz=285,slow=34
AKBB Malin Array Si 57.98 46 P **P** **00 02 53.6 +1.1**
Y14A Wickenburg 58.45 294 IAmb IAmb 00 03 00.7
comp=Z,8.5nm,0.9s
MFID Camas Ranch 58.48 306 IAmb IAmb 00 02 59.8
comp=Z,12nm,0.9s
NEW Newport 58.55 311 P **P** **00 02 55.0 -1.6**
comp=Z,12nm,1.0s,baz=105,slow=6.8,SNR=10.0
NEW LR LR 00 26 10.4
comp=Z,521nm,21.4s,baz=71,slow=34
NEW Newport 58.55 311 IAmb IAmb 00 02 59.7
comp=Z,12nm,0.9s
214A Organ Pipe Nat 58.82 292 IAmb IAmb 00 03 03.5
comp=Z,13nm,1.3s
W13A Hualapai Mount 58.85 296 P **P** **00 02 59.3 +0.2**
F10A Beach Ranch, E 59.00 309 IAmb IAmb 00 03 15.1
comp=Z,14nm,1.4s
BMO Blue Mountains 59.26 307 IAmb IAmb 00 03 25.5
comp=Z,18nm,1.9s
R11A Troy Canyon, C 59.38 300 IAmb IAmb 00 03 06.0
comp=Z,8.6nm,1.3s
TPNV Topopah Spring 60.23 298 IAmb IAmb 00 03 12.7
comp=Z,7.8nm,1.1s
J08A Circle Bar Ran 60.38 306 IAmb IAmb 00 03 13.1
comp=Z,12nm,1.1s
HAWA Hanford 60.49 310 P **P** **00 03 09.9 -0.1**
HAWA IAmb IAmb 00 03 12.8
comp=Z,12nm,1.2s
I07A Izee 60.95 307 IAmb IAmb 00 03 21.5
comp=Z,12nm,1.5s
LTY Liberty 61.08 311 IAmb IAmb 00 03 22.4
comp=Z,13nm,1.2s
KVN Kaiserville 61.11 301 IAmb IAmb 00 03 23.5
comp=Z,17nm,1.5s
NV11 Mina Array Sit 61.31 300 IAmb IAmb 00 03 20.5
comp=Z,6.9nm,1.3s
NVAR Mina Array Bea 61.43 300 P **P** **00 03 15.2 -1.6**
comp=Z,3.3nm,1.0s,baz=73,slow=6.4,SNR=12
NVAR LR LR 00 29 38.3
comp=Z,782nm,18.5s,baz=70,slow=36
RYN Ryan 61.54 301 IAmb IAmb 00 03 20.1
comp=Z,8.0nm,1.2s
OBN Obninsk 61.73 40 LR LR 00 26 58.1
comp=Z,57nm,20.8s,baz=271,slow=33
PAHR Pah Rah Range 61.91 302 P **P** **00 03 20.4 +0.5**
WAKR Walker 62.27 301 IAmb IAmb 00 03 32.6
comp=Z,15nm,1.4s
KLMR Klimovskoe 62.33 33 eP **P** **00 03 26.3 +4.2**
KLMR AMP 00 03 31.2
comp=Z,24nm,1.8s
CMB Columbia Colle 63.11 301 IAmb IAmb 00 03 37.5
comp=Z,8.9nm,1.3s
BR131 Keskin Array S 63.24 57 P **P** **00 03 30.0 +1.2**
BRTR Keskin Array B 63.24 57 P **P** **00 03 27.4 -1.3**
comp=Z,3.7nm,0.9s,baz=280,slow=4.4,SNR=13
BRTR LR LR 00 28 41.5
comp=Z,162nm,20.8s,baz=265,slow=34
ORV Oroville 63.52 302 P **P** **00 03 30.5 0.0**
ORV IAmb IAmb 00 03 33.4
comp=Z,14nm,1.4s
YBH Yreka Blue Hor 63.81 305 LR LR 00 31 41.4
comp=Z,476nm,18.3s,baz=92,slow=36
DAWY Dawson 67.13 332 P **P** **00 03 55.1 +1.6**
DAWY IAmb IAmb 00 03 56.4
comp=Z,10nm,1.3s
EIL Elat 67.44 68 LR LR 00 33 15.5
comp=Z,166nm,20.8s,baz=284,slow=36
KIRV Kirov 67.73 34 LR LR 00 31 36.3
comp=Z,107nm,18.3s,baz=262,slow=34
KBZ Khabaz 68.64 51 P **P** **00 04 02.3 -0.9**
comp=Z,5.2nm,1.0s,baz=329,slow=1.9,SNR=6.6
KBZ LR LR 00 34 44.4
comp=Z,81nm,18.2s,baz=300,slow=36
ILAR Eielson Array 69.91 334 P **P** **00 04 09.4 -1.4**
comp=Z,3.5nm,1.0s,baz=71,slow=4.6,SNR=18
ILAR LR LR 00 35 31.7
comp=Z,253nm,18.9s,baz=85,slow=36
WRH Wood River Hil 70.51 334 P **P** **00 04 15.9 +1.4**
DHY Denali Highway 70.82 332 IAmb IAmb 00 04 23.3
comp=Z,14nm,1.4s
GNI Garni 71.18 54 P **P** **00 04 18.9 -0.3**
comp=Z,7.2nm,0.9s,baz=340,slow=5.3,SNR=3.6
GNI Garni 71.18 54 P **P** **00 04 20.8 +1.6**
MLY Manley 71.28 335 IAmb IAmb 00 04 34.5
comp=Z,19nm,1.8s
H09W1 TRISTAN DA CUN 71.63 154 T T 01 22 41.8
ARU Arti 73.11 35 P **P** **00 04 29.6 -0.6**
comp=Z,0.2nm,0.3s,baz=255,slow=12,SNR=3.2
ARU Arti 73.11 35 IAmb IAmb 00 04 45.1
comp=Z,12nm,1.4s
PLCA Paso Flores 73.24 201 P **P** **00 04 32.0 +0.9**
comp=Z,1.7nm,0.9s,baz=53,slow=10,SNR=2.7
PLCA LR LR 00 37 40.5
comp=Z,80nm,18.7s,baz=60,slow=37
PLCA Paso Flores 73.24 201 IAmb IAmb 00 06 22.7
comp=Z,24nm,1.8s
RDOG Red Dog Mine 73.80 340 IAmb IAmb 00 04 37.1
comp=Z,12nm,1.0s
AKTO Aktyubinsk 75.51 40 P **P** **00 04 43.6 -0.7**
comp=Z,3.6nm,0.9s,baz=279,slow=3.7,SNR=8.2
AKTO LR LR 00 37 13.6
comp=Z,138nm,18.4s,baz=300,slow=35
NRIK Noril'sk 76.25 16 P **P** **00 04 48.6 +0.5**
comp=Z,1.1nm,0.2s,baz=334,slow=3.1,SNR=3.9
ABKAR Akbulak array 77.17 41 IAmb IAmb 00 05 06.3
comp=Z,10nm,1.4s
TIXI Tiksi 79.98 2 P **P** **00 05 08.8 0.0**
BRVK Borovoye 80.67 34 P **P** **00 05 13.9 +1.1**
BVAR Borovoye Array 80.74 34 P **P** **00 05 12.7 -0.6**
comp=Z,1.0nm,0.6s,baz=305,slow=5.2,SNR=9.3
BILL Bilibino 81.17 349 P **P** **00 05 16.6 +1.3**
GEYT Alibeck 81.53 51 P **P** **00 05 17.0 -0.8**
comp=Z,1.9nm,0.8s,baz=258,slow=7.4,SNR=5.7
GYA0B ALIBECK ARRAY 81.53 51 P **P** **00 05 18.2 +0.3**
KMBO Kilima Mbogo 82.64 95 LR LR 00 41 28.1
comp=Z,802nm,19.7s,baz=284,slow=35
KURK Kurchatov 86.16 33 P **P** **00 05 42.3 +1.1**
KURK IAmb IAmb 00 05 54.2
comp=Z,9.8nm,1.1s
KURBB Kurchatov Arra 86.18 33 P **P** **00 05 39.5 -1.8**
comp=Z,2.5nm,1.0s,baz=309,slow=5.2,SNR=11
UOSS Minazif 86.51 64 P **P** **00 05 44.3 +0.8**
UOSS IAmb IAmb 00 05 46.0
comp=Z,11nm,1.1s
ZAA0 Zalesovo Array 86.64 28 P **P** **00 05 44.7 +1.2**
ZAA0 IAmb IAmb 00 05 57.2
comp=Z,7.4nm,1.4s
ZALV Zalesovo Beam 86.64 28 P **P** **00 05 42.2 -1.2**
comp=Z,0.5nm,0.5s,baz=288,slow=5.9,SNR=5.4
ZALV LR LR 00 42 45.0
comp=Z,85nm,19.9s,baz=280,slow=34
KK31 Karatay Array 86.66 42 P **P** **00 05 44.6 +0.7**
KKAR Karatay Array 86.66 42 P **P** **00 05 44.9 +1.1**
BOSA Boshof 87.09 125 LR LR 00 38 20.1
comp=Z,133nm,19.8s,baz=342,slow=31
AAK Ala-Archa 89.25 41 P **P** **00 05 56.6 +0.2**
comp=Z,2.0nm,1.0s,baz=169,slow=6.1,SNR=4.8
AAK Ala-Archa 89.25 41 P **P** **00 05 58.7 +2.2**
AAK IAmb IAmb 00 05 59.5

comp=Z,6.1nm,1.4s
MAKZ Makanchi 90.46 34 P **P** **00 06 01.0 -0.8**
MAKZ IAmb IAmb 00 06 14.7
comp=Z,7.1nm,1.2s
MK31 Makanchi Array 90.62 34 P **P** **00 06 02.1 -0.5**
MKAR Makanchi Array 90.62 34 P **P** **00 06 01.4 -1.2**
comp=Z,1.9nm,1.0s,baz=328,slow=4.3,SNR=10
KSH Kashi 92.11 42 P **P** **00 06 11.8 +2.1**
KSH PP **PP** **00 09 51.3 +2.3**
KSH S **S** **00 17 04.0 -8.0**
KSH pmax pmax
comp=Z,9.0nm,1.2s
KSH LR LR
comp=Z,62nm,6.8s
KSH LR LR
comp=Z,100nm,11.2s
KSH LR LR
comp=Z,180nm,10.9s
NIL Nilore 94.11 48 P **P** **00 06 20.3 +1.3**
PETK Petropavlovsk- 96.59 347 LR LR 00 53 04.6
comp=Z,36nm,18.2s,baz=61,slow=37
LZH Lanzhou 108.87 27 ePdif **Pdif** **00 07 18.3 -6.9**
LZH LR LR
comp=Z,130nm,16.4s
LZH LR LR
comp=Z,130nm,16.5s
LZH LR LR
comp=Z,180nm,17.8s
PPT2 Papeete2 111.80 261 eLR LR 00 44 47.5
comp=Z,155nm,25.2s
CD2 Chengdu 113.29 30 PKP **PKiKP** **00 11 39.0 +0.7**
TBI Tubuai 113.95 256 eLR LR 00 45 48.8
comp=Z,172nm,31.5s
DZM Mont Dzumac 151.99 276 eLR LR 01 03 25.1
comp=Z,317nm,32.7s

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*SOF **25** 23:53:15.4, 40.°28N×24.°02E, h4ᵏᵐ, MD3.5*
*ATH **25** 23:53:17.8, 40.°33N×23.°95E, h15km±1km, ML3.1/17, Error ellipse: s-maj=1.3km s-min=0.6km az=36.0*
*ISK **25** 23:53:17.2, 40.°33N×23.°96E, h13km, ML3.4/25*
*PDG **25** 23:53:18.0±0.4, 40.°37N×24.°02E, h12km, ML3.4/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*IASPEI **25** 23:53:18.1±0.8, 40.°33N±0.°02×23.°95E±0.°02, h10km±4km, Error ellipse: s-maj=2.7km s-min=2.6km az=137.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*THE **25** 23:53:18.3, 40.°34N×23.°93E, h5km, ML3.0/21, Error ellipse: s-maj=0.8km s-min=0.4km az=14.0*
*SKO **25** 23:53:18.1, 40.°32N×23.°99E, h5km*
ISC 25 23:53:18.4±0.8, 40.°32N±0.°02×23.°96E±0.°02, h10km±4km, n188, σ0.°98/249, 29C-11D, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

OUR Ouranopolis 0.02 48 P **Pg** **23 53 20.1 0.0**
OUR S **Sg** **23 53 21.0 -0.4**
OUR Ouranopolis 0.02 48 P **Pg** **23 53 20.2 0.0**
OUR S **Sg** **23 53 21.2 -0.2**
OUR Ouranopolis 0.02 48 PG **Pg** **23 53 20.2 0.0**
OUR SG **Sg** **23 53 21.2 -0.2**
PAIG Paliouri 0.45 209 P **Pg** **23 53 27.1 -0.1**
PAIG S **Sg** **23 53 33.4 +0.3**
2µm,0.5s
PAIG Paliouri 0.45 209 P **Pg** **23 53 27.1 -0.1**
PAIG S **Sg** **23 53 33.6 +0.5**
PAIG AML AML 23 53 34.1
comp=N,2304µm,0.3s
PAIG AML AML 23 53 37.1
comp=E,2826µm,0.3s
THAS Thassos island 0.65 63 P **Pg** **23 53 30.6 -0.3**
THAS S **Sb** **23 53 41.0 +0.1**
THAS Thassos island 0.65 63 P **Pg** **23 53 30.6 -0.3**
THAS S **Sg** **23 53 39.2 -0.2**
SOH Sokhos 0.68 318 P **Pg** **23 53 31.0 -0.6**
SOH S **Sg** **23 53 39.9 -0.7**
comp=E,4µm,0.3s
SOH Sokhos 0.68 318 P **Pg** **23 53 31.1 -0.6**
SOH S **Sg** **23 53 39.6 -1.0**
SOH AML AML 23 53 41.5
comp=N,6572µm,0.3s
SOH AML AML 23 53 41.6
comp=E,10947µm,0.3s
KVLA Kavala 0.70 28 P **Pg** **23 53 31.7 -0.2**
KVLA S **Sg** **23 53 41.0 0.0**
KVLA AML AML 23 53 42.7
comp=N,11366µm,0.3s
KVLA AML AML 23 53 43.6
comp=E,6888µm,0.2s
HORT Hortiatis 0.71 293 P **Pg** **23 53 31.1 -1.1**
HORT S **Sg** **23 53 41.0 -0.6**
comp=E,2µm,0.2s
HORT Hortiatis 0.71 293 P **Pg** **23 53 31.1 -1.1**
HORT S **Sg** **23 53 40.8 -0.8**
HORT AML AML 23 53 45.4
comp=N,4358µm,0.2s
HORT AML AML 23 53 47.5
comp=E,1952µm,0.3s
KAVA Kavala 0.80 32 P **Pg** **23 53 33.1 -0.7**
KAVA S **Sb** **23 53 44.6 -0.7**
comp=E,4µm,0.3s
KAVA Kavala 0.80 32 P **Pg** **23 53 33.4 -0.4**
KAVA AML AML 23 53 46.1
comp=N,7411µm,0.2s
KAVA AML AML 23 53 46.2
comp=E,7036µm,0.3s
THE Thessaloniki 0.82 293 P **Pg** **23 53 32.8 -1.4**
THE S **Sg** **23 53 44.6 -0.4**
comp=E,652nm,0.5s
THE Thessaloniki 0.82 293 P **Pg** **23 53 32.9 -1.4**
THE S **Sg** **23 53 43.8 -1.2**
THE AML AML 23 53 47.5
comp=N,1211µm,0.4s
THE AML AML 23 53 48.3
comp=E,1348µm,0.3s
SRS Serrai 0.84 341 P **Pg** **23 53 34.0 -0.7**
SRS S **Sg** **23 53 45.6 -0.1**
comp=E,2µm,0.1s
SRS Serrai 0.84 341 P **Pg** **23 53 34.1 -0.6**
SRS S **Sg** **23 53 43.6 -0.1**
SRS AML AML 23 53 49.3
comp=N,4685µm,0.1s
SRS AML AML 23 53 50.2
comp=E,4737µm,0.3s
LIA Limnos Island 1.03 114 P **Pg** **23 53 37.9 -0.3**
LIA S **Sn** **23 53 53.7 +0.3**
comp=E,710nm,0.6s
LIA Limnos Island 1.03 114 P **Pg** **23 53 37.9 -0.3**
LIA S **Sg** **23 53 51.2 -0.4**
LIA AML AML 23 53 52.3
comp=E,1326µm,0.5s
LIA AML AML 23 53 54.9
comp=N,1524µm,0.9s
NVR Nevrokopi 1.03 356 P **Pg** **23 53 37.7 -0.6**
NVR S **Sg** **23 53 51.7 0.0**
comp=N,925nm,0.3s
NVR Nevrokopi 1.03 356 P **Pg** **23 53 37.3 -1.0**
NVR S **Sg** **23 53 51.6 -0.2**
NVR AML AML 23 53 53.6
comp=E,1955µm,0.3s
NVR AML AML 23 53 54.1
comp=N,1748µm,0.3s
XOR Xorichti 1.12 212 P **Pb** **23 53 39.5 -0.5**
XOR S **Sg** **23 53 54.9 +0.3**
comp=N,1µm,0.4s
XOR Xorichti 1.12 212 P **Pb** **23 53 39.8 -0.2**
XOR S **Sb** **23 53 54.2 -0.5**
XOR AML AML 23 53 56.1
comp=E,1270µm,0.4s
XOR AML AML 23 53 56.2
comp=N,2974µm,0.4s
LIT Litokhoron 1.15 259 P **Pb** **23 53 39.2 -1.2**
LIT S **Sg** **23 53 55.5 +0.1**
comp=N,288nm,0.4s
LIT Litokhoron 1.15 259 P **Pb** **23 53 39.3 -1.1**
AOS Alonnisos 1.15 183 P **Pb** **23 53 39.5 -0.9**
AOS S **Sn** **23 53 57.1 +0.7**
comp=N,495nm,0.7s
AOS Alonnisos 1.15 183 P **Pb** **23 53 39.5 -0.9**
AOS S **Sb** **23 53 54.6 -0.8**

AOS AML AML 23 53 58.9
comp=N,883µm,0.5s
AOS AML AML 23 53 60.0
comp=E,1087µm,0.9s
AOS Alonnisos 1.15 183 PN **Pb** **23 53 39.7 -0.7**
AOS SN **Sn** **23 53 56.3 -0.1**
NEO Neokhori 1.16 210 P **Pb** **23 53 40.0 -0.6**
NEO S **Sn** **23 53 56.6 -0.1**
comp=E,748nm,0.7s
NEO Neokhori 1.16 210 P **Pb** **23 53 40.0 -0.6**
NEO S **Sb** **23 53 55.8 0.0**
NEO AML AML 23 54 00.5
comp=N,1731µm,0.8s
NEO AML AML 23 54 00.7
comp=E,1205µm,0.6s
KNT Kendrikon 1.17 317 P **Pb** **23 53 39.4 -1.3**
KNT S **Sb** **23 53 55.7 -0.2**
comp=E,1µm,0.2s
KNT Kendrikon 1.17 317 P **Pb** **23 53 39.5 -1.2**
KNT S **Sb** **23 53 54.9 -1.0**
KNT AML AML 23 53 57.0
comp=E,2377µm,0.3s
KNT AML AML 23 53 58.9
comp=N,2991µm,0.2s
ALNA Alonissos 1.17 184 P **Pb** **23 53 40.4 -0.5**
SMTH Samothraki Isl 1.21 82 P **Pn** **23 53 40.3 -1.2**
SMTH S **Sn** **23 53 58.4 +0.5**
comp=N,780nm,0.4s
SMTH Samothraki Isl 1.21 82 P **Pn** **23 53 40.0 -1.4**
SMTH S **Sn** **23 53 57.6 -0.3**
SMTH AML AML 23 53 59.2
comp=E,1993µm,0.4s
SMTH AML AML 23 54 00.2
comp=N,1189µm,0.3s
SKIA Skiathos 1.21 198 P **Pn** **23 53 40.9 -0.6**
SKIA S **Sn** **23 53 59.5 +1.5**
comp=N,320nm,0.7s
MMB Musomiste 1.28 352 P **Pn** **23 53 41.0 -1.5**
GRG Griva 1.35 299 P **Pn** **23 53 42.5 -0.9**
GRG S **Sg** **23 54 01.9 +0.1**
comp=N,862nm,0.5s
GRG Griva 1.35 299 P **Pn** **23 53 42.6 -0.7**
GRG S **Sg** **23 54 02.1 +0.3**
GRG AML AML 23 54 06.2
comp=E,1486µm,0.6s
GRG AML AML 23 54 07.3
comp=N,1961µm,0.5s
LRSO Larissa Observ 1.37 242 P **Pn** **23 53 42.9 -0.7**
LRSO S **Sg** **23 54 02.8 +0.3**
comp=N,1µm,1.0s
LRSO Larissa Observ 1.37 242 P **Pb** **23 53 44.3 +0.1**
KTI Kastanea 1.41 274 P **Pn** **23 53 43.8 -0.6**
VAY Valandovo 1.45 314 i Pg **Pn** **23 53 44.5 -0.3**
VAY i Sg **Sg** **23 54 05.6 +0.4**
VAY eLg Lg 23 54 08.1
comp=N,456nm,0.4s
RDO Rodhopi 1.46 55 P **Pn** **23 53 43.5 -1.3**
RDO Rodhopi 1.46 55 P **Pn** **23 53 43.6 -1.3**
RDO AML AML 23 54 07.5
comp=E,1137µm,0.2s
RDO AML AML 23 54 10.9
comp=N,1350µm,0.3s
RDO Rodhopi 1.46 55 P **Pn** **23 53 43.4 -1.3**
RZN Rozhen 1.48 22 i P **Pn** **23 53 44.7 -0.7**
SKY Skiros Island 1.51 162 P **Pn** **23 53 45.0 -0.6**
MRKA Markates 1.64 190 P **Pn** **23 53 46.9 -0.5**
BOZC Bozcaada 1.67 106 PN **Pn** **23 53 47.2 -0.6**
KZN Kozani 1.68 270 P **Pn** **23 53 47.5 -0.4**
KZN Kozani 1.68 270 P **Pn** **23 53 48.1 +0.2**
THL Klokotos Trika 1.68 244 P **Pn** **23 53 47.5 -0.3**
THL S **Sn** **23 54 09.7 +0.3**
comp=N,132nm,0.5s
THL Klokotos Trika 1.68 244 P **Pn** **23 53 48.0 +0.2**
THL S **Sg** **23 54 11.7 -0.6**
THL AML AML 23 54 13.2
comp=N,326µm,0.6s
THL AML AML 23 54 14.7
comp=E,205µm,0.5s
KKB Krupnik 1.68 337 P **Pn** **23 53 47.3 -0.7**
KKB Krupnik 1.68 337 Pg **Pb** **23 53 49.4 -0.1**
ALN Alexandroupoli 1.69 69 P **Pn** **23 53 48.3 +0.3**
ALN S **Sb** **23 54 11.0 +0.1**
comp=E,518nm,0.5s
ALN Alexandroupoli 1.69 69 P **Pn** **23 53 48.7 +0.7**
ALN Alexandroupoli 1.69 69 PN **Pn** **23 53 46.8 -1.2**
ENEZ Enez 1.72 75 P **Pn** **23 53 48.0 -0.5**
ENEZ S **Sg** **23 54 12.9 -0.9**
ENEZ Enez 1.72 75 PN **Pn** **23 53 47.9 -0.5**
KDZ Kurdzhali 1.73 39 P **Pn** **23 53 46.8 -1.8**
KDZ Kurdzhali 1.73 39 PN **Pn** **23 53 46.7 -1.8**
AGG Agios Georgios 1.81 225 P **Pn** **23 53 49.2 -0.5**
AGG S **Sb** **23 54 13.8 -0.6**
comp=E,132nm,0.6s
AGG Agios Georgios 1.81 225 P **Pn** **23 53 49.4 -0.3**
AGG Agios Georgios 1.81 225 PN **Pn** **23 53 49.1 -0.6**
LKR Lokris 1.83 204 P **Pn** **23 53 50.3 +0.4**
LKR Lokris 1.83 204 P **Pn** **23 53 50.4 +0.5**
SIGR SIGRI 1.83 127 P **Pn** **23 53 50.5 +0.5**
SIGR S **Sb** **23 54 15.6 +0.6**
comp=E,250nm,0.5s
SIGR SIGRI 1.83 127 P **Pn** **23 53 50.7 +0.7**
SIGR SIGRI 1.83 127 PN **Pn** **23 53 49.1 -0.9**
PLD Plovdiv 1.87 17 P **Pn** **23 53 50.7 +0.2**
PLD Plovdiv 1.87 17 Pg **Pg** **23 53 54.1 -0.2**
PLD Plovdiv 1.87 17 PN **Pn** **23 53 49.6 -0.9**
EZN Ezine 1.88 104 PN **Pn** **23 53 50.3 -0.4**
GELI Tayfur-Gelibol 1.92 87 PN **Pn** **23 53 50.4 -0.8**
MAKR Makrakomi, Fth 1.92 228 P **Pn** **23 53 51.9 +0.6**
ERIK Erikli-Kesan 1.98 79 PN **Pn** **23 53 51.2 -0.8**
KPRO Kipourio 2.02 260 P **Pn** **23 53 53.0 +0.3**
KPRO Kipourio 2.02 260 P **Pn** **23 53 53.2 +0.5**
PRK Paraskevi 2.08 120 P **Pb** **23 53 54.8 -1.4**
LPK Lapseki 2.14 88 PN **Pn** **23 53 53.6 -0.6**
PENT Pentalofos 2.16 268 P **Pn** **23 53 55.3 +0.6**
EVR Evrytania 2.17 231 P **Pn** **23 53 55.5 +0.7**
UKOP Uzunkopru-Edir 2.19 67 PN **Pn** **23 53 54.5 -0.4**
NEST Nestorio 2.23 273 P **Pn** **23 53 56.1 +0.6**
PGB Panagyurishte 2.23 4 P **Pn** **23 53 55.0 -0.6**
PGB Panagyurishte 2.23 4 Pg **Pb** **23 53 59.3 +0.3**
VTS Vitosha 2.36 347 P **Pn** **23 53 57.3 -0.1**
VTS Vitosha 2.36 347 ⇑P **Pn** **23 53 57.4 0.0**
VTS ⇑S **Sn** **23 54 24.1 -2.5**
VTS Vitosha 2.36 347 i P **Pn** **23 53 57.4 0.0**
LTK Loutraki 2.42 199 P **Pn** **23 53 58.6 +0.5**
RKY Sarkoy-Tekirda 2.48 80 PN **Pn** **23 53 58.6 -0.4**
CHOS Chios island 2.52 139 P **Pn** **23 53 59.6 +0.1**
CHOS Chios island 2.52 139 PN **Pn** **23 53 59.1 -0.5**
PVO Paravola 2.54 229 P **Pn** **23 54 01.7 +2.0**
DKL Dikili 2.59 118 PN **Pn** **23 54 00.9 +0.5**
EDRB Edirne 2.60 53 P **Pn** **23 54 00.3 -0.3**
EDRB Edirne 2.60 53 PN **Pn** **23 53 59.8 -0.8**
KLV Kalavryta, Ach 2.67 212 P **Pn** **23 54 02.6 +1.0**
PDO Prodromos 2.75 232 P **Pn** **23 54 04.7 +2.1**
MRMT Marmara Adasi 2.79 83 PN **Pn** **23 54 02.5 -0.7**
URLA Izmir 2.83 133 PN **Pn** **23 54 03.3 -0.5**
GONE Gonen-Balikesi 2.87 94 PN **Pn** **23 54 03.3 -0.9**
JMB Yambol 2.91 42 P **Pn** **23 54 04.1 -0.8**
DRO Drossia 2.94 217 P **Pn** **23 54 06.0 +0.8**
ELND Elena 2.98 28 ⇑P **Pn** **23 54 05.4 -0.3**
ELND ⇓S **Sn** **23 54 43.4 +1.9**
RLS Riolos of Patr 2.98 221 P **Pn** **23 54 07.9 +2.2**
CRLT Corlu 2.98 73 PN **Pn** **23 54 05.8 0.0**
EDC Edincik 2.98 88 PN **Pn** **23 54 05.6 -0.2**
MPEP Malo Peshtene 3.04 357 P **Pn** **23 54 06.8 +0.2**
MPEP Malo Peshtene 3.04 357 Pg **Pg** **23 54 15.1 -1.6**
PVL Pavlikeni 3.07 19 P **Pn** **23 54 05.2 -1.8**
BLCB Balcova 3.07 128 PN **Pn** **23 54 06.4 -0.7**
BALB Balikesir 3.09 101 PN **Pn** **23 54 07.2 -0.1**
PLVB Pleven 3.10 9 ⇑P **Pn** **23 54 07.9 +0.4**
PLVB ⇓S **Sb** **23 54 53.6 +1.9**
VLX Vlachokerasia 3.19 203 P **Pn** **23 54 09.8 +1.0**
KEK Kerkira 3.25 261 P **Pn** **23 54 11.6 +2.1**
AMT Artemida-Makis 3.29 213 P **Pn** **23 54 11.9 +1.8**
SZH Strazhica 3.29 26 P **Pn** **23 54 09.9 -0.2**
BLKB Belogradchik 3.44 344 ⇑S **Sg** **23 55 07.3 -1.5**
ITM Ithomi 3.52 208 PN **Pn** **23 54 13.2 0.0**
VLAD Vladila 3.69 5 ⇑P **Pn** **23 54 14.8 -0.8**
BAIL Bailesti 3.73 353 ⇑S **Sg** **23 55 18.6 +0.5**
ARMT Armutlu 3.75 85 PN **Pn** **23 54 16.6 +0.2**
BGKT Bogazkoy 3.75 75 PN **Pn** **23 54 16.6 +0.2**
RAZG Razgrad 3.76 30 ⇓P **Pn** **23 54 29.0 -1.4**
MDNY Mudanya-Bursa 3.76 88 PN **Pn** **23 54 16.7 +0.2**

PVY Plav 3.77 308 ePn Pn 23 54 17.5 +0.7
PVY eSn Sn 23 55 02.2 +0.9
ROIA ROIAK 3.77 42 P Pn 23 54 16.9 +0.2
AYDB Zeytinkoy-Aydi 3.87 127 PN Pn 23 54 17.6 -0.5
ULC Ulcinj 3.92 296 ePn Pn 23 54 19.4 +0.6
ULC eSn Sn 23 55 06.3 +1.4
COPA Copaceanca 3.92 13 ⇓P Pn 23 54 18.5 -0.2
COPA ⇓S Sg 23 55 28.0 +3.5
IVA Berane 3.98 311 ePn Pn 23 54 20.0 +0.4
PUNG Punghina 4.03 349 ⇑P Pn 23 54 20.0 -0.2
PUNG ⇓S Sg 23 55 29.0 +1.2
DRME Dracevica, Mon 4.05 299 ePn Pn 23 54 23.0 +2.4
DRME Dracevica, Mon 4.05 299 ePn Pn 23 54 21.7 +1.1
DRME eSn Sn 23 55 10.0 +1.9
KULA Kula-Manisa 4.06 115 PN Pn 23 54 21.1 +0.3
PDG Podgorica 4.12 302 ⇑P Pn 23 54 21.6 +0.1
PDG ⇑S Sn 23 55 09.3 -0.4
PDG Podgorica 4.12 302 ePn Pn 23 54 22.7 +1.2
TTG Podgorica 4.12 302 ePn Pn 23 54 22.0 +0.5
TTG eSn Sn 23 55 11.5 +1.8
YLV Yalova 4.14 85 PN Pn 23 54 22.3 +0.5
SGRR Singureni 4.18 20 ⇑P Pb 23 54 33.3 +1.3
KOME Kolasin 4.18 309 ePn Pn 23 54 23.0 +0.6
KOME eSn Sn 23 55 12.9 +1.5
HUMR Humele 4.27 10 ⇓P Pn 23 54 23.5 0.0
BUM Brajici-Budva 4.30 299 ⇑Pn Pn 23 54 25.1 +1.1
BUM eSn Sn 23 55 15.7 +1.5
SRE Strehaia 4.38 353 ⇓P Pn 23 54 24.9 -0.1
CEME Cevo 4.40 302 ePn Pn 23 54 26.4 +1.1
CEME eSn Sn 23 55 18.2 +1.6
NKME Niksic 4.48 305 ePn Pn 23 54 27.1 +0.6
NKME eSn Sn 23 55 20.1 +1.3
HCY Herceg Novi 4.63 299 ePn Pn 23 54 31.9 +3.4
HCY Herceg Novi 4.63 299 ePn Pn 23 54 29.0 +0.5
HCY eSn Sn 23 55 23.9 +1.6
ICOR Ion Corvin 4.75 36 ⇑P Pn 23 54 29.7 -0.4
RUDO Rudo 4.75 315 ePn Pn 23 54 30.3 +0.2
UPM Unac-Piva 4.75 309 ePn Pn 23 54 31.4 +1.1
UPM Unac-Piva 4.75 309 ePn Pn 23 54 31.3 +1.0
UPM eSn Sn 23 55 26.2 +0.6
DIVS Divibare 4.79 323 ePn Pn 23 54 30.4 -0.4
BRY Bratogost 4.81 304 ePn Pn 23 54 32.4 +1.3
BRY Bratogost 4.81 304 ePn Pn 23 54 32.3 +1.2
BRY i Sn Sn 23 55 27.7 +0.7
TREB Trebinje 4.84 301 ePn Pn 23 54 36.1 +4.7
BBLS Lazići 4.90 318 ePn Pn 23 54 31.9 -0.4
ARR Arges 5.07 5 ⇑P Pn 23 54 34.7 +0.1
LOT Lotru 5.13 358 ⇑P Pn 23 54 35.1 -0.3
GZR Gura Zlata 5.14 351 ⇑P Pn 23 54 34.4 -1.2
VOIR 5.18 9 ⇓P Pn 23 54 36.4 +0.4
HAPS Han Pijesak,Bl 5.29 317 ePn Pn 23 54 35.9 -1.8
MLR Muntele Rosu 5.37 15 ⇑P Pn 23 54 39.8 +1.0
BZS Buzias 5.57 343 ⇑P Pn 23 54 40.4 -1.0
DEV Deva 5.61 352 ⇑P Pn 23 54 42.4 +0.4
TIP Timpagrande 5.67 261 ⇑P Pn 23 54 43.2 +0.4
CFR Carcaliu 5.75 31 ⇑P Pn 23 54 44.8 +1.0
PLOR Plostina 5.87 19 ⇑P Pn 23 54 47.4 +1.9
VRI Vrincioaia 5.90 19 ⇑P Pn 23 54 47.2 +1.2
OZUR 5.92 12 ⇑P Pn 23 54 47.0 +0.7
SIRR Siria 6.18 345 ⇓P Pn 23 54 48.9 -0.8
CJR Cluj-Napoca 6.40 358 ⇑P Pn 23 54 52.8 0.0
TESR Tescani 6.49 17 ⇑P Pn 23 54 54.4 +0.4
DRGR 6.53 352 ⇓P Pn 23 54 53.5 -1.2
BLY Banja Luka 6.68 314 ⇑P Pn 23 54 57.4 +0.8
BLY Banja Luka 6.68 314 ePn Pn 23 54 57.5 +0.8
MORH Mrgy, Hungar 7.05 328 ePn Pn 23 54 59.9 -1.8
BURAR Bucovina Array 7.35 7 ⇑P Pn 23 55 06.5 +0.6
CRES Cresnjev 8.30 314 ePn Pn 23 55 19.3 +0.4
SORM Soroca 8.42 20 ⇑P Pn 23 55 19.4 -1.1
KOLS Kolonicke sedl 8.70 353 eSG Sg 23 57 58.9 +1.6
SOKA Soboth 9.08 317 ePn Pn 23 55 29.7 +0.1
comp=E,1.4nm,0.5s
OBKA Obir 9.22 315 ePn Pn 23 55 32.6 +1.0
comp=E,1.6nm,0.4s
KBA Koelnbreinsper 10.23 315 ePn Pn 23 55 47.0 +1.6
comp=E,1.8nm,0.6s

NEIC **26** *00:00:04.9±3.7, 30.69S±0.03×121.33E±0.06, h1km±3km, Error ellipse: s-maj=7.8km s-min=3.2km az=66.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr4.89; Mθθ-0.19; Mφφ-4.69; Mrθ-0.92; Mθφ-1.59; Mφr3.52; Fault plane solution: M₀6.23000×10¹⁵ NP1: φs214.28000°, δ31.57000°, λ120.23000°. NP2: φs359.91000°, δ63.10000°, λ72.80000°. Principal axes: T 6.3353, Plg67.0000°, Azm237.0000°; N -0.2264, Plg15.0000°, Azm8.0000°; P -6.1089, Plg16.0000°, Azm102.0000°;*

IDC **26** *00:00:05.7±0.5, 30.73S×121.29E, h0km, mb4.5/18, mb1 4.5/19, mb1mx4.4/39, mbtmp4.5/19, ML2.8/1, MS3.7/8, Ms1 3.8/8, ms1mx3.4/31 Error ellipse: s-maj=22.3km s-min=16.4km az=110.0*

BJI **26** *00:00:06.9±0.0, 30.60S×121.20E, h8km, mB4.9/8, mb4.7/21, Ms7 4.4/2*

AUST **26** *00:00:06.9±0.1, 30.68S×121.19E, h0km±1km, Error ellipse: s-maj=1.1km s-min=0.5km az=294.0*

ISC 26 00:00:05.9±0.3, 30.63S±0.04×121.39E±0.03, h10km, n111, σ2.98/128, mb4.6/26, MS3.7/6, Western Australia

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

KMBL Kambalda 0.85 150 P Pb 00 00 21.5 -1.2
baz=0.9,SNR=106
KMBL S Sb 00 00 32.8 -1.4
baz=0.9,SNR=31
KMBL Kambalda 0.85 150 Pn 00 00 22.8 -1.1
KMBL Sn 00 00 33.8 -2.6
KLBR Kellerberrin 3.26 252 P Pn 00 00 55.1 -1.9
baz=3.1,SNR=73
KLBR S Sn 00 01 31.6 -4.3
baz=3.1,SNR=6.5
KLBR Kellerberrin 3.26 252 Pn 00 00 55.9 -1.2
KLBR LR 00 01 42.9
BLDU Ballidu 4.03 269 P Pn 00 01 04.7 -3.0
baz=3.9,SNR=5.9
BLDU S Sn 00 01 49.6 -5.4
baz=3.9,SNR=5.8
BLDU Ballidu 4.03 269 Pn 00 00 55.9 -12
BLDU Sn 00 01 50.9 -4.1
NWAO Narrogin (SRO) 4.21 236 P Pn 00 01 07.9 -2.3
baz=4.0,SNR=10
NWAO S Sn 00 01 52.1 -7.3
baz=4.0,SNR=8.6
NWAO Narrogin (SRO) 4.21 236 Pn Pn 00 01 07.8 -2.3
28nm,0.3s,baz=60,slow=12,SNR=47
NWAO Lg Lg 00 02 06.2
252nm,0.3s,baz=332,slow=24,SNR=33
NWAO Narrogin (SRO) 4.21 236 Pn 00 01 07.6 -2.5
MUN Mundaring 4.63 252 P Pn 00 01 13.3 -2.6
baz=4.4,SNR=62
MUN S Sn 00 02 02.2 -7.6
baz=4.4,SNR=6.9
MUN Mundaring 4.63 252 Pn 00 01 13.9 -2.0
MUN Sb 00 02 15.9 -7.1
MEEK Meekatharra 4.67 328 P Pn 00 01 16.5 +0.1
baz=4.6,SNR=35
MEEK S Sn 00 02 07.1 -3.6
baz=4.6
MEEK Meekatharra 4.67 328 Pn 00 01 16.9 +0.4
MEEK Sn 00 02 07.9 -2.7
MORW Morawa 4.90 287 P Pn 00 01 17.1 -2.5
baz=4.7,SNR=52
MORW S Sn 00 02 10.0 -6.4
baz=4.7,SNR=4.5
MORW Morawa 4.90 287 Pn 00 01 17.0 -2.6
MORW Sn Sn 00 02 11.3 -5.1
MTKN Mount Kenneth 4.98 253 Pn 00 01 19.9 -0.8
RKGY Rocky Gully 5.44 222 P Pn 00 01 24.9 -2.1
baz=5.3,SNR=95
RKGY S Sn 00 02 26.5 -3.1
baz=5.3
RKGY Rocky Gully 5.44 222 Pn 00 01 25.9 -1.1
RKGY Sn 00 02 27.9 -1.7
FORT Forrest 5.75 93 P Pn 00 01 32.8 +1.5
baz=5.9,SNR=19
FORT S Sn 00 02 37.7 +0.4
baz=5.9
FORT Forrest 5.75 93 Pn 00 01 33.2 +1.9
FORT Pg 00 01 52.5 -3.5
WRKA Warakurna 8.27 49 P Pn 00 02 08.5 +2.5
baz=8.4,SNR=55
WRKA S Sn 00 03 39.6 +0.1
baz=8.4
WRKA Warakurna 8.27 49 Pn 00 02 08.9 +2.9
WRKA Sn 00 03 40.0 +0.5
PSA00 Pilbara Seismi 9.13 351 Pn 00 02 16.3 -1.4
PSAA2 Pilbara Seismi 9.13 351 Pn Pn 00 02 16.3 -1.5
GIRL Giralia 10.21 320 Pn Pn 00 02 30.9 -1.5
MULG Mulgathing 10.94 91 P Pn 00 02 42.8 +0.3
baz=11,SNR=49
MULG S Sn 00 04 42.5 -2.5
baz=11,SNR=7.4
BBOO Buckleboo 12.68 104 P Pn 00 03 05.3 -1.0
baz=13,SNR=25
BBOO S Sn 00 05 21.8 -5.8
baz=13
BBOO Buckleboo 12.68 104 Pn 00 03 05.1 -1.2
OOD Oodnadatta 12.81 81 P Pn 00 03 06.9 -1.1
baz=13,SNR=48
OOD S Sn 00 05 23.9 -6.8
baz=13,SNR=5.0
FITZ Fitzroy Crossi 13.06 18 P Pn 00 03 10.1 -1.5
baz=13,SNR=21
FITZ S Sn 00 05 30.2 -6.8
baz=13
FITZ Fitzroy Crossi 13.06 18 Pn Pn 00 03 10.0 -1.5
6.6nm,0.3s,baz=204,slow=11,SNR=116
FITZ Sn Sn 00 05 29.7 -7.3
4.5nm,0.3s,baz=113,slow=23,SNR=9.0
FITZ Lg Lg 00 07 10.4
1.8nm,0.3s,baz=311,slow=20,SNR=2.2
FITZ Fitzroy Crossi 13.06 18 Pn 00 03 10.3 -1.3
ASAR Alice Springs 13.12 61 Pn Pn 00 03 10.3 -2.0
4.2nm,0.3s,baz=238,slow=11,SNR=173
ASAR Sn Sn 00 05 30.5 -8.0
5.3nm,0.3s,baz=243,slow=22,SNR=7.8
ASAR Lg Lg 00 06 59.0
2.9nm,0.3s,baz=235,slow=26,SNR=4.1
ASAR LR LR 00 08 48.7
comp=Z,355nm,20.4s,baz=233,slow=40
AS31 Alice Springs 13.12 61 Pn 00 03 10.2 -2.2
LCRK Leigh Creek 14.51 94 P Pn 00 03 29.8 -1.5
baz=15,SNR=6.1
LCRK S Sn 00 06 05.6 -6.6
baz=15,SNR=3.3
LCRK Leigh Creek 14.51 94 P Pn 00 03 30.0 -1.3
HTT Hallett 15.13 105 P Pn 00 03 37.5 -2.3
baz=15,SNR=6.1
HTT S Sn 00 06 22.2 -5.4
baz=15
WRA Warramunga Arr 15.81 51 Pn Pn 00 03 44.9 -3.8
2.2nm,0.3s,baz=229,slow=13,SNR=55
WRA Sn Sn 00 06 31.9 -12
2.0nm,0.3s,baz=228,slow=23,SNR=9.4
WRA Lg Lg 00 08 24.0
baz=226,slow=32,SNR=5.4
WRA LR LR 00 10 11.4
comp=Z,359nm,21.9s,baz=210,slow=38
WB2 Warramunga Arr 15.82 51 P Pn 00 03 44.8 -4.0
WR0 Warramunga Arr 15.93 51 P Pn 00 03 46.9 -3.3
WB0 Warramunga Arr 15.97 50 P Pn 00 03 46.6 -4.2
WB0 IAmb IAmb 00 03 58.5
comp=Z,41nm,1.2s
KNRA Kununurra 16.35 26 P Pn 00 03 54.2 -1.4
baz=16,SNR=8.3
KNRA S Sn 00 06 47.9 -9.1
baz=16,SNR=6.2
KNRA Kununurra 16.35 26 P Pn 00 03 54.0 -1.5
KNRA IAmb IAmb 00 04 09.4
comp=Z,23nm,0.6s
STKA Stephens Creek 17.33 99 P Pn 00 04 05.0 -2.9
comp=Z,0.9nm,0.3s,baz=275,slow=13,SNR=13
STKA S Sn 00 07 09.8 -11
comp=Z,3.5nm,0.3s,baz=184,slow=15,SNR=6.4
STKA Lg Lg 00 09 07.6
comp=Z,1.1nm,0.3s,baz=157,slow=15,SNR=2.3
STKA LR LR 00 11 05.2
comp=Z,485nm,19.3s,baz=214,slow=38
STKA Stephens Creek 17.33 99 P Pn 00 04 05.0 -2.9
MTN Manton Dam 19.86 29 P P 00 04 37.6 +0.4
CTA Charters Tower 24.75 71 P P 00 05 29.8 +2.1
comp=Z,9.9nm,0.6s,baz=247,slow=12,SNR=11
KAPI Kappang 25.53 356 LR LR 00 16 57.9
comp=Z,68nm,18.7s,baz=193,slow=40
ARMA Armidale 26.02 97 P P 00 05 42.4 +3.1
ARMA IAmb IAmb 00 05 45.6
comp=Z,18nm,1.1s
COEN Coen 26.03 55 P P 00 05 41.6 +2.3
COEN IAmb IAmb 00 05 43.0
comp=Z,18nm,0.9s
LEM Lembang 26.98 329 LR LR 00 15 47.6
comp=Z,286nm,22.0s,baz=178,slow=35
PMG Port Moresby 31.98 54 LR LR 00 19 38.5
comp=Z,140nm,18.2s,baz=198,slow=36
VNDA Vanda 50.40 169 P P 00 09 03.4 +0.6
comp=Z,2.7nm,0.5s,baz=313,slow=7.5,SNR=5.7
CMAR Chiang Mai Arr 53.37 333 P P 00 09 27.6 +1.9
comp=Z,1.1nm,0.6s,baz=171,slow=6.3,SNR=5.7
CMAR LR LR 00 32 05.6
comp=Z,70nm,21.8s,baz=172,slow=36
QSPA South Pole Qui 59.47 180 P P 00 10 09.8 +1.0
comp=Z,11nm,0.7s,baz=289,slow=0.2,SNR=43
QSPA South Pole Qui 59.47 180 P P 00 10 09.7 +0.8
BRDH Bariadhala 60.20 328 LR LR 00 38 30.1
comp=Z,61nm,18.7s,baz=272,slow=38
SHL Shillong 62.61 330 P P 00 10 32.3 +1.7
ODAN Odare 65.76 327 eP P 00 10 54.0 +2.7
TAPN Taplejung 66.02 327 eP P 00 10 54.9 +1.8
comp=Z,12nm,0.5s
RAMN Ramite 66.21 326 eP P 00 10 55.9 +1.6
comp=Z,10nm,0.5s
JIRN Jiri 67.00 326 eP P 00 10 59.1 -0.4
PKI Pulchoki 67.31 326 eP P 00 11 02.4 +1.1
comp=Z,7.4nm,0.5s
PKIN Phulchoki 67.32 326 eP P 00 11 02.4 +1.1
comp=Z,4.8nm,0.4s
GUN Gumba 67.36 326 eP P 00 11 02.8 +1.1
comp=Z,10nm,0.6s
OPO Ambohidratompo 67.47 261 P P 00 11 02.8 +0.3
comp=Z,2.4nm,0.8s,baz=129,slow=18,SNR=3.6
KKN Kakani 67.55 326 eP P 00 11 04.3 +1.5
KSRS Korea Array 68.01 6 P P 00 11 07.0 +1.9
comp=Z,0.7nm,0.5s,baz=186,slow=8.6,SNR=4.7
GKN Gorkha 68.04 325 eP P 00 11 07.2 +1.4
DANN Dangsing 68.76 325 eP P 00 11 11.4 +0.9
comp=Z,11nm,0.6s
HHC Hu-ho-hao-te 71.70 352 eP P 00 11 34.8 +6.9
HHC Hu-ho-hao-te 71.70 352 eP P 00 11 34.8 +6.9
HHC pmax pmax
comp=Z,5.0nm,1.2s
HHC pmax pmax
comp=Z,73nm,6.7s
GTA Gaotai 72.52 343 eP P 00 11 36.5 +3.6
GTA pP sP 00 11 41.3 +3.8
GTA sP PcP 00 11 44.0 -6.5
GTA Gaotai 72.52 343 eP P 00 11 36.5 +3.6
GTA pP sP 00 11 41.3 +3.8
GTA sP PcP 00 11 44.0 -6.5
GTA pmax pmax
comp=Z,3.0nm,0.7s
USRK Ussuriysk Ar. 75.10 8 P P 00 11 50.1 +2.4
comp=Z,1.4nm,0.6s,baz=221,slow=7.3,SNR=3.8
SONM Songino Array 79.26 350 P P 00 12 13.7 +2.5
comp=Z,1.2nm,0.5s,baz=164,slow=5.6,SNR=13
WMQ Urumqi 80.25 336 eP P 00 12 19.8 +3.2
WMQ pmax pmax
comp=Z,14nm,0.9s
WMQ pmax pmax
comp=Z,74nm,4.1s
WMQ LR LR
comp=Z,210nm,29.3s
BOSA Boshof 80.76 242 P P 00 12 20.8 +0.8
comp=Z,3.4nm,0.7s,baz=115,slow=6.1,SNR=8.9
BOSA Boshof 80.76 242 IAmb IAmb 00 12 21.7
comp=Z,4.8nm,0.8s
KBL Kabul 81.46 319 P P 00 12 25.2 +1.7
KBL IAmb IAmb 00 12 26.2
comp=Z,8.8nm,1.4s
LBTB Lobatse 82.28 246 P P 00 12 29.1 +1.0
comp=Z,2.7nm,0.6s,baz=138,slow=5.7,SNR=4.7
LBTB Lobatse 82.28 246 P P 00 12 28.3 +0.2
LBTB IAmb IAmb 00 12 39.1
comp=Z,5.6nm,1.1s
KMBO Kilima Mbogo 84.38 272 P P 00 12 40.8 +1.6
comp=Z,0.7nm,0.3s,baz=72,slow=6.4,SNR=2.8
KMBO Kilima Mbogo 84.38 272 IAmb IAmb 00 12 41.7
comp=Z,3.1nm,1.1s
AAK Ala-Archa 84.69 327 P P 00 12 42.0 +2.1
comp=Z,3.5nm,0.5s,baz=139,slow=4.3,SNR=23
AAK Ala-Archa 84.69 327 P P 00 12 42.3 +2.3
AAK IAmb IAmb 00 12 42.9
comp=Z,3.9nm,0.6s
MK31 Makanchi Array 84.76 334 P P 00 12 41.5 +1.4
MK31 IAmb IAmb 00 12 43.1
comp=Z,8.2nm,1.5s
MKAR Makanchi Array 84.76 334 P P 00 12 41.5 +1.4
comp=Z,3.9nm,0.5s,baz=148,slow=6.8,SNR=111
LSZ Lusaka 85.05 255 P P 00 12 44.2 +1.8
comp=Z,2.7nm,0.8s,baz=118,slow=4.0,SNR=8.2
LSZ Lusaka 85.05 255 P P 00 12 43.6 +1.1
LSZ IAmb IAmb 00 12 45.0
comp=Z,2.4nm,0.8s
KK31 Karatay Array 86.95 325 P P 00 12 52.0 +1.0
KURBB Kurchatov Arra 89.33 334 P P 00 13 03.6 +1.6
comp=Z,6.4nm,0.6s,baz=143,slow=4.2,SNR=106
KURK Kurchatov 89.37 334 P P 00 13 03.8 +1.6
ZAA0 Zalesovo Array 89.98 339 P P 00 13 04.9 -0.1
ZAA0 IAmb IAmb 00 13 06.9
comp=Z,2.5nm,0.7s
ZALV Zalesovo Beam 89.98 339 P P 00 13 05.8 +0.7
comp=Z,2.3nm,0.6s,baz=156,slow=3.9,SNR=13
GEYT Alibeck 90.21 315 P P 00 13 08.0 +1.4
comp=Z,0.6nm,0.5s,baz=201,slow=7.9,SNR=4.7
RAYN Ar Rayn 90.47 297 P P 00 13 09.3 +1.1
BVAR Borovoye Array 94.38 332 P P 00 13 26.9 +1.5
comp=Z,0.9nm,0.5s,baz=139,slow=5.3,SNR=12
ILAR Eielson Array 117.98 29 PKP PKiKP 00 18 52.5 +0.5
comp=Z,0.2nm,0.7s,baz=260,slow=2.9,SNR=4.2
FINES FINESS Array B 118.88 327 PKP PKiKP 00 18 54.9 +1.0
comp=Z,1.5nm,0.4s,baz=113,slow=2.5,SNR=16
ARCES ARCESS Array B 120.37 336 PKP PKiKP 00 18 58.0 +1.4
comp=Z,4.5nm,0.9s,baz=122,slow=1.6,SNR=12
TORD Torodi Ar. Bea 122.04 267 PKP PKiKP 00 19 02.0 +0.5
comp=Z,1.6nm,0.4s,baz=97,slow=1.5,SNR=40
SPITS Spitsbergen Ar 122.83 346 PKP PKiKP 00 19 03.0 +1.7
comp=Z,10nm,1.0s,baz=116,slow=11,SNR=4.4
GERES GERESS Array B 123.61 311 PKP PKiKP 00 19 04.5 +0.8
comp=Z,0.3nm,0.6s,baz=93,slow=2.7,SNR=3.9
INK Inuvik 123.64 26 PKP PKiKP 00 19 04.7 +1.7
comp=Z,0.5nm,0.5s,baz=128,slow=3.1,SNR=4.4
KEST Kesra 123.91 295 PKP PKiKP 00 19 06.7 +2.0
comp=Z,3.1nm,0.9s,baz=50,slow=1.7,SNR=8.3
DBIC Dimbokro 124.38 256 PKP PKiKP 00 19 06.5 +0.4
comp=Z,2.4nm,0.6s,baz=331,slow=1.6,SNR=4.8
YKA Yellowknife Ar 132.29 31 PKP PKiKP 00 19 21.3 +0.8
comp=Z,0.4nm,0.6s,baz=279,slow=1.9,SNR=7.1
TXAR Lajitas Array 141.15 80 PKhKP PKPpre 00 19 29.8
comp=Z,0.4nm,0.6s,baz=327,slow=1.5,SNR=6.8
ULM Lac du Bonnet 146.01 44 PKPbc PKPab 00 19 46.5 +0.4
comp=Z,2.4nm,0.7s,baz=284,slow=2.9,SNR=7.2
FRB Frobisher Bay 146.27 8 PKPbc PKiKP 00 19 47.1 -1.8
comp=Z,2.8nm,0.5s,baz=345,slow=3.5,SNR=19

IDC **26** *00:02:40.1±1.8, 28.55N×43.78W, h0km, mb3.7/9, mb1 3.9/9, mb1mx3.6/75, mbtmp3.7/9, Error ellipse: s-maj=71.6km s-min=23.7km az=9.0*

ISC 26 00:02:42.1±1.6, 28.5N±0.4×43.8W±0.2, h14km, n14, σ0.85/9, mb3.6/9, Northern Mid-Atlantic Ridge

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

TORD Torodi Ar. Bea 44.89 100 P P 00 10 55.9 -0.6
0.7nm,0.9s,baz=302,slow=10,SNR=2.9
H10N2 ASCENSION HYDR45.86 137 T T 00 59 53.5
baz=323,slow=75,SNR=8.6
H10N3 ASCENSION HYDR45.87 138 T T 00 59 54.5
baz=323,slow=75,SNR=6.3
H10N1 ASCENSION HYDR45.88 138 T T 00 59 55.9
baz=323,slow=75,SNR=9.6
H10S3 ASCENSION HYDR46.66 139 T T 01 00 50.2
baz=322,slow=74,SNR=11
H10S2 ASCENSION HYDR46.67 139 T T 01 00 53.9
baz=258,slow=74,SNR=11
TXAR Lajitas Array 51.90 286 P P 00 11 51.3 +0.6
0.6nm,0.8s,baz=81,slow=8.2,SNR=5.0
PDAR Pinedale Array 54.05 304 P P 00 12 06.5 0.0
1.5nm,0.9s,baz=82,slow=8.3,SNR=8.1
YKA Yellowknife Ar 56.32 328 P P 00 12 21.4 -0.8
0.4nm,0.8s,baz=89,slow=8.0,SNR=6.4
NVAR Mina Array Bea 61.43 300 P P 00 12 58.0 -0.5
0.4nm,0.8s,baz=73,slow=3.1,SNR=2.7
BVAR Borovoye Array 80.77 34 P P 00 14 55.4 +0.2
0.2nm,0.6s,baz=328,slow=5.1,SNR=2.5
GEYT Alibeck 81.56 51 P P 00 15 01.0 +1.4
0.9nm,0.9s,baz=297,slow=6.3,SNR=2.0
KURBB Kurchatov Arra 86.22 33 P P 00 15 22.3 -0.8
1.1nm,1.1s,baz=316,slow=5.2,SNR=4.6
MKAR Makanchi Array 90.65 34 P P 00 15 44.6 +0.3
0.8nm,1.0s,baz=332,slow=4.1,SNR=4.4

IDC **26** *00:10:48.9±1.2, 28.46N×43.65W, h0km, mb3.7/10, mb1 4.0/10, mb1mx3.6/64, mbtmp3.7/10, MS3.5/1, Ms1 3.5/1, ms1mx2.9/40, Error ellipse: s-maj=35.6km s-min=25.8km az=159.0*

NEIC **26** *00:10:51.1±1.1, 28.57N±0.08×43.47W±0.2, h10km±2km, mb4.4/7, Error ellipse: s-maj=27.2km s-min=6.6km az=110.0*

ISC 26 00:10:51.1±1.1, 28.5N±0.2×43.7W±0.2, h12km, n24, σ0.72/17, mb3.7/10, Northern Mid-Atlantic Ridge

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

H10N2 ASCENSION HYDR45.80 138 T T 01 08 06.8
baz=323,slow=75,SNR=7.3
H10N3 ASCENSION HYDR45.80 138 T T 01 08 04.8
baz=323,slow=75,SNR=7.3
H10N1 ASCENSION HYDR45.82 138 T T 01 08 06.1
baz=323,slow=75,SNR=10.0
H10S3 ASCENSION HYDR46.59 139 T T 01 09 05.3
baz=258,slow=74,SNR=15
H10S2 ASCENSION HYDR46.61 139 T T 01 09 04.5
baz=322,slow=74,SNR=18
LPAZ La Paz 50.43 211 P P 00 19 48.7 -0.8
1.5nm,0.7s,baz=1.0,slow=5.3,SNR=4.6
LPAZ La Paz 50.43 211 P P 00 19 50.5 +1.0
LPAZ IAmb IAmb 00 19 53.6
comp=Z,5.9nm,1.3s
TXAR Lajitas Array 52.01 286 P P 00 20 00.8 +0.1
comp=Z,0.4nm,0.7s,baz=92,slow=8.9,SNR=5.7
GO01 Chusmiza 53.88 210 P P 00 20 14.8 -0.1
BW06 Boulder Array 54.14 304 P P 00 20 16.7 +0.2
PD31 Pinedale Array 54.14 304 P P 00 20 16.1 -0.4
PD31 IAmb IAmb 00 20 17.3
comp=Z,4.7nm,1.0s
PDAR Pinedale Array 54.14 304 P P 00 20 16.4 0.0
comp=Z,1.2nm,0.7s,baz=98,slow=7.8,SNR=12
REDW Red Top Meadow 55.00 305 P P 00 20 22.6 -0.1
SRU San Rafael Swe 55.44 300 P P 00 20 26.0 +0.1
CPUP Villa Florida 56.08 195 LR LR 00 42 39.6
comp=Z,38nm,19.1s,baz=16,slow=34
YKA Yellowknife Ar 56.37 328 P P 00 20 31.4 -0.5
comp=Z,0.5nm,0.7s,baz=89,slow=7.5,SNR=6.2
NVAR Mina Array Bea 61.52 300 P P 00 21 07.5 -0.8
comp=Z,0.5nm,0.8s,baz=67,slow=6.9,SNR=4.0
ILAR Eielson Array 69.96 334 P P 00 22 03.0 +1.0
comp=Z,0.4nm,0.7s,baz=69,slow=4.9,SNR=4.6
AKTO Aktyubinsk 75.46 40 P P 00 22 34.7 -0.3
comp=Z,1.0nm,0.7s,baz=304,slow=7.8,SNR=3.6
BVAR Borovoye Array 80.69 34 P P 00 23 02.6 -1.5
comp=Z,0.6nm,0.8s,baz=306,slow=5.0,SNR=4.0
KURK Kurchatov 86.12 33 P P 00 23 32.6 +0.6
KURK Kurchatov 86.12 33 IAmb IAmb 00 23 33.6
comp=Z,14nm,1.9s
KURBB Kurchatov Arra 86.14 33 P P 00 23 32.6 +0.5
comp=Z,0.4nm,0.7s,baz=308,slow=5.3,SNR=5.2
MKAR Makanchi Array 90.58 34 P P 00 23 54.2 +0.9
comp=Z,0.6nm,1.0s,baz=301,slow=5.9,SNR=4.0

IDC 26 00:12:01.9±1.9, 28.42N×43.79W, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.4/61, mbtmp3.6/4, MS3.6/2, Ms1 3.6/2, ms1mx3.0/35, Error ellipse: s-maj=106.2km s-min=29.7km az=20.0, Northern Mid-Atlantic Ridge

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)

TORD Torodi Ar. Bea 44.88 100 P P 00 20 18.4 -0.1
1.4nm,1.0s,baz=280,slow=8.6,SNR=4.0
H10N2 ASCENSION HYDR45.81 137 T T 01 09 15.5
baz=323,slow=75,SNR=4.8
H10N3 ASCENSION HYDR45.82 137 T T 01 09 15.8

baz=323,slow=75,SNR=5.4
H10N1 ASCENSION HYDR45.83 137 T T 01 09 16.4
baz=323,slow=75,SNR=5.6
H10S3 ASCENSION HYDR46.61 139 T T 01 10 12.1
baz=323,slow=74,SNR=6.9
H10S2 ASCENSION HYDR46.62 139 T T 01 10 13.2
baz=257,slow=74,SNR=6.2
NNA Nana 51.34 223 LR LR 00 42 06.5
comp=Z,33nm,21.9s,baz=341,slow=35
TXAR Lajitas Array 51.92 286 P P 00 21 12.8 0.0
0.5nm,0.9s,baz=94,slow=10,SNR=3.9
PDAR Pinedale Array 54.09 304 P P 00 21 28.8 0.0
0.8nm,0.8s,baz=110,slow=8.1,SNR=4.1
YKA Yellowknife Ar 56.38 328 P P 00 21 44.4 -0.3
0.6nm,1.0s,baz=96,slow=7.4,SNR=3.5
YKA LR LR 00 44 11.8
comp=Z,118nm,19.2s,baz=0.0,slow=34

WEL 26 00:17:46.2±0.8, 32°S±16°×17°9E±3°9, h315km±27km, M4.3/10, mB4.5/5, ML4.8/9, MLv4.7/10, Mw(mB)3.6/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	Matawai	6.19	192	P	Pn	00 19 18.8	+0.7
MWZ				S	S	00 20 31.5	-0.8
RTZ	Ruatahuna	6.57	195	P	Pn	00 19 24.6	+1.9
NMHZ	Naumai	7.07	195	P	Pn	00 19 28.6	0.0
BKZ	Black Stump Fm	7.21	197	P	Pn	00 19 27.8	-2.5
BKZ				S	S	00 20 55.2	+0.5
KWHZ	Kaweka Forest	7.47	197	P	Pn	00 19 34.8	+1.4
KWHZ				S	S	00 21 02.2	+1.8
KRHZ	Kereru	7.69	196	P	Pn	00 19 36.5	+0.4
KRHZ				S	S	00 21 04.9	-0.3
KAHZ	Kahuranaki	7.72	193	P	Pn	00 19 34.1	-2.4
KAHZ				S	S	00 21 07.6	+1.5
PNHZ	Pukenui	7.99	197	P	Pn	00 19 40.1	+0.4
PNHZ				S	S	00 21 11.8	0.0
PRHZ	Porangahau	8.23	194	P	Pn	00 19 41.9	-0.6
ANWZ	Angora Road	8.45	194	P	Pn	00 19 46.6	+1.4
BFZ	Birch Farm	8.71	195	P	Pn	00 19 48.8	+0.4
MRZ	Mangatainoka R	8.85	198	P	Pn	00 19 49.9	-0.2
HOWZ	Holdsworth Sta	9.09	198	P	Pn	00 19 53.3	+0.3
OGWZ	Otaki Gorge	9.11	200	P	Pn	00 19 52.5	-0.7
KIW	Kapiti Island	9.22	201	P	Pn	00 19 54.4	-0.2

IDC 26 00:31:25.7±1.3, 29°45N×52°48E, h0km, mb3.6/10, mb1 3.7/15, mb1mx3.5/63, mbtmp3.6/15, ML3.3/5, Error ellipse: s-maj=27.5km s-min=18.4km az=167.0
TEH 26 00:31:26.7, 29°54N×52°51E, h11km, ML3.5
THR 26 00:31:29.1±0.5, 29°60N×52°37E, h18km±8km, ML3.3
OMAN 26 00:31:30.5±0.6, 28°99N×52°31E, h5km±6km, ml3.6/3, ms3.0/1, Error ellipse: s-maj=16.1km s-min=5.0km az=4.0
ISC 26 00:31:27.6±0.6, 29°46N±0°05×52°49E±0°04, h15km, n56, σ1°86/65, mb3.6/10, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHI	Shiraz	0.18	7	ePg	Pg	00 31 29.5	-2.7
SHI				eSg	Sg	00 31 32.4	-2.9
ISRV	Sarvestan	0.55	98	ePg	Pg	00 31 36.7	-1.9
IKAZ	Kazeroun	0.65	300	ePg	Pg	00 31 38.9	-1.6
IKAZ				e		00 31 54.4	
AHBU	AHRAM	1.20	241	ePg	Pg	00 31 51.2	+0.4
JHRM	Jahrom	1.35	135	ePg	Pg	00 31 54.1	+0.5
JHRM				e		00 32 24.5	
KLNJ	Kolanjah	1.73	334	ePn	Pn	00 31 59.2	+1.7
KLNJ				e		00 32 35.8	
IRAM	Ramesheh	2.34	358	ePn	Pn	00 32 07.6	+1.7
LAR1	LAR	2.44	137	ePn	Pn	00 32 08.8	+1.9
ISAD	Sadrabad	2.66	23	ePn	Pn	00 32 12.3	+2.1
IBRJ	Brojen	2.66	337	ePn	Pn	00 32 12.1	+1.9
IMEH	Mehriz	2.66	43	ePn	Pn	00 32 12.8	+2.6
IGAR	Gharneh	2.96	353	ePn	Pn	00 32 16.3	+2.0
ROKH	ROKH	3.14	337	ePn	Pn	00 32 19.6	+2.8
JHBN	Jahan bin	3.18	331	ePn	Pn	00 32 18.0	+0.6
ICHK	Chekchek	3.23	30	ePn	Pn	00 32 20.0	+2.0
IBAF	Bafgh	3.40	51	ePn	Pn	00 32 21.8	+1.5
IZEF	Zefreh	3.43	358	ePn	Pn	00 32 22.6	+1.8
YZKH	Yazd	3.44	31	ePn	Pn	00 32 23.0	+2.2
YZKH	Yazd	3.44	31	ePn	Pn	00 32 23.0	+2.2
IPIR	Pirpir	3.50	337	ePn	Pn	00 32 23.0	+1.3
KHGB	Koh Gabri	3.58	74	ePn	Pn	00 32 24.2	+1.3
KHGB				e		00 33 26.0	
NGRK	Negar Kerman	3.70	86	ePn	Pn	00 32 25.9	+1.3
KRBR	Kerman	3.75	81	ePn	Pn	00 32 29.9	+4.6
KRBR				eSg	Sg	00 33 28.6	+0.3
KRBR				IAML		00 33 33.1	
	comp=E,30nm,0.6s						
KRBR				IAML		00 33 40.9	
	comp=N,35nm,0.5s						
KRBR	Kerman	3.75	81	ePn	Pn	00 32 29.9	+4.6
TVBK	TV Kerman	3.75	81	ePn	Pn	00 32 26.9	+1.6
TVBK				e		00 32 46.9	
GENO	Geno	3.84	121	ePn	Pn	00 32 26.8	+0.4
CHMN	Cheshme madani	4.42	84	ePn	Pn	00 32 36.8	+2.4
KHMZ	Khomeyn	4.78	334	ePn	Pn	00 32 40.6	+1.2
KHMZ	Khomeyn	4.78	334	ePn	Pn	00 32 40.6	+1.2
KHNJ	Kahnooj	4.82	107	ePn	Pn	00 32 42.7	+2.9
BANOM	Banah	4.88	135	P	Pn	00 32 41.8	+1.2
	SNR=10						
BANOM				S	Sn	00 33 38.5	+1.7
TPRV	Parvadeh(Tabas	5.06	44	ePn	Pn	00 32 44.6	+1.6
MDH	Madha	5.35	140	P	Pn	00 32 48.1	+1.1
MDH				S	Sn	00 33 47.7	-0.7
UOSS	Minazif	5.58	143	P	Pn	00 32 51.1	+1.0
UOSS				S	Sn	00 33 52.8	-1.3
HATD	Hatta, Dubai	5.64	144	P	Pn	00 32 52.0	+1.0
HATD				S	Sn	00 33 56.1	+0.5
SOHO	SOHO	6.42	145	P	Pn	00 33 02.4	+0.8
ARQ	Araqi	7.09	148	P	Pn	00 33 11.7	+0.9
ARQ				S	Sn	00 34 30.9	-0.3
SMDO	Samad	8.09	141	P	Pn	00 33 25.6	+0.9
SMDO				S	Sn	00 34 54.1	-2.0
WSAR	Wadi Sarin	8.29	137	Pn	Pn	00 33 27.9	+0.5
	comp=N,0.8nm,0.3s,baz=63,slow=11,SNR=11						
WSAR				Sn	Sn	00 34 56.1	-4.6
	comp=N,0.6nm,0.3s,baz=143,slow=20,SNR=3.5						
WBK	Wadi Bani Khal	8.97	138	P	Pn	00 33 36.4	-0.4
	SNR=6.4						
GEYT	Alibeck	9.66	28	Pn	Pn	00 33 47.3	+1.2
	comp=N,0.1nm,0.3s,baz=208,slow=12,SNR=3.6						
MHTO	MHTO	9.78	148	P	Pn	00 33 48.0	+0.2
	SNR=5.0						
MHTO				S	Sn	00 35 32.4	-5.0
WHFO	Wadi Hawf	11.55	174	P	Pn	00 34 10.6	-1.5
	SNR=12						
ASF	Jabal al Asfar	13.67	285	Pn	Pn	00 34 42.1	+1.1
	comp=N,0.2nm,0.3s,baz=116,slow=14,SNR=3.1						
MMAI	Mount Meron Ar	15.04	288	Pn	Pn	00 35 00.6	+0.9
	comp=N,0.3nm,0.3s,baz=105,slow=17,SNR=3.5						
BRTR	Keskin Array B	18.56	308	P	P	00 35 44.5	+0.5
	comp=N,0.0nm,0.3s,baz=139,slow=12,SNR=2.9						
AKTO	Aktyubinsk	21.36	10	P	P	00 36 15.8	+1.5
	comp=N,0.9nm,0.6s,baz=213,slow=17,SNR=3.6						
AAK	Ala-Archa	22.05	47	P	P	00 36 23.0	+1.1
	comp=N,0.3nm,0.3s,baz=219,slow=14,SNR=2.3						
BVAR	Borovoye Array	26.97	24	P	P	00 37 09.2	+0.7
	comp=N,0.8nm,0.4s,baz=214,slow=7.0,SNR=12						
KURBB	Kurchatov Arra	28.80	35	P	P	00 37 25.3	+0.4
	comp=N,0.1nm,0.2s,baz=233,slow=9.4,SNR=4.9						
MKAR	Makanchi Array	28.90	45	P	P	00 37 27.0	+1.1
	comp=N,0.5nm,1.0s,baz=226,slow=4.7,SNR=4.8						
ZALV	Zalesovo Beam	33.88	35	P	P	00 38 09.1	-0.4
	comp=N,0.5nm,0.3s,baz=253,slow=10.0,SNR=4.2						
FINES	FINESS Array B	36.45	339	P	P	00 38 31.2	-0.4
	comp=N,1.1nm,0.5s,baz=148,slow=8.2,SNR=5.7						
NOA	NORSAR Array B	41.72	331	P	P	00 39 15.2	-0.6
	comp=N,1.1nm,1.0s,baz=135,slow=7.5,SNR=2.4						
TORD	Torodi Ar. Bea	49.64	262	P	P	00 40 19.4	+0.4
	comp=N,1.1nm,0.6s,baz=58,slow=8.8,SNR=9.6						
KSRS	Korea Array	61.91	61	P	P	00 41 45.9	-0.8
	comp=N,0.8nm,0.4s,baz=279,slow=6.9,SNR=3.8						

SJA 26 00:38:29.8±0.5, 21°89S×67°40W, h198km±4km, ML3.3, MW3.4
IDC 26 00:38:30.8±1.2, 21°96S×67°22W, h171km±13km, mb3.1/3, mb1 3.4/5, mb1mx3.2/28, mbtmp3.7/5, Error ellipse: s-maj=32.0km s-min=20.4km az=143.0
GUC 26 00:38:31.9±0.6, 21°90S×67°74W, h204km±6km, ML3.8
ISC 26 00:38:31.4±0.8, 21°81S±0°05×67°38W±0°05, h177km±8km, n27, σ1°55/45, mb3.5/3, 12C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.62	240	P	Pn	00 39 04.9	+0.2
	baz=60,slow=9.3						
LVC				S	Sn	00 39 29.8	-0.7
	18nm,0.3s,baz=260,slow=19,SNR=4.3						
LVC	Limon Verde	1.62	240	iP	Pn	00 39 04.7	0.0
LVC				eS	Sn	00 39 30.7	+0.2
PB09	IPOC Station P	1.73	270	⇑iP	Pn	00 39 06.2	+0.6
PB09				iS	Sn	00 39 31.7	-0.3
PB09	IPOC Station P	1.73	270	iP	Pn	00 39 06.2	+0.6
PB09				eS	Sn	00 39 32.5	+0.5
PB09				IAML		00 39 35.5	
	comp=Z,96nm,0.2s						
YJA	Yavi	1.77	102	iP	Pn	00 39 07.8	+1.4
YJA				eS	Sn	00 39 35.2	+1.9
YJA				IAML		00 39 36.2	
	comp=Z,58nm,0.7s						
PB01	IPOC Station P	2.10	291	⇑iP	Pn	00 39 09.9	+0.3
PB01				iS	Sn	00 39 38.8	-0.3
PB01				IAML		00 39 39.8	
	comp=N,569nm,0.3s						
PB06	IPOC Station P	2.21	246	⇑iP	Pn	00 39 10.3	-0.6
PB06				iS	Sn	00 39 39.4	-2.0
PB07	IPOC Station P	2.33	272	⇑iP	Pn	00 39 11.8	-0.3
PB07				iS	Sn	00 39 41.9	-1.8
PB07				IAML		00 39 43.0	
	comp=N,366nm,0.2s						
PB08	IPOC Station P	2.35	315	⇑iP	Pn	00 39 14.4	+1.8
PB08				iS	Sn	00 39 46.1	+1.6
PB08				IAML		00 39 48.6	
	comp=N,128nm,0.3s						
PB15	IPOC Station P	2.38	234	⇑iP	Pn	00 39 12.1	-0.6
PB15				iS	Sn	00 39 43.0	-1.9
PB15	IPOC Station P	2.38	234	iP	Pn	00 39 12.5	-0.3
PB15				eS	Sn	00 39 43.9	-1.0
PB02	IPOC Station P	2.39	281	⇑iP	Pn	00 39 12.6	-0.1
PB02				iS	Sn	00 39 43.4	-1.5
PB02				IAML		00 39 44.2	
	comp=N,418nm,0.3s						
PB02	IPOC Station P	2.39	281	iP	Pn	00 39 12.9	+0.1
PB02				IAML		00 39 48.4	
	comp=Z,340nm,0.5s						
PB04	IPOC Station P	2.62	258	⇑iP	Pn	00 39 14.8	-0.7
PB04				iS	Sn	00 39 46.9	-2.8
PB04				IAML		00 39 49.1	
	comp=E,218nm,0.2s						
PB04	IPOC Station P	2.62	258	iP	Pn	00 39 14.9	-0.6
GO01	Chusmiza	2.73	321	⇑iP	Pn	00 39 18.5	+1.4
GO01				iS	Sn	00 39 54.3	+1.7
GO01				IAML		00 39 58.4	
	comp=N,471nm,0.1s						
PATCX	Punta Patache	2.76	290	⇑iP	Pn	00 39 16.8	-0.4
PATCX				iS	Sn	00 39 51.2	-1.6
PATCX				IAML		00 39 53.2	
	comp=N,346nm,0.3s						
TA01	Diego Aracena	2.89	295	⇑iP	Pn	00 39 18.0	-0.6
TA01				iS	Sn	00 39 53.0	-2.3
TA01				IAML		00 39 55.0	
	comp=N,162nm,0.4s						
PB11	IPOC Station P	2.95	313	⇑iP	Pn	00 39 19.6	+0.1
AZAP	Zapla	3.21	139	iP	Pn	00 39 22.3	-0.4
SLA	San Lorenzo	3.37	150	iP	Pn	00 39 24.0	-0.7
LPAZ	La Paz	5.54	353	P	Pn	00 39 55.3	+2.3
	comp=N,1.1nm,0.3s,baz=165,slow=7.9,SNR=22						
LPAZ				S	Sn	00 40 55.2	-1.9
	baz=6.1,slow=18,SNR=2.6						
SIV	San Ignacio	8.32	47	P	Pn	00 40 27.6	-1.4
	comp=N,2.8nm,0.3s,baz=240,slow=8.4,SNR=68						
SIV				S	Sn	00 41 56.2	-6.0
	comp=N,0.5nm,0.3s,baz=131,slow=19,SNR=2.4						
TXAR	Lajitas Array	61.70	324	P	P	00 48 32.2	+1.2
	comp=N,0.1nm,0.3s,baz=136,slow=6.7,SNR=1.6						
TORD	Torodi Ar. Bea	76.13	70	P	P	00 49 59.7	-0.5
	comp=N,0.5nm,0.4s,baz=249,slow=5.4,SNR=23						
YKA	Yellowknife Ar	91.96	340	P	P	00 51 19.8	+0.5
	comp=N,0.3nm,0.6s,baz=130,slow=4.4,SNR=7.7						
MKAR	Makanchi Array	145.04	37	PKPbc	PKPab	00 57 47.9	+0.4
	comp=N,0.2nm,0.8s,baz=315,slow=3.6,SNR=3.8						

MOS 26 00:38:38.9±1.2, 45°97N×150°96E, h130km, mb4.0/5, Error ellipse: s-maj=10.9km s-min=7.8km az=52.8
SKHL 26 00:38:39.6±0.4, 45°72N×151°04E, h131km±8km, mb5.1/7, msh5.8/6
IDC 26 00:38:42.5±2.4, 46°21N×150°77E, h140km±21km, mb3.2/15, mb1 3.4/20, mb1mx3.3/54, mbtmp3.7/20, Error ellipse: s-maj=17.9km s-min=12.7km az=147.0
JMA 26 00:38:43.2±0.6, 45°38N×150°78E, h124km, M4.0
ISC 26 00:38:36.7±0.7, 45°77N±0°07×151°10E±0°07, h100km, n80, σ2°68/92, mb3.5/18, 2C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.34	258	eP	Pn	00 39 18.0	+4.4
KUR				AMB	AMB	00 39 19.0	
	700nm,0.4s						
KUR				iS	Sn	00 39 47.1	+5.3
KUR				A	A	00 39 49.0	
	470nm,0.2s						
KUR				A	A	00 39 49.0	
	320nm,0.2s						
KUR	Kuril'sk	2.34	258	ePN	Pn	00 39 17.9	+4.4
KUR				iS	Sn	00 39 47.1	+5.3
KUR				pmax	pmax		
	comp=Z,722nm,0.4s						
KUR				pmax	pmax		
	comp=E,328nm,0.1s						
KUR				pmax	pmax		
	comp=N,459nm,0.2s						
KUR				smax	smax		
	comp=N,465nm,0.2s						
KUR				smax	smax		
	comp=E,319nm,0.2s						
SHO	Shikotan	3.58	240	iP	Pn	00 39 32.8	+2.7
SHO				AMB	AMB	00 39 34.0	
	comp=E,20nm,0.2s						
SHO				AMB	AMB	00 39 34.0	
	comp=E,40nm,0.2s						
SHO				AMB	AMB	00 39 34.0	
	comp=E,60nm,0.2s						
SHO				iS	Sn	00 40 11.7	+0.2
SHO				A	A	00 40 16.0	
	comp=E,270nm,0.3s						
SHO				A	A	00 40 16.0	
	comp=E,120nm,0.3s						
SHO	Shikotan	3.58	240	d iPN	Pn	00 39 32.8	+2.7
SHO				iS	Sn	00 40 12.1	+0.6
SHO				pmax	pmax		
	comp=Z,60nm,0.3s						
SHO				pmax	pmax		
	comp=N,21nm,0.2s						
SHO				pmax	pmax		
	comp=E,42nm,0.2s						
SHO				smax	smax		
	comp=E,118nm,0.4s						
SHO				smax	smax		
	comp=N,269nm,0.2s						
YUK	Yuzh-Kuril'sk	4.11	247	iP	Pn	00 39 41.0	+3.8
YUK				AMB	AMB	00 39 44.0	
	comp=N,230nm,0.4s						
YUK				iS	Sn	00 40 26.8	+2.6
YUK				A	A	00 40 32.0	
	comp=N,250nm,0.3s						
YUK				A	A	00 40 32.0	
	comp=N,360nm,0.3s						
YUK	Yuzh-Kuril'sk	4.11	247	d iPN	Pn	00 39 40.9	+3.8
YUK				iS	Sn	00 40 26.8	+2.6
YUK				pmax	pmax		
	comp=Z,234nm,0.1s						
YUK				smax	smax		
	comp=N,245nm,0.2s						
YUK				smax	smax		
	comp=E,358nm,0.3s						
GRPR	Tuman	4.18	247	eP	Pn	00 39 42.1	+3.9
GRPR				AMB	AMB	00 39 47.4	
	comp=E,180nm,0.4s						
GRPR				iS	Sn	00 40 29.0	+3.0
GRPR				A	A	00 40 31.4	
	comp=E,290nm,0.3s						
GRPR				A	A	00 40 31.4	
	comp=E,250nm,0.3s						
GRPR	Tuman	4.18	247	ePN	Pn	00 39 42.1	+3.9
GRPR				iS	Sn	00 40 29.0	+3.0
GRPR				pmax	pmax		
	comp=Z,181nm,0.2s						
GRPR				smax	smax		
	comp=N,291nm,0.3s						
GRPR				smax	smax		
	comp=E,252nm,0.3s						
GLVR	Golovnino	4.46	245	eP	Pn	00 39 45.4	+3.4
GLVR				AMB	AMB	00 39 54.0	
	comp=E,110nm,0.2s						
GLVR				iS	Sn	00 40 34.5	+1.7
GLVR				A	A	00 40 34.6	
	comp=E,440nm,0.4s						
GLVR				A	A	00 40 34.6	
	comp=E,270nm,0.4s						
GLVR	Golovnino	4.46	245	ePN	Pn	00 39 45.4	+3.4
GLVR				iS	Sn	00 40 34.5	+1.7
GLVR				pmax	pmax		
	comp=N,76nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,110nm,0.2s						
GLVR				smax	smax		
	comp=E,268nm,0.4s						
GLVR				smax	smax		
	comp=N,436nm,0.3s						
NEM2	Nemuro 2	4.52	240	P	Pn	00 39 45.2	+2.4
NEM2				eS	Sn	00 40 33.5	-0.7
NMR	Nemuro--Hokkai	4.53	240	eP	Pn	00 39 45.2	+2.3
NMR				iS	Sn	00 40 34.6	+0.3
NMR	Nemuro--Hokkai	4.53	240	ePN	Pn	00 39 45.2	+2.3
NMR				iS	Sn	00 40 34.6	+0.3
JRA	Rausu	4.63	249	P	Pn	00 39 48.0	+3.8
JNK	Nakash	5.05	247	P	Pn	00 39 53.5	+3.6
JAK	Akkeshi	5.36	241	eS	Sn	00 40 53.6	-1.0
JTKR	Abashiri--Toko	5.42	253	P	Pn	00 39 58.3	+3.3
JAR	Ashorobuto	5.79	247	P	Pn	00 40 03.5	+3.4
YSS	Yuzh-Sakhalins	5.90	285	eP	Pn	00 40 04.0	+2.6
YSS				AMB	AMB	00 40 06.0	
	comp=N,10.0nm,1.0s						
YSS	Yuzh-Sakhalins	5.90	285	ePN	Pn	00 40 04.3	+2.9
YSS				eS	Sn	00 41 09.9	+2.3
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
JOB	Onbets	5.95	244	P	Pn	00 40 05.2	+3.1
JOB				eS	Sn	00 41 09.5	+0.7
SKR	Severo-Kuril's	5.95	32	eP	Pn	00 40 03.6	+1.5
SKR				AMB	AMB	00 40 04.0	
	comp=Z,70nm,0.6s						
SKR				eS	Sn	00 41 09.9	+1.1
SKR				A	A	00 41 13.0	
	comp=Z,50nm,0.7s						
SKR				A	A	00 41 13.0	
	comp=Z,40nm,0.7s						
SKR	Severo-Kuril's	5.95	32	ePN	Pn	00 40 03.7	+1.6
SKR				eS	Sn	00 41 07.4	-1.4
SKR				pmax	pmax		
	comp=Z,71nm,0.6s						
SKR				smax	smax		
	comp=E,36nm,0.8s						
SKR				smax	smax		
	comp=N,47nm,0.7s						
JKA	Kamikawa-asahi	6.25	258	eP	Pn	00 40 10.2	+3.9
ASAJ	Asahikawa	6.26	258	P	Pn	00 40 10.2	+3.9
	comp=N,1.4nm,0.3s,baz=72,slow=18,SNR=6.5						
JCH	Churui	6.39	243	P	Pn	00 40 10.4	+2.2
JCH				eS	Sn	00 41 17.3	-2.4
PAU	Pauzhetka	6.84	31	erx	Pn	00 40 12.8	-1.5
ERM	Erimo	6.85	240	ePN	Pn	00 40 18.3	+3.8
JNBK	Urakawa-nobuka	6.95	243	P	Pn	00 40 17.6	+1.8
JKB	Kayabe	8.25	246	eS	Sn	00 41 59.9	-4.9
PETK	Petropavlovsk-	8.51	28	P	Pn	00 40 37.9	+1.0
	comp=N,0.8nm,0.3s,baz=209,slow=14,SNR=3.7						
JSR	Shiriuchi	8.83	245	eS	Sn	00 42 13.1	-5.8
JANG	Nango	8.84	236	P	Pn	00 40 41.3	-0.3
JANG				eS	Sn	00 42 13.2	-6.2
JTM	Tenmabayashi	8.85	239	P	Pn	00 40 42.1	+0.5
JTM				eS	Sn	00 42 13.3	-6.2
JRG	Rokugo	10.00	234	P	Pn	00 40 58.0	+0.7
KLR	Kul'dur	13.53	292	eP	Pn	00 41 45.6	+1.3
KLR	Kul'dur	13.53	292	⇑iPN	Pn	00 41 45.6	+1.3
USRK	Ussuriysk Ar.	13.62	270	P	Pn	00 41 48.1	+2.6
	baz=61,slow=12,SNR=2.7						
EKMR	Ekimchan	13.87	308	eP	Pn	00 41 48.6	-0.1
EKMR				AMB	AMB	00 41 54.0	
	comp=N,6.0nm,0.9s						
BMKR	Bomnak	16.76	310	eP	Pn	00 42 23.0	-2.0
BMKR				AMB	AMB	00 42 26.0	
	comp=N,3.0nm,0.8s						
SEY	Seymchan	17.22	2	P	Pn	00 42 28.4	-2.1
	comp=N,0.1nm,0.3s,baz=193,slow=6.2,SNR=4.1						
SEY	Seymchan	17.22	2	eP	P	00 42 30.2	-0.4
SEY	Seymchan	17.22	2	⇑iP	P	00 42 30.2	-0.4
KROS	Kirovskiy	17.67	308	eP	P	00 42 32.5	-3.1
KROS				AMB	AMB	00 42 37.0	
	comp=N,60nm,0.9s						
KSRS	Korea Array	19.17	253	P	Pn	00 42 56.4	+2.3
	comp=N,0.2nm,0.3s,baz=47,slow=11,SNR=6.3						
YAK	Yakutsk	20.44	330	eP	Pn	00 43 07.1	-1.6
YAK	Yakutsk	20.44	330	iP	Pn	00 43 07.2	-1.5
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TIXI	Tiksi	28.04	345	eP	P	00 44 18.4	+0.5
TIXI	Tiksi	28.04	345	iP	P	00 44 18.4	+0.5
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.1s						
H11N2	WAKE ISLAND Hy	29.05	148	T	T	01 16 16.1	
	baz=338,slow=76,SNR=140						
H11N1	WAKE ISLAND Hy	29.07	148	T	T	01 16 18.2	
	baz=338,slow=76,SNR=132						
H11N3	WAKE ISLAND Hy	29.07	148	T	T	01 16 18.5	
	baz=338,slow=76,SNR=140						
H11S1	WAKE ISLAND Hy	30.11	149	T	T	01 17 33.1	
	baz=338,slow=76,SNR=97						
H11S3	WAKE ISLAND Hy	30.11	149	T	T	01 17 33.6	
	baz=338,slow=76,SNR=53						
H11S2	WAKE ISLAND Hy	30.12	149	T	T	01 17 33.0	
	baz=338,slow=76,SNR=52						
SONM	Songino Array	30.35	290	P	P	00 44 38.3	-0.6
	comp=Z,0.1nm,0.3s,baz=77,slow=7.7,SNR=2.4						
ILAR	Eielson Array	38.18	38	P	P	00 45 46.8	+0.7
	comp=Z,0.5nm,0.9s,baz=262,slow=6.5,SNR=4.4						
NRIK	Noril'sk	38.89	330	iP	P	00 45 50.6	-1.2
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	46.15	297	P	P	00 46 49.2	-1.7
	comp=Z,0.4nm,0.5s,baz=66,slow=6.5,SNR=9.8						
KURK	Kurchatov	46.75	304	eP	P	00 46 53.6	-1.8
KURK	Kurchatov	46.75	304	P	P	00 46 53.6	-1.8
KURBB	Kurchatov Arra	46.84	304	P	P	00 46 53.6	-2.6
	comp=Z,0.3nm,0.5s,baz=72,slow=8.7,SNR=2.8						
YKA	Yellowknife Ar	52.54	36	P	P	00 47 39.9	+0.7
	comp=Z,0.2nm,0.4s,baz=298,slow=7.1,SNR=4.3						
AAK	Ala-Archa	53.01	296	P	P	00 47 42.6	-0.6
	comp=Z,0.5nm,0.4s,baz=173,slow=8.1,SNR=3.2						
JIRN	Jiri	53.63	274	eP	P	00 47 48.9	+0.8
	comp=Z,4.5nm,0.2s						
GUN	Gumba	53.69	274	eP	P	00 47 49.1	+0.5
	comp=Z,6.8nm,0.6s						
RAMN	Ramite	53.78	273	eP	P	00 47 49.2	+0.1
	comp=Z,5.8nm,0.4s						
GKN	Gorkha	54.50	275	eP	P	00 47 56.0	+1.8
	comp=Z,13nm,0.3s						
DANN	Dangsing	54.90	276	eP	P	00 47 58.3	+1.0
	comp=Z,2.9nm,0.2s						
ARCES	ARCESS Array B	58.32	340	P	P	00 48 18.4	-2.1
	comp=Z,2.6nm,0.9s,baz=46,slow=7.7,SNR=2.7						
FINES	FINESS Array B	64.32	334	P	P	00 48 58.8	-2.2
	comp=Z,11nm,1.3s,baz=21,slow=9.2,SNR=3.3						
GEYT	Alibeck	65.90	300	P	P	00 49 10.6	-1.2
	comp=Z,0.9nm,0.6s,baz=203,slow=1.1,SNR=3.6						
PDAR	Pinedale Array	66.45	52	P	P	00 49 16.0	+0.6
	comp=Z,0.1nm,0.4s,baz=340,slow=4.8,SNR=3.1						
WRA	Warramunga Arr	67.14	197	P	P	00 49 22.3	+2.7
	comp=Z,0.6nm,0.5s,baz=15,slow=6.6,SNR=2.6						
NOA	NORSAR Array B	68.69	340	P	P	00 49 26.8	-2.1
	comp=Z,0.6nm,0.7s,baz=30,slow=6.6,SNR=4.8						
ASAR	Alice Springs	70.85	197	P	P	00 49 46.3	+3.8
	comp=Z,0.3nm,0.7s,baz=11,slow=5.4,SNR=4.2						
AKASG	Malin Array Be	71.57	325	P	P	00 49 44.5	-2.1
	comp=Z,0.5nm,0.3s,baz=37,slow=6.2,SNR=4.9						
AKASG	Malin Array Be	71.57	325	iP	P	00 49 45.0	-1.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						

GERES GERESS Array B 78.71 333 P P 00 50 26.2 -1.5
comp=Z,0.3nm,0.4s,baz=60,slow=5.8,SNR=3.5
TXAR Lajitas Array 79.19 59 P P 00 50 32.6 +1.9
comp=Z,0.3nm,0.6s,baz=302,slow=3.8,SNR=4.7

NEIC 26 00:39:42.7±0.9, 12.98N±0.10×143.4E±0.1, h182km±5km, mb4.2/17, Error ellipse: s-maj=17.9km s-min=14.3km az=84.0
IDC 26 00:39:43.0±0.8, 13.01N×143.43E, h183km±9km, mb3.7/18, mb1 3.8/18, mb1mx3.6/51, mbtmp4.2/18, Error ellipse: s-maj=18.5km s-min=10.0km az=80.0
ISC 26 00:39:44.6±0.5, 13.10N±0.09×143.53E±0.09, h200km, n44, σ1.18/43, mb4.1/24, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.39	70	P	Pn	00 40 16.0	-1.3
	63nm,0.3s,baz=246,slow=3.4,SNR=21						
GUMO				S	Sn	00 40 40.3	-2.4
	272nm,0.3s,baz=192,slow=23,SNR=26						
GUMO	Guam	1.39	70		Pn	00 40 15.4	-1.9
JNU	Nakatsue	23.03	332	P	P	00 44 32.9	+0.7
	3.6nm,0.4s,baz=57,slow=25.5,SNR=4.7						
JNU	Nakatsue	23.03	332	IAmb	IAmb	00 44 34.3	
	comp=Z,12nm,1.1s						
SSLB	Suanglung	23.87	300	P	P	00 44 39.4	-0.6
WRA	Warramunga Arr	34.06	196	P	P	00 46 08.4	-1.6
	comp=Z,7.1nm,0.7s,baz=15,slow=9.3,SNR=30						
BJT	Baijiatuau	36.02	323	P	P	00 46 26.6	0.0
KLR	Kul'dur	37.31	347	P	P	00 46 38.2	+0.8
	comp=Z,0.8nm,0.5s,baz=143,slow=6.1,SNR=4.0						
AS31	Alice Springs	37.73	194	P	P	00 46 39.8	-1.4
AS31				IAmb	IAmb	00 46 41.3	
	comp=Z,2.8nm,0.6s						
ASAR	Alice Springs	37.74	194	P	P	00 46 40.0	-1.3
	comp=Z,4.2nm,0.5s,baz=18,slow=13,SNR=64						
PBKT	Sadao Pong	41.23	280	P	P	00 47 10.4	+0.2
PBKT				IAmb	IAmb	00 47 11.6	
	comp=Z,5.7nm,0.7s						
DZM	Mont Dzumac	41.56	147	P	P	00 47 14.3	+1.4
	comp=Z,6.9nm,0.6s,baz=255,slow=8.0,SNR=10						
CMAR	Chiang Mai Arr	43.15	283	P	P	00 47 25.9	0.0
	comp=Z,2.7nm,0.5s,baz=82,slow=7.1,SNR=15						
CMAR	Chiang Mai Arr	43.15	283	*i* P	P	00 47 25.8	0.0
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ARMA	Armidale	43.97	170		S	00 53 53.0	+4.2
STKA	Stephens Creek	44.76	182	P	P	00 47 36.5	-1.8
	comp=Z,3.7nm,0.8s,baz=351,slow=9.4,SNR=9.4						
STKA	Stephens Creek	44.76	182	IAmb	IAmb	00 47 40.4	
	comp=Z,1.3nm,1.1s						
SONM	Songino Array	46.38	326	P	P	00 47 51.4	+0.4
	comp=Z,1.6nm,0.6s,baz=150,slow=8.1,SNR=17						
SHL	Shillong	50.00	292	P	P	00 48 17.9	-1.2
TAPN	Taplejung	53.85	294	*e*P	P	00 48 47.1	-0.6
	comp=Z,9.0nm,0.8s						
RAMN	Ramite	54.82	294	*e*P	P	00 48 54.0	-0.6
JIRN	Jiri	55.22	295	*e*P	P	00 48 57.2	-0.4
	comp=Z,9.8nm,0.6s						
GUN	Gumba	55.51	295	*e*P	P	00 48 59.2	-0.4
	comp=Z,12nm,0.4s						
PKI	Pulchoki	55.91	294	*e*P	P	00 49 01.1	-1.3
	comp=Z,5.1nm,0.5s						
DANN	Dangsing	57.40	295	*e*P	P	00 49 12.2	-0.7
	comp=Z,17nm,0.5s						
MK31	Makanchi Array	60.93	316	P	P	00 49 36.8	+0.4
MKAR	Makanchi Array	60.93	316	P	P	00 49 37.1	+0.6
	comp=Z,1.8nm,0.5s,baz=93,slow=8.1,SNR=36						
MAKZ	Makanchi	61.15	316	P	P	00 49 38.3	+0.4
MAKZ				IAmb	IAmb	00 49 39.3	
	comp=Z,3.2nm,0.6s						
ZALV	Zalesovo Beam	61.26	325	P	P	00 49 38.4	-0.1
	comp=Z,1.1nm,0.4s,baz=111,slow=7.0,SNR=7.6						
KURK	Kurchatov	64.11	320	P	P	00 49 57.6	+0.3
KURBB	Kurchatov Arra	64.15	320	P	P	00 49 57.8	+0.1
	comp=Z,2.2nm,0.5s,baz=102,slow=6.6,SNR=28						
NRIK	Noril'sk	66.16	341	P	P	00 50 10.8	+0.6
	comp=Z,1.2nm,0.3s,baz=153,slow=6.8,SNR=2.6						
NIL	Nilore	66.51	301	P	P	00 50 12.7	-0.5
KK31	Karatay Array	68.79	311	P	P	00 50 26.9	-0.3
KK31				IAmb	IAmb	00 50 28.2	
	comp=Z,2.0nm,0.5s						
KKAR	Karatay Array	68.79	311	P	P	00 50 27.1	-0.2
KKAR				IAmb	IAmb	00 50 28.2	
	comp=Z,2.0nm,0.5s						
BRVK	Borovoye	69.56	322	P	P	00 50 32.0	+0.3
ILAR	Eielson Array	69.56	25	P	P	00 50 31.8	+0.3
	comp=Z,0.3nm,0.5s,baz=247,slow=6.0,SNR=6.6						
KBL	Kabul	69.98	302	P	P	00 50 34.4	-0.5
ABKAR	Akbulak array	76.02	318	P	P	00 51 09.6	-0.2
ABKAR				IAmb	IAmb	00 51 15.3	
	comp=Z,8.1nm,1.6s						
GEYT	Alibeck	78.49	306	P	P	00 51 24.3	+0.5
	comp=Z,1.3nm,0.8s,baz=227,slow=3.5,SNR=3.6						
YKA	Yellowknife Ar	83.89	27	P	P	00 51 52.9	+1.3
	comp=Z,0.1nm,0.4s,baz=285,slow=5.1,SNR=2.7						
ARCES	ARCESS Array B	87.14	342	P	P	00 52 07.5	-0.1
	comp=Z,1.5nm,0.7s,baz=84,slow=7.0,SNR=8.2						
NVAR	Mina Array Bea	88.24	51	P	P	00 52 15.7	+1.9
	comp=Z,0.3nm,0.5s,baz=268,slow=5.1,SNR=2.7						
FINES	FINESS Array B	91.04	335	P	P	00 52 24.8	-1.1
	comp=Z,1.2nm,0.3s,baz=69,slow=4.1,SNR=18						

IDC 26 00:53:24.5±0.6, 14.46N×56.30E, h0km, mb4.3/32, mb1 4.3/33, mb1mx4.3/46, mbtmp4.2/33, ML3.3/1, MS3.5/1, Ms1 3.5/1, ms1mx3.2/30, Error ellipse: s-maj=13.4km s-min=12.8km az=146.0
MOS 26 00:53:24.3±1.1, 14.37N×56.28E, h10km, mb4.9/37, MS4.2/4, Error ellipse: s-maj=7.9km s-min=5.1km az=95.3
NEIC 26 00:53:25.6±1.5, 14.37N±0.08×56.27E±0.09, h10km±2km, mb4.7/58, Error ellipse: s-maj=14.6km s-min=9.1km az=124.0
BJI 26 00:53:26.0±0.0, 14.50N×56.40E, h10km, mB5.1/41, mb4.7/54, Ms4.7/22, Ms7 4.4/21
OMAN 26 00:53:27.9±99.0, 14.46N×56.17E, h42km±189km, ml4.2/6, Error ellipse: s-maj=9999.0km s-min=669.8km az=323.0
BGR 26 00:53:27.2±0.0, 15.21N×58.94E, h33km, mb4.7
DSN 26 00:53:32.6±1.6, 14.99N×55.91E, h10km, ML4.8/1, Error ellipse: s-maj=22.8km s-min=14.4km az=97.0
ISC 26 00:53:25.7±0.4, 14.44N±0.04×56.20E±0.05, h10km, n249, σ1.90/254, mb4.6/108, MS4.2/12, 38C-13D, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	Socotra	3.10	224		Pn	00 54 10.5	-4.2
SOCY	Socotra	3.10	224	P	Pn	00 54 11.2	-3.6
	SNR=23						
SOCY				S	Sn	00 54 43.0	-9.0
DMTO	DMTO	3.48	340	P	Pn	00 54 19.0	-0.9
DMTO				S	Sn	00 54 56.7	-4.4
RBK	Rabkut	3.60	328	P	Pn	00 54 21.7	+0.1
RBK				S	Sn	00 55 02.2	-2.1
SHAO	Shalim	3.61	351	*i* P	Pn	00 54 19.2	-2.5
	SNR=7.6						
SHAO				S	Sn	00 54 58.4	-6.0
SHAO	Shalim	3.61	351	P	Pn	00 54 20.1	-1.6
	SNR=7.9						
SHAO				S	Sn	00 54 58.1	-6.3
ABTO	Aybut	4.03	317	P	Pn	00 54 28.0	+0.6
	SNR=17						
ABTO				S	Sn	00 55 12.5	-2.2
WHFO	Wadi Hawf	4.17	326	P	Pn	00 54 30.5	+1.0
	SNR=19						
WHFO				S	Sn	00 55 17.0	-1.4
DQM	DQM	5.61	13	P	Pn	00 54 48.5	-0.7
DQM				S	Sn	00 55 46.0	-7.8
WSAR	Wadi Sarin	9.06	14	Pn	Pn	00 55 36.0	-0.6
	0.3nm,0.3s,baz=233,slow=15,SNR=6.1						
ASHO	Ashiyiah	10.20	359	*i* P	Pn	00 55 52.8	+0.6
	SNR=12						
UOSS	Minazif	10.46	0	*i* P	Pn	00 55 54.9	-0.9
	SNR=8.0						
UOSS	Minazif	10.46	0		Pn	00 55 55.1	-0.6
MSFE	Esma-Masafi	10.87	360	*i* P	Pn	00 56 01.1	-0.3
	SNR=15						
BANOM	Banah	11.43	0	P	Pn	00 56 09.0	-0.1
SHME	Shamm	11.56	360	P	Pn	00 56 11.4	+1.6
RAYN	Ar Rayn	13.56	313	*i* P	Pn	00 56 37.7	-0.6
	SNR=14						
RAYN	Ar Rayn	13.56	313		Pn	00 56 37.6	-0.6
RAYN	Ar Rayn	13.56	313	P	Pn	00 56 37.6	-0.6
HRA	Herat	20.60	14	P	P	00 58 05.2	-0.1
HRA				IAmb	IAmb	00 58 22.3	
	comp=Z,26nm,1.1s						
HYB	Hyderabad	21.70	79	*i* P	P	00 58 17.0	-0.1
KBL	Kabul	23.14	28	P	P	00 58 33.7	+1.3
KBL				IAmb	IAmb	00 58 42.4	
	comp=Z,29nm,1.1s						
KBL	Kabul	23.14	28	P	P	00 58 33.7	+1.3
KBL				pmax	pmax		
	comp=Z,29nm,1.1s						
GEYT	Alibeck	23.46	4	P	P	00 58 35.8	+0.3
	comp=Z,17nm,0.8s,baz=194,slow=10,SNR=33						
GYA0B	ALIBECK ARRAY	23.46	4	P	P	00 58 35.1	-0.3
GYA0B				IAmb	IAmb	00 58 43.3	
	comp=Z,25nm,0.8s						
KMBO	Kilima Mbogo	24.31	232	P	P	00 58 46.5	+2.5
	comp=Z,2.5nm,0.8s,baz=57,slow=8.6,SNR=11						
KMBO	Kilima Mbogo	24.31	232	P	P	00 58 44.8	+0.9
KMBO	Kilima Mbogo	24.31	232	P	P	00 58 44.8	+0.9
KMBO				pmax	pmax		
	comp=Z,13nm,1.3s						
NIL	Nilore	24.60	36	P	P	00 58 48.0	+1.8
NIL				IAmb	IAmb	00 58 52.7	
	comp=Z,33nm,1.2s						
NIL	Nilore	24.60	36	P	P	00 58 48.0	+1.8
NIL				pmax	pmax		
	comp=Z,33nm,1.2s						
EIL	Elat	24.79	311	P	P	00 58 47.2	-0.7
	comp=Z,3.4nm,0.7s,baz=105,slow=18,SNR=3.0						
ASF	Jabal al Asfar	24.94	318	P	P	00 58 51.8	+2.4
	comp=Z,14nm,1.1s,baz=106,slow=7.6,SNR=3.8						
PALK	Pallekele	25.08	104	⇓*i*P	P	00 58 51.1	+0.4
PALK				pmax	pmax		
	comp=Z,27nm,1.3s						
H08N2	Diego Garcia H	25.32	144	T	T	01 24 57.5	
	baz=325,slow=76,SNR=190						
H08N3	Diego Garcia H	25.33	144	T	T	01 24 56.9	
	baz=325,slow=76,SNR=288						
H08N1	Diego Garcia H	25.34	144	T	T	01 24 59.1	
	baz=325,slow=76,SNR=299						
MMAI	Mount Meron Ar	26.45	318	P	P	00 59 04.8	+1.7
	comp=Z,14nm,1.1s,baz=138,slow=12,SNR=3.9						
GNI	Garni	27.51	341	P	P	00 59 13.9	+1.3
	comp=Z,9.4nm,0.9s,baz=137,slow=4.4,SNR=8.5						
GNI	Garni	27.51	341	P	P	00 59 13.9	+1.3
GNI	Garni	27.51	341	⇓*i*P	P	00 59 15.0	+2.4
GNI				pmax	pmax		
	comp=Z,38nm,1.0s						
TBLG	Delisi	28.96	342	P	P	00 59 26.3	+1.0
TBLG				IAmb	IAmb	00 59 35.6	
	comp=Z,30nm,1.7s						
TBLG	Delisi	28.96	342	P	P	00 59 26.3	+1.0
TBLG				pmax	pmax		
	comp=Z,30nm,1.7s						
AKH	Akhalkalaki	29.06	340	P	P	00 59 26.5	+0.1
AKH				IAmb	IAmb	00 59 45.7	
	comp=Z,13nm,1.3s						
AKH	Akhalkalaki	29.06	340	P	P	00 59 26.5	+0.1
AKH				pmax	pmax		
	comp=Z,13nm,1.3s						
ZEI	Tsey	30.17	342	*e*P	P	00 59 37.6	+1.3
ZEI				pmax	pmax		
	comp=Z,17nm,1.1s						
KSH	Kashi	30.43	31	P	P	00 59 35.0	-3.5
KSH				pP	pP	00 59 39.3	-1.5
KSH				sP	pwP	00 59 44.0	-0.3
KSH				S	S	01 04 29.3	-10
KSH				SS	SnSn	01 06 02.0	-13
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,100nm,3.6s						
KSH				LR	LR		
	comp=Z,180nm,6.5s						
KSH				LR	LR		
	comp=Z,240nm,5.2s						
KSH				LR	LR		
	comp=Z,210nm,10.6s						
KK31	Karatay Array	31.11	21	P	P	00 59 44.5	+0.3
KK31	Karatay Array	31.11	21	P	P	00 59 44.6	+0.3
KK31				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KKAR	Karatay Array	31.11	21	P	P	00 59 44.3	0.0
KKAR	Karatay Array	31.11	21	P	P	00 59 44.3	0.0
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBZ	Khabaz	31.34	341	P	P	00 59 47.5	+1.3
	comp=Z,7.3nm,0.9s,baz=154,slow=7.1,SNR=9.3						
KBZ	Khabaz	31.34	341	⇓*i*P	P	00 59 50.2	+4.0
KIV	Kislovodsk	31.61	341	P	P	00 59 48.5	-0.2
KIV	Kislovodsk	31.61	341	*e*P	P	00 59 50.6	+1.8
KIV				pmax	pmax		
	comp=Z,41nm,1.0s						
KIV				MLR	MLR		
	comp=Z,458nm,15.0s						
UCH	Uchtor	31.90	26	P	P	00 59 53.9	+2.1
	SNR=8.0						
EKS2	Erkin-Say	31.95	25	P	P	00 59 54.3	+2.5
	SNR=10						
BRTR	Keskin Array B	32.04	326	P	P	00 59 54.0	+1.3
	comp=Z,2.1nm,1.1s,baz=125,slow=11,SNR=5.9						
BRTR	Keskin Array B	32.04	326	*c e*P	P	00 59 56.0	+3.3
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AAK	Ala-Archa	32.23	26	P	P	00 59 56.4	+2.0
	SNR=12						
AAK	Ala-Archa	32.23	26	P	P	00 59 56.0	+1.7
AAK	Ala-Archa	32.23	26	⇑*i*P	P	00 59 57.0	+2.7
AAK				pmax	pmax		
	comp=Z,17nm,1.0s						
SOC	Sochi	32.30	337	*e*P	P	00 59 55.2	+0.5
SOC				*e*		01 01 00.1	
SOC				*e*S	S	01 05 09.1	+0.8
SOC				*e*SS	SnSn	01 06 57.5	-2.6
SOC				pmax	pmax		
	comp=Z,4.0nm,0.3s						
SOC				MLR	MLR		
	comp=Z,292nm,19.0s						
ELL	Elmali	32.30	318	P	P	00 59 55.9	+0.9
ELL	Elmali	32.30	318	P	P	00 59 55.9	+0.9
ELL				pmax	pmax		
	comp=Z,230nm,2.0s						
KBK	Karagaybulak	32.44	26	P	P	00 59 58.3	+2.1
	SNR=12						
CHMS	Chumysh	32.63	26	P	P	00 59 59.2	+1.5
	SNR=8.6						
ABKAR	Akbulak array	34.86	4	P	P	01 00 17.4	+0.5
ABKAR				IAmb	IAmb	01 00 29.5	
	comp=Z,7.4nm,1.0s						
SHL	Shillong	35.21	66	P	P	01 00 20.2	-0.4
SHL	Shillong	35.21	66	P	P	01 00 20.2	-0.4
SHL				pmax	pmax		
	comp=Z,18nm,0.5s						
LSA	Lhasa	35.61	59	P	P	01 00 23.7	-0.6
LSA				IAmb	IAmb	01 00 34.8	
	comp=Z,22nm,1.9s						
LSA	Lhasa	35.61	59	P	P	01 00 23.7	-0.6
LSA				pmax	pmax		
	comp=Z,22nm,1.9s						
AKTO	Aktyubinsk	35.93	2	P	P	01 00 26.5	+0.3
	comp=Z,6.5nm,1.0s,baz=198,slow=10,SNR=6.9						
TOPG	Topolog	38.42	328	⇑P	P	01 00 50.6	+3.1
VRH	Novokhopyorsk	38.49	345	*e*P	P	01 00 46.8	-1.1
VRH				*e*		01 03 02.4	
VRH				pmax	pmax		
	comp=Z,40nm,1.2s						
HARR	Harsova	38.53	327	⇑P	P	01 00 50.0	+1.7
HARR	Harsova	38.53	327	⇑P	P	01 00 50.0	+1.7
MAKZ	Makanchi	38.81	28	P	P	01 00 51.6	+0.9
MAKZ				IAmb	IAmb	01 01 04.0	
	comp=Z,16nm,1.3s						
MAKZ	Makanchi	38.81	28	P	P	01 00 51.6	+0.9
MAKZ				pmax	pmax		
	comp=Z,17nm,1.3s						
MK31	Makanchi Array	38.94	29	P	P	01 00 52.4	+0.6
MK31	Makanchi Array	38.94	29	P	P	01 00 52.4	+0.6
MK31				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MKAR	Makanchi Array	38.94	29	P	P	01 00 52.4	+0.5
	comp=Z,3.5nm,0.8s,baz=214,slow=7.0,SNR=28						
VSR	Storozhevoye	39.18	343	*e*P	P	01 00 53.4	-0.2
VSR				*e*		01 03 06.8	
VSR				pmax	pmax		
	comp=Z,30nm,0.9s						
MILM	Milestii Mici	39.64	330	⇓P	P	01 00 58.9	+1.3
GHRR		39.73	328	⇑P	P	01 01 00.8	+2.4
BISRR	Bisoca	39.75	327	⇑P	P	01 01 01.5	+2.9
WMQ	Urumqi	39.75	36	*e*P	P	01 01 00.3	+1.6
WMQ				pP	sP	01 01 02.0	+0.1
WMQ				sP	pwP	01 01 06.0	+1.6
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.3s						
WMQ				LR	LR		
	comp=Z,470nm,29.2s						
WMQ				LR	LR		
	comp=Z,1μm,29.1s						
WMQ				LR	LR		
	comp=Z,320nm,28.1s						
WMQ	Urumqi	39.75	36	P	P	01 00 59.3	+0.7
WMQ	Urumqi	39.75	36	P	P	01 00 59.3	+0.7
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VTS	Vitosha	39.90	321	⇑P	P	01 01 02.1	+2.1
VTS	Vitosha	39.90	321	P	P	01 01 01.3	+1.3
VTS				IAmb	IAmb	01 01 09.0	
	comp=Z,13nm,1.2s						
VTS	Vitosha	39.90	321	⇑P	P	01 01 02.1	+2.1
VRI	Vrincioaia	39.95	328	⇑P	P	01 01 02.8	+2.6
VRI	Vrincioaia	39.95	328	⇑P	P	01 01 02.8	+2.6
PLOR	Plostina	39.98	328	⇑P	P	01 01 02.9	+2.4
PLOR	Plostina	39.98	328	⇑P	P	01 01 02.9	+2.4
BVAR	Borovoye Array	40.11	13	P	P	01 01 01.6	+0.2
	comp=Z,2.1nm,0.9s,baz=194,slow=5.5,SNR=8.1						
BVAR				PcP	PcP	01 03 06.4	+0.5
	comp=Z,1.8nm,0.8s,baz=197,slow=4.6,SNR=5.7						
MLR	Muntele Rosu	40.11	327	⇑P	P	01 01 04.4	+2.7
MLR	Muntele Rosu	40.11	327	P	P	01 01 03.0	+1.3
MLR				IAmb	IAmb	01 01 17.9	
	comp=Z,38nm,1.2s						
MLR	Muntele Rosu	40.11	327	⇑P	P	01 01 04.4	+2.7
BRVK	Borovoye	40.12	13	P	P	01 01 03.7	+2.2
BRVK	Borovoye	40.12	13	⇓*i*P	P	01 01 03.9	+2.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURBB	Kurchatov Arra	40.38	22	P	P	01 01 04.4	+0.8
	comp=Z,7.1nm,0.9s,baz=220,slow=8.3,SNR=40						
TESR	Tescani	40.43	328	⇓P	P	01 01 05.9	+1.8
LSZ	Lusaka	40.48	224	P	P	01 01 07.4	+2.4
	comp=Z,3.4nm,0.7s,baz=55,slow=8.0,SNR=9.3						
LSZ	Lusaka	40.48	224	P	P	01 01 04.5	-0.6
LSZ	Lusaka	40.48	224	P	P	01 01 04.5	-0.6
LSZ				pmax	pmax		
	comp=Z,12nm,1.2s						
LPSR	Galich'ya Gora	40.48	344	*e*P	P	01 01 04.7	+0.2
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
KURK	Kurchatov	40.49	22	P	P	01 01 04.7	+0.1
KURK				IAmb	IAmb	01 01 17.3	
	comp=Z,12nm,1.1s						
KURK	Kurchatov	40.49	22	⇑*i*P	P	01 01 05.5	+0.9
KURK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VOIR		40.56	326	⇑P	P	01 01 07.5	+2.1
VOIR		40.56	326	⇑P	P	01 01 07.5	+2.1
OZUR		40.59	327	⇑P	P	01 01 07.4	+1.8
DOPR	Dopca	40.72	327	⇑P	P	01 01 08.0	+1.3
SORM	Soroca	40.73	331	⇑P	P	01 01 06.8	+0.2
SORM	Soroca	40.73	331	⇑P	P	01 01 06.8	+0.2
ARR	Arges	40.74	326	⇑P	P	01 01 08.9	+2.1
LHMI	Lhok Sumawe	41.12	99	P	P	01 01 08.8	-1.5
CHTO	Chiang Mai	41.12	78	P	P	01 01 09.1	-1.2
CHTO	Chiang Mai	41.12	78	P	P	01 01 09.1	-1.2
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.4s						
CM31	Chiang Mai Arr	41.12	78	P	P	01 01 09.8	-0.6
CM31				IAmb	IAmb	01 01 17.6	
	comp=Z,14nm,1.0s						
CMAR	Chiang Mai Arr	41.12	78	P	P	01 01 10.9	+0.7
	comp=Z,6.9nm,0.9s,baz=278,slow=8.9,SNR=28						
CMAR	Chiang Mai Arr	41.12	78	P	P	01 01 11.0	+0.7
PRAR	RASCA	41.22	329	⇑P	P	01 01 11.9	+1.2
LOT	Lotru	41.27	325	⇑P	P	01 01 12.5	+1.3
GZR	Gura Zlata	41.79	324	⇑P	P	01 01 16.9	+1.4
GZR	Gura Zlata	41.79	324	⇑P	P	01 01 16.9	+1.4
BURAR	Bucovina Array	41.89	329	⇑P	P	01 01 17.5	+1.2
BURAR	Bucovina Array	41.89	329	⇑P	P	01 01 17.5	+1.2
BUR08	Bucovina Ar. S	41.92	329	P	P	01 01 18.8	+2.2
ARU	Arti	41.95	2	P	P	01 01 16.6	+0.1
	comp=Z,0.3nm,0.3s,baz=163,slow=6.2,SNR=4.7						
ARU	Arti	41.95	2	P	P	01 01 17.8	+1.3
ARU				IAmb	IAmb	01 01 20.7	
	comp=Z,14nm,1.4s						
ARU	Arti	41.95	2	*d i*P	P	01 01 18.2	+1.7
ARU						01 02 51.6	
ARU				S	S	01 07 36.5	+1.6
ARU				SS	SS	01 10 38.2	-3.4
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ARCR	ARCALIA	41.99	327	⇓P	P	01 01 18.1	+1.1
AKASG	Malin Array Be	42.25	335	P	P	01 01 19.3	+0.3
	comp=Z,4.2nm,0.8s,baz=135,slow=7.7,SNR=20						
AKASG				PP	PP	01 02 57.9	+1.1
	comp=Z,2.1nm,0.8s,baz=139,slow=10,SNR=4.2						
AKBB	Malin Array Si	42.25	335	P	P	01 01 19.2	+0.2
AKBB				IAmb	IAmb	01 01 26.9	
	comp=Z,22nm,1.2s						
AKBB	Malin Array Si	42.25	335	P	P	01 01 19.2	+0.2
AKBB				pmax	pmax		
	comp=Z,22nm,1.3s						
PDG	Podgorica	42.28	319	⇓P	P	01 01 20.2	+0.7
PDG	Podgorica	42.28	319	P	P	01 01 20.0	+0.5
TIP	Timpagrande	42.49	313	P	P	01 01 22.3	+1.0
BZS	Buzias	42.58	324	⇑P	P	01 01 23.2	+1.4
BZS	Buzias	42.58	324	⇑P	P	01 01 23.2	+1.4
DRGR		42.68	326	⇓P	P	01 01 24.5	+1.8
DRGR		42.68	326	⇓P	P	01 01 24.5	+1.8
SIRR	Siria	42.94	325	⇑P	P	01 01 26.8	+2.0
PBKT	Sadao Pong	43.13	81	P	P	01 01 27.1	+0.4
OBN	Obninsk	43.36	344	P	P	01 01 29.5	+1.5
OBN	Obninsk	43.36	344	*i* P	P	01 01 28.9	+0.9
OBN				pmax	pmax		
	comp=Z,18nm,1.2s						
OBN				MLR	MLR		
	comp=Z,148nm,19.0s						
TRPA	Tarpa	43.60	327	⇑P	P	01 01 31.8	+1.7
MOS	Moscow	43.64	345	*e*P	P	01 01 30.9	+0.7
MOS				pmax	pmax		
	comp=Z,34nm,1.2s						
PSI	Prapat	43.71	101	P	P	01 01 31.6	0.0
	comp=Z,1.5nm,0.4s,baz=241,slow=18,SNR=2.1						
RPSI	Rantau Prapat	43.74	101	P	P	01 01 31.6	-0.1
KOLS	Kolonicke sedl	44.24	328	*e*P	P	01 01 37.0	+1.8
KOLS				pmax	pmax		
	comp=Z,25nm,1.4s						
KOLS	Kolonicke sedl	44.24	328	*e*P	P	01 01 37.0	+1.8
BLY	Banja Luka	44.75	320	⇑P	P	01 01 41.4	+2.1
BLY	Banja Luka	44.75	320	P	P	01 01 40.3	+1.0
PAOL	Paolisi	44.78	314	P	P	01 01 40.7	+1.1
KMI	Kunming	44.88	69	P	P	01 01 42.3	+1.4
KMI				sP	pwP	01 01 47.0	+0.3
KMI				S	S	01 08 23.5	+4.4
KMI				SS	ScS	01 11 32.5	-6.8
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
KMI				pmax	pmax		
	comp=Z,99nm,5.0s						
KMI				LR	LR		
	comp=Z,180nm,21.7s						
KMI				LR	LR		
	comp=Z,240nm,23.6s						
KMI				LR	LR		
	comp=Z,360nm,27.6s						
ZAA0	Zalesovo Array	45.37	23	P	P	01 01 44.0	-0.1
ZAA0				IAmb	IAmb	01 01 51.2	
	comp=Z,12nm,0.8s						
ZALV	Zalesovo Beam	45.37	23	P	P	01 01 43.9	-0.2
	comp=Z,9.7nm,0.8s,baz=228,slow=7.9,SNR=32						
GTA	Gaotai	45.57	48	*e*P	P	01 01 46.5	+0.4
GTA				pP	pwP	01 01 52.8	+0.8
GTA				sP	sP	01 01 56.0	+6.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,59nm,4.8s						
GTA				LR	LR		
	comp=Z,110nm,16.2s						

GTA LR LR
comp=Z,280nm,17.1s
GTA LR LR
comp=Z,330nm,16.8s
INTR Introdacqua 45.63 315 P **P 01 01 47.3 +0.8**
INTR IAmb IAmb 01 01 55.5
comp=Z,12nm,1.1s
SLVN Son La 45.78 74 P **P 01 01 47.7 -0.3**
SLVN IAmb IAmb 01 01 55.0
comp=Z,5.3nm,0.9s
NACGM Naroch 46.40 337 *e* **P 01 01 52.0 -0.2**
CD2 Chengdu 46.49 61 P **P 01 01 53.0 -0.4**
CD2 pmax pmax
comp=Z,20nm,0.5s
NRCA Norcia 46.50 316 IAmb IAmb 01 02 02.8
comp=Z,13nm,1.1s
MODS Modra-Piesok 46.59 325 *e*P P 01 02 00.1 +6.2
KEST Kesra 46.91 306 P **P 01 01 56.6 -0.1**
comp=Z,3.9nm,1.0s,baz=129,slow=14,SNR=2.1
KEST LR LR 01 22 35.9
comp=Z,60nm,20.3s,baz=280,slow=37
IIGN Ignalina 46.95 337 *e*P **P 01 01 58.1 +1.7**
IIGN IAmb IAmb 01 02 05.5
comp=Z,18nm,1.2s
ARSA Arzberg 47.01 323 *e*P **P 01 01 58.2 +1.1**
comp=Z,5.5nm,0.9s
SOKA Soboth 47.01 322 *e*P **P 01 01 58.3 +1.1**
comp=Z,4.5nm,1.1s
ISAL Salakas 47.15 337 *e*P **P 01 01 59.6 +1.5**
ISAL IAmb IAmb 01 02 07.0
comp=Z,18nm,1.2s
CONA Conrad Observa 47.16 324 *e*P **P 01 01 59.5 +1.2**
comp=Z,9.2nm,1.7s
SUW Suwalki 47.20 334 P **P 01 01 59.2 +0.7**
SUW Suwalki 47.20 334 P **P 01 01 59.2 +0.7**
SUW pmax pmax
comp=Z,57nm,1.1s
OBKA Obir 47.22 321 *e*pP **P 01 02 01.7 +2.8**
comp=Z,4.6nm,0.8s
IZAR Zarasai 47.24 337 *e*P **P 01 02 00.5 +1.8**
LZH Lanzhou 47.63 54 *e*P **P 01 02 04.0 +1.7**
LZH pP pwP 01 02 07.3 -0.9
LZH sP sP 01 02 08.8 +3.2
LZH *e*PP **PP 01 03 55.3 +1.4**
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,79nm,5.4s
LZH LR LR
comp=Z,370nm,14.0s
LZH LR LR
comp=Z,370nm,13.8s
LZH LR LR
comp=Z,460nm,17.0s
MYKA Terra Mystica 47.83 321 *e*P **P 01 02 04.9 +1.3**
comp=Z,8.4nm,1.0s
KLMR Klimovskoe 47.91 349 *e*P **P 01 02 01.2 -2.7**
KLMR pmax pmax
comp=Z,24nm,1.8s
KLMR Klimovskoe 47.91 349 *e*P **P 01 02 01.3 -2.6**
KLMR AMP 01 02 18.5
comp=Z,24nm,1.8s
PABE Paberze 47.93 336 *e*P **P 01 02 04.5 +0.4**
PABE IAmb IAmb 01 02 12.6
comp=Z,44nm,1.2s
MOA Molln 48.04 323 *e*P **P 01 02 06.3 +1.1**
comp=Z,3.9nm,0.8s
KBA Koelnbreinsper 48.22 321 *e*pP **P 01 02 08.8 +2.0**
comp=Z,6.7nm,1.5s
GYA Guiyang 48.50 67 P **P 01 02 08.5 -0.7**
GYA pmax pmax
comp=Z,10.0nm,1.2s
ABTA Abfaltersbach 48.58 321 *e*P **P 01 02 10.3 +0.9**
comp=Z,4.1nm,0.8s
CTI Castel Tesino 48.80 320 P **P 01 02 11.8 +0.6**
CTI IAmb IAmb 01 02 18.7
comp=Z,10nm,1.0s
CTI Castel Tesino 48.80 320 P **P 01 02 11.8 +0.6**
CTI pmax pmax
comp=Z,10.0nm,1.0s
GERES GERESS Array B 48.86 324 P **P 01 02 10.4 -1.2**
comp=Z,1.0nm,0.8s,baz=104,slow=8.2,SNR=7.9
KHC Kasperske Hory 49.07 324 *e*P **P 01 02 12.8 -0.3**
KHC *e*x x 01 02 19.0
KHC Kasperske Hory 49.07 324 P **P 01 02 14.0 +0.9**
KHC IAmb IAmb 01 02 57.5
comp=Z,14nm,1.9s
KHC Kasperske Hory 49.07 324 *e*P **P 01 02 12.8 -0.3**
KHC *e* 01 02 19.0
VSU Vasula 49.15 340 *e*P P 01 02 19.0 +5.6
LBTB Lobatse 49.27 218 P **P 01 02 15.1 +0.1**
LBTB Lobatse 49.27 218 P **P 01 02 15.1 +0.1**
LBTB pmax pmax
comp=Z,28nm,1.3s
WTTA Wattenberg 49.34 321 *e*P **P 01 02 15.7 +0.3**
comp=Z,7.3nm,1.0s
WATA Walderalm 49.41 321 *e*P **P 01 02 15.8 0.0**
comp=Z,5.7nm,1.1s
MOTA Moosalm 49.70 321 *e*P **P 01 02 18.1 0.0**
comp=Z,4.6nm,0.7s
FETA Feichten 49.79 320 *e*P **P 01 02 19.1 +0.3**
comp=Z,4.5nm,1.1s
RETA Reutte 49.97 321 *e*P **P 01 02 19.8 -0.3**
comp=Z,6.0nm,1.0s
DAVA Damuels 50.43 320 *e*pP pP 01 02 25.5 -0.5
comp=Z,3.4nm,0.5s
CLL Collm 50.49 326 *e*P **P 01 02 25.0 +1.2**
CLL *e* 01 02 32.0
comp=Z,13nm,1.5s
CLL LmV 01 26 00.0
comp=Z,100nm,21.6s
CLL Collm 50.49 326 *e*P **P 01 02 25.0 +1.2**
CLL *e* 01 02 32.0
GRF Grafenberg Arr 50.69 324 *e*P P 01 02 31.3 +5.9
comp=Z,15nm,1.7s,baz=118,slow=8.6
RUE Ruedersdorf 50.70 328 *e*P **P 01 02 22.8 -2.5**
XAN Xi'an 51.30 58 P **P 01 02 29.5 -0.8**
XAN pP pwP 01 02 35.8 -0.3
XAN pmax pmax
comp=Z,8.0nm,1.2s
XAN Xi'an 51.30 58 P **P 01 02 29.3 -1.0**
XAN IAmb IAmb 01 02 36.6
comp=Z,9.5nm,1.0s
XAN Xi'an 51.30 58 P **P 01 02 29.3 -1.0**
XAN pmax pmax
comp=Z,9.0nm,1.0s
ENH Enshi 51.30 63 P **P 01 02 28.8 -1.5**
FINES FINESS Array B 51.69 342 P **P 01 02 32.5 -0.2**
comp=Z,2.1nm,0.7s,baz=134,slow=8.0,SNR=6.4
BOSA Boshof 52.22 215 P **P 01 02 38.0 +0.8**
comp=Z,4.1nm,0.9s,baz=28,slow=11,SNR=5.4
BOSA Boshof 52.22 215 IAmb IAmb 01 02 47.0
comp=Z,16nm,1.1s
BOSA Boshof 52.22 215 P **P 01 02 38.0 +0.8**
BOSA pmax pmax
comp=Z,16nm,1.1s
TORD Torodi Ar. Bea 52.84 276 P **P 01 02 42.3 +0.3**
comp=Z,0.7nm,0.8s,baz=98,slow=6.3,SNR=4.7
TLY Talaya 53.00 35 P **P 01 02 42.9 +0.2**
TLY IAmb IAmb 01 02 56.1
comp=Z,11nm,1.6s
TLY Talaya 53.00 35 *e*P **P 01 02 44.0 +1.4**
TLY pmax pmax
comp=Z,15nm,1.4s
TLY MLR MLR
comp=Z,620nm,17.0s
SONM Songino Array 53.07 40 P **P 01 02 43.8 +0.5**
comp=Z,2.6nm,0.9s,baz=240,slow=7.2,SNR=14
ULN Ulaanbaatar 53.49 41 P **P 01 02 46.5 +0.1**
ULN Ulaanbaatar 53.49 41 P **P 01 02 46.5 +0.1**
ULN pmax pmax
comp=Z,4.0nm,1.2s
HHC Hu-ho-hao-te 54.62 50 *e*P **P 01 02 55.5 +0.8**
HHC pmax pmax
comp=Z,5.0nm,1.1s
HHC pmax pmax
comp=Z,39nm,5.7s
HHC LR LR
comp=Z,190nm,16.8s
HHC LR LR
comp=Z,220nm,15.2s
HHC LR LR
comp=Z,310nm,15.6s
WHN Wuhan 55.51 63 P **P 01 02 59.0 -2.2**
NOA NORSAR Array B 56.64 336 P **P 01 03 08.4 -0.5**
comp=Z,2.3nm,1.1s,baz=121,slow=7.8,SNR=2.7
BJI Beijing 57.94 52 *e*P **P 01 03 17.8 -0.5**
BJI pmax pmax
comp=Z,3.0nm,1.1s
BJI LR LR
comp=Z,190nm,13.9s
BJI LR LR
comp=Z,160nm,12.8s
BJI LR LR
comp=Z,260nm,26.5s
ESDC Sonseca Array 58.02 308 P **P 01 03 19.4 +0.4**
comp=Z,1.4nm,0.6s,baz=89,slow=6.0,SNR=5.5
NRIK Noril'sk 58.32 13 P **P 01 03 19.6 -0.8**
comp=Z,3.5nm,0.7s,baz=235,slow=5.6,SNR=5.3
NRIK Noril'sk 58.32 13⇓*i*P **P 01 03 22.3 +1.8**
ARCES ARCESS Array B 58.34 348 P **P 01 03 20.2 -0.4**
comp=Z,2.8nm,0.8s,baz=142,slow=4.5,SNR=6.2
NJ2 Nanjing 59.42 61 *e*P **P 01 03 29.0 +0.2**
NJ2 pmax pmax
comp=Z,15nm,0.6s
HIA Hailar 61.97 42 P **P 01 03 46.3 +0.4**
HIA IAmb IAmb 01 03 53.4
comp=Z,6.9nm,0.8s
HIA Hailar 61.97 42 P **P 01 03 46.3 +0.4**
HIA pmax pmax
comp=Z,7.0nm,0.8s
KSRS Korea Array 66.94 55 P **P 01 04 17.4 -1.1**
comp=Z,3.5nm,0.8s,baz=269,slow=7.3,SNR=14
YAK Yakutsk 69.62 29⇓*i*P **P 01 04 36.0 +1.1**
YAK pmax pmax
comp=Z,13nm,0.9s
USRK Ussuriysk Ar. 69.93 48 P **P 01 04 36.8 -0.5**
comp=Z,4.4nm,0.9s,baz=232,slow=3.5,SNR=4.5
TIXI Tiksi 70.95 19 P **P 01 04 42.1 -0.8**
TIXI IAmb IAmb 01 04 49.6
comp=Z,6.8nm,0.9s
TIXI Tiksi 70.95 19 P **P 01 04 42.1 -0.8**
TIXI pmax pmax
comp=Z,7.0nm,0.9s
H01W3 Cape Leeuwin H 73.64 133 T T 02 25 08.6
baz=302,slow=76,SNR=29
H01W2 Cape Leeuwin H 73.64 133 T T 02 25 08.8
baz=302,slow=76,SNR=34
H01W1 Cape Leeuwin H 73.65 133 T T 02 25 15.6
baz=302,slow=76,SNR=29
SEY Seymchan 80.07 27⇑*i*P **P 01 05 36.1 +0.7**
BILL Bilibino 84.01 21 P **P 01 05 56.4 +0.4**
BILL Bilibino 84.01 21 *i* P **P 01 05 55.8 -0.2**
BILL *i* 01 06 02.0
BILL *i* S **S 01 16 21.5 +1.5**
BILL pmax pmax
comp=Z,6.0nm,1.1s
SYO Syowa Base 84.06 186⇑*e*P **P 01 05 57.0 +1.0**
SYO Syowa Base 84.06 186⇑*e*sP sP 01 06 02.4 +3.1
WRA Warramunga Arr 84.07 112 P **P 01 05 56.0 -1.2**
comp=Z,1.7nm,0.8s,baz=298,slow=4.2,SNR=5.5
WRAB Tennant Creek 84.08 112⇑*i*P **P 01 05 58.8 +1.5**
WRAB pmax pmax
comp=Z,6.0nm,1.4s
ASAR Alice Springs 84.82 116 P **P 01 06 00.0 -1.0**
comp=Z,1.2nm,0.6s,baz=295,slow=5.0,SNR=11
RDOG Red Dog Mine 93.04 14 P **P 01 06 39.5 +0.3**
TOLK Toolik Lake Re 95.11 9 P **P 01 06 49.1 +0.2**
PDAR Pinedale Array 121.59 348 PKP **PKPdf 01 12 19.6 -0.7**
comp=Z,0.5nm,0.7s,baz=88,slow=2.3,SNR=7.0
NVAR Mina Array Bea 127.16 355 PKP **PKiKP 01 12 32.5 +1.0**
comp=Z,1.0nm,0.7s,baz=333,slow=1.1,SNR=9.0

*IDC **26** 00:55:39.0±0.5, 14.41N×56.41E, h0km, mb4.2/27, mb1 4.3/28, mb1mx4.2/48, mbtmp4.2/28, ML3.3/1, MS4.1/15, Ms1 4.1/15, ms1mx3.9/30, Error ellipse: s-maj=14.4km s-min=12.9km az=128.0*

*BJI **26** 00:55:40.0±0.0, 14.40N×56.50E, h10km, mB5.1/36, mb4.7/44, Ms4.6/18, Ms7 4.3/17*

*NEIC **26** 00:55:40.0±1.8, 14.41N±0.08×56.31E±0.09, h10km±2km, mb4.7/53, Error ellipse: s-maj=14.3km s-min=9.1km az=122.0*

*GCMT **26** 00:55:40.0±0.3, 14.50N±0.02×56.21E±0.04, h18km±1km, MW4.9/96, Moment Tensor Solution. s23,c25; s96,c135; Duration: 0 Moment tensor: Scale 10[16]Nm; Mrr-2.76±.20; Mθθ2.14±.12; Mϕϕ0.61±.12; Mrθ-0.00±.24; Mθϕ-0.97±.07; Mϕr-0.16±.33; Best double couple: M0 2.69100×10[16] NP1:ϕs113.00000°,δ44.00000°,λ-94.00000°. NP2: ϕs299.00000°,δ46.00000°,λ-86.00000°. Principal axes: T 2.6130, Plg1.0000°, Azm26.0000°; N 0.1500, Plg3.0000°, Azm116.0000°; P -2.7680, Plg87.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 00:55:41.3±1.1, 14.54N±0.07×56.34E±0.07, h15km±6km, n141, σ1§52/137, mb4.5/71, MS4.1/20, 14C-3D, Owen Fracture Zone region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SOCY Socotra 3.27 225 Pn 00 56 25.4 -6.7
WSAR Wadi Sarin 8.93 14 Pn **Pn 00 57 50.8 +1.1**
0.3nm,0.3s,baz=78,slow=20,SNR=2.6
WSAR LR LR 01 01 06.0
comp=Z,3µm,20.6s,baz=210,slow=36
UOSS Minazif 10.36 359 **Pn 00 58 08.7 -0.7**
RAYN Ar Rayn 13.59 313 **Pn 00 58 51.6 -2.0**
MSEY Mahe Island 19.10 183 P **P 01 00 02.3 -1.4**
MSEY IAmb IAmb 01 00 06.6
comp=Z,86nm,1.6s
HRA Herat 20.47 14 P Pn 01 00 20.1 -0.8
KBL Kabul 22.99 28 P **P 01 00 47.1 +1.5**
KBL IAmb IAmb 01 00 57.0
comp=Z,53nm,1.6s
GEYT Alibeck 23.36 4 P **P 01 00 50.1 +0.9**
comp=Z,6.7nm,0.8s,baz=188,slow=9.7,SNR=5.6
GEYT LR LR 01 11 45.2
comp=Z,343nm,18.9s,baz=165,slow=41
GYA0B ALIBECK ARRAY 23.36 4 P **P 01 00 49.7 +0.6**
GYA0B IAmb IAmb 01 00 59.7
comp=Z,52nm,1.5s
NIL Nilore 24.44 36 P **P 01 01 00.3 +0.8**
NIL IAmb IAmb 01 01 06.4
comp=Z,30nm,1.2s
KMBO Kilima Mbogo 24.48 232 P **P 01 01 00.3 0.0**
comp=Z,5.5nm,0.9s,baz=39,slow=13,SNR=12
KMBO LR LR 01 11 04.9
comp=Z,890nm,18.5s,baz=88,slow=38
KMBO Kilima Mbogo 24.48 232 P **P 01 00 59.4 -0.9**
KMBO IAmb IAmb 01 01 02.6
comp=Z,22nm,1.3s
EIL Elat 24.82 311 P **P 01 01 04.0 +1.0**
comp=Z,10nm,1.1s,baz=103,slow=9.0,SNR=3.6
EIL LR LR 01 10 57.9
comp=Z,252nm,20.5s,baz=120,slow=37
ASF Jabal al Asfar 24.96 318 P **P 01 01 06.6 +2.2**
comp=Z,8.5nm,1.1s,baz=69,slow=9.2,SNR=4.1
PALK Pallekele 24.97 104 LR LR 01 08 41.7
comp=Z,279nm,20.6s,baz=292,slow=32
H08N2 Diego Garcia H 25.32 144 T T 01 27 13.6
baz=325,slow=76,SNR=8.1
H08N3 Diego Garcia H 25.33 144 T T 01 27 15.3
baz=325,slow=76,SNR=10
H08N1 Diego Carcia H 25.34 144 T T 01 27 15.0
baz=325,slow=76,SNR=8.7
MMAI Mount Meron Ar 26.47 318 P **P 01 01 21.2 +3.2**
comp=Z,9.5nm,1.0s,baz=116,slow=6.6,SNR=4.9
MMAI LR LR 01 11 35.7
comp=Z,182nm,18.7s,baz=125,slow=36
GNI Garni 27.46 340 P **P 01 01 28.9 +1.9**
comp=Z,10nm,1.0s,baz=235,slow=4.4,SNR=3.6
GNI LR LR 01 14 02.3
comp=Z,342nm,18.7s,baz=143,slow=40
GNI Garni 27.46 340 P **P 01 01 28.1 +1.2**
GAZ Gaziantep 28.25 326 P **P 01 01 33.8 -0.2**
KSH Kashi 30.28 31 P **P 01 01 49.5 -2.5**
KSH pP pP 01 01 55.0 -0.8
KSH PP **PnPn 01 02 48.8 -1.1**
KSH PcP **PcP 01 04 49.5 -2.9**
KSH S **S 01 06 44.0 -7.4**
KSH sS pS 01 06 56.0 +0.1
KSH SS **SnSn 01 08 20.8 -5.1**
KSH pmax pmax
comp=Z,17nm,1.2s
KSH pmax pmax
comp=Z,92nm,3.8s
KSH LR LR
comp=Z,140nm,4.8s
KSH LR LR
comp=Z,180nm,6.2s
KSH LR LR
comp=Z,270nm,15.2s
KK31 Karatay Array 30.97 20 P **P 01 01 59.5 +1.7**
KKAR Karatay Array 30.97 20 P **P 01 01 59.4 +1.5**
KBZ Khabaz 31.29 341 P **P 01 02 02.6 +2.1**
comp=Z,7.3nm,1.0s,baz=167,slow=3.9,SNR=4.0
KBZ LR LR 01 17 08.6
comp=Z,300nm,19.0s,baz=151,slow=41
KIV Kislovodsk 31.56 341 P **P 01 02 04.2 +1.0**
BRTR Keskin Array B 32.03 326 P **P 01 02 08.9 +1.5**
comp=Z,0.4nm,0.5s,baz=300,slow=36,SNR=3.6
AAK Ala-Archa 32.08 26 P **P 01 02 10.1 +2.3**
AAK IAmb IAmb 01 02 23.3
comp=Z,22nm,1.4s
OPO Ambohidratompo 34.11 196 LR LR 01 13 57.0
comp=Z,380nm,18.9s,baz=176,slow=32
ABKAR Akbulak array 34.75 4 P **P 01 02 30.7 -0.1**
SHL Shillong 35.04 66 P **P 01 02 34.2 +0.3**
SANT Santorini 35.11 314 P **P 01 02 32.9 -1.3**
LSA Lhasa 35.44 59 P **P 01 02 38.2 +0.6**
LSA IAmb IAmb 01 02 49.4
comp=Z,19nm,1.7s
AKTO Aktyubinsk 35.83 2 P **P 01 02 40.9 +0.8**
comp=Z,3.0nm,0.9s,baz=172,slow=8.0,SNR=4.0
AKTO PcP **PcP 01 05 07.4 0.0**
comp=Z,1.6nm,0.7s,baz=167,slow=2.7,SNR=4.4
AGG Agios Georgios 38.58 316 P **P 01 03 03.2 -0.5**
AGG IAmb IAmb 01 03 05.2
comp=Z,20nm,1.4s
MAKZ Makanchi 38.65 28 P **P 01 03 04.7 +0.5**
MK31 Makanchi Array 38.79 29 P **P 01 03 05.2 -0.2**
MKAR Makanchi Array 38.79 29 P **P 01 03 06.7 +1.4**
comp=Z,2.4nm,0.8s,baz=222,slow=6.5,SNR=8.2
MKAR PcP **PcP 01 05 16.9 +0.2**
comp=Z,0.7nm,0.7s,baz=234,slow=1.9,SNR=4.3
MKAR LR LR 01 21 08.3
comp=Z,421nm,20.1s,baz=221,slow=39
WMQ Urumqi 39.59 36 *e*P **P 01 03 14.0 +1.9**
WMQ pP sP 01 03 17.8 +0.3
WMQ sP pwP 01 03 20.3 +0.4
WMQ pmax pmax
comp=Z,13nm,1.3s
WMQ pmax pmax
comp=Z,120nm,3.7s
WMQ LR LR
comp=Z,740nm,29.0s
WMQ LR LR
comp=Z,1µm,29.3s
WMQ LR LR
comp=Z,310nm,24.9s
VTS Vitosha 39.91 321 ⇑P **P 01 03 14.1 -0.8**
VTS Vitosha 39.91 321 P **P 01 03 13.8 -1.1**
VTS IAmb IAmb 01 03 24.3
comp=Z,24nm,1.5s
VRI Vrincioaia 39.94 327 ⇑P **P 01 03 16.8 +1.8**
PLOR Plostina 39.97 327 ⇑P **P 01 03 16.5 +1.3**
BVAR Borovoye Array 39.98 13 PcP **PcP 01 05 20.8 +0.6**
comp=Z,1.7nm,0.6s,baz=223,slow=2.6,SNR=7.0
MLR Muntele Rosu 40.11 326 ⇑P **P 01 03 18.7 +2.2**
MLR Muntele Rosu 40.11 326 P **P 01 03 15.9 -0.6**
KURBB Kurchatov Arra 40.23 22 P **P 01 03 18.5 +1.2**
comp=Z,4.0nm,0.9s,baz=220,slow=8.2,SNR=10
KURBB PcP **PcP 01 05 20.9 -0.1**
comp=Z,1.0nm,0.9s,baz=233,slow=3.2,SNR=4.9
KURK Kurchatov 40.34 22 P **P 01 03 17.9 -0.3**
KURK Kurchatov 40.34 22 PcP **PcP 01 05 20.9 -0.4**
TESR Tescani 40.41 328 ⇑P **P 01 03 20.3 +1.5**
VOIR 40.56 326 ⇑P **P 01 03 22.0 +1.9**
OZUR 40.59 327 ⇓P **P 01 03 21.7 +1.3**
LSZ Lusaka 40.64 224 P **P 01 03 21.9 +0.7**
comp=Z,5.8nm,0.7s,baz=48,slow=7.5,SNR=13
LSZ Lusaka 40.64 224 P **P 01 03 20.9 -0.3**
LSZ IAmb IAmb 01 03 23.2
comp=Z,9.2nm,0.9s
SORM Soroca 40.71 331 ⇑P **P 01 03 20.3 -0.9**
DOPR Dopca 40.71 327 ⇓P **P 01 03 22.7 +1.4**
ARR Arges 40.74 325 ⇑P **P 01 03 23.2 +1.6**
CHTO Chiang Mai 40.97 78 P **P 01 03 22.7 -1.1**
CHTO IAmb IAmb 01 03 38.2
comp=Z,17nm,1.8s
CM31 Chiang Mai Arr 40.97 79 P **P 01 03 24.5 +0.6**
CM31 IAmb IAmb 01 03 32.1
comp=Z,14nm,1.1s
CMAR Chiang Mai Arr 40.97 79 P **P 01 03 25.1 +1.3**
comp=Z,3.0nm,0.7s,baz=276,slow=8.9,SNR=10.0
CMAR LR LR 01 18 29.1
comp=Z,86nm,22.0s,baz=275,slow=34
LOT Lotru 41.27 325 ⇑P **P 01 03 26.9 +0.9**
ARU Arti 41.84 2 P **P 01 03 31.7 +1.3**
comp=Z,0.4nm,0.3s,baz=189,slow=11,SNR=2.9
BURAR Bucovina Array 41.88 328 ⇑P **P 01 03 32.2 +1.2**
ARCR ARCALIA 41.98 327 ⇑P **P 01 03 33.7 +2.0**
AKASG Malin Array Be 42.22 334 P **P 01 03 33.6 +0.1**
comp=Z,2.5nm,0.7s,baz=136,slow=7.9,SNR=8.6
AKASG PP **PP 01 05 12.1 +0.7**
comp=Z,0.5nm,0.4s,baz=135,slow=10,SNR=4.5
TIP Timpagrande 42.52 313 P **P 01 03 36.4 +0.1**
TIP IAmb IAmb 01 04 40.8
comp=Z,9.6nm,1.0s
BZS Buzias 42.58 324 ⇑P **P 01 03 37.8 +1.2**
DRGR 42.67 326 ⇓P **P 01 03 39.4 +2.0**
SIRR Siria 42.94 325 ⇑P **P 01 03 41.1 +1.5**
PBKT Sadao Pong 42.98 81 P **P 01 03 39.3 -1.0**
OBN Obninsk 43.30 344 P **P 01 03 41.8 -0.5**
RPSI Rantau Prapat 43.63 102 P **P 01 03 46.6 +1.1**
ACER Acerenza 43.76 315 P **P 01 03 47.0 +0.7**
KOLS Kolonicke sedl 44.23 328 *e*P **P 01 03 51.9 +2.0**
KMI Kunming 44.71 69 P **P 01 03 54.3 -0.1**
KMI sP sP 01 04 00.8 +1.1
KMI S **S 01 10 35.8 +4.8**
KMI pmax pmax
comp=Z,10.0nm,0.9s
KMI pmax pmax
comp=Z,58nm,3.7s
KMI LR LR
comp=Z,160nm,18.3s
KMI LR LR
comp=Z,220nm,28.2s
KMI LR LR
comp=Z,360nm,29.6s
BLY Banja Luka 44.76 320 ⇑P **P 01 03 55.6 +1.4**
BLY Banja Luka 44.76 320 P **P 01 03 54.1 -0.1**
BLY IAmb IAmb 01 04 03.0
comp=Z,17nm,1.1s
PAOL Paolisi 44.80 314 IAmb IAmb 01 04 04.5
comp=Z,19nm,1.3s
ZAA0 Zalesovo Array 45.23 23 P **P 01 03 57.8 0.0**
ZAA0 IAmb IAmb 01 04 10.4
comp=Z,12nm,1.1s
ZALV Zalesovo Beam 45.23 23 P **P 01 03 58.4 +0.7**
comp=Z,5.4nm,0.7s,baz=228,slow=7.6,SNR=12
ZALV LR LR 01 24 04.4
comp=Z,302nm,21.2s,baz=238,slow=38
GTA Gaotai 45.41 48 *e*P **P 01 04 01.0 +1.4**
GTA pP pwP 01 04 08.0 +0.3
GTA sP sP 01 04 12.3 +7.4
GTA pmax pmax
comp=Z,2.0nm,1.1s
GTA pmax pmax
comp=Z,130nm,4.8s
GTA LR LR
comp=Z,99nm,17.5s
GTA LR LR
comp=Z,280nm,18.7s
GTA LR LR
comp=Z,410nm,17.1s
INTR Introdacqua 45.66 315 P **P 01 04 01.0 -0.5**
INTR IAmb IAmb 01 04 03.9
comp=Z,21nm,1.3s
VYHS Vyhne 45.79 326 *e*P **P 01 04 02.3 0.0**
OJC Ojcow 46.30 328 P **P 01 04 06.2 0.0**
OJC IAmb IAmb 01 04 14.0
comp=Z,21nm,1.5s
CD2 Chengdu 46.32 61 P **P 01 04 06.8 0.0**
CD2 pmax pmax
comp=Z,20nm,0.5s
NRCA Norcia 46.52 316 IAmb IAmb 01 04 17.3
comp=Z,19nm,1.4s
MODS Modra-Piesok 46.59 325 *e*P **P 01 04 08.4 -0.2**
ARSA Arzberg 47.01 323 *e*P **P 01 04 13.0 +1.1**
comp=Z,3.8nm,0.8s
SOKA Soboth 47.02 322 *e*P **P 01 04 13.0 +0.9**
comp=Z,5.0nm,1.1s

CONA	Conrad Observa	47.16	323	eP	P	01 04 14.0	+0.8
	comp=Z,8.5nm,1.1s						
SUW	Suwalki	47.17	334	P	P	01 04 13.1	0.0
OBKA	Obir	47.23	321	eP	P	01 04 14.8	+1.1
	comp=Z,6.6nm,1.1s						
LZH	Lanzhou	47.46	54	eP	P	01 04 09.5	-6.3
LZH				pP	pP	01 04 12.6	-6.8
LZH				sP	sP	01 04 14.3	-6.8
LZH				ePP	PP	01 06 00.8	-6.4
KRLC	Kraliky	47.79	326	eP	P	01 04 17.9	-0.1
KRLC				ex	x	01 04 24.4	
MYKA	Terra Mystica	47.84	321	eP	P	01 04 19.4	+0.9
	comp=Z,7.9nm,0.9s						
MOA	Molln	48.05	323	eP	P	01 04 20.8	+0.8
	comp=Z,3.2nm,0.7s						
STAL	STALIGIAL	48.24	320	IAmb	IAmb	01 04 29.2	
	comp=Z,15nm,1.2s						
ABTA	Abfaltersbach	48.59	321	eP	P	01 04 24.7	+0.4
	comp=Z,5.4nm,1.3s						
GERES	GERESS Array B	48.86	324	P	P	01 04 25.9	-0.4
	comp=Z,0.5nm,0.6s,baz=123,slow=7.2,SNR=3.9						
KHC	Kasperske Hory	49.07	324	eP	P	01 04 26.3	-1.6
KHC				epP	sP	01 04 33.0	-0.4
WTTA	Wattenberg	49.35	321	eP	P	01 04 30.1	-0.2
	comp=Z,5.1nm,0.8s						
WATA	Walderalm	49.42	321	eP	P	01 04 30.3	-0.4
	comp=Z,3.5nm,0.7s						
LBTB	Lobatse	49.44	218	P	P	01 04 29.8	-1.2
SQTA	Sankt Quirin	49.59	321	eP	P	01 04 31.7	-0.3
MOTA	Moosalm	49.71	321	eP	P	01 04 32.4	-0.6
	comp=Z,7.5nm,0.8s						
BRG	Berggiesshubel	49.75	326	eP	P	01 04 33.4	+0.4
	comp=Z,8.3nm,1.3s						
FETA	Feichten	49.80	320	eP	P	01 04 33.7	0.0
	comp=Z,8.7nm,1.2s						
RETA	Reutte	49.98	321	eP	P	01 04 34.2	-0.7
	comp=Z,2.9nm,0.7s						
DAVA	Damuels	50.44	320	eP	P	01 04 38.1	-0.4
	comp=Z,3.3nm,0.6s						
CLL	Collm	50.48	326	eP	P	01 04 40.0	+1.5
	comp=Z,14nm,1.4s						
CLL	Collm	50.48	326	P	P	01 04 38.3	-0.3
CLL				IAmb	IAmb	01 04 46.8	
	comp=Z,24nm,1.6s						
XAN	Xi'an	51.13	58	P	P	01 04 44.0	+0.3
XAN				IAmb	IAmb	01 04 45.3	
	comp=Z,8.3nm,0.9s						
ENH	Enshi	51.13	63	P	P	01 04 43.8	0.0
FINES	FINESS Array B	51.64	342	P	P	01 04 47.3	+0.3
	comp=Z,6.2nm,1.1s,baz=123,slow=7.0,SNR=3.9						
BOSA	Boshof	52.38	215	P	P	01 04 53.0	-0.2
	comp=Z,5.2nm,0.7s,baz=38,slow=9.4,SNR=8.9						
BOSA				LR	LR	01 27 27.9	
	comp=Z,202nm,18.5s,baz=1.0,slow=36						
TLY	Talaya	52.84	35	P	P	01 04 56.9	+0.7
SONM	Songino Array	52.90	40	P	P	01 04 57.9	+1.0
	comp=Z,1.6nm,0.8s,baz=239,slow=8.3,SNR=6.5						
TORD	Torodi Ar. Bea	52.97	276	P	P	01 04 58.3	+0.7
	comp=Z,1.4nm,0.9s,baz=64,slow=6.1,SNR=4.4						
TORD				PcP	PcP	01 06 07.1	+0.6
	comp=Z,1.5nm,1.1s,baz=58,slow=4.9,SNR=2.5						
HHC	Hu-ho-hao-te	54.45	50	eP	P	01 05 09.8	+1.5
HHC				pmax	pmax		
	comp=Z,13nm,1.2s						
HHC				pmax	pmax		
	comp=Z,78nm,6.2s						
HHC				LR	LR		
	comp=Z,180nm,16.6s						
HHC				LR	LR		
	comp=Z,220nm,15.4s						
HHC				LR	LR		
	comp=Z,310nm,16.0s						
BJI	Beijing	57.77	52	eP	P	01 05 33.0	+1.1
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BJI				LR	LR		
	comp=Z,180nm,10.8s						
BJI				LR	LR		
	comp=Z,140nm,18.6s						
BJI				LR	LR		
	comp=Z,250nm,19.0s						
ESDC	Sonseca Array	58.07	308	P	P	01 05 34.1	0.0
	comp=Z,1.2nm,0.5s,baz=96,slow=6.6,SNR=6.1						
NRIK	Noril'sk	58.19	13	LR	LR	01 33 30.9	
	comp=Z,177nm,19.5s,baz=234,slow=39						
ARCES	ARCESS Array B	58.27	348	P	P	01 05 34.7	-0.2
	comp=Z,4.0nm,0.9s,baz=141,slow=7.8,SNR=5.2						
NJ2	Nanjing	59.26	61	eP	P	01 05 42.5	+0.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
HIA	Hailar	61.81	42	P	P	01 06 00.1	+0.6
HIA				IAmb	IAmb	01 07 15.8	
	comp=Z,4.4nm,0.8s						
CN2	Changchun	65.04	48	eP	P	01 06 21.3	+0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KSRS	Korea Array	66.77	55	P	P	01 06 31.8	-0.5
	comp=Z,2.7nm,0.7s,baz=270,slow=6.9,SNR=8.8						
USRK	Ussuriysk Ar.	69.77	48	P	P	01 06 51.0	0.0
	comp=Z,2.7nm,0.9s,baz=273,slow=3.4,SNR=5.1						
TIXI	Tiksi	70.81	19	P	P	01 06 56.2	-0.7
TIXI				IAmb	IAmb	01 07 03.4	
	comp=Z,9.2nm,1.2s						
H01W3	Cape Leeuwin H	73.60	134	T	T	02 27 29.5	
	baz=302,slow=76,SNR=10.0						
H01W2	Cape Leeuwin H	73.61	134	T	T	02 27 26.2	
	baz=302,slow=76,SNR=11						
H01W1	Cape Leeuwin H	73.62	134	T	T	02 27 27.1	
	baz=302,slow=76,SNR=12						
MJAR	Matsushiro Arr	75.04	56	LR	LR	01 41 34.7	
	comp=Z,77nm,21.8s,baz=290,slow=37						
BILL	Bilibino	83.86	21	P	P	01 08 10.7	+0.7
WRA	Warramunga Arr	83.98	112	P	P	01 08 09.9	-1.6
	comp=Z,2.2nm,0.9s,baz=297,slow=4.3,SNR=8.7						
ASAR	Alice Springs	84.74	116	P	P	01 08 14.1	-1.3
	comp=Z,2.2nm,0.8s,baz=294,slow=5.0,SNR=11						
RDOG	Red Dog Mine	92.91	14	P	P	01 08 53.7	+0.3
PDAR	Pinedale Array	121.53	348	PKP	PKPdf	01 14 34.6	-0.2
	comp=Z,0.8nm,0.7s,baz=89,slow=3.1,SNR=9.1						
NVAR	Mina Array Bea	127.08	355	PKP	PKiKP	01 14 46.9	+0.7
	comp=Z,1.3nm,0.7s,baz=8.7,slow=1.4,SNR=8.6						
TXAR	Lajitas Array	132.30	336	PKP	PKiKP	01 14 56.3	-0.4
	comp=Z,0.4nm,0.7s,baz=45,slow=1.9,SNR=4.5						

IDC **26** *00:56:47.4±2.6, 19.55N×108.89W, h0km, mb3.8/7, mb1 4.1/11, mb1mx3.9/42, mbtmp3.9/11, ML3.7/3, MS3.4/16, Ms1 3.4/16, ms1mx3.3/42, Error ellipse: s-maj=57.5km s-min=33.1km az=43.0*

NEIC **26** *00:56:48.9±2.5, 19.47N±0.09×109.13W±0.09, h10km±3km, mb4.1/71, Error ellipse: s-maj=15.4km s-min=10.3km az=137.0*

ISC 26 00:56:50.8±0.7, 19.47N±0.08×109.06W±0.06, h26km, n80, σ1.08/62, mb4.1/18, MS3.3/11, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H06E1	SOCORRO T-PHAS	1.89	249	Pn	Pn	00 57 19.9	-1.5
H06E1				Sn	Sb	00 57 48.8	+0.9
H06E1				T	T	00 59 41.3	
	SNR=829						
H06N1	SOCORRO T-PHAS	1.92	252	Pn	Pn	00 57 19.9	-1.8
H06N1				Sn	Sb	00 57 50.7	+2.2
H06S1	SOCORRO T	1.94	248	Pn	Pn	00 57 19.9	-2.1
H06S1				Sn	Sb	00 57 48.7	-0.4
LPIG	La Paz	4.76	346	Pn	Pn	00 57 59.0	-1.8
	baz=162,slow=6.4,SNR=3.0						
LPIG				LR	LR	00 59 31.3	
	comp=Z,545nm,20.8s,baz=178,slow=35						
ZAIG	Zacatecas	6.90	60		Pn	00 58 28.8	-1.7
SRIG	Santa Rosalia	8.34	340	Pn	Pn	00 58 50.9	+0.8
HSIG		9.66	350	Pn	Pn	00 59 09.0	+0.8
TLIG	Tlapa	10.13	99		Pn	00 59 14.9	+0.1
TX32	Lajitas Array	10.98	26		Pn	00 59 25.5	-0.8
TXAR	Lajitas Array	10.98	26	Pn	Pn	00 59 25.1	-1.3
	0.1nm,0.3s,baz=196,slow=15,SNR=14						
CMIG	Matias Romero	13.67	98	Pn	Pn	01 00 01.9	-1.1
	0.4nm,0.3s,baz=294,slow=12,SNR=7.1						
CMIG				LR	LR	01 05 00.3	
	comp=Z,134nm,19.2s,baz=272,slow=36						
BAR	Barrett	14.82	334	P	Pn	01 00 19.6	+0.8
X18A	Snowflake	15.02	357		Pn	01 00 21.5	-0.1
Y12C	Blythe	15.04	342		Pn	01 00 23.4	+1.8
X16A	Lo Mia Camp, P	15.04	352		Pn	01 00 22.1	+0.2
435B	Jarrell	15.31	40	Pn	Pn	01 00 26.4	+1.2
435B				IAmb	IAmb	01 00 30.4	
	comp=Z,12nm,1.1s						
XPFO	Pion Flat	15.55	336	Pn	Pn	01 00 29.1	+0.6
XPFO				IAmb	IAmb	01 00 36.1	
	comp=Z,7.2nm,1.1s						
PFO	Pinyon Flats O	15.56	336	Pn	Pn	01 00 29.1	+0.6
	comp=Z,0.1nm,0.3s,baz=141,slow=6.6,SNR=3.6						
PFO				LR	LR	01 06 07.2	
	comp=Z,216nm,18.6s,baz=174,slow=36						
PFO	Pinyon Flats O	15.56	336	P	Pn	01 00 30.4	+1.9
ABTX	Abilene, Hawle	15.59	31	Pn	Pn	01 00 30.0	+1.2
ABTX				IAmb	IAmb	01 00 50.5	
	comp=Z,29nm,1.8s						
ANMO	Albuquerque	15.59	8	Pn	Pn	01 00 30.7	+1.7
	baz=172,slow=19,SNR=2.1						
ANMO				LR	LR	01 05 18.3	
	comp=Z,110nm,18.1s,baz=186,slow=33						
ANMO	Albuquerque	15.59	8	Pn	Pn	01 00 29.4	+0.3
W18A	Petrified Fore	15.60	358	Pn	Pn	01 00 29.8	+0.7
W18A				IAmb	IAmb	01 00 36.0	
	comp=Z,9.3nm,0.9s						
HKT	Hockley	15.90	46	Pn	Pn	01 00 32.5	-0.3
HKT				IAmb	IAmb	01 00 45.3	
	comp=Z,36nm,2.0s						
WUAZ	Wupatki	16.12	353		Pn	01 00 36.6	+0.8
W13A	Hualapai Mount	16.15	346		Pn	01 00 36.9	+0.7
U15A	North Rim	17.14	351	P	Pn	01 00 49.2	+0.5
U15A				IAmb	IAmb	01 01 03.1	
	comp=Z,13nm,1.2s						
GSC	Goldstone, Bar	17.20	338		Pn	01 00 47.9	-1.4
MVCO	Mesa Verde	17.69	1		Pn	01 00 55.8	+0.2
MVCO				IAmb	IAmb	01 01 00.2	
	comp=Z,38nm,1.8s						
KNB	Kanab	17.79	350		Pn	01 00 56.1	-0.7
SHPR	Sheep Range	17.80	344		Pn	01 00 55.7	-1.1
LCMT	Little Creek M	17.86	349	P	Pn	01 00 57.8	+0.2
T25A	Trinidad	18.07	12	P	Pn	01 00 59.1	-1.2
SDCO	Great Sand Dun	18.48	9	P	P	01 01 04.5	-0.6
PAGB	Antelope Grade	18.97	331	P	Pn	01 01 11.8	+0.8
PSUT	Pine Spring	19.45	349	P	Pn	01 01 16.9	-0.1
TEIG	Tepich	19.57	84	LR	LR	01 09 18.0	
	comp=Z,120nm,21.7s,baz=138,slow=39						
SRU	San Rafael Swe	19.62	357	P	P	01 01 16.1	-1.3
SMCO	Snowmass	19.73	5	IAmb	IAmb	01 01 25.7	
	comp=Z,15nm,1.1s						
MDPB	Devils Postpil	20.10	336	IAmb	IAmb	01 01 31.5	
	comp=Z,14nm,1.5s						
ISCO	Idaho Springs	20.48	8	P	P	01 01 27.6	+0.7
ISCO				IAmb	IAmb	01 01 38.6	
	comp=Z,15nm,1.8s						
NV11	Mina Array Sit	20.48	339	IAmb	IAmb	01 01 33.3	
	comp=Z,18nm,1.4s						
NVAR	Mina Array Bea	20.53	339	P	Pn	01 01 29.1	-0.6
	comp=Z,4.6nm,1.0s,baz=167,slow=11,SNR=12						
NVAR				LR	LR	01 08 54.8	
	comp=Z,121nm,19.0s,baz=146,slow=36						
MPU	Maple Canyon	20.60	354	P	P	01 01 28.7	+0.5
O20A	White River Ci	20.61	2	P	P	01 01 28.8	+0.5
RYN	Ryan	20.78	339	IAmb	IAmb	01 01 39.1	
	comp=Z,9.3nm,1.3s						
DUG	Dugway, Tooele	20.91	352	P	P	01 01 32.3	+0.9
DUG				IAmb	IAmb	01 01 34.2	
	comp=Z,9.5nm,1.2s						
VBMS	Vicksburg	20.93	49	P	P	01 01 32.4	+0.9
WAKR	Walker	21.00	337	IAmb	IAmb	01 01 36.0	
	comp=Z,13nm,1.2s						
KVN	Kaiserville	21.02	340	P	P	01 01 33.9	+1.1
KVN				IAmb	IAmb	01 01 52.5	
	comp=Z,13nm,1.3s						
YERR	Yerington	21.35	338	IAmb	IAmb	01 01 42.7	
	comp=Z,11nm,1.0s						
N23A	Red Feather La	21.52	6	P	P	01 01 38.4	+0.2
N23A				IAmb	IAmb	01 01 40.1	
	comp=Z,7.7nm,1.1s						
TGUH	Tegucigalpa,Un	21.54	101	P	P	01 01 39.5	+1.1
PNTR	Pine Nut	21.57	337	IAmb	IAmb	01 01 42.0	
	comp=Z,11nm,1.0s						
ELK	Elko	21.86	347	P	P	01 01 42.1	+0.4
	comp=Z,2.3nm,0.9s,baz=170,slow=12,SNR=6.6						
ELK				LR	LR	01 09 40.1	
	comp=Z,72nm,18.1s,baz=174,slow=35						
ELK	Elko	21.86	347	P	P	01 01 42.8	+1.0
ELK				IAmb	IAmb	01 01 46.0	
	comp=Z,6.8nm,1.2s						
PHWY	Pilot Hill	21.98	7	IAmb	IAmb	01 01 46.1	
	comp=Z,8.3nm,1.3s						
PAHR	Pah Rah Range	22.05	338	P	P	01 01 41.3	-2.4
HWUT	Hardware Ranch	22.17	355	IAmb	IAmb	01 01 48.7	
	comp=Z,9.0nm,1.2s						
BEKR	Beckworth	22.54	337	IAmb	IAmb	01 01 52.7	
	comp=Z,4.0nm,0.9s						
ORV	Oroville	22.71	334	IAmb	IAmb	01 02 19.0	
	comp=Z,10nm,1.6s						
PD31	Pinedale Array	23.23	359	P	P	01 01 56.5	+0.3
PD31				IAmb	IAmb	01 02 21.5	
	comp=Z,12nm,1.8s						
PDAR	Pinedale Array	23.23	359	P	P	01 01 55.4	-0.8
	comp=Z,1.0nm,0.8s,baz=167,slow=9.1,SNR=11						
PDAR				LR	LR	01 10 50.0	
	comp=Z,70nm,18.3s,baz=184,slow=36						
REDW	Red Top Meadow	23.87	357	IAmb	IAmb	01 02 20.8	
	comp=Z,6.2nm,1.1s						
WVOR	Wild Horse Val	24.29	343	IAmb	IAmb	01 02 09.2	
	comp=Z,8.1nm,1.2s						
YBH	Yreka Blue Hor	25.05	335	LR	LR	01 11 46.8	
	comp=Z,77nm,19.4s,baz=163,slow=36						
J08A	Circle Bar Ran	25.10	344	P	P	01 02 14.0	+0.5
J08A				IAmb	IAmb	01 02 15.1	
	comp=Z,4.6nm,0.8s						
TKL	Tuckaleechee C	27.50	49	LR	LR	01 15 22.7	
	comp=Z,60nm,18.3s,baz=246,slow=41						
ULM	Lac du Bonnet	32.46	16	LR	LR	01 15 45.3	
	comp=Z,72nm,19.0s,baz=174,slow=35						
OTAV	Otavalo	35.57	119	P	P	01 03 47.7	+1.0
YKA	Yellowknife Ar	43.16	356	P	P	01 04 48.5	-0.5
	comp=Z,0.8nm,0.8s,baz=172,slow=7.8,SNR=16						
YKA				PcP	PcP	01 06 37.7	-0.5
	comp=Z,0.1nm,0.5s,baz=165,slow=3.0,SNR=2.9						
YKA				LR	LR	01 23 27.8	
	comp=Z,70nm,19.2s,baz=0.0,slow=37						
SCHQ	Schefferville	47.59	32	LR	LR	01 27 08.1	
	comp=Z,53nm,18.1s,baz=342,slow=38						
INK	Inuvik	51.18	349	P	P	01 05 51.5	+0.1
	comp=Z,2.9nm,0.9s,baz=123,slow=11,SNR=9.6						
INK	Inuvik	51.18	349	P	P	01 05 52.1	+0.7
ILAR	Eielson Array	51.78	340	P	P	01 05 56.6	+0.6
	comp=Z,0.8nm,0.6s,baz=144,slow=6.9,SNR=15						
LPAZ	La Paz	53.68	129	LR	LR	01 25 59.9	
	comp=Z,28nm,19.1s,baz=314,slow=33						
ARCES	ARCESS Array B	85.57	15	P	P	01 09 26.7	+0.3
	comp=Z,1.6nm,0.8s,baz=327,slow=4.8,SNR=2.9						
NOA	NORSAR Array B	86.68	25	LR	LR	01 47 56.6	
	comp=Z,17nm,19.0s,baz=120,slow=36						
MDT	Midelt	91.13	55	LR	LR	01 51 52.8	
	comp=Z,27nm,18.9s,baz=344,slow=36						
LZH	Lanzhou	116.58	331	ePKP	PKPdf	01 15 31.5	-1.6
LZH				pPKP	PKiKP	01 15 34.8	+1.7
LZH				sPKP		01 15 36.0	

ISC 26 01:01:01.1±0.9, 50.26N±0.04×18.78E±0.03, h0km, n18, σ0.69/31, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.59	224	ePG	Pg	01 01 12.7	+0.4
OKC				eSG	Sg	01 01 20.0	0.0
	comp=Z,10nm,0.4s						
OJC	Ojcow	0.66	93	ePg	Pg	01 01 13.4	-0.3
OJC				eSg	Sg	01 01 22.0	-0.1
MORC	Moravsky Berou	0.93	239	ePG	Pg	01 01 19.4	+0.4
MORC				eSG	Sg	01 01 31.0	0.0
LANS	Liptovska Anna	1.20	158	ePG	Pg	01 01 24.1	+0.1
LANS				eSG	Sg	01 01 39.9	+0.4
LANS				eLG	Lg	01 01 42.4	
NIE	Niedzica	1.30	130	ePg	Pg	01 01 25.7	-0.2
NIE				eSg	Sb	01 01 43.7	+0.2
KRLC	Kraliky	1.30	262	ePG	Pg	01 01 25.1	-0.8
KRLC				eSG	Sg	01 01 42.8	+0.1
	comp=Z,7.7nm,0.3s						
DPC	Dobruska-Polom	1.58	274	ePG	Pn	01 01 29.8	-0.6
DPC				eSG	Sn	01 01 51.9	+0.4
	comp=Z,5.1nm,0.6s						
OSTC	Ostas	1.67	281	ePG	Pn	01 01 32.0	+0.5
OSTC				eSG	Sg	01 01 55.1	+0.5
KSP	Ksiaz	1.69	291	ePg	Pb	01 01 33.5	+0.4
KSP				eSg	Sg	01 01 56.0	+0.7
VRAC	Vranov	1.71	237	ePN	Pb	01 01 33.1	-0.2
VRAC				eSG	Sn	01 01 54.7	0.0
VYHS	Vyhne	1.77	179	ePN	Pn	01 01 32.7	-0.3
VYHS				eSN	Sn	01 01 55.6	-0.6
CHVC	Chvalec	1.77	282	ePG	Pn	01 01 33.1	+0.1
CHVC				eSG	Sn	01 01 57.1	+0.8
UPC	Upice	1.79	279	eSG	Sg	01 01 59.3	+0.8
KRUC	Moravsky	1.96	233	ePN	Pn	01 01 36.1	+0.5
KRUC				eSG	Sb	01 02 02.9	+0.3
GOPC	GO Pecny, Ondr	2.59	264	eSG	Sg	01 02 23.3	-1.1
PRU	Pruhonice	2.74	266	eSG	Sg	01 02 27.9	-1.2
BRG	Berggiesshubel	3.14	283	SG	Sg	01 02 39.9	-2.1
	1.4nm,0.7s						
KHC	Kasperske Hory	3.56	253	eSG	Sg	01 02 54.3	-1.1

IDC **26** *01:03:30.1±1.2, 14.37N×56.24E, h0km, mb3.7/10, mb1 3.9/10, mb1mx3.6/51, mbtmp3.7/10, Error ellipse: s-maj=30.6km s-min=24.2km az=46.0*

NEIC **26** *01:03:30.8±2.4, 14.38N±0.08×56.2E±0.1, h10km±1km, mb4.0/3, Error ellipse: s-maj=20.9km s-min=7.8km az=124.0*

ISC 26 01:03:30.4±0.8, 14.25N±0.09×56.0E±0.1, h10km, n22, σ1.66/17, mb3.9/11, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	Socotra	2.85	224		Pn	01 04 16.5	+0.3
SOCY				Sn	Sn	01 04 47.7	-3.0
UOSS	Minazif	10.64	1	Pn	Pn	01 06 02.6	-0.4
RAYN	Ar Rayn	13.56	314	Pn	Pn	01 06 42.4	-0.7
HRA	Herat	20.82	15	P	P	01 08 09.0	-3.5
HRA				IAmb	IAmb	01 08 16.6	
	comp=Z,5.2nm,1.1s						
GEYT	Alibeck	23.66	4	P	P	01 08 41.6	-0.5
	comp=Z,2.7nm,0.7s,baz=188,slow=9.9,SNR=7.0						
H08N2	Diego Garcia H	25.27	143	T	T	01 35 01.3	
	baz=329						
H08N3	Diego Garcia H	25.29	143	T	T	01 35 11.3	
	baz=329						
H08N1	Diego Carcia H	25.30	143	T	T	01 35 03.0	
	baz=329						
KBZ	Khabaz	31.45	342	P	P	01 09 53.5	+1.4
	comp=Z,2.7nm,0.9s,baz=139,slow=11,SNR=4.0						
MKAR	Makanchi Array	39.18	29	P	P	01 10 57.9	-0.7
	comp=Z,0.4nm,0.8s,baz=218,slow=8.4,SNR=3.9						
KURBB	Kurchatov Arra	40.61	22	P	P	01 11 10.4	+0.1
	comp=Z,0.4nm,0.8s,baz=221,slow=8.2,SNR=6.8						
CMAR	Chiang Mai Arr	41.32	78	P	P	01 11 17.4	+0.6
	comp=Z,1.0nm,0.6s,baz=267,slow=7.9,SNR=5.0						
BUR08	Bucovina Ar. S	41.99	329	P	P	01 11 21.4	-0.6
BUR08				IAmb	IAmb	01 11 30.6	
	comp=Z,11nm,1.5s						
AKASG	Malin Array Be	42.34	335	P	P	01 11 24.7	+0.1
	comp=Z,0.2nm,0.4s,baz=140,slow=6.7,SNR=3.5						
ZALV	Zalesovo Beam	45.60	23	P	P	01 11 49.3	-1.4
	comp=Z,1.9nm,0.7s,baz=229,slow=8.1,SNR=4.3						
TORD	Torodi Ar. Bea	52.70	276	P	P	01 12 48.6	+3.0
	comp=Z,0.5nm,0.9s,baz=89,slow=8.4,SNR=2.8						
H01W3	Cape Leeuwin H	73.63	133	T	T	02 35 16.5	
	baz=299						
H01W2	Cape Leeuwin H	73.64	133	T	T	02 35 16.7	
	baz=299						
H01W1	Cape Leeuwin H	73.65	133	T	T	02 35 17.6	
	baz=299						
WRA	Warramunga Arr	84.16	112	P	P	01 16 02.3	-0.2
	comp=Z,0.7nm,0.8s,baz=299,slow=4.4,SNR=4.4						
ASAR	Alice Springs	84.89	116	P	P	01 16 05.9	-0.3
	comp=Z,0.5nm,0.7s,baz=298,slow=6.5,SNR=4.4						
NVAR	Mina Array Bea	127.33	354	PKP	PKiKP	01 22 38.4	+1.7
	comp=Z,0.4nm,0.7s,baz=68,slow=2.4,SNR=3.2						

NIED **26** *01:09:00, 31.90N×142.00E, h5km, Mw4.1 Best double couple: M_0 1.70000×10^{15} NP1:ϕ_s360.00000°, δ66.00000°, λ108.00000°. NP2:ϕ_s141.00000°, δ30.00000°, λ56.00000°.*

IDC **26** *01:09:32.2±0.7, 31.80N×141.71E, h0km, mb4.0/15, mb1 4.1/19, mb1mx4.0/45, mbtmp3.9/19, ML3.6/4, MS3.0/3, Ms1 3.0/3, ms1mx2.7/44, Error ellipse: s-maj=20.7km s-min=15.4km az=76.0*

JMA **26** *01:09:34.0±0.2, 31.95N×141.96E, h34km, M4.0*

NEIC **26** *01:09:35.0±1.5, 31.78N±0.05×141.7E±0.1, h21km±5km, mb4.4/10, Error ellipse: s-maj=15.8km s-min=4.2km az=69.0*

ISC 26 01:09:36.1±0.6, 31.84N±0.06×141.76E±0.09, h29km, n43, σ1.03/49, mb4.1/21, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.80	291	P	Pn	01 10 05.9	+0.6
JHCJ	Hachijojimakas	2.06	307	P	Pn	01 10 08.4	-0.4
JHCJ				eS	Sn	01 10 33.7	+0.1
JHJ2	Mitsune	2.07	308	P	Pn	01 10 08.5	-0.5
JHJ2				eS	Sn	01 10 34.6	+0.8
JHJ2	Mitsune	2.07	308	Pn	Pn	01 10 08.8	-0.2
JHJ2				Sn	Sn	01 10 33.2	-0.6
JHJ	Hachijo jima 2	2.10	308	Pn	Pn	01 10 08.6	-0.7
	93nm,0.3s,baz=113,slow=23,SNR=45						
JHJ				Sn	Sn	01 10 34.9	+0.4
	50nm,0.3s,baz=240,slow=20,SNR=2.9						
JHJ				LR	LR	01 11 09.2	
	comp=Z,316nm,18.5s,baz=82,slow=47						
BSO1	Boso 1	2.88	347	S	Sn	01 10 52.2	-0.8
JKO	Kozu shima	3.21	317	P	Pn	01 10 25.0	+0.3
JOD2	Odawara 2	4.08	328	eS	Sn	01 11 23.0	-0.3
JHU	Hanno	4.50	333	eS	Sn	01 11 33.6	-0.1
CBIJ	Chichi jima	4.74	175	P	Pn	01 10 45.4	-0.3
CBIJ				S	Sn	01 11 37.4	-2.3
JCJ	Chichijima	4.74	175	Pn	Pn	01 10 45.0	-0.7
	13nm,0.3s,baz=278,slow=22,SNR=18						
JCJ				Sn	Sn	01 11 38.1	-1.6
	16nm,0.3s,baz=319,slow=20,SNR=4.3						
JAG	Ashikaga	4.96	338	P	Pn	01 10 48.2	-0.4
JAG				eS	Sn	01 11 43.3	-1.7
MJAR	Matsushiro Arr	5.54	329	Pn	Pn	01 10 57.1	+0.5
	0.3nm,0.3s,baz=147,slow=10,SNR=3.4						
MAT	Matsushiro	5.54	329	P	Pn	01 10 57.5	+0.9
MAT				S	Sn	01 11 55.9	-3.4
JNU	Nakatsue	9.28	281	LR	LR	01 14 56.4	
	comp=Z,126nm,21.5s,baz=108,slow=35						
ERM	Erimo	10.22	6	Pn	Pn	01 11 58.9	-1.9
KSRS	Korea Array	12.69	300	LR	LR	01 16 56.8	
	comp=Z,71nm,19.5s,baz=114,slow=35						
KLR	Kul'dur	18.93	339	P	P	01 13 53.2	-1.4
	0.2nm,0.3s,baz=131,slow=12,SNR=4.3						
SONM	Songino Array	31.18	311	P	P	01 15 53.8	+1.2
	1.0nm,0.5s,baz=117,slow=9.4,SNR=11						
ZALV	Zalesovo Beam	45.74	316	P	P	01 17 54.7	+0.1
	0.5nm,0.3s,baz=107,slow=7.7,SNR=4.5						
MK31	Makanchi Array	47.27	306	P	P	01 18 05.8	-1.0
MKAR	Makanchi Array	47.27	306	P	P	01 18 07.2	+0.4
	2.2nm,0.7s,baz=91,slow=9.8,SNR=29						
KURK	Kurchatov	49.48	312	P	P	01 18 23.0	-0.6
WB0	Warramunga Arr	51.80	189	P	P	01 18 40.4	-1.0
WB0				IAmb	IAmb	01 18 42.1	
	comp=Z,5.8nm,0.8s						
WB2	Warramunga Arr	51.98	189	P	P	01 18 41.9	-0.9
WRA	Warramunga Arr	51.98	189	P	P	01 18 42.6	-0.1
	comp=Z,4.0nm,0.7s,baz=6.0,slow=7.7,SNR=26						
ILAR	Eielson Array	53.78	30	P	P	01 18 56.3	+0.7
	comp=Z,1.7nm,0.9s,baz=259,slow=6.2,SNR=16						
ASAR	Alice Springs	55.70	189	P	P	01 19 09.8	-0.1
	comp=Z,1.1nm,0.7s,baz=15,slow=12,SNR=13						
KK31	Karatay Array	56.09	303	P	P	01 19 12.5	-0.2
KK31				IAmb	IAmb	01 19 16.1	
	comp=Z,2.6nm,0.8s						
KKAR	Karatay Array	56.09	303	P	P	01 19 11.7	-1.1
KKAR				IAmb	IAmb	01 19 16.1	
	comp=Z,2.6nm,0.8s						
INK	Inuvik	58.90	26	P	P	01 19 32.8	+0.8
	comp=Z,0.4nm,0.3s,baz=307,slow=6.0,SNR=5.4						
INK	Inuvik	58.90	26	P	P	01 19 31.9	-0.1
ABKAR	Akbulak array	61.58	312	P	P	01 19 50.6	0.0
ABKAR				IAmb	IAmb	01 19 51.3	
	comp=Z,3.0nm,1.1s						
YKA	Yellowknife Ar	68.17	29	P	P	01 20 34.2	+0.8
	comp=Z,0.3nm,0.6s,baz=294,slow=5.9,SNR=5.5						
ARCES	ARCESS Array B	68.96	340	P	P	01 20 38.7	+0.5
	comp=Z,1.5nm,0.7s,baz=46,slow=7.8,SNR=2.8						
FINES	FINESS Array B	73.55	333	P	P	01 21 06.7	+0.7
	comp=Z,1.9nm,0.9s,baz=79,slow=9.9,SNR=3.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVAR	Mina Array Bea	77.90	52	P	P	01 21 33.0	+1.3
	comp=Z,0.3nm,0.6s,baz=304,slow=6.4,SNR=3.2						
AKASG	Malin Array Be	78.59	323	P	P	01 21 35.0	+0.1
	comp=Z,0.3nm,0.4s,baz=51,slow=5.6,SNR=2.9						
NOA	NORSAR Array B	79.08	338	P	P	01 21 37.8	+0.2
	comp=Z,0.8nm,0.8s,baz=46,slow=2.5,SNR=2.9						
PDAR	Pinedale Array	81.12	45	P	P	01 21 50.1	+1.0
	comp=Z,0.6nm,0.7s,baz=298,slow=3.2,SNR=6.8						
TX31	Lajitas Ar. Si	93.05	53	P	P	01 22 46.5	-1.0
TX31				IAmb	IAmb	01 22 50.1	
	comp=Z,2.0nm,0.8s						
TX32	Lajitas Array	93.05	53	P	P	01 22 46.8	-0.7
TX32				IAmb	IAmb	01 22 50.2	
	comp=Z,2.1nm,0.8s						
TXAR	Lajitas Array	93.05	53	P	P	01 22 49.3	+1.8
	comp=Z,2.1nm,0.8s,baz=294,slow=3.1,SNR=23						

IDC 26 01:18:30.6±0.6, 19.05S×172.71W, h0km, mb4.6/12, mb1 4.8/14, mb1mx4.6/29, mbtmp4.6/14, ML4.3/2, MS3.7/11, Ms1 3.7/11, ms1mx3.4/45, Error ellipse: s-maj=26.1km s-min=15.6km az=142.0

BJI 26 01:18:31.0±0.0, 18.90S×172.90W, h8km, mB5.3/10, mb5.0/28, Ms4.9/6, MS4.7 4.6/6

NEIC 26 01:18:34.5±1.0, 18.8S±0.1×173.0W±0.2, h18km±5km, mb4.8/59, Error ellipse: s-maj=25.7km s-min=15.4km az=127.0

GCMT 26 01:18:34.5±0.4, 19.21S±0.06×172.28W±0.03, h19km±1km, MW4.8/65, Moment Tensor Solution. s19,c22; s65,c78; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.09±.17; $M_{\theta\theta}$0.41±.11; $M_{\phi\phi}$1.68±.11; $M_{r\theta}$-0.46±.33; $M_{r\phi}$0.32±.07; $M_{\theta\phi}$0.03±.20; Best double couple: $M_0$1.96600×10^{16} NP1:ϕ_s183.00000°, δ45.00000°, λ-105.00000°. NP2: ϕ_s24.00000°, δ47.00000°, λ-76.00000°. Principal axes: T 1.7570, Plg1.0000°, Azm104.0000°; N 0.4190, Plg10.0000°, Azm194.0000°; P -2.1750, Plg80.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 26 01:18:32.9±0.4, 19.04S±0.09×172.72W±0.09, h13km, n126, σ1.33/102, mb4.8/46, MS3.8/10, 8C-4D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	5.18	10	Pn	Pn	01 19 49.8	-0.5
	11nm,0.3s,baz=91,slow=8.2,SNR=7.2						
AFI				Sn	Sn	01 20 36.4	-14
	47nm,0.3s,baz=50,slow=20,SNR=9.3						
AFI				LR	LR	01 21 48.8	
	comp=Z,159nm,21.8s,baz=202,slow=38						
AFI	Afiamalu	5.18	10		Pn	01 19 48.7	-1.6
RAR	Rarotonga	12.36	102	Pn	Pn	01 21 21.6	-7.0
	3.5nm,0.3s,baz=253,slow=10,SNR=5.3						
RAR				Sn	Sn	01 23 30.3	-16
	2.2nm,0.3s,baz=171,slow=18,SNR=2.7						
RAR				LR	LR	01 24 56.1	
	comp=Z,404nm,21.7s,baz=262,slow=31						
DZM	Mont Dzumac	19.74	258	eP	P	01 23 03.2	+0.6
	131nm,1.2s						
DZM				eLR	LR	01 27 46.0	
	comp=Z,752nm,25.8s						
DZM	Mont Dzumac	19.74	258	P	P	01 23 03.5	+0.9
	0.9nm,0.3s,baz=85,slow=16,SNR=14						
DZM				LR	LR	01 29 23.0	
	comp=Z,412nm,21.9s,baz=92,slow=33						
DZM	Mont Dzumac	19.74	258	P	P	01 23 00.5	-2.1
DZM				IAmb	IAmb	01 23 06.5	
	comp=Z,37nm,0.8s						
NOUC	Port Laguerre	19.87	258	P	P	01 22 59.9	-4.1
URZ	Urewera	21.10	203	P	P	01 23 18.1	+1.0
	comp=Z,21nm,0.9s,baz=359,slow=7.4,SNR=8.0						
URZ				S	S	01 27 14.0	+2.4
	comp=Z,16nm,0.9s,baz=87,slow=22,SNR=4.6						
URZ	Urewera	21.10	203	P	P	01 23 19.3	+2.2
URZ				IAmb	IAmb	01 23 31.9	
	comp=Z,31nm,1.1s						
PAE	Paea	22.01	90	eT	T	01 45 25.9	
	comp=Z,4.4nm,0.2s						
PPT2	Papeete2	22.02	90	eLR	LR	01 28 29.5	
	comp=Z,917nm,26.0s,baz=271						
PPT	Papeete	22.02	90	LR	LR	01 29 22.7	
	comp=Z,263nm,20.9s,baz=190,slow=30						
TBI	Tubuai	22.10	105	eP	P	01 23 23.5	-4.5
	comp=Z,210nm,1.1s						
TBI				eS	S	01 27 17.3	-14
	comp=Z,342nm,26.2s						
TBI				eLR	LR	01 28 21.8	
	comp=Z,707nm,30.5s						
QRZ	Quartz Range	25.12	207	P	P	01 24 05.5	+8.0
THZ	Tophouse	25.75	205	P	P	01 24 04.7	+1.5
LTZ	Lake Taylor	26.86	205		sP	01 24 23.6	+8.1
HNR	Honiara	28.12	286	LR	LR	01 34 13.7	
	comp=Z,200nm,19.1s,baz=132,slow=34						
RPZ	Rata Peaks	28.12	205	P	P	01 24 32.5	+7.9
	comp=Z,18nm,0.6s,baz=299,slow=2.9,SNR=12						
RPZ	Rata Peaks	28.12	205	P	P	01 24 26.2	+1.6
RPZ				IAmb	IAmb	01 24 35.2	
	comp=Z,20nm,0.7s						
EIDS	Eidsvold	34.02	253	P	P	01 25 16.3	-0.5
EIDS				IAmb	IAmb	01 25 16.6	
	comp=Z,14nm,0.9s						
ARMA	Armidale	34.17	244	P	P	01 25 18.2	+0.1
ARMA				IAmb	IAmb	01 25 18.8	
	comp=Z,8.8nm,0.8s						
PMG	Port Moresby	39.96	278	LR	LR	01 40 46.6	
	comp=Z,219nm,18.4s,baz=182,slow=33						
TOO	Toolangi	40.77	234	P	P	01 26 14.4	+0.5
TOO				IAmb	IAmb	01 26 15.5	
	comp=Z,15nm,0.8s						
COEN	Coen	42.51	270	P	P	01 26 27.8	-0.6
STKA	Stephens Creek	42.89	243	P	P	01 26 30.6	-0.7
	comp=Z,5.2nm,0.7s,baz=99,slow=9.7,SNR=11						
STKA				LR	LR	01 41 57.2	
	comp=Z,182nm,20.8s,baz=30,slow=33						
STKA	Stephens Creek	42.89	243	P	P	01 26 30.7	-0.6
WR0	Warramunga Arr	49.55	260	P	P	01 27 22.8	-1.1
WR0				IAmb	IAmb	01 27 24.3	
	comp=Z,14nm,0.8s						
AS31	Alice Springs	49.69	255	P	P	01 27 24.2	-0.8
AS31				IAmb	IAmb	01 27 25.5	
	comp=Z,13nm,0.9s						
ASAR	Alice Springs	49.69	255	P	P	01 27 24.5	-0.5
	comp=Z,40nm,0.8s,baz=87,slow=8.4,SNR=320						
ASAR				S	S	01 34 30.3	-3.5
	comp=Z,1.1nm,0.8s,baz=95,slow=14,SNR=8.7						
WB0	Warramunga Arr	49.71	260	P	P	01 27 24.1	-1.0
WB2	Warramunga Arr	49.73	260	P	P	01 27 24.3	-1.0
WRAB	Tennant Creek	49.73	260	P	P	01 27 23.6	-1.7
WRA	Warramunga Arr	49.74	260	P	P	01 27 23.9	-1.4
	comp=Z,18nm,0.8s,baz=98,slow=8.5,SNR=86						
MTN	Manton Dam	54.15	268	P	P	01 27 57.8	-0.4
KNRA	Kununurra	55.74	264	P	P	01 28 09.5	-0.2
FITZ	Fitzroy Crossi	58.16	260	LR	LR	01 52 19.7	
	comp=Z,75nm,19.8s,baz=100,slow=35						
FITZ	Fitzroy Crossi	58.16	260	IAmb	IAmb	01 28 30.3	
	comp=Z,7.1nm,0.8s						
SANI	Sanana	62.25	278	P	P	01 28 52.7	-2.3
	comp=Z,42nm,0.9s						
DAV	Davao City (W)	66.08	287	LR	LR	01 54 36.6	
	comp=Z,42nm,19.6s,baz=30,slow=33						
PLAI	Plampang	67.86	268	P	P	01 29 31.4	-0.1
JAGI	Jajag, Banyuwa	71.39	267	P	P	01 29 52.4	-1.0
MJAR	Matsushiro Arr	72.13	320	P	P	01 29 57.9	+0.7
	comp=Z,8.0nm,0.9s,baz=139,slow=6.6,SNR=10						
MJAR				LR	LR	01 56 30.9	
	comp=Z,22nm,21.1s,baz=175,slow=32						
ISA	Isabella, Lake	74.82	43	P	P	01 30 14.1	+0.9
PFO	Pinyon Flats O	74.94	46	P	P	01 30 15.8	+1.7
PFO				IAmb	IAmb	01 30 16.6	
	comp=Z,5.9nm,1.1s						
XPFO	Pion Flat	74.95	46	P	P	01 30 15.8	+1.7
WAKR	Walker	75.96	40	P	P	01 30 22.5	+2.6
BEKR	Beckworth	76.26	39	P	P	01 30 21.7	+0.2
PETK	Petropavlovsk-	76.28	342	P	P	01 30 21.6	+0.6
	comp=Z,5.9nm,0.8s,baz=114,slow=6.6,SNR=4.6						
RYN	Ryan	76.60	41	P	P	01 30 26.1	+2.6
NVAR	Mina Array Bea	76.61	41	P	P	01 30 23.7	+0.1
	comp=Z,2.8nm,0.9s,baz=224,slow=9.5,SNR=16						
NV11	Mina Array Sit	76.70	41	IAmb	IAmb	01 30 27.5	
	comp=Z,6.6nm,1.1s						
TPUB	Ta-pu	77.45	300	P	P	01 30 28.8	+0.4
TUC	Tucson	78.21	50	P	P	01 30 33.3	+0.8
TUC				IAmb	IAmb	01 30 36.3	
	comp=Z,6.2nm,1.1s						
PINE	Pine Mountain	78.45	36	P	P	01 30 34.3	+0.6
PINE				IAmb	IAmb	01 30 46.2	
	comp=Z,8.5nm,1.1s						
KSRS	Korea Array	79.20	316	P	P	01 30 40.5	+2.9
	comp=Z,13nm,0.9s,baz=134,slow=5.9,SNR=45						
KSRS				LR	LR	01 59 41.5	
	comp=Z,46nm,21.2s,baz=148,slow=31						
KS19	Wonju Array Si	79.27	316		pP	01 30 40.8	+0.9
J08A	Circle Bar Ran	79.56	37	IAmb	IAmb	01 30 43.0	
	comp=Z,7.1nm,1.1s						
TXAR	Lajitas Array	82.11	55	P	P	01 30 54.4	+0.7
	comp=Z,1.9nm,0.9s,baz=219,slow=7.7,SNR=14						
ANMO	Albuquerque	82.65	49	P	P	01 30 57.4	+0.9
NJ2	Nanjing	82.87	307	eP	P	01 30 57.8	+0.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
S22A	4UR Ranch, Cre	83.77	47	IAmb	IAmb	01 31 05.8	
	comp=Z,5.5nm,0.8s						
CN2	Changchun	84.28	320	eP	P	01 31 05.5	+1.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HYT	Haines Junctio	84.49	16	IAmb	IAmb	01 31 08.6	
	comp=Z,6.9nm,1.2s						
PAX	Paxson	84.50	12	IAmb	IAmb	01 31 05.1	
	comp=Z,7.0nm,1.2s						
PD31	Pinedale Array	84.55	41	IAmb	IAmb	01 31 08.2	
	comp=Z,3.4nm,0.9s						
PDAR	Pinedale Array	84.55	41	P	P	01 31 05.5	-0.5
	comp=Z,1.9nm,0.8s,baz=210,slow=3.7,SNR=19						
FLWY	Flagg Ranch	84.55	40	IAmb	IAmb	01 31 10.1	
	comp=Z,5.6nm,1.1s						
MSTX	Muleshoe	84.88	52	IAmb	IAmb	01 31 10.8	
	comp=Z,14nm,1.1s						
DOT	Dot Lake	85.40	12	IAmb	IAmb	01 31 10.5	
	comp=Z,8.9nm,0.9s						
WHN	Wuhan	85.66	304	P	P	01 31 19.5	+7.9
COLA	College	85.80	10	P	P	01 31 11.6	+0.1
IL31		85.88	11	IAmb	IAmb	01 31 24.2	
	comp=Z,9.4nm,1.0s						
ILAR	Eielson Array	85.88	11	P	P	01 31 11.2	-0.7
	comp=Z,4.1nm,0.8s,baz=225,slow=5.3,SNR=38						
TIA	Tai'an	86.04	310	P	P	01 31 15.8	+2.4
TIA				pmax	pmax		
	comp=Z,14nm,0.8s						
AMTX	Amarillo	86.10	51	IAmb	IAmb	01 31 16.6	
	comp=Z,10nm,0.8s						
DAWY	Dawson	86.77	14	IAmb	IAmb	01 31 17.8	
	comp=Z,10nm,0.9s						
EGAK	Eagle	87.00	13	IAmb	IAmb	01 31 19.9	
	comp=Z,12nm,1.1s						
BILL	Bilibino	88.18	352	P	P	01 31 23.3	+0.3
BILL				IAmb	IAmb	01 31 24.9	
	comp=Z,6.5nm,1.1s						
BJI	Beijing	88.43	313	eP	P	01 31 26.5	+1.7
BJI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RPSI	Rantau Prapat	89.31	273	P	P	01 31 30.0	+0.3
VNA2	Neumayer--Watz	89.69	175	P	P	01 31 30.5	+0.1
	baz=202,slow=2.8						
INK	Inuvik	91.63	14	IAmb	IAmb	01 31 40.1	
	comp=Z,4.8nm,1.1s						
CFA	Coronel Fontan	91.88	124	P	P	01 31 40.9	-0.5
	comp=Z,3.3nm,0.8s,baz=220,slow=3.0,SNR=5.2						
PBKT	Sadao Pong	91.92	287	P	P	01 31 44.5	+2.9
HHC	Hu-ho-hao-te	91.96	313	eP	P	01 31 42.8	+1.3
HHC				pmax	pmax		
	comp=Z,7.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,87nm,6.8s						
YKA	Yellowknife Ar	93.17	23	P	P	01 31 45.2	-1.2
	comp=Z,1.1nm,0.9s,baz=230,slow=4.2,SNR=12						
CD2	Chengdu	94.24	301	P	P	01 31 50.8	-1.4
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CMAR	Chiang Mai Arr	94.36	288	P	P	01 31 55.4	+2.5
	comp=Z,3.0nm,0.9s,baz=93,slow=2.8,SNR=14						
LZH	Lanzhou	95.89	306	eP	P	01 31 59.0	-0.7
LZH				pP	sP	01 32 04.8	+2.7
LZH				sP	pwP	01 32 07.3	-4.5
LZH				ePP	PP	01 35 53.5	+1.3
ZALV	Zalesovo Beam	112.47	321	PKiKP	PKiKP	01 37 08.0	-0.5
	comp=Z,0.5nm,0.4s,baz=270,slow=1.4,SNR=4.0						
MKAR	Makanchi Array	113.81	313	PKiKP	PKiKP	01 37 10.5	-0.9
	comp=Z,0.8nm,0.7s,baz=101,slow=1.4,SNR=6.8						
ARCES	ARCESS Array B	128.28	352	PKP	PKiKP	01 37 39.1	0.0
	comp=Z,2.5nm,0.8s,baz=52,slow=2.0,SNR=3.7						
AKASG	Malin Array Be	143.92	336	PKP	PKPbc	01 38 05.6	0.0
	comp=Z,1.0nm,0.6s,baz=28,slow=4.5,SNR=8.0						
KMBO	Kilima Mbogo	144.38	239	PKP	PKPbc	01 38 09.3	+0.7
	comp=Z,5.0nm,0.8s,baz=87,slow=5.2,SNR=17						
SORM	Soroca	146.31	334	⇑P	PKPdf	01 38 11.9	-0.2
CLL	Collm	147.49	353	i PKPbc	PKPab	01 38 17.9	-0.6
	comp=Z,13nm,1.1s						
CLL				e		01 38 28.0	
OSTC	Ostas	147.76	349	ePKPAB	PKPbc	01 38 18.2	+0.8
OSTC				ex	x	01 38 29.2	
BRG	Berggiesshubel	147.80	352	ePKP	PKPbc	01 38 18.1	+0.7
	comp=Z,6.5nm,1.1s						
BRG				e		01 55 56.1	
	comp=Z,16nm,2.0s						
DPC	Dobruska-Polom	147.94	349	ePKPAB	PKPab	01 38 21.4	+1.0
DPC				ex	x	01 38 39.8	
BURAR	Bucovina Array	147.96	337	⇑P	PKPab	01 38 21.8	+1.1
TRPA	Tarpa	148.44	340	⇑P	PKPbc	01 38 19.5	+0.3
VYHS	Vyhne	149.16	345	ePKP	PKiKP	01 38 22.1	-0.2
VYHS				e		01 38 26.6	
GRF	Grafenberg Arr	149.26	355	ePKP	PKiKP	01 38 22.1	-0.4
	baz=7.8,slow=2.0						
BRTR	Keskin Array B	149.33	318	PKPbc	PKPbc	01 38 22.6	+0.7
	comp=Z,6.2nm,0.8s,baz=119,slow=2.4,SNR=30						
MLR	Muntele Rosu	149.42	334	⇑P	PKPdf	01 38 19.6	+2.0
KHC	Kasperske Hory	149.55	352	ePKPDF	PKPdf	01 38 18.6	+1.1
KHC				⇑ePKP	PKPbc	01 38 22.5	+0.5
KHC				ePKPAB	pPKPab	01 38 27.9	-0.8
DRGR		149.56	339	⇓P	PKiKP	01 38 22.9	-0.4
MODS	Modra-Piesok	149.63	347	ePKP	PKPbc	01 38 22.7	+0.5
GERES	GERESS Array B	149.82	352	PKPbc	PKPbc	01 38 22.0	-0.8
	comp=Z,2.2nm,1.0s,baz=82,slow=2.8,SNR=11						
VOIR		149.83	335	⇓P	PKiKP	01 38 24.7	+0.9
ARR	Arges	150.05	335	⇓P	PKiKP	01 38 24.9	+0.5
CONA	Conrad Observa	150.35	348	ePKiKP	PKiKP	01 38 25.1	+0.2
	comp=Z,6.7nm,1.0s						
SIRR	Siria	150.37	340	⇓P	PKiKP	01 38 25.4	+0.5
MOA	Molln	150.71	350	ePKiKP	PKPbc	01 38 25.3	+0.5
	comp=Z,9.4nm,1.5s						
GZR	Gura Zlata	150.74	337	⇑P	PKPbc	01 38 23.9	-1.2
BZS	Buzias	150.95	339	⇑P	PKiKP	01 38 26.0	0.0
RETA	Reutte	151.48	355	esPKPdf	PKiKP	01 38 27.5	+0.2
	comp=Z,12nm,1.5s						
WATA	Walderalm	151.56	354	esPKPdf	PKiKP	01 38 27.4	0.0
	comp=Z,6.6nm,1.1s						
KBA	Koelnbreinsper	151.60	351	ePKiKP	PKPbc	01 38 27.2	0.0
	comp=Z,3.8nm,1.0s						
MOTA	Moosalm	151.60	355	ePKiKP	PKPbc	01 38 27.3	+0.2
	comp=Z,8.1nm,1.3s						
WTTA	Wattenberg	151.62	354	esPKPdf	PKiKP	01 38 27.6	0.0
	comp=Z,5.5nm,0.7s						
PLVB	Pleven	151.67	333	⇑P	PKiKP	01 38 28.1	+0.5
SOKA	Soboth	151.71	349	ePKiKP	PKPbc	01 38 27.5	+0.2
	comp=Z,4.5nm,0.9s						
DAVA	Damuels	151.75	356	esPKPdf	PKiKP	01 38 27.9	0.0
	comp=Z,9.3nm,1.2s						
ABTA	Abfaltersbach	152.03	352	ePKiKP	PKPbc	01 38 28.1	0.0
	comp=Z,5.0nm,0.8s						
TORD	Torodi Ar. Bea	172.06	137	PKP	PKPdf	01 38 40.6	-1.7
	comp=Z,1.8nm,1.0s,baz=308,slow=2.7,SNR=5.1						
TORD				PKPab	PKPab	01 40 05.2	-0.2
	comp=Z,2.7nm,1.1s,baz=268,slow=3.1,SNR=4.6						

JMA 26 01:27:25.7±0.1, 38.27N×144.25E, h34km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.18	293	P	Pn	01 28 01.0	+1.5
OFUJ				S	Sn	01 28 27.4	+2.1
JIKH	Ishinomakikobu	2.19	272	P	Pn	01 28 01.1	+1.4
JIKH				eS	Sn	01 28 27.0	+1.4
JKMT	Kesennumamotoy	2.24	285	P	Pn	01 28 01.9	+1.5
JKMT				S	Sn	01 28 29.0	+2.1
JIO	Ouri	2.29	276	P	Pn	01 28 02.5	+1.5
JIO				eS	Sn	01 28 29.8	+1.8
MIYJ	Miyakonagasawa	2.30	305	P	Pn	01 28 02.4	+1.2
MIYJ				eS	Sn	01 28 29.9	+1.6
JMK	Ichinoseki	2.47	287	P	Pn	01 28 05.5	+2.0
JMK				S	Sn	01 28 35.3	+2.8
JOM	Ohasama	2.60	298	P	Pn	01 28 07.3	+1.9
JOM				eS	Sn	01 28 38.0	+2.2
JANG	Nango	2.98	316	P	Pn	01 28 12.4	+1.8
JYK	Kaneyama	3.12	283	P	Pn	01 28 15.1	+2.7
JYK				eS	Sn	01 28 51.7	+3.2
JFT	Otama	3.19	258	eS	Sn	01 28 52.6	+2.4
JOT	Ohata	3.97	323	P	Pn	01 28 26.9	+2.8
JKB	Kayabe	4.38	327	P	Pn	01 28 32.9	+3.2
JCH	Churui	4.39	351	P	Pn	01 28 29.7	-0.2
JCH				eS	Sn	01 29 17.8	-2.1
NEM2	Nemuro 2	5.21	12	P	Pn	01 28 38.3	-2.9
NEM2				eS	Sn	01 29 33.7	-6.4
JTKR	Abashiri--Toko	5.70	358	P	Pn	01 28 47.2	-0.7
JTKR				eS	Sn	01 29 47.3	-4.8

IDC 26 01:36:17.1±1.6, 22.22S×169.36E, h0km, mb4.1/8, mb1 4.3/9, mb1mx4.1/37, mbtmp4.0/9, ML3.4/1, MS3.5/5, Ms1 3.5/5, ms1mx3.0/33, Error ellipse: s-maj=63.4km s-min=23.0km az=158.0

NEIC 26 01:36:19.2±1.8, 22.03S±0.09×169.21E±0.09, h12km±4km, mb4.5/5, Error ellipse: s-maj=14.4km s-min=10.3km az=134.0

ISC 26 01:36:21.1±0.8, 22.1S±0.2×169.22E±0.09, h25km, n25, σ1.22/24, mb4.1/10, MS3.5/3, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.57	269	Pn	Pn	01 37 01.6	+0.3
	6.0nm,0.3s,baz=118,slow=14,SNR=298						
DZM				Sn	Sn	01 37 32.6	+0.8
	24nm,0.3s,baz=97,slow=19,SNR=6.4						
DZM				LR	LR	01 38 01.6	
	comp=Z,508nm,18.2s,baz=245,slow=39						
DZM	Mont Dzumac	2.57	269	Pn	Pn	01 37 00.9	-0.4
DZM					Sn	01 37 31.0	-0.8
NOUC	Port Laguerre	2.70	269	Pn	Pn	01 37 03.1	+0.1
NOUC				Sn	Sn	01 37 32.3	-2.6
AFI	Afiamalu	19.80	69	LR	LR	01 46 41.3	
	comp=Z,130nm,20.2s,baz=239,slow=32						
CTAO	Charters Tower	21.52	271	P	P	01 41 08.0	-0.5
TOO	Toolangi	25.64	228	P	P	01 41 47.8	-1.0
TOO				IAmb	IAmb	01 42 04.0	
	comp=Z,10.0nm,1.1s						
STKA	Stephens Creek	26.42	242	LR	LR	01 51 24.4	
	comp=Z,104nm,18.7s,baz=22,slow=34						
ASAR	Alice Springs	32.53	260	P	P	01 42 50.5	+0.2
	comp=Z,1.2nm,0.8s,baz=78,slow=8.7,SNR=7.8						
WRA	Warramunga Arr	32.59	267	P	P	01 42 50.0	-0.8
	comp=Z,3.1nm,1.2s,baz=98,slow=8.2,SNR=5.3						
FITZ	Fitzroy Crossi	41.02	267	P	P	01 44 03.6	+1.0
	comp=Z,4.7nm,0.6s,baz=97,slow=10,SNR=12						
FITZ	Fitzroy Crossi	41.02	267	P	P	01 44 02.9	+0.3
FITZ				IAmb	IAmb	01 44 03.9	
	comp=Z,5.3nm,0.7s						
NWAO	Narrogin (SRO)	46.95	245	P	P	01 44 50.6	+0.5
VNDA	Vanda	55.62	182	LR	LR	02 05 06.3	
	comp=Z,46nm,21.2s,baz=259,slow=31						
QSPA	South Pole Qui	68.00	180	P	P	01 47 18.2	+0.2
QSPA				IAmb	IAmb	01 47 18.8	
	comp=Z,8.2nm,1.0s						
USRK	Ussuriysk Ar.	74.23	333	P	P	01 47 57.0	+1.2
	comp=Z,0.4nm,0.5s,baz=180,slow=3.8,SNR=4.3						
PETK	Petropavlovsk-	75.53	353	LR	LR	02 15 22.2	
	comp=Z,28nm,20.5s,baz=230,slow=31						
CMAR	Chiang Mai Arr	79.65	295	P	P	01 48 29.1	+2.2
	comp=Z,0.7nm,0.3s,baz=131,slow=4.1,SNR=4.1						
ULN	Ulaanbaatar	89.11	323	P	P	01 49 14.4	0.0
SONM	Songino Array	89.46	323	P	P	01 49 17.2	+1.3
	comp=Z,1.8nm,1.0s,baz=145,slow=4.4,SNR=8.3						
NVAR	Mina Array Bea	90.68	49	P	P	01 49 21.9	-0.2
	comp=Z,1.1nm,0.8s,baz=225,slow=8.2,SNR=8.5						
ILAR	Eielson Array	92.93	17	P	P	01 49 30.0	-1.5
	comp=Z,0.5nm,0.8s,baz=236,slow=5.1,SNR=4.1						
CLL	Collm	145.45	333	ePKPbc	PKiKP	01 55 58.0	-2.7
EKA	Eskdalemuir Ar	146.29	352	PKPbc	PKPab	01 55 58.9	-1.1
	comp=Z,3.2nm,0.9s,baz=24,slow=1.9,SNR=3.7						
GERES	GERESS Array B	146.94	330	PKPbc	PKPab	01 56 02.4	-0.5
	comp=Z,0.9nm,0.8s,baz=58,slow=3.3,SNR=6.9						
TORD	Torodi Ar. Bea	165.17	235	PKPab	PKPab	01 57 21.5	+0.3
	comp=Z,0.9nm,1.0s,baz=134,slow=3.4,SNR=3.3						

KRNET 26 01:39:52.9±0.1, 42.61N×78.40E, h22km, mb2.5

SOME 26 01:39:52.7, 42.62N×78.47E, h20km

NNC 26 01:39:52.6±1.0, 42.65N×78.42E, h0km, mb2.8, mpv2.5, Error ellipse: s-maj=6.9km s-min=3.0km az=170.0

ISC 26 01:39:52.4±0.9, 42.66N±0.03×78.46E±0.03, h15km±8km, n33, σ0.71/63, 8C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.18	194	⇓iP	Pg	01 39 57.0	0.0
	baz=73						
PRZ				⇓iS	Sg	01 40 00.3	+0.3
	baz=73						
ANVS	Anan'yevo	0.60	282	⇑iP	Pg	01 40 04.0	-0.2
	baz=89						
ANVS				⇑iS	Sg	01 40 12.1	-0.1
	baz=89						
UZB	Uzynbulak	0.64	40	eP	Pb	01 40 05.6	+0.2
	1.1nm,0.0s						
UZB				eS	Sb	01 40 14.9	+0.7
	22nm,0.1s						
UZB	Uzynbulak	0.64	40	P	Pb	01 40 06.0	+0.6
	0.6nm,0.2s						
UZB				S	Sb	01 40 14.9	+0.7
	16nm,0.1s						
KPKS	Kokpek	0.82	11	eP	Pb	01 40 08.9	+0.4
	baz=14						
KPKS				eS	Sn	01 40 20.7	-0.9
	baz=14						
KPKS	Kokpek	0.82	11	eP	Pb	01 40 08.9	+0.4
	6.7nm,0.1s						
KPKS				eS	Sn	01 40 20.6	-0.9
	12nm,0.1s						
KURS	Kuram	0.85	346	eP	Pn	01 40 09.7	-0.3
	baz=49						
KURS				eS	Sn	01 40 21.9	-0.4
	baz=49						
KURS	Kuram	0.85	346	eP	Pn	01 40 09.7	-0.3
	0.7nm,0.1s						
KURS				eS	Sn	01 40 21.9	-0.4
	1.0nm,0.1s						
KURS	Kuram	0.85	346	P	Pb	01 40 09.5	+0.5
	1.2nm,0.1s						
KURS				S	Sn	01 40 21.4	-0.8
	2.1nm,0.2s						
PDGK	Podgornoye	1.01	48	P	Pn	01 40 12.0	-0.2
	0.3nm,0.2s						
PDGK				S	Sn	01 40 25.8	-0.4
	2.3nm,0.2s						
KDJ	Kajisay	1.09	241	⇑iP	Pb	01 40 11.9	-1.2
	baz=42						
KDJ				⇑iS	Sg	01 40 25.4	-2.3
	baz=42						
KOTS	Kotyrbulak	1.14	300	eP	Pb	01 40 13.9	-0.1
	baz=4.0						
KOTS				eS	Sg	01 40 29.2	-0.2
	baz=4.0						
KOTS	Kotyrbulak	1.14	300	eP	Pb	01 40 13.9	-0.1
	1.1nm,0.1s						
KOTS				eS	Sg	01 40 29.2	-0.2
	3.6nm,0.1s						
KOTS	Kotyrbulak	1.14	300	P	Pb	01 40 13.7	-0.3
	1.7nm,0.2s						
KOTS				S	Sb	01 40 28.3	-0.5
	3.7nm,0.2s						
MDOK	Medeo	1.15	296	eP	Pb	01 40 13.9	-0.3
	baz=0.0						
MDOK				eS	Sb	01 40 29.0	0.0
	baz=0.0						
MDOK	Medeo	1.15	296	eP	Pb	01 40 13.9	-0.3
	0.6nm,0.1s						
MDOK				eS	Sb	01 40 29.0	0.0
	3.2nm,0.1s						
IZV	Izvestkoviy	1.41	286	eP	Pb	01 40 18.7	+0.2
	baz=89						
IZV				eS	Sb	01 40 37.2	+0.8
	baz=89						
IZV	Izvestkoviy	1.41	286	eP	Pb	01 40 18.7	+0.2

0.9nm,0.1s
IZV eS Sb 01 40 37.2 +0.8
5.4nm,0.1s
CHKK Chushkaly 1.60 318 eP Pg 01 40 22.6 -0.7
baz=21
CHKK eS Sg 01 40 44.0 -0.1
baz=21
CHKK Chushkaly 1.60 318 eP Pg 01 40 22.6 -0.7
1.5nm,0.1s
CHKK eS Sg 01 40 44.0 -0.1
5.9nm,0.1s
CHKK Chushkaly 1.60 318 P Pg 01 40 22.5 -0.7
1.8nm,0.2s
CHKK S Sg 01 40 43.8 -0.3
6.0nm,0.2s
ARXS Arharly 1.62 344 eP Pg 01 40 23.3 -0.2
1.1nm,0.1s
ARXS eS Sg 01 40 45.1 +0.5
6.4nm,0.1s
ARXS Arharly 1.62 344 P Pg 01 40 23.4 -0.1
ARXS S Sg 01 40 45.0 +0.5
KTBS Karatobe 1.67 309 P Pb 01 40 23.4 +0.4
0.6nm,0.1s
KTBS S Sb 01 40 44.8 +0.9
8.8nm,0.2s
ULHL Ulahol 1.69 256 ⇑iP Pn 01 40 22.4 +0.7
baz=58
ULHL ⇑iS Sn 01 40 43.6 +0.3
baz=58
BOOM Boomskoye usch 1.87 266 ⇑iP Pn 01 40 25.4 +1.3
baz=67
BOOM ⇑iS Sn 01 40 48.5 +1.0
baz=67
DJR Jarkent 1.93 30 eP Pg 01 40 28.6 -0.9
0.4nm,0.1s
DJR eS Sg 01 40 54.2 -0.3
2.6nm,0.2s
DJR Jarkent 1.93 30 Pg Pg 01 40 29.0 -0.5
0.3nm,0.1s
DJR Lg Lg 01 40 54.2
3.2nm,0.3s
KUU Kurty 1.98 309 eP Pb 01 40 28.8 +0.7
0.1nm,0.1s
KUU eS Sb 01 40 54.5 -1.5
3.9nm,0.1s
DGS Degeres 2.06 287 eP Pb 01 40 30.4 +0.9
0.3nm,0.1s
DGS eS Sg 01 40 57.4 -1.2
2.2nm,0.1s
DGS Degeres 2.06 287 Pg Pb 01 40 29.9 +0.4
0.9nm,0.3s
DGS Lg Lg 01 40 56.1
2.6nm,0.4s
KRBS Karabastau 2.28 298 eP Pb 01 40 33.7 +0.3
KRBS eS Sb 01 41 02.9 +1.4
1.0nm,0.2s
KRBS Karabastau 2.28 298 Pg Pb 01 40 34.8 +1.4
0.5nm,0.2s
KRBS Lg Lg 01 41 04.0
2.6nm,0.2s

SOF 26 01:42:42.2,39˚.86N×21˚.19E,h2km,MD4.1
PDG 26 01:42:47.6±0.3,40˚.01N×21˚.61E,h8km±1km,MD4.4/1, ML4.2/12,Error ellipse: s-maj=1.1km s-min=0.7km az=90.0
SKO 26 01:42:48.8,40˚.00N×21˚.55E,h18km
NEIC 26 01:42:49.0±2.4,40˚.21N±0˚.02×21˚.57E±0˚.02,h10km±1km, Error ellipse: s-maj=5.0km s-min=2.8km az=38.0,Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr-1.23; Mθθ1.05; Mφφ0.18; Mrθ-1.01; Mrφ0.49; Mθφ-0.82; Fault plane solution: Mo1.80000×10^15 NP1: φs256.15000°,δ23.12000°,λ-70.39000°. NP2:φs54.97000°, δ68.29000°,λ-98.15000°. Principal axes: T 1.8008, Plg23.0000°, Azm151.0000°; N 0.0062, Plg8.0000°, Azm58.0000°; P -1.8070, Plg66.0000°, Azm311.0000°;
IDC 26 01:42:48.0±0.6,40˚.21N×21˚.57E,h0km,mb4.0/19, mb1 4.2/28,mb1mx4.0/55,mbtmp4.0/28,ML4.1/8,MS3.4/9, Ms1 3.4/9,ms1mx3.0/59 Error ellipse: s-maj=12.0km s-min=11.1km az=90.0
BJI 26 01:42:49.0±0.0,40˚.20N×21˚.50E,h10km,mB4.9/10, mb4.5/22,Ms4.7/4,Ms7 4.4/2
MOS 26 01:42:49.2±1.4,40˚.14N×21˚.56E,h26km,mb4.2/10,Error ellipse: s-maj=8.4km s-min=4.0km az=87.1
ATH 26 01:42:50.6,40˚.23N×21˚.64E,h25km,ML4.0/39,Error ellipse: s-maj=1.1km s-min=0.6km az=326.0
HLW 26 01:42:50.8,39˚.96N×21˚.91E,h10km±41km,Ml4.8
THE 26 01:42:51.4,40˚.22N×21˚.58E,h13km,ML4.1/9,Error ellipse: s-maj=0.9km s-min=0.5km az=268.0
BEO 26 01:42:52.3±0.4,40˚.31N×21˚.62E,h10km,ML3.6/6
GII 26 01:42:55.8±0.5,39˚.14N×21˚.06E,h60km
ISC 26 01:42:50.7±0.4,40˚.18N±0˚.02×21˚.61E±0˚.02,h20km±1km, n501,σ1˚74/557,mb4.2/36,MS3.9/7,38C-26D,Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KZN Kozani 0.17 45 P Pb 01 42 56.0 -0.3
KZN S Sb 01 42 59.4 -0.8
159µm,0.4s
KZN Kozani 0.17 45 P Pb 01 42 56.0 -0.3
KZN S Sb 01 42 59.3 -0.8
KZN AML AML 01 42 59.8
KZN AML AML 01 42 59.9
KPRO Kipourio 0.30 220 P Pb 01 42 57.9 +0.5
KPRO S Sb 01 43 03.2 +1.2
90µm,0.4s
KPRO Kipourio 0.30 220 P Pb 01 42 58.0 +0.7
KPRO S Sn 01 43 04.0 -1.7
KPRO AML AML 01 43 04.8
KPRO AML AML 01 43 05.8
PENT Pentalofos 0.36 272 P Pb 01 42 58.2 -0.2
PENT S Sb 01 43 03.7 +0.1
69µm,0.4s
PENT Pentalofos 0.36 272 P Pb 01 42 58.3 -0.1
PENT S Sb 01 43 04.8 +1.1
PENT AML AML 01 43 05.0
PENT AML AML 01 43 05.9
KTI Kastanea 0.44 61 P Pb 01 43 00.3 +0.5
NEST Nestorio 0.49 298 P Pb 01 43 00.1 -0.5
NEST S Sb 01 43 06.3 -1.1
49µm,0.4s
NEST Nestorio 0.49 298 P Pb 01 43 00.2 -0.5
NEST S Sb 01 43 08.0 +0.6
NEST AML AML 01 43 11.1
comp=N,99288µm,0.5s
NEST AML AML 01 43 11.3
comp=E,97157µm,0.3s
MEV Metsovon 0.49 216 P Pb 01 43 01.2 +0.5
MEV Metsovon 0.49 216 P Pb 01 43 01.3 +0.5
LIT Litokhoron 0.68 97 P Pb 01 43 04.2 +0.4
LIT S Sn 01 43 14.6 -0.5
comp=E,14µm,0.4s
LIT Litokhoron 0.68 97 P Pb 01 43 04.3 +0.4
LIT S Sb 01 43 13.5 +0.6
LIT AML AML 01 43 19.4
comp=E,32408µm,0.5s
LIT AML AML 01 43 20.2
comp=N,23414µm,0.3s
LIT Litokhoron 0.68 97 Pb 01 43 04.2 +0.4
LIT Sn Sn 01 43 16.6 +1.4
THL Klokotos Trika 0.69 153 P Pb 01 43 04.6 +0.6
THL S Sn 01 43 15.6 +0.2
comp=N,17µm,0.5s
THL Klokotos Trika 0.69 153 P Pn 01 43 04.7 -0.6
THL S Sn 01 43 15.3 -0.1
THL AML AML 01 43 18.5
comp=N,36100µm,0.4s
THL AML AML 01 43 19.3
comp=E,32083µm,0.5s
JAN Janina 0.79 228 P Pb 01 43 05.6 -0.1
JAN S Sn 01 43 17.7 -0.1
comp=E,12µm,0.4s
JAN Janina 0.79 228 P Pb 01 43 05.8 +0.1
JAN S Sn 01 43 18.8 +1.0
JAN AML AML 01 43 22.4
comp=N,21410µm,0.4s
JAN AML AML 01 43 23.2
comp=E,24894µm,0.3s
LRSO Larissa Observ 0.79 130 P Pn 01 43 06.6 0.0
LRSO Larissa Observ 0.79 130 P Pn 01 43 06.8 +0.2
GRG Griva 0.98 38 P Pb 01 43 09.0 0.0
GRG S Sn 01 43 23.4 +0.8
comp=E,8µm,0.5s
GRG Griva 0.98 38 P Pb 01 43 09.0 0.0
GRG S Sb 01 43 21.4 0.0
GRG AML AML 01 43 26.5
comp=N,16238µm,0.5s
GRG AML AML 01 43 27.3
comp=E,16276µm,0.5s
OHR Ohrid 1.11 327 iPg Pn 01 43 11.0 -0.1
OHR iSg Sn 01 43 28.9 +3.0
OHR eLg Lg 01 43 29.7
comp=E,14µm,0.5s
OHR eLg Lg 01 43 31.4
comp=N,9µm,0.6s
THE Thessaloniki 1.13 66 P Pb 01 43 12.1 +0.6
THE Thessaloniki 1.13 66 P Pb 01 43 12.0 +0.6
THE AML AML 01 43 32.8
comp=N,6346µm,0.6s
THE AML AML 01 43 36.5
comp=E,3924µm,0.6s
IGT Igoumenitsa 1.18 237 ePg Pb 01 43 15.4 +3.1
IGT eSg Sn 01 43 32.4 +4.9
IGT Igoumenitsa 1.18 237 P Pb 01 43 14.1 +1.7
IGT AML AML 01 43 38.6
comp=N,14011µm,0.5s
IGT AML AML 01 43 40.7
comp=E,9706µm,0.8s
HORT Hortiatis 1.21 70 P Pb 01 43 13.2 +0.3
HORT S Sn 01 43 30.2 +1.9
comp=E,3µm,0.5s
HORT Hortiatis 1.21 70 P Pb 01 43 13.5 +0.6
HORT AML AML 01 43 33.8
comp=E,3803µm,0.5s
HORT AML AML 01 43 37.0
comp=N,6138µm,0.5s
MAKR Makrakomi, Fth 1.24 161 P Pb 01 43 14.5 +1.2
MAKR Makrakomi, Fth 1.24 161 P Pb 01 43 14.6 +1.3
MAKR AML AML 01 43 41.0
comp=E,47196µm,0.4s
MAKR AML AML 01 43 43.4
comp=N,38589µm,0.4s
EVR Evrytania 1.27 173 P Pb 01 43 14.7 +0.7
EVR Evrytania 1.27 173 P Pb 01 43 14.9 +0.9
EVR AML AML 01 43 37.4
comp=E,12737µm,0.3s
EVR AML AML 01 43 38.6
comp=N,16130µm,0.4s
AGG Agios Georgios 1.29 154 P Pb 01 43 15.3 +1.1
AGG Agios Georgios 1.29 154 P Pb 01 43 15.2 +1.0
AGG AML AML 01 43 43.0
comp=E,15845µm,0.7s
AGG AML AML 01 43 43.5
comp=N,14567µm,0.5s
AGG Agios Georgios 1.29 154 P Pb 01 43 14.1 -0.1
AGG Agios Georgios 1.29 154 Pb 01 43 15.1 +1.0
AGG Sg Sb 01 43 33.7 +3.4
VAY Valandovo 1.35 32 iPn Pb 01 43 15.2 -0.1
VAY iSg Sb 01 43 38.4 +6.4
VAY eLg Lg 01 43 39.4
comp=E,2µm,0.5s
VAY eLg Lg 01 43 40.4
comp=N,3µm,0.9s
KASA Kassiopi 1.36 252 P Pb 01 43 16.4 +1.1
KASA AML AML 01 43 38.6
comp=N,14282µm,0.7s
KASA AML AML 01 43 45.4
comp=E,11388µm,0.5s
KNT Kendrikon 1.38 45 P Pb 01 43 15.7 -0.1
KNT Kendrikon 1.38 45 P Pb 01 43 15.8 -0.1
KNT AML AML 01 43 39.6
comp=E,2987µm,0.6s
KNT AML AML 01 43 40.3
comp=N,5150µm,0.5s
XOR Xorichti 1.47 123 P Pb 01 43 17.3 +0.1
XOR AML AML 01 43 44.0
comp=N,17044µm,0.5s
XOR AML AML 01 43 49.5
comp=E,8890µm,0.8s
KEK Kerkira 1.47 252 P Pb 01 43 18.4 +1.1
KEK AML AML 01 43 48.5
comp=E,7720µm,0.6s
KEK AML AML 01 43 49.5
comp=N,6841µm,0.8s
SOH Sokhos 1.47 64 P Pb 01 43 17.6 +0.2
SOH AML AML 01 43 44.4
comp=N,7015µm,0.9s
SOH AML AML 01 43 44.4
comp=E,8540µm,0.5s
NEO Neokhori 1.52 125 P Pb 01 43 18.1 -0.1
NEO AML AML 01 43 46.5
comp=E,19057µm,0.4s
NEO AML AML 01 43 50.5
comp=N,19141µm,0.9s
TSLK Tsoukalades, L 1.54 209 P Pb 01 43 20.2 +1.7
PVO Paravola 1.57 182 P Pb 01 43 19.7 +0.8
PVO AML AML 01 43 47.8
comp=E,9063µm,0.6s
PVO AML AML 01 43 48.8
comp=N,6344µm,0.6s
LKD2 Lefkada island 1.58 208 P Pb 01 43 20.5 +1.3
LKD2 AML AML 01 43 51.0
comp=E,12586µm,0.8s
LKD2 AML AML 01 43 54.4
comp=N,10306µm,0.4s
PAIG Paliouri 1.61 99 P Pb 01 43 18.7 -0.9
PDO Prodromos 1.62 192 P Pb 01 43 20.9 +1.1
PDO AML AML 01 43 52.0
comp=N,9723µm,0.4s
PDO AML AML 01 43 54.7
comp=E,10061µm,0.8s
EVGI Lefkada island 1.73 206 P Pb 01 43 22.8 +1.2
SKIA Skiathos 1.76 125 P Pb 01 43 21.3 -0.9
SKIA AML AML 01 43 54.6
comp=N,8577µm,0.6s
SKIA AML AML 01 43 55.0
comp=E,5263µm,0.5s
TIR Tirane 1.76 312 ePn Pb 01 43 22.2 -0.1
TIR eSn Sb 01 43 44.6 +0.6
TIR Tirane 1.76 312 ⇑P Pb 01 43 21.7 -0.6
TIR ⇓S Sb 01 43 43.6 -0.4
TIR Tirane 1.76 312 Pn 01 43 21.0 +1.0
TIR Sn 01 43 42.9 +1.0
TIR Tirane 1.76 312 P Pn 01 43 21.0 +1.0
TIR 01 43 42.9
SRS Serrai 1.77 58 ePn Pn 01 43 21.2 +1.0
SRS eSn Sb 01 43 45.3 +1.0
SRS Serrai 1.77 58 P Pn 01 43 21.2 +1.0
SKO Skopje 1.79 356 ePn Pb 01 43 21.8 -1.0
SKO Skopje 1.79 356 iPn Pb 01 43 21.7 -1.0
SKO iSg Sb 01 43 49.7 +4.9
OUR Ouranopolis 1.82 85 P Pb 01 43 22.0 -1.2
OUR AML AML 01 43 57.1
comp=E,2748µm,0.4s
OUR AML AML 01 44 05.6
comp=N,4507µm,1.0s
OUR Ouranopolis 1.82 85 P Pn 01 43 21.1 +0.3
DLFA Delphi 1.84 158 P Pb 01 43 22.6 -1.0
DLFA AML AML 01 43 56.1
comp=E,7783µm,0.7s
DLFA AML AML 01 43 59.5
comp=N,6126µm,0.7s
KALE Kalithea 1.84 167 P Pb 01 43 23.1 -0.5
KALE Kalithea 1.84 167 P Pb 01 43 23.1 -0.5
KALE AML AML 01 43 55.8
comp=E,9661µm,0.7s
KALE AML AML 01 43 57.5
comp=N,7202µm,0.6s
TRIZ Trizonia 1.85 169 P Pb 01 43 23.3 -0.5
LKR Lokris 1.87 144 P Pb 01 43 23.4 -0.8
LKR Lokris 1.87 144 P Pb 01 43 23.3 -0.8
KONA Konidatara, Ke 1.93 205 P Pb 01 43 25.6 +0.4
ALIK Aliki, Aigiali 1.96 168 P Pb 01 43 25.2 -0.4
LAKA Lakka 1.96 172 P Pb 01 43 25.2 -0.5
LAKA AML AML 01 44 02.1
comp=N,2076µm,0.6s
LAKA AML AML 01 44 05.1
comp=E,2241µm,0.9s
KKB Krupnik 2.02 33 P Pn 01 43 24.7 +1.2
AOS Alonnisos 2.02 119 P Pn 01 43 24.6 +1.0
AOS Alonnisos 2.02 119 P Pb 01 43 25.1 -1.6
AOS AML AML 01 44 03.1
comp=N,6942µm,0.7s
AOS AML AML 01 44 03.6
comp=E,3806µm,1.2s
AOS Alonnisos 2.02 119 P Pn 01 43 23.9 +0.3
ALNA Alonissos 2.02 120 P Pn 01 43 25.0 +1.4
ALNA AML AML 01 44 06.7
comp=N,7590µm,0.9s
ALNA AML AML 01 44 12.6
comp=E,4965µm,0.6s
NVR Nevrokopi 2.07 55 P Pn 01 43 25.4 +1.2
NVR AML AML 01 44 01.0
comp=E,1224µm,0.9s
NVR AML AML 01 44 04.5
comp=N,1646µm,0.9s
KEF1 Kardakata, Kep 2.10 205 P Pb 01 43 27.3 -0.7
MRKA Markates 2.13 133 P Pb 01 43 26.8 -1.6
MRKA AML AML 01 44 13.7
comp=E,2636µm,1.0s
MRKA AML AML 01 44 16.3
comp=N,3536µm,0.8s
RLS Riolos of Patr 2.13 183 P Pb 01 43 28.7 +0.2
RLS AML AML 01 44 06.8
comp=N,2574µm,0.6s
RLS AML AML 01 44 14.4
comp=E,3038µm,0.6s
MMB Musomiste 2.13 48 P Pn 01 43 26.4 +1.3
KEF4 Livadi, Kephal 2.13 206 P Pb 01 43 27.8 -0.7
VLS Valsamata 2.15 202 P Pb 01 43 28.2 -0.8
PROD Prodromos 2.17 152 P Pn 01 43 27.0 +1.4
KLV Kalavryta, Ach 2.18 169 P Pb 01 43 28.0 -1.4
KLV Kalavryta, Ach 2.18 169 P Pb 01 43 28.0 -1.4
KLV AML AML 01 44 08.8
comp=E,2669µm,1.1s
KLV AML AML 01 44 09.7
comp=N,2444µm,0.7s
LXRA Lixouri, Kepha 2.18 205 P Pb 01 43 28.7 -0.7
ARGA Argostoli. Kep 2.19 204 P Pb 01 43 29.2 -0.4
KEF2 Argostoli. Kep 2.20 204 P Pb 01 43 28.6 -1.1
KEF3 Kipouria, Keph 2.21 207 P Pb 01 43 28.7 -1.1
DRO Drossia 2.23 178 P Pb 01 43 29.8 -0.4
KVLA Kavala 2.24 70 P Pn 01 43 27.6 +1.0
VTN Vitineika 2.29 188 P Pb 01 43 31.2 0.0
VIL2 Platees 2.35 146 P Pb 01 43 30.9 -1.5
VIL2 AML AML 01 44 06.1
comp=N,3378µm,0.5s
VIL2 AML AML 01 44 09.4
comp=E,6091µm,0.6s
KAVA Kavala 2.35 69 P Pn 01 43 28.8 +0.7
KAVA Kavala 2.35 69 P Pn 01 43 28.9 +0.7
KAVA AML AML 01 44 10.9
comp=E,1461µm,1.0s
KAVA AML AML 01 44 13.8
comp=N,1556µm,0.8s
BOSS Bosilegrad 2.40 16 ePn Pn 01 43 30.2 +1.4
LTK Loutraki 2.40 154 P Pn 01 43 30.6 +1.7
LTK Loutraki 2.40 154 P Pn 01 43 30.5 +1.7
THAS Thassos island 2.41 79 P Pn 01 43 29.8 +0.9
SCTE Santa Cesarea 2.41 268 Pn 01 43 29.3 +0.4
VLMS Volimes, Zakyn 2.42 198 P Pb 01 43 31.3 -2.2
LOUT Loutraki 2.44 154 P Pn 01 43 31.2 +1.9
LOUT Loutraki 2.44 154 P Pn 01 43 31.0 +1.7
ULC Ulcinj 2.52 316 ePn Pn 01 43 31.9 +1.4
ULC eSn Sb 01 44 06.1 +0.3
SKY Skiros Island 2.62 119 P Pn 01 43 33.5 +1.6
BARS Barje 2.63 3 ePn Pn 01 43 33.3 +1.3
BARS Barje 2.63 3 ePn Pb 01 43 49.5 +12
AMT Artemida-Makis 2.65 178 P Pb 01 43 36.1 -1.3
PVY Plav 2.71 333 ePn Pn 01 43 35.1 +1.9
PVY iSn Sb 01 44 11.6 +0.2
DRME Dracevica, Mon 2.71 318 ⇓iPn Pn 01 43 34.8 +1.7
DRME Dracevica, Mon 2.71 318 ePn Pn 01 43 34.7 +1.7
DRME eSn Sb 01 44 10.5 -0.8
VTS Vitosha 2.72 26 ePn Pn 01 43 34.6 +1.3
VTS Vitosha 2.72 26 ⇑P Pn 01 43 34.9 +1.6
VTS ⇓S Sb 01 44 09.2 -2.5
VTS Vitosha 2.72 26 P Pn 01 43 34.7 +1.4
VTS Vitosha 2.72 26 Pn 01 43 31.9 -1.5
VTS Vitosha 2.72 26 Sb 01 44 09.2 -2.5
VTS Vitosha 2.72 26 P Pn 01 43 31.9 -1.5
VTS 01 44 09.2
ATH Athens Observa 2.75 143 P Pn 01 43 35.9 +2.3
ATH Athens Observa 2.75 143 P Pn 01 43 35.6 +2.1
ATH AML AML 01 44 15.0
comp=N,2353µm,0.6s
ATH AML AML 01 44 16.3
comp=E,3867µm,0.6s
LIA Limnos Island 2.76 95 P Pn 01 43 35.1 +1.4
PTL Penteli 2.76 140 P Pn 01 43 36.0 +2.2
ATHU Athens Univers 2.79 142 P Pn 01 43 36.3 +2.2
ATHU Athens Univers 2.79 142 P Pn 01 43 36.3 +2.2
RZN Rozhen 2.79 56 P Pn 01 43 36.4 +2.1
PDG Podgorica 2.86 322 eSn Sn 01 44 08.9 0.0
PDG Podgorica 2.86 322 ⇓P Pn 01 43 37.2 +2.1
PDG Podgorica 2.86 322 ⇓iPn Pn 01 43 37.0 +1.9
PDG Podgorica 2.86 322 Pn 01 43 34.0 -1.1
TTG Podgorica 2.86 322 ePn Pn 01 43 36.8 +1.7
TTG eSn Sb 01 44 14.9 -0.6
VLX Vlachokerasia 2.87 168 P Pn 01 43 37.7 +2.3
VLY Voula,Athens 2.88 143 P Pn 01 43 37.6 +2.2
BUM Brajici-Budva 2.94 317 ePn Pn 01 43 37.3 +1.0
BUM eSn Sb 01 44 16.1 -1.9
DID Didima 2.96 154 P Pn 01 43 38.2 +1.7
DID Didima 2.96 154 P Pn 01 43 38.2 +1.7
DID AML AML 01 44 21.6
comp=E,1811µm,0.4s
DID AML AML 01 44 22.1
comp=N,2817µm,0.7s
IVA Berane 2.98 335 ePn Pn 01 43 38.7 +1.9
IVA eSn Sb 01 44 18.5 -0.6
ITM Ithomi 3.01 175 P Pb 01 43 40.6 -3.0
ITM Ithomi 3.01 175 eP Pn 01 43 39.2 +2.0
ITM Ithomi 3.01 175 Pn 01 43 37.6 +0.4
SMTH Samothraki Isl 3.01 83 P Pn 01 43 38.7 +1.5
PLD Plovdiv 3.02 50 P Pn 01 43 40.0 +2.7
PLD Plovdiv 3.02 50 eP Pn 01 43 39.4 +2.1
KRND KRANIDI 3.04 156 P Pn 01 43 39.5 +1.8
KRND KRANIDI 3.04 156 P Pn 01 43 39.4 +1.8
KRND AML AML 01 44 24.5
comp=N,3432µm,0.7s
KRND AML AML 01 44 24.6
comp=E,1994µm,0.5s
PGB Panagyurishte 3.05 38 P Pn 01 43 40.5 +2.8
SELS Selova 3.06 353 ePn Pn 01 43 38.6 +0.8
KARY Karystos 3.07 133 P Pn 01 43 40.3 +2.2
KOME Kolasin 3.09 330 ⇓iPn Pn 01 43 39.3 +1.2
KOME eSn Sb 01 44 21.3 -1.1
CEME Cevo 3.11 320 ⇑iPn Pn 01 43 39.8 +1.2
CEME iSn Sb 01 44 20.2 -2.6
RDO Rodhopi 3.14 71 P Pn 01 43 39.7 +0.9
RDO Rodhopi 3.14 71 eP Pn 01 43 40.2 +1.3
YDRA Hydra 3.18 152 P Pn 01 43 41.5 +2.0
ZAPS Zavoj 3.18 14 ePn Pn 01 43 41.8 +2.2
CGL1 Ceglie Messapi 3.19 280 ⇓iPn Pn 01 43 40.7 +1.0
KDZ Kurdzhali 3.23 62 P Pn 01 43 40.5 +0.2
KDZ Kurdzhali 3.23 62 eP Pn 01 43 40.8 +0.5
HCY Herceg Novi 3.26 315 ⇑iPn Pn 01 43 42.1 +1.5
HCY Herceg Novi 3.26 315 ePn Pn 01 43 41.6 +1.0
HCY eSn Sb 01 44 24.1 -2.9
NKME Niksic 3.26 323 ePn Pn 01 43 42.4 +1.7
NKME iSn Sb 01 44 24.5 -2.7
NKY Niksic 3.28 324 ePn Pn 01 43 42.2 +1.2
NKY eSn Sb 01 44 25.1 -2.7
PYL PYLOS 3.29 178 P Pn 01 43 44.3 +3.3
SJES Sjenica 3.31 339 ePn Pn 01 43 43.0 +1.6
TAR1 Taranto 3.32 277 ⇓iPn Pn 01 43 42.4 +0.9
SIGR SIGRI 3.42 105 P Pn 01 43 44.8 +2.1
SIGR SIGRI 3.42 105 eP Pn 01 43 44.1 +1.4
BOZC Bozcaada 3.43 94 eP Pn 01 43 43.9 +1.0
BOVS Bovan 3.45 1 ePn Pn 01 43 44.0 +0.8
BOVS eSn Sn 01 44 24.3 +0.9
ALN Alexandroupoli 3.45 77 P Pn 01 43 44.6 +1.3
ALN Alexandroupoli 3.45 77 eP Pn 01 43 44.3 +1.1
ALN Alexandroupoli 3.45 77 Pn 01 43 43.2 -0.1
ALN Alexandroupoli 3.45 77 P Pn 01 43 43.2 -0.1
DIM Dimitrovgrad 3.50 57 P Pn 01 43 46.7 +2.8
ENEZ Enez 3.51 79 eP Pn 01 43 44.7 +0.7
TREB Trebinje 3.52 317 ePn Pn 01 43 44.9 +0.7
TREB eSn Sn 01 44 27.5 +2.2
TREB Trebinje 3.52 317 ePn Pn 01 43 44.9 +0.7
MPEP Malo Peshtene 3.55 26 P Pn 01 43 46.2 +1.6
PLE Pljevlja 3.56 333 ePn Pn 01 43 46.9 +2.1
PLE eSn Sn 01 44 30.9 +4.6
IVAS Ivanjica 3.56 343 ePn Pn 01 43 45.2 +0.4
BRY Bratogost 3.56 321 ePn Pn 01 43 46.2 +1.3
BRY Bratogost 3.56 321 ePn Pn 01 43 46.2 +1.3

BRY eSn Sb 01 44 32.0 -3.9
VLI Veliai 3.61 163 P Pn 01 43 47.0 +1.6
UPM Unac-Piva 3.63 327⇓iPn Pn 01 43 48.4 +2.5
UPM Unac-Piva 3.63 327 ePn Pn 01 43 47.8 +1.9
UPM eSn Sb 01 44 33.4 -4.6
EZN Ezine 3.64 94 eP Pn 01 43 47.0 +1.2
ZAGS Zajecar 3.66 7 ePn Pn 01 43 47.1 +1.1
PRK Paraskevi 3.71 103 P Pn 01 43 49.5 +2.7
BAI Bari 3.72 286⇓iPn Pn 01 43 47.8 +1.0
GELI Tayfur-Gelibol 3.73 85 eP Pn 01 43 48.5 +1.5
GRUS Gruza 3.76 350 ePn Pn 01 43 48.8 +1.3
SERI Serifos 3.76 142 P Pn 01 43 49.5 +2.0
ERIK Erikli-Kesan 3.77 81 eP Pn 01 43 49.2 +1.6
MATE Matera 3.77 279 ⇓P Pn 01 43 48.7 +1.1
MATE ⇓S Sn 01 44 30.6 -0.8
MATE Matera 3.77 279 Pn 01 43 48.8 +1.1
MATE Sn 01 44 30.6 -0.8
SG1 Sgolgore (BA) 3.82 281⇓iPn Pn 01 43 49.2 +0.9
RUDO Rudo 3.82 335 ePn Pn 01 43 49.5 +1.2
TIP Timpagrande 3.88 257 ⇑P Pn 01 43 50.6 +1.4
TIP Timpagrande 3.88 257 Pn 01 43 49.5 +0.3
CHOS Chios island 3.89 116 P Pn 01 43 51.8 +2.5
CHOS Chios island 3.89 116 eP Pn 01 43 50.7 +1.4
PLVB Pleven 3.91 34 ⇓P Pn 01 43 52.4 +2.8
PLVB Pleven 3.91 34 Pn 01 43 52.4 +2.8
UKOP Uzunkopru-Edir 3.93 74 eP Pn 01 43 51.7 +1.9
LPK Lapseki 3.94 86 eP Pn 01 43 51.6 +1.6
BBLS Lazići 4.03 337 ePn Pn 01 43 53.3 +2.1
BBLS Lazići 4.03 337 ePn Pn 01 43 51.8 +0.6
MHLA Plaka, Milos I 4.08 146 P Pn 01 43 54.1 +2.2
KTHA Kythira Island 4.08 163 P Pn 01 43 53.9 +2.0
KTHA Kythira Island 4.08 163 eP Pn 01 43 54.1 +2.1
DIVS Divibare 4.09 343 ePn Pn 01 43 53.1 +1.0
DIVS Divibare 4.09 343 ePn Pn 01 43 53.3 +1.2
PVL Pavlikeni 4.12 41 P Pn 01 43 55.1 +2.8
MHLO Agia Marina, M 4.12 147 P Pn 01 43 54.7 +2.3
TRUS Trudelj 4.13 348 ePn Pn 01 43 53.6 +1.0
ELND Elena 4.21 48 ⇑P Pn 01 43 54.9 +1.2
ELND Elena 4.21 48 Pn 01 43 54.9 +1.2
EDRB Edirne 4.22 65 eP Pn 01 43 55.7 +1.9
KUBS Kucevo 4.23 1 ePn Pn 01 43 54.0 +0.1
DKL Dikili 4.24 104 eP Pn 01 43 55.4 +1.4
URLA Izmir 4.28 114 eP Pn 01 43 56.3 +1.7
RKY Sarkoy-Tekirda 4.28 81 eP Pn 01 43 56.1 +1.5
VLAD Vladila 4.34 28 ⇑P Pn 01 43 56.9 +1.4
VLAD Vladila 4.34 28 Pn 01 43 56.9 +1.4
ACER Acerenza 4.36 280 Pn 01 43 56.5 +0.7
APE Apeiranthos 4.37 134 P Pn 01 43 58.1 +2.2
APE Apeiranthos 4.37 134 ⇑P Pn 01 43 58.4 +2.5
APE ⇓ 01 43 59.4
APE Apeiranthos 4.37 134 eP Pn 01 43 57.5 +1.6
APE Apeiranthos 4.37 134 Pn 01 43 58.4 +2.5
APE Apeiranthos 4.37 134c iP Pn 01 43 57.6 +1.6
APE pmax pmax
comp=Z,35nm,1.1s
HAPS Han Pijesak,BI 4.37 334 ePn Pn 01 43 56.4 +0.4
SZH Strazhica 4.47 45 P Pn 01 43 59.5 +2.3
IOSP Ios island 4.50 139 P Pn 01 44 00.3 +2.6
ANKY Antikythira Is 4.51 162 P Pn 01 44 00.2 +2.4
BLCB Balcova 4.58 111 eP Pn 01 44 00.3 +1.6
MRMT Marmara Adasi 4.59 83 eP Pn 01 44 00.5 +1.6
MDVR Moldovita 4.59 1 ⇑P Pn 01 44 00.1 +1.1
MDVR Moldovita 4.59 1 Pn 01 44 00.1 +1.1
TEKS Tekeris 4.63 341 ePn Pn 01 44 00.8 +1.4
TEKS Tekeris 4.63 341 ePn Pn 01 43 59.3 -0.1
SRE Strehaia 4.63 14 ⇓P Pn 01 44 00.6 +1.2
SRE Strehaia 4.63 14 Pn 01 44 00.6 +1.2
SRE Strehaia 4.63 14 ⇓P Pn 01 44 00.6 +1.2
SGRT San Giovanni R 4.71 291 Pn 01 43 59.7 -0.9
CRLT Corlu 4.75 77 eP Pn 01 44 03.1 +2.0
SMG Samos 4.76 120 P Pn 01 44 03.7 +2.3
COPA Copaceanca 4.77 33 ⇑P Pn 01 44 03.4 +2.0
COPA Copaceanca 4.77 33 Pn 01 44 03.4 +2.0
EDC Edincik 4.79 86 eP Pn 01 44 03.5 +1.9
THT2 Imerovigli 4.79 140 eP Pn 01 44 03.8 +2.1
CEL Celeste 4.84 248 Pn 01 44 02.2 -0.2
BALB Balikesir 4.85 94 eP Pn 01 44 03.9 +1.4
SANT Santorini 4.86 140 ⇑P Pn 01 44 06.9 +4.2
SANT Santorini 4.86 140 eP Pn 01 44 04.5 +1.8
SANT Santorini 4.86 140 Pn 01 44 01.8 -0.9
RODP Rodopos 4.92 159 eP Pn 01 44 05.9 +2.5
HUMR Humele 5.01 29 ⇑P Pn 01 44 06.1 +1.5
HUMR Humele 5.01 29 Pn 01 44 06.1 +1.5
GCAM G?zelcaml? 5.04 118 eP Pn 01 44 06.8 +1.8
IMMV Iera Moni Meta 5.08 158 P Pn 01 44 08.0 +2.4
IMMV Iera Moni Meta 5.08 158 eP Pn 01 44 08.1 +2.5
SLVT Silivri 5.12 76 eP Pn 01 44 08.3 +2.1
FRGS Fruska Gora 5.14 346 ePn Pn 01 44 03.2 -3.3
BANR Banloc 5.21 356 ⇑P Pn 01 44 08.6 +1.2
BANR Banloc 5.21 356 Pn 01 44 08.6 +1.2
KNDR Palaiochora Ch 5.21 161 eP Pn 01 44 09.8 +2.4
DOB Doboj 5.24 331 ePn Pn 01 44 08.5 +0.8
GZR Gura Zlata 5.28 9 ⇑P Pn 01 44 09.2 +0.8
GZR Gura Zlata 5.28 9 Pn 01 44 09.2 +0.8
GZR Gura Zlata 5.28 9 ⇑P Pn 01 44 09.2 +0.8
AYDB Zeytinkoy-Aydi 5.37 113 eP Pn 01 44 11.6 +1.8
MGRS Mrkonjic Grad 5.40 323 ePn Pn 01 44 11.9 +1.9
PAOL Paolisi 5.43 281 Pn Pn 01 44 09.7 -0.8
BZS Buzias 5.43 0 ⇓P Pn 01 44 10.1 -0.3
BZS Buzias 5.43 0 Pn 01 44 10.1 -0.3
BZS Buzias 5.43 0 ⇓P Pn 01 44 10.1 -0.3
BODT Bodrum 5.44 123 eP Pn 01 44 12.8 +2.2
LOT Lotru 5.50 16 ⇑P Pn 01 44 12.9 +1.4
LOT Lotru 5.50 16 Pn 01 44 12.9 +1.4
IDI Anoyia 5.54 151 Pn Pn 01 44 13.4 +1.5
comp=Z,7.9nm,0.3s,baz=331,slow=14,SNR=34
IDI Sn Sn 01 45 16.2 +1.2
comp=Z,5.3nm,0.3s,baz=307,slow=20,SNR=3.3
IDI Anoyia 5.54 151 P Pn 01 44 14.7 +2.7
IDI Anoyia 5.54 151 eP Pn 01 44 14.5 +2.6
HRKL Herakleio 5.59 149 eP Pn 01 44 15.3 +2.6
BLY Banja Luka 5.61 326 ⇑P Pn 01 44 14.3 +1.4
BLY Banja Luka 5.61 326 ePn Pn 01 44 14.0 +1.1
BLY Banja Luka 5.61 326 Pn 01 44 12.2 -0.8
ARR Arges 5.64 22 ⇑P Pn 01 44 14.5 +1.2
ARR Arges 5.64 22 Pn 01 44 14.5 +1.2
MANT Manisa 5.64 105 Pn 01 44 15.5 +1.9
GVDS Gavdos 5.68 159 eP Pn 01 44 16.7 +2.8
GVD Gavdhos 5.69 159 P Pn 01 44 16.6 +2.7
GVD Gavdhos 5.69 159 eP Pn 01 44 16.8 +2.8
KULA Kula-Manisa 5.71 105 eP Pn 01 44 16.6 +2.2
SIMA Simav-Kutahya 5.80 99 eP Pn 01 44 17.7 +2.2
DAT Datca 5.81 124 eP Pn 01 44 17.9 +2.1
VOIR 5.83 25 ⇑P Pn 01 44 17.8 +1.8
VOIR 5.83 25 Pn 01 44 17.8 +1.8
VOIR 5.83 25 ⇑P Pn 01 44 17.8 +1.8
NPS Neapolis 5.85 146 P Pn 01 44 18.8 +2.6
LAST Lasithi 5.88 147 P Pn 01 44 19.4 +2.8
YER Yerkesik 6.04 118 eP Pn 01 44 21.3 +2.4
SIRR Siria 6.08 0 ⇑P Pn 01 44 21.7 +2.4
SIRR Siria 6.08 0 Pn 01 44 21.7 +2.4
INTR Introdacqua 6.10 290 Pn 01 44 18.6 -1.2
ISR Istrita 6.13 35 ⇑P Pn 01 44 22.6 +2.6
ISR Istrita 6.13 35 Pn 01 44 22.6 +2.6
ISR Istrita 6.13 35 ⇑P Pn 01 44 22.6 +2.6
MLR Muntele Rosu 6.19 30 Pn Pn 01 44 22.8 +1.9
comp=Z,1.8nm,0.3s,baz=211,slow=2.3,SNR=25
MLR Sn Sn 01 45 34.6 +3.6
baz=270,slow=14,SNR=1.7
MLR LR LR 01 47 22.9
comp=Z,267nm,19.9s,baz=122,slow=44
MLR Muntele Rosu 6.19 30 ⇑P Pn 01 44 22.6 +1.7
MLR Muntele Rosu 6.19 30 Pn 01 44 19.5 -1.4
MLR Muntele Rosu 6.19 30 P Pn 01 44 19.5 -1.4
VAE Valguarnera 6.24 247 Pn Pn 01 44 22.8 +1.3
comp=Z,1.1nm,0.3s,baz=346,slow=13,SNR=11
VAE Sn Sn 01 45 32.0 -0.2
comp=Z,2.3nm,0.3s,baz=60,slow=14,SNR=2.6
ZKR Zakros 6.24 143 eP Pn 01 44 24.4 +2.8
KARP Karpathos 6.38 135 eP Pn 01 44 26.3 +2.8
KARP Karpathos 6.38 135 Pn Pn 01 44 23.4 -0.1
TURN Turunc 6.40 119 eP Pn 01 44 23.7 0.0
MORH Mrgy, Hungar 6.41 341 ePn Pn 01 44 23.7 -0.1
DOPR Dopca 6.41 24 ⇑P Pn 01 44 26.0 +2.1
DOPR Dopca 6.41 24 Pn 01 44 26.0 +2.1
BISRR Bisoca 6.54 33 ⇑P Pn 01 44 28.1 +2.4
BISRR Bisoca 6.54 33 Pn 01 44 28.1 +2.4
OZUR 6.65 26 ⇑P Pn 01 44 29.1 +1.9
OZUR 6.65 26 Pn 01 44 29.1 +1.9
DRGR 6.65 7 ⇑P Pn 01 44 28.7 +1.4
DRGR 6.65 7 Pn 01 44 28.7 +1.4
DRGR 6.65 7 ⇑P Pn 01 44 28.7 +1.4
PLOR Plostina 6.76 31 ⇓P Pn 01 44 32.0 +3.3
PLOR Plostina 6.76 31 Pn 01 44 32.0 +3.3
PLOR Plostina 6.76 31 ⇓P Pn 01 44 32.0 +3.3
VRI Vrincioaia 6.80 32 ⇓P Pn 01 44 32.5 +3.2
VRI Vrincioaia 6.80 32 Pn 01 44 32.5 +3.2
VRI Vrincioaia 6.80 32 ⇓P Pn 01 44 32.5 +3.2
CFR Carcaliu 6.93 42 ⇑P Pn 01 44 34.0 +3.1
CFR Carcaliu 6.93 42 Pn 01 44 34.0 +3.1
CFR Carcaliu 6.93 42 ⇑P Pn 01 44 34.0 +3.1
ZAG Zagreb 6.98 326 ePn Pn 01 44 32.2 +0.5
BEHE Becsehely 7.20 332 ePn Pn 01 44 30.6 -4.1
CRES Cresnjev 7.22 323 ePn Pn 01 44 35.3 +0.4
CRES Cresnjev 7.22 323 ePn Pn 01 44 35.2 +0.2
TESR Tescani 7.31 28 ⇓P Pn 01 44 38.4 +2.1
RIY Rijeka 7.34 317 ePn Pn 01 44 36.6 0.0
CEY Cerknica 7.65 319 ePn Pn 01 44 41.0 +0.1
SKDS Skadanscina 7.73 316 iPn Pn 01 44 41.5 -0.5
SKDS eSn Sn 01 46 05.7 -3.3
VNDS Vrh nad Dolski 7.78 322 ePn Pn 01 44 43.0 +0.4
LJU Ljubljana 7.82 321 ePn Pn 01 44 43.1 -0.1
PSZ Piszkesteto 7.83 351 ⇑P Pn 01 44 44.5 +1.1
PSZ Piszkesteto 7.83 351 Pn 01 44 41.6 -1.8
PSZ Piszkesteto 7.83 351 Pn 01 44 44.5 +1.1
PSZ Piszkesteto 7.83 351 ⇑P Pn 01 44 44.5 +1.1
BUR01 Bucovina Ar. S 7.87 18 Pn 01 44 45.3 +1.3
BURAR Bucovina Array 7.87 18 ⇑P Pn 01 44 45.3 +1.3
BUR08 Bucovina Ar. S 7.89 18 Pn 01 44 43.2 -1.1
TRI Trieste 7.97 316 Pn Pn 01 44 44.7 -0.6
TRI Trieste 7.97 316 P Pn 01 44 44.7 -0.6
TRPA Tarpa 7.97 4 ⇓P Pn 01 44 47.7 +2.5
TRPA Tarpa 7.97 4 Pn 01 44 47.7 +2.5
SOKA Soboth 8.06 326 ePn Pn 01 44 47.0 +0.4
comp=Z,20nm,0.8s,SNR=31
OBKA Obir 8.15 323 ePn Pn 01 44 49.1 +1.2
comp=Z,4.1nm,0.3s,SNR=7.7
ARSA Arzberg 8.32 330 ePn Pn 01 44 50.6 +0.4
comp=Z,8.2nm,0.5s,SNR=13
KECS Kecovo 8.34 355 eP Pn 01 44 54.0 +3.7
KECS Kecovo 8.34 355 ePN Pn 01 44 54.0 +3.7
VYHS Vyhne 8.54 347 eP Pn 01 44 55.4 +2.3
VYHS e 01 46 26.5
VYHS Vyhne 8.54 347 ePN Pn 01 44 55.4 +2.3
VYHS eSN Sn 01 46 26.5 -2.3
CRVS Cervenica-Dubn 8.72 359 eP Pn 01 44 58.4 +2.9
CRVS Cervenica-Dubn 8.72 359 ePN Pn 01 44 58.4 +2.9
MODS Modra-Piesok 8.76 341 eP Pn 01 44 57.2 +1.1
MODS e 01 46 29.0
MODS Modra-Piesok 8.76 341 ePN Pn 01 44 57.2 +1.1
MODS eSN Sn 01 46 29.0 -5.1
KOLS Kolonicke sedl 8.76 3 eP Pn 01 45 01.1 +5.0
KOLS Kolonicke sedl 8.76 3 ePN Pn 01 45 01.1 +5.0
CONA Conrad Observa 8.78 334 ePn Pn 01 44 57.8 +1.4
comp=Z,0.2nm,0.2s
JAVC Velka Javorina 9.12 343 ePN Pn 01 45 01.4 +0.4
KBA Koelnbreinsper 9.13 322 ePn Pn 01 45 01.8 +0.4
comp=Z,1.8nm,0.3s
SLUM Salum 9.15 160 P Pn 01 45 00.9 -0.6
baz=161
SLUM AMP 01 46 00.0
baz=161
SLUM S Sn 01 46 35.2 -8.7
baz=161
BR131 Keskin Array S 9.25 89 Pn 01 45 02.8 -0.2
BR131 Keskin Array S 9.25 89 P Pn 01 45 02.8 -0.2
BRTR Keskin Array B 9.25 89 Pn Pn 01 45 05.3 +2.4
comp=Z,0.3nm,0.3s,baz=265,slow=12,SNR=12
BRTR Sn Sn 01 46 47.2 +0.7
baz=257,slow=13,SNR=2.3
BRTR LR LR 01 49 13.6
comp=Z,112nm,21.0s,baz=252,slow=42
MOA Molln 9.31 328 ePn Pn 01 45 04.8 +1.2
comp=Z,7.9nm,0.7s,SNR=6.8
ABTA Abfaltersbach 9.31 318 ePn Pn 01 45 04.2 +0.4
comp=Z,3.2nm,0.2s,SNR=14
KRUC Moravsky 9.62 339 ePN Pn 01 45 08.5 +0.6
VRAC Vranov 9.79 340 ePN Pn 01 45 11.5 +1.2
VRAC Vranov 9.79 340 Pn Pn 01 45 11.4 +1.2
comp=Z,0.7nm,0.3s,baz=168,slow=14,SNR=7.0
MATC Matruh 9.93 151 P Pn 01 45 11.4 -0.7
baz=151
OKC Ostrava-Krasne 9.96 347 ePN Pn 01 45 14.4 +1.9
OKC eSN Sn 01 47 05.6 +2.0
OKC Ostrava-Krasne 9.96 347 eP Pn 01 45 14.4 +1.9
OKC e 01 47 05.6
MORC Moravsky Berou 10.01 345 ePN Pn 01 45 14.5 +1.2
WTTA Wattenberg 10.10 318 ePn Pn 01 45 15.9 +1.2
comp=Z,4.3nm,0.4s
WATA Walderalm 10.18 318 ePn Pn 01 45 15.8 +0.1
comp=Z,5.9nm,0.3s,SNR=5.5
SQTA Sankt Quirin 10.30 316 ePn Pn 01 45 17.9 +0.6
comp=Z,3.0nm,0.4s,SNR=7.6
GEC2 GERESS Array S 10.33 330 Pn 01 45 16.6 -1.1
GERES GERESS Array B 10.33 330 Pn Pn 01 45 18.2 +0.5
comp=Z,0.5nm,0.3s,baz=152,slow=12,SNR=24
GERES Sn Sn 01 47 15.2 +2.3
comp=Z,0.2nm,0.3s,baz=144,slow=25,SNR=2.4
MOTA Moosalm 10.43 317 ePn Pn 01 45 19.3 +0.2
comp=Z,2.5nm,0.4s,SNR=6.6
FETA Feichten 10.43 314 ePn Pn 01 45 19.7 +0.5
comp=Z,1.4nm,0.4s
KHC Kasperske Hory 10.61 330 ePN Pn 01 45 21.6 +0.1
KHC eSN Sn 01 47 22.2 +2.5
KHC Kasperske Hory 10.61 330 Pn 01 45 21.0 -0.5
KHC Kasperske Hory 10.61 330⇑iP Pn 01 45 20.6 -0.9
KHC pmax pmax
comp=Z,5.0nm,1.0s
KEST Kesra 10.65 249 Pn Pn 01 45 24.4 +2.2
comp=Z,0.2nm,0.3s,baz=280,slow=2.4,SNR=11
KEST Sn Sn 01 47 21.9 +1.1
comp=Z,0.1nm,0.3s,baz=300,slow=20,SNR=2.2
KEST Kesra 10.65 249 Pn 01 45 22.2 +0.1
CSS Mathiatis 10.66 116 Pn Pn 01 45 25.8 +3.6
RETA Reutte 10.70 317 ePn Pn 01 45 22.1 -0.6
comp=Z,1.3nm,0.3s,SNR=4.6
DPC Dobruska-Polom 10.82 342 ePN Pn 01 45 26.2 +1.8
DPC Dobruska-Polom 10.82 342 eP Pn 01 45 26.2 +1.8
DAVA Damuels 11.06 314 ePn Pn 01 45 29.1 +1.4
comp=Z,3.7nm,0.4s
SWA2 11.36 163 P Pn 01 45 30.1 -1.6
baz=163
SWA2 S Sn 01 47 27.2 -11
baz=163
SENIN Lac Senin/Sane 12.12 305 Pn 01 45 39.9 -2.3
CLL Collm 12.63 335 e(sPP) 01 46 02.0
CLL e 01 46 13.0
HNAT Natroun 12.85 142 P Pn 01 45 51.1 -1.1
baz=142
MMAI Mount Meron Ar 13.18 119 Pn Pn 01 45 56.9 +0.2
comp=Z,0.7nm,0.3s,baz=327,slow=15,SNR=4.0
MMAI LR LR 01 52 06.8
comp=Z,148nm,18.5s,baz=355,slow=42
GLL Jalalah 13.43 139 P Pn 01 45 59.4 -0.7
baz=139
AMAZ Amatzia 13.80 125 Pn Pn 01 46 07.0 +1.8
AMAZ Sn Sn 01 48 35.2 -2.7
KZIT Kziot 13.92 128 Pn Pn 01 46 07.2 +0.5
KZIT Sn Sn 01 48 37.5 -3.1
YTIR Yattir 14.05 125 Pn Pn 01 46 09.4 +0.9
HFRF Wahat Farafira 14.14 155 P Pn 01 46 07.1 -2.6
baz=155
GHAJ Ghor Haditha 14.37 124 Pn Pn 01 46 14.0 +1.1
KRMI Paran Flat 14.68 129 Pn Pn 01 46 15.8 -1.3
KRMI Sn Sn 01 48 55.4 -3.8
PRNI Paran 14.68 128 Pn Pn 01 46 16.8 -0.3
PRNI Sn Sn 01 48 56.0 -3.2
MBRI Mt Berech 15.03 130 Pn Pn 01 46 21.3 -0.6
MBRI Sn Sn 01 49 03.5 -4.2
MEM Membach 15.09 319 PnPn P 01 46 29.5 +1.8
NACGM Naroch 15.13 12 e P 01 46 28.0 0.0
EIL Elat 15.14 130 Pn Pn 01 46 23.1 -0.2
comp=Z,0.3nm,0.3s,baz=346,slow=19,SNR=3.1
EIL LR LR 01 52 49.2
comp=Z,50nm,19.2s,baz=298,slow=40
EIL Elat 15.14 130 Pn Pn 01 46 21.3 -2.0
EIL Sn Sn 01 49 05.6 -4.8
BSTI Sart Tilman 15.30 318 P P 01 46 29.3 -0.7
BCLA Clavier 15.34 317 P P 01 46 31.7 +1.3
PABE Paberze 15.41 5 eP Pn 01 46 27.5 +0.8
PABE IAmb IAmb 01 46 40.9
comp=Z,17nm,0.7s
IIGN Ignalina 15.48 10 eP P 01 46 31.0 -0.9
IIGN IAmb IAmb 01 46 34.4
comp=Z,11nm,1.0s
ISAL Salakas 15.69 10 eP P 01 46 33.2 -1.0
PBUR Paburge 15.85 1 eP Pn 01 46 26.9 -5.5
IZAR Zarasai 15.88 10 eP P 01 46 35.2 -1.1
OBN Obninsk 17.96 29 iP P 01 47 00.1 +0.8
OBN pmax pmax
comp=Z,7.0nm,0.9s
OBN MLR MLR
comp=Z,130nm,16.0s
VSU Vasula 18.59 8 eP P 01 47 05.1 -1.1
VSU Vasula 18.59 8⇑iP P 01 47 05.8 -0.4
VSU pmax pmax
comp=Z,36nm,0.8s
MOS Moscow 18.82 29 eP P 01 47 08.5 -0.3
MOS pmax pmax
comp=Z,28nm,1.2s
ESDC Sonseca Array 19.60 277 P P 01 47 17.9 +0.2
comp=Z,0.4nm,0.3s,baz=78,slow=10,SNR=4.5
HFS Hagfors 20.58 349 P P 01 47 27.1 -0.9
comp=Z,7.3nm,0.4s,baz=164,slow=12,SNR=53
KONO Kongsberg 20.90 343 eP P 01 47 30.6 -0.9
OSL Oslo 20.92 345 eP P 01 47 30.6 -1.1
FINES FINESS Array B 21.46 6 P P 01 47 36.4 -1.1
comp=Z,2.8nm,0.5s,baz=175,slow=12,SNR=12
FINES LR LR 01 56 23.7
comp=Z,108nm,21.0s,baz=195,slow=38
FIA1 FINESS Array S 21.46 6 P P 01 47 36.0 -1.5
FIA1 IAmb IAmb 01 47 47.3
comp=Z,11nm,0.9s
BLS5 Blasjo 21.50 339 eP P 01 47 39.1 +1.2
NC602 NORSAR Array S 21.50 346 eP P 01 47 36.7 -1.2
NB201 NORSAR Array S 21.84 346 P P 01 47 40.4 -1.2
NB2 NORSAR Subarra 21.84 346 P P 01 47 40.7 -0.9
comp=Z,12nm,0.6s,baz=160,slow=11
NB2 NORSAR Subarra 21.84 346 P P 01 47 40.7 -0.9
baz=160,slow=11
NOA NORSAR Array B 21.84 346 P P 01 47 40.9 -0.7
comp=Z,23nm,0.9s,baz=174,slow=16,SNR=35
NOA LR LR 01 57 28.4
comp=Z,41nm,18.4s,baz=170,slow=40
SKAR Skarslia 22.12 342 eP P 01 47 44.6 0.0
MDT Midelt 22.27 259 P P 01 47 46.9 +0.3
comp=Z,2.9nm,0.9s,baz=102,slow=9.2,SNR=4.0
EKR10 Eskdalemuir Ar 22.28 321 P P 01 47 45.6 -0.8
EKR7 Eskdalemuir Ar 22.31 321 P P 01 47 45.6 -1.0
EKR7 IAmb IAmb 01 47 48.6
comp=Z,19nm,0.8s
EKA Eskdalemuir Ar 22.34 321 P P 01 47 46.5 -0.4
comp=Z,12nm,0.6s,baz=120,slow=9.8,SNR=27
EKB6 Eskdalemuir Ar 22.34 321 P P 01 47 45.6 -1.4
EKB6 IAmb IAmb 01 47 47.3
comp=Z,14nm,0.9s
ESK Eskdalemuir 22.36 321 P P 01 47 44.9 -2.2
ESK IAmb IAmb 01 47 49.0
comp=Z,16nm,0.7s
ESK Eskdalemuir 22.36 321 P P 01 47 44.9 -2.2
ESK pmax pmax
comp=Z,16nm,0.7s
BER Bergen 22.62 339 eP P 01 47 49.8 0.0
DOMB Dombas 23.18 345 eP P 01 47 55.4 -0.3
KLMR Klimovskoe 23.46 22 eP P 01 47 57.3 -1.2
KLMR pmax pmax
comp=Z,20nm,1.5s
KLMR Klimovskoe 23.46 22 ePKPdf P 01 47 57.4 -1.1
KLMR AMP 01 48 03.5
NSS Namsos 25.03 350 eP P 01 48 12.9 -0.1
AKTO Aktyubinsk 27.32 56 P P 01 48 33.9 0.0
comp=Z,0.4nm,0.4s,baz=242,slow=15,SNR=2.7
STEI Steigen 28.02 355 eP P 01 48 39.4 -0.4
KTK1 Kautokeino 28.90 1 eP P 01 48 46.9 -0.8
ARCES ARCESS Array B 29.49 3 P P 01 48 51.7 -1.2
comp=Z,2.0nm,0.7s,baz=189,slow=11,SNR=15
ARE0 ARCESS Array S 29.49 3 eP P 01 48 53.1 +0.2
TRO Tromso 29.55 358 eP P 01 48 52.3 -1.1
TOA0 Torodi Ar. Sit 32.12 219 P P 01 49 15.4 -1.3
TOA0 IAmb IAmb 01 49 25.5
comp=Z,3.3nm,0.8s
TORD Torodi Ar. Bea 32.12 219 P P 01 49 17.8 +1.1
comp=Z,1.9nm,0.6s,baz=36,slow=9.1,SNR=24
BRVK Borovoye 35.13 52⇓iP P 01 49 41.2 -1.4
BRVK pmax pmax
comp=Z,1.0nm,1.0s
KK31 Karatay Array 36.25 69 P P 01 49 51.1 -1.2
KK31 IAmb IAmb 01 50 03.7
comp=Z,1.9nm,0.8s
KK31 Karatay Array 36.25 69 P P 01 49 51.1 -1.2
KK31 pmax pmax
comp=Z,2.0nm,0.8s
KKAR Karatay Array 36.25 69 P P 01 49 50.7 -1.6
KKAR Karatay Array 36.25 69 P P 01 49 50.7 -1.6
KKAR pmax pmax
comp=Z,2.0nm,0.8s
AAK Ala-Archa 39.20 69 P P 01 50 16.1 -1.4
AAK Ala-Archa 39.20 69 P P 01 50 16.1 -1.4
AAK pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 40.42 55⇑iP P 01 50 27.4 +0.2
KURK pmax pmax
comp=Z,2.0nm,1.2s
DBIC Dimbokro 40.94 223 P P 01 50 32.5 +0.6
comp=Z,2.7nm,0.8s,baz=0.0,slow=6.1,SNR=3.2
DBIC Dimbokro 40.94 223 P P 01 50 31.4 -0.5
DBIC IAmb IAmb 01 50 47.4
comp=Z,7.0nm,1.1s
DBIC Dimbokro 40.94 223 P P 01 50 31.4 -0.5
DBIC pmax pmax
comp=Z,7.0nm,1.1s
MK31 Makanchi Array 43.55 60 P P 01 50 51.8 -1.1
MK31 Makanchi Array 43.55 60 P P 01 50 51.8 -1.1
MK31 pmax pmax
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 43.55 60 P P 01 50 53.4 +0.5
comp=Z,4.0nm,0.5s,baz=272,slow=8.1,SNR=9.2
ZALV Zalesovo Beam 43.74 50 P P 01 50 54.3 0.0
comp=Z,0.7nm,0.5s,baz=277,slow=10.0,SNR=2.4
WMQ Urumqi 48.07 63 eP P 01 51 33.8 +5.1
WMQ pP pP 01 51 36.8 +1.5
WMQ sP sP 01 51 39.5 +1.6
WMQ pmax pmax
comp=Z,8.0nm,0.7s
WMQ pmax pmax
comp=Z,96nm,4.1s
WMQ LR LR
comp=Z,640nm,29.2s
WMQ LR LR
comp=Z,430nm,28.9s
DRLN Deer Lake 54.53 308 P P 01 52 16.7 -0.2
SCHQ Schefferville 57.57 317 P P 01 52 38.6 0.0
comp=Z,4.4nm,0.6s,baz=56,slow=5.1,SNR=16
SCHQ Schefferville 57.57 317 P P 01 52 37.8 -0.8
LZH Lanzhou 62.56 65 eP P 01 53 15.3 +1.9
LZH pP pP 01 53 18.5 -1.7
LZH ePP PP 01 55 34.3 +3.5
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,89nm,7.4s
LZH LR LR
comp=Z,300nm,14.8s
LZH LR LR
comp=Z,290nm,15.0s
LZH LR LR
comp=Z,380nm,17.4s
HHC Hu-ho-hao-te 65.21 57 eP P 01 53 31.8 +1.1
HHC pmax pmax
comp=Z,3.0nm,1.1s
HHC pmax pmax
comp=Z,53nm,6.6s
CD2 Chengdu 65.26 70 P P 01 53 30.8 -0.2
CD2 pmax pmax
comp=Z,20nm,0.6s
BOSA Boshof 68.53 177 P P 01 53 52.8 +1.1
comp=Z,1.9nm,0.9s,baz=0.0,slow=15,SNR=2.4
BOSA Boshof 68.53 177 P P 01 53 50.8 -0.9
BOSA Boshof 68.53 177 P P 01 53 50.8 -0.9
BILL Bilibino 68.87 13 iP P 01 53 51.6 -1.7
BILL i 01 54 01.1
BILL pmax pmax
comp=Z,2.0nm,1.1s
INK Inuvik 70.23 350 P P 01 54 00.9 -0.7
comp=Z,1.0nm,0.5s,baz=4.2,slow=5.5,SNR=10
INK Inuvik 70.23 350 P P 01 54 01.0 -0.7
YKA Yellowknife Ar 71.79 340 P P 01 54 11.4 +0.2
comp=Z,0.9nm,0.7s,baz=40,slow=5.5,SNR=15

WHN	Wuhan	72.94	64	P	P	01 54 26.3	+7.7
ULM	Lac du Bonnet	74.59	324	P	P	01 54 27.9	0.0
	comp=Z,2.3nm,0.7s,baz=52,slow=5.4,SNR=7.0						
ULM				LR	LR	02 28 44.7	
	comp=Z,40nm,18.1s,baz=12,slow=37						
ULM	Lac du Bonnet	74.59	324	IAmb	IAmb	01 54 42.8	
	comp=Z,3.4nm,1.1s						
ILAR	Eielson Array	74.99	355	P	P	01 54 31.1	+1.0
	comp=Z,0.6nm,0.7s,baz=1.3,slow=5.7,SNR=7.8						
NJ2	Nanjing	75.08	61	eP	P	01 54 32.5	+1.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PDAR	Pinedale Array	86.36	326	P	P	01 55 31.7	+0.1
	comp=Z,0.3nm,0.7s,baz=51,slow=5.9,SNR=3.4						
ELK	Elko	90.39	329	LR	LR	02 37 03.0	
	comp=Z,47nm,18.0s,baz=5.0,slow=36						
TXAR	Lajitas Array	94.19	314	P	P	01 56 09.2	+0.9
	comp=Z,0.3nm,0.6s,baz=57,slow=4.6,SNR=4.2						
PFO	Pinyon Flats O	96.98	326	LR	LR	02 41 34.8	
	comp=Z,41nm,18.4s,baz=262,slow=36						
ASAR	Alice Springs	121.53	96	PKP	PKPdf	02 01 42.2	-0.7
	comp=Z,0.3nm,0.5s,baz=282,slow=1.3,SNR=5.1						

ROM 26 01:42:51.3±0.2**, 43.°393N**±0.°004×**12.°497E**±0.°005**, h4^{km}±1^{km}, ML0.7**/1**, 2C-1D, Error ellipse: s-maj=0.6km s-min=0.0km az=214.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATFO	Monte Foce - G	0.06	116	⇑P	Pg	01 42 52.7	0.0
ATFO				S	Sg	01 42 53.9	+0.3
ATFO				AML	AML		
	comp=E,82µm,0.2s						
ATFO				AML	AML		
	comp=N,46µm,0.3s						
ATVO	AVT- Monte Val	0.07	261	⇑P	Pg	01 42 52.8	0.0
ATVO				S	Sg	01 42 54.1	+0.3
ATVO				AML	AML		
	comp=E,60µm,0.3s						
ATVO				AML	AML		
	comp=N,45µm,0.5s						
ATPI	Pietralunga -	0.09	310	P	Pg	01 42 53.4	+0.3
ATPI				S	Sg	01 42 55.1	+0.7
MURB	Monte Urbino	0.13	171	⇓P	Pg	01 42 54.3	+0.4
MURB				S	Sg	01 42 56.7	+1.1
MURB				AML	AML		
	comp=N,44µm,0.2s						
MURB				AML	AML		
	comp=E,64µm,0.2s						

IDC 26 01:46:54.9±0.9, 31.°75N×141.°73E, h0^{km}, mb3.5/7, mb1 3.8/10, mb1mx3.6/43, mbtmp3.6/10, ML3.6/3, MS3.5/2, Ms1 3.5/2, ms1mx2.6/45, Error ellipse: s-maj=26.9km s-min=16.4km az=79.0
JMA 26 01:46:55.4±0.4, 31.°98N×141.°93E, h8^{km}, M3.9
ISC 26 01:46:58.7±0.7**, 31.°83N**±0.°06×**141.°72E**±0.°08**, h29^{km}, n23,** σ**1°46**/29**, mb3.7**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.78	292	P	Pb	01 47 29.0	-1.7
JHCJ	Hachijojimakas	2.05	308	P	Pn	01 47 31.5	+0.3
JHJ2	Mitsune	2.06	309	P	Pn	01 47 31.5	+0.1
JHJ	Hachijo jima 2	2.08	309	Pn	Pn	01 47 31.7	-0.1
	66nm,0.3s,baz=101,slow=23,SNR=41						
JHJ				Sn	Sn	01 47 58.2	+1.5
	27nm,0.3s,baz=139,slow=19,SNR=4.0						
BSO1	Boso 1	2.89	348	P	Pn	01 47 42.0	-0.3
BSO3	Boso 3	3.14	341	P	Pn	01 47 46.4	+0.4
JOD2	Odawara 2	4.07	328	P	Pn	01 47 59.6	+0.5
JOD2				eS	Sn	01 48 47.9	+2.1
JHU	Hanno	4.50	334	P	Pn	01 48 05.7	+0.8
JHU				eS	Sn	01 48 57.9	+1.6
CBIJ	Chichi jima	4.73	175	P	Pn	01 48 09.6	+1.5
CBIJ				eS	Sn	01 49 04.5	+2.5
JCJ	Chichijima	4.73	175	Pn	Pn	01 48 08.2	+0.1
	10nm,0.3s,baz=67,slow=21,SNR=14						
JCJ				Sn	Sn	01 49 00.8	-1.3
	7.9nm,0.3s,baz=285,slow=20,SNR=3.1						
JCJ				LR	LR	01 49 03.8	
	comp=Z,132nm,19.3s,baz=139,slow=28						
JHO	Hitachi	4.87	349	P	Pn	01 48 09.0	-1.0
JAG	Ashikaga	4.96	338	P	Pn	01 48 11.7	+0.5
JAG				eS	Sn	01 49 09.0	+1.4
MJAR	Matsushiro Arr	5.53	329	Pn	Pn	01 48 19.7	+0.5
	0.3nm,0.3s,baz=151,slow=12,SNR=6.7						
JFK	Kawauchi	5.57	353	P	Pn	01 48 18.5	-1.2
JFK				eS	Sn	01 49 19.6	-3.2
TGY	Tagaytay City	25.94	232	LR	LR	02 01 28.6	
	comp=Z,548nm,21.9s,baz=185,slow=34						
GTA	Gaotai	34.65	294	eP	P	01 53 42.5	-3.2
GTA				pP	pP	01 53 46.5	-6.4
GTA				sP	sP	01 53 49.8	-5.6
MKAR	Makanchi Array	47.25	306	P	P	01 55 30.5	+1.2
	0.4nm,0.5s,baz=84,slow=9.4,SNR=5.2						
WRA	Warramunga Arr	51.96	189	P	P	01 56 05.2	0.0
	0.7nm,0.5s,baz=5.0,slow=7.7,SNR=16						
ILAR	Eielson Array	53.80	30	P	P	01 56 20.2	+1.8
	0.4nm,0.8s,baz=262,slow=6.9,SNR=3.4						
ASAR	Alice Springs	55.68	189	P	P	01 56 31.9	-0.6
	0.4nm,0.7s,baz=22,slow=12,SNR=4.1						
INK	Inuvik	58.93	26	P	P	01 56 55.8	+1.0
	1.1nm,1.0s,baz=311,slow=7.1,SNR=3.7						
YKA	Yellowknife Ar	68.20	29	P	P	01 57 56.8	+0.7
	0.1nm,0.6s,baz=303,slow=5.8,SNR=3.0						
TXAR	Lajitas Array	93.08	53	P	P	02 00 10.8	+0.5
	0.3nm,0.8s,baz=322,slow=5.7,SNR=3.4						

PGC 26 02:24:09.3±5.8**, 50.°99N×138.°91W, h10^{km}, MLSn3.8**/5**, Mw4.4**/5**, 545km Wsw of Sandspit, Bc West Of Vancouver Island, West of Vancouver Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIB	Van Inlet	4.53	58	Pn	Pn	02 25 16.2	-1.7
VIB				Sn	Sn	02 26 07.0	-3.7
DIB	Dawson Inlet,	4.54	58	Pn	Pn	02 25 16.4	-1.7
DIB				Sn	Sn	02 26 07.2	-3.6
NDB	Naden	4.70	49	Pn	Pn	02 25 20.2	-0.1
MOBC	Moresby Island	4.79	61	Pn	Pn	02 25 21.7	+0.2
MOBC				Sn	Sn	02 26 14.7	-2.4
HG3B	Hotspring	4.90	68	Sn	Sn	02 26 16.4	-3.2
PNL	Peninsula	8.70	358	Pn	Pn	02 26 16.8	+1.7
PCA	Pinnacle	9.16	356	Pn	Pn	02 26 22.4	+1.0
UBRB	Upper Baezaeko	9.36	73	Pn	Pn	02 26 25.4	+1.3
YUK7	Dusty Glacier	9.57	2	Pn	Pn	02 26 30.2	+3.0
HYT	Haines Junctio	9.89	4	Pn	Pn	02 26 34.3	+2.9
GRNC	Granite Creek	9.89	352	Pn	Pn	02 26 31.9	+0.3
WHY	Whitehorse	9.95	12	Pn	Pn	02 26 35.6	+3.3
YUK6	Outpost Mounta	9.98	2	Pn	Pn	02 26 35.8	+3.0
CTGM	Chitina Glacie	10.09	353	Pn	Pn	02 26 35.3	+1.1
KIAG	Kiagna River	10.14	350	Pn	Pn	02 26 35.2	+0.3
YUK5	Granite Creek	10.18	3	Pn	Pn	02 26 38.3	+2.8
BALM	Baldy	10.25	351	Pn	Pn	02 26 37.4	+1.0
YUK4	Talbot Arm	10.38	1	Pn	Pn	02 26 42.7	+4.4
PTPK	Patty Peak	10.41	350	Pn	Pn	02 26 39.8	+1.2
YUK3	Moose Creek	10.85	356	Pn	Pn	02 26 47.0	+2.4
YUK2	White River	10.88	355	Pn	Pn	02 26 47.7	+2.8
YUK1	Sand Pete Hill	11.23	356	Pn	Pn	02 26 52.2	+2.5
DAWY	Dawson	13.11	359	Pn	Pn	02 27 18.4	+2.9

DDA 26 02:32:00.5, 38.°43N×45.°22E, h6^{km}±2^{km}, ML1.8
ISK 26 02:32:01.2, 38.°43N×45.°12E, h5^{km}, ML2.3/8
TEH 26 02:32:01.1, 38.°28N×45.°11E, h6^{km}, ML2.5
ISC 26 02:32:02.2±1.1**, 38.°43N**±0.°04×**45.°17E**±0.°03**, h15^{km}**±11^{km}**, n18,** σ**1°81**/22**, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITBZ	Tabriz	0.80	104	eP	Pg	02 32 16.7	-1.0
ITBZ				eSg	Sg	02 32 28.3	+0.1
ITBZ				e		02 32 29.4	
BASK	Baskale_VAN	0.99	248	iP	Pb	02 32 20.8	-0.2
BASK				iS	Sn	02 32 35.1	-0.3
BASK				IAML		02 32 44.0	
	comp=N,30nm,0.6s						
BASK				IAML		02 32 44.0	
	comp=E,25nm,0.7s						
YOVA	Hakkari_Yksek	1.09	220	iP	Pg	02 32 21.6	-1.7
YOVA				IAML		02 32 37.0	
	comp=E,17nm,0.8s						
YOVA				iS	Sn	02 32 38.3	+0.4
YOVA				IAML		02 32 46.0	
	comp=N,22nm,0.5s						
CLDR	Caldiran	1.21	307	PN	Pn	02 32 24.7	0.0
CLDR	Caldiran	1.21	307	iP	Pb	02 32 24.2	-0.7
CLDR				IAML		02 32 49.0	
	comp=N,18nm,0.8s						
CLDR				IAML		02 32 54.0	
	comp=E,17nm,0.4s						
VANB	Van	1.40	277	PN	Pg	02 32 28.1	-1.1
VANB				SN	Sn	02 32 47.7	+2.1
IHRS	Heris	1.48	94	ePn	Pb	02 32 29.6	+0.1
IHRS				e		02 32 53.8	
AHAR	Ahar	1.48	87	ePn	Pg	02 32 30.3	-0.4
AHAR				e		02 32 31.7	
IHSH	Hashtrud	1.65	94	ePn	Pg	02 32 38.4	+4.4
IHSH				e		02 33 06.8	
IGDI	IGDIR	1.67	330	iP	Pg	02 32 33.5	-0.7
CUKT	Cukurca	1.71	227	PN	Pg	02 32 32.9	-2.0
CUKT	Cukurca	1.71	227	iP	Pg	02 32 33.7	-1.2
CUKT				iS	Sg	02 33 03.1	+6.0
MAHB	Mahabad	1.71	165	eSg	Sn	02 32 52.8	-0.4
TASB	TASBURUN-IGDIR	1.71	335	PN	Pb	02 32 33.1	-0.3
AKDM	Akdamar-Van	1.72	267	PN	Pb	02 32 32.9	-0.6
GNI	Garni	1.75	349	PN	Pb	02 32 33.8	-0.3
AGRB	Hanur-Agry	2.04	305	PN	Pb	02 32 37.6	-1.5
MLAZ	Malazgirt-MUS	2.17	290	PN	Pb	02 32 39.3	-1.8

DJA 26 02:36:55.4±0.2, 7.°S±7.°×10.°8E±.°, h238^{km}±3^{km}, M4.7/20, mB5.3/12, mb4.9/19, MLv4.6/20, Mw(mB)4.7/12, Mwp5.6/1
IDC 26 02:36:57.0±0.4, 6.°71S×108.°32E, h228^{km}±3^{km}, mb3.7/9, mb1 3.8/9, mb1mx3.4/46, mbtmp4.3/9, Error ellipse: s-maj=17.0km s-min=9.1km az=47.0
NEIC 26 02:36:56.4±1.4, 6.°7S±0.°1×108.°28E±0.°09, h233^{km}±6^{km}, mb4.3/10, Error ellipse: s-maj=17.8km s-min=8.1km az=217.0
ISC 26 02:36:56.4±0.5**, 6.°87S**±0.°08×**108.°25E**±0.°05**, h232^{km}**±4^{km}**, n74,** σ**1°12**/99**, mb4.2**/12**, 1D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	Lembang	0.63	274	P	Pn	02 37 29.1	+1.2
	71nm,0.3s,baz=38,slow=3.5,SNR=32						
LEM				S	S	02 37 53.2	+1.0
	104nm,0.3s,baz=176,slow=20,SNR=35						
LEM	Lembang	0.63	274	P	Pn	02 37 28.9	+1.1
LEM				S	S	02 37 52.3	0.0
CISI	Cisompet, Garu	0.81	212	P	Pn	02 37 28.4	-0.1
CISI				S	S	02 37 53.1	-0.5
CISI	Cisompet, Garu	0.81	212		Pn	02 37 28.9	+0.4
CISI				S	S	02 37 54.5	+0.8
KPJI	Karang Pucung	0.82	124	P	Pn	02 37 29.2	+0.7
KPJI				S	S	02 37 54.0	+0.5
CNJI	Cibinong	1.19	248	P	Pn	02 37 30.2	-0.5
CNJI				S	S	02 37 56.2	-1.2
CBJI	Citeko	1.46	288	P	Pn	02 37 32.3	-0.3
DBJI	Dramaga	1.52	282	P	Pn	02 37 33.9	+0.8
DBJI				S	S	02 38 02.5	+0.7
SKJI	Sukabumi	1.68	265	P	Pn	02 37 34.6	+0.1
SKJI				S	S	02 38 03.9	-0.3
TNG	Tangerang	1.73	293	S	S	02 38 05.7	+0.7
SMRI	Semarang	2.19	95	P	Pn	02 37 40.4	+1.2
SMRI	Semarang	2.19	95		Pn	02 37 39.5	+0.3
SMRI				S	S	02 38 12.7	+0.1
UGM	Wanagama	2.48	115	P	Pn	02 37 42.5	+0.3
UGM				S	S	02 38 17.6	-0.5
UGM	Wanagama	2.48	115		Pn	02 37 42.6	+0.4
UGM				S	S	02 38 17.7	-0.5
WOJI	Wonogiri, Jawa	2.82	110	P	Pn	02 37 46.2	+0.4
PCJI	Pacitan	3.19	115	P	Pn	02 37 49.3	-0.6
KASI	Kota Agung	3.96	290	P	Pn	02 37 59.4	+0.5
KLSI		4.11	302	P	Pn	02 38 01.5	+0.7
LWLI	Liwa	4.55	294	P	Pn	02 38 06.7	+0.4
MDSI	Maura Dua	4.69	300	P	Pn	02 38 08.2	+0.4
MNAI	Manna	5.83	295	P	Pn	02 38 22.2	+0.2
	5.0nm26µm881nm,0.5s						
MNAI	Manna	5.83	295		Pn	02 38 22.3	+0.3
MNAI				S	S	02 39 28.2	-1.9
JAGI	Jajag, Banyuwa	6.07	106	P	Pn	02 38 24.6	-0.4
	0.4nm3µm103nm,0.5s						
JAGI	Jajag, Banyuwa	6.07	106		Pn	02 38 24.9	-0.2
JAGI				S	S	02 39 33.9	-1.8
KSI	Kapahiang	6.47	299	P	Pn	02 38 30.6	+0.3
	2.0nm380nm,0.7s						
SRBI	Singaraja	7.01	100	P	Pn	02 38 37.2	+0.1
	0.4nm2µm84nm,0.4s						
IGBI	Denpasar	7.10	106	P	Pn	02 38 36.5	-1.7
	0.6nm66nm,0.7s						
KRJI	Kerinci	8.26	305	P	Pn	02 38 53.0	-0.2
	8µm951nm,0.8s						
PPSI	Pulau Pagai	9.16	296	P	Pn	02 39 03.3	-1.3
	4µm193nm,0.5s						
PLAI	Plampang	9.64	102	P	Pn	02 39 09.0	-1.7
	1µm113nm,0.7s						
PDSI	Padang	9.76	307	P	Pn	02 39 09.4	-2.9
	4µm39nm,0.4s						
BKNI	Bangkinang	10.14	315	Pn	Pn	02 39 15.5	-1.6
SISI	Saibi	10.66	301	P	Pn	02 39 21.4	-2.3
	1µm67nm,0.9s						
WBSI	Waikabubak, Su	11.37	105	P	Pn	02 39 28.9	-3.7
	13µm1µm85nm,0.5s						
PBSI	Pulau Batu	12.03	304	P	Pn	02 39 38.0	-2.9
	80nm,0.4s						
BNSI	Bone	12.05	79	P	Pn	02 39 42.1	+0.9
	27nm,1.1s						
BASI	Baing, Sumba	12.64	106	P	Pn	02 39 46.3	-2.2
	100nm,0.4s						
IPM	Ipoh	13.38	327	Pn	Pn	02 39 56.4	-1.3
EDFI	Ende, Flores	13.45	99	P	Pn	02 39 57.2	-1.5
	503nm27nm,0.6s						
MPSI	Mapaga	13.65	59	P	P	02 40 02.2	-0.3
	31nm,1.0s						
MMRI	Maumere	13.97	98	P	Pn	02 40 04.7	-0.3
	102nm,0.7s						
MMRI	Maumere	13.97	98	P	Pn	02 40 04.9	-0.1
SOEI	Soe	16.11	101	P	P	02 40 29.3	-0.5
	77nm,0.8s						
SOEI	Soe	16.11	101	P	P	02 40 29.7	-0.1
SOEI				S	S	02 43 26.8	-0.4
FITZ	Fitzroy Crossi	20.30	125	P	P	02 41 16.9	+1.9
	3.3nm,0.6s,baz=315,slow=7.8,SNR=7.4						
FITZ	Fitzroy Crossi	20.30	125	P	P	02 41 16.0	+1.0
FITZ				IAmb	IAmb	02 41 25.1	
	comp=Z,7.3nm,1.1s						
MSAI	Masohi	20.89	81	P	Pn	02 41 31.9	+4.4
KNRA	Kununurra	21.92	115	P	P	02 41 31.9	+0.5
MTN	Manton Dam	23.31	107	P	P	02 41 44.8	+0.8
MTN				IAmb	IAmb	02 42 01.4	
	comp=Z,14nm,0.7s						
SIJI	Sorong	23.72	76	P	P	02 41 47.5	-0.3
	comp=Z,14nm,0.7s,baz=282,slow=20,SNR=3.6						
CMAR	Chiang Mai Arr	26.79	340	P	P	02 42 16.4	+1.1
	comp=Z,1.8nm,0.3s,baz=178,slow=8.1,SNR=3.7						
CMAR				pP	pP	02 42 59.8	-1.3
	comp=Z,1.1nm,0.3s,baz=185,slow=10,SNR=1.8						
CMAR				ScP	ScP	02 48 50.9	+0.6
	comp=Z,1.3nm,0.4s,baz=197,slow=2.8,SNR=6.5						
WB0	Warramunga Arr	28.43	119	P	P	02 42 30.6	+0.6
WRA	Warramunga Arr	28.46	120	P	P	02 42 32.0	+1.8
	comp=Z,0.6nm,0.3s,baz=318,slow=10,SNR=24						
WRA				pP	pP	02 43 17.1	+0.7
	comp=Z,2.1nm,0.9s,baz=295,slow=11,SNR=3.7						
WRA				PcP	PcP	02 45 35.7	-0.6
	comp=Z,0.5nm,0.7s,baz=18,slow=1.5,SNR=4.6						
WRA				S	S	02 47 00.6	+0.1
	comp=Z,1.0nm,0.8s,baz=272,slow=15,SNR=5.7						
WB2	Warramunga Arr	28.47	120	P	P	02 42 30.0	-0.3
WR0	Warramunga Arr	28.64	120	P	P	02 42 31.6	-0.2
WR0				IAmb	IAmb	02 42 36.7	
	comp=Z,4.1nm,1.1s						
AS31	Alice Springs	29.77	127	P	P	02 42 41.6	-0.2
AS31				IAmb	IAmb	02 42 44.7	
	comp=Z,3.3nm,0.2s						
ASAR	Alice Springs	29.77	127	P	P	02 42 43.8	+2.0
	comp=Z,3.0nm,0.4s,baz=306,slow=8.5,SNR=43						
ASAR				PcP	PcP	02 45 40.0	+0.4
	comp=Z,1.2nm,0.6s,baz=302,slow=2.0,SNR=6.7						
ASAR				S	S	02 47 21.2	+0.3
	comp=Z,2.0nm,0.7s,baz=292,slow=15,SNR=14						
ASAR				ScP	ScP	02 49 01.0	+1.4
	comp=Z,0.6nm,0.7s,baz=286,slow=3.3,SNR=6.3						
BBOO	Buckleboo	36.52	139	P	P	02 43 40.8	+0.8
BBOO				IAmb	IAmb	02 43 48.1	
	comp=Z,14nm,1.1s						
STKA	Stephens Creek	39.82	133	P	P	02 44 09.8	+2.3
	comp=Z,16nm,0.6s,baz=308,slow=8.7,SNR=53						
STKA				PcP	PcP	02 46 09.4	+0.7
	comp=Z,0.5nm,0.4s,baz=299,slow=3.0,SNR=3.4						
STKA	Stephens Creek	39.82	133	P	P	02 44 07.6	+0.2
STKA				IAmb	IAmb	02 44 10.8	
	comp=Z,3.4nm,0.7s						
STKA					PcP	02 46 08.4	-0.3
LZH	Lanzhou	42.93	355	⇓P	P	02 44 34.0	+1.3
LZH				pP	pP	02 45 23.3	+1.7
LZH				sP	sP	02 45 49.3	+1.6
LZH				PP	PcP	02 46 29.5	+11
HHC	Hu-ho-hao-te	47.58	3	eP	P	02 45 10.8	+1.7
WMQ	Urumqi	53.77	342	eP	P	02 45 56.5	+1.4
WMQ				sP	sP	02 47 10.5	-1.3
SONM	Songino Array	54.49	358	P	P	02 45 59.8	-0.5
	comp=Z,0.4nm,0.4s,baz=174,slow=7.7,SNR=3.5						
SONM				pP	pP	02 46 51.0	-0.5
	comp=Z,0.8nm,0.8s,baz=187,slow=7.5,SNR=3.3						
MKAR	Makanchi Array	58.19	339	P	P	02 46 24.8	-1.5
	comp=Z,0.4nm,0.5s,baz=154,slow=7.5,SNR=8.7						
MKAR				pP	pP	02 47 18.4	+0.2
	comp=Z,1.2nm,0.7s,baz=146,slow=8.0,SNR=5.9						
BOSA	Boshof	80.61	242	P	P	02 48 45.6	+1.7
	comp=Z,1.7nm,0.5s,baz=91,slow=3.7,SNR=8.5						
BOSA	Boshof	80.61	242	P	P	02 48 44.0	+0.1
PDAR	Pinedale Array	131.15	37	SKPbc	SKPbc	02 58 43.5	-0.8
	comp=Z,0.5nm,0.5s,baz=149,slow=0.8,SNR=7.5						
SCHQ	Schefferville	132.01	356	SKPbc	SKPbc	02 58 45.8	-0.8
	comp=Z,1.2nm,0.6s,baz=342,slow=3.6,SNR=5.9						
ULM	Lac du Bonnet	132.29	21	SKPbc	SKPbc	02 58 46.7	-1.0
	comp=Z,1.9nm,0.5s,baz=338,slow=4.7,SNR=7.0						
TXAR	Lajitas Array	142.55	49	SKPbc	SKiKP	02 59 18.8	-1.0
	comp=Z,0.7nm,0.7s,baz=277,slow=1.5,SNR=7.7						
CPUP	Villa Florida	144.15	202	PKP	PKPdf	02 56 05.8	+0.5
	comp=Z,5.7nm,0.5s,baz=175,slow=2.2,SNR=16						
BDFB	Brasilia	147.55	226	PKPbc	PKiKP	02 56 16.1	-0.2
	comp=Z,3.8nm,0.5s,baz=157,slow=3.5,SNR=8.2						
BDFB	Brasilia	147.55	226		PKiKP	02 56 15.6	-0.8

IDC 26 02:41:32.5±2.7, 12.°80N×91.°22W, h0^{km}, mb3.8/6, mb1 4.1/8, mb1mx3.8/36, mbtmp3.9/8, ML3.9/2, MS2.9/4, Ms1 2.9/4, ms1mx2.5/34, Error ellipse: s-maj=56.1km s-min=31.1km az=136.0
GCG 26 02:41:36.4±0.7, 13.°06N×91.°96W, h36^{km}±245^{km}, MD4.2
NEIC 26 02:41:38.8±1.4, 13.°1N±0.°1×91.°60W±0.°04, h32^{km}±8^{km}, mb3.9/4, Md4.2/14(MEX), Error ellipse: s-maj=19.1km s-min=5.5km az=185.0
ISC 26 02:41:37.6±1.2**, 13.°00N**±0.°09×**91.°56W**±0.°06**, h28^{km}, n29,** σ**1°72**/32**, mb3.9**/6**, MS2.5**/3**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	1.60	43	eP	Pb	02 42 05.8	-0.7
FUG	Fuego 3	1.60	26	eP	Pb	02 42 05.8	-0.8
PCG	Pacaya	1.67	34	eP	Pb	02 42 06.8	-1.0
PCG				eS	Sb	02 42 30.4	+1.9
STG3	Santiaguito 3,	1.70	360	eP	Pn	02 42 03.9	-1.7
NBG	Las Nubes	1.97	37	eP	Pb	02 42 12.3	-0.7
NBG				eS	Sb	02 42 38.5	+1.2
THIG		2.02	340		Pn	02 42 07.1	-2.7
APG	El Apazote	2.26	28	Pn	Pn	02 42 13.6	+0.2
	9.7nm,0.3s,baz=209,slow=9.4,SNR=44						
APG				Sn	Sb	02 42 43.1	-2.5
	8.6nm,0.3s,baz=325,slow=19,SNR=6.8						
SNET	Serv Nac Est T	2.37	73	Pn	Pn	02 42 14.1	-0.7
PCIG		3.13	329		Pn	02 42 21.9	-3.2
CCIG	Comitan	3.31	350		Pn	02 42 28.3	+0.5
CCIG	Comitan	3.31	350		Pn	02 42 27.9	+0.1
CCIG				Sn	Sn	02 43 05.1	-1.2
TGIG		4.05	338		Pn	02 42 39.6	+1.8
CMIG	Matias Romero	5.18	322	Pn	Pn	02 42 51.5	-1.9
	1.0nm,0.3s,baz=159,slow=10,SNR=9.2						
CMIG				Sn	Sn	02 43 57.1	+4.9
	2.8nm,0.3s,baz=91,slow=15,SNR=5.3						
TEIG	Tepich	7.85	23	Pn	Pn	02 43 30.2	+0.3
	5.2nm,0.3s,baz=49,slow=23,SNR=36						
TEIG				LR	LR	02 46 57.2	
	comp=Z,149nm,18.1s,baz=324,slow=41						
TX31	Lajitas Ar. Si	19.76	327		Pn	02 46 07.3	0.0
TX32	Lajitas Array	19.76	327	P	Pn	02 46 06.0	-1.3
TXAR	Lajitas Array	19.76	327	P	Pn	02 46 07.5	+0.2
	1.3nm,0.8s,baz=156,slow=9.5,SNR=7.4						
ABTX	Abilene, Hawle	20.89	341	P	P	02 46 17.8	0.0
ABTX				IAmb	IAmb	02 46 18.9	
	comp=Z,5.5nm,0.8s						
LPIG	La Paz	20.90	305	LR	LR	02 53 21.6	
	comp=Z,20nm,18.6s,baz=182,slow=33						
SDV	Santo Domingo	20.95	99	LR	LR	02 54 25.3	
	comp=Z,23nm,20.3s,baz=60,slow=38						
MNTX	Cornudas Mount	22.54	328	P	P	02 46 34.7	-0.7
MNTX				IAmb	IAmb	02 46 39.4	
	comp=Z,2.7nm,0.7s						
TKL	Tuckaleechee C	23.63	16	P	P	02 46 45.3	-1.2
	comp=Z,3.5nm,0.7s,baz=166,slow=10,SNR=4.9						
TKL				LR	LR	02 56 46.1	
	comp=Z,50nm,19.3s,baz=214,slow=38						
TKL	Tuckaleechee C	23.63	16	P	P	02 46 45.8	-0.7
NVAR	Mina Array Bea	34.72	322	P	P	02 48 28.0	+2.5
	comp=Z,0.4nm,0.6s,baz=128,slow=8.9,SNR=4.5						
SCHQ	Schefferville	46.01	20	P	P	02 49 57.0	-1.4
	comp=Z,0.9nm,0.5s,baz=233,slow=7.5,SNR=6.0						
SCHQ	Schefferville	46.01	20	P	P	02 49 57.2	-1.3
YKA	Yellowknife Ar	52.09	347	P	P	02 50 45.4	+0.6
	comp=Z,1.3nm,0.7s,baz=148,slow=7.8,SNR=22						
ILAR	Eielson Array	63.92	337	P	P	02 52 09.4	+1.6
	comp=Z,0.9nm,0.9s,baz=142,slow=3.6,SNR=5.9						
CMAR	Chiang Mai Arr	147.07	341	PKPbc	PKPab	03 01 19.2	-1.0
	comp=Z,1.4nm,0.3s,baz=328,slow=3.4,SNR=2.9						

JMA 26 03:03:23.0±0.1**, 23.°69N×142.°25E, h201^{km}, M4.7, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	2.93	359	P	Pn	03 04 12.1	+0.3
JHH2				eS	S	03 04 50.3	+0.8
CBIJ	Chichi jima	3.39	359	P	Pn	03 04 17.7	+0.4
CBIJ				eS	S	03 04 59.9	+0.5
BSO3	Boso 3	11.18	353	P	Pn	03 05 57.8	+0.8
JIM2	Oshima 3	11.26	348	P	Pn	03 05 59.5	+1.1
JAG	Ashikaga	12.92	350	P	Pn	03 06 19.4	0.0

IDC 26 03:14:12.7±1.4**, 5.°40S×150.°42E, h0^{km}, mb3.0**/2**, mb1 3.3**/2**, mb1mx3.1**/21**, mbtmp3.1**/2**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.5**/11**, Error ellipse: s-maj=92.2km s-min=20.2km az=141.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.93	56	Pn	Pn	03 14 47.3	+0.5
	107nm,0.3s,baz=212,slow=3.0,SNR=16						
KRVT				Sn	Sb	03 15 13.4	-0.1
	86nm,0.3s,baz=354,slow=16,SNR=5.2						
WRA	Warramunga Arr	21.30	226	P	P	03 19 02.5	+1.3
	0.6nm,0.9s,baz=52,slow=11,SNR=2.8						
ASAR	Alice Springs	24.14	220	P	P	03 19 30.4	-0.3
	0.3nm,0.6s,baz=62,slow=9.5,SNR=5.7						
DAV	Davao City (W)	27.72	296	LR	LR	03 31 22.0	
	comp=Z,41nm,18.6s,baz=247,slow=37						
TORD	Torodi Ar. Bea	148.22	286	PKPbc	PKPbc	03 34 00.5	-1.4
	1.1nm,0.7s,baz=78,slow=2.3,SNR=9.7						

THE 26 03:24:16.1, 38.°23N×20.°36E, h12^{km}, ML2.5/9, Error ellipse: s-maj=1.0km s-min=0.4km az=256.0
ATH 26 03:24:16.2, 38.°24N×20.°39E, h12^{km}±1^{km}, ML2.6/3, Error ellipse: s-maj=1.8km s-min=0.9km az=245.0
ISC 26 03:24:16.0±1.1**, 38.°23N**±0.°02×**20.°38E**±0.°05**, h13^{km}**±4^{km}**, n33,** σ**0°36**/56**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGT1	Agia Thekli	0.02	4	P	Pg	03 24 18.4	+0.1
AGT1				S	Sg	03 24 19.3	-0.6
	16µm,0.1s						
KEF3	Kipouria, Keph	0.04	222	P	Pg	03 24 18.6	+0.2
KEF3				S	Sg	03 24 19.6	-0.5

KEF4	Livadi, Kephal	0.04	53	P	Pg	03 24 18.5	+0.1
KEF4				S	Sg	03 24 19.8	-0.3
LXR1	Lixouri, Cepha	0.05	126	P	Pg	03 24 18.8	+0.3
LXR1				S	Sg	03 24 20.7	+0.4
	29µm,0.1s						
LXRA	Lixouri, Kepha	0.05	127	P	Pg	03 24 18.8	+0.3
LXRA				S	Sg	03 24 20.4	+0.1
KEF1	Kardakata, Kep	0.08	57	P	Pg	03 24 18.8	0.0
KEF1				S	Sg	03 24 20.5	-0.3
ARGA	Argostoli. Kep	0.09	126	P	Pg	03 24 19.1	+0.2
ARGA				S	Sg	03 24 21.2	+0.2
ARG2	Argostoli	0.10	123	P	Pg	03 24 19.2	+0.2
ARG2				S	Sg	03 24 20.9	-0.2
	15µm,0.1s						
KEF2	Argostoli. Kep	0.11	129	P	Pg	03 24 19.2	+0.1
KEF2				S	Sg	03 24 21.1	-0.1
VLS	Valsamata	0.17	109	P	Pg	03 24 20.1	0.0
VLS				S	Sg	03 24 22.8	0.0
	2µm,0.1s						
VLS	Valsamata	0.17	109	P	Pg	03 24 20.1	0.0
VLS				S	Sg	03 24 22.4	-0.4
VLS				AML	AML	03 24 23.2	
	comp=N,4393µm,0.1s						
VLS				AML	AML	03 24 23.3	
	comp=E,4239µm,0.1s						
VSK1	VASILIKIADES	0.23	39	P	Pg	03 24 21.0	0.0
VSK1				S	Sg	03 24 24.9	+0.6
	comp=E,1µm,0.1s						
KONA	Konidatara, Ke	0.24	38	P	Pg	03 24 21.2	0.0
KONA				S	Sg	03 24 24.9	+0.2
KFL	Anninata	0.34	111	P	Pg	03 24 23.0	0.0
KFL				S	Sg	03 24 28.2	+0.5
KFL	Anninata	0.34	111	P	Pg	03 24 22.9	0.0
KFL				S	Sg	03 24 27.4	-0.3
KFL				AML	AML	03 24 29.4	
	comp=E,7193µm,0.4s						
KFL				AML	AML	03 24 29.4	
	comp=N,2557µm,0.2s						
VLMS	Volimes, Zakyn	0.42	148	P	Pg	03 24 24.6	+0.2
VLMS				S	Sg	03 24 30.5	+0.5
VLMS				AML	AML	03 24 32.6	
	comp=E,1930µm,0.1s						
VLMS				AML	AML	03 24 33.4	
	comp=N,3733µm,0.2s						
EVGI	Lefkada island	0.44	29	P	Pg	03 24 24.6	-0.2
EVGI				S	Sb	03 24 31.9	-0.4
EVGI	Lefkada island	0.44	29	P	Pg	03 24 24.8	0.0
EVGI				S	Sg	03 24 31.6	+0.8
LKD2	Lefkada island	0.60	21	P	Pg	03 24 27.4	-0.3
LKD2				S	Sg	03 24 36.3	+0.7
	comp=N,62nm,0.2s						
LKD2	Lefkada island	0.60	21	P	Pg	03 24 27.5	-0.2
TSLK	Tsoukalades, L	0.63	20	P	Pg	03 24 27.8	-0.5
TSLK				S	Sg	03 24 37.1	+0.5
	comp=N,62nm,0.3s						
TSLK	Tsoukalades, L	0.63	20	P	Pg	03 24 27.9	-0.5
AST1	Astakos	0.64	61	P	Pg	03 24 28.6	+0.2
AST1				S	Sb	03 24 37.9	+0.1
	comp=N,235nm,0.2s						
KRI1	kERI	0.67	149	P	Pg	03 24 28.8	-0.2
KRI1				S	Sb	03 24 38.8	+0.1
	comp=N,562nm,0.2s						
VTN	Vitineika	0.71	116	P	Pg	03 24 29.7	-0.1
PDO	Prodromos	0.73	60	P	Pg	03 24 30.0	-0.2
PDO				S	Sb	03 24 41.5	+1.0
PDO	Prodromos	0.73	60	P	Pg	03 24 29.9	-0.2
RLS	Riolos of Patr	0.87	101	P	Pg	03 24 32.4	-0.5
PVO	Paravola	0.98	67	P	Pg	03 24 34.6	-0.3
PVO	Paravola	0.98	67	P	Pg	03 24 34.7	-0.3
DRO	Drossia	1.08	105	P	Pb	03 24 36.4	-0.3
AMT	Artemida-Makis	1.26	123	P	Pn	03 24 39.4	0.0
IGT	Igoumenitsa	1.30	358	P	Pg	03 24 41.1	+0.1

*ATH **26** 03:24:57.3, 38°.24N×20°.37E, h11km±2km, ML2.6/2, Error ellipse: s-maj=2.1km s-min=1.4km az=203.0*

*THE **26** 03:24:57.6, 38°.24N×20°.39E, h11km, ML2.7/8, Error ellipse: s-maj=1.0km s-min=0.4km az=259.0*

ISC 26 03:24:57.4±1.5, **38°.24N**±0°.03×**20°.39E**±0°.05, **h12km**±5km, **n22**, σ0.20/41, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT1	Agia Thekli	0.01	339	P	Pg	03 24 59.4	-0.1
AGT1				S	Sg	03 25 00.9	0.0
	11µm,0.1s						
KEF4	Livadi, Kephal	0.03	53	P	Pg	03 24 59.4	-0.1
KEF4				S	Sg	03 25 00.9	-0.1
KEF3	Kipouria, Keph	0.05	224	P	Pg	03 24 59.6	-0.1
KEF3				S	Sg	03 25 00.8	-0.4
LXR1	Lixouri, Cepha	0.05	135	P	Pg	03 24 59.8	+0.1
LXR1				S	Sg	03 25 01.8	+0.5
	27µm,0.2s						
LXRA	Lixouri, Kepha	0.05	136	P	Pg	03 24 59.8	+0.1
LXRA				S	Sg	03 25 01.5	+0.2
KEF1	Kardakata, Kep	0.07	58	P	Pg	03 24 59.8	-0.1
KEF1				S	Sg	03 25 01.5	-0.2
ARGA	Argostoli. Kep	0.09	131	P	Pg	03 25 00.2	+0.1
ARGA				S	Sg	03 25 02.0	-0.1
ARG2	Argostoli	0.10	128	P	Pg	03 25 00.2	0.0
ARG2				S	Sg	03 25 02.0	-0.1
	11µm,0.1s						
KEF2	Argostoli. Kep	0.10	134	P	Pg	03 25 00.4	+0.1
KEF2				S	Sg	03 25 02.2	-0.1
VLS	Valsamata	0.17	111	P	Pg	03 25 01.1	-0.1
VLS				S	Sg	03 25 04.1	+0.2
	2µm,0.1s						
VLS	Valsamata	0.17	111	P	Pg	03 25 01.0	-0.2
VLS				S	Sg	03 25 03.7	-0.2
VLS				AML	AML	03 25 04.2	
	comp=N,4493µm,0.1s						
VLS				AML	AML	03 25 04.4	
	comp=E,4300µm,0.1s						
VSK1	VASILIKIADES	0.22	39	P	Pg	03 25 02.1	0.0
VSK1				S	Sg	03 25 05.3	0.0
	comp=E,2µm,0.1s						
KONA	Konidatara, Ke	0.23	37	P	Pg	03 25 02.2	-0.2
KONA				S	Sg	03 25 05.4	-0.4
KFL	Anninata	0.34	112	P	Pg	03 25 04.1	-0.1
VLMS	Volimes, Zakyn	0.42	149	P	Pg	03 25 05.5	-0.2
VLMS				S	Sg	03 25 11.5	+0.2
VLMS				AML	AML	03 25 13.0	
	comp=E,1784µm,0.2s						
VLMS				AML	AML	03 25 14.5	
	comp=N,3582µm,0.2s						
EVGI	Lefkada island	0.44	29	P	Pg	03 25 05.9	-0.1
EVGI				S	Sg	03 25 12.2	+0.3
EVGI	Lefkada island	0.44	29	P	Pg	03 25 05.9	-0.1
LKD2	Lefkada island	0.59	21	P	Pg	03 25 09.0	+0.1
LKD2				S	Sg	03 25 17.0	+0.3
	comp=N,80nm,0.3s						
TSLK	Tsoukalades, L	0.62	19	P	Pg	03 25 09.4	-0.1
AST1	Astakos	0.63	61	P	Pg	03 25 09.5	-0.1
AST1				S	Sb	03 25 19.2	+0.1
	comp=N,338nm,0.1s						
KRI1	kERI	0.67	149	P	Pg	03 25 10.2	-0.2
KRI1				S	Sb	03 25 20.3	+0.1
	comp=N,615nm,0.2s						
PDO	Prodromos	0.72	60	P	Pg	03 25 11.1	-0.3
PDO				S	Sb	03 25 22.1	+0.3

*NIED **26** 03:55:00, 32°.20N×141°.70E, h5km, Mw4.3 Best double couple: $M_0$3.02000×10^{15} NP1:ϕ_s329.00000°, δ66.00000°, λ77.00000°. NP2:ϕ_s179.00000°, δ27.00000°, λ117.00000°.*

*BJI **26** 03:55:05.5±0.0, 31°.62N×142°.05E, h34km, mB4.9/8, mb4.4/16*

*IDC **26** 03:55:05.7±0.6, 31°.76N×141°.77E, h0km, mb4.1/17, mb1 4.2/24, mb1mx4.1/59, mbtmp4.1/24, ML3.8/6, MS3.4/5, Ms1 3.4/5, ms1mx2.9/47, Error ellipse: s-maj=17.6km s-min=14.0km az=63.0*

*NEIC **26** 03:55:07.2±1.4, 31°.79N±0°.07×141°.77E±0°.1, h10km±4km, mb4.5/38, Error ellipse: s-maj=14.1km s-min=9.0km az=58.0*

*JMA **26** 03:55:09.0±0.4, 32°.19N×141°.69E, h0km, M4.1*

ISC 26 03:55:10.3±0.5, **31°.96N**±0°.06×**141°.80E**±0°.07, **h29km**, **n84**, σ1.52/86, **mb4.4**/35, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.80	287	P	Pn	03 55 39.7	+0.3
JHCJ	Hachijojimakas	2.02	304	P	Pn	03 55 42.1	-0.4
JHJ2	Mitsune	2.03	305	P	Pn	03 55 42.3	-0.3
JHJ2	Mitsune	2.03	305	P	Pn	03 55 42.6	0.0
JHJ2				Sn	Sn	03 56 08.1	+1.1
JHJ	Hachijo jima 2	2.06	305	Pn	Pn	03 55 42.5	-0.4
	133nm,0.3s,baz=102,slow=23,SNR=144						
JHJ				Sn	Sn	03 56 09.9	+2.2
	111nm,0.3s,baz=224,slow=23,SNR=6.3						
JHJ				LR	LR	03 56 34.7	
	comp=Z,427nm,18.4s,baz=88,slow=42						
BSO1	Boso 1	2.78	346	P	Pn	03 55 52.6	+0.3
BSO3	Boso 3	3.04	340	P	Pn	03 55 56.7	+0.5
JYN	Shimob	4.45	323	P	Pn	03 56 18.1	+2.1
JRY	Ryogami san	4.71	330	P	Pn	03 56 20.0	+0.5
JRY				S	Sn	03 57 12.9	-0.2
CBIJ	Chichi jima	4.86	176	S	Sn	03 57 18.4	+1.7
JCJ	Chichijima	4.86	176	Pn	Pn	03 56 17.3	-4.1
	17nm,0.3s,baz=71,slow=23,SNR=22						
JAG	Ashikaga	4.86	337	P	Pn	03 56 21.3	-0.2
INU	Inuyama	5.23	312	P	Pn	03 56 24.8	-1.8
MJAR	Matsushiro Arr	5.45	328	Pn	Pn	03 56 29.9	+0.2
	0.8nm,0.3s,baz=148,slow=11,SNR=33						
MAJO	Matsushiro	5.46	328		Pn	03 56 30.8	+1.1
MAT	Matsushiro	5.46	328	P	Pn	03 56 30.3	+0.6
MAT	Matsushiro	5.46	328	P	Pn	03 56 30.3	+0.6
MAT				S	Sn	03 57 25.8	-5.7
MJB9	Matsu-Tunnel	5.46	328		Pn	03 56 30.6	+0.8
JMK	Ichinoseki	7.00	356	P	Pn	03 56 49.5	-1.3
JMK				S	Sn	03 58 05.0	-4.3
JNU	Nakatsue	9.29	280	LR	LR	04 00 51.9	
	comp=Z,156nm,18.9s,baz=104,slow=37						
ERM	Erimo	10.10	6	Pn	Pn	03 57 30.6	-2.8
ASAJ	Asahikawa	12.16	3	Pn	Pn	03 58 03.1	+1.6
	1.7nm,0.3s,baz=217,slow=8.9,SNR=5.1						
JKA	Kamikawa-asahi	12.16	3		Pn	03 58 03.1	+1.7
KSRS	Korea Array	12.66	299	Pn	Pn	03 58 09.0	+0.6
	0.1nm,0.3s,baz=110,slow=13,SNR=2.9						
KSRS				LR	LR	04 03 00.6	
	comp=Z,176nm,19.1s,baz=112,slow=37						
USRK	Ussuriysk Ar.	14.44	331	Pn	Pn	03 58 32.5	-0.2
	baz=121,slow=13,SNR=2.9						
USRK				LR	LR	04 04 11.8	
	comp=Z,124nm,18.2s,baz=137,slow=37						
KLR	Kul'dur	18.84	339	P	P	03 59 28.3	+0.5
	0.2nm,0.3s,baz=140,slow=11,SNR=7.8						
WHN	Wuhan	23.49	274	P	P	04 00 19.0	+1.3
HIA	Hailar	23.93	323	P	P	04 00 20.3	-1.5
PETK	Petropavlovsk-	24.06	24	LR	LR	04 09 46.9	
	comp=Z,163nm,21.4s,baz=65,slow=36						
BTO	Baotou	26.92	298	eP	P	04 00 48.8	-0.3
XAN	Xi'an	27.59	283	P	P	04 00 53.5	-1.6
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XAN	Xi'an	27.59	283	P	P	04 00 52.6	-2.5
XAN				IAmb	IAmb	04 00 57.9	
	comp=Z,5.9nm,0.7s						
ULN	Ulaanbaatar	30.71	311	P	P	04 01 23.2	+0.3
SONM	Songino Array	31.13	311	P	P	04 01 27.6	+1.2
	comp=Z,2.2nm,0.5s,baz=121,slow=9.3,SNR=22						
TLY	Talaya	34.07	317	P	P	04 01 53.2	+1.2
	comp=Z,4.0nm,0.5s,baz=158,slow=5.6,SNR=4.0						
TLY	Talaya	34.07	317	P	P	04 01 52.1	0.0
TLY				IAmb	IAmb	04 01 54.5	
	comp=Z,4.8nm,0.7s						
ZALV	Zalesovo Beam	45.68	316	P	P	04 03 29.4	+1.0
	comp=Z,1.2nm,0.5s,baz=119,slow=8.4,SNR=5.8						
ZALV				PcP	PcP	04 05 06.3	+0.3
	comp=Z,1.0nm,0.6s,baz=64,slow=3.4,SNR=2.8						
MK31	Makanchi Array	47.23	306	P	P	04 03 40.5	-0.2
MKAR	Makanchi Array	47.23	306	P	P	04 03 41.4	+0.7
	comp=Z,4.0nm,0.7s,baz=90,slow=9.7,SNR=54						
MAKZ	Makanchi	47.44	306	P	P	04 03 42.3	0.0
MAKZ				IAmb	IAmb	04 03 55.3	
	comp=Z,4.8nm,0.8s						
KURK	Kurchatov	49.43	312	P	P	04 03 57.9	+0.5
SVW2	Sparrevohn	49.44	35	P	P	04 03 58.5	+1.1
SVW2				IAmb	IAmb	04 04 04.2	
	comp=Z,10nm,1.2s						
PPLA	Purkeypile	51.21	32	P	P	04 04 12.0	+1.0
WB0	Warramunga Arr	51.92	189	P	P	04 04 14.7	-1.8
WB0				IAmb	IAmb	04 04 28.0	
	comp=Z,9.3nm,0.9s						
MLY	Manley	52.03	30	P	P	04 04 17.9	+0.9
MLY				IAmb	IAmb	04 04 28.6	
	comp=Z,5.7nm,1.2s						
WR0	Warramunga Arr	52.09	189	P	P	04 04 15.5	-2.3
WR0				IAmb	IAmb	04 04 29.4	
	comp=Z,7.0nm,0.8s						
WB2	Warramunga Arr	52.10	189	P	P	04 04 14.9	-2.9
WRA	Warramunga Arr	52.10	189	P	P	04 04 15.0	-2.8
	comp=Z,3.6nm,0.7s,baz=4.7,slow=7.5,SNR=29						
GHO	Glory Hole Cre	52.67	34	P	P	04 04 21.0	-0.8
GHO				IAmb	IAmb	04 04 34.7	
	comp=Z,9.3nm,1.2s						
RND	Reindeer	52.75	32	P	P	04 04 23.2	+0.9
RND				IAmb	IAmb	04 04 24.0	
	comp=Z,7.8nm,1.2s						
TOLK	Toolik Lake Re	52.87	25	P	P	04 04 24.3	+1.2
TOLK				IAmb	IAmb	04 04 29.7	
	comp=Z,4.3nm,1.0s						
KNK	Knik Glacier	52.89	34	P	P	04 04 23.6	+0.2
SML	Sawmill	52.95	34	P	P	04 04 24.0	+0.2
SML				IAmb	IAmb	04 04 26.7	
	comp=Z,9.4nm,1.0s						
WRH	Wood River Hil	53.13	31	P	P	04 04 23.9	-1.2
CCB	Clear Creek Bu	53.26	30	P	P	04 04 27.1	+1.1
IL31		53.66	30	P	P	04 04 30.1	+1.2
IL31				IAmb	IAmb	04 04 43.2	
	comp=Z,4.7nm,1.0s						
ILAR	Eielson Array	53.66	30	P	P	04 04 29.8	+0.9
	comp=Z,1.7nm,0.9s,baz=261,slow=5.4,SNR=19						
PRP	Porcupine Dome	54.25	29	P	P	04 04 35.3	+1.9
BRVK	Borovoye	54.37	315	P	P	04 04 34.5	+0.3
BRVK				IAmb	IAmb	04 04 48.5	
	comp=Z,3.1nm,0.8s						
AS31	Alice Springs	55.82	189	P	P	04 04 43.4	-1.6
ASAR	Alice Springs	55.82	189	P	P	04 04 44.3	-0.7
	comp=Z,1.2nm,0.7s,baz=16,slow=14,SNR=12						
KK31	Karatay Array	56.06	303	P	P	04 04 46.1	-0.5
KK31				IAmb	IAmb	04 04 48.0	
	comp=Z,5.4nm,0.9s						
KKAR	Karatay Array	56.06	303	P	P	04 04 46.0	-0.7
KKAR				IAmb	IAmb	04 04 48.0	
	comp=Z,5.4nm,0.9s						
INK	Inuvik	58.78	26	P	P	04 05 07.2	+1.9
	comp=Z,1.4nm,0.5s,baz=315,slow=5.5,SNR=15						
INK	Inuvik	58.78	26	P	P	04 05 07.6	+2.2
ABKAR	Akbulak array	61.52	312	P	P	04 05 23.9	-0.6
RES	Resolute Bay	67.43	14	P	P	04 06 04.2	+1.5
	comp=Z,1.9nm,0.9s,baz=337,slow=6.5,SNR=5.2						
YKA	Yellowknife Ar	68.05	29	P	P	04 06 08.1	+1.3
	comp=Z,0.3nm,0.5s,baz=295,slow=6.3,SNR=5.8						
FINES	FINESS Array B	73.46	333	P	P	04 06 40.1	+0.4
	comp=Z,1.7nm,0.8s,baz=46,slow=8.2,SNR=4.1						
JTMT	Jette	75.48	43	P	P	04 06 52.2	+0.3
JTMT				IAmb	IAmb	04 07 01.5	
	comp=Z,5.7nm,1.2s						
LRM	Limekiln Ridge	77.57	44	P	P	04 07 04.2	+0.2
DLMT	Dillon	77.74	44	IAmb	IAmb	04 07 10.9	
	comp=Z,2.8nm,0.8s						
NVAR	Mina Array Bea	77.80	52	P	P	04 07 06.4	+1.1
	comp=Z,1.4nm,0.7s,baz=301,slow=5.8,SNR=15						
AKASG	Malin Array Be	78.52	323	P	P	04 07 08.8	+0.1
	comp=Z,0.8nm,0.5s,baz=44,slow=5.6,SNR=4.8						
NB2	NORSAR Subarra	78.99	338	P	P	04 07 09.4	-1.8
	comp=Z,3.3nm,1.2s,baz=41,slow=5.6						
NOA	NORSAR Array B	78.99	338	P	P	04 07 10.7	-0.5
	comp=Z,1.3nm,0.8s,baz=41,slow=5.4,SNR=4.1						
DUG	Dugway, Tooele	80.45	48	IAmb	IAmb	04 07 32.7	
	comp=Z,4.4nm,1.1s						
PDAR	Pinedale Array	81.01	45	P	P	04 07 22.9	+0.2
	comp=Z,0.6nm,0.7s,baz=63,slow=0.7,SNR=6.2						
BRTR	Keskin Array B	82.47	312	P	P	04 07 31.6	+1.2
	comp=Z,1.0nm,0.9s,baz=45,slow=5.4,SNR=4.3						
RAYN	Ar Rayn	82.91	293	P	P	04 07 32.4	-0.4
RAYN				IAmb	IAmb	04 07 46.0	
	comp=Z,4.3nm,0.8s						
VYHS	Vyhne	85.09	326	eP	P	04 07 44.8	+1.4
CLL	Collm	85.66	331	eP	P	04 07 48.0	+1.9
MODS	Modra-Piesok	85.91	327	eP	P	04 07 48.4	+0.9
TXAR	Lajitas Array	92.95	53	P	P	04 08 21.8	+0.6
	comp=Z,1.6nm,0.7s,baz=301,slow=2.4,SNR=16						

*IDC **26** 04:00:41.7±2.1, 51°.35N×178°.96W, h23km±12km, mb4.3/31, mb1 4.4/34, mb1mx4.3/61, mbtmp4.4/34, ML3.8/2, MS3.8/29, Ms1 3.8/29, ms1mx3.7/40, Error ellipse: s-maj=16.8km s-min=9.5km az=160.0*

*MOS **26** 04:00:42.0±0.8, 51°.23N×178°.82W, h41km, mb4.9/30, Error ellipse: s-maj=9.6km s-min=6.9km az=95.2*

*BJI **26** 04:00:42.0±0.0, 51°.63N×179°.03W, h41km, mB5.0/31, mb4.8/51, Ms4.7/15, Ms7 4.4/13*

*NEIC **26** 04:00:43.9±1.2, 51°.22N±0°.09×178°.90W±0°.09, h42km±4km, Error ellipse: s-maj=14.0km s-min=7.6km az=165.0*

*AEIC **26** 04:00:44.0±3.0, 51°.22N±0°.09×178°.81W±0°.08, h22km±4km, ML4.6/30, mb4.8/246(NEIC), Error ellipse: s-maj=12.8km s-min=7.1km az=168.0*

ISC 26 04:00:43.7±1.0, **51°.19N**±0°.08×**178°.89W**±0°.04, **h40km**±7km, **n638**, σ1.06/554, **mb4.8**/158, **MS3.8**/39, **20C-21D**, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALAA	Gareloi Lava P	0.58	8		Pn	04 00 55.4	-0.2
GAEA	Gareloi East	0.60	9		Pn	04 00 55.6	-0.3
TASE	Tanaga Southea	0.84	39		Pn	04 00 59.1	0.0
TAFP	Tanaga Falls P	0.91	38		Pn	04 00 60.0	-0.1
TAPA	Tanaga Point A	0.92	47		Pn	04 01 00.2	-0.1
KIMD	Kanaga Island	1.19	60		Pn	04 01 03.5	-0.3
KIWB	Kanaga Island	1.27	58	Pn	Pn	04 01 04.5	-0.5
KIWB				Sn	Sn	04 01 21.1	+0.2
KIKV	Kanaga Island	1.28	57		Pn	04 01 05.1	0.0
KICM	Kanaga Island	1.29	55		Pn	04 01 05.6	+0.4
KIRH	Kanaga Island	1.33	57		Pn	04 01 05.8	0.0
ADK	Adak	1.54	62		Pn	04 01 08.7	0.0
ADK				Sn	Sn	04 01 27.6	+0.1
ADAG	Mount Adagdak	1.63	60		Pn	04 01 10.6	+0.7
GSTD	Great Sitkin T	1.92	62		Pn	04 01 14.6	+0.7
GSTD					Sn	04 01 38.7	+1.8
GSMY	Great Sitkin M	1.96	63		Pn	04 01 15.2	+0.7
GSTR	Great Sitkin T	1.98	62		Pn	04 01 15.7	+0.9
ATKA	Atka Island	3.09	69		Pn	04 01 29.9	0.0
ATKA				Sn	Sn	04 02 06.3	+0.6
ATKA	Atka Island	3.09	69		LR	04 02 08.5	
KOKL	Mount Kliuchef	3.13	67		Pn	04 01 32.0	+1.4
KOFP	Korovin Flat P	3.17	68		Pn	04 01 33.1	+1.9
SMY	Shemya	4.60	292		Pn	04 01 50.5	-0.1
SMY	Shemya	4.60	292	P	Pn	04 01 50.1	-0.1
NIKH	Nikolski High	6.44	70		Pn	04 02 16.9	+1.0
NIKH				Sn	Sn	04 03 29.3	+1.2
OKTU	Okmok Mt. Tuli	7.01	68		Pn	04 02 25.8	+2.0
OKFG	Magazine Ridge	7.09	67		Pn	04 02 27.5	+2.6
MGOD	Makushin Gods	7.79	66		Pn	04 02 36.1	+1.6
MREP	Makushin Rep't	7.87	66		Pn	04 02 37.5	+2.0
MNAT	Makushin Natee	7.92	65		Pn	04 02 38.5	+2.3
UNV	Unalaska Valle	8.01	66		Pn	04 02 37.9	+0.5
UNV				Sn	Sn	04 04 07.9	+1.2
AKRB	Akutan Reef Bi	8.33	64		Pn	04 02 44.5	+2.6
AKUT	Akutan	8.50	65	Pn	Pn	04 02 44.6	+0.4
FALS	False Pass	10.02	62	Pn	Pn	04 03 05.8	+0.9
SDPT	Sand Point	11.78	62	Pn	Pn	04 03 29.3	+0.4
GAMB	Gambell	13.19	14	Pn	Pn	04 03 49.9	+1.8
PET	Petropavlovsk	13.91	286	eP	P	04 04 04.1	-1.3
PET				eS	Sn	04 06 38.1	+7.2
PET				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PET				MLR	MLR		
	comp=Z,300nm,16.0s						
PETK	Petropavlovsk-	14.48	287	Pn	Pn	04 04 02.4	-3.5
	comp=Z,0.3nm,0.3s,baz=90,slow=16,SNR=3.0						
SVW2	Sparrevohn	16.25	43	P	P	04 04 31.7	+0.3
SVW2				IAmb	IAmb	04 04 36.8	
	comp=Z,70nm,1.1s						
KDAK	Kodiak Island	16.58	56	Pn	Pn	04 04 29.8	-3.1
	comp=Z,3.5nm,0.3s,baz=231,slow=2.3,SNR=24						
KDAK				LR	LR	04 12 10.5	
	comp=Z,842nm,18.7s,baz=297,slow=42						
KDAK	Kodiak Island	16.58	56	Pn	Pn	04 04 31.2	-1.6
KDAK	Kodiak Island	16.58	56	P	Pn	04 04 31.3	-1.6
KDAK				pmax	pmax		
	comp=Z,24nm,0.9s						
TTA	Tatalina	17.00	37	P	Pn	04 04 38.4	+0.1
TTA	Tatalina	17.00	37	P	Pn	04 04 38.4	+0.1
TTA				pmax	pmax		
	comp=Z,28nm,1.2s						
CNPM	China Poot	17.69	51	Pn	P	04 04 47.4	+0.1
CNPM				IAmb	IAmb	04 04 59.1	
	comp=Z,46nm,1.1s						
BRLK	Bradley Lake	17.92	51	Pn	Pn	04 04 49.5	-0.2
BILL	Bilibino	18.39	342	P	Pn	04 04 55.6	+0.4
BILL	Bilibino	18.39	342	iP	Pn	04 04 56.1	+0.8
BILL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,466nm,17.0s						
RDOG	Red Dog Mine	18.64	19	P	P	04 04 57.4	-0.2
SEW	Seward	18.71	50	IAmb	IAmb	04 05 02.3	
	comp=Z,40nm,0.9s						
RC01	Rabbit Creek A	18.86	47	P	Pn	04 05 01.2	+0.2
MA2	Magadan	19.02	308	⇓iP	Pn	04 05 03.6	+0.7
MA2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KTH	Kantishna Hill	19.31	39	P	P	04 05 04.5	-0.5
KTH				IAmb	IAmb	04 05 09.9	
	comp=Z,91nm,0.8s						
SEY	Seymchan	19.35	318	P	P	04 05 04.7	-0.7
	baz=37,slow=20,SNR=3.0						
SEY				ScP	ScP	04 12 59.3	+1.0
	comp=Z,0.1nm,0.3s,baz=113,slow=6.4,SNR=5.0						
SEY	Seymchan	19.35	318	⇑iP	Pn	04 05 07.8	+1.1
GHO	Glory Hole Cre	19.46	45	P	P	04 05 07.3	+0.6
TRF	Thorofare Moun	19.52	40	P	P	04 05 06.7	-0.7
TRF				IAmb	IAmb	04 05 16.0	
	comp=Z,66nm,1.0s						
BPAW	Bear Paw Mtn.	19.53	38	IAmb	IAmb	04 05 15.5	
	comp=Z,27nm,0.8s						
SML	Sawmill	19.73	46	P	P	04 05 10.4	+0.7
SML				IAmb	IAmb	04 05 27.9	
	comp=Z,28nm,1.0s						
GLI	Glacier Island	20.04	49	P	P	04 05 13.1	+0.1
MCK	McKinley	20.18	40	IAmb	IAmb	04 05 24.1	
	comp=Z,19nm,0.7s						
SCM	Sheep Creek Mo	20.19	46	P	P	04 05 14.0	-0.7
SCM				IAmb	IAmb	04 05 17.6	
	comp=Z,36nm,0.8s						
SCM	Sheep Creek Mo	20.19	46	P	P	04 05 14.0	-0.7
SCM				pmax	pmax		
	comp=Z,36nm,0.8s						
HIN	Hinchinbrook I	20.21	50	P	Pn	04 05 15.9	-1.1
HIN				IAmb	IAmb	04 05 22.8	
	comp=Z,46nm,1.2s						
DHY	Denali Highway	20.58	43	IAmb	IAmb	04 05 22.6	
	comp=Z,76nm,0.9s						
MDM	Murphy Dome	20.99	37	IAmb	IAmb	04 05 27.2	
	comp=Z,40nm,0.9s						
TCOL	CIGO, UAF Yank	21.09	38	P	P	04 05 25.5	+1.2
	baz=244						
HDA	Harding Lake	21.26	39	P	P	04 05 26.4	+0.3
	baz=247,SNR=9.0						
POKR	Poker Plat Res	21.36	37	P	P	04 05 27.7	+0.4
	baz=244,SNR=22						
PAX	Paxson	21.36	44	P	P	04 05 27.0	-0.4
PAX				IAmb	IAmb	04 05 33.1	
	comp=Z,35nm,0.8s						
PAX	Paxson	21.36	44	P	P	04 05 27.0	-0.4
PAX				pmax	pmax		
	comp=Z,35nm,0.8s						
IL31		21.43	38	P	P	04 05 27.2	-0.7
ILAR	Eielson Array	21.43	38	P	P	04 05 26.8	-1.2
	comp=Z,2.8nm,0.8s,baz=242,slow=8.9,SNR=22						
ILAR				PcP	PcP	04 09 29.2	-0.5
	comp=Z,0.6nm,0.4s,baz=285,slow=3.4,SNR=11						
ILAR				ScP	ScP	04 13 04.9	+1.7
	comp=Z,0.8nm,0.7s,baz=288,slow=3.4,SNR=13						
ILAR				LR	LR	04 14 55.2	
	comp=Z,332nm,18.2s,baz=234,slow=40						
COLD	Coldfoot	21.45	31	P	P	04 05 30.3	+2.2
GLB	Gilahina Butte	21.72	48	IAmb	IAmb	04 05 36.7	
	comp=Z,22nm,0.7s						
RIDG	Independent Ri	21.88	42	P	P	04 05 32.3	-0.5
RIDG				IAmb	IAmb	04 05 42.0	
	comp=Z,18nm,0.8s						
CRQM	Cirque	21.91	50	IAmb	IAmb	04 05 51.6	
	comp=Z,16nm,0.8s						
TGL	Tana Glacier	22.06	50	P	P	04 05 35.0	+0.1
MCARA	McCarthy VSAT	22.08	49	P	P	04 05 33.5	-1.4
MCARA				IAmb	IAmb	04 05 49.9	
	comp=Z,31nm,0.9s						

MENT Mentasta 22.12 44 IAmb IAmb 04 05 45.6
comp=Z,25nm,1.0s
PRP Porcupine Dome 22.26 37 P P 04 05 36.5 -0.5
SCRK Sand Creek 22.31 42 P P 04 05 35.8 -1.7
SCRK IAmb IAmb 04 05 41.0
comp=Z,18nm,0.9s
TOLK Toolik Lake Re 22.46 28 P P 04 05 39.4 +0.4
baz=234,SNR=6.0
FYU Fort Yukon 22.81 35 IAmb IAmb 04 05 46.1
comp=Z,20nm,0.8s
CTGM Chitina Glacie 22.81 50 P P 04 05 42.9 0.0
EGAK Eagle 23.73 41 IAmb IAmb 04 05 52.6
comp=Z,34nm,1.0s
TYV Tymovskoe 24.00 284 eP P 04 05 54.9 +0.5
TYV pmax pmax
comp=Z,15nm,0.9s
TYV pmax pmax
comp=Z,100nm,4.6s
DAWY Dawson 24.29 43 IAmb IAmb 04 06 00.8
comp=Z,16nm,1.1s
YSS Yuzh-Sakhalins 25.28 276 P P 04 06 05.3 -0.7
YSS IAmb IAmb 04 06 09.0
comp=Z,32nm,0.7s
YSS Yuzh-Sakhalins 25.28 276 i P P 04 06 07.2 +1.2
YSS pmax pmax
comp=Z,40nm,0.7s
YSS MLR MLR
comp=Z,200nm,17.0s
EPYK Eagle Plains 25.94 38 P P 04 06 10.8 -1.2
EPYK Eagle Plains 25.94 38 P P 04 06 10.7 -1.2
baz=255
ASAJ Asahikawa 26.64 270 P P 04 06 18.5 +0.1
comp=Z,15nm,0.8s,baz=44,slow=8.6,SNR=8.1
ASAJ LR LR 04 17 30.8
comp=Z,99nm,18.3s,baz=138,slow=38
INK Inuvik 27.65 35 P P 04 06 26.5 -0.6
comp=Z,4.8nm,0.9s,baz=235,slow=10,SNR=5.2
INK PcP PcP 04 09 43.0 -0.2
comp=Z,1.1nm,0.5s,baz=285,slow=1.9,SNR=4.0
INK ScP ScP 04 13 23.8 +3.4
comp=Z,0.8nm,0.7s,baz=179,slow=10,SNR=6.6
INK LR LR 04 18 16.4
comp=Z,273nm,19.6s,baz=250,slow=38
GRNR Gornyy 27.81 287 eP P 04 06 24.9 -3.9
GRNR MLR MLR
comp=Z,50nm,17.0s
YAK Yakutsk 29.50 312 LR LR 04 18 05.9
comp=Z,152nm,21.1s,baz=98,slow=36
TIXI Tiksi 30.77 331 PcP PcP 04 09 50.8 -0.3
comp=Z,4.2nm,0.7s,baz=77,slow=0.6,SNR=6.5
TIXI Tiksi 30.77 331 ⇑iP P 04 06 56.7 +1.9
TIXI pmax pmax
comp=Z,2.0nm,0.9s
KLR Kul'dur 31.18 286 P P 04 06 58.2 -0.4
comp=Z,13nm,0.7s,baz=64,slow=8.1,SNR=55
KLR Kul'dur 31.18 286 ⇓iP P 04 06 58.5 -0.1
KLR pmax pmax
comp=Z,17nm,0.9s
C36M Paulatuk 31.21 34 P P 04 06 58.4 -0.3
baz=263
USRK Ussuriysk Ar. 33.26 277 P P 04 07 16.4 -0.6
comp=Z,3.4nm,0.7s,baz=50,slow=5.7,SNR=5.3
USRK LR LR 04 19 35.3
comp=Z,58nm,21.7s,baz=45,slow=34
H11N2 WAKE ISLAND Hy 33.34 205 T T 04 42 42.5
baz=16,slow=76,SNR=459
H11N3 WAKE ISLAND Hy 33.34 205 T T 04 42 41.0
baz=16,slow=76,SNR=598
H11N1 WAKE ISLAND Hy 33.35 205 T T 04 42 33.6
baz=16,slow=76,SNR=48
MJAR Matsushiro Arr 33.70 261 P P 04 07 21.0 +0.2
comp=Z,1.3nm,0.3s,baz=53,slow=6.6,SNR=5.4
MJAR LR LR 04 19 16.1
comp=Z,104nm,21.3s,baz=70,slow=33
MAJO Matsushiro 33.70 261 ⇓iP P 04 07 21.9 +1.1
MAJO pmax pmax
comp=Z,10.0nm,1.4s
H11S1 WAKE ISLAND Hy 34.55 205 T T 04 44 00.4
baz=17,slow=76,SNR=460
H11S2 WAKE ISLAND Hy 34.57 205 T T 04 44 14.6
baz=17,slow=76,SNR=195
H11S3 WAKE ISLAND Hy 34.57 205 T T 04 44 05.9
baz=17,slow=76,SNR=161
JHJ Hachijo jima 2 34.99 255 LR LR 04 19 54.4
comp=Z,60nm,20.8s,baz=32,slow=33
LLLB Lillooet 35.19 68 IAmb IAmb 04 07 36.1
comp=Z,10nm,1.0s
YKA Yellowknife Ar 35.41 46 P P 04 07 34.4 -0.9
comp=Z,5.9nm,0.9s,baz=282,slow=8.0,SNR=34
YKA PcP PcP 04 10 04.7 +0.4
comp=Z,2.2nm,0.9s,baz=282,slow=2.4,SNR=7.3
YKA ScP ScP 04 13 48.0 +1.4
comp=Z,0.5nm,0.5s,baz=285,slow=3.7,SNR=8.3
YKA LR LR 04 23 49.5
comp=Z,431nm,18.3s,baz=0.0,slow=39
D03D Eldon 35.79 73 P P 04 07 40.3 +1.6
baz=297,SNR=9.9
B05A Bryant 36.05 72 P P 04 07 42.7 +1.8
baz=297,SNR=15
F04D Rainier, OR 36.52 76 P P 04 07 46.3 +1.3
baz=299
E04D Cinebar 36.56 75 P P 04 07 47.0 +1.7
baz=299,SNR=5.9
D05A Enumclaw 36.61 73 IAmb IAmb 04 08 02.3
comp=Z,26nm,1.0s
G03D McMinnville, O 36.79 77 P P 04 07 47.3 0.0
baz=300
C06D Leavenworth 36.93 72 P P 04 07 48.9 +0.4
baz=298
I02D Swisshome 36.99 79 P P 04 07 50.1 +1.0
baz=301
LTY Liberty 37.37 73 IAmb IAmb 04 07 54.6
comp=Z,14nm,1.1s
J01E Myrtle Point 37.43 80 P P 04 07 53.0 +0.3
baz=302
H04D Lebanon 37.46 78 P P 04 07 54.3 +1.3
baz=301
I03D Drain, OR 37.51 79 P P 04 07 54.5 +1.0
baz=302
B08A Colville Reser 37.66 70 IAmb IAmb 04 07 56.8
comp=Z,22nm,1.0s
K02D Willamette Mer 37.85 81 P P 04 07 57.5 +1.1
baz=303
JCJ Chichijima 37.95 246 LR LR 04 20 29.9
comp=Z,144nm,22.0s,baz=50,slow=31
G05D Wamic, OR 37.97 76 P P 04 07 58.9 +1.6
baz=300,SNR=7.1
I04A Tendick Farm, 38.04 78 P P 04 07 59.7 +1.7
baz=302,SNR=9.2
BOD Bodaibo 38.04 307 eP P 04 07 56.5 -1.3
BOD pmax pmax
comp=Z,5.0nm,1.0s
L02E Cave Junction 38.18 81 P P 04 08 00.6 +1.5
baz=303
I05D Terrebonne, OR 38.41 77 P P 04 08 02.8 +1.7
baz=301,SNR=6.9
HAWA Hanford 38.47 73 IAmb IAmb 04 08 04.7
comp=Z,20nm,1.1s
F07A Phinny Hill Vi 38.48 74 IAmb IAmb 04 08 04.1
comp=Z,12nm,0.8s
D08A Wollman Farm, 38.52 72 IAmb IAmb 04 08 03.8
comp=Z,18nm,1.1s
J04D Umpqua Nationa 38.52 79 P P 04 08 03.5 +1.3
baz=302
C09A Chrisman Ranch 38.54 71 IAmb IAmb 04 08 04.0
comp=Z,16nm,0.9s
E08A Dider Farm, El 38.71 73 IAmb IAmb 04 08 05.7
comp=Z,18nm,1.2s
PINE Pine Mountain 38.94 78 IAmb IAmb 04 08 09.5
comp=Z,17nm,1.1s
L04D Klamath Falls 38.95 81 P P 04 08 06.5 +0.7
baz=304
YBH Yreka Blue Hor 38.97 81 P P 04 08 06.6 +0.7
YBH Yreka Blue Hor 38.97 81 P P 04 08 06.6 +0.7
YBH pmax pmax
comp=Z,8.0nm,1.2s
NEW Newport 39.01 69 IAmb IAmb 04 08 07.6
comp=Z,20nm,1.0s
NEW Newport 39.01 69 P P 04 08 06.4 +0.4
baz=298,SNR=16
J05D Fort Rock, OR 39.03 78 P P 04 08 08.4 +1.9
baz=303,SNR=8.9
M02C Callahan 39.07 82 P P 04 08 08.3 +1.6
baz=304
K04D Chiloquin, OR 39.07 80 P P 04 08 07.3 +0.6
baz=303
E09A Wood Farm, Sta 39.25 72 IAmb IAmb 04 08 10.7
comp=Z,24nm,1.2s
N02D Trinity Center 39.40 82 P P 04 08 10.3 +0.9
baz=305
M04C Macdoel 39.48 81 P P 04 08 11.3 +1.2
baz=304
KSRS Korea Array 39.58 271 P P 04 08 11.9 +1.1
comp=Z,4.0nm,0.8s,baz=57,slow=8.3,SNR=14
KSRS PcP PcP 04 10 18.4 +1.0
comp=Z,0.5nm,0.4s,baz=58,slow=3.3,SNR=4.5
I07A Izee 39.67 76 IAmb IAmb 04 08 14.7
comp=Z,23nm,1.2s
O02D Mt. Diablo Mer 39.80 84 P P 04 08 13.6 +0.8
baz=306
RES Resolute Bay 39.94 24 PcP PcP 04 10 17.4 -0.5
comp=Z,1.4nm,0.6s,baz=224,slow=3.8,SNR=5.0
O03E Paynes Creek 40.35 83 P P 04 08 18.0 +0.7
baz=306
JNU Nakatsue 40.49 263 P P 04 08 19.3 +0.8
comp=Z,17nm,0.9s,baz=92,slow=1.7,SNR=6.6
JNU Nakatsue 40.49 263 P P 04 08 18.3 -0.3
JNU IAmb IAmb 04 08 23.1
comp=Z,22nm,1.0s
WALA Waterton Lakes 40.50 67 IAmb IAmb 04 08 20.6
comp=Z,16nm,1.1s
J08A Circle Bar Ran 40.69 77 IAmb IAmb 04 08 22.5
comp=Z,10nm,0.9s
JTMT Jette 40.92 69 IAmb IAmb 04 08 23.6
comp=Z,15nm,1.2s
WVOR Wild Horse Val 41.10 78 P P 04 08 22.9 -0.7
WVOR IAmb IAmb 04 08 25.9
comp=Z,11nm,0.9s
WVOR Wild Horse Val 41.10 78 P P 04 08 22.9 -0.7
WVOR pmax pmax
comp=Z,11nm,0.9s
MSO Missoula 41.59 70 IAmb IAmb 04 08 28.9
comp=Z,17nm,1.1s
MSO Missoula 41.59 70 P P 04 08 27.6 +0.1
baz=301,SNR=16
PNTR Pine Nut 42.43 83 IAmb IAmb 04 08 45.5
comp=Z,13nm,0.7s
EGMT Eagleton 43.41 66 IAmb IAmb 04 08 44.4
comp=Z,16nm,0.9s
EGMT Eagleton 43.41 66 P P 04 08 42.0 -0.2
baz=301,SNR=13
NVAR Mina Array Bea 43.63 83 P P 04 08 46.0 +1.7
comp=Z,3.4nm,0.8s,baz=292,slow=6.9,SNR=8.8
NVAR LR LR 04 24 56.3
comp=Z,74nm,19.5s,baz=346,slow=33
MDPB Devils Postpil 43.64 84 P P 04 08 44.1 -0.3
ELK Elko 44.15 78 IAmb IAmb 04 08 50.6
comp=Z,10nm,1.0s
NRIK Noril'sk 44.54 330 LR LR 04 30 09.7
comp=Z,74nm,18.1s,baz=6.0,slow=40
VES Vestal, Richgr 44.75 86 P P 04 08 54.4 +1.4
baz=310
H17A Grant Village 44.89 71 P P 04 08 56.1 +1.8
baz=304,SNR=24
LKWY Lake 44.90 70 IAmb IAmb 04 08 57.3
comp=Z,20nm,1.0s
FLWY Flagg Ranch 44.99 71 IAmb IAmb 04 08 58.0
comp=Z,20nm,1.1s
CWC Cottonwood Cre 45.00 85 P P 04 08 56.5 +1.3
baz=309
ISA Isabella, Lake 45.25 86 P P 04 08 57.5 +0.5
baz=310
RLMT Red Lodge 45.25 69 P P 04 08 57.6 +0.5
baz=304,SNR=38
BJI Beijing 45.35 282 eP P 04 08 57.8 +0.1
BJI pmax pmax
comp=Z,6.0nm,0.8s
R11A Troy Canyon, C 45.38 81 P P 04 08 58.7 +0.5
baz=308,SNR=7.9
MPMC Manual Prospec 45.61 85 P P 04 09 01.1 +1.0
baz=310
FURC Furnace Creek, 45.75 84 P P 04 09 02.4 +1.5
baz=309
TPNV Topopah Spring 45.83 83 IAmb IAmb 04 09 07.6
comp=Z,8.6nm,0.8s
TPNV Topopah Spring 45.83 83 P P 04 09 02.1 +0.3
baz=309,SNR=30
HWUT Hardware Ranch 45.89 75 IAmb IAmb 04 09 05.6
comp=Z,10nm,1.0s
DUG Dugway, Tooele 45.97 77 IAmb IAmb 04 09 05.0
comp=Z,16nm,0.9s
DUG Dugway, Tooele 45.97 77 P P 04 09 03.3 +0.5
baz=307,SNR=22
EDW2 Edwards Air Fo 46.05 86 P P 04 09 03.8 +0.4
baz=310
TLY Talaya 46.11 303 eP P 04 09 07.8 +4.2
TLY pmax pmax
comp=Z,12nm,0.9s
SNCC San Nicolas Is 46.15 89 P P 04 09 04.0 -0.1
baz=312
LAO LASA Array 46.15 66 P P 04 09 04.4 +0.3
baz=304,SNR=11
ULN Ulaanbaatar 46.29 296 P P 04 09 05.4 +0.1
ULN IAmb IAmb 04 09 06.2
comp=Z,7.6nm,0.9s
ULN Ulaanbaatar 46.29 296 P P 04 09 05.4 +0.1
ULN pmax pmax
comp=Z,8.0nm,1.0s
DGMT Dagmar 46.32 63 P P 04 09 06.1 +0.8
baz=303
BW06 Boulder Array 46.42 72 IAmb IAmb 04 09 09.3
comp=Z,16nm,1.1s
BW06 Boulder Array 46.42 72 P P 04 09 06.8 +0.4
baz=306,SNR=30
PD31 Pinedale Array 46.42 72 IAmb IAmb 04 09 09.3
comp=Z,14nm,1.1s
PDAR Pinedale Array 46.42 72 P P 04 09 06.8 +0.3
comp=Z,4.5nm,0.5s,baz=337,slow=2.4,SNR=54
PDAR LR LR 04 27 39.1
comp=Z,46nm,18.9s,baz=352,slow=35
SHOC Shoshone, Teco 46.48 84 P P 04 09 07.6 +1.0
baz=310
GSC Goldstone, Bar 46.52 85 P P 04 09 08.0 +0.9
baz=310
SONM Songino Array 46.68 297 P P 04 09 08.2 0.0
comp=Z,4.5nm,0.9s,baz=55,slow=9.3,SNR=24
SONM ScP ScP 04 14 32.1 +0.7
comp=Z,1.8nm,1.0s,baz=77,slow=2.6,SNR=7.5
SONM LR LR 04 29 37.1
comp=Z,157nm,20.0s,baz=64,slow=37
ZAK Zakamensk 47.00 301 eP P 04 09 09.6 -1.1
ZAK pmax pmax
comp=Z,4.0nm,1.4s
ZAK pmax pmax
comp=Z,3.0nm,1.2s
GUMO Guam 47.55 231 LR LR 04 26 17.6
comp=Z,65nm,20.2s,baz=110,slow=32
GMRC Granite Mounta 47.58 85 P P 04 09 16.0 +0.6
baz=311
HHC Hu-ho-hao-te 47.68 286 eP P 04 09 17.0 +0.9
HHC pmax pmax
comp=Z,5.0nm,1.1s
HHC pmax pmax
comp=Z,43nm,5.6s
BELC Belle Mtn. Jos 47.87 86 P P 04 09 17.6 -0.2
baz=311
K22A Casper 48.30 70 IAmb IAmb 04 09 22.5
comp=Z,17nm,1.1s
K22A Casper 48.30 70 P P 04 09 20.7 -0.3
baz=307,SNR=9.6
MONP2 Monument Peak 48.34 87 P P 04 09 21.1 -0.3
baz=312
RWWY Rawlins 48.47 72 IAmb IAmb 04 09 24.3
comp=Z,18nm,1.1s
U15A North Rim 48.62 81 IAmb IAmb 04 09 25.9
comp=Z,11nm,1.1s
NJ2 Nanjing 48.76 272 eP P 04 09 24.5 +0.1
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
O20A White River Ci 48.79 74 P P 04 09 24.6 -0.2
baz=308,SNR=18
RSSD Black Hills 48.89 67 P P 04 09 24.9 -0.6
RSSD IAmb IAmb 04 09 25.7
comp=Z,6.1nm,0.8s
RSSD Black Hills 48.89 67 P P 04 09 24.9 -0.6
RSSD pmax pmax
comp=Z,6.0nm,0.8s
RSSD Black Hills 48.89 67 P P 04 09 25.3 -0.2
baz=306
Y12C Blythe 48.96 85 P P 04 09 26.8 +0.9
baz=311
N23A Red Feather La 49.71 72 IAmb IAmb 04 09 34.4
comp=Z,14nm,1.1s
N23A Red Feather La 49.71 72 P P 04 09 32.3 +0.5
baz=308,SNR=8.3
WUAZ Wupatki 49.78 81 IAmb IAmb 04 09 34.4
comp=Z,7.5nm,1.1s
WUAZ Wupatki 49.78 81 P P 04 09 32.8 +0.5
baz=311,SNR=5.4
ULM Lac du Bonnet 49.84 56 P P 04 09 31.6 -0.8
comp=Z,0.5nm,0.3s,baz=308,slow=8.7,SNR=2.9
ULM LR LR 04 30 59.4
comp=Z,109nm,21.3s,baz=314,slow=36
MVCO Mesa Verde 50.47 77 IAmb IAmb 04 09 41.1
comp=Z,5.6nm,0.9s
MVCO Mesa Verde 50.47 77 P P 04 09 37.5 -0.2
baz=310,SNR=6.6
ISCO Idaho Springs 50.58 73 IAmb IAmb 04 09 41.7
comp=Z,5.7nm,0.9s
ISCO Idaho Springs 50.58 73 P P 04 09 39.1 +0.6
baz=309,SNR=8.0
S22A 4UR Ranch, Cre 51.14 76 IAmb IAmb 04 09 46.3
comp=Z,11nm,1.1s
S22A 4UR Ranch, Cre 51.14 76 P P 04 09 43.5 +0.7
baz=310,SNR=14
Q24A Divide 51.39 73 P P 04 09 45.2 +0.6
baz=310
SDCO Great Sand Dun 51.95 75 IAmb IAmb 04 09 51.9
comp=Z,8.8nm,1.0s
SDCO Great Sand Dun 51.95 75 P P 04 09 49.4 +0.6
baz=310,SNR=16
TUC Tucson 52.26 84 P P 04 09 51.1 +0.2
TUC Tucson 52.26 84 P P 04 09 51.1 +0.2
TUC pmax pmax
comp=Z,7.0nm,1.2s
TUC Tucson 52.26 84 P P 04 09 51.1 +0.2
baz=313
WHN Wuhan 52.61 274 P P 04 09 53.0 -0.4
KSCO Kaye Shedlock' 52.87 72 IAmb IAmb 04 09 59.8
comp=Z,9.9nm,0.7s
KSCO Kaye Shedlock' 52.87 72 P P 04 09 54.9 -0.5
baz=310
T25A Trinidad 53.01 75 IAmb IAmb 04 10 00.2
comp=Z,26nm,1.1s
T25A Trinidad 53.01 75 P P 04 09 57.1 +0.6
baz=311,SNR=22
ANMO Albuquerque 53.19 78 P P 04 09 57.6 -0.3
ANMO Albuquerque 53.19 78 ⇓iP P 04 09 58.6 +0.7
ANMO pmax pmax
comp=Z,2.0nm,1.0s
ANMO Albuquerque 53.19 78 P P 04 09 58.1 +0.1
baz=312
ECSD EROS Data Cent 53.37 64 IAmb IAmb 04 09 58.7
comp=Z,6.0nm,1.0s
ECSD EROS Data Cent 53.37 64 P P 04 09 57.6 -1.3
baz=309,SNR=6.3
SUMG Summit 53.49 14 P P 04 09 58.1 -1.8
SUMG Summit 53.49 14 P P 04 09 58.1 -1.8
SUMG pmax pmax
comp=Z,3.0nm,0.7s
EYMN Ely 53.52 57 P P 04 09 59.3 -0.6
baz=309
XAN Xi'an 53.64 281 P P 04 10 00.5 -0.6
XAN pmax pmax
comp=Z,10.0nm,1.0s
XAN Xi'an 53.64 281 P P 04 10 00.4 -0.6
XAN IAmb IAmb 04 10 01.2
comp=Z,11nm,1.1s
XAN Xi'an 53.64 281 P P 04 10 00.4 -0.6
XAN pmax pmax
comp=Z,11nm,1.1s
BGNE Belgrade 53.97 67 P P 04 10 03.0 -0.3
BGNE Belgrade 53.97 67 P P 04 10 03.0 -0.3
baz=310
121A Cookes Peak, D 53.98 81 IAmb IAmb 04 10 08.8
comp=Z,5.2nm,0.9s
121A Cookes Peak, D 53.98 81 P P 04 10 03.7 0.0
baz=313
ZALV Zalesovo Beam 54.12 314 P P 04 10 04.1 -0.1
comp=Z,0.7nm,0.4s,baz=24,slow=6.7,SNR=3.4
ZALV PcP PcP 04 11 08.0 -0.4
comp=Z,5.3nm,0.8s,baz=36,slow=3.8,SNR=13
ZALV LR LR 04 34 04.5
comp=Z,69nm,21.3s,baz=40,slow=37
E38A The Farm, Brul 54.33 58 IAmb IAmb 04 10 05.6
comp=Z,6.5nm,0.9s
CBKS Cedar Bluff 54.72 70 P P 04 10 08.9 +0.1
baz=311,SNR=6.4
LZH Lanzhou 55.38 286 eP P 04 10 14.0 +0.2
LZH pP pP 04 10 27.5 +2.2
LZH ePP PP 04 12 19.3 +1.8
LZH pmax pmax
comp=Z,24nm,1.3s
LZH pmax pmax
comp=Z,93nm,6.6s
LZH LR LR
comp=Z,370nm,14.6s
LZH LR LR
comp=Z,380nm,14.8s
LZH LR LR
comp=Z,530nm,17.0s
GTA Gaotai 55.58 292 ⇑P P 04 10 15.0 -0.1
GTA pmax pmax
comp=Z,13nm,0.8s
GTA pmax pmax
comp=Z,52nm,6.5s
GTA LR LR
comp=Z,91nm,17.1s
GTA LR LR
comp=Z,93nm,20.3s
MNTX Cornudas Mount 56.04 80 IAmb IAmb 04 10 23.1
comp=Z,5.2nm,0.9s
MNTX Cornudas Mount 56.04 80 P P 04 10 18.9 +0.6
baz=314
MSTX Muleshoe 56.10 76 IAmb IAmb 04 10 33.9
comp=Z,13nm,1.1s
MSTX Muleshoe 56.10 76 P P 04 10 18.6 -0.3
baz=313
KSU1 Kansas State U 56.37 68 P P 04 10 20.3 -0.3
baz=312
JFWS Jewell Farm 57.44 61 P P 04 10 27.4 -0.8
baz=312
WMOK Wichita Mounta 58.01 73 IAmb IAmb 04 10 34.5
comp=Z,9.0nm,0.9s
WMOK Wichita Mounta 58.01 73 P P 04 10 32.3 0.0
baz=313,SNR=8.3
ARCES ARCESS Array B 58.27 350 P P 04 10 32.5 -1.1
comp=Z,4.0nm,0.7s,baz=21,slow=7.4,SNR=15
ARCES LR LR 04 37 01.2
comp=Z,58nm,19.5s,baz=353,slow=38
D47A Chapleau 58.42 53 P P 04 10 34.1 -0.8
baz=313
E47A Iron Bridge 58.74 54 P P 04 10 36.2 -1.0
baz=313
TX32 Lajitas Array 58.74 81 IAmb IAmb 04 10 42.0
comp=Z,4.7nm,1.1s
TXAR Lajitas Array 58.74 81 P P 04 10 38.0 +0.4
comp=Z,3.6nm,1.0s,baz=304,slow=5.6,SNR=12
TXAR LR LR 04 32 52.6
comp=Z,30nm,21.5s,baz=0.0,slow=33
ABTX Abilene, Hawle 58.93 75 P P 04 10 38.6 -0.2
baz=314,SNR=6.0
CD2 Chengdu 58.95 282 P P 04 10 38.0 -1.0
CD2 pmax pmax
comp=Z,30nm,0.6s
D48A Paudash Townsh 58.98 52 P P 04 10 38.2 -0.7
baz=313
TUL1 Leonard 58.99 70 IAmb IAmb 04 10 39.9
comp=Z,13nm,1.1s
TUL1 Leonard 58.99 70 P P 04 10 39.1 0.0
baz=313
KURK Kurchatov 59.11 314 P P 04 10 38.4 -1.3
KURK IAmb IAmb 04 10 49.2
comp=Z,3.5nm,0.8s
KURK Kurchatov 59.11 314 ceP P 04 10 39.9 +0.3
KURK pmax pmax
comp=Z,50nm,1.3s
L44A Lake County Fo 59.21 60 P P 04 10 40.0 -0.5
baz=313
E48A Lockeyer 59.28 53 P P 04 10 40.3 -0.7
baz=314
WMQ Urumqi 59.39 303 eP P 04 10 42.5 +0.7
WMQ sP sP 04 11 02.0 +3.9
WMQ pmax pmax
comp=Z,8.0nm,0.7s
WMQ LR LR
comp=Z,360nm,28.8s
U38A Gravette 59.46 69 IAmb IAmb 04 10 42.6
comp=Z,8.4nm,0.9s
F48A Evansville 59.50 54 P P 04 10 41.9 -0.5
baz=314
F49A Sandfield 59.84 54 P P 04 10 44.6 -0.2
baz=314

H48A Harrisville 59.92 55 P P 04 10 45.2 -0.2
baz=314
D50A G1974 Best Tow 59.96 51 P P 04 10 44.9 -0.7
baz=314
MKAR Makanchi Array 60.10 308 P P 04 10 44.4 -2.2
comp=Z,0.9nm,0.3s,baz=50,slow=6.4,SNR=29
J47A Sunmer 60.14 57 P P 04 10 46.5 -0.4
baz=314
CCM Cathedral Cave 60.17 65 P P 04 10 46.3 -0.9
CCM IAmb IAmb 04 10 46.4
comp=Z,5.8nm,0.8s
CCM Cathedral Cave 60.17 65 P P 04 10 46.3 -0.9
CCM pmax pmax
comp=Z,6.0nm,0.8s
CCM Cathedral Cave 60.17 65 P P 04 10 46.5 -0.7
baz=314
SCHQ Schefferville 60.19 38 P P 04 10 45.8 -1.2
comp=Z,7.2nm,1.0s,baz=352,slow=7.3,SNR=8.2
SCHQ LR LR 04 38 17.9
comp=Z,224nm,19.0s,baz=318,slow=38
SCHQ Schefferville 60.19 38 P P 04 10 46.3 -0.8
SCHQ IAmb IAmb 04 10 47.8
comp=Z,10nm,1.1s
MGMO Mountain Grove 60.20 67 IAmb IAmb 04 10 47.5
comp=Z,13nm,0.9s
D51A Lot 18 Range I 60.24 51 P P 04 10 46.7 -0.8
baz=314
JCT Junction City 60.33 77 IAmb IAmb 04 10 52.0
comp=Z,6.2nm,0.8s
JCT Junction City 60.33 77 P P 04 10 48.3 -0.1
baz=315
U40A Yellville 60.41 68 P P 04 10 47.7 -1.1
baz=314,SNR=7.0
K47A Vermontville 60.44 58 P P 04 10 48.6 -0.4
baz=314
E51A G1948 Merrick 60.58 51 P P 04 10 48.9 -0.9
baz=315
KRVT Keravat (AS076 60.63 214 LR LR 04 29 47.8
comp=Z,117nm,21.6s,baz=50,slow=29
W39A Magazine 60.67 69 IAmb IAmb 04 10 58.6
comp=Z,6.6nm,0.9s
W39A Magazine 60.67 69 P P 04 10 50.4 -0.2
baz=314
I49A Point Hope 60.70 55 P P 04 10 50.7 0.0
baz=314
L47A Sherwood 60.81 58 P P 04 10 50.9 -0.6
baz=314
K48A Perry 60.82 57 P P 04 10 51.1 -0.4
baz=314
SFIN Lafayette 60.89 61 P P 04 10 51.7 -0.3
baz=314,SNR=8.9
BRVK Borovoye 61.01 320⇑iP P 04 10 54.1 +1.4
BRVK pmax pmax
comp=Z,3.0nm,0.9s
E52A Mattawa 61.16 51 P P 04 10 52.7 -1.0
baz=315
F52A Sundridge 61.18 52 P P 04 10 53.1 -0.8
baz=315
K49A Clarkson 61.18 57 P P 04 10 53.9 0.0
baz=314
MIAR Mount Ida 61.24 70 IAmb IAmb 04 10 56.9
comp=Z,11nm,0.9s
MIAR Mount Ida 61.24 70 P P 04 10 54.6 +0.1
baz=314,SNR=8.4
N47A Urbana 61.31 60 P P 04 10 54.5 -0.4
baz=314
M48A Edgerton 61.42 59 IAmb IAmb 04 10 56.4
comp=Z,13nm,0.8s
M48A Edgerton 61.42 59 P P 04 10 55.1 -0.4
baz=315
WHAR Wooly Hollow 61.48 68 IAmb IAmb 04 11 03.3
comp=Z,14nm,1.1s
W41B Gary Mavity, V 61.59 68 IAmb IAmb 04 11 05.0
comp=Z,8.7nm,0.8s
W41B Gary Mavity, V 61.59 68 P P 04 10 56.6 -0.2
baz=315
LCAR Lake Charles 61.60 67 IAmb IAmb 04 10 56.2
comp=Z,8.3nm,1.1s
N48A Decatur 61.69 59 P P 04 10 56.8 -0.7
baz=315
X40A Basin Creek Fa 61.72 69 P P 04 10 57.3 -0.4
baz=315
I51A Listowel 61.73 55 P P 04 10 57.0 -0.6
baz=315
M49A Liberty Center 61.82 58 P P 04 10 58.0 -0.3
baz=315
G53A Haliburton 62.00 52 P P 04 10 58.8 -0.7
baz=316
O48A Farmland 62.04 60 P P 04 10 59.0 -0.8
baz=315
PRGR Permogore 62.06 338 eP P 04 10 56.4 -3.1
PRGR pmax pmax
comp=Z,17nm,0.9s
G54A Lake Saint Pet 62.07 52 P P 04 10 58.9 -1.0
baz=316
N49A Columbus Grove 62.10 59 P P 04 10 59.4 -0.8
baz=315
D55A Sainte-Anne-du 62.17 49 P P 04 10 58.9 -1.6
baz=316
J52A Paris 62.41 55 P P 04 11 01.6 -0.6
baz=316
H53A Bobcaygeon 62.41 52 P P 04 11 01.6 -0.7
baz=316
P48A Milroy 62.45 61 P P 04 11 01.7 -0.9
baz=315,SNR=7.7
D56A ZEC Mazanza, M 62.49 48 P P 04 11 00.7 -2.0
baz=317
Q48A North Vernon 62.66 61 P P 04 11 03.6 -0.4
baz=315
E56A St. Veronique 62.72 49 P P 04 11 02.8 -1.5
baz=317
N50A Nevada 62.76 58 P P 04 11 03.6 -1.0
baz=315
P49A Miami Univ. Ec 62.79 60 P P 04 11 04.0 -0.9
baz=315
WCI Wyandotte Cave 62.84 62 P P 04 11 05.0 -0.2
WCI Wyandotte Cave 62.84 62 P P 04 11 05.0 -0.2
WCI pmax pmax
comp=Z,30nm,1.1s
WCI Wyandotte Cave 62.84 62 P P 04 11 05.2 0.0
baz=315
G55A Calabogie 62.85 51 P P 04 11 04.3 -0.8
baz=316
O50A Cable 62.95 59 P P 04 11 05.6 -0.3
baz=316
Q49A Aurora 63.07 61 P P 04 11 06.2 -0.5
baz=315
N51A Ashland 63.07 58 P P 04 11 06.3 -0.3
baz=316
HKT Hockley 63.13 75 P P 04 11 06.1 -1.0
HKT IAmb IAmb 04 11 22.5
comp=Z,6.2nm,1.1s
HKT Hockley 63.13 75 P P 04 11 06.1 -1.0
HKT pmax pmax
comp=Z,6.0nm,1.1s
M52A Chesterland 63.16 57 P P 04 11 06.6 -0.7
baz=316
ACSO Alum Creek Sta 63.23 59 P P 04 11 07.0 -0.8
baz=316
P50A Jamestown 63.23 60 P P 04 11 07.2 -0.6
baz=316,SNR=5.1
J54A Appleton 63.32 54 P P 04 11 07.9 -0.4
baz=316
R49A Shelbyville 63.42 61 P P 04 11 08.8 -0.3
baz=316
L53A Girard 63.44 56 P P 04 11 08.7 -0.4
baz=316
ERPA Erie 63.46 55 P P 04 11 08.5 -0.7
baz=316
WVT Waverly 63.46 65 P P 04 11 09.5 +0.1
WVT Waverly 63.46 65 P P 04 11 09.5 +0.1
WVT pmax pmax
comp=Z,19nm,1.1s
WVT Waverly 63.46 65 P P 04 11 08.9 -0.4
baz=316
O51A Pataskala 63.49 58 P P 04 11 08.7 -0.8
baz=316
N52A McGinn's Farm, 63.51 57 P P 04 11 09.2 -0.3
baz=316
M53A WI Miller and 63.59 56 P P 04 11 09.7 -0.4
baz=316
Q50A Georgetown 63.68 60 P P 04 11 10.2 -0.5
baz=316
KMI Kunming 63.69 278 P P 04 11 11.3 0.0
KMI pP pP 04 11 22.0 -1.0
KMI sP sP 04 11 27.0 -0.6
KMI pmax pmax
comp=Z,11nm,0.8s
KMI pmax pmax
comp=Z,88nm,4.1s
KMI LR LR
comp=Z,130nm,17.0s
KMI LR LR
comp=Z,160nm,16.8s
OXF Oxford 63.70 67 P P 04 11 10.6 -0.3
baz=316,SNR=6.2
S49A Springfield 63.72 62 P P 04 11 10.4 -0.6
baz=316,SNR=8.7
L54A Sinclairville 63.72 55 P P 04 11 10.5 -0.5
baz=316
K54A Basiliko Farm, 63.77 54 P P 04 11 10.9 -0.4
baz=316
G57A Newington 63.80 50 P P 04 11 10.6 -0.8
baz=317
R50A Paris 63.89 61 P P 04 11 12.0 -0.1
baz=316
Q51A Peebles 63.90 60 IAmb IAmb 04 11 12.9
comp=Z,17nm,1.1s
Q51A Peebles 63.90 60 P P 04 11 11.8 -0.4
baz=316
O52A Adamsville 63.93 58 P P 04 11 11.9 -0.4
baz=316
N53A Lisbon 63.96 57 P P 04 11 12.2 -0.4
baz=316
T49A Edmonton 64.06 63 P P 04 11 13.2 -0.1
baz=316,SNR=7.7
M54A Oil Creek Stat 64.07 56 P P 04 11 12.8 -0.5
baz=316
KLMR Klimovskoe 64.13 340 eP P 04 11 09.7 -3.6
KLMR pmax pmax
comp=Z,16nm,1.7s
KLMR Klimovskoe 64.13 340 eP P 04 11 09.7 -3.6
KLMR AMP 04 11 27.7
comp=Z,16nm,1.7s
O53A New Philadelph 64.16 57 P P 04 11 13.6 -0.3
baz=316
L55A Hinsdale 64.21 54 P P 04 11 13.7 -0.6
baz=317
S50A Richmond 64.28 61 P P 04 11 14.3 -0.4
baz=316
R51A Hillsboro 64.29 60 P P 04 11 14.8 +0.1
baz=316,SNR=7.1
N54A Moraine State 64.29 56 P P 04 11 14.1 -0.6
baz=316
I57A Carthage 64.32 51 P P 04 11 13.7 -1.1
baz=317
K56A Middlesex 64.40 53 P P 04 11 15.2 -0.2
baz=317
D61A St Aubert, Com 64.48 46 P P 04 11 15.2 -0.6
baz=319
T50A Nancy 64.51 62 P P 04 11 16.1 -0.1
baz=316,SNR=8.1
Q52A Bidwell 64.53 59 P P 04 11 15.5 -0.7
baz=316
E60A Ste Agathe de 64.53 47 P P 04 11 14.8 -1.4
baz=318
J57A Williamstown 64.54 52 P P 04 11 15.4 -0.9
baz=317
M55A Ridgway 64.56 55 P P 04 11 16.4 -0.1
baz=317
P53A Whipple 64.62 58 P P 04 11 16.2 -0.7
baz=316
L56A Greenwood 64.69 54 P P 04 11 16.1 -1.3
baz=317,SNR=8.1
H59A Cadyville 64.76 50 P P 04 11 16.9 -0.8
baz=318
S51A Beattyville 64.76 61 P P 04 11 17.1 -0.7
baz=316
R52A Catlettsburg 64.77 60 P P 04 11 17.6 -0.3
baz=316
K57A Scipio Center 64.78 53 P P 04 11 17.4 -0.5
baz=317
M56A Emporium 64.85 55 P P 04 11 17.5 -0.9
baz=317
N55A Marion Center 64.95 56 P P 04 11 18.5 -0.5
baz=317
Q53A Leroy 65.00 59 P P 04 11 19.0 -0.4
baz=317,SNR=6.7
P54A Burton 65.02 57 P P 04 11 19.1 -0.5
baz=317
T51A Gray 65.05 62 P P 04 11 19.5 -0.2
baz=316
G60A Masonville 65.06 48 P P 04 11 18.6 -1.1
baz=318
D62A Allapoint, All 65.08 45 P P 04 11 19.0 -0.7
baz=319
X48A Hartselle 65.11 66 IAmb IAmb 04 11 19.9
comp=Z,12nm,1.1s
L57A Andrews Acres 65.15 53 P P 04 11 19.9 -0.4
baz=318
R53A Hurricane 65.15 59 P P 04 11 20.0 -0.4
baz=317
N56A West Decatur 65.21 55 P P 04 11 20.1 -0.6
baz=317
Q54A Coxs Mills 65.28 58 P P 04 11 20.7 -0.5
baz=317
MCWV Mont Chateau 65.32 57 P P 04 11 20.7 -0.7
baz=317
U51A La Follette 65.43 62 P P 04 11 22.1 -0.1
baz=317
P55A Reedsville 65.44 57 P P 04 11 21.1 -1.2
baz=317
BINY Binghamton 65.44 53 P P 04 11 21.4 -0.8
baz=318
T52A Hallie 65.47 61 P P 04 11 22.2 -0.3
baz=317
M57A Sunshine Farm, 65.50 54 P P 04 11 21.5 -1.1
baz=318
D63A Stockholm 65.53 45 P P 04 11 21.5 -1.2
baz=320
I60A Shoreham 65.54 50 P P 04 11 21.6 -1.2
baz=318
W50A Signal Mountai 65.56 64 P P 04 11 22.6 -0.5
baz=317,SNR=12
TZTN Tazewell 65.57 62 P P 04 11 23.0 -0.1
baz=317
K59A Cooperstown 65.58 52 P P 04 11 21.8 -1.3
baz=318
L58A Harry Jones Me 65.62 53 P P 04 11 22.5 -0.9
baz=318
SSPA Standing Stone 65.62 55 P P 04 11 23.1 -0.3
SSPA IAmb IAmb 04 11 23.7
comp=Z,15nm,1.0s
SSPA Standing Stone 65.62 55 P P 04 11 22.8 -0.6
baz=318
V51A Loudon 65.66 63 P P 04 11 23.4 -0.3
baz=317,SNR=6.0
Q55A Buckhannon 65.67 58 P P 04 11 23.2 -0.6
baz=317
H61A Lyndonville 65.68 49 P P 04 11 22.6 -1.1
baz=319
N57A Milroy 65.71 55 P P 04 11 24.0 +0.1
baz=318
R54A Victor 65.78 59 P P 04 11 24.0 -0.5
baz=317
M58A Price's Panora 65.81 54 P P 04 11 24.3 -0.3
baz=318
T53A Wise 65.81 61 P P 04 11 24.3 -0.5
baz=317
G62A West of Eustis 65.81 47 P P 04 11 23.5 -1.1
baz=319
CPCT Cooper Cave 65.82 63 IAmb IAmb 04 11 32.1
comp=Z,11nm,1.1s
E63A Oxbow 65.86 45 P P 04 11 24.2 -0.6
baz=320
S54A Dingess, Beckl 65.89 59 P P 04 11 24.7 -0.5
baz=317
Y49A Blount Mountai 65.90 66 IAmb IAmb 04 11 39.2
comp=Z,12nm,1.1s
J60A Lant Hill Farm 65.93 50 P P 04 11 24.4 -0.9
baz=318
FINES FINESS Array B 65.95 347 P P 04 11 24.3 -0.8
comp=Z,4.9nm,0.6s,baz=18,slow=7.6,SNR=22
P56A Dayton Farm, R 65.96 57 P P 04 11 25.2 -0.3
baz=317
I61A Oroboro, Fairl 66.00 49 P P 04 11 24.5 -1.3
baz=319
H62A Milan 66.01 48 P P 04 11 25.0 -0.8
baz=319
V52A Sevierville 66.06 62 P P 04 11 26.0 -0.2
baz=317,SNR=5.7
O57A Amberson 66.07 55 P P 04 11 25.9 -0.4
baz=318
E64A Bridgewater 66.13 45 P P 04 11 24.6 -1.9
baz=320
LRAL Lakeview Retre 66.16 67 IAmb IAmb 04 11 28.3
comp=Z,11nm,1.1s
LRAL Lakeview Retre 66.16 67 P P 04 11 26.2 -0.7
baz=317,SNR=5.1
R55A Marlinton 66.17 58 P P 04 11 26.7 -0.4
baz=317
M59A Waymart 66.20 53 P P 04 11 26.5 -0.7
baz=318
U53A Fall Branch 66.24 61 P P 04 11 27.4 -0.1
baz=317
X51A Calhoun 66.27 64 P P 04 11 27.7 +0.1
baz=317
T54A Tazewell 66.28 60 P P 04 11 27.3 -0.4
baz=317,SNR=5.5
F64A Sherman 66.32 46 P P 04 11 26.9 -0.8
baz=320
S55A Lewisburg 66.34 59 P P 04 11 27.2 -0.9
baz=317
W52A Murphy 66.41 63 P P 04 11 27.8 -0.8
baz=317,SNR=5.7
R56A Bull Pasture M 66.47 58 P P 04 11 28.1 -0.9
baz=318
N59A State Game Lan 66.50 54 P P 04 11 28.6 -0.4
baz=318
U54A Nelsons Funny 66.54 61 P P 04 11 29.1 -0.3
baz=317
G64A Maxfield 66.60 46 P P 04 11 28.6 -0.9
baz=320
V53A Saluda 66.62 62 P P 04 11 29.5 -0.4
baz=317
Z50A Ashland 66.62 66 P P 04 11 29.1 -0.8
baz=317,SNR=20
T55A Pulaski 66.67 60 P P 04 11 30.0 -0.2
baz=318
J62A Henniker 66.72 50 P P 04 11 28.9 -1.5
baz=319
W53A Cullowhee 66.79 62 P P 04 11 30.7 -0.4
baz=317,SNR=6.2
SIJI Sorong 66.79 236 P P 04 11 31.5 +0.4
comp=Z,22nm,0.7s,baz=332,slow=14,SNR=4.4
BLA Blacksburg 66.80 59 P P 04 11 30.3 -0.7
baz=318
N60A Cedar Hill Far 66.87 53 P P 04 11 31.0 -0.4
baz=318
S56A Natural Bridge 66.92 58 P P 04 11 31.2 -0.6
baz=318
AAK Ala-Archa 66.94 310 P P 04 11 33.2 +1.3
AAK IAmb IAmb 04 11 33.5
comp=Z,6.1nm,0.7s
AAK Ala-Archa 66.94 310 ceP P 04 11 33.2 +1.3
AAK pmax pmax
comp=Z,17nm,1.3s
Q58A Fox Den Farm, 66.98 56 P P 04 11 31.4 -0.7
baz=318
U55A TA2, Sparta 66.98 60 P P 04 11 32.1 -0.1
baz=318
R57A Stanardsville 67.01 57 P P 04 11 32.0 -0.3
baz=318
V54A Nebo 67.02 61 P P 04 11 32.1 -0.3
baz=317
BG3 Lake Jocassee 67.05 62 IAmb IAmb 04 11 34.3
comp=Z,15nm,1.0s
P59A Jarrettsville 67.13 55 P P 04 11 32.3 -0.7
baz=318
T56A Rocky Mt 67.14 59 P P 04 11 31.4 -1.8
baz=318
X53A Estanollee 67.20 63 P P 04 11 33.4 -0.1
baz=317,SNR=6.0
Y52A Lilburn 67.23 64 P P 04 11 33.5 -0.3
baz=317,SNR=7.0
K63A Dunstable 67.26 50 P P 04 11 33.0 -0.8
baz=320
R58A Rapidan 67.29 57 P P 04 11 33.7 -0.3
baz=318
V55A Taylorsville 67.36 61 P P 04 11 34.6 0.0
baz=318
PAL Palisades 67.37 52 P P 04 11 34.1 -0.4
baz=319
W54A Cherokee Point 67.39 62 P P 04 11 34.7 -0.1
baz=318
R58B Mineral 67.60 57 P P 04 11 35.6 -0.4
baz=318
H66A Whiting 67.62 46 P P 04 11 35.2 -0.8
baz=321
X54A Belton 67.68 62 P P 04 11 36.5 -0.1
baz=318,SNR=6.6
152A Waverly Hall 67.74 65 IAmb IAmb 04 11 37.2
comp=Z,9.8nm,1.1s
S58A Poland Farm, P 67.77 57 P P 04 11 36.9 -0.2
baz=318
V56A Mocksville 67.79 60 P P 04 11 37.2 0.0
baz=318
KMSC Kings Mountain 67.82 61 P P 04 11 37.1 -0.4
baz=318,SNR=5.8
R59A King George, V 67.83 56 P P 04 11 37.0 -0.4
baz=318
NB2 NORSAR Subarra 67.83 355 P P 04 11 35.8 -1.3
comp=Z,1.3nm,0.6s,baz=7.3,slow=6.9
NOA NORSAR Array B 67.83 355 P P 04 11 36.4 -0.8
comp=Z,2.2nm,0.8s,baz=13,slow=6.8,SNR=5.9
NOA LR LR 04 42 22.6
comp=Z,38nm,19.6s,baz=355,slow=37
Q60A Greensboro 67.89 55 P P 04 11 38.0 +0.3
baz=319
GOGA Godfrey 67.90 64 P P 04 11 37.4 -0.5
baz=318,SNR=6.5
U57A Blanch 67.96 59 P P 04 11 37.8 -0.5
baz=318
T58A Grand View Acr 68.01 58 P P 04 11 38.1 -0.5
baz=318
S59A Mechanicsville 68.06 57 P P 04 11 38.5 -0.4
baz=318
N63A Mattituck 68.07 52 P P 04 11 37.5 -1.4
baz=320
V57A Coltrane Farms 68.12 60 P P 04 11 38.8 -0.6
baz=318
X55A Gracelyn & Ava 68.15 62 P P 04 11 39.5 -0.1
baz=318
Q61A Milford 68.25 55 P P 04 11 39.8 -0.2
baz=319
Y55A Saluda 68.42 63 P P 04 11 41.3 0.0
baz=318,SNR=6.8
KK31 Karatay Array 68.47 313 IAmb IAmb 04 11 42.6
comp=Z,3.6nm,0.7s
KKAR Karatay Array 68.47 313 P P 04 11 41.0 -0.4
KKAR IAmb IAmb 04 11 42.6
comp=Z,3.6nm,0.7s
KKAR Karatay Array 68.47 313 P P 04 11 41.0 -0.4
KKAR pmax pmax
comp=Z,4.0nm,0.7s
X56A White Oak 68.47 62 P P 04 11 41.4 -0.1
baz=318
JSC Jenkinsville 68.50 62 P P 04 11 41.4 -0.3
JSC IAmb IAmb 04 11 43.3
comp=Z,5.5nm,0.8s
JSC Jenkinsville 68.50 62 P P 04 11 41.4 -0.3
JSC pmax pmax
comp=Z,6.0nm,0.8s
T59A Double "B" Far 68.51 58 P P 04 11 41.6 -0.1
baz=319
TAOE Nuku Hiva Isla 68.52 138 eLR LR 04 32 19.7
comp=Z,281nm,25.0s
TAOE Nuku Hiva Isla 68.52 138 eT T 05 26 28.8
comp=Z,38nm,0.2s
W57A Gilead 68.55 60 P P 04 11 41.7 -0.3
baz=318
V58A Windy Hill, Pi 68.55 59 P P 04 11 41.4 -0.6
baz=318
KSH Kashi 68.56 307 P P 04 11 43.8 +1.6
KSH pP sP 04 11 58.3 -0.5
KSH PP PP 04 14 13.5 +0.1
KSH S S 04 20 37.8 -3.8
KSH sS sS 04 21 08.8 +7.8
KSH SS SS 04 25 12.0 +6.7
KSH pmax pmax
comp=Z,9.0nm,0.5s
KSH pmax pmax
comp=Z,150nm,4.8s
KSH LR LR
comp=Z,150nm,7.2s
KSH LR LR
comp=Z,130nm,8.0s
KSH LR LR
comp=Z,96nm,8.5s
V59A Middlesex 69.05 59 P P 04 11 44.9 -0.2
baz=319
W58A Raeford 69.06 60 P P 04 11 44.7 -0.5
baz=319
U60A Pendleton 69.10 58 P P 04 11 45.0 -0.4

baz=319
Z56A Williston 69.15 63 P P 04 11 45.5 -0.3
baz=318
TIGA Tifton 69.29 65 P P 04 11 46.5 -0.2
baz=318
Z57A Bowman 69.54 62 P P 04 11 48.0 -0.2
baz=318,SNR=6.9
NHSC New Hope 69.97 62 P P 04 11 51.3 +0.4
baz=319
Z58A St. Stephen 70.01 62 P P 04 11 51.3 +0.3
baz=319
OBN Obninsk 70.02 339 *i*P P 04 11 50.4 -0.4
OBN pmax pmax
comp=Z,9.0nm,0.9s
OBN MLR MLR
comp=Z,156nm,17.0s
CMAR Chiang Mai Arr 70.97 276 P P 04 11 57.1 0.0
comp=Z,2.2nm,0.4s,baz=69,slow=6.8,SNR=9.5
CMAR LR LR 04 47 15.6
comp=Z,31nm,18.0s,baz=78,slow=38
CMAR Chiang Mai Arr 70.97 276 *i*P P 04 11 58.2 +1.1
CMAR pmax pmax
comp=Z,2.0nm,0.4s
ODAN Odare 71.77 290 *e*P P 04 12 02.2 0.0
GUN Gumba 71.87 292 *e*P P 04 12 03.3 +0.4
comp=Z,57nm,0.4s
JIRN Jiri 71.88 292 *e*P P 04 12 03.3 +0.3
RAMN Ramite 72.17 291 *e*P P 04 12 04.8 +0.2
comp=Z,42nm,0.5s
KKN Kakani 72.31 292 *e*P P 04 12 05.3 -0.1
comp=Z,25nm,0.5s
PKI Pulchoki 72.40 292 *e*P P 04 12 06.3 +0.3
comp=Z,31nm,0.7s
PKIN Phulchoki 72.40 292 *e*P P 04 12 06.3 +0.3
comp=Z,22nm,0.6s
GKN Gorkha 72.52 293 *e*P P 04 12 06.9 +0.3
comp=Z,18nm,0.3s
DMN Daman 72.55 292 *e*P P 04 12 07.5 +0.7
DANN Dangsing 72.77 294 *e*P P 04 12 08.3 +0.1
comp=Z,71nm,0.9s
PPT2 Papeete2 73.15 151 *e*S S 04 21 36.2 +1.4
comp=Z,41nm,29.8s
PPT2 Papeete2 73.15 151 *e*LR LR 04 34 29.4
comp=Z,121nm,28.5s
PPT2 Papeete2 73.15 151 *e*T T 05 32 15.4
comp=Z,5.5nm,0.2s
TIAR Tiarei 73.19 151 *e*T T 05 32 17.8
comp=Z,2.1nm,0.3s
PAE Paea 73.21 151 *e*T T 05 32 20.2
comp=Z,1.5nm,0.2s
DZM Mont Dzumac 74.08 194 *e*LR LR 04 34 55.7
comp=Z,203nm,23.9s
NIL Nilore 74.47 305 P P 04 12 18.7 +0.9
NIL Nilore 74.47 305 P P 04 12 18.7 +0.9
NIL pmax pmax
comp=Z,17nm,0.6s
AKASG Malin Array Be 75.71 342 P P 04 12 22.8 -1.8
comp=Z,1.5nm,0.4s,baz=21,slow=6.0,SNR=26
AKASG LR LR 04 49 11.8
comp=Z,40nm,18.4s,baz=0.0,slow=38
AKASG Malin Array Be 75.71 342 *i*P P 04 12 23.7 -0.8
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKBB Malin Array Si 75.71 342 P P 04 12 23.7 -0.8
AKBB IAmb IAmb 04 12 24.3
comp=Z,11nm,0.9s
AKBB Malin Array Si 75.71 342 P P 04 12 23.7 -0.8
AKBB pmax pmax
comp=Z,11nm,0.9s
CLL Collm 77.38 352 *e*P P 04 12 32.0 -2.0
DPC Dobruska-Polom 78.01 350 *e*P P 04 12 37.1 -0.5
DPC Dobruska-Polom 78.01 350 *e*P P 04 12 37.1 -0.5
GEYT Alibeck 78.18 317 LR LR 04 50 16.8
comp=Z,91nm,18.4s,baz=20,slow=38
SORM Soroca 78.33 342 ⇓P P 04 12 38.5 -0.8
SORM Soroca 78.33 342 ⇓P P 04 12 38.5 -0.8
KIV Kislovodsk 78.60 331 *e*P P 04 12 40.2 -0.8
KIV pmax pmax
comp=Z,25nm,1.0s
TBI Tubuai 78.61 153 *e*LR LR 04 37 04.2
comp=Z,136nm,25.2s
TBI Tubuai 78.61 153 *e*T T 05 39 04.4
comp=Z,4.6nm,0.3s
KOLS Kolonicke sedl 78.62 346 *e*P P 04 12 40.6 -0.4
KOLS Kolonicke sedl 78.62 346 *e*P P 04 12 40.6 -0.4
KBZ Khabaz 78.74 330 LR LR 04 50 48.4
comp=Z,84nm,21.6s,baz=12,slow=38
LANS Liptovska Anna 78.81 348 *e*P P 04 12 42.7 +0.7
LANS pmax pmax
comp=Z,4.0nm,1.2s
LANS Liptovska Anna 78.81 348 *e*P P 04 12 42.6 +0.6
TRPA Tarpa 79.36 346 ⇑P P 04 12 44.8 -0.1
BUR08 Bucovina Ar. S 79.39 344 P P 04 12 44.8 -0.5
BUR08 IAmb IAmb 04 12 46.9
comp=Z,9.7nm,0.8s
BURAR Bucovina Array 79.42 344 ⇑P P 04 12 45.0 -0.4
BURAR Bucovina Array 79.42 344 ⇑P P 04 12 45.0 -0.4
KHC Kasperske Hory 79.49 352 *e*P P 04 12 45.4 -0.3
KHC *e*pP PcP 04 12 54.9 +1.3
KHC Kasperske Hory 79.49 352 ⇑*i*P P 04 12 45.6 -0.1
KHC pmax pmax
comp=Z,6.0nm,1.0s
VYHS Vyhne 79.54 348 *e*P P 04 12 45.6 -0.4
VYHS Vyhne 79.54 348 *e*P P 04 12 45.6 -0.4
GERES GERESS Array B 79.76 352 P P 04 12 46.6 -0.7
comp=Z,0.9nm,0.6s,baz=26,slow=5.8,SNR=9.6
LEOM Leova 79.94 341 ⇓P P 04 12 47.9 -0.2
LEOM Leova 79.94 341 ⇓P P 04 12 47.9 -0.2
ARCR ARCALIA 80.08 344 ⇑P P 04 12 48.0 -0.9
TESR Tescani 80.22 342 ⇑P P 04 12 48.7 -1.0
CONA Conrad Observa 80.45 350 *e*P P 04 12 50.6 -0.4
comp=Z,4.6nm,1.0s
GHRR 80.50 342 ⇓P P 04 12 51.8 +0.6
DRGR 80.64 345 ⇑P P 04 12 50.6 -1.4
DRGR 80.64 345 ⇑P P 04 12 50.6 -1.4
OZUR 80.78 343 ⇓P P 04 12 51.1 -1.7
DOPR Dopca 80.98 343 ⇑P P 04 12 51.2 -2.5
BISRR Bisoca 81.13 342 ⇑P P 04 12 55.3 +0.6
CFR Carcaliu 81.20 341 ⇓P P 04 12 54.1 -0.8
CFR Carcaliu 81.20 341 ⇓P P 04 12 54.1 -0.8
MLR Muntele Rosu 81.33 343 ⇓P P 04 12 56.7 +0.9
MLR Muntele Rosu 81.33 343 IAmb IAmb 04 12 57.4
comp=Z,13nm,1.0s
MLR Muntele Rosu 81.33 343 ⇓P P 04 12 56.7 +0.9
WATA Walderalm 81.44 353 *e*P P 04 12 55.5 -0.9
comp=Z,5.3nm,0.8s
WTTA Wattenberg 81.51 353 *e*P P 04 12 56.6 -0.2
comp=Z,4.1nm,0.8s
KBA Koelnbreinsper 81.55 352 *e*P P 04 12 56.7 -0.3
comp=Z,10nm,0.7s
VOIR 81.55 343 ⇓P P 04 12 57.2 +0.3
VOIR 81.55 343 ⇓P P 04 12 57.2 +0.3
SQTA Sankt Quirin 81.58 353 *e*P P 04 12 56.6 -0.5
comp=Z,4.1nm,0.7s
SOKA Soboth 81.78 350 *e*P P 04 12 58.0 -0.1
comp=Z,14nm,1.2s
FETA Feichten 81.82 353 *e*P P 04 12 57.7 -0.7
comp=Z,7.4nm,1.1s
WRA Warramunga Arr 81.84 224 P P 04 12 57.6 -0.9
comp=Z,1.9nm,0.7s,baz=34,slow=6.1,SNR=6.3
ABTA Abfaltersbach 81.95 352 *e*P P 04 12 57.9 -1.1
comp=Z,7.8nm,1.1s
BZS Buzias 81.96 346 ⇑P P 04 12 58.3 -0.6
BZS Buzias 81.96 346 ⇑P P 04 12 58.3 -0.6
GZR Gura Zlata 81.99 345 ⇓P P 04 12 58.9 -0.3
GZR Gura Zlata 81.99 345 ⇓P P 04 12 58.9 -0.3
OBKA Obir 81.99 351 *e*P P 04 12 58.5 -0.7
comp=Z,8.7nm,1.1s
ICOR Ion Corvin 82.29 341 ⇑P P 04 13 01.1 +0.5
PSI Prapat 82.92 266 P P 04 13 04.0 -0.5
comp=Z,12nm,0.9s,baz=66,slow=3.5,SNR=7.1
RPSI Rantau Prapat 83.00 266 P P 04 13 04.0 -0.8
RPSI IAmb IAmb 04 13 04.9
comp=Z,11nm,0.7s
BLY Banja Luka 83.43 349 *e*P P 04 13 09.8 +3.2
PLVB Pleven 83.61 343 ⇑P P 04 13 07.1 -0.4
DIVS Divibare 83.69 346 *e*P P 04 13 07.1 -0.9
MGRS Mrkonjic Grad 83.77 349 *e*P P 04 13 24.3 +16
HAPS Han Pijesak,BI 83.85 347 *e*P P 04 13 07.6 -1.3
BBLS Lazići 84.00 347 *e*P P 04 13 08.8 -0.8
RUDO Rudo 84.25 347 *e*P P 04 13 09.9 -0.9
FITZ Fitzroy Crossi 84.30 232 P P 04 13 11.8 +0.6
comp=Z,4.8nm,0.7s,baz=32,slow=5.4,SNR=9.3
FITZ Fitzroy Crossi 84.30 232 IAmb IAmb 04 13 12.5
comp=Z,8.6nm,1.1s
VTS Vitosha 84.61 344 ⇓P P 04 13 12.2 -0.6
VTS Vitosha 84.61 344 IAmb IAmb 04 13 12.8
comp=Z,4.2nm,0.9s
VTS Vitosha 84.61 344 ⇓P P 04 13 12.2 -0.6
BRY Bratogost 85.07 347 *e*P P 04 13 13.9 -1.2
BR131 Keskin Array S 85.09 335 P P 04 13 14.8 -0.5
BR131 IAmb IAmb 04 13 15.4
comp=Z,6.2nm,0.8s
BR131 Keskin Array S 85.09 335 P P 04 13 14.8 -0.5
BR131 pmax pmax
comp=Z,6.0nm,0.8s
BRTR Keskin Array B 85.09 335 P P 04 13 14.6 -0.7
comp=Z,6.5nm,0.9s,baz=45,slow=2.8,SNR=20
BRTR LR LR 04 56 38.1
comp=Z,39nm,18.2s,baz=331,slow=40
TREB Trebinje 85.28 347 *e*P P 04 13 14.9 -1.1
ASAR Alice Springs 85.31 222 P P 04 13 16.4 +0.2
comp=Z,1.8nm,0.6s,baz=25,slow=5.7,SNR=21
ASAR LR LR 04 46 19.0
comp=Z,51nm,21.5s,baz=8.0,slow=32
PDG Podgorica 85.43 347 ⇓P P 04 13 16.0 -0.7
PDG Podgorica 85.43 347 *e*P P 04 13 15.0 -1.7
PDG Podgorica 85.43 347 IAmb IAmb 04 13 16.6
comp=Z,10nm,0.8s
HCY Herceg Novi 85.52 347 *e*P P 04 13 15.0 -2.2
DRME Dracevica, Mon 85.68 347 *e*P P 04 13 17.8 -0.2
NRCA Norcia 85.77 351 IAmb IAmb 04 13 19.3
comp=Z,12nm,0.9s
AQU L'Aquila 86.22 351 *e*P P 04 13 16.4 -4.3
INTR Introdacqua 86.51 350 IAmb IAmb 04 13 23.1
comp=Z,11nm,1.0s
ESDC Sonseca Array 89.40 4 P P 04 13 34.7 -1.3
comp=Z,0.2nm,0.3s,baz=8.0,slow=5.7,SNR=4.0
STKA Stephens Creek 89.74 213 P P 04 13 38.0 +0.7
comp=Z,4.4nm,0.6s,baz=328,slow=5.5,SNR=11
STKA LR LR 04 48 11.0
comp=Z,85nm,20.1s,baz=26,slow=32
STKA Stephens Creek 89.74 213 P P 04 13 37.4 +0.1
TORD Torodi Ar. Bea 115.93 359 PKP PKiKP 04 19 21.0 -1.2
comp=Z,0.3nm,0.4s,baz=357,slow=2.2,SNR=8.8
TORD PKKPbc PKKPbc 04 29 51.0 -0.2
comp=Z,0.2nm,0.4s,baz=172,slow=2.4,SNR=4.6
DBIC Dimbokro 122.14 7 PKP PKPdf 04 19 33.0 -1.2
comp=Z,1.1nm,0.4s,baz=345,slow=2.6,SNR=9.3
DBIC Dimbokro 122.14 7 PKiKP 04 19 36.7 +2.3
DBIC Dimbokro 122.14 7 PKIKP PKPdf 04 19 33.0 -1.2
QSPA South Pole Qui 140.94 180 PKhKP PKPpre 04 20 01.7
comp=Z,1.4nm,0.9s,baz=217,slow=1.9,SNR=6.9
LBTB Lobatse 147.82 315 PKPbc 04 20 23.8 -0.4
LBTB Lobatse 147.82 315 PKP2 PKPbc 04 20 23.8 -0.4
BOSA Boshof 151.06 312 PKPbc PKPbc 04 20 31.8 -0.4
comp=Z,3.5nm,0.5s,baz=31,slow=1.5,SNR=8.8

NIED ***26*** *04:10:00, 20°.50N×120°.30E, h14km, Mw4.3 Best double couple: M0 3.41000×10^15 NP1:φs183.00000°, δ71.00000°, λ22.00000°. NP2:φs86.00000°, δ70.00000°, λ160.00000°.*
NEIC ***26*** *04:10:15.8±1.4, 20°.22N±0°.04×120°.29E±0°.09, h12km±4km, mb4.5/28, Error ellipse: s-maj=11.7km s-min=6.1km az=94.0*
BJI ***26*** *04:10:16.4±0.0, 20°.45N×120°.11E, h7km, mB4.6/33, mb4.3/45, ML3.7/2, Ms3.9/27, Ms7 3.6/24*
MAN ***26*** *04:10:17.8, 20°.18N×120°.39E, h34km, mb5.4, ML4.4, MS4.6*
JMA ***26*** *04:10:20.3±0.4, 20°.45N×120°.32E, h84km, M3.6*
IDC ***26*** *04:10:21.0±3.3, 20°.26N×120°.47E, h48km±33km, mb3.9/25, mb1 4.1/27, mb1mx3.9/58, mbtmp4.2/27, ML3.9/2, MS3.4/5, Ms1 3.4/5, ms1mx3.0/42, Error ellipse: s-maj=16.5km s-min=11.4km az=79.0*
ISC 26 04:10:15.1±2.6, **20°.23N**±0°.03×**120°.33E**±0°.05, **h5**km±16km, **n100,** σ**1§67**/110, **mb4.4**/40, **MS3.5**/7, **1D, Philippine Islands region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
BBP Basco 1.55 82 *e*P Pn 04 10 43.3 0.0
BBP *e*S Sn 04 11 01.0 -2.9
SIPP Brgy, Tapao 2.30 177⇓*i*P Pn 04 10 53.2 -0.5
SIPP *e*S Sb 04 11 27.1 +1.3
APYP Conner 2.51 160 *e*P Pn 04 10 55.4 -1.2
APYP *e*S Sn 04 11 25.6 -2.0
SGCP Mt. Cagua 2.56 140 *e*P Pn 04 10 56.5 -0.8
SGCP *e*S Sn 04 11 26.3 -2.5
TWG Pinlang 2.67 15 Pn 04 10 58.8 +0.1
TWG Sn Sn 04 11 30.4 -1.1
SZP Santa 2.67 177 Pn 04 10 58.3 -0.5
SZP Sn Sn 04 11 28.8 -2.7
TPUB Ta-pu 3.07 5 Pn 04 11 03.3 -1.0
YULB Yu-li 3.27 16 Pn 04 11 07.3 +0.2
YULB Sn Sn 04 11 45.9 -0.5
CAUP Cauayan 3.57 156 *e*P Pn 04 11 13.1 +1.9
CAUP *e*S Sn 04 11 57.1 +3.5
SSLB Suanglung 3.58 9 Pn 04 11 10.7 -0.7
SSLB Sn Sn 04 11 51.8 -2.4
SMPP San Manuel, Pa 4.08 175 *e*P Pn 04 11 18.7 +0.5
SMPP *e*S Sn 04 12 02.6 -3.6
NACB Ninganchiao 4.09 16 Pn 04 11 18.6 +0.3
YHNB Yeheng 4.52 12 Pn 04 11 24.7 +0.4
KNMB Chin-men Tao 4.58 337 Pn Pn 04 11 22.7 -2.3
BALP Baler 4.62 165 *e*P Pn 04 11 25.9 +0.3
BALP *e*S Sn 04 12 07.9 -12
YOJ Yonaguni jima 4.89 30 P Pn 04 11 30.4 +1.1
YOJ Yonaguni jima 4.89 30 Pn Pn 04 11 29.9 +0.7
QZH Quanzhou 4.95 341 *e*Pn Pn 04 11 27.5 -2.7
QZH Sn Sn 04 12 18.5 -9.4
QZH LR LR
comp=N,410nm,11.8s
QZH LR LR
comp=E,370nm,14.4s
QZH LR LR
comp=Z,430nm,10.9s
HATJ Hateruma jima 4.99 40 *e*S Sn 04 12 26.3 -2.4
IRIF Iriomote-Funau 5.16 37 P Pn 04 11 34.6 +1.6
JIJ Ishigaki jima 5.42 40 P Pn 04 11 38.4 +1.8
JISG Ishigakijimahi 5.69 40 P Pn 04 11 40.8 +0.5
JISG *e*S Sn 04 12 42.8 -3.2
JTJ Tarama 5.97 42 P Pn 04 11 46.0 +1.9
JTJ *e*S Sn 04 12 52.1 -0.8
HKPS Hong Kong Po S 6.12 291 Pn Pn 04 11 46.3 +0.1
LQP Lukban 6.20 169 *e*P Pn 04 11 43.4 -4.1
QIZ Qiongzhong 9.95 265 P Pn 04 12 38.8 0.0
QIZ S Sn 04 14 31.0 0.0
QIZ LR LR
comp=N,220nm,5.0s
QIZ LR LR
comp=E,270nm,11.0s
QIZ LR LR
comp=Z,310nm,12.3s
NJ2 Nanjing 11.84 354 *e*P Pn 04 13 07.0 +2.3
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
NJ2 LR LR
comp=N,360nm,14.2s
NJ2 LR LR
comp=E,450nm,13.3s
NJ2 LR LR
comp=Z,1μm,24.1s
DLV T Lat 14.04 236 Pn 04 13 33.9 -1.1
DAV Davao City (W) 14.04 158 LR LR 04 20 14.8
comp=Z,113nm,19.6s,baz=296,slow=42
JNU Nakatsue 15.91 34 P Pn 04 14 01.1 +1.2
0.5nm,0.3s,baz=136,slow=3.2,SNR=6.7
JNU Nakatsue 15.91 34 P P 04 14 04.1 +0.5
JNU IAmb IAmb 04 14 06.2
comp=Z,30nm,1.0s
KMI Kunming 16.94 290 P P 04 14 16.3 +1.1
KMI S Sn 04 17 17.5 -4.5
KMI pmax pmax
comp=Z,8.0nm,1.1s
KMI pmax pmax
comp=Z,88nm,4.1s
KMI LR LR
comp=Z,290nm,16.4s
KMI LR LR
comp=Z,130nm,17.0s
KMI LR LR
comp=Z,160nm,16.8s
CD2 Chengdu 18.32 309 P Pn 04 14 27.3 -2.8
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 LR LR
comp=Z,650nm,6.7s
CD2 LR LR
comp=Z,710nm,11.6s
CD2 LR LR
comp=Z,600nm,8.2s
KSRS Korea Array 18.39 19 P P 04 14 30.8 -0.1
comp=Z,0.2nm,0.3s,baz=193,slow=12,SNR=14
BJT Baijiatuau 20.04 351 P P 04 14 48.5 -0.5
BJT IAmb IAmb 04 14 51.7
comp=Z,29nm,0.9s
BJI Beijing 20.06 351 P Pn 04 14 50.8 -0.1
BJI pmax pmax
comp=Z,35nm,0.9s
BJI LR LR
comp=Z,87nm,4.1s
CMAR Chiang Mai Arr 20.25 269 P Pn 04 14 53.7 +0.3
comp=Z,1.3nm,0.3s,baz=69,slow=9.2,SNR=4.5
CMAR LR LR 04 22 04.8
comp=Z,90nm,19.2s,baz=92,slow=34
INU Inuyama 21.04 41 P P 04 15 00.0 +0.1
INU IAmb IAmb 04 15 02.7
comp=Z,13nm,0.8s
LZH Lanzhou 21.41 321 *e*P P 04 15 03.8 -0.2
LZH pP pP 04 15 06.8 +2.4
LZH sP sP 04 15 08.5 +3.9
LZH PP PnPn 04 15 27.5 +3.5
LZH pmax pmax
comp=Z,23nm,1.1s
LZH pmax pmax
comp=Z,69nm,4.3s
LZH LR LR
comp=Z,260nm,12.0s
LZH LR LR
comp=Z,220nm,12.5s
LZH LR LR
comp=Z,180nm,13.6s
HHC Hu-ho-hao-te 21.87 342 *e*P P 04 15 10.5 +1.7
HHC pP sP 04 15 15.5 +6.1
HHC pmax pmax
comp=Z,8.0nm,0.8s
HHC pmax pmax
comp=Z,54nm,4.0s
MJAR Matsushiro Arr 22.55 40 P P 04 15 15.7 -0.5
comp=Z,2.9nm,0.6s,baz=223,slow=9.5,SNR=9.7
SIJI Sorong 23.55 152 P P 04 15 27.2 +0.6
comp=Z,11nm,0.6s,baz=238,slow=19,SNR=2.6
MDJ Mudanjiang 25.51 15 P P 04 15 45.0 +0.6
MDJ pmax pmax
comp=Z,11nm,1.1s
MDJ pmax pmax
comp=Z,170nm,3.5s
GTA Gaotai 26.00 322 *e*P P 04 15 49.8 +0.7
GTA pP pwP 04 15 59.0 +4.2
GTA pmax pmax
comp=Z,2.0nm,1.2s
GTA pmax pmax
comp=Z,83nm,5.1s
GTA LR LR
comp=Z,120nm,15.9s
GTA LR LR
comp=Z,150nm,17.8s
GTA LR LR
comp=Z,87nm,16.8s
PSI Prapat 27.13 233 P P 04 16 02.8 +3.2
comp=Z,9.2nm,0.9s,baz=220,slow=2.5,SNR=5.8
PSI LR LR 04 26 57.3
comp=Z,113nm,18.2s,baz=17,slow=36
RPSI Rantau Prapat 27.20 233 P P 04 16 02.8 +2.8
ULN Ulaanbaatar 29.59 342 P P 04 16 20.2 -1.0
SONM Songino Array 29.76 341 P P 04 16 23.4 +0.8
comp=Z,5.0nm,0.9s,baz=159,slow=9.8,SNR=24
KLR Kul'dur 30.34 15 P P 04 16 27.7 0.0
comp=Z,2.8nm,0.9s,baz=233,slow=5.4,SNR=8.6
TLY Talaya 33.99 341 P P 04 17 00.7 +1.0
comp=Z,3.7nm,0.7s,baz=183,slow=5.9,SNR=5.2
TLY Talaya 33.99 341 P P 04 16 58.9 -0.8
TLY IAmb IAmb 04 17 01.4
comp=Z,5.6nm,0.8s
WMQ Urumqi 35.94 318 *e*P P 04 17 18.3 +1.7
WMQ pP sP 04 17 22.5 +5.4
WMQ pmax pmax
comp=Z,7.0nm,0.9s
WMQ pmax pmax
comp=Z,110nm,4.1s
WMQ LR LR
comp=Z,280nm,28.9s
WMQ LR LR
comp=Z,520nm,29.3s
WMQ LR LR
comp=Z,60nm,27.1s
MK31 Makanchi Array 40.71 320 P P 04 17 57.1 +0.4
MKAR Makanchi Array 40.71 320 P P 04 17 57.6 +0.8
comp=Z,1.7nm,0.7s,baz=116,slow=9.9,SNR=15
MKAR PcP PcP 04 19 57.7 -0.6
comp=Z,0.6nm,0.7s,baz=103,slow=4.6,SNR=4.1
MAKZ Makanchi 40.91 319 P P 04 17 57.8 -0.6
WRA Warramunga Arr 42.22 160 P P 04 18 08.5 -0.8
comp=Z,1.7nm,0.8s,baz=342,slow=9.0,SNR=11
WB2 Warramunga Arr 42.23 160 P P 04 18 08.8 -0.5
WB2 IAmb IAmb 04 18 24.1
comp=Z,6.3nm,0.8s
KSH Kashi 42.50 307 P P 04 18 15.3 +3.7
KSH PcP PcP 04 20 04.5 +0.1
KSH PcS PcS 04 24 02.8 +6.3
KSH S S 04 24 39.3 +4.9
KSH SS SS 04 27 42.5 -1.2
KSH pmax pmax
comp=Z,5.0nm,0.6s
KSH pmax pmax
comp=Z,170nm,5.0s
KSH LR LR
comp=Z,200nm,5.4s
KSH LR LR
comp=Z,120nm,4.5s
KSH LR LR
comp=Z,210nm,6.6s
ZAA0 Zalesovo Array 43.18 330 P P 04 18 15.8 -1.0
ZALV Zalesovo Beam 43.18 330 P P 04 18 17.1 +0.4
comp=Z,3.7nm,0.7s,baz=122,slow=8.0,SNR=15
PETK Petropavlovsk- 43.60 32 LR LR 04 38 44.4
comp=Z,27nm,19.0s,baz=240,slow=39
H11S3 WAKE ISLAND Hy 43.67 84 T T 05 05 07.1
baz=280,slow=75,SNR=7.4
H11S1 WAKE ISLAND Hy 43.68 84 T T 05 05 05.6
baz=280,slow=75,SNR=5.9
H11S2 WAKE ISLAND Hy 43.68 84 T T 05 05 10.9
baz=280,slow=75,SNR=5.9
KURK Kurchatov 44.68 323 P P 04 18 28.4 -0.4
KURK IAmb IAmb 04 18 30.4
comp=Z,6.9nm,1.0s
KURBB Kurchatov Array 44.69 323 P P 04 18 29.7 +0.8
comp=Z,6.0nm,0.7s,baz=124,slow=7.4,SNR=12
MA2 Magadan 44.93 21 P P 04 18 30.2 -0.6
comp=Z,2.0nm,0.3s,baz=203,slow=8.6,SNR=3.6
MA2 Magadan 44.93 21 P P 04 18 30.1 -0.6
MA2 IAmb IAmb 04 18 31.9
comp=Z,8.2nm,1.1s
AS31 Alice Springs 45.60 162 P P 04 18 36.0 -0.4
ASAR Alice Springs 45.60 162 P P 04 18 36.1 -0.3
comp=Z,1.4nm,0.5s,baz=347,slow=7.3,SNR=18
KK31 Karatay Array 47.32 310 P P 04 18 48.5 -1.3
KK31 IAmb IAmb 04 19 01.8
comp=Z,4.4nm,1.1s
KKAR Karatay Array 47.32 310 P P 04 18 48.0 -1.9
KKAR IAmb IAmb 04 19 01.8
comp=Z,4.4nm,1.1s
SEY Seymchan 47.95 19 P P 04 18 54.5 +0.1
comp=Z,1.5nm,0.7s,baz=196,slow=11,SNR=6.0
BVAR Borovoye Array 50.28 323 P P 04 19 12.8 +0.4
comp=Z,2.0nm,0.6s,baz=105,slow=9.3,SNR=11
BVAR PcP PcP 04 20 30.5 -0.8
comp=Z,1.3nm,0.7s,baz=113,slow=3.9,SNR=4.8
BRVK Borovoye 50.35 323 P P 04 19 12.7 -0.2
BRVK IAmb IAmb 04 19 14.7
comp=Z,5.1nm,0.7s
TIXI Tiksi 51.67 3 P P 04 19 21.4 -1.1
comp=Z,1.0nm,0.3s,baz=163,slow=2.7,SNR=4.4
TIXI Tiksi 51.67 3 P P 04 19 21.8 -0.7
NRIK Noril'sk 53.01 346 P P 04 19 33.0 +0.4
comp=Z,3.6nm,0.7s,baz=135,slow=7.6,SNR=3.6
BILL Bilibino 55.66 19 P P 04 19 52.3 +0.4
STKA Stephens Creek 55.68 158 P P 04 19 52.4 0.0
comp=Z,1.1nm,0.7s,baz=337,slow=13,SNR=2.8
STKA Stephens Creek 55.68 158 P P 04 19 50.7 -1.8
KBZ Khabaz 67.36 310 P P 04 21 11.8 +0.5
comp=Z,0.7nm,0.6s,baz=106,slow=7.5,SNR=3.9
KLMR Klimovskoe 68.08 329 *e*P P 04 21 13.1 -2.5

KLMR AMP 04 21 20.9
comp=Z,24nm,1.8s
RAYN Ar Rayn 68.77 288 P P 04 21 19.9 -0.8
RAYN IAmb IAmb 04 21 31.0
comp=Z,4.3nm,0.9s
BPAW Bear Paw Mtn. 71.44 28 P P 04 21 36.4 +0.1
RND Reindeer 72.48 28 P P 04 21 42.3 -0.3
ILAR Eielson Array 73.08 27 P P 04 21 45.1 -1.0
comp=Z,0.9nm,0.8s,baz=270,slow=5.0,SNR=13
FINES FINESS Array B 74.45 330 P P 04 21 54.4 +0.2
comp=Z,3.2nm,0.8s,baz=103,slow=6.1,SNR=6.0
AKASG Malin Array Be 75.29 319 P P 04 21 58.4 -0.8
comp=Z,0.1nm,0.2s,baz=63,slow=6.9,SNR=3.7
EGAK Eagle 75.46 26 IAmb IAmb 04 22 10.3
comp=Z,4.2nm,0.9s
DAWY Dawson 76.41 26 P P 04 22 05.7 +0.3
DAWY IAmb IAmb 04 22 07.0
comp=Z,4.2nm,0.8s
INK Inuvik 77.17 21 P P 04 22 08.8 -0.7
comp=Z,1.5nm,0.7s,baz=297,slow=6.4,SNR=8.2
INK Inuvik 77.17 21 IAmb IAmb 04 22 10.5
comp=Z,2.7nm,0.8s
NB2 NORSAR Subarra 81.33 332 P P 04 22 31.7 -0.8
comp=Z,0.8nm,0.8s,baz=62,slow=5.3
NOA NORSAR Array B 81.33 332 P P 04 22 31.6 -1.0
comp=Z,0.9nm,0.7s,baz=64,slow=5.0,SNR=4.3
VTS Vitosha 81.58 113 P P 04 22 33.0 -1.3
RES Resolute Bay 82.67 9 P P 04 22 39.3 +0.1
GERES GERESS Array B 85.38 321 P P 04 22 54.0 +0.4
comp=Z,1.1nm,0.8s,baz=64,slow=6.1,SNR=8.1
YKA Yellowknife Ar 86.91 22 P P 04 23 01.1 +0.4
comp=Z,3.7nm,0.9s,baz=316,slow=4.4,SNR=34
YKA LR LR 05 07 08.0
comp=Z,19nm,20.3s,baz=0.0,slow=39
TXAR Lajitas Array 114.98 42 PKP PKPdf 04 28 58.0 +0.1
comp=Z,0.6nm,0.9s,baz=169,slow=1.3,SNR=6.1

*IDC **26** 04:15:33.9±0.9, 4.°42S×125.°45E, h422km±10km, mb4.0/29, mb1 4.1/33, mb1mx3.9/57, mbtmp4.7/33, Error ellipse: s-maj=12.3km s-min=7.5km az=68.0*
*NEIC **26** 04:15:34.5±1.9, 4.°44S±0.°08×125.°52E±0.°08, h434km±6km, mb4.5/50, Error ellipse: s-maj=11.9km s-min=11.0km az=69.0*
*KLM **26** 04:15:34.0, 4.°64S×125.°43E, h427km, mb4.7*
*DJA **26** 04:15:35.0±0.1, 4.°S±2.°×12.°6E±.°, h431km±2km, M4.6/57, mb4.7/57, mB5.1/28, MLv5.1/28, Mw(mB)4.5/28*
ISC 26 04:15:34.7±0.5, 4.°47S±0.°04×125.°52E±0.°05, h435km±6km, n178, σ1.°23/193, mb4.4/51, 3D, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

NLAI Namlea 2.00 52 P P 04 16 33.1 -0.7
SANI Sanana 2.45 11 P P 04 16 36.0 -0.7
AAI Ambon 2.78 74 P P 04 16 37.4 -1.5
BBSI Bau Bau 3.11 251 P P 04 16 41.7 +0.3
MSAI Masohi 3.58 72 P P 04 16 43.7 -1.6
LBMI Labuha 4.29 28 P P 04 16 52.2 +0.6
LUWI Luwuk 4.37 321 P P 04 16 53.1 +0.8
LUWI Luwuk 4.37 321 P P 04 16 52.6 +0.3
LUWI S S 04 17 55.5 +0.1
BNDI Bandanaira 4.37 91 P P 04 16 51.9 -0.4
KMSI Cibinong 5.24 343 P P 04 16 58.1 -2.6
9.3nm27µm2µm,0.5s
MMRI Maumere 5.27 218 P P 04 17 02.2 +1.3
3.8nm10µm995nm,0.9s
MMRI Maumere 5.27 218 P P 04 17 02.3 +1.3
BNSI Bone 5.40 271 P P 04 17 03.5 +1.3
2.3nm6µm778nm,0.8s
SOEI Soe 5.40 193 P P 04 17 02.6 +0.2
2.8nm6µm316nm,0.8s
SOEI Soe 5.40 193 P P 04 17 02.8 +0.4
SOEI S S 04 18 13.9 -0.1
BKSI Bulukumba 5.44 261 P P 04 17 03.4 +0.7
2.6nm6µm669nm,0.6s
TNTI Ternate 5.52 20 P P 04 17 03.7 +0.1
0.9nm2µm208nm,0.8s
TNTI Ternate 5.52 20 P P 04 17 02.7 -0.8
EDFI Ende, Flores 5.70 222 P P 04 17 06.2 +0.7
1.7nm5µm577nm,0.9s
SPSI Sidrap Palu 5.75 275 P P 04 17 06.4 +0.5
0.7nm2µm218nm,0.8s
KAPI Kappang 5.77 264 P P 04 17 05.8 -0.3
11nm,0.3s,baz=101,slow=5.2,SNR=30
TTSI Tana Toraja 5.86 284 P P 04 17 08.7 +1.7
0.2nm725nm74nm,0.7s
MRSI Marisa 6.08 324 P P 04 17 09.2 0.0
1.6nm4µm538nm,0.6s
SWI Sorong 6.76 58 P P 04 17 17.0 +0.3
0.8nm257nm,0.8s
SIJI Sorong 6.76 58 P P 04 17 16.4 -0.3
9.1nm,0.3s,baz=41,slow=23,SNR=30
SIJI S S 04 18 38.8 -1.1
3.2nm,0.3s,baz=108,slow=18,SNR=8.4
FAKI Fak Fak 6.89 77 P P 04 17 17.4 -0.7
1.7nm5µm450nm,0.8s
FAKI Fak Fak 6.89 77 P P 04 17 17.1 -0.9
FAKI S S 04 18 37.8 -4.7
MPSI Mapaga 7.37 310 P P 04 17 23.8 +0.6
BASI Baing, Sumba 7.53 220 P P 04 17 23.3 -1.6
1.6nm5µm233nm,1.0s
WBSI Waikabubak, Su 7.96 229 P P 04 17 27.9 -1.7
1.5nm4µm268nm,0.6s
PLAI Plampang 8.82 240 P P 04 17 39.1 +0.1
1.0nm3µm273nm,0.8s
MTN Manton Dam 10.00 147 P P 04 17 52.0 +0.1
SRBI Singaraja 10.85 250 P P 04 18 03.2 +2.0
45nm,0.7s
SKMP Bagumbayan, Su 10.96 355 eP P 04 18 02.7 +0.3
MATI Mati 11.36 4 eP P 04 18 06.4 -0.4
KCP Kidapawan 11.41 358⇓/P P 04 18 07.7 +0.3
KNRA Kununurra 11.59 164 P P 04 18 09.7 +0.5
JAGI Jajag, Banyuwa 11.97 250 P P 04 18 13.1 -0.4
2µm87nm,0.6s
JAGI Jajag, Banyuwa 11.97 250 P P 04 18 13.3 -0.2
BUKP Musuan 12.27 358 eP P 04 18 17.3 +0.4
PAGZ Pagadian 12.42 350 eP P 04 18 19.2 +0.8
GMJI Gumukmas 12.58 252 P P 04 18 20.7 +0.6
961nm91nm,0.9s
SMPI Sarmi 13.40 80 P P 04 18 32.2 +3.2
87nm,1.3s
FITZ Fitzroy Crossi 13.55 180 P P 04 18 30.8 +0.3
18nm,0.3s,baz=16,slow=10.0,SNR=86
KKM Kota Kinabalu 13.98 318 P P 04 18 35.7 +0.4
PWJI Pagerwojo 14.08 255 P P 04 18 38.4 +2.0
35nm,0.8s
STKI Sintang 14.73 287 P P 04 18 44.4 +1.0
GENI Genyem 14.74 83 P P 04 18 45.1 +1.6
391nm,0.9s
WOJI Wonogiri, Jawa 14.89 256 P P 04 18 51.0 +5.9
24nm,1.0s
SBUM Sibu 14.96 297 P P 04 18 47.5 +1.7
SMRI Semarang 15.22 260 P P 04 18 49.6 +1.0
196nm,0.7s
UGM Wanagama 15.29 256 P P 04 18 47.7 -1.7
KSM Kuching 16.30 291 P P 04 19 00.6 +0.5
KPJI Karang Pucung 16.74 259 P P 04 19 04.5 -0.3
1µm120nm,0.7s
WB0 Warramunga Arr 17.49 151 P P 04 19 12.2 -0.6
WB0 S S 04 22 11.4 -1.3
WRA Warramunga Arr 17.62 152 P P 04 19 13.1 -1.0
4.5nm,0.3s,baz=325,slow=8.1,SNR=63
WRA S S 04 22 14.0 -1.0
0.4nm,0.3s,baz=336,slow=15,SNR=14
WB2 Warramunga Arr 17.62 152 P P 04 19 13.4 -0.7
WB2 S S 04 22 13.8 -1.3
WR0 Warramunga Arr 17.73 151 P P 04 19 14.7 -0.5
WR0 IAmb IAmb 04 19 16.9
comp=Z,27nm,0.8s
WR0 S S 04 22 15.7 -1.3
CISI Cisompet, Garu 17.87 259 P P 04 19 14.8 -2.0
comp=Z,3µmcomp=Z,186nm,0.7s
CISI Cisompet, Garu 17.87 259 P P 04 19 15.2 -1.6
PSA00 Pilbara Seismi 17.87 197 P P 04 19 15.7 -1.0
CNJI Cibinong 18.51 260 P P 04 19 20.6 -2.5
comp=Z,103nm,0.7s
COEN Coen 19.80 120 P P 04 19 35.6 +0.4
KLSI 20.72 269 P P 04 19 43.4 -0.3
AS31 Alice Springs 20.73 158 P P 04 19 44.4 +0.7
AS31 IAmb IAmb 04 19 46.0
comp=Z,9.0nm,0.6s
ASAR Alice Springs 20.73 158 P P 04 19 44.5 +0.8
comp=Z,16nm,0.4s,baz=340,slow=8.3,SNR=104
ASAR S S 04 23 08.7 +2.2
comp=Z,7.2nm,0.9s,baz=345,slow=21,SNR=9.5
ASAR ScP **ScP 04 26 30.4 +1.0**
comp=Z,2.9nm,0.7s,baz=343,slow=2.1,SNR=7.6
KASI Kota Agung 20.97 266 P P 04 19 44.0 -1.9
comp=Z,67nm,0.9s
GIRL Giralia 21.11 210 P P 04 19 47.8 +0.7
MDSI Maura Dua 21.27 269 P P 04 19 47.9 -0.8
comp=Z,1µmcomp=Z,24nm,0.6s
PMG Port Moresby 22.03 104 P P 04 19 56.3 +0.8
comp=Z,8.9nm,0.5s,baz=283,slow=8.4,SNR=3.7
PDSI Padang 25.27 277 P P 04 20 23.1 -1.6
comp=Z,19nm,0.8s
IPM Ipoh 26.03 290 P P 04 20 31.0 -0.4
MORW Morawa 26.07 199 P P 04 20 31.4 -0.1
FORT Forrest 26.28 175 P P 04 20 33.6 +0.3
FORT IAmb IAmb 04 20 34.2
comp=Z,29nm,0.6s
SISI Saibi 26.57 276 P P 04 20 37.9 +1.7
comp=Z,17nm,0.8s
KULM Kulim 26.66 291 P P 04 20 35.1 -1.9
KULM IAmb IAmb 04 20 37.7
comp=Z,20nm,0.7s
KULM Kulim 26.66 291 P P 04 20 37.0 0.0
RPSI Rantau Prapat 27.51 285 P P 04 20 42.7 -1.7
RPSI IAmb IAmb 04 20 45.1
comp=Z,20nm,0.9s
PSI Prapat 27.54 285 P P 04 20 43.7 -1.1
comp=Z,20nm,0.9s,baz=129,slow=4.0,SNR=13
TPUB Ta-pu 28.01 350 P P 04 20 47.9 -0.8
TPUB IAmb IAmb 04 20 48.7
comp=Z,14nm,0.9s
NACB Ninganchiao 28.73 353 P P 04 20 54.5 -0.4
NACB IAmb IAmb 04 20 54.8
comp=Z,24nm,1.1s
TPTI 29.34 285 P P 04 20 59.4 -1.1
comp=Z,5.1nm,0.7s
NWAO Narrogin (SRO) 29.35 194 P P 04 21 00.1 -0.3
comp=Z,4.8nm,0.5s,baz=36,slow=7.3,SNR=9.9
NWAO Narrogin (SRO) 29.35 194 P P 04 20 59.6 -0.8
NWAO IAmb IAmb 04 21 05.6
comp=Z,9.9nm,0.8s
NWAO Narrogin (SRO) 29.35 194 P P 04 21 00.0 -0.3
NWAO IAmb IAmb 04 21 05.6
comp=Z,16nm,1.0s
BBOO Buckleboo 29.87 162 P P 04 21 05.2 +0.3
BBOO IAmb IAmb 04 21 06.7
comp=Z,19nm,1.1s
STKA Stephens Creek 31.16 153 P P 04 21 17.1 +1.0
comp=Z,22nm,0.6s,baz=326,slow=8.9,SNR=54
STKA PcP **PcP 04 23 58.8 +0.1**
comp=Z,2.3nm,0.5s,baz=292,slow=1.7,SNR=4.0
STKA ScP **ScP 04 27 00.6 +0.8**
comp=Z,3.2nm,0.7s,baz=350,slow=3.0,SNR=6.9
STKA Stephens Creek 31.16 153 P P 04 21 17.1 +1.0
STKA **PcP 04 23 58.1 -0.6**
STKA **ScP 04 26 58.9 -0.9**
SLVN Son La 33.26 321 P P 04 21 33.3 -1.0
CMAR Chiang Mai Arr 34.71 312 P P 04 21 46.5 -0.1
comp=Z,17nm,0.8s,baz=141,slow=7.2,SNR=67
CMAR PcP **PcP 04 24 10.7 +1.7**
comp=Z,2.1nm,0.7s,baz=171,slow=3.3,SNR=4.2
CMAR ScP **ScP 04 27 14.7 +2.2**
comp=Z,1.2nm,0.3s,baz=181,slow=2.2,SNR=6.8
CHTO Chiang Mai 34.93 312 P P 04 21 49.3 +0.8
CHTO IAmb IAmb 04 21 50.2
comp=Z,38nm,0.9s
WHN Wuhan 36.42 344 P P 04 21 57.8 -2.9
KMI Kunming 36.81 324 P P 04 22 05.8 +1.5
NJ2 Nanjing 36.87 351 eP P 04 22 04.3 -0.1
CAN Canberra 37.60 148 P P 04 22 12.7 +2.2
TOO Toolangi 37.67 154 P P 04 22 13.4 +2.3
TOO IAmb IAmb 04 22 14.0
comp=Z,13nm,0.7s
CD2 Chengdu 40.86 331 P P 04 22 37.5 +0.4
XAN Xi'an 41.38 339 P P 04 22 40.3 -0.9
KSRS Korea Array 41.77 3 P P 04 22 44.5 +0.4
comp=Z,1.1nm,0.5s,baz=165,slow=10,SNR=6.2
MJAR Matsushiro Arr 42.49 15 P P 04 22 49.3 -0.6
comp=Z,4.7nm,0.7s,baz=192,slow=8.3,SNR=8.8
LZH Lanzhou 45.16 335 ⇓P P 04 23 11.8 +0.7
LZH pP pP 04 24 35.5 +0.6
LZH PP PP 04 25 06.0 +1.7
LZH sP sP 04 25 23.0 -1.0
HHC Hu-ho-hao-te 46.88 345 eP P 04 23 25.5 +1.4
LSA Lhasa 47.32 318 P P 04 23 27.4 -0.7
LSA IAmb IAmb 04 23 30.6
comp=Z,12nm,0.7s
ODAN Odare 48.25 312 eP P 04 23 34.8 -0.1
comp=Z,62nm,0.8s
TAPN Taplejung 48.30 313 eP P 04 23 35.2 -0.1
USRK Ussuriysk Ar. 48.80 6 P P 04 23 38.4 +0.1
comp=Z,5.5nm,0.5s,baz=198,slow=7.6,SNR=15
RAMN Ramite 48.89 312 eP P 04 23 39.9 +0.2
comp=Z,135nm,0.7s
JIRN Jiri 49.59 312 eP P 04 23 44.9 -0.1
GTA Gaotai 49.68 334 ⇓P P 04 23 45.5 +0.3
GTA pP PcP 04 25 00.5 +1.6
GTA sP PP 04 25 40.8 -4.4
GUN Gumba 49.95 312 eP P 04 23 47.6 -0.1
comp=Z,116nm,0.8s
PKI Pulchoki 50.11 312 eP P 04 23 48.4 -0.5
PKIN Phulchoki 50.13 312 eP P 04 23 48.3 -0.6
comp=Z,26nm,0.7s
KKN Kakani 50.33 312 eP P 04 23 50.0 -0.3
DMN Daman 50.36 312 eP P 04 23 50.4 -0.2
comp=Z,75nm,0.9s
GKN Gorkha 50.92 312 eP P 04 23 54.4 -0.2
DANN Dangsing 51.76 312 eP P 04 24 00.6 -0.3
comp=Z,121nm,0.7s
DGAR Diego Garcia 52.84 264 P P 04 24 09.0 +0.4
KLR Kul'dur 53.75 5 P P 04 24 13.8 -0.6
comp=Z,0.7nm,0.5s,baz=188,slow=4.5,SNR=4.3
ULN Ulaanbaatar 54.58 345 P P 04 24 20.9 +0.3
SONM Songino Array 54.73 344 P P 04 24 21.3 -0.3
comp=Z,2.0nm,0.6s,baz=163,slow=8.1,SNR=13
SONM PcP **PcP 04 25 17.8 -0.1**
comp=Z,1.4nm,0.8s,baz=166,slow=3.2,SNR=5.0
FOZ Fox Glacier 55.10 142 P P 04 24 25.4 +1.3
LBZ Lake Benmore 55.78 142 P P 04 24 29.9 +0.9
RPZ Rata Peaks 55.97 141 P P 04 24 31.5 +1.2
comp=Z,10.0nm,0.6s,baz=185,slow=5.5,SNR=7.2
RPZ Rata Peaks 55.97 141 IAmb IAmb 04 24 44.9
comp=Z,11nm,0.8s
TUWZ Tuamarina 56.73 138 P P 04 24 36.4 +0.8
WMQ Urumqi 58.89 329 eP P 04 24 51.8 +1.4
NIL Nilore 62.21 312 P P 04 25 12.7 0.0
KSH Kashi 63.17 319 P P 04 25 19.8 +0.9
KSH PcP PcP 04 25 50.5 -1.4
KSH pP pP 04 26 25.3 -23
KSH sP pwP 04 26 57.8 +2.6
KSH PP PP 04 27 50.8 +6.1
KSH S S 04 33 28.0 +12
KSH ScS SKiKP 04 34 45.5 -5.6
PETK Petropavlovsk- 63.45 21 P P 04 25 21.7 +1.5
comp=Z,5.2nm,0.7s,baz=183,slow=7.2,SNR=8.5
MK31 Makanchi Array 63.71 328 P P 04 25 22.1 0.0
MK31 IAmb IAmb 04 25 22.8
comp=Z,7.7nm,0.9s
MKAR Makanchi Array 63.71 328 P P 04 25 21.9 -0.2
comp=Z,10nm,0.7s,baz=123,slow=7.9,SNR=115
MKAR PcP **PcP 04 25 53.9 +0.1**
comp=Z,3.0nm,0.8s,baz=126,slow=4.8,SNR=6.3
MAKZ Makanchi 63.88 328 P P 04 25 23.0 -0.2
MAKZ IAmb IAmb 04 25 23.4
comp=Z,5.2nm,0.7s
KBL Kabul 65.74 311 P P 04 25 36.1 +0.6
AAK Ala-Archa 65.76 321 P P 04 25 35.4 0.0
comp=Z,4.9nm,0.7s,baz=112,slow=4.3,SNR=16
AAK Ala-Archa 65.76 321 P P 04 25 35.2 -0.2
AAK IAmb IAmb 04 25 36.8
comp=Z,5.8nm,0.8s
ZAA0 Zalesovo Array 67.39 335 IAmb IAmb 04 25 44.9
comp=Z,10.0nm,0.9s
ZALV Zalesovo Beam 67.39 335 P P 04 25 44.0 -1.1
comp=Z,4.4nm,0.4s,baz=124,slow=4.5,SNR=25
KURBB Kurchatov Arra 68.06 330 P P 04 25 48.6 -0.7
comp=Z,43nm,0.7s,baz=138,slow=5.5,SNR=13
KURK Kurchatov 68.08 330 P P 04 25 49.2 -0.2
KURK IAmb IAmb 04 25 50.0
comp=Z,14nm,0.8s
KK31 Karatay Array 68.53 320 P P 04 25 52.2 -0.1
KKAR Karatay Array 68.53 320 P P 04 25 52.2 -0.1
WSAR Wadi Sarin 70.75 296 P P 04 26 05.4 -0.7
comp=Z,2.7nm,0.5s,baz=92,slow=6.2,SNR=4.6
HRA Herat 70.89 309 IAmb IAmb 04 26 07.8
comp=Z,11nm,1.0s
BRVK Borovoye 73.65 329 P P 04 26 22.1 -0.3
BRVK IAmb IAmb 04 26 23.2
comp=Z,9.1nm,1.1s
GEYT Alibeck 75.19 311 P P 04 26 32.2 +0.7
comp=Z,3.8nm,0.6s,baz=159,slow=4.6,SNR=9.3
ABKAR Akbulak array 77.78 322 P P 04 26 45.0 -0.6
ABKAR IAmb IAmb 04 26 46.1
comp=Z,5.1nm,0.8s
NRIK Noril'sk 78.08 347 P P 04 26 46.9 +0.2
comp=Z,4.8nm,0.7s,baz=122,slow=2.3,SNR=5.9
AKTO Aktyubinsk 79.37 323 P P 04 26 53.9 -0.2
comp=Z,7.0nm,0.7s,baz=110,slow=7.0,SNR=24
RAYN Ar Rayn 82.65 294 P P 04 27 10.8 -1.0
RAYN IAmb IAmb 04 27 12.8
comp=Z,13nm,0.7s
QSPA South Pole Qui 85.49 180 P P 04 27 25.6 +0.5
comp=Z,6.4nm,0.7s,baz=297,slow=1.3,SNR=37
QSPA South Pole Qui 85.49 180 P P 04 27 25.3 +0.1
QSPA IAmb IAmb 04 27 26.4
comp=Z,7.6nm,0.8s
TBLG Delisi 86.09 312 IAmb IAmb 04 27 30.3
comp=Z,20nm,0.9s
AKH Akhalkalaki 86.96 312 IAmb IAmb 04 27 35.1
comp=Z,20nm,1.0s
KBZ Khabaz 87.73 314 P P 04 27 36.2 +0.2
comp=Z,2.8nm,0.8s,baz=296,slow=3.1,SNR=4.1
KMBO Kilima Mbogo 88.18 269 P P 04 27 39.5 +0.3
comp=Z,0.9nm,0.5s,baz=99,slow=6.7,SNR=4.7
KMBO Kilima Mbogo 88.18 269 P P 04 27 38.1 -1.0
ILAR Eielson Array 92.98 25 P P 04 27 58.4 -1.6
comp=Z,0.4nm,0.3s,baz=241,slow=4.6,SNR=11
ILAR PKKPbc **PKKPdf 04 45 08.6 +0.9**
comp=Z,0.3nm,0.6s,baz=32,slow=3.0,SNR=5.3
BRTR Keskin Array B 94.27 309 P P 04 28 05.5 -1.0
comp=Z,1.2nm,0.8s,baz=79,slow=8.9,SNR=4.8
LSZ Lusaka 95.88 254 P P 04 28 12.8 -1.6
BOSA Boshof 96.85 241 P P 04 28 18.7 +0.2
comp=Z,9.5nm,0.9s,baz=108,slow=3.8,SNR=13
BOSA Boshof 96.85 241 P P 04 28 18.1 -0.5
AKASG Malin Array Be 97.42 320 P P 04 28 19.0 -1.4
comp=Z,0.8nm,0.5s,baz=71,slow=4.5,SNR=4.7
ARCES ARCESS Array B 97.67 340 P P 04 28 19.8 -1.2
comp=Z,1.9nm,0.8s,baz=79,slow=6.3,SNR=4.7
YKA Yellowknife Ar 107.41 25 PKKPbc PKKPbc 04 44 26.5 -3.1
comp=Z,0.5nm,0.6s,baz=107,slow=3.2,SNR=7.6
GERES GERESS Array B 107.63 320 PKiKP **PKiKP 04 33 11.4 0.0**
comp=Z,0.7nm,0.6s,baz=58,slow=3.3,SNR=6.2
NVAR Mina Array Bea 113.16 50 PKKPbc PKKPbc 04 44 11.0 +0.5
comp=Z,0.6nm,0.7s,baz=108,slow=4.8,SNR=4.6
PDAR Pinedale Array 118.21 43 PKKPbc PKKPbc 04 43 55.5 +2.1
comp=Z,0.7nm,0.7s,baz=78,slow=4.2,SNR=5.7
TORD Torodi Ar. Bea 123.92 283 PKP **PKiKP 04 33 43.5 -0.1**
comp=Z,2.6nm,0.7s,baz=102,slow=2.2,SNR=25
TXAR Lajitas Array 127.35 56 PKP **PKiKP 04 33 51.1 +0.8**
comp=Z,0.3nm,0.8s,baz=186,slow=2.5,SNR=4.5
TXAR SKPbc SKPbc 04 36 27.4
comp=Z,0.4nm,0.8s,baz=247,slow=2.6,SNR=4.5
SCHQ Schefferville 128.80 9 PKP **PKiKP 04 33 52.4 +0.1**
comp=Z,1.8nm,0.6s,baz=93,slow=1.2,SNR=6.3
SCHQ Schefferville 128.80 9 PKPdf 04 33 50.8 -0.7
DBIC Dimbokro 130.57 275 PKP **PKiKP 04 33 57.4 +0.4**
comp=Z,2.5nm,1.0s,baz=112,slow=1.3,SNR=4.1
DBIC SKPbc **SKPab 04 36 40.2 +1.1**
comp=Z,6.0nm,1.0s,baz=88,slow=7.1,SNR=5.8
DBIC Dimbokro 130.57 275 PKPdf 04 33 55.7 -0.4
GO02 Mina Guanaco 147.09 154 PKiKP 04 34 30.0 -0.9
CPUP Villa Florida 149.26 175 PKPbc **PKiKP 04 34 34.5 -0.4**
comp=Z,7.4nm,1.0s,baz=191,slow=3.0,SNR=10
CPUP Villa Florida 149.26 175 PKPbc 04 34 33.3 -0.6
PB11 IPOC Station P 151.67 149 PKiKP 04 34 40.7 +0.5
GO01 Chusmiza 151.99 149 PKiKP 04 34 42.5 +1.2

*NCEDC **26** 04:23:55.6±1.0, 38.°79N±0.°01×122.°76W±0.°01, h2km±5km, Md2.5/72, Error ellipse: s-maj=1.7km s-min=1.5km az=178.0*
NEIC 26 04:23:56.0±1.3, 38.°77N±0.°01×122.°80W±0.°01, h4km±4km, Error ellipse: s-maj=1.8km s-min=1.7km az=192.0, Northern California

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GDXM Geysers 0.04 2 Pg 04 23 56.5 -0.7
GAXM Alexander Vall 0.07 150 Pg 04 23 57.3 -0.1
GBGM Boggs Mountain 0.10 63 Pg 04 23 57.5 -0.7
GACM Adobe Creek 0.12 334 Pg 04 23 58.3 -0.2
GSGM Seigler Mounta 0.12 34 Pg 04 23 58.0 -0.4
GPMM Pine Mountain 0.14 305 Pg 04 23 59.1 +0.3
GCVM Cloverdale 0.17 271 Pg 04 24 00.0 +0.7
NHSM Mount Saint He 0.18 128 Pg 04 23 59.2 -0.4
GSSM Skaggs Springs 0.18 249 Pg 04 24 00.4 +0.8
NMCNC Mill Creek, So 0.20 207 Pg 04 24 00.5 +0.7
MAC Mark West Spri 0.22 165 Pg 04 24 00.8 +0.4
NMTM Middletown 0.28 82 Pg 04 24 00.8 -0.6
NSHM Saint Helena R 0.29 149 Pg 04 24 01.6 0.0
MNRC McLaughlin Min 0.30 68 Pg 04 24 01.7 -0.1
HOPS Hopland Field 0.31 317 Pg 04 24 02.4 +0.3
GHLM Highland Sprin 0.32 328 Pg 04 24 02.4 0.0
GDCM Dry Creek 0.35 270 Pg 04 24 03.6 +0.9
GSNM Snow Mountain 0.35 299 Pg 04 24 03.5 +0.6
GWKM Walker Ridge 0.37 40 Pg 04 24 02.9 -0.3
FTR Fort Ross 0.38 230 Pg 04 24 04.0 +0.7
NTYM Taylor 0.39 164 Pg 04 24 04.0 +0.5
GBMM Baldy Mountain 0.44 32 Pg 04 24 04.5 -0.1
NBPM Berryessa Peak 0.48 102 Pg 04 24 05.7 +0.4
CVS Carmenet Viney 0.50 148 Pg 04 24 05.5 0.0
NAPC Atlas Peak 0.54 127 Pg 04 24 06.2 -0.2
GGUM Gualala 0.56 280 Pg 04 24 07.5 +0.8
GTSM Trough Springs 0.56 15 Pg 04 24 07.0 +0.1
MCCM Marconi Confer 0.62 186 Pb 04 24 08.9 -0.6
GHOM Hamilton Openi 0.64 296 Pb 04 24 09.1 -0.7
SNT Sears Point 0.64 155 Pg 04 24 08.2 -0.2
NDHM Dunnigan Hills 0.69 90 Pb 04 24 10.4 -0.2
NADM Allendale 0.72 115 Pb 04 24 11.0 0.0
GHMM Hull Mountain 0.73 352 Pb 04 24 11.8 +0.3
GNAM Navarro Ridge 0.78 304 Pb 04 24 11.9 -0.3
NPRM Point Reyes 0.79 193 Pb 04 24 11.8 -0.5
NLHM Lake Herman 0.82 142 Pb 04 24 12.0 +0.2
GTC Three Chop Rid 0.86 317 Pb 04 24 13.2 -0.4
CPMM Point Molate 0.87 159 Pg 04 24 13.0 +0.3
CPIM Pinole Ridge 0.90 149 Pg 04 24 13.4 +0.1
BRIB Briones 0.99 149 Pg 04 24 14.8 -0.1
VAK Adit at Lawren 0.99 154 Pg 04 24 14.6 -0.3
CVPM Vollmer Peak 0.99 153 Pg 04 24 14.9 -0.1
BKS Berkeley--Byer 0.99 153 Pg 04 24 14.9 -0.2
JPRM Presidio of Sa 1.00 165 Pg 04 24 15.5 +0.3
CRPB Rossmann Par 1.10 140 Pg 04 24 16.3 -0.9
KCPM Cahto Peak 1.10 327 Pn 04 24 18.1 -0.3
CRHM Round Hill Res 1.10 145 Pg 04 24 17.1 -0.2
CSLM San Leandro Hi 1.17 153 Pg 04 24 18.0 0.4
SAC San Andreas 1.22 166 Pg 04 24 18.6 -0.8
DONR Donner Summit 2.01 72 Pn 04 24 30.2 -0.8
CMB Columbia Colle 2.03 110 Pn 04 24 29.8 -1.3
IND Independence 2.06 70 Pn 04 24 31.0 -0.6
RUBR Rubicon Trail 2.08 81 Pn 04 24 31.5 -0.4
TAHR Tahoe 2.09 79 Pn 04 24 31.6 -0.4
KBF Kyburz Flat 2.14 69 Pn 04 24 32.0 -0.7
MPK Martis Peak 2.22 75 Pn 04 24 33.5 -0.4
GNO Genoa 2.30 85 Pn 04 24 34.8 -0.1
PEAR Peavine Mounta 2.36 68 Pn 04 24 35.5 -0.2
BFC Buffalo Canyon 2.49 86 Pn 04 24 37.6 +0.1
VCNR Virginia City 2.51 77 Pn Pn 04 24 36.6 -1.1
PNTR Pine Nut 2.51 82 Pn 04 24 38.3 +0.4
WAKR Walker 2.64 95 Pn Pn 04 24 38.3 -1.3
YERR Yerington 2.78 84 Pn Pn 04 24 40.6 -1.0
MDPB Devils Postpil 3.14 110 Pn Pn 04 24 45.3 -1.2
OMMB Old Mammoth Mi 3.21 110 Pn Pn 04 24 46.3 -1.1
RYN Ryan 3.35 91 Pn Pn 04 24 48.1 -1.1
NV11 Mina Array Sit 3.65 94 Pn Pn 04 24 52.1 -1.4
KVN Kaiserville 3.67 84 Pn Pn 04 24 52.6 -1.2

*ATH **26** 04:26:33.0, 38.°42N×20.°47E, h13km±1km, ML2.7/11, Error ellipse: s-maj=1.7km s-min=0.6km az=263.0*
*THE **26** 04:26:33.2, 38.°42N×20.°45E, h9km±1km, ML3.2/10, Error ellipse: s-maj=1.6km s-min=0.3km az=155.0*
ISC 26 04:26:33.0±0.9, 38.°42N±0.°02×20.°47E±0.°03, h12km±5km, n39, σ0.°43/69, Greece

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VSK1 VASILIKIADES 0.07 100 P **Pg 04 26 35.4 -0.2**

VSK1				S	**Sg**	**04 26 37.1**	**-0.3**
	95µm,0.3s						
KONA	**Konidatara, Ke**	**0.08**	**87**	P	**Pg**	**04 26 35.5**	**-0.1**
KONA				S	**Sg**	**04 26 37.2**	**-0.3**
KONA				AML	AML	04 26 37.4	
	comp=N,70827µm,0.2s						
KONA				AML	AML	04 26 38.0	
	comp=E,50560µm,0.1s						
KEF1	**Kardakata, Kep**	**0.14**	**180**	P	**Pg**	**04 26 36.4**	**0.0**
KEF1				S	**Sg**	**04 26 39.0**	**+0.2**
KEF4	**Livadi, Kephal**	**0.17**	**192**	P	**Pg**	**04 26 36.8**	**0.0**
KEF4				S	**Sg**	**04 26 39.3**	**-0.1**
AGT1	**Agia Thekli**	**0.18**	**202**	P	**Pg**	**04 26 37.0**	**-0.1**
AGT1				S	**Sg**	**04 26 40.1**	**+0.2**
LXR1	**Lixouri, Cepha**	**0.22**	**187**	P	**Pg**	**04 26 37.9**	**+0.2**
LXR1				S	**Sg**	**04 26 41.7**	**+0.8**
	comp=E,49µm,0.3s						
LXRA	**Lixouri, Kepha**	**0.22**	**187**	P	**Pg**	**04 26 37.9**	**+0.2**
LXRA				S	**Sg**	**04 26 41.7**	**+0.8**
KEF3	**Kipouria, Keph**	**0.24**	**204**	P	**Pg**	**04 26 38.0**	**-0.1**
KEF3				S	**Sg**	**04 26 42.1**	**+0.7**
ARG2	**Argostoli**	**0.24**	**177**	P	**Pg**	**04 26 38.0**	**-0.1**
ARG2				S	**Sg**	**04 26 41.9**	**+0.4**
	comp=E,31µm,0.2s						
ARGA	**Argostoli. Kep**	**0.24**	**178**	P	**Pg**	**04 26 38.1**	**0.0**
ARGA				S	**Sg**	**04 26 41.9**	**+0.3**
EVGI	**Lefkada island**	**0.25**	**36**	P	**Pg**	**04 26 38.3**	**+0.1**
EVGI				S	**Sg**	**04 26 42.0**	**+0.3**
EVGI	**Lefkada island**	**0.25**	**36**	P	**Pg**	**04 26 38.3**	**+0.1**
EVGI				S	**Sg**	**04 26 42.4**	**+0.7**
KEF2	**Argostoli. Kep**	**0.26**	**177**	P	**Pg**	**04 26 38.2**	**-0.1**
KEF2				S	**Sg**	**04 26 42.2**	**+0.3**
VLS	**Valsamata**	**0.26**	**159**	P	**Pg**	**04 26 38.3**	**-0.1**
VLS				S	**Sg**	**04 26 42.4**	**+0.3**
	comp=E,4µm,0.2s						
VLS	**Valsamata**	**0.26**	**159**	P	**Pg**	**04 26 38.3**	**-0.1**
VLS				S	**Sg**	**04 26 42.6**	**+0.5**
VLS				AML	AML	04 26 42.8	
	comp=E,9723µm,0.2s						
VLS				AML	AML	04 26 44.9	
	comp=N,6440µm,0.2s						
MGNA	**Meganis**	**0.34**	**47**	P	**Pg**	**04 26 39.7**	**-0.2**
MGNA				S	**Sg**	**04 26 45.0**	**+0.4**
MGNA				AML	AML	04 26 46.0	
	comp=N,3870µm,0.1s						
MGNA				AML	AML	04 26 48.3	
	comp=E,2059µm,0.3s						
LKD2	**Lefkada island**	**0.40**	**22**	P	**Pg**	**04 26 40.7**	**-0.2**
LKD2				S	**Sg**	**04 26 47.0**	**+0.8**
	comp=E,992nm,0.4s						
LKD2	**Lefkada island**	**0.40**	**22**	P	**Pg**	**04 26 40.7**	**-0.2**
LKD2				S	**Sg**	**04 26 46.9**	**+0.8**
LKD2				AML	AML	04 26 47.9	
	comp=N,1816µm,0.3s						
LKD2				AML	AML	04 26 48.6	
	comp=E,2191µm,0.5s						
TSLK	**Tsoukalades, L**	**0.43**	**20**	P	**Pg**	**04 26 41.4**	**-0.1**
TSLK				S	**Sb**	**04 26 48.3**	**-0.6**
	comp=E,1µm,0.5s						
TSLK	**Tsoukalades, L**	**0.43**	**20**	P	**Pg**	**04 26 41.4**	**-0.1**
TSLK				S	**Sg**	**04 26 48.2**	**+1.0**
TSLK				AML	AML	04 26 48.9	
	comp=E,2311µm,0.6s						
TSLK				AML	AML	04 26 49.1	
	comp=N,2336µm,0.4s						
AST1	**Astakos**	**0.50**	**76**	P	**Pg**	**04 26 42.9**	**+0.1**
AST1				S	**Sb**	**04 26 51.1**	**+0.1**
	comp=N,4µm,0.3s						
VLMS	**Volimes, Zakyn**	**0.56**	**164**	P	**Pg**	**04 26 43.6**	**-0.5**
VLMS				S	**Sg**	**04 26 51.4**	**-0.1**
VLMS				AML	AML	04 26 57.8	
	comp=N,4403µm,0.3s						
VLMS				AML	AML	04 26 59.2	
	comp=E,2965µm,0.3s						
PDO	**Prodromos**	**0.59**	**72**	P	**Pg**	**04 26 44.2**	**-0.2**
PDO				S	**Sb**	**04 26 53.8**	**+0.3**
	comp=E,2µm,0.4s						
PDO	**Prodromos**	**0.59**	**72**	P	**Pg**	**04 26 44.2**	**-0.2**
PDO				S	**Sg**	**04 26 52.3**	**+0.1**
PDO				AML	AML	04 26 58.9	
	comp=E,2082µm,0.4s						
PDO				AML	AML	04 26 58.9	
	comp=N,2093µm,0.4s						
ZAK2	**Zakynthos**	**0.72**	**152**	P	**Pg**	**04 26 47.0**	**+0.1**
ZAK2				S	**Sb**	**04 26 57.9**	**+0.7**
	comp=N,4µm,0.4s						
VTN	**Vitineika**	**0.76**	**132**	P	**Pg**	**04 26 47.9**	**+0.3**
KRI1	**kERI**	**0.81**	**160**	P	**Pg**	**04 26 47.7**	**-0.9**
KRI1				S	**Sb**	**04 27 00.5**	**+0.7**
	comp=N,2µm,0.3s						
PVO	**Paravola**	**0.85**	**76**	P	**Pg**	**04 26 49.6**	**+0.2**
PVO				S	**Sb**	**04 27 01.4**	**+0.3**
PVO				AML	AML	04 27 10.5	
	comp=E,1055µm,0.4s						
PVO				AML	AML	04 27 10.8	
	comp=N,1586µm,0.7s						
RLS	**Riolos of Patr**	**0.86**	**115**	P	**Pg**	**04 26 49.2**	**-0.5**
RLS				S	**Sg**	**04 27 01.2**	**+0.2**
RLS				AML	AML	04 27 11.4	
	comp=E,450µm,0.4s						
RLS				AML	AML	04 27 13.3	
	comp=N,443µm,0.5s						
DRO	**Drossia**	**1.08**	**115**	P	**Pb**	**04 26 53.8**	**+0.2**
IGT	**Igoumenitsa**	**1.11**	**355**	P	**Pb**	**04 26 53.5**	**-0.7**
IGT				S	**Sn**	**04 27 09.8**	**+0.1**
IGT				AML	AML	04 27 12.7	
	comp=E,468µm,1.0s						
IGT				AML	AML	04 27 15.5	
	comp=N,619µm,0.4s						
TRIZ	**Trizonia**	**1.26**	**92**	P	**Pn**	**04 26 55.9**	**-0.5**
JAN	**Janina**	**1.27**	**13**	P	**Pb**	**04 26 57.1**	**+0.3**
KALE	**Kalithea**	**1.31**	**91**	P	**Pn**	**04 26 56.8**	**-0.4**
AMT	**Artemida-Makis**	**1.32**	**132**	P	**Pb**	**04 26 58.1**	**+0.3**
AMT				S	**Sg**	**04 27 16.3**	**+0.8**
AMT				AML	AML	04 27 34.3	
	comp=E,494µm,0.5s						
AMT				AML	AML	04 27 35.5	
	comp=N,591µm,0.6s						
KLV	**Kalavryta, Ach**	**1.38**	**105**	P	**Pn**	**04 26 57.8**	**-0.2**
KEK	**Kerkira**	**1.39**	**338**	P	**Pb**	**04 26 58.8**	**+0.1**
ITM	**Ithomi**	**1.69**	**137**	P	**Pb**	**04 27 05.1**	**-0.3**
PYL	**PYLOS**	**1.83**	**146**	P	**Pb**	**04 27 05.6**	**-0.7**

IDC 26 04:30:13.4±2.2, **1°.10N×127°.21E, h0km, mb3.4**/4, **mb1 3.5**/4, **mb1mx3.3**/29, **mbtmp3.4**/4, **Error ellipse: s-maj=230.4km s-min=23.1km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.05**	**162**	P	P	04 35 10.6	+0.7
	0.2nm,0.3s,baz=342,slow=9.7,SNR=2.1						
ASAR	**Alice Springs**	**25.46**	**166**	P	P	04 35 42.7	-0.6
	0.3nm,0.6s,baz=353,slow=14,SNR=4.1						
MKAR	**Makanchi Array**	**59.98**	**326**	P	P	04 40 21.9	0.0
	0.3nm,0.6s,baz=120,slow=8.2,SNR=4.1						
KURBB	**Kurchatov Arra**	**64.20**	**328**	P	P	04 40 50.0	-0.1
	0.6nm,0.6s,baz=123,slow=6.6,SNR=4.9						

*IDC **26** 04:58:12.6±1.3, 3°.64S×151°.17E, h0km, mb3.4/3, mb1 3.8/4, mb1mx3.5/42, mbtmp3.6/4, ML2.1/1, MS3.2/3, Ms1 3.1/3, ms1mx2.8/18, Error ellipse: s-maj=24.7km s-min=20.0km az=12.0*

ISC 26 04:58:16.6±1.3, **3°.6S**±0°.1×**151°.17E**±0°.08, **h35km, n9,** σ**0**^{s}**78**/8, **mb3.4**/3, **MS3.1**/3, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.14**	**131**	Pn	**Pn**	**04 58 35.2**	**-0.8**
	331nm,0.3s,baz=177,slow=1.5,SNR=74						
KRVT				Sn	**Sn**	**04 58 51.4**	**+1.0**
	584nm,0.3s,baz=337,slow=21,SNR=30						
PMG	**Port Moresby**	**7.05**	**214**	Pn	**Pn**	**04 59 57.5**	**+0.1**
	2.2nm,0.3s,baz=68,slow=8.2,SNR=3.6						
PMG				Sn	**Sn**	**05 01 16.7**	**+0.3**
	2.9nm,0.3s,baz=274,slow=16,SNR=4.2						
WRA	**Warramunga Arr**	**23.13**	**224**	P	**P**	**05 03 19.7**	**-0.2**
	0.5nm,0.5s,baz=50,slow=10,SNR=3.0						
ASAR	**Alice Springs**	**26.05**	**218**	P	**P**	**05 03 46.2**	**-0.7**
	0.6nm,0.6s,baz=53,slow=9.5,SNR=6.1						
STKA	**Stephens Creek**	**29.58**	**197**	LR	LR	05 14 46.7	
	comp=Z,45nm,21.2s,baz=25,slow=34						
RAR	**Rarotonga**	**50.77**	**115**	LR	LR	05 23 34.1	
	comp=Z,28nm,21.9s,baz=106,slow=30						
PETK	**Petropavlovsk-**	**56.72**	**5**	LR	LR	05 29 45.3	
	comp=Z,14nm,18.9s,baz=240,slow=33						
ILAR	**Eielson Array**	**81.62**	**22**	P	**P**	**05 10 31.5**	**+0.7**
	0.4nm,0.8s,baz=259,slow=5.3,SNR=4.0						
TORD	**Torodi Ar. Bea**	**148.37**	**289**	PKPbc	**PKPab**	**05 18 03.1**	**-0.5**
	0.7nm,0.4s,baz=94,slow=2.2,SNR=8.8						

*DJA **26** 04:58:34.4±0.7, 4°S±6°×12°8E±°, h221km±8km, M4.0/10, mB5.9/1, mb4.5/3, MLv3.9/10, MLv3.8/4, Mw(mB)5.5/1*

*IDC **26** 04:58:35.7±5.6, 4°.17S×128°.82E, h298km±82km, mb2.6/1, mb1 2.9/3, mb1mx2.7/44, mbtmp3.5/3, Error ellipse: s-maj=134.6km s-min=17.4km az=80.0*

ISC 26 04:58:30.8±1.2, **4°.36S**±0°.10×**128°.15E**±0°.08, **h250km, n12,** σ**1**^{s}**68**/13, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.67**	**4**	P	**Pn**	**04 59 04.2**	**-0.1**
MSAI	**Masohi**	**1.27**	**38**	P	**Pn**	**04 59 06.9**	**-0.6**
NLAI	**Namlea**	**1.52**	**317**	P	**Pn**	**04 59 10.3**	**+1.0**
BNDI	**Bandanaira**	**1.76**	**95**	P	**Pn**	**04 59 12.1**	**+1.0**
LBMI	**Labuha**	**3.75**	**350**	P	**Pn**	**04 59 32.2**	**+0.5**
FAKI	**Fak Fak**	**4.33**	**71**	P	**Pn**	**04 59 39.8**	**+1.2**
SIJI	**Sorong**	**4.66**	**42**	P	**Pn**	**04 59 43.5**	**+1.0**
	36nm,0.3s,baz=92,slow=4.9,SNR=158						
SIJI				S	**S**	**05 00 36.8**	**-2.8**
	14nm,0.3s,baz=208,slow=22,SNR=9.5						
KMPI	**Kaimana, Papua**	**5.59**	**83**	P	**Pn**	**04 59 55.2**	**+1.4**
	0.9nm148nm,0.7s						
RKPI	**Ransiki, Papua**	**6.65**	**65**	P	**Pn**	**05 00 08.3**	**+1.2**
WRA	**Warramunga Arr**	**16.62**	**159**	P	**Pn**	**05 02 10.7**	**+0.3**
	0.5nm,0.3s,baz=343,slow=14,SNR=20						
ASAR	**Alice Springs**	**19.98**	**164**	P	**Pn**	**05 02 46.6**	**-3.1**
	0.2nm,0.3s,baz=344,slow=11,SNR=10						
MKAR	**Makanchi Array**	**65.02**	**327**	P	**P**	**05 08 45.9**	**+1.5**
	0.1nm,0.3s,baz=137,slow=7.8,SNR=4.7						

*RSNC **26** 05:30:02.0±1.0, 7°.22N×72°.27W, h4km±6km, ML3.2, Mw3.5*

*IDC **26** 05:30:05.7±2.1, 7°.30N×72°.24W, h62km±21km, mb3.4/2, mb1 3.6/4, mb1mx3.2/33, mbtmp3.6/4, ML2.1/2, Error ellipse: s-maj=31.5km s-min=15.6km az=120.0*

ISC 26 05:29:58.4±1.3, **7°.26N**±0°.03×**72°.12W**±0°.03, **h0km**±10km, **n34,** σ**1**^{s}**88**/56, **2C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**0.58**	**278**	⇓*i*P	**Pg**	**05 30 09.8**	**+0.3**
PAMC				*e*S	**Sg**	**05 30 16.9**	**-0.2**
PAMC				*i*		05 30 17.3	
	comp=Z,588nm,0.4s						
TAMC	**Tame, Arauca**	**0.88**	**158**	*e*P	**Pb**	**05 30 17.8**	**+1.2**
TAMC				*e*S	**Sb**	**05 30 30.4**	**+1.5**
TAMC				*i*		05 30 39.9	
	comp=Z,258nm,1.0s						
BARC	**Barichara**	**1.25**	**238**	⇑*i*P	**Pg**	**05 30 21.9**	**-0.4**
BARC				*e*S	**Sg**	**05 30 36.2**	**-2.2**
BARC				*i*		05 30 38.6	
	comp=Z,671nm,0.4s						
OCAC	**Ocana**	**1.54**	**309**	⇓*e*P	**Pb**	**05 30 27.9**	**0.0**
OCAC				*e*S	**Sb**	**05 30 47.4**	**-0.6**
OCAC				*i*		05 30 53.8	
	comp=Z,1µm,0.3s						
RUSC	**La Rusia**	**1.66**	**215**	⇓*i*P	**Pn**	**05 30 29.4**	**+0.2**
RUSC				*e*S	**Sn**	**05 30 50.4**	**-1.1**
RUSC				*i*		05 30 54.9	
	comp=Z,216nm,1.2s						
SDV	**Santo Domingo**	**2.19**	**42**	P	**Pb**	**05 30 39.2**	**+0.3**
	comp=Z,11nm,0.3s,baz=187,slow=5.2,SNR=88						
SDV				S	**Sg**	**05 31 08.4**	**-0.3**
	comp=Z,22nm,0.3s,baz=221,slow=3.4,SNR=3.9						
SDV	**Santo Domingo**	**2.19**	**42**	*e*P	**Pb**	**05 30 39.3**	**+0.3**
SDV				*e*S	**Sg**	**05 31 08.4**	**-0.3**
SDV				*i*		05 31 14.5	
	comp=Z,281nm,0.3s						
PTBC	**PUERTO BERRIO,**	**2.43**	**253**	⇑*i*P	**Pn**	**05 30 40.0**	**+0.6**
PTBC				*e*S	**Sn**	**05 31 09.3**	**-0.5**
PTBC				*i*		05 31 14.6	
	comp=Z,185nm,0.3s						
SMLC	**San Martn de**	**2.47**	**309**	*e*P	**Pn**	**05 30 41.0**	**+1.2**
SMLC				*e*S	**Sb**	**05 31 14.6**	**0.0**
SMLC				*i*		05 31 15.3	
	comp=Z,237nm,0.5s						
SPBC	**San Pablo de B**	**2.51**	**231**	*e*P	**Pn**	**05 30 42.6**	**+2.0**
SPBC				*e*S	**Sb**	**05 31 15.4**	**-0.5**
SPBC				*i*		05 31 18.6	
	comp=Z,217nm,0.9s						
ELOV	**Elorza**	**2.63**	**95**	*e*P	**Pb**	**05 30 46.5**	**+0.1**
ELOV				*e*S	**Sg**	**05 31 22.2**	**-0.8**
ZARC	**Zaragoza, Cauc**	**2.73**	**275**	*e*P	**Pn**	**05 30 45.0**	**+1.6**
ZARC				*e*S	**Sn**	**05 31 17.6**	**+0.5**
CODC	**Agustn Codazz**	**2.96**	**334**	*e*P	**Pn**	**05 30 48.6**	**+1.9**
CODC				*e*S	**Sn**	**05 31 19.1**	**-3.9**
CODC				*i*		05 31 42.0	
	comp=Z,22nm,0.4s						
PTGC	**Puerto Gaitan,**	**3.04**	**180**	*e*P	**Pn**	**05 30 48.3**	**+0.5**
PTGC				*i*		05 31 44.9	
	comp=Z,95nm,0.3s						
CHIC	**Chingaza**	**3.06**	**212**	*e*P	**Pn**	**05 30 49.6**	**+1.2**
CHIC				*e*S	**Sn**	**05 31 25.4**	**-0.6**
CHIC				*i*		05 31 39.7	
	comp=Z,48nm,0.7s						
NORC	**Norcasia**	**3.21**	**239**	*e*P	**Pn**	**05 30 52.4**	**+2.2**
NORC				*e*S	**Sn**	**05 31 32.5**	**+3.4**
NORC				*i*		05 31 37.4	
	comp=Z,121nm,0.4s						
ROSC	**El Rosal**	**3.25**	**222**	P	**Pn**	**05 30 54.3**	**+3.4**
	comp=Z,3.3nm,0.3s,baz=85,slow=14,SNR=14						
ROSC				S	**Sb**	**05 31 39.3**	**+1.8**
	comp=Z,9.1nm,0.3s,baz=171,slow=22,SNR=5.3						
ROSC	**El Rosal**	**3.25**	**222**	*e*P	**Pn**	**05 30 54.6**	**+3.6**
UREC	**San Jos de Ur**	**3.42**	**278**	*e*P	**Pn**	**05 30 55.2**	**+2.3**
UREC				*e*S	**Sn**	**05 31 36.9**	**+2.6**
HELC	**Santa Helena**	**3.55**	**253**	*e*P	**Pn**	**05 30 56.5**	**+1.5**
HELC				*e*S	**Sn**	**05 31 38.2**	**+0.3**
HELC				*i*		05 31 50.3	
	comp=Z,56nm,0.7s						
GUY2C	**Guyana, Caldas**	**3.81**	**238**	*e*P	**Pn**	**05 31 00.9**	**+2.2**
GUY2C				*e*S	**Sn**	**05 31 45.6**	**+1.1**
GUY2C				*i*		05 32 07.7	
	comp=Z,49nm,0.6s						
RREF	**El Recreo**	**3.97**	**234**	*e*P	**Pn**	**05 31 02.9**	**+1.8**
RREF				*e*S	**Sn**	**05 31 49.2**	**+0.5**
RREF				*i*		05 32 01.9	
	comp=Z,39nm,0.8s						
SJCC	**San Jacinto, C**	**4.00**	**311**	*e*P	**Pn**	**05 31 03.7**	**+2.6**
SJCC				*e*S	**Sn**	**05 31 52.3**	**+3.5**
DBBC	**Dabeiba**	**4.07**	**267**	*e*P	**Pn**	**05 31 04.8**	**+2.9**
DBBC				*i*		05 32 10.3	
	comp=Z,65nm,0.6s						
CBOC	**Ciudad Bolivar**	**4.11**	**251**	*e*S	**Sb**	**05 31 57.7**	**-4.3**
ANIL	**Santa Ana**	**4.27**	**230**	*e*P	**Pn**	**05 31 06.6**	**+1.7**
URIC	**Uribia, Colomb**	**4.42**	**2**	*e*P	**Pn**	**05 31 09.4**	**+2.7**
URIC				*i*		05 32 07.7	
	comp=Z,15nm,1.5s						
ORTC	**Ortega, Tolima**	**4.55**	**223**	*e*P	**Pn**	**05 31 09.7**	**+1.1**
ORTC				*e*S	**Sn**	**05 32 03.9**	**+1.6**
ORTC				*i*		05 32 23.3	
	comp=Z,23nm,0.6s						
YOTC	**Yotoco, Valle**	**5.32**	**232**	*e*P	**Pn**	**05 31 20.5**	**+1.3**
MACC	**Macarena, Meta**	**5.36**	**199**	*e*P	**Pn**	**05 31 19.0**	**-0.8**
SIV	**San Ignacio**	**25.56**	**155**	P	**P**	**05 35 29.8**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=345,slow=12,SNR=3.3						
YKA	**Yellowknife Ar**	**63.20**	**339**	P	**P**	**05 40 26.6**	**-1.5**
	comp=Z,0.6nm,0.5s,baz=128,slow=7.1,SNR=11						
ASAR	**Alice Springs**	**150.17**	**234**	PKPbc	**PKPbc**	**05 49 50.2**	**-2.0**
	comp=Z,0.6nm,1.0s,baz=121,slow=3.6,SNR=2.7						
WRA	**Warramunga Arr**	**151.42**	**241**	PKPbc	**PKPbc**	**05 49 53.0**	**-2.2**
	comp=Z,0.4nm,0.5s,baz=108,slow=3.0,SNR=5.0						

*IDC **26** 05:41:36.0±6.0, 56°.09S×27°.69W, h107km±55km, mb4.2/9, mb1 4.3/11, mb1mx4.0/25, mbtmp4.7/11, MS3.3/4, Ms1 3.3/4, ms1mx3.0/17, Error ellipse: s-maj=24.9km s-min=14.2km az=44.0*

*NEIC **26** 05:41:36.3±1.6, 56°.20S±0°.09×27°.8W±0°.2, h109km±6km, mb4.8/16 Error ellipse: s-maj=13.7km s-min=11.1km az=145.0*

ISC 26 05:41:37.4±0.6, **56°.2S**±0°.1×**27°.98W**±0°.09, **h121km, n43,** σ**1**^{s}**05**/42, **mb4.7**/13, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.22**	**288**		**Pn**	**05 42 53.4**	**+0.2**
HOPE				Sn	**Sn**	**05 43 49.0**	**-3.2**
VNA3	**Neumayer Olymp**	**17.04**	**160**	P	**P**	**05 45 26.5**	**-1.3**
VNA2	**Neumayer--Watz**	**17.26**	**157**	P	**P**	**05 45 29.7**	**-0.6**
	baz=315,slow=13						
SNAA	**Sanae**	**18.83**	**155**	P	**P**	**05 45 46.5**	**-0.9**
SNAA	**Sanae**	**18.83**	**155**	P	**P**	**05 45 46.2**	**-1.1**
	4.3nm,0.3s,baz=305,slow=9.3,SNR=171						
SNAA	**Sanae**	**18.83**	**155**	P	**P**	**05 45 46.3**	**-1.1**
SNAA				IAmb	IAmb	05 45 47.7	
	comp=Z,34nm,0.6s						
PMSA	**Palmer Station**	**19.50**	**229**	P	**Pn**	**05 45 58.0**	**+1.0**
	comp=Z,1.9nm,0.3s,baz=77,slow=14,SNR=3.9						
USHA	**Ushuaia**	**22.73**	**256**	P	**P**	**05 46 30.2**	**+1.4**
	comp=Z,9.9nm,0.9s,baz=78,slow=14,SNR=5.1						
GO09	**Cerro Castillo**	**26.34**	**262**	P	**P**	**05 47 02.1**	**+0.4**
GO09				IAmb	IAmb	05 47 14.2	
	comp=Z,27nm,1.1s						
PLCA	**Paso Flores**	**31.58**	**281**	P	**P**	**05 47 48.3**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=166,slow=10,SNR=5.7						
PLCA				LR	LR	06 00 30.2	
	comp=Z,44nm,18.3s,baz=154,slow=36						
PLCA	**Paso Flores**	**31.58**	**281**	IAmb	IAmb	05 47 53.6	
	comp=Z,7.0nm,1.4s						
QSPA	**South Pole Qui**	**34.09**	**180**	P	**P**	**05 48 10.6**	**+0.6**
	comp=Z,7.9nm,0.6s,baz=50,slow=1.3,SNR=77						
QSPA	**South Pole Qui**	**34.09**	**180**	P	**P**	**05 48 11.0**	**+1.0**
QSPA				IAmb	IAmb	05 48 12.0	
	comp=Z,10nm,0.7s						
GO05	**Huala**	**36.48**	**287**	P	**P**	**05 48 29.4**	**-1.2**
CPUP	**Villa Florida**	**36.55**	**312**	P	**P**	**05 48 31.2**	**0.0**
	comp=Z,4.4nm,1.1s,baz=147,slow=7.2,SNR=5.9						
ROC1	**El Roble**	**37.56**	**290**	P	**P**	**05 48 40.8**	**+0.8**
MAW	**Mawson**	**40.33**	**144**	P	**P**	**05 49 01.9**	**-0.4**
	comp=Z,7.6nm,0.5s,baz=231,slow=20,SNR=13						
GO02	**Mina Guanaco**	**43.15**	**298**	P	**P**	**05 49 27.0**	**+0.8**
LVC	**Limon Verde**	**44.97**	**301**	P	**P**	**05 49 41.6**	**+0.8**
	comp=Z,10nm,0.7s,baz=96,slow=8.4,SNR=13						
LVC	**Limon Verde**	**44.97**	**301**	P	**P**	**05 49 42.5**	**+1.7**
LVC				IAmb	IAmb	05 49 45.1	
	comp=Z,14nm,0.8s						
PB10	**IPOC Station P**	**45.01**	**299**	P	**P**	**05 49 41.4**	**+0.8**
BOSA	**Boshof**	**46.43**	**76**	LR	LR	06 06 12.9	
	comp=Z,38nm,20.9s,baz=134,slow=32						
VNDA	**Vanda**	**46.45**	**183**	LR	LR	06 09 28.5	
	comp=Z,44nm,18.0s,baz=202,slow=36						
PB01	**IPOC Station P**	**46.59**	**302**	P	**P**	**05 49 54.2**	**+1.1**
PB01				IAmb	IAmb	05 49 55.4	
	comp=Z,19nm,0.9s						
GO01	**Chusmiza**	**47.63**	**303**	P	**P**	**05 50 03.2**	**+1.5**
GO01				IAmb	IAmb	05 50 04.5	
	comp=Z,12nm,0.7s						
PB11	**IPOC Station P**	**47.77**	**302**	P	**P**	**05 50 03.5**	**+1.2**
PB11				IAmb	IAmb	05 50 05.0	
	comp=Z,27nm,1.2s						
MNMC	**Minye Minye**	**48.28**	**303**	P	**P**	**05 50 08.1**	**+1.6**
LPAZ	**La Paz**	**50.08**	**306**	P	**P**	**05 50 21.9**	**+1.4**
	comp=Z,8.0nm,0.7s,baz=149,slow=6.1,SNR=11						
LPAZ	**La Paz**	**50.08**	**306**	P	**P**	**05 50 22.0**	**+1.4**
LPAZ				IAmb	IAmb	05 50 23.5	
	comp=Z,9.8nm,0.8s						
DBIC	**Dimbokro**	**65.45**	**25**	P	**P**	**05 52 06.6**	**-0.6**
	comp=Z,5.3nm,0.9s,baz=171,slow=11,SNR=3.9						
DBIC				LR	LR	06 15 08.3	
	comp=Z,22nm,21.3s,baz=14,slow=31						
TOA0	**Torodi Ar. Sit**	**73.37**	**30**	P	**P**	**05 52 56.0**	**+0.2**
TORD	**Torodi Ar. Bea**	**73.37**	**30**	P	**P**	**05 52 55.9**	**0.0**
	comp=Z,6.8nm,0.7s,baz=199,slow=6.6,SNR=36						
QRZ	**Quartz Range**	**81.83**	**196**	P	**P**	**05 53 41.8**	**-0.9**
FXWY	**Fox Creek**	**121.38**	**302**		**PKiKP**	**06 00 16.5**	**+0.7**
FINES	**FINESS Array B**	**124.69**	**28**	PKP	**PKPdf**	**06 00 20.1**	**-0.9**
	comp=Z,1.4nm,0.9s,baz=299,slow=3.9,SNR=3.9						
ARCES	**ARCESS Array B**	**131.21**	**22**	PKP	**PKiKP**	**06 00 34.1**	**-0.1**
	comp=Z,4.4nm,1.1s,baz=191,slow=4.4,SNR=4.0						
YKA	**Yellowknife Ar**	**135.95**	**318**	PKP	**PKPdf**	**06 00 42.2**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=126,slow=2.5,SNR=18						
HYT	**Haines Junctio**	**144.50**	**307**		**PKPdf**	**06 00 58.9**	**+0.8**
INK	**Inuvik**	**145.60**	**321**		**PKPbc**	**06 01 00.3**	**+0.2**
DAWY	**Dawson**	**146.53**	**312**		**PKPbc**	**06 01 03.1**	**0.0**
ILAR	**Eielson Array**	**149.85**	**312**	PKPbc	**PKPbc**	**06 01 11.8**	**+0.1**
	comp=Z,4.9nm,0.7s,baz=127,slow=1.6,SNR=49						
ILAR				pPKPbc	**pPKPdf**	**06 01 40.0**	**+1.1**
	comp=Z,2.3nm,0.8s,baz=127,slow=1.6,SNR=5.1						
RND	**Reindeer**	**150.38**	**309**		**PKiKP**	**06 01 14.1**	**+0.3**
SONM	**Songino Array**	**151.18**	**87**	PKPbc	**PKPbc**	**06 01 14.8**	**-0.7**
	comp=Z,2.0nm,0.7s,baz=230,slow=3.4,SNR=13						

*IDC **26** 05:59:09.5±1.8, 40°.33N×23°.89E, h0km, mb3.6/4, mb1 3.8/7, mb1mx3.4/44, mbtmp3.6/7, ML3.5/3, Error ellipse: s-maj=26.4km s-min=16.4km az=39.0*

*BEO **26** 05:59:09.3±0.7, 40°.29N×24°.37E, h15km±3km, ML3.4/11*

*SOF **26** 05:59:09.3, 40°.31N×24°.03E, h8km, MD3.6*

*PDG **26** 05:59:10.9±0.5, 40°.34N×24°.01E, h12km, ML3.5/10, Error ellipse: s-maj=0.5km s-min=0.5km az=0.0*

*ATH **26** 05:59:10.9, 40°.32N×23°.95E, h14km±1km, ML3.4/19, Error ellipse: s-maj=1.5km s-min=1.0km az=82.0*

*ISK **26** 05:59:10.4, 40°.33N×23°.98E, h12km, ML3.6/34*

*IASPEI **26** 05:59:11.0±0.8, 40°.33N±0°.02×23°.95E±0°.02, h11km±4km, mb3.5/4, Error ellipse: s-maj=3.2km s-min=2.9km az=122.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*SKO **26** 05:59:11.6, 40°.29N×23°.94E, h8km*

*THE **26** 05:59:11.4, 40°.34N×23°.94E, h9km, ML3.4/13, Error ellipse: s-maj=0.7km s-min=0.4km az=358.0*

*DDA **26** 05:59:13.0, 40°.24N×24°.34E, h11km±2km, ML2.9*

ISC 26 05:59:11.1±0.7, **40°.32N**±0°.02×**23°.96E**±0°.02, **h11km**±4km, **n191,** σ**1**^{s}**10**/240, **mb3.5**/4, **14C-11D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.02**	**47**	P	**Pg**	**05 59 13.2**	**+0.3**
OUR				S	**Sg**	**05 59 14.2**	**-0.1**
	261µm,0.4s						
OUR	**Ouranopolis**	**0.02**	**47**	P	**Pg**	**05 59 13.3**	**+0.3**
OUR				S	**Sg**	**05 59 14.3**	**0.0**
OUR				AML	AML	05 59 14.5	
OUR				AML	AML	05 59 14.9	
OUR	**Ouranopolis**	**0.02**	**47**	PG	**Pg**	**05 59 13.3**	**+0.3**
OUR				SG	**Sg**	**05 59 14.2**	**-0.1**
PAIG	**Paliouri**	**0.45**	**209**	P	**Pg**	**05 59 20.3**	**+0.5**
PAIG				S	**Sb**	**05 59 26.9**	**-0.8**
	5µm,0.2s						
PAIG	**Paliouri**	**0.45**	**209**	P	**Pg**	**05 59 20.3**	**+0.5**
PAIG				S	**Sb**	**05 59 26.9**	**-0.8**
PAIG				AML	AML	05 59 30.0	
	comp=N,8596µm,0.2s						
PAIG				AML	AML	05 59 30.1	
	comp=E,11798µm,0.3s						
THAS	**Thassos island**	**0.65**	**63**	P	**Pg**	**05 59 23.7**	**+0.1**
THAS				S	**Sb**	**05 59 33.1**	**-0.3**
	comp=E,27µm,0.2s						
THAS	**Thassos island**	**0.65**	**63**	P	**Pg**	**05 59 23.7**	**+0.1**
THAS				AML	AML	05 59 35.3	
	comp=N,61461µm,0.2s						
THAS				AML	AML	05 59 35.3	
	comp=E,45088µm,0.2s						
SOH	**Sokhos**	**0.68**	**318**	P	**Pg**	**05 59 24.1**	**-0.2**
SOH				S	**Sg**	**05 59 33.0**	**-0.3**
	comp=E,7µm,0.4s						
SOH	**Sokhos**	**0.68**	**318**	P	**Pg**	**05 59 24.2**	**-0.2**
SOH				S	**Sg**	**05 59 32.9**	**-0.4**
SOH				AML	AML	05 59 35.7	
	comp=N,10497µm,0.3s						
SOH				AML	AML	05 59 38.2	
	comp=E,15402µm,0.5s						
KVLA	**Kavala**	**0.70**	**28**	P	**Pb**	**05 59 24.9**	**-0.4**
KVLA				S	**Sb**	**05 59 34.2**	**-0.7**
KVLA				AML	AML	05 59 36.2	
	comp=N,14949µm,0.3s						
KVLA				AML	AML	05 59 36.3	
	comp=E,10359µm,0.3s						
HORT	**Hortiatis**	**0.71**	**293**	P	**Pg**	**05 59 24.3**	**-0.6**
HORT				S	**Sg**	**05 59 34.8**	**+0.5**
	comp=E,5µm,0.1s						
HORT	**Hortiatis**	**0.71**	**293**	P	**Pg**	**05 59 24.2**	**-0.6**
HORT				S	**Sg**	**05 59 34.6**	**+0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HORT				AML	AML	05 59 35.6	
	comp=E,8594μm,0.2s						
HORT				AML	AML	05 59 38.6	
	comp=N,13228μm,0.2s						
KAVA	**Kavala**	**0.80**	**32**	P	**Pb**	**05 59 26.7**	**-0.3**
KAVA				S	**Sb**	**05 59 38.1**	**+0.3**
	comp=N,5μm,0.2s						
KAVA	**Kavala**	**0.80**	**32**	P	**Pg**	**05 59 26.4**	**-0.1**
KAVA				S	**Sb**	**05 59 37.3**	**-0.5**
KAVA				AML	AML	05 59 39.1	
	comp=N,11816μm,0.2s						
KAVA				AML	AML	05 59 39.3	
	comp=E,9622μm,0.2s						
THE	**Thessaloniki**	**0.82**	**293**	P	**Pg**	**05 59 26.0**	**-0.9**
THE				S	**Sb**	**05 59 38.4**	**-0.1**
	comp=E,1μm,0.2s						
THE	**Thessaloniki**	**0.82**	**293**	P	**Pg**	**05 59 26.0**	**-0.9**
THE				AML	AML	05 59 41.3	
	comp=N,2866μm,0.2s						
THE				AML	AML	05 59 41.5	
	comp=E,2886μm,0.3s						
SRS	**Serrai**	**0.84**	**341**	P	**Pg**	**05 59 27.3**	**-0.1**
SRS				S	**Sg**	**05 59 38.2**	**-0.2**
	comp=E,3μm,0.2s						
SRS	**Serrai**	**0.84**	**341**	*e*Pg	**Pb**	**05 59 28.0**	**+0.2**
SRS				*e*Sg	**Sn**	**05 59 41.3**	**-0.1**
SRS	**Serrai**	**0.84**	**341**	P	**Pg**	**05 59 27.2**	**-0.2**
SRS				AML	AML	05 59 43.1	
	comp=E,4499μm,0.2s						
SRS				AML	AML	05 59 44.8	
	comp=N,5354μm,0.3s						
LIA	**Limnos Island**	**1.03**	**114**	P	**Pb**	**05 59 31.0**	**+0.1**
LIA				S	**Sn**	**05 59 46.8**	**+1.0**
	comp=N,2μm,0.3s						
LIA	**Limnos Island**	**1.03**	**114**	P	**Pb**	**05 59 31.0**	**+0.1**
LIA				AML	AML	05 59 48.0	
	comp=N,3304μm,0.3s						
LIA				AML	AML	05 59 48.5	
	comp=E,2903μm,0.3s						
NVR	**Nevrokopi**	**1.03**	**356**	P	**Pg**	**05 59 30.7**	**-0.3**
NVR	**Nevrokopi**	**1.03**	**356**	P	**Pg**	**05 59 30.7**	**-0.3**
NVR				AML	AML	05 59 46.8	
	comp=E,2964μm,0.3s						
NVR				AML	AML	05 59 49.2	
	comp=N,1912μm,0.2s						
XOR	**Xorichti**	**1.12**	**212**	P	**Pn**	**05 59 32.7**	**-0.1**
XOR				S	**Sn**	**05 59 48.5**	**+0.3**
	comp=N,4μm,0.3s						
XOR	**Xorichti**	**1.12**	**212**	P	**Pn**	**05 59 32.9**	**+0.1**
XOR				AML	AML	05 59 49.4	
	comp=E,4070μm,0.3s						
XOR				AML	AML	05 59 49.4	
	comp=N,12550μm,0.3s						
LIT	**Litokhoron**	**1.15**	**259**	P	**Pb**	**05 59 32.3**	**-0.7**
LIT	**Litokhoron**	**1.15**	**259**	P	**Pb**	**05 59 32.3**	**-0.7**
LIT				AML	AML	05 59 50.0	
	comp=E,1500μm,0.2s						
LIT				AML	AML	05 59 50.7	
	comp=N,1658μm,0.3s						
AOS	**Alonnisos**	**1.15**	**183**	P	**Pb**	**05 59 32.6**	**-0.4**
AOS				S	**Sn**	**05 59 49.9**	**+1.0**
	comp=N,1μm,0.4s						
AOS	**Alonnisos**	**1.15**	**183**	P	**Pb**	**05 59 32.5**	**-0.4**
AOS				AML	AML	05 59 53.0	
	comp=N,2515μm,0.4s						
AOS				AML	AML	05 59 53.9	
	comp=E,1955μm,0.7s						
AOS	**Alonnisos**	**1.15**	**183**	PN	**Pn**	**05 59 33.0**	**-0.1**
NEO	**Neokhori**	**1.16**	**210**	P	**Pg**	**05 59 33.4**	**0.0**
NEO	**Neokhori**	**1.16**	**210**	P	**Pb**	**05 59 32.9**	**-0.3**
NEO				AML	AML	05 59 50.2	
	comp=N,4972μm,0.3s						
NEO				AML	AML	05 59 50.5	
	comp=E,6472μm,0.2s						
KNT	**Kendrikon**	**1.17**	**317**	P	**Pb**	**05 59 32.6**	**-0.7**
KNT	**Kendrikon**	**1.17**	**317**	P	**Pb**	**05 59 32.8**	**-0.5**
KNT				AML	AML	05 59 50.1	
	comp=E,3986μm,0.4s						
KNT				AML	AML	05 59 51.2	
	comp=N,4963μm,0.5s						
ALNA	**Alonissos**	**1.17**	**184**	P	**Pb**	**05 59 33.3**	**-0.1**
SMTH	**Samothraki Isl**	**1.21**	**82**	P	**Pn**	**05 59 33.4**	**-0.6**
SMTH				S	**Sn**	**05 59 51.4**	**+1.0**
	comp=N,2μm,0.4s						
SMTH	**Samothraki Isl**	**1.21**	**82**	P	**Pn**	**05 59 32.9**	**-1.0**
SKIA	**Skiathos**	**1.21**	**198**	P	**Pn**	**05 59 33.6**	**-0.4**
SKIA	**Skiathos**	**1.21**	**198**	P	**Pn**	**05 59 33.9**	**-0.2**
SKIA				AML	AML	05 59 54.1	
	comp=E,1568μm,0.7s						
SKIA				AML	AML	05 59 56.5	
	comp=N,1618μm,0.7s						
MMB	**Musomiste**	**1.28**	**352**	P	**Pn**	**05 59 34.3**	**-0.7**
GRG	**Griva**	**1.35**	**299**	P	**Pn**	**05 59 35.5**	**-0.4**
GRG	**Griva**	**1.35**	**299**	P	**Pn**	**05 59 36.0**	**+0.1**
GRG				AML	AML	05 59 59.4	
	comp=E,2703μm,0.6s						
GRG				AML	AML	06 00 00.5	
	comp=N,3881μm,0.5s						
VAY	**Valandovo**	**1.45**	**314**	*i* Pg	**Pb**	**05 59 38.0**	**-0.2**
VAY				*i* Sg	**Sg**	**05 59 58.8**	**+0.9**
VAY				*e*Lg	Lg	06 00 01.0	
	comp=N,2μm,1.0s						
VAY				*e*Lg	Lg	06 00 01.4	
	comp=E,661nm,0.6s						
RDO	**Rodhopi**	**1.46**	**55**	P	**Pn**	**05 59 36.6**	**-0.7**
RDO	**Rodhopi**	**1.46**	**55**	PN	**Pn**	**05 59 36.6**	**-0.7**
RDO				SN	**Sn**	**05 59 56.1**	**-0.3**
RZN	**Rozhen**	**1.48**	**22**	*i* P	**Pn**	**05 59 37.8**	**-0.1**
SKY	**Skiros Island**	**1.51**	**162**	P	**Pn**	**05 59 38.2**	**+0.1**
MRKA	**Markates**	**1.64**	**190**	P	**Pn**	**05 59 39.7**	**-0.2**
BOZC	**Bozcaada**	**1.67**	**106**	PN	**Pn**	**05 59 40.1**	**-0.3**
BOZC	**Bozcaada**	**1.67**	**106**	*i* P	**Pn**	**05 59 40.4**	**0.0**
BOZC				IAML		06 00 16.0	
	comp=N,214nm,0.6s						
BOZC				IAML		06 00 17.0	
	comp=E,164nm,0.9s						
KZN	**Kozani**	**1.68**	**270**	P	**Pb**	**05 59 41.1**	**-0.9**
THL	**Klokotos Trika**	**1.68**	**244**	P	**Pn**	**05 59 40.5**	**+0.1**
THL				AML	AML	06 00 06.4	
	comp=N,642μm,0.5s						
THL				AML	AML	06 00 08.1	
	comp=E,450μm,0.4s						
KKB	**Krupnik**	**1.68**	**337**	P	**Pn**	**05 59 40.4**	**-0.1**
KKB	**Krupnik**	**1.68**	**337**	Pg	**Pg**	**05 59 42.8**	**-0.5**
ENZZ	**Sultanice-Enez**	**1.69**	**79**	PN	**Pn**	**05 59 40.1**	**-0.4**
ALN	**Alexandroupoli**	**1.69**	**69**	P	**Pn**	**05 59 40.1**	**-0.4**
ALN				S	**Sb**	**06 00 03.4**	**0.0**
	comp=E,898nm,0.6s						
ALN	**Alexandroupoli**	**1.69**	**69**	PN	**Pn**	**05 59 40.3**	**-0.2**
ENEZ	**Enez**	**1.72**	**75**	PN	**Pn**	**05 59 40.8**	**-0.2**
KDZ	**Kurdzhali**	**1.73**	**39**	*i* P	**Pn**	**05 59 39.9**	**-1.2**
KDZ	**Kurdzhali**	**1.73**	**39**	PN	**Pn**	**05 59 39.9**	**-1.2**
AGG	**Agios Georgios**	**1.81**	**225**	P	**Pn**	**05 59 42.3**	**+0.1**
AGG	**Agios Georgios**	**1.81**	**225**	PN	**Pn**	**05 59 42.4**	**+0.1**
LKR	**Lokris**	**1.82**	**204**	P	**Pn**	**05 59 42.6**	**+0.2**
SIGR	**SIGRI**	**1.83**	**127**	P	**Pn**	**05 59 43.1**	**+0.6**
SIGR	**SIGRI**	**1.83**	**127**	PN	**Pn**	**05 59 42.6**	**+0.1**
PLD	**Plovdiv**	**1.87**	**17**	P	**Pn**	**05 59 43.9**	**+0.9**
PLD	**Plovdiv**	**1.87**	**17**	Pg	**Pg**	**05 59 47.6**	**+0.7**
PLD	**Plovdiv**	**1.87**	**17**	PN	**Pn**	**05 59 42.9**	**-0.1**
EZN	**Ezine**	**1.88**	**104**	PN	**Pn**	**05 59 43.2**	**0.0**
GELI	**Tayfur-Gelibol**	**1.92**	**87**	PN	**Pn**	**05 59 43.7**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.92**	**228**	P	**Pn**	**05 59 44.5**	**+0.7**
ERIK	**Erikli-Kesan**	**1.98**	**79**	PN	**Pn**	**05 59 44.4**	**-0.1**
KPRO	**Kipourio**	**2.02**	**260**	P	**Pn**	**05 59 46.2**	**+0.9**
BAYC	**CANAKKALE_Bayr**	**2.07**	**105**	*i* P	**Pn**	**05 59 45.9**	**+0.1**
BAYC				*i* S	**Sn**	**06 00 10.6**	**-1.0**
BAYC				IAML		06 00 11.0	
	comp=E,91nm,0.2s						
BAYC				IAML		06 00 24.0	
	comp=N,63nm,0.9s						
DIM	**Dimitrovgrad**	**2.10**	**34**	P	**Pn**	**05 59 46.8**	**+0.6**
KESN	**Edirne-Kesan**	**2.13**	**75**	*i* P	**Pn**	**05 59 47.8**	**+0.8**
KESN				*i* S	**Sg**	**06 00 19.6**	**-0.1**
KESN				IAML		06 00 21.0	
	comp=N,452nm,0.5s						
KESN				IAML		06 00 22.0	
	comp=E,718nm,0.4s						
LPK	**Lapseki**	**2.14**	**88**	PN	**Pn**	**05 59 46.4**	**-0.4**
PENT	**Pentalofos**	**2.16**	**268**	P	**Pn**	**05 59 47.6**	**+0.4**
UKOP	**Uzunkopru-Edir**	**2.19**	**67**	PN	**Pn**	**05 59 47.3**	**-0.1**
PGB	**Panagyurishte**	**2.23**	**4**	P	**Pn**	**05 59 48.1**	**0.0**
PGB	**Panagyurishte**	**2.23**	**4**	Pg	**Pb**	**05 59 52.5**	**+1.0**
VTS	**Vitosha**	**2.36**	**347**	*e*Pn	**Pn**	**05 59 50.1**	**+0.2**
VTS				*e*Sn	**Sn**	**06 00 19.0**	**0.0**
VTS	**Vitosha**	**2.36**	**347**	⇑P	**Pn**	**05 59 50.6**	**+0.6**
VTS				⇓S	**Sn**	**06 00 19.5**	**+0.5**
VTS	**Vitosha**	**2.36**	**347**	*i* P	**Pn**	**05 59 50.5**	**+0.6**
BOSS	**Bosilegrad**	**2.44**	**333**	*e*Pn	**Pn**	**05 59 51.4**	**+0.4**
BOSS				*e*Sn	**Sb**	**06 00 23.4**	**-1.8**
RKY	**Sarkoy-Tekirda**	**2.48**	**80**	PN	**Pn**	**05 59 51.7**	**+0.2**
SKO	**Skopje**	**2.52**	**312**	*i* Pn	**Pn**	**05 59 52.9**	**+0.9**
CHOS	**Chios island**	**2.52**	**139**	P	**Pn**	**05 59 52.7**	**+0.6**
CHOS	**Chios island**	**2.52**	**139**	PN	**Pn**	**05 59 52.4**	**+0.3**
OHR	**Ohrid**	**2.53**	**289**	*e*Pn	**Pn**	**05 59 53.6**	**+1.5**
OHR				*e*Sn	**Sn**	**06 00 23.5**	**+0.5**
OHR				*e*Lg	Lg	06 00 28.0	
	comp=E,92nm,0.8s						
OHR				*e*Lg	Lg	06 00 28.1	
	comp=N,70nm,0.6s						
KRBG	**Karabiga-Canak**	**2.55**	**87**	PN	**Pn**	**05 59 52.4**	**0.0**
DKL	**Dikili**	**2.59**	**118**	PN	**Pn**	**05 59 53.6**	**+0.7**
EDRB	**Edirne**	**2.60**	**53**	PN	**Pn**	**05 59 53.3**	**+0.2**
ZEDA	**zmir-Bergama**	**2.76**	**118**	*i* P	**Pn**	**05 59 56.7**	**+1.5**
ZEDA				IAML		06 00 53.0	
	comp=E,30nm,0.4s						
ZEDA				IAML		06 00 55.0	
	comp=N,41nm,0.5s						
MRMT	**Marmara Adasi**	**2.79**	**83**	PN	**Pn**	**05 59 55.8**	**+0.1**
TKR	**Tekirdag**	**2.80**	**75**	PN	**Pn**	**05 59 56.0**	**+0.2**
URLA	**Izmir**	**2.83**	**133**	PN	**Pn**	**05 59 56.5**	**+0.2**
URLA	**Izmir**	**2.83**	**133**	*i* P	**Pn**	**05 59 56.7**	**+0.5**
URLA				IAML		06 00 56.0	
	comp=E,25nm,0.8s						
GONE	**Gonen-Balikesi**	**2.87**	**94**	PN	**Pn**	**05 59 57.3**	**+0.6**
BALY	**Balya**	**2.87**	**100**	*i* P	**Pn**	**05 59 57.5**	**+0.7**
BALY				IAML		06 00 54.0	
	comp=N,115nm,0.7s						
BALY				IAML		06 00 55.0	
	comp=E,79nm,0.5s						
IGT	**Igoumenitsa**	**2.90**	**255**	*e*Pn	**Pn**	**05 59 59.8**	**+2.6**
IGT				*e*Sn	**Sb**	**06 00 36.8**	**-1.5**
BARS	**Barje**	**2.97**	**328**	*e*Pn	**Pn**	**05 59 58.6**	**+0.4**
BARS	**Barje**	**2.97**	**328**	*e*Pn	**Pg**	**06 00 11.8**	**+3.8**
BARS				*e*Sn	**Sn**	**06 00 36.6**	**+2.8**
ELND	**Elena**	**2.98**	**28**	⇑P	**Pn**	**05 59 58.6**	**+0.3**
ELND				⇑S	**Sn**	**06 00 33.2**	**-0.8**
EDC	**Edincik**	**2.98**	**88**	PN	**Pn**	**05 59 58.8**	**+0.4**
MPEP	**Malo Peshtene**	**3.04**	**357**	P	**Pn**	**06 00 00.1**	**+1.0**
PVL	**Pavlikeni**	**3.07**	**19**	P	**Pn**	**05 59 58.3**	**-1.2**
BLCB	**Balcova**	**3.07**	**128**	PN	**Pn**	**06 00 00.1**	**+0.5**
BALB	**Balikesir**	**3.09**	**101**	PN	**Pn**	**05 59 59.9**	**+0.1**
PLVB	**Pleven**	**3.10**	**9**	⇑P	**Pn**	**06 00 01.1**	**+1.1**
ZAPS	**Zavoj**	**3.11**	**342**	*e*Pn	**Pn**	**06 00 00.9**	**+0.7**
TIR	**Tirane**	**3.27**	**290**	⇓P	**Pb**	**06 00 06.1**	**-3.0**
TIR	**Tirane**	**3.27**	**290**	⇓S	**Sb**	**06 00 47.0**	**-2.1**
SZH	**Strazhica**	**3.29**	**26**	P	**Pn**	**06 00 03.1**	**+0.5**
SLVT	**Silivri**	**3.35**	**73**	PN	**Pn**	**06 00 03.9**	**+0.5**
APE	**Apeiranthos**	**3.47**	**159**	PN	**Pn**	**06 00 05.4**	**+0.3**
CTYL	**Yalikoy Yolu**	**3.48**	**69**	PN	**Pn**	**06 00 05.9**	**+0.8**
ELBA	**Catalca**	**3.50**	**75**	*i* P	**Pn**	**06 00 05.7**	**+0.3**
ELBA				IAML		06 01 05.0	
	comp=N,24nm,0.5s						
ELBA				IAML		06 01 17.0	
	comp=E,22nm,0.6s						
ITM	**Ithomi**	**3.52**	**208**	PN	**Pn**	**06 00 06.8**	**+1.1**
CTKS	**Kestanelik-??a**	**3.57**	**74**	PN	**Pn**	**06 00 07.1**	**+0.7**
SELS	**Selova**	**3.59**	**325**	*e*Pn	**Pn**	**06 00 06.8**	**0.0**
GCAM	**G?zelcaml?**	**3.65**	**135**	PN	**Pn**	**06 00 08.2**	**+0.7**
BOVS	**Bovan**	**3.71**	**334**	*e*Pn	**Pn**	**06 00 08.7**	**+0.3**
ZAGS	**Zajecar**	**3.72**	**340**	*e*Pn	**Pn**	**06 00 08.5**	**0.0**
ZAGS				*e*Sn	**Sn**	**06 00 53.3**	**+1.0**
ARMT	**Armutlu**	**3.75**	**85**	PN	**Pn**	**06 00 09.8**	**+0.9**
BGKT	**Bogazkoy**	**3.75**	**75**	PN	**Pn**	**06 00 09.6**	**+0.7**
RAZG	**Razgrad**	**3.76**	**30**	⇓P	**Pn**	**06 00 09.7**	**+0.7**
MDNY	**Mudanya-Bursa**	**3.76**	**88**	PN	**Pn**	**06 00 10.0**	**+0.9**
PVY	**Plav**	**3.77**	**308**	*e*Pn	**Pn**	**06 00 10.1**	**+0.8**
PVY				*e*Sn	**Sn**	**06 00 55.3**	**+1.6**
ROIA	**ROIAK**	**3.77**	**42**	P	**Pn**	**06 00 10.2**	**+1.0**
PRD	**Provadia**	**3.86**	**41**	P	**Pn**	**06 00 10.5**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**3.87**	**127**	PN	**Pn**	**06 00 11.4**	**+0.8**
ULC	**Ulcinj**	**3.92**	**296**	*e*Pn	**Pn**	**06 00 13.1**	**+1.8**
ULC				*e*Sn	**Sn**	**06 00 59.7**	**+2.4**
ISK	**Istanbul-Kandi**	**3.95**	**77**	PN	**Pn**	**06 00 12.1**	**+0.5**
KAVV	**Kandilli-Istan**	**3.95**	**77**	PN	**Pn**	**06 00 12.3**	**+0.7**
KLYT	**Kilyos**	**3.97**	**75**	PN	**Pn**	**06 00 12.6**	**+0.7**
DRME	**Dracevica, Mon**	**4.05**	**299**	*e*Pn	**Pn**	**06 00 15.6**	**+2.5**
DRME	**Dracevica, Mon**	**4.05**	**299**	*e*Pn	**Pn**	**06 00 15.0**	**+1.9**
DRME				*e*Sn	**Sn**	**06 01 03.2**	**+2.6**
KULA	**Kula-Manisa**	**4.06**	**115**	PN	**Pn**	**06 00 14.4**	**+1.1**
PDG	**Podgorica**	**4.12**	**302**	⇑P	**Pn**	**06 00 16.8**	**+2.9**
PDG	**Podgorica**	**4.12**	**302**	*e*Pn	**Pn**	**06 00 16.0**	**+2.0**
TTG	**Podgorica**	**4.12**	**302**	*e*Pn	**Pn**	**06 00 15.5**	**+1.5**
TTG				*e*Sn	**Sn**	**06 01 04.5**	**+2.3**
YLV	**Yalova**	**4.14**	**85**	PN	**Pn**	**06 00 15.4**	**+1.1**
KOME	**Kolasin**	**4.18**	**309**	*e*Pn	**Pn**	**06 00 16.0**	**+1.0**
KOME				*e*Sn	**Sn**	**06 01 06.0**	**+2.1**
SJES	**Sjenica**	**4.19**	**316**	*e*Pn	**Pn**	**06 00 16.4**	**+1.4**
GRUS	**Gruza**	**4.31**	**327**	*e*Pn	**Pn**	**06 00 16.8**	**+0.3**
GRUS				*e*Sn	**Sn**	**06 01 07.1**	**+0.3**
IVAS	**Ivanjica**	**4.32**	**320**	*e*Pn	**Pn**	**06 00 17.2**	**+0.4**
IVAS				*e*Sn	**Sn**	**06 01 07.3**	**+0.1**
CEME	**Cevo**	**4.40**	**302**	*e*Pn	**Pn**	**06 00 19.4**	**+1.6**
CEME				*e*Sn	**Sn**	**06 01 11.3**	**+2.2**
NKME	**Niksic**	**4.48**	**305**	*e*Pn	**Pn**	**06 00 20.5**	**+1.5**
NKME				*e*Sn	**Sn**	**06 01 12.8**	**+1.6**
HCY	**Herceg Novi**	**4.63**	**299**	*e*Pn	**Pn**	**06 00 23.0**	**+2.0**
HCY	**Herceg Novi**	**4.63**	**299**	*e*Pn	**Pn**	**06 00 22.6**	**+1.6**
HCY				*e*Sn	**Sn**	**06 01 16.4**	**+1.7**
TRUS	**Trudelj**	**4.71**	**327**	*e*Pn	**Pn**	**06 00 22.1**	**0.0**
TRUS				*e*Sn	**Sn**	**06 01 17.4**	**+0.7**
RUDO	**Rudo**	**4.75**	**315**	*e*Pn	**Pn**	**06 00 22.6**	**-0.1**
UPM	**Unac-Piva**	**4.75**	**309**	*e*Pn	**Pn**	**06 00 24.2**	**+1.3**
UPM	**Unac-Piva**	**4.75**	**309**	*e*Pn	**Pn**	**06 00 24.2**	**+1.3**
UPM				*e*Sn	**Sn**	**06 01 19.2**	**+1.1**
DIVS	**Divibare**	**4.79**	**323**	*e*Pn	**Pn**	**06 00 23.5**	**+0.2**
DIVS				*e*Sn	**Sn**	**06 01 19.6**	**+0.8**
DIVS	**Divibare**	**4.79**	**323**	*e*Pn	**Pn**	**06 00 23.5**	**+0.2**
BRY	**Bratogost**	**4.81**	**304**	*e*Pn	**Pn**	**06 00 26.5**	**+2.9**
BRY	**Bratogost**	**4.81**	**304**	*e*Pn	**Pn**	**06 00 25.0**	**+1.4**
BRY				*i* Sn	**Sn**	**06 01 20.9**	**+1.4**
TREB	**Trebinje**	**4.84**	**301**	*e*Pn	**Pn**	**06 00 26.5**	**+2.6**
BBLS	**Lazići**	**4.90**	**318**	*e*Pn	**Pn**	**06 00 25.9**	**+1.1**
BBLS				*e*Sn	**Sn**	**06 01 22.2**	**+0.6**
BBLS	**Lazići**	**4.90**	**318**	*e*Pn	**Pn**	**06 00 26.0**	**+1.1**
MANR	**Mangalia**	**4.91**	**43**	⇑P	**Pn**	**06 00 25.6**	**+0.9**
MTUR	**Matau**	**4.97**	**9**	⇑P	**Pn**	**06 00 27.1**	**+1.3**
ARR	**Arges**	**5.07**	**5**	⇓P	**Pn**	**06 00 27.9**	**+0.9**
IDI	**Anoyia**	**5.08**	**171**	Pn	**Pn**	**06 00 29.1**	**+1.9**
	comp=E,1.2nm,0.3s,baz=342,slow=13,SNR=6.2						
LOT	**Lotru**	**5.13**	**358**	⇑P	**Pn**	**06 00 28.3**	**+0.3**
GZR	**Gura Zlata**	**5.14**	**351**	⇑P	**Pn**	**06 00 27.6**	**-0.6**
ISR	**Istrita**	**5.16**	**21**	⇓P	**Pn**	**06 00 29.7**	**+1.4**
VOIR		**5.18**	**9**	⇓P	**Pn**	**06 00 30.8**	**+2.2**
TIRR	**Tirgusor**	**5.29**	**37**	⇑P	**Pn**	**06 00 30.3**	**+0.3**
TIRR	**Tirgusor**	**5.29**	**37**	⇑P	**Pn**	**06 00 30.3**	**+0.3**
HAPS	**Han Pijesak,BI**	**5.29**	**317**	*e*Pn	**Pn**	**06 00 30.3**	**+0.1**
MLR	**Muntele Rosu**	**5.37**	**15**	Pn	**Pn**	**06 00 32.6**	**+1.4**
	comp=E,1.9nm,0.3s,baz=158,slow=1.7,SNR=14						
MLR	**Muntele Rosu**	**5.37**	**15**	⇓P	**Pn**	**06 00 32.7**	**+1.4**
FRGS	**Fruska Gora**	**5.72**	**329**	*e*Pn	**Pn**	**06 00 31.7**	**-4.3**
DOPR	**Dopca**	**5.74**	**10**	⇓P	**Pn**	**06 00 37.5**	**+1.2**
VRI	**Vrincioaia**	**5.90**	**19**	⇑P	**Pn**	**06 00 40.3**	**+1.8**
TESR	**Tescani**	**6.49**	**17**	⇑P	**Pn**	**06 00 47.0**	**+0.4**
MGRS	**Mrkonjic Grad**	**6.53**	**311**	*e*Pn	**Pn**	**06 00 50.3**	**+3.1**
BLY	**Banja Luka**	**6.68**	**314**	⇓P	**Pn**	**06 00 53.7**	**+4.5**
BLY	**Banja Luka**	**6.68**	**314**	*e*Pn	**Pn**	**06 00 50.3**	**+1.2**
MORH	**Mrgy, Hungar**	**7.05**	**328**	*e*Pn	**Pn**	**06 00 54.1**	**-0.1**
BURAR	**Bucovina Array**	**7.35**	**7**	⇑P	**Pn**	**06 00 59.5**	**+1.1**
BRTR	**Keskin Array B**	**7.45**	**91**	Pn	**Pn**	**06 01 00.9**	**+1.1**
	comp=E,0.2nm,0.3s,baz=264,slow=11,SNR=8.4						
BRTR				Sn	**Sn**	**06 02 24.5**	**0.0**
	comp=E,0.2nm,0.3s,baz=287,slow=15,SNR=4.1						
CRES	**Cresnjev**	**8.31**	**314**	*e*Pn	**Pn**	**06 01 11.3**	**-0.1**
SORM	**Soroca**	**8.42**	**20**	⇓P	**Pn**	**06 01 13.3**	**+0.3**
FINES	**FINESS Array B**	**21.19**	**3**	P	**P**	**06 03 54.8**	**-1.5**
	comp=E,2.9nm,1.0s,baz=168,slow=9.8,SNR=4.2						
NOA	**NORSAR Array B**	**22.18**	**343**	P	**P**	**06 04 05.8**	**-1.2**
	comp=E,1.4nm,1.0s,baz=148,slow=9.2,SNR=3.2						
EKA	**Eskdalemuir Ar**	**23.39**	**319**	P	**P**	**06 04 18.7**	**-1.0**
	comp=E,0.5nm,0.5s,baz=112,slow=8.7,SNR=3.2						
ARCES	**ARCESS Array B**	**29.29**	**1**	P	**P**	**06 05 13.1**	**0.0**
	comp=E,1.7nm,0.8s,baz=178,slow=8.1,SNR=3.4						

NIED ***26*** *06:03:00, 30.°40N×131.°20E, h32km, Mw3.9 Best double couple: M₀7.86000×10¹⁴ NP1:φs29.00000°, δ69.00000°, λ87.00000°. NP2:φs219.00000°, δ21.00000°, λ99.00000°.*
JMA ***26*** *06:03:50.9±0.1, 30.°39N×131.°10E, h30km±1km, M3.6*
JMA Felt I J1.
NEIC ***26*** *06:03:52.5±0.9, 30.°42N±0.°10×131.°0E±0.°2, h49km±9km, mb4.3/5, Error ellipse: s-maj=19.3km s-min=14.0km az=92.0*
IDC ***26*** *06:03:53.2±3.5, 30.°45N×131.°09E, h55km±28km, mb3.7/14, mb1 3.8/16, mb1mx3.6/42, mbtmp4.0/16, ML3.1/2, MS3.1/6, Ms1 3.1/6, ms1mx2.8/42, Error ellipse: s-maj=32.8km s-min=21.6km az=76.0*
ISC 26 06:03:50.5±0.8**, 30.°41N**±0.°06×**131.°04E**±0.°07**, h28**km**, n39, σ0.ˢ99**/38**, mb4.0**/15**, MS3.2**/5**, 5D, Kyushu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JMTN	**Minamitane**	**0.12**	**264**	⇓P	**Pn**	**06 03 56.7**	**+0.1**
JMTN				*e*S	**Sb**	**06 04 01.0**	**+1.7**
JTN	**Tanegashima 3**	**0.25**	**347**	⇓P	**Pn**	**06 03 57.9**	**-0.4**
JTN				S	**Sn**	**06 04 03.0**	**+1.4**
JYAK	**Yakushimahirau**	**0.49**	**250**	⇓P	**Pb**	**06 04 01.4**	**+0.7**
JYAK				S	**Sb**	**06 04 09.1**	**+1.5**
JKC	**Kuchinoerabu**	**0.73**	**274**	P	**Pn**	**06 04 05.5**	**+0.6**
JKC				*e*S	**Sn**	**06 04 16.6**	**+1.4**
JTSR	**Tashiro 2**	**0.76**	**352**	⇓P	**Pn**	**06 04 05.6**	**+0.2**
JTSR				S	**Sn**	**06 04 16.7**	**+0.8**
JNAR	**Kushima--Naru**	**1.13**	**10**	P	**Pb**	**06 04 11.8**	**+0.4**
JNAR				*e*S	**Sb**	**06 04 26.9**	**+1.2**
JNN	**Nakanoshima**	**1.16**	**241**	P	**Pn**	**06 04 11.9**	**+1.1**
JSU	**Suzuyama**	**1.20**	**335**	⇓P	**Pb**	**06 04 12.3**	**-0.3**
JNKG	**Nichinankitago**	**1.28**	**13**	P	**Pb**	**06 04 13.8**	**-0.1**
JNKG				S	**Sb**	**06 04 31.4**	**+1.5**
JNU	**Nakatsue**	**2.71**	**357**	P	**Pn**	**06 04 33.7**	**+1.6**
	3.7nm,0.3s,baz=214,slow=9.5,SNR=20						
JNU				S	**Sn**	**06 05 05.8**	**+1.8**
	5.0nm,0.3s,baz=191,slow=9.0,SNR=4.8						
JNU	**Nakatsue**	**2.71**	**357**		**Pn**	**06 04 33.5**	**+1.4**
INU	**Inuyama**	**7.03**	**44**	Pn	**Pn**	**06 05 33.5**	**+1.9**
KSRS	**Korea Array**	**7.49**	**341**	LR	LR	06 08 54.2	
	comp=Z,95nm,19.0s,baz=172,slow=40						
KLR	**Kul'dur**	**18.80**	**1**	P	**P**	**06 08 07.5**	**-0.1**
	0.2nm,0.3s,baz=175,slow=11,SNR=4.6						
SONM	**Songino Array**	**25.68**	**320**	P	**P**	**06 09 18.0**	**-0.2**
	1.0nm,0.4s,baz=137,slow=10,SNR=10						
PETK	**Petropavlovsk-**	**29.85**	**33**	LR	LR	06 22 19.8	
	comp=Z,23nm,18.7s,baz=236,slow=37						
CMAR	**Chiang Mai Arr**	**31.45**	**255**	LR	LR	06 24 26.7	
	comp=Z,12nm,21.5s,baz=190,slow=39						
H11N2	**WAKE ISLAND Hy**	**34.04**	**100**	T	T	06 46 33.3	
	baz=296,slow=74,SNR=32						
H11N1	**WAKE ISLAND Hy**	**34.05**	**100**	T	T	06 46 32.9	
	baz=296,slow=74,SNR=25						
H11N3	**WAKE ISLAND Hy**	**34.06**	**100**	T	T	06 46 32.7	
	baz=296,slow=74,SNR=23						
ZALV	**Zalesovo Beam**	**40.58**	**319**	P	**P**	**06 11 26.5**	**-0.8**
	0.5nm,0.3s,baz=89,slow=7.6,SNR=4.2						
ZALV				LR	LR	06 29 06.6	
	comp=Z,33nm,18.8s,baz=15,slow=37						
MK31	**Makanchi Array**	**40.77**	**308**	P	**P**	**06 11 28.5**	**-0.7**
MKAR	**Makanchi Array**	**40.77**	**308**	P	**P**	**06 11 28.9**	**-0.3**
	1.0nm,0.8s,baz=97,slow=9.9,SNR=11						
MKAR				LR	LR	06 31 22.3	
	comp=Z,47nm,18.6s,baz=66,slow=40						
TIXI	**Tiksi**	**41.31**	**359**	P	**P**	**06 11 32.0**	**-1.1**
	1.3nm,0.4s,baz=156,slow=7.4,SNR=3.7						
TIXI	**Tiksi**	**41.31**	**359**	IAmb	IAmb	06 11 34.7	
	comp=Z,4.0nm,1.1s						
BRVK	**Borovoye**	**48.98**	**316**	P	**P**	**06 12 33.6**	**-0.7**
PALK	**Pallekele**	**52.39**	**255**	LR	LR	06 36 12.3	
	comp=Z,22nm,20.4s,baz=21,slow=37						
ASAR	**Alice Springs**	**53.84**	**177**	P	**P**	**06 13 10.7**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=7.8,slow=13,SNR=6.9						
ABKAR	**Akbulak array**	**55.68**	**311**	P	**P**	**06 13 24.0**	**-0.1**
ABKAR				IAmb	IAmb	06 13 24.7	
	comp=Z,2.4nm,0.7s						
ARU	**Arti**	**55.72**	**320**	P	**P**	**06 13 23.9**	**-0.3**
	comp=Z,1.3nm,0.2s,baz=34,slow=1.0,SNR=7.0						
AKTO	**Aktyubinsk**	**56.74**	**313**	P	**P**	**06 13 31.8**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=86,slow=6.9,SNR=4.6						
INK	**Inuvik**	**64.08**	**24**	P	**P**	**06 14 21.0**	**-0.4**
	comp=Z,1.4nm,0.9s,baz=322,slow=6.4,SNR=5.1						
INK	**Inuvik**	**64.08**	**24**	IAmb	IAmb	06 14 22.6	
	comp=Z,7.9nm,1.4s						
ARCES	**ARCESS Array B**	**67.04**	**338**	P	**P**	**06 14 40.0**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=47,slow=8.3,SNR=5.7						
KBZ	**Khabaz**	**68.46**	**309**	P	**P**	**06 14 50.2**	**+0.3**
	comp=Z,3.4nm,1.0s,baz=356,slow=4.3,SNR=3.8						
FINES	**FINESS Array B**	**70.46**	**330**	P	**P**	**06 15 01.5**	**-0.5**
	comp=Z,2.6nm,0.5s,baz=70,slow=5.6,SNR=27						
AKASG	**Malin Array Be**	**73.97**	**320**	P	**P**	**06 15 21.6**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=56,slow=6.7,SNR=2.9						
BRTR	**Keskin Array B**	**76.42**	**308**	P	**P**	**06 15 38.1**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=64,slow=3.4,SNR=3.2						
NOA	**NORSAR Array B**	**76.65**	**334**	P	**P**	**06 15 37.6**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=48,slow=5.8,SNR=3.3						

IDC 26 06:12:50.8±1.9**, 54.°97N**×**164.°47E, h0**km**, mb3.5**/4**, mb1 3.8**/4**, mb1mx3.3**/57**, mbtmp3.5**/4**, ML1.9**/1**, Error ellipse: s-maj=100.0km s-min=30.5km az=149.0, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**4.41**	**248**	Pn	Pn	06 13 58.8	-0.1
	0.3nm,0.3s,baz=84,slow=15,SNR=3.2						
ILAR	**Eielson Array**	**25.65**	**48**	P	P	06 18 21.4	-0.3
	0.5nm,0.7s,baz=257,slow=8.2,SNR=7.0						
INK	**Inuvik**	**30.79**	**40**	P	P	06 19 07.6	+0.1
	2.1nm,1.2s,baz=289,slow=5.5,SNR=4.5						
YKA	**Yellowknife Ar**	**40.02**	**45**	P	P	06 20 26.7	-0.1
	0.1nm,0.5s,baz=298,slow=7.6,SNR=3.9						
TXAR	**Lajitas Array**	**67.55**	**71**	P	P	06 23 49.1	+0.2
	0.5nm,0.6s,baz=297,slow=5.6,SNR=6.8						

BJI ***26*** *06:18:27.8±0.0, 35.°94N×82.°33E, h7km, mb4.0/3, ML3.8/6, Ms3.6/4, Ms7 3.6/3*
IDC ***26*** *06:18:28.7±0.8, 36.°05N×82.°34E, h0km, mb3.7/11, mb1 4.0/16, mb1mx3.8/55, mbtmp3.8/16, ML3.6/5, MS3.1/7, Ms1 3.1/7, ms1mx2.8/38, Error ellipse: s-maj=26.5km s-min=14.5km az=47.0*
ISC 26 06:18:33.1±0.6**, 36.°05N**±0.°07×**82.°47E**±0.°08**, h35**km**, n27, σ1.ˢ64**/27**, mb3.6**/11**, MS3.0**/5**, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUN	**Gumba**	**8.62**	**159**	*e*P	**Pn**	**06 20 35.3**	**-0.3**
WMQ	**Urumqi**	**8.74**	**26**	*e*P	**Pn**	**06 20 38.3**	**+1.3**
WMQ				S	**Sn**	**06 22 14.5**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.5s						
WMQ				smax	smax		
	comp=N,15nm,1.1s						
WMQ				smax	smax		
	comp=E,17nm,1.5s						
PKI	**Pulchoki**	**8.81**	**163**	*e*P	**Pn**	**06 20 38.8**	**+0.4**
JIRN	**Jiri**	**8.94**	**158**	*e*P	**Pn**	**06 20 40.1**	**0.0**
AAK	**Ala-Archa**	**9.02**	**319**	Pn	**Pn**	**06 20 41.2**	**+0.2**
	0.3nm,0.3s,baz=153,slow=8.1,SNR=7.1						
AAK				Lg	Lg	06 23 12.6	
	0.7nm,0.3s,baz=299,slow=20,SNR=4.6						
AAK				LR	LR	06 24 31.0	
	comp=Z,108nm,18.3s,baz=116,slow=40						
RAMN	**Ramite**	**9.73**	**158**	*e*P	**Pn**	**06 20 48.0**	**-2.9**
	14nm,0.8s						
ODAN	**Odare**	**10.08**	**154**	*e*P	**Pn**	**06 20 53.1**	**-2.5**
MKAR	**Makanchi Array**	**10.74**	**359**	Pn	**Pn**	**06 21 04.2**	**-0.2**
	1.7nm,0.3s,baz=180,slow=13,SNR=167						
MKAR				Sn	**Sn**	**06 23 03.9**	**+0.6**
	0.3nm,0.3s,baz=183,slow=24,SNR=3.6						
GTA	**Gaotai**	**14.13**	**71**	*e*P	**Pn**	**06 21 49.0**	**-1.9**
GTA				pP	**P**	06 21 56.3	-1.7
GTA				sP		06 22 00.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURBB	**Kurchatov Arra**	**14.84**	**350**	Pn	**Pn**	**06 21 57.4**	**-2.9**
	0.0nm,0.3s,baz=171,slow=12,SNR=4.9						
ZALV	**Zalesovo Beam**	**17.97**	**5**	P	**Pn**	**06 22 38.0**	**-2.0**
	0.1nm,0.3s,baz=192,slow=12,SNR=9.2						
BVAR	**Borovoye Array**	**18.98**	**337**	P	**P**	**06 22 50.9**	**-0.5**
	0.6nm,0.3s,baz=135,slow=9.4,SNR=18						
GEYT	**Alibeck**	**19.53**	**283**	P	**P**	**06 22 55.2**	**-2.4**

0.3nm,0.3s,baz=81,slow=10,SNR=3.9
GEYT LR LR 06 31 49.0
comp=Z,42nm,19.3s,baz=40,slow=41
SONM Songino Array 21.25 49 P P 06 23 18.1 +1.9
1.3nm,0.8s,baz=231,slow=11,SNR=7.9
AKTO Aktyubinsk 22.75 317 P P 06 23 31.9 -0.3
2.6nm,0.8s,baz=108,slow=13,SNR=6.9
AKTO LR LR 06 32 50.5
comp=Z,47nm,18.4s,baz=39,slow=38
CMAR Chiang Mai Arr 22.78 136 P P 06 23 34.6 +2.0
1.7nm,0.3s,baz=319,slow=10,SNR=4.9
CMAR LR LR 06 34 40.6
comp=Z,38nm,18.2s,baz=219,slow=42
WSAR Wadi Sarin 24.26 245 LR LR 06 35 45.2
comp=Z,30nm,18.1s,baz=78,slow=43
ARU Arti 26.01 329 LR LR 06 35 05.3
comp=Z,75nm,18.4s,baz=187,slow=38
BRTR Keskin Array B 38.33 291 P P 06 25 50.5 -0.2
0.7nm,0.9s,baz=56,slow=4.6,SNR=4.1
FINES FINESS Array B 43.17 324 P P 06 26 29.9 -0.1
0.6nm,0.5s,baz=101,slow=9.9,SNR=3.6
ARCES ARCESS Array B 45.26 335 P P 06 26 48.8 +2.0
1.4nm,0.8s,baz=71,slow=9.1,SNR=4.2
NB2 NORSAR Subarra 50.31 323 P P 06 27 28.4 +2.4
comp=Z,2.9nm,0.9s,baz=86,slow=7.4
NOA NORSAR Array B 50.31 323 P P 06 27 27.9 +1.8
comp=Z,1.3nm,0.8s,baz=86,slow=7.2,SNR=5.1
NOA LR LR 06 49 52.2
comp=Z,15nm,19.9s,baz=245,slow=38
GERES GERESS Array B 50.67 307 P P 06 27 28.9 -0.1
comp=Z,0.2nm,0.2s,baz=48,slow=6.0,SNR=3.6
WRA Warramunga Arr 74.21 130 P P 06 30 08.9 +2.4
comp=Z,0.3nm,0.5s,baz=331,slow=6.2,SNR=6.3
ASAR Alice Springs 76.74 133 P P 06 30 21.4 +0.4
comp=Z,0.5nm,0.8s,baz=324,slow=6.1,SNR=3.8
YKA Yellowknife Ar 80.84 8 P P 06 30 42.4 -0.5
comp=Z,0.2nm,0.5s,baz=343,slow=5.1,SNR=5.5

IDC 26 06:20:13.5±1.3, 16.°27N×147.°41E, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.5/53, mbtmp3.6/8, Error ellipse: s-maj=40.5km s-min=24.5km az=92.0
ISC 26 06:20:18.8±1.2, 16.°3N±0.°2×147.°4E±0.°3, h35km, n11, σ0.s41/8, mb3.6/8, Mariana Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
H11S3 WAKE ISLAND Hy 18.57 80 T T 06 43 23.5
baz=266,slow=75,SNR=23
H11S1 WAKE ISLAND Hy 18.58 80 T T 06 43 24.2
baz=266,slow=75,SNR=15
H11S2 WAKE ISLAND Hy 18.58 80 T T 06 43 24.5
baz=266,slow=75,SNR=28
MJAR Matsushiro Arr 21.77 340 P P 06 25 07.1 -0.5
1.0nm,0.4s,baz=170,slow=9.8,SNR=6.6
KLR Kul'dur 35.26 342 P P 06 27 10.3 +0.3
1.2nm,0.6s,baz=155,slow=5.7,SNR=6.7
WRA Warramunga Arr 38.20 200 P P 06 27 35.2 -0.1
0.3nm,0.9s,baz=19,slow=9.0,SNR=3.4
SONM Songino Array 46.03 322 P P 06 28 39.1 -0.1
0.4nm,0.4s,baz=114,slow=7.1,SNR=5.0
MKAR Makanchi Array 61.30 315 P P 06 30 31.4 +0.6
0.3nm,0.6s,baz=88,slow=8.9,SNR=4.9
KURBB Kurchatov Arra 64.19 319 P P 06 30 49.5 -0.4
0.9nm,0.6s,baz=95,slow=7.5,SNR=12
ILAR Eielson Array 65.12 26 P P 06 30 55.8 -0.1
0.3nm,0.8s,baz=249,slow=5.4,SNR=4.5
YKA Yellowknife Ar 79.38 28 P P 06 32 21.1 +0.1
0.2nm,0.6s,baz=287,slow=5.0,SNR=4.1

IDC 26 06:25:09.3±71.0, 19.°37S×170.°66E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/32, mbtmp3.9/3, Error ellipse: s-maj=1206.0km s-min=132.5km az=76.0, Vanuatu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STKA Stephens Creek 28.92 239 P P 06 31 11.2 +0.9
3.1nm,1.0s,baz=66,slow=12,SNR=2.8
WRA Warramunga Arr 34.17 263 P P 06 31 57.2 +0.6
0.4nm,0.5s,baz=96,slow=7.7,SNR=5.1
ASAR Alice Springs 34.40 256 P P 06 31 57.4 -1.3
1.5nm,0.8s,baz=89,slow=9.8,SNR=9.1

IDC 26 06:33:52.7±7.9, 18.°55N×145.°59E, h109km±73km, mb3.7/12, mb1 3.9/13, mb1mx3.7/36, mbtmp4.0/13, ML3.2/1, Error ellipse: s-maj=31.1km s-min=13.3km az=91.0
NEIC 26 06:33:56.3±1.4, 18.°6N±0.°1×145.°5E±0.°2, h139km±8km, mb4.4/32, Error ellipse: s-maj=27.1km s-min=16.6km az=99.0
ISC 26 06:33:57.1±0.6, 18.°54N±0.°10×145.°5E±0.°2, h150km, n45, σ0.s77/43, mb4.2/29, Mariana Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MJAR Matsushiro Arr 19.04 342 P P 06 38 06.1 -1.6
0.1nm,0.3s,baz=154,slow=10,SNR=2.8
KLR Kul'dur 32.56 343 P P 06 40 13.8 -0.1
1.2nm,0.4s,baz=162,slow=3.8,SNR=10
KNRA Kununurra 37.78 207 P P 06 40 59.4 +0.4
WB0 Warramunga Arr 39.60 197 P P 06 41 12.7 -1.4
WB0 IAmb IAmb 06 41 14.4
comp=Z,5.9nm,0.8s
WR0 Warramunga Arr 39.74 196 P P 06 41 15.0 -0.3
WR0 IAmb IAmb 06 41 17.1
comp=Z,5.1nm,0.9s
WRA Warramunga Arr 39.78 197 P P 06 41 14.9 -0.7
comp=Z,5.0nm,0.8s,baz=17,slow=8.9,SNR=20
FITZ Fitzroy Crossi 41.31 209 P P 06 41 28.6 +0.4
FITZ IAmb IAmb 06 41 29.8
comp=Z,5.0nm,0.8s
SONM Songino Array 43.14 322 P P 06 41 43.5 +0.6
comp=Z,0.6nm,0.6s,baz=139,slow=9.6,SNR=3.9
AS31 Alice Springs 43.45 196 P P 06 41 45.5 +0.1
ASAR Alice Springs 43.45 196 P P 06 41 45.2 -0.2
comp=Z,1.4nm,0.6s,baz=19,slow=8.9,SNR=29
STKA Stephens Creek 50.27 184 P P 06 42 38.5 +0.3
comp=Z,1.4nm,0.8s,baz=80,slow=6.1,SNR=3.0
BBOO Buckleboo 51.85 190 P P 06 42 50.8 +0.7
BBOO IAmb IAmb 06 43 09.7
comp=Z,18nm,1.4s
MKAR Makanchi Array 58.43 314 P P 06 43 38.2 +1.1
comp=Z,0.7nm,0.8s,baz=87,slow=9.4,SNR=6.2
NRIK Noril'sk 61.69 340 P P 06 43 59.0 +0.1
comp=Z,1.3nm,0.4s,baz=103,slow=8.6,SNR=4.8
RC01 Rabbit Creek A 61.79 30 P P 06 44 00.1 +0.4
KTH Kantishna Hill 61.86 27 P P 06 44 01.1 +0.9
KTH IAmb IAmb 06 44 04.9
comp=Z,6.4nm,1.2s
PMR Palmer 62.19 29 P P 06 44 02.9 +0.6
PMR IAmb IAmb 06 44 03.2
comp=Z,7.7nm,1.1s
GHO Glory Hole Cre 62.32 29 P P 06 44 03.9 +0.5
MLY Manley 62.34 25 P P 06 44 04.3 +0.9
MLY IAmb IAmb 06 44 05.3
comp=Z,3.6nm,0.9s
KNK Knik Glacier 62.46 30 P P 06 44 04.7 +0.5
SCM Sheep Creek Mo 63.08 29 P P 06 44 09.0 +0.7
DHY Denali Highway 63.30 28 P P 06 44 10.4 +0.4
DHY IAmb IAmb 06 44 12.7
comp=Z,4.6nm,1.2s
HDA Harding Lake 63.77 27 P P 06 44 12.4 -0.4
TOLK Toolik Lake Re 63.81 22 P P 06 44 14.5 +1.5
TOLK IAmb IAmb 06 44 15.5
comp=Z,4.9nm,1.1s
IL31 63.87 26 P P 06 44 13.1 -0.3
IL31 IAmb IAmb 06 44 13.6
comp=Z,4.9nm,1.1s
ILAR Eielson Array 63.87 26 P P 06 44 13.0 -0.4
comp=Z,1.4nm,0.7s,baz=250,slow=6.1,SNR=16
PAX Paxson 64.14 28 P P 06 44 16.1 +0.8
PAX IAmb IAmb 06 44 27.8
comp=Z,8.9nm,1.5s
RIDG Independent Ri 64.55 28 P P 06 44 18.3 +0.4
RIDG IAmb IAmb 06 44 19.8
comp=Z,7.4nm,1.4s
SCRK Sand Creek 64.96 27 P P 06 44 21.8 +1.1
SCRK IAmb IAmb 06 44 22.8
comp=Z,4.4nm,1.3s
MCARA McCarthy VSAT 65.03 30 P P 06 44 20.6 -0.4
BALM Baldy 65.32 31 P P 06 44 23.7 +0.7
EGAK Eagle 66.29 27 P P 06 44 28.8 -0.3
C36M Paulatuk 72.97 22 P P 06 45 10.3 +0.6
C36M IAmb IAmb 06 45 10.9
comp=Z,4.8nm,1.0s
ABKAR Akbulak array 73.32 317 P P 06 45 12.4 +0.2
YKA Yellowknife Ar 78.22 28 P P 06 45 39.8 0.0
comp=Z,1.8nm,0.7s,baz=290,slow=5.3,SNR=20
PINE Pine Mountain 79.91 47 IAmb IAmb 06 45 51.8
comp=Z,7.1nm,0.8s
BEKR Beckworth 81.43 51 P P 06 45 57.9 0.0
PNTR Pine Nut 82.22 51 P P 06 46 02.3 +0.2
PNTR IAmb IAmb 06 46 04.1
comp=Z,4.1nm,0.7s
KVN Kaiserville 83.35 51 IAmb IAmb 06 46 09.1
comp=Z,3.0nm,0.7s
NVAR Mina Array Bea 83.39 52 P P 06 46 09.0 +0.9
comp=Z,2.4nm,0.7s,baz=268,slow=5.8,SNR=24
ELK Elko 84.87 49 P P 06 46 16.3 +0.7
YHL Hebgen Lake 86.18 44 P P 06 46 22.7 +0.7
FINES FINESS Array B 86.94 335 P P 06 46 23.6 -1.4
comp=Z,1.3nm,0.6s,baz=90,slow=5.7,SNR=6.3
PDAR Pinedale Array 88.08 45 P P 06 46 29.9 -1.2
comp=Z,0.2nm,0.4s,baz=141,slow=0.6,SNR=4.6
LPAZ La Paz 147.87 91 PKPbc PKiKP 06 53 26.4 -1.6
comp=Z,1.6nm,0.5s,baz=233,slow=6.0,SNR=4.2

ISK 26 06:58:28.3, 38.°67N×43.°13E, h8km, ML2.5/5
DDA 26 06:58:28.7, 38.°67N×43.°12E, h7km±5km, ML2.2
ISC 26 06:58:29.1±0.9, 38.°69N±0.°03×43.°14E±0.°03, h11km±9km, n16, σ0.s71/31, Turkey

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VANB Van 0.22 115 PG Pg 06 58 33.9 +0.2
VANB SG Sg 06 58 38.5 +1.6
TVAN Van 0.26 127 iP Pg 06 58 34.0 -0.7
TVAN iS Sg 06 58 38.6 +0.3
TVAN IAML 06 58 39.0
comp=E,1μm,0.5s
TVAN IAML 06 58 40.0
comp=N,469nm,0.4s
ADCV BITLIS_Adilcev 0.34 291 iP Pb 06 58 36.7 -0.6
ADCV iS Sb 06 58 43.4 +0.5
AKDM Akdamar-Van 0.38 199 PG Pg 06 58 36.0 -0.7
AKDM SG Sg 06 58 41.6 -0.1
GEVA Gevas 0.38 190 iP Pg 06 58 36.1 -0.6
GEVA iS Sg 06 58 42.9 -0.9
GEVA IAML 06 58 44.0
comp=E,202nm,0.4s
GEVA IAML 06 58 44.0
comp=N,277nm,0.5s
VMUR Van-Muradiye 0.45 48 iP Pg 06 58 38.3 +0.2
VMUR iS Sb 06 58 45.8 -0.2
VMUR IAML 06 58 46.0
comp=N,476nm,0.3s
VMUR IAML 06 58 47.0
comp=E,517nm,0.3s
CLDR Caldiran 0.76 53 PG Pg 06 58 43.6 -0.2
CLDR SG Sb 06 58 54.8 -0.1
CLDR Caldiran 0.76 53 iP Pg 06 58 43.1 -0.8
CLDR iS Sb 06 58 54.6 -0.2
CLDR IAML 06 58 56.0
comp=N,93nm,0.3s
BLIS Bitlis-Merkez 0.85 252 iP Pg 06 58 45.0 -0.5
BLIS iS Sg 06 58 56.1 -0.4
BLIS IAML 06 58 59.0
comp=N,88nm,0.2s
GURO Guroymak-BITLI 0.88 261 PG Pg 06 58 45.6 -0.4
GURO SG Sb 06 58 58.0 -0.1
AGRB Hanur-Agry 0.90 353 PG Pg 06 58 46.1 -0.3
AGRB SG Sb 06 58 59.5 +0.8
SRTM Siirt_Merkez 1.18 234 iP Pg 06 58 52.7 +0.9
SRTM iS Sn 06 59 09.6 +1.8
SRTM IAML 06 59 12.0
comp=N,52nm,0.5s
SRTM IAML 06 59 13.0
comp=E,62nm,0.6s
MUSM Mu-Merkez 1.27 272 iP Pn 06 58 52.1 -0.8
MUSM iS Sn 06 59 09.8 -0.2
EATA Eleskirt 1.28 337 iP Pn 06 58 53.1 0.0
EATA iS Sn 06 59 10.5 +0.1
EATA IAML 06 59 17.0
comp=E,40nm,0.5s
BTMN Batman 1.67 242 iP Pg 06 59 02.1 +0.9
BTMN iS Sg 06 59 22.9 +0.1
BTMN IAML 06 59 25.0
comp=N,70nm,0.5s
MAZI Mazidag 2.45 241 PN Pn 06 59 09.7 +0.6

IDC 26 07:11:46.8±4.2, 2.°23N×96.°25E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/43, mbtmp3.6/4, Error ellipse: s-maj=159.4km s-min=28.3km az=58.0
DJA 26 07:11:49.8±1.1, 2.°N±.°×96.°6E±.°, h18km±3km, M3.6/5, mb4.2/2, MLv3.4/5
ISC 26 07:11:51.1±1.2, 2.°33N±0.°07×96.°2E±0.°1, h25km±6km, n20, σ0.s81/18, mb3.7/4, Northern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SNSI Sinabang, Aceh 0.12 48 P Pb 07 11 55.7 -0.2
SNSI S Sb 07 11 59.4 +0.3
SNSI Sinabang, Aceh 0.12 48 P Pb 07 11 55.7 -0.2
SNSI S Sb 07 11 59.4 +0.3
TPTI 1.32 45 P Pn 07 12 12.7 -1.2
TPTI S Sn 07 12 32.1 +1.4
TPTI 1.32 45 P Pn 07 12 12.7 -1.2
TPTI S Sn 07 12 32.1 +1.4
MLSI Meulaboh, Aceh 1.93 5 P Pn 07 12 22.1 -0.2
MLSI Meulaboh, Aceh 1.93 5 P Pn 07 12 22.1 -0.2
KCSI Kotacane, Aceh 1.93 52 P Pn 07 12 21.9 -0.5
KCSI Kotacane, Aceh 1.93 52 P Pn 07 12 21.9 -0.5
PBSI Pulau Batu 3.13 139 P Pn 07 12 38.9 +0.1
PBSI Pulau Batu 3.13 139 P Pn 07 12 38.9 +0.1
H08S2 Diego Garcia H 25.68 247 T T 07 43 57.4
baz=69,slow=76,SNR=17
H08S3 Diego Garcia H 25.68 247 T T 07 43 55.2
baz=69,slow=76,SNR=61
H08S1 Diego Garcia H 25.70 247 T T 07 43 56.3
baz=69,slow=76,SNR=14
H01W3 Cape Leeuwin H 40.65 157 T T 08 02 28.6
baz=333,slow=76,SNR=22
H01W2 Cape Leeuwin H 40.66 157 T T 08 02 30.0
baz=333,slow=76,SNR=29
H01W1 Cape Leeuwin H 40.67 157 T T 08 02 33.5
baz=333,slow=76,SNR=24
WRA Warramunga Arr 43.45 122 P P 07 19 51.4 -1.1
0.2nm,0.7s,baz=299,slow=9.3,SNR=3.2
MKAR Makanchi Array 45.92 347 P P 07 20 12.2 +0.4
0.4nm,0.3s,baz=170,slow=8.5,SNR=3.9
SONM Songino Array 46.17 9 P P 07 20 14.2 +0.3
0.5nm,0.6s,baz=184,slow=9.5,SNR=4.5
ZALV Zalesovo Beam 52.30 351 P P 07 21 00.5 0.0
0.8nm,0.5s,baz=168,slow=7.4,SNR=4.1

NNC 26 07:14:30.5±0.6, 50.°05N×78.°81E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=7.1km s-min=2.9km az=62.0, Suspected Mining explosion.
ASRS 26 07:14:32.8±0.5, 50.°N±3.°×7.°9E±.°, h10km, MLh3.6/6, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed
ISC 26 07:14:29.8±0.9, 50.°05N±0.°04×78.°64E±0.°05, h0km, n19, σ1.s68/29, 6C-3D, Eastern Kazakhstan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KURBB Kurchatov Arra 0.57 353 ⇑P Pb 07 14 42.0 -0.8
19nm,0.5s
KURBB ⇑S Sb 07 14 50.9 -0.6
227nm,0.6s
KURK Kurchatov 0.66 359 ⇑P Pb 07 14 43.4 -0.9
7.3nm,0.4s
KURK ⇑S Sb 07 14 53.6 -0.5
104nm,0.7s
SEM Semipalatinsk 1.09 70 P Pb 07 14 50.5 -1.3
7.2nm,0.2s
SEM S Sg 07 15 03.1 -1.8
44nm,0.3s
MAKZ Makanchi 3.94 144 ⇑Pg Pb 07 15 38.6 -1.4
2.0nm,0.7s
MAKZ ⇑Lg Lg 07 16 30.6
6.2nm,0.5s
MK31 Makanchi Array 4.07 142 ⇓Pn Pn 07 15 34.5 +1.1
0.2nm,0.3s,baz=80,slow=36,SNR=22
MK31 ⇓Pg Pb 07 15 42.8 +0.5
1.4nm,0.5s,baz=326,slow=13,SNR=9.4
MK31 ⇓Lg Lg 07 16 37.0
4.7nm,0.5s,baz=332,slow=27,SNR=14
MKAR Makanchi Array 4.07 142 P Pn 07 15 34.8 +1.5
MKAR S Sn 07 16 23.2 +1.6
KAPS Kapalarasan 4.80 174 Pg Pg 07 15 58.9 -2.8
1.3nm,0.3s
KAPS Lg Lg 07 16 59.6
6.7nm,0.7s
ZSN Zaisan 4.87 120 Pg Pb 07 15 54.9 -1.1
4.0nm,0.2s
ZSN Lg Lg 07 16 53.3
5.0nm,0.3s
DGZ Jazzator, Alta 5.70 90 P Pn 07 15 58.4 +2.6
DGZ S Sn 07 17 04.3 +2.4
CHBI Chibit, Altay 5.70 84 P Pn 07 15 58.5 +2.7
CHBI S Sn 07 17 02.5 +0.5
ELT Eltsovka 5.72 53 P Pn 07 15 58.1 +2.2
ELT S Sn 07 17 00.8 -1.4
ARTR Artybash 5.74 69 S Sn 07 17 04.0 +1.2
AKAR Aktash 5.78 84 P Pn 07 15 59.7 +2.8
AKAR S Sn 07 17 05.2 +1.4
DJR Jarkent 5.78 172 Pg Pg 07 16 18.3 -2.2
0.9nm,0.2s
DJR Lg Lg 07 17 33.1
3.1nm,0.4s
ARXS Arharly 5.87 186 Pg Pg 07 16 22.2 0.0
2.1nm,0.4s
ARXS Lg Lg 07 17 37.0
6.1nm,0.5s
ULGR Ulagan, Altay 6.00 81 P Pn 07 16 01.8 +1.9
ULGR S Sn 07 17 09.9 +0.6
BRVK Borovoye 6.02 303 S Sn 07 17 10.5 +0.9
KUU Kurty 6.36 195 Pg Pg 07 16 30.7 -0.9
0.6nm,0.2s
KUU Lg Lg 07 17 53.4
8.6nm,0.5s
TASR Tashtagol 6.38 61 S Sn 07 17 18.4 -0.2

NNC 26 07:15:17.8±10.0, 37.°02N×70.°50E, h0km, mb3.9, mpv3.5, 2C-2D, Error ellipse: s-maj=85.9km s-min=75.0km az=158.0, Afghanistan-Tajikistan border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AML Almayashu 5.67 25 P Pn 07 16 44.0 +0.4
SNR=28
UCH Uchtor 6.05 30 P Pn 07 16 48.5 -0.4
SNR=14
KK31 Karatay Array 6.08 0 ⇓Pn Pn 07 16 52.0 +3.1
0.6nm,0.3s,baz=181,slow=13,SNR=18
KK31 ⇑Sn Sn 07 18 01.0 +1.9
2.5nm,0.3s,baz=186,slow=23,SNR=14
EKS2 Erkin-Say 6.17 23 P Pn 07 16 50.9 +0.6
SNR=14
KZA Kyzart 6.24 35 P Pn 07 16 49.6 -2.0
SNR=8.6
AAK Ala-Archa 6.40 27 P Pn 07 16 53.2 -0.2
SNR=6.3
AAK Ala-Archa 6.40 27 Pn Pn 07 16 52.5 -0.9
4.2nm,0.4s
AAK Sn Sn 07 18 06.2 -1.1
11nm,1.2s
CHMS Chumysh 6.80 27 ⇓Pn Pn 07 16 57.1 -1.8
2.6nm,0.6s
CHMS ⇑Sn Sn 07 18 19.1 +2.0
5.2nm,0.7s

AZER 26 07:28:25.7, 40.°99N×47.°95E, h5km, ML3.1
NSSP 26 07:28:27.0, 41.°03N×47.°80E, h5km, Ms3.1
IASPEI 26 07:28:28.2±0.9, 41.°00N±0.°02×47.°90E±0.°02, h7km±6km, Error ellipse: s-maj=3.0km s-min=2.8km az=88.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009
DRS 26 07:28:29.0±0.0, 41.°04N×47.°90E, h11km
MOS 26 07:28:29.4±0.0, 41.°09N×47.°91E, h10km, MPVA3.9
ISC 26 07:28:28.1±0.8, 41.°01N±0.°02×47.°90E±0.°02, h9km±6km, n57, σ1.s53/108, 3C-5D, Eastern Caucasus

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
QBL Gabala 0.08 217 P Pg 07 28 30.0 -0.4
SNR=666
QBL S Sg 07 28 31.8 -0.3
XNQ Khinaliq 0.24 48 P Pg 07 28 33.4 +0.1
SNR=661
XNQ S Sg 07 28 37.4 +0.7
IML Ismayilli 0.30 135 P Pg 07 28 34.4 +0.2
SNR=25
IML S Sg 07 28 39.8 +1.6
AKT Akhty 0.49 345 iPg Pg 07 28 38.3 +0.7
AKT eSg Sb 07 28 45.7 -0.6
SEKA Sheki 0.57 291 P Pg 07 28 39.7 +0.5
SNR=27
SEKA S Sb 07 28 49.6 +1.1
QUBA Quba, Azerbaij 0.57 52 P Pb 07 28 40.2 0.0
SNR=34
QUBA S Sb 07 28 49.2 +0.8
PQL Pirkuli 0.57 112 P Pg 07 28 39.4 +0.2
SNR=55
PQL S Sb 07 28 49.3 +0.7
QSAR Qusar 0.58 28 P Pb 07 28 40.4 0.0
SNR=65
QSAR S Sb 07 28 49.2 +0.5
KSMR Kasumkent 0.62 16 ePg Pb 07 28 41.0 -0.1
KSMR eSg Sb 07 28 50.5 +0.5
MNGR Mingechevir, A 0.66 249 P Pb 07 28 42.1 +1.3
SNR=6.5
MNGR S Sn 07 28 53.9 -0.2
KDMR Kurdemir 0.67 161 P Pb 07 28 42.1 +1.1
KDMR S Sb 07 28 52.6 +1.4
ZRD Zardab 0.75 193 P Pg 07 28 43.1 +0.6
SNR=157
ZRD S Sb 07 28 55.9 +2.4
SIZA Siyzn 0.76 85 P Pg 07 28 43.3 +0.6
SNR=13
SIZA S Sn 07 28 56.9 +0.2
ATGJ Altiaghaj 0.80 100 P Pg 07 28 43.7 +0.1
SNR=8.4
ATGJ S Sb 07 28 56.1 +0.9
GBS Qobustan 0.92 120 P Pg 07 28 46.9 +1.0
SNR=11
GBS S Sn 07 29 01.4 +0.7
BRDA Brd 0.92 217 P Pg 07 28 46.6 +0.7
SNR=4.4
BRDA S Sn 07 29 02.7 +2.2
DRN Derbent 1.07 17 ePg Pn 07 28 49.8 +0.6
DRN eSg Sn 07 29 05.2 +1.0
AGDM Agdam 1.08 214 P Pb 07 28 48.4 -0.6
SNR=143
AGDM S Sg 07 29 05.4 +2.4
ZKTA Zakatala 1.15 304 P Pb 07 28 49.7 -0.5
SNR=8.6
ZKTA S Sn 07 29 08.0 +1.7
URKR Urkarakh 1.17 350 ePg Pn 07 28 52.0 +1.2
URKR eSg Sn 07 29 08.7 +1.7
SAAT Saatly 1.21 161 Pn Pn 07 28 49.9 -1.3
SAAT Sn Sn 07 29 07.4 +0.4
GANJ Ganja 1.25 254 P Pn 07 28 50.5 -1.2
SNR=26
GANJ S Sb 07 29 08.3 +0.3
KMKR Kumukh 1.27 332 ePg Pn 07 28 54.0 +1.4
KMKR eSg Sn 07 29 11.0 +1.5
BLQ Beylaqan 1.31 192 P Pn 07 28 51.7 -0.9
SNR=7.4
BLQ S Sb 07 29 10.6 +0.8
ALIB Äli-Bayra 1.35 141 P Pn 07 28 54.3 +1.3
SNR=4.7
ALIB S Sg 07 29 16.3 +4.9
DDFL Dedoflistskaro 1.41 289 P Pg 07 28 56.5 +1.2
DDFL S Sn 07 29 11.9 -0.9
QRD Qoradiz 1.61 196 Pn Pn 07 28 55.9 -0.7
SNR=13
QRD Sn Sn 07 29 18.2 +0.7
GDB GEDABAY 1.65 261 Pn Pn 07 28 56.9 -0.5
SNR=58
GDB Sn Sn 07 29 19.1 +0.3
GLBA Cllabad 1.80 168 Pn Pn 07 28 58.8 -0.5
SNR=16

GLBA Sn Sn 07 29 22.5 +0.2
QZX Qazax, Azerbai 1.91 272 Pn Pn 07 29 01.7 +0.8
SNR=43
QZX Sn Sb 07 29 28.1 +0.9
GRS Goris 1.93 219 ⇓iP Pn 07 28 55.0 -6.1
GRS ⇑iS Sn 07 29 21.0 -4.5
BTLR Botlikh 2.08 323 ePg Pg 07 29 07.6 -0.3
YRD Yardimli 2.11 173 Pn Pn 07 29 02.7 -1.0
SNR=29
YRD Sn Sn 07 29 29.5 -0.5
DLMR Dylym 2.27 336 ePg Pb 07 29 10.0 +0.8
LRK Lerik 2.39 172 Pn Pn 07 29 07.1 -0.4
SNR=16
LRK Sn Sn 07 29 37.0 +0.1
SBZ Shahbuz 2.41 229 Pn Pn 07 29 09.4 +1.6
SNR=7.7
SBZ Sn Sb 07 29 41.9 +0.3
BTNK Botanikuri 2.43 287 P Pb 07 29 11.0 -1.0
BTNK S Sb 07 29 42.9 +0.9
BTNK Botanikuri 2.43 287 ePn Pb 07 29 11.0 -1.0
BTNK eSn Sb 07 29 42.9 +0.9
TBLG Delisi 2.49 288 P Pb 07 29 12.5 -0.4
TBLG S Sb 07 29 44.8 +1.2
TBLG Delisi 2.49 288 ePn Pb 07 29 12.5 -0.4
TBLG eSn Sb 07 29 44.8 +1.2
KAPZ Kaputan 2.53 255 eP Pn 07 29 12.3 +2.8
KAPZ eS Sb 07 29 46.1 +1.1
ASTR Astara 2.54 164 Pn Pn 07 29 08.9 -0.5
ASTR Sn Sn 07 29 41.3 +0.8
ORD Ordubad 2.54 216 Pn Pn 07 29 10.2 +0.6
SNR=11
ORD Sn Sn 07 29 43.3 +2.7
GNI Garni 2.55 251 eP Pb 07 29 14.3 +0.1
GNI eS Sb 07 29 48.5 +2.8
NAX Nakhchivan 2.60 226 Pn Pn 07 29 12.1 +1.8
SNR=2.7
NAX Sn Sn 07 29 46.3 -0.6
NRKZ NAREK 2.67 249 eP Pb 07 29 15.8 -0.3
NRKZ eS Sb 07 29 51.5 +2.6
STE Stepanavan 2.67 271 eP Pn 07 29 09.0 -2.4
STE eS Sn 07 29 44.0 +0.1
STE Stepanavan 2.67 271 ⇑eP Pb 07 29 13.6 +2.2
STE ⇑eS Sb 07 29 48.1 -1.0
TRLG Trialeti 2.91 282 P Pn 07 29 17.5 +2.8
TRLG S Sb 07 29 55.3 -0.6
TRLG Trialeti 2.91 282 ePn Pn 07 29 17.5 +2.8
TRLG eSn Sb 07 29 55.3 -0.6
GUDG Gudauri 2.94 301 P Pn 07 29 18.6 +3.3
GUDG S Sb 07 29 55.2 -1.9
GUDG Gudauri 2.94 301 ePn Pn 07 29 18.6 +3.3
GUDG eSn Sb 07 29 55.2 -1.9
ARUZ Aruch 2.99 257 eP Pb 07 29 20.0 -1.5
ARUZ eS Sb 07 29 59.0 +0.8
AKH Akhalkalaki 3.35 278 i Pn Pb 07 29 25.5 -2.2
AKH eSn Sb 07 30 06.1 -2.5
AKTO Aktyubinsk 11.77 33 ⇓P Pn 07 31 13.8 -2.3
2.4nm,1.1s
AKTO ⇓S Sn 07 33 23.9 -3.6
1.2nm,0.9s
AB31 Akbulak array 11.84 42 ⇓P Pn 07 31 10.6 -6.3
0.7nm,0.8s,baz=214,slow=13,SNR=6.5
AB31 ⇓S Sn 07 33 19.4 -10
0.7nm,0.7s,baz=220,slow=24
VYHS Vyhne 21.86 300 eP P 07 33 19.1 -1.8

IDC 26 07:30:33.4±1.1, 6°.04S×154°.83E, h0km, mb3.9/8, mb1 4.2/8, mb1mx3.9/30, mbtmp3.9/8, Error ellipse: s-maj=44.9km s-min=21.2km az=127.0
ISC 26 07:30:44.7±1.0, 6°.2S±0°.2×154°.8E±0°.2, h89km, n11, σ0°.95/8, mb3.8/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.11	233	P	P	07 35 52.5	+0.2
	1.5nm,0.3s,baz=57,slow=10,SNR=21						
ASAR	Alice Springs	26.55	227	P	P	07 36 14.2	-0.4
	1.4nm,0.4s,baz=57,slow=9.2,SNR=40						
H11S3	WAKE ISLAND Hy	27.18	25	T	T	08 04 30.9	
	baz=205,slow=74,SNR=6.5						
H11S2	WAKE ISLAND Hy	27.18	25	T	T	08 04 25.8	
	baz=205,slow=74,SNR=5.3						
H11S1	WAKE ISLAND Hy	27.20	25	T	T	08 04 27.0	
	baz=205,slow=74,SNR=4.0						
STKA	Stephens Creek	28.39	204	P	P	07 36 30.6	-0.2
	1.8nm,0.7s,baz=5.8,slow=15,SNR=3.3						
CMAR	Chiang Mai Arr	60.21	295	P	P	07 40 44.8	+0.8
	1.5nm,0.5s,baz=115,slow=5.1,SNR=6.8						
MKAR	Makanchi Array	82.62	319	P	P	07 42 57.9	-0.4
	0.3nm,0.6s,baz=92,slow=8.2,SNR=6.9						
ILAR	Eielson Array	82.69	22	P	P	07 42 56.9	-1.3
	0.4nm,0.8s,baz=243,slow=6.0,SNR=3.3						
NVAR	Mina Array Bea	91.39	52	P	P	07 43 42.8	+1.4
	0.4nm,0.7s,baz=256,slow=6.0,SNR=3.8						
YKA	Yellowknife Ar	95.71	28	P	P	07 44 00.2	-0.2
	0.1nm,0.6s,baz=272,slow=4.6,SNR=3.5						

OMAN 26 08:08:06.0±0.9, 27°.73N×58°.11E, h23km±5km, ml4.0/14, Error ellipse: s-maj=5.5km s-min=3.4km az=20.0
NEIC 26 08:08:05.5±1.2, 27°.89N±0°.07×58°.1E±0°.1, h67km±5km, Error ellipse: s-maj=13.7km s-min=10.5km az=84.0
THR 26 08:08:05.6±0.4, 27°.84N×58°.00E, h42km±5km, ML4.1
TEH 26 08:08:06.1, 27°.80N×58°.12E, h50km, ML4.4
IDC 26 08:08:06.8±2.4, 27°.85N×58°.09E, h83km±25km, mb3.6/17, mb1 3.7/21, mb1mx3.5/59, mbtmp3.9/21, MS2.9/6, Ms1 2.9/6, ms1mx2.6/43, Error ellipse: s-maj=22.4km s-min=14.7km az=152.0
DSN 26 08:08:06.8±1.8, 27°.60N×57°.92E, h10km, ML4.4/7, Error ellipse: s-maj=46.5km s-min=10.8km az=143.0
ISC 26 08:08:04.6±0.6, 27°.78N±0°.04×58°.07E±0°.05, h50km, n99, σ2°.56/107, mb3.8/16, MS2.8/4, Southern Iran

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KHNJ Kahnooj 0.36 298 ePg Pn 08 08 17.2 +2.8
NIAN Nian 1.11 259 ePg Pn 08 08 27.5 +3.6
NIAN e 08 08 45.8
IBND Bandar-abas 1.39 257 ePg Pn 08 08 30.9 +3.2
IBND e 08 08 57.2
GENO Geno 1.72 258 ePg Pn 08 08 34.9 +2.5
GENO e 08 09 04.3
CHMN Cheshme madani 2.12 348 ePn Pn 08 08 40.9 +2.9
NGRK Negar Kerman 2.20 328 ePn Pn 08 08 41.9 +2.9
NGRK e 08 09 10.7
BANOM Banah 2.43 221 P Pn 08 08 44.3 +2.4
BANOM S Sn 08 09 12.8 +2.3
BANOM Banah 2.43 221 P Pn 08 08 44.4 +2.5
SNR=45
BANOM S Sn 08 09 13.5 +3.0
SNR=7.6
SHME Shamm 2.44 225 eP Pn 08 08 44.6 +2.6
SNR=38
SHME S Sn 08 09 11.5 +0.9
KRBR Kerman 2.48 333 eSg Sn 08 09 19.7 +7.7
KRBR IAML 08 09 21.5
comp=E,899nm,0.1s
TVBK TV Kerman 2.48 333 ePn Pn 08 08 46.7 +3.9
TVBK e 08 09 19.5
MDH Madha 2.94 213 P Pn 08 08 49.8 +0.9
SNR=15
KHGB Koh Gabri 2.94 332 ePn Pn 08 08 51.8 +2.8
KHGB e 08 09 31.7
MSFE Esma-Masafi 2.95 216 eP Pn 08 08 51.7 +2.6
SNR=16
MSFE Esma-Masafi 2.95 216 ePn Pn 08 08 51.7 +2.6
CHBR Chabahar 3.07 135 ePn Pn 08 08 54.2 +3.6
CHBR Chabahar 3.07 135 ePn Pn 08 08 54.2 +3.6
UMQ Umm Al-Quwin 3.11 224 ePn Pn 08 08 55.1 +3.9
UOSS Minazif 3.28 211 i P Pn 08 08 54.2 +0.7
SNR=15
UOSS Minazif 3.28 211 Pn 08 08 54.6 +1.0
UOSS Sn Sn 08 09 31.0 -0.3
UOSS Minazif 3.28 211 eP Pn 08 08 55.2 +1.6
UOSS Minazif 3.28 211 ePn Pn 08 08 54.8 +1.2
HATD Hatta, Dubai 3.42 211 i P Pn 08 08 57.0 +1.5
SNR=12
HATD Hatta, Dubai 3.42 211 P Pn 08 08 58.1 +2.6
HATD Hatta, Dubai 3.42 211 ePn Pn 08 08 57.5 +2.1
NAZ Nazwa, Dubai 3.52 218 i P Pn 08 08 57.5 +0.7
SNR=9.6
NAZ Nazwa, Dubai 3.52 218 P Pn 08 09 00.5 +3.7
SNR=9.7
NAZ S Sn 08 09 41.6 +4.4
NAZ Nazwa, Dubai 3.52 218 ePn Pn 08 09 00.1 +3.3
ASHO Ashiyah 3.57 211 P Pn 08 09 00.0 +2.4
ASHO Ashiyah 3.57 211 P Pn 08 09 02.0 +4.4
SNR=29
ASHO S Sn 08 09 43.5 +4.9
FAQ Al Faqa, Dubai 3.75 217 i P Pn 08 09 00.7 +0.7
SNR=5.0
FAQ Al Faqa, Dubai 3.75 217 P Pn 08 09 03.6 +3.6
SNR=5.1
FAQ S Sn 08 09 45.1 +2.2
FAQ Al Faqa, Dubai 3.75 217 ePn Pn 08 09 03.5 +3.5
SOHO SOHO 3.88 201 P Pn 08 09 03.3 +1.4
SNR=12
NHDN Nehbandan 3.99 25 ePn Pn 08 09 06.2 +2.8
AJN Ajban 4.23 222 ePn Pn 08 09 09.6 +3.0
HOQ Hoqain 4.24 189 P Pn 08 09 09.0 +2.3
SNR=18
BIDO Bidbid 4.24 179 P Pn 08 09 09.8 +3.1
BIDO S Sn 08 09 56.2 +1.2
ALNE Al Ain 4.25 210 ePn Pn 08 09 10.7 +3.8
BSRN Basiran 4.27 12 ePn Pn 08 09 09.2 +1.9
BSRN Basiran 4.27 12 ePn Pn 08 09 09.2 +1.9
IBAF Bafgh 4.38 331 ePn Pn 08 09 11.2 +2.5
WSAR Wadi Sarin 4.55 173 P Pn 08 09 14.0 +3.0
comp=E,4.7nm,0.3s,baz=344,slow=8.4,SNR=98
WSAR S Sn 08 10 02.4 -0.2
comp=E,27nm,0.3s,baz=197,slow=19,SNR=17
WSAR LR LR 08 11 31.0
comp=E,34nm,19.0s,baz=146,slow=44
ARQ Araqi 4.64 198 P Pn 08 09 16.3 +4.0
SNR=29
ARQ S Sn 08 10 08.5 +3.7
IKOO Kooshah 4.70 10 ePn Pn 08 09 15.8 +2.6
SMDO Samad 4.70 180 P Pn 08 09 17.4 +4.3
SNR=5.4
BSY Bisya 5.08 189 P Pn 08 09 23.8 +5.6
BSY S Sn 08 10 18.8 +3.3
GHB Gharebagh 5.12 289 ePn Pn 08 09 20.3 +1.3
ITEG Tejag 5.13 6 ePn Pn 08 09 21.5 +2.4
WBK Wadi Bani Khal 5.21 171 P Pn 08 09 23.0 +2.9
SNR=31
TPRV Parvadeh(Tabas 5.37 347 ePn Pn 08 09 23.3 +1.1
JMDO Jabal Madar 5.39 180 S Sn 08 10 25.7 +2.5
YZKH Yazd 5.49 328 ePn Pn 08 09 26.0 +2.0
YZKH Yazd 5.49 328 ePn Pn 08 09 26.0 +2.0
IMON Monand 5.57 14 ePn Pn 08 09 28.3 +3.2
ISAD Sadrabad 5.61 318 ePn Pn 08 09 26.5 +0.8
IKAZ Kazeroun 5.82 291 ePn Pn 08 09 28.7 +0.1
TKDS Koohdasht(Taba 5.87 352 ePn Pn 08 09 32.2 +3.0
TABS Tabas 5.91 352 ePn Pn 08 09 31.3 +1.6
TABS Tabas 5.91 352 ePn Pn 08 09 31.3 +1.6
GHWR Ruwais 6.03 232 ePn Pn 08 09 31.5 +0.3
SHRT Shahrakht 6.15 18 eP Pn 08 09 35.3 +2.3
SHRT Shahrakht 6.15 18 ePn Pn 08 09 35.3 +2.3
TNSJ Nastanj 6.29 349 ePn Pn 08 09 37.9 +3.0
IRAM Ramesheh 6.37 310 ePn Pn 08 09 36.1 0.0
KLNJ Kolanjah 6.50 301 ePn Pn 08 09 38.8 +0.8
ROKH ROKH 7.60 308 ePn Pn 08 09 53.0 0.0
KHMZ Khomeyn 9.16 312 ePn Pn 08 10 15.8 +1.5
KHMZ Khomeyn 9.16 312 ePn Pn 08 10 15.8 +1.5
ASAO Ashtian 9.64 316 ePn Pn 08 10 22.8 +1.9
ASAO Ashtian 9.64 316 ePn Pn 08 10 22.8 +1.9
GEYT Alibeck 10.12 0 P Pn 08 10 28.1 +0.8
comp=E,0.3nm,0.3s,baz=161,slow=14,SNR=3.1
RAYN Ar Rayn 12.10 252 Pn 08 10 50.7 -3.7
THW Thamme Wali 12.83 64 P Pn 08 11 06.1 +1.8
CEP Cherat 13.33 60 P Pn 08 11 14.5 +3.2
NIL Nilore 14.31 62 ePn Pn 08 11 26.3 +1.9
ASF Jabal al Asfar 18.85 289 P P 08 12 20.2 -0.4
comp=E,0.2nm,0.3s,baz=12,slow=9.3,SNR=2.7
AAK Ala-Archa 19.94 38 P P 08 12 32.0 -0.5
baz=234,slow=22,SNR=5.9
AAK LR LR 08 21 04.9
comp=E,41nm,19.5s,baz=6.0,slow=39
KBZ Khabaz 20.07 326 P P 08 12 34.6 +1.0
comp=E,1.5nm,0.9s,baz=118,slow=17,SNR=2.4
MMAI Mount Meron Ar 20.22 290 P P 08 12 36.6 +1.0
comp=E,1.1nm,0.3s,baz=114,slow=9.6,SNR=3.3
MMAI LR LR 08 22 21.3
comp=E,43nm,18.3s,baz=150,slow=42
EIL Elat 20.36 281 P P 08 12 37.0 +0.1
comp=E,14nm,0.9s,baz=4.5,slow=2.9,SNR=6.3
EIL LR LR 08 22 20.6
comp=E,22nm,19.1s,baz=110,slow=42
ABKAR Akbulak array 21.49 3 P P 08 12 48.2 -0.8
ABKAR IAmb IAmb 08 12 51.2
comp=Z,2.6nm,0.8s
AKTO Aktyubinsk 22.62 360 P P 08 12 59.6 -1.5
comp=Z,1.1nm,0.4s,baz=174,slow=11,SNR=5.2
BRTR Keskin Array B 23.47 307 P P 08 13 08.4 -1.4
comp=Z,1.0nm,0.4s,baz=128,slow=11,SNR=6.3
BRTR LR LR 08 23 55.4
comp=Z,28nm,18.4s,baz=3.5,slow=40
BVAR Borovoye Array 26.83 17 P P 08 13 38.5 -1.6
comp=Z,0.7nm,0.5s,baz=188,slow=9.5,SNR=5.7
MKAR Makanchi Array 26.87 39 P P 08 13 39.1 -1.5
comp=Z,0.3nm,0.5s,baz=230,slow=8.0,SNR=1.9
KURK Kurchatov 27.71 29 P P 08 13 42.8 -5.3
KURK IAmb IAmb 08 13 57.1
comp=Z,3.4nm,0.7s
IDI Anoyia 29.15 293 P P 08 14 00.2 -0.9
comp=Z,6.6nm,0.9s,baz=17,slow=11,SNR=4.0
AKASG Malin Array Be 31.64 324 P P 08 14 20.2 -2.6
comp=Z,0.9nm,0.3s,baz=121,slow=8.1,SNR=5.0
ZALV Zalesovo Beam 32.69 30 P P 08 14 30.4 -1.6
comp=Z,1.0nm,0.3s,baz=224,slow=8.1,SNR=5.8
VYHS Vyhne 36.61 315 eP P 08 15 05.1 -0.8
FINES FINESS Array B 39.85 337 P P 08 15 31.5 -1.5
comp=Z,2.3nm,0.5s,baz=127,slow=11,SNR=12
GERES GERESS Array B 39.96 314 P P 08 15 32.6 -1.6
comp=Z,0.7nm,0.6s,baz=119,slow=11,SNR=5.2
SONM Songino Array 42.31 48 LR LR 08 35 32.0
comp=Z,50nm,18.7s,baz=73,slow=39
NOA NORSAR Array B 45.58 330 P P 08 16 17.1 -2.4
comp=Z,0.7nm,0.5s,baz=115,slow=7.9,SNR=4.3
ARCES ARCESS Array B 45.84 345 P P 08 16 20.0 -1.4
comp=Z,1.7nm,0.8s,baz=146,slow=8.7,SNR=12
TORD Torodi Ar. Bea 54.35 266 P P 08 17 25.5 -1.1
comp=Z,4.2nm,0.4s,baz=64,slow=7.3,SNR=53
ILAR Eielson Array 85.72 10 P P 08 20 36.1 -1.9
comp=Z,0.4nm,0.8s,baz=310,slow=4.2,SNR=4.2
YKA Yellowknife Ar 89.85 357 P P 08 20 56.2 -1.5
comp=Z,0.3nm,0.7s,baz=5.2,slow=5.5,SNR=9.8

KRAR 26 08:14:23.4±0.1, 53°.79N×87°.95E, M2.4, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)
NNC 26 08:14:22.2±1.6, 53°.57N×87°.90E, h0km, mb3.7, mpv3.3, 7C-5D, Error ellipse: s-maj=13.8km s-min=6.1km az=57.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.87	283	⇑Pn	Pn	08 14 54.9	-0.5
	1.5nm,0.5s						
ZAA0				⇓Sn	Sb	08 15 20.8	-0.3
	3.3nm,0.5s						
KURK	Kurchatov	6.39	247	⇑Pn	Pn	08 15 57.8	+0.4
	4.2nm,1.0s						
KURK				⇑Lg	Lg	08 17 44.1	
	8.5nm,1.2s						
KURBB	Kurchatov Arra	6.48	247	⇓Pn	Pn	08 15 58.4	-0.4
	5.1nm,0.4s						
KURBB				⇑Lg	Lg	08 17 48.4	
	4.3nm,0.4s						
MK31	Makanchi Array	7.67	210	⇑Pn	Pn	08 16 16.0	+0.8
	0.8nm,0.5s,baz=30,slow=13,SNR=21						
MK31				⇑Sn	Sn	08 17 44.0	+1.3
	1.3nm,0.8s						
MK31				⇓Lg	Lg	08 18 21.7	
	3.6nm,0.9s,baz=31,slow=30,SNR=4.7						
MAKZ	Makanchi	7.76	212	⇓Pn	Pn	08 16 18.0	+1.7
	1.3nm,0.6s						
MAKZ				⇑Sn	Sn	08 17 45.3	+0.5
	1.1nm,0.7s						
MAKZ				⇓Lg	Lg	08 18 27.5	
	3.0nm,0.9s						

NNC 26 09:00:23.8±6.3, 54°.19N×86°.25E, h0km, mb3.5, mpv2.8, 6C-6D, Error ellipse: s-maj=65.3km s-min=28.0km az=0.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	0.88	254	⇑P	Pg	09 00 40.5	-0.1
	0.2nm,0.3s						
ZAA0				⇑S	Sg	09 00 52.9	+0.9
	1.3nm,0.5s						
KURK	Kurchatov	5.82	236	⇓Pn	Pn	09 01 54.3	+3.0
	1.5nm,0.8s						
KURK				⇓Lg	Lg	09 03 31.4	
	2.8nm,0.9s						
KURBB	Kurchatov Arra	5.92	236	⇓Pn	Pn	09 01 55.5	+2.8
	0.9nm,0.3s						
KURBB				⇑Lg	Lg	09 03 34.9	
	4.0nm,0.7s						
MK31	Makanchi Array	7.83	200	⇑Pn	Pn	09 02 19.2	+0.3
	0.3nm,0.4s,baz=26,slow=13,SNR=23						
MK31				⇓Sn	Sn	09 03 51.2	+3.1
	0.5nm,0.7s,baz=27,slow=19						
MK31				⇓Lg	Lg	09 04 33.3	
	0.9nm,0.8s,baz=33,slow=32						
MAKZ	Makanchi	7.88	202	⇓Pn	Pn	09 02 22.5	+2.9
	1.5nm,0.8s						
MAKZ				⇑Sn	Sn	09 03 50.8	+1.4
	1.1nm,1.0s						
MAKZ				⇑Lg	Lg	09 04 34.7	
	0.9nm,0.9s						

IDC 26 09:00:33.1±3.1, 64°.58N×31°.62E, h0km, mb1 3.1/4, mb1mx2.9/53, mbtmp3.0/4, ML2.1/4, Error ellipse: s-maj=42.0km s-min=9.5km az=106.0
MOS 26 09:00:34.4, 64°.76N×30°.90E, M2.0, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)
HEL 26 09:00:35.5±0.2, 64°.71N×30°.73E, h0km, ML2.0, Explosion
UPP 26 09:00:36.2±3.0, 64°.50N×30°.72E, h0km, ML1.5, Suspected explosion
ISC 26 09:00:35.4±1.4, 64°.69N±0°.03×30°.96E±0°.07, h0km, n30, σ1°.68/40, Finland-Karelia border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KU6 Riekki 1.41 342 PG Pn 09 00 59.9 -2.4
baz=168
KU6 MSG 09 01 16.7
comp=Z,8.3nm,0.2s
KU6 SN Sg 09 01 19.6 -1.1
JOF Joensuu 1.79 175 PB Pn 09 01 06.7 -0.8
JOF SB Sb 09 01 31.3 -0.7
OUL Oulu 2.20 283 PG Pn 09 01 12.4 -0.7
baz=97
OUL SG Sn 09 01 39.0 -1.9
OUF Merijarvi 2.71 266 PN Pn 09 01 19.2 -0.9
baz=81
OUF MSG 09 01 52.7
comp=Z,7.6nm,0.2s
OUF SB Sn 09 01 54.2 +0.5
OBF0 Syolatti, Pyha 2.91 269 PG Pb 09 01 28.2 +0.2
OBF0 SG Sb 09 02 02.9 -1.2
SUF Sumiainen 2.92 229 PN Pn 09 01 23.4 +0.4
SUF MSG 09 01 59.5
comp=Z,4.9nm,0.2s
SUF SB Sb 09 02 02.5 -1.9
TOF Tornio 3.11 300 MSG 09 02 04.1
comp=Z,3.7nm,0.2s
TOF SG Sb 09 02 07.8 -2.0
SGF Sodankyl 3.30 329 SG Sb 09 02 15.1 -0.3
KAF Kangasniemi 3.33 221 PN Pn 09 01 30.4 +1.8
FIA0 FINESS Array S 3.95 216 PN Pn 09 01 37.8 +0.7
FINES FINESS Array B 3.95 216 Pn Pn 09 01 35.5 -1.7
comp=Z,0.1nm,0.3s,baz=33,slow=16,SNR=4.0
FINES Sn Sn 09 02 25.5 +1.4
comp=Z,0.5nm,0.3s,baz=43,slow=23,SNR=7.6
FINES Lg Lg 09 02 35.5
comp=Z,0.5nm,0.3s,baz=24,slow=30,SNR=6.6
PAJU Pajala 3.98 309 P Pn 09 01 37.8 +0.1
VAF Ylistaro 4.03 249 PN Pn 09 01 39.5 +1.3
baz=58
SJUU Sjulsmark 4.04 286 P Pn 09 01 37.7 -0.7
SJUU S Sn 09 02 28.8 +2.4
ERTU Ertsjaerv 4.09 301 P Pn 09 01 39.7 +0.6
ERTU Ertsjaerv 4.09 301 PN Pn 09 01 40.1 +1.0
BURU Burvik 4.13 273 PG Pb 09 01 50.5 +1.7
HARU Harads 4.42 294 P Pn 09 01 43.6 -0.1
UMAU Umeaa 4.55 264 PN Pn 09 01 45.6 +0.2
UMAU SG Sb 09 02 54.0 +2.6
MASU Masugnsbyn 4.58 311 P Pn 09 01 47.9 +1.9
HEF Hetta 4.73 325 SG Sb 09 02 59.8 +3.2
LILU Lilltraesk 4.76 282 P Pn 09 01 46.6 -1.7
SVAU Svanoeiden 4.91 273 P Pn 09 01 48.7 -1.6
LANU Lannavaara 4.94 317 P Pn 09 01 50.5 -0.2
ARCES ARCESS Array B 5.31 339 Pn Pn 09 01 53.2 -2.6
comp=Z,0.2nm,0.3s,baz=151,slow=13,SNR=12
ARCES Sn Sn 09 02 54.9 -2.6
comp=Z,0.5nm,0.3s,baz=156,slow=25,SNR=3.3
ARCES Lg Lg 09 03 18.4
comp=Z,0.7nm,0.3s,baz=160,slow=29,SNR=6.6
KUA Kurravaara 5.39 312 P Pn 09 01 59.9 +3.0
KOVU Salmi 5.59 314 P Pn 09 01 59.9 +0.1
NOD Norderasen 7.17 267 P Pn 09 02 21.0 -0.4
HFS Hagfors 9.21 248 Pn Pn 09 02 46.9 -2.3
comp=Z,0.1nm,0.3s,baz=46,slow=11,SNR=2.7
NOA NORSAR Array B 9.72 257 Pn Pn 09 02 53.8 -2.5
comp=Z,0.0nm,0.3s,baz=68,slow=13,SNR=2.6

NIED 26 09:29:00, 44°.80N×149°.30E, h59km, Mw3.7 Best double couple: M0 3.81000×10^14 NP1:φs53.00000°, δ84.00000°, λ107.00000°. NP2:φs161.00000°, δ18.00000°, λ19.00000°.
SKHL 26 09:29:02.7±0.6, 44°.62N×149°.61E, h44km±5km, mb4.1/4
JMA 26 09:29:04.4±1.1, 44°.84N×149°.32E, h30km, M3.7
ISC 26 09:29:03.8±4.2, 44°.6N±0°.1×149°.5E±0°.2, h36km, n20, σ1°.62/29, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KUR Kuril'sk 1.29 298 i P Pn 09 29 24.6 -0.7
KUR AMB AMB 09 29 25.0
30nm,0.3s
KUR i S Sn 09 29 39.6 -1.7
KUR A A 09 29 40.0
280nm,0.2s
KUR A A 09 29 40.0
540nm,0.2s
YUK Yuzh-Kuril'sk 2.67 258 eP Pn 09 29 44.8 +0.6
YUK AMB AMB 09 29 48.0
40nm,0.4s
YUK i S Sn 09 30 15.9 +0.6
YUK A A 09 30 19.0
150nm,0.4s
YUK A A 09 30 19.0
190nm,0.4s
GRPR Tuman 2.74 258 eP Pn 09 29 45.2 0.0
GRPR AMB AMB 09 29 50.0
30nm,0.3s
GRPR i S Sn 09 30 17.0 -0.1
GRPR A A 09 30 20.0
120nm,0.3s
GRPR A A 09 30 20.0
160nm,0.3s
NEM2 Nemuro 2 2.99 246 P Pn 09 29 47.6 -1.0
NEM2 eS Sn 09 30 20.0 -3.1
GLVR Golovnino 2.99 254 eP Pn 09 29 49.0 +0.4
GLVR AMB AMB 09 29 52.0
30nm,0.3s
GLVR i S Sn 09 30 24.1 +0.9
GLVR A A 09 30 32.0
150nm,0.4s
GLVR A A 09 30 32.0
120nm,0.4s
NMR Nemuro--Hokkai 2.99 246 eP Pn 09 29 47.8 -0.9
NMR i S Sn 09 30 22.2 -1.1
JRA Rausu 3.21 259 P Pn 09 29 53.7 +2.1
JRA eS Sn 09 30 30.6 +2.0
JNK Nakash 3.59 255 P Pn 09 29 57.9 +1.0
JAK Akkeshi 3.84 246 P Pn 09 30 00.6 +0.4
JTKR Abashiri--Toko 4.06 262 P Pn 09 30 04.9 +1.6
JAR Ashorobuto 4.34 254 P Pn 09 30 09.1 +1.9
JAR eS Sn 09 30 55.9 -0.6
JOB Onbets 4.45 249 P Pn 09 30 09.4 +0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JOB				eS	Sn	09 30 58.2	-0.9
JCH	Churui	4.88	248	P	Pn	09 30 16.4	+1.8
JCH				eS	Sn	09 31 08.7	-1.2
JKK2	Kamakama 2	4.90	263	P	Pn	09 30 18.7	+3.8
JEM	Erimo	5.31	243	P	Pn	09 30 23.0	+2.5
JNBK	Urakawa-nobuka	5.44	247	P	Pn	09 30 22.9	+0.6
JBT2	Biratori 2	5.49	253	P	Pn	09 30 25.1	+2.2
JNB	Noboribetsu	6.51	253	P	Pn	09 30 38.9	+1.9
JKB	Kayabe	6.76	249	P	Pn	09 30 41.0	+0.7
JKB				eS	Sn	09 31 51.8	-4.2
JYM2	Yakumo 2	7.10	252	P	Pn	09 30 46.8	+1.7

IDC 26 09:55:41.4±1.1, 26°.68S×114°.15W, h0km, mb4.2/10, mb1 4.5/10, mb1mx4.3/26, mbtmp4.2/10, MS4.1/14, Ms1 4.0/14, ms1mx4.0/18, Error ellipse: s-maj=36.8km s-min=23.6km az=46.0

NEIC 26 09:55:42.9±1.1, 26°.8S±0°.1×114°.18W±0°.07, h10km±1km, mb4.8/122, Error ellipse: s-maj=20.0km s-min=9.6km az=160.0

BJI 26 09:55:45.0±0.0, 26°.70S×114°.20W, h10km, mB5.4/9, Ms5.1/4, Ms7 4.8/3

GCMT 26 09:55:45.8±0.2, 26°.94S±0°.02×114°.19W±0°.02, h12km±1km, MW4.8/103, Moment Tensor Solution. s31,c39; s103,c145; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.99±.11; $M_{\theta\theta}$-0.03±.09; $M_{\phi\phi}$1.02±.09; $M_{r\theta}$-0.22±.22; $M_{\theta\phi}$-1.96±.06; $M_{\phi r}$0.36±.20; Best double couple: $M_0$2.05500×10^{16} NP1:ϕ_s277.00000°, δ82.00000°, λ179.00000°. NP2:ϕ_s7.00000°, δ89.00000°, λ8.00000°. Principal axes: T 2.5760, Plg7.0000°, Azm233.0000°; N -1.0380, Plg82.0000°, Azm17.0000°; P -1.5340, Plg5.0000°, Azm142.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 26 09:55:43.6±0.5, 26°.7S±0°.1×114°.17W±0°.07, h10km, n255, σ0.s90/239, mb4.8/60, MS4.1/21, 1C, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	4.34	97	Pn	Pn	09 56 48.5	-1.2
PTCN	Pitcairn Islan	14.42	273	Pn	Pn	09 59 07.5	-0.5
TAOE	Nuku Hiva Isla	30.33	301	eLR	LR	10 09 43.7	
	comp=Z,680nm,24.7s						
TAOE	Nuku Hiva Isla	30.33	301	P	P	10 01 55.6	0.0
TBI	Tubuai	32.09	268	eLQ	LQ	10 09 04.6	
	512nm,31.5s						
TBI				eLR	LR	10 10 22.1	
	comp=Z,473nm,28.5s						
TBI	Tubuai	32.09	268	eT	T	10 35 35.6	
	26nm,0.2s						
PPT2	Papeete2	33.93	278	eS	S	10 07 51.0	-1.2
	56nm,29.0s						
PPT2				eLR	LR	10 11 15.3	
	comp=Z,604nm,24.2s,baz=104						
PPT	Papeete	33.94	278	LR	LR	10 12 25.4	
	comp=Z,208nm,20.0s,baz=106,slow=30						
PLCA	Paso Flores	38.51	123	P	P	10 03 06.0	-0.2
	6.5nm,1.0s,baz=294,slow=7.4,SNR=9.0						
PLCA				LR	LR	10 14 52.5	
	comp=Z,226nm,20.3s,baz=288,slow=30						
PLCA	Paso Flores	38.51	123	P	P	10 03 05.3	-0.9
PLCA				IAmb	IAmb	10 03 10.6	
	comp=Z,36nm,1.4s						
ATAH	Atahualpa	39.16	67	P	P	10 03 10.9	-1.4
	comp=Z,4.3nm,0.8s,baz=243,slow=11,SNR=2.1						
GO02	Mina Guanaco	39.97	98	P	P	10 03 19.7	+0.8
LVC	Limon Verde	41.18	94	P	P	10 03 29.0	0.0
OTAV	Otavalo	43.57	58	P	P	10 03 47.9	-0.7
LPAZ	La Paz	43.87	86	P	P	10 03 49.9	-1.3
	comp=Z,3.1nm,0.9s,baz=268,slow=9.2,SNR=5.3						
LPAZ				LR	LR	10 18 02.0	
	comp=Z,200nm,21.1s,baz=248,slow=31						
LPAZ	La Paz	43.87	86	P	P	10 03 50.3	-0.9
ACON	Acoyapa	47.65	40	P	P	10 04 20.6	+0.3
CCIG	Comitan	47.78	29	P	P	10 04 21.4	0.0
CCIG				IAmb	IAmb	10 04 32.9	
	comp=Z,6.9nm,1.0s						
MOIG	Morelia	47.78	17	P	P	10 04 21.4	0.0
TGUH	Tegucigalpa,Un	48.21	36	P	P	10 04 25.4	+0.7
ROSC	El Rosal	49.69	57	LR	LR	10 20 54.7	
	comp=Z,335nm,20.7s,baz=208,slow=30						
CPUP	Villa Florida	50.49	103	LR	LR	10 22 08.1	
	comp=Z,174nm,20.8s,baz=260,slow=31						
RUSC	La Rusia	51.30	57	P	P	10 04 48.9	+0.1
NIUE	Niue	51.59	266	P	P	10 04 48.8	-1.6
SDV	Santo Domingo	55.09	56	P	P	10 05 15.1	-1.2
SDV				IAmb	IAmb	10 05 25.1	
	comp=Z,13nm,1.4s						
HSIG		55.48	3	P	P	10 05 19.8	+1.2
HSIG				IAmb	IAmb	10 05 19.8	
	comp=Z,11nm,1.4s						
833A	Chaparral WMA,	56.51	16	P	P	10 05 26.9	+0.9
833A				IAmb	IAmb	10 05 30.5	
	comp=Z,9.3nm,0.9s						
833A	Chaparral WMA,	56.51	16	P	P	10 05 26.3	+0.3
	baz=196						
TX31	Lajitas Ar. Si	56.61	11	P	P	10 05 28.0	+1.2
TX32	Lajitas Array	56.61	11	P	P	10 05 28.0	+1.2
TXAR	Lajitas Array	56.61	11	P	P	10 05 26.6	-0.2
	comp=Z,0.8nm,0.8s,baz=185,slow=9.0,SNR=6.9						
TXAR				LR	LR	10 25 19.7	
	comp=Z,84nm,18.4s,baz=0.0,slow=31						
214A	Organ Pipe Nat	58.33	1	P	P	10 05 39.5	+0.7
214A				IAmb	IAmb	10 05 41.0	
	comp=Z,9.5nm,1.2s						
214A	Organ Pipe Nat	58.33	1	P	P	10 05 39.5	+0.7
	baz=181,SNR=5.1						
JCT	Junction City	58.48	15	P	P	10 05 40.1	+0.2
JCT	Junction City	58.48	15	P	P	10 05 40.4	+0.5
	baz=195,SNR=7.0						
MNTX	Cornudas Mount	58.66	9	P	P	10 05 41.5	+0.4
MNTX	Cornudas Mount	58.66	9	P	P	10 05 41.2	0.0
	baz=189						
TUC	Tucson	58.76	3	P	P	10 05 42.1	+0.3
TUC	Tucson	58.76	3	P	P	10 05 42.6	+0.7
	baz=184						
HKT	Hockley	58.99	19	P	P	10 05 43.9	+0.6
IKP	In-Ko-Pah, Jac	59.04	358	P	P	10 05 44.6	+0.8
	baz=178						
BAR	Barrett	59.09	358	P	P	10 05 44.4	+0.3
BAR				IAmb	IAmb	10 05 45.9	
	comp=Z,13nm,1.4s						
113A	Mohawk Valley,	59.13	0	P	P	10 05 45.5	+1.2
113A				IAmb	IAmb	10 05 46.3	
	comp=Z,7.1nm,0.9s						
121A	Cookes Peak, D	59.20	6	P	P	10 05 45.5	+0.4
121A				IAmb	IAmb	10 05 47.1	
	comp=Z,12nm,1.1s						
121A	Cookes Peak, D	59.20	6	P	P	10 05 45.9	+0.8
	baz=187,SNR=7.0						
SNZO	South Karori	59.21	236	P	P	10 05 44.8	-0.2
MONP2	Monument Peak	59.29	358	P	P	10 05 46.7	+1.0
	baz=178						
435B	Jarrell	59.31	17	P	P	10 05 46.0	+0.4
435B	Jarrell	59.31	17	P	P	10 05 46.3	+0.7
	baz=197						
SNCC	San Nicolas Is	59.82	355	P	P	10 05 50.1	+1.0
	baz=174						
PFO	Pinyon Flats O	60.01	358	P	P	10 05 51.7	+1.1
BC3	Big Chuckawall	60.02	359	P	P	10 05 51.7	+1.1
	baz=179						
MURC	Murrieta	60.02	357	P	P	10 05 51.5	+1.0
	baz=177						
Y12C	Blythe	60.11	360	P	P	10 05 52.0	+0.9
Y12C				IAmb	IAmb	10 05 53.1	
	comp=Z,7.7nm,0.9s						
Y12C	Blythe	60.11	360	P	P	10 05 52.4	+1.3
	baz=180						
Y14A	Wickenburg	60.30	1	P	P	10 05 53.6	+1.2
BELC	Belle Mtn. Jos	60.38	358	P	P	10 05 53.9	+0.8
	baz=178,SNR=6.3						
WHTX	Lake Whitney,	60.49	16	P	P	10 05 55.1	+1.4
	baz=197						
IRM	Iron Mountain	60.52	359	P	P	10 05 55.0	+1.1
	baz=179,SNR=5.6						
SCZ2	Santa Cruz Isl	60.57	355	P	P	10 05 56.5	+2.2
	baz=174						
ABTX	Abilene, Hawle	60.58	14	P	P	10 05 54.8	+0.4
ABTX				IAmb	IAmb	10 06 00.5	
	comp=Z,11nm,1.1s						
ABTX	Abilene, Hawle	60.58	14	P	P	10 05 55.5	+1.1
	baz=195						
PASC	Pasadena Art C	60.65	356	P	P	10 05 54.0	-0.8
PASC				IAmb	IAmb	10 06 05.1	
	comp=Z,5.6nm,1.0s						
PDMCI	Parker Dam,Lak	60.66	0	P	P	10 05 55.9	+1.0
	baz=180						
BFSC	Mount Baldy Ra	60.68	357	P	P	10 05 56.1	+0.9
	baz=176						
X16A	Lo Mia Camp, P	60.83	3	P	P	10 05 56.4	+0.1
X18A	Snowflake	61.02	4	P	P	10 05 58.0	+0.5
X18A				IAmb	IAmb	10 05 59.5	
	comp=Z,7.6nm,0.8s						
NATX	Nacogdoches	61.03	19	P	P	10 05 58.6	+1.3
GMRC	Granite Mounta	61.15	359	P	P	10 05 59.3	+0.9
	baz=178,SNR=6.8						
MSTX	Muleshoe	61.29	11	P	P	10 05 59.0	-0.2
MSTX				IAmb	IAmb	10 05 59.8	
	comp=Z,8.2nm,0.9s						
MSTX	Muleshoe	61.29	11	P	P	10 05 58.9	-0.4
	baz=192,SNR=5.2						
EDW2	Edwards Air Fo	61.34	356	P	P	10 05 59.8	+0.2
	baz=176						
W13A	Hualapai Mount	61.45	0	P	P	10 06 00.9	+0.4
W18A	Petrified Fore	61.61	4	P	P	10 06 02.1	+0.6
W18A				IAmb	IAmb	10 06 12.7	
	comp=Z,6.8nm,1.1s						
W18A	Petrified Fore	61.61	4	P	P	10 06 01.9	+0.4
	baz=184						
GSC	Goldstone, Bar	61.70	358	P	P	10 06 02.6	+0.6
GSC				IAmb	IAmb	10 06 03.4	
	comp=Z,6.4nm,1.0s						
GSC	Goldstone, Bar	61.70	358	P	P	10 06 02.6	+0.6
	baz=177,SNR=5.4						
ANMO	Albuquerque	61.73	7	P	P	10 06 02.2	-0.1
	baz=188						
SMMC	Simmler	61.91	355	P	P	10 06 04.0	+0.6
	baz=174						
WUAZ	Wupatki	61.92	3	P	P	10 06 04.1	+0.5
WUAZ				IAmb	IAmb	10 06 05.7	
	comp=Z,6.3nm,1.1s						
WUAZ	Wupatki	61.92	3	P	P	10 06 04.5	+0.9
	baz=183						
BDFB	Brasilia	62.09	94	LR	LR	10 30 15.9	
	comp=Z,131nm,18.4s,baz=296,slow=33						
ISA	Isabella, Lake	62.15	356	P	P	10 06 04.9	-0.1
ISA				IAmb	IAmb	10 06 07.6	
	comp=Z,6.8nm,1.2s						
ISA	Isabella, Lake	62.15	356	P	P	10 06 05.5	+0.6
	baz=176						
SHOC	Shoshone, Teco	62.28	358	P	P	10 06 06.5	+0.7
	baz=178,SNR=5.6						
AMTX	Amarillo	62.37	12	P	P	10 06 06.7	+0.2
AMTX				IAmb	IAmb	10 06 07.2	
	comp=Z,7.4nm,0.8s						
AMTX	Amarillo	62.37	12	P	P	10 06 06.4	-0.1
	baz=192						
MPMC	Manual Prospec	62.49	357	P	P	10 06 07.9	+0.5
	baz=177,SNR=6.0						
U15A	North Rim	62.80	2	P	P	10 06 09.6	0.0
U15A				IAmb	IAmb	10 06 11.7	
	comp=Z,8.8nm,1.1s						
VNDA	Vanda	62.84	194	LR	LR	10 27 56.2	
	comp=Z,125nm,19.0s,baz=92,slow=31						
SHPR	Sheep Range	62.86	359	P	P	10 06 10.2	+0.4
FURC	Furnace Creek,	62.87	358	P	P	10 06 10.5	+0.9
	baz=177						
CWC	Cottonwood Cre	62.90	356	P	P	10 06 10.3	+0.2
	baz=176						
TPNV	Topopah Spring	63.33	358	P	P	10 06 13.7	+0.8
TPNV	Topopah Spring	63.33	358	P	P	10 06 13.8	+0.8
	baz=178						
KNB	Kanab	63.38	1	P	P	10 06 13.2	-0.1
GRAC	Grapevine Rang	63.42	357	P	P	10 06 14.1	+0.8
	baz=177						
MVCO	Mesa Verde	63.78	5	P	P	10 06 15.6	-0.4
MVCO	Mesa Verde	63.78	5	P	P	10 06 16.3	+0.3
	baz=186						
CCUT	Cedar City	63.90	1	P	P	10 06 17.0	+0.2
MIAR	Mount Ida	63.95	19	P	P	10 06 17.1	+0.2
	baz=200						
SZCU	Shurtz Canyon	63.95	1	P	P	10 06 17.6	+0.5
T25A	Trinidad	64.15	9	P	P	10 06 19.0	+0.6
	baz=190						
S22A	4UR Ranch, Cre	64.46	6	P	P	10 06 20.5	0.0
S22A				IAmb	IAmb	10 06 22.1	
	comp=Z,6.2nm,1.2s						
S22A	4UR Ranch, Cre	64.46	6	P	P	10 06 20.9	+0.3
	baz=187						
W39A	Magazine	64.50	18	P	P	10 06 20.1	-0.4
	baz=200						
SDCO	Great Sand Dun	64.61	8	P	P	10 06 21.6	+0.1
SDCO	Great Sand Dun	64.61	8	P	P	10 06 21.6	+0.1
	baz=188						
TUL1	Leonard	64.64	16	P	P	10 06 20.9	-0.5
TUL1				IAmb	IAmb	10 06 36.9	
	comp=Z,6.5nm,0.9s						
TUL1	Leonard	64.64	16	P	P	10 06 21.9	+0.5
	baz=198						
CMB	Columbia Colle	64.64	355	P	P	10 06 21.9	+0.5
R11A	Troy Canyon, C	64.71	359	P	P	10 06 22.1	+0.1
R11A	Troy Canyon, C	64.71	359	P	P	10 06 22.8	+0.8
	baz=179						
X43A	Marvell	64.75	21	P	P	10 06 22.6	+0.5
	baz=203						
TIGA	Tifton	64.76	29	P	P	10 06 22.6	+0.3
	baz=210						
LRAL	Lakeview Retre	64.77	25	P	P	10 06 22.6	+0.3
	baz=207						
PSUT	Pine Spring	64.88	0	P	P	10 06 24.2	+1.0
MSU	Marysvale	64.89	2	P	P	10 06 23.5	+0.3
NV11	Mina Array Sit	64.89	357	P	P	10 06 23.6	+0.5
NV11				IAmb	IAmb	10 06 25.1	
	comp=Z,7.8nm,1.1s						
NVAR	Mina Array Bea	64.89	356	P	P	10 06 24.0	+0.7
	comp=Z,4.0nm,0.8s,baz=184,slow=9.7,SNR=29						
NVAR				LR	LR	10 28 40.2	
	comp=Z,60nm,18.9s,baz=225,slow=30						
W41B	Gary Mavity, V	64.93	20	P	P	10 06 23.8	+0.5
	baz=202						
WAKR	Walker	65.04	355	P	P	10 06 24.2	0.0
RYN	Ryan	65.10	356	P	P	10 06 25.3	+0.7
RYN				IAmb	IAmb	10 06 26.7	
	comp=Z,7.2nm,1.4s						
Q16A	Castle Valley	65.32	3	P	P	10 06 25.8	-0.3
HHAR	Hobbs	65.47	18	P	P	10 06 26.7	-0.1
HHAR				IAmb	IAmb	10 06 37.3	
	comp=Z,13nm,1.4s						
KVN	Kaiserville	65.50	357	P	P	10 06 27.3	+0.1
KVN				IAmb	IAmb	10 06 29.0	
	comp=Z,10nm,1.3s						
YERR	Yerington	65.50	356	P	P	10 06 27.3	+0.1
YERR				IAmb	IAmb	10 06 29.1	
	comp=Z,5.0nm,1.0s						
SRU	San Rafael Swe	65.55	3	P	P	10 06 27.3	-0.1
AFDM	Forest Hills D	65.60	354	P	P	10 06 27.4	-0.2
AFDM				IAmb	IAmb	10 06 29.2	
	comp=Z,8.7nm,1.3s						
RUBR	Rubicon Trail	65.64	355	P	P	10 06 27.6	-0.4
SMCO	Snowmass	65.87	6	P	P	10 06 29.9	+0.2
P17A	Butcher Ranch,	65.90	3	P	P	10 06 30.0	+0.3
PAHR	Pah Rah Range	66.23	356	P	P	10 06 32.4	+0.6
PAHR				IAmb	IAmb	10 06 34.6	
	comp=Z,5.8nm,1.2s						
KSCO	Kaye Shedlock'	66.24	10	P	P	10 06 31.8	-0.1
NLU	North Lily Min	66.33	2	P	P	10 06 32.7	+0.2
MPU	Maple Canyon	66.40	2	P	P	10 06 32.5	-0.5
DUG	Dugway, Tooele	66.55	1	P	P	10 06 33.1	-0.7
DUG				IAmb	IAmb	10 06 35.6	
	comp=Z,8.0nm,1.1s						
DUG	Dugway, Tooele	66.55	1	P	P	10 06 34.5	+0.7
	baz=181						
O20A	White River Ci	66.71	5	P	P	10 06 35.7	+0.8
	baz=186						
MGMO	Mountain Grove	66.76	19	P	P	10 06 34.8	-0.3
S39A	Bolivar	66.97	18	P	P	10 06 36.1	-0.2
S39A				IAmb	IAmb	10 06 42.4	
	comp=Z,6.0nm,1.1s						
JLU	Jordanelle	66.99	2	P	P	10 06 36.6	-0.1
O02D	Mt. Diablo Mer	67.00	353	P	P	10 06 37.3	+0.7
	baz=172						
RDMU	Red Mountain	67.05	4	P	P	10 06 36.9	-0.3
CTU	Camp Tracy	67.07	2	P	P	10 06 37.3	+0.1
ELK	Elko	67.09	359	P	P	10 06 37.7	+0.3
WVT	Waverly	67.24	23	P	P	10 06 38.0	-0.2
	baz=205						
BGU	Big Grassy Mou	67.28	1	P	P	10 06 38.7	+0.3
WDC	Whiskeytown Da	67.37	353	P	P	10 06 39.1	+0.2
KSU1	Kansas State U	67.47	15	P	P	10 06 40.3	+0.7
	baz=197						
TCUT	Toone Canyon	67.51	2	P	P	10 06 40.2	+0.2
N23A	Red Feather La	67.67	7	P	P	10 06 41.1	0.0
N23A				IAmb	IAmb	10 06 44.7	
	comp=Z,8.5nm,1.2s						
N23A	Red Feather La	67.67	7	P	P	10 06 41.4	+0.3
	baz=188						
W52A	Murphy	67.78	26	P	P	10 06 41.6	0.0
	baz=209						
CCM	Cathedral Cave	67.90	19	P	P	10 06 41.6	-0.6
	baz=202						
MOD	Modoc Plateau	68.48	355	P	P	10 06 46.0	0.0
MOD				IAmb	IAmb	10 06 47.5	
	comp=Z,6.5nm,0.8s						
M04C	Macdoel	68.49	354	P	P	10 06 46.3	+0.2
	baz=173						
YBH	Yreka Blue Hor	68.53	353	P	P	10 06 46.1	-0.2
YBH				IAmb	IAmb	10 06 46.2	
	comp=Z,6.3nm,1.1s						
WVOR	Wild Horse Val	68.90	356	P	P	10 06 48.5	-0.1
WVOR				IAmb	IAmb	10 06 50.5	
	comp=Z,8.3nm,0.9s						
JOHN	Johnston Islan	68.93	302	P	P	10 06 47.4	-1.7
L04D	Klamath Falls	68.97	354	P	P	10 06 48.9	-0.2
	baz=172						
AHID	Auburn Hatcher	69.17	2	P	P	10 06 49.9	-0.4
AHID				IAmb	IAmb	10 06 50.4	
	comp=Z,4.5nm,0.8s						
BW06	Boulder Array	69.24	4	P	P	10 06 49.7	-1.2
BW06				IAmb	IAmb	10 06 51.0	
	comp=Z,15nm,1.4s						
BW06	Boulder Array	69.24	4	P	P	10 06 50.0	-0.8
	baz=184						
PD31	Pinedale Array	69.24	4	P	P	10 06 49.3	-1.6
PD31				IAmb	IAmb	10 06 51.0	
	comp=Z,13nm,1.5s						
PDAR	Pinedale Array	69.24	4	P	P	10 06 49.5	-1.3
	comp=Z,1.2nm,0.7s,baz=163,slow=5.7,SNR=13						
K22A	Casper	69.35	6	P	P	10 06 51.3	-0.1
K22A	Casper	69.35	6	P	P	10 06 51.8	+0.4
	baz=187						
HUMO	Hull Mountain	69.42	353	P	P	10 06 51.1	-0.6
HUMO				IAmb	IAmb	10 06 53.2	
	comp=Z,9.3nm,1.0s						
U53A	Fall Branch	69.43	27	P	P	10 06 51.1	-0.8
	baz=210						
REDW	Red Top Meadow	69.77	3	P	P	10 06 52.4	-1.7
REDW				IAmb	IAmb	10 07 00.7	
	comp=Z,9.7nm,1.4s						
MFID	Camas Ranch	69.77	359	P	P	10 06 53.0	-1.0
MFID				IAmb	IAmb	10 06 55.1	
	comp=Z,7.3nm,1.2s						
J08A	Circle Bar Ran	69.81	357	P	P	10 06 55.1	+0.9
J08A				IAmb	IAmb	10 06 56.2	
	comp=Z,9.6nm,1.0s						
J05D	Fort Rock, OR	69.93	355	P	P	10 06 55.8	+0.8
	baz=173						
FXWY	Fox Creek	70.04	2	P	P	10 06 55.4	-0.3
PINE	Pine Mountain	70.41	355	P	P	10 06 58.5	+0.5
PINE				IAmb	IAmb	10 06 59.6	
	comp=Z,11nm,0.9s						
V58A	Windy Hill, Pi	70.41	30	P	P	10 06 58.0	+0.2
	baz=213						
FLWY	Flagg Ranch	70.50	3	P	P	10 06 57.9	-0.6
FLWY				IAmb	IAmb	10 06 59.4	
	comp=Z,8.1nm,0.9s						
I07A	Izee	70.59	356	P	P	10 06 59.9	+0.9
I07A				IAmb	IAmb	10 07 00.7	
	comp=Z,9.4nm,1.0s						
T55A	Pulaski	70.81	28	P	P	10 06 59.5	-0.9
	baz=211						
I05D	Terrebonne, OR	70.98	355	P	P	10 07 02.0	+0.7
	baz=173						
LKWY	Lake	70.99	3	P	P	10 07 01.1	-0.5
YMR	Madison River	71.07	2	P	P	10 07 02.2	+0.3
RSSD	Black Hills	71.07	8	P	P	10 07 00.9	-1.1
RSSD	Black Hills	71.07	8	P	P	10 07 02.1	+0.1
	baz=190						
U58A	Oxford	71.16	30	P	P	10 07 02.2	-0.3
	baz=213						
MCMT	McKenzie Canyo	71.18	1	P	P	10 07 02.9	+0.2
YHH	Holmes Hill	71.19	2	P	P	10 07 02.2	-0.6
QLMT	Earthquake Lak	71.22	2	P	P	10 07 03.6	+0.7
YHL	Hebgen Lake	71.24	2	P	P	10 07 02.1	-1.0
BMO	Blue Mountains	71.25	358	P	P	10 07 01.6	-1.3
DZM	Mont Dzumac	71.35	254	eLR	LR	10 28 35.3	
	comp=Z,305nm,26.9s						
YNE	Yellowstone No	71.45	3	P	P	10 07 03.3	-1.0
RLMT	Red Lodge	71.60	4	P	P	10 07 04.4	-0.8
RLMT	Red Lodge	71.60	4	P	P	10 07 04.9	-0.3
	baz=185						
L40A	Anamosa	71.62	18	P	P	10 07 05.2	+0.2
DLMT	Dillon	71.72	1	P	P	10 07 05.9	+0.1
DLMT				IAmb	IAmb	10 07 06.9	
	comp=Z,9.8nm,1.2s						
G05D	Wamic, OR	71.88	355	P	P	10 07 06.5	-0.1
	baz=173						
ECSD	EROS Data Cent	71.91	13	P	P	10 07 06.2	-0.6
ECSD	EROS Data Cent	71.91	13	P	P	10 07 06.8	0.0
	baz=196						
GCMT	Greycliff	72.25	3	P	P	10 07 08.4	-0.6
F10A	Beach Ranch, E	72.37	358	P	P	10 07 09.1	-0.5
F07A	Phinny Hill Vi	72.43	356	P	P	10 07 09.6	-0.2
F07A				IAmb	IAmb	10 07 10.8	
	comp=Z,14nm,1.3s						
F05D	White Salmon	72.53	355	P	P	10 07 11.4	+1.0
	baz=173						
L46A	Eue Claire	73.05	21	P	P	10 07 14.5	+0.9
	baz=206						
MSO	Missoula	73.17	0	P	P	10 07 14.4	0.0
MSO				IAmb	IAmb	10 07 15.4	
	comp=Z,7.8nm,1.1s						
MSO	Missoula	73.17	0	P	P	10 07 14.6	+0.2
	baz=180						
P55A	Reedsville	73.24	27	P	P	10 07 14.8	0.0
	baz=212						
JTMT	Jette	74.09	360	P	P	10 07 20.1	+0.3
JTMT				IAmb	IAmb	10 07 20.8	
	comp=Z,10.0nm,0.9s						
C09A	Chrisman Ranch	74.23	357	P	P	10 07 20.4	-0.1
C09A				IAmb	IAmb	10 07 22.7	
	comp=Z,5.8nm,0.8s						
D03D	Eldon	74.31	354	P	P	10 07 21.3	+0.4
	baz=172						
EGMT	Eagleton	74.47	3	P	P	10 07 22.4	+0.4
	baz=184						
J47A	Sunmer	74.64	22	P	P	10 07 21.0	-1.9
J47A				IAmb	IAmb	10 07 27.0	
	comp=Z,16nm,1.2s						
NEW	Newport	74.65	358	P	P	10 07 22.7	-0.3
NEW				IAmb	IAmb	10 07 24.2	
	comp=Z,9.8nm,1.1s						
NEW	Newport	74.65	358	P	P	10 07 23.3	+0.3
	baz=177						
N55A	Marion Center	74.66	27	P	P	10 07 23.1	0.0
	baz=212						
EYMN	Ely	77.04	15	P	P	10 07 36.7	+0.1
	baz=201						
ULM	Lac du Bonnet	78.30	12	P	P	10 07 42.8	-0.7
	comp=Z,1.7nm,0.7s,baz=201,slow=5.3,SNR=5.9						
ULM	Lac du Bonnet	78.30	12	IAmb	IAmb	10 07 46.9	
	comp=Z,11nm,1.4s						
D47A	Chapleau	78.58	21	P	P	10 07 45.1	-0.1
	baz=208						
E53A	Dumoine, Ponti	79.89	25	P	P	10 07 51.5	-0.8
	baz=213						
LSQQ	Lebel-sur-Quev	82.39	24	P	P	10 08 05.4	-0.2
	baz=213						
SYO	Syowa Base	82.67	171⇑	eX	P	10 08 15.0	+8.1
MAW	Mawson	85.97	179	LR	LR	10 42 33.2	
	comp=Z,121nm,19.8s,baz=230,slow=33						
STKA	Stephens Creek	87.27	236	LR	LR	10 42 00.9	
	comp=Z,121nm,18.5s,baz=182,slow=32						
YKA	Yellowknife Ar	88.87	360	P	P	10 08 36.1	-1.3
	comp=Z,1.5nm,0.8s,baz=174,slow=5.2,SNR=29						
H11S2	WAKE ISLAND Hy	88.89	291	T	T	11 47 03.6	
	baz=119,slow=75,SNR=109						
H11S1	WAKE ISLAND Hy	88.90	291	T	T	11 46 57.7	
	baz=119,slow=75,SNR=112						
H11S3	WAKE ISLAND Hy	88.90	291	T	T	11 47 00.9	
	baz=119,slow=75,SNR=110						
H11N3	WAKE ISLAND Hy	89.30	292	T	T	11 47 24.8	
	baz=116,slow=78,SNR=28						
H11N1	WAKE ISLAND Hy	89.31	292	T	T	11 47 27.0	
	baz=116,slow=78,SNR=63						

H11N2 WAKE ISLAND Hy 89.32 292 T T 11 47 31.3
baz=116,slow=78,SNR=27
SCHQ Schefferville 90.78 25 P P 10 08 45.9 -0.7
comp=Z,2.1nm,0.8s,baz=240,slow=9.5,SNR=3.5
SCHQ LR LR 10 44 37.0
comp=Z,59nm,20.9s,baz=350,slow=32
SCHQ Schefferville 90.78 25 P P 10 08 46.2 -0.4
DOT Dot Lake 93.07 347 P P 10 08 55.6 -1.4
KTH Kantishna Hill 94.50 344 P P 10 09 02.9 -0.8
ILAR Eielson Array 94.65 347 P P 10 09 02.8 -1.4
comp=Z,0.5nm,0.9s,baz=178,slow=3.6,SNR=4.4
ASAR Alice Springs 97.35 239 LR LR 10 48 40.3
comp=Z,243nm,18.1s,baz=150,slow=33
WRA Warramunga Arr 99.02 242 LR LR 10 51 30.6
comp=Z,58nm,18.3s,baz=135,slow=34
NJ2 Nanjing 133.86 290 ePKP PKPdf 10 15 00.0 -1.2
WHN Wuhan 137.49 287 PKP PKPdf 10 15 09.5 +1.5
HHC Hu-ho-hao-te 139.89 303 ePKP PKPdf 10 15 11.8 -0.4
SONM Songino Array 142.00 315 PKhKP PKPpre 10 15 08.7
comp=Z,1.3nm,0.9s,baz=151,slow=0.7,SNR=3.1
SONM PKP PKPdf 10 15 13.4 -2.5
comp=Z,1.4nm,0.9s,baz=137,slow=2.1,SNR=7.1
PBKT Sadao Pong 145.91 260 PKPdf 10 15 23.8 +0.4
LZH Lanzhou 146.40 296 ePKPbc PKPdf 10 15 24.5 +0.6
LZH sPKP 10 15 29.0
LZH LR LR
comp=Z,100nm,17.9s
LZH LR LR
comp=Z,110nm,18.0s
LZH LR LR
comp=Z,150nm,20.1s
CD2 Chengdu 146.60 286 PKPbc PKPdf 10 15 22.8 -1.5
CMAR Chiang Mai Arr 148.41 262 PKPbc PKPdf 10 15 30.0 +2.5
comp=Z,2.0nm,0.6s,baz=121,slow=1.3,SNR=12
GTA Gaotai 149.00 303 PKPbc PKPdf 10 15 31.3 +3.2
GTA pPKP PKiKP 10 15 36.3 +2.8
GTA LR LR
comp=Z,74nm,17.8s
GTA LR LR
comp=Z,130nm,17.5s
ZAA0 Zalesovo Array 149.36 338 PKPdf PKPdf 10 15 27.9 -0.1
ZAA0 pPKPdf 10 15 31.2 +0.5
ZALV Zalesovo Beam 149.36 338 PKPbc PKPdf 10 15 31.0 +3.0
comp=Z,2.9nm,0.7s,baz=29,slow=3.0,SNR=13
ARU Arti 149.82 8 PKPdf PKPdf 10 15 28.1 -0.5
ARU pPKPdf 10 15 33.1 +1.7
BRTR Keskin Array B 150.26 56 PKPbc PKPdf 10 15 34.5 +4.3
comp=Z,1.9nm,0.8s,baz=238,slow=3.1,SNR=6.2
WMQ Urumqi 155.40 320 ePKP PKPdf 10 15 36.5 -0.9
WMQ LR LR
comp=Z,480nm,28.9s
WMQ LR LR
comp=Z,1μm,28.9s
WMQ LR LR
comp=Z,160nm,29.0s
MKAR Makanchi Array 156.08 331 PKP PKPdf 10 15 37.7 -0.5
comp=Z,0.2nm,0.8s,baz=51,slow=5.2,SNR=2.6
KSH Kashi 164.65 329 PKP PKPdf 10 15 50.5 +2.5
KSH PKS PKSdf 10 19 23.5 +2.5
KSH PP PP 10 20 37.0 +8.0
KSH SKS SKSdf 10 22 55.5 +2.9
KSH SKKS SKKSac 10 27 19.0 +1.5
KSH AMB AMB
comp=Z,130nm,8.2s
KSH LR LR
comp=Z,46nm,4.6s
KSH LR LR
comp=Z,43nm,5.0s
KSH LR LR
comp=Z,280nm,7.3s

DJA 26 10:23:41.6±0.5, 0°S±4°×12°3E±°, h79km±10km, M4.0/8, mB4.7/1, mb4.2/2, MLv3.8/8, Mw(mB)3.9/1, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
LUWI	Luwuk	1.09	201	P	Pn	10 24 01.8	+0.1
LUWI				S	Sn	10 24 17.5	+0.8
LUWI	Luwuk	1.09	201	P	Pn	10 24 01.8	+0.1
LUWI				S	Sn	10 24 17.5	+0.8
MRSI	Marisa	1.32	292	P	Pn	10 24 04.9	+0.3
MRSI				S	Sn	10 24 22.0	0.0
MRSI	Marisa	1.32	292	P	Pn	10 24 04.9	+0.3
MRSI				S	Sn	10 24 22.0	0.0
APSI	Ampana	1.76	240	P	Pn	10 24 10.4	+0.1
APSI	Ampana	1.76	240	P	Pn	10 24 10.4	+0.1
MPSI	Mapaga	3.29	276	P	Pn	10 24 31.9	+1.0
MPSI	Mapaga	3.29	276	P	Pn	10 24 31.9	+1.0
SANI	Sanana	3.46	126	P	Pn	10 24 32.4	-0.9
SANI	Sanana	3.46	126	P	Pn	10 24 32.4	-0.9
LBMI	Labuha	4.37	98	P	Pn	10 24 46.4	+0.7
LBMI	Labuha	4.37	98	P	Pn	10 24 46.4	+0.7
TTSI	Tana Toraja	4.50	228	P	Pn	10 24 46.6	-0.8
TTSI	Tana Toraja	4.50	228	P	Pn	10 24 46.6	-0.8
SPSI	Sidrap Palu	5.19	221	P	Pn	10 24 56.6	-0.1
SPSI	Sidrap Palu	5.19	221	P	Pn	10 24 56.6	-0.1

MEX 26 10:26:54.6±0.7, 14.°22N×92.°07W, h10km, MD3.9
GCG 26 10:26:57.8±1.0, 14.°08N×91.°82W, h34km±16km, MD3.7
ISC 26 10:26:52.1±2.9, 14.°3N±0.°1×92.°06W±0.°06, h10km±16km, n11, σ1§44/20, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.51	70	eP	Pn	10 27 07.1	+1.7
ERG				eS	Sn	10 27 14.8	+0.6
STG3	Santiaguito 3,	0.65	47	eP	Pn	10 27 08.0	+0.4
THIG		0.67	343	eP	Pb	10 27 07.1	+1.3
THIG				iS	Sn	10 27 16.1	-2.0
FUG	Fuego 3	1.20	81	eP	Pb	10 27 15.4	+0.4
PCG	Pacaya	1.42	85	eP	Pb	10 27 19.1	+0.3
PCG				eS	Sn	10 27 36.1	-0.9
IXG	Ixpaco	1.57	93	eP	Pn	10 27 21.1	+0.8
IXG				eS	Sn	10 27 38.3	-2.5
NBG	Las Nubes	1.69	79	eP	Pb	10 27 24.0	+0.5
NBG				eS	Sg	10 27 45.6	-1.0
PCIG		1.82	322	eP	Pn	10 27 22.1	-1.3
PCIG				iS	Sn	10 27 44.9	-1.6
CCIG	Comitan	2.01	358	iP	Pn	10 27 27.5	+1.3
CCIG				eS	Sg	10 27 54.7	-2.0
TGIG		2.70	338	eP	Pb	10 27 42.7	+2.2
TGIG				iS	Sn	10 28 08.2	-0.2
CMIG	Matias Romero	3.91	316	iP	Pn	10 27 52.9	+0.7
CMIG				iS	Sn	10 28 37.8	-0.4

NIED 26 10:45:00, 38.°60N×138.°80E, h185km, Mw4.2 Best double couple: M₀2.62000×10¹⁵ NP1:φs37.00000°, δ80.00000°, λ-70.00000°. NP2:φs153.00000°, δ22.00000°, λ-152.00000°.
MOS 26 10:45:39.8±0.9, 38.°66N×138.°87E, h201km, mb4.3/26, Error ellipse: s-maj=7.5km s-min=5.0km az=96.1
BJI 26 10:45:39.6±0.0, 38.°66N×138.°93E, h217km, mB4.7/31, mb4.5/41
NEIC 26 10:45:41.1±1.9, 38.°59N±0.°06×138.°94E±0.°08, h201km±6km, mb4.3/61, Error ellipse: s-maj=9.7km s-min=7.4km az=132.0
IDC 26 10:45:41.3±0.6, 38.°63N×138.°75E, h198km±7km, mb3.9/25, mb1 3.9/31, mb1mx3.9/40, mbtmp4.3/31, MS2.5/2, Ms1 2.5/2, ms1mx2.3/40, Error ellipse: s-maj=11.0km s-min=8.8km az=111.0
JMA 26 10:45:42.0±0.1, 38.°60N×138.°81E, h196km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs138.00000°, δ27.00000°, λ-175.00000°. NP2: φs44.00000°, δ88.00000°, λ-63.00000°. Principal axes: T Plg37.0000°, Azm110.0000°; N Plg27.0000°, Azm223.0000°; P Plg41.0000°, Azm339.0000°;
ISC 26 10:45:40.9±0.5, 38.°64N±0.°04×138.°90E±0.°05, h198km±5km, n217, σ1§36/251, mb4.3/68, 18C-18D, Near west coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res
JAW Awa shima 0.33 124 ⇓P Pn 10 46 08.3 +1.0
JAW S Sn 10 46 28.4 +0.9
JYA Atsumi 0.64 94 ⇓P Pn 10 46 09.7 +1.3
JYA S Sn 10 46 31.4 +1.9
JSD Sado 0.78 220 ⇓P Pn 10 46 09.6 +0.4
JSD S Sn 10 46 30.6 -0.3
JNS Sasagawa 0.88 158 ⇓P Pn 10 46 10.5 +0.8
JNS S Sn 10 46 32.5 +0.5
JYS Shirataka 1.00 114 P Pn 10 46 12.0 +1.5
JIZZ Izumozaki 1.11 188 ⇓P Pn 10 46 12.5 +1.2
JYK Kaneyama 1.17 76 ⇓P Pn 10 46 13.2 +1.5
JYK S Sn 10 46 37.4 +1.8
JFT Otama 1.59 134 ⇓P Pn 10 46 16.4 +1.1
JFT S Sn 10 46 43.5 +1.6
JSZ Suzu 1.70 226 ⇓P Pn 10 46 16.5 +0.2
JSZ S Sn 10 46 43.1 -0.6
JHG Hegura jima 1.75 244 ⇑P Pn 10 46 17.0 +0.3
JHG S Sn 10 46 44.2 -0.3
JMK Ichinoseki 1.84 79 ⇓P Pn 10 46 18.8 +1.2
JOM Ohasama 2.04 65 ⇓P Pn 10 46 21.2 +1.5
JOM S Sn 10 46 52.0 +2.2
MJB9 Matsu-Tunnel 2.16 195 Pn 10 46 21.8 +0.8
MJB9 Sn Sn 10 46 52.9 +0.7
MAJO Matsushiro 2.16 195 Pn 10 46 21.5 +0.5
MAJO Sn Sn 10 46 52.5 +0.2
MAJO Matsushiro 2.16 195 d iP Pn 10 46 21.2 +0.1
MAT Matsushiro 2.16 195 P Pn 10 46 21.4 +0.3
MAT S Sn 10 46 51.9 -0.3
MAT Matsushiro 2.16 195 P Pn 10 46 21.4 +0.3
MAT S Sn 10 46 52.0 -0.3
MJAR Matsushiro Arr 2.16 195 P Pn 10 46 21.7 +0.6
17nm,0.3s,baz=6.3,slow=12,SNR=1493
MJAR S Sn 10 46 52.4 +0.2
baz=47,slow=17,SNR=2.4
MJAR LR LR 10 47 18.2
comp=Z,121nm,18.5s,baz=305,slow=45
JAG Ashikaga 2.25 169 ⇓P Pn 10 46 22.4 +0.4
JRY Ryogami san 2.62 180 ⇓P Pn 10 46 26.2 +0.1
JRY S Sn 10 47 00.5 -0.8
JANG Nango 2.66 49 P Pn 10 46 28.3 +1.8
JKG Kaga 3.12 222 P Pn 10 46 32.2 +0.3
JYN Shimob 3.15 185 P Pn 10 46 31.7 -0.6
JYN S Sn 10 47 11.3 -1.2
INU Inuyama 3.61 205 Pn 10 46 38.2 +0.3
INU Sn Sn 10 47 22.7 +0.3
ERM Erimo 4.69 43 Pn 10 46 51.8 +0.6
ERM Sn Sn 10 47 47.7 +1.2
ERM Erimo 4.69 43 ceP Pn 10 46 51.4 +0.2
ERM pmax pmax
comp=Z,32nm,0.9s
JHJ Hachijo jima 2 5.55 172 P Pn 10 46 59.9 -2.5
comp=Z,57nm,0.3s,baz=149,slow=23,SNR=26
JHJ S Sn 10 48 01.1 -5.6
comp=Z,80nm,0.3s,baz=298,slow=23,SNR=11
JHJ LR LR 10 49 00.4
comp=Z,41nm,21.9s,baz=50,slow=36
JHJ2 Mitsune 5.56 172 Pn 10 46 59.8 -2.7
ASAJ Asahikawa 6.14 26 P Pn 10 47 09.2 -0.6
comp=Z,2.4nm,0.3s,baz=205,slow=16,SNR=9.3
ASAJ S Sn 10 48 16.3 -4.0
comp=Z,1.3nm,0.3s,baz=292,slow=18,SNR=3.2
JKA Kamikawa-asahi 6.14 26 Pn 10 47 09.2 -0.6
JKA Sn 10 48 16.3 -4.0
TEY Ternei 6.62 346⇑eP Pn 10 47 16.6 +0.5
TEY pmax pmax
comp=Z,30nm,0.6s
NMR Nemuro--Hokkai 7.00 45 eP Pn 10 47 19.1 -1.9
NMR iS Sn 10 48 33.5 -6.9
GLVR Golovnino 7.13 42 eP Pn 10 47 22.1 -0.6
GLVR iS Sn 10 48 38.3 -5.2
GLVR pmax pmax
comp=N,62nm,0.5s
GLVR pmax pmax
comp=E,18nm,0.5s
GLVR pmax pmax
comp=Z,88nm,0.5s
GRPR Tuman 7.44 42 eP Pn 10 47 26.0 -0.7
GRPR iS Sn 10 48 45.6 -5.2
GRPR pmax pmax
comp=Z,65nm,0.4s
YUK Yuzh-Kuril'sk 7.51 42 d iP Pn 10 47 27.0 -0.7
YUK iS Sn 10 48 47.1 -5.5
YUK pmax pmax
comp=Z,65nm,0.3s
YUK pmax pmax
comp=N,22nm,0.2s
YUK pmax pmax
comp=E,22nm,0.2s
YUK pmax pmax
comp=Z,83nm,1.2s
USRK Ussuriysk Ar. 7.61 319 P Pn 10 47 30.1 +1.2
baz=135,slow=12,SNR=49
USA0B Ussuriysk Arra 7.61 319 Pn Pn 10 47 30.0 +1.1
USA0B Ussuriysk Arra 7.61 319 P Pn 10 47 30.0 +1.1
SHO Shikotan 7.93 46 eP Pn 10 47 31.3 -1.9
SHO iS Sn 10 48 54.8 -7.8
SHO pmax pmax
comp=N,5.0nm,0.3s
SHO pmax pmax
comp=E,8.0nm,0.3s
SHO pmax pmax
comp=Z,11nm,0.3s
KSRS Korea Array 8.74 266 P Pn 10 47 44.8 +1.0
comp=Z,0.3nm,0.3s,baz=83,slow=12,SNR=5.6
YSS Yuzh-Sakhalins 8.78 18 Pn 10 47 43.8 -0.4
YSS Yuzh-Sakhalins 8.78 18 ⇓iP Pn 10 47 43.5 -0.7
YSS eS Sn 10 49 19.9 -2.7
YSS pmax pmax
comp=Z,70nm,0.6s
YSS smax smax
comp=N,30nm,0.8s
KUR Kuril'sk 9.38 42 eP Pn 10 47 51.7 -0.3
KUR eS Sn 10 49 34.9 -1.9
KUR pmax pmax
comp=Z,17nm,0.6s
KUR smax smax
comp=N,28nm,0.3s
KUR smax smax
comp=E,14nm,0.4s
KLR Kul'dur 11.77 336 P Pn 10 48 22.6 -0.2
comp=E,0.6nm,0.3s,baz=141,slow=10,SNR=30
KLR Kul'dur 11.77 336 eP Pn 10 48 23.2 +0.4
KLR pmax pmax
comp=Z,6.0nm,0.7s
JOW Kunigami 14.77 220 Pn 10 48 59.5 -0.9
ZEA Zeya 17.09 336 eP P 10 49 25.1 -1.6
ZEA pmax pmax
comp=E,20nm,0.6s
ZEA pmax pmax
comp=N,20nm,0.7s
ZEA pmax pmax
comp=Z,35nm,0.7s
HIA Hailar 17.36 314 P P 10 49 29.7 -0.1
HIA IAmb IAmb 10 49 30.4
comp=Z,14nm,1.2s
HIA Hailar 17.36 314 P P 10 49 29.7 -0.1
HIA pmax pmax
comp=Z,14nm,1.2s
BJT Baijiatuau 17.64 282 P P 10 49 31.7 -1.1
BJT IAmb IAmb 10 49 43.4
comp=Z,12nm,0.6s
BJT Baijiatuau 17.64 282 P P 10 49 31.7 -1.1
BJT pmax pmax
comp=Z,12nm,0.6s
PETK Petropavlovsk- 19.42 36 P P 10 49 52.7 +0.6
comp=Z,0.2nm,0.3s,baz=201,slow=15,SNR=8.1
HHC Hu-ho-hao-te 21.11 285 eP P 10 50 07.8 -2.4
HHC pmax pmax
comp=Z,7.0nm,0.8s
HHC pmax pmax
comp=Z,64nm,4.0s
WHN Wuhan 21.72 256 P P 10 50 19.3 +2.8
MA2 Magadan 22.28 16 P P 10 50 21.3 -0.3
comp=Z,15nm,0.7s,baz=191,slow=11,SNR=30
MA2 Magadan 22.28 16 P P 10 50 21.8 +0.2
MA2 IAmb IAmb 10 50 22.7
comp=Z,12nm,0.7s
MA2 Magadan 22.28 16 ceP P 10 50 21.5 -0.1
MA2 pmax pmax
comp=Z,12nm,0.7s
YAK Yakutsk 24.10 349 P P 10 50 37.8 -0.2
comp=Z,10.0nm,0.5s,baz=244,slow=1.1,SNR=8.2
YAK Yakutsk 24.10 349 P P 10 50 38.0 0.0
YAK Yakutsk 24.10 349 c iP P 10 50 37.8 -0.2
YAK pmax pmax
comp=Z,12nm,0.8s
YAK pmax pmax
comp=E,1.0nm,0.8s
YAK pmax pmax
comp=N,3.0nm,0.6s
ULN Ulaanbaatar 24.82 302 P P 10 50 45.1 +0.2
ULN Ulaanbaatar 24.82 302 P P 10 50 45.1 +0.2
ULN pmax pmax
comp=Z,14nm,0.7s
BOD Bodaibo 25.12 328 eP P 10 50 46.1 -1.2
BOD pmax pmax
comp=Z,11nm,1.1s
SONM Songino Array 25.25 302 P P 10 50 48.0 -0.8
comp=Z,13nm,0.7s,baz=103,slow=9.0,SNR=89
SONM PcP PcP 10 54 16.5 +0.1
comp=Z,0.3nm,0.5s,baz=120,slow=0.8,SNR=4.4
ENH Enshi 25.57 260 P P 10 50 52.2 +0.5
SEY Seymchan 25.66 14 P P 10 50 53.0 +0.8
comp=Z,7.7nm,0.8s,baz=208,slow=7.4,SNR=31
SEY Seymchan 25.66 14 iP P 10 50 52.5 +0.3
ZAK Zakamensk 27.72 307 eP P 10 51 09.7 -1.1
ZAK pmax pmax
comp=Z,4.0nm,0.8s
TLY Talaya 27.78 310 iP P 10 51 11.3 +0.1
TLY pmax pmax
comp=Z,5.0nm,0.7s
LZH Lanzhou 27.88 276 ⇑P P 10 51 13.0 +0.5
LZH pP pP 10 51 53.3 +1.4
LZH PP PnPn 10 52 12.0 +1.2
LZH sP sP 10 52 16.3 +1.8
LZH pmax pmax
comp=Z,20nm,1.1s
LZH pmax pmax
comp=Z,73nm,4.8s
CD2 Chengdu 29.74 266 P P 10 51 28.0 -0.9
CD2 pmax pmax
comp=Z,20nm,0.5s
GTA Gaotai 30.22 284 eP P 10 51 31.5 -1.6
GTA pmax pmax
comp=Z,2.0nm,0.8s
BILL Bilibino 33.09 18 iP P 10 51 55.1 -2.6
BILL i *PP pwP 10 52 41.0 +2.9
BILL pmax pmax
comp=Z,6.0nm,1.5s
TIXI Tiksi 33.48 354 P P 10 52 00.1 -0.8
comp=Z,3.2nm,0.6s,baz=146,slow=5.8,SNR=12
TIXI Tiksi 33.48 354 P P 10 52 00.5 -0.4
TIXI IAmb IAmb 10 52 01.4
comp=Z,4.0nm,0.6s
TIXI Tiksi 33.48 354 eP P 10 52 00.5 -0.4
TIXI pmax pmax
comp=Z,3.0nm,0.6s
SLVN Son La 34.61 250 P P 10 52 11.0 -0.3
SLVN IAmb IAmb 10 52 12.5
comp=Z,5.2nm,0.9s
WMQ Urumqi 38.35 295 eP P 10 52 44.0 +1.2
WMQ pmax pmax
comp=Z,120nm,5.1s
WMQ LR LR
comp=Z,400nm,29.0s
WMQ LR LR
comp=Z,650nm,29.1s
WMQ LR LR
comp=Z,89nm,28.9s
ZAA0 Zalesovo Array 39.37 311 P P 10 52 50.5 -0.3
ZAA0 IAmb IAmb 10 52 51.1
comp=Z,9.7nm,0.8s
ZALV Zalesovo Beam 39.37 311 P P 10 52 50.2 -0.6
comp=Z,10nm,0.8s,baz=90,slow=7.2,SNR=37
ZALV PcP PcP 10 54 54.5 -0.5
comp=Z,2.4nm,0.5s,baz=103,slow=2.6,SNR=8.7
CHTO Chiang Mai 39.83 252 P P 10 52 54.6 -0.5
CHTO IAmb IAmb 10 52 59.5
comp=Z,4.8nm,0.5s
CHTO Chiang Mai 39.83 252 P P 10 52 54.6 -0.5
CHTO pmax pmax
comp=Z,5.0nm,0.5s
CMAR Chiang Mai Arr 40.05 251 P P 10 52 57.2 +0.2
comp=Z,1.5nm,0.6s,baz=43,slow=7.9,SNR=4.3
LSA Lhasa 40.12 272 P P 10 52 55.3 -2.7
LSA Lhasa 40.12 272 P P 10 52 55.3 -2.7
LSA pmax pmax
comp=Z,5.0nm,1.1s
NRIK Noril'sk 40.98 335 P P 10 53 04.2 +0.2
comp=Z,4.1nm,0.6s,baz=93,slow=9.9,SNR=4.8
SHL Shillong 41.48 266 P P 10 53 07.7 -1.1
SHL IAmb IAmb 10 53 08.5
comp=Z,11nm,1.0s
SHL Shillong 41.48 266 P P 10 53 07.7 -1.1
SHL pmax pmax
comp=Z,11nm,1.0s
MK31 Makanchi Array 41.59 300 P P 10 53 08.7 -0.5
MK31 Makanchi Array 41.59 300 P P 10 53 08.7 -0.5
MK31 pmax pmax
comp=Z,3.0nm,1.1s
MKAR Makanchi Array 41.59 300 P P 10 53 08.5 -0.8
comp=Z,1.7nm,0.5s,baz=84,slow=9.3,SNR=37
MKAR ScP ScP 10 58 32.3 -1.2
comp=Z,0.4nm,0.7s,baz=68,slow=4.6,SNR=3.6
MKAR Makanchi Array 41.59 300 iP P 10 53 08.6 -0.7
MKAR pmax pmax
comp=Z,2.0nm,0.5s
MAKZ Makanchi 41.80 300 P P 10 53 10.3 -0.7
MAKZ Makanchi 41.80 300 P P 10 53 10.3 -0.7
MAKZ pmax pmax
comp=Z,3.0nm,0.6s
KURK Kurchatov 43.38 307 P P 10 53 22.7 -0.8
KURK Kurchatov 43.38 307 ceP P 10 53 22.8 -0.8
KURK pmax pmax
comp=Z,31nm,0.8s
JIRN Jiri 44.93 272 eP P 10 53 36.5 -0.1
comp=Z,13nm,0.3s
RAMN Ramite 44.94 271 eP P 10 53 36.1 -0.5
comp=Z,18nm,0.5s
GUN Gumba 45.05 273 eP P 10 53 37.3 -0.3
comp=Z,40nm,0.4s
PKI Pulchoki 45.58 273 eP P 10 53 41.0 -0.7
comp=Z,12nm,0.5s
PKIN Phulchoki 45.59 273 eP P 10 53 40.6 -1.1
comp=Z,11nm,0.5s
DMN Daman 45.80 273 eP P 10 53 42.8 -0.5
comp=Z,7.8nm,0.4s
GKN Gorkha 45.98 274 eP P 10 53 44.4 -0.2
DANN Dangsing 46.51 274 eP P 10 53 48.8 -0.1
comp=Z,115nm,0.5s
SAUI Saumlaki 46.92 190 P P 10 53 51.3 -0.4
KBK Karagaybulak 47.66 296 P P 10 53 57.9 +0.4
SNR=23
USP Ospenovka 47.79 297 P P 10 53 58.4 +0.1
SNR=8.1
KSH Kashi 47.95 292 P P 10 54 04.0 +4.3
KSH PP PP 10 55 55.8 +2.5
KSH S S 11 00 45.3 +3.3
KSH pmax pmax
comp=Z,9.0nm,0.7s
KSH pmax pmax
comp=Z,130nm,5.6s
KSH LR LR
comp=Z,130nm,5.4s
KSH LR LR
comp=Z,160nm,4.9s
KSH LR LR
comp=Z,310nm,8.2s
AAK Ala-Archa 47.99 296 P P 10 54 00.1 +0.1
SNR=7.0
AAK Ala-Archa 47.99 296 P P 10 53 59.0 -0.9
AAK IAmb IAmb 10 54 00.8
comp=Z,7.8nm,0.8s
AAK Ala-Archa 47.99 296 ceP P 10 53 59.6 -0.3
AAK pmax pmax
comp=Z,9.0nm,0.8s
BRVK Borovoye 48.08 311 P P 10 53 59.9 -0.4
BRVK IAmb IAmb 10 54 01.3
comp=Z,7.5nm,0.8s
BRVK Borovoye 48.08 311 ceP P 10 53 59.8 -0.4
BRVK pmax pmax
comp=Z,9.0nm,0.9s
UCH Uchtor 48.10 296 P P 10 54 02.0 +0.8
SNR=5.4
EKS2 Erkin-Say 48.48 297 P P 10 54 04.0 +0.3
SNR=5.9
AML Almayashu 48.71 296 P P 10 54 06.3 +0.6
SNR=12
IL31 49.22 33 P P 10 54 09.9 +1.2
ILAR Eielson Array 49.22 33 P P 10 54 10.0 +1.2
comp=Z,1.2nm,0.7s,baz=268,slow=4.7,SNR=17
KK31 Karatay Array 50.61 298 P P 10 54 19.3 -0.3
KK31 IAmb IAmb 10 54 21.1
comp=Z,7.0nm,0.8s
KK31 Karatay Array 50.61 298 P P 10 54 19.3 -0.3

KK31 pmax pmax
comp=Z,7.0nm,0.8s
KKAR Karatay Array 50.61 298 P P 10 54 19.3 -0.3
KKAR IAmb IAmb 10 54 21.1
comp=Z,7.0nm,0.8s
KKAR Karatay Array 50.61 298 P P 10 54 19.3 -0.3
KKAR pmax pmax
comp=Z,7.0nm,0.8s
NIL Nilore 52.24 286 P P 10 54 31.6 -0.2
NIL Nilore 52.24 286 P P 10 54 31.7 -0.2
NIL pmax pmax
comp=Z,9.0nm,0.6s
SMRI Semarang 52.59 217 P P 10 54 32.5 -1.9
EPYK Eagle Plains 53.13 30 P P 10 54 39.8 +1.9
ARU Arti 53.84 317 P P 10 54 43.3 +0.2
ARU IAmb IAmb 10 54 43.8
comp=Z,6.9nm,0.6s
ARU Arti 53.84 317 *d* *i*P P 10 54 43.0 -0.1
ARU 10 56 45.8
ARU S S 11 02 00.4 -1.7
ARU pmax pmax
comp=Z,5.0nm,0.6s
INK Inuvik 53.87 27 P P 10 54 44.4 +1.3
comp=Z,2.5nm,0.6s,baz=297,slow=7.5,SNR=17
INK Inuvik 53.87 27 P P 10 54 44.2 +1.1
KBL Kabul 55.00 289 P P 10 54 51.1 -1.0
KBL IAmb IAmb 10 54 52.3
comp=Z,9.0nm,1.0s
KBL Kabul 55.00 289 P P 10 54 51.1 -1.0
KBL pmax pmax
comp=Z,9.0nm,1.0s
ABKAR Akbulak array 55.39 309 P P 10 54 54.2 -0.1
ABKAR IAmb IAmb 10 54 54.5
comp=Z,5.9nm,0.6s
C36M Paulatuk 56.81 25 P P 10 55 05.6 +1.5
C36M IAmb IAmb 10 55 06.2
comp=Z,7.3nm,0.7s
WB0 Warramunga Arr 58.25 185 P P 10 55 13.8 -0.8
PRGR Permogore 58.33 326 *e*P P 10 55 13.6 -1.2
WRAB Tennant Creek 58.42 185 *i*P P 10 55 16.6 +0.8
WRA Warramunga Arr 58.43 185 P P 10 55 15.3 -0.6
comp=Z,1.2nm,0.4s,baz=2.4,slow=6.9,SNR=2.0
WR0 Warramunga Arr 58.43 185 P P 10 55 15.7 -0.2
WR0 IAmb IAmb 10 55 21.9
comp=Z,6.8nm,1.3s
HRA Herat 60.06 292 P P 10 55 28.2 +0.8
KEV Kevo 61.23 338 P P 10 55 34.9 +0.5
KEV Kevo 61.23 338 P P 10 55 34.9 +0.5
KEV pmax pmax
comp=Z,52nm,1.4s
GEYT Alibeck 61.33 297 P P 10 55 35.6 -0.1
comp=Z,3.8nm,0.6s,baz=57,slow=5.5,SNR=6.1
RES Resolute Bay 61.54 14 P P 10 55 37.0 +0.7
RES IAmb IAmb 10 55 41.0
comp=Z,5.4nm,0.6s
RES Resolute Bay 61.54 14 P P 10 55 37.1 +0.7
RES pmax pmax
comp=Z,5.0nm,0.6s
ARCES ARCESS Array B 61.79 339 P P 10 55 38.5 +0.4
comp=Z,5.1nm,0.7s,baz=58,slow=8.2,SNR=23
ARE0 ARCESS Array S 61.79 339 P P 10 55 38.8 +0.6
ASAR Alice Springs 62.15 185 P P 10 55 41.0 -0.1
comp=Z,0.7nm,0.8s,baz=14,slow=9.9,SNR=9.0
YKA Yellowknife Ar 63.42 30 P P 10 55 49.9 +0.9
comp=Z,1.0nm,0.6s,baz=307,slow=6.4,SNR=24
FIA1 FINESS Array S 66.46 331 P P 10 56 08.7 +0.1
FINES FINESS Array B 66.46 331 P P 10 56 08.6 -0.1
comp=Z,7.0nm,0.4s,baz=43,slow=8.0,SNR=50
KBZ Khabaz 68.35 309 P P 10 56 21.1 +0.3
comp=Z,4.8nm,0.9s,baz=99,slow=3.3,SNR=4.8
KIV Kislovodsk 68.36 309 *e*P P 10 56 22.1 +1.2
KIV pmax pmax
comp=Z,33nm,1.0s
LTY Liberty 68.98 46 P P 10 56 26.5 +1.8
SUMG Summit 69.07 359 *i*P P 10 56 26.5 +1.3
comp=Z,18nm,0.9s
SUMG Summit 69.07 359 P P 10 56 26.3 +1.1
SUMG Summit 69.07 359 *i*P P 10 56 26.5 +1.3
SUMG pmax pmax
comp=Z,18nm,0.9s
GNI Garni 69.16 305 *i*P P 10 56 26.5 +0.4
UOSS Minazif 69.44 286 P P 10 56 28.0 +0.1
UOSS IAmb IAmb 10 56 28.6
comp=Z,5.1nm,0.7s
NC405 NORSAR Array S 71.72 336 P P 10 56 41.5 +0.5
AKASG Malin Array Be 71.81 321 P P 10 56 41.0 -0.6
comp=Z,3.2nm,0.5s,baz=47,slow=6.2,SNR=17
AKBB Malin Array Si 71.81 321 P P 10 56 41.4 -0.2
AKBB IAmb IAmb 10 56 42.0
comp=Z,7.6nm,0.8s
AKBB Malin Array Si 71.81 321 P P 10 56 41.4 -0.2
AKBB pmax pmax
comp=Z,8.0nm,0.8s
NC204 NORSAR Array S 71.89 336 P P 10 56 42.7 +0.6
NB2 NORSAR Subarra 71.93 336 P P 10 56 42.1 -0.2
comp=Z,7.1nm,0.6s,baz=41,slow=6.2
NOA NORSAR Array B 71.93 336 P P 10 56 42.4 +0.1
comp=Z,7.2nm,0.8s,baz=40,slow=6.0,SNR=25
KONO Kongsberg 73.52 336 P P 10 56 52.2 +0.7
KONO Kongsberg 73.52 336 P P 10 56 52.3 +0.7
KONO pmax pmax
comp=Z,22nm,1.4s
EGMT Eagleton 74.36 40 P P 10 56 58.7 +1.9
DLMT Dillon 74.59 44 P P 10 57 00.6 +2.4
DLMT IAmb IAmb 10 57 01.2
comp=Z,3.1nm,0.7s
NVAR Mina Array Bea 75.60 52 P P 10 57 07.7 +3.4
comp=Z,0.3nm,0.6s,baz=295,slow=6.0,SNR=5.2
KWP Kalwaria Pacla 75.66 323 P P 10 57 05.5 +1.4
KWP Kalwaria Pacla 75.66 323 P P 10 57 05.5 +1.4
KWP pmax pmax
comp=Z,21nm,1.3s
YHL Hebgen Lake 75.68 44 P P 10 57 07.8 +3.1
BUR08 Bucovina Ar. S 75.81 320 P P 10 57 05.6 +0.5
BUR08 IAmb IAmb 10 57 06.2
comp=Z,4.1nm,0.8s
BURAR Bucovina Array 75.82 320 ⇑P P 10 57 05.3 +0.2
BURAR Bucovina Array 75.82 320 ⇑P P 10 57 05.3 +0.2
TESR Tescani 75.83 319 ⇑P P 10 57 05.4 +0.4
YHH Holmes Hill 75.90 44 P P 10 57 08.1 +2.2
VRI Vrincioaia 76.21 318 ⇑P P 10 57 07.9 +0.5
VRI Vrincioaia 76.21 318 ⇑P P 10 57 07.9 +0.6
BR131 Keskin Array S 76.30 310 P P 10 57 07.8 -0.3
BR131 IAmb IAmb 10 57 09.7
comp=Z,5.9nm,1.0s
BR131 Keskin Array S 76.30 310 P P 10 57 07.8 -0.3
BR131 pmax pmax
comp=Z,6.0nm,1.0s
BRTR Keskin Array B 76.30 310 P P 10 57 07.8 -0.3
comp=Z,2.7nm,0.9s,baz=104,slow=3.9,SNR=9.2
BRTR Keskin Array B 76.30 310 *ce*P P 10 57 08.3 +0.2
BRTR pmax pmax
comp=Z,2.0nm,0.6s
RLMT Red Lodge 76.53 43 P P 10 57 11.5 +2.1
CRVS Cervenica-Dubn 76.76 323 *e*P P 10 57 08.7 -1.6
CRVS Cervenica-Dubn 76.76 323 *e*P P 10 57 08.7 -1.6
ARR Arges 77.64 319 ⇑P P 10 57 17.0 +1.7
PD31 Pinedale Array 77.94 44 P P 10 57 19.5 +2.2
PDAR Pinedale Array 77.94 44 P P 10 57 18.8 +1.5
comp=Z,0.9nm,0.6s,baz=255,slow=0.7,SNR=12
VYHS Vyhne 78.27 324 *e*P P 10 57 19.3 +0.6
VYHS Vyhne 78.27 324 *e*P P 10 57 19.3 +0.6
SOCY Socotra 78.56 276 P P 10 57 19.2 -1.7
GZR Gura Zlata 78.57 320 ⇓P P 10 57 20.7 +0.3
GZR Gura Zlata 78.57 320 ⇓P P 10 57 20.7 +0.3
CLL Collm 78.71 329 *i*P P 10 57 21.9 +0.9
CLL Collm 78.71 329 *i*P P 10 57 21.9 +0.9
ULM Lac du Bonnet 79.23 32 P P 10 57 23.7 -0.1
comp=Z,1.9nm,0.8s,baz=320,slow=7.2,SNR=5.1
KHC Kasperske Hory 80.13 327 *e*P P 10 57 29.0 +0.2
KHC Kasperske Hory 80.13 327 P P 10 57 29.7 +0.9
KHC Kasperske Hory 80.13 327 P P 10 57 29.7 +0.9
KHC pmax pmax
comp=Z,2.0nm,0.7s
VTS Vitosha 80.26 318 ⇑P P 10 57 29.0 -0.7
VTS Vitosha 80.26 318 P P 10 57 30.8 +1.1
VTS IAmb IAmb 10 57 31.2
comp=Z,4.3nm,0.7s
VTS Vitosha 80.26 318 ⇑P P 10 57 29.0 -0.8
GEC2 GERESS Array S 80.29 327 P P 10 57 30.3 +0.6
GERES GERESS Array B 80.29 327 P P 10 57 29.6 -0.2
comp=Z,1.5nm,0.5s,baz=40,slow=6.5,SNR=10
STAL STALIGIAL 82.71 326 P P 10 57 41.6 -0.8
STAL IAmb IAmb 10 57 41.9
comp=Z,6.6nm,0.7s
FUORN Ofenpass-Fuorn 83.48 327 P P 10 57 47.3 +0.7
ITM Ithomi 84.81 314 P P 10 57 53.1 -0.1
NRCA Norcia 85.16 323 P P 10 57 55.5 +0.6
NRCA IAmb IAmb 10 57 56.5
comp=Z,6.9nm,1.1s
TXAR Lajitas Array 90.69 51 P P 10 58 23.1 +1.7
comp=Z,0.3nm,0.7s,baz=296,slow=3.6,SNR=4.9
TORD Torodi Ar. Bea 114.79 313 PKiKP PKiKP 11 03 57.3 -1.0
comp=Z,0.2nm,0.5s,baz=14,slow=2.7,SNR=3.5
DBIC Dimbokro 123.76 315 PKP PKPdf 11 04 14.8 -0.8
comp=Z,2.1nm,0.7s,baz=35,slow=2.4,SNR=3.6
DBIC Dimbokro 123.76 315 PKPdf 11 04 15.1 -0.5
DBIC Dimbokro 123.76 315 PKIKP PKPdf 11 04 15.1 -0.5
LPAZ La Paz 147.49 54 PKPbc PKPbc 11 05 04.0 +1.4
comp=Z,0.8nm,0.6s,baz=223,slow=5.0,SNR=3.9

VIE 26 10:54:42.5±1.6,47°.27N×14°.97E,h0km,ml0.9/2,Error ellipse: s-maj=18.9km s-min=6.1km az=29.0 5 km SSE of Kraubath a.d. Mur Mining explosion.,Austria

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ARSA Arzberg 0.38 92 *e*Pg Pg 10 54 49.6 0.0
1.4nm,0.1s
ARSA Sg Sg 10 54 55.3 +0.8
1.5nm,0.1s
MOA Molln 0.75 321 Pg Pg 10 54 57.2 +0.3
0.2nm,0.1s

ATH 26 10:56:10.3,38°.65N×23°.58E,h6km±3km,ML1.4/5,Error ellipse: s-maj=3.3km s-min=0.9km az=66.0,Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MRKA Markates 0.06 4 P Pg 10 56 11.8 -0.2
MRKA S Sg 10 56 13.3 +0.1
MRKA AML AML 10 56 13.9
comp=N,4016μm,0.4s
MRKA AML AML 10 56 14.0
comp=E,4271μm,0.4s
LKR Lokris 0.46 271 P Pg 10 56 18.7 -0.5
VIL2 Platees 0.50 210 P Pb 10 56 20.9 -0.6
VIL2 S Sb 10 56 28.5 -0.5
VIL2 AML AML 10 56 35.1
comp=N,50μm,0.5s
VIL2 AML AML 10 56 36.4
comp=E,75μm,0.6s
AOS Alonnisos 0.57 24 P Pg 10 56 21.3 -0.1
AOS S Sg 10 56 29.0 +0.1
AOS AML AML 10 56 31.2
comp=E,52μm,0.5s
AOS AML AML 10 56 33.2
comp=N,53μm,0.4s
PROD Prodromos 0.66 234 P Pg 10 56 22.5 -0.5
NEO Neokhori 0.72 337 P Pg 10 56 24.3 +0.2
NEO S Sg 10 56 34.2 +0.7
NEO AML AML 10 56 38.7
comp=N,175μm,0.4s
NEO AML AML 10 56 38.7
comp=E,97μm,0.3s
XOR Xorichti 0.78 337 P Pg 10 56 25.2 -0.2
XOR S Sg 10 56 36.1 +0.6
XOR AML AML 10 56 39.9
comp=N,44μm,0.4s
XOR AML AML 10 56 40.2
comp=E,51μm,0.5s
VLY Voula,Athens 0.81 168 P Pg 10 56 25.5 -0.4
VLY S Sg 10 56 37.1 +0.7

NIED 26 10:57:00,37°.20N×141°.40E,h44km,Mw4.0 Best double couple: $M_0$1.06000×10^{15} NP1:ϕ_s28.00000°,δ68.00000°,λ97.00000°. NP2:ϕ_s190.00000°,δ23.00000°,λ74.00000°.
JMA 26 10:57:03.7±0.1,37°.16N×141°.35E,h49km±1km,M3.9
JMA Felt II J1.
IDC 26 10:57:04.4±1.6,37°.17N×141°.37E,h47km±16km,mb3.6/19,mb1 3.8/26,mb1mx3.6/61,mbtmp3.9/26,ML3.5/5,MS2.9/7,Ms1 2.9/7,ms1mx2.7/41,Error ellipse: s-maj=16.5km s-min=13.8km az=95.0
NEIC 26 10:57:04.6±1.0,37°.16N±0°.06×141°.43E±0°.08,h51km±8km,mb4.2/9,Error ellipse: s-maj=10.2km s-min=7.3km az=124.0
ISC 26 10:57:03.6±0.6,37°.16N±0°.04×141°.44E±0°.07,h39km±5km,n63,$\sigma 1^s 10$/69,mb3.9/25,Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JFK Kawauchi 0.50 294 P Pn 10 57 13.9 -0.4
JFK S Sn 10 57 20.9 -1.0
ONAJ Iwakimizuishiy 0.52 264 P Pn 10 57 14.2 -0.4
ONAJ S Sn 10 57 21.5 -0.9
JFFD Fukushimafurud 0.71 265 P Pn 10 57 16.6 -0.6
JFFD S Sn 10 57 25.5 -1.4
JMST Minamisoumatoc 0.72 322 P Pn 10 57 16.8 -0.4
JMST S Sn 10 57 26.1 -0.9
JMM Marumori 0.87 324 P Pn 10 57 19.1 -0.3
JMM S Sn 10 57 30.1 -0.8
JHO Hitachi 0.89 232 P Pn 10 57 18.7 -0.9
JHO S Sn 10 57 29.3 -2.0
JFT Otama 0.95 292 P Pn 10 57 20.7 +0.2
JFT S Sn 10 57 32.8 -0.1
JIO Ouri 1.29 357 P Pn 10 57 25.1 0.0
JIO S Sn 10 57 40.2 -1.0
JOU Okura 1.35 333 P Pn 10 57 26.0 0.0
JFY Yanaizu 1.41 281 P Pn 10 57 26.7 -0.1
JYS Shirataka 1.52 314 P Pn 10 57 28.9 +0.6
MJAR Matsushiro Arr 2.67 258 P Pn 10 57 44.5 +0.5
2.3nm,0.3s,baz=79,slow=16,SNR=91
MJAR S Sn 10 58 17.5 +2.3
1.8nm,0.3s,baz=14,slow=12,SNR=6.3
MJAR LR LR 10 59 02.9
comp=Z,244nm,18.8s,baz=65,slow=46
MAJO Matsushiro 2.67 258 Pn 10 57 45.0 +0.9
MAT Matsushiro 2.67 258 P Pn 10 57 45.0 +0.9
MAT S Sn 10 58 19.9 +4.7
MJB9 Matsu-Tunnel 2.67 258 Pn 10 57 45.0 +0.8
INU Inuyama 4.01 244 Pn 10 58 03.6 +1.1
JHJ2 Mitsune 4.25 199 Pn Pn 10 58 06.7 +0.8
JHJ2 Sn Sn 10 58 55.9 +1.6
JHJ Hachijo jima 2 4.26 199 P Pn 10 58 06.3 +0.4
32nm,0.3s,baz=142,slow=23,SNR=20
JHJ S Sn 10 58 53.1 -1.1
40nm,0.3s,baz=284,slow=23,SNR=5.8
ERM Erimo 5.03 15 Pn Pn 10 58 17.5 +1.1
ERM Sn Sn 10 59 16.9 +3.7
ASAJ Asahikawa 7.00 7 P Pn 10 58 43.2 -0.4
1.9nm,0.3s,baz=241,slow=12,SNR=11
ASAJ S Sn 11 00 02.8 +0.9
0.7nm,0.3s,baz=94,slow=19,SNR=2.9
ASAJ LR LR 11 01 11.9
comp=Z,31nm,22.0s,baz=148,slow=35
JKA Kamikawa-asahi 7.00 7 Pn 10 58 43.2 -0.4
JKA Sn 11 00 02.8 +0.9
JNU Nakatsue 9.54 248 LR LR 11 03 14.2
comp=Z,72nm,19.7s,baz=152,slow=39
USRK Ussuriysk Ar. 10.04 317 P Pn 10 59 25.2 0.0
baz=123,slow=15,SNR=2.4
JCJ Chichijima 10.06 176 P Pn 10 59 25.8 +0.3
4.4nm,0.3s,baz=344,slow=20,SNR=5.7
JCJ S Sn 11 01 08.3 -8.7
4.3nm,0.3s,baz=294,slow=19,SNR=3.2
KSRS Korea Array 10.78 276 P Pn 10 59 36.8 +1.5
0.1nm,0.3s,baz=90,slow=14,SNR=5.6
KSRS LR LR 11 03 29.3
comp=Z,76nm,19.2s,baz=76,slow=36
KLR Kul'dur 13.97 333 P Pn 11 00 18.8 0.0
0.1nm,0.3s,baz=130,slow=16,SNR=2.8
PETK Petropavlovsk- 19.57 30 LR LR 11 08 17.6
comp=Z,27nm,19.8s,baz=49,slow=34
MA2 Magadan 23.22 12 P P 11 02 07.2 +0.3
1.9nm,0.5s,baz=238,slow=5.0,SNR=5.3
MA2 LR LR 11 11 27.6
comp=Z,28nm,18.8s,baz=108,slow=37
MA2 Magadan 23.22 12 P P 11 02 07.3 +0.3
SEY Seymchan 26.66 11 P P 11 02 38.5 +0.1
0.4nm,0.3s,baz=232,slow=19,SNR=5.0
SONM Songino Array 27.73 304 P P 11 02 48.2 -0.2
1.4nm,0.5s,baz=104,slow=8.7,SNR=14
H11N2 WAKE ISLAND Hy 28.19 121 T T 11 32 29.6
baz=314,slow=75
H11N1 WAKE ISLAND Hy 28.20 121 T T 11 32 21.7
baz=314,slow=75
H11N3 WAKE ISLAND Hy 28.21 121 T T 11 32 36.1
baz=314,slow=75
H11S1 WAKE ISLAND Hy 28.91 123 T T 11 33 23.8
baz=316,slow=76
H11S3 WAKE ISLAND Hy 28.91 123 T T 11 33 22.7
baz=316,slow=76
H11S2 WAKE ISLAND Hy 28.92 123 T T 11 33 29.2
baz=316,slow=76
TIXI Tiksi 35.17 353 P P 11 03 52.6 -0.6
0.5nm,0.3s,baz=124,slow=3.6,SNR=3.7
ZAA0 Zalesovo Array 41.85 312 P P 11 04 48.7 -0.7
ZAA0 IAmb IAmb 11 04 52.3
comp=Z,2.2nm,0.8s
ZALV Zalesovo Beam 41.85 312 P P 11 04 49.2 -0.2
comp=Z,1.5nm,0.5s,baz=78,slow=6.5,SNR=8.5
MK31 Makanchi Array 44.07 302 P P 11 05 07.3 -0.4
MKAR Makanchi Array 44.07 302 P P 11 05 07.3 -0.3
comp=Z,0.8nm,0.5s,baz=85,slow=12,SNR=15
MAKZ Makanchi 44.28 302 P P 11 05 08.9 -0.4
MAKZ IAmb IAmb 11 05 13.9
comp=Z,2.6nm,1.1s
KURK Kurchatov 45.87 308 P P 11 05 21.0 -0.8
KURK IAmb IAmb 11 05 23.0
comp=Z,4.1nm,0.8s
KURBB Kurchatov Arra 45.94 308 P P 11 05 21.6 -0.8
comp=Z,3.3nm,0.6s,baz=85,slow=8.4,SNR=23
ILAR Eielson Array 49.37 32 P P 11 05 49.5 +0.6
comp=Z,0.9nm,0.6s,baz=268,slow=6.1,SNR=14
BVAR Borovoye Array 50.50 312 P P 11 05 57.2 -0.3
comp=Z,0.7nm,0.4s,baz=68,slow=5.4,SNR=5.5
BRVK Borovoye 50.56 312 P P 11 05 56.6 -1.3
BRVK IAmb IAmb 11 05 58.3
comp=Z,3.3nm,0.8s
INK Inuvik 54.26 27 P P 11 06 25.0 -0.1
comp=Z,1.0nm,1.0s,baz=260,slow=1.8,SNR=3.9
ARU Arti 56.28 318 P P 11 06 39.6 -0.2
comp=Z,1.7nm,0.2s,baz=178,slow=5.3,SNR=4.1
ARU Arti 56.28 318 P P 11 06 39.7 -0.2
WR0 Warramunga Arr 57.19 188 P P 11 06 46.5 -0.1
WR0 IAmb IAmb 11 06 58.9
comp=Z,4.1nm,1.2s
WRA Warramunga Arr 57.19 188 P P 11 06 46.0 -0.7
comp=Z,0.3nm,0.4s,baz=3.5,slow=7.1,SNR=5.7
ABKAR Akbulak array 57.88 310 P P 11 06 51.0 -0.3
AKTO Aktyubinsk 58.61 312 P P 11 06 55.4 -1.0
comp=Z,1.6nm,0.7s,baz=72,slow=14,SNR=6.3
ASAR Alice Springs 60.92 188 P P 11 07 12.4 0.0
comp=Z,0.6nm,1.0s,baz=3.3,slow=6.5,SNR=4.1
YKA Yellowknife Ar 63.69 30 P P 11 07 30.0 -0.5
comp=Z,0.4nm,0.8s,baz=304,slow=6.6,SNR=7.3
GEYT Alibeck 63.79 299 LR LR 11 35 26.2
comp=Z,50nm,20.7s,baz=245,slow=36
FINES FINESS Array B 68.71 332 P P 11 08 02.5 -0.3
comp=Z,2.0nm,0.8s,baz=49,slow=8.6,SNR=4.2
NOA NORSAR Array B 74.08 337 P P 11 08 35.2 0.0
comp=Z,1.2nm,0.9s,baz=45,slow=10.0,SNR=3.5
AKASG Malin Array Be 74.21 322 P P 11 08 35.2 -0.9
comp=Z,1.0nm,0.4s,baz=48,slow=5.8,SNR=3.5
NVAR Mina Array Bea 74.89 53 P P 11 08 42.2 +1.6
comp=Z,0.1nm,0.4s,baz=311,slow=5.9,SNR=2.8
TXAR Lajitas Array 90.02 52 P P 11 10 00.0 +0.6
comp=Z,0.2nm,0.6s,baz=308,slow=3.3,SNR=3.3

IDC 26 11:04:21.0±4.1,36°.21N×70°.72E,h169km±36km,mb3.4/10,mb1 3.5/14,mb1mx3.2/53,mbtmp4.0/14,Error ellipse: s-maj=28.0km s-min=17.0km az=32.0
BJI 26 11:04:23.9±0.0,36°.49N×70°.64E,h214km,mB4.6/8,mb4.1/8
NEIC 26 11:04:24.3±2.4,36°.49N±0°.06×70°.7E±0°.1,h195km±5km,mb4.1/11,Error ellipse: s-maj=11.7km s-min=8.2km az=88.0
NNC 26 11:04:27.4±5.6,36°.83N×70°.36E,h148km±93km,mb3.5,mpv4.1,Error ellipse: s-maj=47.4km s-min=34.2km az=29.0
ISC 26 11:04:24.0±0.5,36°.52N±0°.04×70°.87E±0°.05,h188km,n73,$\sigma 2^s 01$/90,mb3.9/15,6C-4D,Hindu Kush region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KBL Kabul 2.48 217 Pn 11 05 07.0 -0.1
KBL Sn Sn 11 05 38.9 -1.7
CEP Cherat 2.83 162 P Pn 11 05 12.4 +1.2
CEP S Sn 11 05 48.0 +0.1
CHCP Chirah Chowk 3.47 145 P Pn 11 05 20.6 +1.8
NIL Nilore 3.47 145 Pn 11 05 20.7 +1.9
NIL Sn Sn 11 06 04.1 +2.4
THW Thamme Wali 3.79 169 ⇓P Pn 11 05 23.4 +0.6
SARP Sargodha 4.83 161 ⇓P Pn 11 05 36.0 0.0
TAS Tashkent 4.95 346 Pn Pn 11 05 38.8 +1.3
TAS Sn Sn 11 06 34.0 -1.2
KSH Kashi 5.02 52 P Pn 11 05 36.3 -2.1
KSH S Sn 11 06 29.5 -7.5
KSH pmax pmax
comp=Z,9.0nm,0.7s
KSH pmax pmax
comp=Z,170nm,5.4s
KSH LR LR
comp=N,350nm,4.8s
KSH LR LR
comp=E,340nm,4.8s
KSH LR LR
comp=Z,260nm,6.3s
THN Thein Dam 5.72 134 *e*P Pn 11 05 48.0 +0.6
THN *e*S Sn 11 06 52.0 -1.1
AML Almayashu 6.01 21 P Pn 11 05 52.9 +1.4
SNR=110
DHRM DHARAMSHALA 6.19 132 *e*P Pn 11 05 54.8 +0.9
DHRM *e*S Sn 11 07 03.1 -1.6
DHRM IAML 11 07 05.9
comp=E,372nm,0.3s
DHRM IAML 11 07 07.3
comp=N,245nm,0.4s
UCH Uchtor 6.36 25 P Pn 11 05 57.4 +1.3
SNR=24
KZA Kyzart 6.50 30 P Pn 11 06 00.5 +2.5
SNR=6.1
EKS2 Erkin-Say 6.53 19 P Pn 11 05 59.9 +1.9
SNR=16
KK31 Karatay Array 6.58 358 ⇓P Pn 11 05 58.7 +0.1
comp=N,4.7nm,0.3s,baz=179,slow=12,SNR=159
KK31 ⇓S Sn 11 07 09.6 -3.7
comp=N,51nm,0.4s,baz=186,slow=22,SNR=28
KK31 Karatay Array 6.58 358 Pn 11 05 59.6 +1.0
KK31 Sn Sn 11 07 11.3 -2.1
KKAR Karatay Array 6.58 358 Pn 11 05 59.5 +0.9
KKAR Sn Sn 11 07 11.1 -2.2
AAK Ala-Archa 6.72 24 P Pn 11 06 02.4 +1.9
comp=N,4.5nm,0.3s,baz=159,slow=4.9,SNR=44
AAK S Sn 11 07 17.6 +0.7
comp=N,11nm,0.3s,baz=2.3,slow=19,SNR=38
AAK Ala-Archa 6.72 24 P Pn 11 06 02.6 +2.0
SNR=14
AAK Ala-Archa 6.72 24 P Pn 11 06 02.3 +1.9
comp=N,5.6nm,0.3s
AAK S Sn 11 07 16.8 -0.1
comp=N,64nm,0.5s
AAK Ala-Archa 6.72 24 Pn 11 06 02.4 +1.9
AAK Sn Sn 11 07 17.2 +0.3
BHK Bhakra 6.87 136 *e*x x 11 07 19.4
KBK Karagaybulak 6.89 26 P Pn 11 06 04.9 +2.1
SNR=6.5
ULHL Ulahol 7.07 34 P Pn 11 06 08.5 +3.3
SNR=7.0
CHMS Chumysh 7.12 24 P Pn 11 06 07.8 +2.1
SNR=7.7
CHMS Chumysh 7.12 24 ⇑P Pn 11 06 07.4 +1.6
comp=N,6.8nm,0.5s
CHMS ⇑S Sn 11 07 25.6 -0.7
comp=N,60nm,0.6s
USP Ospenovka 7.29 21 P Pn 11 06 09.2 +1.2
SNR=8.9
SMLA Simla 7.51 134 *e*P Pn 11 06 10.9 0.0
SMLA *e*S Sn 11 07 31.9 -3.6
SMLA IAML 11 07 34.5
comp=N,76nm,0.2s
SMLA IAML 11 07 36.4
comp=E,66nm,0.2s
JOSI Joshimath 9.38 127 *e*P Pn 11 06 35.5 -0.1
JOSI *e*S Sn 11 08 15.4 -5.1
JOSI IAML 11 08 18.9
comp=N,61nm,0.2s
JOSI IAML 11 08 19.5

comp=E,70nm,0.3s
KUDL Kundal 9.61 149 eP Pn 11 06 27.5 -11
KUDL eS Sn 11 08 04.8 -21
SONA Sohna 9.78 146 eS Sn 11 08 23.7 -5.9
MAKZ Makanchi 13.20 35 Pn 11 07 25.3 +1.1
MK31 Makanchi Array 13.34 36 P 11 07 27.5 -1.5
MKAR Makanchi Array 13.34 36 P Pn 11 07 27.1 +1.2
comp=E,0.3nm,0.3s,baz=220,slow=10.0,SNR=12
DANN Dangsing 13.59 123 eP Pn 11 07 30.1 +0.5
comp=E,33nm,0.6s
GKN Gorkha 14.41 122 eP P 11 07 41.0 -0.3
comp=E,29nm,0.2s
WMQ Urumqi 14.77 55 eP P 11 07 46.3 +1.2
WMQ LR LR
comp=E,240nm,6.9s
WMQ LR LR
comp=E,190nm,7.7s
WMQ LR LR
comp=E,72nm,7.7s
AB31 Akbulak array 15.01 331 ⇑P Pn 11 07 45.4 -1.3
comp=E,3.1nm,0.5s,baz=142,slow=11,SNR=54
AB31 ⇑S Sn 11 10 27.1 -7.2
comp=E,3.0nm,0.7s,baz=164,slow=20,SNR=6.6
ABKAR Akbulak array 15.01 331 P Pn 11 07 45.8 -0.9
KURBB Kurchatov Arra 15.13 19 P Pn 11 07 48.4 -0.5
comp=E,0.2nm,0.3s,baz=204,slow=11,SNR=7.7
PKIN Phulchoki 15.20 122 eP P 11 07 51.5 +1.4
comp=E,18nm,0.5s
PKI Pulchoki 15.21 122 eP P 11 07 50.9 +0.6
comp=E,22nm,0.5s
KURK Kurchatov 15.24 19 P P 11 07 50.3 +0.2
GUN Gumba 15.32 120 eP P 11 07 52.1 +0.5
comp=E,12nm,0.4s
JIRN Jiri 15.69 120 eP P 11 07 56.9 +1.2
comp=E,62nm,0.4s
RAMN Ramite 16.42 121 eP Pn 11 08 04.3 +0.1
comp=E,14nm,0.4s
BVAR Borovoye Array 16.50 359 P Pn 11 08 06.2 +1.5
comp=E,2.0nm,0.3s,baz=171,slow=10,SNR=23
BRVK Borovoye 16.54 359 P Pn 11 08 05.8 +0.6
BRVK IAmb IAmb 11 08 09.7
comp=Z,6.9nm,0.6s
AKTO Aktyubinsk 16.71 330 P Pn 11 08 07.5 +0.3
comp=Z,2.7nm,0.3s,baz=138,slow=9.3,SNR=51
AKTO Aktyubinsk 16.71 330 ⇓P Pn 11 08 06.7 -0.4
comp=Z,25nm,0.9s
AKTO ⇑S S 11 11 10.3 -0.5
comp=Z,5.1nm,0.8s
TAPN Taplejung 16.95 118 eP Pn 11 08 11.9 +1.3
comp=Z,14nm,0.5s
UOSS Minazif 17.07 232 P Pn 11 08 09.0 -1.5
UOSS IAmb IAmb 11 08 13.3
comp=Z,5.3nm,0.7s
ZAA0 Zalesovo Array 19.94 25 P P 11 08 42.6 +1.3
ZALV Zalesovo Beam 19.94 25 P P 11 08 42.8 +1.5
comp=Z,9.3nm,0.7s,baz=222,slow=11,SNR=28
ARU Arti 21.57 341 P P 11 08 60.0 +1.4
comp=Z,1.6nm,0.2s,baz=139,slow=21,SNR=4.9
ARU Arti 21.57 341 P P 11 08 57.5 -1.1
ARU IAmb IAmb 11 09 01.5
comp=Z,4.3nm,0.6s
LZH Lanzhou 26.51 81 ⇑P P 11 09 45.0 +0.7
LZH pP pP 11 10 24.5 +0.9
LZH PP PnPn 11 10 39.3 +2.8
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,62nm,4.7s
HHC Hu-ho-hao-te 31.86 70 eP P 11 10 30.5 -0.9
HHC pmax pmax
comp=Z,6.0nm,0.9s
HHC pmax pmax
comp=Z,110nm,4.8s
FINES FINESS Array B 37.40 326 P P 11 11 19.1 +0.6
comp=Z,0.4nm,0.4s,baz=106,slow=7.8,SNR=4.8
ARCES ARCESS Array B 41.08 338 P P 11 11 50.0 +1.2
comp=Z,3.3nm,0.9s,baz=82,slow=8.7,SNR=3.8
NOA NORSAR Array B 44.30 323 P P 11 12 14.5 -0.3
comp=Z,0.2nm,0.4s,baz=99,slow=7.9,SNR=2.5
ZCCA Zocca 45.35 299 P P 11 12 25.5 +2.1
TIXI Tiksi 45.79 22 P P 11 12 27.9 +1.5
TOA0 Torodi Ar. Sit 65.61 269 P P 11 14 46.7 -1.4
TOA0 IAmb IAmb 11 14 54.7
comp=Z,4.2nm,1.4s
TORD Torodi Ar. Bea 65.61 269 P P 11 14 46.0 -2.1
comp=Z,0.6nm,0.5s,baz=49,slow=6.2,SNR=10
INK Inuvik 73.90 9 P P 11 15 38.9 +1.2
comp=Z,0.8nm,0.8s,baz=330,slow=4.3,SNR=3.0
INK Inuvik 73.90 9 P P 11 15 39.5 +1.7
YKA Yellowknife Ar 81.23 3 P P 11 16 19.1 +0.7
comp=Z,0.3nm,0.5s,baz=344,slow=5.2,SNR=7.9
WB0 Warramunga Arr 82.01 122 P P 11 16 22.4 -0.8
WB0 IAmb IAmb 11 16 36.2
comp=Z,4.4nm,1.3s
WRA Warramunga Arr 82.09 122 P P 11 16 22.6 -1.1
comp=Z,0.5nm,0.5s,baz=324,slow=4.9,SNR=10
WB2 Warramunga Arr 82.10 122 P P 11 16 22.6 -1.0
WB2 IAmb IAmb 11 16 23.1
comp=Z,4.9nm,1.1s
WR0 Warramunga Arr 82.24 122 P P 11 16 23.2 -1.2
WR0 IAmb IAmb 11 16 37.0
comp=Z,7.8nm,1.5s
ASAR Alice Springs 84.36 125 P P 11 16 34.1 -1.1
comp=Z,0.5nm,0.5s,baz=308,slow=4.7,SNR=13

IDC 26 11:16:49.9±1.9, 36°.53N×141°.68E, h0km, mb3.3/4, mb1 3.4/6, mb1mx3.3/37, mbtmp3.4/6, ML2.8/2, Error ellipse: s-maj=39.7km s-min=21.7km az=62.0
JMA 26 11:16:54.9±0.1, 36°.63N×141°.44E, h48km±3km, M3.1
ISC 26 11:16:50.8±2.1, 36°.56N±0°.04×141°.54E±0°.07, h6km±13km, n25, σ0°.77/30, mb3.3/4, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JHO Hitachi 0.78 274 P Pn 11 17 08.3 0.0
JHO S Sn 11 17 18.8 -1.6
JHYU Hitachinakayam 0.80 255 P Pn 11 17 09.1 +0.6
JHYU S Sn 11 17 19.9 -0.8
ONAJ Iwakimizuishiy 0.80 313 P Pn 11 17 08.4 -0.3
ONAJ S Sb 11 17 18.1 -0.3
JFFD Fukushimafurud 0.95 305 P Pn 11 17 10.4 -0.2
JFK Kawauchi 0.97 327 P Pn 11 17 10.6 -0.4
JFK S Sb 11 17 22.8 -0.2
JFT Otama 1.36 315 P Pg 11 17 17.3 +0.5
JFT S Sn 11 17 33.8 -0.8
JMM Marumori 1.44 336 P Pn 11 17 17.3 -0.1
JAG Ashikaga 1.68 266 P Pb 11 17 21.8 -0.4
JAG S Sn 11 17 42.7 +0.1
JFY Yanaizu 1.69 301 P Pb 11 17 22.6 +0.2
JFY S Sb 11 17 44.2 +0.2
JKT Katashina 1.85 277 P Pb 11 17 24.7 -0.4
JIO Ouri 1.90 356 P Pn 11 17 23.5 -0.2
JOU Okura 1.94 339 P Pb 11 17 25.7 -0.8
JOU S Sn 11 17 48.8 -0.1
MJAR Matsushiro Arr 2.68 271 Pn Pn 11 17 36.0 +1.5
1.1nm,0.3s,baz=96,slow=9.3,SNR=56
MJAR Sn Sb 11 18 11.5 -0.8
1.1nm,0.3s,baz=148,slow=10,SNR=10
MAT Matsushiro 2.68 271 P Pb 11 17 37.0 -2.2
MAT S Sn 11 18 07.4 +0.1
JHJ Hachijo jima 2 3.72 203 Pn Pn 11 17 47.9 -0.8
2.6nm,0.3s,baz=59,slow=18,SNR=3.2
JHJ Sn Sn 11 18 33.1 +0.2
5.0nm,0.3s,baz=323,slow=5.1,SNR=3.8
H11N2 WAKE ISLAND Hy 27.82 120 T T 11 52 02.4
baz=313,slow=75,SNR=15
H11N1 WAKE ISLAND Hy 27.83 120 T T 11 52 03.3
baz=313,slow=75,SNR=14
H11N3 WAKE ISLAND Hy 27.84 120 T T 11 52 04.1
baz=313,slow=75,SNR=11
SONM Songino Array 28.14 305 P P 11 22 44.7 +1.1
0.2nm,0.4s,baz=106,slow=11,SNR=2.7
H11S1 WAKE ISLAND Hy 28.52 122 T T 11 52 59.7
baz=314
H11S3 WAKE ISLAND Hy 28.52 122 T T 11 52 56.7
baz=314
H11S2 WAKE ISLAND Hy 28.54 122 T T 11 53 03.2
baz=314
MKAR Makanchi Array 44.46 303 P P 11 25 02.8 +0.3
0.2nm,0.7s,baz=84,slow=9.2,SNR=3.0
WRA Warramunga Arr 56.60 188 P P 11 26 34.6 +0.1
0.3nm,0.5s,baz=7.5,slow=7.5,SNR=5.5
ASAR Alice Springs 60.33 188 P P 11 27 00.6 +0.1
0.2nm,0.8s,baz=1.3,slow=5.5,SNR=3.2

DNK 26 11:57:05.2±4.4, 51°.42N×15°.75E, h15km±271km, ML2.3, Hypocentre not reviewed by the ISC
VIE 26 11:57:06.5±1.3, 51°.51N×16°.03E, h0km, mb2.4/5, ml2.9/6, Error ellipse: s-maj=14.8km s-min=2.1km az=57.0 82 km NW of Wroclaw Suspected Mining induced.
BGR 26 11:57:07.7±0.7, 51°.53N×16°.03E, h1km, ML3.0/8, Error ellipse: s-maj=10.0km s-min=4.4km az=36.0
IPEC 26 11:57:07.3±0.3, 51°.51N×16°.06E, h0km, ML2.4/4, Error ellipse: s-maj=3.3km s-min=1.6km az=63.0
PRU 26 11:57:08.1±0.0, 51°.51N×16°.00E, h0km
IDC 26 11:57:08.5±1.2, 51°.50N×15°.92E, h0km, mb1 3.4/4, mb1mx3.1/43, mbtmp3.2/4, ML2.5/3, Error ellipse: s-maj=15.8km s-min=8.9km az=137.0
ISC 26 11:57:05.4±0.8, 51°.57N±0°.03×16°.06E±0°.02, h0km, n50, σ1°.22/84, Poland

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSP Ksiaz 0.74 169 ePg Pb 11 57 20.9 -0.3
KSP eSg Sb 11 57 30.5 -1.3
KSP Ksiaz 0.74 169 ePg Pb 11 57 20.9 -0.3
KSP eSg Sb 11 57 30.6 -1.3
CHVC Chvalec 0.98 180 ePG Pb 11 57 25.5 +0.2
CHVC eSG Sb 11 57 37.7 -1.1
comp=Z,76nm,0.5s
OSTC Ostas 1.02 175 ePG Pb 11 57 26.2 +0.3
OSTC eSG Sb 11 57 39.2 -0.6
comp=Z,104nm,0.4s
UPC Upice 1.06 182 ePG Pb 11 57 26.4 -0.3
UPC eSG Sb 11 57 40.5 -0.6
comp=Z,113nm,0.4s
DPC Dobruska-Polom 1.23 172 ePG Pb 11 57 29.8 +0.3
DPC eSG Sb 11 57 45.4 -0.6
comp=Z,91nm,0.5s
DPC Dobruska-Polom 1.23 172 ePg Pg 11 57 29.4 +0.5
BRG Berggiesshubel 1.50 243 PN Pn 11 57 33.7 +0.1
BRG PG Pg 11 57 34.7 +0.5
BRG SG Sn 11 57 54.4 +0.5
118nm,0.4s
BRG Berggiesshubel 1.50 243 ePn Pn 11 57 33.6 -0.1
BRG eSg Sg 11 57 54.0 +0.4
KRLC Kraliky 1.56 163 ePG Pn 11 57 35.0 +0.5
KRLC eSG Sn 11 57 56.2 +0.8
comp=Z,74nm,0.4s
PRA Prague 1.82 215 eSG Sg 11 58 03.4 -0.5
comp=Z,76nm,1.1s
GOPC GO Pecny, Ondr 1.84 207 ePG Pb 11 57 40.2 +0.2
GOPC eSG Sg 11 58 04.0 -0.6
comp=Z,34nm,0.5s
PRU Pruhonice 1.85 212 ePG Pb 11 57 40.3 +0.2
PRU eSG Sg 11 58 04.4 -0.5
comp=Z,36nm,0.3s
CLL Collm 1.93 263 i Pn Pn 11 57 40.1 +0.6
CLL ePg Pb 11 57 43.0 +1.5
CLL i 11 57 47.0
CLL e 11 58 04.0
CLL eSg Sg 11 58 09.0 +1.5
comp=Z,31nm,0.5s
CLL Collm 1.93 263 ePn Pn 11 57 40.0 +0.5
MORC Moravsky Berou 2.02 152 ePN Pn 11 57 41.6 +0.8
MORC eSG Sb 11 58 08.8 0.0
MORC Moravsky Berou 2.02 152 ePn Pn 11 57 41.5 +0.6
MORC Moravsky Berou 2.02 152 ePn Pn 11 57 41.6 +0.8
baz=332
MORC eSg Sb 11 58 08.8 0.0
comp=Z,31nm,0.4s,baz=332
OKC Ostrava-Krasne 2.18 142 ePG Pb 11 57 46.6 +0.9
OKC eSG Sg 11 58 16.1 +0.7
comp=Z,54nm,0.7s
VRAC Vranov 2.29 171 ePN Pn 11 57 45.3 +0.9
VRAC eSG Sg 11 58 17.1 -1.8
VRAC Vranov 2.29 171 Pn Pn 11 57 46.2 +1.8
comp=Z,0.6nm,0.3s,baz=284,slow=20,SNR=3.2
VRAC Lg Lg 11 58 19.4
comp=Z,7.8nm,0.3s,baz=71,slow=22,SNR=11
VRAC Vranov 2.29 171 ePn Pn 11 57 45.3 +0.9
baz=351
VRAC eSg Sg 11 58 17.0 -1.8
comp=Z,20nm,0.4s,baz=351
PBCC Pribram 2.30 216 ePG Pb 11 57 48.9 +1.2
PBCC eSG Sg 11 58 18.8 -0.4
TREC Trest 2.31 189 eSG Sg 11 58 18.9 -0.5
comp=Z,29nm,0.6s
KRUC Moravsky 2.52 175 ePN Pn 11 57 48.5 +0.9
KRUC eSG Sg 11 58 24.1 -2.2
KRUC Moravsky 2.52 175 ePn Pn 11 57 48.5 +0.9
baz=355
KRUC eSg Sg 11 58 24.0 -2.2
comp=Z,21nm,0.5s,baz=355
TANN Tannenbergstha 2.55 245 ePn Pn 11 57 48.5 +0.4
NKC Novy Kostel 2.65 241 ePN Pn 11 57 50.3 +0.9
NKC ePG Pb 11 57 54.4 +0.7
NKC eSG Sg 11 58 31.3 +0.8
comp=Z,71nm,0.4s
OJC Ojcow 2.72 118 ePg Pg 11 57 58.4 +0.8
OJC eSg Sg 11 58 34.4 +1.5
JAVC Velka Javorina 2.90 159 eSG Sg 11 58 36.3 -2.3
JAVC Velka Javorina 2.90 159 eSg Sg 11 58 36.3 -2.3
comp=Z,11nm,0.5s,baz=339
KHC Kasperske Hory 2.91 214 ePN Pn 11 57 53.7 +0.7
KHC ePG Pb 11 57 58.8 +0.6
KHC eSN Sn 11 58 28.0 -0.7
KHC eSG Sg 11 58 37.5 -1.4
comp=Z,13nm,0.3s
MOX Moxa 2.95 253 ePn Pn 11 57 54.8 +1.2
ROTZ Rotzenmuhle 3.04 235 ePn Pn 11 57 55.2 +0.4
GEC2 GERESS Array S 3.12 210 ePn Pn 11 57 57.1 +1.1
GERES GERESS Array B 3.12 210 Pn Pn 11 57 57.3 +1.4
comp=Z,1.2nm,0.3s,baz=31,slow=13,SNR=24
GERES Pg Pb 11 58 03.6 +1.8
comp=Z,3.0nm,0.3s,baz=28,slow=18,SNR=29
GERES Lg Lg 11 58 44.3
comp=Z,3.0nm,0.3s,baz=24,slow=29,SNR=6.8
WET Wettzell 3.17 221 ePn Pn 11 57 57.1 +0.6
LANS Liptovska Anna 3.26 137 eSG Sg 11 58 51.7 +1.7
MODS Modra-Piesok 3.29 166 ePG Pg 11 58 08.9 +0.4
MODS eSG Sg 11 58 54.1 +3.0
ZST Bratislava 3.44 168 eSG Sg 11 58 55.1 -0.8
CLZ Clausthal 3.55 277 ePn Pn 11 58 02.6 +0.8
VYHS Vyhne 3.56 149 ePN Pn 11 58 02.9 +1.0
VYHS ePG Pg 11 58 16.2 +2.6
VYHS eSG Sg 11 59 02.1 +2.4
GRF Grafenberg Arr 3.61 241 ePn Pn 11 58 03.2 +0.7
BSD Bornholm Skovb 3.62 349 i P Pn 11 58 02.7 +0.1
BSD i S Sn 11 58 42.6 -3.4
BSD Bornholm Skovb 3.62 349 e 11 58 02.4
baz=186,slow=12
BSD i P 11 58 02.7
BSD i S 11 58 42.6
BSD IAML 11 58 46.6
comp=Z,3.3nm,0.3s
CONA Conrad Observa 3.65 182 ePn Pn 11 58 03.6 +0.5
comp=Z,0.5nm,0.2s
MOA Molln 3.90 198 ePn Pn 11 58 07.6 +1.0
comp=Z,1.8nm,0.3s
ARSA Arzberg 4.34 185 Pg Pg 11 58 28.4 0.0
comp=Z,2.1nm,0.3s
KBA Koelnbreinsper 4.83 203 ePn Pn 11 58 20.3 +0.8
comp=Z,2.6nm,0.5s
AKASG Malin Array Be 8.33 91 Pn Pn 11 59 08.5 +1.3
comp=Z,1.4nm,0.3s,baz=282,slow=12,SNR=4.7
AKASG Sn Sn 12 00 39.0 -2.9
comp=Z,0.6nm,0.3s,baz=274,slow=23,SNR=2.9
FINES FINESS Array B 11.32 25 Pn Pn 11 59 47.5 -0.7
comp=Z,0.1nm,0.3s,baz=216,slow=11,SNR=3.4

IDC 26 12:12:58.5±1.7, 7°.64N×127°.15E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/40, mbtmp3.5/4, MS3.1/2, Ms1 3.1/2, ms1mx2.4/28, Error ellipse: s-maj=33.0km s-min=24.1km az=43.0
MAN 26 12:13:03.5, 7°.35N×126°.95E, h19km, mb4.6, ML3.4, MS3.3
ISC 26 12:13:05.0±1.7, 7°.26N±0°.08×126°.92E±0°.08, h34km±3km, n14, σ1°.91/20, mb3.5/4, 1C-1D, Mindanao

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MATI Mati 0.73 245 eP Pn 12 13 18.4 -0.6
MATI eS Sn 12 13 28.8 -0.2
DAV Davao City (W) 1.34 262 Pn Pb 12 13 30.4 +0.7
126nm,0.3s,baz=41,slow=11,SNR=3.9
DAV Sn Sb 12 13 50.4 +3.7
88nm,0.3s,baz=252,slow=22,SNR=26
DDMP Don Marcelino, 1.66 226 eP Pn 12 13 32.1 +0.3
DDMP eS Sb 12 13 55.0 -0.7
KCP Kidapawan 1.83 262 ⇑i P Pb 12 13 37.1 -1.0
KCP i S Sn 12 13 57.4 +1.0
BUKP Musuan 1.94 289 eP Pn 12 13 36.3 +0.5
BUKP eS Sn 12 14 00.2 +1.2
SKMP Bagumbayan, Su 2.47 253 eP Pn 12 13 44.8 +1.8
SKMP eS Sb 12 14 16.8 -2.1
CGP Cagayan de Oro 2.50 298 ⇓eP Pn 12 13 44.6 +1.2
CGP eS Sn 12 14 13.7 +0.8
PAGZ Pagadian 3.56 280 eP Pn 12 13 58.4 +0.5
PAGZ eS Sn 12 14 34.9 -3.9
FITZ Fitzroy Crossi 25.23 183 P P 12 18 28.7 +0.7
3.7nm,1.0s,baz=0.0,slow=8.1,SNR=3.3
PMG Port Moresby 26.09 129 LR LR 12 28 54.3
comp=Z,35nm,19.4s,baz=206,slow=36
WRA Warramunga Arr 28.00 165 P P 12 18 55.2 +2.2
0.1nm,0.4s,baz=349,slow=8.6,SNR=5.4
ASAR Alice Springs 31.48 168 P P 12 19 24.9 +1.0
0.2nm,0.4s,baz=343,slow=6.8,SNR=8.0
MKAR Makanchi Array 54.81 324 P P 12 22 28.9 -2.9
0.4nm,0.6s,baz=116,slow=8.2,SNR=4.8
AKASG Malin Array Be 89.29 321 LR LR 13 08 08.3
comp=Z,9.9nm,18.6s,baz=355,slow=37

IDC 26 12:25:31.8±1.6, 3°.71S×151°.03E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/23, mbtmp3.3/3, Error ellipse: s-maj=37.8km s-min=13.1km az=24.0, New Ireland region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRVT Keravat (AS076 1.16 121 Pg Pg 12 25 52.2 -1.8
183nm,0.3s,baz=243,slow=1.7,SNR=20
KRVT Lg Lg 12 26 11.5
214nm,0.3s,baz=318,slow=21,SNR=15
KRVT LR LR 12 26 28.6
comp=Z,122nm,20.7s,baz=133,slow=49
WRA Warramunga Arr 22.92 224 P P 12 30 37.8 +0.3
0.2nm,0.3s,baz=52,slow=9.7,SNR=2.2
ASAR Alice Springs 25.83 218 P P 12 31 05.0 -0.1
0.4nm,0.9s,baz=53,slow=8.5,SNR=2.5
MKAR Makanchi Array 78.35 319 P P 12 37 34.4 +0.3
0.3nm,0.4s,baz=96,slow=7.1,SNR=5.1

WEL 26 12:40:50.0, 35°S±20°×17°9E±65°3, h221km±33km, M3.6/10, MLv3.6/10, Error ellipse: s-maj=1.0km s-min=0.0km az=89.6, South of Kermadec Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MXZ Matakaoa Point 2.97 191 P Pn 12 41 40.2 -0.2
WMGZ Waiomatatini S 3.21 189 P Pn 12 41 44.2 +1.2
WMGZ S S 12 42 26.3 +1.6
HAZ Te Kaha 3.26 197 P Pn 12 41 44.1 +0.4
HAZ S S 12 42 26.8 +0.9
PKGZ Pakihiroa 3.33 193 P Pn 12 41 44.2 -0.4
PKGZ S S 12 42 30.3 +3.0
PUZ Puketiti 3.48 190 P Pn 12 41 44.9 -1.4
PUZ S S 12 42 30.5 +0.1
RUGZ Raukumara Rang 3.49 198 P Pn 12 41 46.6 +0.1
MWZ Matawai 3.87 198 P Pn 12 41 51.5 +0.5
MWZ S S 12 42 39.4 +0.4
CNGZ Carnagh Statio 3.89 189 P Pn 12 41 51.8 +0.7
TKGZ Te Karaka 3.90 194 P Pn 12 41 49.4 -1.9
TKGZ S S 12 42 41.3 +1.8
URZ Urewera 3.92 203 P Pn 12 41 51.7 +0.1
URZ S S 12 42 41.3 +1.4
RIGZ Rimuhau 4.18 194 P Pn 12 41 54.8 +0.1
MUGZ Murupara 4.23 205 P Pn 12 41 55.4 0.0
SNGZ Shannon Statio 4.34 198 P Pn 12 41 56.7 0.0
ALRZ Allen Road 4.46 208 P Pn 12 41 59.0 +0.8
BKZ Black Stump Fm 4.95 203 P Pn 12 42 03.8 -0.4
KAHZ Kahuranaki 5.42 198 P Pn 12 42 09.2 -0.9
TSZ Takapari Road 5.93 203 P Pn 12 42 14.9 -1.7
MRZ Mangatainoka R 6.60 203 P Pn 12 42 22.5 -2.6

MOS 26 13:08:26.7±0.0, 43°.30N×44°.21E, h12km, MPVA3.5
TIF 26 13:08:27.1, 43°.34N×44°.29E, h19km±6km
NORS 26 13:08:27.1±0.0, 43°.30N×44°.21E, h10km, MPVA3.4
ISC 26 13:08:27.7±0.8, 43°.33N±0°.02×44°.22E±0°.02, h17km±6km, n24, σ0°.89/44, Western Caucasus

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STDR Stavd-Durt 0.12 291 i Pg Pg 13 08 31.0 -0.4
STDR eSg Sg 13 08 34.8 +0.9
ARNR Ardon 0.16 161 i Pg Pb 13 08 31.4 -0.7
ARNR eSg Sb 13 08 34.8 -0.3
BTKR Batakoyurt 0.24 79 ePg Pg 13 08 32.7 -0.5
BTKR eSg Sb 13 08 37.6 -0.1
KORR Kora 0.26 204 ePg Pg 13 08 33.4 -0.2
KORR eSg Sg 13 08 36.9 -0.7
LSNR Lesken 0.29 260 ePg Pb 13 08 34.9 +0.4
LSNR eSg Sn 13 08 41.5 -1.7
PRTR Priterechnaya 0.43 7 ePg Pb 13 08 37.1 +0.3
PRTR eSg Sn 13 08 45.5 -1.0
VLKR Vladikavkaz 0.44 130 i Pg Pn 13 08 38.5 -0.8
VLKR eSg Sn 13 08 45.1 -1.8
NCK Nalchik 0.48 291 ePg Pn 13 08 38.8 -1.1
NCK eSg Sn 13 08 48.0 +0.1
LACR Lac 0.50 173 ePg Pb 13 08 37.9 +0.1
LACR eSg Sb 13 08 46.4 +1.1
TRKR Terskaya 0.55 43 ePg Pn 13 08 39.6 -1.1
TRKR eSg Sn 13 08 50.5 +1.0
KMGR Komgaron 0.55 119 ePg Pb 13 08 39.0 +0.1
ZEI Tsey 0.59 203 ePg Pb 13 08 39.8 +0.2
ZEI eSg Sb 13 08 48.7 +1.0
DIGR Digorskoe uzhe 0.63 228 ePg Pb 13 08 40.4 0.0
DIGR eSg Sn 13 08 50.5 -1.4
GUDG Gudauri 0.88 167 P Pb 13 08 44.5 -0.2
GUDG S Sb 13 08 56.1 -0.1
GUDG Gudauri 0.88 167 ePg Pb 13 08 44.3 -0.4
GUDG eSg Sg 13 08 57.3 +0.7
ONI Oni 0.93 217 P Pn 13 08 46.0 0.0
ONI S Sn 13 08 59.4 +0.5
ONI Oni 0.93 217 ePg Pn 13 08 46.0 0.0
ONI eSg Sn 13 08 59.4 +0.5
KBZ Khabaz 1.04 293 i Pg Pn 13 08 47.0 -0.4
KBZ eSg Sg 13 09 02.8 +1.4
GROC Groznyy 1.16 96 ePg Pg 13 08 51.8 +1.7
GROC eSg Sg 13 09 07.0 +1.7
SHA1 Shidzhatmaz 1.21 290 ePg Pg 13 08 50.5 -0.5
SHA1 eSg Sg 13 09 07.7 +0.9
KIV0 Kislovodsk Arr 1.27 300 i Pg Pg 13 08 51.6 -0.6
KIV0 eSg Sg 13 09 09.8 +1.0
BTLR Botlikh 1.61 114 ePg Pg 13 08 57.3 +0.2
BTLR eSg Sg 13 09 18.6 -1.1
AKH Akhalkalaki 1.99 196 ePg Pg 13 09 01.6 +0.8
DDFL Dedoflistskaro 2.35 142 P Pn 13 08 57.0 -8.6

SOME 26 13:10:26.6, 41°.10N×71°.83E, h5km
KRNET 26 13:10:26.9±0.1, 40°.89N×72°.02E, h21km, mb2.1
NNC 26 13:10:33.2±7.3, 41°.40N×72°.14E, h26km±54km, mb2.6, mpv2.8, Error ellipse: s-maj=64.6km s-min=40.2km az=178.0
ISC 26 13:10:25.3±1.3, 41°.01N±0°.05×71°.87E±0°.03, h5km±11km, n15, σ1°.00/27, 8C-8D, Kyrgyzstan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ARK Arkit 0.79 5 ⇓i P Pn 13 10 44.0 +0.8
baz=58
ARK ⇓i S Sn 13 10 56.1 +0.7
baz=58
ARSB Arslanbob 0.89 69 ⇑i P Pb 13 10 42.9 -0.5
baz=59
ARSB ⇑i S Sg 13 10 54.3 +0.3
baz=59
BTK Batken 1.25 220 ⇑i P Pg 13 10 49.5 +0.2
baz=28
BTK ⇑i S Sn 13 11 06.3 -0.5
baz=28
JBG Jabagly 1.72 325 P Pb 13 10 57.9 +0.3

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	2.0nm,0.1s						
JBG				S	Sg	13 11 22.2	+1.5
	12nm,0.1s						
AML	Almayashu	1.76	50	⇓iP	Pg	13 10 58.9	-0.2
	baz=45						
AML				⇓iS	Sg	13 11 22.2	+0.2
	baz=45						
IUG	Iuzhnay	1.79	310	eP	Pb	13 10 58.5	-0.1
	3.2nm,0.1s						
IUG				eS	Sg	13 11 22.4	-0.3
	8.8nm,0.1s						
IUG	Iuzhnay	1.79	310	P	Pb	13 10 58.5	-0.1
	3.2nm,0.1s						
IUG				S	Sg	13 11 23.4	+0.7
	40nm,0.1s						
MRKS	Merke	2.00	30	eP	Pb	13 11 02.8	+0.5
	0.5nm,0.0s						
MRKS				eS	Sg	13 11 29.9	+0.2
	4.6nm,0.1s						
MRKS	Merke	2.00	30	Pg	Pb	13 11 02.8	+0.5
	0.5nm,0.0s						
MRKS				Lg	Lg	13 11 30.5	
	4.6nm,0.1s						
EKS2	Erkin-Say	2.17	40	⇓eP	Pb	13 11 04.5	-0.7
	baz=36						
EKS2				⇓eS	Sb	13 11 32.0	-0.6
	baz=36						
KK31	Karatay Array	2.32	335	⇑Pn	Pb	13 11 06.7	-1.0
	0.3nm,0.3s,baz=144,slow=16,SNR=6.3						
KK31				⇑Lg	Lg	13 11 38.2	
	1.2nm,0.3s,baz=135,slow=26,SNR=10						
UCH	Uchtor	2.32	58	⇑eP	Pb	13 11 06.5	-1.4
	baz=54						
UCH				⇑iS	Sb	13 11 35.2	-1.9
	baz=54						
BRLS	Borolday	2.52	324	eP	Pb	13 11 09.2	-1.9
	0.3nm,0.1s						
BRLS				eS	Sb	13 11 40.6	-1.8
	3.2nm,0.1s						
AAK	Ala-Archa	2.54	49	Pg	Pg	13 11 13.8	-0.3
	1.4nm,0.7s						
AAK				Lg	Lg	13 11 44.0	
	1.4nm,0.6s						
KZA	Kyzart	2.75	66	⇓iP	Pn	13 11 12.0	+1.6
	baz=63						
KZA				⇓iS	Sn	13 11 45.2	+1.0
	baz=63						

IDC 26 13:13:13.1±1.5, 4.09S×129.37E, h0km, mb3.8/1, mb1 3.6/4, mb1mx3.4/30, mbtmp3.5/4, ML3.1/2, Error ellipse: s-maj=46.6km s-min=24.4km az=88.0
NEIC 26 13:13:18.8±1.2, 4.17S±0.06×129.6E±0.2, h52km±13km, mb4.2/6, Error ellipse: s-maj=24.4km s-min=5.7km az=106.0
ISC 26 13:13:17.3±1.1, 4.19S±0.09×129.5E±0.2, h36km, n11, σ0.51/12, mb4.4/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	3.05	66	Pn	Pn	13 14 03.3	+0.3
SIJI	Sorong	3.75	29	Pn	Pn	13 14 12.7	-0.1
	baz=252,slow=20						
SIJI				Sn	Sn	13 14 55.6	-0.2
	5.4nm,0.3s,baz=194,slow=23,SNR=6.8						
WB0	Warramunga Arr	16.21	163	Pn	Pn	13 17 01.3	-1.2
WB0				IAmb	IAmb	13 17 47.3	
	comp=Z,25nm,1.9s						
WRA	Warramunga Arr	16.36	164	Pn	Pn	13 17 04.3	-0.1
	comp=Z,0.1nm,0.3s,baz=338,slow=15,SNR=4.3						
WB2	Warramunga Arr	16.36	163	Pn	Pn	13 17 04.3	-0.1
WB2				IAmb	IAmb	13 17 38.1	
	comp=Z,22nm,1.8s						
WR0	Warramunga Arr	16.43	163	Pn	Pn	13 17 05.4	0.0
ASAR	Alice Springs	19.83	168	P	Pn	13 17 47.6	+0.7
	comp=Z,0.1nm,0.3s,baz=352,slow=9.9,SNR=11						
TOO	Toolangi	36.32	158	P	P	13 20 17.6	-0.1
MK31	Makanchi Array	65.61	326	P	P	13 23 57.8	+0.1
MK31				IAmb	IAmb	13 25 27.1	
	comp=Z,6.6nm,1.9s						
MKAR	Makanchi Array	65.61	326	P	P	13 23 58.0	+0.4
	comp=Z,0.5nm,0.4s,baz=115,slow=7.5,SNR=13						
KURK	Kurchatov	69.86	328	P	P	13 24 24.4	+0.1
KURK				IAmb	IAmb	13 25 21.9	
	comp=Z,11nm,1.9s						

SOME 26 13:17:51.9, 40.82N×70.53E, h5km
KRNET 26 13:17:53.1±0.1, 40.97N×69.80E, mb2.5
ISC 26 13:17:55.7±1.9, 40.93N±0.06×70.18E±0.08, h4km±14km, n7, σ1.23/14, 6C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	Batken	1.00	151	⇓iP	Pg	13 18 15.2	+0.3
	baz=39						
BTK				⇑iS	Sn	13 18 31.4	+0.1
	baz=39						
IUG	Iuzhnay	1.22	355	eP	Pb	13 18 18.4	-1.0
	0.7nm,0.1s						
IUG				eS	Sn	13 18 37.8	+1.1
	19nm,0.1s						
ARK	Arkit	1.59	57	⇑iP	Pb	13 18 24.8	-1.0
	baz=63						
ARK				⇑iS	Sg	13 18 48.0	+1.1
	baz=63						
ARSB	Arslanbob	2.15	79	⇓eP	Pn	13 18 32.6	+0.1
	baz=81						
ARSB				⇓iS	Sb	13 19 01.9	-0.5
	baz=81						
AML	Almayashu	2.90	64	⇓iP	Pn	13 18 43.2	+0.2
	baz=67						
AML				⇓iS	Sn	13 19 19.7	+1.2
	baz=67						
MRKS	Merke	2.91	50	eP	Pn	13 18 44.1	+1.2
	0.9nm,0.0s						
MRKS				eS	Sb	13 19 21.6	-2.5
	2.9nm,0.1s						
UCH	Uchtor	3.50	67	⇑iP	Pn	13 18 51.6	+0.3
	baz=69						
UCH				⇑iS	Sn	13 19 34.4	+1.0
	baz=69						

IDC 26 13:19:38.6±28.0, 14.28N×25.35W, h0km, mb3.9/3, mb1 3.9/3, mb1mx3.5/29, mbtmp4.0/3, Error ellipse: s-maj=560.5km s-min=63.5km az=57.0
NEIC 26 13:19:48.1±2.3, 15.0N±0.4×24.49W±0.04, h11km±7km, mb4.3/2, Error ellipse: s-maj=53.0km s-min=5.2km az=182.0
ISC 26 13:19:46.7±2.3, 14.7N±0.3×24.5W±0.2, h10km, n15, σ0.90/9, mb4.0/4, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SACV	Santiago Islan	0.91	72		Pg	13 20 03.8	-0.5
SACV				Sg	Sb	13 20 17.4	+0.5
TIC	Toumodi	20.74	111	eP	Pn	13 24 34.0	+3.8
TIC	Toumodi	20.74	111	P	Pn	13 24 34.0	+3.8
DBIC	Dimbokro	20.88	110	P	P	13 24 29.3	+0.1
	3.7nm,1.0s,baz=288,slow=16,SNR=2.7						
DBIC	Dimbokro	20.88	110	P	P	13 24 28.9	-0.4
DBIC				IAmb	IAmb	13 24 50.0	
	comp=Z,26nm,1.6s						
LIC	Lamto	20.91	112	eP	Pn	13 24 31.9	-0.2
	comp=Z,4.4nm,0.2s						
LIC	Lamto	20.91	112	P	Pn	13 24 31.9	-0.2
KIC	Kosan Boka	21.11	111	eP	P	13 24 31.0	-0.8
	comp=Z,4.6nm,0.6s						
KIC	Kosan Boka	21.11	111	P	P	13 24 31.0	-0.8
H10N2	ASCENSION HYDR	24.48	155	T	T	13 50 40.6	
	baz=336,slow=75,SNR=390						
H10N3	ASCENSION HYDR	24.49	155	T	T	13 50 41.2	
	baz=336,slow=75,SNR=355						
H10N1	ASCENSION HYDR	24.50	155	T	T	13 50 42.1	
	baz=336,slow=75,SNR=362						
TOA0	Torodi Ar. Sit	25.48	90	P	P	13 25 16.8	+1.5
TOA0				IAmb	IAmb	13 25 19.5	
	comp=Z,9.5nm,1.4s						
TORD	Torodi Ar. Bea	25.48	90	P	P	13 25 16.2	+0.8
	comp=Z,1.7nm,0.5s,baz=282,slow=10.0,SNR=12						
BRTR	Keskin Array B	56.34	52	P	P	13 29 28.0	-0.3
	comp=Z,0.5nm,0.7s,baz=262,slow=5.4,SNR=4.4						

MDD 26 13:35:19.1±2.8, 32.34N×7.61W, h0km, mb4.1/1, Error ellipse: s-maj=40.7km s-min=24.2km az=90.0, PRXIMO
INMG 26 13:35:21.3±1.0, 32.35N×7.79W, h23km±11km, MD2.5, ML2.5, Error ellipse: s-maj=6.6km s-min=4.3km az=145.0
IGIL 26 13:35:22.2, 32.35N×7.80W, h18km
SFS 26 13:35:19.0, 32.38N×7.65W, ML4.0, BENGUERIR (MARRUECOS), Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVE	Averroes	0.94	12	eP	Pn	13 35 39.2	-0.3
AVE				eS	Sn	13 35 52.4	-1.2
PFVI	Vila Bisbo	4.84	349	ePn	Pn	13 36 32.5	-0.6
PBDV	Barranco-do-Ve	4.86	357	ePn	Pn	13 36 32.6	-0.8
PBDV				eSn	Sn	13 37 27.1	-3.2
PBDV	Barranco-do-Ve	4.86	357	P	Pn	13 36 32.6	-0.8
PBDV				S	Sn	13 37 27.1	-3.2
MORF	Marmelete	4.98	351	eP	Pn	13 36 34.4	-0.8
MORF	Marmelete	4.98	351	ePn	Pn	13 36 34.3	-0.8
MORF				eSn	Sn	13 37 30.2	-3.3
MORF				A	A	13 37 46.7	
	4.0nm,0.7s						
MORF	Marmelete	4.98	351	P	Pn	13 36 34.4	-0.8
MORF				S	Sn	13 37 30.2	-3.3
	4.0nm,0.7s						
PVAQ	Vaqueiros	5.01	359	ePn	Pn	13 36 34.9	-0.6
PVAQ				eSn	Sn	13 37 30.8	-3.3
PVAQ				A	A	13 37 32.0	
	7.3nm,0.7s						
PVAQ	Vaqueiros	5.01	359	P	Pn	13 36 34.9	-0.6
PVAQ				S	Sn	13 37 30.8	-3.3
	7.3nm,0.7s						
EGRO	El Granado	5.14	1	P	Pn	13 36 37.1	-0.1
	2.1nm,0.2s,SNR=5.6						
EGRO				S	Sn	13 37 33.4	-3.9
	0.3nm,0.0s						
PCVE	Castro Verde	5.25	357	ePn	Pn	13 36 38.4	-0.3
PCVE	Castro Verde	5.25	357	P	Pn	13 36 38.4	-0.3
EMIN	Mina Concepcio	5.43	8	P	Pn	13 36 40.2	-1.0
	1.0nm,0.1s,SNR=20						
EMIN				S	Sn	13 37 39.7	-4.8
	8.5nm,0.4s						
PBEJ	Beja	5.64	358	eSn	Sn	13 37 45.3	-4.2
PBEJ	Beja	5.64	358	S	Sn	13 37 45.3	-4.2
PNCL	Nicolau / Gran	5.76	353	ePn	Pn	13 36 45.1	-0.7
PNCL				eSn	Sn	13 37 48.3	-4.3
PNCL	Nicolau / Gran	5.76	353	P	Pn	13 36 45.1	-0.7
PNCL				S	Sn	13 37 48.3	-4.3
ECAB	El Cabril	5.97	17	P	Pn	13 36 48.3	-0.3
	0.5nm,0.1s,SNR=7.0						
ECAB				S	Sn	13 37 53.0	-4.7
	0.5nm,0.3s						
EADA	Adamuz	6.30	23	P	Pn	13 36 52.4	-0.8
	0.6nm,0.1s,SNR=7.9						
EADA				S	Sn	13 38 01.0	-4.8
	0.3nm,0.2s,SNR=7.9						
EBAD	Badajoz	6.38	4	P	Pn	13 36 53.5	-0.8
	0.9nm,0.1s,SNR=7.9						
EBAD				S	Sn	13 38 02.5	-5.3
	0.5nm,0.2s,SNR=7.9						
PESTR	Estremoz	6.47	0	ePn	Pn	13 36 56.3	+0.7
PMTG	Montargil	6.69	356	ePn	Pn	13 36 58.0	-0.5
PMTG				eSn	Sn	13 38 12.2	-3.3
PMTG	Montargil	6.69	356	P	Pn	13 36 58.0	-0.5
PMTG				S	Sn	13 38 12.2	-3.3
PMRV	Marv??o	7.04	2	ePn	Pn	13 37 02.8	-0.5
PMRV				eSn	Sn	13 38 19.2	-4.8
PMRV	Marv??o	7.04	2	P	Pn	13 37 02.8	-0.5
PMRV				S	Sn	13 38 19.2	-4.8

IDC 26 14:35:14.5±2.5, 6.10S×130.39E, h0km, mb3.9/1, mb1 3.6/3, mb1mx3.4/20, mbtmp3.5/3, ML3.5/2, Error ellipse: s-maj=171.4km s-min=30.5km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.29	165	Pn	Pn	14 38 37.2	-1.1
	0.3nm,0.3s,baz=348,slow=13,SNR=17						
WRA				Sn	Sn	14 41 06.6	-11
	0.8nm,0.3s,baz=343,slow=21,SNR=15						
ASAR	Alice Springs	17.79	169	P	P	14 39 24.5	-0.1
	0.1nm,0.3s,baz=347,slow=9.0,SNR=6.2						
ASAR				S	Sn	14 42 26.6	-16
	0.1nm,0.3s,baz=349,slow=26,SNR=3.6						
MKAR	Makanchi Array	67.69	326	P	P	14 46 13.7	0.0
	0.5nm,0.4s,baz=118,slow=7.9,SNR=23						

GUC 26 14:49:49.8±0.6, 28.33S×70.79W, h93km±6km, ML4.1
SJA 26 14:49:50.6±0.9, 28.14S×71.00W, h66km±11km, ML3.2, MW3.2
ISC 26 14:49:49.3±1.4, 28.21S±0.03×71.5W±0.1, h35km, n21, σ1.72/35, 2C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO04	Tololo Observa	2.04	164	eP	Pn	14 50 22.1	+0.7
GO04				iS	Sn	14 50 45.7	0.0
AC01	Pan de Azucar	2.19	21	⇑iP	Pn	14 50 25.4	+2.1
AC01				iS	Sn	14 50 50.6	+1.4
AROD	Rodeo	2.61	139	iP	Pn	14 50 30.5	+1.2
AROD				iS	Sn	14 50 59.2	-0.7
ACDV	Cuesta del Vie	2.83	134	iP	Pn	14 50 33.5	+1.4
ACCO	Cerro Coronel	3.16	139	iP	Pn	14 50 38.3	+1.5
ACCO				eS	Sn	14 51 14.4	+1.0
GO02	Mina Guanaco	3.47	29	⇑iP	Pn	14 50 42.3	+1.3
GO02				iS	Sn	14 51 21.6	+0.6
GO02					IAML	14 51 42.3	
	comp=E,273nm,0.6s						
PB14	IPOC Station P	3.69	15	eP	Pn	14 50 45.5	+1.2
PB14				iS	Sn	14 51 26.4	-0.3
PB14	IPOC Station P	3.69	15	eP	Pn	14 50 45.4	+1.2
PB14				iS	Sn	14 51 26.4	-0.3
PB14					IAML	14 51 56.2	
	comp=Z,52nm,0.5s						
AMOG	MOGNA	3.75	137	iP	Pn	14 50 45.7	+1.0
CO04	Los Peladeros	3.84	174	iP	Pn	14 50 47.2	+1.1
CO04				iS	Sn	14 51 30.7	+0.5
RTLL	Cerro Villicun	4.05	141	iP	Pn	14 50 49.8	+1.0
RTLL				eP		14 50 49.9	
RTLL				iS	Sn	14 51 33.4	-1.6
RTLL					IAML	14 51 39.5	
	comp=Z,38nm,0.3s						
PB10	IPOC Station P	4.75	10	eP	Pn	14 50 58.9	+0.4
PB10				iS	Sn	14 51 51.5	-0.7
PB10	IPOC Station P	4.75	10	eP	Pn	14 50 59.1	+0.7
PB10				iS	Sn	14 51 51.5	-0.7
PB10					IAML	14 51 52.8	
	comp=Z,15nm,0.3s						
ROCH	El Roble	4.76	175	iP	Pn	14 50 59.3	+0.6
ROCH				iS	Sn	14 51 51.9	-0.9
ROC1	El Roble	4.76	176	iP	Pn	14 50 59.3	+0.5
ASAL	Salagasta	4.92	153	iP	Pn	14 51 02.7	+1.9
ARCO	CERRO ARCO	5.10	155	iP	Pn	14 51 05.4	+2.0
PB05	IPOC Station P	5.46	12	eP	Pn	14 51 08.4	+0.2
PB05				iS	Sn	14 52 08.1	-1.8
ACAN	Cantantal	5.48	139	iP	Pn	14 51 08.9	+0.4
PB04	IPOC Station P	5.97	12	iP	Pn	14 51 14.7	-0.6
PB04				iS	Sn	14 52 20.7	-2.0
VYHS	Vyhne	110.74	45	ePDIFF	Pdif	15 04 11.1	-7.2

NEIC 26 14:53:13.9±3.0, 25.9S±0.1×179.9E±0.1, h485km±9km, mb4.8/30, Error ellipse: s-maj=18.7km s-min=16.3km az=125.0
IDC 26 14:53:15.3±2.0, 25.89S×179.86E, h490km±22km, mb3.5/10, mb1 3.7/13, mb1mx3.5/29, mbtmp4.4/13, Error ellipse: s-maj=17.0km s-min=14.2km az=11.0
ISC 26 14:53:13.2±0.6, 25.92S±0.07×179.94E±0.09, h475km, n74, σ1.48/81, mb4.4/19, 1C-1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.83	151	P	P	14 54 29.2	+0.8
GLKZ				S	S	14 55 31.9	+2.1
MSVF	Nonsavu	8.34	347	P	P	14 55 11.8	-1.1
OUZ	Omahuta	10.76	209	P	P	14 55 41.8	+3.4
NIUE	Niue	11.58	56	P	P	14 55 50.7	+3.2
MXZ	Matakaoa Point	11.69	186	P	P	14 55 49.9	+1.6
URZ	Urewera	12.53	190	P	P	14 55 58.5	+1.1
	4.6nm,0.3s,baz=8.7,slow=2.5,SNR=26						
URZ				S	S	14 58 14.0	+1.2
	0.8nm,0.3s,baz=220,slow=22,SNR=7.0						
URZ	Urewera	12.53	190	P	P	14 55 56.3	-1.1
DZM	Mont Dzumac	12.92	284	P	P	14 56 03.8	+1.9
	0.4nm,0.3s,baz=116,slow=18,SNR=4.2						
DZM	Mont Dzumac	12.92	284	P	P	14 56 02.4	+0.5
NOUC	Port Laguerre	13.03	284	P	P	14 56 03.3	+0.3
HIZ	Hauiti	13.27	198	P	P	14 56 07.8	+2.5
HIZ	Hauiti	13.27	198	P	P	14 56 07.7	+2.5
NMHZ	Naumai	13.40	191	P	P	14 56 09.0	+2.2
BKZ	Black Stump Fm	13.52	192	P	P	14 56 07.2	-0.8
BKZ	Black Stump Fm	13.52	192	P	P	14 56 07.6	-0.5
MCHZ	McNeill Hill	13.76	191	P	P	14 56 11.5	+1.1
BHHZ	Black Hill Sta	13.91	193	P	P	14 56 12.2	-0.1
PXZ	Pawanui	14.30	190	P	P	14 56 16.6	+0.3
PXZ				S	S	14 58 45.4	-1.9
TSZ	Takapari Road	14.48	192	P	P	14 56 17.7	-0.6
ANWZ	Angora Road	14.78	190	P	P	14 56 22.6	+1.3
ANWZ				S	S	14 58 53.6	-3.0
BFZ	Birch Farm	15.04	191	P	P	14 56 23.5	-0.6
BFZ				IAmb	IAmb	14 56 54.7	
	comp=Z,56nm,1.3s						
BFZ	Birch Farm	15.04	191	P	P	14 56 22.8	-1.3
BFZ				S	S	14 58 56.4	-5.3
OGWZ	Otaki Gorge	15.38	194	P	P	14 56 25.5	-2.1
OGWZ				S	S	14 59 03.4	-4.7
MSWZ	Moikau Station	15.94	193	P	P	14 56 32.2	-1.3
SNZO	South Karori	15.95	194	P	P	14 56 32.2	-1.4
BHW	Baring Head	16.01	194	P	P	14 56 33.8	-0.5
QRZ	Quartz Range	16.09	201	P	P	14 56 35.9	+0.7
NNZ	Nelson	16.20	198	P	P	14 56 35.8	-0.5
NNZ				IAmb	IAmb	14 57 03.6	
	comp=Z,41nm,1.2s						
TUWZ	Tuamarina	16.25	196	P	P	14 56 35.7	-1.1
BSWZ	Blackbirch Sta	16.53	196	P	P	14 56 39.5	-0.3
THZ	Tophouse	16.84	198	P	P	14 56 42.0	-1.1
THZ				IAmb	IAmb	14 56 47.5	
	comp=Z,77nm,1.8s						
KHZ	Kahutara	17.27	196	P	P	14 56 46.9	-0.6
KHZ				IAmb	IAmb	14 57 13.7	
	comp=Z,45nm,1.4s						
LTZ	Lake Taylor	17.96	199	P	P	14 56 52.9	-1.4
LTZ				IAmb	IAmb	14 56 55.1	
	comp=Z,43nm,1.5s						
OXZ	Oxford	18.52	198	P	P	14 56 58.3	-1.3
RPZ	Rata Peaks	19.17	200	P	P	14 57 05.9	+0.4
	comp=Z,1.3nm,0.3s,baz=344,slow=2.3,SNR=9.4						
RPZ	Rata Peaks	19.17	200	P	P	14 57 05.7	+0.2
RPZ				IAmb	IAmb	14 57 21.0	
	comp=Z,43nm,1.4s						
FOZ	Fox Glacier	19.41	203	P	P	14 57 06.6	-1.0
LBZ	Lake Benmore	20.05	201	P	P	14 57 11.8	-1.6
ARMA	Armidale	25.33	253	P	P	14 58 03.3	+2.1
ARMA				IAmb	IAmb	14 58 05.1	
	comp=Z,20nm,1.4s						
EIDS	Eidsvold	26.00	265	P	P	14 58 08.3	+1.1
EIDS				IAmb	IAmb	14 58 09.1	
	comp=Z,18nm,0.7s						
TOO	Toolangi	31.35	240	P	P	14 58 55.2	+1.5
TOO				IAmb	IAmb	14 59 42.1	
	comp=Z,71nm,1.7s						
CTA	Charters Tower	31.49	274	P	P	14 58 56.3	+1.1
	comp=Z,7.3nm,0.5s,baz=100,slow=9.7,SNR=12						
STKA	Stephens Creek	33.97	251	P	P	14 59 17.1	+1.0
	comp=Z,3.2nm,0.5s,baz=101,slow=9.4,SNR=15						
STKA	Stephens Creek	33.97	251	P	P	14 59 16.8	+0.7
RABL	Rabaul	34.29	304	P	P	14 59 18.3	-0.7
RABL				IAmb	IAmb	14 59 54.3	
	comp=Z,26nm,0.7s						
COEN	Coen	36.43	282	P	P	14 59 37.4	+0.5
BBOO	Buckleboo	38.64	249	P	P	14 59 54.4	-0.5
BBOO				IAmb	IAmb	15 00 00.7	
	comp=Z,43nm,1.5s						
AS31	Alice Springs	41.69	263	P	P	15 00 19.6	0.0
ASAR	Alice Springs	41.69	263	P	P	15 00 19.7	+0.1
	comp=Z,4.7nm,0.4s,baz=90,slow=7.3,SNR=127						
ASAR				S	S	15 06 01.6	+0.2
	comp=Z,0.9nm,0.8s,baz=96,slow=16,SNR=5.7						
WR0	Warramunga Arr	42.07	268	P	P	15 00 22.1	-0.5
WB2	Warramunga Arr	42.25	268	P	P	15 00 23.6	-0.4
WRA	Warramunga Arr	42.26	268	P	P	15 00 23.9	-0.2
	comp=Z,4.0nm,0.4s,baz=99,slow=6.9,SNR=45						
WRA				S	S	15 06 08.0	-1.6
	comp=Z,2.8nm,0.9s,baz=98,slow=15,SNR=7.5						
WB0	Warramunga Arr	42.26	269	P	P	15 00 23.5	-0.6
FORT	Forrest	45.59	251	P	P	15 00 49.2	-0.6
FORT				IAmb	IAmb	15 00 50.5	
	comp=Z,30nm,0.8s						
KNRA	Kununurra	48.66	272	P	P	15 01 13.4	+0.2
KNRA				IAmb	IAmb	15 01 15.5	
	comp=Z,21nm,0.8s						
FITZ	Fitzroy Crossi	50.65	267	P	P	15 01 28.2	+0.3
	comp=Z,3.8nm,0.6s,baz=79,slow=9.4,SNR=10						
FITZ	Fitzroy Crossi	50.65	267	P	P	15 01 27.9	0.0
MORW	Morawa	56.16	251	P	P	15 02 06.7	-0.4
MORW				IAmb	IAmb	15 03 20.5	
	comp=Z,93nm,1.9s						
GIRL	Giralia	59.42	258	P	P	15 02 30.2	+0.7
QSPA	South Pole Qui	64.17	180	P	P	15 03 01.7	+1.7
	comp=Z,7.1nm,0.7s,baz=356,slow=0.9,SNR=44						
QSPA	South Pole Qui	64.17	180	P	P	15 03 01.6	+1.7
QSPA				IAmb	IAmb	15 03 02.5	
	comp=Z,7.7nm,0.8s						
JAGI	Jajag, Banyuwa	64.60	273	P	P	15 03 02.1	-1.4
JAGI				IAmb	IAmb	15 03 02.9	
	comp=Z,19nm,1.1s						
MJAR	Matsushiro Arr	73.53	326	P	P	15 03 56.1	-0.8
	comp=Z,0.7nm,0.4s,baz=143,slow=5.8,SNR=4.5						
KSRS	Korea Array	79.76	320	P	P	15 04 31.6	+0.5
	comp=Z,1.3nm,0.6s,baz=132,slow=6.1,SNR=7.0						
SYO	Syowa Base	81.04	193	⇑eP	P	15 04 35.9	-1.4
SYO	Syowa Base	81.04	193	⇓ePcP	PcP	15 04 40.6	-1.5
VNA3	Neumayer Olymp	82.87	177	P	P	15 04 47.0	+0.3
NVAR	Mina Array Bea	86.24	44	P	P	15 05 04.8	+0.8
	comp=Z,0.6nm,0.7s,baz=213,slow=7.1,SNR=5.2						
CMAR	Chiang Mai Arr	90.18	290	P	P	15 05 24.1	+1.6
	comp=Z,0.3nm,0.3s,baz=116,slow=4.1,SNR=3.9						
YAK	Yakutsk	96.43	339	P	P	15 05 49.6	-0.4
ARCES	ARCESS Array B	133.85	348	PKP	PKiKP	15 11 34.8	-1.3
	comp=Z,2.7nm,1.0s,baz=46,slow=2.6,SNR=5.4						
NB2	NORSAR Subarra	144.06	351	PKP	PKPab	15 11 52.0	-0.9
	comp=Z,1.6nm,0.9s,baz=21,slow=3.6						
NOA	NORSAR Array B	144.06	351	PKP	PKPab	15 11 52.0	-0.9
	comp=Z,0.2nm,0.4s,baz=24,slow=3.9,SNR=4.9						
BRTR	Keskin Array B	148.72	305	PKPbc	PKiKP	15 12 06.3	-1.4
	comp=Z,0.6nm,0.6s,baz=91,slow=1.4,SNR=4.0						

IDC 26 15:24:09.2±3.7, 3.38S×135.06E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.4/23, mbtmp3.4/3, ML3.3/1, Error ellipse: s-maj=169.4km s-min=32.5km az=79.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.48	182	Pn	Pn	15 28 01.8	-0.2
	0.1nm,0.3s,baz=1.4,slow=13,SNR=2.3						
WRA				Sn	Sn	15 30 53.0	-13
	0.1nm,0.3s,baz=14,slow=23,SNR=4.3						
ASAR	Alice Springs	20.20	183	P	P	15 28 45.8	+0.1
	2.2nm,0.6s,baz=4.5,slow=12,SNR=25						
MKAR	Makanchi Array	68.13	324	P	P	15 35 11.2	0.0
	0.2nm,0.7s,baz=107,slow=5.0,SNR=2.1						

THE 26 15:40:17.4, 38.24N×20.39E, h12km, ML2.5/5, Error ellipse: s-maj=0.8km s-min=0.3km az=257.0
ATH 26 15:40:17.5, 38.26N×20.40E, h10km±1km, ML2.5/10, Error ellipse: s-maj=1.8km s-min=0.8km az=229.0
ISC 26 15:40:17.5±0.9, 38.25N±0.02×20.41E±0.04, h11km±4km, n35, σ0.40/62, 4C-7D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.01	53	⇓Pd0	Pg	15 40 19.3	-0.2
KEF4				S	Sg	15 40 20.4	-0.4
AGT1	Agia Thekli	0.02	269	P	Pg	15 40 19.4	-0.1
AGT1				S	Sg	15 40 20.7	-0.2
KEF1	Kardakata, Kep	0.05	60	⇑Pc0	Pg	15 40 19.4	-0.3
KEF1				S	Sg	15 40 20.6	-0.7
LXR1	Lixouri, Cepha	0.05	158	P	Pg	15 40 19.9	+0.2
LXR1				S	Sg	15 40 20.7	-0.2
LXRA	Lixouri, Kepha	0.05	159	⇓Pd0	Pg	15 40 19.9	+0.2

LXRA				S	Sg	15 40 21.6	+0.3
KEF3	**Kipouria, Keph**	**0.07**	**227**	⇓Pd0	**Pg**	**15 40 20.0**	**+0.2**
KEF3				S	**Sg**	**15 40 21.8**	**+0.2**
ARGA	**Argostoli. Kep**	**0.09**	**145**	P	**Pg**	**15 40 20.2**	**+0.1**
ARG2	**Argostoli**	**0.09**	**141**	P	**Pg**	**15 40 20.4**	**+0.3**
ARG2				S	**Sg**	**15 40 22.1**	**+0.1**
KEF2	**Argostoli. Kep**	**0.10**	**146**	⇓Pd0	**Pg**	**15 40 20.4**	**+0.1**
KEF2				S	**Sg**	**15 40 22.3**	**0.0**
VLS	**Valsamata**	**0.16**	**118**	P	**Pg**	**15 40 21.1**	**0.0**
VLS				S	**Sg**	**15 40 23.8**	**+0.2**
VLS	**Valsamata**	**0.16**	**118**	⇑Pc0	**Pg**	**15 40 21.1**	**0.0**
VLS				S	**Sg**	**15 40 23.6**	**0.0**
VLS				AML	AML	15 40 24.0	
	comp=N,21551μm,0.2s						
VLS				AML	AML	15 40 24.1	
	comp=E,23302μm,0.1s						
VSK1	**VASILIKIADES**	**0.20**	**37**	P	**Pg**	**15 40 21.9**	**+0.1**
VSK1				S	**Sg**	**15 40 25.2**	**+0.5**
KONA	**Konidatara, Ke**	**0.21**	**36**	P	**Pg**	**15 40 22.0**	**0.0**
KONA				S	**Sg**	**15 40 24.9**	**-0.2**
KONA				AML	AML	15 40 26.1	
	comp=N,7612μm,0.4s						
KONA				AML	AML	15 40 28.4	
	comp=E,7397μm,0.4s						
EVGI	**Lefkada island**	**0.42**	**27**	P	**Pg**	**15 40 25.7**	**0.0**
EVGI				S	**Sg**	**15 40 32.3**	**+1.0**
EVGI	**Lefkada island**	**0.42**	**27**	⇓Pd0	**Pg**	**15 40 25.6**	**-0.1**
EVGI				S	**Sg**	**15 40 32.2**	**+0.9**
MGNA	**Meganis**	**0.50**	**36**	P	**Pg**	**15 40 26.9**	**-0.4**
MGNA				AML	AML	15 40 35.5	
	comp=N,1174μm,0.2s						
MGNA				AML	AML	15 40 37.6	
	comp=E,910μm,0.3s						
LKD2	**Lefkada island**	**0.57**	**20**	P	**Pg**	**15 40 28.2**	**-0.4**
LKD2				S	**Sb**	**15 40 37.2**	**-0.5**
	comp=E,302nm,0.5s						
LKD2	**Lefkada island**	**0.57**	**20**	⇓Pd0	**Pg**	**15 40 28.1**	**-0.6**
TSLK	**Tsoukalades, L**	**0.60**	**18**	P	**Pg**	**15 40 29.0**	**-0.2**
TSLK				S	**Sb**	**15 40 38.7**	**+0.1**
	comp=E,248nm,0.4s						
TSLK	**Tsoukalades, L**	**0.60**	**18**	⇓Pd0	**Pg**	**15 40 28.8**	**-0.5**
TSLK				S	**Sg**	**15 40 37.0**	**-0.2**
TSLK				AML	AML	15 40 43.9	
	comp=N,402μm,0.4s						
TSLK				AML	AML	15 40 45.8	
	comp=E,596μm,0.5s						
KRI1	**kERI**	**0.67**	**151**	P	**Pg**	**15 40 30.0**	**-0.5**
KRI1				S	**Sb**	**15 40 40.1**	**-0.3**
	comp=E,1μm,0.3s						
VTN	**Vitineika**	**0.69**	**118**	P	**Pg**	**15 40 30.6**	**-0.3**
VTN				S	**Sb**	**15 40 41.1**	**-0.1**
PDO	**Prodromos**	**0.70**	**60**	P	**Pg**	**15 40 30.8**	**-0.2**
PDO				S	**Sb**	**15 40 41.8**	**+0.5**
	comp=E,948nm,0.4s						
PDO	**Prodromos**	**0.70**	**60**	⇑Pc0	**Pg**	**15 40 30.8**	**-0.2**
PDO				S	**Sb**	**15 40 40.9**	**-0.4**
PDO				AML	AML	15 40 42.5	
	comp=E,1406μm,0.4s						
PDO				AML	AML	15 40 43.4	
	comp=N,1289μm,0.4s						
RLS	**Riolos of Patr**	**0.85**	**103**	P	**Pg**	**15 40 33.6**	**-0.3**
RLS				S	**Sb**	**15 40 46.5**	**+0.8**
	comp=N,152nm,0.2s						
RLS	**Riolos of Patr**	**0.85**	**103**	P	**Pg**	**15 40 33.3**	**-0.7**
RLS				S	**Sb**	**15 40 46.0**	**+0.2**
RLS				AML	AML	15 40 50.3	
	comp=E,392μm,0.3s						
RLS				AML	AML	15 40 50.9	
	comp=N,257μm,0.2s						
PVO	**Paravola**	**0.95**	**67**	P	**Pg**	**15 40 35.8**	**+0.1**
PVO				S	**Sn**	**15 40 50.0**	**-0.2**
PVO	**Paravola**	**0.95**	**67**	⇑Pc0	**Pg**	**15 40 35.7**	**0.0**
PVO				S	**Sb**	**15 40 49.3**	**+0.8**
PVO				AML	AML	15 40 54.6	
	comp=E,884μm,0.4s						
PVO				AML	AML	15 40 55.9	
	comp=N,842μm,0.5s						
DRO	**Drossia**	**1.07**	**106**	P	**Pb**	**15 40 37.6**	**-0.4**
DRO				S	**Sg**	**15 40 52.5**	**+0.6**
DRO	**Drossia**	**1.07**	**106**	P	**Pb**	**15 40 37.5**	**-0.4**
DRO				AML	AML	15 41 01.9	
	comp=E,731μm,0.6s						
DRO				AML	AML	15 41 02.5	
	comp=N,525μm,0.3s						
AMT	**Artemida-Makis**	**1.25**	**125**	P	**Pg**	**15 40 41.5**	**0.0**
AMT				AML	AML	15 41 11.0	
	comp=E,295μm,0.7s						
AMT				AML	AML	15 41 16.6	
	comp=N,274μm,0.4s						
EVR	**Evrytania**	**1.28**	**58**	P	**Pb**	**15 40 41.6**	**0.0**
IGT	**Igoumenitsa**	**1.28**	**357**	P	**Pn**	**15 40 41.1**	**-0.2**
IGT				S	**Sg**	**15 40 59.6**	**+0.8**
IGT				AML	AML	15 41 03.0	
	comp=E,128μm,0.5s						
IGT				AML	AML	15 41 11.1	
	comp=N,103μm,0.6s						
KLV	**Kalavryta, Ach**	**1.39**	**98**	P	**Pn**	**15 40 42.9**	**+0.1**
KEK	**Kerkira**	**1.54**	**342**	P	**Pn**	**15 40 45.2**	**+0.4**

*NEIC **26** 16:19:17.3±1.0, 7°.2S±0°.1×155°.47E±0°.08, h115km±8km, mb4.6/2, Error ellipse: s-maj=20.6km s-min=6.4km az=210.0*

*IDC **26** 16:19:17.7±1.3, 7°.23S×155°.59E, h123km±13km, mb3.2/6, mb1 3.5/9, mb1mx3.4/37, mbtmp3.9/9, MS3.2/4, Ms1 3.2/4, ms1mx2.8/18, Error ellipse: s-maj=20.7km s-min=10.9km az=30.0*

ISC 26 16:19:16.5±0.8, **7°.3S**±0°.1×**155°.52E**±0°.08, **h100km, n16,** σ**1s.74**/15, **mb3.5**/8, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**4.54**	**313**	Pn	**Pn**	**16 20 23.3**	**+0.3**
KRVT	**Keravat (AS076**	**4.56**	**310**	P	**Pn**	**16 20 25.9**	**+2.6**
	19nm,0.3s,baz=292,slow=7.3,SNR=4.3						
KRVT				S	**Sn**	**16 21 18.3**	**+3.1**
	13nm,0.3s,baz=306,slow=24,SNR=2.4						
KRVT				LR	LR	16 22 21.5	
	comp=Z,124nm,21.2s,baz=100,slow=40						
HNR	**Honiara**	**4.88**	**116**	P	**Pn**	**16 20 29.8**	**+2.2**
	8.6nm,0.3s,baz=196,slow=12,SNR=3.2						
HNR				S	**Sn**	**16 21 23.2**	**+0.4**
	5.2nm,0.3s,baz=152,slow=23,SNR=4.0						
HNR				LR	LR	16 22 05.8	
	comp=Z,274nm,18.4s,baz=277,slow=35						
HNR	**Honiara**	**4.88**	**116**	P	Pn	16 20 36.0	+8.5
PMG	**Port Moresby**	**8.53**	**255**	P	**Pn**	**16 21 18.4**	**+1.2**
	2.1nm,0.3s,baz=91,slow=11,SNR=9.4						
PMG	**Port Moresby**	**8.53**	**255**	Pn	**Pn**	**16 21 17.9**	**+0.7**
DZM	**Mont Dzumac**	**18.09**	**145**	LR	LR	16 28 48.7	
	comp=Z,78nm,19.1s,baz=84,slow=32						
WB0	**Warramunga Arr**	**23.95**	**237**	P	**P**	**16 24 20.9**	**-0.8**
WB0				IAmb	IAmb	16 25 11.5	
	comp=Z,19nm,1.7s						
WRAB	**Tennant Creek**	**24.07**	**236**	P	**P**	**16 24 21.9**	**-0.8**
WRAB				IAmb	IAmb	16 24 41.7	
	comp=Z,27nm,0.7s						
WRA	**Warramunga Arr**	**24.08**	**236**	P	**P**	**16 24 22.8**	**0.0**
	comp=Z,1.3nm,0.7s,baz=62,slow=9.7,SNR=6.0						
ASAR	**Alice Springs**	**26.37**	**229**	P	**P**	**16 24 44.0**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=57,slow=9.9,SNR=8.1						
STKA	**Stephens Creek**	**27.70**	**206**	LR	LR	16 35 56.2	
	comp=Z,70nm,18.4s,baz=25,slow=36						
CMAR	**Chiang Mai Arr**	**61.38**	**296**	P	**P**	**16 29 21.0**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=129,slow=7.1,SNR=2.6						
SONM	**Songino Array**	**69.86**	**327**	P	**P**	**16 30 13.8**	**-2.8**
	comp=Z,0.3nm,0.5s,baz=141,slow=7.1,SNR=2.9						
ILAR	**Eielson Array**	**83.46**	**21**	P	**P**	**16 31 31.3**	**-1.4**
	comp=Z,0.5nm,1.0s,baz=256,slow=6.3,SNR=4.2						
MKAR	**Makanchi Array**	**83.96**	**319**	P	**P**	**16 31 35.7**	**0.0**
	comp=Z,0.7nm,0.7s,baz=101,slow=5.9,SNR=6.9						

*IDC **26** 16:19:03.6±18.0, 24°.79S×176°.21W, h0km, mb4.1/4, mb1 4.3/5, mb1mx3.9/40, mbtmp4.2/5, ML4.9/2, Error ellipse: s-maj=352.0km s-min=42.7km az=76.0*

*NEIC **26** 16:19:21.6±0.8, 25°.9S±0°.2×176°.5W±0°.4, h139km±24km, mb4.7/16, Error ellipse: s-maj=57.4km s-min=15.5km az=119.0*

ISC 26 16:19:22.0±1.0, **26°.1S**±0°.1×**176°.3W**±0°.2, **h150km, n31,** σ**1s.60**/32, **mb4.3**/7, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.46**	**205**	Pn	**Pn**	**16 20 15.5**	**+0.2**
	120nm,0.3s,baz=56,slow=23,SNR=3.9						
RAO				Sn	**Sn**	**16 20 57.6**	**+1.0**
	282nm,0.3s,baz=82,slow=23,SNR=12						
RAO	**Raoul Island**	**3.46**	**205**	Pn	**Pn**	**16 20 15.7**	**+0.4**
NIUE	**Niue**	**9.12**	**41**	Pn	**Pn**	**16 21 30.3**	**-0.1**
URZ	**Urewera**	**13.35**	**203**	Pn	**P**	**16 22 31.3**	**+1.5**
	2.0nm,0.3s,baz=280,slow=2.6,SNR=9.5						
URZ	**Urewera**	**13.35**	**203**	Pn	**Pn**	**16 22 25.6**	**0.0**
BKZ	**Black Stump Fm**	**14.38**	**203**	Pn	**Pn**	**16 22 36.0**	**-2.6**
HIZ	**Hauiti**	**14.46**	**209**	Pn	**Pn**	**16 22 37.1**	**-2.6**
BFZ	**Birch Farm**	**15.82**	**201**		**Pn**	**16 22 57.5**	**+1.0**
MSWZ	**Moikau Station**	**16.81**	**203**		**P**	**16 23 07.2**	**-1.0**
SNZO	**South Karori**	**16.91**	**204**		**Pn**	**16 23 11.6**	**+1.9**
SNZO				IAmb	IAmb	16 23 42.8	
	comp=Z,70nm,1.2s						
TUWZ	**Tuamarina**	**17.30**	**205**	P	**P**	**16 23 12.7**	**-0.8**
NNZ	**Nelson**	**17.34**	**207**	P	**P**	**16 23 12.1**	**-1.9**
NNZ				IAmb	IAmb	16 23 45.2	
	comp=Z,41nm,1.2s						
QRZ	**Quartz Range**	**17.38**	**210**	P	**P**	**16 23 12.8**	**-1.6**
QRZ				IAmb	IAmb	16 23 30.8	
	comp=Z,92nm,1.7s						
CMWZ	**Cape Campbell**	**17.47**	**204**	P	**P**	**16 23 14.9**	**-0.5**
BSWZ	**Blackbirch Sta**	**17.57**	**205**	P	**P**	**16 23 15.1**	**-1.4**
THZ	**Tophouse**	**18.00**	**207**	P	**P**	**16 23 19.6**	**-1.6**
THZ				IAmb	IAmb	16 24 14.5	
	comp=Z,90nm,2.0s						
KHZ	**Kahutara**	**18.30**	**205**	P	**P**	**16 23 20.4**	**-4.0**
PYZ	**Puysegur Point**	**24.21**	**210**	P	**P**	**16 24 23.8**	**-0.8**
STKA	**Stephens Creek**	**37.13**	**251**	P	**P**	**16 26 20.7**	**+2.4**
	comp=Z,1.9nm,0.9s,baz=92,slow=10,SNR=4.6						
STKA	**Stephens Creek**	**37.13**	**251**	P	**P**	**16 26 20.6**	**+2.4**
BBOO	**Buckleboo**	**41.77**	**249**	P	**P**	**16 26 56.1**	**-0.6**
BBOO				IAmb	IAmb	16 27 49.4	
	comp=Z,41nm,1.4s						
AS31	**Alice Springs**	**45.05**	**262**	P	**P**	**16 27 22.0**	**-1.2**
ASAR	**Alice Springs**	**45.05**	**262**	P	**P**	**16 27 23.3**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=90,slow=7.6,SNR=40						
WR0	**Warramunga Arr**	**45.47**	**267**	P	**P**	**16 27 24.2**	**-2.2**
WR0				IAmb	IAmb	16 28 27.7	
	comp=Z,17nm,1.6s						
WB2	**Warramunga Arr**	**45.64**	**267**	P	**P**	**16 27 26.6**	**-1.3**
WB2				IAmb	IAmb	16 28 51.0	
	comp=Z,20nm,1.6s						
WRA	**Warramunga Arr**	**45.66**	**267**	P	**P**	**16 27 26.9**	**-1.1**
	comp=Z,1.1nm,0.4s,baz=106,slow=7.8,SNR=15						
WB0	**Warramunga Arr**	**45.66**	**267**	P	**P**	**16 27 26.9**	**-1.0**
FORT	**Forrest**	**48.76**	**251**	P	**P**	**16 27 51.4**	**-0.3**
FITZ	**Fitzroy Crossi**	**54.04**	**266**	P	**P**	**16 28 31.7**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=86,slow=13,SNR=4.0						
FITZ	**Fitzroy Crossi**	**54.04**	**266**	P	**P**	**16 28 31.6**	**+0.3**
FITZ				IAmb	IAmb	16 28 51.8	
	comp=Z,14nm,1.3s						
MORW	**Morawa**	**59.31**	**250**	P	**P**	**16 29 07.5**	**-0.8**

*IDC **26** 16:29:23.9±1.3, 7°.32N×124°.25E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/36, mbtmp3.5/4, MS2.9/1, Ms1 2.9/1, ms1mx2.3/34, Error ellipse: s-maj=29.2km s-min=16.1km az=16.0*

*MAN **26** 16:29:24.6, 7°.49N×124°.29E, h13km, mb4.7, ML3.6, MS3.5*

ISC 26 16:29:24.5±1.2, **7°.51N**±0°.03×**124°.28E**±0°.03, **h7km**±10km, **n16,** σ**1s.96**/24, **mb3.3**/4, **3C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.29**	**186**	⇓*i*P	**Pb**	**16 29 32.0**	**0.0**
CTBH				*i* S	**Sb**	**16 29 37.3**	**+0.2**
BUKP	**Musuan**	**0.86**	**65**	*e*P	**Pg**	**16 29 40.0**	**-1.0**
BUKP				*e*S	**Sb**	**16 29 52.4**	**-1.2**
KCP	**Kidapawan**	**0.95**	**122**	⇑*i*P	**Pg**	**16 29 41.7**	**-1.0**
KCP				*i* S	**Sn**	**16 30 04.6**	**+6.4**
PAGZ	**Pagadian**	**0.95**	**291**	*e*P	**Pg**	**16 29 43.0**	**+0.3**
PAGZ				*e*S	**Sg**	**16 29 56.7**	**+1.6**
SKMP	**Bagumbayan, Su**	**1.02**	**165**	*e*P	**Pg**	**16 29 43.0**	**-1.1**
SKMP				*e*S	**Sn**	**16 29 58.6**	**-1.3**
CGP	**Cagayan de Oro**	**1.02**	**24**	⇑*i*P	**Pg**	**16 29 42.8**	**-1.4**
CGP				*e*S	**Sn**	**16 30 00.5**	**+0.5**
DAV	**Davao City (W)**	**1.36**	**109**	Pg	**Pn**	**16 29 48.9**	**-1.1**
	129nm,0.3s,baz=281,slow=5.2,SNR=6.5						
DAV				Lg	Lg	16 30 06.9	
	69nm,0.3s,baz=311,slow=20,SNR=12						
BUTP	**Butuan**	**1.97**	**42**	*e*P	**Pg**	**16 30 01.1**	**-1.1**
BUTP				*e*S	**Sg**	**16 30 29.8**	**+2.1**
DDMP	**Don Marcelino,**	**2.00**	**134**	*e*P	**Pn**	**16 29 57.2**	**-1.5**
DDMP				*e*S	**Sb**	**16 30 25.8**	**-0.4**
MATI	**Mati**	**2.04**	**106**	*e*P	**Pn**	**16 29 59.6**	**+0.2**
MATI				*e*S	**Sg**	**16 30 33.2**	**+3.0**
SNPH	**Sibulan**	**2.09**	**331**	⇑*e*P	**Pb**	**16 30 02.4**	**-0.4**
WRA	**Warramunga Arr**	**29.02**	**160**	P	**P**	**16 35 23.5**	**-1.9**
	0.4nm,0.7s,baz=332,slow=10,SNR=3.9						
ASAR	**Alice Springs**	**32.38**	**163**	P	**P**	**16 35 54.4**	**-0.7**
	0.2nm,0.5s,baz=344,slow=7.3,SNR=7.0						
KLR	**Kul'dur**	**42.05**	**7**	LR	LR	16 54 36.2	
	comp=Z,17nm,20.2s,baz=14,slow=36						
STKA	**Stephens Creek**	**42.52**	**158**	P	**P**	**16 37 20.3**	**-0.5**
	3.9nm,0.8s,baz=323,slow=6.8,SNR=8.4						
MKAR	**Makanchi Array**	**53.08**	**325**	P	**P**	**16 38 44.1**	**+1.4**
	0.2nm,0.7s,baz=138,slow=7.3,SNR=3.1						

*RHSSO **26** 16:37:21.3±0.3, 45°.06N×15°.10E, h3km±2km, ML2.9/12*

*PRU **26** 16:37:21.3±0.0, 45°.17N×15°.15E, h0km*

ISC 26 16:37:20.8±1.0, **45°.09N**±0°.01×**15°.14E**±0°.02, **h6km**±9km, **n92,** σ**1s.24**/154, **8C-9D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOJS	**Bojanci**	**0.42**	**11**	⇓*i*Pg	**Pb**	**16 37 29.8**	**-0.8**
BOJS				*e*Sg	**Sb**	**16 37 36.5**	**-0.7**
BOJS	**Bojanci**	**0.42**	**11**	P	**Pg**	**16 37 29.5**	**+0.6**
BOJS				AML	AML		
	comp=E,1555μm,0.3s						
BOJS				AML	AML		
	comp=N,808μm,0.3s						
BOJS				AML	AML		
	comp=E,1555μm,0.3s						
BOJS				AML	AML		
	comp=N,808μm,0.3s						
BOJS				AML	AML		
	comp=E,1555μm,0.3s						
BOJS				AML	AML		
	comp=N,808μm,0.3s						
RIY	**Rijeka**	**0.52**	**297**	*e*Pg	**Pg**	**16 37 30.8**	**0.0**
RIY				Sg	**Sg**	**16 37 37.9**	**+0.3**
RIY	**Rijeka**	**0.52**	**297**	⇓*i*Pg	**Pg**	**16 37 29.9**	**-0.9**
RIY				*e*Sg	**Sg**	**16 37 38.3**	**+0.7**
NVLJ	**Novalja**	**0.56**	**200**	*e*Pg	**Pg**	**16 37 31.1**	**-0.6**
NVLJ				Sg	**Sg**	**16 37 38.1**	**-0.8**
OZLJ	**Ozalj**	**0.57**	**24**	*i* Pg	**Pb**	**16 37 33.2**	**+0.1**
OZLJ				Sg	**Sb**	**16 37 41.9**	**+0.3**
KNDS	**Knezji Dol**	**0.69**	**309**	*e*Pg	**Pg**	**16 37 33.5**	**-0.6**
KNDS				*e*Sg	**Sb**	**16 37 44.3**	**-0.8**
UDBI	**Udbina**	**0.72**	**142**	*e*Pg	**Pg**	**16 37 34.5**	**-0.1**
UDBI				Sg	**Sg**	**16 37 43.9**	**0.0**
VISS	**Visnje**	**0.74**	**343**	*i* Pg	**Pg**	**16 37 35.2**	**+0.1**
CRES	**Cresnjev**	**0.77**	**17**	*e*Pg	**Pb**	**16 37 36.4**	**-0.1**
CRES				*e*Sg	**Sb**	**16 37 47.0**	**-0.2**
CRES	**Cresnjev**	**0.77**	**17**	*e*Pg	**Pg**	**16 37 35.7**	**+0.2**
CRES				*e*Sg	**Sb**	**16 37 47.0**	**-0.2**
CEY	**Cerknica**	**0.82**	**322**	*e*Pg	**Pg**	**16 37 36.2**	**-0.4**
CEY				*e*Sg	**Sb**	**16 37 49.3**	**+0.6**
CEY	**Cerknica**	**0.82**	**322**	⇑*i*Pg	**Pg**	**16 37 36.0**	**-0.5**
CEY				*e*Sg	**Sb**	**16 37 47.8**	**-0.9**
GCIS	**Gornji Cirnik**	**0.85**	**24**	*e*Pg	**Pb**	**16 37 37.8**	**-0.1**
LEGS	**Legarje**	**0.86**	**8**	*e*Pg	**Pb**	**16 37 37.9**	**-0.3**
SKDS	**Skadanscina**	**0.92**	**300**	*i* Pg	**Pg**	**16 37 37.2**	**-1.2**
SKDS				*e*Sg	**Sb**	**16 37 51.3**	**-0.2**
ZAG	**Zagreb**	**0.94**	**39**	*i* Pg	**Pn**	**16 37 40.6**	**0.0**
ZAG				Sg	**Sn**	**16 37 52.7**	**-1.7**
ZAG	**Zagreb**	**0.94**	**39**	⇑P	**Pn**	**16 37 40.3**	**-0.3**
ZAG				AML	AML		
	comp=E,2590μm,0.7s						
ZAG				AML	AML		
	comp=N,2395μm,0.4s						
ZAG				AML	AML		
	comp=E,2590μm,0.7s						
ZAG				AML	AML		
	comp=N,2395μm,0.4s						
ZAG	**Zagreb**	**0.94**	**39**	*e*Pg	**Pn**	**16 37 39.7**	**-0.9**
ZAG				*e*Sg	**Sn**	**16 37 52.7**	**-1.7**
PDKS	**Podkum**	**0.97**	**354**	*e*Pg	**Pb**	**16 37 39.7**	**-0.3**
GBAS	**Gorenja Brezov**	**0.97**	**330**	*i* Pg	**Pg**	**16 37 39.6**	**+0.1**
GOLS	**Golise**	**0.98**	**20**	*e*Pg	**Pn**	**16 37 40.5**	**-0.5**
GOLS				*e*Sg	**Sn**	**16 37 55.1**	**-0.2**
PTJ	**Puntijarka**	**1.00**	**35**	*i* Pg	**Pn**	**16 37 40.9**	**-0.5**
PTJ				Sg	**Sn**	**16 37 55.6**	**-0.3**
LJU	**Ljubljana**	**1.04**	**336**	*i* Pg	**Pn**	**16 37 41.6**	**-0.4**
LJU	**Ljubljana**	**1.04**	**336**	⇓P	**Pn**	**16 37 41.3**	**-0.7**
LJU				AML	AML		
	comp=E,564μm,0.2s						
LJU				AML	AML		
	comp=N,752μm,1.4s						
LJU				AML	AML		
	comp=N,752μm,1.4s						
LJU				AML	AML		
	comp=E,564μm,0.2s						
LJU	**Ljubljana**	**1.04**	**336**	⇑*i*Pg	**Pg**	**16 37 40.7**	**-0.1**
LJU				*e*Sg	**Sn**	**16 37 55.7**	**-1.1**
VNDS	**Vrh nad Dolski**	**1.06**	**343**	*e*Pg	**Pb**	**16 37 41.3**	**-0.2**
DOBS	**Dobrina**	**1.08**	**12**	*e*Pg	**Pn**	**16 37 42.4**	**-0.1**
DUGI	**Dugi Otok**	**1.10**	**183**	*e*Pg	**Pb**	**16 37 40.3**	**-1.9**
DUGI				Sg	**Sg**	**16 37 56.1**	**-0.1**
JAVS	**Javornik**	**1.10**	**317**	*e*Pg	**Pg**	**16 37 40.5**	**-1.4**
JAVS				*e*Sg	**Sn**	**16 37 58.5**	**+0.1**
TRI	**Trieste**	**1.15**	**303**	⇑P	**Pb**	**16 37 41.0**	**-2.1**
TRI				AML	AML		
	comp=E,588μm,0.4s						
TRI				AML	AML		
	comp=N,331μm,0.8s						
TRI				AML	AML		
	comp=E,588μm,0.4s						
TRI				AML	AML		
	comp=N,331μm,0.8s						
CRNS	**Crni Vrh**	**1.17**	**328**	*e*Pg	**Pb**	**16 37 43.1**	**-0.3**
CRNS				*e*Sg	**Sn**	**16 38 00.9**	**+1.0**
MOSL	**Moslavina**	**1.25**	**65**	*e*Pg	**Pg**	**16 37 45.3**	**+0.5**
MOSL				Sg	**Sn**	**16 38 02.5**	**+0.6**
VOJS	**Vojsko**	**1.29**	**317**	*e*Pg	**Pn**	**16 37 44.9**	**-0.5**
VOJS				*e*Sg	**Sn**	**16 38 04.3**	**+1.3**
MORI	**Morici**	**1.29**	**162**	*i* Pg	**Pn**	**16 37 44.6**	**-0.7**
MORI				Sg	**Sb**	**16 38 01.1**	**-1.2**
MOZS	**Mozjanca**	**1.30**	**338**	*e*Pg	**Pg**	**16 37 45.8**	**+0.1**
MOZS				*e*Sg	**Sg**	**16 38 03.9**	**+1.4**
KALN	**Kalnik**	**1.39**	**41**	*e*Pg	**Pg**	**16 37 47.8**	**+0.4**
KALN				Sg	**Sg**	**16 38 07.3**	**+1.9**
GROS	**Grobnik**	**1.39**	**10**	*e*Pg	**Pb**	**16 37 46.8**	**-0.4**
GROS				*e*Sg	**Sg**	**16 38 05.7**	**+0.2**
SABO	**M.te Sabotino**	**1.40**	**310**	P	**Pn**	**16 37 46.4**	**-0.4**
SABO				S	**Sg**	**16 38 08.0**	**+2.2**
SABO				AML	AML		
	comp=E,1044μm,0.8s						
SABO				AML	AML		
	comp=N,914μm,0.4s						
SABO				AML	AML		
	comp=E,1044μm,0.8s						
SABO				AML	AML		
	comp=N,914μm,0.4s						
KIJV	**Kijevo**	**1.41**	**140**	*e*Pg	**Pg**	**16 37 48.6**	**+0.8**
KIJV				Sg	**Sg**	**16 38 07.6**	**+1.4**
GORS	**Gorjuse**	**1.47**	**327**	*e*Pg	**Pb**	**16 37 47.9**	**-0.6**
GORS				*e*Sg	**Sg**	**16 38 09.5**	**+1.7**
OBKA	**Obir**	**1.48**	**344**	*e*Pg	**Pb**	**16 37 48.6**	**0.0**
	comp=N,40nm,0.2s,SNR=74						
OBKA				*e*Sn	**Sg**	**16 38 10.3**	**+2.1**
	comp=N,57nm,0.3s						
ZIRJ	**Zirje**	**1.48**	**166**	*e*Pg	**Pb**	**16 37 48.0**	**-0.7**
ZIRJ				Sg	**Sg**	**16 38 08.6**	**+0.2**
BLY	**Banja Luka**	**1.49**	**103**	⇓P	**Pb**	**16 37 48.8**	**-0.1**
BLY				AML	AML		
	comp=E,328μm,1.4s						
BLY				AML	AML		
	comp=N,186μm,0.8s						
BLY				AML	AML		
	comp=E,328μm,1.4s						
BLY				AML	AML		
	comp=N,186μm,0.8s						
BLY	**Banja Luka**	**1.49**	**103**	⇓*i*Pg	**Pn**	**16 37 47.8**	**-0.3**
BLY				*e*Sg	**Sg**	**16 38 08.3**	**-0.4**
CADS	**Cadrg**	**1.50**	**320**	*e*Pg	**Pb**	**16 37 48.8**	**-0.3**
CADS				*e*Sg	**Sg**	**16 38 10.8**	**+1.7**
MGRS	**Mrkonjic Grad**	**1.54**	**115**	⇑*i*Pg	**Pb**	**16 37 49.3**	**-0.4**
MGRS				*e*Sg	**Sg**	**16 38 10.3**	**+0.1**
PERS	**Pernice**	**1.54**	**359**	*i* Pg	**Pn**	**16 37 48.8**	**-0.1**
KOGS	**Kog**	**1.56**	**29**	*e*Pg	**Pg**	**16 37 51.4**	**+0.7**
KOGS				Sg	**Sg**	**16 38 12.6**	**+1.6**
KOGS	**Kog**	**1.56**	**29**	⇑P	**Pg**	**16 37 51.5**	**+0.7**
KOGS				AML	AML		
	comp=E,1780μm,0.6s						
KOGS				AML	AML		
	comp=N,1395μm,0.5s						
KOGS				AML	AML		
	comp=E,1780μm,0.6s						
KOGS				AML	AML		
	comp=N,1395μm,0.5s						
SOKA	**Soboth**	**1.59**	**357**	*e*Pn	**Pn**	**16 37 49.5**	**+0.1**
	comp=N,13nm,0.3s,SNR=38						
SOKA				*e*Sg	**Sg**	**16 38 12.8**	**+1.0**
	comp=N,29nm,0.6s						
ROBS	**Robic**	**1.62**	**316**	*e*Pg	**Pb**	**16 37 51.0**	**-0.1**
ROBS				*e*Sg	**Sg**	**16 38 12.5**	**-0.4**
BEHE	**Becsehely**	**1.79**	**39**	*e*Pn	**Pb**	**16 37 53.5**	**-0.5**
BEHE				*e*Sn	**Sb**	**16 38 17.1**	**+0.5**
PTCC	**Patocco-Chiusa**	**1.81**	**317**	⇓P	**Pb**	**16 37 53.9**	**-0.5**
PTCC				S	**Sg**	**16 38 19.0**	**-0.1**
PTCC				AML	AML		
	comp=E,180μm,1.1s						
PTCC				AML	AML		
	comp=N,196μm,0.5s						
PTCC				AML	AML		
	comp=N,196μm,0.5s						
PTCC				AML	AML		
	comp=E,180μm,1.1s						
ACOM	**Acomizza, Ital**	**1.85**	**323**	⇓P	**Pb**	**16 37 53.9**	**-1.1**
ACOM				AML	AML		
	comp=E,384μm,0.4s						
ACOM				AML	AML		
	comp=N,376μm,0.4s						
ACOM				AML	AML		
	comp=E,384μm,0.4s						
ACOM				AML	AML		
	comp=N,376μm,0.4s						
MYKA	**Terra Mystica**	**1.86**	**326**	*e*Pn	**Pb**	**16 37 54.0**	**-1.2**
	comp=N,7.4nm,0.2s,SNR=21						
MYKA				*e*Sn	**Sb**	**16 38 18.3**	**-0.4**
	comp=N,19nm,0.6s						
DOB	**Doboj**	**2.13**	**99**	*e*Pn	**Pb**	**16 37 58.1**	**-1.7**
DOB				*e*Sn	**Sb**	**16 38 25.5**	**-0.9**
ARSA	**Arzberg**	**2.17**	**7**	*e*Pn	**Pn**	**16 37 57.5**	**0.0**
	comp=N,3.5nm,0.4s,SNR=4.5						
ARSA				*e*Sn	**Sn**	**16 38 23.2**	**-1.5**
	comp=N,5.3nm,0.3s						
MAKA	**Makarska**	**2.25**	**143**	*e*Pn	**Pb**	**16 38 00.6**	**-1.2**
MAKA				Sn	**Sb**	**16 38 30.7**	**+0.8**
KBA	**Koelnbreinsper**	**2.35**	**328**	*i* Pn	**Pn**	**16 38 01.0**	**+1.0**
	comp=N,5.1nm,0.5s,SNR=9.9						
ABTA	**Abfaltersbach**	**2.47**	**313**	*e*Pn	**Pn**	**16 38 02.1**	**+0.4**
	comp=N,0.5nm,0.2s,SNR=10.0						
ABTA				*e*Sn	**Sb**	**16 38 34.4**	**-1.9**
	comp=N,4.4nm,0.2s						
MOA	**Molln**	**2.82**	**348**	*e*Pn	**Pn**	**16 38 07.6**	**+1.2**
	comp=N,1.5nm,0.2s,SNR=5.8						
MOA				*e*Sn	**Sn**	**16 38 42.2**	**+1.5**
	comp=N,5.0nm,0.3s						
RISI	**Rein**	**2.83**	**312**	⇑P	**Pn**	**16 38 07.6**	**+0.9**
RISI				AML	AML		
	comp=E,326μm,0.5s						
RISI				AML	AML		
	comp=N,335μm,0.5s						
RISI				AML	AML		
	comp=E,326μm,0.5s						
RISI				AML	AML		
	comp=N,335μm,0.5s						
CONA	**Conrad Observa**	**2.88**	**10**	*e*Pn	**Pn**	**16 38 07.6**	**+0.4**
	comp=N,3.0nm,0.2s,SNR=12						
CONA				*i* Sn	**Sn**	**16 38 40.6**	**-1.6**
	comp=N,4.7nm,0.4s						
HAPS	**Han Pijesak,Bl**	**2.90**	**109**	*e*Pn	**Pn**	**16 38 08.7**	**+1.1**
HAPS				*e*Sn	**Sn**	**16 38 43.7**	**+0.9**
ROVR	**Rover Verones**	**2.92**	**282**	S	**Sg**	**16 38 56.0**	**+1.4**
MAGA	**Magasa**	**3.25**	**284**	⇓P	**Pn**	**16 38 12.2**	**-0.2**
MAGA				AML	AML		
	comp=E,378μm,0.6s						
MAGA				AML	AML		
	comp=N,168μm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MAGA	comp=E,378μm,0.6s			AML	AML		
MAGA	comp=N,168μm,0.4s			AML	AML		
DBRK	Dubrovnik	3.25	137	ePn	Pn	16 38 13.7	+1.4
DBRK				Sn	Sn	16 38 54.4	+3.1
WTTA	Wattenberg comp=N,2.2nm,0.2s	3.26	313	ePn	Pn	16 38 14.0	+1.4
WTTA	comp=N,8.9nm,0.4s			iSn	Sn	16 38 54.3	+2.5
BRY	Bratogost	3.29	131	ePn	Pn	16 38 13.6	+0.7
BRY				eSn	Sn	16 38 53.2	+0.9
BBLS	Lazići	3.29	110	ePn	Pn	16 38 13.7	+0.9
BBLS				eSn	Sn	16 38 53.6	+1.3
TREB	Trebinje	3.32	135	ePn	Pn	16 38 14.0	+0.8
TREB				eSn	Sn	16 38 53.6	+0.7
WATA	Walderalm comp=N,2.9nm,0.2s	3.34	313	ePn	Pn	16 38 15.6	+1.9
WATA	comp=N,5.4nm,0.3s			iSn	Sn	16 38 56.9	+3.2
SQTA	Sankt Quirin comp=N,2.6nm,0.3s	3.46	309	iPn	Pn	16 38 17.4	+2.1
SQTA	comp=N,6.6nm,0.4s			eSn	Sn	16 38 58.8	+2.1
MIDA	Miranda	3.51	191	S	Sb	16 39 09.0	+2.8
LEOD	Capriano del C	3.56	278	S	Sb	16 39 04.0	-3.6
HCY	Herceg Novi	3.59	136	ePn	Pn	16 38 17.8	+0.9
MODS	Modra-Piesok	3.60	23	ePN	Pn	16 38 15.8	-1.2
MODS				ePG	Pg	16 38 28.1	-1.6
MODS				eSG	Sg	16 39 14.1	-2.1
MOTA	Moosalm comp=N,0.8nm,0.1s	3.60	310	ePn	Pn	16 38 18.8	+1.6
MOTA	comp=N,12nm,0.6s			eSn	Sn	16 39 02.3	+2.3
DIVS	Divibare	3.60	104	eSn	Sn	16 39 00.4	+0.3
FETA	Feichten comp=N,0.3nm,0.2s	3.63	304	iPn	Pn	16 38 20.2	+2.6
FETA	comp=N,5.8nm,0.6s			iSn	Sn	16 39 03.9	+3.1
KRUC	Moravsky	4.06	12	ePN	Pn	16 38 23.6	+0.2
KRUC				eSN	Sn	16 39 08.4	-2.8
DRME	Dracevica, Mon	4.13	133	ePn	Pn	16 38 24.9	+0.6
DRME				eSn	Sn	16 39 13.0	+0.1
KHC	Kasperske Hory	4.18	346	ePN	Pn	16 38 24.9	-0.1
KHC				ePG	Pb	16 38 36.5	+1.8
KHC				eSN	Sn	16 39 11.9	-2.3
VYHS	Vyhne	4.24	35	ePN	Pn	16 38 26.7	+0.8
VYHS				eSN	Sn	16 39 12.7	-3.0
MCRV	Calabrutti - M	4.31	180	P	Pn	16 38 21.7	-5.2
VENT	Ventotene	4.48	197	⇓P	Pb	16 38 34.6	-5.1
GOPC	GO Pecny, Ondr	4.83	357	ePN	Pn	16 38 33.7	-0.3
PRU	Pruhonice	4.92	355	ePN	Pn	16 38 35.0	-0.1
MORC	Moravsky Berou	4.96	18	ePN	Pn	16 38 36.6	+0.8
CLL	Collm	6.38	348	ePn	Pn	16 38 56.0	+0.8
CLL				e		16 40 30.0	
CLL				eSg	Sg	16 40 46.0	+0.5
VPL	Vulcano Piano	6.71	181	⇑P	Pn	16 38 57.1	-2.7

ROM 26 16:38:07.8±0.1, 43.407N±0.003×12.459E±0.006, h6km±1km, ML1.2/3, Error ellipse: s-maj=0.4km s-min=0.3km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATVO	AVT- Monte Val	0.05	237	P	Pg	16 38 09.4	+0.1
ATVO				S	Sg	16 38 10.6	+0.2
ATVO	comp=E,378μm,0.4s			AML	AML		
ATVO	comp=N,276μm,0.1s			AML	AML		
ATPI	Pietralunga -	0.06	317	P	Pg	16 38 09.7	+0.2
ATPI				S	Sg	16 38 11.0	+0.3
ATPI	comp=N,266μm,0.1s			AML	AML		
ATPI	comp=E,226μm,0.5s			AML	AML		
ATFO	Monte Foce - G	0.09	116	P	Pg	16 38 10.1	+0.1
ATFO				S	Sg	16 38 11.8	+0.4
ATFO	comp=E,226μm,0.7s			AML	AML		
ATFO	comp=N,264μm,1.2s			AML	AML		
PIEI	Pieia	0.14	23	P	Pg	16 38 11.2	+0.4
PIEI				S	Sg	16 38 13.8	+1.1
PIEI	comp=E,134μm,1.3s			AML	AML		
PIEI	comp=N,145μm,0.2s			AML	AML		
MURB	Monte Urbino	0.15	162	P	Pg	16 38 11.4	+0.5
MURB				S	Sg	16 38 14.4	+1.3
MURB	comp=N,224μm,1.4s			AML	AML		
MURB	comp=E,228μm,1.0s			AML	AML		
ATCC	AVT- Casa Cast	0.26	149	P	Pg	16 38 13.5	+0.6
ATCC				S	Sb	16 38 18.2	-1.4

JMA 26 16:42:33.2±0.1, 23.75N×121.67E, h36km±2km, M3.1
TAP 26 16:42:34.0, 23.78N×121.65E, h38km, ML3.5, B
ISC 26 16:42:34.2±0.9, 23.78N±0.02×121.67E±0.02, h32km±7km, n131, σ0.95/226, 5C-28D, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ENLB	Shoufeng baz=343	0.14	333	P	Pn	16 42 40.1	-0.1
ENLB	baz=343			S	Sb	16 42 45.3	+1.1
HWA	Hwalien baz=357	0.20	343	eP	Pn	16 42 41.3	+0.2
ESL	Shilin baz=279	0.22	279	⇓iP	Pn	16 42 41.0	-0.3
ESL	baz=279			S	Sn	16 42 46.0	+0.2
EGFH	Guangfu baz=250	0.25	243	⇓P	Pn	16 42 41.3	-0.4
EGFH	baz=250			eS	Sn	16 42 46.7	+0.2
TWD	Chiawan baz=360	0.31	347	⇓eP	Pn	16 42 42.1	-0.4
TWD	baz=360			S	Sn	16 42 48.3	+0.4
HGSD	Ruisui baz=224	0.36	218	⇑P	Pb	16 42 43.0	+0.3
HGSD	baz=224			eS	Sn	16 42 50.3	+1.0
NACB	Ninganchiao baz=345	0.40	350	⇓P	Pb	16 42 43.1	-0.1
NACB	baz=345			S	Sb	16 42 49.5	+0.1
EHY	Hungye baz=225	0.42	229	⇓iP	Pb	16 42 43.0	-0.6
EHY	baz=225			eS	Sb	16 42 49.1	-0.8
ETLH	Xiulin Townshi baz=333	0.46	338	⇓P	Pb	16 42 43.9	-0.3
ETLH	baz=333			eS	Sb	16 42 50.7	-0.4
OWD	Renai baz=292	0.48	291	⇓iP	Pb	16 42 44.4	-0.3
OWD	baz=292			eS	Sb	16 42 51.5	-0.3
VWDT	VWDT baz=266	0.48	267	⇓P	Pb	16 42 44.5	0.0
VWDT	baz=266			eS	Sb	16 42 51.5	-0.1
YULB	Yu-li baz=229	0.52	222	⇓P	Pn	16 42 44.2	-1.2
YULB	baz=229			eS	Sb	16 42 51.1	-1.3
WHF	Hehuan Shan baz=311	0.52	315	⇓iP	Pn	16 42 44.9	-0.9
WHF	baz=311			S	Sb	16 42 52.5	-0.5
CHGB	Renai baz=308	0.53	302	⇓P	Pn	16 42 45.3	-0.5
CHGB	baz=308			eS	Sb	16 42 52.9	-0.3
TWF1	Yuli baz=224	0.55	219	⇓iP	Pn	16 42 44.7	-1.1
TWF1	baz=224			eS	Sn	16 42 52.1	-1.7
ENA	Nanau baz=18	0.65	6	P	Pn	16 42 46.8	-0.5
ENA	baz=18			eS	Sn	16 42 56.1	-0.3
TWT	Tachien baz=312	0.65	316	⇓iP	Pn	16 42 47.3	-0.2
TWT	baz=312			eS	Sn	16 42 56.1	-0.6
SSLB	Suanglung baz=270	0.66	271	⇓P	Pn	16 42 46.5	-0.8
SSLB	baz=270			eS	Sn	16 42 55.1	-1.5
TDCB	Techi baz=312	0.66	315	⇓P	Pn	16 42 47.3	-0.2
TDCB	baz=312			S	Sn	16 42 55.9	-1.1
FULB	Fuli baz=219	0.67	211	⇑P	Pn	16 42 47.2	-0.4
FULB	baz=219			S	Sn	16 42 57.9	+0.8
NNSB	Datong baz=340	0.70	338	⇓P	Pn	16 42 47.4	-0.6
NNSB	baz=340			eS	Sn	16 42 56.1	-1.7
NNSH	Datong baz=339	0.70	338	eP	Pn	16 42 47.4	-0.6
NNSH	baz=339			eS	Sn	16 42 56.5	-1.3
NNS	Nan Shan baz=341	0.71	338	eP	Pn	16 42 47.7	-0.5
NNS	baz=341			eS	Sn	16 42 57.3	-0.8
SMLT	Sun Moon Lake baz=280	0.71	278	⇓iP	Pn	16 42 47.8	-0.4
SMLT	baz=280			S	Sn	16 42 57.4	-0.8
YUS	Yu-Shan baz=244	0.72	246	⇓iP	Pn	16 42 48.2	-0.4
YUS	baz=244			S	Sn	16 42 57.3	-1.5
DPDB	Guoxing baz=290	0.72	290	⇓iP	Pn	16 42 47.9	-0.4
DPDB	baz=290			eS	Sn	16 42 57.8	-0.5
CHKT	Chengkung baz=191	0.73	202	eP	Pn	16 42 47.8	-0.6
WHYT	Xinyi Township baz=256	0.75	264	P	Pn	16 42 48.5	-0.2
WHYT	baz=256			S	Sn	16 42 58.9	-0.1
TYC	Yuchr baz=285	0.75	280	⇓iP	Pn	16 42 48.2	-0.4
TYC	baz=285			eS	Sn	16 42 57.6	-1.3
WHP	Taichung City baz=314	0.83	307	eP	Pn	16 42 49.6	-0.1
WHP	baz=314			eS	Sn	16 43 00.7	-0.2
NDT	Datong Townshi baz=344	0.83	350	P	Pn	16 42 49.3	-0.4
NDT	baz=344			eS	Sn	16 43 00.1	-0.8
ALS	Alishan baz=249	0.84	251	eP	Pn	16 42 49.9	-0.1
ALS	baz=249			eS	Sn	16 43 01.1	-0.3
ELDTW	Lidau baz=218	0.84	226	eP	Pn	16 42 48.9	-1.0
ELDTW	baz=218			eS	Sn	16 42 58.9	-2.3
TWC	Suao baz=22	0.84	11	eP	Pn	16 42 50.1	+0.2
TWC	baz=22			eS	Sn	16 43 01.6	+0.4
ENTT	Nioudou baz=349	0.86	354	⇓P	Pn	16 42 49.8	-0.4
ENTT	baz=349			eS	Sn	16 43 01.2	-0.4
WJS	Zhushan baz=272	0.86	273	⇓eP	Pn	16 42 50.6	+0.5
WJS	baz=272			eS	Sn	16 43 02.7	+1.1
EOS1	EOS1 baz=47	0.87	29	eP	Pn	16 42 50.5	+0.3
EOS1	baz=47			eS	Sn	16 43 02.6	+0.7
WNT	Mingjian baz=275	0.91	276	⇓P	Pn	16 42 51.5	+0.7
WNT	baz=275			eS	Sn	16 43 03.8	+1.0
YHNB	Yeheng baz=346	0.93	343	⇓P	Pn	16 42 51.0	-0.1
YHNB	baz=346			S	Sn	16 43 02.4	-0.9
CHN5	Tsauling baz=257	0.93	259	P	Pn	16 42 51.6	+0.4
CHN5	baz=257			S	Sn	16 43 03.9	+0.5
NSK	Sanguang baz=345	0.94	342	⇓iP	Pn	16 42 51.1	-0.1
NSK	baz=345			S	Sn	16 43 02.8	-0.8
TWE	Neicheng baz=355	0.94	360	P	Pn	16 42 51.0	-0.2
TWE	baz=355			eS	Sn	16 43 03.5	0.0
SLBB	Yuanshan baz=360	0.97	358	eP	Pn	16 42 51.5	-0.2
TCU	Taichung baz=292	0.98	292	eP	Pn	16 42 52.7	+0.9
TCU	baz=292			eS	Sn	16 43 06.3	+1.8
ILA	Ilan baz=355	0.98	4	eP	Pn	16 42 51.6	-0.3
TWQ1	Liyutan baz=305	0.99	305	⇑eP	Pn	16 42 52.9	+0.9
TWQ1	baz=305			eS	Sn	16 43 06.3	+1.3
NWLT	Wulai baz=348	1.00	351	eP	Pn	16 42 52.1	-0.1
NWLT	baz=348			eS	Sn	16 43 04.5	-0.7
WGK	Gukeng baz=264	1.02	265	P	Pn	16 42 52.9	+0.6
WGK	baz=264			eS	Sn	16 43 06.7	+1.2
STYT	Tauyuan baz=226	1.04	234	eP	Pn	16 42 52.8	+0.2
STYT	baz=226			eS	Sn	16 43 06.4	+0.3
WDLH	Douliu baz=264	1.04	265	eP	Pn	16 42 53.4	+0.8
WDLH	baz=264			eS	Sn	16 43 06.9	+0.9
NSY	Sanyi baz=308	1.04	308	eP	Pn	16 42 53.7	+1.0
NSY	baz=308			eS	Sn	16 43 07.9	+1.7
NSTT	Nanjuang baz=325	1.04	324	⇓eP	Pn	16 42 53.6	+0.9
NSTT	baz=325			S	Sn	16 43 06.6	+0.5
LIOB	Emei baz=326	1.05	325	⇓eP	Pn	16 42 53.8	+1.1
LIOB	baz=326			S	Sn	16 43 07.3	+1.0
WCHH	Zhanghua baz=285	1.06	287	eP	Pn	16 42 53.6	+0.8
WCHH	baz=285			eS	Sn	16 43 08.2	+1.6
TPUB	Ta-pu baz=241	1.07	244	⇑P	Pn	16 42 53.6	+0.6
TPUB	baz=241			S	Sn	16 43 07.4	+0.6
CHN4	Tsaushan baz=245	1.08	247	P	Pn	16 42 54.0	+0.9
CHN4	baz=245			S	Sn	16 43 08.5	+1.6
NTC	Toucheng baz=359	1.08	8	eP	Pn	16 42 54.3	+1.2
TWH	Lutao baz=187	1.08	189	eP	Pn	16 42 51.7	-1.5
WDJ	Dajia District baz=302	1.10	301	eP	Pn	16 42 54.2	+0.8
WDJ	baz=302			eS	Sn	16 43 08.9	+1.4
NMLH	Miaoli baz=314	1.10	313	eP	Pn	16 42 54.2	+0.7
NMLH	baz=314			eS	Sn	16 43 08.3	+0.7
TWGBT	Beinan baz=198	1.10	210	eP	Pn	16 42 51.5	-1.9
TWG	Pinlang baz=198	1.10	210	eP	Pn	16 42 51.7	-1.8
PTSB	Yuanli baz=308	1.10	307	eP	Pn	16 42 54.4	+1.0
PTSB	baz=308			eS	Sn	16 43 08.9	+1.3
WTP	Ta-pu baz=239	1.10	241	P	Pn	16 42 54.2	+0.6
WTP	baz=239			eS	Sn	16 43 08.7	+0.9
CHN2	Minshiung baz=256	1.12	258	eP	Pn	16 42 54.7	+1.0
CHN2	baz=256			eS	Sn	16 43 10.2	+2.2
TTN	Taitung baz=203	1.13	205	eP	Pn	16 42 53.5	-0.3
WLTB	Daxi baz=346	1.13	340	eP	Pn	16 42 55.1	+1.3
WLTB	baz=346			eS	Sn	16 43 09.6	+1.2
CHY	Chiayi baz=255	1.18	256	eP	Pn	16 42 55.0	+0.5
CHY	baz=255			eS	Sn	16 43 09.8	+0.4
NHDH	Xindian Distri baz=357	1.19	354	eP	Pn	16 42 55.1	+0.5
NHDH	baz=357			eS	Sn	16 43 09.5	-0.1
SBCB	Hsinchu baz=329	1.19	328	eP	Pn	16 42 55.5	+0.9
SBCB	baz=329			eS	Sn	16 43 11.7	+2.0
TIPB	Shuangxi	1.20	7	eP	Pn	16 42 55.2	+0.5
TIPB				eS	Sn	16 43 10.0	0.0
TWA	Mucha baz=351	1.20	356	eP	Pn	16 42 55.0	+0.2
TWA	baz=351			eS	Sn	16 43 10.0	+0.1
TWK	Hsinying baz=243	1.20	245	⇓P	Pn	16 42 55.6	+0.7
TWK	baz=243			eS	Sn	16 43 11.3	+1.3
HSN	Hsinchu baz=330	1.20	328	eP	Pn	16 42 55.1	+0.3
CHN1	Nanshi baz=238	1.20	241	eP	Pn	16 42 55.9	+1.0
CHN1	baz=238			eS	Sn	16 43 11.4	+1.3
RLNB	Erlin baz=266	1.20	276	eP	Pn	16 42 55.8	+0.9
RLNB	baz=266			S	Sn	16 43 11.6	+1.5
SNST	Tainan City baz=241	1.21	243	eP	Pn	16 42 56.0	+1.0
SNST	baz=241			eS	Sn	16 43 11.6	+1.3
SGST	Jiashian baz=233	1.22	235	eP	Pn	16 42 55.1	0.0
SGST	baz=233			eS	Sn	16 43 11.1	+0.7
SLGT	Liugui baz=237	1.22	230	eP	Pn	16 42 55.9	+0.8
SLGT	baz=237			eS	Sn	16 43 12.6	+2.0
TWB1	Santiao Chiao baz=19	1.26	13	eP	Pn	16 42 56.0	+0.4
TWB1	baz=19			eS	Sn	16 43 12.8	+1.5
NCUH	Zhongli baz=339	1.26	340	eP	Pn	16 42 56.4	+0.7
WTCT	Ta-ch'eng baz=273	1.27	274	P	Pn	16 42 56.7	+0.9
WTCT	baz=273			eS	Sn	16 43 14.1	+2.3
NWF	Wu-fen Shan baz=356	1.29	5	eP	Pn	16 42 56.7	+0.6
NWF	baz=356			eS	Sn	16 43 13.4	+1.0
WFSB	Wu-fen Shan baz=356	1.29	5	P	Pn	16 42 56.4	+0.4
WFSB	baz=356			eS	Sn	16 43 12.8	+0.6
WLGB	Puzi baz=257	1.29	257	eP	Pn	16 42 56.7	+0.7
WSF	Szhu baz=263	1.33	264	P	Pn	16 42 57.3	+0.6
WSF	baz=263			eS	Sn	16 43 15.5	+2.2
JYNG	Yonagunijimaku	1.34	60	P	Pn	16 42 57.0	+0.2
JYNG				S	Sn	16 43 14.2	+0.7
YM01	YM01	1.36	356	eP	Pn	16 42 57.6	+0.5
YM01				eS	Sn	16 43 13.7	-0.4
YM10	YM10 baz=360	1.37	356	eP	Pn	16 42 58.1	+0.8
YM10	baz=360			eS	Sn	16 43 14.3	0.0
YM11	YM11 baz=358	1.38	356	eP	Pn	16 42 57.8	+0.4
CHN3	Shinhua baz=238	1.39	240	eP	Pn	16 42 59.0	+1.6
CHN3	baz=238			eS	Sn	16 43 17.4	+2.8
YOJ	Yonaguni jima	1.40	61	P	Pn	16 42 58.2	+0.6
YOJ				eS	Sn	16 43 15.5	+0.5
SSD	Sandimen baz=219	1.40	223	eP	Pn	16 42 57.9	+0.3
SSD	baz=219			eS	Sn	16 43 17.0	+1.9
ANP	Anpu baz=356	1.41	354	eP	Pn	16 42 58.1	+0.3
CHN8	Yiju baz=251	1.41	252	⇑P	Pn	16 42 58.0	+0.4
CHN8	baz=251			S	Sn	16 43 16.4	+1.3
SCLT	Jiali baz=244	1.48	246	eP	Pn	16 42 59.3	+0.6
SCLT	baz=244			eS	Sn	16 43 18.4	+1.5
TWM1	Shoushan baz=230	1.49	231	eP	Pn	16 43 00.6	+1.7
MASBT	Mashibuluo baz=202	1.50	220	eP	Pn	16 42 59.5	+0.5
MASBT	baz=202			eS	Sn	16 43 18.4	+0.9
EAST	Anshuo baz=200	1.58	209	eP	Pn	16 43 00.1	0.0
SSPT	Xinbi baz=217	1.64	218	eP	Pn	16 43 01.2	+0.3
SCZT	Fangliau baz=213	1.70	215	eP	Pn	16 43 02.9	+1.2
LAY	Lan-yu baz=182	1.74	184	eP	Pn	16 43 01.8	-0.4
WLCH	Liuqiu baz=219	1.85	220	eP	Pn	16 43 07.6	+3.8
WDGT	Dungji baz=255	1.92	255	eP	Pn	16 43 04.4	-0.3
PHUB	P'eng-hu baz=249	1.94	263	eP	Pn	16 43 04.9	-0.1
PHUB	baz=249			eS	Sn	16 43 27.4	-0.9
PNG	Penghu baz=263	1.95	264	eP	Pn	16 43 05.1	0.0
PNG	baz=263			eS	Sn	16 43 28.5	0.0
IRIF	Iriomote-Funau	1.96	73	P	Pn	16 43 05.9	+0.6
IRIF				eS	Sn	16 43 29.9	+1.1
HATJ	Hateruma jima	1.97	82	P	Pn	16 43 04.7	-0.7
HATJ				eS	Sn	16 43 29.3	+0.2
TWKBT	Hengchun baz=193	1.99	204	eP	Pn	16 43 05.8	+0.1
TWK1	Hengchun baz=193	2.00	204	eP	Pn	16 43 06.2	+0.4
VCHM	Qimei baz=254	2.13	255	eP	Pn	16 43 07.7	0.0
VCHM	baz=254			eS	Sn	16 43 32.5	-0.5
JKRS	Kuro-shima	2.19	78	P	Pn	16 43 09.3	+0.9
JKRS				eS	Sn	16 43 35.3	+0.9
JIJ	Ishigaki jima	2.33	75	P	Pn	16 43 10.6	+0.2
JIJ				S	Sn	16 43 37.3	-0.7
VWUC	VWUC baz=300	2.36	301	eP	Pn	16 43 09.9	-0.8
PTTC	Pingtan baz=313	2.43	315	eP	Pn	16 43 11.3	-0.5
JISG	Ishigakijimahi	2.54	71	P	Pn	16 43 13.1	-0.2

JISG S Sn 16 43 42.4 -0.7
PTMZ Houxiangcun 2.64 299 eP Pn 16 43 14.2 -0.4
baz=297
MATB Ma-tsu 2.83 327 eP Pn 16 43 17.6 +0.4
baz=325
JTJ Tarama 2.90 72 P Pn 16 43 18.6 +0.4
JTJ S Sn 16 43 51.9 0.0
KNM Kinmen 3.02 283 eP Pn 16 43 21.1 +1.2
baz=282
KNMB Chin-men Tao 3.07 283 eP Pn 16 43 19.8 -0.7
baz=284
LYJJ Jianjiangzhen 3.25 328 eP Pn 16 43 22.6 -0.5
baz=326
MHZQ Yeshan 3.33 314 eP Pn 16 43 23.6 -0.5
baz=312
JIRB Irabujima 3.36 71 P Pn 16 43 24.5 0.0
JIRB eS Sn 16 44 02.5 -0.9
XPSS Dashiqiu 3.41 337 eP Pn 16 43 24.5 -0.7
baz=345
JIKM Ikemajima 3.46 70 P Pn 16 43 26.3 +0.5
JIKM eS Sn 16 44 05.5 -0.2
JMJ2 Miyako jima3 3.47 73 P Pn 16 43 26.7 +0.6
JMJ2 eS Sn 16 44 07.0 +0.9
JOGS Gusukube 3.55 73 eS Sn 16 44 08.5 +0.6
AXDP Jialang 3.55 289 eP Pn 16 43 26.9 -0.2
baz=287
AXDP eS Sn 16 44 05.0 -3.1
baz=287
ZPLA Ao Xicun 3.59 273 eP Pn 16 43 27.2 -0.5
baz=274
ZZJH Jiuhuzhen 3.75 281 eP Pn 16 43 29.8 -0.1
baz=282

IDC 26 17:21:53.4±0.8, 60.25S×48.92W, h0km, mb4.1/10, mb1 4.2/11, mb1mx4.1/28, mbtmp4.2/11, ML4.5/1, MS3.5/10, Ms1 3.5/10, ms1mx3.3/28, Error ellipse: s-maj=29.2km s-min=17.6km az=60.0
NEIC 26 17:21:55.1±1.3, 60.19S±0.09×48.9W±0.2, h10km±1km, mb4.6/12, Error ellipse: s-maj=16.5km s-min=14.4km az=114.0
ISC 26 17:21:55.1±0.6, 60.19S±0.08×49.00W±0.09, h10km, n44, σ0.75/34, mb4.3/15, MS3.4/9, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	Palmer Station	8.34	230	Pn	Pn	17 23 55.3	-0.5
	5.7nm,0.3s,baz=77,slow=12,SNR=9.9						
PMSA				LR	LR	17 26 55.7	
	comp=Z,496nm,19.2s,baz=164,slow=36						
PMSA	Palmer Station	8.34	230	P	Pn	17 23 55.1	-0.7
HOPE	Hope Point	8.99	54	Pn	Pn	17 24 03.2	-1.5
EFI	East Falkland	9.92	325	Pn	Pn	17 24 16.3	-1.2
USHA	Ushuaia	11.73	289	LR	LR	17 28 18.5	
	comp=Z,270nm,19.1s,baz=162,slow=33						
VNA3	Neumayer Olymp	19.15	141	P	Pn	17 26 20.0	+1.1
VNA2	Neumayer--Watz	19.80	140	P	Pn	17 26 27.1	+0.5
	baz=299,slow=12						
SNAA	Sanae	21.37	141	P	P	17 26 42.7	+0.5
	2.9nm,1.0s,baz=274,slow=15,SNR=2.7						
SNAA				LR	LR	17 33 15.9	
	comp=Z,161nm,19.2s,baz=360,slow=32						
SNAA	Sanae	21.37	141	P	P	17 26 42.0	-0.2
PLCA	Paso Flores	23.62	316	P	P	17 27 05.7	-0.4
	7.0nm,0.9s,baz=183,slow=9.6,SNR=15						
PLCA				LR	LR	17 36 01.7	
	comp=Z,81nm,19.4s,baz=178,slow=36						
PLCA	Paso Flores	23.62	316	P	P	17 27 06.5	+0.4
PLCA				IAmb	IAmb	17 27 06.9	
	comp=Z,13nm,1.1s						
QSPA	South Pole Qui	30.05	180	LR	LR	17 41 58.3	
	comp=Z,104nm,19.2s,baz=150,slow=40						
QSPA	South Pole Qui	30.05	180	P	P	17 28 03.5	-0.4
QSPA				IAmb	IAmb	17 28 05.4	
	comp=Z,13nm,1.2s						
GO04	Tololo Observa	33.39	324	P	P	17 28 33.7	0.0
CPUP	Villa Florida	34.33	347	P	P	17 28 42.4	+0.8
	comp=Z,0.8nm,0.5s,baz=116,slow=16,SNR=2.9						
CPUP				LR	LR	17 41 43.8	
	comp=Z,51nm,22.0s,baz=170,slow=35						
GO03	Copiap	35.66	327	P	P	17 28 53.5	+0.3
GO02	Mina Guanaco	37.80	329	P	P	17 29 11.8	+0.1
GO02				IAmb	IAmb	17 29 18.3	
	comp=Z,8.1nm,1.0s						
PB10	IPOC Station P	39.63	328	P	P	17 29 27.1	+0.4
PB10				IAmb	IAmb	17 30 26.3	
	comp=Z,18nm,1.1s						
LVC	Limon Verde	40.07	331	P	P	17 29 31.6	+0.8
	comp=Z,3.5nm,0.5s,baz=162,slow=4.0,SNR=5.4						
LVC	Limon Verde	40.07	331	P	P	17 29 31.4	+0.7
PB01	IPOC Station P	41.72	331	P	P	17 29 43.8	-0.2
PB01				IAmb	IAmb	17 29 45.9	
	comp=Z,13nm,0.8s						
GO01	Chusmiza	42.97	331	P	P	17 29 55.4	+0.7
MAW	Mawson	43.22	149	LR	LR	17 46 53.3	
	comp=Z,178nm,19.5s,baz=242,slow=35						
MNMC	Minye Minye	43.58	331	P	P	17 30 00.2	+0.7
BDFB	Brasilia	44.49	1	P	P	17 30 07.8	+1.3
	comp=Z,1.4nm,0.4s,baz=136,slow=11,SNR=3.5						
BDFB				LR	LR	17 46 49.8	
	comp=Z,33nm,20.7s,baz=328,slow=34						
SIV	San Ignacio	45.00	343	P	P	17 30 10.9	+0.4
	comp=Z,5.3nm,0.8s,baz=189,slow=7.3,SNR=27						
LPAZ	La Paz	45.99	334	P	P	17 30 19.8	+0.7
	comp=Z,2.2nm,0.7s,baz=172,slow=8.0,SNR=8.9						
LPAZ				LR	LR	17 50 21.2	
	comp=Z,26nm,21.4s,baz=176,slow=37						
LPAZ	La Paz	45.99	334	P	P	17 30 19.3	+0.3
SAML	Samuel	52.23	342	P	P	17 31 06.4	+0.3
SAML				IAmb	IAmb	17 31 07.5	
	comp=Z,5.2nm,0.9s						
SUR	Sutherland	52.58	91	P	P	17 31 08.1	-0.7
	comp=Z,4.6nm,1.1s,baz=252,slow=19,SNR=3.1						
H10S2	ASCENSION HYDR	57.21	42	T	T	18 34 09.4	
	baz=20,slow=74,SNR=17						
H10S3	ASCENSION HYDR	57.21	42	T	T	18 34 05.5	
	baz=200,slow=74,SNR=16						
BOSA	Boshof	57.86	92	LR	LR	17 52 32.0	
	comp=Z,47nm,18.8s,baz=166,slow=32						
H10N3	ASCENSION HYDR	58.30	41	T	T	18 35 31.9	
	baz=199,slow=75,SNR=16						
H10N1	ASCENSION HYDR	58.31	41	T	T	18 35 32.1	
	baz=199,slow=75,SNR=11						
H10N2	ASCENSION HYDR	58.32	41	T	T	18 35 19.8	
	baz=199,slow=75,SNR=16						
TORD	Torodi Ar. Bea	83.54	49	P	P	17 34 22.7	-0.3
	comp=Z,2.6nm,1.0s,baz=188,slow=5.7,SNR=7.7						
CMIG	Matias Romero	85.43	316	LR	LR	18 05 53.3	
	comp=Z,286nm,18.0s,baz=131,slow=31						
ASAR	Alice Springs	96.42	183	P	P	17 35 23.9	-0.3
	comp=Z,0.1nm,0.6s,baz=171,slow=4.3,SNR=4.8						
WRA	Warramunga Arr	100.11	183	P	Pdif	17 35 41.3	+0.5
	comp=Z,0.4nm,1.0s,baz=185,slow=4.3,SNR=3.1						
ARCES	ARCESS Array B	139.81	32	PKP	PKPdf	17 41 22.1	+0.7
	comp=Z,2.0nm,0.8s,baz=262,slow=2.5,SNR=6.4						
ILAR	Eielson Array	144.29	313	PKP	PKPab	17 41 26.9	-0.7
	comp=Z,0.6nm,0.6s,baz=149,slow=2.1,SNR=9.1						
MK31	Makanchi Array	148.86	93		PKPdf	17 41 38.8	+1.0
MKAR	Makanchi Array	148.86	93	PKPbc	PKPdf	17 41 39.3	+1.5
	comp=Z,0.5nm,0.7s,baz=238,slow=1.1,SNR=6.3						

NEIC 26 17:30:17.3±0.4, 29.5S±0.2×178.1W±0.3, h84km±11km, mb4.4/10, Error ellipse: s-maj=41.7km s-min=19.1km az=49.0
IDC 26 17:30:18.3±0.6, 29.50S×178.21W, h87km±14km, mb4.1/6, mb1 4.2/6, mb1mx3.8/24, mbtmp4.4/6, Error ellipse: s-maj=37.8km s-min=22.3km az=44.0
ISC 26 17:30:18.2±0.8, 29.6S±0.1×178.2W±0.1, h87km, n23, σ0.81/23, mb4.5/9, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.41	43	P	Pn	17 30 32.3	+0.4
	137nm,0.3s,baz=23,slow=18,SNR=7.0						
RAO				S	Sn	17 30 43.8	+1.7
	993nm,0.3s,baz=264,slow=22,SNR=16						
RAO	Raoul Island	0.41	43		Sn	17 30 30.2	-12
RAO	Raoul Island	0.41	43	Pn	Pn	17 30 30.1	-1.8
CTAO	Charters Tower	33.47	278	P	P	17 36 49.3	+0.1
STKA	Stephens Creek	34.48	256	P	P	17 36 58.5	+0.6
	3.5nm,0.5s,baz=100,slow=10.0,SNR=12						
STKA	Stephens Creek	34.48	256	P	P	17 36 58.1	+0.3
PMG	Port Moresby	38.06	295	P	P	17 37 27.8	-0.6
	3.0nm,0.3s,baz=199,slow=20,SNR=6.8						
PMG	Port Moresby	38.06	295	P	P	17 37 27.8	-0.6
PMG				IAmb	IAmb	17 37 47.9	
	comp=Z,16nm,1.1s						
AS31	Alice Springs	42.95	266	P	P	17 38 09.2	+0.4
ASAR	Alice Springs	42.96	266	P	P	17 38 09.2	+0.3
	comp=Z,1.1nm,0.5s,baz=105,slow=7.2,SNR=62						
WR0	Warramunga Arr	43.69	271	P	P	17 38 15.0	+0.3
WR0				IAmb	IAmb	17 38 16.3	
	comp=Z,2.8nm,0.7s						
WB2	Warramunga Arr	43.86	271	P	P	17 38 16.1	0.0
WB2				IAmb	IAmb	17 38 17.8	
	comp=Z,3.1nm,0.8s						
WRA	Warramunga Arr	43.87	271	P	P	17 38 16.4	+0.3
	comp=Z,2.2nm,0.3s,baz=110,slow=8.1,SNR=88						
WB0	Warramunga Arr	43.89	272	P	P	17 38 16.6	+0.3
WB0				IAmb	IAmb	17 38 20.0	
	comp=Z,14nm,1.5s						
FORT	Forrest	46.07	254	P	P	17 38 32.6	-0.9
VNDA	Vanda	48.92	186	P	P	17 38 55.8	+1.0
	comp=Z,2.4nm,0.7s,baz=349,slow=12,SNR=3.8						
VNDA	Vanda	48.92	186	P	P	17 38 54.1	-0.8
VNDA				IAmb	IAmb	17 39 21.3	
	comp=Z,6.6nm,1.1s						
KNRA	Kununurra	50.44	274	P	P	17 39 08.6	+1.4
QSPA	South Pole Qui	60.56	180	P	P	17 40 19.1	-0.1
	comp=Z,3.8nm,0.7s,baz=356,slow=0.2,SNR=19						
QSPA	South Pole Qui	60.56	180	P	P	17 40 19.1	-0.1
QSPA				IAmb	IAmb	17 40 21.6	
	comp=Z,2.5nm,0.8s						
FINES	FINESS Array B	144.28	340	PKP	PKPdf	17 49 42.7	-0.6
	comp=Z,1.2nm,0.5s,baz=66,slow=3.5,SNR=7.4						
AKASG	Malin Array Be	150.50	323	PKPbc	PKPbc	17 49 59.7	+0.3
	comp=Z,0.6nm,0.5s,baz=51,slow=2.5,SNR=4.6						
CLL	Collm	156.70	342	ePKPab	PKPab	17 50 32.0	-0.4

ANF 26 18:18:01.8±0.5, 36.61N×97.82W, h5km, ML3.6/8, Error ellipse: s-maj=5.8km s-min=5.3km az=133.0
TUL 26 18:18:02±2.3, 36.59N±0.03×97.81W±0.06, h5km±5km, ML3.0, Error ellipse: s-maj=6.6km s-min=3.7km az=86.0
NEIC 26 18:18:02.3±1.8, 36.58N±0.03×97.75W±0.04, h1km±5km, Error ellipse: s-maj=4.6km s-min=3.7km az=80.0
IDC 26 18:18:09.8±1.0, 38.20N×96.46W, h0km, mb3.3/1, mb1 3.9/5, mb1mx3.5/52, mbtmp3.5/5, ML3.9/4, Error ellipse: s-maj=14.9km s-min=10.1km az=177.0
ISC 26 18:18:01.1±0.7, 36.58N±0.03×97.75W±0.03, h10km, n50, σ2.47/58, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	Winter Ranch,	1.02	259		Pb	18 18 20.4	-0.5
T35A	Sooner Cattle	1.05	71	Pn	Pn	18 18 23.4	+1.4
OKCFA	Oklahoma City	1.19	168		Pg	18 18 24.2	+0.3
OKCSW	OKLAHOMA CITY	1.20	168	Pg	Pg	18 18 24.6	+0.5
FNO	Franklin	1.35	168		Pg	18 18 27.6	+0.6
W35A	Tecumseh	1.59	153		Pg	18 18 31.3	-0.3
TUL1	Leonard	1.72	112	Pn	Pg	18 18 34.1	0.0
TUL1	Leonard	1.72	112	Pb	Pb	18 18 35.0	+0.9
	baz=293						
TUL1				S	Sg	18 18 57.5	+1.1
	baz=293						
X34A	Smith Ranch, M	1.98	182		Pb	18 18 37.4	+0.2
X34A					Sg	18 19 04.7	+0.1
WMOK	Wichita Mounta	2.02	205	Pn	Pb	18 18 37.0	-0.9
WMOK	Wichita Mounta	2.02	205	P	Pb	18 18 36.8	-1.1
	baz=23						
WMOK				S	Sb	18 19 03.4	+0.3
	baz=23						
KSU1	Kansas State U	2.67	19	Pb	Pb	18 18 49.9	+0.8
	baz=201						
KSU1				S	Sb	18 19 19.6	-2.4
	baz=201						
U38A	Gravette	2.72	92		Pb	18 18 48.1	-1.6
CBKS	Cedar Bluff	2.73	325		Pb	18 18 48.9	-1.2
CBKS	Cedar Bluff	2.73	325	Pb	Pb	18 18 49.8	-0.3
	baz=145						
CBKS				Sb	Sg	18 19 26.3	-2.5
	baz=145						
X37A	Clayton	2.78	135	Pn	Pn	18 18 47.8	+2.2
HHAR	Hobbs	3.09	94		Pn	18 18 51.9	+2.0
W39A	Magazine	3.51	112		Pn	18 18 59.2	+3.5
W39A	Magazine	3.51	112	Pb	Pb	18 19 04.7	+1.5
	baz=294						
W39A				Sb	Sg	18 19 51.0	-2.6
	baz=294						
AMTX	Amarillo	3.62	243	Pn	Pn	18 19 00.4	+3.2
AMTX	Amarillo	3.62	243	Pb	Pb	18 19 06.3	+1.1
	baz=60						
AMTX				S	Sn	18 19 41.6	+1.6
	baz=60						
U40A	Yellville	3.96	92		Pn	18 19 04.9	+3.1
U40A	Yellville	3.96	92	P	Pn	18 19 04.4	+2.5
	baz=275						
U40A				Sb	Sg	18 20 05.5	-2.6
	baz=275						
MIAR	Mount Ida	3.96	120		Pn	18 19 04.9	+2.9
MIAR	Mount Ida	3.96	120	P	Pn	18 19 02.8	+0.8
	baz=302						
MIAR				Sb	Sg	18 20 06.1	-2.3
	baz=302						
ABTX	Abilene, Hawle	4.24	202	Pn	Pn	18 19 08.2	+2.4
X40A	Basin Creek Fa	4.52	116		Pn	18 19 13.2	+3.6
KSCO	Kaye Shedlock'	4.56	304	Pn	Pn	18 19 12.2	+2.0
WHTX	Lake Whitney,	4.58	177	Pn	Pn	18 19 12.2	+1.7
FCAR	Ozark Folk Cen	4.60	97		Pn	18 19 13.2	+2.5
WHAR	Wooly Hollow	4.62	105		Pn	18 19 12.9	+2.0
W41B	Gary Mavity, V	4.69	106		Pn	18 19 14.8	+2.9
BGNE	Belgrade	4.83	356	Pn	Pn	18 19 15.7	+1.8
MSTX	Muleshoe	4.86	239		Pn	18 19 17.9	+3.5
LCAR	Lake Charles	5.35	94	Pn	Pn	18 19 23.3	+2.3
T25A	Trinidad	5.37	278		Pn	18 19 23.8	+2.3
CCM	Cathedral Cave	5.39	72	Pg	Pn	18 19 41.6	-2.8
OGNE	Ogallala	5.49	324	Pn	Pn	18 19 26.1	+3.0
SDCO	Great Sand Dun	6.30	283		Pn	18 19 36.6	+2.4
Q24A	Divide	6.32	294	Pn	Pn	18 19 36.1	+1.5
ECSD	EROS Data Cent	7.20	7		Pn	18 19 47.6	+1.2
ANMO	Albuquerque	7.26	260	Pn	Pg	18 20 17.2	-2.9
	0.4nm,0.3s,baz=80,slow=16,SNR=5.4						
ANMO				Sn	Sg	18 21 48.2	-6.0
	1.2nm,0.3s,baz=187,slow=10,SNR=9.8						
ANMO	Albuquerque	7.26	260		Pb	18 20 12.0	+4.6
S22A	4UR Ranch, Cre	7.34	282		Pb	18 20 12.5	+3.7
L40A	Anamosa	7.46	41		Pn	18 19 52.5	+2.6
N23A	Red Feather La	7.71	306		Pn	18 19 55.5	+1.8
TXAR	Lajitas Array	8.77	216	Pn	Pg	18 20 42.7	-6.2
	0.3nm,0.3s,baz=40,slow=15,SNR=4.7						
TXAR				Sn	Sg	18 22 35.0	-7.5
	0.4nm,0.3s,baz=50,slow=18,SNR=4.6						
TXAR				Lg	Lg	18 23 40.9	
	baz=138,slow=15,SNR=3.9						
PDAR	Pinedale Array	10.99	308	Pn	Pn	18 20 49.0	+10
	0.2nm,0.3s,baz=111,slow=12,SNR=3.8						
PDAR				Lg	Lg	18 23 49.0	
	0.2nm,0.3s,baz=106,slow=34,SNR=6.4						
TKL	Tuckaleechee C	11.35	91	Pn	Pn	18 20 42.3	-1.0
	1.2nm,0.3s,baz=292,slow=19,SNR=9.7						
TKL				Sn	Sn	18 22 35.8	-14
	1.5nm,0.3s,baz=307,slow=22,SNR=7.2						
ILAR	Eielson Array	40.38	330	P	P	18 25 41.5	+2.7
	0.4nm,0.8s,baz=105,slow=7.3,SNR=5.3						

ANF 26 18:23:54.7±0.5, 41.31N×123.54W, h13km±2km, ML2.1/5, Error ellipse: s-maj=4.2km s-min=2.3km az=79.0
NCEDC 26 18:23:55.1, 41.33N×123.50W, h35km, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
M02C	Callahan	0.52	81	P	Pb	18 24 05.4	-0.3
	baz=263,SNR=301						
M02C				S	Sg	18 24 12.5	+0.6
	baz=263						
N02D	Trinity Center	0.71	118	P	Pg	18 24 08.5	-0.1
	baz=301,SNR=44						
N02D				S	Sb	18 24 18.4	-0.3
	baz=301						
L02E	Cave Junction	0.85	357	S	Sb	18 24 22.9	+0.4
	baz=175						
O02D	Mt. Diablo Mer	1.27	153	P	Pb	18 24 18.4	-0.1
	baz=335,SNR=17						
O02D				S	Sg	18 24 35.8	+0.3
	baz=335						
L04D	Klamath Falls	1.29	45	P	Pn	18 24 18.4	-0.1
	baz=226,SNR=6.7						
L04D				S	Sg	18 24 36.4	0.0
	baz=226						
M04C	Macdoel	1.36	69	S	Sg	18 24 38.3	-0.2
	baz=251						
K02D	Willamette Mer	1.39	356	S	Sb	18 24 38.8	+0.6
	baz=175						

NEIC 26 18:28:31.4±0.3, 16.89S±0.09×172.24W±0.07, h10km±1km, mb4.4/3, Error ellipse: s-maj=17.2km s-min=8.8km az=27.0
IDC 26 18:28:36.7±4.2, 16.31S×173.37W, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.7/28, mbtmp3.8/5, ML3.5/1, MS3.1/1, Ms1 3.0/1, ms1mx2.5/26, Error ellipse: s-maj=180.8km s-min=20.5km az=135.0
ISC 26 18:28:31.5±1.0, 16.89S±0.07×172.2W±0.1, h10km, n13, σ1.27/10, mb4.0/7, MS3.0/4, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.99	8	Pn	Pb	18 29 23.1	-1.8
	6.9nm,0.3s,baz=209,slow=13,SNR=2.7						
AFI				Sn	Sn	18 29 57.5	+2.5
	36nm,0.3s,baz=15,slow=21,SNR=7.2						
AFI	Afiamalu	2.99	8		Pn	18 29 19.2	+0.2
NIUE	Niue	3.06	136		Pn	18 29 20.1	+0.2
DZM	Mont Dzumac	20.78	252	eLR	LR	18 38 57.5	
	comp=Z,85nm,24.6s						
PPT2	Papeete2	21.61	95	eLR	LR	18 38 01.7	
	comp=Z,54nm,27.5s						
TBI	Tubuai	22.28	110	eLR	LR	18 38 33.7	
	comp=Z,96nm,30.2s						
STKA	Stephens Creek	44.32	242	P	P	18 36 42.9	+0.9
	1.4nm,0.7s,baz=58,slow=13,SNR=2.8						
STKA				LR	LR	18 52 19.9	
	comp=Z,23nm,21.3s,baz=24,slow=33						
WB0	Warramunga Arr	50.62	258	P	P	18 37 30.8	-0.3
WB0				IAmb	IAmb	18 37 53.9	
	comp=Z,7.0nm,1.3s						
WB2	Warramunga Arr	50.64	258	P	P	18 37 30.9	-0.4
WB2				IAmb	IAmb	18 37 42.5	
	comp=Z,9.2nm,1.4s						
WRA	Warramunga Arr	50.65	258	P	P	18 37 30.4	-0.9
	comp=Z,0.4nm,0.4s,baz=96,slow=7.0,SNR=18						
AS31	Alice Springs	50.77	253	P	P	18 37 32.0	-0.2
AS31				IAmb	IAmb	18 37 33.5	
	comp=Z,0.7nm,0.6s						
ASAR	Alice Springs	50.77	253	P	P	18 37 31.9	-0.3
	comp=Z,2.1nm,0.6s,baz=88,slow=8.7,SNR=70						
ILAR	Eielson Array	83.68	11	P	P	18 41 05.5	+5.5
	comp=Z,0.2nm,0.7s,baz=223,slow=6.2,SNR=3.8						

IDC 26 18:38:29.3±2.5, 0.70S×16.31W, h0km, mb4.0/3, mb1 4.0/4, mb1mx3.6/53, mbtmp4.0/4, ML3.3/1, MS3.7/18, Ms1 3.7/18, ms1mx3.5/35, Error ellipse: s-maj=86.1km s-min=49.6km az=138.0
ISC 26 18:38:28.5±1.7, 1.2S±0.4×16.2W±0.3, h10km, n20, σ0.61/6, MS3.8/14, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	Dimbokro	13.73	55	Pn	Pn	18 41 43.3	-0.1
	0.2nm,0.3s,baz=233,slow=16,SNR=3.8						
DBIC				LR	LR	18 45 48.1	
	comp=Z,261nm,21.9s,baz=220,slow=32						
RCBR	Riachuelo	20.21	256	LR	LR	18 49 04.3	
	comp=Z,262nm,18.2s,baz=65,slow=31						
TORD	Torodi Ar. Bea	22.73	51	P	P	18 43 31.0	0.0
	16nm,0.9s,baz=234,slow=8.9,SNR=47						
TORD				LR	LR	18 51 07.4	
	comp=Z,166nm,20.3s,baz=285,slow=34						
BDFB	Brasilia	34.53	244	LR	LR	18 57 53.6	
	comp=Z,94nm,19.6s,baz=56,slow=34						
KEST	Kesra	43.76	30	LR	LR	19 05 38.8	
	comp=Z,221nm,19.1s,baz=200,slow=38						
CPUP	Villa Florida	46.80	234	LR	LR	19 05 23.8	
	comp=Z,88nm,19.3s,baz=60,slow=34						
VAE	Valguarnera	47.74	33	LR	LR	19 06 56.1	
	comp=Z,125nm,19.1s,baz=160,slow=36						
LPAZ	La Paz	53.31	251	LR	LR	19 09 39.4	
	comp=Z,106nm,19.2s,baz=93,slow=35						
GERES	GERESS Array B	56.12	23	P	P	18 48 08.9	+0.7
	0.2nm,0.5s,baz=206,slow=4.3,SNR=3.5						
GERES				LR	LR	19 11 59.9	
	comp=Z,49nm,19.1s,baz=272,slow=36						
ROSC	El Rosal	58.37	276	LR	LR	19 11 56.5	
	comp=Z,90nm,19.7s,baz=88,slow=34						
BRTR	Keskin Array B	61.01	42	LR	LR	19 18 13.7	
	comp=Z,30nm,18.4s,baz=193,slow=39						
PLCA	Paso Flores	62.89	224	LR	LR	19 14 06.2	
	comp=Z,40nm,18.9s,baz=114,slow=34						
AKASG	Malin Array Be	64.48	30	LR	LR	19 18 30.2	
	comp=Z,37nm,18.5s,baz=235,slow=37						
NOA	NORSAR Array B	65.52	14	LR	LR	19 18 44.4	
	comp=Z,43nm,18.4s,baz=200,slow=37						
FINES	FINESS Array B	70.25	20	P	P	18 49 40.9	-0.7
	1.8nm,0.8s,baz=243,slow=12,SNR=4.6						
FINES				LR	LR	19 19 29.4	
	comp=Z,24nm,18.3s,baz=244,slow=35						
GEYT	Alibeck	78.37	51	LR	LR	19 27 41.8	
	comp=Z,42nm,19.7s,baz=165,slow=38						
NRIK	Noril'sk	95.92	20	LR	LR	19 38 16.9	
	comp=Z,35nm,18.4s,baz=304,slow=38						
MKAR	Makanchi Array	96.66	43	LR	LR	19 40 07.1	
	comp=Z,32nm,18.2s,baz=316,slow=38						
ASAR	Alice Springs	141.87	132	PKP	PKPdf	18 58 01.8	+0.2
	0.9nm,0.8s,baz=233,slow=2.8,SNR=8.9						
WRA	Warramunga Arr	144.30	128	PKP	PKiKP	18 58 09.4	-0.1
	3.4nm,0.9s,baz=236,slow=2.7,SNR=21						

TAP 26 18:43:35.9, 24.41N×121.76E, h9km, ML3.2, B
JMA 26 18:43:35.5±0.1, 24.41N×121.75E, h0km, M2.8
ISC 26 18:43:35.9±0.8, 24.41N±0.01×121.78E±0.02, h9km±5km, n109, σ0.63/181, 22C-10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	Nanau	0.04	300	iP	Pg	18 43 37.7	+0.1
	baz=337						
ENA				iS	Sg	18 43 38.8	-0.1
	baz=337						
TWC	Suao	0.21	18	P	Pg	18 43 40.6	+0.4
	baz=19						
TWC				S	Sg	18 43 43.3	+0.1
	baz=19						
NACB	Ninganchiao	0.29	215	⇓P	Pg	18 43 41.7	0.0
	baz=212						
NACB				S	Sg	18 43 45.5	0.0
	baz=212						
ENTT	Nioudou	0.30	320	⇑iP	Pg	18 43 42.3	+0.4
	baz=324						
ENTT				S	Sg	18 43 46.4	+0.4
	baz=324						
NDT	Datong Townshi	0.31	309	⇑iP	Pb	18 43 42.5	-1.1
	baz=311						
NDT				S	Sb	18 43 47.0	-1.9
	baz=311						
TWE	Neicheng	0.33	342	⇑iP	Pg	18 43 42.8	+0.4
	baz=348						
TWE				iS	Sg	18 43 47.0	+0.2
	baz=348						
ETLH	Xiulin Townshi	0.34	233	⇓P	Pg	18 43 42.6	0.0
	baz=231						
ETLH				eS	Sg	18 43 46.9	-0.2
	baz=231						
EOS1	EOS1	0.35	66	P	Pg	18 43 43.8	+1.0
	baz=57						
EOS1				eS	Sb	18 43 49.5	-0.4
	baz=57						
ILA	Ilan	0.36	356	P	Pb	18 43 43.6	-0.8
	baz=352						
ILA				S	Sg	18 43 48.4	+0.7
	baz=352						
NNSB	Datong	0.36	273	⇑P	Pg	18 43 43.2	+0.1
	baz=273						
NNSB				S	Sg	18 43 47.5	-0.3
	baz=273						
NNSH	Datong	0.36	273	⇑iP	Pg	18 43 43.2	+0.1
	baz=273						
NNSH				S	Sg	18 43 47.6	-0.3
	baz=273						
SLBB	Yuanshan	0.37	339	⇑iP	Pb	18 43 43.8	-0.9
	baz=342						

SLBB				S	Sg	18 43 48.6	+0.6
	baz=342						
TWD	Chiawan	0.37	207	⇓P	Pg	18 43 43.3	+0.1
	baz=202						
TWD				eS	Sg	18 43 48.1	+0.1
	baz=202						
NNS	Nan Shan	0.37	275	⇑iP	Pg	18 43 43.4	+0.1
	baz=275						
NNS				S	Sg	18 43 47.8	-0.4
	baz=275						
NWLT	Wulai	0.44	326	⇑P	Pb	18 43 45.1	-0.9
	baz=328						
NWLT				S	Sg	18 43 50.7	+0.2
	baz=328						
NTC	Toucheng	0.45	6	⇑eP	Pg	18 43 45.0	+0.4
	baz=9.0						
NTC				eS	Sg	18 43 50.6	+0.1
	baz=9.0						
YHNB	Yeheng	0.45	305	⇑P	Pb	18 43 45.2	-0.9
	baz=307						
YHNB				eS	Sg	18 43 50.0	-0.6
	baz=307						
HWA	Hwalien	0.46	200	eP	Pb	18 43 45.6	-0.6
	baz=196						
HWA				eS	Sb	18 43 52.0	-1.0
	baz=196						
NSK	Sanguang	0.47	305	⇑iP	Pb	18 43 45.4	-1.0
	baz=307						
NSK				S	Sg	18 43 50.9	-0.2
	baz=307						
ENLB	Shoufeng	0.53	198	eP	Pg	18 43 46.4	+0.2
	baz=195						
ENLB				eS	Sg	18 43 53.3	+0.2
	baz=195						
WHF	Hehuan Shan	0.54	241	⇓iP	Pg	18 43 46.5	0.0
	baz=250						
WHF				eS	Sg	18 43 53.1	-0.4
	baz=250						
TIPB	Shuangxi	0.56	5	⇑iP	Pg	18 43 47.2	+0.4
	baz=357						
TIPB				S	Sg	18 43 53.9	-0.4
	baz=357						
TDCB	Techi	0.58	255	eP	Pb	18 43 47.8	-0.6
	baz=247						
TDCB				eS	Sg	18 43 54.5	-0.5
	baz=247						
TWA	Mucha	0.59	343	⇑iP	Pb	18 43 48.1	-0.4
	baz=345						
TWA				eS	Sg	18 43 55.8	+0.5
	baz=345						
NHDH	Xindian Distri	0.60	337	eP	Pb	18 43 48.2	-0.4
	baz=339						
NHDH				eS	Sg	18 43 55.6	+0.3
	baz=339						
TWB1	Santiao Chiao	0.63	18	eP	Pg	18 43 48.0	-0.1
	baz=11						
TWB1				eS	Sg	18 43 56.1	-0.2
	baz=11						
WLTB	Daxi	0.65	313	eP	Pb	18 43 49.7	+0.2
	baz=314						
CHGB	Renai	0.65	238	⇓P	Pg	18 43 48.6	+0.1
	baz=246						
CHGB				eS	Sg	18 43 56.5	-0.6
	baz=246						
NWF	Wu-fen Shan	0.66	0	eP	Pb	18 43 49.4	-0.3
	baz=353						
NWF				S	Sg	18 43 57.6	+0.3
	baz=353						
WFSB	Wu-fen Shan	0.66	0	⇑P	Pb	18 43 49.3	-0.3
	baz=353						
WFSB				S	Sg	18 43 57.3	0.0
	baz=353						
ESL	Shilin	0.67	208	⇑P	Pg	18 43 48.7	-0.2
	baz=206						
ESL				eS	Sg	18 43 57.3	-0.4
	baz=206						
TAP	Taipei	0.67	339	eP	Pb	18 43 49.5	-0.3
	baz=341						
TAP				eS	Sb	18 43 58.5	-0.8
	baz=341						
OWD	Renai	0.71	231	eP	Pg	18 43 49.7	0.0
	baz=221						
OWD				eS	Sg	18 43 58.8	-0.2
	baz=221						
LIOB	Emei	0.73	289	⇑P	Pb	18 43 51.0	+0.1
	baz=290						
LIOB				S	Sb	18 44 00.2	-0.8
	baz=290						
NSTT	Nanjuang	0.74	288	⇑iP	Pb	18 43 51.0	-0.1
	baz=288						
NSTT				S	Sb	18 44 00.0	-1.2
	baz=288						
YM01	YM01	0.76	346	⇑P	Pb	18 43 51.5	+0.2
	baz=347						
YM01				eS	Sb	18 44 00.7	-0.2
	baz=347						
WHP	Taichung City	0.77	260	⇑P	Pb	18 43 51.5	-0.1
	baz=260						
WHP				eS	Sg	18 44 00.8	0.0
	baz=260						
YM10	YM10	0.77	345	⇑P	Pb	18 43 51.7	+0.1
	baz=347						
YM10				eS	Sb	18 44 01.6	-0.5
	baz=347						
NCUH	Zhongli	0.77	316	eP	Pb	18 43 52.1	+0.5
	baz=317						
NCUH				eS	Sb	18 44 02.6	+0.4
	baz=317						
NCU	National Centr	0.78	316	eP	Pn	18 43 52.5	-0.6
	baz=318						
NCU				eS	Sb	18 44 02.4	+0.2
	baz=318						
YM11	YM11	0.78	346	⇑P	Pb	18 43 51.8	+0.1
	baz=348						
YM11				eS	Sb	18 44 01.9	-0.4
	baz=348						
EGFH	Guangfu	0.80	204	eP	Pg	18 43 51.4	0.0
	baz=210						
EGFH				eS	Sg	18 44 01.9	+0.1
	baz=210						
ANP	Anpu	0.81	343	eP	Pb	18 43 52.0	-0.2
	baz=345						
NTST	Danshui	0.81	338	eP	Pb	18 43 52.9	+0.7
	baz=326						
SBCB	Hsinchu	0.81	298	eP	Pn	18 43 53.3	-0.3
	baz=298						
HSN	Hsinchu	0.83	298	eP	Pb	18 43 52.5	-0.1
	baz=302						
HSN				eS	Sb	18 44 03.6	-0.2
	baz=302						
DPDB	Guoxing	0.86	244	⇓P	Pb	18 43 53.0	-0.1
	baz=249						
DPDB				S	Sg	18 44 03.0	-0.7
	baz=249						
VWDT	VWDT	0.87	222	⇓P	Pg	18 43 52.5	-0.3
	baz=212						
VWDT				S	Sg	18 44 04.1	0.0
	baz=212						
TWY	Chenhua	0.88	349	eP	Pb	18 43 53.7	+0.4
	baz=351						
NMLH	Miaoli	0.91	278	eP	Pn	18 43 54.6	-0.3
	baz=278						
TWQ1	Liyutan	0.92	266	eP	Pb	18 43 54.5	-0.5
	baz=266						
TWQ1				eS	Sb	18 44 06.3	0.0
	baz=266						
SMLT	Sun Moon Lake	0.96	237	⇓iP	Pb	18 43 54.6	-0.2
	baz=236						
SMLT				eS	Sb	18 44 07.0	-0.6
	baz=236						
HGSD	Ruisui	0.97	200	eP	Pb	18 43 55.1	+0.3
	baz=211						
HGSD				eS	Sb	18 44 08.3	+0.5
	baz=211						
SSLB	Suanglung	0.97	231	⇓P	Pg	18 43 54.4	-0.2
	baz=230						
SSLB				S	Sg	18 44 06.0	-1.4
	baz=230						
PTSB	Yuanli	0.98	272	eP	Pb	18 43 55.3	+0.2
	baz=272						
TYC	Yuchr	0.98	239	⇓P	Pb	18 43 54.8	-0.2
	baz=238						
TYC				eS	Sg	18 44 06.1	-1.3
	baz=238						
EHY	Hungye	0.99	205	eP	Pg	18 43 54.4	-0.5
	baz=210						
EHY				eS	Sg	18 44 07.3	-0.5
	baz=210						
TCU	Taichung	1.04	256	eP	Pn	18 43 56.6	-0.1
	baz=254						
WDJ	Dajia District	1.04	267	eP	Pn	18 43 57.5	+0.9
	baz=277						
JYNG	Yonagunijimaku	1.07	87	P	Pg	18 43 56.8	+0.4
JYNG				eS	Sg	18 44 10.3	0.0
WHYT	Xinyi Township	1.10	230	eP	Pb	18 43 57.2	0.0
	baz=229						
YULB	Yu-li	1.10	204	eP	Pg	18 43 56.1	-1.1
	baz=202						
WJS	Zhushan	1.12	239	eP	Pn	18 43 58.4	+0.6
	baz=238						
WJS				eS	Sn	18 44 13.6	+0.2
	baz=238						
YOJ	Yonaguni jima	1.13	87	P	Pg	18 43 57.6	0.0
YOJ				eS	Sg	18 44 12.3	+0.1
WNT	Mingjian	1.13	242	eP	Pn	18 43 58.8	+0.9
	baz=242						
WNT				eS	Sn	18 44 14.1	+0.6
	baz=242						
TWF1	Yuli	1.14	203	eP	Pg	18 43 57.5	-0.4
	baz=212						
WCHH	Zhanghua	1.16	254	eP	Pn	18 43 59.3	+1.0
	baz=252						
YUS	Yu-Shan	1.19	220	⇑P	Pg	18 43 58.5	-0.3
	baz=229						
YUS				eS	Sb	18 44 14.2	-0.4
	baz=229						
PCYT	Pengchaiyu	1.24	12	eP	Pg	18 43 59.0	-0.9
	baz=14						
ALS	Alishan	1.26	225	eP	Pb	18 43 60.0	-0.3
	baz=206						
FULB	Fuli	1.28	200	eP	Pg	18 44 00.3	-0.3
	baz=211						
CHN5	Tsauling	1.29	231	eP	Pn	18 44 01.4	+1.2
	baz=231						
CHN5				S	Sn	18 44 18.7	+1.0
	baz=231						
WGK	Gukeng	1.32	237	P	Pb	18 44 01.8	+0.8
	baz=237						
WGK				S	Sn	18 44 20.3	+1.9
	baz=237						
WDLH	Douliu	1.34	238	eP	Pg	18 44 02.5	+0.8
	baz=237						
WDLH				eS	Sn	18 44 21.3	+2.5
	baz=237						
RLNB	Erlin	1.39	249	eP	Pg	18 44 03.0	+0.3
	baz=248						
RLNB				eS	Sn	18 44 21.2	+1.2
	baz=248						
ELDTW	Lidau	1.40	210	eP	Pn	18 44 01.9	+0.1
	baz=209						
ELDTW				eS	Sg	18 44 19.9	-1.0
	baz=209						
CHN4	Tsaushan	1.51	226	eP	Pg	18 44 05.2	+0.3
	baz=225						
CHN4				eS	Sg	18 44 25.8	+1.3
	baz=225						
TPUB	Ta-pu	1.52	224	eP	Pg	18 44 05.0	-0.2
	baz=209						
TPUB				eS	Sg	18 44 26.1	+1.1
	baz=209						
CHY	Chiayi	1.54	234	eP	Pg	18 44 05.4	0.0
	baz=232						
STYT	Tauyuan	1.55	217	eP	Pb	18 44 05.0	+0.1
	baz=201						
WTP	Ta-pu	1.57	223	eP	Pg	18 44 05.7	-0.5
	baz=204						
WSF	Szhu	1.62	242	eP	Pg	18 44 06.2	-0.8
	baz=242						
WSF				eS	Sg	18 44 28.2	+0.3
	baz=242						
TWK	Hsinying	1.64	226	eP	Pb	18 44 07.0	-0.4
	baz=225						
TWK				eS	Sg	18 44 29.1	+0.5
	baz=225						
WLGB	Puzi	1.64	236	eP	Pb	18 44 06.3	0.0
	baz=235						
WLGB				eS	Sg	18 44 29.9	+1.3
	baz=235						
CHN1	Nanshi	1.67	223	eP	Pg	18 44 08.4	+0.4
	baz=234						
CHN1				eS	Sg	18 44 30.2	+0.5
	baz=234						
TWG	Pinlang	1.71	202	eP	Pb	18 44 07.3	-0.2
	baz=201						
TWGBT	Beinan	1.71	202	eP	Pn	18 44 06.7	+0.8
	baz=201						
TWH	Lutao	1.71	189	eP	Pn	18 44 05.1	-0.9
	baz=187						
SGST	Jiashian	1.71	220	eP	Pb	18 44 07.8	+0.2
	baz=205						
SGST				eS	Sg	18 44 31.0	-0.1
	baz=205						
SLGT	Liugui	1.75	217	eP	Pb	18 44 08.6	+0.4
	baz=215						
CHN8	Yiju	1.78	234	eP	Pb	18 44 08.6	-0.1
	baz=245						
IRIF	Iriomote-Funau	1.78	92	P	Pn	18 44 06.9	0.0
IRIF				eS	Sn	18 44 30.1	+0.4
SSD	Sandimen	1.96	213	eP	Pb	18 44 11.8	0.0
	baz=211						
JKRS	Kuro-shima	2.04	94	P	Pn	18 44 11.1	+0.6
JKRS				S	Sn	18 44 36.3	+0.2
MASBT	Mashibuluo	2.07	211	eP	Pb	18 44 13.5	-0.2
	baz=209						
JIJ	Ishigaki jima	2.16	91	P	Pn	18 44 11.8	-0.3
JIJ				S	Sn	18 44 37.7	-1.3
EAST	Anshuo	2.19	203	eP	Pb	18 44 14.5	-1.2
	baz=189						
VWUC	VWUC	2.19	286	eP	Pn	18 44 12.6	0.0
	baz=285						
PNG	Penghu	2.20	248	eP	Pb	18 44 14.8	-1.1
	baz=246						
PHUB	P'eng-hu	2.21	247	eP	Pn	18 44 13.8	+1.1
	baz=245						
WDGT	Dungji	2.25	240	eP	Pb	18 44 15.2	-1.5
	baz=252						
JISG	Ishigakijimahi	2.31	85	P	Pn	18 44 14.7	+0.5
JISG				eS	Sn	18 44 42.0	-0.8
MATB	Ma-tsu	2.40	317	eP	Pn	18 44 15.8	+0.4
	baz=316						
PTMZ	Houxiangcun	2.50	285	eP	Pn	18 44 16.9	+0.2
	baz=285						
JTJ	Tarama	2.67	84	P	Pn	18 44 20.0	+0.8
JTJ				S	Sn	18 44 52.0	+0.3
LYJJ	Jianjiangzhen	2.81	320	eP	Pn	18 44 21.3	+0.4
	baz=318						
XPSS	Dashiqiu	2.89	331	eP	Pn	18 44 20.9	-1.3
	baz=328						
MHZQ	Yeshan	3.00	305	eP	Pn	18 44 24.4	+0.7
	baz=305						
AXDP	Jialang	3.50	279	eP	Pn	18 44 31.1	+0.6
	baz=279						

*IDC **26** 18:53:46.5±21.0, 17.78S×178.42W, h585km±252km, mb3.2/4, mb1 3.4/4, mb1mx3.0/28, mbtmp4.1/4, Error ellipse: s-maj=129.2km s-min=77.2km az=119.0*
*NEIC **26** 18:53:48.5±0.3, 17.8S±0.4×178.5W±0.3, h611km±16km, mb4.7/3, Error ellipse: s-maj=69.6km s-min=19.9km az=143.0*
ISC 26 18:53:46.0±3.0, **17.8S**±0.6×**178.4W**±0.6, **h579km, n13,** σ0.29/12, **mb4.2**/9, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.35	270	P	P	18 55 10.3	+4.7
CTA	Charters Tower	33.44	260	P	P	18 59 38.5	+0.2
	baz=94,slow=14						
STKA	Stephens Creek	38.67	241	P	P	19 00 21.4	+0.3
	2.9nm,0.9s,baz=94,slow=13,SNR=4.6						
STKA	Stephens Creek	38.67	241	P	P	19 00 21.1	0.0
BBOO	Buckleboo	43.44	241	P	P	19 00 58.6	-0.3
BBOO				IAmb	IAmb	19 01 12.2	
	comp=Z,57nm,1.6s						
WR0	Warramunga Arr	44.44	259	P	P	19 01 06.5	-0.3
WR0				IAmb	IAmb	19 01 20.2	
	comp=Z,36nm,1.9s						
WB0	Warramunga Arr	44.60	260	P	P	19 01 07.7	-0.2
WB0				IAmb	IAmb	19 01 28.6	
	comp=Z,9.6nm,1.3s						
WB2	Warramunga Arr	44.62	259	P	P	19 01 07.7	-0.4
WB2				IAmb	IAmb	19 02 48.9	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	44.63	259	P	P	19 01 08.2	0.0
	comp=Z,1.3nm,0.5s,baz=97,slow=7.4,SNR=47						
AS31	Alice Springs	44.80	254	P	P	19 01 09.2	-0.2
AS31				IAmb	IAmb	19 01 10.4	
	comp=Z,2.4nm,0.5s						
ASAR	Alice Springs	44.80	254	P	P	19 01 09.7	+0.2
	comp=Z,6.3nm,0.5s,baz=87,slow=8.7,SNR=148						
GHO	Glory Hole Cre	82.70	14	P	P	19 05 09.6	+0.3
ILAR	Eielson Array	85.78	13	P	P	19 05 24.0	-0.2
	comp=Z,0.2nm,0.5s,baz=226,slow=3.4,SNR=4.8						

*NEIC **26** 18:59:35.0±1.2, 20.4S±0.2×178.0W±0.2, h513km±8km, mb4.5/21, Error ellipse: s-maj=30.9km s-min=20.9km az=150.0*
*IDC **26** 18:59:35.9±6.2, 20.35S×178.02W, h525km±62km, mb3.3/7, mb1 3.5/8, mb1mx3.2/27, mbtmp4.2/8, Error ellipse: s-maj=38.5km s-min=30.0km az=68.0*
ISC 26 18:59:36.1±0.7, **20.4S**±0.2×**178.0W**±0.1, **h534km, n32,** σ0.79/33, **mb4.4**/17, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	7.67	82	P	P	19 01 29.2	-0.9
DZM	Mont Dzumac	14.65	261	P	P	19 02 41.9	-0.5
	0.4nm,0.3s,baz=94,slow=19,SNR=4.1						
EIDS	Eidsvold	28.92	254	P	P	19 04 51.9	-0.3
ARMA	Armidale	29.16	244	P	P	19 04 54.4	0.0
ARMA				IAmb	IAmb	19 05 37.3	
	comp=Z,37nm,1.6s						
CTA	Charters Tower	33.55	264	P	P	19 05 32.1	+0.2
	comp=Z,4.4nm,0.3s,baz=92,slow=11,SNR=24						
COEN	Coen	37.62	273	P	P	19 06 06.1	+0.3
COEN				IAmb	IAmb	19 07 36.1	
	comp=Z,27nm,1.9s						
STKA	Stephens Creek	37.88	244	P	P	19 06 07.9	+0.2
	comp=Z,1.3nm,0.6s,baz=84,slow=13,SNR=4.7						
STKA	Stephens Creek	37.88	244	P	P	19 06 07.8	+0.1
BBOO	Buckleboo	42.64	243	P	P	19 06 44.6	-1.1
WR0	Warramunga Arr	44.47	262	P	P	19 06 59.3	-0.9
WR0				IAmb	IAmb	19 08 19.2	
	comp=Z,23nm,1.8s						
AS31	Alice Springs	44.59	257	P	P	19 07 00.8	-0.2
ASAR	Alice Springs	44.59	257	P	P	19 07 00.8	-0.2
	comp=Z,6.0nm,0.5s,baz=91,slow=8.2,SNR=155						
ASAR				PcP	PcP	19 08 33.0	+0.4
	comp=Z,0.4nm,0.5s,baz=103,slow=3.9,SNR=4.7						
WB0	Warramunga Arr	44.64	262	P	P	19 07 00.7	-0.8
WB0				IAmb	IAmb	19 07 01.4	
	comp=Z,6.3nm,0.6s						
WB2	Warramunga Arr	44.65	262	P	P	19 07 00.8	-0.8
WB2				IAmb	IAmb	19 07 26.8	
	comp=Z,34nm,1.9s						
WRA	Warramunga Arr	44.66	262	P	P	19 07 00.7	-0.9
	comp=Z,1.8nm,0.3s,baz=97,slow=7.5,SNR=71						
MTN	Manton Dam	49.21	270	P	P	19 07 35.1	-0.9
KNRA	Kununurra	50.72	266	P	P	19 07 46.9	-0.1
FITZ	Fitzroy Crossi	53.09	262	P	P	19 08 03.2	-0.8
SOEI	Soe	56.55	272	P	P	19 08 29.8	+1.3
SOEI				IAmb	IAmb	19 08 31.2	
	comp=Z,30nm,1.0s						
PSA00	Pilbara Seismi	57.74	257	P	P	19 08 36.6	+0.2
PSAB1	Pilbara Seismi	57.76	257	P	P	19 08 35.9	-0.6
PSAB1				IAmb	IAmb	19 08 38.7	
	comp=Z,32nm,1.5s						
PSAC1	Pilbara Seismi	57.78	257	P	P	19 08 36.9	+0.2
PSAC1				IAmb	IAmb	19 08 38.4	
	comp=Z,27nm,1.6s						
PSAD3	Pilbara Seismi	57.79	257	P	P	19 08 36.7	0.0
PSAD3				IAmb	IAmb	19 09 34.4	
	comp=Z,26nm,1.4s						
QSPA	South Pole Qui	69.68	180	P	P	19 09 52.9	+1.0
	comp=Z,1.2nm,0.8s,baz=29,slow=19,SNR=6.0						
QSPA	South Pole Qui	69.68	180	P	P	19 09 52.8	+0.9
QSPA				IAmb	IAmb	19 10 15.3	
	comp=Z,26nm,1.8s						
BPAW	Bear Paw Mtn.	86.78	12	P	P	19 11 24.3	+1.1
BWN	Browne	87.14	12	P	P	19 11 25.3	+0.4
CCB	Clear Creek Bu	87.90	12	P	P	19 11 29.1	+0.7
CCB				IAmb	IAmb	19 11 30.2	
	comp=Z,25nm,1.9s						
ILAR	Eielson Array	88.19	13	P	P	19 11 30.1	+0.3
	comp=Z,0.3nm,0.8s,baz=200,slow=9.6,SNR=3.2						
CMAR	Chiang Mai Arr	90.12	290	P	P	19 11 40.4	+0.6
	comp=Z,0.3nm,0.3s,baz=116,slow=2.1,SNR=4.1						
AKASG	Malin Array Be	142.94	331	PKP	PKPdf	19 18 06.6	-2.2
	comp=Z,0.2nm,0.3s,baz=40,slow=4.3,SNR=5.3						
BRTR	Keskin Array B	146.80	312	PKPbc	PKPbc	19 18 19.5	+0.7
	comp=Z,0.5nm,0.7s,baz=92,slow=4.3,SNR=2.9						

*TEH **26** 19:06:04.9, 26.57N×57.85E, h20km, ML3.7*
*OMAN **26** 19:06:05.6±0.5, 26.46N×57.61E, h2km±2km, ml3.2/12, Error ellipse: s-maj=9.6km s-min=2.7km az=359.0*
ISC 26 19:06:05.7±1.1, **26.53N**±0.04×**57.73E**±0.06, **h10km, n37,** σ1.17/45, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIAN	Nian	1.30	323	ePg	Pn	19 06 29.0	-0.9
NIAN				e		19 06 55.4	
IBND	Bandar-abas	1.40	311	ePg	Pb	19 06 31.8	-0.1
IBND				eSg	Sg	19 06 52.1	+1.3
IBND				e		19 07 08.1	
KHNJ	Kahnooj	1.41	359	ePg	Pn	19 06 28.7	-2.8
BANOM	Banah	1.42	245	P	Pg	19 06 32.1	-0.8
	SNR=161						
BANOM				S	Sg	19 06 51.2	0.0
SHME	Shamm	1.50	252	ePn	Pg	19 06 33.8	-0.7
GENO	Geno	1.64	302	ePn	Pb	19 06 35.4	-0.7
GENO				e		19 07 04.1	
MDH	Madha	1.77	227	P	Pn	19 06 36.0	-0.5
	SNR=14						
MDH				S	Sn	19 06 58.9	-0.1
MSFE	Esma-Masafi	1.83	231	ePn	Pn	19 06 37.0	-0.2
UOSS	Minazif	2.09	221	ePn	Pn	19 06 40.3	-0.5
UMQ	Umm Al-Quwin	2.11	242	ePn	Pb	19 06 42.2	-1.8
HATD	Hatta, Dubai	2.22	221	ePn	Pn	19 06 43.1	+0.5
ASHO	Ashiyiah	2.37	220	P	Pn	19 06 44.1	-0.6
NAZ	Nazwa, Dubai	2.41	231	ePn	Pb	19 06 48.3	-0.9
SOHO	SOHO	2.62	205	P	Pn	19 06 47.0	-1.0
	SNR=22						
FAQ	Al Faqa, Dubai	2.62	228	ePn	Pn	19 06 49.6	+1.5
HOQ	Hoqain	2.96	187	P	Pn	19 06 52.1	-0.7
	SNR=15						
BIDO	Bidbid	3.02	173	P	Pn	19 06 53.5	0.0
NGRK	Negar Kerman	3.23	344	ePn	Pn	19 06 57.1	+0.3
NGRK				e		19 07 54.0	
CHMN	Cheshme madani	3.33	357	ePn	Pn	19 06 58.3	+0.2
CHMN				e		19 07 06.8	
ARQ	Araqi	3.36	199	P	Pn	19 06 57.3	-1.0
ARQ				S	Sn	19 07 41.0	+2.7
WSAR	Wadi Sarin	3.38	166	P	Pn	19 06 59.2	+0.7
SMDO	Samad	3.47	175	P	Pn	19 07 00.4	+0.6
SMDO				S	Sn	19 07 42.5	+1.5
TVBK	TV Kerman	3.55	346	e		19 07 13.6	
TVBK				ePn	Pn	19 07 02.4	+1.2
BSY	Bisya	3.80	187	P	Pn	19 07 03.9	-0.4
BSY				S	Sn	19 07 51.6	+2.5
KHGB	Koh Gabri	3.99	344	e		19 07 18.6	
KHGB				ePn	Pn	19 07 08.6	+1.5
WBK	Wadi Bani Khal	4.06	164	P	Pn	19 07 09.0	+1.0
	SNR=23						
WBK				S	Sn	19 07 55.2	-0.4
JMDO	Jabal Madar	4.15	175	P	Pn	19 07 09.4	+0.2
UMZA	Um Al Zommool	4.46	212	ePn	Pn	19 07 14.0	+0.7
NHDN	Nehbandan	5.26	22	ePn	Pn	19 07 23.5	-1.0
IBAF	Bafgh	5.39	340	ePn	Pn	19 07 28.4	+2.1
MHTO	MHTO	5.52	178	P	Pn	19 07 28.6	+0.6
MHTO				S	Sn	19 08 32.4	+0.9
IKOO	Kooshah	5.98	10	ePn	Pn	19 07 34.0	-0.5
IKAZ	Kazeroun	6.12	303	ePn	Pn	19 07 35.0	-1.5
ITEG	Tejag	6.41	8	ePn	Pn	19 07 39.7	-0.6
IMON	Monand	6.85	14	ePn	Pn	19 07 47.4	+0.9
KLNJ	Kolanjah	6.99	311	ePn	Pn	19 07 48.6	+0.1
IPIR	Pirpir	8.54	318	ePn	Pn	19 08 11.4	+1.7

*RSNC **26** 19:10:37.7±1.1, 6.45N×73.77W, h0km±5km, ML3.4*
*IDC **26** 19:10:43.4±3.6, 6.47N×73.77W, h70km±31km, mb3.5/3, mb1 3.7/3, mb1mx3.2/23, mbtmp3.8/3, Error ellipse: s-maj=54.4km s-min=25.6km az=89.0*
ISC 26 19:10:36.7±1.1, **6.45N**±0.03×**73.75W**±0.02, **h13km**±9km,

n30, σ1§41/43, mb4.1/3, 1C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.58	76	⇑iP	Pb	19 10 48.6	-0.3
BARC				i		19 10 57.4	
	comp=Z,2μm,0.4s						
BRRC	Barranca, Sant	0.66	3	iP	Pb	19 10 50.2	+0.2
BRRC				eS	Sb	19 10 59.6	+0.5
BRRC				i		19 11 07.4	
	comp=Z,458nm,0.2s						
BRRC				i		19 11 07.6	
	comp=Z,503nm,0.2s						
PTBC	PUERTO BERRIO,	0.71	277	⇓iP	Pb	19 10 50.8	-0.1
PTBC				eS	Sb	19 11 00.6	0.0
PTBC				i		19 11 04.3	
	comp=Z,903nm,0.3s						
PTBC				i		19 11 04.4	
	comp=Z,954nm,0.3s						
SPBC	San Pablo de B	0.85	202	eP	Pb	19 10 53.5	+0.1
SPBC				i		19 11 11.0	
	comp=Z,1μm,0.2s						
SPBC				i		19 11 11.0	
	comp=Z,1μm,0.2s						
RUSC	La Rusia	0.86	130	⇓iP	Pb	19 10 53.8	0.0
RUSC				eS	Sb	19 11 05.1	-0.3
RUSC				i		19 11 05.9	
	comp=Z,906nm,0.7s						
RUSC				i		19 11 06.2	
	comp=Z,726nm,0.2s						
PAMC	Pamplona, Colo	1.37	50	eP	Pn	19 11 02.4	+0.5
PAMC				eS	Sg	19 11 20.3	-0.6
PAMC				i		19 11 26.1	
	comp=Z,664nm,0.2s						
NORC	Norcasia	1.42	232	eP	Pb	19 11 02.4	-0.6
NORC				eS	Sn	19 11 21.9	+1.0
NORC				i		19 11 22.4	
	comp=Z,587nm,0.6s						
NORC				i		19 11 22.9	
	comp=Z,700nm,0.6s						
ZARC	Zaragoza, Cauc	1.51	313	eP	Pn	19 11 03.5	-0.1
ZARC				eS	Sg	19 11 24.6	-0.9
ZARC				i		19 11 26.6	
	comp=Z,595nm,0.3s						
ZARC				i		19 11 26.8	
	comp=Z,690nm,0.3s						
ROSC	El Rosal	1.69	200	P	Pg	19 11 10.2	+0.9
	comp=Z,24nm,0.3s,baz=309,slow=3.2,SNR=14						
ROSC				S	Sg	19 11 33.2	+1.9
	comp=Z,70nm,0.3s,baz=114,slow=19,SNR=12						
ROSC	El Rosal	1.69	200	eP	Pg	19 11 10.3	+1.0
ROSC				i		19 11 37.3	
	comp=Z,292nm,0.3s						
ROSC				i		19 11 40.0	
	comp=Z,302nm,0.3s						
HELC	Santa Helena	1.79	262	⇓iP	Pb	19 11 08.4	-1.2
HELC				eS	Sn	19 11 31.1	+0.7
HELC				i		19 11 32.8	
	comp=Z,513nm,0.2s						
HELC				i		19 11 32.9	
	comp=Z,495nm,0.2s						
CHIC	Chingaza	1.81	179	eP	Pg	19 11 11.2	-0.2
CHIC				eS	Sg	19 11 37.8	+2.9
CHIC				i		19 11 40.4	
	comp=Z,275nm,0.4s						
CHIC				i		19 11 44.3	
	comp=Z,231nm,0.5s						
OCAC	Ocana	1.83	13	eP	Pn	19 11 09.4	+1.4
OCAC				eS	Sb	19 11 34.2	+1.2
OCAC				i		19 11 50.7	
	comp=Z,379nm,0.3s						
OCAC				i		19 11 50.8	
	comp=Z,356nm,0.3s						
TAMC	Tame, Arauca	1.94	90	eP	Pg	19 11 12.9	-1.1
TAMC				eS	Sg	19 11 38.1	-1.2
TAMC				i		19 11 44.1	
	comp=Z,523nm,0.4s						
UREC	San Jos de Ur	2.19	306	eP	Pb	19 11 15.1	-1.2
UREC				i		19 11 48.7	
	comp=Z,194nm,0.4s						
UREC				i		19 11 48.8	
	comp=N,262nm,0.3s						
CBOC	Ciudad Bolivar	2.33	256	eP	Pb	19 11 17.3	-1.3
CBOC				eS	Sb	19 11 47.7	+0.4
CBOC				i		19 11 52.0	
	comp=Z,127nm,0.5s						
CBOC				i		19 11 53.0	
	comp=Z,131nm,0.6s						
SMLC	San Martn de	2.36	352	eP	Pn	19 11 14.8	-0.4
SMLC				i		19 11 55.0	
	comp=Z,266nm,0.8s						
SMLC				i		19 11 55.6	
	comp=Z,237nm,0.6s						
DBBC	Dabeiba	2.51	283	eP	Pb	19 11 20.5	-1.2
DBBC				i		19 12 03.2	
	comp=Z,197nm,0.6s						
PTGC	Puerto Gaitan,	2.75	144	eP	Pb	19 11 23.4	-2.3
PTGC				i		19 12 06.2	
	comp=Z,220nm,0.5s						
PTGC				i		19 12 08.6	
	comp=Z,230nm,1.2s						
ORTC	Ortega, Tolima	2.93	211	eP	Pb	19 11 26.1	-2.8
ORTC				eS	Sb	19 12 03.0	-1.6
ORTC				i		19 12 06.0	
	comp=Z,112nm,0.3s						
ORTC				i		19 12 16.9	
	comp=Z,110nm,0.3s						
PRAC	Prado	2.94	203	eP	Pb	19 11 26.6	-2.4
PRAC				i		19 12 17.9	
	comp=Z,162nm,0.5s						
PLMC	San Jos del P	2.95	239	eP	Pb	19 11 26.8	-2.4
PLMC				i		19 12 10.8	
	comp=Z,74nm,0.4s						
SJCC	San Jacinto, C	3.71	338	eP	Pn	19 11 36.3	+2.5
SJCC				i		19 12 25.6	
	comp=Z,45nm,0.7s						
SDV	Santo Domingo	3.92	52	eP	Pn	19 11 39.8	+3.0
SDV				i		19 12 28.5	
	comp=Z,75nm,0.5s						
LPAZ	La Paz	23.26	166	P	P	19 15 45.8	+1.0
	comp=Z,0.6nm,0.5s,baz=2.4,slow=7.2,SNR=2.9						
YKA	Yellowknife Ar	63.40	340	P	P	19 21 05.1	-0.6
	comp=Z,0.8nm,0.5s,baz=132,slow=6.9,SNR=20						
ARCES	ARCESS Array B	87.24	20	P	P	19 23 22.1	-0.5
	comp=Z,0.9nm,0.8s,baz=276,slow=3.5,SNR=7.6						
MKAR	Makanchi Array	122.88	19	PKP	PKPdf	19 29 32.1	-0.8
	comp=Z,0.1nm,0.5s,baz=191,slow=18,SNR=4.1						
ASAR	Alice Springs	148.39	234	PKPbc	PKPdf	19 30 21.4	+1.0
	comp=Z,0.7nm,0.7s,baz=109,slow=2.9,SNR=7.3						
WRA	Warramunga Arr	149.61	241	PKPbc	PKPbc	19 30 25.5	-1.5
	comp=Z,0.8nm,0.5s,baz=110,slow=2.5,SNR=12						

*TUL **26** 19:30:33±0.0, 36°.68N×97°.69W, h5km, ML3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*ANF **26** 19:30:33.1±0.5, 36°.69N×97°.72W, h5km, ML4.2/8, Error ellipse: s-maj=6.4km s-min=5.7km az=114.0*
*NEIC **26** 19:30:33.6±1.2, 36°.62N±0°.04×97°.71W±0°.07, h5km±8km, Error ellipse: s-maj=7.7km s-min=6.2km az=80.0*
ISC 26 19:30:33.3±0.9, **36°.67N**±0°.04×**97°.72W**±0°.04, **h10**km, **n47**, σ**0§90**/53, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	1.05	164		Pg	19 30 52.9	-0.6
U32A	Winter Ranch,	1.07	255		Pg	19 30 53.3	-0.7
OKCFA	Oklahoma City	1.27	170		Pn	19 30 56.7	-0.4
OKCSW	OKLAHOMA CITY	1.28	170		Pn	19 30 57.0	-0.3
FNO	Franklin	1.43	170		Pn	19 30 60.0	+0.6
W35A	Tecumseh	1.66	155		Pn	19 31 03.0	+0.5
TUL1	Leonard	1.73	115		Pn	19 31 03.8	+0.4
TUL1	Leonard	1.73	115	P	Pn	19 31 04.0	+0.6
	baz=297						
TUL1				S	Sb	19 31 27.1	+0.2
	baz=297						
X34A	Smith Ranch, M	2.06	183		Pn	19 31 07.6	-0.4
WMOK	Wichita Mounta	2.11	205		Pn	19 31 09.3	+0.6
WMOK	Wichita Mounta	2.11	205	P	Pn	19 31 09.5	+0.7
	baz=24						
WMOK				S	Sn	19 31 36.8	+1.8
	baz=24						
KSU1	Kansas State U	2.58	19	P	Pn	19 31 15.7	+0.5
	baz=200						
KSU1				S	Sn	19 31 47.0	+0.4
	baz=200						
CBKS	Cedar Bluff	2.68	324		Pb	19 31 19.6	-1.7
CBKS	Cedar Bluff	2.68	324	Pb	Pb	19 31 20.6	-0.7
	baz=142						
CBKS				S	Sn	19 31 50.6	+1.5
	baz=142						
U38A	Gravette	2.69	94		Pn	19 31 17.8	+1.1
X37A	Clayton	2.82	137		Pn	19 31 19.5	+1.0
HHAR	Hobbs	3.07	96		Pn	19 31 22.4	+0.5
Z35A	Perchaven, San	3.35	173	Pn	Pn	19 31 25.6	-0.1
W39A	Magazine	3.51	114		Pn	19 31 28.7	+0.8
W39A	Magazine	3.51	114	P	Pn	19 31 28.8	+0.8
	baz=296						
AMTX	Amarillo	3.68	242		Pn	19 31 31.3	+0.9
AMTX	Amarillo	3.68	242	P	Pn	19 31 31.6	+1.2
	baz=60						
AMTX				S	Sn	19 32 15.3	+1.4
	baz=60						
U40A	Yellville	3.93	93		Pn	19 31 33.9	+0.2
U40A	Yellville	3.93	93	P	Pn	19 31 34.2	+0.5
	baz=276						
U40A				S	Sn	19 32 20.0	+0.1
	baz=276						
MIAR	Mount Ida	3.98	121	Pn	Pn	19 31 35.1	+0.7
MIAR	Mount Ida	3.98	121	P	Pn	19 31 35.5	+1.1
	baz=304						
ABTX	Abilene, Hawle	4.33	202	Pn	Pn	19 31 39.5	+0.2
MGMO	Mountain Grove	4.39	82		Pn	19 31 41.1	+1.0
X40A	Basin Creek Fa	4.53	117	Pn	Pn	19 31 43.0	+1.0
KSCO	Kaye Shedlock'	4.54	303	Pn	Pn	19 31 43.5	+1.3
FCAR	Ozark Folk Cen	4.58	98	Pn	Pn	19 31 43.8	+1.1
WHAR	Wooly Hollow	4.61	106	Pn	Pn	19 31 43.2	+0.1
WHTX	Lake Whitney,	4.67	177	Pn	Pn	19 31 44.2	+0.3
W41B	Gary Mavity, V	4.68	107	Pn	Pn	19 31 44.2	+0.2
BGNE	Belgrade	4.75	356	Pn	Pn	19 31 44.7	-0.2
237A	Washetta, Mont	4.91	161	Pn	Pn	19 31 46.8	-0.4
MSTX	Muleshoe	4.93	238	Pn	Pn	19 31 47.4	-0.2
LCAR	Lake Charles	5.33	94		Pn	19 31 52.8	-0.1
CCM	Cathedral Cave	5.34	73	Pn	Pn	19 31 54.6	+1.5
T25A	Trinidad	5.39	277		Pn	19 31 54.4	+0.4
OGNE	Ogallala	5.44	323	Pn	Pn	19 31 56.6	+2.1
435B	Jarrell	5.87	179	Pn	Pn	19 32 00.1	-0.2
SDCO	Great Sand Dun	6.31	282		Pn	19 32 07.7	+1.0
JCT	Junction City	6.41	196	Pn	Pn	19 32 08.0	+0.1
S44A	Carbondale	6.83	79	Pn	Pn	19 32 14.9	+1.4
ECSD	EROS Data Cent	7.11	6	Pn	Pn	19 32 16.0	-1.4
ANMO	Albuquerque	7.31	259	Pn	Pn	19 32 20.2	-0.1

*IDC **26** 19:40:56.5±1.0, 7°.65S×105°.81E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.8/40, mbtmp3.9/10, MS3.2/2, Ms1 3.2/2, ms1mx2.7/30, Error ellipse: s-maj=30.6km s-min=15.0km az=41.0*
*DJA **26** 19:40:59.3±0.4, 8°S±3°×10°6E±°, h10km, M4.4/12, mB5.0/1, mb4.7/3, MLv4.2/12, Mw(mB)4.2/1, Mwp5.6/1*
*NEIC **26** 19:41:03.6±1.6, 7°.6S±0°.2×106°.08E±0°.09, h53km±8km, mb4.5/10, Error ellipse: s-maj=24.5km s-min=9.4km az=204.0*
ISC 26 19:41:01.2±0.7, **7°.70S**±0°.06×**106°.00E**±0°.05, **h32**km, **n64**, σ**1§28**/65, **mb4.1**/15, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	Sukabumi	0.89	39	P	Pn	19 41 16.5	-0.9
SKJI	Sukabumi	0.89	39	P	Pn	19 41 16.5	-0.9
CNJI	Cibinong	1.19	71	P	Pn	19 41 20.9	-0.6
CNJI	Cibinong	1.19	71	P	Pn	19 41 20.9	-0.6
DBJI	Dramaga	1.36	33	P	Pn	19 41 24.3	+0.3
DBJI				S	Sb	19 41 44.3	+1.1
DBJI	Dramaga	1.36	33	P	Pn	19 41 24.3	+0.3
DBJI				S	Sb	19 41 44.3	+1.1
TNG	Tangerang	1.65	23	P	Sb	19 41 51.3	-0.1
TNG				S	Sb	19 41 51.1	-0.3
TNG	Tangerang	1.65	23	P	Sb	19 41 51.3	-0.1
TNG				S	Sb	19 41 51.1	-0.3
CISI	Cisompet, Garu	1.81	86	P	Pn	19 41 29.5	-0.6
CISI	Cisompet, Garu	1.81	86	P	Pn	19 41 29.5	-0.6
CISI	Cisompet, Garu	1.81	86	Pn	Pn	19 41 29.1	-1.1
LEM	Lembang	1.82	62	Pn	Pb	19 41 32.7	-1.3
	60nm,0.3s,baz=289,slow=4.2,SNR=74						
LEM				Sn	Sb	19 41 57.7	+1.1
	75nm,0.3s,baz=93,slow=21,SNR=6.8						
LEM	Lembang	1.82	62	P	Pb	19 41 32.6	-1.4
LEM	Lembang	1.82	62	P	Pb	19 41 32.6	-1.4
KPJI	Karang Pucung	2.93	83	P	Pn	19 41 46.7	+1.2
KPJI				S	Sn	19 42 21.9	+2.2
KPJI	Karang Pucung	2.93	83	P	Pn	19 41 46.7	+1.2
KPJI				S	Sn	19 42 21.9	+2.2
KLSI		3.25	337	P	Pn	19 41 52.2	+2.3
KLSI		3.25	337	P	Pn	19 41 52.2	+2.3
LWLI	Liwa	3.29	324	P	Pn	19 41 51.9	+1.3
LWLI				S	Sn	19 42 31.7	+3.0
LWLI	Liwa	3.29	324	P	Pn	19 41 51.9	+1.3
LWLI				S	Sn	19 42 31.7	+3.0
UGM	Wanagama	4.49	93	P	Pn	19 42 06.8	-0.2
UGM	Wanagama	4.49	93	P	Pn	19 42 06.8	-0.2
UGM	Wanagama	4.49	93		Pn	19 42 07.2	+0.1
MNAI	Manna	4.49	317	P	Pn	19 42 08.1	+1.0
MNAI	Manna	4.49	317	P	Pn	19 42 08.1	+1.0
MNAI	Manna	4.49	317	Pn	Pn	19 42 07.8	+0.7
PCJI	Pacitan	5.15	96	P	Pn	19 42 16.3	+0.2
	0.3nm29nm,0.8s						
PCJI	Pacitan	5.15	96	P	Pn	19 42 16.3	+0.2
	0.3nm29nm,0.8s						
GMJI	Gumukmas	7.39	95	P	Pn	19 42 47.3	+0.3
GMJI	Gumukmas	7.39	95	P	Pn	19 42 47.3	+0.3
PPSI	Pulau Pagai	7.72	309	P	Pn	19 42 51.6	+0.2
	0.4nm16μm119nm,1.1s						
PPSI	Pulau Pagai	7.72	309	P	Pn	19 42 51.6	+0.2
	0.4nm16μm119nm,1.1s						
JAGI	Jajag, Banyuwa	8.11	96	P	Pn	19 42 59.0	+2.2
JAGI	Jajag, Banyuwa	8.11	96	P	Pn	19 42 59.0	+2.2
JAGI	Jajag, Banyuwa	8.11	96		Pn	19 42 59.2	+2.4
SOEI	Soe	18.17	98	P	Pn	19 45 10.2	-1.1
SOEI				IAmb	IAmb	19 45 48.1	
	comp=Z,26nm,1.0s						
FITZ	Fitzroy Crossi	21.73	120	P	P	19 45 52.9	+2.9
	comp=Z,3.7nm,1.0s,baz=297,slow=11,SNR=3.9						
MTN	Manton Dam	25.24	104	P	P	19 46 24.7	+0.1
FAKI	Fak Fak	26.56	81	P	P	19 46 36.4	-0.1
CMAR	Chiang Mai Arr	26.91	345	P	P	19 46 39.1	-0.4
	comp=Z,0.4nm,0.3s,baz=178,slow=9.0,SNR=5.7						
H01W3	Cape Leeuwin H	28.07	166	T	T	20 16 33.4	
	baz=352,slow=74,SNR=3.7						
H01W1	Cape Leeuwin H	28.08	166	T	T	20 16 34.6	
H01W2	Cape Leeuwin H	28.08	166	T	T	20 16 36.3	
	baz=22,slow=74,SNR=3.6						
WB0	Warramunga Arr	30.02	116	P	P	19 47 07.6	+0.2
WB0				IAmb	IAmb	19 47 28.9	
	comp=Z,23nm,1.8s						
WRA	Warramunga Arr	30.03	117	P	P	19 47 08.4	+1.0
	comp=Z,0.9nm,0.5s,baz=291,slow=10,SNR=9.1						
WB2	Warramunga Arr	30.04	117	P	P	19 47 07.8	+0.3
WB2				IAmb	IAmb	19 47 32.3	
	comp=Z,21nm,1.7s						
WR0	Warramunga Arr	30.21	117	P	P	19 47 09.2	+0.2
WR0				IAmb	IAmb	19 47 36.0	
	comp=Z,13nm,1.6s						
ASAR	Alice Springs	31.11	124	P	P	19 47 18.3	+1.3
	comp=Z,1.2nm,0.8s,baz=300,slow=8.0,SNR=11						
ASAR				LR	LR	20 01 30.9	
	comp=Z,26nm,18.4s,baz=272,slow=39						
H08S2	Diego Garcia H	33.20	268	T	T	20 22 55.0	
	baz=92,slow=76,SNR=17						
H08S3	Diego Garcia H	33.21	268	T	T	20 22 58.0	
	baz=92,slow=76,SNR=23						
H08S1	Diego Carcia H	33.22	268	T	T	20 23 01.3	
	baz=92,slow=76,SNR=5.6						
STKA	Stephens Creek	40.92	131	P	P	19 48 42.3	+1.5
	comp=Z,1.4nm,0.5s,baz=308,slow=11,SNR=4.0						
SONM	Songino Array	55.29	0	P	P	19 50 30.6	-1.1
	comp=Z,0.3nm,0.4s,baz=195,slow=8.9,SNR=4.7						
MK31	Makanchi Array	58.21	341	P	P	19 50 50.5	-1.8
MKAR	Makanchi Array	58.21	341	P	P	19 50 51.5	-0.8
	comp=Z,1.8nm,0.7s,baz=143,slow=7.9,SNR=21						
GEYT	Alibeck	63.63	319	P	P	19 51 29.4	0.0
	comp=Z,0.7nm,0.6s,baz=186,slow=13,SNR=3.9						
ZALV	Zalesovo Beam	63.97	346	P	P	19 51 30.1	-1.0
	comp=Z,0.8nm,0.3s,baz=164,slow=5.0,SNR=5.5						
ZALV				LR	LR	20 20 48.9	
	comp=Z,25nm,19.1s,baz=101,slow=38						
BRVK	Borovoye	67.69	338	P	P	19 51 54.8	-0.4
BRVK				IAmb	IAmb	19 51 57.7	
	comp=Z,6.4nm,1.4s						
ABKAR	Akbulak array	69.51	330	P	P	19 52 06.4	-0.2
ABKAR				IAmb	IAmb	19 52 07.2	
	comp=Z,2.9nm,0.7s						
TIXI	Tiksi	80.62	7	P	P	19 53 08.4	-1.8
BRTR	Keskin Array B	81.55	312	P	P	19 53 16.4	+0.3
	comp=Z,1.5nm,0.7s,baz=134,slow=6.7,SNR=8.4						
H09N1	TRISTAN DA CUN	107.22	227	T	T	21 54 40.9	
H09W1	TRISTAN DA CUN	107.23	227	T	T	21 54 34.7	
TXAR	Lajitas Array	144.77	49	PKP	PKPab	20 00 34.3	-0.2
	comp=Z,1.0nm,0.8s,baz=325,slow=1.5,SNR=5.2						

*IDC **26** 19:47:29.4±0.8, 45°.68S×34°.20E, h0km, mb4.2/9, mb1 4.4/11, mb1mx4.1/35, mbtmp4.3/11, ML4.5/2, MS3.5/16, Ms1 3.5/16, ms1mx3.4/31, Error ellipse: s-maj=37.0km s-min=17.0km az=61.0*
*NEIC **26** 19:47:30.9±1.7, 45°.9S±0°.2×33°.8E±0°.3, h10km±1km, mb4.7/8, Error ellipse: s-maj=42.7km s-min=18.5km az=54.0*
ISC 26 19:47:31.4±0.8, **45°.7S**±0°.1×**33°.8E**±0°.2, **h10**km, **n40**, σ**1§78**/29, **mb4.5**/10, **MS3.6**/14, **Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	Sutherland	16.64	319	Pn	Pn	19 51 25.0	+0.2
	1.5nm,0.3s,baz=140,slow=13,SNR=22						
SUR				Sn	Sn	19 54 23.8	-5.8
	0.5nm,0.3s,baz=102,slow=20,SNR=3.9						
SUR				LR	LR	19 56 59.8	
	comp=Z,215nm,19.3s,baz=148,slow=34						
SUR	Sutherland	16.64	319		Pn	19 51 24.8	0.0
BOSA	Boshof	18.32	336	iP	P	19 51 44.4	-1.5
BOSA	Boshof	18.32	336	P	P	19 51 44.9	-0.9
	1.6nm,0.3s,baz=161,slow=12,SNR=26						
BOSA				LR	LR	19 57 33.7	
	comp=Z,172nm,21.6s,baz=144,slow=33						
BOSA	Boshof	18.32	336	iP	P	19 51 44.4	-1.5
BOSA	Boshof	18.32	336	P	P	19 51 45.1	-0.8
LBTB	Lobatse	21.66	340	iP	P	19 52 22.4	+0.3
LBTB	Lobatse	21.66	340	P	P	19 52 23.8	+1.8
	11nm,0.8s,baz=160,slow=11,SNR=13						
LBTB				LR	LR	19 59 34.3	
	comp=Z,150nm,21.4s,baz=166,slow=33						
LBTB	Lobatse	21.66	340	iP	P	19 52 22.4	+0.3
LBTB	Lobatse	21.66	340	P	P	19 52 23.6	+1.5
LBTB				IAmb	IAmb	19 52 30.3	
	comp=Z,28nm,0.9s						
MSNA	Messina	23.49	351	iP	P	19 52 41.5	+0.2
MSNA	Messina	23.49	351	iP	P	19 52 41.5	+0.2
MATP	Matopo	25.57	349	iP	P	19 52 59.3	-1.3
MATP	Matopo	25.57	349	P	P	19 52 58.8	-1.8
	comp=Z,8.2nm,0.8s,baz=180,slow=11,SNR=14						
MATP				LR	LR	20 01 25.6	
	comp=Z,100nm,20.6s,baz=168,slow=33						
MATP	Matopo	25.57	349	iP	P	19 52 59.3	-1.3
MAW	Mawson	26.69	155	LR	LR	20 00 38.1	
	comp=Z,103nm,21.9s,baz=253,slow=30						
TSUM	Tsumeb	29.61	328	P	P	19 53 38.7	+1.8
	comp=Z,4.3nm,0.8s,baz=154,slow=8.6,SNR=10						
TSUM				LR	LR	20 04 57.0	
	comp=Z,135nm,18.3s,baz=154,slow=35						
TSUM	Tsumeb	29.61	328	P	P	19 53 38.1	+1.2
TSUM				IAmb	IAmb	19 53 39.6	
	comp=Z,8.7nm,1.1s						
LSZ	Lusaka	30.68	349	P	P	19 53 47.7	+1.4
LSZ				IAmb	IAmb	19 53 48.8	
	comp=Z,12nm,0.8s						
QSPA	South Pole Qui	44.52	180	P	P	19 55 41.4	-1.5
	comp=Z,1.8nm,1.1s,baz=314,slow=4.5,SNR=3.2						
QSPA	South Pole Qui	44.52	180	P	P	19 55 40.7	-2.2
QSPA				IAmb	IAmb	19 56 15.5	
	comp=Z,22nm,1.6s						
VNDA	Vanda	52.98	168	LR	LR	20 17 11.5	
	comp=Z,57nm,21.2s,baz=235,slow=34						
H10S2	ASCENSION HYDR	55.24	296	T	T	20 56 60.0	
	baz=81,slow=74,SNR=90						
H10S3	ASCENSION HYDR	55.26	296	T	T	20 56 60.0	
	baz=139,slow=74,SNR=78						
DBIC	Dimbokro	62.50	316	P	P	19 57 55.5	+0.5
	comp=Z,4.2nm,0.8s,baz=167,slow=8.7,SNR=4.4						
DBIC				LR	LR	20 20 49.2	
	comp=Z,15nm,20.0s,baz=157,slow=32						
DBIC	Dimbokro	62.50	316	P	P	19 57 55.7	+0.6
TOA0	Torodi Ar. Sit	65.33	325	P	P	19 58 15.2	+1.6
TORD	Torodi Ar. Bea	65.33	325	P	P	19 58 15.2	+1.5
	comp=Z,3.2nm,0.7s,baz=161,slow=6.3,SNR=11						
TORD				LR	LR	20 25 06.9	
	comp=Z,38nm,20.4s,baz=350,slow=34						
PLCA	Paso Flores	70.60	231	LR	LR	20 27 33.6	
	comp=Z,25nm,18.3s,baz=179,slow=34						
CPUP	Villa Florida	72.37	250	P	P	19 58 59.7	+2.1
	comp=Z,1.4nm,0.7s,baz=141,slow=6.5,SNR=2.8						
CPUP				LR	LR	20 26 22.3	
	comp=Z,25nm,18.6s,baz=204,slow=32						
LEM	Lembang	73.88	83	LR	LR	20 24 26.4	
	comp=Z,30nm,18.8s,baz=208,slow=30						
FITZ	Fitzroy Crossi	78.57	104	LR	LR	20 27 47.5	
	comp=Z,56nm,20.1s,baz=226,slow=31						
STKA	Stephens Creek	78.92	124	LR	LR	20 29 19.8	
	comp=Z,34nm,18.6s,baz=202,slow=32						
ASAR	Alice Springs	80.13	114	P	P	19 59 39.5	-2.3
	comp=Z,3.5nm,1.3s,baz=217,slow=5.2,SNR=5.4						
ASAR				LR	LR	20 30 50.5	
	comp=Z,32nm,18.8s,baz=157,slow=33						
WRA	Warramunga Arr	83.07	111	P	P	19 59 56.6	-0.8
	comp=Z,0.6nm,1.0s,baz=165,slow=29,SNR=3.0						
LPAZ	La Paz	86.55	250	LR	LR	20 35 38.2	
	comp=Z,34nm,20.2s,baz=106,slow=33						
FPAL	Fort Paine	133.33	278		PKPpre	20 06 39.9	
Y49A	Blount Mountai	133.52	277		PKPpre	20 06 40.5	
PLAL	Pickwick Lake	135.28	277		PKPpre	20 06 43.9	
YKA	Yellowknife Ar	155.34	324	PKPab	PKPab	20 07 50.4	+1.3
	comp=Z,0.6nm,0.7s,baz=66,slow=4.7,SNR=8.9						

*IDC **26** 20:01:21.0±18.0, 12°.41S×166°.98E, h189km±170km, mb3.2/6, mb1 3.4/6, mb1mx3.1/22, mbtmp3.7/6, MS3.2/2, Ms1 3.2/2, ms1mx2.7/13, Error ellipse: s-maj=82.5km s-min=57.5km az=133.0*
ISC 26 20:01:24.3±2.4, **12°.5S**±0°.4×**167°.0E**±0°.5, **h220**km, **n8**, σ**1§12**/6, **mb3.5**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	21.27	246	P	P	20 05 54.5	+0.7
	2.0nm,0.6s,baz=58,slow=13,SNR=1.1						
STKA	Stephens Creek	30.29	226	P	P	20 07 15.7	+0.5
	0.7nm,0.4s,baz=11,slow=10,SNR=4.7						
WRA	Warramunga Arr	32.16	252	P	P	20 07 30.9	-0.7
	0.3nm,0.3s,baz=86,slow=9.1,SNR=8.3						
ASAR	Alice Springs	33.27	246	P	P	20 07 40.0	-1.3
	0.4nm,0.5s,baz=71,slow=9.2,SNR=9.0						
SIJI	Sorong	37.22	285	LR	LR	20 25 13.4	
	comp=Z,26nm,18.1s,baz=346,slow=38						
KAPI	Kappang	47.19	275	LR	LR	20 29 22.8	
	comp=Z,38nm,20.8s,baz=250,slow=36						
ILAR	Eielson Array	84.47	18	P	P	20 13 31.6	-0.4
	0.3nm,0.6s,baz=236,slow=6.8,SNR=4.6						
MKAR	Makanchi Array	95.36	317	P	P	20 14 24.3	+0.7
	0.3nm,0.6s,baz=84,slow=5.8,SNR=7.7						

IDC 26 20:15:36.8±2.3, **4°.35N**×**127°.20E**, **h0**km, **mb3.3**/3, **mb1 3.5/3, mb1mx3.2/41, mbtmp3.3/3, Error ellipse: s-maj=171.8km s-min=28.5km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.14	164	P	P	20 21 02.3	-1.6
	1.0nm,0.6s,baz=344,slow=11,SNR=5.7						
ASAR	Alice Springs	28.60	167	P	P	20 21 36.9	+1.9
	0.1nm,0.4s,baz=344,slow=11,SNR=2.2						
MKAR	Makanchi Array	57.32	325	P	P	20 25 26.7	0.0
	0.1nm,0.4s,baz=122,slow=7.8,SNR=4.3						

HEL 26 20:24:19.0±0.3, **67°.17N**×**20°.63E**, **h0**km, **ML1.1**, **Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERTU	Ertsjaerv	0.87	134	PB	Pg	20 24 35.4	-0.3
ERTU				SB	Sg	20 24 46.8	-0.2
HEF	Hetta	1.70	41	PG	Pn	20 24 49.8	0.0
HEF				MSG		20 25 09.8	

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
	comp=Z,0.5nm,0.2s						
HEF				SG	Sn	20 25 11.1	-1.1
TOF	Tornio	1.84	125	MSG		20 25 13.7	
	comp=Z,1.4nm,0.2s						
TOF				SG	Sn	20 25 16.0	+0.4
KIF	Kilpisjarvi	1.84	2	PG	Pb	20 24 52.7	-0.8
	baz=183						
KIF				MSG		20 25 15.0	
	comp=Z,0.9nm,0.2s						
KIF				SG	Sg	20 25 18.0	-0.2
SGF	Sodankyl	2.31	80	SG	Sb	20 25 28.9	-1.4
ARE0	ARCESS Array S	2.99	35	PB	Pn	20 25 09.7	+2.1
ARE0				SB	Sb	20 25 47.5	-2.5
OUL	Oulu	3.00	132	PG	Pb	20 25 13.4	+0.3

BER 26 20:24:24.3±0.3, 67.67N×9.42E, h15km±5km, ML1.3, Confirmed Earthquake, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
LOF	Lofoten	1.63	72	eP	Pn	20 24 50.3	-2.0
LOF				eS	Sn	20 25 10.8	-2.1
LOF				IAML		20 25 13.7	
	comp=Z,6.4nm,0.3s						
KONS	Konsvik	1.87	127	eS	Sn	20 25 16.4	-2.5
STOK	Stokkvaagen	1.95	132	eS	Sn	20 25 18.4	-2.6
STEI	Steigen	2.23	81	eP	Pn	20 24 58.3	-2.3
STEI				eS	Sn	20 25 22.4	-5.4
STEI				IAML		20 25 34.8	
	comp=Z,2.4nm,0.7s						
MOR8	Moi Rana	2.49	125	eS	Sn	20 25 33.2	-1.1
MOR8				IAML		20 25 38.6	
	comp=Z,1.9nm,0.4s						

NNC 26 20:37:48.9±1.0, 40.81N×77.77E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=6.8km s-min=4.5km az=170.0
SOME 26 20:37:48.3, 40.77N×77.77E, h10km
KRNET 26 20:37:49.5±0.1, 40.87N×77.82E, h13km, mb2.7
ISC 26 20:37:44.0±2.5, 40.66N±0.10×77.76E±0.04, h1km±17km, n44, σ1.08/70, 13C-15D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
KDJ	Kajisay	1.54	344	⇑iP	Pg	20 38 14.6	+1.1
	baz=40						
KDJ				⇑iS	Sb	20 38 33.5	0.0
	baz=40						
PRZ	Przheval'sk	1.89	14	⇑iP	Pb	20 38 20.6	+1.2
	baz=15						
PRZ				⇑iS	Sb	20 38 43.2	-0.4
	baz=15						
ULHL	Ulahol	1.96	325	⇑eP	Pg	20 38 23.1	+1.5
	baz=20						
ULHL				⇑iS	Sg	20 38 47.5	+0.6
	baz=20						
ANVS	Anan'yevo	2.13	358	⇓iP	Pg	20 38 25.4	+0.6
	baz=57						
ANVS				⇓iS	Sb	20 38 51.3	+0.8
	baz=57						
BOOM	Boomskoye usch	2.29	324	⇑iP	Pb	20 38 27.7	+1.5
	baz=20						
BOOM				⇑iS	Sg	20 38 56.7	-0.8
	baz=20						
KZA	Kyzart	2.37	308	⇑iP	Pg	20 38 30.6	+1.2
	baz=3.0						
KZA				⇑iS	Sg	20 39 00.2	+0.1
	baz=3.0						
TNSS	Tian-Shan	2.46	346	eP	Pg	20 38 31.9	+0.7
	7.6nm,0.1s						
TNSS				eS	Sg	20 39 03.4	+0.4
	7.5nm,0.2s						
TNSS	Tian-Shan	2.46	346	Pg	Pg	20 38 31.9	+0.7
	7.6nm,0.1s						
TNSS				Lg	Lg	20 39 03.4	
	7.5nm,0.2s						
IZV	Izvestkoviy	2.53	340	eP	Pg	20 38 33.8	+1.2
	4.4nm,0.1s						
IZV				eS	Sg	20 39 06.2	+0.9
	8.4nm,0.2s						
IZV	Izvestkoviy	2.53	340	Pg	Pg	20 38 33.8	+1.2
	4.4nm,0.1s						
IZV				Lg	Lg	20 39 06.2	
	8.4nm,0.2s						
ZHN	Zhinishke	2.56	11	eP	Pb	20 38 32.5	+1.6
	0.6nm,0.1s						
ZHN				eS	Sb	20 39 04.4	+1.5
	5.5nm,0.1s						
ZHN	Zhinishke	2.56	11	Pg	Pb	20 38 32.5	+1.6
	0.6nm,0.1s						
ZHN				Lg	Lg	20 39 04.4	
	5.5nm,0.1s						
MDOK	Medeo	2.56	348	eP	Pg	20 38 33.5	+0.4
	10nm,0.2s						
MDOK				eS	Sg	20 39 05.8	-0.6
	8.4nm,0.4s						
MDOK	Medeo	2.56	348	Pg	Pg	20 38 33.5	+0.4
	12nm,0.2s						
MDOK				Lg	Lg	20 39 06.3	
	5.9nm,0.3s						
KOTS	Kotyrbulak	2.62	350	eP	Pg	20 38 34.9	+0.6
	19nm,0.1s						
KOTS				eS	Sg	20 39 08.2	-0.1
	11nm,0.3s						
KOTS	Kotyrbulak	2.62	350	Pg	Pg	20 38 34.9	+0.6
	19nm,0.1s						
KOTS				Lg	Lg	20 39 08.2	
	11nm,0.3s						
UZB	Uzynbulak	2.66	20	eP	Pg	20 38 35.4	+0.4
	1.0nm,0.1s						
UZB				eS	Sg	20 39 09.3	-0.2
	6.9nm,0.3s						
UZB	Uzynbulak	2.66	20	Pg	Pg	20 38 35.4	+0.4
	1.0nm,0.1s						
UZB				Lg	Lg	20 39 09.4	
	6.9nm,0.3s						
KST	Kastek	2.74	331	eP	Pg	20 38 37.1	+0.6
	2.8nm,0.1s						
KST				eS	Sg	20 39 12.2	+0.2
	6.3nm,0.2s						
KST	Kastek	2.74	331	Pg	Pg	20 38 37.1	+0.6
	2.8nm,0.1s						
KST				Lg	Lg	20 39 12.2	
	6.3nm,0.2s						
KURS	Kuram	2.85	6	eP	Pg	20 38 38.5	-0.1
	1.6nm,0.2s						
KURS				eS	Sg	20 39 14.6	-0.9
	5.7nm,0.2s						
KURS	Kuram	2.85	6	Pg	Pg	20 38 38.5	-0.1
	1.6nm,0.2s						
KURS				Lg	Lg	20 39 14.6	
	5.7nm,0.2s						
ARLS	Aral	2.86	296	⇑iP	Pb	20 38 37.5	+1.5
	baz=92						
ARLS				⇑iS	Sb	20 39 11.7	+0.2
	baz=92						
KPKS	Kokpek	2.89	13	eP	Pg	20 38 38.9	-0.5
	6.3nm,0.1s						
KPKS				eS	Sg	20 39 15.2	-1.7
	9.8nm,0.2s						
UCH	Uchtor	2.91	304	⇓iP	Pg	20 38 38.1	+1.2
	baz=0.0						
UCH				⇓iS	Sb	20 39 13.3	+0.2
	baz=0.0						
PDGK	Podgornoye	2.96	25	Pg	Pg	20 38 40.5	-0.3
	2.5nm,0.3s						
PDGK				Lg	Lg	20 39 18.1	
	8.5nm,0.3s						
PDGK	Podgornoye	2.96	25	⇑Pg	Pb	20 38 38.7	+0.9
	3.1nm,0.5s						
PDGK				⇓Lg	Lg	20 39 18.2	
	26nm,0.7s						
DGS	Degeres	2.98	331	eP	Pg	20 38 41.5	+0.4
	1.8nm,0.2s						
DGS				eS	Sg	20 39 19.5	-0.3
	10nm,0.3s						
DGS	Degeres	2.98	331	Pg	Pg	20 38 41.5	+0.4
	1.8nm,0.2s						
DGS				Lg	Lg	20 39 19.5	
	10nm,0.3s						
AAK	Ala-Archa	3.15	310	⇓iP	Pb	20 38 40.8	-0.1
	baz=7.0						
AAK				⇓iS	Sb	20 39 18.5	-1.4
	baz=7.0						
AAK	Ala-Archa	3.15	310	⇓Pg	Pb	20 38 43.0	+2.1
	4.4nm,0.8s						
AAK				⇓Lg	Lg	20 39 24.8	
	14nm,1.1s						
KTBS	Karatobe	3.16	346	eP	Pg	20 38 44.0	-0.5
	3.5nm,0.2s						
KTBS				eS	Sg	20 39 24.1	-1.3
	14nm,0.2s						
KTBS	Karatobe	3.16	346	Pg	Pg	20 38 44.0	-0.5
	3.5nm,0.2s						
KTBS				Lg	Lg	20 39 24.1	
	14nm,0.2s						
CHKK	Chushkaly	3.25	350	eP	Pg	20 38 45.8	-0.5
	1.5nm,0.1s						
CHKK				eS	Sg	20 39 26.9	-1.5
	14nm,0.2s						
CHKK	Chushkaly	3.25	350	Pg	Pg	20 38 45.7	-0.5
	1.5nm,0.1s						
CHKK				Lg	Lg	20 39 26.9	
	14nm,0.2s						
CHMS	Chumysh	3.25	317	⇓Pg	Pg	20 38 46.2	0.0
	4.1nm,0.8s						
CHMS				⇓Lg	Lg	20 39 27.5	
	5.2nm,0.9s						
AML	Almayashu	3.40	297	⇓iP	Pb	20 38 45.1	-0.2
	baz=94						
AML				⇓iS	Sb	20 39 25.7	-1.6
	baz=94						
KUU	Kurty	3.40	342	eP	Pg	20 38 48.2	-1.1
	0.8nm,0.1s						
KUU				eS	Sg	20 39 31.4	-2.0
	3.6nm,0.3s						
KUU	Kurty	3.40	342	Pg	Pg	20 38 48.1	-1.2
	1.1nm,0.1s						
KUU				Lg	Lg	20 39 31.4	
	4.1nm,0.2s						
KRBS	Karabastau	3.41	334	eP	Pg	20 38 48.5	-0.9
	3.8nm,0.1s						
KRBS				eS	Sg	20 39 31.6	-2.1
	1.3nm,0.1s						
KRBS	Karabastau	3.41	334	Pg	Pg	20 38 48.6	-0.9
	3.8nm,0.1s						
KRBS				Lg	Lg	20 39 31.5	
	1.3nm,0.1s						
EKS2	Erkin-Say	3.60	305	⇓iP	Pb	20 38 47.3	-1.2
	baz=2.0						
EKS2				⇓iS	Sb	20 39 29.5	-3.2
	baz=2.0						
DJR	Jarkent	3.97	22	eP	Pg	20 38 59.2	-0.9
	0.3nm,0.1s						
DJR				eS	Sg	20 39 49.8	-1.6
	3.3nm,0.1s						
DJR	Jarkent	3.97	22	Pg	Pg	20 38 59.2	-0.9
	0.3nm,0.1s						
DJR				Lg	Lg	20 39 49.8	
	3.3nm,0.1s						

IDC 26 20:44:16.3±5.5, 5.35S×132.32E, h0km, mb3.4/1, mb1 3.5/3, mb1mx3.3/22, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=364.5km s-min=32.5km az=75.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.64	172	Pn	Pn	20 47 44.5	-0.3
	0.1nm,0.3s,baz=352,slow=13,SNR=2.5						
WRA				Sn	Sn	20 50 14.7	-13
	0.1nm,0.3s,baz=345,slow=40,SNR=2.4						
ASAR	Alice Springs	18.28	175	P	Pn	20 48 31.6	0.0
	0.1nm,0.3s,baz=351,slow=8.5,SNR=5.8						
MKAR	Makanchi Array	68.15	325	P	P	20 55 18.4	0.0
	0.2nm,0.4s,baz=118,slow=7.6,SNR=5.2						

IDC 26 20:57:56.0±1.6, 27.11S×67.17E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.6/42, mbtmp3.7/8, Error ellipse: s-maj=52.9km s-min=27.8km az=29.0
NEIC 26 20:57:57.9±1.3, 27.1S±0.2×67.2E±0.2, h10km±1km, mb4.3/3, Error ellipse: s-maj=31.7km s-min=19.2km az=140.0
ISC 26 20:57:58.1±0.8, 27.0S±0.2×67.2E±0.2, h10km, n19, σ0.63/15, mb3.8/13, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
H08S1	Diego Garcia H	19.93	15	T	T	21 23 12.4	
H08S2	Diego Garcia H	19.93	16	T	T	21 23 12.8	
	baz=113,slow=74,SNR=8.3						
H08S3	Diego Garcia H	19.95	15	T	T	21 23 09.6	
	baz=192,slow=74,SNR=11						
SUR	Sutherland	40.41	251	P	P	21 05 36.2	-0.6
CMAR	Chiang Mai Arr	54.71	38	P	P	21 07 28.2	+0.4
	0.8nm,0.8s,baz=225,slow=6.5,SNR=4.8						
SNAA	Sanae	58.31	200	P	P	21 07 53.5	+0.6
ASAR	Alice Springs	59.73	103	P	P	21 08 02.9	-0.6
	0.4nm,0.6s,baz=253,slow=6.1,SNR=8.3						
WRA	Warramunga Arr	61.34	99	P	P	21 08 14.3	-0.2
	0.6nm,0.7s,baz=250,slow=6.6,SNR=3.3						
BRTR	Keskin Array B	73.43	334	P	P	21 09 30.3	-0.3
	0.6nm,0.8s,baz=131,slow=4.3,SNR=4.3						
MKAR	Makanchi Array	74.74	11	P	P	21 09 37.1	-0.9
	0.4nm,0.7s,baz=197,slow=6.9,SNR=2.5						
TORD	Torodi Ar. Bea	75.06	293	P	P	21 09 40.4	-0.1
	0.4nm,0.8s,baz=106,slow=4.7,SNR=2.6						
ABKAR	Akbulak array	76.23	355	P	P	21 09 46.3	-0.1
ABKAR				IAmb	IAmb	21 09 47.4	
	comp=Z,1.7nm,0.7s						
ZALV	Zalesovo Beam	82.08	10	P	P	21 10 18.6	+0.3
	comp=Z,1.5nm,0.7s,baz=194,slow=5.5,SNR=6.0						
SONM	Songino Array	82.44	25	P	P	21 10 20.5	0.0
	comp=Z,0.6nm,0.8s,baz=210,slow=6.3,SNR=4.3						
CONA	Conrad Observa	87.71	328	iP	P	21 10 47.3	+0.3
	comp=Z,3.1nm,1.0s						
MOA	Molln	88.41	327	eP	P	21 10 51.0	+0.8
	comp=Z,1.0nm,0.5s						
ABTA	Abfaltersbach	88.51	326	eP	P	21 10 51.5	+0.8
	comp=Z,2.0nm,0.7s						
FETA	Feichten	89.59	325	iPcP	P	21 10 57.0	+1.1
	comp=Z,1.5nm,0.6s						
YKA	Yellowknife Ar	144.53	1	PKP	PKPbc	21 17 33.0	+0.2
	comp=Z,0.2nm,0.5s,baz=342,slow=3.2,SNR=6.3						

BJI 26 20:58:52.4±0.0, 24.56N×93.78E, h50km, mB4.8/25, mb4.5/31, ML4.4/4, Ms4.3/5, Ms7 4.0/3
NDI 26 20:58:53.4±2.1, 24.59N×93.68E, h20km±11km, ML4.0, mb4.4(NEIC)
IDC 26 20:58:55.1±2.1, 24.45N×93.76E, h61km±21km, mb3.9/17, mb1 4.1/19, mb1mx3.8/45, mbtmp4.2/19, ML4.0/2, MS2.9/2, Ms1 2.9/2, ms1mx2.7/52, Error ellipse: s-maj=15.4km s-min=11.2km az=67.0
NEIC 26 20:58:55.1±1.4, 24.47N±0.06×93.71E±0.09, h60km±7km, mb4.4/24, Error ellipse: s-maj=11.7km s-min=8.6km az=69.0
ISC 26 20:58:53.1±0.9, 24.48N±0.04×93.59E±0.04, h46km±9km, n83, σ2.24/99, mb4.3/29, 1C-1D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
KOHI	KOHIMA	1.32	21	eP	Pn	20 59 16.6	+1.3
KOHI				eS	Sn	20 59 35.6	+3.7
KOHI				IAML		20 59 38.5	
	comp=N,5μm,0.4s						
SHL	Shillong	1.89	305	eP	Pn	20 59 25.7	+2.6
SHL				eS	Sn	20 59 48.5	+2.6
SHL				IAML		20 59 50.2	
	comp=N,1μm,0.2s						
SHL	Shillong	1.89	305		Pn	20 59 25.6	+2.4
TEZP	TEZPUR	2.25	342	eP	Pn	20 59 28.4	+0.6
TEZP				eS	Sn	20 59 54.4	+0.1
TEZP				IAML		21 00 04.7	
	comp=E,2μm,0.2s						
TEZP				IAML		21 00 06.3	
	comp=N,2μm,0.3s						
JORH	JORHAT	2.33	15	eP	Pn	20 59 29.7	+0.7
JORH				eS	Sn	20 59 56.7	+0.3
JORH				IAML		21 00 06.8	
	comp=N,4μm,0.4s						
JORH				IAML		21 00 07.5	
	comp=E,3μm,0.2s						
BRDH	Bariadhala	2.53	225	P	Pn	20 59 35.1	+3.3
	comp=E,14nm,0.3s,baz=89,slow=12,SNR=4.3						
BRDH				S	Sn	21 00 06.4	+5.0
	comp=E,85nm,0.3s,baz=100,slow=23,SNR=5.9						
LKP	Lekhapani	3.49	35	eP	Pn	20 59 45.5	+0.6
LKP				eS	Sn	21 00 22.8	-2.2
LKP				IAML		21 00 27.5	
	comp=E,409nm,0.3s						
LKP				IAML		21 00 27.9	
	comp=N,402nm,0.3s						
SIMRM	Sittwe	4.38	189		Pn	20 59 59.1	+2.0
GTK	Tadong	5.31	303	eP	Pn	21 00 12.9	+2.8
GTK				eS	Sn	21 01 07.7	-2.3
GTK				IAML		21 01 16.9	
	comp=N,253nm,0.6s						
GTK				IAML		21 01 18.2	
	comp=E,359nm,0.6s						
LSA	Lhasa	5.64	338	P	Pn	21 00 18.0	+3.2
LSA				S	Sn	21 01 21.5	+3.0
LSA				smax	smax		
	comp=E,600nm,0.5s						
LSA				smax	smax		
	comp=E,400nm,0.7s						
LSA	Lhasa	5.64	338		Pn	21 00 17.8	+3.0
TAPN	Taplejung	6.02	300	ePn	Pn	21 00 22.8	+2.9
TAPN				eSn	Sn	21 01 26.7	-1.0
ODAN	Odare	6.08	294	ePn	Pn	21 00 23.6	+2.9
ODAN				eSn	Sn	21 01 27.5	-1.6
	comp=E,857nm,0.5s						
RAMN	Ramite	6.77	293	ePn	Pn	21 00 32.8	+2.6
RAMN				eSn	Sn	21 01 42.4	-3.7
	comp=E,362nm,0.6s						
BOK	Bokaro	7.07	266	eP	Pn	21 00 37.3	+3.2
BOK				eS	Sn	21 01 52.4	-0.9
BOK				IAML		21 01 56.6	
	comp=N,73nm,0.7s						
JIRN	Jiri	7.37	297	ePn	Pn	21 00 41.5	+2.9
JIRN				eSn	Sn	21 01 58.0	-3.1
	comp=N,730nm,0.5s						
CHTO	Chiang Mai	7.52	138		Pn	21 00 41.4	+1.1
GUN	Gumba	7.72	298	ePn	Pn	21 00 46.2	+2.8
GUN				eSn	Sn	21 02 07.3	-2.4
CM31	Chiang Mai Arr	7.79	139		Pn	21 00 44.0	0.0
CMAR	Chiang Mai Arr	7.79	139	P	Pn	21 00 45.1	+1.1
	comp=N,1.0nm,0.3s,baz=314,slow=13,SNR=37						
PKI	Pulchoki	7.98	294	ePn	Pn	21 00 48.6	+1.8
PKIN	Phulchoki	7.99	294	ePn	Pn	21 00 48.6	+1.6
KKN	Kakani	8.16	296	ePn	Pn	21 00 51.3	+2.0
DMN	Daman	8.24	294	ePn	Pn	21 00 52.0	+1.6
GKN	Gorkha	8.77	295	ePn	Pn	21 00 59.2	+1.6
PBKT	Sadao Pong	10.47	137		Pn	21 01 21.9	+1.2
DGPR	DIGLIPUR	11.26	183	eP	Pn	21 01 31.6	+0.1
DGPR				eS	Sn	21 03 29.6	-6.4
DGPR				IAML		21 03 36.2	
	comp=E,31nm,0.3s						
DGPR				IAML		21 03 40.8	
	comp=N,23nm,0.4s						
NGP	Nagpur	13.81	259	ex	x	21 02 18.3	
NGP				ex	Sn	21 04 31.7	-6.7
UBPT	Khong Chiam	14.43	127		Pn	21 02 12.8	-1.9
LZH	Lanzhou	14.56	35	⇑P	Pn	21 02 14.5	-1.9
LZH				pmax	pmax		
	comp=N,25nm,1.3s						
ENH	Enshi	15.25	64		Pn	21 02 22.9	-2.5
ENH				IAmb	IAmb	21 03 20.2	
	comp=Z,18nm,0.9s						
HYB	Hyderabad	15.70	246	iP	Pn	21 02 30.0	-1.4
HYB				eS	S	21 05 36.0	-1.5
GTA	Gaotai	15.79	18	eP	Pn	21 02 33.0	+0.6
GTA				pP	P	21 02 36.5	+0.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,130nm,5.6s						
GTA				LR	LR		
	comp=Z,680nm,17.8s						
XAN	Xi'an	16.40	51	P	Pn	21 02 39.8	-0.4
XAN				IAmb	IAmb	21 02 41.9	
	comp=Z,16nm,0.4s						
NIL	Nilore	19.96	302	P	Pn	21 03 24.1	+0.5
PALK	Pallekele	21.10	218	LR	LR	21 12 13.7	
	comp=Z,28nm,21.9s,baz=6.7,slow=38						
KSH	Kashi	21.11	319	P	P	21 03 35.5	+1.5
KSH				pP	sP	21 03 52.3	+1.3
KSH				S	S	21 07 17.8	-8.7
KSH				PcP	PcP	21 07 39.0	+0.1
KSH				PcS	PcS	21 11 15.3	-1.7
KSH				pmax	pmax		
	comp=Z,15nm,1.2s						
KSH				pmax	pmax		
	comp=Z,590nm,7.6s						
KSH				LR	LR		
	comp=Z,520nm,5.6s						
IPM	Ipoh	21.13	159	P	P	21 03 33.1	-1.2
IPM				IAmb	IAmb	21 03 33.5	
	comp=Z,17nm,0.9s						
BTO	Baotou	21.16	37	eP	P	21 03 33.3	-1.3
PSI	Prapat	22.16	166	P	P	21 03 46.2	+0.8
	comp=Z,3.6nm,0.4s,baz=282,slow=6.1,SNR=4.8						
RPSI	Rantau Prapat	22.26	166	P	P	21 03 45.5	-0.8
RPSI	Rantau Prapat	22.26	166	P	P	21 03 46.2	-0.1
KBL	Kabul	23.55	301	P	P	21 03 59.9	+0.3
AAK	Ala-Archa	24.01	324	LR	LR	21 14 58.3	
	comp=Z,42nm,18.8s,baz=117,slow=40						
AAK	Ala-Archa	24.01	324	P	P	21 04 06.7	+2.8
MK31	Makanchi Array	24.04	341	P	P	21 04 04.8	+1.0
MKAR	Makanchi Array	24.04	341	P	P	21 04 05.1	+1.2
	comp=Z,2.1nm,0.3s,baz=158,slow=8.9,SNR=85						
MAKZ	Makanchi	24.14	340	P	P	21 04 06.3	+1.5
MAKZ				IAmb	IAmb	21 04 07.5	
	comp=Z,28nm,1.8s						
SONM	Songino Array	25.43	20	P	P	21 04 17.5	+0.9
	comp=Z,6.1nm,0.6s,baz=199,slow=8.0,SNR=59						
ULN	Ulaanbaatar	25.67	21	P	P	21 04 19.1	+0.3
ULN				IAmb	IAmb	21 04 21.6	
	comp=Z,14nm,1.2s						
KURBB	Kurchatov Arra	28.59	340	P	P	21 04 46.2	+1.5
	comp=Z,3.8nm,0.7s,baz=154,slow=8.0,SNR=25						
KURK	Kurchatov	28.64	340	P	P	21 04 46.5	+1.3
ZAA0	Zalesovo Array	30.16	350	P	P	21 04 59.7	+1.1
ZAA0				IAmb	IAmb	21 05 00.8	
	comp=Z,4.2nm,0.7s						
ZALV	Zalesovo Beam	30.16	350	P	P	21 04 59.9	+1.2
	comp=Z,3.8nm,0.5s,baz=178,slow=8.0,SNR=22						
BRVK	Borovoye	33.53	334	P	P	21 05 29.7	+1.5
BRVK				IAmb	IAmb	21 05 30.6	
	comp=Z,4.3nm,0.9s						
ABKAR	Akbulak array	36.07	322	P	P	21 05 52.4	+2.1
ABKAR				IAmb	IAmb	21 05 52.8	
	comp=Z,3.2nm,0.6s						
KLR	Kul'dur	38.66	40	P	P	21 06 11.9	-0.3
	comp=Z,1.1nm,0.5s,baz=262,slow=9.7,SNR=5.8						
ARU	Arti	40.79	331	P	P	21 06 31.3	+1.5
RAYN	Ar Rayn	43.77	279	P	P	21 06 54.9	+0.4
RAYN				IAmb	IAmb	21 07 12.2	
	comp=Z,10nm,1.3s						
NRIK	Noril'sk	45.02	357	P	P	21 07 04.2	+0.4
	comp=Z,2.3nm,0.4s,baz=168,slow=6.9,SNR=7.6						
TIXI	Tiksi	51.21	14	P	P	21 07 51.5	-0.1
TIXI				IAmb	IAmb	21 08 08.3	
	comp=Z,2.5nm,0.7s						
KNRA	Kununurra	52.64	136	P	P	21 08 01.7	-1.2
AKASG	Malin Array Be	55.34	316	P	P	21 08 22.3	0.0
	comp=Z,1.7nm,0.5s,baz=80,slow=6.5,SNR=6.9						
FINES	FINESS Array B	58.08	328	P	P	21 08 42.7	+1.3
	comp=Z,1.2nm,0.6s,baz=103,slow=6.1,SNR=6.6						
ARR	Arges	58.48	309	⇓P	P	21 08 44.3	-0.3
WB0	Warramunga Arr	59.27	134	P	P	21 08 49.4	-0.9
WRA	Warramunga Arr	59.36	134	P	P	21 08 50.1	-0.8
	comp=Z,10.0nm,0.6s,baz=320,slow=7.4,SNR=233						
WB2	Warramunga Arr	59.37	134	P	P	21 08 50.1	-0.9
WR0	Warramunga Arr	59.50	134	P	P	21 08 51.1	-0.8
ARCES	ARCESS Array B	59.65	338	P	P	21 08 53.1	+0.9
	comp=Z,3.6nm,1.0s,baz=97,slow=5.7,SNR=6.2						
LANS	Liptovska Anna	61.68	314	eP	P	21 09 07.2	+0.7
AS31	Alice Springs	61.80	138	P	P	21 09 07.0	-0.6
AS31				IAmb	IAmb	21 09 07.9	
	comp=Z,1.8nm,0.7s						
ASAR	Alice Springs	61.80	138	P	P	21 09 07.1	-0.4
	comp=Z,4.2nm,0.5s,baz=319,slow=6.7,SNR=65						
VYHS	Vyhne	62.16	313	eP	P	21 09 13.5	+3.8
NB2	NORSAR Subarra	65.24	328	P	P	21 09 29.9	+0.1
	comp=Z,0.8nm,0.6s,baz=83,slow=6.5						
NOA	NORSAR Array B	65.24	328	P	P	21 09 30.2	+0.4
	comp=Z,0.9nm,0.6s,baz=85,slow=6.5,SNR=4.9						
GERES	GERESS Array B	65.48	314	P	P	21 09 33.0	+1.3
	comp=Z,1.0nm,0.6s,baz=72,slow=5.9,SNR=12						
STKA	Stephens Creek	72.42	138	P	P	21 10 13.8	-0.9
	comp=Z,1.6nm,0.4s,baz=307,slow=4.2,SNR=10						

ILAR	**Eielson Array**	**79.64**	**22**	P	**P**	**21 10 55.6**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=296,slow=4.1,SNR=6.8						
C36M	**Paulatuk**	**82.57**	**13**	P	**P**	**21 11 11.1**	**+0.2**
C36M				IAmb	IAmb	21 11 46.1	
	comp=Z,8.9nm,1.3s						
BOSA	**Boshof**	**84.30**	**235**	P	**P**	**21 11 22.1**	**+1.5**
	comp=Z,4.2nm,1.0s,baz=180,slow=0.4,SNR=4.7						
BOSA	**Boshof**	**84.30**	**235**	P	**P**	**21 11 20.6**	**+0.1**
TORD	**Torodi Ar. Bea**	**86.35**	**283**	P	**P**	**21 11 33.4**	**+2.4**
	comp=Z,0.3nm,0.8s,baz=78,slow=4.5,SNR=2.7						

*BJI **26** 21:13:35.6±0.0, 53.80N×171.90W, h241km, mB5.3/76, mb5.1/81*

*AEIC **26** 21:13:39.6±4.0, 53.43N±0.07×171.68W±0.10, h290km±4km, Error ellipse: s-maj=10.4km s-min=7.8km az=159.0*

*KLM **26** 21:13:39.0, 53.28N×171.52W, h250km, mb5.5*

*MOS **26** 21:13:39.2±0.9, 53.63N×171.86W, h268km, mb5.5/64, MS5.1/14, Error ellipse: s-maj=6.9km s-min=3.8km az=97.1*

*NEIC **26** 21:13:40.1±2.3, 53.61N±0.06×171.82W±0.09, h265km±1km, mb5.7/742, Mwb6.1/105, Mwc6.1/92, Mww6.1, ML5.9(AEIC), Mwc6.2(GCMT), Error ellipse: s-maj=11.0km s-min=8.7km az=325.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.34; $M_{\theta\theta}$-0.41; $M_{\phi\phi}$0.07; $M_{r\theta}$1.20; $M_{\theta\phi}$-0.39; $M_{\phi r}$-0.80; Fault plane solution: $M_0$1.55000×10^{18} NP1:ϕ_s116.11000°,δ86.02000°, λ107.00000°. NP2:ϕ_s218.91000°,δ17.45000°,λ13.39000°. Principal axes: T 1.7044, Plg46.0000°, Azm44.0000°; N -0.3842, Plg17.0000°, Azm295.0000°; P -1.3202, Plg39.0000°, Azm191.0000°;*

*IDC **26** 21:13:41.3±0.4, 53.56N×171.89W, h278km±2km, mb5.0/41, mb1 5.1/43, mb1mx5.1/44, mbtmp5.6/43 Error ellipse: s-maj=8.6km s-min=5.2km az=5.0*

*BGR **26** 21:13:42.3±0.0, 53.28N×171.87W, h304km±3km, mb5.8*

*GCMT **26** 21:13:44.1±0.1, 53.60N×171.87W, h275km, MW6.1/170, Moment Tensor Solution. s167,c399; s170,c638; Duration: 2.8 Moment tensor: Scale 10^{18}Nm; M_{rr}0.30±.01; $M_{\theta\theta}$-0.59±.01; $M_{\phi\phi}$0.28±.01; $M_{r\theta}$1.47±.01; $M_{\theta\phi}$-0.59±.01; $M_{\phi r}$-1.11±.01; Best double couple: $M_0$1.95300×10^{18} NP1:ϕ_s214.00000°,δ21.00000°, λ7.00000°. NP2:ϕ_s118.00000°,δ88.00000°,λ111.00000°. Principal axes: T 2.2020, Plg44.0000°, Azm49.0000°; N -0.4970, Plg21.0000°, Azm297.0000°; P -1.7040, Plg39.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **26** 21:13:44, 53.58N×171.81W, h277km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.33; $M_{\theta\theta}$-0.63; $M_{\phi\phi}$0.30; $M_{r\theta}$1.51; $M_{\theta\phi}$-0.60; $M_{\phi r}$-1.15; Fault plane solution: $M_0$2.06000×10^{18} NP1:ϕ_s215.00000°, δ21.00000°,λ7.00000°. NP2:ϕ_s118.00000°,δ87.00000°, λ111.00000°. Principal axes: T 2.2702, Plg44.0000°, Azm49.0000°; N -0.5095, Plg21.0000°, Azm297.0000°; P -1.7607, Plg39.0000°, Azm189.0000°;*

*NEIC **26** 21:13:45, 53.68N×172.00W, h280km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.27; $M_{\theta\theta}$-0.50; $M_{\phi\phi}$0.23; $M_{r\theta}$1.44; $M_{\theta\phi}$-0.59; $M_{\phi r}$-1.10; Fault plane solution: $M_0$1.95000×10^{18} NP1:ϕ_s213.00000°, δ19.00000°,λ4.00000°. NP2:ϕ_s119.00000°,δ89.00000°, λ109.00000°. Principal axes: T 2.1598, Plg43.0000°, Azm48.0000°; N -0.5308, Plg19.0000°, Azm298.0000°; P -1.6291, Plg40.0000°, Azm191.0000°;*

*NEIC **26** 21:13:54.9, 53.54N×172.17W, h274km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.26; $M_{\theta\theta}$-0.58; $M_{\phi\phi}$0.32; $M_{r\theta}$1.26; $M_{\theta\phi}$-0.48; $M_{\phi r}$-0.97; Fault plane solution: $M_0$1.70000×10^{18} NP1:ϕ_s215.91000°, δ22.43000°,λ7.30000°. NP2:ϕ_s119.16000°,δ87.22000°, λ112.27000°. Principal axes: T 1.8917, Plg43.0000°, Azm51.0000°; N -0.3870, Plg22.0000°, Azm298.0000°; P -1.5048, Plg38.0000°, Azm189.0000°;*

ISC 26 21:13:40.5±0.2**, 53.57N**±0.03×**171.93W**±0.02**, h271**km±1km**, h271**km**:pP-P, n1882,** σ1.75/2103**, mb5.6**/580**, 104C-58D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KONE	**Korovin Northe**	**1.77**	**229**		**Pn**	**21 14 23.5**	**+0.7**
KOSE	**Korovin Southe**	**1.77**	**227**		**Pn**	**21 14 23.6**	**+0.7**
KOFP	**Korovin Flat P**	**1.84**	**226**		**Pn**	**21 14 24.2**	**+0.7**
KOKL	**Mount Kliuchef**	**1.86**	**229**		**Pn**	**21 14 24.6**	**+1.0**
ATKA	**Atka Island**	**1.94**	**226**		**Pn**	**21 14 24.5**	**+0.3**
ATKA	**Atka Island**	**1.94**	**226**		**S**	**21 15 00.1**	**+1.3**
ATKA	**Atka Island**	**1.94**	**226**		**S**	**21 14 59.9**	**+1.1**
NIKH	**Nikolski High**	**1.94**	**107**		**Pn**	**21 14 22.6**	**-1.6**
NIKH	**Nikolski High**	**1.94**	**107**		**S**	**21 14 57.3**	**-1.5**
NIKH	**Nikolski High**	**1.94**	**107**		**S**	**21 14 57.2**	**-1.5**
OKSP	**Okmok Steeple**	**2.20**	**97**		**Pn**	**21 14 25.4**	**-1.1**
GSTR	**Great Sitkin T**	**2.91**	**241**		**Pn**	**21 14 34.1**	**+0.8**
GSMY	**Great Sitkin M**	**2.93**	**240**		**Pn**	**21 14 34.3**	**+0.7**
GSTD	**Great Sitkin T**	**2.97**	**241**		**Pn**	**21 14 34.8**	**+0.7**
MGOD	**Makushin Gods**	**3.02**	**84**		**Pn**	**21 14 32.9**	**-1.5**
MGOD					**S**	**21 15 15.2**	**-2.1**
MSW	**Makushin Switc**	**3.08**	**81**		**Pn**	**21 14 33.7**	**-1.3**
MREP	**Makushin Rep't**	**3.09**	**83**		**Pn**	**21 14 34.0**	**-1.2**
MNAT	**Makushin Natee**	**3.13**	**82**		**Pn**	**21 14 34.6**	**-1.0**
MNAT					**S**	**21 15 18.0**	**-1.4**
UNV	**Unalaska Valle**	**3.23**	**83**		**Pn**	**21 14 35.3**	**-1.3**
UNV					**S**	**21 15 18.3**	**-3.0**
UNV	**Unalaska Valle**	**3.23**	**83**		**S**	**21 15 19.2**	**-2.1**
ADAG	**Mount Adagdak**	**3.25**	**243**		**Pn**	**21 14 38.0**	**+1.0**
ADK	**Adak**	**3.35**	**242**		**Pn**	**21 14 38.4**	**+0.5**
ADK				S	**S**	**21 15 22.6**	**-1.0**
AKRB	**Akutan Reef Bi**	**3.52**	**78**		**Pn**	**21 14 38.9**	**-0.9**
AKRB					**S**	**21 15 25.5**	**-1.4**
AKMO	**Akutan Morgan**	**3.54**	**79**		**Pn**	**21 14 39.1**	**-0.9**
AKMO					**S**	**21 15 25.4**	**-2.1**
AKGG	**Akutan Green G**	**3.57**	**77**		**Pn**	**21 14 39.6**	**-0.7**
AKLV	**Akutan Long Va**	**3.59**	**78**		**Pn**	**21 14 39.7**	**-0.8**
AKBBA	**Akutan Broad B**	**3.59**	**79**		**Pn**	**21 14 39.3**	**-1.2**
KICM	**Kanaga Island**	**3.60**	**245**		**Pn**	**21 14 41.9**	**+1.2**
KIKV	**Kanaga Island**	**3.61**	**244**		**Pn**	**21 14 41.8**	**+1.0**
KIWB	**Kanaga Island**	**3.61**	**244**		**Pn**	**21 14 41.7**	**+0.9**
AKUT	**Akutan**	**3.69**	**79**		**Pn**	**21 14 40.3**	**-1.3**
KIMD	**Kanaga Island**	**3.70**	**243**		**Pn**	**21 14 42.3**	**+0.5**
AKSA	**Akutan Strait**	**3.73**	**79**		**Pn**	**21 14 41.3**	**-0.8**
AKSA					**S**	**21 15 29.9**	**-1.3**
SPIA	**Saint Paul Isl**	**3.74**	**14**		**Pn**	**21 14 43.1**	**+0.9**
SPIA					**S**	**21 15 33.6**	**+2.3**
TAPA	**Tanaga Point A**	**3.99**	**246**		**Pn**	**21 14 46.1**	**+1.1**
TAFP	**Tanaga Falls P**	**4.04**	**248**		**Pn**	**21 14 47.0**	**+1.3**
TASE	**Tanaga Southea**	**4.10**	**247**		**Pn**	**21 14 47.6**	**+1.2**
WECS	**Westdahl Cape**	**4.32**	**74**		**Pn**	**21 14 47.8**	**-1.1**
WESP	**Westdahl Peak**	**4.35**	**75**		**Pn**	**21 14 48.3**	**-0.9**
GAEA	**Gareloi East**	**4.52**	**249**		**Pn**	**21 14 53.1**	**+1.9**
GALAA	**Gareloi Lava P**	**4.54**	**249**		**Pn**	**21 14 52.5**	**+1.1**
SSBA	**Shishaldin**	**4.74**	**72**		**Pn**	**21 14 52.2**	**-1.6**
SSBA					**S**	**21 15 50.7**	**-1.7**
FALS	**False Pass**	**5.16**	**72**		**Pn**	**21 14 57.4**	**-1.3**
FALS	**False Pass**	**5.16**	**72**		**S**	**21 16 00.5**	**-0.8**
FALS	**False Pass**	**5.16**	**72**		**S**	**21 16 00.3**	**-1.0**
BALA	**Baldy Mountain**	**5.59**	**69**		**Pn**	**21 15 00.2**	**-3.6**
DT1	**Dutton Round H**	**5.85**	**71**		**Pn**	**21 15 05.2**	**-1.9**
HAG	**Hague Volcano**	**6.11**	**69**		**Pn**	**21 15 09.3**	**-0.9**
HAG	**Hague Volcano**	**6.11**	**69**	P	**Pn**	**21 15 09.3**	**-0.9**
PVV	**Pavlof Volcano**	**6.18**	**69**		**Pn**	**21 15 10.1**	**-1.0**
SDPT	**Sand Point**	**6.91**	**70**		**Pn**	**21 15 17.6**	**-2.5**
SDPT				S	**S**	**21 16 35.7**	**-4.7**
CNBA	**Chernabura Isl**	**7.35**	**75**		**Pn**	**21 15 22.8**	**-2.8**
VNWF	**Veniaminof 8**	**7.59**	**65**		**Pn**	**21 15 27.6**	**-1.0**
VNFG	**Fog Glacier, M**	**7.63**	**64**		**Pn**	**21 15 28.4**	**-0.7**
VNSS	**Veniaminof 8**	**7.67**	**65**		**Pn**	**21 15 28.5**	**-1.2**
VNNF	**Veniaminof 3**	**7.76**	**64**		**Pn**	**21 15 29.5**	**-1.3**
CHGN	**Chignik**	**8.25**	**65**		**Pn**	**21 15 33.9**	**-2.8**
CHGN				S	**S**	**21 17 05.0**	**-5.8**
SMY	**Shemya**	**8.45**	**270**		**Pn**	**21 15 39.1**	**-0.1**
SMY	**Shemya**	**8.45**	**270**	P	**Pn**	**21 15 39.1**	**-0.1**
PLK1	**Peulik 1**	**9.63**	**58**		**Pn**	**21 15 53.4**	**-0.5**
CHIR	**Chirikof Islan**	**9.71**	**70**		**Pn**	**21 15 51.8**	**-3.2**
PLK2	**Peulik 2**	**9.76**	**58**		**Pn**	**21 15 54.8**	**-0.8**
GAMB	**Gambell**	**10.24**	**1**		**Pn**	**21 16 02.5**	**+1.0**
GAMB	**Gambell**	**10.24**	**1**		**S**	**21 17 56.5**	**+0.2**
KELA	**Mount Kelaz**	**10.29**	**55**		**Pn**	**21 16 01.3**	**-0.9**
SII	**Sitkinak Islan**	**10.60**	**66**		**Pn**	**21 16 03.9**	**-2.2**
OHAK	**Old Harbor**	**11.21**	**63**		**Pn**	**21 16 10.0**	**-3.5**
ANM	**Nome**	**11.53**	**14**		**P**	**21 16 18.9**	**-1.3**
ANM	**Nome**	**11.53**	**14**	P	**P**	**21 16 18.9**	**-1.3**
SVW2	**Sparrevohn**	**11.59**	**43**		**Pn**	**21 16 18.8**	**+0.6**
KDAK	**Kodiak Island**	**11.69**	**61**	P	**Pn**	**21 16 16.4**	**-3.1**
	134nm,0.3s,baz=254,slow=6.1,SNR=172						
KDAK				S	S	21 18 18.9	-11
	145nm,0.3s,baz=156,slow=19,SNR=7.5						
KDAK				ScP	**ScP**	**21 24 48.5**	**-1.3**
	1.2nm,0.3s,baz=91,slow=5.2,SNR=7.8						
KDAK	**Kodiak Island**	**11.69**	**61**		**Pn**	**21 16 16.7**	**-2.8**
RSO	**Redoubt South**	**12.49**	**49**	P	**Pn**	**21 16 29.7**	**+0.2**
TTA	**Tatalina**	**12.54**	**35**	P	**Pn**	**21 16 30.6**	**+0.7**
TTA	**Tatalina**	**12.54**	**35**	P	**Pn**	**21 16 30.7**	**+0.7**
CNPM	**China Poot**	**12.85**	**54**	P	**Pn**	**21 16 32.8**	**-1.0**
SKT	**Skwentna**	**13.71**	**44**	P	**P**	**21 16 45.0**	**+0.5**
SUA	**Susitna One**	**13.80**	**47**	P	**Pn**	**21 16 43.8**	**-1.5**
SUA				S	**S**	**21 19 13.0**	**-4.8**
SEW	**Seward**	**13.89**	**53**		**Pn**	**21 16 43.8**	**-2.4**
PPLA	**Purkeypile**	**13.92**	**40**	P	**P**	**21 16 46.9**	**0.0**
PMR	**Palmer**	**14.56**	**47**	P	**P**	**21 16 51.6**	**-2.3**
PMR	**Palmer**	**14.56**	**47**	P	**P**	**21 16 51.6**	**-2.3**
GHO	**Glory Hole Cre**	**14.73**	**47**	P	**P**	**21 16 53.4**	**-2.5**
KNK	**Knik Glacier**	**14.79**	**49**	P	**P**	**21 16 54.4**	**-2.1**
KNK				S	**S**	**21 19 32.5**	**-6.8**
TRF	**Thorofare Moun**	**14.94**	**40**	P	**P**	**21 16 57.9**	**-0.4**
GLI	**Glacier Island**	**15.24**	**51**	P	**P**	**21 16 58.2**	**-3.2**
MID	**Middleton Isla**	**15.24**	**57**	P	**P**	**21 17 00.5**	**-0.8**
MID	**Middleton Isla**	**15.24**	**57**	P	**P**	**21 17 00.5**	**-0.8**
MID				pmax	pmax		
	comp=Z,3μm,0.7s						
BWN	**Browne**	**15.64**	**38**	P	**Pn**	**21 17 07.4**	**+0.4**
EYAK	**Cordova Ski Ar**	**15.78**	**53**	P	**P**	**21 17 06.8**	**-0.5**
EYAK				S	**S**	**21 19 55.4**	**-3.7**
NEA	**Nenana**	**16.00**	**37**	P	**P**	**21 17 10.0**	**+0.4**
WRH	**Wood River Hil**	**16.30**	**39**	P	**P**	**21 17 12.1**	**-0.9**
TCOL	**CIGO, UAF Yank**	**16.60**	**38**	P	**P**	**21 17 15.2**	**-0.9**
	baz=238,SNR=444						
COLA	**College**	**16.60**	**38**	P	**P**	**21 17 15.4**	**-0.8**
COLA	**College**	**16.60**	**38**	P	**P**	**21 17 15.4**	**-0.8**
COLA				pmax	pmax		
	comp=Z,2μm,0.8s						
PAX	**Paxson**	**16.68**	**45**	P	**P**	**21 17 17.1**	**-0.1**
PAX	**Paxson**	**16.68**	**45**	P	**P**	**21 17 17.1**	**-0.1**
PAX				pmax	pmax		
	comp=Z,849nm,0.6s						
HDA	**Harding Lake**	**16.70**	**40**	P	**P**	**21 17 15.7**	**-1.7**
	baz=241,SNR=1000						
POKR	**Poker Plat Res**	**16.88**	**37**	P	**P**	**21 17 18.1**	**-1.2**
	baz=238,SNR=945						
IL31		**16.90**	**39**	P	**P**	**21 17 18.9**	**-0.6**
ILAR	**Eielson Array**	**16.90**	**39**	P	**P**	**21 17 17.8**	**-1.7**
	comp=Z,23nm,0.3s,baz=238,slow=8.6,SNR=881						
ILAR				S	**S**	**21 20 22.0**	**+0.5**
	comp=Z,9.5nm,0.3s,baz=329,slow=24,SNR=5.5						
ILAR				ScP	**ScP**	**21 24 56.2**	**-2.6**
	comp=Z,2.1nm,0.3s,baz=280,slow=3.5,SNR=14						
ILAR				P3KPbc		21 52 13.2	
	comp=Z,0.1nm,0.3s,baz=54,slow=3.6,SNR=10						
ILAR				P4KP		22 00 37.4	
	comp=Z,0.1nm,0.3s,baz=246,slow=4.5,SNR=4.4						
VRDI	**Verde Repeater**	**17.04**	**52**	P	**P**	**21 17 21.1**	**-0.1**
TGL	**Tana Glacier**	**17.23**	**54**	IAmb	IAmb	21 17 30.4	
	comp=Z,411nm,0.9s						
MCARA	**McCarthy VSAT**	**17.28**	**52**	P	**P**	**21 17 23.1**	**-0.5**
MENT	**Mentasta**	**17.41**	**46**	P	**P**	**21 17 24.7**	**-0.4**
BALM	**Baldy**	**17.52**	**53**	P	**P**	**21 17 25.8**	**-0.6**
BALM				IAmb	IAmb	21 17 44.5	
	comp=Z,361nm,0.8s						
DOT	**Dot Lake**	**17.52**	**44**	P	**P**	**21 17 26.0**	**-0.2**
PET	**Petropavlovsk**	**17.54**	**280**	P	**Pn**	**21 17 28.4**	**-1.0**
PET	**Petropavlovsk**	**17.54**	**280**b	*i*P	**Pn**	**21 17 28.7**	**-0.7**
PET				*e*S	**S**	**21 20 34.2**	**-0.2**
PET				pmax	pmax		
	comp=Z,709nm,1.2s						
PET				pmax	pmax		
	comp=Z,3μm,13.0s						
PET				pmax	pmax		
	comp=Z,3μm,15.0s						
BILL	**Bilibino**	**17.82**	**333**	P	**P**	**21 17 30.9**	**+1.5**
BILL	**Bilibino**	**17.82**	**333**d	*i*P	**P**	**21 17 30.9**	**+1.5**
BILL				*i* S	**S**	**21 20 39.9**	**+0.3**
BILL				pmax	pmax		
	comp=Z,812nm,1.1s						
BARN	**Barnard Glacie**	**17.85**	**53**	IAmb	IAmb	21 17 40.3	
	comp=Z,383nm,0.8s						
PEA0B	**Petropavlovsk-**	**18.08**	**281**	P	**Pn**	**21 17 34.4**	**-1.3**
PEA0B	**Petropavlovsk-**	**18.08**	**281**d	*i*P	**P**	**21 17 33.8**	**+1.4**
PETK	**Petropavlovsk-**	**18.08**	**281**	P	**P**	**21 17 33.8**	**+1.3**
	comp=Z,9.9nm,0.3s,baz=86,slow=14,SNR=100						
PETK				pP	**pwP**	**21 18 21.7**	**+4.1**
	comp=Z,26nm,0.3s,baz=82,slow=15,SNR=6.0						
PETK				S	**S**	**21 20 36.8**	**-8.3**
	baz=79,slow=15,SNR=2.9						
PETK				ScP	**ScP**	**21 25 00.2**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=113,slow=6.8,SNR=9.5						
PETK				PKiKP	**PKiKP**	**21 29 42.3**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=129,slow=4.0,SNR=5.3						
PCA	**Pinnacle**	**18.38**	**57**	P	**P**	**21 17 34.7**	**-0.9**
TOLK	**Toolik Lake Re**	**18.39**	**26**	P	**P**	**21 17 36.4**	**+0.8**
	baz=226,SNR=1000						
SKR	**Severo-Kuril's**	**19.74**	**275**	*e*P	**P**	**21 17 47.5**	**-2.6**
SKR				*e*S	S	21 21 06.1	-11
SKR				pmax	pmax		
	comp=Z,2μm,6.0s						
SKR				pmax	pmax		
	comp=Z,277nm,1.0s						
SKR				MLR	MLR		
	comp=Z,2μm,18.0s						
HYT	**Haines Junctio**	**19.82**	**55**	IAmb	IAmb	21 18 00.5	
	comp=Z,251nm,0.7s						
SEY	**Seymchan**	**20.72**	**311**	P	**P**	**21 18 01.3**	**+1.1**
	comp=Z,214nm,0.8s,baz=105,slow=7.7,SNR=691						
SEY				S	**S**	**21 21 38.0**	**+4.0**
	comp=Z,107nm,1.2s,baz=228,slow=22,SNR=12						
SEY				ScP	**ScP**	**21 25 06.2**	**-1.1**
	comp=Z,84nm,0.8s,baz=121,slow=3.4,SNR=20						
SEY	**Seymchan**	**20.72**	**311**d	*i*P	**P**	**21 18 01.4**	**+1.2**
SKAG	**Skagway**	**20.83**	**59**	P	**P**	**21 17 59.9**	**-1.4**
SIT	**Sitka**	**20.95**	**66**	IAmb	IAmb	21 18 16.1	
	comp=Z,430nm,0.9s						
WHY	**Whitehorse**	**21.09**	**56**	IAmb	IAmb	21 18 55.6	
	comp=Z,240nm,0.9s						
BESE	**Bessie Mountai**	**21.09**	**61**	IAmb	IAmb	21 18 37.2	
	comp=Z,332nm,0.7s						
MA2	**Magadan**	**21.19**	**301**	P	**P**	**21 18 06.3**	**+1.4**
MA2				IAmb	IAmb	21 18 10.2	
	comp=Z,488nm,1.2s						
MA2	**Magadan**	**21.19**	**301**ce	P	**P**	**21 18 06.4**	**+1.4**
MA2				pmax	pmax		
	comp=Z,468nm,1.3s						
JIS	**Juneau Island**	**21.36**	**62**	IAmb	IAmb	21 18 37.6	
	comp=Z,236nm,0.8s						
EPYK	**Eagle Plains**	**21.41**	**40**	P	**P**	**21 18 07.4**	**+0.5**
EPYK	**Eagle Plains**	**21.41**	**40**	P	**P**	**21 18 05.8**	**-1.1**
	baz=250,SNR=1000						
EPYK				S	**S**	**21 21 47.0**	**+1.8**
	baz=250						
CRAG	**Craig**	**22.41**	**69**	P	**P**	**21 18 18.4**	**+2.4**
WRAK	**Wrangell Islan**	**22.67**	**67**	P	**P**	**21 18 20.0**	**+1.6**
INK	**Inuvik**	**23.24**	**36**	P	**P**	**21 18 23.2**	**-0.2**
	comp=Z,1μm,0.7s,baz=240,slow=8.9,SNR=1128						
INK				ScP	**ScP**	**21 25 11.8**	**-1.8**
	comp=Z,27nm,0.8s,baz=294,slow=2.4,SNR=7.2						
INK	**Inuvik**	**23.24**	**36**	P	**P**	**21 18 23.3**	**-0.2**
INK				PcP	**PcP**	**21 22 02.1**	**-0.1**
H02N1	**VAN INLET T-PH**	**23.28**	**75**	P	**P**	**21 18 25.7**	**+1.5**
	SNR=434						
DIB	**Dawson Inlet,**	**23.33**	**75**	P	**P**	**21 18 25.4**	**+0.9**
H02S1	**DAWSON INLET T**	**23.33**	**75**	P	**P**	**21 18 26.1**	**+1.6**
	SNR=698						
DLBC	**Dease Lake**	**23.63**	**61**	P	**P**	**21 18 28.3**	**+1.1**
	comp=Z,104nm,0.6s,baz=268,slow=6.5,SNR=141						
DLBC				ScP	**ScP**	**21 25 15.4**	**+0.3**
	comp=Z,30nm,1.1s,baz=256,slow=6.7,SNR=4.0						
DLBC	**Dease Lake**	**23.63**	**61**	IAmb	IAmb	21 19 06.1	
	comp=Z,212nm,0.7s						
BBB	**Bella Bella**	**26.17**	**75**	P	**P**	**21 18 50.8**	**+0.7**
	comp=Z,145nm,0.8s,baz=302,slow=9.4,SNR=33						
BBB				ScP	**ScP**	**21 25 21.2**	**-1.0**
	comp=Z,66nm,0.9s,baz=303,slow=4.6,SNR=12						
C36M	**Paulatuk**	**26.82**	**36**	P	**P**	**21 18 55.4**	**-0.2**
C36M				PcP	**PcP**	**21 22 07.7**	**-2.5**
C36M	**Paulatuk**	**26.82**	**36**	P	**P**	**21 18 55.2**	**-0.4**
	baz=259,SNR=298						
C36M				S	**S**	**21 23 09.9**	**-1.0**
	baz=259						
KUR	**Kuril'sk**	**27.15**	**269**d	*i*P	**P**	**21 18 59.3**	**+0.5**
KUR				*e**PP	**pP**	**21 19 52.2**	**+2.2**
KUR				*e*		21 22 10.8	
KUR				*e*S	**S**	**21 23 19.2**	**+2.6**
KUR				*i*		21 29 17.2	
KUR				pmax	pmax		
	comp=Z,5μm,4.9s						
KUR				pmax	pmax		
	comp=N,2μm,5.3s						
KUR				pmax	pmax		
	comp=E,3μm,4.5s						
TYV	**Tymovskoe**	**27.60**	**283**	*e*P	**P**	**21 19 04.5**	**+1.8**
TYV				*e*S	**S**	**21 23 27.9**	**+4.3**
TYV				pmax	pmax		
	comp=Z,800nm,4.1s						
TYV				pmax	pmax		
	comp=Z,63nm,1.1s						
TYV				smax	smax		
	comp=E,30nm,1.3s						
TYV				smax	smax		
	comp=N,2μm,8.2s						
NKL	**Nikolayevsk**	**27.88**	**289**	*e*P	**P**	**21 19 06.4**	**+1.2**
NKL				*e*		21 19 59.8	
NKL				*e*S	**S**	**21 23 25.3**	**-2.6**
NKL				pmax	pmax		
	comp=Z,55nm,0.9s						
NKL				pmax	pmax		
	comp=E,6.0nm,0.8s						
NKL				pmax	pmax		
	comp=N,9.0nm,0.9s						
NKL				pmax	pmax		
	comp=Z,72nm,4.4s						
NKL				smax	smax		
	comp=E,18nm,2.3s						
NKL				smax	smax		
	comp=N,6.0nm,1.1s						
NKL				MLR	MLR		
	comp=E,35nm,13.0s						
YUK	**Yuzh-Kuril'sk**	**29.00**	**268**c	*i*P	**P**	**21 19 13.8**	**-1.4**
YUK				*i* *PP	**pP**	**21 20 07.6**	**+0.8**
YUK				*e*		21 22 12.3	
YUK				*i* S	**S**	**21 23 44.7**	**-1.0**
YUK				*i*		21 29 22.5	
YUK				pmax	pmax		
	comp=Z,246nm,1.0s						
YUK				pmax	pmax		
	comp=N,108nm,0.8s						
YUK				pmax	pmax		
	comp=E,108nm,0.5s						
YUK				pmax	pmax		
	comp=Z,313nm,1.2s						
YSS	**Yuzh-Sakhalins**	**29.30**	**276**	P	**P**	**21 19 18.9**	**+1.1**
YSS				IAmb	IAmb	21 19 22.4	
	comp=Z,168nm,1.0s						
YSS	**Yuzh-Sakhalins**	**29.30**	**276**⇓	*e*P	**P**	**21 19 18.6**	**+0.8**
YSS				*e**PP	**pwP**	**21 20 12.2**	**-2.2**
YSS				*e*S	**S**	**21 23 49.6**	**-0.7**
YSS				*e*		21 29 22.5	
YSS				pmax	pmax		
	comp=Z,1μm,4.0s						
YSS				pmax	pmax		
	comp=Z,160nm,0.9s						
YSS				smax	smax		
	comp=N,2μm,8.0s						
YSS				smax	smax		
	comp=E,1μm,6.7s						
YSS				MLR	MLR		
	comp=Z,3μm,15.0s						
YSS				MLR	MLR		
	comp=N,2μm,13.0s						
YSS				MLR	MLR		
	comp=E,1μm,16.0s						
PGC	**Sidney**	**30.35**	**79**	IAmb	IAmb	21 19 32.3	
	comp=Z,542nm,1.5s						
YKA	**Yellowknife Ar**	**30.64**	**50**	P	**P**	**21 19 28.7**	**-0.6**
	comp=Z,301nm,0.9s,baz=276,slow=7.1,SNR=531						
YKA				ScP	**ScP**	**21 25 34.6**	**-1.5**
	comp=Z,18nm,0.8s,baz=289,slow=2.9,SNR=8.8						
YKA				P3KPbc		21 51 10.7	
	comp=Z,2.2nm,0.9s,baz=97,slow=5.5,SNR=17						
NLWA	**Neilton Lookou**	**30.71**	**82**	P	**P**	**21 19 30.9**	**+0.7**
NLWA				IAmb	IAmb	21 19 35.2	
	comp=Z,360nm,1.0s						
A04D	**Lummi Island**	**30.75**	**79**	P	**P**	**21 19 31.8**	**+1.3**
	baz=298,SNR=34						
A04D				S	**S**	**21 24 17.9**	**+5.0**
	baz=298						
ASAJ	**Asahikawa**	**30.90**	**271**	P	**P**	**21 19 32.5**	**+0.6**
	comp=Z,189nm,1.0s,baz=33,slow=5.6,SNR=23						
ASAJ				ScP	**ScP**	**21 25 35.9**	**-1.4**
	comp=Z,47nm,0.9s,baz=264,slow=4.0,SNR=12						
TIXI	**Tiksi**	**30.90**	**328**	P	**P**	**21 19 31.9**	**+0.4**
	comp=Z,29nm,0.4s,baz=102,slow=12,SNR=126						
TIXI				PcP	**PcP**	**21 22 20.5**	**-0.1**
	comp=Z,16nm,0.7s,baz=313,slow=2.9,SNR=3.3						
TIXI				ScP	**ScP**	**21 25 35.2**	**-1.6**
	comp=Z,94nm,0.9s,baz=94,slow=2.9,SNR=24						
TIXI	**Tiksi**	**30.90**	**328**	ScP	**ScP**	**21 25 34.7**	**-2.2**
TIXI	**Tiksi**	**30.90**	**328**	P	**P**	**21 19 32.5**	**+0.9**
TIXI	**Tiksi**	**30.90**	**328**ce	P	**P**	**21 19 32.9**	**+1.3**
TIXI				pmax	pmax		
	comp=Z,82nm,1.0s						
D03D	**Eldon**	**31.10**	**81**	P	**P**	**21 19 35.1**	**+1.6**
	baz=300,SNR=174						
D03D				S	**S**	**21 24 22.6**	**+4.3**
	baz=300						
YAK	**Yakutsk**	**31.22**	**309**	P	**P**	**21 19 34.1**	**-0.3**
	comp=Z,53nm,0.5s,baz=93,slow=0.9,SNR=53						
YAK				ScP	**ScP**	**21 25 35.8**	**-2.2**
	comp=Z,141nm,0.8s,baz=185,slow=0.4,SNR=34						
YAK				ScS	**ScS**	**21 29 36.0**	**+0.4**
	comp=Z,3.4nm,0.3s,baz=111,slow=11,SNR=7.8						
YAK	**Yakutsk**	**31.22**	**309**	P	**P**	**21 19 33.9**	**-0.4**
YAK				IAmb	IAmb	21 19 36.1	
	comp=Z,201nm,1.0s						
YAK				PcP	**PcP**	**21 22 21.9**	**+0.4**
YAK					**ScP**	**21 25 35.8**	**-2.2**
YAK	**Yakutsk**	**31.22**	**309**	*e*P	**P**	**21 19 34.3**	**-0.1**
YAK				*e*		21 20 58.5	
YAK				*e*S	**S**	**21 24 17.2**	**-2.6**
YAK				*e*SS	**SS**	**21 26 37.7**	**-1.1**
YAK				*e*		21 29 31.7	
YAK				pmax	pmax		
	comp=Z,195nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,146nm,1.3s						
YAK				pmax	pmax		
	comp=Z,51nm,0.8s						
YAK				pmax	pmax		
	comp=N,68nm,1.5s						
YAK				pmax	pmax		
	comp=E,101nm,1.4s						
YAK				smax	smax		
	comp=N,385nm,1.7s						
YAK				smax	smax		
	comp=E,313nm,1.8s						
GRNR	**Gornyy**	**31.23**	**286**⇓	*i*P	**P**	**21 19 35.1**	**+0.4**
GRNR				*e*		21 20 28.0	
GRNR				*e*S	**S**	**21 24 24.9**	**+4.5**
GRNR				pmax	pmax		
	comp=Z,80nm,1.2s						
GRNR				smax	smax		
	comp=E,30nm,1.1s						
B05A	**Bryant**	**31.32**	**79**	P	**P**	**21 19 36.4**	**+0.9**
	baz=299,SNR=227						
B05A				S	**S**	**21 24 25.7**	**+3.9**
	baz=299						
D04E	**Lakebay**	**31.46**	**81**	P	**P**	**21 19 38.6**	**+1.9**
	baz=300,SNR=44						
D04E				S	**S**	**21 24 30.8**	**+6.9**
	baz=300						
ERM	**Erimo**	**31.79**	**267**	P	**P**	**21 19 40.1**	**+0.5**
ERM	**Erimo**	**31.79**	**267**ce	P	**P**	**21 19 39.5**	**-0.1**
ERM				pmax	pmax		
	comp=Z,125nm,1.2s						
F04D	**Rainier, OR**	**31.88**	**83**	P	**P**	**21 19 41.6**	**+1.2**
	baz=302,SNR=20						
F04D				S	**S**	**21 24 35.1**	**+4.5**
	baz=302						
E04D	**Cinebar**	**31.90**	**82**	P	**P**	**21 19 41.6**	**+1.0**

baz=301,SNR=164
E04D S S 21 24 35.2 +4.4
baz=301
D05A Enumclaw 31.92 81 P P 21 19 42.2 +1.5
D05A PcP **PcP 21 22 25.4 +1.7**
D05A ScP **ScP 21 25 40.9 +0.2**
C06D Leavenworth 32.19 79 P P 21 19 44.0 +0.8
baz=300,SNR=32
C06D S **S 21 24 38.2 +2.8**
baz=300
G03D McMinnville, O 32.20 85 P P 21 19 44.7 +1.5
baz=303,SNR=21
G03D S **S 21 24 39.5 +4.1**
baz=303
I02D Swisshome 32.46 87 P P 21 19 46.8 +1.4
baz=304,SNR=14
I02D S **S 21 24 44.3 +4.8**
baz=304
COR Corvallis 32.52 86 P P 21 19 47.6 +1.8
COR Corvallis 32.52 86 P P 21 19 47.7 +1.8
COR pmax pmax
comp=Z,341nm,0.8s
KEKH Kekaha 32.88 159 P P 21 19 50.7 +1.4
KEKH IAmb IAmb 21 19 52.8
comp=Z,334nm,0.9s
H04D Lebanon 32.89 86 P P 21 19 50.8 +1.6
baz=304,SNR=69
H04D S **S 21 24 50.2 +4.1**
baz=304
B08A Colville Reser 32.89 77 P P 21 19 49.7 +0.5
F05D White Salmon 32.91 83 P P 21 19 50.7 +1.4
baz=302,SNR=16
F05D S **S 21 24 50.8 +4.4**
baz=302
J01E Myrtle Point 32.95 89 P P 21 19 51.0 +1.4
baz=306,SNR=10
J01E S **S 21 24 51.9 +4.9**
baz=306
I03D Drain, OR 32.99 87 P P 21 19 51.5 +1.5
baz=305,SNR=33
I03D S **S 21 24 53.3 +5.7**
baz=305
H04A Detroit Lake 33.13 85 P P 21 19 52.4 +1.2
H04A PcP **PcP 21 22 28.0 +0.7**
H04A ScP **ScP 21 25 45.6 +0.6**
KBO Bosley Butte 33.33 90 P P 21 19 55.2 +2.1
KBO IAmb IAmb 21 19 59.1
comp=Z,572nm,1.4s
G05D Wamic, OR 33.34 83 P P 21 19 54.0 +0.9
baz=303,SNR=75
G05D S **S 21 24 57.8 +4.8**
baz=303
K02D Willamette Mer 33.38 89 P P 21 19 54.4 +0.9
baz=306,SNR=18
K02D S **S 21 24 59.2 +5.3**
baz=306
I04A Tendick Farm, 33.49 86 P P 21 19 55.6 +1.1
baz=305,SNR=151
I04A S **S 21 24 59.5 +4.0**
baz=305
L02E Cave Junction 33.74 90 P P 21 19 58.7 +2.2
baz=307,SNR=30
L02E S **S 21 25 04.2 +5.0**
baz=307
G06A Carlson Farm, 33.74 83 IAmb IAmb 21 20 00.9
comp=Z,468nm,1.7s
D08A Wollman Farm, 33.79 79 IAmb IAmb 21 19 60.0
comp=Z,303nm,0.8s
KIP Kipapa 33.81 156 P P 21 19 59.0 +1.7
KIP Kipapa 33.81 156 P P 21 19 59.0 +1.7
KIP pmax pmax
comp=Z,489nm,0.8s
I05D Terrebonne, OR 33.82 85 P P 21 19 58.8 +1.5
baz=304,SNR=46
I05D S **S 21 25 04.8 +4.2**
baz=304
HON Honolulu 33.91 156 P P 21 19 59.5 +1.5
HON Honolulu 33.91 156 P P 21 19 59.6 +1.5
HON pmax pmax
comp=Z,1μm,0.8s
KRMB Red Mountain 33.94 91 IAmb IAmb 21 20 03.3
comp=Z,103nm,0.7s
TEY Ternei 33.96 277⇓*i*P P 21 19 58.3 0.0
TEY pmax pmax
comp=Z,120nm,0.7s
TEY pmax pmax
comp=N,40nm,0.7s
TEY pmax pmax
comp=E,80nm,0.7s
TEY pmax pmax
comp=N,140nm,0.6s
TEY pmax pmax
comp=E,200nm,0.6s
TEY pmax pmax
comp=Z,290nm,0.7s
TEY pmax pmax
comp=E,40nm,1.1s
TEY pmax pmax
comp=N,40nm,0.6s
TEY pmax pmax
comp=Z,120nm,0.9s
J04D Umpqua Nationa 33.99 87 P P 21 20 00.7 +1.8
baz=306,SNR=38
J04D S **S 21 25 07.4 +3.9**
baz=306
E08A Dider Farm, El 34.00 80 IAmb IAmb 21 20 02.6
comp=Z,393nm,1.0s
NEW Newport 34.22 76 P P 21 20 00.7 +0.1
NEW Newport 34.22 76 P P 21 20 00.7 +0.1
NEW pmax pmax
comp=Z,901nm,0.7s
NEW Newport 34.22 76 P P 21 20 01.2 +0.6
baz=300,SNR=1000
PINE Pine Mountain 34.37 85 P P 21 20 03.7 +1.6
PINE PcP **PcP 21 22 32.6 +1.6**
PINE ScP **ScP 21 25 49.8 +0.2**
KHMM Horse Mountain 34.44 92 IAmb IAmb 21 20 07.9
comp=Z,211nm,0.7s
L04D Klamath Falls 34.47 89 P P 21 20 04.4 +1.5
baz=307,SNR=58
L04D S **S 21 25 15.5 +4.7**
baz=307
J05D Fort Rock, OR 34.48 86 P P 21 20 04.5 +1.4
baz=306,SNR=249
J05D S **S 21 25 16.0 +5.1**
baz=306
YBH Yreka Blue Hor 34.52 90 ScP ScP 21 25 49.4 -0.7
comp=Z,26nm,1.0s,baz=322,slow=5.6,SNR=11
YBH Yreka Blue Hor 34.52 90 IAmb IAmb 21 20 08.5
comp=Z,179nm,0.8s
K04D Chiloquin, OR 34.56 88 P P 21 20 05.0 +1.3
baz=306,SNR=15
K04D S **S 21 25 17.8 +5.8**
baz=306
KLR Kul'dur 34.62 286 P P 21 20 04.3 +0.3
comp=Z,19nm,0.6s,baz=58,slow=8.1,SNR=26
KLR ScP **ScP 21 25 47.6 -2.6**
comp=Z,18nm,1.0s,baz=4.3,slow=3.3,SNR=6.7
KLR Kul'dur 34.62 286 *i*P P 21 20 04.4 +0.5
KLR pmax pmax
comp=Z,60nm,1.0s
M02C Callahan 34.64 90 P P 21 20 06.2 +1.9
baz=308,SNR=38
M02C S **S 21 25 19.2 +5.9**
baz=308
G08A Pilot Rock 34.70 82 IAmb IAmb 21 20 08.6
comp=Z,383nm,1.5s
KMRM Mail Ridge 34.86 93 IAmb IAmb 21 20 11.7
comp=Z,214nm,0.8s
HLK Haleakala 34.89 154 IAmb IAmb 21 20 12.3
comp=Z,353nm,0.9s
N02D Trinity Center 34.99 91 P P 21 20 09.3 +2.0
baz=308,SNR=30
N02D S **S 21 25 23.2 +4.7**
baz=308
M04C Macdoel 35.01 89 P P 21 20 08.8 +1.3
baz=307,SNR=99
M04C S **S 21 25 23.4 +4.4**
baz=307
I07A Izee 35.06 84 IAmb IAmb 21 20 12.1
comp=Z,307nm,0.8s
ZEA Zeya 35.08 295 *e*P P 21 20 07.0 -0.7
ZEA *e*PPP PPP 21 21 45.0
ZEA *e*S **S 21 25 18.0 -1.4**
ZEA *e*SS **sS 21 26 50.0 -4.8**
ZEA pmax pmax
comp=E,64nm,1.8s
ZEA pmax pmax
comp=Z,64nm,1.4s
ZEA pmax pmax
comp=Z,500nm,6.0s
ZEA pmax pmax
comp=Z,1μm,7.0s
ZEA pmax pmax
comp=E,600nm,6.0s
ZEA smax smax
comp=N,3μm,6.0s
ZEA smax smax
comp=E,2μm,6.0s
ZEA smax smax
comp=Z,900nm,6.0s
KCPM Cahto Peak 35.27 93 IAmb IAmb 21 20 14.7
comp=Z,441nm,1.5s
WDC Whiskeytown Da 35.33 91 IAmb IAmb 21 20 15.8
comp=Z,566nm,1.9s
F10A Beach Ranch, E 35.35 80 IAmb IAmb 21 20 13.9
comp=Z,188nm,0.9s
O02D Mt. Diablo Mer 35.44 92 P P 21 20 12.6 +1.5
baz=309,SNR=47
O02D S **S 21 25 30.4 +5.0**
baz=309
BMO Blue Mountains 35.92 81 IAmb IAmb 21 20 19.0
comp=Z,529nm,1.4s
O03E Paynes Creek 35.95 91 P P 21 20 16.4 +0.9
baz=309,SNR=59
O03E S **S 21 25 36.6 +3.5**
baz=309
RES Resolute Bay 35.97 26 ScP ScP 21 25 51.8 -2.8
comp=Z,28nm,0.9s,baz=318,slow=4.1,SNR=4.9
HOPS Hopland Field 36.02 94 IAmb IAmb 21 20 20.6
comp=Z,198nm,0.9s
HUH Hualalai 36.02 154 IAmb IAmb 21 20 27.5
comp=Z,207nm,0.9s
POHA Pohakuloa 36.03 153 P P 21 20 17.5 +1.0
POHA IAmb IAmb 21 20 22.0
comp=Z,458nm,1.1s
J08A Circle Bar Ran 36.08 84 IAmb IAmb 21 20 20.7
comp=Z,222nm,0.7s
KHLU Kahalu`u 36.10 154 P P 21 20 18.2 +1.3
KHLU IAmb IAmb 21 20 21.7
comp=Z,477nm,1.0s
HMH Humu'ula Sheep 36.20 153 IAmb IAmb 21 20 23.1
comp=Z,470nm,1.3s
MLOA Mauna Loa Obse 36.23 153 IAmb IAmb 21 20 24.1
comp=Z,248nm,0.8s
MWH Moku'aweowe 36.28 153 IAmb IAmb 21 20 46.4
comp=Z,343nm,1.1s
GDXM Geysers 36.30 94 P P 21 20 20.5 +2.0
GDXM IAmb IAmb 21 20 24.3
comp=Z,749nm,1.8s
UWB Uwekahuna B 36.42 153 IAmb IAmb 21 20 24.4
comp=Z,442nm,1.1s
SBLHI Steaming Bluff 36.42 153 IAmb IAmb 21 20 24.4
comp=Z,432nm,1.1s
AIN Ainahou 36.42 153 IAmb IAmb 21 20 29.0
comp=Z,449nm,1.1s
OBL Observatory Le 36.43 153 IAmb IAmb 21 20 24.5
comp=Z,489nm,1.0s
HATHI Halema'uma'u T 36.43 153 IAmb IAmb 21 20 24.5
comp=Z,535nm,1.1s
NPH North Pit 36.43 153 IAmb IAmb 21 20 24.6
comp=Z,199nm,1.0s
WRMHI West Rim 36.43 153 IAmb IAmb 21 20 24.6
comp=Z,480nm,1.1s
BYL Byron's Ledge 36.44 153 IAmb IAmb 21 20 24.6
comp=Z,422nm,1.0s
KKO Keanakako`i 36.45 153 IAmb IAmb 21 20 24.8
comp=Z,397nm,0.9s
RIM Rim 36.45 153 IAmb IAmb 21 20 32.7
comp=Z,431nm,1.1s
SDHHI Sand Hill 36.45 153 IAmb IAmb 21 20 24.8
comp=Z,478nm,1.0s
KHU Kahuku 36.50 154 P P 21 20 22.1 +1.7
KHU IAmb IAmb 21 20 24.8
comp=Z,295nm,0.9s
KHU ScP **ScP 21 25 57.9 +0.1**
WVOR Wild Horse Val 36.53 86 IAmb IAmb 21 20 24.6
comp=Z,268nm,0.8s
JOHN Johnston Islan 36.80 176 P P 21 20 23.9 +1.3
MSO Missoula 36.81 76 P P 21 20 22.8 +0.1
baz=303,SNR=432
BEKR Beckworth 37.08 90 IAmb IAmb 21 20 30.6
comp=Z,126nm,0.7s
USA0B Ussuriysk Arra 37.15 279*d* *i*P P 21 20 24.7 -0.7
USRK Ussuriysk Ar. 37.15 279 P P 21 20 25.0 -0.4
comp=Z,33nm,0.8s,baz=54,slow=9.5,SNR=33
USRK PcP **PcP 21 22 38.2 -0.8**
comp=Z,17nm,0.8s,baz=50,slow=6.4,SNR=4.1
USRK ScP **ScP 21 25 57.2 -2.3**
comp=Z,7.6nm,0.6s,baz=44,slow=4.3,SNR=10
AFDM Forest Hills D 37.30 92 IAmb IAmb 21 20 31.7
comp=Z,310nm,1.6s
H11N2 WAKE ISLAND Hy 37.51 214 P P 21 20 29.6 +1.3
baz=337,slow=4.3,SNR=10
H11N2 T T 21 57 43.0
baz=18,slow=76,SNR=271
H11N3 WAKE ISLAND Hy 37.51 214 P P 21 20 29.7 +1.3
baz=337,slow=4.3,SNR=12
H11N3 T T 21 57 36.2
baz=18,slow=76,SNR=752
H11N1 WAKE ISLAND Hy 37.52 214 P P 21 20 29.8 +1.3
baz=337,slow=4.3,SNR=21
H11N1 T T 21 57 38.3
baz=18,slow=76,SNR=767
MFID Camas Ranch 37.62 82 IAmb IAmb 21 20 33.0
comp=Z,148nm,0.8s
RUBR Rubicon Trail 37.72 91 IAmb IAmb 21 20 36.8
comp=Z,158nm,0.8s
PAHR Pah Rah Range 37.76 90 IAmb IAmb 21 20 34.9
comp=Z,303nm,0.7s
VLA Vladivostok 37.84 277 *i*P P 21 20 32.3 +1.2
VLA pmax pmax
comp=Z,199nm,1.0s
WAKE Wake Island 38.00 214 P P 21 20 33.6 +0.9
WAKE IAmb IAmb 21 20 35.6
comp=Z,671nm,1.4s
MJA0 Matsu Arr-Jizo 38.21 264 *e*P P 21 20 34.7 +0.3
MJA0 pmax pmax
comp=Z,21nm,0.5s
MAJO Matsushiro 38.24 264 P P 21 20 34.1 -0.5
MAJO Matsushiro 38.24 264 *i*P P 21 20 34.7 +0.2
MAJO pmax pmax
comp=Z,103nm,0.9s
MAT Matsushiro 38.24 264 P P 21 20 34.6 +0.1
MAT S **S 21 26 06.8 -0.7**
MJAR Matsushiro Arr 38.24 264 P P 21 20 34.8 +0.2
comp=Z,21nm,0.5s,baz=37,slow=7.4,SNR=77
MJAR PcP **PcP 21 22 43.4 +0.8**
comp=Z,18nm,1.1s,baz=21,slow=2.7,SNR=4.1
MJAR ScP **ScP 21 26 02.3 -1.5**
comp=Z,25nm,0.9s,baz=53,slow=2.6,SNR=12
MJB9 Matsu-Tunnel 38.24 264 P P 21 20 34.3 -0.2
CMB Columbia Colle 38.24 93 P P 21 20 35.2 +0.7
CMB IAmb IAmb 21 20 39.0
comp=Z,317nm,1.5s
CMB PcP **PcP 21 22 42.3 -0.4**
CMB Columbia Colle 38.24 93 P P 21 20 35.3 +0.7
CMB 21 22 42.3
CMB pmax pmax
comp=Z,317nm,1.5s
YERR Yerington 38.31 91 P P 21 20 36.2 +0.9
YERR IAmb IAmb 21 20 41.2
comp=Z,214nm,0.7s
MDJ Mudanjiang 38.32 281 P P 21 20 34.3 -0.8
MDJ pP pP 21 21 27.8 -0.8
MDJ PP **PP 21 22 05.0 -3.9**
MDJ S **S 21 26 05.5 -3.1**
MDJ sS sS 21 27 41.0 -4.1
MDJ SS **SS 21 29 02.0 -7.3**
MDJ ScS **ScS 21 30 17.5 +2.8**
MDJ pmax pmax
comp=Z,62nm,1.1s
MDJ pmax pmax
comp=Z,780nm,5.5s
WAKR Walker 38.50 91 IAmb IAmb 21 20 41.6
comp=Z,280nm,0.7s
EGMT Eagleton 38.57 72 IAmb IAmb 21 20 39.9
comp=Z,344nm,1.1s
EGMT Eagleton 38.57 72 P P 21 20 36.6 -0.7
baz=302,SNR=128
MSHR Mys Shultsa 38.59 277*d* *i*P P 21 20 37.9 +0.5
H11S1 WAKE ISLAND Hy 38.71 214 P P 21 20 40.0 +1.6
baz=311,slow=1.8,SNR=16
H11S1 T T 21 59 09.3
baz=314,slow=74,SNR=521
H11S2 WAKE ISLAND Hy 38.72 214 P P 21 20 39.8 +1.3
baz=311,slow=1.8,SNR=13
H11S2 T T 21 59 09.3
baz=15,slow=74,SNR=575
H11S3 WAKE ISLAND Hy 38.73 214 P P 21 20 40.0 +1.5
baz=311,slow=1.8,SNR=11
H11S3 T T 21 59 11.0
SNR=326
KVN Kaiserville 38.95 90 IAmb IAmb 21 20 44.8
comp=Z,468nm,1.6s
RYN Ryan 38.97 90 IAmb IAmb 21 20 44.9
comp=Z,167nm,0.6s
PMPB Monarch Peak 39.21 95 IAmb IAmb 21 20 48.9
comp=Z,178nm,0.7s
NVAR Mina Array Bea 39.23 90 P P 21 20 43.4 +0.5
comp=Z,147nm,0.6s,baz=301,slow=7.7,SNR=390
NVAR PcP **PcP 21 22 47.0 +1.1**
comp=Z,16nm,0.6s,baz=283,slow=3.0,SNR=7.4
NVAR ScP **ScP 21 26 07.3 -0.7**
comp=Z,64nm,0.8s,baz=284,slow=4.1,SNR=31
NVAR ScS **ScS 21 30 24.2 +3.5**
comp=Z,1.6nm,0.9s,baz=100,slow=1.7,SNR=4.1
MDPB Devils Postpil 39.28 92 IAmb IAmb 21 20 46.6
comp=Z,225nm,0.7s
NV11 Mina Array Sit 39.31 90 IAmb IAmb 21 20 48.6
comp=Z,361nm,1.6s
FFC Flin Flon 39.43 59 P P 21 20 43.2 -0.9
FFC IAmb IAmb 21 20 46.5
comp=Z,157nm,0.7s
FFC Flin Flon 39.43 59 P P 21 20 43.2 -0.9
FFC pmax pmax
comp=Z,157nm,0.7s
MLAC Mammoth, Mammo 39.43 92 P P 21 20 46.6 +1.9
baz=312,SNR=16
MLAC S **S 21 26 30.6 +4.8**
baz=312
PAGB Antelope Grade 39.86 95 IAmb IAmb 21 20 51.0
comp=Z,184nm,0.7s
VOG Valley Oaks Go 39.98 94 P P 21 20 49.9 +1.0
baz=313,SNR=9.4
VOG S **S 21 26 37.6 +4.3**
baz=313
BOD Bodaibo 40.04 307 *e*P P 21 20 48.9 -0.1
BOD pmax pmax
comp=Z,212nm,1.4s
H17A Grant Village 40.13 77 P P 21 20 51.6 +1.3
baz=306,SNR=658
H17A S **S 21 26 39.6 +3.7**
baz=306
LKWY Lake 40.13 77 IAmb IAmb 21 20 54.8
comp=Z,490nm,1.1s
TIN Tinemaha, Big 40.17 92 P P 21 20 52.3 +1.7
baz=312,SNR=18
TIN S **S 21 26 42.2 +5.7**
baz=312
IMW Indian Meadow 40.21 78 IAmb IAmb 21 20 54.7
comp=Z,244nm,0.8s
FLWY Flagg Ranch 40.24 78 P P 21 20 51.9 +0.7
FLWY IAmb IAmb 21 20 55.0
comp=Z,433nm,0.8s
SMMC Simmler 40.30 95 P P 21 20 53.4 +1.8
baz=314,SNR=22
SMMC S **S 21 26 43.3 +5.1**
baz=314
FXWY Fox Creek 40.31 79 P P 21 20 51.9 +0.1
FXWY IAmb IAmb 21 20 55.3
comp=Z,414nm,1.8s
FXWY PcP **PcP 21 22 51.6 +2.2**
HVU Hansel Valley 40.40 82 P P 21 20 53.0 +0.6
HVU Hansel Valley 40.40 82 P P 21 20 53.0 +0.6
HVU pmax pmax
comp=Z,315nm,0.7s
RLMT Red Lodge 40.47 76 P P 21 20 52.9 -0.1
RLMT IAmb IAmb 21 20 57.2
comp=Z,401nm,0.9s
RLMT Red Lodge 40.47 76 P P 21 20 53.7 +0.7
baz=306,SNR=268
VES Vestal, Richgr 40.48 94 P P 21 20 54.1 +1.2
baz=313
SNOW Snow King Moun 40.57 79 P P 21 20 54.4 +0.4
SNOW PcP **PcP 21 22 51.9 +1.6**
CWC Cottonwood Cre 40.67 93 P P 21 20 56.1 +1.4
baz=313
CWC S **S 21 26 47.7 +3.7**
baz=313
PKM Mcpherson Peak 40.70 96 P P 21 20 56.8 +1.8
baz=314,SNR=33
PKM S **S 21 26 48.8 +4.4**
baz=314
GRAC Grapevine Rang 40.73 91 P P 21 20 56.5 +1.4
baz=312,SNR=9.5
GRAC S **S 21 26 49.4 +4.9**
baz=312
BGU Big Grassy Mou 40.78 83 P P 21 20 55.8 +0.3
BGU PcP **PcP 21 22 51.6 +0.7**
AHID Auburn Hatcher 40.79 80 IAmb IAmb 21 20 59.8
comp=Z,231nm,0.8s
R11A Troy Canyon, C 40.90 88 IAmb IAmb 21 21 00.3
comp=Z,179nm,0.7s
R11A Troy Canyon, C 40.90 88 P P 21 20 57.3 +0.7
baz=311,SNR=428
R11A S **S 21 26 49.1 +1.8**
baz=311
ISA Isabella, Lake 40.97 94 P P 21 20 57.5 +0.5
baz=313,SNR=129
ISA S **S 21 26 50.1 +2.0**
baz=313
SBC Santa Barbara 41.07 96 P P 21 20 59.1 +1.3
baz=314
SBC S **S 21 26 54.3 +4.9**
baz=314
ARVC Arvin 41.12 95 P P 21 20 58.8 +0.6
baz=314,SNR=6.6
ARVC S **S 21 26 52.8 +2.5**
baz=314
CN2 Changchun 41.22 283 *e*P P 21 20 58.3 -0.6
CN2 *e*S **S 21 26 47.5 -4.0**
CN2 pmax pmax
comp=Z,50nm,0.7s
CN2 pmax pmax
comp=Z,590nm,11.2s
CN2 LR LR
comp=Z,8μm,18.0s
CN2 LR LR
comp=Z,6μm,18.0s
CN2 LR LR
comp=Z,4μm,20.0s
HWUT Hardware Ranch 41.22 82 IAmb IAmb 21 21 02.7
comp=Z,808nm,1.7s
MPMC Manual Prospec 41.28 92 P P 21 21 00.4 +0.6
baz=313,SNR=145
MPMC S **S 21 26 55.7 +2.6**
baz=313
LAO LASA Array 41.31 72 IAmb IAmb 21 21 02.9
comp=Z,609nm,1.2s
LAO LASA Array 41.31 72 P P 21 21 00.2 +0.5
baz=305,SNR=42
DUG Dugway, Tooele 41.37 84 P P 21 21 00.7 +0.4
DUG IAmb IAmb 21 21 04.9
comp=Z,504nm,1.1s
DUG Dugway, Tooele 41.37 84 P P 21 21 00.7 +0.4
DUG pmax pmax
comp=Z,504nm,1.1s
DUG Dugway, Tooele 41.37 84 P P 21 21 01.0 +0.7
baz=310,SNR=214
FURC Furnace Creek, 41.38 92 P P 21 21 01.8 +1.5
baz=313,SNR=117
FURC S **S 21 26 58.1 +4.1**
baz=313
TPNV Topopah Spring 41.42 90 P P 21 21 01.4 +0.6
TPNV IAmb IAmb 21 21 05.0
comp=Z,418nm,0.7s
TPNV Topopah Spring 41.42 90 P P 21 21 01.4 +0.6
TPNV pmax pmax
comp=Z,418nm,0.7s
TPNV Topopah Spring 41.42 90 P P 21 21 01.9 +1.1
baz=312,SNR=324
SCZ2 Santa Cruz Isl 41.43 97 P P 21 21 01.6 +0.9
baz=315,SNR=9.1
SCZ2 S **S 21 26 59.5 +4.7**
baz=315
DGMT Dagmar 41.45 68 P P 21 21 00.3 -0.4
DGMT IAmb IAmb 21 21 02.8
comp=Z,273nm,0.7s
DGMT Dagmar 41.45 68 P P 21 21 00.4 -0.3
baz=304,SNR=27

TULEG Thule 41.53 20 IAmb IAmb 21 21 04.0
comp=Z,254nm,0.8s
OSI Osito Audit: C 41.54 95 IAmb IAmb 21 21 04.3
comp=Z,191nm,0.7s
OSI Osito Audit: C 41.54 95 P P 21 21 02.5 +0.9
baz=314,SNR=18
OSI S S 21 27 00.9 +4.4
baz=314
LRMC Laurel Mtn Rad 41.56 93 P P 21 21 02.0 +0.1
baz=313,SNR=12
LRMC S S 21 26 59.9 +2.9
baz=313
BLG Laguna Peak, P 41.69 96 P P 21 21 03.7 +0.9
baz=315,SNR=21
BLG S S 21 27 02.4 +3.8
baz=315
BW06 Boulder Array 41.69 79 P P 21 21 03.0 0.0
baz=308,SNR=669
PD31 Pinedale Array 41.69 79 IAmb IAmb 21 21 06.0
comp=Z,401nm,0.7s
PDAR Pinedale Array 41.69 79 P P 21 21 02.7 -0.3
comp=Z,359nm,0.6s,baz=345,slow=1.8,SNR=683
PDAR ScP ScP 21 26 16.6 -1.0
comp=Z,16nm,1.0s,baz=318,slow=2.0,SNR=4.9
PDAR P3KPbc 21 50 26.4
comp=Z,0.2nm,0.5s,baz=118,slow=8.6,SNR=4.2
EDW2 Edwards Air Fo 41.79 94 P P 21 21 04.4 +0.7
baz=314,SNR=64
EDW2 S S 21 27 03.1 +3.0
baz=314
SNCC San Nicolas Is 42.02 97 IAmb IAmb 21 21 10.3
comp=Z,386nm,1.4s
SNCC San Nicolas Is 42.02 97 P P 21 21 06.9 +1.4
baz=315,SNR=8.2
SNCC S S 21 27 08.1 +4.7
baz=315
DECC Green Verdugo 42.02 95 P P 21 21 06.6 +1.1
baz=314,SNR=14
DECC S S 21 27 05.8 +2.4
baz=314
SHOC Shoshone, Teco 42.12 92 P P 21 21 07.4 +1.2
baz=313,SNR=42
SHOC S S 21 27 08.1 +3.3
baz=313
MWC Mount Wilson 42.20 95 IAmb IAmb 21 21 11.1
comp=Z,775nm,1.6s
GSC Goldstone, Bar 42.20 93 IAmb IAmb 21 21 09.6
comp=Z,256nm,0.7s
GSC Goldstone, Bar 42.20 93 P P 21 21 08.0 +1.0
baz=314,SNR=170
GSC S S 21 27 08.4 +2.0
baz=314
RRX Edison Barstow 42.38 93 P P 21 21 09.5 +1.1
baz=314,SNR=5.5
RRX S S 21 27 12.0 +3.3
baz=314
FMP Fort Macarthur 42.42 96 P P 21 21 09.5 +0.9
baz=315
FMP S S 21 27 12.4 +3.2
baz=315
BFSC Mount Baldy Ra 42.43 95 P P 21 21 09.8 +0.9
baz=314,SNR=91
BFSC S S 21 27 13.3 +3.6
baz=314
CIS Catalina Islan 42.57 96 P P 21 21 10.7 +0.8
baz=315,SNR=15
CIS S S 21 27 13.6 +2.1
baz=315
TUQ Turquoise Moun 42.64 92 P P 21 21 11.4 +0.8
baz=313,SNR=51
TUQ S S 21 27 15.4 +2.7
baz=313
SCI2 San Clemente I 42.79 97 P P 21 21 12.7 +1.1
baz=316,SNR=10
SCI2 S S 21 27 19.0 +4.4
baz=316
HEC Hector,Ludlow 42.81 93 P P 21 21 12.7 +0.8
baz=314,SNR=61
HEC S S 21 27 18.2 +3.1
baz=314
BBRC Big Bear Solar 42.85 94 P P 21 21 13.7 +1.3
baz=314,SNR=21
BBRC S S 21 27 18.3 +2.3
baz=314
MURC Murrieta 43.15 95 P P 21 21 15.4 +0.8
baz=315,SNR=17
MURC S S 21 27 23.5 +3.5
baz=315
CIT Chita 43.16 299 eP P 21 21 14.9 +0.5
CIT e 21 22 15.2
CIT e 21 22 55.5
CIT pmax pmax
comp=Z,128nm,1.3s
GMRC Granite Mounta 43.24 92 P P 21 21 16.0 +0.6
baz=314,SNR=109
GMRC S S 21 27 24.4 +2.9
baz=314
SNY Shenyang 43.51 282 ⇓P P 21 21 18.3 +1.1
SNY pP pP 21 22 11.0 -1.1
SNY S S 21 27 26.0 +1.1
SNY sS sS 21 29 00.5 -2.7
SNY pmax pmax
comp=Z,140nm,1.1s
SNY LR LR
comp=Z,7µm,17.7s
SNY LR LR
comp=Z,5µm,16.1s
SNY LR LR
comp=Z,4µm,16.9s
K22A Casper 43.53 77 IAmb IAmb 21 21 20.1
comp=Z,251nm,0.9s
K22A Casper 43.53 77 P P 21 21 17.2 -0.4
baz=308,SNR=109
K22A S S 21 27 24.5 -1.0
baz=308
PFO Pinyon Flats O 43.58 94 ScP ScP 21 26 24.5 -0.7
comp=Z,78nm,1.1s,baz=314,slow=3.4,SNR=30
PFO Pinyon Flats O 43.58 94 P P 21 21 18.8 +0.7
PFO ScP 21 26 25.6 +0.4
PFO Pinyon Flats O 43.58 94 P P 21 21 18.7 +0.6
baz=315,SNR=51
PFO S S 21 27 28.9 +2.5
baz=315
BELC Belle Mtn. Jos 43.58 93 P P 21 21 18.3 +0.1
baz=314,SNR=155
BELC S S 21 27 28.7 +2.3
baz=314
XPFO Pion Flat 43.58 94 P P 21 21 18.3 +0.1
TPFO Pinon Flats 43.59 94 S S 21 27 28.2 +1.7
baz=315
109C Camp Elliot, M 43.70 96 P P 21 21 19.9 +1.0
baz=315,SNR=8.4
109C S S 21 27 30.6 +2.7
baz=315
RWWY Rawlins 43.73 78 IAmb IAmb 21 21 22.6
comp=Z,398nm,0.8s
KSRS Korea Array 43.76 274 P P 21 21 20.2 +1.0
comp=Z,51nm,0.8s,baz=54,slow=7.5,SNR=77
KSRS ScP ScP 21 26 24.6 -1.0
comp=Z,11nm,0.8s,baz=57,slow=4.3,SNR=8.5
KSRS Korea Array 43.76 274 eP P 21 21 20.2 +1.0
KSRS pmax pmax
comp=Z,52nm,0.8s
NEE2 Needles Airpor 43.88 92 P P 21 21 20.9 +0.7
baz=314,SNR=7.3
NEE2 S S 21 27 32.9 +2.6
baz=314
IRM Iron Mountain 43.98 93 P P 21 21 22.0 +0.9
baz=314,SNR=164
IRM S S 21 27 35.0 +3.0
baz=314
RSSD Black Hills 44.07 74 P P 21 21 21.0 -0.9
RSSD IAmb IAmb 21 21 24.9
comp=Z,236nm,0.7s
RSSD Black Hills 44.07 74 P P 21 21 21.0 -0.9
RSSD pmax pmax
comp=Z,236nm,0.7s
O20A White River Ci 44.11 81 P P 21 21 22.3 +0.1
baz=310,SNR=465
O20A S S 21 27 33.6 -0.4
baz=310
MONP2 Monument Peak 44.11 95 P P 21 21 23.2 +0.8
baz=315,SNR=47
MONP2 S S 21 27 38.1 +3.9
baz=315
U15A North Rim 44.13 88 IAmb IAmb 21 21 26.7
comp=Z,255nm,0.7s
MDND Maddock 44.34 67 P P 21 21 23.1 -0.6
baz=306,SNR=46
MDND S S 21 27 35.7 -1.0
baz=306
NOR Nord 44.42 5 iP P 21 21 24.6 +0.7
comp=Z,123nm,0.9s
NOR Nord 44.42 5 iP P 21 21 24.6 +0.7
NOR pmax pmax
comp=Z,120nm,0.9s
SWSC Sam W. Stewart 44.44 94 P P 21 21 25.3 +0.6
baz=315,SNR=12
SWSC S S 21 27 42.1 +3.6
baz=315
IKP In-Ko-Pah, Jac 44.47 95 P P 21 21 25.7 +0.7
baz=316,SNR=40
IKP S S 21 27 42.5 +3.4
baz=316
PDMCI Parker Dam,Lak 44.48 92 P P 21 21 25.3 +0.3
baz=314,SNR=71
PDMCI S S 21 27 41.7 +2.7
baz=314
INCN Inchon 44.50 275 P P 21 21 26.3 +1.1
INCN Inchon 44.50 275 P P 21 21 26.3 +1.1
INCN pmax pmax
comp=Z,178nm,1.0s
NRIK Noril'sk 44.62 330 P P 21 21 26.6 +0.9
comp=Z,108nm,0.9s,baz=71,slow=7.4,SNR=87
NRIK PcP PcP 21 23 03.9 +0.8
comp=Z,15nm,0.7s,baz=85,slow=1.2,SNR=3.6
NRIK ScP ScP 21 26 27.9 -0.8
comp=Z,17nm,0.8s,baz=35,slow=5.2,SNR=4.6
Y12C Blythe 44.64 92 P P 21 21 27.1 +0.8
baz=315,SNR=46
Y12C S S 21 27 43.5 +2.2
baz=315
TJN Taejon 44.81 273 ceP P 21 21 28.5 +1.0
GLA Glamis 44.95 93 IAmb IAmb 21 21 30.9
comp=Z,182nm,0.7s
GLA Glamis 44.95 93 P P 21 21 29.2 +0.5
baz=315,SNR=80
GLA S S 21 27 49.2 +3.3
baz=315
ULM Lac du Bonnet 44.95 62 P P 21 21 27.3 -1.2
comp=Z,82nm,0.5s,baz=310,slow=7.5,SNR=136
N23A Red Feather La 44.97 78 IAmb IAmb 21 21 32.2
comp=Z,386nm,1.2s
N23A Red Feather La 44.97 78 P P 21 21 29.3 +0.2
baz=310,SNR=96
N23A S S 21 27 47.0 +0.5
baz=310
KULLO Kullorsuaq 45.03 20 ⇑iP P 21 21 29.4 +0.6
comp=Z,261nm,0.9s
KULLO Kullorsuaq 45.03 20 ⇑iP P 21 21 29.4 +0.6
KULLO pmax pmax
comp=Z,260nm,0.9s
WUAZ Wupatki 45.30 88 IAmb IAmb 21 21 35.6
comp=Z,195nm,0.7s
WUAZ Wupatki 45.30 88 P P 21 21 32.8 +1.2
baz=313,SNR=123
ISCO Idaho Springs 45.87 79 IAmb IAmb 21 21 40.2
comp=Z,490nm,1.6s
ISCO Idaho Springs 45.87 79 P P 21 21 36.3 +0.2
baz=311,SNR=92
MVCO Mesa Verde 45.87 84 P P 21 21 36.3 +0.2
baz=312,SNR=122
AGMN Agassiz Nation 46.10 64 P P 21 21 35.6 -1.9
baz=307,SNR=20
D32A Dogwood Acres, 46.17 66 IAmb IAmb 21 21 39.0
comp=Z,253nm,0.7s
S22A 4UR Ranch, Cre 46.50 82 P P 21 21 41.9 +0.8
baz=312,SNR=215
S22A S S 21 28 10.2 +1.8
baz=312
DL2 Dalian 46.53 280 P P 21 21 41.0 +0.1
DL2 pP pP 21 22 37.3 +0.8
DL2 S S 21 28 07.8 -0.2
DL2 pmax pmax
comp=Z,31nm,0.7s
DL2 pmax pmax
comp=Z,540nm,7.3s
W18A Petrified Fore 46.55 87 IAmb IAmb 21 21 45.2
comp=Z,234nm,0.8s
W18A Petrified Fore 46.55 87 P P 21 21 42.5 +1.2
baz=314,SNR=83
W18A S S 21 28 11.5 +2.6
baz=314
Q24A Divide 46.68 80 S S 21 28 12.5 +1.5
baz=311
SUSD Miller 46.75 70 P P 21 21 41.6 -1.0
baz=309,SNR=21
X18A Snowflake 46.82 88 IAmb IAmb 21 21 47.6
comp=Z,814nm,1.6s
214A Organ Pipe Nat 46.92 93 P P 21 21 44.8 +0.7
baz=316,SNR=118
214A S S 21 28 16.2 +2.3
baz=316
OGNE Ogallala 47.21 76 IAmb IAmb 21 21 49.2
comp=Z,388nm,0.8s
OGNE Ogallala 47.21 76 P P 21 21 46.3 0.0
baz=310,SNR=76
SDCO Great Sand Dun 47.28 81 IAmb IAmb 21 21 50.6
comp=Z,385nm,1.3s
SDCO Great Sand Dun 47.28 81 P P 21 21 47.1 0.0
baz=312,SNR=400
KWAJ Kwajalein Atol 47.60 208 P P 21 21 50.8 +1.5
KWAJ IAmb IAmb 21 21 53.0
comp=Z,646nm,1.2s
KWAJ Kwajalein Atol 47.60 208 P P 21 21 50.8 +1.5
KWAJ pmax pmax
comp=Z,646nm,1.3s
IRK Irkutsk 47.73 304 eP P 21 21 50.6 +0.6
IRK eS S 21 28 25.6 +0.8
IRK e 21 31 11.9
IRK pmax pmax
comp=Z,203nm,1.6s
KBS Kingsbay 47.74 359 eP P 21 21 51.4 +1.7
KBS IVmBBB 21 21 54.7
comp=Z,3µm,3.9s
KBS eS S 21 28 28.2 +3.9
KBS Kingsbay 47.74 359 P P 21 21 51.3 +1.6
KBS IAmb IAmb 21 21 53.3
comp=Z,283nm,0.8s
KBS Kingsbay 47.74 359 P P 21 21 51.3 +1.6
KBS pmax pmax
comp=Z,283nm,0.8s
TUC Tucson 47.88 91 P P 21 21 52.1 +0.6
TUC ScP ScP 21 26 43.1 0.0
KSCO Kaye Shedlock' 48.13 78 IAmb IAmb 21 21 56.7
comp=Z,648nm,1.1s
KSCO Kaye Shedlock' 48.13 78 P P 21 21 53.5 +0.1
baz=312,SNR=88
KSCO S S 21 28 32.0 +1.1
baz=312
T25A Trinidad 48.33 81 IAmb IAmb 21 21 58.6
comp=Z,493nm,0.9s
T25A Trinidad 48.33 81 P P 21 21 55.5 +0.4
baz=313,SNR=337
T25A S S 21 28 35.5 +1.5
baz=313
TLY Talaya 48.38 304 P P 21 21 55.5 +0.5
comp=Z,36nm,0.8s,baz=33,slow=7.6,SNR=36
TLY ScP ScP 21 26 43.4 -1.4
comp=Z,14nm,0.8s,baz=30,slow=3.4,SNR=4.7
TLY Talaya 48.38 304 P P 21 21 55.8 +0.8
TLY ScP 21 26 43.7 -1.2
TLY Talaya 48.38 304 diP P 21 21 56.0 +1.0
TLY ePPP PPP 21 24 48.3
TLY eS S 21 28 35.2 +1.3
TLY e 21 31 14.8
TLY eSS SS 21 31 58.9 -7.8
TLY pmax pmax
comp=Z,385nm,1.5s
SPA0 Spitsbergen Ar 48.42 358 eP P 21 21 55.5 +0.6
SPA0 eS S 21 28 32.6 -1.1
SPA0 Spitsbergen Ar 48.42 358 IAmb IAmb 21 21 58.0
comp=Z,337nm,0.9s
ECSD EROS Data Cent 48.51 69 P P 21 21 54.4 -1.6
baz=310,SNR=123
ANMO Albuquerque 48.62 85 P P 21 21 57.5 +0.3
ANMO Albuquerque 48.62 85 P P 21 21 57.5 +0.3
ANMO pmax pmax
comp=Z,251nm,1.5s
EYMN Ely 48.64 62 P P 21 21 55.7 -1.3
baz=309,SNR=56
Y22D IRIS PASSCAL I 48.94 86 IAmb IAmb 21 22 04.0
comp=Z,338nm,0.8s
Y22D IRIS PASSCAL I 48.94 86 P P 21 22 00.4 +0.7
baz=314,SNR=5.5
Y22D S S 21 28 47.8 +5.4
baz=314
BJI Beijing 48.96 285 P P 21 22 00.3 +0.9
BJI pP pP 21 22 57.0 +1.4
BJI S S 21 28 43.5 +1.4
BJI pmax pmax
comp=Z,57nm,0.7s
BJI pmax pmax
comp=Z,440nm,4.3s
ULN Ulaanbaatar 49.00 298 P P 21 22 00.3 +0.4
ULN ScP ScP 21 26 45.0 -2.7
BGNE Belgrade 49.14 73 P P 21 22 00.2 -0.7
baz=311,SNR=79
SONM Songino Array 49.36 299 P P 21 22 03.2 +0.6
comp=Z,26nm,0.7s,baz=55,slow=6.6,SNR=86
SONM pP pwP 21 23 02.5 -1.2
comp=Z,8.4nm,0.8s,baz=50,slow=8.3,SNR=1.4
SONM PcP PcP 21 23 21.1 +0.5
comp=Z,14nm,0.7s,baz=46,slow=2.5,SNR=4.8
SONM ScP ScP 21 26 47.3 -1.9
comp=Z,53nm,0.8s,baz=48,slow=3.6,SNR=25
SONM PKPPKP P'P'df 21 52 44.3 -12
comp=Z,0.2nm,0.3s,baz=180,slow=2.2,SNR=3.8
SONM P4KPbc 21 59 35.4
comp=Z,0.6nm,1.1s,baz=70,slow=3.6,SNR=4.2
ZAK Zakamensk 49.36 303 eP P 21 22 03.4 +0.9
ZAK pmax pmax
comp=Z,57nm,1.4s
E38A The Farm, Brul 49.45 63 IAmb IAmb 21 22 03.8
comp=Z,240nm,0.7s
121A Cookes Peak, D 49.51 88 IAmb IAmb 21 22 07.7
comp=Z,162nm,0.7s
121A Cookes Peak, D 49.51 88 P P 21 22 04.7 +0.7
baz=315,SNR=144
121A S S 21 28 52.0 +1.7
baz=315
HSPB Hornsund (broa 49.61 358 eP P 21 22 02.9 -0.9
HSPB eS S 21 28 53.8 +3.6
HSPB Hornsund (broa 49.61 358 eP P 21 22 05.2 +1.3
HSPB eS S 21 28 51.7 +1.5
HSPB Hornsund (broa 49.61 358 eP P 21 22 02.9 -0.9
HSPB eS S 21 28 53.8 +3.6
SPMN Marine on St. 49.65 66 P P 21 22 03.7 -1.0
baz=310,SNR=17
SPMN S S 21 28 47.9 -3.7
baz=310
MOY Mondy 49.69 305 eP P 21 22 06.4 +1.4
MOY pmax pmax
comp=Z,117nm,1.4s
HOPEN Hopen 49.74 355 eP P 21 22 06.2 +1.3
HOPEN IVmBBB 21 22 07.5
comp=Z,3µm,1.1s
HOPEN eS S 21 28 55.0 +3.0
CBKS Cedar Bluff 49.94 76 P P 21 22 06.8 -0.1
baz=312,SNR=224
SUMG Summit 50.08 17 iP P 21 22 08.6 +0.7
comp=Z,916nm,0.9s
SUMG Summit 50.08 17 IAmb IAmb 21 22 12.1
comp=Z,420nm,1.0s
SUMG Summit 50.08 17 iP P 21 22 08.6 +0.7
SUMG pmax pmax
comp=Z,920nm,0.9s
ILULI Ilulissat 50.16 24 iP P 21 22 08.0 0.0
comp=Z,146nm,0.8s
ILULI Ilulissat 50.16 24 iP P 21 22 08.0 0.0
ILULI pmax pmax
comp=Z,150nm,0.8s
TIA Tai'an 50.98 280 P P 21 22 15.0 +0.3
TIA S S 21 29 08.3 -1.8
TIA pmax pmax
comp=Z,21nm,0.6s
TIA pmax pmax
comp=Z,530nm,4.4s
TIA LR LR
comp=Z,1µm,17.5s
TIA LR LR
comp=Z,2µm,23.3s
TIA LR LR
comp=Z,2µm,20.0s
HHC Hu-ho-hao-te 51.06 288 eP P 21 22 16.8 +1.5
HHC sP sP 21 23 39.0 -2.7
HHC S S 21 29 10.5 -0.8
HHC sS sS 21 30 44.5 -7.9
HHC ScS ScS 21 31 36.0 -0.7
HHC pmax pmax
comp=Z,25nm,1.0s
HHC pmax pmax
comp=Z,420nm,5.5s
MSTX Muleshoe 51.48 83 IAmb IAmb 21 22 22.1
comp=Z,351nm,1.2s
MSTX Muleshoe 51.48 83 P P 21 22 18.5 -0.1
baz=315,SNR=76
MSTX S S 21 29 18.0 +0.8
baz=315
AMTX Amarillo 51.49 81 IAmb IAmb 21 22 21.0
comp=Z,258nm,0.8s
AMTX Amarillo 51.49 81 P P 21 22 18.5 0.0
baz=314
MNTX Cornudas Mount 51.53 87 P P 21 22 19.4 +0.6
baz=316,SNR=322
KSU1 Kansas State U 51.55 74 P P 21 22 17.8 -1.1
baz=313,SNR=40
SCIA State Center 51.59 69 IAmb IAmb 21 22 20.4
comp=Z,283nm,0.9s
SCIA State Center 51.59 69 P P 21 22 18.1 -1.0
baz=312,SNR=20
I40A Norwalk 51.71 66 IAmb IAmb 21 22 20.9
comp=Z,193nm,0.6s
F42A Maple Grove Fa 51.81 62 IAmb IAmb 21 22 21.6
comp=Z,205nm,0.6s
SFJD Kangerlussuaq 51.96 25 iP P 21 22 21.3 -0.1
SFJD Kangerlussuaq 51.96 25 P P 21 22 21.2 -0.1
SFJD IAmb IAmb 21 22 23.8
comp=Z,256nm,0.7s
SFJD Kangerlussuaq 51.96 25 iP P 21 22 21.3 -0.1
E43A Lone Tree Farm 52.00 61 IAmb IAmb 21 22 22.9
comp=Z,303nm,0.6s
BJO1 Bjornoya 52.00 356 IVmB_BB 21 22 23.2
comp=Z,2µm,1.6s
BJO1 eP P 21 22 23.4 +1.8
BJO1 eS S 21 29 23.2 +0.3
U32A Winter Ranch, 52.02 78 IAmb IAmb 21 22 24.7
comp=Z,479nm,0.8s
BTO Baotou 52.09 289 eP P 21 22 23.8 +0.9
BTO S S 21 29 23.3 -2.0
BTO LR LR
comp=Z,1997µm,10.6s
BTO LR LR
comp=Z,1919µm,11.0s
SSE Sheshan 52.17 273 P P 21 22 25.0 +1.6
SSE S S 21 29 27.0 +0.7
SSE pmax pmax
comp=Z,30nm,0.6s
SSE pmax pmax
comp=Z,450nm,3.2s
SSE LR LR
comp=Z,600nm,22.4s
SSE LR LR
comp=Z,820nm,20.2s
E44A Grand Marais A 52.40 60 IAmb IAmb 21 22 28.0
comp=Z,233nm,0.9s
E44A Grand Marais A 52.40 60 P P 21 22 24.1 -0.8
baz=312,SNR=12
PATS Pohnpei 52.48 218 P P 21 22 26.8 +1.0
PATS IAmb IAmb 21 22 30.9
comp=Z,613nm,1.6s
JFWS Jewell Farm 52.56 66 IAmb IAmb 21 22 26.5
comp=Z,217nm,0.8s
JFWS Jewell Farm 52.56 66 P P 21 22 24.0 -2.2
baz=312,SNR=48
TIY Taiyuan 52.68 285 eP P 21 22 29.5 +2.3
TIY S S 21 29 37.0 +3.7
TIY pmax pmax
comp=Z,110nm,1.2s
TIY pmax pmax
comp=Z,540nm,3.8s
TIY LR LR
comp=Z,3µm,17.1s
TIY LR LR
comp=Z,1µm,10.1s
TIY LR LR
comp=Z,1µm,15.4s
XMAS Kiritimati 52.73 162 P P 21 22 29.3 +1.6
H43A Windswept, Lux 52.86 63 IAmb IAmb 21 22 29.3
comp=Z,242nm,0.8s
NJ2 Nanjing 52.87 275 ⇓P P 21 22 28.3 -0.3

NJ2 pP pP 21 23 25.0 -0.7
NJ2 S S 21 29 34.8 -1.0
NJ2 SS SS 21 33 22.5 +4.3
NJ2 pmax pmax
comp=Z,57nm,0.7s
NJ2 pmax pmax
comp=Z,640nm,3.9s
NJ2 LR LR
comp=Z,2µm,20.6s
NJ2 LR LR
comp=Z,2µm,17.7s
NJ2 LR LR
comp=Z,1µm,14.2s
D46A Sault St. Mari 53.19 59 P **P 21 22 29.1 -1.6**
baz=312,SNR=60
F45A CMU Biological 53.23 61 P **P 21 22 29.8 -1.2**
baz=312,SNR=28
WMOK Wichita Mounta 53.29 79 IAmb IAmb 21 22 33.9
comp=Z,199nm,0.8s
WMOK Wichita Mounta 53.29 79 P **P 21 22 31.6 -0.1**
baz=315,SNR=290
E46A Sault Ste Mari 53.40 60 IAmb IAmb 21 22 34.8
comp=Z,318nm,1.2s
L42A Oliver, Polo 53.49 67 IAmb IAmb 21 22 34.3
comp=Z,162nm,0.8s
TARA Tarawa 53.53 199 P **P 21 22 34.3 +0.9**
TARA IAmb IAmb 21 22 36.9
comp=Z,503nm,1.2s
D47A Chapleau 53.55 58 P **P 21 22 32.0 -1.4**
baz=312,SNR=101
D47A S **S 21 29 41.0 -3.6**
baz=312
G45A Suttons Bay 53.59 62 P **P 21 22 31.9 -1.7**
baz=312,SNR=23
OKCFA Oklahoma City 53.60 78 IAmb IAmb 21 22 36.1
comp=Z,233nm,0.7s
H45A Beulah 53.67 62 P **P 21 22 32.7 -1.4**
baz=313,SNR=6.5
N41A Harden Midland 53.71 69 IAmb IAmb 21 22 35.9
comp=Z,228nm,0.8s
K43A Burlington 53.74 65 IAmb IAmb 21 22 36.5
comp=Z,187nm,0.8s
G46A Petoskey 53.82 61 P **P 21 22 34.5 -0.8**
baz=313,SNR=39
E47A Iron Bridge 53.87 59 P **P 21 22 34.0 -1.6**
baz=313,SNR=62
X34A Smith Ranch, M 53.95 79 IAmb IAmb 21 22 40.2
comp=Z,293nm,1.2s
I45A Fountain 53.96 63 IAmb IAmb 21 22 37.4
comp=Z,332nm,0.7s
I45A Fountain 53.96 63 P **P 21 22 35.1 -1.2**
baz=313,SNR=9.4
D48A Paudash Townsh 54.13 57 P **P 21 22 36.0 -1.4**
baz=313,SNR=126
TUL1 Leonard 54.22 76 IAmb IAmb 21 22 39.7
comp=Z,197nm,0.8s
TUL1 Leonard 54.22 76 P **P 21 22 37.1 -1.2**
baz=315,SNR=44
TUL1 S **S 21 29 51.4 -2.4**
baz=315
TXAR Lajitas Array 54.26 88 P **P 21 22 38.7 -0.1**
comp=Z,128nm,0.6s,baz=300,slow=5.1,SNR=505
TXAR PcP **pwP 21 23 40.3 +1.0**
comp=Z,35nm,0.5s,baz=282,slow=1.2,SNR=9.1
TXAR P4KPbc 21 59 57.5
comp=Z,0.4nm,0.6s,baz=304,slow=3.8,SNR=5.2
ABTX Abilene, Hawle 54.28 82 P **P 21 22 38.9 +0.1**
baz=316,SNR=190
ABTX S **S 21 29 54.8 0.0**
baz=316
GLMI Grayling 54.28 61 IAmb IAmb 21 22 41.1
comp=Z,345nm,0.7s
GLMI Grayling 54.28 61 P **P 21 22 37.4 -1.2**
baz=313,SNR=13
J45A Montague 54.29 63 P **P 21 22 36.9 -1.7**
baz=313
L44A Lake County Fo 54.33 66 IAmb IAmb 21 22 39.8
comp=Z,230nm,0.7s
L44A Lake County Fo 54.33 66 P **P 21 22 37.4 -1.5**
baz=313,SNR=16
SCO Scoresbysund 54.38 12 *i* P **P 21 22 39.4 +0.5**
comp=Z,141nm,0.7s
SCO Scoresbysund 54.38 12 IAmb IAmb 21 22 41.2
comp=Z,147nm,0.7s
SCO Scoresbysund 54.38 12 *i* P **P 21 22 39.4 +0.5**
SCO pmax pmax
comp=Z,140nm,0.7s
E48A Lockeyer 54.42 58 P **P 21 22 38.3 -1.2**
baz=313,SNR=66
G47A Hillman 54.44 60 P **P 21 22 38.3 -1.4**
baz=313,SNR=24
I46A Reed City 54.45 62 P **P 21 22 38.8 -1.0**
baz=313,SNR=11
F48A Evansville 54.63 59 P **P 21 22 40.1 -1.0**
baz=313,SNR=52
H47A Mio 54.65 61 P **P 21 22 39.6 -1.6**
baz=313,SNR=8.1
U38A Gravette 54.66 75 IAmb IAmb 21 22 42.1
comp=Z,168nm,0.7s
HDIL Hopedale 54.68 68 P **P 21 22 39.8 -1.7**
baz=314,SNR=64
J46A Howard City 54.74 63 P **P 21 22 40.1 -1.8**
baz=313,SNR=9.0
M44A Midewin, Midew 54.80 66 IAmb IAmb 21 22 43.2
comp=Z,233nm,0.8s
I47A Gladwin 54.89 62 IAmb IAmb 21 22 45.5
comp=Z,404nm,1.5s
I47A Gladwin 54.89 62 P **P 21 22 42.0 -0.9**
baz=313,SNR=12
F49A Sandfield 54.97 59 P **P 21 22 42.3 -1.2**
baz=313,SNR=95
H48A Harrisville 55.04 60 P **P 21 22 42.7 -1.3**
baz=314,SNR=17
D50A G1974 Best Tow 55.11 56 P **P 21 22 43.0 -1.5**
baz=314,SNR=61
K46A Dorr 55.13 64 P **P 21 22 43.1 -1.5**
baz=314,SNR=27
Z35A Perchaven, San 55.18 80 IAmb IAmb 21 22 47.6
comp=Z,392nm,1.1s
I48A Sherman Twp 55.19 61 P **P 21 22 44.0 -1.1**
baz=314,SNR=22
J47A Sunmer 55.26 63 IAmb IAmb 21 22 46.8
comp=Z,132nm,0.8s
J47A Sunmer 55.26 63 P **P 21 22 44.5 -1.1**
baz=314,SNR=18
L46A Eue Claire 55.31 65 IAmb IAmb 21 22 46.9
comp=Z,258nm,0.8s
L46A Eue Claire 55.31 65 P **P 21 22 44.3 -1.7**
baz=314,SNR=10.0
CCM Cathedral Cave 55.32 71 P **P 21 22 44.1 -2.0**
CCM IAmb IAmb 21 22 47.7
comp=Z,168nm,0.7s
CCM Cathedral Cave 55.32 71 P **P 21 22 44.1 -2.0**
CCM pmax pmax
comp=Z,168nm,0.7s
CCM Cathedral Cave 55.32 71 P **P 21 22 44.0 -2.1**
baz=314
MGMO Mountain Grove 55.37 73 IAmb IAmb 21 22 47.5
comp=Z,218nm,1.0s
D51A Lot 18 Range I 55.40 56 P **P 21 22 45.0 -1.5**
baz=314,SNR=64
O44A Mansfield 55.42 68 IAmb IAmb 21 22 47.4
comp=Z,207nm,0.7s
SLM Saint Louis 55.49 70 IAmb IAmb 21 22 50.2
comp=Z,172nm,0.8s
ZALV Zalesovo Beam 55.49 316 P **P 21 22 46.9 -0.1**
comp=Z,5.7nm,0.5s,baz=28,slow=6.7,SNR=36
ZALV PcP **pP 21 23 44.1 -0.6**
comp=Z,20nm,0.8s,baz=27,slow=4.3,SNR=6.5
ZALV PP **PP 21 24 56.3 +2.7**
comp=Z,16nm,0.8s,baz=24,slow=8.2,SNR=3.7
ZALV ScP **ScP 21 27 14.2 -1.4**
comp=Z,13nm,0.9s,baz=35,slow=5.4,SNR=4.4
ZALV PKP2bc 21 53 04.6
comp=Z,2.7nm,1.2s,baz=165,slow=6.2,SNR=3.9
ZALV Zalesovo Beam 55.49 316 *e*P **P 21 22 47.8 +0.8**
ZALV pmax pmax
comp=Z,6.0nm,0.5s
K47A Vermontville 55.55 63 P **P 21 22 45.9 -1.8**
baz=314,SNR=42
HAMF Hammerfest 55.59 354 *e*P **P 21 22 47.7 +0.3**
HAMF *e*S **S 21 30 11.2 +0.3**
U40A Yellville 55.60 74 IAmb IAmb 21 22 49.5
comp=Z,181nm,0.8s
U40A Yellville 55.60 74 P **P 21 22 46.0 -2.2**
baz=315,SNR=142
SCHQ Schefferville 55.61 43 P **P 21 22 47.1 -0.9**
comp=Z,163nm,0.8s,baz=318,slow=7.3,SNR=200
SCHQ Schefferville 55.61 43 IAmb IAmb 21 22 50.0
comp=Z,195nm,0.9s
E51A G1948 Merrick 55.72 57 P **P 21 22 47.5 -1.3**
baz=314,SNR=52
JCT Junction City 55.73 84 P **P 21 22 48.8 -0.4**
baz=317,SNR=161
J48A Bridge Port 55.76 62 IAmb IAmb 21 22 51.5
comp=Z,131nm,0.8s
J48A Bridge Port 55.76 62 P **P 21 22 48.2 -1.0**
baz=314,SNR=23
I49A Point Hope 55.82 61 IAmb IAmb 21 22 52.2
comp=Z,177nm,0.8s
I49A Point Hope 55.82 61 P **P 21 22 48.7 -0.9**
baz=314,SNR=28
W39A Magazine 55.88 76 IAmb IAmb 21 22 52.7
comp=Z,301nm,1.2s
W39A Magazine 55.88 76 P **P 21 22 48.9 -1.2**
baz=315,SNR=100
L47A Sherwood 55.93 64 P **P 21 22 48.6 -1.7**
baz=314,SNR=30
K48A Perry 55.93 63 P **P 21 22 49.2 -1.2**
baz=314,SNR=26
F51A Arnstein 55.93 57 P **P 21 22 49.0 -1.3**
baz=314,SNR=46
SFIN Lafayette 56.01 67 IAmb IAmb 21 22 52.2
comp=Z,312nm,0.8s
SFIN Lafayette 56.01 67 P **P 21 22 49.9 -1.0**
baz=314,SNR=54
WHTX Lake Whitney, 56.02 81 IAmb IAmb 21 22 54.7
comp=Z,727nm,1.5s
WHTX Lake Whitney, 56.02 81 P **P 21 22 50.9 -0.2**
baz=316,SNR=41
J49A Marlette 56.06 62 P **P 21 22 50.3 -1.0**
baz=314,SNR=40
M47A Cromwell 56.13 65 P **P 21 22 50.3 -1.5**
baz=314,SNR=13
KNTN Kanton 56.14 180 P **P 21 22 52.8 +0.8**
KNTN IAmb IAmb 21 22 54.6
comp=Z,265nm,0.9s
KEV Kevo 56.22 352 P **P 21 22 51.4 -0.5**
KEV IAmb IAmb 21 22 54.0
comp=Z,146nm,0.8s
KEV Kevo 56.22 352 P **P 21 22 51.4 -0.5**
KEV pmax pmax
comp=Z,146nm,0.8s
D53A Lac Vacive, Po 56.23 55 P **P 21 22 51.1 -1.3**
baz=314,SNR=68
K49A Clarkson 56.30 62 P **P 21 22 52.2 -0.8**
baz=314,SNR=29
E52A Mattawa 56.31 56 P **P 21 22 51.7 -1.3**
baz=314,SNR=51
F52A Sundridge 56.32 57 P **P 21 22 52.1 -1.0**
baz=314,SNR=75
FCAR Ozark Folk Cen 56.34 74 IAmb IAmb 21 22 54.1
comp=Z,368nm,0.9s
L48A N Adams 56.36 64 P **P 21 22 52.0 -1.4**
baz=314,SNR=37
N47A Urbana 56.43 65 IAmb IAmb 21 22 54.2
comp=Z,175nm,0.7s
N47A Urbana 56.43 65 P **P 21 22 52.0 -1.9**
baz=315,SNR=39
MIAR Mount Ida 56.46 76 IAmb IAmb 21 22 57.1
comp=Z,542nm,1.1s
MIAR Mount Ida 56.46 76 P **P 21 22 53.4 -0.8**
baz=316,SNR=275
P46A Rosedale 56.48 67 IAmb IAmb 21 22 55.4
comp=Z,202nm,0.7s
AAM Ann Arbor 56.52 63 IAmb IAmb 21 22 55.3
comp=Z,151nm,0.6s
AAM Ann Arbor 56.52 63 P **P 21 22 53.3 -1.3**
baz=315,SNR=11
M48A Edgerton 56.53 64 IAmb IAmb 21 22 55.3
comp=Z,298nm,0.8s
M48A Edgerton 56.53 64 P **P 21 22 53.1 -1.5**
baz=315,SNR=55
ARCES ARCESS Array B 56.55 353 P **P 21 22 54.7 +0.4**
comp=Z,87nm,0.7s,baz=11,slow=6.9,SNR=207
ARE0 ARCESS Array S 56.55 353 *e*P **P 21 22 54.7 +0.4**
ARE0 *e*S **S 21 30 24.6 +1.0**
ARE0 ARCESS Array S 56.55 353 P **P 21 22 54.4 +0.1**
L49A Milan 56.60 63 P **P 21 22 54.1 -1.0**
baz=315,SNR=47
OLIL Olney 56.61 69 IAmb IAmb 21 22 56.6
comp=Z,655nm,1.5s
WHN Wuhan 56.63 277 P **P 21 22 55.5 +0.1**
WHN pP **PcP 21 23 47.8 -0.5**
WHN S **S 21 30 24.8 -0.8**
WHN sS **sS 21 32 04.0 -4.7**
WHN pmax pmax
comp=Z,56nm,0.6s
WHN LR LR
comp=Z,2µm,12.0s
WHN LR LR
comp=Z,2µm,10.0s
WHN LR LR
comp=Z,2µm,17.5s
WHAR Wooly Hollow 56.67 74 IAmb IAmb 21 22 57.6
comp=Z,185nm,1.1s
PBMO Poplar Bluff 56.68 72 IAmb IAmb 21 22 56.2
comp=Z,186nm,0.7s
D54A Lac Fusel, La 56.69 54 P **P 21 22 54.0 -1.6**
baz=315,SNR=31
S44A Carbondale 56.70 70 IAmb IAmb 21 22 57.0
comp=Z,195nm,0.7s
E53A Dumoine, Ponti 56.74 56 P **P 21 22 54.0 -1.9**
baz=315,SNR=66
K50A Casco 56.74 62 P **P 21 22 55.1 -0.9**
baz=315,SNR=8.0
W41B Gary Mavity, V 56.78 74 IAmb IAmb 21 22 57.7
comp=Z,466nm,1.4s
W41B Gary Mavity, V 56.78 74 P **P 21 22 54.9 -1.6**
baz=316,SNR=88
N48A Decatur 56.80 65 P **P 21 22 54.6 -1.9**
baz=315,SNR=75
435B Jarrell 56.82 82 IAmb IAmb 21 22 59.8
comp=Z,525nm,1.2s
435B Jarrell 56.82 82 P **P 21 22 56.8 0.0**
baz=317,SNR=25
H52A Wyevale 56.84 58 P **P 21 22 55.8 -1.0**
baz=315,SNR=60
I51A Listowel 56.85 60 P **P 21 22 56.6 -0.3**
baz=315,SNR=48
TRO Tromso 56.85 355 *e*P **P 21 22 57.1 +0.8**
TRO IVmBBB 21 22 59.1
comp=Z,1µm,0.8s
TRO *e*S **S 21 30 29.1 +1.5**
E54A Lac Daplat, Po 56.93 55 P **P 21 22 55.8 -1.5**
baz=315,SNR=78
X40A Basin Creek Fa 56.93 75 P **P 21 22 56.1 -1.3**
baz=316,SNR=51
M49A Liberty Center 56.94 64 P **P 21 22 56.1 -1.4**
baz=315,SNR=28
237A Washetta, Mont 56.98 80 IAmb IAmb 21 22 59.6
comp=Z,229nm,0.6s
I52A Shelburne 57.10 59 P **P 21 22 57.3 -1.3**
baz=315
SADO Sadowa 57.13 58 IAmb IAmb 21 22 59.2
comp=Z,91nm,0.6s
G53A Haliburton 57.15 57 P **P 21 22 58.0 -0.9**
baz=315,SNR=83
L50A Kingsville 57.16 62 P **P 21 22 57.8 -1.1**
baz=315,SNR=26
O48A Farmland 57.16 65 P **P 21 22 56.9 -2.1**
baz=315,SNR=107
BLO Bloomington 57.17 67 IAmb IAmb 21 23 01.1
comp=Z,170nm,0.7s
N49A Columbus Grove 57.21 64 IAmb IAmb 21 23 00.1
comp=Z,201nm,0.8s
N49A Columbus Grove 57.21 64 P **P 21 22 58.0 -1.4**
baz=315,SNR=70
G54A Lake Saint Pet 57.22 57 P **P 21 22 58.1 -1.2**
baz=315,SNR=36
KTK1 Kautokeino 57.23 354 *e*P **P 21 22 59.8 +0.8**
LVZ Lovozero 57.24 348 P **P 21 22 59.3 +0.1**
LVZ Lovozero 57.24 348 *ce*P **P 21 22 59.1 -0.1**
LVZ pmax pmax
comp=Z,363nm,0.8s
HENM Henderson Moun 57.27 71 IAmb IAmb 21 23 01.9
comp=Z,240nm,0.8s
XAN Xi'an 57.29 284 P **P 21 23 00.3 +0.3**
XAN S **S 21 30 32.3 -2.0**
XAN ScS **ScS 21 32 18.5 -2.8**
XAN pmax pmax
comp=Z,26nm,0.7s
XAN pmax pmax
comp=Z,470nm,4.3s
XAN LR LR
comp=Z,3µm,19.1s
XAN LR LR
comp=Z,2µm,17.6s
XAN LR LR
comp=Z,2µm,13.7s
D55A Sainte-Anne-du 57.35 54 P **P 21 22 58.9 -1.4**
baz=315,SNR=116
K51A Iona Station 57.36 61 P **P 21 22 59.7 -0.6**
baz=315,SNR=6.0
E55A Montcerf-Lytto 57.47 55 P **P 21 22 59.5 -1.6**
baz=315,SNR=16
M50A Fremont 57.48 63 P **P 21 22 59.4 -1.9**
baz=315,SNR=12
HICK Hickman 57.53 71 IAmb IAmb 21 23 03.7
comp=Z,220nm,0.9s
J52A Paris 57.53 60 P **P 21 23 00.7 -0.8**
baz=315,SNR=13
833A Chaparral WMA, 57.54 85 P **P 21 23 01.9 +0.1**
baz=318,SNR=41
H53A Bobcaygeon 57.55 58 P **P 21 23 00.6 -1.1**
baz=315,SNR=33
P48A Milroy 57.57 66 P **P 21 23 00.1 -1.8**
baz=315,SNR=70
I53A Kortright Cn E 57.57 59 P **P 21 23 00.9 -0.9**
baz=315,SNR=9.0
O49A Covington 57.65 65 P **P 21 23 00.9 -1.6**
baz=315,SNR=7.5
D56A ZEC Mazanza, M 57.67 53 P **P 21 23 00.7 -1.8**
baz=316,SNR=66
SSLB Suanglung 57.70 267 IAmb IAmb 21 23 06.8
comp=Z,228nm,1.1s
APA Apatity 57.70 349⇑*i*P **P 21 23 01.7 -0.6**
APA *i* 21 24 29.0
APA *i* S **S 21 30 36.0 -2.6**
APA pmax pmax
comp=Z,66nm,0.8s
APA MLR MLR
comp=Z,1µm,17.0s
K52A Tillsonburg 57.73 61 P **P 21 23 02.2 -0.7**
baz=315
F55A Otter Lake 57.77 55 P **P 21 23 01.8 -1.4**
baz=316,SNR=20
Q48A North Vernon 57.78 67 P **P 21 23 01.7 -1.6**
baz=316,SNR=21
NATX Nacogdoches 57.83 79 P **P 21 23 03.7 -0.1**
baz=317,SNR=19
Z41A Richland Creek 57.83 76 IAmb IAmb 21 23 07.0
comp=Z,644nm,1.8s
Z41A Richland Creek 57.83 76 P **P 21 23 03.1 -0.7**
baz=316,SNR=14
N50A Nevada 57.87 64 P **P 21 23 02.8 -1.1**
baz=315,SNR=42
E56A St. Veronique 57.90 54 P **P 21 23 02.5 -1.6**
baz=316,SNR=50
P49A Miami Univ. Ec 57.91 66 P **P 21 23 02.4 -1.8**
baz=316,SNR=32
H06E1 SOCORRO T-PHAS57.94 102 T T 22 25 19.9
SNR=3.4
WCI Wyandotte Cave 57.97 68 P **P 21 23 03.5 -1.1**
WCI Wyandotte Cave 57.97 68 P **P 21 23 03.5 -1.1**
WCI pmax pmax
comp=Z,764nm,1.8s
WCI Wyandotte Cave 57.97 68 P **P 21 23 03.3 -1.3**
baz=316
M51A Elyria 57.99 63 P **P 21 23 03.4 -1.3**
baz=316,SNR=13
NRS Narsarsuaq 58.00 27 *i* P **P 21 23 04.2 -0.3**
comp=Z,122nm,0.8s
NRS Narsarsuaq 58.00 27 *i* P **P 21 23 04.2 -0.3**
NRS pmax pmax
comp=Z,120nm,0.8s
G55A Calabogie 58.00 56 P **P 21 23 03.6 -1.1**
baz=316,SNR=65
X43A Marvell 58.03 74 P **P 21 23 04.2 -0.9**
baz=316,SNR=18
O50A Cable 58.06 65 P **P 21 23 04.0 -1.3**
baz=316,SNR=45
DELO Deloro Mine 58.08 57 IAmb IAmb 21 23 07.5
comp=Z,148nm,0.8s
D57A Chemin Vers le 58.11 53 P **P 21 23 03.5 -2.0**
baz=316,SNR=55
N51A Ashland 58.18 63 IAmb IAmb 21 23 06.6
comp=Z,190nm,0.6s
N51A Ashland 58.18 63 P **P 21 23 04.2 -1.9**
baz=316,SNR=43
Q49A Aurora 58.18 66 P **P 21 23 04.4 -1.7**
baz=316,SNR=11
QZH Quanzhou 58.24 270⇓*i*P **P 21 23 06.8 +0.2**
QZH pP **pP 21 24 05.8 +0.8**
QZH S **S 21 30 48.3 +1.6**
QZH sS **ScS 21 32 29.0 +0.7**
QZH pmax pmax
comp=Z,41nm,1.0s
QZH pmax pmax
comp=Z,690nm,4.7s
QZH LR LR
comp=Z,680nm,18.0s
QZH LR LR
comp=Z,760nm,16.1s
I55A Frankford 58.26 57 P **P 21 23 05.7 -0.8**
baz=316,SNR=20
H55A Tweed 58.27 57 P **P 21 23 05.7 -0.9**
baz=316,SNR=39
M52A Chesterland 58.28 62 IAmb IAmb 21 23 07.9
comp=Z,182nm,0.6s
M52A Chesterland 58.28 62 P **P 21 23 05.7 -1.1**
baz=316,SNR=44
ACSO Alum Creek Sta 58.35 64 IAmb IAmb 21 23 08.2
comp=Z,139nm,0.7s
ACSO Alum Creek Sta 58.35 64 P **P 21 23 05.9 -1.3**
baz=316,SNR=27
P50A Jamestown 58.35 65 P **P 21 23 05.9 -1.3**
baz=316,SNR=56
E57A Chemin Saint G 58.42 54 P **P 21 23 05.9 -1.8**
baz=316,SNR=83
J54A Appleton 58.45 59 IAmb IAmb 21 23 08.8
comp=Z,204nm,0.6s
J54A Appleton 58.45 59 P **P 21 23 07.2 -0.7**
baz=316,SNR=20
HKT Hockley 58.46 81 P **P 21 23 08.5 +0.4**
HKT IAmb IAmb 21 23 12.1
comp=Z,243nm,1.2s
HKT Hockley 58.46 81 P **P 21 23 08.5 +0.4**
HKT pmax pmax
comp=Z,243nm,1.2s
D58A Chemin du LacG 58.53 52 P **P 21 23 06.6 -1.8**
baz=316,SNR=52
R49A Shelbyville 58.54 67 P **P 21 23 07.1 -1.5**
baz=316,SNR=16
LOF Lofoten 58.55 358 *e*P **P 21 23 08.6 +0.4**
LOF IVmB_BB 21 23 14.7
comp=Z,2µm,3.7s
LOF *e*S **S 21 30 53.3 +3.7**
L53A Girard 58.56 61 P **P 21 23 07.5 -1.1**
baz=316,SNR=24
GTA Gaotai 58.56 295 ⇓P **P 21 23 09.0 +0.1**
GTA ScP **ScP 21 27 27.3 -2.3**
GTA PcS **PcS 21 27 55.0 -3.1**
GTA S **S 21 30 49.3 -1.5**
GTA ScS **ScS 21 32 26.3 -4.4**
GTA pmax pmax
comp=Z,28nm,1.0s
GTA pmax pmax
comp=Z,280nm,5.2s
GTA LR LR
comp=Z,2µm,17.5s
GTA LR LR
comp=Z,3µm,17.1s
GTA LR LR
comp=Z,2µm,16.5s
ERPA Erie 58.58 61 IAmb IAmb 21 23 11.6
comp=Z,169nm,0.8s
ERPA Erie 58.58 61 P **P 21 23 07.8 -1.0**
baz=316
O51A Pataskala 58.61 64 P **P 21 23 07.5 -1.6**
baz=316,SNR=26
WVT Waverly 58.61 71 P **P 21 23 07.8 -1.3**
WVT IAmb IAmb 21 23 10.9
comp=Z,187nm,1.3s
WVT Waverly 58.61 71 P **P 21 23 07.8 -1.3**
WVT pmax pmax
comp=Z,187nm,1.3s
WVT Waverly 58.61 71 P **P 21 23 08.1 -1.0**
baz=316
N52A McGinn's Farm, 58.62 63 P **P 21 23 07.7 -1.4**
baz=316,SNR=23
H56A Elgin 58.70 56 P **P 21 23 08.3 -1.2**

baz=316,SNR=37
STEI Steigen 58.70 357 eP P 21 23 09.6 +0.4
STEI IVmB_BB 21 23 10.9
comp=Z,2μm,0.9s
STEI eS S 21 30 53.9 +2.4
M53A Wl Miller and 58.71 62 P P 21 23 08.9 -0.8
baz=316,SNR=68
LZH Lanzhou 58.72 289 ⇑P P 21 23 11.3 +1.3
LZH S S 21 30 54.0 +1.0
LZH sS ScS 21 32 30.5 -1.5
LZH SS SS 21 34 49.5 -0.7
LZH pmax pmax
comp=Z,170nm,1.3s
LZH pmax pmax
comp=Z,930nm,7.2s
LZH LR LR
comp=Z,3μm,14.6s
LZH LR LR
comp=Z,3μm,15.7s
LZH LR LR
comp=Z,2μm,16.8s
Q50A Georgetown 58.80 66 P P 21 23 09.4 -1.0
baz=316,SNR=61
PECO Prince Edward 58.81 57 IAmb IAmb 21 23 13.1
comp=Z,353nm,1.0s
P51A Williamsport 58.84 65 P P 21 23 08.9 -1.7
baz=316
S49A Springfield 58.84 68 P P 21 23 09.2 -1.5
baz=316,SNR=41
L54A Sinclairville 58.85 60 P P 21 23 09.5 -1.2
baz=316,SNR=48
E58A La Victoria 58.87 53 P P 21 23 08.7 -2.0
baz=317,SNR=27
J55A Hilton 58.87 58 P P 21 23 09.8 -1.0
baz=316,SNR=13
OXF Oxford 58.88 73 P P 21 23 10.1 -0.9
baz=317,SNR=85
K54A Basiliko Farm, 58.90 59 P P 21 23 10.2 -0.9
baz=316,SNR=19
G57A Newington 58.96 55 P P 21 23 09.9 -1.4
baz=316,SNR=31
F58A St-Lin Laurent 58.98 54 P P 21 23 09.7 -1.7
baz=317
R50A Paris 59.01 67 IAmb IAmb 21 23 13.2
comp=Z,211nm,0.8s
R50A Paris 59.01 67 P P 21 23 10.8 -1.0
baz=316,SNR=60
Q51A Peebles 59.01 65 P P 21 23 10.9 -0.9
baz=316,SNR=18
O52A Adamsville 59.04 63 IAmb IAmb 21 23 13.1
comp=Z,244nm,0.7s
O52A Adamsville 59.04 63 P P 21 23 10.9 -1.1
baz=316,SNR=34
143A Socs Landing, 59.04 76 IAmb IAmb 21 23 14.8
comp=Z,271nm,1.1s
N53A Lisbon 59.08 62 IAmb IAmb 21 23 14.0
comp=Z,185nm,1.2s
N53A Lisbon 59.08 62 P P 21 23 10.9 -1.3
baz=316,SNR=21
D59A Saint-Raymond 59.09 52 P P 21 23 10.8 -1.3
baz=317,SNR=16
WVNY West Valley, N 59.09 60 IAmb IAmb 21 23 14.6
comp=Z,483nm,1.6s
K55A Perry 59.13 59 P P 21 23 11.6 -1.0
baz=316,SNR=11
E59A St. Maurice 59.15 53 P P 21 23 10.9 -1.7
baz=317
M54A Oil Creek Stat 59.19 61 IAmb IAmb 21 23 15.5
comp=Z,163nm,0.9s
M54A Oil Creek Stat 59.19 61 P P 21 23 12.0 -0.9
baz=316,SNR=33
T49A Edmonton 59.19 68 IAmb IAmb 21 23 14.3
comp=Z,124nm,0.7s
T49A Edmonton 59.19 68 P P 21 23 12.0 -1.1
baz=316,SNR=37
H57A Richville 59.23 56 P P 21 23 11.4 -1.7
baz=317,SNR=42
P52A Corning 59.23 64 P P 21 23 11.7 -1.6
baz=316,SNR=16
O53A New Philadelph 59.28 63 P P 21 23 12.4 -1.2
baz=316,SNR=12
PLAL Pickwick Lake 59.30 72 IAmb IAmb 21 23 15.2
comp=Z,132nm,0.7s
L55A Hinsdale 59.34 60 P P 21 23 13.4 -0.7
baz=316,SNR=22
J56A Wolcott 59.35 58 IAmb IAmb 21 23 16.7
comp=Z,381nm,1.1s
J56A Wolcott 59.35 58 P P 21 23 13.1 -0.9
baz=316,SNR=14
G58A Ormstown 59.38 55 P P 21 23 12.2 -2.0
baz=317,SNR=47
R51A Hillsboro 59.41 66 P P 21 23 13.8 -0.7
baz=316,SNR=63
S50A Richmond 59.41 67 P P 21 23 13.6 -0.9
baz=316,SNR=26
N54A Moraine State 59.41 62 IAmb IAmb 21 23 17.0
comp=Z,352nm,1.3s
N54A Moraine State 59.41 62 P P 21 23 13.3 -1.2
baz=316,SNR=40
V48A Smith Brothers 59.46 70 IAmb IAmb 21 23 16.5
comp=Z,176nm,1.2s
I57A Carthage 59.47 56 P P 21 23 13.8 -1.0
baz=317,SNR=26
342A Flagon Creek P 59.48 78 IAmb IAmb 21 23 18.7
comp=Z,176nm,0.8s
CLTN Cedars of Leba 59.48 70 IAmb IAmb 21 23 16.7
comp=Z,219nm,0.7s
F59A Saint Guilaume 59.48 53 P P 21 23 13.4 -1.5
baz=317,SNR=22
LONY Lake Ozonia 59.51 55 P P 21 23 13.3 -1.8
baz=317
K56A Middlesex 59.53 58 P P 21 23 14.6 -0.8
baz=317,SNR=62
D60A Saint Jean D'O 59.58 51 P P 21 23 13.9 -1.6
baz=317,SNR=39
T50A Nancy 59.64 68 P P 21 23 15.0 -1.1
baz=317,SNR=87
Q52A Bidwell 59.64 65 P P 21 23 14.7 -1.4
baz=316,SNR=14
BBP Basco 59.66 263 eP P 21 23 17.0 +0.6
M55A Ridgway 59.68 60 IAmb IAmb 21 23 18.7
comp=Z,192nm,0.8s
M55A Ridgway 59.68 60 P P 21 23 15.3 -1.1
baz=317,SNR=58
J57A Williamstown 59.69 57 IAmb IAmb 21 23 19.1
comp=Z,203nm,0.9s
J57A Williamstown 59.69 57 P P 21 23 15.5 -0.8
baz=317,SNR=30
D61A St Aubert, Com 59.71 51 P P 21 23 15.0 -1.4
baz=318,SNR=43
P53A Whipple 59.73 64 IAmb IAmb 21 23 17.4
comp=Z,174nm,0.6s
P53A Whipple 59.73 64 P P 21 23 15.4 -1.3
baz=316,SNR=23
E60A Ste Agathe de 59.74 52 P P 21 23 15.0 -1.6
baz=317,SNR=37
O54A Avella 59.77 62 IAmb IAmb 21 23 19.4
comp=Z,208nm,0.8s
O54A Avella 59.77 62 P P 21 23 15.9 -1.0
baz=317,SNR=24
F60A Warwick 59.79 53 P P 21 23 15.2 -1.8
baz=317,SNR=30
L56A Greenwood 59.82 59 IAmb IAmb 21 23 20.3
comp=Z,400nm,1.1s
L56A Greenwood 59.82 59 P P 21 23 16.7 -0.7
baz=317,SNR=68
H58A Gabriels 59.85 55 P P 21 23 15.8 -1.7
baz=317,SNR=26
G59A Clarenceville 59.85 54 P P 21 23 15.7 -1.7
baz=317,SNR=12
BORG Borgarnes 59.86 14 P P 21 23 18.8 +1.7
BORG Borgarnes 59.86 14 P P 21 23 18.8 +1.7
BORG pmax pmax
comp=Z,787nm,2.0s
S51A Beattyville 59.88 67 IAmb IAmb 21 23 20.0
comp=Z,161nm,0.8s
S51A Beattyville 59.88 67 P P 21 23 16.3 -1.4
baz=317,SNR=16
R52A Catlettsburg 59.89 65 P P 21 23 16.3 -1.5
baz=317,SNR=18
VBMS Vicksburg 59.91 76 P P 21 23 17.6 -0.4
baz=317,SNR=14
K57A Scipio Center 59.92 58 P P 21 23 17.1 -0.8
baz=317,SNR=35
H59A Cadyville 59.93 55 P P 21 23 16.3 -1.7
baz=317,SNR=53
M56A Emporium 59.97 60 IAmb IAmb 21 23 20.5
comp=Z,323nm,1.3s
M56A Emporium 59.97 60 P P 21 23 17.5 -0.8
baz=317,SNR=43
I58A Old Forge 59.99 56 P P 21 23 17.3 -1.2
baz=317,SNR=25
SEM Semipalatinsk 60.00 315 eP P 21 23 16.5 -2.1
SEM eS S 21 31 08.5 -0.5
SEM Semipalatinsk 60.00 315 eP P 21 23 16.5 -2.1
SEM eS S 21 31 08.5 -0.5
N55A Marion Center 60.07 61 P P 21 23 18.2 -0.8
baz=317,SNR=39
J58A Remsen 60.08 57 IAmb IAmb 21 23 21.1
comp=Z,262nm,1.1s
J58A Remsen 60.08 57 P P 21 23 18.0 -1.0
baz=317,SNR=38
Q53A Leroy 60.12 64 P P 21 23 18.5 -0.8
baz=317,SNR=20
S52A Salyersville 60.13 66 P P 21 23 18.6 -0.9
baz=317,SNR=18
P54A Burton 60.13 63 P P 21 23 18.5 -0.9
baz=317,SNR=17
E61A Lac Etchemin 60.14 51 P P 21 23 18.1 -1.3
baz=318,SNR=13
T51A Gray 60.17 67 P P 21 23 18.4 -1.3
baz=317,SNR=88
KONS Konsvik 60.20 358 eP P 21 23 19.9 +0.5
ZSN Zaisan 60.20 310 eP P 21 23 20.3 +0.6
ZSN eS S 21 31 12.2 +0.9
ZSN Zaisan 60.20 310 eP P 21 23 20.3 +0.6
ZSN eS S 21 31 12.2 +0.9
F61A St Evariste 60.24 52 P P 21 23 19.0 -1.0
baz=318,SNR=39
G60A Masonville 60.25 54 P P 21 23 18.6 -1.6
baz=318,SNR=8.4
X48A Hartselle 60.27 71 IAmb IAmb 21 23 22.1
comp=Z,241nm,1.4s
R53A Hurricane 60.27 65 IAmb IAmb 21 23 23.1
comp=Z,240nm,0.9s
R53A Hurricane 60.27 65 P P 21 23 19.2 -1.2
baz=317,SNR=26
L57A Andrews Acres 60.28 59 P P 21 23 19.5 -0.9
baz=317,SNR=62
O55A Ligonier 60.32 62 P P 21 23 19.3 -1.3
baz=317,SNR=12
D62A Allapoint, All 60.32 50 IAmb IAmb 21 23 23.0
comp=Z,173nm,0.8s
D62A Allapoint, All 60.32 50 P P 21 23 19.6 -1.0
baz=318,SNR=86
TMCR Tamitsa 60.33 345 eP P 21 23 18.4 -1.9
TMCR eS S 21 31 11.1 -1.1
TMCR pmax pmax
comp=Z,98nm,0.5s
N56A West Decatur 60.33 61 P P 21 23 20.0 -0.7
baz=317,SNR=63
K58A Earlville 60.33 57 IAmb IAmb 21 23 23.7
comp=Z,278nm,1.1s
K58A Earlville 60.33 57 P P 21 23 19.9 -0.8
baz=317,SNR=46
SWET Sewanee 60.34 70 IAmb IAmb 21 23 22.2
comp=Z,375nm,1.6s
STOK Stokkvaagen 60.37 358 eP P 21 23 21.1 +0.6
STOK eS S 21 31 15.2 +2.5
J59A Piesco 60.39 56 P P 21 23 19.7 -1.5
baz=317,SNR=27
Q54A Coxs Mills 60.40 64 IAmb IAmb 21 23 23.8
comp=Z,153nm,0.8s
Q54A Coxs Mills 60.40 64 P P 21 23 20.3 -0.9
baz=317,SNR=27
MCWV Mont Chateau 60.43 62 P P 21 23 20.3 -1.1
baz=317,SNR=11
KURK Kurchatov 60.44 316 P P 21 23 21.6 +0.3
KURK Kurchatov 60.44 316 ceP P 21 23 21.6 +0.3
KURK pmax pmax
comp=Z,80nm,0.9s
I59A Olmsteadville 60.46 56 P P 21 23 20.1 -1.4
baz=317,SNR=33
H60A Morristown 60.47 54 P P 21 23 20.1 -1.6
baz=318,SNR=19
MOR8 Moi Rana 60.49 357 eP P 21 23 20.6 -0.8
MOR8 IVmBBB 21 23 22.0
comp=Z,1μm,2.9s
MOR8 eS S 21 31 13.9 -0.5
G61A St-Isidore-de- 60.50 53 P P 21 23 20.4 -1.4
baz=318,SNR=32
P55A Reedsville 60.55 63 P P 21 23 21.6 -0.7
baz=317,SNR=14
KURBB Kurchatov Arra 60.55 316 P P 21 23 22.9 +0.9
comp=Z,49nm,0.6s,baz=43,slow=7.1,SNR=162
KURBB pP pP 21 24 23.1 +2.3
comp=Z,9.2nm,0.9s,baz=41,slow=6.1,SNR=1.9
U51A La Follette 60.56 68 P P 21 23 21.3 -1.1
baz=317,SNR=46
BINY Binghamton 60.58 58 P P 21 23 21.9 -0.5
baz=317,SNR=82
T52A Hallie 60.59 67 IAmb IAmb 21 23 25.7
comp=Z,293nm,0.8s
T52A Hallie 60.59 67 P P 21 23 22.1 -0.5
baz=317,SNR=30
M57A Sunshine Farm, 60.62 59 IAmb IAmb 21 23 26.5
comp=Z,354nm,1.5s
M57A Sunshine Farm, 60.62 59 P P 21 23 22.1 -0.6
baz=317,SNR=33
S53A Williamson 60.65 66 P P 21 23 22.1 -0.8
baz=317,SNR=9.2
O56A Blue Knob Stat 60.66 61 P P 21 23 21.9 -1.2
baz=317,SNR=12
TZTN Tazewell 60.70 67 IAmb IAmb 21 23 24.9
comp=Z,208nm,0.7s
TZTN Tazewell 60.70 67 P P 21 23 22.4 -0.9
baz=317,SNR=61
W50A Signal Mountai 60.70 70 P P 21 23 22.1 -1.3
baz=317,SNR=54
I60A Shoreham 60.71 55 P P 21 23 21.6 -1.6
baz=318,SNR=13
K59A Cooperstown 60.72 57 P P 21 23 22.6 -0.7
baz=317,SNR=34
SSPA Standing Stone 60.74 60 P P 21 23 22.5 -1.0
SSPA IAmb IAmb 21 23 26.2
comp=Z,232nm,0.9s
SSPA Standing Stone 60.74 60 P P 21 23 22.7 -0.8
baz=317
L58A Harry Jones Me 60.76 58 P P 21 23 23.2 -0.4
baz=317,SNR=118
D63A Stockholm 60.79 50 P P 21 23 22.4 -1.3
baz=319,SNR=49
Q55A Buckhannon 60.79 63 P P 21 23 22.9 -1.0
baz=317,SNR=35
V51A Loudon 60.79 69 P P 21 23 22.6 -1.3
baz=317,SNR=38
H61A Lyndonville 60.86 54 P P 21 23 22.8 -1.4
baz=318,SNR=20
ACCN Adirondack Com 60.86 56 IAmb IAmb 21 23 26.0
comp=Z,166nm,1.1s
R54A Victor 60.90 64 P P 21 23 23.9 -0.7
baz=317,SNR=66
T53A Wise 60.93 66 P P 21 23 24.2 -0.7
baz=317,SNR=51
M58A Price's Panora 60.94 59 P P 21 23 24.2 -0.6
baz=317,SNR=55
S54A Dingess, Beckl 61.00 65 P P 21 23 24.6 -0.7
baz=317,SNR=44
G62A West of Eustis 61.02 52 IAmb IAmb 21 23 27.7
comp=Z,295nm,1.2s
G62A West of Eustis 61.02 52 P P 21 23 24.2 -1.1
baz=318,SNR=47
L59A Walton 61.06 57 P P 21 23 25.2 -0.4
baz=318,SNR=90
Y49A Blount Mountai 61.06 71 IAmb IAmb 21 23 26.4
comp=Z,103nm,0.6s
P56A Dayton Farm, R 61.07 62 P P 21 23 25.0 -0.8
baz=317,SNR=22
LBNH Lisbon 61.08 54 P P 21 23 24.5 -1.2
baz=318,SNR=17
J60A Lant Hill Farm 61.09 56 P P 21 23 24.8 -1.0
baz=318,SNR=60
E63A Oxbow 61.10 50 IAmb IAmb 21 23 26.5
comp=Z,145nm,0.8s
E63A Oxbow 61.10 50 P P 21 23 23.9 -1.9
baz=319,SNR=50
346A Big Creek Wild 61.12 76 IAmb IAmb 21 23 29.2
comp=Z,326nm,1.1s
I61A Oroboro, Fairl 61.17 54 P P 21 23 25.2 -1.1
baz=318,SNR=21
V52A Sevierville 61.18 68 P P 21 23 25.6 -0.9
baz=317,SNR=40
O57A Amberson 61.19 61 P P 21 23 25.2 -1.3
baz=317,SNR=77
N58A Sunbury 61.20 60 IAmb IAmb 21 23 29.4
comp=Z,153nm,0.8s
N58A Sunbury 61.20 60 P P 21 23 25.6 -1.0
baz=318,SNR=45
H62A Milan 61.20 53 IAmb IAmb 21 23 28.8
comp=Z,310nm,1.1s
H62A Milan 61.20 53 P P 21 23 25.2 -1.3
baz=318,SNR=40
TKL Tuckaleechee C 61.22 68 IAmb IAmb 21 23 28.5
comp=Z,137nm,0.8s
R55A Marlinton 61.29 64 IAmb IAmb 21 23 30.3
comp=Z,252nm,1.4s
R55A Marlinton 61.29 64 P P 21 23 26.3 -0.9
baz=317,SNR=22
SGCP Mt. Cagua 61.31 262 eP P 21 23 26.6 -0.9
K60A Five Rivers En 61.32 56 P P 21 23 25.9 -1.4
baz=318,SNR=9.7
F63A Nahmakanta, Br 61.33 51 IAmb IAmb 21 23 28.4
comp=Z,144nm,0.8s
F63A Nahmakanta, Br 61.33 51 P P 21 23 25.9 -1.4
baz=319,SNR=46
LRAL Lakeview Retre 61.33 72 P P 21 23 26.5 -1.0
LRAL IAmb IAmb 21 23 28.6
comp=Z,113nm,0.8s
LRAL Lakeview Retre 61.33 72 P P 21 23 26.0 -1.6
baz=318,SNR=42
M59A Waymart 61.34 58 P P 21 23 26.7 -0.8
baz=318,SNR=86
PRGR Permogore 61.35 341 ⇑iP P 21 23 27.1 -0.1
PRGR e 21 24 06.5
PRGR e*PP pP 21 24 25.7 -0.5
PRGR i S S 21 31 23.7 -1.6
PRGR e 21 32 47.6
PRGR pmax pmax
comp=Z,138nm,0.9s
U53A Fall Branch 61.36 67 P P 21 23 27.0 -0.8
baz=317,SNR=25
E64A Bridgewater 61.38 50 P P 21 23 26.1 -1.5
baz=319,SNR=84
T54A Tazewell 61.40 66 P P 21 23 27.4 -0.6
baz=317,SNR=79
X51A Calhoun 61.41 70 IAmb IAmb 21 23 29.8
comp=Z,153nm,0.9s
X51A Calhoun 61.41 70 P P 21 23 26.9 -1.2
baz=318,SNR=17
J61A Chester 61.44 55 P P 21 23 26.9 -1.2
baz=318,SNR=28
S55A Lewisburg 61.46 64 P P 21 23 27.9 -0.5
baz=318,SNR=55
P57A Homestead Farm 61.52 61 IAmb IAmb 21 23 31.2
comp=Z,143nm,0.7s
P57A Homestead Farm 61.52 61 P P 21 23 28.0 -0.7
baz=318,SNR=29
G63A Kingsbury 61.53 52 P P 21 23 27.5 -1.2
baz=319,SNR=17
W52A Murphy 61.55 69 P P 21 23 27.9 -1.1
baz=318,SNR=36
F64A Sherman 61.55 51 IAmb IAmb 21 23 29.9
comp=Z,178nm,0.8s
F64A Sherman 61.55 51 P P 21 23 27.3 -1.5
baz=319,SNR=68
PKME Peaks-Kenny Pk 61.57 52 P P 21 23 27.7 -1.2
baz=319,SNR=21
WMQ Urumqi 61.57 306 P P 21 23 29.8 +0.7
WMQ PcP PcP 21 24 09.3 +1.3
WMQ PP PP 21 25 54.0 +6.3
WMQ S S 21 31 29.8 +1.0
WMQ ScS SKKSac 21 32 50.5 -2.5
WMQ SS SS 21 35 35.8 +1.5
WMQ pmax pmax
comp=Z,41nm,1.3s
WMQ pmax pmax
comp=Z,170nm,3.6s
WMQ LR LR
comp=Z,2μm,14.3s
WMQ LR LR
comp=Z,950nm,15.9s
WMQ LR LR
comp=Z,1μm,17.5s
R56A Bull Pasture M 61.58 63 P P 21 23 28.3 -0.9
baz=318,SNR=32
K61A Williamstown 61.59 56 P P 21 23 28.2 -0.9
baz=318,SNR=24
L60A Shokan 61.62 57 P P 21 23 28.7 -0.7
baz=318,SNR=41
O58A Lewisberry 61.62 60 P P 21 23 28.5 -0.9
baz=318,SNR=64
N59A State Game Lan 61.63 59 IAmb IAmb 21 23 32.3
comp=Z,282nm,1.1s
N59A State Game Lan 61.63 59 P P 21 23 28.4 -1.0
baz=318,SNR=80
I62A Tamworth 61.64 54 P P 21 23 28.1 -1.3
baz=318,SNR=7.2
Q57A Strasburg 61.64 62 P P 21 23 28.4 -1.2
baz=318,SNR=19
PAGS Pennsylvania G 61.65 60 IAmb IAmb 21 23 32.0
comp=Z,205nm,1.2s
U54A Nelsons Funny 61.66 66 P P 21 23 29.4 -0.4
baz=318,SNR=32
H63A New Sharon 61.67 52 P P 21 23 28.4 -1.2
baz=319,SNR=16
V53A Saluda 61.74 68 P P 21 23 29.5 -0.8
baz=318,SNR=23
Z50A Ashland 61.78 72 IAmb IAmb 21 23 31.4
comp=Z,237nm,0.9s
Z50A Ashland 61.78 72 P P 21 23 28.9 -1.6
baz=318,SNR=109
T55A Pulaski 61.79 65 P P 21 23 30.0 -0.6
baz=318,SNR=73
L61A Hillsdale 1, H 61.80 57 P P 21 23 29.8 -0.8
baz=318,SNR=28
BVAR Borovoye Array 61.82 323 P P 21 23 30.9 +0.5
comp=Z,47nm,0.6s,baz=49,slow=6.8,SNR=184
BVAR PcP PcP 21 24 08.7 0.0
comp=Z,20nm,0.6s,baz=46,slow=3.6,SNR=7.0
BVAR pP pP 21 24 31.4 +1.9
comp=Z,25nm,0.9s,baz=80,slow=4.6,SNR=2.0
G64A Maxfield 61.83 51 P P 21 23 29.5 -1.2
baz=319,SNR=14
BRVK Borovoye 61.83 323 P P 21 23 31.3 +0.8
BRVK IAmb IAmb 21 24 40.8
comp=Z,227nm,1.2s
BRVK Borovoye 61.83 323 ceP P 21 23 30.9 +0.4
BRVK pmax pmax
comp=Z,143nm,1.3s
MK31 Makanchi Array 61.85 311 i P P 21 23 30.7 -0.2
MKAR Makanchi Array 61.85 311 P P 21 23 30.4 -0.4
comp=Z,9.2nm,0.5s,baz=48,slow=5.8,SNR=133
MKAR PcP PcP 21 24 09.3 +0.3
comp=Z,8.3nm,0.6s,baz=50,slow=5.9
MKAR pP pP 21 24 31.5 +1.5
comp=Z,13nm,1.0s,baz=288,slow=0.8,SNR=2.1
MKAR PKPPKP P'P'df 21 52 32.6 -5.7
comp=Z,1.8nm,0.8s,baz=245,slow=4.7,SNR=12
O59A Robesonia 61.86 60 P P 21 23 30.3 -0.7
baz=318,SNR=49
I63A Otisfield 61.87 53 IAmb IAmb 21 23 32.4
comp=Z,130nm,1.0s
I63A Otisfield 61.87 53 P P 21 23 30.1 -0.9
baz=319,SNR=19
J62A Henniker 61.89 55 P P 21 23 30.2 -0.9
baz=318,SNR=15
P58A Pank, Wackersv 61.89 61 P P 21 23 30.1 -1.0
baz=318,SNR=18
SVE Sverdlovsk 61.89 330 d iP P 21 23 31.7 +0.8
SVE eS S 21 31 34.1 +1.9
SVE e 21 32 48.0
SVE pmax pmax
comp=Z,134nm,1.1s
M60A Port Jervis 61.91 58 P P 21 23 30.4 -0.9
baz=318,SNR=92
BLA Blacksburg 61.91 65 P P 21 23 30.8 -0.6
baz=318,SNR=54
W53A Cullowhee 61.91 68 P P 21 23 30.5 -1.0
baz=318,SNR=43
MAKZ Makanchi 61.98 312 P P 21 23 31.3 -0.4
MAKZ Makanchi 61.98 312 P P 21 23 31.3 -0.4
MAKZ pmax pmax
comp=Z,32nm,0.9s
N60A Cedar Hill Far 62.00 59 P P 21 23 31.4 -0.5
baz=318,SNR=76
MVL Millersville 62.01 60 IAmb IAmb 21 23 33.4
comp=Z,101nm,0.7s
S56A Natural Bridge 62.03 64 P P 21 23 31.6 -0.5
baz=318,SNR=27
L61B Northampton 62.04 56 P P 21 23 30.9 -1.2
baz=318,SNR=16
H64A Troy 62.07 52 P P 21 23 31.1 -1.2

	baz=319,SNR=10.0						
APYP	Conner	62.08	262	eP	P	21 23 31.6	-1.1
U55A	TA2, Sparta	62.09	66	P	P	21 23 32.0	-0.7
	baz=318,SNR=114						
Q58A	Fox Den Farm,	62.10	62	P	P	21 23 32.0	-0.5
	baz=318,SNR=62						
ODNJ	Ogdensburg	62.10	58	IAmb	IAmb	21 23 34.5	
	comp=Z,348nm,1.2s						
K62A	Royalston	62.10	55	IAmb	IAmb	21 23 34.5	
	comp=Z,123nm,0.9s						
K62A	Royalston	62.10	55	P	P	21 23 31.5	-1.0
	baz=318,SNR=20						
R57A	Stanardsville	62.13	63	P	P	21 23 32.1	-0.6
	baz=318,SNR=60						
V54A	Nebo	62.14	67	P	P	21 23 32.1	-0.8
	baz=318,SNR=27						
Z51A	Franklin	62.16	71	IAmb	IAmb	21 23 33.6	
	comp=Z,157nm,0.7s						
SDMD	Soldier's Deli	62.19	61	IAmb	IAmb	21 23 35.5	
	comp=Z,166nm,1.1s						
NSS	Namsos	62.20	358	eP	P	21 23 33.1	+0.3
NSS				eS	S	21 31 37.3	+1.5
J63A	Strafford	62.21	54	P	P	21 23 32.4	-0.7
	baz=319,SNR=5.2						
P59A	Jarrettsville	62.25	60	P	P	21 23 32.9	-0.6
	baz=318,SNR=63						
T56A	Rocky Mt	62.26	65	P	P	21 23 32.8	-0.8
	baz=318,SNR=30						
O60A	Telford	62.26	59	P	P	21 23 32.6	-0.9
	baz=318,SNR=52						
S57A	Dark Hollow, R	62.30	63	IAmb	IAmb	21 23 37.0	
	comp=Z,158nm,1.0s						
S57A	Dark Hollow, R	62.30	63	P	P	21 23 33.4	-0.5
	baz=318,SNR=35						
X53A	Estanollee	62.33	69	P	P	21 23 33.4	-0.8
	baz=318,SNR=60						
M61A	Granite Spring	62.35	57	P	P	21 23 33.1	-1.1
	baz=318,SNR=17						
L62A	Suffield	62.36	56	P	P	21 23 32.1	-2.1
	baz=318						
Y52A	Lilburn	62.38	70	IAmb	IAmb	21 23 36.2	
	comp=Z,138nm,0.8s						
Y52A	Lilburn	62.38	70	P	P	21 23 33.1	-1.4
	baz=318,SNR=30						
R58A	Rapidan	62.40	62	P	P	21 23 33.7	-0.8
	baz=318,SNR=48						
I64A	Boothbay	62.42	53	P	P	21 23 33.1	-1.4
	baz=319						
G65A	Princeton	62.42	51	P	P	21 23 33.3	-1.2
	baz=320,SNR=17						
K63A	Dunstable	62.43	55	P	P	21 23 33.4	-1.2
	baz=319,SNR=14						
CAUP	Cauayan	62.46	261	eP	P	21 23 31.1	-4.1
H65A	Eastbrook	62.48	51	P	P	21 23 33.7	-1.3
	baz=319,SNR=17						
V55A	Taylorsville	62.48	66	IAmb	IAmb	21 23 36.9	
	comp=Z,149nm,0.7s						
V55A	Taylorsville	62.48	66	P	P	21 23 34.6	-0.6
	baz=318,SNR=26						
N61A	South Mountain	62.50	58	P	P	21 23 34.4	-0.7
	baz=318,SNR=24						
PAL	Palisades	62.51	58	IAmb	IAmb	21 23 38.0	
	comp=Z,301nm,1.0s						
PAL	Palisades	62.51	58	P	P	21 23 34.3	-0.9
	baz=318						
P60A	Greenville	62.52	60	IAmb	IAmb	21 23 37.9	
	comp=Z,204nm,1.4s						
P60A	Greenville	62.52	60	P	P	21 23 34.2	-1.0
	baz=318,SNR=20						
W54A	Cherokee Point	62.52	68	P	P	21 23 34.7	-0.7
	baz=318,SNR=31						
CD2	Chengdu	62.55	285⇓	iP	P	21 23 36.3	+0.6
CD2				pP	pP	21 24 34.5	-0.4
CD2				PP	PP	21 25 55.8	-0.7
CD2				S	S	21 31 41.8	+0.6
CD2				pmax	pmax		
	comp=Z,70nm,0.6s						
CD2				pmax	pmax		
	comp=Z,580nm,5.3s						
CD2				LR	LR		
	comp=Z,3µm,25.5s						
CD2				LR	LR		
	comp=Z,3µm,20.4s						
CD2				LR	LR		
	comp=Z,2µm,18.5s						
HRV	Adam Dziewonsk	62.55	55	P	P	21 23 34.5	-1.0
HRV	Adam Dziewonsk	62.55	55	P	P	21 23 34.5	-1.0
HRV				pmax	pmax		
	comp=Z,81nm,1.0s						
U56A	King	62.57	65	P	P	21 23 35.0	-0.7
	baz=318,SNR=48						
CPNY	Central Park	62.64	58	IAmb	IAmb	21 23 38.9	
	comp=Z,332nm,1.0s						
BRAL	Brewton	62.67	74	P	P	21 23 35.7	-0.8
	baz=318,SNR=14						
M62A	Hamden	62.69	57	P	P	21 23 35.2	-1.1
	baz=319,SNR=8.3						
Q59A	Harwood	62.69	61	P	P	21 23 35.4	-1.1
	baz=318						
T57A	Hurt	62.70	64	IAmb	IAmb	21 23 38.5	
	comp=Z,291nm,1.3s						
T57A	Hurt	62.70	64	P	P	21 23 35.7	-0.8
	baz=318,SNR=51						
R58B	Mineral	62.72	63	IAmb	IAmb	21 23 39.5	
	comp=Z,126nm,0.8s						
R58B	Mineral	62.72	63	P	P	21 23 35.9	-0.7
	baz=318,SNR=29						
WES	Weston	62.76	55	IAmb	IAmb	21 23 37.1	
	comp=Z,112nm,0.8s						
GZH	Guangzhou	62.77	272	P	P	21 23 34.5	-2.6
GZH				pP	pP	21 24 27.8	-8.6
GZH				S	S	21 31 37.0	-7.0
GZH				LR	LR		
	comp=Z,1µm,17.7s						
GZH				LR	LR		
	comp=Z,1µm,18.4s						
N62A	Caumsett State	62.78	57	P	P	21 23 35.6	-1.4
CBN	Corbin Frederi	62.80	62	P	P	21 23 36.2	-1.0
	baz=319						
X54A	Belton	62.81	68	P	P	21 23 36.9	-0.4
	baz=318,SNR=88						
GGN	Saint George	62.81	50	IAmb	IAmb	21 23 38.7	
	comp=Z,130nm,0.9s						
ARU	Arti	62.84	331	P	P	21 23 37.5	+0.4
ARU				IAmb	IAmb	21 23 39.4	
	comp=Z,83nm,0.7s						
ARU	Arti	62.84	331c	iP	P	21 23 37.4	+0.3
ARU						21 24 12.6	
ARU				*PP	pP	21 24 38.2	+1.8
ARU						21 25 58.7	
ARU				PPP	PPP	21 27 31.0	
ARU				S	S	21 31 46.7	+2.8
ARU						21 32 58.6	
ARU				SS	SS	21 35 59.7	+6.6
ARU				pmax	pmax		
	comp=Z,104nm,0.8s						
ARU				MLR	MLR		
	comp=Z,1µm,17.0s						
EMMW	East Machias	62.84	51	IAmb	IAmb	21 23 38.9	
	comp=Z,148nm,0.9s						
H66A	Whiting	62.85	51	P	P	21 23 36.1	-1.2
	baz=320,SNR=20						
O61A	Allentown	62.86	59	P	P	21 23 37.0	-0.5
	baz=318,SNR=20						
S58A	Poland Farm, P	62.88	63	IAmb	IAmb	21 23 41.3	
	comp=Z,137nm,0.8s						
S58A	Poland Farm, P	62.88	63	P	P	21 23 37.2	-0.6
	baz=318,SNR=29						
152A	Waverly Hall	62.89	71	IAmb	IAmb	21 23 38.3	
	comp=Z,131nm,0.8s						
V56A	Mocksville	62.91	66	P	P	21 23 37.1	-0.8
	baz=318,SNR=70						
PAULI	Pauline	62.92	68	IAmb	IAmb	21 23 39.4	
	comp=Z,124nm,0.7s						
R59A	King George, V	62.94	62	P	P	21 23 37.1	-1.0
	baz=318,SNR=12						
KMSC	Kings Mountain	62.94	67	IAmb	IAmb	21 23 39.8	
	comp=Z,239nm,0.8s						
KMSC	Kings Mountain	62.94	67	P	P	21 23 37.3	-0.9
	baz=318,SNR=41						
MOIG	Morelia	62.99	93	IAmb	IAmb	21 23 40.8	
	comp=Z,186nm,1.0s						
L63A	North Scituate	63.01	56	P	P	21 23 37.0	-1.4
	baz=319,SNR=7.7						
Q60A	Greensboro	63.01	60	IAmb	IAmb	21 23 39.4	
	comp=Z,108nm,0.6s						
Q60A	Greensboro	63.01	60	P	P	21 23 36.7	-1.9
	baz=318						
GOGA	Godfrey	63.04	70	IAmb	IAmb	21 23 40.2	
	comp=Z,190nm,0.8s						
GOGA	Godfrey	63.04	70	P	P	21 23 37.4	-1.4
	baz=318,SNR=44						
P61A	Hammonton	63.05	59	IAmb	IAmb	21 23 41.0	
	comp=Z,300nm,1.0s						
P61A	Hammonton	63.05	59	P	P	21 23 37.6	-1.2
	baz=319						
U57A	Blanch	63.07	65	P	P	21 23 38.2	-0.8
	baz=318,SNR=88						
T58A	Grand View Acr	63.12	64	P	P	21 23 38.1	-1.2
	baz=318,SNR=54						
M63A	Gales Ferry	63.14	56	P	P	21 23 37.8	-1.5
	baz=319,SNR=18						
LMN	Caledonia Moun	63.17	48	IAmb	IAmb	21 23 40.8	
	comp=Z,188nm,0.7s						
R60A	Leonardtown, M	63.17	61	P	P	21 23 38.9	-0.7
	baz=318,SNR=8.2						
S59A	Mechanicsville	63.17	62	P	P	21 23 39.2	-0.5
	baz=318,SNR=13						
KLMR	Klimovskoe	63.21	343c	iP	P	21 23 38.4	-1.0
KLMR				e*PP	pP	21 24 36.0	-2.8
KLMR				e		21 26 01.0	
KLMR				PPP	PPP	21 27 35.9	
KLMR				S	S	21 31 45.1	-3.2
KLMR						21 33 00.6	
KLMR				pmax	pmax		
	comp=Z,95nm,0.9s						
KLMR	Klimovskoe	63.21	343⇑	iP	P	21 23 38.5	-1.0
KLMR			⇑	iP	P	21 23 38.5	-1.0
KLMR			⇑	iP	P	21 23 38.5	-1.0
KLMR				AMP		21 23 40.2	
	comp=Z,95nm,0.9s						
KLMR				epP	pP	21 24 36.1	-2.8
KLMR				ePP	PP	21 26 01.1	-0.3
KLMR				PPP	PPP	21 27 35.9	
KLMR				S	S	21 31 45.1	-3.2
KLMR				S	S	21 31 45.1	-3.2
KLMR				ScS	SKKSac	21 33 00.7	-3.9
KLMR				ScS	SKKSac	21 33 00.7	-3.9
N63A	Mattituck	63.22	57	P	P	21 23 38.5	-1.3
	baz=319						
V57A	Coltrane Farms	63.24	65	P	P	21 23 39.1	-1.0
	baz=318,SNR=30						
X55A	Gracelyn & Ava	63.28	68	P	P	21 23 39.5	-0.8
	baz=318,SNR=106						
L64A	Middleborough	63.33	55	P	P	21 23 39.3	-1.3
	baz=319						
W56A	Indian Trail	63.36	66	P	P	21 23 39.7	-1.2
	baz=318,SNR=17						
Q61A	Milford	63.37	60	P	P	21 23 40.4	-0.5
	baz=319						
BRZS	Berezniki	63.39	319⇑	iP	P	21 23 40.8	-0.1
BRZS				eS	S	21 31 51.1	0.0
BRZS	Berezniki	63.39	319c	iP	P	21 23 40.8	-0.1
BRZS				eS	S	21 31 51.0	0.0
M64A	Tiverton	63.44	56	P	P	21 23 40.2	-1.1
	baz=319,SNR=10						
TBLU	Trondheim	63.51	359	eP	P	21 23 41.0	-0.4
TBLU				IVmB_BB		21 23 41.3	
	comp=Z,1µm,1.4s						
TBLU				eS	S	21 31 53.8	+1.8
U58A	Oxford	63.52	64	P	P	21 23 41.0	-1.0
	baz=318,SNR=12						
BALP	Baler	63.55	261	eP	P	21 23 44.6	+2.3
Y55A	Saluda	63.55	68	P	P	21 23 41.1	-1.0
	baz=318,SNR=89						
S60A	Water View	63.55	62	P	P	21 23 41.1	-1.0
	baz=319,SNR=5.3						
DRLN	Deer Lake	63.59	42	IAmb	IAmb	21 23 44.2	
	comp=Z,191nm,0.8s						
X56A	White Oak	63.59	67	P	P	21 23 41.5	-0.9
	baz=318,SNR=69						
JSC	Jenkinsville	63.62	68	IAmb	IAmb	21 23 44.2	
	comp=Z,118nm,0.7s						
T59A	Double "B" Far	63.63	63	P	P	21 23 41.9	-0.7
	baz=319,SNR=62						
V58A	Windy Hill, Pi	63.67	65	P	P	21 23 42.3	-0.5
	baz=319,SNR=54						
W57A	Gilead	63.67	66	IAmb	IAmb	21 23 44.2	
	comp=Z,172nm,0.7s						
W57A	Gilead	63.67	66	P	P	21 23 42.1	-0.8
	baz=318,SNR=32						
M65A	Busby, Falmout	63.71	55	P	P	21 23 41.6	-1.4
	baz=319						
PVCP	Virac	63.74	257	eP	P	21 23 40.3	-3.3
SMPP	San Manuel, Pa	63.75	262	eP	P	21 23 41.6	-2.1
R61A	Willards	63.77	61	P	P	21 23 42.6	-0.9
	baz=319						
T60A	Surry	63.94	62	P	P	21 23 43.5	-1.0
	baz=319						
U59A	Littleton	63.96	64	IAmb	IAmb	21 23 49.2	
	comp=Z,115nm,0.7s						
U59A	Littleton	63.96	64	P	P	21 23 44.2	-0.5
	baz=319,SNR=27						
Y56A	Pelion	63.96	68	P	P	21 23 43.8	-1.0
	baz=319,SNR=6.3						
S61A	Accomac	64.09	61	P	P	21 23 44.6	-0.9
	baz=319						
X57A	Johnson Farm,	64.13	67	P	P	21 23 45.4	-0.5
	baz=319,SNR=18						
POLP	Polillo Island	64.13	260	eP	P	21 23 49.5	+3.4
V59A	Middlesex	64.16	64	P	P	21 23 45.5	-0.5
	baz=319,SNR=49						
GYA	Guiyang	64.18	280⇓	iP	P	21 23 47.0	+0.5
GYA				pP	pP	21 24 38.5	-7.5
GYA				S	S	21 32 00.5	-1.1
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,250nm,7.4s						
GYA				LR	LR		
	comp=Z,2µm,16.7s						
GYA				LR	LR		
	comp=Z,1µm,15.7s						
GYA				LR	LR		
	comp=Z,570nm,15.7s						
W58A	Raeford	64.18	66	P	P	21 23 45.6	-0.6
	baz=319,SNR=29						
MOL	Molde	64.20	0	eP	P	21 23 46.3	+0.4
MOL				IVmB_BB		21 23 52.2	
	comp=Z,2µm,3.3s						
U60A	Pendleton	64.21	63	P	P	21 23 46.0	-0.3
	baz=319,SNR=16						
Z56A	Williston	64.28	68	P	P	21 23 46.4	-0.5
	baz=319,SNR=20						
Y57A	Sumter	64.30	67	P	P	21 23 46.5	-0.5
	baz=319,SNR=17						
CNP	Catarman	64.31	256	eP	P	21 23 50.5	+3.2
TIGA	Tifton	64.44	71	P	P	21 23 46.7	-1.3
	baz=319,SNR=7.8						
FIA1	FINESS Array S	64.45	351	IAmb	IAmb	21 23 49.2	
	comp=Z,134nm,0.9s						
FINES	FINESS Array B	64.45	351	P	P	21 23 47.2	-0.3
	comp=Z,87nm,0.8s,baz=17,slow=8.0,SNR=187						
FINES				PcP	PcP	21 24 18.9	-0.4
	comp=Z,14nm,0.6s,baz=13,slow=5.0,SNR=4.5						
FINES				pP	pP	21 24 48.8	+1.7
	comp=Z,33nm,1.0s,baz=19,slow=12,SNR=2.6						
FINES				PP	PP	21 26 14.1	+1.9
	comp=Z,32nm,0.9s,baz=12,slow=9.8,SNR=4.6						
FINES				PKPPKP	P'P'df	21 52 28.8	-7.2
	comp=Z,1.3nm,0.6s,baz=245,slow=3.6,SNR=3.3						
X58A	Rowland	64.47	66	IAmb	IAmb	21 23 49.9	
	comp=Z,159nm,0.8s						
X58A	Rowland	64.47	66	P	P	21 23 47.6	-0.5
	baz=319,SNR=12						
W59A	Clinton	64.50	65	P	P	21 23 47.8	-0.5
	baz=319,SNR=9.6						
AKN	Aaknes	64.59	1	eP	P	21 23 49.4	+0.9
AKN				IVmBBB		21 23 49.5	
	comp=Z,2µm,1.6s						
AKN				eS	S	21 32 09.1	+3.7
HAL	Halifax	64.66	49	IAmb	IAmb	21 23 50.8	
	comp=Z,206nm,1.5s						
Z57A	Bowman	64.67	68	P	P	21 23 49.0	-0.4
	baz=319,SNR=34						
V60A	Jim Taylor Roa	64.69	64	IAmb	IAmb	21 23 51.8	
	comp=Z,195nm,0.7s						
V60A	Jim Taylor Roa	64.69	64	P	P	21 23 48.9	-0.5
	baz=319,SNR=14						
U61A	Possum Corner	64.69	63	P	P	21 23 48.6	-0.9
	baz=319,SNR=14						
DOMB	Dombas	64.73	359	eP	P	21 23 49.6	+0.2
DOMB				IVmBBB		21 24 16.6	
	comp=Z,2µm,4.0s						
DOMB				eS	S	21 32 08.4	+1.3
CNNC	Cliffs of the	64.74	65	IAmb	IAmb	21 23 51.7	
	comp=Z,165nm,0.8s						
CNNC	Cliffs of the	64.74	65	P	P	21 23 49.2	-0.6
	baz=319						
Y58A	Scranton	64.78	67	P	P	21 23 49.6	-0.5
	baz=319,SNR=15						
X59A	McDuffie Farm,	64.86	66	P	P	21 23 50.1	-0.5
	baz=319,SNR=19						
RABL	Rabaul	64.94	220	IAmb	IAmb	21 23 56.0	
	comp=Z,73nm,0.6s						
TDK	Taldyqorghan	64.96	312	eP	P	21 23 51.7	+0.5
TDK				eS	S	21 32 10.8	+0.3
TDK	Taldyqorghan	64.96	312	eP	P	21 23 51.6	+0.5
TDK				eS	S	21 32 10.7	+0.3
157A	Early Branch	64.97	69	P	P	21 23 51.0	-0.3
	baz=319,SNR=21						
GBN	Guysborough	64.97	47	IAmb	IAmb	21 23 53.9	
	comp=Z,176nm,1.1s						
W60A	Pink Hill	64.98	65	P	P	21 23 50.8	-0.6
	baz=319						
V61A	Roper	65.03	63	P	P	21 23 51.3	-0.4
	baz=319,SNR=8.1						
NHSC	New Hope	65.10	68	P	P	21 23 52.2	+0.1
	baz=319,SNR=28						
Z58A	St. Stephen	65.13	67	P	P	21 23 51.9	-0.5
	baz=319,SNR=29						
Y59A	Loris	65.15	66	P	P	21 23 51.7	-0.7
	baz=319,SNR=12						
FOO	Floro	65.16	2	eP	P	21 23 52.2	+0.2
FOO				eS	S	21 32 16.5	+4.4
BOAC	Boac	65.19	259	eP	P	21 23 55.4	+2.5
X60A	Albert Glenn T	65.19	65	P	P	21 23 52.1	-0.6
	baz=319,SNR=18						
W61A	Ground Anchor	65.27	64	P	P	21 23 52.6	-0.6
	baz=319,SNR=5.3						
158A	Hollywood	65.37	68	P	P	21 23 53.3	-0.6
	baz=319,SNR=7.7						
Z59A	Georgetown, SC	65.49	67	P	P	21 23 54.1	-0.6
	baz=319,SNR=7.5						
Y60A	Bolivia	65.50	66	P	P	21 23 53.4	-1.3
	baz=319,SNR=10						
OCLP	Ormoc	65.52	255	eP	P	21 23 56.2	+1.2
V62A	Hyde County Ai	65.53	63	P	P	21 23 54.0	-0.9
	baz=320						
HYA	Hoyanger	65.60	1	eP	P	21 23 55.7	+0.8
HYA				eS	S	21 32 16.0	-1.6
PUL	Pulkovo	65.61	348c	eP	P	21 23 55.9	+1.0
PUL				pmax	pmax		
	comp=Z,148nm,0.9s						
PGP	Puerto Galera	65.68	260⇓	iP	P	21 23 57.3	+1.2
PGP				eS	pP	21 24 55.5	-0.6
SUE	Sulen	65.69	2	eP	P	21 23 56.4	+1.0
SUE				eS	S	21 32 21.4	+2.8
NB2	NORSAR Subarra	65.71	358	P	P	21 23 55.7	0.0
	comp=Z,41nm,0.7s,baz=1.5,slow=6.9						
NB2	NORSAR Subarra	65.71	358	P	P	21 23 55.7	0.0
	baz=1.5,slow=6.9						
NOA	NORSAR Array B	65.71	358	P	P	21 23 55.6	-0.1
	comp=Z,38nm,0.7s,baz=1.3,slow=6.4,SNR=151						
NOA				PcP	PcP	21 24 25.2	+0.5
	comp=Z,2.9nm,0.6s,baz=359,slow=2.7,SNR=4.5						
NOA				pP	pwP	21 24 58.1	-2.0
	comp=Z,1.3nm,0.7s,baz=4.9,slow=17,SNR=2.5						
NOA				PP	PP	21 26 23.7	+0.3
	comp=Z,10nm,1.0s,baz=1.9,slow=6.4,SNR=3.3						
NOA				PKPPKP	P'P'df	21 52 30.6	-3.5
	comp=Z,13nm,1.1s,baz=168,slow=2.8,SNR=5.4						
NBO00	NORSAR Array S	65.73	359	IAmb	IAmb	21 25 06.9	
	comp=Z,321nm,1.4s						
LUBP	Lubang	65.91	260	eP	P	21 23 58.3	+0.7
NAO01	NORSAR Array S	65.92	358	IAmb	IAmb	21 25 08.0	
	comp=Z,352nm,1.4s						
OTRP	Odiongan	65.96	258	eP	P	21 23 58.1	+0.3
NC602	NORSAR Array S	66.01	358	eP	P	21 23 57.7	+0.2
NC602				eS	S	21 32 24.9	+2.3
NC602	NORSAR Array S	66.01	358	IAmb	IAmb	21 25 08.5	
	comp=Z,406nm,1.4s						
KPKS	Kokpek	66.05	311	eP	P	21 23 57.7	-0.5
KPKS				eS	S	21 32 24.3	+0.6
KPKS	Kokpek	66.05	311	eP	P	21 23 57.7	-0.5
KPKS				eS	S	21 32 24.3	+0.6
SKAR	Skarslia	66.10	360	eP	P	21 23 58.8	+0.6
SKAR				IVmB_BB		21 24 02.5	
	comp=Z,3µm,5.1s						
SKAR				eS	S	21 32 26.4	+2.7
MSLP	Maasin	66.11	254	eP	P	21 23 59.1	+0.3
UZB	Uzynbulak	66.14	311	eP	P	21 23 58.9	-0.1
UZB				eS	S	21 32 25.6	+0.5
UZB	Uzynbulak	66.14	311	eP	P	21 23 58.8	-0.1
UZB				eS	S	21 32 25.5	+0.5
ASK	Askoy	66.28	2	eP	P	21 23 59.8	+0.6
ASK				eS	S	21 32 31.6	+5.9
BER	Bergen	66.38	1	eP	P	21 24 00.5	+0.7
BER				IVmBBB		21 24 57.8	
	comp=Z,3µm,3.7s						
BER				eS	S	21 32 31.9	+5.0
ZHN	Zhinishke	66.39	311	iP	P	21 24 00.3	-0.1
ZHN				iS	S	21 32 28.4	+0.4
ZHN				eS	S	21 32 28.4	+0.4
ZHN	Zhinishke	66.39	311	iP	P	21 24 00.3	-0.1
ZHN				eS	S	21 32 28.3	+0.4
LRW	Lerwick	66.41	5	eP	P	21 24 00.4	+0.4
CHKK	Chushkaly	66.49	313	eP	P	21 24 00.2	-0.7
CHKK				eS	S	21 32 28.8	-0.1
CHKK	Chushkaly	66.49	313	eP	P	21 24 00.1	-0.7
CHKK				eS	S	21 32 28.8	-0.1
HFS	Hagfors	66.56	357	PKPPKP		21 52 29.4	
	comp=Z,3.3nm,1.0s,baz=130,slow=6.6,SNR=4.2						
BUTP	Butuan	66.62	253	eP	P	21 24 02.5	+0.5
KUU	Kurty	66.74	313	eP	P	21 24 01.7	-0.8
KUU				eS	S	21 32 33.2	+1.2
KUU	Kurty	66.74	313	eP	P	21 24 01.7	-0.8
KUU				eS	S	21 32 33.1	+1.2
BTLS	Baital	66.81	315	eP	P	21 24 02.9	+0.1
BTLS				eS	S	21 32 33.0	+0.5
BTLS	Baital	66.81	315	eP	P	21 24 02.9	+0.1
BTLS				eS	S	21 32 33.0	+0.5
OSL	Oslo	66.83	359	eP	P	21 24 03.6	+1.0
OSL				eS	S	21 32 36.9	+4.6
ODD1	Odda	66.87	1	eP	P	21 24 03.6	+0.7
ODD1				eS	S	21 32 34.9	+2.0
MDOK	Medeo	67.01	312	iP	P	21 24 04.1	-0.3
MDOK				eS	S	21 32 34.7	-0.7
MDOK	Medeo	67.01	312	iP	P	21 24 04.0	-0.3
MDOK				eS	S	21 32 34.7	-0.7
GUIM	Jordan	67.02	256	eP	P	21 24 01.6	-3.0
AAA	Alma-Ata	67.03	312	eP	P	21 24 03.8	-0.6
AAA				eS	S	21 32 36.3	+0.8
AAA	Alma-Ata	67.03	312	eP	P	21 24 03.8	-0.6
AAA				eS	S	21 32 36.3	+0.8
KONO	Kongsberg	67.13	359	eP	P	21 24 05.4	+0.8
KONO				IVmBBB		21 24 06.8	
	comp=Z,1µm,1.1s						
KONO				eS	S	21 32 37.8	+1.9
KONO	Kongsberg	67.13	359	P	P	21 24 04.6	0.0
KONO				IAmb	IAmb	21 25 15.4	
	comp=Z,210nm,1.2s						
KONO	Kongsberg	67.13	359	P	P	21 24 04.6	0.0
KONO				pmax	pmax		
	comp=Z,210nm,1.3s						
TNSS	Tian-Shan	67.16	312	eP	P	21 24 06.1	+0.5
TNSS	Tian-Shan	67.16	312	eP	P	21 24 06.1	+0.5
VSU	Vasula	67.31	349	eP	P	21 24 06.2	+0.5
VSU	Vasula	67.31	349c	eP	P	21 24 05.7	0.0
VSU				pmax	pmax		
	comp=Z,681nm,0.8s						
MTBS	Maitube	67.31	312	eP	P	21 24 07.0	+0.9
MTBS				eS	S	21 32 35.1	-3.7
MTBS	Maitube	67.31	312	eP	P	21 24 07.0	+0.9
MTBS				eS	S	21 32 35.1	-3.7
BUSP	Coron	67.31	259	eP	P	21 24 07.4	+1.1
BLS5	Blasjo	67.36	1	eP	P	21 24 06.6	+0.6
BLS5				IVmB_BB		21 25 17.1	
	comp=Z,2µm,8.6s						
BLS5				eS	S	21 32 40.5	+1.8
KMI	Kunming	67.49	282	P	P	21 24 08.5	+0.8
KMI				sP	sP	21 25 34.8	-1.8
KMI				S	S	21 32 41.0	-0.7
KMI				SKS	SKiKP	21 33 33.3	-2.9
KMI				SS	SS	21 37 04.3	-2.9

KMI pmax pmax
comp=Z,94nm,1.2s
KMI pmax pmax
comp=Z,540nm,6.5s
KMI LR LR
comp=Z,2μm,21.4s
KMI LR LR
comp=Z,2μm,20.2s
KMI LR LR
comp=Z,1μm,20.9s
KMI Kunming 67.49 282 IAmb IAmb 21 24 11.6
comp=Z,128nm,1.2s
KMY Karmoy 67.55 2 eP P 21 24 07.8 +0.7
KMY eS S 21 32 45.9 +5.0
STRU Stroemstad 67.72 358 eP P 21 24 08.8 +0.5
TAOE Nuku Hiva Isla 67.77 146 eP P 21 24 09.4 +0.2
comp=Z,394nm,1.0s
TAOE Nuku Hiva Isla 67.77 146 eT T 22 37 19.9
comp=Z,129nm,0.3s
TAOE Nuku Hiva Isla 67.77 146 IAmb IAmb 21 24 11.9
comp=Z,129nm,0.8s
BUKP Musuan 67.82 252 eP P 21 24 12.5 +2.9
SGDS Sogindy 67.84 314 iP P 21 24 10.2 +0.8
SGDS eS S 21 32 45.7 +0.7
BIGH Upper Bighouse 67.87 7 eP P 21 24 09.6 +0.4
BIGH IAmb IAmb 21 24 11.2
comp=Z,116nm,0.9s
QIZ Qiongzhong 67.96 272 P P 21 24 11.0 +0.6
QIZ pP pP 21 25 12.5 +1.8
QIZ S S 21 32 48.5 +1.6
QIZ ScS ScS 21 33 43.8 +1.1
QIZ pmax pmax
comp=Z,470nm,10.4s
LEWI Lewis, Hebride 67.99 8 eP P 21 24 10.3 +0.3
USP Ospenovka 68.04 314 P P 21 24 11.4 +0.8
SNR=40
MLA1 Latheron 68.10 6 eP P 21 24 11.6 +1.0
CHMS Chumysh 68.15 313 P P 21 24 12.3 +1.1
SNR=27
DWPF Disney Wildern 68.18 72 P P 21 24 11.7 +0.1
DWPF Disney Wildern 68.18 72 P P 21 24 11.4 -0.3
baz=320
KBK Karagaybulak 68.34 313 P P 21 24 13.4 +0.8
SNR=32
MOS Moscow 68.38 343 eP P 21 24 11.2 -1.2
MOS eS S 21 32 47.8 -2.9
MOS e 21 33 39.9
MOS pmax pmax
comp=Z,104nm,0.7s
ENPP El Nido 68.40 259 eP P 21 24 11.4 -1.7
SNART Snartemo 68.45 0 eP P 21 24 14.3 +1.5
HOMB Homborsund 68.52 360 eP P 21 24 13.8 +0.6
HOMB eS S 21 32 55.0 +2.7
AAK Ala-Archa 68.55 313 P P 21 24 14.6 +0.7
comp=Z,44nm,0.8s,baz=96,slow=2.5,SNR=97
AAK Ala-Archa 68.55 313 P P 21 24 14.7 +0.8
SNR=51
AAK Ala-Archa 68.55 313 iP P 21 24 14.6 +0.7
SNR=65
AAK Ala-Archa 68.55 313 P P 21 24 14.1 +0.2
AAK IAmb IAmb 21 25 26.2
comp=Z,161nm,1.4s
AAK Ala-Archa 68.55 313 ceP P 21 24 14.6 +0.7
AAK pmax pmax
comp=Z,80nm,1.0s
SLIT Slitere, Latvi 68.56 352 eP P 21 24 13.3 -0.1
ABKAR Akbulak array 68.59 326 IAmb IAmb 21 25 25.8
comp=Z,393nm,1.8s
KZA Kyzart 68.68 313 P P 21 24 15.8 +0.8
SNR=16
GENI Genyem 68.69 233 P P 21 24 16.7 +1.8
comp=Z,4μmcomp=Z,198nm,1.0s
GENI Genyem 68.69 233 P P 21 24 16.7 +1.8
comp=Z,4μmcomp=Z,198nm,1.0s
KAC Achnashellach 68.76 8 eP P 21 24 14.9 +0.2
PAGZ Pagadian 68.81 254 eP P 21 24 13.8 -1.8
MCD Coleburn Disti 68.83 7 eP P 21 24 15.4 +0.3
EKS2 Erkin-Say 68.84 314 P P 21 24 16.6 +0.9
SNR=13
SMPI Sarmi 68.87 234 P P 21 24 17.7 +1.8
comp=Z,3μmcomp=Z,141nm,1.5s
SMPI Sarmi 68.87 234 P P 21 24 17.7 +1.8
comp=Z,3μmcomp=Z,141nm,1.5s
UCH Uchtor 68.88 313 P P 21 24 17.5 +1.2
SNR=13
KPL Plockton 68.89 8 eP P 21 24 15.6 +0.2
MDO Dochfour 68.89 7 eP P 21 24 15.9 +0.4
OBN Obninsk 69.16 343 P P 21 24 16.6 -0.6
OBN IAmb IAmb 21 25 28.7
comp=Z,196nm,1.3s
OBN Obninsk 69.16 343 ciP P 21 24 16.0 -1.2
OBN i 21 24 38.2
OBN i*PP pwP 21 25 20.6 -1.8
OBN pmax pmax
comp=Z,73nm,1.0s
SKMP Bagumbayan, Su 69.22 252 eP P 21 24 17.7 -0.5
AML Almayashu 69.31 314 P P 21 24 19.9 +1.0
SNR=6.2
DRUM Mains of Drumt 69.54 6 eP P 21 24 19.2 -0.3
DRUM IAmb IAmb 21 24 22.0
comp=Z,203nm,0.9s
DZA Taraz 69.69 316 eP P 21 24 20.4 -0.4
DZA eS S 21 33 05.7 -1.0
DZA Taraz 69.69 316 eP P 21 24 20.3 -0.4
DZA eS S 21 33 05.6 -1.0
EDU Dundee 69.87 7 eP P 21 24 21.8 +0.2
INVG Invergeldie, C 69.92 7 eP P 21 24 21.3 -0.5
IZAR Zarasai 70.03 349 eP P 21 24 23.2 +0.7
PBUR Paburge 70.18 352 eP P 21 24 24.0 +0.7
PBUR IAmb IAmb 21 24 25.0
comp=Z,185nm,0.7s
BRLS Borolday 70.20 317 eS S 21 33 15.9 +3.4
ISAL Salakas 70.21 349 eP P 21 24 24.3 +0.7
ISAL IAmb IAmb 21 24 25.9
comp=Z,37nm,0.7s
TEIG Tepich 70.26 83 P P 21 24 23.9 -0.4
TEIG IAmb IAmb 21 24 28.8
comp=Z,96nm,0.9s
MUD Monsted U'grnd 70.34 359 iP P 21 24 25.0 +0.7
comp=Z,84nm,0.9s
MUD i 21 25 34.6
MUD Monsted U'grnd 70.34 359 iP P 21 24 25.0 +0.7
MUD pmax pmax
comp=Z,84nm,0.9s
JBG Jabagly 70.41 316 ciP P 21 24 25.6 +0.4
JBG eS S 21 33 16.7 +1.5
IIGN Ignalina 70.42 349 eP P 21 24 25.5 +0.6
KSH Kashi 70.42 310 P P 21 24 29.0 +3.7
KSH PP PP 21 27 10.0 +5.4
KSH S S 21 33 15.3 -0.1
KSH SKS SKSac 21 33 58.8 -1.5
KSH SS SS 21 37 55.8 +4.6
KSH pmax pmax
comp=Z,38nm,1.8s
KSH pmax pmax
comp=Z,550nm,7.1s
KSH LR LR
comp=Z,800nm,10.9s
KSH LR LR
comp=Z,850nm,10.5s
KSH LR LR
comp=Z,2μm,15.1s
PGBU Glenifferbraes 70.50 7 eP P 21 24 25.6 +0.3
PGBU IAmb IAmb 21 24 27.1
comp=Z,158nm,1.0s
PABE Paberze 70.50 350 eP P 21 24 26.1 +0.7
PABE IAmb IAmb 21 24 27.5
comp=Z,302nm,0.8s
WAMI Wamena 70.51 233 P P 21 24 28.2 +2.3
comp=Z,164nm,0.8s
WAMI Wamena 70.51 233 P P 21 24 28.2 +2.3
comp=Z,164nm,0.8s
ESY Stoneypath 70.53 6 eP P 21 24 25.6 +0.2
EAU Auchinoon 70.54 7 eP P 21 24 26.3 +0.7
LSA Lhasa 70.54 294 P P 21 24 27.8 +1.2
LSA Lhasa 70.54 294 P P 21 24 28.0 +1.4
LSA Lhasa 70.54 294 IAmb IAmb 21 24 31.4
comp=Z,100nm,0.8s
EBL Broad Law 70.64 7 eP P 21 24 26.3 +0.1
RKPI Ransiki, Papua 70.71 239 P P 21 24 28.5 +1.3
comp=Z,5μmcomp=Z,461nm,1.4s
RKPI Ransiki, Papua 70.71 239 P P 21 24 28.5 +1.3
comp=Z,5μmcomp=Z,461nm,1.4s
NACGM Naroch 70.79 349 eP P 21 24 26.0 -1.1
NACGM PM 21 24 28.0
comp=Z,0.4nm,1.0s
NACGM epP pP 21 25 12.0 -16
NACGM esP pwP 21 25 32.0 -0.6
NACGM ePP PP 21 27 04.0 -3.1
NACGM ePPP PPP 21 29 46.0
NACGM eS S 21 33 14.0 -4.9
NACGM esS ScS 21 34 14.0 +10
NACGM eSS SS 21 38 04.0 +8.3
NACGM eSSS SSS 21 41 10.0
NACGM eLQ LQ 21 45 33.0
NACGM eLR LR 21 49 28.0
IUG Iuzhnay 70.85 316 eP P 21 24 28.5 +0.6
IUG eS S 21 33 20.2 0.0
IUG Iuzhnay 70.85 316 eP P 21 24 28.4 +0.6
IUG eS S 21 33 20.2 0.0
CHM Chimkent 70.88 316 eP P 21 24 28.0 0.0
CHM iS S 21 33 20.9 +0.5
CHM eS S 21 33 21.6 +1.2
CHM Chimkent 70.88 316 eP P 21 24 27.9 0.0
CHM eS S 21 33 21.6 +1.2
CCIG Comitan 71.02 88 IAmb IAmb 21 24 31.4
comp=Z,336nm,1.7s
COP Copenhagen 71.05 357 iP P 21 24 29.6 +1.0
comp=Z,77nm,1.0s
COP i 21 25 38.7
COP Copenhagen 71.05 357 iP P 21 24 29.6 +1.0
COP pmax pmax
comp=Z,77nm,1.0s
EKA Eskdalemuir Ar 71.07 7 PKPKPKP 21 52 16.2
comp=Z,9.1nm,1.0s,baz=165,slow=3.5,SNR=8.4
ESK Eskdalemuir 71.08 7 eP P 21 24 28.6 -0.2
ESK IAmb IAmb 21 24 30.7
comp=Z,69nm,0.8s
ESK Eskdalemuir 71.08 7 P P 21 24 28.4 -0.4
ESK Eskdalemuir 71.08 7 P P 21 24 28.4 -0.4
ESK pmax pmax
comp=Z,69nm,0.8s
LPSR Galich'ya Gora 71.11 341 eP P 21 24 28.7 -0.3
LPSR eS S 21 33 19.2 -3.4
LPSR pmax pmax
comp=Z,60nm,0.8s
LPSR smax smax
comp=E,90nm,3.5s
BATP Bataraza 71.28 259 eP P 21 24 32.6 +2.0
GAL1 Galloway 71.42 8 eP P 21 24 30.5 -0.3
GAL1 IAmb IAmb 21 24 32.5
comp=Z,110nm,0.9s
MSVF Nonsavu 71.53 190 P P 21 24 32.2 +0.2
MSVF IAmb IAmb 21 24 35.3
comp=Z,216nm,1.4s
MSVF Nonsavu 71.53 190 P P 21 24 32.2 +0.2
MSVF pmax pmax
comp=Z,216nm,1.4s
BSD Bornholm Skovb 71.54 356 iP P 21 24 32.0 +0.5
BSD i 21 25 41.1
BSD Bornholm Skovb 71.54 356 iP P 21 24 32.0 +0.5
EDMD Edmundbyers 71.65 6 eP P 21 24 32.4 +0.2
PMG Port Moresby 71.67 223 P P 21 24 32.9 +0.1
PMG IAmb IAmb 21 24 36.0
comp=Z,190nm,1.2s
PMG Port Moresby 71.67 223 ceP P 21 24 33.5 +0.7
PMG pmax pmax
comp=Z,640nm,1.2s
SWI Sorong 71.67 242 P P 21 24 33.9 +1.0
comp=Z,4μmcomp=Z,6μmcomp=Z,423nm,1.1s
SWI Sorong 71.67 242 P P 21 24 33.9 +1.0
comp=Z,4μmcomp=Z,6μmcomp=Z,423nm,1.1s
KLNR Kaliningrad 71.73 353 ciP P 21 24 32.2 -0.4
KLNR pmax pmax
comp=Z,286nm,1.1s
VRH Novokhopyorsk 71.85 338 eP P 21 24 33.1 -0.3
VRH pmax pmax
comp=Z,80nm,0.6s
VORR Voronezh 71.94 340 eP P 21 24 32.0 -1.9
VORR pmax pmax
comp=Z,250nm,1.0s
KOHI KOHIMA 71.99 289 eP P 21 24 35.1 +0.3
KOHI IAmb IAmb 21 24 41.2
comp=Z,58nm,0.5s
TEZP TEZPUR 72.03 290 eP P 21 24 34.2 -0.7
TEZP IAmb IAmb 21 24 40.4
comp=Z,19nm,0.7s
IOMK Kirk Michael 72.03 8 eP P 21 24 34.2 -0.3
IOMK IAmb IAmb 21 24 36.1
comp=Z,155nm,0.8s
SUW Suwalki 72.06 351 eP P 21 24 34.0 -0.6
SUW eS S 21 33 30.8 -2.5
SUW eL L 21 44 04.3
comp=Z,2μm,28.1s
SUW Suwalki 72.06 351 eP P 21 24 34.0 -0.6
SUW eS S 21 33 30.8 -2.5
SUW MLR MLR
comp=Z,2μm,28.1s
GDLE Glaisdale, N Y 72.13 5 eP P 21 24 34.4 -0.7
WIM Isle of Man 72.13 8 eP P 21 24 35.0 -0.1
RGN Rugen 72.16 357 eP P 21 24 35.9 +0.7
comp=Z,245nm,1.0s,baz=2.0,slow=5.6
RGN eS S 21 33 35.9 +1.4
RGN Rugen 72.16 357 eP P 21 24 36.5 +1.3
RGN Rugen 72.16 357 IAmb IAmb 21 24 38.2
comp=Z,180nm,0.8s
VSR Storozhevoye 72.38 340 eP P 21 24 36.4 -0.2
VSR eS S 21 33 34.4 -2.6
VSR pmax pmax
comp=Z,60nm,0.5s
VSR smax smax
comp=N,30nm,1.3s
TNTI Ternate 72.39 246 P P 21 24 36.6 -0.5
TNTI IAmb IAmb 21 24 40.5
comp=Z,169nm,1.4s
VORD Divnogorie 72.59 340 eP P 21 24 38.0 +0.2
VORD pmax pmax
comp=Z,60nm,0.6s
HLG Helgoland 72.61 0 eP P 21 24 39.0 +1.1
comp=Z,204nm,1.1s,baz=2.0,slow=5.6
BSEG Bad Segeberg 72.85 359 eP P 21 24 39.7 +0.5
comp=Z,88nm,1.0s,baz=2.0,slow=5.6
BSEG epP pwP 21 25 49.5 +4.5
BSEG eS SKiKP 21 33 43.8 +0.8
WPS Cemaes, Angles 72.89 8 eP P 21 24 39.7 +0.2
WPS IAmb IAmb 21 24 41.0
comp=Z,72nm,1.1s
FAKI Fak Fak 72.90 240 P P 21 24 41.1 +1.0
comp=Z,5μmcomp=Z,5μmcomp=Z,377nm,1.1s
FAKI Fak Fak 72.90 240 P P 21 24 41.1 +1.0
comp=Z,5μmcomp=Z,5μmcomp=Z,377nm,1.1s
FAKI Fak Fak 72.90 240 IAmb IAmb 21 24 44.8
comp=Z,219nm,0.8s
WME Myndd Eilian 72.91 8 eP P 21 24 38.7 -1.0
WLF1 Llynfaes 73.01 8 eP P 21 24 39.5 -0.7
YRC Rhoscolyn 73.03 8 eP P 21 24 40.6 +0.2
LBWR Ladybower, Pea 73.09 6 eP P 21 24 41.1 +0.4
LBWR IAmb IAmb 21 24 42.5
comp=Z,98nm,1.1s
GKP Gorka Klasztor 73.26 354 eP P 21 24 42.0 +0.3
GKP eS S 21 33 47.0 +0.2
GKP eL L 21 47 45.2
comp=Z,1μm,18.9s
GKP Gorka Klasztor 73.26 354 eP P 21 24 42.0 +0.3
GKP eS S 21 33 47.0 +0.2
GKP MLR MLR
comp=Z,1μm,18.9s
SHL Shillong 73.36 290 eP P 21 24 42.4 -0.6
SHL IAmb IAmb 21 24 46.4
comp=Z,49nm,0.7s
STNC Stoke 73.37 6 eP P 21 24 42.8 +0.5
STNC IAmb IAmb 21 24 44.4
comp=Z,146nm,0.8s
PPT Papeete 73.41 158 P P 21 24 43.2 +0.3
comp=Z,28nm,0.8s,baz=73,slow=14,SNR=3.6
PPT2 Papeete2 73.44 158 eP P 21 24 43.7 +0.6
comp=Z,155nm,1.4s
PPTF Pamatai, Papee 73.44 158 P P 21 24 43.3 +0.1
PPTF IAmb IAmb 21 24 50.6
comp=Z,212nm,1.4s
TIAR Tiarei 73.46 158 eP P 21 24 43.4 +0.2
comp=Z,97nm,1.0s
TIAR Tiarei 73.46 158 eT T 22 44 53.3
comp=Z,5.1nm,0.3s
LBMI Labuha 73.49 245 P P 21 24 44.1 +0.5
comp=Z,2μmcomp=Z,103nm,1.5s
LBMI Labuha 73.49 245 P P 21 24 44.1 +0.5
comp=Z,2μmcomp=Z,103nm,1.5s
FOEL Foel Wylfa 73.50 7 eP P 21 24 43.1 0.0
FOEL IAmb IAmb 21 24 45.6
comp=Z,129nm,0.7s
LLW Llanuwychllyn 73.50 7 eP P 21 24 43.0 -0.1
LLW IAmb IAmb 21 24 45.0
comp=Z,65nm,0.8s
PAE Paea 73.50 158 eP P 21 24 43.5 +0.1
comp=Z,24nm,1.3s
TVO Taravao 73.69 157 eP P 21 24 45.0 +0.4
comp=Z,61nm,1.3s
CWF Charnwood Fore 73.78 6 eP P 21 24 44.9 +0.3
GTK Tadong 73.79 294 eP P 21 24 45.8 +0.3
GTK IAmb IAmb 21 24 50.1
comp=Z,64nm,0.2s
BBSR BB Station 73.85 57 P P 21 24 44.8 -0.6
HLM1 Long Mynd 73.89 7 eP P 21 24 45.7 +0.3
WACR West Acre 73.90 5 eP P 21 24 43.8 -1.5
WACR IAmb IAmb 21 24 47.9
comp=Z,300nm,0.8s
RETH Rethem/Aller, 74.06 359 eP P 21 24 46.8 +0.5
comp=Z,74nm,1.0s,baz=2.0,slow=5.6
RETH epP pwP 21 25 56.4 +4.0
MEH Mehetia 74.06 156 eP P 21 24 47.0 +0.3
comp=Z,30nm,1.2s
RUE Ruedersdorf 74.22 356 eP P 21 24 47.6 +0.4
comp=Z,162nm,1.1s,baz=2.0,slow=5.6
RUE eS S 21 33 57.9 +0.4
RUE Ruedersdorf 74.22 356 eP P 21 24 48.0 +0.8
TAPN Taplejung 74.25 295 eP P 21 24 48.1 -0.2
NRDL Niedersach Rie 74.30 359 eP P 21 24 48.0 +0.4
comp=Z,56nm,0.9s,baz=2.0,slow=5.6
NRDL eS S 21 33 57.9 -0.4
RSBS Rosebush, Pemb 74.30 8 eP P 21 24 47.6 -0.2
RSBS IAmb IAmb 21 24 49.9
comp=Z,125nm,1.0s
MCH1 Michaelchurch 74.40 7 eP P 21 24 46.7 -1.6
MCH1 IAmb IAmb 21 24 50.5
comp=Z,50nm,0.8s
BEL Belsk 74.43 352 eP P 21 24 49.1 +0.6
BEL eS S 21 33 59.3 -0.6
BEL eL L 21 44 59.6
comp=Z,2μm,20.5s
BEL Belsk 74.43 352 eP P 21 24 49.1 +0.6
BEL eS S 21 33 59.3 -0.6
BEL MLR MLR
comp=Z,2μm,20.5s
IBBN Ibbenburen 74.50 0 eP P 21 24 49.3 +0.4
comp=Z,167nm,0.9s,baz=2.0,slow=5.6
IBBN eS S 21 34 00.5 -0.2
CHTO Chiang Mai 74.58 281 P P 21 24 49.7 -0.2
CHTO Chiang Mai 74.58 281 P P 21 24 49.7 -0.2
CHTO pmax pmax
comp=Z,55nm,1.0s
AKASG Malin Array Be 74.59 346 P P 21 24 48.5 -0.9
comp=Z,34nm,0.6s,baz=16,slow=5.8,SNR=96
AKASG pP pP 21 25 51.9 +1.0
comp=Z,7.7nm,0.7s,baz=18,slow=6.1,SNR=1.5
AKASG PP PP 21 27 39.3 0.0
comp=Z,21nm,1.0s,baz=16,slow=8.4,SNR=4.4
AKASG Malin Array Be 74.59 346 eP P 21 24 48.5 -0.9
AKASG pmax pmax
comp=Z,35nm,0.6s
AKBB Malin Array Si 74.59 346 ciP P 21 24 48.4 -1.0
ASSE Asse, Remlinge 74.65 358 eP P 21 24 50.1 +0.4
comp=Z,77nm,1.2s,baz=2.0,slow=5.6
ASSE epP pwP 21 25 60.0 +4.2
STRD Stroud 74.68 7 eP P 21 24 49.9 0.0
STRD IAmb IAmb 21 24 51.9
comp=Z,108nm,0.8s
GUN Gumba 74.80 296 eP P 21 24 51.2 -0.2
comp=Z,258nm,0.5s
ODAN Odare 74.81 295 eP P 21 24 51.4 0.0
comp=Z,63nm,0.4s
JIRN Jiri 74.83 296 eP P 21 24 51.6 -0.1
comp=Z,245nm,0.3s
CMAR Chiang Mai Arr 74.86 281 P P 21 24 51.6 +0.1
comp=Z,42nm,0.7s,baz=26,slow=6.3,SNR=166
CMAR pP pP 21 25 55.1 +2.1
comp=Z,4.2nm,0.7s,baz=29,slow=4.5,SNR=1.2
CMAR Chiang Mai Arr 74.86 281 eP P 21 24 51.6 +0.1
CMAR pmax pmax
comp=Z,44nm,0.7s
CLZ Clausthal 74.94 359 eP P 21 24 52.2 +0.7
comp=Z,115nm,1.1s,baz=2.0,slow=5.6
CLZ eS S 21 34 06.9 +1.2
SWN1 Swindon 74.97 6 eP P 21 24 52.2 +0.7
SWN1 IAmb IAmb 21 24 53.6
comp=Z,142nm,0.7s
RAMN Ramite 75.17 295 eP P 21 24 53.1 -0.4
comp=Z,131nm,0.3s
WOL Wolverton 75.20 6 eP P 21 24 53.2 +0.3
WOL IAmb IAmb 21 24 54.8
comp=Z,94nm,0.8s
RAR Rarotonga 75.21 168 P P 21 24 54.0 +0.8
RAR IAmb IAmb 21 24 57.2
comp=Z,117nm,1.1s
RAR Rarotonga 75.21 168 P P 21 24 54.0 +0.8
RAR pmax pmax
comp=Z,117nm,1.2s
KKN Kakani 75.21 297 eP P 21 24 53.8 +0.2
comp=Z,146nm,0.8s
GTTG Gottingen 75.25 359 eP P 21 24 53.8 +0.6
comp=Z,130nm,1.1s,baz=2.0,slow=5.6
GTTG eS S 21 34 10.4 +1.5
PKI Pulchoki 75.32 296 eP P 21 24 53.9 -0.5
PKIN Phulchoki 75.32 296 eP P 21 24 53.8 -0.5
comp=Z,145nm,1.0s
SPMM Sapulut 75.34 258 P P 21 24 56.0 +1.7
BUG Bochum--Univer 75.36 1 eP P 21 24 53.8 0.0
comp=Z,77nm,0.9s,baz=2.0,slow=5.6
GKN Gorkha 75.38 297 eP P 21 24 54.4 -0.1
comp=Z,139nm,0.5s
CLL Collm 75.42 357 eP P 21 24 55.1 +1.0
comp=Z,68nm,1.0s,baz=2.0,slow=5.6
CLL epP pwP 21 26 04.6 +4.3
CLL eS S 21 34 11.4 +0.6
CLL Collm 75.42 357 ⇑iP P 21 24 55.1 +1.0
comp=Z,73nm,1.0s
CLL ePlp 21 24 59.0
comp=Z,500nm,22.2s
CLL epP pP 21 25 54.0 -1.7
CLL i 21 26 05.5
comp=Z,116nm,1.5s
CLL esP sP 21 26 23.0 -1.2
CLL e 21 26 35.0
CLL e(PPP) 21 29 18.0
CLL ePPPP 21 31 00.0
CLL eS S 21 34 10.0 -0.8
comp=N,900nm,18.1s
CLL eS S 21 34 10.0 -0.8
comp=E,2μm,19.5s
CLL ePS PnS 21 35 31.0 +3.7
CLL esS sS 21 36 01.0 -0.2
CLL eSS SS 21 39 06.0 +0.1
CLL esSS 21 40 42.0
CLL eSSS SSS 21 42 30.0
CLL eSSSS 21 44 54.0
CLL Collm 75.42 357 ⇑iP P 21 24 55.1 +1.0
CLL e*PP pP 21 25 54.0 -1.7
CLL eS S 21 34 10.0 -0.8
CLL pmax pmax
comp=Z,73nm,1.0s
DMN Daman 75.45 297 eP P 21 24 54.9 -0.1
NEUB Neuenburg 75.55 358 eP P 21 24 55.3 +0.4
comp=Z,140nm,1.0s,baz=2.0,slow=5.6
NEUB eS S 21 34 13.5 +1.2
DANN Dangsing 75.57 298 eP P 21 24 55.6 -0.2
comp=Z,485nm,0.7s
TGUH Tegucigalpa,Un 75.66 86 IAmb IAmb 21 24 58.7
comp=Z,181nm,0.8s
KSP Ksiaz 75.73 355 eP P 21 24 56.0 +0.1
KSP epP pwP 21 26 01.2 -1.1
KSP eS S 21 34 13.9 -0.4
KSP eL L 21 45 07.7
comp=Z,1μm,25.5s
KSP Ksiaz 75.73 355 eP P 21 24 56.0 +0.1
KSP e*PP pwP 21 26 01.2 -1.1
KSP eS S 21 34 13.9 -0.4
KSP MLR MLR
comp=Z,1μm,25.5s
FBE Freiberg 75.79 357 eP P 21 24 56.8 +0.6
comp=Z,180nm,1.3s,baz=2.0,slow=5.6
BRG Berggiesshubel 75.82 356 iP P 21 24 56.6 +0.2
comp=Z,89nm,0.9s
BRG pP pP 21 25 52.0 -6.1
BRG sP sP 21 26 22.0 -4.5

BRG PP PP 21 27 46.0 -3.6
BRG S S 21 34 16.0 +0.8
BRG SS SS 21 39 17.0 +5.1
BRG Berggiesshubel 75.82 356 eP P 21 24 56.6 +0.2
comp=Z,90nm,0.9s,baz=2.0,slow=5.6
BRG eS S 21 34 12.1 -3.1
BRG Berggiesshubel 75.82 356 iP P 21 24 56.6 +0.2
BRG 21 27 46.0
BRG S S 21 34 16.0 +0.8
BRG SS SS 21 39 17.0 +5.1
BRG pmax pmax
comp=Z,89nm,0.9s
UBBA Unterbreizbach 75.97 359 eP P 21 24 57.7 +0.5
comp=Z,61nm,1.6s,baz=2.0,slow=5.6
UBBA eS S 21 34 15.1 -1.6
CHVC Chvalec 76.00 355 eP P 21 24 57.4 -0.1
CHVC ex x 21 26 13.4
CHVC eS S 21 34 10.7 -6.6
CCA1 Carnmenellis 76.01 9 eP P 21 24 56.8 -0.7
OSTC Ostas 76.02 355 eP P 21 24 57.6 0.0
OSTC ex x 21 26 07.6
OSTC eS S 21 34 14.7 -2.8
UPC Upice 76.08 355 eP P 21 24 57.9 0.0
UPC ex x 21 26 14.8
UPC eS S 21 34 17.3 -0.9
UPC Upice 76.08 355 eP P 21 24 57.9 0.0
UPC eS S 21 34 17.3 -0.9
LVV L'vov 76.11 349 eP P 21 24 58.0 -0.1
LVV eS S 21 34 16.0 -2.5
LVV MLR MLR
comp=Z,630nm,16.0s
OJC Ojcow 76.12 352 eP P 21 24 57.2 -0.9
OJC eS S 21 34 09.6 -8.9
OJC eL L 21 45 32.0
comp=Z,2µm,19.8s
OJC Ojcow 76.12 352 eP P 21 24 57.2 -0.9
OJC eS S 21 34 09.6 -8.9
OJC MLR MLR
comp=Z,2µm,19.8s
MOX Moxa 76.12 358 eP P 21 24 58.5 +0.4
comp=Z,72nm,0.8s,baz=2.0,slow=5.6
MOX epP pwP 21 26 07.8 +3.3
MOX eS S 21 34 14.9 -3.6
PVCC Panska Ves 76.13 356 eP P 21 24 58.6 +0.4
PVCC ex x 21 26 14.8
PVCC eS S 21 34 15.3 -3.4
PVCC Panska Ves 76.13 356 eP P 21 24 58.6 +0.4
PVCC eS S 21 34 15.3 -3.4
DHRM DHARAMSHALA 76.19 306 eP P 21 24 58.6 -0.5
DHRM IAmb IAmb 21 25 02.4
comp=Z,104nm,0.9s
DPC Dobruska-Polom 76.22 355 eP P 21 24 59.1 +0.4
DPC epP pP 21 25 58.9 -1.6
DPC eS S 21 34 15.0 -4.8
DPC Dobruska-Polom 76.22 355 eP P 21 24 59.1 +0.4
DPC e 21 25 58.9
DPC eS S 21 34 15.0 -4.8
AHRW Bad Neuenahr-A 76.26 1 eP P 21 24 59.5 +0.6
comp=Z,70nm,1.0s,baz=2.0,slow=5.6
PLN Plauen 76.26 357 eP P 21 24 59.3 +0.3
comp=Z,25nm,0.7s,baz=2.0,slow=5.6
TANN Tannenbergstha 76.33 357 eP P 21 24 60.0 +0.6
comp=Z,109nm,1.2s,baz=2.0,slow=5.6
TANN eS S 21 34 20.8 -0.1
KWP Kalwaria Pacla 76.44 350 eP P 21 25 00.1 +0.2
KWP epP pwP 21 26 10.4 +4.0
KWP eS S 21 34 21.4 -0.6
KWP eL L 21 45 36.2
comp=Z,2µm,22.5s
KWP Kalwaria Pacla 76.44 350 IAmb IAmb 21 25 02.3
comp=Z,150nm,0.8s
KWP Kalwaria Pacla 76.44 350 eP P 21 25 00.1 +0.2
KWP eS S 21 34 21.4 -0.6
KWP MLR MLR
comp=Z,2µm,22.5s
WERN Wernitzgruen 76.46 357 eP P 21 25 00.7 +0.7
comp=Z,87nm,1.0s,baz=2.0,slow=5.6
KRLC Kraliky 76.47 354 eP P 21 25 00.4 +0.3
KRLC ex x 21 26 10.5
KRLC eS S 21 34 15.3 -7.2
KRLC Kraliky 76.47 354 eP P 21 25 00.4 +0.3
KRLC eS S 21 34 15.3 -7.2
NIL Nilore 76.48 309 P P 21 25 00.8 +0.3
NIL IAmb IAmb 21 26 13.4
comp=Z,176nm,1.1s
NIL Nilore 76.48 309 P P 21 25 00.8 +0.3
NIL pmax pmax
comp=Z,176nm,1.1s
NKC Novy Kostel 76.51 357 eP P 21 25 00.9 +0.6
NKC ex x 21 26 14.8
NKC eS S 21 34 20.5 -2.3
NKC Novy Kostel 76.51 357 eP P 21 25 00.9 +0.6
NKC eS S 21 34 20.5 -2.3
TNS Taunus Mts 76.58 360 eP P 21 25 01.1 +0.3
comp=Z,53nm,0.8s,baz=2.0,slow=5.6
TNS epP pwP 21 26 11.6 +4.4
TNS eS S 21 34 23.8 +0.1
PRA Prague 76.60 356 eP P 21 25 00.9 +0.1
PRA ex x 21 26 16.3
PRA eS S 21 34 18.2 -5.5
PRA Prague 76.60 356 eP P 21 25 00.9 +0.1
PRA eS S 21 34 18.2 -5.5
OKC Ostrava-Krasne 76.62 353 eP P 21 25 01.3 +0.4
OKC ex x 21 26 14.8
OKC eS S 21 34 17.9 -6.0
OKC Ostrava-Krasne 76.62 353 eP P 21 25 01.3 +0.4
OKC eS S 21 34 17.9 -6.0
PRU Pruhonice 76.67 356 eP P 21 25 01.6 +0.4
PRU ex x 21 26 16.3
PRU eS S 21 34 22.3 -2.2
PRU Pruhonice 76.67 356 eP P 21 25 01.6 +0.4
PRU eS S 21 34 22.3 -2.2
SMLA Simla 76.68 305 eP P 21 25 01.2 -0.3
SMLA IAmb IAmb 21 25 05.1
comp=Z,203nm,1.1s
MORC Moravsky Berou 76.72 354 ⇑iP P 21 25 01.9 +0.4
MORC esP pwP 21 26 12.7 +4.6
MORC eS S 21 34 25.1 -0.1
MORC Moravsky Berou 76.72 354 ⇑P P 21 25 01.9 +0.4
MORC Moravsky Berou 76.72 354 ⇑P P 21 25 01.9 +0.4
GOPC GO Pecny, Ondr 76.74 356 eP P 21 25 01.6 0.0
GOPC epP pP 21 26 04.7 +1.3
GOPC eS S 21 34 23.7 -1.6
GOPC GO Pecny, Ondr 76.74 356 eP P 21 25 01.6 0.0
GOPC e 21 26 04.7
GOPC eS S 21 34 23.7 -1.6
MANZ Manzenberg 76.77 357 eP P 21 25 02.2 +0.5
comp=Z,47nm,1.1s,baz=2.0,slow=5.6
MANZ eS S 21 34 26.1 +0.5
STHS Stebnicka Huta 76.79 351 eP P 21 25 02.8 +0.9
STHS pmax pmax
comp=Z,40nm,0.8s
STHS Stebnicka Huta 76.79 351 eP P 21 25 02.8 +0.9
NIE Niedzica 76.87 352 eP P 21 25 03.5 +1.1
NIE epP pwP 21 26 13.5 +4.6
NIE eS S 21 34 26.2 -0.6
NIE eL L 21 45 47.1
comp=Z,1µm,22.7s
NIE Niedzica 76.87 352 eP P 21 25 03.5 +1.1
NIE eS S 21 34 26.2 -0.6
NIE MLR MLR
comp=Z,1µm,22.7s
ROTZ Rotzenmuhle 76.98 357 eP P 21 25 03.7 +0.8
comp=Z,54nm,0.9s,baz=2.0,slow=5.6
ROTZ eS S 21 34 28.9 +1.0
PBCC Pribram 77.00 356 eP P 21 25 03.8 +0.8
GRA1 Grafenberg Arr 77.08 358 IAmb IAmb 21 25 06.4
comp=Z,135nm,0.9s
GRF Grafenberg Arr 77.08 358 eP P 21 25 04.4 +0.9
comp=Z,144nm,0.9s,baz=2.0,slow=5.6
GRF epP pwP 21 26 13.9 +3.9
GRF eS S 21 34 30.7 +1.8
WLF Walferdange 77.13 1 eP P 21 25 04.5 +0.8
comp=Z,50nm,0.9s,baz=2.0,slow=5.6
KOLS Kolonicke sedl 77.17 350 eP P 21 25 04.4 +0.4
KOLS pmax pmax
comp=Z,35nm,1.2s
KOLS Kolonicke sedl 77.17 350 eP P 21 25 04.4 +0.4
JLP Les Platons 77.20 7 eP P 21 25 04.1 -0.1
LANS Liptovska Anna 77.20 352 eP P 21 25 05.9 +1.7
LANS pmax pmax
comp=Z,73nm,1.1s

LANS Liptovska Anna 77.20 352 eP P 21 25 05.9 +1.7
SORM Soroca 77.22 346 ⇑P P 21 25 03.8 -0.5
SORM Soroca 77.22 346 ⇑P P 21 25 03.8 -0.5
VRAC Vranov 77.25 354 ⇑iP P 21 25 05.1 +0.7
VRAC esP pwP 21 26 16.4 +5.4
VRAC eS S 21 34 30.9 +0.1
VRAC Vranov 77.25 354 ⇑P P 21 25 05.1 +0.7
VRAC Vranov 77.25 354 ⇑P P 21 25 05.1 +0.7
JSA Saint Aubin 77.25 7 eP P 21 25 03.4 -1.0
JSA IAmb IAmb 21 25 06.0
comp=Z,86nm,0.8s
CRVS Cervenica-Dubn 77.28 351 eP P 21 25 05.4 +0.8
CRVS pmax pmax
comp=Z,43nm,1.0s
CRVS Cervenica-Dubn 77.28 351 eP P 21 25 05.4 +0.8
GOF Gofitskoye 77.30 335 ⇑iP P 21 25 05.7 +0.9
GOF eS S 21 34 32.9 +1.4
GOF pmax pmax
comp=Z,427nm,1.1s
GOF smax smax
comp=E,228nm,1.2s
TREC Trest 77.32 355 eP P 21 25 04.8 0.0
TREC ex x 21 26 19.2
TREC eS S 21 34 31.5 -0.1
TREC Trest 77.32 355 eP P 21 25 04.8 0.0
TREC eS S 21 34 31.5 -0.1
UZH Uzhgorod 77.47 350 ⇓iP P 21 25 04.3 -1.3
UZH e 21 25 16.6
UZH eS S 21 34 30.8 -2.3
UZH MLR MLR
comp=N,220nm,16.0s
UZH MLR MLR
comp=E,80nm,16.0s
UZH MLR MLR
comp=Z,100nm,16.0s
KRUC Moravsky 77.50 354 ⇑iP P 21 25 06.1 +0.3
KRUC esP pwP 21 26 17.3 +4.8
KRUC eS S 21 34 32.8 -0.7
KHC Kasperske Hory 77.57 356 eP P 21 25 07.0 +0.7
KHC epP pP 21 26 09.0 +0.8
KHC ex x 21 26 17.5
KHC ex x 21 26 46.5
KHC eS S 21 34 29.5 -4.8
KHC Kasperske Hory 77.57 356 eP P 21 25 07.0 +0.7
KHC e 21 26 09.0
KHC eS S 21 34 29.5 -4.8
WET Wettzell 77.58 357 eP P 21 25 06.5 +0.2
comp=Z,49nm,1.1s,baz=2.0,slow=5.6
WET epP pwP 21 26 16.8 +3.9
WET eS S 21 34 34.2 -0.2
DZM Mont Dzumac 77.62 200 eP P 21 25 07.7 +1.0
comp=Z,454nm,1.4s
DZM Mont Dzumac 77.62 200 IAmb IAmb 21 25 11.6
comp=Z,274nm,1.4s
JAVC Velka Javorina 77.63 354 ⇑iP P 21 25 08.1 +1.5
JAVC esP pwP 21 26 19.4 +6.2
JAVC eS S 21 34 37.0 +2.1
KBL Kabul 77.64 312 P P 21 25 06.5 -0.6
KBL Kabul 77.64 312 P P 21 25 06.5 -0.6
KBL pmax pmax
comp=Z,63nm,1.0s
KECS Kecovo 77.78 352 eP P 21 25 08.4 +1.0
KECS pmax pmax
comp=Z,28nm,1.0s
KECS Kecovo 77.78 352 eP P 21 25 08.4 +1.0
GEC2 GERESS Array S 77.85 356 eP P 21 25 08.8 +0.9
comp=Z,59nm,0.9s,baz=2.0,slow=5.6
GERES GERESS Array B 77.85 356 P P 21 25 08.6 +0.7
comp=Z,33nm,0.8s,baz=20,slow=4.3,SNR=135
GERES pP pwP 21 26 13.5 -1.0
comp=Z,2.9nm,0.8s,baz=58,slow=35,SNR=2.7
GERES PKP2bc 21 52 00.2
comp=Z,0.7nm,0.8s,baz=214,slow=1.0,SNR=6.2
VYHS Vyhne 77.91 353 eP P 21 25 08.8 +0.7
VYHS pmax pmax
comp=Z,57nm,1.0s
VYHS Vyhne 77.91 353 eP P 21 25 08.8 +0.7
TRPA Tarpa 77.94 350 ⇑P P 21 25 08.7 +0.5
SMOL Smolenice 77.99 354 eP P 21 25 09.9 +1.4
SMOL pmax pmax
comp=Z,42nm,1.0s
SMOL Smolenice 77.99 354 eP P 21 25 09.8 +1.3
STU Stuttgart 78.03 359 eP P 21 25 09.1 +0.3
comp=Z,76nm,0.8s,baz=2.0,slow=5.6
STU Stuttgart 78.03 359 IAmb IAmb 21 25 10.7
comp=Z,250nm,1.6s
MAK Makhachkala 78.06 332 eP P 21 25 09.4 +0.4
MAK e*PP pP 21 26 09.3 -1.7
MAK e*SP sP 21 26 35.7 -3.6
MAK ePPP PPP 21 29 58.4
MAK eS S 21 34 42.3 +2.7
MAK eSS SS 21 39 52.5 +6.5
MAK pmax pmax
comp=Z,446nm,1.1s
MAK MLR MLR
comp=Z,625nm,15.0s
BOK Bokaro 78.07 294 eP P 21 25 09.3 -0.1
BOK IAmb IAmb 21 25 13.7
comp=Z,33nm,0.6s
BOK ix x 21 26 17.8
MODS Modra-Piesok 78.14 354 eP P 21 25 09.7 +0.4
MODS e 21 26 15.5
MODS pmax pmax
comp=Z,120nm,1.1s
MODS Modra-Piesok 78.14 354 eP P 21 25 09.7 +0.4
MODS e 21 26 15.5
BBJ Bamboo Saint A 78.14 75 ⇓iP P 21 25 10.5 +0.7
BURAR Bucovina Array 78.15 348 ⇑P P 21 25 09.6 0.0
GTBY Guantanamo Bay 78.15 73 IAmb IAmb 21 25 13.0
comp=Z,136nm,0.8s
KIS Kishinev 78.27 346 eP P 21 25 10.0 0.0
comp=Z,180nm,1.5s
KIS epP pwP 21 26 21.0 +4.2
KIS Kishinev 78.27 346 ePPP PPP 21 30 08.0
KIS eS S 21 34 36.0 -5.7
comp=Z,1µm,8.0s
KIS eScS SKSac 21 34 56.0 -1.9
KIS Kishinev 78.27 346 eP P 21 25 10.0 0.0
KIS e 21 25 17.0
KIS e 21 28 11.0
KIS ePPP PPP 21 30 08.0
KIS eS S 21 34 36.0 -5.7
KIS e 21 34 56.0
KIS ePS 21 35 58.0
KIS eSS SS 21 39 54.0 +5.2
KIS pmax pmax
comp=Z,180nm,1.5s
KIS pmax pmax
comp=Z,1µm,8.0s
KIS smax smax
comp=N,1µm,8.0s
KIS MLR MLR
comp=Z,1µm,17.0s
BMR Baia Mare 78.29 349 ⇓P P 21 25 10.5 +0.4
BMR Baia Mare 78.29 349 ⇓P P 21 25 10.5 +0.4
GROC Groznyy 78.32 333 eP P 21 25 09.8 -0.6
GROC e 21 25 17.5
GROC e*PP pP 21 26 10.2 -2.2
GROC e*SP sP 21 26 38.1 -2.7
GROC pmax pmax
comp=Z,46nm,1.2s
ZST Bratislava 78.32 354 eP P 21 25 10.8 +0.5
ZST pmax pmax
comp=Z,102nm,1.0s
ZST Bratislava 78.32 354 eP P 21 25 10.8 +0.5
MILM Milestii Mici 78.34 346 ⇓P P 21 25 09.8 -0.6
KIV Kislovodsk 78.43 335 iP P 21 25 11.7 +0.6
SNR=18
KIV Kislovodsk 78.43 335 P P 21 25 11.7 +0.6
KIV Kislovodsk 78.43 335 eP P 21 25 11.4 +0.3
KIV e*PP pwP 21 26 16.0 -1.9
KIV e 21 28 12.4
KIV eS S 21 34 45.4 +1.7
KIV eSS SS 21 39 55.7 +4.1
KIV pmax pmax
comp=Z,202nm,1.1s
KIV pmax pmax
comp=Z,527nm,3.7s
KIV MLR MLR
comp=Z,915nm,19.0s
BFO Black Forest 78.48 360 eP P 21 25 12.0 +0.8
comp=Z,59nm,1.1s,baz=2.0,slow=5.6
BFO Black Forest 78.48 360 P P 21 25 11.8 +0.6

BFO Black Forest 78.48 360 P P 21 25 11.8 +0.6
BFO pmax pmax
comp=Z,93nm,1.3s
ACON Acoyapa 78.56 85 IAmb IAmb 21 25 12.9
comp=Z,160nm,1.6s
KBZ Khabaz 78.58 335 P P 21 25 12.6 +0.8
comp=Z,35nm,0.8s,baz=220,slow=0.7,SNR=36
KBZ pP pwP 21 26 17.9 -0.7
comp=Z,11nm,0.8s,baz=356,slow=4.1,SNR=2.2
KBZ Khabaz 78.58 335 c iP P 21 25 12.3 +0.5
KBZ pmax pmax
comp=Z,41nm,0.8s
FUR Furstenfeldbru 78.61 358 eP P 21 25 11.1 -0.8
comp=Z,92nm,0.8s,baz=2.0,slow=5.6
SRO Srobarova 78.62 353 eP P 21 25 13.3 +1.4
SRO pmax pmax
comp=Z,44nm,1.0s
SRO Srobarova 78.62 353 eP P 21 25 13.3 +1.4
STH Stony Hill 78.64 75 ⇓iP P 21 25 13.1 +0.5
CLF Chambon-Foret 78.66 4 IAmb IAmb 21 25 14.9
comp=Z,181nm,0.9s
CONA Conrad Observa 78.66 355 iP P 21 25 13.2 +0.9
comp=Z,104nm,1.0s,SNR=52
CONA iPP pP 21 26 14.6 +0.1
comp=Z,32nm,1.0s,SNR=8.1
PCJ Portland Cotta 78.71 76 ⇓iP P 21 25 13.3 +0.4
ARCR ARCALIA 78.77 349 ⇑P P 21 25 13.5 +0.7
MOA Molln 78.82 356 iP P 21 25 13.8 +0.8
comp=Z,27nm,0.8s,SNR=12
ANN Anapa 78.84 339 eP P 21 25 12.2 -1.0
ANN e*PP pwP 21 26 17.8 -2.2
ANN e 21 28 13.0
ANN eS S 21 34 48.0 +0.2
ANN e 21 35 02.9
ANN pmax pmax
comp=Z,108nm,1.4s
LEOM Leova 78.86 346 ⇓P P 21 25 13.4 +0.2
LEOM Leova 78.86 346 ⇓P P 21 25 13.4 +0.2
ESPN Las Esperanzas 78.89 85 IAmb IAmb 21 25 15.3
comp=Z,126nm,0.9s
TBI Tubuai 79.03 159 eP P 21 25 14.5 +0.2
comp=Z,312nm,1.5s
TBI Tubuai 79.03 159 eT T 22 51 39.9
comp=Z,17nm,0.3s
TESR Tescani 79.05 347 ⇑P P 21 25 13.8 -0.5
UBR Ueberruh 79.11 359 eP P 21 25 14.7 -0.1
comp=Z,98nm,1.3s,baz=2.0,slow=5.6
UBR eS S 21 34 51.7 +1.0
GEYT Alibeck 79.14 322 P P 21 25 15.2 +0.2
comp=Z,17nm,0.8s,baz=340,slow=3.9,SNR=47
GEYT pP pwP 21 26 20.4 -1.7
comp=Z,12nm,0.9s,baz=4.5,slow=7.6,SNR=4.1
BIR Birlad 79.15 346 ⇑P P 21 25 15.7 +0.8
BIR Birlad 79.15 346 ⇑P P 21 25 15.7 +0.8
ZEI Tsey 79.21 334 eP P 21 25 13.2 -2.3
ZEI pmax pmax
comp=Z,44nm,0.6s
CJR Cluj-Napoca 79.22 349 ⇓P P 21 25 15.5 +0.2
CJR Cluj-Napoca 79.22 349 ⇓P P 21 25 15.5 +0.2
DRGR 79.24 350 ⇑P P 21 25 15.1 -0.3
DRGR 79.24 350 ⇑P P 21 25 15.1 -0.3
RETA Reutte 79.30 358 iP P 21 25 16.4 +0.7
comp=Z,58nm,0.9s,SNR=19
ARSA Arzberg 79.36 355 iP P 21 25 16.9 +0.9
comp=Z,69nm,1.1s,SNR=32
ARSA iPP pwP 21 26 23.8 +0.8
comp=Z,18nm,0.9s,SNR=6.8
SIM Simferopol' 79.36 342 c eP P 21 25 17.3 +1.3
SIM eS S 21 34 47.2 -6.1
SIM pmax pmax
comp=Z,105nm,0.9s
GHRR 79.39 346 ⇑P P 21 25 17.1 +1.0
WATA Walderalm 79.43 358 iP P 21 25 17.1 +0.6
comp=Z,124nm,1.1s,SNR=38
MOTA Moosalm 79.43 358 iP P 21 25 17.1 +0.6
comp=Z,125nm,1.0s,SNR=52
MOTA iPP pwP 21 26 21.3 -2.1
comp=Z,34nm,1.1s,SNR=5.3
SOC Sochi 79.49 337 eP P 21 25 15.9 -0.8
SOC e*SP sP 21 26 47.8 +0.5
SOC e 21 28 18.9
SOC iS S 21 34 53.3 -1.4
SOC pmax pmax
comp=Z,68nm,0.8s
WTTA Wattenberg 79.50 358 iP P 21 25 17.7 +0.7
comp=Z,100nm,0.8s,SNR=39
WTTA epP pwP 21 26 24.7 +0.8
comp=Z,29nm,1.0s,SNR=7.0
DAVA Damuels 79.51 359 iP P 21 25 17.3 +0.3
comp=Z,56nm,0.9s,SNR=19
SQTA Sankt Quirin 79.55 358 iP P 21 25 18.0 +0.8
comp=Z,119nm,1.0s,SNR=36
SQTA iPP pwP 21 26 24.3 +0.2
comp=Z,29nm,0.8s,SNR=6.0
OZUR 79.57 348 ⇓P P 21 25 17.9 +0.7
KBA Koelnbreinsper 79.63 356 iP P 21 25 18.8 +1.1
comp=Z,257nm,1.1s,SNR=89
KBA iPP pwP 21 26 24.8 +0.2
comp=Z,90nm,0.9s,SNR=12
SBUM Sibu 79.65 260 P P 21 25 20.0 +2.0
VRI Vrincioaia 79.67 347 ⇑P P 21 25 18.3 +0.6
VRI Vrincioaia 79.67 347 ⇑P P 21 25 18.3 +0.6
PLOR Plostina 79.70 347 ⇓P P 21 25 18.3 +0.5
PLOR Plostina 79.70 347 ⇓P P 21 25 18.3 +0.5
PRVC Isla de Provid 79.70 82 eP P 21 25 18.8 +0.5
ODBI Odobesti 79.73 347 ⇑P P 21 25 19.1 +1.2
PETR Petresti 79.74 346 ⇑P P 21 25 19.6 +1.6
DOPR Dopca 79.75 348 ⇑P P 21 25 18.9 +0.8
FETA Feichten 79.76 358 iP P 21 25 19.2 +0.9
comp=Z,138nm,1.0s,SNR=41
FETA pP pwP 21 26 26.1 +0.8
comp=Z,27nm,0.8s,SNR=8.9
GIUM Giurgiulesti 79.83 346 ⇑P P 21 25 18.9 +0.4
SEVA Sevastopol 79.85 342 ⇑P P 21 25 17.0 -1.6
SIRR Siria 79.87 350 ⇑P P 21 25 18.7 0.0
SOKA Soboth 79.95 355 iP P 21 25 19.8 +0.5
comp=Z,117nm,1.0s,SNR=51
SOKA epP pwP 21 26 26.7 +0.4
comp=Z,66nm,1.2s,SNR=8.4
TBLG Delisi 79.97 333 IAmb IAmb 21 25 21.4
comp=Z,85nm,0.7s
BISRR Bisoca 79.98 347 ⇑P P 21 25 20.3 +0.8
ABTA Abfaltersbach 79.99 357 iP P 21 25 20.1 +0.6
comp=Z,106nm,1.2s,SNR=39
ABTA iPP pwP 21 26 28.1 +1.6
SNR=5.7
PERS Pernice 79.99 355 eP P 21 25 19.9 +0.5
JTS Las Juntas de 80.01 86 P P 21 25 19.7 -0.3
JTS Las Juntas de 80.01 86 P P 21 25 19.7 -0.3
JTS pmax pmax
comp=Z,16nm,0.6s
TLCR 80.04 345 ⇓P P 21 25 20.1 +0.5
TLCR 80.04 345 ⇓P P 21 25 20.1 +0.5
BEHE Becsehely 80.06 354 ⇑iP P 21 25 20.3 +0.6
MYKA Terra Mystica 80.07 356 eP P 21 25 20.2 +0.3
comp=Z,52nm,1.6s,SNR=13
MYKA epP pwP 21 26 26.6 -0.3
comp=Z,15nm,0.9s,SNR=8.8
GRER 80.11 347 ⇓P P 21 25 21.6 +1.6
MLR Muntele Rosu 80.14 347 ⇑P P 21 25 21.2 +0.8
MLR Muntele Rosu 80.14 347 ⇑P P 21 25 21.2 +0.8
CFR Carcaliu 80.15 346 ⇑P P 21 25 20.0 -0.2
CFR Carcaliu 80.15 346 ⇑P P 21 25 20.0 -0.2
GROS Grobnik 80.15 355 eP P 21 25 20.3 0.0
OBKA Obir 80.15 355 iP P 21 25 20.8 +0.5
comp=Z,68nm,0.8s,SNR=25
OBKA iPP pwP 21 26 26.6 -0.7
comp=Z,41nm,0.8s,SNR=5.7
MORH Mrgy, Hungar 80.19 353 ⇑iP P 21 25 19.8 -0.6
VOIR 80.31 348 ⇑P P 21 25 21.2 0.0
VOIR 80.31 348 ⇑P P 21 25 21.2 0.0
TUE Stuetta 80.33 359 IAmb IAmb 21 25 24.4
comp=Z,94nm,0.9s
TOPG Topolog 80.41 346 ⇓P P 21 25 21.8 +0.2
ARR Arges 80.43 348 ⇓P P 21 25 22.5 +0.7
JURR Jurilovca 80.44 345 ⇓P P 21 25 22.4 +0.7
LOT Lotru 80.45 349 ⇓P P 21 25 21.5 -0.4
BZS Buzias 80.52 350 ⇑P P 21 25 21.8 -0.4
BZS Buzias 80.52 350 ⇑P P 21 25 21.8 -0.4
MTUR Matau 80.52 348 ⇓P P 21 25 22.9 +0.6
MTUR Matau 80.52 348 ⇓P P 21 25 22.9 +0.6
AKH Akhalkalaki 80.60 334 ⇓P P 21 25 23.5 +0.6
LJU Ljubljana 80.61 355 ⇑iP P 21 25 22.3 -0.4
GZR Gura Zlata 80.62 350 ⇓P P 21 25 22.6 -0.2

GZR Gura Zlata 80.62 350 ⇓P P 21 25 22.6 -0.2
LGNH Logne 80.70 72 IAmb IAmb 21 25 25.9
comp=Z,86nm,0.6s
CRES Cresnjev 80.78 355⇑iP P 21 25 23.4 -0.2
TIRR Tirgusor 80.81 345 ⇓P P 21 25 22.3 -1.4
TIRR Tirgusor 80.81 345 ⇓P P 21 25 22.3 -1.4
SULR 80.90 347 ⇓P P 21 25 23.6 -0.6
GOLR 80.91 348 ⇑P P 21 25 25.1 +0.9
BWNR Bhubaneshwar 80.92 292 eP P 21 25 24.7 0.0
BWNR IAmb IAmb 21 25 29.0
comp=Z,52nm,0.8s
CEY Cerknica 80.92 355 eP P 21 25 24.1 -0.2
CEY Cerknica 80.92 355⇑iP P 21 25 23.8 -0.5
SC01 Santiago de lo 81.02 70 IAmb IAmb 21 25 29.6
comp=Z,205nm,0.9s
SDDR Presa de Saban 81.07 70 IAmb IAmb 21 25 27.7
comp=Z,62nm,0.7s
BOJS Bojanci 81.11 355 eP P 21 25 25.2 -0.1
SALO Salr 81.17 358 IAmb IAmb 21 25 28.0
comp=Z,108nm,0.8s
HUMR Humele 81.21 348 ⇑P P 21 25 25.4 -0.4
ICOR Ion Corvin 81.23 346 ⇓P P 21 25 26.9 +1.0
SRE Strehaia 81.29 349 ⇓P P 21 25 25.9 -0.4
SRE Strehaia 81.29 349 ⇓P P 21 25 25.9 -0.4
RIY Rijeka 81.33 355⇑iP P 21 25 26.1 -0.3
MDVR Moldovita 81.33 350 ⇓P P 21 25 26.3 -0.2
MANR Mangalia 81.41 345 ⇓P P 21 25 27.9 +1.1
GNI Garni 81.44 332 iP P 21 25 28.8 +1.5
SNR=9.3
GNI 81.44 332 P P 21 25 26.4 -1.0
GNI Garni 81.44 332c iP P 21 25 28.3 +0.9
GNI pmax pmax
comp=Z,148nm,1.1s
SSB Saint Sauveur 81.48 3 IAmb IAmb 21 26 41.3
comp=Z,152nm,1.4s
KSM Kuching 81.56 261 IAmb IAmb 21 25 31.9
comp=Z,117nm,1.1s
KSM Kuching 81.56 261 P P 21 25 30.0 +2.0
COPA Copaceanca 81.57 348 ⇑P P 21 25 27.1 -0.6
PUNG Punghina 81.70 349 ⇑P P 21 25 28.2 -0.2
BNI Bardonecchia 81.75 1 IAmb IAmb 21 26 44.0
comp=Z,211nm,1.3s
BLY Banja Luka 81.75 353⇑iP P 21 25 28.3 -0.3
RAZG Razgrad 81.96 347 ⇓P P 21 25 29.6 -0.2
ZIMR 82.02 347 ⇓P P 21 25 30.2 +0.1
ZIMR 82.02 347 ⇓P P 21 25 30.2 +0.1
PRMA PARMA 82.03 358 IAmb IAmb 21 26 44.7
comp=Z,294nm,1.2s
MGRS Mrkonjic Grad 82.09 353⇑iP P 21 25 31.7 +1.3
DIVS Divibare 82.18 351⇑iP P 21 25 30.4 -0.6
HAPS Han Pijesak,Bl 82.28 352 eP P 21 25 30.7 -0.8
DIKM Dikmen 82.31 340 ⇓P P 21 25 32.5 +0.9
PLVB Pleven 82.38 348 ⇑P P 21 25 32.1 +0.1
BBLS Lazići 82.46 352⇑iP P 21 25 32.5 +0.1
PVL Pavlikeni 82.46 347 iP P 21 25 33.2 +0.9
MSSA Maissana 82.49 359 IAmb IAmb 21 25 34.1
comp=Z,80nm,0.8s
MPEP Malo Peshtene 82.52 349 iP P 21 25 31.9 -0.8
DGPR DIGLIPUR 82.55 282 eP P 21 25 32.4 -0.7
DGPR IAmb IAmb 21 25 36.3
comp=Z,92nm,1.1s
VLC Villacollemand 82.63 358 IAmb IAmb 21 26 47.5
comp=Z,196nm,1.4s
ELND Elena 82.67 347 ⇓P P 21 25 33.0 -0.4
RUDO Rudo 82.71 352⇑iP P 21 25 33.2 -0.4
MMRI Maumere 83.01 245 IAmb IAmb 21 26 43.1
comp=Z,93nm,0.6s
BHPL Bhopal 83.02 300 eP P 21 25 34.8 -0.8
BHPL ix x 21 26 46.8
JMB Yambol 83.03 346 iP P 21 25 36.6 +1.3
UPM Unac-Piva 83.16 352 eP P 21 25 35.9 -0.3
PGB Panagyurishte 83.26 348 iP P 21 25 37.5 +0.9
VTS Vitosha 83.31 349 P P 21 25 35.4 -1.5
VTS Vitosha 83.31 349 ⇑P P 21 25 36.4 -0.5
VTS Vitosha 83.31 349 iP P 21 25 36.6 -0.3
VTS Vitosha 83.31 349 ⇑P P 21 25 36.4 -0.5
CHLP Challavanipeta 83.33 292 eP P 21 25 36.7 -0.5
CHLP IAmb IAmb 21 25 39.9
comp=Z,27nm,1.2s
CHLP epP pwP 21 26 45.6 +0.8
MURB Monte Urbino 83.47 357 IAmb IAmb 21 26 53.6
comp=Z,279nm,1.4s
BRY Bratogost 83.49 352⇑iP P 21 25 37.0 -0.8
DIM Dimitrovgrad 83.58 347 iP P 21 25 39.2 +1.1
EDRB Edirne 83.61 346 P P 21 25 37.2 -1.0
TREB Trebinje 83.69 352 eP P 21 25 37.4 -1.2
AGPR Aguadilla, PR 83.80 67 IAmb IAmb 21 26 52.0
comp=Z,282nm,1.1s
NGP Nagpur 83.89 297 eP P 21 25 39.0 -1.0
NGP IAmb IAmb 21 25 43.0
comp=Z,26nm,0.8s
NGP ipP pwP 21 26 48.8 +1.0
PDG Podgorica 83.90 352 ⇑P P 21 25 39.2 -0.5
PDG Podgorica 83.90 352⇑iP P 21 25 38.7 -0.9
BCIP Isla Barro Col 83.94 83 IAmb IAmb 21 25 42.1
comp=Z,84nm,0.6s
HCY Herceg Novi 83.94 352 eP P 21 25 38.9 -1.0
KDZ Kurdzhali 83.99 347 iP P 21 25 40.9 +0.7
ORH Orhaniye 84.05 343 P P 21 25 30.8 -10
AOPR Arecibo Observ 84.10 67 IAmb IAmb 21 25 44.2
comp=Z,103nm,0.6s
LATE Laterza 84.14 357 IAmb IAmb 21 26 54.8
comp=Z,214nm,1.4s
SKO Skopje 84.14 350 iP P 21 25 41.3 +0.4
DRME Dracevica, Mon 84.14 352⇑iP P 21 25 40.0 -0.9
PBRG Braganca 84.15 11 eP P 21 25 41.2 +0.2
comp=Z,58nm,1.2s
PBRG epP pwP 21 26 53.5 +4.9
CRPR Cabo Rojo, PR 84.18 68 IAmb IAmb 21 25 43.3
comp=Z,80nm,0.6s
MLPR Magueyes Islan 84.24 68 IAmb IAmb 21 25 44.7
comp=Z,204nm,1.4s
KULM Kulim 84.25 271 P P 21 25 44.0 +2.2
MMB Musomiste 84.26 348 iP P 21 25 42.2 +0.6
AQU L'Aquila 84.34 356⇑iP P 21 25 42.2 +0.2
OBIP Obispado Ponce 84.42 67 IAmb IAmb 21 25 43.3
comp=Z,99nm,0.7s
RDO Rodhopi 84.47 347 P P 21 25 43.0 +0.5
NVR Nevrokopi 84.48 348 P P 21 25 42.6 -0.1
BRTR Keskin Array B 84.49 340 P P 21 25 43.2 +0.3
comp=Z,26nm,0.8s,baz=36,slow=2.4,SNR=72
BRTR pP pwP 21 26 48.6 -2.0
comp=Z,8.9nm,0.9s,baz=33,slow=2.9,SNR=3.0
BRTR PP PP 21 29 00.9 +1.3
comp=Z,8.7nm,0.9s,baz=352,slow=4.2,SNR=3.6
BRTR PKKPbc PKKPbc 21 43 50.3 +1.1
comp=Z,1.3nm,0.5s,baz=191,slow=3.0,SNR=8.9
BRTR SKKPbc SKKPbc 21 47 00.4 +4.5
comp=Z,1.7nm,0.8s,baz=161,slow=4.1,SNR=7.6
BRTR PKPPKP P'P'df 21 51 50.0 -10
comp=Z,2.3nm,1.0s,baz=297,slow=0.8,SNR=6.6
GCPR Guaynabo City 84.50 67 IAmb IAmb 21 25 45.3
comp=Z,142nm,0.9s
ANTO Ankara 84.52 341 P P 21 25 43.0 0.0
ANTO IAmb IAmb 21 26 59.9
comp=Z,118nm,1.1s
ANTO Ankara 84.52 341 P P 21 25 43.0 0.0
ANTO pmax pmax
comp=Z,118nm,1.1s
PHP Peshkopia 84.53 351 P P 21 25 41.5 -1.4
PVRL Vila Real 84.56 12 eP P 21 25 43.3 +0.2
PVRL epP pwP 21 26 56.4 +5.7
ICMP Isla Caja de M 84.60 67 P P 21 25 43.1 -0.4
SJG San Juan 84.62 67 eP P 21 25 42.9 -0.7
SJG San Juan 84.62 67 P P 21 25 43.6 0.0
SJG IAmb IAmb 21 25 44.5
comp=Z,95nm,0.5s
SJG San Juan 84.62 67 P P 21 25 43.6 0.0
SJG pmax pmax
comp=Z,95nm,0.5s
ALN Alexandroupoli 84.64 346 P P 21 25 43.2 -0.2
VAY Valandovo 84.66 349 iP P 21 25 43.9 +0.4
IPM Ipoh 84.67 270 P P 21 25 46.0 +2.0
SRS Serrai 84.75 348 P P 21 25 36.9 -7.1
MVO Moncorvo 84.75 11 eP P 21 25 44.2 +0.1
comp=Z,68nm,1.5s
MVO epP pwP 21 26 56.7 +4.9
KAVA Kavala 84.75 348 P P 21 25 44.1 +0.2
PDPR Patillas Dam, 84.77 67 IAmb IAmb 21 25 46.7
comp=Z,55nm,0.6s
KNT Kendrikon 84.78 349 P P 21 25 44.1 0.0
ENEZ Enez 84.78 346 P P 21 25 44.0 -0.1
EIDS Eidsvold 84.89 213 IAmb IAmb 21 25 48.5
comp=Z,117nm,1.2s
MTP Monte Pirata 84.96 66 IAmb IAmb 21 25 47.4
comp=Z,124nm,0.7s
GRG Griva 85.04 349 P P 21 25 44.6 -0.9
OHR Ohrid 85.06 350 iP P 21 25 46.1 +0.5
SOH Sokhos 85.07 348 P P 21 25 45.5 -0.1
STVI Saint Thomas 85.08 66 IAmb IAmb 21 25 48.0
comp=Z,120nm,0.6s
PVIS Viseu 85.09 12 eP P 21 25 45.5 -0.2
comp=Z,52nm,2.3s
PVIS epP pwP 21 26 55.2 +1.8
THAS Thassos island 85.11 347 P P 21 25 46.0 +0.3
MYKOM Kota Tinggi 85.13 266 P P 21 25 48.0 +1.8
SMTH Samothraki Isl 85.13 347 P P 21 25 45.3 -0.6
MTE Manteigas 85.44 12 eP P 21 25 47.3 -0.2
comp=Z,49nm,2.1s
MTE epP pwP 21 26 57.6 +2.3
OUR Ouranopolis 85.47 348 P P 21 25 46.9 -0.6
COI Coimbra 85.52 13 eP P 21 25 46.9 -0.9
comp=Z,83nm,1.8s
COI epP pwP 21 26 58.5 +2.9
COI Coimbra 85.52 13 IAmb IAmb 21 25 50.4
comp=Z,73nm,0.8s
KNRA Kununurra 85.54 236 IAmb IAmb 21 25 51.4
comp=Z,250nm,1.4s
PAYG Puerto Ayora 85.56 97 P P 21 25 48.7 +0.3
PAYG IAmb IAmb 21 25 50.7
comp=Z,103nm,0.9s
RPR Rampur 85.64 296 eP P 21 25 47.9 -0.8
RPR IAmb IAmb 21 25 51.0
comp=Z,18nm,0.9s
RPR epP pwP 21 26 57.8 +1.0
SMRC Santa Marta, M 85.64 77 eP P 21 25 49.3 +0.6
EZN Ezine 85.65 346 P P 21 25 48.2 -0.2
PCAS Casmilo, Conde 85.66 13 eP P 21 25 48.3 -0.2
comp=Z,78nm,1.8s
PCAS epP pwP 21 27 00.0 +3.7
PVM Polavaram 85.69 293 eP P 21 25 48.2 -0.8
PVM IAmb IAmb 21 25 51.4
comp=Z,24nm,0.9s
PVM epP pP 21 26 54.4 +2.2
LIA Limnos Island 85.74 347 P P 21 25 48.7 -0.1
ACER Acerenza 85.78 354 IAmb IAmb 21 27 02.8
comp=Z,305nm,1.5s
CAPC Capurgana 85.83 81 eP P 21 25 49.9 +0.3
LIT Litokhoron 85.88 349 P P 21 25 49.5 -0.1
PAIG Paliouri 85.91 348 P P 21 25 48.7 -1.0
UCM Universidad Co 85.99 9 eP P 21 26 01.1 +11
UCM eS S 21 36 03.9 +3.6
GGR Gangavaram 86.00 295 eP P 21 25 49.1 -1.4
GGR IAmb IAmb 21 25 52.7
comp=Z,14nm,1.2s
GGR epP pP 21 26 55.6 +1.9
PCBR Castelo Branco 86.00 12 eP P 21 25 49.7 -0.4
comp=Z,42nm,1.2s
SRSP Sriramsagar 86.09 297 eP P 21 25 49.2 -1.7
SRSP IAmb IAmb 21 25 52.7
comp=Z,17nm,0.9s
SRSP epP pwP 21 26 56.9 -2.2
PTOM Tomar 86.10 13 eP P 21 25 50.6 0.0
comp=Z,88nm,1.2s
SJCC San Jacinto, C 86.10 79 eP P 21 25 50.7 -0.3
KPRO Kipourio 86.15 350 P P 21 25 50.5 -0.4
GAZ Gaziantep 86.17 337 IAmb IAmb 21 27 08.9
comp=Z,97nm,1.2s
SCTE Santa Cesarea 86.30 352 IAmb IAmb 21 25 53.2
comp=Z,83nm,0.8s
PMRV Marv??o 86.42 12 eP P 21 25 51.7 -0.5
THL Klokotos Trika 86.46 349 P P 21 25 50.8 -1.6
JAN Janina 86.50 350 P P 21 25 52.9 +0.3
WR0 Warramunga Arr 86.50 229 IAmb IAmb 21 25 56.0
comp=Z,265nm,1.4s
LHMI Lhok Sumawe 86.50 274 IAmb IAmb 21 25 56.9
comp=Z,118nm,0.7s
URIC Uribia, Colomb 86.51 75 eP P 21 25 52.7 -0.2
XOR Xorichti 86.52 348 P P 21 25 51.5 -1.2
KEK Kerkira 86.54 351 P P 21 25 52.8 0.0
ESDC Sonseca Array 86.55 9 P P 21 25 52.5 -0.3
comp=Z,13nm,0.6s,baz=347,slow=3.9,SNR=60
ESDC pP pwP 21 26 58.8 -2.1
comp=Z,6.3nm,0.8s,baz=347,slow=5.1,SNR=3.9
ESDC SKKPbc SKKPbc 21 46 54.9 +3.7
comp=Z,1.8nm,0.7s,baz=188,slow=1.4,SNR=8.4
WRAB Tennant Creek 86.56 229 P P 21 25 52.8 -0.2
WRAB Tennant Creek 86.56 229c eP P 21 25 53.5 +0.5
WRAB pmax pmax
comp=Z,337nm,1.3s
WRA Warramunga Arr 86.57 229 P P 21 25 52.4 -0.6
comp=Z,97nm,0.9s,baz=37,slow=5.9,SNR=136
WRA PKiKP PKiKP 21 30 56.9 -1.0
comp=Z,0.7nm,0.5s,baz=354,slow=1.7,SNR=4.6
WRA PKKPbc PKKPbc 21 43 46.0 +0.6
comp=Z,0.2nm,0.3s,baz=219,slow=2.6,SNR=6.4
WRA Warramunga Arr 86.57 229 eP P 21 25 53.0 0.0
WRA pmax pmax
comp=Z,97nm,0.9s
NEO Neokhori 86.58 348 P P 21 25 52.1 -0.9
PMAFR Mafra 86.64 13 eP P 21 25 53.1 -0.1
comp=Z,161nm,0.8s
MYLAV Mylavaram 86.64 294 eP P 21 25 53.1 -0.4
MYLAV IAmb IAmb 21 25 56.2
comp=Z,32nm,1.1s
MYLAV epP pP 21 26 58.5 +1.6
PAB San Pablo 86.64 10 P P 21 25 52.4 -0.9
PAB San Pablo 86.64 10 P P 21 25 52.4 -0.9
PAB pmax pmax
comp=Z,28nm,1.2s
PMTG Montargil 86.67 13 eP P 21 25 52.4 -1.0
comp=Z,31nm,0.9s
IGT Igoumenitsa 86.67 351 P P 21 25 53.0 -0.4
SKIA Skiathos 86.69 348 P P 21 25 52.8 -0.7
PTAC Punta Ardita, 86.75 82 eP P 21 25 53.1 -1.0
MAHO Mahon 86.85 3⇑iP P 21 25 56.0 +1.7
MAHO iS SKSac 21 35 55.8 +1.2
LIS Lisbon 86.89 13 eP P 21 25 54.2 -0.2
LIS eSKSac SKSac 21 35 55.1 +0.2
LIS Lisbon 86.89 13 eP P 21 25 54.2 -0.2
LIS e 21 35 55.1
PESTR Estremoz 86.95 12 P P 21 25 54.1 -0.6
SNR=8.3
AGG Agios Georgios 86.96 349 P P 21 25 54.3 -0.5
MAKR Makrakomi, Fth 86.99 349 P P 21 25 54.7 -0.3
CODC Agustn Codazz 87.08 77 eP P 21 25 55.5 -0.3
SKI Saint Kitts 87.11 65 IAmb IAmb 21 26 04.5
comp=Z,109nm,0.6s
EVR Evrytania 87.12 349 P P 21 25 55.5 -0.2
HYBB Hyderabad (bro 87.22 296 eP P 21 25 55.7 -0.7
HYBB IAmb IAmb 21 25 58.6
comp=Z,33nm,0.8s
HYBB epP pP 21 27 01.3 +1.4
HYB Hyderabad 87.22 296 iP P 21 25 56.0 -0.4
HYB esP pP 21 27 02.0 +2.2
HYB eSKKS S 21 36 06.0 -6.7
HYB e 21 38 00.0
LKR Lokris 87.25 348 P P 21 25 55.7 -0.5
PSI Prapat 87.26 271 P P 21 25 56.8 +0.1
comp=Z,124nm,0.6s,baz=355,slow=2.5,SNR=48
TIP Timpagrande 87.32 353 ⇑P P 21 25 55.5 -1.1
TIP Timpagrande 87.32 353 IAmb IAmb 21 27 11.0
comp=Z,118nm,1.2s
RPSI Rantau Prapat 87.34 271 IAmb IAmb 21 26 00.6
comp=Z,176nm,0.8s
ANWB Willy Bob 87.35 64 IAmb IAmb 21 25 58.0
comp=Z,97nm,0.6s
LKD2 Lefkada island 87.37 350 P P 21 25 56.8 0.0
PVO Paravola 87.45 349 P P 21 25 57.6 +0.5
PDO Prodromos 87.51 350 P P 21 25 57.5 +0.1
NJS Nagarjunasagar 87.52 295 eP P 21 25 56.3 -1.5
NJS IAmb IAmb 21 25 59.9
comp=Z,19nm,1.1s
NJS epP pP 21 27 03.3 +2.1
PNCL Nicolau / Gran 87.57 13 eP P 21 25 57.6 -0.1
comp=Z,56nm,1.2s
PNCL epP pwP 21 27 10.0 +4.2
KALE Kalithea 87.61 349 P P 21 25 57.7 -0.5
UREC San Jos de Ur 87.61 80 eP P 21 25 57.5 -0.7
SMLC San Martn de 87.63 79 eP P 21 25 57.4 -0.9
VILL Villia 87.69 348 P P 21 25 57.7 -0.6
SOLC Bahia Solano 87.72 83 eP P 21 25 59.6 +0.9
KLRI Killari 87.72 298 eP P 21 25 57.6 -1.2
KLRI IAmb IAmb 21 26 00.9
comp=Z,36nm,0.7s
KLRI epP pP 21 27 04.4 +2.0
PTL Penteli 87.74 348 P P 21 25 57.9 -0.6
PBEJ Beja 87.74 13 eP P 21 25 58.5 0.0
comp=Z,38nm,1.4s
ADKI Addanki 87.74 294 eP P 21 25 58.6 -0.2
ADKI IAmb IAmb 21 26 01.4
comp=Z,20nm,1.0s
ADKI epP pP 21 27 04.1 +1.8
DBBC Dabeiba 87.80 81 eP P 21 25 59.6 +0.4
LTK Loutraki 87.87 348 P P 21 25 57.7 -1.5
LOUT Loutraki 87.91 348 P P 21 25 58.6 -0.7
KLV Kalavryta, Ach 87.95 349 P P 21 25 59.1 -0.5
VLS Valsamata 87.99 350 P P 21 25 59.6 -0.1
RLS Riolos of Patr 88.01 349 P P 21 25 59.8 0.0
DRO Drossia 88.09 349 P P 21 26 00.0 -0.2
PTEO Sao Teotonio 88.10 13 eP P 21 25 59.7 -0.5
PCVE Castro Verde 88.11 13 eP P 21 25 59.5 -0.7
comp=Z,56nm,1.8s
SRLM Srisailam 88.12 295 eP P 21 26 00.0 -0.6
SRLM IAmb IAmb 21 26 01.9
comp=Z,20nm,1.2s
SRLM epP pwP 21 27 08.6 -0.6
ZARC Zaragoza, Cauc 88.21 80 eP P 21 25 59.6 -1.5
SESP Santiago Espad 88.22 8 P P 21 26 01.4 +0.4
SNR=6.0
HORN Hornachuelos 88.23 11 P P 21 26 00.5 -0.3
SNR=14
MORF Marmelete 88.34 13 eP P 21 26 01.2 -0.2
MORF AMb AMB 21 26 02.9
comp=Z,72nm,2.1s
MORF eSKSac SKSac 21 36 03.9 0.0
MORF Marmelete 88.34 13 eP P 21 26 00.8 -0.6
comp=Z,73nm,1.4s
MORF Marmelete 88.34 13 eP P 21 26 01.2 -0.2
MORF e 21 36 03.9
DID Didima 88.35 348 P P 21 25 59.5 -1.9
PVAQ Vaqueiros 88.37 13 eP P 21 26 01.1 -0.4
comp=Z,58nm,2.2s
PVAQ epP pwP 21 27 14.5 +4.8
KRND KRANIDI 88.48 348 P P 21 26 01.0 -1.0
PFVI Vila Bisbo 88.49 13 eP P 21 26 02.9 +0.9
comp=Z,126nm,1.8s
PBDV Barranco-do-Ve 88.50 13 eP P 21 26 03.0 +0.9
AMT Artemida-Makis 88.50 349 P P 21 26 02.2 +0.1
OCAC Ocana 88.52 78 eP P 21 26 02.8 +0.1
VLX Vlachokerasia 88.59 349 P P 21 26 02.8 +0.2
CORL Corleone 88.80 356 IAmb IAmb 21 27 18.5
comp=Z,281nm,1.5s
ITM Ithomi 88.83 349 P P 21 26 03.3 -0.4
CBOC Ciudad Bolivar 88.84 82 eP P 21 26 04.4 +0.2
H05N1 Guadeloupe/Mar 88.85 64 P P 21 26 04.5 +0.4
SNR=6.6
HELC Santa Helena 88.86 81 eP P 21 26 03.5 -1.0
CART Cartagena 88.88 7⇑eP P 21 25 57.5 -6.3
CART eS SKSac 21 36 05.3 -1.5
UGM Wanagama 88.99 255 IAmb IAmb 21 26 06.2
comp=Z,166nm,1.4s
LEF Lefka 89.09 340 ⇑P P 21 26 05.3 +0.4
CLTB Caltabellotta 89.11 356 IAmb IAmb 21 27 19.7
comp=Z,135nm,1.3s
PYL PYLOS 89.13 349 P P 21 26 04.5 -0.5
VLI Veliai 89.16 348 P P 21 26 04.0 -1.2
BRRC Barranca, Sant 89.19 79 eP P 21 26 05.8 +0.1
PTBC PUERTO BERRIO, 89.21 80 eP P 21 26 05.4 -0.3
OUZ Omahuta 89.31 192 IAmb IAmb 21 26 09.3
comp=Z,209nm,1.5s
EMAL Malaga-Limoner 89.39 10⇑eP P 21 26 05.6 -0.6
EMAL eS S 21 36 32.1 -0.2
ARMA Armidale 89.42 211 IAmb IAmb 21 26 11.7
comp=Z,150nm,1.4s
SDV Santo Domingo 89.56 76 eP P 21 26 07.9 +0.3
SDV Santo Domingo 89.56 76 eP P 21 26 07.3 -0.3
SDV Santo Domingo 89.56 76 P P 21 26 07.0 -0.6
SDV IAmb IAmb 21 26 10.4
comp=Z,83nm,0.9s
PAMC Pamplona, Colo 89.60 78 eP P 21 26 08.3 +0.2
KTHA Kythira Island 89.60 348 P P 21 26 06.5 -0.8
KTHR Kythira 89.61 348 P P 21 26 06.7 -0.6
SKHT Srikalahasti 89.61 293 eP P 21 26 06.7 -0.9
SKHT IAmb IAmb 21 26 09.4
comp=Z,38nm,1.7s
SKHT epP pP 21 27 12.8 +1.5
GUY2C Guyana, Caldas 89.73 82 eP P 21 26 09.2 +0.5
NORC Norcasia 89.75 81 eP P 21 26 08.0 -0.4
GR1C Gorgona, Isla 89.84 85 eP P 21 26 07.8 -0.8
BARC Barichara 89.92 79 eP P 21 26 09.2 -0.1
URV Uravakonda 89.95 295 eP P 21 26 08.0 -1.2
URV IAmb IAmb 21 26 11.1
comp=Z,38nm,1.3s
URV epP pP 21 27 13.9 +0.9
ANKY Antikythira Is 89.96 348 P P 21 26 08.3 -0.6
ASAR Alice Springs 90.01 228 P P 21 26 09.5 +0.3
comp=Z,50nm,0.6s,baz=24,slow=4.4,SNR=291
ASAR pP pwP 21 27 15.9 -0.2
comp=Z,23nm,0.9s,baz=33,slow=4.6,SNR=4.5
ASAR PKiKP PKiKP 21 31 02.6 -0.9
comp=Z,2.8nm,1.0s,baz=57,slow=1.4,SNR=4.2
ASAR ScS S 21 36 38.0 -0.2
comp=Z,15nm,0.9s,baz=27,slow=8.1,SNR=14
ASAR PKKPbc PKKPbc 21 43 37.8 +0.6
comp=Z,0.6nm,0.5s,baz=177,slow=3.6,SNR=7.7
ASAR PKPPKP 21 51 46.8
comp=Z,0.4nm,0.8s,baz=213,slow=2.0,SNR=4.1
FDF Fort de France 90.11 65 IAmb IAmb 21 26 11.8
comp=Z,84nm,0.6s
CEU Ceuta 90.14 11⇑iP P 21 26 11.1 +1.4
CEU eS S 21 36 37.7 -1.5
YOTC Yotoco, Valle 90.14 83 eP P 21 26 10.6 +0.4
SPBC San Pablo de B 90.15 80 eP P 21 26 10.2 -0.1
IMMV Iera Moni Meta 90.27 347 P P 21 26 10.0 -0.4
VAM Vamos 90.29 347 P P 21 26 09.9 -0.6
LAST Lasithi 90.36 348 P P 21 26 10.7 -0.2
SHME Shamm 90.46 318 iP P 21 26 09.8 -1.7
SNR=8.6
BANOM Banah 90.51 318 P P 21 26 10.8 -0.9
SNR=5.1
BANOM Banah 90.51 318 P P 21 26 10.8 -0.9
SNR=5.1
KNDR Palaiochora Ch 90.53 347 P P 21 26 11.2 -0.4
ROSC El Rosal 90.65 81 P P 21 26 13.7 +0.8
comp=Z,25nm,0.6s,baz=15,slow=6.5,SNR=11
ROSC El Rosal 90.65 81 eP P 21 26 12.7 -0.3
ORTC Ortega, Tolima 90.85 82 eP P 21 26 12.8 -0.7
GVDS Gavdos 90.86 347 P P 21 26 13.0 -0.1
KEST Kesra 91.06 359 P P 21 26 14.3 +0.2
comp=Z,7.1nm,0.8s,baz=290,slow=3.7,SNR=10.0
MDH Madha 91.06 318 P P 21 26 13.0 -1.2
SNR=6.9
MDH Madha 91.06 318 P P 21 26 13.0 -1.2
SNR=6.9
POPC Popayan, Colom 91.10 84 eP P 21 26 15.3 +0.6
CHIC Chingaza 91.17 81 eP P 21 26 14.7 -0.6
BBAC Balboa, Cauca 91.18 85 eP P 21 26 13.4 -1.8
PRAC Prado 91.22 82 eP P 21 26 15.0 -0.1
UOSS Minazif 91.42 317 iP P 21 26 14.0 -1.8
SNR=9.3
UOSS Minazif 91.42 317 P P 21 26 14.0 -1.8
PCON Cinco Dias 91.44 84 eP P 21 26 17.6 +0.8
SOTA Rioblanco 91.46 84 eP P 21 26 17.6 +0.9
HATD Hatta, Dubai 91.55 317 iP P 21 26 14.7 -1.8
SNR=9.8
NAZ Nazwa, Dubai 91.60 318 iP P 21 26 15.5 -1.2
SNR=6.2
ASHO Ashiyiah 91.71 317 P P 21 26 16.1 -1.1
SNR=13
ASHO Ashiyiah 91.71 317 P P 21 26 16.1 -1.1
SNR=13
OTAV Otavalo 91.88 87 eP P 21 26 19.4 +0.8
WSAR Wadi Sarin 91.93 315 P P 21 26 17.8 -0.4
comp=Z,14nm,0.7s,baz=253,slow=2.1,SNR=18
JBK JBK 91.97 9 P P 21 26 19.0 +0.4
SNR=11
SOHO SOHO 92.01 317 P P 21 26 17.0 -1.6
SNR=7.5
SOHO SOHO 92.01 317 P P 21 26 17.0 -1.6
SNR=7.5
HOQ Hoqain 92.18 316 P P 21 26 19.0 -0.4
SNR=5.4
HOQ Hoqain 92.18 316 P P 21 26 19.0 -0.4
SNR=5.4
SMDO Samad 92.33 315 P P 21 26 19.8 -0.4
SNR=5.5
SMDO Samad 92.33 315 P P 21 26 19.8 -0.4
SNR=5.5
WBK Wadi Bani Khal 92.34 314 P P 21 26 20.1 0.0
WBK Wadi Bani Khal 92.34 314 P P 21 26 20.1 0.0
ALNE Al Ain 92.39 317 iP P 21 26 19.4 -1.0

SNR=14
PTGC Puerto Gaitan, 92.45 80 eP P 21 26 19.9 -0.9
AVE Averroes 92.45 13 eP P 21 26 20.6 +0.1
AVE eS S 21 37 04.4 +4.2
FLOC Florencia 92.47 84 eP P 21 26 21.6 +0.7
ARQ Araqi 92.72 316 P P 21 26 22.0 +0.1
SNR=13
ARQ Araqi 92.72 316 P P 21 26 22.0 +0.1
SNR=13
JMDO Jabal Madar 92.92 315 P P 21 26 22.4 -0.5
SNR=5.4
JMDO Jabal Madar 92.92 315 P P 21 26 22.4 -0.5
SNR=5.4
BSY Bisya 92.97 316 P P 21 26 22.1 -1.0
SNR=8.1
BSY Bisya 92.97 316 P P 21 26 22.1 -1.0
SNR=8.1
MACC Macarena, Meta 93.09 82 eP P 21 26 22.0 -1.7
MDT Midelt 93.28 11 P P 21 26 23.6 -0.8
SNR=14
TOSP Speyside 93.28 66 IAmb IAmb 21 26 26.1
comp=Z,79nm,0.6s
STKA Stephens Creek 94.15 218 P P 21 26 28.0 0.0
comp=Z,30nm,1.2s,baz=356,slow=4.7,SNR=14
STKA Stephens Creek 94.15 218 eP P 21 26 29.8 +1.8
STKA pmax pmax
comp=Z,31nm,1.2s
MHTO MHTO 94.20 314 P P 21 26 27.8 -0.9
SNR=12
MHTO MHTO 94.20 314 P P 21 26 27.8 -0.9
SNR=12
PSA00 Pilbara Seismi 95.02 240 IAmb IAmb 21 26 34.7
comp=Z,44nm,1.1s
RAYN Ar Rayn 96.67 326 iP P 21 26 39.4 -0.6
SNR=27
RAYN Ar Rayn 96.67 326 P P 21 26 39.5 -0.5
RAYN Ar Rayn 96.67 326 P P 21 26 39.5 -0.5
RAYN pmax pmax
comp=Z,25nm,1.0s
LPAZ La Paz 111.12 89 Pdiff Pdif 21 27 46.4 +1.5
comp=Z,0.7nm,0.4s,baz=314,slow=4.1,SNR=3.1
LPAZ PKiKP PKiKP 21 31 41.3 -1.1
comp=Z,1.9nm,0.5s,baz=218,slow=5.0,SNR=7.1
TORD Torodi Ar. Bea 113.33 7 PKiKP PKiKP 21 31 44.8 -1.2
comp=Z,3.3nm,0.4s,baz=346,slow=2.5,SNR=49
TORD PP PP 21 32 34.1 -5.8
comp=Z,5.7nm,0.9s,baz=359,slow=8.0,SNR=5.0
TORD PKKPbc PKKPbc 21 42 29.2 +0.1
comp=Z,4.3nm,0.8s,baz=191,slow=1.1,SNR=30
TORD SKKPbc SKKPbc 21 45 46.4 +2.9
comp=Z,4.8nm,0.9s,baz=173,slow=2.4,SNR=6.2
SIV San Ignacio 115.09 83 PKP PKPdf 21 31 48.3 -1.0
comp=Z,4.2nm,0.6s,baz=284,slow=3.3,SNR=22
SIV PP PP 21 32 48.8 -4.5
comp=Z,3.9nm,0.8s,baz=329,slow=8.9,SNR=4.5
LVC Limon Verde 115.53 94 PKP PKPdf 21 31 49.8 -0.6
comp=Z,2.6nm,0.5s,baz=309,slow=5.5,SNR=3.3
LVC Limon Verde 115.53 94 PKPdf 21 31 50.1 -0.3
LVC Limon Verde 115.53 94 PKIKP PKPdf 21 31 50.1 -0.3
DBIC Dimbokro 119.00 15 PKP PKPdf 21 31 55.8 -1.2
comp=Z,7.4nm,0.4s,baz=335,slow=2.1,SNR=44
DBIC PP PP 21 33 14.6 -4.8
comp=Z,12nm,1.3s,baz=2.7,slow=8.5,SNR=3.1
DBIC SKP 21 35 04.1
comp=Z,2.4nm,0.6s,baz=325,slow=3.2,SNR=4.6
DBIC PKKPbc PKKPbc 21 42 09.8 +0.4
comp=Z,1.9nm,0.4s,baz=122,slow=1.9,SNR=7.4
TIC Toumodi 119.00 15 ePKP1 PKPdf 21 31 55.6 -1.4
KIC Kosan Boka 119.32 15 ePKP1 PKPdf 21 31 55.9 -1.7
comp=Z,14nm,0.6s
LIC Lamto 119.41 15 ePKP1 PKPdf 21 31 56.4 -1.4
comp=Z,7.9nm,0.3s
GO04 Tololo Observa 120.07 101 PKPdf 21 31 58.1 -0.7
AROD Rodeo 120.84 100 eP PKiKP 21 32 00.7 +0.2
ACCO Cerro Coronel 121.39 100 iP PKPdf 21 32 01.4 0.0
CYA Choya 121.75 96 iP PKPdf 21 32 01.6 -0.2
ACLC CERRO LA CRUZ 121.79 97 iP PKPdf 21 32 02.0 0.0
AMOG MOGNA 121.98 100 eP PKPdf 21 32 02.0 -0.2
ROC1 El Roble 121.99 103 iP PKPdf 21 32 01.8 -0.6
RTLS Leoncito 122.14 101 iP PKPdf 21 32 02.7 -0.1
RTLS IAML 21 32 03.5
comp=Z,20nm,0.3s
RTLL Cerro Villicun 122.28 100 iP PKPdf 21 32 02.4 -0.3
BDFB Brasilia 122.39 71 PKP PKPdf 21 32 03.1 -0.3
comp=Z,10nm,0.5s,baz=353,slow=1.7,SNR=11
KMBO Kilima Mbogo 122.44 325 PKP PKiKP 21 32 04.3 +0.2
comp=Z,5.1nm,0.6s,baz=5.9,slow=2.6,SNR=19
KMBO PP PP 21 33 44.1 +0.8
comp=Z,1.0nm,0.3s,baz=80,slow=1.3,SNR=3.5
KMBO Kilima Mbogo 122.44 325 iP PKiKP 21 32 04.1 0.0
SNR=15
KMBO Kilima Mbogo 122.44 325 PKiKP 21 32 03.9 -0.1
KMBO Kilima Mbogo 122.44 325c iPKIKP PKiKP 21 32 04.5 +0.4
KMBO pmax pmax
comp=Z,5.0nm,0.6s
CFA Coronel Fontan 122.62 100 PKP PKPdf 21 32 02.3 -1.1
comp=Z,9.6nm,0.4s,baz=292,slow=1.6,SNR=17
APLL PUNTA DE LOS L 122.75 98 eP PKPdf 21 32 02.9 -0.7
ASAL Salagasta 122.98 101 eP PKPdf 21 32 03.6 -0.5
ARCO CERRO ARCO 123.10 102 iP PKPdf 21 32 04.4 0.0
AAGR Agrelo 123.34 102 iP PKiKP 21 32 05.1 0.0
ACAN Cantantal 123.72 100 eP PKPdf 21 32 05.0 -0.4
MBAR Mbarara 123.97 332 PKPdf 21 32 05.9 -0.8
MBAR Mbarara 123.97 332 PKIKP PKPdf 21 32 05.9 -0.8
CPUP Villa Florida 125.23 87 PKP PKPdf 21 32 08.3 -0.1
comp=Z,12nm,0.5s,baz=334,slow=1.7,SNR=46
PLCA Paso Flores 127.67 110 PKP PKPdf 21 32 12.8 0.0
comp=Z,16nm,0.8s,baz=339,slow=2.7,SNR=28
PLCA SKPbc SKPbc 21 35 03.7
comp=Z,15nm,0.8s,baz=332,slow=4.5,SNR=20
PLCA Paso Flores 127.67 110 eP PKPdf 21 32 12.3 -0.5
SPB Sao Paulo 129.00 77 eP PKPdf 21 32 15.1 -0.7
VNDA Vanda 131.84 187 PKP PKPdf 21 32 20.5 0.0
comp=Z,2.6nm,0.5s,baz=312,slow=4.2,SNR=6.0
VNDA SKPbc SKPbc 21 35 18.5 -0.8
comp=Z,26nm,0.8s,baz=348,slow=4.5,SNR=16
OPO Ambohidratompo 133.87 304 PKP PKiKP 21 32 26.4 -0.3
comp=Z,3.2nm,0.6s
OPO SKPbc SKPbc 21 35 26.0 -2.2
comp=Z,21nm,0.9s,baz=26,slow=3.7,SNR=18
GO10 Punta Arenas 135.12 123 PKiKP 21 32 28.0 +0.1
USHA Ushuaia 137.32 124 SKPbc SKPbc 21 35 35.7 -1.6
comp=Z,55nm,0.8s,baz=320,slow=3.1,SNR=18
EFI East Falkland 141.10 115 PKPpre PKPpre 21 32 30.6
EFI PKPdf 21 32 36.5 -0.8
EFI East Falkland 141.10 115 PKIKP PKPdf 21 32 36.5 -0.8
QSPA South Pole Qui 143.33 180 PKP PKPbc 21 32 39.0 0.0
comp=Z,53nm,0.5s,baz=24,slow=0.3,SNR=8.9
QSPA SKPbc SKPbc 21 35 51.3 -1.6
comp=Z,73nm,0.7s,baz=10,slow=0.8,SNR=12
MATP Matopo 143.39 327 iP PKPab 21 32 30.0 -9.4
MATP Matopo 143.39 327 iP PKPab 21 32 30.0 -9.4
PMSA Palmer Station 143.48 137 PKP PKPbc 21 32 39.0 -0.3
comp=Z,62nm,0.6s,baz=322,slow=1.5,SNR=12
PMSA SKPbc SKPbc 21 35 51.2 -2.0
comp=Z,80nm,1.1s,baz=138,slow=15,SNR=4.8
PMSA Palmer Station 143.48 137 PKPpre 21 32 39.3
MSNA Messina 144.65 323⇑iP PKPdf 21 32 45.5 +0.9
MSNA Messina 144.65 323⇑iP PKPdf 21 32 45.5 +0.9
TSUM Tsumeb 144.92 344 iP PKPab 21 32 45.4 +0.1
TSUM Tsumeb 144.92 344 PKP PKPbc 21 32 44.7 -0.4
comp=Z,78nm,0.8s,baz=1.9,slow=4.8,SNR=124
TSUM pPKP pPKPdf 21 33 52.9 +0.3
comp=Z,15nm,1.0s,baz=90,slow=1.4,SNR=1.9
TSUM SKPbc SKPbc 21 35 57.1 -1.2
comp=Z,46nm,0.8s,baz=351,slow=4.2,SNR=9.9
TSUM Tsumeb 144.92 344 iP PKPab 21 32 45.4 +0.1
TSUM Tsumeb 144.92 344 PKPbc 21 32 45.1 -0.1
LBTB Lobatse 148.60 328 iP PKPbc 21 32 55.6 +0.4
LBTB Lobatse 148.60 328 PKPbc PKPbc 21 32 55.2 0.0
comp=Z,58nm,0.5s,baz=341,slow=2.0,SNR=107
LBTB Lobatse 148.60 328 iP PKPbc 21 32 55.6 +0.4
MAW Mawson 150.82 220 PKPbc PKiKP 21 33 00.0 +0.4
comp=Z,78nm,0.9s,baz=125,slow=3.2,SNR=35
MAW pPKPbc pPKPbc 21 34 09.2 +2.6
comp=Z,29nm,0.9s,baz=248,slow=3.5,SNR=2.5
MAW Mawson 150.82 220 PKiKP 21 33 00.1 +0.4
MAW PKPab PKPab 21 33 09.4 +1.9
BOSA Boshof 152.06 326 iP PKiKP 21 33 03.8 +0.2
BOSA Boshof 152.06 326 PKP PKPdf 21 32 56.7 +0.1
comp=Z,11nm,1.1s,baz=11,slow=2.1,SNR=7.9
BOSA PKPbc PKPbc 21 33 02.9 -0.5
comp=Z,46nm,0.4s,baz=19,slow=2.1,SNR=179
BOSA Boshof 152.06 326 iP PKiKP 21 33 03.8 +0.2
SUR Sutherland 156.93 332 PKP PKPdf 21 33 04.4 +1.2
comp=Z,14nm,1.0s,baz=310,slow=7.2,SNR=3.2
SUR Sutherland 156.93 332 PKPdf 21 33 03.0 -0.3
VNA3 Neumayer Olymp 160.61 163 PKPdf PKPdf 21 33 05.6 -0.5
SNAA Sanae 161.21 169 PKPdf PKPdf 21 33 05.0 -1.8
SNAA PKPab 21 33 52.1 -0.1
SNAA Sanae 161.21 169 PKP2 PKPab 21 33 52.1 -0.1
SNAA 22 33 05.0
VNA2 Neumayer--Watz 161.27 164 PKPdf PKPdf 21 33 06.1 -0.7
NVL N'lazarevskaya 162.65 184 ePKP2 PKPab 21 33 58.1 -0.4
NVL eSS SS 21 58 50.4 +67
NVL pmax pmax
comp=Z,19nm,1.2s

TAP **26** *21:18:52.8, 23°.70N×121°.44E, h14km, ML3.3, C*
JMA **26** *21:18:52.2±0.2, 23°.68N×121°.47E, h3km±3km, M3.5*
ISC 26 21:18:52.8±0.8, 23°.69N±0°.01×121°.46E±0°.02, h13km±5km, n116, σ0§54/196, 6C-16D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	Guangfu baz=206	0.04	234	⇑iP	Pg	21 18 55.5	+0.4
EGFH	baz=206			S	Sg	21 18 57.1	+0.3
ESL	Shilin baz=360	0.13	349	⇓iP	Pg	21 18 56.3	+0.2
ESL	baz=360			iS	Sg	21 18 58.2	-0.3
HGSD	Ruisui baz=192	0.20	189	⇑P	Pb	21 18 58.2	-0.2
HGSD	baz=192			eS	Sb	21 19 01.9	-0.1
EHY	Hungye baz=215	0.22	214	⇑iP	Pg	21 18 57.6	-0.1
EHY	baz=215			eS	Sg	21 19 00.6	-0.3
ENLB	Shoufeng baz=29	0.25	32	P	Pg	21 18 58.3	+0.2
ENLB	baz=29			S	Sb	21 19 02.9	-0.7
VWDT	VWDT baz=281	0.30	282	⇓P	Pg	21 18 59.2	+0.2
VWDT	baz=281			S	Sg	21 19 03.1	0.0
HWA	Hwalien baz=20	0.32	25	P	Pb	21 19 00.5	+0.1
HWA	baz=20			eS	Sb	21 19 05.0	-0.4
YULB	Yu-li baz=204	0.33	207	⇑P	Pg	21 18 59.6	0.0
YULB	baz=204			eS	Sg	21 19 04.1	-0.1
TWF1	Yuli baz=209	0.37	204	P	Pg	21 19 00.3	0.0
TWF1	baz=209			S	Sg	21 19 05.4	+0.2
OWD	Renai baz=317	0.37	315	P	Pg	21 19 00.3	-0.1
OWD	baz=317			eS	Sg	21 19 04.6	-0.8
TWD	Chiawan baz=13	0.41	18	P	Pg	21 19 01.4	+0.4
TWD	baz=13			S	Sg	21 19 06.6	+0.1
CHGB	Renai baz=333	0.45	325	⇓P	Pg	21 19 02.0	+0.1
CHGB	baz=333			S	Sg	21 19 07.3	-0.7
SSLB	Suanglung baz=290	0.47	282	⇓P	Pg	21 19 01.9	-0.3
SSLB	baz=290			S	Sg	21 19 07.5	-1.1
WHF	Hehuan Shan baz=342	0.49	339	⇓iP	Pg	21 19 02.4	-0.2
WHF	baz=342			eS	Sg	21 19 08.7	-0.4
NACB	Ninganchiao baz=14	0.50	14	P	Pg	21 19 02.6	0.0
NACB	baz=14			S	Sg	21 19 08.8	-0.4
YUS	Yu-Shan baz=252	0.51	247	⇑iP	Pg	21 19 03.1	+0.2
YUS	baz=252			eS	Sg	21 19 09.2	-0.5
FULB	Fuli baz=209	0.51	197	eP	Pb	21 19 03.5	-0.2
FULB	baz=209			eS	Sb	21 19 11.3	+0.2
ETLH	Xiulin Townshi baz=4.0	0.52	2	⇓P	Pg	21 19 02.9	-0.1
ETLH	baz=4.0			S	Sg	21 19 09.8	-0.1
SMLT	Sun Moon Lake baz=291	0.55	291	⇓iP	Pg	21 19 03.5	-0.1
SMLT	baz=291			S	Sg	21 19 10.6	-0.4
WHYT	Xinyi Township baz=264	0.56	271	⇓eP	Pg	21 19 03.9	+0.1
WHYT	baz=264			S	Sg	21 19 10.8	-0.3
TYC	Yuchr baz=300	0.59	291	⇓iP	Pg	21 19 04.1	-0.3
TYC	baz=300			S	Sg	21 19 11.4	-0.8
CHKT	Chengkung baz=187	0.59	188	eP	Pb	21 19 05.2	0.0
CHKT	baz=187			eS	Sb	21 19 14.5	+1.1
DPDB	Guoxing baz=313	0.60	305	⇓iP	Pg	21 19 04.6	+0.1
DPDB	baz=313			S	Sg	21 19 11.6	-0.8
TWT	Tachien baz=335	0.62	335	⇓iP	Pg	21 19 05.2	+0.2
TWT	baz=335			S	Sg	21 19 12.5	-0.7
TDCB	Techi baz=335	0.62	334	⇓P	Pg	21 19 05.2	+0.1
TDCB	baz=335			S	Sg	21 19 12.4	-1.0
ALS	Alishan baz=252	0.63	254	P	Pg	21 19 05.5	+0.4
ALS	baz=252			S	Sg	21 19 13.1	-0.4
ELDTW	Lidau baz=211	0.64	219	eP	Pg	21 19 04.7	-0.7
ELDTW	baz=211			eS	Sg	21 19 13.2	-0.7
WJS	Zhushan baz=283	0.68	281	eP	Pb	21 19 07.2	+0.6
WJS	baz=283			eS	Sb	21 19 16.9	+0.9
CHN5	Tsauling baz=255	0.72	263	eP	Pb	21 19 07.4	0.0
CHN5	baz=255			eS	Sb	21 19 16.9	-0.3
WNT	Mingjian baz=287	0.73	285	P	Pb	21 19 08.0	+0.4
WNT	baz=287			eS	Sb	21 19 18.4	+1.0
NNSB	Datong baz=2.0	0.74	355	⇓P	Pg	21 19 07.1	-0.1
NNSB	baz=2.0			S	Sg	21 19 16.7	-0.2
NNSH	Datong baz=1.0	0.74	355	eP	Pg	21 19 07.0	-0.2
NNSH	baz=1.0			eS	Sg	21 19 16.8	-0.1
WHP	Taichung City baz=323	0.75	321	⇓P	Pg	21 19 07.3	-0.1
WHP	baz=323			eS	Sg	21 19 16.9	-0.4
NNS	Nan Shan baz=2.0	0.75	354	⇓P	Pg	21 19 07.4	-0.1
NNS	baz=2.0			S	Sg	21 19 17.2	-0.2
ENA	Nanau baz=10.0	0.78	19	⇑P	Pg	21 19 07.1	-0.9
ENA	baz=10.0			eS	Sg	21 19 18.4	+0.3
WGK	Gukeng baz=269	0.82	270	eP	Pn	21 19 09.7	-0.5
WGK	baz=269			eS	Sb	21 19 19.9	-0.1
STYT	Tauyuan baz=227	0.83	231	eP	Pg	21 19 09.1	+0.2
STYT	baz=227			eS	Sb	21 19 20.2	-0.1
WDLH	Douliu baz=269	0.84	270	eP	Pn	21 19 09.9	-0.5
WDLH	baz=269			eS	Sn	21 19 21.9	-0.9
TCU	Taichung baz=307	0.85	303	eP	Pn	21 19 10.6	+0.1
TCU	baz=307			eS	Sn	21 19 22.4	-0.4
TPUB	Ta-pu baz=247	0.85	243	P	Pg	21 19 09.9	+0.5
TPUB	baz=247			S	Sg	21 19 20.7	+0.1
CHN4	Tsaushan baz=245	0.86	247	P	Pn	21 19 10.3	-0.5
CHN4	baz=245			S	Sg	21 19 21.5	+0.6
WTP	Ta-pu baz=250	0.89	240	eP	Pg	21 19 10.6	+0.5
WTP	baz=250			eS	Sg	21 19 22.1	+0.3
TWQ1	Liyutan baz=325	0.91	316	eP	Pn	21 19 11.0	-0.3
TWQ1	baz=325			eS	Sg	21 19 23.2	+0.9
NDT	Datong Townshi baz=3.0	0.91	3	eP	Pb	21 19 10.1	-0.4
NDT	baz=3.0			eS	Sb	21 19 21.6	-0.9
WCHH	Zhanghua baz=294	0.91	295	eP	Pn	21 19 11.0	-0.3
TWG	Pinlang baz=208	0.94	202	eP	Pb	21 19 10.4	-0.6
TWG	baz=208			eS	Sb	21 19 22.6	-0.7
TWGBT	Beinan baz=208	0.94	202	eP	Pb	21 19 10.5	-0.4
TWGBT	baz=208			eS	Sb	21 19 22.5	-0.8
ENTT	Nioudou baz=7.0	0.95	6	eP	Pb	21 19 10.3	-0.9
ENTT	baz=7.0			eS	Sg	21 19 23.9	+0.2
NSY	Sanyi baz=320	0.96	319	eP	Pn	21 19 12.6	+0.4
CHY	Chiayi baz=257	0.97	259	eP	Pn	21 19 12.2	+0.1
CHY	baz=257			eS	Sn	21 19 25.5	-0.3
TWH	Lutao baz=182	0.97	179	eP	Pb	21 19 11.2	-0.5
YHNB	Yeheng baz=357	0.98	356	eP	Pb	21 19 11.2	-0.5
YHNB	baz=357			eS	Sb	21 19 23.8	-0.8
TWC	Suao baz=13	0.98	21	eP	Pb	21 19 11.7	-0.1
TWC	baz=13			eS	Sb	21 19 24.2	-0.4
NSK	Sanguang baz=356	0.99	355	P	Pb	21 19 11.8	-0.1
NSK	baz=356			S	Sb	21 19 24.3	-0.5
TWK	Hsinying baz=243	0.99	245	eP	Pn	21 19 12.4	0.0
TWK	baz=243			eS	Sg	21 19 25.2	+0.4
CHN1	Nanshi baz=249	0.99	240	P	Pn	21 19 12.8	+0.3
CHN1	baz=249			eS	Sn	21 19 26.0	-0.4
WDJ	Dajia District baz=323	0.99	311	eP	Pn	21 19 13.0	+0.5
WDJ	baz=323			eS	Sn	21 19 27.6	+1.1
SNST	Tainan City baz=251	1.00	242	eP	Pn	21 19 12.7	+0.1
SNST	baz=251			eS	Sn	21 19 26.3	-0.3
SGST	Jiashian baz=232	1.01	233	eP	Pb	21 19 11.8	-0.4
SGST	baz=232			eS	Sg	21 19 25.9	+0.5
SLGT	Liugui baz=214	1.02	227	eP	Pn	21 19 12.8	0.0
PTSB	Yuanli baz=319	1.02	318	eP	Pn	21 19 13.4	+0.5
PTSB	baz=319			eS	Sn	21 19 27.6	+0.4
NSTT	Nanjuang baz=338	1.03	336	⇓P	Pg	21 19 12.8	+0.2
NSTT	baz=338			S	Sb	21 19 25.2	-0.6
RLNB	Erlin baz=282	1.03	281	eP	Pn	21 19 13.0	0.0
RLNB	baz=282			eS	Sn	21 19 26.8	-0.4
LIOB	Emei baz=339	1.03	337	P	Pn	21 19 13.1	0.0
LIOB	baz=339			eS	Sg	21 19 26.4	+0.1
NMLH	Miaoli baz=326	1.04	324	eP	Pg	21 19 14.3	+1.3
NMLH	baz=326			eS	Sn	21 19 27.2	-0.4
TWE	Neicheng baz=11	1.04	10	eP	Pn	21 19 13.0	-0.2
TWE	baz=11			eS	Sb	21 19 25.7	-0.7
EOS1	EOS1 baz=51	1.05	35	eP	Pg	21 19 13.6	+0.5
SLBB	Yuanshan baz=18	1.07	9	eP	Pb	21 19 13.4	+0.1
NWLT	Wulai baz=3.0	1.08	2	eP	Pb	21 19 13.4	-0.1
NWLT	baz=3.0			eS	Sb	21 19 26.4	-1.2
WSF	Szhu baz=267	1.14	268	eP	Pg	21 19 14.7	0.0
WSF	baz=267			eS	Sg	21 19 29.9	+0.4
WLTB	Daxi baz=360	1.17	351	eP	Pg	21 19 15.6	+0.1
SBCB	Hsinchu baz=328	1.18	339	eP	Pg	21 19 16.3	+0.8
ECL	Taimali baz=192	1.18	203	eP	Pn	21 19 14.6	-0.5
HSN	Hsinchu baz=330	1.19	338	eP	Pg	21 19 16.6	+0.7
CHN8	Yiju baz=252	1.20	254	eP	Pb	21 19 15.3	-0.1
CHN8	baz=252			eS	Sg	21 19 32.8	+1.4
NTC	Toucheng baz=13	1.21	16	eP	Pb	21 19 15.7	+0.2
SSD	Sandimen baz=217	1.21	219	eP	Pn	21 19 15.4	-0.1
SSD	baz=217			eS	Sn	21 19 31.4	-0.3
NHDH	Xindian Distri baz=12	1.27	3	eP	Pn	21 19 16.4	+0.1
TWA	Mucha baz=14	1.29	5	eP	Pn	21 19 16.5	-0.1
NCUH	Zhongli baz=351	1.30	349	eP	Pg	21 19 18.4	+0.6
NCUH	baz=351			eS	Sg	21 19 36.6	+1.9
MASBT	Mashibuluo baz=211	1.31	215	eP	Pb	21 19 17.3	-0.1
MASBT	baz=211			eS	Sg	21 19 34.9	-0.3
TIPB	Shuangxi baz=12	1.32	15	eP	Pn	21 19 17.1	0.0
TIPB	baz=12			eS	Sn	21 19 34.4	-0.1
TWB1	Santiao Chiao baz=9.0	1.40	20	eP	Pb	21 19 18.7	-0.1
TWS1	Kuangyinshan baz=15	1.41	358	eP	Pg	21 19 19.8	-0.1
NWF	Wu-fen Shan baz=10.0	1.41	12	eP	Pb	21 19 19.4	+0.3
NWF	baz=10.0			eS	Sb	21 19 36.8	-0.1
WFSB	Wu-fen Shan baz=10.0	1.41	12	eP	Pb	21 19 18.7	-0.2
WFSB	baz=10.0			eS	Sb	21 19 37.1	+0.3
YM01	YM01 baz=5.0	1.45	4	eP	Pn	21 19 19.0	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YM10	YM10	1.46	4	eP	Pn	21 19 19.3	+0.2
	baz=5.0						
NTST	Danshui	1.47	360	eP	Pb	21 19 19.7	-0.3
	baz=15						
YM11	YM11	1.47	4	eP	Pb	21 19 20.0	-0.2
	baz=6.0						
ANP	Anpu	1.49	2	eP	Pn	21 19 19.2	-0.2
	baz=17						
SCZT	Fangliau	1.52	211	eP	Pb	21 19 21.1	+0.2
	baz=208						
SCZT				eS	Sb	21 19 39.9	-0.3
	baz=208						
JYNG	Yonagunijimaku	1.56	61	P	Pb	21 19 20.9	-0.6
JYNG				S	Sb	21 19 41.2	+0.1
YOJ	Yonaguni jima	1.61	61	P	Pn	21 19 21.3	+0.3
YOJ				S	Sn	21 19 42.1	+0.4
LAY	Lan-yu	1.65	177	eP	Pn	21 19 19.8	-1.7
	baz=170						
WLCH	Liuqiu	1.66	217	eP	Pg	21 19 25.2	+0.4
	baz=212						
WDGT	Dungji	1.71	256	eP	Pn	21 19 22.1	-0.2
	baz=261						
PHUB	P'eng-hu	1.74	265	eP	Pn	21 19 23.3	+0.5
	baz=261						
PNG	Penghu	1.75	266	eP	Pn	21 19 23.4	+0.5
	baz=267						
PNG				eS	Sn	21 19 45.4	+0.3
	baz=267						
TWKBT	Hengchun	1.84	199	eP	Pn	21 19 24.8	+0.6
	baz=195						
VCHM	Qimei	1.93	256	eP	Pn	21 19 26.1	+0.8
	baz=249						
IRIF	Iriomote-Funau	2.17	72	P	Pn	21 19 29.1	+0.4
IRIF				eS	Sn	21 19 56.5	+1.0
HATJ	Hateruma jima	2.18	80	eS	Sn	21 19 56.8	+1.1
VWUC	VWUC	2.25	306	eP	Pn	21 19 29.4	-0.4
	baz=307						
PTTC	Pingtan	2.37	320	eP	Pn	21 19 31.2	-0.2
	baz=322						
JKRS	Kuro-shima	2.40	76	P	Pn	21 19 32.7	+0.9
JKRS				eS	Sn	21 20 01.8	+0.8
PTMZ	Houxiangcun	2.52	303	eP	Pn	21 19 33.7	+0.2
	baz=304						
JIJ	Ishigaki jima	2.54	74	P	Pn	21 19 33.7	-0.1
JIJ				eS	Sn	21 20 06.3	+1.6
JISG	Ishigakijimahi	2.75	71	P	Pn	21 19 36.4	-0.3
JISG				eS	Sn	21 20 09.1	-0.8
MATB	Ma-tsu	2.81	331	eP	Pn	21 19 36.5	-1.0
	baz=334						
KNM	Kinmen	2.86	285	eP	Pn	21 19 39.8	+1.7
	baz=284						
KNMB	Chin-men Tao	2.91	286	eP	Pn	21 19 38.6	-0.2
	baz=286						
JTJ	Tarama	3.11	72	P	Pn	21 19 41.8	+0.2
JTJ				S	Sn	21 20 18.9	+0.2
MHZQ	Yeshan	3.26	318	eP	Pn	21 19 44.0	+0.3
	baz=319						
AXDP	Jialang	3.40	291	eP	Pn	21 19 45.9	+0.2
	baz=292						
XPSS	Dashiqiu	3.42	341	eP	Pn	21 19 46.0	+0.1
	baz=330						

*IDC **26** 21:24:01.0±1.2, 18°.51N×145°.59E, h0km, mb3.7/7, mb1 4.0/7, mb1mx3.7/37, mbtmp3.7/7, MS4.3/1, Ms1 4.3/1, ms1mx3.3/51, Error ellipse: s-maj=47.8km s-min=31.8km az=103.0*

ISC 26 21:24:06.3±1.1, **18°.5N**±0°.2×**145°.6E**±0°.3, **h35km, n8,** σ0s.56/7, **mb3.7/7, Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNU	Nakatsue	19.65	321	LR	LR	21 35 08.0	
	comp=Z,902nm,20.6s,baz=54,slow=34						
WRA	Warramunga Arr	39.74	197	P	P	21 31 36.0	+0.2
	0.9nm,0.6s,baz=24,slow=8.3,SNR=1.2						
SONM	Songino Array	43.24	322	P	P	21 32 04.5	+0.1
	0.6nm,0.6s,baz=127,slow=6.4,SNR=4.4						
ILAR	Eielson Array	63.89	26	P	P	21 34 36.0	+0.6
	0.4nm,0.6s,baz=258,slow=5.6,SNR=4.1						
YKA	Yellowknife Ar	78.23	28	P	P	21 36 02.0	-0.2
	0.2nm,0.5s,baz=278,slow=4.7,SNR=2.0						
ARCES	ARCESS Array B	82.66	342	P	P	21 36 26.1	+0.2
	1.7nm,0.8s,baz=88,slow=9.1,SNR=1.0						
FINES	FINESS Array B	87.03	335	P	P	21 36 47.2	-0.8
	3.0nm,1.1s,baz=72,slow=6.2,SNR=7.2						
PDAR	Pinedale Array	88.06	45	P	P	21 36 53.3	-0.4
	0.1nm,0.6s,baz=289,slow=2.8,SNR=1.4						

ROM 26 21:49:56.5±0.1, **43°.434N**±0°.003×**12°.495E**±0°.005, **h9km, ML1.0/6, 2C, Error ellipse: s-maj=0.4km s-min=0.3km az=301.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATPI	Pietralunga -	0.07	284	⇑P	Pg	21 49 58.9	+0.3
ATPI				S	Sg	21 50 00.5	+0.3
ATPI				AML	AML		
	comp=E,164µm,1.1s						
ATPI				AML	AML		
	comp=N,140µm,1.0s						
ATVO	AVT- Monte Val	0.08	231	⇑P	Pg	21 49 59.1	+0.3
ATVO				S	Sg	21 50 00.8	+0.5
ATVO				AML	AML		
	comp=N,120µm,0.1s						
ATVO				AML	AML		
	comp=E,154µm,0.1s						
ATVO				AML	AML		
	comp=N,120µm,0.1s						
ATFO	Monte Foce - G	0.09	140	P	Pg	21 49 59.1	+0.2
ATFO				S	Sg	21 50 01.0	+0.5
PIEI	Pieia	0.11	16	P	Pg	21 49 59.6	+0.5
PIEI				S	Sg	21 50 01.9	+0.9
PIEI				AML	AML		
	comp=E,236µm,0.3s						
PIEI				AML	AML		
	comp=E,236µm,0.3s						
PIEI				AML	AML		
	comp=N,127µm,0.2s						
FRON	Frontone	0.19	63	P	Pg	21 50 01.0	+0.6
FRON				S	Sg	21 50 04.3	+1.2
FRON				AML	AML		
	comp=E,43µm,0.8s						
FRON				AML	AML		
	comp=N,114µm,1.4s						
NARO	Abbazia di Nar	0.19	19	P	Pg	21 50 00.9	+0.5
NARO				S	Sg	21 50 04.2	+1.1
NARO				AML	AML		
	comp=E,55µm,0.2s						
NARO				AML	AML		
	comp=N,42µm,0.4s						
ATCC	AVT- Casa Cast	0.27	157	P	Pg	21 50 02.7	+0.8
ATCC				S	Sb	21 50 07.8	-0.5
ARVD	Arcevia	0.33	79	P	Pg	21 50 03.6	+0.5
ARVD				S	Sb	21 50 09.3	-0.8
CAFI	Castiglion Fio	0.40	255	AML	AML		
	comp=E,20µm,1.4s						
CAFI				AML	AML		
	comp=N,27µm,1.6s						

BUC 26 21:51:26.2±0.4, **44°.52N×21°.72E, h17km**±2km, **ml1.0/2, 6C-8D, Error ellipse: s-maj=4.6km s-min=1.7km az=74.0, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDVR	Moldovita	0.26	359	⇑P	Pg	21 51 32.2	+0.2
MDVR				⇓S	Sg	21 51 36.2	+0.2
MDVR	Moldovita	0.26	359	⇑P	Pg	21 51 32.2	+0.2
MDVR				⇓S	Sg	21 51 36.2	+0.2
BZS	Buzias	1.10	356	⇓P	Pn	21 51 47.0	+0.1
BZS				⇑S	Sn	21 52 01.5	-0.1
BZS	Buzias	1.10	356	⇓P	Pn	21 51 47.0	+0.1
BZS				⇑S	Sn	21 52 01.5	-0.1
BLKB	Belogradchik	1.13	142	⇓S	Sn	21 52 02.7	+0.2
BLKB	Belogradchik	1.13	142	⇓S	Sn	21 52 02.7	+0.2
GZR	Gura Zlata	1.15	40	⇑P	Pb	21 51 48.0	+0.3
GZR				⇓S	Sg	21 52 03.5	-0.1
GZR	Gura Zlata	1.15	40	⇑P	Pb	21 51 48.0	+0.3
GZR				⇓S	Sg	21 52 03.5	-0.1

*NEIC **26** 22:01:07.4±1.9, 14°.9N±0°.1×93°.80W±0°.05, h38km±58km, Error ellipse: s-maj=18.4km s-min=7.2km az=183.0*

*MEX **26** 22:01:07.3±0.5, 14°.72N×93°.76W, h34km±8km, MD4.0*

ISC 26 22:01:05.8±3.3, **14°.9N**±0°.2×**93°.79W**±0°.07, **h13km**±13km, **n10,** σ0s.73/19, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCIG		0.98	34		Pg	22 01 24.5	-0.2
PCIG					Sb	22 01 38.0	+0.6
PCIG		0.98	34	iP	Pg	22 01 24.5	-0.2
PCIG				iS	Sb	22 01 38.0	+0.6
TGIG		1.98	19		Pn	22 01 39.1	0.0
TGIG					Sn	22 02 04.0	0.0
TGIG		1.98	19	iP	Pn	22 01 39.1	0.0
TGIG				eS	Sn	22 02 04.0	0.0
CCIG	Comitan	2.11	49		Pn	22 01 42.1	+1.2
CCIG					Sb	22 02 09.7	-0.5
CCIG	Comitan	2.11	49		Pn	22 01 40.8	-0.1
CCIG					Sn	22 02 05.8	-1.3
CCIG	Comitan	2.11	49	eP	Pn	22 01 40.8	-0.1
CCIG				iS	Sn	22 02 05.8	-1.3
CMIG	Matias Romero	2.43	334		Pn	22 01 45.1	-0.1
CMIG					Sn	22 02 14.8	-0.1
CMIG	Matias Romero	2.43	334	eP	Pn	22 01 45.1	-0.1
CMIG				iS	Sn	22 02 14.8	-0.1
TEIG	Tepich	7.47	44	Pn	Pn	22 02 55.9	+1.4

*IDC **26** 22:32:49.3±8.2, 30°.85S×179°.11W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.5/23, mbtmp3.4/2, MS4.1/1, Ms1 4.1/1, ms1mx3.3/8, Error ellipse: s-maj=353.9km s-min=56.2km az=157.0*

*WEL **26** 22:33:36.2±0.9, 31°S±15°×17°9E±3°8, h191km±49km, M4.2/12, mB4.4/6, MLv4.6/12, Mw(mB)3.6/6*

ISC 26 22:33:35.2±2.7, **31°.5S**±0°.2×**179°.1E**±0°.3, **h250km, n21,** σ**1s.19**/24, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.43	50	S	S	22 35 17.3	-0.5
WMGZ	Waiomatatini S	6.31	185	P	Pn	22 35 08.6	+1.5
WMGZ				S	S	22 36 21.8	+1.1
HAZ	Te Kaha	6.31	189	P	Pn	22 35 08.5	+1.4
HAZ				S	S	22 36 20.0	-0.8
PKGZ	Pakihiroa	6.41	187	P	Pn	22 35 09.2	+0.8
PKGZ				S	S	22 36 22.8	-0.2
RUGZ	Raukumara Rang	6.53	190	P	Pn	22 35 11.1	+1.1
RUGZ				S	S	22 36 24.3	-1.8
PUZ	Puketiti	6.57	186	P	Pn	22 35 11.0	+0.6
TWGZ	Tauwhareparae	6.70	187	P	Pn	22 35 11.5	-0.5
TWGZ				S	S	22 36 30.0	+0.2
URZ	Urewera	6.92	193	P	Pn	22 35 15.8	+1.1
MWZ	Matawai	6.92	190	P	Pn	22 35 16.8	+2.0
MWZ				S	S	22 36 33.5	-1.2
RAGZ	Rawiri	7.09	191	P	Pn	22 35 15.5	-1.5
MUGZ	Murupara	7.20	195	P	Pn	22 35 19.9	+1.7
RTZ	Ruatahuna	7.29	193	P	Pn	22 35 19.6	+0.1
MTHZ	Maungataniwha	7.54	193	P	Pn	22 35 23.0	+0.4
RAHZ	Arahi	7.56	192	P	Pn	22 35 23.0	+0.2
MRHZ	Matea Rd	7.62	196	P	Pn	22 35 24.1	+0.5
TWVZ	Taurewa	8.10	201	P	Pn	22 35 31.2	+1.4
KWHZ	Kaweka Forest	8.18	195	P	Pn	22 35 29.9	-0.8
BHHZ	Black Hill Sta	8.32	196	P	Pn	22 35 30.9	-1.6
ASAR	Alice Springs	40.57	270	P	P	22 40 43.3	-7.6
	0.2nm,0.3s,baz=107,slow=7.9,SNR=2.2						
WRA	Warramunga Arr	41.67	275	P	P	22 40 52.0	-7.7
	0.2nm,0.3s,baz=111,slow=8.0,SNR=6.3						
WRA				LR	LR	22 56 58.9	
	comp=Z,226nm,21.2s,baz=215,slow=34						
FINES	FINESS Array B	145.28	337	PKPbc	PKPdf	22 52 27.0	-15
	1.4nm,0.4s,baz=46,slow=4.5,SNR=20						

*IDC **26** 22:50:48.8±2.6, 8°.29N×126°.34E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/35, mbtmp3.7/4, MS3.5/2, Ms1 3.5/2, ms1mx2.9/37, Error ellipse: s-maj=226.2km s-min=26.4km az=64.0*

*MAN **26** 22:50:51.8, 7°.45N×124°.30E, h1km, mb5.0, ML3.9, MS3.9*

ISC 26 22:50:53.3±1.0, **7°.47N**±0°.03×**124°.30E**±0°.04, **h17km**±7km, **n16,** σ**1s.58**/24, **mb3.4/4, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.26	193	⇓iP	Pg	22 50 59.8	+0.8
CTBH				iS	Sg	22 51 04.6	+1.7
BUKP	Musuan	0.85	62	eP	Pg	22 51 08.0	-2.0
BUKP				eS	Sg	22 51 19.9	-1.4
SKMP	Bagumbayan, Su	0.97	166	eP	Pb	22 51 10.7	-1.1
SKMP				eS	Sn	22 51 26.3	+0.5
PAGZ	Pagadian	0.99	292	eP	Pg	22 51 11.0	-1.5
PAGZ				eS	Sg	22 51 23.8	-1.7
CGP	Cagayan de Oro	1.05	22	⇑eP	Pb	22 51 13.3	+0.2
CGP				eS	Sn	22 51 31.1	+3.5
DDMP	Don Marcelino,	1.95	134	eP	Pn	22 51 26.3	+0.6
DDMP				eS	Sg	22 51 54.3	-1.8
BUTP	Butuan	1.98	41	eP	Pn	22 51 27.6	+1.5
BUTP				eS	Sg	22 51 58.7	+1.6
SNPH	Sibulan	2.14	331	iP	Pn	22 51 29.9	+1.5
SNPH				iS	Sn	22 51 53.0	-1.6
TBP	Tagbilaran	2.25	349	⇑eP	Pn	22 51 29.4	-0.5
TBP				eS	Sn	22 51 57.0	-0.2
GUIM	Jordan	3.56	332	eP	Pn	22 51 48.9	+1.0
GUIM				eS	Sn	22 52 30.5	+0.8
GUMO	Guam	21.11	72	LR	LR	23 02 34.9	
	comp=Z,128nm,18.1s,baz=116,slow=37						
FITZ	Fitzroy Crossi	25.44	177	LR	LR	23 07 43.6	
	comp=Z,104nm,18.7s,baz=122,slow=39						
WRA	Warramunga Arr	28.98	160	P	P	22 56 51.2	-1.1
	0.3nm,0.4s,baz=347,slow=10,SNR=1.5						
ASAR	Alice Springs	32.34	163	P	P	22 57 20.6	-1.4
	0.2nm,0.4s,baz=342,slow=7.4,SNR=4.2						
STKA	Stephens Creek	42.47	158	P	P	22 58 47.8	+0.1
	4.3nm,0.9s,baz=330,slow=8.9,SNR=7.7						
MKAR	Makanchi Array	53.12	325	P	P	23 00 12.0	+1.8
	0.3nm,0.6s,baz=124,slow=8.5,SNR=5.3						

IDC 26 23:18:20.6±1.3, **12°.67S×171°.60W, h0km, mb4.0/5, mb1 4.3/5, mb1mx3.8/33, mbtmp4.0/5, Error ellipse: s-maj=49.7km s-min=30.4km az=146.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	46.93	238	P	P	23 26 52.7	-0.6
	1.3nm,0.6s,baz=87,slow=5.1,SNR=4.2						
WRA	Warramunga Arr	52.21	255	P	P	23 27 33.9	+0.1
	0.3nm,0.4s,baz=82,slow=6.1,SNR=4.6						
ASAR	Alice Springs	52.65	250	P	P	23 27 37.1	+0.1
	3.2nm,0.4s,baz=82,slow=8.9,SNR=48						
VNDA	Vanda	66.25	186	P	P	23 29 10.1	0.0
	3.7nm,1.1s,baz=48,slow=3.6,SNR=10						
NVAR	Mina Array Bea	71.14	42	P	P	23 29 41.5	-0.1
	0.5nm,0.8s,baz=251,slow=5.6,SNR=3.6						

IDC 26 23:52:01.5±12.0, **26°.68N×143°.63E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/25, mbtmp3.6/3, Error ellipse: s-maj=474.6km s-min=30.2km az=71.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	47.21	192	P	P	00 00 36.4	+0.1
	1.6nm,0.9s,baz=13,slow=8.4,SNR=6.2						
ASAR	Alice Springs	50.93	192	P	P	00 01 04.4	-0.3
	0.2nm,0.3s,baz=13,slow=5.1,SNR=3.8						
MKAR	Makanchi Array	51.73	310	P	P	00 01 10.6	-0.1
	0.4nm,0.5s,baz=88,slow=9.2,SNR=13						

*NEIC **26** 23:58:55.8±1.9, 43°.57N±0°.05×105°.19W±0°.08, h0km±2km, ML2.7/49, Error ellipse: s-maj=10.0km s-min=8.5km az=303.0*

*IDC **26** 23:58:56.1±2.0, 43°.68N×105°.44W, h0km, mb1 3.4/3, mb1mx3.2/31, mbtmp3.1/3, ML3.0/3, Error ellipse: s-maj=57.8km s-min=9.7km az=150.0*

ISC 26 23:58:55.3±0.9, **43°.58N**±0°.05×**105°.21W**±0°.05, **h0km, n31,** σ**1s.10**/33, **Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	1.01	57		Pb	23 59 16.4	+0.6
RSSD					Sn	23 59 32.2	+0.2
K22A	Casper	1.34	226		Pg	23 59 20.7	-0.2
PHWY	Pilot Hill	2.29	185		Pn	23 59 33.8	-0.8
RWWY	Rawlins	2.40	219		Pn	23 59 35.9	-0.3
RWWY				IAML		00 00 12.8	
	28nm,0.6s						
RWWY				IAML		00 00 13.8	
	55nm,1.0s						
N23A	Red Feather La	2.74	192		Pn	23 59 43.0	+2.2
N23A				IAML		00 00 24.4	
	comp=E,24nm,0.6s						
N23A				IAML		00 00 29.6	
	comp=N,22nm,0.8s						
LAO	LASA Array	3.19	347	Pn	Pn	23 59 47.5	+0.8
BW06	Boulder Array	3.28	257		Pn	23 59 48.2	0.0
PD31	Pinedale Array	3.28	257		Pn	23 59 48.3	0.0
PDAR	Pinedale Array	3.28	257	Pn	Pn	23 59 50.3	+2.1
	comp=N,1.2nm,0.3s,baz=75,slow=18,SNR=18						
PDAR				Lg	Lg	00 00 34.3	
	comp=N,1.2nm,0.3s,baz=76,slow=16,SNR=4.6						
RLMT	Red Lodge	3.29	299		Pn	23 59 48.2	-0.1
RLMT				IAML		00 00 45.7	
	comp=N,14nm,2.5s						
OGNE	Ogallala	3.54	137		Pn	23 59 51.9	+0.3
YNE	Yellowstone No	3.73	294		Pn	23 59 54.9	+0.5
YMP	Mirror Lake Pl	3.74	290	Pn	Pn	23 59 54.8	+0.1
ISCO	Idaho Springs	3.79	185	Pn	Pn	23 59 55.0	-0.3
ISCO				IAML		00 00 40.9	
	comp=N,10nm,4.5s						
ISCO				IAML		00 01 19.4	
	comp=N,9.0nm,4.0s						
LKWY	Lake	3.87	287		Pn	23 59 57.4	+1.1
LKWY				IAML		00 01 06.4	
	comp=N,14nm,3.1s						
LKWY				IAML		00 01 24.5	
	comp=N,15nm,4.5s						
GCMT	Greycliff	3.87	306		Pn	23 59 56.3	+0.1
H17A	Grant Village	3.96	284		Pn	23 59 58.7	+1.2
H17A				IAML		00 01 21.7	
	comp=E,8.4nm,4.6s						
H17A				IAML		00 01 38.7	
	comp=N,8.6nm,4.5s						
FLWY	Flagg Ranch	4.00	279		Pn	23 59 59.2	+1.1
FLWY				IAML		00 00 28.3	
	comp=N,15nm,4.8s						
YPP	Pitchstone Pla	4.10	282		Pn	00 00 01.1	+1.5
REDW	Red Top Meadow	4.11	269		Pn	00 00 00.9	+1.3
REDW				IAML		00 02 25.1	
	comp=N,15nm,4.8s						
IMW	Indian Meadow	4.16	276		Pn	00 00 02.0	+1.6
IMW				IAML		00 01 30.3	
	comp=N,8.5nm,2.2s						
IMW				IAML		00 02 47.0	
	comp=N,8.1nm,4.2s						
TPAW	Teton Pass	4.17	271		Pn	00 00 01.3	+0.7
TPAW				IAML		00 00 36.1	
	comp=N,12nm,5.0s						
TPAW				IAML		00 01 23.6	
	comp=N,11nm,4.3s						
FXWY	Fox Creek	4.22	273		Pn	00 00 02.4	+1.2
FXWY				IAML		00 01 35.0	
	comp=N,6.8nm,4.7s						
YHH	Holmes Hill	4.23	288		Pn	00 00 00.8	-0.6
AHID	Auburn Hatcher	4.38	261		Pn	00 00 03.3	0.0
AHID				Pg	Pg	00 00 18.0	-1.3
AHID				IAML		00 02 33.4	
	comp=E,11nm,4.5s						
RDMU	Red Mountain	4.42	229		Pn	00 00 04.0	+0.1
YHL	Hebgen Lake	4.47	289		Pn	00 00 05.5	+0.8
HWUT	Hardware Ranch	5.09	249		Pn	00 00 12.4	-0.6
ULM	Lac du Bonnet	9.23	40	Pn	Pn	00 01 08.0	-1.7
	comp=E,0.5nm,0.3s,baz=230,slow=12,SNR=5.4						
ULM				Lg	Lg	00 03 45.5	
	comp=E,0.1nm,0.3s,baz=307,slow=20,SNR=2.0						
ULM	Lac du Bonnet	9.23	40		Pn	00 01 08.9	-0.7
NVAR	Mina Array Bea	11.15	247	Pn	Pn	00 01 38.7	+2.5
	comp=E,0.1nm,0.3s,baz=73,slow=15,SNR=2.5						

*NEIC **27** 00:19:09.6±1.7, 36°.45N±0°.02×97°.06W±0°.03, h5km±6km, Error ellipse: s-maj=3.2km s-min=2.7km az=60.0*

*IDC **27** 00:19:10.2±2.0, 36°.60N×97°.25W, h0km, mb1 3.4/4, mb1mx3.2/50, mbtmp3.1/4, ML3.0/4, Error ellipse: s-maj=29.5km s-min=12.3km az=105.0*

*ANF **27** 00:19:10.4±0.6, 36°.42N×97°.03W, h5km, ML4.0/8, Error ellipse: s-maj=8.6km s-min=5.0km az=52.0*

*TUL **27** 00:19:10±1.3, 36°.45N±0°.03×97°.07W±0°.03, h0km±6km, ML3.2, Error ellipse: s-maj=4.5km s-min=3.1km az=131.0*

ISC 27 00:19:08.0±1.3, **36°.49N**±0°.03×**97°.10W**±0°.03, **h1km**±11km, **n50,** σ**1s.57**/68, **Oklahoma**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.64	48	Pg	Pb	00 19 22.2	+0.2
ADOK	Arcadia Dam	0.86	195	Pg	Pg	00 19 25.5	+0.9
OKCFA	Oklahoma City	1.11	195		Pb	00 19 29.6	-0.4
OKCFA					Sg	00 19 44.3	+0.7
OKCSW	OKLAHOMA CITY	1.12	194		Pb	00 19 29.7	-0.4
OKCSW					Sg	00 19 44.5	+0.6
TUL1	Leonard	1.21	118		Pb	00 19 31.5	-0.2
TUL1					Sb	00 19 46.5	-1.4
TUL1	Leonard	1.21	118	P	Pb	00 19 31.6	-0.2
	baz=298						
TUL1				S	Sb	00 19 46.3	-1.5
	baz=298						
FNO	Franklin	1.25	191	Pg	Pn	00 19 32.5	-0.3
W35A	Tecumseh	1.35	172		Pn	00 19 33.0	-1.0
W35A					Sb	00 19 51.1	-0.8
U32A	Winter Ranch,	1.53	266		Pn	00 19 38.2	+0.9
U32A					Sg	00 19 59.0	+1.7
X34A	Smith Ranch, M	1.98	198		Pb	00 19 44.5	-0.3
U38A	Gravette	2.19	91		Pb	00 19 47.2	-1.3
WMOK	Wichita Mounta	2.22	218		Pn	00 19 47.5	+1.5
WMOK					Sb	00 20 16.0	-1.0
WMOK	Wichita Mounta	2.22	218	P	Pb	00 19 47.6	-1.3
	baz=39						
WMOK				S	Sb	00 20 16.3	-0.7
	baz=39						
HHAR	Hobbs	2.56	94		Pn	00 19 52.2	+1.5
KSU1	Kansas State U	2.63	8	P	Pb	00 19 55.1	-0.9
	baz=188						
W39A	Magazine	2.99	115		Pn	00 19 56.9	+0.3
W39A	Magazine	2.99	115	P	Pn	00 19 57.6	+1.0
	baz=296						
W39A				S	Sn	00 20 34.4	+1.3
	baz=296						
CBKS	Cedar Bluff	3.12	319	Pn	Pn	00 20 00.9	+2.4
CBKS				Pg	Pg	00 20 07.8	0.0
CBKS					Sn	00 20 38.0	+1.5
CBKS	Cedar Bluff	3.12	319	P	Pn	00 20 01.0	+2.6
	baz=138						
Z35A	Perchaven, San	3.15	182		Pn	00 19 58.5	-0.4
S39A	Bolivar	3.25	67	Pn	Pn	00 20 02.2	+2.0
U40A	Yellville	3.43	91		Pn	00 20 03.6	+0.9
U40A	Yellville	3.43	91	P	Pn	00 20 04.0	+1.3
	baz=273						
U40A				S	Sn	00 20 44.9	+0.8
	baz=273						
MIAR	Mount Ida	3.47	123		Pn	00 20 04.6	+1.3
MIAR	Mount Ida	3.47	123	P	Pn	00 20 04.5	+1.3
	baz=305						
MIAR				S	Sn	00 20 46.3	+1.3
	baz=305						
MGMO	Mountain Grove	3.94	79		Pn	00 20 11.3	+1.6
X40A	Basin Creek Fa	4.02	119	P	Pn	00 20 12.2	+1.5
	baz=301						
X40A				S	Sn	00 21 00.0	+1.6
	baz=301						
WHTX	Lake Whitney,	4.50	184	Pn	Pn	00 20 17.1	-0.2
Z41A	Richland Creek	4.79	131		Pn	00 20 22.1	+0.9
LCAR	Lake Charles	4.83	93	Pn	Pn	00 20 23.2	+1.4
CCM	Cathedral Cave	4.93	70	Pn	Pn	00 20 24.4	+1.2
CCM					Pb	00 20 37.5	+2.4
CCM				Sn	Sn	00 21 19.1	-1.8
KSCO	Kaye Shedlock'	5.05	302		Pn	00 20 26.1	+1.1
435B	Jarrell	5.71	184		Pn	00 20 35.4	+1.5
OGNE	Ogallala	5.88	321	Pn	Pn	00 20 38.4	+1.9
OGNE					Pg	00 20 59.4	-1.4
P43A	Skaggs, Pawnee	6.76	60	Pn	Pn	00 20 49.2	+0.8
SDCO	Great Sand Dun	6.83	283		Pn	00 20 51.7	+2.1
L40A	Anamosa	7.19	38	Pn	Pn	00 20 54.5	+0.1
ECSD	EROS Data Cent	7.25	3		Pn	00 20 57.4	+2.3

ECSD Sn Sn 00 22 15.9 -2.1
HDIL Hopedale 7.34 54 Pn Pn 00 20 56.8 +0.4
PLAL Pickwick Lake 7.50 99 Pn Pn 00 20 59.8 +1.3
ANMO Albuquerque 7.76 261 Pn Pn 00 21 02.6 +0.3
0.1nm,0.3s,baz=79,slow=5.2,SNR=2.7
ANMO Pg Pg 00 21 31.6 -5.1
0.4nm,0.3s,baz=74,slow=15,SNR=6.1
ANMO Lg Lg 00 23 08.9
0.9nm,0.3s,baz=83,slow=8.1,SNR=4.6
S22A 4UR Ranch, Cre 7.87 282 Pn Pn 00 21 07.9 +4.0
S22A Pg 00 21 35.9 -2.9
L42A Oliver, Polo 7.97 44 Pn Pn 00 21 07.7 +2.6
N23A Red Feather La 8.19 305 Pn Pn 00 21 10.6 +2.3
JFWS Jewell Farm 8.31 37 Pn Pn 00 21 10.5 +0.8
MNTX Cornudas Mount 8.36 238 Pn 00 21 13.3 +2.8
TXAR Lajitas Array 9.02 220 Pn Pn 00 21 20.4 +0.8
0.1nm,0.3s,baz=44,slow=11,SNR=7.9
TXAR Pg 00 21 54.3
0.4nm,0.3s,baz=40,slow=13,SNR=5.7
TXAR Lg Lg 00 23 47.0
0.4nm,0.3s,baz=41,slow=16,SNR=3.9
TKL Tuckaleechee C 10.82 90 Lg Lg 00 24 44.9
1.1nm,0.3s,baz=351,slow=21,SNR=9.8
PDAR Pinedale Array 11.46 307 Pn Pn 00 21 53.9 +0.8
0.1nm,0.3s,baz=115,slow=15,SNR=3.4
PDAR Pg 00 22 39.0
0.1nm,0.3s,baz=110,slow=16,SNR=3.6
PDAR Lg Lg 00 25 03.4
0.1nm,0.3s,baz=120,slow=30,SNR=2.8
ULM Lac du Bonnet 13.78 3 Pn Pn 00 22 20.9 -3.6
0.1nm,0.3s,baz=190,slow=11,SNR=2.6
ULM Sn Sn 00 24 45.0 -13
0.2nm,0.3s,baz=90,slow=20,SNR=2.5
ULM Lg Lg 00 26 10.4
0.1nm,0.3s,baz=180,slow=20,SNR=1.9

IDC 27 00:30:20.0±0.8, 17°.65S×172°.96W, h0km, mb4.2/10, mb1 4.4/10, mb1mx4.0/54, mbtmp4.2/10, MS3.6/12, Ms1 3.7/12, ms1mx3.4/34, Error ellipse: s-maj=38.4km s-min=18.2km az=139.0
ISC 27 00:30:24.3±0.8, 17°.7S±0°.2×173°.0W±0°.2, h28km, n42, σ0s.65/29, mb4.1/10, MS3.7/12, Tonga Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AFI Afiamalu 3.93 17 Pn Pn 00 31 16.1 -6.8
9.5nm,0.3s,baz=148,slow=19,SNR=3.2
AFI Sn Sn 00 31 58.1 -10
17nm,0.3s,baz=271,slow=19,SNR=4.9
RAR Rarotonga 12.94 108 LR LR 00 37 19.9
comp=Z,90nm,21.8s,baz=284,slow=32
DZM Mont Dzumac 19.83 254 eLR LR 00 38 50.4
comp=Z,299nm,25.4s
DZM Mont Dzumac 19.83 254 LR LR 00 41 08.1
comp=Z,212nm,20.6s,baz=197,slow=33
URZ Urewera 22.25 201 P P 00 35 18.8 -0.2
28nm,0.9s,baz=4.1,slow=7.4,SNR=7.1
PPT2 Papeete2 22.31 93 eLR LR 00 39 50.9
comp=Z,344nm,27.8s
PPT Papeete 22.31 93 LR LR 00 42 13.6
comp=Z,197nm,18.3s,baz=220,slow=32
TBI Tubuai 22.73 108 eLR LR 00 40 08.3
comp=Z,293nm,29.5s
CTA Charters Tower 38.58 260 P P 00 37 45.0 -0.1
1.0nm,0.3s,baz=95,slow=16,SNR=2.8
STKA Stephens Creek 43.28 242 P P 00 38 23.5 -0.2
2.1nm,0.7s,baz=94,slow=15,SNR=4.2
WRA Warramunga Arr 49.75 259 P P 00 39 13.9 -0.7
1.2nm,0.4s,baz=98,slow=6.7,SNR=10.0
WRA LR LR 00 58 33.1
comp=Z,135nm,21.4s,baz=115,slow=34
ASAR Alice Springs 49.82 254 P P 00 39 15.3 +0.2
6.5nm,0.6s,baz=88,slow=8.3,SNR=32
KAPI Kappang 66.84 272 LR LR 01 10 12.1
comp=Z,25nm,18.5s,baz=116,slow=36
NVAR Mina Array Bea 75.76 41 P P 00 42 07.0 -0.9
1.2nm,0.8s,baz=227,slow=5.9,SNR=5.5
NVAR LR LR 01 09 55.5
comp=Z,98nm,19.6s,baz=233,slow=31
TXAR Lajitas Array 81.56 56 LR LR 01 12 44.4
comp=Z,20nm,19.2s,baz=0.0,slow=31
PDAR Pinedale Array 83.70 41 P P 00 42 50.0 -0.9
1.0nm,1.0s,baz=151,slow=3.4,SNR=4.8
ILAR Eielson Array 84.60 11 P P 00 42 54.5 -0.1
0.7nm,0.8s,baz=226,slow=5.0,SNR=6.1
ILAR LR LR 01 16 13.2
comp=Z,50nm,19.6s,baz=226,slow=33
SEY Seymchan 84.82 345 P P 00 42 55.6 -0.1
1.2nm,0.7s,baz=114,slow=5.8,SNR=4.7
PLCA Paso Flores 87.69 132 LR LR 01 14 56.6
comp=Z,42nm,18.7s,baz=226,slow=30
YKA Yellowknife Ar 92.03 23 P P 00 43 30.4 +0.2
0.9nm,1.0s,baz=235,slow=4.0,SNR=6.8
CMAR Chiang Mai Arr 93.70 288 LR LR 01 23 47.9
comp=Z,20nm,18.9s,baz=86,slow=34
LPAZ La Paz 98.66 110 LR LR 01 20 03.8
comp=Z,34nm,18.7s,baz=240,slow=30
TLY Talaya 99.66 321 LR LR 01 23 53.6
comp=Z,25nm,19.3s,baz=328,slow=32
KMBO Kilima Mbogo 144.84 241 PKP PKPdf 00 50 01.5 +1.5
1.3nm,0.6s,baz=161,slow=2.7,SNR=5.6
OJC Ojcow 145.96 345 eP PKPab 00 50 02.9 +1.2
KSP Ksiaz 146.10 349 eP PKPab 00 50 03.4 +1.1
CLL Collm 146.12 353 ePKPbc PKPab 00 50 03.0 +0.7
comp=Z,20nm,1.1s
CLL ePKPab sPKPab 00 50 14.0 +1.0
CHVC Chvalec 146.39 350 eP PKPab 00 50 03.5 +0.1
OSTC Ostas 146.39 349 eP PKPab 00 50 03.9 +0.5
DPC Dobruska-Polom 146.57 349 eP PKPab 00 50 04.8 +0.7
OKC Ostrava-Krasne 146.70 347 eP PKiKP 00 50 05.7 -0.5
KRLC Kraliky 146.75 349 eP PKPab 00 50 05.1 +0.3
VYHS Vyhne 147.80 345 e PKiKP 00 50 08.0 -0.5
BRTR Keskin Array B 148.16 319 PKPbc PKiKP 00 50 09.1 -0.6
comp=Z,1.1nm,0.9s,baz=103,slow=3.1,SNR=4.4
KHC Kasperske Hory 148.19 352 eP PKiKP 00 50 09.1 -0.2
GERES GERESS Array B 148.45 352 PKPbc PKPbc 00 50 09.0 +0.6
comp=Z,2.2nm,1.0s,baz=45,slow=4.0,SNR=9.8
CONA Conrad Observa 148.98 348 i PKKPbc PKiKP 00 50 11.7 +0.6
comp=Z,1.0nm,0.4s
MOTA Moosalm 150.23 354 i PKKPbc PKiKP 00 50 13.5 -0.2
comp=Z,1.5nm,0.5s
FETA Feichten 150.59 355 i PKKPbc PKiKP 00 50 15.4 +0.9
ABTA Abfaltersbach 150.67 352 i PKKPbc PKiKP 00 50 14.7 +0.1
comp=Z,3.2nm,0.7s
DAVOX Davos/Dischmat 150.89 356 PKPbc PKiKP 00 50 14.9 -0.3
TORD Torodi Ar. Bea 173.17 131 PKPab PKPab 00 51 59.6 +0.2
comp=Z,1.1nm,1.0s,baz=247,slow=3.0,SNR=3.0

NIED 27 00:32:00, 34°.70N×140°.10E, h83km, Mw3.9 Best double couple: M₀8.24000×10¹⁴ NP1:φs236.00000°, δ88.00000°, λ127.00000°. NP2:φs328.00000°, δ37.00000°, λ3.00000°.
NEIC 27 00:32:49.0±1.9, 34°.83N±0°.05×140°.39E±0°.10, h86km±7km, mb4.4/10, Error ellipse: s-maj=12.0km s-min=7.4km az=80.0
IDC 27 00:32:51.0±1.1, 34°.71N×140°.04E, h93km±7km, mb3.8/22, mb1 3.9/24, mb1mx3.6/75, mbtmp4.1/24, MS2.8/2, Ms1 2.9/2, ms1mx2.4/42, Error ellipse: s-maj=21.9km s-min=5.7km az=74.0
JMA 27 00:32:50.1±0.2, 34°.70N×140°.06E, h89km±2km, M3.8 Broadband fault plane solution: P waves. NP1: φs348.00000°, δ50.00000°, λ-5.00000°. NP2:φs81.00000°, δ86.00000°, λ-140.00000°. Principal axes: T Plg24.0000°, Azm207.0000°; N Plg50.0000°, Azm85.0000°; P Plg30.0000°, Azm312.0000°;
ISC 27 00:32:49.8±0.7, 34°.75N±0°.04×140°.16E±0°.05, h91km±5km, n77, σ1s.26/81, mb4.1/28, 6C-4D, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BSO4 Boso 4 0.28 32 ⇑P Pn 00 33 04.3 +1.1
BSO4 X 00 33 15.8
BSO3 Boso 3 0.29 81 ⇓P Pn 00 33 04.1 +1.1
BSO3 eX 00 33 15.8
TATJ Tateyama 2 0.35 322 ⇑P Pn 00 33 04.5 +0.8
TATJ S Sn 00 33 15.5 +1.5
JKUC kamogawauchiur 0.41 5 ⇑P Pn 00 33 04.6 +0.6
JKUC S Sn 00 33 16.0 +1.4
JIM2 Oshima 3 0.60 267 P Pn 00 33 05.0 -0.5
JIM2 S Sn 00 33 16.2 -1.0
BSO1 Boso 1 0.68 98 P Pn 00 33 06.9 +1.3
JMKN Mikurajimanish 0.98 209 ⇑P Pn 00 33 09.4 0.0
JMKN S Sn 00 33 23.5 -0.5
JOD2 Odawara 2 1.01 300 P Pn 00 33 09.3 -0.5
JOD2 S Sn 00 33 24.1 -0.6
JFNN Fujinakano 1.28 290 ⇓P Pn 00 33 13.1 +0.1
JFNN S Sn 00 33 30.4 0.0
JYN Shimob 1.52 300 ⇓P Pn 00 33 16.2 +0.3
JRY Ryogami san 1.62 321 ⇓P Pn 00 33 17.8 +0.6
JRY S Sn 00 33 38.6 +0.6
SHZ3 Shizuoka 3 1.63 282 P Pn 00 33 17.5 +0.2
JHJ Hachijo jima 2 1.66 191 P Pn 00 33 18.4 +0.7
171nm,0.3s,baz=334,slow=15,SNR=53
JHJ S Sn 00 33 38.9 +0.1
307nm,0.3s,baz=113,slow=22,SNR=37
JHJ LR LR 00 34 00.4
comp=Z,55nm,18.2s,baz=104,slow=43
JHJ2 Mitsune 1.66 190 ⇑P Pn 00 33 18.3 +0.6
JHJ2 S Sn 00 33 38.9 +0.1
JHJ2 Mitsune 1.66 190 Pn 00 33 18.4 +0.7
JHJ2 Sn 00 33 39.4 +0.6
JAG Ashikaga 1.76 341 ⇑P Pn 00 33 19.2 +0.2
MJAR Matsushiro Arr 2.39 319 P Pn 00 33 27.9 +0.7
4.2nm,0.3s,baz=148,slow=12,SNR=141
MJAR S Sn 00 33 55.6 -0.2
6.1nm,0.3s,baz=134,slow=17,SNR=11
MAJO Matsushiro 2.39 319 Pn 00 33 28.3 +1.1
MAT Matsushiro 2.39 319 P Pn 00 33 28.2 +1.0
MAT S Sn 00 33 56.3 +0.5
MJB9 Matsu-Tunnel 2.39 319 Pn 00 33 28.3 +1.1
INU Inuyama 2.64 284 Pn 00 33 31.5 +0.9
ERM Erimo 7.62 17 Pn Pn 00 34 37.7 -0.4
ERM Sn 00 35 57.5 -5.3
JCJ Chichijima 7.83 167 P Pn 00 34 38.0 -3.1
31nm,0.3s,baz=360,slow=21,SNR=31
JCJ S Sn 00 35 58.5 -10
5.6nm,0.3s,baz=270,slow=20,SNR=2.8
JNU Nakatsue 7.88 261 P Pn 00 34 43.0 +1.3
0.4nm,0.3s,baz=108,slow=11,SNR=3.7
ASAJ Asahikawa 9.54 11 S Sn 00 36 41.0 -8.4
0.6nm,0.3s,baz=131,slow=19,SNR=2.5
JKA Kamikawa-asahi 9.54 11 Sn 00 36 41.0 -8.4
KSRS Korea Array 10.26 289 LR LR 00 38 27.1
comp=Z,23nm,20.7s,baz=355,slow=33
KLR Kul'dur 15.74 339 P Pn 00 36 22.2 -3.9
0.4nm,0.3s,baz=189,slow=6.1,SNR=9.4
MA2 Magadan 25.79 12 P P 00 38 14.2 +2.2
2.2nm,0.3s,baz=188,slow=14,SNR=6.3
H11N2 WAKE ISLAND Hy 27.98 115 T T 01 08 28.1
baz=308,slow=75,SNR=32
H11N1 WAKE ISLAND Hy 27.98 115 T T 01 08 29.4
baz=308,slow=75,SNR=28
H11N3 WAKE ISLAND Hy 28.00 115 T T 01 08 26.1
baz=308,slow=75,SNR=28
WAKE Wake Island 28.07 116 P P 00 38 31.0 -1.9
SONM Songino Array 28.29 308 P P 00 38 35.6 +0.9
1.8nm,0.7s,baz=108,slow=9.1,SNR=15
H11S3 WAKE ISLAND Hy 28.59 118 T T 01 08 46.2
baz=310,slow=76,SNR=12
H11S1 WAKE ISLAND Hy 28.59 118 T T 01 08 47.9
baz=310,slow=76,SNR=12
H11S2 WAKE ISLAND Hy 28.61 118 T T 01 08 46.7
baz=310,slow=76,SNR=9.9
TIXI Tiksi 37.44 354 P P 00 39 54.5 +0.8
1.4nm,0.4s,baz=142,slow=3.4,SNR=6.3
TIXI Tiksi 37.44 354 P P 00 39 51.9 -1.8
CMAR Chiang Mai Arr 39.96 257 P P 00 40 15.2 -0.3
0.6nm,0.3s,baz=36,slow=4.8,SNR=4.5
CMAR LR LR 00 57 27.4
comp=Z,23nm,18.1s,baz=90,slow=37
ZAA0 Zalesovo Array 42.73 314 P P 00 40 37.4 -0.4
ZALV Zalesovo Beam 42.73 314 P P 00 40 38.5 +0.8
2.4nm,0.7s,baz=86,slow=7.0,SNR=14
ZALV PcP PcP 00 42 28.4 +0.7
0.5nm,0.5s,baz=93,slow=3.2,SNR=3.0
MK31 Makanchi Array 44.50 304 P P 00 40 52.9 +0.8
MK31 IAmb IAmb 00 40 53.6
comp=Z,3.9nm,0.7s
MKAR Makanchi Array 44.50 304 P P 00 40 53.0 +0.9
comp=Z,4.0nm,0.6s,baz=89,slow=10.0,SNR=63
MAKZ Makanchi 44.71 304 P P 00 40 54.2 +0.4
MAKZ IAmb IAmb 00 40 55.3
comp=Z,4.8nm,0.8s
RAMN Ramite 46.18 276 eP P 00 41 04.8 -1.1
comp=Z,14nm,0.7s
JIRN Jiri 46.24 277 eP P 00 41 05.9 -0.6
comp=Z,24nm,0.5s
GUN Gumba 46.39 277 eP P 00 41 07.2 -0.5
comp=Z,10.0nm,0.7s
KURK Kurchatov 46.57 310 P P 00 41 08.9 +0.7
KURK IAmb IAmb 00 41 10.0
comp=Z,5.6nm,0.7s
KURBB Kurchatov Arra 46.63 310 P P 00 41 09.6 +0.8
comp=Z,3.5nm,0.7s,baz=81,slow=7.4,SNR=37
PKI Pulchoki 46.91 277 eP P 00 41 10.2 -1.5
PKIN Phulchoki 46.92 277 eP P 00 41 10.5 -1.2
comp=Z,5.5nm,0.6s
KKN Kakani 46.93 277 eP P 00 41 11.1 -0.6
GKN Gorkha 47.37 278 eP P 00 41 14.3 -0.8
DANN Dangsing 47.95 279 eP P 00 41 19.3 -0.4
comp=Z,17nm,0.5s
AAK Ala-Archa 50.70 300 P P 00 41 41.1 +0.8
comp=Z,0.5nm,0.5s,baz=144,slow=4.4,SNR=5.5
AAK Ala-Archa 50.70 300 IAmb IAmb 00 41 41.9
comp=Z,2.4nm,0.8s
BVAR Borovoye Array 51.37 313 P P 00 41 45.4 +0.4
comp=Z,0.4nm,0.4s,baz=72,slow=4.7,SNR=5.4
WB2 Warramunga Arr 54.67 187 P P 00 42 09.2 -0.3
WRA Warramunga Arr 54.67 187 P P 00 42 09.2 -0.3
comp=Z,7.4nm,0.6s,baz=2.7,slow=7.6,SNR=62
KBL Kabul 57.30 292 P P 00 42 28.7 +0.3
KBL IAmb IAmb 00 42 29.1
comp=Z,5.0nm,1.1s
ARU Arti 57.40 319 P P 00 42 28.8 +0.2
comp=Z,0.8nm,0.5s,baz=280,slow=20,SNR=5.6
KKH Kailua Kona 57.86 87 P P 00 42 28.7 -3.6
ASAR Alice Springs 58.40 187 P P 00 42 36.0 +0.1
comp=Z,1.8nm,0.7s,baz=7.0,slow=8.4,SNR=8.8
ABKAR Akbulak array 58.64 311 P P 00 42 37.8 +0.5
ABKAR IAmb IAmb 00 42 38.7
comp=Z,2.5nm,0.6s
AKTO Aktyubinsk 59.45 313 P P 00 42 44.4 +1.4
comp=Z,1.4nm,0.5s,baz=72,slow=7.5,SNR=3.3
GEYT Alibeck 64.05 299 P P 00 43 14.4 +0.3
comp=Z,1.4nm,0.8s,baz=48,slow=2.1,SNR=3.7
RES Resolute Bay 65.06 14 P P 00 43 21.7 +1.8
comp=Z,0.5nm,0.3s,baz=286,slow=5.8,SNR=4.3
RES Resolute Bay 65.06 14 P P 00 43 19.9 -0.1
FINES FINESS Array B 70.35 332 P P 00 43 54.0 +0.6
comp=Z,1.4nm,0.6s,baz=82,slow=5.0,SNR=5.9
NWAO Narrogin (SRO) 70.68 200 P P 00 43 55.6 0.0
comp=Z,5.3nm,0.7s,baz=50,slow=2.5,SNR=2.9
KBZ Khabaz 71.61 311 P P 00 44 02.5 +1.1
comp=Z,1.5nm,0.9s,baz=96,slow=5.2,SNR=3.7
AKASG Malin Array Be 75.47 322 P P 00 44 24.0 +0.2
comp=Z,1.0nm,0.4s,baz=47,slow=6.2,SNR=8.0
HFS Hagfors 75.74 335 P P 00 44 25.8 +0.6
comp=Z,0.9nm,0.5s,baz=48,slow=2.2,SNR=7.0
NOA NORSAR Array B 75.89 337 P P 00 44 27.0 +0.9
comp=Z,0.6nm,0.8s,baz=316,slow=17,SNR=3.2
BRTR Keskin Array B 79.59 311 P P 00 44 48.6 +1.4
comp=Z,0.4nm,0.8s,baz=46,slow=8.4,SNR=3.7
GERES GERESS Array B 84.10 328 P P 00 45 11.7 +1.1
comp=Z,0.6nm,0.7s,baz=50,slow=7.2,SNR=4.3

BJI 27 00:36:11.0±0.0, 10°.60S×108°.50E, h10km, mB5.0/5, mb4.5/8
IDC 27 00:36:14.7±0.8, 10°.10S×108°.87E, h0km, mb4.1/15, mb1 4.2/18, mb1mx4.0/56, mbtmp4.1/15, ML4.0/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/25, Error ellipse: s-maj=38.7km s-min=13.5km az=51.0
NEIC 27 00:36:14.5±2.7, 10°.39S±0°.07×108°.63E±0°.06, h8km±4km, mb4.5/13, Error ellipse: s-maj=9.9km s-min=8.0km az=182.0
DJA 27 00:36:16.3±0.7, 10°S±6°×10°9E±°, h10km, M4.7/13, mB5.1/2, mb4.7/6, MLv4.7/13, Mw(mB)4.4/2
ISC 27 00:36:14.7±0.5, 10°.36S±0°.06×108°.65E±0°.05, h10km, n69, σ1s.75/75, mb4.3/19, South of Java

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CISI Cisompet, Garu 2.91 343 P Pn 00 36 59.9 -1.2
CISI Cisompet, Garu 2.91 343 P Pn 00 36 59.9 -1.2
CISI Cisompet, Garu 2.91 343 Pn 00 37 00.1 -1.0
XMIS Christmas Isla 2.95 267 Pn Pn 00 37 01.4 -0.4
KPJI Karang Pucung 3.02 5 P Pn 00 37 03.0 +0.4
KPJI S Sn 00 37 37.7 -1.2
KPJI Karang Pucung 3.02 5 P Pn 00 37 03.0 +0.4
KPJI S Sn 00 37 37.7 -1.2
UGM Wanagama 3.05 37 P Pn 00 37 04.1 +1.0
UGM Wanagama 3.05 37 P Pn 00 37 04.1 +1.0
UGM Wanagama 3.05 37 Pn 00 37 03.9 +0.8
UGM Sn 00 37 35.5 -4.2
PCJI Pacitan 3.29 49 P Pn 00 37 05.9 -0.5
PCJI Pacitan 3.29 49 P Pn 00 37 05.9 -0.5
WOJI Wonogiri, Jawa 3.36 42 P Pn 00 37 07.3 -0.1
WOJI S Sn 00 37 43.6 -3.8
WOJI Wonogiri, Jawa 3.36 42 P Pn 00 37 07.3 -0.1
WOJI S Sn 00 37 43.6 -3.8
CNJI Cibinong 3.38 333 P Pn 00 37 07.0 -0.6
CNJI Cibinong 3.38 333 P Pn 00 37 07.0 -0.6
LEM Lembang 3.66 344 Pn Pn 00 37 09.8 -1.7
18nm,0.3s,baz=249,slow=13,SNR=15
LEM Sn Sn 00 37 52.5 -2.3
24nm,0.3s,baz=142,slow=19,SNR=3.6
LEM LR LR 00 38 54.8
comp=Z,347nm,21.9s,baz=227,slow=46
LEM Lembang 3.66 344 P Pn 00 37 13.2 +1.7
LEM Lembang 3.66 344 P Pn 00 37 13.2 +1.7
SMRI Semarang 3.73 28 P Pn 00 37 14.7 +2.2
SMRI Semarang 3.73 28 P Pn 00 37 14.7 +2.2
SMRI Semarang 3.73 28 Pn 00 37 14.6 +2.1
PWJI Pagerwojo 3.88 54 P Pn 00 37 15.3 +0.8
PWJI Pagerwojo 3.88 54 P Pn 00 37 15.3 +0.8
GMJI Gumukmas 5.16 67 P Pn 00 37 35.4 +3.3
GMJI Gumukmas 5.16 67 P Pn 00 37 35.4 +3.3
JAGI Jajag, Banyuwa 5.74 71 P Pn 00 37 39.9 -0.2
1.1nm3μm72nm,0.6s
JAGI Jajag, Banyuwa 5.74 71 P Pn 00 37 39.9 -0.2
1.1nm3μm72nm,0.6s
JAGI Jajag, Banyuwa 5.74 71 Pn 00 37 40.2 +0.1
JAGI Sn 00 38 40.3 -5.9
KLSI 6.84 325 P Pn 00 37 56.4 +1.2
0.0nm11nm,0.8s
KLSI 6.84 325 P Pn 00 37 56.4 +1.2
0.0nm11nm,0.8s
SRBI Singaraja 6.86 71 P Pn 00 37 56.3 +0.8
0.5nm46nm,0.7s
SRBI Singaraja 6.86 71 P Pn 00 37 56.3 +0.8
0.5nm46nm,0.7s
MNAI Manna 8.21 316 Pn Pn 00 38 13.7 -0.3
MNAI Sn 00 39 41.2 -5.8
GIRL Giralia 13.33 157 Pn Pn 00 39 21.6 -2.6
PSA00 Pilbara Seismi 15.49 137 Pn Pn 00 39 50.0 -3.3
PSA00 IAmb IAmb 00 40 03.8
comp=Z,39nm,1.4s
RPSI Rantau Prapat 16.18 323 Pn Pn 00 40 03.4 +0.9
PSI Prapat 16.27 323 Pn Pn 00 40 03.4 -0.3
comp=Z,0.1nm,0.3s,baz=165,slow=16,SNR=2.0
FITZ Fitzroy Crossi 18.17 117 P P 00 40 28.8 +1.2
comp=Z,0.9nm,0.3s,baz=310,slow=9.4,SNR=31
FITZ S Sn 00 43 31.6 -19
comp=Z,0.6nm,0.3s,baz=197,slow=21,SNR=6.6
MORW Morawa 19.86 161 P P 00 40 45.9 -0.2
KNRA Kununurra 20.29 107 P P 00 40 51.0 +0.2
KNRA IAmb IAmb 00 41 03.0
comp=Z,41nm,1.4s
WB0 Warramunga Arr 26.52 114 P P 00 41 53.7 +0.9
WRA Warramunga Arr 26.53 114 P P 00 41 53.8 +0.9
comp=Z,1.1nm,0.6s,baz=288,slow=11,SNR=5.7
ASAR Alice Springs 27.47 122 P P 00 42 02.0 +0.6
comp=Z,0.7nm,0.7s,baz=296,slow=10,SNR=6.8
ASAR PcP PcP 00 45 21.5 +1.6
comp=Z,0.8nm,0.5s,baz=306,slow=2.3,SNR=5.8
CMAR Chiang Mai Arr 30.19 341 P P 00 42 25.8 +0.3
comp=Z,0.6nm,0.3s,baz=170,slow=12,SNR=4.1
TPUB Ta-pu 35.45 19 P P 00 43 12.7 +1.3
STKA Stephens Creek 37.22 130 P P 00 43 28.0 +1.5
comp=Z,4.2nm,0.7s,baz=284,slow=12,SNR=7.6
STKA Stephens Creek 37.22 130 P P 00 43 27.6 +1.1
SONM Songino Array 57.97 358 P P 00 46 07.8 +0.2
comp=Z,1.2nm,0.6s,baz=178,slow=8.1,SNR=17
MK31 Makanchi Array 61.58 340 IAmb IAmb 00 46 48.0
comp=Z,1.7nm,0.7s
MKAR Makanchi Array 61.58 340 P P 00 46 33.3 +1.0
comp=Z,1.4nm,0.6s,baz=147,slow=7.8,SNR=18
KLR Kul'dur 62.72 17 P P 00 46 39.1 -0.7
comp=Z,0.9nm,0.5s,baz=216,slow=5.4,SNR=3.6
KURBB Kurchatov Arra 66.15 340 P P 00 47 02.5 +0.3
comp=Z,24nm,0.4s,baz=151,slow=6.1,SNR=7.8
KURK Kurchatov 66.19 340 P P 00 47 03.0 +0.4
KURK IAmb IAmb 00 47 04.3
comp=Z,4.6nm,1.2s
ZALV Zalesovo Beam 67.17 345 P P 00 47 08.4 -0.3
comp=Z,0.5nm,0.4s,baz=138,slow=4.4,SNR=3.0
GEYT Alibeck 67.34 319 P P 00 47 11.3 +1.1
comp=Z,1.1nm,0.8s,baz=174,slow=1.3,SNR=3.9
BVAR Borovoye Array 71.08 337 P P 00 47 34.1 +1.0
comp=Z,3.0nm,0.7s,baz=140,slow=7.8,SNR=17
ABKAR Akbulak array 73.11 329 IAmb IAmb 00 47 47.4
comp=Z,6.3nm,1.1s
PETK Petropavlovsk- 75.74 28 P P 00 47 59.8 -0.7
comp=Z,2.7nm,0.8s,baz=224,slow=7.7,SNR=3.1
ARU Arti 78.34 334 P P 00 48 16.1 +1.1
comp=Z,0.4nm,0.4s,baz=147,slow=5.1,SNR=3.9
ARU Arti 78.34 334 IAmb IAmb 00 48 16.9
comp=Z,3.6nm,0.9s
NRIK Noril'sk 80.86 353 P P 00 48 28.5 0.0
comp=Z,2.5nm,0.7s,baz=74,slow=2.9,SNR=4.8
TIXI Tiksi 82.93 6 P P 00 48 39.5 +0.2
comp=Z,1.2nm,0.4s,baz=162,slow=1.4,SNR=7.8
TIXI Tiksi 82.93 6 P P 00 48 38.2 -1.2
TIXI IAmb IAmb 00 48 40.1
comp=Z,3.5nm,0.7s
BR131 Keskin Array S 85.27 312 P P 00 48 52.1 -0.1
BRTR Keskin Array B 85.27 312 P P 00 48 53.6 +1.4
comp=Z,1.5nm,0.7s,baz=123,slow=6.8,SNR=9.2
YKA Yellowknife Ar 119.40 21 PKP PKiKP 00 55 04.1 -0.1
comp=Z,1.0nm,0.3s,baz=327,slow=1.6,SNR=5.9
TXAR Lajitas Array 144.40 53 PKP PKPdf 00 55 52.1 0.0
comp=Z,0.7nm,0.8s,baz=261,slow=2.5,SNR=9.0
BDFB Brasilia 145.34 222 PKPbc PKPdf 00 55 55.7 +1.6
comp=Z,1.4nm,0.5s,baz=158,slow=12,SNR=3.1
TKL Tuckaleechee C 152.40 22 PKPbc PKiKP 00 56 12.2 +0.3
comp=Z,1.7nm,0.6s,baz=257,slow=6.2,SNR=4.4

BEO 27 00:38:24.6±1.1, 38°.12N×20°.02E, h19km±6km, ML3.0/5
PDG 27 00:38:24.5±0.2, 38°.25N×20°.35E, h22km, ML3.4/12, Error ellipse: s-maj=0.7km s-min=0.7km az=0.0
ATH 27 00:38:25.9, 38°.28N×20°.45E, h13km±1km, ML3.1/6, Error ellipse: s-maj=2.0km s-min=0.7km az=252.0
THE 27 00:38:25.9, 38°.27N×20°.43E, h14km, ML3.6/9, Error ellipse: s-maj=0.8km s-min=0.3km az=269.0
ISC 27 00:38:25.7±0.8, 38°.27N±0°.02×20°.44E±0°.03, h14km±4km, n71, σ0s.88/113, 1C, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF4 Livadi, Kephal 0.02 228 P Pg 00 38 28.2 0.0
KEF4 S Sg 00 38 29.8 -0.1
KEF1 Kardakata, Kep 0.02 73 P Pg 00 38 28.1 -0.2
KEF1 S Sg 00 38 29.4 -0.5
AGT1 Agia Thekli 0.05 246 P Pg 00 38 28.5 +0.1
AGT1 S Sg 00 38 30.3 +0.1
65μm,0.3s
LXR1 Lixouri, Cepha 0.07 183 P Pg 00 38 28.8 +0.2
LXR1 S Sg 00 38 31.1 +0.7
124μm,0.3s
LXRA Lixouri, Kepha 0.07 184 P Pg 00 38 28.9 +0.3
LXRA S Sg 00 38 30.8 +0.3
ARGA Argostoli. Kep 0.10 163 P Pg 00 38 29.0 +0.1
ARGA S Sg 00 38 30.9 0.0
ARG2 Argostoli 0.10 159 P Pg 00 38 29.0 +0.1
ARG2 S Sg 00 38 31.3 +0.4
110μm,0.1s
KEF3 Kipouria, Keph 0.10 228 P Pg 00 38 29.1 +0.2
KEF3 S Sg 00 38 31.0 0.0
KEF2 Argostoli. Kep 0.11 162 P Pg 00 38 29.2 +0.1
KEF2 S Sg 00 38 30.9 -0.3
VLS Valsamata 0.15 129 P Pg 00 38 29.6 +0.1
VLS S Sg 00 38 32.4 +0.3
37μm,0.1s
VLS Valsamata 0.15 129 P Pg 00 38 29.6 +0.1
VLS S Sg 00 38 31.8 -0.3
VLS AML AML 00 38 32.5
VLS AML AML 00 38 32.5
comp=N,43775μm,0.1s

VSK1	VASILIKIADES	0.17	35	P	Pg	00 38 29.9	+0.1
VSK1				S	Sg	00 38 33.2	+0.6
comp=N,15µm,0.3s							
KONA	Konidatara, Ke	0.18	33	P	Pg	00 38 30.2	+0.1
KONA				S	Sg	00 38 32.3	-0.7
EVGI	Lefkada island	0.39	26	P	Pg	00 38 33.7	+0.1
EVGI				S	Sb	00 38 40.0	-0.2
EVGI	Lefkada island	0.39	26	P	Pg	00 38 33.7	+0.1
EVGI				S	Sg	00 38 39.0	+0.1
MGNA	Meganis	0.47	35	P	Pg	00 38 35.2	+0.1
MGNA				S	Sg	00 38 41.7	+0.2
LKD2	Lefkada island	0.54	18	P	Pg	00 38 36.2	-0.3
LKD2	Lefkada island	0.54	18	P	Pg	00 38 36.2	-0.3
LKD2				S	Sg	00 38 44.0	+0.3
LKD2				AML	AML	00 38 52.7	
comp=N,1832µm,0.3s							
LKD2				AML	AML	00 38 53.0	
comp=E,2216µm,0.3s							
AST1	Astakos	0.57	62	P	Pg	00 38 37.1	+0.1
AST1				S	Sb	00 38 46.0	+0.4
comp=E,5µm,0.3s							
TSLK	Tsoukalades, L	0.58	17	P	Pg	00 38 36.9	-0.2
TSLK	Tsoukalades, L	0.58	17	P	Pg	00 38 37.0	-0.1
TSLK				S	Sg	00 38 45.1	+0.4
PDO	Prodromos	0.67	60	P	Pg	00 38 38.6	-0.2
PDO				S	Sb	00 38 48.9	+0.6
comp=E,3µm,0.4s							
PDO	Prodromos	0.67	60	P	Pg	00 38 38.8	0.0
PDO				S	Sb	00 38 48.3	0.0
PDO				AML	AML	00 38 50.3	
comp=E,4681µm,0.6s							
PDO				AML	AML	00 38 51.1	
comp=N,4634µm,0.4s							
KRI1	kERI	0.68	154	P	Pg	00 38 38.8	-0.1
KRI1				S	Sb	00 38 49.6	+1.1
comp=N,4µm,0.2s							
VTN	Vitineika	0.69	121	P	Pb	00 38 39.4	0.0
RLS	Riolos of Patr	0.83	104	P	Pg	00 38 41.5	-0.4
RLS				S	Sn	00 38 54.3	-0.8
comp=N,388nm,0.4s							
RLS	Riolos of Patr	0.83	104	P	Pg	00 38 41.6	-0.3
RLS				S	Sb	00 38 54.1	+1.0
RLS				AML	AML	00 38 57.8	
comp=N,758µm,0.2s							
RLS				AML	AML	00 38 58.3	
comp=E,612µm,0.4s							
PVO	Paravola	0.92	68	P	Pg	00 38 43.5	0.0
PVO	Paravola	0.92	68	P	Pg	00 38 43.6	0.0
PVO				S	Sg	00 38 54.9	-0.6
PVO				AML	AML	00 38 59.5	
comp=E,4781µm,0.2s							
PVO				AML	AML	00 38 59.6	
comp=N,3631µm,0.2s							
DRO	Drossia	1.05	107	P	Pb	00 38 45.5	-0.2
DRO	Drossia	1.05	107	P	Pb	00 38 45.5	-0.2
DRO				S	Sn	00 39 00.4	-0.1
DRO				AML	AML	00 39 10.4	
comp=E,2418µm,0.3s							
DRO				AML	AML	00 39 10.5	
comp=N,2154µm,0.4s							
AMT	Artemida-Makis	1.24	126	P	Pg	00 38 49.8	+0.1
EVR	Evrytania	1.25	59	P	Pn	00 38 48.7	-0.1
EVR	Evrytania	1.25	59	P	Pn	00 38 48.8	-0.1
IGT	Igoumenitsa	1.26	356	ePg	Pg	00 38 50.8	+0.7
IGT				eSg	Sg	00 39 10.0	+3.5
TRIZ	Trizonia	1.28	85	P	Pn	00 38 49.0	-0.2
TRIZ	Trizonia	1.28	85	P	Pn	00 38 49.1	-0.2
ALIK	Aliki, Aigiali	1.31	90	P	Pn	00 38 49.9	+0.3
KALE	Kalithea	1.34	84	P	Pn	00 38 49.8	-0.2
KALE	Kalithea	1.34	84	P	Pn	00 38 49.9	-0.2
KLV	Kalavryta, Ach	1.36	99	P	Pn	00 38 50.5	+0.1
KLV	Kalavryta, Ach	1.36	99	P	Pn	00 38 50.7	+0.3
MAKR	Makrakomi, Fth	1.52	60	P	Pb	00 38 53.5	-0.1
AGG	Agios Georgios	1.66	63	P	Pb	00 38 56.2	+0.1
VLX	Vlachokerasia	1.78	120	P	Pb	00 38 58.3	+0.2
OHR	Ohrid	2.85	5	iPn	Pn	00 39 11.5	+0.7
TIR	Tirane	3.10	352	ePn	Pn	00 39 14.7	+0.4
TIR				eSn	Sn	00 39 51.4	+0.2
SRS	Serrai	3.74	40	ePn	Pn	00 39 26.4	+3.4
SKO	Skopje	3.77	11	ePn	Pn	00 39 24.4	+0.9
ULC	Ulcinj	3.80	346	ePn	Pn	00 39 22.8	-1.1
ULC				eSn	Sn	00 40 07.6	-0.8
SG1	Sgolgore (BA)	3.88	313	ePn	Pn	00 39 25.9	+0.9
BAI	Bari	3.95	317	ePn	Pn	00 39 27.7	+1.9
DRME	Dracevica, Mon	4.03	347	ePn	Pn	00 39 25.8	-1.2
DRME				eSn	Sn	00 40 13.2	-0.8
BUM	Brajici-Budva	4.20	344	ePn	Pn	00 39 28.7	-0.6
BUM				eSn	Sn	00 40 17.0	-1.2
PDG	Podgorica	4.25	348	eSn	Sn	00 40 18.9	-0.5
TTG	Podgorica	4.25	348	ePn	Pn	00 39 29.8	-0.2
TTG				eSn	Sn	00 40 18.7	-0.7
PVY	Plav	4.33	355	ePn	Pn	00 39 31.0	-0.3
PVY				eSn	Sn	00 40 20.9	-0.8
CEME	Cevo	4.43	345	ePn	Pn	00 39 31.8	-0.7
CEME				eSn	Sn	00 40 23.0	-0.9
HCY	Herceg Novi	4.43	341	⇑iPn	Pn	00 39 31.5	-1.0
HCY				iSn	Sn	00 40 21.0	-2.8
BOSS	Bosilegrad	4.50	20	ePn	Pn	00 39 35.3	+1.8
IVA	Berane	4.62	355	ePn	Pn	00 39 34.6	-0.5
IVA				eSn	Sn	00 40 27.0	-1.5
KOME	Kolasin	4.63	352	ePn	Pn	00 39 34.6	-0.7
KOME				eSn	Sn	00 40 28.0	-0.9
NKME	Niksic	4.63	346	ePn	Pn	00 39 34.5	-0.8
NKME				eSn	Sn	00 40 27.7	-1.2
BARS	Barje	4.66	13	ePn	Pn	00 39 36.3	+0.6
TREB	Trebinje	4.72	341	ePn	Pn	00 39 35.6	-0.9
TREB				eSn	Sn	00 40 28.1	-2.9
BRY	Bratogost	4.85	343	ePn	Pn	00 39 37.3	-1.1
BRY				eSn	Sn	00 40 32.8	-1.5
SJES	Sjenica	5.00	356	ePn	Pn	00 39 41.2	+0.8
SJES				eSn	Sn	00 40 37.9	-0.1
UPM	Unac-Piva	5.06	347	ePn	Pn	00 39 40.2	-1.2
UPM				eSn	Sn	00 40 38.0	-1.7
IVAS	Ivanjica	5.30	358	ePn	Pn	00 39 43.6	-1.0
BOVS	Bovan	5.44	10	ePn	Pn	00 39 47.0	+0.6
DIVS	Divibare	5.83	357	ePn	Pn	00 39 51.2	-0.6

NEIC 27 00:43:49.7±1.4, 12°.9N±0°.1×143°.6E±0°.2, h150km±10km, mb4.2/3, Error ellipse: s-maj=21.7km s-min=16.2km az=90.0

IDC 27 00:43:50.6±2.6, 12°.88N×143°.69E, h160km±45km, mb3.4/8, mb1 3.5/8, mb1mx3.2/57, mbtmp3.8/8, Error ellipse: s-maj=92.6km s-min=14.8km az=88.0

ISC 27 00:43:49.5±0.8, 12°.9N±0°.1×143°.6E±0°.1, h150km, n12, σ0§96/13, mb3.8/9, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.42	60	P	Pn	00 44 17.9	-0.4
26nm,0.3s,baz=205,slow=19,SNR=3.2							
GUMO				S	Sn	00 44 41.6	+1.4
62nm,0.3s,baz=287,slow=13,SNR=9.5							
PATS	Pohnpei	15.68	111	Pn	Pn	00 47 21.7	-0.7
PMG	Port Moresby	22.41	171	P	P	00 48 35.8	-0.1
MAJO	Matsushiro	24.07	349	P	P	00 48 49.5	-1.4
MAJO				IAmb	IAmb	00 49 02.8	
comp=Z,8.5nm,1.1s							
WRA	Warramunga Arr	33.86	196	P	P	00 50 18.1	+0.2
comp=Z,1.7nm,0.4s,baz=24,slow=9.4,SNR=21							
ASAR	Alice Springs	37.53	195	P	P	00 50 50.1	+0.9
comp=Z,0.3nm,0.5s,baz=12,slow=9.6,SNR=4.1							
KLR	Kul'dur	37.55	347	P	P	00 50 50.0	+0.9
comp=Z,1.6nm,0.8s,baz=148,slow=12,SNR=5.6							
SONM	Songino Array	46.62	326	P	P	00 52 03.3	+0.6
comp=Z,0.4nm,0.5s,baz=150,slow=8.6,SNR=4.6							
MKAR	Makanchi Array	61.16	317	P	P	00 53 48.3	+0.1
comp=Z,0.2nm,0.7s,baz=101,slow=7.3,SNR=4.7							
ZALV	Zalesovo Beam	61.49	325	P	P	00 53 50.6	+0.4
comp=Z,0.4nm,0.4s,baz=92,slow=8.7,SNR=3.4							
BVAR	Borovoye Array	69.73	322	P	P	00 54 43.5	+0.4
comp=Z,0.6nm,0.4s,baz=82,slow=4.8,SNR=5.5							
FINES	FINESS Array B	91.29	335	P	P	00 56 36.2	-1.5
comp=Z,1.3nm,0.8s,baz=78,slow=4.6,SNR=5.9							

IDC 27 00:56:15.4±5.9, 36°.46N×82°.80E, h0km, mb3.1/1, mb1 3.3/4, mb1mx3.1/54, mbtmp3.3/4, ML2.8/3, Error ellipse: s-maj=74.8km s-min=42.1km az=21.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	8.90	316	Pn	Pn	00 58 27.5	+2.2
0.1nm,0.3s,baz=198,slow=20,SNR=1.8							
AAK				Lg	Lg	01 00 51.0	
0.2nm,0.3s,baz=198,slow=20,SNR=2.5							
MKAR	Makanchi Array	10.34	358	Pn	Pn	00 58 44.3	-0.6
0.2nm,0.3s,baz=180,slow=13,SNR=9.0							
MKAR				Sn	Sn	01 00 41.0	-0.4
0.1nm,0.3s,baz=176,slow=22,SNR=3.4							
ZALV	Zalesovo Beam	17.55	4	P	P	01 00 22.2	-0.2
0.1nm,0.3s,baz=183,slow=11,SNR=3.7							
SONM	Songino Array	20.78	49	P	P	01 00 58.2	+0.1
0.9nm,0.8s,baz=236,slow=11,SNR=6.3							

SJA 27 01:15:13.8±0.7, 23°.78S×67°.66W, h166km±9km, ML3.6, MW3.4

NEIC 27 01:15:13.4±2.1, 23°.73S±0°.06×67°.9W±0°.2, h193km±19km, Error ellipse: s-maj=31.5km s-min=8.4km az=95.0

GUC 27 01:15:16.7±0.5, 23°.67S×68°.22W, h196km±6km, ML4.0

IDC 27 01:15:18.9±10.0, 23°.48S×67°.51W, h171km±86km, mb3.2/1, mb1 3.5/2, mb1mx3.1/16, mbtmp3.9/2, Error ellipse: s-maj=92.4km s-min=73.4km az=139.0

ISC 27 01:15:14.7±0.9, 23°.74S±0°.04×67°.72W±0°.05, h163km±9km, n47, σ1§39/74, 6D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.57	316		Pn	01 15 47.5	+1.2
LVC				Sn	Sn	01 16 09.8	-0.9
PB15	IPOC Station P	1.69	288	iP	Pn	01 15 48.8	+1.3
PB15				iS	Sn	01 16 13.4	+0.8
PB15	IPOC Station P	1.69	288	iP	Pn	01 15 48.5	+1.1
PB15				eS	Sn	01 16 13.3	+0.7
PB06	IPOC Station P	1.99	301	⇓iP	Pn	01 15 52.1	+1.4
PB06				iS	Sn	01 16 18.8	+0.4
PB06				IAML		01 16 21.5	
comp=E,984nm,0.3s							
PB06	IPOC Station P	1.99	301	iP	Pn	01 15 52.1	+1.4
PB06				eS	Sn	01 16 19.0	+0.6
PB06				IAML		01 16 21.9	
comp=Z,485nm,0.2s							
GO02	Mina Guanaco	2.21	230	eP	Pn	01 15 54.2	+0.9
GO02				iS	Sn	01 16 24.2	+1.0
GO02				IAML		01 16 25.9	
comp=E,924nm,0.5s							
GO02	Mina Guanaco	2.21	230		Pn	01 15 54.4	+1.1
GO02				Sn	Sn	01 16 21.4	-1.9
SLA	San Lorenzo	2.25	116	iP	Pn	01 15 53.5	0.0
PB09	IPOC Station P	2.39	324	⇓iP	Pn	01 15 57.0	+1.7
PB09				iS	Sn	01 16 27.9	+1.2
PB09				IAML		01 16 32.3	
comp=N,273nm,0.2s							
AZAP	Zapla	2.48	102	iP	Pn	01 15 55.5	-0.9
PB03	IPOC Station P	2.52	312	iP	Pn	01 15 58.0	+1.1
PB03				iS	Sn	01 16 29.4	-0.1
PB03				IAML		01 16 31.4	
comp=N,606nm,0.2s							
YJA	Yavi	2.56	53	iP	Pn	01 15 58.0	+0.3
YJA				eS	Sn	01 16 30.9	+0.1
PB14	IPOC Station P	2.60	250	eP	Pn	01 15 59.1	+1.1
PB14				iS	Sn	01 16 31.0	-0.5
PB14	IPOC Station P	2.60	250	iP	Pn	01 15 58.5	+0.5
PB14				eS	Sn	01 16 31.4	0.0
PB14				IAML		01 17 43.6	
comp=Z,154nm,0.8s							
PB10	IPOC Station P	2.61	274		Pn	01 15 56.0	-1.7
PB10					Sn	01 16 26.8	-4.2
PB10	IPOC Station P	2.61	274	iP	Pn	01 15 58.8	+1.0
PB10				IAML		01 16 38.7	
comp=Z,55nm,0.2s							
PB04	IPOC Station P	2.64	302	eP	Pn	01 15 59.2	+0.9
PB04				eS	Sn	01 16 32.0	-0.1
PB04				IAML		01 16 34.0	
comp=E,469nm,0.5s							
PB04	IPOC Station P	2.64	302		Pn	01 15 56.7	-1.6
PB04				Sn	Sn	01 16 28.0	-4.1
PB04	IPOC Station P	2.64	302	iP	Pn	01 15 59.2	+0.9
PB07	IPOC Station P	2.83	315	⇓iP	Pn	01 16 01.8	+1.1
PB07				iS	Sn	01 16 35.7	-0.6
PB07				IAML		01 16 37.6	
comp=N,662nm,0.3s							
PB02	IPOC Station P	3.14	320	⇓iP	Pn	01 16 05.2	+0.7
PB02				iS	Sn	01 16 42.6	-0.5
PB02				IAML		01 16 47.8	
comp=E,520nm,0.3s							
PB01	IPOC Station P	3.14	328	⇓iP	Pn	01 16 05.2	+0.7
PB01				iS	Sn	01 16 42.3	-0.8
PB01				IAML		01 16 45.7	
comp=E,392nm,0.2s							
PB01	IPOC Station P	3.14	328		Pn	01 16 03.6	-0.9
PB01				Sn	Sn	01 16 41.3	-1.9
PATCX	Punta Patache	3.68	322	eP	Pn	01 16 11.0	-0.2
PATCX				eS	Sn	01 16 54.4	-0.8
AHML	Horco Molle	3.72	145	iP	Pn	01 16 11.2	-0.5
PB08	IPOC Station P	3.82	339	⇓iP	Pn	01 16 14.7	+1.3
PB08				iS	Sn	01 16 59.1	+0.1
GO01	Chusmiza	4.28	341		Pn	01 16 19.4	0.0
GO01				Sn	Sn	01 17 09.3	-0.5
PB11	IPOC Station P	4.35	335		Pn	01 16 19.0	-1.1
PB11				Sn	Sn	01 17 06.8	-4.2
GO03	Copiap	4.46	210		Pn	01 16 19.8	-1.4
GO03				Sn	Sn	01 17 11.6	-1.7
MNMC	Minye Minye	4.91	339		Pn	01 16 26.9	-0.6
MNMC				Sn	Sn	01 17 22.2	-2.1
VCA	Vinchina	4.99	185	iP	Pn	01 16 28.8	+0.4
VCA				IAML		01 18 56.6	
comp=Z,90nm,0.9s							
ACLC	CERRO LA CRUZ	5.70	173	iP	Pn	01 16 37.4	-0.4
AROD	Rodeo	6.59	193	iP	Pn	01 16 49.7	+0.2
APLL	PUNTA DE LOS L	6.71	171	iP	Pn	01 16 49.6	-1.3
ACCO	Cerro Coronel	6.92	190	iP	Pn	01 16 53.4	-0.6
GO04	Tololo Observa	6.97	203		Pn	01 16 52.3	-2.2
LPAZ	La Paz	7.43	357	P	Pn	01 17 02.1	+1.0
comp=Z,4.0nm,0.3s,baz=154,slow=5.6,SNR=82							
LPAZ				S	Sn	01 18 23.7	-1.0
baz=265,slow=12,SNR=0.9							
LPAZ	La Paz	7.43	357		Pn	01 17 01.3	+0.2
LPAZ					Sn	01 18 23.0	-1.6
RTLL	Cerro Villicun	7.59	185	iP	Pn	01 17 01.6	-1.0
CFA	Coronel Fontan	7.85	183	iP	Pn	01 17 05.3	-0.7
RTCV	Cerro Valdivia	8.12	185	iP	Pn	01 17 08.6	-1.0
RTLS	Leoncito	8.15	190	iP	Pn	01 17 08.9	-1.3
ACAN	Cantantal	8.51	177	iP	Pn	01 17 13.6	-1.2
SAML	Samuel	15.34	17	Pn	Pn	01 18 41.5	-1.3
SAML				IAmb	IAmb	01 18 42.4	
comp=Z,1.4nm,0.8s							
TORD	Torodi Ar. Bea	77.09	69	P	P	01 26 52.3	+1.8
comp=Z,0.6nm,0.9s,baz=239,slow=5.7,SNR=2.3							
WRA	Warramunga Arr	131.55	208	PKP	PKiKP	01 34 12.0	+2.3
comp=Z,0.4nm,0.8s,baz=147,slow=1.3,SNR=1.7							
MKAR	Makanchi Array	146.74	39	PKPbc	PKPab	01 34 38.9	0.0
comp=Z,0.2nm,0.6s,baz=290,slow=4.4,SNR=2.5							

NIED 27 01:20:00, 43°.40N×147°.60E, h17km, Mw4.1 Best double couple: Mo1.47000×10^15 NP1:φs142.00000°, δ74.00000°, λ35.00000°. NP2:φs41.00000°, δ57.00000°, λ161.00000°.

BJI 27 01:20:35.3±0.0, 43°.74N×148°.04E, h46km, mB5.0/10, mb4.4/12, Ms5.0/1

JMA 27 01:20:35.6±0.2, 43°.37N×147°.60E, h13km, M4.4

SKHL 27 01:20:37.4±0.6, 43°.48N×147°.76E, h50km±2km, mb4.6/3

NEIC 27 01:20:37.7±1.2, 43°.53N±0°.06×147°.7E±0°.1, h35km±2km, mb4.3/20, Error ellipse: s-maj=14.8km s-min=10.2km az=112.0

MOS 27 01:20:37.8±0.9, 43°.60N×147°.59E, h50km, mb4.5/14, Error ellipse: s-maj=9.9km s-min=7.8km az=108.3

IDC 27 01:20:39.0±2.5, 43°.65N×147°.69E, h44km±22km, mb3.8/16, mb1 4.1/22, mb1mx3.9/39, mbtmp4.1/22, ML4.2/2, MS3.2/8, Ms1 3.2/8, ms1mx2.9/45, Error ellipse: s-maj=22.7km s-min=15.2km az=161.0

ISC 27 01:20:33.1±1.7, 43°.53N±0°.05×147°.71E±0°.04, h4km±9km, n134, σ1§39/143, mb4.3/34, 10C-8D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.43	291	eP	Pg	01 21 01.0	+0.4
YUK				AMB	AMB	01 21 02.0	
220nm,0.2s							
YUK				eS	Sg	01 21 19.0	-0.1
YUK				A	A	01 21 25.0	
680nm,0.2s							
YUK				A	A	01 21 25.0	
710nm,0.2s							
YUK	Yuzh-Kuril'sk	1.43	291	ePN	Pg	01 21 01.0	+0.4
YUK				eS	Sg	01 21 19.1	-0.1
YUK				pmax	pmax		
comp=Z,2µm,0.2s							
YUK				pmax	pmax		
comp=N,399nm,0.1s							
YUK				pmax	pmax		
comp=E,663nm,0.2s							
YUK				smax	smax		
comp=N,7µm,0.2s							
YUK				smax	smax		
comp=E,705nm,0.1s							
NEM2	Nemuro 2	1.45	264	P	Pn	01 21 00.2	+0.2
NEM2				eS	Sb	01 21 18.0	-1.2
NMR	Nemuro--Hokkai	1.46	264	eP	Pg	01 21 00.9	-0.1
NMR				eS	Sb	01 21 18.8	-0.7
NMR	Nemuro--Hokkai	1.46	264	ePN	Pb	01 21 00.7	0.0
NMR				eS	Sb	01 21 18.8	-0.7
GRPR	Tuman	1.48	289	eP	Pb	01 21 01.0	-0.1
GRPR				AMB	AMB	01 21 01.0	
comp=E,110nm,0.2s							
GRPR				eS	Sb	01 21 19.0	-1.3
GRPR				A	A	01 21 22.0	
comp=E,940nm,0.3s							
GRPR				A	A	01 21 22.0	
comp=E,600nm,0.3s							
GRPR	Tuman	1.48	289	ePN	Pg	01 21 01.4	-0.1
GRPR				eS	Sb	01 21 19.7	-0.6
GRPR				pmax	pmax		
comp=Z,1µm,0.3s							
GRPR				pmax	pmax		
comp=N,136nm,0.2s							
GRPR				pmax	pmax		
comp=E,186nm,0.2s							
GRPR				smax	smax		
comp=E,6µm,0.3s							
GRPR				smax	smax		
comp=N,9µm,0.2s							
KUR	Kuril'sk	1.70	4	iP	Pg	01 21 05.6	-0.1
KUR				AMB	AMB	01 21 07.3	
comp=N,110nm,0.3s							
KUR				eS	Sb	01 21 26.1	-0.6
KUR				A	A	01 21 32.3	
comp=N,790nm,0.4s							
KUR				A	A	01 21 32.3	
comp=N,350nm,0.4s							
KUR	Kuril'sk	1.70	4c	iPN	Pg	01 21 05.6	-0.1
KUR				eS	Sb	01 21 26.1	-0.6
KUR				pmax	pmax		
comp=N,422nm,0.4s							
KUR				pmax	pmax		
comp=Z,1µm,0.4s							
KUR				pmax	pmax		
comp=E,506nm,0.3s							
KUR				smax	smax		
comp=N,778nm,0.2s							
KUR				smax	smax		
comp=E,347nm,0.3s							
JKHN	Kushirohamanak	1.92	257	P	Pn	01 21 07.3	+0.8
JRA	Rausu	1.92	283	P	Pb	01 21 08.1	-0.6
JRA				eS	Sn	01 21 31.6	+0.5
JNSB	Nemuroshibetsu	1.98	278	P	Pb	01 21 08.7	-1.0
JNK	Nakash	2.18	272	P	Pn	01 21 10.9	+0.8
JNK				eS	Sn	01 21 36.9	-0.6
JAK	Akkeshi	2.27	257	P	Pn	01 21 11.7	+0.4
JAK				eS	Sn	01 21 39.0	-0.7
JTKR	Abashiri--Toko	2.79	280	P	Pn	01 21 20.8	+2.3
JAR	Ashorobuto	2.88	267	P	Pn	01 21 21.2	+1.4
JAR				eS	Sn	01 21 55.2	+0.3
JOB	Onbets	2.91	259	P	Pn	01 21 21.2	+1.2
JMP	Maruseppu	3.19	280	P	Pn	01 21 26.6	+2.6
JCH	Churui	3.32	255	P	Pn	01 21 26.6	+0.9
JCH				eS	Sn	01 22 04.3	-1.3
JKK2	Kamakawa 2	3.62	277	P	Pn	01 21 32.7	+2.8
JEM	Erimo	3.68	247	P	Pn	01 21 32.3	+1.6
ERM	Erimo	3.68	247		Pn	01 21 32.4	+1.7
ERM				Sn	Sn	01 22 14.4	-0.1
ERM	Erimo	3.68	247	d iPN	Pn	01 21 33.1	+2.4
JKA	Kamikawa-asahi	3.75	281	eP	Pn	01 21 34.9	+3.2
JKA	Kamikawa-asahi	3.75	281		Pn	01 21 34.9	+3.2
ASAJ	Asahikawa	3.75	281	P	Pn	01 21 34.9	+3.2
comp=E,12nm,0.3s,baz=89,slow=8.9,SNR=18							
ASAJ				LR	LR	01 22 21.9	
comp=E,50nm,20.5s,baz=158,slow=28							
JFR	Furan	3.75	266	P	Pn	01 21 33.9	+2.2
JFR				eS	Sn	01 22 16.1	-0.2
JNBK	Urakawa-nobuka	3.85	253	P	Pn	01 21 34.0	+0.9
JSE	Soyaes	3.95	293	P	Pn	01 21 37.2	+2.8
JHR	Hokuryu	4.35	275	P	Pn	01 21 43.7	+3.7
JWK2	Keihoku	4.53	295	P	Pn	01 21 46.9	+4.5
JEW	Eniwo	4.63	264	P	Pn	01 21 46.9	+3.1
YSS	Yuzh-Sakhalins	4.89	316	eP	Pn	01 21 50.0	+2.6
YSS				AMB	AMB	01 21 51.0	
comp=E,20nm,0.4s							
YSS				eS	Sn	01 22 44.0	-0.4
YSS				A	A	01 22 45.0	
comp=E,40nm,0.6s							
YSS				A	A	01 22 45.0	
comp=E,40nm,0.6s							
YSS	Yuzh-Sakhalins	4.89	316	⇑ePN	Pn	01 21 50.6	+3.2
YSS				eS	Sn	01 22 44.8	+0.4
YSS				pmax	pmax		
comp=Z,20nm,0.4s							
YSS				smax	smax		
comp=N,40nm,0.7s							
YSS				smax	smax		
comp=E,40nm,0.6s							
YSS				MLR	MLR		
comp=Z,200nm,14.0s							
MAJO	Matsushiro	10.09	229	iPN	Pn	01 23 02.0	+3.3
MJAR	Matsushiro Arr	10.09	229	P	Pn	01 22 57.3	-1.4
comp=Z,0.2nm,0.3s,baz=33,slow=14,SNR=8.1							
MJAR				LR	LR	01 26 49.0	
comp=Z,60nm,21.1s,baz=55,slow=36							
USRK	Ussuriysk Ar.	11.38	279	P	Pn	01 23 16.8	+0.6
baz=85,slow=13,SNR=3.2							
PETK	Petropavlovsk-	11.65	31	P	Pn	01 23 19.9	-0.1
baz=195,slow=15,SNR=3.9							
PETK				LR	LR	01 27 45.0	
comp=Z,90nm,19.1s,baz=240,slow=37							
KLR	Kul'dur	12.40	303	P	Pn	01 23 31.7	+1.4
comp=Z,0.1nm,0.3s,baz=66,slow=19,SNR=2.4							
KLR	Kul'dur	12.40	303	eP	Pn	01 23 29.1	-1.2
KLR	Kul'dur	12.40	303	iPN	Pn	01 23 29.1	-1.2
KLR				pmax	pmax		
comp=Z,7.0nm,1.8s							
EKMR	Ekimchan	13.67	319	eP	Pn	01 23 49.0	+1.4
MA2	Magadan	16.18	6	P	Pn	01 24 22.0	+1.0
comp=Z,1.0nm,0.3s,baz=181,slow=14,SNR=14							
MA2				LR	LR	01 30 36.9	
comp=Z,65nm,18.6s,baz=158,slow=37							
MA2	Magadan	16.18	6	eP	Pn	01 24 22.1	+1.1
MA2	Magadan	16.18	6	P	Pn	01 24 21.7	+0.7
MA2				IAmb	IAmb	01 24 24.8	
comp=Z,14nm,0.7s							
MA2	Magadan	16.18	6	iP	Pn	01 24 22.1	+1.1
MA2				IAmb	IAmb		
comp=Z,14nm,0.7s							
KSRS	Korea Array	16.22	255	P	Pn	01 24 21.1	-0.5
comp=Z,0.3nm,0.3s,baz=62,slow=12,SNR=5.6							
KSRS				LR	LR	01 29 54.4	
comp=Z,53nm,19.9s,baz=77,slow=34							
SEY	Seymchan	19.62	6	P	P	01 25 01.3	-1.0
comp=Z,1.5nm,0.3s,baz=187,slow=8.8,SNR=28							
SEY	Seymchan	19.62	6	iP	P	01 25 01.8	-0.4
YAK	Yakutsk	21.36	336	iP	P	01 25 19.6	-1.4
YAK				pmax	pmax		
comp=Z,10.0nm,0.7s							
BILL	Bilibino	26.46	16	eP	P	01 26 12.1	+1.4
BILL	Bilibino	26.46	16	P	P	01 26 10.1	-0.6
BILL				IAmb	IAmb	01 26 12.8	
comp=Z,3.9nm,0.6s							
BILL	Bilibino	26.46	16	iP	P	01 26 08.4	-2.3
BILL				i		01 26 19.7	
BILL				pmax	pmax		
comp=Z,3.0nm,0.9s							
H11N2	WAKE ISLAND Hy	28.67	140	T	T	01 57 13.2	
baz=330,slow=75,SNR=160							
H11N1	WAKE ISLAND Hy	28.68	140	T	T	01 57 14.9	
baz=330,slow=75,SNR=128							

H11N3	WAKE ISLAND Hy	28.69	140	T	T	01 57 14.9	
	baz=330,slow=75,SNR=156						
SONM	Songino Array	28.93	293	P	P	01 26 34.0	+0.7
	comp=Z,1.4nm,0.6s,baz=84,slow=8.1,SNR=12						
SONM	Songino Array	28.93	293	P	P	01 26 34.0	+0.7
H11S1	WAKE ISLAND Hy	29.64	141	T	T	01 58 27.5	
	baz=331,slow=76,SNR=313						
H11S3	WAKE ISLAND Hy	29.65	141	T	T	01 58 27.6	
	baz=331,slow=76,SNR=232						
TIXI	Tiksi	29.66	348	i P	P	01 26 35.1	-4.1
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
H11S2	WAKE ISLAND Hy	29.66	141	T	T	01 58 27.5	
	baz=331,slow=76,SNR=186						
GTA	Gaotai	35.73	280	eP	P	01 27 33.8	+0.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MLY	Manley	39.78	36	P	P	01 28 07.0	+0.3
TOLK	Toolik Lake Re	40.47	30	P	P	01 28 13.0	+0.6
TOLK				IAmb	IAmb	01 28 14.2	
	comp=Z,6.7nm,0.7s						
HDA	Harding Lake	41.41	37	P	P	01 28 20.2	+0.1
HDA				IAmb	IAmb	01 28 33.8	
	comp=Z,4.7nm,0.6s						
IL31		41.42	36	P	P	01 28 20.3	+0.2
ILAR	Eielson Array	41.42	36	P	P	01 28 20.3	0.0
	comp=Z,1.8nm,0.7s,baz=270,slow=8.7,SNR=19						
PRP	Porcupine Dome	41.97	35	P	P	01 28 25.8	+0.9
PRP				IAmb	IAmb	01 28 29.6	
	comp=Z,5.1nm,0.8s						
SCRK	Seal Creek	42.73	37	P	P	01 28 31.1	+0.1
MK31	Makanchi Array	45.05	298	P	P	01 28 50.1	+0.3
MK31	Makanchi Array	45.05	298	P	P	01 28 50.1	+0.3
MK31				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	45.05	298	P	P	01 28 50.4	+0.5
	comp=Z,1.0nm,0.5s,baz=78,slow=8.8,SNR=27						
KURK	Kurchatov	45.99	304	eP	P	01 28 57.0	-0.1
KURK	Kurchatov	45.99	304	i P	P	01 28 57.0	-0.1
KURK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
HYT	Haines Junctio	46.22	41	P	P	01 28 59.8	+0.8
INK	Inuvik	46.38	30	P	P	01 29 00.4	+0.4
INK	Inuvik	46.38	30	P	P	01 29 00.4	+0.4
INK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WHY	Whitehorse	47.51	41	P	P	01 29 08.7	-0.3
WHY				IAmb	IAmb	01 29 23.8	
	comp=Z,1.9nm,0.8s						
CMAR	Chiang Mai Arr	47.86	254	LR	LR	01 49 41.5	
	comp=Z,27nm,18.3s,baz=60,slow=36						
C36M	Paulatuk	49.48	28	P	P	01 29 24.3	+0.4
C36M				PcP	PcP	01 30 49.5	+3.7
YKA	Yellowknife Ar	55.75	34	P	P	01 30 10.9	+0.4
	comp=Z,1.7nm,0.6s,baz=300,slow=6.6,SNR=24						
ABKAR	Akbulak array	57.52	309	P	P	01 30 23.4	+0.1
ABKAR				IAmb	IAmb	01 30 24.2	
	comp=Z,1.9nm,0.5s						
ARCES	ARCESS Array B	59.59	340	P	P	01 30 36.0	-1.4
	comp=Z,1.0nm,0.4s,baz=47,slow=7.2,SNR=24						
CTA	Charters Tower	63.32	182	LR	LR	01 56 00.1	
	comp=Z,150nm,22.0s,baz=75,slow=33						
WRAB	Tennant Creek	64.33	194	i P	P	01 31 12.3	+2.5
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.2s						
WRA	Warramunga Arr	64.35	194	P	P	01 31 10.3	+0.5
	comp=Z,0.7nm,0.9s,baz=13,slow=6.7,SNR=3.4						
FINES	FINESS Array B	65.25	333	P	P	01 31 14.2	-1.1
	comp=Z,5.7nm,0.7s,baz=45,slow=6.7,SNR=26						
FINES	FINESS Array B	65.25	333	i P	P	01 31 14.6	-0.8
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
OBN	Obninsk	65.73	324	eP	P	01 31 17.6	-0.9
OBN	Obninsk	65.73	324	i P	P	01 31 17.6	-0.9
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NVAR	Mina Array Bea	67.35	58	P	P	01 31 29.7	+0.2
	comp=Z,0.8nm,0.8s,baz=298,slow=7.5,SNR=3.7						
PDAR	Pinedale Array	69.74	50	P	P	01 31 44.0	-0.3
	comp=Z,0.4nm,0.5s,baz=208,slow=1.6,SNR=7.1						
NB2	NORSAR Subarra	69.95	339	P	P	01 31 44.5	-0.6
	comp=Z,2.3nm,0.5s,baz=45,slow=6.5						
NOA	NORSAR Array B	69.95	339	P	P	01 31 44.6	-0.6
	comp=Z,5.1nm,0.6s,baz=32,slow=6.6,SNR=23						
KIV	Kislovodsk	70.21	312	eP	P	01 31 47.0	-0.1
KIV	Kislovodsk	70.21	312	i P	P	01 31 47.0	-0.1
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KBZ	Khabaz	70.25	312	P	P	01 31 47.0	-0.2
	comp=Z,2.4nm,0.8s,baz=61,slow=9.5,SNR=5.1						
KBZ				LR	LR	02 05 41.0	
	comp=Z,42nm,20.9s,baz=74,slow=38						
KBZ	Khabaz	70.25	312	i P	P	01 31 46.9	-0.2
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	Malin Array Be	72.00	324	P	P	01 31 57.0	-0.6
	comp=Z,1.8nm,0.4s,baz=38,slow=6.1,SNR=9.7						
AKASG	Malin Array Be	72.00	324	i P	P	01 31 57.2	-0.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKBB	Malin Array Si	72.00	324	P	P	01 31 56.7	-0.9
AKBB				IAmb	IAmb	01 31 58.2	
	comp=Z,6.1nm,0.8s						
AKBB	Malin Array Si	72.00	324	P	P	01 31 56.7	-0.9
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VASR	Vaslui	75.67	322	⇓P	P	01 32 19.6	+0.3
DIKM	Dikmen	75.75	314	⇓P	P	01 32 29.3	+10
BUR08	Bucovina Ar. S	76.04	324	P	P	01 32 21.5	0.0
BUR08				IAmb	IAmb	01 32 23.4	
	comp=Z,2.8nm,0.6s						
BURAR	Bucovina Array	76.05	324	⇑P	P	01 32 22.0	+0.4
TESR	Tescani	76.28	322	⇓P	P	01 32 22.2	-0.6
GHRR		76.29	322	⇑P	P	01 32 18.9	-3.9
CFR	Carcaliu	76.63	321	⇑P	P	01 32 26.9	+2.2
ODBI	Odobesti	76.67	322	⇓P	P	01 32 24.9	-0.1
TOPG	Topolog	76.75	320	⇓P	P	01 32 25.2	-0.2
TRPA	Tarpa	76.77	326	⇑P	P	01 32 25.7	+0.2
OZUR		76.98	323	⇓P	P	01 32 27.7	+0.9
DOPR	Dopca	77.26	323	⇑P	P	01 32 29.2	+0.9
MORC	Moravsky Berou	77.38	329	P	P	01 32 28.9	-0.1
MORC				IAmb	IAmb	01 32 31.6	
	comp=Z,2.9nm,0.9s						
MORC	Moravsky Berou	77.38	329	P	P	01 32 28.9	-0.1
MORC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KRLC	Kraliky	77.42	330	eP	P	01 32 29.4	+0.2
KRLC	Kraliky	77.42	330	eP	P	01 32 29.4	+0.2
SCHQ	Schefferville	77.69	20	P	P	01 32 30.1	-0.4
	comp=Z,1.5nm,0.5s,baz=312,slow=7.3,SNR=8.3						
SCHQ	Schefferville	77.69	20	P	P	01 32 30.5	-0.1
CLL	Collm	77.69	333	i P	P	01 32 31.0	+0.4
	comp=Z,3.0nm,0.7s						
CLL	Collm	77.69	333	i P	P	01 32 31.0	+0.4
CLL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VOIR		77.82	323	⇓P	P	01 32 31.3	-0.3
MTUR	Matau	77.98	323	⇑P	P	01 32 23.3	-9.1
BRTR	Keskin Array B	77.99	314	P	P	01 32 32.3	-0.4
	comp=Z,0.5nm,0.6s,baz=41,slow=2.6,SNR=2.9						
ARR	Arges	78.06	323	⇑P	P	01 32 35.0	+2.1
PRU	Pruhonice	78.29	331	eP	P	01 32 33.8	-0.1
PRU	Pruhonice	78.29	331	eP	P	01 32 33.8	-0.1
KHC	Kasperske Hory	79.35	331	eP	P	01 32 39.9	+0.1
KHC	Kasperske Hory	79.35	331	eP	P	01 32 39.9	+0.1
GERES	GERESS Array B	79.55	331	P	P	01 32 40.1	-0.9
	comp=Z,0.5nm,0.6s,baz=29,slow=6.6,SNR=5.6						
VTS	Vitosha	80.84	322	⇑P	P	01 32 47.5	-0.7
TXAR	Lajitas Array	82.43	57	P	P	01 32 56.4	-0.3
	comp=Z,0.8nm,0.7s,baz=295,slow=3.4,SNR=11						

SNET 27 01:26:09.8±0.5, 13°.73N×90°.57W, h31km±99km, MD3.3
GCG 27 01:26:09.0±0.7, 13°.55N×90°.69W, h32km±11km, MD3.5
ISC 27 01:26:08.5±2.7, 13°.5N±0°.2×90°.65W±0°.08, h38km, n9, σ0s.95/13, 3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	0.74	16	eP	Pn	01 26 22.4	-0.2
PCG	Pacaya	0.93	3	eP	Pn	01 26 25.1	-0.3
PCG				eS	Sn	01 26 35.6	-2.0
FUG	Fuego 3	1.00	349	eP	Pn	01 26 26.0	-0.2
SBLS	San Blas	1.07	69⇓	eP	Pn	01 26 27.1	0.0
SBLS				eS	Sn	01 26 41.2	+0.3
RTR	El Retiro	1.07	66⇓	eP	Pn	01 26 27.3	+0.2
SNJE	San Jose	1.10	68⇓	eP	Pn	01 26 27.5	0.0
NBG	Las Nubes	1.17	15	eP	Pn	01 26 30.1	+1.6
NBG				eS	Sn	01 26 44.5	+1.2
STG3	Santiaguito 3,	1.54	325	eP	Pn	01 26 33.8	+0.3
STG3				eS	Sn	01 26 52.4	0.0
MTO3	Montecristo	1.57	53	eP	Pn	01 26 33.2	-0.7

IDC 27 01:55:29.7±5.5, 2°.63N×128°.43E, h119km±64km, mb2.9/3, mb1 3.2/4, mb1mx3.0/44, mbtmp3.5/4, Error ellipse: s-maj=113.7km s-min=25.7km az=71.0
DJA 27 01:55:30.7±0.9, 3°N±8°×12°8E±°, h92km±14km, M4.3/7, mB4.8/1, mb4.4/1, MLv4.2/7, Mw(mB)4.0/1
ISC 27 01:55:28.4±1.1, 2°.63N±0°.09×128°.23E±0°.08, h100km, n10, σ1s.22/13, mb3.3/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.03	205	P	Pn	01 56 02.4	+1.0
TNTI				S	Sn	01 56 25.9	-0.7
TNTI	Ternate	2.03	205	P	Pn	01 56 02.4	+1.0
TNTI				S	Sn	01 56 25.9	-0.7
SWI	Sorong	4.60	139	P	Pn	01 56 37.1	+1.4
SWI	Sorong	4.60	139	P	Pn	01 56 37.1	+1.4
SIJI	Sorong	4.61	139	P	Pn	01 56 37.3	+1.5
	22nm,0.3s,baz=319,slow=19,SNR=98						
SIJI				S	Sn	01 57 26.6	-1.7
	5.8nm,0.3s,baz=312,slow=10,SNR=7.2						
SANI	Sanana	5.16	206	P	Pn	01 56 44.3	+1.1
SANI	Sanana	5.16	206	P	Pn	01 56 44.3	+1.1
WRA	Warramunga Arr	23.22	165	P	P	02 00 26.2	-0.7
	0.3nm,0.4s,baz=344,slow=10.0,SNR=6.4						
SONM	Songino Array	48.82	341	P	P	02 04 03.0	-0.6
	0.3nm,0.7s,baz=149,slow=6.6,SNR=2.8						
MKAR	Makanchi Array	59.31	325	P	P	02 05 20.0	+0.2
	0.2nm,0.4s,baz=114,slow=7.8,SNR=11						

TAP 27 02:08:33.1, 25°.14N×121°.59E, h8km, ML1.4, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YM01	YM01	0.02	296	P	Pg	02 08 35.2	+0.6
	baz=296						
YM01				S	Sg	02 08 36.3	+0.7
	baz=296						
YM10	YM10	0.03	305	eP	Pg	02 08 34.9	+0.3
	baz=305						
YM10				eS	Sg	02 08 36.4	+0.7
	baz=305						
YM11	YM11	0.03	336	eP	Pg	02 08 34.9	+0.3
	baz=336						
YM11				eS	Sg	02 08 36.2	+0.4
	baz=336						
YM05	YM05	0.03	322	P	Pg	02 08 34.9	+0.2
	baz=322						
YM05				S	Sg	02 08 36.6	+0.8
	baz=322						
YM04	YM04	0.05	288	P	Pg	02 08 35.1	+0.3
	baz=288						
YM04				S	Sg	02 08 36.2	+0.2
	baz=288						
YM08	YM08	0.05	3	eP	Pg	02 08 35.1	+0.3
	baz=2.0						
YM08				S	Sg	02 08 36.7	+0.7
	baz=2.0						
YM03	YM03	0.06	313	eP	Pg	02 08 35.5	+0.6
	baz=313						
YM03				eS	Sg	02 08 36.9	+0.6
	baz=313						
ANP	Anpu	0.08	308	P	Pg	02 08 35.5	+0.3
	baz=309						
ANP				S	Sg	02 08 36.9	+0.2
	baz=309						
NTST	Danshui	0.13	281	i P	Pg	02 08 36.8	+0.9
	baz=281						
NTST				i S	Sg	02 08 39.3	+1.5
	baz=281						
TWY	Chenhua	0.14	5	eP	Pg	02 08 36.9	+0.8
	baz=8.0						
TWY				eS	Sg	02 08 39.6	+1.6
	baz=8.0						
TWA	Mucha	0.16	181	eS	Sg	02 08 40.4	+1.7
	baz=178						
TWS1	Kuangyinshan	0.16	256⇑	iP	Pg	02 08 37.2	+0.8
	baz=255						
TWS1				i S	Sg	02 08 40.0	+1.4
	baz=255						
NWF	Wu-fen Shan	0.19	111	eP	Pg	02 08 38.0	+1.0
	baz=110						
WFSB	Wu-fen Shan	0.19	111	eP	Pg	02 08 37.9	+1.0
	baz=110						
TIPB	Shuangxi	0.27	128	eP	Pg	02 08 39.4	+0.9
	baz=127						
TIPB				eS	Sb	02 08 44.0	-1.1
	baz=127						

JMA 27 02:09:33.0±0.1, 24°.71N×123°.45E, h14km±4km, M2.0, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.45	146	P	Pg	02 09 41.8	-0.2
IRIF				S	Sg	02 09 48.0	-0.1
YOJ	Yonaguni jima	0.47	238	P	Pg	02 09 42.1	-0.2
YOJ				S	Sg	02 09 48.7	+0.1
JYNG	Yonagunijimaku	0.53	241	P	Pg	02 09 43.2	-0.2
JYNG				S	Sg	02 09 50.6	+0.2
JKRS	Kuro-shima	0.69	133	P	Pg	02 09 46.4	-0.1
JKRS				S	Sg	02 09 55.5	-0.2
JIJ	Ishigaki jima	0.72	119	P	Pg	02 09 46.3	-0.7
JIJ				S	Sg	02 09 56.0	-0.5
HATJ	Hateruma jima	0.73	153	P	Pg	02 09 46.7	-0.4
HATJ				eS	Sg	02 09 56.3	-0.4
JISG	Ishigakijimahi	0.79	99	P	Pb	02 09 48.6	0.0
JISG				eS	Sg	02 09 58.7	-0.1
JTJ	Tarama	1.14	93	P	Pb	02 09 53.9	-0.6
JTJ				eS	Sb	02 10 08.6	-0.6

IDC 27 02:21:00.8±3.7, 12°.86N×120°.94E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.2/34, mbtmp3.2/3, Error ellipse: s-maj=439.9km s-min=30.5km az=62.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	35.16	158	P	P	02 27 56.4	-0.2
	0.3nm,0.3s,baz=337,slow=9.3,SNR=2.9						
ASAR	Alice Springs	38.45	161	P	P	02 28 24.6	0.0
	0.2nm,0.5s,baz=345,slow=6.6,SNR=2.5						
MKAR	Makanchi Array	46.85	324	P	P	02 29 32.6	-0.1
	0.1nm,0.6s,baz=126,slow=9.1,SNR=1.5						

IDC 27 03:05:50.0±9.2, 21°.08S×178°.36W, h570km±85km, mb3.0/5, mb1 3.3/5, mb1mx3.0/36, mbtmp4.0/5, Error ellipse: s-maj=140.9km s-min=37.0km az=146.0
ISC 27 03:05:50.3±2.4, 21°.1S±0°.8×178°.4W±0°.4, h579km, n9, σ0s.86/10, mb3.7/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.10	265	P	P	03 11 40.1	+0.4
	2.3nm,0.4s,baz=72,slow=13,SNR=3.0						
ASAR	Alice Springs	44.06	257	P	P	03 13 08.3	+0.2
	2.0nm,0.6s,baz=98,slow=7.7,SNR=30						
ASAR				PcP	PcP	03 14 40.9	+0.3
	0.5nm,0.7s,baz=101,slow=4.8,SNR=4.3						
WRA	Warramunga Arr	44.19	263	P	P	03 13 09.0	-0.2
	1.3nm,0.5s,baz=98,slow=7.9,SNR=32						
ILAR	Eielson Array	88.96	13	P	P	03 17 43.5	0.0
	0.4nm,0.8s,baz=219,slow=5.5,SNR=3.6						
PDAR	Pinedale Array	89.62	43	P	P	03 17 48.2	+0.9
	0.3nm,0.6s,baz=269,slow=3.6,SNR=3.3						
AKASG	Malin Array Be	143.36	330	PKP	PKPdf	03 24 17.3	-2.0
	0.7nm,0.5s,baz=42,slow=4.0,SNR=9.2						
BRTR	Keskin Array B	146.98	311	PKPbc	PKPbc	03 24 29.2	+0.2
	0.6nm,0.6s,baz=95,slow=2.6,SNR=4.2						
MMAI	Mount Meron Ar	147.81	299	PKPbc	PKiKP	03 24 32.5	-0.2
	0.7nm,0.4s,baz=99,slow=4.5,SNR=2.4						
GERES	GERESS Array B	150.67	344	PKPbc	PKiKP	03 24 37.7	-0.4
	0.3nm,0.4s,baz=38,slow=5.0,SNR=3.3						

IDC 27 03:24:59.2±0.3, 13°.83N×144°.87E, h155km±2km, mb3.8/17, mb1 4.0/17, mb1mx3.8/45, mbtmp4.3/17, Error ellipse: s-maj=17.8km s-min=10.2km az=81.0
NEIC 27 03:24:59.5±1.7, 13°.78N±0°.07×144°.84E±0°.10, h161km±4km, mb4.5/11, Error ellipse: s-maj=15.9km s-min=6.6km az=125.0
ISC 27 03:24:58.6±0.5, 13°.84N±0°.09×144°.82E±0°.09, h150km, n53, σ1s.17/52, mb4.2/24, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.26	170	P	Pn	03 25 21.7	+2.7
	3µm,0.3s,baz=360,slow=2.2,SNR=326						
GUMO				S	Sn	03 25 37.3	+2.7
	1µm,0.3s,baz=307,slow=20,SNR=22						
GUMO	Guam	0.26	170		Pn	03 25 21.5	+2.5
GUMO					Sn	03 25 37.1	+2.6
PATS	Pohnpei	14.98	116		P	03 28 24.4	-0.2
PATS				Sn	Sn	03 31 08.2	-1.2
JOW	Kunigami	20.16	312	P	P	03 29 22.2	+0.9
	0.9nm,0.3s,baz=163,slow=13,SNR=5.2						
H11N1	WAKE ISLAND Hy	21.91	72	T	T	03 52 43.6	
	baz=257,slow=75,SNR=6.3						
H11N2	WAKE ISLAND Hy	21.92	72	T	T	03 52 43.4	
	baz=257,slow=75,SNR=3.6						
H11N3	WAKE ISLAND Hy	21.93	72	T	T	03 52 46.2	
	baz=257,slow=75,SNR=6.9						
JNU	Nakatsue	23.01	329	P	P	03 29 51.6	+1.1
	24nm,0.7s,baz=103,slow=1.7,SNR=26						
JNU	Nakatsue	23.01	329	P	P	03 29 51.2	+0.7
MJAR	Matsushiro Arr	23.37	346	P	P	03 29 53.3	-0.4
	1.8nm,0.4s,baz=161,slow=11,SNR=9.0						
KSRS	Korea Array	27.92	330	P	P	03 30 35.1	+0.5
	7.6nm,0.4s,baz=143,slow=9.5,SNR=30						
USRK	Ussuriysk Ar.	32.18	343	P	P	03 31 13.5	+1.4
	1.4nm,0.4s,baz=170,slow=10,SNR=7.3						
QIZ	Qiongzhong	33.91	284	P	P	03 31 27.4	0.0
WRA	Warramunga Arr	35.12	197	P	P	03 31 38.0	+0.2
	2.1nm,0.5s,baz=21,slow=9.6,SNR=22						
WRA				ScP	ScP	03 37 37.1	-0.8
	2.1nm,1.0s,baz=13,slow=3.9,SNR=5.3						
ASAR	Alice Springs	38.78	196	P	P	03 32 08.8	+0.1
	0.5nm,0.4s,baz=17,slow=13,SNR=12						
ASAR				PcP	PcP	03 34 17.4	+0.2
	0.3nm,0.6s,baz=24,slow=5.1,SNR=3.1						
ASAR				ScP	ScP	03 37 49.8	-1.6
	0.3nm,0.6s,baz=20,slow=3.0,SNR=3.2						
HIA	Hailar	40.89	335	P	P	03 32 25.7	-0.2
HIA				IAmb	IAmb	03 32 28.0	
	comp=Z,12nm,0.8s						
PBKT	Sadao Pong	42.34	279	P	P	03 32 37.0	-1.1
PBKT				IAmb	IAmb	03 32 39.5	
	comp=Z,7.1nm,0.8s						
CMAR	Chiang Mai Arr	44.22	282	P	P	03 32 53.4	+0.2
	comp=Z,0.7nm,0.3s,baz=84,slow=5.8,SNR=7.5						
STKA	Stephens Creek	45.56	184	P	P	03 33 02.6	-0.9
	comp=Z,0.9nm,0.4s,baz=341,slow=13,SNR=3.6						
STKA	Stephens Creek	45.56	184	P	P	03 33 02.2	-1.3
ULN	Ulaanbaatar	46.15	325	P	P	03 33 07.9	-0.2
SONM	Songino Array	46.50	325	P	P	03 33 11.9	+1.1
	comp=Z,2.8nm,0.5s,baz=127,slow=6.0,SNR=40						
TLY	Talaya	50.12	328	P	P	03 33 38.9	+0.5
TLY				IAmb	IAmb	03 33 40.4	
	comp=Z,6.2nm,0.8s						
LSA	Lhasa	51.84	297	P	P	03 33 50.5	-1.7
LSA				IAmb	IAmb	03 33 53.7	
	comp=Z,6.3nm,0.5s						
TAPN	Taplejung	54.71	294	eP	P	03 34 12.3	-0.6
	comp=Z,5.1nm,0.3s						
ODAN	Odare	54.98	293	eP	P	03 34 14.5	-0.3
	comp=Z,8.4nm,0.3s						
RAMN	Ramite	55.68	293	eP	P	03 34 18.9	-1.0
	comp=Z,5.9nm,0.3s						
JIRN	Jiri	56.06	294	eP	P	03 34 22.2	-0.5
	comp=Z,11nm,0.3s						
GUN	Gumba	56.35	294	eP	P	03 34 24.2	-0.5
	comp=Z,14nm,0.5s						
PKIN	Phulchoki	56.77	294	eP	P	03 34 26.4	-1.2
	comp=Z,5.2nm,0.4s						
GKN	Gorkha	57.45	294	eP	P	03 34 31.7	-0.5
DANN	Dangsing	58.23	295	eP	P	03 34 37.3	-0.5
MK31	Makanchi Array	61.28	316	P	P	03 34 58.2	+0.2
MK31				IAmb	IAmb	03 34 59.0	
	comp=Z,3.2nm,0.4s						
MKAR	Makanchi Array	61.28	316	P	P	03 34 58.8	+0.7
	comp=Z,3.6nm,0.3s,baz=94,slow=8.5,SNR=143						
ZALV	Zalesovo Beam	61.39	324	P	P	03 34 58.5	-0.1
	comp=Z,0.8nm,0.4s,baz=91,slow=6.2,SNR=3.8						
MAKZ	Makanchi	61.49	316	P	P	03 34 59.9	+0.4
MAKZ				IAmb	IAmb	03 35 00.5	
	comp=Z,6.9nm,0.4s						
KURK	Kurchatov	64.36	320	P	P	03 35 18.3	0.0
KURK				IAmb	IAmb	03 35 19.2	
	comp=Z,12nm,1.4s						
ILAR	Eielson Array	68.36	25	P	P	03 35 41.8	-1.7
	comp=Z,0.6nm,0.4s,baz=248,slow=5.8,SNR=16						
YKA	Yellowknife Ar	82.65	27	P	P	03 37 04.9	0.0
	comp=Z,0.7nm,0.3s,baz=287,slow=5.0,SNR=16						
NVAR	Mina Array Bea	86.80	51	P	P	03 37 27.7	+1.1
	comp=Z,0.9nm,0.5s,baz=267,slow=5.6,SNR=11						
ARCES	ARCESS Array B	86.83	342	P	P	03 37 25.5	-0.3
	comp=Z,3.2nm,0.9s,baz=84,slow=7.6,SNR=8.1						
FINES	FINESS Array B	90.91	335	P	P	03 37 43.5	-1.6
	comp=Z,0.7nm,0.4s,baz=61,slow=5.0,SNR=12						
PDAR	Pinedale Array	91.82	45	P	P	03 37 50.2	+0.2
	comp=Z,0.4nm,0.5s,baz=238,slow=3.6,SNR=6.3						
SNAA	Sanae	119.03	191	PKP	PKPdf	03 43 29.0	+0.1
	comp=Z,1.1nm,0.5s,baz=219,slow=4.0,SNR=16						
TORD	Torodi Ar. Bea	134.68	305	PKP	PKPdf	03 43 58.6	-1.7
	comp=Z,0.3nm,0.5s,baz=35,slow=0.8,SNR=12						
TORD				SKPbc	SKPbc	03 47 14.7	-2.1
	comp=Z,0.8nm,0.8s,baz=54,slow=2.9,SNR=4.7						
DBIC	Dimbokro	143.65	302	PKP	PKPab	03 44 13.8	+0.1
	comp=Z,1.8nm,0.3s,baz=44,slow=4.1,SNR=13						
KIC	Kosan Boka	143.73	302	ePKP1	PKPab	03 44 14.2	+0.2
	comp=Z,4.0nm,0.4s						
KIC	Kosan Boka	143.73	302		PKPab	03 44 14.2	+0.2
TIC	Toumodi	143.80	302	ePKP1	PKPab	03 44 14.8	+0.6
TIC	Toumodi	143.80	302		PKPab	03 44 14.8	+0.6
LIC	Lamto	144.04	302	ePKP1	PKPab	03 44 14.7	-0.4
	comp=Z,16nm,0.4s						
LIC	Lamto	144.04	302		PKPab	03 44 14.7	-0.4
LPAZ	La Paz	148.10	99	PKPbc	PKPbc	03 44 29.9	+1.6
	comp=Z,2.1nm,0.6s,baz=253,slow=2.6,SNR=12						

IDC 27 03:34:51.6±1.9, 1°.76N×126°.10E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/53, mbtmp3.5/4, MS3.3/1, Ms1 3.3/1, ms1mx2.4/27, Error ellipse: s-maj=199.7km s-min=21.5km az=66.0
DJA 27 03:34:58.0±0.6, 2°N±8°×12°6E±°, h10km, M3.4/3, MLv3.4/3
ISC 27 03:34:58.3±1.3, 1°.9N±0°.4×126°.5E±0°.5, h54km, n7, σ1s.05/8, mb3.5/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.40	140	P	Pn	03 35 22.3	+0.8
TNTI				S	Sn	03 35 38.3	-0.6
TNTI	Ternate	1.40	140	P	Pn	03 35 22.3	+0.8
TNTI				S	Sn	03 35 38.3	-0.6
WRA	Warramunga Arr	22.99	161	P	P	03 39 57.3	-1.4
	0.7nm,0.4s,baz=338,slow=10,SNR=9.6						
ASAR	Alice Springs	26.37	164	P	P	03 40 30.9	+1.2
	0.2nm,0.5s,baz=343,slow=12,SNR=4.1						
HNR	Honiara	35.19	109	LR	LR	03 55 47.1	
	comp=Z,45nm,20.0s,baz=335,slow=35						
MKAR	Makanchi Array	58.95	326	P	P	03 44 52.2	-0.1
	0.2nm,0.5s,baz=121,slow=7.7,SNR=6.8						
KURBB	Kurchatov Arra	63.18	328	P	P	03 45 20.3	-0.4
	0.4nm,0.6s,baz=129,slow=5.8,SNR=4.8						

JMA 27 03:51:22.8, 24°.38N×122°.16E, h54km±2km, M2.6
TAP 27 03:51:23.0, 24°.52N×122°.15E, h45km, ML3.4, D
ISC 27 03:51:23.5±1.2, 24°.50N±0°.03×122°.17E±0°.02, h44km±7km, n68, σ0s.61/124, 4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.06	323	P	Pn	03 51 30.9	+0.4
	baz=331						
EOS1				S	Sn	03 51 35.8	+0.5
	baz=331						
TWC	Suao	0.31	291	i P	Pn	03 51 32.0	-0.3

baz=289
TWC iS Sn 03 51 38.3 -0.1
baz=289
ENA Nanau 0.40 260 iP Pn 03 51 32.7 -0.5
baz=255
ENA S Sn 03 51 39.8 -0.2
baz=255
ILA Ilan 0.47 305 P Pn 03 51 34.7 +0.6
baz=304
ILA S Sn 03 51 42.3 +0.8
baz=304
NTC Toucheng 0.47 319 P Pn 03 51 34.1 0.0
baz=319
NTC S Sn 03 51 40.9 -0.7
baz=319
TWE Neicheng 0.51 296 iP Pn 03 51 34.5 -0.1
baz=295
TWE iS Sn 03 51 41.5 -0.9
baz=295
TWB1 Santiao Chiao 0.54 342⇓iP Pn 03 51 34.4 -0.5
baz=344
TWB1 iS Sn 03 51 42.2 -0.8
baz=344
SLBB Yuanshan 0.55 298 iP Pn 03 51 35.7 +0.5
baz=296
SLBB S Sn 03 51 43.8 +0.4
baz=296
TIPB Shuangxi 0.57 326⇓iP Pn 03 51 35.0 -0.4
baz=327
TIPB S Sn 03 51 43.3 -0.5
baz=327
ENTT Nioudou 0.57 285 iP Pn 03 51 35.5 +0.1
baz=282
ENTT iS Sn 03 51 44.5 +0.7
baz=282
NDT Datong Townshi 0.61 280 P Pn 03 51 35.9 +0.1
baz=278
NDT S Sn 03 51 45.5 +0.8
baz=278
NACB Ninganchiao 0.62 239 P Pn 03 51 35.2 -0.7
baz=235
NACB S Sn 03 51 46.0 +1.1
baz=235
NWLT Wulai 0.67 295 eP Pn 03 51 36.5 -0.2
baz=293
NWLT S Sn 03 51 46.8 +0.6
baz=293
TWD Chiawan 0.67 232 P Pn 03 51 35.8 -0.8
baz=228
TWD iS Sn 03 51 45.5 -0.6
baz=228
NWF Wu-fen Shan 0.67 328⇓iP Pn 03 51 36.4 -0.4
baz=328
NWF iS Sn 03 51 45.7 -0.6
baz=328
WFSB Wu-fen Shan 0.67 328 P Pn 03 51 36.5 -0.3
baz=328
WFSB S Sn 03 51 45.7 -0.5
baz=328
ETLH Xiulin Townshi 0.69 245 eP Pn 03 51 36.6 -0.4
baz=243
ETLH S Sn 03 51 46.5 -0.3
baz=243
JYNG Yonagunijimaku 0.71 94 P Pn 03 51 37.1 -0.1
JYNG eS Sn 03 51 47.0 0.0
TWA Mucha 0.72 312 P Pn 03 51 37.1 -0.3
baz=312
TWA iS Sn 03 51 46.9 -0.4
baz=312
NNSB Datong 0.72 265 P Pn 03 51 37.2 -0.3
baz=262
NNSB S Sn 03 51 47.4 -0.1
baz=262
NNSH Datong 0.72 265 eP Pn 03 51 37.0 -0.5
baz=262
NNSH eS Sn 03 51 47.4 -0.2
baz=262
NNS Nan Shan 0.73 266 iP Pn 03 51 37.3 -0.3
baz=263
NNS S Sn 03 51 47.6 -0.2
baz=263
YHNB Yeheng 0.74 283 ⇓P Pn 03 51 37.9 +0.1
baz=282
YHNB S Sn 03 51 48.2 +0.2
baz=282
NHDH Xindian Distri 0.75 308 P Pn 03 51 37.8 +0.1
baz=308
NHDH eS Sn 03 51 47.2 -0.7
baz=308
NSK Sanguang 0.76 284 iP Pn 03 51 37.9 -0.1
baz=282
NSK iS Sn 03 51 48.5 +0.1
baz=282
YOJ Yonaguni jima 0.77 93 P Pn 03 51 37.8 -0.1
YOJ eS Sn 03 51 48.4 0.0
TATO Taipei 0.78 308 P Pn 03 51 38.8 +0.7
baz=307
TATO eS Sn 03 51 49.0 +0.2
baz=307
ENLB Shoufeng 0.79 221 eS Sn 03 51 48.1 -0.8
baz=219
TAP1 Taipei 0.80 313 eP Pn 03 51 37.4 -1.0
baz=311
TAP1 eS Sn 03 51 48.9 -0.2
baz=311
YM01 YM01 0.85 320 P Pn 03 51 38.9 -0.2
baz=320
YM01 S Sn 03 51 49.6 -0.8
baz=320
YM10 YM10 0.86 320 P Pn 03 51 38.5 -0.7
baz=320
YM10 S Sn 03 51 50.2 -0.5
baz=320
YM11 YM11 0.86 321 eP Pn 03 51 38.4 -0.9
baz=321
YM05 YM05 0.86 320 P Pn 03 51 38.7 -0.7
baz=320
YM04 YM04 0.87 319 eP Pn 03 51 38.9 -0.6
baz=318
YM04 eS Sn 03 51 50.2 -0.8
baz=318
WHF Hehuan Shan 0.90 247 P Pn 03 51 40.1 -0.1
baz=244
WHF eS Sn 03 51 51.9 -0.3
baz=244
WLTB Daxi 0.91 293 eP Pn 03 51 39.5 -0.4
baz=292
TWS1 Kuangyinshan 0.91 311 P Pn 03 51 39.7 -0.2
baz=311
TWS1 eS Sn 03 51 51.3 -0.6
baz=311
TWY Chenhua 0.93 326 eP Pn 03 51 40.0 -0.2
baz=326
TWY eS Sn 03 51 51.7 -0.7
baz=326
TDCB Techi 0.95 255 P Pn 03 51 40.7 0.0
baz=253
TDCB S Sn 03 51 52.8 -0.4
baz=253
ESL Shilin 0.96 225 P Pn 03 51 39.2 -1.4
baz=222
ESL S Sn 03 51 51.9 -1.2
baz=222
CHGB Renai 1.01 245 P Pn 03 51 41.1 -0.3
baz=242
CHGB S Sn 03 51 53.8 -0.8
baz=242
NCU National Centr 1.01 298 eS Sn 03 51 54.6 +0.3
baz=297
OWD Renai 1.06 239 eP Pn 03 51 41.5 -0.5
baz=237
OWD eS Sn 03 51 54.5 -1.2
baz=237
LIOB Emei 1.06 278 P Pn 03 51 42.6 +0.6
baz=277
LIOB eS Sn 03 51 56.6 +0.9
baz=277
EGFH Guangfu 1.07 220 eS Sn 03 51 55.9 +0.2
baz=217
NSTT Nanjuang 1.07 277 P Pn 03 51 42.4 +0.3
baz=276
NSTT eS Sn 03 51 56.4 +0.5
baz=276
PCYT Pengchaiyu 1.13 355 eP Pn 03 51 43.2 +0.3
baz=356
PCYT eS Sn 03 51 57.7 +0.4
baz=356
WHP Taichung City 1.14 259 P Pn 03 51 43.7 +0.6
baz=257
WHP eS Sn 03 51 58.0 +0.4
baz=257
VWDT VWDT 1.20 232 P Pn 03 51 43.4 -0.4
baz=230
HGSD Ruisui 1.21 214 eP Pn 03 51 43.2 -0.8
baz=212
HGSD eS Sn 03 51 59.5 +0.2
baz=212
SMLT Sun Moon Lake 1.31 242 P Pn 03 51 46.3 +0.8
baz=240
SMLT S Sn 03 52 01.8 -0.1
baz=240
SSLB Suanglung 1.32 238 eP Pn 03 51 45.7 +0.2
baz=236
SSLB eS Sn 03 52 01.1 -0.8
baz=236
TYC Yuchr 1.34 244 P Pn 03 51 46.3 +0.6
baz=242
TYC S Sn 03 52 02.8 +0.4
baz=242
IRIF Iriomote-Funau 1.43 96 P Pn 03 51 46.7 -0.3
IRIF S Sn 03 52 00.4 -0.2
WJS Zhushan 1.48 243 eS Sn 03 52 07.6 +1.8
baz=241
FULB Fuli 1.52 212 eP Pn 03 51 46.8 -1.5
baz=210
HATJ Hateruma jima 1.56 106 S Sn 03 52 07.1 -0.6
ALS Alishan 1.59 232 eP Pn 03 51 49.6 +0.1
baz=230
ALS eS Sn 03 52 08.1 -0.9
baz=230
CHN5 Tsauling 1.63 237 eP Pn 03 51 50.9 +1.0
baz=235
CHN5 eS Sn 03 52 10.9 +1.1
baz=235
JKRS Kuro-shima 1.70 98 P Pn 03 51 50.9 +0.2
JKRS eS Sn 03 52 11.8 +0.6
JIJ Ishigaki jima 1.80 94 P Pn 03 51 51.9 -0.2
JIJ eS Sn 03 52 13.2 -0.6
CHN4 Tsaushan 1.84 232 eP Pn 03 51 53.8 +1.2
baz=230
CHN4 eS Sn 03 52 15.9 +1.2
baz=230
TPUB Ta-pu 1.85 230 eP Pn 03 51 53.0 +0.2
baz=228
TPUB eS Sn 03 52 15.8 +0.8
baz=228
WTP Ta-pu 1.89 229 eP Pn 03 51 53.8 +0.4
baz=227
WTP eS Sn 03 52 15.8 -0.3
baz=227
JISG Ishigakijimahi 1.95 87 P Pn 03 51 54.5 +0.4
JISG eS Sn 03 52 17.5 +0.1
TWK Hsinying 1.97 232 eS Sn 03 52 18.2 +0.2
baz=230
CHN1 Nanshi 1.99 229 eS Sn 03 52 18.7 +0.2
baz=228
JTJ Tarama 2.31 86 P Pn 03 51 59.5 +0.4
JTJ eS Sn 03 52 27.1 +0.8

SKHL 27 04:21:15.7±0.6, 47.97N×154.11E, h76km±4km, mb4.5/8
MOS 27 04:21:15.3±1.1, 48.05N×153.97E, h79km, mb4.2/9, Error ellipse: s-maj=11.6km s-min=6.9km az=76.9
NEIC 27 04:21:17.5±1.3, 48.12N±0.08×153.8E±0.2, h85km±6km, mb4.0/8, Error ellipse: s-maj=19.0km s-min=1.5km az=126.0
IDC 27 04:21:18.4±2.3, 48.09N×153.82E, h91km±20km, mb3.6/17, mb1 3.8/22, mb1mx3.7/40, mbtmp3.9/22, MS2.9/9, Ms1 2.9/9, ms1mx2.7/38, Error ellipse: s-maj=18.9km s-min=10.9km az=147.0
ISC 27 04:21:15.3±0.5, 48.01N±0.06×154.01E±0.06, h64km, n105, σ1.62/109, mb3.9/28, 4C-1D, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC

SKR Severo-Kuril's 3.01 26 eP Pn 04 22 00.3 -0.1
SKR AMB AMB 04 22 02.0
90nm,0.7s
SKR eS Sn 04 22 34.1 -1.2
SKR A A 04 22 36.0
250nm,0.4s
SKR A A 04 22 36.0
290nm,0.4s
SKR Severo-Kuril's 3.01 26 ePN Pn 04 22 00.5 +0.1
SKR eS Sn 04 22 35.3 0.0
SKR pmax pmax
comp=Z,87nm,0.7s
SKR smax smax
comp=N,255nm,0.6s
SKR smax smax
comp=E,291nm,0.4s
KUR Kuril'sk 5.06 239 iP Pn 04 22 31.0 +2.4
KUR AMB AMB 04 22 32.7
comp=E,50nm,0.5s
KUR eS Sn 04 23 27.0 +1.3
KUR A A 04 23 46.3
comp=E,160nm,0.5s
KUR A A 04 23 46.3
comp=E,80nm,0.5s
KUR Kuril'sk 5.06 239⇑iPN Pn 04 22 30.9 +2.4
KUR S Sn 04 23 29.6 +3.9
KUR pmax pmax
comp=Z,112nm,0.6s
KUR smax smax
comp=N,164nm,0.5s
KUR smax smax
comp=E,83nm,0.4s
PEA0B Petropavlovsk- 5.62 23 Pn 04 22 37.6 +1.5
PEA0B Sn Sn 04 23 38.6 -0.6
PEA0B Petropavlovsk- 5.62 23d iPN Pn 04 22 37.5 +1.4
PETK Petropavlovsk- 5.62 23 P Pn 04 22 37.5 +1.3
comp=E,4.2nm,0.3s,baz=179,slow=12,SNR=93
PETK S Sn 04 23 47.5 +8.3
comp=E,0.7nm,0.3s,baz=205,slow=19,SNR=2.3
PETK LR LR 04 25 06.4
comp=E,59nm,20.1s,baz=242,slow=41
PET Petropavlovsk 5.83 29 eP Pn 04 22 40.6 +1.7
PET AMB AMB 04 22 44.7
comp=E,18nm,0.7s
PET eS Sn 04 23 43.1 -1.2
PET A A 04 23 49.4
comp=E,90nm,0.5s
PET A A 04 23 49.4
comp=E,100nm,0.5s
PET Petropavlovsk 5.83 29 Pn Pn 04 22 40.9 +1.9
PET Sn 04 23 43.2 -1.1
PET Petropavlovsk 5.83 29 ePN Pn 04 22 44.4 +5.5
PET eS Sn 04 23 42.5 -1.8
PET pmax pmax
comp=Z,18nm,0.7s
PET smax smax
comp=N,88nm,0.4s
PET smax smax
comp=E,107nm,0.5s
SHO Shikotan 6.50 233 eP Pn 04 22 48.5 +0.3
SHO AMB AMB 04 22 50.0
comp=E,10.0nm,0.2s
SHO eS Sn 04 24 01.1 +0.3
SHO A A 04 24 17.0
comp=E,80nm,0.4s
SHO A A 04 24 17.0
comp=E,20nm,0.4s
SHO Shikotan 6.50 233 ePN Pn 04 22 48.7 +0.5
SHO pmax pmax
comp=N,13nm,0.2s
SHO pmax pmax
comp=E,12nm,0.2s
SHO pmax pmax
comp=Z,13nm,0.2s
YUK Yuzh-Kuril'sk 6.93 238 eP Pn 04 22 54.5 +0.5
GLVR Golovnino 7.30 237 eP Pn 04 22 56.0 -3.2
GLVR Golovnino 7.30 237 ePN Pn 04 22 56.0 -3.2
NMR Nemuro--Hokkai 7.43 234 eP Pn 04 22 58.0 -2.9
NMR Nemuro--Hokkai 7.43 234 ePN Pn 04 22 58.9 -2.0
YSS Yuzh-Sakhalins 7.70 266 eP Pn 04 23 06.7 +2.1
YSS AMB AMB 04 23 07.0
comp=Z,60nm,0.6s
YSS eS Sn 04 24 29.9 -0.4
YSS Yuzh-Sakhalins 7.70 266 Pn 04 23 05.0 +0.4
YSS Yuzh-Sakhalins 7.70 266⇑ePN Pn 04 23 05.3 +0.7
YSS eS Sn 04 24 30.4 +0.1
YSS pmax pmax
comp=Z,60nm,0.6s
YSS pmax pmax
comp=N,50nm,0.7s
YSS pmax pmax
comp=E,40nm,0.6s
TYV Tymovskoe 7.94 295 eP Pn 04 23 10.7 +2.9
TYV AMB AMB 04 23 11.7
comp=E,24nm,0.6s
TYV eS Sn 04 24 35.0 -1.0
TYV Tymovskoe 7.94 295 ePN Pn 04 23 21.0 +13
TYV pmax pmax
comp=Z,200nm,3.8s
TYV pmax pmax
comp=Z,25nm,0.6s
JKA Kamikawa-asahi 8.84 248 eP Pn 04 23 22.7 +2.5
JKA Kamikawa-asahi 8.84 248 Pn 04 23 22.7 +2.5
ASAJ Asahikawa 8.84 248 P Pn 04 23 22.7 +2.5
comp=Z,2.6nm,0.3s,baz=75,slow=16,SNR=11
ERM Erimo 9.74 236 Pn Pn 04 23 30.6 -1.9
ERM Erimo 9.74 236 iPN Pn 04 23 34.4 +1.9
MA2 Magadan 11.74 352 P Pn 04 24 00.7 +0.9
comp=Z,1.7nm,0.3s,baz=136,slow=21,SNR=6.6
MA2 LR LR 04 28 27.1
comp=Z,42nm,18.7s,baz=140,slow=37
MA2 Magadan 11.74 352 Pn 04 23 59.8 0.0
MA2 Magadan 11.74 352 cePN Pn 04 24 00.6 +0.9
MA2 pmax pmax
comp=Z,7.0nm,0.8s
EKMR Ekimchan 14.30 299 eP Pn 04 24 33.8 -0.5
EKMR AMB AMB 04 24 43.9
comp=Z,6.0nm,0.7s
KLR Kul'dur 14.77 283 P Pn 04 24 41.4 +1.0
comp=Z,0.2nm,0.3s,baz=129,slow=13,SNR=11
KLR LR LR 04 30 09.1
comp=Z,65nm,18.6s,baz=344,slow=36
KLR Kul'dur 14.77 283 eP P 04 24 43.7 -1.1
KLR pmax pmax
comp=Z,3.0nm,1.0s
SEY Seymchan 14.99 357 P P 04 24 45.5 -1.7
comp=Z,0.2nm,0.3s,baz=167,slow=12,SNR=8.3
SEY Seymchan 14.99 357 iP P 04 24 45.2 -1.9
USRK Ussuriysk Ar. 15.73 264 P P 04 24 54.7 -0.8
baz=63,slow=12,SNR=10
YAK Yakutsk 19.62 325 eP Pn 04 25 40.2 +0.2
YAK Yakutsk 19.62 325 iP Pn 04 25 40.2 +0.2
YAK pmax pmax
comp=Z,6.0nm,0.9s
BILL Bilibino 21.03 13 eP P 04 25 55.9 +2.6
BILL Bilibino 21.03 13 iP P 04 25 55.9 +2.6
BILL pmax pmax
comp=Z,5.0nm,1.6s
KSRS Korea Array 21.78 251 P P 04 26 01.4 -0.1
comp=Z,3.8nm,0.8s,baz=53,slow=10,SNR=13
KSRS LR LR 04 34 06.4
comp=Z,14nm,19.0s,baz=85,slow=35
KSRS Korea Array 21.78 251 eP P 04 26 01.9 +0.4
KSRS Korea Array 21.78 251 eP P 04 26 01.9 +0.4
KSRS pmax pmax
comp=Z,4.0nm,0.8s
JNU Nakatsue 22.90 238 LR LR 04 36 06.0
comp=Z,20nm,19.4s,baz=44,slow=39
TIXI Tiksi 26.44 342 LR LR 04 38 26.2
comp=Z,23nm,20.5s,baz=4.5,slow=39
TIXI Tiksi 26.44 342 eP P 04 26 44.3 -1.3
TIXI Tiksi 26.44 342 iP P 04 26 44.3 -1.3
TIXI pmax pmax
comp=Z,9.0nm,3.6s
H11N2 WAKE ISLAND Hy 30.08 155 T T 04 59 32.5
baz=342,slow=76,SNR=233
H11N1 WAKE ISLAND Hy 30.10 155 T T 04 59 31.7
baz=342,slow=76,SNR=333
H11N3 WAKE ISLAND Hy 30.10 155 T T 04 59 30.2
baz=342,slow=76,SNR=148
H11S1 WAKE ISLAND Hy 31.19 156 T T 05 00 54.2
baz=343,slow=76,SNR=1290
H11S3 WAKE ISLAND Hy 31.20 156 T T 05 00 54.1
baz=343,slow=76,SNR=1015
H11S2 WAKE ISLAND Hy 31.21 156 T T 05 00 53.4
baz=343,slow=76,SNR=826
SONM Songino Array 31.51 288 P P 04 27 30.8 -0.3
comp=Z,0.2nm,0.4s,baz=89,slow=9.2,SNR=3.0
SONM PcP PcP 04 30 21.6 -0.8
comp=Z,0.6nm,0.8s,baz=140,slow=1.1,SNR=3.9
SONM LR LR 04 41 06.0
comp=Z,56nm,19.6s,baz=19,slow=38
TLY Talaya 32.16 296 LR LR 04 41 57.5
comp=Z,40nm,20.8s,baz=74,slow=39
IL31 35.18 40 P P 04 28 02.8 +0.2
ILAR Eielson Array 35.18 40 P P 04 28 02.9 +0.2
comp=Z,1.8nm,1.1s,baz=261,slow=5.3,SNR=8.5
INK Inuvik 40.26 33 P P 04 28 46.6 +1.3
comp=Z,2.4nm,0.5s,baz=295,slow=6.7,SNR=21
INK Inuvik 40.26 33 P P 04 28 45.6 +0.3
INK IAmb IAmb 04 28 45.7
comp=Z,1.0nm,0.9s
INK Inuvik 40.26 33 P P 04 28 45.6 +0.3
INK pmax pmax
comp=Z,1.0nm,1.0s
ZALV Zalesovo Beam 42.38 305 LR LR 04 48 07.3
comp=Z,33nm,19.2s,baz=66,slow=38
MK31 Makanchi Array 46.91 297 P P 04 29 38.1 -1.0
MK31 IAmb IAmb 04 29 39.9
comp=Z,1.3nm,0.8s
MK31 Makanchi Array 46.91 297 P P 04 29 38.1 -1.0
MK31 pmax pmax
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 46.91 297 P P 04 29 38.6 -0.5
comp=Z,1.5nm,0.7s,baz=65,slow=8.0,SNR=19
MKAR PcP PcP 04 31 09.8 -0.9
comp=Z,0.3nm,0.7s,baz=64,slow=4.4,SNR=2.6
MKAR Makanchi Array 46.91 297 eP P 04 29 39.1 0.0
MKAR Makanchi Array 46.91 297 eP P 04 29 39.1 0.0
MKAR pmax pmax
comp=Z,2.0nm,0.7s
KURK Kurchatov 47.18 303 eP P 04 29 42.1 +1.0
KURK Kurchatov 47.18 303 P P 04 29 39.1 -2.0
KURK IAmb IAmb 04 29 42.0
comp=Z,1.6nm,0.8s
KURK Kurchatov 47.18 303 iP P 04 29 42.1 +1.0
KURK pmax pmax
comp=Z,1.0nm,1.1s
RES Resolute Bay 49.45 19 P P 04 29 57.4 -0.8
RES Resolute Bay 49.45 19 P P 04 29 57.4 -0.8
RES pmax pmax
comp=Z,1.0nm,0.3s
YKA Yellowknife Ar 49.55 38 P P 04 29 59.3 +0.2
comp=Z,0.6nm,0.7s,baz=298,slow=6.7,SNR=8.5
YKA PcP PcP 04 31 19.8 -0.1
comp=Z,0.3nm,0.7s,baz=304,slow=3.4,SNR=3.1
BVAR Borovoye Array 50.54 309 P P 04 30 05.6 -1.2
comp=Z,0.6nm,0.4s,baz=57,slow=8.6
BRVK Borovoye 50.58 309 eP P 04 30 07.6 +0.6
BRVK Borovoye 50.58 309 iP P 04 30 07.6 +0.6
BRVK pmax pmax
comp=Z,1.0nm,0.8s
CMAR Chiang Mai Arr 53.26 256 P P 04 30 27.7 +0.3
comp=Z,2.1nm,0.3s,baz=30,slow=7.3,SNR=6.6
CMAR Chiang Mai Arr 53.26 256 eP P 04 30 29.4 +1.9
CMAR pmax pmax
comp=Z,2.0nm,0.3s
ARU Arti 54.50 317 eP P 04 30 36.7 +0.7
ARU Arti 54.50 317 iP P 04 30 36.7 +0.7
ARU pmax pmax
comp=Z,1.0nm,1.0s
LVZ Lovozero 55.85 337 ceP P 04 30 44.5 -1.1
LVZ pmax pmax
comp=Z,20nm,1.3s
NVAR Mina Array Bea 61.31 63 P P 04 31 25.3 +1.1
comp=Z,1.1nm,0.6s,baz=294,slow=7.2,SNR=9.9
FINES FINESS Array B 63.16 335 P P 04 31 35.1 -0.8
comp=Z,1.8nm,0.8s,baz=36,slow=7.1,SNR=7.6
FINES FINESS Array B 63.16 335 eP P 04 31 35.2 -0.7
FINES pmax pmax
comp=Z,2.0nm,0.8s
PDAR Pinedale Array 63.51 55 P P 04 31 39.7 +0.8
comp=Z,0.8nm,0.7s,baz=294,slow=2.5,SNR=9.4
OBN Obninsk 64.61 326 iP P 04 31 49.2 +3.7
OBN pmax pmax
comp=Z,4.0nm,0.9s
SZCU Shurtz Canyon 64.96 61 P P 04 31 48.5 +0.1
NOA NORSAR Array B 67.23 341 P P 04 32 01.0 -1.3
comp=Z,0.5nm,0.6s,baz=25,slow=6.2,SNR=2.9
NOA NORSAR Array B 67.23 341 P P 04 32 01.0 -1.3
WB0 Warramunga Arr 69.72 200 P P 04 32 17.5 -0.7
WB0 IAmb IAmb 04 32 22.5
comp=Z,2.9nm,1.1s
WB2 Warramunga Arr 69.90 200 P P 04 32 18.3 -1.0

WB2				IAmb	IAmb	04 32 24.9	
	comp=Z,3.5nm,1.1s						
WRA	**Warramunga Arr**	**69.91**	**200**	P	**P**	**04 32 18.6**	**-0.7**
	comp=Z,10nm,0.3s,baz=15,slow=6.2,SNR=6.5						
WRA	**Warramunga Arr**	**69.91**	**200**	*e*P	**P**	**04 32 19.3**	**0.0**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**70.84**	**326**	P	**P**	**04 32 23.2**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=39,slow=6.0,SNR=2.8						
SCHQ	**Schefferville**	**71.91**	**23**	P	**P**	**04 32 31.8**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=263,slow=9.2,SNR=3.7						
ASAR	**Alice Springs**	**73.60**	**199**	P	**P**	**04 32 42.1**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=11,slow=5.5,SNR=7.7						
CLL	**Collm**	**75.57**	**336**	*i* P	**P**	**04 32 53.0**	**+0.4**
CLL	**Collm**	**75.57**	**336**	*i* P	**P**	**04 32 53.0**	**+0.4**
VYHS	**Vyhne**	**76.32**	**331**	*e*P	**P**	**04 32 55.2**	**-1.8**
VYHS	**Vyhne**	**76.32**	**331**	*e*P	**P**	**04 32 55.2**	**-1.8**
TXAR	**Lajitas Array**	**76.34**	**61**	P	**P**	**04 32 58.4**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=300,slow=4.3,SNR=30						
GERES	**GERESS Array B**	**77.59**	**334**	P	**P**	**04 33 03.4**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=54,slow=6.8,SNR=4.7						
TORD	**Torodi Ar. Bea**	**114.31**	**330**	PKP	**PKiKP**	**04 39 46.7**	**-1.2**
	comp=Z,0.5nm,0.9s,baz=33,slow=1.5,SNR=4.7						
DBIC	**Dimbokro**	**122.46**	**335**	PKP	**PKPdf**	**04 40 02.8**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=297,slow=5.4,SNR=4.4						
DBIC	**Dimbokro**	**122.46**	**335**		**PKPdf**	**04 40 02.3**	**-1.2**
DBIC	**Dimbokro**	**122.46**	**335**	PKIKP	**PKPdf**	**04 40 02.3**	**-1.2**

ROM 27 04:30:18.3±0.1, 43°.405N±0°.002×12°.460E±0°.005, h5km, ML0.5/1, Error ellipse: s-maj=0.3km s-min=0.2km az=65.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATVO	**AVT- Monte Val**	**0.04**	**239**	P	Pg	04 30 19.7	+0.1
ATVO				S	Sg	04 30 20.8	+0.2
ATVO				AML	AML		
	comp=E,127μm,0.2s						
ATVO				AML	AML		
	comp=N,132μm,0.1s						
ATPI	**Pietralunga -**	**0.06**	**317**	P	Pg	04 30 20.0	+0.1
ATPI				S	Sg	04 30 21.3	+0.3
ATFO	**Monte Foce - G**	**0.09**	**115**	P	Pg	04 30 20.4	+0.1
ATFO				S	Sg	04 30 22.1	+0.4
ATFO				AML	AML		
	comp=E,60μm,1.3s						
ATFO				AML	AML		
	comp=N,38μm,0.8s						
PIEI	**Pieia**	**0.14**	**23**	P	Pg	04 30 21.6	+0.4
PIEI				S	Sg	04 30 24.2	+1.0
MURB	**Monte Urbino**	**0.15**	**162**	P	Pg	04 30 21.7	+0.4
MURB				S	Sg	04 30 24.6	+1.2

STR 27 04:33:10.7±1.0, 50°N±3°×°±°, h0km

ISC 27 04:33:09.7±1.2, 49°.82N±0°.08×7°.40E±0°.08, h16km±12km, n8, σ0s.72/15, 1D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABH	**Alteburg**	**0.12**	**56**	Pg	**Pg**	**04 33 13.3**	**-0.1**
WLF	**Walferdange**	**0.82**	**260**	P	**Pn**	**04 33 26.9**	**+0.3**
WLF				S	**Sn**	**04 33 38.4**	**-0.1**
	comp=N,5.0nm,0.2s						
LANF	**Langenberg**	**0.88**	**162**	Pg	**Pn**	**04 33 27.0**	**-0.5**
LANF				Pn	**Pb**	**04 33 27.9**	**+1.2**
LANF				Sg	**Sb**	**04 33 37.4**	**-0.7**
LKLB	**Kalborn**	**0.88**	**289**	⇓P	**Pn**	**04 33 28.5**	**+1.0**
LKLB				S	**Sb**	**04 33 37.5**	**-0.7**
SUBF	**Surbourg**	**0.95**	**162**	Pg	**Pn**	**04 33 28.4**	**0.0**
SUBF				Sg	**Sn**	**04 33 40.8**	**-0.8**
BHOU	**Houvegnez**	**1.05**	**302**	P	**Pn**	**04 33 30.6**	**+0.8**
BHOU				S	**Sb**	**04 33 43.1**	**+0.1**
MEM	**Membach**	**1.20**	**312**	P	**Pb**	**04 33 31.2**	**-0.8**
MEM				S	**Sn**	**04 33 48.3**	**+0.5**
	comp=E,1.4nm,0.2s						
BCLA	**Clavier**	**1.48**	**295**	P	**Pg**	**04 33 37.8**	**-0.3**

PDG 27 04:47:10.7±0.2, 41°.57N×20°.15E, h9km, ML2.7/13, Error ellipse: s-maj=0.4km s-min=0.4km az=0.0

TIR 27 04:47:10.5, 41°.57N×20°.12E, h2km, Md2.5/4

SKO 27 04:47:11.6, 41°.55N×20°.12E, h5km

BEO 27 04:47:12.3±0.3, 41°.57N×20°.16E, h0km±2km, ML2.1/12

ISC 27 04:47:11.4±1.0, 41°.59N±0°.02×20°.13E±0°.02, h9km±9km, n43, σ1s.20/81, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.26**	**68**	*i* PG	**Pg**	**04 47 16.3**	**-0.2**
PHP				*i* SG	**Sg**	**04 47 20.8**	**+0.8**
TIR	**Tirane**	**0.31**	**219**	*e*Pg	**Pg**	**04 47 17.1**	**-0.4**
TIR				*e*Sg	**Sg**	**04 47 22.6**	**+0.9**
PUK	**Puka**	**0.49**	**339**	*i* PG	**Pg**	**04 47 21.0**	**+0.2**
PUK				*i* SG	**Sb**	**04 47 29.5**	**0.0**
OHR	**Ohrid**	**0.70**	**133**	*i* Pg	**Pg**	**04 47 23.3**	**-1.5**
OHR				*i* Sg	**Sg**	**04 47 34.0**	**+0.1**
OHR				*e*Lg	Lg	04 47 34.5	
	comp=E,154nm,0.6s						
ULC	**Ulcinj**	**0.76**	**300**	*e*Pg	**Pg**	**04 47 25.1**	**-0.9**
ULC				*e*Sg	**Sb**	**04 47 37.7**	**+0.4**
BCI	**Bajram Curri**	**0.78**	**357**	*i* PG	**Pg**	**04 47 25.9**	**-0.5**
BCI				*i* SG	**Sb**	**04 47 38.8**	**+0.9**
DRME	**Dracevica, Mon**	**0.92**	**311**	*e*Pg	**Pg**	**04 47 28.1**	**-1.0**
DRME				*e*Sg	**Sn**	**04 47 43.2**	**-0.8**
PVY	**Plav**	**1.01**	**353**	*e*Pg	**Pg**	**04 47 29.6**	**-1.3**
PVY				*e*Sg	**Sn**	**04 47 46.0**	**-0.4**
SKO	**Skopje**	**1.05**	**68**	*e*Pg	**Pg**	**04 47 31.5**	**-0.1**
SKO				*e*Sg	**Sg**	**04 47 44.5**	**-0.8**
SKO	**Skopje**	**1.05**	**68**	*i* Pg	**Pg**	**04 47 31.4**	**-0.3**
SKO				*i* Sg	**Sg**	**04 47 44.6**	**-0.8**
SKO				*e*Lg	Lg	04 47 44.7	
	comp=N,30nm,0.4s						
PDG	**Podgorica**	**1.06**	**323**	*e*Pg	**Pg**	**04 47 31.5**	**-0.3**
PDG				*e*Sg	**Sn**	**04 47 47.6**	**+0.2**
TTG	**Podgorica**	**1.06**	**323**	*e*Pg	**Pg**	**04 47 30.8**	**-1.0**
TTG				*e*Sg	**Sn**	**04 47 47.9**	**+0.5**
BUM	**Brajici-Budva**	**1.16**	**308**	*e*Pg	**Pb**	**04 47 32.5**	**-1.2**
BUM				*e*Sg	**Sn**	**04 47 51.5**	**+1.5**
IVA	**Berane**	**1.29**	**352**	*e*Pg	**Pn**	**04 47 35.1**	**-0.7**
IVA				*e*Sg	**Sn**	**04 47 55.6**	**+2.6**
TPE	**Tepelena**	**1.29**	**184**	*i* PG	**Pn**	**04 47 35.6**	**-0.1**
TPE				*i* SG	**Sn**	**04 47 56.2**	**+3.1**
CEME	**Cevo**	**1.31**	**317**	*e*Pg	**Pn**	**04 47 35.2**	**-0.8**
CEME				*e*Sg	**Sn**	**04 47 56.6**	**+2.9**
KOME	**Kolasin**	**1.34**	**340**	*e*Pg	**Pn**	**04 47 35.6**	**-0.8**
KOME				*e*Sg	**Sn**	**04 47 57.5**	**+3.0**
NKME	**Niksic**	**1.47**	**324**	*e*Pg	**Pn**	**04 47 37.9**	**-0.2**
NKME				*e*Sg	**Sn**	**04 48 00.7**	**+2.2**
HCY	**Herceg Novi**	**1.49**	**306**	*e*Pg	**Pn**	**04 47 38.1**	**-0.3**
HCY				*e*Sg	**Sn**	**04 48 01.6**	**+2.4**
SJES	**Sjenica**	**1.68**	**356**	*e*Pn	**Pb**	**04 47 42.5**	**0.0**
SJES				*e*Sn	**Sg**	**04 48 05.0**	**-0.3**
TREB	**Trebinje**	**1.74**	**311**	*e*Pn	**Pb**	**04 47 43.1**	**-0.4**
TREB				*e*Sn	**Sg**	**04 48 07.7**	**+0.5**
BARS	**Barje**	**1.75**	**45**	*e*Pn	**Pb**	**04 47 43.5**	**-0.3**
BARS				*e*Sn	**Sb**	**04 48 07.0**	**+1.0**
BRY	**Bratogost**	**1.76**	**319**	*e*Pn	**Pn**	**04 47 42.8**	**+0.5**
BRY				*e*Sn	**Sg**	**04 48 08.4**	**+0.3**
SELS	**Selova**	**1.79**	**24**	*e*Pg	**Pb**	**04 47 44.3**	**-0.1**
SELS				*e*Sg	**Sg**	**04 48 08.8**	**-0.1**
PLE	**Pljevlja**	**1.82**	**343**	*e*Pn	**Pn**	**04 47 43.6**	**+0.5**
PLE				*e*Sn	**Sg**	**04 48 09.8**	**-0.2**
DBRK	**Dubrovnik**	**1.83**	**307**	*e*Pn	**Pb**	**04 47 44.2**	**-0.8**
DBRK				Sn	**Sg**	**04 48 09.4**	**-0.7**
UPM	**Unac-Piva**	**1.85**	**331**	*e*Pn	**Pb**	**04 47 44.4**	**-1.1**
UPM				*e*Sn	**Sg**	**04 48 10.6**	**-0.2**
VAY	**Valandovo**	**1.86**	**97**	*e*Pn	**Pb**	**04 47 44.7**	**-0.8**
VAY	**Valandovo**	**1.86**	**97**	*i* Pn	**Pn**	**04 47 44.0**	**+0.5**
BOSS	**Bosilegrad**	**1.97**	**62**	*e*Pn	**Pb**	**04 47 46.9**	**-0.6**
BOSS				*e*Sn	**Sb**	**04 48 11.7**	**-0.6**
IVAS	**Ivanjica**	**1.99**	**1**	*e*Pn	**Pb**	**04 47 47.4**	**-0.4**
IVAS				*e*Sn	**Sb**	**04 48 13.8**	**+1.1**
GRUS	**Gruza**	**2.34**	**10**	*e*Pn	**Pb**	**04 47 52.6**	**-1.1**
BOVS	**Bovan**	**2.35**	**29**	*e*Pn	**Pn**	**04 47 51.9**	**+1.6**
BOVS				*e*Sn	**Sn**	**04 48 21.2**	**-2.0**
ZAPS	**Zavoj**	**2.51**	**47**	*e*Pn	**Pb**	**04 47 55.0**	**-1.6**
DIVS	**Divibare**	**2.51**	**358**	*e*Pn	**Pn**	**04 47 54.7**	**-2.0**
DIVS				*e*Sn	**Sb**	**04 48 26.1**	**-1.7**
VTS	**Vitosha**	**2.53**	**65**	*e*Pn	**Pn**	**04 47 54.7**	**+1.8**
HAPS	**Han Pijesak,Bl**	**2.64**	**341**	*e*Pn	**Pn**	**04 47 55.6**	**+1.3**
HAPS				*e*Sn	**Sb**	**04 48 29.6**	**-2.0**
ZAGS	**Zajecar**	**2.71**	**34**	*e*Pn	**Pn**	**04 47 57.4**	**+2.2**
ZAGS				*e*Sn	**Sn**	**04 48 29.8**	**+1.7**
MAKA	**Makarska**	**2.86**	**307**	*e*Pn	**Pn**	**04 47 58.5**	**+1.3**
MAKA				Sn	**Sn**	**04 48 32.1**	**+0.4**
KIJV	**Kijevo**	**3.65**	**313**	*e*Pn	**Pn**	**04 48 08.8**	**+0.7**
KIJV				Sn	**Sn**	**04 48 52.1**	**+0.8**
ZIRJ	**Zirje**	**3.90**	**303**	*e*Pn	**Pn**	**04 48 11.9**	**+0.4**
ZIRJ				Sn	**Sn**	**04 48 58.2**	**+0.8**
DUGI	**Dugi Otok**	**4.44**	**304**	*e*Pn	**Pn**	**04 48 19.3**	**+0.4**
DUGI				Sn	**Sn**	**04 49 11.5**	**+0.8**
NVLJ	**Novalja**	**4.86**	**309**	*e*Pn	**Pn**	**04 48 24.6**	**-0.1**
NVLJ				Sn	**Sn**	**04 49 19.7**	**-1.4**

NIED 27 05:03:00, 37°.20N×136°.80E, h8km, Mw3.7 Best double couple: Mo3.68000×10^14 NP1:φs28.00000°, δ59.00000°, λ59.00000°. NP2:φs258.00000°, δ43.00000°, λ131.00000°.

IDC 27 05:03:54.5±0.8, 37°.08N×136°.77E, h0km, mb3.4/6, mb1 3.6/8, mb1mx3.5/46, mbtmp3.4/8, ML3.5/2, MS2.5/3, Ms1 2.5/3, ms1mx2.3/33, Error ellipse: s-maj=22.2km s-min=12.5km az=25.0

JMA 27 05:03:54.7, 37°.25N×136°.76E, h11km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs44.00000°, δ38.00000°, λ58.00000°. NP2:φs262.00000°, δ59.00000°, λ112.00000°. Principal axes: T Plg68.0000°, Azm217.0000°; N Plg19.0000°, Azm70.0000°; P Plg11.0000°, Azm336.0000°;

JMA Felt III J1.

ISC 27 05:03:55.4±1.2, 37°.22N±0°.03×136°.83E±0°.04, h5km±8km, n16, σ1s.21/21, mb3.3/6, 2C-3D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.30**	**187**	⇓P	**Pg**	**05 04 01.4**	**+0.2**
JJH				S	**Sg**	**05 04 06.2**	**+1.1**
JSZ	**Suzu**	**0.48**	**62**	⇑P	**Pg**	**05 04 04.6**	**0.0**
JSZ				S	**Sg**	**05 04 11.9**	**+1.0**
JHG	**Hegura jima**	**0.63**	**7**	⇓P	**Pg**	**05 04 06.5**	**-0.9**
JHG				S	**Sg**	**05 04 15.0**	**-0.6**
JTT	**Ttatey**	**0.74**	**147**	⇓P	**Pg**	**05 04 09.6**	**+0.1**
JTT				S	**Sg**	**05 04 20.2**	**+1.1**
JKG	**Kaga**	**1.03**	**203**	⇑P	**Pg**	**05 04 13.7**	**-1.3**
JKG				S	**Sg**	**05 04 27.9**	**-0.4**
MAT	**Matsushiro**	**1.30**	**121**	P	**Pn**	**05 04 18.6**	**-1.5**
MAT				S	**Sn**	**05 04 37.8**	**-0.1**
MJAR	**Matsushiro Arr**	**1.30**	**121**	Pg	**Pn**	**05 04 19.3**	**-0.9**
	6.0nm,0.3s,baz=304,slow=16,SNR=120						
MJAR				Lg	Lg	05 04 37.3	
	6.1nm,0.3s,baz=300,slow=22,SNR=16						
JNU	**Nakatsue**	**6.36**	**232**	Pn	**Pn**	**05 05 29.6**	**-0.2**
	1.6nm,0.3s,baz=0.7,slow=1.2,SNR=9.8						
JNU				LR	LR	05 08 00.4	
	comp=Z,58nm,19.7s,baz=4.5,slow=39						
KSRS	**Korea Array**	**7.10**	**275**	Pn	**Pn**	**05 05 41.0**	**+1.2**
	0.4nm,0.3s,baz=85,slow=15,SNR=2.8						
KSRS				LR	LR	05 08 03.9	
	comp=Z,26nm,18.8s,baz=35,slow=35						
ASAJ	**Asahikawa**	**8.16**	**31**	LR	LR	05 09 15.7	
	comp=Z,31nm,18.4s,baz=254,slow=39						
SONM	**Songino Array**	**24.66**	**305**	P	**P**	**05 09 15.8**	**-1.2**
	0.3nm,0.5s,baz=100,slow=7.7,SNR=3.1						
MKAR	**Makanchi Array**	**40.90**	**301**	P	**P**	**05 11 39.8**	**+1.3**
	0.1nm,0.6s,baz=99,slow=8.0,SNR=2.7						
WRA	**Warramunga Arr**	**56.91**	**183**	P	**P**	**05 13 39.0**	**-2.4**
	0.6nm,0.4s,baz=359,slow=7.6,SNR=16						
ASAR	**Alice Springs**	**60.63**	**183**	P	**P**	**05 14 06.6**	**-0.6**
	0.3nm,0.5s,baz=12,slow=14,SNR=5.6						
YKA	**Yellowknife Ar**	**65.45**	**29**	P	**P**	**05 14 39.0**	**+0.2**
	0.1nm,0.6s,baz=298,slow=4.1,SNR=3.1						
PDAR	**Pinedale Array**	**80.09**	**43**	P	**P**	**05 16 08.5**	**+2.0**
	0.3nm,0.6s,baz=274,slow=0.5,SNR=4.6						

IDC 27 05:08:45.4±2.4, 65°.93N×111°.15E, h0km, mb3.2/3, mb1 3.5/5, mb1mx3.3/41, mbtmp3.3/4, ML2.8/1, MS3.6/2, Ms1 3.5/2, ms1mx2.6/51, Error ellipse: s-maj=167.4km s-min=18.0km az=138.0

ISC 27 05:08:47.1±2.2, 66°.2N±0°.8×110°.7E±0°.7, h10km, n8, σ0s.47/6, mb3.3/4, Northern and central Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**8.51**	**42**	Pn	**Pn**	**05 10 49.8**	**-0.4**
	0.6nm,0.3s,baz=301,slow=4.0,SNR=3.9						
TIXI				Lg	Lg	05 13 09.1	
	0.5nm,0.3s,baz=298,slow=13,SNR=7.2						
ZALV	**Zalesovo Beam**	**17.63**	**239**	P	**P**	**05 12 53.7**	**+0.2**
	0.2nm,0.3s,baz=30,slow=15,SNR=4.3						
KURBB	**Kurchatov Arra**	**22.57**	**242**	P	**P**	**05 13 47.1**	**-0.1**
	0.5nm,0.3s,baz=40,slow=11,SNR=5.0						
MKAR	**Makanchi Array**	**24.58**	**232**	P	**P**	**05 14 06.5**	**-0.4**
	0.2nm,0.4s,baz=36,slow=6.8,SNR=6.9						
ASAJ	**Asahikawa**	**28.07**	**126**	LR	LR	05 25 41.9	
	comp=Z,277nm,20.3s,baz=90,slow=37						
ILAR	**Eielson Array**	**37.98**	**43**	P	**P**	**05 16 05.0**	**+0.5**
	0.3nm,0.6s,baz=311,slow=6.0,SNR=5.9						
KBZ	**Khabaz**	**42.22**	**273**	LR	LR	05 39 08.8	
	comp=Z,30nm,20.8s,baz=235,slow=43						
YKA	**Yellowknife Ar**	**47.41**	**27**	P	**P**	**05 17 20.9**	**0.0**
	0.1nm,0.4s,baz=334,slow=7.9,SNR=2.6						

IDC 27 05:10:57.4±0.5, 59°.42S×59°.60W, h0km, mb5.0/17, mb1 5.0/20, mb1mx4.9/27, mbtmp5.0/20, ML4.7/3, MS4.5/19, Ms1 4.5/19, ms1mx4.4/23, Error ellipse: s-maj=22.3km s-min=11.1km az=74.0

NEIC 27 05:10:58.7±1.2, 59°.46S±0°.03×59°.8W±0°.2, h10km±1km, mb5.4/46, Ms_20 4.9/61, Mww5.3, Error ellipse: s-maj=14.9km s-min=2.7km az=253.0

MOS 27 05:10:58.5±0.9, 59°.35S×59°.46W, h15km, mb5.4/16, MS4.7/6, Error ellipse: s-maj=27.0km s-min=9.1km az=95.1

NEIC 27 05:11:00, 59°.46S×60°.10W, h20km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr-0.13; Mθθ1.12; Mφφ-0.99; Mrθ0.07; Mrφ0.53; Mθφ0.47; Fault plane solution: Mo1.28000×10^17 NP1:φs120.00000°, δ70.00000°, λ-10.00000°. NP2:φs213.00000°, δ81.00000°, λ-159.00000°. Principal axes: T 1.2687, Plg8.0000°, Azm345.0000°; N 0.0236, Plg67.0000°, Azm237.0000°; P -1.2924, Plg21.0000°, Azm78.0000°;

BJI 27 05:11:00.0±0.0, 59°.50S×59°.70W, h10km, mB5.5/17, Ms5.5/7, Ms7 5.3/4

GCMT 27 05:11:01.7±0.1, 59°.46S±0°.01×59°.63W±0°.02, h20km, MW5.3/139, Moment Tensor Solution. s99,c150; s139,c236; Duration: 1s.1 Moment tensor: Scale 10^17 Nm; Mrr-0.25±.02; Mθθ1.07±.02; Mφφ-0.92±.02; Mrθ-0.04±.03; Mrφ0.51±.02; Mθφ0.62±.04; Best double couple: Mo1.28300×10^17 NP1:φs118.00000°, δ67.00000°, λ-16.00000°. NP2:φs214.00000°, δ75.00000°, λ-157.00000°. Principal axes: T 1.2020, Plg5.0000°, Azm345.0000°; N 0.1570, Plg62.0000°, Azm245.0000°; P -1.3640, Plg27.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 27 05:10:58.7±0.3, 59°.46S±0°.05×59°.77W±0°.06, h10km, n231, σ1s.31/196, mb5.3/41, MS4.8/53, 6C-1D, Drake Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**5.70**	**199**	Pn	**Pn**	**05 12 22.7**	**-0.6**
	75nm,0.3s,baz=46,slow=8.4,SNR=59						
PMSA				Sn	**Sn**	**05 13 23.4**	**-5.3**
	51nm,0.3s,baz=248,slow=17,SNR=15						
PMSA				LR	LR	05 14 16.3	
	comp=Z,3μm,20.8s,baz=88,slow=34						
PMSA	**Palmer Station**	**5.70**	**199**		**Pn**	**05 12 22.4**	**-0.9**
PMSA					**Sn**	**05 13 25.8**	**-2.9**
USHA	**Ushuaia**	**6.61**	**311**	Pn	**Pn**	**05 12 35.5**	**-0.4**
	2.5nm,0.3s,baz=318,slow=16,SNR=39						
USHA				Sn	**Sn**	**05 13 48.4**	**-2.8**
	13nm,0.3s,baz=341,slow=20,SNR=12						
USHA				LR	LR	05 14 35.6	
	comp=Z,3μm,20.4s,baz=134,slow=33						
EFI	**East Falkland**	**7.86**	**8**		**Pn**	**05 12 52.8**	**-0.1**
EFI	**East Falkland**	**7.86**	**8***c*	*i* P	**Pn**	**05 12 53.1**	**+0.1**
GO10	**Punta Arenas**	**8.89**	**310**		**Pn**	**05 13 07.2**	**0.0**
GO09	**Cerro Castillo**	**10.87**	**314**		**Pn**	**05 13 33.2**	**-0.9**
HOPE	**Hope Point**	**13.71**	**78**	P	**Pn**	**05 14 12.4**	**-0.4**
HOPE	**Hope Point**	**13.71**	**78**	P	**Pn**	**05 14 12.4**	**-0.4**
GO07	**Milladeo Hill,**	**18.46**	**326**	P	**Pn**	**05 15 15.3**	**+0.9**
PLCA	**Paso Flores**	**19.93**	**335**	P	**Pn**	**05 15 31.6**	**-0.6**
	0.6nm,0.3s,baz=186,slow=11,SNR=75						
PLCA				LR	LR	05 24 06.0	
	comp=Z,2μm,18.0s,baz=194,slow=40						
PLCA	**Paso Flores**	**19.93**	**335**	*e*P	**P**	**05 15 31.4**	**+0.9**
PLCA	**Paso Flores**	**19.93**	**335**	P	**P**	**05 15 31.5**	**+0.9**
PLCA				IAmb	IAmb	05 15 42.4	
	comp=Z,176nm,1.0s						
VNA3	**Neumayer Olymp**	**23.15**	**141**	P	**P**	**05 16 05.0**	**+0.2**
VNA1	**Neumayer--Stat**	**23.57**	**139**	P	**P**	**05 16 09.6**	**+0.6**
VNA2	**Neumayer--Watz**	**23.87**	**140**	P	**P**	**05 16 13.2**	**+1.3**
	baz=265,slow=9.0						
SNAA	**Sanae**	**25.34**	**142**	P	**P**	**05 16 26.2**	**+0.9**
SNAA	**Sanae**	**25.34**	**142**	P	**P**	**05 16 26.3**	**+0.9**
	comp=Z,138nm,1.0s,baz=271,slow=7.5,SNR=160						
SNAA				LR	LR	05 24 52.0	
	comp=Z,1μm,19.1s,baz=290,slow=33						
SNAA	**Sanae**	**25.34**	**142**	P	**P**	**05 16 26.4**	**+1.0**
SNAA	**Sanae**	**25.34**	**142***c*	*i* P	**P**	**05 16 25.9**	**+0.5**
GO05	**Huala**	**25.73**	**337**	P	**P**	**05 16 28.7**	**-0.5**
PEL	**Peldehue**	**27.31**	**340**	P	**P**	**05 16 43.0**	**-0.4**
PEL				IAMs_20	IAMs_20	05 26 42.8	
	comp=Z,2μm,20.0s						
PEL	**Peldehue**	**27.31**	**340**	P	**P**	**05 16 43.0**	**-0.4**
PEL				pmax	pmax		
	comp=Z,632nm,1.0s						
PEL				MLR	MLR		
	comp=Z,2μm,20.0s						
ROC1	**El Roble**	**27.53**	**339**	P	**P**	**05 16 45.4**	**-0.2**
CFA	**Coronel Fontan**	**28.43**	**345**	P	**P**	**05 16 52.2**	**-1.2**
	comp=Z,11nm,0.5s,baz=175,slow=9.4,SNR=26						
CFA				LR	LR	05 30 00.1	
	comp=Z,881nm,18.1s,baz=198,slow=40						
NVL	**N'lazarevskaya**	**30.16**	**141**	*e*P	**P**	**05 17 09.3**	**+0.9**
NVL				*e*S	S	05 21 56.7	-10
NVL				pmax	pmax		
	comp=Z,48nm,1.2s						
NVL				MLR	MLR		
	comp=Z,1μm,7.0s						
GO04	**Tololo Observa**	**30.23**	**341**	P	**P**	**05 17 09.6**	**0.0**
GO04				IAMs_20	IAMs_20	05 29 57.6	
	comp=Z,2μm,18.0s						
QSPA	**South Pole Qui**	**30.78**	**180**	P	**P**	**05 17 14.9**	**+0.8**
	comp=Z,181nm,0.9s,baz=160,slow=2.8,SNR=385						
QSPA	**South Pole Qui**	**30.78**	**180**	P	**P**	**05 17 15.0**	**+0.8**
QSPA	**South Pole Qui**	**30.78**	**180**	IAMs_20	IAMs_20	05 29 38.2	
	comp=Z,2μm,20.0s						
GO03	**Copiap**	**32.66**	**343**	P	**P**	**05 17 30.6**	**-0.2**
GO03				IAmb	IAmb	05 17 31.8	
	comp=Z,70nm,1.4s						
GO03				IAMs_20	IAMs_20	05 31 28.7	
	comp=Z,2μm,19.0s						
CPUP	**Villa Florida**	**33.15**	**4**	P	**P**	**05 17 34.7**	**-0.4**
	comp=Z,16nm,0.9s,baz=176,slow=7.9,SNR=28						
CPUP				LR	LR	05 30 45.1	
	comp=Z,825nm,20.4s,baz=178,slow=36						
CPUP	**Villa Florida**	**33.15**	**4**	P	**P**	**05 17 34.9**	**-0.1**
CPUP				IAmb	IAmb	05 17 35.8	
	comp=Z,27nm,1.0s						
GO02	**Mina Guanaco**	**34.96**	**344**	P	**P**	**05 17 51.0**	**-0.1**
GO02				IAmb	IAmb	05 18 02.3	
	comp=Z,32nm,0.8s						
GO02				IAMs_20	IAMs_20	05 33 03.5	
	comp=Z,1μm,18.0s						
PB10	**IPOC Station P**	**36.72**	**343**	P	**P**	**05 18 05.8**	**0.0**
PB10				IAMs_20	IAMs_20	05 33 11.1	
	comp=Z,1μm,20.0s						
SPB	**Sao Paulo**	**36.88**	**19**	*e*P	**P**	**05 18 08.1**	**+0.9**
SPB	**Sao Paulo**	**36.88**	**19**	P	**P**	**05 18 07.8**	**+0.5**
TRCB	**Terra Rica**	**36.98**	**11**	*e*P	**P**	**05 18 08.4**	**+0.2**
LVC	**Limon Verde**	**37.38**	**346**	P	**P**	**05 18 12.3**	**+0.3**
	comp=Z,22nm,0.7s,baz=181,slow=7.6,SNR=20						
LVC	**Limon Verde**	**37.38**	**346**	*e*P	**P**	**05 18 12.0**	**0.0**
LVC	**Limon Verde**	**37.38**	**346**	P	**P**	**05 18 12.1**	**+0.2**
LVC	**Limon Verde**	**37.38**	**346**	IAMs_20	IAMs_20	05 33 28.7	
	comp=Z,2μm,18.0s						
LVC	**Limon Verde**	**37.38**	**346**	P	**P**	**05 18 12.1**	**+0.2**
LVC				pmax	pmax		
	comp=Z,26nm,0.8s						
LVC				MLR	MLR		
	comp=Z,2μm,18.0s						
VAO	**Valinhos**	**37.54**	**20**	*e*P	**P**	**05 18 12.4**	**-0.4**
PB04	**IPOC Station P**	**37.82**	**344**	P	**P**	**05 18 15.4**	**0.0**
PB04				IAmb	IAmb	05 18 16.6	
	comp=Z,52nm,1.0s						
PCMB	**Pacaembu**	**38.30**	**13**	*e*P	**P**	**05 18 19.3**	**+0.1**
PB01	**IPOC Station P**	**39.00**	**345**	P	**P**	**05 18 25.6**	**+0.4**
PB01				IAmb	IAmb	05 18 27.0	
	comp=Z,72nm,1.1s						
AQDB	**Aquidauana**	**39.05**	**6**	*e*P	**P**	**05 18 24.9**	**-0.6**
PB11	**IPOC Station P**	**40.29**	**346**	P	**P**	**05 18 35.9**	**-0.1**
PB11				IAmb	IAmb	05 18 37.5	
	comp=Z,75nm,1.0s						
GO01	**Chusmiza**	**40.32**	**346**	P	**P**	**05 18 36.8**	**+0.1**
GO01				IAmb	IAmb	05 18 38.7	
	comp=Z,59nm,1.1s						
VNDA	**Vanda**	**40.88**	**193**	LR	LR	05 33 47.0	
	comp=Z,769nm,18.3s,baz=150,slow=34						
MNMC	**Minye Minye**	**40.90**	**346**	P	**P**	**05 18 41.8**	**+0.5**
MNMC				IAmb	IAmb	05 18 43.3	
	comp=Z,65nm,1.1s						
PP1B	**Ponte de Pedra**	**41.95**	**7**	*e*P	**P**	**05 18 50.2**	**+0.7**
IPMB	**Ipameri, GO**	**42.26**	**16**	*e*P	**P**	**05 18 52.5**	**+0.4**
BSFB	**Barra de Sao F**	**42.83**	**27**	*e*P	**P**	**05 18 57.1**	**+0.4**
SIV	**San Ignacio**	**43.41**	**358**	P	**P**	**05 19 01.1**	**-0.4**
	comp=Z,14nm,0.9s,baz=185,slow=7.9,SNR=53						
LPAZ	**La Paz**	**43.54**	**348**	P	**P**	**05 19 03.6**	**+0.4**
	comp=Z,8.3nm,1.0s,baz=163,slow=6.2,SNR=21						
LPAZ				LR	LR	05 38 24.3	
	comp=Z,820nm,19.2s,baz=148,slow=38						
LPAZ	**La Paz**	**43.54**	**348**	*e*P	**P**	**05 19 03.3**	**+0.2**
LPAZ	**La Paz**	**43.54**	**348**	P	**P**	**05 19 03.5**	**+0.4**
LPAZ	**La Paz**	**43.54**	**348**	P	**P**	**05 19 03.5**	**+0.4**
LPAZ				pmax	pmax		
	comp=Z,31nm,1.3s						
SALV	**Santo Antonio**	**43.59**	**6**	*e*P	**P**	**05 19 03.0**	**+0.2**
ARAG	**Araguaiana, MT**	**44.07**	**11**	*e*P	**P**	**05 19 06.9**	**+0.2**
BDFB	**Brasilia**	**44.59**	**16**	P	**P**	**05 19 10.6**	**-0.4**
	comp=Z,21nm,0.8s,baz=177,slow=4.4,SNR=34						
BDFB				LR	LR	05 40 04.7	
	comp=Z,416nm,18.2s,baz=172,slow=39						
BDFB	**Brasilia**	**44.59**	**16**	P	**P**	**05 19 10.4**	**-0.6**
BDFB	**Brasilia**	**44.59**	**16**	P	**P**	**05 19 10.4**	**-0.6**
BDFB				pmax	pmax		
	comp=Z,20nm,0.8s						
BDFB				MLR	MLR		
	comp=Z,700nm,18.0s						
JANB	**Januaria**	**45.77**	**21**	*e*P	**P**	**05 19 20.2**	**-0.1**
MAW	**Mawson**	**46.48**	**154**	P	**P**	**05 19 26.3**	**+1.0**
	comp=Z,49nm,1.1s,baz=246,slow=11,SNR=4.7						
MAW				LR	LR	05 37 58.5	
	comp=Z,2μm,20.8s,baz=220,slow=35						
MAW	**Mawson**	**46.48**	**154**	P	**P**	**05 19 25.4**	**+0.1**
MAW	**Mawson**	**46.48**	**154**	P	**P**	**05 19 25.4**	**+0.1**
MAW				pmax	pmax		
	comp=Z,18nm,1.3s						
NNA	**Nana**	**49.07**	**338**	P	**P**	**05 19 46.6**	**+0.6**
	comp=Z,12nm,0.8s,baz=183,slow=9.9,SNR=4.8						
NNA	**Nana**	**49.07**	**338**	P	**P**	**05 19 46.1**	**+0.1**
NNA				IAmb	IAmb	05 19 47.4	
	comp=Z,85nm,1.6s						
NNA	**Nana**	**49.07**	**338***d*	*i* P	**P**	**05 19 46.3**	**+0.3**
NNA				pmax	pmax		
	comp=Z,84nm,1.6s						
SAML	**Samuel**	**50.47**	**356**	P	**P**	**05 19 56.3**	**-0.3**
SAML	**Samuel**	**50.47**	**356**	IAMs_20	IAMs_20	05 43 40.8	
	comp=Z,1μm,18.0s						
SAML	**Samuel**	**50.47**	**356**	P	**P**	**05 19 56.3**	**-0.3**
SAML				pmax	pmax		
	comp=Z,30nm,1.2s						
SAML				MLR	MLR		
	comp=Z,1μm,18.0s						
RCBR	**Riachuelo**	**56.54**	**29**	IAMs_20	IAMs_20	05 41 02.7	
	comp=Z,523nm,18.0s						
H10S3	**ASCENSION HYDR**	**60.72**	**53**	T	T	06 27 19.0	
	baz=205,slow=74,SNR=123						
H10S2	**ASCENSION HYDR**	**60.72**	**53**	T	T	06 27 21.9	
	baz=15,slow=74,SNR=108						
OTAV	**Otavalo**	**61.30**	**339**	*e*P	**P**	**05 21 15.9**	**+1.3**
OTAV	**Otavalo**	**61.30**	**339**	P	**P**	**05 21 16.0**	**+1.3**
OTAV	**Otavalo**	**61.30**	**339**	P	**P**	**05 21 16.0**	**+1.3**

OTAV IAmb IAmb 05 21 17.3
comp=Z,51nm,1.1s
OTAV Otavalo 61.30 339 P P 05 21 16.0 +1.3
OTAV pmax pmax
comp=Z,51nm,1.1s
OTAV MLR MLR
comp=Z,400nm,22.0s
H10N3 ASCENSION HYDR61.79 53 T T 06 28 40.0
baz=204,slow=75,SNR=372
H10N1 ASCENSION HYDR61.80 53 T T 06 28 42.5
baz=204,slow=75,SNR=356
H10N2 ASCENSION HYDR61.81 53 T T 06 28 40.8
baz=204,slow=75,SNR=162
CRUC La Cruz 62.33 341 eP P 05 21 22.6 +1.1
BBAC Balboa, Cauca 62.83 340 eP P 05 21 24.7 0.0
SOTA Rioblanco 62.83 341 eP P 05 21 25.0 -0.1
PCON Cinco Dias 62.98 341 eP P 05 21 27.4 +1.2
BOSA Boshof 63.35 101 P P 05 21 27.1 -0.9
comp=Z,13nm,0.9s,baz=210,slow=5.9,SNR=13
BOSA LR LR 05 43 53.2
comp=Z,284nm,19.3s,baz=216,slow=31
BOSA Boshof 63.35 101 P P 05 21 27.5 -0.5
BOSA IAmb IAmb 05 21 28.4
comp=Z,33nm,1.2s
GR1C Gorgona, Isla 63.95 339 eP P 05 21 32.1 +0.3
PRAC Prado 64.11 343 eP P 05 21 32.6 -0.3
YOTC Yotoco, Valle 64.60 342 eP P 05 21 35.9 -0.3
CHIC Chingaza 64.84 345 eP P 05 21 36.1 -2.0
ROSC El Rosal 65.13 344 P P 05 21 40.6 +0.6
comp=Z,25nm,0.9s,baz=170,slow=7.4,SNR=13
ROSC LR LR 05 52 47.3
comp=Z,959nm,18.1s,baz=193,slow=38
ROSC El Rosal 65.13 344 eP P 05 21 41.1 +1.1
ROSC El Rosal 65.13 344 P P 05 21 40.1 0.0
ROSC IAmb IAmb 05 21 42.0
comp=Z,29nm,0.9s
RREF El Recreo 65.34 343 eP P 05 21 42.6 +0.9
PLMC San Jos del P 65.49 342 eP P 05 21 42.6 +0.6
GUY2C Guyana, Caldas 65.66 343 eP P 05 21 42.6 -1.0
SPBC San Pablo de B 65.90 344 eP P 05 21 42.6 -2.0
NORC Norcasia 65.92 343 eP P 05 21 43.1 -1.7
RUSC La Rusia 66.00 345 eP P 05 21 44.5 -1.3
LBTB Lobatse 66.48 100 LR LR 05 44 16.4
comp=Z,393nm,21.0s,baz=206,slow=30
LBTB Lobatse 66.48 100 P P 05 21 47.8 -0.6
LBTB Lobatse 66.48 100 P P 05 21 47.8 -0.6
LBTB pmax pmax
comp=Z,84nm,1.4s
HELC Santa Helena 66.64 343 eP P 05 21 48.3 -1.3
PTBC PUERTO BERRIO, 66.82 344 eP P 05 21 48.3 -2.2
TSUM Tsumeb 67.25 89 P P 05 21 53.2 -0.1
TSUM IAmb IAmb 05 21 54.5
comp=Z,17nm,0.9s
DBBC Dabeiba 67.55 342 eP P 05 21 55.0 -0.2
ZARC Zaragoza, Cauc 67.82 344 eP P 05 21 55.0 -1.8
MQZ McQueen's Vall 68.53 218 IAMs_20 IAMs_20 05 54 22.1
comp=Z,653nm,20.0s
SDV Santo Domingo 68.67 348 eP P 05 22 01.4 -0.9
SDV Santo Domingo 68.67 348 IAMs_20 IAMs_20 05 54 46.3
comp=Z,510nm,20.0s
SMLC San Martn de 69.00 345 eP P 05 22 02.1 -2.0
LTZ Lake Taylor 69.48 218 IAMs_20 IAMs_20 05 43 45.4
comp=Z,783nm,20.0s
TBI Tubuai 70.04 258 eS S 05 31 24.9 +3.8
comp=Z,612nm,25.0s
TBI Tubuai 70.04 258 eLR LR 05 43 20.7
comp=Z,1μm,29.2s,baz=152
TBI Tubuai 70.04 258 eT T 06 38 37.3
comp=Z,3.4nm,0.3s
SJCC San Jacinto, C 70.23 344 eP P 05 22 11.6 -0.1
QRZ Quartz Range 71.16 219 IAMs_20 IAMs_20 05 50 16.9
comp=Z,458nm,18.0s
HDC Heredia 71.94 335 P P 05 22 23.2 +1.0
HDC IAmb IAmb 05 22 24.5
comp=Z,41nm,1.0s
JTS Las Juntas de 72.41 334 P P 05 22 25.8 +0.9
JTS IAmb IAmb 05 22 26.9
comp=Z,42nm,1.2s
JTS Las Juntas de 72.41 334c iP P 05 22 25.7 +0.8
JTS pmax pmax
comp=Z,26nm,1.1s
MCLT Moule a Chique 72.92 359 P P 05 22 25.5 -2.4
MEH Mehetia 73.94 262 eT T 06 43 27.6
comp=Z,13nm,0.3s
ACON Acoyapa 74.08 334 P P 05 22 33.5 -1.2
ESPN Las Esperanzas 74.11 335 P P 05 22 34.6 -0.2
TVO Taravao 74.61 261 eT T 06 44 18.5
comp=Z,2.1nm,0.3s
TIAR Tiarei 74.85 261 eT T 06 44 36.2
comp=Z,2.5nm,0.3s
PAE Paea 74.88 261 eT T 06 44 38.5
comp=Z,0.9nm,0.2s
PPT2 Papeete2 74.94 261 eS S 05 32 18.8 +1.4
comp=Z,891nm,28.2s
PPT2 Papeete2 74.94 261 eLR LR 05 45 35.8
comp=Z,836nm,29.5s,baz=150
PPT Papeete 74.96 261 LR LR 05 49 27.3
comp=Z,78nm,18.1s,baz=162,slow=31
LSZ Lusaka 75.95 96 P P 05 22 46.0 +0.1
LSZ IAmb IAmb 05 22 47.2
comp=Z,32nm,1.0s
LSZ Lusaka 75.95 96 P P 05 22 46.0 +0.1
LSZ pmax pmax
comp=Z,33nm,1.0s
SKI Saint Kitts 76.55 357 IAMs_20 IAMs_20 05 49 11.2
comp=Z,654nm,21.0s
TGUH Tegucigalpa,Un 76.58 333 eP P 05 22 48.2 -1.0
TGUH Tegucigalpa,Un 76.58 333 P P 05 22 49.4 +0.2
TGUH IAmb IAmb 05 22 50.3
comp=Z,48nm,1.1s
SEUS St. Eustatius 76.72 357 IAMs_20 IAMs_20 05 55 08.6
comp=Z,684nm,20.0s
SABA Saba 76.85 357 IAMs_20 IAMs_20 06 03 09.1
comp=Z,753nm,21.0s
MLPR Magueyes Islan 77.38 353 P P 05 22 51.9 -1.6
MLPR IAmb IAmb 05 22 52.5
comp=Z,30nm,0.9s
OBIP Obispado Ponce 77.42 353 P P 05 22 52.1 -1.6
OBIP IAmb IAmb 05 22 53.0
comp=Z,27nm,1.1s
LIC Lamto 78.43 56 eP P 05 22 59.6 +0.1
comp=Z,78nm,0.6s
LIC Lamto 78.43 56 P P 05 22 59.6 +0.1
KIC Kosan Boka 78.68 56 eP P 05 23 00.9 0.0
comp=Z,78nm,1.0s
KIC Kosan Boka 78.68 56 P P 05 23 00.9 0.0
SDDR Presa de Saban 78.72 349 P P 05 23 01.0 0.0
TIC Toumodi 78.81 56 eP P 05 23 01.6 -0.1
TIC Toumodi 78.81 56 P P 05 23 01.6 -0.1
TIC Toumodi 78.81 56 P P 05 23 01.6 -0.1
DBIC Dimbokro 78.91 56 P P 05 23 02.5 +0.3
comp=Z,13nm,0.7s,baz=177,slow=5.7,SNR=26
DBIC LR LR 05 50 33.4
comp=Z,142nm,20.9s,baz=189,slow=30
DBIC Dimbokro 78.91 56 P P 05 23 02.8 +0.6
DBIC IAmb IAmb 05 23 03.7
comp=Z,67nm,1.4s
CCIG Comitan 79.94 329 P P 05 23 08.7 +0.8
TEIG Tepich 82.76 333 P P 05 23 22.4 -0.1
TEIG IAmb IAmb 05 23 24.3
comp=Z,29nm,1.1s
TLIG Tlapa 83.00 323 P P 05 23 25.9 +1.9
STKA Stephens Creek 87.30 198 P P 05 23 47.1 +1.7
comp=Z,2.7nm,0.8s,baz=224,slow=3.8,SNR=4.0
TOA0 Torodi Ar. Sit 87.51 59 P P 05 23 47.4 +0.8
TOA0 IAmb IAmb 05 23 48.1
comp=Z,28nm,1.4s
TORD Torodi Ar. Bea 87.51 59 P P 05 23 46.6 +0.1
comp=Z,9.9nm,1.0s,baz=199,slow=5.5,SNR=27
TORD PP PP 05 27 08.9 -2.6
comp=Z,4.4nm,1.2s,baz=200,slow=7.5,SNR=4.6
TORD LR LR 05 57 40.2
comp=Z,201nm,19.4s,baz=180,slow=32
MBAR Mbarara 89.74 91 IAMs_20 IAMs_20 05 59 28.4
comp=Z,417nm,19.0s
FORT Forrest 89.87 187 P P 05 23 57.0 -0.6
FORT IAmb IAmb 05 24 02.5
comp=Z,24nm,0.8s
DZM Mont Dzumac 90.38 222 eLR LR 05 52 47.9
comp=Z,345nm,28.9s
KMBO Kilima Mbogo 92.61 97 LR LR 06 00 18.9
comp=Z,277nm,21.8s,baz=258,slow=32
TXAR Lajitas Array 95.61 323 P P 05 24 24.3 +0.4
comp=Z,1.7nm,1.1s,baz=143,slow=4.4,SNR=6.1
TXAR LR LR 06 00 31.6

comp=Z,127nm,20.1s,baz=0.0,slow=31
ASAR Alice Springs 96.42 193 P P 05 24 28.1 +0.1
comp=Z,1.5nm,0.9s,baz=157,slow=3.8,SNR=8.2
ASAR PP PP 05 28 21.0 +0.3
comp=Z,2.9nm,1.1s,baz=165,slow=6.6,SNR=4.9
ASAR LR LR 06 06 10.4
comp=Z,81nm,21.2s,baz=167,slow=34
OKCFA Oklahoma City 99.55 330 IAMs_20 IAMs_20 06 07 35.2
comp=Z,521nm,21.0s
WR0 Warramunga Arr 100.01 194 IAMs_20 IAMs_20 06 17 50.0
comp=Z,448nm,21.0s
WR8 Warramunga Arr 100.02 194 IAMs_20 IAMs_20 06 14 37.2
comp=Z,483nm,19.0s
WC4 Warramunga Arr 100.03 193 IAMs_20 IAMs_20 05 55 55.6
comp=Z,382nm,22.0s
WB1 Warramunga Ar. 100.03 193 IAMs_20 IAMs_20 06 03 08.6
comp=Z,301nm,18.0s
WRA Warramunga Arr 100.05 193 P Pdif 05 24 43.3 -0.9
comp=Z,2.1nm,0.8s,baz=178,slow=4.0,SNR=8.9
WC1 Warramunga Arr 100.07 193 IAMs_20 IAMs_20 06 14 36.6
comp=Z,394nm,20.0s
WB7 Warramunga Arr 100.14 194 IAMs_20 IAMs_20 06 13 56.3
comp=Z,408nm,22.0s
WB9 Warramunga Arr 100.19 194 IAMs_20 IAMs_20 06 06 05.9
comp=Z,387nm,19.0s
WB0 Warramunga Arr 100.22 194 IAMs_20 IAMs_20 06 06 26.5
comp=Z,355nm,19.0s
CISI Cisompet, Garu 112.47 167 IAMs_20 IAMs_20 06 10 47.3
comp=Z,267nm,22.0s
MYKOM Kota Tinggi 121.09 161 IAMs_20 IAMs_20 06 20 57.0
comp=Z,204nm,19.0s
KSM Kuching 121.66 168 IAMs_20 IAMs_20 06 22 56.8
comp=Z,298nm,19.0s
GERES GERESS Array B 123.33 49 PKP PKPdf 05 29 54.6 -0.2
comp=Z,0.3nm,0.4s,baz=186,slow=2.7,SNR=3.5
KULM Kulim 123.91 156 IAMs_20 IAMs_20 06 22 08.8
comp=Z,263nm,20.0s
BRTR Keskin Array B 124.80 70 PKP PKPdf 05 29 57.9 -0.1
comp=Z,1.6nm,0.9s,baz=193,slow=3.8,SNR=6.9
CLL Collm 125.05 47 ePKPdf PKiKP 05 29 59.0 +0.8
CLL eSS SS 05 49 00.0 +16
CLL Collm 125.05 47 ePKIKP PKiKP 05 29 59.0 +0.8
H11N3 WAKE ISLAND Hy128.20 241 T T 07 51 44.5
baz=158,slow=80,SNR=6.8
H11N1 WAKE ISLAND Hy128.21 241 T T 07 51 50.7
baz=158,slow=80,SNR=6.6
H11N2 WAKE ISLAND Hy128.22 241 T T 07 51 52.0
baz=158,slow=80,SNR=6.6
YKA Yellowknife Ar 128.68 331 PKP PKPdf 05 30 04.7 +0.3
comp=Z,1.0nm,0.7s,baz=144,slow=2.4,SNR=17
AKASG Malin Array Be 131.13 58 PKP PKPdf 05 30 08.7 -0.8
comp=Z,1.6nm,0.7s,baz=258,slow=1.7,SNR=8.9
AKASG SKPbc SKPab 05 33 34.1 -0.1
comp=Z,0.6nm,0.4s,baz=235,slow=4.2,SNR=7.5
KIV Kislovodsk 132.39 73 iPKIKP PKiKP 05 30 14.2 +0.8
KIV pmax pmax
comp=Z,21nm,1.1s
CMAR Chiang Mai Arr 136.24 150 PKP PKiKP 05 30 21.1 -0.7
comp=Z,0.7nm,0.3s,baz=229,slow=3.0,SNR=4.2
OBN Obninsk 137.40 58 iPKIKP PKiKP 05 30 25.0 +2.0
OBN pmax pmax
comp=Z,8.0nm,1.0s
QIZ Qiongzhong 138.93 165 PKP PKPdf 05 30 25.0 -0.1
QIZ SS SS 05 51 34.8 +3.0
QIZ AMB AMB
comp=Z,150nm,3.9s
QIZ LR LR
comp=Z,170nm,12.8s
ILAR Eielson Array 139.98 318 PKP PKPdf 05 30 24.6 -0.9
comp=Z,1.0nm,0.8s,baz=107,slow=0.9,SNR=9.9
ARCES ARCESS Array B 142.19 35 PKP PKPdf 05 30 27.5 -1.9
comp=Z,2.6nm,0.9s,baz=48,slow=1.8,SNR=3.6
KLMR Klimovskoe 142.19 52 ePKHKP PKPdf 05 30 24.3 -5.3
KLMR 05 33 37.6
KLMR pmax pmax
comp=Z,19nm,1.8s
KLMR Klimovskoe 142.19 52 ePKPdf PKPdf 05 30 24.3 -5.3
KLMR AMP 05 30 30.8
comp=Z,19nm,1.8s
KLMR PP PP 05 33 37.6 +0.6
APA Apatity 143.59 40⇑iPKHKP PKPpre 05 30 27.4
APA i 05 30 32.6
APA pmax pmax
comp=Z,5.0nm,0.9s
APA pmax pmax
comp=Z,6.0nm,1.0s
LVZ Lovozero 144.16 40⇑ePKIKP PKPbc 05 30 31.9 +0.7
AKTO Aktyubinsk 144.41 76 PKP PKPab 05 30 31.2 -0.9
comp=Z,5.3nm,0.6s,baz=194,slow=3.3,SNR=20
ADK Adak 144.88 286 PKPdf 05 30 34.3 -0.3
ADK Adak 144.88 286 PKIKP PKPdf 05 30 34.3 -0.3
PRGR Permogore 145.10 54 ePKIKP PKPbc 05 30 32.0 -2.2
PRGR pmax pmax
comp=Z,66nm,1.0s
GYA Guiyang 145.69 158 PKPbc PKPab 05 30 38.3 +0.5
GYA PP PP 05 34 07.8 +10
GYA AMB AMB
comp=Z,130nm,7.8s
KK31 Karatay Array 145.81 96 PKPdf 05 30 36.6 0.0
KK31 Karatay Array 145.81 96 PKP2 PKPdf 05 30 36.6 0.0
KKAR Karatay Array 145.81 96 PKPdf 05 30 36.7 +0.1
KKAR Karatay Array 145.81 96 PKP2 PKPdf 05 30 36.7 +0.1
KSH Kashi 145.87 106 PKPbc PKPdf 05 30 36.3 -0.7
KSH PP PP 05 34 00.5 +1.1
KSH PKS PKSdf 05 34 08.8 -3.6
KSH SKS SKSdf 05 37 49.5 +3.7
KSH SKKS SKKSac 05 40 53.0 +2.1
KSH SS SS 05 52 51.5 -2.2
KSH AMB AMB
comp=Z,77nm,5.8s
KSH LR LR
comp=Z,150nm,9.9s
KSH LR LR
comp=Z,110nm,7.4s
KSH LR LR
comp=Z,230nm,6.9s
RDOG Red Dog Mine 147.18 318 PKPab 05 30 41.8 -0.4
AAK Ala-Archa 147.49 101 PKPbc PKPbc 05 30 42.4 +0.2
comp=Z,3.9nm,0.8s,baz=198,slow=7.6,SNR=8.2
AAK Ala-Archa 147.49 101⇑ePKP2 PKPbc 05 30 42.3 +0.1
ARU Arti 148.16 68 PKPbc 05 30 43.2 -0.1
ARU Arti 148.16 68 iPKP2 PKPbc 05 30 43.0 -0.3
ARU 05 34 10.4
ARU SS SS 05 53 19.0 -0.2
GAMB Gambell 148.76 307 PKPdf 05 30 42.3 +1.6
SVE Sverdlovsk 149.35 68 ePKP2 PKPbc 05 30 46.4 +0.1
SVE pmax pmax
comp=Z,30nm,1.3s
CD2 Chengdu 149.36 151 PKPbc PKPdf 05 30 43.0 +0.1
WHN Wuhan 150.81 170 PKPbc PKPab 05 31 03.3 +5.4
BRVK Borovoye 152.11 81 PKPdf PKPdf 05 30 47.2 +0.9
BRVK PKPbc PKPab 05 30 53.5 +0.2
BRVK Borovoye 152.11 81 PKIKP PKiKP 05 30 53.5 +0.2
NJ2 Nanjing 152.57 177 ePKPbc PKPdf 05 30 47.0 -0.7
XAN Xi'an 153.50 159 P PKiKP 05 30 59.0 +2.1
XAN pP PKPab 05 31 08.8 -0.3
MJAR Matsushiro Arr 154.28 215 SKP 05 34 26.5
comp=Z,1.4nm,0.4s,baz=173,slow=5.0,SNR=5.3
LZH Lanzhou 154.30 148 ePKPbc PKPdf 05 30 53.0 +2.7
LZH pPKP PKPbc 05 30 56.3 -2.3
LZH sPKP 05 30 57.5
LZH LR LR
comp=Z,180nm,18.0s
LZH LR LR
comp=Z,180nm,17.8s
LZH LR LR
comp=Z,240nm,20.1s
MKAR Makanchi Array 154.34 103 PKPbc PKPbc 05 30 57.4 -0.7
comp=Z,1.2nm,0.8s,baz=267,slow=2.6,SNR=9.4
MKAR PKPab PKPab 05 31 11.6 -0.8
comp=Z,2.0nm,0.9s,baz=240,slow=4.0,SNR=8.2
WMQ Urumqi 154.80 114 ePKPbc PKPdf 05 30 51.5 +0.8
WMQ LR LR
comp=Z,480nm,29.0s
WMQ LR LR
comp=Z,770nm,29.0s
GTA Gaotai 156.13 138 PKP PKPab 05 31 08.3 -12
GTA pPKP pPKPab 05 31 19.3 -3.4
GTA sPKP 05 31 23.3
KSRS Korea Array 157.43 196 PKPab PKPab 05 31 26.1 +0.4
comp=Z,1.6nm,0.8s,baz=163,slow=4.6,SNR=4.3
BILL Bilibino 158.43 313 iPKIKP PKPdf 05 30 57.5 +3.0
BILL i 05 31 26.7
BILL pmax pmax
comp=Z,1.0nm,1.2s

HHC Hu-ho-hao-te 160.59 160 ePKP PKPdf 05 31 00.5 +2.5
SONM Songino Array 165.80 139 PKPab PKPab 05 32 01.8 -0.5
comp=Z,2.9nm,1.0s,baz=202,slow=4.8,SNR=12

IDC 27 05:14:09.3±1.6,4.°49S×130.°51E,h0km,mb3.1/1, mb1 3.6/5,mb1mx3.4/43,mbtmp3.4/5,ML3.5/4,Error ellipse: s-maj=60.9km s-min=23.9km az=85.0,Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 3.68 12 Pn Pn 05 15 08.7 +1.1
5.4nm,0.3s,baz=210,slow=20,SNR=28
SIJI Sn Sn 05 15 48.0 -3.7
7.2nm,0.3s,baz=230,slow=23,SNR=12
FITZ Fitzroy Crossi 14.34 199 Pn Pn 05 17 33.6 -0.1
0.1nm,0.3s,baz=16,slow=8.7,SNR=2.1
WRA Warramunga Arr 15.80 167 Pn Pn 05 17 53.8 +0.3
0.3nm,0.3s,baz=348,slow=11,SNR=16
ASAR Alice Springs 19.34 171 P P 05 18 36.7 +0.2
0.1nm,0.3s,baz=348,slow=10,SNR=7.3
MKAR Makanchi Array 66.43 326 P P 05 25 00.2 -0.3
0.1nm,0.3s,baz=108,slow=8.2,SNR=3.9

LJU 27 05:17:15.4,45.°74N×14.°87E,h2km,ML0.7,1D, Northwestern Balkan Peninsula

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VISS Visnje 0.07 342⇓iPg Pg 05 17 16.8 0.0
VISS iSg Sg 05 17 17.8 +0.1
comp=Z,28nm,0.1s

VIE 27 05:17:50.8±0.7,46.°38N×13.°02E,h6km±23km,mb0.8/1, ml1.2/4,1C-4D,Error ellipse: s-maj=3.2km s-min=1.7km az=29.0 3 km S of Tolmezzo,Austria

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FUSE Fusea 0.04 341⇓ePg Pg 05 17 51.6 -0.6
FUSE eSg Sg 05 17 52.7 -0.5
BOO Bordano 0.08 136⇓ePg Pg 05 17 51.8 -1.0
BOO eSg Sg 05 17 53.3 -0.8
CLUD Cludinico 0.12 309⇑ePg Pg 05 17 53.1 -0.4
CLUD eSg Sg 05 17 55.5 +0.2
MPRI Monte Prat 0.14 189⇓ePg Pg 05 17 52.8 -0.9
MPRI eSg Sg 05 17 55.0 -0.7
VINO Villanova 0.22 124⇓ePg Pg 05 17 54.3 -0.9
VINO eSg Sg 05 17 57.8 -0.3
MYKA Terra Mystica 0.50 60 iPg Pg 05 18 00.2 -0.3
0.5nm,0.1s
MYKA eSg Sb 05 18 08.3 -1.2
7.7nm,0.4s
ABTA Abfaltersbach 0.51 317 iPg Pg 05 18 00.7 0.0
0.2nm,0.1s
ABTA iSg Sg 05 18 07.9 +0.6
0.9nm,0.1s
KBA Koelnbreinsper 0.73 18 eSg Sg 05 18 15.1 +0.6
0.9nm,0.2s

GEN 27 05:27:49.4,44.°16N×10.°31E,h2km±1km,Ml0.4
ROM 27 05:27:48.8±0.1,44.°156N±0.°007×10.°315E±0.°009, h8km,ML0.8/1,Error ellipse: s-maj=0.6km s-min=0.6km az=7.0,Northern Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VLC Villacollemand 0.05 86 P Pg 05 27 50.8 +0.3
VLC S Sg 05 27 51.9 +0.1
SARO Sassorosso 0.07 65 P Pg 05 27 51.0 +0.2
SARO S Sg 05 27 52.1 -0.1
SARO AML AML
comp=E,77μm,0.8s
SARO AML AML
comp=N,158μm,0.5s
SARO Sassorosso 0.07 65 P Pg 05 27 51.0 +0.2
SARO S Sg 05 27 52.2 -0.1
EQUI Equi 0.12 275 P Pg 05 27 51.9 +0.4
EQUI S Sg 05 27 53.8 +0.5
EQUI Equi 0.12 275 P Pg 05 27 51.9 +0.5
EQUI S Sg 05 27 53.7 +0.5
CARD Cardoso 0.18 137 P Pg 05 27 53.5 +1.1
CARD S Sg 05 27 56.5 +1.6
CARD Cardoso 0.18 137 P Pg 05 27 53.3 +0.9
CARD S Sg 05 27 56.2 +1.3
ERBM Eremo 0.27 15 P Pg 05 27 55.1 +0.9
ERBM S Sb 05 28 00.1 -0.8
MAIM Mastiano 0.27 152 P Pg 05 27 54.7 +0.5
MAIM S Sb 05 27 59.3 -1.4
POPM Popiglio 0.34 109 P Pb 05 27 56.3 -0.7
POPM S Sb 05 28 01.5 -1.1
POPM Popiglio 0.34 109 P Pb 05 27 56.3 -0.7
POPM S Sb 05 28 01.3 -1.3
GRAM Graiana 0.38 332 P Pb 05 27 57.1 -0.8
GRAM S Sb 05 28 03.0 -1.0

IDC 27 05:36:49.9±0.7,73.°47N×7.°77E,h0km,mb3.7/8, mb1 3.8/13,mb1mx3.9/65,mbtmp3.7/13,ML3.0/4,MS3.3/12, Ms1 3.4/12,ms1mx3.0/58,Error ellipse: s-maj=20.2km s-min=11.1km az=63.0
NAO 27 05:36:49.5±1.9,73.°52N×7.°93E,ML3.5
BER 27 05:36:53.1±4.3,73.°57N×8.°30E,h8km±24km,ML2.4, ML2.7(HEL),Confirmed Earthquake
HEL 27 05:36:56.9±0.4,73.°40N×9.°45E,h10km,ML2.7,Confirmed Earthquake
ISC 27 05:36:50.4±0.6,73.°48N±0.°05×8.°54E±0.°06,h10km,n71, σ2°75/96,mb3.8/8,MS3.4/7,Greenland Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BJO1 Bjornoya 3.08 65 Pn Pn 05 37 41.5 +2.6
BJO1 Bjornoya 3.08 65 eP Pn 05 37 40.5 +1.5
HSPB Hornsund (broa 3.97 23 Pn Pn 05 37 51.1 0.0
HSPB Hornsund (broa 3.97 23 eP Pn 05 37 51.3 +0.1
BRBA Barentsburg A 4.81 14 Pn Pn 05 38 02.5 -0.3
BRBA Barentsburg A 4.81 14 Pn Pn 05 38 02.5 -0.3
BRBB Barentsburg B 4.85 14 Pn Pn 05 38 02.9 -0.3
BRBB Barentsburg B 4.85 14 Pn Pn 05 38 02.9 -0.3
TRO Tromso 5.07 134 eP Pn 05 38 09.1 +2.8
TRO eS Sn 05 39 02.9 -1.9
TRO Tromso 5.07 134 eP Pn 05 38 09.2 +2.8
TRO eS Sn 05 39 03.8 -1.0
TRO IAML 05 39 05.0
comp=Z,19nm,0.4s
SPA0 Spitsbergen Ar 5.10 18 Pn Pn 05 38 06.7 0.0
baz=188,slow=18
SPA0 Spitsbergen Ar 5.10 18 Pn Pn 05 38 06.7 0.0
baz=188,slow=18
SPA0 eS Sn 05 39 02.3 -3.2
SPA0 IAML 05 39 05.2
comp=Z,4.3nm,0.7s
SPITS Spitsbergen Ar 5.10 18 Pn Pn 05 38 06.5 -0.2
baz=184,slow=18,SNR=142
SPITS LR LR 05 40 04.1
comp=Z,188nm,18.5s,baz=190,slow=38
HOPEN Hopen 5.24 47 Pn Pn 05 38 08.8 +0.2
HOPEN Hopen 5.24 47 eP Pn 05 38 09.4 +0.8
HOPEN eS Sn 05 39 05.9 -3.0
HOPEN IAML 05 39 10.4
comp=Z,5.6nm,0.7s
HAMF Hammerfest 5.47 114 Pn Pn 05 38 13.3 +1.6
HAMF Sn Sn 05 39 12.4 -2.3
HAMF Hammerfest 5.47 114 eP Pn 05 38 13.7 +1.9
HAMF eS Sn 05 39 12.3 -2.3
HAMF IAML 05 39 15.6
comp=Z,9.7nm,0.3s
KBS Kingsbay 5.54 7 Pn Pn 05 38 12.0 -0.7
KBS Kingsbay 5.54 7 eP Pn 05 38 12.0 -0.7
LOF Lofoten 5.62 160 eP Pn 05 38 15.6 +1.8
LOF IAML 05 39 17.6
comp=Z,12nm,0.7s
KIF Kilpisjarvi 5.97 133 eP Pn 05 38 21.0 +2.3
KIF eS Sn 05 39 24.8 -2.3
KIF MSN 05 39 30.2
comp=Z,2.2nm,0.1s
KIF Kilpisjarvi 5.97 133 eP Pn 05 38 21.2 +2.5
KIF eS Sn 05 39 25.3 -1.7
STEI Steigen 6.00 155 eP Pn 05 38 20.7 +1.7

STEI eS Sn 05 39 24.5 -3.1
STEI IAML 05 39 30.5
comp=Z,5.9nm,0.6s
KTK1 Kautokeino 6.51 126 eP Pn 05 38 29.5 +3.5
KTK1 eS Sn 05 39 38.0 -2.2
KTK1 Kautokeino 6.51 126 eP Pn 05 38 29.7 +3.7
KTK1 IAML 05 39 50.8
comp=Z,3.5nm,0.5s
ARA0 ARCESS Array S 6.67 118 Pn Pn 05 38 31.1 +2.8
baz=315,slow=12
ARA0 Sn Sn 05 39 42.8 -1.5
baz=310,slow=22
ARA0 ARCESS Array S 6.67 118 Pn Pn 05 38 31.1 +2.8
baz=315,slow=12
ARA0 Sn Sn 05 39 42.8 -1.5
baz=310,slow=22
ARCES ARCESS Array B 6.67 118 Pn Pn 05 38 31.0 +2.7
comp=Z,1.6nm,0.3s,baz=321,slow=11,SNR=40
ARCES Sn Sn 05 39 43.2 -1.1
comp=Z,2.7nm,0.3s,baz=315,slow=20,SNR=12
ARCES LR LR 05 41 27.1
comp=Z,142nm,18.8s,baz=272,slow=40
ARE0 ARCESS Array S 6.67 118 eP Pn 05 38 31.3 +3.0
ARE0 eS Sn 05 39 41.1 -3.2
ARE0 ARCESS Array S 6.67 118 eP Pn 05 38 31.6 +3.2
ARE0 IAML 05 39 48.7
comp=Z,5.7nm,0.3s
KEV Kevo 6.91 114 eP Pn 05 38 33.5 +2.0
KEV eS Sn 05 39 46.8 -3.3
KEV MSN 05 39 50.5
comp=Z,2.1nm,0.2s
KEV Kevo 6.91 114 eP Pn 05 38 33.6 +2.1
KEV eS Sn 05 39 48.0 -2.0
KEV MSN 05 39 50.5
comp=Z,2.1nm,0.2s
LANU Lannavaara 7.01 134 eP Pn 05 38 35.9 +2.9
LANU eS Sn 05 39 49.7 -3.0
LANU Lannavaara 7.01 134 eP Pn 05 38 35.9 +2.9
LANU eS Sn 05 39 49.7 -3.0
KONS Konsvik 7.18 165 eP Pn 05 38 37.4 +2.2
KONS IAML 05 39 57.9
comp=Z,14nm,0.9s
STOK Stokkvaagen 7.34 166 eP Pn 05 38 40.1 +2.7
STOK eS Sn 05 39 56.1 -4.5
MOR8 Moi Rana 7.61 162 eP Pn 05 38 42.5 +1.3
MOR8 eS Sn 05 40 01.3 -6.2
MOR8 IAML 05 40 07.3
comp=Z,6.0nm,0.8s
VRF Varrio 9.01 119 eP Pn 05 39 01.0 +0.7
VRF eS Sn 05 40 36.1 -5.5
VRF Varrio 9.01 119 eP Pn 05 39 01.0 +0.7
VRF eS Sn 05 40 36.1 -5.5
TOF Tornio 9.18 136 eP Pn 05 39 04.9 +2.3
TOF eS Sn 05 40 41.6 -4.2
TOF Tornio 9.18 136 eP Pn 05 39 04.9 +2.3
TOF eS Sn 05 40 41.6 -4.2
SCO Scoresbysund 9.83 267 iP Pn 05 39 07.9 -3.6
APA0 Apatity Array 9.98 114 Pn Pn 05 39 14.1 +0.5
baz=343,slow=10
APA0 Sn Sn 05 40 58.4 -7.1
baz=311,slow=28
APA0 Apatity Array 9.98 114 Pn Pn 05 39 14.1 +0.5
baz=343,slow=10
APA0 Sn Sn 05 40 58.4 -7.1
baz=311,slow=28
KU6 Riekki 10.44 125 eP Pn 05 39 20.3 +0.4
KU6 eS Sn 05 41 10.7 -6.0
KU6 Riekki 10.44 125 eP Pn 05 39 20.3 +0.4
KU6 eS Sn 05 41 10.7 -6.0
AKN Aaknes 11.37 184 Pn Pn 05 39 33.9 +1.3
AKN Aaknes 11.37 184 Pn Pn 05 39 33.9 +1.3
NOA NORSAR Array B 12.54 174 Pn Pn 05 39 50.1 +1.6
comp=Z,0.0nm,0.3s,baz=349,slow=13,SNR=3.0
NOA LR LR 05 44 11.8
comp=Z,62nm,20.7s,baz=350,slow=35
NRA0 NORESS Array S 12.85 173 Pn Pn 05 39 55.0 +2.2
NRA0 NORESS Array S 12.85 173 Pn Pn 05 39 55.0 +2.2
HFS Hagfors 13.55 169 Pn Pn 05 40 03.8 +1.5
baz=338,slow=16
HFS Hagfors 13.55 169 Pn Pn 05 40 04.3 +2.0
comp=Z,0.2nm,0.3s,baz=0.7,slow=12,SNR=5.8
HFS LR LR 05 44 32.8
comp=Z,106nm,19.0s,baz=344,slow=34
HFS Hagfors 13.55 169 Pn Pn 05 40 03.8 +1.5
baz=338,slow=16
FIA0 FINESS Array S 13.73 142 Pn Pn 05 40 06.1 +1.3
baz=336,slow=14
FIA0 FINESS Array S 13.73 142 Pn Pn 05 40 06.1 +1.3
baz=336,slow=14
FINES FINESS Array B 13.73 142 Pn Pn 05 40 06.5 +1.7
comp=Z,0.1nm,0.3s,baz=342,slow=12,SNR=6.2
FINES Sn Sn 05 42 31.4 -5.7
comp=Z,0.1nm,0.3s,baz=325,slow=24,SNR=3.2
FINES LR LR 05 44 57.4
comp=Z,114nm,20.6s,baz=327,slow=35
KLMR Klimovskoe 17.13 121 eP P 05 40 53.7 +2.5
comp=Z,311nm,1.8s
VRAC Vranov 24.51 167 LR LR 05 50 59.3
comp=Z,47nm,18.6s,baz=288,slow=35
AKASG Malin Array Be 24.53 147 P P 05 42 11.4 +1.8
comp=Z,2.5nm,0.8s,baz=346,slow=9.5,SNR=7.4
GERES GERESS Array B 24.82 172 P P 05 42 13.4 +1.0
comp=Z,0.5nm,0.7s,baz=7.8,slow=11,SNR=5.0
GERES LR LR 05 51 39.2
comp=Z,50nm,19.5s,baz=318,slow=36
INK Inuvik 36.33 337 P P 05 43 53.5 -0.1
comp=Z,2.4nm,0.9s,baz=20,slow=13,SNR=5.9
YKA Yellowknife Ar 39.10 322 P P 05 44 16.2 -0.9
comp=Z,0.4nm,0.8s,baz=27,slow=9.0,SNR=7.2
YKA PcP PcP 05 46 26.1 -0.4
comp=Z,0.7nm,1.0s,baz=31,slow=2.9,SNR=5.9
YKA LR LR 05 58 57.3
comp=Z,70nm,21.6s,baz=0.0,slow=34
ILAR Eielson Array 41.05 344 P P 05 44 35.2 +2.0
comp=Z,1.5nm,0.9s,baz=359,slow=6.5,SNR=11
MKAR Makanchi Array 41.30 88 LR LR 06 04 52.0
comp=Z,30nm,19.9s,baz=253,slow=40
GEYT Alibeck 42.84 118 LR LR 06 03 44.1
comp=Z,52nm,19.7s,baz=30,slow=38
ULM Lac du Bonnet 46.45 301 P P 05 45 16.6 -0.3
comp=Z,2.0nm,1.0s,baz=39,slow=5.1,SNR=2.9
SONM Songino Array 47.02 66 P P 05 45 24.6 +3.1
comp=Z,0.6nm,1.0s,baz=358,slow=3.6,SNR=4.3
PDAR Pinedale Array 56.70 309 LR LR 06 09 37.7
comp=Z,104nm,18.1s,baz=158,slow=35
TORD Torodi Ar. Bea 60.44 188 P P 05 47 01.3 +1.5
comp=Z,0.8nm,0.9s,baz=354,slow=6.8,SNR=3.8
CMAR Chiang Mai Arr 72.57 84 LR LR 06 27 18.4
comp=Z,96nm,19.4s,baz=190,slow=42

IDC 27 05:45:57.3±0.7, 3°.08N×125°.99E, h0km, mb3.8/10, mb1 4.0/10, mb1mx3.7/51, mbtmp3.8/10, Error ellipse: s-maj=59.7km s-min=14.5km az=70.0
NEIC 27 05:46:02.8±0.7, 3°.1N±0°.1×126°.1E±0°.2, h39km±8km, mb4.2/10, Error ellipse: s-maj=36.3km s-min=10.1km az=60.0
DJA 27 05:46:06.4±0.8, 3°N±5°×12°6E±°, h56km±34km, M4.0/7, mB4.7/1, mb4.2/2, MLv4.0/7, Mw(mB)3.9/1
ISC 27 05:46:06.3±0.6, 3°.05N±0°.08×126°.2E±0°.2, h72km, n28, σ1s07/32, mb4.0/16, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.54	153	P	Pn	05 46 46.2	+0.8
TNTI				S	Sn	05 47 16.8	+1.5
TNTI	Ternate	2.54	153	P	Pn	05 46 46.2	+0.8
TNTI				S	Sn	05 47 16.8	+1.5
TNTI	Ternate	2.54	153	Pn	Pn	05 46 42.6	-2.8
TNTI				Sn	Sn	05 47 11.9	-3.4
SANI	Sanana	5.07	182	P	Pn	05 47 20.4	+0.6
SANI	Sanana	5.07	182	P	Pn	05 47 20.4	+0.6
KNRA	Kununurra	18.78	172	P	P	05 50 19.1	-0.8
FITZ	Fitzroy Crossi	21.02	182	P	P	05 50 44.0	-0.3
	1.7nm,0.5s,baz=20,slow=8.1,SNR=6.7						
FITZ	Fitzroy Crossi	21.02	182	P	P	05 50 43.9	-0.3
FITZ				IAmb	IAmb	05 50 59.5	
	comp=Z,7.7nm,1.2s						
WB0	Warramunga Arr	24.06	161	P	P	05 51 14.8	-0.2
WB0				IAmb	IAmb	05 51 15.7	
	comp=Z,7.0nm,1.0s						
WRAB	Tennant Creek	24.20	161	P	P	05 51 16.5	+0.2
WRAB				IAmb	IAmb	05 51 18.5	
	comp=Z,7.0nm,0.7s						
WRA	Warramunga Arr	24.21	161	P	P	05 51 16.4	0.0
	comp=Z,2.1nm,0.3s,baz=334,slow=11,SNR=42						
WB2	Warramunga Arr	24.21	161	P	P	05 51 16.7	+0.3
WB2				IAmb	IAmb	05 51 17.8	
	comp=Z,5.2nm,0.8s						
WR0	Warramunga Arr	24.29	161	P	P	05 51 17.0	-0.1
WR0				IAmb	IAmb	05 51 32.3	
	comp=Z,8.9nm,1.4s						
AS31	Alice Springs	27.59	165	P	P	05 51 46.4	-0.6
ASAR	Alice Springs	27.59	165	P	P	05 51 47.3	+0.3
	comp=Z,1.1nm,0.5s,baz=345,slow=7.4,SNR=24						
BBOO	Buckleboo	36.87	166	P	P	05 53 08.6	+0.8
STKA	Stephens Creek	37.69	158	P	P	05 53 15.0	+0.1
	comp=Z,1.6nm,0.6s,baz=356,slow=10,SNR=4.8						
STKA	Stephens Creek	37.69	158	P	P	05 53 15.1	+0.3
SONM	Songino Array	47.77	342	P	P	05 54 36.1	-0.3
	comp=Z,0.3nm,0.6s,baz=170,slow=8.8,SNR=3.5						
MKAR	Makanchi Array	57.81	326	P	P	05 55 49.6	-0.7
	comp=Z,0.4nm,0.4s,baz=120,slow=7.0,SNR=8.7						
MKAR				PcP	PcP	05 56 42.6	+0.3
	comp=Z,0.5nm,0.8s,baz=134,slow=4.2,SNR=3.7						
KURBB	Kurchatov Arra	62.03	328	P	P	05 56 18.6	-0.5
	comp=Z,0.5nm,0.3s,baz=128,slow=6.5,SNR=5.1						
KURK	Kurchatov	62.03	328	P	P	05 56 18.2	-0.9
KURK				IAmb	IAmb	05 56 19.3	
	comp=Z,1.9nm,0.8s						
KIWB	Kanaga Island	67.54	34	P	P	05 56 55.1	+0.2
BVAR	Borovoye Array	67.60	327	P	P	05 56 55.0	-0.4
	comp=Z,0.3nm,0.4s,baz=122,slow=14,SNR=3.0						
AKTO	Aktyubinsk	73.86	322	P	P	05 57 32.3	-1.1
	comp=Z,0.6nm,0.4s,baz=130,slow=7.3						
ILAR	Eielson Array	85.94	25	P	P	05 58 39.5	+1.2
	comp=Z,0.1nm,0.6s,baz=293,slow=6.5,SNR=2.7						
ARCES	ARCESS Array B	90.90	340	P	P	05 59 02.3	+0.5
	comp=Z,3.3nm,1.1s,baz=46,slow=5.2,SNR=4.5						
TORD	Torodi Ar. Bea	122.63	288	PKP	PKiKP	06 04 55.5	+0.4
	comp=Z,0.4nm,0.5s,baz=75,slow=2.2,SNR=4.5						

IDC 27 05:57:03.2±1.4, 17°.22N×147°.11E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/60, mbtmp3.7/7, Error ellipse: s-maj=43.8km s-min=21.5km az=86.0
ISC 27 05:57:10.0±1.4, 17°.2N±0°.2×147°.1E±0°.3, h48km, n8, σ0s61/8, mb3.8/8, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	38.95	199	P	P	06 04 31.7	+0.1
	1.2nm,0.7s,baz=24,slow=9.3,SNR=6.2						
ASAR	Alice Springs	42.59	198	P	P	06 05 01.2	-0.3
	0.2nm,0.6s,baz=19,slow=10.0,SNR=3.5						
SONM	Songino Array	45.14	322	P	P	06 05 22.2	+0.2
	0.2nm,0.3s,baz=134,slow=6.2,SNR=4.0						
CMAR	Chiang Mai Arr	45.73	279	P	P	06 05 27.4	+0.5
	1.4nm,0.8s,baz=58,slow=6.7,SNR=5.4						
MKAR	Makanchi Array	60.45	314	P	P	06 07 15.2	+0.3
	0.4nm,0.5s,baz=93,slow=7.7,SNR=5.1						
KURBB	Kurchatov Arra	63.32	318	P	P	06 07 33.1	-0.9
	30nm,0.4s,baz=93,slow=7.6,SNR=11						
BVAR	Borovoye Array	68.47	321	P	P	06 08 06.5	-0.6
	1.3nm,0.4s,baz=97,slow=7.6,SNR=11						
YKA	Yellowknife Ar	78.71	28	P	P	06 09 07.4	+0.4
	0.2nm,0.7s,baz=283,slow=5.4,SNR=4.1						

BER 27 06:01:29.8±3.4, 73°.59N×8°.31E, h26km±41km, ML2.0, ML2.8(HEL), Confirmed Earthquake
NAO 27 06:01:31.6±4.4, 73°.80N×10°.80E, ML2.7
HEL 27 06:01:31.3±0.3, 73°.17N×8°.57E, h10km, ML2.8, Confirmed Earthquake
ISC 27 06:01:25.7±1.1, 73°.53N±0°.06×8°.91E±0°.08, h10km, n25, σ2s28/39, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO1	Bjornoya	2.96	66	eP	Pb	06 02 16.6	-1.8
HSPB	Hornsund (broa	3.88	23	Pn	Pn	06 02 25.2	0.0
HSPB	Hornsund (broa	3.88	23	eP	Pn	06 02 25.2	0.0
SPA0	Spitsbergen Ar	5.01	18	Pn	Pn	06 02 41.7	+0.9
	baz=190,slow=18						
SPA0	Spitsbergen Ar	5.01	18	Pn	Pn	06 02 41.7	+0.9
	baz=190,slow=18						
TRO	Tromso	5.04	136	eS	Sn	06 03 37.7	-1.5
TRO	Tromso	5.04	136	eP	Pn	06 02 43.8	+2.7
TRO				eS	Sn	06 03 37.9	-1.4
TRO				IAML		06 03 39.4	
	comp=Z,6.6nm,0.4s						
HOPEN	Hopen	5.12	47	eP	Pn	06 02 43.2	+0.9
HOPEN				IAML		06 03 30.9	
	comp=Z,6.6nm,0.9s						
HOPEN				eS	Sn	06 03 39.7	-1.7
HAMF	Hammerfest	5.40	115	Pn	Pn	06 02 48.9	+2.8
HAMF				Sn	Sn	06 03 48.9	+0.8
HAMF	Hammerfest	5.40	115	eP	Pn	06 02 47.9	+1.8
HAMF				eS	Sn	06 03 48.3	+0.2
HAMF				IAML		06 03 52.1	
	comp=Z,5.4nm,0.7s						
KBS	Kingsbay	5.47	6	Pn	Pn	06 02 46.4	-0.7
KBS	Kingsbay	5.47	6	eP	Pn	06 02 46.4	-0.7
KIF	Kilpisjarvi	5.94	134	eP	Pn	06 02 55.8	+2.4
KIF				eS	Sn	06 03 58.5	-2.8
KIF				MSN		06 04 05.6	
	comp=Z,3.5nm,0.3s						
KIF	Kilpisjarvi	5.94	134	eP	Pn	06 02 55.8	+2.4
KIF				eS	Sn	06 03 58.5	-2.8
KIF				MSN		06 04 05.6	
	comp=Z,3.5nm,0.3s						
STEI	Steigen	6.00	156	eP	Pn	06 02 56.3	+2.0
STEI				eS	Sn	06 03 59.6	-3.4
STEI				IAML		06 04 44.5	
	comp=Z,2.3nm,0.8s						
KTK1	Kautokeino	6.46	128	eS	Sn	06 04 12.5	-1.7
KTK1	Kautokeino	6.46	128	eP	Pn	06 03 04.9	+4.3
KTK1				eS	Sn	06 04 14.2	0.0
KTK1				IAML		06 04 19.6	
	comp=Z,2.0nm,0.8s						
ARA0	ARCESS Array S	6.61	119	Pn	Pn	06 03 05.3	+2.6
	baz=316,slow=12						
ARA0				Sn	Sn	06 04 15.7	-2.2
	baz=318,slow=16						
ARA0	ARCESS Array S	6.61	119	Pn	Pn	06 03 05.3	+2.6
	baz=316,slow=12						
ARA0				Sn	Sn	06 04 15.7	-2.2
	baz=318,slow=16						
ARE0	ARCESS Array S	6.61	119	eP	Pn	06 03 06.0	+3.4
ARE0				eS	Sn	06 04 17.8	-0.1
KEV	Kevo	6.83	115	eP	Pn	06 03 09.8	+4.0
KEV				eS	Sn	06 04 23.7	+0.2
KEV	Kevo	6.83	115	eP	Pn	06 03 09.8	+4.0
LANU	Lannavaara	6.98	136	eP	Pn	06 03 10.2	+2.5
LANU				eS	Sn	06 04 24.5	-2.6
LANU	Lannavaara	6.98	136	eP	Pn	06 03 10.2	+2.5
LANU				eS	Sn	06 04 24.5	-2.6
SCO	Scoresbysund	9.94	267	iS	Pn	06 03 48.6	+0.4

MOS 27 06:05:12.8±1.6, 38°.85N×48°.87E, h16km, mb4.3/11, Error ellipse: s-maj=8.7km s-min=6.1km az=108.5
AZER 27 06:05:12.1, 38°.62N×48°.52E, h35km, ML4.0
THR 27 06:05:13.3±0.5, 38°.53N×48°.54E, h22km±3km, ML4.1
TEH 27 06:05:13.1, 38°.71N×48°.61E, h36km, ML4.2
IDC 27 06:05:14.6±1.9, 38°.85N×49°.18E, h0km, mb4.0/3, mb1 3.9/9, mb1mx3.6/47, mbtmp4.0/9, ML3.5/6, Error ellipse: s-maj=36.1km s-min=16.5km az=176.0
NEIC 27 06:05:14.5±2.2, 38°.66N±0°.08×48°.71E±0°.07, h30km±6km, mb4.0/13, mb_Lg4.2(TEH), ML4.0(AZER), Error ellipse: s-maj=12.3km s-min=6.9km az=199.0
NNC 27 06:05:18.8±4.5, 39°.23N×49°.57E, h0km, mb4.1, Error ellipse: s-maj=41.7km s-min=16.8km az=58.0
ISC 27 06:05:14.4±0.6, 38°.68N±0°.02×48°.60E±0°.02, h30km±4km, n180, σ1s83/220, mb4.1/14, 9C-9D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKRN	Lenkeran, Azer	0.14	77	Pg	Pb	06 05 20.0	0.0
LKRN	Lenkeran, Azer	0.14	77	PG	Pb	06 05 20.0	0.0
LKRN	Lenkeran, Azer	0.14	77	P	Pb	06 05 20.0	0.0
	SNR=1558						
LKRN				S	Sb	06 05 24.7	+0.9
LKRN	Lenkeran, Azer	0.14	77	ePg	Pb	06 05 20.0	0.0
ASTR	Astara	0.19	129	P	Pb	06 05 20.4	-0.1
	SNR=1065						
ASTR				S	Sb	06 05 25.4	+0.8
ASTR	Astara	0.19	129	ePg	Pb	06 05 20.3	-0.1
LRK	Lerik	0.21	260		Pb	06 05 20.3	-0.6
LRK	Lerik	0.21	260	P	Pb	06 05 20.3	-0.6
	SNR=333						
LRK				S	Sb	06 05 25.4	+0.1
LRK	Lerik	0.21	260	ePg	Pb	06 05 20.3	-0.6
YRD	Yardimli	0.37	310	P	Pb	06 05 22.3	-0.7
YRD				S	Sb	06 05 28.7	-0.1
YRD	Yardimli	0.37	310	ePn	Pb	06 05 22.3	-0.7
GRMI	Germi	0.57	283	ePg	Pb	06 05 24.9	-1.2
GRMI				eSg	Sb	06 05 33.0	-1.0
GRMI	Germi	0.57	283	ePg	Pb	06 05 24.9	-1.2
GLBA	Clilabad	0.58	344	P	Pb	06 05 25.7	-0.5
	SNR=367						
GLBA				S	Sn	06 05 35.3	0.0
GLBA	Clilabad	0.58	344	ePg	Pb	06 05 25.9	-0.3
IHSH	Hashtrud	1.11	251	ePn	Pb	06 05 43.4	+8.1
IHSH				e		06 06 13.0	
SAAT	Saatly	1.19	353	P	Pn	06 05 35.2	+0.2
	SNR=7.4						
SAAT				S	Sb	06 05 52.6	+1.2
SAAT	Saatly	1.19	353	ePg	Pn	06 05 35.2	+0.2
QRD	Qoradiz	1.27	308	P	Pn	06 05 35.4	-0.7
	SNR=37						
QRD				S	Sn	06 05 52.3	+0.1
QRD	Qoradiz	1.27	308	ePg	Pn	06 05 35.4	-0.7
IHRS	Heris	1.28	254		Pn	06 05 36.1	-0.4
IHRS	Heris	1.28	254	ePg	Pn	06 05 36.0	-0.4
ALIB	Äli-Bayra	1.31	14	P	Pb	06 05 38.4	0.0
	SNR=7.9						
ALIB				S	Sb	06 06 00.3	+5.4
BLQ	Beylaqan	1.32	322	P	Pn	06 05 36.5	-0.4
BLQ				S	Sb	06 05 54.7	-0.4
BLQ	Beylaqan	1.32	322	ePg	Pn	06 05 36.4	-0.4
KDMR	Kurdemir	1.73	349	Pg	Pb	06 05 44.4	-1.1
KDMR				Sn	Sb	06 06 06.6	-0.1
ZRD	Zardab	1.75	336	Pg	Pn	06 05 44.0	+1.2
	SNR=13						
ZRD				Sn	Sb	06 06 07.8	+0.4
ZRD	Zardab	1.75	336	ePg	Pn	06 05 43.9	+1.2
AGDM	Agdam	1.84	321	Pn	Pn	06 05 43.9	-0.1
	SNR=24						
AGDM				Sn	Sb	06 06 08.4	-1.6
GBS	Qobustan	1.87	8	Pn	Pb	06 05 46.6	-1.4
	SNR=18						
GBS				Sn	Sb	06 06 10.9	-0.1
BRDA	Brd	1.93	326	Pn	Pn	06 05 45.7	+0.5
	SNR=10						
BRDA				Sg	Sb	06 06 14.3	+1.8
BRDA	Brd	1.93	326	ePn	Pn	06 05 45.7	+0.5
GOBA	Gobu	1.93	27	Pn	Pn	06 05 45.6	+0.5
GOBA				Sg	Sb	06 06 15.5	+3.0
ZNJK	Zanjan	2.01	178	ePg	Pn	06 05 46.5	0.0
ZNJK				eSg	Sn	06 06 10.8	+0.1
ZNJK	Zanjan	2.01	178	ePn	Pn	06 05 46.5	0.0
ORD	Ordubad	2.05	278	Pg	Pn	06 05 47.3	+0.3
	SNR=78						
ORD				Sg	Sb	06 06 14.4	-1.8
ORD	Ordubad	2.05	278	ePn	Pn	06 05 47.3	+0.3
PQL	Pirkuli	2.11	360	Pn	Pn	06 05 48.5	+0.7
	SNR=29						
PQL				Sn	Sb	06 06 15.4	-2.4
IML	Ismayilli	2.14	351	Pn	Pn	06 05 48.0	-0.1
	SNR=5.6						
IML				Sn	Sb	06 06 17.8	-0.7
IML	Ismayilli	2.14	351	ePn	Pn	06 05 48.0	-0.1
NDR	Nardaran	2.18	29	Sn	Sb	06 06 19.1	-0.6
ATGJ	Altiaghaj	2.19	7	Pn	Pn	06 05 48.5	-0.5
	SNR=10.0						
ATGJ				Sg	Sb	06 06 26.2	+5.9
IMRD	Marand	2.27	272	ePn	Pn	06 05 51.3	+1.2
QBL	Gabala	2.34	346	Pn	Pn	06 05 50.5	-0.4
	SNR=6.6						
QBL				Sn	Sn	06 06 21.3	+2.6
QBL	Gabala	2.34	346	ePn	Pn	06 05 50.5	-0.4
SIZA	Siyzn	2.40	5	Pn	Pn	06 05 52.0	+0.2
	SNR=13						
SIZA				Sn	Sb	06 06 24.5	-1.8
NAX	Nakhchivan	2.47	282	PN	Pn	06 05 54.2	+1.4
NAX	Nakhchivan	2.47	282	Pg	Pn	06 05 54.2	+1.4
	SNR=14						
NAX				Sg	Sb	06 06 27.8	-0.5
NAX	Nakhchivan	2.47	282	ePn	Pn	06 05 54.2	+1.4
SBZ	Shahbuz	2.48	288	Pn	Pn	06 05 52.6	-0.4
	SNR=59						
SBZ				Sg	Sb	06 06 28.2	-0.3
SBZ	Shahbuz	2.48	288	ePn	Pn	06 05 52.5	-0.4
XNQ	Khinaliq	2.52	352	Pn	Pn	06 05 53.5	0.0
	SNR=7.4						
XNQ				Sn	Sn	06 06 24.0	+0.8
XNQ	Khinaliq	2.52	352	ePn	Pn	06 05 53.4	0.0
IGZV	Ghazvin	2.62	150	Pn	Pn	06 05 54.3	-0.8
IGZV	Ghazvin	2.62	150	ePn	Pn	06 05 54.2	-0.8
IGZV				e		06 06 27.2	
GANJ	Ganja	2.64	319	PN	Pn	06 05 53.9	-1.1
GANJ	Ganja	2.64	319	Pn	Pn	06 05 53.9	-1.1
	SNR=20						
GANJ				Sn	Sn	06 06 27.5	+1.5
GANJ	Ganja	2.64	319	ePn	Pn	06 05 53.9	-1.1
SEKA	Sheki	2.75	337	PN	Pn	06 05 55.2	-1.3
SEKA	Sheki	2.75	337	Pn	Pn	06 05 55.3	-1.3
	SNR=15						
SEKA				Sn	Sn	06 06 30.3	+1.5
SEKA	Sheki	2.75	337	ePn	Pn	06 05 55.2	-1.3
QALM	Alamut, Qazvin	2.77	143	Pn	Pn	06 05 55.7	-1.3
QALM	Alamut, Qazvin	2.77	143	ePn	Pn	06 05 55.9	-1.1
QALM				e		06 06 33.3	
AKT	Akhty	2.88	347	ePN	Pn	06 05 59.1	+0.8
AKT				e		06 06 04.3	
AKT				eS	Sn	06 06 33.4	+1.4
AKT				e		06 06 38.9	
AKT				e		06 06 46.2	
AKT				pmax	pmax		
	comp=Z,35nm,0.6s						
AKT				smax	smax		
	comp=N,59nm,0.2s						
AKT				smax	smax		
	comp=E,132nm,0.4s						
AKT				smax	smax		
	comp=E,154nm,0.4s						
AKT				MLR	MLR		
	comp=Z,55nm,2.0s						
MAHB	Mahabad	2.99	231	ePn	Pn	06 06 01.5	+1.6
GDB	GEDABAY	3.00	314	Pn	Pn	06 05 59.2	-0.9
	SNR=7.5						
GDB				Sn	Sn	06 06 36.9	+1.8
GDB	GEDABAY	3.00	314	ePn	Pn	06 05 59.1	-0.9
QABG	Abgarm-Qazvin	3.07	165	ePn	Pn	06 05 59.8	-1.3
HYR	Heyderabad	3.09	291	Pn	Pn	06 06 01.6	+0.3
	SNR=7.0						
HYR				Sg	Sb	06 06 48.6	+2.5
HYR	Heyderabad	3.09	291	ePn	Pn	06 06 01.5	+0.3
MAKU	Maku	3.13	284	ePn	Pn	06 06 03.3	+1.4
MAKU				eSg	Sb	06 06 48.2	+1.0
MAKU	Maku	3.13	284	Pn	Pn	06 06 03.0	+1.2
MAKU	Maku	3.13	284	ePn	Pn	06 06 03.3	+1.4
THKV	Tehran--Karaj	3.30	146	IAML		06 06 41.8	
	comp=E,437nm,0.4s						
ZKT	Zaqatala	3.32	334	ePn	Pn	06 06 03.7	-0.7
ZKTA	Zakatala	3.32	333	Pn	Pn	06 06 03.7	-0.6
	SNR=9.9						
ZKTA				Sn	Sn	06 06 44.8	+1.9
GNI	Garni	3.33	297		Pn	06 06 05.2	+0.5
GNI				S	Sn	06 06 54.6	+1.5
GNI	Garni	3.33	297	dePN	Pb	06 06 10.2	-2.7
GNI				pmax	pmax		
	comp=Z,136nm,0.8s						
DRN	Derbent	3.35	357	⇑ePn	Pn	06 06 05.9	+1.2
DDFL	Dedoflistskaro	3.36	326	P	Pn	06 06 06.7	+1.8
DDFL				S	Sb	06 07 01.1	+7.4
IMHD	Mahdasht	3.41	150	e		06 06 07.6	
IMHD				ePn	Pn	06 06 05.6	-0.1
CHTH	Charan	3.42	143	ePn	Pn	06 06 06.4	+0.4
CHTH	Charan	3.42	143	ePn	Pn	06 06 06.4	+0.4
QZX	Qazax, Azerbai	3.44	315	Pn	Pn	06 06 06.3	+0.3
	SNR=5.7						
QZX	Qazax, Azerbai	3.44	315	ePn	Pn	06 06 06.3	+0.3
HSRG	Sareghieh	3.44	184	ePn	Pn	06 06 07.4	+1.1
SNGE	Sanandaj	3.72	196	ePn	Pn	06 06 09.8	-0.2
SNGE	Sanandaj	3.72	196	ePn	Pn	06 06 09.8	-0.2
IPRN	Peran	3.84	128	ePn	Pn	06 06 10.8	-0.8
IDMV	Damavand	4.13	137	ePn	Pn	06 06 16.8	+1.0

KZRT	Kazreti	4.21	311	S	Sb	06 07 16.0	-2.2
TBLG	Delisi	4.25	317	Pn	Pn	06 06 16.9	-0.2
TBLG	Delisi	4.25	317	PN	Pn	06 06 16.9	-0.2
ASAO	Ashtian	4.28	164	ePn	Pn	06 06 18.1	+0.3
ASAO	Ashtian	4.28	164	ePn	Pn	06 06 18.1	+0.3
IDHR	Dehrash	4.35	205	ePn	Pn	06 06 20.5	+1.8
BTLR	Botlikh	4.37	336⇓	ePN	Pn	06 06 19.6	+0.7
HSAM	Samen	4.46	180	ePn	Pn	06 06 22.8	+2.5
TRLG	Trialeti	4.48	311	P	Pb	06 06 30.1	-2.3
TRLG				S	Sb	06 07 25.0	-1.1
IFIR	Firoozkooh	4.49	131	ePn	Pn	06 06 21.9	+1.2
IGLO	Ghaloghah	4.69	116	ePn	Pn	06 06 22.2	-1.1
GHVR	GHOM	4.72	152	ePn	Pn	06 06 23.6	0.0
GHVR	GHOM	4.72	152	ePn	Pn	06 06 23.6	0.0
BDRS	Dareh Seyedi	4.72	177	ePn	Pn	06 06 25.7	+1.8
AKH	Akhalkalaki	4.78	306		Pn	06 06 25.8	+1.3
AKH	Akhalkalaki	4.78	306	PN	Pn	06 06 25.8	+1.3
ILAS	Lasjerd	4.79	132	ePn	Pn	06 06 25.6	+0.8
IDOB	Doab	4.89	184	ePn	Pn	06 06 28.8	+2.6
GUDG	Gudauri	4.92	322	P	Pn	06 06 25.4	-1.1
GUDG				S	Sn	06 07 22.8	+0.4
GROC	Groznyy	4.99	336⇓	ePN	Pn	06 06 29.4	+2.1
BMDN	Meydan	5.00	178	ePn	Pn	06 06 30.1	+2.5
IKMR	Kamar-syah	5.15	182	ePn	Pn	06 06 33.1	+3.6
IANJ	Anjilo	5.32	125	ePn	Pn	06 06 32.7	+0.6
ZEI	Tsey	5.44	320	eP	Pb	06 06 45.9	-2.9
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ONI	Oni	5.53	317	P	Pb	06 06 48.4	-1.9
ONI				S	Sb	06 08 00.1	+4.0
IMND	Minoodasht	5.56	103	ePn	Pn	06 06 33.2	-1.9
IKLH	Kolahrood	5.87	155	ePn	Pn	06 06 40.8	+1.2
NCK	Nalchik	6.12	323⇓	eP	Pn	06 06 47.3	+4.5
IPIR	Pirpir	6.26	162	ePn	Pn	06 06 46.6	+1.5
KIV	Kislovodsk	6.90	322	Pn	Pn	06 06 58.0	+4.4
KIV	Kislovodsk	6.90	322	eP	Pn	06 06 57.7	+4.1
KIV				pmax	pmax		
	comp=Z,26nm,1.1s						
GEYT	Alibeck	7.52	93	Pn	Pn	06 06 59.6	-2.4
	comp=Z,6.9nm,0.3s,baz=292,slow=15,SNR=44						
GYA0B	ALIBECK ARRAY	7.52	93	⇓P	Pn	06 06 59.6	-2.4
GYA0B				⇓S	Sn	06 08 20.1	-6.2
GYA0B	ALIBECK ARRAY	7.52	93		Pn	06 07 00.1	-1.9
GYA0B				Sn	Sn	06 08 26.5	+0.2
IEMG	Emamgholi	8.03	96	ePn	Pn	06 07 04.7	-1.9
IKRD	Kardeh	8.08	101	ePn	Pn	06 07 19.6	+10
IAKL	Akhelmad	8.32	101	ePn	Pn	06 07 12.4	-0.8
IPAY	Payeh	8.55	102	ePn	Pn	06 07 16.0	-0.4
GAZ	Gaziantep	9.13	264	Pn	Pn	06 07 27.4	+3.3
IMYA	Miami	9.43	101	ePn	Pn	06 07 27.8	-0.6
BRTR	Keskin Array B	11.66	280	Pn	Pn	06 08 11.1	+12
	comp=Z,0.0nm,0.3s,baz=99,slow=8.9,SNR=3.9						
ILGA	Ilgaz	11.69	286	Pn	Pn	06 07 59.5	+0.2
AB31	Akbulak array	13.34	34	⇑P	Pn	06 08 17.8	-3.8
	comp=Z,1.3nm,0.6s,baz=210,slow=13,SNR=17						
AB31				⇑S	Sn	06 10 38.1	-11
	comp=Z,2.4nm,0.5s,baz=208,slow=24,SNR=7.4						
ABKAR	Akbulak array	13.34	34	Pn	Pn	06 08 18.6	-3.0
AKTO	Aktyubinsk	13.52	27	Pn	Pn	06 08 20.2	-3.8
	comp=Z,0.6nm,0.3s,baz=189,slow=5.8,SNR=14						
AKTO	Aktyubinsk	13.52	27	⇑P	Pn	06 08 21.1	-3.0
	comp=Z,2.3nm,0.5s						
AKTO				⇓S	Sn	06 10 43.2	-10
	comp=Z,3.8nm,0.5s						
KK31	Karatay Array	17.13	68	P	Pn	06 09 09.4	-2.2
KK31	Karatay Array	17.13	68	P	Pn	06 09 09.4	-2.2
KK31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KKAR	Karatay Array	17.13	68		Pn	06 09 09.7	-1.9
KKAR	Karatay Array	17.13	68	P	Pn	06 09 09.7	-1.9
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKASG	Malin Array Be	18.22	318	P	P	06 09 31.5	+6.6
	comp=Z,0.4nm,0.3s,baz=123,slow=12,SNR=3.3						
AKBB	Malin Array Si	18.22	318⇑	iP	P	06 09 28.9	+4.0
ARU	Arti	18.95	17	P	P	06 09 32.0	-0.9
	comp=Z,0.0nm,0.3s,baz=215,slow=12,SNR=3.3						
ARU	Arti	18.95	17d	iP	P	06 09 32.0	-0.9
ARU				S	Sn	06 13 03.0	-1.9
ARU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AAK	Ala-Archa	20.01	70	P	P	06 09 45.1	+0.3
	comp=Z,0.4nm,0.3s,baz=214,slow=7.2,SNR=22						
AAK	Ala-Archa	20.01	70	P	P	06 09 45.4	+0.6
AAK	Ala-Archa	20.01	70c	iP	Pn	06 09 46.2	-0.4
AAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NIL	Nilore	20.50	97	P	P	06 09 50.1	+0.1
NIL	Nilore	20.50	97	P	P	06 09 50.1	+0.1
NIL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BRVK	Borovoye	20.73	39	P	P	06 09 52.2	-0.2
BRVK				IAmb	IAmb	06 09 55.8	
	comp=Z,7.3nm,0.8s						
BRVK	Borovoye	20.73	39⇑	eP	P	06 09 51.5	-0.8
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BVAR	Borovoye Array	20.77	39	P	P	06 09 52.1	-0.6
	comp=Z,4.6nm,0.8s,baz=231,slow=9.4,SNR=20						
ITM	Ithomi	21.07	274	P	P	06 09 57.1	+0.9
ITM				IAmb	IAmb	06 09 57.2	
	comp=Z,3.9nm,0.8s						
KSH	Kashi	21.23	79	P	P	06 09 55.3	-2.7
KSH				PP	PnPn	06 10 17.0	-0.8
KSH				S	S	06 13 37.0	-16
KSH				PcP	PcP	06 14 04.3	+2.0
KSH				ScP	ScP	06 17 40.0	+3.0
KSH				PcS	PcS	06 17 44.8	+4.3
CRVS	Cervenica-Dubn	21.99	306	eP	P	06 10 14.7	+8.8
CRVS	Cervenica-Dubn	21.99	306	ePN	P	06 10 14.7	+8.8
PDG	Podgorica	22.56	289	P	P	06 10 05.1	-1.5
PDG				IAmb	IAmb	06 10 15.3	
	comp=Z,6.0nm,1.0s						
PSZ	Piszkesteto	22.73	303	P	P	06 10 14.7	+0.8
PSZ				IAmb	IAmb	06 10 19.1	
	comp=Z,4.2nm,1.0s						
PSZ	Piszkesteto	22.73	303	P	P	06 10 14.7	+0.8
PSZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KLMR	Klimovskoe	22.92	349	eP	P	06 10 17.1	+1.5
KLMR				pmax	pmax		
	comp=Z,25nm,2.0s						
KLMR	Klimovskoe	22.92	349	eP	P	06 10 17.2	+1.6
KLMR				AMP		06 10 26.7	
	comp=Z,25nm,2.0s						
KURBB	Kurchatov Arra	24.23	51	P	P	06 10 28.4	-0.1
	comp=Z,3.4nm,0.8s,baz=257,slow=9.7,SNR=18						
VSU	Vasula	24.32	332⇑	eP	P	06 10 32.0	+2.9
VSU				pmax	pmax		
	comp=Z,22nm,1.3s						
KURK	Kurchatov	24.32	51	P	P	06 10 29.5	+0.2
KURK	Kurchatov	24.32	51d	eP	P	06 10 29.0	-0.2
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MORC	Moravsky Berou	24.69	307	P	P	06 10 32.1	-0.6
MORC	Moravsky Berou	24.69	307	P	P	06 10 32.1	-0.6
MORC				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MAKZ	Makanchi	25.67	61	P	P	06 10 41.7	+0.1
MAKZ				IAmb	IAmb	06 10 44.0	
	comp=Z,4.1nm,0.8s						
MAKZ	Makanchi	25.67	61	P	P	06 10 41.7	+0.1
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK31	Makanchi Array	25.88	61	P	P	06 10 43.6	+0.1
MK31				IAmb	IAmb	06 10 46.2	
	comp=Z,4.3nm,0.8s						
MK31	Makanchi Array	25.88	61	P	P	06 10 43.6	+0.1
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	Makanchi Array	25.88	61	P	P	06 10 43.5	0.0
	comp=Z,4.5nm,0.8s,baz=260,slow=7.8,SNR=24						
FINES	FINESS Array B	26.72	336	P	P	06 10 57.5	+6.7
	comp=Z,1.7nm,0.8s,baz=134,slow=8.2,SNR=4.7						
WMQ	Urumqi	29.64	67	eP	P	06 11 17.8	+0.6
WMQ				pP	pP	06 11 25.0	-0.9
WMQ				sP	sP	06 11 28.5	-1.0
TAM	Tamanrasset	39.89	259	P	P	06 12 44.9	-0.9
TAM				IAmb	IAmb	06 12 55.4	
	comp=Z,3.1nm,1.3s						
TAM	Tamanrasset	39.89	259	P	P	06 12 44.9	-0.9
TAM				pmax	pmax		
	comp=Z,3.0nm,1.3s						
LZH	Lanzhou	43.41	76	eP	P	06 13 12.0	-2.6
LZH				pP	pP	06 13 19.5	-4.0
LZH				sP	sP	06 13 23.8	-3.3
LZH				ePP	PP	06 14 54.3	-1.3
HHC	Hu-ho-hao-te	47.51	66	eP	P	06 13 46.3	-0.6
CMAR	Chiang Mai Arr	47.93	100	iP	P	06 13 49.2	-1.1
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
YSS	Yuzh-Sakhalins	65.50	49⇑	eP	P	06 15 56.2	+1.5
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						

IDC **27** *06:11:06.0±1.1, 59°42S×59°64W, h0km, mb4.0/5, mb1 4.2/8, mb1mx4.0/21, mbtmp4.1/8, ML4.0/3, MS3.6/17, Ms1 3.6/17, ms1mx3.5/24, Error ellipse: s-maj=37.8km s-min=19.7km az=73.0*

NEIC **27** *06:11:06.5±1.6, 59°51S±0°05×59°84W±0°3, h10km±2km, mb4.7/3, Error ellipse: s-maj=23.1km s-min=6.3km az=77.0*

ISC 27 06:11:06.5±0.7, 59°52S±0°06×59°85W±0°08, h10km, n30, σ1°22/22, mb4.0/6, MS3.7/14, Drake Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	Palmer Station	5.63	199	Pn	Pn	06 12 30.7	+0.7
	17nm,0.3s,baz=26,slow=12,SNR=51						
PMSA				Sn	Sn	06 13 31.8	-2.8
	6.2nm,0.3s,baz=218,slow=20,SNR=9.7						
PMSA				LR	LR	06 14 25.3	
	comp=Z,408nm,19.4s,baz=169,slow=35						
PMSA	Palmer Station	5.63	199		Pn	06 12 30.8	+0.7
PMSA					Sn	06 13 33.3	-1.4
USHA	Ushuaia	6.62	312	Pn	Pn	06 12 44.3	+0.6
	0.9nm,0.3s,baz=308,slow=17,SNR=14						
USHA				Sn	Sn	06 13 57.9	-1.2
	0.7nm,0.3s,baz=4.8,slow=12,SNR=4.4						
USHA				LR	LR	06 14 49.6	
	comp=Z,298nm,18.5s,baz=134,slow=34						
EFI	East Falkland	7.93	8		Pn	06 13 01.2	-0.6
HOPE	Hope Point	13.76	78		Pn	06 14 20.3	-1.1
PLCA	Paso Flores	19.97	336	P	P	06 15 39.1	+0.3
	0.1nm,0.3s,baz=183,slow=11,SNR=6.1						
PLCA				LR	LR	06 22 55.3	
	comp=Z,170nm,20.2s,baz=196,slow=36						
PLCA	Paso Flores	19.97	336	P	P	06 15 38.9	+0.1
PLCA				IAmb	IAmb	06 15 50.1	
	comp=Z,18nm,0.9s						
VNA3	Neumayer Olymp	23.12	141	P	P	06 16 13.0	+0.7
VNA1	Neumayer--Stat	23.55	139	P	P	06 16 17.8	+1.3
VNA2	Neumayer--Watz	23.85	140	P	P	06 16 20.7	+1.2
	baz=271,slow=11						
SNAA	Sanae	25.32	142	P	P	06 16 34.4	+1.5
SNAA	Sanae	25.32	142	P	P	06 16 34.2	+1.3
	comp=Z,13nm,0.8s,baz=272,slow=8.9,SNR=16						
SNAA				LR	LR	06 25 22.2	
	comp=Z,196nm,19.0s,baz=357,slow=34						
SNAA	Sanae	25.32	142	P	P	06 16 33.9	+0.9
SNAA				IAmb	IAmb	06 16 39.5	
	comp=Z,20nm,1.0s						
PEL	Peldehue	27.35	340	P	P	06 16 52.5	+0.9
PEL				IAmb	IAmb	06 16 55.1	
	comp=Z,21nm,0.9s						
CFA	Coronel Fontan	28.48	345	LR	LR	06 30 34.5	
	comp=Z,80nm,18.1s,baz=185,slow=41						
CPUP	Villa Florida	33.22	4	P	P	06 17 44.0	+0.6
	comp=Z,0.7nm,0.5s,baz=193,slow=3.9,SNR=3.2						
CPUP				LR	LR	06 31 01.4	
	comp=Z,78nm,18.7s,baz=187,slow=36						
LVC	Limon Verde	37.44	346	LR	LR	06 34 20.2	
	comp=Z,153nm,19.6s,baz=204,slow=37						
VNDA	Vanda	40.81	193	LR	LR	06 35 25.3	
	comp=Z,110nm,18.2s,baz=162,slow=36						
SIV	San Ignacio	43.47	358	P	P	06 19 09.1	-0.6
	comp=Z,0.5nm,0.6s,baz=156,slow=12,SNR=3.4						
SIV				LR	LR	06 38 26.7	
	comp=Z,140nm,19.0s,baz=188,slow=38						
LPAZ	La Paz	43.59	348	LR	LR	06 39 15.2	
	comp=Z,88nm,18.5s,baz=155,slow=39						
BDFB	Brasilia	44.67	16	P	P	06 19 18.7	-0.7
	comp=Z,2.4nm,0.8s,baz=163,slow=14,SNR=4.1						
MAW	Mawson	46.45	154	LR	LR	06 38 06.1	
	comp=Z,172nm,20.1s,baz=237,slow=35						
NNA	Nana	49.11	338	LR	LR	06 37 39.7	
	comp=Z,38nm,21.7s,baz=152,slow=32						
ATAH	Atahualpa	54.14	337	LR	LR	06 43 29.6	
	comp=Z,16nm,18.5s,baz=238,slow=36						
ROSC	El Rosal	65.18	344	LR	LR	06 52 47.9	
	comp=Z,60nm,19.5s,baz=212,slow=38						
PPT	Papeete	74.90	261	LR	LR	06 49 43.7	
	comp=Z,14nm,19.0s,baz=34,slow=31						
TORD	Torodi Ar. Bea	87.59	59	P	P	06 23 54.5	-0.1
	comp=Z,0.6nm,0.8s,baz=217,slow=4.5,SNR=2.9						
KMBO	Kilima Mbogo	92.65	97	LR	LR	07 00 22.8	
	comp=Z,39nm,19.4s,baz=86,slow=32						
TXAR	Lajitas Array	95.63	323	LR	LR	07 00 58.4	
	comp=Z,22nm,18.8s,baz=0.0,slow=31						
YKA	Yellowknife Ar	128.71	331	PKP	PKiKP	06 30 14.9	+1.9
	comp=Z,0.2nm,0.8s,baz=148,slow=2.3,SNR=3.4						

IDC 27 06:28:52.1±2.1, 56°41S×27°84W, h0km, mb3.9/1, mb1 3.9/1, mb1mx3.4/23, mbtmp3.9/1, Error ellipse: s-maj=109.9km s-min=80.7km az=132.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	73.55	30	P	P	06 40 26.7	0.0
	0.7nm,0.6s,baz=205,slow=6.9,SNR=5.0						
ILAR	Eielson Array	150.08	311	PKPbc	PKPbc	06 48 42.6	-0.4
	0.6nm,1.1s,baz=132,slow=1.3,SNR=4.1						
SONM	Songino Array	151.11	88	PKPbc	PKPbc	06 48 46.0	-0.3
	0.6nm,0.4s,baz=219,slow=3.6,SNR=6.6						

IDC 27 06:30:20.0±11.0, 7°01S×126°26E, h397km±158km, mb2.6/1, mb1 2.8/4, mb1mx2.7/36, mbtmp3.6/4, Error ellipse: s-maj=118.7km s-min=50.8km az=36.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.04	183	P	P	06 32 49.3	+0.1
	0.2nm,0.3s,baz=2.3,slow=8.7,SNR=13						
WRA	Warramunga Arr	15.05	149	P	P	06 33 33.4	0.0
	0.6nm,0.3s,baz=326,slow=12,SNR=40						
ASAR	Alice Springs	18.11	157	P	P	06 34 05.9	-0.1
	0.1nm,0.3s,baz=334,slow=11,SNR=6.8						
MKAR	Makanchi Array	66.25	329	P	P	06 40 27.0	0.0
	0.2nm,0.6s,baz=127,slow=8.1,SNR=2.5						

AZER **27** *06:30:25.5, 38°71N×48°56E, h21km, ML3.2*

TEH **27** *06:30:25.6, 38°61N×48°60E, h31km, ML3.7*

ISC 27 06:30:26.4±0.9, 38°66N±0°03×48°57E±0°03, h31km±6km, n75, σ1°33/99, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKRN	Lenkeran, Azer	0.17	74	P	Pn	06 30 32.0	-0.9
	SNR=553						
LKRN				S	Sb	06 30 36.8	+0.4
LKRN	Lenkeran, Azer	0.17	74	ePg	Pn	06 30 32.0	-0.9
LRK	Lerik	0.18	264	P	Pn	06 30 32.4	-0.9
	SNR=284						
LRK				S	Sb	06 30 37.5	+0.5
LRK	Lerik	0.18	264	ePg	Pn	06 30 32.3	-0.9
ASTR	Astara	0.20	121	P	Pn	06 30 32.4	-0.9
	SNR=72						
ASTR				S	Sb	06 30 37.5	+0.5
ASTR	Astara	0.20	121	ePg	Pn	06 30 32.4	-0.9
YRD	Yardimli	0.36	314	P	Pb	06 30 34.4	-0.5
	SNR=152						
YRD				S	Sn	06 30 40.9	-1.1
YRD	Yardimli	0.36	314	ePg	Pb	06 30 34.4	-0.5
GLBA	Cilabad	0.59	346	P	Pb	06 30 37.9	-0.6
	SNR=35						
GLBA				S	Sn	06 30 47.6	+0.1
GLBA	Cilabad	0.59	346	ePg	Pn	06 30 38.0	-0.8
IHSH	Hashtrud	1.09	251	ePn	Pb	06 30 54.2	+7.3
IHSH				e		06 31 25.1	
ISRB	Sarab	1.10	221	ePg	Pb	06 30 46.1	-0.9
SAAT	Saatly	1.20	355	P	Pb	06 30 48.7	+0.1
SAAT				S	Sb	06 31 04.8	+1.1
SAAT	Saatly	1.20	355	ePg	Pb	06 30 48.6	+0.1
AHAR	Ahar	1.21	262	ePg	Pn	06 30 47.1	-0.2
AHAR				e		06 31 05.6	
IHRS	Heris	1.25	255	ePg	Pb	06 30 48.3	-1.2
QRD	Qoradiz	1.26	310	P	Pn	06 30 47.6	-0.3
	SNR=5.0						
QRD				S	Sb	06 31 04.6	-0.8
QRD	Qoradiz	1.26	310	ePg	Pn	06 30 47.8	-0.1
BLQ	Beylaqan	1.32	324	P	Pn	06 30 48.6	-0.1
	SNR=15						
BLQ				S	Sb	06 31 06.7	-0.4
BLQ	Beylaqan	1.32	324	ePg	Pb	06 30 49.0	+0.3
TVRZ	Varzaqan	1.50	265	ePn	Pb	06 30 52.7	-1.1
TVRZ				e		06 31 14.6	
KDMR	Kurdemir	1.74	350	Pn	Pb	06 30 56.7	-0.9
KDMR				Sn	Sb	06 31 18.6	-0.4
KDMR	Kurdemir	1.74	350	ePn	Pb	06 30 56.7	-0.9
ZRD	Zardab	1.75	337	Pn	Pb	06 30 56.0	-1.9
ZRD				Sn	Sb	06 31 20.2	+0.7
ZRD	Zardab	1.75	337	ePn	Pb	06 30 56.0	-1.9
AGDM	Agdam	1.84	322	Pn	Pb	06 30 57.2	-2.2
	SNR=6.9						
AGDM				Sn	Sb	06 31 21.4	-0.5
GBS	Qobustan	1.89	9	Pn	Pb	06 30 58.0	-2.3
	SNR=2.8						
GBS				Sn	Sn	06 31 20.5	+1.0
GBS	Qobustan	1.89	9	ePn	Pn	06 30 58.0	-2.3
BRDA	Brd	1.93	326	Pn	Pb	06 30 58.5	-2.4
	SNR=3.2						
BRDA				Sg	Sb	06 31 27.0	+2.4
BRDA	Brd	1.93	326	ePn	Pb	06 30 58.5	-2.4
ITBZ	Tabriz	1.95	258	ePn	Pb	06 30 58.5	+0.9
ORD	Ordubad	2.03	278	Pn	Pn	06 30 60.0	+1.3
	SNR=12						
ORD				Sn	Sb	06 31 26.8	-0.8
ORD	Ordubad	2.03	278	ePn	Pn	06 30 59.9	+1.3
PQL	Pirkuli	2.12	0	Pn	Pb	06 31 02.8	-1.5
	SNR=4.0						
PQL				Sn	Sn	06 31 27.1	+1.7
PQL	Pirkuli	2.12	0	ePn	Pb	06 31 02.8	-1.5
IML	Ismayilli	2.15	352	Pn	Pb	06 31 02.8	-2.0
IML				Sn	Sb	06 31 30.6	-0.3
IML	Ismayilli	2.15	352	ePn	Pb	06 31 02.7	-2.0
ATGJ	Altiaghaj	2.21	7	Pg	Pb	06 31 04.3	-1.5
	SNR=3.1						
ATGJ				Sg	Sb	06 31 34.7	+1.8
ATGJ	Altiaghaj	2.21	7	ePn	Pb	06 31 04.3	-1.5
IMRD	Marand	2.25	272	ePn	Pn	06 31 03.1	+1.4
IMRD				e		06 31 36.6	
SIZA	Siyzn	2.42	6	Pn	Pn	06 31 05.4	+1.3
	SNR=3.0						
SIZA				Sg	Sb	06 31 41.3	+2.5
SIZA	Siyzn	2.42	6	ePn	Pn	06 31 05.3	+1.3
NAX	Nakhchivan	2.45	283	Pn	Pn	06 31 04.2	-0.3
	SNR=2.9						
NAX				Sg	Sb	06 31 42.0	+2.2
NAX	Nakhchivan	2.45	283	ePn	Pn	06 31 04.1	-0.3
SBZ	Shahbuz	2.46	288	Pn	Pn	06 31 05.4	+0.7
	SNR=7.4						
SBZ				Sg	Sb	06 31 41.0	+1.0
SBZ	Shahbuz	2.46	288	ePn	Pn	06 31 05.3	+0.7
XNQ	Khinaliq	2.53	353	Pn	Pn	06 31 06.6	+1.0
	SNR=11						
XNQ				Sg	Sb	06 31 43.3	+1.3
XNQ	Khinaliq	2.53	353	ePn	Pn	06 31 06.5	+1.0
IGZV	Ghazvin	2.62	150	ePn	Pn	06 31 06.2	-0.7
GANJ	Ganja	2.63	319	Pn	Pn	06 31 08.1	+1.3
	SNR=2.9						
GANJ				Sn	Sb	06 31 42.7	-2.1
GANJ	Ganja	2.63	319	ePn	Pn	06 31 08.1	+1.3
SEKA	Sheki	2.75	338	Pn	Pn	06 31 08.4	-0.1
	SNR=4.1						
SEKA				Sn	Sn	06 31 42.9	+2.1
SEKA	Sheki	2.75	338	ePn	Pn	06 31 08.4	-0.1
QALM	Alamut, Qazvin	2.77	143	e		06 31 41.0	
QALM				ePn	Pn	06 31 07.9	-1.0
GDB	GEDABAY	2.99	314	Pn	Pn	06 31 12.4	+0.4
GDB				Sn	Sn	06 31 49.6	+2.7
GDB	GEDABAY	2.99	314	ePn	Pn	06 31 12.3	+0.4
QABG	Abgarm-Qazvin	3.06	164	ePn	Pn	06 31 12.0	-0.9
HYR	Heyderabad	3.08	291	Sg	Sb	06 32 00.7	+3.1
ZKT	Zaqatala	3.33	335	ePn	Pn	06 31 18.1	+1.7
ZKTA	Zakatala	3.33	334	Pn	Pn	06 31 18.1	+1.8
ZKTA				Sn	Sb	06 31 57.0	+2.1
HSRG	Sareghieh	3.42	184	ePn	Pn	06 31 18.5	+0.6
IRAZ	Razeghan	3.43	161	ePn	Pn	06 31 17.5	-0.5
QZX	Qazax, Azerbai	3.43	315	Pn	Pn	06 31 18.2	+0.4
	SNR=3.0						
QZX				Sn	Sb	06 32 05.3	-2.5
QZX	Qazax, Azerbai	3.43	315	ePn	Pn	06 31 18.2	+0.4
IPRN	Peran	3.85	128	ePn	Pn	06 31 22.9	-0.8
IDHR	Dehrash	4.33	205	ePn	Pn	06 31 31.6	+1.3
IFIR	Firoozkooh	4.50	131	ePn	Pn	06 31 34.4	+1.7
IGLO	Ghaloghah	4.70	116	ePn	Pn	06 31 34.5	-0.9
ISHM	Shahmirzad	4.72	126	ePn	Pn	06 31 35.9	+0.1
IANJ	Anjilo	5.33	125	ePn	Pn	06 31 44.3	+0.2
ISFR	Sfrayin	7.63	99	ePn	Pn	06 32 15.3	-0.4
IEMG	Emamgholi	8.05	96	ePn	Pn	06 32 19.5	-2.0
IKRD	Kardeh	8.10	100	ePn	Pn	06 32 32.1	+10
IAKL	Akhelmad	8.34	101	ePn	Pn	06 32 24.4	-1.0
IPAY	Payeh	8.57	102	ePn	Pn	06 32 27.7	-0.8

THE **27** *06:42:32.7, 38°32N×20°36E, h13km±1km, ML3.5/7, Error ellipse: s-maj=1.5km s-min=0.6km az=272.0*

ATH **27** *06:42:33.0, 38°32N×20°42E, h13km, ML2.8/14, Error ellipse: s-maj=1.4km s-min=0.7km az=274.0*

ISC 27 06:42:33.2±0.8, 38°33N±0°02×20°42E±0°03, h11km±5km, n51, σ0°70/73, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF1	Kardakata, Kep	0.06	143	P	Pg	06 42 35.4	-0.1
KEF1				S	Sg	06 42 36.8	-0.3
KEF4	Livadi, Kephal	0.07	179	P	Pg	06 42 35.5	0.0
KEF4				S	Sg	06 42 36.9	-0.3
AGT1	Agia Thekli	0.08	202	P	Pg	06 42 35.6	-0.1
AGT1				S	Sg	06 42 37.3	-0.2
	70μm,0.2s						
LXR1	Lixouri, Cepha	0.13	175	P	Pg	06 42 36.5	+0.2
LXR1				S	Sg	06 42 38.9	+0.4
LXRA	Lixouri, Kepha	0.13	175	P	Pg	06 42 36.5	+0.2
LXRA				S	Sg	06 42 38.8	+0.3
KEF3	Kipouria, Keph	0.14	205	P	Pb	06 42 36.5	-1.3
KEF3				S	Sg	06 42 38.6	-0.2
VSK1	VASILIKIADES	0.14	54	P	Pg	06 42 36.1	-0.4
VSK1				S	Sg	06 42 39.9	+1.1
	14μm,0.2s						
KONA	Konidatara, Ke	0.15	50	P	Pg	06 42 36.2	-0.5
KONA				S	Sg	06 42 40.1	+0.9
KONA				AML	AML	06 42 43.9	
	comp=E,19923μm,0.7s						
KONA				AML	AML	06 42 43.9	
	comp=N,16724μm,0.4s						
ARGA	Argostoli. Kep	0.16	164	P	Pg	06 42 36.7	0.0
ARGA				S	Sg	06 42 39.2	0.0
ARG2	Argostoli	0.16	161	P	Pg	06 42 36.8	0.0
ARG2				S	Sg	06 42 39.3	+0.1
	comp=N,42μm,0.2s						
KEF2	Argostoli. Kep	0.17	163	P	Pg	06 42 37.0	0.0
KEF2				S	Sg	06 42 39.3	-0.2
VLS	Valsamata	0.20	139	P	Pg	06 42 37.4	-0.1
VLS				S	Sg	06 42 40.5	+0.1
	comp=N,8μm,0.1s						
VLS	Valsamata	0.20	139	P	Pg	06 42 37.4	-0.1
VLS				S	Sg	06 42 40.2	-0.2
VLS				AML	AML	06 42 40.9	
	comp=N,14699μm,0.1s						
VLS				AML	AML	06 42 41.7	
	comp=E,17718μm,0.1s						
EVGI	Lefkada island	0.35	32	P	Pg	06 42 39.7	-0.5
EVGI				S	Sb	06 42 46.6	-0.3
EVGI	Lefkada island	0.35	32	P	Pg	06 42 39.7	-0.5
EVGI				S	Sb	06 42 46.2	-0.7
MGNA	Meganis	0.44	41	P	Pg	06 42 41.2	-0.6
MGNA				S	Sb	06 42 49.0	-0.5
MGNA				AML	AML	06 42 49.9	
	comp=N,2687μm,0.3s						
MGNA				AML	AML	06 42 53.8	
	comp=E,4227μm,0.4s						
LKD2	Lefkada island	0.50	22	P	Pg	06 42 42.2	-0.7
LKD2				AML	AML	06 42 59.9	

comp=N,1478µm,0.3s
LKD2 AML AML 06 43 01.3
comp=E,1316µm,0.3s
TSLK Tsoukalades, L 0.53 20 P Pg 06 42 43.1 -0.4
TSLK S **Sb 06 42 51.9 -0.3**
comp=E,910nm,0.4s
TSLK Tsoukalades, L 0.53 20 P Pg 06 42 43.1 -0.4
TSLK S **Sb 06 42 51.6 -0.6**
TSLK AML AML 06 42 57.3
comp=N,1622µm,0.4s
TSLK AML AML 06 43 01.5
comp=E,2049µm,0.4s
AST1 Astakos 0.57 68 P Pg 06 42 44.6 +0.4
AST1 S **Sb 06 42 54.0 +0.8**
comp=E,4µm,0.2s
PDO Prodromos 0.66 65 P Pg 06 42 45.9 0.0
PDO Prodromos 0.66 65 P Pg 06 42 46.0 +0.1
PDO S **Sg 06 42 54.7 +0.1**
PDO AML AML 06 42 58.9
comp=N,3463µm,0.4s
PDO AML AML 06 42 58.9
comp=E,3601µm,0.5s
VTN Vitineika 0.73 124 P Pg 06 42 47.4 +0.1
VTN Vitineika 0.73 124 P Pg 06 42 47.5 +0.1
KRI1 kERI 0.73 155 P Pg 06 42 46.3 -1.1
KRI1 S **Sb 06 42 58.3 +0.3**
comp=E,6µm,0.2s
RLS Riolos of Patr 0.86 108 P Pg 06 42 49.2 -0.7
PVO Paravola 0.91 71 P Pg 06 42 50.8 0.0
PVO Paravola 0.91 71 P Pg 06 42 51.0 +0.1
PVO S **Sb 06 43 03.7 +0.5**
PVO AML AML 06 43 07.7
comp=E,2633µm,0.3s
PVO AML AML 06 43 12.5
comp=N,1656µm,0.3s
DRO Drossia 1.08 110 P Pb 06 42 53.4 -0.6
DRO Drossia 1.08 110 P Pb 06 42 53.4 -0.6
DRO AML AML 06 43 15.4
comp=N,1762µm,0.3s
DRO AML AML 06 43 18.9
comp=E,2281µm,0.4s
LAKA Lakka 1.23 94 P Pn 06 42 56.0 -0.4
LAKA AML AML 06 43 16.2
comp=E,502µm,0.4s
LAKA AML AML 06 43 21.9
comp=N,421µm,0.6s
EVR Evrytania 1.23 61 P Pb 06 42 56.8 +0.1
EVR AML AML 06 43 27.9
comp=N,389µm,0.6s
EVR AML AML 06 43 30.4
comp=E,309µm,0.7s
AMT Artemida-Makis 1.29 128 P Pb 06 42 57.5 0.0
AMT AML AML 06 43 23.1
comp=N,1027µm,0.5s
AMT AML AML 06 43 27.7
comp=E,993µm,0.6s
TRIZ Trizonia 1.30 88 P Pn 06 42 56.6 -0.7
TRIZ Trizonia 1.30 88 P Pn 06 42 56.7 -0.5
KALE Kalithea 1.35 87 P Pn 06 42 57.9 -0.2
KALE AML AML 06 43 30.4
comp=N,546µm,0.5s
KALE AML AML 06 43 30.9
comp=E,379µm,0.4s
KLV Kalavryta, Ach 1.39 101 P Pn 06 42 58.5 -0.1
KLV AML AML 06 43 22.5
comp=N,419µm,0.3s
KLV AML AML 06 43 25.3
comp=E,296µm,0.6s
KASA Kassiopi 1.47 345 P Pg 06 43 01.8 +0.4
KEK Kerkira 1.47 341 P Pg 06 43 00.4 -0.1
AGG Agios Georgios 1.65 64 P Pb 06 43 04.7 -0.1
AGG AML AML 06 43 34.0
comp=N,269µm,0.4s
AGG AML AML 06 43 35.1
comp=E,295µm,0.4s
ITM Ithomi 1.65 133 P Pb 06 43 03.0 -0.7
PYL PYLOS 1.77 143 P Pb 06 43 04.5 -1.2
VLX Vlachokerasia 1.82 121 P Pb 06 43 07.1 +0.5
LTK Loutraki 2.03 98 P Pb 06 43 09.4 -0.7
VIL2 Platees 2.24 92 P Pb 06 43 13.0 -0.7
DID Didima 2.37 109 P Pb 06 43 14.0 -2.0
NEO Neokhori 2.40 65 P Pb 06 43 14.7 -1.7
VLY Voula,Athens 2.70 99 P Pn 06 43 18.1 +1.5
AOS Alonnisos 2.83 72 P Pn 06 43 20.2 +1.8
KTHA Kythira Island 2.95 134 P Pn 06 43 22.3 +2.3
SG1 Sgolgore (BA) 3.83 312 *e*Pn Pn 06 43 33.1 +1.0

IDC 27 06:50:58.9±1.0, 52.40N×169.60W, h0km, mb4.0/19, mb1 4.1/21, mb1mx3.9/55, mbtmp4.0/21, ML3.6/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/47, Error ellipse: s-maj=27.0km s-min=14.7km az=179.0
AEIC 27 06:51:03.4±2.8, 52.32N±0.08×169.53W±0.09, h25km±5km, ML3.4/13, mb4.0/30(NEIC), Error ellipse: s-maj=12.8km s-min=5.6km az=150.0
NEIC 27 06:51:04.4±2.5, 52.31N±0.08×169.48W±0.10, h38km±7km, Error ellipse: s-maj=13.6km s-min=6.1km az=149.0
ISC 27 06:51:04.6±0.7, 52.31N±0.10×169.49W±0.05, h40km, n77, σ1.31/72, mb4.0/20, Fox Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NIKH Nikolski High 0.77 30 Pn 06 51 18.3 -0.7
NIKH Nikolski High 0.77 30 Sn 06 51 28.8 -0.5
MGOD Makushin Gods 2.17 46 Pn 06 51 37.9 -0.3
UNV Unalaska Valle 2.37 48 Pn 06 51 40.6 -0.2
UNV Unalaska Valle 2.37 48 Sn 06 52 10.3 +1.7
AKGG Akutan Green G 2.83 47 Pn 06 51 49.1 +1.9
AKUT Akutan 2.89 49 Pn Pn 06 51 50.7 +2.7
ATKA Atka Island 2.90 270 Pn 06 51 48.1 0.0
ATKA Atka Island 2.90 270 Sn 06 52 23.0 +1.3
GSTR Great Sitkin T 4.05 270 Pn Pn 06 52 05.1 +1.0
FALS False Pass 4.42 52 Pn Pn 06 52 11.4 +2.3
ADK Adak 4.46 267 Pn Pn 06 52 10.3 +0.7
ADK Sn **Sn 06 53 00.6 +0.4**
KIWB Kanaga Island 4.75 268 Pn 06 52 14.8 +1.2
SPIA Saint Paul Isl 4.90 355 Pn Pn 06 52 18.4 +2.8
OHAK Old Harbor 10.56 56 Pn Pn 06 53 31.5 -1.7
KDAK Kodiak Island 11.12 54 Pn Pn 06 53 39.0 -1.9
0.6nm,0.3s,baz=306,slow=17,SNR=3.0
KDAK Kodiak Island 11.12 54 Pn 06 53 40.6 -0.3
GAMB Gambell 11.56 355 Pn Pn 06 53 50.4 +3.7
RSO Redoubt South 12.32 42 Pn Pn 06 53 57.9 +0.4
SEW Seward 13.56 47 Pn Pn 06 54 12.8 -1.3
SUA Susitna One 13.70 41 Pn Pn 06 54 15.9 -0.1
GHO Glory Hole Cre 14.60 41 Pn Pn 06 54 27.8 -0.4
KTH Kantishna Hill 14.90 34 P 06 54 36.6 -0.7
HIN Hinchinbrook I 15.03 48 Pn Pn 06 54 32.1 -1.8
SCM Sheep Creek Mo 15.28 43 Pn Pn 06 54 35.7 -1.6
SCM IAmb IAmb 06 54 46.3
comp=Z,22nm,1.3s
EYAK Cordova Ski Ar 15.43 48 Pn Pn 06 54 36.8 -2.3
EYAK IAmb IAmb 06 54 50.0
comp=Z,34nm,1.4s
RAGM Ragged Mountai 15.87 50 Pn Pn 06 54 43.9 -0.9
RAGM IAmb IAmb 06 55 01.4
comp=Z,28nm,1.2s
DHY Denali Highway 15.90 39 Pn Pn 06 54 46.2 +0.9
MLY Manley 15.96 30 P P 06 54 50.1 +1.1
GLB Gilahina Butte 16.64 47 Pn Pn 06 54 53.2 -1.4
GLB IAmb IAmb 06 54 55.9
comp=Z,12nm,1.4s
CCB Clear Creek Bu 16.65 34 Pn Pn 06 54 54.5 -0.1
MDM Murphy Dome 16.70 32 Pn Pn 06 54 55.7 +0.3
CRQM Cirque 16.71 49 Pn Pn 06 54 54.8 -0.8
CRQM IAmb IAmb 06 55 10.3
comp=Z,23nm,1.3s
VRDI Verde Repeater 16.72 48 Pn Pn 06 54 54.7 -1.1
VRDI IAmb IAmb 06 55 04.0
comp=Z,7.8nm,1.2s
TGL Tana Glacier 16.85 49 Pn Pn 06 54 56.9 -0.5
TGL IAmb IAmb 06 55 06.2
comp=Z,8.3nm,1.0s
MCARA McCarthy VSAT 16.97 47 Pn 06 54 59.8 +1.1
MCARA IAmb IAmb 06 55 09.1
comp=Z,7.8nm,0.9s
IL31 17.04 34 Pn 06 54 58.9 -0.6
ILAR Eielson Array 17.04 34 P Pn 06 54 58.3 -1.2
comp=Z,0.1nm,0.3s,baz=232,slow=11,SNR=11
BALM Baldy 17.16 49 Pn 06 55 00.9 -0.4
BARN Barnard Glacie 17.49 49 P Pn 06 55 05.8 +0.5
BARN IAmb IAmb 06 55 08.7
comp=Z,14nm,1.5s
CTGM Chitina Glacie 17.61 50 P Pn 06 55 07.4 +0.6
CTGM IAmb IAmb 06 55 18.6
comp=Z,18nm,1.4s
HYT Haines Junctio 19.39 51 P Pn 06 55 30.2 +1.8
DAWY Dawson 19.52 41 P P 06 55 28.4 +0.1
PEA0B Petropavlovsk- 19.81 285 P P 06 55 32.0 +0.6
PETK Petropavlovsk- 19.81 285 P P 06 55 30.4 -1.0
comp=Z,1.4nm,0.3s,baz=93,slow=13,SNR=23
SKAG Skagway 20.27 56 P Pn **06 55 38.6 +0.1**
SKAG IAmb IAmb 06 55 39.5
comp=Z,22nm,1.4s
WHY Whitehorse 20.63 53 P Pn **06 55 42.3 -0.6**
WHY IAmb IAmb 06 55 49.9
comp=Z,4.2nm,0.8s
EPYK Eagle Plains 21.49 37 P P 06 55 48.6 -0.9
EPYK IAmb IAmb 06 55 54.4
comp=Z,7.3nm,0.9s
MA2 Magadan 23.12 304 P P 06 56 06.2 -0.5
comp=Z,1.2nm,0.3s,baz=45,slow=16,SNR=2.8
INK Inuvik 23.43 33 P P 06 56 08.0 -1.8
comp=Z,1.4nm,0.4s,baz=241,slow=7.0,SNR=18
INK LR LR 07 05 46.8
comp=Z,49nm,18.4s,baz=7.0,slow=38
INK Inuvik 23.43 33 P P 06 56 08.7 -1.0
INK IAmb IAmb 06 56 16.6
comp=Z,5.2nm,1.2s
YKA Yellowknife Ar 30.34 49 P P 06 57 12.8 +0.9
comp=Z,1.0nm,0.4s,baz=273,slow=7.7,SNR=30
TIXI Tiksi 32.75 329 P P 06 57 30.9 -2.2
comp=Z,1.7nm,0.3s,baz=97,slow=3.4,SNR=3.5
KLR Kul'dur 36.41 289 P P 06 58 03.0 -1.9
comp=Z,0.9nm,0.5s,baz=75,slow=5.3,SNR=5.1
MCMT McKenzie Canyo 37.36 78 P P 06 58 14.2 +0.8
EGMT Eagleton 37.55 72 P P 06 58 16.0 +1.2
H11S1 WAKE ISLAND Hy 38.55 218 T T 07 39 33.9
baz=23,slow=76,SNR=39
H11S2 WAKE ISLAND Hy 38.56 218 T T 07 39 27.8
baz=23,slow=76,SNR=36
H11S3 WAKE ISLAND Hy 38.57 218 T T 07 39 33.8
baz=23,slow=76,SNR=19
PD31 Pinedale Array 40.48 79 P P 06 58 40.2 +0.7
PD31 IAmb IAmb 06 58 40.5
comp=Z,1.8nm,0.7s
PDAR Pinedale Array 40.48 79 P P 06 58 40.0 +0.5
comp=Z,1.3nm,0.5s,baz=303,slow=3.4,SNR=21
Q16A Castle Valley 41.80 85 P P 06 58 48.0 -2.3
X34A Smith Ranch, M 52.73 80 P P 07 00 18.3 +3.1
TXAR Lajitas Array 52.82 89 P P 07 00 15.9 0.0
comp=Z,0.6nm,0.6s,baz=301,slow=5.4,SNR=10
SCHQ Schefferville 55.53 43 P P 07 00 34.9 -0.4
comp=Z,1.7nm,0.8s,baz=324,slow=7.3,SNR=4.2
SCHQ Schefferville 55.53 43 IAmb IAmb 07 00 37.2
comp=Z,6.0nm,1.1s
ARCES ARCESS Array B 57.97 354 P P 07 00 51.2 -1.1
comp=Z,2.2nm,0.7s,baz=22,slow=8.4,SNR=9.6
BVAR Borovoye Array 63.71 324 P P 07 01 31.8 +0.2
comp=Z,2.1nm,0.4s,baz=57,slow=6.6,SNR=20
MKAR Makanchi Array 63.79 313 P P 07 01 31.6 -0.7
comp=Z,0.3nm,0.4s,baz=58,slow=6.5,SNR=5.5
FINES FINESS Array B 65.92 352 P P 07 01 45.5 -0.3
comp=Z,0.7nm,0.4s,baz=16,slow=7.5,SNR=8.4
NOA NORSAR Array B 67.00 360 P P 07 01 53.4 +0.6
comp=Z,0.4nm,0.7s,baz=342,slow=5.5,SNR=2.5
AKTO Aktyubinsk 70.03 330 P P 07 02 10.8 -0.9
comp=Z,0.5nm,0.3s,baz=24,slow=10.0,SNR=2.9
AAK Ala-Archa 70.49 315 P P 07 02 14.4 -0.5
comp=Z,1.0nm,0.5s,baz=250,slow=2.2,SNR=3.8
AKASG Malin Array Be 76.15 348 P P 07 02 46.8 -1.1
comp=Z,1.0nm,0.5s,baz=16,slow=6.0,SNR=4.6
CMAR Chiang Mai Arr 76.56 283 P P 07 02 51.0 +0.2
comp=Z,1.3nm,0.4s,baz=15,slow=8.4,SNR=4.3
GERES GERESS Array B 79.19 358 P P 07 03 05.1 +0.1
comp=Z,0.4nm,0.5s,baz=8.7,slow=7.1,SNR=3.2
ASAR Alice Springs 90.30 230 P P 07 04 01.4 +0.3
comp=Z,0.2nm,0.7s,baz=24,slow=6.0,SNR=3.2

NNC 27 06:52:40.3±4.3, 43.26N×88.18E, h0km, mb3.5, mpv3.1, 6C-3D, Error ellipse: s-maj=31.4km s-min=25.6km az=105.0, Northern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MK31 Makanchi Array 5.47 312 ⇑Pn Pn **06 54 03.2 +0.2**
0.3nm,0.3s,baz=127,slow=14,SNR=13
MK31 ⇓Sn Sn 06 55 09.4 +2.8
4.5nm,0.9s,baz=125,slow=26,SNR=7.5
MK31 ⇑Lg Lg 06 55 35.4
4.4nm,0.7s,baz=153,slow=27,SNR=3.8
MAKZ Makanchi 5.65 311 ⇑Pn Pn 06 54 05.6 +0.2
4.8nm,1.2s
MAKZ ⇓Sn Sn 06 55 11.1 +0.1
2.3nm,0.8s
MAKZ ⇑Lg Lg 06 55 39.5
2.8nm,0.8s
PDGK Podgornoye 6.34 274 ⇑Pn Pn 06 54 15.6 +0.5
1.9nm,0.5s
PDGK ⇓Sn Sn 06 55 27.9 -0.4
7.1nm,1.0s
PDGK ⇑Lg Lg 06 56 01.7
4.4nm,0.6s

IDC 27 07:25:54.1±6.2, 36.94N×71.08E, h182km±36km, mb3.0/1, mb1 3.1/5, mb1mx2.8/50, mbtmp3.6/5, MS2.9/1, Ms1 2.9/1, ms1mx2.2/21, Error ellipse: s-maj=83.5km s-min=18.8km az=153.0
NNC 27 07:25:54.9±11.0, 37.27N×70.85E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=92.3km s-min=77.6km az=163.0
ISC 27 07:25:56.1±1.9, 37.1N±0.2×71.0E±0.1, h200km, n14, σ0.77/18, 5C-1D, Afghanistan-Tajikistan border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AML Almayashu 5.46 21 P Pn 07 27 16.4 -0.2
SNR=25
UCH Uchtor 5.81 27 P Pn 07 27 20.6 -0.6
SNR=13
EKS2 Erkin-Say 5.97 20 P Pn 07 27 23.8 +0.8
SNR=14
KK31 Karatay Array 6.03 356 ⇑Pn Pn 07 27 25.0 +1.3
0.4nm,0.2s,baz=177,slow=13,SNR=20
KK31 ⇑Sn **Sn 07 28 33.1 0.0**
2.4nm,0.3s,baz=185,slow=26,SNR=21
AAK Ala-Archa 6.17 25 P Pn 07 27 25.4 -0.1
2.3nm,0.3s,baz=180,slow=7.4,SNR=23
AAK S **Sn 07 28 35.9 -0.5**
0.7nm,0.3s,baz=359,slow=20,SNR=21
AAK Ala-Archa 6.17 25 P Pn 07 27 25.8 +0.3
SNR=9.2
AAK Ala-Archa 6.17 25 ⇑Pn Pn 07 27 25.6 +0.1
3.3nm,0.3s
AAK ⇑Sn **Sn 07 28 35.7 -0.7**
8.7nm,0.6s
KBK Karagaybulak 6.34 27 P Pn 07 27 28.8 +0.9
SNR=5.4
CHMS Chumysh 6.57 25 ⇑Pn Pn 07 27 29.9 -0.8
2.2nm,0.3s
CHMS ⇓Sn **Sn 07 28 45.2 -0.5**
7.1nm,0.9s
GEYT Alibeck 10.29 279 P Pn 07 28 19.0 0.0
0.5nm,0.3s,baz=96,slow=15,SNR=3.6
GEYT S **Sn 07 30 12.7 -1.2**
0.4nm,0.3s,baz=130,slow=14,SNR=3.3
MKAR Makanchi Array 12.82 37 P Pn 07 28 50.0 -1.2
0.1nm,0.3s,baz=214,slow=11,SNR=3.4
ZALV Zalesovo Beam 19.39 25 P P 07 30 07.4 +0.8
0.5nm,0.3s,baz=219,slow=9.8,SNR=5.4
BRTR Keskin Array B 29.28 287 LR LR 07 47 38.4
comp=Z,20nm,18.3s,baz=21,slow=44
YKA Yellowknife Ar 80.67 3 P P 07 37 46.8 +0.6
0.2nm,0.6s,baz=353,slow=5.5,SNR=7.9

THE 27 07:26:48.2, 38.34N×20.43E, h11km±1km, ML3.6/8, Error ellipse: s-maj=1.1km s-min=0.3km az=255.0
ATH 27 07:26:48.1, 38.34N×20.44E, h10km±2km, ML3.3/6, Error ellipse: s-maj=2.3km s-min=0.6km az=242.0
ISC 27 07:26:48.2±0.8, 38.34N±0.02×20.47E±0.03, h10km±5km, n45, σ0.52/70, Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KEF1 Kardakata, Kep 0.06 175 P Pg 07 26 50.1 -0.2
KEF1 S **Sg 07 26 51.7 -0.1**
KEF4 Livadi, Kephal 0.09 202 P Pg 07 26 50.6 0.0
KEF4 S **Sg 07 26 52.3 +0.1**
VSK1 VASILIKIADES 0.11 47 P Pg 07 26 51.1 +0.2
VSK1 S **Sg 07 26 53.5 +0.6**
26µm,0.1s
AGT1 Agia Thekli 0.11 217 P Pg 07 26 50.8 -0.1
AGT1 S **Sg 07 26 52.7 -0.1**
78µm,0.2s
KONA Konidatara, Ke 0.12 43 P Pg 07 26 50.8 -0.3
KONA S **Sg 07 26 53.5 +0.3**
KONA AML AML 07 26 54.2
comp=N,33550µm,0.3s
KONA AML AML 07 26 57.9
comp=E,16858µm,0.4s
LXR1 Lixouri, Cepha 0.14 189 P Pg 07 26 51.6 +0.3
LXR1 S **Sg 07 26 54.1 +0.6**
LXRA Lixouri, Kepha 0.14 189 P Pg 07 26 51.5 +0.2
LXRA S **Sg 07 26 54.2 +0.7**
ARG2 Argostoli 0.16 173 P Pg 07 26 51.8 +0.1
ARG2 S **Sg 07 26 55.0 +0.9**
comp=E,40µm,0.1s
ARGA Argostoli. Kep 0.16 176 P Pg 07 26 51.6 0.0
ARGA S **Sg 07 26 54.6 +0.5**
KEF3 Kipouria, Keph 0.16 215 P Pg 07 26 51.7 0.0
KEF3 S **Sg 07 26 54.5 +0.3**
KEF2 Argostoli. Kep 0.17 174 P Pg 07 26 51.9 0.0
KEF2 S **Sg 07 26 55.1 +0.7**
VLS Valsamata 0.19 148 P Pg 07 26 52.2 +0.1
VLS S **Sg 07 26 55.5 +0.6**
comp=E,39µm,0.1s
VLS Valsamata 0.19 148 P Pg 07 26 52.3 +0.1
VLS S **Sg 07 26 55.4 +0.5**
VLS AML AML 07 26 55.6
comp=N,74020µm,0.2s
VLS AML AML 07 26 55.6
comp=E,78476µm,0.1s
EVGI Lefkada island 0.32 28 P Pg 07 26 54.9 +0.3
EVGI S **Sg 07 27 00.2 +1.3**
EVGI Lefkada island 0.32 28 P Pg 07 26 54.9 +0.3
EVGI S **Sg 07 26 59.9 +1.0**
MGNA Meganis 0.41 39 P Pg 07 26 56.3 0.0
MGNA S **Sg 07 27 02.2 +0.5**
MGNA AML AML 07 27 03.5
comp=N,9568µm,0.2s
MGNA AML AML 07 27 03.8
comp=E,10321µm,0.2s
LKD2 Lefkada island 0.48 18 P Pg 07 26 57.3 -0.2
LKD2 S **Sb 07 27 05.1 -0.7**
comp=E,2µm,0.3s
LKD2 Lefkada island 0.48 18 P Pg 07 26 57.3 -0.2
LKD2 S **Sg 07 27 04.9 +1.1**
LKD2 AML AML 07 27 07.2
comp=N,3517µm,0.3s
LKD2 AML AML 07 27 08.0
comp=E,3462µm,0.3s
TSLK Tsoukalades, L 0.51 17 P Pg 07 26 58.2 0.0
TSLK S **Sb 07 27 06.0 -0.7**
comp=E,2µm,0.3s
TSLK Tsoukalades, L 0.51 17 P Pg 07 26 58.2 0.0
TSLK S **Sg 07 27 05.7 +0.8**
AST1 Astakos 0.53 67 P Pg 07 26 58.9 +0.4
AST1 S **Sb 07 27 07.5 +0.2**
comp=E,14µm,0.2s
PDO Prodromos 0.62 65 P Pg 07 27 00.3 +0.1
PDO Prodromos 0.62 65 P Pg 07 27 00.4 +0.1
PDO S **Sb 07 27 10.0 +0.1**
PDO AML AML 07 27 11.6
comp=N,8284µm,0.3s
PDO AML AML 07 27 12.7
comp=E,8051µm,0.3s
VTN Vitineika 0.71 126 P Pg 07 27 02.0 +0.1
VTN S **Sb 07 27 13.0 +0.7**
KRI1 kERI 0.73 157 P Pg 07 27 01.6 -0.7
KRI1 S **Sb 07 27 13.6 +0.6**
comp=E,6µm,0.3s
RLS Riolos of Patr 0.84 109 P Pg 07 27 04.3 0.0
PVO Paravola 0.88 71 P Pg 07 27 05.3 +0.2
PVO Paravola 0.88 71 P Pg 07 27 05.3 +0.2
PVO AML AML 07 27 20.8
comp=E,5772µm,0.3s
PVO AML AML 07 27 21.4
comp=N,4951µm,0.2s
DRO Drossia 1.05 111 P Pb 07 27 08.3 -0.2
LAKA Lakka 1.20 94 P Pn 07 27 10.5 -0.5
IGT Igoumenitsa 1.20 355 P Pb 07 27 09.9 -1.1
EVR Evrytania 1.20 61 P Pn 07 27 10.6 -0.5
EVR Evrytania 1.20 61 P Pn 07 27 10.7 -0.5
TRIZ Trizonia 1.27 88 P Pn 07 27 11.1 -0.7
TRIZ Trizonia 1.27 88 P Pn 07 27 11.2 -0.7
ALIK Aliki, Aigiali 1.30 93 P Pn 07 27 11.6 -0.7
KALE Kalithea 1.32 87 P Pn 07 27 12.0 -0.7
KALE Kalithea 1.32 87 P Pn 07 27 12.0 -0.7
KLV Kalavryta, Ach 1.36 102 P Pn 07 27 13.0 -0.3
KLV Kalavryta, Ach 1.36 102 P Pn 07 27 13.0 -0.3
KEK Kerkira 1.47 340 P Pn 07 27 15.1 -0.5
ITM Ithomi 1.64 134 P Pb 07 27 18.5 0.0
VLX Vlachokerasia 1.80 122 P Pb 07 27 22.4 -0.2
CGL1 Ceglie Messapi 3.27 316 *e*Pn Pn 07 27 40.6 +1.1
SG1 Sgolgore (BA) 3.85 312 *e*Pn Pn 07 27 47.8 +0.4
SG1 Sn **Sn 07 28 32.7 0.0**

MAN 27 07:55:05.4, 9.41N×122.55E, h39km, mb3.8, ML2.6, MS2.1, Negros

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IDC 27 07:59:52.5±2.5, 38.81N×30.14E, h0km, mb3.3/3, mb1 3.6/6, mb1mx3.3/56, mbtmp3.3/6, ML3.4/3, MS2.6/1, Ms1 2.6/1, ms1mx2.1/32, Error ellipse: s-maj=42.3km s-min=18.2km az=20.0
ISK 27 07:59:53.9, 39.02N×30.01E, h5km, ML3.8/44
DDA 27 07:59:54.1, 39.02N×29.98E, h15km±2km, MW3.9
ISC 27 07:59:54.0±1.1, 39.01N±0.02×30.02E±0.02, h5km±9km, n106, σ1.16/122, mb3.3/3, 3C-11D, Turkey

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AFYO Afyonkarahisar 0.31 136 *i* P Pb 08 00 01.2 -0.9
AFYO *i* S **Sb 08 00 06.6 -1.0**
AFYO IAML 08 00 07.0
comp=E,28µm,0.4s
GDZ Gediz 0.43 281 *i* P Pg 08 00 02.4 +0.1
GDZ *i* S **Sg 08 00 08.5 +0.6**
GDZ IAML 08 00 09.0
comp=N,1µm,0.3s
GEDZ Gediz 0.48 274 PG Pb 08 00 04.0 -1.0
AUKIR Kırka- Seyitga 0.48 56 *i* P Pb 08 00 04.3 -0.8
AUKIR *i* S **Sb 08 00 10.8 -1.6**
AUKIR IAML 08 00 12.0
comp=N,13µm,0.2s
TVSB Tavsanli 0.62 315 PG Pg 08 00 05.9 0.0
SHUT Suhut-Afyon 0.62 138 PG Pb 08 00 07.1 -0.3
KZIL AFYON_Kizioren 0.76 173 *i* P Pb 08 00 09.5 -0.2
KZIL *i* S **Sb 08 00 20.6 +0.1**
KZIL IAML 08 00 25.0
comp=E,1µm,0.5s
KZIL IAML 08 00 26.0
comp=N,1µm,0.7s
KHAL Karahalli 0.76 213 *i* P Pg 08 00 09.0 +0.3
KHAL *i* S **Sb 08 00 19.8 -0.7**
KHAL IAML 08 00 21.0
comp=E,956nm,0.5s
KHAL IAML 08 00 25.0
comp=N,594nm,0.7s
BOLV Bolvadin 0.78 112 *i* P Pg 08 00 09.4 +0.4
BOLV *i* S **Sg 08 00 19.8 +0.6**
BOLV IAML 08 00 26.0
comp=N,3µm,0.4s
BOLV IAML 08 00 26.0
comp=E,3µm,0.5s
KHL Karahalli 0.79 210 PG Pb 08 00 10.0 -0.3
SIMA Simav-Kutahya 0.81 275 PG Pb 08 00 10.6 -0.1
ESKT Eskisehir 0.82 51 PG Pb 08 00 10.8 -0.1
USAK Uak-Merkez 0.84 250 *i* P Pg 08 00 10.4 +0.3
USAK *i* S **Sg 08 00 21.4 +0.5**
USAK IAML 08 00 31.0
comp=E,480nm,0.7s
CIFT Cifteler, Eski 0.88 66 PG Pb 08 00 12.2 +0.3
CIFT Cifteler, Eski 0.88 66 *i* P Pb 08 00 12.3 +0.3
CIFT *i* S **Sb 08 00 24.6 +0.6**
CIFT IAML 08 00 28.0
comp=N,5µm,0.5s
BORA Eskisehir 0.93 21 PG Pb 08 00 12.2 -0.5

BORA Eskisehir 0.93 21 i P Pg 08 00 11.8 -0.1
BORA i S Sg 08 00 24.4 +0.4
BORA IAML 08 00 28.0
comp=N,954nm,0.4s
BORA IAML 08 00 29.0
comp=E,1µm,0.4s
AUKUT KUTAHYA 0.94 0 i P Pg 08 00 02.5 -10
AUKUT i S Sg 08 00 07.9 -17
BASM Basmaki-Afyon 1.09 179 PN Pn 08 00 16.2 +0.1
SRCK Saricakaya, Es 1.13 24 PN Pg 08 00 15.6 -0.1
SRCK SN Sn 08 00 33.2 +0.7
SRCK Saricakaya, Es 1.13 24 i P Pg 08 00 15.4 -0.3
SRCK i S Sb 08 00 30.5 -0.6
KULA Kula-Manisa 1.17 245 PN Pg 08 00 16.5 0.0
BAGO Egridir - ISPA 1.18 149 i P Pn 08 00 17.5 +0.1
BAGO IAML 08 00 42.0
comp=N,324nm,1.3s
BAGO IAML 08 00 45.0
comp=E,224nm,0.9s
CAVI Cavuskoy 1.20 353 PN Pg 08 00 16.8 -0.2
CAVI SN Sn 08 00 35.1 +0.9
SVRH Sivrihisar-ESK 1.25 69 PN Pn 08 00 18.9 +0.7
ISP Isparta 1.25 161 PN Pn 08 00 18.4 +0.1
AUSIV SIVRIHISAR 1.26 70 PN Pn 08 00 19.1 +0.7
AUSIV SIVRIHISAR 1.26 70 i P Pn 08 00 18.8 +0.4
AUSIV i S Sn 08 00 35.8 +0.1
AUSIV IAML 08 00 41.0
comp=N,738nm,0.3s
BRDR BURDUR-Merkez 1.31 179 i P Pg 08 00 19.3 +0.1
BRDR i S Sn 08 00 39.8 +2.7
BRDR IAML 08 00 44.0
comp=E,406nm,0.6s
BRDR IAML 08 00 45.0
comp=N,571nm,0.7s
ULDT Uludag 1.32 329 i P Pg 08 00 18.8 -0.6
ULDT i S Sb 08 00 36.4 -0.3
DURS Dursunbey 1.34 297 i P Pn 08 00 19.2 -0.3
DURS i S Sn 08 00 37.4 -0.3
IZI Iznik 1.39 342 PN Pg 08 00 21.3 +0.6
KIZT Kizilcal 1.46 95 PN Pg 08 00 21.9 -0.1
GULT Gulveren 1.47 15 PN Pg 08 00 22.4 +0.2
DENT Denizli 1.48 212 PN Pg 08 00 22.7 +0.4
DOGA KONYA_Doganhis 1.58 124 i P Pb 08 00 23.4 -0.4
DOGA i S Sb 08 00 44.2 +0.1
BCK Bucak 1.61 164 PN Pg 08 00 24.9 0.0
MDNY Mudanya-Bursa 1.61 327 PN Pg 08 00 24.5 -0.5
YLV Yalova 1.63 342 PN Pg 08 00 24.9 -0.4
SPNC Sapanca-Adapaz 1.69 7 PN Pb 08 00 25.5 -0.1
MDUB Mudurnu 1.72 32 PN Pb 08 00 26.2 0.0
AKS Akhisar 1.73 266 PN Pb 08 00 26.4 +0.2
SAUV Serdivan-Sakar 1.74 8 PN Pb 08 00 26.4 -0.1
YLVH Yalova 1.75 344 PN Pb 08 00 26.6 -0.1
BALB Balikesir 1.77 291 PN Pb 08 00 27.2 +0.2
ARMT Armutlu 1.79 330 PN Pb 08 00 26.9 -0.4
HRT Hereke 1.83 352 PN Pb 08 00 27.3 -0.7
YUVA Yuva-Kibriscik 1.89 43 PN Pb 08 00 28.7 -0.3
TUZL Tuzla-Istanbul 1.89 342 PN Pb 08 00 28.5 -0.5
SAHE Sakarya_HENDEK 1.95 19 i P Pg 08 00 31.5 +0.2
AYDB Zeytinkoy-Aydi 1.98 238 PN Pb 08 00 29.9 -0.7
KIBS BOLU 1.99 45 i P Pg 08 00 32.7 +0.4
LADK Ladik-KONYA 2.01 113 PN Pb 08 00 30.3 -0.8
KORT Korkueli 2.02 172 PN Pb 08 00 30.6 -0.8
GONE Gonen-Balikesi 2.08 301 PN Pb 08 00 31.4 -0.9
KAND Kocaeli-Kandir 2.08 4 i P Pg 08 00 34.0 0.0
EDC Edincik 2.13 309 PN Pb 08 00 32.1 -1.1
HVHR Bakirkoy-Istan 2.15 336 PN Pb 08 00 32.3 -1.2
SILT Sile 2.16 352 PN Pb 08 00 32.3 -1.3
KAVV Kandilli-Istan 2.18 341 PN Pb 08 00 32.6 -1.3
ISK Istanbul-Kandi 2.18 341 PN Pb 08 00 32.5 -1.5
LOD Lodumlu 2.30 67 PN Pb 08 00 34.4 -1.6
ANTO Ankara 2.31 67 ⇓P Pg 08 00 38.2 -0.1
ANTO Ankara 2.31 67 PN Pb 08 00 34.8 -1.5
YER Yerkesik 2.32 217 PN Pb 08 00 34.8 -1.6
BGKT Bogazkoy 2.37 337 PN Pb 08 00 35.3 -1.9
CMDR Camlidere-ANKA 2.40 51 i P Pg 08 00 39.0 -1.1
BLCB Balcova 2.41 256 PN Pb 08 00 36.1 -1.8
DKL Dikili 2.43 272 PN Pb 08 00 36.3 -1.8
KEPZ Antalya-Kepez 2.45 149 i P Pg 08 00 40.0 -1.0
MRMT Marmara Adasi 2.45 311 PN Pb 08 00 36.7 -2.0
ELBA Catalca 2.46 331 i P Pg 08 00 41.0 -0.1
CTKS Kestanelik-??a 2.51 333 PN Pb 08 00 37.2 -2.3
KDZE Karadeniz Ereo 2.54 25 ⇓P Pb 08 00 39.9 -0.3
KDZE Karadeniz Ereo 2.54 25 PN Pn 08 00 37.6 +1.6
SLVT Silivri 2.62 329 PN Pn 08 00 38.6 +1.7
RKY Sarkoy-Tekirda 2.75 308 PN Pn 08 00 40.7 +1.8
URLA Izmir 2.76 257 PN Pn 08 00 40.8 +1.9
CTYL Yalikoy Yolu 2.79 332 PN Pn 08 00 41.2 +1.8
LPK Lapseki 2.86 299 PN Pn 08 00 42.2 +1.9
BRTR Keskin Array B 2.90 75 Pn Pn 08 00 41.7 +0.8
comp=N,2.3nm,0.3s,baz=249,slow=14,SNR=49
BRTR Sn Sn 08 01 15.1 -1.1
comp=N,4.4nm,0.3s,baz=239,slow=17,SNR=6.4
EZN Ezine 2.98 287 PN Pn 08 00 43.9 +2.0
GELI Tayfur-Gelibol 3.07 298 PN Pn 08 00 45.1 +2.0
KESN Edirne-Kesan 3.14 306 i P Pn 08 00 44.5 -0.1
ERIK Erikli-Kesan 3.17 303 PN Pn 08 00 46.6 +2.1
BOZC Bozcaada 3.18 286 PN Pn 08 00 46.7 +2.0
SIRC Yozgat 4.00 84 i P Pn 08 00 58.6 +2.5
DIKM Dikmen 4.79 55 ⇓P Pn 08 01 09.8 +2.9
ELND Elena 5.01 323 ⇓P Pn 08 01 10.4 +0.4
IDI Anoyia 5.53 229 LR LR 08 04 03.6
comp=N,58nm,19.0s,baz=272,slow=46
TIRR Tirgusor 5.57 348 ⇓P Pn 08 01 18.5 +1.0
PLVB Pleven 5.97 319 ⇑P Pn 08 01 24.3 +1.3
CFR Carcaliu 6.32 348 ⇓P Pn 08 01 29.5 +1.7
MLR Muntele Rosu 7.14 336 Pn Pn 08 01 42.6 +3.3
comp=N,0.3nm,0.3s,baz=186,slow=15,SNR=8.8
MLR Muntele Rosu 7.14 336 ⇓P Pn 08 01 41.0 +1.8
VRI Vrincioaia 7.27 342 ⇓P Pn 08 01 42.4 +1.5
VOIR 7.40 332 ⇓P Pn 08 01 44.0 +1.2
ARR Arges 7.50 330 ⇑P Pn 08 01 45.3 +1.1
OZUR 7.74 338 ⇓P Pn 08 01 48.4 +1.1
GZR Gura Zlata 8.34 322 ⇑P Pn 08 01 55.9 +0.3
BURAR Bucovina Array 9.28 339 ⇓P Pn 08 02 11.2 +2.6
AKASG Malin Array Be 11.70 358 Pn Pn 08 02 43.0 +1.4
comp=N,0.4nm,0.3s,baz=176,slow=12,SNR=3.5
KLMR Klimovskoe 22.66 12 e P 08 04 52.8 -3.0
KLMR AMP 08 04 59.2
comp=Z,25nm,2.2s
MKAR Makanchi Array 38.46 61 P P 08 07 16.9 +0.1
comp=Z,0.3nm,0.7s,baz=268,slow=11,SNR=2.8
YKA Yellowknife Ar 74.91 344 P P 08 11 35.6 +0.1
comp=Z,0.2nm,0.7s,baz=41,slow=6.8,SNR=3.8
ILAR Eielson Array 76.53 359 P P 08 11 45.0 +0.2
comp=Z,0.2nm,0.6s,baz=340,slow=4.8,SNR=2.4

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*BJI **27** 08:06:11.2±0.0, 36.°24N×82.°99E, h9km, ML3.8/5*
*IDC **27** 08:06:12.2±1.5, 36.°29N×82.°75E, h0km, mb3.7/7, mb1 3.9/11, mb1mx3.6/62, mbtmp3.7/11, ML3.6/3, MS2.8/3, Ms1 2.8/3, ms1mx2.5/38, Error ellipse: s-maj=28.9km s-min=24.2km az=179.0*
*NNC **27** 08:06:19.8±2.0, 36.°85N×83.°17E, h0km, mb4.1, mpv4.0, Error ellipse: s-maj=26.4km s-min=14.4km az=74.0*
ISC 27 08:06:13.6±1.3**, 36.°4N**±0.°1×**83.°30E**±0.°07**, h10km, n20, σ2§00/21, mb3.8/6, MS2.7/3, 4C-5D, Southern Xinjiang**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSH Kashi 6.59 301 Pn Pb 08 08 08.0 -0.4
KSH Sn Sb 08 09 32.5 +5.3
PDGK Podgornoye 7.54 338 ⇓Pn Pn 08 08 04.8 +1.0
9.9nm,0.9s
PDGK ⇓Sn Sn 08 09 26.9 -2.5
58nm,1.1s
PDGK ⇑Lg Lg 08 10 01.9
22nm,0.8s
WMQ Urumqi 8.17 23 eP Pn 08 08 15.3 +3.0
WMQ sP Pb 08 08 21.3 -14
WMQ S Sn 08 09 45.3 +0.6
WMQ sS Sb 08 09 56.8 -16
WMQ smax smax
comp=N,27nm,0.9s
WMQ smax smax
comp=E,21nm,1.1s
AAK Ala-Archa 9.24 315 Pn Pn 08 08 27.2 +0.1
baz=137,slow=19,SNR=2.2
AAK Lg Lg 08 10 55.9
0.5nm,0.3s,baz=338,slow=19,SNR=3.7
MK31 Makanchi Array 10.44 356 ⇓Pn Pn 08 08 43.3 -0.2
0.8nm,0.4s,baz=183,slow=12,SNR=62
MK31 ⇑Sn Sn 08 10 38.9 -1.6
2.7nm,0.6s,baz=180,slow=24,SNR=6.1
MK31 ⇑Lg Lg 08 11 35.3
9.7nm,0.9s
MKAR Makanchi Array 10.44 356 Pn Pn 08 08 42.9 -0.6
0.7nm,0.3s,baz=186,slow=12,SNR=18
MKAR Sn Sn 08 10 40.3 -0.2
0.7nm,0.3s,baz=182,slow=23,SNR=6.9
MAKZ Makanchi 10.48 355 ⇓Pn Pn 08 08 44.7 +0.8
2.2nm,0.5s
MAKZ ⇓Sn Sn 08 10 38.4 -2.9
4.0nm,0.7s
MAKZ ⇑Lg Lg 08 11 36.5
4.1nm,0.8s
GTA Gaotai 13.39 72 eP Pn 08 09 23.8 -0.1
GTA pP P 08 09 28.5 -5.0
GTA sP 08 09 31.0
ZALV Zalesovo Beam 17.61 3 P Pn 08 10 18.4 -0.5
0.4nm,0.3s,baz=194,slow=22,SNR=5.0
BVAR Borovoye Array 18.96 335 P P 08 10 33.5 -1.4
0.2nm,0.3s,baz=133,slow=10,SNR=8.0
GEYT Alibeck 20.12 282 LR LR 08 19 43.8
comp=Z,38nm,21.9s,baz=300,slow=41
SONM Songino Array 20.53 49 P Pn 08 10 57.5 +3.1
2.4nm,1.1s,baz=239,slow=10.0,SNR=10
AKTO Aktyubinsk 22.99 316 P P 08 11 15.8 -2.5
0.9nm,0.6s,baz=113,slow=5.3,SNR=3.8
PALK Pallekele 29.06 185 LR LR 08 22 41.1
comp=Z,18nm,18.8s,baz=193,slow=34
KSRS Korea Array 35.44 75 LR LR 08 30 02.9
comp=Z,12nm,19.1s,baz=180,slow=40
HFS Hagfors 49.32 322 P P 08 15 02.4 -0.1
2.3nm,1.0s,baz=93,slow=14,SNR=4.3
GERES GERESS Array B 51.02 307 P P 08 15 14.4 -1.3
0.8nm,0.7s,baz=59,slow=5.1,SNR=5.6
ILAR Eielson Array 71.82 20 P P 08 17 38.3 +2.2
0.8nm,0.8s,baz=308,slow=4.2,SNR=10.0
TORD Torodi Ar. Bea 75.63 276 P P 08 17 55.8 -3.4
0.4nm,0.5s,baz=65,slow=5.0,SNR=3.4
YKA Yellowknife Ar 80.43 8 P P 08 18 24.8 -0.3
0.6nm,0.7s,baz=340,slow=5.0,SNR=8.9

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*IDC **27** 08:09:22.1±1.3, 38.°92N×30.°14E, h0km, mb3.8/3, mb1 3.7/7, mb1mx3.4/54, mbtmp3.6/7, ML3.4/4, MS2.2/2, Ms1 2.2/2, ms1mx2.1/41, Error ellipse: s-maj=20.0km s-min=16.2km az=171.0*
*ISK **27** 08:09:22.8, 39.°03N×30.°05E, h5km, ML3.8/53*
*DDA **27** 08:09:22.7, 39.°02N×29.°98E, h12km±1km, MW3.8*
ISC 27 08:09:23.0±1.0**, 39.°00N**±0.°02×**30.°02E**±0.°02**, h7km**±8km**, n139, σ1§13**/149**, 3C-16D, Turkey**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AFYO Afyonkarahisar 0.31 134 i P Pb 08 09 29.6 -1.3
AFYO i S Sb 08 09 35.2 -1.0
AFYO IAML 08 09 37.0
comp=N,9µm,0.6s
KUTH Kutahya 0.39 0 PG Pg 08 09 31.6 +0.8
KUTH SG Sg 08 09 36.7 +0.8
GDZ Gediz 0.43 282 i P Pg 08 09 31.0 -0.3
GDZ i S Sg 08 09 37.2 +0.2
GDZ IAML 08 09 38.0
comp=N,1µm,0.3s
GDZ IAML 08 09 38.0
comp=E,2µm,0.2s
GEDZ Gediz 0.47 275 PG Pg 08 09 32.9 +0.6
AUKIR Kırka- Seyitga 0.48 55 i P Pg 08 09 32.9 +0.4
AUKIR i S Sg 08 09 39.3 +0.5
AUKIR IAML 08 09 41.0
comp=N,8µm,0.3s
AUKIR IAML 08 09 42.0
comp=E,7µm,0.3s
SHUT Suhut-Afyon 0.61 137 PG Pb 08 09 36.2 +0.1
TVSB Tavsanli 0.62 316 PG Pg 08 09 34.8 -0.3
KZIL AFYON_Kizioren 0.75 173 i P Pb 08 09 38.0 -0.5
KZIL IAML 08 09 54.0
comp=E,2µm,0.4s
KZIL IAML 08 09 55.0
comp=N,990nm,0.7s
KHAL Karahalli 0.75 213 i P Pg 08 09 37.6 0.0
KHAL i S Sb 08 09 48.3 -0.7
KHAL IAML 08 09 49.0
comp=E,1µm,0.6s
KHAL IAML 08 09 50.0
comp=N,1µm,0.4s
BOLV Bolvadin 0.78 111 i P Pg 08 09 38.2 +0.1
BOLV i S Sb 08 09 49.2 -0.7
BOLV IAML 08 09 54.0
comp=N,2µm,0.6s
BOLV IAML 08 09 55.0
comp=E,2µm,0.5s
KHL Karahalli 0.78 210 PG Pb 08 09 38.5 -0.5
SIMA Simav-Kutahya 0.81 276 PG Pb 08 09 40.2 +0.7
SIMA SG Sn 08 09 52.6 -0.7
ESKT Eskisehir 0.83 51 PG Pg 08 09 38.3 -0.7
USAK Uak-Merkez 0.83 250 i P Pg 08 09 38.9 -0.1
USAK i S Sg 08 09 50.3 +0.5
USAK IAML 08 09 51.0
comp=E,652nm,0.3s
USAK IAML 08 09 54.0
comp=N,533nm,0.5s
CIFT Cifteler, Eski 0.89 66 PG Pb 08 09 40.7 -0.1
CIFT Cifteler, Eski 0.89 66 i P Pg 08 09 40.0 -0.1
CIFT IAML 08 09 57.0
comp=N,4µm,0.5s
CIFT IAML 08 10 03.0
comp=E,3µm,0.5s
BORA Eskisehir 0.94 21 PG Pg 08 09 40.7 -0.4
BORA Eskisehir 0.94 21 i P Pg 08 09 40.3 -0.8
BORA i S Sg 08 09 53.3 0.0
BORA IAML 08 09 57.0
comp=E,1µm,0.5s
BORA IAML 08 09 57.0
comp=N,758nm,0.5s
AUKUT KUTAHYA 0.95 0 i P Pg 08 09 30.9 -10
BASM Basmaki-Afyon 1.08 179 PN Pn 08 09 45.2 +0.5
SRCK Saricakaya, Es 1.14 24 PN Pg 08 09 44.3 -0.6
SRCK Saricakaya, Es 1.14 24 i P Pg 08 09 44.1 -0.8
SRCK i S Sg 08 09 59.0 -0.8
SRCK IAML 08 10 03.0
comp=E,4µm,0.5s
SRCK IAML 08 10 04.0
comp=N,2µm,0.5s
KULA Kula-Manisa 1.17 246 PN Pn 08 09 45.9 0.0
BAGO Egridir - ISPA 1.18 149 i P Pn 08 09 46.3 +0.3
BAGO i S Sn 08 10 03.6 +1.3
BAGO IAML 08 10 10.0
comp=N,305nm,1.3s
BAGO IAML 08 10 14.0
comp=E,222nm,1.3s
CAVI Cavuskoy 1.21 354 PN Pg 08 09 46.1 -0.1
ISP Isparta 1.24 161 PN Pn 08 09 47.1 +0.2
MANT Manisa 1.25 246 i P Pg 08 09 46.7 -0.3
MANT IAML 08 10 08.0
comp=N,363nm,0.7s
MANT IAML 08 10 08.0
comp=E,363nm,1.1s
SVRH Sivrihisar-ESK 1.25 69 PN Pn 08 09 47.3 +0.3
SVRH SN Sn 08 10 05.3 +1.1
AUSIV SIVRIHISAR 1.26 69 PN Pn 08 09 47.7 +0.5
AUSIV SIVRIHISAR 1.26 69 i P Pg 08 09 47.1 -0.1
AUSIV IAML 08 10 06.0
comp=E,511nm,0.7s
AUSIV IAML 08 10 10.0
comp=N,722nm,1.0s
BRDR BURDUR-Merkez 1.30 178 i P Pb 08 09 48.2 +0.3
BRDR IAML 08 10 11.0
comp=N,667nm,0.5s
BRDR IAML 08 10 12.0
comp=E,595nm,0.5s
ULDT Uludag 1.33 329 i P Pn 08 09 48.0 -0.1
ULDT IAML 08 10 11.0
comp=E,2µm,1.1s
ULDT IAML 08 10 12.0
comp=N,894nm,0.5s
DURS Dursunbey 1.34 297 i P Pn 08 09 48.1 -0.1
DURS IAML 08 10 08.0
comp=N,1µm,0.9s
DURS IAML 08 10 11.0
comp=E,1µm,0.8s
IZI Iznik 1.40 343 PN Pg 08 09 50.0 +0.1
KIZT Kizilcal 1.46 94 PN Pg 08 09 50.8 -0.2
DENT Denizli 1.47 212 PN Pg 08 09 52.3 +1.1
GULT Gulveren 1.48 15 PN Pb 08 09 51.1 +0.2
GEYV SAKARYA_Geyve 1.50 8 i P Pn 08 09 50.4 0.0
GEYV IAML 08 10 16.0
comp=N,1µm,0.6s
GEYV IAML 08 10 16.0
comp=E,2µm,0.8s
DOGA KONYA_Doganhis 1.57 124 i P Pg 08 09 52.6 -0.6
DOGA IAML 08 10 19.0
comp=N,156nm,0.6s
DOGA IAML 08 10 21.0
comp=E,164nm,0.9s
BCK Bucak 1.60 164 PN Pg 08 09 53.8 0.0
MDNY Mudanya-Bursa 1.62 328 PN Pg 08 09 53.9 -0.2
YLV Yalova 1.64 343 PN Pb 08 09 54.1 +0.5
GOMA Golmarmara-Man 1.67 260 PN Pg 08 09 55.1 +0.1
SPNC Sapanca-Adapaz 1.70 7 PN Pb 08 09 54.7 +0.1
AKHS Akhisar 1.72 267 i P Pg 08 09 56.1 +0.1
AKS Akhisar 1.72 267 PN Pg 08 09 55.8 -0.3
MDUB Mudurnu 1.73 31 PN Pb 08 09 55.1 0.0
BTAS Taskesti 1.74 25 i P Pn 08 09 53.9 +0.2
BTAS IAML 08 10 26.0
comp=E,612nm,0.5s
BTAS IAML 08 10 27.0
comp=N,1µm,0.6s
SAUV Serdivan-Sakar 1.75 8 PN Pb 08 09 55.2 -0.3
TAVA DENIZLI_Tavas 1.76 210 i P Pb 08 09 54.8 -0.9
TAVA IAML 08 10 26.0
comp=N,271nm,1.3s
TAVA IAML 08 10 32.0
comp=E,217nm,1.3s
YLVH Yalova 1.76 344 PN Pb 08 09 55.8 +0.1
BALB Balikesir 1.78 292 PN Pb 08 09 55.9 0.0
ARMT Armutlu 1.80 331 PN Pb 08 09 56.5 +0.2
GOLH Golhisar 1.80 192 i P Pb 08 09 55.8 -0.6
GOLH IAML 08 10 42.0
comp=N,332nm,0.9s
STEP BALIKESIR_Sava 1.82 283 i P Pb 08 09 56.1 -0.6
STEP IAML 08 10 28.0
comp=N,921nm,1.0s
STEP IAML 08 10 34.0
comp=E,523nm,0.8s
LAFA Gebze-Kocaeli 1.83 344 PN Pb 08 09 56.7 -0.1
HRT Hereke 1.84 352 PN Pb 08 09 56.4 -0.6
YUVA Yuva-Kibriscik 1.89 42 PN Pb 08 09 57.2 -0.8
TUZL Tuzla-Istanbul 1.90 343 PN Pb 08 09 57.6 -0.4
SAHE Sakarya_HENDEK 1.96 19 i P Pn 08 09 57.4 +0.7
SAHE IAML 08 10 29.0
comp=N,275nm,0.8s
SAHE IAML 08 10 35.0
comp=E,187nm,0.7s
AYDB Zeytinkoy-Aydi 1.97 238 PN Pg 08 09 59.9 -1.0
KIBS BOLU 2.00 44 i P Pn 08 09 58.1 +0.8
KIBS IAML 08 10 35.0
comp=N,504nm,0.8s
KIBS IAML 08 10 44.0
comp=E,556nm,0.8s
LADK Ladik-KONYA 2.01 113 PN Pb 08 09 59.3 -0.6
KORT Korkueli 2.02 172 PN Pb 08 09 59.7 -0.4
KORT Korkueli 2.02 172 i P Pb 08 09 60.0 -0.1
KORT IAML 08 10 44.0
comp=E,211nm,1.1s
GONE Gonen-Balikesi 2.08 301 PN Pb 08 10 00.6 -0.5
KAND Kocaeli-Kandir 2.09 4 i P Pn 08 09 58.8 +0.3
KONT Konya--Tatoy 2.12 119 i P Pn 08 10 00.0 +1.1
KONT IAML 08 10 45.0
comp=E,119nm,1.0s
KONT IAML 08 10 47.0
comp=N,97nm,1.6s
EDC Edincik 2.14 310 PN Pb 08 10 01.3 -0.8
AYDN Tasoluk 2.15 232 i P Pn 08 09 58.8 -0.6
HVHR Bakirkoy-Istan 2.16 336 PN Pb 08 10 01.5 -1.0
SILT Sile 2.17 352 PN Pb 08 10 01.4 -1.2
KAVV Kandilli-Istan 2.19 341 PN Pb 08 10 01.9 -1.0
ISK Istanbul-Kandi 2.19 341 PN Pb 08 10 01.8 -1.1
AVCI Avcilar-stanb 2.23 334 PN Pb 08 10 02.9 -0.7
YIGI Dzce 2.25 29 i P Pn 08 10 01.1 +0.5
YIGI IAML 08 10 44.0
comp=N,133nm,0.7s
YIGI IAML 08 10 51.0
comp=E,151nm,0.7s
KKUL Konya-Kulu 2.26 85 i P Pg 08 10 07.0 +0.6
ZEDA zmir-Bergama 2.29 270 i P Pn 08 10 01.4 +0.2
LOD Lodumlu 2.30 67 PN Pn 08 10 03.2 +1.7
YER Yerkesik 2.31 217 PN Pb 08 10 04.2 -0.9
ANTO Ankara 2.32 67 ⇓P Pg 08 10 07.0 -0.5
ANTO Ankara 2.32 67 PN Pb 08 10 03.6 -1.6
KLYT Kilyos 2.37 342 PN Pb 08 10 04.4 -1.6
BGKT Bogazkoy 2.38 337 PN Pb 08 10 04.5 -1.6
BCAM Yenicaga 2.40 40 i P Pn 08 10 03.1 +0.3
TURN Turunc 2.40 208 i P Pg 08 10 11.4 +2.3
BLCB Balcova 2.41 256 PN Pb 08 10 05.5 -1.2
CMDR Camlidere-ANKA 2.41 51 i P Pn 08 10 01.7 -1.3
DKL Dikili 2.42 273 PN Pb 08 10 05.8 -1.2
DALY Dalyan (Mula) 2.43 207 i P Pg 08 10 08.7 -0.9
KEPZ Antalya-Kepez 2.44 149 i P Pn 08 10 05.0 +1.6
KEPZ IAML 08 10 45.0
comp=N,97nm,1.6s
KEPZ IAML 08 10 57.0
comp=E,121nm,1.1s
MRMT Marmara Adasi 2.46 311 PN Pb 08 10 05.9 -1.7
ELBA Catalca 2.46 331 i P Pn 08 10 04.3 +0.7
FETY Fethiye 2.48 198 i P Pb 08 10 06.2 -1.7
FETY IAML 08 10 53.0
comp=E,46nm,1.0s
CTKS Kestanelik-??a 2.51 333 PN Pn 08 10 06.5 +2.2
KRBG Karabiga-Canak 2.52 304 PN Pb 08 10 06.7 -1.8
BOTS Marmara Eregli 2.53 322 PN Pb 08 10 06.8 -1.9
GCAM G?zelcaml? 2.55 240 PN Pb 08 10 07.2 -1.8
GCAM G?zelcaml? 2.55 240 i P Pg 08 10 12.9 +1.1
KDZE Karadeniz Ereo 2.55 25 ⇑P Pb 08 10 09.5 +0.3
KDZE Karadeniz Ereo 2.55 25 PN Pn 08 10 06.7 +1.8
SLVT Silivri 2.62 329 PN Pn 08 10 08.1 +2.3
URLA Izmir 2.75 258 PN Pb 08 10 10.5 -2.1
RKY Sarkoy-Tekirda 2.76 308 PN Pn 08 10 10.1 +2.4
AKAS Kas 2.78 187 i P Pb 08 10 10.4 -2.8
CTYL Yalikoy Yolu 2.80 332 PN Pn 08 10 10.6 +2.4
LPK Lapseki 2.86 300 PN Pb 08 10 11.9 -2.5
BRTR Keskin Array B 2.90 74 Pn Pn 08 10 10.3 +0.6
comp=E,1.5nm,0.3s,baz=251,slow=14,SNR=27
BRTR Sn Sn 08 10 45.3 +0.4
comp=E,2.7nm,0.3s,baz=255,slow=19,SNR=6.0
BRTR LR LR 08 10 54.5
comp=E,17nm,19.8s,baz=224,slow=33
EZN Ezine 2.98 287 PN Pn 08 10 13.3 +2.7
KIRS Kırehir-Merke 3.04 86 i P Pn 08 10 12.7 +1.1
GELI Tayfur-Gelibol 3.07 298 PN Pn 08 10 14.5 +2.6
ERIK Erikli-Kesan 3.17 303 PN Pn 08 10 15.9 +2.6
BOZC Bozcaada 3.18 287 PN Pn 08 10 16.2 +2.7
PHSR Pinarhisar 3.24 325 PN Pn 08 10 16.7 +2.4
BZK Bozkurt 4.24 45 ⇑P Pn 08 10 32.8 +4.8
ELND Elena 5.02 323 ⇓P Pn 08 10 39.6 +0.8
IDI Anoyia 5.52 229 Pn Pn 08 10 46.8 +1.0
comp=E,0.2nm,0.3s,baz=47,slow=18,SNR=2.1
TIRR Tirgusor 5.58 348 ⇓P Pn 08 10 47.2 +0.7
HARR Harsova 5.89 345 ⇓P Pn 08 10 51.3 +0.6
VTS Vitosha 6.29 307 ⇓P Pn 08 10 55.2 -1.1
CFR Carcaliu 6.33 348 ⇑P Pn 08 10 56.9 +0.2
MLR Muntele Rosu 7.15 336 Pn Pn 08 11 10.0 +1.9
comp=E,0.5nm,0.3s,baz=195,slow=13,SNR=11
MLR Muntele Rosu 7.15 336 ⇓P Pn 08 11 10.0 +1.9
VRI Vrincioaia 7.28 342 ⇓P Pn 08 11 11.0 +1.3
PLOR Plostina 7.28 341 ⇓P Pn 08 11 11.4 +1.5
MMAI Mount Meron Ar 7.40 142 LR LR 08 14 52.8
comp=E,58nm,20.9s,baz=340,slow=46
VOIR 7.41 332 ⇓P Pn 08 11 12.7 +1.1
OZUR 7.75 338 ⇓P Pn 08 11 18.2 +2.0
DOPR Dopca 7.75 335 ⇓P Pn 08 11 17.4 +1.1
LOT Lotru 7.93 326 ⇓P Pn 08 11 19.9 +1.1
GZR Gura Zlata 8.34 322 ⇓P Pn 08 11 24.4 -0.1
MDVR Moldovita 8.46 316 ⇓P Pn 08 11 25.0 -1.0
SORM Soroca 9.21 353 ⇓P Pn 08 11 38.5 +2.3
DRGR 9.45 328 ⇓P Pn 08 11 40.0 +0.4
AKASG Malin Array Be 11.71 358 Pn Pn 08 12 12.2 +1.8
comp=E,0.5nm,0.3s,baz=170,slow=11,SNR=2.3
KLMR Klimovskoe 22.67 12 e P 08 14 23.9 -0.7
KLMR AMP 08 14 28.7
comp=Z,28nm,1.8s
ARU Arti 25.65 38 P P 08 14 52.7 -0.4
comp=Z,1.7nm,0.2s,baz=264,slow=10,SNR=3.2
TORD Torodi Ar. Bea 35.92 232 P P 08 16 24.1 +0.1
comp=Z,0.9nm,0.8s,baz=38,slow=8.7,SNR=4.2
MKAR Makanchi Array 38.46 61 P P 08 16 45.5 +0.1
comp=Z,0.3nm,0.6s,baz=270,slow=6.7,SNR=3.7

STR 27 08:11:15.6±0.8, 46°N±3°×±°, h0km, MLv2.1/6
LDG 27 08:11:16.3±0.1, 45°.92N×7°.98E, h8km, Md2.4/2, Ml2.4/14, Error ellipse: s-maj=2.0km s-min=1.2km az=106.0
ZUR 27 08:11:16.3, 45°.93N×7°.98E, h8km±1km, MLh2.1/48, Error ellipse: s-maj=2.0km s-min=0.8km az=138.0
ROM 27 08:11:16.1±0.1, 45°.952N±0°.007×7°.92E±0°.01, h12km, ML2.1/6, Error ellipse: s-maj=1.2km s-min=0.7km az=295.0
GEN 27 08:11:16.4, 45°.95N×7°.94E, h10km, Ml2.1
VIE 27 08:11:16.5±1.2, 45°.94N×8°.04E, h8km, ml2.5/1, Error ellipse: s-maj=9.7km s-min=6.3km az=151.0 34 km S of Monte-Rosa Gebirge
ISC 27 08:11:16.4±0.8, 45°.93N±0°.02×7°.98E±0°.02, h12km±4km, n70, σ0§87/130, 24C-14D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res
SATI	Passo dei Sala	0.09	234	⇑Pg	Pg	08 11 19.5	-0.1
	3.5nm,SNR=42						
SATI				⇑Pg	Pg	08 11 19.5	-0.1
SATI				Sg	Sg	08 11 21.2	-0.7
SATI	Passo dei Sala	0.09	234	P	Pg	08 11 19.4	-0.1
SATI				S	Sg	08 11 21.1	-0.7
SATI				AML	AML		
	comp=E,5560µm,0.1s						
SATI				AML	AML		
	comp=N,5415µm,0.1s						
SATI	Passo dei Sala	0.09	234	P	Pg	08 11 19.5	-0.1
SATI				S	Sg	08 11 21.2	-0.7
MMK	Mattmark	0.12	356	⇑Pg	Pg	08 11 19.5	-0.3
MMK				⇑Pg	Pg	08 11 19.5	-0.3
	comp=N,2.2nm,SNR=22						
MMK				Sg	Sg	08 11 21.3	-1.0
MMK	Mattmark	0.12	356	P	Pg	08 11 19.5	-0.3
MMK				S	Sg	08 11 21.2	-1.1
MMK				AML	AML		
	comp=E,2190µm,0.3s						
MMK				AML	AML		
	comp=N,2230µm,0.4s						
SNIB	St. Niklaus Ba	0.28	334	⇑Pg	Pg	08 11 21.9	-0.3
SNIB				⇑Pg	Pg	08 11 21.9	-0.3
	comp=N,1.6nm,SNR=7.6						
SGRA	Graechen Ausbl	0.28	340	⇑Pg	Pg	08 11 22.0	-0.3
SGRA				⇑Pg	Pg	08 11 22.0	-0.3
	comp=N,0.8nm,SNR=3.6						
EMBD	Embd, Matterta	0.30	341	⇑Pg	Pg	08 11 22.3	-0.4
EMBD				⇑Pg	Pg	08 11 22.3	-0.4
	comp=N,0.3nm,SNR=4.2						
SIMPL	Simplonpass	0.31	6	⇑Pg	Pg	08 11 22.3	-0.6
SIMPL				⇑Pg	Pg	08 11 22.3	-0.6
	comp=N,0.3nm,SNR=3.2						
SVIT	Visp-Terbiners	0.37	350	Pg	Pg	08 11 23.4	-0.4
	comp=N,1.0nm,SNR=4.6						
SVIT				Pg	Pg	08 11 23.4	-0.4
SVIO	Visp Obere Sta	0.37	350	⇓Pg	Pg	08 11 23.4	-0.5
	comp=N,0.6nm,SNR=3.7						
SVIO				⇓Pg	Pg	08 11 23.4	-0.5
VANNI	Vissoie, Val d	0.39	317	⇑Pg	Pg	08 11 23.8	-0.4
VANNI				⇑Pg	Pg	08 11 23.8	-0.4
	comp=N,0.8nm,SNR=10						
VANNI				Sg	Sg	08 11 28.4	-1.0
DIX	Grande Dixence	0.42	291	⇓Pg	Pg	08 11 24.4	-0.5
	comp=N,0.5nm,SNR=3.9						
DIX				⇓Pg	Pg	08 11 24.4	-0.5
DIX	Grande Dixence	0.42	291	P	Pg	08 11 24.4	-0.5
DIX				S	Sg	08 11 29.6	-1.1
DIX				AML	AML		
	comp=E,144µm,1.4s						
DIX				AML	AML		
	comp=N,229µm,0.3s						
CIRO	Champorcher	0.43	221	⇑Pg	Pg	08 11 24.9	-0.2
CIRO				⇑Pg	Pg	08 11 24.9	-0.2
	comp=N,0.5nm,SNR=4.8						
CIRO				Sg	Sg	08 11 30.6	-0.4
CIRO	Champorcher	0.43	221	P	Pg	08 11 24.9	-0.2
CIRO				S	Sg	08 11 30.6	-0.4
CIRO				AML	AML		
	comp=E,518µm,0.4s						
CIRO				AML	AML		
	comp=N,458µm,0.3s						
CIRO	Champorcher	0.43	221	P	Pg	08 11 24.9	-0.2
CIRO				S	Sg	08 11 30.6	-0.4
TRAV	Traversella	0.45	201	⇑Pg	Pg	08 11 25.3	+0.1
	comp=N,1.2nm,SNR=8.3						
TRAV				⇑Pg	Pg	08 11 25.3	+0.1
TRAV	Traversella	0.45	201	P	Pg	08 11 25.3	+0.1
TRAV				S	Sg	08 11 31.4	+0.1
TRAV				AML	AML		
	comp=E,458µm,0.5s						
TRAV				AML	AML		
	comp=N,530µm,0.1s						
TRAV				AML	AML		
	comp=E,458µm,0.5s						
TRAV	Traversella	0.45	201	P	Pg	08 11 25.3	+0.1
TRAV				S	Sg	08 11 31.3	+0.1
LAUCH	Lauchernalp	0.51	344	⇓Pg	Pg	08 11 26.2	-0.2
	comp=E,0.3nm,SNR=2.7						
LAUCH				⇓Pg	Pg	08 11 26.2	-0.2
FIESA	Fiescheralp	0.51	10	⇑Pg	Pg	08 11 26.1	-0.4
	comp=E,0.1nm,SNR=1.5						
FIESA				⇑Pg	Pg	08 11 26.1	-0.4
LKBD	Leukerbad	0.52	332	⇓Pg	Pg	08 11 26.4	-0.3
	comp=E,0.3nm,SNR=2.0						
LKBD				⇓Pg	Pg	08 11 26.4	-0.3
SIOV	Sion-Valere	0.52	306	⇓Pg	Pg	08 11 26.3	-0.4
SIOV				⇓Pg	Pg	08 11 26.3	-0.4
	comp=E,0.2nm,SNR=1.7						
REMY	Saint-Rhmy-en	0.58	261	⇓Pg	Pg	08 11 27.2	-0.6
REMY				⇓Pg	Pg	08 11 27.2	-0.6
	comp=E,0.2nm,SNR=1.9						
REMY	Saint-Rhmy-en	0.58	261	P	Pg	08 11 27.2	-0.6
REMY				AML	AML		
	comp=E,272µm,0.9s						
REMY				AML	AML		
	comp=N,297µm,0.2s						
REMY	Saint-Rhmy-en	0.58	261	P	Pg	08 11 27.2	-0.6
REMY				S	Sg	08 11 35.1	-0.4
SENIN	Lac Senin/Sane	0.64	313	⇓Pg	Pg	08 11 28.6	-0.4
SENIN				⇓Pg	Pg	08 11 28.6	-0.4
	comp=N,0.1nm,SNR=1.1						
FUSIO	Fusio	0.71	42	Pg	Pg	08 11 29.7	-0.5
FUSIO				Pg	Pg	08 11 29.7	-0.5
	comp=N,0.3nm,SNR=4.1						
FUSIO	Fusio	0.71	42	P	Pg	08 11 29.7	-0.5
FUSIO				AML	AML		
	comp=E,106µm,0.2s						
FUSIO				AML	AML		
	comp=N,93µm,0.5s						
SALAN	Lac Salanfe	0.73	287	⇑Pg	Pg	08 11 30.3	-0.3
	comp=N,0.2nm,SNR=1.2						
SALAN				⇑Pg	Pg	08 11 30.3	-0.3
MUGIO	Muggio	0.74	90	P	Pg	08 11 30.9	0.0
LSD	Lago del Serru	0.75	232	⇑Pg	Pg	08 11 30.5	-0.6
	comp=N,0.4nm,SNR=4.2						
LSD				⇑Pg	Pg	08 11 30.5	-0.6
LSD	Lago del Serru	0.75	232	P	Pg	08 11 30.4	-0.6
LSD				S	Sg	08 11 39.7	-1.3
LSD				AML	AML		
	comp=E,130µm,0.9s						
LSD				AML	AML		
	comp=N,136µm,1.4s						
LSD	Lago del Serru	0.75	232	P	Pg	08 11 30.5	-0.6
LSD				S	Sg	08 11 39.4	-1.6
HASLI	Hasliberg/Brie	0.84	8	Pg	Pg	08 11 32.1	-0.5
	comp=N,0.2nm,SNR=1.2						
HASLI				Pg	Pg	08 11 32.1	-0.5
NALPS	Val Nalps	0.85	39	Pg	Pg	08 11 32.5	-0.5
NALPS				Pg	Pg	08 11 32.5	-0.5
	comp=N,0.2nm,SNR=2.6						
MONC	Moncucco Torin	0.86	182	P	Pb	08 11 33.4	+0.2
RSP	Reno Superiore	0.93	213	P	Pg	08 11 33.5	-0.8
RSP				S	Sg	08 11 46.5	+0.1
RSP				AML	AML		
	comp=N,80µm,1.0s						
RSP				AML	AML		
	comp=E,88µm,1.3s						
RSP	Reno Superiore	0.93	213	P	Pg	08 11 33.5	-0.8
RSP				S	Sg	08 11 45.4	-1.1
LPG	La Plagne	0.96	244	ePg	Pg	08 11 34.0	-1.0
LPG				eSg	Sg	08 11 45.6	-2.0
	comp=E,15nm,0.2s						
LPL	La Plagne	0.96	245	ePg	Pg	08 11 34.0	-1.0
LPL				eSg	Sg	08 11 47.1	-0.5
	comp=E,18nm,0.3s						
RSL	Roselend	0.97	256	Pg	Pg	08 11 34.6	-0.6
BNI	Bardonecchia	1.27	227	P	Pn	08 11 39.9	-0.1
MBDF	Montbardon	1.47	216	ePg	Pn	08 11 43.4	+0.5
MBDF				eSg	Sb	08 12 02.9	+0.4
	comp=E,5.8nm,0.3s						
CABF	La Chapelle	1.48	298	ePg	Pb	08 11 44.1	+0.3
CABF				eSg	Sg	08 12 04.8	+0.8
	comp=E,4.3nm,0.2s						
CHMF	Charmoille	1.60	326	Pn	Pb	08 11 45.9	-0.1
CHMF				Pg	Pg	08 11 47.5	+0.2
CHMF				Sn	Sg	08 12 07.9	-0.1
OG35	Corcelles	1.68	275	Pg	Pg	08 11 49.3	+0.6
OG35				Sn	Sg	08 12 10.2	-0.2
ORIF	Oris-en-Rattie	1.79	236	ePg	Pb	08 11 49.6	+0.5
ORIF				eSg	Sb	08 12 12.3	+0.8
	comp=E,8.1nm,0.5s						
ORIF	Oris-en-Rattie	1.79	236	Pg	Pb	08 11 49.8	+0.7
OGAG	Argentiere	1.79	215	Pg	Pn	08 11 45.1	-2.1
DAVA	Damuels	1.89	43	Pg	Pg	08 11 52.9	+0.3
	comp=E,1.7nm,0.1s						
DAVA				eSg	Sg	08 12 17.0	-0.2
	comp=E,7.1nm,0.2s						
HINF	Hinteralfeld	2.04	338	ePn	Pn	08 11 51.4	+0.8
HINF	Hinteralfeld	2.04	338	ePg	Pg	08 11 54.9	-0.6
HINF				eSg	Sg	08 12 20.9	-1.1
	comp=E,3.9nm,0.3s						
SBF	Sospel	2.10	191	ePn	Pn	08 11 50.3	-1.1
SBF	Sospel	2.10	191	ePg	Pg	08 11 55.9	-0.8
SBF				eSn	Sn	08 12 15.7	-1.8
CALF	Calern	2.30	199	Pn	Pn	08 11 55.4	+1.1
HAU	Haudompre	2.36	332	ePg	Pg	08 12 00.5	-1.1
HAU				eSg	Sg	08 12 31.1	-1.0
	comp=E,8.5nm,0.3s						
CDF	Champ du Feu	2.53	349	ePg	Pg	08 12 04.0	-0.9
CDF				eSg	Sg	08 12 36.8	-0.9
	comp=E,2.6nm,0.4s						
FRF	La Foret Royal	2.55	202	ePg	Pb	08 12 03.4	+1.3
FRF				eSg	Sg	08 12 36.1	-2.2
	comp=E,1.6nm,0.2s						
VIVF	Saint-Julien-l	2.56	246	ePg	Pb	08 12 04.0	+1.7
VIVF				eSg	Sb	08 12 35.5	+1.7
	comp=E,2.9nm,0.3s						
SMRF	Simiane la Rot	2.59	222	ePg	Pg	08 12 05.4	-0.7
LMR	La Mourre	2.80	202	ePg	Pb	08 12 07.8	+1.5
LMR				eSn	Sn	08 12 32.5	-2.1
LMR				eSg	Sb	08 12 42.8	+2.3
	comp=E,2.7nm,0.4s						
SMF	Signal de Mont	2.96	286	ePn	Pn	08 12 04.4	+1.3
SMF				eSg	Sb	08 12 48.1	+3.1
	comp=E,2.5nm,0.2s						
LOR	Lormes	3.14	297	ePg	Pg	08 12 15.0	-1.5
	baz=116						
LOR				eSg	Sg	08 12 55.5	-1.7
	comp=E,2.1nm,0.3s,baz=116						
SSF	Saint Saulge	3.29	292	ePg	Pg	08 12 18.8	-0.6
SSF				eSg	Sg	08 13 00.3	-1.7
AVF	Avril sur Loir	3.31	287	ePn	Pn	08 12 08.7	+0.7
BGF	Bois d'Agland	3.61	282	ePn	Pn	08 12 12.7	+0.5
TCF	Toulx Ste Croi	4.03	277	ePn	Pn	08 12 18.6	+0.7
CAF	Calviac	4.28	259	ePn	Pn	08 12 22.1	+0.7

SJA 27 08:11:16.4±0.6, 32°.89S×70°.37W, h107km±3km, ML3.4, MW3.7
GUC 27 08:11:17.9±0.6, 32°.79S×70°.34W, h88km±3km, ML3.5
ISC 27 08:11:18.4±1.9, 32°.84S±0°.05×70°.37W±0°.04, h99km±15km, n30, σ0§66/50, 6C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res
PEL	Peldehue	0.40	221	eP	Pn	08 11 32.6	-0.9
PEL				eS	Sn	08 11 44.1	-0.7
PEL				IAML		08 11 45.4	
	comp=E,4µm,0.4s						
FCH	Farellones	0.49	172	eP	Pn	08 11 34.0	-0.5
FCH				iS	Sn	08 11 46.4	+0.1
FCH				IAML		08 11 47.3	
	comp=E,4µm,0.2s						
ROCH	El Roble	0.55	256	⇑iP	Pn	08 11 34.5	-0.3
ROCH				iS	Sn	08 11 47.2	+0.3
ROCH				IAML		08 11 49.1	
	comp=N,3µm,0.4s						
ROC1	El Roble	0.56	256	iP	Pn	08 11 34.5	-0.4
ROC1				eS	Sn	08 11 47.4	+0.3
CLCH	Cerro Calan	0.57	194	⇑iP	Pn	08 11 34.5	-0.2
CLCH				eS	Sn	08 11 46.4	-0.5
CLCH				IAML		08 11 48.4	
	comp=E,3µm,0.6s						
STL	Santa Lucia	0.64	201	⇑iP	Pn	08 11 35.0	-0.2
STL				iS	Sn	08 11 47.9	+0.1
FSR	Penalolen	0.65	192	eP	Pn	08 11 34.8	-0.5
FSR				iS	Sn	08 11 49.6	+1.6
MT03	Universidad Ad	0.66	190	eP	Pn	08 11 35.3	-0.2
MT03				iS	Sn	08 11 48.9	+0.6
ANTU	Antumapu	0.76	197	eP	Pn	08 11 37.2	+0.9
ANTU				eS	Sn	08 11 51.2	+1.5
ANTU				IAML		08 11 52.0	
	comp=E,2µm,0.2s						
MT02	Curacav	0.77	237	⇑iP	Pn	08 11 35.9	-0.4
MT02				iS	Sn	08 11 49.7	-0.2
CO04	Los Peladeros	0.95	327	⇑iP	Pn	08 11 38.1	-0.4
CO04				iS	Sn	08 11 53.4	-0.1
CO04				IAML		08 11 54.7	
	comp=E,2µm,0.2s						
LMEL	Las Melosas	1.01	172	eP	Pn	08 11 39.1	+0.1
LMEL				iS	Sn	08 11 55.6	+1.0
LMEL				IAML		08 11 59.7	
	comp=N,1µm,0.4s						
VA01	Torpederas	1.09	260	eP	Pn	08 11 39.5	-0.1
VA01				iS	Sn	08 11 55.9	+0.2
ARCO	CERRO ARCO	1.21	90	⇑iP	Pn	08 11 41.0	-0.2
ARCO				eS	Sn	08 11 58.9	+0.3
ARCO				IAML		08 12 02.5	
	comp=Z,695nm,0.5s						
ASAL	Salagasta	1.32	79	iP	Pn	08 11 42.2	-0.3
ASAL				eS	Sn	08 12 01.1	+0.5
AAGR	Agrelo	1.32	101	iP	Pn	08 11 42.1	-0.4
AAGR				eS	Sn	08 12 00.7	0.0
RTLS	Leoncito	1.38	41	iP	Pn	08 11 43.7	+0.3
RTLS				eS	Sn	08 12 04.0	+1.6
RTLS				IAML		08 12 04.2	
	comp=Z,215nm,0.2s						
CO02	Combarbal	1.72	342	eP	Pn	08 11 47.0	-0.5
CO02				iS	Sn	08 12 09.4	-0.1
CO02				IAML		08 12 12.2	
	comp=N,1µm,0.2s						
RTCV	Cerro Valdivia	1.83	58	iP	Pn	08 11 48.5	-0.3
RTCV				eS	Sn	08 12 12.4	+0.5
ZON	Zonda	1.93	48	iP	Pn	08 11 50.2	+0.1
ZON				IAML		08 12 16.5	
	comp=Z,120nm,0.5s						
CO03	El Pedregal	2.02	352	⇓iP	Pn	08 11 51.7	+0.5
CO03				iS	Sn	08 12 16.8	+0.5
CO03				IAML		08 12 18.9	
	comp=E,341nm,0.3s						
CFA	Coronel Fontan	2.19	56	iP	Pn	08 11 53.1	-0.3
RTLL	Cerro Villicun	2.21	47	iP	Pn	08 11 53.5	-0.2
RTLL				IAML		08 12 21.2	
	comp=E,650nm,0.4s						
AMOG	MOGNA	2.48	41	iP	Pn	08 11 57.2	-0.1
ACCO	Cerro Coronel	2.51	27	iP	Pn	08 11 58.0	+0.1
ACAN	Cantantal	2.75	19	iP	Pn	08 11 59.9	-0.8
AROD	Rodeo	2.77	16	iP	Pn	08 12 02.1	+0.6
ACDV	Cuesta del Vie	2.87	22	iP	Pn	08 12 03.0	+0.5
APLL	PUNTA DE LOS L	4.08	54	iP	Pn	08 12 17.3	-1.5
APLL				IAML		08 12 17.8	
	comp=Z,36nm,0.1s						
ACLC	CERRO LA CRUZ	4.49	42	iP	Pn	08 12 22.9	-1.5

LJU 27 08:12:55.9, 45°.74N×14°.87E, h2km, ML0.1, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res
VISS	Visnje	0.07	338	⇓iPg	Pg	08 12 57.3	0.0
VISS				iSg	Sg	08 12 58.3	+0.2
	comp=Z,6.0nm,0.1s						

IDC 27 08:24:26.4±2.9, 6°.97N×94°.66E, h213km±28km, mb3.4/9, mb1 3.5/11, mb1mx3.3/33, mbtmp4.0/11, Error ellipse: s-maj=36.6km s-min=13.8km az=58.0
ISC 27 08:24:26.4±0.9, 7°.0N±0°.1×94°.6E±0°.2, h213km, n12, σ0§51/12, mb3.5/9, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res
PSI	Prapat	5.94	134	P	Pn	08 25 53.5	+0.2
	5.3nm,0.3s,baz=284,slow=7.8,SNR=19						
CMAR	Chiang Mai Arr	12.19	20	P	Pn	08 27 13.9	+0.5
	0.5nm,0.3s,baz=213,slow=12,SNR=14						
MKAR	Makanchi Array	41.09	347	P	P	08 31 48.8	-0.6
	0.5nm,0.4s,baz=157,slow=8.5,SNR=9.1						
SONM	Songino Array	41.96	12	P	P	08 31 56.1	-0.5
	0.8nm,0.5s,baz=189,slow=8.5,SNR=9.4						
GEYT	Alibeck	45.21	318	P	P	08 32 23.4	+0.9
	1.9nm,0.4s,baz=99,slow=9.2,SNR=4.1						
WRA	Warramunga Arr	47.34	125	P	P	08 32 39.5	+0.2
	0.7nm,0.4s,baz=304,slow=8.3,SNR=1.7						
ZALV	Zalesovo Beam	47.53	352	P	P	08 32 40.1	-0.1
	1.6nm,0.3s,baz=179,slow=7.2,SNR=7.2						
ASAR	Alice Springs	48.96	130	P	P	08 32 51.3	-0.4
	0.4nm,0.6s,baz=301,slow=7.0,SNR=7.1						
BRTR	Keskin Array B	63.39	311	P	P	08 34 33.7	+0.1
	0.7nm,0.8s,baz=125,slow=11,SNR=4.2						
FINES	FINESS Array B	73.75	332	P	P	08 35 36.4	-0.6
	0.5nm,0.3s,baz=101,slow=7.2,SNR=5.6						
ARCES	ARCESS Array B	76.29	340	P	P	08 35 51.2	-0.2
	2.0nm,0.9s,baz=97,slow=7.4,SNR=3.4						
TXAR	Lajitas Array	139.86	25	PKP	PKPdf	08 43 30.0	0.0
	0.1nm,0.3s,baz=278,slow=1.2,SNR=3.9						

NIED 27 08:54:00, 44°.60N×148°.80E, h53km, Mw4.1 Best double couple: $M_0$1.58000×10^{15} NP1:ϕ_s294.00000°, δ60.00000°, λ-44.00000°. NP2:ϕ_s50.00000°, δ53.00000°, λ-141.00000°.
SKHL 27 08:54:40.4±0.2, 44°.35N×149°.03E, h61km±9km, mb4.6/11
JMA 27 08:54:40.3±0.5, 44°.55N×148°.83E, h30km, M4.7
MOS 27 08:54:40.2±1.2, 44°.42N×148°.86E, h58km, mb4.3/9, Error ellipse: s-maj=7.7km s-min=6.1km az=66.1
NEIC 27 08:54:42.9±1.4, 44°.47N±0°.08×148°.8E±0°.1, h62km±7km, mb4.2/19, Error ellipse: s-maj=15.3km s-min=6.8km az=132.0
IDC 27 08:54:43.9±0.7, 44°.44N×148°.69E, h70km±7km, mb3.5/20, mb1 3.7/25, mb1mx3.6/50, mbtmp3.8/25, MS3.1/9, Ms1 3.1/9, ms1mx2.8/50, Error ellipse: s-maj=15.8km s-min=11.9km az=156.0
ISC 27 08:54:41.7±0.7, 44°.35N±0°.05×148°.85E±0°.06, h56km±6km, n148, σ1§44/169, mb4.0/32, MS3.3/5, 8C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res
KUR	Kuril'sk	1.13	322	iP	Pn	08 54 59.5	-1.8
KUR				AMB	AMB	08 55 00.1	
	530nm,0.5s						
KUR				iS	Sn	08 55 13.7	-2.2
KUR				A	A	08 55 19.3	
	2µm,0.5s						
KUR				A	A	08 55 19.3	
	1µm,0.5s						
KUR	Kuril'sk	1.13	322c	iPN	Pn	08 54 59.5	-1.8
KUR				iS	Sn	08 55 14.0	-1.9
KUR				pmax	pmax		
	comp=N,267nm,0.5s						
KUR				pmax	pmax		
	comp=E,219nm,0.5s						
KUR				pmax	pmax		
	comp=Z,1µm,0.5s						
KUR				smax	smax		
	comp=N,2µm,0.4s						
KUR				smax	smax		
	comp=E,1µm,0.4s						
SHO	Shikotan	1.53	252	eP	Pn	08 55 06.0	-0.7
SHO				AMB	AMB	08 55 08.0	
	comp=E,290nm,0.2s						
SHO				eS	Sn	08 55 25.4	-0.2
SHO				A	A	08 55 29.9	
	comp=E,1µm,0.4s						
SHO				A	A	08 55 29.9	
	comp=E,2µm,0.4s						
SHO	Shikotan	1.53	252	ePN	Pn	08 55 06.7	0.0
SHO				eS	Sn	08 55 24.4	-1.2
SHO				pmax	pmax		
	comp=N,116nm,0.4s						
SHO				pmax	pmax		
	comp=Z,291nm,0.4s						
SHO				pmax	pmax		
	comp=E,77nm,0.3s						
SHO				smax	smax		
	comp=N,1µm,0.2s						
SHO				smax	smax		
	comp=E,4µm,0.2s						
YUK	Yuzh-Kuril'sk	2.17	263	eP	Pn	08 55 16.0	+0.5
YUK				AMB	AMB	08 55 17.1	
	comp=E,110nm,0.3s						
YUK				AMB	AMB	08 55 17.1	
	comp=E,70nm,0.3s						
YUK				AMB	AMB	08 55 17.1	
	comp=E,350nm,0.3s						
YUK				eS	Sn	08 55 42.0	+0.8
YUK				A	A	08 55 54.0	
	comp=E,1µm,0.5s						
YUK				A	A	08 55 54.0	
	comp=E,1µm,0.5s						
YUK	Yuzh-Kuril'sk	2.17	263	ePN	Pn	08 55 16.5	+1.0
YUK				eS	Sn	08 55 42.6	+1.4
YUK				pmax	pmax		
	comp=Z,705nm,0.2s						
YUK				pmax	pmax		
	comp=N,113nm,0.1s						
YUK				pmax	pmax		
	comp=E,66nm,0.1s						
YUK				smax	smax		
	comp=E,3µm,0.5s						
YUK				smax	smax		
	comp=N,1µm,0.3s						
GRPR	Tuman	2.24	262	eP	Pn	08 55 17.0	+0.6
GRPR				AMB	AMB	08 55 18.0	
	comp=N,300nm,0.4s						
GRPR				eS	Sn	08 55 44.0	+1.0
GRPR				A	A	08 55 47.0	
	comp=N,810nm,0.4s						
GRPR				A	A	08 55 47.0	
	comp=N,1µm,0.4s						
GRPR	Tuman	2.24	262	ePN	Pn	08 55 17.5	+1.1
GRPR				eS	Sn	08 55 44.4	+1.4
GRPR				pmax	pmax		
	comp=N,123nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,301nm,0.3s						
GRPR				pmax	pmax		
	comp=E,96nm,0.2s						
GRPR				smax	smax		
	comp=N,2µm,0.3s						
GRPR				smax	smax		
	comp=E,3µm,0.3s						
NEM2	Nemuro 2	2.45	247	P	Pn	08 55 18.1	-1.2
NEM2				eS	Sn	08 55 46.6	-1.5
NMR	Nemuro--Hokkai	2.46	248	eP	Pn	08 55 19.0	-0.4
NMR				eS	Sn	08 55 46.7	-1.6
NMR	Nemuro--Hokkai	2.46	248	ePN	Pn	08 55 19.1	-0.4
NMR				eS	Sn	08 55 46.7	-1.6
GLVR	Golovnino	2.48	257	eP	Pn	08 55 20.0	+0.4
GLVR				AMB	AMB	08 55 21.0	
	comp=E,550nm,0.5s						
GLVR				eS	Sn	08 55 49.0	+0.3
GLVR				A	A	08 56 05.0	
	comp=E,1µm,0.5s						
GLVR				A	A	08 56 05.0	
	comp=E,2µm,0.5s						
GLVR	Golovnino	2.48	257	ePN	Pn	08 55 20.2	+0.6
GLVR				eS	Sn	08 55 49.8	+1.1
GLVR				pmax	pmax		
	comp=Z,554nm,0.4s						
GLVR				pmax	pmax		
	comp=E,116nm,0.3s						
GLVR				smax	smax		
	comp=N,3µm,0.3s						
GLVR				smax	smax		
	comp=E,3µm,0.4s						
JRA	Rausu	2.72	263	P	Pn	08 55 23.3	+0.4
JRA				eS	Sn	08 55 55.6	+1.1
JNK	Nakash	3.08	257	P	Pn	08 55 27.8	-0.1
JNK				eS	Sn	08 56 03.5	0.0
JAK	Akkeshi	3.30	247	P	Pn	08 55 30.1	-0.8

JTKR Abashiri--Toko 3.58 266 P Pn 08 55 35.1 +0.4
JAR Ashorobuto 3.83 256 P Pn 08 55 38.8 +0.7
JAR eS Sn 08 56 23.3 +1.5
JMP Maruseppu 3.97 267 P Pn 08 55 41.0 +1.0
JCH Churui 4.36 248 P Pn 08 55 45.2 -0.1
JCH eS Sn 08 56 33.7 -1.1
JKK2 Kamakawa 2 4.42 266 P Pn 08 55 48.2 +2.0
JKA Kamikawa-asahi 4.50 269 eP Pn 08 55 48.7 +1.4
JKA Kamikawa-asahi 4.50 269 Pn 08 55 48.7 +1.4
ASAJ Asahikawa 4.50 269 P Pn 08 55 50.0 +2.7
ASAJ Asahikawa 4.50 269 P Pn 08 55 48.7 +1.4
comp=E,3.9nm,0.3s,baz=53,slow=16,SNR=12
JSE Soyaes 4.51 280 P Pn 08 55 48.4 +0.9
JFR Furan 4.69 258 P Pn 08 55 51.0 +1.1
ERM Erimo 4.77 243 Pn 08 55 52.3 +1.2
ERM Sn Sn 08 56 46.0 +1.0
ERM Erimo 4.77 243dePN Pn 08 55 52.1 +1.1
JAB Ashibetsu 4.86 262 P Pn 08 55 55.1 +2.8
JNBK Urakawa-nobuka 4.91 247 P Pn 08 55 52.3 -0.6
JBT2 Biratori 2 4.97 254 P Pn 08 55 53.5 -0.2
YSS Yuzh-Sakhalins 5.00 303 eP Pn 08 55 54.0 -0.2
YSS AMB AMB 08 55 54.0
comp=E,20nm,1.0s
YSS eS Sn 08 56 49.4 -1.3
YSS Yuzh-Sakhalins 5.00 303 Pn Pn 08 55 54.1 -0.2
YSS Yuzh-Sakhalins 5.00 303 ePN Pn 08 55 53.4 -0.8
YSS eS Sn 08 56 49.4 -1.3
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,500nm,16.0s
JWK2 Keihoku 5.04 283 P Pn 08 55 57.8 +3.1
JEW Eniwo 5.58 257 P Pn 08 56 04.2 +2.0
JNB Noboribetsu 5.99 254 P Pn 08 56 08.3 +0.5
JKB Kayabe 6.23 249 P Pn 08 56 10.8 -0.2
JKB eS Sn 08 57 17.4 -3.4
JYM2 Yakumo 2 6.58 253 P Pn 08 56 15.9 0.0
JANG Nango 6.73 236 P Pn 08 56 15.5 -2.4
JANG eS Sn 08 57 26.3 -6.8
JTM Tenmabayashi 6.76 241 P Pn 08 56 17.6 -0.7
JTM eS Sn 08 57 29.3 -4.5
JOSM Okushiri--Mats 7.21 255 P Pn 08 56 25.0 +0.5
TYV Tymovskoe 7.74 329 eP Pn 08 56 32.0 +0.3
TYV AMB AMB 08 56 33.9
comp=Z,4.0nm,0.5s
TYV Tymovskoe 7.74 329 ePN Pn 08 56 33.6 +1.9
TYV eS Sn 08 58 00.2 +2.4
TYV pmax pmax
comp=Z,4.0nm,0.5s
TYV smax smax
comp=N,8.0nm,1.3s
JRG Rokugo 7.88 234 P Pn 08 56 32.0 -1.6
SKR Severo-Kuril's 8.02 35 eP Pn 08 56 34.1 -1.3
SKR Severo-Kuril's 8.02 35⇑ePN Pn 08 56 33.9 -1.5
JIO Ouri 8.15 226 P Pn 08 56 35.1 -2.2
TEY Ternei 8.76 279 eP Pn 08 56 46.3 +0.8
TEY AMB AMB 08 56 47.3
comp=N,20nm,1.0s
TEY Ternei 8.76 279⇓ePN Pn 08 56 46.3 +0.8
TEY pmax pmax
comp=Z,20nm,1.2s
PEA0B Petropavlovsk- 10.53 31 Pn 08 57 08.5 -1.2
PEA0B Petropavlovsk- 10.53 31⇑ePN Pn 08 57 08.9 -0.8
PETK Petropavlovsk- 10.53 31 P Pn 08 57 08.4 -1.4
comp=Z,0.5nm,0.3s,baz=219,slow=18,SNR=12
PETK LR LR 09 01 48.9
comp=Z,61nm,18.4s,baz=241,slow=40
PET Petropavlovsk 10.82 33 eP Pn 08 57 13.0 -0.7
PET Petropavlovsk 10.82 33⇑ePN Pn 08 57 14.4 +0.7
MJA0 Matsu Arr-Jizo 11.22 230 ePN Pn 08 57 19.0 -0.4
MJAR Matsushiro Arr 11.24 230 P Pn 08 57 18.5 -1.1
comp=Z,0.1nm,0.3s,baz=30,slow=16,SNR=4.2
USRK Ussuriysk Ar. 12.09 275 P Pn 08 57 30.9 -0.2
baz=91,slow=13,SNR=7.4
USRK LR LR 09 02 31.4
comp=Z,86nm,20.6s,baz=110,slow=39
KLR Kul'dur 12.69 299 P Pn 08 57 42.8 +3.6
comp=Z,0.1nm,0.3s,baz=108,slow=17,SNR=3.7
KLR LR LR 09 02 33.6
comp=Z,58nm,19.9s,baz=178,slow=37
EKMR Ekimchan 13.63 315 eP Pn 08 57 51.2 -0.8
EKMR AMB AMB 08 57 57.1
comp=Z,6.0nm,0.8s
MA2 Magadan 15.29 4 P Pn 08 58 14.1 +0.3
comp=Z,0.4nm,0.3s,baz=199,slow=2.3,SNR=4.6
MA2 LR LR 09 03 21.0
comp=Z,55nm,19.6s,baz=154,slow=34
MA2 Magadan 15.29 4 eP Pn 08 58 13.0 -0.8
MA2 Magadan 15.29 4 Pn 08 58 13.8 -0.1
MA2 Magadan 15.29 4⇑eP Pn 08 58 13.0 -0.8
BMKR Bomnak 16.56 316 eP Pn 08 58 27.8 -2.1
BMKR AMB AMB 08 58 34.0
comp=Z,8.0nm,1.0s
KSRS Korea Array 17.23 254 P Pn 08 58 38.8 +0.4
comp=Z,0.2nm,0.3s,baz=68,slow=11,SNR=6.8
KSRS LR LR 09 05 29.2
comp=Z,48nm,18.5s,baz=134,slow=38
KSRS Korea Array 17.23 254 eP P 08 58 40.5 +1.3
KSRS Korea Array 17.23 254 eP P 08 58 40.5 +1.3
KS19 Wonju Array Si 17.25 254 P 08 58 39.0 +0.5
KROS Kirovskiy 17.38 313 eP P 08 58 36.0 -4.2
TJN Taejon 18.17 251⇓eP P 08 58 50.0 +0.4
SEY Seymchan 18.73 5 P P 08 58 55.0 -0.5
comp=Z,0.1nm,0.3s,baz=179,slow=8.3,SNR=9.1
YAK Yakutsk 20.96 334 eP P 08 59 17.7 -2.0
YAK Yakutsk 20.96 334⇓eP P 08 59 17.7 -2.0
YAK pmax pmax
comp=Z,6.0nm,0.6s
H11N2 WAKE ISLAND Hy 28.79 143 T T 09 31 31.4
baz=333,slow=76,SNR=91
H11N1 WAKE ISLAND Hy 28.80 143 T T 09 31 29.0
baz=333,slow=76,SNR=85
H11N3 WAKE ISLAND Hy 28.81 143 T T 09 31 32.4
baz=333,slow=76,SNR=100
SONM Songino Array 29.38 292 P P 09 00 39.8 +0.3
comp=Z,0.3nm,0.3s,baz=87,slow=8.2,SNR=5.9
H11S1 WAKE ISLAND Hy 29.79 144 T T 09 32 42.8
baz=333,slow=76,SNR=168
H11S3 WAKE ISLAND Hy 29.80 144 T T 09 32 49.5
baz=333,slow=76,SNR=137
H11S2 WAKE ISLAND Hy 29.81 144 T T 09 32 44.1
baz=333,slow=76,SNR=133
KTH Kantishna Hill 38.52 39 P P 09 01 58.2 0.0
MLY Manley 38.64 36 P P 09 01 58.2 -1.0
TOLK Toolik Lake Re 39.35 31 P P 09 02 05.7 +0.6
TOLK IAmb IAmb 09 02 10.8
comp=Z,3.5nm,1.2s
RND Reindeer 39.45 39 P P 09 02 04.6 -1.4
RND IAmb IAmb 09 02 14.6
comp=Z,4.6nm,1.3s
RND Reindeer 39.45 39 P P 09 02 04.6 -1.4
RND pmax pmax
comp=Z,5.0nm,1.3s
WRH Wood River Hil 39.76 37 P P 09 02 11.2 +2.7
IL31 40.28 37 P P 09 02 12.2 -0.5
IL31 IAmb IAmb 09 02 15.5
comp=Z,6.3nm,1.4s
ILAR Eielson Array 40.28 37 P P 09 02 14.6 +1.7
comp=Z,0.8nm,0.9s,baz=267,slow=5.3,SNR=6.0
ZALV Zalesovo Beam 41.62 307 PcP PcP 09 04 19.8 -0.1
comp=Z,0.6nm,0.5s,baz=79,slow=3.7,SNR=3.5
ZALV LR LR 09 20 21.7
comp=Z,25nm,18.0s,baz=80,slow=37
DAWY Dawson 43.58 37 P P 09 02 37.9 -1.9
DAWY IAmb IAmb 09 02 41.5
comp=Z,4.5nm,1.3s
EPYK Eagle Plains 44.34 34 P P 09 02 45.7 -0.2
EPYK IAmb IAmb 09 02 57.4
comp=Z,7.6nm,1.4s
INK Inuvik 45.26 31 P P 09 02 55.3 +2.3
comp=Z,0.8nm,0.5s,baz=306,slow=4.1,SNR=8.0
INK Inuvik 45.26 31 P P 09 02 55.0 +2.0
INK IAmb IAmb 09 03 14.4
comp=Z,3.4nm,1.3s
INK Inuvik 45.26 31 P P 09 02 55.0 +2.0
INK pmax pmax
comp=Z,3.0nm,1.3s
MK31 Makanchi Array 45.39 298 P P 09 02 54.5 0.0
MK31 Makanchi Array 45.39 298 P P 09 02 54.5 0.0
MK31 pmax pmax
comp=Z,2.0nm,1.3s
MKAR Makanchi Array 45.39 298 P P 09 02 54.5 0.0
comp=Z,0.4nm,0.4s,baz=78,slow=9.9,SNR=12
MKAR PcP PcP 09 04 33.2 +0.3
comp=Z,0.7nm,0.7s,baz=59,slow=5.6,SNR=4.0
MKAR LR LR 09 23 28.7
comp=Z,46nm,20.5s,baz=45,slow=38
KURK Kurchatov 46.21 304 eP P 09 02 59.3 -1.5
KURK Kurchatov 46.21 304 P P 09 03 00.0 -0.8
KURK IAmb IAmb 09 03 01.1
comp=Z,1.7nm,0.6s
KURK Kurchatov 46.21 304⇑eP P 09 02 59.3 -1.5
KURK pmax pmax
comp=Z,1.0nm,0.4s
KURBB Kurchatov Arra 46.30 304 P P 09 03 00.6 -0.9
comp=Z,0.3nm,0.3s,baz=246,slow=24,SNR=9.1
CMAR Chiang Mai Arr 48.87 255 P P 09 03 21.8 -0.1
comp=Z,1.0nm,0.3s,baz=48,slow=8.0,SNR=6.7
CMAR Chiang Mai Arr 48.87 255 eP P 09 03 23.9 +2.1
CMAR pmax pmax
comp=Z,1.0nm,0.3s
BVAR Borovoye Array 50.07 309 P P 09 03 31.5 +0.9
comp=Z,0.3nm,0.4s,baz=19,slow=9.4,SNR=4.1
JIRN Jiri 52.12 273 eP P 09 03 47.4 +0.7
comp=Z,20nm,0.5s
AAK Ala-Archa 52.20 296 P P 09 03 47.1 +0.2
comp=Z,1.4nm,0.5s,baz=88,slow=5.6,SNR=5.9
AAK Ala-Archa 52.20 296 eP P 09 03 47.4 +0.5
AAK Ala-Archa 52.20 296 P P 09 03 46.7 -0.2
AAK IAmb IAmb 09 03 47.9
comp=Z,4.0nm,1.3s
AAK Ala-Archa 52.20 296⇑eP P 09 03 47.4 +0.5
AAK pmax pmax
comp=Z,2.0nm,1.0s
GUN Gumba 52.20 274 eP P 09 03 48.1 +0.8
comp=Z,20nm,0.4s
RAMN Ramite 52.25 272 eP P 09 03 48.0 +0.5
comp=Z,30nm,0.6s
KKN Kakani 52.70 274 eP P 09 03 51.7 +0.9
comp=Z,9.8nm,0.5s
PKI Pulchoki 52.74 274 eP P 09 03 51.5 +0.3
comp=Z,4.9nm,0.4s
PKIN Phulchoki 52.74 274 eP P 09 03 51.1 -0.1
DMN Daman 52.93 274 eP P 09 03 52.1 -0.5
comp=Z,11nm,0.6s
GKN Gorkha 53.03 275 eP P 09 03 53.8 +0.6
comp=Z,6.5nm,0.3s
DANN Dangsing 53.46 276 eP P 09 03 57.4 +0.9
comp=Z,25nm,0.9s
KK31 Karatay Array 54.51 298 P P 09 04 03.4 -0.3
KK31 IAmb IAmb 09 04 04.5
comp=Z,1.9nm,0.8s
KK31 Karatay Array 54.51 298 P P 09 04 03.4 -0.3
KK31 pmax pmax
comp=Z,2.0nm,0.8s
KKAR Karatay Array 54.51 298 P P 09 04 03.8 +0.2
KKAR IAmb IAmb 09 04 04.5
comp=Z,1.9nm,0.8s
KKAR Karatay Array 54.51 298 P P 09 04 03.8 +0.2
KKAR pmax pmax
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 54.62 34 P P 09 04 04.4 +0.4
comp=Z,0.3nm,0.6s,baz=302,slow=6.8,SNR=7.4
ABKAR Akbulak array 57.64 309 P P 09 04 25.6 -0.2
AKTO Aktyubinsk 58.07 311 P P 09 04 28.4 -0.5
comp=Z,0.7nm,0.5s,baz=44,slow=7.2,SNR=3.6
FIA1 FINESS Array S 64.89 334 P P 09 05 14.8 +0.2
FINES FINESS Array B 64.89 334 P P 09 05 14.3 -0.3
comp=Z,1.6nm,0.5s,baz=38,slow=9.6,SNR=8.7
WRA Warramunga Arr 65.34 195 P P 09 05 18.7 +0.7
comp=Z,0.4nm,0.8s,baz=9.0,slow=6.8,SNR=3.5
WRA pP pwP 09 05 37.5 -0.3
comp=Z,0.8nm,0.7s,baz=16,slow=6.8,SNR=4.0
NVAR Mina Array Bea 66.22 59 P P 09 05 24.8 +0.9
comp=Z,0.4nm,0.5s,baz=297,slow=6.5,SNR=3.6
PDAR Pinedale Array 68.58 51 P P 09 05 40.0 +1.2
comp=Z,0.3nm,0.7s,baz=330,slow=3.4,SNR=3.3
PDAR pP pP 09 05 57.0 +3.9
comp=Z,0.5nm,0.7s,baz=349,slow=1.8,SNR=3.9
ASAR Alice Springs 69.05 195 P P 09 05 42.5 +1.1
comp=Z,0.3nm,0.7s,baz=10,slow=4.4,SNR=4.2
ASAR pP pwP 09 06 01.8 +0.4
comp=Z,0.6nm,0.6s,baz=11,slow=6.4,SNR=5.1
GOF Gofitskoye 69.33 313⇑eP P 09 05 41.9 -1.2
NOA NORSAR Array B 69.48 340 P P 09 05 43.1 -0.6
comp=Z,0.4nm,0.3s,baz=30,slow=6.3,SNR=3.1
NOA LR LR 09 38 48.0
comp=Z,14nm,20.8s,baz=30,slow=38
KIV Kislovodsk 70.27 313 eP P 09 05 46.6 -2.3
KIV Kislovodsk 70.27 313 eP P 09 05 46.6 -2.3
KIV pmax pmax
comp=Z,14nm,0.9s
KIV MLR MLR
comp=Z,76nm,17.0s
ULM Lac du Bonnet 70.28 38 P P 09 05 49.0 +0.3
comp=Z,0.8nm,0.6s,baz=326,slow=1.2,SNR=3.2
AKASG Malin Array Be 71.81 324 P P 09 05 56.8 -1.2
comp=Z,1.3nm,0.6s,baz=37,slow=6.1,SNR=7.2
AKASG Malin Array Be 71.81 324 eP P 09 05 57.9 -0.1
AKASG pmax pmax
comp=Z,1.0nm,0.6s
BUR08 Bucovina Ar. S 75.85 325 P P 09 06 22.4 +0.5
BUR08 IAmb IAmb 09 06 23.0
comp=Z,1.5nm,0.7s
STKA Stephens Creek 76.15 186 LR LR 09 44 52.9
comp=Z,14nm,18.1s,baz=22,slow=40
CLL Collm 77.34 333 i P P 09 06 30.8 +0.8
comp=Z,5.0nm,0.6s
CLL Collm 77.34 333 i P P 09 06 30.8 +0.8
CLL pmax pmax
comp=Z,5.0nm,0.6s
GERES GERESS Array B 79.22 332 P P 09 06 40.3 -0.4
comp=Z,0.5nm,0.4s,baz=39,slow=6.4,SNR=5.4
TXAR Lajitas Array 81.30 57 P P 09 06 52.8 +0.6
comp=Z,0.5nm,0.5s,baz=298,slow=5.1,SNR=6.3
TORD Torodi Ar. Bea 115.45 324 PKP PKiKP 09 13 16.5 -1.0
comp=Z,0.3nm,0.7s,baz=2.9,slow=2.9,SNR=2.7
BDFB Brasilia 148.01 32 PKPbc PKPbc 09 14 21.8 +0.6
comp=Z,1.5nm,0.4s,baz=131,slow=14,SNR=3.1
PLCA Paso Flores 150.94 97 PKPbc PKPbc 09 14 27.9 +0.2
comp=Z,0.9nm,0.8s,baz=27,slow=2.3,SNR=4.1

DJA 27 09:09:58.6±2.4, 4°N±22°×12°7E±°, h10km, M4.9/9, mb4.9/6, mB5.2/4, MLv5.0/9, Mw(mB)4.6/4
IDC 27 09:10:10.5±1.0, 2°.33N×126°.63E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.7/46, mbtmp3.9/8, ML3.6/1, MS2.6/1, Ms1 2.6/1, ms1mx2.3/33, Error ellipse: s-maj=53.0km s-min=16.0km az=63.0
ISC 27 09:10:12.0±0.9, 2°.18N±0°.08×126°.58E±0°.07, h10km, n25, σ2§10/19, mb3.9/6, Northern Molucca Sea

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
TNTI Ternate 1.61 150 P Pg 09 10 48.9 +6.0
TNTI Ternate 1.61 150 P Pg 09 10 48.9 +6.0
LBMI Labuha 2.95 162 P Pg 09 11 10.3 +1.7
LBMI Labuha 2.95 162 P Pg 09 11 10.3 +1.7
KMSI Cibinong 3.04 238 P Pg 09 11 13.8 +3.3
KMSI Cibinong 3.04 238 P Pg 09 11 13.8 +3.3
SANI Sanana 4.24 188 P Pg 09 11 31.7 -1.7
0.2nm798nm21nm,0.8s
SANI Sanana 4.24 188 P Pg 09 11 31.7 -1.7
0.2nm798nm21nm,0.8s
MRSI Marisa 4.93 250 P Pb 09 11 36.5 -2.1
0.5nm2μm150nm,0.8s
MRSI Marisa 4.93 250 P Pb 09 11 36.5 -2.1
0.5nm2μm150nm,0.8s
LUWI Luwuk 4.97 230 P Pb 09 11 39.7 +0.5
0.8nm5μm175nm,0.8s
LUWI Luwuk 4.97 230 P Pb 09 11 39.7 +0.5
0.8nm5μm175nm,0.8s
SIJI Sorong 5.58 123 Pn Pn 09 11 36.8 +1.5
1.7nm,0.3s,baz=210,slow=20,SNR=4.0
APSI Ampana 5.80 238 P Pb 09 11 50.1 -3.3
0.4nm1μm98nm,0.9s
APSI Ampana 5.80 238 P Pb 09 11 50.1 -3.3
0.4nm1μm98nm,0.9s
MPSI Mapaga 6.92 255 P Pg 09 12 18.8 -5.9
MPSI Mapaga 6.92 255 P Pg 09 12 18.8 -5.9
FITZ Fitzroy Crossi 20.17 183 P Pn 09 14 50.1 +1.4
1.9nm,0.6s,baz=18,slow=6.4,SNR=2.7
WRA Warramunga Arr 23.27 161 P P 09 15 20.6 +0.6
1.8nm,0.5s,baz=342,slow=9.1,SNR=22
ASAR Alice Springs 26.66 165 P P 09 15 52.5 +1.1
0.5nm,0.8s,baz=344,slow=7.9,SNR=7.1
CMAR Chiang Mai Arr 31.55 303 P P 09 16 34.2 -0.6
1.2nm,0.3s,baz=142,slow=7.2,SNR=6.4
KSRS Korea Array 35.12 2 LR LR 09 33 27.5
comp=Z,9.1nm,19.2s,baz=175,slow=40
STKA Stephens Creek 36.75 158 P P 09 17 20.1 +0.3
4.2nm,0.7s,baz=349,slow=9.1,SNR=7.2
SONM Songino Array 48.71 342 P P 09 18 55.8 -1.1
0.3nm,0.5s,baz=151,slow=6.6,SNR=3.9
MKAR Makanchi Array 58.74 326 P P 09 20 09.9 -0.3
0.5nm,0.4s,baz=118,slow=7.7,SNR=7.4

IDC 27 09:10:21.7±0.6, 2°.41N×126°.63E, h0km, mb4.1/12, mb1 4.3/13, mb1mx4.1/46, mbtmp4.1/13, ML4.0/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/30, Error ellipse: s-maj=32.3km s-min=13.0km az=74.0
NEIC 27 09:10:28.7±2.4, 2°.40N±0°.08×126°.88E±0°.08, h55km±6km, mb4.4/16, Error ellipse: s-maj=12.0km s-min=11.3km az=49.0
ISC 27 09:10:28.5±0.5, 2°.38N±0°.08×126°.74E±0°.08, h53km, n44, σ1§70/37, mb4.2/18, 1D, Northern Molucca Sea

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
TNTI Ternate 1.71 159 Pn Pn 09 10 56.2 +0.3
DAV Davao City (W) 4.80 346 LR LR 09 13 49.9
comp=Z,238nm,20.0s,baz=157,slow=44
KCP Kidapawan 4.89 340⇓eP Pn 09 11 50.6 +11
KCP i S Sn 09 12 46.8 +12
LUWI Luwuk 5.22 229 Pn Pn 09 11 47.8 +3.7
SIJI Sorong 5.55 125 Pn Pn 09 11 48.9 +0.2
4.7nm,0.3s,baz=209,slow=22,SNR=7.7
TTSI Tana Toraja 8.77 232 P Pn 09 12 28.4 -4.3
TTSI Tana Toraja 8.77 232 P Pn 09 12 28.4 -4.3
GENI Genyem 14.30 110 P P 09 13 57.5 +3.5
GENI Genyem 14.30 110 P P 09 13 57.5 +3.5
SBUM Sibu 14.51 271 P P 09 13 57.1 +0.8
SRBI Singaraja 15.50 228 P P 09 14 17.0 +10
SRBI Singaraja 15.50 228 P P 09 14 17.0 +10
JAGI Jajag, Banyuwa 16.54 229 P P 09 14 27.5 +8.6
JAGI Jajag, Banyuwa 16.54 229 P P 09 14 27.5 +8.6
KNRA Kununurra 18.05 174 P Pn 09 14 36.5 +0.9
KNRA IAmb IAmb 09 14 38.3
comp=Z,14nm,0.8s
FITZ Fitzroy Crossi 20.37 183 P Pn 09 15 02.0 -1.4
comp=Z,4.2nm,0.5s,baz=14,slow=5.4,SNR=13
FITZ Fitzroy Crossi 20.37 183 IAmb IAmb 09 15 08.5
comp=Z,6.6nm,0.8s
COEN Coen 23.00 135 P P 09 15 28.2 -0.8
COEN IAmb IAmb 09 15 30.1
comp=Z,5.7nm,0.8s
WB0 Warramunga Arr 23.25 161 P P 09 15 30.7 -0.8
WB0 IAmb IAmb 09 15 40.6
comp=Z,15nm,0.9s
WRA Warramunga Arr 23.40 162 P P 09 15 31.9 -0.9
comp=Z,6.8nm,0.6s,baz=342,slow=11,SNR=24
WB2 Warramunga Arr 23.40 162 P P 09 15 31.6 -1.3
WB2 IAmb IAmb 09 15 41.6
comp=Z,9.0nm,0.8s
WR0 Warramunga Arr 23.48 161 P P 09 15 32.2 -1.4
WR0 IAmb IAmb 09 15 37.1
comp=Z,13nm,1.1s
AS31 Alice Springs 26.81 165 P P 09 16 03.0 -0.9
ASAR Alice Springs 26.81 165 P P 09 16 04.3 +0.4
comp=Z,1.4nm,0.7s,baz=341,slow=7.1,SNR=16
ASAR PcP PcP 09 19 26.5 +0.6
comp=Z,0.8nm,0.7s,baz=350,slow=2.2,SNR=5.2
CMAR Chiang Mai Arr 31.58 302 P P 09 16 46.5 +0.1
comp=Z,1.0nm,0.3s,baz=120,slow=6.4,SNR=4.6
FORT Forrest 32.99 178 P P 09 16 58.8 +0.2
KSRS Korea Array 34.92 2 P P 09 17 16.1 +0.9
comp=Z,2.0nm,0.6s,baz=177,slow=9.3,SNR=9.0
MJAR Matsushiro Arr 35.61 16 P P 09 17 20.0 -1.2
comp=Z,1.9nm,0.6s,baz=184,slow=8.6,SNR=8.0
BBOO Buckleboo 36.09 167 P P 09 17 26.4 +1.1
BBOO IAmb IAmb 09 17 45.6
comp=Z,21nm,1.4s
STKA Stephens Creek 36.87 159 P P 09 17 32.5 +0.5
comp=Z,6.6nm,0.7s,baz=337,slow=8.8,SNR=10
STKA Stephens Creek 36.87 159 P P 09 17 32.5 +0.5
ARMA Armidale 40.34 146 P P 09 18 02.2 +0.9
ARMA IAmb IAmb 09 18 04.8
comp=Z,12nm,1.0s
USRK Ussuriysk Ar. 41.91 6 P P 09 18 14.9 +1.2
comp=Z,4.1nm,0.7s,baz=194,slow=5.9,SNR=8.7
SONM Songino Array 48.58 342 P P 09 19 06.5 -0.2
comp=Z,0.8nm,0.5s,baz=159,slow=7.4,SNR=9.0
MK31 Makanchi Array 58.67 326 P P 09 20 20.5 0.0
MK31 IAmb IAmb 09 20 22.8
comp=Z,1.8nm,0.9s
MKAR Makanchi Array 58.67 326 P P 09 20 20.4 -0.1
comp=Z,2.1nm,0.7s,baz=119,slow=8.3,SNR=13
LBZ Lake Benmore 60.57 146 P P 09 20 34.2 +0.7
BKZ Black Stump Fm 61.58 138 P P 09 20 38.5 -2.1
ZALV Zalesovo Beam 61.79 333 P P 09 20 40.2 -1.5
comp=Z,0.8nm,0.5s,baz=122,slow=7.0,SNR=3.4
KURK Kurchatov 62.88 328 P P 09 20 48.9 -0.1
ABKAR Akbulak array 73.20 321 P P 09 21 54.0 +0.2
ILAR Eielson Array 86.31 25 P P 09 23 05.5 +1.0
comp=Z,0.3nm,0.8s,baz=243,slow=5.1,SNR=4.7
SCHQ Schefferville 121.89 9 PKP PKiKP 09 29 17.1 +0.1
comp=Z,1.2nm,0.7s,baz=276,slow=2.7,SNR=3.6
TORD Torodi Ar. Bea 123.34 287 PKP PKiKP 09 29 21.2 +0.3
comp=Z,0.3nm,0.5s,baz=54,slow=2.7,SNR=2.4

IDC 27 09:32:36.7±2.5, 2°.53N×126°.88E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/29, mbtmp3.4/3, MS3.1/1, Ms1 3.1/1, ms1mx2.3/23, Error ellipse: s-maj=224.8km s-min=26.6km az=66.0, Northern Molucca Sea

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
WRA Warramunga Arr 23.50 162 P P 09 37 47.7 -0.8
1.0nm,0.5s,baz=341,slow=11,SNR=3.1
ASAR Alice Springs 26.92 166 P P 09 38 20.7 +0.8
0.3nm,0.5s,baz=345,slow=7.8,SNR=7.7
ASAR LR LR 09 50 27.2
comp=Z,36nm,18.4s,baz=198,slow=40
MKAR Makanchi Array 58.62 326 P P 09 42 35.5 -0.2
0.2nm,0.4s,baz=114,slow=7.9,SNR=4.5

DNK 27 09:49:24.2±5.6, 51°.40N×16°.40E, h15km±282km, ML2.3, Hypocentre not reviewed by the ISC
IDC 27 09:49:25.7±0.6, 51°.44N×16°.10E, h0km, mb3.8/2, mb1 3.6/9, mb1mx3.3/67, mbtmp3.4/9, ML3.1/7, Error ellipse: s-maj=14.8km s-min=6.6km az=103.0
VIE 27 09:49:26.6, 51°.45N×16°.07E, h0km, mb3.2/1, ML3.0/3 76 km WNW of Wroclaw Suspected Mining induced.
BGR 27 09:49:26.7±0.5, 51°.40N×16°.18E, h1km, ML3.1/13, Error ellipse: s-maj=7.8km s-min=4.4km az=29.0
ISC 27 09:49:23.7±0.6, 51°.53N±0°.03×16°.22E±0°.02, h0km, n58, σ1§29/102, Poland

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
KSP Ksiaz 0.69 176 ePg Pg 09 49 37.4 +0.5
KSP eSg Sg 09 49 44.8 -0.8
KSP Ksiaz 0.69 176 i Pg Pg 09 49 37.3 +0.5
KSP eSg Sg 09 49 45.3 -0.4
CHVC Chvalec 0.94 186 ePG Pg 09 49 42.3 +0.6
CHVC eSG Sg 09 49 53.4 -0.6
OSTC Ostas 0.97 180 ePG Pg 09 49 42.8 +0.6
OSTC eSG Sg 09 49 53.5 -1.3
comp=Z,61nm,0.2s
UPC Upice 1.03 187 ePG Pg 09 49 43.6 +0.3
UPC eSG Sg 09 49 56.3 -0.3
comp=Z,265nm,0.6s
DPC Dobruska-Polom 1.18 177 ePG Pg 09 49 46.2 -0.1
DPC eSG Sg 09 50 00.5 -0.1
comp=Z,109nm,0.5s
DPC Dobruska-Polom 1.18 177 ePg Pg 09 49 46.1 -0.1
DPC eSg Sg 09 50 01.7 +0.2
PVCC Panska Ves 1.44 227 ePG Pb 09 49 51.9 +0.5
PVCC eSG Sb 09 50 10.3 0.0
comp=Z,301nm,0.3s
KRLC Kraliky 1.50 166 ePG Pg 09 49 51.8 0.0
KRLC eSG Sg 09 50 10.7 -1.0
BRG Berggiesshubel 1.57 246 PN Pn 09 49 53.0 +0.2
BRG PG Pg 09 49 54.8 +1.0
BRG SG Sg 09 50 14.8 +0.7
108nm,0.3s
BRG Berggiesshubel 1.57 246 eSg Sn 09 50 13.3 -0.5
GOPC GO Pecny, Ondr 1.85 210 ePN Pn 09 49 57.4 +0.7
GOPC ePG Pb 09 49 58.6 +0.2
GOPC eSG Sb 09 50 21.8 -0.3

Code	Station Name	Δ°	AZ°	Phase Op	ISC	Time h m s	Res
	comp=Z,55nm,0.5s						
PRU	Pruhonice	1.87	215	ePG	Pb	09 49 58.8	+0.1
PRU				eSG	Sb	09 50 22.3	-0.3
	comp=Z,57nm,0.3s						
FBE	Freiberg	1.90	252	eSg	Sb	09 50 23.6	+0.3
MORC	Moravsky Berou	1.94	154	ePN	Pn	09 49 57.9	0.0
MORC				eSG	Sn	09 50 22.4	-0.7
MORC	Moravsky Berou	1.94	154	ePn	Pn	09 49 58.0	0.0
MORC				eSg	Sn	09 50 23.6	+0.5
CLL	Collm	2.02	265	ePn	Pb	09 50 01.0	-0.3
CLL				ePg	Pg	09 50 03.0	+0.6
CLL				eSg	Sg	09 50 30.0	+1.4
	comp=Z,36nm,0.6s						
CLL	Collm	2.02	265	ePn	Pn	09 50 00.5	+1.5
OKC	Ostrava-Krasne	2.09	143	ePN	Pn	09 49 59.9	-0.1
OKC				ePG	Pb	09 50 03.3	+0.9
OKC				eSG	Sb	09 50 29.0	+0.1
OKC	Ostrava-Krasne	2.09	143	ePn	Pn	09 49 59.8	-0.1
VRAC	Vranov	2.23	174	ePN	Pn	09 50 02.2	+0.3
VRAC				eSG	Sb	09 50 32.9	-0.2
VRAC	Vranov	2.23	174	Pn	Pn	09 50 02.6	+0.7
	comp=Z,6.1nm,0.3s,baz=344,slow=14,SNR=13						
VRAC				Lg	Lg	09 50 32.8	
	comp=Z,9.8nm,0.3s,baz=253,slow=20,SNR=9.2						
TREC	Trest	2.28	192	ePG	Pb	09 50 06.0	+0.3
TREC				eSG	Sg	09 50 35.5	-1.4
	comp=Z,37nm,0.3s						
KRUC	Moravsky	2.47	177	ePN	Pn	09 50 06.0	+0.9
KRUC				eSG	Sb	09 50 41.1	+1.3
OJC	Ojcow	2.62	119	ePn	Pn	09 50 07.9	+0.7
OJC	Ojcow	2.62	119	ePn	Pn	09 50 08.0	+0.7
OJC				ePg	Pg	09 50 13.6	-0.3
OJC				eSg	Sg	09 50 48.4	+0.6
TANN	Tannenbergstha	2.62	246	ePn	Pn	09 50 08.3	+1.0
NKC	Novy Kostel	2.71	243	ePG	Pg	09 50 15.8	+0.2
NKC				eSG	Sg	09 50 50.9	+0.1
	comp=Z,41nm,0.3s						
JAVC	Velka Javorina	2.83	160	ePN	Pn	09 50 11.8	+1.7
KHC	Kasperske Hory	2.93	216	ePN	Pn	09 50 12.4	+0.8
KHC				ePG	Pb	09 50 17.9	+1.1
KHC				eSN	Sn	09 50 46.6	-0.9
KHC				eSG	Sb	09 50 55.2	+2.0
	comp=Z,25nm,0.3s						
MANZ	Manzenberg	3.03	241	ePn	Pn	09 50 14.2	+1.4
MOX	Moxa	3.03	255	ePn	Pn	09 50 14.6	+1.8
ROTZ	Rotzenmuhle	3.10	237	ePn	Pn	09 50 15.0	+1.2
SMOL	Smolenice	3.12	165	ePG	Pg	09 50 23.9	+0.6
SMOL				eSG	Sg	09 51 06.0	+2.3
GEC2	GERESS Array S	3.13	212	ePn	Pn	09 50 15.1	+0.7
GERES	GERESS Array B	3.13	212	Pn	Pn	09 50 15.4	+1.1
	comp=Z,1.1nm,0.3s,baz=33,slow=14,SNR=24						
GERES				Pg	Pb	09 50 21.2	+1.0
	comp=Z,11nm,0.3s,baz=32,slow=19,SNR=76						
GERES				Lg	Lg	09 50 59.9	
	comp=Z,3.7nm,0.3s,baz=20,slow=20,SNR=5.1						
LANS	Liptovska Anna	3.16	138	ePG	Pg	09 50 25.0	+0.8
LANS				eSG	Sg	09 51 04.3	-0.9
WET	Wettzell	3.20	223	ePn	Pn	09 50 15.6	+0.3
MODS	Modra-Piesok	3.23	167	ePN	Pn	09 50 16.1	+0.5
MODS				ePG	Pg	09 50 25.2	-0.3
MODS				eSG	Sg	09 51 06.6	-0.8
NIE	Niedzica	3.36	127	ePn	Pn	09 50 18.6	+1.2
NIE				ePg	Pg	09 50 30.0	+2.0
NIE				eSg	Sg	09 51 14.2	+2.8
ZST	Bratislava	3.38	170	eSG	Sg	09 51 10.2	-2.1
VYHS	Vyhne	3.48	150	ePG	Pg	09 50 29.6	-0.6
VYHS				eSG	Sg	09 51 13.7	-1.5
CONA	Conrad Observa	3.61	184	ePn	Pn	09 50 22.2	+1.3
	comp=Z,2.0nm,0.4s						
CONA				i Pg	Pg	09 50 30.8	-2.0
	comp=Z,8.4nm,0.3s						
CONA				Sg	Sg	09 51 16.9	-2.7
	comp=Z,22nm,0.4s						
GRF	Grafenberg Arr	3.67	242	ePn	Pn	09 50 22.9	+1.3
BSD	Bornholm Skovb	3.68	348	i P	Pn	09 50 22.9	+1.2
BSD				i S	Sn	09 51 01.8	-3.9
BSD	Bornholm Skovb	3.68	348	e		09 50 21.9	
	baz=189,slow=12						
BSD				i P		09 50 23.0	
BSD				i S		09 51 01.8	
BSD				IAML		09 51 08.7	
	comp=Z,2.7nm,0.3s						
MOA	Molln	3.89	200	i Pn	Pn	09 50 25.5	+0.8
	comp=Z,3.8nm,0.3s						
MOA				ePg	Pg	09 50 38.6	+0.4
	comp=Z,7.5nm,0.4s						
MOA				i Sg	Sg	09 51 27.0	-1.6
	comp=Z,26nm,0.5s						
ARSA	Arzberg	4.30	186	i Sg	Sg	09 51 41.9	0.0
	comp=Z,17nm,0.6s						
KBA	Koelnbreinsper	4.83	204	i Pn	Pn	09 50 39.1	+1.3
	comp=Z,1.8nm,0.3s						
KBA				Sg	Sg	09 51 58.0	-0.8
	comp=Z,25nm,1.0s						
WTTA	Wattenberg	5.21	217	i Sg	Sg	09 52 08.4	-2.5
	comp=Z,6.7nm,0.4s						
SQTA	Sankt Quirin	5.41	219	i Pn	Pn	09 50 47.8	+2.1
	comp=Z,2.5nm,0.2s						
AKASG	Malin Array Be	8.23	91	Pn	Pn	09 51 23.8	-0.5
	comp=Z,1.1nm,0.3s,baz=283,slow=12,SNR=4.1						
HFS	Hagfors	8.74	352	Pn	Pn	09 51 31.4	+0.2
	comp=Z,0.3nm,0.3s,baz=160,slow=14,SNR=6.7						
NOA	NORSAR Array B	9.93	346	Pn	Pn	09 51 47.5	0.0
	comp=Z,0.0nm,0.3s,baz=161,slow=12,SNR=3.5						
FINES	FINESS Array B	11.32	25	Pn	Pn	09 52 06.2	-0.3
	comp=Z,0.3nm,0.3s,baz=210,slow=11,SNR=7.3						
FINES				Sn	Sn	09 54 08.1	-5.4
	comp=Z,0.2nm,0.3s,baz=218,slow=18,SNR=3.8						
EKA	Eskdalemuir Ar	12.16	296	Pn	Pn	09 52 16.3	-1.6
	baz=99,slow=14,SNR=2.8						
ARCES	ARCESS Array B	18.59	10	Pn	P	09 53 40.2	-1.8
	comp=Z,0.4nm,0.3s,baz=193,slow=13,SNR=11						
SPITS	Spitsbergen Ar	26.76	0	P	P	09 55 06.6	+2.0
	comp=Z,5.3nm,0.9s,baz=208,slow=20,SNR=5.8						
YKA	Yellowknife Ar	59.87	336	P	P	09 59 33.0	+2.5
	comp=Z,0.2nm,0.5s,baz=26,slow=6.6,SNR=4.0						

IDC 27 09:54:32.0±3.1, 2.72N×127.38E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.1/55, mbtmp3.2/3, Error ellipse: s-maj=290.3km s-min=25.3km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.53	163	P	P	09 59 43.3	-0.8
	0.2nm,0.2s,baz=342,slow=11,SNR=13						
ASAR	Alice Springs	26.98	167	P	P	10 00 16.8	+1.1
	0.3nm,0.9s,baz=349,slow=12,SNR=4.2						
MKAR	Makanchi Array	58.75	325	P	P	10 04 31.7	-0.2
	0.2nm,0.6s,baz=112,slow=7.0,SNR=3.3						

NEIC 27 09:57:10.2±2.1, 54.2N±0.1×169.4W±0.1, h267km±6km, mb4.1/54, ML3.9/25(AEIC), Error ellipse: s-maj=18.9km s-min=8.7km az=163.0

AEIC 27 09:57:10.4±8.2, 54.9N±0.1×170.1W±0.1, h169km±8km, Error ellipse: s-maj=15.5km s-min=7.9km az=158.0

IDC 27 09:57:12.8±3.0, 54.37N×169.51W, h289km±29km, mb3.3/15, mb1 3.5/17, mb1mx3.2/56, mbtmp3.9/17, Error ellipse: s-maj=20.1km s-min=10.7km az=82.0

ISC 27 09:57:10.1±0.6, 54.19N±0.09×169.39W±0.05, h269km±5km, n132, σ1.25/142, mb3.9/27, Fox Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
OKWE	Okmok W'ng Wal	0.99	136		Pn	09 57 47.3	+0.1
OKTU	Okmok Mt. Tuli	1.14	135		Pn	09 57 47.7	-0.3
OKFG	Magazine Ridge	1.18	131		Pn	09 57 47.7	-0.4
OKFG					S	09 58 17.4	-0.7
NIKH	Nikolski High	1.27	165		Pn	09 57 47.7	-1.0
NIKH					S	09 58 16.4	-2.7
MSW	Makushin Switc	1.56	99		Pn	09 57 50.4	-0.3
UNV	Unalaska Valle	1.74	100		Pn	09 57 51.5	-0.4
UNV	Unalaska Valle	1.74	100		S	09 58 21.9	-3.1
AKRB	Akutan Reef Bi	1.96	91		Pn	09 57 54.0	+0.2
AKMO	Akutan Morgan	1.99	92		Pn	09 57 54.2	+0.2
AKMO					S	09 58 27.9	-1.0
AKBBA	Akutan Broad B	2.04	91		Pn	09 57 54.6	+0.2
AKBBA					S	09 58 29.0	-0.6
AKUT	Akutan	2.13	90	Pn	Pn	09 57 55.5	+0.3
AKUT					S	09 58 29.0	-1.9
AKSA	Akutan Strait	2.17	90		Pn	09 57 55.6	0.0
AKSA					S	09 58 31.0	-0.7
SSBA	Shishaldin	3.13	77		Pn	09 58 05.2	+0.1
ATKA	Atka Island	3.51	237	Pn	Pn	09 58 09.2	0.0
ATKA					S	09 58 53.9	-2.3
FALS	False Pass	3.54	77		Pn	09 58 09.7	+0.2
FALS	False Pass	3.54	77		S	09 58 58.3	+1.5
GSTR	Great Sitkin T	4.53	245		Pn	09 58 21.6	+0.7
GSTR					S	09 59 16.3	-1.1
ADK	Adak	4.97	245		Pn	09 58 25.8	-0.3
ADK	Adak	4.97	245		S	09 59 23.6	-3.2
KIWB	Kanaga Island	5.24	247		Pn	09 58 30.0	+0.7
SDPT	Sand Point	5.29	74	Pn	Pn	09 58 28.7	-1.2
TAFP	Tanaga Falls P	5.67	250		Pn	09 58 35.2	+0.7
TASE	Tanaga Southea	5.73	249		Pn	09 58 35.8	+0.5
CNBA	Chernabura Isl	5.75	80		Pn	09 58 33.6	-1.8
CHGN	Chignik	6.62	67	Pn	Pn	09 58 45.5	-0.6
CHIR	Chirikof Islan	8.08	73	Pn	Pn	09 59 02.3	-2.0
SII	Sitkinak Islan	8.98	69	Pn	Pn	09 59 13.6	-2.0
OHAK	Old Harbor	9.58	65	Pn	Pn	09 59 20.8	-2.3
KDAK	Kodiak Island	10.07	62	P	Pn	09 59 26.8	-2.4
	6.6nm,0.3s,baz=237,slow=2.0,SNR=48						
KDAK				S	S	10 01 11.8	-11
	0.7nm,0.3s,baz=131,slow=19,SNR=3.8						
KDAK	Kodiak Island	10.07	62	Pn	Pn	09 59 27.6	-1.6
SVW2	Sparrevohn	10.12	41		Pn	09 59 31.0	+1.3
RSO	Redoubt South	10.95	48	Pn	Pn	09 59 41.8	+1.6
HOM	Homer	11.12	53	Pn	Pn	09 59 42.9	+0.8
TTA	Tatalina	11.18	33	Pn	Pn	09 59 38.8	-4.1
CNPM	China Poot	11.26	54	Pn	Pn	09 59 43.1	-0.9
BRLK	Bradley Lake	11.52	54	Pn	Pn	09 59 46.9	-0.2
SKT	Skwentna	12.22	43		P	09 59 58.2	+0.4
SUA	Susitna One	12.28	46	Pn	Pn	09 59 57.1	+0.5
SUA					S	10 02 11.8	-1.4
SEW	Seward	12.31	53		Pn	09 59 56.2	-0.6
SEW					S	10 02 09.5	-4.0
PPLA	Purkeypile	12.48	39		P	10 00 01.6	+0.7
RC01	Rabbit Creek A	12.55	49		Pn	10 00 00.4	+0.6
PMR	Palmer	13.03	47		Pn	10 00 05.7	+0.1
GHO	Glory Hole Cre	13.20	47		Pn	10 00 07.8	+0.1
KNK	Knik Glacier	13.25	49	P	Pn	10 00 08.7	+0.4
KTH	Kantishna Hill	13.33	38	P	P	10 00 11.2	+1.0
SML	Sawmill	13.47	47	P	Pn	10 00 10.9	0.0
TRF	Thorofare Moun	13.50	39	P	P	10 00 13.9	+1.7
BPAW	Bear Paw Mtn.	13.64	36	P	P	10 00 15.4	+1.9
GLI	Glacier Island	13.67	52	P	Pn	10 00 12.4	-1.0
HIN	Hinchinbrook I	13.80	54	P	Pn	10 00 14.6	-0.3
SCM	Sheep Creek Mo	13.92	48	P	P	10 00 17.0	+0.3
MCK	McKinley	14.16	39	P	P	10 00 19.8	+0.5
EYAK	Cordova Ski Ar	14.20	54	P	Pn	10 00 19.1	-0.6
MLY	Manley	14.32	33	P	Pn	10 00 21.5	+0.4
DHY	Denali Highway	14.44	43	P	Pn	10 00 23.4	+0.7
RAGM	Ragged Mountai	14.67	55	P	Pn	10 00 26.7	+1.3
WRH	Wood River Hil	14.88	38	P	P	10 00 27.8	-0.1
CCB	Clear Creek Bu	15.08	38	P	P	10 00 29.5	+0.1
PAX	Paxson	15.17	45	P	Pn	10 00 31.6	+0.2
PAX				IAmb	IAmb	10 00 33.9	
	comp=Z,9.9nm,1.1s						
HDA	Harding Lake	15.27	39	P	P	10 00 32.5	+0.1
HDA				IAmb	IAmb	10 00 39.4	
	comp=Z,6.3nm,1.0s						
GLB	Gilahina Butte	15.36	52	P	Pn	10 00 33.8	+0.1
GLB				IAmb	IAmb	10 00 35.5	
	comp=Z,8.9nm,0.6s						
VRDI	Verde Repeater	15.47	53	IAmb	IAmb	10 00 36.9	
	comp=Z,6.8nm,0.6s						
IL31		15.48	38	P	P	10 00 33.5	-0.2
ILAR	Eielson Array	15.48	38	P	P	10 00 33.1	-0.7
	comp=Z,0.4nm,0.3s,baz=227,slow=8.8,SNR=24						
ILAR				S	S	10 03 19.1	-4.0
	comp=Z,0.2nm,0.3s,baz=226,slow=16,SNR=6.8						
CRQM	Cirque	15.50	54	P	Pn	10 00 35.6	+0.2
CRQM				IAmb	IAmb	10 00 40.0	
	comp=Z,6.6nm,0.6s						
TGL	Tana Glacier	15.64	55	P	Pn	10 00 36.5	-0.6
TGL				IAmb	IAmb	10 00 51.6	
	comp=Z,16nm,1.4s						
MCARA	McCarthy VSAT	15.71	52	P	P	10 00 36.2	-0.1
MENT	Mentasta	15.89	46	P	Pn	10 00 40.8	+0.9
MENT				IAmb	IAmb	10 00 55.0	
	comp=Z,8.9nm,1.0s						
BALM	Baldy	15.94	54	P	P	10 00 39.3	+0.3
BALM				IAmb	IAmb	10 00 52.9	
	comp=Z,5.4nm,1.0s						
DOT	Dot Lake	16.03	44	P	P	10 00 40.2	+0.4
DOT				IAmb	IAmb	10 00 48.1	
	comp=Z,3.5nm,0.7s						
SCRK	Sand Creek	16.20	43	IAmb	IAmb	10 00 43.4	
	comp=Z,4.0nm,0.6s						
CTGM	Chitina Glacie	16.41	54	P	P	10 00 44.4	+0.2
CTGM				IAmb	IAmb	10 00 48.7	
	comp=Z,7.6nm,0.8s						
PCA	Pinnacle	16.78	58	P	P	10 00 48.7	+0.5
TOLK	Toolik Lake Re	17.18	25	P	Pn	10 00 53.8	-1.0
DAWY	Dawson	18.11	45	P	P	10 01 03.0	+0.6
DAWY				IAmb	IAmb	10 01 22.5	
	comp=Z,6.1nm,1.4s						
HYT	Haines Junctio	18.23	56	P	P	10 01 03.5	-0.4
HYT				IAmb	IAmb	10 01 15.4	
	comp=Z,9.3nm,1.3s						
PETK	Petropavlovsk-	19.44	280	P	P	10 01 16.9	+0.2
	comp=Z,0.2nm,0.3s,baz=86,slow=12,SNR=5.4						
EPYK	Eagle Plains	19.97	40	P	P	10 01 22.3	0.0
EPYK				IAmb	IAmb	10 01 24.1	
	comp=Z,3.7nm,0.6s						
SEY	Seymchan	21.46	309	P	P	10 01 37.3	+0.1
	comp=Z,0.6nm,0.3s,baz=118,slow=6.6,SNR=5.0						
INK	Inuvik	21.85	36	P	P	10 01 41.1	+0.4
	comp=Z,3.3nm,0.5s,baz=241,slow=7.4,SNR=50						
INK				PcP	PcP	10 05 29.0	-0.3
	comp=Z,0.7nm,0.4s,baz=225,slow=1.4,SNR=5.9						
INK	Inuvik	21.85	36	P	P	10 01 41.4	+0.7
INK				IAmb	IAmb	10 01 41.5	
	comp=Z,3.5nm,0.6s						
DLBC	Dease Lake	22.01	63	P	P	10 01 44.0	+1.6
	comp=Z,1.4nm,0.6s,baz=243,slow=8.0,SNR=7.0						
YKA	Yellowknife Ar	29.08	51	P	P	10 02 45.9	+0.4
	comp=Z,0.2nm,0.5s,baz=273,slow=8.6,SNR=8.7						
YKA				PcP	PcP	10 05 45.9	0.0
	comp=Z,0.6nm,0.5s,baz=287,slow=2.8,SNR=15						
B08A	Colville Reser	31.30	80	IAmb	IAmb	10 03 08.2	
	comp=Z,4.3nm,0.8s						
HAWA	Hanford	32.20	83	P	P	10 03 15.1	+2.0
HAWA				IAmb	IAmb	10 03 16.1	
	comp=Z,4.4nm,0.7s						
NEW	Newport	32.62	79	IAmb	IAmb	10 03 19.3	
	comp=Z,5.1nm,0.7s						
I07A	Izee	33.51	87	P	P	10 03 26.7	+2.1
JTMT	Jette	34.52	78	P	P	10 03 34.6	+1.4
JTMT				IAmb	IAmb	10 03 35.8	
	comp=Z,3.5nm,0.6s						
WVOR	Wild Horse Val	35.00	88	P	P	10 03 38.4	+1.1
MCMT	McKenzie Canyo	36.96	81	P	P	10 03 55.6	+1.6
NVAR	Mina Array Bea	37.75	93	P	P	10 04 02.0	+1.4
	comp=Z,1.2nm,0.7s,baz=299,slow=7.3,SNR=7.1						
YHL	Hebgen Lake	37.91	80	P	P	10 04 03.5	+1.5
RLMT	Red Lodge	38.86	78	P	P	10 04 10.1	+0.4
RLMT				IAmb	IAmb	10 04 12.7	
	comp=Z,9.9nm,1.3s						
PD31	Pinedale Array	40.10	81	P	P	10 04 20.1	0.0
PDAR	Pinedale Array	40.10	81	P	P	10 04 21.2	+1.2
	comp=Z,1.9nm,0.7s,baz=307,slow=3.5,SNR=20						
RDMU	Red Mountain	41.48	84	P	P	10 04 32.6	+1.4
O20A	White River Ci	42.53	83	P	P	10 04 40.3	+0.7
O20A				IAmb	IAmb	10 04 41.7	
	comp=Z,6.0nm,0.8s						
U15A	North Rim	42.62	91	P	P	10 04 42.2	+1.7
ULM	Lac du Bonnet	43.33	64	P	P	10 04 45.0	-0.6
	comp=Z,2.1nm,0.5s,baz=288,slow=7.6,SNR=6.8						
ULM	Lac du Bonnet	43.33	64	IAmb	IAmb	10 04 46.0	
	comp=Z,2.9nm,0.7s						
SDCO	Great Sand Dun	45.72	84	P	P	10 05 05.4	+0.5
ECSD	EROS Data Cent	46.88	72	P	P	10 05 13.1	-0.4
EYMN	Ely	47.02	64	P	P	10 05 14.0	-0.5
FRB	Frobisher Bay	47.50	36	P	P	10 05 18.1	+0.1
	comp=Z,3.3nm,0.5s,baz=311,slow=8.2,SNR=13						
SONM	Songino Array	50.37	300	pP	pP	10 06 41.4	+5.3
	comp=Z,0.9nm,0.9s,baz=57,slow=7.5,SNR=6.2						
SONM				ScP	ScP	10 10 22.4	-1.3
	comp=Z,0.4nm,0.7s,baz=37,slow=3.1,SNR=3.2						
E43A	Lone Tree Farm	50.38	63	P	P	10 05 39.5	-0.5
E43A				IAmb	IAmb	10 05 41.8	
	comp=Z,6.3nm,0.9s						
TX31	Lajitas Ar. Si	52.75	90	P	P	10 05 58.6	+0.9
TX32	Lajitas Array	52.75	90	P	P	10 05 58.4	+0.6
TXAR	Lajitas Array	52.75	90	P	P	10 05 58.9	+1.1
	comp=Z,2.0nm,0.7s,baz=301,slow=5.5,SNR=34						
TXAR				PcP	PcP	10 07 04.5	+1.0
	comp=Z,0.4nm,0.4s,baz=237,slow=1.1,SNR=8.8						
CCM	Cathedral Cave	53.70	73	P	P	10 06 04.1	-0.4
U40A	Yellville	53.99	76	P	P	10 06 05.5	-1.0
U40A				IAmb	IAmb	10 06 06.0	
	comp=Z,3.2nm,0.6s						
SCHQ	Schefferville	54.12	44	P	P	10 06 07.2	0.0
	comp=Z,2.5nm,0.7s,baz=322,slow=6.3,SNR=7.8						
SCHQ	Schefferville	54.12	44	P	P	10 06 07.3	0.0
SCHQ				IAmb	IAmb	10 06 07.4	
	comp=Z,4.7nm,0.9s						
D53A	Lac Vacive, Po	54.63	57	P	P	10 06 10.6	-0.4
D53A				IAmb	IAmb	10 06 25.5	
	comp=Z,8.1nm,1.3s						
FCAR	Ozark Folk Cen	54.73	76	P	P	10 06 10.7	-1.1
FCAR				IAmb	IAmb	10 06 11.1	
	comp=Z,4.0nm,0.7s						
WLAR	White Oak Lake	55.74	79	P	P	10 06 19.5	+0.5
M54A	Oil Creek Stat	57.57	63	P	P	10 06 31.7	-0.1
L56A	Greenwood	58.21	61	P	P	10 06 36.5	+0.3
M56A	Emporium	58.36	62	P	P	10 06 37.3	+0.1
SSPA	Standing Stone	59.12	62	P	P	10 06 42.2	-0.3
SSPA				IAmb	IAmb	10 06 45.7	
	comp=Z,13nm,1.4s						
L59A	Walton	59.45	59	P	P	10 06 44.5	-0.2
F64A	Sherman	59.99	52	P	P	10 06 47.2	-1.0
GGN	Saint George	61.25	52	P	P	10 06 56.6	-0.1
DRLN	Deer Lake	62.11	43	P	P	10 07 02.6	+0.2
MKAR	Makanchi Array	62.55	313	P	P	10 07 04.8	-0.6
	comp=Z,0.4nm,0.6s,baz=52,slow=7.4,SNR=6.0						
FINES	FINESS Array B	64.06	352	P	P	10 07 14.3	-0.6
	comp=Z,0.8nm,0.3s,baz=13,slow=7.6,SNR=8.3						
NB2	NORSAR Subarra	65.11	360	P	P	10 07 21.5	-0.3
	comp=Z,0.7nm,0.6s,baz=0.1,slow=6.2						
NOA	NORSAR Array B	65.11	360	P	P	10 07 21.2	-0.6
	comp=Z,0.7nm,0.6s,baz=0.3,slow=6.1,SNR=4.4						
AKASG	Malin Array Be	74.32	348	P	P	10 08 16.9	-0.8
	comp=Z,0.9nm,0.4s,baz=15,slow=5.6,SNR=6.8						
GERES	GERESS Array B	77.30	358	P	P	10 08 35.1	+0.4
	comp=Z,0.3nm,0.4s,baz=354,slow=8.4,SNR=3.7						
PLCA	Paso Flores	126.48	111	PKP	PKPdf	10 15 40.3	-0.1
	comp=Z,1.8nm,1.0s,baz=247,slow=3.8,SNR=3.6						
MAW	Mawson	152.27	221	PKPbc	PKiKP	10 16 32.5	-0.1
	comp=Z,12nm,0.6s,baz=208,slow=17,SNR=11						

TUL 27 10:14:01±2.1, 36.54N±0.04×97.06W±0.02, h8km±6km, ML3.4, Error ellipse: s-maj=5.5km s-min=1.6km az=200.0

NEIC 27 10:14:02.7±1.1, 36.47N±0.03×97.12W±0.02, h5km±2km, Error ellipse: s-maj=6.1km s-min=3.0km az=30.0

ANF 27 10:14:02.9±0.6, 36.49N×97.01W, h5km, ML4.3/12, Error ellipse: s-maj=7.6km s-min=2.7km az=36.0

IDC 27 10:14:03.9±2.2, 36.73N×97.44W, h0km, mb3.2/2, mb1 3.7/5, mb1mx3.4/40, mbtmp3.4/5, ML3.8/2, MS2.6/1, Ms1 2.6/1, ms1mx2.3/23, Error ellipse: s-maj=39.7km s-min=13.6km az=106.0

ISC 27 10:14:02.0±1.3, 36.48N±0.03×97.11W±0.03, h4km±10km, n59, σ1.35/72, Oklahoma

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.65	48	Pg	Pg	10 14 13.2	-1.2
ADOK	Arcadia Dam	0.85	194	Pg	Pg	10 14 19.1	+0.7
OKCFA	Oklahoma City	1.10	195		Pg	10 14 23.5	+0.4
OKCSW	OKLAHOMA CITY	1.11	194		Pb	10 14 23.5	-0.2
TUL1	Leonard	1.21	118		Pn	10 14 24.1	-1.6
TUL1				Sg	Sg	10 14 41.8	+0.9
TUL1	Leonard	1.21	118	P	Pn	10 14 24.2	-1.5
	baz=299						
TUL1				S	Sb	10 14 40.8	-0.7
	baz=299						
FNO	Franklin	1.25	191		Pg	10 14 26.3	+0.4
W35A	Tecumseh	1.34	172		Pn	10 14 26.8	-0.8
W35A				Sn	Sg	10 14 45.5	+0.4
U32A	Winter Ranch,	1.53	267	Pn	Pb	10 14 30.8	-0.2
U32A				Sn	Sb	10 14 50.5	-0.2
X34A	Smith Ranch, M	1.97	198		Pb	10 14 37.9	-0.5
X34A				Sn	Sb	10 15 03.0	-0.3
U38A	Gravette	2.20	90		Pn	10 14 40.2	+0.9
U38A					LR	10 15 09.0	
WMOK	Wichita Mounta	2.21	219		Pn	10 14 40.4	+0.9
WMOK				Sn	Sb	10 15 09.4	-0.9
WMOK	Wichita Mounta	2.21	219	P	Pn	10 14 40.4	+0.9
	baz=37						
WMOK				S	Sg	10 15 12.4	-0.6
	baz=37						
HHAR	Hobbs	2.56	94		Pn	10 14 45.3	+0.9
KSU1	Kansas State U	2.64	8	P	Pn	10 14 45.8	+0.3
	baz=189						
KSU1				S	Sn	10 15 20.3	+2.3
	baz=189						
W39A	Magazine	2.99	114		Pn	10 14 50.9	+0.7
W39A	Magazine	2.99	114	P	Pn	10 14 50.9	+0.7
	baz=296						
W39A				S	Sn	10 15 27.3	+0.8
	baz=296						
CBKS	Cedar Bluff	3.13	319		Pn	10 14 52.5	+0.3
CBKS	Cedar Bluff	3.13	319	Pb	Pb	10 14 59.0	+0.8
	baz=137						
CBKS				Sb	Sb	10 15 39.7	+3.0
	baz=137						
Z35A	Perchaven, San	3.15	182	Pn	Pn	10 14 53.4	+1.0
S39A	Bolivar	3.26	67	Pn	Pn	10 14 57.4	+3.5
U40A	Yellville	3.43	91		Pn	10 14 56.1	-0.2
U40A				Sn	Sn	10 15 37.0	-0.5
U40A	Yellville	3.43	91	P	Pn	10 14 56.1	-0.2
	baz=273						
U40A				S	Sn	10 15 37.7	+0.2
	baz=273						
MIAR	Mount Ida	3.47	123		Pn	10 14 57.3	+0.5
MIAR	Mount Ida	3.47	123	P	Pn	10 14 57.4	+0.5
	baz=305						
MIAR				S	Sn	10 15 38.7	+0.3
	baz=305						
Z38A	Mt. Pleasant	3.66	151	Pn	Pn	10 14 59.6	+0.2
MGMO	Mountain Grove	3.94	79		Pn	10 15 03.4	+0.1
X40A	Basin Creek Fa	4.02	118		Pn	10 15 05.1	+0.8
X40A	Basin Creek Fa	4.02	118	P	Pn	10 15 05.1	+0.8
	baz=301						
X40A				S	Sn	10 15 52.1	+0.3
	baz=301						
AMTX	Amarillo	4.05	248		Pn	10 15 06.2	+1.3
AMTX	Amarillo	4.05	248	P	Pn	10 15 06.2	+1.3
	baz=65						
FCAR	Ozark Folk Cen	4.08	97		Pn	10 15 06.4	+1.3
WHAR	Wooly Hollow	4.09	105		Pn	10 15 05.4	+0.1
W41B	Gary Mavity, V	4.16	107		Pn	10 15 06.8	+0.5
W41B	Gary Mavity, V	4.16	107	P	Pn	10 15 06.5	+0.2
	baz=290						
W41B				Sb	Sb	10 16 09.9	+3.5
	baz=290						
UALR	University of	4.24	112	Pn	Pn	10 15 07.7	+0.3
WLAR	White Oak Lake	4.30	129		Pn	10 15 08.7	+0.5
ABTX	Abilene, Hawle	4.38	209	Pn	Pn	10 15 10.1	+0.8
ABTX	Abilene, Hawle	4.38	209	P	Pn	10 15 12.4	+3.1
	baz=28						
WHTX	Lake Whitney,	4.49	184	Pn	Pn	10 15 10.9	0.0
WHTX	Lake Whitney,	4.49	184	P	Pn	10 15 12.7	+1.9
	baz=3.5						
WHTX				Sb	Sb	10 16 20.9	+5.0
	baz=3.5						
237A	Washetta, Mont	4.60	166		Pn	10 15 12.8	+0.5
Z41A	Richland Creek	4.78	131		Pn	10 15 14.8	0.0
LCAR	Lake Charles	4.83	93	Pn	Pn	10 15 16.2	+0.8
BGNE	Belgrade	4.99	351		Pn	10 15 17.0	-0.6
OGNE	Ogallala	5.89	321	Pn	Pn	10 15 29.4	-0.7
OXF	Oxford	6.58	105		Pn	10 15 39.4	-0.2
L42A	Oliver, Polo	7.98	44	Pn	Pn	10 15 55.8	-2.9
T47A	Sharon Grove	8.05	83	Pn	Pn	10 15 59.3	-0.4
PHWY	Pilot Hill	8.09	309	Pn	Pn	10 15 59.3	-1.3
N23A	Red Feather La	8.19	305		Pn	10 16 01.5	-0.4
JFWS	Jewell Farm	8.32	37	Pn	Pn	10 16 01.9	-1.5
TXAR	Lajitas Array	9.01	220	Pn	Pn	10 16 13.3	+0.3
	0.2nm,0.3s,baz=35,slow=11,SNR=5.3						
TXAR				Pg		10 16 43.8	
	0.7nm,0.3s,baz=45,slow=15,SNR=5.7						
TXAR				Lg	Lg	10 18 46.6	
	0.7nm,0.3s,baz=41,slow=36,SNR=11						
TXAR				LR	LR	10 20 28.7	
	comp=Z,39nm,20.8s,baz=0.0,slow=43						
TKL	Tuckaleechee C	10.83	90	Lg	Lg	10 19 37.8	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	2.9nm,0.3s,baz=11,slow=23,SNR=8.9						
PDAR	**Pinedale Array**	**11.46**	**307**	Pn	**Pn**	**10 16 45.0**	**-1.7**
	0.1nm,0.3s,baz=124,slow=14,SNR=8.2						
PDAR				Lg	Lg	10 20 00.6	
	0.3nm,0.3s,baz=107,slow=35,SNR=3.8						
ULM	**Lac du Bonnet**	**13.79**	**3**	Pn	Pn	10 17 13.5	-4.7
	0.2nm,0.3s,baz=178,slow=14,SNR=3.2						
ULM				Lg	Lg	10 21 04.9	
	0.4nm,0.3s,baz=84,slow=22,SNR=3.1						
SADO	**Sadowa**	**15.93**	**53**	Lg	Lg	10 22 16.3	
	0.5nm,0.3s,baz=319,slow=2.6,SNR=3.1						
YKA	**Yellowknife Ar**	**28.21**	**343**	P	**P**	**10 19 53.7**	**-1.9**
	0.1nm,0.6s,baz=143,slow=8.9,SNR=3.7						
ILAR	**Eielson Array**	**40.72**	**330**	P	**P**	**10 21 43.8**	**+0.3**
	0.5nm,0.6s,baz=101,slow=7.4,SNR=7.2						

TRN 27 10:31:52.5,18.00N×62.02W,h23km,MD3.7,Leeward Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.40**	**146**	eP	Pn	10 32 02.8	-0.1
ANWB				eS	Sn	10 32 09.5	-0.3
SKI	**Saint Kitts**	**0.95**	**226**	eP	Pn	10 32 12.2	+1.7
SKI				eS	Sn	10 32 26.7	+3.3
BPA	**Boggy Peak**	**0.96**	**171**	eP	Pn	10 32 12.1	+1.4
BPA				eS	Sn	10 32 25.9	+2.2
NVRH	**Round Hill, Ne**	**0.98**	**214**	eP	Pn	10 32 12.8	+1.8
NVRH				eS	Sn	10 32 27.2	+3.0
SMRT	**St. Maarten**	**1.00**	**273**	eP	Pn	10 32 12.0	+0.8
SMRT				eS	Sn	10 32 27.1	+2.4
NEV	**Hard Times**	**1.01**	**211**	eP	Pn	10 32 13.3	+2.0
SEUS	**St. Eustatius**	**1.04**	**241**	eP	Pb	10 32 13.4	+1.5
SEUS				eS	Sn	10 32 29.4	+3.8
NVBH	**Bath Hotel, Ne**	**1.05**	**213**	eP	Pb	10 32 13.3	+1.4
NVBH				eS	Sn	10 32 28.3	+2.6
SABA	**Saba**	**1.22**	**252**	eP	Pb	10 32 16.1	+1.1
SABA				eS	Sb	10 32 32.3	+2.0
MLYT	**Lee's Yard**	**1.28**	**187**	eP	Pb	10 32 17.1	+1.1
MLYT				eS	Sb	10 32 34.7	+2.7
DWS	**Wesley**	**2.51**	**164**	eP	Pb	10 32 34.6	-2.3

SJA 27 10:39:51.9±0.9,35.51S×72.31W,h10km,ML3.1,MW2.8
GUC 27 10:40:07.8±0.8,34.75S×71.61W,h33km±21km,ML3.0,1C-1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GO05	**Huala**	**0.37**	**226**	eP	Pn	10 40 17.1	+0.2
GO05				i S	Sn	10 40 23.4	+0.4
GO05					IAML	10 40 24.7	
	comp=E,1μm,0.2s						
GO05	**Huala**	**0.37**	**226**	eP	Pn	10 40 17.1	+0.2
GO05				eS	Sn	10 40 23.4	+0.4
LMEL	**Las Melosas**	**1.47**	**53**	⇓eP	Pb	10 40 34.2	-0.5
LMEL				i S	Sb	10 40 54.6	+1.5
LMEL					IAML	10 40 58.8	
	comp=N,437nm,0.1s						
MT02	**Curacav**	**1.54**	**15**	⇑iP	Pb	10 40 34.6	-1.1
MT02				i S	Sb	10 40 53.8	-1.1
MT02					IAML	10 40 57.8	
	comp=N,135nm,0.3s						
MT03	**Universidad Ad**	**1.55**	**36**	eP	Pb	10 40 35.9	-0.1
MT03				i S	Sb	10 40 56.6	+1.3
MT03					IAML	10 41 00.3	
	comp=E,876nm,0.3s						
PEL	**Peldehue**	**1.78**	**26**	eP	Pb	10 40 39.0	-0.8
PEL				i S	Sb	10 41 01.9	+0.1
PEL					IAML	10 41 09.6	
	comp=N,239nm,0.4s						
PEL	**Peldehue**	**1.78**	**26**	i P	Pb	10 40 39.1	-0.7
ROC1	**El Roble**	**1.84**	**16**	i P	Pb	10 40 39.5	-1.4
ROC1				eS	Sb	10 41 03.0	-0.7
ROCH	**El Roble**	**1.84**	**16**	IAML		10 41 16.9	
	comp=E,173nm,0.5s						
ARCO	**CERRO ARCO**	**2.93**	**50**	i P	Pb	10 41 00.1	+0.6
ARCO					IAML	10 41 14.6	
	comp=Z,21nm,0.4s						
ASAL	**Salagasta**	**3.16**	**48**	i P	Pb	10 41 02.6	-0.7
ASAL				eS	Sb	10 41 46.8	+5.3
RTLL	**Cerro Villicun**	**4.31**	**38**	i P	Pn	10 41 14.4	+3.3
RTLL					IAML	10 42 16.7	
	comp=Z,12nm,0.5s						
AMOG	**MOGNA**	**4.62**	**35**	i P	Pn	10 41 18.0	+2.7
ACCO	**Cerro Coronel**	**4.67**	**28**	i P	Pn	10 41 18.9	+2.6
ACCO				eS	Sb	10 42 18.7	-6.5
AROD	**Rodeo**	**4.92**	**22**	i P	Pn	10 41 22.8	+3.1
AROD				eS	Sb	10 42 31.3	-0.8
ACDV	**Cuesta del Vie**	**5.03**	**25**	i P	Pn	10 41 23.6	+2.5

SOME 27 10:54:38.9,43.57N×69.68E
NNC 27 10:54:39.5±1.5,43.61N×69.67E,h0km,mb3.5,mpv3.2,3C-2D,Error ellipse: s-maj=8.4km s-min=6.4km az=153.0,Suspected Mining explosion.,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRLS	**Borolday**	**0.60**	**168**	P	Pn	10 54 54.8	-0.4
	0.6nm,0.3s						
BRLS				S	Sn	10 55 05.1	-0.5
	6.9nm,0.3s						
KK31	**Karatay Array**	**0.80**	**129**	⇑P	Pg	10 54 54.8	0.0
	2.2nm,0.3s,baz=309,slow=17,SNR=161						
KK31				S	Sg	10 55 06.3	+1.1
	16nm,0.4s,baz=302,slow=29,SNR=116						
JBG	**Jabagly**	**1.35**	**151**	P	Pg	10 55 04.3	-1.1
	15nm,0.4s						
JBG				S	Sg	10 55 22.7	-0.2
	28nm,0.5s						
DZA	**Taraz**	**1.41**	**120**	P	Pn	10 55 06.2	-0.3
	72nm,0.1s						
DZA				S	Sg	10 55 24.6	-0.3
	57nm,0.2s						
IUG	**Iuzhnay**	**1.49**	**170**	P	Pb	10 55 08.6	+0.5
	5.2nm,0.3s						
IUG				S	Sn	10 55 29.9	+2.0
	57nm,0.4s						
SGDS	**Sogindy**	**3.61**	**91**	Pg	Pb	10 55 46.3	+2.0
	4.0nm,0.4s						
SGDS				Lg	Lg	10 56 33.9	
	4.5nm,0.4s						
AAK	**Ala-Archa**	**3.67**	**104**	⇓Pg	Pb	10 55 45.6	+0.3
	4.6nm,0.6s						
AAK				⇑Lg	Lg	10 56 35.3	
	4.5nm,0.6s						
CHMS	**Chumysh**	**3.76**	**98**	⇓Pg	Pb	10 55 46.7	-0.1
	2.8nm,0.5s						
CHMS				⇑Lg	Lg	10 56 36.6	
	5.8nm,0.5s						
DGS	**Degeres**	**4.46**	**93**	Pg	Pg	10 56 02.1	-2.9
	4.3nm,0.5s						
DGS				Lg	Lg	10 57 00.8	
	9.7nm,0.6s						
KST	**Kastek**	**4.63**	**95**	Pg	Pg	10 56 05.1	-3.1
KST				Lg	Lg	10 57 05.9	
	7.1nm,0.4s						

TEH 27 11:04:12.5,29.43N×51.25E,h8km,ML3.5,Southern Iran

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IKAZ	**Kazeroun**	**0.62**	**55**	ePg	Pg	11 04 24.3	-0.3
IKAZ				e		11 04 40.3	
SHI	**Shiraz**	**1.12**	**79**	ePg	Pn	11 04 34.7	+0.1
GHB	**Gharebagh**	**1.12**	**92**	ePg	Pg	11 04 34.0	-0.1
KLNJ	**Kolanjah**	**1.60**	**10**	ePn	Pb	11 04 42.9	+0.3
KLNJ				e		11 05 18.4	
ISRV	**Sarvestan**	**1.62**	**91**	ePn	Pg	11 04 43.7	0.0
ISRV				eSg	Sg	11 05 07.9	+3.1
ISRV				e		11 05 21.3	
JHRM	**Jahrom**	**2.23**	**114**	ePn	Pn	11 04 51.3	+1.4
JHRM				e		11 05 33.8	
IBRJ	**Brojen**	**2.47**	**0**	ePn	Pb	11 04 56.7	-0.7
IRAM	**Ramesheh**	**2.57**	**22**	ePn	Pb	11 04 57.7	-1.2
LMD1	**Lamerd**	**2.68**	**141**	ePn	Pb	11 04 59.3	-1.4
LMD1				e		11 05 54.8	
JHBN	**Jahan bin**	**2.84**	**350**	ePn	Pb	11 05 01.2	-2.5
ROKH	**ROKH**	**2.92**	**356**	ePn	Pb	11 05 02.0	+2.6
ISAD	**Sadrabad**	**3.25**	**40**	ePn	Pn	11 05 06.9	+2.9
IMEH	**Mehriz**	**3.50**	**55**	ePn	Pn	11 05 10.8	+3.3
IZEF	**Zefreh**	**3.58**	**15**	ePn	Pn	11 05 11.1	+2.5
IKLH	**Kolahrood**	**3.89**	**4**	ePn	Pn	11 05 15.4	+2.6
IBAF	**Bafgh**	**4.30**	**59**	ePn	Pn	11 05 20.7	+2.3
KHGB	**Koh Gabri**	**4.63**	**77**	ePn	Pn	11 05 25.4	+2.4
KHGB				e		11 06 28.1	
NIAN	**Nian**	**5.25**	**109**	ePn	Pn	11 05 33.4	+2.1

RHSSO 27 11:22:49.8±0.3,42.60N×19.40E,h4km±1km,ML3.1/12
PDG 27 11:22:49.7±0.1,42.60N×19.36E,h10km,MD3.1/10,ML2.9/13,Error ellipse: s-maj=0.1km s-min=0.2km az=0.0
PRU 27 11:22:54.4±0.0,42.60N×19.55E,h21km
ISC 27 11:22:49.7±1.0,42.61N±0.02×19.36E±0.02,h4km±9km,n63,σ1974/104,13C-6D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PDG	**Podgorica**	**0.20**	**202**	⇓P	Pg	11 22 53.4	-0.1
PDG				⇑S	Sg	11 22 56.6	+0.6
PDG	**Podgorica**	**0.20**	**202**	⇑iPg	Pg	11 22 53.4	-0.1
PDG				eSg	Sg	11 22 56.8	+0.6
TTG	**Podgorica**	**0.20**	**202**	ePg	Pg	11 22 53.4	-0.1
TTG				eSg	Sg	11 22 56.7	+0.6
KOME	**Kolasin**	**0.27**	**26**	⇓iPg	Pg	11 22 55.0	+0.1
KOME				i Sg	Sg	11 22 59.5	+1.1
CEME	**Cevo**	**0.33**	**259**	ePg	Pg	11 22 56.0	-0.1
CEME				i Sg	Sg	11 23 01.3	+0.9
NKME	**Niksic**	**0.33**	**298**	ePg	Pg	11 22 56.2	0.0
NKME				eSg	Sg	11 23 01.6	+1.0
NKY	**Niksic**	**0.33**	**307**	ePg	Pg	11 22 56.1	-0.1
NKY				eSg	Sg	11 23 02.0	+1.4
DRME	**Dracevica, Mon**	**0.44**	**197**	⇑iPg	Pg	11 22 57.6	-0.6
DRME				eSg	Sg	11 23 04.4	+0.4
DRME	**Dracevica, Mon**	**0.44**	**197**	ePg	Pg	11 22 57.7	-0.5
DRME				eSg	Sg	11 23 05.2	+1.2
PVY	**Plav**	**0.45**	**92**	⇓iPg	Pg	11 22 57.7	-0.6
PVY				eSg	Sb	11 23 04.9	-2.3
BUM	**Brajici-Budva**	**0.46**	**228**	ePg	Pg	11 22 58.3	-0.3
BUM				eSg	Sg	11 23 05.7	+1.1
IVA	**Berane**	**0.47**	**57**	ePg	Pg	11 22 58.7	-0.1
IVA				eSg	Sb	11 23 06.5	-1.5
ULC	**Ulcinj**	**0.65**	**187**	ePg	Pg	11 23 01.6	-0.6
ULC				eSg	Sb	11 23 12.0	-1.1
HCY	**Herceg Novi**	**0.66**	**256**	⇑iPg	Pg	11 23 02.1	-0.2
HCY				eSg	Sg	11 23 11.7	+0.9
HCY	**Herceg Novi**	**0.66**	**256**	ePg	Pg	11 23 02.1	-0.2
HCY				eSg	Sb	11 23 12.5	-0.7
BRY	**Bratogost**	**0.67**	**296**	⇑iPg	Pg	11 23 01.9	-0.6
BRY				eSg	Sg	11 23 12.4	+1.2
BRY	**Bratogost**	**0.67**	**296**	ePg	Pg	11 23 01.9	-0.6
BRY				eSg	Sb	11 23 12.9	-0.7
UPM	**Unac-Piva**	**0.68**	**331**	ePg	Pg	11 23 02.5	-0.3
UPM				eSg	Sg	11 23 12.0	+0.5
UPM	**Unac-Piva**	**0.68**	**331**	ePg	Pg	11 23 02.4	-0.3
UPM				eSg	Sb	11 23 13.5	-0.4
PLE	**Pljevlja**	**0.72**	**2**	⇓iPg	Pg	11 23 03.3	-0.2
PLE				eSg	Sb	11 23 15.1	0.0
TREB	**Trebinje**	**0.75**	**278**	ePg	Pg	11 23 03.2	-0.9
TREB				eSg	Sb	11 23 15.4	-0.4
DBRK	**Dubrovnik**	**0.89**	**274**	ePg	Pg	11 23 07.0	+0.2
DBRK				Sg	Sn	11 23 21.9	-0.5
RUDO	**Rudo**	**1.00**	**1**	ePg	Pg	11 23 07.9	-1.1
RUDO				eSg	Sb	11 23 22.7	-0.5
STON	**Ston**	**1.25**	**283**	ePg	Pn	11 23 12.8	-1.0
STON				eSg	Sn	11 23 30.8	-0.2
BBLS	**Lazići**	**1.25**	**2**	ePg	Pn	11 23 12.5	-1.5
BBLS				eSg	Sn	11 23 30.2	-1.2
TIR	**Tirane**	**1.32**	**163**	⇑P	Pb	11 23 14.5	-0.5
HAPS	**Han Pijesak,Bl**	**1.50**	**349**	ePn	Pb	11 23 17.6	-0.6
HAPS				eSg	Sg	11 23 38.3	+0.3
DIVS	**Divibare**	**1.56**	**17**	ePn	Pb	11 23 18.3	-0.8
DIVS				eSg	Sg	11 23 39.9	+0.2
MAKA	**Makarska**	**1.84**	**292**	ePn	Pg	11 23 24.8	-0.2
MAKA				Sn	Sg	11 23 51.2	+2.3
OHR	**Ohrid**	**1.85**	**144**	i Pn	Pg	11 23 25.4	+0.3
OHR				i Sn	Sg	11 23 52.6	+3.6
TEKS	**Tekeris**	**1.94**	**4**	ePn	Pn	11 23 23.7	+0.3
TEKS				eSn	Sb	11 23 48.7	-1.4
MGRS	**Mrkonjic Grad**	**2.45**	**318**	ePn	Pn	11 23 31.3	+0.9
MGRS				eSn	Sn	11 24 01.9	+1.2
BLY	**Banja Luka**	**2.65**	**324**	⇑Pn	Pb	11 23 35.0	-2.7
BLY	**Banja Luka**	**2.65**	**324**	ePn	Pn	11 23 34.2	+1.0
BLY				eSn	Sn	11 24 06.9	+1.1
VAY	**Valandovo**	**2.72**	**117**	i Pn	Pb	11 23 37.9	-1.0
VAY				i Sn	Sb	11 24 11.0	-1.6
MDVR	**Moldovita**	**2.76**	**37**	⇑P	Pn	11 23 34.8	+0.1
MATE	**Matera**	**2.79**	**226**	⇑P	Pn	11 23 35.2	+0.1
MATE				⇑S	Sn	11 24 08.4	-0.3
VTS	**Vitosha**	**2.86**	**89**	⇑P	Pn	11 23 37.1	+0.8
ZIRJ	**Zirje**	**2.91**	**292**	ePn	Pb	11 23 39.7	-2.4
ZIRJ				Sn	Sb	11 24 16.7	-1.3
MORI	**Morici**	**2.94**	**296**	i Pn	Pb	11 23 40.9	-1.8
MORI				Sn	Sb	11 24 19.2	+0.2
BZS	**Buzias**	**3.42**	**28**	⇑P	Pn	11 23 44.4	+0.7
DUGI	**Dugi Otok**	**3.43**	**295**	ePn	Pb	11 23 47.2	-3.7
DUGI				Sn	Sb	11 24 29.8	-3.1
MORH	**Mrgy, Hungar**	**3.64**	**352**	ePn	Pn	11 23 46.5	-0.2
GZR	**Gura Zlata**	**3.72**	**40**	⇓P	Pn	11 23 49.3	+1.4
NVLJ	**Novalja**	**3.80**	**302**	ePn	Pn	11 23 51.5	+2.7
NVLJ				Sn	Sb	11 24 39.3	-4.2
TIP	**Timpagrande**	**3.96**	**211**	⇑P	Pn	11 23 51.7	+0.5
KALN	**Kalnik**	**4.09**	**330**	ePn	Pn	11 23 56.3	+3.3
CRES	**Cresnjev**	**4.26**	**320**	ePn	Pn	11 23 55.7	+0.4
CRES				eSn	Sn	11 24 44.8	-0.7
RIY	**Rijeka**	**4.44**	**309**	ePn	Pn	11 23 58.2	+0.5
RIY				eSn	Sn	11 24 49.1	-0.7
CEY	**Cerknica**	**4.72**	**313**	ePn	Pn	11 24 01.9	+0.2
CEY				eSn	Sn	11 24 56.2	-0.7
DRGR		**4.81**	**29**	⇓P	Pn	11 24 03.8	+0.8
SOKA	**Soboth**	**5.10**	**324**	i Pn	Pn	11 24 09.5	+2.6
	3.7nm,0.4s						
OBKA	**Obir**	**5.19**	**320**	ePn	Pn	11 24 12.4	+4.2
	1.5nm,0.5s						
ARSA	**Arzberg**	**5.38**	**331**	i Pn	Pn	11 24 13.5	+2.8
	2.6nm,0.4s						
MYKA	**Terra Mystica**	**5.72**	**317**	i Sn	Sn	11 25 28.3	+6.7
	3.4nm,0.5s						
KBA	**Koelnbreinsper**	**6.18**	**318**	ePn	Pn	11 24 26.0	+4.2
	1.2nm,0.4s						
MOA	**Molln**	**6.35**	**327**	ePn	Pn	11 24 27.8	+3.8
	1.5nm,0.4s						
ABTA	**Abfaltersbach**	**6.39**	**313**	i Pn	Pn	11 24 27.3	+2.7
	4.0nm,0.5s						
WTTA	**Wattenberg**	**7.18**	**313**	ePn	Pn	11 24 39.0	+3.4
	2.3nm,0.3s						
WATA	**Walderalm**	**7.26**	**313**	i Pn	Pn	11 24 43.2	+6.6
	3.4nm,0.4s						
MOTA	**Moosalm**	**7.52**	**312**	i Pn	Pn	11 24 44.3	+4.1
	3.1nm,0.4s						
FETA	**Feichten**	**7.55**	**309**	i Pn	Pn	11 24 44.5	+3.9
	1.2nm,0.4s						
FETA				i Sn	Sn	11 26 10.6	+3.9
	3.4nm,0.8s						
KHC	**Kasperske Hory**	**7.66**	**330**	ePN	Pn	11 24 41.5	-0.5
KHC				ex	x	11 24 45.9	
KHC				eSN	Sn	11 26 08.7	-0.5

MEX 27 11:31:24.0±1.2,14.30N×93.21W,h10km±29km,MD4.6
GCMT 27 11:31:25.5±0.3,14.46N±0.02×93.37W±0.03,h30km,MW4.9/70,Moment Tensor Solution. s45,c52; s70,c89; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.63±.13; Mθθ-1.83±.08; Mφφ-0.80±.09; Mrθ0.97±.09; Mrφ1.01±.06; Mθφ-1.14±.12; Best double couple: Mo2.94600×10^16 NP1:φs294.00000°,δ31.00000°,λ76.00000°. NP2: φs130.00000°,δ60.00000°,λ98.00000°. Principal axes: T 3.0650, Plg74.0000°, Azm60.0000°; N -0.2380, Plg7.0000°, Azm306.0000°; P -2.8270, Plg15.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
SNET 27 11:31:26.3±0.8,14.40N×93.01W,h20km±6km,ML4.8
UCR 27 11:31:27.1±1.3,14.47N×92.98W,h21km±75km,ML4.3,mb4.6(NEIC)
NEIC 27 11:31:27.5±2.2,14.51N±0.06×93.08W±0.05,h56km±2km,Error ellipse: s-maj=9.8km s-min=5.5km az=213.0
IDC 27 11:31:30.1±2.2,14.63N×92.77W,h76km±18km,mb4.1/21,mb1 4.3/26,mb1mx4.3/38,mbtmp4.5/26,MS3.8/22,Ms1 3.8/22,ms1mx3.8/34,Error ellipse: s-maj=21.9km s-min=10.5km az=50.0
GCG 27 11:31:46.8±1.0,14.41N×91.55W,h24km±13km,MD4.5
ISC 27 11:31:24.0±1.3,14.45N±0.04×93.19W±0.03,h28km±9km,n445,σ1964/371,mb4.6/94,MS4.0/24,2D,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		**1.00**	**63**		**Pn**	**11 31 41.6**	**-0.5**
THIG					**Sn**	**11 31 55.6**	**+0.2**
THIG		**1.00**	**63**	eP	**Pn**	**11 31 41.6**	**-0.5**
THIG				eS	**Sn**	**11 31 55.6**	**+0.2**
PCIG		**1.25**	**359**		**Pn**	**11 31 44.7**	**-0.8**
PCIG					**Sn**	**11 31 57.6**	**-3.8**
PCIG		**1.25**	**359**	eP	**Pn**	**11 31 44.7**	**-0.8**
PCIG				i S	**Sb**	**11 32 02.5**	**0.0**
ERG	**Entre ros, C**	**1.57**	**90**	eP	**Pb**	**11 31 51.1**	**-1.3**
STG3	**Santiaguito 3,**	**1.59**	**80**	⇓iP	**Pn**	**11 31 50.7**	**+0.3**
CCIG	**Comitan**	**2.08**	**29**		**Pb**	**11 31 59.6**	**-1.6**
CCIG					**Sb**	**11 32 25.0**	**-1.8**
CCIG	**Comitan**	**2.08**	**29**	Pn	**Pb**	**11 31 59.6**	**-1.6**
CCIG	**Comitan**	**2.08**	**29**	eP	**Pb**	**11 31 59.6**	**-1.6**
CCIG				eS	**Sb**	**11 32 25.0**	**-1.8**
FUG	**Fuego 3**	**2.27**	**90**	eP	**Pn**	**11 32 00.6**	**+0.8**
TGIG		**2.31**	**2**		**Pn**	**11 32 01.9**	**+1.6**
TGIG					**Sb**	**11 32 30.6**	**-2.6**
TGIG		**2.31**	**2**	eP	**Pn**	**11 32 01.9**	**+1.6**
TGIG				eS	**Sb**	**11 32 30.6**	**-2.6**
PCG	**Pacaya**	**2.50**	**91**	eP	**Pn**	**11 32 04.5**	**+1.4**
IXG	**Ixpaco**	**2.68**	**96**	⇓iP	**Pn**	**11 32 06.5**	**+1.1**
APG	**El Apazote**	**2.69**	**78**	P	**Pn**	**11 32 06.4**	**+0.7**
	132nm,0.3s,baz=254,slow=9.3,SNR=284						
APG				LR	LR	11 32 32.3	
	comp=Z,476nm,21.6s,baz=258,slow=28						
APG				S	**Sn**	**11 32 38.5**	**+1.0**
	147nm,0.3s,baz=359,slow=11,SNR=4.1						
NBG	**Las Nubes**	**2.76**	**87**	eP	**Pb**	**11 32 09.4**	**-3.3**
CMIG	**Matias Romero**	**3.09**	**328**	P	**Pn**	**11 32 11.0**	**0.0**
	36nm,0.3s,baz=162,slow=10,SNR=461						
CMIG				S	**Sn**	**11 32 46.6**	**-0.4**
	64nm,0.3s,baz=106,slow=21,SNR=7.0						
CMIG				LR	LR	11 33 47.1	
	comp=Z,998nm,19.9s,baz=129,slow=43						
CMIG	**Matias Romero**	**3.09**	**328**		**Pn**	**11 32 11.0**	**0.0**
CMIG					**Sn**	**11 32 46.0**	**-1.0**
CMIG	**Matias Romero**	**3.09**	**328**	eP	**Pn**	**11 32 10.6**	**-0.3**
CMIG				i S	**Sn**	**11 32 49.1**	**+2.1**
HUIG	**Huatulco**	**3.11**	**295**		**Pn**	**11 32 09.9**	**-1.3**
HUIG					Sn	11 32 34.2	-13
HUIG	**Huatulco**	**3.11**	**295**	eP	**Pn**	**11 32 09.9**	**-1.3**
HUIG				i S	**Sn**	**11 32 43.8**	**-3.7**
MRL	**Marmol**	**3.45**	**79**	eP	**Pn**	**11 32 18.3**	**+2.3**
SBLS	**San Blas**	**3.51**	**100**	eP	**Pn**	**11 32 18.1**	**+1.2**
SBLS				eS	**Sn**	**11 32 58.6**	**+0.9**
SBLS	**San Blas**	**3.51**	**100**	eP	**Pn**	**11 32 18.1**	**+1.2**
SBLS				eS	**Sn**	**11 32 58.6**	**+0.9**
CEVE	**Cerro Verde**	**3.51**	**100**	eP	**Pn**	**11 32 17.7**	**+0.7**
CEVE				eS	**Sn**	**11 32 58.8**	**+1.0**
CEVE	**Cerro Verde**	**3.51**	**100**	eP	**Pn**	**11 32 17.7**	**+0.7**
CEVE				eS	**Sn**	**11 32 58.8**	**+1.0**
BOQS	**Boqueron**	**3.86**	**100**	eP	**Pn**	**11 32 23.1**	**+1.3**
SNET	**Serv Nac Est T**	**3.91**	**101**	Pn	**Pn**	**11 32 25.0**	**+2.7**
LFU	**La Fuente**	**4.01**	**100**	eP	**Pn**	**11 32 25.6**	**+1.9**
LFU	**La Fuente**	**4.01**	**100**	eP	**Pn**	**11 32 25.6**	**+1.9**
LFRS	**El Faro**	**4.09**	**101**	eP	**Pn**	**11 32 26.2**	**+1.4**
PEIG	**Puerto Escondi**	**4.12**	**292**	eP	**Pn**	**11 32 24.9**	**-0.2**
PEIG				eS	**Sn**	**11 33 13.2**	**+0.7**
PAVA	**Las Pavas**	**4.19**	**100**	eP	**Pn**	**11 32 27.5**	**+1.3**
PAVA	**Las Pavas**	**4.19**	**100**	eP	**Pn**	**11 32 27.5**	**+1.3**
COEB	**Comit de Eme**	**4.62**	**101**	eP	**Pn**	**11 32 33.2**	**+1.1**
COEB					IAML	11 33 47.2	
	comp=Z,645nm,0.6s						
COEB	**Comit de Eme**	**4.62**	**101**	eP	**Pn**	**11 32 33.2**	**+1.1**
COEB					IAML	11 33 47.2	
	comp=Z,645nm,0.6s						
YOIG	**Yosondua**	**4.83**	**300**	eP	**Pn**	**11 32 38.0**	**+2.9**
YOIG				eS	**Sn**	**11 33 33.0**	**+2.6**
JUCU	**Jucuar¡n**	**4.94**	**103**	eP	**Pn**	**11 32 37.7**	**+1.2**
JUCU					IAML	11 33 58.4	
	comp=Z,626nm,0.6s						
JUCU	**Jucuar¡n**	**4.94**	**103**	eP	**Pn**	**11 32 37.7**	**+1.2**
JUCU					IAML	11 33 58.4	
	comp=Z,626nm,0.6s						
PNIG	**Pinotepa**	**5.14**	**293**		**Pn**	**11 32 39.9**	**+0.8**
PNIG	**Pinotepa**	**5.14**	**293**	eP	**Pn**	**11 32 39.9**	**+0.8**
TOIG	**Toxpalan**	**5.19**	**315**	eP	**Pn**	**11 32 41.6**	**+1.6**
TOIG				eS	**Sn**	**11 33 42.8**	**+3.7**
LCND	**La Caada**	**5.27**	**102**	eP	**Pn**	**11 32 42.0**	**+1.1**
LCND					IAML	11 34 02.1	
	comp=Z,440nm,0.5s						
LCND	**La Caada**	**5.27**	**102**	eP	**Pn**	**11 32 42.0**	**+1.1**
LCND					IAML	11 34 02.1	
	comp=Z,440nm,0.5s						
CNCH	**Conchagua**	**5.33**	**102**	eP	**Pn**	**11 32 43.3**	**+1.4**
CNCH					IAML	11 33 59.0	
	comp=Z,2μm,0.6s						
CNCH	**Conchagua**	**5.33**	**102**	eP	**Pn**	**11 32 43.3**	**+1.4**
CNCH					IAML	11 33 59.0	
	comp=Z,2μm,0.6s						
HLIG	**Huajuapan de L**	**5.56**	**308**	eP	**Pn**	**11 32 44.9**	**-0.3**
HLIG				eS	**Sn**	**11 33 49.4**	**+1.1**
TGUH	**Tegucigalpa,Un**	**5.75**	**93**		**Pn**	**11 32 48.9**	**+1.3**
FTIG	**Fresnillo de T**	**5.86**	**307**	eP	**Pn**	**11 32 51.9**	**+2.8**
FTIG				eS	**Sn**	**11 33 52.2**	**-3.4**
TLIG	**Tlapa**	**6.03**	**302**	Pn	**Pn**	**11 32 54.3**	**+2.8**
TLIG				Sn	**Sn**	**11 34 03.8**	**+4.2**
ESTN	**Estel**	**6.76**	**101**	Pn	**Pn**	**11 33 02.6**	**+1.1**
MEIG	**Mezcala**	**7.08**	**300**	eP	**Pn**	**11 33 07.1**	**+1.3**
MEIG				eS	**Sn**	**11 34 21.5**	**-4.0**
CAIG	**El Cayaco**	**7.29**	**292**	eP	**Pn**	**11 33 10.5**	**+1.9**
CAIG				eS	**Sb**	**11 34 48.0**	**-8.3**
TEIG	**Tepich**	**7.41**	**39**	P	**Pn**	**11 33 10.2**	**-0.1**
	comp=Z,28nm,0.3s,baz=144,slow=0.1,SNR=122						
TEIG				S	**Sn**	**11 34 31.8**	**-1.8**
	comp=Z,23nm,0.3s,baz=139,slow=18,SNR=3.2						
ARIG	**Puente Sto Nin**	**7.86**	**300**		**Pn**	**11 33 20.2**	**+3.8**
ARIG	**Puente Sto Nin**	**7.86**	**300**	eP	**Pn**	**11 33 20.2**	**+3.8**
ACON	**Acoyapa**	**8.19**	**107**	Pn	**Pn**	**11 33 22.5**	**+1.5**
NY14	**Universidad de**	**8.37**	**116**	eP	**Pn**	**11 33 26.2**	**+2.6**
GBS3	**Finca Las Img**	**8.38**	**115**	eP	**Pn**	**11 33 27.6**	**+3.9**
LAPC	**Finca la Perla**	**8.41**	**115**	eP	**Pn**	**11 33 27.4**	**+3.4**
GB1A	**Borinquen Arri**	**8.42**	**115**	eP	**Pn**	**11 33 26.5**	**+2.2**
GPS2	**Hotel Rincn d**	**8.49**	**115**	eP	**Pn**	**11 33 27.3**	**+2.1**
GUAI	**GUAI**	**8.57**	**118**	eP	**Pn**	**11 33 28.3**	**+2.0**
MESS	**Mesas**	**8.63**	**114**	eP	**Pn**	**11 33 30.0**	**+2.9**
CUI	**Cuipilapa**	**8.69**	**115**	eP	**Pn**	**11 33 30.9**	**+2.9**
ACAL	**Aguas Claras**	**8.82**	**115**	eP	**Pn**	**11 33 32.4**	**+2.6**
PTEN	**Parque Tenorio**	**8.82**	**114**	eP	**Pn**	**11 33 34.2**	**+4.3**
ESPN	**Las Esperanzas**	**8.94**	**103**	Pn	**Pn**	**11 33 32.4**	**+1.1**
JTS	**Las Juntas de**	**9.05**	**116**	P	**Pn**	**11 33 35.0**	**+2.2**
	comp=Z,2.1nm,0.3s,baz=346,slow=11,SNR=11						
JTS				S	**Sn**	**11 35 14.5**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=198,slow=20,SNR=1.8						
JTS	**Las Juntas de**	**9.05**	**116**		**Pn**	**11 33 35.3**	**+2.5**
CEDE	**Laguna Cedeo**	**9.18**	**114**	eP	**Pn**	**11 33 37.1**	**+2.4**
MOIG	**Morelia**	**9.25**	**305**		Pn	11 33 40.2	+4.4
HDC	**Heredia**	**9.91**	**115**	Pn	**Pn**	**11 33 47.2**	**+2.4**
ZAIG	**Zacatecas**	**12.14**	**314**		**Pn**	**11 34 18.9**	**+3.4**
FSCY	**Frank Sound, G**	**12.46**	**66**		**Pn**	**11 34 19.1**	**-0.5**
CBCY	**The Bluff, Cay**	**13.87**	**66**		**Pn**	**11 34 39.4**	**+0.6**
833A	**Chaparral WMA,**	**14.96**	**338**		**Pn**	**11 34 55.8**	**+2.2**
833A	**Chaparral WMA,**	**14.96**	**338**	P	**Pn**	**11 34 55.8**	**+2.2**
	baz=156						
MTDJ	**Mount Denham**	**15.48**	**74**		**P**	**11 35 03.3**	**-1.5**
HKT	**Hockley**	**15.62**	**351**		**Pn**	**11 35 03.1**	**+1.0**
435B	**Jarrell**	**16.75**	**347**		**Pn**	**11 35 17.3**	**+0.6**
435B	**Jarrell**	**16.75**	**347**	P	**Pn**	**11 35 18.1**	**-0.6**
	baz=164						
HPIG		**17.03**	**319**		**P**	**11 35 21.4**	**-0.6**
344A	**Westbrook Farm**	**17.07**	**7**	P	**P**	**11 35 22.8**	**+0.6**
344A				IAmb	IAmb	11 35 26.9	
	comp=Z,46nm,1.1s						
JCT	**Junction City**	**17.07**	**340**	P	**P**	**11 35 22.1**	**-0.3**
JCT	**Junction City**	**17.07**	**340**	P	**P**	**11 35 22.6**	**+0.2**
	baz=157,SNR=6.8						
346A	**Big Creek Wild**	**17.20**	**11**	IAmb	IAmb	11 35 33.4	
	comp=Z,41nm,0.8s						
NATX	**Nacogdoches**	**17.28**	**356**	P	**P**	**11 35 25.0**	**+0.5**
	baz=175						
DWPF	**Disney Wildern**	**17.44**	**37**	P	**Pn**	**11 35 25.2**	**-0.1**
	baz=221						

H06E1 SOCORRO T-PHAS 17.53 287 T T 11 53 26.0
H06S1 SOCORRO T 17.55 286 T T 11 53 25.9
baz=103
BRAL Brewton 17.57 18 P P 11 35 28.5 +0.8
BRAL Brewton 17.57 18 P P 11 35 27.6 -0.1
baz=200
237A Washetta, Mont 17.63 353 P 11 35 29.2 +0.7
TXAR Lajitas Array 17.70 329 P P 11 35 31.3 +2.0
comp=Z,0.1nm,0.3s,baz=148,slow=14,SNR=47
TXAR PcP PcP 11 40 07.0 +0.6
comp=Z,0.0nm,0.3s,baz=145,slow=6.5,SNR=3.9
TXAR LR LR 11 43 24.5
comp=Z,121nm,19.3s,baz=0.0,slow=40
TX31 Lajitas Ar. Si 17.70 329 P P 11 35 31.8 +2.5
VBMS Vicksburg 17.85 7 P P 11 35 30.6 -0.2
VBMS IAmb IAmb 11 35 37.9
comp=Z,31nm,0.8s
WHTX Lake Whitney, 17.89 348 P P 11 35 31.6 +0.3
WHTX Lake Whitney, 17.89 348 P P 11 35 32.4 +1.1
baz=166
DBBC Dabeiba 18.23 112 eP P 11 35 38.4 +3.1
143A Socs Landing, 18.24 5 P P 11 35 35.9 +0.8
143A IAmb IAmb 11 35 40.2
comp=Z,42nm,0.9s
250A Grady 18.56 19 IAmb IAmb 11 35 45.6
comp=Z,26nm,0.7s
Z41A Richland Creek 18.73 1 P Pn 11 35 42.0 +1.0
Z41A IAmb IAmb 11 35 46.3
comp=Z,31nm,0.8s
Z41A Richland Creek 18.73 1 P Pn 11 35 40.9 -0.1
baz=181
LPIG La Paz 18.78 303 P Pn 11 35 47.0 +5.3
comp=Z,5.7nm,0.3s,baz=43,slow=3.9,SNR=3.2
CBOC Ciudad Bolivar 18.93 115 eP Pn 11 35 45.0 +1.2
ABTX Abilene, Hawle 19.02 343 P Pn 11 35 45.7 +1.0
baz=160,SNR=15
TIGA Tifton 19.06 26 P P 11 35 44.2 +0.1
baz=209
WLAR White Oak Lake 19.15 0 P Pn 11 35 45.6 -0.6
WLAR IAmb IAmb 11 36 03.1
comp=Z,43nm,0.9s
Z35A Perchaven, San 19.16 350 Pn 11 35 48.0 +1.8
LRAL Lakeview Retre 19.34 16 P Pn 11 35 48.2 -0.3
LRAL Lakeview Retre 19.34 16 P Pn 11 35 47.8 -0.6
baz=198
CCAR Cane Creek 19.42 4 P P 11 35 48.6 +0.5
CCAR IAmb IAmb 11 35 56.1
comp=Z,48nm,0.9s
SMLC San Martn de 19.54 105 eP P 11 35 49.4 -0.2
152A Waverly Hall 19.71 22 IAmb IAmb 11 35 56.4
comp=Z,34nm,0.8s
GUY2C Guyana, Caldas 19.79 116 eP Pn 11 35 54.9 +0.4
Z50A Ashland 19.85 18 IAmb IAmb 11 36 03.2
comp=Z,23nm,0.8s
Z50A Ashland 19.85 18 P P 11 35 53.6 +0.7
baz=201
X40A Basin Creek Fa 19.95 1 P P 11 35 54.6 +0.7
X40A Basin Creek Fa 19.95 1 P Pn 11 35 55.0 -0.7
baz=181
RREF El Recreo 19.97 117 eP Pn 11 35 57.3 +0.6
MIAR Mount Ida 20.01 359 P P 11 35 54.9 +0.4
MIAR IAmb IAmb 11 36 02.1
comp=Z,30nm,0.9s
MIAR Mount Ida 20.01 359 P P 11 35 54.7 +0.1
baz=178,SNR=13
BBAC Balboa, Cauca 20.01 127 eP Pn 11 35 56.9 +0.1
PTBC PUERTO BERRIO, 20.01 111 eP P 11 35 55.1 +0.4
NORC Norcasia 20.07 114 eP Pn 11 35 57.6 +0.3
X43A Marvell 20.09 6 P Pn 11 35 56.3 -0.9
baz=186
ANIL Santa Ana 20.12 118 eP Pn 11 36 04.6 +6.4
Z51A Franklin 20.14 20 P Pn 11 35 58.0 0.0
Z51A IAmb IAmb 11 36 15.9
comp=Z,19nm,0.6s
UALR University of 20.25 2 IAmb IAmb 11 36 05.2
comp=Z,31nm,0.9s
OXF Oxford 20.26 9 P Pn 11 35 58.5 -0.9
OXF Oxford 20.26 9 P P 11 35 57.9 +0.6
baz=190
Y49A Blount Mountai 20.27 16 IAmb IAmb 11 36 20.6
comp=Z,20nm,0.8s
OTAV Otavalo 20.30 133 P P 11 35 59.4 +1.1
SOTA Rioblanco 20.44 125 eP Pn 11 36 01.8 -0.4
MNTX Cornudas Mount 20.48 329 P Pn 11 36 00.9 -1.1
MNTX Cornudas Mount 20.48 329 P Pn 11 36 01.6 -0.3
baz=144,SNR=29
PCON Cinco Dias 20.50 124 eP Pn 11 36 02.9 +0.1
X34A Smith Ranch, M 20.50 349 IAmb IAmb 11 36 21.9
comp=Z,24nm,0.8s
ORTC Ortega, Tolima 20.56 119 eP Pn 11 36 03.0 -0.1
W41B Gary Mavity, V 20.65 2 P P 11 36 02.2 +0.7
baz=182
W39A Magazine 20.66 359 P P 11 36 02.6 +0.9
baz=178
X48A Hartselle 20.67 15 IAmb IAmb 11 36 09.1
comp=Z,25nm,1.0s
WHAR Wooly Hollow 20.77 2 IAmb IAmb 11 36 11.2
comp=Z,19nm,1.0s
WMOK Wichita Mounta 20.82 347 P P 11 36 03.7 +0.3
WMOK Wichita Mounta 20.82 347 P P 11 36 03.8 +0.4
baz=164,SNR=6.3
GOGA Godfrey 20.84 23 P P 11 36 03.6 0.0
baz=207,SNR=14
ROSC El Rosal 20.89 115 P Pn 11 36 07.4 +0.1
comp=Z,36nm,0.9s,baz=54,slow=2.9,SNR=15
ROSC El Rosal 20.89 115 P Pn 11 36 06.2 -1.0
PLAL Pickwick Lake 20.96 12 IAmb IAmb 11 36 12.7
comp=Z,27nm,0.8s
PRAC Prado 20.96 119 eP Pn 11 36 06.7 -1.1
Y52A Lilburn 21.02 22 P P 11 36 06.4 +0.9
baz=205,SNR=14
FPAL Fort Paine 21.14 18 IAmb IAmb 11 36 12.8
comp=Z,18nm,0.9s
BARC Barichara 21.15 110 eP P 11 36 07.0 -0.3
OKCFA Oklahoma City 21.22 350 IAmb IAmb 11 36 11.9
comp=Z,32nm,0.8s
MSTX Muleshoe 21.28 338 IAmb IAmb 11 36 14.2
comp=Z,33nm,0.8s
MSTX Muleshoe 21.28 338 P P 11 36 09.7 +1.2
baz=153,SNR=25
PAMC Pamplona, Colo 21.31 107 eP P 11 36 11.6 +2.2
FCAR Ozark Folk Cen 21.37 2 IAmb IAmb 11 36 13.4
comp=Z,24nm,0.9s
X51A Calhoun 21.39 19 IAmb IAmb 11 36 18.1
comp=Z,30nm,1.0s
X51A Calhoun 21.39 19 P P 11 36 09.6 +0.1
baz=202
SDDR Presa de Saban 21.45 75 P P 11 36 09.9 -0.4
SDDR IAmb IAmb 11 36 26.8
comp=Z,45nm,1.4s
TUL1 Leonard 21.50 354 IAmb IAmb 11 36 27.1
comp=Z,17nm,0.9s
TUL1 Leonard 21.50 354 P P 11 36 12.0 +1.4
baz=173
CHIC Chingaza 21.51 115 eP P 11 36 13.5 +2.2
RUSC La Rusia 21.52 111 eP P 11 36 12.9 +1.3
RUSC La Rusia 21.52 111 P P 11 36 11.2 -0.4
FLOC Florencia 21.54 125 eP P 11 36 13.1 +1.9
LCAR Lake Charles 21.60 4 IAmb IAmb 11 36 21.6
comp=Z,18nm,0.9s
SWET Sewanee 21.68 16 IAmb IAmb 11 36 33.9
comp=Z,32nm,1.1s
AMTX Amarillo 21.74 341 P P 11 36 14.8 +1.5
baz=157
HHAR Hobbs 21.75 358 IAmb IAmb 11 36 21.8
comp=Z,23nm,1.0s
U40A Yellville 21.82 1 P P 11 36 14.8 +0.8
baz=180,SNR=7.7
W50A Signal Mountai 21.84 18 P P 11 36 15.5 +1.1
baz=200
X53A Estanollee 21.87 22 P P 11 36 15.4 +0.7
baz=206,SNR=7.0
HSIG 21.92 314 P P 11 36 15.4 +0.2
Z57A Bowman 21.92 29 P P 11 36 15.8 +0.6
baz=214
Y55A Saluda 21.95 26 P P 11 36 15.8 +0.4
baz=210
NHSC New Hope 22.02 30 P P 11 36 16.7 +0.5
baz=215
HODGE Hodges 22.04 25 IAmb IAmb 11 36 36.7
comp=Z,34nm,1.1s
WVT Waverly 22.11 12 P P 11 36 17.1 -0.2
WVT IAmb IAmb 11 36 26.2
comp=Z,19nm,0.8s
WVT Waverly 22.11 12 P P 11 36 17.6 +0.4
baz=194
W52A Murphy 22.18 20 P P 11 36 18.2 +0.2
baz=204
X54A Belton 22.27 24 P P 11 36 20.1 +1.2
baz=208,SNR=7.4
CPCT Cooper Cave 22.31 19 IAmb IAmb 11 36 29.8
comp=Z,18nm,1.0s
PBMO Poplar Bluff 22.37 6 IAmb IAmb 11 36 39.3
comp=Z,24nm,1.1s
121A Cookes Peak, D 22.38 326 P P 11 36 23.4 +3.0
baz=140,SNR=31
Z58A St. Stephen 22.38 31 P P 11 36 20.4 +0.3
baz=216
319A Douglas 22.39 322 IAmb IAmb 11 36 30.7
comp=Z,25nm,1.1s
BG3 Lake Jocassee 22.45 23 IAmb IAmb 11 36 37.9
comp=Z,14nm,0.9s
U32A Winter Ranch, 22.45 348 IAmb IAmb 11 36 23.1
comp=Z,20nm,0.9s
X55A Gracelyn & Ava 22.50 26 P P 11 36 22.1 +0.7
baz=210
W53A Cullowhee 22.52 22 P P 11 36 23.9 +2.2
baz=206
T35A Sooner Cattle 22.57 353 IAmb IAmb 11 36 40.9
comp=Z,20nm,1.0s
MGMO Mountain Grove 22.62 2 IAmb IAmb 11 36 32.4
comp=Z,21nm,1.1s
MACC Macarena, Meta 22.68 121 eP P 11 36 26.9 +3.4
V51A Loudon 22.69 19 P P 11 36 23.8 +0.3
baz=202
PAULI Pauline 22.73 25 IAmb IAmb 11 36 33.5
comp=Z,30nm,0.8s
TKL Tuckaleechee C 22.75 20 P P 11 36 23.2 -0.8
comp=Z,6.0nm,1.0s,baz=188,slow=14,SNR=3.2
TKL Tuckaleechee C 22.75 20 IAmb IAmb 11 36 41.7
comp=Z,29nm,1.1s
SDV Santo Domingo 22.76 102 P P 11 36 22.9 -1.7
comp=Z,33nm,1.0s,baz=295,slow=3.5,SNR=25
SDV Santo Domingo 22.76 102 P P 11 36 22.9 -1.7
SDV IAmb IAmb 11 36 26.5
comp=Z,22nm,0.9s
X56A White Oak 22.78 27 P P 11 36 24.0 -0.3
baz=212
W54A Cherokee Point 22.81 24 P P 11 36 25.0 +0.3
baz=208
Y58A Scranton 22.92 30 P P 11 36 25.5 -0.2
baz=215
V52A Sevierville 22.97 20 P P 11 36 27.3 +0.9
baz=204
T47A Sharon Grove 23.09 12 IAmb IAmb 11 36 32.9
comp=Z,16nm,0.9s
V53A Saluda 23.09 22 P P 11 36 28.0 +0.4
baz=206
S39A Bolivar 23.15 360 IAmb IAmb 11 36 29.2
comp=Z,8.6nm,0.6s
Y22D IRIS PASSCAL I 23.16 330 P P 11 36 30.3 +1.9
baz=144
KMSC Kings Mountain 23.20 25 IAmb IAmb 11 36 48.8
comp=Z,18nm,0.9s
KMSC Kings Mountain 23.20 25 P P 11 36 28.5 -0.2
baz=210
U51A La Follette 23.33 19 P P 11 36 30.9 +1.0
baz=203
Y59A Loris 23.38 31 P P 11 36 30.4 +0.1
baz=217
V54A Nebo 23.51 23 P P 11 36 32.2 +0.5
baz=208
W56A Indian Trail 23.52 27 P P 11 36 31.6 -0.1
baz=212
T49A Edmonton 23.57 15 P P 11 36 31.8 -0.5
baz=198
CCM Cathedral Cave 23.57 4 P P 11 36 31.1 -1.2
CCM IAmb IAmb 11 36 33.4
comp=Z,12nm,0.8s
CCM Cathedral Cave 23.57 4 P P 11 36 31.1 -1.2
baz=184
TZTN Tazewell 23.63 20 P P 11 36 31.8 -1.0
baz=204
T50A Nancy 23.68 17 P P 11 36 32.1 -1.2
baz=200
W57A Gilead 23.79 28 P P 11 36 32.2 -2.2
baz=213
U53A Fall Branch 23.80 22 P P 11 36 33.3 -1.2
baz=206
V55A Taylorsville 23.86 25 P P 11 36 34.0 -1.2
baz=209
T51A Gray 23.89 19 P P 11 36 34.7 -0.6
baz=202
TUC Tucson 23.95 321 P P 11 36 37.7 +1.6
TUC IAmb IAmb 11 36 40.4
comp=Z,27nm,1.1s
TUC Tucson 23.95 321 P P 11 36 38.4 +2.3
baz=134
X59A McDuffie Farm, 23.97 31 P P 11 36 35.8 -0.3
baz=217
W58A Raeford 24.03 29 P P 11 36 35.2 -1.4
baz=215
V56A Mocksville 24.13 26 P P 11 36 37.6 0.0
baz=211
U54A Nelsons Funny 24.21 23 IAmb IAmb 11 36 53.2
comp=Z,24nm,1.0s
U54A Nelsons Funny 24.21 23 P P 11 36 38.9 +0.5
baz=207
S49A Springfield 24.28 15 P P 11 36 38.6 -0.3
baz=198
T52A Hallie 24.33 20 P P 11 36 38.9 -0.5
baz=204
T53A Wise 24.37 21 P P 11 36 39.5 -0.4
baz=205
S50A Richmond 24.42 17 P P 11 36 39.8 -0.4
baz=201
WCI Wyandotte Cave 24.46 13 P P 11 36 39.8 -0.7
baz=196
U55A TA2, Sparta 24.50 24 P P 11 36 41.5 +0.4
baz=209
V57A Coltrane Farms 24.50 27 P P 11 36 39.8 -1.2
baz=212
S51A Beattyville 24.62 19 P P 11 36 41.7 -0.3
baz=202
U56A King 24.63 25 P P 11 36 42.0 -0.2
baz=211
T25A Trinidad 24.71 338 P P 11 36 45.4 +2.3
baz=153,SNR=40
V58A Windy Hill, Pi 24.72 28 IAmb IAmb 11 36 42.2
comp=Z,12nm,0.9s
V58A Windy Hill, Pi 24.72 28 P P 11 36 41.9 -1.1
baz=214
KSU1 Kansas State U 24.74 354 P P 11 36 42.4 -0.7
baz=172
T54A Tazewell 24.78 23 P P 11 36 42.3 -1.3
baz=207
R49A Shelbyville 24.78 15 P P 11 36 42.7 -0.8
baz=198
CBKS Cedar Bluff 24.95 348 IAmb IAmb 11 36 47.8
comp=Z,20nm,0.8s
CBKS Cedar Bluff 24.95 348 P P 11 36 45.4 +0.3
baz=164,SNR=7.6
214A Organ Pipe Nat 25.00 318 P P 11 36 48.3 +2.7
214A Organ Pipe Nat 25.00 318 P P 11 36 48.1 +2.5
baz=129,SNR=6.6
V59A Middlesex 25.11 30 P P 11 36 45.0 -1.4
baz=216
T55A Pulaski 25.13 24 P P 11 36 46.5 -0.3
baz=209
U57A Blanch 25.15 27 P P 11 36 45.9 -1.0
baz=213
R51A Hillsboro 25.23 18 P P 11 36 46.8 -0.7
baz=202
Q48A North Vernon 25.25 14 P P 11 36 47.0 -0.8
baz=197
BLA Blacksburg 25.36 24 P P 11 36 48.2 -0.6
baz=210
T56A Rocky Mt 25.36 25 P P 11 36 48.1 -0.6
baz=211
W18A Petrified Fore 25.40 327 P P 11 36 51.1 +1.7
baz=140
U58A Oxford 25.48 28 P P 11 36 48.3 -1.5
baz=214
SDCO Great Sand Dun 25.65 337 IAmb IAmb 11 36 55.7
comp=Z,20nm,1.1s
SDCO Great Sand Dun 25.65 337 P P 11 36 54.1 +2.4
baz=151,SNR=7.2
KSCO Kaye Shedlock' 25.84 343 P P 11 36 54.4 +1.1
baz=158,SNR=5.8
T58A Grand View Acr 25.93 28 P P 11 36 53.4 -0.6
baz=214
Q51A Peebles 25.97 18 P P 11 36 54.3 0.0
baz=202
R54A Victor 25.99 22 P P 11 36 54.9 +0.4
baz=208
S22A 4UR Ranch, Cre 26.17 335 P P 11 36 58.9 +2.4
baz=148,SNR=13
U60A Pendleton 26.20 30 P P 11 36 54.7 -1.6
baz=217
HDIL Hopedale 26.23 7 P P 11 36 55.4 -1.2
baz=188
Q53A Leroy 26.40 21 P P 11 36 59.4 +1.2
baz=206
T59A Double "B" Far 26.41 29 P P 11 36 56.8 -1.4
baz=216
MVCO Mesa Verde 26.45 332 IAmb IAmb 11 37 06.0
comp=Z,15nm,0.9s
MVCO Mesa Verde 26.45 332 P P 11 37 01.3 +2.4
baz=145,SNR=11
WUAZ Wupatki 26.59 325 IAmb IAmb 11 37 03.8
comp=Z,12nm,1.1s
WUAZ Wupatki 26.59 325 P P 11 37 01.2 +1.1
baz=137
Q24A Divide 26.60 339 P P 11 37 01.8 +1.5
baz=153
S58A Poland Farm, P 26.70 27 P P 11 36 60.0 -0.9
baz=214
Q54A Coxs Mills 26.75 22 P P 11 37 01.7 +0.3
baz=207
T60A Surry 26.93 30 P P 11 37 02.3 -0.6
baz=217
GLA Glamis 27.01 317 P P 11 37 05.6 +1.8
baz=128
Y12C Blythe 27.25 319 P P 11 37 06.8 +0.9
Y12C Blythe 27.25 319 P P 11 37 08.0 +2.1
baz=129
N48A Decatur 27.26 14 P P 11 37 04.5 -1.4
baz=197
R58A Rapidan 27.29 27 P P 11 37 06.5 +0.3
baz=213
PDMCI Parker Dam,Lak 27.37 320 P P 11 37 09.0 +2.1
baz=131,SNR=11
S60A Water View 27.42 29 P P 11 37 06.7 -0.6
baz=216
P54A Burton 27.43 22 P P 11 37 07.6 +0.2
baz=207
SMCO Snowmass 27.46 336 IAmb IAmb 11 37 16.6
comp=Z,23nm,1.3s
OGNE Ogallala 27.50 345 P P 11 37 09.4 +1.2
baz=161
ISCO Idaho Springs 27.51 339 P P 11 37 10.1 +1.6
baz=153
N49A Columbus Grove 27.52 15 P P 11 37 08.8 +0.6
baz=199
IKP In-Ko-Pah, Jac 27.64 315 P P 11 37 11.9 +2.4
baz=125
BC3 Big Chuckawall 27.80 317 P P 11 37 13.5 +2.6
baz=128,SNR=7.2
IRM Iron Mountain 27.91 319 P P 11 37 14.3 +2.5
baz=129,SNR=5.9
P57A Homestead Farm 28.28 25 P P 11 37 15.4 +0.4
baz=212
PFO Pinyon Flats O 28.44 316 P P 11 37 19.1 +2.4
comp=Z,1.2nm,0.3s,baz=119,slow=5.4,SNR=4.0
PFO Pinyon Flats O 28.44 316 IAmb IAmb 11 37 20.2
comp=Z,4.5nm,0.9s
JFWS Jewell Farm 28.48 5 P P 11 37 17.3 +0.6
baz=186
N23A Red Feather La 28.60 340 P P 11 37 19.8 +1.7
baz=153
GMRC Granite Mounta 28.64 319 P P 11 37 20.9 +2.5
baz=129
O20A White River Ci 28.78 336 IAmb IAmb 11 37 28.6
comp=Z,12nm,1.0s
O20A White River Ci 28.78 336 P P 11 37 21.4 +1.7
baz=148,SNR=8.8
HEC Hector,Ludlow 29.10 318 P P 11 37 24.9 +2.4
baz=128
TUQ Turquoise Moun 29.22 320 P P 11 37 25.5 +1.9
baz=130
ECSD EROS Data Cent 29.33 355 IAmb IAmb 11 37 29.1
comp=Z,8.0nm,0.8s
ECSD EROS Data Cent 29.33 355 P P 11 37 24.1 -0.2
baz=173
SHPR Sheep Range 29.45 322 IAmb IAmb 11 37 29.5
comp=Z,13nm,1.3s
SCI2 San Clemente I 29.52 313 P P 11 37 28.0 +1.8
baz=122
GSC Goldstone, Bar 29.69 319 IAmb IAmb 11 37 36.2
comp=Z,12nm,1.4s
GSC Goldstone, Bar 29.69 319 P P 11 37 29.8 +2.0
baz=128
O59A Robesonia 29.75 27 P P 11 37 29.7 +1.6
baz=214
SUSD Miller 30.29 352 IAmb IAmb 11 37 37.6
comp=Z,16nm,0.9s
SUSD Miller 30.29 352 P P 11 37 32.8 -0.1
baz=169
SNCC San Nicolas Is 30.36 313 P P 11 37 35.1 +1.6
baz=122
K22A Casper 30.36 340 IAmb IAmb 11 37 36.7
comp=Z,10nm,0.9s
K22A Casper 30.36 340 P P 11 37 35.2 +1.5
baz=154,SNR=8.2
TPNV Topopah Spring 30.40 322 P P 11 37 36.6 +2.5
baz=131
M58A Price's Panora 30.51 25 P P 11 37 34.5 -0.3
baz=213
MPMC Manual Prospec 30.60 319 P P 11 37 38.2 +2.3
baz=128
SPMN Marine on St. 30.68 1 IAmb IAmb 11 37 38.4
comp=Z,7.7nm,0.7s
SPMN Marine on St. 30.68 1 P P 11 37 36.8 +0.6
baz=180
R11A Troy Canyon, C 30.96 324 P P 11 37 41.2 +2.1
baz=134
RSSD Black Hills 30.99 345 P P 11 37 39.5 +0.3
RSSD IAmb IAmb 11 37 41.9
comp=Z,7.0nm,0.7s
RSSD Black Hills 30.99 345 P P 11 37 40.5 +1.3
baz=159
M59A Waymart 31.08 26 P P 11 37 38.5 -1.4
baz=215
HWUT Hardware Ranch 31.41 333 IAmb IAmb 11 37 47.3
comp=Z,7.4nm,1.0s
BW06 Boulder Array 31.54 337 P P 11 37 45.6 +1.5
baz=148
PDAR Pinedale Array 31.54 337 P P 11 37 44.7 +0.6
comp=Z,2.5nm,0.9s,baz=150,slow=7.2,SNR=14
PDAR PcP PcP 11 40 36.3 -0.2
comp=Z,0.6nm,0.6s,baz=122,slow=5.6,SNR=3.8
PDAR LR LR 11 51 52.9
comp=Z,60nm,20.0s,baz=154,slow=39
AHID Auburn Hatcher 32.16 335 IAmb IAmb 11 37 53.3
comp=Z,14nm,1.1s
SADO Sadowa 32.49 19 LR LR 11 52 30.6
comp=Z,130nm,20.1s,baz=228,slow=39
ELK Elko 32.49 328 IAmb IAmb 11 37 56.2
comp=Z,5.1nm,0.9s
NVAR Mina Array Bea 32.60 322 P P 11 37 56.4 +2.9
comp=Z,14nm,0.8s,baz=138,slow=8.7,SNR=70
NVAR PcP PcP 11 40 40.5 +1.0
comp=Z,4.1nm,0.9s,baz=145,slow=4.1,SNR=8.9
NVAR LR LR 11 52 58.1
comp=Z,604nm,18.0s,baz=162,slow=40
FXWY Fox Creek 32.85 336 IAmb IAmb 11 38 05.3
comp=Z,6.7nm,0.9s
RYN Ryan 32.86 322 IAmb IAmb 11 37 59.8
comp=Z,5.3nm,0.8s
KVN Kaiserville 32.89 323 IAmb IAmb 11 37 59.8
comp=Z,6.6nm,0.9s
IMW Indian Meadow 33.03 336 IAmb IAmb 11 38 07.6
comp=Z,6.8nm,0.8s
FLWY Flagg Ranch 33.10 337 IAmb IAmb 11 38 07.0
comp=Z,8.8nm,0.8s
H17A Grant Village 33.32 337 IAmb IAmb 11 38 09.0
comp=Z,12nm,1.1s
H17A Grant Village 33.32 337 P P 11 38 02.1 +2.4
baz=148
LKWY Lake 33.40 337 IAmb IAmb 11 38 08.1
comp=Z,9.1nm,0.8s
RLMT Red Lodge 33.47 339 IAmb IAmb 11 38 02.9
comp=Z,9.9nm,1.1s
RLMT Red Lodge 33.47 339 P P 11 38 01.8 +0.8
baz=151,SNR=7.2
L64A Middleborough 33.53 31 P P 11 38 00.4 -0.8
baz=222
MDND Maddock 33.72 352 P P 11 38 02.9 0.0
baz=168,SNR=5.4
AGMN Agassiz Nation 33.82 357 IAmb IAmb 11 38 05.9
comp=Z,10.0nm,0.9s
LAO LASA Array 33.94 344 IAmb IAmb 11 38 07.1

	comp=Z,11nm,1.1s						
LAO	LASA Array	33.94	344	P	P	11 38 05.4	+0.5
	baz=157,SNR=6.0						
E51A	G1948 Merrick	33.98	17	P	P	11 38 06.4	+1.2
	baz=204						
PAHR	Pah Rah Range	34.07	323	IAmb	IAmb	11 38 10.0	
	comp=Z,8.1nm,1.0s						
I61A	Oroboro, Fairl	34.41	27	P	P	11 38 08.3	-0.6
	baz=218						
BEKR	Beckworth	34.75	322	IAmb	IAmb	11 38 15.5	
	comp=Z,7.6nm,1.0s						
DLMT	Dillon	34.91	336	IAmb	IAmb	11 38 21.4	
	comp=Z,13nm,0.9s						
H61A	Lyndonville	35.01	27	P	P	11 38 14.4	+0.2
	baz=218						
ORV	Oroville	35.25	321	IAmb	IAmb	11 38 20.5	
	comp=Z,9.0nm,1.2s						
WVOR	Wild Horse Val	35.48	327	IAmb	IAmb	11 38 21.6	
	comp=Z,16nm,1.1s						
ULM	Lac du Bonnet	35.77	357	P	P	11 38 18.6	-1.9
	comp=Z,6.7nm,0.9s,baz=179,slow=7.9,SNR=15						
ULM				PcP	PcP	11 40 47.9	-0.1
	comp=Z,4.0nm,0.8s,baz=202,slow=3.6,SNR=5.2						
ULM				LR	LR	11 54 47.0	
	comp=Z,144nm,20.5s,baz=190,slow=39						
ULM	Lac du Bonnet	35.77	357	IAmb	IAmb	11 38 20.9	
	comp=Z,7.5nm,0.9s						
O03E	Paynes Creek	35.88	321	P	P	11 38 23.6	+1.8
	baz=128						
MOD	Modoc Plateau	36.03	325	IAmb	IAmb	11 38 26.5	
	comp=Z,14nm,1.2s						
EGMT	Eagleton	36.18	341	P	P	11 38 25.6	+1.4
	baz=152,SNR=11						
MSO	Missoula	36.65	336	IAmb	IAmb	11 38 30.7	
	comp=Z,11nm,1.0s						
MSO	Missoula	36.65	336	P	P	11 38 29.6	+1.4
	baz=145,SNR=8.5						
L04D	Klamath Falls	37.37	323	P	P	11 38 35.6	+1.1
	baz=129						
JTMT	Jette	37.53	337	IAmb	IAmb	11 38 38.3	
	comp=Z,8.7nm,0.9s						
SAML	Samuel	37.77	126	P	P	11 38 36.0	-2.0
L02E	Cave Junction	38.09	322	P	P	11 38 41.9	+1.5
	baz=127						
I04A	Tendick Farm,	38.44	325	P	P	11 38 45.0	+1.7
	baz=130						
WALA	Waterton Lakes	38.48	338	IAmb	IAmb	11 38 48.9	
	comp=Z,11nm,1.3s						
G05D	Wamic, OR	38.82	328	P	P	11 38 48.6	+2.0
	baz=133						
I03D	Drain, OR	38.90	325	P	P	11 38 48.7	+1.5
	baz=129						
NEW	Newport	39.09	335	P	P	11 38 49.7	+0.9
	baz=141						
H04D	Lebanon	39.09	326	P	P	11 38 49.6	+0.8
	baz=130						
LPAZ	La Paz	39.31	140	P	P	11 38 51.4	-0.2
	comp=Z,1.4nm,0.8s,baz=339,slow=10,SNR=5.9						
LPAZ				LR	LR	11 54 33.4	
	comp=Z,125nm,19.5s,baz=317,slow=35						
LPAZ	La Paz	39.31	140	IAmb	IAmb	11 38 52.3	
	comp=Z,3.9nm,1.1s						
F05D	White Salmon	39.34	329	P	P	11 38 53.3	+2.5
	baz=133						
G03D	McMinnville, O	39.82	326	P	P	11 38 56.6	+1.7
	baz=130						
FFC	Flin Flon	40.77	352	P	P	11 39 01.7	-0.9
D03D	Eldon	41.28	329	P	P	11 39 08.2	+1.3
	baz=133						
FCC	Fort Churchill	44.24	359	P	P	11 39 29.8	-0.9
SCHQ	Schefferville	45.21	21	P	P	11 39 36.4	-2.1
	comp=Z,2.3nm,0.8s,baz=250,slow=15,SNR=3.1						
SCHQ				PcP	PcP	11 41 18.1	-0.2
	comp=Z,5.0nm,0.9s,baz=227,slow=4.6,SNR=5.6						
SCHQ				LR	LR	12 00 49.3	
	comp=Z,277nm,18.2s,baz=172,slow=39						
SCHQ	Schefferville	45.21	21	IAmb	IAmb	11 39 37.9	
	comp=Z,7.2nm,1.1s						
YKA	Yellowknife Ar	50.33	347	P	P	11 40 18.4	+0.4
	comp=Z,17nm,0.8s,baz=149,slow=7.6,SNR=200						
YKA				PcP	PcP	11 41 34.6	-1.8
	comp=Z,1.9nm,0.8s,baz=146,slow=5.3,SNR=5.5						
TAOE	Nuku Hiva Isla	52.01	246	eS	S	11 47 50.3	-3.5
	comp=Z,104nm,25.0s						
TAOE				eLR	LR	11 55 26.5	
	comp=Z,171nm,25.0s						
CPUP	Villa Florida	53.47	139	P	P	11 40 40.4	-1.6
	comp=Z,0.5nm,0.3s,baz=274,slow=13,SNR=3.5						
CPUP				LR	LR	12 05 07.6	
	comp=Z,113nm,18.3s,baz=348,slow=38						
CPUP	Villa Florida	53.47	139	IAmb	IAmb	11 40 54.2	
	comp=Z,12nm,1.4s						
BDFB	Brasilia	53.74	122	P	P	11 40 43.1	-1.1
	comp=Z,8.3nm,0.8s,baz=255,slow=8.3,SNR=8.7						
BDFB				LR	LR	12 04 05.6	
	comp=Z,98nm,19.1s,baz=314,slow=37						
C36M	Paulatuk	58.21	348	IAmb	IAmb	11 41 16.5	
	comp=Z,11nm,1.3s						
C36M	Paulatuk	58.21	348	P	P	11 41 14.8	-0.4
	baz=144						
BALM	Baldy	58.33	334	IAmb	IAmb	11 41 19.5	
	comp=Z,9.4nm,1.0s						
PLCA	Paso Flores	58.78	160	P	P	11 41 20.4	+0.6
	comp=Z,3.2nm,1.0s,baz=332,slow=7.7,SNR=3.8						
PLCA				LR	LR	12 01 53.2	
	comp=Z,98nm,18.4s,baz=13,slow=31						
PLCA	Paso Flores	58.78	160	IAmb	IAmb	11 41 24.6	
	comp=Z,17nm,1.4s						
DAWY	Dawson	58.83	338	IAmb	IAmb	11 41 21.1	
	comp=Z,4.3nm,1.0s						
EPYK	Eagle Plains	59.33	341	IAmb	IAmb	11 41 42.1	
	comp=Z,9.1nm,1.1s						
EPYK	Eagle Plains	59.33	341	P	P	11 41 23.8	+0.6
	baz=129						
INK	Inuvik	59.68	344	P	P	11 41 26.2	+0.6
	comp=Z,8.2nm,0.7s,baz=117,slow=7.4,SNR=42						
EGAK	Eagle	59.87	338	IAmb	IAmb	11 41 28.4	
	comp=Z,6.6nm,0.9s						
RCBR	Riachuelo	60.27	105	P	P	11 41 30.4	-0.2
PAX	Paxson	60.57	335	P	P	11 41 33.0	+1.1
HDA	Harding Lake	61.83	337	IAmb	IAmb	11 41 41.5	
	comp=Z,6.3nm,0.8s						
HDA	Harding Lake	61.83	337	P	P	11 41 41.0	+0.7
	baz=117						
ILAR	Eielson Array	61.97	337	P	P	11 41 41.8	+0.6
	comp=Z,7.6nm,0.9s,baz=133,slow=4.3,SNR=55						
ILAR				LR	LR	12 10 46.9	
	comp=Z,138nm,18.6s,baz=126,slow=38						
RND	Reindeer	62.13	335	P	P	11 41 43.1	+0.7
CCB	Clear Creek Bu	62.27	337	IAmb	IAmb	11 41 49.6	
	comp=Z,9.4nm,1.2s						
POKR	Poker Flat Res	62.34	337	P	P	11 41 45.0	+1.3
	baz=117						
TCOL	CIGO, UAF Yank	62.39	337	P	P	11 41 44.7	+0.7
	baz=117						
PPT	Papeete	64.08	242	LR	LR	12 02 54.8	
	comp=Z,84nm,21.2s,baz=27,slow=29						
PPT2	Papeete2	64.09	242	eLR	LR	12 01 04.2	
	comp=Z,128nm,25.0s						
COLD	Coldfoot	64.29	339	IAmb	IAmb	11 41 59.3	
	comp=Z,4.9nm,1.0s						
TOLK	Toolik Lake Re	64.71	340	P	P	11 42 00.2	+0.9
	baz=117,SNR=6.3						
TBI	Tubuai	66.63	236	eLR	LR	12 02 14.6	
	comp=Z,115nm,27.8s						
TBI	Tubuai	66.63	236	eT	T	12 54 28.1	
	comp=Z,3.4nm,0.3s						
RDOG	Red Dog Mine	69.14	338	IAmb	IAmb	11 42 29.3	
	comp=Z,5.6nm,0.8s						
ESDC	Sonseca Array	80.34	52	P	P	11 43 30.7	-2.3
	comp=Z,3.1nm,0.8s,baz=293,slow=6.2,SNR=7.5						
ESDC				LR	LR	12 13 37.2	
	comp=Z,67nm,22.0s,baz=345,slow=32						
BILL	Bilibino	80.61	338	P	P	11 43 34.2	+0.4
NOA	NORSAR Array B	84.30	28	P	P	11 43 52.5	-0.7
	comp=Z,1.6nm,0.9s,baz=286,slow=6.7,SNR=4.1						
NOA				LR	LR	12 19 55.0	
	comp=Z,70nm,20.9s,baz=275,slow=35						
ARCES	ARCESS Array B	86.07	18	P	P	11 44 01.4	-0.5
	comp=Z,2.7nm,0.8s,baz=305,slow=5.1,SNR=3.2						
ARCES				LR	LR	12 22 45.0	
	comp=Z,68nm,18.3s,baz=266,slow=36						
TIC	Toumodi	86.60	84	ePKP2	P	11 44 04.5	-1.1
LIC	Lamto	86.70	84	ePKP2	P	11 44 04.6	-1.4
	comp=Z,20nm,0.7s						
DBIC	Dimbokro	86.75	84	P	P	11 44 04.8	-1.5
	comp=Z,5.3nm,0.7s,baz=244,slow=5.1,SNR=9.1						
DBIC	Dimbokro	86.75	84	P	P	11 44 05.8	-0.5
KIC	Kosan Boka	86.94	84	ePKP2	P	11 44 05.2	-2.0
	comp=Z,12nm,0.7s						
GERES	GERESS Array B	89.99	39	P	P	11 44 20.3	-0.9
	comp=Z,0.7nm,0.8s,baz=304,slow=5.7,SNR=3.4						
GERES				LR	LR	12 25 28.8	
	comp=Z,34nm,18.0s,baz=276,slow=36						
FINES	FINESS Array B	90.58	25	LR	LR	12 23 43.2	
	comp=Z,44nm,21.5s,baz=302,slow=35						
TORD	Torodi Ar. Bea	91.39	76	P	P	11 44 26.0	-2.2
	comp=Z,0.6nm,0.6s,baz=302,slow=4.7,SNR=4.3						
TORD				LR	LR	12 22 21.0	
	comp=Z,62nm,21.0s,baz=350,slow=34						
KEST	Kesra	91.54	53	P	P	11 44 26.3	-2.3
	comp=Z,3.2nm,0.9s,baz=281,slow=12,SNR=3.8						
KEST	Kesra	91.54	53	IAmb	IAmb	11 44 28.3	
	comp=Z,4.5nm,0.8s						
NRIK	Noril'sk	96.43	360	LR	LR	12 31 55.8	
	comp=Z,46nm,19.5s,baz=358,slow=38						
AKASG	Malin Array Be	97.98	33	LR	LR	12 32 18.0	
	comp=Z,35nm,18.0s,baz=305,slow=37						
DZM	Mont Dzumac	104.74	251	eLR	LR	12 20 04.4	
	comp=Z,88nm,23.1s						
SONM	Songino Array	115.57	346	PKP	PKiKP	11 50 02.7	-1.1
	comp=Z,0.4nm,0.7s,baz=53,slow=2.3,SNR=3.9						
SONM				PP	PP	11 51 05.7	+0.8
	comp=Z,0.3nm,0.4s,baz=358,slow=4.6,SNR=3.9						
MK31	Makanchi Array	118.90	4		PKPdf	11 50 09.3	-0.9
MKAR	Makanchi Array	118.90	4	PKP	PKPdf	11 50 08.1	-2.0
	comp=Z,0.9nm,0.9s,baz=354,slow=2.4,SNR=7.4						
HHC	Hu-ho-hao-te	120.38	338	ePKP	PKiKP	11 50 15.5	+2.2
BOSA	Boshof	121.59	115	PKP	PKPdf	11 50 15.8	0.0
	comp=Z,4.5nm,0.8s,baz=105,slow=1.9,SNR=6.1						
WMQ	Urumqi	122.01	359	ePKP	PKPdf	11 50 14.0	-2.2
NJ2	Nanjing	124.50	327	ePKP	PKiKP	11 50 21.8	+0.3
GTA	Gaotai	125.06	348	ePKP	PKiKP	11 50 23.0	+0.3
KSH	Kashi	125.37	10	PKP	PKiKP	11 50 24.5	+1.2
KSH				sPKP		11 50 41.0	
KSH				PP	PP	11 52 18.5	+6.6
KSH				PKS	PKSdf	11 54 02.0	+2.4
KSH				SKKS		11 59 06.0	
LZH	Lanzhou	127.22	343	ePKP	PKPdf	11 50 25.8	-0.8
LZH				sPKP		11 50 49.5	
LZH				LR	LR		
	comp=Z,69nm,18.0s						
LZH				LR	LR		
	comp=Z,76nm,18.1s						
LZH				LR	LR		
	comp=Z,110nm,19.8s						
STKA	Stephens Creek	127.27	241	PKP	PKiKP	11 50 27.0	0.0
	comp=Z,2.7nm,0.8s,baz=135,slow=5.3,SNR=4.7						
WRA	Warramunga Arr	134.38	256	PKP	PKPdf	11 50 40.2	-0.1
	comp=Z,0.8nm,0.7s,baz=86,slow=2.2,SNR=9.5						
ASAR	Alice Springs	134.73	251	PKhKP	PKPpre	11 50 31.3	
	comp=Z,0.3nm,0.7s,baz=120,slow=3.9,SNR=4.4						
ASAR				PKP	PKPdf	11 50 41.1	+0.2
	comp=Z,1.1nm,1.0s,baz=86,slow=1.9,SNR=7.2						
CHTO	Chiang Mai	144.85	340		PKPab	11 50 57.7	-0.6
CMAR	Chiang Mai Arr	145.18	340	PKPbc	PKPab	11 50 59.8	+0.3
	comp=Z,11nm,0.9s,baz=339,slow=3.8,SNR=56						
PBKT	Sadao Pong	146.15	335	PKPbc	PKPbc	11 51 02.5	0.0

PAS 27 11:37:47.3±1.3, 34°.469N±0°.009×118°.94W±0°.01, h5km±1km, ML2.4/115, Error ellipse: s-maj=2.5km s-min=1.8km az=107.0

NEIC 27 11:37:47.1±1.5, 34°.470N±0°.008×118°.94W±0°.01, h3km±4km, Error ellipse: s-maj=1.4km s-min=1.1km az=109.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OSI	Osito Audit: C	0.23	51	Pg	Pg	11 37 51.7	0.0
STCC	Santa Clara	0.26	231		Pg	11 37 53.0	+0.8
BLCC	Black Canyon	0.32	136		Pg	11 37 53.1	-0.1
BLG	Laguna Peak, P	0.38	196		Sg	11 38 00.5	+1.2
MPI	Mount Pinos, F	0.38	334		Pg	11 37 54.6	0.0
MPI					Sg	11 38 00.3	+0.7
IR2C	Iron Canyon	0.45	100		Pg	11 37 56.5	+0.6
THC	Tehachapi Micr	0.49	28		Pg	11 37 56.5	-0.1
DJJ	Donna J Jenkin	0.54	132		Pg	11 37 57.0	-0.6
DJJ					Sg	11 38 05.4	+0.8
DECC	Green Verdugo	0.55	113		Pg	11 37 57.8	+0.2
LEOC	Leona Valley	0.55	73		Pg	11 37 57.5	-0.2
BCW	Bitter Crk WRg	0.61	320		Pg	11 37 58.9	0.0
SBC	Santa Barbara	0.64	268		Pg	11 38 00.1	+0.7
PASC	Pasadena Art C	0.69	115	Pg	Pg	11 37 59.8	-0.6
SCZ2	Santa Cruz Isl	0.74	231		Pg	11 38 00.6	-0.8
SCZ2					Sg	11 38 10.8	-0.3
CHFC	Chilao Flat St	0.77	100		Pg	11 38 01.4	-0.5
MWC	Mount Wilson	0.77	108		Pg	11 38 02.4	+0.4
RPV	Rancho Palos V	0.85	148		Pb	11 38 04.2	-0.4
FIGC	Figueroa Mtn.	0.90	287		Pb	11 38 05.0	-0.4
SBB	Saddle Back Bu	0.95	76		Pg	11 38 05.3	0.0
SSK	Sunset Peak	1.06	104		Pg	11 38 07.4	-0.2
ISA	Isabella, Lake	1.25	18		Pg	11 38 10.1	-1.0
GSC	Goldstone, Bar	1.94	64		Pb	11 38 22.2	-1.0
DAC	Darwin (Calif)	2.11	31	Pn	Pn	11 38 24.1	+0.5
PFO	Pinyon Flats O	2.23	112	Pn	Pn	11 38 24.4	-0.7
XPFO	Pion Flat	2.23	112	Pn	Pn	11 38 25.1	0.0
PMPB	Monarch Peak	2.31	319	Pn	Pn	11 38 25.5	-0.7
BAR	Barrett	2.60	133	Pn	Pn	11 38 29.1	-1.1
SAO	San Andreas Ge	3.07	319	Pn	Pn	11 38 35.6	-0.9

IDC 27 11:46:34.9±8.6, 41°.70N×140°.75E, h158km±43km, mb3.2/8, mb1 3.3/9, mb1mx3.1/48, mbtmp3.6/9, Error ellipse: s-maj=158.3km s-min=24.6km az=175.0

JMA 27 11:46:34.7±0.1, 41°.84N×140°.84E, h148km±1km, M3.1

ISC 27 11:46:34.4±0.8, 41°.81N±0°.04×140°.84E±0°.04, h150km±5km, n28, σ0°.63/46, mb3.5/8, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKB	Kayabe	0.16	62	P	Pn	11 46 54.8	+0.2
JKB				eS	Sn	11 47 09.9	-0.1
JSR	Shiriuchi	0.42	229	P	Pn	11 46 55.6	+0.2
JSR				eS	Sn	11 47 11.0	-0.3
JOT	Ohata	0.46	160	P	Pn	11 46 56.0	+0.4
JOT				eS	Sn	11 47 12.0	+0.4
JYM2	Yakumo 2	0.47	311	P	Pn	11 46 55.8	+0.2
JYM2				eS	Sn	11 47 12.2	+0.5
JNB	Noboribetsu	0.67	12	P	Pn	11 46 56.4	-0.3
JOMM	Oshimamatsumae	0.69	246	P	Pn	11 46 57.1	+0.3
JOMM				eS	Sn	11 47 14.1	+0.3
JHST	Hiyamasetana	0.94	311	P	Pn	11 46 58.6	-0.1
JHST				eS	Sn	11 47 16.4	-0.8
JSH	Shimam	1.02	325	P	Pn	11 46 59.6	+0.3
JSH				eS	Sn	11 47 17.9	-0.5
JTM	Tenmabayashi	1.04	171	P	Pn	11 47 00.0	+0.5
JTM				eS	Sn	11 47 18.7	+0.1
JOSM	Okushiri--Mats	1.06	285	P	Pn	11 46 59.5	-0.1
JOSM				eS	Sn	11 47 17.9	-1.0
JEW	Eniwo	1.12	23	P	Pn	11 47 00.6	+0.4
JEW				eS	Sn	11 47 20.3	+0.3
JIAM	Iburiatsuma	1.14	44	P	Pn	11 47 00.8	+0.5
JIAM				eS	Sn	11 47 20.4	+0.2
JIW	Iwasaki	1.37	208	P	Pn	11 47 03.4	+0.7
JIW				eS	Sn	11 47 24.5	+0.2
JNBK	Urakawa-nobuka	1.50	71	P	Pn	11 47 04.1	+0.2
JNBK				eS	Sn	11 47 26.8	+0.3
JANG	Nango	1.52	160	P	Pn	11 47 04.1	-0.2
JANG				eS	Sn	11 47 26.3	-0.8
JSK	Shakotan	1.56	350	P	Pn	11 47 04.8	+0.2
JSK				eS	Sn	11 47 27.8	0.0
JFR	Furan	1.87	43	P	Pn	11 47 07.2	-0.8
JFR				eS	Sn	11 47 33.1	-0.8
JCH	Churui	2.04	66	P	Pn	11 47 10.0	+0.1
JCH				eS	Sn	11 47 36.0	-1.2
JHR	Hokuryu	2.04	18	P	Pn	11 47 10.8	+0.9
JHR				eS	Sn	11 47 38.8	+1.5
USRK	Ussuriysk Ar.	6.92	293	P	Pn	11 48 13.9	+0.7
	baz=99,slow=14,SNR=6.0						
SONM	Songino Array	25.02	296	P	P	11 51 43.5	-0.9
	0.3nm,0.6s,baz=86,slow=8.4,SNR=2.1						
ZALV	Zalesovo Beam	38.49	308	P	P	11 53 40.1	-1.5
	0.8nm,0.3s,baz=83,slow=8.4,SNR=2.2						
MKAR	Makanchi Array	41.36	297	P	P	11 54 05.1	-0.3
	0.3nm,0.4s,baz=81,slow=9.1,SNR=6.5						
KURBB	Kurchatov Arra	42.84	304	P	P	11 54 16.9	-0.3
	0.7nm,0.4s,baz=79,slow=8.9,SNR=5.8						
ILAR	Eielson Array	45.76	35	P	P	11 54 41.2	+0.9
	0.5nm,0.9s,baz=268,slow=6.9,SNR=3.5						
BVAR	Borovoye Array	47.12	309	P	P	11 54 51.0	-0.1
	0.8nm,0.4s,baz=83,slow=8.5,SNR=7.7						
AKTO	Aktyubinsk	55.23	309	P	P	11 55 52.4	+0.9
	1.0nm,0.6s,baz=68,slow=11,SNR=2.4						
PDAR	Pinedale Array	74.65	46	P	P	11 57 57.5	+0.1
	0.2nm,0.6s,baz=328,slow=3.2,SNR=2.5						

IDC 27 12:10:27.8±1.3, 33°.91N×138°.52E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.3/45, mbtmp3.4/4, ML2.4/1, Error ellipse: s-maj=36.6km s-min=19.1km az=51.0

JMA 27 12:10:28.7±0.2, 34°.59N×140°.35E, h59km±2km, M3.1

ISC 27 12:10:29.3±1.0, 34°.58N±0°.04×140°.35E±0°.05, h59km, n26, σ0°.78/31, mb3.5/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	Boso 3	0.26	31	P	Pn	12 10 38.4	-0.2
BSO3				eX		12 10 45.8	
BSO4	Boso 4	0.41	358	P	Pn	12 10 40.0	-0.1
BSO4				X		12 10 48.7	
BSO1	Boso 1	0.52	82	P	Pn	12 10 40.5	-0.3
BSO1				eX		12 10 48.2	
KTR	Katsuura	0.57	357	P	Pn	12 10 41.4	-0.5
KTR				S	Sn	12 10 50.3	-0.7
TATJ	Tateyama 2	0.59	320	P	Pn	12 10 42.2	+0.1
TATJ				S	Sn	12 10 52.4	+0.9
JKUC	kamogawauchiur	0.59	348	P	Pn	12 10 41.7	-0.5
JKUC				S	Sn	12 10 51.1	-0.4
JIM2	Oshima 3	0.77	280	P	Pn	12 10 43.8	-0.5
JIM2				eS	Sn	12 10 54.1	-1.3
JTHY	Toshimahigashi	0.88	267	P	Pn	12 10 45.7	0.0
JTHY				S	Sn	12 10 57.9	+0.1
JMKN	Mikurajimanish	0.93	223	P	Pn	12 10 46.5	+0.1
JMKN				S	Sn	12 10 59.1	+0.1
KTJ3	Kamata3	1.11	289	P	Pn	12 10 48.2	-0.5
KTJ3				S	Sn	12 11 01.4	-1.8
JIZS	Izushimoda	1.22	277	P	Pn	12 10 50.0	-0.2
JOD2	Odawara 2	1.24	304	P	Pn	12 10 50.0	-0.5
JOD2				eS	Sn	12 11 04.6	-1.7
JFNN	Fujinakano	1.50	295	P	Pn	12 10 54.1	+0.2
JHJ2	Mitsune	1.53	197	P	Pn	12 10 54.8	+0.5
JHJ	Hachijo jima 2	1.53	198	Pn	Pn	12 10 54.9	+0.5
	baz=323,slow=20						
JHJ				Sn	Sn	12 11 12.2	-1.1
	73nm,0.3s,baz=94,slow=24,SNR=2.0						
MJAR	Matsushiro Arr	2.62	319	Pn	Pn	12 11 10.0	+0.8
	0.7nm,0.3s,baz=144,slow=12,SNR=29						
MJAR				Sn	Sn	12 11 40.6	+0.7
	1.1nm,0.3s,baz=13,slow=32,SNR=12						
MAT	Matsushiro	2.62	319	P	Pn	12 11 10.4	+1.2
MAT				S	Sn	12 11 41.3	+1.4
H11N2	WAKE ISLAND Hy	27.76	115	T	T	12 46 01.1	
	baz=308,slow=75,SNR=7.3						
H11N1	WAKE ISLAND Hy	27.76	115	T	T	12 45 58.1	
	baz=308,slow=75,SNR=9.5						
H11N3	WAKE ISLAND Hy	27.78	115	T	T	12 46 01.2	
	baz=308,slow=75,SNR=7.2						
H11S3	WAKE ISLAND Hy	28.37	118	T	T	12 46 49.0	
	baz=310,slow=76						
H11S1	WAKE ISLAND Hy	28.37	118	T	T	12 46 48.8	
	baz=310,slow=76						
H11S2	WAKE ISLAND Hy	28.39	118	T	T	12 46 50.5	
	baz=310,slow=76						
MKAR	Makanchi Array	44.73	304	P	P	12 18 36.8	+0.2
	0.3nm,0.5s,baz=88,slow=9.9,SNR=3.6						
WRA	Warramunga Arr	54.52	187	P	P	12 19 51.1	-0.1
	0.9nm,0.8s,baz=1.3,slow=7.5,SNR=9.4						
ASAR	Alice Springs	58.25	187	P	P	12 20 18.0	+0.3
	0.3nm,0.8s,baz=12,slow=13,SNR=4.6						

IDC 27 12:14:13.6±0.8, 36°.30N×139°.44E, h143km±7km, mb2.9/6, mb1 3.1/8, mb1mx3.0/47, mbtmp3.4/8, MS2.8/1, Ms1 2.8/1, ms1mx2.3/8, Error ellipse: s-maj=22.2km s-min=9.4km az=74.0

ISC 27 12:14:13.4±0.8, 36°.31N±0°.07×139°.5E±0°.1, h150km, n12, σ1°.42/14, mb3.3/6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	1.06	283	P	Pn	12 14 38.0	-0.7
	2.2nm,0.3s,baz=212,slow=8.2,SNR=80						
MJAR				S	Sn	12 14 56.3	-1.6
	1.9nm,0.3s,baz=71,slow=28,SNR=22						
MAT	Matsushiro	1.06	283	P	Pn	12 14 38.7	0.0
MAT				S	Sn	12 14 56.3	-1.7
JHJ	Hachijo jima 2	3.19	176	P	Pn	12 15 04.5	+1.3
	12nm,0.3s,baz=344,slow=7.0,SNR=7.3						
JHJ				S	Sn	12 15 41.5	-0.2
	33nm,0.3s,baz=77,slow=22,SNR=7.7						
ASAJ	Asahikawa	8.16	16	P	Pn	12 16 08.1	-0.7
	0.4nm,0.3s,baz=208,slow=16,SNR=8.3						
ASAJ				S	Sn	12 17 30.8	-8.7
	0.1nm,0.3s,baz=120,slow=20,SNR=2.2						
JCJ	Chichijima	9.46	165	P	Pn	12 16 23.4	-2.9
	2.1nm,0.3s,baz=266,slow=19,SNR=5.2						
JCJ				S	Sn	12 18 01.6	-10
	1.9nm,0.3s,baz=253,slow=19,SNR=2.6						
USRK	Ussuriysk Ar.	9.74	326	LR	LR	12 19 12.7	
	comp=Z,62nm,20.6s,baz=288,slow=31						
ZALV	Zalesovo Beam	41.27	313	P	P	12 21 44.0	+0.4
	0.6nm,0.3s,baz=101,slow=6.7,SNR=3.3						
MKAR	Makanchi Array	43.20	302	P	P	12 21 59.9	+0.5
	0.3nm,0.7s,baz=92,slow=9.5,SNR=4.2						
ILAR	Eielson Array	50.93	32	P	P	12 23 01.0	+2.0
	0.1nm,0.6s,baz=280,slow=5.3,SNR=3.0						
WRA	Warramunga Arr	56.15	186	P	P	12 23 38.3	+0.9
	0.2nm,0.5s,baz=360,slow=7.6,SNR=10.0						
ASAR	Alice Springs	59.88	186	P	P	12 24 03.8	+0.4
	0.4nm,0.9s,baz=358,slow=6.8,SNR=3.3						
YKA	Yellowknife Ar	65.21	29	P	P	12 24 38.5	+0.3
	0.1nm,0.3s,baz=306,slow=7.6,SNR=4.7						

IDC 27 12:32:22.9±0.8, 17°.69S×65°.93E, h0km, mb4.1/10, mb1 4.2/10, mb1mx3.9/52, mbtmp4.1/10, MS3.7/10, Ms1 3.7/10, ms1mx3.4/34, Error ellipse: s-maj=25.9km s-min=23.8km az=86.0

NEIC 27 12:32:24.3±2.4, 17°.7S±0°.1×65°.8E±0°.1, h10km±1km, mb4.5/5, Error ellipse: s-maj=27.2km s-min=19.7km az=137.0

ISC 27 12:32:24.2±0.7, 17°.8S±0°.2×65°.9E±0°.1, h10km, n35, σ1°.68/19, mb4.2/13, MS3.8/10, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	Riviere de l'E	10.15	249	Pn	Pn	12 34 49.3	-0.9
H08S1	Diego Carcia H	11.94	33	T	T	12 46 55.4	
	baz=211,slow=75,SNR=168						
H08S2	Diego Garcia H	11.95	33	T	T	12 46 56.6	
	baz=211,slow=75,SNR=74						
H08S3	Diego Garcia H	11.96	33	T	T	12 46 56.9	
	baz=211,slow=75,SNR=270						
H08N3	Diego Garcia H	12.41	24	T	T	12 47 45.9	
	baz=203,slow=75,SNR=99						
H08N1	Diego Garcia H	12.42	24	T	T	12 47 31.5	
	baz=203,slow=75,SNR=77						
H08N2	Diego Garcia H	12.43	24	T	T	12 47 42.1	
	baz=203,slow=75,SNR=88						
PALK	Pallekele	28.87	32	LR	LR	12 47 36.1	
	comp=Z,81nm,18.9s,baz=200,slow=32						
LBTB	Lobatse	38.10	252	P	P	12 39 44.9	+1.2
	1.1nm,0.3s,baz=95,slow=14,SNR=2.3						
LEM	Lembang	42.09	80	LR	LR	12 54 30.4	
	comp=Z,102nm,18.9s,baz=232,slow=32						
H01W2	Cape Leeuwin H	46.00	122	T	T	13 30 00.0	
	baz=280,slow=75,SNR=46						
H01W3	Cape Leeuwin H	46.00	122	T	T	13 29 57.9	
	baz=280,slow=75,SNR=77						
H01W1	Cape Leeuwin H	46.02	122	T	T	13 29 59.0	
	baz=280,slow=75,SNR=52						
NWAO	Narrogin (SRO)	48.32	118	LR	LR	12 57 14.9	
	comp=Z,92nm,18.2s,baz=302,slow=31						
CMAR	Chiang Mai Arr	48.50	44	P	P	12 41 07.2	-0.4
	2.4nm,1.0s,baz=233,slow=8.2,SNR=15						
CMAR				LR	LR	12 58 21.5	
	comp=Z,49nm,21.7s,baz=192,slow=32						
MAW	Mawson	49.83	182	LR	LR	12 57 23.8	
	comp=Z,84nm,21.0s,baz=56,slow=30						
SLVN	Son La	53.83	45	P	P	12 41 46.4	-1.3
SLVN				IAmb	IAmb	12 41 57.0	
	comp=Z,7.7nm,1.2s						
ASAR	Alice Springs	63.35	108	P	P	12 42 54.1	0.0
	comp=Z,1.9nm,0.8s,baz=269,slow=6.2,SNR=22						
ASAR				LR	LR	13 06 28.2	

comp=Z,176nm,20.5s,baz=274,slow=32
WRA Warramunga Arr 64.38 104 P P 12 43 01.7 +0.8
comp=Z,4.1nm,0.9s,baz=264,slow=6.0,SNR=9.7
MK31 Makanchi Array 65.96 12 P P 12 43 10.2 -0.3
MKAR Makanchi Array 65.96 12 P P 12 43 08.4 -2.1
comp=Z,0.9nm,0.9s,baz=165,slow=5.0,SNR=7.0
ABKAR Akbulak array 66.95 356 P P 12 43 16.4 -0.3
ABKAR IAmb IAmb 12 43 33.8
comp=Z,2.6nm,1.1s
STKA Stephens Creek 68.90 118 LR LR 13 10 03.3
comp=Z,52nm,19.4s,baz=206,slow=33
KURK Kurchatov 69.12 9 P P 12 43 30.7 +0.4
KURK IAmb IAmb 12 43 40.5
comp=Z,4.3nm,1.1s
TORD Torodi Ar. Bea 70.42 291 LR LR 13 13 04.6
comp=Z,58nm,18.1s,baz=5.0,slow=35
QSPA South Pole Qui 72.31 180 P P 12 43 49.9 0.0
comp=Z,0.9nm,0.9s,baz=178,slow=15,SNR=4.2
ZALV Zalesovo Beam 73.27 12 P P 12 43 53.4 -2.0
comp=Z,1.2nm,0.6s,baz=202,slow=4.7,SNR=6.5
SONM Songino Array 74.70 27 P P 12 44 05.5 +1.4
comp=Z,1.0nm,1.0s,baz=204,slow=3.3,SNR=6.5
SONM LR LR 13 15 38.2
comp=Z,54nm,21.1s,baz=244,slow=35
AKASG Malin Array Be 75.43 337 P P 12 44 09.4 +1.3
comp=Z,0.1nm,0.2s,baz=143,slow=5.0,SNR=2.9
KSRS Korea Array 80.10 46 LR LR 13 18 52.1
comp=Z,19nm,18.4s,baz=267,slow=35
MJAR Matsushiro Arr 86.95 50 P P 12 45 11.4 +1.7
comp=Z,2.9nm,1.1s,baz=239,slow=7.8,SNR=3.4
CHGN Chignik 129.20 30 PKPdf 12 51 27.5 -4.9
YKA Yellowknife Ar 135.34 0 PKP PKPdf 12 51 43.8 -0.1
comp=Z,0.2nm,0.8s,baz=344,slow=2.2,SNR=3.3
ULM Lac du Bonnet 144.47 340 PKP PKPab 12 51 59.5 +0.5
comp=Z,0.8nm,0.6s,baz=328,slow=3.3,SNR=3.0
PDAR Pinedale Array 154.80 352 PKPbc PKiKP 12 52 27.3 +1.0
comp=Z,0.3nm,0.7s,baz=26,slow=2.3,SNR=2.5

DJA 27 12:32:50.1±0.4, 10°S±5°×11°9E±°, h61km±14km, M4.0/7, mb3.9/1, MLv4.0/7, Sumbawa region
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WBSI Waikabubak, Su 0.90 75 P Pn 12 33 07.8 +0.9
WBSI Waikabubak, Su 0.90 75 P Pn 12 33 07.8 +0.9
PLAI Plampang 1.26 325 P Pn 12 33 12.5 +0.8
PLAI S Sn 12 33 27.6 -0.2
PLAI Plampang 1.26 325 P Pn 12 33 12.5 +0.8
PLAI S Sn 12 33 27.6 -0.2
WSI Waingapu 1.77 84 P Pn 12 33 19.5 +1.0
WSI S Sn 12 33 41.0 +1.0
WSI Waingapu 1.77 84 P Pn 12 33 19.5 +1.0
WSI S Sn 12 33 41.0 +1.0
BASI Baing, Sumba 2.07 100 P Pn 12 33 23.5 +1.0
BASI S Sn 12 33 45.9 -1.3
BASI Baing, Sumba 2.07 100 P Pn 12 33 23.5 +1.0
BASI S Sn 12 33 45.9 -1.3
EDFI Ende, Flores 3.33 71 P Pn 12 33 39.7 -0.2
EDFI S Sn 12 34 17.6 -0.7
EDFI Ende, Flores 3.33 71 P Pn 12 33 39.7 -0.2
EDFI S Sn 12 34 17.6 -0.7
DNP Denpasar 3.47 290 S Sn 12 34 22.6 +1.1
DNP Denpasar 3.47 290 S Sn 12 34 22.6 +1.1
IGBI Denpasar 3.48 287 P Pn 12 33 41.6 -0.2
IGBI S Sn 12 34 22.1 +0.3
IGBI Denpasar 3.48 287 P Pn 12 33 41.6 -0.2
IGBI S Sn 12 34 22.1 +0.3
SRBI Singaraja 3.71 298 P Pn 12 33 44.7 -0.2
SRBI Singaraja 3.71 298 P Pn 12 33 44.7 -0.2
MMRI Maumere 3.88 72 P Pn 12 33 47.5 +0.2
MMRI Maumere 3.88 72 P Pn 12 33 47.5 +0.2
JAGI Jajag, Banyuwa 4.52 288 P Pn 12 33 55.7 -0.4
JAGI Jajag, Banyuwa 4.52 288 P Pn 12 33 55.7 -0.4
BKSI Bulukumba 4.79 20 P Pn 12 34 00.3 +0.5
BKSI Bulukumba 4.79 20 P Pn 12 34 00.3 +0.5
GMJI Gumukmas 5.25 287 P Pn 12 34 05.1 -0.9
GMJI Gumukmas 5.25 287 P Pn 12 34 05.1 -0.9
BNSI Bone 5.66 16 P Pn 12 34 12.1 +0.4
BNSI Bone 5.66 16 P Pn 12 34 12.1 +0.4

IDC 27 12:38:54.0±1.4, 4.84S×130.19E, h0km, mb3.8/3, mb1 4.0/7, mb1mx3.8/33, mbtmp3.9/7, ML3.9/4, Error ellipse: s-maj=51.3km s-min=22.1km az=80.0
DJA 27 12:38:59.2±0.5, 5°S±4°×13°0E±°, h23km±4km, M3.9/12, MLv3.9/12
ISC 27 12:38:57.8±0.8, 4.77S±0.04×130.33E±0.04, h35km, n28, σ2.49/39, Banda Sea
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BNDI Bandanaira 0.49 299 P Pn 12 39 08.8 +0.5
BNDI S Sn 12 39 15.3 -0.3
BNDI Bandanaira 0.49 299 P Pn 12 39 08.8 +0.5
BNDI S Sn 12 39 15.3 -0.3
MSAI Masohi 1.99 315 P Pn 12 39 29.5 +0.6
MSAI S Sn 12 39 52.7 +0.1
MSAI Masohi 1.99 315 P Pn 12 39 29.5 +0.6
MSAI S Sn 12 39 52.7 +0.1
AAI Ambon 2.38 297 P Pn 12 39 36.3 +1.9
AAI S Sn 12 40 02.8 +0.3
AAI Ambon 2.38 297 P Pn 12 39 36.3 +1.9
AAI S Sn 12 40 02.8 +0.3
FAKI Fak Fak 2.65 46 P Pn 12 39 39.9 +1.9
FAKI S Sn 12 40 09.8 +0.8
FAKI Fak Fak 2.65 46 P Pn 12 39 39.9 +1.9
FAKI S Sn 12 40 09.8 +0.8
SAUI Saumlaki 3.34 163 P Pn 12 39 51.7 +4.2
SAUI Saumlaki 3.34 163 P Pn 12 39 51.7 +4.2
NLAI Namlea 3.56 295 P Pn 12 39 53.4 +2.8
NLAI Namlea 3.56 295 P Pn 12 39 53.4 +2.8
SIJI Sorong 3.98 14 Pn Pn 12 39 57.3 +0.9
3.7nm,0.3s,baz=197,slow=18,SNR=58
SIJI Sn Sn 12 40 40.3 -1.6
10nm,0.3s,baz=299,slow=24,SNR=14
SWI Sorong 3.98 13 P Pn 12 39 57.3 +0.9
SWI Sorong 3.98 13 P Pn 12 39 57.3 +0.9
LBMI Labuha 4.98 325 P Pn 12 40 11.1 +1.0
LBMI Labuha 4.98 325 P Pn 12 40 11.1 +1.0
RKPI Ransiki, Papua 5.02 50 P Pn 12 40 10.8 +0.2
RKPI Ransiki, Papua 5.02 50 P Pn 12 40 10.8 +0.2
SANI Sanana 5.11 302 P Pn 12 40 13.7 +1.9
SANI Sanana 5.11 302 P Pn 12 40 13.7 +1.9
FITZ Fitzroy Crossi 14.02 199 Pn Pn 12 42 13.2 -0.9
0.5nm,0.3s,baz=24,slow=12,SNR=10
FITZ Sn Sn 12 44 43.2 -5.3
0.1nm,0.3s,baz=15,slow=19,SNR=2.2
WRA Warramunga Arr 15.58 166 Pn Pn 12 42 32.7 -2.2
0.4nm,0.3s,baz=349,slow=13,SNR=19
WRA Sn Sn 12 45 16.9 -10
0.3nm,0.3s,baz=341,slow=22,SNR=6.6
ASAR Alice Springs 19.11 170 P P 12 43 18.4 +0.6
0.6nm,0.3s,baz=350,slow=10,SNR=27
ASAR S Sn 12 46 38.5 -13
0.0nm,0.3s,baz=355,slow=27,SNR=3.9
CMAR Chiang Mai Arr 38.60 308 P P 12 46 17.3 -0.5
0.3nm,0.5s,baz=128,slow=5.8,SNR=3.9
MKAR Makanchi Array 66.56 326 P P 12 49 46.6 +2.2
1.1nm,0.5s,baz=113,slow=8.0,SNR=22
KSH Kashi 66.61 317 P P 12 49 47.3 +2.3
ZALV Zalesovo Beam 69.74 333 P P 12 50 06.0 +1.8
0.6nm,0.5s,baz=121,slow=5.8,SNR=4.2

MEX 27 13:00:13.6±0.5, 15.26N×91.30W, h20km±80km, MD3.8
GCG 27 13:00:15.0±0.6, 15.25N×91.47W, h31km±12km, MD3.5
ISC 27 13:00:13.6±1.6, 15.30N±0.05×91.52W±0.05, h22km±18km, n9, σ0.65/16, Mexico-Guatemala border region
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STG3 Santiaguito 3, 0.59 185 eP Pn 13 00 26.7 -0.2
STG3 eS Sn 13 00 35.8 -0.1
THIG 0.82 242 iP Pn 13 00 29.0 -0.8
THIG iS Sn 13 00 42.0 +0.7
FUG Fuego 3 1.07 142 eP Pn 13 00 33.5 0.0
CCIG Comitan 1.14 329 eP Pn 13 00 33.9 -0.6
CCIG eS Sn 13 00 48.5 -1.0
PCG Pacaya 1.26 136 eP Pb 13 00 36.8 -0.1
PCG eS Sb 13 00 52.9 0.0
NBG Las Nubes 1.34 122 eP Pn 13 00 37.1 -0.1
NBG eS Sb 13 00 55.3 +0.3
PCIG 1.69 284 eP Pn 13 00 42.2 +0.4
MRL Marmol 1.78 97 eP Pn 13 00 43.8 +0.4
MRL eS Sn 13 01 05.0 -0.5
TGIG 2.13 314 eP Pn 13 00 48.1 +0.2
TGIG eS Sn 13 01 15.0 +1.2

NIC 27 13:13:12.9±0.0, 35.99N×29.93E, h36km±41km, Ml2.8/2
DDA 27 13:13:12.0, 36.03N×29.92E, h36km±1km, ML2.4
ISK 27 13:13:12.2, 35.98N×29.93E, h24km, ML2.9/19
ISC 27 13:13:12.4±1.0, 35.96N±0.04×29.94E±0.03, h22km±6km, n45, σ0.97/64, Eastern Mediterranean Sea
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DEMR Demre-Antalya 0.28 354 PG Pb 13 13 18.6 -0.4
DEMR SG Sb 13 13 23.4 -0.1
AKAS Kas 0.39 315 PG Pb 13 13 20.6 -0.2
AKAS SG Sb 13 13 26.6 +0.2
AKAS Kas 0.39 315 iP Pb 13 13 20.6 -0.2
AKAS iS Sb 13 13 26.8 +0.3
AKUM Antalya-Kumluc 0.49 41 iP Pb 13 13 22.0 -0.4
AKUM IAML 13 13 30.0
comp=N,346nm,0.2s
AKUM IAML 13 13 30.0
comp=E,672nm,0.4s
AKUM iS Sn 13 13 30.1 -1.9
ELL Elmali 0.79 358 PG Pb 13 13 26.7 -0.9
ELL SG Sn 13 13 39.2 -0.4
ELL Elmali 0.79 358 P Pb 13 13 26.5 -1.1
ELL S Sn 13 13 38.7 -1.0
FETY Fethiye 0.97 315 PG Pb 13 13 29.9 -0.7
FETY SG Sn 13 13 43.1 -0.8
FETY Fethiye 0.97 315 iP Pn 13 13 30.1 -0.7
FETY iS Sn 13 13 42.6 -1.3
FETY IAML 13 13 47.0
comp=E,90nm,0.5s
FETY IAML 13 13 50.0
comp=N,66nm,0.3s
KORT Korkueli 1.09 17 PG Pb 13 13 32.3 -0.5
KORT SG Sn 13 13 47.3 +0.2
KORT Korkueli 1.09 17 iP Pn 13 13 31.7 -0.9
KORT iS Sn 13 13 47.6 +0.5
KORT IAML 13 13 52.0
comp=N,112nm,0.7s
KORT IAML 13 13 53.0
comp=E,113nm,0.5s
ANTB Antalya 1.10 31 PN Pn 13 13 32.1 -0.4
GOLH Golhisar 1.31 347 iP Pb 13 13 35.9 -0.6
GOLH iS Sb 13 13 56.1 +3.1
GOLH IAML 13 14 00.0
comp=N,89nm,0.4s
GOLH IAML 13 14 20.0
comp=E,33nm,1.5s
DALY Dalyan (Mula) 1.35 310 PN Pb 13 13 35.9 -1.1
DALY Dalyan (Mula) 1.35 310 iP Pb 13 13 36.6 -0.4
DALY iS Sb 13 13 53.8 0.0
DALY IAML 13 13 56.0
comp=N,121nm,0.4s
DALY IAML 13 13 57.0
comp=E,86nm,0.2s
TURN Turunc 1.42 311 PN Pb 13 13 39.8 +1.6
TURN Turunc 1.42 311 iP Pb 13 13 40.8 +2.6
TURN IAML 13 14 04.0
comp=N,41nm,0.3s
TURN IAML 13 14 05.0
comp=E,31nm,0.3s
ARG Arkhangelos 1.49 281 PN Pb 13 13 38.2 -1.3
BCK Bucak 1.59 19 PN Pn 13 13 39.5 +0.2
TAVA DENIZLI_Tavas 1.72 332 iP Pb 13 13 41.9 -1.5
TAVA iS Sb 13 14 04.2 -0.4
TAVA IAML 13 14 07.0
comp=N,85nm,0.5s
TAVA IAML 13 14 08.0
comp=E,48nm,0.5s
YER Yerkesik 1.78 312 PN Pn 13 13 42.1 +0.2
ALAN Alanya-ANTALYA 1.79 70 PN Pn 13 13 42.1 +0.1
ISP Isparta 1.92 14 PN Pn 13 13 44.0 +0.1
DENT Denizli 1.94 338 PN Pn 13 13 44.2 +0.1
GAZI Gazipasa 1.94 81 PN Pn 13 13 44.6 +0.5
GAZI Gazipasa 1.94 81 iP Pn 13 13 43.3 -0.8
GAZI iS Sn 13 14 05.9 -2.0
GAZI IAML 13 14 06.0
comp=N,35nm,0.6s
GAZI IAML 13 14 08.0
comp=E,48nm,0.7s
BASM Basmaki-Afyon 1.96 2 PN Pn 13 13 44.6 +0.1
DAT Datca 2.06 293 PN Pn 13 13 46.1 +0.3
DAT Datca 2.06 293 iP Pb 13 13 47.2 -2.0
DAT IAML 13 14 20.0
comp=N,14nm,0.2s
DAT IAML 13 14 22.0
comp=E,17nm,0.9s
SEYD Seydisehir-KON 2.10 46 PN Pn 13 13 46.7 +0.3
BAGO Egridir - ISPA 2.14 18 iP Pn 13 13 47.8 +0.9
BAGO iS Sn 13 14 13.7 +0.9
BAGO IAML 13 14 16.0
comp=E,7.7nm,0.6s
BAGO IAML 13 14 29.0
comp=N,6.9nm,0.7s
AKMS Akamas 2.17 115 P Pn 13 13 48.1 +0.9
AKMS AML AML 13 14 12.4
comp=N,0.2nm,0.4s
AKMS AML AML 13 14 12.4
comp=N,0.2nm,0.4s
AKMS S Sn 13 14 13.3 -0.1
AKMS AML AML 13 14 13.8
comp=N,0.2nm,0.3s
AKMS AML AML 13 14 13.8
comp=N,0.2nm,0.3s
HDMB Hadim 2.28 63 PN Pn 13 13 49.4 +0.4
KARP Karpathos 2.30 261 PN Pn 13 13 49.8 +0.8
KARP Karpathos 2.30 261 P Pn 13 13 49.5 +0.4
KARP S Sn 13 14 16.3 -0.4
ALFC Alefka 2.31 109 P Pn 13 13 49.1 -0.1
ALFC S Sn 13 14 16.6 -0.3
ALFC AML AML 13 14 16.8
comp=N,0.2nm,0.3s
ALFC AML AML 13 14 16.8
comp=N,0.2nm,0.3s
ALFC AML AML 13 14 17.9
comp=N,0.1nm,0.1s
ALFC AML AML 13 14 17.9
comp=N,0.1nm,0.1s
AYDN Tasoluk 2.37 316 iP Pb 13 13 54.6 0.0
BODT Bodrum 2.39 298 PN Pn 13 13 50.9 +0.6
DOGA KONYA_Doganhis 2.55 32 iP Pn 13 13 54.1 +1.5
DOGA iS Sn 13 14 23.7 +0.6
DOGA IAML 13 14 27.0
comp=N,38nm,0.7s
DOGA IAML 13 14 31.0
comp=E,23nm,1.2s
AYDB Zeytinkoy-Aydi 2.58 321 PN Pn 13 13 53.4 +0.4
SHUT Suhut-Afyon 2.64 10 PN Pn 13 13 54.5 +0.7
SZAC Souni 2.69 116 S Sn 13 14 27.4 +1.2
KULA Kula-Manisa 2.75 339 PN Pn 13 13 56.2 +0.9
GCAM G?zelcaml? 2.79 309 PN Pn 13 13 56.8 +1.1
ZKR Zakros 3.15 256 S Sn 13 14 37.5 -0.2
MVOU Mavrovouni 3.15 106 P Pn 13 14 01.1 +0.3

INET 27 13:18:06.8, 12.19N×89.33W, h15km, ML4.0
SNET 27 13:18:09.8±1.3, 12.48N×89.12W, h20km±3km, ML4.0
UCR 27 13:18:11.2±2.4, 12.53N×89.08W, h22km±7km, ML3.9, mb4.5(NEIC)
NEIC 27 13:18:11.2±2.6, 12.54N±0.07×89.07W±0.07, h35km±4km, mb4.5/34, Md4.0(SNET), Error ellipse: s-maj=11.4km s-min=7.3km az=220.0
IDC 27 13:18:13.7±2.4, 12.91N×88.78W, h42km±19km, mb3.8/10, mb1 4.0/14, mb1mx3.8/43, mbtmp4.0/14, ML3.4/4, MS3.0/10, Ms1 3.3/10, ms1mx3.0/51, Error ellipse: s-maj=33.1km s-min=18.6km az=42.0
GCG 27 13:18:15.0±1.1, 12.54N×89.35W, h35km±238km, MD4.2
ISC 27 13:18:12.2±1.0, 12.52N±0.05×89.08W±0.04, h50km±9km, n122, σ1.33/144, mb4.4/22, MS3.3/7, Off coast of central America
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JUCU Jucuar¡n 1.09 48 eP Pn 13 18 30.9 -0.4
JUCU eS Sn 13 18 45.7 +0.4
JUCU IAML 13 18 54.0
comp=Z,4µm,0.4s
JUCU Jucuar¡n 1.09 48 eP Pn 13 18 30.9 -0.4
JUCU eS Sn 13 18 45.7 +0.4
JUCU IAML 13 18 54.0
comp=Z,4µm,0.4s
LFRS El Faro 1.10 1 eP Pn 13 18 30.6 -0.7
COEB Comit de Eme 1.11 29 eP Pn 13 18 31.2 -0.4
COEB IAML 13 18 51.6
comp=Z,2µm,0.5s
COEB Comit de Eme 1.11 29 eP Pn 13 18 31.2 -0.4
COEB IAML 13 18 51.6
comp=Z,2µm,0.5s
COEG Centro de Oper 1.11 10 eP Pn 13 18 30.3 -1.2
COEG eS Sn 13 18 46.1 +0.3
COEG IAML 13 18 50.6
comp=Z,2µm,0.3s
COEG Centro de Oper 1.11 10 eP Pn 13 18 30.3 -1.2
COEG eS Sn 13 18 46.1 +0.3
COEG IAML 13 18 50.6
comp=Z,2µm,0.3s
TECA Tecapa 1.12 30 eP Pn 13 18 31.2 -0.5
TECA Tecapa 1.12 30 eP Pn 13 18 31.2 -0.5
SNET Serv Nac Est T 1.17 353 eP Pn 13 18 31.2 -1.1
SNET Serv Nac Est T 1.17 353 Pn 13 18 31.3 -1.1
SNET Serv Nac Est T 1.17 353 eP Pn 13 18 31.2 -1.1
OPAM Oficina de Pla 1.19 354 eP Pn 13 18 32.2 -0.4
OPAM Oficina de Pla 1.19 354 eP Pn 13 18 32.2 -0.4
PAVA Las Pavas 1.19 7 eP Pn 13 18 32.4 -0.3
PAVA eS Sn 13 18 50.1 +2.2
PAVA IAML 13 18 51.2
comp=Z,3µm,0.5s
PAVA Las Pavas 1.19 7 eP Pn 13 18 32.4 -0.3
PAVA eS Sn 13 18 50.1 +2.2
PAVA IAML 13 18 51.2
comp=Z,3µm,0.5s
PACA Pacayal 1.20 38 eP Pn 13 18 32.4 -0.4
PACA Pacayal 1.20 38 eP Pn 13 18 32.4 -0.4
UEES Universidad Ev 1.20 353 eP Pn 13 18 32.1 -0.6
UEES Universidad Ev 1.20 353 eP Pn 13 18 32.1 -0.6
LBRS Las Brisas 1.21 2 eP Pn 13 18 32.9 0.0
LFU La Fuente 1.22 358 eP Pn 13 18 32.6 -0.5
LFU eS Sn 13 18 49.6 +1.1
LFU La Fuente 1.22 358 eP Pn 13 18 32.6 -0.5
LFU eS Sn 13 18 49.6 +1.1
BOQS Boqueron 1.22 351 eP Pn 13 18 32.7 -0.5
BOQS eS Sn 13 18 50.5 +1.8
BLLM Bellamira 1.23 42 eP Pn 13 18 33.2 +0.1
BLLM eS Sn 13 18 51.2 +2.5
BLLM Bellamira 1.23 42 eP Pn 13 18 33.2 +0.1
BLLM eS Sn 13 18 51.2 +2.5
LCND La Caada 1.40 56 eP Pn 13 18 34.9 -0.5
LCND eS Sn 13 18 53.9 +1.2
LCND La Caada 1.40 56 eP Pn 13 18 34.9 -0.5
LCND eS Sn 13 18 53.9 +1.2
CEVE Cerro Verde 1.40 338 eP Pn 13 18 34.8 -0.8
CEVE eS Sn 13 18 54.8 +1.7
CEVE IAML 13 19 03.6
comp=Z,5µm,0.4s
CEVE Cerro Verde 1.40 338 eP Pn 13 18 34.8 -0.8
CEVE eS Sn 13 18 54.8 +1.7
CEVE IAML 13 19 03.6
comp=Z,5µm,0.4s
SBLS San Blas 1.41 338 eP Pn 13 18 34.8 -1.0
SBLS San Blas 1.41 338 eP Pn 13 18 34.8 -1.0
CNCH Conchagua 1.43 58 eP Pn 13 18 35.4 -0.5
CNCH Conchagua 1.43 58 eP Pn 13 18 35.4 -0.5
SNJE San Jose 1.43 339 eP Pn 13 18 34.9 -1.2
SNJE eS Sn 13 18 56.2 +2.4
SNJE San Jose 1.43 339 eP Pn 13 18 34.9 -1.2
SNJE eS Sn 13 18 56.2 +2.4
RTR El Retiro 1.48 338 eP Pn 13 18 35.8 -0.8
RTR eS Sn 13 18 57.6 +2.8
RTR El Retiro 1.48 338 eP Pn 13 18 35.8 -0.8
RTR eS Sn 13 18 57.6 +2.8
MTO3 Montecristo 1.89 352 eP Pn 13 18 42.5 +0.3
MTO3 eS Sn 13 19 07.2 +2.2
MTO3 Montecristo 1.89 352 eP Pn 13 18 42.5 +0.3
MTO3 eS Sn 13 19 07.2 +2.2
IXG Ixpaco 2.11 321 eP Pn 13 18 44.4 -0.8
TGUH Tegucigalpa,Un 2.33 49 Pn 13 18 49.1 +0.9
PCG Pacaya 2.38 322 eP Pn 13 18 46.5 -2.5
NBG Las Nubes 2.40 329 eP Pn 13 18 51.6 +2.3
FUG Fuego 3 2.57 318 eP Pn 13 18 52.6 +1.0
FUG eS Sn 13 19 21.6 -0.1
MRL Marmol 2.61 347 eP Pn 13 18 54.6 +2.4
ESTN Estel 2.71 77 Pn 13 18 52.5 -0.8
APG El Apazote 2.81 332 P Pn 13 18 54.4 -0.6
comp=Z,6.3nm,0.3s,baz=269,slow=4.6,SNR=8.8
APG LR LR 13 19 41.8
comp=Z,77nm,21.3s,baz=163,slow=33
STG3 Santiaguito 3, 3.26 312 eP Pn 13 19 01.6 +0.6
STG3 eS Sn 13 19 38.0 -0.7
ACON Acoyapa 3.86 98 Pn Pn 13 19 07.5 -1.6
GB1A Borinquen Arri 3.98 115 eP Pn 13 19 12.4 +1.5
GB1A eS Sn 13 19 56.5 +0.1
BUEV Buena Vista 3.98 115 eP Pn 13 19 12.7 +1.8
BUEV eS Sn 13 19 57.9 +1.4
CUI Cuipilapa 4.26 115 eP Pn 13 19 16.1 +1.4
CUI eS Sn 13 20 03.0 -0.2
JTS Las Juntas de 4.61 118 P Pn 13 19 20.4 +0.9
comp=Z,6.2nm,0.3s,baz=350,slow=7.2,SNR=14
JTS S Sn 13 20 09.4 -2.4
comp=Z,4.3nm,0.3s,baz=342,slow=10,SNR=3.9
JTS Las Juntas de 4.61 118 Pn Pn 13 19 19.4 -0.1
JTS Las Juntas de 4.61 118 eP Pn 13 19 21.6 +2.1
ARE1 Arenal 1 4.74 115 eP Pn 13 19 23.3 +2.1
ARE1 eS Sn 13 20 15.7 +0.8
CEDE Laguna Cedeo 4.74 115 eP Pn 13 19 23.4 +2.1
LCR2 La Lucha 2 5.70 118 eP Pn 13 19 36.6 +2.0
CVTR Volcan Turrial 5.78 115 eP Pn 13 19 37.2 +1.3
CMIG Matias Romero 7.22 310 P Pn 13 19 55.5 +0.2
comp=Z,0.6nm,0.3s,baz=145,slow=12,SNR=4.8
CMIG S Sn 13 21 12.5 -3.4
comp=Z,0.7nm,0.3s,baz=66,slow=14,SNR=2.1
TEIG Tepich 7.70 6 P Pn 13 19 56.9 -4.9
comp=Z,0.2nm,0.3s,baz=321,slow=8.0,SNR=1.9
TEIG LR LR 13 23 29.8
comp=Z,521nm,18.4s,baz=130,slow=43
TEIG Tepich 7.70 6 P Pn 13 20 00.1 -1.7
PAYG Puerto Ayora 13.16 185 Pn Pn 13 21 15.4 -1.2
GTBY Guantanamo Bay 15.29 59 Pn Pn 13 21 43.3 -1.7
GTBY IAmb IAmb 13 21 47.6
comp=Z,66nm,1.5s
SDV Santo Domingo 18.48 99 LR LR 13 30 52.1
comp=Z,65nm,20.6s,baz=266,slow=42
SDD Santo Domingo 19.38 70 P P 13 22 32.6 -1.6
JCT Junction City 20.44 333 P P 13 22 45.3 -0.3
JCT IAmb IAmb 13 22 47.0
comp=Z,12nm,0.7s
Z50A Ashland 20.84 7 P P 13 22 50.3 +0.4
Y49A Blount Mountai 21.38 6 P P 13 22 56.3 +0.7
GOGA Godfrey 21.42 13 P P 13 22 57.6 +1.6
GOGA IAmb IAmb 13 23 04.6
comp=Z,22nm,1.5s
TX32 Lajitas Array 21.54 323 P P 13 22 59.9 +2.4
TX32 IAmb IAmb 13 23 00.7
comp=Z,7.4nm,0.7s
TXAR Lajitas Array 21.54 323 P P 13 22 59.4 +1.9
comp=Z,7.4nm,0.6s,baz=141,slow=9.4,SNR=104
TX31 Lajitas Ar. Si 21.54 323 P P 13 22 59.9 +2.4
H06E1 SOCORRO T-PHAS 21.93 289 T T 13 45 30.6
SNR=3.5
ATAH Atahualpa 22.23 151 LR LR 13 30 47.4
comp=Z,82nm,19.7s,baz=334,slow=34
MIAR Mount Ida 22.30 350 P P 13 23 06.8 +1.3
MIAR IAmb IAmb 13 23 09.2
comp=Z,23nm,0.8s
W41B Gary Mavity, V 22.73 353 P P 13 23 11.3 +1.2
W39A Magazine 22.97 350 P P 13 23 14.3 +1.7
W39A IAmb IAmb 13 23 15.5
comp=Z,12nm,0.7s
LPIG La Paz 23.18 303 LR LR 13 33 17.2
comp=Z,128nm,20.9s,baz=114,slow=39
X34A Smith Ranch, M 23.38 342 P P 13 23 18.2 +1.6
FCAR Ozark Folk Cen 23.43 354 P P 13 23 17.6 +0.6
FCAR IAmb IAmb 13 23 19.7
comp=Z,25nm,0.7s
LCAR Lake Charles 23.52 356 P P 13 23 17.4 -0.5
LCAR IAmb IAmb 13 23 21.4
comp=Z,10nm,0.6s
TKL Tuckaleechee C 23.53 11 P P 13 23 16.9 -1.1
comp=Z,7.9nm,0.7s,baz=174,slow=11,SNR=9.7
TKL LR LR 13 32 21.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,104nm,19.7s,baz=180,slow=37						
TKL	Tuckaleechee C	23.53	11	IAmb	IAmb	13 23 20.1	
	comp=Z,8.7nm,0.7s						
CLTN	Cedars of Leba	23.60	6	P	P	13 23 18.8	+0.2
WMOK	Wichita Mounta	23.81	340	P	P	13 23 20.3	-0.3
U40A	Yellville	23.98	352	P	P	13 23 22.5	+0.4
U40A				IAmb	IAmb	13 23 25.8	
	comp=Z,10nm,0.7s						
PBMO	Poplar Bluff	24.18	357	P	P	13 23 24.2	+0.2
PBMO				IAmb	IAmb	13 23 25.3	
	comp=Z,16nm,0.9s						
MNTX	Cornudas Mount	24.28	324	P	P	13 23 24.1	-0.9
T49A	Edmonton	24.69	7	P	P	13 23 28.5	-0.1
T49A				IAmb	IAmb	13 23 47.0	
	comp=Z,16nm,1.4s						
MGMO	Mountain Grove	24.70	354	P	P	13 23 29.7	+1.0
AMTX	Amarillo	25.03	335	P	P	13 23 31.7	-0.1
AMTX				IAmb	IAmb	13 23 33.5	
	comp=Z,9.7nm,0.6s						
S39A	Bolivar	25.35	352	P	P	13 23 34.2	-0.4
S39A				IAmb	IAmb	13 23 37.9	
	comp=Z,15nm,0.6s						
CCM	Cathedral Cave	25.50	356	P	P	13 23 36.3	+0.3
NNA	Nana	27.21	153	LR	LR	13 34 13.7	
	comp=Z,50nm,20.8s,baz=294,slow=35						
L40A	Anamosa	29.49	357	P	P	13 24 11.6	-0.1
COWI	Conover	33.47	360	P	P	13 24 45.8	-0.8
E38A	The Farm, Brul	34.04	357	P	P	13 24 51.4	-0.1
PDAR	Pinedale Array	34.98	333	P	P	13 24 59.6	-0.3
	comp=Z,0.3nm,0.7s,baz=149,slow=9.4,SNR=3.2						
PDAR				PcP	PcP	13 27 33.5	+2.0
	comp=Z,0.3nm,0.5s,baz=135,slow=6.7,SNR=4.4						
LPAZ	La Paz	35.34	144	LR	LR	13 38 30.6	
	comp=Z,37nm,20.3s,baz=304,slow=34						
EYMN	Ely	35.37	357	P	P	13 25 02.3	-0.8
TPAW	Teton Pass	36.17	333	P	P	13 25 09.7	-0.5
TPAW				IAmb	IAmb	13 25 14.8	
	comp=Z,4.7nm,1.0s						
NVAR	Mina Array Bea	36.61	320	P	P	13 25 16.8	+2.7
	comp=Z,0.4nm,0.3s,baz=139,slow=8.4,SNR=2.1						
ULM	Lac du Bonnet	38.03	353	P	P	13 25 24.4	-1.3
	comp=Z,5.4nm,0.6s,baz=171,slow=9.3,SNR=19						
ULM				LR	LR	13 42 52.0	
	comp=Z,107nm,19.9s,baz=142,slow=39						
ULM	Lac du Bonnet	38.03	353	P	P	13 25 23.7	-1.9
ULM				IAmb	IAmb	13 25 25.4	
	comp=Z,6.7nm,0.7s						
MCMT	McKenzie Canyo	38.07	332	P	P	13 25 25.6	-0.7
YBH	Yreka Blue Hor	41.29	321	LR	LR	13 43 57.5	
	comp=Z,50nm,19.1s,baz=150,slow=38						
SCHQ	Schefferville	45.68	18	P	P	13 26 26.9	-1.2
	comp=Z,5.6nm,0.7s,baz=218,slow=6.7,SNR=18						
SCHQ				PcP	PcP	13 28 05.9	+0.6
	comp=Z,1.2nm,0.5s,baz=230,slow=6.0,SNR=4.1						
SCHQ	Schefferville	45.68	18	P	P	13 26 27.2	-0.9
SCHQ				IAmb	IAmb	13 26 29.6	
	comp=Z,14nm,1.2s						
YKA	Yellowknife Ar	53.13	346	P	P	13 27 24.4	-0.2
	comp=Z,1.1nm,0.7s,baz=141,slow=7.9,SNR=19						
YKA				PcP	PcP	13 28 33.5	+1.2
	comp=Z,0.4nm,0.6s,baz=143,slow=3.8,SNR=5.5						
RES	Resolute Bay	62.23	358	P	P	13 28 27.9	-0.5
ILAR	Eielson Array	65.32	336	P	P	13 28 47.9	-1.0
	comp=Z,0.4nm,0.9s,baz=117,slow=7.0,SNR=5.8						
DBIC	Dimbokro	82.97	85	P	P	13 30 33.0	+0.2
	comp=Z,1.0nm,0.6s,baz=225,slow=7.1,SNR=2.6						
DBIC	Dimbokro	82.97	85	IAmb	IAmb	13 30 37.6	
	comp=Z,8.2nm,1.5s						
TORD	Torodi Ar. Bea	87.95	77	P	P	13 30 58.1	+0.6
	comp=Z,0.3nm,0.6s,baz=293,slow=7.3,SNR=2.7						
SONM	Songino Array	118.35	348	PKP	PKiKP	13 36 56.6	+2.1
	comp=Z,0.2nm,0.4s,baz=74,slow=1.4,SNR=3.2						
MKAR	Makanchi Array	120.45	7	PKP	PKiKP	13 36 59.1	+0.5
	comp=Z,0.1nm,0.4s,baz=245,slow=2.3,SNR=2.9						
LZH	Lanzhou	130.14	346	ePKP	PKPdf	13 37 14.3	-3.2
LZH				pPKP	pPKPdf	13 37 25.5	-6.6
LZH				sPKP		13 37 29.8	
WRA	Warramunga Arr	137.76	254	PKP	PKiKP	13 37 34.7	+0.8
	comp=Z,0.7nm,1.0s,baz=90,slow=2.2,SNR=4.2						
ASAR	Alice Springs	137.81	249	PKP	PKiKP	13 37 33.1	-0.8
	comp=Z,0.3nm,0.7s,baz=107,slow=3.8,SNR=4.9						
CMAR	Chiang Mai Arr	148.22	345	PKPbc	PKiKP	13 37 55.6	+0.2
	comp=Z,2.2nm,0.6s,baz=345,slow=3.8,SNR=16						

IDC 27 13:33:12.0±1.6, 59.97N×153.09W, h90km±26km, mb3.0/1, mb1 3.4/6, mb1mx3.1/48, mbtmp3.5/6, Error ellipse: s-maj=28.6km s-min=11.2km az=109.0
NEIC 27 13:33:13.2±1.7, 59.90N±0.04×153.12W±0.07, h122km±3km, Error ellipse: s-maj=6.2km s-min=4.2km az=142.0
AEIC 27 13:33:14.2±1.7, 59.90N±0.04×153.1W±0.1, h121km±5km, ML3.0/91, Error ellipse: s-maj=7.7km s-min=5.7km az=99.0
ISC 27 13:33:13.1±1.0, 59.91N±0.03×153.07W±0.04, h128km±6km, n78, σ1.00/102, Southern Alaska

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ILS	Iliamna Low So	0.05	0		Pn	13 33 30.1	-0.5
RED	Redoubt Volcan	0.54	16		Pn	13 33 31.8	-0.3
RED					Sn	13 33 45.5	-1.2
AUL	Augustine Lava	0.56	200		Pn	13 33 32.4	+0.2
AUL					Sn	13 33 46.3	-0.3
AUW	Augustine West	0.57	201		Pn	13 33 32.4	+0.1
AUQ	Augustine Qik'	0.58	198		Pn	13 33 32.4	0.0
AUQ					Sn	13 33 46.4	-0.6
RSO	Redoubt South	0.58	16		Pn	13 33 32.4	-0.2
RSO				Sn	Sn	13 33 46.2	-1.2
RDWB	Redoubt West	0.59	11		Pn	13 33 32.2	-0.4
RDWB					Sn	13 33 45.9	-1.6
HOM	Homer	0.76	108		Pn	13 33 34.0	+0.4
HOM					Sn	13 33 49.8	+0.7
CNPM	China Poot	1.00	112		Pn	13 33 36.0	+0.3
CNPM					Sn	13 33 52.7	-0.3
BRLK	Bradley Lake	1.11	96		Pn	13 33 37.0	+0.2
BRLK					Sn	13 33 54.2	-0.6
BRSE	Bradley Lake S	1.19	97		Pn	13 33 37.8	+0.2
BRSE					Sn	13 33 55.9	-0.3
CAPN	Captain Cook N	1.29	47		Pn	13 33 40.6	+2.1
CAPN					Sn	13 33 59.6	+1.6
SPCR	Spurr Chakacha	1.37	18		Pn	13 33 39.6	+0.1
CRP	Crater Peak	1.44	18		Pn	13 33 40.8	+0.4
SLKM	Skilak Lake	1.54	66		Pn	13 33 41.5	0.0
SLKM					Sn	13 34 01.8	-1.3
SVW2	Sparrevohn	1.73	315		Pn	13 33 42.9	-0.7
SEW	Seward	1.83	82		Pn	13 33 44.8	+0.1
SEW					Sn	13 34 07.8	-1.1
SUA	Susitna One	1.94	35		Pn	13 33 46.6	+0.4
SUA					Sn	13 34 11.8	+0.2
RC01	Rabbit Creek A	2.03	53		Pn	13 33 47.3	+0.1
RC01					Sn	13 34 12.4	-1.0
KDAK	Kodiak Island	2.14	173	P	Pn	13 33 47.9	-0.7
	4.4nm,0.3s,baz=9.0,slow=12,SNR=6.6						
KDAK				S	Sn	13 34 14.1	-1.7
	27nm,0.3s,baz=303,slow=23,SNR=44						
KDAK	Kodiak Island	2.14	173		Pn	13 33 47.9	-0.7
KDAK					Sn	13 34 14.8	-1.0
SKT	Skwentna	2.21	19		Pn	13 33 49.6	+0.1
SKT					Sn	13 34 18.7	+1.3
PWL	Port Wells	2.54	66		Pn	13 33 52.9	-0.7
PWL					Sn	13 34 22.7	-2.1
PMR	Palmer	2.57	47		Pn	13 33 53.1	-0.8
OHAK	Old Harbor	2.69	183		Pn	13 33 54.4	-1.2
OHAK					Sn	13 34 25.4	-2.9
KNK	Knik Glacier	2.73	54		Pn	13 33 55.4	-0.6
GHO	Glory Hole Cre	2.76	46		Pn	13 33 55.8	-0.7
GHO					Sn	13 34 28.0	-1.9
SML	Sawmill	3.00	49		Pn	13 33 58.8	-0.8
PPLA	Purkeypile	3.03	8		Pn	13 34 01.1	+1.0
GLI	Glacier Island	3.12	69		Pn	13 34 01.7	+0.6
HIN	Hinchinbrook I	3.32	79		Pn	13 34 04.1	+0.3
HIN					Sn	13 34 41.5	-1.4
FID	Port Fidalgo	3.38	73		Pn	13 34 04.7	+0.2
JPK	Jack Peak	3.40	67		Pn	13 34 05.5	+0.7
SCM	Sheep Creek Mo	3.41	53		Pn	13 34 04.6	-0.3
SCM					Sn	13 34 43.3	-1.7
HUR	Hurricane	3.50	27		Pn	13 34 06.7	+0.7
WAT1	Susitna Watana	3.65	35		Pn	13 34 07.8	-0.3
EYAK	Cordova Ski Ar	3.71	77		Pn	13 34 09.3	+0.6
WAT6	Susitna Watana	3.72	42		Pn	13 34 07.8	-0.8
WAT2	Susitna Watana	3.75	33		Pn	13 34 09.1	-0.4
TRF	Thorofare Moun	3.80	19		Pn	13 34 09.9	-0.2
KTH	Kantishna Hill	3.80	15		Pn	13 34 09.8	-0.2
RND	Reindeer	4.05	28		Pn	13 34 12.9	-0.4
DHY	Denali Highway	4.19	38		Pn	13 34 15.1	-0.2
GOAT	Goat Mountain	4.21	77		Pn	13 34 16.3	+0.7
MCK	McKinley	4.31	25		Pn	13 34 17.0	+0.2
BPAW	Bear Paw Mtn.	4.32	12		Pn	13 34 16.7	-0.3
PAX	Paxson	4.77	47		Pn	13 34 23.0	0.0
GLB	Gilahina Butte	4.81	67		Pn	13 34 23.4	-0.1
VRDI	Verde Repeater	4.93	70		Pn	13 34 25.5	+0.3
CRQM	Cirque	5.01	76	Pn	Pn	13 34 26.1	-0.2
NEA	Nenana	5.05	20	Pn	Pn	13 34 26.7	+0.1
WRH	Wood River Hil	5.14	25		Pn	13 34 27.4	-0.4
TGL	Tana Glacier	5.16	76		Pn	13 34 29.0	+0.8
MCARA	McCarthy VSAT	5.16	69		Pn	13 34 29.2	+1.1
MLY	Manley	5.26	11		Pn	13 34 28.9	-0.5
HDA	Harding Lake	5.35	30		Pn	13 34 30.2	-0.4
CCB	Clear Creek Bu	5.35	25		Pn	13 34 29.9	-0.8
PTPK	Patty Peak	5.39	72		Pn	13 34 32.6	+1.2
KIAG	Kiagna River	5.41	74		Pn	13 34 32.6	+1.0
BALM	Baldy	5.42	73		Pn	13 34 32.9	+1.0
RIDG	Independent Ri	5.47	42		Pn	13 34 32.7	+0.3
TCOL	CIGO, UAF Yank	5.54	24		Pn	13 34 33.0	-0.2
COLA	College	5.54	24		Pn	13 34 32.8	-0.4
IL31		5.67	28		Pn	13 34 34.1	-0.8
ILAR	Eielson Array	5.67	28	P	Pn	13 34 34.2	-0.7
	2.0nm,0.3s,baz=216,slow=14,SNR=54						
ILAR				S	Sn	13 35 35.1	-3.7
	0.5nm,0.3s,baz=201,slow=17,SNR=4.5						
BARN	Barnard Glacie	5.76	73		Pn	13 34 37.5	+1.2
CTGM	Chitina Glacie	5.91	75		Pn	13 34 39.8	+1.5
SCRK	Sand Creek	5.92	42		Pn	13 34 37.7	-0.7
IM03		6.11	357		Pn	13 34 41.3	+0.5
BC03		6.26	55		Pn	13 34 43.1	+0.2
PNL	Peninsula	6.91	86		Pn	13 34 52.4	+0.8
FYU	Fort Yukon	7.56	24		Pn	13 34 57.7	-2.6
DHAK	Deception Hill	7.61	90	Pn	Pn	13 35 02.3	+1.2
DAWY	Dawson	7.67	51	Pn	Pn	13 35 02.1	+0.3
DLBC	Dease Lake	11.90	87	P	Pn	13 35 58.3	-0.2
	0.1nm,0.3s,baz=256,slow=4.2,SNR=1.2						
DLBC				S	Sn	13 38 07.8	-1.6
	0.1nm,0.3s,baz=284,slow=4.2,SNR=2.4						
INK	Inuvik	11.93	37	P	Pn	13 35 58.6	-0.2
	0.1nm,0.3s,baz=231,slow=10,SNR=2.6						
YKA	Yellowknife Ar	18.52	65	P	Pn	13 37 21.4	+0.5
	0.1nm,0.3s,baz=277,slow=9.9,SNR=10						
SONM	Songino Array	54.82	306	P	P	13 42 31.6	+2.1
	0.2nm,0.4s,baz=55,slow=5.5,SNR=2.4						

JMA 27 13:34:00.4±0.1, 39.17N×142.34E, h33km±1km, M3.6
JMA Felt I J1.
NIED 27 13:34:00, 39.20N×142.40E, h41km, Mw3.5 Best double couple: M0 1.69000×10^14 NP1:φs215.00000°, δ60.00000°, λ-114.00000°. NP2:φs76.00000°, δ37.00000°, λ-55.00000°.
IDC 27 13:34:03.4±1.7, 39.55N×141.42E, h0km, mb3.3/3, mb1 3.4/5, mb1mx3.2/50, mbtmp3.2/5, ML2.6/2, Error ellipse: s-maj=52.7km s-min=27.0km az=90.0
ISC 27 13:34:01.8±2.1, 39.19N±0.05×142.2E±0.1, h34km±3km, n19, σ1.28/19, mb3.4/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.45	256	P	Pb	13 34 11.3	-0.4
OFUJ				S	Sb	13 34 18.6	+0.1
MIYJ	Miyakonagasawa	0.50	320	P	Pb	13 34 11.8	-0.7
MIYJ				S	Sb	13 34 19.6	-0.2
JKMT	Kesennumamotoy	0.70	237	P	Pn	13 34 14.5	-0.8
JKMT				S	Sn	13 34 24.3	-0.7
JOM	Ohasama	0.78	291	P	Pn	13 34 16.6	+0.2
JOM				S	Sb	13 34 28.2	+0.8
JTH	Tanohata	0.80	339	P	Pn	13 34 15.7	-1.0
JMK	Ichinoseki	0.82	253	P	Pn	13 34 16.8	-0.2
JMK				S	Sn	13 34 28.7	+0.8
JIO	Ouri	1.01	223	P	Pn	13 34 18.4	-1.2
JIO				S	Sn	13 34 31.0	-1.5
JKZ	Kuzumaki	1.05	319	P	Pn	13 34 20.6	+0.4
JKZ				S	Sb	13 34 35.1	-0.1
MJAR	Matsushiro Arr	4.14	232	Pn	Pn	13 35 05.7	+3.1
	0.1nm,0.3s,baz=43,slow=12,SNR=7.3						
ASAJ	Asahikawa	4.93	3	Pn	Pn	13 35 15.6	+2.2
	0.4nm,0.3s,baz=192,slow=9.3,SNR=6.6						
ASAJ				Sn	Sn	13 36 07.6	-1.6
	0.3nm,0.3s,baz=157,slow=14,SNR=1.6						
H11N2	WAKE ISLAND Hy	28.78	125	T	T	14 10 16.1	
	baz=318,slow=75,SNR=42						
H11N1	WAKE ISLAND Hy	28.79	125	T	T	14 10 17.4	
	baz=318,slow=75,SNR=44						
H11N3	WAKE ISLAND Hy	28.80	125	T	T	14 10 19.8	
	baz=318,slow=75,SNR=36						
H11S1	WAKE ISLAND Hy	29.57	127	T	T	14 11 21.9	
	baz=318,slow=76,SNR=9.4						
H11S3	WAKE ISLAND Hy	29.57	127	T	T	14 11 21.4	
	baz=318,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	29.59	127	T	T	14 11 23.9	
	baz=318,slow=76,SNR=10						
MKAR	Makanchi Array	43.55	300	P	P	13 42 02.4	+0.1
	0.3nm,0.7s,baz=81,slow=9.1,SNR=3.2						
WRA	Warramunga Arr	59.29	189	P	P	13 44 08.4	+8.3
	0.3nm,0.5s,baz=6.1,slow=6.9,SNR=7.3						
ASAR	Alice Springs	63.01	189	P	P	13 44 34.1	+8.8
	0.2nm,0.7s,baz=11,slow=10.0,SNR=3.2						

IDC 27 13:39:14.9±2.6, 22.27S×170.18E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.8/38, mbtmp3.8/5, ML3.2/1, Error ellipse: s-maj=107.4km s-min=29.8km az=162.0
ISC 27 13:39:17.6±2.1, 22.2S±0.6×170.2E±0.2, h21km, n6, σ0.60/7, mb3.8/4, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.52	272	Pn	Pn	13 40 12.1	+0.8
	2.4nm,0.3s,baz=90,slow=19,SNR=61						
DZM				Sn	Sn	13 40 51.9	-0.5
	5.5nm,0.3s,baz=197,slow=15,SNR=3.8						
ASAR	Alice Springs	33.44	260	P	P	13 45 55.1	-0.1
	1.4nm,0.8s,baz=88,slow=9.4,SNR=15						
WRA	Warramunga Arr	33.53	267	P	P	13 45 55.4	-0.7
	0.8nm,1.1s,baz=102,slow=8.4,SNR=5.8						
CMAR	Chiang Mai Arr	80.59	294	P	P	13 51 28.8	-0.2
	0.3nm,0.3s,baz=121,slow=3.5,SNR=3.7						
ILAR	Eielson Array	92.81	17	P	P	13 52 28.0	0.0
	0.4nm,0.7s,baz=209,slow=5.2,SNR=4.5						
GERES	GERESS Array B	147.56	331	PKPbc	PKiKP	13 59 02.5	+0.2
	0.6nm,0.6s,baz=31,slow=2.3,SNR=3.8						

TAP 27 13:46:31.2, 23.84N×122.74E, h14km±1km, ML2.5, D
JMA 27 13:46:32.1±0.2, 23.87N×122.72E, h24km±4km, M2.1
ISC 27 13:46:31.3±1.3, 23.83N±0.04×122.73E±0.02, h18km±3km, n59, σ0.71/83, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.65	18	P	Pg	13 46 44.1	-0.2
JYNG				S	Sb	13 46 52.2	-0.7
YOJ	Yonaguni jima	0.68	22	P	Pg	13 46 44.7	-0.1
YOJ				eS	Sb	13 46 52.9	-0.9
EOS1	EOS1	0.90	323	eP	Pg	13 46 48.6	-0.3
	baz=322						
EOS1				eS	Sn	13 47 01.3	-0.3
	baz=322						
HATJ	Hateruma jima	1.01	77	P	Pb	13 46 50.2	-0.1
HATJ				eS	Sb	13 47 03.3	0.0
IRIF	Iriomote-Funau	1.05	61	P	Pb	13 46 50.7	-0.2
IRIF				S	Sb	13 47 04.3	0.0
ENA	Nanau	1.08	304	P	Pn	13 46 51.7	+0.2
	baz=303						
ENA				eS	Sg	13 47 08.2	+1.7
	baz=303						
NACB	Ninganchiao	1.09	289	eP	Pb	13 46 51.3	-0.3
	baz=272						
NACB				eS	Sn	13 47 06.6	+0.4
	baz=272						
TWC	Suao	1.12	314	eP	Pn	13 46 52.0	0.0
	baz=314						
TWC				eS	Sg	13 47 08.0	+0.3
	baz=314						
ESL	Shilin	1.18	270	eP	Pn	13 46 52.8	-0.1
	baz=268						
ESL				eS	Sb	13 47 08.3	+0.1
	baz=268						
ETLH	Xiulin Townshi	1.20	289	eP	Pn	13 46 53.0	-0.3
	baz=273						
ETLH				eS	Sg	13 47 10.5	+0.2
	baz=273						
EGFH	Guangfu	1.20	263	eP	Pn	13 46 51.9	-1.3
	baz=262						
EGFH				eS	Sn	13 47 10.1	+1.1
	baz=262						
HGSD	Ruisui	1.24	255	eP	Pn	13 46 52.9	-0.9
	baz=253						
HGSD				eS	Sb	13 47 09.6	-0.2
	baz=253						
JKRS	Kuro-shima	1.24	71	P	Pb	13 46 54.2	0.0
JKRS				eS	Sn	13 47 10.4	+0.4
TWE	Neicheng	1.31	313	eP	Pg	13 46 56.2	-0.5
	baz=312						
TWE				eS	Sg	13 47 14.0	+0.1
	baz=312						
EHY	Hungye	1.33	256	eP	Pn	13 46 54.6	-0.3
	baz=255						
EHY				eS	Sn	13 47 11.8	-0.3
	baz=255						
ENTT	Nioudou	1.33	308	eP	Pg	13 46 56.6	-0.5
	baz=307						
ENTT				eS	Sg	13 47 14.7	+0.2
	baz=307						
NDT	Datong Townshi	1.35	305	eP	Pg	13 46 57.0	-0.4
	baz=305						
SLBB	Yuanshan	1.36	313	eP	Pg	13 46 57.0	-0.5
	baz=313						
NNSB	Datong	1.36	296	P	Pb	13 46 56.3	-0.1
	baz=296						
NNSH	Datong	1.36	296	eP	Pb	13 46 55.9	+0.3
	baz=296						
WHF	Hehuan Shan	1.37	284	eP	Pn	13 46 56.0	0.0
	baz=283						
NNS	Nan Shan	1.38	297	eP	Pb	13 46 56.5	-0.2
	baz=296						
YULB	Yu-li	1.38	252	eP	Pn	13 46 55.4	-0.3
	baz=251						
YULB				eS	Sn	13 47 14.0	+0.6
	baz=251						
TWF1	Yuli	1.39	250	eP	Pn	13 46 55.6	-0.2
	baz=249						
TWF1				eS	Sn	13 47 14.1	+0.3
	baz=249						
JIJ	Ishigaki jima	1.40	67	P	Pb	13 46 56.6	-0.4
JIJ				S	Sb	13 47 14.7	+0.2
TIPB	Shuangxi	1.40	324	eP	Pg	13 46 57.9	-0.6
	baz=337						
OWD	Renai	1.42	275	eP	Pn	13 46 56.6	+0.2
	baz=275						
CHGB	Renai	1.44	280	eP	Pn	13 46 57.3	+0.7
	baz=279						
VWDT	VWDT	1.45	267	eP	Pn	13 46 56.7	0.0
	baz=253						
FULB	Fuli	1.46	245	eP	Pn	13 46 55.8	-0.9
	baz=244						
NWLT	Wulai	1.46	311	eP	Pb	13 46 58.8	+0.8
	baz=310						
YHNB	Yeheng	1.49	305	eP	Pb	13 46 58.7	+0.2
	baz=304						
YHNB				eS	Sb	13 47 17.8	+0.7
	baz=304						
NSK	Sanguang	1.51	304	eP	Pb	13 46 58.7	-0.1
	baz=304						
NWF	Wu-fen Shan	1.51	325	eP	Pb	13 46 57.3	-0.2
	baz=325						
WFSB	Wu-fen Shan	1.51	325	eP	Pb	13 46 58.5	-0.2
	baz=325						
SSLB	Suanglung	1.62	269	eP	Pn	13 46 59.0	0.0
	baz=269						
JISG	Ishigakijimahi	1.63	62	P	Pn	13 46 59.6	+0.5
JISG				S	Sn	13 47 20.0	+0.3
DPDB	Guoxing	1.66	277	eP	Pn	13 47 00.5	+0.9
	baz=277						
YUS	Yu-Shan	1.66	259	eP	Pn	13 47 00.2	+0.2
	baz=258						
SMLT	Sun Moon Lake	1.67	272	eP	Pn	13 47 00.7	+1.0
	baz=272						
WHP	Taichung City	1.69	286	eP	Pb	13 47 02.4	+0.5
	baz=273						
ELDTW	Lidau	1.69	248	eP	Pn	13 46 59.8	-0.3
	baz=248						
TYC	Yuchr	1.71	273	eP	Pb	13 47 01.7	-0.5
	baz=273						
WHYT	Xinyi Township	1.72	266	eP	Pn	13 47 01.5	+1.1
	baz=266						
YM03	YM03	1.73	322	eP	Pb	13 47 01.8	-0.8
	baz=322						
LIOB	Emei	1.76	298	eP	Pb	13 47 03.6	+0.5
	baz=298						
NSTT	Nanjuang	1.77	297	eP	Pb	13 47 03.5	+0.4
	baz=298						
ALS	Alishan	1.79	260	eP	Pn	13 47 02.1	+0.6
	baz=260						
TWQ1	Liyutan	1.86	287	eP	Pb	13 47 05.2	+0.4
	baz=286						
TWQ1				eS	Sg	13 47 29.7	-1.6
	baz=286						
CHN5	Tsauling	1.89	263	eP	Pn	13 47 04.2	+1.4
	baz=263						
PTSB	Yuanli	1.95	289	eP	Pb	13 47 05.6	-0.6
	baz=289						
TPUB	Ta-pu	1.99	255	eP	Pn	13 47 05.8	+1.7
	baz=255						
CHN4	Tsaushan	2.01	257	eP	Pb	13 47 06.9	-0.5
	baz=256						
CHN4				eS	Sb	13 47 31.7	-0.4
	baz=256						
WTP	Ta-pu	2.02	254	eP	Pb	13 47 06.2	+1.7
	baz=253						
WTP				eS	Sb	13 47 31.8	-0.7
	baz=253						
SLGT	Liugui	2.08	247	eP	Pn	13 47 06.8	+1.5
	baz=236						
CHN1	Nanshi	2.12	253	eP	Pn	13 47 07.6	+1.8
	baz=252						
TWK	Hsinying	2.13	255	eP	Pn	13 47 08.1	+2.1
	baz=255						
EAST	Anshuo	2.25	231	eP	Pn	13 47 07.5	-0.2
	baz=242						
MASBT	Mashibuluo	2.27	238	eP	Pn	13 47 08.6	+0.6
	baz=226						

IDC 27 13:49:23.4±1.2, 2.43S×99.63E, h0km, mb4.2/15, mb1 4.2/15, mb1mx3.9/75, mbtmp4.2/15, Error ellipse: s-maj=41.3km s-min=15.3km az=58.0
DJA 27 13:49:26.1±0.8, 3°S±5°×100°E±°, h27km±5km, M4.1/11, mB4.7/1, mb4.2/3, MLv4.1/11, MLv4.1/11, Mw(mB)4.0/1
NEIC 27 13:49:27.7±1.6, 2.50S±0.06×99.52E±0.08, h34km±6km, mb4.4/14, Error ellipse: s-maj=11.4km s-min=8.3km az=111.0
ISC 27 13:49:27.2±0.7, 2.52S±0.07×99.51E±0.07, h32km, n62, σ0.88/64, mb4.3/22, Southern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.55	116	P	Pb	13 49 37.9	-0.6
PPSI				S	Sb	13 49 46.8	+0.5
PPSI	Pulau Pagai	0.55	116	P	Pb	13 49 37.9	-0.6
PPSI				S	Sb	13 49 46.8	+0.5
SISI	Saibi	1.26	340	P	Pn	13 49 48.4	-0.2
SISI				S	Sn	13 50 05.6	+1.1
SISI	Saibi	1.26	340	P	Pn	13 49 48.4	-0.2
SISI				S	Sn	13 50 05.6	+1.1
PDSI	Padang	1.86	31	P	Pn	13 49 55.7	-1.2
PDSI	Padang	1.86	31	P	Pn	13 49 55.7	-1.2
KRJI	Kerinci	2.00	78	P	Pn	13 49 58.3	-0.5
KRJI	Kerinci	2.00	78	P	Pn	13 49 58.3	-0.5
SDSI	Sungai Dareh	2.48	50	P	Pn	13 50 05.5	+0.1
SDSI	Sungai Dareh	2.48	50	P	Pn	13 50 05.5	+0.1
PBSI	Pulau Batu	2.74	333	P	Pn	13 50 08.8	-0.2
PBSI				S	Sn	13 50 41.3	+0.2
PBSI	Pulau Batu	2.74	333	P	Pn	13 50 08.8	-0.2
PBSI				S	Sn	13 50 41.3	+0.2
BKNI	Bangkinang	3.22	28	P	Pn	13 50 16.0	+0.5
BKNI	Bangkinang	3.22	28	P	Pn	13 50 16.0	+0.5
BKNI	Bangkinang	3.22	28		Pn	13 50 16.7	+1.2
MNAI	Manna	3.89	118	P	Pn	13 50 24.3	-0.5
MNAI	Manna	3.89	118	P	Pn	13 50 24.3	-0.5
MNAI	Manna	3.89	118	Pn	Pn	13 50 24.7	-0.1

KLSI 5.63 113 P Pn 13 50 49.0 +0.2
0.1nm11nm,0.6s
KLSI 5.63 113 P Pn 13 50 49.0 +0.2
0.1nm11nm,0.6s
KASI Kota Agung 5.80 121 P Pn 13 50 50.5 -0.5
KASI Kota Agung 5.80 121 P Pn 13 50 50.5 -0.5
MYKOM Kota Tinggi 6.10 45 Pn 13 50 54.4 -0.7
KULM Kulim 7.84 8 Pn Pn 13 51 18.8 -0.4
LHMI Lhok Sumawe 8.12 342 Pn Pn 13 51 23.3 +0.5
PBKT Sadao Pong 19.03 4 P P 13 53 43.9 -2.7
CMAR Chiang Mai Arr 20.86 358 P P 13 54 06.1 -0.5
2.9nm,0.8s,baz=187,slow=9.9,SNR=24
H08S2 Diego Garcia H 27.38 258 T T 14 23 46.7
baz=82
H08S3 Diego Garcia H 27.39 258 T T 14 23 47.2
baz=82,slow=74
H08S1 Diego Carcia H 27.40 258 T T 14 23 48.1
baz=82,slow=74
H01W3 Cape Leeuwin H 34.95 159 T T 14 33 21.4
baz=335,slow=76,SNR=6.2
H01W2 Cape Leeuwin H 34.97 159 T T 14 33 22.3
baz=335,slow=76,SNR=6.2
H01W1 Cape Leeuwin H 34.97 159 T T 14 33 20.3
baz=335,slow=76,SNR=5.8
WB0 Warramunga Arr 38.13 119 P P 13 56 44.1 +0.4
WB0 IAmb IAmb 13 56 44.6
comp=Z,3.6nm,0.6s
WRA Warramunga Arr 38.15 120 P P 13 56 43.7 -0.2
comp=Z,2.2nm,0.6s,baz=308,slow=9.0,SNR=32
WRAB Tennant Creek 38.16 120 P P 13 56 44.7 +0.7
WRAB IAmb IAmb 13 56 45.5
comp=Z,5.0nm,0.6s
WB2 Warramunga Arr 38.16 120 P P 13 56 44.5 +0.5
WB2 IAmb IAmb 13 56 45.1
comp=Z,7.6nm,1.3s
WR0 Warramunga Arr 38.34 119 P P 13 56 45.8 +0.4
WR0 IAmb IAmb 13 56 46.5
comp=Z,5.2nm,0.8s
FORT Forrest 38.96 139 P P 13 56 50.7 +0.2
AS31 Alice Springs 39.34 125 P P 13 56 54.3 +0.4
ASAR Alice Springs 39.34 125 P P 13 56 54.2 +0.3
comp=Z,1.7nm,0.7s,baz=299,slow=7.7,SNR=27
ASAR PcP PcP 13 59 03.7 +1.5
comp=Z,0.4nm,0.7s,baz=289,slow=2.8,SNR=3.8
KSRS Korea Array 47.72 31 P P 13 58 00.2 -0.8
comp=Z,3.5nm,0.9s,baz=227,slow=8.8,SNR=10
KS19 Wonju Array Si 47.72 31 P P 13 57 58.7 -2.4
STKA Stephens Creek 49.17 131 P P 13 58 13.7 +1.3
comp=Z,2.9nm,1.0s,baz=289,slow=6.1,SNR=4.2
STKA Stephens Creek 49.17 131 P P 13 58 12.1 -0.3
SONM Songino Array 50.51 6 P P 13 58 23.1 +0.7
comp=Z,1.0nm,0.4s,baz=187,slow=10,SNR=15
SONM PcP PcP 13 59 39.8 -0.3
comp=Z,0.9nm,0.8s,baz=187,slow=4.3,SNR=3.0
MK31 Makanchi Array 51.40 345 P P 13 58 28.5 -0.5
MK31 IAmb IAmb 13 58 31.0
comp=Z,2.1nm,0.9s
MKAR Makanchi Array 51.40 345 P P 13 58 29.8 +0.8
comp=Z,1.9nm,0.7s,baz=150,slow=8.3,SNR=20
USRK Ussuriysk Ar. 54.84 28 P P 13 58 54.6 +0.2
comp=Z,4.9nm,0.7s,baz=234,slow=6.3,SNR=11
KURBB Kurchatov Arra 55.91 344 P P 13 59 02.5 +0.6
comp=Z,0.8nm,0.9s,baz=170,slow=6.8,SNR=6.4
KURK Kurchatov 55.97 344 P P 13 59 01.0 -1.3
KURK IAmb IAmb 13 59 04.3
comp=Z,2.6nm,0.9s
ZAA0 Zalesovo Array 57.59 350 P P 13 59 13.2 -0.6
ZAA0 IAmb IAmb 13 59 15.5
comp=Z,5.4nm,0.9s
ZALV Zalesovo Beam 57.59 350 P P 13 59 14.4 +0.6
comp=Z,4.0nm,0.7s,baz=178,slow=5.8,SNR=20
RAYN Ar Rayn 58.57 299 P P 13 59 18.8 -2.5
KLR Kul'dur 58.61 24 P P 13 59 21.0 0.0
comp=Z,1.7nm,0.7s,baz=244,slow=6.2,SNR=8.6
ASAJ Asahikawa 60.32 34 P P 13 59 33.3 +0.4
comp=Z,3.1nm,0.8s,baz=58,slow=12,SNR=2.5
JKA Kamikawa-asahi 60.32 34 P P 13 59 33.3 +0.4
BVAR Borovoye Array 60.51 340 P P 13 59 34.3 +0.2
comp=Z,1.0nm,0.7s,baz=144,slow=10,SNR=6.7
ABKAR Akbulak array 61.87 332 P P 13 59 42.4 -0.9
ABKAR IAmb IAmb 13 59 44.2
comp=Z,1.7nm,0.8s
FINES FINESS Array B 84.35 332 P P 14 01 57.2 +1.3
comp=Z,0.9nm,0.6s,baz=104,slow=8.0,SNR=3.9
SPITS Spitsbergen Ar 91.04 348 P P 14 02 28.5 +0.5
comp=Z,4.6nm,0.8s,baz=81,slow=9.1,SNR=3.1
TXAR Lajitas Array 145.41 37 PKPbc PKPab 14 09 04.4 +1.5
comp=Z,4.6nm,0.6s,baz=269,slow=1.0,SNR=49

*TEH **27** 13:57:22.6, 30°.71N×49°.90E, h18km, ML4.2*
*NEIC **27** 13:57:24.4±1.5, 30°.45N±0°.08×49°.97E±0°.06, h39km±8km, Error ellipse: s-maj=12.1km s-min=6.1km az=204.0*
*SGS **27** 13:57:25, 30°.76N×49°.72E, h7km, Ml4.1*
*IDC **27** 13:57:25.3±2.3, 30°.45N×49°.98E, h49km±24km, mb3.4/14, mb1 3.6/19, mb1mx3.5/68, mbtmp3.8/19, ML3.3/5, MS3.0/7, Ms1 3.0/7, ms1mx2.7/45, Error ellipse: s-maj=24.8km s-min=16.1km az=179.0*
*THR **27** 13:57:25.3±0.5, 30°.59N×49°.87E, h44km±5km, ML4.2*
*OMAN **27** 13:57:29.6±0.6, 30°.14N×50°.03E, h17km±1km, Error ellipse: s-maj=7.5km s-min=4.0km az=274.0*
ISC 27 13:57:23.4±0.5, **30°.59N**±0°.04×**49°.92E**±0°.04, **h25km, n115,** σ1**s**75/118, **mb3.7**/17, **2C, Western Iran**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AHWZ Ahwaz 1.32 304 ePg Pn 13 57 46.6 +0.4
AHWZ e 13 58 08.8
KLNJ Kolanjah 1.50 74 ePn Pn 13 57 48.8 -0.3
KLNJ e 13 58 21.9
IBRJ Brojen 1.75 41 ePn Pn 13 57 53.2 +0.9
JHBN Jahan bin 1.75 21 ePn Pn 13 57 53.0 +0.5
SHGR Shooshtar-Gavs 1.79 328 ePn Pn 13 57 53.5 +0.9
SHGR eSg Sb 13 58 18.3 +0.8
SHGR IAML 13 58 26.5
comp=E,3μm,0.6s
SHGR IAML 13 58 27.0
comp=N,3μm,0.7s
SHGR Shooshtar-Gavs 1.79 328 ePn Pn 13 57 53.5 +0.9
IKAZ Kazeroun 1.85 115 ePn Pb 13 57 56.8 0.0
IKAZ e 13 58 32.2
ROKH ROKH 1.99 28 ePn Pn 13 57 56.6 +0.9
ROKH e 13 58 27.0
AHBU AHRAM 2.10 145 ePn Pn 13 58 00.6 +3.7
IPIR Pirpir 2.25 21 ePn Pn 13 58 00.0 +0.7
IPIR e 13 58 39.2
IRAM Ramesheh 2.44 60 ePn Pn 13 58 03.4 +1.6
IRAM e 13 58 43.4
SHI Shiraz 2.44 112 ePn Pn 13 58 04.0 +2.2
IGAR Gharneh 2.56 45 ePn Pn 13 58 05.2 +1.7
IGAR e 13 58 55.5
ISRV Sarvestan 3.02 113 ePn Pn 13 58 12.6 +2.6
IKLH Kolahrood 3.06 27 ePn Pn 13 58 12.2 +1.7
IKLH e 13 59 00.7
IZEF Zefreh 3.08 41 ePn Pn 13 58 11.7 +1.0
KHMZ Khomeyn 3.14 1 ePn Pn 13 58 12.7 +1.2
KHMZ IAML 13 59 02.9
comp=E,271nm,0.6s
KHMZ Khomeyn 3.14 1 ePn Pn 13 58 12.7 +1.2
IKMR Kamar-syah 3.19 336 ePn Pn 13 58 11.8 -0.2
IKMR e 13 59 10.4
BMDN Meydan 3.21 344 ePn Pn 13 58 12.1 -0.3
BMDN e 13 59 17.6
IKFM Kafar-mosalman 3.41 330 ePn Pn 13 58 14.3 -0.7
IKFM e 13 59 23.0
QAM Ghamsar 3.41 22 ePn Pn 13 58 16.7 +1.5
BDRS Dareh Seyedi 3.46 346 ePn Pn 13 58 16.3 +0.3
ISAD Sadrabad 3.49 67 ePn Pn 13 58 18.2 +1.9
ISAD e 13 59 22.5
HSAM Samen 3.78 343 ePn Pn 13 58 20.6 +0.3
QYSM Um Kedad 3.81 225 P Pn 13 58 22.8 +2.3
KRSH Karshahi 3.86 29 ePn Pn 13 58 22.3 +1.0
ASAO Ashtian 3.95 1 ePn Pn 13 58 23.6 +1.0
ASAO Ashtian 3.95 1 ePn Pn 13 58 23.6 +1.0
GHVR GHOM 4.05 16 ePn Pn 13 58 25.5 +1.6
GHVR GHOM 4.05 16 ePn Pn 13 58 25.5 +1.6
IKOM Komasi 4.11 331 ePn Pn 13 58 25.5 +0.7
IKOM e 14 00 03.4
IMEH Mehriz 4.11 78 ePn Pn 13 58 26.6 +1.7
IMEH e 13 59 40.2
ANAR Anarak 4.15 50 ePn Pn 13 58 27.1 +1.8
ICHK Chekchek 4.18 66 ePn Pn 13 58 28.2 +2.4
HAGD Aghdareh 4.27 351 ePn Pn 13 58 27.3 +0.3
IQOM Qom 4.35 13 ePn Pn 13 58 27.9 -0.2
YZKH Yazd 4.38 65 ePn Pn 13 58 30.9 +2.5
YZKH Yazd 4.38 65 ePn Pn 13 58 30.9 +2.5
IVRN Varamin 4.65 19 ePn Pn 13 58 32.5 +0.4
SMAN Sihmah 4.69 201 P Pn 13 58 35.7 +3.1
BOQSS 4.73 186 P Pn 13 58 36.7 +3.5
BOQSS S Sn 13 59 30.8 +3.6
BOQSS 4.73 186 ePn Pn 13 58 36.7 +3.5
RQBS RQBS 4.74 228 P Pn 13 58 34.7 +1.3
RQBS S Sn 13 59 27.4 -0.2
IRAZ Razeghan 4.80 0 ePn Pn 13 58 34.7 +0.4
IRAZ e 14 00 08.3
HSRG Sareghieh 4.84 344 ePn Pn 13 58 35.0 +0.1
IBAF Bafgh 4.95 77 ePn Pn 13 58 38.4 +2.1
IDHR Dehrash 5.06 325 ePn Pn 13 58 37.2 -0.7
IDHR e 13 59 48.7
QABG Abgarm-Qazvin 5.11 357 ePn Pn 13 58 38.5 -0.1
IDMV Damavand 5.28 19 ePn Pn 13 58 40.7 -0.2
ILAS Lasjerd 5.42 27 ePn Pn 13 58 43.7 +0.9
IFIR Firoozkooh 5.57 25 ePn Pn 13 58 45.6 +0.7
KHGB Koh Gabri 5.67 91 ePn Pn 13 58 49.5 +3.3
QALM Alamut, Qazvin 5.86 6 ePn Pn 13 58 49.0 +0.2
IANJ Anjilo 5.91 34 ePn Pn 13 58 49.4 -0.1
ISHM Shahmirzad 5.92 28 ePn Pn 13 58 50.7 +1.0
IPRN Peran 5.99 19 ePn Pn 13 58 50.0 -0.5
TPRV Parvadeh(Tabas 6.25 65 ePn Pn 13 58 56.4 +2.2
BTHS 6.57 173 ePn Pn 13 59 01.6 +3.1
TNSJ Nastanj 6.59 58 ePn Pn 13 59 00.0 +0.2
IGLO Ghaloghah 6.74 28 ePn Pn 13 59 02.5 +1.6
TKDS Koohdasht(Taba 6.81 62 ePn Pn 13 59 03.8 +1.9
BANOM Banah 7.30 128 P Pn 13 59 09.1 +0.6
SNR=12
BANOM S Sn 14 00 29.4 -1.2
MDH Madha 7.72 132 P Pn 13 59 16.3 +2.0
MDH S Sn 14 00 39.8 -1.1
UOSS Minazif 7.91 134 Pn Pn 13 59 15.2 -1.8
UOSS Minazif 7.91 134 P Pn 13 59 18.8 +1.9
HATD Hatta, Dubai 7.96 135 P Pn 13 59 19.6 +2.1
ASHO Ashiyiah 8.02 136 P Pn 13 59 20.5 +2.2
RAYN Ar Rayn 8.06 210 Pn 13 59 18.2 -0.8
MZR Muzera 8.20 156 P Pn 13 59 23.6 +2.7
SOHO SOHO 8.71 136 P Pn 13 59 29.2 +1.4
ISFR Sfrayin 9.31 44 ePn Pn 13 59 38.1 +1.8
GEYT Alibeck 9.98 41 P Pn 13 59 47.3 +2.2
comp=E,0.3nm,0.3s,baz=241,slow=11,SNR=11
GEYT LR LR 14 04 07.0
comp=E,130nm,19.8s,baz=205,slow=40
GYA0B ALIBECK ARRAY 9.98 41 P Pn 13 59 46.8 +1.6
BSY Bisya 10.17 138 P Pn 13 59 48.4 +0.5
GNI Garni 10.43 338 LR LR 14 04 11.3
comp=E,66nm,21.1s,baz=155,slow=38
SMDO Samad 10.44 134 P Pn 13 59 54.1 +2.5
WSAR Wadi Sarin 10.68 131 P Pn 13 59 53.3 -1.5
comp=E,0.8nm,0.3s,baz=319,slow=8.3,SNR=9.8
WSAR S Sn 14 01 47.0 -6.6
comp=E,0.1nm,0.3s,baz=132,slow=19,SNR=1.4
WSAR LR LR 14 04 53.1
comp=E,70nm,20.3s,baz=338,slow=42
JMDO Jabal Madar 10.99 136 P Pn 14 00 01.2 +2.2
ASF Jabal al Asfar 11.24 281 P Pn 14 00 03.5 +1.0
comp=E,0.3nm,0.3s,baz=35,slow=7.0,SNR=2.2
ASF S Sn 14 02 05.0 -2.4
comp=E,0.3nm,0.3s,baz=95,slow=12,SNR=2.2
ASF Lg Lg 14 03 28.5
comp=E,0.4nm,0.3s,baz=260,slow=23,SNR=2.5
WBK Wadi Bani Khal 11.35 132 P Pn 14 00 03.1 -0.8
MHTO MHTO 12.00 141 P Pn 14 00 14.2 +1.3
SNR=7.9
EIL Elat 12.99 270 LR LR 14 06 50.5
comp=E,89nm,19.7s,baz=107,slow=43
WHFO Wadi Hawf 13.10 164 P Pn 14 00 29.0 +1.1
SNR=11
DMTO DMTO 13.61 159 P Pn 14 00 34.7 -0.3
KBZ Khabaz 14.25 339 P Pn 14 00 46.9 +3.5
comp=E,0.1nm,0.3s,baz=134,slow=12,SNR=2.9
BRTR Keskin Array B 16.11 309 P Pn 14 01 10.9 +2.6
comp=E,0.1nm,0.3s,baz=128,slow=13,SNR=7.3
BRTR LR LR 14 09 22.8
comp=E,48nm,18.6s,baz=98,slow=44
KARP Karpathos 19.69 291 P P 14 01 48.6 -2.1
ABKAR Akbulak array 20.13 19 P P 14 01 54.9 -0.5
KK31 Karatay Array 20.61 47 P P 14 02 01.2 +0.4
KK31 IAmb IAmb 14 02 08.9
comp=Z,6.9nm,1.0s
KKAR Karatay Array 20.61 47 P P 14 02 01.3 +0.5
KKAR IAmb IAmb 14 02 08.9
comp=Z,6.9nm,1.0s
AKTO Aktyubinsk 20.73 15 P Pn 14 02 03.9 -0.5
comp=Z,0.5nm,0.3s,baz=204,slow=20,SNR=2.9
IDI Anoyia 21.50 289 P P 14 02 11.4 +1.0
comp=Z,1.4nm,0.3s,baz=104,slow=17,SNR=4.3
IDI LR LR 14 14 45.9
comp=Z,22nm,18.7s,baz=288,slow=48
AGG Agios Georgios 24.09 298 P P 14 02 35.9 -1.1
AGG IAmb IAmb 14 02 54.6
comp=Z,8.3nm,1.2s
AKASG Malin Array Be 25.34 328 P P 14 02 48.6 +0.5
comp=Z,0.5nm,0.4s,baz=136,slow=9.3,SNR=3.4
BURAR Bucovina Array 25.45 319 ⇑P P 14 02 50.6 +1.3
BUR08 Bucovina Ar. S 25.48 319 P P 14 02 50.4 +0.8
BUR08 IAmb IAmb 14 02 58.5
comp=Z,4.5nm,1.1s
DRGR 26.51 315 ⇑P P 14 03 03.9 +5.0
BVAR Borovoye Array 26.93 28 P P 14 03 02.3 -0.2
comp=Z,1.1nm,0.8s,baz=209,slow=8.5,SNR=7.3
KURBB Kurchatov Arra 29.24 39 P P 14 03 23.5 +0.4
comp=Z,0.7nm,0.7s,baz=243,slow=9.1,SNR=5.6
KURK Kurchatov 29.34 39 P P 14 03 23.5 -0.5
KURK Kurchatov 29.34 39 IAmb IAmb 14 03 25.6
comp=Z,4.1nm,1.4s
MK31 Makanchi Array 29.74 48 P P 14 03 28.3 +0.7
MKAR Makanchi Array 29.74 48 P P 14 03 27.6 0.0
comp=Z,0.9nm,0.7s,baz=236,slow=8.4,SNR=11
MKAR LR LR 14 16 45.5
comp=Z,38nm,20.7s,baz=294,slow=39
CTI Castel Tesino 33.39 308 P P 14 03 58.7 -1.2
CTI IAmb IAmb 14 04 12.4
comp=Z,11nm,1.5s
ZALV Zalesovo Beam 34.26 37 P P 14 04 06.9 -0.3
comp=Z,0.3nm,0.3s,baz=230,slow=8.9,SNR=3.5
FIA1 FINESS Array S 34.60 340 P P 14 04 08.8 -1.2
FINES FINESS Array B 34.60 340 P P 14 04 10.1 0.0
comp=Z,1.1nm,0.8s,baz=145,slow=10,SNR=2.7
GTA Gaotai 41.37 64 eP P 14 05 09.3 +1.7
GTA pP pP 14 05 14.5 -0.7
GTA sP sP 14 05 17.3 -1.0
CMAR Chiang Mai Arr 45.89 93 P P 14 05 43.1 -0.9
comp=Z,0.3nm,0.3s,baz=294,slow=8.8,SNR=3.0
SONM Songino Array 45.97 51 P P 14 05 43.0 -1.5
comp=Z,0.5nm,0.9s,baz=275,slow=8.8,SNR=3.1
TORD Torodi Ar. Bea 47.62 260 P P 14 05 57.2 -0.4
comp=Z,0.2nm,0.4s,baz=221,slow=1.6,SNR=4.0
SPITS Spitsbergen Ar 49.93 351 P P 14 06 14.6 0.0
comp=Z,1.6nm,0.7s,baz=148,slow=12,SNR=1.9
SEY Seymchan 68.58 29 P P 14 08 23.8 +0.1
comp=Z,1.1nm,0.7s,baz=263,slow=23,SNR=5.7
ILAR Eielson Array 84.05 7 P P 14 09 50.6 -0.8
comp=Z,0.4nm,0.9s,baz=339,slow=4.8,SNR=3.7

*OTT **27** 13:59:38.3±0.1, 71°.35N×69°.10W, h18km, MN3.8/6, 100km northeast from Clyde River, Nu Eastern Arctic Background Seismic Zone.*
*IDC **27** 13:59:40.8±3.3, 71°.10N×70°.80W, h0km, mb3.5/4, mb1 3.7/8, mb1mx3.3/65, mbtmp3.5/8, ML3.0/4, Error ellipse: s-maj=56.6km s-min=16.0km az=58.0*
*DNK **27** 13:59:44.5±1.9, 71°.51N×68°.79W, h50km±24km, ML2.8, Hypocentre not reviewed by the ISC*
ISC 27 13:59:35.3±0.7, **71°.29N**±0°.05×**69°.17W**±0°.05, **h10km, n21,** σ4**s**19/31, **mb3.6**/4, **Baffin Bay**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
UPNV Upernavik 4.30 64 i P 14 00 44.4
UPNV i S 14 01 29.4
UPNV IAML 14 01 37.0
comp=Z,16nm,0.4s
ILON Igloolik, Nuna 4.69 252 PN Pn 14 00 47.9 +2.0
ILON SN Sn 14 01 40.0 -0.2
ILON LG Lg 14 02 04.5
ILON Trac 14 02 09.4
comp=Z,295nm,0.5s
KULLO Kullorsuaq 4.82 41 i P Pn 14 00 50.6 +2.9
KULLO i S Sn 14 01 40.6 -2.9
KULLO Kullorsuaq 4.82 41 PN Pn 14 00 50.6 +2.9
KULLO SN Sn 14 01 40.8 -2.7
KULLO Trac 14 01 45.4
comp=Z,47nm,0.3s
KULLO Kullorsuaq 4.82 41 i P 14 00 50.7
KULLO i S 14 01 40.7
KULLO IAML 14 01 48.2
comp=Z,14nm,0.4s
NUUG Nuugaatsiaq 5.11 80 i P 14 00 55.3
NUUG i S 14 01 47.6
NUUG IAML 14 01 59.0
comp=Z,3.9nm,0.4s
TULEG Thule 5.28 1 PN Pn 14 00 57.1 +3.1
TULEG SN Sn 14 01 51.2 -3.5
TULEG Trac 14 01 53.8
comp=Z,35nm,0.3s
TULEG Thule 5.28 1 i P 14 00 57.3
TULEG i S 14 01 50.9
TULEG IAML 14 01 54.3
comp=Z,29nm,0.3s
ILULI Ilulissat 6.46 100 SN Sn 14 02 22.2 -1.6
FRB Frobisher Bay 7.59 178 Pn Pn 14 01 28.1 +2.4
comp=Z,0.3nm,0.3s,baz=354,slow=15,SNR=2.8
FRB Sn Sn 14 02 48.5 -3.1
comp=Z,3.2nm,0.3s,baz=12,slow=5.3,SNR=8.0
FRB Lg Lg 14 03 29.1
comp=Z,13nm,0.3s,baz=85,slow=18,SNR=27
FRB Frobisher Bay 7.59 178 PN Pn 14 01 28.4 +2.8
FRB SN Sn 14 02 48.8 -2.8
FRB Trac 14 03 32.1
comp=Z,69nm,0.5s
FRB LG Lg 14 03 34.1
SFJD Kangerlussuaq 7.87 114 i P Pn 14 01 34.9 +5.3
SFJD Kangerlussuaq 7.87 114 PN Pn 14 01 31.7 +2.0
SFJD SN Sn 14 02 54.4 -4.3
SFJD Trac 14 03 01.4
comp=Z,803nm,7.0s
SFJD Kangerlussuaq 7.87 114 i P 14 01 34.9
SFJD IAML 14 02 59.6
comp=Z,0.1nm,0.3s
RES Resolute Bay 8.22 306 Pn Pn 14 01 37.0 +2.7
comp=Z,0.4nm,0.3s,baz=104,slow=5.8,SNR=8.6
RES Sn Sn 14 02 59.9 -7.2
comp=Z,0.4nm,0.3s,baz=108,slow=20,SNR=3.6
RES Lg Lg 14 03 50.7
comp=Z,0.6nm,0.3s,baz=221,slow=4.6,SNR=3.5
RES Resolute Bay 8.22 306 SN Sn 14 03 02.7 -4.4
SUMG Summit 9.56 68 i P Pn 14 01 55.4 +2.3
SUMG Summit 9.56 68 i P 14 01 55.4
SUMG IAML 14 03 39.4
comp=Z,11nm,0.5s
KNGQ Kangiqsujuaq 9.81 188 PN Pn 14 01 57.4 +1.2
KNGQ SN Sn 14 03 41.9 -4.3
KNGQ LG Lg 14 04 46.3
KNGQ Trac 14 04 46.4
comp=Z,8.0nm,0.2s
KAJQ Kangiqsualujju 12.72 172 PN Pn 14 02 36.8 +0.8
KAJQ SN Sn 14 04 49.9 -7.5
KAJQ LG Lg 14 06 12.7
KAJQ Trac 14 06 15.4
comp=Z,31nm,0.6s
SCHQ Schefferville 16.56 175 Pn Pn 14 03 26.3 -0.9
comp=Z,0.2nm,0.3s,baz=350,slow=12,SNR=2.1
SCHQ Sn Sn 14 06 18.6 -12
comp=Z,0.2nm,0.3s,baz=72,slow=13,SNR=2.9
SCHQ Lg Lg 14 08 02.7
comp=Z,0.6nm,0.3s,baz=75,slow=18,SNR=3.9
SCHQ Schefferville 16.56 175 SN Sn 14 06 21.2 -10
SCHQ LG Lg 14 08 18.2
YKA Yellowknife Ar 19.36 266 P P 14 04 00.8 +0.2
comp=Z,0.1nm,0.3s,baz=44,slow=12,SNR=8.9
YKA S Sn 14 07 22.4 -16
comp=Z,0.1nm,0.3s,baz=349,slow=16,SNR=3.1
YKA Lg Lg 14 09 20.0
comp=Z,0.2nm,0.3s,baz=43,slow=22,SNR=3.2
INK Inuvik 21.47 294 P P 14 04 24.4 +1.0
comp=Z,0.9nm,1.0s,baz=76,slow=4.2,SNR=2.4
INK S S 14 08 11.8 -9.3
comp=Z,0.3nm,0.6s,baz=175,slow=18,SNR=2.5
ULM Lac du Bonnet 24.39 224 P P 14 04 54.5 +1.2
comp=Z,1.3nm,0.6s,baz=32,slow=7.4,SNR=4.4
ULM Lg Lg 14 12 06.7
comp=Z,3.7nm,1.1s,baz=293,slow=7.7,SNR=2.2
PDAR Pinedale Array 34.78 237 P P 14 06 29.8 +4.0
comp=Z,0.4nm,0.5s,baz=48,slow=5.7,SNR=7.6
TXAR Lajitas Array 46.09 223 P P 14 08 03.7 +4.5
comp=Z,0.5nm,0.6s,baz=38,slow=5.7,SNR=6.7

*NIED **27** 14:04:00, 38°.90N×142°.00E, h53km, Mw4.0 Best double couple: M₀1.26000×10¹⁵ NP1:φs23.00000°, δ73.00000°, λ98.00000°. NP2:φs179.00000°, δ19.00000°, λ67.00000°.*
*JMA **27** 14:04:59.8±0.1, 38°.89N×141°.97E, h49km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs202.00000°, δ23.00000°, λ90.00000°. NP2:φs22.00000°, δ67.00000°, λ90.00000°. Principal axes: T Plg68.0000°, Azm292.0000°; N Plg0.0000°, Azm22.0000°; P Plg22.0000°, Azm112.0000°;*
JMA Felt II J1.
*IDC **27** 14:05:00.5±1.7, 38°.88N×141°.93E, h64km±14km, mb3.7/20, mb1 3.8/26, mb1mx3.7/58, mbtmp4.0/26, MS2.9/8, Ms1 2.9/8, ms1mx2.7/60 Error ellipse: s-maj=16.9km s-min=9.2km az=112.0*
*NEIC **27** 14:05:00.5±1.2, 38°.88N±0°.07×142°.0E±0°.1, h66km±5km, mb4.4/10, Error ellipse: s-maj=14.7km s-min=7.2km az=119.0*
ISC 27 14:04:58.8±1.1, **38°.85N**±0°.05×**142°.02E**±0°.09, **h50km±8km, n70,** σ1**s**06/77, **mb4.2**/25, **9D, Near east coast of eastern Honshu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
OFUJ Ofunato 0.36 310 ⇓P Pn 14 05 08.1 -0.3
OFUJ S Sn 14 05 14.4 -0.9
JKMT Kesennumamotoy 0.43 265 ⇓P Pn 14 05 08.9 -0.2
JKMT i S Sn 14 05 15.7 -0.9
JMK Ichinoseki 0.63 280 ⇓P Pn 14 05 11.3 -0.3
JMK S Sn 14 05 19.9 -1.0
JIO Ouri 0.66 233 ⇓P Pn 14 05 11.8 -0.1
JIO S Sn 14 05 20.5 -0.9
JOM Ohasama 0.84 318 ⇓P Pn 14 05 13.9 -0.4
JOM S Sn 14 05 24.6 -1.1
JOU Okura 1.17 246 ⇓P Pn 14 05 18.5 -0.2
JOU S Sn 14 05 33.2 -0.4
JRG Rokugo 1.21 297 ⇓P Pn 14 05 18.7 -0.6
JRG eS Sn 14 05 33.8 -0.7
JYK Kaneyama 1.30 274 ⇓P Pn 14 05 20.2 -0.3
JMM Marumori 1.38 225 ⇓P Pn 14 05 21.2 -0.3
JMM eS Sn 14 05 37.5 -1.1
JANG Nango 1.57 346 P Pn 14 05 23.7 -0.5
JANG eS Sn 14 05 42.9 -0.5
ERM Erimo 3.28 15 Pn 14 05 47.6 0.0
ERM Sn Sn 14 06 26.8 +1.5
MJAR Matsushiro Arr 3.80 234 P Pn 14 05 56.8 +2.0
1.1nm,0.3s,baz=38,slow=13,SNR=74
MJAR S Sn 14 06 39.3 +1.1
0.5nm,0.3s,baz=8.7,slow=13,SNR=4.5
MJAR LR LR 14 07 34.9
comp=Z,106nm,18.8s,baz=40,slow=41
MAJO Matsushiro 3.80 234 Pn 14 05 56.1 +1.3
MAT Matsushiro 3.80 234 P Pn 14 05 56.6 +1.8
MAT S Sn 14 06 38.9 +0.7
MJB9 Matsu-Tunnel 3.80 234 Pn 14 05 56.6 +1.8
ASAJ Asahikawa 5.28 5 P Pn 14 06 15.8 +0.8
1.3nm,0.3s,baz=208,slow=13,SNR=34
ASAJ S Sn 14 07 16.0 +1.5
2.1nm,0.3s,baz=135,slow=20,SNR=2.9
ASAJ LR LR 14 08 44.5
comp=Z,72nm,20.6s,baz=202,slow=43
JKA Kamikawa-asahi 5.28 5 Pn 14 06 15.8 +0.8
JKA Sn 14 07 16.0 +1.5
INU Inuyama 5.31 230 Pn 14 06 18.4 +2.9
JHJ Hachijo jima 2 6.00 198 P Pn 14 06 26.1 +1.2
7.6nm,0.3s,baz=35,slow=16,SNR=3.9
JHJ S Sn 14 07 30.1 -2.1
13nm,0.3s,baz=324,slow=19,SNR=4.2
USA0B Ussuriysk Arra 9.22 309 Pn 14 07 09.9 +0.8
USRK Ussuriysk Ar. 9.22 309 P Pn 14 07 09.4 +0.4
baz=124,slow=14,SNR=8.8
USRK LR LR 14 10 33.8
comp=Z,82nm,21.7s,baz=117,slow=36

JNU Nakatsue 10.68 241 LR LR 14 11 55.4
comp=Z,63nm,21.2s,baz=43,slow=39
JNU Nakatsue 10.68 241 Pn Pn 14 07 28.2 -0.9
KSRS Korea Array 11.19 267 P Pn 14 07 38.8 +2.9
0.3nm,0.3s,baz=78,slow=14,SNR=5.8
KSRS LR LR 14 11 31.4
comp=Z,56nm,18.1s,baz=73,slow=35
KLR Kul'dur 12.72 328 P Pn 14 07 58.1 +1.3
0.1nm,0.3s,baz=151,slow=12,SNR=3.5
KLR LR LR 14 12 47.7
comp=Z,80nm,18.4s,baz=219,slow=37
MA2 Magadan 21.48 12 P P 14 09 43.1 +0.2
2.3nm,0.5s,baz=189,slow=8.6,SNR=6.2
MA2 LR LR 14 18 53.8
comp=Z,23nm,19.2s,baz=122,slow=39
YAK Yakutsk 24.42 346 P P 14 10 11.0 -1.2
2.6nm,0.3s,baz=206,slow=2.1,SNR=4.9
YAK Yakutsk 24.42 346 P P 14 10 11.0 -1.2
YAK Yakutsk 24.42 346 IAmb IAmb 14 10 13.3
comp=Z,9.1nm,0.8s
SEY Seymchan 24.92 11 P P 14 10 16.6 -0.1
comp=Z,2.6nm,0.8s,baz=198,slow=6.9,SNR=9.3
SONM Songino Array 27.22 301 P P 14 10 38.6 +0.7
comp=Z,0.7nm,0.7s,baz=91,slow=9.3,SNR=5.5
H11N2 WAKE ISLAND Hy 28.72 124 T T 14 41 16.6
baz=317,slow=75,SNR=408
H11N1 WAKE ISLAND Hy 28.73 124 T T 14 41 17.3
baz=317,slow=75,SNR=586
H11N3 WAKE ISLAND Hy 28.74 124 T T 14 41 14.9
baz=317,slow=75,SNR=675
H11S1 WAKE ISLAND Hy 29.50 126 T T 14 42 15.0
baz=318,slow=76,SNR=133
H11S3 WAKE ISLAND Hy 29.50 126 T T 14 42 10.3
baz=318,slow=76,SNR=138
H11S2 WAKE ISLAND Hy 29.51 126 T T 14 42 15.9
baz=318,slow=76,SNR=128
SIJI Sorong 40.74 197 LR LR 14 27 57.7
comp=Z,15nm,21.0s,baz=267,slow=34
ZAA0 Zalesovo Array 41.07 311 P P 14 12 34.5 -2.7
ZAA0 IAmb IAmb 14 12 38.0
comp=Z,5.2nm,0.8s
ZALV Zalesovo Beam 41.07 311 P P 14 12 36.9 -0.3
comp=Z,2.9nm,0.6s,baz=90,slow=7.5,SNR=16
ZALV PcP PcP 14 14 36.0 0.0
comp=Z,0.7nm,0.3s,baz=111,slow=3.2,SNR=3.7
CMAR Chiang Mai Arr 42.44 254 P P 14 12 47.9 -0.9
comp=Z,0.5nm,0.4s,baz=43,slow=9.2,SNR=4.7
MK31 Makanchi Array 43.58 301 P P 14 12 57.7 -0.1
MK31 IAmb IAmb 14 12 58.4
comp=Z,4.7nm,0.8s
MKAR Makanchi Array 43.58 301 P P 14 12 57.4 -0.4
comp=Z,3.9nm,0.6s,baz=85,slow=9.5,SNR=56
MAKZ Makanchi 43.79 301 P P 14 12 59.2 -0.2
MAKZ IAmb IAmb 14 13 00.1
comp=Z,4.3nm,0.8s
KURK Kurchatov 45.21 307 P P 14 13 10.2 -0.4
KURBB Kurchatov Arra 45.28 307 P P 14 13 10.6 -0.7
comp=Z,8.5nm,0.6s,baz=80,slow=8.2,SNR=64
JIRN Jiri 47.35 274 eP P 14 13 29.4 +1.2
RAMN Ramite 47.37 273 eP P 14 13 28.1 -0.2
comp=Z,20nm,1.0s
GUN Gumba 47.47 274 eP P 14 13 29.4 +0.2
comp=Z,9.2nm,0.5s
ILAR Eielson Array 47.71 33 P P 14 13 30.8 +0.7
comp=Z,0.6nm,0.6s,baz=269,slow=6.2,SNR=12
KKN Kakani 48.00 275 eP P 14 13 34.0 +0.9
comp=Z,7.0nm,0.4s
PKI Pulchoki 48.00 274 eP P 14 13 33.0 -0.2
PKIN Phulchoki 48.01 274 eP P 14 13 34.1 +0.9
DANN Dangsing 48.91 276 eP P 14 13 40.3 +0.1
comp=Z,20nm,0.6s
BVAR Borovoye Array 49.72 311 P P 14 13 45.3 -0.3
comp=Z,3.1nm,0.5s,baz=67,slow=7.8,SNR=25
BVAR PcP PcP 14 15 06.2 +0.1
comp=Z,0.9nm,0.4s,baz=90,slow=4.4,SNR=4.9
BRVK Borovoye 49.77 311 P P 14 13 45.9 -0.1
BRVK IAmb IAmb 14 13 46.5
comp=Z,4.0nm,1.1s
AAK Ala-Archa 50.07 297 P P 14 13 48.3 -0.3
comp=Z,1.1nm,0.4s,baz=101,slow=5.0,SNR=5.4
AAK Ala-Archa 50.07 297 P P 14 13 48.6 -0.1
INK Inuvik 52.56 28 P P 14 14 07.9 +1.3
comp=Z,1.0nm,0.8s,baz=324,slow=4.3,SNR=3.9
INK Inuvik 52.56 28 IAmb IAmb 14 14 09.4
comp=Z,1.1nm,0.8s
ARU Arti 55.33 318 P P 14 14 26.5 -0.5
comp=Z,2.1nm,0.6s,baz=119,slow=2.1,SNR=10
ARU Arti 55.33 318 P P 14 14 24.8 -2.3
ABKAR Akbulak array 57.15 309 P P 14 14 39.0 -1.1
ABKAR IAmb IAmb 14 14 40.3
comp=Z,3.5nm,0.7s
WRA Warramunga Arr 58.92 188 P P 14 14 52.7 -0.1
comp=Z,1.1nm,0.5s,baz=6.6,slow=7.0,SNR=19
YKA Yellowknife Ar 62.00 31 P P 14 15 13.9 +0.6
comp=Z,0.3nm,0.6s,baz=305,slow=7.5,SNR=2.9
ASAR Alice Springs 62.65 188 P P 14 15 18.2 +0.1
comp=Z,0.6nm,0.7s,baz=8.2,slow=5.1,SNR=12
FINES FINESS Array B 67.43 332 P P 14 15 48.4 -0.3
comp=Z,3.2nm,0.7s,baz=42,slow=5.9,SNR=8.4
NOA NORSAR Array B 72.70 337 P P 14 16 21.0 -0.1
comp=Z,0.6nm,0.7s,baz=19,slow=5.2,SNR=3.3
AKASG Malin Array Be 73.16 322 P P 14 16 23.3 -0.5
comp=Z,0.9nm,0.4s,baz=45,slow=6.4,SNR=4.9
BRTR Keskin Array B 78.01 312 P P 14 16 51.5 -0.5
comp=Z,0.5nm,0.4s,baz=130,slow=3.4,SNR=4.6

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*ATH **27** 14:07:22.6, 38.°14N×20.°37E, h13km, ML3.0/19, Error ellipse: s-maj=1.6km s-min=0.8km az=42.0*
*THE **27** 14:07:23.3, 38.°17N×20.°39E, h11km, ML3.2/9, Error ellipse: s-maj=0.6km s-min=0.3km az=261.0*
*IDC **27** 14:07:31.6±2.9, 38.°89N×21.°88E, h0km, mb3.5/4, mb1 3.5/6, mb1mx3.3/49, mbtmp3.5/6, ML3.3/2, Error ellipse: s-maj=59.4km s-min=24.4km az=49.0*
ISC 27 14:07:23.4±0.8, 38.°17N±0.°02×20.°41E±0.°03, h11km±4km, n73, σ0.°66/101, mb3.5/4, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	301	P	Pg	14 07 25.2	-0.1
CHV1				S	Sg	14 07 26.6	-0.1
LXRA	Lixouri, Kepha	0.04	31	P	Pg	14 07 25.5	+0.1
LXRA				S	Sg	14 07 27.0	+0.1
LXR1	Lixouri, Cepha	0.04	32	P	Pg	14 07 25.4	0.0
ARGA	Argostoli. Kep	0.05	81	P	Pg	14 07 25.5	0.0
ARGA				S	Sg	14 07 26.8	-0.3
KEF2	Argostoli. Kep	0.06	93	P	Pg	14 07 25.7	+0.1
KEF2				S	Sg	14 07 26.9	-0.4
ARG2	Argostoli	0.06	81	P	Pg	14 07 25.6	0.0
ARG2				S	Sg	14 07 27.1	-0.1
KEF3	Kipouria, Keph	0.06	304	P	Pg	14 07 25.6	0.0
KEF3				S	Sg	14 07 27.1	-0.2
AGT1	Agia Thekli	0.09	344	P	Pg	14 07 25.9	0.0
AGT1				S	Sg	14 07 27.9	+0.2
KEF4	Livadi, Kephal	0.09	6	P	Pg	14 07 26.0	+0.1
KEF4				S	Sg	14 07 28.1	+0.2
KEF1	Kardakata, Kep	0.12	23	P	Pg	14 07 26.4	+0.1
KEF1				S	Sg	14 07 28.1	-0.3
VLS	Valsamata	0.14	86	P	Pg	14 07 26.6	0.0
VLS				S	Sg	14 07 29.2	+0.2
	24μm,0.1s						
VLS	Valsamata	0.14	86	P	Pg	14 07 26.7	0.0
VLS				S	Sg	14 07 29.2	+0.2
VLS				AML	AML	14 07 29.9	
	comp=E,59844μm,0.2s						
VLS				AML	AML	14 07 29.9	
	comp=N,34635μm,0.1s						
VSK1	VASILIKIADES	0.27	26	P	Pg	14 07 28.9	0.0
VSK1				S	Sg	14 07 33.4	+0.8
	comp=N,10μm,0.4s						
KONA	Konidatara, Ke	0.28	26	P	Pg	14 07 29.2	0.0
KONA				S	Sg	14 07 33.9	+0.9
KONA				AML	AML	14 07 34.2	
	comp=E,11298μm,0.5s						
KONA				AML	AML	14 07 38.0	
	comp=N,10017μm,0.7s						
EVGI	Lefkada island	0.49	23	P	Pg	14 07 32.8	-0.2
EVGI				S	Sg	14 07 40.2	+0.7
EVGI	Lefkada island	0.49	23	P	Pg	14 07 32.8	-0.2
EVGI				S	Sb	14 07 40.6	-0.6
ZAK2	Zakynthos	0.54	134	P	Pg	14 07 34.0	+0.1
ZAK2				S	Sb	14 07 42.6	0.0
MGNA	Meganis	0.57	31	P	Pg	14 07 34.0	-0.5
MGNA				AML	AML	14 07 43.5	
	comp=N,3101μm,0.3s						
MGNA				AML	AML	14 07 43.7	
	comp=E,3323μm,0.3s						
KRI1	kERI	0.60	148	P	Pg	14 07 34.6	-0.4
KRI1				S	Sg	14 07 43.7	+0.8
	comp=E,6μm,0.3s						
LKD2	Lefkada island	0.65	17	P	Pg	14 07 35.4	-0.6
LKD2				S	Sb	14 07 45.5	-0.3
LKD2	Lefkada island	0.65	17	P	Pg	14 07 35.4	-0.6
LKD2				AML	AML	14 07 53.5	
	comp=N,1435μm,0.4s						
LKD2				AML	AML	14 07 55.2	
	comp=E,1516μm,0.2s						
VTN	Vitineika	0.66	112	P	Pg	14 07 36.2	+0.1
TSLK	Tsoukalades, L	0.68	16	P	Pg	14 07 36.0	-0.6
TSLK				S	Sb	14 07 46.8	+0.1
TSLK	Tsoukalades, L	0.68	16	P	Pg	14 07 36.1	-0.5
TSLK				AML	AML	14 07 53.7	
	comp=N,2060μm,0.4s						
TSLK				AML	AML	14 07 56.3	
	comp=E,1933μm,0.6s						
PDO	Prodromos	0.74	54	P	Pg	14 07 37.4	-0.3
PDO				S	Sb	14 07 48.7	+0.2
	comp=E,3μm,0.4s						
PDO	Prodromos	0.74	54	P	Pg	14 07 37.4	-0.3
PDO				AML	AML	14 07 49.8	
	comp=E,3681μm,0.4s						
PDO				AML	AML	14 07 54.0	
	comp=N,5477μm,0.5s						
RLS	Riolos of Patr	0.84	97	P	Pg	14 07 39.0	-0.6
RLS	Riolos of Patr	0.84	97	P	Pg	14 07 38.9	-0.6
RLS				AML	AML	14 07 55.7	
	comp=E,2289μm,0.4s						
RLS				AML	AML	14 07 59.2	
	comp=N,2086μm,0.7s						
PVO	Paravola	0.98	63	P	Pg	14 07 42.1	-0.1
PVO				S	Sn	14 07 57.2	+0.2
	comp=N,3μm,0.3s						
PVO	Paravola	0.98	63	P	Pg	14 07 42.2	-0.1
PVO				S	Sn	14 07 57.0	0.0
PVO				AML	AML	14 07 58.6	
	comp=E,7552μm,0.3s						
PVO				AML	AML	14 08 04.4	
	comp=N,3444μm,0.4s						
DRO	Drossia	1.05	102	P	Pg	14 07 42.9	-0.6
DRO	Drossia	1.05	102	P	Pg	14 07 42.9	-0.6
DRO				AML	AML	14 08 07.0	
	comp=E,4523μm,0.8s						
DRO				AML	AML	14 08 09.3	
	comp=N,4058μm,0.6s						
AMT	Artemida-Makis	1.21	121	P	Pg	14 07 46.7	+0.1
AMT				AML	AML	14 08 09.3	
	comp=N,2332μm,0.8s						
AMT				AML	AML	14 08 11.1	
	comp=E,2538μm,0.5s						
LAKA	Lakka	1.23	86	P	Pn	14 07 45.8	-0.8
LAKA				S	Sn	14 08 03.4	+0.1
	comp=E,442nm,0.7s						
LAKA	Lakka	1.23	86	P	Pn	14 07 46.0	-0.6
LAKA				AML	AML	14 08 07.2	
	comp=E,993μm,0.5s						
LAKA				AML	AML	14 08 13.2	
	comp=N,862μm,1.0s						
TRIZ	Trizonia	1.32	81	P	Pn	14 07 46.7	-1.0
TRIZ				S	Sg	14 08 05.8	-0.1
	comp=N,1μm,0.4s						
TRIZ	Trizonia	1.32	81	P	Pn	14 07 47.2	-0.5
EVR	Evrytania	1.32	55	P	Pn	14 07 48.1	+0.2
EVR				AML	AML	14 08 18.6	
	comp=N,870μm,0.6s						
EVR				AML	AML	14 08 19.8	
	comp=E,642μm,0.6s						
ALIK	Aliki, Aigiali	1.34	86	P	Pn	14 07 48.0	0.0
ALIK				S	Sg	14 08 06.5	0.0
IGT	Igoumenitsa	1.36	357	P	Pn	14 07 48.1	-0.2
IGT				S	Sb	14 08 06.3	-0.1
IGT	Igoumenitsa	1.36	357	P	Pn	14 07 48.7	+0.4
IGT				AML	AML	14 08 10.7	
	comp=N,311μm,0.4s						
IGT				AML	AML	14 08 13.9	
	comp=E,439μm,0.5s						
KLV	Kalavryta, Ach	1.38	95	P	Pn	14 07 47.9	-0.7
KLV				S	Sb	14 08 06.6	-0.2
KLV	Kalavryta, Ach	1.38	95	P	Pn	14 07 48.6	+0.1
KLV				AML	AML	14 08 20.2	
	comp=E,577μm,0.7s						
KLV				AML	AML	14 08 26.4	
	comp=N,562μm,0.6s						
KALE	Kalithea	1.38	80	P	Pn	14 07 47.6	-1.0
KALE				S	Sn	14 08 07.1	+0.3
	comp=N,480nm,0.6s						
KALE	Kalithea	1.38	80	P	Pn	14 07 48.4	-0.2
KALE				AML	AML	14 08 16.1	
	comp=E,1024μm,0.6s						
KALE				AML	AML	14 08 25.3	
	comp=N,1116μm,0.6s						
ITM	Ithomi	1.56	129	P	Pn	14 07 51.6	+0.7
ITM				AML	AML	14 08 22.6	
	comp=E,641μm,0.7s						
ITM				AML	AML	14 08 22.8	
	comp=N,963μm,0.5s						
MAKR	Makrakomi, Fth	1.59	57	P	Pg	14 07 53.9	+0.1
MAKR				AML	AML	14 08 24.8	
	comp=E,1318μm,0.8s						
MAKR				AML	AML	14 08 26.0	
	comp=N,924μm,0.6s						
KEK	Kerkira	1.61	343	P	Pn	14 07 52.2	+0.4
PYL	PYLOS	1.65	140	P	Pn	14 07 52.6	+0.3
AGG	Agios Georgios	1.73	60	P	Pb	14 07 55.7	+0.6
AGG				AML	AML	14 08 30.0	
	comp=E,439μm,0.7s						
AGG				AML	AML	14 08 30.5	
	comp=N,538μm,0.5s						
VLX	Vlachokerasia	1.75	116	P	Pb	14 07 55.3	-0.3
THL	Klokotos Trika	1.87	41	P	Pb	14 07 58.0	+0.4
THL				AML	AML	14 08 29.2	
	comp=N,281μm,0.9s						
THL				AML	AML	14 08 34.6	
	comp=E,438μm,0.5s						
LTK	Loutraki	2.02	93	P	Pn	14 07 57.4	0.0
LTK				S	Sn	14 08 22.8	+0.2
	comp=E,158nm,0.6s						
LTK	Loutraki	2.02	93	P	Pb	14 07 59.1	-1.0
LOUT	Loutraki	2.03	94	P	Pn	14 07 58.1	+0.6
LKR	Lokris	2.09	76	P	Pb	14 08 00.1	-1.1
VIL2	Platees	2.25	88	P	Pb	14 08 02.8	-1.2
SCTE	Santa Cesarea	2.43	322	P	Pn	14 08 03.0	0.0
NEO	Neokhori	2.47	62	P	Pn	14 08 05.3	+1.7
XOR	Xorichti	2.48	60	P	Pn	14 08 05.2	+1.4
LIT	Litokhoron	2.52	39	P	Pn	14 08 06.1	+1.9
MRKA	Markates	2.55	77	P	Pn	14 08 06.2	+1.5
VLY	Voula,Athens	2.69	96	P	Pn	14 08 07.7	+1.2
KTHA	Kythira Island	2.85	131	P	Pn	14 08 11.2	+2.4
AOS	Alonnisos	2.89	69	P	Pn	14 08 10.4	+1.1
TIP	Timpagrande	3.03	291	P	Pn	14 08 11.5	+0.2
ANKY	Antikythira Is	3.26	134	P	Pn	14 08 15.6	+1.2
IDI	Anoyia	4.60	127	Pn	Pn	14 08 38.7	+5.7
	comp=E,0.7nm,0.3s,baz=326,slow=15,SNR=6.3						
IDI				Sn	Sn	14 09 26.7	+0.3
	comp=E,1.1nm,0.3s,baz=84,slow=16,SNR=5.1						
GERES	GERESS Array B	11.72	338	Pn	Pn	14 10 19.1	+8.5
	comp=E,0.1nm,0.3s,baz=169,slow=12,SNR=2.4						
FINES	FINESS Array B	23.57	7	P	P	14 12 34.8	+1.2
	comp=E,1.2nm,0.8s,baz=194,slow=9.7,SNR=3.3						
KURBB	Kurchatov Arra	42.30	53	P	P	14 15 15.9	-1.0
	comp=E,0.2nm,0.4s,baz=278,slow=8.5,SNR=2.7						
MKAR	Makanchi Array	45.38	58	P	P	14 15 40.7	-1.0
	comp=E,0.3nm,0.5s,baz=271,slow=7.3,SNR=7.3						
ZALV	Zalesovo Beam	45.76	48	P	P	14 15 43.6	-0.9
	comp=E,0.6nm,0.3s,baz=296,slow=11,SNR=3.8						

IDC 27 14:16:50.1±3.7, 5.°95S×154.°08E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.3/43, mbtmp3.3/2, MS3.1/1, Ms1 3.1/1, ms1mx2.3/23, Error ellipse: s-maj=174.9km s-min=50.9km az=126.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.70	232	P	P	14 22 04.0	+0.1
	0.9nm,0.8s,baz=57,slow=9.4,SNR=4.5						
ASAR	Alice Springs	26.22	226	P	P	14 22 26.6	-0.4
	0.3nm,0.8s,baz=57,slow=9.4,SNR=3.3						
FITZ	Fitzroy Crossi	30.27	244	LR	LR	14 35 40.6	
	comp=Z,33nm,19.0s,baz=162,slow=37						
TORD	Torodi Ar. Bea	151.87	287	PKPbc	PKPbc	14 36 48.3	+0.2
	0.7nm,0.7s,baz=98,slow=2.9,SNR=4.1						

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*IDC **27** 14:21:34.9±0.8, 34.°64N×69.°59E, h0km, mb3.7/15, mb1 3.9/20, mb1mx3.8/63, mbtmp3.8/20, ML3.9/5, MS3.4/2, Ms1 3.4/2, ms1mx2.6/51, Error ellipse: s-maj=18.7km s-min=16.4km az=43.0*
*NNC **27** 14:21:39.6±4.3, 35.°00N×69.°24E, h0km, mb4.5, mpv4.5, Error ellipse: s-maj=35.0km s-min=23.5km az=8.0*
ISC 27 14:21:36.5±0.6, 34.°66N±0.°06×69.°62E±0.°05, h10km, n59, σ2.°74/66, mb3.7/15, 6C-4D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.07	113	P	Pg	14 22 15.4	-0.8
CEP				S	Sg	14 22 45.0	+2.0
THW	Thamme Wali	2.56	136	P	Pb	14 22 22.3	-0.3
CHCP	Chirah Chowk	3.18	107	P	Pb	14 22 30.3	-2.8
JMU	Jammu	4.81	112	eP	Pb	14 23 01.0	+0.2
JMU				eS	Sb	14 24 00.0	+1.3
THN	Thein Dam	5.55	112	eP	Pb	14 23 05.0	-8.5
THN				eS	Sn	14 24 08.0	+5.0
DHRM	DHARAMSHALA	6.08	111	eP	Pn	14 23 09.3	+2.7
DHRM				eS	Sn	14 24 17.0	+0.7
DHRM				IAML		14 24 54.7	
	comp=E,263nm,0.6s						
BHK	Bhakra	6.56	118	eP	Pb	14 23 21.6	-9.0
BHK				ex	x	14 24 49.8	
SMLA	Simla	7.25	117	eP	Pn	14 23 25.3	+2.7
SMLA				eS	Sn	14 24 44.8	-0.2
SMLA				IAML		14 24 49.9	
	comp=N,150nm,0.7s						
SMLA				IAML		14 24 50.2	
	comp=E,156nm,0.1s						
SMLA				IAML		14 24 54.2	
	comp=Z,82nm,0.5s						
AML	Almayashu	8.12	22	P	Pn	14 23 37.4	+2.7
	SNR=29						
KK31	Karatay Array	8.46	4	⇑P	Pn	14 23 41.1	+1.9
	comp=Z,9.5nm,0.5s,baz=186,slow=14,SNR=129						
KK31				⇑S	Sn	14 25 13.4	-1.3
	comp=Z,8.2nm,0.5s,baz=193,slow=22,SNR=5.3						
UCH	Uchtor	8.47	25	P	Pn	14 23 43.5	+3.8
	SNR=18						
KZA	Kyzart	8.62	29	P	Pn	14 23 45.0	+3.2
	SNR=20						
EKS2	Erkin-Say	8.63	21	P	Pn	14 23 43.7	+2.2
	SNR=20						
NDI	New Delhi	8.79	131	ex	Pn	14 23 47.0	+3.3
NDI				ex	Sn	14 25 22.0	-0.9
AAK	Ala-Archa	8.83	24	Pn	Pn	14 23 46.1	+1.8
	comp=Z,2.9nm,0.3s,baz=152,slow=5.5,SNR=29						
AAK				Sn	Sn	14 25 25.8	+1.8
	comp=Z,0.8nm,0.3s,baz=330,slow=20,SNR=5.8						
AAK	Ala-Archa	8.83	24	P	Pn	14 23 46.6	+2.2
	SNR=17						
AAK	Ala-Archa	8.83	24	⇑P	Pn	14 23 45.8	+1.5
	comp=Z,12nm,0.5s						
AAK				⇓S	Sn	14 25 27.1	+3.2
	comp=Z,21nm,0.6s						
KBK	Karagaybulak	9.01	26	P	Pn	14 23 53.6	+6.9
	SNR=6.7						
CHMS	Chumysh	9.24	24	P	Pn	14 23 52.6	+2.9
	SNR=24						
CHMS	Chumysh	9.24	24	⇓P	Pn	14 23 51.7	+2.0
	comp=Z,26nm,0.7s						
CHMS				⇑S	Sn	14 25 34.4	+0.6
	comp=Z,19nm,0.7s						
USP	Ospenovka	9.40	22	P	Pn	14 23 53.7	+1.7
	SNR=17						
GEYT	Alibeck	9.84	293	Pn	Pn	14 24 00.2	+2.1
	comp=Z,0.7nm,0.3s,baz=127,slow=11,SNR=13						
GEYT				Sn	Sn	14 25 53.2	+4.5
	comp=Z,0.2nm,0.3s,baz=152,slow=19,SNR=2.2						
MDOK	Medeo	10.27	32	P	Pn	14 24 06.9	+2.8
	comp=Z,6.9nm,0.8s						
MDOK				S	Sn	14 26 01.2	+1.9
	comp=Z,7.2nm,0.9s						
PDGK	Podgornoye	11.56	39	⇑P	Pn	14 24 22.3	+0.6
	comp=Z,5.6nm,0.8s						
DANN	Dangsing	13.60	114	eP	Pn	14 24 47.1	-2.6
	comp=Z,35nm,0.5s						
GKN	Gorkha	14.44	113	eP	Pn	14 24 56.7	-4.4
	comp=Z,24nm,0.3s						
WSAR	Wadi Sarin	14.89	223	LR	LR	14 32 38.9	
	comp=Z,40nm,18.1s,baz=76,slow=45						
DMN	Daman	15.00	114	eP	Pn	14 25 05.6	-3.2
KKN	Kakani	15.03	113	eP	Pn	14 25 03.8	-5.5
	comp=Z,24nm,0.5s						
PKIN	Phulchoki	15.23	113	eP	Pn	14 25 07.7	-4.2
	comp=Z,22nm,0.4s						
PKI	Pulchoki	15.24	113	eP	Pn	14 25 07.6	-4.6
	comp=Z,32nm,0.6s						
GUN	Gumba	15.43	111	eP	Pn	14 25 08.4	-6.2
	comp=Z,18nm,0.4s						
MKAR	Makanchi Array	15.44	34	Pn	Pn	14 25 14.7	+0.4
	comp=Z,0.5nm,0.3s,baz=195,slow=8.9,SNR=20						
JIRN	Jiri	15.79	112	eP	Pn	14 25 14.6	-4.8
	comp=Z,50nm,0.4s						
AB31	Akbulak array	16.25	337	P	Pn	14 25 23.3	-1.4
	comp=Z,2.8nm,0.5s,baz=150,slow=13,SNR=75						
AB31				⇓S	Sn	14 28 17.5	-7.4
	comp=Z,1.5nm,0.6s,baz=161,slow=22,SNR=3.6						
RAMN	Ramite	16.47	113	eP	Pn	14 25 23.5	-4.5
TAPN	Taplejung	17.12	110	eP	Pn	14 25 32.0	-4.2
	comp=Z,18nm,0.6s						
ODAN	Odare	17.12	112	eP	Pn	14 25 30.6	-5.6
	comp=Z,21nm,0.6s						
KURBB	Kurchatov Arra	17.23	19	P	Pn	14 25 35.4	-1.7
	comp=Z,0.1nm,0.3s,baz=209,slow=11,SNR=12						
AKTO	Aktyubinsk	17.90	335	P	P	14 25 46.1	0.0
	comp=Z,0.3nm,0.3s,baz=160,slow=9.9,SNR=12						
AKTO	Aktyubinsk	17.90	335	⇓P	P	14 25 45.2	-0.9
	comp=Z,7.9nm,1.2s						
AKTO				⇑S	Sn	14 29 01.0	-4.0
	comp=Z,8.3nm,1.1s						
BVAR	Borovoye Array	18.37	1	P	P	14 25 51.1	-0.1
	comp=Z,0.9nm,0.3s,baz=160,slow=9.9,SNR=16						
ZALV	Zalesovo Beam	22.05	24	P	P	14 26 31.4	+0.2
	comp=Z,4.0nm,0.4s,baz=220,slow=10,SNR=13						
KBZ	Khabaz	22.53	302	P	P	14 26 37.3	+0.9
	comp=Z,1.1nm,0.8s,baz=104,slow=12,SNR=2.4						
ARU	Arti	23.05	344	P	P	14 26 41.9	+0.1
	comp=Z,0.9nm,0.5s,baz=144,slow=14,SNR=4.7						
SONM	Songino Array	30.32	53	P	P	14 27 48.3	+0.1
	comp=Z,0.8nm,0.7s,baz=252,slow=9.2,SNR=7.5						
CMAR	Chiang Mai Arr	30.64	114	P	P	14 27 51.3	+0.2
	comp=Z,0.3nm,0.3s,baz=304,slow=6.4,SNR=2.3						
AKASG	Malin Array Be	33.27	311	P	P	14 28 14.0	+0.1
	comp=Z,0.4nm,0.4s,baz=88,slow=7.2,SNR=4.4						
FINES	FINESS Array B	38.41	328	P	P	14 28 58.0	+0.2
	comp=Z,5.4nm,1.0s,baz=123,slow=7.0,SNR=5.0						
ARCES	ARCESS Array B	42.43	339	P	P	14 29 30.9	-0.2
	comp=Z,1.1nm,0.5s,baz=120,slow=9.3,SNR=16						
NB2	NORSAR Subarra	45.20	324	P	P	14 29 52.7	-0.7
	comp=Z,0.5nm,0.5s,baz=100,slow=8.6						
NOA	NORSAR Array B	45.20	324	P	P	14 29 53.0	-0.4
	comp=Z,0.6nm,0.6s,baz=99,slow=7.8,SNR=5.1						
USRK	Ussuriysk Ar.	48.06	59	LR	LR	14 54 57.6	
	comp=Z,102nm,18.5s,baz=218,slow=42						
TORD	Torodi Ar. Bea	64.55	269	P	P	14 32 13.5	-0.6
	comp=Z,1.2nm,0.6s,baz=50,slow=5.3,SNR=8.0						
INK	Inuvik	75.89	9	P	P	14 33 22.9	+0.2
	comp=Z,0.8nm,0.6s,baz=348,slow=5.3,SNR=10						
ILAR	Eielson Array	76.85	15	P	P	14 33 28.1	-0.1
	comp=Z,0.3nm,0.8s,baz=314,slow=4.6,SNR=5.0						
WRA	Warramunga Arr	81.99	121	P	P	14 33 56.9	0.0
	comp=Z,0.2nm,0.6s,baz=321,slow=5.2,SNR=4.3						
YKA	Yellowknife Ar	83.13	2	P	P	14 34 01.7	-0.5
	comp=Z,0.4nm,0.4s,baz=353,slow=5.4,SNR=12						
ASAR	Alice Springs	84.14	124	P	P	14 34 08.7	+0.6
	comp=Z,0.3nm,0.5s,baz=323,slow=4.9,SNR=18						

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*ATH **27** 14:23:14.6, 38.°06N×20.°24E, h17km±2km, ML2.6/5, Error ellipse: s-maj=2.9km s-min=1.7km az=40.0*
*THE **27** 14:23:15.0, 38.°08N×20.°22E, h15km, ML2.6/6, Error ellipse: s-maj=1.0km s-min=0.5km az=70.0*
ISC 27 14:23:14.6±1.5, 38.°08N±0.°04×20.°22E±0.°07, h17km±5km, n34, σ0.°33/56, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.16	39	P	Pg	14 23 18.7	-0.1
KEF3				S	Sg	14 23 21.5	-0.1

CHV1 Chavriata, Kef 0.16 50 P Pg 14 23 18.7 -0.1
CHV1 S Sg 14 23 21.6 -0.1
LXRA Lixouri, Kepha 0.21 54 P Pg 14 23 19.6 +0.1
LXRA S Sb 14 23 23.4 -0.2
AGT1 Agia Thekli 0.21 37 P Pg 14 23 19.6 0.0
AGT1 S Sg 14 23 23.5 +0.5
ARGA Argostoli. Kep 0.23 64 P Pg 14 23 19.8 +0.1
ARGA S Sg 14 23 23.3 +0.1
KEF2 Argostoli. Kep 0.23 67 P Pg 14 23 19.8 0.0
KEF2 S Sg 14 23 23.2 -0.2
ARG2 Argostoli 0.23 64 P Pg 14 23 19.9 0.0
ARG2 S Sg 14 23 23.8 +0.3
KEF4 Livadi, Kephal 0.24 42 P Pg 14 23 20.1 +0.1
KEF4 S Sb 14 23 24.4 -0.1
VLS Valsamata 0.31 71 P Pg 14 23 20.9 -0.2
VLS S Sg 14 23 25.7 +0.1
3µm,0.1s
VLS Valsamata 0.31 71 P Pg 14 23 21.0 -0.2
VLS S Sg 14 23 25.5 -0.1
VLS AML AML 14 23 26.1
comp=E,5668µm,0.1s
VLS AML AML 14 23 26.2
comp=N,4066µm,0.1s
VSK1 VASILIKIADES 0.43 39 P Pg 14 23 23.2 0.0
KONA Konidatara, Ke 0.44 38 P Pg 14 23 23.6 +0.1
KONA S Sb 14 23 30.4 +0.1
KONA AML AML 14 23 30.9
comp=N,2286µm,0.3s
KONA AML AML 14 23 31.1
comp=E,1634µm,0.2s
FSK Fiskardo 0.47 35 P Pg 14 23 23.9 0.0
KRI1 kERI 0.63 131 P Pg 14 23 26.9 -0.1
KRI1 S Sb 14 23 36.7 +1.0
comp=E,2µm,0.3s
EVGI Lefkada island 0.64 32 P Pg 14 23 27.0 -0.2
EVGI S Sb 14 23 37.2 +1.1
EVGI Lefkada island 0.64 32 P Pg 14 23 27.3 +0.1
MGNA Meganis 0.73 38 P Pg 14 23 28.5 -0.4
MGNA S Sb 14 23 39.5 +0.9
MGNA AML AML 14 23 40.7
comp=E,690µm,0.2s
MGNA AML AML 14 23 41.3
comp=N,677µm,0.3s
VTN Vitineika 0.78 102 P Pg 14 23 30.0 +0.2
VTN S Sn 14 23 41.8 -0.3
VTN Vitineika 0.78 102 P Pg 14 23 29.8 +0.1
LKD2 Lefkada island 0.79 26 P Pg 14 23 30.3 +0.3
TSLK Tsoukalades, L 0.82 24 P Pb 14 23 30.4 0.0
PDO Prodromos 0.92 55 P Pb 14 23 32.0 -0.1
PDO S Sg 14 23 44.9 +0.4
comp=N,468nm,0.4s
PDO Prodromos 0.92 55 P Pb 14 23 32.0 -0.1
PDO S Sg 14 23 44.5 0.0
PDO AML AML 14 23 52.3
comp=E,660µm,0.5s
PDO AML AML 14 23 55.0
comp=N,668µm,0.4s
RLS Riolos of Patr 0.98 91 P Pb 14 23 32.9 -0.3
RLS S Sn 14 23 47.2 0.0
PVO Paravola 1.16 62 P Pb 14 23 36.4 +0.2
PVO S Sg 14 23 52.1 0.0
comp=N,240nm,0.2s
PVO Paravola 1.16 62 P Pg 14 23 36.8 -0.2
PVO AML AML 14 23 56.9
comp=E,611µm,0.3s
PVO AML AML 14 24 05.0
comp=N,442µm,0.7s
DRO Drossia 1.18 96 P Pn 14 23 36.5 +0.1
DRO S Sn 14 23 52.2 0.0
comp=N,272nm,0.5s
DRO Drossia 1.18 96 P Pg 14 23 37.2 -0.2
AMT Artemida-Makis 1.30 114 P Pn 14 23 37.7 -0.3
IGT Igoumenitsa 1.46 3 P Pn 14 23 39.7 -0.5
IGT S Sb 14 23 59.3 +0.3
TRIZ Trizonia 1.49 78 P Pb 14 23 41.8 +0.1
KALE Kalithea 1.54 78 P Pn 14 23 40.9 -0.5
KALE Kalithea 1.54 78 P Pb 14 23 42.5 -0.3
ITM Ithomi 1.62 123 P Pn 14 23 42.1 -0.4
ITM S Sn 14 24 03.2 +0.1
comp=N,85nm,0.4s

IDC **27** *14:30:38.1±0.7, 35°.94N×82°.45E, h0km, mb3.9/17, mb1 4.1/22, mb1mx3.9/66, mbtmp3.9/22, ML3.8/5, MS3.5/19, Ms1 3.5/19, ms1mx3.4/43, Error ellipse: s-maj=21.0km s-min=12.9km az=50.0*
BJI **27** *14:30:39.5±0.0, 36°.06N×82°.44E, h6km, mB4.6/8, mb4.2/11, ML4.4/8, Ms4.0/14, Ms7 3.8/13*
NEIC **27** *14:30:40.2±2.0, 36°.01N±0°.08×82°.52E±0°.10, h15km±4km, mb4.2/3, Error ellipse: s-maj=12.5km s-min=11.1km az=156.0*
ISC 27 14:30:40.3±0.5, **36°.01N**±0°.05×**82°.37E**±0°.04, **h10km**, **n62**, **σ2°22**/59, **mb3.8**/19, **MS3.5**/15, **Southern Xinjiang**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JOSI Joshimath 5.93 204 eS Pn 14 32 15.6 +7.2
KSH Kashi 6.16 307 Pn Pn 14 32 15.0 +3.6
KSH Sn Sn 14 33 23.0 +1.1
KSH smax smax
comp=N,670nm,0.7s
KSH smax smax
comp=E,1µm,1.2s
KSH LR LR
comp=Z,1µm,7.8s
DHRM DHARAMSHALA 6.28 235 eP Pg 14 32 37.8 -2.8
DHRM eS Sg 14 33 59.5 -2.3
SMLA Simla 6.52 223 eS Sn 14 34 13.4 +3.7
DANN Dangsing 7.73 171 eP Pn 14 32 31.7 -1.5
24nm,0.4s
NIL Nilore 7.86 255 Pn 14 32 36.5 +1.8
GKN Gorkha 8.21 166 eP Pn 14 32 38.7 -1.0
27nm,0.4s
GUN Gumba 8.61 159 eP Pn 14 32 43.9 -1.4
36nm,0.6s
DMN Daman 8.70 164 eP Pn 14 32 44.0 -2.4
13nm,0.4s
PKIN Phulchoki 8.79 162 eP Pn 14 32 46.0 -1.8
18nm,0.4s
PKI Pulchoki 8.80 162 eP Pn 14 32 46.4 -1.6
WMQ Urumqi 8.81 26 eP Pn 14 32 46.8 -0.9
WMQ S Sn 14 34 19.8 -7.2
WMQ pmax pmax
comp=Z,13nm,1.1s
WMQ smax smax
comp=N,56nm,1.1s
WMQ smax smax
comp=E,47nm,1.1s
WMQ LR LR
comp=N,560nm,6.7s
WMQ LR LR
comp=E,310nm,8.3s
WMQ LR LR
comp=Z,330nm,6.7s
WMQ Urumqi 8.81 26 Pn 14 32 47.1 -0.7
JIRN Jiri 8.94 158 eP Pn 14 32 49.2 -0.7
78nm,0.4s
AAK Ala-Archa 9.00 320 Pn Pn 14 32 52.3 +1.8
0.3nm,0.3s,baz=156,slow=9.8,SNR=6.8
AAK Sn Sn 14 34 34.0 +2.1
0.3nm,0.3s,baz=181,slow=15,SNR=1.9
AAK Lg Lg 14 35 21.1
2.1nm,0.3s,baz=288,slow=15,SNR=7.1
AAK LR LR 14 36 42.9
comp=Z,267nm,18.2s,baz=130,slow=40
RAMN Ramite 9.73 157 eP Pn 14 32 57.6 -3.0
109nm,1.1s
TAPN Taplejung 9.76 151 eP Pn 14 32 58.4 -2.7
ODAN Odare 10.08 153 eP Pn 14 33 02.6 -2.8
MK31 Makanchi Array 10.77 360 Pn 14 33 14.0 -0.6
MKAR Makanchi Array 10.77 360 Pn Pn 14 33 14.2 -0.5
3.9nm,0.3s,baz=189,slow=14,SNR=185
MKAR Sn Sn 14 35 13.7 -1.5
1.0nm,0.3s,baz=188,slow=26,SNR=5.6
MKAR Lg Lg 14 36 15.6
baz=165,slow=28,SNR=2.6
MKAR LR LR 14 38 16.4
comp=Z,212nm,20.2s,baz=174,slow=42
MAKZ Makanchi 10.79 359 Pn 14 33 14.6 -0.2
KBL Kabul 10.99 266 Pn 14 33 18.8 +1.0
GTA Gaotai 14.22 71 eP P 14 34 12.0 +2.6
GTA pP Pn 14 34 16.3 +14
GTA sP 14 34 19.3
GTA Gaotai 14.22 71 eP Pn 14 34 02.5 +0.6
GTA pP P 14 34 07.0 -2.4
GTA sP 14 34 10.0
GTA S Sn 14 36 41.5 +1.7
GTA pmax pmax
comp=Z,130nm,4.9s
GTA LR LR
comp=N,350nm,14.0s
GTA LR LR
comp=E,430nm,11.7s
GTA LR LR
comp=Z,450nm,11.4s
KURBB Kurchatov Arra 14.87 350 Pn Pn 14 34 07.1 -3.4
0.1nm,0.3s,baz=172,slow=12,SNR=13
KURBB Lg Lg 14 38 33.0
0.0nm,0.3s,baz=180,slow=30,SNR=2.6
KURK Kurchatov 14.94 351 Pn 14 34 09.1 -2.5
BRDH Bariadhala 15.54 146 LR LR 14 41 40.8
comp=Z,125nm,20.8s,baz=352,slow=43
LZH Lanzhou 17.37 83 eP Pn 14 34 41.3 -1.7
LZH pP P 14 34 44.5 +0.2
LZH sP pP 14 34 46.8 -1.7
LZH ePP PnPn 14 34 55.3 +2.3
LZH pmax pmax
comp=Z,20nm,1.0s
LZH pmax pmax
comp=Z,67nm,4.6s
LZH LR LR
comp=N,230nm,12.6s
LZH LR LR
comp=E,240nm,12.3s
LZH LR LR
comp=Z,310nm,13.8s
ZAA0 Zalesovo Array 18.02 5 P Pn 14 34 47.4 -3.3
ZAA0 IAmb IAmb 14 34 53.8
comp=Z,17nm,0.8s
ZALV Zalesovo Beam 18.02 5 P Pn 14 34 47.5 -3.1
comp=Z,0.5nm,0.3s,baz=191,slow=12,SNR=32
ZALV LR LR 14 42 39.6
comp=Z,128nm,19.0s,baz=218,slow=40
BVAR Borovoye Array 18.99 337 P P 14 35 01.5 -0.4
comp=Z,1.4nm,0.3s,baz=154,slow=21,SNR=9.4
BRVK Borovoye 19.05 337 P P 14 35 02.6 0.0
BRVK IAmb IAmb 14 35 05.3
comp=Z,14nm,0.7s
GEYT Alibeck 19.46 283 P P 14 35 06.9 -0.3
comp=Z,0.3nm,0.3s,baz=121,slow=7.6,SNR=5.4
ABKAR Akbulak array 21.05 316 P P 14 35 23.9 -0.5
ABKAR IAmb IAmb 14 35 29.9
comp=Z,4.5nm,0.9s
SONM Songino Array 21.33 49 P P 14 35 27.6 +0.1
comp=Z,19nm,1.1s,baz=235,slow=11,SNR=40
SONM LR LR 14 44 17.5
comp=Z,187nm,20.0s,baz=202,slow=38
TLY Talaya 21.80 37 LR LR 14 44 54.4
comp=Z,135nm,20.4s,baz=232,slow=39
AKTO Aktyubinsk 22.72 317 P P 14 35 42.2 -0.1
comp=Z,2.0nm,0.7s,baz=144,slow=6.6,SNR=4.2
AKTO LR LR 14 45 15.9
comp=Z,123nm,20.6s,baz=125,slow=38
CMAR Chiang Mai Arr 22.81 136 P P 14 35 42.4 -1.0
comp=Z,1.0nm,0.8s,baz=307,slow=11,SNR=8.4
WSAR Wadi Sarin 24.17 245 LR LR 14 46 38.4
comp=Z,102nm,21.9s,baz=76,slow=40
ARU Arti 26.00 329 P P 14 36 13.5 +0.4
comp=Z,0.9nm,0.3s,baz=91,slow=12,SNR=2.1
ARU LR LR 14 47 22.8
comp=Z,73nm,18.1s,baz=116,slow=38
WHN Wuhan 27.21 92 P P 14 36 31.3 +6.9
PALK Pallekele 28.64 183 LR LR 14 48 30.8
comp=Z,79nm,19.1s,baz=338,slow=38
GNI Garni 29.75 289 LR LR 14 49 59.0
comp=Z,46nm,21.9s,baz=132,slow=39
KBZ Khabaz 31.03 297 LR LR 14 50 32.6
comp=Z,108nm,19.9s,baz=75,slow=38
NRIK Noril'sk 33.51 3 P P 14 37 21.1 +1.5
comp=Z,1.0nm,0.3s,baz=182,slow=4.0,SNR=5.3
NRIK LR LR 14 52 52.2
comp=Z,88nm,19.3s,baz=172,slow=40
KSRS Korea Array 36.27 74 LR LR 14 54 07.2
comp=Z,98nm,20.0s,baz=293,slow=39
KLR Kul'dur 38.00 54 P P 14 38 00.1 +1.7
comp=Z,1.6nm,0.7s,baz=280,slow=8.2,SNR=4.9
BRTR Keskin Array B 38.27 291 P P 14 38 00.9 0.0
comp=Z,1.9nm,1.1s,baz=66,slow=3.1,SNR=3.9
AKASG Malin Array Be 40.45 308 LR LR 14 56 51.5
comp=Z,105nm,21.3s,baz=295,slow=39
MLR Muntele Rosu 42.99 301 P P 14 38 40.6 +0.8
comp=Z,1.4nm,0.6s,baz=124,slow=15,SNR=3.2
MLR LR LR 14 59 44.4
comp=Z,195nm,18.9s,baz=104,slow=40
FINES FINESS Array B 43.15 324 P P 14 38 40.4 -0.4
comp=Z,1.4nm,0.7s,baz=100,slow=7.9,SNR=3.7
ARCES ARCESS Array B 45.26 336 P P 14 38 56.6 -1.0
comp=Z,1.2nm,0.6s,baz=93,slow=7.8,SNR=9.9
NB2 NORSAR Subarra 50.30 323 P P 14 39 38.8 +2.0
comp=Z,0.6nm,0.6s,baz=87,slow=7.4
NOA NORSAR Array B 50.30 323 P P 14 39 37.5 +0.8
comp=Z,1.1nm,0.8s,baz=86,slow=7.4,SNR=4.5
NOA LR LR 15 03 02.2
comp=Z,55nm,18.6s,baz=355,slow=39
GERES GERESS Array B 50.63 307 P P 14 39 40.2 +0.6
comp=Z,0.3nm,0.3s,baz=84,slow=10,SNR=3.6
PETK Petropavlovsk- 53.79 46 LR LR 15 03 33.6
comp=Z,47nm,19.6s,baz=242,slow=37
ILAR Eielson Array 72.42 20 P P 14 42 05.9 -0.5
comp=Z,0.6nm,0.8s,baz=317,slow=5.3,SNR=8.5
ILAR LR LR 15 19 36.5
comp=Z,34nm,21.6s,baz=356,slow=41
INK Inuvik 72.59 13 P P 14 42 07.7 +0.4
comp=Z,1.2nm,0.9s,baz=0.1,slow=5.2,SNR=3.7
WRA Warramunga Arr 74.25 130 P P 14 42 16.0 -1.7
comp=Z,1.7nm,1.0s,baz=324,slow=6.2,SNR=6.8
TORD Torodi Ar. Bea 74.91 275 P P 14 42 22.1 +0.3
comp=Z,0.4nm,0.6s,baz=68,slow=4.7,SNR=2.5
ASAR Alice Springs 76.78 132 P P 14 42 30.6 -1.7
comp=Z,0.7nm,0.8s,baz=321,slow=5.4,SNR=12
YKA Yellowknife Ar 80.89 8 P P 14 42 53.6 -0.7
comp=Z,0.9nm,0.7s,baz=344,slow=5.1,SNR=6.2

IDC **27** *14:33:50.8±2.9, 33°.98N×135°.40E, h36km±26km, mb3.4/8, mb1 3.6/13, mb1mx3.4/67, mbtmp3.6/13, ML3.2/5, MS2.7/5, Ms1 2.7/5, ms1mx2.5/28, Error ellipse: s-maj=17.9km s-min=15.3km az=25.0*
JMA **27** *14:33:50.0, 33°.95N×135°.41E, h36km±1km, M3.9*
Broadband fault plane solution: P waves. NP1: φs141.00000°, δ51.00000°, λ34.00000°. NP2: φs28.00000°, δ64.00000°, λ135.00000°. Principal axes: T Plg49.0000°, Azm348.0000°; N Plg40.0000°, Azm184.0000°; P Plg8.0000°, Azm87.0000°;
JMA Felt II J1.
ISC 27 14:33:50.0±0.8, **33°.98N**±0°.04×**135°.41E**±0°.03, **h30km**±6km, **n27**, **σ0°66**/39, **mb3.8**/8, **4C-5D**, **Near south coast of western Honshu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JWM Minabe 0.14 200 ⇑P Pn 14 33 56.1 0.0
JWM S Sb 14 34 00.0 +0.5
JTNC Tanabenakahech 0.23 134 ⇑P Pn 14 33 57.0 -0.3
JTNC S Sb 14 34 01.4 +0.3
JWY Kouya 0.28 32 ⇓P Pn 14 33 58.1 0.0
JWY S Sn 14 34 03.3 -0.1
JAJ2 Tsuna 0.62 315 ⇓P Pb 14 34 02.4 0.0
JAJ2 S Sb 14 34 10.8 -0.1
JHE Heguri 0.71 18 ⇑P Pb 14 34 03.6 -0.3
JHE S Sb 14 34 13.3 -0.1
JKN2 Miekihoku 0.76 70 ⇓P Pb 14 34 03.7 -1.0
JAI Aioi 0.82 257 ⇓P Pb 14 34 04.9 -0.8
JAI eS Sb 14 34 15.6 -0.9
JKS Kasai 1.11 335 ⇑P Pn 14 34 09.1 -0.3
JKS S Sn 14 34 23.3 -0.3
TSUJ Tsu 2 1.11 49 ⇓P Pn 14 34 08.7 -0.7
TSUJ eS Sn 14 34 21.9 -1.7
JIE Ise 1.15 69 P Pn 14 34 09.5 -0.5
JIE S Sn 14 34 24.7 0.0
TTO1 TONANKAI O.B.S 1.20 107 P Pn 14 34 10.8 +0.4
MAT Matsushiro 3.43 41 P Pn 14 34 42.5 +1.1
MAT S Sn 14 35 22.3 +1.3
MJAR Matsushiro Arr 3.43 41 Pn Pn 14 34 42.6 +1.2
0.4nm,0.3s,baz=214,slow=14,SNR=32
MJAR Sn Sn 14 35 20.3 -0.8
0.6nm,0.3s,baz=215,slow=15,SNR=4.3
MJAR LR LR 14 36 23.1
comp=Z,31nm,19.4s,baz=345,slow=44
JHJ Hachijo jima 2 3.75 102 Pn Pn 14 34 46.4 +0.6
24nm,0.3s,baz=74,slow=22,SNR=8.4
JHJ Sn Sn 14 35 29.0 +0.2
5.7nm,0.3s,baz=107,slow=19,SNR=1.8
JNU Nakatsue 3.88 259 Pn Pn 14 34 48.1 +0.6
4.4nm,0.3s,baz=91,slow=5.0,SNR=83
JNU Sn Sn 14 35 32.4 +0.3
1.6nm,0.3s,baz=353,slow=2.2,SNR=3.5
JNU LR LR 14 36 15.2
comp=Z,87nm,19.8s,baz=150,slow=37
KSRS Korea Array 7.01 302 Pn Pn 14 35 30.9 +0.5
0.5nm,0.3s,baz=116,slow=14,SNR=6.3
KSRS Sn Sn 14 36 48.1 -1.0
0.8nm,0.3s,baz=120,slow=23,SNR=11
KSRS LR LR 14 38 01.1
comp=Z,43nm,20.4s,baz=175,slow=36
USRK Ussuriysk Ar. 10.55 346 Pn Pn 14 36 19.4 +0.5
baz=168,slow=14,SNR=4.3
ASAJ Asahikawa 11.56 27 LR LR 14 41 11.4
comp=Z,61nm,21.7s,baz=286,slow=38
SONM Songino Array 25.75 311 P P 14 39 17.8 -0.1
2.0nm,0.7s,baz=125,slow=8.9,SNR=12
DAV Davao City (W) 28.28 201 LR LR 14 49 12.6
comp=Z,41nm,20.3s,baz=290,slow=33
MKAR Makanchi Array 41.68 304 P P 14 41 36.0 +0.2
1.5nm,0.7s,baz=89,slow=9.8,SNR=13
KURBB Kurchatov Arra 44.11 310 P P 14 41 54.5 -0.8
0.8nm,0.6s,baz=97,slow=7.0,SNR=5.1
BVAR Borovoye Array 49.06 314 P P 14 42 33.9 -0.2
0.9nm,0.5s,baz=106,slow=8.7,SNR=6.0
WRA Warramunga Arr 53.63 181 P P 14 43 08.4 -0.1
0.5nm,0.9s,baz=356,slow=7.3,SNR=3.2
ILAR Eielson Array 54.66 31 P P 14 43 15.5 -0.1
0.2nm,0.8s,baz=261,slow=5.4,SNR=4.8
ASAR Alice Springs 57.34 182 P P 14 43 35.4 +0.1
0.3nm,1.0s,baz=1.4,slow=11,SNR=2.9
YKA Yellowknife Ar 68.85 28 P P 14 44 51.6 +0.5
1.0nm,1.1s,baz=294,slow=6.0,SNR=3.7

DDA **27** *14:34:09.3, 35°.62N×26°.87E, h0km±2km, ML2.3*
THE **27** *14:34:09.2, 35°.30N×27°.23E, h0km, ML2.6/6, Error ellipse: s-maj=2.2km s-min=0.5km az=123.0*
ISK **27** *14:34:10.1, 35°.31N×27°.22E, h12km, ML2.8/14*
ATH **27** *14:34:10.5, 35°.38N×27°.19E, h23km±1km, ML2.7/4, Error ellipse: s-maj=5.4km s-min=1.2km az=327.0*
ISC 27 14:34:10.5±1.1, **35°.36N**±0°.05×**27°.20E**±0°.03, **h17km**±7km, **n41**, **σ1°22**/62, **Dodecanese Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KARP Karpathos 0.19 350 P Pb 14 34 15.2 -0.4
KARP S Sg 14 34 19.5 +0.9
5µm,0.1s
KARP Karpathos 0.19 350 P Pb 14 34 15.3 -0.4
KARP S Sg 14 34 19.5 +0.9
KARP AML AML 14 34 20.0
comp=N,11386µm,0.1s
KARP AML AML 14 34 21.2
comp=E,8730µm,0.3s
KARP Karpathos 0.19 350 PG Pb 14 34 15.1 -0.6
KARP SG Sg 14 34 19.5 +0.9
ZKR Zakros 0.84 254 P Pg 14 34 25.7 -1.3
ZKR S Sn 14 34 39.6 0.0
comp=E,475nm,0.3s
ZKR Zakros 0.84 254 P Pg 14 34 26.1 -0.8
ZKR S Sb 14 34 38.9 +1.1
ZKR AML AML 14 34 42.8
comp=E,1111µm,0.4s
ZKR AML AML 14 34 44.8
comp=N,768µm,0.5s
ZKR Zakros 0.84 254 PG Pg 14 34 26.3 -0.7
ZKR SG Sb 14 34 39.0 +1.3
STIA Sitia Lasithi 0.92 261 P Pg 14 34 27.7 -0.8
STIA S Sn 14 34 42.5 +0.9
ARG Arkhangelos 1.14 41 P Pg 14 34 32.0 -0.6
ARG S Sn 14 34 48.1 +1.2
comp=N,308nm,0.5s
ARG Arkhangelos 1.14 41 P Pg 14 34 32.2 -0.4
ARG S Sn 14 34 48.4 +1.5
ARG AML AML 14 34 54.7
comp=N,451µm,0.4s
ARG AML AML 14 34 57.8
comp=E,811µm,0.7s
ARG Arkhangelos 1.14 41 PN Pg 14 34 32.8 +0.2
ARG SN Sn 14 34 49.5 +2.6
FRMA Ierapetra Chan 1.25 255 P Pn 14 34 31.5 -1.7
FRMA S Sb 14 34 48.0 -1.5
comp=E,128nm,0.7s
NPS Neapolis 1.30 266 P Pn 14 34 34.3 +0.3
NPS S Sg 14 34 53.5 +0.5
comp=E,330nm,0.5s
NPS Neapolis 1.30 266 P Pn 14 34 34.9 +0.3
NPS S Sg 14 34 53.8 +1.0
DAT Datca 1.40 12 P Pn 14 34 34.9 -0.5
DAT S Sg 14 34 54.6 -1.3
DAT Datca 1.40 12 PN Pg 14 34 36.4 -1.2
DAT SN Sg 14 34 56.3 +0.4
DAT Datca 1.40 12 i P Pn 14 34 35.4 0.0
DAT i S Sg 14 34 56.5 +0.6
DAT IAML 14 34 59.0
comp=N,53nm,0.3s
DAT IAML 14 35 03.0
comp=E,33nm,0.9s
KOSK Kos Island 1.40 353 PN Pg 14 34 36.9 -0.7
LAST Lasithi 1.43 263 P Pn 14 34 35.4 -0.3
LAST S Sg 14 34 56.8 +0.2
comp=E,140nm,0.7s
LAST Lasithi 1.43 263 P Pb 14 34 36.9 +0.2
LAST AML AML 14 35 03.9
comp=N,282µm,0.7s
LAST AML AML 14 35 04.7
comp=E,236µm,0.8s
BODT Bodrum 1.70 3 PN Pb 14 34 41.1 -0.3
SANT Santorini 1.74 306 P Pb 14 34 41.4 -0.6
SANT Santorini 1.74 306 PN Pb 14 34 41.5 -0.6
STAX Taxiarchis Har 1.79 306 P Pb 14 34 42.0 -0.9
THT2 Imerovigli 1.80 307 PN Pb 14 34 42.5 -0.6
AMGA Amorgos Island 1.81 325 P Pn 14 34 41.5 +0.5
DALY Dalyan (Mula) 1.87 38 PN Pn 14 34 43.2 -1.0
DALY Dalyan (Mula) 1.87 38 i P Pn 14 34 44.0 -0.3
DALY i S Sg 14 35 11.9 +1.1
DALY IAML 14 35 23.0
comp=N,32nm,0.4s
DALY IAML 14 35 24.0
comp=E,45nm,1.2s
TURN Turunc 1.89 36 PN Pn 14 34 40.1 -1.9
TURN Turunc 1.89 36 i P Pn 14 34 39.3 -2.7
TURN i S Sn 14 35 03.2 -2.2
IDI Anoyia 1.89 269 P Pb 14 34 44.3 -0.4
YER Yerkesik 1.98 26 PN Pb 14 34 44.8 -1.3
FETY Fethiye 1.99 50 PN Pb 14 34 44.8 -1.4
AKAS Kas 2.14 65 PN Pn 14 34 46.9 +1.3
APE Apeiranthos 2.18 322 P Pn 14 34 46.7 +0.7
APE Apeiranthos 2.18 322 PN Pb 14 34 47.9 -1.6
AYDN Tasoluk 2.36 13 i P Pn 14 34 49.8 +1.3
AYDN i S Sb 14 35 19.5 -2.0
TAVA DENIZLI_Tavas 2.52 33 i P Pb 14 34 53.3 -2.0
TAVA i S Sb 14 35 27.5 +1.5
TAVA IAML 14 35 34.0
comp=E,24nm,0.4s
TAVA IAML 14 35 36.0
comp=N,18nm,0.6s
AYDB Zeytinkoy-Aydi 2.64 12 PN Pn 14 34 54.4 +1.9
GOLH Golhisar 2.67 45 i P Pn 14 34 53.7 +0.8
KORT Korkueli 3.03 56 PN Pn 14 34 59.6 +1.8
CHOS Chios island 3.16 343 PN Pn 14 35 01.9 +2.3

IDC 27 15:38:52.4±3.1, **2°.10N**×**99°.04E**, **h125km**±9km, **mb3.0**/3, **mb1 3.1**/3, **mb1mx2.8**/39, **mbtmp3.4**/3, **Error ellipse: s-maj=152.1km s-min=21.5km az=56.0**, **Northern Sumatera**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PSI Prapat 0.71 351 P Pn 15 39 12.4 -0.1
13nm,0.3s,baz=233,slow=5.1,SNR=48
PSI S Sn 15 39 27.6 0.0
1.7nm,0.3s,baz=104,slow=19,SNR=9.0
WRA Warramunga Arr 40.98 124 P P 15 46 23.2 -0.1
0.2nm,0.3s,baz=303,slow=8.6,SNR=6.3

ASAR	Alice Springs	42.50	129	P	P	15 46 35.6	-0.2
	0.1nm,0.6s,baz=297,slow=7.5,SNR=7.1						
MKAR	Makanchi Array	46.85	344	P	P	15 47 09.8	-0.1
	0.3nm,0.4s,baz=157,slow=8.6,SNR=12						

IDC **27** *15:58:40.6±1.4, 6.69S×154.64E, h0km, mb3.7/6, mb1 4.0/6, mb1mx3.7/39, mbtmp3.7/6, MS2.8/1, Ms1 2.8/1, ms1mx2.2/32, Error ellipse: s-maj=55.2km s-min=26.4km az=135.0*
NEIC **27** *15:58:44.4±1.9, 6.5S±0.1×154.6E±0.2, h23km±7km, mb4.4/5, Error ellipse: s-maj=22.4km s-min=15.9km az=112.0*
ISC 27 15:58:47.6±1.0, **6.4S**±0.1×**154.6E**±0.2, **h48km, n15,** σ1s30/14, **mb4.0**/9, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.27	313	Pn	Pn	15 59 36.3	-0.1
HNR	Honiara	6.11	119	LR	LR	16 02 17.5	
	comp=Z,85nm,21.0s,baz=274,slow=37						
PMG	Port Moresby	7.90	248	Pn	Pn	16 00 40.9	+1.0
WR0	Warramunga Arr	23.63	233	P	P	16 03 54.5	-0.2
WR0				IAmb	IAmb	16 03 59.3	
	comp=Z,10nm,1.4s						
WB0	Warramunga Arr	23.65	234	P	P	16 03 54.6	-0.2
WB0				IAmb	IAmb	16 04 12.9	
	comp=Z,8.0nm,1.3s						
WB2	Warramunga Arr	23.77	234	P	P	16 03 55.3	-0.8
WRA	Warramunga Arr	23.78	234	P	P	16 03 54.8	-1.3
	comp=Z,0.9nm,0.6s,baz=58,slow=9.7,SNR=5.7						
ASAR	Alice Springs	26.22	227	P	P	16 04 16.6	-1.7
	comp=Z,0.4nm,0.8s,baz=67,slow=8.3,SNR=4.3						
BBOO	Buckleboo	31.38	211	P	P	16 05 03.3	-0.7
BBOO				IAmb	IAmb	16 05 22.7	
	comp=Z,35nm,1.4s						
CMAR	Chiang Mai Arr	60.15	295	P	P	16 08 51.8	+0.9
	comp=Z,0.5nm,0.3s,baz=121,slow=6.4,SNR=4.4						
YAK	Yakutsk	70.93	348	P	P	16 09 57.0	-2.6
MKAR	Makanchi Array	82.70	319	P	P	16 11 07.8	+1.4
	comp=Z,0.4nm,0.8s,baz=100,slow=6.4,SNR=5.3						
ILAR	Eielson Array	83.02	22	P	P	16 11 09.0	+1.4
	comp=Z,0.3nm,0.9s,baz=243,slow=6.0,SNR=3.9						
NVAR	Mina Array Bea	91.72	52	P	P	16 11 51.1	+0.5
	comp=Z,0.5nm,0.8s,baz=242,slow=6.4,SNR=3.6						
TORD	Torodi Ar. Bea	152.46	286	PKPbc	PKPbc	16 18 39.4	-0.3
	comp=Z,1.2nm,0.6s,baz=45,slow=1.3,SNR=6.1						

JMA **27** *15:59:57.6±0.2, 22.24N×121.29E, h54km±4km, M3.2*
TAP **27** *15:59:57.6, 22.21N×121.31E, h26km±1km, ML2.9, B*
ISC 27 15:59:56.9±1.2, **22.26N**±0.03×**121.36E**±0.03, **h9km**±10km, **n66,** σ0s84/89, **1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.29	141	iP	Pb	16 00 05.0	+0.8
	baz=125						
LAY				eS	Sb	16 00 10.7	+1.5
	baz=125						
TAW	Tawu	0.43	283	iP	Pb	16 00 07.0	+0.3
	baz=291						
TAW				eS	Sb	16 00 14.1	+0.7
	baz=291						
TWH	Lutao	0.46	14	eP	Pb	16 00 08.6	+1.4
	baz=19						
EAST	Anshuo	0.48	284	⇑iP	Pb	16 00 07.7	+0.1
	baz=292						
EAST				eS	Sb	16 00 15.3	+0.5
	baz=292						
ECL	Taimali	0.50	312	iP	Pb	16 00 08.4	+0.5
	baz=320						
ECL				eS	Sb	16 00 16.3	+1.1
	baz=320						
TTN	Taitung	0.53	339	eP	Pb	16 00 09.0	+0.7
	baz=345						
TSEB	Hengchuen, Pin	0.56	230	eP	Pb	16 00 09.4	+0.6
	baz=234						
TWKBT	Hengchun	0.60	238	eP	Pg	16 00 07.9	-0.6
	baz=240						
TWKBT				eS	Sg	16 00 15.3	-0.9
	baz=240						
TWK1	Hengchun	0.60	238	eP	Pg	16 00 07.8	-0.7
	baz=240						
TWK1				eS	Sb	16 00 19.0	+0.9
	baz=240						
TWGBT	Beinan	0.61	335	P	Pb	16 00 10.4	+0.7
	baz=340						
TWGBT				eS	Sn	16 00 20.2	-1.5
	baz=340						
HEN	Hengchun	0.63	246	eP	Pg	16 00 08.9	-0.1
	baz=249						
HEN				eS	Sg	16 00 16.9	-0.4
	baz=249						
SCZT	Fangliau	0.69	279	P	Pg	16 00 10.8	+0.6
	baz=284						
SCZT				eS	Sb	16 00 20.3	-0.4
	baz=284						
MASBT	Mashibuluo	0.75	298	eP	Pb	16 00 12.3	+0.1
	baz=302						
SSPT	Xinbi	0.76	287	eP	Pb	16 00 12.9	+0.6
	baz=292						
SSD	Sandimen	0.82	306	P	Pn	16 00 14.6	-0.1
	baz=310						
CHKT	Chengkung	0.83	1	eS	Sn	16 00 27.2	0.0
	baz=3.0						
WLCH	Liuqiu	0.91	276	eP	Pn	16 00 16.1	+0.2
	baz=279						
FULB	Fuli	0.93	357	P	Pn	16 00 16.0	-0.3
	baz=359						
FULB				eS	Sn	16 00 29.0	-0.7
	baz=359						
ELDTW	Lidau	0.97	341	eP	Pg	16 00 15.5	-0.1
	baz=345						
SLGT	Liugui	0.98	318	eP	Pn	16 00 17.3	+0.5
	baz=322						
TWM1	Shoushan	1.03	303	eP	Pn	16 00 18.3	+0.8
	baz=307						
STYT	Tauyuan	1.05	328	eP	Pn	16 00 19.3	+1.4
	baz=332						
SGST	Jiashian	1.08	319	eP	Pg	16 00 18.1	+0.4
	baz=322						
SGST				eS	Sn	16 00 33.6	+0.1
	baz=322						
TWF1	Yuli	1.08	357	iP	Pb	16 00 18.1	+0.2
	baz=359						
YULB	Yu-li	1.12	357	eP	Pb	16 00 17.6	-0.9
	baz=359						
YULB				eS	Sb	16 00 32.3	-1.0
	baz=359						
CHN1	Nanshi	1.19	320	eP	Pg	16 00 20.1	+0.3
	baz=323						
WTP	Ta-pu	1.19	325	P	Pg	16 00 20.5	+0.7
	baz=328						
WTP				eS	Sn	16 00 37.6	+1.3
	baz=328						
HGSD	Ruisui	1.23	3	P	Pn	16 00 20.3	+0.1
	baz=4.0						
HGSD				eS	Sg	16 00 36.6	+0.3
	baz=4.0						
TPUB	Ta-pu	1.23	327	eP	Pb	16 00 20.6	+0.3
	baz=330						
EHY	Hungye	1.24	359	eP	Pn	16 00 19.3	-1.2
YUS	Yu-Shan	1.28	343	eP	Pb	16 00 21.5	+0.1
	baz=345						
TWK	Hsinying	1.28	321	eP	Pb	16 00 21.4	+0.2
	baz=324						
CHN4	Tsaushan	1.29	327	eP	Pb	16 00 21.8	+0.4
	baz=329						
ALS	Alishan	1.34	338	eP	Pb	16 00 22.8	+0.4
	baz=340						
CHN5	Tsauling	1.47	335	eP	Pb	16 00 24.4	0.0
	baz=337						
VWDT	VWDT	1.50	352	P	Pn	16 00 23.8	-0.1
	baz=354						
VWDT				S	Sn	16 00 43.3	-0.3
	baz=354						
WHYT	Xinyi Township	1.50	342	eP	Pn	16 00 24.2	+0.1
	baz=344						
ESL	Shilin	1.54	3	eP	Pb	16 00 25.6	-0.1
	baz=4.0						
SSLB	Suanglung	1.56	346	eP	Pb	16 00 25.6	-0.4
	baz=348						
WJS	Zhushan	1.66	340	eP	Pb	16 00 27.8	+0.2
	baz=341						
SMLT	Sun Moon Lake	1.67	346	eP	Pb	16 00 28.6	+0.7
	baz=347						
OWD	Renai	1.69	354	eP	Pn	16 00 27.3	+0.5
	baz=355						
OWD				S	Sn	16 00 48.1	-0.6
	baz=355						
TYC	Yuchr	1.70	344	eP	Pb	16 00 28.8	+0.5
	baz=346						
CHGB	Renai	1.80	355	eP	Pn	16 00 28.5	+0.2
	baz=356						
CHGB				eS	Sn	16 00 50.6	-0.8
	baz=356						
DPDB	Guoxing	1.81	347	eP	Pb	16 00 29.7	-0.5
	baz=349						
WHF	Hehuan Shan	1.88	357	eP	Pn	16 00 30.2	+0.7
	baz=359						
NACB	Ninganchiao	1.92	7	eP	Pn	16 00 30.3	+0.6
	baz=7.0						
ETLH	Xiulin Townshi	1.94	3	eP	Pn	16 00 30.7	+0.6
	baz=4.0						
WHP	Taichung City	2.04	349	eP	Pb	16 00 33.1	-1.1
	baz=350						
PHUB	P'eng-hu	2.06	307	eP	Pn	16 00 29.9	-1.8
	baz=309						
PNG	Penghu	2.11	308	eP	Pn	16 00 30.9	-1.5
	baz=310						
NNSB	Datong	2.15	1	eP	Pb	16 00 35.0	-1.2
	baz=1.0						
NNSH	Datong	2.15	1	eP	Pb	16 00 35.5	-0.7
	baz=1.0						
NNS	Nan Shan	2.17	0	eP	Pb	16 00 36.5	+0.1
	baz=1.0						
EOS1	EOS1	2.38	17	eP	Pn	16 00 37.9	+1.7
	baz=17						
YHNB	Yeheng	2.40	0	eP	Pn	16 00 37.6	+1.2
	baz=1.0						
YHNB				eS	Sn	16 01 05.6	-0.4
	baz=1.0						
NSK	Sanguang	2.40	0	eP	Pb	16 00 39.6	-0.8
	baz=1.0						
NWLT	Wulai	2.51	3	eP	Pn	16 00 40.0	+2.2
	baz=3.0						
TIPB	Shuangxi	2.73	9	eP	Pn	16 00 43.2	+2.2
	baz=9.0						
HATJ	Hateruma jima	2.88	51	P	Pn	16 00 43.8	+0.9
IRIF	Iriomote-Funau	3.00	46	P	Pn	16 00 44.9	+0.2
IRIF				eS	Sn	16 01 20.4	-0.4
JKRS	Kuro-shima	3.13	51	P	Pn	16 00 46.6	+0.1
JKRS				eS	Sn	16 01 22.7	-1.3
JIJ	Ishigaki jima	3.31	50	P	Pn	16 00 49.1	+0.2
JIJ				S	Sn	16 01 27.0	-1.3
JISG	Ishigakijimahi	3.57	49	P	Pn	16 00 52.2	-0.2
JISG				S	Sn	16 01 32.9	-1.8
JTJ	Tarama	3.88	52	P	Pn	16 00 56.8	+0.1
JTJ				S	Sn	16 01 41.7	-0.7
JIRB	Irabujima	4.33	53	P	Pn	16 01 02.7	-0.3

HLW **27** *16:09:32.7, 34.49N×26.89E, h9km±10km, Md3.9, Ml3.8*
THE **27** *16:09:34.5, 34.81N×26.89E, h8km±1km, ML2.7/6, Error ellipse: s-maj=1.9km s-min=0.7km az=2.0*
ATH **27** *16:09:36.0, 35.08N×26.79E, h58km±4km, ML2.8/10, Error ellipse: s-maj=4.6km s-min=1.6km az=130.0*
DDA **27** *16:09:42.1, 35.54N×27.49E, h18km±2km, ML2.1*
ISC 27 16:09:33.6±1.4, **34.98N**±0.07×**26.97E**±0.04, **h75km**±10km, **n48,** σ1s92/64, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.59	16	P	Pn	16 09 49.0	+1.2
KARP				S	Sn	16 10 01.1	+2.8
	2μm,0.4s						
KARP	Karpathos	0.59	16	P	Pn	16 09 49.0	+1.2
KARP				S	Sn	16 09 59.0	+0.7
ZKR	Zakros	0.63	283	P	Pn	16 09 47.0	-1.2
ZKR				S	Sn	16 09 56.6	-2.3
	2μm,0.3s						
ZKR	Zakros	0.63	283	P	Pn	16 09 47.1	-1.1
ZKR				S	Sn	16 09 56.9	-2.0
ZKR				AML	AML	16 09 59.0	
	comp=E,4576μm,0.3s						
ZKR				AML	AML	16 10 02.4	
	comp=N,1736μm,0.4s						
STIA	Sitia Lasithi	0.75	287	P	Pn	16 09 49.5	0.0
STIA				S	Sn	16 10 00.8	-0.4
FRMA	Ierapetra Chan	1.01	272	P	Pn	16 09 51.1	-1.4
FRMA				S	Sn	16 10 04.0	-2.6
	comp=N,215nm,0.6s						
NPS	Neapolis	1.15	285	P	Pn	16 09 55.2	+1.0
NPS				S	Sn	16 10 11.0	+1.4
	comp=N,635nm,0.5s						
NPS	Neapolis	1.15	285	P	Pn	16 09 55.2	+1.0
NPS				AML	AML	16 10 15.2	
	comp=N,847μm,0.4s						
NPS				AML	AML	16 10 22.6	
	comp=E,1189μm,0.5s						
LAST	Lasithi	1.23	279	P	Pn	16 09 56.2	+0.8
LAST				S	Sn	16 10 13.9	+2.2
	comp=E,242nm,0.6s						
LAST	Lasithi	1.23	279	P	Pn	16 09 56.3	+0.8
LAST				AML	AML	16 10 21.8	
	comp=E,474μm,0.5s						
LAST				AML	AML	16 10 26.1	
	comp=N,512μm,0.6s						
ARG	Arkhangelos	1.55	37	P	Pn	16 10 03.1	+3.6
ARG	Arkhangelos	1.55	37	P	Pn	16 10 03.0	+3.6
IDI	Anoyia	1.73	281	P	Pn	16 10 03.3	+1.4
IDI				S	Sn	16 10 24.4	+1.2
	comp=N,92nm,0.3s						
IDI	Anoyia	1.73	281	P	Pn	16 10 03.2	+1.3
IDI				S	Sn	16 10 23.4	+0.2
IDI				AML	AML	16 10 46.1	
	comp=N,263μm,0.5s						
IDI				AML	AML	16 10 47.8	
	comp=E,212μm,0.5s						
SIVA	Sivas	1.77	272	P	Pn	16 10 03.5	+1.2
SIVA				AML	AML	16 10 40.0	
	comp=E,623μm,0.7s						
SIVA				AML	AML	16 10 41.5	
	comp=N,478μm,0.6s						
DAT	Datca	1.81	16	iP	Pn	16 10 04.8	+1.7
DAT				iS	Sn	16 10 21.0	-4.3
DAT					IAML	16 10 28.0	
	comp=N,24nm,0.3s						
SANT	Santorini	1.85	319	P	Pn	16 10 04.2	+0.7
STAX	Taxiarchis Har	1.90	319	P	Pn	16 10 04.3	+0.3
STAX				S	Sn	16 10 25.2	-2.0
THR3	Thira Island,	1.91	319	P	Pn	16 10 05.3	+1.1
THR5	Thira Island,	1.95	318	P	Pn	16 10 05.8	+1.1
AMGA	Amorgos Island	2.04	335	P	Pn	16 10 07.0	+1.0
AMGA				S	Sn	16 10 29.8	-0.9
AMGA				AML	AML	16 10 31.8	
	comp=E,324μm,0.4s						
AMGA				AML	AML	16 10 38.3	
	comp=N,280μm,0.4s						
IOSP	Ios island	2.21	322	P	Pn	16 10 09.1	+0.9
IOSP				S	Sn	16 10 34.4	-0.2
DALY	Dalyan (Mula)	2.29	36	iP	Pn	16 10 12.0	+2.7
DALY				iS	Sn	16 10 33.6	-2.9
DALY					IAML	16 10 50.0	
	comp=N,26nm,0.3s						
DALY					IAML	16 10 56.0	
	comp=E,16nm,0.6s						
VAM	Vamos	2.31	281	P	Pn	16 10 11.6	+2.1
VAM				AML	AML	16 10 51.6	
	comp=E,147μm,0.3s						
VAM				AML	AML	16 11 01.7	
	comp=N,221μm,0.7s						
TURN	Turunc	2.31	35	iP	Pn	16 10 09.1	-0.4
TURN				iS	Sn	16 10 31.3	-5.7
TURN					IAML	16 10 38.0	
	comp=N,43nm,0.4s						
TURN					IAML	16 10 46.0	
	comp=E,37nm,1.0s						
GVDS	Gavdos	2.37	268	P	Pn	16 10 11.5	+1.2
GVD	Gavdhos	2.37	267	P	Pn	16 10 11.3	+0.9
GVD	Gavdhos	2.37	267	P	Pn	16 10 11.2	+0.9
FETY	Fethiye	2.39	46	iP	Pn	16 10 12.6	+2.0
FETY				iS	Sn	16 10 36.8	-2.1
FETY					IAML	16 10 43.0	
	comp=E,13nm,0.3s						
APE	Apeiranthos	2.39	331	P	Pn	16 10 11.4	+0.8
APE				S	Sn	16 10 39.4	+0.4
APE				AML	AML	16 10 40.1	
	comp=N,121μm,0.2s						
APE				AML	AML	16 10 46.3	
	comp=E,156μm,0.4s						
IMMV	Iera Moni Meta	2.49	282	P	Pn	16 10 14.3	+2.3
IMMV	Iera Moni Meta	2.49	282	P	Pn	16 10 14.4	+2.4
IMMV				S	Sn	16 10 40.4	-1.0
IMMV				AML	AML	16 11 07.7	
	comp=N,230μm,0.5s						
IMMV				AML	AML	16 11 13.7	
	comp=E,187μm,0.9s						
TAVA	DENIZLI_Tavas	2.94	32	iP	Pn	16 10 20.7	+2.6
TAVA				iS	Sn	16 10 49.8	-2.6
TAVA					IAML	16 10 59.0	
	comp=E,19nm,0.4s						
TAVA					IAML	16 11 00.0	
	comp=N,19nm,0.3s						
GOLH	Golhisar	3.08	42	iP	Pn	16 10 23.4	+3.3
GOLH				iS	Sn	16 10 54.6	-1.3
GOLH					IAML	16 11 03.0	
	comp=N,21nm,0.4s						
GOLH					IAML	16 11 20.0	
	comp=E,14nm,1.1s						
ANKY	Antikythira Is	3.12	288	P	Pn	16 10 21.4	+0.9
KTHA	Kythira Island	3.43	293	P	Pn	16 10 25.3	+0.6
CHOS	Chios island	3.48	348	P	Pn	16 10 27.1	+1.7
VLI	Veliai	3.70	299	P	Pn	16 10 29.2	+0.7
VLI				AML	AML	16 11 13.4	
	comp=N,98μm,0.5s						
VLI				AML	AML	16 11 14.6	
	comp=E,95μm,0.4s						
SLUM	Salum	3.78	203	S	Sn	16 11 03.0	-10
	baz=206						
SLUM				AMP		16 11 00.0	
	baz=206						
DID	Didima	3.93	311	P	Pn	16 10 32.8	+1.2
LTK	Loutraki	4.43	314	P	Pn	16 10 39.1	+0.8
KLV	Kalavryta, Ach	4.94	310	P	Pn	16 10 46.8	+1.4
SWA2		5.86	193	P	Pn	16 10 57.0	-0.9
	baz=194						
SWA2				S	Sn	16 11 55.6	-8.1
	baz=194						
SWA2				AMP		16 12 00.0	
	baz=194						
KOT	Kottamia	6.50	139	P	Pn	16 11 05.0	-1.7
	baz=136						
KOT				S	Sn	16 12 12.3	-7.2
	baz=136						
HHAG	Hagoal	6.63	138	P	Pn	16 11 06.7	-1.7
	baz=134						
GLL	Jalalah	6.72	142	P	Pn	16 11 08.0	-1.7
	baz=138						
RSH		6.95	123	P	Pn	16 11 11.0	-1.8
	baz=119						
HFRF	Wahat Farafira	7.89	171	P	Pn	16 11 24.7	-1.0
	baz=170						

IDC **27** *16:15:20.4±1.7, 7.01S×129.21E, h0km, mb3.3/1, mb1 3.9/4, mb1mx3.5/41, mbtmp3.7/4, ML3.9/3, Error ellipse: s-maj=65.7km s-min=28.6km az=78.0*
NEIC **27** *16:15:30.2±2.7, 6.84S±0.08×130.1E±0.1, h153km±14km, mb4.6/5, Error ellipse: s-maj=15.5km s-min=10.9km az=76.0*
ISC 27 16:15:29.7±0.7, **6.87S**±0.05×**130.16E**±0.09, **h150km, n21,** σ2s87/26, **mb4.6**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.58	135	Pn	Pn	16 16 01.5	+1.4
FAKI	Fak Fak	4.44	28	Pn	Pn	16 16 36.6	+0.9
FAKI					Sn	16 17 23.2	-4.0
MTN	Manton Dam	6.01	171		Pn	16 16 57.3	+0.7
MTN					Sn	16 18 01.1	-3.6
SIJI	Sorong	6.06	11	Pn	Pn	16 16 57.7	+0.5
	0.7nm,0.3s,baz=197,slow=19,SNR=14						
SIJI				Sn	Sn	16 18 02.2	-3.5
	3.3nm,0.3s,baz=240,slow=22,SNR=9.8						
SOEI	Soe	6.50	243	Pn	Pn	16 17 03.6	+0.4
KNRA	Kununurra	8.86	189	Pn	Pn	16 17 33.9	-0.7
KNRA					Sn	16 19 07.4	-5.7
LUWI	Luwuk	9.37	308	Pn	Pn	16 17 40.0	-1.4
FITZ	Fitzroy Crossi	12.00	201	Pn	Pn	16 18 14.1	-2.0
WB0	Warramunga Arr	13.46	163		Pn	16 18 34.8	-0.1
WRAB	Tennant Creek	13.61	163	Pn	Pn	16 18 37.3	+0.5
WRA	Warramunga Arr	13.61	163	Pn	Pn	16 18 37.0	+0.2
	0.9nm,0.3s,baz=345,slow=13,SNR=41						
WRA				Sn	Sn	16 21 01.5	-6.1
	0.5nm,0.3s,baz=346,slow=21,SNR=5.6						
WB2	Warramunga Arr	13.62	163	Pn	Pn	16 18 36.5	-0.3
WR0	Warramunga Arr	13.69	162	Pn	Pn	16 18 37.8	+0.1
COEN	Coen	14.60	120		P	16 18 53.9	+2.2
AS31	Alice Springs	17.08	168	P	Pn	16 19 22.3	+2.6
ASAR	Alice Springs	17.09	168	P	Pn	16 19 22.4	+2.7
	0.5nm,0.3s,baz=338,slow=9.5,SNR=46						
ASAR				S	S	16 22 26.1	-3.5
	0.1nm,0.3s,baz=320,slow=16,SNR=4.4						
KKM	Kota Kinabalu	18.93	312	P	Pn	16 19 41.8	+0.2
KKM				IAmb	IAmb	16 19 50.3	
	comp=Z,21nm,1.1s						
NWAO	Narrogin (SRO)	28.58	203	P	P	16 21 15.8	+4.1
NWAO				IAmb	IAmb	16 21 57.5	
	comp=Z,26nm,1.5s						
NWAO	Narrogin (SRO)	28.58	203	P	P	16 21 15.9	+4.2
NWAO				IAmb	IAmb	16 21 57.5	
	comp=Z,31nm,1.5s						
ARMA	Armidale	30.90	142	P	P	16 21 33.6	+1.2
ARMA				IAmb	IAmb	16 21 54.5	
	comp=Z,16nm,1.3s						
MKAR	Makanchi Array	68.20	327	P	P	16 26 20.0	+6.0
	comp=Z,0.2nm,0.5s,baz=115,slow=7.7,SNR=3.0						

IDC **27** *16:25:17.9±1.2, 14.09N×93.05W, h0km, mb4.1/8, mb1 4.4/13, mb1mx4.1/46, mbtmp4.2/13, ML4.0/5, MS3.7/23, Ms1 3.7/23, ms1mx3.5/35, Error ellipse: s-maj=32.9km s-min=14.8km az=35.0*
MEX **27** *16:25:17.8±0.9, 13.85N×93.15W, h7km, MD4.4*
NEIC **27** *16:25:22.2±2.5, 14.15N±0.04×93.08W±0.05, h32km±6km, mb4.4/79, Md4.3/18(MEX), Error ellipse: s-maj=6.7km s-min=5.1km az=112.0*
GCG **27** *16:25:22.2±0.8, 13.63N×92.84W, h45km±280km, MD4.5*
ISC 27 16:25:18.9±2.3, **14.06N**±0.06×**93.10W**±0.04, **h15km**±13km, **n133,** σ1s35/133, **mb4.4**/38, **MS3.6**/20, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.17	44		Pn	16 25 39.7	-0.9
THIG					Sg	16 25 56.8	+0.1
THIG		1.17	44	iP	Pn	16 25 39.8	-0.9
THIG				iS	Sg	16 25 56.8	+0.1
ERG	Entre ros, C	1.53	76	eP	Pn	16 25 46.3	+0.6
STG3	Santiaguito 3,	1.62	66	eP	Pn	16 25 47.1	+0.1
PCIG		1.64	356		Pn	16 25 45.7	-1.4
PCIG					Sb	16 26 08.8	-0.4
PCIG		1.64	356	iP	Pn	16 25 45.7	-1.4
PCIG				iS	Sb	16 26 08.8	-0.4
FUG	Fuego 3	2.22	80	eP	Pn	16 25 55.3	0.0
FUG				eS	Sn	16 26 22.3	-0.4
CCIG	Comitan	2.40	23		Pn	16 25 59.2	+1.4
CCIG	Comitan	2.40	23		Pn	16 25 59.2	+1.4
CCIG					Sb	16 26 30.4	-0.9
CCIG	Comitan	2.40	23	eP	Pn	16 25 59.2	+1.4
CCIG				iS	Sb	16 26 30.4	-0.9
PCG	Pacaya	2.44	82	eP	Pn	16 25 58.7	+0.3
PCG				eS	Sn	16 26 26.7	-1.4
IXG	Ixpaco	2.58	87	eP	Pn	16 25 59.9	-0.4
TGIG		2.70	360		Pn	16 26 02.7	+0.8
TGIG					Sn	16 26 35.9	+1.6
TGIG		2.70	360	eP	Pn	16 26 02.7	+0.8
TGIG				iS	Sn	16 26 35.9	+1.6
APG	El Apazote	2.72	70	Pn	Pn	16 26 02.9	+0.6
	19nm,0.3s,baz=284,slow=6.3,SNR=49						
APG				Sn	Sn	16 26 37.1	+2.1
	34nm,0.3s,baz=307,slow=16,SNR=5.6						
NBG	Las Nubes	2.72	79	eP	Pn	16 26 04.0	+1.7
HUIG	Huatulco	3.37	301		Pn	16 26 09.8	-1.2
HUIG					Sn	16 26 49.6	-1.1
HUIG	Huatulco	3.37	301	eP	Pn	16 26 09.8	-1.2
HUIG				iS	Sn	16 26 49.6	-1.1
MRL	Marmol	3.46	73	eP	Pn	16 26 13.7	+1.2
CMIG	Matias Romero	3.47	331	Pn	Pn	16 26 12.8	+0.4
	7.3nm,0.3s,baz=138,slow=10,SNR=65						
CMIG				Sn	Sn	16 26 56.9	+3.8

37nm,0.3s,baz=324,slow=19,SNR=6.7
CMIG LR LR 16 27 07.6
comp=Z,194nm,21.6s,baz=178,slow=32
CMIG Matias Romero 3.47 331 Pn 16 26 11.9 -0.5
CMIG Matias Romero 3.47 331 eP **Pn 16 26 11.9 -0.5**
CMIG iS **Sn 16 26 54.0 +0.9**
TLIG Tlapa 6.31 304 Pn 16 26 53.7 +2.2
TEIG Tepich 7.67 36 Pn **Pn 16 27 09.8 -0.3**
17nm,0.3s,baz=311,slow=2.0,SNR=53
TEIG Sn **Sn 16 28 35.4 -1.3**
5.3nm,0.3s,baz=319,slow=18,SNR=4.2
TEIG LR LR 16 30 29.1
comp=Z,1µm,20.5s,baz=321,slow=41
TEIG Tepich 7.67 36 Pn 16 27 09.0 -1.1
JTS Las Juntas de 8.80 114 Pn **Pn 16 27 27.5 +1.8**
0.8nm,0.3s,baz=14,slow=17,SNR=3.3
JTS Las Juntas de 8.80 114 Pn **Pn 16 27 27.1 +1.4**
HKT Hockley 16.01 351 Pn 16 29 04.7 +1.2
JCT Junction City 17.47 340 P **P 16 29 22.9 -0.3**
JCT IAmb IAmb 16 29 30.0
comp=Z,34nm,1.6s
TX31 Lajitas Ar. Si 18.07 329 P **P 16 29 30.5 +0.5**
TX32 Lajitas Array 18.07 329 P **P 16 29 30.5 +0.5**
TXAR Lajitas Array 18.07 329 P **P 16 29 32.5 +2.5**
comp=Z,0.1nm,0.3s,baz=156,slow=9.6,SNR=23
TXAR LR LR 16 37 25.6
comp=Z,72nm,18.4s,baz=0.0,slow=40
352A Blakely 18.89 22 P **P 16 29 39.0 +0.2**
ABTX Abilene, Hawle 19.42 343 P **P 16 29 44.2 -0.5**
LRAL Lakeview Retre 19.69 15 P **P 16 29 47.8 +0.2**
152A Waverly Hall 20.04 21 P **P 16 29 50.5 -0.9**
152A IAmb IAmb 16 29 58.0
comp=Z,16nm,0.8s
Z50A Ashland 20.19 18 P **P 16 29 51.4 -1.7**
Z50A IAmb IAmb 16 30 08.9
comp=Z,16nm,1.1s
MIAR Mount Ida 20.40 359 P **P 16 29 54.8 -0.5**
MIAR IAmb IAmb 16 30 04.3
comp=Z,29nm,1.0s
Z51A Franklin 20.48 19 P **P 16 29 56.9 +0.7**
Z51A IAmb IAmb 16 30 11.3
comp=Z,22nm,1.2s
X37A Clayton 20.54 355 P Pn 16 29 59.9 +0.8
X37A IAmb IAmb 16 30 02.2
comp=Z,14nm,0.8s
MNTX Cornudas Mount 20.85 329 P Pn 16 30 01.6 -1.2
X48A Hartselle 21.03 14 P **P 16 30 02.5 +0.4**
X48A IAmb IAmb 16 30 10.4
comp=Z,12nm,0.9s
W41B Gary Mavity, V 21.04 2 P **P 16 30 02.7 +0.5**
W39A Magazine 21.05 358 P **P 16 30 03.2 +0.8**
W39A IAmb IAmb 16 30 17.7
comp=Z,28nm,1.5s
GOGA Godfrey 21.16 23 P **P 16 30 01.3 -2.2**
GOGA IAmb IAmb 16 30 04.4
comp=Z,17nm,0.8s
WMOK Wichita Mounta 21.22 347 P **P 16 30 04.2 0.0**
FCAR Ozark Folk Cen 21.75 2 P **P 16 30 09.1 -0.8**
FCAR IAmb IAmb 16 30 12.9
comp=Z,10nm,0.9s
LCAR Lake Charles 21.98 4 P **P 16 30 11.4 -1.0**
LCAR IAmb IAmb 16 30 23.1
comp=Z,14nm,1.0s
AMTX Amarillo 22.13 341 P **P 16 30 14.3 +0.2**
HHAR Hobbs 22.14 358 P **P 16 30 13.4 -0.7**
HHAR IAmb IAmb 16 30 16.4
comp=Z,17nm,1.3s
W50A Signal Mountai 22.19 17 P **P 16 30 15.5 +0.9**
U40A Yellville 22.20 1 P **P 16 30 14.8 +0.1**
U40A IAmb IAmb 16 30 16.5
comp=Z,8.0nm,0.8s
SDV Santo Domingo 22.60 101 P **P 16 30 20.4 +1.0**
comp=Z,6.9nm,0.9s,baz=294,slow=5.6,SNR=9.0
SDV LR LR 16 40 48.9
comp=Z,114nm,19.3s,baz=268,slow=41
SDV Santo Domingo 22.60 101 P **P 16 30 20.4 +1.0**
121A Cookes Peak, D 22.75 326 P **P 16 30 23.1 +2.3**
121A IAmb IAmb 16 30 25.2
comp=Z,18nm,0.9s
T35A Sooner Cattle 22.96 353 P **P 16 30 20.9 -1.9**
T35A IAmb IAmb 16 30 22.9
comp=Z,15nm,0.9s
MGMO Mountain Grove 23.01 2 P **P 16 30 22.4 -0.9**
TKL Tuckaleechee C 23.08 20 LR LR 16 40 43.3
comp=Z,180nm,18.7s,baz=196,slow=40
S39A Bolivar 23.53 360 P **P 16 30 26.8 -1.7**
CCM Cathedral Cave 23.95 4 P **P 16 30 30.8 -1.8**
ANMO Albuquerque 24.03 332 P **P 16 30 35.1 +1.5**
comp=Z,2.2nm,0.8s,baz=143,slow=9.4,SNR=6.1
ANMO LR LR 16 41 35.6
comp=Z,93nm,20.1s,baz=149,slow=41
ANMO Albuquerque 24.03 332 P **P 16 30 35.0 +1.4**
TUC Tucson 24.31 321 P **P 16 30 38.3 +2.2**
TUC IAmb IAmb 16 30 41.1
comp=Z,14nm,1.4s
V58A Windy Hill, Pi 25.02 28 P **P 16 30 43.6 +1.2**
V58A IAmb IAmb 16 30 48.8
comp=Z,16nm,1.0s
T25A Trinidad 25.10 338 P **P 16 30 44.9 +1.5**
ATAH Atahualpa 25.62 144 LR LR 16 38 55.7
comp=Z,69nm,19.7s,baz=307,slow=32
SDCO Great Sand Dun 26.04 337 P **P 16 30 53.2 +1.3**
SDCO IAmb IAmb 16 30 58.2
comp=Z,11nm,1.1s
X16A Lo Mia Camp, P 26.19 324 P **P 16 30 54.9 +1.7**
SJG San Juan 26.20 78 LR LR 16 42 16.4
comp=Z,96nm,19.8s,baz=276,slow=39
CBYP Canovanas 26.49 77 P **P 16 30 50.8 -5.1**
S22A 4UR Ranch, Cre 26.56 335 P **P 16 30 58.4 +1.8**
S22A IAmb IAmb 16 31 03.8
comp=Z,8.5nm,1.1s
MVCO Mesa Verde 26.83 332 P **P 16 31 00.8 +1.8**
MVCO IAmb IAmb 16 31 10.9
comp=Z,8.0nm,0.9s
SMCO Snowmass 27.85 336 P **P 16 31 09.7 +1.4**
SMCO IAmb IAmb 16 31 16.3
comp=Z,17nm,1.4s
U15A North Rim 28.13 326 P **P 16 31 11.8 +1.1**
PFO Pinyon Flats O 28.78 317 LR LR 16 42 57.1
comp=Z,150nm,21.2s,baz=162,slow=37
O20A White River Ci 29.17 336 P **P 16 31 19.5 -0.4**
N58A Sunbury 30.27 25 P **P 16 31 27.4 -1.9**
WVNY West Valley, N 30.90 21 P **P 16 31 32.6 -2.3**
TCUT Toone Canyon 31.32 333 P **P 16 31 39.8 +0.8**
PDAR Pinedale Array 31.93 337 P **P 16 31 45.5 +1.2**
comp=Z,1.1nm,0.9s,baz=141,slow=9.6,SNR=6.7
PDAR LR LR 16 45 32.9
comp=Z,52nm,18.9s,baz=152,slow=38
NV11 Mina Array Sit 32.87 322 P **P 16 31 54.9 +2.4**
NV11 IAmb IAmb 16 32 04.7
comp=Z,6.0nm,0.9s
REDW Red Top Meadow 32.94 336 P **P 16 31 53.9 +0.8**
NVAR Mina Array Bea 32.96 322 P **P 16 31 56.2 +2.9**
comp=Z,3.1nm,0.8s,baz=137,slow=8.9,SNR=20
NVAR LR LR 16 47 05.3
comp=Z,220nm,18.7s,baz=177,slow=40
SNOW Snow King Moun 32.99 336 P **P 16 31 54.1 +0.5**
TPAW Teton Pass 33.09 336 P **P 16 31 54.8 +0.3**
FXWY Fox Creek 33.24 336 P **P 16 31 56.8 +1.0**
IMW Indian Meadow 33.42 336 P **P 16 31 58.2 +0.8**
IMW IAmb IAmb 16 32 12.6
comp=Z,3.8nm,0.8s
FLWY Flagg Ranch 33.49 337 P **P 16 31 59.3 +1.5**
FLWY IAmb IAmb 16 32 10.7
comp=Z,5.7nm,0.9s
YPP Pitchstone Pla 33.69 337 P **P 16 32 02.9 +3.2**
LKWY Lake 33.78 338 P **P 16 32 01.8 +1.3**
LKWY IAmb IAmb 16 32 14.2
comp=Z,9.4nm,1.2s
YMP Mirror Lake Pl 33.84 338 P **P 16 32 02.6 +1.5**
RLMT Red Lodge 33.86 339 P **P 16 32 01.9 +0.8**
RLMT IAmb IAmb 16 32 02.9
comp=Z,7.0nm,1.2s
YNE Yellowstone No 34.02 338 P **P 16 32 03.3 +0.8**
MDND Maddock 34.12 352 P **P 16 32 02.1 -0.9**
YHH Holmes Hill 34.14 337 P **P 16 32 04.7 +1.0**
AGMN Agassiz Nation 34.21 357 P **P 16 32 02.2 -1.6**
AGMN IAmb IAmb 16 32 24.6
comp=Z,8.0nm,1.5s
YHL Hebgen Lake 34.32 337 P **P 16 32 06.1 +0.9**
MCMT McKenzie Canyo 34.96 335 P **P 16 32 11.5 +0.9**
DLMT Dillon 35.30 336 P **P 16 32 14.8 +1.4**
WVOR Wild Horse Val 35.85 327 P **P 16 32 19.0 +0.8**
ULM Lac du Bonnet 36.15 357 P **P 16 32 18.8 -1.7**
comp=Z,3.0nm,0.8s,baz=182,slow=9.2,SNR=6.8
ULM LR LR 16 50 21.6
comp=Z,91nm,18.2s,baz=157,slow=42
ULM Lac du Bonnet 36.16 357 P **P 16 32 18.4 -2.2**
EGMT Eagleton 36.58 341 P **P 16 32 24.9 +0.7**
MSO Missoula 37.04 336 P **P 16 32 28.2 -0.1**
MSO IAmb IAmb 16 32 35.7
comp=Z,6.4nm,1.1s
F10A Beach Ranch, E 37.75 332 P **P 16 32 34.9 +0.6**
F10A IAmb IAmb 16 32 45.7
comp=Z,8.0nm,1.0s
JTMT Jette 37.92 337 P **P 16 32 35.8 0.0**
JTMT IAmb IAmb 16 32 37.5
comp=Z,5.4nm,1.0s
WALA Waterton Lakes 38.87 338 P **P 16 32 46.0 +2.2**
WALA IAmb IAmb 16 32 49.5
comp=Z,15nm,1.6s
FFC Flin Flon 41.16 352 P **P 16 33 00.4 -2.1**
SIV San Ignacio 43.52 132 P **P 16 33 23.1 +0.8**
comp=Z,0.8nm,0.7s,baz=307,slow=11,SNR=4.1
RPN Rapa Nui 43.87 201 LR LR 16 47 23.7
comp=Z,72nm,20.6s,baz=18,slow=30
SCHQ Schefferville 45.54 21 LR LR 16 54 31.3
comp=Z,283nm,18.5s,baz=240,slow=38
YKA Yellowknife Ar 50.73 347 P **P 16 34 18.4 +0.6**
comp=Z,8.7nm,0.8s,baz=150,slow=7.6,SNR=77
PLCA Paso Flores 58.39 160 LR LR 16 55 07.3
comp=Z,75nm,20.4s,baz=220,slow=31
INK Inuvik 60.08 344 P **P 16 35 25.9 +0.8**
comp=Z,5.9nm,0.9s,baz=125,slow=6.4,SNR=15
INK Inuvik 60.08 344 P **P 16 35 25.0 0.0**
IL31 62.36 337 P **P 16 35 41.3 +0.8**
IL31 IAmb IAmb 16 35 49.6
comp=Z,3.5nm,0.9s
ILAR Eielson Array 62.36 337 P **P 16 35 41.5 +0.9**
comp=Z,1.7nm,0.9s,baz=140,slow=5.0,SNR=14
ILAR LR LR 17 03 14.6
comp=Z,43nm,18.0s,baz=116,slow=36
RND Reindeer 62.52 335 P **P 16 35 42.2 +0.4**
MLY Manley 63.95 336 P **P 16 35 51.5 +0.3**
MLY IAmb IAmb 16 36 00.9
comp=Z,3.3nm,0.8s
PPT Papeete 63.97 242 LR LR 16 57 41.1
comp=Z,48nm,21.9s,baz=138,slow=30
BILL Bilibino 81.00 338 P **P 16 37 33.4 +0.6**
BILL IAmb IAmb 16 37 34.3
comp=Z,5.8nm,1.0s
NOA NORSAR Array B 84.60 28 LR LR 17 13 26.3
comp=Z,59nm,21.7s,baz=285,slow=34
ARCES ARCESS Array B 86.41 18 LR LR 17 16 58.7
comp=Z,50nm,18.4s,baz=297,slow=36
TIXI Tiksi 89.97 348 P **P 16 38 16.8 -0.5**
TIXI IAmb IAmb 16 38 27.5
comp=Z,3.6nm,1.1s
GERES GERESS Array B 90.23 39 LR LR 17 17 58.9
comp=Z,35nm,19.2s,baz=305,slow=35
FINES FINESS Array B 90.89 25 LR LR 17 19 39.2
comp=Z,44nm,18.0s,baz=278,slow=36
NRIK Noril'sk 96.81 360 LR LR 17 27 03.7
comp=Z,75nm,18.5s,baz=5.0,slow=38
AKASG Malin Array Be 98.26 33 LR LR 17 26 20.4
comp=Z,37nm,18.1s,baz=315,slow=37
HHC Hu-ho-hao-te 120.78 338 eP **PKiKP 16 44 12.0 +0.9**
WMQ Urumqi 122.39 359 eP **PKiKP 16 44 18.4 +0.7**
KSH Kashi 125.73 10 PKP **PKiKP 16 44 21.5 +0.6**
LZH Lanzhou 127.61 343 ePKP **PKPdf 16 44 24.3 0.0**
LZH pPKP sPKPdf 16 44 36.5 +6.7
LZH sPKP 16 44 41.0
CMAR Chiang Mai Arr 145.57 339 PKPbc **PKPab 16 44 58.0 +0.1**
comp=Z,2.5nm,0.8s,baz=336,slow=3.6,SNR=24

IDC 27 16:31:55.8±24.0, 17.°62S×178.°72W, h466km±213km, mb2.8/3, mb1 3.1/3, mb1mx2.8/29, mbtmp3.6/3, Error ellipse: s-maj=271.5km s-min=48.0km az=131.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.40	259	P	P	16 39 23.5	-0.5
	0.2nm,0.5s,baz=95,slow=7.6,SNR=8.1						
ASAR	Alice Springs	44.59	254	P	P	16 39 25.8	+0.2
	1.0nm,0.4s,baz=89,slow=7.8,SNR=58						
ASAR				PcP	PcP	16 40 58.4	-0.5
	0.2nm,0.4s,baz=105,slow=4.1,SNR=7.4						
ILAR	Eielson Array	85.68	13	P	P	16 43 43.7	-0.2
	0.2nm,0.4s,baz=225,slow=5.7,SNR=4.4						
GERES	GERESS Array B	147.26	345	PKPbc	PKPbc	16 50 45.8	-0.4
	0.1nm,0.2s,baz=17,slow=4.1,SNR=3.7						

CNRM 27 16:33:11.6±0.3, 32.°91N×5.°33W, h5km, Error ellipse: s-maj=2.9km s-min=2.5km az=116.0
MDD 27 16:33:12.1±2.8, 33.°07N×5.°31W, h0km, mb3.8/5, Error ellipse: s-maj=32.6km s-min=24.0km az=68.0, PRXIMO
INMG 27 16:33:12.5±1.0, 33.°15N×5.°11W, h10km, ML2.2, Error ellipse: s-maj=6.2km s-min=2.2km az=53.0
ISC 27 16:33:11.7±1.0, 33.°04N±0.°02×5.°26W±0.°03, h16km±9km, n35, σ1.°56/68, 1C, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MD31	MD31	0.46	112	P	Pg	16 33 20.2	-0.8
MD31				S	Sg	16 33 26.1	-1.2
MDT	Midelt	0.60	112	P	Pg	16 33 22.8	-0.7
MDT				S	Sg	16 33 30.2	-1.3
LCRM	LCR	0.72	28	P	Pg	16 33 25.2	-0.8
LCRM				S	Sn	16 33 37.6	-0.7
SICH	Sidi Chahed	1.06	358	P	Pn	16 33 33.8	+1.8
SICH				S	Sn	16 33 50.9	+4.6
ZHG	ZHG	1.22	290	P	Pb	16 33 34.9	+0.4
ZHG				S	Sg	16 33 52.1	+0.7
AVE	Averroes	1.82	279	eP	Pg	16 33 48.5	+1.8
AVE				eS	Sb	16 34 07.7	+0.4
ARF	Arif	1.83	151	P	Pn	16 33 43.8	+1.2
ARF				S	Sn	16 34 05.1	-0.5
AKLM	AKL	1.87	38	P	Pg	16 33 47.6	0.0
AKLM				S	Sg	16 34 14.5	+2.6
RSA	Sarsar	1.89	346	P	Pb	16 33 46.8	+0.8
RSA				S	Sg	16 34 12.5	-0.3
CHEFC	Chefchaouen	2.06	358	P	Pb	16 33 49.4	+0.6
CHEFC				S	Sg	16 34 18.4	+0.3
TZRR	Tazzarine	2.27	187	P	Pn	16 33 48.2	-0.4
TZRR				S	Sn	16 34 17.8	+1.5
OUZM	OUZ	2.48	211	P	Pn	16 33 53.6	+2.0
OUZM				S	Sb	16 34 25.2	-1.1
TDRA	Tendrara	2.72	89	P	Pn	16 33 55.6	+0.8
TDRA				S	Sn	16 34 29.3	+1.8
OUK	Oukaimeden	2.87	231	P	Pn	16 33 56.8	-0.3
OUK				S	Sn	16 34 29.9	-1.6
ZGR	Zagora	2.93	186	P	Pn	16 33 57.7	-0.1
ZGR				S	Sn	16 34 34.0	+1.4
TTIG	Tnine Tigouga,	3.68	228	P	Pn	16 34 06.9	-1.2
TTIG				S	Sn	16 34 50.9	-0.2
PBDV	Barranco-do-Ve	4.73	333	⇑eP	Pn	16 34 22.3	0.0
PBDV				eS	Sn	16 35 14.6	-2.2
PBDV				A	A	16 35 19.9	
	3.2nm,1.3s						
PBDV	Barranco-do-Ve	4.73	333	P	Pn	16 34 22.3	0.0
PBDV				S	Sn	16 35 14.6	-2.2
	3.2nm,1.3s						
PVAQ	Vaqueiros	4.79	336	eP	Pn	16 34 23.1	-0.1
PVAQ				eS	Sn	16 35 16.2	-2.2
PVAQ				A	A	16 35 16.5	
	3.2nm,0.4s						
PVAQ	Vaqueiros	4.79	336	P	Pn	16 34 23.1	-0.1
PVAQ				S	Sn	16 35 16.2	-2.2
	3.2nm,0.4s						
EGRO	El Granado	4.83	339	P	Pn	16 34 24.1	+0.3
	2.1nm,0.1s,SNR=14						
EGRO				S	Sn	16 35 17.0	-2.4
	2.3nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	4.85	347	P	Pn	16 34 24.5	+0.5
	0.5nm,0.1s,SNR=7.9						
EMIN				S	Sn	16 35 17.9	-2.0
	0.8nm,0.2s,SNR=7.9						
ECAB	El Cabril	5.02	359	P	Pn	16 34 27.4	+1.0
	0.8nm,0.4s,SNR=7.9						
ECAB				S	Sn	16 35 20.9	-3.3
	1.1nm,0.3s,SNR=7.9						
PCVE	Castro Verde	5.11	334	eP	Pn	16 34 29.0	+1.4
PCVE				eS	Sn	16 35 24.3	-1.9
PCVE				A	A	16 35 27.7	
	2.4nm,0.3s						
PCVE	Castro Verde	5.11	334	P	Pn	16 34 29.0	+1.4
PCVE				S	Sn	16 35 24.3	-1.9
	2.4nm,0.3s						
EADA	Adamuz	5.14	6	P	Pn	16 34 29.2	+1.1
	0.4nm,0.1s,SNR=7.9						
EADA				S	Sn	16 35 25.1	-2.0
	0.6nm,0.1s,SNR=7.9						
PTEO	Sao Teotonio	5.31	329	eP	Pn	16 34 30.6	+0.3
PTEO				eS	Sn	16 35 29.1	-2.0
PTEO	Sao Teotonio	5.31	329	P	Pn	16 34 30.6	+0.3
PTEO				S	Sn	16 35 29.1	-2.0
PNCL	Nicolau / Gran	5.71	333	eP	Pn	16 34 36.7	+0.8
PNCL				eS	Sn	16 35 38.7	-2.4
PNCL				A	A	16 35 46.9	
	1.4nm,0.5s						
PNCL	Nicolau / Gran	5.71	333	P	Pn	16 34 36.7	+0.8
PNCL				S	Sn	16 35 38.7	-2.4
	1.4nm,0.5s						
EBAD	Badajoz	5.87	346	P	Pn	16 34 38.7	+0.6
	0.9nm,0.2s,SNR=7.9						
EBAD				S	Sn	16 35 42.6	-2.4
	1.9nm,0.2s,SNR=7.9						
PMTG	Montargil	6.47	339	eP	Pn	16 34 46.5	+0.2
PMTG	Montargil	6.47	339	P	Pn	16 34 46.5	+0.2
PMRV	Marv??o	6.60	345	eP	Pn	16 34 48.6	+0.5
PMRV				eS	Sn	16 36 00.7	-2.3
PMRV	Marv??o	6.60	345	P	Pn	16 34 48.6	+0.5
PMRV				S	Sn	16 36 00.7	-2.3

IDC 27 16:34:59.4±6.8, 17.°15S×179.°16W, h520km±72km, mb3.0/7, mb1 3.4/7, mb1mx3.1/30, mbtmp3.8/7, Error ellipse: s-maj=87.6km s-min=21.5km az=149.0
NEIC 27 16:35:00.2±1.4, 17.°52S±0.°09×178.°9W±0.°1, h539km±10km, mb4.4/8, Error ellipse: s-maj=18.9km s-min=11.7km az=66.0
ISC 27 16:35:00.2±0.8, 17.°5S±0.°2×179.°0W±0.°2, h539km, n18, σ0.°79/19, mb3.6/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.86	265	P	P	16 36 14.7	+1.1
KNTN	Kanton	16.25	27	P	P	16 38 21.7	-0.9
OUZ	Omahuta	18.87	199	P	P	16 38 47.2	+0.8
THZ	Tophouse	25.18	194	P	P	16 39 41.2	-1.9
ARMA	Armidale	29.70	239	P	P	16 40 23.3	+0.5
ARMA				IAmb	IAmb	16 40 41.6	
	comp=Z,30nm,1.8s						
STKA	Stephens Creek	38.37	241	P	P	16 41 35.1	-0.4
STKA				IAmb	IAmb	16 41 40.7	
	comp=Z,3.3nm,1.6s						
BBOO	Buckleboo	43.15	240	P	P	16 42 13.0	-0.5
BBOO				IAmb	IAmb	16 42 13.3	
	comp=Z,48nm,1.4s						
WRA	Warramunga Arr	44.19	259	P	P	16 42 21.3	-0.5
	comp=Z,0.7nm,1.1s,baz=111,slow=7.0,SNR=3.1						
WRA				PcP	PcP	16 43 55.0	+0.2
	comp=Z,0.2nm,0.6s,baz=109,slow=2.9,SNR=3.3						
AS31	Alice Springs	44.40	254	P	P	16 42 23.1	-0.2
ASAR	Alice Springs	44.40	254	P	P	16 42 23.2	-0.1
	comp=Z,1.0nm,0.4s,baz=89,slow=7.9,SNR=31						
ASAR				PcP	PcP	16 43 55.5	0.0
	comp=Z,0.2nm,0.4s,baz=101,slow=4.0,SNR=7.6						
VNDA	Vanda	60.82	185		P	16 44 27.0	+7.3
VNDA				IAmb	IAmb	16 44 37.3	
	comp=Z,29nm,1.6s						
NVAR	Mina Array Bea	79.49	44	P	P	16 46 11.6	+0.3
	comp=Z,0.7nm,0.7s,baz=225,slow=9.1,SNR=5.8						
ILAR	Eielson Array	85.59	13	P	P	16 46 40.5	-0.6
	comp=Z,0.4nm,0.4s,baz=223,slow=5.3,SNR=10						
TXAR	Lajitas Array	86.22	58	P	P	16 46 46.5	+1.4
	comp=Z,0.6nm,0.8s,baz=223,slow=6.1,SNR=8.4						
PDAR	Pinedale Array	87.41	44	P	P	16 46 50.6	0.0
	comp=Z,0.6nm,0.6s,baz=198,slow=4.5,SNR=6.1						
YKA	Yellowknife Ar	94.17	25	P	P	16 47 20.5	-0.5
	comp=Z,0.2nm,0.7s,baz=239,slow=4.3,SNR=3.5						
BRTR	Keskin Array B	144.11	315	PKP	PKPdf	16 53 35.1	0.0
	comp=Z,0.5nm,0.6s,baz=101,slow=3.2,SNR=3.8						
GERES	GERESS Array B	147.06	345	PKPbc	PKPbc	16 53 43.0	+0.2
	comp=Z,0.1nm,0.3s,baz=40,slow=2.3,SNR=5.3						

IDC 27 16:44:01.3±3.2, 14.°22S×66.°22E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/36, mbtmp3.4/4, MS3.3/4, Ms1 3.3/4, ms1mx2.8/25, Error ellipse: s-maj=107.3km s-min=33.7km az=59.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	8.96	44	T	T	16 55 39.2	
	baz=224,slow=75,SNR=14						
H08S2	Diego Garcia H	8.97	44	T	T	16 55 40.9	
	baz=224,slow=75,SNR=16						
H08S3	Diego Garcia H	8.98	44	T	T	16 55 44.6	
	baz=224,slow=75,SNR=20						
H08N3	Diego Garcia H	9.12	31	T	T	16 55 44.1	
	baz=211,slow=76,SNR=421						
H08N1	Diego Garcia H	9.14	32	T	T	16 55 47.2	
	baz=211,slow=76,SNR=286						
H08N2	Diego Garcia H	9.14	31	T	T	16 55 47.8	
	baz=211,slow=76,SNR=269						
PALK	Pallekele	25.74	35	LR	LR	16 57 02.8	
	comp=Z,56nm,20.4s,baz=206,slow=30						
BRDH	Bariadhala	44.32	35	LR	LR	17 13 17.0	
	comp=Z,42nm,18.4s,baz=268,slow=40						
CMAR	Chiang Mai Arr	45.76	46	LR	LR	17 09 38.6	
	comp=Z,13nm,19.3s,baz=135,slow=34						
TSUM	Tsumeb	46.73	257	LR	LR	17 10 52.6	
	comp=Z,54nm,18.6s,baz=144,slow=34						
MKAR	Makanchi Array	62.42	12	P	P	16 54 25.6	-0.5
	0.2nm,0.6s,baz=209,slow=7.7,SNR=2.9						
ASAR	Alice Springs	64.21	110	P	P	16 54 38.2	-0.4
	0.2nm,0.6s,baz=274,slow=5.7,SNR=5.2						
WRA	Warramunga Arr	64.99	106	P	P	16 54 43.9	+0.2
	0.5nm,0.8s,baz=271,slow=5.9,SNR=5.2						
SONM	Songino Array	71.41	27	P	P	16 55 24.0	+0.6
	0.5nm,0.8s,baz=224,slow=5.7,SNR=3.2						
PDAR	Pinedale Array	151.32	354	PKPbc	PKPbc	17 03 57.4	-0.1
	0.3nm,0.4s,baz=318,slow=1.2,SNR=3.6						

SOME 27 17:08:55.1, 42.°15N×83.°85E, h5km
NNC 27 17:09:03.8±2.4, 41.°23N×83.°14E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=17.8km s-min=11.1km az=149.0
ISC 27 17:09:06.2±3.1, 42.°2N±0.°1×83.°4E±0.°1, h15km, n19, σ2.°96/31, 4C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	3.08	294	⇓Pn	Pb	17 09 57.6	-3.1
	7.6nm,1.0s						
PDGK				⇓Lg	Lg	17 10 51.5	
	9.5nm,0.5s						
UZB	Uzynbulak	3.34	289	eP	Pb	17 10 03.2	-2.0
	2.8nm,0.5s						
UZB				eS	Sb	17 10 50.8	+5.0
	17nm,0.6s						
UZB	Uzynbulak	3.34	289	Pg	Pg	17 10 09.8	-0.5
	2.8nm,0.5s						
UZB				Lg	Lg	17 11 01.4	
	17nm,0.6s						
DJR	Jarkent	3.39	311	eP	Pb	17 10 03.9	-2.1
	0.6nm,0.2s						
DJR				eS	Sb	17 10 51.8	+4.7
	3.7nm,0.5s						
KPKS	Kokpek	3.67	292	eP	Pb	17 10 09.5	-1.0
	4.6nm,0.2s						
KPKS				eS	Sb	17 11 01.0	+5.7
	20nm,0.6s						
KAPS	Kapalarasan	4.26	318	eP	Pb	17 10 19.0	-1.8
	4.0nm,0.3s						
KAPS				eS	Sb	17 11 17.5	+5.5
	7.3nm,0.4s						
KAPS	Kapalarasan	4.26	318	Pg	Pb	17 10 18.9	-1.9
	4.0nm,0.3s						
KAPS				Lg	Lg	17 11 17.5	
	5.6nm,0.3s						
ARXS	Arharly	4.53	299	eP	Pb	17 10 25.8	+0.4
	1.4nm,0.4s						
ARXS				eS	Sg	17 11 28.7	-2.9
	4.2nm,0.5s						
MK31	Makanchi Array	4.69	351	⇑Pn	Pb	17 10 29.7	+1.5
	0.1nm,0.2s,baz=172,slow=14,SNR=14						
MK31				⇑Sn	Sg	17 11 35.2	-1.5
	0.3nm,0.3s						
MK31				⇑Lg	Lg	17 11 59.9	

0.5nm,0.3s,baz=175,slow=26,SNR=5.0
KOTS Kotyrbulak 4.72 285 eP Pb 17 10 29.9 +1.1
3.5nm,0.4s
KOTS eS Sg 17 11 36.6 -1.2
21nm,0.5s
MAKZ Makanchi 4.75 348 ⇑Pn Pb 17 10 29.5 +0.4
3.9nm,1.6s
MAKZ ⇓Sn Sg 17 11 35.4 -3.2
1.4nm,0.8s
MAKZ ⇓Lg Lg 17 11 59.9
2.8nm,0.8s
MDOK Medeo 4.76 284 Pg Pg 17 10 34.8 -2.5
1.9nm,0.5s
MDOK Lg Lg 17 11 41.6
8.0nm,0.6s
CHKK Chushkaly 4.96 292 eP Pb 17 10 34.1 +1.3
0.5nm,0.1s
CHKK eS Sg 17 11 43.7 -1.9
5.3nm,0.3s
CHKK Chushkaly 4.96 292 Pg Pb 17 10 36.9 +4.1
0.5nm,0.1s
CHKK Lg Lg 17 11 47.7
5.3nm,0.3s
KTBS Karatobe 5.14 290 eP Pb 17 10 37.3 +1.5
1.0nm,0.3s
KTBS eS Sg 17 11 48.6 -2.5
12nm,0.9s
KTBS Karatobe 5.14 290 Pg Pg 17 10 43.5 -1.1
1.0nm,0.3s
KTBS Lg Lg 17 11 58.4
12nm,0.9s
KST Kastek 5.53 282 eP Pb 17 10 44.4 +1.9
1.6nm,0.5s
KST eS Sg 17 11 59.0 -4.6
4.3nm,0.4s
DGS Degeres 5.69 283 eP Pb 17 10 47.8 +2.5
1.3nm,0.5s
DGS eS Sg 17 12 06.9 -1.9
9.1nm,0.5s
DGS Degeres 5.69 283 Pg Pg 17 10 51.9 -3.3
1.3nm,0.5s
DGS Lg Lg 17 12 13.4
9.1nm,0.5s

GCG 27 17:09:40.9±0.6, 15.53N×92.07W, h142km±11km, MD3.8
MEX 27 17:09:44.2±0.3, 13.95N×92.66W, h16km±223km, MD3.9
ISC 27 17:09:30.6±4.1, 13.6N±0.2×93.2W±0.1, h33km±5km, n9, σ2.44/17, Off coast of Chiapas

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
THIG 1.54 35 i P Pb 17 10 00.2 +1.7
THIG i S Sn 17 10 12.7 -1.9
ERG Entre ros, C 1.75 63 eP Pb 17 10 03.7 +1.6
ERG eS Sb 17 10 27.2 +3.5
STG3 Santiaguito 3, 1.89 55 eP Pb 17 10 05.2 +0.7
STG3 eS Sn 17 10 24.2 +0.9
PCIG 2.06 359 eP Pb 17 10 11.6 +4.4
PCIG i S Sb 17 10 33.1 +0.7
FUG Fuego 3 2.40 70 eP Pb 17 10 11.9 -1.3
FUG eS Sn 17 10 36.6 +0.5
PCG Pacaya 2.60 73 eP Pb 17 10 14.6 -2.1
PCG eS Sb 17 10 40.7 -0.4
IXG Ixpaco 2.71 78 eP Pb 17 10 17.4 -1.0
IXG eS Sn 17 10 45.7 +2.1
CCIG Comitan 2.81 21 eP Pb 17 10 22.4 +2.1
CCIG i S Sb 17 10 50.1 -4.3
TGIG 3.12 1 i P Pb 17 10 27.1 +1.6
TGIG i S Sb 17 10 59.1 -4.1

MAN 27 17:21:29.1, 7.69N×124.65E, h23km, mb4.4, ML3.2, MS3.0, Mindanao

GUC 27 17:23:03.0, 31.21S×68.60W, h125km, ML4.7
SJA 27 17:23:04.9±0.9, 31.23S×68.68W, h111km±3km, ML4.5, MW4.4
IDC 27 17:23:05.4±0.5, 31.28S×68.66W, h105km±3km, mb4.0/10, mb1 4.1/15, mb1mx4.0/29, mbtmp4.4/13, MS3.5/1, Ms1 3.5/1, ms1mx2.8/19, Error ellipse: s-maj=21.0km s-min=11.4km az=67.0
NEIC 27 17:23:05.7±1.2, 31.22S±0.06×68.64W±0.07, h110km±2km, mb4.8/28, Md4.8(SJA), Error ellipse: s-maj=10.1km s-min=7.6km az=225.0
ISC 27 17:23:05.1±0.5, 31.16S±0.03×68.66W±0.04, h106km±4km, n110, σ1.50/132, mb4.5/19, 10C-3D, San Juan Province

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RTLL Cerro Villicun 0.23 137 ⇑i P Pn 17 23 21.1 +0.8
RTLL i S Sn 17 23 32.7 +1.2
RTLL IAML 17 23 34.1
comp=E,92µm,0.4s
RTLL Cerro Villicun 0.23 137 i P Pn 17 23 20.9 +0.6
RTLL eS Sn 17 23 32.8 +1.2
RTLL IAML 17 23 36.3
comp=Z,17µm,0.2s
AMOG MOGNA 0.26 33 i P Pn 17 23 22.0 +1.6
CFA Coronel Fontan 0.57 141 LR LR 17 23 14.4
comp=Z,38nm,21.8s,baz=180,slow=18
CFA P Pn 17 23 22.9 +0.7
comp=Z,1µm,0.3s,baz=299,slow=9.5
CFA S Sn 17 23 35.5 +0.5
comp=Z,3µm,0.3s,baz=90,slow=20,SNR=135
CFA Coronel Fontan 0.57 141 i P Pn 17 23 22.5 +0.3
CFA eS Sn 17 23 35.8 +0.9
ACCO Cerro Coronel 0.67 328 i P Pn 17 23 25.1 +1.8
RTCV Cerro Valdivia 0.71 172 i P Pn 17 23 23.8 +0.5
RTLS Leoncito 0.84 220 i P Pn 17 23 25.3 +0.5
RTLS eS Sn 17 23 40.8 +1.3
RTLS IAML 17 23 41.5
comp=Z,6µm,0.2s
ACDV Cuesta del Vie 1.06 338 i P Pn 17 23 28.6 +1.7
ACDV eS Sn 17 23 46.0 +2.7
ACDV IAML 17 23 47.5
comp=Z,5µm,0.4s
ASAL Salagasta 1.44 186 i P Pn 17 23 31.6 +0.5
ACAN Cantantal 1.67 132 i P Pn 17 23 34.8 +0.9
ARCO CERRO ARCO 1.69 188 i P Pn 17 23 34.8 +0.5
CO03 El Pedregal 1.77 280 ⇓i P Pn 17 23 37.0 +1.8
CO03 eS Sn 17 23 58.1 0.0
CO03 IAML 17 24 05.4
comp=N,9µm,0.4s
AAGR Agrelo 1.93 184 i P Pn 17 23 37.9 +0.8
APLL PUNTA DE LOS L 1.98 68 i P Pn 17 23 38.8 +1.0
CO02 Combarbal 2.01 268 eP Pn 17 23 39.1 +1.0
CO02 i S Sn 17 24 03.8 +0.4
CO02 IAML 17 24 06.6
comp=N,17µm,0.2s
GO04 Tololo Observa 2.09 298 ⇓i P Pn 17 23 40.6 +1.2
GO04 i S Sn 17 24 07.6 +2.1
GO04 IAML 17 24 13.6
comp=N,13µm,0.4s
GO04 Tololo Observa 2.09 298 Pn 17 23 40.5 +1.1
GO04 Sn Sn 17 24 07.7 +2.2
CO04 Los Peladeros 2.17 245 ⇑i P Pn 17 23 40.8 +0.5
CO04 i S Sn 17 24 07.3 0.0
CO04 IAML 17 24 09.8
comp=E,8µm,0.6s
ACLC CERRO LA CRUZ 2.27 41 i P Pn 17 23 43.9 +2.2
VCA Vinchina 2.45 9 ⇑i P Pn 17 23 46.2 +2.3
VCA i S Sn 17 24 16.2 +2.6
VCA Vinchina 2.45 9 i P Pn 17 23 46.3 +2.3
VCA IAML 17 24 22.2
comp=Z,3µm,0.3s
FCH Farellones 2.57 212 ⇑i P Pn 17 23 46.7 +1.1
FCH i S Sn 17 24 17.8 +1.1
PEL Peldehue 2.62 220 ⇑i P Pn 17 23 46.2 +0.2
PEL i S Sn 17 24 17.3 -0.2
PEL Peldehue 2.62 220 Pn 17 23 46.1 0.0
PEL Peldehue 2.62 220 i P Pn 17 23 46.5 +0.4
ROCH El Roble 2.69 227 ⇑i P Pn 17 23 46.9 -0.3
ROCH i S Sn 17 24 18.4 -1.1
ROCH IAML 17 24 23.3
comp=N,3µm,0.4s
ROC1 El Roble 2.70 227 Pn 17 23 46.9 -0.4
ROC1 El Roble 2.70 227 i P Pn 17 23 47.3 0.0
CLCH Cerro Calan 2.74 215 ⇑i P Pn 17 23 48.5 +0.8
CLCH i S Sn 17 24 20.5 +0.2
CLCH IAML 17 24 28.8
comp=N,2µm,0.6s
MT03 Universidad Ad 2.81 213 ⇑i P Pn 17 23 49.2 +0.6
MT03 i S Sn 17 24 22.1 +0.1
MT03 IAML 17 24 27.2
comp=E,4µm,0.3s
STL Santa Lucia 2.82 216 eP Pn 17 23 49.1 +0.4
STL i S Sn 17 24 22.1 -0.2
STL IAML 17 24 25.8
comp=N,2µm,0.3s
ANTU Antumapu 2.93 214 eP Pn 17 23 51.7 +1.6
ANTU i S Sn 17 24 26.7 +2.0
LMEL Las Melosas 2.98 206 ⇑i P Pn 17 23 51.6 +0.7
LMEL i S Sn 17 24 29.4 +3.2
VA01 Torpederas 3.15 233 ⇓i P Pn 17 23 51.2 -1.7
VA01 i S Sn 17 24 27.3 -2.5
CYA Choya 3.67 43 ⇑i P Pn 17 24 00.5 +0.4
CYA Choya 3.67 43 i P Pn 17 24 00.3 +0.2
GO03 Copiap 3.81 338 Pn 17 24 03.1 +1.1
GO03 Sn Sn 17 24 45.3 -0.7
GO03 Copiap 3.81 338 IPZ 17 24 03.4
PUMA Malargue 4.38 189 i P Pn 17 24 09.2 -0.3
EDS3 Malargue 4.64 187 i P Pn 17 24 12.8 -0.4
GO05 Huala 4.72 215 Pn 17 24 10.8 -3.4
AHML Horco Molle 5.24 35 i P Pn 17 24 20.8 -0.4
GO02 Mina Guanaco 6.03 352 Pn 17 24 32.6 +0.4
CCHI Chillan 6.13 207 i P Pn 17 24 30.3 -2.8
SLA San Lorenzo 6.99 24 i P Pn 17 24 46.6 +1.4
PB10 IPOC Station P 7.80 347 Pn 17 24 53.6 -2.4
PB10 IPOC Station P 7.80 347 i P Pn 17 24 53.9 -2.0
LVC Limon Verde 8.52 358 P Pn 17 25 05.1 -1.0
comp=N,16nm,0.3s,baz=183,slow=11,SNR=34
LVC S Sn 17 26 35.3 -5.4
comp=N,5.4nm,0.3s,baz=198,slow=20,SNR=3.8
LVC Limon Verde 8.52 358 Pn 17 25 04.7 -1.3
PB04 IPOC Station P 8.89 351 Pn 17 25 07.4 -3.5
PLCA Paso Flores 9.68 189 P Pn 17 25 19.5 -1.9
comp=N,1.3nm,0.3s,baz=20,slow=11,SNR=42
PLCA Paso Flores 9.68 189 Pn 17 25 18.9 -2.4
PB01 IPOC Station P 10.10 356 Pn 17 25 23.9 -3.4
CPUP Villa Florida 11.04 67 P Pn 17 25 36.4 -3.5
comp=N,0.5nm,0.3s,baz=252,slow=12,SNR=8.0
CPUP S Sn 17 27 39.3 -2.1
comp=N,2.0nm,0.3s,baz=277,slow=16,SNR=2.4
CPUP Villa Florida 11.04 67 Pn Pn 17 25 32.2 -7.7
PB11 IPOC Station P 11.39 355 Pn 17 25 40.0 -4.7
GO01 Chusmiza 11.45 357 Pn 17 25 42.5 -3.4
MNMC Minye Minye 12.01 356 Pn 17 25 49.5 -3.6
LPAZ La Paz 14.81 2 P Pn 17 26 32.0 +2.2
comp=N,1.7nm,0.3s,baz=183,slow=8.0,SNR=57
LPAZ La Paz 14.81 2 Pn 17 26 29.7 -0.1
SIV San Ignacio 16.61 26 P Pn 17 26 52.8 +0.4
comp=N,5.3nm,0.3s,baz=212,slow=9.5,SNR=95
NNA Nana 20.52 337 P P 17 27 36.8 +1.7
comp=N,5.4nm,0.5s,baz=225,slow=6.6,SNR=3.7
NNA Nana 20.52 337 IAmb IAmb 17 27 37.5
comp=Z,76nm,1.9s
EFI East Falkland 21.94 162 P 17 27 48.6 -1.2
EFI IAmb IAmb 17 28 46.1
comp=Z,148nm,1.7s
GO10 Punta Arenas 22.05 184 P P 17 27 49.4 -1.6
SAML Samuel 22.68 14 P P 17 27 57.8 0.0
SAML IAmb IAmb 17 28 03.7
comp=Z,33nm,1.3s
USHA Ushuaia 23.66 180 P P 17 28 07.0 +0.4
comp=Z,7.8nm,0.6s,baz=311,slow=9.3,SNR=6.2
BDFB Brasilia 24.38 55 P P 17 28 15.3 +1.7
comp=Z,1.8nm,0.4s,baz=190,slow=11,SNR=2.8
SDV Santo Domingo 39.86 357 P P 17 30 28.1 -0.6
SDV IAmb IAmb 17 30 29.0
comp=Z,7.9nm,1.0s
SVB Belmont 44.74 10 P P 17 31 07.0 -1.1
MLPR Magueyes Islan 48.87 2 P P 17 31 39.7 -0.4
BANI BANI 49.29 358 P P 17 31 44.0 +0.5
VNA3 Neumayer Olymp 50.95 159 P P 17 31 55.7 +0.4
VNA2 Neumayer--Watz 51.56 158 P P 17 32 00.3 +0.4
baz=287,slow=8.1
SNAA Sanae 53.16 159 P P 17 32 11.5 -0.3
comp=Z,3.9nm,0.8s,baz=258,slow=6.7,SNR=6.1
SNAA Sanae 53.16 159 IAmb IAmb 17 32 13.3
comp=Z,16nm,1.5s
TEIG Tepich 54.45 337 P P 17 32 22.2 +0.6
TX31 Lajitas Ar. Si 68.77 327 P P 17 33 59.1 +1.2
TX32 Lajitas Array 68.77 327 P P 17 33 59.0 +1.2
TXAR Lajitas Array 68.77 327 P P 17 33 59.0 +1.1
comp=Z,1.0nm,0.6s,baz=156,slow=8.4,SNR=13
TXAR pP pP 17 34 26.1 +1.1
comp=Z,0.8nm,0.8s,baz=134,slow=5.4,SNR=3.5
WVT Waverly 69.31 343 P P 17 34 00.9 +0.1
WVT IAmb IAmb 17 34 01.7
comp=Z,7.5nm,0.7s
LCAR Lake Charles 70.13 341 P P 17 34 06.8 +0.9
LCAR IAmb IAmb 17 34 07.1
comp=Z,9.2nm,0.7s
U40A Yellville 70.89 340 P P 17 34 11.3 +0.8
U40A IAmb IAmb 17 34 11.5
comp=Z,4.3nm,0.5s
S39A Bolivar 72.27 340 P P 17 34 19.2 +0.4
SUR Sutherland 73.67 118 P P 17 34 28.9 +1.2
MAW Mawson 75.06 163 P P 17 34 34.9 +0.1
comp=Z,4.0nm,0.7s,baz=176,slow=5.5,SNR=4.3
LONY Lake Ozonia 75.61 356 P P 17 34 39.5 +1.4
LONY IAmb IAmb 17 35 47.0
comp=Z,26nm,0.8s
GGN Saint George 75.93 1 P P 17 34 41.5 +1.7
TSUM Tsumeb 77.21 105 LR LR 18 04 04.7
comp=Z,27nm,20.5s,baz=146,slow=32
E63A Oxbow 77.22 0 P P 17 34 48.4 +1.3
E63A IAmb IAmb 17 36 11.9
comp=Z,77nm,1.9s
D62A Allapoint, All 77.88 360 P P 17 34 52.3 +1.5
D62A IAmb IAmb 17 34 56.2
comp=Z,54nm,1.9s
ECSD EROS Data Cent 78.80 340 P P 17 34 56.8 +0.8
ECSD IAmb IAmb 17 35 12.0
comp=Z,26nm,1.9s
BOSA Boshof 78.82 117 P P 17 34 56.9 +0.1
comp=Z,4.3nm,0.7s,baz=209,slow=3.8,SNR=8.5
BOSA Boshof 78.82 117 IAmb IAmb 17 36 47.5
comp=Z,22nm,1.6s
TOA0 Torodi Ar. Sit 80.54 68 P P 17 35 05.6 -0.4
TORD Torodi Ar. Bea 80.54 68 P P 17 35 06.6 +0.6
comp=Z,2.6nm,0.8s,baz=261,slow=5.2,SNR=11
TORD pP pP 17 35 34.9 +1.4
comp=Z,1.9nm,0.7s,baz=266,slow=4.5,SNR=5.3
DRLN Deer Lake 80.67 7 P P 17 35 06.8 +0.9
LBTB Lobatse 80.86 114 P P 17 35 07.5 -0.3
NVAR Mina Array Bea 83.27 323 P P 17 35 20.7 +0.7
comp=Z,0.4nm,0.6s,baz=150,slow=5.4,SNR=4.2
SCHQ Schefferville 85.65 1 P P 17 35 32.3 +0.9
comp=Z,2.4nm,1.1s,baz=205,slow=6.6,SNR=3.6
SCHQ Schefferville 85.65 1 IAmb IAmb 17 36 19.0
comp=Z,50nm,1.9s
ASAR Alice Springs 121.36 204 PKP PKPdf 17 41 45.4 -1.1
comp=Z,0.4nm,0.5s,baz=135,slow=1.7,SNR=9.7
WRA Warramunga Arr 124.60 207 PKP PKPdf 17 41 51.9 -0.9
comp=Z,1.0nm,0.6s,baz=172,slow=1.7,SNR=14
WRA pPKP pPKPdf 17 42 22.7 +0.6
comp=Z,0.7nm,0.3s,baz=175,slow=1.7,SNR=4.9
ZALV Zalesovo Beam 150.31 32 PKPbc PKPbc 17 42 43.5 +0.1
comp=Z,1.0nm,0.5s,baz=302,slow=4.4,SNR=5.7
ZALV pPKPbc pPKPbc 17 43 11.1 -1.5
comp=Z,1.5nm,0.5s,baz=300,slow=3.5,SNR=4.8
MKAR Makanchi Array 152.75 47 PKPbc PKiKP 17 42 49.4 -0.1
comp=Z,0.2nm,0.5s,baz=298,slow=0.3,SNR=4.3
MKAR PKPab PKPab 17 43 01.2 +0.6
comp=Z,0.4nm,0.7s,baz=335,slow=2.9,SNR=5.6
MKAR pPKPbc pPKPbc 17 43 17.6 -1.0
comp=Z,0.7nm,0.7s,baz=308,slow=1.5,SNR=4.2
WMQ Urumqi 157.47 49 ePKP PKPdf 17 42 48.0 -0.7
WMQ LR LR
comp=Z,110nm,28.9s
HHC Hu-ho-hao-te 170.33 359 ePKP PKPdf 17 43 00.0 -0.5
LZH Lanzhou 172.05 50 ePKP PKPdf 17 43 01.0 -0.6
LZH pPKP pPKPdf 17 43 28.5 -2.7
LZH LR LR
comp=Z,130nm,18.0s
LZH LR LR
comp=Z,170nm,20.2s
NJ2 Nanjing 173.53 280 ePKP PKPdf 17 43 03.5 +1.4

IDC 27 17:41:08.3±1.7, 6.66S×130.32E, h0km, mb3.3/1, mb1 3.5/5, mb1mx3.3/46, mbtmp3.5/5, ML3.3/4, Error ellipse: s-maj=66.8km s-min=24.5km az=86.0, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIJI Sorong 5.83 9 Pn Pn 17 42 36.6 +0.6
0.4nm,0.3s,baz=187,slow=23,SNR=8.4
SIJI Sn Sn 17 43 37.0 -6.6
0.4nm,0.3s,baz=229,slow=19,SNR=3.7
FITZ Fitzroy Crossi 12.26 201 Pn Pn 17 44 05.9 +1.7
0.2nm,0.3s,baz=31,slow=12,SNR=19
WRA Warramunga Arr 13.77 164 Pn Pn 17 44 23.9 -1.1
0.1nm,0.3s,baz=345,slow=13,SNR=6.9
WRA Sn Sn 17 46 46.2 -13
0.2nm,0.3s,baz=355,slow=18,SNR=6.3
ASAR Alice Springs 17.26 169 P Pn 17 45 10.6 -0.3
0.2nm,0.3s,baz=346,slow=9.3,SNR=17
ASAR S Sn 17 48 11.9 -12
0.0nm,0.3s,baz=351,slow=17,SNR=3.6
MKAR Makanchi Array 68.11 327 P P 17 52 09.9 -0.2
0.1nm,0.4s,baz=120,slow=7.3,SNR=3.6

NIED 27 17:41:00, 20.40N×120.50E, h65km, Mw4.2 Best double couple: M0 2.61000×10^15 NP1:ϕs209.00000°, δ49.00000°, λ73.00000°. NP2:ϕs54.00000°, δ43.00000°, λ108.00000°.
IDC 27 17:41:48.4±0.7, 20.23N×120.41E, h0km, mb3.9/13, mb1 4.1/15, mb1mx3.9/51, mbtmp4.0/15, ML3.7/2, MS2.8/2, Ms1 2.9/2, ms1mx2.6/36, Error ellipse: s-maj=27.9km s-min=13.8km az=70.0
NEIC 27 17:41:49.2±1.1, 20.21N±0.05×120.5E±0.2, h7km±3km, mb4.5/4, Error ellipse: s-maj=22.3km s-min=7.4km az=91.0
JMA 27 17:41:50.5±0.4, 20.43N×120.50E, h0km, M3.8
ISC 27 17:41:49.8±0.6, 20.23N±0.05×120.33E±0.10, h10km, n34, σ1.02/34, mb4.0/15, Philippine Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TWG Pinlang 2.67 15 Pn 17 42 31.4 -1.3
SZP Santa 2.67 177 Pn Pn 17 42 31.5 -1.4
TPUB Ta-pu 3.06 5 Pn 17 42 37.1 -1.2
YULB Yu-li 3.27 16 Pn 17 42 41.4 +0.2
SSLB Suanglung 3.58 9 Pn 17 42 44.6 -0.9
NACB Ninganchiao 4.09 16 Pn 17 42 51.2 -1.2
YHNB Yeheng 4.52 12 Pn 17 42 56.9 -1.5
JKRS Kuro-shima 5.24 40 P Pn 17 43 09.3 +1.1
JIJ Ishigaki jima 5.42 40 P Pn 17 43 12.0 +1.4
JIJ eS Sn 17 44 13.0 -0.1
JISG Ishigakijimahi 5.69 40 P Pn 17 43 14.0 -0.3
JISG eS Sn 17 44 17.3 -2.4
JTJ Tarama 5.96 42 P Pn 17 43 18.4 +0.3
JTJ eS Sn 17 44 25.1 -1.4
JNU Nakatsue 15.91 34 Pn P 17 45 35.1 -2.4
0.3nm,0.3s,baz=194,slow=4.2,SNR=4.7
KSRS Korea Array 18.39 19 P P 17 46 04.7 -0.1
0.1nm,0.3s,baz=202,slow=13,SNR=4.6
KSRS LR LR 17 53 51.2
comp=Z,36nm,19.6s,baz=207,slow=39
CMAR Chiang Mai Arr 20.26 269 LR LR 17 53 22.4
comp=Z,28nm,20.8s,baz=84,slow=34
MJAR Matsushiro Arr 22.55 40 P P 17 46 50.3 +0.2
1.9nm,0.9s,baz=184,slow=12,SNR=3.6
SIJI Sorong 23.55 152 P P 17 47 00.9 +0.4
7.7nm,0.6s,baz=27,slow=6.8,SNR=8.4
SONM Songino Array 29.76 341 P P 17 47 57.1 +0.6
1.8nm,0.8s,baz=163,slow=10.0,SNR=12
MKAR Makanchi Array 40.72 320 P P 17 49 31.3 +0.6
0.6nm,0.6s,baz=114,slow=8.7,SNR=8.5
WRA Warramunga Arr 42.22 160 P P 17 49 42.4 -0.8
0.5nm,0.6s,baz=341,slow=8.9,SNR=6.2
WRA PcP PcP 17 51 37.1 -0.3
0.7nm,0.7s,baz=340,slow=3.3,SNR=4.2
ZALV Zalesovo Beam 43.19 330 P P 17 49 51.3 +0.6
1.6nm,0.6s,baz=124,slow=8.3,SNR=8.2
H11S3 WAKE ISLAND Hy 43.66 84 T T 18 36 39.7
baz=277
H11S1 WAKE ISLAND Hy 43.67 84 T T 18 36 45.0
baz=277
H11S2 WAKE ISLAND Hy 43.68 84 T T 18 36 42.0
baz=277
KURBB Kurchatov Arra 44.69 323 P P 17 50 03.6 +0.8
2.6nm,0.7s,baz=123,slow=7.7,SNR=17
ASAR Alice Springs 45.60 162 P P 17 50 10.0 -0.3
0.9nm,0.5s,baz=347,slow=7.2,SNR=22
CTA Charters Tower 47.44 146 P P 17 50 25.7 +0.9
3.0nm,0.7s,baz=288,slow=3.2,SNR=2.9
BRVK Borovoye 50.35 323 P P 17 50 47.6 +0.8
BILL Bilibino 55.65 19 P P 17 51 26.0 +0.3
BILL IAmb IAmb 17 51 27.5
comp=Z,7.4nm,1.2s
ILAR Eielson Array 73.08 27 P P 17 53 19.4 -0.5
comp=Z,0.8nm,0.8s,baz=287,slow=5.3,SNR=7.8
BRTR Keskin Array B 74.89 307 P P 17 53 32.2 +1.0
comp=Z,0.5nm,0.8s,baz=60,slow=8.5,SNR=2.9
INK Inuvik 77.17 21 P P 17 53 43.6 +0.3
comp=Z,0.8nm,0.7s,baz=286,slow=3.9,SNR=4.3
C36M Paulatuk 79.78 19 P P 17 53 57.7 -0.1
RES Resolute Bay 82.67 9 P P 17 54 13.7 +0.6
RES IAmb IAmb 17 54 13.8
comp=Z,2.3nm,0.8s
YKA Yellowknife Ar 86.90 22 P P 17 54 34.1 -0.5
comp=Z,1.7nm,0.9s,baz=318,slow=4.5,SNR=21

NNC 27 17:58:29.8±0.8, 41.89N×79.09E, h0km, mb3.1, mpv2.9, Error ellipse: s-maj=5.5km s-min=2.9km az=152.0
SOME 27 17:58:29.2, 41.92N×79.10E, h10km
KRNET 27 17:58:29.5±0.1, 41.83N×79.06E, h12km, mb2.5
ISC 27 17:58:28.5±2.2, 41.84N±0.07×79.09E±0.05, h2km±12km, n37, σ0.96/62, 10C-9D, Kyrgyzstan-Xinjiang border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PRZ Przheval'sk 0.82 322 ⇓i P Pg 17 58 45.1 +0.8
baz=24
PRZ ⇓i S Sb 17 58 56.6 -0.7
baz=24
UZB Uzynbulak 1.31 358 ⇓i P Pn 17 58 53.3 -0.7
6.0nm,0.2s
UZB ⇓i S Sn 17 59 10.6 -1.5
5.5nm,0.1s
UZB Uzynbulak 1.31 358 P Pn 17 58 53.3 -0.7
6.0nm,0.2s
UZB S Sn 17 59 10.6 -1.5
5.5nm,0.1s
ANVS Anan'yevo 1.42 312 ⇑i P Pg 17 58 56.2 +0.5
baz=13
ANVS ⇑i S Sg 17 59 15.3 +1.2
baz=13
KDJ Kajisay 1.46 282 ⇑i P Pb 17 58 56.5 +0.1
baz=83
KDJ ⇑i S Sg 17 59 15.8 +0.5
baz=83
PDGK Podgornoye 1.52 11 P Pb 17 58 56.9 -0.6
1.5nm,0.2s
PDGK S Sg 17 59 17.3 0.0
3.1nm,0.2s
PDGK Podgornoye 1.52 11 ⇑P Pb 17 58 56.8 -0.7
1.1nm,0.4s
PDGK ⇑S Sg 17 59 17.3 0.0
7.7nm,0.6s
KPKS Kokpek 1.65 350 ⇓i P Pb 17 58 59.6 -0.2
12nm,0.1s
KPKS eS Sg 17 59 21.0 -0.6
20nm,0.2s
TNSS Tian-Shan 1.99 308 eP Pb 17 59 06.0 +0.3
2.1nm,0.2s
TNSS eS Sg 17 59 32.5 0.0
7.2nm,0.2s
TNSS Tian-Shan 1.99 308 Pg Pb 17 59 06.0 +0.3
2.3nm,0.2s
TNSS Lg Lg 17 59 32.5
7.2nm,0.2s
MDOK Medeo 2.01 312 eP Pb 17 59 06.0 +0.2
2.4nm,0.3s
MDOK eS Sg 17 59 32.5 -0.6
9.9nm,0.6s
MDOK Medeo 2.01 312 Pg Pb 17 59 06.0 +0.2
2.4nm,0.2s
MDOK Lg Lg 17 59 32.5
9.9nm,0.4s
KOTS Kotyrbulak 2.02 314 eP Pb 17 59 06.8 +0.7
8.5nm,0.2s
KOTS eS Sg 17 59 33.3 -0.2
46nm,0.4s

KOTS Kotyrbulak 2.02 314 Pg Pb 17 59 06.7 +0.7
8.5nm,0.2s
KOTS Lg Lg 17 59 33.3
46nm,0.4s
ULHL Ulahol 2.16 282 ⇓iP Pb 17 59 08.3 -0.2
baz=82
ULHL ⇓iS Sb 17 59 36.9 +1.1
baz=82
IZV Izvestkoviy 2.19 304 eP Pb 17 59 09.6 +0.6
2.3nm,0.2s
IZV eS Sg 17 59 38.6 -0.3
17nm,0.3s
IZV Izvestkoviy 2.19 304 Pg Pb 17 59 09.6 +0.6
2.3nm,0.2s
IZV Lg Lg 17 59 38.7
17nm,0.2s
NRN Naryn 2.35 261 ⇑iP Pb 17 59 11.3 -0.5
baz=61
NRN ⇑iS Sb 17 59 41.8 +0.4
baz=61
MTBS Maitube 2.35 304 eP Pb 17 59 12.8 +1.1
2.4nm,0.1s
MTBS eS Sg 17 59 44.1 -0.1
20nm,0.5s
MTBS Maitube 2.35 304 Pg Pb 17 59 12.8 +1.1
2.6nm,0.1s
MTBS Lg Lg 17 59 44.1
20nm,0.5s
BOOM Boomskoye usch 2.43 287 ⇓iP Pb 17 59 11.9 -1.2
baz=87
BOOM ⇓iS Sb 17 59 43.3 -0.3
baz=87
CHKK Chushkaly 2.54 323 eP Pb 17 59 15.6 +0.8
3.9nm,0.2s
CHKK eS Sg 17 59 48.8 -1.3
35nm,0.3s
DJR Jarkent 2.54 11 eP Pb 17 59 14.9 0.0
1.1nm,0.1s
DJR eS Sg 17 59 48.1 -2.1
19nm,0.3s
DJR Jarkent 2.54 11 Pg Pb 17 59 14.9 0.0
0.8nm,0.1s
DJR Lg Lg 17 59 48.1
19nm,0.4s
ARXS Arharly 2.55 339 eP Pb 17 59 15.7 +0.7
1.3nm,0.2s
ARXS eS Sg 17 59 48.3 -2.1
12nm,0.3s
ARXS Arharly 2.55 339 Pg Pb 17 59 15.7 +0.7
1.3nm,0.2s
ARXS Lg Lg 17 59 48.6
12nm,0.3s
KTBS Karatobe 2.58 317 eP Pb 17 59 16.1 +0.6
1.1nm,0.2s
KTBS eS Sg 17 59 50.3 -1.1
12nm,0.3s
KTBS Karatobe 2.58 317 Pg Pb 17 59 16.1 +0.6
0.8nm,0.3s
KTBS Lg Lg 17 59 50.3
12nm,0.4s
KST Kastek 2.61 298 eP Pb 17 59 16.4 +0.3
2.7nm,0.2s
KST eS Sg 17 59 50.7 -1.6
6.6nm,0.5s
KST Kastek 2.61 298 Pg Pb 17 59 16.4 +0.3
2.7nm,0.3s
KST Lg Lg 17 59 50.7
6.6nm,0.5s
DGS Degeres 2.83 301 eP Pb 17 59 20.4 +0.7
1.2nm,0.3s
DGS eS Sg 17 59 57.3 -2.0
5.4nm,0.7s
DGS Degeres 2.83 301 Pg Pb 17 59 20.4 +0.7
1.2nm,0.3s
DGS Lg Lg 17 59 57.3
5.4nm,0.7s
KUU Kurty 2.88 316 eP Pb 17 59 21.4 +0.8
0.9nm,0.4s
KUU eS Sg 17 59 58.9 -2.3
5.4nm,0.5s
KUU Kurty 2.88 316 Pg Pb 17 59 21.5 +0.8
0.9nm,0.4s
KUU Lg Lg 17 59 58.9
5.4nm,0.5s
KAPS Kapalarasan 3.45 3 eP Pb 17 59 30.5 +0.1
0.6nm,0.4s
KAPS eS Sb 18 00 15.1 +2.3
2.6nm,0.4s
KAPS Kapalarasan 3.45 3 Pg Pb 17 59 30.5 +0.1
0.4nm,0.3s
KAPS Lg Lg 18 00 15.1
2.8nm,0.3s
MK31 Makanchi Array 5.46 24 ⇑Pn Pn 17 59 51.4 +0.6
0.4nm,0.7s,baz=205,slow=13,SNR=6.5
MK31 Sn Sn 18 00 55.9 +1.7
0.6nm,0.8s,baz=206,slow=24,SNR=4.3
MK31 ⇑Lg Lg 18 01 19.6
0.3nm,0.6s,baz=209,slow=27,SNR=3.8

IDC 27 18:05:29.4±1.5, 24.78N×141.09E, h214km±14km, mb3.6/26, mb1 3.6/31, mb1mx3.6/52, mbtmp4.1/31, Error ellipse: s-maj=12.0km s-min=9.0km az=94.0
NEIC 27 18:05:29.1±1.3, 24.77N±0.08×141.07E±0.09, h211km±5km, mb4.7/89, Error ellipse: s-maj=12.8km s-min=11.1km az=138.0
JMA 27 18:05:31.6±0.1, 25.12N×140.68E, h179km, M4.6
ISC 27 18:05:26.2±0.4, 24.76N±0.05×141.06E±0.07, h181km, n154, σ1.26/163, mb4.6/63, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	2.12	28	P	Pn	18 06 09.0	+4.4
JHH2				eS	Sn	18 06 37.8	+3.2
CBIJ	Chichi jima	2.54	23	P	Pn	18 06 13.5	+4.2
CBIJ				S	Sn	18 06 45.6	+2.5
JCJ	Chichijima	2.54	23	P	Pn	18 06 13.6	+4.3
	340nm,0.3s,baz=277,slow=22,SNR=256						
JCJ				S	Sn	18 06 45.7	+2.7
	453nm,0.3s,baz=116,slow=24,SNR=49						
BSO3	Boso 3	10.02	357	P	Pn	18 07 45.1	-0.5
BSO3				S	Sn	18 09 31.1	-5.9
BSO4	Boso 4	10.21	357	eS	Sn	18 09 37.5	-4.4
JKUC	kamogawauchiur	10.39	356	P	Pn	18 07 50.3	-0.4
JOD2	Odawara 2	10.61	351	P	Pn	18 07 54.2	+0.7
JHU	Hanno	11.16	353	eS	Sn	18 09 56.2	-8.5
JRY	Ryogami san	11.37	351	P	Pn	18 08 03.5	0.0
JAG	Ashikaga	11.71	354	P	Pn	18 08 08.5	+0.8
JHO	Hitachi	11.82	358	P	Pn	18 08 08.6	-0.6
JHO				eS	Sn	18 10 07.1	-13
MJAR	Matsushiro Arr	12.00	349	P	Pn	18 08 14.5	+3.0
	0.1nm,0.3s,baz=191,slow=11,SNR=3.0						
JNU	Nakatsue	12.20	315	P	Pn	18 08 17.1	+3.0
	0.1nm,0.3s,baz=132,slow=19,SNR=2.1						
JNU	Nakatsue	12.20	315	P	P	18 08 19.3	+0.2
JMM	Marumori	13.07	359	P	Pn	18 08 23.7	-1.3
KSRS	Korea Array	16.91	322	P	Pn	18 09 13.0	+0.8
	0.5nm,0.3s,baz=141,slow=12,SNR=12						
KS19	Wonju Array Si	16.97	322	P	P	18 09 12.6	+0.7
KS19				IAmb	IAmb	18 10 02.8	
	comp=Z,72nm,1.9s						
NACB	Ninganchiao	17.73	272	Pn	Pn	18 09 23.3	+1.2
NACB				IAmb	IAmb	18 09 47.5	
	comp=Z,28nm,1.0s						
YHNB	Yeheng	17.89	274	Pn	Pn	18 09 25.1	+1.1
YHNB				IAmb	IAmb	18 10 13.6	
	comp=Z,46nm,1.3s						
YULB	Yu-li	18.10	270	Pn	Pn	18 09 28.0	+1.6
YULB				IAmb	IAmb	18 09 57.0	
	comp=Z,59nm,1.7s						
SSLB	Suanglung	18.36	271	P	P	18 09 28.7	+1.4
ASAJ	Asahikawa	19.35	3	P	P	18 09 38.4	+0.7
	comp=Z,0.4nm,0.3s,baz=190,slow=11,SNR=4.6						
JKA	Kamikawa-asahi	19.35	3	P	P	18 09 38.4	+0.7
USRK	Ussuriysk Ar.	20.76	341	P	P	18 09 53.2	+0.4
	comp=Z,2.6nm,0.4s,baz=142,slow=8.6,SNR=15						
KLR	Kul'dur	25.49	346	P	P	18 10 37.8	+0.3
	comp=Z,1.2nm,0.6s,baz=203,slow=4.9,SNR=7.2						
ENH	Enshi	28.48	288	P	P	18 11 04.2	-0.3
ENH				IAmb	IAmb	18 11 43.5	
	comp=Z,18nm,1.9s						
PETK	Petropavlovsk-	30.97	20	P	P	18 11 26.9	+0.8
	comp=Z,1.6nm,0.6s,baz=237,slow=3.7,SNR=16						
LUWI	Luwuk	31.18	217	P	P	18 11 27.9	-0.4
SONM	Songino Array	35.75	319	P	P	18 12 08.0	+0.3
	comp=Z,0.8nm,0.5s,baz=130,slow=7.3,SNR=10						
PBKT	Sadao Pong	38.27	266	P	P	18 12 29.9	+0.7
COEN	Coen	38.54	177	P	P	18 12 32.3	+1.0
COEN				IAmb	IAmb	18 12 50.2	
	comp=Z,38nm,1.9s						
MTN	Manton Dam	38.61	196	P	P	18 12 31.4	-0.5
HNR	Honiara	38.66	149	P	P	18 12 31.6	-0.7
SEY	Seymchan	38.91	8	P	P	18 12 34.2	+0.4
	comp=Z,1.9nm,0.5s,baz=190,slow=7.7,SNR=22						
CHTO	Chiang Mai	39.44	270	P	P	18 12 39.8	+0.9
CM31	Chiang Mai Arr	39.54	269	P	P	18 12 39.9	+0.1
CMAR	Chiang Mai Arr	39.54	269	P	P	18 12 40.6	+0.9
	comp=Z,1.3nm,0.7s,baz=63,slow=7.6,SNR=18						
JAGI	Jajag, Banyuwa	42.18	222	P	P	18 13 00.6	-0.7
JAGI				IAmb	IAmb	18 13 01.6	
	comp=Z,12nm,0.5s						
LSA	Lhasa	44.38	288	P	P	18 13 18.9	-0.4
WB0	Warramunga Arr	44.73	189	P	P	18 13 21.4	-0.1
WR0	Warramunga Arr	44.90	189	P	P	18 13 23.0	+0.1
WRAB	Tennant Creek	44.90	189	P	P	18 13 23.0	+0.1
WRAB				IAmb	IAmb	18 13 23.7	
	comp=Z,18nm,0.7s						
WB2	Warramunga Arr	44.91	189	P	P	18 13 22.9	0.0
WB2				IAmb	IAmb	18 13 23.8	
	comp=Z,16nm,0.7s						
WRA	Warramunga Arr	44.91	189	P	P	18 13 23.0	0.0
	comp=Z,14nm,0.6s,baz=9.1,slow=8.7,SNR=87						
WRA				PcP	PcP	18 15 01.1	-0.2
	comp=Z,1.1nm,0.6s,baz=360,slow=3.4,SNR=5.4						
BILL	Bilibino	45.95	13	P	P	18 13 30.4	-0.1
RPSI	Rantau Prapat	46.14	248	P	P	18 13 33.9	+1.1
TAPN	Taplejung	47.70	285	eP	P	18 13 46.5	+1.4
	comp=Z,7.9nm,0.4s						
ODAN	Odare	48.06	285	eP	P	18 13 48.6	+0.8
	comp=Z,40nm,0.9s						
UNV	Unalaska Valle	48.40	39	P	P	18 13 50.0	+0.3
AS31	Alice Springs	48.63	189	P	P	18 13 51.0	-0.9
ASAR	Alice Springs	48.64	189	P	P	18 13 51.4	-0.5
	comp=Z,0.4nm,0.5s,baz=21,slow=11,SNR=13						
ASAR				PcP	PcP	18 15 14.3	-0.1
	comp=Z,0.7nm,0.7s,baz=360,slow=2.6,SNR=8.7						
RAMN	Ramite	48.74	285	eP	P	18 13 54.3	+1.3
AKUT	Akutan	48.90	39	P	P	18 13 54.1	+0.7
JIRN	Jiri	48.98	286	eP	P	18 13 56.9	+1.9
	comp=Z,72nm,0.6s						
GUN	Gumba	49.20	286	eP	P	18 13 58.3	+1.6
	comp=Z,22nm,0.3s						
GAMB	Gambell	49.66	25	P	P	18 13 59.6	+0.6
GAMB				IAmb	IAmb	18 14 48.0	
	comp=Z,31nm,1.9s						
PKI	Pulchoki	49.67	286	eP	P	18 14 01.1	+0.9
	comp=Z,12nm,0.6s						
PKIN	Phulchoki	49.68	286	eP	P	18 14 00.6	+0.4
	comp=Z,5.4nm,0.4s						
KKN	Kakani	49.75	286	eP	P	18 14 02.3	+1.7
	comp=Z,19nm,0.8s						
DMN	Daman	49.93	286	eP	P	18 14 03.4	+1.3
	comp=Z,20nm,0.7s						
GKN	Gorkha	50.27	287	eP	P	18 14 05.8	+1.3
	comp=Z,27nm,0.7s						
ZALV	Zalesovo Beam	50.61	321	P	P	18 14 06.1	-0.3
	comp=Z,0.4nm,0.3s,baz=114,slow=6.9,SNR=3.5						
ZALV				PcP	PcP	18 15 20.1	-1.2
	comp=Z,1.0nm,0.6s,baz=101,slow=7.7,SNR=5.1						
DANN	Dangsing	50.97	287	eP	P	18 14 11.9	+2.0
	comp=Z,131nm,0.6s						
MK31	Makanchi Array	51.21	311	P	P	18 14 11.4	+0.3
MKAR	Makanchi Array	51.21	311	P	P	18 14 11.4	+0.3
	comp=Z,7.0nm,0.5s,baz=87,slow=9.4,SNR=158						
MKAR				PcP	PcP	18 15 23.3	-0.5
	comp=Z,0.3nm,0.4s,baz=74,slow=7.9,SNR=2.6						
MAKZ	Makanchi	51.42	311	P	P	18 14 13.4	+0.7
CNBA	Chernabura Isl	52.57	39	P	P	18 14 19.9	-1.0
CHGN	Chignik	53.48	37	P	P	18 14 27.6	+0.1
KURK	Kurchatov	53.92	316	P	P	18 14 30.7	-0.1
SVW2	Sparrevohn	55.80	32	P	P	18 14 45.3	+1.1
SVW2				IAmb	IAmb	18 15 14.9	
	comp=Z,47nm,1.7s						
STKA	Stephens Creek	56.32	179	P	P	18 14 48.1	-0.1
	comp=Z,2.3nm,0.5s,baz=338,slow=9.2,SNR=6.8						
STKA	Stephens Creek	56.32	179	P	P	18 14 48.0	-0.1
OHAK	Old Harbor	56.40	37	P	P	18 14 48.9	+0.4
FORT	Forrest	56.61	193	P	P	18 14 50.1	-0.1
FORT				IAmb	IAmb	18 16 39.0	
	comp=Z,24nm,0.9s						
AAK	Ala-Archa	56.78	306	P	P	18 14 52.6	+1.0
AAK				IAmb	IAmb	18 14 53.3	
	comp=Z,5.4nm,0.5s						
KDAK	Kodiak Island	56.84	36	P	P	18 14 51.5	-0.1
	comp=Z,7.1nm,0.6s,baz=264,slow=2.9,SNR=7.6						
KDAK	Kodiak Island	56.84	36	P	P	18 14 51.6	+0.1
PPLA	Purkeypile	57.68	30	P	P	18 14 57.5	-0.1
CNPM	China Poot	57.72	34	P	P	18 14 57.7	0.0
SKT	Skwentna	57.86	31	P	P	18 14 58.2	-0.5
SKT				IAmb	IAmb	18 14 60.0	
	comp=Z,14nm,1.3s						
BRLK	Bradley Lake	57.92	34	P	P	18 14 58.3	-0.8
SUA	Susitna One	58.16	32	P	P	18 15 00.0	-0.9
KTH	Kantishna Hill	58.35	29	P	P	18 15 02.9	+0.9
KTH				IAmb	IAmb	18 16 13.2	
	comp=Z,35nm,2.0s						
RC01	Rabbit Creek A	58.61	32	P	P	18 15 04.0	+0.2
TRF	Thorofare Moun	58.62	29	P	P	18 15 04.4	+0.3
TRF				IAmb	IAmb	18 16 09.6	
	comp=Z,35nm,1.8s						
MLY	Manley	58.64	27	P	P	18 15 04.7	+0.6
MLY				IAmb	IAmb	18 15 20.1	
	comp=Z,17nm,1.8s						
NIL	Nilore	58.92	296	P	P	18 15 08.0	+1.5
NIL				IAmb	IAmb	18 15 09.5	
	comp=Z,13nm,0.6s						
GHO	Glory Hole Cre	59.06	31	P	P	18 15 07.1	0.0
GHO				IAmb	IAmb	18 16 33.6	
	comp=Z,15nm,1.2s						
BVAR	Borovoye Array	59.09	318	P	P	18 15 06.9	-0.4
	comp=Z,2.0nm,0.4s,baz=98,slow=9.2,SNR=24						
BVAR				PcP	PcP	18 15 53.5	-0.6
	comp=Z,1.0nm,0.5s,baz=78,slow=4.9,SNR=4.6						
BRVK	Borovoye	59.15	318	P	P	18 15 07.3	-0.4
MCK	McKinley	59.25	29	P	P	18 15 07.3	-0.9
MCK				IAmb	IAmb	18 16 37.1	
	comp=Z,53nm,2.0s						
RND	Reindeer	59.25	29	P	P	18 15 08.3	0.0
RND				IAmb	IAmb	18 15 23.0	
	comp=Z,15nm,1.6s						
KNK	Knik Glacier	59.25	32	P	P	18 15 08.0	-0.3
KNK				IAmb	IAmb	18 15 09.2	
	comp=Z,10nm,0.6s						
NEA	Nenana	59.28	28	P	P	18 15 07.0	-1.4
SML	Sawmill	59.34	31	P	P	18 15 09.5	+0.5
KK31	Karatay Array	59.65	307	P	P	18 15 12.1	+0.8
KK31				IAmb	IAmb	18 15 12.8	
	comp=Z,8.5nm,0.7s						
KKAR	Karatay Array	59.65	307	P	P	18 15 12.2	+0.9
KKAR				IAmb	IAmb	18 15 12.9	
	comp=Z,8.5nm,0.7s						
TOLK	Toolik Lake Re	59.68	23	P	P	18 15 10.7	-0.4
TOLK				IAmb	IAmb	18 17 13.1	
	comp=Z,28nm,2.0s						
SCM	Sheep Creek Mo	59.82	31	P	P	18 15 12.5	+0.3
CCB	Clear Creek Bu	59.84	28	P	P	18 15 10.4	-1.7
CCB				IAmb	IAmb	18 16 50.7	
	comp=Z,24nm,2.0s						
GLI	Glacier Island	59.88	33	P	P	18 15 12.5	-0.1
GLI				IAmb	IAmb	18 17 14.0	
	comp=Z,33nm,1.4s						
DHY	Denali Highway	59.89	30	P	P	18 15 12.9	+0.1
DHY				IAmb	IAmb	18 16 23.2	
	comp=Z,34nm,1.9s						
IL31		60.24	28	P	P	18 15 15.1	+0.2
ILAR	Eielson Array	60.24	28	P	P	18 15 13.9	-1.0
	comp=Z,1.3nm,0.7s,baz=256,slow=5.7,SNR=16						
EYAK	Cordova Ski Ar	60.53	33	P	P	18 15 17.8	+0.8
PAX	Paxson	60.75	30	P	P	18 15 19.1	+0.6
PAX				IAmb	IAmb	18 17 18.3	
	comp=Z,26nm,1.8s						
SCRK	Sand Creek	61.45	29	P	P	18 15 23.6	+0.3
SCRK				IAmb	IAmb	18 17 05.0	
	comp=Z,30nm,1.9s						
GLB	Gilahina Butte	61.49	32	P	P	18 15 24.1	+0.6
GLB				IAmb	IAmb	18 17 06.2	
	comp=Z,23nm,1.8s						
VRDI	Verde Repeater	61.66	32	P	P	18 15 24.2	-0.5
VRDI				IAmb	IAmb	18 16 52.6	
	comp=Z,21nm,1.6s						
CRQM	Cirque	61.82	33	P	P	18 15 25.5	-0.3
CRQM				IAmb	IAmb	18 17 25.4	
	comp=Z,24nm,1.3s						
MCARA	McCarthy VSAT	61.87	32	P	P	18 15 25.7	-0.2
MCARA				IAmb	IAmb	18 17 20.4	
	comp=Z,26nm,1.6s						
TGL	Tana Glacier	61.97	33	P	P	18 15 27.2	+0.4
TGL				IAmb	IAmb	18 15 35.4	
	comp=Z,18nm,1.4s						
TOO	Toolangi	62.14	176	P	P	18 15 28.3	+0.3
KBL	Kabul	62.17	297	P	P	18 15 28.3	-0.4
KBL				IAmb	IAmb	18 15 30.3	
	comp=Z,16nm,0.7s						
BALM	Baldy	62.20	32	P	P	18 15 28.4	+0.1
BALM				IAmb	IAmb	18 17 16.2	
	comp=Z,9.6nm,1.3s						
BARN	Barnard Glacie	62.53	32	P	P	18 15 31.1	+0.5
BARN				IAmb	IAmb	18 17 28.1	
	comp=Z,8.3nm,1.1s						
CTGM	Chitina Glacie	62.69	32	P	P	18 15 31.3	-0.3
CTGM				IAmb	IAmb	18 17 07.5	
	comp=Z,18nm,1.5s						
EPYK	Eagle Plains	64.48	26	P	P	18 15 41.9	-1.2
EPYK				IAmb	IAmb	18 17 57.4	
	comp=Z,37nm,1.9s						
HYT	Haines Junctio	64.57	32	P	P	18 15 44.3	+0.4
HYT				IAmb	IAmb	18 16 05.6	
	comp=Z,9.2nm,1.4s						
INK	Inuvik	65.57	24	P	P	18 15 49.4	-0.5
	comp=Z,0.7nm,0.3s,baz=278,slow=5.9,SNR=11						
INK	Inuvik	65.57	24	P	P	18 15 49.4	-0.5
INK				IAmb	IAmb	18 17 38.0	
	comp=Z,17nm,2.0s						
ARU	Arti	65.65	323	P	P	18 15 50.5	-0.2
	comp=Z,0.8nm,0.5s,baz=31,slow=2.9,SNR=5.3						
ARU	Arti	65.65	323	P	P	18 15 50.5	-0.2
ABKAR	Akbulak array	66.01	315	P	P	18 15 52.6	-0.6
DIB	Dawson Inlet,	68.50	40	P	P	18 16 08.7	0.0
GEYT	Alibeck	69.92	303	P	P	18 16 17.2	-0.6
	comp=Z,1.9nm,0.8s,baz=141,slow=0.9,SNR=4.8						
NNZ	Nelson	72.17	155	P	P	18 16 30.7	-0.3
SPITS	Spitsbergen Ar	72.49	350	P	P	18 16 32.2	-0.3
	comp=Z,6.8nm,1.0s,baz=118,slow=12,SNR=6.2						
KHZ	Kahutara	73.26	155	P	P	18 16 36.6	-0.7
YKA	Yellowknife Ar	74.67	28	P	P	18 16 44.6	-0.8
	comp=Z,0.7nm,0.6s,baz=295,slow=5.6,SNR=7.3						
ARCES	ARCESS Array B	75.41	341	P	P	18 16 49.6	+0.1
	comp=Z,2.6nm,1.0s,baz=72,slow=7.8,SNR=5.2						
KBZ	Khabaz	78.85	313	P	P	18 17 09.3	+0.1
	comp=Z,3.9nm,0.8s,baz=123,slow=4.5,SNR=13						
FINES	FINESS Array B	79.58	334	P	P	18 17 11.2	-1.6
	comp=Z,0.7nm,0.3s,baz=69,slow=4.6,SNR=12						
BMO	Blue Mountains	80.66	45	P	P	18 17 19.1	0.0
NVAR	Mina Array Bea	82.76	51	P	P	18 17 30.2	-0.1
	comp=Z,0.7nm,0.7s,baz=284,slow=6.1,SNR=4.1						
AKASG	Malin Array Be	83.89	324	P	P	18 17 33.7	-1.8
	comp=Z,0.3nm,0.3s,baz=52,slow=5.2,SNR=4.6						
QLMT	Earthquake Lak	84.38	43	P	P	18 17 39.6	+1.1
YHL	Hebgen Lake	84.52	43	P	P	18 17 40.0	+0.8
YHB	Horse Butte	84.56	43	P	P	18 17 37.3	-2.1
YMR	Madison River	84.75	43	P	P	18 17 39.7	-0.6
YHH	Holmes Hill	84.76	43	P	P	18 17 40.7	+0.3
LKWY	Lake	85.15	43	P	P	18 17 42.2	-0.2
RAYN	Ar Rayn	85.15	294	P	P	18 17 42.2	-0.3
NOA	NORSAR Array B	85.39	338	P	P	18 17 40.8	-2.1
	comp=Z,0.9nm,0.7s,baz=48,slow=4.8,SNR=3.7						
RLMT	Red Lodge	85.56	42	P	P	18 17 43.9	-0.4
PDAR	Pinedale Array	86.58	44	P	P	18 17 48.0	-1.4
	comp=Z,0.4nm,0.8s,baz=259,slow=3.0,SNR=4.2						
BRTR	Keskin Array B	86.83	313	P	P	18 17 49.5	-1.1
	comp=Z,0.8nm,0.7s,baz=86,slow=5.1,SNR=5.1						
LCMT	Little Creek M	86.98	51	P	P	18 17 49.9	-1.5
MSU	Marysvale	86.99	49	P	P	18 17 50.7	-0.7
TORD	Torodi Ar. Bea	125.30	309	PKP	PKPdf	18 24 04.8	-1.4
	comp=Z,0.4nm,0.4s,baz=27,slow=1.1,SNR=4.9						
PLCA	Paso Flores	149.22	129	PKPbc	PKPbc	18 24 53.1	-0.4
	comp=Z,3.1nm,0.9s,baz=258,slow=3.9,SNR=6.0						
PLCA	Paso Flores	149.22	129	PKPdf	PKPdf	18 24 47.0	-2.0
PLCA					PKPbc	18 24 52.9	-0.5
LPAZ	La Paz	151.44	78	PKPbc	PKPbc	18 24 59.7	-0.3
	comp=Z,1.4nm,0.5s,baz=31,slow=11,SNR=6.8						
LPAZ	La Paz	151.44	78		PKPbc	18 24 59.3	-0.8

UPP 27 18:07:29.4±0.1, 67.07N×20.92E, h0km, ML2.1, Explosion
IDC 27 18:07:30.4±0.8, 67.08N×21.11E, h0km, mb1 3.2/5, mb1mx3.0/42, mbtmp3.2/5, ML2.2/5, Error ellipse: s-maj=10.8km s-min=4.7km az=148.0
HEL 27 18:07:30.1±0.1, 67.07N×20.91E, h0km, ML2.1, ML2.1(UPP), Explosion
ISC 27 18:07:29.3±0.8, 67.09N±0.02×20.94E±0.03, h0km, n35, σ0.68/48, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	Dundret	0.15	282	P	Pg	18 07 32.5	+0.4
DUNU				S	Sg	18 07 34.7	+0.7
DUNU	Dundret	0.15	282	iP	Pg	18 07 32.5	+0.4
DUNU				iS	Sg	18 07 34.7	+0.7
MASU	Masugnsbyn	0.55	48	P	Pg	18 07 40.3	+0.5
MASU	Masugnsbyn	0.55	48	iP	Pg	18 07 40.3	+0.5
ERTU	Ertsjaerv	0.73	137	P	Pg	18 07 42.9	-0.4
ERTU	Ertsjaerv	0.73	137	iP	Pg	18 07 42.9	-0.4
PAJU	Pajala	0.85	94	P	Pg	18 07 45.4	-0.3
PAJU	Pajala	0.85	94	iP	Pg	18 07 45.4	-0.3
KUA	Kurravaara	0.90	345	P	Pg	18 07 46.2	-0.3
KUA				S	Sb	18 07 59.2	-1.0
KUA	Kurravaara	0.90	345	eP	Pg	18 07 46.2	-0.3
KUA				eS	Sb	18 07 59.2	-1.0
HARU	Harads	0.93	179	P	Pg	18 07 46.4	-0.7
HARU	Harads	0.93	179	eP	Pg	18 07 46.4	-0.7
LANU	Lannavaara	1.04	22	P	Pg	18 07 48.8	-0.4
LANU	Lannavaara	1.04	22	eP	Pg	18 07 48.8	-0.4
LANU				eS	Sb	18 08 03.8	-0.7
KOVU	Salmi	1.17	346	P	Pg	18 07 51.4	-0.4
KOVU	Salmi	1.17	346	eP	Pg	18 07 51.4	-0.4
SJUU	Sjulsmark	1.61	170	P	Pn	18 07 58.4	-0.5
SJUU	Sjulsmark	1.61	170	eP	Pn	18 07 58.4	-0.5
HEF	Hetta	1.68	37	eP	Pn	18 08 00.1	+0.1
HEF				eS	Sb	18 08 22.4	-0.3
HEF				MSG		18 08 26.7	
	comp=Z,9.2nm,0.1s						
HEF	Hetta	1.68	37	eP	Pb	18 08 00.8	-0.2
TOF	Tornio	1.69	125	eP	Pn	18 08 00.2	+0.2
TOF				eS	Sg	18 08 23.8	+0.2
LILU	Lilltraesk	1.87	194	P	Pn	18 08 02.7	+0.2
LILU	Lilltraesk	1.87	194	eP	Pn	18 08 02.7	+0.2
KIF	Kilpisjarvi	1.92	359	eP	Pb	18 08 05.0	-0.2
KIF				eS	Sg	18 08 30.0	-1.0
KIF				MSG		18 08 39.2	
	comp=Z,16nm,0.1s						
KIF	Kilpisjarvi	1.92	359	eP	Pg	18 08 05.6	-0.5
RNF	Rovaniemi	2.06	101	eP	Pn	18 08 06.1	+1.0
RNF				eS	Sb	18 08 33.8	0.0
I37NO	I37NO	2.17	337	i		18 22 20.0	
	baz=154,slow=326,SNR=2.0						
SGF	Sodankyl	2.20	78	eP	Pn	18 08 07.8	+0.8
SGF				eS	Sb	18 08 37.2	-0.5
OUL	Oulu	2.85	133	eP	Pn	18 08 17.6	+1.6
OUL				eS	Sn	18 08 51.9	+0.9
ARCES	ARCESS Array B	2.98	33	Pn	Pn	18 08 18.1	+0.3
	comp=Z,0.4nm,0.3s,baz=214,slow=14,SNR=40						
ARCES				Sn	Sn	18 08 54.1	-0.1
	comp=Z,0.7nm,0.3s,baz=208,slow=25,SNR=5.8						
KEV	Kevo	3.49	37	eP	Pn	18 08 25.7	+0.9
KEV				eS	Sn	18 09 06.7	0.0
FINES	FINESS Array B	6.09	156	Pn	Pn	18 09 01.2	+0.7
	comp=Z,0.2nm,0.3s,baz=343,slow=13,SNR=7.1						
FINES				Sn	Sn	18 10 10.2	-0.6
	comp=Z,0.3nm,0.3s,baz=347,slow=24,SNR=6.8						
NOA	NORSAR Array B	7.41	220	Pn	Pn	18 09 20.7	+2.1
	comp=Z,0.0nm,0.3s,baz=29,slow=12,SNR=5.4						
HFS	Hagfors	7.69	208	Pn	Pn	18 09 21.5	-0.8
	comp=Z,0.1nm,0.3s,baz=29,slow=13,SNR=6.7						
SPITS	Spitsbergen Ar	11.22	355	Pn	Pn	18 10 10.7	+0.1
	baz=165,slow=24,SNR=2.2						

IDC 27 18:44:02.2±0.7, 7.84S×117.61E, h0km, mb4.1/15, mb1 4.1/17, mb1mx3.9/45, mbtmp4.1/17, ML4.0/3, MS3.5/13, Ms1 3.5/13, ms1mx3.2/42, Error ellipse: s-maj=16.5km

s-min=10.8km az=60.0

BJI **27** 18:44:03.0±0.0, 7.90S×117.50E, h10km, mB5.0/8, mb4.5/9, Ms5.0/1, Ms7 4.7/1

NEIC **27** 18:44:04.9±1.9, 7.95S±0.07×117.56E±0.06, h20km±1km, mb4.5/17, Error ellipse: s-maj=9.7km s-min=9.1km az=184.0

DJA **27** 18:44:04.8±0.2, 8°S±2°×11°7E±°, h10km, M4.9/19, mb4.9/17, mB5.4/6, MLv5.0/19, Mw(mB)4.8/6

ISC 27 18:44:03.6±0.4, **7.90S**±0.04×**117.57E**±0.04, **h10km**, **n139**, σ1.87/140, **mb4.3**/19, **MS3.5**/12, **Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
PLAI	**Plampang**	**0.94**	**167**	P	**Pn**	**18 44 23.9**	**+0.9**
PLAI				S	**Sn**	**18 44 37.8**	**+1.3**
PLAI	**Plampang**	**0.94**	**167**	P	**Pn**	**18 44 23.9**	**+0.9**
PLAI				S	**Sn**	**18 44 37.8**	**+1.3**
SRBI	**Singaraja**	**2.34**	**265**	P	**Pn**	**18 44 41.2**	**-1.0**
SRBI				S	**Sn**	**18 45 11.1**	**+0.1**
SRBI	**Singaraja**	**2.34**	**265**	P	**Pn**	**18 44 41.2**	**-1.0**
SRBI				S	**Sn**	**18 45 11.1**	**+0.1**
DNP	**Denpasar**	**2.46**	**252**	P	**Pn**	**18 44 43.7**	**-0.1**
DNP	**Denpasar**	**2.46**	**252**	P	**Pn**	**18 44 43.7**	**-0.1**
WBSI	**Waikabubak, Su**	**2.50**	**134**	P	**Pn**	**18 44 46.3**	**+1.9**
WBSI				S	**Sb**	**18 45 19.3**	**-0.2**
WBSI	**Waikabubak, Su**	**2.50**	**134**	P	**Pn**	**18 44 46.3**	**+1.9**
WBSI				S	**Sb**	**18 45 19.3**	**-0.2**
IGBI	**Denpasar**	**2.56**	**249**	P	**Pn**	**18 44 44.4**	**-0.8**
IGBI	**Denpasar**	**2.56**	**249**	P	**Pn**	**18 44 44.4**	**-0.8**
WSI	**Waingapu**	**3.22**	**123**	P	**Pn**	**18 44 56.6**	**+2.3**
WSI	**Waingapu**	**3.22**	**123**	P	**Pn**	**18 44 56.6**	**+2.3**
JAGI	**Jajag, Banyuwa**	**3.43**	**260**	P	**Pn**	**18 44 56.4**	**-0.8**
JAGI				S	**Sn**	**18 45 37.9**	**0.0**
JAGI	**Jajag, Banyuwa**	**3.43**	**260**	P	**Pn**	**18 44 56.4**	**-0.8**
JAGI				S	**Sn**	**18 45 37.9**	**0.0**
JAGI	**Jajag, Banyuwa**	**3.43**	**260**		**Pn**	**18 44 56.1**	**-1.0**
KAPI	**Kappang**	**3.59**	**37**	Pn	**Pn**	**18 44 59.8**	**+0.4**
	42nm,0.3s,baz=195,slow=3.7,SNR=242						
KAPI				Pg	**Pb**	**18 45 05.2**	**-2.1**
	106nm,0.3s,baz=198,slow=8.1,SNR=38						
KAPI				Sn	**Sn**	**18 45 41.1**	**-0.9**
	65nm,0.3s,baz=234,slow=20,SNR=7.7						
KAPI				Lg	Lg	18 45 55.3	
	96nm,0.3s,baz=82,slow=21,SNR=8.1						
BKSI	**Bulukumba**	**3.60**	**45**	P	**Pn**	**18 44 59.7**	**+0.1**
BKSI	**Bulukumba**	**3.60**	**45**	P	**Pn**	**18 44 59.7**	**+0.1**
KMMI	**Kalianget**	**3.67**	**283**	P	**Pn**	**18 45 01.0**	**+0.5**
KMMI	**Kalianget**	**3.67**	**283**	P	**Pn**	**18 45 01.0**	**+0.5**
BASI	**Baing, Sumba**	**3.76**	**128**	P	**Pn**	**18 45 04.2**	**+2.5**
BASI	**Baing, Sumba**	**3.76**	**128**	P	**Pn**	**18 45 04.2**	**+2.5**
GMJI	**Gumukmas**	**4.10**	**265**	P	**Pn**	**18 45 05.8**	**-0.6**
GMJI	**Gumukmas**	**4.10**	**265**	P	**Pn**	**18 45 05.8**	**-0.6**
EDFI	**Ende, Flores**	**4.17**	**102**	P	**Pn**	**18 45 09.3**	**+1.9**
EDFI	**Ende, Flores**	**4.17**	**102**	P	**Pn**	**18 45 09.3**	**+1.9**
BNSI	**Bone**	**4.30**	**36**	P	**Pn**	**18 45 11.0**	**+1.9**
BNSI	**Bone**	**4.30**	**36**	P	**Pn**	**18 45 11.0**	**+1.9**
SPSI	**Sidrap Palu**	**4.48**	**29**	P	**Pn**	**18 45 11.6**	**0.0**
SPSI	**Sidrap Palu**	**4.48**	**29**	P	**Pn**	**18 45 11.6**	**0.0**
MMRI	**Maumere**	**4.68**	**99**	P	**Pn**	**18 45 15.8**	**+1.4**
MMRI	**Maumere**	**4.68**	**99**	P	**Pn**	**18 45 15.8**	**+1.4**
MMRI	**Maumere**	**4.68**	**99**		**Pn**	**18 45 15.5**	**+1.1**
GRJI	**Gresik**	**5.14**	**281**	P	**Pn**	**18 45 20.1**	**-0.6**
	1.2nm4μm309nm,0.7s						
GRJI	**Gresik**	**5.14**	**281**	P	**Pn**	**18 45 20.1**	**-0.6**
	1.2nm4μm309nm,0.7s						
TTSI	**Tana Toraja**	**5.32**	**25**	P	**Pn**	**18 45 24.7**	**+1.6**
	2μm152nm,0.9s						
TTSI	**Tana Toraja**	**5.32**	**25**	P	**Pn**	**18 45 24.7**	**+1.6**
	2μm152nm,0.9s						
BBSI	**Bau Bau**	**5.52**	**65**	P	**Pn**	**18 45 30.0**	**+4.1**
	0.1nm12nm,0.8s						
BBSI	**Bau Bau**	**5.52**	**65**	P	**Pn**	**18 45 30.0**	**+4.1**
	0.1nm12nm,0.8s						
PCJI	**Pacitan**	**6.33**	**267**	P	**Pn**	**18 45 37.7**	**+0.6**
	0.6nm128nm,0.7s						
PCJI	**Pacitan**	**6.33**	**267**	P	**Pn**	**18 45 37.7**	**+0.6**
	0.6nm128nm,0.7s						
WOJI	**Wonogiri, Jawa**	**6.58**	**270**	P	**Pn**	**18 45 41.9**	**+1.4**
WOJI	**Wonogiri, Jawa**	**6.58**	**270**	P	**Pn**	**18 45 41.9**	**+1.4**
BKB	**Balikpapan**	**6.63**	**354**	Pn	**Pn**	**18 45 45.3**	**+4.1**
SOEI	**Soe**	**6.87**	**106**	P	**Pn**	**18 45 48.6**	**+4.0**
	0.5nm104nm,1.1s						
SOEI	**Soe**	**6.87**	**106**	P	**Pn**	**18 45 48.6**	**+4.0**
	0.5nm104nm,1.1s						
SOEI	**Soe**	**6.87**	**106**		**Pn**	**18 45 48.6**	**+4.0**
UGM	**Wanagama**	**6.98**	**269**	P	**Pn**	**18 45 45.8**	**-0.2**
	0.7nm171nm,0.7s						
UGM	**Wanagama**	**6.98**	**269**	P	**Pn**	**18 45 45.8**	**-0.2**
	0.7nm171nm,0.7s						
UGM	**Wanagama**	**6.98**	**269**		**Pn**	**18 45 46.8**	**+0.8**
SMRI	**Semarang**	**7.12**	**276**	P	**Pn**	**18 45 46.8**	**-1.1**
	0.8nm267nm,1.0s						
SMRI	**Semarang**	**7.12**	**276**	P	**Pn**	**18 45 46.8**	**-1.1**
	0.8nm267nm,1.0s						
SMRI	**Semarang**	**7.12**	**276**		**Pn**	**18 45 46.3**	**-1.6**
APSI	**Ampana**	**8.05**	**31**	P	**Pn**	**18 46 03.6**	**+3.0**
	21nm,0.9s						
APSI	**Ampana**	**8.05**	**31**	P	**Pn**	**18 46 03.6**	**+3.0**
	21nm,0.9s						
KPJI	**Karang Pucung**	**8.58**	**273**	P	**Pn**	**18 46 08.9**	**+0.9**
	99nm,0.8s						
KPJI	**Karang Pucung**	**8.58**	**273**	P	**Pn**	**18 46 08.9**	**+0.9**
	99nm,0.8s						
CISI	**Cisompet, Garu**	**9.67**	**271**	P	**Pn**	**18 46 23.5**	**+0.5**
	2μm98nm,0.7s						
CISI	**Cisompet, Garu**	**9.67**	**271**	P	**Pn**	**18 46 23.5**	**+0.5**
	2μm98nm,0.7s						
CISI	**Cisompet, Garu**	**9.67**	**271**		**Pn**	**18 46 20.8**	**-2.2**
LEM	**Lembang**	**9.93**	**276**	Pn	**Pn**	**18 46 29.1**	**+2.5**
	4.1nm,0.3s,baz=55,slow=8.3,SNR=30						
STKI	**Sintang**	**9.97**	**322**	P	Pn	18 46 33.1	+6.0
STKI	**Sintang**	**9.97**	**322**	P	Pn	18 46 33.1	+6.0
DBJI	**Dramaga**	**10.82**	**276**	P	**Pn**	**18 46 37.8**	**-0.9**
	3μm75nm,2.1s						
DBJI	**Dramaga**	**10.82**	**276**	P	**Pn**	**18 46 37.8**	**-0.9**
	3μm75nm,2.1s						
SKJI	**Sukabumi**	**10.96**	**274**	P	**Pn**	**18 46 41.0**	**+0.4**
	133nm,1.0s						
SKJI	**Sukabumi**	**10.96**	**274**	P	**Pn**	**18 46 41.0**	**+0.4**
	133nm,1.0s						
FITZ	**Fitzroy Crossi**	**12.82**	**143**	Pn	**Pn**	**18 47 06.3**	**+0.2**
	0.1nm,0.3s,baz=326,slow=11,SNR=5.5						
FITZ				Sn	**Sn**	**18 49 23.9**	**-5.2**
	0.5nm,0.3s,baz=200,slow=19,SNR=5.8						
FITZ				LR	LR	18 53 01.8	
	comp=Z,128nm,20.2s,baz=322,slow=42						
FITZ	**Fitzroy Crossi**	**12.82**	**143**	Pn	**Pn**	**18 47 06.0**	**-0.1**
KLSI		**13.15**	**283**	P	**P**	**18 47 18.7**	**-2.1**
KLSI		**13.15**	**283**	P	**P**	**18 47 18.7**	**-2.1**
KNRA	**Kununurra**	**13.40**	**126**		**Pn**	**18 47 12.9**	**-1.1**
LWLI	**Liwa**	**13.72**	**281**	P	**P**	**18 47 23.5**	**-3.8**
LWLI	**Liwa**	**13.72**	**281**	P	**P**	**18 47 23.5**	**-3.8**
MDSI	**Maura Dua**	**13.73**	**284**	P	**Pn**	**18 47 20.9**	**+2.3**
	17nm,1.4s						
MDSI	**Maura Dua**	**13.73**	**284**	P	**Pn**	**18 47 20.9**	**+2.3**
	17nm,1.4s						
PSA00	**Pilbara Seismi**	**13.77**	**171**	Pn	**Pn**	**18 47 18.1**	**-0.9**
MTN	**Manton Dam**	**14.22**	**111**		**Pn**	**18 47 24.5**	**-0.7**
MNAI	**Manna**	**14.95**	**283**	Pn	**Pn**	**18 47 35.2**	**0.0**
GIRL	**Giralia**	**15.01**	**192**	Pn	**Pn**	**18 47 34.3**	**-1.6**
SIJI	**Sorong**	**15.33**	**64**	Pn	**P**	**18 47 44.8**	**-0.3**
	0.2nm,0.3s,baz=240,slow=20,SNR=2.4						
FAKI	**Fak Fak**	**15.43**	**72**	P	**P**	**18 47 45.1**	**-1.0**
FAKI				IAmb	IAmb	18 47 59.9	
	comp=Z,27nm,0.9s						
DAV	**Davao City (W)**	**16.88**	**28**	LR	LR	18 56 10.8	
	comp=Z,184nm,18.1s,baz=120,slow=43						
KRJI	**Kerinci**	**17.05**	**289**	P	**P**	**18 48 03.4**	**-0.8**
	comp=Z,2μmcomp=Z,282nm,0.9s						
KRJI	**Kerinci**	**17.05**	**289**	P	**P**	**18 48 03.4**	**-0.8**
	comp=Z,2μmcomp=Z,282nm,0.9s						
WB0	**Warramunga Arr**	**20.13**	**128**	P	**P**	**18 48 38.0**	**+0.1**
WB0				IAmb	IAmb	18 48 51.5	
	comp=Z,16nm,0.7s						
WRA	**Warramunga Arr**	**20.18**	**128**	P	**P**	**18 48 39.2**	**+0.6**
	comp=Z,2.0nm,0.5s,baz=302,slow=13,SNR=23						
WRA				S	**S**	**18 52 20.7**	**-4.6**
	comp=Z,1.7nm,0.8s,baz=302,slow=24,SNR=4.3						
WRAB	**Tennant Creek**	**20.18**	**128**		**Sn**	18 52 32.0	+4.1
WB2	**Warramunga Arr**	**20.19**	**128**		**P**	**18 48 38.7**	**0.0**
WR0	**Warramunga Arr**	**20.35**	**128**		**P**	**18 48 40.4**	**0.0**
WR0				IAmb	IAmb	18 48 53.9	
	comp=Z,26nm,0.8s						
RPSI	**Rantau Prapat**	**21.37**	**299**	P	**P**	**18 48 51.8**	**+0.4**
RPSI				IAmb	IAmb	18 49 10.8	
	comp=Z,30nm,1.4s						
RPSI	**Rantau Prapat**	**21.37**	**299**	P	**P**	**18 48 52.4**	**+0.9**
PSI	**Prapat**	**21.42**	**299**	P	**P**	**18 48 52.4**	**+0.2**
	comp=Z,3.2nm,0.4s,baz=141,slow=6.9,SNR=5.6						
AS31	**Alice Springs**	**22.16**	**137**	P	**P**	**18 48 59.2**	**-0.7**
ASAR	**Alice Springs**	**22.16**	**137**	P	**P**	**18 49 01.2**	**+1.3**
	comp=Z,6.7nm,0.7s,baz=311,slow=9.7,SNR=31						
ASAR				S	**S**	**18 53 05.7**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=314,slow=25,SNR=3.9						
ASAR				LR	LR	18 57 53.0	
	comp=Z,108nm,19.3s,baz=316,slow=38						
FORT	**Forrest**	**24.79**	**158**	P	**P**	**18 49 23.2**	**-2.6**
NWAO	**Narrogin (SRO)**	**24.91**	**181**	P	**P**	**18 49 27.3**	**+0.4**
	comp=Z,5.6nm,1.0s,baz=21,slow=8.6,SNR=3.1						
NWAO				S	**S**	**18 53 59.4**	**+9.2**
	comp=Z,5.6nm,0.5s,baz=17,slow=17,SNR=4.1						
NWAO				LR	LR	18 59 18.4	
	comp=Z,78nm,19.7s,baz=314,slow=37						
NWAO	**Narrogin (SRO)**	**24.91**	**181**	IAmb	IAmb	18 49 55.1	
	comp=Z,11nm,0.7s						
COEN	**Coen**	**25.84**	**106**	P	**P**	**18 49 34.8**	**-0.7**
CMAR	**Chiang Mai Arr**	**32.00**	**325**	P	**P**	**18 50 31.2**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=146,slow=7.0,SNR=7.4						
CMAR				LR	LR	19 03 19.6	
	comp=Z,78nm,18.2s,baz=162,slow=36						
STKA	**Stephens Creek**	**32.70**	**140**	P	**P**	**18 50 37.1**	**+0.7**
	comp=Z,2.1nm,0.8s,baz=292,slow=11,SNR=3.0						
STKA				LR	LR	19 04 14.2	
	comp=Z,99nm,19.4s,baz=27,slow=37						
STKA	**Stephens Creek**	**32.70**	**140**	IAmb	IAmb	18 50 46.4	
	comp=Z,0.9nm,0.7s						
BRDH	**Bariadhala**	**39.60**	**321**	LR	LR	19 09 37.4	
	comp=Z,125nm,18.1s,baz=154,slow=39						
JCJ	**Chichijima**	**42.18**	**34**	LR	LR	19 12 22.2	
	comp=Z,14nm,18.3s,baz=114,slow=40						
LSA	**Lhasa**	**45.20**	**327**	P	**P**	**18 52 23.0**	**+1.4**
LSA	**Lhasa**	**45.20**	**327**	P	**P**	**18 52 21.8**	**+0.2**
LSA				IAmb	IAmb	18 52 43.5	
	comp=Z,14nm,1.6s						
ODAN	**Odare**	**45.28**	**321**	eP	**P**	**18 52 22.5**	**+0.5**
	comp=Z,17nm,0.7s						
TAPN	**Taplejung**	**45.43**	**322**	eP	**P**	**18 52 23.8**	**+0.5**
	comp=Z,36nm,1.0s						
RAMN	**Ramite**	**45.84**	**320**	eP	**P**	**18 52 27.4**	**+1.0**
	comp=Z,13nm,0.6s						
KSRS	**Korea Array**	**46.15**	**11**	LR	LR	19 12 57.1	
	comp=Z,20nm,20.0s,baz=205,slow=38						
JIRN	**Jiri**	**46.60**	**321**	eP	**P**	**18 52 32.7**	**+0.2**
	comp=Z,36nm,0.7s						
GUN	**Gumba**	**46.97**	**321**	eP	**P**	**18 52 35.8**	**+0.4**
	comp=Z,35nm,0.8s						
PKI	**Pulchoki**	**47.03**	**320**	eP	**P**	**18 52 35.9**	**0.0**
	comp=Z,12nm,0.8s						
PKIN	**Phulchoki**	**47.04**	**320**	eP	**P**	**18 52 35.9**	**0.0**
	comp=Z,8.4nm,0.7s						
DMN	**Daman**	**47.25**	**320**	eP	**P**	**18 52 37.7**	**+0.2**
	comp=Z,16nm,0.8s						
KKN	**Kakani**	**47.26**	**320**	eP	**P**	**18 52 37.8**	**+0.2**
	comp=Z,12nm,0.8s						
GKN	**Gorkha**	**47.82**	**320**	eP	**P**	**18 52 42.2**	**+0.3**
DANN	**Dangsing**	**48.62**	**319**	eP	**P**	**18 52 48.1**	**-0.1**
	comp=Z,25nm,0.6s						
GTA	**Gaotai**	**49.87**	**342**	eP	**P**	**18 52 58.5**	**+1.2**
USRK	**Ussuriysk Ar.**	**53.47**	**13**	P	**P**	**18 53 24.1**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=188,slow=7.3,SNR=3.5						
ULN	**Ulaanbaatar**	**56.30**	**352**	P	**P**	**18 53 44.5**	**-0.1**
SONM	**Songino Array**	**56.37**	**351**	P	**P**	**18 53 44.6**	**-0.5**
	comp=Z,2.9nm,0.9s,baz=171,slow=9.8,SNR=18						
SONM				LR	LR	19 21 13.2	
	comp=Z,50nm,18.4s,baz=130,slow=40						
ASAJ	**Asahikawa**	**56.51**	**21**	P	**P**	**18 53 45.2**	**-0.8**
	comp=Z,9.0nm,0.9s,baz=190,slow=6.1,SNR=3.9						
JKA	**Kamikawa-asahi**	**56.51**	**21**	P	**P**	**18 53 45.2**	**-0.8**
KSH	**Kashi**	**60.89**	**324**	P	P	18 54 23.8	+7.0
KSH				PP	**PP**	**18 56 38.0**	**+6.9**
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSH				LR	LR		
	comp=Z,140nm,10.1s						
KSH				LR	LR		
	comp=Z,250nm,5.8s						
KSH				LR	LR		
	comp=Z,270nm,10.5s						
MK31	**Makanchi Array**	**62.84**	**334**	P	**P**	**18 54 29.0**	**-0.7**
MK31				IAmb	IAmb	18 54 42.2	
	comp=Z,3.9nm,1.1s						
MKAR	**Makanchi Array**	**62.84**	**334**	P	**P**	**18 54 29.7**	**0.0**
	comp=Z,1.8nm,0.6s,baz=154,slow=6.6,SNR=25						
MKAR				LR	LR	19 23 00.5	
	comp=Z,43nm,21.0s,baz=166,slow=37						
AAK	**Ala-Archa**	**63.78**	**326**	P	**P**	**18 54 36.4**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=100,slow=6.1,SNR=3.1						
AAK	**Ala-Archa**	**63.78**	**326**	IAmb	IAmb	18 55 04.7	
	comp=Z,4.3nm,1.2s						
KURBB	**Kurchatov Arra**	**67.36**	**334**	P	**P**	**18 54 58.1**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=143,slow=5.7,SNR=7.9						
KURK	**Kurchatov**	**67.39**	**334**	P	**P**	**18 54 58.1**	**-1.0**
KURK	**Kurchatov**	**67.39**	**334**	IAmb	IAmb	18 55 05.3	
	comp=Z,2.5nm,0.6s						
ZALV	**Zalesovo Beam**	**67.52**	**340**	P	**P**	**18 54 58.4**	**-1.5**
	comp=Z,1.0nm,0.6s,baz=140,slow=5.3,SNR=6.5						
GEYT	**Alibeck**	**71.66**	**314**	LR	LR	19 30 43.0	
	comp=Z,28nm,19.1s,baz=205,slow=39						
BVAR	**Borovoye Array**	**72.67**	**332**	P	**P**	**18 55 31.0**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=138,slow=7.0,SNR=8.8						
SEY	**Seymchan**	**75.48**	**16**	P	**P**	**18 55 48.5**	**+0.8**
	comp=Z,4.6nm,1.1s,baz=232,slow=4.5,SNR=11						
ABKAR	**Akbulak array**	**75.85**	**325**	P	**P**	**18 55 49.7**	**-0.4**
TIXI	**Tiksi**	**79.73**	**4**	P	**P**	**18 56 10.8**	**-0.5**
BOSA	**Boshof**	**88.29**	**242**	LR	LR	19 33 08.1	
	comp=Z,45nm,19.1s,baz=142,slow=33						

NEIC **27** 18:52:28.7±2.9, 35.83N±0.06×121.58W±0.05, h6km±4km, Error ellipse: s-maj=8.8km s-min=5.2km az=195.0

IDC **27** 18:52:29.1±0.7, 35.77N×121.47W, h0km, mb4.1/20, mb1 4.2/27, mb1mx4.0/55, mbtmp4.0/27, ML3.5/7, MS3.2/9, Ms1 3.2/9, ms1mx3.0/53, Error ellipse: s-maj=11.9km s-min=9.6km az=25.0

ANF **27** 18:52:30.4±0.9, 35.79N×121.54W, h28km±12km, ML4.2/28, Error ellipse: s-maj=6.7km s-min=3.1km az=88.0

NCEDC **27** 18:52:30.0±2.4, 35.87N±0.06×121.50W±0.05, h10km±4km, Mwr4.1/8, mb4.3/16(NEIC), Error ellipse: s-maj=8.7km s-min=5.4km az=206.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.52; $M_{\theta\theta}$-0.70; $M_{\phi\phi}$-0.82; $M_{r\theta}$0.12; $M_{r\phi}$0.80; $M_{\theta\phi}$0.11;

ISC 27 18:52:29.3±1.3, **35.83N**±0.03×**121.52W**±0.03, **h5km**±8km, **n329**, σ1.39/327, **mb4.2**/23, **MS3.6**/3, **Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
PAPM	**Alder Peak**	**0.15**	**59**		**Pg**	**18 52 32.8**	**+0.4**
PHCM	**Hearst Castle**	**0.34**	**117**		**Pb**	**18 52 37.0**	**-0.8**
BAPM	**Anderson Peak**	**0.35**	**344**		**Pb**	**18 52 37.2**	**-1.0**
PHSB	**Hesperia Broad**	**0.38**	**91**		**Pg**	**18 52 37.4**	**+0.7**
PHSB					**Sg**	**18 52 42.9**	**+1.1**
PCCM	**Crazy Canyon**	**0.39**	**49**		**Pb**	**18 52 37.3**	**+0.4**
BPOM	**Post Ranch**	**0.44**	**333**		**Pb**	**18 52 38.9**	**-0.7**
PCBM	**Cambria**	**0.49**	**130**		**Pb**	**18 52 39.7**	**-0.7**
PANM	**San Antonio Re**	**0.50**	**96**		**Pg**	**18 52 39.7**	**+0.7**
PSAM	**San Ardo**	**0.55**	**70**		**Pg**	**18 52 40.2**	**+0.3**
BSMM	**Soledad Missio**	**0.55**	**8**		**Pg**	**18 52 40.2**	**+0.2**
HAST	**Hastings Reser**	**0.55**	**358**		**Pb**	**18 52 40.4**	**-1.2**
HAST					**Sb**	**18 52 47.9**	**-1.9**
LRC	**Lone Oak Road**	**0.57**	**43**		**Pg**	**18 52 40.4**	**+0.1**
RAMR	**Ramage Ranch**	**0.57**	**110**		**Pb**	**18 52 41.3**	**-0.5**
RAMR					**Sg**	**18 52 49.4**	**+1.8**
ARDC	**Alexander Ranc**	**0.58**	**130**		**Pb**	**18 52 41.2**	**-0.7**
ARDC					**Sb**	**18 52 49.5**	**-0.9**
BLDC	**Black Mountain**	**0.58**	**121**		**Pb**	**18 52 41.5**	**-0.6**
BLDC	**Black Mountain**	**0.58**	**121**		**Pb**	**18 52 41.5**	**-0.6**
BLDC					**Sb**	**18 52 50.7**	**0.0**
BSGM	**Shirttail Gulc**	**0.62**	**21**		**Pg**	**18 52 41.1**	**-0.1**
PMPB	**Monarch Peak**	**0.70**	**57**		**Pg**	**18 52 42.5**	**-0.2**
BPIM	**Pinnacles**	**0.71**	**24**		**Pg**	**18 52 42.8**	**-0.2**
LRV	**Little Rabbit**	**0.72**	**35**		**Pg**	**18 52 43.3**	**+0.2**
BJCM	**Johnson Can.**	**0.72**	**8**		**Pg**	**18 52 43.2**	**0.0**
PPO	**Portuguese Can**	**0.74**	**87**		**Pg**	**18 52 44.1**	**+0.6**
BPCNC	**Pine Canyon**	**0.74**	**354**		**Pb**	**18 52 43.9**	**-0.9**
BBNM	**San Benito**	**0.76**	**28**		**Pg**	**18 52 44.2**	**+0.2**
SCZ	**Santa Cruz**	**0.77**	**7**		**Pg**	**18 52 44.1**	**0.0**
LSDC	**Los Osos Digit**	**0.77**	**134**		**Pb**	**18 52 44.9**	**-0.3**
BVL	**Bear Valley**	**0.79**	**20**		**Pg**	**18 52 44.3**	**-0.1**
PTAM	**Tassajara Cree**	**0.80**	**123**		**Pg**	**18 52 45.0**	**+0.4**
VPDC	**Valencia Peak**	**0.80**	**138**		**Pg**	**18 52 44.9**	**+0.2**
PKD	**Bear Valley Ra**	**0.80**	**82**		**Pg**	**18 52 44.6**	**-0.2**
PVCM	**Vineyard Canyo**	**0.81**	**83**		**Pg**	**18 52 44.9**	**0.0**
BJOM	**Mount Johnson**	**0.81**	**12**		**Pg**	**18 52 44.5**	**-0.5**
PWKM	**Work Ranch**	**0.82**	**91**		**Pg**	**18 52 45.7**	**+0.5**
EFD	**Emergency Oper**	**0.83**	**128**		**Pb**	**18 52 45.6**	**-0.6**
HMOM	**Monterey**	**0.83**	**337**		**Pb**	**18 52 45.3**	**-1.0**
PSTM	**Stockdale Moun**	**0.83**	**83**		**Pg**	**18 52 45.0**	**-0.2**
BSRM	**Salinas Radio**	**0.83**	**0**		**Pb**	**18 52 45.4**	**-0.8**
DCD	**Diablo Creek**	**0.83**	**138**		**Pb**	**18 52 45.0**	**-0.3**
BBGB	**Big Mountain B**	**0.84**	**28**		**Pb**	**18 52 45.9**	**-0.5**
DPD	**Davis Peak**	**0.85**	**135**		**Pg**	**18 52 45.5**	**-0.2**
BLRM	**Lewis Ranch**	**0.85**	**14**		**Pb**	**18 52 45.6**	**-0.2**
BEHM	**Elkhorn Ranch**	**0.88**	**19**		**Pb**	**18 52 46.5**	**-0.5**
BCGM	**Cienega Road**	**0.89**	**9**		**Pb**	**18 52 46.2**	**-0.2**
BEMM	**Emmet**	**0.89**	**23**		**Pb**	**18 52 46.8**	**-0.6**
BAVM	**Antelope Valle**	**0.90**	**26**		**Pb**	**18 52 46.8**	**-0.7**
PCMM	**Cholame Hills**	**0.91**	**92**		**Pg**	**18 52 47.0**	**+0.3**
BHRM	**Hodges Ranch**	**0.92**	**13**		**Pb**	**18 52 47.3**	**-0.4**
BVYM	**Vineyard**	**0.92**	**6**		**Pg**	**18 52 46.7**	**-0.2**
FRP	**Fremont Peak**	**0.92**	**2**		**Pb**	**18 52 46.8**	**-1.0**
TCHL	**Shandon**	**0.92**	**99**		**Pg**	**18 52 47.4**	**+0.4**
SAO	**San Andreas Ge**	**0.93**	**4**		**Pb**	**18 52 46.0**	**-1.2**
PMCM	**McMillan Canyo**	**0.94**	**96**		**Pg**	**18 52 47.7**	**+0.3**
BSLM	**Silva Ranch**	**0.95**	**8**		**Pn**	**18 52 48.1**	**-1.3**
GHC	**Gold Hill**	**0.95**	**90**		**Pg**	**18 52 47.4**	**-0.2**
HJGM	**San Juan Grade**	**0.96**	**358**		**Pb**	**18 52 47.5**	**-0.3**
PKLM	**Kerr Lake**	**0.96**	**93**		**Pg**	**18 52 47.6**	**-0.2**
CTM	**Castle Mountai**	**0.97**	**84**		**Pg**	**18 52 48.2**	**+0.3**
HERM	**Elkhorn Road**	**0.97**	**351**		**Pb**	**18 52 48.0**	**-0.7**
HTUM	**Tustin Road**	**0.99**	**354**		**Pg**	**18 52 47.9**	**-0.5**
HJSM	**John Smith Roa**	**1.00**	**10**		**Pb**	**18 52 48.7**	**-0.4**
PSNM	**Stone Corral**	**1.00**	**92**		**Pg**	**18 52 47.9**	**-0.6**
TSCN	**Private Proper**	**1.00**	**107**		**Pg**	**18 52 48.4**	**-0.1**
MOBB	**Monterey Bay O**	**1.00**	**329**		**Pn**	**18 52 49.2**	**-0.7**
PSRM	**Scobie Ranch**	**1.01**	**88**		**Pg**	**18 52 48.3**	**-0.4**
BMSM	**Mercy Hot Spri**	**1.01**	**35**		**Pn**	**18 52 49.4**	**-0.9**
HBTM	**San Juan Bauti**	**1.01**	**359**		**Pg**	**18 52 48.3**	**-0.5**
TRAM	**Private Proper**	**1.03**	**98**		**Pg**	**18 52 48.7**	**-0.4**
PAGB	**Antelope Grade**	**1.04**	**95**		**Pg**	**18 52 47.9**	**-1.4**
PARM	**Anticline Ridg**	**1.04**	**66**		**Pg**	**18 52 49.4**	**+0.1**
PMRM	**Maxey Ranch**	**1.05**	**92**		**Pg**	**18 52 48.7**	**-0.7**
ANZ	**Anzar Road**	**1.05**	**357**		**Pb**	**18 52 48.6**	**-0.8**
THIS	**South End of C**	**1.06**	**96**		**Pb**	**18 52 49.1**	**-1.1**
THIS					**Sg**	**18 53 04.2**	**+0.8**
HCOM	**Corn Cob Canyo**	**1.06**	**352**		**Pg**	**18 52 49.0**	**-0.7**
HLTM	**Lone Tree Road**	**1.06**	**9**		**Pb**	**18 52 49.5**	**-0.7**
OCR	**O'Connell Ranc**	**1.08**	**1**		**Pg**	**18 52 49.7**	**-0.4**
PTRM	**Twissleman Ran**	**1.09**	**99**		**Pb**	**18 52 49.3**	**-1.3**
JELB	**Ellicott, Sant**	**1.12**	**347**		**Pb**	**18 52 50.0**	**-1.2**
CSR	**Chase Ranch**	**1.12**	**357**		**Pb**	**18 52 50.0**	**-1.2**
BRMM	**Rolling Bench**	**1.15**	**29**		**Pg**	**18 52 51.5**	**+0.2**
HFEM	**San Felipe**	**1.15**	**5**		**Pb**	**18 52 50.6**	**-1.1**
PKEM	**Kettleman Hill**	**1.17**	**78**		**Pn**	**18 52 51.3**	**-1.1**
PACP	**Pacheco Peak**	**1.19**	**9**		**Pn**	**18 52 51.5**	**-0.9**
CDC	**Canada Road**	**1.19**	**1**		**Pb**	**18 52 51.0**	**-1.4**
PMLM	**Mount Lospe**	**1.20**	**141**		**Pn**	**18 52 50.9**	**-1.9**
HLPM	**Lions Peak**	**1.21**	**356**		**Pn**	**18 52 51.1**	**-1.7**
JTGM	**Trout Gulch Ro**	**1.23**	**347**		**Pn**	**18 52 51.2**	**-1.9**
HPCM	**Pacheco Lake**	**1.24**	**9**		**Pn**	**18 52 52.1**	**-1.3**
SFJWR	**San Luis Fatjo**	**1.25**	**13**		**Pn**	**18 52 51.7**	**-1.8**
JRGM	**Rodeo Gulch Ro**	**1.25**	**344**		**Pn**	**18 52 51.7**	**-1.8**
SLD	**San Luis Dam**	**1.26**	**11**		**Pn**	**18 52 52.2**	**-1.4**
JHLM	**Holstrom Ranch**	**1.30**	**349**		**Pn**	**18 52 52.2**	**-2.0**
JLAB	**Laurel Hill**	**1.33**	**353**		**Pn**	**18 52 52.8**	**-1.8**
CADM	**Anderson Res.**	**1.33**	**356**		**Pn**	**18 52 53.0**	**-1.6**
AMC	**Almaden**	**1.35**	**349**		**Pn**	**18 52 52.8**	**-2.0**
SMMC	**Simmler**	**1.35**	**112**		**Pn**	**18 52 53.1**	**-1.8**
SMMC	**Simmler**	**1.35**	**112**	P	**Pn**	**18 52 53.1**	**-1.8**
	baz=295,SNR=206						
SMMC				S	**Sb**	**18 53 10.0**	**-2.7**
	baz=295						
JUMM	**Mount Umunhum**	**1.36**	**347**		**Pn**	**18 52 53.1**	**-2.0**
JBNB	**Ben Lomond Mou**	**1.38**	**339**		**Pn**	**18 52 53.3**	**-2.0**
JSTM	**Santa Teresa H**	**1.39**	**351**		**Pn**	**18 52 53.6**	**-1.8**
CCOB	**Coe Ranch Numb**	**1.43**	**355**		**Pn**	**18 52 54.9**	**-1.0**
CARC	**Carrizo Plain**	**1.46**	**111**		**Pn**	**18 52 54.8**	**-1.7**
SCCB	**Santa Clara Co**	**1.48**	**349**		**Pn**	**18 52 55.1**	**-1.4**
MHC	**Mount Hamilton**	**1.51**	**356**		**Pn**	**18 52 55.6**	**-1.5**
ARN	**Arnold Ranch**	**1.51**	**360**		**Pn**	**18 52 55.8**	**-1.4**
GATR	**Gnd/Air Tx Cnt**	**1.53**	**147**		**Pn**	**18 52 55.4**	**-1.9**
JJRM	**Joaquin Road**	**1.60**	**340**		**Pn**	**18 52 56.4**	**-2.0**
JFP	**Foothills Park**	**1.61**	**341**		**Pn**	**18 52 56.4**	**-2.1**
CMMM	**Mount Mocho**	**1.62**	**1**		**Pn**	**18 52 57.3**	**-1.3**
CMLM	**Mount Lewis**	**1.64**	**356**		**Pn**	**18 52 57.8**	**-1.2**
JSFB	**Stanford Teles**	**1.65**	**342**		**Pn**	**18 52 57.3**	**-1.7**
JRSC	**Jasper Ridge**	**1.67**	**340**		**Pn**	**18 52 56.9**	**-2.3**
FIGC	**Figueroa Mtn.**	**1.67**	**131**		**Pn**	**18 52 57.7**	**-1.7**
PKM	**Mcpherson Peak**	**1.69**	**124**		**Pn**	**18 52 58.1**	**-1.5**
PKM	**Mcpherson Peak**	**1.69**	**124**	P	**Pn**	**18 52 57.7**	**-1.9**
	baz=306,SNR=159						
CMJM	**Mission San Jo**	**1.71**	**351**		**Pn**	**18 52 58.2**	**-1.6**
JHPM	**Huddart Park**	**1.73**	**339**		**Pn**	**18 52 57.9**	**-2.1**
MYLM	**Yosemite Lake**	**1.78**	**30**		**Pn**	**18 52 59.4**	**-1.4**
WENL	**Wente Vineyard**	**1.79**	**354**		**Pn**	**18 53 00.1**	**-0.9**
VOG	**Valley Oaks Go**	**1.80**	**74**	P	**Pn**	**18 52 59.2**	**-1.8**
	baz=256,SNR=21						
VOG				S	**Sn**	**18 53 21.7**	**-2.6**
	baz=256						
CNIC	**Niles Canyon**	**1.81**	**349**		**Pn**	**18 52 59.4**	**-1.7**
SYP	**Santa Ynez Pea**	**1.82**	**135**		**Pn**	**18 52 59.8**	**-1.6**
MHDM	**Hidden Dam**	**1.83**	**45**		**Pn**	**18 53 00.1**	**-1.4**
FRI	**Friant**	**1.86**	**51**		**Pn**	**18 53 00.7**	**-1.3**
JCPM	**Coyote Point**	**1.86**	**340**		**Pn**	**18 52 59.8**	**-2.1**
SAC	**San Andreas**	**1.89**	**338**		**Pn**	**18 53 00.3**	**-2.0**
RCTC	**Rector, Farmer**	**1.91**	**75**		**Pn**	**18 53 00.9**	**-1.6**
BCW	**Bitter Crk WRg**	**1.94**	**117**		**Pn**	**18 53 02.0**	**-1.0**
CSLM	**San Leandro Hi**	**1.95**	**346**		**Pn**	**18 53 01.0**	**-2.0**
CLCB	**Lake Chabot**	**1.95**	**347**		**Pn**	**18 53 01.4**	**-1.7**
VES	**Vestal, Richgr**	**1.98**	**89**		**Pn**	**18 53 01.4**	**-2.1**
VES	**Vestal, Richgr**	**1.98**	**89**	P	**Pn**	**18 53 01.4**	**-2.1**
	baz=271,SNR=40						
VES				S	**Sn**	**18 53 26.0**	**-2.7**
	baz=271						
CBCNC	**Byron Hot Spri**	**1.98**	**357**		**Pn**	**18 53 02.9**	**-0.7**
CMOB	**Morgan Territo**	**1.98**	**354**		**Pn**	**18 53 02.4**	**-1.2**
MRHM	**Rocky Hill**	**2.02**	**76**		**Pn**	**18 53 02.4**	**-1.8**
BGC	**Bolinger Road**	**2.02**	**348**		**Pn**	**18 53 02.5**	**-1.7**
SBC	**Santa Barbara**	**2.03**	**133**		**Pn**	**18 53 02.6**	**-1.6**
SBC	**Santa Barbara**	**2.03**	**133**	P	**Pn**	**18 53 02.6**	**-1.6**
	baz=315						
CRHM	**Round Hill Res**	**2.06**	**350**		**Pn**	**18 53 03.4**	**-1.1**
SMCB	**Saint Mary's C**	**2.06**	**347**		**Pn**	**18 53 02.8**	**-1.7**
CYBM	**Yerba Buena Is**	**2.08**	**341**		**Pn**	**18 53 02.8**	**-2.1**
CRPB	**Russellman Par**	**2.10**	**352**		**Pn**	**18 53 03.3**	**-1.9**
JPRM	**Presidio of Sa**	**2.10**	**339**		**Pn**	**18 53 03.0**	**-2.1**
BKS	**Berkeley--Byer**	**2.12**	**345**		**Pn**	**18 53 03.2**	**-2.2**
BL67	**Building 67, L**	**2.12**	**344**		**Pn**	**18 53 03.4**	**-2.1**
BRK	**Berkeley--Havi**	**2.12**	**344**		**Pn**	**18 53 03.2**	**-2.2**
CVPM	**Vollmer Peak**	**2.12**	**345**		**Pn**	**18 53 03.5**	**-2.0**
VAK	**Adit at Lawren**	**2.12**	**344**		**Pn**	**18 53 03.1**	**-2.3**
BDM	**Black Diamond**	**2.13**	**353**		**Pn**	**18 53 04.4**	**-1.3**
MMMM	**Miami Mountain**	**2.13**	**42**		**Pn**	**18 53 05.1**	**-0.6**
BRIB	**Briones**	**2.14**	**347**		**Pn**	**18 53 04.1**	**-1.6**
HELL	**Mitchell Peak,**	**2.19**	**67**		**Pn**	**18 53 05.2**	**-1.3**
CSPM	**San Pablo Ridg**	**2.21**	**344**		**Pn**	**18 53 04.9**	**-1.8**
CPIM	**Pinole Ridge**	**2.22**	**346**		**Pn**	**18 53 05.2**	**-1.6**
CPMM	**Point Molate**	**2.23**	**342**		**Pn**	**18 53 04.5**	**-2.3**
MCUB	**Copperopolis B**	**2.26**	**18**		**Pn**	**18 53 06.0**	**-1.3**
WOFM	**Oak Flat**	**2.31**	**97**		**Pn**	**18 53 06.3**	**-1.8**
ARVC	**Arvin**	**2.31**	**107**		**Pn**	**18 53 06.7**	**-1.3**
ARVC	**Arvin**	**2.31**	**107**	P	**Pn**	**18 53 06.5**	**-1.6**
	baz=290,SNR=14						
KCC	**Kaiser Creek**	**2.31**	**49**		**Pn**	**18 53 07.5**	**-0.6**
NLHM	**Lake Herman**	**2.33**	**348**		**Pn**	**18 53 06.9**	**-1.5**
MNHB	**New Hogan Dam**	**2.38**	**14**		**Pn**	**18 53 07.8**	**-1.2**
CMB	**Columbia Colle**	**2.38**	**22**		**Pn**	**18 53 08.1**	**-1.0**
TEJ	**El Tejon**	**2.39**	**104**		**Pn**	**18 53 07.3**	**-1.9**
SCZ2	**Santa Cruz Isl**	**2.40**	**139**	P	**Pn**	**18 53 07.2**	**-2.2**
	baz=321						
WASM	**Alta Sierra Ca**	**2.41**	**91**		**Pn**	**18 53 08.2**	**-1.5**
NOLM	**Olema**	**2.42**	**336**		**Pn**	**18 53 07.5**	**-2.1**
SNT	**Sears Point**	**2.46**	**343**		**Pn**	**18 53 08.0**	**-2.1**
ISA	**Isabella, Lake**	**2.49**	**93**		**Pn**	**18 53 08.9**	**-1.6**
ISA	**Isabella, Lake**	**2.49**	**93**	P	**Pn**	**18 53 09.1**	**-1.4**
	baz=276,SNR=86						
ISA				S	**Sn**	**18 53 39.7**	**-1.6**
	baz=276						
MCCM	**Marconi Confer**	**2.55**	**335**		**Pn**	**18 53 08.7**	**-2.6**

OSI Osito Audit: C 2.59 117 Pn 18 53 10.9 -1.1
OSI Osito Audit: C 2.59 117 P Pn 18 53 10.7 -1.4
baz=300,SNR=11
AASM Arroyo Seco 2.61 7 Pn 18 53 10.8 -1.4
CVS Carmenet Viney 2.62 344 Pn 18 53 10.1 -2.1
BLG Laguna Peak, P 2.65 130 P Pn 18 53 11.2 -1.6
baz=312,SNR=12
BLG S Sn 18 53 42.1 -3.2
baz=312
OMMB Old Mammoth Mi 2.69 48 Pn 18 53 13.7 0.0
MLAC Mammoth, Mammo 2.81 50 P Pn 18 53 15.5 +0.4
baz=231,SNR=43
CWC Cottonwood Cre 2.85 77 P Pn 18 53 15.0 -0.6
baz=259
CWC S Sn 18 53 49.2 -1.3
baz=259
TIN Tinemaha, Big 2.92 64 P Pn 18 53 17.0 +0.4
baz=247,SNR=38
EDW2 Edwards Air Fo 3.04 107 P Pn 18 53 16.7 -1.4
baz=290,SNR=32
EDW2 S Sn 18 53 54.3 -0.6
baz=290
DECC Green Verdugo 3.06 120 P Pn 18 53 17.0 -1.3
baz=303,SNR=6.6
SNCC San Nicolas Is 3.06 147 Pn Pn 18 53 18.1 -0.4
SNCC San Nicolas Is 3.06 147 S Sn 18 53 52.4 -3.0
baz=329
GDXM Geysers 3.14 342 Pn 18 53 17.0 -2.5
AFDM Forest Hills D 3.14 8 Pn 18 53 18.2 -1.3
WAKR Walker 3.14 31 Pn 18 53 20.1 +0.4
PASC Pasadena Art C 3.20 120 Pn 18 53 18.4 -1.9
DAC Darwin (Calif) 3.21 81 Pn 18 53 21.8 +1.2
MWC Mount Wilson 3.27 118 Pn 18 53 20.0 -1.4
MPMC Manual Prospec 3.28 85 P Pn 18 53 20.2 -1.4
baz=268,SNR=94
HOPS Hopland Field 3.39 339 Pn Pn 18 53 21.6 -1.2
RUBR Rubicon Trail 3.39 18 Pn 18 53 22.5 -0.6
BFSC Mount Baldy Ra 3.55 116 P Pn 18 53 23.8 -1.4
baz=298,SNR=43
BFSC S Sn 18 54 05.2 -2.4
baz=298
PNTR Pine Nut 3.59 25 Pn 18 53 26.0 +0.2
YERR Yerington 3.63 29 Pn 18 53 26.5 0.0
NVAR Mina Array Bea 3.65 44 Pn Pn 18 53 27.5 +0.8
4.2nm,0.3s,baz=230,slow=18,SNR=47
NVAR Lg Lg 18 54 23.9
16nm,0.3s,baz=223,slow=17,SNR=3.1
RYN Ryan 3.67 40 Pn 18 53 27.8 +0.8
ORV Oroville 3.71 0 Pn 18 53 25.8 -1.6
NV11 Mina Array Sit 3.74 45 Pn 18 53 29.0 +1.2
VCNR Virginia City 3.76 23 Pn 18 53 27.8 -0.5
SCI2 San Clemente I 3.76 138 P Pn 18 53 26.6 -1.4
baz=321
SCI2 S Sn 18 54 10.5 -2.1
baz=321
GSC Goldstone, Bar 3.88 96 Pn 18 53 28.3 -1.5
GSC Goldstone, Bar 3.88 96 P Pn 18 53 28.4 -1.3
baz=280,SNR=8.9
GSC S Sn 18 54 13.4 -2.4
baz=280
BBRC Big Bear Solar 4.09 111 P Pn 18 53 30.4 -2.3
baz=294
BEKR Beckworth 4.13 13 Pn 18 53 33.4 +0.1
KCPM Cahto Peak 4.18 338 Pn 18 53 33.4 -0.4
MURC Murrieta 4.20 121 P Pn 18 53 32.1 -2.0
baz=304
MURC S Sn 18 54 20.6 -3.0
baz=304
KVN Kaiserville 4.21 39 Pn 18 53 34.1 -0.3
PAHR Pah Rah Range 4.22 23 Pn 18 53 33.7 -0.8
TPNV Topopah Spring 4.40 74 Pn 18 53 35.9 -1.1
TPNV Topopah Spring 4.40 74 P Pn 18 53 36.8 -0.1
baz=257,SNR=22
O03E Paynes Creek 4.46 357 P Pn 18 53 37.0 -0.7
baz=177,SNR=10
PFO Pinyon Flats O 4.72 117 Pn Pn 18 53 40.2 -1.1
2.2nm,0.3s,baz=296,slow=11,SNR=19
PFO Lg Lg 18 54 57.3
2.2nm,0.3s,baz=355,slow=13,SNR=3.7
PFO Pinyon Flats O 4.72 117 Pn 18 53 39.8 -1.5
XPFO Pion Flat 4.73 117 Pn 18 53 40.1 -1.3
TPFO Pinon Flats 4.73 117 P Pn 18 53 36.4 -5.0
baz=300
WDC Whiskeytown Da 4.80 351 Pn 18 53 42.6 +0.2
GMRC Granite Mounta 4.91 101 P Pn 18 53 42.0 -1.9
baz=284
BAR Barrett 5.10 127 Pn 18 53 44.2 -2.3
MONP2 Monument Peak 5.14 123 P Pn 18 53 45.8 -1.4
baz=307,SNR=12
SHPR Sheep Range 5.19 81 Pn 18 53 48.0 +0.2
R11A Troy Canyon, C 5.37 60 Pn 18 53 50.1 -0.2
R11A Troy Canyon, C 5.37 60 P Pn 18 53 48.8 -1.5
baz=244
IKP In-Ko-Pah, Jac 5.49 124 P Pn 18 53 50.6 -1.3
baz=307
IRM Iron Mountain 5.50 106 P Pn 18 53 50.1 -1.8
baz=290
SWSC Sam W. Stewart 5.54 120 P Pn 18 53 50.9 -1.6
baz=303
NEE2 Needles Airpor 5.75 99 P Pn 18 53 53.6 -1.7
baz=283
YBH Yreka Blue Hor 5.96 351 Pn Pn 18 54 00.0 +1.7
0.3nm,0.3s,baz=170,slow=12,SNR=5.4
YBH LR LR 18 55 50.5
comp=Z,66nm,20.4s,baz=109,slow=33
YBH Yreka Blue Hor 5.96 351 Pn Pn 18 54 00.7 +2.3
MOD Modoc Plateau 6.13 9 Pn Pn 18 54 00.2 -0.6
GLA Glamis 6.19 115 Pn 18 54 00.5 -0.9
W13A Hualapai Mount 6.28 94 Pn 18 54 01.3 -1.5
PSUT Pine Spring 6.69 64 Pn Pn 18 54 06.9 -1.5
CCUT Cedar City 6.78 73 Pn Pn 18 54 07.1 -2.6
ELK Elko 6.96 43 Pn Pn 18 54 15.1 +2.9
0.3nm,0.3s,baz=238,slow=16,SNR=5.6
ELK Lg Lg 18 56 06.6
0.9nm,0.3s,baz=150,slow=11,SNR=5.4
ELK LR LR 18 56 48.3
comp=Z,254nm,21.1s,baz=238,slow=37
ELK Elko 6.96 43 Pn Pn 18 54 10.1 -2.1
WVOR Wild Horse Val 6.96 18 Pn Pn 18 54 09.5 -2.6
SZCU Shurtz Canyon 7.00 73 Pn Pn 18 54 09.5 -3.2
KNB Kanab 7.11 78 Pn Pn 18 54 12.8 -1.5
Y14A Wickenburg 7.25 103 Pn 18 54 14.9 -1.1
U15A North Rim 7.49 83 Pn 18 54 21.0 +1.5
J08A Circle Bar Ran 7.87 16 Pn Pn 18 54 23.1 -1.5
MSU Marysvale 7.92 68 Pn Pn 18 54 22.0 -3.4
PINE Pine Mountain 7.96 3 Pn Pn 18 54 23.9 -2.0
DUG Dugway, Tooele 8.13 55 Pn Pn 18 54 27.5 -0.7
I07A Izee 8.38 10 Pn Pn 18 54 31.2 -0.4
BGU Big Grassy Mou 8.38 50 Pn Pn 18 54 30.5 -1.1
NLU North Lily Min 8.53 58 Pn Pn 18 54 33.9 +0.3
TMUT Trail Mountain 8.89 64 Pn Pn 18 54 40.2 +1.5
JLU Jordanelle 9.24 56 Pn Pn 18 54 41.8 -1.7
P17A Butcher Ranch, 9.29 64 Pn Pn 18 54 43.2 -0.8
SRU San Rafael Swe 9.33 66 Pn 18 54 38.6 -6.1
TCUT Toone Canyon 9.52 53 Pn Pn 18 54 44.8 -2.5
BMO Blue Mountains 9.56 18 Pn Pn 18 54 49.1 +1.4
HWUT Hardware Ranch 9.68 50 Pn Pn 18 54 50.9 +1.4
MVCO Mesa Verde 10.57 79 Pn Pn 18 55 01.5 -0.2
AHID Auburn Hatcher 10.63 46 Pn Pn 18 55 02.3 -0.1
F10A Beach Ranch, E 10.63 16 Pn Pn 18 55 02.3 -0.1
HAWA Hanford 10.65 7 Pn Pn 18 55 01.4 -1.2
E07A Sunnyside 10.79 6 Pn Pn 18 55 04.1 -0.3
LON Longmire 10.91 359 Pn Pn 18 55 05.6 -0.5
TPAW Teton Pass 11.17 44 Pn Pn 18 55 09.2 -0.7
O20A White River Ci 11.32 64 Pn 18 55 14.4 +2.5
LTY Liberty 11.43 3 Pn Pn 18 55 13.8 +0.5
PDAR Pinedale Array 11.56 50 Pn Pn 18 55 20.2 +5.0
0.1nm,0.3s,baz=232,slow=9.3,SNR=5.5
PDAR LR LR 19 00 26.4
comp=Z,176nm,19.2s,baz=230,slow=41
SMCO Snowmass 12.03 70 Pn 18 55 21.7 0.0
LRM Limekiln Ridge 12.10 32 Pn 18 55 34.6 +12
ANMO Albuquerque 12.33 90 LR LR 19 00 17.0
comp=Z,110nm,20.6s,baz=260,slow=38
B08A Colville Reser 12.62 7 Pn Pn 18 55 29.8 +0.3
YNE Yellowstone No 12.67 40 Pn Pn 18 55 31.0 +0.6
NEW Newport 12.84 13 Pn Pn 18 55 36.7 +4.2
0.2nm,0.3s,baz=181,slow=8.3,SNR=7.8
NEW LR LR 19 00 41.0
comp=Z,120nm,18.1s,baz=190,slow=38
NEW Newport 12.84 13 Pn Pn 18 55 32.0 -0.5
JTMT Jette 13.06 22 Pn Pn 18 55 35.1 -0.5
WALA Waterton Lakes 14.35 21 P Pn 18 55 50.7 -2.5
EGMT Eagleton 14.98 32 P Pn 18 56 02.0 +0.3

RSSD Black Hills 15.73 53 P P 18 56 15.4 -0.5
RSSD IAmb IAmb 18 56 21.9
comp=Z,17nm,1.1s
LAO LASA Array 15.78 42 P P 18 56 14.6 -1.6
LAO IAmb IAmb 18 56 23.2
comp=Z,30nm,1.1s
TX31 Lajitas Ar. Si 16.38 108 P P 18 56 22.4 -0.6
TX32 Lajitas Array 16.38 108 P Pn 18 56 19.4 -0.7
TXAR Lajitas Array 16.38 108 Pn P 18 56 22.4 -0.6
comp=Z,0.0nm,0.3s,baz=294,slow=12,SNR=18
TXAR LR LR 19 03 36.2
comp=Z,76nm,19.0s,baz=0.0,slow=41
BBB Bella Bella 17.01 346 LR LR 19 02 02.1
comp=Z,47nm,21.2s,baz=131,slow=34
DGMT Dagmar 17.96 40 Pn Pn 18 56 38.4 -1.3
DGMT IAmb IAmb 18 56 46.6
comp=Z,20nm,1.1s
ECSD EROS Data Cent 20.65 60 P P 18 57 09.1 -0.7
AGMN Agassiz Nation 22.64 49 P P 18 57 30.1 -1.0
AGMN IAmb IAmb 18 57 31.2
comp=Z,8.0nm,0.8s
FFC Flin Flon 23.22 29 P P 18 57 36.8 -0.3
FFC IAmb IAmb 18 57 42.0
comp=Z,5.4nm,0.8s
ULM Lac du Bonnet 23.49 44 P P 18 57 38.8 -1.1
comp=Z,3.8nm,0.8s,baz=245,slow=9.8,SNR=8.8
ULM LR LR 19 07 16.8
comp=Z,80nm,19.6s,baz=164,slow=38
ULM Lac du Bonnet 23.49 44 P P 18 57 38.6 -1.2
EYMN Ely 25.25 52 P P 18 57 55.2 -1.1
EYMN IAmb IAmb 18 58 01.9
comp=Z,15nm,1.4s
YKA Yellowknife Ar 27.03 7 P P 18 58 12.4 +0.3
comp=Z,0.4nm,0.7s,baz=181,slow=9.8,SNR=9.0
YKA PcP PcP 19 01 33.8 +0.6
comp=Z,0.3nm,0.7s,baz=169,slow=2.2,SNR=4.6
PCA Pinnacle 27.13 339 P P 18 58 12.6 -0.6
TKL Tuckaleechee C 30.52 79 P P 18 58 44.2 +0.7
comp=Z,4.6nm,0.4s,baz=230,slow=16,SNR=13
ILAR Eielson Array 32.72 340 P P 18 59 04.7 +2.1
comp=Z,1.5nm,0.8s,baz=158,slow=7.8,SNR=14
ILAR PcP PcP 19 01 48.9 +1.0
comp=Z,0.5nm,0.8s,baz=174,slow=3.3,SNR=4.6
INK Inuvik 33.22 352 P P 18 59 08.0 +1.2
comp=Z,1.1nm,0.7s,baz=156,slow=13,SNR=4.0
INK Inuvik 33.22 352 IAmb IAmb 18 59 22.1
comp=Z,5.4nm,1.4s
RES Resolute Bay 40.98 10 P P 19 00 13.7 +1.1
comp=Z,2.4nm,0.7s,baz=204,slow=10.0,SNR=9.6
RES Resolute Bay 40.98 10 P P 19 00 13.4 +0.8
SCHQ Schefferville 41.66 45 P P 19 00 18.6 +0.1
comp=Z,2.8nm,1.0s,baz=266,slow=19,SNR=3.4
SCHQ Schefferville 41.66 45 IAmb IAmb 19 00 19.6
comp=Z,2.9nm,0.8s
SEY Seymchan 57.07 327 P P 19 02 17.4 +1.4
comp=Z,0.8nm,0.7s,baz=90,slow=8.1,SNR=4.1
PETK Petropavlovsk- 57.08 315 P P 19 02 17.8 +1.5
comp=Z,4.3nm,1.0s,baz=91,slow=9.1,SNR=3.2
MA2 Magadan 58.78 324 P P 19 02 29.8 +1.7
comp=Z,0.9nm,0.3s,baz=68,slow=11,SNR=4.3
MA2 Magadan 58.78 324 P P 19 02 27.5 -0.7
MEH Mehetia 59.04 210 eT T 20 06 15.1
comp=Z,9.6nm,0.2s
TIAR Tiarei 59.28 211 eT T 20 06 33.4
comp=Z,12nm,0.2s
PPT2 Papeete2 59.41 211 eLR LR 19 19 34.3
comp=Z,77nm,30.0s
TVO Taravao 59.44 211 eT T 20 06 45.5
comp=Z,3.5nm,0.3s
TIXI Tiksi 62.20 340 P P 19 02 51.7 +0.4
comp=Z,3.4nm,1.0s,baz=96,slow=0.6,SNR=5.5
TIXI Tiksi 62.20 340 IAmb IAmb 19 02 54.8
comp=Z,5.9nm,1.4s
H11N3 WAKE ISLAND Hy 64.05 276 T T 20 12 49.1
baz=58,slow=75,SNR=1258
H11N2 WAKE ISLAND Hy 64.06 276 T T 20 12 48.4
baz=58,slow=75,SNR=1702
H11N1 WAKE ISLAND Hy 64.07 276 T T 20 12 49.4
baz=58,slow=75,SNR=1571
TBI Tubuai 64.53 208 eT T 20 13 06.6
comp=Z,8.2nm,0.2s
H11S1 WAKE ISLAND Hy 64.85 275 T T 20 13 47.7
baz=58,slow=75,SNR=3302
H11S2 WAKE ISLAND Hy 64.85 275 T T 20 13 48.1
baz=58,slow=75,SNR=3195
H11S3 WAKE ISLAND Hy 64.86 275 T T 20 13 48.2
baz=58,slow=75,SNR=1870
MDP Montagnes des 69.93 98 LR LR 19 37 39.5
comp=Z,31nm,18.5s,baz=145,slow=39
LPAZ La Paz 72.37 126 P P 19 03 57.2 -0.1
comp=Z,1.9nm,1.0s,baz=341,slow=7.4,SNR=3.8
LPAZ La Paz 72.37 126 P P 19 03 56.2 -1.1
LPAZ IAmb IAmb 19 04 02.2
comp=Z,2.3nm,1.0s
USRK Ussuriysk Ar. 76.17 315 P P 19 04 18.5 +0.1
comp=Z,3.9nm,0.7s,baz=81,slow=13,SNR=5.2
MJAR Matsushiro Arr 76.77 306 P P 19 04 22.9 +0.9
comp=Z,0.9nm,0.6s,baz=35,slow=9.2,SNR=4.7
FINES FINESS Array B 79.54 15 P P 19 04 37.9 +1.0
comp=Z,1.8nm,0.7s,baz=15,slow=7.9,SNR=5.7
SONM Songino Array 86.34 330 P P 19 05 13.8 +1.3
comp=Z,0.9nm,0.7s,baz=36,slow=3.4,SNR=5.9
ZALV Zalesovo Beam 87.72 345 P P 19 05 19.2 +0.3
comp=Z,0.5nm,0.6s,baz=38,slow=5.6,SNR=4.3
HHC Hu-ho-hao-te 89.45 323 eP P 19 05 25.5 -2.1
AKASG Malin Array Be 90.06 18 P P 19 05 31.7 +1.7
comp=Z,0.2nm,0.3s,baz=345,slow=6.7,SNR=2.9
BVAR Borovoye Array 90.90 353 P P 19 05 35.7 +1.8
comp=Z,1.2nm,0.8s,baz=24,slow=4.0,SNR=8.1
KURBB Kurchatov Arra 92.11 347 P P 19 05 40.6 +1.1
comp=Z,0.6nm,0.6s,baz=18,slow=4.4,SNR=5.9
WMQ Urumqi 96.38 339 eP P 19 06 00.3 +0.9
LZH Lanzhou 96.93 325 eP P 19 06 01.3 -0.8
LZH pP sP 19 06 04.5 +0.2
LZH sP pP 19 06 06.0 +2.3
LZH ePP PP 19 09 58.5 +1.9

IDC **27** *18:52:58.9±0.7, 39.23N×106.76E, h0km, mb3.7/16, mb1 3.9/19, mb1mx3.7/53, mbtmp3.8/19, ML3.6/3, MS3.3/10, Ms1 3.3/10, ms1mx3.0/63, Error ellipse: s-maj=18.9km s-min=14.9km az=49.0*
BJI **27** *18:52:58.2±0.0, 39.30N×106.82E, h7km, mB4.2/1, mb4.1/9, ML4.4/23, Ms3.9/18, Ms7 3.7/11*
NEIC **27** *18:53:03.5±1.8, 39.34N±0.07×106.8E±0.1, h34km±5km, mb4.0/12, Error ellipse: s-maj=13.5km s-min=9.6km az=77.0*
ISC 27 18:53:01.1±0.4, 39.38N±0.04×106.75E±0.03, h10km, n57, σ1§66/65, mb3.9/18, MS3.3/6, Western Nei Mongol

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BTO Baotou 2.79 63 ePn Pn 18 53 44.3 -1.7
BTO ePg Pb 18 53 48.5 -2.6
BTO Sn Sn 18 54 19.0 -0.7
BTO Sg Sb 18 54 25.5 +0.1
LZH Lanzhou 4.02 216 Pn Pn 18 54 02.3 -0.6
LZH Pg Pb 18 54 12.3 +0.2
LZH Sg Sb 18 55 02.5 +1.7
LZH smax smax
comp=N,1μm,1.1s
LZH smax smax
comp=E,1μm,1.2s
LZH LR LR
comp=E,1μm,5.6s
LZH LR LR
comp=Z,2μm,6.8s
TIY Taiyuan 4.75 109 ePg Pb 18 54 23.0 -1.6
TIY Sg Sb 18 55 20.0 -1.9
TIY smax smax
comp=N,630nm,0.6s
TIY smax smax
comp=E,310nm,0.5s
GTA Gaotai 5.38 272 Pn Pn 18 54 21.3 -0.2
GTA Pg Pb 18 54 35.8 +0.6
GTA Sn Sn 18 55 21.8 -1.7
GTA Sg Sb 18 55 43.3 +3.5
GTA smax smax
comp=N,660nm,1.0s
GTA smax smax
comp=E,220nm,1.0s
GTA LR LR
comp=E,460nm,3.8s
XAN Xi'an 5.61 161 Pn Pn 18 54 23.3 -1.4
XAN Pg Pb 18 54 41.0 +1.8
XAN Sn Sn 18 55 27.5 -1.7
XAN Sg Sb 18 55 50.8 +4.3
XAN smax smax
comp=N,370nm,0.5s
XAN smax smax
comp=E,170nm,0.7s
XAN Xi'an 5.61 161 Pn 18 54 23.1 -1.5
BJT Baijiatuau 7.29 82 Pn Pn 18 54 46.8 -0.9
BJI Beijing 7.29 82 Pg Pb 18 55 10.0 +2.2
BJI Sg Sb 18 56 41.5 +6.7
BJI smax smax
comp=N,150nm,0.8s
BJI smax smax
comp=E,110nm,0.8s
SONM Songino Array 8.45 358 Pn Pn 18 55 03.8 +0.1
1.0nm,0.3s,baz=177,slow=14,SNR=24
SONM Sn Sn 18 56 33.1 -6.1
1.2nm,0.3s,baz=180,slow=23,SNR=3.3
SONM Lg Lg 18 57 27.3
4.1nm,0.3s,baz=185,slow=31,SNR=4.2
ULN Ulaanbaatar 8.48 1 Pn 18 55 04.5 +0.3
ENH Enshi 9.36 165 Pn 18 55 15.1 -1.1
WHN Wuhan 10.79 142 P Pn 18 55 34.3 -1.4
WHN S Sn 18 57 37.8 +1.3
WHN LR LR
comp=Z,620nm,13.0s
TLY Talaya 12.49 351 LR LR 19 01 06.6
comp=Z,76nm,18.8s,baz=157,slow=39
WMQ Urumqi 14.93 293 eP Pn 18 56 31.8 -0.4
WMQ sP P 18 56 38.5 +0.6
WMQ LR LR
comp=N,230nm,5.7s
WMQ LR LR
comp=E,350nm,6.7s
LSA Lhasa 16.06 238 P Pn 18 56 45.3 -2.2
KSRS Korea Array 16.70 90 Pn Pn 18 56 54.2 -1.0
0.1nm,0.3s,baz=284,slow=11,SNR=4.0
KSRS LR LR 19 03 29.4
comp=Z,58nm,18.1s,baz=266,slow=38
MK31 Makanchi Array 19.29 301 P P 18 57 25.0 -1.0
MKAR Makanchi Array 19.29 301 P P 18 57 25.1 -0.9
0.3nm,0.3s,baz=103,slow=11,SNR=16
MKAR LR LR 19 05 18.0
comp=Z,75nm,21.0s,baz=106,slow=38
USRK Ussuriysk Ar. 19.39 67 LR LR 19 05 23.3
comp=Z,71nm,21.2s,baz=185,slow=38
MAKZ Makanchi 19.50 300 P P 18 57 27.9 -0.5
TAPN Taplejung 19.88 239 eP P 18 57 32.1 -0.8
12nm,0.7s
YULB Yu-li 20.16 138 Pn P 18 57 37.1 +1.4
KLR Kul'dur 20.33 53 P P 18 57 37.4 0.0
1.6nm,0.6s,baz=299,slow=20,SNR=5.8
KLR LR LR 19 05 38.9
comp=Z,34nm,19.9s,baz=236,slow=37
ODAN Odare 20.42 238 eP P 18 57 38.0 -0.7
20nm,0.9s
JIRN Jiri 20.70 242 eP P 18 57 40.6 -1.3
21nm,0.5s
GUN Gumba 20.75 243 eP P 18 57 40.8 -1.6
28nm,0.7s
ZAA0 Zalesovo Array 20.82 322 P P 18 57 41.6 -1.0
ZALV Zalesovo Beam 20.82 322 P P 18 57 41.4 -1.2
8.2nm,0.6s,baz=125,slow=9.9,SNR=27
ZALV LR LR 19 06 14.0
comp=Z,70nm,21.4s,baz=102,slow=38
RAMN Ramite 20.88 240 eP P 18 57 41.9 -1.8
6.9nm,0.4s
KKN Kakani 21.24 244 eP P 18 57 45.8 -1.8
16nm,0.6s
PKI Pulchoki 21.29 243 eP P 18 57 46.1 -2.1
13nm,0.5s
PKIN Phulchoki 21.30 243 eP P 18 57 46.1 -2.1
9.6nm,0.5s
DMN Daman 21.48 243 eP P 18 57 48.2 -1.9
17nm,0.7s
GKN Gorkha 21.56 245 eP P 18 57 49.0 -1.9
7.5nm,0.3s
CHTO Chiang Mai 21.58 200 P P 18 57 52.0 +1.0
CHTO IAmb IAmb 18 57 57.1
comp=Z,7.4nm,1.4s
CMAR Chiang Mai Arr 21.93 200 P P 18 57 53.2 -1.5
comp=Z,1.0nm,0.9s,baz=6.2,slow=8.9,SNR=7.4
DANN Dangsing 21.98 247 eP P 18 57 53.6 -1.9
comp=Z,14nm,0.4s
KURK Kurchatov 22.74 309 P P 18 58 03.1 0.0
KURBB Kurchatov Arra 22.76 309 P P 18 58 03.8 +0.4
comp=Z,6.0nm,0.8s,baz=107,slow=12,SNR=11
PBKT Sadao Pong 23.28 194 P P 18 58 08.0 -1.0
PBKT IAmb IAmb 18 58 12.1
comp=Z,4.8nm,0.7s
AAK Ala-Archa 24.48 288 P P 18 58 20.7 +0.2
comp=Z,2.4nm,0.5s,baz=89,slow=7.3,SNR=9.5
AAK LR LR 19 09 22.8
comp=Z,76nm,18.7s,baz=70,slow=40
AAK Ala-Archa 24.48 288 P P 18 58 20.6 +0.1
AAK IAmb IAmb 18 58 23.2
comp=Z,2.9nm,0.7s
KK31 Karatay Array 27.37 290 P P 18 58 46.1 -0.3
KK31 IAmb IAmb 18 58 52.1
comp=Z,2.6nm,0.8s
KKAR Karatay Array 27.37 290 P P 18 58 46.4 -0.1
KKAR IAmb IAmb 18 58 52.1
comp=Z,2.6nm,0.8s
BVAR Borovoye Array 28.28 311 P P 18 58 53.7 -0.8
comp=Z,0.4nm,0.5s,baz=114,slow=6.8,SNR=4.8
TIXI Tiksi 34.23 12 P P 18 59 45.5 -1.0
comp=Z,0.5nm,0.6s,baz=235,slow=5.4,SNR=5.4
TIXI Tiksi 34.23 12 P P 18 59 45.3 -1.2
TIXI IAmb IAmb 19 00 28.3
comp=Z,2.5nm,1.1s
PETK Petropavlovsk- 37.01 51 LR LR 19 15 03.8
comp=Z,55nm,20.3s,baz=65,slow=36
GEYT Alibeck 37.64 284 P P 19 00 16.4 +0.1
comp=Z,1.7nm,0.6s,baz=39,slow=9.6,SNR=4.6
GEYT LR LR 19 19 30.7
comp=Z,48nm,18.5s,baz=50,slow=42
ARCES ARCESS Array B 50.72 333 P P 19 02 01.1 +0.5
comp=Z,2.2nm,0.8s,baz=45,slow=5.3,SNR=4.1
FINES FINESS Array B 52.08 323 P P 19 02 11.6 +0.8
comp=Z,0.7nm,0.8s,baz=71,slow=10,SNR=3.6
FINES LR LR 19 26 07.9
comp=Z,98nm,21.5s,baz=280,slow=38
AKASG Malin Array Be 53.55 309 P P 19 02 22.0 +0.2
comp=Z,0.7nm,0.6s,baz=62,slow=7.6,SNR=3.6
BRTR Keskin Array B 54.84 295 P P 19 02 32.4 +0.8
comp=Z,0.4nm,0.6s,baz=79,slow=7.5,SNR=2.5
ILAR Eielson Array 61.48 28 P P 19 03 18.9 +1.4
comp=Z,0.4nm,0.8s,baz=304,slow=8.1,SNR=4.0
WRA Warramunga Arr 64.41 151 P P 19 03 34.9 -2.6
comp=Z,0.3nm,0.6s,baz=346,slow=6.7,SNR=4.9
ASAR Alice Springs 67.66 153 P P 19 03 56.5 -1.9
comp=Z,0.7nm,0.6s,baz=339,slow=6.7,SNR=11
YKA Yellowknife Ar 73.17 19 P P 19 04 33.2 +1.7
comp=Z,0.4nm,0.6s,baz=328,slow=4.9,SNR=8.9

THE **27** *18:56:37.8, 41.49N×20.78E, h32km±43km, ML2.0/3, Error ellipse: s-maj=43.1km s-min=1.4km az=0.0*
TIR **27** *18:56:40.9, 40.96N×20.19E, h4km, Md2.7/6*
ATH **27** *18:56:42.1, 40.99N×20.19E, h20km±1km, ML2.0/4, Error ellipse: s-maj=1.9km s-min=1.0km az=278.0*
SKO **27** *18:56:43.0, 41.01N×20.20E, h17km*
ISC 27 18:56:42.2±1.0, 40.97N±0.02×20.24E±0.03, h10km±10km, n27, σ1§25/44, Greece-Albania border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
OHR Ohrid 0.45 72 i Pg Pb 18 56 51.7 -0.5
OHR i Sg Sb 18 57 00.8 +1.9
OHR eLg Lg 18 57 01.5
comp=E,76nm,0.4s
TIR Tirane 0.47 323 P Pg 18 56 50.9 -0.4
TIR S Sg 18 56 57.9 +0.4
TIR AML AML 18 57 02.3
comp=N,539μm,0.2s
TIR AML AML 18 57 04.4
comp=E,477μm,0.4s
TPE Tepelena 0.70 194 i PG Pg 18 56 54.7 -1.0
TPE i SG Sg 18 57 05.2 +0.3
PHP Peshkopia 0.73 12 i PG Pb 18 56 55.9 -0.4
PHP i SG Sb 18 57 07.3 +0.3
VLO Vlora 0.76 228 i PG Pg 18 56 55.4 -1.3
VLO i SG Sg 18 57 06.5 -0.1
NEST Nestorio 0.83 132 P Pg 18 56 56.9 -1.4
NEST S Sb 18 57 10.8 +0.7
comp=E,38nm,0.3s

NEST Nestorio 0.83 132 P Pg 18 56 58.4 +0.2
NEST AML AML 18 57 18.9
comp=E,60µm,0.3s
NEST AML AML 18 57 19.1
comp=N,74µm,0.3s
PENT Pentalofos 1.04 138 P Pb 18 56 59.5 -2.8
PENT S Sn 18 57 17.2 -0.2
PUK Puka 1.10 347 i PG Pb 18 57 02.6 -0.7
PUK i SG Sn 18 57 19.1 +0.1
KASA Kassiopi 1.25 191 P Pb 18 57 05.9 +0.1
KASA S Sg 18 57 22.9 +0.6
KEK Kerkira 1.30 195 P Pb 18 57 07.0 +0.3
KEK S Sg 18 57 24.9 +0.9
KEK AML AML 18 57 30.2
comp=E,167µm,0.6s
KEK AML AML 18 57 31.7
comp=N,142µm,0.6s
KPRO Kipourio 1.33 139 P Pn 18 57 03.9 -3.0
KPRO S Sb 18 57 23.0 -1.4
comp=N,30nm,0.5s
KPRO Kipourio 1.33 139 P Pg 18 57 08.0 +0.2
KZN Kozani 1.34 119 P Pg 18 57 08.6 +0.6
SKO Skopje 1.35 42 i Pg Pn 18 57 06.5 -0.5
SKO i Sg Sg 18 57 25.6 +0.1
SKO eLg Lg 18 57 31.8
comp=N,3.3nm,0.4s
JAN Janina 1.40 160 P Pn 18 57 07.5 -0.2
JAN S Sg 18 57 28.6 +1.5
BCI Bajram Curri 1.40 355 i PN Pg 18 57 09.0 0.0
BCI i SN Sg 18 57 29.1 +1.9
MEV Metsovon 1.41 147 P Pg 18 57 09.1 -0.2
IGT Igoumenitsa 1.44 177 P Pb 18 57 09.1 0.0
IGT S Sg 18 57 32.7 +4.2
comp=N,42nm,0.8s
IGT Igoumenitsa 1.44 177 i PG Pb 18 57 09.2 +0.1
IGT i SG Sg 18 57 29.7 +1.1
IGT Igoumenitsa 1.44 177 P Pb 18 57 09.2 +0.1
IGT S Sg 18 57 29.4 +0.9
IGT AML AML 18 57 32.0
comp=E,102µm,0.4s
IGT AML AML 18 57 34.5
comp=N,91µm,0.7s
SCTE Santa Cesarea 1.62 237 P Pn 18 57 11.2 +0.5
GRG Griva 1.64 90 P Pb 18 57 12.4 -0.1
VAY Valandovo 1.80 78 i Pn Pn 18 57 13.0 -0.2
THL Klokotos Trika 1.96 135 P Pb 18 57 17.1 -0.8
KNT Kendrikon 2.02 84 P Pb 18 57 17.6 -1.4
AGG Agios Georgios 2.53 140 P Pn 18 57 25.2 +2.0

PDG 27 19:16:49.0±0.2, 35.°24N×22.°03E, h12km±11km, ML4.4/13, Error ellipse: s-maj=209.4km s-min=74.5km az=90.0
BEO 27 19:16:51.2±1.0, 35.°53N×23.°03E, h0km, ML4.0/6
IDC 27 19:16:51.9±2.1, 35.°55N×23.°33E, h35km±18km, mb3.7/11, mb1 3.7/18, mb1mx3.5/65, mbtmp3.7/18, ML3.5/7, MS3.4/2, Ms1 3.4/2, ms1mx2.5/66, Error ellipse: s-maj=21.7km s-min=15.3km az=24.0
HLW 27 19:16:53.2, 35.°43N×23.°71E, h25km±15km, Md4.3, Ml4.4
ISK 27 19:16:53.8, 35.°48N×23.°39E, h56km, ML3.8/19
ATH 27 19:16:54.8, 35.°58N×23.°39E, h44km±1km, ML3.7/16, Error ellipse: s-maj=2.0km s-min=0.8km az=228.0
THE 27 19:16:55.9, 35.°51N×23.°33E, h25km±1km, ML3.8/9, Error ellipse: s-maj=1.7km s-min=0.4km az=41.0
DDA 27 19:16:56.0, 35.°59N×23.°38E, h37km±252km, MW4.0
ISC 27 19:16:53.1±0.7, 35.°53N±0.°04×23.°32E±0.°04, h53km±6km, n196, σ2.°23/251, mb3.7/11, 17C-12D, Crete

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ANKY Antikythira Is 0.34 358 P Pn 19 17 03.8 +0.9
ANKY S Sn 19 17 09.8 -0.1
22µm,0.5s
ANKY Antikythira Is 0.34 358 P Pn 19 17 03.7 +0.9
ANKY S Sn 19 17 09.9 +0.1
ANKY AML AML 19 17 11.8
comp=N,50498µm,0.5s
ANKY AML AML 19 17 12.5
comp=E,39779µm,0.6s
RODP Rodopos 0.36 85 P Pn 19 17 04.0 +1.0
RODP S Sn 19 17 09.7 -0.6
RODP Rodopos 0.36 85 PG Pn 19 17 04.1 +1.0
RODP SG Sn 19 17 11.3 +1.0
KNDR Palaiochora Ch 0.42 134 P Pn 19 17 03.5 -0.2
KNDR Palaiochora Ch 0.42 134 PG Pn 19 17 03.5 -0.2
KNDR SG Sn 19 17 11.8 +0.5
IMMV Iera Moni Meta 0.55 97 P Pn 19 17 06.1 +1.0
IMMV S Sn 19 17 13.9 +0.1
comp=E,12µm,0.7s
IMMV Iera Moni Meta 0.55 97 P Pn 19 17 06.1 +1.0
IMMV S Sn 19 17 14.3 +0.6
IMMV AML AML 19 17 15.5
comp=N,25636µm,0.7s
IMMV AML AML 19 17 15.7
comp=E,22633µm,0.7s
IMMV Iera Moni Meta 0.55 97 PG Pn 19 17 05.9 +0.8
IMMV SG Sn 19 17 14.6 +0.8
CHAN Chania 0.59 91 P Pn 19 17 06.9 +1.3
CHAN S Sn 19 17 15.8 +1.1
comp=E,4µm,0.6s
VAM Vamos 0.73 99 P Pn 19 17 09.0 +1.7
VAM S Sn 19 17 19.5 +1.7
comp=E,8µm,0.6s
VAM Vamos 0.73 99 P Pn 19 17 08.9 +1.5
VAM S Sn 19 17 19.2 +1.5
VAM AML AML 19 17 21.4
comp=E,18352µm,0.9s
VAM AML AML 19 17 21.7
comp=N,11870µm,0.4s
KTHA Kythira Island 0.75 344 P Pn 19 17 10.3 +2.6
KTHA S Sn 19 17 21.8 +3.4
comp=N,13µm,0.4s
KTHA Kythira Island 0.75 344 P Pn 19 17 10.2 +2.6
KTHA S Sn 19 17 21.1 +2.8
KTHA AML AML 19 17 24.9
comp=E,36739µm,0.4s
KTHA AML AML 19 17 25.3
comp=N,13982µm,0.5s
KTHA Kythira Island 0.75 344 PG Pn 19 17 09.9 +2.2
KTHA SG Sn 19 17 21.7 +3.4
KTHR Kythira 0.77 341 P Pn 19 17 10.3 +2.4
KTHR S Sn 19 17 21.3 +2.6
comp=N,9µm,0.4s
GVD Gavdhos 0.94 137 P Pn 19 17 12.0 +2.0
GVD S Sn 19 17 25.1 +2.6
comp=N,5µm,0.5s
GVD Gavdhos 0.94 137 P Pn 19 17 11.9 +1.9
GVD S Sn 19 17 25.6 +3.1
GVD AML AML 19 17 27.3
comp=E,9993µm,0.7s
GVD AML AML 19 17 33.6
comp=N,10811µm,0.5s
GVD Gavdhos 0.94 137 PG Pn 19 17 10.6 +0.6
PRNS Prines Rethymn 0.98 99 P Pn 19 17 12.4 +1.8
MNVA Monemvasia 1.18 349 P Pn 19 17 16.0 +2.8
MNVA AML AML 19 17 33.9
comp=N,3105µm,0.7s
MNVA AML AML 19 17 35.6
comp=E,5488µm,0.5s
VLI Veliai 1.23 346 P Pn 19 17 16.6 +2.7
VLI S Sn 19 17 33.7 +4.3
comp=E,4µm,0.6s
VLI Veliai 1.23 346 P Pn 19 17 16.7 +2.7
VLI AML AML 19 17 37.7
comp=N,8931µm,0.5s
VLI AML AML 19 17 40.9
comp=E,7115µm,0.7s
IDI Anoyia 1.31 100 P Pn 19 17 17.5 +2.4
IDI S Sn 19 17 34.7 +3.2
comp=E,975nm,0.4s
IDI Anoyia 1.31 100 Pg Pn 19 17 17.6 +2.4
comp=E,47nm,0.3s,baz=263,slow=13,SNR=133
IDI LR LR 19 17 25.5
comp=E,57nm,21.9s,baz=270,slow=26
IDI Lg Lg 19 17 34.3
comp=E,41nm,0.3s,baz=312,slow=19,SNR=11
IDI Anoyia 1.31 100 P Pn 19 17 17.5 +2.4
IDI S Sn 19 17 33.0 +1.5
IDI AML AML 19 17 38.3
comp=E,1606µm,0.4s
IDI AML AML 19 17 41.7
comp=N,2361µm,0.5s
IDI Anoyia 1.31 100 PN Pn 19 17 15.8 +0.7

SIVA Sivas 1.32 112 P Pn 19 17 17.9 +2.7
SIVA S Sn 19 17 35.0 +3.2
SIVA AML AML 19 17 40.5
comp=E,6948µm,0.8s
SIVA AML AML 19 17 46.3
comp=N,5956µm,0.8s
IACM Heraklion 1.45 98 P Pn 19 17 19.7 +2.8
IACM AML AML 19 17 49.3
comp=E,13753µm,0.7s
IACM AML AML 19 17 52.2
comp=N,11327µm,0.8s
HRKL Herakleio 1.47 98 PN Pn 19 17 18.1 +0.9
MHLA Plaka, Milos I 1.51 36 P Pn 19 17 19.7 +1.9
LAST Lasithi 1.81 101 P Pn 19 17 24.7 +2.9
LAST S Sn 19 17 46.1 +2.5
LAST AML AML 19 17 57.6
comp=N,1684µm,0.8s
LAST AML AML 19 18 02.4
comp=E,1440µm,1.2s
YDRA Hydra 1.82 4 P Pn 19 17 24.6 +2.6
THR9 Santorini-Faro 1.85 63 P Pn 19 17 24.7 +2.3
KRND KRANIDI 1.85 356 P Pn 19 17 25.2 +2.8
THR5 Thira Island, 1.87 61 P Pn 19 17 24.6 +1.9
SAP3 Santorini-Thir 1.88 61 P Pn 19 17 24.8 +2.0
SAP1 Santorini-Akro 1.88 63 P Pn 19 17 24.9 +2.1
THR6 Thira Island, 1.88 63 P Pn 19 17 24.8 +2.0
SERI Serifos 1.88 30 P Pn 19 17 24.5 +1.7
SERI S Sn 19 17 46.6 +1.2
SERI AML AML 19 17 48.6
comp=E,1076µm,0.4s
SERI AML AML 19 17 53.2
comp=N,866µm,0.2s
NPS Neapolis 1.89 97 P Pn 19 17 25.4 +2.4
STAX Taxiarchis Har 1.90 62 P Pn 19 17 24.9 +1.8
THR3 Thira Island, 1.90 62 P Pn 19 17 24.9 +1.8
THT1 Athinios (Pele 1.92 63 P Pn 19 17 25.6 +2.3
SANT Santorini 1.93 64 P Pn 19 17 25.4 +1.8
SANT S Sn 19 17 48.2 +1.5
SANT AML AML 19 17 55.2
comp=E,1550µm,0.6s
SANT AML AML 19 18 01.9
comp=N,772µm,0.6s
SANT Santorini 1.93 64 ⇑P Pn 19 17 25.6 +2.1
SANT ⇑S Sn 19 17 49.6 +3.0
SANT Santorini 1.93 64 PN Pn 19 17 25.0 +1.5
SANT Santorini 1.93 64 i P Pn 19 17 25.3 +1.8
SANT i S Sn 19 17 47.6 +0.9
THR7 Fira-Santorini 1.93 62 P Pn 19 17 26.2 +2.7
THT2 Imerovigli 1.93 62 PN Pn 19 17 25.0 +1.5
CMBO Columbo, Santo 1.94 60 P Pn 19 17 25.7 +2.2
SAP2K Karterados 1.94 62 P Pn 19 17 26.2 +2.6
THR2 Thira island, 1.95 61 P Pn 19 17 26.3 +2.6
THR8 Santorini-Mono 1.96 63 P Pn 19 17 25.9 +2.1
DID Didima 1.97 358 P Pn 19 17 26.1 +2.0
DID S Sn 19 17 49.5 +1.8
DID AML AML 19 17 55.4
comp=E,2748µm,0.3s
DID AML AML 19 17 56.9
comp=N,1819µm,0.3s
VLX Vlachokerasia 1.99 338 P Pn 19 17 28.0 +3.7
IOSP Ios island 1.99 53 P Pn 19 17 26.0 +1.7
IOSP S Sn 19 17 49.2 +1.1
IOSP AML AML 19 17 50.7
comp=N,2701µm,0.6s
IOSP AML AML 19 17 51.1
comp=E,1918µm,0.4s
ITM Ithomi 1.99 326 P Pn 19 17 26.6 +2.3
ITM Ithomi 1.99 326 PN Pn 19 17 27.3 +2.9
APE Apeiranthos 2.36 49 P Pn 19 17 30.8 +1.4
APE Apeiranthos 2.36 49 ⇑P Pn 19 17 31.2 +1.8
APE ⇓S Sn 19 17 58.8 +1.7
APE Apeiranthos 2.36 49 PN Pn 19 17 30.9 +1.5
APE Apeiranthos 2.36 49 i P Pn 19 17 30.7 +1.4
APE i S Sn 19 17 54.6 -2.5
ZKR Zakros 2.41 99 P Pn 19 17 33.1 +3.1
ZKR Zakros 2.41 99 PN Pn 19 17 31.4 +1.4
AMGA Amorgos Island 2.46 57 P Pn 19 17 32.3 +1.7
ATH Athens Observa 2.46 7 P Pn 19 17 34.0 +3.3
ATHU Athens Univers 2.46 9 P Pn 19 17 33.5 +2.8
LOUT Loutraki 2.47 354 P Pn 19 17 34.1 +3.3
LTK Loutraki 2.50 354 P Pn 19 17 33.4 +2.0
PTL Penteli 2.55 10 P Pn 19 17 34.5 +2.5
DION Dionisos Attik 2.59 11 P Pn 19 17 35.1 +2.5
DION S Sn 19 18 05.3 +2.5
DION AML AML 19 18 08.3
comp=E,39µm,0.3s
DION AML AML 19 18 09.8
comp=N,36µm,0.2s
KARY Karystos 2.65 19 P Pn 19 17 35.8 +2.4
VL2 Platees 2.68 359 P Pn 19 17 35.1 +1.3
KLV Kalavryta, Ach 2.68 340 P Pn 19 17 36.7 +3.0
KALE Kalithea 3.01 342 P Pn 19 17 41.1 +2.8
KARP Karpathos 3.13 89 P Pn 19 17 41.5 +1.5
KARP Karpathos 3.13 89 PN Pn 19 17 41.5 +1.5
KOSK Kos Island 3.20 67 PN Pn 19 17 43.0 +2.1
BODT Bodrum 3.57 63 PN Pn 19 17 48.1 +2.2
AGG Agios Georgios 3.57 348 PN Pn 19 17 49.4 +3.4
AGG Agios Georgios 3.57 348 i P Pn 19 17 48.6 +2.6
CHOS Chios island 3.60 37 PN Pn 19 17 49.0 +2.6
DAT Datca 3.65 70 PN Pn 19 17 49.1 +2.0
AOS Alonnisos 3.66 7 PN Pn 19 17 50.4 +3.2
DGB zmir 3.81 48 i P Pn 19 17 50.1 +0.9
GCAM G?zelcaml? 3.82 54 i P Pn 19 17 51.8 +2.5
GCAM i S Sn 19 18 31.4 -1.7
URLA Izmir 3.86 42 PN Pn 19 17 51.9 +2.1
URLA Izmir 3.86 42 i P Pn 19 17 52.0 +2.1
URLA i S Sn 19 18 25.9 -8.0
ARG Arkhangelos 3.96 79 PN Pn 19 17 53.6 +2.3
AYDN Tasoluk 4.24 59 i P Pn 19 17 59.0 +3.8
YER Yerkesik 4.32 67 PN Pn 19 17 58.8 +2.6
AYDB Zeytinkoy-Aydi 4.39 55 PN Pn 19 18 00.1 +2.8
TURN Turunc 4.48 71 PN Pn 19 17 56.8 -1.5
TURN Turunc 4.48 71 i P Pn 19 17 56.9 -1.5
TURN i S Sn 19 18 38.0 -11
DALY Dalyan (Mula) 4.50 72 PN Pn 19 18 01.4 +2.7
LIT Litokhoron 4.61 352 i P Pn 19 18 02.2 +2.0
LIT i S Sn 19 18 50.6 -1.8
IGT Igoumenitsa 4.65 330 ePn Pn 19 18 01.9 +1.2
IGT eSn Sn 19 18 52.8 -0.5
FETY Fethiye 4.80 75 PN Pn 19 18 04.7 +1.9
TAVA DENIZLI_Tavas 4.90 65 i P Pn 19 18 08.2 +3.9
TAVA i S Sn 19 18 58.2 -1.6
BAYC CANAKKALE_Bayr 4.92 30 i P Pn 19 18 05.6 +1.1
AKAS Kas 5.15 80 PN Pn 19 18 09.3 +1.5
AKAS Kas 5.15 80 i P Pn 19 18 08.6 +0.8
AKAS i S Sn 19 19 01.4 -4.6
ELL Elmali 5.47 75 PN Pn 19 18 14.7 +2.6
SRS Serrai 5.58 2 ePn Pn 19 18 15.2 +1.7
SRS eSn Sn 19 19 17.5 +1.2
KHAL Karahalli 5.70 58 i P Pn 19 18 19.0 +3.7
AKUM Antalya-Kumluc 5.76 80 i P Pn 19 18 17.6 +1.8
AKUM i S Sn 19 19 11.7 -8.9
VAY Valandovo 5.81 354 ePn Pn 19 18 17.5 +0.9
VAY Valandovo 5.81 354 i Pn Pn 19 18 18.7 +2.1
BRDR BURDUR-Merkez 5.84 66 i P Pn 19 18 20.0 +2.9
KORT Korkueli 5.87 73 PN Pn 19 18 20.0 +2.4
KORT Korkueli 5.87 73 i P Pn 19 18 20.7 +3.2
KORT i S Sn 19 19 21.2 -2.4
TIP Timpagrande 6.37 307 ⇑P Pn 19 18 24.9 +0.6
TIP ⇓S Sn 19 19 32.9 -2.8
TIR Tirane 6.41 336 ePn Pn 19 18 23.7 -1.1
TIR eSn Sn 19 19 35.4 -1.2
SWA2 6.52 163 AMP 19 19 00.0
baz=166
KEPZ Antalya-Kepez 6.84 76 i P Pn 19 18 32.2 +1.4
CGL1 Ceglie Messapi 6.88 320 ePn Pn 19 18 30.7 -0.6
KIRK Kırklareli 6.91 24 i P Pn 19 18 32.9 +1.3
BOSS Bosilegrad 6.99 355 ePn Pn 19 18 34.6 +1.8
VTS Vitosha 7.08 360 ⇑P Pn 19 18 35.0 +0.9
ULC Ulcinj 7.17 335 ⇑ iPn Pn 19 18 33.9 -1.3
ULC eSn Sn 19 19 52.8 -2.5
MATE Matera 7.30 316 ⇑P Pn 19 18 36.7 -0.3
MATE ⇑S Sn 19 19 53.4 -5.0
GAZI Gazipasa 7.34 82 i P Pn 19 18 36.0 -1.6
BARS Barje 7.37 351 ePn Pn 19 18 39.1 +1.1
DRME Dracevica, Mon 7.39 335 ePn Pn 19 18 36.0 -2.2
DRME Dracevica, Mon 7.39 335 ⇑ iPn Pn 19 18 37.0 -1.2
DRME eSn Sn 19 19 57.8 -2.8
VAE Valguarnera 7.43 288 Pn Pn 19 18 39.6 +0.8
comp=N,0.7nm,0.3s,baz=105,slow=18,SNR=2.1
VAE Sn Sn 19 19 56.2 -5.6

comp=N,3.8nm,0.3s,baz=196,slow=12,SNR=7.3
SG1 Sgolgore (BA) 7.44 317 ePn Pn 19 18 38.5 -0.5
PVY Plav 7.52 341 ⇓ iPn Pn 19 18 40.4 +0.2
PVY eSn Sn 19 20 03.6 -0.5
PDG Podgorica 7.58 337 eSn Sn 19 20 03.8 -1.5
PDG Podgorica 7.58 337 ⇓P Pn 19 18 41.0 +0.1
PDG ⇓S Sn 19 20 03.8 -1.5
PDG Podgorica 7.58 337 ePn Pn 19 18 39.7 -1.1
TTG Podgorica 7.58 337 ⇓ iPn Pn 19 18 40.5 -0.3
TTG eSn Sn 19 20 03.2 -2.1
BUM Brajici-Budva 7.59 334 ⇓ iPn Pn 19 18 39.6 -1.4
BUM eSn Sn 19 20 02.3 -3.3
ELND Elena 7.65 14 ⇑P Pn 19 18 41.2 -0.6
CEME Cevo 7.80 335 ⇑ iPn Pn 19 18 42.5 -1.4
CEME eSn Sn 19 20 07.7 -3.1
IVA Berane 7.80 341 ⇓ iPn Pn 19 18 44.0 +0.1
IVA eSn Sn 19 20 10.6 -0.2
ERMK Ermenek 7.85 79 i P Pn 19 18 46.6 +1.9
HCY Herceg Novi 7.86 333 ePn Pn 19 18 43.1 -1.6
HCY Herceg Novi 7.86 333 ⇓ iPn Pn 19 18 43.2 -1.5
HCY eSn Sn 19 20 08.2 -4.0
SELS Selova 7.87 348 ePn Pn 19 18 44.6 -0.2
KOME Kolasin 7.88 339 ⇑ iPn Pn 19 18 45.0 -0.1
KOME eSn Sn 19 20 11.2 -1.7
NKME Niksic 7.98 336 ⇓ iPn Pn 19 18 45.3 -1.1
NKME eSn Sn 19 20 12.5 -2.8
NKY Niksic 8.01 337 ⇑ iPn Pn 19 18 46.5 -0.3
NKY eSn Sn 19 20 13.1 -2.9
SJES Sjenica 8.14 342 ePn Pn 19 18 49.1 +0.4
TREB Trebinje 8.15 333 eSn Sn 19 20 15.8 -3.5
TREB Trebinje 8.15 333 ePn Pn 19 18 47.3 -1.3
BOVS Bovan 8.19 352 ePn Pn 19 18 49.5 +0.3
CSS Mathiatis 8.21 91 i P Pn 19 18 47.2 -2.4
BRY Bratogost 8.24 335 ePn Pn 19 18 47.8 -2.2
BRY Bratogost 8.24 335 ⇑ iPn Pn 19 18 48.4 -1.6
BRY eSn Sn 19 20 17.9 -3.9
ZAGS Zajecar 8.31 355 ePn Pn 19 18 52.1 +1.2
UPM Unac-Piva 8.39 337 ePn Pn 19 18 50.7 -1.4
UPM Unac-Piva 8.39 337 ⇑ iPn Pn 19 18 51.7 -0.4
UPM eSn Sn 19 20 22.8 -2.6
IVAS Ivanjica 8.40 344 ePn Pn 19 18 50.9 -1.2
STON Ston 8.53 331 eSn Sn 19 20 24.6 -3.9
STON Ston 8.53 331 ePn Pn 19 18 51.5 -2.3
GRUS Gruza 8.58 347 ePn Pn 19 18 53.7 -0.9
RUDO Rudo 8.63 341 ePn Pn 19 18 52.6 -2.7
BBLS Lazići 8.85 341 ePn Pn 19 18 54.3 -4.1
KERG Konya-Eregli 8.91 75 i P Pn 19 19 00.2 +1.1
DIVS Divibare 8.93 344 ePn Pn 19 18 58.4 -1.0
DIVS Divibare 8.93 344 ePn Pn 19 18 57.8 -1.6
HAPS Han Pijesak,BI 9.18 340 ePn Pn 19 19 00.5 -2.4
BRTR Keskin Array B 9.20 60 Pn Pn 19 19 04.8 +1.6
comp=N,0.3nm,0.3s,baz=234,slow=13,SNR=22
TEKS Tekeris 9.46 343 ePn Pn 19 19 02.1 -4.6
GZR Gura Zlata 9.86 358 ⇓P Pn 19 19 11.1 -1.0
VOIR 9.98 7 ⇑P Pn 19 19 13.6 -0.2
MGRS Mrkonjic Grad 10.08 334 ePn Pn 19 19 13.2 -1.9
MLR Muntele Rosu 10.15 11 ⇓P Pn 19 19 16.5 +0.4
BZS Buzias 10.16 353 ⇑P Pn 19 19 16.1 -0.1
MMAI Mount Meron Ar 10.31 101 Pn Pn 19 19 15.4 -3.0
comp=N,1.2nm,0.3s,baz=297,slow=11,SNR=8.1
MMAI Sn Sn 19 21 04.3 -8.1
comp=N,1.0nm,0.3s,baz=303,slow=27,SNR=3.2
MORH Mrgy, Hungar 11.24 343 ePn Pn 19 19 28.0 -2.9
EIL Elat 11.41 118 Pn Pn 19 19 31.6 -1.8
comp=N,0.4nm,0.3s,baz=329,slow=18,SNR=5.1
CRES Cresnjev 11.88 332 ePn Pn 19 19 36.7 -3.0
CEY Cerknica 12.22 329 ePn Pn 19 19 43.0 -1.3
SOKA Soboth 12.76 333 i Pn Pn 19 19 50.4 -1.3
comp=N,0.5nm,0.2s
OBKA Obir 12.80 332 i Pn Pn 19 19 51.4 -0.8
comp=N,0.6nm,0.3s
KBA Koelnbreinsper 13.74 330 i Pn Pn 19 20 06.4 +1.2
comp=N,0.3nm,0.2s
MOA Molln 14.03 334 i Pn Pn 19 20 09.4 +0.5
comp=N,0.7nm,0.3s
VRAC Vranov 14.63 342 LR LR 19 27 28.4
comp=N,66nm,21.1s,baz=116,slow=44
GERES GERESS Array B 15.07 335 Pn Pn 19 20 22.4 -0.3
comp=N,0.2nm,0.3s,baz=158,slow=14,SNR=5.1
AKASG Malin Array Be 15.76 14 Pn Pn 19 20 30.2 -1.1
comp=N,0.3nm,0.3s,baz=228,slow=20,SNR=2.7
KBZ Khabaz 17.14 56 Pn P 19 20 51.5 +1.8
comp=N,0.1nm,0.3s,baz=253,slow=19,SNR=5.1
HFS Hagfors 25.40 349 P P 19 22 14.8 -0.4
comp=N,1.1nm,0.4s,baz=161,slow=9.8,SNR=13
FINES FINESS Array B 25.99 3 P P 19 22 20.5 0.0
comp=N,0.3nm,0.3s,baz=167,slow=10.0,SNR=6.5
NOA NORSAR Array B 26.68 347 P P 19 22 26.9 +0.1
comp=N,0.8nm,0.9s,baz=142,slow=10.0,SNR=5.4
EKA Eskdalemuir Ar 26.88 326 P P 19 22 30.0 +1.4
comp=N,0.9nm,0.3s,baz=126,slow=8.4,SNR=16
TORD Torodi Ar. Bea 29.61 227 P P 19 22 54.5 +1.1
comp=N,0.5nm,0.6s,baz=36,slow=8.3,SNR=3.8
ARCES ARCESS Array B 34.08 1 P P 19 23 32.1 +0.1
comp=N,2.7nm,1.0s,baz=171,slow=8.6,SNR=6.7
SPITS Spitsbergen Ar 42.86 358 P P 19 24 46.7 +1.2
comp=N,6.6nm,0.9s,baz=202,slow=7.2,SNR=3.5
MKAR Makanchi Array 44.83 57 P P 19 25 02.4 +0.6
comp=N,0.8nm,0.6s,baz=279,slow=7.1,SNR=16
ZALV Zalesovo Beam 45.84 46 P P 19 25 09.7 +0.1
comp=N,0.7nm,0.3s,baz=263,slow=7.6,SNR=4.4
RES Resolute Bay 62.92 345 LR LR 19 55 08.1
comp=N,62nm,20.8s,baz=198,slow=36
CMAR Chiang Mai Arr 68.02 83 P P 19 27 47.6 +0.5
comp=N,0.3nm,0.8s,baz=298,slow=7.6,SNR=5.5
YKA Yellowknife Ar 76.62 341 P P 19 28 38.4 +0.8
comp=N,0.2nm,0.5s,baz=42,slow=6.9,SNR=4.6

ATA 27 19:22:33.7±2.5, 39.°04N×41.°62E, h38km±31km, ML1.6, MW2.5
ISK 27 19:22:34.9, 39.°08N×41.°63E, h18km, ML1.8/6
ISC 27 19:22:34.5±1.2, 39.°00N±0.°05×41.°59E±0.°03, h19km±3km, n12, σ0.°66/21, Turkey

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VRTB Varto-Mus 0.19 327 PG Pg 19 22 39.6 0.0
VRTB SG Sg 19 22 42.9 -0.1
BNGL BINGOL 0.34 263 eP Pn 19 22 44.4 -0.4
BNGL eS Sn 19 22 50.7 -0.6
BNGL IAML 19 22 51.8
comp=Z,158nm,0.3s
GURO Guroymak-BITLI 0.56 142 PG Pn 19 22 47.4 -0.3
GURO SG Sn 19 22 56.5 -0.1
BNGB Bingl 0.71 270 PG Pn 19 22 49.7 0.0
BNGB SG Sn 19 23 01.0 +0.8
BLIS Bitlis-Merkez 0.71 145 eP Pn 19 22 50.3 +0.5
BLIS eS Sn 19 23 00.6 +0.2
BLIS IAML 19 23 01.8
comp=Z,15nm,0.4s
MLAZ Malazgirt-MUS 0.76 79 PG Pb 19 22 49.3 0.0
MLAZ SG Sg 19 23 00.0 +0.3
YEDI Yedisu-Bingol 0.92 299 PG Pb 19 22 52.3 +0.3
TUTA Tutak 1.03 67 eP Pb 19 22 53.2 -0.8
TUTA eS Sn 19 23 09.7 +1.4
TUTA IAML 19 23 14.4
comp=N,14nm,0.2s
HOMI Horasan 1.07 13 eP Pb 19 22 54.0 -0.7
HOMI IAML 19 23 18.0
comp=N,12nm,0.6s
EATA Eleskirt 1.11 39 eP Pb 19 22 55.4 0.0
EATA eS Sb 19 23 09.7 +0.1
EATA IAML 19 23 12.6
comp=N,3.7nm,0.4s
AGRB Hanur-Agry 1.23 62 PN Pn 19 22 56.9 -0.1
GEVA Gevas 1.34 120 eP Pn 19 22 57.0 -1.4
GEVA eS Sg 19 23 18.7 +0.7
GEVA IAML 19 23 28.8
comp=N,1.6nm,0.4s

ISK 27 19:25:25.4, 39.°94N×41.°39E, h14km, ML1.9/4
ATA 27 19:25:25.1±2.3, 39.°92N×41.°44E, h49km±11km, ML2.0, MW3.5
ISC 27 19:25:26.1±1.2, 39.°91N±0.°05×41.°39E±0.°03, h12km±10km, n12, σ0.°82/18, Turkey

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AKDA Akdag 0.19 353 eP Pg 19 25 30.4 -0.1
KOPR Koprukoy-ERZUR 0.36 77 PG Pg 19 25 33.2 -0.2
HOMI Horasan 0.41 71 eP Pg 19 25 34.7 +0.3

HOMI IAML 19 25 56.7
comp=N,59nm,0.4s
KRIK Erzurum-spir 0.56 320 *e*P **Pn 19 25 39.7 -0.4**
KRIK *e*S **Sn 19 25 49.9 +0.5**
KRIK IAML 19 25 52.8
comp=Z,940nm,0.1s
KOPT Kop Dagi 0.70 279 *e*P **Pg 19 25 40.4 +0.7**
YEDI Yedisu-Bingol 0.81 234 PG **Pb 19 25 41.2 -1.0**
YEDI SG **Sb 19 25 53.7 +0.6**
EATA Eleskirt 0.85 93 *e*P **Pb 19 25 43.0 0.0**
BAYB BAYBURT 0.94 292 *e*P **Pb 19 25 44.6 +0.1**
BAYB *e*S **Sn 19 25 59.4 +0.6**
BAYB IAML 19 26 09.4
comp=Z,6.8nm,1.2s
BNGL BINGOL 0.98 191 *e*P **Pn 19 25 45.9 0.0**
BNGL IAML 19 26 03.5
comp=Z,31nm,0.5s
BNGB Bingl 1.07 211 PN **Pb 19 25 46.8 +0.1**
BNGB SN **Sn 19 26 02.3 +0.3**
BAYT Aydıntepe-Bayb 1.07 297 PG **Pb 19 25 46.2 -0.5**
BAYT SG **Sg 19 26 01.5 +0.7**
EUZM Uzumlu 1.32 262 *e*P **Pn 19 25 48.2 -2.3**
EUZM *e*S **Sb 19 26 08.6 +0.7**
EUZM IAML 19 26 18.5
comp=N,2.4nm,0.6s

DDA 27 19:43:26.8, 40°.95N×35°.06E, h7km±2km, ML1.8
ISK 27 19:43:27.3, 40°.92N×35°.05E, h8km, ML2.8/9
ISC 27 19:43:27.0±1.0, 40°.94N±0°.03×35°.04E±0°.02, h10km±9km, n23, σ0°.62/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAK	**Corum_Osmancik**	**0.34**	**213**	*i* P	**Pb**	**19 43 34.8**	**-0.5**
CTAK				*i* S	**Sg**	**19 43 39.8**	**+1.3**
CTAK				IAML		19 43 40.0	
	comp=E,201nm,0.3s						
CTAK				IAML		19 43 40.0	
	comp=N,332nm,0.5s						
KAGI	**orum-Kargı**	**0.47**	**296**	*i* P	**Pg**	**19 43 36.4**	**+0.2**
KAGI				IAML		19 43 42.0	
	comp=N,111nm,0.8s						
KAGI				*i* S	**Sg**	**19 43 42.1**	**-0.3**
KAGI				IAML		19 43 44.0	
	comp=E,101nm,0.1s						
HAVZ	**Havza**	**0.54**	**75**	*i* P	**Pb**	**19 43 38.2**	**-0.3**
HAVZ				*i* S	**Sg**	**19 43 44.4**	**-0.1**
HAVZ				IAML		19 43 47.0	
	comp=E,204nm,0.3s						
HAVZ				IAML		19 43 48.0	
	comp=N,137nm,0.2s						
KAYA	**Kayacik-Havza(**	**0.54**	**88**	PG	**Pb**	**19 43 38.1**	**-0.5**
KAYA				SG	**Sb**	**19 43 46.1**	**-0.3**
YARM	**Yarimca-Ladik(**	**0.60**	**91**	PG	**Pb**	**19 43 39.3**	**-0.3**
YARM				SG	**Sb**	**19 43 47.9**	**-0.2**
AMSY	**Amasya-Merkez**	**0.68**	**116**	*i* P	**Pg**	**19 43 40.3**	**+0.2**
AMSY				IAML		19 43 49.0	
	comp=E,361nm,1.2s						
AMSY				*i* S	**Sg**	**19 43 49.4**	**+0.4**
AMSY				IAML		19 43 50.0	
	comp=N,290nm,0.4s						
COAL	**Corum-Alaca**	**0.68**	**183**	*i* P	**Pg**	**19 43 40.4**	**+0.2**
COAL				IAML		19 43 48.0	
	comp=E,58nm,1.2s						
COAL				*i* S	**Sg**	**19 43 48.7**	**-0.4**
COAL				IAML		19 43 49.0	
	comp=N,54nm,1.0s						
HKOY	**Hamitkoy-Ladik**	**0.72**	**93**	PG	**Pb**	**19 43 41.5**	**-0.2**
HKOY				SG	**Sb**	**19 43 51.9**	**+0.2**
DIKM	**Dikmen**	**0.73**	**13**	PG	**Pb**	**19 43 42.3**	**+0.4**
KUPE	**Kupecik-Ladik(**	**0.77**	**94**	PG	**Pg**	**19 43 41.7**	**-0.2**
KVT	**Kavak**	**0.78**	**79**	PG	**Pb**	**19 43 42.3**	**-0.3**
KVT				SG	**Sb**	**19 43 54.0**	**+0.7**
CORM	**Corum**	**0.82**	**202**	PG	**Pb**	**19 43 43.2**	**-0.1**
CORM				SG	**Sb**	**19 43 54.8**	**+0.4**
ILGA	**Ilgaz**	**1.01**	**277**	*i* P	**Pb**	**19 43 46.5**	**+0.1**
ILGA				*i* S	**Sg**	**19 43 58.8**	**-0.7**
ILGA				IAML		19 43 59.0	
	comp=N,17nm,1.0s						
ILGA				IAML		19 44 07.0	
	comp=E,26nm,0.6s						
DELI	**KIRIKKALE**	**1.27**	**223**	*i* P	**Pn**	**19 43 50.5**	**-0.3**
DELI				*i* S	**Sb**	**19 44 05.5**	**-1.8**
DELI				IAML		19 44 08.0	
	comp=E,14nm,0.3s						
DELI				IAML		19 44 10.0	
	comp=N,18nm,0.6s						
ELDT	**Eldivan**	**1.30**	**251**	*i* P	**Pn**	**19 43 51.8**	**+0.5**
ELDT				*i* S	**Sb**	**19 44 07.8**	**-0.7**
ELDT				IAML		19 44 08.0	
	comp=N,12nm,1.1s						
YOZ	**Yozgat**	**1.31**	**170**	PN	**Pb**	**19 43 51.9**	**+0.1**
YOZ				SN	**Sn**	**19 44 10.3**	**+1.2**
ERBA	**Erbaa**	**1.33**	**100**	*i* P	**Pn**	**19 43 51.5**	**-0.2**
PELI	**Kastamonı-Ara**	**1.35**	**286**	*i* P	**Pb**	**19 43 52.8**	**+0.3**
PELI				*i* S	**Sb**	**19 44 08.6**	**-1.3**
PELI				IAML		19 44 09.0	
	comp=N,13nm,0.9s						
PELI				IAML		19 44 12.0	
	comp=E,11nm,0.7s						
SIRC	**Yozgat**	**1.60**	**177**	*i* P	**Pb**	**19 43 56.7**	**0.0**
SIRC				*i* S	**Sn**	**19 44 16.7**	**+0.6**
SIRC				IAML		19 44 21.0	
	comp=E,11nm,0.5s						
SIRC				IAML		19 44 23.0	
	comp=N,7.3nm,0.3s						
BRTR	**Keskin Array B**	**1.61**	**222**	PN	**Pb**	**19 43 56.7**	**-0.2**
CUSAR	**Sarkisla-SIVAS**	**1.77**	**148**	*i* P	**Pg**	**19 44 00.3**	**-0.7**
SVSK	**Karacayir**	**1.81**	**124**	PN	**Pb**	**19 43 59.4**	**-0.8**
KIRS	**Kırehir-Merke**	**1.99**	**206**	*i* P	**Pb**	**19 44 03.8**	**+0.4**
KIRS				*i* S	**Sb**	**19 44 28.5**	**+0.2**

IDC 27 19:48:18.2±1.4, 32°.06N×40°.39W, h0km, mb3.6/12, mb1 3.9/12, mb1mx3.6/73, mbtmp3.6/12, MS3.1/3, Ms1 3.1/3, ms1mx2.8/36, Error ellipse: s-maj=41.7km s-min=17.3km az=1.0
ISC 27 19:48:20.4±1.4, 32°.1N±0°.3×40°.4W±0°.1, h14km, n18, σ0°.84/12, mb3.7/12, MS3.3/3, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**27.07**	**245**	LR	LR	20 03 03.2	
	comp=Z,16nm,19.1s,baz=96,slow=33						
EKA	**Eskdalemuir Ar**	**34.92**	**37**	P	**P**	**19 55 11.5**	**0.0**
	0.9nm,0.6s,baz=238,slow=4.8,SNR=3.8						
DBIC	**Dimbokro**	**41.65**	**120**	LR	LR	20 12 14.5	
	comp=Z,40nm,19.0s,baz=322,slow=34						
ROSC	**El Rosal**	**41.74**	**237**	LR	LR	20 13 52.7	
	comp=Z,40nm,18.2s,baz=114,slow=37						
TORD	**Torodi Ar. Bea**	**42.84**	**106**	P	**P**	**19 56 18.6**	**+0.2**
	0.8nm,0.8s,baz=310,slow=6.7,SNR=3.2						
GERES	**GERESS Array B**	**43.48**	**51**	P	**P**	**19 56 23.4**	**+0.2**
	0.2nm,0.4s,baz=267,slow=5.9,SNR=2.8						
H10N2	**ASCENSION HYDR**	**46.75**	**144**	T	T	20 46 36.9	
	baz=329,slow=75,SNR=17						
H10N3	**ASCENSION HYDR**	**46.75**	**144**	T	T	20 46 37.2	
	baz=329,slow=75,SNR=19						
H10N1	**ASCENSION HYDR**	**46.77**	**144**	T	T	20 46 38.3	
	baz=329,slow=75,SNR=21						
FINES	**FINESS Array B**	**51.22**	**34**	P	**P**	**19 57 23.0**	**-0.2**
	1.4nm,0.6s,baz=250,slow=6.1						
MLR	**Muntele Rosu**	**52.02**	**55**	P	**P**	**19 57 29.2**	**-0.5**
	2.2nm,1.0s,baz=270,slow=8.1,SNR=2.4						
AKASG	**Malin Array Be**	**53.42**	**48**	P	**P**	**19 57 38.6**	**-1.1**
	0.5nm,0.5s,baz=280,slow=6.6,SNR=3.9						
TXAR	**Lajitas Array**	**53.78**	**285**	P	**P**	**19 57 42.5**	**-0.3**
	0.3nm,0.6s,baz=108,slow=5.8,SNR=3.5						
PDAR	**Pinedale Array**	**54.56**	**302**	P	**P**	**19 57 47.5**	**-0.9**
	0.9nm,0.7s,baz=83,slow=7.4,SNR=9.1						
YKA	**Yellowknife Ar**	**54.89**	**327**	P	**P**	**19 57 49.7**	**-0.5**
	0.3nm,0.6s,baz=89,slow=7.4,SNR=5.5						
NVAR	**Mina Array Bea**	**62.18**	**300**	P	**P**	**19 58 41.8**	**0.0**
	0.2nm,0.4s,baz=74,slow=6.7,SNR=2.7						
ILAR	**Eielson Array**	**68.03**	**334**	P	**P**	**19 59 20.9**	**+1.9**
	0.3nm,0.8s,baz=66,slow=3.1,SNR=3.2						
BVAR	**Borovoye Array**	**76.16**	**36**	P	**P**	**20 00 08.3**	**+0.4**
	0.6nm,0.8s,baz=308,slow=7.1,SNR=3.5						

IDC 27 19:56:39.5±5.8, 36°.60N×69°.66E, h188km±28km, mb3.3/3, mb1 3.1/8, mb1mx2.8/61, mbtmp3.7/8, MS3.0/3, Ms1 3.1/3, ms1mx2.5/37, Error ellipse: s-maj=87.1km s-min=22.4km az=154.0
ISC 27 19:56:39.5±1.0, 36°.55N±0°.09×69°.71E±0°.10, h200km, n18, σ0°.74/17, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**7.11**	**30**	P	**Pn**	**19 58 21.3**	**+0.1**
	0.6nm,0.3s,baz=174,slow=6.2,SNR=14						
AAK				S	**Sn**	**19 59 40.7**	**-1.2**
	0.3nm,0.3s,baz=216,slow=17,SNR=5.8						
GEYT	**Alibeck**	**9.35**	**282**	P	**Pn**	**19 58 49.6**	**-0.6**
	0.2nm,0.3s,baz=103,slow=11,SNR=4.0						
MKAR	**Makanchi Array**	**13.88**	**39**	P	**Pn**	**19 59 48.1**	**+0.4**
	0.1nm,0.3s,baz=220,slow=12,SNR=10						
MKAR				LR	LR	20 05 02.1	
	comp=Z,37nm,21.6s,baz=11,slow=36						
DANN	**Dangsing**	**14.40**	**121**	*e*P	**Pn**	**19 59 53.3**	**-1.3**
GKN	**Gorkha**	**15.22**	**120**	*e*P	**Pn**	**20 00 04.7**	**+0.2**
	11nm,0.2s						
KURBB	**Kurchatov Arra**	**15.43**	**22**	P	**P**	**20 00 06.5**	**-0.4**
	0.1nm,0.3s,baz=210,slow=11,SNR=4.4						
KKN	**Kakani**	**15.80**	**119**	*e*P	**P**	**20 00 11.2**	**-0.2**
	5.4nm,0.2s						
PKIN	**Phulchoki**	**16.01**	**120**	*e*P	**P**	**20 00 13.7**	**-0.1**
	5.1nm,0.2s						
PKI	**Pulchoki**	**16.02**	**120**	*e*P	**P**	**20 00 14.0**	**0.0**
	8.7nm,0.3s						
GUN	**Gumba**	**16.15**	**118**	*e*P	**Pn**	**20 00 16.6**	**+0.6**
	6.4nm,0.3s						
BVAR	**Borovoye Array**	**16.48**	**1**	P	**Pn**	**20 00 20.0**	**+0.7**
	0.4nm,0.3s,baz=170,slow=10,SNR=15						
JIRN	**Jiri**	**16.52**	**118**	*e*P	**P**	**20 00 20.3**	**+0.8**
	12nm,0.4s						
RAMN	**Ramite**	**17.24**	**119**	*e*P	**P**	**20 00 28.5**	**+1.2**
	5.1nm,0.5s						
ZALV	**Zalesovo Beam**	**20.31**	**26**	P	**P**	**20 01 00.4**	**+0.5**
	0.8nm,0.3s,baz=214,slow=11,SNR=6.3						
ASF	**Jabal al Asfar**	**27.36**	**271**	LR	LR	20 13 47.0	
	comp=Z,153nm,19.6s,baz=54,slow=38						
CMAR	**Chiang Mai Arr**	**31.40**	**117**	LR	LR	20 16 44.9	
	comp=Z,13nm,18.6s,baz=235,slow=38						
FINES	**FINESS Array B**	**36.86**	**326**	P	**P**	**20 03 28.5**	**+0.2**
	2.8nm,1.0s,baz=148,slow=8.2,SNR=3.1						
ARCES	**ARCESS Array B**	**40.70**	**338**	P	**P**	**20 04 00.6**	**+0.6**
	0.9nm,0.7s,baz=106,slow=8.2,SNR=4.9						

IDC 27 19:59:54.9±9.0, 39°.84N×106°.19E, h0km, mb3.3/2, mb1 3.3/4, mb1mx3.0/62, mbtmp3.3/4, ML2.9/2, Error ellipse: s-maj=123.9km s-min=35.7km az=119.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**7.99**	**1**	Pn	Pn	20 01 52.4	0.0
	0.1nm,0.3s,baz=182,slow=13,SNR=8.0						
SONM				Sn	Sn	20 03 22.6	-0.9
	0.4nm,0.3s,baz=188,slow=20,SNR=3.7						
SONM				Lg	Lg	20 04 11.1	
	0.6nm,0.3s,baz=193,slow=32,SNR=4.1						
MKAR	**Makanchi Array**	**18.68**	**300**	P	P	20 04 14.2	-0.3
	0.1nm,0.3s,baz=101,slow=13,SNR=5.7						
ZALV	**Zalesovo Beam**	**20.20**	**321**	P	P	20 04 29.1	-1.9
	0.9nm,0.4s,baz=127,slow=11,SNR=5.7						
KURBB	**Kurchatov Arra**	**22.13**	**308**	P	P	20 04 53.7	+1.8
	0.7nm,0.6s,baz=108,slow=12,SNR=3.5						

MAN 27 20:07:38.0, 9°.97N×121°.41E, h45km, mb4.3, ML3.2, MS2.9, Sulu Sea

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GUC 27 20:11:00.1±0.6, 32°.73S×71°.66W, h14km±4km, ML2.7
SJA 27 20:11:01.7±0.8, 32°.92S×71°.96W, h65km±17km, ML2.7, MW2.9
ISC 27 20:10:57.9±1.8, 32°.65S±0°.03×71°.74W±0°.08, h6km±11km, n21, σ1°.30/39, 3C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA01	**Torpederas**	**0.38**	**169**	⇓*i*P	**Pb**	**20 11 07.1**	**+0.1**
VA01				*i* S	**Sg**	**20 11 11.6**	**+1.3**
VA01				IAML		20 11 15.2	
	comp=E,1μm,0.1s						
ROC1	**El Roble**	**0.69**	**118**	*e*P	**Pn**	**20 11 13.4**	**-1.0**
ROC1				*e*S	**Sb**	**20 11 22.4**	**0.0**
ROCH	**El Roble**	**0.69**	**118**	⇓*i*P	**Pn**	**20 11 13.3**	**-1.1**
ROCH				*i* S	**Sb**	**20 11 22.3**	**-0.1**
ROCH				IAML		20 11 25.9	
	comp=E,384nm,0.4s						
MT02	**Curacav**	**0.79**	**141**	⇓*i*P	**Pb**	**20 11 13.7**	**-0.3**
MT02				*i* S	**Sg**	**20 11 24.4**	**+1.1**
MT02				IAML		20 11 26.7	
	comp=N,346nm,0.1s						
CO04	**Los Peladeros**	**0.88**	**47**	⇓*i*P	**Pn**	**20 11 18.6**	**+1.4**
CO04				*i* S	**Sn**	**20 11 31.8**	**+1.3**
CO04				IAML		20 11 36.1	
	comp=N,477nm,0.2s						
PEL	**Peldehue**	**1.01**	**119**	*e*P	**Pn**	**20 11 18.1**	**-0.7**
PEL				*i* S	**Sb**	**20 11 31.9**	**+0.4**
PEL				IAML		20 11 35.3	
	comp=E,827nm,0.2s						
PEL	**Peldehue**	**1.01**	**119**	*i* P	**Pn**	**20 11 18.4**	**-0.3**
PEL				*e*S	**Sn**	**20 11 33.2**	**-0.1**
STL	**Santa Lucia**	**1.21**	**131**	⇑*i*P	**Pb**	**20 11 21.1**	**-0.1**
STL				*i* S	**Sb**	**20 11 36.6**	**-0.5**
STL				IAML		20 11 39.8	
	comp=N,254nm,0.3s						
CLCH	**Cerro Calan**	**1.25**	**127**	*e*P	**Pg**	**20 11 22.0**	**+0.1**
CLCH				*i* S	**Sg**	**20 11 38.8**	**+0.6**
CLCH				IAML		20 11 43.0	
	comp=N,318nm,0.4s						
MT03	**Universidad Ad**	**1.33**	**130**	*i* P	**Pg**	**20 11 23.4**	**0.0**
MT03				*i* S	**Sg**	**20 11 41.4**	**+0.8**
MT03				IAML		20 11 44.6	
	comp=N,949nm,0.2s						
FCH	**Farellones**	**1.39**	**119**	⇑*i*P	**Pg**	**20 11 24.5**	**0.0**
FCH				*i* S	**Sb**	**20 11 42.5**	**-0.1**
FCH				IAML		20 11 44.7	
	comp=E,302nm,0.1s						
LMEL	**Las Melosas**	**1.75**	**133**	⇑*i*P	**Pb**	**20 11 30.1**	**-0.5**
LMEL				*i* S	**Sb**	**20 11 52.8**	**-0.2**
LMEL				IAML		20 11 56.2	
	comp=N,335nm,0.2s						
RTLS	**Leoncito**	**2.23**	**68**	*e*P	**Pg**	**20 11 41.0**	**+0.3**
RTLS				*i* S	**Sg**	**20 12 13.2**	**+3.5**
RTLS				IAML		20 12 20.6	
	comp=Z,18nm,0.3s						
ASAL	**Salagasta**	**2.45**	**89**	*i* P	**Pg**	**20 11 44.8**	**-0.1**
AAGR	**Agrelo**	**2.48**	**101**	*i* P	**Pg**	**20 11 45.3**	**-0.2**
RTLL	**Cerro Villicun**	**3.07**	**65**	*i* P	**Pg**	**20 11 55.9**	**-0.8**
RTLL				*i* Pn	**Sb**	**20 12 34.7**	**+4.0**
RTLL				*e*S	**Sg**	**20 12 35.6**	**-0.9**
RTLL				IAML		20 12 45.0	
	comp=Z,24nm,0.4s						
ACCO	**Cerro Coronel**	**3.07**	**49**	*e*P	**Pb**	**20 11 53.6**	**+0.5**
ACCO				*e*S	**Sg**	**20 12 35.3**	**-1.2**
AROD	**Rodeo**	**3.14**	**39**	*i* P	**Pg**	**20 11 56.2**	**-1.9**
AROD				*i* S	**Sg**	**20 12 39.1**	**+0.3**
CFA	**Coronel Fontan**	**3.15**	**72**	*e*P	**Pb**	**20 11 53.6**	**-0.7**
CFA				*i* S	**Sg**	**20 12 39.8**	**+0.8**
AMOG	**MOGNA**	**3.25**	**59**	*e*P	**Pb**	**20 11 54.3**	**-1.7**
ACAN	**Cantantal**	**3.86**	**86**	*i* P	**Pb**	**20 12 03.5**	**-2.9**

IDC 27 20:11:30.9±100.0, 14°.90S×167°.99E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/34, mbtmp3.9/3, MS3.7/1, Ms1 3.7/1, ms1mx2.6/42, Error ellipse: s-maj=1695.0km s-min=119.8km az=65.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**19.33**	**140**	LR	LR	20 22 00.5	
	comp=Z,216nm,20.1s,baz=132,slow=33						
STKA	**Stephens Creek**	**29.42**	**230**	P	P	20 17 36.3	+0.1
	1.8nm,0.4s,baz=67,slow=9.0,SNR=6.3						
WRA	**Warramunga Arr**	**32.46**	**256**	P	P	20 18 03.5	+0.3
	0.9nm,0.3s,baz=85,slow=7.1,SNR=18						
ASAR	**Alice Springs**	**33.26**	**250**	P	P	20 18 09.8	-0.4
	0.9nm,0.6s,baz=76,slow=9.2,SNR=14						

IDC 27 20:26:01.4±2.6, 43°.41N×105°.24W, h0km, mb1 3.6/3, mb1mx3.2/54, mbtmp3.3/3, ML3.4/3, Error ellipse: s-maj=58.0km s-min=9.1km az=153.0
NEIC 27 20:26:03.2±1.4, 43°.60N±0°.05×105°.18W±0°.07, h0km±2km, ML3.3/57, Error ellipse: s-maj=9.7km s-min=6.6km az=139.0
ISC 27 20:26:01.9±0.9, 43°.61N±0°.05×105°.17W±0°.06, h0km, n46, σ1°.15/45, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.96**	**58**		**Pb**	**20 26 22.4**	**+0.8**
K22A	**Casper**	**1.38**	**226**		**Pg**	**20 26 26.4**	**-2.0**
K22A				IAML		20 26 49.2	
	comp=N,392nm,0.3s						
K22A				IAML		20 26 50.2	
	comp=E,313nm,0.2s						
PHWY	**Pilot Hill**	**2.32**	**185**		**Pn**	**20 26 41.9**	**+0.3**
RWWY	**Rawlins**	**2.44**	**219**		**Pn**	**20 26 44.5**	**+1.2**
RWWY				IAML		20 27 20.5	
	comp=E,140nm,0.5s						
N23A	**Red Feather La**	**2.78**	**192**		**Pn**	**20 26 48.9**	**+1.0**
N23A				IAML		20 27 31.6	
	comp=E,108nm,0.8s						
N23A				IAML		20 27 36.3	
	comp=N,98nm,0.5s						
LAO	**LASA Array**	**3.17**	**347**		**Pn**	**20 26 53.3**	**+0.3**
RLMT	**Red Lodge**	**3.30**	**299**		**Pn**	**20 26 55.0**	**-0.1**
RLMT				IAML		20 27 50.1	
	comp=N,79nm,0.4s						
RLMT				IAML		20 27 54.5	
	comp=N,68nm,0.5s						
BW06	**Boulder Array**	**3.32**	**257**		**Pn**	**20 26 55.8**	**+0.5**
BW06				IAML		20 27 44.8	
	comp=N,55nm,0.4s						
PD31	**Pinedale Array**	**3.32**	**257**		**Pn**	**20 26 54.6**	**-0.8**
PDAR	**Pinedale Array**	**3.32**	**257**	Pn	**Pn**	**20 26 57.0**	**+1.7**
	comp=N,5.3nm,0.3s,baz=78,slow=16,SNR=39						
PDAR				Lg	Lg	20 27 41.6	
	comp=N,20nm,0.3s,baz=73,slow=35,SNR=12						
OGNE	**Ogallala**	**3.54**	**138**		**Pn**	**20 26 58.2**	**0.0**
YNE	**Yellowstone No**	**3.74**	**294**		**Pn**	**20 27 00.8**	**-0.3**
YMP	**Mirror Lake Pl**	**3.76**	**289**		**Pn**	**20 27 01.9**	**+0.4**
ISCO	**Idaho Springs**	**3.82**	**185**		**Pn**	**20 27 03.4**	**+1.0**
GCMT	**Greycliff**	**3.88**	**306**		**Pn**	**20 27 03.8**	**+0.9**
LKWY	**Lake**	**3.89**	**286**		**Pn**	**20 27 04.8**	**+1.6**
LKWY				IAML		20 28 10.4	
	comp=N,48nm,0.5s						
LKWY				IAML		20 28 14.6	
	comp=N,38nm,1.2s						
H17A	**Grant Village**	**3.98**	**283**		**Pn**	**20 27 05.5**	**+1.1**
H17A				IAML		20 28 11.5	
	comp=N,39nm,0.9s						
FLWY	**Flagg Ranch**	**4.03**	**279**		**Pn**	**20 27 06.5**	**+1.4**
FLWY				IAML		20 28 15.1	
	comp=N,58nm,1.1s						
FLWY				IAML		20 28 18.1	
	comp=N,45nm,1.1s						
YPP	**Pitchstone Pla**	**4.12**	**281**		**Pn**	**20 27 07.0**	**+0.6**
REDW	**Red Top Meadow**	**4.14**	**268**	Pn	**Pn**	**20 27 08.5**	**+1.9**
REDW				IAML		20 28 19.8	
	comp=N,51nm,0.8s						
O20A	**White River Ci**	**4.16**	**214**		**Pn**	**20 27 07.8**	**+0.9**
O20A				IAML		20 28 13.9	
	comp=N,39nm,1.0s						
O20A				IAML		20 28 21.2	
	comp=E,45nm,0.8s						
IMW	**Indian Meadow**	**4.19**	**276**		**Pn**	**20 27 08.7**	**+1.3**
IMW				IAML		20 28 27.1	
	comp=E,34nm,0.6s						
YHH	**Holmes Hill**	**4.25**	**288**		**Pn**	**20 27 09.9**	**+1.7**
FXWY	**Fox Creek**	**4.25**	**272**		**Pn**	**20 27 09.0**	**+0.8**
AHID	**Auburn Hatcher**	**4.42**	**261**		**Pn**	**20 27 12.3**	**+1.9**
AHID				IAML		20 28 24.3	
	comp=N,44nm,0.9s						
AHID				IAML		20 28 44.2	
	comp=E,33nm,1.3s						
RDMU	**Red Mountain**	**4.47**	**229**		**Pn**	**20 27 12.1**	**+0.9**
YHB	**Horse Butte**	**4.48**	**287**		**Pn**	**20 27 11.7**	**+0.4**
YHL	**Hebgen Lake**	**4.50**	**288**		**Pn**	**20 27 13.0**	**+1.4**
DGMT	**Dagmar**	**4.91**	**8**		**Pn**	**20 27 17.9**	**+1.0**
KSCO	**Kaye Shedlock'**	**4.98**	**157**		**Pn**	**20 27 19.2**	**+1.1**
HWUT	**Hardware Ranch**	**5.13**	**249**		**Pn**	**20 27 20.7**	**+0.5**
HWUT				IAML		20 29 01.5	
	comp=E,30nm,1.1s						
HWUT				IAML		20 29 14.1	
	comp=E,25nm,0.9s						
TCUT	**Toone Canyon**	**5.25**	**244**		**Pn**	**20 27 24.1**	**+2.2**
EGMT	**Eagleton**	**5.45**	**326**		**Pn**	**20 27 25.2**	**+0.7**
DLMT	**Dillon**	**5.59**	**291**		**Pn**	**20 27 27.6**	**+1.1**
MCMT	**McKenzie Canyo**	**5.65**	**285**		**Pn**	**20 27 29.4**	**+2.1**
P17A	**Butcher Ranch,**	**5.88**	**227**		**Pn**	**20 27 31.3**	**+0.8**
SRU	**San Rafael Swe**	**6.04**	**224**	Pn	**Pn**	**20 27 34.0**	**+1.4**
ECSD	**EROS Data Cent**	**6.21**	**86**		**Pn**	**20 27 36.2**	**+1.5**
TMUT	**Trail Mountain**	**6.26**	**229**	Pn	**Pn**	**20 27 36.9**	**+1.1**
T25A	**Trinidad**	**6.49**	**175**		**Pn**	**20 27 39.0**	**+0.1**
MVCO	**Mesa Verde**	**6.88**	**203**		**Pn**	**20 27 44.5**	**+0.3**
MSU	**Marysvale**	**7.35**	**228**		**Pn**	**20 27 50.9**	**+0.3**
I10CA	**LAC DU BONNET**	**9.08**	**40**	*i*		21 19 50.0	
	baz=223,slow=338,SNR=7.3						
ULM	**Lac du Bonnet**	**9.19**	**40**	Pn	**Pn**	**20 28 15.2**	**-0.4**
	comp=E,1.1nm,0.3s,baz=228,slow=13,SNR=9.9						
ULM				Lg	Lg	20 30 50.6	
	comp=E,0.5nm,0.3s,baz=126,slow=22,SNR=4.3						
ULM	**Lac du Bonnet**	**9.19**	**40**		**Pn**	**20 28 14.7**	**-0.9**
YKA	**Yellowknife Ar**	**19.71**	**347**	P	**Pn**	**20 30 34.1**	**+0.1**
	comp=E,0.1nm,0.3s,baz=156,slow=12,SNR=2.8						

IDC 27 20:26:20.1±2.0, 28°.55N×140°.28E, h0km, mb3.5/2, mb1 3.7/4, mb1mx3.3/47, mbtmp3.6/4, ML3.2/2, MS2.8/2, Ms1 2.9/2, ms1mx2.3/41, Error ellipse: s-maj=46.2km s-min=28.3km az=54.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.23**	**130**	Pn	Pn	20 26 58.0	-0.2
	23nm,0.3s,baz=276,slow=23,SNR=18						
JCJ				Sn	Sn	20 27 27.6	+1.2
	67nm,0.3s,baz=284,slow=22,SNR=10						
MJAR	**Matsushiro Arr**	**8.16**	**348**	Pn	Pn	20 28 19.6	-0.2
	0.1nm,0.3s,baz=167,slow=13,SNR=3.9						
KLR	**Kul'dur**	**21.66**	**345**	LR	LR	20 40 07.8	
	comp=Z,20nm,18.1s,baz=150,slow=38						
H11N2	**WAKE ISLAND Hy**	**25.79**	**104**	T	T	20 58 36.4	
	baz=296,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**25.79**	**104**	T	T	20 58 39.0	
	baz=296,slow=75,SNR=8.3						
H11N3	**WAKE ISLAND Hy**	**25.80**	**104**	T	T	20 58 40.1	
	baz=296,slow=75,SNR=11						
CMAR	**Chiang Mai Arr**	**39.05**	**264**	LR	LR	20 50 03.8	
	comp=Z,13nm,18.8s,baz=180,slow=36						
WRA	**Warramunga Arr**	**48.55**	**187**	P	P	20 35 05.1	-0.1
	0.8nm,0.7s,baz=4.9,slow=7.7,SNR=14						
ASAR	**Alice Springs**	**52.27**	**187**	P	P	20 35 33.3	-0.1
	0.1nm,0.3s,baz=8.9,slow=13,SNR=3.3						

IDC 27 20:38:04.9±1.1, 13°.02N×143°.91E, h221km±29km, mb3.2/6, mb1 3.3/6, mb1mx2.9/48, mbtmp3.7/6, Error ellipse: s-maj=92.2km s-min=15.8km az=84.0
ISC 27 20:38:03.9±0.8, 13°.0N±0°.1×143°.5E±0°.1, h200km, n7, σ0°.87/8, mb3.6/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.46**	**64**	P	**Pn**	**20 38 37.6**	**+0.3**
	18nm,0.3s,baz=253,slow=4.8,SNR=7.3						
GUMO				S	**Sn**	**20 39 03.1**	**-0.1**
	66nm,0.3s,baz=328,slow=23,SNR=11						
WRA	**Warramunga Arr**	**33.92**	**196**	P	**P**	**20 44 28.3**	**+0.1**
	2.4nm,0.7s,baz=16,slow=9.3,SNR=14						
ASAR	**Alice Springs**	**37.59**	**195**	P	**P**	**20 44 59.7**	**+0.3**
	1.5nm,0.5s,baz=17,slow=13,SNR=33						
STKA	**Stephens Creek**	**44.62**	**182**	P	**P**	**20 45 56.4**	**-0.1**
	1.1nm,0.6s,baz=6.2,slow=7.6,SNR=7						
SONM	**Songino Array**	**46.50**	**326**	P	**P**	**20 46 12.4**	**+1.2**
	0.2nm,0.6s,baz=144,slow=9.5,SNR=2.6						
MKAR	**Makanchi Array**	**61.03**	**317**	P	**P**	**20 47 56.3**	**-0.1**
	0.1nm,0.5s,baz=89,slow=7.4,SNR=4.0						
FINES	**FINESS Array B**	**91.17**	**335**	P	**P**	**20 50 44.4**	**-1.5**
	0.3nm,0.3s,baz=81,slow=8.6,SNR=4.4						

UCR 27 20:42:12.2±1.4, 9°.47N×84°.51W, h13km±6km, MD3.9, 1C,

Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCR2	La Lucha 2	0.57	62	eP	Pg	20 42 22.8	-0.7
LCR2				eS	Sg	20 42 31.0	-0.1
SRA1	San Ramn	0.61	3	eP	Pg	20 42 23.6	-0.6
SRA1				eS	Sg	20 42 32.6	+0.3
SJS	Escuela Geolog	0.65	44	eP	Pg	20 42 24.3	-0.6
SJS				eS	Sb	20 42 34.0	-0.5
HDC	Heredia	0.66	37	eP	Pg	20 42 24.9	-0.1
HDC				eS	Sg	20 42 34.2	+0.4
EDDO	Dominical	0.68	109	⇑eP	Pg	20 42 23.9	-1.5
EDDO				eS	Sn	20 42 37.5	-0.4
CVTR	Volcan Turrial	0.92	54	eP	Pg	20 42 29.1	-1.0
JTS	Las Juntas de	0.92	332	eP	Pg	20 42 28.4	-1.7
EDLM	Las Mercedes	0.93	102	eP	Pg	20 42 28.2	-2.0
EDLM				eS	Sn	20 42 44.1	-0.2
FORC	Fortuna	1.00	351	iP	Pb	20 42 30.3	-1.1
FORC				iS	Sg	20 42 45.3	+0.6
CEDE	Laguna Cedeo	1.03	349	iP	Pb	20 42 31.0	-0.9
EDPN	Palmar Norte	1.16	116	eP	Pb	20 42 32.9	-1.2
EDPN				eS	Sn	20 42 50.0	+0.2
EDBA	Buenos Aires	1.26	104	eP	Pn	20 42 34.7	-0.9
EDBA				eS	Sn	20 42 52.5	+0.2
GUAI	GUAI	1.26	309	iP	Pn	20 42 34.3	-1.3
GUAI				iS	Sg	20 42 52.8	-0.2
ACAL	Aguas Claras	1.27	336	iP	Pn	20 42 34.6	-1.1
DRK0	Durika	1.27	99	eP	Pn	20 42 34.0	-1.8
PTEN	Parque Tenorio	1.32	339	iP	Pn	20 42 35.7	-0.7
CUI	Cuipilapa	1.34	331	iP	Pn	20 42 35.7	-1.0
CUI				eS	Sb	20 42 54.0	-0.4
COLC	Colonia	1.37	330	iP	Pn	20 42 36.0	-1.1
GUAB	Guayabo de Bag	1.42	330	iP	Pn	20 42 36.6	-1.1
LIM1	Limonal	1.42	329	iP	Pn	20 42 36.8	-1.0
MESS	Mesas	1.43	332	iP	Pn	20 42 37.2	-0.7
GPS2	Hotel Rincn d	1.52	327	iP	Pn	20 42 38.4	-0.7
GPS1	Guardaparques	1.54	328	iP	Pn	20 42 38.7	-0.7
NY14	Universidad de	1.54	319	iP	Pn	20 42 39.1	-0.3
BUEV	Buena Vista	1.59	326	eP	Pn	20 42 39.3	-0.8
GB1A	Borinquen Arri	1.60	327	eP	Pn	20 42 39.8	-0.5
GBS3	Finca Las Img	1.60	325	iP	Pn	20 42 39.5	-0.8
BUAI	Buenos Aires	1.61	330	iP	Pn	20 42 39.7	-0.7
BRU2	Volcan	1.92	110	eP	Pn	20 42 45.0	+0.3

*NEIC **27** 21:04:32.5±1.5, 21.°6S±0.°1×176.°53W±0.°10, h161km±7km, mb4.4/24, Error ellipse: s-maj=16.1km s-min=13.4km az=172.0*

*IDC **27** 21:04:37.1±5.3, 21.°68S×176.°69W, h197km±50km, mb3.6/8, mb1 3.8/11, mb1mx3.6/37, mbtmp4.3/11, Error ellipse: s-maj=31.2km s-min=18.0km az=167.0*

ISC 27 21:04:35.0±0.5, 21.°74S±0.°07×176.°47W±0.°07, h183km, n65, σ1.§94/65, mb4.2/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.52	307	Pn	Pn	21 06 09.3	+0.4
NIUE	Niue	6.69	68	Pn	Pn	21 06 10.2	-0.8
NIUE					Sn	21 07 20.5	-6.3
RAO	Raoul Island	7.59	190	Pn	Pn	21 06 24.3	+1.5
GLKZ	Green Lake	7.60	190	S	Sn	21 07 47.6	-0.9
RAR	Rarotonga	15.55	91	P	P	21 08 08.7	+3.6
	1.7nm,0.3s,baz=236,slow=10,SNR=4.7						
DZM	Mont Dzumac	15.86	266	P	P	21 08 07.8	-0.8
	0.2nm,0.3s,baz=107,slow=14,SNR=2.5						
DZM	Mont Dzumac	15.86	266	P	Pn	21 08 07.2	-1.4
DZM				IAmb	IAmb	21 08 13.8	
	comp=Z,17nm,0.9s						
OUZ	Omahuta	16.00	211	P	Pn	21 08 12.3	+2.2
MXZ	Matakaoa Point	16.40	195	P	Pn	21 08 16.8	+2.0
MXZ				IAmb	IAmb	21 08 30.0	
	comp=Z,26nm,1.1s						
HAZ	Te Kaha	16.71	196	P	P	21 08 19.0	+1.2
PKGZ	Pakihiroa	16.77	195	P	P	21 08 19.2	+0.8
PKGZ				S	S	21 11 10.1	-14
RUGZ	Raukumara Rang	16.94	196	P	P	21 08 20.6	+0.3
RUGZ				S	S	21 11 12.4	-15
MKAZ	Moumakai	16.94	204	P	Pn	21 08 23.0	+1.7
TWGZ	Tauwhareparae	17.06	195	P	P	21 08 24.7	+1.9
TWGZ				S	S	21 11 20.8	-9.3
MWZ	Matawai	17.32	196	P	Pn	21 08 26.6	+0.8
MWZ				S	S	21 11 22.7	-13
URZ	Urewera	17.36	197	P	P	21 08 25.3	+0.4
	comp=Z,7.7nm,0.3s,baz=331,slow=3.6,SNR=15						
URZ				S	S	21 11 27.0	-9.1
	comp=Z,0.8nm,0.3s,baz=72,slow=19,SNR=4.2						
URZ	Urewera	17.36	197	P	P	21 08 25.8	+0.9
URZ	Urewera	17.36	197	P	P	21 08 25.1	+0.2
URZ				S	S	21 11 27.2	-8.9
TOZ	Tahuroa Road	17.38	202	P	Pn	21 08 29.6	+3.1
MTHZ	Maungataniwha	17.99	197	P	P	21 08 33.0	+1.2
MRHZ	Matea Rd	18.09	198	P	P	21 08 32.2	-0.7
MRHZ				S	S	21 11 39.5	-11
HIZ	Hauiti	18.30	202	P	P	21 08 36.2	+1.1
HIZ	Hauiti	18.30	202	P	Pn	21 08 38.1	+0.7
BKZ	Black Stump Fm	18.38	198	P	P	21 08 36.9	+0.8
BKZ				IAmb	IAmb	21 08 40.2	
	comp=Z,18nm,1.2s						
WTVZ	West Tongariro	18.60	200	P	P	21 08 39.0	+0.4
NGZ	Ngauruhoe	18.66	200	P	P	21 08 39.7	+0.6
FWVZ	Far West T-bar	18.74	200	P	P	21 08 37.2	-3.0
BHHZ	Black Hill Sta	18.80	198	P	P	21 08 39.5	-1.2
PKVZ	Pokaka	18.84	200	P	Pn	21 08 44.2	+4.5
KAHZ	Kahuranaki	18.87	196	P	P	21 08 41.3	0.0
MSWZ	Moikau Station	20.82	198	P	P	21 09 02.3	+0.1
BHW	Baring Head	20.92	198	P	P	21 09 02.7	-0.6
PLWZ	Palliser	20.96	198	P	P	21 09 02.1	-1.6
QRZ	Quartz Range	21.18	204	P	P	21 09 06.4	+0.4
NNZ	Nelson	21.23	202	P	P	21 09 05.0	-1.4
NNZ				IAmb	IAmb	21 09 21.0	
	comp=Z,22nm,1.0s						
LTZ	Lake Taylor	22.99	202		PcP	21 13 11.5	+4.0
RPZ	Rata Peaks	24.24	202	P	P	21 09 35.5	+0.5
	comp=Z,4.8nm,0.4s,baz=191,slow=6.9,SNR=5.6						
RPZ	Rata Peaks	24.24	202	P	P	21 09 36.2	+1.2
RPZ				IAmb	IAmb	21 09 47.6	
	comp=Z,21nm,1.1s						
FOZ	Fox Glacier	24.54	205	P	P	21 09 38.8	+1.2
EIDS	Eidsvold	29.92	257	P	P	21 10 26.4	+0.5
EIDS				IAmb	IAmb	21 10 27.4	
	comp=Z,11nm,1.1s						
STKA	Stephens Creek	38.56	246	P	P	21 11 40.2	+0.2
	comp=Z,1.9nm,0.6s,baz=85,slow=12,SNR=5.1						
STKA	Stephens Creek	38.56	246	IAmb	IAmb	21 11 41.8	
	comp=Z,1.2nm,1.0s						
BBOO	Buckleboo	43.29	245	P	P	21 12 17.5	-1.2
BBOO				IAmb	IAmb	21 12 34.1	
	comp=Z,9.1nm,1.1s						
AS31	Alice Springs	45.64	258	P	P	21 12 36.5	-1.0
ASAR	Alice Springs	45.64	258	P	P	21 12 37.0	-0.5
	comp=Z,4.0nm,0.8s,baz=88,slow=8.2,SNR=24						
WR0	Warramunga Arr	45.66	263	P	P	21 12 36.9	-0.8
WB0	Warramunga Arr	45.84	263	P	P	21 12 38.1	-0.9
WB2	Warramunga Arr	45.84	263	P	P	21 12 37.5	-1.6
WB2				IAmb	IAmb	21 12 39.4	
	comp=Z,6.7nm,1.1s						
WRA	Warramunga Arr	45.85	263	P	P	21 12 38.2	-1.0
	comp=Z,1.0nm,0.3s,baz=90,slow=5.8,SNR=75						
FORT	Forrest	50.13	247	P	P	21 13 11.8	0.0
KNRA	Kununurra	52.01	267	P	P	21 13 25.3	-0.7
KNRA				IAmb	IAmb	21 13 26.4	
	comp=Z,11nm,1.0s						
FITZ	Fitzroy Crossi	54.28	263	P	P	21 13 41.7	-0.9
	comp=Z,1.4nm,0.5s,baz=71,slow=6.0,SNR=7.7						
SIJI	Sorong	54.94	285	P	P	21 13 46.2	-1.1
	comp=Z,8.4nm,0.8s,baz=70,slow=6.1,SNR=4.6						
NWAO	Narrogin (SRO)	59.10	244	P	P	21 14 16.2	-0.1
	baz=136,slow=9.6						
NWAO	Narrogin (SRO)	59.10	244	P	P	21 14 16.4	+0.1
NWAO				IAmb	IAmb	21 14 29.1	
	comp=Z,12nm,1.1s						
NWAO	Narrogin (SRO)	59.10	244	IAmb	IAmb	21 14 29.1	
	comp=Z,8.9nm,1.1s						
MORW	Morawa	60.68	248	P	P	21 14 26.6	-0.6
MORW				IAmb	IAmb	21 14 38.5	
	comp=Z,6.9nm,1.1s						
QSPA	South Pole Qui	68.33	180	P	P	21 15 18.8	+2.5
QSPA				IAmb	IAmb	21 15 19.8	
	comp=Z,3.3nm,0.8s						
TXAR	Lajitas Array	86.53	57	P	P	21 17 00.2	+2.5
	comp=Z,0.2nm,0.7s,baz=238,slow=1.7,SNR=3.7						
ILAR	Eielson Array	89.21	12	P	P	21 17 09.2	-0.2
	comp=Z,0.2nm,0.6s,baz=207,slow=1.8,SNR=4.4						
MKAR	Makanchi Array	113.09	313	PKiKP	PKiKP	21 22 50.1	-0.3
	comp=Z,0.2nm,0.4s,baz=258,slow=1.2,SNR=5.8						
ARCES	ARCESS Array B	130.39	350	PKP	PKPdf	21 23 22.6	-0.2
	comp=Z,1.1nm,0.7s,baz=60,slow=2.9,SNR=5.5						
AKASG	Malin Array Be	144.78	331	PKP	PKPab	21 23 48.2	-1.0
	comp=Z,0.2nm,0.3s,baz=44,slow=3.3,SNR=6.9						
CLL	Collm	149.58	348	iPKPbc	PKiKP	21 24 04.5	+1.0
	comp=Z,4.0nm,0.9s						
GERES	GERESS Array B	151.76	346	PKPbc	PKiKP	21 24 08.2	0.0
	comp=Z,0.3nm,0.3s,baz=42,slow=2.2,SNR=4.6						

*GRAL **27** 21:09:14.5±0.3, 33.°19N×35.°37E, h3km±4km, MD2.8*

*GII **27** 21:09:14.2±0.0, 33.°23N×35.°41E, h1km, MD1.6/3, Mm1.8/4*

ISC 27 21:09:14.8±1.0, 33.°24N±0.°03×35.°40E±0.°04, h13km±7km, n19, σ0.§59/31, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDI	Kefar Szold	0.22	103	Pg	Pg	21 09 19.2	-0.4
KSDI				Sg	Sg	21 09 23.5	+0.6
MMA0B	Mount Meron ar	0.23	180	Pg	Pg	21 09 19.1	-0.7
MMA0B				Sg	Sg	21 09 23.2	+0.1
HNTI	Hanita	0.25	231	Pg	Pg	21 09 19.8	-0.3
HNTI				Sg	Sg	21 09 24.3	+0.6
NATI	Neve Ativ	0.28	86	Pg	Pg	21 09 20.1	-0.6
NATI				Sg	Sg	21 09 25.6	+1.0
QRWL	Qaraoun	0.38	37	eP	Pg	21 09 22.4	-0.2
KSHT	Keshet	0.43	127	Pg	Pb	21 09 23.7	-0.6
RCY	Rachaya	0.44	55	eP	Pg	21 09 23.4	-0.3
RCY				eS	Sg	21 09 30.0	+0.3
DQRL	Deir Qamar	0.48	17	eP	Pg	21 09 24.2	-0.2
DQRL				eS	Sg	21 09 31.4	+0.4
BLGI	Bet Lehem HaGe	0.54	199	Pg	Pb	21 09 25.3	-0.8
BLGI				Sg	Sb	21 09 33.7	-0.1
BHL	Bhannes	0.69	18	eP	Pg	21 09 27.9	-0.5
OFRI	`Ofer	0.71	210	Pg	Pb	21 09 28.5	-0.6
OFRI				Sg	Sb	21 09 39.8	+1.0
MMLI	Mount Malkishu	0.80	179	Pg	Pb	21 09 30.0	-0.7
MMLI				Sg	Sb	21 09 41.9	+0.5
QRNJ	Al-Qirein	0.92	171	Pg	Pb	21 09 32.2	-0.4
HMDT	Nahal Hemdat	0.99	174	Pg	Pb	21 09 33.3	-0.6
HMDT				Sg	Sn	21 09 48.0	-0.3
SLTI	Sal'it	1.04	197	Pg	Pb	21 09 34.4	-0.4
SLTI				Sg	Sn	21 09 49.4	-0.2
HWQ	Hawqa	1.13	24	eP	Pg	21 09 35.6	-1.0
DSI	Dead Sea	1.67	181	Pn	Pn	21 09 44.2	+0.4
AMAZ	Amatzia	1.75	194	Pn	Pn	21 09 45.7	+0.7
YTIR	Yattir	1.89	187	Pn	Pb	21 09 49.0	-0.2
YTIR				Sn	Sb	21 10 13.1	+0.3

IDC 27 21:14:20.8±2.9, 6.°06S×129.°93E, h95km±39km, mb3.2/2, mb1 3.5/6, mb1mx3.3/39, mbtmp3.7/6, Error ellipse: s-maj=62.8km s-min=21.2km az=86.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.32	15	P	Pn	21 15 38.0	+0.1
	3.7nm,0.3s,baz=242,slow=15,SNR=36						
SIJI				S	Sn	21 16 32.8	-5.2
	4.2nm,0.3s,baz=236,slow=23,SNR=8.8						
FITZ	Fitzroy Crossi	12.68	199	P	Pn	21 17 17.7	0.0
	0.5nm,0.3s,baz=28,slow=13,SNR=19						
FITZ				S	Sn	21 19 28.8	-8.4
	0.2nm,0.3s,baz=152,slow=21,SNR=5.4						
WRA	Warramunga Arr	14.45	163	P	Pn	21 17 39.5	-1.3
	0.4nm,0.3s,baz=343,slow=12,SNR=8.4						
WRA				S	Sn	21 20 06.3	-14
	0.6nm,0.3s,baz=343,slow=22,SNR=9.8						
ASAR	Alice Springs	17.92	168	P	Pn	21 18 24.1	+0.2
	0.4nm,0.3s,baz=348,slow=10,SNR=22						
ASAR				S	Sn	21 21 34.2	-10
	0.4nm,0.3s,baz=345,slow=24,SNR=6.3						
CMAR	Chiang Mai Arr	39.08	309	P	P	21 21 39.3	+0.3
	0.4nm,0.5s,baz=132,slow=6.6,SNR=4.1						
MKAR	Makanchi Array	67.41	327	P	P	21 25 05.9	-0.2
	0.3nm,0.4s,baz=116,slow=7.7,SNR=10.0						

*SJA **27** 21:20:27.3±0.8, 21.°05S×69.°01W, h143km±12km, ML3.0, MW3.0*

*GUC **27** 21:20:30.1±0.4, 21.°11S×68.°92W, h119km±2km, ML3.2*

ISC 27 21:20:30.2±1.6, 21.°10S±0.°04×68.°99W±0.°06, h120km±12km, n22, σ0.§50/38, 11C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.47	277	⇑iP	Pn	21 20 47.6	-0.4
PB01				iS	Sn	21 21 00.8	-0.7
PB01				IAML		21 21 01.4	
	comp=N,1µm,0.4s						
PB09	IPOC Station P	0.73	199	⇑iP	Pn	21 20 49.6	-0.4
PB09				iS	Sn	21 21 04.8	-0.2
PB02	IPOC Station P	0.87	255	⇑iP	Pn	21 20 51.2	+0.2
PB02				iS	Sn	21 21 07.2	+0.3
PB02				IAML		21 21 09.9	
	comp=E,857nm,0.1s						
PB08	IPOC Station P	0.97	351	eP	Pn	21 20 52.3	0.0
PB08				iS	Sn	21 21 09.2	+0.3
PB08				IAML		21 21 11.0	
	comp=E,520nm,0.2s						
PB07	IPOC Station P	1.04	233	⇑iP	Pn	21 20 52.7	-0.1
PB07				iS	Sn	21 21 10.0	+0.1
PB07				IAML		21 21 12.1	
	comp=N,360nm,0.2s						
PATCX	Punta Patache	1.12	284	⇑iP	Pn	21 20 53.9	+0.4
PATCX				iS	Sn	21 21 11.8	+0.7
PATCX				IAML		21 21 13.8	
	comp=E,484nm,0.5s						
PB03	IPOC Station P	1.18	217	⇑iP	Pn	21 20 54.0	-0.2
PB03				iS	Sn	21 21 11.9	-0.5
PB03				IAML		21 21 12.5	
	comp=E,357nm,0.1s						
TA01	Diego Aracena	1.23	295	⇑iP	Pn	21 20 54.6	+0.1
TA01				iS	Sn	21 21 13.4	+0.3
TA01				IAML		21 21 15.0	
	comp=E,528nm,0.2s						
GO01	Chusmiza	1.44	352	eP	Pn	21 20 57.5	+0.1
GO01				iS	Sn	21 21 18.2	+0.3
PB11	IPOC Station P	1.47	335	⇑iP	Pn	21 20 57.3	-0.1
PB11				iS	Sn	21 21 18.5	+0.4
PB11				IAML		21 21 19.7	
	comp=N,598nm,0.5s						
PB04	IPOC Station P	1.63	221	⇑iP	Pn	21 20 59.2	-0.1
PB04				eS	Sn	21 21 21.8	+0.3
PB04				IAML		21 21 23.6	
	comp=N,237nm,0.1s						
PB04	IPOC Station P	1.63	221	iP	Pn	21 20 59.3	-0.1
PB04				eS	Sn	21 21 22.3	+0.8
PB04				IAML		21 21 28.8	
	comp=Z,156nm,0.2s						
PB06	IPOC Station P	1.69	199	⇑eP	Pn	21 20 59.8	-0.1
PB06				iS	Sn	21 21 22.3	-0.3
PB06				IAML		21 21 25.9	
	comp=E,241nm,0.2s						
PB06	IPOC Station P	1.69	199	iP	Pn	21 20 60.0	0.0
PB06				eS	Sn	21 21 23.6	+0.9
PSGC	Pisagua	1.83	324	⇑iP	Pn	21 21 01.2	-0.5
PSGC				iS	Sn	21 21 25.4	-0.3
PSGC				IAML		21 21 28.6	
	comp=N,132nm,0.2s						
PB05	IPOC Station P	2.08	213	eP	Pn	21 21 04.5	-0.2
PB05				IAML		21 21 34.5	
	comp=E,106nm,0.4s						
PB05	IPOC Station P	2.08	213	iP	Pn	21 21 04.3	-0.4
PB15	IPOC Station P	2.15	192	iP	Pn	21 21 06.6	+0.9
PB15				eS	Sn	21 21 33.9	+1.0
PB15				IAML		21 24 37.3	
	comp=Z,431nm,0.5s						
PB10	IPOC Station P	2.81	211	iP	Pn	21 21 13.4	-0.5
YJA	Yavi	3.41	109	iP	Pn	21 21 21.8	-0.4
YJA				IAML		21 21 25.9	
	comp=Z,3.4nm,0.7s						
PB14	IPOC Station P	3.74	200	iP	Pn	21 21 25.4	-1.2
HJA	Humahuaca	3.93	123	iP	Pn	21 21 29.3	+0.2

*IDC **27** 21:21:30.7±1.3, 35.°42N×23.°26E, h0km, mb3.7/3, mb1 3.7/7, mb1mx3.4/43, mbtmp3.6/7, ML3.6/4, Error ellipse: s-maj=24.5km s-min=14.9km az=9.0*

*ATH **27** 21:21:32.3, 35.°41N×23.°37E, h8km±1km, ML3.3/25, Error ellipse: s-maj=1.8km s-min=0.7km az=223.0*

*THE **27** 21:21:32.9, 35.°46N×23.°38E, h13km±1km, ML3.2/9, Error ellipse: s-maj=1.9km s-min=0.3km az=195.0*

ISC 27 21:21:32.1±1.1, 35.°40N±0.°03×23.°33E±0.°03, h10km±8km, n75, σ1.§21/107, mb3.6/3, 1C-1D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.33	120	P	Pg	21 21 38.9	+0.2
KNDR				S	Sg	21 21 43.4	+0.3
	15µm,0.2s						
RODP	Rodopos	0.38	65	P	Pg	21 21 40.0	+0.4
ANKY	Antikythira Is	0.47	357	P	Pg	21 21 41.4	+0.3
ANKY				S	Sg	21 21 47.5	+0.2
	3µm,0.4s						
ANKY	Antikythira Is	0.47	357	P	Pg	21 21 41.5	+0.3
ANKY				S	Sg	21 21 47.5	+0.2
ANKY				AML	AML	21 21 48.7	
	comp=N,7819µm,0.4s						
ANKY				AML	AML	21 21 48.9	
	comp=E,6096µm,0.3s						
IMMV	Iera Moni Meta	0.53	83	P	Pg	21 21 42.2	-0.2
IMMV	Iera Moni Meta	0.53	83	P	Pg	21 21 42.4	0.0
IMMV				S	Sg	21 21 49.5	0.0
IMMV				AML	AML	21 21 51.5	
	comp=E,21774µm,0.3s						
IMMV				AML	AML	21 21 52.1	
	comp=N,18119µm,0.3s						
CHAN	Chania	0.59	78	P	Pg	21 21 43.4	-0.1
VAM	Vamos	0.71	89	P	Pg	21 21 45.3	-0.4
VAM				S	Sg	21 21 55.2	+0.2
	comp=N,3µm,0.3s						
VAM	Vamos	0.71	89	P	Pg	21 21 45.7	-0.1
VAM				S	Sg	21 21 55.1	+0.1
VAM				AML	AML	21 21 57.2	
	comp=E,6519µm,0.4s						
VAM				AML	AML	21 22 03.6	
	comp=N,7116µm,0.4s						
GVD	Gavdhos	0.83	132	P	Pb	21 21 48.6	0.0
GVD				S	Sn	21 22 01.7	-0.5
	comp=N,3µm,0.3s						
GVD	Gavdhos	0.83	132	P	Pb	21 21 48.6	0.0
GVD				S	Sg	21 21 58.5	-0.5
GVD				AML	AML	21 22 04.6	
	comp=N,6649µm,0.5s						
GVD				AML	AML	21 22 05.7	
	comp=E,7598µm,0.3s						
KTHA	Kythira Island	0.88	346	P	Pg	21 21 48.7	-0.4
KTHA				S	Sg	21 22 00.9	+0.3
	comp=E,2µm,0.4s						
KTHA	Kythira Island	0.88	346	P	Pg	21 21 48.8	-0.2
KTHA				S	Sb	21 22 02.0	+0.7
KTHA				AML	AML	21 22 02.5	
	comp=E,4988µm,0.4s						
KTHA				AML	AML	21 22 04.6	
	comp=N,1899µm,0.3s						
KTHR	Kythira	0.90	343	P	Pg	21 21 48.7	-0.7
KTHR				S	Sg	21 22 00.8	-0.3
	comp=N,2µm,0.3s						
PRNS	Prines Rethymn	0.95	92	P	Pg	21 21 49.0	-1.4
PRNS				S	Sg	21 22 02.0	-0.8
SIVA	Sivas	1.27	107	P	Pn	21 21 55.3	-0.5
SIVA				S	Sb	21 22 12.0	-0.4
	comp=N,995nm,0.4s						
SIVA	Sivas	1.27	107	P	Pn	21 21 55.6	-0.2
SIVA				S	Sg	21 22 12.7	-0.2
SIVA				AML	AML	21 22 19.1	
	comp=E,2287µm,0.4s						
SIVA				AML	AML	21 22 21.7	
	comp=N,1839µm,0.3s						
IDI	Anoyia	1.28	95	P	Pn	21 21 55.3	-0.7
IDI				S	Sb	21 22 11.7	-1.1
	comp=N,470nm,0.4s						
IDI	Anoyia	1.28	95	Pg	Pb	21 21 56.3	0.0
	comp=N,34nm,0.3s,baz=240,slow=9.9,SNR=166						
IDI				Lg	Lg	21 22 14.4	
	comp=N,81nm,0.3s,baz=59,slow=24,SNR=13						
IDI				LR	LR	21 22 43.7	
	comp=N,78nm,20.0s,baz=348,slow=55						
IDI	Anoyia	1.28	95	P	Pb	21 21 56.3	0.0
IDI				S	Sb	21 22 12.2	-0.5
IDI				AML	AML	21 22 15.8	
	comp=N,831µm,0.6s						
IDI				AML	AML	21 22 15.8	
	comp=E,1056µm,0.3s						
MNVA	Monemvasia	1.31	349	P	Pn	21 21 55.8	-0.5
MNVA				S	Sg	21 22 15.6	+1.5
VLI	Veliai	1.35	346	P	Pn	21 21 55.4	-1.6
VLI				S	Sb	21 22 14.0	-0.9
	comp=E,478nm,0.6s						
VLI	Veliai	1.35	346	P	Pn	21 21 57.1	0.0
VLI				S	Sn	21 22 15.4	+0.3
VLI				AML	AML	21 22 19.5	
	comp=N,1060µm,0.7s						
VLI				AML	AML	21 22 25.2	
	comp=E,1015µm,1.1s						
IACM	Heraklion	1.42	93	P	Pg	21 21 59.5	+0.1
IACM				S	Sg	21 22 17.3	-0.5
IACM				AML	AML	21 22 21.2	
	comp=E,6139µm,0.5s						
IACM				AML	AML	21 22 23.6	
	comp=N,8467µm,0.5s						
MHLO	Agia Marina, M	1.55	34	P	Pn	21 22 00.0	+0.3
MHLO				AML	AML	21 22 27.7	
	comp=E,4453µm,0.7s						
MHLO				AML	AML	21 22 29.4	
	comp=N,4231µm,0.8s						
MHLA	Plaka, Milos I	1.60	33	P	Pb	21 22 01.6	-0.2
MHLA				S	Sg	21 22 24.3	+0.6
MHLA				AML	AML	21 22 29.4	
	comp=E,2663µm,0.9s						
MHLA				AML	AML	21 22 30.3	
	comp=N,2946µm,1.1s						
LAST	Lasithi	1.77	97	P	Pb	21 22 05.1	+0.4
LAST				S	Sg	21 22 29.1	+0.1
LAST				AML	AML	21 22 36.7	
	comp=E,541µm,0.4s						
LAST				AML	AML	21 22 42.2	
	comp=N,566µm,0.5s						
NPS	Neapolis	1.87	94	P	Pb	21 22 07.0	+0.7
NPS				S	Sg	21 22 31.8	-0.4
NPS				AML	AML	21 22 39.6	
	comp=N,691µm,0.5s						
NPS				AML	AML	21 22 42.6	
	comp=E,720µm,0.3s						
SAP1	Santorini-Akro	1.93	60	P	Pb	21 22 07.1	-0.2
SAP1				S	Sb	21 22 32.1	+0.7
SAP1				AML	AML	21 22 38.4	
	comp=N,3234µm,0.4s						
SAP1				AML	AML	21 22 38.9	
	comp=E,3899µm,0.7s						
SAP3	Santorini-Thir	1.93	57	P	Pn	21 22 05.7	+0.7
SAP3				AML	AML	21 22 41.2	
	comp=E,3258µm,0.6s						
SAP3				AML	AML	21 22 43.0	
	comp=N,4312µm,0.4s						
PYL	PYLOS	1.97	320	P	Pb	21 22 08.8	+0.8
PYL				S	Sg	21 22 34.7	-0.7
PYL				AML	AML	21 22 42.5	
	comp=N,257µm,0.5s						
PYL				AML	AML	21 22 45.1	
	comp=E,264µm,0.4s						
SANT	Santorini	1.98	60	P	Pb	21 22 07.4	-0.8
SANT				AML	AML	21 22 37.0	
	comp=E,991µm,0.3s						
SANT				AML	AML	21 22 37.0	
	comp=N,356µm,0.4s						
KRND	KRANIDI	1.98	356	P	Pb	21 22 08.1	-0.1
KRND				S	Sg	21 22 34.7	-1.1
KRND				AML	AML	21 22 40.3	
	comp=E,446µm,0.4s						
KRND				AML	AML	21 22 40.5	
	comp=N,604µm,0.5s						
SERI	Serifos	1.99	28	P	Pb	21 22 08.0	-0.4
SERI				S	Sb	21 22 34.1	+1.0
SERI				AML	AML	21 22 40.2	
	comp=N,252µm,0.7s						
SERI				AML	AML	21 22 40.8	
	comp=E,324µm,0.4s						
SAP2K	Karterados	1.99	59	P	Pb	21 22 07.3	-1.0
SAP2K				S	Sg	21 22 34.6	-1.4
SAP2K				AML	AML	21 22 40.7	
	comp=E,3163µm,0.7s						
SAP2K				AML	AML	21 22 42.5	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=N,3270µm,0.6s						
CMBO	Columbo, Santo	1.99	57	P	Pb	21 22 08.7	+0.3
CMBO				S	Sb	21 22 33.2	-0.1
CMBO				AML	AML	21 22 38.5	
	comp=N,1731µm,0.4s						
CMBO				AML	AML	21 22 42.5	
	comp=E,1614µm,0.7s						
IOSP	Ios island	2.06	50	P	Pb	21 22 09.0	-0.6
DID	Didima	2.10	358	P	Pn	21 22 08.6	+1.2
DID				S	Sg	21 22 38.2	-1.4
ITM	Ithomi	2.11	328	P	Pb	21 22 09.7	-0.7
VLX	Vlachokerasia	2.11	339	P	Pg	21 22 11.7	-0.8
VLX				AML	AML	21 22 54.5	
	comp=E,468µm,0.6s						
VLX				AML	AML	21 22 57.4	
	comp=N,404µm,0.7s						
ZKR	Zakros	2.38	96	P	Pb	21 22 14.8	-0.2
APE	Apeiranthos	2.43	46	P	Pb	21 22 13.9	-2.1
APE				S	Sb	21 22 45.3	-0.7
APE				AML	AML	21 22 51.1	
	comp=N,281µm,0.4s						
APE				AML	AML	21 22 54.9	
	comp=E,436µm,0.5s						
APE	Apeiranthos	2.43	46	eP	Pn	21 22 13.4	+1.5
VLY	Voula,Athens	2.47	8	P	Pn	21 22 14.0	+1.5
AMT	Artemida-Makis	2.50	329	P	Pn	21 22 14.9	+2.1
AMGA	Amorgos Island	2.52	55	P	Pb	21 22 15.1	-2.2
AMGA				AML	AML	21 22 57.4	
	comp=E,286µm,0.4s						
AMGA				AML	AML	21 22 57.8	
	comp=N,454µm,0.4s						
ATHU	Athens Univers	2.59	8	P	Pn	21 22 15.6	+1.6
LTK	Loutraki	2.63	354	P	Pn	21 22 16.7	+2.1
PTL	Penteli	2.68	9	P	Pn	21 22 17.6	+2.4
PTL				S	Sn	21 22 49.8	+2.0
PTL				AML	AML	21 22 56.9	
	comp=N,151µm,0.9s						
PTL				AML	AML	21 23 00.9	
	comp=E,162µm,0.5s						
KARY	Karystos	2.77	18	P	Pn	21 22 18.6	+2.0
KLV	Kalavryta, Ach	2.80	341	P	Pb	21 22 20.8	-1.5
VIL2	Platees	2.81	359	P	Pn	21 22 18.0	+1.0
DRO	Drossia	2.86	333	P	Pn	21 22 20.5	+2.7
KARP	Karpathos	3.13	86	P	Pn	21 22 23.0	+1.5
KARP	Karpathos	3.13	86	eP	Pn	21 22 22.9	+1.5
KALE	Kalithea	3.13	343	P	Pb	21 22 25.0	-3.0
DAT	Datca	3.68	68	eP	Pn	21 22 31.1	+1.9
AGG	Agios Georgios	3.70	348	P	Pn	21 22 32.6	+3.3
MAKR	Makrakomi, Fth	3.73	345	P	Pn	21 22 33.0	+3.2
URLA	Izmir	3.94	41	eP	Pn	21 22 34.4	+1.7
ARG	Arkhangelos	3.98	77	eP	Pn	21 22 35.1	+2.0
TURN	Turunc	4.51	69	eP	Pn	21 22 37.9	-2.5
DALY	Dalyan (Mula)	4.53	70	eP	Pn	21 22 41.8	+1.1
FETY	Fethiye	4.82	74	eP	Pn	21 22 45.9	+1.2
AKAS	Kas	5.16	79	eP	Pn	21 22 51.1	+1.6
ELL	Elmali	5.49	74	eP	Pn	21 22 55.6	+1.6
BRTR	Keskin Array B	9.25	59	Pn	Pn	21 23 48.5	+2.9
	comp=E,0.1nm,0.3s,baz=240,slow=12,SNR=4.9						
VOIR		10.11	7	⇓P	Pn	21 24 04.4	+7.0
MLR	Muntele Rosu	10.27	10	Pn	Pn	21 24 01.1	+1.5
	comp=E,0.2nm,0.3s,baz=152,slow=16,SNR=5.0						
MMAI	Mount Meron Ar	10.27	100	Pn	Pn	21 23 59.7	0.0
	comp=E,0.7nm,0.3s,baz=286,slow=10,SNR=4.9						
MMAI				Sn	Sn	21 25 54.0	-1.0
	comp=E,0.4nm,0.3s,baz=256,slow=23,SNR=2.4						
SIRR	Siria	10.93	354	⇑P	Pn	21 24 07.9	-0.6
EIL	Elat	11.34	117	Pn	Pn	21 24 13.7	-0.6
	comp=E,0.3nm,0.3s,baz=329,slow=12,SNR=2.7						
HFS	Hagfors	25.53	349	P	P	21 27 00.5	0.0
	comp=E,3.3nm,1.1s,baz=170,slow=11,SNR=4.0						
TORD	Torodi Ar. Bea	29.53	227	P	P	21 27 37.3	+0.4
	comp=E,0.5nm,0.5s,baz=32,slow=9.1,SNR=6.6						
MKAR	Makanchi Array	44.89	57	P	P	21 29 45.9	-0.8
	comp=E,0.2nm,0.5s,baz=268,slow=7.6,SNR=6.6						

IDC 27 21:32:44.1±1.7, 7°.39S×124°.32E, h0km, mb3.5/1, mb1 4.0/4, mb1mx3.6/31, mbtmp3.8/4, ML3.8/3, Error ellipse: s-maj=118.3km s-min=26.1km az=64.0
DJA 27 21:33:01.6±0.8, 8°S±8°×12°4E±°, h172km±7km, M3.8/7, mb4.0/2, MLv3.6/7
NEIC 27 21:33:03.0±2.6, 8°.20S±0°.08×124°.11E±0°.09, h186km±10km, mb4.0/7, Error ellipse: s-maj=14.5km s-min=10.8km az=56.0
ISC 27 21:33:03.7±0.8, 8°.37S±0°.08×124°.14E±0°.06, h200km, n32, σ2s.09/42, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	1.38	175	P	Pn	21 33 35.6	-0.9
SOEI				S	Sn	21 33 59.0	-3.2
SOEI	Soe	1.38	175	P	Pn	21 33 35.6	-0.9
SOEI				S	Sn	21 33 59.0	-3.2
SOEI	Soe	1.38	175		Pn	21 33 35.5	-1.1
MMRI	Maumere	1.90	262	P	Pn	21 33 39.0	-2.2
MMRI				S	Sn	21 34 09.6	-0.7
MMRI	Maumere	1.90	262	P	Pn	21 33 39.0	-2.2
MMRI				S	Sn	21 34 09.6	-0.7
MMRI	Maumere	1.90	262		Pn	21 33 39.5	-1.7
EDFI	Ende, Flores	2.45	261	P	Pn	21 33 46.2	-1.0
EDFI				S	Sn	21 34 20.9	-0.1
EDFI	Ende, Flores	2.45	261	P	Pn	21 33 46.2	-1.0
EDFI				S	Sn	21 34 20.9	-0.1
BASI	Baing, Sumba	3.97	242	P	Pn	21 34 04.8	-0.3
BASI	Baing, Sumba	3.97	242	P	Pn	21 34 04.8	-0.3
WSI	Waingapu	4.01	251	P	Pn	21 34 05.0	-0.6
WSI	Waingapu	4.01	251	P	Pn	21 34 05.0	-0.6
WBSI	Waikabubak, Su	4.86	255	P	Pn	21 34 16.1	-0.3
	0.1nm25nm,0.9s						
WBSI	Waikabubak, Su	4.86	255	P	Pn	21 34 16.1	-0.3
	0.1nm25nm,0.9s						
PLAI	Plampang	6.31	265	P	Pn	21 34 34.3	-0.7
PLAI	Plampang	6.31	265	P	Pn	21 34 34.3	-0.7
MTN	Manton Dam	8.19	123	Pn	Pn	21 34 59.8	+0.3
KNRA	Kununurra	8.55	149	Pn	Pn	21 35 03.9	-0.3
KNRA				Sn	Sn	21 36 38.1	-2.3
FAKI	Fak Fak	9.72	57	Pn	Pn	21 35 18.0	-1.3
FITZ	Fitzroy Crossi	9.78	172	Pn	Pn	21 35 19.5	-0.6
	0.1nm,0.3s,baz=359,slow=14,SNR=4.0						
FITZ				Sn	Sn	21 37 05.2	-4.3
	1.3nm,0.3s,baz=315,slow=15,SNR=15						
FITZ	Fitzroy Crossi	9.78	172	Pn	Pn	21 35 22.0	+1.9
JAGI	Jajag, Banyuwa	9.88	269	Pn	Pn	21 35 18.7	-2.8
WB0	Warramunga Arr	15.06	140	Pn	Pn	21 36 27.4	+0.5
WB0				IAmb	IAmb	21 36 32.1	
	comp=Z,7.3nm,1.1s						
WRA	Warramunga Arr	15.16	140	Pn	Pn	21 36 29.9	+1.5
	comp=Z,0.7nm,0.3s,baz=316,slow=12,SNR=48						
WRA				Sn	S	21 39 10.2	-6.2
	comp=Z,0.2nm,0.3s,baz=319,slow=24,SNR=5.0						
WB2	Warramunga Arr	15.17	140		P	21 36 32.0	+3.5
WB2				IAmb	IAmb	21 36 32.5	
	comp=Z,4.0nm,0.5s						
WR0	Warramunga Arr	15.30	140		P	21 36 32.9	+2.9
WR0				IAmb	IAmb	21 36 34.5	
	comp=Z,4.6nm,1.1s						
AS31	Alice Springs	17.86	150	P	Pn	21 37 02.1	+1.9
ASAR	Alice Springs	17.86	150	P	Pn	21 37 02.1	+1.9
	comp=Z,0.8nm,0.3s,baz=329,slow=12,SNR=32						
ASAR				S	S	21 40 13.8	+0.9
	comp=Z,0.1nm,0.3s,baz=311,slow=20,SNR=3.5						
COEN	Coen	19.48	108	P	P	21 37 17.7	+2.0
COEN				IAmb	IAmb	21 37 21.1	
	comp=Z,6.5nm,1.3s						
MORW	Morawa	21.95	199	P	P	21 37 43.9	+2.4
MORW				IAmb	IAmb	21 37 50.7	
	comp=Z,14nm,1.3s						
BBOO	Buckleboo	26.71	157	P	P	21 38 27.9	+3.3
MKAR	Makanchi Array	66.34	330	P	P	21 43 29.9	-1.0
	comp=Z,0.3nm,0.6s,baz=121,slow=6.9,SNR=6.5						

IDC 27 21:46:23.3±1.4, 3°.87S×145°.14E, h0km, mb3.6/6, mb1 3.8/8, mb1mx3.6/34, mbtmp3.6/8, ML2.8/2, MS3.2/4, Ms1 3.2/4, ms1mx2.8/27, Error ellipse: s-maj=41.9km s-min=21.8km az=95.0
NEIC 27 21:46:30.2±1.2, 4°.15±0°.1×145°.2E±0°.1, h56km±9km, mb4.1/8, Error ellipse: s-maj=22.4km s-min=14.6km az=69.0
ISC 27 21:46:28.4±1.0, 3°.97S±0°.09×145°.2E±0°.1, h35km, n21, σ0s.95/20, mb3.7/7, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.74	160	Pn	Pn	21 47 52.3	+1.1
	2.6nm,0.3s,baz=14,slow=19,SNR=4.1						
PMG				Sn	Sn	21 48 56.6	+0.8
	1.7nm,0.3s,baz=119,slow=22,SNR=4.1						
PMG				LR	LR	21 50 36.3	
	comp=Z,179nm,19.8s,baz=194,slow=43						
PMG	Port Moresby	5.74	160		Pn	21 47 51.6	+0.4
PMG					Sn	21 48 55.0	-0.9
KRVT	Keravat (AS076	6.82	93	LR	LR	21 50 18.3	
	comp=Z,126nm,19.6s,baz=326,slow=34						
COEN	Coen	10.12	191	Pn	Pn	21 48 51.6	+0.2
FAKI	Fak Fak	12.97	274	Pn	Pn	21 49 31.8	+1.5
WB0	Warramunga Arr	18.91	213	P	P	21 50 46.7	-0.4
WR0	Warramunga Arr	18.98	212	P	P	21 50 47.0	-1.0
WR0				IAmb	IAmb	21 51 06.1	
	comp=Z,6.4nm,1.0s						
WRAB	Tennant Creek	19.07	213	P	Pn	21 50 49.1	+0.1
WRAB				IAmb	IAmb	21 51 04.4	
	comp=Z,26nm,1.1s						
WB2	Warramunga Arr	19.07	213	P	Pn	21 50 48.5	-0.6
WRA	Warramunga Arr	19.08	213	P	Pn	21 50 48.0	-1.1
	comp=Z,0.1nm,0.3s,baz=37,slow=11,SNR=5.4						
KNRA	Kununurra	19.91	233	P	Pn	21 50 56.7	-2.4
SOEI	Soe	21.55	253	P	P	21 51 15.5	+0.4
ASAR	Alice Springs	22.41	208	P	P	21 51 24.5	+0.3
	comp=Z,0.9nm,0.7s,baz=34,slow=11,SNR=9.3						
ASAR				LR	LR	21 59 40.7	
	comp=Z,61nm,18.3s,baz=176,slow=36						
FITZ	Fitzroy Crossi	23.74	232	P	P	21 51 36.8	-0.9
	comp=Z,1.2nm,0.8s,baz=66,slow=13,SNR=2.2						
FITZ	Fitzroy Crossi	23.74	232	IAmb	IAmb	21 51 43.0	
	comp=Z,5.6nm,1.1s						
KSRS	Korea Array	44.24	340	LR	LR	22 10 58.3	
	comp=Z,33nm,21.5s,baz=56,slow=33						
CMAR	Chiang Mai Arr	50.72	298	P	P	21 55 25.0	-0.2
	comp=Z,0.8nm,0.4s,baz=118,slow=5.7,SNR=11						
MKAR	Makanchi Array	74.80	321	P	P	21 58 04.9	-0.3
	comp=Z,1.0nm,0.8s,baz=106,slow=7.7,SNR=13						
MAKZ	Makanchi	75.00	321	P	P	21 58 07.2	+0.7
MAKZ				IAmb	IAmb	21 58 11.7	
	comp=Z,3.0nm,0.9s						
ZALV	Zalesovo Beam	76.35	328	P	P	21 58 13.3	-0.6
	comp=Z,0.3nm,0.5s,baz=123,slow=5.3,SNR=3.2						
ILAR	Eielson Array	84.34	24	P	P	21 58 56.4	-0.3
	comp=Z,0.5nm,0.8s,baz=252,slow=5.4,SNR=3.2						

IDC 27 22:17:19.5±5.5, 2°.94N×127°.19E, h83km±59km, mb3.3/6, mb1 3.5/7, mb1mx3.2/44, mbtmp3.7/7, ML3.5/1, MS3.4/1, Ms1 3.4/1, ms1mx2.5/25, Error ellipse: s-maj=66.7km s-min=19.4km az=73.0
ISC 27 22:17:15.8±1.0, 2°.9N±0°.2×126°.9E±0°.2, h44km, n10, σ0s.97/10, mb3.7/7, 4C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.77	130	P	Pn	22 18 40.4	+1.5
	1.5nm,0.3s,baz=143,slow=20,SNR=2.4						
SIJI				S	Sn	22 19 42.7	-1.2
	0.6nm,0.3s,baz=17,slow=19,SNR=2.0						
FITZ	Fitzroy Crossi	20.90	183	P	P	22 21 55.5	+0.9
	1.1nm,0.5s,baz=11,slow=11,SNR=1.6						
WRA	Warramunga Arr	23.85	162	P	P	22 22 25.5	+0.3
	1.1nm,0.3s,baz=343,slow=9.3,SNR=40						
ASAR	Alice Springs	27.28	166	P	P	22 22 55.9	-0.4
	0.4nm,0.3s,baz=343,slow=9.7,SNR=6.0						
STKA	Stephens Creek	37.31	159	P	P	22 24 22.8	-1.1
	1.1nm,0.6s,baz=323,slow=15,SNR=1.5						
BRDH	Bariadhala	39.40	303	LR	LR	22 44 16.6	
	comp=Z,46nm,18.4s,baz=259,slow=41						
SONM	Songino Array	48.13	342	P	P	22 25 51.5	0.0
	0.2nm,0.5s,baz=161,slow=7.8,SNR=1.9						
MK31	Makanchi Array	58.32	325	⇑Pg	P	22 27 06.4	0.0
	0.3nm,0.5s,baz=158,slow=16,SNR=2.7						
MK31				⇑Lg	Lg	22 27 34.9	
	0.6nm,0.8s,baz=161,slow=27,SNR=2.7						
MKAR	Makanchi Array	58.32	325	P	P	22 27 06.9	+0.5
	0.3nm,0.4s,baz=118,slow=8.1,SNR=15						
MAKZ	Makanchi	58.50	325	⇑Pg	P	22 27 06.9	-0.8
	0.9nm,1.1s						
MAKZ				⇑Lg	Lg	22 27 38.8	
	1.4nm,1.3s						

IDC 27 22:25:15.6±1.3, 37°.46N×134°.64E, h399km±20km, mb2.5/2, mb1 2.8/6, mb1mx2.5/57, mbtmp3.4/6, Error ellipse: s-maj=36.4km s-min=21.5km az=57.0
JMA 27 22:25:15.8±0.2, 37°.44N×134°.82E, h399km, M3.0
ISC 27 22:25:14.9±0.9, 37°.46N±0°.08×134°.80E±0°.08, h400km, n14, σ1s.04/17, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKG	Kaga	1.70	133	P	Pn	22 26 09.9	+0.8
JSZ	Suzu	2.04	89	P	Pn	22 26 12.4	+1.4
JWT	Wachi	2.22	167	P	Pn	22 26 13.1	+0.7
JWT				S	S	22 26 58.2	-0.5
JYTA	Yamagatataniai	2.43	139	P	Pn	22 26 14.6	+0.9
JSD	Sado	2.80	77	P	Pn	22 26 17.4	+1.0
MAT	Matsushiro	2.88	107	P	Pn	22 26 18.1	+1.0
MJAR	Matsushiro Arr	2.88	107	P	Pn	22 26 18.7	+1.6
	0.2nm,0.3s,baz=286,slow=10,SNR=24						
JMK	Ichinoseki	5.27	72	P	Pn	22 26 40.7	+1.1
JMK				eS	S	22 27 47.3	-1.3
KSRS	Korea Array	5.47	272	P	Pn	22 26 41.9	+0.1
	0.3nm,0.3s,baz=94,slow=11,SNR=7.4						
BSO1	Boso 1	5.73	117	P	Pn	22 26 42.8	-1.2
BSO1				eS	S	22 27 56.1	-0.6
USRK	Ussuriysk Ar.	7.07	343	P	P	22 26 59.2	-0.5
	baz=156,slow=10.0,SNR=17						
KLR	Kul'dur	11.97	350	P	Pn	22 27 55.3	-0.2
	0.1nm,0.3s,baz=164,slow=14,SNR=4.7						
MKAR	Makanchi Array	39.40	301	P	P	22 32 06.9	-0.8
	0.2nm,0.6s,baz=91,slow=8.6,SNR=2.0						
WRA	Warramunga Arr	57.09	181	P	P	22 34 22.2	+1.0
	0.6nm,0.9s,baz=353,slow=7.5,SNR=2.7						

KRNET 27 22:28:20.3±0.1, 43°.13N×79°.73E, mb2.4
NNC 27 22:28:21.6±0.8, 43°.03N×79°.51E, h0km, mb3.1, mpv2.9, Error ellipse: s-maj=5.7km s-min=2.4km az=126.0
SOME 27 22:28:21.6, 43°.07N×79°.47E, h15km
ISC 27 22:28:23.3±1.1, 43°.14N±0°.04×79°.45E±0°.04, h14km±7km, n43, σ1s.08/78, 20C-15D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	0.20	9	P	Pg	22 28 27.6	-0.3
	38nm,0.1s						
PDGK				S	Sg	22 28 31.9	+0.9
	76nm,0.1s						
PDGK	Podgornoye	0.20	9	⇓P	Pg	22 28 27.5	-0.3
	13nm,0.2s						
PDGK				⇓S	Sg	22 28 31.8	+0.9
	128nm,0.4s						
UZB	Uzynbulak	0.31	272	⇑iP	Pg	22 28 29.2	-0.6
	11nm,0.1s						
UZB				⇑iS	Sg	22 28 34.8	+0.6
	76nm,0.1s						
UZB	Uzynbulak	0.31	272	P	Pg	22 28 29.2	-0.6
	11nm,0.1s						
UZB				S	Sg	22 28 34.8	+0.6
	76nm,0.1s						
KPKS	Kokpek	0.65	301	⇑iP	Pg	22 28 35.2	-0.8
	18nm,0.1s						
KPKS				⇑iS	Sg	22 28 45.0	+0.5
	84nm,0.3s						
ZHN	Zhinishke	0.74	273	⇓iP	Pg	22 28 36.7	-1.0
	2.2nm,0.1s						
ZHN				⇓iS	Sg	22 28 47.3	-0.2
	16nm,0.2s						
KURS	Kuram	1.00	291	eP	Pg	22 28 40.4	-2.1
	0.1nm,0.1s						
KURS				eS	Sg	22 28 53.7	-1.9
	0.6nm,0.1s						
PRZ	Przheval'sk	1.01	230	⇑iP	Pb	22 28 41.4	-1.3
	baz=36						
PRZ				⇑iS	Sn	22 28 57.7	+0.3
	baz=36						
MNBS	Baschi	1.21	321	⇓iP	Pn	22 28 45.6	-0.5
	7.5nm,0.1s						
MNBS				⇑iS	Sb	22 29 02.5	+0.8
	59nm,0.2s						
MNBS	Baschi	1.21	321	P	Pn	22 28 45.5	-0.5
	1.7nm,0.1s						
MNBS				S	Sb	22 29 02.5	+0.8
	59nm,0.2s						
DJR	Jarkent	1.22	12	eP	Pn	22 28 45.0	-1.1
	2.1nm,0.1s						
DJR				eS	Sb	22 29 02.0	0.0
	28nm,0.3s						
DJR	Jarkent	1.22	12	P	Pn	22 28 45.0	-1.1
	2.1nm,0.1s						
DJR				S	Sb	22 29 02.0	0.0
	28nm,0.3s						
ANVS	Anan'yevo	1.35	255	⇑iP	Pg	22 28 48.2	-1.2
	baz=58						
ANVS				⇑iS	Sg	22 29 09.1	+2.1
	baz=58						
ARXS	Arharly	1.59	313	eP	Pn	22 28 51.7	+0.5
	2.1nm,0.2s						
ARXS				eS	Sb	22 29 13.8	+1.1
	14nm,0.2s						
KOTS	Kotyrbulak	1.71	274	⇑iP	Pb	22 28 54.1	-0.6
	3.6nm,0.4s						
KOTS				⇓iS	Sg	22 29 18.0	-0.4
	23nm,0.2s						
KOTS	Kotyrbulak	1.71	274	P	Pb	22 28 54.1	-0.6
	3.5nm,0.4s						
KOTS				S	Sg	22 29 17.9	-0.4
	23nm,0.2s						
MDOK	Medeo	1.76	272	eP	Pb	22 28 54.6	-0.9
	2.8nm,0.4s						
MDOK				⇓eS	Sb	22 29 18.0	+0.6
	4.2nm,0.4s						
MDOK	Medeo	1.76	272	⇑P	Pg	22 28 55.8	-1.3
	10nm,1.3s						
MDOK				⇑S	Sb	22 29 17.6	+0.2
	14nm,1.4s						
MDOK	Medeo	1.76	272	Pg	Pb	22 28 54.6	-0.9
	2.8nm,0.4s						
MDOK				Lg	Lg	22 29 18.0	
	4.2nm,0.4s						
TNSS	Tian-Shan	1.83	268	eP	Pb	22 28 56.2	-0.7
	2.1nm,0.3s						
TNSS				eS	Sg	22 29 21.3	-1.1
	5.5nm,0.4s						
TNSS	Tian-Shan	1.83	268	P	Pb	22 28 56.2	-0.7
	2.1nm,0.3s						
TNSS				S	Sb	22 29 21.0	+1.1
	5.5nm,0.4s						
CHKK	Chushkaly	1.93	293	eP	Pb	22 28 57.1	-1.1
	0.6nm,0.1s						
CHKK				eS	Sb	22 29 22.6	+0.3
	6.0nm,0.2s						
CHKK	Chushkaly	1.93	293	P	Pb	22 28 57.1	-1.1
	0.6nm,0.1s						
CHKK				S	Sb	22 29 22.5	+0.3
	6.0nm,0.2s						
KDJ	Kajisay	1.95	240	⇑iP	Pn	22 28 56.4	+0.2
	baz=43						
KDJ				⇑iS	Sb	22 29 23.1	0.0
	baz=43						
IZV	Izvestkoviy	2.08	268	eP	Pb	22 29 00.8	-0.2
	2.3nm,0.3s						
IZV				eS	Sg	22 29 29.3	-0.8
	7.6nm,0.5s						
IZV	Izvestkoviy	2.08	268	Pg	Pb	22 29 00.8	-0.2
	2.3nm,0.3s						
IZV				Lg	Lg	22 29 29.3	
	7.6nm,0.5s						
KTBS	Karatobe	2.10	287	eP	Pb	22 29 00.3	-0.9
	0.4nm,0.2s						
KTBS				eS	Sb	22 29 28.1	+1.0
	6.6nm,0.4s						
KTBS	Karatobe	2.10	287	Pg	Pb	22 29 00.3	-0.9
	0.8nm,0.3s						
KTBS				Lg	Lg	22 29 28.1	
	6.6nm,0.4s						
KAPS	Kapalarasan	2.15	358	eP	Pb	22 29 01.1	-1.0
	2.8nm,0.2s						
KAPS				eS	Sb	22 29 29.9	+1.2
	8.3nm,0.1s						
KAPS	Kapalarasan	2.15	358	Pg	Pb	22 29 01.1	-1.0
	2.8nm,0.2s						
KAPS				Lg	Lg	22 29 29.9	
	8.3nm,0.1s						
MTBS	Maitube	2.21	271	eP	Pb	22 29 03.2	+0.1
	1.8nm,0.1s						
MTBS				eS	Sg	22 29 32.9	-1.4
	7.8nm,0.3s						
MTBS	Maitube	2.21	271	Pg	Pb	22 29 03.2	+0.1
	1.8nm,0.1s						
MTBS				Lg	Lg	22 29 32.9	
	7.8nm,0.3s						
KUU	Kurty	2.38	290	eP	Pb	22 29 05.9	-0.2
	1.0nm,0.1s						
KUU				eS	Sb	22 29 37.5	+2.1
	3.2nm,0.3s						
ULHL	Ulahol	2.52	250	⇓iP	Pb	22 29 05.1	+0.9
	baz=52						
ULHL				⇓iS	Sb	22 29 37.5	-2.1
	baz=52						
KST	Kastek	2.55	269	eP	Pb	22 29 08.8	-0.3
	0.9nm,0.1s						
KST				eS	Sb	22 29 42.3	+2.0
	4.1nm,0.6s						
KST	Kastek	2.55	269	Pg	Pb	22 29 08.8	-0.3
	2.3nm,0.3s						
KST				Lg	Lg	22 29 42.3	
	4.2nm,0.8s						
BOOM	Boomskoye usch	2.66	257	⇑iP	Pb	22 29 07.3	+1.3
	baz=58						
BOOM				⇑iS	Sb	22 29 40.9	-2.5
	baz=58						
DGS	Degeres	2.69	273	eP	Pb	22 29 09.9	-1.4
	0.4nm,0.5s						
DGS				eS	Sb	22 29 44.4	+0.2
	3.6nm,0.4s						
NRN	Naryn	3.07	238	⇑iP	Pn	22 29 12.6	+0.8
	baz=40						
NRN				⇑iS	Sn	22 29 50.8	+2.3
	baz=40						
KZA	Kyzart	3.27	253	⇓eP	Pn	22 29 15.3	+0.7
	baz=54						
KZA				⇓eS	Sn	22 29 55.3	+1.7
	baz=54						
KBK	Karagaybulak	3.34	263	⇓eP	Pn	22 29 16.6	+1.3
	baz=64						
KBK				⇓iS	Sn	22 29 57.0	+2.1
	baz=64						
MAKZ	Makanchi	4.09	25	⇑Pn	Pn	22 29 25.8	+0.4
	1.4nm,1.1s						
MAKZ				⇑Lg	Lg	22 30 33.0	
	1.0nm,1.0s						
MK31	Makanchi Array	4.18	28	⇓Pn	Pn	22 29 27.1	+0.4
	1.0nm,0.9s,baz=205,slow=13,SNR=8.0						
MK31				⇓Lg	Lg	22 30 34.4	
	1.1nm,0.7s,baz=207,slow=29,SNR=4.9						

INET 27 22:30:06.6, 12°.28N×86°.71W, h133km, ML2.7
UCR 27 22:30:03.7±2.4, 12°.83N×85°.74W, h6km±67km, MW3.5, 1C, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACON	Acoyapa	1.02	147	eS	Sg	22 30 35.5	-1.0
CRIN	San Cristobal	1.29	264	⇑iP	Pn	22 30 26.3	-2.0
CRIN				eS	Sg	22 30 44.4	-0.8
GB1A	Borinquen Arri	2.03	171	eP	Pn	22 30 39.7	+1.2
GB1A				eS	Sn	22 31 04.9	+0.7

IDC 27 22:32:30.6±0.5, 6°.50S×128°.72E, h0km, mb4.5/18, mb1 4.5/21, mb1mx4.4/38, mbtmp4.5/21, ML4.6/3, MS3.6/18, Ms1 3.6/18, ms1mx3.5/39, Error ellipse: s-maj=18.5km s-min=13.5km az=69.0
BJI 27 22:32:33.0±0.0, 6°.50S×128°.90E, h28km, mB5.1/25, mb4.6/32, Ms4.8/7, Ms7 4.6/5
NEIC 27 22:32:35.0±2.4, 6°.52S±0°.05×128°.88E±0°.06, h33km±3km, mb4.8/57, Error ellipse: s-maj=8.6km s-min=7.6km az=73.0
DJA 27 22:32:35.3±0.2, 6°S±2°×12°9E±°, h41km±6km, M4.6/24, mb4.9/24, mB5.2/15, MLv4.7/14, Mw(mB)4.5/15, Mwp4.8/1
ISC 27 22:32:35.2±0.3, 6°.49S±0°.04×128°.88E±0°.04, h35km, n206, σ1s.70/220, mb4.8/47, MS3.5/15, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.21	28	P	Pn	22 33 06.5	-2.9
BNDI				S	Sn	22 33 32.4	-3.1
BNDI	Bandanaira	2.21	28	P	Pn	22 33 06.5	-2.9
BNDI				S	Sn	22 33 32.4	-3.1
SAUI	Saumlaki	2.83	122	P	Pn	22 33 19.2	+1.4
SAUI				S	Sn	22 33 51.8	+1.1
SAUI	Saumlaki	2.83	122	P	Pn	22 33 19.2	+1.4
SAUI				S	Sn	22 33 51.8	+1.1
SAUI	Saumlaki	2.83	122		Pn	22 33 18.4	+0.6
AAI	Ambon	2.87	346	P	Pn	22 33 15.6	-2.8
AAI				S	Sn	22 33 47.1	-4.7
AAI	Ambon	2.87	346	P	Pn	22 33 15.6	-2.8
AAI				S	Sn	22 33 47.1	-4.7
MSAI	Masohi	3.13	1	P	Pn	22 33 20.0	-2.0
MSAI				S	Sn	22 33 57.9	-0.2
MSAI	Masohi	3.13	1	P	Pn	22 33 20.0	-2.0
MSAI				S	Sn	22 33 57.9	-0.2
NLAI	Namlea	3.68	331	P	Pn	22 33 29.0	-0.7
NLAI				S	Sn	22 34 09.7	-2.2
NLAI	Namlea	3.68	331	P	Pn	22 33 29.0	-0.7
NLAI				S	Sn	22 34 09.7	-2.2
FAKI	Fak Fak	4.89	44	P	Pn	22 33 45.6	-0.7
FAKI	Fak Fak	4.89	44	P	Pn	22 33 45.6	-0.7
FAKI	Fak Fak	4.89	44		Pn	22 33 45.8	-0.5
SANI	Sanana	5.27	327	P	Pn	22 33 51.0	-0.5
	0.3nm1μm70nm,0.7s						
SANI	Sanana	5.27	327	P	Pn	22 33 51.0	-0.5
	0.3nm1μm70nm,0.7s						
SOEI	Soe	5.60	234	P	Pn	22 33 57.4	+1.3
	1.2nm3μm247nm,1.0s						
SOEI	Soe	5.60	234	P	Pn	22 33 57.4	+1.3
	1.2nm3μm247nm,1.0s						
SOEI	Soe	5.60	234		Pn	22 33 57.0	+0.9
LBMI	Labuha	5.97	347	P	Pn	22 34 02.6	+1.4
	1.3nm4μm226nm,1.1s						
LBMI	Labuha	5.97	347	P	Pn	22 34 02.6	+1.4
	1.3nm4μm226nm,1.1s						
SIJI	Sorong	6.07	23	Pn	Pn	22 34 02.2	-0.4
	8.4nm,0.3s,baz=212,slow=7.2,SNR=23						
SIJI				Sn	Sn	22 35 08.0	-2.9
	baz=30,slow=20,SNR=3.7						
BBSI	Bau Bau	6.35	279	P	Pn	22 34 07.1	+0.8
	0.2nm583nm65nm,1.0s						
BBSI	Bau Bau	6.35	279	P	Pn	22 34 07.1	+0.8
	0.2nm583nm65nm,1.0s						
MTN	Manton Dam	6.69	161	P	Pn	22 34 09.9	-1.1
	baz=6.7,SNR=26						
MTN	Manton Dam	6.69	161		Pn	22 34 11.7	+0.7
MMRI	Maumere	6.92	252	P	Pn	22 34 15.7	+1.6
	0.7nm172nm,0.9s						
MMRI	Maumere	6.92	252	P	Pn	22 34 15.7	+1.6
	0.7nm172nm,0.9s						
MMRI	Maumere	6.92	252		Pn	22 34 15.0	+0.9
KDU	Kakadu	7.10	150	P	Pn	22 34 15.0	-1.7
	baz=7.1,SNR=31						
TNTI	Ternate	7.37	348	P	Pn	22 34 20.6	+0.2
	0.2nm66nm,0.9s						
TNTI	Ternate	7.37	348	P	Pn	22 34 20.6	+0.2
	0.2nm66nm,0.9s						
TNTI	Ternate	7.37	348		Pn	22 34 19.3	-1.0
EDFI	Ende, Flores	7.47	252	P	Pn	22 34 23.0	+1.2
	0.4nm2μm139nm,1.0s						
EDFI	Ende, Flores	7.47	252	P	Pn	22 34 23.0	+1.2
	0.4nm2μm139nm,1.0s						
LUWI	Luwuk	8.15	311	P	Pn	22 34 30.1	-0.9
	1μm58nm,0.8s						
LUWI	Luwuk	8.15	311	P	Pn	22 34 30.1	-0.9
	1μm58nm,0.8s						
LUWI	Luwuk	8.15	311	Pn	Pn	22 34 30.9	-0.1
BKSI	Bulukumba	8.78	277	P	Pn	22 34 40.7	+1.0
	2μm199nm,0.8s						
BKSI	Bulukumba	8.78	277	P	Pn	22 34 40.7	+1.0
	2μm199nm,0.8s						
BNSI	Bone	8.97	283	P	Pn	22 34 43.2	+0.9
	1μm166nm,0.7s						
BNSI	Bone	8.97	283	P	Pn	22 34 43.2	+0.9
	1μm166nm,0.7s						
KNRA	Kununurra	9.13	181	P	Pn	22 34 42.9	-1.6
	baz=9.2,SNR=29						
KNRA	Kununurra	9.13	181		Pn	22 34 43.1	-1.3
KAPI	Kappang	9.20	279	Pn	Pn	22 34 44.6	-0.8
	12nm,0.3s,baz=77,slow=6.0,SNR=36						
KAPI				LR	LR	22 38 19.3	
	comp=Z,679nm,18.9s,baz=102,slow=38						
SPSI	Sidrap Palu	9.41	285	P	Pn	22 34 49.5	+1.2
	775nm58nm,1.4s						
SPSI	Sidrap Palu	9.41	285	P	Pn	22 34 49.5	+1.2
	775nm58nm,1.4s						
TTSI	Tana Toraja	9.65	290	P	Pn	22 34 54.2	+2.5
	40nm,0.9s						
TTSI	Tana Toraja	9.65	290	P	Pn	22 34 54.2	+2.5
	40nm,0.9s						
MRSI	Marisa	9.79	315	P	Pn	22 34 55.8	+2.3
	590nm32nm,0.8s						
MRSI	Marisa	9.79	315	P	Pn	22 34 55.8	+2.3
	590nm32nm,0.8s						
PLAI	Plampang	11.24	257	P	Pn	22 35 15.1	+1.7
	1μm68nm,1.4s						
PLAI	Plampang	11.24	257	P	Pn	22 35 15.1	+1.7
	1μm68nm,1.4s						
FITZ	Fitzroy Crossi	11.96	195	P	Pn	22 35 21.4	-1.8
	baz=12,SNR=8.5						
FITZ	Fitzroy Crossi	11.96	195	Pn	Pn	22 35 19.1	-4.1
	1.2nm,0.3s,baz=23,slow=9.0,SNR=18						
FITZ				Sn	Sn	22 37 24.0	-11
	0.8nm,0.3s,baz=77,slow=18,SNR=3.5						
FITZ				LR	LR	22 40 43.9	
	comp=Z,101nm,19.9s,baz=18,slow=41						
FITZ	Fitzroy Crossi	11.96	195		Pn	22 35 21.5	-1.8
SKMP	Bagumbayan, Su	13.63	341	eP	Pn	22 35 43.7	-2.4
DAV	Davao City (W)	13.87	346	LR	LR	22 42 22.5	
	comp=Z,135nm,19.5s,baz=155,slow=43						
KCP	Kidapawan	13.93	344⇑	eP	Pn	22 35 47.8	-2.5
WB0	Warramunga Arr	14.24	158		Pn	22 35 50.5	-4.0
WRAB	Tennant Creek	14.38	159	Pn	Pn	22 35 52.4	-4.0
WRA	Warramunga Arr	14.38	159	Pn	Pn	22 35 51.7	-4.7
	0.8nm,0.3s,baz=331,slow=13,SNR=25						
WRA				Sn	Sn	22 38 26.1	-8.7
	1.9nm,0.3s,baz=328,slow=22,SNR=10						
WRA				LR	LR	22 41 36.2	
	comp=Z,727nm,21.4s,baz=340,slow=36						
WB2	Warramunga Arr	14.39	159	Pn	Pn	22 35 52.5	-4.0
WR0	Warramunga Arr	14.47	158		Pn	22 35 53.8	-3.8
JAGI	Jajag, Banyuwa	14.73	261		Pn	22 35 58.5	-2.6
PAGZ	Pagadian	15.26	339	eP	Pn	22 36 06.6	-1.5
COEN	Coen	15.90	119	P	Pn	22 36 17.7	+1.2
PSA00	Pilbara Seismi	17.35	209	P	Pn	22 36 34.6	-0.1
PSA00				IAmb	IAmb	22 36 40.6	
	comp=Z,62nm,1.1s						
QIS	Mount Isa	17.43	144	P	Pn	22 36 33.9	-1.8
	baz=17,SNR=6.2						
PCJI	Pacitan	17.63	263	P	Pn	22 36 37.1	-1.2
	comp=Z,57nm,1.1s						
PCJI	Pacitan	17.63	263	P	Pn	22 36 37.1	-1.2
	comp=Z,57nm,1.1s						
KKM	Kota Kinabalu	17.74	314	P	Pn	22 36 37.5	-2.2
AS31	Alice Springs	17.75	165	P	P	22 36 40.1	0.0
ASAR	Alice Springs	17.75	165	P	Pn	22 36 38.4	-1.2
	comp=Z,1.8nm,0.3s,baz=338,slow=9.7,SNR=51						
ASAR				S	Sn	22 39 44.1	-12
	comp=Z,0.2nm,0.3s,baz=327,slow=17,SNR=3.6						
ASAR				LR	LR	22 43 28.8	
	comp=Z,454nm,20.4s,baz=333,slow=37						
WOJI	Wonogiri, Jawa	17.86	265	P	Pn	22 36 40.1	-1.0
WOJI	Wonogiri, Jawa	17.86	265	P	Pn	22 36 40.1	-1.0
UGM	Wanagama	18.26	264	P	P	22 36 42.9	-3.0
UGM				IAmb	IAmb	22 36 55.7	
	comp=Z,67nm,1.3s						
PMG	Port Moresby	18.34	100	LR	LR	22 46 04.3	
	comp=Z,170nm,19.4s,baz=204,slow=44						
WRKA	Warakurna	18.45	182	P	P	22 36 46.0	-2.0
	baz=19,SNR=39						
SBUM	Sibu	18.85	298	P	Pn	22 36 53.1	-0.1
MTSU	Mount Surprise	18.99	129	P	P	22 36 51.9	-2.0
	baz=19,SNR=4.6						
KPJI	Karang Pucung	19.82	266	P	Pn	22 37 03.9	-0.8
	comp=Z,1μmcomp=Z,37nm,0.8s						
KPJI	Karang Pucung	19.82	266	P	Pn	22 37 03.9	-0.8
	comp=Z,1μmcomp=Z,37nm,0.8s						
KSM	Kuching	20.15	292	P	P	22 37 07.0	+0.4
CISI	Cisompet, Garu	20.93	266	P	P	22 37 15.4	+0.3
	comp=Z,31nm,0.6s						
CISI	Cisompet, Garu	20.93	266	P	P	22 37 15.4	+0.3
	comp=Z,31nm,0.6s						
CISI	Cisompet, Garu	20.93	266	P	P	22 37 13.9	-1.2
CISI				IAmb	IAmb	22 37 28.9	
	comp=Z,58nm,1.1s						
LEM	Lembang	21.12	268	P	P	22 37 16.0	-1.2
	comp=Z,69nm,1.0s,baz=51,slow=6.4,SNR=12						
LEM				LR	LR	22 45 58.9	
	comp=Z,161nm,18.2s,baz=347,slow=39						
GIRL	Giralia	21.38	220	P	P	22 37 20.9	+1.1
	baz=22,SNR=5.4						
GIRL	Giralia	21.38	220	P	P	22 37 19.7	-0.1
CNJI	Cibinong	21.60	267	P	P	22 37 23.1	+0.8
	comp=Z,1μmcomp=Z,138nm,0.9s						
CNJI	Cibinong	21.60	267	P	P	22 37 23.1	+0.8
	comp=Z,1μmcomp=Z,138nm,0.9s						
CTA	Charters Tower	21.62	130	P	P	22 37 25.5	+3.1
	comp=Z,4.5nm,0.9s,baz=293,slow=14,SNR=3.0						
MEEK	Meekatharra	22.29	205	P	P	22 37 29.4	-0.2
	baz=22,SNR=4.1						
KRVT	Keravat (AS076	23.15	86	LR	LR	22 48 37.7	
	comp=Z,119nm,18.8s,baz=234,slow=42						
XMIS	Christmas Isla	23.30	259	P	P	22 37 40.5	+0.3
XMIS				IAmb	IAmb	22 37 42.1	
	comp=Z,37nm,1.0s						
FORT	Forrest	24.17	182	P	P	22 37 48.6	+0.3
MDSI	Maura Dua	24.66	273	P	P	22 37 52.0	-0.9
MDSI	Maura Dua	24.66	273	P	P	22 37 52.0	-0.9
QLP	Quilpie	24.77	146	P	P	22 37 53.1	-0.6
	baz=25,SNR=7.1						
MORW	Morawa	25.52	207	P	P	22 38 02.0	+1.4
	baz=26,SNR=8.6						
MORW	Morawa	25.52	207	P	P	22 38 00.9	+0.4
MORW				IAmb	IAmb	22 38 02.7	
	comp=Z,33nm,0.9s						
BLDU	Ballidu	26.58	204	P	P	22 38 11.1	+1.0
	baz=27,SNR=10						
STKA	Stephens Creek	27.91	156	P	P	22 38 22.0	-0.1
	baz=28,SNR=4.0						
STKA	Stephens Creek	27.91	156	P	P	22 38 22.6	+0.6
	comp=Z,4.6nm,0.8s,baz=343,slow=13,SNR=4.8						
STKA				LR	LR	22 51 12.7	
	comp=Z,242nm,18.2s,baz=352,slow=40						
STKA	Stephens Creek	27.91	156	P	P	22 38 22.3	+0.3
EIDS	Eidsvold	28.34	134	P	P	22 38 24.8	-1.2
EIDS				IAmb	IAmb	22 38 30.9	
	comp=Z,23nm,1.5s						
NWAO	Narrogin (SRO)	28.44	201	P	P	22 38 26.3	-0.5
	comp=Z,4.4nm,0.7s,baz=51,slow=9.7,SNR=2.8						
NWAO				LR	LR	22 50 39.3	
	comp=Z,63nm,19.3s,baz=328,slow=38						
NWAO	Narrogin (SRO)	28.44	201	P	P	22 38 27.4	+0.6
NWAO				IAmb	IAmb	22 38 45.8	
	comp=Z,43nm,1.5s						
NWAO	Narrogin (SRO)	28.44	201	P	P	22 38 27.0	+0.2
NWAO				IAmb	IAmb	22 38 45.8	
	comp=Z,36nm,1.5s						
CMSA	Cobar Meteorol	29.47	150	P	P	22 38 35.6	-0.3
	baz=30,SNR=8.8						
IPM	Ipoh	29.86	291	P	P	22 38 39.9	+0.3
IPM				IAmb	IAmb	22 38 45.2	
	comp=Z,14nm,1.0s						
KULM	Kulim	30.51	292	P	P	22 38 44.1	-1.2
KULM				IAmb	IAmb	22 38 45.7	
	comp=Z,14nm,1.0s						
RPSI	Rantau Prapat	31.26	286	P	P	22 38 49.8	-2.2
RPSI				IAmb	IAmb	22 38 53.7	
	comp=Z,24nm,1.0s						
PSI	Prapat	31.30	286	P	P	22 38 49.6	-2.8
	comp=Z,19nm,0.9s,baz=125,slow=5.5,SNR=16						
CAN	Canberra	34.15	150	P	P	22 39 18.4	+1.4
TOO	Toolangi	34.43	156	P	P	22 39 20.0	+0.5
TOO				IAmb	IAmb	22 39 25.7	
	comp=Z,16nm,1.2s						
CMAR	Chiang Mai Arr	38.55	311	P	P	22 39 55.5	+0.7
	comp=Z,2.9nm,0.4s,baz=137,slow=7.0,SNR=18						
CMAR				PcP	PcP	22 42 09.2	+2.0
	comp=Z,1.7nm,0.8s,baz=168,slow=3.1,SNR=6.0						
CMAR				LR	LR	22 58 25.6	
	comp=Z,35nm,18.1s,baz=140,slow=40						
SANVU	Saraoutou	38.61	107	P	P	22 39 55.3	-0.1
CHTO	Chiang Mai	38.77	311	P	P	22 39 57.1	+0.4
NOUC	Port Laguerre	39.30	117	P	P	22 40 01.0	-0.1
JNU	Nakatsue	39.44	3	P	P	22 40 02.0	0.0
JNU				IAmb	IAmb	22 40 03.7	
	comp=Z,22nm,1.2s						
NJ2	Nanjing	39.50	347	eP	P	22 40 05.5	+3.0
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MJAR	Matsushiro Arr	43.69	11	P	P	22 40 36.3	-0.5
	comp=Z,5.3nm,0.9s,baz=187,slow=9.6,SNR=8.9						
MJAR				LR	LR	22 57 25.1	
	comp=Z,34nm,21.4s,baz=55,slow=34						
KSRS	Korea Array	43.73	359	P	P	22 40 37.9	+0.9
	comp=Z,3.0nm,0.7s,baz=174,slow=9.3,SNR=8.1						
KSRS				LR	LR	22 59 42.4	
	comp=Z,24nm,19.1s,baz=163,slow=37						
CD2	Chengdu	44.28	328	eP	P	22 40 43.0	+1.3
LZH	Lanzhou	48.44	333	eP	P	22 41 17.5	+3.1
LZH				pP	pwP	22 41 28.8	-0.9
LZH				sP	sP	22 41 33.0	+6.1
LZH				ePP	PP	22 43 10.5	+3.1
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,91nm,5.8s						
LZH				LR	LR		
	comp=Z,370nm,14.5s						
LZH				LR	LR		
	comp=Z,370nm,14.3s						
LZH				LR	LR		
	comp=Z,510nm,17.0s						
HHC	Hu-ho-hao-te	49.72	343	eP	P	22 41 27.5	+3.4
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,55nm,5.7s						
USRK	Ussuriysk Ar.	50.54	3	P	P	22 41 31.6	+1.6
	comp=Z,1.8nm,0.6s,baz=163,slow=4.6,SNR=4.0						
USRK				LR	LR	23 03 30.4	
	comp=Z,34nm,19.2s,baz=299,slow=37						
LSA	Lhasa	51.06	317	P	P	22 41 36.8	+1.9
LSA				pmax	pmax		
	comp=Z,19nm,0.8s						
LSA	Lhasa	51.06	317	P	P	22 41 34.9	0.0
LSA				IAmb	IAmb	22 41 47.0	
	comp=Z,7.5nm,0.9s						
ODAN	Odare	52.08	311	eP	P	22 41 42.4	+0.1
	comp=Z,27nm,0.9s						
TAPN	Taplejung	52.12	312	eP	P	22 41 42.9	+0.3
	comp=Z,42nm,1.0s						
RPZ	Rata Peaks	52.32	142	P	P	22 41 45.1	+1.6
	comp=Z,13nm,0.9s,baz=221,slow=9.3,SNR=2.3						
RPZ	Rata Peaks	52.32	142	IAmb	IAmb	22 41 45.9	
	comp=Z,73nm,1.4s						
RAMN	Ramite	52.72	311	eP	P	22 41 47.3	+0.3
	comp=Z,34nm,0.8s						
GTA	Gaotai	53.00	332	eP	P	22 41 48.3	-0.4
GTA				pP	pP	22 41 54.5	-3.2
GTA				sP	sP	22 41 58.0	-3.3
GTA				pmax	pmax		
	comp=Z,230nm,5.4s						
GTA				LR	LR		
	comp=Z,82nm,16.2s						
GTA				LR	LR		
	comp=Z,120nm,16.5s						
GTA				LR	LR		
	comp=Z,210nm,15.9s						
TUWZ	Tuamarina	53.00	138	P	P	22 41 47.6	-1.0
JIRN	Jiri	53.41	312	eP	P	22 41 52.2	-0.1
	comp=Z,25nm,0.9s						
GUN	Gumba	53.78	312	eP	P	22 41 54.9	0.0
	comp=Z,43nm,1.0s						
PKI	Pulchoki	53.95	311	eP	P	22 41 55.7	-0.4
	comp=Z,9.5nm,0.7s						
PKIN	Phulchoki	53.96	311	eP	P	22 41 55.7	-0.5
KKN	Kakani	54.16	311	eP	P	22 41 57.3	-0.3
	comp=Z,13nm,0.8s						
DMN	Daman	54.20	311	eP	P	22 41 57.9	0.0
	comp=Z,34nm,1.1s						
GKN	Gorkha	54.76	311	eP	P	22 42 01.7	-0.1
DANN	Dangsing	55.60	311	eP	P	22 42 08.0	0.0
	comp=Z,42nm,0.9s						
KAAM	Kaadhehdhoo	56.19	275	P	P	22 42 11.8	-0.4
ULN	Ulaanbaatar	57.45	343	P	P	22 42 21.2	+0.5
SONM	Songino Array	57.62	342	P	P	22 42 22.7	+0.9
	comp=Z,3.0nm,0.9s,baz=167,slow=5.0,SNR=13						
WMQ	Urumqi	62.37	327	eP	P	22 42 55.8	+1.4
WMQ				pP	sP	22 43 06.0	-1.1
WMQ				sP	pwP	22 43 10.5	+0.6
WMQ				PcP	PcP	22 43 35.8	+2.0
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,220nm,19.7s						
WMQ				LR	LR		
	comp=Z,1μm,26.1s						
PETK	Petropavlovsk-	64.20	19	P	P	22 43 06.9	+0.6
	comp=Z,2.3nm,0.7s,baz=218,slow=16,SNR=4.3						
PETK				LR	LR	23 06 51.8	
	comp=Z,24nm,21.5s,baz=240,slow=32						
JOHN	Johnston Islan	65.12	68	P	P	22 43 10.8	-2.1
NIL	Nilore	66.04	311	P	P	22 43 19.1	+0.4
NIL				IAmb	IAmb	22 43 19.3	
	comp=Z,7.3nm,0.8s						
KSH	Kashi	66.89	318	P	P	22 43 25.0	+0.8
KSH				pP	pP	22 43 34.3	+0.9
KSH				PcP	PcP	22 43 49.3	-3.3
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,420nm,5.5s						
KSH				LR	LR		
	comp=Z,140nm,6.9s						
KSH				LR	LR		
	comp=Z,110nm,8.4s						
KSH				LR	LR		
	comp=Z,550nm,8.0s						
MKAR	Makanchi Array	67.19	327	P	P	22 43 26.4	+0.6
	comp=Z,6.0nm,0.7s,baz=128,slow=7.9,SNR=67						
MAKZ	Makanchi	67.37	327	P	P	22 43 27.4	+0.5
MA2	Magadan	68.13	12	P	P	22 43 32.7	+1.4
MA2				IAmb	IAmb	22 43 42.8	
	comp=Z,10nm,0.8s						
YAK	Yakutsk	68.32	0	P	P	22 43 33.6	+1.1
AAK	Ala-Archa	69.44	320	P	P	22 43 40.4	+0.3
AAK				IAmb	IAmb	22 43 50.8	
	comp=Z,5.2nm,0.8s						
KBL	Kabul	69.58	310	P	P	22 43 41.8	+0.5
KBL				IAmb	IAmb	22 43 43.9	
	comp=Z,5.4nm,0.8s						
ZAA0	Zalesovo Array	70.64	334	IAmb	IAmb	22 43 56.7	
	comp=Z,8.5nm,1.0s						
ZALV	Zalesovo Beam	70.64	334	P	P	22 43 46.4	-0.6
	comp=Z,7.0nm,0.9s,baz=113,slow=3.9,SNR=21						
KURK	Kurchatov	71.51	329	P	P	22 43 52.7	+0.4
KURK				IAmb	IAmb	22 43 53.8	
	comp=Z,14nm,1.0s						
SEY	Seymchan	71.52	11	P	P	22 43 54.0	+1.9
	comp=Z,1.7nm,0.3s,baz=232,slow=4.4,SNR=10.0						
KK31	Karatay Array	72.23	319	P	P	22 43 56.7	-0.1
KKAR	Karatay Array	72.23	319	P	P	22 43 56.7	-0.1
VNDA	Vanda	73.08	173	LR	LR	23 14 24.6	
	comp=Z,76nm,19.0s,baz=316,slow=34						
HRA	Herat	74.76	308	P	P	22 44 12.1	-0.2
SOCY	Socotra	76.72	284	P	P	22 44 22.9	-0.7
BRVK	Borovoye	77.11	328	P	P	22 44 25.5	+0.6
BRVK				IAmb	IAmb	22 44 26.5	
	comp=Z,8.9nm,0.9s						
UOSS	Minazif	77.20	297	P	P	22 44 26.3	+0.3
UOSS				IAmb	IAmb	22 44 27.0	
	comp=Z,10nm,1.1s						
TIXI	Tiksi	77.98	360	P	P	22 44 30.2	+0.8
TIXI				IAmb	IAmb	22 44 40.7	
	comp=Z,8.2nm,0.8s						
WRMHI	West Rim	78.90	69	P	P	22 44 33.9	-1.8
UWE	Uwekahuna	78.91	69	P	P	22 44 34.1	-1.7
GEYT	Alibeck	79.04	310	P	P	22 44 37.0	+0.9
	comp=Z,5.3nm,1.0s,baz=113,slow=2.3,SNR=16						
GYA0B	ALIBECK ARRAY	79.04	310	P	P	22 44 36.0	0.0
GYA0B				IAmb	IAmb	22 44 46.9	
	comp=Z,8.2nm,1.0s						
NIKH	Nikolski High	79.04	33	P	P	22 44 34.3	-1.3
NRIK	Noril'sk	80.80	346	P	P	22 44 45.3	+0.5
	comp=Z,1.8nm,0.5s,baz=118,slow=3.0,SNR=5.0						
ABKAR	Akbulak array	81.42	322	P	P	22 44 48.8	+0.3
QSPA	South Pole Qui	83.48	180	P	P	22 44 59.8	+0.6
QSPA				IAmb	IAmb	22 45 00.5	
	comp=Z,7.6nm,0.8s						
ARU	Arti	84.69	328	P	P	22 45 05.5	+0.2
ARU					pP	22 45 14.3	-0.5
ARU				IAmb	IAmb	22 45 15.1	
	comp=Z,10nm,1.0s						
RAYN	Ar Rayn	86.52	294	P	P	22 45 15.8	+0.6
KDAK	Kodiak Island	89.38	32	LR	LR	23 28 45.4	
	comp=Z,51nm,18.5s,baz=265,slow=38						
RSO	Redoubt South	89.90	29	P	P	22 45 30.4	-0.2
TBLG	Delisi	89.92	312	P	P	22 45 30.6	-0.4
TBLG				IAmb	IAmb	22 45 49.3	
	comp=Z,10nm,1.1s						
AKH	Akhalkalaki	90.79	311	P	P	22 45 35.4	+0.1
AKH				IAmb	IAmb	22 45 37.7	
	comp=Z,6.7nm,1.1s						
ILAR	Eielson Array	93.37	25	P	P	22 45 48.3	+1.9
	comp=Z,0.4nm,0.8s,baz=255,slow=2.7,SNR=3.6						
ILAR				PKKPbc	PKKPdf	23 02 53.2	-1.4
	comp=Z,0.2nm,0.6s,baz=45,slow=1.4,SNR=4.6						
ILAR				LR	LR	23 25 11.6	
	comp=Z,28nm,21.2s,baz=290,slow=34						
YKA	Yellowknife Ar	107.79	26	PKiKP	PKiKP	22 50 59.0	+0.5
	comp=Z,0.3nm,0.7s,baz=309,slow=1.2,SNR=4.2						
YKA				PKKPbc	PKKPbc	23 02 11.1	-3.5
	comp=Z,0.5nm,0.7s,baz=101,slow=3.0,SNR=8.3						
CCUT	Cedar City	115.85	51		PKPdf	22 51 12.8	-2.1
MSU	Marysvale	116.55	50		PKiKP	22 51 18.4	+2.2
PDAR	Pinedale Array	117.33	45	PKP	PKiKP	22 51 19.6	+2.0
	comp=Z,0.2nm,0.7s,baz=289,slow=2.8,SNR=2.8						
PDAR				PP	PP	22 52 30.8	+2.1
	comp=Z,0.9nm,1.0s,baz=184,slow=8.5,SNR=4.1						
ULM	Lac du Bonnet	122.63	32	PKP	PKPdf	22 51 26.5	-0.7
	comp=Z,1.3nm,0.8s,baz=275,slow=4.1,SNR=3.1						
TXAR	Lajitas Array	125.62	59	PKP	PKiKP	22 51 35.2	+1.1
	comp=Z,0.3nm,0.6s,baz=270,slow=1.8,SNR=3.2						
TORD	Torodi Ar. Bea	127.61	282	PKP	PKiKP	22 51 38.4	+0.1
	comp=Z,1.6nm,0.7s,baz=94,slow=1.5,SNR=9.4						
PLCA	Paso Flores	129.73	161	PKP	PKiKP	22 51 43.1	+1.1
	comp=Z,1.4nm,0.7s,baz=148,slow=0.4,SNR=4.8						
PLCA	Paso Flores	129.73	161	pPKPdf	pPKPdf	22 51 52.0	+0.7
DBIC	Dimbokro	134.05	273	PKhKP	PKPpre	22 51 47.2	
	comp=Z,2.8nm,1.0s,baz=229,slow=9.3,SNR=2.6						
DBIC	Dimbokro	134.05	273	PKPdf	PKPdf	22 51 47.0	-3.0
GO02	Mina Guanaco	143.77	151	pPKPdf	pPKPdf	22 52 15.7	-2.2
LVC	Limon Verde	146.24	149	PKPdf	PKPab	22 52 14.1	+0.1
LVC				pPKPdf	pPKPdf	22 52 23.0	-0.2
CPUP	Villa Florida	146.82	170	PKPbc	PKPbc	22 52 14.4	0.0
	comp=Z,9.5nm,0.9s,baz=201,slow=3.9,SNR=14						
CPUP	Villa Florida	146.82	170		PKPab	22 52 15.8	+0.1
CPUP				pPKPdf	pPKPbc	22 52 24.2	-0.1
PB11	IPOC Station P	148.17	145		PKiKP	22 52 20.0	-0.3
MNMC	Minye Minye	148.70	145	PKPbc	PKPdf	22 52 17.9	+1.5
MNMC				PKPab	PKiKP	22 52 22.1	+0.6
LPAZ	La Paz	151.79	144		PKPdf	22 52 21.8	+0.1
LPAZ				pPKPdf	pPKPdf	22 52 30.2	-1.5
LPAZ					pPKPbc	22 52 38.0	0.0
SDV	Santo Domingo	160.52	82		PKPdf	22 52 33.4	+0.8
SDV				pPKPdf	pPKPdf	22 52 42.6	+0.1

UCR 27 23:00:17.7±1.2, 9.66N×85.12W, h21km±3km, MD3.5, 1C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	Las Juntas de	0.65	15	eP	Pb	23 00 29.6	-0.8
JTS				eS	Sb	23 00 38.9	-0.1
GUAI	GUAI	0.72	327	iP	Pb	23 00 31.1	-0.4
GUAI				iS	Sb	23 00 41.8	+0.8
CEDE	Laguna Cedeo	0.92	26	iP	Pb	23 00 34.9	0.0
CEDE				eS	Sn	23 00 47.9	-0.1
ACAL	Aguas Claras	0.97	5	iP	Pb	23 00 35.4	-0.4
ACAL				iS	Sb	23 00 48.4	+0.1
CUI	Cuipilapa	0.99	357	iP	Pb	23 00 35.6	-0.7
CUI				eS	Sn	23 00 49.6	-0.2
LIM1	Limonal	1.04	353	iP	Pb	23 00 36.4	-0.6
LIM1				iS	Sb	23 00 50.6	+0.4
PTEN	Parque Tenorio	1.05	7⇑	iP	Pb	23 00 37.0	-0.3
NY14	Universidad de	1.06	337	iP	Pn	23 00 37.2	-0.2
MESS	Mesas	1.07	356	iP	Pn	23 00 37.0	-0.6
LCR2	La Lucha 2	1.10	86	eP	Pn	23 00 37.3	-0.8
LCR2				eS	Sn	23 00 52.3	+0.1
GPS1	Guardaparques	1.13	348	iP	Pn	23 00 38.2	-0.2
LAPC	Finca la Perla	1.14	344	iP	Pn	23 00 38.1	-0.4
LAPC				iS	Sn	23 00 53.4	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
GBS3	Finca Las Img	1.16	343	iP	Pn	23 00 38.3	-0.5
GBS3				iS	Sn	23 00 54.0	0.0
BUEV	Buena Vista	1.16	346	eP	Pn	23 00 38.5	-0.4
BUEV				eS	Sn	23 00 54.4	+0.2
GB1A	Borinquen Arri	1.18	347	eP	Pn	23 00 38.8	-0.3
GB1A				iP	Pb	23 00 39.1	-0.4
GB1A				eS	Sn	23 00 54.9	+0.2
BUAI	Buenos Aires	1.23	350	iP	Pn	23 00 39.5	-0.2
CVTR	Volcan Turrial	1.39	75	eP	Pb	23 00 42.8	-0.4
DRK0	Durika	1.89	102	eP	Pn	23 00 48.8	-0.1
DRK0				eS	Sn	23 01 12.2	-0.1

ATA 27 23:01:56.9±2.3, 39.84N×41.83E, h37km±13km, ML2.0, MW3.7
ISK 27 23:01:57.6, 39.90N×41.74E, h4km, ML2.0/10
ISC 27 23:01:57.3±1.3, 39.87N±0.03×41.80E±0.03, h13km±11km, n20, σ1.01/29, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
KOPR	Koprukoy-ERZUR	0.13	18	PG	Pb	23 02 01.0	-0.8
EATA	Eleskirt	0.53	90	eP	Pb	23 02 09.5	-1.4
EATA				eS	Sb	23 02 17.1	+0.7
EATA				IAML		23 02 26.7	
	comp=Z,11nm,0.5s						
VRTB	Varto-Mus	0.76	201	PG	Pn	23 02 13.0	-0.8
VRTB				SG	Sn	23 02 24.1	-1.1
KARO	Karliova-Bingo	0.81	226	PG	Pb	23 02 13.3	0.0
SENK	Senkaya-Erzuru	0.81	31	PG	Pb	23 02 13.3	-0.1
KRIK	Erzurum-spir	0.82	305	eP	Pn	23 02 16.4	+1.6
KRIK				eS	Sn	23 02 26.6	-0.3
KRIK				IAML		23 02 28.9	
	comp=Z,675nm,0.2s						
AGRB	Hanur-Agry	0.96	107	PG	Pn	23 02 17.7	+1.0
AGRB				SG	Sn	23 02 32.5	+2.1
BNGL	BINGOL	1.04	209	eP	Pn	23 02 17.5	-0.3
BNGL				eS	Sn	23 02 32.6	+0.3
BNGL				IAML		23 02 39.0	
	comp=Z,75nm,0.5s						
YEDI	Yedisu-Bingol	1.06	247	PG	Pn	23 02 17.8	-0.2
YEDI				SG	Sn	23 02 32.6	-0.2
MUSM	Mu-Merkez	1.16	191	eP	Pb	23 02 18.6	-0.8
MUSM				eS	Sn	23 02 36.1	+0.9
MUSM				IAML		23 02 38.6	
	comp=Z,13nm,0.5s						
BNGB	Bingl	1.23	225	PN	Pg	23 02 21.4	+0.3
BAYB	BAYBURT	1.25	289	eP	Pg	23 02 21.5	+0.1
BAYB				eS	Sn	23 02 38.7	+1.2
BAYB				IAML		23 02 44.5	
	comp=Z,7.5nm,0.6s						
DIGO	Kars	1.32	65	eP	Pn	23 02 21.4	-0.3
DIGO				eS	Sg	23 02 42.0	+1.9
DIGO				IAML		23 02 50.8	
	comp=N,6.5nm,0.3s						
BAYT	Aydıntepe-Bayb	1.38	293	PN	Pg	23 02 23.4	-0.4
CHOM	Cayeli-Rize	1.46	327	PN	Pg	23 02 24.7	-0.7
DYDN	Diyadin	1.49	102	eP	Pn	23 02 23.1	-0.9
DYDN				IAML		23 02 52.3	
	comp=E,8.7nm,0.4s						
BCA	Borcka	1.58	355	PN	Pg	23 02 26.7	-1.0
EUZM	Uzumlu	1.63	265	eP	Pb	23 02 26.4	-0.9
EPOS	Posof	1.78	23	eP	Pb	23 02 28.7	-1.2
GEVA	Gevas	1.83	147	eP	Pn	23 02 27.9	-0.8
GEVA				IAML		23 03 01.9	
	comp=Z,2.9nm,0.5s						

NEIC 27 23:02:34.8±1.1, 17.1S±0.1×175.0W±0.1, h250km±4km, mb4.4/9, Error ellipse: s-maj=19.8km s-min=13.2km az=145.0
IDC 27 23:02:35.9±2.0, 17.00S×175.19W, h252km±19km, mb3.6/5, mb1 3.8/7, mb1mx3.4/43, mbtmp4.3/7, Error ellipse: s-maj=22.6km s-min=15.2km az=125.0
ISC 27 23:02:35.4±0.6, 17.11S±0.09×174.96W±0.09, h256km, n23, σ1.11/26, mb4.3/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
AFI	Afiamalu	4.42	44	P	Pn	23 03 46.2	+1.7
	16nm,0.3s,baz=239,slow=1.1,SNR=14						
AFI				S	S	23 04 37.8	-1.7
	72nm,0.3s,baz=232,slow=20,SNR=16						
AFI	Afiamalu	4.42	44	Pn	Pn	23 03 45.2	+0.7
AFI				S	S	23 04 38.5	-1.0
NIUE	Niue	5.17	113	Pn	Pn	23 03 52.5	-1.0
MSVF	Nonsavu	6.71	264		Pn	23 04 12.2	-0.4
DZM	Mont Dzumac	18.20	251	P	P	23 06 29.7	-0.4
	0.4nm,0.3s,baz=174,slow=14,SNR=3.3						
DZM	Mont Dzumac	18.20	251	P	P	23 06 29.0	-1.1
DZM				IAmb	IAmb	23 06 33.6	
	comp=Z,23nm,1.1s						
URZ	Urewera	22.19	197	P	P	23 07 11.3	+0.7
	comp=Z,12nm,0.4s,baz=10,slow=2.6,SNR=15						
URZ				S	S	23 10 59.0	+3.2
	comp=Z,5.8nm,0.6s,baz=174,slow=23,SNR=3.6						
URZ	Urewera	22.19	197	P	P	23 07 11.3	+0.7
BKZ	Black Stump Fm	23.21	197	P	P	23 07 19.2	-0.8
BKZ				IAmb	IAmb	23 07 31.2	
	comp=Z,7.9nm,1.2s						
RPZ	Rata Peaks	29.05	201	P	P	23 08 12.2	+0.1
RPZ				IAmb	IAmb	23 08 22.7	
	comp=Z,8.5nm,0.8s						
MLZ	Mavora Lakes	31.54	203	P	P	23 08 33.5	-0.4
MLZ				IAmb	IAmb	23 08 51.2	
	comp=Z,12nm,0.9s						
WHZ	Wether Hill Ro	32.05	203	P	P	23 08 38.1	-0.2
ARMA	Armidale	33.19	240	P	P	23 08 48.0	-0.6
ARMA				IAmb	IAmb	23 08 49.7	
	comp=Z,9.0nm,1.1s						
STKA	Stephens Creek	41.90	241	P	P	23 10 01.4	+0.2
	comp=Z,1.5nm,0.5s,baz=83,slow=7.1,SNR=5.5						
STKA	Stephens Creek	41.90	241	P	P	23 10 01.8	+0.6
WRA	Warramunga Arr	48.02	258	P	P	23 10 48.0	-1.4
	comp=Z,0.7nm,0.6s,baz=93,slow=7.5,SNR=12						
AS31	Alice Springs	48.18	253	P	P	23 10 50.0	-0.6
ASAR	Alice Springs	48.18	253	P	P	23 10 50.0	-0.6
	comp=Z,13nm,0.6s,baz=88,slow=8.4,SNR=137						
ILAR	Eielson Array	84.40	12	P	P	23 14 38.8	+0.1
	comp=Z,0.2nm,0.5s,baz=230,slow=5.5,SNR=4.3						
CLL	Collm	145.29	351	ePKPbc	PKPab	23 21 44.0	+0.7
BRTR	Keskin Array B	146.48	318	PKPbc	PKPbc	23 21 47.0	0.0
	comp=Z,0.4nm,0.6s,baz=94,slow=2.0,SNR=2.6						
GERES	GERESS Array B	147.57	349	PKPbc	PKPbc	23 21 49.5	-0.1
	comp=Z,0.2nm,0.4s,baz=113,slow=2.2,SNR=3.1						
TORD	Torodi Ar. Bea	174.91	140	PKPab	PKPab	23 23 53.3	+1.7
	comp=Z,0.8nm,1.1s,baz=228,slow=7.6,SNR=2.9						

IDC 27 23:14:02.4±2.7, 7.15S×129.97E, h92km±36km, mb3.6/1, mb1 3.8/5, mb1mx3.3/47, mbtmp4.0/5, Error ellipse: s-maj=64.3km s-min=22.6km az=91.0
DJA 27 23:14:04.4±0.5, 7°S±3°×13°0E±°, h126km±13km, M4.4/7, mB5.2/2, mb4.1/5, MLv4.5/7, Mw(mB)4.6/2
ISC 27 23:14:02.3±0.8, 6.94S±0.05×129.99E±0.06, h150km, n17, σ2.52/26, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
SAUI	Saumlaki	1.66	129	P	Pn	23 14 35.5	+1.9
SAUI				S	Sn	23 14 58.1	+0.5
SAUI	Saumlaki	1.66	129	P	Pn	23 14 35.5	+1.9
SAUI				S	Sn	23 14 58.1	+0.5
BNDI	Bandanaira	2.40	358	P	Pn	23 14 43.1	+1.1
BNDI	Bandanaira	2.40	358	P	Pn	23 14 43.1	+1.1
FAKI	Fak Fak	4.58	29	P	Pn	23 15 12.6	+2.4
FAKI				S	Sn	23 16 00.8	-2.3
FAKI	Fak Fak	4.58	29	P	Pn	23 15 12.6	+2.4
FAKI				S	Sn	23 16 00.8	-2.3
SIJI	Sorong	6.16	12	P	Pn	23 15 34.0	+2.8
	baz=205,slow=19						
SIJI				S	Sn	23 16 38.3	-2.4
	5.1nm,0.3s,baz=128,slow=22,SNR=6.0						
SOEI	Soe	6.32	243	P	Pn	23 15 35.3	+1.9
	0.4nm24nm,0.6s						
SOEI				S	Sn	23 16 44.2	-0.5
	0.4nm24nm,0.6s						
SOEI	Soe	6.32	243	P	Pn	23 15 35.3	+1.9
	0.4nm24nm,0.6s						
SOEI				S	Sn	23 16 44.2	-0.5
	0.4nm24nm,0.6s						
RKPI	Ransiki, Papua	6.81	38	P	Pn	23 15 42.0	+2.1
	0.7nm3μm46nm,0.7s						
RKPI	Ransiki, Papua	6.81	38	P	Pn	23 15 42.0	+2.1
	0.7nm3μm46nm,0.7s						
EDFI	Ende, Flores	8.42	257	P	Pn	23 16 02.5	+1.0
EDFI				S	Sn	23 17 35.6	+0.3
EDFI	Ende, Flores	8.42	257	P	Pn	23 16 02.5	+1.0
EDFI				S	Sn	23 17 35.6	+0.3
FITZ	Fitzroy Crossi	11.88	201	P	Pn	23 16 45.5	-1.5
	1.4nm,0.3s,baz=30,slow=10,SNR=23						
FITZ				S	Sn	23 18 46.1	-12
	1.4nm,0.3s,baz=242,slow=23,SNR=3.7						
WRA	Warramunga Arr	13.60	162	P	Pn	23 17 08.0	-1.2
	1.1nm,0.3s,baz=342,slow=10.0,SNR=28						
WRA				S	Sn	23 19 26.6	-13
	2.1nm,0.3s,baz=343,slow=19,SNR=14						
ASAR	Alice Springs	17.05	168	P	Pn	23 17 54.4	+2.4
	0.5nm,0.3s,baz=346,slow=9.1,SNR=16						
ASAR				S	S	23 20 53.0	-8.5
	0.6nm,0.3s,baz=327,slow=14,SNR=8.1						
MKAR	Makanchi Array	68.17	327	P	P	23 24 53.9	+7.5
	0.7nm,0.5s,baz=115,slow=8.1,SNR=21						

NCEDC 27 23:37:50.7±0.5, 37.79N±0.03×122.59W±0.04, h9km±4km, Md1.9, Error ellipse: s-maj=6.8km s-min=1.1km az=46.0
NEIC 27 23:37:50.9±0.6, 37.78N±0.04×122.59W±0.05, h11km±6km, Error ellipse: s-maj=7.7km s-min=1.4km az=224.0, Central California

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
JPRM	Presidio of Sa	0.10	81		Pg	23 37 53.6	+0.1
CYBM	Yerba Buena Is	0.19	80		Pg	23 37 54.9	0.0
CPMM	Point Molate	0.23	41		Pg	23 37 55.5	0.0
SAC	San Andreas	0.24	144		Pg	23 37 56.1	+0.3
JCPM	Coyote Point	0.29	131		Pg	23 37 56.9	+0.2
NOLM	Olema	0.30	329		Pg	23 37 56.6	-0.4
BRIB	Briones	0.38	68		Pg	23 37 58.9	+0.5
MCCM	Marconi Confer	0.43	328	Pg	Pg	23 37 59.2	-0.2
MCCM				Sg	Sg	23 38 04.8	-0.3
CMJM	Mission San Jo	0.63	114		Pg	23 38 03.1	+0.1
GDXM	Geysers	1.04	351	Pg	Pn	23 38 11.4	0.0
HOPS	Hopland Field	1.27	343	Pn	Pn	23 38 14.6	0.0
SAO	San Andreas Ge	1.36	138	Pn	Pb	23 38 16.2	-0.2
AFDM	Forest Hills D	1.73	47	Pn	Pn	23 38 19.8	-1.1
CMB	Columbia Colle	1.77	81	Pn	Pn	23 38 21.5	+0.1
ORV	Oroville	1.97	25	Pn	Pn	23 38 25.0	+0.8
KCPM	Cahto Peak	2.06	338	Pn	Pn	23 38 25.2	-0.2
PMPB	Monarch Peak	2.12	137	Pn	Pn	23 38 25.5	-0.8

ISK 27 23:38:57.9, 41.64N×41.52E, h15km, ML2.3/4
TIF 27 23:38:57.2, 41.60N×41.68E, h26km
ATA 27 23:38:58.1±1.8, 41.69N×41.86E, h47km±592km, ML2.5, MW2.9
DDA 27 23:38:59.3, 41.52N×41.79E, h7km±2km, ML1.7
ISC 27 23:38:58.4±0.9, 41.58N±0.04×41.74E±0.03, h18km±3km, n21, σ1.07/37, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
BATM	Batumi	0.04	308	P	Pg	23 39 01.9	+0.2
BATM				S	Sg	23 39 04.9	+0.9
BATM	Batumi	0.04	308	PG	Pg	23 39 01.9	+0.2
BATM				SG	Sg	23 39 04.9	+0.9
BATM	Batumi	0.04	308	iP	Pg	23 39 01.9	+0.2
BATM				iS	Sg	23 39 04.7	+0.7
BCA	Borcka	0.16	214	PG	Pb	23 39 02.8	+0.6
BCA				SG	Sb	23 39 06.8	+1.0
DBOC	Borcka	0.24	194	iP	Pg	23 39 04.2	+0.2
DBOC				iS	Sg	23 39 07.5	-0.3
DBOC				IAML		23 39 09.0	
	comp=E,181nm,0.2s						
DAGI	Agillar	0.52	165	iP	Pg	23 39 08.8	-0.1
DAGI				iS	Sg	23 39 15.4	-0.4
DAGI				IAML		23 39 17.0	
	comp=N,52nm,0.2s						
DAGI				IAML		23 39 17.0	
	comp=E,71nm,0.2s						
DBAD	Bademkaya	0.56	184	iP	Pg	23 39 09.2	-0.4
DBAD				iS	Sg	23 39 15.8	-1.3
DBAD				IAML		23 39 18.0	
	comp=E,46nm,0.3s						
DBAD				IAML		23 39 21.0	
	comp=N,35nm,0.2s						
DDEM	Demirkent	0.68	179	iP	Pb	23 39 11.3	-0.6
DDEM				iS	Sb	23 39 17.9	-3.0
DDEM				IAML		23 39 22.0	
	comp=N,137nm,0.3s						
DDEM				IAML		23 39 23.0	
	comp=E,98nm,0.2s						
EPOS	Posof	0.74	95	eP	Pb	23 39 12.7	-0.3
EPOS				eS	Sg	23 39 24.3	+1.3
EPOS				IAML		23 39 25.4	
	comp=Z,5.9nm,0.4s						
EPOS	Posof	0.74	95	iP	Pb	23 39 12.9	0.0
EPOS				iS	Sb	23 39 23.2	+0.4
EPOS				IAML		23 39 24.0	
	comp=N,17nm,0.5s						
CHOM	Cayeli-Rize	0.88	237	PG	Pb	23 39 13.6	-1.6
SENK	Senkaya-Erzuru	1.11	155	PN	Pg	23 39 21.1	+1.0
BKRG	Bakuriani	1.35	82	P	Pn	23 39 22.9	+0.4
BKRG				S	Sg	23 39 41.9	-0.3
KRIK	Erzurum-spir	1.38	207	eP	Pg	23 39 26.8	+1.7
KRIK				eS	Sg	23 39 45.8	+2.6
KRIK				IAML		23 39 46.7	
	comp=Z,708nm,0.3s						
KRIK	Erzurum-spir	1.38	207	iP	Pg	23 39 26.6	+1.5
KRIK				iS	Sg	23 39 44.0	+0.8
BGD	Bogdanovka	1.43	102	P	Pn	23 39 23.8	+0.1
BGD				S	Sb	23 39 43.7	+1.0
ONI	Oni	1.63	51	P	Pn	23 39 24.8	-1.5
ONI				S	Sn	23 39 46.2	-0.6
ONI	Oni	1.63	51	PN	Pb	23 39 28.2	+0.2
BAYT	Aydıntepe-Bayb	1.69	226	PN	Pn	23 39 26.7	-0.5
BAYB	BAYBURT	1.73	221	eP	Pn	23 39 28.1	+0.2
BAYB				IAML		23 39 53.4	
	comp=Z,7.3nm,0.3s						
BAYB	BAYBURT	1.73	221	iP	Pn	23 39 28.0	+0.2
BAYB				iS	Sn	23 39 49.5	-0.1
BAYB				IAML		23 39 51.0	
	comp=E,16nm,0.3s						
BAYB				IAML		23 39 52.0	
	comp=N,9.2nm,0.4s						

UCR 27 23:39:39.2±1.2, 11.18N×86.48W, h9km±6km, MD4.1
INET 27 23:39:40.0, 11.10N×86.53W, h17km, ML3.2
ISC 27 23:39:38.3±1.8, 11.22N±0.07×86.44W±0.09, h9km±12km, n19, σ0.48/26, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
NY14	Universidad de	1.06	123	iP	Pb	23 39 58.6	-0.1
NY14				iS	Sn	23 40 13.7	-0.4
LAPC	Finca la Perla	1.09	114	iP	Pb	23 39 59.2	-0.1
LAPC				iS	Sn	23 40 14.1	-0.8
BUEV	Buena Vista	1.10	112	iP	Pg	23 39 59.9	+0.4
BUEV				eS	Sn	23 40 15.9	+0.7
GB1A	Borinquen Arri	1.10	111	iP	Pg	23 39 59.9	+0.4
GPS1	Guardaparques	1.16	112	iP	Pg	23 40 00.8	+0.2
GPS2	Hotel Rincn d	1.17	114	iP	Pn	23 40 00.8	-0.1
GPS2				iS	Sn	23 40 17.5	+0.6
CNGN	Cerro Negro	1.29	349	eP	Pg	23 40 03.4	+0.2
COLC	Colonia	1.33	114	iP	Pn	23 40 03.1	0.0
COLC				iS	Sg	23 40 21.1	-0.2
CUI	Cuipilapa	1.37	114	eP	Pb	23 40 04.0	-0.2
CUI				eS	Sg	23 40 22.5	0.0
ACON	Acoyapa	1.45	59	eP	Pb	23 40 05.3	-0.1
ACAL	Aguas Claras	1.50	113	iP	Pb	23 40 05.8	-0.6
PTEN	Parque Tenorio	1.51	109	iP	Pb	23 40 06.5	-0.1
CRIN	San Cristobal	1.58	338	eP	Pn	23 40 07.0	+0.4
JTS	Las Juntas de	1.73	122	eP	Pn	23 40 08.5	-0.1
JTS				eS	Sg	23 40 33.1	-0.9
MATN	Matagalpa	1.77	16	eP	Pb	23 40 10.4	-0.6
CEDE	Laguna Cedeo	1.86	113	eP	Pb	23 40 12.9	+0.4
ESPN	Las Esperanzas	2.31	65	eP	Pg	23 40 23.0	+0.4
LCR2	La Lucha 2	2.81	121	eP	Pn	23 40 24.3	+0.7
CVTR	Volcan Turrial	2.89	114	eP	Pb	23 40 29.6	-0.7

IDC 27 23:56:54.5±3.1, 22.15N×143.25E, h0km, mb3.6/5, mb1 3.6/5, mb1mx3.4/48, mbtmp3.6/5, Error ellipse: s-maj=122.6km s-min=26.2km az=81.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
KLR	Kul'dur	28.53	344	P	P	00 02 51.8	+0.1
	1.0nm,0.4s,baz=157,slow=11,SNR=5.9						
SONM	Songino Array	39.03	320	P	P	00 04 23.6	+0.5
	0.3nm,0.5s,baz=125,slow=8.4,SNR=5.1						
WRA	Warramunga Arr	42.73	192	P	P	00 04 53.5	-0.1
	0.3nm,0.5s,baz=15,slow=7.9,SNR=7.4						
MKAR	Makanchi Array	54.44	312	P	P	00 06 23.7	0.0
	0.2nm,0.6s,baz=87,slow=7.0,SNR=4.2						
KURBB	Kurchatov Arra	57.24	317	P	P	00 06 42.9	-0.7
	0.4nm,0.5s,baz=88,slow=8.4,SNR=5.5						

TEH 28 00:05:17.9, 32.16N×47.65E, h18km, ML2.5
ISN 28 00:05:17.3±0.8, 32.17N×47.62E, h14km±5km, ML2.3
ISC 28 00:05:17.1±1.5, 32.12N±0.07×47.66E±0.07, h10km, n8, σ0.86/12, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
IKFM	Kafar-mosalman	1.41	6	ePn	Pn	00 05 42.8	-0.1
IKFM				e		00 06 03.1	
IKMR	Kamar-syah	1.52	23	ePn	Pn	00 05 44.8	+0.4
IKMR				eSg	Sg	00 06 07.0	+0.9
IKMR				e		00 06 10.2	
NSR	Nassriya	1.70	230	ePg	Pn	00 05 47.0	+0.1
NSR				eSg	Sn	00 06 09.0	+0.3
IBDR	Badra	1.76	305	ePg	Pn	00 05 48.0	+0.3
IBDR				eSg	Sb	00 06 11.0	-0.8
IBDR				AML	AML	00 06 18.0	
	comp=N,48nm,0.7s						
IBDR				AML	AML	00 06 18.7	
	comp=E,30nm,0.7s						
BMDN	Meydan	1.83	32	ePn	Pn	00 05 49.7	+0.8
BMDN				e		00 05 54.6	
BDRS	Dareh Seyedi	2.10	29	ePn	Pn	00 05 53.5	+0.9
BDRS				e		00 06 31.5	
HSAM	Samen	2.23	20	ePn	Pb	00 05 56.5	-1.3
HSAM				e		00 05 59.5	
BHD	Baghdad	3.00	293	ePn	Pn	00 06 00.1	+1.3
BHD				eSn	Sn	00 06 41.0	+0.4

IDC 28 00:17:06.0±0.8, 4.27S×137.19E, h0km, mb4.1/8, mb1 4.3/12, mb1mx4.1/31, mbtmp4.2/12, ML4.1/4, MS3.0/3, Ms1 3.0/3, ms1mx2.7/35, Error ellipse: s-maj=30.6km s-min=15.9km az=69.0
BJI 28 00:17:06.8±0.0, 4.50S×137.30E, h16km, mB4.9/1, mb4.4/10, Ms4.9/2, Ms7 4.6/2
NEIC 28 00:17:10.6±2.5, 4.38S±0.09×137.23E±0.07, h37km±9km, mb4.5/8, Error ellipse: s-maj=15.1km s-min=6.9km az=216.0
DJA 28 00:17:10.0±0.2, 5°S±3°×13°7E±°, h10km, M4.5/10, mb4.7/10, mB5.0/4, MLv4.4/6, Mw(mB)4.3/4
ISC 28 00:17:08.3±0.5, 4.48S±0.05×137.16E±0.04, h10km, n50, σ1.83/51, mb4.3/12, Irian Jaya

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
WAMI	Wamena	1.66	69	P	Pg	00 17 40.3	+0.1
WAMI				S	Sg	00 18 02.7	+0.9
WAMI	Wamena	1.66	69	P	Pg	00 17 40.3	+0.1
WAMI				S	Sg	00 18 02.7	+0.9
SMPI	Sarmi	2.92	32	P	Pn	00 17 55.8	+0.9
SMPI	Sarmi	2.92	32	P	Pn	00 17 55.8	+0.9
GENI	Genyem	3.55	58	P	Pn	00 18 06.3	+2.9
GENI	Genyem	3.55	58	P	Pn	00 18 06.3	+2.9
RKPI	Ransiki, Papua	4.19	315	P	Pg	00 18 28.7	+0.1
RKPI	Ransiki, Papua	4.19	315	P	Pg	00 18 28.7	+0.1
FAKI	Fak Fak	5.14	287	P	Pn	00 18 27.2	+1.9
	0.3nm45nm,0.7s						
FAKI	Fak Fak	5.14	287	P	Pn	00 18 27.2	+1.9
	0.3nm45nm,0.7s						
FAKI	Fak Fak	5.14	287		Pn	00 18 26.7	+1.4
SIJI	Sorong	6.89	301	Pn	Pn	00 18 48.4	-1.1
	3.4nm,0.3s,baz=67,slow=10,SNR=5.9						
SIJI				Sn	Sn	00 20 05.8	-2.2
	0.4nm,0.3s,baz=307,slow=20,SNR=2.2						
MTN	Manton Dam	10.22	215		Pn	00 19 38.0	+2.8
LBMI	Labuha	10.37	291	P	Pn	00 19 37.8	+0.6
	4μm25nm,0.8s						
LBMI	Labuha	10.37	291	P	Pn	00 19 37.8	+0.6
	4μm25nm,0.8s						
COEN	Coen	11.13	148		Pn	00 19 47.5	-0.1
SANI	Sanana	11.41	282	P	Pn	00 19 58.8	+7.4
SANI	Sanana	11.41	282	P	Pn	00 19 58.8	+7.4
SOEI	Soe	13.82	247	P	Pn	00 20 26.3	+1.8
	65nm,1.0s						
SOEI	Soe	13.82	247	P	Pn	00 20 26.3	+1.8
	65nm,1.0s						
SOEI	Soe	13.82	247		Pn	00 20 26.1	+1.6
KNRA	Kununurra	13.85	216		Pn	00 20 26.4	+1.7
KRVT	Keravat (AS076	14.83	90	LR	LR	00 27 35.1	
	comp=Z,61nm,18.4s,baz=206,slow=42						
WB0	Warramunga Arr	15.43	190	Pn	Pn	00 20 44.6	-1.6
WB0				IAmb	IAmb	00 20 53.8	
	comp=Z,44nm,0.7s						
WR0	Warramunga Arr	15.59	189	Pn	Pn	00 20 48.1	-0.2
WR0				IAmb	IAmb	00 20 55.7	
	comp=Z,29nm,0.9s						
WRAB	Tennant Creek	15.60	190		Pn	00 20 48.4	0.0
WB2	Warramunga Arr	15.61	190	Pn	Pn	00 20 46.9	-1.6
WRA	Warramunga Arr	15.61	190	Pn	Pn	00 20 46.3	-2.3
	comp=Z,0.5nm,0.3s,baz=16,slow=13,SNR=14						
WRA				Sn	Sn	00 23 34.9	-6.8
	comp=Z,0.5nm,0.3s,baz=16,slow=22,SNR=4.2						
BNSI	Bone	17.00	270	P	P	00 21 11.6	+3.4
	comp=Z,28nm,1.0s						
BNSI	Bone	17.00	270	P	P	00 21 11.6	+3.4
	comp=Z,28nm,1.0s						
FITZ	Fitzroy Crossi	17.61	219	P	Pn	00 21 13.7	-0.2
	comp=Z,0.7nm,0.3s,baz=34,slow=11,SNR=14						
FITZ				S	Sn	00 24 23.9	-6.3
	comp=Z,0.4nm,0.3s,baz=185,slow=17,SNR=3.2						
FITZ				LR	LR	00 27 38.4	
	comp=Z,17nm,18.7s,baz=3.5,slow=36						
FITZ	Fitzroy Crossi	17.61	219	P	Pn	00 21 14.2	+0.3
CTA	Charters Tower	17.86	151	P	Pn	00 21 18.9	+1.8
	comp=Z,0.6nm,0.3s,baz=334,slow=13,SNR=7.2						
AS31	Alice Springs	19.33	189		P	00 21 36.2	+2.3
ASAR	Alice Springs	19.33	189		P	00 21 36.2	+2.4
	comp=Z,0.2nm,0.3s,baz=187,slow=26,SNR=4.1						
ASAR				S	Sn	00 25 07.6	-4.2
	comp=Z,0.2nm,0.3s,baz=50,slow=33,SNR=3.2						
ASAR				LR	LR	00 30 08.6	
	comp=Z,92nm,18.0s,baz=226,slow=40						
STKA	Stephens Creek	27.57	172	P	P	00 22 55.9	+0.3
	comp=Z,1.7nm,0.6s,baz=345,slow=9.4,SNR=3.1						
WHN	Wuhan	41.09	329	P	P	00 24 52.5	+0.1
CMAR	Chiang Mai Arr	44.02	302	P	P	00 25 15.3	-1.1
	comp=Z,0.8nm,0.4s,baz=128,slow=7.3,SNR=9.9						
USRK	Ussuriysk Ar.	48.68	355	P	P	00 25 51.1	-1.6
	comp=Z,1.6nm,0.6s,baz=185,slow=5.7,SNR=4.7						
GTA	Gaotai	55.60	325	eP	P	00 26 44.0	-0.5
GTA				pP	pP	00 26 49.5	+1.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	58.68	336	P	P	00 27 03.8	-2.3
	comp=Z,0.5nm,0.8s,baz=169,slow=8.4,SNR=3.2						
MK31	Makanchi Array	70.26	323	P	P	00 28 20.8	-1.0
MK31				IAmb	IAmb	00 28 22.0	
	comp=Z,2.9nm,1.1s						
MKAR	Makanchi Array	70.26	323	P	P	00 28 20.5	-1.3
	comp=Z,2.2nm,0.8s,baz=120,slow=7.5,SNR=20						
MAKZ	Makanchi	70.45	323	P	P	00 28 21.7	-1.2
MAKZ				IAmb	IAmb	00 28 22.6	
	comp=Z,6.0nm,1.1s						
KSH	Kashi	71.18	314	P	P	00 28 29.3	+1.6
KSH				pmax	pmax		
	comp=Z,12nm,1.1s						
ZALV	Zalesovo Beam	72.69	331	P	P	00 28 34.0	-2.4
	comp=Z,0.8nm,0.6s,baz=104,slow=4.9,SNR=5.6						
VNDA	Vanda	74.17	175	P	P	00 28 44.9	+0.3
	comp=Z,3.8nm,0.9s,baz=322,slow=7.0,SNR=3.7						
ILAR	Eielson Array	88.08	25	P	P	00 29 56.0	-2.7
	comp=Z,1.8nm,0.8s,baz=267,slow=4.6,SNR=16						
TORD	Torodi Ar. Bea	135.22	284	PKP	PKPdf	00 36 27.9	-1.4
	comp=Z,0.4nm,0.7s,baz=134,slow=1.8,SNR=2.6						
LPAZ	La Paz	147.57	130	PKPbc	PKPdf	00 36 55.1	+3.0
	comp=Z,2.3nm,0.7s,baz=189,slow=3.7,SNR=8.9						

NEIC 28 00:51:46.7±1.3, 18.98N±0.03×66.75W±0.02, h31km±9km, Error ellipse: s-maj=4.9km s-min=2.1km az=185.0
RSPR 28 00:51:47.0, 19.02N×66.78W, h55km±4km, MD3.3/13
ISC 28 00:51:45.9±1.2, 19.02N±0.05×66.76W±0.03, h29km, n57, σ0.81/70, 7C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.58	158	⇑eP	Pn	00 51 58.9	+0.7
EMPR	Esperanza - Ma	0.58	158	eS	Sn	00 52 08.5	+1.7
EMPR	Esperanza - Ma	0.58	158		Pn	00 51 58.9	+0.7
EMPR					Sn	00 52 08.5	+1.7
AGPR	Aguadilla, PR	0.64	211	Pn	Pn	00 51 58.5	-0.6
AGPR				Sn	Sn	00 52 07.8	-0.5
AOPR	Arecibo Observ	0.67	180	⇓eP	Pn	00 51 59.6	+0.1
AOPR	Arecibo Observ	0.67	180		Pn	00 51 59.6	+0.1
AOPR	Arecibo Observ	0.67	180	Sn	Sn	00 52 10.2	+1.2
MPR	Mayaguez	0.88	204		Pb	00 52 02.1	-0.5
MPR				Sn	Sn	00 52 13.4	-0.8
LSP	Las Mesas	0.90	200	⇓eP	Pb	00 52 02.6	-0.3
LSP	Las Mesas	0.90	200		Pb	00 52 02.6	-0.3
GCPR	Guaynabo City	0.95	138		Pb	00 52 04.1	+0.2
GCPR				Sn	Sb	00 52 16.0	-0.1
OBIP	Obispado Ponce	0.98	172	eS	Sb	00 52 17.0	+0.1
OBIP	Obispado Ponce	0.98	172	⇓eP	Pb	00 52 03.4	-0.9
OBIP	Obispado Ponce	0.98	172		Pb	00 52 03.4	-0.9
OBIP					Sb	00 52 17.0	+0.1
GBPR	Guanica, Bosqu	1.05	186	eS	Sb	00 52 18.8	0.0
GBPR	Guanica, Bosqu	1.05	186	⇑eP	Pb	00 52 05.3	-0.1
GBPR	Guanica, Bosqu	1.05	186		Pb	00 52 05.3	-0.1
GBPR					Sb	00 52 18.8	0.0
CRPR	Cabo Rojo, PR	1.06	198	eS	Sb	00 52 18.7	-0.5
CRPR	Cabo Rojo, PR	1.06	198	⇓eP	Pb	00 52 05.0	-0.6
CRPR	Cabo Rojo, PR	1.06	198		Pb	00 52 05.0	-0.6
CRPR					Sb	00 52 18.7	-0.5
SJG	San Juan	1.07	147		Pb	00 52 05.5	-0.4
SJG				Sn	Sb	00 52 18.7	-0.8
MLPR	Magueyes Islan	1.08	195	eS	Sb	00 52 18.6	-1.1
MLPR	Magueyes Islan	1.08	195	⇑eP	Pn	00 52 04.5	-0.6
MLPR	Magueyes Islan	1.08	195		Pn	00 52 04.5	-0.6
MLPR					Sb	00 52 18.6	-1.1
CBYP	Canovanas	1.14	131	eS	Sb	00 52 20.8	-0.6
CBYP	Canovanas	1.14	131	⇓eP	Pb	00 52 06.1	-0.9
CBYP	Canovanas	1.14	131		Pb	00 52 06.1	-0.9
CBYP					Sb	00 52 20.8	-0.6
CBYP	Canovanas	1.14	131	Sn	Sb	00 52 21.1	-0.2
ICMP	Isla Caja de M	1.15	169		Pb	00 52 09.2	+2.0
PDPR	Patillas Dam,	1.22	145	eS	Sn	00 52 22.2	-0.3
PDPR	Patillas Dam,	1.22	145	⇓eP	Pb	00 52 07.5	-0.8
PDPR	Patillas Dam,	1.22	145		Pb	00 52 07.5	-0.8
PDPR					Sn	00 52 22.2	-0.3
IGPR	InterUniversit	1.22	149	eS	Sb	00 52 23.3	-0.4
IGPR	InterUniversit	1.22	149	⇑eP	Pb	00 52 07.5	-0.8
IGPR	InterUniversit	1.22	149		Pb	00 52 08.9	+0.6
HUMP	Col San Antoni	1.23	135	eS	Sn	00 52 22.5	-0.2
HUMP	Col San Antoni	1.23	135	⇑eP	Pb	00 52 07.3	-1.2
HUMP	Col San Antoni	1.23	135		Pb	00 52 07.3	-1.2
HUMP					Sn	00 52 22.5	-0.2
MTP	Monte Pirata	1.47	129	⇑eP	Pn	00 52 10.6	+0.2
MTP	Monte Pirata	1.47	129	eS	Sn	00 52 28.9	+0.3
MTP	Monte Pirata	1.47	129		Pn	00 52 10.6	+0.2
MTP					Sn	00 52 28.9	+0.3
CUPR	Culebra, Puert	1.57	117		Pn	00 52 11.7	-0.1
STVI	Saint Thomas	1.84	111	⇑eP	Pn	00 52 15.3	-0.1
STVI	Saint Thomas	1.84	111	eS	Sn	00 52 37.9	+0.2
STVI	Saint Thomas	1.84	111		Pn	00 52 15.3	-0.1
STVI	Saint Thomas	1.84	111		Sn	00 52 37.9	+0.2
STVI	Saint Thomas	1.84	111		Sn	00 52 37.4	-0.3
CDVI	St. Croix	2.27	123		Pn	00 52 23.3	+1.8
DR12	Loma Pena Alta	2.49	265		Pn	00 52 25.1	+0.5
SDD	Santo Domingo	3.04	260	Pn	Pn	00 52 33.2	+1.1
BANI	BANI	3.47	260		Pn	00 52 39.0	+1.0
SABA	Saba	3.62	112	Pn	Pn	00 52 40.7	+0.7
SMRT	St. Maarten	3.63	105	Pn	Pn	00 52 40.2	+0.1
SC01	Santiago de lo	3.77	277	Pn	Pn	00 52 44.0	+1.8
SKI	Saint Kitts	4.17	113	Pn	Pn	00 52 49.1	+1.5
SDDR	Presa de Saban	4.29	270		Pn	00 52 50.7	+1.4
GRTK	Grand Turk	4.80	302	Pn	Pn	00 52 55.3	-0.9

AEIC 28 01:21:21.9±4.4, 52.2N±0.1×179.59E±0.09, h72km±5km, ML3.6/33, mb4.2/6(NEIC), Error ellipse: s-maj=17.3km s-min=7.7km az=183.0
NEIC 28 01:21:22.1±1.6, 51.7N±0.1×179.58E±0.09, h95km±6km, Error ellipse: s-maj=18.1km s-min=8.0km az=173.0
IDC 28 01:21:24.3±2.9, 51.83N×179.42E, h112km±25km, mb3.6/19, mb1 3.7/21, mb1mx3.6/51, mbtmp3.9/21, MS2.9/3, Ms1 2.9/3, ms1mx2.5/40, Error ellipse: s-maj=21.2km s-min=11.0km az=168.0
ISC 28 01:21:21.8±0.9, 51.8N±0.1×179.46E±0.05, h90km±8km, n72, σ1.20/75, mb3.9/21, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAEA	Gareloi East	1.11	90		Pn	01 21 42.1	-0.7
TANO	Tanaga North	1.50	84		Pn	01 21 47.1	-0.5
TANO					Sn	01 22 05.8	-1.3
TASE	Tanaga Southea	1.55	87		Pn	01 21 47.6	-0.7
TAFP	Tanaga Falls P	1.59	85		Pn	01 21 47.9	-0.8
TAFP					Sn	01 22 07.7	-1.3
TAPA	Tanaga Point A	1.69	88		Pn	01 21 49.3	-0.7
KIMD	Kanaga Island	2.05	89		Pn	01 21 54.0	-0.6
KIMD					Sn	01 22 20.2	+0.5
KICM	Kanaga Island	2.08	85		Pn	01 21 54.8	-0.2
KICM					Sn	01 22 19.5	-0.8
KIKV	Kanaga Island	2.09	86		Pn	01 21 54.5	-0.6
KIKV					Sn	01 22 21.0	+0.3
KINC	Kanaga Island	2.12	85		Pn	01 21 55.1	-0.5
KIRH	Kanaga Island	2.14	86		Pn	01 21 55.3	-0.5
KIRH					Sn	01 22 22.4	+0.6
ADK	Adak	2.39	86		Pn	01 21 58.1	-1.1
ADAG	Mount Adagdak	2.45	84		Pn	01 21 59.2	-0.7
ADAG					Sn	01 22 28.2	-0.9
GSTD	Great Sitkin T	2.73	83		Pn	01 22 02.9	-0.9
GSTD					Sn	01 22 33.8	-2.2
GSMY	Great Sitkin M	2.79	83		Pn	01 22 03.9	-0.5
GSTR	Great Sitkin T	2.79	82		Pn	01 22 01.5	-3.0
SMY	Shemya	3.43	288	Pn	Pn	01 22 15.6	+2.6
KOWE	Korovin West	3.92	79		Pn	01 22 19.0	-0.8
KOWE					Sn	01 23 02.5	-2.1
ATKA	Atka Island	3.94	81		Pn	01 22 19.8	-0.2
ATKA	Atka Island	3.94	81		Sn	01 23 04.0	-1.1
KOKL	Mount Kliuchef	3.95	80		Pn	01 22 20.0	-0.2
NIKH	Nikolski High	7.25	76		Pn	01 23 06.7	+1.8
MREP	Makushin Rep't	8.60	71		Pn	01 23 25.4	+2.0
UNV	Unalaska Valle	8.75	71		Pn	01 23 26.3	+1.0
PETK	Petropavlovsk-	13.33	284	P	Pn	01 24 29.4	+2.2
	0.1nm,0.3s,baz=100,slow=18,SNR=2.4						
PETK				S	Sn	01 26 50.6	-3.0
	0.2nm,0.3s,baz=76,slow=31,SNR=3.1						
PETK				LR	LR	01 29 09.2	
	comp=Z,40nm,20.7s,baz=61,slow=35						
KDAK	Kodiak Island	17.12	59	P	Pn	01 25 13.5	-1.6
	0.5nm,0.3s,baz=246,slow=3.3,SNR=9.1						
MA2	Magadan	17.84	307	LR	LR	01 31 33.4	
	comp=Z,24nm,18.6s,baz=108,slow=34						
SEY	Seymchan	18.21	318	P	Pn	01 25 29.4	+1.1
	0.1nm,0.3s,baz=135,slow=14,SNR=2.6						
SKT	Skwentna	18.68	46	P	Pn	01 25 36.1	+2.2
SKT				IAmb	IAmb	01 25 39.1	
	comp=Z,18nm,1.2s						
RC01	Rabbit Creek A	19.23	49		P	01 25 28.2	-10
RC01				IAmb	IAmb	01 26 17.7	
	comp=Z,41nm,1.4s						
KTH	Kantishna Hill	19.52	41		Pn	01 25 44.5	+0.6
KTH				IAmb	IAmb	01 26 14.2	
	comp=Z,15nm,1.4s						
ILAR	Eielson Array	21.62	40	P	P	01 26 05.4	+1.2
	comp=Z,0.3nm,0.5s,baz=228,slow=7.9,SNR=9.1						
ILAR				ScP	ScP	01 33 29.1	-1.7
	comp=Z,0.4nm,0.7s,baz=280,slow=3.6,SNR=5.1						
DAWY	Dawson	24.56	44	P	P	01 26 36.7	+3.9
DAWY				IAmb	IAmb	01 26 38.2	
	comp=Z,14nm,1.8s						
INK	Inuvik	27.75	36	P	P	01 27 01.7	+0.3
	comp=Z,0.4nm,0.4s,baz=264,slow=3.6,SNR=3.0						
KLR	Kul'dur	30.03	284	P	P	01 27 21.9	0.0
	comp=Z,1.9nm,0.4s,baz=64,slow=10,SNR=13						
KLR				S	S	01 32 00.5	-13
	comp=Z,1.0nm,0.3s,baz=90,slow=10,SNR=2.8						
USRK	Ussuriysk Ar.	32.17	275	P	P	01 27 40.5	-0.2
	comp=Z,2.3nm,0.5s,baz=49,slow=10,SNR=6.5						
H11N2	WAKE ISLAND Hy	33.48	202	T	T	02 03 34.0	
	baz=12,slow=76						
H11N3	WAKE ISLAND Hy	33.49	202	T	T	02 03 24.3	
	baz=12,slow=76						
H11N1	WAKE ISLAND Hy	33.49	202	T	T	02 03 24.4	
	baz=12,slow=76						
H11S1	WAKE ISLAND Hy	34.70	202	T	T	02 04 54.7	
	baz=16,slow=76						
H11S2	WAKE ISLAND Hy	34.72	202	T	T	02 04 55.3	
	baz=16,slow=76						
H11S3	WAKE ISLAND Hy	34.72	202	T	T	02 04 55.0	
	baz=16,slow=76						
YKA	Yellowknife Ar	35.74	47	P	P	01 28 11.2	-0.1
	comp=Z,0.9nm,0.9s,baz=281,slow=8.1,SNR=6.2						
KSRS	Korea Array	38.55	269	P	P	01 28 35.9	+0.4
	comp=Z,2.0nm,0.8s,baz=60,slow=8.8,SNR=5.6						
YBH	Yreka Blue Hor	39.89	81	LR	LR	01 44 07.8	
	comp=Z,45nm,19.8s,baz=6.0,slow=34						
NVAR	Mina Array Bea	44.57	82	P	P	01 29 26.1	+1.2
	comp=Z,0.4nm,0.7s,baz=298,slow=7.8,SNR=3.7						
SONM	Songino Array	45.49	295	P	P	01 29 32.6	+0.6
	comp=Z,1.6nm,0.5s,baz=60,slow=7.6,SNR=18						
SONM				PcP	PcP	01 31 09.4	+0.1
	comp=Z,0.5nm,0.7s,baz=38,slow=2.7,SNR=3.6						
PDAR	Pinedale Array	47.21	72	P	P	01 29 45.4	-0.2
	comp=Z,0.4nm,0.5s,baz=346,slow=3.5,SNR=6.5						
ZALV	Zalesovo Beam	52.96	312	P	P	01 30 27.4	-1.1
	comp=Z,0.4nm,0.4s,baz=30,slow=9.0,SNR=2.7						
FRB	Frobisher Bay	53.24	31	P	P	01 30 30.1	-0.3
	comp=Z,0.7nm,0.5s,baz=300,slow=7.8,SNR=4.3						
ARCES	ARCESS Array B	57.50	349	P	P	01 31 00.7	-0.2
	comp=Z,1.2nm,0.7s,baz=27,slow=8.3,SNR=2.7						
MKAR	Makanchi Array	58.92	307	P	P	01 31 10.8	-0.5
	comp=Z,1.2nm,0.4s,baz=53,slow=6.3,SNR=40						
TXAR	Lajitas Array	59.66	80	P	P	01 31 17.1	+0.4
	comp=Z,0.2nm,0.5s,baz=302,slow=5.6,SNR=8.1						
FINES	FINESS Array B	65.14	346	P	P	01 31 51.7	-0.7
	comp=Z,1.7nm,1.0s,baz=32,slow=8.2,SNR=2.4						
NB2	NORSAR Subarra	67.13	354	P	P	01 32 04.8	-0.5
	comp=Z,0.8nm,0.6s,baz=6.6,slow=6.5						
NOA	NORSAR Array B	67.13	354	P	P	01 32 05.0	-0.3
	comp=Z,0.8nm,0.7s,baz=12,slow=6.8,SNR=5.2						
CMAR	Chiang Mai Arr	69.89	274	P	P	01 32 23.6	+0.5
	comp=Z,1.6nm,0.3s,baz=24,slow=7.4,SNR=6.7						
TAPN	Taplejung	70.05	289	eP	P	01 32 25.2	+0.9
ODAN	Odare	70.60	289	eP	P	01 32 27.5	-0.1
	comp=Z,7.4nm,0.4s						
GUN	Gumba	70.70	291	eP	P	01 32 29.0	+0.7
	comp=Z,29nm,0.6s						
JIRN	Jiri	70.70	290	eP	P	01 32 29.2	+0.8
	comp=Z,31nm,0.7s						
RAMN	Ramite	71.00	289	eP	P	01 32 30.5	+0.5
	comp=Z,21nm,0.6s						
KKN	Kakani	71.13	291	eP	P	01 32 31.5	+0.7
PKI	Pulchoki	71.22	291	eP	P	01 32 32.1	+0.6
	comp=Z,8.5nm,0.5s						
PKIN	Phulchoki	71.23	291	eP	P	01 32 31.9	+0.4
	comp=Z,7.8nm,0.5s						
GKN	Gorkha	71.35	292	eP	P	01 32 32.5	+0.5
	comp=Z,8.6nm,0.4s						
DMN	Daman	71.37	291	eP	P	01 32 33.1	+0.8
	comp=Z,3.2nm,0.2s						
DANN	Dangsing	71.59	292	eP	P	01 32 34.1	+0.4
	comp=Z,13nm,0.7s						
AKASG	Malin Array Be	74.81	341	P	P	01 32 50.9	-1.0
	comp=Z,0.3nm,0.3s,baz=357,slow=37,SNR=2.7						
WRA	Warramunga Arr	81.57	222	P	P	01 33 28.6	-0.9
	comp=Z,0.3nm,0.5s,baz=32,slow=5.9,SNR=4.8						
ASAR	Alice Springs	85.07	221	P	P	01 33 47.4	0.0
	comp=Z,0.4nm,0.4s,baz=26,slow=3.2,SNR=4.4						
TORD	Torodi Ar. Bea	115.31	358	PKP	PKiKP	01 39 51.7	-1.3
	comp=Z,1.1nm,1.1s,baz=347,slow=3.3,SNR=4.7						
BOSA	Boshof	149.89	310	PKPbc	PKPbc	01 41 00.9	-0.5
	comp=Z,2.4nm,0.5s,baz=34,slow=5.2,SNR=4.3						

IDC 28 01:29:00.3±2.9, 43.55N×132.40E, h0km, mb1 3.3/2, mb1mx3.0/47, mbtmp3.3/2, ML3.1/2, Error ellipse: s-maj=17.4km s-min=10.3km az=150.0, Primorye

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USRK	Ussuriysk Ar.	0.71	336	Pg	Pg	01 29 14.1	+0.1
	baz=157,slow=17,SNR=384						
USRK				Lg	Lg	01 29 23.9	
	baz=157,slow=31,SNR=39						
I45RU	USSURIYSK INFR	0.71	335	i		01 34 01.8	
	baz=153,slow=330,SNR=5.4						
KLR	Kul'dur	5.70	356	Pn	Pn	01 30 26.1	-0.1
	0.4nm,0.3s,baz=183,slow=16,SNR=6.0						
KSRS	Korea Array	6.98	211	Pn	Pn	01 30 44.1	+0.4
	0.5nm,0.3s,baz=24,slow=13,SNR=3.0						

BYKL 28 01:40:13.9±0.3, 55.72N×111.19E, h10km±4km
IDC 28 01:40:13.3±1.7, 55.89N×111.24E, h0km, mb3.6/8, mb1 3.8/14, mb1mx3.6/47, mbtmp3.7/14, ML3.4/5, Error ellipse: s-maj=31.7km s-min=17.1km az=114.0
MOS 28 01:40:13.0±1.1, 55.78N×111.19E, h14km, mb3.6/1, Error ellipse: s-maj=11.7km s-min=6.4km az=79.3
ISC 28 01:40:13.1±1.1, 55.72N±0.02×111.29E±0.02, h2km±8km, n59, σ2.35/110, mb3.7/6, 6C-5D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMO	Kumora	0.18	344	⇑iPg	Pg	01 40 17.3	+0.8
KMO				i Sg	Sg	01 40 20.2	+1.3
KMO				Pmax			
	6μm,0.3s						
KMO				Smax			
	47μm,0.7s						
KMO	Kumora	0.18	344	⇓iPG	Pg	01 40 17.5	+1.0
KMO				e		01 40 20.1	
KMO				pmax	pmax		
	comp=Z,6μm,0.3s						
KMO				smax	smax		
	comp=N,7μm,0.7s						
YOA	Uoyan	0.48	30	ePg	Pg	01 40 23.9	+1.6
YOA				e		01 40 27.2	
YOA				i Sg	Sb	01 40 31.7	-0.3
YOA				Pmax			
	comp=N,1μm,0.3s						
YOA				Smax			
	comp=N,9μm,1.0s						
YOA	Uoyan	0.48	30	⇑iPG	Pg	01 40 24.0	+1.6
YOA				i		01 40 32.0	
YOA				pmax	pmax		
	comp=Z,831nm,0.3s						
YOA				smax	smax		
	comp=E,9μm,0.8s						
YLYR	Ulyunkhan	0.84	185	⇑iPg	Pg	01 40 29.3	+0.1
YLYR				eSg	Sg	01 40 41.3	+1.1
YLYR				eL	L	01 40 46.0	
YLYR				Pmax			
	comp=E,340nm,0.4s						
YLYR				Smax			
	comp=E,2μm,0.9s						
YLYR	Ulyunkhan	0.84	185	⇑iPG	Pg	01 40 29.5	+0.3
YLYR				e		01 40 39.5	
YLYR				pmax	pmax		
	comp=Z,332nm,0.6s						
YLYR				smax	smax		
	comp=E,2μm,0.7s						
NIZ	Nizh Angarsk	0.99	274	⇑iPg	Pg	01 40 31.7	-0.3
NIZ				e		01 40 35.9	
NIZ				eSg	Sg	01 40 44.8	0.0
NIZ				e		01 40 51.9	
NIZ				max			
	comp=E,228nm,0.3s						
NIZ				max			
	comp=E,733nm,0.2s						
NIZ	Nizh Angarsk	0.99	274	ePG	Pg	01 40 31.6	-0.4
NIZ				e		01 40 44.7	
NIZ				pmax	pmax		
	comp=Z,166nm,0.4s						
NIZ				smax	smax		
	comp=E,732nm,0.2s						
SVKR	Severomuysk	1.34	72	ePg	Pb	01 40 39.9	+0.9
SVKR				e		01 40 43.6	
SVKR				eSg	Sg	01 40 58.5	+2.3
SVKR				max			
	comp=E,398nm,0.1s						
SVKR				Smax			
	comp=E,3μm,0.6s						
SVKR	Severomuysk	1.34	72	ePG	Pb	01 40 39.9	+0.9
SVKR				e		01 40 56.9	
SVKR				pmax	pmax		
	comp=Z,548nm,0.3s						
SVKR				smax	smax		
	comp=E,3μm,0.7s						
UKT	Uakit	1.35	99	⇑iPg	Pn	01 40 39.3	+0.3
UKT				e		01 40 41.4	
UKT				eSg	Sb	01 40 58.1	+1.3
UKT				e		01 41 01.7	
UKT				max			
	comp=E,613nm,0.7s						
UKT				max			
	comp=E,2μm,0.6s						
SYVR	Suvo	2.19	200	ePn	Pn	01 40 50.6	+0.1
SYVR				⇓iPg	Pb	01 40 53.2	-0.3
SYVR				eSg	Sb	01 41 21.9	+0.8
SYVR				Pmax			
	comp=E,689nm,0.6s						
SYVR				Smax			
	comp=E,794nm,1.0s						
SYVR	Suvo	2.19	200	ePN	Pn	01 40 52.1	+1.6
SYVR				e		01 41 21.9	
SYVR				pmax	pmax		
	comp=Z,693nm,0.6s						
SYVR				smax	smax		
	comp=E,762nm,0.6s						
BOD	Bodaibo	2.59	34	ePn	Pn	01 40 56.3	+0.4
BOD				ePg	Pb	01 40 59.8	-0.3
BOD				e		01 41 03.6	
BOD				eSn	Sn	01 41 28.8	+0.9
BOD				eSg	Sg	01 41 34.7	-1.4
BOD				Pmax			
	comp=E,58nm,0.3s						
BOD				Smax			
	comp=E,466nm,0.6s						
BOD	Bodaibo	2.59	34	ePN	Pn	01 40 56.8	+0.9
BOD				e		01 41 01.2	
BOD				eS	Sn	01 41 28.4	+0.5
BOD				e		01 41 33.8	
BOD				pmax	pmax		
	comp=Z,55nm,0.3s						
BOD				smax	smax		
	comp=E,487nm,0.4s						
NLYR	Nelyaty	2.59	71	ePn	Pn	01 40 58.2	+2.1
NLYR				ePg	Pb	01 41 01.0	+0.7
NLYR				eSn	Sn	01 41 30.3	+2.1
NLYR				eSg	Sg	01 41 36.6	+0.3
NLYR				Pmax			
	comp=E,70nm,0.5s						
NLYR				Smax			
	comp=E,425nm,1.1s						
MXMB	Maximikha	2.87	212	ePn	Pn	01 41 01.1	+1.3
MXMB				ePg	Pb	01 41 04.4	-0.6
MXMB				e		01 41 37.7	
MXMB				eSg	Sb	01 41 43.4	+2.9
OGRR	Ongureny	2.98	227	ePn	Pn	01 41 03.6	+2.2
OGRR				ePg	Pb	01 41 05.4	-1.5
OGRR				e		01 41 09.4	
OGRR				eSn	Sn	01 41 37.2	-0.5
OGRR				eSg	Sb	01 41 45.8	+2.0
OGRR				max			
	comp=E,39nm,0.4s						
OGRR				Smax			
	comp=E,234nm,0.6s						
OGRR	Ongureny	2.98	227	ePN	Pn	01 41 01.5	+0.1
OGRR				e		01 41 07.4	
OGRR				e		01 41 46.4	
OGRR				pmax	pmax		
	comp=Z,40nm,0.6s						
OGRR				smax	smax		
	comp=E,234nm,0.6s						
KELR	Kotokel	3.51	214	ePn	Pn	01 41 06.7	-1.9
KELR				Pg	Pb	01 41 16.2	+0.3
KELR				e		01 41 19.0	
KELR				eSn	Sn	01 41 49.1	-1.6
KELR				eSg	Sb	01 42 01.6	+2.7
VTMR	Vitim	3.80	10	ePn	Pn	01 41 12.6	+0.1
VTMR				ePg	Pb	01 41 21.8	+1.1
VTMR				e		01 41 53.3	
VTMR				eSg	Sg	01 42 11.0	-3.9
CIT	Chita	3.94	159	ePN	Pn	01 41 15.0	+0.4
CIT				e		01 41 23.9	
CIT				eS	Sn	01 42 00.6	-0.7
CIT				e		01 42 16.7	
CIT				pmax	pmax		
	comp=Z,150nm,1.2s						
CIT				smax	smax		
	comp=E,288nm,1.3s						
CRS	Chara	4.07	70	ePn	Pn	01 41 18.7	+2.4
CRS				ePg	Pb	01 41 26.8	+1.4
CRS				eSg	Sg	01 42 20.9	-2.7
CRS				Pmax			
	comp=E,71nm,0.8s						
CRS				Smax			
	comp=E,359nm,1.0s						
TRTB	Turuntaevo	4.11	213	⇓iPn	Pn	01 41 18.0	+1.2
TRTB				ePg	Pb	01 41 26.1	+0.1
TRTB				e		01 42 06.3	
TRTB				eSg	Sb	01 42 20.8	+4.7
TRG	Tyrgan	4.14	226	ePn	Pn	01 41 18.2	+0.8
TRG				ePg	Pb	01 41 26.4	-0.3
TRG				e		01 42 07.2	
TRG				eSg	Sb	01 42 21.0	+3.9
TRG				Pmax			
	comp=E,30nm,1.1s						
TRG				Smax			
	comp=E,177nm,1.1s						
TRG	Tyrgan	4.14	226	ePN	Pn	01 41 18.4	+1.0
TRG				e		01 41 28.3	
TRG				eS	Sn	01 42 05.5	-0.8
TRG				e		01 42 20.7	
TRG				pmax	pmax		
	comp=Z,30nm,0.8s						
TRG				smax	smax		
	comp=N,148nm,0.4s						
FFNB	Fofonovo	4.54	218	ePn	Pn	01 41 20.1	-2.8
FFNB				ePg	Pb	01 41 33.1	-0.4
FFNB				eSg	Sb	01 42 32.7	+4.0
KAB	Kabansk	4.58	219	eSg	Sg	01 42 37.1	-3.0
KAB				Smax			
	comp=N,495nm,1.1s						
STDB	Stepnoy Dvoret	4.59	221	eSg	Sb	01 42 35.5	+5.5
HRMR	Khuramsha	4.84	214	⇓iPn	Pn	01 41 28.2	+1.3
HRMR				ePg	Pb	01 41 40.0	+1.5
HRMR				eSg	Sg	01 42 44.3	-4.0
HRMR				Pmax			
	comp=N,113nm,0.6s						
HRMR				Smax			
	comp=N,496nm,0.5s						
BGT	Bolshoye Golou	5.06	226	ePn	Pn	01 41 28.3	-1.6
BGT				ePg	Pb	01 41 42.8	+0.5
BGT				e		01 41 54.7	
BGT				e		01 42 33.5	
BGT				eSg	Sb	01 42 48.9	+5.4
TUP	Tupik	5.15	101	⇓iPn	Pn	01 41 32.7	+1.6
TUP				ePg	Pb	01 41 46.8	+3.0
TUP				eSn	Sn	01 42 29.7	-1.4
TUP				eSg	Sg	01 42 56.5	-1.8
TUP				Pmax			
	comp=N,28nm,0.7s						
TUP				Smax			
	comp=N,374nm,0.8s						
TUP	Tupik	5.15	101	ePN	Pn	01 41 32.3	+1.2
TUP				e		01 41 47.1	
TUP				eS	Sn	01 42 30.2	-0.9
TUP				e		01 42 55.9	
TUP				pmax	pmax		
	comp=Z,30nm,0.5s						
TUP				smax	smax		
	comp=N,376nm,0.8s						
IRK	Irkutsk	5.41	233	eSg	Sb	01 43 00.2	+6.7
IRK				Smax			
	comp=N,267nm,0.3s						
IRK	Irkutsk	5.41	233	ePN	Pn	01 41 35.1	+0.4
IRK				e		01 41 50.0	
IRK				e		01 42 58.9	
IRK				pmax	pmax		
	comp=Z,175nm,0.1s						
IRK				smax	smax		
	comp=E,278nm,0.4s						
LSTR	Listvyanka	5.43	227	ePn	Pn	01 41 36.7	+1.7
LSTR				ePg	Pb	01 41 49.6	+1.0

LSTR				eSg	Sb	01 43 01.2	+7.1
LSTR				Pmax			
	comp=E,6.0nm,0.4s						
LSTR				Smax			
	comp=E,46nm,0.9s						
IVK	Ivanovka	5.66	229	ePn	Pn	01 41 38.3	+0.2
IVK				e		01 41 58.2	
IVK				eSg	Sb	01 43 05.9	+5.3
YKLR	Yuktali	5.86	77	ePn	Pn	01 41 39.9	-1.0
YKLR				ePg	Pb	01 41 58.0	+2.1
YKLR				eSg	Sg	01 43 15.5	-5.7
KPC	Khapcheranga	6.06	173	ePn	Pn	01 41 43.6	-0.1
KPC				ePg	Pb	01 42 02.2	+2.9
KPC				e		01 43 06.1	
KPC				eSg	Sg	01 43 21.7	-5.8
KPC				Pmax			
	comp=E,8.0nm,0.6s						
KPC				Smax			
	comp=E,198nm,1.2s						
KPC	Khapcheranga	6.06	173	ePN	Pn	01 41 43.8	+0.1
KPC				e		01 42 02.6	
KPC				e		01 43 19.7	
KPC				pmax	pmax		
	comp=Z,16nm,0.5s						
KPC				smax	smax		
	comp=E,199nm,1.4s						
TLY	Talaya	6.08	231	ePn	Pn	01 41 44.4	+0.5
TLY				e		01 42 02.3	
TLY				eSg	Sb	01 43 20.6	+7.9
TLY				Smax			
	comp=E,123nm,1.0s						
TLY	Talaya	6.08	231	Pn	Pn	01 41 45.1	+1.2
	comp=E,0.0nm,0.3s,baz=333,slow=15,SNR=2.4						
TLY				Pg	Pb	01 42 00.7	+1.1
	comp=E,0.0nm,0.3s,baz=39,slow=12,SNR=6.1						
TLY				Lg	Lg	01 43 18.5	
	comp=E,0.1nm,0.3s,baz=280,slow=17,SNR=8.5						
ZAK	Zakamensk	7.20	225	ePN	Pn	01 42 06.7	+7.4
ZAK				e		01 43 56.7	
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ZAK				smax	smax		
	comp=E,51nm,1.0s						
ORL	Orlik	7.46	249	ePN	Pn	01 42 05.0	+2.1
ORL				e		01 42 29.0	
ORL				eS	Sn	01 43 26.1	-1.9
ORL				e		01 44 03.0	
ORL				pmax	pmax		
	comp=Z,11nm,0.6s						
ORL				smax	smax		
	comp=N,92nm,1.2s						
SONM	Songino Array	8.45	203	Pn	Pn	01 42 18.3	+1.7
	comp=N,0.8nm,0.3s,baz=11,slow=14,SNR=15						
SONM				Lg	Lg	01 44 37.0	
	comp=N,0.9nm,0.3s,baz=3.9,slow=23,SNR=4.1						
YAK	Yakutsk	11.40	49	Lg	Lg	01 46 02.0	
	comp=N,0.3nm,0.3s,baz=143,slow=20,SNR=3.4						
KLR	Kul'dur	14.03	109	Pn	Pn	01 43 34.4	+1.7
	comp=N,0.6nm,0.3s,baz=301,slow=14,SNR=11						
KLR				Lg	Lg	01 47 31.5	
	comp=N,0.2nm,0.3s,baz=218,slow=20,SNR=3.6						
ZALV	Zalesovo Beam	15.32	274	Pn	Pn	01 43 49.6	-0.5
	comp=N,0.3nm,0.3s,baz=79,slow=12,SNR=5.6						
ZALV				Lg	Lg	01 48 10.9	
	comp=N,0.2nm,0.3s,baz=73,slow=20,SNR=3.0						
NRIK	Noril'sk	17.32	331	P	Pn	01 44 13.1	-2.6
	comp=N,0.5nm,0.3s,baz=123,slow=12,SNR=5.6						
NRIK				Lg	Lg	01 49 10.6	
	comp=N,0.3nm,0.3s,baz=37,slow=13,SNR=3.3						
TIXI	Tiksi	17.65	18	P	Pn	01 44 17.2	-2.6
	comp=N,0.6nm,0.3s,baz=253,slow=9.5,SNR=4.2						
TIXI				Lg	Lg	01 49 20.7	
	comp=N,0.5nm,0.3s,baz=322,slow=12,SNR=2.6						
KURK	Kurchatov	20.07	269	P	P	01 44 46.7	-0.7
MKAR	Makanchi Array	20.09	256	P	P	01 44 47.9	+0.1
	comp=N,0.5nm,0.4s,baz=50,slow=9.5,SNR=16						
KURBB	Kurchatov Arra	20.16	269	P	P	01 44 46.7	-1.8
	comp=N,0.5nm,0.3s,baz=61,slow=11,SNR=3.3						
BVAR	Borovoye Array	23.73	281	P	P	01 45 26.0	-0.2
	comp=N,0.7nm,0.3s,baz=83,slow=10,SNR=5.7						
ARCES	ARCESS Array B	38.14	325	P	P	01 47 32.4	-0.7
	comp=N,1.5nm,0.9s,baz=93,slow=6.1,SNR=8.3						
FINES	FINESS Array B	41.77	314	P	P	01 48 03.0	-0.3
	comp=N,1.2nm,0.7s,baz=56,slow=7.1,SNR=4.9						
AKASG	Malin Array Be	46.69	300	P	P	01 48 42.9	+0.1
	comp=N,0.2nm,0.4s,baz=44,slow=8.6,SNR=4.5						
NOA	NORSAR Array B	47.77	320	P	P	01 48 50.1	-1.1
	comp=N,0.3nm,0.5s,baz=50,slow=7.7,SNR=2.8						
BRTR	Keskin Array B	51.81	287	P	P	01 49 22.8	+0.4
	comp=N,0.6nm,0.7s,baz=61,slow=6.8,SNR=3.7						

GCG 28 01:43:30.5±0.6, 13°.33N×90°.05W, h99km±13km, MD3.7
SNET 28 01:43:34.6±0.9, 13°.38N×90°.34W, h22km±4km, ML3.4
ISC 28 01:43:35.0±2.7, 13°.33N±0°.1×90°.31W±0°.07, h27km±15km, n16, σ1.61/15, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.84	52	eP	Pb	01 43 50.7	-0.5
CEVE				eS	Pb	01 44 03.8	+1.5
CEVE				IAML		01 44 04.9	
	comp=Z,3μm,0.3s						
SBLS	San Blas	0.85	52	eP	Pn	01 43 50.8	-0.7
IXG	Ixpaco	0.87	352	eP	Pn	01 43 49.6	-2.1
IXG	Ixpaco	0.87	352	eP	Pn	01 43 50.5	-1.1
IXG				eS	Sn	01 44 06.6	+3.1
UNIC	Universidad Ca	1.00	48	eS	Sn	01 44 06.0	-0.6
PCG	Pacaya	1.11	345	eP	Pn	01 43 54.2	-1.0
PCG				eS	Sn	01 44 10.7	+0.9
SNET	Serv Nac Est T	1.11	70	eS	Sn	01 44 10.1	+0.6
SNET				IAML		01 44 12.2	
	comp=Z,556nm,0.3s						
UEES	Universidad Ev	1.12	69	eP	Pn	01 43 55.1	+0.1
UEES				eS	Sn	01 44 10.4	+0.8
UEES				IAML		01 44 11.9	
	comp=Z,822nm,0.3s						
FUG	Fuego 3	1.25	336	eP	Pn	01 43 55.5	-1.4
FUG				eS	Sb	01 44 14.7	+1.0
FUG				eS		01 44 14.8	
NBG	Las Nubes	1.27	358	eP	Pn	01 43 57.8	+0.5
NBG				eS	Sn	01 44 14.4	+0.8
PAVA	Las Pavas	1.39	73	eP	Pn	01 43 59.5	+0.7
PAVA				eS	Sn	01 44 18.5	+2.0
MTO3	Montecristo	1.42	40	eP	Pn	01 43 58.7	-0.7
ALJI	Alcalda de J	1.69	89	eS	Sn	01 44 25.3	+1.6
STG3	Santiaguito 3,	1.85	319	eP	Pn	01 44 04.2	-1.1
STG3				eS	Sn	01 44 30.5	+2.6
MRL	Marmol	1.86	19	eP	Pn	01 44 04.7	-0.7
LCND	La Caada	2.35	90	IAML		01 44 46.8	
	comp=Z,115nm,0.5s						

NEIC 28 01:47:24.2±0.9, 51°.02N±0°.08×176°.10W±0°.07, h21km±7km, Error ellipse: s-maj=12.0km s-min=6.2km az=173.0
AEIC 28 01:47:24.9±1.1, 51°.02N±0°.04×176°.07W±0°.04, h26km±5km, ML3.6/27, Error ellipse: s-maj=6.1km s-min=3.3km az=178.0
IDC 28 01:47:25.5±1.8, 52°.02N×176°.43W, h0km, mb3.6/8, mb1 3.8/10, mb1mx3.6/42, mbtmp3.7/10, ML3.6/2, Error ellipse: s-maj=55.3km s-min=19.0km az=1.0
ISC 28 01:47:26.2±2.4, 51°.1N±0°.1×176°.15W±0°.04, h31km±15km, n32, σ1.52/38, mb3.7/8, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	Adak	0.86	337		Pn	01 47 41.6	-0.5
ADAG	Mount Adagdak	0.94	343		Pn	01 47 43.3	+0.1
GSMY	Great Sitkin M	0.96	3		Pn	01 47 43.3	-0.2
KIMD	Kanaga Island	0.96	315		Pn	01 47 42.9	-0.5
KIMD					Sb	01 47 57.4	+0.8
GSTD	Great Sitkin T	0.97	0		Pn	01 47 43.6	-0.1
GSTD					Sn	01 47 57.5	+1.2
KIRH	Kanaga Island	1.00	324		Pn	01 47 44.0	-0.1
GSTR	Great Sitkin T	1.01	3		Pn	01 47 44.4	+0.2
KIKV	Kanaga Island	1.02	321		Pn	01 47 44.1	-0.2
KINC	Kanaga Island	1.04	324		Pn	01 47 44.6	0.0
KICM	Kanaga Island	1.06	322		Pn	01 47 44.8	0.0
TAPA	Tanaga Point A	1.27	306		Pn	01 47 47.4	-0.3
TAPA					Sb	01 48 06.5	+1.0
TASE	Tanaga Southea	1.40	303		Pn	01 47 49.8	+0.2
TAFP	Tanaga Falls P	1.41	306		Pn	01 47 49.5	-0.1
TAFP					Sb	01 48 09.9	+0.6
ATKA	Atka Island	1.65	47		Pn	01 47 51.7	-1.2
ATKA					Sn	01 48 12.5	-0.5
KOKL	Mount Kliuchef	1.73	44		Pn	01 47 53.7	-0.4
KOFP	Korovin Flat P	1.74	46		Pn	01 47 53.7	-0.6
KOSE	Korovin Southe	1.81	45		Pn	01 47 55.5	+0.3
KOSE					Sb	01 48 19.3	-1.8
NIKH	Nikolski High	4.88	64		Pn	01 48 38.0	+0.6
MGOD	Makushin Gods	6.29	61		Pn	01 48 56.8	+0.1
UNV	Unalaska Valle	6.51	61		Pn	01 49 00.8	+1.2
KDAK	Kodiak Island	15.21	55	Pn	Pn	01 50 55.2	-3.2
	0.2nm,0.3s,baz=336,slow=20,SNR=5.6						
KDAK				Sn	Sn	01 53 50.9	+5.4
	0.2nm,0.3s,baz=158,slow=19,SNR=3.1						
PETK	Petropavlovsk-	16.17	287	Pn	P	01 51 14.3	+0.6
	1.2nm,0.3s,baz=99,slow=16,SNR=8.6						
KTH	Kantishna Hill	18.31	37	P	Pn	01 51 38.4	+0.9
ILAR	Eielson Array	20.45	37	P	P	01 51 58.6	-2.1
	0.2nm,0.3s,baz=238,slow=10,SNR=15						
YKA	Yellowknife Ar	34.22	47	P	P	01 54 06.8	-1.7
	0.2nm,0.5s,baz=281,slow=9.2,SNR=3.8						
PDAR	Pinedale Array	44.80	74	P	P	01 55 40.9	+3.8
	0.4nm,0.5s,baz=316,slow=3.8,SNR=4.7						
SONM	Songino Array	48.26	298	P	P	01 56 03.7	-0.3
	0.4nm,0.6s,baz=52,slow=8.2,SNR=4.4						
TXAR	Lajitas Array	57.04	83	P	P	01 57 13.6	+4.5
	0.1nm,0.6s,baz=307,slow=3.3,SNR=2.3						
MKAR	Makanchi Array	61.51	310	P	P	01 57 37.7	-1.9
	0.2nm,0.3s,baz=48,slow=6.4,SNR=9.2						
NOA	NORSAR Array B	68.07	356	P	P	01 58 21.0	-1.2
	1.0nm,1.0s,baz=14,slow=8.3,SNR=2.4						
AAK	Ala-Archa	68.31	311	P	P	01 58 24.2	+0.1
	3.2nm,0.8s,baz=42,slow=4.5,SNR=9.5						
BRTR	Keskin Array B	85.88	337	P	P	02 00 02.4	-0.3
	0.3nm,0.4s,baz=6.9,slow=1.9,SNR=4.6						

NIC 28 02:16:03.5±0.0, 36°.27N×28°.98E, h6km±2km, Ml2.0/3
ISK 28 02:16:04.3, 36°.50N×28°.85E, h16km, ML2.5/14
THE 28 02:16:04.5, 36°.52N×28°.85E, h3km±2km, ML2.1/1, Error ellipse: s-maj=3.0km s-min=0.8km az=135.0
ATH 28 02:16:10.5, 36°.50N×27°.98E, h16km±3km, ML1.9/2, Error ellipse: s-maj=6.7km s-min=2.0km az=79.0
ISC 28 02:16:04.0±1.0, 36°.48N±0°.03×28°.87E±0°.02, h17km±7km, n38, σ0.64/49, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.23	48	P	Pg	02 16 09.5	+0.2
FETY				S	Sg	02 16 13.1	0.0
FETY	Fethiye	0.23	48	PG	Pg	02 16 09.6	+0.2
FETY				SG	Sb	02 16 14.3	+0.6
DALY	Dalyan (Mula)	0.38	333	PG	Pb	02 16 11.9	-0.3
DALY				SG	Sb	02 16 17.6	-0.2
TURN	Turunc	0.45	332	PG	Pn	02 16 15.7	+0.1
TURN				SG	Sn	02 16 24.3	+1.1
AKAS	Kas	0.65	112	PG	Pb	02 16 17.8	+1.0
ARG	Arkhangelos	0.65	246	P	Pg	02 16 17.0	+0.2
ARG				S	Sn	02 16 27.7	-0.6
	202nm,0.5s						
ARG	Arkhangelos	0.65	246	P	Pg	02 16 17.1	+0.2
ARG				AML	AML	02 16 29.2	
	comp=N,323μm,0.7s						
ARG				AML	AML	02 16 30.6	
	comp=E,474μm,0.4s						
ARG	Arkhangelos	0.65	246	PG	Pb	02 16 17.4	+0.5
ARG	Arkhangelos	0.65	246	P	Pg	02 16 17.0	+0.2
ARG				S	Sn	02 16 28.1	-0.2
YER	Yerkesik	0.80	325	P	Pg	02 16 19.9	+0.2
YER				S	Sn	02 16 30.8	-1.4
YER	Yerkesik	0.80	325	PG	Pg	02 16 19.9	+0.2
ELL	Elmali	0.88	72	PG	Pn	02 16 22.1	+0.4
ELL	Elmali	0.88	72	P	Pb	02 16 20.6	-0.3
ELL				S	Sn	02 16 34.2	0.0
DATC	Datca-Mugla	1.01	286	PG	Pg	02 16 23.9	+0.4
DAT	Datca	1.07	284	P	Pg	02 16 24.6	0.0
DAT				S	Sn	02 16 39.3	+0.6
DAT	Datca	1.07	284	PG	Pg	02 16 25.1	+0.5
KORT	Korkueli	1.30	66	PN	Pg	02 16 29.5	+0.4
BODT	Bodrum	1.38	295	P	Pb	02 16 29.0	-0.3
BODT				S	Sg	02 16 47.4	-1.1
BODT	Bodrum	1.38	295	PN	Pb	02 16 29.3	0.0
AYDB	Zeytinkoy-Aydi	1.66	332	PN	Pn	02 16 33.1	+0.7
KARP	Karpathos	1.67	237	P	Pn	02 16 32.6	+0.2
KARP	Karpathos	1.67	237	PN	Pn	02 16 33.6	+1.2
KARP	Karpathos	1.67	237	P	Pn	02 16 32.4	0.0
KARP				S	Sb	02 16 55.2	+0.3
KARP				AML	AML	02 17 01.4	
KARP				AML	AML	02 17 01.4	
BASM	Basmaki-Afyon	1.72	33	PN	Pn	02 16 34.2	+1.0
GCAM	G?zelcaml?	1.79	314	PN	Pb	02 16 35.3	-0.9
SMG	Samos	2.03	308	P	Pn	02 16 38.2	+0.8
SMG				AML	AML	02 17 05.5	
	comp=N,113μm,0.3s						
SMG				AML	AML	02 17 06.6	
	comp=E,116μm,0.3s						
AMGA	Amorgos Island	2.42	279	P	Pn	02 16 42.5	-0.1
ZKR	Zakros	2.55	238	P	Pn	02 16 45.3	+0.8
ZKR	Zakros	2.55	238	P	Pn	02 16 45.4	+0.8
ZKR				AML	AML	02 17 30.2	
ZKR				AML	AML	02 17 31.1	
APE	Apeiranthos	2.74	283	P	Pn	02 16 47.1	-0.1
IOSP	Ios island	2.89	276	P	Pn	02 16 49.4	+0.2
NPS	Neapolis	2.91	246	P	Pn	02 16 49.0	0.0
LAST	Lasithi	3.05	245	P	Pn	02 16 51.6	+0.1
AKMS	Akamas	3.18	116	P	Pn	02 16 51.8	-1.4
IDI	Anoyia	3.44	251	P	Pn	02 16 56.5	-0.3
NATA	Nata	3.46	118	P	Pn	02 16 56.0	-1.1
SZAC	Souni	3.70	117	P	Pn	02 16 59.6	-0.7
MVOU	Mavrovouni	4.14	109	P	Pn	02 17 05.4	-1.0

NIED 28 02:28:00, 20°.40N×120°.40E, h68km, Mw5.1 Best double couple: $M_0$4.91000×10^16 NP1:ϕ_s272.00000°, δ51.00000°, λ85.00000°. NP2:ϕ_s101.00000°, δ39.00000°, λ97.00000°.
IDC 28 02:28:35.6±0.3, 20°.18N×120°.31E, h0km, mb4.5/39, mb1 4.6/42, mb1mx4.5/55, mbtmp4.5/42, ML3.7/3, MS4.0/29, Ms1 4.0/29, ms1mx3.9/59, Error ellipse: s-maj=13.3km s-min=8.1km az=79.0
JMA 28 02:28:35.8±0.4, 20°.37N×120°.42E, h0km, M4.9
NEIC 28 02:28:36.8±1.2, 20°.18N±0°.04×120°.32E±0°.06, h10km±1km, mb5.0/131, Error ellipse: s-maj=8.2km s-min=5.8km az=57.0
MAN 28 02:28:37.3, 20°.26N×120°.26E, h33km, mb5.6, ML4.6, MS4.9
MOS 28 02:28:38.8±1.0, 20°.20N×120°.32E, h32km, mb5.1/41, MS4.3/4, Error ellipse: s-maj=8.2km s-min=4.7km az=111.2
GCMT 28 02:28:38.8±0.2, 20°.24N±0°.02×120°.15E±0°.02, h12km, MW5.0/102, Moment Tensor Solution. s34,c39; s102,c160; Duration: 0 Moment tensor: Scale 10^16Nm; M_{rr}-3.02±.16; $M_{\theta\theta}$1.07±.09; $M_{\phi\phi}$1.94±.11; $M_{r\theta}$0.17±.26; $M_{r\phi}$-1.70±.06; $M_{\theta\phi}$0.96±.29; Best double couple: $M_0$3.29400×10^16 NP1:ϕ_s309.00000°, δ41.00000°, λ-111.00000°. NP2:ϕ_s155.00000°, δ52.00000°, λ-73.00000°. Principal axes: T 3.3290, Plg6.0000°, Azm233.0000°; N -0.0810, Plg13.0000°, Azm325.0000°; P -3.2590, Plg75.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
KLM 28 02:28:39.0, 20°.15N×120°.22E, h10km, mb5.0
BJI 28 02:28:40.3±0.0, 20°.47N×120°.18E, h25km, mB4.9/58, mb4.5/58, ML4.2/2, Ms4.8/67, Ms7 4.5/62
ISC 28 02:28:38.2±0.8, 20°.21N±0°.03×120°.31E±0°.04, h16km±5km, n495, σ1.64/489, mb4.9/162, MS4.1/41, 41C-22D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	Basco	1.57	81	eP	Pn	02 29 03.0	-2.3
BBP				eS	Sn	02 29 22.8	-2.6
BBP	Basco	1.57	81⇑	eP	Pn	02 29 04.5	-0.9
BBP				iS	Sn	02 29 24.3	-1.0
SIPP	Brgy, Tapao	2.27	176⇓	eP	Pn	02 29 13.9	-1.1
SIPP				eS	Sb	02 29 47.3	+0.6
APYP	Conner	2.49	159	eP	Pn	02 29 17.0	-1.0
APYP				eS	Sn	02 29 47.9	-0.2
SGCP	Mt. Cagua	2.55	140	eP	Pn	02 29 17.9	-0.9
SGCP				eS	Sn	02 29 49.5	-0.1
ABRA	Dolores	2.57	171	eP	Pn	02 29 17.2	-1.9
ABRA				eS	Sn	02 29 45.6	-4.5
SZP	Santa	2.64	177		Pn	02 29 18.6	-1.5
TWG	Pinlang	2.70	15		Pn	02 29 19.5	-1.4
TPUB	Ta-pu	3.10	5		Pn	02 29 24.3	-2.0
YULB	Yu-li	3.30	16		Pn	02 29 28.8	-0.4
CAUP	Cauayan	3.55	156	eP	Pn	02 29 33.7	+1.2
CAUP				eS	Sn	02 30 18.6	+4.4
SSLB	Suanglung	3.62	9		Pn	02 29 31.6	-2.0
BOLP	Bolinao	3.82	186	eP	Pn	02 29 36.3	0.0
BOLP				eS	Sn	02 30 21.0	+0.1
SMPP	San Manuel, Pa	4.05	175	eP	Pn	02 29 38.2	-1.3
NACB	Ninganchiao	4.13	17		Pn	02 29 39.9	-0.6
SCZP	Santa Cruz	4.42	185	eP	Pn	02 29 44.5	0.0
YHNB	Yeheng	4.55	12		Pn	02 29 46.1	-0.3
KNMB	Chin-men Tao	4.60	338	Pn	Pn	02 29 44.5	-2.4
BALP	Baler	4.60	165	eP	Pn	02 29 47.6	+0.6
BALP				eS	Sn	02 30 42.6	+2.4
TATO	Taipei	4.87	13	Pn	Pn	02 29 50.0	-0.8
JYNG	Yonagunijimaku	4.88	30	P	Pn	02 29 50.1	-0.8
JYNG				S	Sn	02 30 44.9	-2.1
YOJ	Yonaguni jima	4.92	30	P	Pn	02 29 51.3	-0.1
YOJ				eS	Sn	02 30 45.9	-2.1
YOJ	Yonaguni jima	4.92	30		Pn	02 29 50.6	-0.8
YOJ	Yonaguni jima	4.92	30	P	Pn	02 29 50.6	-0.8
QZH	Quanzhou	4.97	342	Pn	Pn	02 29 49.5	-2.7
QZH				Sn	Sn	02 30 43.3	-6.1
QZH				LR	LR		
	comp=N,4μm,10.7s						
QZH				LR	LR		
	comp=E,1μm,12.3s						
QZH				LR	LR		
	comp=Z,5μm,12.4s						
HATJ	Hateruma jima	5.02	40	P	Pn	02 29 52.7	-0.1
HATJ				S	Sn	02 30 46.6	-3.9
IRIF	Iriomote-Funau	5.19	37	P	Pn	02 29 55.1	0.0
IRIF				eS	Sn	02 30 51.6	-3.1
JKRS	Kuro-shima	5.28	40	P	Pn	02 29 56.2	-0.1
JKRS				S	Sn	02 30 54.7	-2.1
JIJ	Ishigaki jima	5.45	40	P	Pn	02 29 57.1	-1.7
JIJ				S	Sn	02 30 56.7	-4.5
POLP	Polilio Island	5.67	164	eP	Pn	02 30 02.7	+1.1
JISG	Ishigakijimahi	5.72	40	P	Pn	02 30 01.5	-0.9
JISG				eS	Sn	02 31 04.2	-3.6
JTJ	Tarama	6.00	42	P	Pn	02 30 05.9	-0.4
JTJ				eS	Sn	02 31 11.2	-3.5
TGY	Tagaytay City	6.10	174	Pn	Pn	02 30 08.3	+0.6
	48nm,0.3s,baz=257,slow=9.6,SNR=4.0						
TGY				Sn	Sn	02 31 17.9	+0.7
	36nm,0.3s,baz=73,slow=4.0,SNR=3.5						
TGY				LR	LR	02 32 45.9	
	comp=Z,1μm,21.3s,baz=238,slow=41						
HKPS	Hong Kong Po S	6.11	291		Pn	02 30 06.4	-1.4
JIRB	Irabujima	6.43	43	P	Pn	02 30 10.9	-1.3
JIRB				S	Sn	02 31 22.0	-3.3
LUBP	Lubang	6.44	181	eP	Sg	02 32 16.0	+11
PGP	Puerto Galera	6.70	175⇓	eP	Pn	02 30 24.7	+8.8
PVCP	Virac	7.53	150	eP	Pn	02 30 24.8	-2.6
SJMP	San Jose	7.74	174	eP	Pn	02 30 31.2	+1.0
OTRP	Odiongan	7.97	168	eP	Pn	02 30 36.1	+2.7
ENPP	El Nido	8.99	186	eP	Pn	02 30 46.4	-0.9
JOW	Kunigami	9.84	46	Pn	Pn	02 30 58.3	-0.7
	0.3nm,0.3s,baz=211,slow=19,SNR=7.2						
JOW	Kunigami	9.84	46	Pn	Pn	02 30 57.6	-1.4
QIZ	Qiongzhong	9.93	265	P	Pn	02 30 59.0	-1.3
QIZ				S	Sn	02 32 52.3	+0.8
QIZ				LR	LR		
	comp=N,3μm,11.8s						
QIZ				LR	LR		
	comp=E,3μm,10.4s						
QIZ				LR	LR		
	comp=Z,3μm,10.8s						
MSLP	Maasin	10.93	156	eP	Pn	02 31 15.9	+1.9
WHN	Wuhan	11.61	334	P	Pn	02 31 24.0	+0.7
WHN				S	Sn	02 33 34.0	+1.4
WHN				LR	LR		
	comp=N,5μm,11.9s						
WHN				LR	LR		
	comp=E,3μm,9.4s						
WHN				LR	LR		
	comp=Z,6μm,12.4s						
NJ2	Nanjing	11.87	354	eP	Pn	02 31 27.0	+0.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,280nm,4.3s						
NJ2				LR	LR		
	comp=N,2μm,13.2s						
NJ2				LR	LR		
	comp=E,2μm,14.9s						
NJ2				LR	LR		
	comp=Z,2μm,14.2s						
PAGZ	Pagadian	12.64	166	eP	Pn	02 31 40.4	+3.0
BUKP	Musuan	13.09	159	eP	Pn	02 31 45.2	+1.6
KCP	Kidapawan	13.91	160⇓	eP	P	02 31 60.0	-3.0
GYA	Guiyang	13.99	299⇑	iP	P	02 32 05.8	+2.0
GYA				pP	Pn	02 32 15.3	+19
GYA				PP	PnPn	02 32 16.8	+13
GYA				S	S	02 34 42.5	-10
GYA				SS	Sn	02 34 58.8	+28
ENH	Enshi	14.00	318	Pn	Pn	02 31 57.6	+1.6
SKMP	Bagumbayan, Su	14.21	163	eP	P	02 32 07.2	+0.9
KKM	Kota Kinabalu	14.63	196		Pn	02 32 00.9	-3.8
SLVN	Son La	15.38	277		Pn	02 32 14.0	-0.7
JNU	Nakatsue	15.95	34	Pn	Pn	02 32 22.6	+0.6
	0.5nm,0.3s,baz=239,slow=14,SNR=3.1						
JNU				LR	LR	02 38 35.2	
	comp=Z,712nm,21.9s,baz=223,slow=38						
JNU	Nakatsue	15.95	34	Pn	Pn	02 32 20.9	-1.0
XAN	Xi'an	17.09	326	P	P	02 32 38.5	+0.4
XAN				pmax	pmax		
	comp=Z,170nm,3.6s						
XAN				LR	LR		
	comp=N,2μm,11.9s						
XAN				LR	LR		
	comp=E,850nm,11.9s						
XAN				LR	LR		
	comp=Z,2μm,11.8s						
XAN	Xi'an	17.09	326	Pn	Pn	02 32 36.4	0.0
XAN	Xi'an	17.09	326	P	Pn	02 32 36.4	0.0
XAN				pmax	pmax		
	comp=Z,40nm,1.4s						
INCN	Inchon	18.08	16		P	02 32 49.4	+0.4
INCN	Inchon	18.08	16	P	P	02 32 49.4	+0.4
INCN				pmax	pmax		
	comp=Z,69nm,1.4s						
CD2	Chengdu	18.32	309	P	Pn	02 32 50.0	-1.7
CD2				pmax	pmax		
	comp=Z,270nm,6.7s						
CD2				LR	LR		
	comp=Z,3μm,11.4s						
CD2				LR	LR		
	comp=Z,3μm,12.0s						
CD2				LR	LR		
	comp=Z,2μm,13.1s						
KSRS	Korea Array	18.42	19	P	P	02 32 52.0	-0.8
	comp=Z,0.8nm,0.3s,baz=198,slow=12,SNR=14						
KSRS				LR	LR	02 41 18.4	
	comp=Z,601nm,18.4s,baz=196,slow=41						
DL2	Dalian	18.67	3	P	P	02 32 53.5	-2.0
DL2				S	S	02 36 26.3	-1.4
DL2				pmax	pmax		
	comp=Z,460nm,7.2s						
DL2				LR	LR		
	comp=Z,1μm,11.4s						
DL2				LR	LR		
	comp=Z,730nm,8.9s						
DL2				LR	LR		
	comp=Z,1μm,17.8s						
PBKT	Sadao Pong	18.70	262	P	P	02 32 56.0	0.0
SBUM	Sibu	19.33	205	P	P	02 33 02.0	-0.9
MRSI	Marisa	19.67	175	P	Pn	02 33 09.0	+1.0
	comp=Z,2μmcomp=Z,179nm,1.2s						
MRSI	Marisa	19.67	175	P	Pn	02 33 09.0	+1.0
	comp=Z,2μmcomp=Z,179nm,1.2s						
MPSI	Mapaga	19.75	181	P	Pn	02 33 08.7	-0.3
	comp=Z,1μmcomp=Z,44nm,0.8s						
MPSI	Mapaga	19.75	181	P	Pn	02 33 08.7	-0.3
	comp=Z,1μmcomp=Z,44nm,0.8s						
KMSI	Cibinong	19.84	169	P	Pn	02 33 12.0	+2.0
	comp=Z,177nm,0.6s						
KMSI	Cibinong	19.84	169	P	Pn	02 33 12.0	+2.0
	comp=Z,177nm,0.6s						
BJT	Baijiatuau	20.07	351	P	P	02 33 10.9	+0.2

BJT IAmb IAmb 02 33 26.2
comp=Z,82nm,1.1s
BJT Baijiatuau 20.07 351 P **P** **02 33 10.9 +0.2**
BJT pmax pmax
comp=Z,82nm,1.1s
BJI Beijing 20.09 351 P Pn 02 33 12.5 -0.3
BJI sP pwP 02 33 21.3 +1.6
BJI S **S** **02 36 56.3 +0.3**
BJI pmax pmax
comp=Z,31nm,1.0s
BJI pmax pmax
comp=Z,240nm,3.9s
BJI LR LR
comp=Z,610nm,11.2s
BJI LR LR
comp=Z,720nm,14.7s
CHTO Chiang Mai 20.19 270 P **P** **02 33 11.6 -0.6**
CHTO Chiang Mai 20.19 270 P **P** **02 33 11.6 -0.6**
CHTO pmax pmax
comp=Z,28nm,1.5s
CMAR Chiang Mai Arr 20.24 269 P **P** **02 33 13.3 +0.6**
comp=Z,1.7nm,0.3s,baz=73,slow=9.4,SNR=6.2
CMAR PcP **PcP** **02 37 26.4 -0.4**
comp=Z,0.7nm,0.4s,baz=19,slow=0.8,SNR=4.4
CMAR LR LR 02 40 55.6
comp=Z,772nm,19.3s,baz=90,slow=37
CMAR Chiang Mai Arr 20.24 269ceP Pn 02 33 14.3 -0.5
CMAR pmax pmax
comp=Z,3.0nm,0.5s
TNTI Ternate 20.51 159 P Pn 02 33 17.8 -0.2
comp=Z,82nm,1.4s
TNTI Ternate 20.51 159 P Pn 02 33 17.8 -0.2
comp=Z,82nm,1.4s
TNTI Ternate 20.51 159 P **P** **02 33 13.1 -2.7**
TNTI IAmb IAmb 02 33 23.1
comp=Z,83nm,1.1s
APSI Ampana 21.03 176 P **P** **02 33 23.3 +2.0**
comp=Z,1µmcomp=Z,113nm,1.1s
APSI Ampana 21.03 176 P **P** **02 33 23.3 +2.0**
comp=Z,1µmcomp=Z,113nm,1.1s
KSM Kuching 21.03 209 **P** **02 33 20.0 -1.3**
INU Inuyama 21.07 41 P **P** **02 33 21.3 -0.4**
INU IAmb IAmb 02 33 27.6
comp=Z,39nm,0.7s
LUWI Luwuk 21.25 173 P **P** **02 33 25.5 +1.8**
comp=Z,6µmcomp=Z,323nm,1.4s
LUWI Luwuk 21.25 173 P **P** **02 33 25.5 +1.8**
comp=Z,6µmcomp=Z,323nm,1.4s
LUWI Luwuk 21.25 173 P **P** **02 33 22.7 -1.0**
LZH Lanzhou 21.42 321 eP **P** **02 33 27.5 +1.9**
LZH pmax pmax
comp=Z,28nm,1.2s
LZH LR LR
comp=Z,1µm,11.9s
LZH LR LR
comp=Z,1µm,12.5s
LZH LR LR
comp=Z,1µm,13.6s
BKB Balikpapan 21.59 189 P **P** **02 33 24.8 -2.6**
JHJ Hachijo jima 2 21.59 49 LR LR 02 40 54.6
comp=Z,552nm,22.0s,baz=250,slow=34
SNY Shenyang 21.73 7 ⇑P **P** **02 33 28.0 -0.7**
SNY pmax pmax
comp=Z,17nm,1.4s
SNY LR LR
comp=Z,770nm,12.5s
SNY LR LR
comp=Z,440nm,9.6s
SNY LR LR
comp=Z,1µm,12.1s
LBMI Labuha 21.88 160 P **P** **02 33 32.1 +1.6**
comp=Z,191nm,1.0s
LBMI Labuha 21.88 160 P **P** **02 33 32.1 +1.6**
comp=Z,191nm,1.0s
HHC Hu-ho-hao-te 21.89 342 eP **P** **02 33 31.5 +1.0**
HHC PP **PnPn** **02 33 57.5 +5.4**
HHC S **S** **02 37 33.0 +1.1**
HHC pmax pmax
comp=Z,15nm,0.8s
HHC pmax pmax
comp=Z,140nm,4.3s
HHC LR LR
comp=Z,980nm,12.2s
HHC LR LR
comp=Z,530nm,10.2s
HHC LR LR
comp=Z,960nm,11.5s
BTO Baotou 22.15 339 eP **P** **02 33 37.3 +3.9**
MAJO Matsushiro 22.59 40 P **P** **02 33 37.3 -0.7**
MAJO IAmb IAmb 02 33 56.2
comp=Z,76nm,1.4s
MAJO Matsushiro 22.59 40⇓eP **P** **02 33 37.2 -0.7**
MAJO pmax pmax
comp=Z,13nm,1.3s
MAT Matsushiro 22.59 40 P **P** **02 33 37.8 -0.2**
MAT S **S** **02 37 49.0 +4.1**
MJAR Matsushiro Arr 22.59 40 P **P** **02 33 37.5 -0.5**
comp=Z,12nm,1.0s,baz=224,slow=8.8,SNR=14
MJAR LR LR 02 42 20.0
comp=Z,127nm,20.6s,baz=230,slow=36
MJB9 Matsu-Tunnel 22.59 40 P **P** **02 33 37.3 -0.7**
MJB9 IAmb IAmb 02 33 56.2
comp=Z,81nm,1.5s
SANI Sanana 22.81 165 P **P** **02 33 37.5 -2.9**
comp=Z,2µmcomp=Z,167nm,1.0s
SANI Sanana 22.81 165 P **P** **02 33 37.5 -2.9**
comp=Z,2µmcomp=Z,167nm,1.0s
TTSI Tana Toraja 23.11 181 P **P** **02 33 49.3 +5.8**
comp=Z,1µmcomp=Z,79nm,1.4s
TTSI Tana Toraja 23.11 181 P **P** **02 33 49.3 +5.8**
comp=Z,1µmcomp=Z,79nm,1.4s
SIJI Sorong 23.54 152 P **P** **02 33 46.3 -1.5**
comp=Z,167nm,0.8s,baz=344,slow=9.0,SNR=68
KBKI Kotabaru 23.71 190 P **P** **02 33 53.4 +3.9**
comp=Z,15nm,0.8s
KBKI Kotabaru 23.71 190 P **P** **02 33 53.4 +3.9**
comp=Z,15nm,0.8s
CN2 Changchun 23.92 9 eP **P** **02 33 50.8 -0.5**
CN2 eS **S** **02 38 08.0 +1.0**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,8.3s
CN2 LR LR
comp=Z,1µm,12.0s
CN2 LR LR
comp=Z,700nm,12.0s
CN2 LR LR
comp=Z,1µm,16.1s
SPSI Sidrap Palu 24.02 181 P **P** **02 33 55.4 +2.9**
comp=Z,1µmcomp=Z,57nm,1.2s
SPSI Sidrap Palu 24.02 181 P **P** **02 33 55.4 +2.9**
comp=Z,1µmcomp=Z,57nm,1.2s
BBKI Banjar Baru 24.12 193 P **P** **02 33 59.7 +6.3**
comp=Z,215µm,0.9s
BBKI Banjar Baru 24.12 193 P **P** **02 33 59.7 +6.3**
comp=Z,215µm,0.9s
KULM Kulim 24.19 235 P **P** **02 33 53.7 -0.4**
KULM IAmb IAmb 02 33 56.3
comp=Z,66nm,1.5s
KULM Kulim 24.19 235 P **P** **02 33 56.0 +1.9**
NLAI Namlea 24.23 163 P **P** **02 33 56.2 +1.8**
comp=Z,3µmcomp=Z,210nm,1.4s
NLAI Namlea 24.23 163 P **P** **02 33 56.2 +1.8**
comp=Z,3µmcomp=Z,210nm,1.4s
MYKOM Kota Tinggi 24.36 223 P **P** **02 33 55.8 +0.1**
MYKOM IAmb IAmb 02 34 13.2
comp=Z,59nm,1.3s
GUMO Guam 24.39 102 LR LR 02 41 45.2
comp=Z,335nm,20.4s,baz=292,slow=32
IPM Ipoh 24.43 233 P **P** **02 33 55.5 -0.8**
IPM IAmb IAmb 02 33 56.8
comp=Z,49nm,1.1s
IPM Ipoh 24.43 233 P **P** **02 33 57.0 +0.7**
BNSI Bone 24.45 180 P **P** **02 33 58.2 +1.8**
comp=Z,1µmcomp=Z,76nm,1.3s
BNSI Bone 24.45 180 P **P** **02 33 58.2 +1.8**
comp=Z,1µmcomp=Z,76nm,1.3s
MSAI Masohi 24.89 159 P **P** **02 34 03.0 +2.6**
comp=Z,1µmcomp=Z,123nm,1.2s
MSAI Masohi 24.89 159 P **P** **02 34 03.0 +2.6**
comp=Z,1µmcomp=Z,123nm,1.2s
AAI Ambon 24.98 161 P **P** **02 34 03.4 +2.2**
comp=Z,3µmcomp=Z,192nm,1.1s
AAI Ambon 24.98 161 P **P** **02 34 03.4 +2.2**
comp=Z,3µmcomp=Z,192nm,1.1s
KAPI Kappang 25.07 181 P **P** **02 34 03.2 +1.3**
comp=Z,50nm,0.9s,baz=351,slow=9.4,SNR=14
KAPI LR LR 02 44 51.2
comp=Z,262nm,18.8s,baz=360,slow=39
BKSI Bulukumba 25.37 180 P **P** **02 34 06.9 +2.2**
comp=Z,27nm,1.3s
BKSI Bulukumba 25.37 180 P **P** **02 34 06.9 +2.2**
comp=Z,27nm,1.3s
RKPI Ransiki, Papua 25.51 146 P **P** **02 34 11.1 +5.1**
comp=Z,3µmcomp=Z,123nm,1.1s
RKPI Ransiki, Papua 25.51 146 P **P** **02 34 11.1 +5.1**
comp=Z,3µmcomp=Z,123nm,1.1s
MDJ Mudanjiang 25.54 16 P **P** **02 34 07.0 +1.0**
MDJ pP pwP 02 34 17.0 +2.0
MDJ sP sP 02 34 20.8 +10
MDJ PP **PnPn** **02 34 42.0 +0.1**
MDJ S **S** **02 38 36.5 +3.6**
MDJ pmax pmax
comp=Z,14nm,1.3s
MDJ pmax pmax
comp=Z,240nm,4.7s
MDJ LR LR
comp=Z,670nm,14.1s
MDJ LR LR
comp=Z,670nm,19.6s
MDJ LR LR
comp=Z,890nm,15.7s
MDJ Mudanjiang 25.54 16 P **P** **02 34 06.1 +0.1**
MDJ IAmb IAmb 02 34 20.1
comp=Z,34nm,1.0s
FAKI Fak Fak 25.80 152 P **P** **02 34 09.2 +0.6**
comp=Z,1µmcomp=Z,88nm,1.5s
FAKI Fak Fak 25.80 152 P **P** **02 34 09.2 +0.6**
comp=Z,1µmcomp=Z,88nm,1.5s
FAKI Fak Fak 25.80 152 P **P** **02 34 07.0 -1.7**
USRK Ussuriysk Ar. 25.83 20 P **P** **02 34 09.6 +0.9**
comp=Z,5.0nm,0.8s,baz=210,slow=7.9,SNR=3.7
USRK LR LR 02 44 45.2
comp=Z,305nm,19.3s,baz=197,slow=38
GTA Gaotai 26.02 322 ⇓P **P** **02 34 10.5 -0.1**
GTA pP pP 02 34 14.8 +0.4
GTA sP sP 02 34 18.0 +2.1
GTA PcP **PcP** **02 37 39.3 +0.7**
GTA S **S** **02 38 40.5 -0.4**
GTA sS sS 02 38 47.8 +0.6
GTA pmax pmax
comp=Z,5.0nm,1.1s
GTA pmax pmax
comp=Z,290nm,5.1s
GTA LR LR
comp=Z,520nm,10.2s
GTA LR LR
comp=Z,1µm,12.1s
GTA LR LR
comp=Z,1µm,12.1s
SHL Shillong 26.70 287 P **P** **02 34 16.3 -0.7**
SHL Shillong 26.70 287 P **P** **02 34 16.3 -0.7**
SHL pmax pmax
comp=Z,17nm,1.1s
BRDH Bariadhala 26.78 280 LR LR 02 46 54.7
comp=Z,583nm,18.1s,baz=124,slow=41
PSI Prapat 27.10 233 P **P** **02 34 20.6 -0.1**
comp=Z,25nm,1.1s,baz=27,slow=7.4,SNR=15
PSI PcP **PcP** **02 37 41.5 -0.1**
comp=Z,2.8nm,0.5s,baz=134,slow=3.3,SNR=3.9
PSI LR LR 02 43 59.5
comp=Z,443nm,21.1s,baz=54,slow=34
RPSI Rantau Prapat 27.17 233 P **P** **02 34 20.6 -0.5**
RPSI **PcP** **02 37 41.5 -0.1**
RPSI Rantau Prapat 27.17 233 P **P** **02 34 19.3 -1.8**
RPSI IAmb IAmb 02 34 22.4
comp=Z,60nm,1.4s
BKNI Bangkinang 27.31 226 P **P** **02 34 21.6 -0.7**
LSA Lhasa 28.01 295 P **P** **02 34 28.9 -0.2**
LSA Lhasa 28.01 295 P **P** **02 34 28.9 -0.2**
LSA pmax pmax
comp=Z,8.0nm,0.9s
PDSI Padang 28.61 225 P P 02 34 40.8 +6.8
comp=Z,15nm,1.2s
PDSI Padang 28.61 225 P P 02 34 40.8 +6.8
comp=Z,15nm,1.2s
MMRI Maumere 28.72 176 P **P** **02 34 33.8 -1.1**
EDFI Ende, Flores 28.80 177 P **P** **02 34 35.9 +0.2**
comp=Z,430nmcomp=Z,33nm,1.4s
EDFI Ende, Flores 28.80 177 P **P** **02 34 35.9 +0.2**
comp=Z,430nmcomp=Z,33nm,1.4s
PLAI Plampang 28.96 185 P **P** **02 34 38.3 +1.3**
comp=Z,1µmcomp=Z,61nm,1.8s
PLAI Plampang 28.96 185 P **P** **02 34 38.3 +1.3**
comp=Z,1µmcomp=Z,61nm,1.8s
HIA Hailar 29.00 359 P **P** **02 34 37.5 +0.4**
HIA IAmb IAmb 02 34 53.5
comp=Z,25nm,1.4s
HIA Hailar 29.00 359 P **P** **02 34 37.5 +0.4**
HIA pmax pmax
comp=Z,25nm,1.4s
KLSI 29.09 213 P P 02 34 44.3 +6.1
comp=Z,5µmcomp=Z,258nmcomp=Z,9.1nm,1.3s
KLSI 29.09 213 P P 02 34 44.3 +6.1
comp=Z,5µmcomp=Z,258nmcomp=Z,9.1nm,1.3s
JAGI Jajag, Banyuwa 29.13 193 P **P** **02 34 38.2 -0.3**
JAGI IAmb IAmb 02 34 45.9
comp=Z,17nm,1.0s
MDSI Maura Dua 29.21 215 P **P** **02 34 42.0 +2.8**
comp=Z,896nmcomp=Z,6.3nm,1.6s
MDSI Maura Dua 29.21 215 P **P** **02 34 42.0 +2.8**
comp=Z,896nmcomp=Z,6.3nm,1.6s
PWJI Pagerwojo 29.27 197 P **P** **02 34 40.3 +0.6**
comp=Z,42nm,1.1s
PWJI Pagerwojo 29.27 197 P **P** **02 34 40.3 +0.6**
comp=Z,42nm,1.1s
WOJI Wonogiri, Jawa 29.36 199 P **P** **02 34 41.5 +1.0**
comp=Z,31nm,1.4s
WOJI Wonogiri, Jawa 29.36 199 P **P** **02 34 41.5 +1.0**
comp=Z,31nm,1.4s
KPJI Karang Pucung 29.57 203 P **P** **02 34 44.9 +2.5**
comp=Z,14nm,0.9s
KPJI Karang Pucung 29.57 203 P **P** **02 34 44.9 +2.5**
comp=Z,14nm,0.9s
ULN Ulaanbaatar 29.61 342 P **P** **02 34 42.3 -0.4**
ULN IAmb IAmb 02 34 52.4
comp=Z,39nm,1.5s
ULN Ulaanbaatar 29.61 342 P **P** **02 34 42.3 -0.4**
ULN pmax pmax
comp=Z,39nm,1.5s
PCJI Pacitan 29.62 199 P P 02 34 53.0 +10
PCJI Pacitan 29.62 199 P P 02 34 53.0 +10
LEM Lembang 29.62 206 LR LR 02 47 43.4
comp=Z,147nm,19.4s,baz=44,slow=39
SONM Songino Array 29.78 341 P **P** **02 34 44.5 +0.3**
comp=Z,5.1nm,0.8s,baz=160,slow=9.9,SNR=36
SONM PcP **PcP** **02 37 47.1 -0.5**
comp=Z,2.4nm,1.2s,baz=134,slow=4.2,SNR=4.5
SONM LR LR 02 47 41.6
comp=Z,341nm,18.8s,baz=159,slow=38
SISI Saibi 29.84 227 P **P** **02 34 44.8 -0.1**
comp=Z,863nmcomp=Z,13nm,1.5s
SISI Saibi 29.84 227 P **P** **02 34 44.8 -0.1**
comp=Z,863nmcomp=Z,13nm,1.5s
SOEI Soe 30.03 172 P **P** **02 34 46.0 -0.6**
ASAJ Asahikawa 30.22 33 P **P** **02 34 49.1 +1.1**
comp=Z,9.4nm,0.7s,baz=255,slow=20,SNR=1.6
ASAJ LR LR 02 47 39.1
comp=Z,410nm,20.5s,baz=262,slow=38
JKA Kamikawa-asahi 30.22 33 P **P** **02 34 49.1 +1.1**
KLR Kul'dur 30.38 15 P **P** **02 34 50.5 +1.2**
comp=Z,5.8nm,1.0s,baz=222,slow=3.8,SNR=5.3
KLR PcP **PcP** **02 37 48.5 -0.4**
comp=Z,1.3nm,0.6s,baz=315,slow=1.4,SNR=4.1
KLR LR LR 02 47 47.5
comp=Z,496nm,20.5s,baz=196,slow=38
KLR Kul'dur 30.38 15⇑eP **P** **02 34 50.0 +0.8**
KLR pmax pmax
comp=Z,6.0nm,1.1s
TAPN Taplejung 30.60 290 eP **P** **02 34 52.1 +0.2**
comp=Z,54nm,1.5s
ODAN Odare 30.84 289 eP **P** **02 34 54.4 +0.5**
comp=Z,27nm,0.9s
RAMN Ramite 31.55 289 eP **P** **02 35 00.8 +0.6**
comp=Z,28nm,0.8s
JIRN Jiri 31.98 290 eP **P** **02 35 04.9 +0.8**
comp=Z,98nm,1.3s
GUN Gumba 32.28 290 eP **P** **02 35 07.4 +0.7**
comp=Z,33nm,0.7s
YSS Yuzh-Sakhalins 32.35 29 eP P 02 35 23.5 +17
YSS pmax pmax
comp=Z,30nm,1.0s
YSS MLR MLR
comp=Z,300nm,19.0s
PKI Pulchoki 32.66 290 eP **P** **02 35 09.9 -0.1**
comp=Z,53nm,1.4s
PKIN Phulchoki 32.67 290 eP **P** **02 35 10.0 -0.1**
DMN Daman 32.93 290 eP **P** **02 35 12.2 -0.1**
comp=Z,53nm,1.3s
ZAK Zakamensk 33.00 340 eP **P** **02 35 11.8 -0.6**
ZAK pmax pmax
comp=Z,8.0nm,1.2s
GKN Gorkha 33.38 290 eP **P** **02 35 16.0 -0.2**
comp=Z,47nm,1.1s
TLY Talaya 34.02 341 P **P** **02 35 21.4 +0.2**
comp=Z,6.5nm,0.7s,baz=42,slow=5.2,SNR=3.8
TLY LR LR 02 50 19.9
comp=Z,282nm,19.4s,baz=142,slow=38
TLY Talaya 34.02 341 P **P** **02 35 21.3 +0.1**
TLY IAmb IAmb 02 35 34.3
comp=Z,17nm,1.1s
TLY Talaya 34.02 341 eP **P** **02 35 22.1 +0.9**
TLY pmax pmax
comp=Z,67nm,1.5s
TLY MLR MLR
comp=Z,2µm,12.0s
DANN Dangsing 34.19 291 eP **P** **02 35 23.5 +0.2**
comp=Z,29nm,0.9s
MOY Mondy 34.85 339 eP **P** **02 35 29.6 +1.1**
WMQ Urumqi 35.95 318 eP **P** **02 35 37.8 -0.2**
WMQ pP pwP 02 35 47.3 +0.2
WMQ sP sP 02 35 51.0 +7.7
WMQ pmax pmax
comp=Z,8.0nm,1.3s
WMQ pmax pmax
comp=Z,79nm,5.1s
WMQ LR LR
comp=Z,560nm,10.3s
WMQ LR LR
comp=Z,360nm,14.5s
WMQ LR LR
comp=Z,560nm,11.7s
WMQ Urumqi 35.95 318 P **P** **02 35 37.4 -0.7**
WMQ Urumqi 35.95 318 P **P** **02 35 37.4 -0.7**
WMQ pmax pmax
comp=Z,20nm,1.5s
BOD Bodaibo 37.85 355 eP **P** **02 35 54.3 +0.4**
BOD pmax pmax
comp=Z,8.0nm,1.7s
FITZ Fitzroy Crossi 38.42 172 P **P** **02 35 58.1 -1.0**
comp=Z,19nm,1.1s,baz=4.6,slow=8.6,SNR=12
FITZ Fitzroy Crossi 38.42 172 P **P** **02 35 57.8 -1.3**
FITZ IAmb IAmb 02 35 59.2
comp=Z,28nm,1.1s
KRVT Keravat (AS076 39.55 125 LR LR 02 49 06.6
comp=Z,221nm,20.7s,baz=334,slow=31
RABL Rabaul 39.58 124 P **P** **02 36 07.3 -1.7**
COEN Coen 40.72 145 P **P** **02 36 16.4 -2.0**
COEN IAmb IAmb 02 36 18.9
comp=Z,23nm,0.9s
MK31 Makanchi Array 40.73 320 eP **P** **02 36 18.7 +0.5**
MKAR Makanchi Array 40.73 320 P **P** **02 36 18.9 +0.7**
comp=Z,2.9nm,0.8s,baz=114,slow=10.0,SNR=29
MKAR PcP **PcP** **02 38 19.9 +0.4**
comp=Z,1.4nm,0.7s,baz=88,slow=5.0,SNR=3.0
MKAR LR LR 02 54 26.4
comp=Z,166nm,18.1s,baz=117,slow=38
MAKZ Makanchi 40.92 319 P **P** **02 36 19.9 +0.1**
MAKZ Makanchi 40.92 319 P **P** **02 36 19.9 +0.1**
MAKZ pmax pmax
comp=Z,25nm,1.4s
PSA00 Pilbara Seismi 41.52 181 IAmb IAmb 02 36 29.4
comp=Z,47nm,1.1s
WB0 Warramunga Arr 42.05 160 P **P** **02 36 28.3 -0.9**
WRAB Tennant Creek 42.20 160 P **P** **02 36 30.0 -0.4**
WRAB Tennant Creek 42.20 160 d iP **P** **02 36 29.6 -0.8**
WRAB pmax pmax
comp=Z,57nm,1.0s
WRA Warramunga Arr 42.20 160 P **P** **02 36 29.6 -0.9**
comp=Z,25nm,1.0s,baz=342,slow=9.1,SNR=40
WRA PcP **PcP** **02 38 24.6 0.0**
comp=Z,4.0nm,0.7s,baz=344,slow=3.3,SNR=4.9
KSH Kashi 42.50 307 P **P** **02 36 36.8 +3.8**
KSH sP pwP 02 36 44.8 +2.6
KSH S **S** **02 43 00.0 +5.3**
KSH pmax pmax
comp=Z,11nm,0.7s
KSH LR LR
comp=Z,360nm,7.3s
KSH LR LR
comp=Z,270nm,5.8s
KSH LR LR
comp=Z,460nm,8.8s
ZAA0 Zalesovo Array 43.20 330 P **P** **02 36 38.5 +0.3**
ZAA0 IAmb IAmb 02 36 47.5
comp=Z,40nm,1.4s
ZALV Zalesovo Beam 43.20 330 P **P** **02 36 38.5 +0.3**
comp=Z,6.1nm,0.7s,baz=116,slow=7.6,SNR=27
ZALV LR LR 02 55 31.2
comp=Z,224nm,18.6s,baz=88,slow=37
PETK Petropavlovsk- 43.63 32 P **P** **02 36 41.6 -0.1**
comp=Z,2.9nm,0.8s,baz=215,slow=6.7,SNR=3.5
PETK LR LR 02 54 55.0
comp=Z,238nm,20.9s,baz=239,slow=36
H11S3 WAKE ISLAND Hy 43.69 84 T T 03 23 32.7
baz=281,slow=75,SNR=9.4
NIL Nilore 43.69 298 P **P** **02 36 42.3 -0.2**
NIL IAmb IAmb 02 36 44.0
comp=Z,18nm,0.9s
NIL Nilore 43.69 298 P **P** **02 36 42.3 -0.2**
NIL pmax pmax
comp=Z,18nm,0.9s
H11S1 WAKE ISLAND Hy 43.70 84 T T 03 23 31.0
baz=281,slow=75,SNR=9.0
H11S2 WAKE ISLAND Hy 43.70 84 T T 03 23 32.2
baz=281,slow=75,SNR=8.7
AAK Ala-Archa 44.38 311 P **P** **02 36 49.1 +1.0**
comp=Z,1.3nm,0.7s,baz=102,slow=9.1,SNR=3.9
AAK Ala-Archa 44.38 311 P **P** **02 36 47.4 -0.6**
AAK Ala-Archa 44.38 311⇓eP **P** **02 36 48.9 +0.8**
AAK pmax pmax
comp=Z,3.0nm,0.9s
KURK Kurchatov 44.69 323 P **P** **02 36 50.0 -0.2**
KURK Kurchatov 44.69 323ceP **P** **02 36 51.2 +1.0**
KURK pmax pmax
comp=Z,24nm,1.3s
KURBB Kurchatov Arra 44.70 323 P **P** **02 36 50.9 +0.6**
comp=Z,10.0nm,0.8s,baz=125,slow=7.5,SNR=82
MA2 Magadan 44.96 21 P **P** **02 36 53.4 +1.1**
comp=Z,3.9nm,0.5s,baz=221,slow=14,SNR=3.9
MA2 Magadan 44.96 21 P **P** **02 36 53.2 +0.9**
MA2 IAmb IAmb 02 37 02.2
comp=Z,21nm,1.4s
MA2 Magadan 44.96 21⇓eP **P** **02 36 53.6 +1.3**
MA2 pmax pmax
comp=Z,8.0nm,1.1s
AS31 Alice Springs 45.58 162 P **P** **02 36 57.0 -0.5**
AS31 IAmb IAmb 02 36 58.9
comp=Z,15nm,1.3s
ASAR Alice Springs 45.58 162 P **P** **02 36 57.4 -0.2**
comp=Z,16nm,0.8s,baz=335,slow=6.7,SNR=105
ASAR PcP **PcP** **02 38 35.8 -0.2**
comp=Z,4.8nm,1.0s,baz=335,slow=4.1,SNR=3.5
KBL Kabul 47.24 299 P **P** **02 37 11.2 +0.3**
KBL IAmb IAmb 02 37 21.6
comp=Z,13nm,1.1s
KBL Kabul 47.24 299 P **P** **02 37 11.2 +0.3**
KBL pmax pmax
comp=Z,13nm,1.2s
KK31 Karatay Array 47.33 310 IAmb IAmb 02 37 21.9
comp=Z,12nm,1.1s
KKAR Karatay Array 47.33 310 P **P** **02 37 11.9 +0.7**
KKAR Karatay Array 47.33 310 P **P** **02 37 11.9 +0.7**
CTA Charters Tower 47.42 146 P **P** **02 37 13.0 +0.9**
comp=Z,39nm,1.0s,baz=324,slow=11,SNR=17
SEY Seymchan 47.98 19 P **P** **02 37 17.0 +1.1**
comp=Z,1.4nm,0.6s,baz=312,slow=6.5,SNR=5.2
SEY PcP **PcP** **02 38 43.7 -0.1**
comp=Z,0.6nm,0.2s,baz=141,slow=0.5,SNR=3.7
SEY Seymchan 47.98 19⇑eP **P** **02 37 15.8 -0.1**
HNR Honiara 48.87 123 LR LR 02 57 06.8
comp=Z,99nm,19.1s,baz=322,slow=35
BVAR Borovoye Array 50.29 323 P **P** **02 37 34.4 +0.6**
comp=Z,2.9nm,0.7s,baz=104,slow=9.6,SNR=16
BVAR PcP **PcP** **02 38 52.0 -0.5**
comp=Z,2.2nm,0.6s,baz=76,slow=3.6,SNR=5.9
BRVK Borovoye 50.36 323 P **P** **02 37 34.7 +0.4**
BRVK IAmb IAmb 02 37 44.4
comp=Z,33nm,1.4s

BRVK Borovoye 50.36 323 deP P 02 37 35.1 +0.8
BRVK pmax pmax
comp=Z,16nm,1.3s
FORT Forrest 51.24 171 P P 02 37 40.7 -0.3
TIXI Tiksi 51.70 3 P P 02 37 43.3 -0.6
comp=Z,1.7nm,0.3s,baz=186,slow=3.4,SNR=3.4
TIXI Tiksi 51.70 3 P P 02 37 43.4 -0.6
TIXI Tiksi 51.70 3⇑eP P 02 37 43.1 -0.9
TIXI pmax pmax
comp=Z,5.0nm,1.3s
NWAO Narrogin (SRO) 52.91 183 P P 02 37 52.7 -0.8
comp=Z,17nm,0.9s,baz=15,slow=7.2,SNR=6.4
NWAO Narrogin (SRO) 52.91 183 P P 02 37 52.9 -0.6
NWAO Narrogin (SRO) 52.91 183 P P 02 37 52.9 -0.6
NWAO pmax pmax
comp=Z,52nm,1.3s
NRIK Noril'sk 53.03 346 P P 02 37 53.8 -0.2
comp=Z,5.5nm,0.6s,baz=121,slow=6.5,SNR=6.1
NRIK Noril'sk 53.03 346⇑eP P 02 37 54.4 +0.4
EIDS Eidsvold 54.29 145 P P 02 38 03.8 0.0
BBOO Buckleboo 54.83 164 P P 02 38 07.5 0.0
STKA Stephens Creek 55.66 158 P P 02 38 13.3 -0.2
comp=Z,18nm,1.0s,baz=342,slow=5.7,SNR=20
STKA Stephens Creek 55.66 158 P P 02 38 13.9 +0.3
STKA Stephens Creek 55.66 158 P P 02 38 13.9 +0.3
STKA pmax pmax
comp=Z,6.0nm,1.1s
BILL Bilibino 55.69 19 P P 02 38 14.0 +0.6
BILL IAmb IAmb 02 38 14.6
comp=Z,10nm,0.9s
BILL Bilibino 55.69 19 deP P 02 38 13.4 +0.1
BILL e*PP pwP 02 38 28.0 +5.5
BILL pmax pmax
comp=Z,12nm,0.9s
BILL MLR MLR
comp=Z,347nm,20.0s
ABKAR Akbulak array 55.69 316 P P 02 38 13.7 +0.1
GEYT Alibeck 56.17 303 P P 02 38 17.2 -0.2
comp=Z,3.8nm,0.9s,baz=97,slow=6.1,SNR=10
GEYT LR LR 03 05 41.4
comp=Z,269nm,19.0s,baz=25,slow=40
GYA0B ALIBECK ARRAY 56.17 303 IAmb IAmb 02 38 28.8
comp=Z,20nm,1.2s
SVE Sverdlovsk 56.80 325⇓eP P 02 38 22.5 +1.0
SVE pmax pmax
comp=Z,39nm,1.3s
WBK Wadi Bani Khal 56.80 284 P P 02 38 23.0 +0.9
WSAR Wadi Sarin 57.00 285 LR LR 03 04 20.7
comp=Z,70nm,21.9s,baz=106,slow=38
WSAR Wadi Sarin 57.00 285 P P 02 38 24.6 +1.1
SNR=5.3
AKTO Aktyubinsk 57.10 318 LR LR 03 02 29.7
comp=Z,164nm,18.6s,baz=116,slow=36
BIDO Bidbid 57.41 286 P P 02 38 28.6 +2.2
SNR=6.2
JMDO Jabal Madar 57.63 284 P P 02 38 28.4 +0.4
ARU Arti 57.83 325 P P 02 38 28.7 0.0
comp=Z,2.0nm,0.4s,baz=145,slow=0.7,SNR=13
ARU LR LR 03 05 52.7
comp=Z,159nm,18.9s,baz=81,slow=39
ARU Arti 57.83 325 P P 02 38 28.4 -0.3
ARU IAmb IAmb 02 38 29.5
comp=Z,9.1nm,0.7s
ARU Arti 57.83 325c iP P 02 38 29.2 +0.5
ARU 02 39 18.8
ARU S S 02 46 30.2 +2.8
ARU pmax pmax
comp=Z,29nm,1.8s
HOQ Hoqain 58.14 286 P P 02 38 33.0 +1.5
SNR=7.0
BSY Bisya 58.39 285 P P 02 38 34.3 +1.1
DQM DQM 58.62 282 P P 02 38 35.6 +0.7
ARMA Armidale 58.66 148 P P 02 38 34.5 -0.5
BANOM Banah 58.67 289 P P 02 38 37.1 +1.9
SOHO SOHO 58.75 287 P P 02 38 37.6 +1.9
SNR=5.6
ARQ Araqi 58.90 286 P P 02 38 38.5 +1.7
ASHO Ashiyiah 59.08 287 P P 02 38 39.7 +1.6
SNR=5.7
DMTO DMTO 61.51 280 P P 02 38 54.1 -0.6
DZM Mont Dzumac 61.61 131 eLR LR 02 57 08.4
comp=Z,162nm,31.2s
DZM Mont Dzumac 61.61 131 LR LR 03 01 43.6
comp=Z,101nm,18.5s,baz=224,slow=32
TOO Toolangi 62.17 158 P P 02 38 58.6 -0.1
TOO Toolangi 62.17 158 P P 02 38 58.6 -0.1
TOO pmax pmax
comp=Z,62nm,1.1s
RBK Rabkut 62.24 280 P P 02 38 59.8 0.0
SNR=6.7
WHFO Wadi Hawf 62.55 280 P P 02 39 01.3 -0.4
KIRV Kirov 63.03 326 LR LR 03 08 54.0
comp=Z,135nm,19.0s,baz=177,slow=38
ABTO Aybut 63.12 280 P P 02 39 05.5 -0.1
SNR=5.5
PRGR Permogore 65.16 329 eP P 02 39 15.8 -2.3
PRGR pmax pmax
comp=Z,10.0nm,1.0s
ANM Nome 65.21 27 IAmb IAmb 02 39 20.9
comp=Z,8.0nm,0.9s
GNI Garni 66.42 306 P P 02 39 27.7 +0.7
GNI Garni 66.42 306 deP P 02 39 28.1 +1.1
GNI pmax pmax
comp=Z,28nm,1.2s
RDOG Red Dog Mine 66.49 24 IAmb IAmb 02 39 37.9
comp=Z,19nm,1.4s
ZEI Tsey 66.74 309 eP P 02 39 28.4 -0.6
ZEI pmax pmax
comp=Z,9.0nm,0.9s
KBZ Khabaz 67.36 310 P P 02 39 33.2 +0.7
comp=Z,4.0nm,0.9s,baz=103,slow=5.0,SNR=11
KBZ Khabaz 67.36 310ceP P 02 39 33.4 +0.8
VRH Novokhopyorsk 67.43 318 eP P 02 39 31.8 -1.1
VRH pmax pmax
comp=Z,10.0nm,0.6s
KIV Kislovodsk 67.49 310 P P 02 39 33.5 0.0
KIV IAmb IAmb 02 39 35.6
comp=Z,12nm,0.8s
KIV Kislovodsk 67.49 310 eP P 02 39 33.2 -0.4
KIV pmax pmax
comp=Z,47nm,1.1s
KIV MLR MLR
comp=Z,296nm,17.0s
MSVF Nonsavu 68.05 120 P P 02 39 37.3 -0.1
MSVF Nonsavu 68.05 120⇑eP P 02 39 38.4 +1.0
MSVF pmax pmax
comp=Z,54nm,1.1s
KLMR Klimovskoe 68.10 329 eP P 02 39 33.2 -3.7
KLMR pmax pmax
comp=Z,45nm,1.3s
KLMR Klimovskoe 68.10 329 eP P 02 39 33.2 -3.7
KLMR AMP 02 39 46.0
comp=Z,45nm,1.3s
TMCR Tamitsa 68.66 332 eP P 02 39 39.5 -0.8
RAYN Ar Rayn 68.76 288 P P 02 39 42.1 +0.2
RAYN Ar Rayn 68.76 288 P P 02 39 42.1 +0.2
RAYN pmax pmax
comp=Z,26nm,1.2s
VORD Divnogorie 68.98 318 eP P 02 39 41.4 -1.2
VORD pmax pmax
comp=Z,5.0nm,1.0s
LPSR Galich'ya Gora 69.03 320 eP P 02 39 42.0 -0.9
LPSR pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 69.03 318 eP P 02 39 41.7 -1.2
VSR pmax pmax
comp=Z,20nm,1.8s
TTA Tatalina 69.35 29 IAmb IAmb 02 39 46.8
comp=Z,9.8nm,0.7s
MOS Moscow 69.46 323 eP P 02 39 44.7 -0.8
MOS e 02 39 52.9
MOS pmax pmax
comp=Z,35nm,1.5s
OBN Obninsk 70.13 323 P P 02 39 49.3 -0.4
OBN Obninsk 70.13 323⇑eP P 02 39 48.8 -0.8
OBN e*PP pwP 02 39 58.0 -1.0
OBN *SP PcP 02 40 06.0 -5.6
OBN S S 02 49 00.0 0.0
OBN SS SS 02 53 30.0 +0.5
OBN SSS SSS 02 56 38.0
OBN pmax pmax
comp=Z,13nm,1.1s
OBN MLR MLR
comp=Z,131nm,16.0s
TOLK Toolik Lake Re 71.41 23 IAmb IAmb 02 40 06.0
comp=Z,8.3nm,0.9s
TOLK Toolik Lake Re 71.41 23 P P 02 39 57.9 +0.6
baz=278
MLY Manley 71.45 27 IAmb IAmb 02 40 08.0
comp=Z,20nm,1.0s
SKT Skwentna 71.53 30 P P 02 39 58.4 +0.3
SKT IAmb IAmb 02 40 02.4
comp=Z,18nm,1.2s
KTH Kantishna Hill 71.58 28 IAmb IAmb 02 40 06.7
comp=Z,8.1nm,0.9s
TRF Thorofare Moun 71.87 28 IAmb IAmb 02 40 17.7
comp=Z,19nm,1.4s
RND Reindeer 72.52 28 P P 02 40 03.9 -0.2
RND Reindeer 72.52 28 P P 02 40 03.9 -0.2
RND pmax pmax
comp=Z,26nm,0.8s
WRH Wood River Hil 72.66 27 IAmb IAmb 02 40 24.4
comp=Z,14nm,1.2s
TCOL CIGO, UAF Yank 72.68 27 P P 02 40 05.1 +0.2
baz=280
GAZ Gaziantep 72.74 304 IAmb IAmb 02 40 16.3
comp=Z,18nm,1.2s
CCB Clear Creek Bu 72.75 27 IAmb IAmb 02 40 13.8
comp=Z,11nm,1.3s
GHO Glory Hole Cre 72.78 30 IAmb IAmb 02 40 16.3
comp=Z,14nm,1.0s
ARCES ARCESS Array B 72.92 338 P P 02 40 06.4 +0.1
comp=Z,3.5nm,0.9s,baz=95,slow=9.5,SNR=4.1
KNK Knik Glacier 73.06 30 IAmb IAmb 02 40 16.7
comp=Z,18nm,1.0s
IL31 73.11 27 P P 02 40 07.2 -0.3
ILAR Eielson Array 73.11 27 P P 02 40 06.8 -0.7
comp=Z,2.1nm,0.7s,baz=268,slow=5.1,SNR=27
ILAR LR LR 03 14 41.6
comp=Z,52nm,19.5s,baz=291,slow=38
HDA Harding Lake 73.16 27 P P 02 40 07.1 -0.7
baz=281
SPITS Spitsbergen Ar 73.18 348 P P 02 40 07.8 +0.1
comp=Z,2.6nm,0.6s,baz=116,slow=11,SNR=3.6
FYU Fort Yukon 73.41 25 IAmb IAmb 02 40 11.7
comp=Z,31nm,1.5s
PAX Paxson 74.11 28 IAmb IAmb 02 40 15.0
comp=Z,12nm,1.2s
RIDG Independent Ri 74.20 27 IAmb IAmb 02 40 15.0
comp=Z,22nm,1.0s
FIA1 FINESS Array S 74.46 330 P P 02 40 15.7 +0.3
FIA1 IAmb IAmb 02 40 25.4
comp=Z,20nm,1.2s
FINES FINESS Array B 74.47 330 P P 02 40 15.3 -0.1
comp=Z,4.1nm,0.8s,baz=95,slow=6.1,SNR=12
FINES FINESS Array B 74.47 330 iP P 02 40 15.6 +0.2
FINES pmax pmax
comp=Z,4.0nm,0.8s
SCRK Sand Creek 74.52 27 P P 02 40 16.3 +0.4
SCRK IAmb IAmb 02 40 26.3
comp=Z,8.6nm,0.8s
VSU Vasula 74.85 327⇓eP P 02 40 16.9 -0.8
VSU pmax pmax
comp=Z,48nm,1.2s
BR131 Keskin Array S 74.89 307 P P 02 40 17.9 -0.7
BR131 Keskin Array S 74.89 307⇑eP P 02 40 18.3 -0.2
BRTR Keskin Array B 74.89 307 P P 02 40 18.4 -0.2
comp=Z,1.0nm,0.8s,baz=111,slow=5.4,SNR=8.0
BRTR Keskin Array B 74.89 307ceP P 02 40 19.2 +0.6
BRTR pmax pmax
comp=Z,1.0nm,0.8s
MENT Mentasta 74.89 28 IAmb IAmb 02 40 36.0
comp=Z,21nm,1.3s
GLB Gilahina Butte 75.23 30 IAmb IAmb 02 40 22.4
comp=Z,26nm,1.4s
AKASG Malin Array Be 75.30 319 P P 02 40 19.8 -0.7
comp=Z,1.2nm,0.6s,baz=60,slow=5.8,SNR=8.9
AKBB Malin Array Si 75.30 319⇑eP P 02 40 20.0 -0.5
MCARA McCarthy VSAT 75.61 30 IAmb IAmb 02 40 34.3
comp=Z,15nm,1.0s
BARN Barnard Glacie 76.34 30 IAmb IAmb 02 40 44.3
comp=Z,12nm,1.0s
DAWY Dawson 76.44 26 IAmb IAmb 02 40 28.5
comp=Z,9.5nm,0.8s
EPYK Eagle Plains 76.75 24 IAmb IAmb 02 40 36.3
comp=Z,18nm,1.1s
EPYK Eagle Plains 76.75 24 P P 02 40 28.3 -0.2
baz=290
INK Inuvik 77.20 21 P P 02 40 30.6 -0.3
comp=Z,4.9nm,1.0s,baz=276,slow=5.6,SNR=12
INK Inuvik 77.20 21 P P 02 40 30.8 -0.1
INK IAmb IAmb 02 40 39.5
comp=Z,28nm,1.5s
INK Inuvik 77.20 21 P P 02 40 30.8 -0.1
INK pmax pmax
comp=Z,28nm,1.5s
CFR Carcaliu 77.44 314 ⇑P P 02 40 33.4 +0.7
CFR Carcaliu 77.44 314 ⇑P P 02 40 33.4 +0.7
ISP Isparta 77.73 306 P P 02 40 34.2 -0.5
ISP Isparta 77.73 306 P P 02 40 34.2 -0.5
ISP pmax pmax
comp=Z,43nm,1.5s
SUW Suwalki 77.97 323 P P 02 40 35.4 -0.1
SUW IAmb IAmb 02 40 36.4
comp=Z,18nm,0.9s
SUW Suwalki 77.97 323 P P 02 40 35.4 -0.1
SUW pmax pmax
comp=Z,18nm,0.9s
TESR Tescani 78.06 315 ⇑P P 02 40 36.8 +0.6
VRI Vrincioaia 78.19 315 ⇑P P 02 40 38.1 +1.2
VRI Vrincioaia 78.19 315 ⇑P P 02 40 38.1 +1.2
PLOR Plostina 78.25 315 ⇑P P 02 40 39.9 +2.6
PLOR Plostina 78.25 315 ⇑P P 02 40 39.9 +2.6
HYT Haines Junctio 78.34 29 IAmb IAmb 02 40 43.2
comp=Z,19nm,1.2s
BURAR Bucovina Array 78.67 317 ⇑P P 02 40 40.4 +0.7
BURAR Bucovina Array 78.67 317 ⇑P P 02 40 40.4 +0.7
BUR08 Bucovina Ar. S 78.67 317 P P 02 40 40.4 +0.7
OZUR 78.75 315 ⇑P P 02 40 41.4 +1.3
MLR Muntele Rosu 78.83 314 ⇑P P 02 40 41.3 +0.7
MLR Muntele Rosu 78.83 314 ⇑P P 02 40 41.3 +0.7
DOPR Dopca 79.06 315 ⇓P P 02 40 42.5 +0.8
VOIR 79.44 315 ⇑P P 02 40 47.1 +3.2
VOIR 79.44 315 ⇑P P 02 40 47.1 +3.2
WHY Whitehorse 79.60 29 IAmb IAmb 02 40 47.6
comp=Z,24nm,1.5s
KWP Kalwaria Pacla 79.63 319 eP P 02 40 45.8 +1.0
KWP Kalwaria Pacla 79.63 319 P P 02 40 44.9 +0.2
KWP IAmb IAmb 02 40 54.7
comp=Z,34nm,1.4s
KWP Kalwaria Pacla 79.63 319 eP P 02 40 45.8 +1.0
ELND Elena 79.65 312 ⇑P P 02 40 53.4 +8.4
ARR Arges 79.74 315 ⇑P P 02 40 46.5 +1.0
HUMR Humele 79.77 314 ⇑P P 02 40 46.0 +0.4
C36M Paulatuk 79.81 19 IAmb IAmb 02 40 53.6
comp=Z,30nm,1.3s
C36M Paulatuk 79.81 19 P P 02 40 44.8 -0.5
baz=301
CJR Cluj-Napoca 80.00 316 ⇓P P 02 40 49.0 +2.1
CJR Cluj-Napoca 80.00 316 ⇓P P 02 40 49.0 +2.1
KOLS Kolonicke sedl 80.12 318 eP P 02 40 50.3 +2.8
KOLS Kolonicke sedl 80.12 318 eP P 02 40 50.3 +2.8
TRPA Tarpa 80.22 318 ⇓P P 02 40 48.8 +0.8
DRGR 80.55 316 ⇑P P 02 40 50.8 +0.9
DRGR 80.55 316 ⇑P P 02 40 50.8 +0.9
CRVS Cervenica-Dubn 80.64 319 eP P 02 40 51.2 +1.0
CRVS pmax pmax
comp=Z,30nm,1.6s
CRVS Cervenica-Dubn 80.64 319 eP P 02 40 51.2 +1.0
DEV Deva 80.73 315 ⇓P P 02 40 52.1 +1.4
DEV Deva 80.73 315 ⇓P P 02 40 52.1 +1.4
GZR Gura Zlata 80.97 315 ⇑P P 02 40 53.0 +0.8
GZR Gura Zlata 80.97 315 ⇑P P 02 40 53.0 +0.8
KARP Karpathos 80.99 304 P P 02 40 51.6 -0.8
NIE Niedzica 81.17 319 eP P 02 40 55.4 +2.3
NIE Niedzica 81.17 319 eP P 02 40 55.4 +2.3
OJC Ojcow 81.19 320 eP P 02 40 53.4 +0.2
OJC Ojcow 81.19 320 eP P 02 40 53.4 +0.2
NB2 NORSAR Subarra 81.35 332 P P 02 40 53.3 -0.5
comp=Z,0.9nm,0.8s,baz=64,slow=5.3
NOA NORSAR Array B 81.35 332 P P 02 40 53.2 -0.6
comp=Z,1.8nm,0.8s,baz=64,slow=5.3,SNR=5.1
NOA LR LR 03 22 05.1
comp=Z,128nm,18.5s,baz=200,slow=39
VTS Vitosha 81.59 312 ⇓P P 02 40 56.3 +0.7
VTS Vitosha 81.59 312 ⇓P P 02 40 56.3 +0.7
BZS Buzias 81.67 315 ⇑P P 02 40 55.4 -0.3
BZS Buzias 81.67 315 ⇑P P 02 40 55.4 -0.3
SANT Santorini 82.03 306 P P 02 40 57.0 -1.0
VYHS Vyhne 82.41 319 eP P 02 41 00.6 +1.0
VYHS Vyhne 82.41 319 eP P 02 41 00.6 +1.0
VAY Valandovo 82.50 311 iP P 02 41 00.4 +0.2
RES Resolute Bay 82.70 9 P P 02 40 59.5 -1.1
RES Resolute Bay 82.70 9 P P 02 40 59.5 -1.1
RES pmax pmax
comp=Z,37nm,1.5s
MORC Moravsky Berou 82.71 320 eP P 02 41 01.9 +0.7
JAVC Velka Javorina 82.99 320 eP P 02 41 05.0 +2.3
KSP Ksiaz 83.03 322 eP P 02 41 04.2 +1.4
KSP Ksiaz 83.03 322 eP P 02 41 04.2 +1.4
SKO Skopje 83.06 312 iP P 02 41 02.9 -0.2
DPC Dobruska-Polom 83.21 321 eP P 02 41 05.5 +1.7
DPC Dobruska-Polom 83.21 321 eP P 02 41 05.5 +1.7
SMOL Smolenice 83.27 319 eP P 02 41 06.4 +2.3
SMOL Smolenice 83.27 319 eP P 02 41 06.4 +2.3
VRAC Vranov 83.46 320 eP P 02 41 06.2 +1.1
VRAC Vranov 83.46 320 ⇑P P 02 41 05.0 -0.1
VRAC Vranov 83.46 320 ⇑P P 02 41 05.0 -0.1
AGG Agios Georgios 83.47 309 IAmb IAmb 02 41 06.4
comp=Z,17nm,1.3s
KRUC Moravsky 83.68 320 eP P 02 41 05.8 -0.4
OHR Ohrid 83.82 311 iP P 02 41 03.3 -3.8
KMBO Kilima Mbogo 83.87 267 P P 02 41 08.3 +0.3
comp=Z,0.7nm,0.3s,baz=64,slow=5.2,SNR=6.0
KMBO Kilima Mbogo 83.87 267 P P 02 41 07.0 -1.0
KMBO Kilima Mbogo 83.87 267 P P 02 41 07.0 -1.0
KMBO pmax pmax
comp=Z,5.0nm,1.0s
BRG Berggiesshubel 84.38 322 eP P 02 41 10.5 +0.8
comp=Z,18nm,1.4s
BRG e 03 02 01.5
comp=Z,61nm,2.2s
BRG Berggiesshubel 84.38 322 eP P 02 41 10.5 +0.8
BRG pmax pmax
comp=Z,18nm,1.4s
BRG pmax pmax
comp=Z,9.0nm,1.2s
BRG pmax pmax
comp=Z,61nm,2.2s
CONA Conrad Observa 84.46 319 ipP P 02 41 10.8 +0.6
comp=Z,13nm,1.5s
CLL Collm 84.73 323 iP P 02 41 12.5 +1.1
comp=Z,29nm,1.8s
CLL i 02 41 20.6
CLL ePP PP 02 44 28.0 +1.0
CLL Collm 84.73 323 iP P 02 41 12.5 +1.1
CLL i 02 41 20.6
CLL pmax pmax
comp=Z,29nm,1.8s
ARSA Arzberg 84.95 319 iP P 02 41 11.8 -0.9
comp=Z,5.8nm,1.2s
KHC Kasperske Hory 85.34 321 eP P 02 41 15.0 +0.4
KHC ex x 02 41 23.0
KHC Kasperske Hory 85.34 321⇓eP P 02 41 14.7 +0.1
KHC pmax pmax
comp=Z,8.0nm,1.2s
GEC2 GERESS Array S 85.39 321 P P 02 41 15.3 +0.3
GEC2 IAmb IAmb 02 41 24.7
comp=Z,14nm,1.5s
GERES GERESS Array B 85.39 321 P P 02 41 15.2 +0.2
comp=Z,1.6nm,0.7s,baz=66,slow=4.5,SNR=13
MOA Molln 85.47 320 iP P 02 41 14.1 -1.1
comp=Z,12nm,1.2s
SOKA Soboth 85.49 318 iPcP P 02 41 14.9 -0.6
comp=Z,6.2nm,1.2s
OBKA Obir 85.86 318 ipP P 02 41 18.9 +1.5
comp=Z,10nm,1.6s
KBA Koelnbreinsper 86.37 319 iPcP P 02 41 19.7 -0.2
comp=Z,7.7nm,1.4s
YKA Yellowknife Ar 86.94 22 P P 02 41 22.2 +0.1
comp=Z,5.0nm,0.8s,baz=316,slow=4.5,SNR=66
ABTA Abfaltersbach 87.03 319 iP P 02 41 21.4 -1.6
comp=Z,9.2nm,1.4s
SQTA Sankt Quirin 87.61 320 ipP P 02 41 26.5 +0.6
comp=Z,15nm,1.4s
MOTA Moosalm 87.61 320 iPcP P 02 41 25.0 -1.0
comp=Z,9.7nm,1.4s
FETA Feichten 87.99 320 iPcP P 02 41 27.0 -0.8
comp=Z,8.8nm,1.3s
D03D Eldon 91.86 37 P P 02 41 47.5 +1.8
baz=303
L02E Cave Junction 94.45 42 p P 02 41 58.0 +0.3
baz=302
J04D Umpqua Nationa 94.79 41 p P 02 42 01.1 +1.6
baz=303
PINE Pine Mountain 95.19 40 IAmb IAmb 02 42 12.6
comp=Z,12nm,1.4s
L04D Klamath Falls 95.22 41 p P 02 42 02.5 +1.1
baz=303
J05D Fort Rock, OR 95.29 40 p P 02 42 02.4 +0.7
baz=304
PPT2 Papeete2 96.02 106 eLR LR 03 13 01.0
comp=Z,153nm,25.0s
TBI Tubuai 97.98 112 eLR LR 03 13 50.5
comp=Z,89nm,32.8s
TAOE Nuku Hiva Isla 101.91 95 eS Sdif 02 54 23.0 +9.0
comp=Z,97nm,27.9s
TAOE Nuku Hiva Isla 101.91 95 eLR LR 03 15 37.6
comp=Z,218nm,23.5s
TXAR Lajitas Array 115.01 42 PKP PKiKP 02 47 19.1 -0.1
comp=Z,0.7nm,0.7s,baz=307,slow=0.5,SNR=9.3
GO10 Punta Arenas 145.96 168 PKPbc PKPab 02 48 17.9 +0.6
OCAC Ocana 148.72 27 eP PKPbc 02 48 25.3 -0.5
SDV Santo Domingo 149.15 21 PKPdf 02 48 22.2 -0.6
SDV PKPbc PKPbc 02 48 26.9 -0.1
PTBC PUERTO BERRIO 149.71 30 eP PKPdf 02 48 22.6 -0.9
RUSC La Rusia 150.91 28 eP PKPbc 02 48 31.3 -0.3
RUSC La Rusia 150.91 28 PKPbc 02 48 31.4 -0.2
YOTC Yotoco, Valle 150.92 36 eP PKPdf 02 48 26.4 +0.9
ROSC El Rosal 151.26 32 PKPbc PKPbc 02 48 32.4 +0.1
comp=Z,7.6nm,0.5s,baz=82,slow=7.1,SNR=3.6
ROSC El Rosal 151.26 32 PKiKP 02 48 32.7 -0.2
ORTC Ortega, Tolima 151.58 34 eP PKPbc 02 48 31.4 -1.2
CHIC Chingaza 151.73 31 eP PKPdf 02 48 26.8 -0.4
PRAC Prado 151.93 34 eP PKPdf 02 48 32.8 -0.7
SOTA Rioblanco 152.28 39 eP PKPbc 02 48 33.8 -1.0
OTAV Otavalo 152.61 44 PKPdf 02 48 27.4 -1.1
OTAV PKPbc PKiKP 02 48 35.8 0.0
OTAV Otavalo 152.61 44 PKIKP PKPdf 02 48 27.4 -1.1
OTAV 02 48 35.8
PLCA Paso Flores 157.54 158 PKP PKPdf 02 48 35.1 +1.1
comp=Z,2.6nm,1.0s,baz=235,slow=12,SNR=3.8
PLCA PKPab PKPab 02 49 06.3 +0.6
comp=Z,5.3nm,1.0s,baz=218,slow=7.5,SNR=6.8
PLCA Paso Flores 157.54 158 PKPdf PKPdf 02 48 33.1 -0.9
PLCA PKPab 02 49 06.1 +0.4
PLCA Paso Flores 157.54 158 PKIKP PKPdf 02 48 33.1 -0.9
SAML Samuel 168.31 17 PKPdf 02 48 44.2 -0.8
SAML Samuel 168.31 17 PKIKP PKPdf 02 48 44.2 -0.8
MNMC Minye Minye 170.61 85 PKPdf 02 48 46.8 +0.2
LPAZ La Paz 171.09 65 PKP PKPdf 02 48 48.2 +0.8
comp=Z,5.0nm,1.1s,baz=49,slow=2.5,SNR=13
LPAZ La Paz 171.09 65 PKPdf 02 48 48.0 +0.7
LPAZ La Paz 171.09 65 PKIKP PKPdf 02 48 48.0 +0.7

LJU 28 02:39:38.1,46.39N×15.07E,h0km Rockburst, Northwestern Balkan Peninsula

IDC 28 02:41:59.5±2.0,55.25N×165.38E,h0km,mb3.3/3, mb1 3.7/4,mb1mx3.2/65,mbtmp3.3/4,ML2.8/1,Error ellipse: s-maj=122.6km s-min=30.5km az=151.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	5.00	248	Pn	Pn	02 43 15.8	+0.1
	1.9nm,0.3s,baz=77,slow=18,SNR=18						
PETK				Sn	Sn	02 44 10.8	-3.2
	0.6nm,0.3s,baz=81,slow=39,SNR=3.6						
ILAR	Eielson Array	25.07	48	P	P	02 47 24.9	-0.3
	0.6nm,1.0s,baz=262,slow=8.6,SNR=6.3						
H11N2	WAKE ISLAND Hy	35.48	178	T	T	03 26 39.8	
	baz=358,slow=76,SNR=34						
H11N3	WAKE ISLAND Hy	35.49	178	T	T	03 26 39.7	
	baz=358,slow=76,SNR=28						
H11N1	WAKE ISLAND Hy	35.50	178	T	T	03 26 38.7	
	baz=358,slow=76,SNR=39						
YKA	Yellowknife Ar	39.45	46	P	P	02 49 31.1	+0.3
	0.3nm,0.6s,baz=298,slow=7.8,SNR=5.3						
TXAR	Lajitas Array	66.97	72	P	P	02 52 53.8	-0.2
	0.2nm,0.6s,baz=297,slow=4.8,SNR=3.5						

NEIC **28** *02:45:47.4±1.8, 15.98S±0.08×167.9E±0.2, h166km±7km, mb4.1/2, Error ellipse: s-maj=29.1km s-min=9.8km az=79.0*
IDC **28** *02:45:48.2±5.4, 15.95S×167.78E, h170km±51km, mb3.5/4, mb1 3.7/5, mb1mx3.3/40, mbtmp4.0/5, Error ellipse: s-maj=50.0km s-min=35.3km az=154.0*
ISC 28 02:45:48.5±1.8, **15.92S**±0.09×**167.8E**±0.3, **h177km, n9, σ1§04/10, mb4.0/5, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.71	311	Pn	Pn	02 46 12.4	-1.6
DZM	Mont Dzumac	6.24	191	P	Pn	02 47 18.3	-0.4
	2.4nm,0.3s,baz=27,slow=18,SNR=17						
DZM				S	Sn	02 48 28.8	-1.1
	0.6nm,0.3s,baz=319,slow=20,SNR=4.5						
STKA	Stephens Creek	28.60	232	P	P	02 51 29.1	+0.8
	1.1nm,0.4s,baz=64,slow=11,SNR=7.4						
STKA	Stephens Creek	28.60	232	IAmb	IAmb	02 52 07.1	
	comp=Z,6.5nm,2.0s						
WRA	Warramunga Arr	31.21	258	P	P	02 51 58.0	-0.5
	comp=Z,0.3nm,0.3s,baz=80,slow=6.1,SNR=5.9						
AS31	Alice Springs	32.71	251	P	P	02 52 04.7	+0.1
AS31				IAmb	IAmb	02 52 05.8	
	comp=Z,2.4nm,0.5s						
ASAR	Alice Springs	32.71	251	P	P	02 52 05.1	+0.6
	comp=Z,4.4nm,0.5s,baz=77,slow=8.9,SNR=66						
ASAR				PcP	PcP	02 54 46.7	+0.7
	comp=Z,0.2nm,0.3s,baz=103,slow=3.2,SNR=3.6						
SONM	Songino Array	83.73	323	P	P	02 57 58.9	+1.2
	comp=Z,0.4nm,0.6s,baz=126,slow=3.7,SNR=3.8						
ARCES	ARCESS Array B	121.52	345	PKP	PKiKP	03 04 19.8	-0.6
	comp=Z,3.0nm,1.0s,baz=48,slow=1.3,SNR=4.4						

MOS **28** *02:48:06.9±0.9, 15.79S×13.08W, h11km, mb5.2/47, Error ellipse: s-maj=10.6km s-min=5.8km az=58.8*
IDC **28** *02:48:07.1±0.5, 15.70S×13.18W, h0km, mb4.4/34, mb1 4.4/34, mb1mx4.4/44, mbtmp4.4/34, MS4.5/24, Ms1 4.5/24, ms1mx4.5/27, Error ellipse: s-maj=16.3km s-min=11.5km az=156.0*
NEIC **28** *02:48:08.5±1.7, 15.8S±0.1×13.07W±0.09, h10km±1km, mb5.2/107, Error ellipse: s-maj=18.9km s-min=14.4km az=173.0*
BJI **28** *02:48:09.0±0.0, 15.90S×13.10W, h13km, Ms5.3/6, Ms7 5.0/4*
GCMT **28** *02:48:10.5±0.1, 15.57S±0.01×13.22W±0.01, h12km, MW5.2/136, Moment Tensor Solution. s90,c112; s136,c238; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-6.03±.10; Mθθ0.15±.10; Mφφ5.88±.09; Mrθ2.54±.30; Mrφ-1.38±.08; Mθφ-0.37±.27; Best double couple: M0 6.60500×10^16 NP1:φs185.00000°, δ44.00000°, λ-62.00000°. NP2:φs328.00000°, δ53.00000°, λ-115.00000°. Principal axes: T 6.2700, Plg5.0000°, Azm75.0000°; N 0.6730, Plg19.0000°, Azm344.0000°; P -6.9410, Plg70.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 28 02:48:08.5±0.3, **15.79S**±0.08×**13.13W**±0.06, **h10km, n332, σ1§17/303, mb5.0/136, MS4.6/30, 29C-28D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	6.95	348	T	T	02 56 49.5	
	baz=52,slow=74,SNR=432						
H10S3	ASCENSION HYDR	6.96	347	T	T	02 56 49.4	
	baz=168,slow=74,SNR=454						
SHEL	Horse Pasture	7.11	92		Pn	02 49 50.8	-1.8
SHEL	Horse Pasture	7.11	92	P	Pn	02 49 50.8	-1.8
H10N1	ASCENSION HYDR	8.01	350	T	T	02 58 08.4	
	baz=170,slow=75						
H10N3	ASCENSION HYDR	8.02	350	T	T	02 58 10.1	
	baz=170,slow=75						
H10N2	ASCENSION HYDR	8.03	350	T	T	02 58 08.4	
	baz=170,slow=75						
LIC	Lamto	23.30	21	eP	P	02 53 16.4	-0.3
	156nm,1.9s						
LIC	Lamto	23.30	21	P	P	02 53 16.4	-0.3
KIC	Kosan Boka	23.52	21	eP	P	02 53 19.3	+0.3
	164nm,1.8s						
KIC	Kosan Boka	23.52	21	P	P	02 53 19.3	+0.3
TIC	Toumodi	23.69	20	eP	P	02 53 20.0	-0.6
TIC	Toumodi	23.69	20	P	P	02 53 20.0	-0.6
TIC	Toumodi	23.69	20	P	P	02 53 20.0	-0.6
DBIC	Dimbokro	23.77	21	P	P	02 53 21.2	-1.1
	5.1nm,0.9s,baz=176,slow=11,SNR=8.1						
DBIC				LR	LR	03 00 19.3	
	comp=Z,1μm,20.1s,baz=180,slow=31						
DBIC	Dimbokro	23.77	21	P	P	02 53 21.6	+0.3
DBIC	Dimbokro	23.77	21	P	P	02 53 21.7	+0.3
DBIC				pmax	pmax		
	comp=Z,54nm,1.5s						
RCBR	Riachuelo	24.43	291	P	P	02 53 26.5	-1.1
	comp=Z,6.8nm,0.8s,baz=95,slow=13,SNR=3.6						
RCBR				LR	LR	03 00 22.0	
	comp=Z,2μm,21.5s,baz=108,slow=30						
RCBR	Riachuelo	24.43	291	P	P	02 53 27.0	-0.7
RCBR				IAmb	IAmb	02 53 37.8	
	comp=Z,54nm,1.4s						
RCBR	Riachuelo	24.43	291	P	P	02 53 27.0	-0.7
RCBR				pmax	pmax		
	comp=Z,54nm,1.4s						
TSUM	Tsumeb	29.47	101	P	P	02 54 13.1	0.0
	comp=Z,1.0nm,1.0s,baz=255,slow=12,SNR=2.8						
TSUM				LR	LR	03 03 38.2	
	comp=Z,1μm,21.7s,baz=270,slow=32						
TOA0	Torodi Ar. Sit	32.28	28	P	P	02 54 37.1	-0.5
TOA0				IAmb	IAmb	02 54 43.9	
	comp=Z,36nm,1.1s						
TOA0	Torodi Ar. Sit	32.28	28	P	P	02 54 37.4	-0.2
	SNR=8.5						
TORD	Torodi Ar. Bea	32.28	28	P	P	02 54 36.7	-0.9
	comp=Z,19nm,1.0s,baz=210,slow=7.9,SNR=51						
TORD				LR	LR	03 05 17.5	
	comp=Z,2μm,20.6s,baz=220,slow=32						
BDFB	Brasilia	33.56	265	P	P	02 54 49.5	+0.4
	comp=Z,8.0nm,1.2s,baz=53,slow=8.3,SNR=5.3						
BDFB				LR	LR	03 05 42.3	
	comp=Z,2μm,20.5s,baz=111,slow=32						
BDFB	Brasilia	33.56	265	P	P	02 54 49.8	+0.7
BDFB	Brasilia	33.56	265	P	P	02 54 49.8	+0.7
BDFB				pmax	pmax		
	comp=Z,30nm,1.5s						
LBTB	Lobatse	37.33	111	P	P	02 55 21.9	+0.5
	comp=Z,4.4nm,1.0s,baz=270,slow=11,SNR=2.9						
LBTB	Lobatse	37.33	111	P	P	02 55 21.0	-0.4
LBTB	Lobatse	37.33	111	P	P	02 55 21.0	-0.4
LBTB				pmax	pmax		
	comp=Z,14nm,1.3s						
BOSA	Boshof	37.59	117	P	P	02 55 24.5	+0.9
	comp=Z,4.6nm,1.0s,baz=272,slow=8.6,SNR=4.0						
BOSA				LR	LR	03 08 17.2	
	comp=Z,943nm,19.4s,baz=278,slow=32						
BOSA	Boshof	37.59	117	P	P	02 55 21.6	-2.0
BOSA	Boshof	37.59	117	P	P	02 55 21.7	-2.0
BOSA				pmax	pmax		
	comp=Z,15nm,1.2s						
MATP	Matopo	39.76	103	P	P	02 55 39.4	-2.6
	comp=Z,5.3nm,1.1s,baz=260,slow=9.9,SNR=6.9						
LSZ	Lusaka	39.77	95	P	P	02 55 43.1	+1.1
	comp=Z,7.0nm,1.0s,baz=262,slow=8.9,SNR=9.8						
LSZ	Lusaka	39.77	95	P	P	02 55 43.2	+1.1
LSZ	Lusaka	39.77	95	P	P	02 55 43.2	+1.1
LSZ				pmax	pmax		
	comp=Z,25nm,1.3s						
CPUP	Villa Florida	42.38	248	P	P	02 56 03.4	+0.1
	comp=Z,4.4nm,0.8s,baz=99,slow=10.0,SNR=5.4						
CPUP				LR	LR	03 10 47.8	
	comp=Z,773nm,21.6s,baz=86,slow=32						
CPUP	Villa Florida	42.38	248	P	P	02 56 04.6	+1.3
CPUP	Villa Florida	42.38	248	P	P	02 56 04.6	+1.3
CPUP				pmax	pmax		
	comp=Z,25nm,1.5s						
TAM	Tamanrasset	42.47	26	P	P	02 56 05.7	+1.6
TAM	Tamanrasset	42.47	26	P	P	02 56 05.7	+1.6
TAM				pmax	pmax		
	comp=Z,13nm,1.3s						
MBAR	Mbarara	45.83	75	P	P	02 56 31.1	-0.2
MBAR	Mbarara	45.83	75	ceP	P	02 56 33.8	+2.5
MBAR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SIV	San Ignacio	46.03	263	P	P	02 56 33.2	+0.5
	comp=Z,0.7nm,0.5s,baz=122,slow=8.2,SNR=5.3						
SIV				PcP	PcP	02 58 08.6	-0.7
	comp=Z,1.6nm,0.9s,baz=90,slow=5.1,SNR=4.2						
SAML	Samuel	49.27	272	P	P	02 56 58.4	+0.5
SAML	Samuel	49.27	272	P	P	02 56 58.4	+0.5
SAML				pmax	pmax		
	comp=Z,22nm,1.4s						
KMBO	Kilima Mbogo	51.75	79	P	P	02 57 17.5	+0.5
	comp=Z,0.9nm,0.6s,baz=266,slow=15,SNR=2.3						
KMBO	Kilima Mbogo	51.75	79	P	P	02 57 17.2	+0.3
KMBO	Kilima Mbogo	51.75	79	P	P	02 57 17.3	+0.3
KMBO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CFA	Coronel Fontan	52.34	242	P	P	02 57 21.5	+0.6
	comp=Z,4.6nm,1.0s,baz=76,slow=11,SNR=5.7						
LPAZ	La Paz	52.72	261	P	P	02 57 24.7	+0.1
	comp=Z,1.6nm,1.0s,baz=85,slow=6.0,SNR=4.4						
LPAZ				LR	LR	03 18 05.8	
	comp=Z,592nm,20.5s,baz=118,slow=34						
LPAZ	La Paz	52.72	261	P	P	02 57 24.4	-0.2
LPAZ	La Paz	52.72	261	P	P	02 57 24.4	-0.2
LPAZ				pmax	pmax		
	comp=Z,8.0nm,1.5s						
GO02	Mina Guanaco	53.39	250	P	P	02 57 29.3	+0.2
GO02				IAmb	IAmb	02 57 41.3	
	comp=Z,31nm,1.4s						
PB01	IPOC Station P	53.50	255	P	P	02 57 30.2	+0.5
PB01				IAmb	IAmb	02 57 41.3	
	comp=Z,36nm,1.4s						
PB11	IPOC Station P	53.77	257	P	P	02 57 31.8	+0.1
GO03	Copiap	53.94	247	P	P	02 57 33.3	+0.5
GO03				IAmb	IAmb	02 57 47.2	
	comp=Z,40nm,1.2s						
PB04	IPOC Station P	54.03	254	P	P	02 57 33.5	-0.1
ROC1	El Roble	54.78	241	P	P	02 57 39.2	+0.1
VNA1	Neumayer--Stat	54.92	178	P	P	02 57 39.8	+0.7
VNA2	Neumayer--Watz	55.23	178	P	P	02 57 42.4	+1.1
	baz=350,slow=9.6						
PLCA	Paso Flores	55.27	231	LR	LR	03 18 17.0	
	comp=Z,841nm,20.0s,baz=111,slow=33						
KEST	Kesra	55.49	22	P	P	02 57 43.8	0.0
	comp=Z,12nm,1.0s,baz=209,slow=4.0,SNR=7.0						
KEST				LR	LR	03 21 19.3	
	comp=Z,554nm,18.9s,baz=169,slow=36						
KEST	Kesra	55.49	22	P	P	02 57 44.4	+0.7
KEST				IAmb	IAmb	02 57 54.3	
	comp=Z,40nm,1.2s						
ESDC	Sonseca Array	55.84	9	P	P	02 57 45.8	-0.3
	comp=Z,1.7nm,0.9s,baz=190,slow=8.1,SNR=3.2						
ESDC				LR	LR	03 21 20.0	
	comp=Z,214nm,19.9s,baz=210,slow=36						
SNAA	Sanae	56.20	176	P	P	02 57 48.5	0.0
SNAA	Sanae	56.20	176	P	P	02 57 48.4	0.0
	comp=Z,6.6nm,1.1s,baz=349,slow=5.1,SNR=6.9						
SNAA	Sanae	56.20	176	P	P	02 57 48.2	-0.2
SNAA				IAmb	IAmb	02 57 56.6	
	comp=Z,24nm,1.2s						
SNAA	Sanae	56.20	176	⇓eP	P	02 57 46.4	-2.0
NVL	N'lazarevskaya	57.02	170	eP	P	02 58 01.2	+7.1
NVL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
H05N1	Guadeloupe/Mar	57.05	302	T	T	03 59 21.0	
	SNR=7.1						
NNA	Nana	61.77	265	⇑eP	P	02 58 25.1	-2.9
NNA				pmax	pmax		
	comp=Z,24nm,1.1s						
HUMP	Col San Antoni	61.91	301	P	P	02 58 29.4	+0.7
SDV	Santo Domingo	61.99	289	P	P	02 58 30.2	+0.6
PDPR	Patillas Dam,	61.99	301	P	P	02 58 30.1	+0.9
PDPR				IAmb	IAmb	02 58 35.3	
	comp=Z,25nm,1.2s						
IDI	Anoyia	62.29	35	P	P	02 58 31.7	+0.7
	comp=Z,12nm,0.9s,baz=228,slow=7.1,SNR=9.4						
AQU	L'Aquila	62.81	22	P	P	02 58 35.9	+1.6
AQU	L'Aquila	62.81	22	P	P	02 58 35.9	+1.6
AQU				pmax	pmax		
	comp=Z,43nm,1.3s						
RUSC	La Rusia	63.13	285	P	P	02 58 38.3	+0.8
ROSC	El Rosal	63.92	284	P	P	02 58 43.8	+1.1
	comp=Z,2.8nm,0.4s,baz=155,slow=17,SNR=4.1						
ROSC				LR	LR	03 25 48.1	
	comp=Z,3μm,18.5s,baz=150,slow=35						
ROSC	El Rosal	63.92	284	IAmb	IAmb	02 58 49.3	
	comp=Z,23nm,1.4s						
APE	Apeiranthos	63.96	34	⇑eP	P	02 58 40.8	-1.3
APE				pmax	pmax		
	comp=Z,9.0nm,1.2s						
EIL	Elat	64.75	46	P	P	02 58 48.1	+0.8
	comp=Z,5.9nm,1.0s,baz=298,slow=8.5,SNR=3.2						
OHR	Ohrid	64.76	28	iP	P	02 58 51.1	+3.9
TEOL	Teolo	64.89	19	P	P	02 58 47.6	-0.3
CTI	Castel Tesino	65.50	19	IAmb	IAmb	02 58 54.2	
	comp=Z,19nm,1.4s						
VAY	Valandovo	65.73	29	iP	P	02 58 54.2	+0.7
SKO	Skopje	65.73	28	iP	P	02 58 54.0	+0.5
DAVA	Damuels	66.10	17	iP	P	02 58 55.8	-0.1
	comp=Z,22nm,1.3s						
FETA	Feichten	66.10	18	iP	P	02 58 55.2	-0.7
	comp=Z,9.4nm,1.1s						
ELL	Elmali	66.17	37	P	P	02 58 57.3	+0.8
ELL				IAmb	IAmb	02 59 01.6	
	comp=Z,25nm,1.1s						
ELL	Elmali	66.17	37	P	P	02 58 57.3	+0.8
ELL				pmax	pmax		
	comp=Z,25nm,1.1s						
GBAS	Gorenja Brezov	66.31	21	eP	P	02 58 57.8	+0.7
OTAV	Otavalo	66.37	277	P	P	02 58 59.0	+0.3
OTAV	Otavalo	66.37	277	P	P	02 58 59.0	+0.3
OTAV				pmax	pmax		
	comp=Z,13nm,1.5s						
ABTA	Abfaltersbach	66.39	19	iP	P	02 58 57.8	+0.1
	comp=Z,9.9nm,1.1s						
SQTA	Sankt Quirin	66.42	18	iP	P	02 58 57.6	-0.3
	comp=Z,24nm,1.3s						
MOTA	Moosalm	66.50	18	iP	P	02 58 59.9	+1.4
	comp=Z,23nm,1.6s						
UBR	Ueberruh	66.52	17	eP	P	02 58 57.6	-0.8
	comp=Z,13nm,1.0s,baz=205,slow=6.2						
RETA	Reutte	66.53	17	iP	P	02 58 58.0	-0.5
	comp=Z,12nm,1.2s						
WTTA	Wattenberg	66.59	18	iP	P	02 58 58.5	-0.6
	comp=Z,19nm,1.1s						
WATA	Walderalm	66.63	18	iP	P	02 58 59.4	+0.1
	comp=Z,13nm,1.5s						
MANT	Manisa	66.64	35	P	P	02 59 00.3	+0.7
BFO	Black Forest	66.64	15	P	P	02 58 59.7	+0.5
BFO				IAmb	IAmb	02 59 05.9	
	comp=Z,23nm,1.2s						
BFO	Black Forest	66.64	15	P	P	02 58 59.7	+0.5
BFO				pmax	pmax		
	comp=Z,23nm,1.2s						
MYKA	Terra Mystica	66.65	20	iP	P	02 59 01.4	+2.1
	comp=Z,20nm,1.6s						
OBKA	Obir	66.84	20	iP	P	02 59 00.1	-0.5
	comp=Z,10.0nm,1.4s						
KBA	Koelnbreinsper	66.95	19	iP	P	02 59 00.9	-0.4
	comp=Z,16nm,1.2s						
VTS	Vitosha	67.06	28	⇓P	P	02 59 02.5	+0.4
VTS	Vitosha	67.06	28	IAmb	IAmb	02 59 09.1	
	comp=Z,14nm,1.1s						
VTS	Vitosha	67.06	28	⇓P	P	02 59 02.5	+0.4
ALN	Alexandroupoli	67.08	31	P	P	02 59 02.6	+0.5
ALN	Alexandroupoli	67.08	31	P	P	02 59 02.6	+0.5
ALN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SOKA	Soboth	67.15	21	iP	P	02 59 03.0	+0.4
	comp=Z,11nm,1.0s						
RJOB	Jochberg	67.36	19	eP	P	02 59 03.0	-0.8
	comp=Z,3.9nm,0.9s,baz=205,slow=6.2						
ARSA	Arzberg	67.82	21	iP	P	02 59 06.2	-0.5
	comp=Z,20nm,1.2s						
MOA	Molln	67.92	20	iP	P	02 59 06.3	-1.0
	comp=Z,23nm,1.4s						
CONA	Conrad Observa	68.52	21	iP	P	02 59 11.3	+0.1
	comp=Z,16nm,1.2s						
ELND	Elena	68.53	30	⇓P	P	02 59 11.0	-0.2
GEC2	GERESS Array S	68.62	19	eP	P	02 59 11.1	-0.6
	comp=Z,5.6nm,1.1s,baz=205,slow=6.2						
GEC2	GERESS Array S	68.62	19	IAmb	IAmb	02 59 23.8	
	comp=Z,17nm,1.4s						
GERES	GERESS Array B	68.62	19	P	P	02 59 11.3	-0.5
	comp=Z,1.6nm,0.8s,baz=217,slow=3.3,SNR=10						
GERES				LR	LR	03 29 45.0	
	comp=Z,355nm,18.6s,baz=227,slow=36						
WET	Wettzell	68.64	18	eP	P	02 59 11.6	-0.2
	comp=Z,6.5nm,1.0s,baz=205,slow=6.2						
BZS	Buzias	68.74	25	⇓P	P	02 59 12.8	+0.3
BZS	Buzias	68.74	25	⇓P	P	02 59 12.8	+0.3
KHC	Kasperske Hory	68.84	18	eP	P	02 59 12.5	-0.6
KHC				epP	pwP	02 59 18.5	-0.8
KHC				ePP	PP	03 01 45.5	+0.1
KHC	Kasperske Hory	68.84	18	eP	P	02 59 12.5	-0.6
KHC				e		02 59 18.5	
KHC				e		03 01 45.5	
ROTZ	Rotzenmuhle	69.00	17	eP	P	02 59 12.1	-1.9
	comp=Z,6.5nm,1.0s,baz=205,slow=6.2						
COPA	Copaceanca	69.15	29	⇓P	P	02 59 14.5	-0.5
MANZ	Manzenberg	69.17	17	eP	P	02 59 15.3	+0.2
	comp=Z,10nm,1.2s,baz=205,slow=6.2						
ZST	Bratislava	69.17	21	eP	P	02 59 15.4	+0.3
ZST				pmax	pmax		
	comp=Z,64nm,1.7s						
ZST	Bratislava	69.17	21	eP	P	02 59 15.3	+0.2
SIRR	Siria	69.29	25	⇑P	P	02 59 16.4	+0.5
RAYN	Ar Rayn	69.35	57	P	P	02 59 17.8	+1.0
RAYN				IAmb	IAmb	02 59 25.9	
	comp=Z,18nm,1.4s						
RAYN	Ar Rayn	69.35	57	P	P	02 59 17.8	+1.0
RAYN				pmax	pmax		
	comp=Z,18nm,1.5s						
MODS	Modra-Piesok	69.39	21	eP	P	02 59 16.1	-0.3
MODS				pmax	pmax		
	comp=Z,56nm,1.5s						
MODS	Modra-Piesok	69.39	21	eP	P	02 59 16.1	-0.3
PBCC	Pribram	69.46	18	eP	P	02 59 16.9	+0.1
WERN	Wernitzgruen	69.52	17	eP	P	02 59 17.2	0.0
	comp=Z,6.0nm,1.0s,baz=205,slow=6.2						
GUNZ	Gunzen	69.57	17	eP	P	02 59 17.6	0.0
	comp=Z,6.2nm,0.9s,baz=205,slow=6.2						
MOX	Moxa	69.63	17	eP	P	02 59 17.7	-0.2
	comp=Z,10nm,1.1s,baz=205,slow=6.2						
TANN	Tannenbergstha	69.66	17	eP	P	02 59 18.9	+0.8
	comp=Z,13nm,1.1s,baz=205,slow=6.2						
KRUC	Moravsky	69.68	20	eP	P	02 59 17.9	-0.3
ARR	Arges	69.84	27	⇑P	P	02 59 19.5	+0.2
PRU	Pruhonice	69.89	19	eP	P	02 59 19.4	-0.1
PRU				epP	pwP	02 59 25.3	-0.5
PRU	Pruhonice	69.89	19	eP	P	02 59 19.4	-0.1
PRU				e		02 59 25.3	
GOPC	GO Pecny, Ondr	69.90	19	eP	P	02 59 19.7	+0.1
GOPC				epP	pwP	02 59 24.4	-1.5
GOPC	GO Pecny, Ondr	69.90	19	eP	P	02 59 19.7	+0.1
GOPC				e		02 59 24.4	
JAVC	Velka Javorina	69.94	21	eP	P	02 59 20.6	+0.7
PSZ	Piszkesteto	69.95	23	⇑P	P	02 59 20.3	+0.3
PSZ	Piszkesteto	69.95	23	IAmb	IAmb	02 59 27.4	
	comp=Z,33nm,1.4s						
PSZ	Piszkesteto	69.95	23	⇑P	P	02 59 20.3	+0.3
ANTO	Ankara	69.96	36	P	P	02 59 21.1	+0.9
ANTO				IAmb	IAmb	02 59 24.1	
	comp=Z,19nm,1.1s						
ANTO	Ankara	69.96	36	P	P	02 59 21.1	+0.9
ANTO				pmax	pmax		
	comp=Z,19nm,1.2s						
VRAC	Vranov	69.96	20	eP	P	02 59 19.7	-0.3
VRAC	Vranov	69.96	20	⇓P	P	02 59 19.6	-0.3
VRAC	Vranov	69.96	20	⇓P	P	02 59 19.6	-0.3
VYHS	Vyhne	70.04	22	eP	P	02 59 20.9	+0.4
VYHS				pmax	pmax		
	comp=Z,45nm,1.5s						
VYHS	Vyhne	70.04	22	eP	P	02 59 20.9	+0.4
VOIR		70.08	28	⇓P	P	02 59 20.4	-0.4
VOIR		70.08	28	⇓P	P	02 59 20.4	-0.4
DRGR		70.14	25	⇓P	P	02 59 20.2	-1.0
DRGR		70.14	25	⇓P	P	02 59 20.2	-1.0
MAW	Mawson	70.18	157	LR	LR	03 22 56.5	
	comp=Z,284nm,20.1s,baz=262,slow=30						
NEUB	Neuenburg	70.18	16	eP	P	02 59 21.9	+0.6
	comp=Z,11nm,0.8s,baz=205,slow=6.2						
BR131	Keskin Array S	70.34	37	P	P	02 59 23.2	+0.6
BR131	Keskin Array S	70.34	37	P	P	02 59 23.7	+1.0
	SNR=7.7						
BR131	Keskin Array S	70.34	37	ceP	P	02 59 23.7	+1.0
BRTR	Keskin Array B	70.34	37	P	P	02 59 23.4	+0.6
	comp=Z,4.6nm,0.9s,baz=206,slow=5.8,SNR=25						
BRTR				LR	LR	03 32 04.8	
	comp=Z,66nm,18.5s,baz=222,slow=38						
BRTR	Keskin Array B	70.34	37	ceP	P	02 59 23.7	+1.0
BRTR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PVCC	Panska Ves	70.38	18	eP	P	02 59 23.2	+0.8
PVCC	Panska Ves	70.38	18	eP	P	02 59 23.2	+0.8
BRG	Berggiesshubel	70.49	18	eP	P	02 59 22.5	-0.7
	comp=Z,32nm,2.0s						
BRG	Berggiesshubel	70.49	18	eP	P	02 59 22.5	-0.7
BRG				pmax	pmax		
	comp=Z,32nm,2.0s						
BRG	Berggiesshubel	70.49	18	ePKKP	P	02 59 22.6	-0.6
	comp=Z,8.8nm,1.2s						
MLR	Muntele Rosu	70.52	28	⇓P	P	02 59 23.5	-0.1
MLR	Muntele Rosu	70.52	28	⇓P	P	02 59 23.5	-0.1
CLL	Collm	70.61	17	eP	P	02 59 24.0	+0.2
	comp=Z,67nm,2.3s						
CLL				ePP	PP	03 02 02.0	+1.5
CLL	Collm	70.61	17	eP	P	02 59 24.0	+0.2
CLL				pmax	pmax		
	comp=Z,67nm,2.3s						
DOPR	Dopca	70.64	27	⇓P	P	02 59 22.7	-1.5
MORC	Moravsky Berou	70.68	21	eP	P	02 59 24.6	+0.2
MORC	Moravsky Berou	70.68	21	⇑P	P	02 59 24.6	+0.2
MORC	Moravsky Berou	70.68	21	IAmb	IAmb	02 59 36.0	
	comp=Z,28nm,1.5s						
MORC	Moravsky Berou	70.68	21	⇑P	P	02 59 24.6	+0.2
KRLC	Kraliky	70.68	20	eP	P	02 59 24.7	+0.3
KRLC				epP	pwP	02 59 30.2	-0.5
KRLC	Kraliky	70.68	20	eP	P	02 59 24.7	+0.3
KRLC				e		02 59 30.2	
DPC	Dobruska-Polom	70.77	19	eP	P	02 59 25.4	+0.5
DPC				ex	x	02 59 31.5	
DPC	Dobruska-Polom	70.77	19	eP	P	02 59 25.4	+0.5
DPC				e		02 59 31.5	
GAZ	Gaziantep	70.85	41	IAmb	IAmb	02 59 33.5	
	comp=Z,17nm,1.1s						
CHVC	Chvalec	70.89	19	eP	P	02 59 25.6	0.0
TIRR	Tirgusor	70.90	30	⇓P	P	02 59 23.9	-1.8
TIRR	Tirgusor	70.90	30	⇓P	P	02 59 23.9	-1.8
OZUR		70.91	28	⇓P	P	02 59 25.6	-0.3
OSTC	Ostas	70.91	19	eP	P	02 59 25.9	+0.1
OSTC				ex	x	02 59 31.8	
NRDL	Niedersach Rie	70.92	15	eP	P	02 59 27.0	+1.4
	comp=Z,12nm,1.1s,baz=205,slow=6.2						
OKC	Ostrava-Krasne	70.93	21	eP	P	02 59 26.4	+0.5
OKC				epP	pwP	02 59 32.1	0.0
OKC	Ostrava-Krasne	70.93	21	eP	P	02 59 26.4	+0.5
OKC				e		02 59 32.1	
PLOR	Plostina	71.11	28	⇑P	P	02 59 26.7	-0.4
PLOR	Plostina	71.11	28	⇑P	P	02 59 26.7	-0.4
TRPA	Tarpa	71.14	24	⇓P	P	02 59 26.6	-0.6
VRI	Vrincioaia	71.16	28	⇑P	P	02 59 25.8	-1.6
VRI	Vrincioaia	71.16	28	⇑P	P	02 59 25.8	-1.6
KSP	Ksiaz	71.19	19	eP	P	02 59 28.3	+0.9
KSP	Ksiaz	71.19	19	eP	P	02 59 28.3	+0.9
TOPG	Topolog	71.19	30	⇓P	P	02 59 26.5	-1.1
ILGA	Ilgaz	71.27	36	IAmb	IAmb	02 59 31.6	
	comp=Z,14nm,1.0s						
NIE	Niedzica	71.34	22	eP	P	02 59 30.1	+1.7
NIE	Niedzica	71.34	22	eP	P	02 59 30.1	+1.7
CRVS	Cervenica-Dubn	71.35	23	eP	P	02 59 29.0	+0.6
CRVS				pmax	pmax		
	comp=Z,48nm,1.4s						
CRVS	Cervenica-Dubn	71.35	23	eP	P	02 59 29.0	+0.6
TESR	Tescani	71.61	28	⇑P	P	02 59 29.5	-0.6
KOLS	Kolonicke sedl	71.69	24	eP	P	02 59 31.2	+0.7
KOLS				pmax	pmax		
	comp=Z,20nm,1.7s						
KOLS	Kolonicke sedl	71.69	24	eP	P	02 59 31.2	+0.7
OJC	Ojcow	71.83	22	eP	P	02 59 31.9	+0.6
OJC	Ojcow	71.83	22	IAmb	IAmb	02 59 38.5	
	comp=Z,17nm,1.2s						
OJC	Ojcow	71.83	22	eP	P	02 59 31.9	+0.6
BURAR	Bucovina Array	71.84	26	⇓P	P	02 59 31.1	-0.4
BURAR	Bucovina Array	71.84	26	⇓P	P	02 59 31.1	-0.4
BUR08	Bucovina Ar. S	71.85	26	P	P	02 59 33.0	+1.4
BSEG	Bad Segeberg	72.29	14	eP	P	02 59 28.9	-5.0
	comp=Z,13nm,1.0s,baz=205,slow=6.2						
KWP	Kalwaria Pacla	72.42	24	eP	P	02 59 37.1	+2.3
KWP	Kalwaria Pacla	72.42	24	IAmb	IAmb	02 59 52.8	

comp=Z,42nm,1.5s
KWP Kalwaria Pacla 72.42 24 eP P 02 59 37.1 +2.3
MILM Milestii Mici 72.91 29 ⇑P P 02 59 37.1 -0.7
KIS Kishinev 72.97 29 ePKP P 02 59 36.0 -2.1
KIS Kishinev 72.97 29 eP P 02 59 36.0 -2.1
KIS e 02 59 49.0
LVV L'vov 73.09 24 eP P 02 59 38.9 +0.1
LVV eS S 03 09 04.1 -2.1
LVV MLR MLR
comp=Z,200nm,17.0s
GKP Gorka Klasztor 73.58 18 eP P 02 59 42.1 +0.5
GKP Gorka Klasztor 73.58 18 eP P 02 59 42.1 +0.5
SORM Soroca 73.60 28 ⇓P P 02 59 40.2 -1.6
SORM Soroca 73.60 28 ⇓P P 02 59 40.2 -1.6
QSPA South Pole Qui 74.38 180 P P 02 59 47.0 +0.6
KLNR Kaliningrad 75.64 19⇓eP P 02 59 52.8 -0.7
KLNR pmax pmax
comp=Z,27nm,0.9s
AKASG Malin Array Be 75.89 26 P P 02 59 54.0 -1.0
comp=Z,5.2nm,0.9s,baz=220,slow=5.2,SNR=25
AKASG LR LR 03 33 07.5
comp=Z,133nm,21.0s,baz=230,slow=36
AKASG Malin Array Be 75.89 26ceP P 02 59 54.5 -0.6
AKASG pmax pmax
comp=Z,7.0nm,1.0s
AKBB Malin Array Si 75.89 26 IAmb IAmb 03 00 01.5
comp=Z,18nm,1.1s
AKBB Malin Array Si 75.89 26⇑eP P 02 59 54.4 -0.7
SUW Suwalki 76.14 21 eP P 02 59 56.8 +0.4
SUW Suwalki 76.14 21 eP P 02 59 56.8 +0.4
SOC Sochi 76.31 37 eP P 02 59 57.8 +0.2
SOC ePPP PPP 03 04 32.6
SOC eS S 03 09 45.1 +2.7
SOC eSS SS 03 14 33.6 -3.3
SOC eSSS SSS 03 17 47.9
ACON Acoyapa 76.43 287 P P 02 59 59.3 +0.4
ACON IAmb IAmb 03 00 04.5
comp=Z,25nm,1.3s
GNI Garni 77.36 42 P P 03 00 04.7 +0.8
comp=Z,2.2nm,0.5s,baz=27,slow=2.7,SNR=7.3
GNI Garni 77.36 42 P P 03 00 04.3 +0.4
GNI IAmb IAmb 03 00 11.6
comp=Z,24nm,1.2s
GNI Garni 77.36 42ceP P 03 00 05.8 +1.9
GNI pmax pmax
comp=Z,73nm,1.7s
NEY Neytrino 77.86 38⇑eP P 03 00 07.4 +0.8
NEY pmax pmax
comp=Z,1.0nm,0.9s
KBZ Khabaz 78.25 38 P P 03 00 09.3 +0.9
comp=Z,3.8nm,0.9s,baz=229,slow=6.5,SNR=8.1
KBZ Khabaz 78.25 38⇓eP P 03 00 08.3 -0.1
KIV Kislovodsk 78.25 38 P P 03 00 09.6 +0.9
KIV IAmb IAmb 03 00 16.4
comp=Z,41nm,1.5s
KIV Kislovodsk 78.25 38 eP P 03 00 08.9 +0.3
KIV pmax pmax
comp=Z,51nm,1.1s
KIV MLR MLR
comp=Z,353nm,19.0s
KVAR Kislovodsk Arr 78.26 38 P P 03 00 09.7 +1.0
comp=Z,1.1nm,0.4s,baz=253,slow=19,SNR=4.1
ZEI Tsey 78.31 39 eP P 03 00 13.8 +4.7
ZEI pmax pmax
comp=Z,10.0nm,0.6s
NAZ Nazwa, Dubai 78.32 60 P P 03 00 10.5 +1.2
SNR=12
NAZ P P 03 00 10.5 +1.2
SNR=12
ARQ Araqi 78.39 62 P P 03 00 11.3 +1.5
SNR=7.3
ARQ P P 03 00 11.3 +1.5
SNR=7.3
NCK Nalchik 78.53 38⇑iP P 03 00 11.0 +0.9
NCK pmax pmax
comp=Z,7.0nm,0.9s
ASHO Ashiyiah 78.53 60 P P 03 00 11.9 +1.3
SNR=6.6
HATD Hatta, Dubai 78.65 60 P P 03 00 12.8 +1.6
SNR=11
HATD P P 03 00 12.8 +1.6
SNR=11
SOHO SOHO 78.71 61 P P 03 00 13.1 +1.6
SNR=14
UOSS Minazif 78.75 60 P P 03 00 11.7 -0.1
UOSS IAmb IAmb 03 00 18.9
comp=Z,25nm,1.1s
UOSS Minazif 78.75 60 P P 03 00 12.7 +0.9
NOA NORSAR Array B 79.01 12 P P 03 00 12.8 +0.5
comp=Z,1.3nm,0.9s,baz=205,slow=5.6,SNR=2.7
NOA LR LR 03 36 57.7
comp=Z,189nm,18.1s,baz=205,slow=37
GOF Gofitskoye 79.10 37⇑eP P 03 00 14.1 +0.9
GOF pmax pmax
comp=Z,16nm,0.6s
HOQ Hoqain 79.16 62 P P 03 00 14.9 +0.9
SNR=6.2
HOQ P P 03 00 14.9 +0.9
SNR=6.2
BANOM Banah 79.22 59 P P 03 00 15.2 +0.9
WSAR Wadi Sarin 80.15 62 P P 03 00 19.7 +0.3
comp=Z,5.9nm,0.9s,baz=256,slow=6.2,SNR=6.0
WSAR Wadi Sarin 80.15 62 P P 03 00 20.6 +1.2
SNR=6.5
T59A Double "B" Far 80.16 313 IAmb IAmb 03 00 26.4
comp=Z,33nm,1.1s
VORD Divnogorie 80.69 31 eP P 03 00 25.8 +4.2
VORD pmax pmax
comp=Z,20nm,0.8s
VSR Storozhevoye 80.79 30⇑eP P 03 00 22.0 -0.1
VSR pmax pmax
comp=Z,13nm,1.0s
VSU Vasula 80.89 20⇑eP P 03 00 21.2 -1.3
VSU pmax pmax
comp=Z,9.0nm,0.3s
T57A Hurt 81.38 312 IAmb IAmb 03 00 32.4
comp=Z,28nm,1.3s
LPSR Galich'ya Gora 81.56 29 eP P 03 00 25.6 -0.6
LPSR pmax pmax
comp=Z,10.0nm,0.8s
P57A Homestead Farm 81.66 315 IAmb IAmb 03 00 34.7
comp=Z,31nm,1.1s
VRH Novokhopyorsk 82.04 31 eP P 03 00 29.4 +0.6
VRH pmax pmax
comp=Z,9.0nm,0.9s
OBN Obninsk 82.16 26⇑eP P 03 00 34.2 +4.9
OBN pmax pmax
comp=Z,23nm,1.2s
MOS Moscow 83.03 26 eP P 03 00 32.1 -1.7
MOS e 03 03 43.9
MOS pmax pmax
comp=Z,33nm,0.6s
FINES FINESS Array B 83.03 18 P P 03 00 33.2 -0.5
comp=Z,2.7nm,1.0s,baz=204,slow=4.2,SNR=5.4
FINES LR LR 03 39 23.6
comp=Z,336nm,18.0s,baz=210,slow=37
SCHQ Schefferville 83.73 332 P P 03 00 36.3 -1.3
comp=Z,2.8nm,0.7s,baz=134,slow=4.5,SNR=4.6
SCHQ LR LR 03 30 59.9
comp=Z,217nm,20.2s,baz=116,slow=31
SCHQ Schefferville 83.73 332 IAmb IAmb 03 00 43.7
comp=Z,9.2nm,1.1s
GEYT Alibeck 85.46 49 P P 03 00 46.3 -0.4
comp=Z,4.0nm,0.8s,baz=249,slow=11,SNR=7.4
GEYT LR LR 03 37 19.9
comp=Z,325nm,20.6s,baz=220,slow=35
T49A Edmonton 85.97 310 IAmb IAmb 03 00 54.9
comp=Z,15nm,1.2s
X48A Hartselle 86.09 307 IAmb IAmb 03 00 56.4
comp=Z,29nm,1.4s
O49A Covington 86.34 313 IAmb IAmb 03 00 56.7
comp=Z,19nm,1.0s
V48A Smith Brothers 86.41 309 IAmb IAmb 03 00 57.9
comp=Z,21nm,1.1s
VNDA Vanda 86.83 179 LR LR 03 34 47.3
comp=Z,184nm,18.1s,baz=254,slow=32
T47A Sharon Grove 87.09 310 IAmb IAmb 03 01 00.8
comp=Z,14nm,1.0s
KLMR Klimovskoe 87.13 23 eP P 03 00 59.7 +5.4
KLMR pmax pmax
comp=Z,18nm,1.7s
KLMR Klimovskoe 87.13 23 eP P 03 00 59.8 +5.5
KLMR AMP 03 01 06.0
comp=Z,18nm,1.7s
WVT Waverly 87.31 309 P P 03 00 54.9 -0.9
WVT Waverly 87.31 309 P P 03 00 54.9 -0.9
WVT pmax pmax
comp=Z,24nm,1.2s
TMCR Tamitsa 88.77 20 eP P 03 01 02.1 +0.1
TMCR pmax pmax
comp=Z,17nm,0.8s
ARCES ARCESS Array B 89.35 13 LR LR 03 43 48.7
comp=Z,166nm,18.0s,baz=188,slow=37
LCAR Lake Charles 89.81 308 P P 03 01 06.5 -1.1
LCAR IAmb IAmb 03 01 18.0
comp=Z,19nm,1.4s
KIRV Kirov 89.88 28 P P 03 01 07.4 +0.1
comp=Z,3.3nm,0.5s,baz=198,slow=0.6,SNR=3.6
PRGR Permogore 89.95 24 eP P 03 01 06.2 -1.4
PRGR pmax pmax
comp=Z,14nm,1.0s
W41B Gary Mavity, V 90.36 306 IAmb IAmb 03 01 20.9
comp=Z,23nm,1.2s
WHAR Wooly Hollow 90.42 307 IAmb IAmb 03 01 21.1
comp=Z,13nm,1.1s
FCAR Ozark Folk Cen 90.49 307 IAmb IAmb 03 01 16.6
comp=Z,17nm,1.4s
AKTO Aktyubinsk 90.51 37 P P 03 01 10.9 +0.3
comp=Z,3.3nm,0.7s,baz=90,slow=4.0,SNR=5.9
CCM Cathedral Cave 90.54 309 P P 03 01 10.9 -0.1
CCM Cathedral Cave 90.54 309 P P 03 01 10.9 -0.1
CCM pmax pmax
comp=Z,27nm,1.1s
U40A Yellville 91.20 307 IAmb IAmb 03 01 20.5
comp=Z,12nm,1.3s
HKT Hockley 91.62 301 P P 03 01 16.6 +0.5
HKT IAmb IAmb 03 01 27.3
comp=Z,14nm,1.4s
HKT Hockley 91.62 301 P P 03 01 16.6 +0.5
HKT pmax pmax
comp=Z,14nm,1.4s
S39A Bolivar 91.98 309 IAmb IAmb 03 01 28.2
comp=Z,17nm,1.2s
ARU Arti 93.26 32 P P 03 01 21.3 -1.8
comp=Z,0.8nm,0.3s,baz=209,slow=8.5,SNR=3.2
ARU Arti 93.26 32 IAmb IAmb 03 01 26.1
comp=Z,6.7nm,1.0s
ARU Arti 93.26 32 P P 03 01 23.4 +0.3
ARU 03 05 07.8
ARU S SKSac 03 11 57.4 +0.2
ARU SP SP 03 13 47.3 +4.6
ARU SS SS 03 18 43.0 -3.3
T35A Sooner Cattle 94.18 307 IAmb IAmb 03 01 38.8
comp=Z,17nm,1.1s
WMOK Wichita Mounta 95.35 304 IAmb IAmb 03 01 36.7
comp=Z,4.0nm,0.6s
PALK Pallekele 95.61 84 LR LR 03 40 22.6
comp=Z,238nm,19.9s,baz=209,slow=33
ECSD EROS Data Cent 96.15 314 IAmb IAmb 03 01 42.4
comp=Z,14nm,1.4s
ULM Lac du Bonnet 97.43 320 LR LR 03 38 48.4
comp=Z,123nm,19.9s,baz=128,slow=31
ULM Lac du Bonnet 97.43 320⇑eP P 03 01 40.9 -1.4
TXAR Lajitas Array 98.03 298 P P 03 01 44.0 -1.7
comp=Z,0.7nm,1.0s,baz=141,slow=4.5,SNR=5.4
BRVK Borovoye 98.57 37⇑eP Pdif 03 01 47.7 +0.3
BRVK pmax pmax
comp=Z,1.0nm,1.1s
GTA Gaotai 117.50 54 ePKP PKiKP 03 06 56.8 +1.7
GTA LR LR
comp=Z,110nm,19.7s
GTA LR LR
comp=Z,130nm,18.7s
LZH Lanzhou 120.82 57 ePKP PKPdf 03 06 58.0 -3.6
CD2 Chengdu 120.83 63 PKP PKPdf 03 07 00.5 -1.1
ILAR Eielson Array 121.99 339 PKP PKPdf 03 07 00.3 -2.5
comp=Z,0.6nm,0.8s,baz=329,slow=1.5,SNR=5.9
QIZ Qiongzhong 125.69 78 PKP PKPdf 03 07 10.0 -1.2
QIZ SS SS 03 26 02.8 -1.4
QIZ LR LR
comp=Z,200nm,16.3s
QIZ LR LR
comp=Z,170nm,17.1s
HHC Hu-ho-hao-te 126.29 51 ePKP PKPdf 03 07 07.8 -4.1
HHC LR LR
comp=Z,220nm,16.9s
HHC LR LR
comp=Z,250nm,16.4s
HHC LR LR
comp=Z,210nm,19.2s
BILL Bilibino 127.78 0⇓iPKIKP PKPdf 03 07 13.5 -0.3
BILL e 03 07 16.9
BILL e 03 07 19.5
BILL pmax pmax
comp=Z,7.0nm,1.5s
BILL MLR MLR
comp=Z,93nm,23.0s
ASAR Alice Springs 129.25 140 PKP PKPdf 03 07 16.9 -1.1
comp=Z,0.9nm,0.8s,baz=192,slow=3.6,SNR=7.2
WHN Wuhan 129.95 63 PKP PKiKP 03 07 25.0 +5.2
SEY Seymchan 131.83 9 PKP PKPdf 03 07 21.1 -0.5
comp=Z,1.2nm,0.5s,baz=150,slow=3.9,SNR=4.1
SEY Seymchan 131.83 9⇑iPKIKP PKPdf 03 07 21.9 +0.3
WRA Warramunga Arr 132.21 137 PKP PKPdf 03 07 22.8 -0.9
comp=Z,0.9nm,0.9s,baz=264,slow=1.3,SNR=4.8
NJ2 Nanjing 133.60 61 ePKP PKPdf 03 07 25.3 -0.5
INU Inuyama 146.97 48 PKPbc 03 07 51.6 -0.1
MJAR Matsushiro Arr 147.21 45 PKPbc PKPbc 03 07 52.4 -0.1
comp=Z,4.9nm,1.0s,baz=302,slow=3.8,SNR=5.8
PMG Port Moresby 148.25 141 PKPbc PKiKP 03 07 58.0 +0.4
comp=Z,25nm,0.9s,baz=233,slow=5.1,SNR=3.5

IDC 28 02:55:20.6±6.1, 15.93S×13.44W, h0km, mb3.9/5, mb1 3.9/5, mb1mx3.6/31, mbtmp3.9/5, Error ellipse: s-maj=140.9km s-min=41.5km az=61.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	7.03	350	T	T	03 04 01.3	
	baz=168,slow=74,SNR=14						
H10S3	ASCENSION HYDR	7.04	350	T	T	03 04 02.7	
	baz=52,slow=74,SNR=14						
DBIC	Dimbokro	24.01	21	P	P	03 00 37.2	0.0
	2.5nm,0.9s,baz=219,slow=9.2,SNR=4.2						
TSUM	Tsumeb	29.74	101	P	P	03 01 28.9	-0.1
	0.6nm,0.3s,baz=321,slow=13,SNR=5.3						
TORD	Torodi Ar. Bea	32.54	28	P	P	03 01 53.4	-0.2
	3.6nm,0.9s,baz=211,slow=8.6,SNR=12						
BRTR	Keskin Array B	70.63	37	P	P	03 06 39.0	+0.8
	0.8nm,0.9s,baz=193,slow=5.9,SNR=4.7						
AKASG	Malin Array Be	76.15	26	P	P	03 07 10.0	-0.3
	0.1nm,0.3s,baz=222,slow=6.0,SNR=7.5						

*IDC **28** 03:03:10.8±2.0, 55.93N×111.26E, h0km, mb3.4/5, mb1 3.6/8, mb1mx3.3/50, mbtmp3.5/8, ML3.3/3, Error ellipse: s-maj=33.8km s-min=24.7km az=113.0*
*MOS **28** 03:03:10.8±0.6, 55.77N×111.25E, h14km, mb3.6/1, Error ellipse: s-maj=13.3km s-min=8.2km az=75.7*
*BYKL **28** 03:03:11.6±0.3, 55.72N×111.16E, h10km±4km*
ISC 28 03:03:11.3±1.0, 55.75N±0.02×111.25E±0.02, h4km±8km, n51, σ2.44/93, mb3.4/3, 5C-4D, Lake Baykal region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KMO Kumora 0.14 349⇑iPg Pg 03 03 14.3 +0.1
KMO eSg Sg 03 03 17.5 +1.4
KMO Kumora 0.14 349 ePG Pg 03 03 14.4 +0.2
KMO e 03 03 17.4
KMO pmax pmax
comp=Z,3μm,0.3s
KMO smax smax
comp=N,9μm,0.8s
YOA Uoyan 0.47 34 ePg Pg 03 03 21.4 +1.1
YOA eSg Sb 03 03 28.9 -0.6
YOA Pmax
comp=N,598nm,0.3s
YOA Smax
comp=N,3μm,1.0s
YOA Uoyan 0.47 34 ePG Pg 03 03 21.4 +1.1
YOA e 03 03 29.2
YOA pmax pmax
comp=Z,571nm,0.3s
YOA smax smax
comp=E,3μm,0.6s
YLYR Ulyunkhan 0.87 183 ePg Pg 03 03 26.5 -1.4
YLYR ⇑i 03 03 27.0
YLYR ePb Pb 03 03 28.3 -0.7
YLYR eSg Sg 03 03 39.0 -0.3
YLYR max
comp=E,172nm,0.4s
YLYR Smax
comp=E,598nm,0.8s
YLYR Ulyunkhan 0.87 183⇑iPG Pg 03 03 26.6 -1.4
YLYR e 03 03 38.2
YLYR pmax pmax
comp=Z,167nm,0.5s
YLYR smax smax
comp=E,395nm,0.4s
NIZ Nizh Angarsk 0.97 272 ePg Pg 03 03 28.5 -1.3
NIZ e 03 03 32.9
NIZ eSg Sg 03 03 42.1 -0.2
NIZ e 03 03 47.1
NIZ max
comp=E,154nm,0.3s
NIZ max
comp=E,376nm,0.5s
NIZ Nizh Angarsk 0.97 272 ePG Pg 03 03 28.9 -0.9
NIZ e 03 03 41.8
NIZ pmax pmax
comp=Z,123nm,0.4s
NIZ smax smax
comp=N,354nm,0.4s
SVKR Severomuysk 1.35 73 ePg Pb 03 03 37.6 +0.4
SVKR eSg Sg 03 03 57.5 +2.9
SVKR Pmax
comp=N,160nm,0.3s
SVKR Smax
comp=N,938nm,0.9s
UKT Uakit 1.37 100⇓iPg Pn 03 03 36.5 -0.8
UKT e 03 03 38.7
UKT eSg Sb 03 03 55.5 0.0
UKT e 03 03 58.8
UKT max
comp=N,215nm,0.4s
UKT max
comp=N,608nm,0.5s
UKT Uakit 1.37 100 ePG Pn 03 03 36.5 -0.8
UKT e 03 03 55.6
UKT pmax pmax
comp=Z,200nm,0.5s
UKT smax smax
comp=N,584nm,0.7s
SYVR Suvo 2.21 200⇑iPn Pn 03 03 49.2 +0.4
SYVR ePg Pb 03 03 50.7 -1.2
SYVR eSg Sb 03 04 19.2 -0.4
SYVR Pmax
comp=N,323nm,0.6s
SYVR Smax
comp=N,425nm,0.6s
SYVR Suvo 2.21 200 ePN Pn 03 03 49.2 +0.4
SYVR e 03 03 50.7
SYVR e 03 04 18.3
SYVR pmax pmax
comp=Z,328nm,0.5s
SYVR smax smax
comp=E,432nm,0.6s
BOD Bodaibo 2.57 35 ePn Pn 03 03 54.6 +0.9
BOD ePg Pb 03 03 57.6 -0.3
BOD eSn Sn 03 04 25.6 +0.2
BOD eSg Sb 03 04 31.7 +1.8
BOD Pmax
comp=E,25nm,0.4s
BOD Smax
comp=E,250nm,1.1s
BOD Bodaibo 2.57 35 ePN Pn 03 03 54.8 +1.1
BOD e 03 03 59.2
BOD eS Sn 03 04 25.8 +0.4
BOD e 03 04 30.9
BOD pmax pmax
comp=Z,22nm,0.3s
BOD smax smax
comp=E,245nm,0.5s
NLYR Nelyaty 2.60 71⇓iPn Pn 03 03 55.6 +1.5
NLYR ⇓iPg Pb 03 03 59.8 +1.3
NLYR eSn Sn 03 04 28.0 +1.8
NLYR eSg Sg 03 04 33.8 -1.0
NLYR Pmax
comp=E,35nm,0.6s
NLYR Smax
comp=E,139nm,1.1s
MXMB Maximikha 2.88 211 ePn Pn 03 03 58.9 +0.9
MXMB ⇑iPg Pb 03 04 02.3 -1.0
MXMB e 03 04 34.2
MXMB eSg Sb 03 04 41.2 +2.3
OGRR Ongureny 2.99 227 ePn Pn 03 04 01.2 +1.7
OGRR ePg Pb 03 04 05.0 -0.1
OGRR e 03 04 08.0
OGRR e 03 04 38.7
OGRR eSg Sb 03 04 43.4 +1.5
OGRR max
comp=E,25nm,0.4s
OGRR Smax
comp=E,124nm,0.5s
OGRR Ongureny 2.99 227 ePN Pn 03 04 00.2 +0.7
OGRR e 03 04 05.8
OGRR e 03 04 43.8
OGRR pmax pmax
comp=Z,25nm,0.5s
OGRR smax smax
comp=E,122nm,0.5s
KELR Kotokel 3.52 213 ePg Pb 03 04 13.8 -0.3
KELR e 03 04 14.5
KELR eSg Sb 03 04 59.6 +2.4
VTMR Vitim 3.77 10 eSg Sg 03 05 09.7 -2.6
CIT Chita 3.97 159 eSg Sb 03 05 14.8 +4.6
CIT Smax
comp=E,135nm,0.3s
CRS Chara 4.08 71 ePn Pn 03 04 16.1 +1.7
CRS ePg Pb 03 04 25.5 +1.9
CRS eSg Sg 03 05 18.5 -3.6
CRS Pmax
comp=E,38nm,0.9s
CRS Smax
comp=E,156nm,0.9s
TRTB Turuntaevo 4.12 213 ePn Pn 03 04 15.4 +0.4
TRTB ePg Pb 03 04 24.0 -0.3
TRTB eSn Sn 03 05 03.1 -0.5
TRTB eSg Sb 03 05 18.3 +3.9
TRG Tyrgan 4.15 226 ePn Pn 03 04 12.2 -3.2
TRG ePg Pb 03 04 24.7 -0.1
TRG e 03 04 28.6
TRG e Sg 03 05 18.7 -5.7
TRG eSg Sg 03 05 18.7 -5.7
TRG max
comp=E,25nm,0.8s
TRG Smax
comp=E,82nm,0.9s
UUDB Ulan-Yde 4.43 210 ePg Pb 03 04 29.5 -0.1
UUDB eSg Sb 03 05 27.3 +4.0
UUDB Pmax
comp=E,45nm,0.6s
UUDB Smax
comp=E,92nm,1.5s
FFNB Fofonovo 4.56 217 eSg Sb 03 05 30.3 +3.3
HRMR Khuramsha 4.85 214 ePn Pn 03 04 22.7 -2.3
HRMR ePg Pb 03 04 37.3 +0.5
HRMR eSg Sb 03 05 40.5 +5.0
HRMR Pmax
comp=E,67nm,0.6s
HRMR Smax
comp=E,303nm,0.5s
TUP Tupik 5.17 101⇓iPn Pn 03 04 29.4 0.0
TUP ePg Pb 03 04 43.5 +1.3
TUP eSn Sn 03 05 27.3 -2.2
TUP eSg Sg 03 05 53.3 -3.9
TUP Pmax
comp=E,100nm,0.6s
TUP Smax
comp=E,159nm,0.5s
TUP Tupik 5.17 101 ePN Pn 03 04 29.4 0.0
TUP e 03 04 44.3
TUP eS Sn 03 05 27.5 -2.0
TUP e 03 05 52.4
TUP pmax pmax
comp=Z,16nm,0.6s
TUP smax smax
comp=N,159nm,0.8s
LSTR Listvyanka 5.43 227 e Sn 03 05 38.8 +2.8
LSTR eSg Sb 03 05 57.9 +5.7
LSTR Smax
comp=N,54nm,1.0s
IVK Ivanovka 5.66 229 ePn Pn 03 04 34.2 -1.9

IVK				ePg	Pb	03 04 51.4	+0.9
IVK				eSn	Sn	03 05 39.0	-2.5
IVK				eSg	Sb	03 06 05.3	+6.6
TLY	Talaya	6.08	231	eSg	Sb	03 06 17.6	+6.8
TLY				Smax			
	comp=N,55nm,0.8s						
TLY	Talaya	6.08	231	Pg	Pb	03 04 58.8	+1.1
	comp=N,0.0nm,0.3s,baz=66,slow=12,SNR=3.3						
TLY				Lg	Lg	03 06 16.4	
	comp=N,0.0nm,0.3s,baz=287,slow=12,SNR=9.3						
KPC	Khapcheranga	6.09	173	ePn	Pn	03 04 41.2	-0.9
KPC				ePg	Pb	03 05 00.0	+2.1
KPC				e		03 06 07.6	
KPC				eSg	Sb	03 06 19.8	+8.7
KPC				Pmax			
	comp=N,5.0nm,0.8s						
KPC				Smax			
	comp=N,87nm,1.3s						
ARS	Arshan	6.48	237	ePN	Pn	03 04 49.9	+2.5
ARS				e		03 05 07.2	
ARS				e		03 06 29.4	
ARS				pmax	pmax		
	comp=Z,16nm,0.4s						
ARS				smax	smax		
	comp=E,216nm,0.5s						
MOY	Mondy	7.33	240	ePN	Pn	03 05 00.4	+1.3
MOY				e		03 05 21.6	
MOY				eS	Sn	03 06 21.0	-1.8
MOY				e		03 06 57.0	
MOY				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MOY				smax	smax		
	comp=E,44nm,0.8s						
ORL	Orlik	7.45	249	ePN	Pn	03 05 02.2	+1.5
ORL				e		03 05 26.0	
ORL				eS	Sn	03 06 25.0	-0.7
ORL				e		03 07 00.4	
ORL				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ORL				smax	smax		
	comp=N,57nm,1.1s						
SONM	Songino Array	8.47	203	Pn	Pn	03 05 16.0	+1.2
	comp=N,0.3nm,0.3s,baz=14,slow=12,SNR=8.3						
SONM				Pg	Pb	03 05 41.9	+3.4
	comp=N,0.3nm,0.3s,baz=12,slow=16,SNR=5.6						
SONM				Lg	Lg	03 07 36.6	
	comp=N,0.6nm,0.3s,baz=355,slow=26,SNR=6.9						
YAK	Yakutsk	11.40	49	Lg	Lg	03 09 00.7	
	comp=N,0.4nm,0.3s,baz=343,slow=19,SNR=2.3						
KLR	Kul'dur	14.06	109	Pn	Pn	03 06 31.2	+0.2
	comp=N,0.3nm,0.3s,baz=306,slow=14,SNR=5.8						
KLR				Lg	Lg	03 10 29.4	
	comp=N,0.1nm,0.3s,baz=287,slow=14,SNR=3.4						
ZALV	Zalesovo Beam	15.30	274	Pn	Pn	03 06 48.0	+0.2
	comp=N,0.3nm,0.3s,baz=74,slow=12,SNR=3.4						
ZALV				Lg	Lg	03 11 11.8	
	baz=85,slow=32,SNR=1.9						
ZALV	Zalesovo Beam	15.30	274	P	Pn	03 06 48.0	+0.2
NRIK	Noril'sk	17.28	331	Lg	Lg	03 12 09.9	
	comp=N,1.7nm,0.3s,baz=252,slow=17,SNR=4.6						
TIXI	Tiksi	17.63	18	Lg	Lg	03 12 22.7	
	baz=314,slow=4.6,SNR=3.8						
KURK	Kurchatov	20.05	269	P	P	03 07 45.1	0.0
MKAR	Makanchi Array	20.08	256	P	P	03 07 45.6	0.0
	comp=N,0.4nm,0.6s,baz=49,slow=9.1,SNR=7.8						
KURBB	Kurchatov Arra	20.14	269	P	P	03 07 45.1	-1.1
	comp=N,0.2nm,0.3s,baz=64,slow=11,SNR=4.3						
BVAR	Borovoye Array	23.71	281	P	P	03 08 23.4	-0.5
	comp=N,0.4nm,0.3s,baz=70,slow=11,SNR=6.3						
ARCES	ARCESS Array B	38.11	325	P	P	03 10 29.6	-1.1
	comp=N,3.2nm,1.1s,baz=68,slow=9.8,SNR=3.5						
FINES	FINESS Array B	41.74	314	P	P	03 11 00.5	-0.4
	comp=N,0.5nm,0.7s,baz=61,slow=6.5,SNR=2.9						

IDC 28 03:05:22.4±6.3,15.17S×14.21W,h0km,mb3.9/4, mb1 3.8/4,mb1mx3.6/27,mbtmp3.9/4,MS3.7/3,Ms1 3.7/3, ms1mx3.3/29,Error ellipse: s-maj=330.9km s-min=102.9km az=107.0,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	6.18	356	T	T	03 14 00.6	
	baz=168,slow=74,SNR=7.5						
H10S3	ASCENSION HYDR	6.19	356	T	T	03 14 02.5	
	baz=52,slow=74,SNR=6.3						
DBIC	Dimbokro	23.59	24	P	P	03 10 35.2	+0.1
	1.7nm,0.7s,baz=179,slow=10.0,SNR=3.1						
TORD	Torodi Ar. Bea	32.23	30	P	P	03 11 52.6	-0.1
	3.6nm,0.9s,baz=207,slow=9.1,SNR=13						
TORD				LR	LR	03 22 52.0	
	comp=Z,147nm,18.4s,baz=185,slow=33						
BDFB	Brasilia	32.58	265	LR	LR	03 22 48.3	
	comp=Z,167nm,19.8s,baz=112,slow=32						
CPUP	Villa Florida	41.65	247	LR	LR	03 29 46.1	
	comp=Z,71nm,19.3s,baz=19,slow=35						
BRTR	Keskin Array B	70.47	37	P	P	03 16 39.4	+0.3
	0.8nm,0.9s,baz=224,slow=4.0,SNR=5.3						
AKASG	Malin Array Be	75.80	27	P	P	03 17 09.9	-0.2
	0.2nm,0.3s,baz=230,slow=6.1,SNR=5.1						

IDC 28 03:11:45.7±1.4,34.76N×80.63E,h0km,mb3.7/4, mb1 3.6/8,mb1mx3.4/50,mbtmp3.5/8,ML3.0/4,MS4.0/4, Ms1 4.0/4,ms1mx3.2/44,Error ellipse: s-maj=32.1km s-min=20.9km az=56.0
BJI 28 03:11:50.6±0.0,34.88N×80.81E,h8km,mb3.5/1,ML3.5/4
ISC 28 03:11:49.4±1.1,34.96N±0.08×80.8E±0.2,h10km,n22, σ1§77/18,mb3.8/4,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	Dangsing	7.04	158	eP	Pn	03 13 33.5	+0.6
	6.2nm,0.3s						
GUN	Gumba	8.24	147	eP	Pn	03 13 50.1	+0.8
	7.1nm,0.4s						
PKIN	Phulchoki	8.33	151	eP	Pn	03 13 50.8	+0.3
	10.0nm,0.5s						
PKI	Pulchoki	8.34	151	eP	Pn	03 13 51.0	+0.3
	7.5nm,0.4s						
JIRN	Jiri	8.59	146	eP	Pn	03 13 54.8	+0.6
	17nm,0.4s						
AAK	Ala-Archa	9.12	329	Pn	Pn	03 14 04.2	+2.9
	0.1nm,0.3s,baz=166,slow=12,SNR=2.6						
AAK				Lg	Lg	03 16 37.6	
	0.1nm,0.3s,baz=35,slow=20,SNR=3.6						
RAMN	Ramite	9.39	147	eP	Pn	03 14 04.0	-1.0
	10nm,0.4s						
TAPN	Taplejung	9.60	140	eP	Pn	03 14 07.6	-0.3
ODAN	Odare	9.84	143	eP	Pn	03 14 10.3	-0.9
	19nm,0.6s						
WMQ	Urumqi	10.32	29	eP	Pn	03 14 20.3	+2.8
MKAR	Makanchi Array	11.88	5	Pn	Pn	03 14 38.4	-0.4
	0.2nm,0.3s,baz=181,slow=12,SNR=11						
MKAR				Sn	Sn	03 16 49.4	-2.0
	0.0nm,0.3s,baz=184,slow=17,SNR=2.2						
MKAR				Lg	Lg	03 18 12.9	
	0.0nm,0.3s,baz=179,slow=30,SNR=1.9						
KURBB	Kurchatov Arra	15.75	355	Pn	Pn	03 15 28.6	-2.6
	0.0nm,0.3s,baz=179,slow=9.7,SNR=2.9						
GTA	Gaotai	15.76	68	eP	P	03 15 38.5	+2.9
GTA				pP	pP	03 15 43.0	+3.1
GTA				sP	sP	03 15 45.5	+3.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BVAR	Borovoye Array	19.53	341	P	P	03 16 15.9	-0.9
	0.1nm,0.3s,baz=153,slow=13,SNR=4.5						
SONM	Songino Array	22.97	48	P	P	03 16 55.0	+1.0
	2.9nm,1.1s,baz=235,slow=10,SNR=11						
CMAR	Chiang Mai Arr	23.00	131	P	P	03 16 52.2	-2.3
	2.6nm,0.3s,baz=317,slow=7.4,SNR=4.4						
USRK	Ussuriysk Ar.	39.93	61	LR	LR	03 38 35.7	
	comp=Z,63nm,18.5s,baz=333,slow=40						
JNU	Nakatsue	41.16	78	LR	LR	03 37 45.2	
	comp=Z,634nm,21.0s,baz=12,slow=38						
JHJ	Hachijo jima 2	48.26	74	LR	LR	03 43 11.8	
	comp=Z,83nm,18.2s,baz=62,slow=39						
TORD	Torodi Ar. Bea	73.76	275	P	P	03 23 21.2	-3.0
	1.3nm,0.9s,baz=50,slow=5.3,SNR=4.5						
ASAR	Alice Springs	77.01	131	LR	LR	04 03 25.0	
	comp=Z,107nm,18.4s,baz=228,slow=40						
YKA	Yellowknife Ar	82.09	7	P	P	03 24 08.7	-1.1
	0.1nm,0.3s,baz=338,slow=4.7,SNR=4.0						

ISC 28 03:38:01.9±1.0,50.28N±0.05×18.78E±0.03,h0km,n16, σ0§71/28,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.61	223	ePG	Pg	03 38 14.2	+0.7
OKC				eSG	Sg	03 38 22.2	+0.9
	comp=Z,7.8nm,0.5s						
OJC	Ojcow	0.66	95	ePg	Pg	03 38 14.5	0.0
OJC				eSg	Sg	03 38 23.1	+0.1
MORC	Moravsky Berou	0.95	238	ePG	Pg	03 38 20.3	+0.3
MORC				eSG	Sg	03 38 33.1	+0.8
LANS	Liptovska Anna	1.22	158	ePG	Pg	03 38 25.2	-0.1
LANS				eSG	Sg	03 38 41.0	0.0
LANS				eLG	Lg	03 38 43.6	
KRLC	Kraliky	1.30	262	ePG	Pg	03 38 26.1	-0.8
KRLC				eSG	Sg	03 38 43.1	-0.6
	comp=Z,8.5nm,0.3s						
NIE	Niedzica	1.31	131	ePg	Pg	03 38 26.9	-0.2
NIE				eSg	Sg	03 38 44.4	+0.5
DPC	Dobruska-Polom	1.58	273	ePG	Pn	03 38 31.2	0.0
DPC				eSG	Sn	03 38 51.5	-0.8
	comp=Z,7.4nm,0.7s						
OSTC	Ostas	1.66	280	ePG	Pn	03 38 32.3	-0.1
KSP	Ksiaz	1.68	290	ePg	Pg	03 38 34.6	+0.4
KSP				eSg	Sg	03 38 57.1	+1.2
VRAC	Vranov	1.72	236	ePN	Pn	03 38 33.6	+0.5
VRAC				eSG	Sn	03 38 55.9	+0.1
CHVC	Chvalec	1.77	281	ePG	Pn	03 38 34.0	+0.2
CHVC				eSG	Sb	03 38 57.8	-0.2
VYHS	Vyhne	1.79	179	ePN	Pn	03 38 33.6	-0.5
VYHS				eSN	Sn	03 38 57.3	-0.3
KRUC	Moravsky	1.98	233	ePN	Pn	03 38 37.1	+0.5
KRUC				eSG	Sb	03 39 03.4	-0.5
GOPC	GO Pecny, Ondr	2.60	263	eSG	Sg	03 39 24.4	-1.0
PRU	Pruhonice	2.74	265	eSG	Sb	03 39 27.3	+1.3
KHC	Kasperske Hory	3.57	253	eSG	Sg	03 39 54.7	-1.8

ATH 28 03:51:48.7,36.06N×25.13E,h30km,ML3.9/30,Error ellipse: s-maj=0.8km s-min=0.5km az=71.0
HLW 28 03:51:48.3,36.07N×25.44E,h22km±27km,Md4.8,Ml4.3
ISK 28 03:51:48.7,36.05N×25.08E,h8km,ML4.0/22
THE 28 03:51:49.8,36.06N×25.13E,h16km,ML4.0/12,Error ellipse: s-maj=0.8km s-min=0.3km az=59.0
IDC 28 03:51:49.5±2.0,36.07N×25.11E,h24km±15km,mb3.9/25, mb1 4.0/31,mb1mx3.9/63,mbtmp4.0/31,ML3.7/6,MS3.4/3, Ms1 3.4/3,ms1mx2.8/59,Error ellipse: s-maj=13.2km s-min=10.3km az=157.0
MOS 28 03:51:49.7±1.4,35.96N×25.17E,h33km,mb4.4/14,Error ellipse: s-maj=7.1km s-min=5.1km az=79.5
NIC 28 03:51:49.7±0.0,36.06N×25.09E,h28km±4km,Ml4.1/3
NEIC 28 03:51:50.9±2.5,35.99N±0.06×25.11E±0.07,h32km±5km, Error ellipse: s-maj=8.9km s-min=7.0km az=220.0
GII 28 03:51:53.7±0.0,35.56N×25.61E,h10km±1km,mb4.2/2, MD4.0/2
ISC 28 03:51:49.8±0.8,36.05N±0.02×25.16E±0.02,h27km±6km, n336,σ1§69/390,mb4.1/36,21C-11D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR9	Santorini-Faro	0.35	27	P	Pb	03 51 57.1	-0.6
THR6	Thira Island,	0.36	32	P	Pb	03 51 57.4	-0.5
SAP1	Santorini-Akro	0.36	32	P	Pb	03 51 57.4	-0.6
SAP1				S	Sb	03 52 03.3	-0.2
	45μm,0.2s						
SAP1	Santorini-Akro	0.36	32	P	Pb	03 51 57.3	-0.6
SAP1				S	Sb	03 52 03.3	-0.2
THR5	Thira Island,	0.40	22	P	Pb	03 51 57.9	-0.6
THT1	Athinios (Pele	0.40	33	P	Pb	03 51 57.8	-0.7
THT1				S	Sb	03 52 03.7	-0.8
SANT	Santorini	0.41	37	P	Pb	03 51 57.9	-0.7
SANT				S	Sb	03 52 04.1	-0.5
	8μm,0.8s						
SANT	Santorini	0.41	37	P	Pb	03 51 57.9	-0.7
SANT	Santorini	0.41	37	⇓P	Pb	03 51 57.8	-0.7
SANT				⇑S	Sb	03 52 05.1	+0.5
SANT	Santorini	0.41	37	PG	Pb	03 51 57.9	-0.7
SANT				SG	Sb	03 52 04.3	-0.3
SANT	Santorini	0.41	37		Pb	03 51 57.7	-0.9
THR3	Thira Island,	0.41	28	P	Pb	03 51 58.2	-0.5
SAP3	Santorini-Thir	0.42	21	P	Pb	03 51 58.3	-0.5
SAP3				S	Sb	03 52 04.8	0.0
	29μm,0.3s						
SAP3	Santorini-Thir	0.42	21	P	Pb	03 51 58.3	-0.5
SAP3				S	Sb	03 52 04.4	-0.4
SAP2K	Karterados	0.43	32	P	Pb	03 51 58.5	-0.5
SAP2K				S	Sb	03 52 05.2	0.0
	36μm,0.6s						
SAP2K	Karterados	0.43	32	P	Pb	03 51 58.6	-0.5
SAP2K				S	Sb	03 52 05.1	-0.2
SFIR	Foira Santorin	0.43	30	P	Pb	03 51 58.6	-0.4
THR7	Fira-Santorini	0.43	30	P	Pb	03 51 58.3	-0.7
THT2	Imerovigli	0.44	29	P	Pb	03 51 58.8	-0.4
THT2	Imerovigli	0.44	29	PG	Pb	03 51 58.9	-0.3
THR8	Santorini-Mono	0.44	36	P	Pb	03 51 58.5	-0.7
THR2	Thira island,	0.46	29	P	Pb	03 51 59.0	-0.4
SAP4	Santorini-Oia	0.46	22	P	Pb	03 51 59.0	-0.4
SAP4				S	Sb	03 52 06.0	0.0
	16μm,0.1s						
SAP4	Santorini-Oia	0.46	22	P	Pb	03 51 58.8	-0.6
SAP4				S	Sb	03 52 06.0	0.0
CMBO	Columbo, Santo	0.47	25	P	Pb	03 51 59.2	-0.4
CMBO	Columbo, Santo	0.47	25	P	Pb	03 51 59.2	-0.4
CMBO				S	Sb	03 52 06.6	+0.4
CMBO				AML	AML	03 52 11.9	
CMBO				AML	AML	03 52 14.1	
	comp=N,35330μm,0.5s						
HRKL	Herakleio	0.73	184	P	Pb	03 52 03.6	-0.4
HRKL	Herakleio	0.73	184	PG	Pb	03 52 03.5	-0.4
HRKL				SG	Sb	03 52 14.2	+0.5
IACM	Heraklion	0.74	186	P	Pb	03 52 03.7	-0.4
IDI	Anoyia	0.79	196	P	Pb	03 52 04.0	-0.9
IDI	Anoyia	0.79	196	Pg	Pb	03 52 05.1	+0.1
	comp=N,139nm,0.3s,baz=57,slow=4.0,SNR=526						
IDI				Lg	Lg	03 52 15.2	
	comp=N,2μm,0.3s,baz=292,slow=19,SNR=52						
IDI	Anoyia	0.79	196	P	Pb	03 52 04.4	-0.6
IDI				S	Sb	03 52 15.2	-0.1
IDI				AML	AML	03 52 17.9	
	comp=N,13903μm,0.3s						
IDI				AML	AML	03 52 20.6	
	comp=E,18511μm,0.3s						
IDI	Anoyia	0.79	196	PG	Pb	03 52 04.1	-0.9
IDI				SG	Sb	03 52 14.9	-0.4
NPS	Neapolis	0.86	155	P	Pb	03 52 05.7	-0.5
NPS				S	Sn	03 52 18.9	+0.9
	comp=E,19μm,0.5s						
NPS	Neapolis	0.86	155	P	Pb	03 52 05.8	-0.5
NPS				S	Sn	03 52 18.9	+0.9
NPS				AML	AML	03 52 20.3	
	comp=N,31648μm,0.4s						
NPS				AML	AML	03 52 20.5	
	comp=E,32505μm,0.3s						
MHLO	Agia Marina, M	0.89	317	P	Pb	03 52 05.4	-1.2
MHLO	Agia Marina, M	0.89	317	P	Pb	03 52 05.6	-0.9
MHLO				S	Sn	03 52 17.7	-0.8
MHLO				AML	AML	03 52 21.4	
	comp=E,49514μm,0.5s						
MHLO				AML	AML	03 52 23.4	
	comp=N,43896μm,0.6s						
MHLA	Plaka, Milos I	0.92	320	P	Pb	03 52 06.6	-0.5
MHLA				S	Sn	03 52 18.5	-0.8
MHLA				AML	AML	03 52 24.2	
	comp=E,15068μm,0.9s						
MHLA				AML	AML	03 52 25.8	
	comp=N,24763μm,0.8s						
LAST	Lasithi	0.92	163	P	Pb	03 52 06.8	-0.4
LAST				S	Sn	03 52 19.9	+0.4
	comp=N,8μm,0.5s						
LAST	Lasithi	0.92	163	P	Pb	03 52 07.3	+0.1
LAST				S	Sn	03 52 20.1	+0.7
LAST				AML	AML	03 52 23.6	
	comp=N,13488μm,0.3s						
LAST				AML	AML	03 52 26.9	
	comp=E,14620μm,0.5s						
AMGA	Amorgos Island	0.98	37	P	Pn	03 52 07.5	-0.3
AMGA				S	Sn	03 52 21.6	+0.7
	comp=E,9μm,0.7s						
AMGA	Amorgos Island	0.98	37	P	Pn	03 52 07.5	-0.3
AMGA				S	Sn	03 52 22.2	+1.3
AMGA				AML	AML	03 52 23.4	
	comp=E,19558μm,0.8s						
AMGA				AML	AML	03 52 23.7	
	comp=N,16585μm,0.5s						
VAM	Vamos	1.01	231	P	Pn	03 52 07.3	-0.9
VAM	Vamos	1.01	231	P	Pn	03 52 07.5	-0.7
VAM				S	Sn	03 52 21.7	+0.2
VAM				AML	AML	03 52 22.7	
	comp=N,75037μm,0.6s						
VAM				AML	AML	03 52 23.6	
	comp=E,36694μm,0.3s						
CHAN	Chania	1.05	240	P	Pn	03 52 07.8	-0.9
CHAN				S	Sn	03 52 23.2	+0.7
	comp=E,7μm,0.5s						
APE	Apeiranthos	1.06	16	P	Pn	03 52 08.5	-0.5
APE				S	Sn	03 52 23.2	+0.3
	comp=E,6μm,0.8s						
APE	Apeiranthos	1.06	16	P	Pn	03 52 08.7	-0.3
APE				S	Sn	03 52 23.4	+0.4
APE				AML	AML	03 52 27.6	
	comp=N,9241μm,0.6s						
APE				AML	AML	03 52 27.7	
	comp=E,12848μm,0.9s						
APE	Apeiranthos	1.06	16	⇓P	Pn	03 52 08.6	-0.3
APE				⇑S	Sb	03 52 22.0	-1.2
APE	Apeiranthos	1.06	16	PN	Pb	03 52 09.6	0.0
APE	Apeiranthos	1.06	16	c iP	Pn	03 52 08.5	-0.5
APE	Apeiranthos	1.06	16	⇑P	Pn	03 52 08.7	-0.3
APE				S	Sn	03 52 23.3	+0.3
APE				AML	AML	03 52 26.8	
	comp=E,15nm,1.1s						
APE				AML	AML	03 52 26.8	
	comp=E,15nm,1.1s						
APE				AML	AML	03 52 27.5	
	comp=E,11nm,0.4s						
APE				AML	AML	03 52 27.5	
	comp=E,11nm,0.4s						
SIVA	Sivas	1.06	196	P	Pb	03 52 09.6	0.0
SIVA	Sivas	1.06	196	P	Pb	03 52 09.8	+0.2
SIVA				S	Sn	03 52 24.4	+1.5
SIVA				AML	AML	03 52 24.8	
	comp=E,44844μm,0.4s						
SIVA				AML	AML	03 52 28.9	
	comp=N,21926μm,0.5s						
IMMV	Iera Moni Meta	1.12	239	P	Pn	03 52 09.2	-0.5
IMMV				S	Sn	03 52 24.4	+0.1
	comp=N,10μm,0.4s						
IMMV	Iera Moni Meta	1.12	239	P	Pn	03 52 09.3	-0.5
IMMV				S	Sn	03 52 24.8	+0.5
IMMV				AML	AML	03 52 35.5	
	comp=N,25825μm,0.9s						
IMMV				AML	AML	03 52 36.9	
	comp=E,23251μm,0.5s						
IMMV	Iera Moni Meta	1.12	239	PG	Pn	03 52 09.2	-0.5
IMMV				SG	Sn	03 52 24.8	+0.5
FRMA	Ierapetra Chan	1.13	155	P	Pb	03 52 11.2	+0.5
STIA	Sitia Lasithi	1.13	138	P	Pn	03 52 10.5	+0.6
RODP	Rodopos	1.24	247	P	Pn	03 52 11.1	-0.3
RODP	Rodopos	1.24	247	PN	Pn	03 52 11.9	-0.6
SERI	Serifos	1.24	334	P	Pn	03 52 10.7	-0.7
SERI				S	Sn	03 52 27.0	-0.2
	comp=E,1μm,0.9s						
SERI	Serifos	1.24	334	P	Pn	03 52 10.8	-0.6
SERI				S	Sb	03 52 27.6	-0.5
SERI				AML	AML	03 52 29.8	
	comp=E,2148μm,0.4s						
SERI				AML	AML	03 52 30.0	
	comp=N,3287μm,0.6s						
ZKR	Zakros	1.27	137	P	Pn	03 52 12.3	+0.5
ZKR	Zakros	1.27	137	P	Pn	03 52 12.6	+0.9
ZKR				S	Sb	03 52 29.8	+0.8
ZKR				AML	AML	03 52 32.8	
	comp=E,25078μm,0.7s						
ZKR				AML	AML	03 52 34.1	
	comp=N,12832μm,0.7s						
ZKR	Zakros	1.27	137	PN	Pb	03 52 13.9	+0.9
ZKR	Zakros	1.27	137	⇑P	Pn	03 52 12.3	+0.5
ZKR				S	Sn	03 52 29.1	+1.2
ZKR				AML	AML	03 52 33.4	
	comp=N,13nm,0.7s						
ZKR				AML	AML	03 52 33.4	
	comp=N,13nm,0.7s						
KNDR	Palaiochora Ch	1.45	236	P	Pb	03 52 15.2	-0.9
KNDR	Palaiochora Ch	1.45	236	PN	Pb	03 52 15.6	-0.5
KNDR				SN	Sb	03 52 35.2	+1.1
GVD	Gavdhos	1.49	216	P	Pb	03 52 16.1	-0.7
GVD				AML	AML	03 52 44.3	
	comp=N,8849μm,0.4s						
GVD				AML	AML	03 52 49.0	
	comp=E,8676μm,0.4s						
GVD	Gavdhos	1.49	216	PN	Pb	03 52 16.4	-0.4
TNSA	Tinos	1.49	0	P	Pn	03 52 15.0	+0.2
ANKY	Antikythira Is	1.52	264	P	Pn	03 52 14.9	-0.3
ANKY	Antikythira Is	1.52	264	P	Pn	03 52 15.1	-0.1
ANKY				AML	AML	03 52 40.1	
	comp=E,11540μm,0.5s						
ANKY				AML	AML	03 52 42.5	
	comp=N,6177μm,0.5s						
KOSK	Kos Island	1.63	64	P	Pn	03 52 17.1	+0.4
KOSK	Kos Island	1.63	64	PN	Pb	03 52 19.1	0.0
NISR	Nisiros	1.69	70	P	Pn	03 52 18.1	+0.6
KARP	Karpathos	1.70	106	P	Pn	03 52 18.6	+0.8
KARP	Karpathos	1.70	106	P	Pn	03 52 18.7	+0.8
KARP				S	Sb	03 52 41.4	-0.1
KARP				AML	AML	03 52 51.2	
	comp=E,6169μm,0.6s						
KARP				AML	AML	03 52 56.1	
	comp=N,7458μm,0.6s						
KARP	Karpathos	1.70	106	PN	Pb	03 52 20.7	+0.3
KARP	Karpathos	1.70	106	P	Pn	03 52 18.2	+0.5
KARP	Karpathos	1.70	106	⇑P	Pn	03 52 18.5	+0.8
KARP				S	Sb	03 52 41.0	-0.4
KARP				AML	AML	03 52 50.9	
	comp=N,6.2nm,0.6s						
KARP				AML	AML	03 52 50.9	
	comp=N,6.2nm,0.6s						
KARP				AML	AML	03 52 55.5	
	comp=N,7.5nm,0.6s						
KARP				AML	AML	03 52 55.5	
	comp=N,7.5nm,0.6s						
KTHA	Kythira Island	1.71	278	P	Pn	03 52 17.5	-0.3
KTHA	Kythira Island	1.71	278	P	Pn	03 52 17.6	-0.3
KTHA				AML	AML	03 52 49.1	
	comp=N,6485μm,0.5s						
KTHA				AML	AML	03 52 49.2	
	comp=E,10064μm,0.4s						
KTHA	Kythira Island	1.71	278	PN	Pb	03 52 18.9	-1.7
KTHR	Kythira	1.76	278	P	Pn	03 52 18.3	-0.2
MNVA	Monemvasia	1.83	291	P	Pn	03 52 20.1	+0.7
YDRA	Hydra	1.88	314	P	Pn	03 52 20.7	+0.5
VLI	Veliai	1.92	291	P	Pn	03 52 20.4	-0.3
VLI	Veliai	1.92	291	P	Pn	03 52 20.6	0.0
VLI				S	Sn	03 52 44.1	+0.2
VLI				AML	AML	03 52 58.8	
	comp=N,2555μm,0.6s						
VLI				AML	AML	03 52 59.0	
	comp=E,4507μm,0.6s						
BODT	Bodrum	2.01	59	P	Pn	03 52 22.3	+0.4
BODT	Bodrum	2.01	59	PN	Pb	03 52 24.4	-1.2
KARY	Karystos	2.06	344	P	Pn	03 52 22.9	+0.1
KARY				AML	AML	03 52 55.8	
	comp=E,1532μm,0.7s						
KARY				AML	AML	03 52 57.8	
	comp=N,1269μm,0.5s						
DAT	Datca	2.07	70	P	Pn	03 52 23.2	+0.3
DAT	Datca	2.07	70	PN	Pb	03 52 25.5	-1.2
KRND	KRANIDI	2.09	310	P	Pn	03 52 23.2	+0.1
KRND	KRANIDI	2.09	310	P	Pn	03 52 23.7	+0.5
KRND				AML	AML	03 53 01.1	
	comp=N,1946μm,0.9s						
KRND				AML	AML	03 53 07.2	
	comp=E,2156μm,0.8s						
VLY	Voula,Athens	2.11	329	P	Pn	03 52 24.1	+0.7
VLY				AML	AML	03 53 02.2	
	comp=E,1322μm,0.6s						
VLY				AML	AML	03 53 02.7	
	comp=N,1134μm,0.8s						
DID	Didima	2.12	314	P	Pn	03 52 23.5	-0.1
DID	Didima	2.12	314	P	Pn	03 52 23.5	-0.1
DID				AML	AML	03 53 05.7	
	comp=N,1289μm,0.6s						
DID				AML	AML	03 53 09.2	
	comp=E,885μm,0.7s						
SMG	Samos	2.14	39	P	Pn	03 52 23.7	0.0

SMG Samos 2.14 39 P Pn 03 52 24.0 +0.3
SMG AML AML 03 53 05.3
comp=E,3247μm,0.7s
SMG AML AML 03 53 06.7
comp=N,2106μm,0.5s
ATHU Athens Univers 2.21 331 P Pn 03 52 25.3 +0.5
ATHU AML AML 03 52 58.7
comp=E,988μm,0.8s
ATHU AML AML 03 53 10.5
comp=N,500μm,0.9s
ATH Athens Observa 2.24 329 P Pn 03 52 26.0 +0.8
ATH AML AML 03 53 01.1
comp=N,1308μm,0.8s
ATH AML AML 03 53 01.2
comp=E,1554μm,1.0s
PTL Penteli 2.25 333 P Pn 03 52 25.7 +0.4
DION Dionisos Attik 2.25 335 P Pn 03 52 26.2 +0.9
GCAM G?zelcaml? 2.34 45 PN Pb 03 52 29.4 -1.9
ARG Arkhangelos 2.41 85 P Pn 03 52 28.8 +1.4
ARG Arkhangelos 2.41 85 P Pn 03 52 28.9 +1.4
ARG S Sn 03 52 57.5 +1.5
ARG AML AML 03 53 10.7
comp=N,1454μm,0.7s
ARG AML AML 03 53 18.7
comp=E,2480μm,0.7s
ARG Arkhangelos 2.41 85 PN Pn 03 52 29.6 +2.2
ARG Arkhangelos 2.41 85 ⇑P Pn 03 52 28.4 +1.0
ARG S Sn 03 52 57.9 +1.8
CHOS Chios island 2.44 17 P Pn 03 52 27.9 -0.1
CHOS Chios island 2.44 17 P Pn 03 52 28.3 +0.3
CHOS Chios island 2.44 17 PN Pn 03 52 29.0 +1.0
URLA Izmir 2.58 26 PN Pn 03 52 32.3 +2.5
VLX Vlachokerasia 2.59 301 P Pn 03 52 30.5 +0.4
VLX Vlachokerasia 2.59 301 P Pn 03 52 30.6 +0.4
VLX AML AML 03 53 16.8
comp=N,1791μm,0.8s
VLX AML AML 03 53 24.8
comp=E,2130μm,1.0s
LOUT Loutraki 2.61 319 P Pn 03 52 31.3 +1.0
VIL2 Platees 2.64 326 P Pn 03 52 30.4 -0.2
LTK Loutraki 2.64 319 P Pn 03 52 31.7 +1.1
YER Yerkesik 2.74 66 PN Pn 03 52 34.8 +2.8
BLCB Balcova 2.78 32 PN Pn 03 52 35.3 +2.8
ITM Ithomi 2.84 294 P Pn 03 52 35.0 +1.7
ITM AML AML 03 53 26.7
comp=N,549μm,1.3s
ITM AML AML 03 53 28.9
comp=E,639μm,0.6s
ITM Ithomi 2.84 294 PN Pn 03 52 34.8 +1.5
ITM Ithomi 2.84 294 Pn 03 52 35.0 +1.7
PYL PYLOS 2.88 288 P Pn 03 52 35.4 +1.5
PYL AML AML 03 53 31.7
comp=E,930μm,0.6s
PYL AML AML 03 53 40.6
comp=N,897μm,1.0s
AYDB Zeytinkoy-Aydi 2.90 48 PN Pn 03 52 37.2 +2.9
TURN Turunc 2.90 72 PN Pn 03 52 33.1 -1.0
DALY Dalyan (Mula) 2.92 74 PN Pn 03 52 38.0 +3.5
MRKA Markates 2.94 335 P Pn 03 52 35.2 +0.5
LKR Lokris 3.12 327 P Pn 03 52 38.1 +0.9
LKR Lokris 3.12 327 P Pn 03 52 38.0 +0.9
KLV Kalavryta, Ach 3.12 311 P Pn 03 52 38.7 +1.3
KLV Kalavryta, Ach 3.12 311 P Pn 03 52 38.7 +1.3
KLV AML AML 03 53 27.8
comp=E,455μm,1.1s
KLV AML AML 03 53 35.1
comp=N,468μm,1.0s
AMT Artemida-Makis 3.14 299 P Pn 03 52 39.0 +1.4
SIGR SIGRI 3.21 10 PN Pn 03 52 39.9 +1.5
FETY Fethiye 3.22 78 PN Pn 03 52 41.8 +3.1
AOS Alonnisos 3.28 342 P Pn 03 52 39.8 +0.3
AOS Alonnisos 3.28 342 PN Pn 03 52 41.9 +2.5
DKL Dikili 3.32 24 PN Pn 03 52 42.5 +2.5
DRO Drossia 3.35 306 P Pn 03 52 42.2 +1.7
DRO Drossia 3.35 306 P Pn 03 52 42.1 +1.7
KALE Kalithea 3.36 315 P Pn 03 52 41.6 +1.0
KALE Kalithea 3.36 315 P Pn 03 52 41.6 +1.0
TRIZ Trizonia 3.38 314 P Pn 03 52 41.9 +1.1
SKIA Skiathos 3.39 337 P Pn 03 52 41.6 +0.6
NEO Neokhori 3.60 335 P Pn 03 52 44.7 +0.9
NEO Neokhori 3.60 335 P Pn 03 52 44.7 +0.9
AKAS Kas 3.60 86 PN Pn 03 52 47.4 +3.4
MANT Manisa 3.65 47 Pn 03 52 46.8 +2.2
XOR Xorichti 3.66 335 P Pn 03 52 45.0 +0.3
KULA Kula-Manisa 3.72 48 PN Pn 03 52 49.1 +3.5
AGG Agios Georgios 3.73 324 P Pn 03 52 47.3 +1.7
AGG Agios Georgios 3.73 324 PN Pn 03 52 47.4 +1.8
AGG Agios Georgios 3.73 324 Pn Pn 03 52 47.8 +2.2
AGG Agios Georgios 3.73 324 P Pn 03 52 47.8 +2.2
MAKR Makrakomi, Fth 3.82 322 P Pn 03 52 49.1 +2.3
EZN Ezine 3.86 13 PN Pn 03 52 50.7 +3.0
ELL Elmali 3.90 78 P Pn 03 52 50.6 +2.6
ELL Elmali 3.90 78 P Pn 03 52 50.6 +2.6
EVR Evrytania 3.91 318 P Pn 03 52 50.0 +1.8
SLUM Salum 4.54 179 AMP 03 53 00.0
baz=183
LIT Litokhoron 4.56 333 Pn 03 52 59.7 +2.6
LIT Litokhoron 4.56 333 Pn 03 52 59.7 +2.6
ISP Isparta 4.65 66 Pn Pn 03 52 58.6 +0.3
ISP Isparta 4.65 66 P Pn 03 52 58.6 +0.3
ALN Alexandroupoli 4.89 8 Pn 03 53 04.0 +2.4
ALN Alexandroupoli 4.89 8 P Pn 03 53 04.0 +2.4
VAY Valandovo 5.64 340 *i* Pn Pn 03 53 17.7 +5.8
AKMS Akamas 5.94 98 P Pn 03 53 16.9 +0.9
OHR Ohrid 6.10 327 *i* Pn Pn 03 53 21.1 +2.8
OHR *i* Sn Sn 03 54 35.9 +8.7
ALFC Alefka 6.13 96 ⇑P Pn 03 53 19.8 +1.3
NATA Nata 6.18 100 P Pn 03 53 20.0 +0.7
MDUB Mudurnu 6.49 45 Pn Pn 03 53 26.2 +2.6
OSC2 CSNet OBS 4 6.57 115 P Pn 03 53 27.2 +2.6
OSC2 S Sn 03 54 40.9 +2.2
HBRG Burj al `Arab 6.72 143 AMP 03 54 00.0
baz=144
TIR Tirane 6.72 324 ⇑P Pn 03 53 26.7 +0.1
ASGA Asgata 6.72 98 P Pn 03 53 28.4 +1.7
VTS Vitosha 6.73 348 ⇓P Pn 03 53 26.7 -0.3
VTS Vitosha 6.73 348 Pn 03 53 28.6 +1.6
VTS Vitosha 6.73 348 P Pn 03 53 28.6 +1.6
CSS Mathiatis 6.75 97 Pn Pn 03 53 26.9 -0.2
CSS Mathiatis 6.75 97 P Pn 03 53 28.8 +1.6
CSS Mathiatis 6.75 97 PN Pn 03 53 27.8 +0.6
ELND Elena 6.90 4 ⇓P Pn 03 53 28.3 -0.8
BR231 Keskin MP Arra 7.11 56 Pn 03 53 34.5 +2.4
ANTO Ankara 7.14 55 Pn Pn 03 53 33.3 +0.8
ANTO Ankara 7.14 55 P Pn 03 53 33.3 +0.8
TIP Timpagrande 7.36 298 ⇓P Pn 03 53 36.2 +0.6
TIP Timpagrande 7.36 298 Pn Pn 03 53 35.3 -0.3
BR131 Keskin Array S 7.64 59 Pn 03 53 42.1 +2.6
BR131 Keskin Array S 7.64 59 *d*eP Pn 03 53 42.8 +3.3
BRTR Keskin Array B 7.64 59 Pn Pn 03 53 43.0 +3.5
comp=N,1.2nm,0.3s,baz=234,slow=13,SNR=132
BRTR LR LR 03 57 22.8
comp=N,57nm,21.8s,baz=70,slow=44
PDG Podgorica 7.85 326 ⇓P Pn 03 53 41.6 -0.6
PDG Podgorica 7.85 326 Pn 03 53 42.7 +0.6
HNAT Natroun 7.87 143 AMP 03 55 00.0
baz=144
MATE Matera 8.08 307 ⇑P Pn 03 53 45.2 0.0
SG1 Sgolgore (BA) 8.19 308 *e*Pn Pn 03 53 47.0 +0.1
KOT Kottamia 8.28 136 AMP 03 55 00.0
baz=137
ILGA Ilgaz 8.36 51 Pn 03 53 51.2 +1.8
ACER Acerenza 8.64 306 Pn 03 53 52.8 -0.3
VAE Valguarnera 8.74 283 Pn Pn 03 53 58.0 +3.5
comp=N,0.4nm,0.3s,baz=135,slow=20,SNR=2.8
VAE Sn Sn 03 55 27.6 -4.5
comp=N,1.3nm,0.3s,baz=49,slow=2.9,SNR=5.4
HNTI Hanita 8.77 107 Pn Pn 03 53 53.6 -1.3
HNTI Sn Sn 03 55 28.3 -4.6
MMA0B Mount Meron ar 8.98 107 Pn Pn 03 53 57.6 -0.1
MMAI Mount Meron Ar 8.98 107 Pn Pn 03 53 56.1 -1.6
comp=N,2.2nm,0.3s,baz=303,slow=12,SNR=19
MMAI Sn Sn 03 55 33.8 -4.2
comp=N,4.7nm,0.3s,baz=303,slow=27,SNR=7.0
QRWL Qaraoun 9.01 103 *e*P Pn 03 53 57.0 -1.2
HWQ Hawqa 9.01 98 *e*P Pn 03 53 59.0 +0.8
KSDI Kefar Szold 9.11 105 Pn Pn 03 53 59.3 -0.2
NATI Neve Ativ 9.15 105 Pn Pn 03 53 59.7 -0.3
NATI Sn Sn 03 55 37.6 -4.4
KZIT Kziot 9.26 121 Pn Pn 03 53 59.4 -2.2
KZIT Sn Sn 03 55 38.6 -6.3
AMAZ Amatzia 9.28 116 Pn Pn 03 54 00.1 -1.8
AMAZ Sn Sn 03 55 39.6 -5.8
VOIR 9.38 360 ⇓P Pn 03 54 01.3 -2.0
HMDT Nahal Hemdat 9.39 111 Pn Pn 03 54 02.1 -1.2
HMDT Sn Sn 03 55 43.5 -4.4
MLR Muntele Rosu 9.45 3 Pn Pn 03 54 03.8 -0.5
comp=N,0.1nm,0.3s,baz=204,slow=13,SNR=2.9
GZR Gura Zlata 9.51 350 ⇑P Pn 03 54 03.5 -1.5
YTIR Yattir 9.52 117 Pn Pn 03 54 03.7 -1.5
YTIR Sn Sn 03 55 44.7 -6.6
DSI Dead Sea 9.60 115 Pn Pn 03 54 05.9 -0.4
DSI Sn Sn 03 55 47.7 -5.6
PAOL Paolisi 9.67 304 Pn 03 54 08.6 +1.3
GAZ Gaziantep 9.76 80 Pn 03 54 09.1 +0.7
GHAJ Ghor Haditha 9.88 116 Pn Pn 03 54 09.2 -0.8
BZS Buzias 9.93 345 ⇑P Pn 03 54 09.0 -1.7
KRMI Paran Flat 9.96 124 Pn Pn 03 54 09.0 -2.2
KRMI Sn Sn 03 55 54.8 -7.4
PRNI Paran 10.01 122 Pn Pn 03 54 09.8 -2.1
PRNI Sn Sn 03 55 56.5 -6.8
HRFI Mount Harif 10.23 123 Pn Pn 03 54 13.5 -1.3
HRFI Sn Sn 03 56 02.3 -6.3
MBRI Mt Berech 10.29 125 Pn Pn 03 54 14.5 -1.3
MBRI Sn Sn 03 56 03.8 -6.6
EIL Elat 10.40 125 Pn Pn 03 54 15.8 -1.4
comp=N,0.8nm,0.3s,baz=231,slow=5.8,SNR=14
EIL Sn Sn 03 56 03.3 -10
comp=N,1.7nm,0.3s,baz=37,slow=17,SNR=4.4
EIL Elat 10.40 125 Pn Pn 03 54 15.2 -2.0
ASF Jabal al Asfar 10.47 108 Pn Pn 03 54 17.4 -0.8
comp=N,0.4nm,0.3s,baz=273,slow=3.8,SNR=4.8
ASF Sn Sn 03 56 11.3 -3.4
comp=N,0.3nm,0.3s,baz=190,slow=18,SNR=2.6
INTR Introdacqua 10.58 308 Pn 03 54 21.8 +2.1
DRGR 10.89 351 ⇓P Pn 03 54 22.4 -1.5
NRCA Norcia 11.51 310 Pn 03 54 33.4 +1.0
ANN Anapa 12.79 43 *e*P Pn 03 54 51.7 +1.9
ANN pmax pmax
comp=Z,58nm,0.9s
VYHS Vyhne 13.28 341 *e*P Pn 03 54 58.9 +2.4
VYHS Vyhne 13.28 341 *e*PN Pn 03 54 58.9 +2.4
MYKA Terra Mystica 13.65 324 *i* Pn Pn 03 55 02.7 +1.2
comp=Z,1.7nm,0.3s
MOA Molln 14.29 329 *i* Pn P 03 55 11.0 +0.7
comp=Z,0.8nm,0.5s
VRAC Vranov 14.66 337 Pn P 03 55 21.8 +0.5
comp=Z,0.5nm,0.3s,baz=121,slow=10.0,SNR=4.3
VRAC LR LR 04 01 27.0
comp=Z,133nm,19.4s,baz=286,slow=40
AKASG Malin Array Be 14.94 10 Pn P 03 55 25.4 +1.1
comp=Z,1.0nm,0.3s,baz=202,slow=11,SNR=11
AKASG Malin Array Be 14.94 10*c*eP P 03 55 25.0 +0.7
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKBB Malin Array Si 14.94 10 Pn P 03 55 22.4 -1.9
AKBB Malin Array Si 14.94 10⇑eP P 03 55 22.1 -2.2
WTTA Wattenberg 15.07 322 *i* Pn Pn 03 55 19.8 -1.1
comp=Z,1.2nm,0.4s
WATA Walderalm 15.15 322 *i* Pn Pn 03 55 21.8 -0.1
comp=Z,1.7nm,0.4s
KRLC Kraliky 15.28 339 *e*P P 03 55 29.9 +1.6
KRLC Kraliky 15.28 339 *e*P P 03 55 29.9 +1.6
GEC2 GERESS Array S 15.31 330 Pn Pn 03 55 29.9 +1.8
GERES GERESS Array B 15.31 330 Pn P 03 55 29.1 +0.5
comp=Z,0.2nm,0.3s,baz=144,slow=12,SNR=14
FETA Feichten 15.37 320 *i* Pn P 03 55 27.7 -1.7
comp=Z,3.7nm,1.0s
KIV Kislovodsk 15.56 54 *e*P P 03 55 32.2 +0.8
KIV pmax pmax
comp=Z,23nm,1.1s
KHC Kasperske Hory 15.59 331 *e*P P 03 55 32.7 +1.1
KHC Kasperske Hory 15.59 331 Pn Pn 03 55 29.4 +1.8
KHC Kasperske Hory 15.59 331⇑eP P 03 55 31.2 -0.4
KBZ Khabaz 15.61 55 Pn P 03 55 31.1 -0.7
comp=Z,0.3nm,0.3s,baz=251,slow=8.2,SNR=26
KBZ Khabaz 15.61 55⇑eP Pn 03 55 30.2 +2.3
RETA Reutte 15.66 321 *i* Pn Pn 03 55 29.4 +0.9
comp=Z,0.7nm,0.3s
DPC Dobruska-Polom 15.66 339 *e*P P 03 55 33.7 +1.2
DPC Dobruska-Polom 15.66 339 *e*P P 03 55 33.7 +1.2
DAVOX Davos/Dischmat 15.67 318 Pn Pn 03 55 30.4 +1.6
GOPC GO Pecny, Ondr 15.78 335 *e*P P 03 55 34.1 +0.4
GOPC GO Pecny, Ondr 15.78 335 *e*P P 03 55 34.1 +0.4
OSTC Ostas 15.88 339 *e*P P 03 55 37.5 +2.7
PRU Pruhonice 15.93 334 *e*P P 03 55 36.1 +0.8
PRU Pruhonice 15.93 334 *e*P P 03 55 36.1 +0.8
CHVC Chvalec 15.95 338 *e*P P 03 55 38.4 +2.7
NCK Nalchik 15.99 57⇑eP P 03 55 35.2 -0.9
NCK pmax pmax
comp=Z,6.0nm,0.6s
PRA Prague 16.03 334 *e*P P 03 55 37.0 +0.5
PRA Prague 16.03 334 *e*P P 03 55 37.0 +0.5
BTLR Botlikh 17.56 61⇑eP P 03 55 55.1 +1.6
CLL Collm 17.57 334 *e*pP P 03 55 56.0 +2.5
CLL Collm 17.57 334 *e*P P 03 55 56.0 +2.5
OBN Obninsk 20.62 19⇓eP Pn 03 56 30.9 +1.7
OBN 03 56 50.0
OBN *e* 04 00 37.8
OBN pmax pmax
comp=Z,5.0nm,0.9s
TAM Tamanrasset 21.56 238 P P 03 56 37.8 +0.4
TAM IAmb IAmb 03 57 03.4
comp=Z,13nm,1.8s
TAM Tamanrasset 21.56 238 P P 03 56 37.8 +0.4
TAM pmax pmax
comp=Z,13nm,1.8s
RAYN Ar Rayn 21.57 120 P P 03 56 39.2 +1.8
RAYN IAmb IAmb 03 56 41.4
comp=Z,7.7nm,1.2s
RAYN Ar Rayn 21.57 120 P P 03 56 39.2 +1.8
RAYN pmax pmax
comp=Z,8.0nm,1.3s
ESDC Sonseca Array 23.23 288 P P 03 56 54.2 -0.6
comp=Z,2.1nm,0.6s,baz=79,slow=10.0,SNR=9.4
MDT Midelt 24.72 271 P P 03 57 09.7 +0.7
comp=Z,1.3nm,0.7s,baz=101,slow=10,SNR=3.1
HFS Hagfors 25.21 346 P P 03 57 12.0 -1.1
comp=Z,2.2nm,0.8s,baz=157,slow=15,SNR=4.1
HFS Hagfors 25.21 346 P P 03 57 12.0 -1.1
FINES FINESS Array B 25.43 1 P P 03 57 13.8 -1.1
comp=Z,0.8nm,0.6s,baz=166,slow=12,SNR=3.2
GEYT Alibeck 26.32 76 P P 03 57 25.1 +1.8
comp=Z,6.2nm,0.9s,baz=274,slow=11,SNR=7.1
NOA NORSAR Array B 26.54 345 P P 03 57 25.4 +0.3
comp=Z,1.1nm,0.8s,baz=160,slow=9.8,SNR=3.6
EKA Eskdalemuir Ar 27.32 324 P P 03 57 31.9 -0.2
comp=Z,4.9nm,0.7s,baz=120,slow=9.6,SNR=14
AKTO Aktyubinsk 27.66 48 P P 03 57 35.3 +0.1
comp=Z,0.5nm,0.5s,baz=221,slow=9.3,SNR=2.4
TOA0 Torodi Ar. Sit 31.07 229 P P 03 58 06.0 +0.3
TOA0 IAmb IAmb 03 58 12.2
comp=Z,4.0nm,0.9s
TORD Torodi Ar. Bea 31.07 229 P P 03 58 06.2 +0.5
comp=Z,2.0nm,0.6s,baz=95,slow=9.2,SNR=17
KK31 Karatay Array 35.31 64 P P 03 58 43.9 +1.3
KK31 IAmb IAmb 03 58 46.6
comp=Z,2.7nm,0.7s
KK31 Karatay Array 35.31 64 P P 03 58 43.9 +1.3
KK31 pmax pmax
comp=Z,3.0nm,0.7s
KKAR Karatay Array 35.31 64 P P 03 58 43.9 +1.3
KKAR IAmb IAmb 03 58 46.6
comp=Z,2.7nm,0.7s
KKAR Karatay Array 35.31 64 P P 03 58 43.9 +1.3
KKAR pmax pmax
comp=Z,3.0nm,0.7s
KBL Kabul 35.63 79 P P 03 58 47.1 +1.6
KBL IAmb IAmb 03 58 52.1
comp=Z,3.2nm,0.6s
KBL Kabul 35.63 79 P P 03 58 47.2 +1.6
KBL pmax pmax
comp=Z,3.0nm,0.6s
BVAR Borovoye Array 35.74 47 P P 03 58 47.5 +1.3
comp=Z,0.8nm,0.5s,baz=242,slow=40,SNR=2.6
MBAR Mbarara 36.83 171⇓eP P 03 58 56.5 +0.6
MBAR pmax pmax
comp=Z,6.0nm,1.0s
AAK Ala-Archa 38.27 65 P P 03 59 09.7 +1.8
comp=Z,3.4nm,0.5s,baz=198,slow=5.8,SNR=9.7
AAK LR LR 04 15 51.7
comp=Z,354nm,21.5s,baz=243,slow=38
AAK Ala-Archa 38.27 65 P P 03 59 10.0 +2.0
AAK IAmb IAmb 03 59 10.5
comp=Z,3.9nm,0.7s
AAK Ala-Archa 38.27 65*c*eP P 03 59 09.8 +1.8
AAK pmax pmax
comp=Z,5.0nm,1.0s
KMBO Kilima Mbogo 38.66 160 P P 03 59 10.9 -0.5
comp=Z,0.5nm,0.3s,baz=146,slow=4.5,SNR=3.6
KMBO Kilima Mbogo 38.66 160 P P 03 59 10.6 -0.9
KMBO IAmb IAmb 03 59 13.8
comp=Z,11nm,1.7s
KMBO Kilima Mbogo 38.66 160 *i* P P 03 59 13.0 +1.5
KMBO pmax pmax
comp=Z,1.0nm,0.3s
NIL Nilore 39.23 79 P P 03 59 18.1 +2.2
NIL IAmb IAmb 03 59 19.1
comp=Z,8.7nm,1.0s
NIL Nilore 39.23 79 P P 03 59 18.1 +2.2
NIL pmax pmax
comp=Z,9.0nm,1.0s
KSH Kashi 39.88 69 P P 03 59 21.5 +0.1
KSH PcP PcP 04 01 35.3 +8.5
KSH S S 04 05 23.3 -1.3
DBIC Dimbokro 40.12 230 P P 03 59 23.9 +0.4
comp=Z,1.6nm,0.6s,baz=17,slow=10.0,SNR=2.9
DBIC Dimbokro 40.12 230 P P 03 59 23.9 +0.4
DBIC pmax pmax
comp=Z,18nm,1.5s
KURBB Kurchatov Arra 40.57 52 P P 03 59 27.0 +0.2
comp=Z,1.4nm,0.6s,baz=278,slow=8.7,SNR=14
KURK Kurchatov 40.63 52 P P 03 59 28.2 +0.9
KURK Kurchatov 40.63 52 P P 03 59 28.2 +0.9
KURK pmax pmax
comp=Z,2.0nm,0.9s
MAKZ Makanchi 43.08 57 P P 03 59 47.8 +0.4
MAKZ Makanchi 43.08 57 P P 03 59 47.8 +0.4
MAKZ pmax pmax
comp=Z,2.0nm,0.7s
MK31 Makanchi Array 43.29 57 P P 03 59 49.9 +0.7
MK31 IAmb IAmb 03 59 51.0
comp=Z,3.0nm,0.8s
MK31 Makanchi Array 43.29 57 P P 03 59 49.9 +0.7
MK31 pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 43.29 57 P P 03 59 49.8 +0.7
comp=Z,3.1nm,0.6s,baz=281,slow=6.8,SNR=46
MKAR Makanchi Array 43.29 57*c*eP P 03 59 50.4 +1.3
MKAR pmax pmax
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 44.40 47 P P 03 59 57.2 -0.6
comp=Z,1.0nm,0.3s,baz=260,slow=12,SNR=5.2
DANN Dangsing 49.54 81 *e*P P 04 00 39.6 +0.8
comp=Z,55nm,0.7s
GKN Gorkha 50.39 81 *e*P P 04 00 46.1 +1.1
DMN Daman 50.93 82 *e*P P 04 00 49.9 +0.6
comp=Z,27nm,0.8s
PKI Pulchoki 51.19 82 *e*P P 04 00 51.6 +0.3
comp=Z,17nm,0.9s
GUN Gumba 51.42 81 *e*P P 04 00 53.5 +0.5
comp=Z,19nm,0.8s
JIRN Jiri 51.78 81 *e*P P 04 00 56.5 +0.8
RAMN Ramite 52.41 82 *e*P P 04 01 00.5 +0.2
comp=Z,17nm,1.0s
TAPN Taplejung 53.13 81 *e*P P 04 01 06.4 +0.7
SONM Songino Array 58.93 51 P P 04 01 47.6 +0.9
comp=Z,0.2nm,0.4s,baz=305,slow=7.3,SNR=3.6
FRB Frobisher Bay 59.91 329 P P 04 01 52.9 0.0
comp=Z,2.0nm,0.8s,baz=86,slow=7.9,SNR=3.5
SCHQ Schefferville 62.51 319 P P 04 02 11.2 +0.4
comp=Z,2.5nm,0.6s,baz=50,slow=6.0,SNR=13
CMAR Chiang Mai Arr 66.47 84 P P 04 02 37.5 +0.2
comp=Z,1.9nm,0.3s,baz=310,slow=8.4,SNR=6.5
CMAR Chiang Mai Arr 66.47 84*c*eP P 04 02 38.0 +0.8
CMAR pmax pmax
comp=Z,2.0nm,0.3s
WHN Wuhan 72.17 65 P P 04 03 07.8 -4.5
USRK Ussuriysk Ar. 76.22 45 P P 04 03 34.4 -1.3
comp=Z,2.7nm,0.7s,baz=297,slow=9.4,SNR=4.6
YKA Yellowknife Ar 76.61 342 P P 04 03 36.6 -1.0
comp=Z,0.4nm,0.5s,baz=32,slow=5.4,SNR=9.2
KSRS Korea Array 77.74 53 P P 04 03 44.2 -0.1
comp=Z,1.3nm,0.5s,baz=315,slow=4.7,SNR=4.7
ULM Lac du Bonnet 79.57 326 P P 04 03 52.2 -2.0
comp=Z,0.5nm,0.3s,baz=18,slow=4.1,SNR=3.4
NEW Newport 89.57 336 P P 04 04 45.1 +0.3
comp=Z,1.0nm,0.6s,baz=11,slow=5.2,SNR=2.5
NEW Newport 89.57 336 P P 04 04 45.1 +0.3
NEW pmax pmax
comp=Z,8.0nm,1.6s
WRA Warramunga Arr 116.69 96 PKP PKPdf 04 10 31.9 0.0
comp=Z,0.5nm,0.8s,baz=319,slow=1.7,SNR=3.4
ASAR Alice Springs 118.20 100 PKP PKPdf 04 10 34.6 -0.1
comp=Z,0.4nm,0.5s,baz=341,slow=2.7,SNR=4.3

IDC 28 04:11:25.5±4.4, 48°.91S×127°.39E, h0km, mb4.0/2, mb1 4.3/2, mb1mx3.8/15, mbtmp4.0/2, Error ellipse: s-maj=115.5km s-min=70.4km az=135.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	17.08	320	T	T	04 32 13.1	
	baz=150						
H01W2	Cape Leeuwin H	17.09	320	T	T	04 32 07.5	
	baz=150						
H01W3	Cape Leeuwin H	17.10	320	T	T	04 32 17.6	
	baz=150						
ASAR	Alice Springs	25.71	14	P	P	04 16 57.4	0.0
	1.7nm,0.7s,baz=187,slow=9.1,SNR=16						
CMAR	Chiang Mai Arr	71.69	332	P	P	04 22 49.1	0.0
	0.9nm,0.3s,baz=185,slow=4.5,SNR=3.0						
YKA	Yellowknife Ar	144.03	44	PKP	PKPdf	04 31 01.1	-0.5
	0.6nm,0.9s,baz=269,slow=3.1,SNR=5.9						

MEX 28 04:18:14.1±0.5, 14°.44N×93°.08W, h22km±14km, MD3.9
GCG 28 04:18:16.8±0.5, 15°.11N×92°.56W, h104km±8km, MD3.7
ISC 28 04:18:14.2±2.5, 14°.7N±0°.1×93°.0W±0°.1, h32km±15km, n7, σ0°96/14, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.74	72	*e*P	Pb	04 18 28.4	-0.3
THIG				*i* S	Sn	04 18 39.9	+1.3
PCIG		1.04	348	*e*P	Pb	04 18 33.8	0.0
PCIG				*e*S	Sb	04 18 48.5	+1.4
STG3	Santiaguito 3,	1.38	89	*e*P	Pn	04 18 37.6	+0.2
STG3				*e*S	Sb	04 18 55.8	-1.1
CCIG	Comitan	1.79	27	*e*P	Pb	04 18 47.4	+0.8
CCIG				*e*S	Sb	04 19 08.1	-0.7
TGIG		2.09	357	*i* P	Pn	04 18 45.7	-1.4
TGIG				*e*S	Sb	04 19 17.1	0.0
FUG	Fuego 3	2.09	96	*e*P	Pn	04 18 47.5	+0.2
FUG				*e*S	Sn	04 19 11.7	-0.6
IXG	Ixpaco	2.52	101	*e*P	Pn	04 18 54.0	+0.8
IXG				*e*S	Sn	04 19 22.4	-0.5

IDC 28 04:27:25.6±6.7, 15°.04S×14°.40W, h0km, mb3.7/3, mb1 3.7/3, mb1mx3.4/36, mbtmp3.7/3, MS3.6/1, Ms1 3.6/1, ms1mx3.1/28, Error ellipse: s-maj=365.3km s-min=142.3km az=119.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	32.22	30	P	P	04 33 55.7	0.0
	3.1nm,1.1s,baz=211,slow=9.4,SNR=8.6						
KMBO	Kilima Mbogo	52.81	80	LR	LR	04 56 50.8	
	comp=Z,58nm,21.2s,baz=96,slow=33						
BRTR	Keskin Array B	70.48	37	P	P	04 38 42.4	+0.1
	0.4nm,0.6s,baz=218,slow=9.1,SNR=3.7						
AKASG	Malin Array Be	75.77	27	P	P	04 39 13.2	0.0
	0.2nm,0.4s,baz=222,slow=5.7,SNR=7.6						

IDC 28 04:27:53.3±2.5, 15°.57S×13°.21W, h0km, mb4.1/8, mb1 4.2/8, mb1mx3.9/35, mbtmp4.1/8, MS3.8/3, Ms1 3.8/3, ms1mx3.3/28, Error ellipse: s-maj=90.5km s-min=46.4km az=143.0
NEIC 28 04:27:54.7±1.1, 15°.6S±0°.1×13°.20W±0°.07, h10km±2km, mb4.6/10, Error ellipse: s-maj=21.9km s-min=6.8km az=158.0
ISC 28 04:27:54.7±0.7, 15°.6S±0°.1×13°.2W±0°.1, h10km, n24, σ0°66/17, mb4.4/9, MS3.7/3, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	6.76	348	T	T	04 36 34.0	

baz=168,slow=74,SNR=49
H10S3 ASCENSION HYDR 6.77 348 T T 04 36 34.4
baz=52,slow=74,SNR=45
SHEL Horse Pasture 7.18 94 Pn Pn 04 29 39.7 -0.2
DBIC Dimbokro 23.63 21 P P 04 33 06.2 0.0
2.0nm,0.7s,baz=190,slow=12,SNR=3.6
DBIC Dimbokro 23.63 21 IAmb IAmb 04 33 13.2
comp=Z,33nm,1.7s
TSUM Tsumeb 29.57 101 LR LR 04 43 22.4
comp=Z,139nm,21.9s,baz=314,slow=31
TOA0 Torodi Ar. Sit 32.15 28 P P 04 34 22.3 -0.4
TOA0 IAmb IAmb 04 34 23.3
comp=Z,8.1nm,0.9s
TORD Torodi Ar. Bea 32.15 28 P P 04 34 22.6 -0.1
comp=Z,6.0nm,0.9s,baz=216,slow=7.2,SNR=14
SIV San Ignacio 45.98 263 LR LR 04 54 25.9
comp=Z,77nm,18.1s,baz=104,slow=35
SAML Samuel 49.20 272 P P 04 36 43.6 0.0
SNAA Sanae 56.39 176 P P 04 37 35.4 -0.5
VAE Valguarnera 58.85 26 LR LR 05 05 05.0
comp=Z,117nm,18.5s,baz=236,slow=38
SDV Santo Domingo 61.87 289 P P 04 38 14.9 -0.1
GERES GERESS Array B 68.47 19 P P 04 38 57.7 +0.7
comp=Z,0.6nm,0.8s,baz=223,slow=5.3,SNR=4.5
BRTR Keskin Array B 70.24 37 P P 04 39 08.9 +0.7
comp=Z,1.2nm,0.8s,baz=206,slow=6.8,SNR=5.7
MLR Muntele Rosu 70.39 28 P P 04 39 08.8 -0.3
GAZ Gaziantep 70.75 41 P P 04 39 12.9 +1.5
QSPA South Pole Qui 74.56 180 P P 04 39 34.2 +0.6
AKASG Malin Array Be 75.76 26 P P 04 39 39.8 -0.8
comp=Z,0.9nm,0.7s,baz=220,slow=5.6,SNR=8.2
GNI Garni 77.27 42 P P 04 39 50.1 +0.5
KIV Kislovodsk 78.15 38 P P 04 39 53.3 -1.0
KIV IAmb IAmb 04 40 29.9
comp=Z,5.3nm,0.8s
FINES FINESS Array B 82.88 18 P P 04 40 18.8 -0.3
comp=Z,5.8nm,1.2s,baz=235,slow=4.9,SNR=3.7
GEYT Alibeck 85.39 49 P P 04 40 32.9 +0.4
comp=Z,1.0nm,0.4s,baz=211,slow=2.5,SNR=3.2
TXAR Lajitas Array 97.89 298 P Pdif 04 41 31.4 +0.1
comp=Z,0.6nm,1.0s,baz=145,slow=3.3,SNR=3.3

KRSC 28 04:34:59.2±1.8, 52.01N×159.88E, h29km±25km, ML4.7
MOS 28 04:35:03.6±1.1, 52.16N×159.39E, h60km, mb4.5/17, Error ellipse: s-maj=8.0km s-min=3.5km az=92.8
BJI 28 04:35:03.5±0.0, 52.90N×159.43E, h59km, mB5.0/13, mb4.5/15, Ms4.7/1, Ms7 4.6/1
NEIC 28 04:35:05.0±1.6, 52.22N±0.08×159.5E±0.1, h59km±6km, mb4.5/32, Error ellipse: s-maj=12.3km s-min=11.4km az=223.0
IDC 28 04:35:07.2±1.6, 52.25N×159.48E, h79km±12km, mb3.8/27, mb1 3.9/33, mb1mx3.8/50, mbtmp4.1/33, MS3.5/9, Ms1 3.5/9, ms1mx3.2/44, Error ellipse: s-maj=15.5km s-min=10.7km az=143.0
ISC 28 04:35:03.4±0.8, 52.11N±0.04×159.67E±0.04, h49km±7km, n228, σ1.46/238, mb4.3/49, MS3.6/8, 15C-16D, Off east coast of Kamchatka Peninsula

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RUS Russkaya 0.78 295 eP Pn 04 35 16.6 -1.5
RUS eS Sn 04 35 28.5 -0.4
RUS Russkaya 0.78 295 PN Pn 04 35 16.6 -1.5
RUS S Sn 04 35 28.5 -0.4
MTVR Mutnovka 0.99 293 eP Pn 04 35 20.3 -0.7
MTVR Mutnovka 0.99 293 PN Pn 04 35 20.3 -0.7
SPN Mys Shipunski 1.01 12 eP Pn 04 35 20.0 -1.2
SPN eS Sn 04 35 36.4 +2.1
SPN Mys Shipunski 1.01 12 PN Pn 04 35 20.0 -1.2
SPN S Sn 04 35 36.4 +2.1
KDTR Khodutka, Kamc 1.03 253 eP Pn 04 35 20.3 -1.2
KDTR eS Sn 04 35 34.8 -0.1
KDTR Khodutka, Kamc 1.03 253 PN Pn 04 35 20.3 -1.2
KDTR S Sn 04 35 34.8 -0.1
GRL Gorelyy 1.07 295 eP Pn 04 35 22.1 -0.1
GRL eS Sn 04 35 38.6 +2.5
GRL Gorelyy 1.07 295 PN Pn 04 35 22.1 -0.1
DALK Dalny 1.08 329 eP Pn 04 35 21.0 -1.1
DALK eS Sn 04 35 37.0 +1.1
DALK Dalny 1.08 329 PN Pn 04 35 21.0 -1.1
DALK S Sn 04 35 37.0 +1.1
NLC Nalytchevo 1.08 349 eP Pn 04 35 20.6 -1.5
NLC eS Sn 04 35 36.1 +0.1
NLC Nalytchevo 1.08 349 PN Pn 04 35 20.6 -1.5
NLC S Sn 04 35 36.1 +0.1
PET Petropavlovsk 1.10 326 eP Pn 04 35 21.5 -1.0
PET eS Sn 04 35 39.4 +2.8
PET Petropavlovsk 1.10 326 Pn 04 35 21.3 -1.2
PET Petropavlovsk 1.10 326⇓iPN Pn 04 35 21.4 -1.0
PET eS Sn 04 35 36.7 +0.1
PET pmax pmax
comp=Z,843nm,0.5s
PET smax smax
comp=N,4µm,0.5s
PET smax smax
comp=E,2µm,0.6s
ASAK Asacha 1.12 285 eP Pn 04 35 22.7 -0.1
ASAK eS Sn 04 35 39.2 +2.0
ASAK Asacha 1.12 285 PN Pn 04 35 22.7 -0.1
ASAK S Sn 04 35 39.2 +2.0
KRMR Karymshinskiy 1.19 308 eP Pn 04 35 22.2 -1.4
KRMR eS Sn 04 35 39.1 +0.5
KRMR Karymshinskiy 1.19 308 PN Pn 04 35 22.2 -1.4
KRMR S Sn 04 35 39.1 +0.5
UGLR Uglovaya 1.21 335 eP Pn 04 35 23.2 -0.9
UGLR Uglovaya 1.21 335 PN Pn 04 35 23.2 -0.9
SDLR Sedlovina 1.26 338 eP Pn 04 35 23.5 -1.2
SDLR Sedlovina 1.26 338 PN Pn 04 35 23.5 -1.2
SMAR Somma 1.27 336 eP Pn 04 35 24.1 -0.8
SMAR Somma 1.27 336 PN Pn 04 35 24.1 -0.8
AVH Avacha 1.29 334 eP Pn 04 35 24.6 -0.4
AVH Avacha 1.29 334 PN Pn 04 35 24.6 -0.4
KRER Koryakskii 1.32 335 eP Pn 04 35 25.0 -0.6
KRER Koryakskii 1.32 335 PN Pn 04 35 25.0 -0.6
KOK Koryaka 1.34 332 eP Pn 04 35 25.1 -0.7
KOK Koryaka 1.34 332 PN Pn 04 35 25.1 -0.7
KRX Arik 1.39 334 eP Pn 04 35 26.2 -0.4
KRX Arik 1.39 334 PN Pn 04 35 26.2 -0.4
PEA0B Petropavlovsk- 1.56 310 P Pn 04 35 28.8 +0.1
PEA0B Petropavlovsk- 1.56 310 d iPN Pn 04 35 28.5 -0.2
PETK Petropavlovsk- 1.56 310 P Pn 04 35 28.8 0.0
comp=E,120nm,0.3s,baz=111,slow=18,SNR=338
PETK S Sn 04 35 49.5 +1.7
comp=E,68nm,0.3s,baz=116,slow=20,SNR=7.3
PETK LR LR 04 36 20.6
comp=E,1µm,18.9s,baz=65,slow=53
APC Apacha 1.74 299 eP Pn 04 35 32.0 +0.9
APC Apacha 1.74 299 PN Pn 04 35 32.0 +0.9
PAU Pauzhetka 1.89 251 eP Pn 04 35 32.9 -0.3
PAU Pauzhetka 1.89 251 PN Pn 04 35 32.9 -0.3
SKR Severo-Kuril's 2.65 239 eP Pn 04 35 43.4 -0.1
SKR eS Sn 04 36 15.2 +0.8
SKR Severo-Kuril's 2.65 239 ePN Pn 04 35 43.5 -0.1
SKR eS Sn 04 36 13.9 -0.5
SKR smax smax
comp=E,533nm,0.6s
SKR smax smax
comp=N,1µm,0.7s
SKR MLR MLR
comp=Z,300nm,17.0s
ALID Alaid 2.86 246 eP Pn 04 35 47.5 +0.9
ALID Alaid 2.86 246 PN Pn 04 35 47.5 +0.9
KZV Kizimen 3.03 7 eP Pn 04 35 49.1 +0.2
KZV eS Sn 04 36 25.6 +1.6
KZV Kizimen 3.03 7 PN Pn 04 35 49.1 +0.2
KZV S Sn 04 36 25.6 +1.6
TUMD Tumrok D 3.12 8 eP Pn 04 35 50.0 -0.1
TUMR Tumrok 3.19 5 eP Pn 04 35 51.8 +0.7
TUMR Tumrok 3.19 5 PN Pn 04 35 51.8 +0.7
KMNR Kamenistaya 3.67 5 eP Pn 04 36 01.1 +3.5
KMNR Kamenistaya 3.67 5 PN Pn 04 36 01.1 +3.5
BZMR Bezymyannaya 3.86 7 eP Pn 04 36 02.9 +2.6
BZMR Bezymyannaya 3.86 7 PN Pn 04 36 02.9 +2.6
ESO Esso 3.86 352 eP Pn 04 36 01.5 +1.3
ESO Esso 3.86 352 PN Pn 04 36 01.5 +1.3
KIRR Kirishev 3.87 6 eP Pn 04 36 01.3 +0.9
KIRR Kirishev 3.87 6 PN Pn 04 36 01.3 +0.9
BZGR Bezymyannyi-Gr 3.88 9 eP Pn 04 36 02.1 +1.5
BZGR Bezymyannyi-Gr 3.88 9 PN Pn 04 36 02.1 +1.5
KOZ Kozyrevsk 3.95 2 eP Pn 04 36 06.5 +5.0
KOZ Kozyrevsk 3.95 2 PN Pn 04 36 06.5 +5.0
ZLN Zelenaya 3.97 9 eP Pn 04 36 05.9 +4.2
ZLN Zelenaya 3.97 9 PN Pn 04 36 05.9 +4.2
LGNR Loginova 4.02 8 eP Pn 04 36 04.2 +1.6
LGNR Loginova 4.02 8 PN Pn 04 36 04.2 +1.6
CIRR Tsirk 4.06 9 eP Pn 04 36 05.5 +2.5
CIRR Tsirk 4.06 9 PN Pn 04 36 05.5 +2.5
KRSR Krestovskiy 4.14 7 eP Pn 04 36 05.8 +1.6
KRSR Krestovskiy 4.14 7 PN Pn 04 36 05.8 +1.6
SRDR Sredinnyy 4.21 0 eP Pn 04 36 07.2 +2.2
SRDR Sredinnyy 4.21 0 PN Pn 04 36 07.2 +2.2
KLY Klyuchi 4.25 7 eP Pn 04 36 09.8 +4.4
KLY Klyuchi 4.25 7 PN Pn 04 36 09.8 +4.4
KBTR Krutoberegovo 4.50 23 eP Pn 04 36 08.1 -0.8
KBTR Krutoberegovo 4.50 23 PN Pn 04 36 08.1 -0.8
BDR Baidarnaya 4.55 11 eP Pn 04 36 12.6 +2.9
BDR Baidarnaya 4.55 11 PN Pn 04 36 12.6 +2.9
SRKR Sorokina 4.63 10 eP Pn 04 36 16.0 +5.2
SRKR Sorokina 4.63 10 PN Pn 04 36 16.0 +5.2
BKI Bering 4.86 48 eP Pn 04 36 11.2 -2.6
BKI Bering 4.86 48 PN Pn 04 36 11.2 -2.6
MA2 Magadan 8.99 330 P Pn 04 37 12.5 +2.1
comp=Z,0.3nm,0.3s,baz=117,slow=14,SNR=4.3
MA2 LR LR 04 41 16.7
comp=Z,232nm,18.1s,baz=198,slow=42
SEY Seymchan 11.52 343 P Pn 04 37 46.8 +1.8
comp=Z,0.3nm,0.3s,baz=17,slow=19,SNR=2.1
SEY Seymchan 11.52 343 iPN Pn 04 37 42.4 -2.6
JKA Kamikawa-asahi 13.91 242 P Pn 04 38 18.6 +0.9
ASAJ Asahikawa 13.91 242 P Pn 04 38 18.6 +0.9
comp=Z,0.7nm,0.3s,baz=260,slow=18,SNR=2.3
BILL Bilibino 16.30 9 Pn Pn 04 38 48.8 +0.3
BILL Bilibino 16.30 9⇑eP P 04 38 50.8 0.0
BILL pmax pmax
comp=Z,7.0nm,0.7s
BILL MLR MLR
comp=Z,90nm,17.0s
KLR Kul'dur 17.89 272 P P 04 39 09.2 +0.8
comp=Z,0.3nm,0.3s,baz=60,slow=12,SNR=9.1
KLR Kul'dur 17.89 272⇑eP P 04 39 08.8 +0.3
KLR pmax pmax
comp=Z,12nm,2.0s
YAK Yakutsk 18.91 313 P P 04 39 17.9 -1.6
comp=Z,0.2nm,0.3s,baz=114,slow=1.6,SNR=2.8
YAK Yakutsk 18.91 313 P P 04 39 18.0 -1.6
USRK Ussuriysk Ar. 20.00 258 P P 04 39 30.4 -1.3
baz=78,slow=12,SNR=4.2
MJA0 Matsu Arr-Jizo 21.72 233 eP P 04 39 51.0 +0.7
MJA0 pmax pmax
comp=Z,11nm,0.8s
MJB9 Matsu-Tunnel 21.74 233 P P 04 39 51.4 +1.0
MJB9 IAmb IAmb 04 39 54.5
comp=Z,14nm,0.7s
MAJO Matsushiro 21.74 233 P P 04 39 51.6 +1.1
MAJO IAmb IAmb 04 39 54.5
comp=Z,14nm,0.7s
MAJO Matsushiro 21.74 233⇑eP P 04 39 51.4 +0.9
MAJO pmax pmax
comp=Z,8.0nm,0.9s
MAT Matsushiro 21.74 233 P P 04 39 51.6 +1.1
MJAR Matsushiro Arr 21.74 233 P P 04 39 51.6 +1.2
comp=Z,11nm,0.8s,baz=26,slow=11,SNR=21
MJAR LR LR 04 48 20.0
comp=Z,83nm,20.6s,baz=15,slow=36
TIXI Tiksi 23.87 336 P P 04 40 11.2 -0.6
TIXI IAmb IAmb 04 40 12.0
comp=Z,12nm,0.7s
TIXI Tiksi 23.87 336deP P 04 40 11.0 -0.8
TIXI pmax pmax
comp=Z,10.0nm,0.8s
HIA Hailar 25.23 280 P P 04 40 24.1 -0.4
HIA Hailar 25.23 280 P P 04 40 24.1 -0.4
HIA pmax pmax
comp=Z,18nm,0.6s
KSRS Korea Array 26.62 249 P P 04 40 36.3 -0.6
comp=Z,1.5nm,0.6s,baz=34,slow=12,SNR=4.2
KSRS LR LR 04 50 23.9
comp=Z,32nm,20.0s,baz=40,slow=34
KSRS Korea Array 26.62 249 eP P 04 40 38.8 +1.8
KSRS pmax pmax
comp=Z,3.0nm,1.0s
JNU Nakatsue 28.16 239 P P 04 40 53.4 +2.5
comp=Z,7.3nm,0.7s,baz=14,slow=8.3,SNR=3.7
JNU Nakatsue 28.16 239 IAmb IAmb 04 40 59.3
comp=Z,26nm,1.3s
ILAR Eielson Array 29.69 44 P P 04 41 05.5 +1.3
comp=Z,0.6nm,0.9s,baz=268,slow=7.9,SNR=5.1
H11N2 WAKE ISLAND Hy 32.81 167 T T 05 16 32.3
baz=351,slow=76,SNR=45
H11N3 WAKE ISLAND Hy 32.82 167 T T 05 16 45.7
baz=351,slow=76,SNR=36
H11N1 WAKE ISLAND Hy 32.83 167 T T 05 16 45.8
baz=351,slow=76,SNR=58
ULN Ulaanbaatar 33.48 284 P P 04 41 36.9 -0.9
ULN IAmb IAmb 04 42 48.5
comp=Z,7.5nm,1.8s
ULN Ulaanbaatar 33.48 284 P P 04 41 36.9 -0.9
ULN pmax pmax
comp=Z,8.0nm,1.8s
TLY Talaya 33.84 292 iP P 04 41 40.8 +0.1
SONM Songino Array 33.88 284 P P 04 41 41.0 -0.3
comp=Z,0.3nm,0.4s,baz=70,slow=6.3,SNR=2.7
SONM PcP PcP 04 44 19.8 +1.0
comp=Z,0.7nm,0.8s,baz=78,slow=3.3,SNR=5.2
SONM Songino Array 33.88 284 P P 04 41 41.0 -0.3
H11S1 WAKE ISLAND Hy 33.99 168 T T 05 18 06.3
baz=352,slow=76,SNR=10
H11S3 WAKE ISLAND Hy 34.00 168 T T 05 18 07.3
baz=352,slow=76,SNR=15
H11S2 WAKE ISLAND Hy 34.01 168 T T 05 18 07.3
baz=352,slow=76,SNR=5.2
ZAK Zakamensk 34.59 290 eP P 04 41 45.4 -1.9
ZAK pmax pmax
comp=Z,2.0nm,1.0s
INK Inuvik 34.80 37 P P 04 41 48.5 -0.3
comp=Z,1.1nm,0.6s,baz=316,slow=6.4,SNR=8.2
INK Inuvik 34.80 37 IAmb IAmb 04 42 06.8
comp=Z,13nm,1.8s
INK Inuvik 34.80 37 P P 04 41 48.5 -0.3
INK pmax pmax
comp=Z,13nm,1.8s
C36M Paulatuk 38.00 34 P P 04 42 16.0 0.0
C36M IAmb IAmb 04 42 25.2
comp=Z,6.7nm,1.2s
WHN Wuhan 39.45 255 P P 04 42 32.0 +3.4
ENH Enshi 42.57 259 P P 04 42 53.4 -0.9
ZALV Zalesovo Beam 43.10 303 LR LR 05 02 04.0
comp=Z,127nm,21.8s,baz=54,slow=38
YKA Yellowknife Ar 44.06 42 P P 04 43 06.1 +0.2
comp=Z,1.0nm,0.8s,baz=300,slow=8.0,SNR=6.8
KURK Kurchatov 48.04 302 P P 04 43 35.7 -1.6
KURK IAmb IAmb 04 43 37.4
comp=Z,3.7nm,0.6s
KURK Kurchatov 48.04 302⇓eP P 04 43 35.1 -2.2
KURK pmax pmax
comp=Z,3.0nm,0.9s
SPITS Spitsbergen Ar 48.06 350 LR LR 05 05 19.4
comp=Z,54nm,18.5s,baz=210,slow=38
MK31 Makanchi Array 48.35 296 P P 04 43 38.2 -1.7
MK31 Makanchi Array 48.35 296 P P 04 43 38.2 -1.7
MK31 pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 48.35 296 P P 04 43 38.1 -1.7
comp=Z,0.8nm,0.5s,baz=54,slow=6.6,SNR=29
BRVK Borovoye 50.83 309 P P 04 43 56.9 -1.6
BRVK IAmb IAmb 04 43 57.4
comp=Z,4.0nm,0.7s
BRVK Borovoye 50.83 309deP P 04 43 56.6 -1.9
BRVK pmax pmax
comp=Z,3.0nm,0.8s
ARU Arti 53.95 318 P P 04 44 20.2 -1.3
comp=Z,2.8nm,0.2s,baz=293,slow=16,SNR=2.9
ARU Arti 53.95 318 IAmb IAmb 04 44 21.4
comp=Z,3.8nm,0.6s
ARU Arti 53.95 318 d iP P 04 44 22.2 +0.6
ARU 04 46 22.9
ARU S S 04 51 52.3 -0.8
ARU SS SKiKP 04 55 25.6 -3.6
ARU pmax pmax
comp=Z,4.0nm,1.0s
ARCES ARCESS Array B 54.14 342 P P 04 44 21.2 -1.6
comp=Z,3.8nm,0.9s,baz=25,slow=9.4,SNR=7.1
SUMG Summit 54.96 7 iP P 04 44 30.8 +1.6
SUMG Summit 54.96 7 iP P 04 44 30.8 +1.6
AAK Ala-Archa 55.28 297 P P 04 44 30.5 -1.2
AAK IAmb IAmb 04 45 18.5
comp=Z,4.0nm,1.2s
AAK Ala-Archa 55.28 297⇑eP P 04 44 28.8 -2.9
AAK pmax pmax
comp=Z,1.0nm,0.9s
KIRV Kirov 56.03 324 LR LR 05 11 21.3
comp=Z,158nm,20.1s,baz=55,slow=39
NVAR Mina Array Bea 56.32 69 P P 04 44 41.8 +2.6
comp=Z,0.5nm,0.8s,baz=286,slow=6.0,SNR=3.7
KK31 Karatay Array 57.14 299 P P 04 44 43.4 -1.3
KK31 Karatay Array 57.14 299 P P 04 44 43.4 -1.3
KK31 pmax pmax
comp=Z,2.0nm,0.7s
KKAR Karatay Array 57.14 299 P P 04 44 43.4 -1.3
KKAR Karatay Array 57.14 299 P P 04 44 43.4 -1.3
KKAR pmax pmax
comp=Z,2.0nm,0.7s
CHTO Chiang Mai 57.46 259 P P 04 44 47.8 +0.6
CHTO Chiang Mai 57.46 259 P P 04 44 47.8 +0.6
CHTO pmax pmax
comp=Z,7.0nm,0.9s
CMAR Chiang Mai Arr 57.73 258 P P 04 44 50.3 +1.2
comp=Z,3.6nm,0.7s,baz=25,slow=7.3,SNR=15
PDAR Pinedale Array 58.23 60 P P 04 44 53.7 +1.0
comp=Z,0.5nm,0.7s,baz=298,slow=3.2,SNR=4.2
ABKAR Akbulak array 58.23 311 P P 04 44 51.5 -0.7
AKTO Aktyubinsk 58.30 313 P P 04 44 51.2 -1.4
comp=Z,0.9nm,0.5s,baz=73,slow=8.8,SNR=3.5
ULM Lac du Bonnet 59.68 46 P P 04 45 02.2 0.0
comp=Z,1.1nm,0.8s,baz=319,slow=9.2,SNR=3.6
RSSD Black Hills 60.17 56 P P 04 45 07.1 +1.1
RSSD IAmb IAmb 04 45 14.6
comp=Z,6.4nm,1.1s
RSSD Black Hills 60.17 56 P P 04 45 07.1 +1.1
RSSD pmax pmax
comp=Z,6.0nm,1.2s
FINES FINESS Array B 60.92 337 P P 04 45 10.0 -0.5
comp=Z,4.6nm,1.2s,baz=33,slow=10,SNR=6.8
FINES FINESS Array B 60.92 337 P P 04 45 10.0 -0.5
NIL Nilore 62.21 290 P P 04 45 18.9 -0.8
NIL Nilore 62.21 290 P P 04 45 18.9 -0.8
NIL pmax pmax
comp=Z,8.0nm,1.0s
NB2 NORSAR Subarra 64.41 344 P P 04 45 33.9 0.0
comp=Z,1.0nm,0.6s,baz=23,slow=6.9
NOA NORSAR Array B 64.41 344 P P 04 45 33.7 -0.2
comp=Z,1.0nm,0.6s,baz=20,slow=6.8,SNR=5.8
NOA LR LR 05 16 27.8
comp=Z,14nm,18.3s,baz=260,slow=39
NOA NORSAR Array B 64.41 344 eP P 04 45 34.2 +0.3
NOA pmax pmax
comp=Z,1.0nm,0.6s
GEYT Alibeck 67.41 303 P P 04 45 54.0 +0.5
comp=Z,1.6nm,0.6s,baz=240,slow=2.9,SNR=3.8
GEYT LR LR 05 17 50.8
comp=Z,63nm,19.2s,baz=270,slow=38
AKASG Malin Array Be 69.32 329 P P 04 46 03.6 -1.6
comp=Z,5.9nm,0.8s,baz=31,slow=6.4,SNR=18
AKASG LR LR 05 18 26.7
comp=Z,39nm,21.0s,baz=280,slow=38
AKASG Malin Array Be 69.32 329 eP P 04 46 04.5 -0.7
AKASG pmax pmax
comp=Z,6.0nm,0.8s
AKBB Malin Array Si 69.32 329 P P 04 46 04.6 -0.5
AKBB Malin Array Si 69.32 329 d iP P 04 46 04.4 -0.8
KIV Kislovodsk 69.98 317 eP P 04 46 08.9 -0.6
KIV pmax pmax
comp=Z,16nm,1.0s
KBZ Khabaz 70.07 316 P P 04 46 09.9 0.0
comp=Z,1.2nm,0.6s,baz=47,slow=23,SNR=4.7
TXAR Lajitas Array 71.26 66 P P 04 46 18.4 +0.9
comp=Z,0.7nm,0.8s,baz=298,slow=4.1,SNR=8.7
SORM Soroca 71.83 328 ⇑P P 04 46 19.5 -1.0
SORM Soroca 71.83 328 ⇑P P 04 46 19.5 -1.0
KWP Kalwaria Pacla 72.24 332 P P 04 46 23.1 +0.1
KWP Kalwaria Pacla 72.24 332 P P 04 46 23.1 +0.1
KWP pmax pmax
comp=Z,21nm,1.1s
KOLS Kolonicke sedl 72.99 332 eP P 04 46 27.8 +0.4
KOLS pmax pmax
comp=Z,5.0nm,1.2s
KOLS Kolonicke sedl 72.99 332 eP P 04 46 27.8 +0.4
CHVC Chvalec 73.14 337 eP P 04 46 28.8 +0.5
CLL Collm 73.18 339 eP P 04 46 29.0 +0.6
CLL Collm 73.18 339 eP P 04 46 29.0 +0.6
CRVS Cervenica-Dubn 73.25 333 eP P 04 46 27.8 -1.2
CRVS Cervenica-Dubn 73.25 333 eP P 04 46 27.8 -1.2
BUR08 Bucovina Ar. S 73.27 330 P P 04 46 28.9 -0.4
BUR08 IAmb IAmb 04 46 30.1
comp=Z,5.7nm,0.8s
BURAR Bucovina Array 73.29 330 ⇑P P 04 46 24.8 -4.5
BURAR Bucovina Array 73.29 330 ⇑P P 04 46 24.8 -4.5
LANS Liptovska Anna 73.58 334 eP P 04 46 32.6 +1.7
LANS pmax pmax
comp=Z,3.0nm,0.7s
LANS Liptovska Anna 73.58 334 eP P 04 46 32.6 +1.7
TRPA Tarpa 73.64 332 ⇑P P 04 46 29.8 -1.4
TESR Tescani 73.81 328 ⇑P P 04 46 30.3 -2.0
VYHS Vyhne 74.35 334 eP P 04 46 36.1 +0.7
VYHS Vyhne 74.35 334 eP P 04 46 36.1 +0.7
OZUR 74.46 329 ⇓P P 04 46 31.8 -4.3
CFR Carcaliu 74.50 327 ⇓P P 04 46 36.4 +0.2
CFR Carcaliu 74.50 327 ⇓P P 04 46 36.4 +0.2
TOPG Topolog 74.68 326 ⇓P P 04 46 37.7 +0.3
MLR Muntele Rosu 74.95 328 ⇓P P 04 46 38.4 -0.7
MLR Muntele Rosu 74.95 328 P P 04 46 39.0 -0.1
MLR IAmb IAmb 04 46 41.0
comp=Z,4.7nm,0.8s
MLR Muntele Rosu 74.95 328 ⇓P P 04 46 38.4 -0.7
TIRR Tirgusor 75.03 326 P P 04 46 39.3 -0.1
TIRR Tirgusor 75.03 326 P P 04 46 39.3 -0.1
KHC Kasperske Hory 75.08 338 eP P 04 46 39.7 0.0
KHC epP pwP 04 46 55.6 -1.6
KHC Kasperske Hory 75.08 338 eP P 04 46 39.7 0.0
KHC e 04 46 55.6
WRA Warramunga Arr 75.08 205 P P 04 46 40.1 +0.3
comp=Z,2.0nm,0.8s,baz=15,slow=5.9,SNR=5.5
VOIR 75.28 329 ⇑P P 04 46 40.5 -0.4
VOIR 75.28 329 ⇑P P 04 46 40.5 -0.4
GERES GERESS Array B 75.32 338 P P 04 46 41.5 +0.4
comp=Z,0.7nm,0.6s,baz=31,slow=5.9,SNR=6.4
ARR Arges 75.48 329 ⇓P P 04 46 43.4 +1.3
GZR Gura Zlata 76.03 330 ⇑P P 04 46 45.2 0.0
GZR Gura Zlata 76.03 330 ⇑P P 04 46 45.2 0.0
BZS Buzias 76.18 331 ⇓P P 04 46 45.5 -0.4
BZS Buzias 76.18 331 ⇓P P 04 46 45.5 -0.4
BR131 Keskin Array S 77.21 320 P P 04 46 52.0 -0.1
BR131 Keskin Array S 77.21 320 P P 04 46 52.0 -0.1
BR131 pmax pmax
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 77.21 320 P P 04 46 52.2 +0.1
comp=Z,1.6nm,0.7s,baz=45,slow=2.3,SNR=9.9
PLVB Pleven 77.25 328 ⇑P P 04 46 52.9 +0.9
MDUB Mudurnu 77.51 322 P P 04 46 53.8 +0.1
UOSS Minazif 78.47 296 P P 04 46 58.6 -0.5
ASAR Alice Springs 78.76 204 P P 04 47 01.4 +1.0
comp=Z,0.9nm,0.7s,baz=12,slow=6.1,SNR=9.0
MANT Manisa 80.23 323 P P 04 47 08.1 -0.6
RAYN Ar Rayn 85.37 303 P P 04 47 35.2 -0.2
RAYN Ar Rayn 85.37 303 P P 04 47 35.2 -0.2
RAYN pmax pmax
comp=Z,6.0nm,0.8s
ESDC Sonseca Array 87.48 347 P P 04 47 45.9 +0.4
comp=Z,1.2nm,0.5s,baz=3.6,slow=4.7,SNR=6.2
KEST Kesra 88.75 336 P P 04 47 50.4 -1.2
comp=Z,3.0nm,0.7s,baz=308,slow=7.4,SNR=4.4

IDC 28 04:48:06.5±3.9, 20.34S×169.39E, h125km±32km, mb3.6/6, mb1 3.8/7, mb1mx3.5/35, mbtmp4.0/7, Error ellipse: s-maj=41.2km s-min=32.6km az=169.0
ISC 28 04:48:06.4±1.0, 20.35S±0.2×169.4E±0.2, h125km, n10, σ0.54/11, mb3.8/6, Vanuatu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DZM Mont Dzumac 3.28 237 P Pn 04 48 56.9 +0.3
14nm,0.3s,baz=91,slow=8.9,SNR=206
DZM S Sn 04 49 35.0 -0.3
45nm,0.3s,baz=128,slow=23,SNR=33
WRA Warramunga Arr 32.89 264 P P 04 54 28.2 -0.6
0.2nm,0.5s,baz=100,slow=8.6,SNR=3.4
ASAR Alice Springs 33.03 258 P P 04 54 30.2 +0.1
1.4nm,0.5s,baz=86,slow=8.9,SNR=21

CMAR	Chiang Mai Arr	79.07	294	P	P	04 59 58.0	+0.7
	1.5nm,0.4s,baz=101,slow=4.7,SNR=4.1						
SNAA	Sanae	88.12	182	P	P	05 00 42.8	+0.1
	3.2nm,1.0s,baz=200,slow=19,SNR=7.3						
SONM	Songino Array	88.15	323	P	P	05 00 43.4	+0.2
	0.5nm,0.8s,baz=136,slow=5.0,SNR=3.0						
NVAR	Mina Array Bea	89.38	48	P	P	05 00 49.4	+0.1
	0.3nm,0.6s,baz=240,slow=7.2,SNR=2.9						
ARCES	ARCESS Array B	126.12	345	PKP	PKPdf	05 06 52.2	-1.1
	2.7nm,0.9s,baz=75,slow=1.0,SNR=3.7						
GERES	GERESS Array B	145.49	331	PKPbc	PKPdf	05 07 29.7	-0.1
	1.5nm,0.7s,baz=42,slow=4.2,SNR=9.6						
DAVOX	Davos/Dischmat	148.74	332	PKPbc	PKPbc	05 07 39.0	-0.3

ASRS **28** *05:13:43.5, 53.74N×91.05E, M2.2, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
NNC **28** *05:13:57.5±2.9, 53.38N×90.26E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=23.5km s-min=17.0km az=71.0, Suspected Mining explosion.*

ISC 28 05:13:35.8±4.7, 52.06N±0.09×90.5E±0.2, h0km, n3, σ0§37/5, 3C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.93	301	⇑Pn	Pg	05 14 51.0	0.0
	2.5nm,0.8s						
ZAA0				⇓Lg	Lg	05 15 41.8	
	11nm,0.8s						
MK31	Makanchi Array	7.52	229	⇑Pn	Pg	05 15 59.5	-0.2
	0.4nm,0.5s,baz=42,slow=13,SNR=9.8						
MK31				⇓Pg	Pb	05 16 29.1	+42
	1.9nm,0.8s,baz=45,slow=11,SNR=5.1						
MK31				⇓Sn	Sg	05 17 37.4	+0.3
	2.2nm,0.7s,baz=42,slow=22,SNR=2.9						
MK31				⇓Lg	Lg	05 18 24.5	
	21nm,1.1s,baz=55,slow=35,SNR=4.8						
KURBB	Kurchatov Arra	7.65	264	⇓Pn	Pb	05 15 49.3	+0.1
	2.9nm,0.5s						
KURBB				⇑Sn	Sb	05 17 20.5	-0.3
	28nm,0.7s						
KURBB				⇓Lg	Lg	05 18 02.6	
	48nm,0.8s						

DJA **28** *05:20:41.5±0.4, 7°S±7°×10°7E±°, h156km±3km, M4.0/13, mB5.1/3, mb4.4/5, MLv3.8/13, Mw(mB)4.4/3*
IDC **28** *05:20:42.6±0.9, 6.54S×107.77E, h161km±16km, mb3.2/6, mb1 3.4/7, mb1mx3.1/44, mbtmp3.8/7, Error ellipse: s-maj=97.8km s-min=15.7km az=45.0*
NEIC **28** *05:20:42.3±2.9, 7.02S±0.08×107.41E±0.08, h169km±4km, mb4.1/9, Error ellipse: s-maj=15.1km s-min=7.8km az=223.0*

ISC 28 05:20:42.1±0.7, 7.07S±0.10×107.37E±0.05, h165km±5km, n63, σ1§18/84, mb4.0/9, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNJI	Cibinong	0.34	225	P	Pn	05 21 04.1	-0.5
CNJI				S	Sn	05 21 19.6	-2.2
CNJI	Cibinong	0.34	225	P	Pn	05 21 04.1	-0.5
CNJI				S	Sn	05 21 19.6	-2.2
LEM	Lembang	0.35	46	P	Pn	05 21 05.7	+0.8
	41nm,0.3s,baz=348,slow=3.8,SNR=53						
LEM				S	Sn	05 21 22.9	+0.7
	38nm,0.3s,baz=7.1,slow=22,SNR=36						
LEM	Lembang	0.35	46	P	Pn	05 21 05.5	+0.7
LEM				S	Sn	05 21 22.8	+0.6
LEM	Lembang	0.35	46	P	Pn	05 21 05.5	+0.7
LEM				S	Sn	05 21 22.8	+0.6
CISI	Cisompet, Garu	0.66	137	P	Pn	05 21 05.6	-0.5
CISI				S	Sn	05 21 22.9	-1.6
CISI	Cisompet, Garu	0.66	137	P	Pn	05 21 05.6	-0.5
CISI				S	Sn	05 21 22.9	-1.6
CISI	Cisompet, Garu	0.66	137		Pn	05 21 05.8	-0.3
CISI				Sn	Sn	05 21 23.6	-0.9
DBJI	Dramaga	0.80	310	P	Pn	05 21 07.6	+0.7
DBJI				S	Sn	05 21 25.3	-0.6
DBJI	Dramaga	0.80	310	P	Pn	05 21 07.6	+0.7
DBJI				S	Sn	05 21 25.3	-0.6
SKJI	Sukabumi	0.81	275	P	Pn	05 21 07.2	+0.3
SKJI				S	Sn	05 21 24.8	-1.1
SKJI	Sukabumi	0.81	275	P	Pn	05 21 07.2	+0.3
SKJI				S	Sn	05 21 24.8	-1.1
KPJI	Karang Pucung	1.57	100	P	Pn	05 21 14.6	+1.0
KPJI				S	Sn	05 21 37.6	-0.2
KPJI	Karang Pucung	1.57	100	P	Pn	05 21 14.6	+1.0
KPJI				S	Sn	05 21 37.6	-0.2
SMRI	Semarang	3.05	90	Pn	Pn	05 21 27.3	-3.4
UGM	Wanagama	3.24	105	P	Pn	05 21 33.4	+0.3
UGM				S	Sn	05 22 10.6	-2.2
UGM	Wanagama	3.24	105	P	Pn	05 21 33.4	+0.3
UGM				S	Sn	05 22 10.6	-2.2
UGM	Wanagama	3.24	105		Pn	05 21 33.1	0.0
UGM				Sn	Sn	05 22 10.8	-2.0
KASI	Kota Agung	3.24	298	S	Sn	05 22 11.3	-1.5
KASI	Kota Agung	3.24	298	S	Sn	05 22 11.3	-1.5
KLSI		3.53	312	P	Pn	05 21 37.2	+0.4
KLSI		3.53	312	P	Pn	05 21 37.2	+0.4
PCJI	Pacitan	3.94	107	P	Pn	05 21 41.4	-0.6
PCJI				S	Sn	05 22 26.3	-2.3
PCJI	Pacitan	3.94	107	P	Pn	05 21 41.4	-0.6
PCJI				S	Sn	05 22 26.3	-2.3
MDSI	Maura Dua	4.08	309	P	Pn	05 21 44.4	+0.5
MDSI	Maura Dua	4.08	309	P	Pn	05 21 44.4	+0.5
PWJI	Pagerwojo	4.50	102	P	Pn	05 21 49.6	+0.3
PWJI				S	Sn	05 22 40.4	-1.3
PWJI	Pagerwojo	4.50	102	P	Pn	05 21 49.6	+0.3
PWJI				S	Sn	05 22 40.4	-1.3
MNAI	Manna	5.15	301	P	Pn	05 21 58.1	+0.3
MNAI	Manna	5.15	301	P	Pn	05 21 58.1	+0.3
MNAI	Manna	5.15	301	Pn	Pn	05 21 58.0	+0.3
MNAI				Sn	Sn	05 22 55.6	-1.5
JAGI	Jajag, Banyuwa	6.87	102	P	Pn	05 22 20.5	0.0
	0.3nm2μm44nm,0.5s						
JAGI	Jajag, Banyuwa	6.87	102	P	Pn	05 22 20.5	0.0
	0.3nm2μm44nm,0.5s						
JAGI	Jajag, Banyuwa	6.87	102		Pn	05 22 20.4	0.0
	0.3nm2μm44nm,0.5s						
SRBI	Singaraja	7.84	98	P	Pn	05 22 34.3	+0.9
	0.2nm24nm,0.4s						
SRBI	Singaraja	7.84	98	P	Pn	05 22 34.3	+0.9
	0.2nm24nm,0.4s						
PLAI	Plampang	10.46	100	P	Pn	05 23 07.0	-1.0
PLAI	Plampang	10.46	100	P	Pn	05 23 07.0	-1.0
RPSI	Rantau Prapat	12.85	319	P	Pn	05 23 38.8	-0.2
PSI	Prapat	12.93	319	P	Pn	05 23 38.8	-1.4
	0.3nm,0.3s,baz=139,slow=20,SNR=8.1						
LHMI	Lhok Sumawe	16.04	319	P	Pn	05 24 18.0	-0.8
FITZ	Fitzroy Crossi	20.91	123	P	P	05 25 12.7	+0.9
	1.2nm,0.8s,baz=314,slow=13,SNR=4.0						
FITZ	Fitzroy Crossi	20.91	123	P	P	05 25 12.9	+1.1
FITZ				IAmb	IAmb	05 25 26.6	
	comp=Z,15nm,1.5s						
KNRA	Kununurra	22.63	114	P	P	05 25 30.7	+1.4
KNRA				IAmb	IAmb	05 25 35.1	
	comp=Z,17nm,1.4s						
WB0	Warramunga Arr	29.10	118	P	P	05 26 28.3	+0.7
WB0				IAmb	IAmb	05 26 43.7	
	comp=Z,5.5nm,1.3s						
WRA	Warramunga Arr	29.12	119	P	P	05 26 28.1	+0.3
	comp=Z,0.5nm,0.9s,baz=334,slow=17,SNR=5.2						
WB2	Warramunga Arr	29.13	119	P	P	05 26 28.8	+1.0
WB2				IAmb	IAmb	05 26 43.5	
	comp=Z,3.8nm,1.1s						
WR0	Warramunga Arr	29.30	119	P	P	05 26 30.5	+1.2
WR0				IAmb	IAmb	05 26 32.7	
	comp=Z,4.4nm,1.4s						
ASAR	Alice Springs	30.35	126	P	P	05 26 38.0	-0.5
	comp=Z,0.5nm,0.5s,baz=300,slow=8.7,SNR=7.1						
STKA	Stephens Creek	40.32	132	P	P	05 28 05.5	+1.9
	comp=Z,2.7nm,0.5s,baz=308,slow=8.4,SNR=8.6						
STKA	Stephens Creek	40.32	132	P	P	05 28 05.7	+2.1
MKAR	Makanchi Array	58.08	340	P	P	05 30 16.3	-1.8
	comp=Z,0.3nm,0.5s,baz=153,slow=8.6,SNR=4.1						
BKZ	Black Stump Fm	69.40	129	P	P	05 31 34.0	+1.5
ABKAR	Akbulak array	69.66	329	P	P	05 31 32.0	-1.6
BRTR	Keskin Array B	82.15	312	P	P	05 32 45.5	+0.7
	comp=Z,0.4nm,0.7s,baz=88,slow=10,SNR=3.3						
MNTX	Cornudas Mount	140.85	47	PKPdf	PKPdf	05 39 51.7	-1.3
TXAR	Lajitas Array	143.34	49	PKP	PKPbc	05 39 55.1	-0.1
	comp=Z,1.2nm,1.2s,baz=350,slow=2.1,SNR=2.7						
L56A	Greenwood	144.81	6		PKPab	05 39 58.4	-0.7
U40A	Yellville	145.49	30	PKPdf	PKPdf	05 40 01.1	0.0
SSPA	Standing Stone	146.25	7	PKPbc	PKPdf	05 40 03.4	+1.2
LCAR	Lake Charles	146.53	28		PKPbc	05 40 04.5	0.0
WVT	Waverly	147.91	24	PKPbc	PKPdf	05 40 07.3	+2.2
V52A	Sevierville	149.65	18	PKPbc	PKPbc	05 40 13.0	+0.3

KRSC 28 05:22:26.2±1.6, 48.10N×156.00E, h23km±20km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.59	2	eP	Pb	05 23 09.3	-2.5
SKR				eS	Sb	05 23 40.8	-2.4
ALID	Alaid	2.79	354	eP	Pn	05 23 10.6	+1.1
PAU	Pauzhetka	3.41	9	eP	Pn	05 23 20.9	+3.0
PAU				eS	Sn	05 24 01.0	+3.3
KDTR	Khodutka, Kamc	3.95	19	eP	Pn	05 23 29.3	+4.0
KDTR				eS	Sn	05 24 16.0	+5.1
ASAK	Asacha	4.46	15	eP	Pn	05 23 37.2	+4.8
MTVR	Mutnovka	4.61	17	eP	Pn	05 23 39.2	+4.7
MTVR				eS	Sn	05 24 32.6	+5.3
RUS	Russkaya	4.63	19	eP	Pn	05 23 38.8	+4.2
RUS				eS	Sn	05 24 31.2	+3.6
GRL	Gorelyy	4.65	16	eP	Pn	05 23 40.1	+5.0
GRL				eS	Sn	05 24 33.9	+5.5
KRMR	Karymshinskiy	4.93	15	eP	Pn	05 23 43.7	+4.9
UGLR	Uglovaya	5.42	18	eP	Pn	05 23 50.2	+4.5
AVH	Avacha	5.46	18	eP	Pn	05 23 51.5	+5.4
KOK	Koryaka	5.46	17	eP	Pn	05 23 52.2	+6.0
SPN	Mys Shipunski	5.62	26	eP	Pn	05 23 52.7	+4.4
TUMR	Tumrok	7.64	18	P	Pn	05 24 20.3	+4.2

NIED **28** *05:32:00, 41.00N×142.90E, h32km, Mw3.9 Best double couple: $M_0$6.86000×10^14 NP1:ϕ_s24.00000°, δ68.00000°, λ104.00000°. NP2:ϕ_s171.00000°, δ26.00000°, λ60.00000°.*
JMA **28** *05:32:31.9±0.2, 41.04N×142.89E, h23km±4km, M4.0*
NEIC **28** *05:32:34.7±1.9, 41.12N±0.06×142.95E±0.10, h50km±6km, mb4.3/13, Error ellipse: s-maj=11.2km s-min=7.8km az=119.0*
IDC **28** *05:32:36.0±2.3, 41.09N×142.79E, h62km±20km, mb3.6/17, mb1 3.8/21, mb1mx3.6/40, mbtmp3.9/21, MS3.1/6, Ms1 3.1/6, ms1mx2.8/55, Error ellipse: s-maj=17.3km s-min=15.3km az=97.0*

ISC 28 05:32:30.8±1.0, 41.05N±0.03×142.86E±0.04, h19km±3km, n71, σ1§04/79, mb4.2/25, 2C-4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	Erimo	0.99	13		Pg	05 32 50.3	+0.2
ERM				Sn	Sn	05 33 03.8	+0.7
JEM	Erimo	0.99	13	P	Pg	05 32 50.3	+0.2
JEM				eS	Sn	05 33 03.6	+0.5
JARK	Aomorirokkasho	1.13	269	⇓P	Pg	05 32 52.4	-0.2
JARK				S	Sn	05 33 07.1	+0.7
JAHD	Aomorihigashid	1.17	281	⇓P	Pg	05 32 53.0	-0.4
JAHD				eS	Sg	05 33 08.7	0.0
JKEN	Kujiedanarisaw	1.21	227	P	Pg	05 32 53.4	-0.8
JKEN				eS	Sg	05 33 09.8	-0.3
JANG	Nango	1.22	237	⇓P	Pg	05 32 53.8	-0.6
JANG				eS	Sg	05 33 10.5	+0.1
JNBK	Urakawa-nobuka	1.23	356	⇑P	Pg	05 32 53.9	-0.8
JNBK				eS	Sg	05 33 10.6	-0.3
JTM	Tenmabayashi	1.38	260	P	Pg	05 32 56.7	-0.7
JTM				S	Sg	05 33 14.5	-1.0
JOT	Ohata	1.41	284	⇓P	Pg	05 32 56.6	-1.3
JOT				eS	Sg	05 33 14.9	-1.4
JKB	Kayabe	1.61	302	⇑P	Pb	05 32 59.5	-0.3
JKB				eS	Sb	05 33 19.5	-0.2
JCH	Churui	1.61	13	P	Pn	05 32 58.7	+0.6
JCH				eS	Sn	05 33 18.6	+0.3
JIAM	Iburiatsuma	1.72	336	P	Pg	05 33 02.7	-1.2
JIAM				eS	Sg	05 33 26.2	-0.2
JBT2	Biratori 2	1.77	348	P	Pb	05 33 02.0	-0.5
JBT2				eS	Sb	05 33 24.5	+0.2
JOM	Ohasama	1.98	218	P	Pb	05 33 05.6	-0.5
JOM				eS	Sb	05 33 29.9	-0.4
JEW	Eniwo	2.08	330	P	Pb	05 33 07.1	-0.7
JEW				eS	Sb	05 33 33.6	+0.4
JFR	Furan	2.12	355	P	Pb	05 33 07.6	-1.0
JFR				eS	Sb	05 33 33.8	-0.8
JOMM	Oshimamatsumae	2.20	283	P	Pb	05 33 09.0	-0.9
JOMM				eS	Sb	05 33 35.7	-1.0
JAR	Ashorobuto	2.35	16	P	Pn	05 33 09.0	+0.7
JAR				eS	Sn	05 33 35.7	-0.8
JAK	Akkeshi	2.38	35	P	Pn	05 33 08.9	+0.2
JAK				eS	Sn	05 33 34.5	-2.8
JKA	Kamikawa-asahi	3.07	357		Pn	05 33 20.6	+2.3
JKA					Sb	05 34 01.1	-0.7
ASAJ	Asahikawa	3.08	356	P	Pn	05 33 20.6	+2.3
	5.1nm,0.3s,baz=244,slow=14,SNR=11						
ASAJ				S	Sb	05 34 01.1	-0.8
	12nm,0.3s,baz=332,slow=32,SNR=7.5						
MJB9	Matsu-Tunnel	5.78	220	Pn	Pn	05 33 59.7	+4.3
MAJO	Matsushiro	5.78	220	Pn	Pn	05 33 59.2	+3.8
MJAR	Matsushiro Arr	5.78	220	P	Pn	05 33 59.5	+4.1
	0.2nm,0.3s,baz=31,slow=15,SNR=5.5						
MJAR				LR	LR	05 36 36.6	
	comp=Z,81nm,21.2s,baz=20,slow=42						
USRK	Ussuriysk Ar.	8.61	295	P	Pn	05 34 37.9	+3.6
	baz=102,slow=13,SNR=3.8						
USRK				LR	LR	05 38 06.3	
	comp=Z,92nm,21.1s,baz=118,slow=39						
KLR	Kul'dur	11.32	320	P	Pn	05 35 13.9	+2.6
	0.1nm,0.3s,baz=117,slow=14,SNR=3.3						
KLR				LR	LR	05 39 33.3	
	comp=Z,66nm,20.6s,baz=280,slow=37						
KSRS	Korea Array	12.12	258	LR	LR	05 39 38.3	
	comp=Z,60nm,19.9s,baz=40,slow=35						
JNU	Nakatsue	12.40	234	LR	LR	05 40 09.0	
	comp=Z,59nm,19.8s,baz=46,slow=37						
ULN	Ulaanbaatar	26.27	297	P	P	05 38 00.6	+1.1
ULN				IAmb	IAmb	05 38 06.4	
	comp=Z,2.9nm,0.6s						
SONM	Songino Array	26.72	297	P	P	05 38 09.4	+0.6
	comp=Z,1.9nm,0.6s,baz=81,slow=8.8,SNR=15						
H11N2	WAKE ISLAND Hy	29.51	129	T	T	06 09 45.6	
	baz=318,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	29.52	129	T	T	06 09 58.7	
	baz=318,slow=75,SNR=19						
H11N3	WAKE ISLAND Hy	29.53	129	T	T	06 09 50.6	
	baz=318,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	30.36	131	T	T	06 11 14.4	
	baz=324,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	30.36	131	T	T	06 11 09.2	
	baz=324,slow=76,SNR=9.3						
H11S2	WAKE ISLAND Hy	30.38	131	T	T	06 11 05.8	
	baz=324,slow=76,SNR=9.7						
ZALV	Zalesovo Beam	40.16	309	P	P	05 40 04.9	-0.3
	comp=Z,2.7nm,0.6s,baz=94,slow=7.2,SNR=6.2						
MK31	Makanchi Array	43.06	299	P	P	05 40 29.3	+0.1
MKAR	Makanchi Array	43.06	299	P	P	05 40 29.1	-0.1
	comp=Z,0.9nm,0.5s,baz=85,slow=10,SNR=14						
MAKZ	Makanchi	43.26	299	P	P	05 40 31.9	+1.1
CMAR	Chiang Mai Arr	43.69	252	P	P	05 40 33.7	-0.9
	comp=Z,2.3nm,0.3s,baz=44,slow=7.8,SNR=4.3						
TOLK	Toolik Lake Re	44.41	29	P	P	05 40 39.7	0.0
TOLK				IAmb	IAmb	05 40 50.5	
	comp=Z,8.0nm,1.5s						
KURK	Kurchatov	44.44	305	P	P	05 40 39.7	-0.5
KURK				IAmb	IAmb	05 40 54.1	
	comp=Z,2.3nm,0.6s						
ILAR	Eielson Array	45.53	34	P	P	05 40 48.3	-0.3
	comp=Z,0.2nm,0.6s,baz=288,slow=7.4,SNR=3.5						
VRDI	Verde Repeater	47.52	39	P	P	05 41 05.4	+0.8
INK	Inuvik	50.32	29	P	P	05 41 26.2	+0.6
	comp=Z,0.5nm,0.4s,baz=333,slow=2.8,SNR=6.8						
INK	Inuvik	50.32	29	P	P	05 41 26.5	+0.9
HNR	Honiara	52.64	159	P	P	05 41 45.7	+2.1
	comp=Z,282nm,1.0s,baz=196,slow=15,SNR=1.7						
DLBC	Dease Lake	54.80	40	P	P	05 41 58.7	-0.4
ABKAR	Akbulak array	56.27	309	P	P	05 42 09.3	-0.3
ABKAR				IAmb	IAmb	05 42 20.7	
	comp=Z,1.6nm,0.6s						
ARCES	ARCESS Array B	60.65	339	P	P	05 42 39.4	-0.5
	comp=Z,8.8nm,1.2s,baz=60,slow=13,SNR=3.0						
WB0	Warramunga Arr	61.01	189	P	P	05 42 42.7	-0.2
WB0				IAmb	IAmb	05 42 47.0	
	comp=Z,5.2nm,1.2s						
WR0	Warramunga Arr	61.18	189	P	P	05 42 44.0	0.0
WR0				IAmb	IAmb	05 43 02.8	
	comp=Z,4.5nm,1.1s						
WRA	Warramunga Arr	61.19	189	P	P	05 42 43.5	-0.6
	comp=Z,0.9nm,0.3s,baz=10,slow=5.9,SNR=3.9						
GEYT	Alibeck	62.92	298	P	P	05 42 54.4	-1.4
	comp=Z,1.2nm,0.4s,baz=47,slow=10,SNR=2.7						
ASAR	Alice Springs	64.92	189	P	P	05 43 08.6	-0.2
	comp=Z,0.2nm,0.6s,baz=12,slow=6.8,SNR=3.3						
FIA1	FINESS Array B	65.80	332	P	P	05 43 13.8	-0.4
FINES	FINESS Array B	65.80	332	P	P	05 43 13.7	-0.5
	comp=Z,2.8nm,0.6s,baz=52,slow=7.2,SNR=15						
SUMG	Summit	66.67	0	P	P	05 43 20.9	+0.8
KBZ	Khabaz	69.16	310	P	P	05 43 36.5	+0.8
	comp=Z,2.2nm,0.9s,baz=58,slow=1.6,SNR=4.9						
NOA	NORSAR Array B	70.92	337	P	P	05 43 45.2	-1.1
	comp=Z,0.5nm,0.6s,baz=38,slow=6.2,SNR=3.8						
NVAR	Mina Array Bea	71.72	55	P	P	05 43 50.8	-1.0
	comp=Z,0.1nm,0.3s,baz=336,slow=8.1,SNR=2.2						
AKASG	Malin Array Be	71.82	322	P	P	05 43 51.4	-0.4
	comp=Z,1.5nm,0.4s,baz=45,slow=6.0,SNR=15						
AKBB	Malin Array Si	71.82	322	P	P	05 43 51.5	-0.2
AKBB				IAmb	IAmb	05 43 52.1	
	comp=Z,3.4nm,0.9s						
PDAR	Pinedale Array	74.08	47	P	P	05 44 05.8	+0.1
	comp=Z,0.3nm,0.6s,baz=318,slow=1.2,SNR=3.4						
BUR08	Bucovina Ar. S	75.85	322	P	P	05 44 16.1	+0.5
URZ	Urewera	84.91	154	LR	LR	06 18 00.9	
	comp=Z,89nm,19.8s,baz=192,slow=32						
TXAR	Lajitas Array	86.80	53	P	P	05 45 14.9	+0.8
	comp=Z,0.1nm,0.7s,baz=294,slow=4.7,SNR=2.4						
URIC	Uribia, Colomb	118.44	40	PKPdf	PKPdf	05 51 14.8	-2.6
QSPA	South Pole Qui	130.78	180	PKPpre	PKPpre	05 51 32.2	
SNAA	Sanae	144.91	198		PKPdf	05 52 04.7	-0.5

BJI **28** *05:50:35.5±0.0, 7.18N×94.13E, h96km, mB5.1/47, mb4.9/65*
NDI **28** *05:50:35.8±3.0, 7.43N×94.52E, h72km±111km, mb5.2, mb5.1(NEIC)*
GCMT **28** *05:50:37.2±0.2, 7.30N±0.01×94.09E±0.01, h93km±1km, MW5.1/113, Moment Tensor Solution. s78,c104; s113,c172; Duration: 0 Moment tensor: Scale 10^16 Nm; M_{rr}3.53±.11; $M_{\theta\theta}$-4.42±.11; $M_{\phi\phi}$0.89±.12; $M_{r\theta}$-1.67±.09; $M_{r\phi}$-3.08±.13; $M_{\theta\phi}$0.69±.09; Best double couple: $M_0$5.23700×10^16 NP1:ϕ_s36.00000°, δ46.00000°, λ45.00000°. NP2:ϕ_s272.00000°, δ59.00000°, λ126.00000°. Principal axes: T 4.4800, Plg58.0000°, Azm234.0000°; N 1.5190, Plg31.0000°, Azm71.0000°; P -5.9930, Plg8.0000°, Azm337.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MOS **28** *05:50:37.8±1.2, 7.33N×94.29E, h106km, mb5.1/36 Error ellipse: s-maj=7.8km s-min=5.0km az=105.4*
DJA **28** *05:50:37.0±0.2, 7°N±2°×9°4E±°, h70km±3km, M5.0/54, mb5.2/54, mB5.4/29, MLv5.3/10, Mw(mB)4.9/29, Mwp5.2/4*
KLM **28** *05:50:39.0, 7.11N×94.16E, h76km, mb5.0*
NEIC **28** *05:50:39.1±2.3, 7.30N±0.06×94.26E±0.07, h102km±4km, mb5.1/108, Error ellipse: s-maj=10.8km s-min=7.3km az=54.0*
IDC **28** *05:50:39.0±0.9, 7.30N×94.31E, h103km±7km, mb4.6/27, mb1 4.7/31, mb1mx4.7/40, mbtmp5.0/31, MS3.8/28, Ms1 3.8/28, ms1mx3.7/47, Error ellipse: s-maj=12.5km s-min=8.7km az=55.0*

ISC 28 05:50:37.4±0.4, 7.27N±0.03×94.23E±0.03, h89km±3km, h89km:pP-P, n713, σ1§54/752, mb5.0/128, 20C-7D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.38	127	P	Pn	05 51 29.2	+1.2
LHMI	Lhok Sumawe	3.38	127	P	Pn	05 51 29.2	+1.2
LHMI	Lhok Sumawe	3.38	127		Pn	05 51 29.7	+1.7
MLSI	Meulaboh, Aceh	3.69	144	P	Pn	05 51 32.4	+0.2
MLSI	Meulaboh, Aceh	3.69	144	P	Pn	05 51 32.4	+0.2
PBA	Port Blair	4.60	342	Pn	Pn	05 51 44.3	-0.3
PBA				Sn	Sn	05 52 36.6	-0.2
KCSI	Kotacane, Aceh	5.13	136	P	Pn	05 51 52.3	+0.5
	3.0nm11μm618nm,0.7s						
KCSI	Kotacane, Aceh	5.13	136	P	Pn	05 51 52.3	+0.5
	3.0nm11μm618nm,0.7s						
SNSI	Sinabang, Aceh	5.26	157	P	Pn	05 51 49.7	-3.9
	3.4nm14μm593nm,0.5s						
SNSI				S	Sn	05 52 49.3	-3.7
	3.4nm14μm593nm,0.5s						
SNSI	Sinabang, Aceh	5.26	157	P	Pn	05 51 49.7	-3.9
	3.4nm14μm593nm,0.5s						
SNSI				S	Sn	05 52 49.3	-3.7
	3.4nm14μm593nm,0.5s						
PSI	Prapat	6.45	133	P	Pn	05 52 11.2	+1.4
	25nm,0.3s,baz=312,slow=9.7,SNR=104						
PSI				S	Sn	05 53 21.8	-0.3
	9.6nm,0.3s,baz=351,slow=19,SNR=1.5						
PSI				LR	LR	05 55 15.2	
	comp=Z,2μm,20.3s,baz=303,slow=43						
RPSI	Rantau Prapat	6.52	134		Pn	05 52 11.2	+0.5
RPSI					Sn	05 53 21.8	-1.9
RPSI	Rantau Prapat	6.52	134		Pn	05 52 10.6	-0.1
RPSI				Sn	Sn	05 53 22.0	-1.7
KULM	Kulim	6.68	107		Pn	05 52 14.1	+1.1
KULM	Kulim	6.68	107	P	Pn	05 52 14.0	+1.1
IPM	Ipoh	7.31	112		Pn	05 52 21.6	+0.1
IPM				Sn	Sn	05 53 42.5	-0.4
IPM	Ipoh	7.31	112	P	Pn	05 52 22.0	+0.5
PBSI	Pulau Batu	8.32	151	P	Pn	05 52 31.8	-3.6
	2μm114nm,0.5s						
PBSI	Pulau Batu	8.32	151	P	Pn	05 52 31.8	-3.6
	2μm114nm,0.5s						
BKNI	Bangkinang	9.68	135	P	Pn	05 52 52.6	-1.3
	2μm150nm,0.7s						
BKNI	Bangkinang	9.68	135	P	Pn	05 52 52.6	-1.3
	2μm150nm,0.7s						
BKNI	Bangkinang	9.68	135		Pn	05 52 52.2	-1.6
SISI	Saibi	9.82	150	P	Pn	05 52 53.0	-2.8
	689nm41nm,0.6s						
SISI	Saibi	9.82	150	P	Pn	05 52 53.0	-2.8
	689nm41nm,0.6s						
PDSI	Padang	10.23	142	P	Pn	05 52 58.3	-3.1
	3μm58nm,0.6s						
PDSI	Padang	10.23	142	P	Pn	05 52 58.3	-3.1
	3μm58nm,0.6s						
SDSI	Sungai Dareh	10.86	138	P	Pn	05 53 07.7	-2.3
	2μm22nm,0.6s						
SDSI	Sungai Dareh	10.86	138	P	Pn	05 53 07.7	-2.3
	2μm22nm,0.6s						
MYKOM	Kota Tinggi	11.02	119	Pn	Pn	05 53 12.9	+0.7
MYKOM	Kota Tinggi	11.02	119	P	Pn	05 53 14.0	+1.8
PBKT	Sadao Pong	11.35	35	P	Pn	05 53 18.8	+2.2
PPSI	Pulau Pagai	11.52	150	P	Pn	05 53 17.8	-1.0
	72nm,1.1s						
PPSI	Pulau Pagai	11.52	150	P	Pn	05 53 17.8	-1.0
	72nm,1.1s						
KRJI	Kerinci	11.77	142	P	Pn	05 53 20.5	-1.9
	4μm171nm,0.6s						
KRJI	Kerinci	11.77	142	P	Pn	05 53 20.5	-1.9
	4μm171nm,0.6s						
CM31	Chiang Mai Arr	12.03	22	P	Pn	05 53 27.9	+2.2
CMAR	Chiang Mai Arr	12.03	22	P	Pn	05 53 28.3	+2.5
	10nm,0.3s,baz=209,slow=14,SNR=63						
CMAR				ScP	ScP	06 02 27.8	-1.5
	baz=238,slow=2.9,SNR=23						
CHTO	Chiang Mai	12.36	21		Pn	05 53 31.7	+1.6
CHTO	Chiang Mai	12.36	21	P	Pn	05 53 31.7	+1.6
SIMRM	Sittwe	12.85	354		Pn	05 53 32.8	-3.9
PALK	Pallekele	13.42	271	P	Pn	05 53 44.9	+0.6
	18nm,0.3s,baz=70,slow=12,SNR=61						
PALK				LR	LR	05 58 33.8	
	comp=Z,613nm,20.6s,baz=70,slow=35						
PALK	Pallekele	13.42	271		Pn	05 53 46.2	+1.9
PALK	Pallekele	13.42	271	P	Pn	05 53 46.2	+1.9
UBPT	Khong Chiam	13.59	53	P	Pn	05 53 49.7	+3.2
KSI	Kapahiang	13.69	142	P	P	05 53 51.1	-2.4
KSI	Kapahiang	13.69	142	P	P	05 53 51.1	-2.4
MNAI	Manna	14.47	143	P	Pn	05 53 53.9	-4.0
	4μm147nm,0.5s						
MNAI	Manna	14.47	143	P	Pn	05 53 53.9	-4.0
	4μm147nm,0.5s						
MNAI	Manna	14.47	143		Pn	05 53 54.4	-3.5
DLV	T Lat	14.80	71	P	Pn	05 54 06.0	+3.6
MDRS	Chennai	14.92	294	eP	Pn	05 54 05.0	+1.3
MDRS				IAmb	IAmb	05 54 10.2	
	comp=Z,78nm,0.3s						

MDRS ex x 05 56 33.8
CHLP Challavanipeta 14.93 319 eP Pn 05 54 04.2 +0.5
CHLP IAmb IAmb 05 54 07.0
comp=Z,194nm,0.6s
CHLP e 05 56 35.1
CHLP IVMs_BB IVMs_BB 05 57 03.8
comp=Z,214nm,3.6s
SAIH SAIHA 15.18 356 eP Pn 05 54 04.7 -2.4
SAIH IAmb IAmb 05 54 09.7
comp=Z,104nm,0.5s
BWNR Bhubaneshwar 15.31 329 eP Pn 05 54 07.4 -1.2
BWNR i x x 05 54 09.6
BWNR ex x 05 56 44.0
MDSI Maura Dua 15.33 139 P Pn 05 54 05.9 -3.0
comp=Z,406nmcomp=Z,32nm,0.8s
MDSI Maura Dua 15.33 139 P Pn 05 54 05.9 -3.0
comp=Z,406nmcomp=Z,32nm,0.8s
BRDH Bariadhala 15.52 351 P Pn 05 54 11.9 +0.7
comp=Z,70nm,0.3s,baz=87,slow=10,SNR=13
SKHT Srikalahasti 15.65 295 eP Pn 05 54 13.5 +0.5
SKHT IAmb IAmb 05 54 18.2
comp=Z,19nm,0.6s
SKHT e 05 56 51.8
SKHT IVMs_BB IVMs_BB 05 57 21.8
comp=Z,310nm,4.1s
LWLI Liwa 15.66 141 P Pn 05 54 13.3 +0.1
LWLI Liwa 15.66 141 P Pn 05 54 13.3 +0.1
PVM Polavaram 15.80 310 eP Pn 05 54 14.8 -0.1
PVM IAmb IAmb 05 54 20.0
comp=Z,63nm,0.7s
PVM e 05 56 56.6
PVM IVMs_BB IVMs_BB 05 57 22.9
comp=Z,277nm,4.2s
KLSI 15.84 138 P Pn 05 54 15.5 +0.1
comp=Z,202nmcomp=Z,15nm,0.7s
KLSI 15.84 138 P Pn 05 54 15.5 +0.1
comp=Z,202nmcomp=Z,15nm,0.7s
MYLAV Mylavaram 16.29 307 eP Pn 05 54 21.3 +0.4
MYLAV IAmb IAmb 05 54 26.2
comp=Z,42nm,0.6s
MYLAV e 05 57 05.9
MYLAV IVMs_BB IVMs_BB 05 57 33.8
comp=Z,285nm,3.9s
ADKI Addanki 16.36 303 eP Pn 05 54 22.2 +0.5
ADKI IAmb IAmb 05 54 26.4
comp=Z,20nm,0.7s
ADKI e 05 57 05.6
ADKI IVMs_BB IVMs_BB 05 57 35.6
comp=Z,248nm,3.9s
SLVN Son La 16.82 33 P Pn 05 54 29.2 +1.7
KSM Kuching 17.03 109 P P 05 54 35.0 +4.5
GGR Gangavaram 17.23 309 eP Pn 05 54 33.2 +0.6
GGR IAmb IAmb 05 54 34.7
comp=Z,29nm,0.8s
GGR e 05 57 31.1
GGR IVMsBB 05 57 55.2
comp=Z,183nm,5.4s
NJS Nagarjunasagar 17.26 304 eP Pn 05 54 33.2 +0.3
NJS IAmb IAmb 05 54 35.3
comp=Z,16nm,0.8s
NJS e 05 57 28.1
NJS IVMs_BB IVMs_BB 05 57 53.4
comp=Z,211nm,5.6s
SRLM Srisailam 17.38 302 eP Pn 05 54 34.8 +0.3
SRLM IAmb IAmb 05 54 36.3
comp=Z,12nm,0.8s
SRLM e 05 57 30.1
SRLM IVMs_BB IVMs_BB 05 57 55.9
comp=Z,222nm,5.3s
URV Uravakonda 18.31 296 eP Pn 05 54 46.0 +0.4
URV IAmb IAmb 05 54 47.8
comp=Z,25nm,0.8s
URV e 05 57 52.6
URV IVMs_BB IVMs_BB 05 58 13.8
comp=Z,384nm,7.2s
HYB Hyderabad 18.32 305 iP P 05 54 45.0 +0.2
comp=Z,67nm,0.6s
HYB eS Sn 05 58 08.0 -2.4
HYBB Hyderabad (bro 18.32 305 eP P 05 54 45.9 +1.0
HYBB IAmb IAmb 05 54 46.6
comp=Z,27nm,0.7s
HYBB IVMs_BB IVMs_BB 05 58 28.4
comp=Z,262nm,3.6s
SHL Shillong 18.33 353 P P 05 54 42.1 -2.9
SHL Shillong 18.33 353 P P 05 54 42.1 -2.9
SHL pmax pmax
comp=Z,238nm,0.4s
RPR Rampur 18.54 310 eP P 05 54 47.9 +0.8
RPR IAmb IAmb 05 54 51.9
comp=Z,17nm,0.6s
RPR e 05 58 04.2
RPR IVMsBB 05 58 22.4
comp=Z,221nm,4.1s
SBUM Sibu 18.55 104 P Pn 05 54 51.1 +2.6
SBUM Sibu 18.55 104 P Pn 05 54 52.0 +3.5
QIZ Qiongzhong 19.16 51 P P 05 54 53.5 -0.4
QIZ S S 05 58 24.0 -2.5
QIZ sS sS 05 58 52.0 -2.1
QIZ LR LR
comp=Z,540nm,10.4s
QIZ LR LR
comp=Z,310nm,12.2s
QIZ LR LR
comp=Z,340nm,18.6s
QIZ Qiongzhong 19.16 51 P Pn 05 54 57.2 +1.5
QIZ IAmb IAmb 05 54 58.7
comp=Z,83nm,1.5s
TEZP TEZPUR 19.29 356 eP P 05 54 52.9 -2.4
TEZP IAmb IAmb 05 55 01.4
comp=Z,58nm,0.6s
SRSP Sriramsagar 19.31 308 eP P 05 54 56.7 +1.1
SRSP IAmb IAmb 05 54 58.4
comp=Z,16nm,0.7s
SRSP e 05 58 19.2
SRSP IVMs_BB IVMs_BB 05 58 38.9
comp=Z,208nm,8.3s
KMI Kunming 19.53 24 P Pn 05 55 01.8 +1.6
KMI S S 05 58 28.3 -5.9
KMI pmax pmax
comp=Z,33nm,0.6s
KMI pmax pmax
comp=Z,200nm,13.6s
KMI LR LR
comp=Z,380nm,14.1s
KMI LR LR
comp=Z,320nm,8.1s
KMI LR LR
comp=Z,260nm,13.1s
NGP Nagpur 20.14 315 eP P 05 55 05.2 +0.5
NGP ex x 05 58 44.5
KLRI Killari 20.25 304 eP P 05 55 06.8 +0.9
KLRI IAmb IAmb 05 55 13.1
comp=Z,24nm,0.8s
KLRI e 05 58 39.0
KLRI IVMs_BB IVMs_BB 05 59 27.4
comp=Z,255nm,6.4s
ODAN Odare 20.54 342 eP P 05 55 08.0 -1.1
comp=Z,422nm,0.8s
KPJI Karang Pucung 20.62 134 P Pn 05 55 12.6 -0.3
comp=Z,34nm,0.5s
KPJI Karang Pucung 20.62 134 P Pn 05 55 12.6 -0.3
comp=Z,34nm,0.5s
GTK Tadong 20.64 346 eP P 05 55 09.1 -1.0
GTK IAmb IAmb 05 55 14.6
comp=Z,112nm,0.9s
RAMN Ramite 20.87 341 eP P 05 55 12.1 -0.6
comp=Z,235nm,0.6s
TAPN Taplejung 20.91 344 eP P 05 55 11.9 -1.2
comp=Z,642nm,0.7s
SMRI Semarang 21.54 131 P P 05 55 22.6 +3.0
comp=Z,144nm,0.7s
SMRI Semarang 21.54 131 P P 05 55 22.6 +3.0
comp=Z,144nm,0.7s
SMRI Semarang 21.54 131 P P 05 55 21.4 +1.8
JIRN Jiri 21.66 340 eP P 05 55 19.9 -1.3
comp=Z,327nm,0.6s
PKI Pulchoki 21.86 339 eP P 05 55 21.9 -1.3
comp=Z,283nm,0.5s
PKIN Phulchoki 21.86 339 eP P 05 55 22.0 -1.3
comp=Z,275nm,0.6s
KKM Kota Kinabalu 21.87 92 P P 05 55 26.2 +2.9
GUN Gumba 22.00 340 eP P 05 55 23.3 -1.5
comp=Z,247nm,0.5s
DMN Daman 22.00 338 eP P 05 55 23.3 -1.4
comp=Z,231nm,0.6s
KKN Kakani 22.10 339 eP P 05 55 24.2 -1.5
comp=Z,122nm,0.6s
UGM Wanagama 22.17 133 P P 05 55 24.9 -1.4
UGM PcP PcP 05 59 20.3 0.0
KAAM Kaadhehdhoo 22.22 253 P P 05 55 29.0 +2.1
KAAM IAmb IAmb 05 55 30.5
comp=Z,54nm,0.9s
GYA Guiyang 22.45 30 ⇑iP P 05 55 31.0 +1.6
GYA pP pwP 05 55 51.5 +1.6
GYA sP sP 05 56 03.8 +6.6
GYA S S 05 59 25.5 -4.5
GYA SS SnSn 06 00 14.0 +6.7
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,130nm,4.9s
GYA LR LR
comp=Z,290nm,8.7s
GYA LR LR
comp=Z,380nm,9.2s
GYA LR LR
comp=Z,420nm,12.8s
LSA Lhasa 22.50 353 P P 05 55 29.0 -1.2
LSA Lhasa 22.50 353 P P 05 55 28.6 -1.6
LSA Lhasa 22.50 353 P P 05 55 28.6 -1.6
LSA pmax pmax
comp=Z,158nm,0.7s
GKN Gorkha 22.53 337 eP P 05 55 28.9 -1.4
comp=Z,102nm,0.2s
DANN Dangsing 23.19 336 eP P 05 55 35.9 -1.0
comp=Z,271nm,0.6s
PWJI Pagerwojo 23.19 131 P P 05 55 34.2 -2.5
comp=Z,28nm,0.6s
PWJI Pagerwojo 23.19 131 P P 05 55 34.2 -2.5
comp=Z,28nm,0.6s
CD2 Chengdu 25.15 20 ⇓P P 05 55 54.8 +0.3
CD2 S S 06 00 11.8 -1.3
CD2 pmax pmax
comp=Z,80nm,0.6s
CD2 pmax pmax
comp=Z,140nm,6.3s
JAGI Jajag, Banyuwa 25.28 128 P P 05 55 55.5 -0.2
comp=Z,874nmcomp=Z,28nm,0.5s
JAGI Jajag, Banyuwa 25.28 128 P P 05 55 55.5 -0.2
comp=Z,874nmcomp=Z,28nm,0.5s
JAGI Jajag, Banyuwa 25.28 128 P P 05 55 55.1 -0.6
SRBI Singaraja 25.89 126 P P 05 56 06.5 +5.3
comp=Z,2μmcomp=Z,142nm,1.1s
SRBI Singaraja 25.89 126 P P 05 56 06.5 +5.3
comp=Z,2μmcomp=Z,142nm,1.1s
DGAR Diego Garcia 26.16 237 iP P 05 56 05.0 +1.3
DGAR pmax pmax
comp=Z,38nm,0.9s
H08S3 Diego Garcia H 26.25 236 T T 06 22 56.6
baz=56,slow=75,SNR=951
H08S2 Diego Garcia H 26.26 236 T T 06 22 47.2
baz=56,slow=75,SNR=160
H08S1 Diego Carcia H 26.27 236 T T 06 22 58.5
baz=56,slow=75,SNR=35
MPSI Mapaga 26.51 104 P P 05 56 09.2 +2.4
comp=Z,27nm,0.8s
MPSI Mapaga 26.51 104 P P 05 56 09.2 +2.4
comp=Z,27nm,0.8s
KAPI Kappang 28.24 115 LR LR 06 07 05.9
comp=Z,157nm,21.9s,baz=300,slow=35
BKSI Bulukumba 28.70 115 P P 05 56 29.3 +2.8
comp=Z,23nm,0.6s
BKSI Bulukumba 28.70 115 P P 05 56 29.3 +2.8
comp=Z,23nm,0.6s
LUWI Luwuk 29.65 105 P P 05 56 34.2 -0.6
LUWI IAmb IAmb 05 56 38.9
comp=Z,40nm,0.7s
WHN Wuhan 29.86 37 P P 05 56 38.0 +1.5
XAN Xi'an 29.90 25 P P 05 56 36.5 -0.4
XAN S S 06 01 20.5 -7.3
XAN pmax pmax
comp=Z,32nm,0.7s
XAN pmax pmax
comp=Z,210nm,4.6s
XAN LR LR
comp=Z,310nm,23.1s
XAN LR LR
comp=Z,390nm,21.6s
XAN LR LR
comp=Z,540nm,21.3s
XAN Xi'an 29.90 25 P P 05 56 36.6 -0.2
XAN IAmb IAmb 05 56 37.4
comp=Z,30nm,0.5s
XAN Xi'an 29.90 25 P P 05 56 36.7 -0.2
XAN pmax pmax
comp=Z,30nm,0.5s
LZH Lanzhou 30.00 16 eP P 05 56 38.3 +0.4
LZH pP pwP 05 56 58.5 -2.2
LZH sP sP 05 57 12.5 +5.0
LZH pmax pmax
comp=Z,32nm,1.1s
LZH pmax pmax
comp=Z,190nm,4.3s
LZH LR LR
comp=Z,300nm,13.5s
LZH LR LR
comp=Z,420nm,14.8s
LZH LR LR
comp=Z,430nm,15.2s
YULB Yu-li 30.54 55 P P 05 56 46.2 +3.6
YULB IAmb IAmb 05 57 00.2
comp=Z,27nm,1.4s
WSI Waingapu 30.94 123 P P 05 56 49.5 +3.3
comp=Z,36μmcomp=Z,857nm,0.5s
WSI Waingapu 30.94 123 P P 05 56 49.5 +3.3
comp=Z,36μmcomp=Z,857nm,0.5s
GTA Gaotai 32.39 8 ⇓P P 05 56 59.0 +0.2
GTA pP pP 05 57 18.8 +0.2
GTA sP sP 05 57 33.0 +4.4
GTA PcP PcP 05 59 46.5 +2.0
GTA ScP ScP 06 03 18.8 -1.7
GTA PcS PcS 06 03 22.5 -7.2
GTA ScS ScS 06 07 17.8 -2.1
GTA pmax pmax
comp=Z,26nm,0.7s
GTA pmax pmax
comp=Z,200nm,5.4s
GTA LR LR
comp=Z,180nm,14.6s
GTA LR LR
comp=Z,150nm,15.2s
GTA LR LR
comp=Z,170nm,15.2s
NIL Nilore 32.65 326 P P 05 57 00.8 -0.2
NIL Nilore 32.65 326 P P 05 57 00.8 -0.2
NIL pmax pmax
comp=Z,193nm,0.6s
NJ2 Nanjing 33.67 40 eP P 05 57 09.8 -0.1
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
SOEI Soe 34.37 119 P P 05 57 14.5 -1.8
comp=Z,44nm,0.7s
SOEI Soe 34.37 119 P P 05 57 14.5 -1.8
comp=Z,44nm,0.7s
SOEI Soe 34.37 119 P P 05 57 14.4 -2.0
GIRL Giralia 35.60 147 P P 05 57 27.2 +0.5
baz=36,SNR=4.3
GIRL Giralia 35.60 147 P P 05 57 27.2 +0.5
KBL Kabul 35.70 323 P P 05 57 28.6 +0.9
KBL IAmb IAmb 05 57 29.3
comp=Z,8.1nm,0.7s
KBL Kabul 35.70 323 P P 05 57 28.6 +0.9
KBL pmax pmax
comp=Z,8.0nm,0.7s
KSH Kashi 36.06 336 P P 05 57 28.5 -2.0
KSH pP pP 05 57 49.3 -1.2
KSH PP PnPn 05 58 54.8 +0.4
KSH S S 06 02 56.5 -6.8
KSH SS SnSn 06 05 25.5 -12
KSH pmax pmax
comp=Z,16nm,0.7s
KSH pmax pmax
comp=Z,130nm,5.5s
KSH LR LR
comp=Z,280nm,7.0s
KSH LR LR
comp=Z,320nm,7.0s
KSH LR LR
comp=Z,220nm,8.9s
BTO Baotou 36.07 21 eP P 05 57 30.0 -0.6
HHC Hu-ho-hao-te 36.84 22 eP P 05 57 38.5 +1.4
HHC pP sP 05 58 01.8 -5.1
HHC eS S 06 03 13.0 -2.2
HHC pmax pmax
comp=Z,14nm,0.9s
HHC pmax pmax
comp=Z,45nm,4.0s
HHC LR LR
comp=Z,120nm,15.3s
HHC LR LR
comp=Z,150nm,17.0s
HHC LR LR
comp=Z,79nm,8.6s
WMQ Urumqi 36.85 352 P P 05 57 37.5 +0.3
WMQ pP pP 05 58 00.0 +2.7
WMQ PcP PcP 05 59 58.5 +1.2
WMQ S S 06 03 14.5 -0.8
WMQ pmax pmax
comp=Z,21nm,0.9s
WMQ pmax pmax
comp=Z,80nm,4.5s
WMQ LR LR
comp=Z,570nm,25.5s
WMQ LR LR
comp=Z,160nm,23.1s
WMQ LR LR
comp=Z,340nm,24.3s
WMQ Urumqi 36.85 352 P P 05 57 38.4 +1.2
WMQ IAmb IAmb 05 57 39.7
comp=Z,31nm,0.8s
WMQ Urumqi 36.85 352 P P 05 57 38.4 +1.2
WMQ pmax pmax
comp=Z,31nm,0.8s
BJI Beijing 38.09 28 P P 05 57 49.5 +1.9
BJI pmax pmax
comp=Z,15nm,0.6s
PSA00 Pilbara Seismi 38.12 139 P P 05 57 47.4 -0.7
PSA00 IAmb IAmb 05 57 48.2
comp=Z,22nm,0.6s
PDGK Podgornoye 38.18 343 P P 05 57 47.9 -0.6
UCH Uchtor 38.94 337 P P 05 57 55.3 0.0
SNR=16
KBK Karagaybulak 39.13 337 P P 05 57 57.3 +0.8
SNR=27
AML Almayashu 39.19 336 P P 05 57 57.6 +0.4
SNR=44
AAK Ala-Archa 39.29 337 P P 05 57 58.8 +1.0
SNR=12
AAK Ala-Archa 39.29 337 P P 05 57 58.7 +0.9
AAK IAmb IAmb 05 57 59.6
comp=Z,19nm,1.0s
AAK Ala-Archa 39.29 337 P P 05 57 58.7 +0.9
AAK pmax pmax
comp=Z,19nm,1.0s
CHMS Chumysh 39.50 337 P P 05 57 59.6 +0.2
SNR=7.0
EKS2 Erkin-Say 39.60 336 P P 05 58 01.1 +0.8
SNR=13
USP Ospenovka 39.83 337 P P 05 58 02.3 +0.2
SNR=14
SOCY Socotra 39.93 280 P P 05 58 03.7 +0.3
SOCY IAmb IAmb 05 58 07.1
comp=Z,19nm,0.7s
FITZ Fitzroy Crossi 39.96 129 P P 05 58 02.2 -1.2
baz=40,SNR=18
FITZ Fitzroy Crossi 39.96 129 P P 05 58 02.4 -1.1
baz=315,slow=5.9
FITZ PcP PcP 06 00 07.6 +0.3
comp=Z,5.6nm,0.5s,baz=285,slow=1.0,SNR=4.0
FITZ ScP ScP 06 03 46.1 -2.4
comp=Z,6.6nm,0.6s,baz=336,slow=4.0,SNR=11
FITZ Fitzroy Crossi 39.96 129 P P 05 58 02.1 -1.3
FITZ IAmb IAmb 05 58 05.0
comp=Z,12nm,0.6s
FITZ PcP PcP 06 00 07.5 +0.3
FITZ ScP 06 03 44.8 -3.6
UOSS Minazif 40.35 300 P P 05 58 09.2 +2.5
UOSS PcP 06 00 07.7 -0.8
MSEY Mahe Island 40.45 254 P P 05 58 10.5 +2.8
MSEY IAmb IAmb 05 58 10.7
comp=Z,14nm,0.8s
MSEY Mahe Island 40.45 254 P P 05 58 10.5 +2.8
MSEY pmax pmax
comp=Z,15nm,0.8s
MK31 Makanchi Array 40.69 347 IAmb IAmb 05 58 09.8
comp=Z,36nm,0.8s
MK31 Makanchi Array 40.69 347 iP P 05 58 08.4 -0.8
MKAR Makanchi Array 40.69 347 P P 05 58 08.9 -0.3
comp=Z,48nm,0.6s,baz=167,slow=8.0,SNR=651
MKAR ScP ScP 06 03 49.0 -1.9
comp=Z,1.4nm,0.8s,baz=151,slow=5.5,SNR=4.0
MKAR LR LR 06 18 34.1
comp=Z,126nm,18.1s,baz=158,slow=41
MAKZ Makanchi 40.77 347 P P 05 58 09.3 -0.5
MAKZ Makanchi 40.77 347 P P 05 58 09.3 -0.5
MAKZ pmax pmax
comp=Z,51nm,0.6s
KNRA Kununurra 41.11 124 P P 05 58 11.3 -1.6
baz=41,SNR=7.6
KNRA Kununurra 41.11 124 P P 05 58 11.4 -1.5
KNRA IAmb IAmb 05 58 11.9
comp=Z,11nm,0.7s
KNRA PcP 06 00 11.9 +0.9
MEEK Meekatharra 41.18 146 P P 05 58 13.1 -0.2
baz=41,SNR=8.1
KK31 Karatay Array 41.34 334 IAmb IAmb 05 58 15.8
comp=Z,23nm,0.8s
KK31 Karatay Array 41.34 334 iP P 05 58 14.1 -0.4
KKAR Karatay Array 41.34 334 IAmb IAmb 05 58 15.8
comp=Z,23nm,0.8s
SONM Songino Array 41.73 12 P P 05 58 18.0 +0.3
comp=Z,6.8nm,0.8s,baz=193,slow=8.2,SNR=46
SONM PcP PcP 06 00 13.3 +0.6
comp=Z,4.5nm,0.7s,baz=203,slow=4.0,SNR=7.4
SONM ScP ScP 06 03 52.9 -2.2
comp=Z,6.2nm,0.7s,baz=194,slow=4.2,SNR=23
SONM LR LR 06 16 56.3
comp=Z,180nm,21.0s,baz=173,slow=38
MTN Manton Dam 41.76 118 P P 05 58 16.6 -1.7
baz=42,SNR=6.7
MORW Morawa 41.79 151 P P 05 58 18.9 +0.6
baz=42,SNR=12
MORW Morawa 41.79 151 P P 05 58 19.1 +0.7
MORW PcP 06 00 13.1 0.0
ULN Ulaanbaatar 41.90 13 P P 05 58 19.5 +0.3
ULN Ulaanbaatar 41.90 13 P P 05 58 19.5 +0.3
ULN pmax pmax
comp=Z,5.0nm,0.7s
JNU Nakatsue 42.58 48 P P 05 58 23.9 -0.9
JNU IAmb IAmb 05 58 31.0
comp=Z,16nm,0.8s
KSRS Korea Array 42.86 40 P P 05 58 27.6 +0.7
comp=Z,1.5nm,0.5s,baz=239,slow=8.6,SNR=5.4
KSRS PcP PcP 06 00 16.5 0.0
comp=Z,2.1nm,0.6s,baz=235,slow=3.2,SNR=5.5
KSRS ScP ScP 06 03 56.5 -3.1
comp=Z,2.0nm,0.7s,baz=226,slow=3.3,SNR=6.3
KSRS LR LR 06 17 18.3
comp=Z,120nm,19.3s,baz=227,slow=37
KDU Kakadu 42.87 117 P P 05 58 27.0 -0.3
baz=43,SNR=5.2
BLDU Ballidu 43.40 151 P P 05 58 31.0 -0.4
baz=44,SNR=8.3
MUN Mundaring 44.31 153 P P 05 58 38.9 +0.3
baz=44,SNR=6.9
MOY Mondy 44.61 6 eP P 05 58 41.0 +0.1
GEYT Alibeck 44.71 319 P P 05 58 42.5 +0.7
comp=Z,14nm,0.5s,baz=137,slow=8.2,SNR=28
GEYT LR LR 06 19 46.4
comp=Z,116nm,19.1s,baz=95,slow=39
GYA0 ALIBECK ARRAY 44.71 319 P P 05 58 42.2 +0.4
GYA0B ALIBECK ARRAY 44.71 319 P P 05 58 42.3 +0.5
GYA0B IAmb IAmb 05 58 43.2
comp=Z,22nm,0.5s
KLBR Kellerberrin 44.71 151 P P 05 58 42.0 +0.2
baz=45,SNR=10
TLY Talaya 44.95 8 P P 05 58 44.4 +0.9
TLY Talaya 44.95 8 iP P 05 58 43.2 -0.3
TLY pmax pmax
comp=Z,4.0nm,0.9s
KURK Kurchatov 45.22 346 P P 05 58 45.8 +0.3
KURK Kurchatov 45.22 346 P P 05 58 45.8 +0.3
KURK pmax pmax
comp=Z,38nm,0.7s
CN2 Changchun 45.49 32 eP P 05 58 48.8 +0.9
CN2 pmax pmax
comp=Z,10.0nm,0.8s

NWAO Narrogin (SRO) 45.57 153 P P 05 58 48.9 +0.3
baz=46,SNR=12
NWAO Narrogin (SRO) 45.57 153 LR LR 06 15 52.0
comp=Z,133nm,21.5s,baz=332,slow=33
NWAO Narrogin (SRO) 45.57 153 P P 05 58 49.0 +0.3
NWAO IAmb IAmb 05 58 52.6
comp=Z,22nm,0.6s
NWAO Narrogin (SRO) 45.57 153 P P 05 58 49.0 +0.3
NWAO pmax pmax
comp=Z,22nm,0.6s
WRKA Warakurna 46.16 135 P P 05 58 53.3 -0.2
baz=46,SNR=30
KMBL Kambalda 46.64 147 P P 05 58 57.1 +0.1
baz=47,SNR=7.7
RKGY Rocky Gully 46.88 154 P P 05 58 59.3 +0.5
baz=47,SNR=9.2
HIA Hailar 47.04 23 P P 05 59 01.2 +1.2
HIA IAmb IAmb 05 59 01.7
comp=Z,12nm,0.7s
HIA Hailar 47.04 23 P P 05 59 01.2 +1.2
HIA pmax pmax
comp=Z,12nm,0.7s
ZALV Zalesovo Beam 47.16 352 P P 05 59 00.9 +0.2
comp=Z,36nm,0.4s,baz=186,slow=7.6,SNR=205
ZALV ScP ScP 06 04 14.7 -2.4
comp=Z,1.5nm,0.4s,baz=193,slow=4.4,SNR=5.9
ZALV S S 06 05 44.1 -2.5
comp=Z,2.2nm,0.7s,baz=139,slow=25,SNR=5.0
ZALV LR LR 06 23 12.2
comp=Z,91nm,19.0s,baz=204,slow=41
ZALV Zalesovo Beam 47.16 352 P P 05 59 01.0 +0.2
RER Riviere de l'E 47.18 232 P P 05 59 03.5 +2.0
WRA Warramunga Arr 47.84 125 P P 05 59 05.4 -1.2
comp=Z,39nm,0.5s,baz=305,slow=8.5,SNR=204
WRA PcP PcP 06 00 33.9 -0.3
comp=Z,6.8nm,0.5s,baz=312,slow=3.0,SNR=7.8
WRA ScP ScP 06 04 17.4 -3.2
comp=Z,2.0nm,0.7s,baz=312,slow=3.9,SNR=5.3
WRA S S 06 05 51.8 -5.4
comp=Z,1.6nm,0.8s,baz=271,slow=13,SNR=6.6
WRA LR LR 06 21 32.0
comp=Z,120nm,19.7s,baz=195,slow=39
WRAB Tennant Creek 47.85 125 P P 05 59 05.7 -1.0
WRAB Tennant Creek 47.85 125 c eP P 05 59 05.3 -1.3
WRAB pmax pmax
comp=Z,46nm,0.7s
WB2 Warramunga Arr 47.85 125 P P 05 59 05.6 -1.1
WB2 PcP PcP 06 00 34.1 -0.1
MDJ Mudanjiang 48.26 34 P P 05 59 10.8 +1.4
MDJ pP pwP 05 59 33.5 -0.1
MDJ pmax pmax
comp=Z,11nm,1.1s
MDJ pmax pmax
comp=Z,260nm,5.9s
USRK Ussuriysk Ar. 49.35 35 LR LR 06 20 41.0
comp=Z,71nm,21.1s,baz=226,slow=37
RAYN Ar Rayn 49.42 295 P P 05 59 20.2 +1.5
RAYN IAmb IAmb 05 59 20.8
comp=Z,19nm,0.6s
RAYN Ar Rayn 49.42 295 P P 05 59 20.2 +1.5
RAYN pmax pmax
comp=Z,19nm,0.6s
AS31 Alice Springs 49.46 130 P P 05 59 17.9 -1.1
AS31 IAmb IAmb 05 59 19.2
comp=Z,11nm,0.5s
AS31 PcP PcP 06 00 40.5 +0.5
ASAR Alice Springs 49.46 130 P P 05 59 17.9 -1.1
comp=Z,34nm,0.6s,baz=302,slow=7.4,SNR=535
ASAR PcP PcP 06 00 40.0 0.0
comp=Z,12nm,0.6s,baz=312,slow=3.6,SNR=13
ASAR ScP ScP 06 04 24.6 -2.9
comp=Z,2.3nm,0.8s,baz=308,slow=4.5,SNR=6.1
ASAR S S 06 06 13.4 -6.6
comp=Z,2.1nm,0.7s,baz=298,slow=14,SNR=7.1
ASAR LR LR 06 21 13.7
comp=Z,109nm,20.6s,baz=290,slow=37
MAT Matsushiro 49.50 47 P P 05 59 20.9 +1.8
MAT eS S 06 06 24.8 +4.6
MJAR Matsushiro Arr 49.50 47 P P 05 59 19.8 +0.7
comp=Z,3.9nm,0.6s,baz=246,slow=6.9,SNR=9.2
MJAR PcP PcP 06 00 40.4 +0.5
comp=Z,3.0nm,0.5s,baz=246,slow=3.6,SNR=6.5
MJAR LR LR 06 21 39.7
comp=Z,58nm,18.4s,baz=240,slow=38
BVAR Borovoye Array 49.59 341 S S 06 06 16.6 -4.3
comp=Z,1.8nm,0.6s,baz=142,slow=15,SNR=6.8
BRVK Borovoye 49.65 341 P P 05 59 19.6 -0.3
BRVK IAmb IAmb 05 59 20.6
comp=Z,22nm,0.8s
BRVK PcP 06 00 40.8 +0.8
BRVK Borovoye 49.65 341 P P 05 59 18.9 -1.0
FORT Forrest 49.81 141 P P 05 59 21.9 +0.4
baz=50,SNR=56
FORT Forrest 49.81 141 P P 05 59 21.9 +0.4
AB31 Akbulak array 50.80 332 i P P 05 59 28.7 +0.1
ABKAR Akbulak array 50.80 332 P P 05 59 29.2 +0.5
ATD Arta Tunnel 50.82 279 P P 05 59 32.1 +2.7
KLR Kul'dur 52.36 30 LR LR 06 25 54.4
comp=Z,84nm,18.9s,baz=244,slow=40
KLR Kul'dur 52.36 30 i P P 05 59 39.8 -0.5
KLR pmax pmax
comp=Z,6.0nm,1.0s
QIS Mount Isa 52.47 123 P P 05 59 40.6 -1.0
baz=52,SNR=15
AKTO Aktyubinsk 52.52 332 S S 06 06 58.0 -3.3
comp=Z,2.0nm,0.8s,baz=320,slow=19,SNR=5.9
AKTO LR LR 06 24 21.7
comp=Z,99nm,18.3s,baz=145,slow=38
AKTO Aktyubinsk 52.52 332 P P 05 59 41.0 -0.4
BOD Bodaibo 52.71 13 eP P 05 59 43.0 +0.3
BOD pmax pmax
comp=Z,14nm,1.5s
COEN Coen 52.95 113 P P 05 59 43.9 -1.3
baz=53,SNR=8.1
COEN Coen 52.95 113 P P 05 59 44.4 -0.8
COEN PcP PcP 06 00 54.5 +1.5
ABPO Ambohimpanom 53.18 240 P P 05 59 49.4 +2.4
ABPO IAmb IAmb 05 59 49.6
comp=Z,16nm,0.8s
ABPO PcP PcP 06 00 54.9 +0.9
ZEA Zeya 53.47 24 eP P 05 59 48.9 +0.6
ZEA pmax pmax
comp=Z,10.0nm,0.6s
GNI Garni 54.92 315 i P P 06 00 00.4 +1.0
GNI pmax pmax
comp=Z,18nm,0.9s
PMG Port Moresby 55.27 107 P P 06 00 02.5 +0.5
PMG Port Moresby 55.27 107 P P 06 00 02.6 +0.5
PMG pmax pmax
comp=Z,28nm,0.7s
MTSU Mount Surprise 55.50 118 P P 06 00 03.2 -0.5
baz=56,SNR=15
GRNR Gornyy 55.68 31 eP P 06 00 05.1 +0.7
GRNR MLR MLR
comp=Z,120nm,12.0s
SVE Sverdlovsk 55.99 338 c iP P 06 00 06.7 +0.2
SVE pmax pmax
comp=Z,58nm,1.0s
AKH Akhalkalaki 56.28 316 ⇑P PcP 06 01 07.1 +1.4
BBOO Buckleboo 56.31 138 P P 06 00 08.7 -0.5
baz=56,SNR=16
BBOO Buckleboo 56.31 138 IAmb IAmb 06 00 09.7
comp=Z,23nm,0.8s
ARU Arti 56.48 337 S S 06 07 52.1 -2.2
comp=Z,1.1nm,0.4s,baz=6.9,slow=22,SNR=18
ARU Arti 56.48 337 P P 06 00 10.2 +0.2
ARU IAmb IAmb 06 00 10.8
comp=Z,27nm,0.9s
ARU Arti 56.48 337 d iP P 06 00 09.9 -0.1
ARU 06 01 05.2
ARU 06 02 13.2
ARU S S 06 07 54.0 -0.3
ARU SS SS 06 11 47.3 +4.5
ARU pmax pmax
comp=Z,24nm,0.8s
KMBO Kilima Mbogo 57.45 264 i P P 06 00 14.9 -3.0
KMBO Kilima Mbogo 57.45 264 P P 06 00 20.1 +2.3
comp=Z,31nm,0.6s,baz=64,slow=10,SNR=98
KMBO LR LR 06 23 16.3
comp=Z,64nm,18.2s,baz=90,slow=34
KMBO Kilima Mbogo 57.45 264 i P P 06 00 14.9 -3.0
KMBO Kilima Mbogo 57.45 264 P P 06 00 20.3 +2.4
KMBO Kilima Mbogo 57.45 264 P P 06 00 20.3 +2.4
KMBO pmax pmax
comp=Z,32nm,0.7s
KBZ Khabaz 57.59 318 P P 06 00 17.6 -0.4
comp=Z,2.2nm,0.9s,baz=136,slow=5.2,SNR=5.6
KBZ PcP PcP 06 01 11.1 +0.6
comp=Z,7.5nm,0.6s,baz=130,slow=1.7,SNR=14
KBZ ScP ScP 06 05 00.7 -1.8
comp=Z,1.8nm,0.6s,baz=162,slow=1.7,SNR=4.0
SHA1 Shidzhatmaz 57.76 318 i P P 06 00 16.7 -2.9
KIV Kislovodsk 57.82 318 eP P 06 00 18.4 -1.4
KIV pmax pmax
comp=Z,20nm,1.0s
HTT Hallett 58.61 136 P P 06 00 25.4 0.0
baz=59,SNR=12
QLP Quilpie 59.00 127 P P 06 00 28.0 -0.2
baz=59,SNR=26
STKA Stephens Creek 59.63 133 P P 06 00 32.1 -0.3
baz=60,SNR=14
STKA Stephens Creek 59.63 133 P P 06 00 32.0 -0.3
comp=Z,7.7nm,0.6s,baz=310,slow=7.9,SNR=22
STKA LR LR 06 29 33.8
comp=Z,70nm,19.4s,baz=270,slow=39
MMAI Mount Meron Ar 60.02 304 LR LR 06 28 55.4
comp=Z,37nm,21.4s,baz=5.0,slow=38
YAK Yakutsk 60.54 18 eP P 06 00 36.5 -1.6
YAK e*PP pP 06 00 58.4 -1.3
YAK e 06 01 13.6
YAK eS S 06 08 43.1 -3.7
YAK e*SS sS 06 09 19.9 -4.1
YAK e 06 10 08.8
YAK eSS SS 06 12 48.5 +2.2
YAK eSSS SSS 06 15 24.5
YAK pmax pmax
comp=Z,18nm,1.0s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=E,8.0nm,1.2s
YAK pmax pmax
comp=Z,100nm,3.8s
YAK pmax pmax
comp=N,107nm,4.0s
YAK pmax pmax
comp=E,56nm,3.8s
YAK smax smax
comp=N,98nm,4.2s
YAK smax smax
comp=E,60nm,2.5s
NRIK Noril'sk 62.15 357 P P 06 00 47.5 -1.3
comp=E,17nm,0.5s,baz=156,slow=5.2,SNR=20
NRIK LR LR 06 29 00.1
comp=E,98nm,18.9s,baz=176,slow=37
CMSA Cobar Meteorol 62.46 131 P P 06 00 51.4 -0.2
baz=62,SNR=42
RMQ Roma 62.60 125 P P 06 00 53.4 +0.8
baz=63,SNR=16
BR131 Keskin Array S 62.89 311 P P 06 00 53.1 -1.5
BR131 Keskin Array S 62.89 311 P P 06 00 53.1 -1.5
BR131 pmax pmax
comp=Z,4.0nm,0.7s
BRTR Keskin Array B 62.89 311 P P 06 00 53.0 -1.5
comp=Z,2.3nm,0.5s,baz=128,slow=7.1,SNR=23
MBAR Mbarara 63.80 266 P P 06 01 02.6 +1.6
MBAR IAmb IAmb 06 01 04.1
comp=Z,26nm,1.4s
MBAR Mbarara 63.80 266 P P 06 01 02.6 +1.6
MBAR pmax pmax
comp=Z,26nm,1.5s
EIDS Eidsvold 64.08 123 P P 06 01 02.4 0.0
baz=64,SNR=6.1
EIDS Eidsvold 64.08 123 P P 06 01 02.2 -0.1
EIDS IAmb IAmb 06 01 02.7
comp=Z,7.7nm,0.7s
PRGR Permogore 64.93 337 eP P 06 01 05.3 -2.0
PRGR pmax pmax
comp=Z,19nm,0.6s
TOO Toolangi 65.36 137 P P 06 01 11.5 +1.0
baz=65,SNR=11
TOO Toolangi 65.36 137 P P 06 01 11.6 +1.1
TOO IAmb IAmb 06 01 12.4
comp=Z,14nm,0.7s
TOO Toolangi 65.36 137 P P 06 01 11.6 +1.1
TOO pmax pmax
comp=Z,15nm,0.7s
MOS Moscow 65.64 329 eP P 06 01 11.2 -0.8
MOS e 06 01 42.0
MOS e 06 03 43.9
YNG Young 65.78 133 P P 06 01 13.5 +0.2
baz=66,SNR=4.8
OBN Obninsk 65.93 328 LR LR 06 32 59.0
comp=Z,28nm,20.3s,baz=190,slow=38
OBN Obninsk 65.93 328 ⇑eP P 06 01 14.3 +0.5
OBN *PP pP 06 01 36.0 0.0
OBN 06 01 45.0
OBN e 06 10 20.7
OBN pmax pmax
comp=Z,31nm,1.4s
OBN MLR MLR
comp=Z,129nm,19.0s
ARMA Armidale 66.52 127 P P 06 01 18.0 -0.2
baz=67,SNR=17
ARMA Armidale 66.52 127 P P 06 01 19.7 +1.4
ARMA IAmb IAmb 06 01 21.2
comp=Z,16nm,0.7s
CAN Canberra 66.69 133 P P 06 01 19.2 +0.1
CAN IAmb IAmb 06 01 20.9
comp=Z,26nm,0.7s
CAN Canberra 66.69 133 P P 06 01 19.2 +0.1
CAN pmax pmax
comp=Z,26nm,0.7s
CNB Canberra Magne 66.95 133 P P 06 01 21.0 +0.2
baz=67,SNR=11
KLMR Klimovskoe 67.03 334 eP P 06 01 18.2 -2.6
KLMR pmax pmax
comp=Z,6.0nm,0.7s
KLMR Klimovskoe 67.03 334 eP P 06 01 18.2 -2.6
KLMR AMP 06 01 24.3
comp=Z,6.0nm,0.7s
MA2 Magadan 67.26 27 P P 06 01 23.2 +1.0
MA2 IAmb IAmb 06 01 24.2
comp=Z,18nm,0.8s
MA2 Magadan 67.26 27 c eP P 06 01 20.7 -1.5
MA2 pmax pmax
comp=Z,34nm,2.5s
TIXI Tiksi 67.80 11 P P 06 01 25.0 -0.4
TIXI Tiksi 67.80 11 c eP P 06 01 24.1 -1.3
TIXI pmax pmax
comp=Z,19nm,0.5s
CFR Carcaliu 68.09 316 ⇑P P 06 01 27.4 -0.3
PETK Petropavlovsk- 68.44 35 LR LR 06 37 39.7
comp=Z,24nm,18.3s,baz=240,slow=41
SORM Soroca 68.60 319 ⇑P P 06 01 29.7 -1.1
SANT Santorini 68.64 306 ⇑P P 06 01 30.7 -0.8
SANT Santorini 68.64 306 P P 06 01 30.8 -0.8
SANT IAmb IAmb 06 01 31.5
comp=Z,11nm,0.6s
AKASG Malin Array Be 68.68 322 P P 06 01 29.3 -2.0
comp=Z,0.5nm,0.3s,baz=87,slow=6.2,SNR=7.5
AKASG LR LR 06 36 53.2
comp=Z,40nm,18.4s,baz=270,slow=40
BISRR Bisoca 69.15 316 ⇑P P 06 01 35.7 +1.3
LSZ Lusaka 69.15 251 i P P 06 01 31.1 -3.9
LSZ Lusaka 69.15 251 i P P 06 01 31.1 -3.9
LSZ Lusaka 69.15 251 P P 06 01 35.8 +0.8
LSZ IAmb IAmb 06 01 36.6
comp=Z,15nm,0.6s
LSZ Lusaka 69.15 251 P P 06 01 35.8 +0.8
LSZ pmax pmax
comp=Z,15nm,0.6s
VRI Vrincioaia 69.20 316 ⇑P P 06 01 35.1 +0.4
PLOR Plostina 69.25 316 ⇑P P 06 01 36.1 +1.1
ELND Elena 69.26 313 ⇑P P 06 01 35.2 +0.1
TAU Tasmania Unive 69.36 141 P P 06 01 36.9 +1.3
TAU IAmb IAmb 06 01 51.5
comp=Z,67nm,1.4s
TAU Tasmania Unive 69.36 141 P P 06 01 36.9 +1.3
TAU pmax pmax
comp=Z,67nm,1.5s
TESR Tescani 69.38 317 ⇓P P 06 01 35.1 -0.7
SEY Seymchan 69.44 25 i P P 06 01 34.7 -1.0
MLR Muntele Rosu 69.66 316 ⇑P P 06 01 38.8 +1.1
MLR Muntele Rosu 69.66 316 P P 06 01 38.5 +0.8
MLR Muntele Rosu 69.66 316 P P 06 01 38.5 +0.8
MLR pmax pmax
comp=Z,18nm,1.5s
DOPR Dopca 70.13 316 ⇑P P 06 01 34.9 -5.5
MATP Matopo 70.19 245 i P P 06 01 37.8 -3.6
MATP Matopo 70.19 245 i P P 06 01 37.8 -3.6
PLVB Pleven 70.24 313 ⇑P P 06 01 40.9 -0.2
VOIR 70.27 316 ⇑P P 06 01 40.9 -0.5
BURAR Bucovina Array 70.55 318 ⇑P P 06 01 42.9 -0.1
BUR08 Bucovina Ar. S 70.57 318 P P 06 01 44.2 +1.1
VTS Vitosha 71.14 312 P P 06 01 46.7 -0.1
VTS Vitosha 71.14 312 P P 06 01 46.7 -0.1
VTS pmax pmax
comp=Z,3.0nm,0.6s
NACGM Naroch 71.19 326 e P 06 01 45.0 -1.6
DRGR 72.10 317 ⇑P P 06 01 52.6 +0.3
VSU Vasula 72.15 329 i P P 06 01 52.1 -0.2
VSU pmax pmax
comp=Z,20nm,1.0s
LVZ Lovozero 72.15 340 P P 06 01 52.2 0.0
LVZ IAmb IAmb 06 02 07.1
comp=Z,40nm,1.5s
LVZ Lovozero 72.15 340 P P 06 01 52.2 0.0
LVZ pmax pmax
comp=Z,40nm,1.5s
APA Apatity 72.44 339 ⇓i P P 06 01 50.1 -3.8
APA pmax pmax
comp=Z,5.0nm,0.8s
APA MLR MLR
comp=Z,700nm,13.0s
BZS Buzias 72.69 315 ⇓P P 06 01 56.2 +0.4
KOLS Kolonicke sedl 72.71 319 eP P 06 01 58.0 +2.1
KOLS Kolonicke sedl 72.71 319 eP P 06 01 58.0 +2.1
CRVS Cervenica-Dubn 73.24 319 eP P 06 01 59.5 +0.5
CRVS Cervenica-Dubn 73.24 319 eP P 06 01 59.5 +0.5
FIA1 FINESS Array S 73.28 332 P P 06 01 58.8 -0.1
FINES FINESS Array B 73.28 332 P P 06 01 58.6 -0.3
comp=Z,5.8nm,0.4s,baz=96,slow=5.6,SNR=60
FINES LR LR 06 37 55.4
comp=Z,139nm,18.9s,baz=112,slow=39
LBTB Lobatse 74.03 242 i P P 06 02 02.7 -1.5
LBTB Lobatse 74.03 242 i P P 06 02 02.7 -1.5
LBTB Lobatse 74.03 242 P P 06 02 05.4 +1.2
LBTB IAmb IAmb 06 02 06.2
comp=Z,31nm,0.7s
LBTB Lobatse 74.03 242 P P 06 02 05.4 +1.2
LBTB pmax pmax
comp=Z,31nm,0.7s
OJC Ojcow 74.49 320 P P 06 02 06.4 +0.1
OJC Ojcow 74.49 320 P P 06 02 06.4 +0.1
OJC pmax pmax
comp=Z,6.0nm,0.6s
VYHS Vyhne 74.91 318 eP P 06 02 08.9 +0.1
VYHS Vyhne 74.91 318 eP P 06 02 08.9 +0.1
BOSA Boshof 75.34 238 i P P 06 02 10.7 -1.0
BOSA Boshof 75.34 238 P P 06 02 12.5 +0.8
comp=Z,33nm,0.6s,baz=80,slow=4.5,SNR=114
BOSA Boshof 75.34 238 i P P 06 02 10.7 -1.0
BOSA Boshof 75.34 238 P P 06 02 12.5 +0.8
BOSA Boshof 75.34 238 P P 06 02 12.5 +0.8
BOSA pmax pmax
comp=Z,40nm,0.7s
ARCES ARCESS Array B 75.86 340 P P 06 02 14.0 +0.3
comp=Z,2.6nm,0.4s,baz=90,slow=6.6,SNR=28
ARCES LR LR 06 38 46.7
comp=Z,136nm,19.3s,baz=159,slow=38
ARE0 ARCESS Array S 75.86 340 eP P 06 02 14.4 +0.7
ARE0 ARCESS Array S 75.86 340 P P 06 02 15.2 +1.5
KRLC Kraliky 76.41 320 eP P 06 02 18.3 +1.0
KRLC Kraliky 76.41 320 eP P 06 02 18.3 +1.0
KTK1 Kautokeino 76.49 339 eP P 06 02 18.6 +1.3
BILL Bilibino 76.61 22 ⇓eP P 06 02 18.3 +0.3
BILL 06 02 28.0
BILL *SP sP 06 02 53.0 +3.2
BILL S S 06 11 49.0 -8.0
BILL *SS ScS 06 12 30.0 +4.0
BILL pmax pmax
comp=Z,14nm,2.5s
BILL MLR MLR
comp=Z,132nm,20.0s
DPC Dobruska-Polom 76.72 320 eP P 06 02 20.4 +1.3
DPC Dobruska-Polom 76.72 320 eP P 06 02 20.4 +1.3
HAMF Hammerfest 76.78 341 eP P 06 02 20.2 +1.3
SOKA Soboth 77.34 316 i P P 06 02 23.2 +0.5
comp=Z,5.9nm,1.0s
OBKA Obir 77.66 316 i P P 06 02 25.1 +0.6
comp=Z,8.2nm,1.0s
GOPC GO Pecny, Ondr 77.68 319 eP P 06 02 25.2 +0.8
GOPC GO Pecny, Ondr 77.68 319 eP P 06 02 25.2 +0.8
MAW Mawson 77.97 192 P P 06 02 27.2 +1.7
baz=78,SNR=9.5
MAW Mawson 77.97 192 P P 06 02 26.8 +1.3
comp=Z,21nm,0.6s,baz=60,slow=3.9,SNR=21
MAW LR LR 06 29 36.0
comp=Z,200nm,19.6s,baz=251,slow=30
MAW Mawson 77.97 192 P P 06 02 27.3 +1.9
MAW Mawson 77.97 192 P P 06 02 27.3 +1.9
MAW pmax pmax
comp=Z,5.0nm,0.7s
TRO Tromso 78.12 340 eP P 06 02 27.4 +1.0
MYKA Terra Mystica 78.29 316 i P P 06 02 28.8 +0.8
comp=Z,4.3nm,1.0s
GEC2 GERESS Array S 78.33 318 P P 06 02 27.5 -0.6
GERES GERESS Array B 78.33 318 P P 06 02 28.4 +0.2
comp=Z,2.6nm,0.5s,baz=93,slow=5.0,SNR=20
KHC Kasperske Hory 78.43 319 eP P 06 02 28.4 -0.2
KHC Kasperske Hory 78.43 319 eP P 06 02 28.4 -0.2
KBA Koelnbreinsper 78.51 316 i P P 06 02 28.0 -1.3
comp=Z,6.4nm,1.1s
ABTA Abfaltersbach 79.07 316 i P P 06 02 31.8 -0.4
comp=Z,10.0nm,1.5s
STEI Steigen 79.16 338 eP P 06 02 32.3 +0.2
MOR8 Moi Rana 79.26 336 eP P 06 02 31.9 -0.9
WTTA Wattenberg 79.68 317 i P P 06 02 34.6 -1.0
comp=Z,3.9nm,0.4s
LOF Lofoten 79.82 338 eP P 06 02 35.4 -0.3
TSUM Tsumeb 79.90 249 i P P 06 02 36.3 -0.9
TSUM Tsumeb 79.90 249 i P P 06 02 36.3 -0.9
TSUM Tsumeb 79.90 249 P P 06 02 38.7 +1.5
SQTA Sankt Quirin 79.97 317 i P P 06 02 35.8 -1.4
comp=Z,3.6nm,0.5s
NC405 NORSAR Array S 80.06 331 P P 06 02 37.8 +0.6
NC405 IAmb IAmb 06 02 55.3
comp=Z,22nm,1.1s
SUR Sutherland 80.06 235 P P 06 02 39.9 +2.0
SUR IAmb IAmb 06 02 40.9
comp=Z,32nm,0.7s
NSS Namsos 80.15 334 eP P 06 02 37.3 -0.2
NC303 NORSAR Array S 80.23 331 P P 06 02 38.4 +0.3
RETA Reutte 80.28 317 i P P 06 02 38.3 -0.4
comp=Z,5.4nm,0.5s
NB2 NORSAR Subarra 80.30 331 P P 06 02 38.4 -0.1
comp=Z,1.3nm,0.6s,baz=98,slow=4.8
NB2 NORSAR Subarra 80.30 331 P P 06 02 38.4 -0.1
baz=98,slow=4.8
NOA NORSAR Array B 80.30 331 P P 06 02 38.6 +0.1
comp=Z,1.6nm,0.7s,baz=91,slow=5.6,SNR=8.6
NOA LR LR 06 42 37.9
comp=Z,91nm,18.6s,baz=110,slow=39
FETA Feichten 80.30 316 i P P 06 02 38.3 -0.7
comp=Z,3.4nm,0.6s
SPA0 Spitsbergen Ar 80.44 348 eP P 06 02 39.4 +0.5
SPA0 Spitsbergen Ar 80.44 348 P P 06 02 39.3 +0.4
NC204 NORSAR Array S 80.53 331 P P 06 02 40.5 +0.8
NC204 IAmb IAmb 06 02 41.1
comp=Z,22nm,1.2s
KONO Kongsberg 81.06 329 eP P 06 02 43.8 +1.3
DOMB Dombas 81.36 332 eP P 06 02 44.5 +0.4
KBS Kingsbay 81.43 349 P P 06 02 45.6 +1.5
KBS IAmb IAmb 06 02 58.9
comp=Z,15nm,0.8s
KBS Kingsbay 81.43 349 P P 06 02 45.6 +1.5
KEST Kesra 81.66 305 P P 06 02 46.6 +0.3
comp=Z,5.2nm,0.6s,baz=60,slow=3.3,SNR=8.8
KEST Kesra 81.66 305 P P 06 02 47.0 +0.7
SKAR Skarslia 81.71 330 eP P 06 02 47.6 +1.6
MOL Molde 82.07 332 eP P 06 02 48.4 +0.6
AKN Aaknes 82.33 332 eP P 06 02 50.2 +1.1
ODD1 Odda 82.56 329 eP P 06 02 52.1 +1.7
BLS5 Blasjo 82.66 329 eP P 06 02 51.5 +0.6
SENIN Lac Senin/Sane 82.68 316 P P 06 02 51.6 0.0
DCZ Deep Cove 83.36 137 P P 06 02 55.0 +0.3
DCZ IAmb IAmb 06 02 55.4
comp=Z,17nm,1.0s
WHZ Wether Hill Ro 84.01 138 P P 06 02 57.9 -0.3
WHZ IAmb IAmb 06 02 58.3
comp=Z,21nm,0.8s
RPZ Rata Peaks 85.56 135 P P 06 03 06.5 +0.5
comp=Z,12nm,0.9s,baz=223,slow=19,SNR=3.8
RPZ Rata Peaks 85.56 135 IAmb IAmb 06 03 20.6

comp=Z,30nm,1.1s
NOR Nord 85.86 352 *i* P P 06 03 05.3 -1.4
NOR *e*S pP 06 03 25.4 -4.2
NOR Nord 85.86 352 *i* P P 06 03 05.3 -1.4
ANM Nome 87.93 25 IAmb IAmb 06 03 19.8
comp=Z,22nm,1.4s
RDOG Red Dog Mine 88.08 22 IAmb IAmb 06 03 19.2
comp=Z,7.3nm,0.7s
BKZ Black Stump Fm 88.58 130 IAmb IAmb 06 03 21.5
comp=Z,35nm,1.4s
URZ Urewera 88.90 129 P P 06 03 20.9 -1.2
comp=Z,6.1nm,0.6s,baz=229,slow=11,SNR=5.0
URZ Urewera 88.90 129 IAmb IAmb 06 03 29.7
comp=Z,14nm,1.1s
TOA0 Torodi Ar. Sit 90.82 283 IAmb IAmb 06 03 32.9
comp=Z,5.8nm,0.7s
TORD Torodi Ar. Bea 90.82 283 P P 06 03 32.0 +0.4
comp=Z,5.2nm,0.6s,baz=89,slow=4.8,SNR=36
TORD PP PP 06 07 09.6 +1.0
comp=Z,0.7nm,0.9s,baz=103,slow=4.6,SNR=3.0
TORD PKKPbc PKKPdf 06 20 56.2 +3.2
comp=Z,1.1nm,0.5s,baz=315,slow=2.5,SNR=11
TORD LR LR 06 41 34.4
comp=Z,48nm,21.8s,baz=55,slow=34
ESDC Sonseca Array 91.67 310 P P 06 03 35.6 +0.4
comp=Z,2.2nm,0.6s,baz=58,slow=4.3,SNR=10
VNDA Vanda 92.32 168 P P 06 03 38.1 +0.9
comp=Z,4.4nm,0.8s,baz=301,slow=10,SNR=3.8
TOLK Toolik Lake Re 92.49 19 P P 06 03 39.1 +0.8
TOLK Toolik Lake Re 92.49 19 P P 06 03 39.6 +1.2
baz=297
SKT Skwentna 94.68 26 IAmb IAmb 06 03 49.7
comp=Z,7.7nm,0.8s
POKR Poker Flat Res 94.89 22 P P 06 03 50.5 +1.1
baz=299
SUA Susitna One 95.23 26 P P 06 03 52.3 +1.1
ILAR Eielson Array 95.27 22 P P 06 03 49.0 -2.1
comp=Z,1.3nm,0.7s,baz=286,slow=4.5,SNR=19
ILAR PP PP 06 07 39.1 -2.7
comp=Z,0.4nm,0.7s,baz=291,slow=6.4,SNR=4.4
ILAR PKKPbc PKKPdf 06 20 43.6 -2.2
comp=Z,0.4nm,0.6s,baz=143,slow=1.8,SNR=4.5
MENT Mentasta 97.41 23 P P 06 04 02.9 +2.0
MENT IAmb IAmb 06 04 04.2
comp=Z,5.8nm,0.7s
INK Inuvik 97.54 16 PKPbc PKKPbc 06 20 37.1 -3.4
comp=Z,0.9nm,0.5s,baz=108,slow=2.4,SNR=8.9
EPYK Eagle Plains 97.87 18 P P 06 04 02.7 -0.2
baz=309
RES Resolute Bay 98.00 2 IAmb IAmb 06 04 05.5
comp=Z,5.0nm,0.8s
DBIC Dimbokro 98.11 278 P P 06 04 05.8 +0.8
comp=Z,2.7nm,0.5s,baz=45,slow=3.8,SNR=12
DBIC LR LR 06 49 00.1
comp=Z,76nm,18.1s,baz=98,slow=36
C36M Paulatuk 99.13 13 IAmb IAmb 06 04 09.3
comp=Z,4.9nm,0.8s
C36M Paulatuk 99.13 13 P Pdif 06 04 08.8 +0.4
baz=322
YKA Yellowknife Ar 106.99 14 PKiKP PKiKP 06 08 51.0 -1.6
comp=Z,0.2nm,0.7s,baz=316,slow=1.8,SNR=3.9
YKA PKKPbc PKKPbc 06 20 09.2 -3.5
comp=Z,1.3nm,0.5s,baz=147,slow=3.6,SNR=31
YKA PKKP PKKPdf 06 20 24.8 +0.4
comp=Z,1.8nm,0.6s,baz=145,slow=5.0,SNR=25
SCHQ Schefferville 116.13 348 PKP PKiKP 06 09 09.6 -0.7
comp=Z,1.1nm,0.5s,baz=15,slow=3.3,SNR=7.5
SCHQ PKKPbc PKKPbc 06 19 39.3 -3.3
comp=Z,1.1nm,0.7s,baz=257,slow=3.3,SNR=4.8
SCHQ PKKPab PKKPab 06 19 45.0 -2.0
comp=Z,0.7nm,0.5s,baz=243,slow=7.6,SNR=4.7
D03D Eldon 116.24 27 P PKPdf 06 09 11.3 +0.7
baz=318
NEW Newport 118.20 23 P PKPdf 06 09 14.8 +0.4
baz=324
H04D Lebanon 118.63 29 P PKPdf 06 09 16.1 +0.8
baz=317
I03D Drain, OR 118.93 30 P PKPdf 06 09 16.4 +0.5
baz=316
J01E Myrtle Point 119.02 31 P PKPdf 06 09 16.3 +0.2
baz=316
I04A Tendick Farm, 119.32 30 P PKPdf 06 09 17.0 +0.2
baz=317
I05D Terrebonne, OR 119.44 29 P PKPdf 06 09 17.3 +0.3
baz=319
J04D Umpqua Nationa 119.88 30 P PKPdf 06 09 18.4 +0.3
baz=317
F10A Beach Ranch, E 120.01 25 PKPdf 06 09 18.1 0.0
PINE Pine Mountain 120.04 29 PKPdf 06 09 18.9 +0.6
J05D Fort Rock, OR 120.28 29 P PKPdf 06 09 19.1 +0.3
baz=318
L04D Klamath Falls 120.53 31 P PKPdf 06 09 18.7 -0.5
baz=317
MSO Missoula 120.60 22 PKPdf 06 09 18.8 -0.4
MSO Missoula 120.60 22 P PKPdf 06 09 18.8 -0.4
baz=327
M02C Callahan 120.84 32 P PKPdf 06 09 20.0 +0.2
baz=316
M04C Macdoel 121.08 31 P PKPdf 06 09 20.6 +0.3
baz=317
N02D Trinity Center 121.22 32 P PKPdf 06 09 21.0 +0.4
baz=316
J08A Circle Bar Ran 121.53 28 PKPdf 06 09 21.4 +0.3
MOD Modoc Plateau 121.77 30 PKPdf 06 09 22.3 +0.6
ULM Lac du Bonnet 122.05 8 PKP PKPdf 06 09 20.7 -1.0
comp=Z,5.0nm,0.7s,baz=7.1,slow=2.9,SNR=18
ULM SKP 06 12 47.0
comp=Z,0.7nm,0.6s,baz=17,slow=1.6,SNR=4.1
ULM PKKPbc PKKPbc 06 19 17.7 -3.2
comp=Z,1.5nm,0.3s,baz=169,slow=2.7,SNR=8.2
ULM Lac du Bonnet 122.05 8 PKPdf 06 09 21.0 -0.7
O03E Paynes Creek 122.19 32 P PKPdf 06 09 22.3 -0.2
baz=316
DLMT Dillon 122.34 22 PKPdf 06 09 23.4 +0.7
MATQ Matagami 122.77 354 P PKPdf 06 09 22.3 -0.8
baz=9.5
LSQQ Lebel-sur-Quev 123.38 353 P PKPdf 06 09 23.9 -0.4
baz=10
YMR Madison River 123.54 21 PKPdf 06 09 26.9 +1.8
RLMT Red Lodge 123.73 20 PKPdf 06 09 25.6 +0.2
RLMT Red Lodge 123.73 20 P PKPdf 06 09 25.6 +0.2
baz=332
D61A St Aubert, Com 124.03 347 P PKPdf 06 09 25.0 -0.6
baz=19
VCNR Virginia City 124.04 31 PKPdf 06 09 26.6 +0.4
PNTR Pine Nut 124.22 32 PKPdf 06 09 27.1 +0.5
LATQ La Tuque 124.38 349 PKPdf 06 09 25.6 -0.7
LATQ La Tuque 124.38 349 P PKPdf 06 09 24.6 -1.7
baz=16
FXWY Fox Creek 124.40 22 PKPdf 06 09 27.2 +0.4
D58A Chemin du LacG 124.68 349 P PKPdf 06 09 26.3 -0.6
baz=16
EYMN Ely 124.79 5 P PKPdf 06 09 27.0 -0.1
baz=353
E61A Lac Etchemin 124.83 347 P PKPdf 06 09 26.8 -0.4
baz=18
F64A Sherman 124.86 345 P PKPdf 06 09 26.7 -0.6
baz=21
D57A Chemin Vers le 124.93 350 P PKPdf 06 09 26.6 -0.8
baz=14
KVN Kaiserville 125.02 31 PKPdf 06 09 28.6 +0.6
KVN Kaiserville 125.02 31 PKIKP PKPdf 06 09 28.6 +0.6
D56A ZEC Mazanza, M 125.04 351 P PKPdf 06 09 27.2 -0.4
baz=13
E60A Ste Agathe de 125.09 348 P PKPdf 06 09 27.0 -0.7
baz=17
RYN Ryan 125.12 31 PKPdf 06 09 29.4 +1.2
D55A Sainte-Anne-du 125.18 351 P PKPdf 06 09 27.4 -0.5
baz=12
F63A Nahmakanta, Br 125.19 346 P PKPdf 06 09 27.2 -0.7
baz=20
D54A Lac Fusel, La 125.22 352 P PKPdf 06 09 27.1 -0.8
baz=11
F61A St Evariste 125.37 347 P PKPdf 06 09 27.4 -0.8
baz=18
NVAR Mina Array Bea 125.39 31 PKP PKPdf 06 09 29.6 +0.8
comp=Z,2.7nm,0.7s,baz=300,slow=1.7,SNR=26
NVAR SKP 06 12 54.9
comp=Z,0.4nm,0.6s,baz=300,slow=1.8,SNR=3.7
D53A Lac Vacive, Po 125.42 353 P PKPdf 06 09 27.7 -0.6
baz=9.8
E58A La Victoria 125.45 349 P PKPdf 06 09 27.9 -0.5
baz=15
D50A G1974 Best Tow 125.55 355 P PKPdf 06 09 28.0 -0.5
baz=7.2
E57A Chemin Saint G 125.56 350 P PKPdf 06 09 27.8 -0.9
baz=14

E56A St. Veronique 125.58 351 P PKPdf 06 09 28.1 -0.5
baz=13
F60A Warwick 125.58 348 P PKPdf 06 09 28.1 -0.5
baz=17
H66A Whiting 125.58 344 P PKPdf 06 09 27.8 -0.8
baz=23
D51A Lot 18 Range I 125.58 355 P PKPdf 06 09 27.8 -0.8
baz=7.8
D48A Paudash Townsh 125.68 357 P PKPdf 06 09 28.2 -0.6
baz=4.8
BW06 Boulder Array 125.69 21 P PKPdf 06 09 28.7 -0.6
baz=331
PD31 Pinedale Array 125.69 21 PKPdf 06 09 28.6 -0.7
PDAR Pinedale Array 125.69 21 PKP PKPdf 06 09 28.8 -0.5
comp=Z,1.9nm,0.7s,baz=67,slow=0.5,SNR=14
PDAR SKP SKPdf 06 12 54.6 -2.2
comp=Z,0.4nm,0.6s,baz=191,slow=3.0,SNR=3.7
PDAR PKKPbc PKKPab 06 19 04.2 -1.6
comp=Z,0.9nm,0.6s,baz=137,slow=6.7,SNR=14
PDAR SKKPbc SKKPbc 06 22 56.2 +7.0
comp=Z,0.6nm,0.8s,baz=129,slow=7.1,SNR=4.4
D41A Chassel 125.85 2 PKPdf 06 09 29.2 0.0
D47A Chapleau 125.86 358 P PKPdf 06 09 29.0 -0.2
baz=3.2
G63A Kingsbury 125.87 346 P PKPdf 06 09 28.8 -0.4
baz=20
D46A Sault St. Mari 126.06 359 P PKPdf 06 09 29.3 -0.2
baz=2.1
E53A Dumoine, Ponti 126.10 353 P PKPdf 06 09 29.1 -0.5
baz=9.9
E51A G1948 Merrick 126.14 355 P PKPdf 06 09 29.4 -0.3
baz=7.7
RSSD Black Hills 126.25 16 P PKPdf 06 09 29.5 -0.8
baz=337
E44A Grand Marais A 126.35 0 P PKPdf 06 09 30.1 0.0
baz=360
VOG Valley Oaks Go 126.38 34 P PKPdf 06 09 29.8 -0.6
baz=317
E48A Lockeyer 126.39 357 P PKPdf 06 09 29.6 -0.6
baz=4.4
E47A Iron Bridge 126.47 358 P PKPdf 06 09 29.9 -0.4
baz=3.0
E46A Sault Ste Mari 126.59 359 PKPdf 06 09 30.3 -0.3
G59A Clarenceville 126.67 349 P PKPdf 06 09 29.9 -0.8
baz=16
F51A Arnstein 126.78 355 P PKPdf 06 09 30.5 -0.4
baz=7.2
R11A Troy Canyon, C 126.81 29 P PKPdf 06 09 32.3 +0.8
baz=322
K22A Casper 126.84 19 P PKPdf 06 09 31.2 -0.2
baz=334
H61A Lyndonville 126.94 348 P PKPdf 06 09 31.8 +0.4
baz=17
CWC Cottonwood Cre 127.00 33 P PKPdf 06 09 32.6 +0.7
baz=318
F48A Evansville 127.07 357 P PKPdf 06 09 31.2 -0.3
baz=3.9
F49A Sandfield 127.10 357 P PKPdf 06 09 31.4 -0.1
baz=4.6
H59A Cadyville 127.19 349 P PKPdf 06 09 31.5 -0.2
baz=15
F45A CMU Biological 127.29 360 P PKPdf 06 09 31.9 0.0
baz=0.3
MPMC Manual Prospec 127.60 33 P PKPdf 06 09 33.2 +0.2
baz=319
G46A Petoskey 127.65 359 P PKPdf 06 09 32.7 +0.1
baz=1.1
G47A Hillman 127.77 358 P PKPdf 06 09 33.0 +0.2
baz=2.4
SADO Sadowa 127.86 354 PKP PKPdf 06 09 33.1 +0.1
comp=Z,2.0nm,0.4s,baz=49,slow=0.7,SNR=4.0
I60A Shoreham 127.89 349 P PKPdf 06 09 33.2 +0.1
baz=16
SCZ2 Santa Cruz Isl 127.91 36 P PKPdf 06 09 32.7 -0.8
baz=316
I59A Olmsteadville 128.04 349 P PKPdf 06 09 33.7 +0.3
baz=15
GLMI Grayling 128.14 359 P PKPdf 06 09 33.9 +0.3
baz=1.4
MSU Marysvale 128.25 26 PKPdf 06 09 35.9 +1.6
MSU Marysvale 128.25 26 PKIKP PKPdf 06 09 35.9 +1.6
ECSD EROS Data Cent 128.29 10 P PKPdf 06 09 33.7 -0.3
baz=346
Q16A Castle Valley 128.35 25 PKPdf 06 09 35.4 +1.0
O20A White River Ci 128.47 22 P PKPdf 06 09 34.8 +0.2
baz=331
GSC Goldstone, Bar 128.53 33 P PKPdf 06 09 35.0 +0.3
baz=319
I48A Sherman Twp 128.75 358 P PKPdf 06 09 35.4 +0.6
baz=2.6
I49A Point Hope 128.96 357 P PKPdf 06 09 35.3 +0.2
baz=3.7
I51A Listowel 128.99 356 P PKPdf 06 09 35.0 -0.2
baz=6.0
J49A Marlette 129.55 358 P PKPdf 06 09 35.9 -0.5
baz=3.3
J48A Bridge Port 129.64 358 P PKPdf 06 09 36.7 +0.2
baz=2.5
ISCO Idaho Springs 129.70 20 P PKPdf 06 09 36.5 -0.7
baz=334
J47A Sunmer 129.72 359 P PKPdf 06 09 36.5 -0.1
baz=1.2
JFWS Jewell Farm 129.89 4 P PKPdf 06 09 36.6 -0.4
baz=354
BINY Binghamton 129.96 351 P PKPdf 06 09 37.1 0.0
baz=13
BGNE Belgrade 130.25 12 P PKPdf 06 09 37.6 -0.1
baz=344
L56A Greenwood 130.26 352 P PKPdf 06 09 37.4 -0.3
baz=11
K46A Dorr 130.28 0 P PKPdf 06 09 37.6 -0.1
baz=360
K47A Vermontville 130.29 359 P PKPdf 06 09 37.5 -0.3
baz=1.0
L57A Andrews Acres 130.29 351 P PKPdf 06 09 38.0 +0.2
baz=12
L55A Hinsdale 130.33 353 P PKPdf 06 09 37.9 0.0
baz=9.5
L54A Sinclairville 130.38 354 P PKPdf 06 09 38.0 +0.1
baz=8.3
L49A Milan 130.83 358 P PKPdf 06 09 38.7 -0.1
baz=2.6
L50A Kingsville 130.85 357 P PKPdf 06 09 38.9 +0.1
baz=3.8
MVCO Mesa Verde 130.91 24 P PKPdf 06 09 39.7 +0.3
baz=330
M57A Sunshine Farm, 130.99 351 P PKPdf 06 09 39.0 -0.1
baz=11
M56A Emporium 130.99 352 P PKPdf 06 09 39.2 0.0
baz=9.9
L47A Sherwood 130.99 359 P PKPdf 06 09 38.8 -0.3
baz=0.7
L48A N Adams 131.01 359 P PKPdf 06 09 39.3 +0.1
baz=1.7
M55A Ridgway 131.08 353 P PKPdf 06 09 39.4 +0.1
baz=9.2
M54A Oil Creek Stat 131.14 354 P PKPdf 06 09 39.5 +0.1
baz=8.0
N59A State Game Lan 131.18 350 P PKPdf 06 09 40.0 +0.5
baz=13
N58A Sunbury 131.41 351 P PKPdf 06 09 40.1 +0.2
baz=12
M49A Liberty Center 131.47 358 P PKPdf 06 09 40.1 +0.2
baz=2.3
N56A West Decatur 131.56 352 P PKPdf 06 09 40.1 -0.1
baz=9.8
O60A Telford 131.69 349 P PKPdf 06 09 39.9 -0.5
baz=14
N55A Marion Center 131.78 353 P PKPdf 06 09 40.5 -0.1
baz=9.0
N53A Lisbon 131.95 355 P PKPdf 06 09 41.1 +0.1
baz=6.5
X16A Lo Mia Camp, P 131.95 29 PKPdf 06 09 42.8 +1.4
N52A McGinn's Farm, 132.01 356 P PKPdf 06 09 40.9 -0.1
baz=5.4
N47A Urbana 132.09 360 P PKPdf 06 09 41.4 +0.2
baz=0.1
N48A Decatur 132.10 359 P PKPdf 06 09 41.3 +0.1
baz=0.9
N50A Nevada 132.14 357 P PKPdf 06 09 41.4 +0.1
baz=3.5
O56A Blue Knob Stat 132.23 353 P PKPdf 06 09 42.2 +0.6
baz=9.6
T25A Trinidad 132.50 20 P PKPdf 06 09 42.2 -0.2
baz=335
O54A Avella 132.52 354 P PKPdf 06 09 42.4 +0.3
baz=7.2
O53A New Philadelph 132.53 355 P PKPdf 06 09 42.5 +0.4

baz=6.1
P59A Jarrettsville 132.56 350 P PKPdf 06 09 42.5 +0.4
baz=12
ACSO Alum Creek Sta 132.67 357 P PKPdf 06 09 42.5 +0.2
baz=3.7
O48A Farmland 132.71 359 P PKPdf 06 09 42.5 +0.1
baz=0.8
O52A Adamsville 132.71 356 P PKPdf 06 09 42.5 +0.1
baz=5.2
O51A Pataskala 132.73 357 P PKPdf 06 09 42.7 +0.3
baz=4.2
O49A Covington 132.76 359 P PKPdf 06 09 42.8 +0.3
baz=1.9
O50A Cable 132.78 358 P PKPdf 06 09 42.8 +0.3
baz=2.9
P57A Homestead Farm 132.93 352 P PKPdf 06 09 43.1 +0.3
baz=10
Q61A Milford 133.07 349 P PKPdf 06 09 43.2 +0.1
baz=14
P55A Reedsville 133.13 354 P PKPdf 06 09 42.9 -0.3
baz=8.0
P52A Corning 133.21 356 P PKPdf 06 09 43.4 +0.1
baz=4.9
P50A Jamestown 133.32 358 P PKPdf 06 09 44.0 +0.4
baz=2.6
Q58A Fox Den Farm, 133.41 351 P PKPdf 06 09 43.7 0.0
baz=11
P51A Williamsport 133.42 357 P PKPdf 06 09 43.7 0.0
baz=3.6
P48A Milroy 133.50 360 PKPdf 06 09 43.1 -0.8
P48A Milroy 133.50 360 P PKPdf 06 09 44.1 +0.2
baz=0.4
Q55A Buckhannon 133.67 354 P PKPdf 06 09 44.7 +0.4
baz=7.7
ANMO Albuquerque 133.69 24 PKPdf 06 09 46.1 +1.4
ANMO Albuquerque 133.69 24 PKIKP PKPdf 06 09 46.1 +1.4
ANMO Albuquerque 133.69 24 P PKPdf 06 09 45.1 +0.5
baz=331
Q51A Peebles 133.88 357 P PKPdf 06 09 45.0 +0.4
baz=3.3
Q52A Bidwell 133.89 356 P PKPdf 06 09 45.1 +0.5
baz=4.8
Q53A Leroy 133.94 355 P PKPdf 06 09 45.2 +0.5
baz=5.8
Q49A Aurora 133.95 359 P PKPdf 06 09 45.4 +0.6
baz=1.2
Q48A North Vernon 134.04 360 P PKPdf 06 09 45.5 +0.6
baz=0.0
R57A Stanardsville 134.17 352 P PKPdf 06 09 46.0 +0.8
baz=10.0
R56A Bull Pasture M 134.17 353 P PKPdf 06 09 46.0 +0.7
baz=8.7
S59A Mechanicsville 134.51 351 P PKPdf 06 09 46.1 +0.3
baz=12
R54A Victor 134.56 355 P PKPdf 06 09 45.9 0.0
baz=6.6
CCM Cathedral Cave 134.62 6 PKPdf 06 09 45.9 -0.1
CCM Cathedral Cave 134.62 6 PKIKP PKPdf 06 09 45.9 -0.1
CCM Cathedral Cave 134.62 6 P PKPdf 06 09 45.9 -0.1
baz=352
R49A Shelbyville 134.67 359 P PKPdf 06 09 46.2 +0.1
baz=0.8
WCI Wyandotte Cave 134.73 1 P PKPdf 06 09 46.6 +0.3
baz=359
S57A Dark Hollow, R 134.75 352 P PKPdf 06 09 46.8 +0.5
baz=9.5
S58A Poland Farm, P 134.77 351 P PKPdf 06 09 47.0 +0.7
baz=11
S50A Richmond 135.27 358 P PKPdf 06 09 47.0 -0.3
baz=1.9
S51A Beattyville 135.28 358 P PKPdf 06 09 47.5 +0.2
baz=3.0
T59A Double "B" Far 135.32 351 P PKPdf 06 09 47.5 +0.1
baz=12
T55A Pulaski 135.60 354 P PKPdf 06 09 47.9 -0.1
baz=7.0
T56A Rocky Mt 135.61 353 P PKPdf 06 09 48.0 +0.1
baz=8.1
T54A Tazewell 135.73 355 P PKPdf 06 09 48.2 0.0
baz=5.9
T52A Hallie 135.78 357 P PKPdf 06 09 49.1 +0.8
baz=3.9
MSTX Muleshoe 135.93 20 P PKPdf 06 09 49.3 +0.5
baz=335
T50A Nancy 135.93 359 P PKPdf 06 09 48.6 +0.1
baz=1.3
T51A Gray 135.96 358 P PKPdf 06 09 49.2 +0.6
baz=2.5
TUL1 Leonard 136.03 12 P PKPdf 06 09 49.2 +0.5
baz=346
U58A Oxford 136.04 352 P PKPdf 06 09 49.3 +0.5
baz=10
U40A Yellville 136.10 8 P PKPdf 06 09 49.4 +0.6
baz=350
U57A Blanch 136.11 353 P PKPdf 06 09 49.5 +0.6
baz=9.1
U55A TA2, Sparta 136.23 354 P PKPdf 06 09 49.7 +0.5
baz=6.7
U54A Nelsons Funny 136.28 355 P PKPdf 06 09 49.8 +0.5
baz=5.6
TZTN Tazewell 136.37 357 P PKPdf 06 09 49.6 +0.2
baz=3.1
LCAR Lake Charles 136.59 6 PKPdf 06 09 49.6 -0.2
V59A Middlesex 136.61 351 P PKPdf 06 09 50.1 +0.3
baz=11
V57A Coltrane Farms 136.70 353 P PKPdf 06 09 50.1 +0.2
baz=8.6
WVT Waverly 136.79 2 PKPpre PKPpre 06 09 40.4
WVT PKPdf 06 09 50.1 0.0
WVT Waverly 136.79 2 PKHKP PKPpre 06 09 40.4
WVT 06 09 50.1
WVT Waverly 136.79 2 P PKPdf 06 09 50.1 0.0
baz=357
V56A Mocksville 136.86 354 P PKPdf 06 09 50.1 -0.2
baz=7.6
CLTN Cedars of Leba 136.87 1 PKPdf 06 09 51.3 +1.1
V55A Taylorsville 136.90 355 P PKPdf 06 09 50.1 -0.2
baz=6.5
V54A Nebo 137.03 355 P PKPdf 06 09 50.7 +0.1
baz=5.5
V52A Sevierville 137.07 357 P PKPdf 06 09 51.1 +0.5
baz=3.1
W39A Magazine 137.09 10 P PKPdf 06 09 51.2 +0.4
baz=348
V53A Saluda 137.20 356 P PKPdf 06 09 51.4 +0.4
baz=4.3
W60A Pink Hill 137.22 350 P PKPdf 06 09 51.2 +0.3
baz=12
TKL Tuckaleechee C 137.26 358 PKP PKPdf 06 09 50.7 -0.4
comp=Z,3.1nm,0.6s,baz=98,slow=0.9,SNR=8.0
TKL SKPbc SKPbc 06 13 13.8 -2.7
comp=Z,4.9nm,0.6s,baz=132,slow=6.4,SNR=9.2
W41B Gary Mavity, V 137.34 8 P PKPdf 06 09 51.2 0.0
baz=350
W56A Indian Trail 137.54 354 P PKPdf 06 09 51.8 +0.2
baz=7.5
KMSC Kings Mountain 137.61 355 P PKPdf 06 09 51.9 +0.2
baz=6.5
W53A Cullowhee 137.72 357 P PKPdf 06 09 52.3 +0.3
baz=3.8
X60A Albert Glenn T 137.73 350 P PKPdf 06 09 52.7 +0.8
baz=11
MIAR Mount Ida 137.76 10 P PKPdf 06 09 52.8 +0.9
baz=348
W52A Murphy 137.83 358 P PKPdf 06 09 52.3 +0.2
baz=2.7
X54A Belton 138.29 356 P PKPdf 06 09 53.1 +0.2
baz=5.0
X55A Gracelyn & Ava 138.30 355 P PKPdf 06 09 52.5 -0.5
baz=6.1
X51A Calhoun 138.38 359 P PKPdf 06 09 53.5 +0.4
baz=1.3
X53A Estanollee 138.39 357 P PKPdf 06 09 53.6 +0.4
baz=3.6
Y58A Scranton 138.64 352 P PKPdf 06 09 54.3 +0.7
baz=9.1
Y52A Lilburn 139.06 358 P PKPdf 06 09 54.3 -0.1
baz=2.5
WHTX Lake Whitney, 139.40 15 P PKPdf 06 09 55.1 +0.1
baz=342
Z50A Ashland 139.70 0 P PKPdf 06 09 55.5 -0.1
baz=360
TX31 Lajitas Ar. Si 139.73 25 PKPpre 06 09 47.1
TX32 Lajitas Array 139.73 25 PKPpre 06 09 47.7
TXAR Lajitas Array 139.74 25 PKhKP PKPpre 06 09 47.7
comp=Z,0.6nm,0.6s,baz=218,slow=0.5,SNR=12
TXAR SKPbc SKPbc 06 13 21.0 -2.8
comp=Z,3.6nm,0.6s,baz=161,slow=0.5,SNR=27

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCT	Junction City	140.12	19		PKPpre	06 09 48.8	
JCT	Junction City	140.12	19	PKHKP	PKPpre	06 09 48.8	
BDFB	Brasilia	142.13	254	PKhKP	PKPpre	06 09 55.6	
	comp=Z,6.8nm,0.7s,baz=138,slow=6.3,SNR=9.0						
BDFB				SKPbc	SKPbc	06 13 28.9	-1.4
	comp=Z,3.9nm,0.7s,baz=138,slow=5.6,SNR=5.6						
BDFB	Brasilia	142.13	254		PKPpre	06 09 55.1	
BDFB	Brasilia	142.13	254	PKHKP	PKPpre	06 09 55.1	
PLCA	Paso Flores	144.01	200	PKP	PKPab	06 10 01.5	+0.9
	comp=Z,11nm,0.6s,baz=242,slow=1.7,SNR=68						
PLCA				SKPbc	SKPbc	06 13 32.3	-1.8
	comp=Z,2.1nm,0.8s,baz=84,slow=2.6,SNR=4.2						
PLCA	Paso Flores	144.01	200		PKPab	06 10 01.3	+0.6
DWPF	Disney Wildern	144.58	353	P	PKPab	06 10 03.7	+0.7
	baz=7.3						
ZAIG	Zacatecas	145.92	28		PKPdf	06 10 09.3	+2.1
CBE	Ff, Capester	146.68	314	eP	PKPdf	06 10 10.5	+2.2
CPUP	Villa Florida	146.96	232	PKPbc	PKPdf	06 10 09.1	+0.7
	comp=Z,19nm,0.7s,baz=104,slow=2.4,SNR=71						
CPUP				SKPbc	SKPbc	06 13 40.0	-1.1
	comp=Z,1.5nm,0.8s,baz=241,slow=9.2,SNR=3.1						
CPUP	Villa Florida	146.96	232		PKPdf	06 10 09.3	+0.9
BAMF	Morne Balai	147.17	312	eP	PKPdf	06 10 11.6	+2.4
MPOM	Morne Pois Mar	147.20	311	eP	PKPdf	06 10 11.7	+2.6
GBMF	Grand Be	147.20	312	eP	PKPbc	06 10 13.0	+1.4
PCM	Pelee Case Pet	147.22	312	eP	PKPbc	06 10 13.2	+1.7
FDF	Fort de France	147.23	312	eP	PKPdf	06 10 11.7	+2.4
ZAM	Aeronautique	147.24	312	eP	PKPbc	06 10 13.3	+1.8
TRMF	Trois Ilets	147.28	311	eP	PKPbc	06 10 13.5	+1.9
TRMF	Trois Ilets	147.28	311	eP	PKPbc	06 10 13.7	+2.0
BIM	Bigot	147.31	311	eP	PKPbc	06 10 11.1	+1.8
MTP	Monte Pirata	147.85	322		PKPdf	06 10 12.5	+2.3
HUMP	Col San Antoni	148.00	322		PKPdf	06 10 11.5	+1.1
SJG	San Juan	148.20	323	PKPbc	PKPdf	06 10 13.8	+3.1
	comp=Z,16nm,0.6s,baz=305,slow=19,SNR=3.0						
SJG	San Juan	148.20	323		PKPdf	06 10 13.2	+2.5
SJG	San Juan	148.20	323	PKP2	PKPdf	06 10 13.2	+2.5
OBIP	Obispado Ponce	148.53	323		PKPdf	06 10 12.8	+1.5
GO05	Huala	149.60	203		PKPbc	06 10 16.9	-0.3
TLIG	Tlapa	152.28	27		PKPbc	06 10 24.0	-0.1
SAML	Samuel	157.58	264		PKPab	06 10 56.4	-0.5
SAML	Samuel	157.58	264	PKP2	PKPab	06 10 56.4	-0.5
LVC	Limon Verde	157.72	225		PKPab	06 10 57.9	+0.3
LVC	Limon Verde	157.72	225	PKP2	PKPab	06 10 57.9	+0.3
SDV	Santo Domingo	157.97	317	PKPdf	PKPdf	06 10 24.6	-0.6
SDV					PKPab	06 10 58.1	-0.5
GO01	Chusmiza	159.74	231		PKPdf	06 10 27.8	+0.3
GO01					PKPab	06 11 06.9	+0.3
SMLC	San Martn de	160.23	324	eP	PKPdf	06 10 27.8	+0.2
LPAZ	La Paz	160.56	241	PKP	PKPdf	06 10 29.1	+0.5
	comp=Z,3.5nm,0.6s,baz=119,slow=0.8,SNR=28						
LPAZ				PKPab	PKPab	06 11 08.6	-1.9
	comp=Z,1.3nm,0.5s,baz=209,slow=12,SNR=4.6						
LPAZ	La Paz	160.56	241	PKPdf	PKPdf	06 10 28.4	-0.2
LPAZ					PKPab	06 11 09.8	-0.6
LPAZ	La Paz	160.56	241		PKPdf	06 10 28.7	+0.1
LPAZ	La Paz	160.56	241	PKIKP	PKPdf	06 10 28.4	-0.2
LPAZ						06 11 09.8	
PTBC	PUERTO BERRIO	162.24	320	eP	PKPdf	06 10 29.0	-0.8
NORC	Norcasia	163.24	319	eP	PKPdf	06 10 30.0	-0.8
ROSC	El Rosal	163.41	316	PKP	PKPdf	06 10 31.5	+0.1
	comp=Z,2.3nm,0.3s,baz=211,slow=19,SNR=4.1						
GUY2C	Guyana, Caldas	163.82	320	eP	PKPdf	06 10 31.6	-0.3
GUY2C				eS	PKPab	06 11 19.9	-4.6
YOTC	Yotoco, Valle	165.39	320	eP	PKPdf	06 10 31.4	-1.5

IDC 28 05:59:31.9±1.5, 32.14N×40.36W, h0km, mb3.7/8, mb1 4.0/8, mb1mx3.6/47, mbtmp3.7/8, MS3.5/9, Ms1 3.5/9, ms1mx3.2/52, Error ellipse: s-maj=48.3km s-min=23.0km az=15.0

NEIC 28 05:59:34.4±0.4, 32.3N±0.1×40.3W±0.2, h15km±5km, mb4.4/4, Error ellipse: s-maj=24.6km s-min=15.4km az=46.0

ISC 28 05:59:34.4±1.0, 32.3N±0.2×40.3W±0.1, h14km, n23, σ0.93/12, mb3.8/10, MS3.5/9, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	San Juan	27.22	245	LR	LR	06 17 55.3	
	comp=Z,29nm,18.1s,baz=64,slow=41						
SCHQ	Schefferville	29.33	328	LR	LR	06 16 33.6	
	comp=Z,153nm,21.0s,baz=156,slow=35						
MDT	Midelt	30.01	79	LR	LR	06 14 52.6	
	comp=Z,62nm,20.1s,baz=325,slow=31						
TKL	Tuckaleechee C	36.00	288	LR	LR	06 19 28.5	
	comp=Z,67nm,20.8s,baz=50,slow=33						
FRB	Frobisher Bay	36.13	339	P	P	06 06 35.3	-0.3
	1.8nm,0.9s,baz=130,slow=10,SNR=4.3						
SDV	Santo Domingo	36.48	237	P	P	06 06 40.0	+0.6
DBIC	Dimbokro	41.68	120	LR	LR	06 22 23.6	
	comp=Z,77nm,19.7s,baz=246,slow=33						
TORD	Torodi Ar. Bea	42.82	107	P	P	06 07 31.9	-0.3
	1.5nm,1.0s,baz=299,slow=9.2,SNR=4.7						
ULM	Lac du Bonnet	44.37	311	LR	LR	06 26 33.6	
	comp=Z,58nm,19.4s,baz=122,slow=36						
H10N2	ASCENSION HYDR	46.86	144	T	T	06 58 06.5	
	baz=329,slow=75,SNR=55						
H10N3	ASCENSION HYDR	46.86	144	T	T	06 57 46.1	
	baz=329,slow=75,SNR=68						
H10N1	ASCENSION HYDR	46.88	144	T	T	06 58 08.1	
	baz=329,slow=75,SNR=57						
H10S3	ASCENSION HYDR	47.74	145	T	T	06 58 51.7	
	baz=329,slow=74,SNR=96						
H10S2	ASCENSION HYDR	47.75	145	T	T	06 58 52.7	
	baz=251,slow=74,SNR=80						
AKASG	Malin Array Be	53.24	48	P	P	06 08 52.4	+0.1
	0.5nm,0.6s,baz=274,slow=6.9,SNR=3.8						
TXAR	Lajitas Array	53.80	285	P	P	06 08 56.8	-0.1
	0.5nm,0.8s,baz=82,slow=9.0,SNR=5.2						
TXAR				LR	LR	06 30 15.6	
	comp=Z,47nm,20.1s,baz=0.0,slow=34						
BW06	Boulder Array	54.52	302	P	P	06 09 02.0	-0.2
BW06				IAmb	IAmb	06 09 02.8	
	comp=Z,3.3nm,1.0s						
PD31	Pinedale Array	54.52	302	P	P	06 09 01.9	-0.2
PDAR	Pinedale Array	54.52	302	P	P	06 09 02.1	0.0
	comp=Z,1.7nm,1.0s,baz=87,slow=7.6,SNR=8.9						
PDAR				LR	LR	06 32 32.8	
	comp=Z,71nm,18.0s,baz=51,slow=36						
YKA	Yellowknife Ar	54.77	327	P	P	06 09 03.2	0.0
	comp=Z,0.5nm,0.9s,baz=80,slow=7.8,SNR=6.1						
WALA	Waterton Lakes	56.13	311	P	P	06 09 13.3	-0.1
WALA				IAmb	IAmb	06 09 13.4	
	comp=Z,5.6nm,1.4s						
NVAR	Mina Array Bea	62.15	300	P	P	06 09 53.7	-1.9
	comp=Z,0.7nm,0.6s,baz=64,slow=4.1,SNR=4.1						
NVAR				LR	LR	06 37 43.7	
	comp=Z,97nm,18.0s,baz=16,slow=37						
ILAR	Eielson Array	67.89	334	P	P	06 10 34.0	+1.9
	comp=Z,0.3nm,0.9s,baz=52,slow=5.8,SNR=3.8						

NEIC 28 06:03:11.1±1.1, 18.16S±0.08×169.0E±0.1, h213km±5km, mb4.2/3, Error ellipse: s-maj=19.5km s-min=10.4km az=73.0

IDC 28 06:03:13.2±4.2, 18.44S×169.07E, h239km±50km, mb3.2/4, mb1 3.4/5, mb1mx3.2/34, mbtmp3.8/5, Error ellipse: s-maj=97.3km s-min=27.8km az=157.0

ISC 28 06:03:09.5±1.0, 18.16S±0.09×169.1E±0.2, h200km, n16, σ1.21/16, mb4.0/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.26	325	Pn	Pn	06 04 04.3	+2.0
DZM	Mont Dzumac	4.64	212	P	Pn	06 04 21.3	+1.9
	4.1nm,0.3s,baz=128,slow=13,SNR=48						
DZM	Mont Dzumac	4.64	212		Pn	06 04 20.9	+1.5
NOUC	Port Laguerre	4.74	214		Pn	06 04 21.6	+1.1
WRA	Warramunga Arr	32.90	261	P	P	06 09 23.6	-1.4
	0.1nm,0.4s,baz=85,slow=8.4,SNR=3.9						
AS31	Alice Springs	33.30	254	P	P	06 09 27.6	-0.9
AS31				IAmb	IAmb	06 09 28.0	
	comp=Z,1.7nm,0.3s						
ASAR	Alice Springs	33.30	254	P	P	06 09 27.5	-1.0
	comp=Z,1.4nm,0.4s,baz=83,slow=8.6,SNR=24						
MAJO	Matsushiro	61.75	332	P	P	06 13 05.7	-1.2
MAJO				IAmb	IAmb	06 13 15.2	
	comp=Z,16nm,1.4s						
QSPA	South Pole Qui	71.89	180	P	P	06 14 10.9	+0.3
QSPA				IAmb	IAmb	06 14 25.0	
	comp=Z,7.0nm,1.5s						
SVW2	Sparrevohn	83.90	16	P	P	06 15 17.1	+0.7
SONM	Songino Array	86.30	323	P	P	06 15 29.4	+0.6
	comp=Z,0.4nm,0.5s,baz=136,slow=6.2,SNR=2.1						
ILAR	Eielson Array	89.23	17	P	P	06 15 41.5	-0.8
	comp=Z,0.3nm,0.5s,baz=232,slow=5.0,SNR=6.9						
YKA	Yellowknife Ar	99.76	27	P	Pdif	06 16 30.7	+0.4
	comp=Z,0.3nm,0.6s,baz=252,slow=4.5,SNR=6.5						
ARCES	ARCESS Array B	124.00	345	PKP	PKPdf	06 21 42.5	-0.8
	comp=Z,2.2nm,0.8s,baz=54,slow=4.6,SNR=7.3						
IDI	Anoyia	144.03	306	PKP	PKPab	06 22 19.1	-0.5
	comp=Z,2.2nm,0.4s,baz=111,slow=2.7,SNR=5.8						
DAVOX	Davos/Dischmat	146.72	334	PKPbc	PKPbc	06 22 28.4	+0.3

KRNET 28 07:38:26.4±0.1, 41.32N×70.04E, h26km, mb3.0

SOME 28 07:38:27.1, 41.03N×70.70E, h10km

NNC 28 07:38:27.5±2.3, 41.00N×70.72E, h0km, mb3.2, mpv3.0, Error ellipse: s-maj=17.6km s-min=9.4km az=27.0

ISC 28 07:38:30.8±1.5, 41.14N±0.05×70.52E±0.05, h7km±12km, n18, σ1.68/30, 16C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAS	Tashkent	0.94	282	⇑eP	Pb	07 38 37.8	-12
	baz=71						
TAS				⇑eS	Sb	07 38 46.4	-16
	baz=71						
IUG	Iuzhnay	1.07	340	eP	Pn	07 38 51.9	-0.5
	2.1nm,0.1s						
IUG				eS	Sn	07 39 09.7	+2.2
	20nm,0.2s						
IUG	Iuzhnay	1.07	340	P	Pn	07 38 51.9	-0.5
	2.1nm,0.1s						
IUG				S	Sn	07 39 09.7	+2.2
	20nm,0.2s						
BTK	Batken	1.10	168	⇓iP	Pg	07 38 51.8	-0.2
	baz=55						
BTK				⇓iS	Sn	07 39 10.1	+1.7
	baz=55						
ARK	Arkit	1.27	58	⇑iP	Pn	07 38 54.1	-1.0
	baz=72						
ARK				⇑iS	Sg	07 39 13.9	+2.2
	baz=72						
JBG	Jabagly	1.28	1	P	Pn	07 38 54.8	-0.5
	34nm,0.1s						
JBG				S	Sg	07 39 14.4	+2.3
	26nm,0.3s						
ARSB	Arslanbob	1.87	84	⇑iP	Pn	07 39 03.4	0.0
	baz=89						
ARSB				⇑iS	Sb	07 39 30.3	+1.3
	baz=89						
BRLS	Borolday	1.96	345	Pg	Pn	07 39 02.7	-1.8
	0.6nm,0.2s						
BRLS				Lg	Lg	07 39 28.1	
	0.8nm,0.4s						
KK31	Karatay Array	1.96	360	Pn	Pn	07 39 03.6	-0.9
	0.6nm,0.2s,baz=184,slow=17,SNR=23						
KK31				⇓Sn	Sb	07 39 30.8	-0.8
	1.8nm,0.5s,baz=187,slow=28,SNR=5.3						
AML	Almayashu	2.58	66	⇑iP	Pn	07 39 11.5	-1.9
	baz=72						
AML				⇑iS	Sn	07 39 46.0	+0.8
	baz=72						
MRKS	Merke	2.58	51	eP	Pb	07 39 15.6	-1.9
	6.8nm,0.3s						
MRKS				eS	Sb	07 39 50.2	+0.8
	6.5nm,0.4s						
MRKS	Merke	2.58	51	Pg	Pb	07 39 15.6	-1.9
	6.8nm,0.3s						
MRKS				Lg	Lg	07 39 50.2	
	6.5nm,0.4s						
EKS2	Erkin-Say	2.87	57	⇑eP	Pn	07 39 13.8	-3.3
	baz=63						
EKS2				⇑iS	Sn	07 39 51.0	-1.0
	baz=63						
ARLS	Aral	2.95	75	⇑iP	Pn	07 39 18.3	+0.1
	baz=79						
ARLS				⇑iS	Sn	07 39 56.3	+2.3
	baz=79						
UCH	Uchtor	3.18	69	⇓eP	Pn	07 39 19.9	-1.9
	baz=73						
UCH				⇓iS	Sn	07 40 00.8	+0.6
	baz=73						
AAK	Ala-Archa	3.33	62	⇑Pg	Pn	07 39 25.4	+2.0
	3.0nm,1.1s						
AAK				⇑Lg	Lg	07 40 13.0	
	1.6nm,0.6s						
KZA	Kyzart	3.67	74	⇑eP	Pn	07 39 27.1	-1.3
	baz=77						
KZA				⇑iS	Sn	07 40 13.3	+1.2
	baz=77						
SGDS	Sogindy	3.83	52	Pg	Pb	07 39 37.3	-1.4
	1.9nm,0.4s						
SGDS				Lg	Lg	07 40 27.7	
	1.5nm,0.3s						

NEIC 28 07:41:28.6±2.1, 6.77N±0.07×72.99W±0.06, h157km±6km, Error ellipse: s-maj=10.9km s-min=7.7km az=142.0

IDC 28 07:41:28.4±0.6, 6.70N×72.88W, h167km±8km, mb3.4/9, mb1 3.7/12, mb1mx3.4/35, mbtmp3.9/12, Error ellipse: s-maj=23.7km s-min=7.1km az=134.0

RSNC 28 07:41:30.0±0.8, 6.81N×73.14W, h145km±4km, ML3.8, Mw4.0, Fault plane solution: NP1:φs136.00000°, δ74.00000°, λ158.00000°.

ISC 28 07:41:28.8±0.6, 6.84N±0.03×73.10W±0.04, h154km±5km, n103, σ1.59/137, mb4.1/21, 3C-8D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.26	199	⇑iP	Pn	07 41 49.8	-0.3
BARC				eS	Sn	07 42 04.8	-1.5
BARC				i		07 42 05.8	
	comp=Z,3μm,0.3s						
PAMC	Pamplona, Colo	0.63	39	⇓iP	Pn	07 41 52.8	+0.8
PAMC				eS	Sn	07 42 09.1	-0.5
PAMC				i		07 42 11.4	
	comp=Z,762nm,0.4s						
RUSC	La Rusia	0.94	179	⇓iP	Pn	07 41 53.7	-0.5
RUSC				eS	Sn	07 42 12.2	-1.3
RUSC				i		07 42 13.5	
	comp=Z,947nm,0.7s						
RUSC	La Rusia	0.94	179		Pn	07 41 53.7	-0.5
TAMC	Tame, Arauca	1.36	107	⇑iP	Pn	07 41 58.2	+0.9
TAMC				eS	Sn	07 42 18.8	-0.3
TAMC				i		07 42 18.9	
	comp=Z,571nm,0.4s						
PTBC	PUERTO BERRIO,	1.38	257	eP	Pn	07 41 56.3	-1.2
PTBC				eS	Sn	07 42 17.4	-2.1
PTBC				i		07 42 22.5	
	comp=Z,852nm,0.3s						
OCAC	Ocana	1.40	351	eP	Pn	07 41 57.8	-0.1
OCAC				eS	Sn	07 42 19.8	-0.4
OCAC				i		07 42 28.0	
	comp=Z,791nm,0.4s						
SPBC	San Pablo de B	1.53	219	⇑eP	Pn	07 41 58.5	-0.6
SPBC				eS	Sn	07 42 20.1	-2.3
SPBC				i		07 42 24.9	
	comp=Z,898nm,0.4s						
ZARC	Zaragoza, Cauc	1.86	290	eP	Pn	07 42 02.1	-0.5
ZARC				eS	Sn	07 42 27.6	-1.1
ZARC				i		07 42 32.9	
	comp=Z,589nm,0.6s						
SMLC	San Martn de	2.17	334	eP	Pn	07 42 05.8	-0.4
SMLC				eS	Sn	07 42 35.8	+0.7
SMLC				i		07 42 43.9	
	comp=Z,561nm,0.1s						
NORC	Norcasia	2.17	234	eP	Pn	07 42 05.9	-0.4
NORC				eS	Sn	07 42 33.9	-1.3
NORC				i		07 42 38.7	
	comp=Z,494nm,0.2s						
CHIC	Chingaza	2.29	196	⇓eP	Pn	07 42 07.6	-0.4
CHIC				eS	Sn	07 42 37.3	-0.9
CHIC				i		07 42 42.4	
	comp=Z,480nm,0.3s						
ROSC	El Rosal	2.33	212	P	Pn	07 42 09.8	+1.2
	comp=Z,89nm,0.3s,baz=77,slow=16,SNR=224						
ROSC				S	Sn	07 42 40.5	+1.3
	comp=Z,414nm,0.3s,baz=355,slow=24,SNR=31						
ROSC	El Rosal	2.33	212	⇓eP	Pn	07 42 09.7	+1.2
ROSC				eS	Sn	07 42 38.4	-0.7
ROSC				i		07 42 44.5	
	comp=Z,1μm,0.4s						
ROSC	El Rosal	2.33	212		Pn	07 42 09.8	+1.2
ROSC				Sn	Sn	07 42 39.9	+0.8
HELC	Santa Helena	2.50	255	eP	Pn	07 42 10.4	-0.1
HELC				eS	Sn	07 42 41.9	-0.8
HELC				i		07 42 48.0	
	comp=Z,408nm,0.4s						
CVER	Cruz Verde, Cu	2.50	203	⇓eP	Pn	07 42 10.2	-0.5
UREC	San Jos de Ur	2.58	291	eP	Pn	07 42 09.6	-1.6
UREC				eS	Sn	07 42 40.0	-3.8
UREC				i		07 42 52.0	
	comp=Z,617nm,0.2s						
GUY2C	Guyana, Caldas	2.77	235	eP	Pn	07 42 13.6	-0.3
GUY2C				eS	Sn	07 42 50.6	+1.8
GUY2C				i		07 42 55.8	
	comp=Z,408nm,0.4s						
PTGC	Puerto Gaitan,	2.80	160	⇓iP	Pn	07 42 12.9	-0.9
PTGC				eS	Sn	07 42 46.3	-2.4
PTGC				i		07 42 48.9	
	comp=Z,240nm,0.3s						
CBOC	Ciudad Bolivar	3.06	252	eP	Pn	07 42 17.3	0.0
CBOC				eS	Sn	07 42 51.3	-3.4
CBOC				i		07 43 05.2	
	comp=Z,135nm,0.6s						
CODC	Agustn Codazz	3.09	354	⇓eP	Pn	07 42 17.7	+0.2
CODC				eS	Sn	07 42 55.0	-0.3
CODC				i		07 43 05.9	
	comp=Z,125nm,0.6s						
SDV	Santo Domingo	3.17	50	P	Pn	07 42 19.2	+0.4
	comp=Z,73nm,0.3s,baz=194,slow=4.9,SNR=988						
SDV				S	Sn	07 42 56.3	-1.2
	comp=Z,56nm,0.3s,baz=61,slow=13,SNR=14						
ARGC	Ariguani, Magd	3.20	339	eP	Pn	07 42 19.9	+0.9
ARGC				eS	Sn	07 42 58.4	+0.5
ARGC				i		07 43 05.3	
	comp=Z,149nm,0.4s						
PRAC	Prado	3.58	210	eP	Pn	07 42 23.4	-0.4
PRAC				eS	Sn	07 43 05.4	-1.2
PRAC				i		07 43 09.5	
	comp=Z,484nm,0.7s						
ORTC	Ortega, Tolima	3.62	216	eP	Pn	07 42 24.1	-0.2
ORTC				eS	Sn	07 43 06.0	-1.3
ORTC				i		07 43 11.4	
	comp=Z,261nm,0.7s						
SJCC	San Jacinto, C	3.67	326	eP	Pn	07 42 23.5	-1.5
SJCC				eS	Sn	07 43 04.9	-3.7
SJCC				i		07 43 18.9	
	comp=Z,128nm,0.6s						
PLMC	San Jos del P	3.71	239	eP	Pn	07 42 25.4	-0.1
PLMC				i		07 43 15.6	
	comp=Z,134nm,0.2s						
GUVC	San Jose del G	4.30	174	eP	Pn	07 42 31.8	-1.4
GUVC				eS	Sn	07 43 20.6	-2.6
GUVC				i		07 43 24.2	
	comp=Z,167nm,0.2s						
YOTC	Yotoco, Valle	4.30	229	eP	Pn	07 42 32.0	-1.3
YOTC				eS	Sn	07 43 18.8	-4.7
YOTC				i		07 43 34.5	
	comp=Z,29nm,0.9s						
SOLC	Bahia Solano	4.33	262	eP	Pn	07 42 32.9	-0.6
SOLC				i		07 43 26.9	
	comp=Z,33nm,0.4s						
SMRC	Santa Marta, M	4.43	346	eP	Pn	07 42 34.5	-0.4
SMRC				eS	Sn	07 43 22.1	-4.3
SMRC				i		07 43 27.1	
	comp=Z,76nm,0.2s						
CAPC	Capurgana	4.58	293	eP	Pn	07 42 34.3	-2.5
CAPC				eS	Sn	07 43 25.7	-4.0
CAPC				i		07 43 35.6	
	comp=Z,64nm,0.2s						
PTAC	Punta Ardita,	4.69	274	eP	Pn	07 42 36.5	-1.6
PTAC				i		07 43 32.3	
	comp=Z,116nm,0.2s						
MACC	Macarena, Meta	4.73	189	⇓eP	Pn	07 42 36.7	-2.1
MACC				eS	Sn	07 43 28.2	-5.2
MACC				i		07 43 31.6	
	comp=Z,86nm,0.9s						
URIC	Uribia, Colomb	4.95	13		Pn	07 42 40.1	-1.5
GARC	Garzon, Huila	5.21	207	eP	Pn	07 42 43.9	-1.4
GARC				eS	Sn	07 43 41.1	-3.9
PCON	Cinco Dias	5.56	216	eP	Pn	07 42 51.0	+0.6
PCON				i		07 44 18.6	
	comp=Z,29nm,0.5s						
FLOC	Florencia	5.81	206		Pn	07 42 51.9	-1.3
SOTA	Rioblanco	5.84	217	eP	Pn	07 42 54.5	+0.6
SOTA				i		07 44 10.8	
	comp=Z,23nm,0.8s						
BBAC	Balboa, Cauca	6.33	221	eP	Pn	07 43 00.8	+0.6
BBAC				i		07 44 25.2	
	comp=Z,20nm,1.2s						
CRUC	La Cruz	6.50	216	eP	Pn	07 43 03.3	+0.7
CRUC				i		07 44 19.1	
	comp=Z,14nm,0.6s						
BCIP	Isla Barro Col	7.06	290	Pn	Pn	07 43 07.2	-2.5
OTAV	Otavalo	8.46	219		Pn	07 43 27.5	-1.4
PCRV	Puerto La Cruz	9.00	68	P	Pn	07 43 34.9	-0.7
	comp=Z,1.2nm,0.3s,baz=185,slow=12,SNR=6.7						
PCRV				S	Sn	07 45 12.3	-3.4
	baz=142,slow=19,SNR=1.5						
PLCV	Puerto La Cruz	9.04	68		Pn	07 43 34.9	-1.2
PLCV					Sn	07 45 12.3	-4.2
MTDJ	Mount Denham	12.11	339		Pn	07 44 19.3	+2.7
DR12	Loma Pena Alta	12.41	17	P	P	07 44 26.3	+0.2
GTBY	Guantanamo Bay	13.15	352	P	P	07 44 33.5	-0.7
CBCY	The Bluff, Cay	14.36	334	P	P	07 44 49.0	+1.4
TEIG	Tepich	19.84	314	P	P	07 45 52.3	+1.2
CCIG	Comitan	20.86	298	P	P	07 46 01.9	+2.9
CCIG				IAmb	IAmb	07 46 03.2	
	comp=Z,8.8nm,1.1s						
Z50A	Ashland	28.85	337	P	P	07 47 14.5	+1.7
Z50A				IAmb	IAmb	07 47 15.3	
	comp=Z,4.1nm,0.9s						
Y49A	Blount Mountai	29.57	337	P	P	07 47 20.7	+1.4
Y49A				IAmb	IAmb	07 47 39.8	
	comp=Z,6.0nm,1.1s						
V48A	Smith Brothers	31.40	338	P	P	07 47 36.9	+1.7
WVT	Waverly	32.12	337	P	P	07 47 42.6	+1.0
LCAR	Lake Charles	33.46	333	P	P	07 47 54.6	+1.3
FCAR	Ozark Folk Cen	33.76	332	P	P	07 47 56.1	+0.3
FCAR				IAmb	IAmb	07 47 56.8	
	comp=Z,4.6nm,1.1s						
U40A	Yellville	34.49	331	P	P	07 48 02.9	+0.8
M56A	Emporium	34.79	353	P	P	07 48 06.7	+2.0
CCM	Cathedral Cave	35.16	335	P	P	07 48 08.4	+0.6
SFIN	Lafayette	35.67	342	P	P	07 48 12.8	+0.6
S39A	Bolivar	35.78	332	P	P	07 48 13.2	0.0
S39A				IAmb	IAmb	07 48 29.1	
	comp=Z,4.0nm,1.3s						
TX31	Lajitas Ar. Si	36.47	312	P	P	07 48 19.8	+0.6
TX32	Lajitas Array	36.47	312	P	P	07 48 19.4	+0.1
TXAR	Lajitas Array	36.47	312	P	P	07 48 19.6	+0.4
	comp=Z,0.5nm,0.4s,baz=126,slow=8.3,SNR=12						
TXAR				PcP	PcP	07 50 40.2	+0.2
	comp=Z,0.2nm,0.6s,baz=134,slow=3.9,SNR=3.2						
G62A	West of Eustis	38.29	3	P	P	07 48 36.2	+1.9
MNTX	Cornudas Mount	38.97	314	P	P	07 48 40.7	+0.6
MNTX				IAmb	IAmb	07 48 41.3	
	comp=Z,5.9nm,1.4s						
I42A	Draeger Farm,	39.42	342	P	P	07 48 43.9	+0.2
I42A				IAmb	IAmb	07 48 56.2	
	comp=Z,5.4nm,1.1s						
BATG	Bathurst New B	40.74	7	P	P	07 48 55.5	+1.0
BATG				IAmb	IAmb	07 48 59.9	
	comp=Z,8.9nm,1.3s						
ECSD	EROS Data Cent	42.14	334	P	P	07 49 05.7	-0.3
EYMN	Ely	43.86	342	P	P	07 49 19.6	-0.1
EYMN				IAmb	IAmb	07 49 20.1	
	comp=Z,3.2nm,0.6s						
ULM	Lac du Bonnet	47.27	340	P	P	07 49 45.8	-0.7
	comp=Z,2.1nm,0.4s,baz=149,slow=8.9,SNR=9.4						
ULM	Lac du Bonnet	47.27	340	P	P	07 49 45.7	-0.7
ULM				IAmb	IAmb	07 49 46.8	
	comp=Z,2.0nm,0.6s						
MSU	Marysvale	47.30	318	P	P	07 49 48.6	+1.4
NLU	North Lily Min	48.01	319	P	P	07 49 53.7	+1.1
PDAR	Pinedale Array	48.07	324	P	P	07 49 53.0	0.0
	comp=Z,0.4nm,0.5s,baz=127,slow=10,SNR=6.3						
SCHQ	Schefferville	48.12	5	P	P	07 49 53.0	+0.1
	comp=Z,2.1nm,0.5s,baz=172,slow=6.2,SNR=12						
SCHQ	Schefferville	48.12	5	P	P	07 49 53.2	+0.3
SCHQ				IAmb	IAmb	07 49 54.1	
	comp=Z,1.8nm,0.5s						
BGU	Big Grassy Mou	49.14	320	P	P	07 50 01.6	+0.4
REDW	Red Top Meadow	49.19	324	P	P	07 50 02.0	+0.4
REDW				IAmb	IAmb	07 50 03.3	
	comp=Z,9.3nm,1.4s						
YHL	Hebgen Lake	50.27	325	P	P	07 50 11.7	+1.8

MCMT	McKenzie Canyo	51.22	324	P	P	07 50 18.4	+1.5
NVAR	Mina Array Bea	51.48	315	P	P	07 50 19.2	+0.3
	comp=Z,0.3nm,0.6s,baz=119,slow=7.3,SNR=2.6						
WVOR	Wild Horse Val	53.53	319	P	P	07 50 33.9	+0.1
F10A	Beach Ranch, E	54.42	323	P	P	07 50 39.9	-0.2
F10A				IAmb	IAmb	07 50 53.5	
	comp=Z,5.5nm,1.4s						
I07A	Izee	54.87	320	P	P	07 50 43.9	+0.5
PINE	Pine Mountain	55.65	319	P	P	07 50 50.4	+1.3
PINE				IAmb	IAmb	07 51 06.9	
	comp=Z,3.7nm,1.4s						
KEBM	Edson Butte	57.50	317	P	P	07 51 04.0	+1.9
YKA	Yellowknife Ar	63.25	340	P	P	07 51 40.0	-0.6
	comp=Z,1.5nm,0.5s,baz=131,slow=6.9,SNR=38						
SUMG	Summit	68.96	11	P	P	07 52 17.3	-0.1
SUMG				IAmb	IAmb	07 52 36.8	
	comp=Z,4.9nm,1.2s						
INK	Inuvik	73.02	340	P	P	07 52 41.1	-0.2
	comp=Z,0.4nm,0.5s,baz=129,slow=3.4,SNR=4.3						
INK	Inuvik	73.02	340	P	P	07 52 41.5	+0.1
PRP	Porcupine Dome	76.55	336	P	P	07 53 02.7	+0.7
ILAR	Eielson Array	76.95	335	P	P	07 53 03.6	-0.4
	comp=Z,0.2nm,0.7s,baz=87,slow=4.7,SNR=2.9						
ARCES	ARCESS Array B	86.64	20	P	P	07 53 52.9	-1.7
	comp=Z,1.9nm,0.9s,baz=270,slow=3.6,SNR=4.0						
MK31	Makanchi Array	122.29	20	PKPdf	PKPdf	08 00 04.7	-1.0
MKAR	Makanchi Array	122.29	20	PKP	PKPdf	08 00 04.2	-1.5
	comp=Z,0.1nm,0.3s,baz=294,slow=3.0,SNR=6.9						
ASAR	Alice Springs	149.14	234	PKPbc	PKPbc	08 00 57.9	-2.0
	comp=Z,0.3nm,0.5s,baz=112,slow=3.8,SNR=3.0						
WB2	Warramunga Arr	150.36	241	PKPdf	PKPdf	08 00 58.8	+1.2
WRA	Warramunga Arr	150.37	241	PKPbc	PKPdf	08 00 58.9	+1.3
	comp=Z,0.4nm,0.4s,baz=106,slow=3.0,SNR=6.5						
WB0	Warramunga Arr	150.39	242		PKPbc	08 01 01.8	-1.2
DAV	Davao City (W)	156.80	306	PKPdf	PKPdf	08 01 06.4	-0.5

NIED 28 07:44:00, 36.80N×139.90E, h125km, Mw3.8 Best double couple: M0 6.29000×10^14 NP1:φs219.00000°, δ78.00000°, λ-61.00000°. NP2:φs329.00000°, δ31.00000°, λ-156.00000°.

IDC 28 07:44:51.1±1.4, 36.85N×140.15E, h123km±12km, mb3.6/10, mb1 3.7/15, mb1mx3.5/50, mbtmp4.0/15, Error ellipse: s-maj=19.0km s-min=9.4km az=65.0

NEIC 28 07:44:51.9±2.6, 36.91N±0.03×140.09E±0.08, h125km±7km, mb4.4/13, Error ellipse: s-maj=10.0km s-min=2.1km az=69.0

JMA 28 07:44:53.9±0.1, 36.77N×139.90E, h131km±1km, M3.6 JMA Felt I J1.

ISC 28 07:44:52.7±0.7, 36.87N±0.04×139.94E±0.06, h133km±6km, n59, σ1.73/69, mb4.2/17, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSB	Shiboa	0.10	350	P	Pn	07 45 12.2	+1.5
JSB				S	Sn	07 45 25.8	+1.3
JKT	Katashina	0.57	260	P	Pn	07 45 13.4	+0.8
JFY	Yanaizu	0.57	341	P	Pn	07 45 14.0	+1.5
JAG	Ashikaga	0.59	222	P	Pn	07 45 13.1	+0.5
JFT	Otama	0.72	26	P	Pn	07 45 15.5	+2.0
JFT				S	Sn	07 45 31.7	+2.3
JHK	Hiroka	0.83	297	P	Pn	07 45 15.6	+1.3
JHK				eS	Sn	07 45 32.0	+1.2
JNS	Sasagawa	1.07	332	P	Pn	07 45 17.8	+1.3
JRY	Ryogami san	1.20	225	P	Pn	07 45 18.3	+0.5
JRY				S	Sn	07 45 36.6	-0.2
MJAR	Matsushiro Arr	1.43	257	P	Pn	07 45 20.4	+0.2
	2.0nm,0.3s,baz=65,slow=9.2,SNR=57						
MJAR				S	Sn	07 45 40.9	-0.3
	1.3nm,0.3s,baz=88,slow=26,SNR=12						
MAJO	Matsushiro	1.43	257		Pn	07 45 20.4	+0.2
MAJO				Sn	Sn	07 45 40.7	-0.5
MAT	Matsushiro	1.43	257	P	Pn	07 45 20.9	+0.7
MAT	Matsushiro	1.43	257	P	Pn	07 45 20.9	+0.7
MAT				S	Sn	07 45 40.4	-0.8
MJB9	Matsu-Tunnel	1.43	257		Pn	07 45 20.7	+0.4
MJB9				Sn	Sn	07 45 40.5	-0.8
JAW	Awa shima	1.68	341	P	Pn	07 45 24.6	+1.7
JOD2	Odawara 2	1.75	204	P	Pn	07 45 23.4	-0.4
JOD2				S	Sn	07 45 45.9	-1.7
JSD	Sado	1.77	312	P	Pn	07 45 25.0	+0.9
JSD				S	Sn	07 45 48.6	+0.5
JYN	Shimob	1.78	220	P	Pn	07 45 24.4	+0.2
JYN				S	Sn	07 45 47.9	-0.4
JYK	Kaneyama	2.07	9	P	Pn	07 45 29.8	+2.2
JSZ	Suzu	2.14	286	P	Pn	07 45 29.2	+0.8
JSZ				eS	Sn	07 45 56.3	+0.4
INU	Inuyama	2.81	238		Pn	07 45 36.6	-0.4
INU				Sn	Sn	07 46 09.3	-1.7
JHJ	Hachijo jima 2	3.75	182	P	Pn	07 45 48.3	-0.8
	23nm,0.3s,baz=148,slow=22,SNR=27						
JHJ				S	Sn	07 46 30.6	-2.3
	108nm,0.3s,baz=53,slow=22,SNR=13						
JHJ2	Mitsune	3.75	182	Pn	Pn	07 45 50.4	+1.2
JHJ2				Sn	Sn	07 46 30.4	-2.6
ERM	Erimo	5.71	25	Pn	Pn	07 46 16.0	+0.8
ERM				Sn	Sn	07 47 15.3	-4.2
ASAJ	Asahikawa	7.51	15	P	Pn	07 46 39.6	+0.1
	2.0nm,0.3s,baz=219,slow=13,SNR=7.8						
ASAJ				S	Sn	07 47 56.8	-6.4
	0.6nm,0.3s,baz=225,slow=19,SNR=2.8						
JKA	Kamikawa-asahi	7.51	15		Pn	07 46 39.6	+0.1
JKA					Sn	07 47 56.8	-6.4
USRK	Ussuriysk Ar.	9.50	323	P	Pn	07 47 07.5	+1.4
	baz=154,slow=15,SNR=5.8						
KSRS	Korea Array	9.61	277	P	Pn	07 47 10.4	+2.8
	0.1nm,0.3s,baz=105,slow=15,SNR=4.6						
JCJ	Chichijima	9.93	168	P	Pn	07 47 08.3	-3.7
	9.5nm,0.3s,baz=26,slow=19,SNR=8.0						
JCJ				S	Sn	07 48 49.8	-12
	13nm,0.3s,baz=301,slow=19,SNR=7.2						
PET	Petropavlovsk	20.79	33	P	P	07 49 22.8	-0.2
SONM	Songino Array	26.90	305	P	P	07 50 21.4	+0.1
	1.5nm,0.6s,baz=106,slow=9.5,SNR=11						
H11N2	WAKE ISLAND Hy	29.09	119	T	T	08 21 04.7	
	baz=313,slow=75,SNR=7.3						
H11N1	WAKE ISLAND Hy	29.10	119	T	T	08 21 05.0	
	baz=313,slow=75,SNR=8.0						
H11N3	WAKE ISLAND Hy	29.11	119	T	T	08 21 06.4	
	baz=313,slow=75,SNR=5.8						
H11S1	WAKE ISLAND Hy	29.78	121	T	T	08 21 56.0	
	baz=314,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	29.78	121	T	T	08 21 58.5	
	baz=314,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	29.79	121	T	T	08 21 59.7	
	baz=314,slow=76,SNR=9.4						
ZAA0	Zalesovo Array	41.16	313	IAmb	IAmb	07 52 25.1	
	comp=Z,5.7nm,0.7s						
ZALV	Zalesovo Beam	41.16	313	P	P	07 52 24.2	+0.6
	comp=Z,4.8nm,0.6s,baz=94,slow=7.2,SNR=18						
MK31	Makanchi Array	43.21	302	P	P	07 52 40.0	-0.3
MKAR	Makanchi Array	43.21	302	P	P	07 52 41.4	+1.0
	comp=Z,2.1nm,0.8s,baz=93,slow=9.7,SNR=14						
MAKZ	Makanchi	43.42	302	P	P	07 52 42.7	+0.6
KURK	Kurchatov	45.10	308	P	P	07 52 56.1	+0.8
KURK				IAmb	IAmb	07 52 57.6	
	comp=Z,9.4nm,1.1s						
RSO	Redoubt South	47.76	38	P	P	07 53 16.4	+0.2
TOLK	Toolik Lake Re	49.15	27		pP	07 53 51.0	-6.2
COEN	Coen	50.65	176	P	P	07 53 39.2	+0.9
COEN				IAmb	IAmb	07 53 53.8	
	comp=Z,6.7nm,1.2s						
FYU	Fort Yukon	50.84	30	P	P	07 53 38.8	-0.4
FYU				IAmb	IAmb	07 53 44.8	
	comp=Z,5.2nm,1.1s						
FITZ	Fitzroy Crossi	56.31	196	P	P	07 54 21.8	+2.2
WB0	Warramunga Arr	56.57	186	P	P	07 54 21.6	+0.1
WB2	Warramunga Arr	56.75	186	P	P	07 54 22.7	0.0
WB2				IAmb	IAmb	07 54 24.2	
	comp=Z,4.9nm,1.0s						
WR0	Warramunga Arr	56.75	186	P	P	07 54 22.3	-0.4
WR0				IAmb	IAmb	07 54 28.1	
	comp=Z,6.2nm,1.4s						
WRA	Warramunga Arr	56.75	186	P	P	07 54 22.6	-0.1
	comp=Z,1.2nm,0.3s,baz=2.4,slow=7.3,SNR=8.5						
ABKAR	Akbulak array	57.14	310	P	P	07 54 25.8	+0.6
ABKAR				IAmb	IAmb	07 54 26.3	
	comp=Z,1.9nm,0.6s						
ASAR	Alice Springs	60.48	186	P	P	07 54 48.8	+0.3
	comp=Z,0.5nm,0.8s,baz=23,slow=13,SNR=6.1						
ARCES	ARCESS Array B	63.73	339	P	P	07 55 09.8	+0.2
	comp=Z,2.0nm,0.9s,baz=64,slow=8.3,SNR=3.8						
YKA	Yellowknife Ar	64.54	30	P	P	07 55 12.7	-2.3
	comp=Z,0.2nm,0.6s,baz=304,slow=6.9,SNR=3.8						
FORT	Forrest	68.21	191	P	P	07 55 39.5	+0.8
FINES	FINESS Array B	68.41	332	P	P	07 55 40.0	+0.4
	comp=Z,1.5nm,0.7s,baz=76,slow=8.0,SNR=4.1						
AKASG	Malin Array Be	73.70	322	P	P	07 56 11.1	-0.6
	comp=Z,0.9nm,0.6s,baz=50,slow=6.0,SNR=7.1						
NOA	NORSAR Array B	73.88	337	P	P	07 56 13.1	+0.5
	comp=Z,0.5nm,0.5s,baz=39,slow=5.9,SNR=3.0						

BJI 28 07:49:11.1±0.0, 17.12S×171.86W, h6km, mB5.4/9, mb4.9/15, Ms5.0/6, Ms7 4.7/6

IDC 28 07:49:11.8±0.6, 17.31S×172.31W, h0km, mb4.4/12, mb1 4.6/12, mb1mx4.3/37, mbtmp4.4/12, MS3.8/16, Ms1 3.8/16, ms1mx3.6/34, Error ellipse: s-maj=30.2km s-min=17.0km az=139.0

NEIC 28 07:49:17.5±2.0, 17.42S±0.07×172.04W±0.04, h35km±5km, mb4.8/51, Error ellipse: s-maj=11.2km s-min=1.7km az=207.0

ISC 28 07:49:14.0±0.4, 17.42S±0.07×172.08W±0.07, h15km, n127, σ1.50/113, mb4.6/37, MS3.9/19, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	2.63	129		Pn	07 49 54.3	-1.7
AFI	Afiamalu	3.50	5	Pn	Pn	07 50 01.2	-6.9
	11nm,0.3s,baz=144,slow=4.4,SNR=7.6						
AFI				Sn	Sn	07 50 35.5	-14
	46nm,0.3s,baz=323,slow=18,SNR=9.5						
AFI				LR	LR	07 51 06.6	
	comp=Z,576nm,19.6s,baz=261,slow=34						
AFI	Afiamalu	3.50	5		Pn	07 50 06.3	-1.8
MSVF	Nonsavu	9.41	267	Pn	Pn	07 51 31.8	+2.5
RAR	Rarotonga	12.22	110	LR	LR	07 55 40.0	
	comp=Z,371nm,20.2s,baz=288,slow=31						
RAR	Rarotonga	12.22	110	Pn	Pn	07 52 06.0	-1.6
DZM	Mont Dzumac	20.73	254	eLR	LR	07 59 16.5	
	comp=Z,588nm,25.6s						
DZM	Mont Dzumac	20.73	254	LR	LR	08 00 31.2	
	comp=Z,449nm,20.3s,baz=96,slow=33						
PPT2	Papeete2	21.47	94	eLQ	LQ	07 57 58.3	
	368nm,25.5s						
PPT2				eLR	LR	07 58 49.6	
	comp=Z,613nm,25.0s,baz=262						
PPT	Papeete	21.47	94	LR	LR	07 59 53.4	
	comp=Z,221nm,20.5s,baz=292,slow=30						
TBI	Tubuai	22.00	109	eLR	LR	07 59 08.3	
	comp=Z,776nm,27.8s,baz=279						
URZ	Urewera	22.82	202	P	P	07 54 17.5	+1.1
	18nm,0.5s,baz=286,slow=4.0,SNR=19						
URZ				S	S	07 58 20.4	-4.8
	7.5nm,1.0s,baz=232,slow=19,SNR=3.6						
URZ	Urewera	22.82	202	P	P	07 54 17.5	+1.1
URZ				IAmb	IAmb	07 54 26.2	
	comp=Z,31nm,0.8s						
BKZ	Black Stump Fm	23.84	202	P	P	07 54 26.4	-0.4
BKZ				IAmb	IAmb	07 54 35.7	
	comp=Z,26nm,1.2s						
HIZ	Hauiti	23.92	206	P	P	07 54 32.7	+5.2
TUWZ	Tuamarina	26.77	204	P	P	07 54 59.3	+6.0
HNR	Honiara	28.31	283	LR	LR	08 05 07.1	
	comp=Z,216nm,18.7s,baz=116,slow=34						
RPZ	Rata Peaks	29.84	205	LR	LR	08 06 11.0	
	comp=Z,183nm,19.0s,baz=192,slow=34						
TAOE	Nuku Hiva Isla	32.20	79	eLR	LR	08 03 40.2	
	comp=Z,324nm,26.7s						
COEN	Coen	43.14	268	P	P	07 57 13.3	-1.1
STKA	Stephens Creek	44.17	242	P	P	07 57 20.0	-2.5
	comp=Z,3.0nm,0.7s,baz=59,slow=11,SNR=5.5						
STKA				LR	LR	08 13 22.0	
	comp=Z,53nm,18.9s,baz=183,slow=33						
STKA	Stephens Creek	44.17	242	P	P	07 57 21.4	-1.1
BBOO	Buckleboo	48.93	241	P	P	07 57 57.4	-2.4
BBOO				IAmb	IAmb	07 58 09.0	
	comp=Z,11nm,0.9s						
WR0	Warramunga Arr	50.45	258	P	P	07 58 08.8	-2.8
WB0	Warramunga Arr	50.61	258	P	P	07 58 09.1	-3.7
WB0				IAmb	IAmb	07 58 11.4	
	comp=Z,6.6nm,0.9s						
WB2	Warramunga Arr	50.63	258	P	P	07 58 09.4	-3.6
WRA	Warramunga Arr	50.64	258	P	P	07 58 10.3	-2.8
	comp=Z,2.6nm,0.5s,baz=97,slow=6.8,SNR=42						
WRA				LR	LR	08 17 30.1	
	comp=Z,190nm,21.5s,baz=105,slow=34						
AS31	Alice Springs	50.72	253	P	P	07 58 11.7	-1.9
AS31				IAmb	IAmb	07 58 22.7	
	comp=Z,6.2nm,0.8s						
ASAR	Alice Springs	50.72	253	P	P	07 58 11.4	-2.2
	comp=Z,24nm,0.8s,baz=89,slow=8.5,SNR=183						
ASAR				LR	LR	08 18 10.2	
	comp=Z,71nm,19.1s,baz=170,slow=34						
FORT	Forrest	55.66	244	P	P	07 58 50.4	+0.6
FORT				IAmb	IAmb	07 58 51.4	
	comp=Z,11nm,0.8s						
MORW	Morawa	66.18	245	P	P	08 00 00.9	-0.7
UNV	Unalaska Valle	71.14	3	P	P	08 00 31.4	-0.2
MJAR	Matsushiro Arr	71.29	320	P	P	08 00 30.7	-2.4
	comp=Z,1.6nm,0.3s,baz=124,slow=6.6,SNR=3.6						
MJAR				LR	LR	08 26 01.6	
	comp=Z,35nm,22.0s,baz=330,slow=31						
QSPA	South Pole Qui	72.64	180	P	P	08 00 42.7	+1.8
NVAR	Mina Array Bea	75.00	41	P	P	08 00 55.4	+0.2
	comp=Z,0.9nm,0.8s,baz=228,slow=9.9,SNR=5.4						
NVAR				LR	LR	08 28 35.1	
	comp=Z,110nm,20.4s,baz=278,slow=31						
214A	Organ Pipe Nat	75.05	49	P	P	08 00 55.9	+0.4
214A				IAmb	IAmb	08 00 57.8	
	comp=Z,8.5nm,1.3s						
SHPR	Sheep Range	75.90	44	P	P	08 01 00.9	+0.5
Y14A	Wickenburg	75.97	47	P	P	08 01 01.8	+1.1
Y14A				IAmb	IAmb	08 01 14.4	
	comp=Z,7.6nm,1.3s						
W13A	Hualapai Mount	75.98	46	P	P	08 01 02.1	+1.1
TUC	Tucson	76.71	50	P	P	08 01 04.8	-0.2
NACB	Ninganchiao	76.76	301	P	P	08 01 05.4	0.0
X16A	Lo Mia Camp, P	77.32	48	P	P	08 01 10.2	+1.7
319A	Douglas	77.35	51	P	P	08 01 09.3	+0.7
319A				IAmb	IAmb	08 01 11.9	
	comp=Z,5.3nm,0.9s						
KNB	Kanab	77.75	45	P	P	08 01 11.4	+0.5
HPIG		78.06	57	P	P	08 01 13.9	+1.1
HPIG				IAmb	IAmb	08 01 16.0	
	comp=Z,8.3nm,1.3s						
KSRS	Korea Array	78.48	315	P	P	08 01 15.3	+0.7
	comp=Z,3.6nm,1.0s,baz=111,slow=4.4,SNR=7.3						
KSM	Kuching	78.63	275	P	P	08 01 16.8	+0.8
ZAIG	Zacatecas	78.82	62	P	P	08 01 18.7	+1.4
MNTX	Cornudas Mount	80.43	53	P	P	08 01 26.2	+0.8
MNTX				IAmb	IAmb	08 01 28.5	
	comp=Z,9.2nm,1.4s						
TX31	Lajitas Ar. Si	80.70	55	P	P	08 01 28.2	+1.2
TX31				IAmb	IAmb	08 01 29.8	
	comp=Z,13nm,1.4s						
TX32	Lajitas Array	80.70	55	P	P	08 01 28.4	+1.4
TX32				IAmb	IAmb	08 01 29.9	
	comp=Z,12nm,1.4s						
TXAR	Lajitas Array	80.70	55	P	P	08 01 27.7	+0.6
	comp=Z,3.0nm,1.1s,baz=218,slow=5.7,SNR=14						
VRDI	Verde Repeater	81.66	14	P	P	08 01 32.0	+0.4
VRDI				IAmb	IAmb	08 01 38.9	
	comp=Z,7.8nm,1.4s						
GLB	Gilahina Butte	81.77	13	P	P	08 01 32.2	+0.2
PMSA	Palmer Station	81.83	156	P	P	08 01 34.8	+2.5
NJ2	Nanjing	82.38	307	eP	P	08 01 36.0	+0.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SMCO	Snowmass	82.81	45	P	P	08 01 39.6	+1.3
PDAR	Pinedale Array	82.93	41	P	P	08 01 38.6	-0.1
	comp=Z,0.6nm,0.7s,baz=207,slow=1.7,SNR=5.5						
YHL	Hebgen Lake	83.04	39	P	P	08 01 40.4	+1.1
YHH	Holmes Hill	83.21	39	P	P	08 01 41.5	+1.3
MSTX	Muleshoe	83.41	52	P	P	08 01 41.8	+0.6
MSTX				IAmb	IAmb	08 01 43.3	
	comp=Z,17nm,1.4s						
CN2	Changchun	83.44	320	eP	P	08 01 42.8	+1.8
CN2				eS	S	08 12 02.3	+0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,7.0s						
CN2				LR	LR		
	comp=Z,400nm,14.0s						
CN2				LR	LR		
	comp=Z,400nm,15.0s						
WRH	Wood River Hil	83.70	10	P	P	08 01 41.0	-0.8
WRH				IAmb	IAmb	08 01 44.5	
	comp=Z,15nm,1.1s						
YNE	Yellowstone No	83.83	39	P	P	08 01 44.2	+0.9
CCB	Clear Creek Bu	83.91	10	P	P	08 01 41.7	-1.2
CCB				IAmb	IAmb	08 01 44.8	
	comp=Z,9.3nm,1.1s						
COLA	College	84.11	10	P	P	08 01 42.9	-1.0
MDM	Murphy Dome	84.12	10	P	P	08 01 42.8	-1.3
MDM				IAmb	IAmb	08 01 45.0	
	comp=Z,19nm,1.3s						
IL31		84.18	11	P	P	08 01 43.1	-1.2
IL31				IAmb	IAmb	08 01 46.1	
	comp=Z,17nm,1.3s						
ILAR	Eielson Array	84.18	11	P	P	08 01 43.3	-1.0
	comp=Z,2.3nm,0.8s,baz=219,slow=6.0,SNR=33						
AMTX	Amarillo	84.62	51	P	P	08 01 47.7	+0.4
AMTX				IAmb	IAmb	08 01 58.2	
	comp=Z,4.3nm,0.8s						
SEY	Seymchan	84.79	345	P	P	08 01 45.9	-1.5
	comp=Z,1.7nm,0.8s,baz=129,slow=6.5,SNR=5.2						
DAWY	Dawson	85.06	14	P	P	08 01 48.6	-0.2
DAWY				IAmb	IAmb	08 01 50.7	
	comp=Z,7.2nm,0.8s						
PRP	Porcupine Dome	85.10	11	P	P	08 01 48.2	-0.9
WHN	Wuhan	85.27	304	P	P	08 01 55.8	+5.3
COLD	Coldfoot	85.94	8	P	P	08 01 54.6	+1.6
COLD				IAmb	IAmb	08 02 01.7	
	comp=Z,7.0nm,1.5s						
BILL	Bilibino	86.67	352	P	P	08 01 55.6	-1.0
BILL				IAmb	IAmb	08 01 57.8	
	comp=Z,7.9nm,1.1s						
HHC	Hu-ho-hao-te	91.32	312	eP	P	08 02 19.5	+0.1
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,74nm,4.5s						
HHC				LR	LR		
	comp=Z,200nm,27.2s						
HHC				LR	LR		
	comp=Z,210nm,23.8s						
HHC				LR	LR		
	comp=Z,91nm,22.1s						
YKA	Yellowknife Ar	91.45	23	P	P	08 02 19.1	-0.2
	comp=Z,1.7nm,1.2s,baz=240,slow=4.1,SNR=7.9						
PBKT	Sadao Pong	92.04	287	P	P	08 02 24.2	+1.1
CMAR	Chiang Mai Arr	94.44	288	LR	LR	08 40 44.1	
	comp=Z,21nm,21.9s,baz=0.0,slow=33						
ULM	Lac du Bonnet	94.71	39	LR	LR	08 41 01.3	
	comp=Z,89nm,19.9s,baz=74,slow=33						
SONM	Songino Array	97.18	318	LR	LR	08 41 29.8	
	comp=Z,39nm,20.1s,baz=155,slow=32						
LPAZ	La Paz	97.94	110	LR	LR	08 39 28.0	
	comp=Z,55nm,18.1s,baz=196,slow=31						
ROSC	El Rosal	98.83	88	LR	LR	08 38 15.4	
	comp=Z,87nm,21.1s,baz=216,slow=30						
MKAR	Makanchi Array	113.13	314	PKiKP	PKiKP	08 07 50.9	-0.1
	comp=Z,0.4nm,0.7s,baz=176,slow=2.2,SNR=4.3						
BVAR	Borovoye Array	120.24	322	PKP	PKPdf	08 08 03.9	-0.6
	comp=Z,0.9nm,0.7s,baz=115,slow=2.4,SNR=5.1						
AKASG	Malin Array Be	142.68	338	PKhKP	PKPpre	08 08 41.7	
	comp=Z,0.2nm,0.3s,baz=37,slow=3.4,SNR=2.2						
RAYN	Ar Rayn	144.34	286		PKPdf	08 08 50.4	-0.1
KMBO	Kilima Mbogo	145.72	240	PKPbc	PKPab	08 08 54.9	+0.8
	comp=Z,6.5nm,1.0s,baz=84,slow=2.9,SNR=21						
KMBO	Kilima Mbogo	145.72	240		PKPab	08 08 55.1	+1.1
CLL	Collm	145.95	354	ePKPbc	PKPab	08 08 54.0	+0.6
	comp=Z,21nm,1.5s						
UPC	Upice	146.36	351	ePKP	PKPab	08 08 55.8	+0.7
DPC	Dobruska-Polom	146.46	350	ePKP	PKPab	08 08 55.7	+0.2
KRLC	Kraliky	146.65	350	ePKP	PKPab	08 08 56.7	+0.4
MORC	Moravsky Berou	146.80	349	ePKP	PKPbc	08 08 55.7	+0.1
PRU	Pruhonice	147.08	352	ePKP	PKPab	08 08 57.8	0.0
VRAC	Vranov	147.42	349	ePKP	PKPbc	08 08 57.6	+0.3
VRAC	Vranov	147.42	349	PKPbc	PKPbc	08 08 57.5	+0.2
	comp=Z,2.3nm,0.4s,baz=124,slow=3.5,SNR=3.1						
JAVC	Velka Javorina	147.65	348	ePKP	PKiKP	08 08 59.5	-0.6
KRUC	Moravsky	147.70	350	ePKP	PKPbc	08 08 58.3	+0.2
VYHS	Vyhne	147.75	346	ePKP	PKiKP	08 09 00.2	-0.1
KHC	Kasperske Hory	148.04	353	ePKP	PKiKP	08 09 00.6	-0.3
KHC	Kasperske Hory	148.04	353		PKPbc	08 08 59.4	+0.4
MODS	Modra-Piesok	148.19	348	ePKP	PKPbc	08 08 58.8	-0.7
MLR	Muntele Rosu	148.22	336	PKPbc	PKPbc	08 08 59.1	-0.6
	comp=Z,3.5nm,0.9s,baz=79,slow=2.0,SNR=6.4						
MLR	Muntele Rosu	148.22	336		PKPbc	08 08 59.9	+0.1
GEC2	GERESS Array S	148.31	353		PKPbc	08 08 59.9	+0.1
GERES	GERESS Array B	148.31	353	PKPbc	PKPbc	08 08 60.0	+0.1
	comp=Z,2.1nm,0.7s,baz=40,slow=2.3,SNR=13						
BR131	Keskin Array S	148.51	320		PKPbc	08 09 01.0	+0.3
BRTR	Keskin Array B	148.51	320	PKPbc	PKiKP	08 09 01.5	-0.8
	comp=Z,4.8nm,1.1s,baz=137,slow=4.4,SNR=12						
CONA	Conrad Observa	148.88	350	i PKiKP	PKPbc	08 09 02.0	+0.7
	comp=Z,22nm,2.0s						
MOA	Molln	149.21	352	i PKiKP	PKiKP	08 09 03.1	-0.2
	comp=Z,11nm,1.4s						
ARSA	Arzberg	149.60	350	i PKPbc	PKPbc	08 09 01.0	-2.1
	comp=Z,6.7nm,1.4s						
RETA	Reutte	149.92	356	i PKiKP	PKiKP	08 09 05.3	+0.4
	comp=Z,15nm,1.4s						
MOTA	Moosalm	150.04	356	i PKiKP	PKPbc	08 09 04.2	-0.2
	comp=Z,15nm,1.2s						
WTTA	Wattenberg	150.08	355	i PKiKP	PKPbc	08 09 04.6	+0.1
	comp=Z,7.1nm,0.7s						
KBA	Koelnbreinsper	150.09	353	i PKPbc	PKPbc	08 09 03.8	-0.7
	comp=Z,6.8nm,1.4s						
SQTA	Sankt Quirin	150.16	355	i PKiKP	PKPbc	08 09 05.0	+0.4
	comp=Z,9.4nm,0.8s						
DAVA	Damuels	150.17	357	i PKPdf	PKPdf	08 09 00.7	+1.1
	comp=Z,7.7nm,0.8s						
SOKA	Soboth	150.24	350	i PKiKP	PKPbc	08 09 04.6	-0.1
	comp=Z,7.5nm,1.0s						
FETA	Feichten	150.39	356	i PKiKP	PKPbc	08 09 05.6	+0.4
	comp=Z,9.1nm,1.0s						
OBKA	Obir	150.48	351	i pPKPdf	PKiKP	08 09 08.4	+2.3
	comp=Z,5.4nm,1.0s						
MYKA	Terra Mystica	150.49	352	i PKPbc	PKPbc	08 09 04.3	-1.0
	comp=Z,13nm,1.9s						
ABTA	Abfaltersbach	150.51	354	i PKiKP	PKPbc	08 09 05.1	-0.2
	comp=Z,10nm,0.8s						
DAVOX	Davos/Dischmat	150.68	357	PKPbc	PKiKP	08 09 07.0	+0.4
MMAI	Mount Meron Ar	150.80	307	PKPbc	PKiKP	08 09 07.1	0.0
	comp=Z,0.9nm,0.2s,baz=90,slow=1.4,SNR=3.3						
TORD	Torodi Ar. Bea	172.65	124	PKP	PKPdf	08 09 21.6	-1.9
	comp=Z,0.7nm,0.8s,baz=292,slow=3.7,SNR=4.2						
TORD				PKPab	PKPab	08 10 48.6	-0.3
	comp=Z,0.9nm,0.9s,baz=235,slow=5.1,SNR=3.5						

IDC 28 07:55:11.6±0.9, 16.87S×172.62W, h0km, mb3.9/8, mb1 4.3/8, mb1mx3.9/33, mbtmp3.9/8, Error ellipse: s-maj=49.6km s-min=20.2km az=138.0

NEIC 28 07:55:14.4±2.6, 17.67S±0.08×172.21W±0.09, h31km±3km, mb4.5/6, Error ellipse: s-maj=13.0km s-min=11.1km az=54.0

ISC 28 07:55:13.8±0.7, 17.2S±0.1×172.4W±0.2, h17km, n21, σ1.33/18, mb4.0/11, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	3.01	128	Pn	Pn	07 55 53.0	-7.8
AFI	Afiamalu	3.35	11		Pb	07 56 14.3	+1.5
URZ	Urewera	22.88	202	P	P	08 00 19.6	+3.0
	11nm,0.9s,baz=22,slow=19,SNR=4.3						
URZ	Urewera	22.88	202	IAmb	IAmb	08 00 35.0	
	comp=Z,30nm,1.2s						
PLWZ	Palliser	26.48	201	P	P	08 00 49.7	-0.5
BBOO	Buckleboo	48.74	241	P	P	08 03 51.7	-6.1
WR0	Warramunga Arr	50.17	258	P	P	08 04 06.9	-2.1
WR0				IAmb	IAmb	08 04 12.7	
	comp=Z,5.8nm,1.2s						
WB0	Warramunga Arr	50.33	258	P	P	08 04 09.5	-0.7
WB0				IAmb	IAmb	08 04 28.2	
	comp=Z,9.8nm,1.5s						
WRA	Warramunga Arr	50.36	258	P	P	08 04 09.0	-1.5
	comp=Z,0.7nm,0.5s,baz=98,slow=6.9,SNR=7.2						
AS31	Alice Springs	50.46	253	P	P	08 04 11.1	-0.1
ASAR	Alice Springs	50.46	253	P	P	08 04 10.2	-1.0
	comp=Z,3.4nm,0.6s,baz=88,slow=8.5,SNR=49						
QSPA	South Pole Qui	72.84	180	P	P	08 06 41.5	-0.1
QSPA				IAmb	IAmb	08 06 51.7	
	comp=Z,7.8nm,1.4s						
NVAR	Mina Array Bea	75.06	41	P	P	08 06 54.7	-0.4
	comp=Z,0.4nm,0.7s,baz=217,slow=9.8,SNR=3.1						
TXAR	Lajitas Array	80.85	56	P	P	08 07 27.0	-0.3

comp=Z,0.8nm,1.0s,baz=228,slow=6.8,SNR=5.7
PDAR Pinedale Array 83.00 41 P **P 08 07 37.5 -1.0**
comp=Z,0.6nm,0.9s,baz=66,slow=1.8,SNR=4.6
ILAR Eielson Array 84.04 11 P **P 08 07 42.0 -1.0**
comp=Z,1.1nm,1.1s,baz=227,slow=6.1,SNR=4.4
YKA Yellowknife Ar 91.39 23 P **P 08 08 17.9 -0.6**
comp=Z,0.3nm,0.9s,baz=223,slow=4.2,SNR=4.1
KMBO Kilima Mbogo 145.53 241 PKPbc **PKPab 08 14 54.0 +1.2**
comp=Z,1.1nm,0.3s,baz=56,slow=3.6,SNR=5.0
KMBO Kilima Mbogo 145.53 241 PKPab 08 14 54.3 +1.4
GERES GERESS Array B 148.06 352 PKPbc **PKPbc 08 14 59.0 +0.3**
comp=Z,0.4nm,0.2s,baz=8.5,slow=2.0,SNR=4.4
BRTR Keskin Array B 148.15 320 PKPbc **PKPbc 08 15 00.1 +0.8**
comp=Z,1.0nm,0.9s,baz=147,slow=2.9,SNR=3.4

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*VLA **28** 08:00:21.0, 52.°31N×35.°42E, M2.3, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*IDC **28** 08:00:25.6±3.5, 52.°30N×35.°10E, h0km, mb1 3.6/2, mb1mx3.1/42, mbtmp3.5/2, ML2.9/3, Error ellipse: s-maj=41.2km s-min=15.2km az=115.0*
ISC 28 08:00:25.8±3.7, 52.°6N±0.°1×34.°7E±0.°3, h0km, n5, σ1°02/5, Baltic States-Belarus-Northwestern Russia

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC

AKASG Malin Array Be 3.91 242 Pn **Pn 08 01 26.9 -0.2**
0.7nm,0.3s,baz=60,slow=15,SNR=3.9
AKASG Sn **Sn 08 02 13.6 0.0**
0.7nm,0.3s,baz=62,slow=14,SNR=2.8
I43RU DUBNA INFRASON 4.35 19 *i* 08 29 20.0
baz=190,slow=327,SNR=1.2
FINES FINESS Array B 9.98 336 Pn **Pn 08 02 51.3 +1.1**
0.1nm,0.3s,baz=156,slow=14,SNR=4.3
FINES Sn **Sn 08 04 42.1 -0.7**
0.1nm,0.3s,baz=156,slow=24,SNR=3.8
I31KZ AKTYUBINSK INF 14.70 89 *i* 09 22 50.0
baz=286,slow=306,SNR=15
ARCES ARCESS Array B 17.48 349 Pn **Pn 08 04 30.1 -0.6**
0.1nm,0.3s,baz=162,slow=12,SNR=3.6

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*IDC **28** 08:10:39.9±0.5, 42.°77N×96.°42E, h0km, mb4.2/27, mb1 4.3/31, mb1mx4.2/49, mbtmp4.2/31, ML3.9/4, MS3.6/13, Ms1 3.7/13, ms1mx3.4/49, Error ellipse: s-maj=14.0km s-min=11.0km az=26.0*
*NEIC **28** 08:10:41.7±2.8, 42.°77N±0.°08×96.°48E±0.°09, h12km±4km, mb4.5/45, Error ellipse: s-maj=11.5km s-min=9.2km az=193.0*
*BJI **28** 08:10:41.0±0.0, 42.°94N×96.°57E, h9km, mB4.7/26, mb4.5/33, ML5.1/16, Ms4.5/38, Ms7 4.2/24*
*MOS **28** 08:10:41.6±2.0, 42.°83N×96.°48E, h18km, mb4.9/24, MS4.0/7, Error ellipse: s-maj=7.2km s-min=5.8km az=97.2*
*NNC **28** 08:10:47.0±2.2, 43.°22N×96.°22E, h23km±13km, mb4.5, Error ellipse: s-maj=17.8km s-min=9.7km az=3.0*
ISC 28 08:10:42.8±0.3, 42.°87N±0.°04×96.°48E±0.°04, h10km, n180, σ2°44/171, mb4.5/63, MS3.7/17, 20C-13D, Gansu

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC

GTA Gaotai 4.28 143 Pn **Pn 08 11 47.0 -1.1**
GTA Pg **Pb 08 11 57.8 -0.3**
GTA Sn **Sn 08 12 37.0 -1.1**
GTA Sg **Sb 08 12 52.3 +2.4**
GTA smax smax
comp=N,1μm,1.0s
GTA smax smax
comp=E,930nm,1.0s
GTA LR LR
comp=N,2μm,8.9s
GTA LR LR
comp=E,1μm,8.6s
GTA LR LR
comp=Z,2μm,7.9s
WMQ Urumqi 6.47 281 *e*Pn **Pn 08 12 19.0 +0.8**
WMQ Sn **Sn 08 13 34.3 +2.2**
WMQ smax smax
comp=N,790nm,0.9s
WMQ smax smax
comp=E,2μm,0.9s
WMQ LR LR
comp=N,1μm,4.0s
WMQ LR LR
comp=E,3μm,4.1s
WMQ LR LR
comp=Z,620nm,4.0s
WMQ Urumqi 6.47 281 Pn 08 12 18.8 +0.6
WMQ Sn **Sn 08 13 33.6 +1.5**
SONM Songino Array 8.57 51 Pn **Pn 08 12 46.6 -0.3**
5.5nm,0.3s,baz=234,slow=15,SNR=155
SONM Pg Pg 08 13 19.5 -7.3
19nm,0.3s,baz=240,slow=17,SNR=12
SONM Lg Lg 08 15 07.1
38nm,0.3s,baz=228,slow=30,SNR=7.3
LZH Lanzhou 8.85 138 *e*P Pn 08 12 48.8 -2.0
LZH pP Pg 08 12 53.0 -39
LZH S **Sn 08 14 34.8 +4.1**
LZH pmax pmax
comp=Z,53nm,1.0s
LZH pmax pmax
comp=Z,240nm,4.0s
LZH smax smax
comp=N,460nm,1.0s
LZH smax smax
comp=E,440nm,1.3s
LZH LR LR
comp=N,880nm,9.8s
LZH LR LR
comp=E,1μm,9.2s
LZH LR LR
comp=Z,1μm,9.2s
ZAK Zakamensk 8.85 30 *e*P **Pn 08 12 53.0 +2.2**
ZAK pmax pmax
comp=Z,66nm,0.8s
ULN Ulaanbaatar 8.96 52 Pn 08 12 51.8 -0.6
ULN Ulaanbaatar 8.96 52 P **Pn 08 12 51.8 -0.6**
MOY Mondy 9.32 18 *e*P **Pn 08 12 58.6 +1.4**
TLY Talaya 10.07 26 Pn **Pn 08 13 08.1 +0.8**
comp=Z,0.0nm,0.3s,baz=181,slow=6.8,SNR=8.0
TLY Pg 08 13 43.2
comp=Z,0.1nm,0.3s,baz=202,slow=16,SNR=15
TLY Lg Lg 08 15 56.1
comp=Z,0.2nm,0.3s,baz=205,slow=35,SNR=12
TLY LR LR 08 17 00.2
comp=Z,285nm,18.4s,baz=209,slow=37
TLY Talaya 10.07 26 Pn 08 13 07.8 +0.4
TLY Talaya 10.07 26 *e*P **Pn 08 13 08.2 +0.8**
TLY pmax pmax
comp=Z,11nm,0.9s
TLY pmax pmax
comp=Z,55nm,0.4s
TLY MLR MLR
comp=Z,945nm,9.0s
BTO Baotou 10.37 98 *e*Pg Pn 08 13 07.3 -4.4
BTO Sg Sn 08 14 56.8 -11
IRK Irkutsk 10.75 27 *e*P **Pn 08 13 18.1 +1.4**
IRK pmax pmax
comp=Z,109nm,0.1s
MK31 Makanchi Array 10.81 296 Pn **Pn 08 13 15.2 -2.4**
comp=Z,4.1nm,0.3s,baz=99,slow=14,SNR=283
MK31 ⇓Sn **Sn 08 15 13.8 -4.8**
comp=Z,21nm,0.6s
MK31 ⇑Lg Lg 08 16 22.1
comp=Z,108nm,0.7s
MK31 Makanchi Array 10.81 296 Pn 08 13 15.5 -2.1
MK31 Makanchi Array 10.81 296 P **Pn 08 13 15.2 -2.4**
MK31 08 15 13.8
MKAR Makanchi Array 10.81 296 Pn **Pn 08 13 15.5 -2.1**
comp=Z,3.7nm,0.3s,baz=99,slow=15,SNR=159
MKAR Sn **Sn 08 15 13.5 -5.1**
comp=Z,5.2nm,0.3s,baz=96,slow=26,SNR=5.6
MKAR Lg Lg 08 16 17.4
comp=Z,1.8nm,0.3s,baz=107,slow=23,SNR=3.6
MKAR LR LR 08 17 31.4
comp=Z,456nm,18.3s,baz=104,slow=38
MAKZ Makanchi 11.02 296 ⇓Pn **Pn 08 13 18.4 -2.1**
comp=Z,23nm,0.8s
MAKZ ⇑Lg Lg 08 16 28.6
comp=Z,104nm,0.9s
MAKZ Makanchi 11.02 296 Pn 08 13 18.4 -2.1
MAKZ Makanchi 11.02 296 P **Pn 08 13 18.3 -2.1**
HHC Hu-ho-hao-te 11.43 95 *e*P **Pn 08 13 23.8 -2.4**
HHC PP **PnPn 08 13 40.5 +6.7**
HHC Hu-ho-hao-te 11.43 95 *e*P **Pn 08 13 25.0 -1.2**
HHC S Sn 08 15 26.0 -8.0
HHC pmax pmax
comp=Z,7.0nm,1.0s
HHC pmax pmax
comp=Z,28nm,3.3s
HHC LR LR
comp=Z,460nm,4.4s
HHC LR LR
comp=Z,430nm,6.2s
PDGK Podgornoye 12.43 278 ⇑Pn **Pn 08 13 39.5 -0.3**
comp=Z,29nm,0.6s
PDGK ⇓Sn **Sn 08 15 55.8 -2.6**
comp=Z,92nm,1.0s
PDGK ⇓Lg Lg 08 17 15.3
comp=Z,213nm,0.9s
XAN Xi'an 13.13 128 P Pn 08 13 44.5 -4.9
XAN pP P 08 13 55.0 -4.6
XAN S **Sn 08 16 20.3 +4.7**
XAN Xi'an 13.13 128 Pn Pn 08 13 44.4 -5.0
XAN Xi'an 13.13 128 P Pn 08 13 44.4 -5.0
TIY Taiyuan 13.22 108 *e*P Pn 08 13 57.0 +6.4
CD2 Chengdu 13.27 152 P Pn 08 13 48.8 -2.5
CD2 S **Sn 08 16 17.8 -1.2**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 LR LR
comp=Z,600nm,9.0s
CD2 LR LR
comp=Z,1μm,12.6s
CD2 LR LR
comp=Z,730nm,8.8s
KRAR Krasnoyarsk 13.36 351 *i* P Pn 08 13 48.7 -3.6
ZAA0 Zalesovo Array 13.50 329 ⇑Pn **Pn 08 13 52.6 -1.6**
comp=Z,2.8nm,0.8s
ZAA0 ⇓Lg Lg 08 17 45.4
comp=Z,15nm,1.1s
ZAA0 Zalesovo Array 13.50 329 Pn 08 13 53.0 -1.3
ZALV Zalesovo Beam 13.50 329 Pn **Pn 08 13 51.9 -2.3**
comp=Z,0.4nm,0.3s,baz=143,slow=13,SNR=11
ZALV Lg Lg 08 17 40.5
comp=Z,0.7nm,0.3s,baz=169,slow=23,SNR=3.3
ZALV LR LR 08 18 59.6
comp=Z,181nm,18.9s,baz=134,slow=37
MDOK Medeo 14.22 278 ⇓Pn **Pn 08 14 04.9 +0.6**
comp=Z,5.4nm,0.5s
MDOK ⇑Sn **Sn 08 16 39.2 -2.9**
comp=Z,56nm,1.4s
MDOK ⇓Lg Lg 08 18 12.8
comp=Z,68nm,0.9s
KURK Kurchatov 14.51 309 ⇑Pn Pn 08 14 02.9 -5.2
comp=Z,27nm,0.9s
KURK ⇓Lg Lg 08 18 17.4
comp=Z,73nm,0.8s
KURK Kurchatov 14.51 309 Pn 08 14 03.5 -4.5
KURK Kurchatov 14.51 309*ce*P Pn 08 14 03.3 -4.7
KURK pmax pmax
comp=Z,14nm,1.0s
KURBB Kurchatov Arra 14.52 308 Pn Pn 08 14 03.4 -4.8
comp=Z,0.3nm,0.3s,baz=113,slow=14,SNR=22
KURBB Sn Sn 08 16 39.9 -9.2
comp=Z,0.2nm,0.3s,baz=102,slow=28,SNR=2.9
KURBB Lg Lg 08 18 12.6
comp=Z,0.2nm,0.3s,baz=116,slow=31,SNR=5.8
BJI Beijing 15.04 94 P **Pn 08 14 14.0 -1.3**
BJI S **Sn 08 16 59.0 -2.8**
BJI pmax pmax
comp=Z,5.0nm,0.7s
BJI LR LR
comp=Z,840nm,8.4s
BJI LR LR
comp=Z,490nm,4.4s
BJT Baijiatuau 15.04 94 Pn **Pn 08 14 12.2 -3.1**
BJT IAmb IAmb 08 14 21.2
comp=Z,21nm,1.4s
BJT Baijiatuau 15.04 94 P **Pn 08 14 12.2 -3.1**
BJT pmax pmax
comp=Z,21nm,1.4s
KSH Kashi 15.79 265 P **Pn 08 14 26.3 +1.0**
KSH pP P 08 14 31.0 +1.8
KSH sP pP 08 14 35.0 +2.6
KSH S **Sn 08 17 20.8 +0.5**
KSH SS **S 08 17 40.3 +5.2**
CHMS Chumysh 15.91 278 ⇑Pn **Pn 08 14 26.2 -0.6**
comp=Z,4.6nm,0.7s
CHMS ⇑Lg Lg 08 19 04.9
comp=Z,40nm,1.1s
AAK Ala-Archa 16.15 277 Pn **Pn 08 14 29.0 -0.9**
comp=Z,0.3nm,0.3s,baz=109,slow=6.4,SNR=5.6
AAK Lg Lg 08 19 11.0
comp=Z,0.3nm,0.3s,baz=118,slow=20,SNR=2.4
AAK Ala-Archa 16.15 277 ⇑Pn **Pn 08 14 30.3 +0.4**
comp=Z,3.8nm,0.6s
AAK ⇑Lg Lg 08 19 12.8
comp=Z,60nm,1.2s
AAK Ala-Archa 16.15 277 Pn 08 14 29.5 -0.5
AAK Ala-Archa 16.15 277 *i* P **Pn 08 14 29.4 -0.5**
ENH Enshi 16.32 136 Pn 08 14 28.9 -3.2
ENH IAmb IAmb 08 14 34.6
comp=Z,36nm,0.8s
GUN Gumba 17.22 213 *e*P **Pn 08 14 41.1 -2.7**
comp=Z,17nm,0.5s
JIRN Jiri 17.32 212 *e*P **Pn 08 14 42.3 -2.7**
comp=Z,29nm,0.6s
HIA Hailar 17.33 60 P **Pn 08 14 47.6 +2.9**
HIA Hailar 17.33 60 P **Pn 08 14 47.6 +2.9**
HIA pmax pmax
comp=Z,12nm,1.3s
ODAN Odare 17.61 208 *e*P **Pn 08 14 47.9 -0.6**
comp=Z,68nm,0.9s
SHL Shillong 17.67 194 P **Pn 08 14 49.8 +0.6**
SHL Shillong 17.67 194 P **Pn 08 14 49.8 +0.6**
SHL pmax pmax
comp=Z,11nm,0.6s
PKIN Phulchoki 17.71 214 *e*P **Pn 08 14 46.7 -3.1**
comp=Z,16nm,0.8s
PKI Pulchoki 17.71 214 *e*P **Pn 08 14 46.8 -3.1**
comp=Z,29nm,0.9s
DANN Dangsing 17.77 219 *e*P **Pn 08 14 49.6 -0.9**
comp=Z,41nm,0.6s
RAMN Ramite 17.80 210 *e*P **Pn 08 14 49.4 -1.5**
comp=Z,18nm,0.6s
DMN Daman 17.81 215 *e*P **Pn 08 14 49.5 -1.5**
comp=Z,10nm,0.4s
GYA Guiyang 18.37 150⇑*i*P **P 08 14 56.3 -1.4**
GYA PP sP 08 15 11.5 +9.1
GYA S **Sn 08 18 24.3 +1.4**
GYA SS **SnSn 08 18 49.0 +12**
GYA pmax pmax
comp=Z,10.0nm,0.7s
GYA pmax pmax
comp=Z,100nm,4.0s
GYA LR LR
comp=Z,230nm,10.2s
GYA LR LR
comp=Z,170nm,10.6s
KMI Kunming 18.44 162 P **P 08 15 00.5 +1.9**
KMI pmax pmax
comp=Z,13nm,0.7s
BOD Bodaibo 18.59 30 *e*P **P 08 14 58.8 -1.1**
BOD pmax pmax
comp=Z,13nm,1.7s
WHN Wuhan 18.84 125 P **P 08 15 01.3 -1.5**
KK31 Karatay Array 18.98 280 ⇓P **P 08 15 03.3 -1.0**
comp=Z,4.3nm,0.8s,baz=89,slow=11,SNR=29
KK31 Karatay Array 18.98 280 P **P 08 15 03.5 -0.8**
KK31 Karatay Array 18.98 280 P **P 08 15 03.5 -0.8**
KK31 pmax pmax
comp=Z,12nm,1.3s
KKAR Karatay Array 18.98 280 P **P 08 15 03.5 -0.8**
KKAR Karatay Array 18.98 280 P **P 08 15 03.5 -0.8**
KKAR pmax pmax
comp=Z,12nm,1.3s
BVAR Borovoye Array 20.11 309 P **P 08 15 15.0 -1.5**
comp=Z,19nm,0.4s,baz=116,slow=10,SNR=78
BRVK Borovoye 20.18 309 P **P 08 15 15.4 -1.8**
BRVK Borovoye 20.18 309*ce*P **P 08 15 15.2 -2.1**
BRVK pmax pmax
comp=Z,24nm,1.0s
NIL Nilore 20.38 251 P **P 08 15 17.4 -2.2**
NIL IAmb IAmb 08 15 26.1
comp=Z,22nm,0.7s
NIL Nilore 20.38 251 P **P 08 15 17.4 -2.2**
NIL pmax pmax
comp=Z,22nm,0.7s
NJ2 Nanjing 20.73 114 *e*P **P 08 15 20.5 -2.9**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
CN2 Changchun 21.05 78 *e*P **P 08 15 24.8 -2.0**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
SLVN Son La 22.36 162 P **P 08 15 39.7 -1.4**
SLVN IAmb IAmb 08 15 42.2
comp=Z,19nm,1.4s
KBL Kabul 22.89 258 P **P 08 15 44.8 -2.0**
KBL Kabul 22.89 258 P **P 08 15 44.8 -2.0**
KBL pmax pmax
comp=Z,25nm,0.8s
ZEA Zeya 23.00 51 *e*P **P 08 15 49.8 +2.3**
ZEA pmax pmax
comp=Z,23nm,1.0s
ZEA MLR MLR
comp=Z,500nm,14.0s
CHTO Chiang Mai 24.07 174 P **P 08 15 57.4 -0.9**
CHTO Chiang Mai 24.07 174 P **P 08 15 57.4 -0.9**
CHTO pmax pmax
comp=Z,9.0nm,1.2s
CMAR Chiang Mai Arr 24.42 174 P **P 08 16 00.8 -0.8**
comp=Z,4.9nm,0.6s,baz=354,slow=9.7,SNR=23
CMAR LR LR 08 25 37.0
comp=Z,126nm,19.9s,baz=346,slow=37
KS19 Wonju Array Si 24.49 92 P **P 08 16 00.4 -1.6**
KS19 IAmb IAmb 08 16 02.5
comp=Z,16nm,0.8s
KSRS Korea Array 24.55 92 P **P 08 16 01.6 -1.0**
comp=Z,8.2nm,0.6s,baz=284,slow=8.8,SNR=25
KLR Kul'dur 25.13 63 P **P 08 16 06.5 -1.3**
comp=Z,3.0nm,0.7s,baz=270,slow=10,SNR=13
KLR LR LR 08 27 05.7
comp=Z,165nm,18.8s,baz=254,slow=39
USRK Ussuriysk Ar. 25.66 75 P **P 08 16 11.4 -1.2**
comp=Z,1.2nm,0.7s,baz=263,slow=10.0,SNR=3.0
USRK LR LR 08 25 44.4
comp=Z,143nm,18.2s,baz=287,slow=35
AB31 Akbulak array 25.95 297 ⇑P **P 08 16 14.9 -0.4**
comp=Z,5.0nm,0.8s,baz=90,slow=10.0,SNR=12
ABKAR Akbulak array 25.95 297 P **P 08 16 15.0 -0.2**
ABKAR IAmb IAmb 08 16 24.3
comp=Z,12nm,1.1s
QIZ Qiongzhong 26.32 150 P **P 08 16 17.0 -1.7**
QIZ S **S 08 20 51.3 -0.2**
QIZ pmax pmax
comp=Z,14nm,1.4s
QIZ LR LR
comp=Z,150nm,5.5s
QIZ LR LR
comp=Z,360nm,14.7s
PBKT Sadao Pong 26.49 170 P **P 08 16 21.7 +1.4**
SVE Sverdlovsk 26.64 314⇓*e*P **P 08 16 24.4 +3.1**
SVE pmax pmax
comp=Z,30nm,0.8s
NRIK Noril'sk 26.94 353 P **P 08 16 22.8 -1.1**
comp=Z,1.6nm,0.3s,baz=163,slow=12,SNR=3.3
NRIK LR LR 08 27 13.3
comp=Z,121nm,21.2s,baz=174,slow=37
AKTO Aktyubinsk 27.22 300 P **P 08 16 27.9 +1.3**
comp=Z,4.7nm,0.8s,baz=96,slow=11,SNR=7.0
AKTO LR LR 08 27 34.2
comp=Z,235nm,21.4s,baz=104,slow=37
AKTO Aktyubinsk 27.22 300 ⇓P **P 08 16 25.9 -0.7**
comp=Z,6.2nm,0.9s
YAK Yakutsk 27.40 34 *e*P **P 08 16 33.0 +4.9**
YAK pmax pmax
comp=Z,14nm,0.9s
YAK pmax pmax
comp=N,2.0nm,1.0s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK pmax pmax
comp=N,17nm,1.3s
YAK pmax pmax
comp=E,18nm,1.3s
ARU Arti 27.64 313 P **P 08 16 28.8 -1.6**
comp=E,1.8nm,0.4s,baz=127,slow=5.5,SNR=3.6
ARU Arti 27.64 313 P **P 08 16 32.5 +2.1**
ARU IAmb IAmb 08 16 33.9
comp=Z,16nm,1.0s
ARU Arti 27.64 313*d i*P **P 08 16 33.2 +2.8**
ARU 08 17 20.0
ARU S **S 08 21 19.1 +7.2**
ARU SS **SnSn 08 22 27.8 +4.8**
ARU pmax pmax
comp=Z,16nm,0.9s
GRNR Gornyy 28.17 60 *e*P P 08 16 32.4 -2.8
GRNR pmax pmax
comp=Z,6.0nm,1.0s
GRNR MLR MLR
comp=Z,280nm,15.0s
JNU Nakatsue 28.63 98 LR LR 08 29 10.7
comp=Z,126nm,19.8s,baz=2.0,slow=39
GEYT Alibeck 29.45 273 P **P 08 16 44.7 -2.0**
comp=Z,1.1nm,0.4s,baz=49,slow=6.5,SNR=3.0
GEYT LR LR 08 28 46.9
comp=Z,69nm,20.4s,baz=230,slow=37
TIXI Tiksi 32.90 18 P **P 08 17 15.3 -1.4**
comp=Z,1.3nm,0.3s,baz=228,slow=4.4,SNR=3.3
TIXI Tiksi 32.90 18 P **P 08 17 18.1 +1.4**
TIXI IAmb IAmb 08 17 28.9
comp=Z,2.7nm,0.8s
TIXI Tiksi 32.90 18*ce*P **P 08 17 19.3 +2.6**
TIXI pmax pmax
comp=Z,4.0nm,1.0s
PRGR Permogore 35.19 320 *e*P **P 08 17 38.0 +1.4**
PRGR pmax pmax
comp=Z,9.0nm,0.7s
MA2 Magadan 36.69 44*ce*P P 08 17 54.9 +5.4
MA2 pmax pmax
comp=Z,11nm,1.3s
SEY Seymchan 37.69 38 P **P 08 17 58.1 +0.2**
comp=Z,1.6nm,0.6s,baz=275,slow=12,SNR=4.2
SEY Seymchan 37.69 38 *i* P **P 08 18 02.1 +4.1**
KLMR Klimovskoe 38.06 318 *e*P P 08 17 54.9 -6.2
KLMR pmax pmax
comp=Z,15nm,0.8s
KLMR Klimovskoe 38.06 318 *e*P P 08 17 55.0 -6.1
KLMR AMP 08 18 04.2
comp=Z,15nm,0.8s
GNI Garni 38.34 284*ce*P **P 08 18 06.0 +2.1**
GNI pmax pmax
comp=Z,19nm,0.8s
KBZ Khabaz 38.43 290 P **P 08 18 03.6 -0.8**
comp=Z,1.3nm,0.9s,baz=175,slow=11,SNR=3.1
KBZ LR LR 08 36 08.9
comp=Z,87nm,18.8s,baz=294,slow=40
KIV Kislovodsk 38.51 291 *e*P P 08 18 02.1 -3.1
KIV pmax pmax
comp=Z,12nm,1.1s
KIV MLR MLR
comp=Z,202nm,16.0s
SHA1 Shidzhatmaz 38.59 290 *i* P **P 08 18 06.6 +0.5**
NEY Neytrino 38.70 290 *i* P **P 08 18 08.0 +1.0**
NEY pmax pmax
comp=Z,1.0nm,0.9s
OBN Obninsk 39.95 309⇑*e*P **P 08 18 18.5 +1.5**
OBN *SP **pP 08 18 22.0 +1.5**
OBN 08 19 50.0
OBN S **S 08 24 28.0 +6.1**
OBN pmax pmax
comp=Z,10.0nm,0.4s
OBN MLR MLR
comp=Z,107nm,13.0s
LVZ Lovozero 40.64 329 P **P 08 18 25.5 +2.9**
LVZ Lovozero 40.64 329 P **P 08 18 25.5 +2.9**
LVZ pmax pmax
comp=Z,19nm,0.9s
PETK Petropavlovsk- 41.05 54 P **P 08 18 26.4 +0.3**
comp=Z,4.3nm,0.8s,baz=207,slow=9.3,SNR=3.2
APA Apatity 41.09 329⇓*i*P **P 08 18 29.6 +3.4**
APA pmax pmax
comp=Z,9.0nm,1.0s
APA MLR MLR
comp=Z,400nm,11.0s
KEV Kevo 43.51 332 P **P 08 18 44.0 -1.9**
KEV IAmb IAmb 08 19 00.7
comp=Z,15nm,1.2s
KEV Kevo 43.51 332 P **P 08 18 44.0 -1.9**
KEV pmax pmax
comp=Z,15nm,1.2s
BILL Bilibino 43.65 31⇑*e*P **P 08 18 51.3 +4.2**
BILL *e**PP **sP 08 18 54.4 +2.4**
BILL *e**SP pP 08 18 59.5 +8.9
BILL 08 20 40.0

BILL				PPP	PPP	08 21 05.0	
BILL				S	S	08 25 10.0	-6.4
BILL				eSSS	SSS	08 29 09.9	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,139nm,17.0s						
ARCES	ARCESS Array B	44.04	331	P	P	08 18 48.7	-1.5
	comp=Z,3.1nm,0.8s,baz=78,slow=8.3,SNR=13						
ARCES				PcP	PP	08 20 36.1	+3.6
	comp=Z,2.8nm,1.0s,baz=90,slow=4.9,SNR=4.2						
ARCES				LR	LR	08 39 22.8	
	comp=Z,131nm,19.9s,baz=171,slow=39						
ARE0	ARCESS Array S	44.04	331	P	P	08 18 49.1	-1.1
FIA1	FINESS Array S	44.52	320	P	P	08 18 55.1	+1.0
FINES	FINESS Array B	44.52	320	P	P	08 18 52.1	-2.0
	comp=Z,7.4nm,0.7s,baz=89,slow=8.2,SNR=18						
AKASG	Malin Array Be	45.26	304	P	P	08 18 58.3	-1.9
	comp=Z,1.8nm,0.4s,baz=64,slow=8.7,SNR=3.1						
AKASG	Malin Array Be	45.26	304	cP	P	08 19 02.7	+2.5
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BR131	Keskin Array S	46.34	288	P	P	08 19 08.6	-0.5
BR131				IAmb	IAmb	08 19 15.3	
	comp=Z,3.1nm,0.8s						
BR131	Keskin Array S	46.34	288	iP	P	08 19 08.8	-0.3
BRTR	Keskin Array B	46.34	288	P	P	08 19 07.8	-1.2
	comp=Z,2.2nm,0.9s,baz=92,slow=7.5,SNR=5.0						
BUR08	Bucovina Ar. S	48.78	302	P	P	08 19 28.0	+0.2
OJC	Ojcow	51.07	307	P	P	08 19 46.9	+1.7
OJC	Ojcow	51.07	307	P	P	08 19 46.9	+1.7
OJC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SPSI	Sidrap Palu	51.16	150	P	P	08 19 43.9	-2.2
SPSI	Sidrap Palu	51.16	150	P	P	08 19 43.9	-2.2
NC405	NORSAR Array S	51.30	322	P	P	08 19 44.6	-2.1
NB2	NORSAR Subarra	51.56	322	P	P	08 19 45.8	-2.9
	comp=Z,1.2nm,0.6s,baz=66,slow=7.4						
NOA	NORSAR Array B	51.56	322	P	P	08 19 45.8	-2.8
	comp=Z,1.2nm,0.8s,baz=68,slow=7.4,SNR=5.2						
NOA				LR	LR	08 41 33.6	
	comp=Z,63nm,18.8s,baz=300,slow=36						
CLL	Collm	54.54	310	iPP	P	08 20 13.1	+2.4
	comp=Z,4.0nm,0.7s						
CLL				e		08 20 24.0	
CLL	Collm	54.54	310	iP	P	08 20 14.3	+3.6
CLL				e		08 20 24.0	
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GERES	GERESS Array B	55.25	307	P	P	08 20 15.5	-0.5
	comp=Z,0.7nm,0.6s,baz=53,slow=8.7,SNR=4.0						
ITM	Ithomi	55.64	291	P	P	08 20 17.1	-1.8
ITM				IAmb	IAmb	08 20 31.9	
	comp=Z,7.9nm,0.9s						
PRP	Porcupine Dome	61.81	25	P	P	08 21 02.6	+1.1
PRP				IAmb	IAmb	08 21 10.1	
	comp=Z,1.9nm,0.8s						
IL31		61.89	26	P	P	08 21 01.7	-0.2
IL31				IAmb	IAmb	08 21 19.0	
	comp=Z,3.3nm,1.1s						
ILAR	Eielson Array	61.89	26	P	P	08 21 02.7	+0.8
	comp=Z,0.4nm,0.7s,baz=316,slow=3.8,SNR=16						
INK	Inuvik	63.03	19	P	P	08 21 08.8	-0.5
	comp=Z,1.5nm,0.6s,baz=342,slow=7.1,SNR=8.8						
INK	Inuvik	63.03	19	P	P	08 21 08.9	-0.5
INK				IAmb	IAmb	08 21 23.9	
	comp=Z,4.8nm,1.2s						
INK	Inuvik	63.03	19	P	P	08 21 08.9	-0.5
INK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
C36M	Paulatuk	64.18	15	P	P	08 21 15.2	-1.8
C36M				IAmb	IAmb	08 21 20.7	
	comp=Z,3.0nm,0.9s						
KNRA	Kununurra	65.38	146	P	P	08 21 23.7	-1.7
FITZ	Fitzroy Crossi	66.34	150	P	P	08 21 30.0	-1.6
FITZ				IAmb	IAmb	08 21 30.6	
	comp=Z,4.1nm,0.8s						
HYT	Haines Junctio	67.72	25	P	P	08 21 40.0	-0.2
HYT				IAmb	IAmb	08 21 45.4	
	comp=Z,6.0nm,1.2s						
COEN	Coen	70.91	132	P	P	08 21 56.4	-3.9
COEN				IAmb	IAmb	08 22 08.5	
	comp=Z,6.6nm,1.4s						
WB0	Warramunga Arr	71.44	142	P	P	08 22 00.7	-2.6
WB0				IAmb	IAmb	08 22 17.1	
	comp=Z,9.1nm,1.4s						
WRA	Warramunga Arr	71.57	143	P	P	08 22 01.8	-2.4
	comp=Z,2.2nm,0.7s,baz=338,slow=6.1,SNR=25						
WB2	Warramunga Arr	71.57	142	P	P	08 22 01.9	-2.2
WB2				IAmb	IAmb	08 22 06.1	
	comp=Z,3.9nm,0.9s						
WR0	Warramunga Arr	71.67	142	P	P	08 22 02.7	-2.0
WR0				IAmb	IAmb	08 22 10.9	
	comp=Z,4.7nm,1.1s						
YKA	Yellowknife Ar	72.06	15	P	P	08 22 05.0	-1.6
	comp=Z,0.6nm,0.6s,baz=336,slow=5.5,SNR=9.0						
YKA	Yellowknife Ar	72.06	15	P	P	08 22 05.0	-1.6
MORW	Morawa	73.81	162	P	P	08 22 15.6	-1.7
AS31	Alice Springs	74.65	145	P	P	08 22 20.5	-1.8
ASAR	Alice Springs	74.65	145	P	P	08 22 20.4	-1.9
	comp=Z,3.1nm,0.9s,baz=336,slow=5.8,SNR=29						
NWAO	Narrogin (SRO)	77.79	162	P	P	08 22 37.6	-2.3
NWAO	Narrogin (SRO)	77.79	162	P	P	08 22 37.6	-2.3
NWAO				pmax	pmax		
	comp=Z,16nm,1.4s						
SCHQ	Schefferville	81.64	350	P	P	08 23 01.4	+0.7
	comp=Z,1.2nm,0.5s,baz=359,slow=5.7,SNR=9.4						
BBOO	Buckleboo	83.59	147	P	P	08 23 08.7	-2.4
TORD	Torodi Ar. Bea	84.63	283	P	P	08 23 16.6	-0.3
	comp=Z,1.9nm,0.8s,baz=45,slow=5.0,SNR=8.9						
STKA	Stephens Creek	85.12	143	P	P	08 23 16.3	-2.5
	comp=Z,3.2nm,0.6s,baz=342,slow=6.5,SNR=17						
STKA	Stephens Creek	85.12	143	P	P	08 23 15.9	-2.9
RSSD	Black Hills	91.47	15	P	P	08 23 48.2	-1.3
RSSD	Black Hills	91.47	15	P	P	08 23 48.2	-1.3
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PD31	Pinedale Array	91.60	19	P	P	08 23 47.8	-2.3
PD31				IAmb	IAmb	08 23 53.4	
	comp=Z,3.1nm,1.3s						
DBIC	Dimbokro	93.74	283	P	P	08 23 58.9	-1.3
	comp=Z,1.6nm,0.6s,baz=56,slow=7.3,SNR=2.1						
TMUT	Trail Mountain	94.45	21	P	P	08 23 59.9	-3.6
QSPA	South Pole Qui	132.63	180	PKPdf	PKPdf	08 29 54.5	-2.1
CPUP	Villa Florida	153.01	299	PKPbc	PKPbc	08 30 42.7	+2.2
CPUP	Villa Florida	153.01	299	PKIKP	PKPbc	08 30 42.7	+2.2

IDC 28 08:11:35.8±3.2, 36.88S×98.42W, h0km, mb3.8/5, mb1 4.3/5, mb1mx4.0/17, mbtmp3.9/5, Error ellipse: s-maj=92.1km s-min=28.7km az=30.0, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	22.02	109	P	P	08 16 32.1	+0.3
	2.5nm,1.0s,baz=262,slow=14,SNR=2.5						
LPAZ	La Paz	33.75	61	P	P	08 18 19.6	-0.3
	6.9nm,0.8s,baz=219,slow=5.9,SNR=38						
TXAR	Lajitas Array	66.05	355	P	P	08 22 25.1	+0.6
	0.1nm,0.6s,baz=174,slow=9.0,SNR=3.0						
NVAR	Mina Array Bea	77.15	344	P	P	08 23 31.3	-0.1
	0.7nm,0.7s,baz=170,slow=7.0,SNR=5.8						
PDAR	Pinedale Array	79.91	352	P	P	08 23 46.1	-0.4
	1.1nm,0.6s,baz=146,slow=6.6,SNR=16						

DJA 28 08:30:43.3±0.8, 11°S±6°×11°7E±°, h10km, M3.8/7, mb3.8/1, MLv3.8/7, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	2.63	21	P	Pn	08 31 27.2	+1.3
PLAI				S	Sn	08 31 56.1	-1.8
PLAI	Plampang	2.63	21	P	Pn	08 31 27.2	+1.3
PLAI				S	Sn	08 31 56.1	-1.8
WBSI	Waikabubak, Su	3.02	57	P	Pn	08 31 30.3	-0.9
WBSI				S	Sn	08 32 08.0	+0.5
WBSI	Waikabubak, Su	3.02	57	P	Pn	08 31 30.3	-0.9
WBSI				S	Sn	08 32 08.0	+0.5
DNP	Denpasar	3.05	329	P	Pn	08 31 29.9	-1.7
DNP	Denpasar	3.05	329	P	Pn	08 31 29.9	-1.7
JAGI	Jajag, Banyuwa	3.85	317	P	Pn	08 31 41.9	-0.7
JAGI				S	Sn	08 32 25.1	-2.9
JAGI	Jajag, Banyuwa	3.85	317	P	Pn	08 31 41.9	-0.7
JAGI				S	Sn	08 32 25.1	-2.9
GMJI	Gumukmas	4.49	312	P	Pn	08 31 50.8	-0.6
GMJI				S	Sn	08 32 40.2	-3.4
GMJI	Gumukmas	4.49	312	P	Pn	08 31 50.8	-0.6
GMJI				S	Sn	08 32 40.2	-3.4
PCJI	Pacitan	6.36	299	P	Pn	08 32 15.7	-1.5
PCJI	Pacitan	6.36	299	P	Pn	08 32 15.7	-1.5

PRE 28 08:35:21.3±1.2, 28.84S×23.92E, h5km, ML2.2, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	1.20	80	iP	Pn	08 35 49.3	+4.5
BOSA	Boshof	1.20	80	eP	Pn	08 35 45.2	+0.3
BOSA				eS	Sb	08 36 00.9	+0.4
BOSA				AML	AML	08 36 07.9	
	comp=Z,60nm,0.3s						
BOSA	Boshof	1.20	80	iP	Pn	08 35 49.3	+4.5
SWZ	Schweizer	2.07	38	eP	Pb	08 35 58.5	-1.0
SWZ				eS	Sn	08 36 24.3	+1.2
SWZ				AML	AML	08 36 31.5	
	comp=Z,18nm,0.3s						
HVD	Gariep Dam	2.23	142	eP	Pn	08 36 00.3	+1.1
HVD				eS	Sn	08 36 27.9	+0.7
HVD				AML	AML	08 36 35.7	
	comp=Z,19nm,0.4s						
LBTB	Lobatse	4.09	22	iP	Pn	08 36 24.9	+0.2
LBTB				iS	Sn	08 37 08.6	-4.4
LBTB	Lobatse	4.09	22	eP	Pn	08 36 25.9	+1.2
LBTB				eS	Sn	08 37 12.1	-0.9
LBTB				AML	AML	08 37 36.6	
	comp=Z,6.9nm,0.2s						
LBTB	Lobatse	4.09	22	iP	Pn	08 36 24.9	+0.2
LBTB				iS	Sn	08 37 08.6	-4.4

ISC 28 08:42:33.5±2.0, 51.45N±0.09×16.14E±0.06, h0km, n12, σ0.55/21, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.61	171	iPg	Pg	08 42 45.8	+0.7
KSP				eSg	Sb	08 42 55.2	-0.9
CHVC	Chvalec	0.86	184	ePG	Pg	08 42 50.3	+0.4
CHVC				eSG	Sb	08 43 02.7	-0.6
OSTC	Ostas	0.89	177	ePG	Pg	08 42 51.0	+0.5
OSTC				eSG	Sb	08 43 03.6	-0.6
	comp=Z,5.6nm,0.2s						
UPC	Upice	0.94	185	ePG	Pb	08 42 52.6	-0.1
UPC				eSG	Sb	08 43 05.6	-0.1
	comp=Z,8.5nm,0.2s						
DPC	Dobruska-Polom	1.10	174	ePG	Pg	08 42 54.6	0.0
DPC				eSG	Sb	08 43 10.1	-0.2
	comp=Z,4.2nm,0.2s						
PVCC	Panska Ves	1.35	228	ePG	Pg	08 42 59.1	-0.3
PVCC				eSG	Sb	08 43 17.8	+0.3
	comp=Z,18nm,0.2s						
KRLC	Kraliky	1.43	163	ePG	Pn	08 43 00.3	-0.4
KRLC				eSG	Sn	08 43 20.2	-0.1
	comp=Z,5.6nm,0.3s						
PRU	Pruhonice	1.78	215	eSG	Sg	08 43 30.5	0.0
CLL	Collm	1.97	267	ePg	Pb	08 43 10.0	-0.2
CLL				eSg	Sg	08 43 37.0	+0.3
NKC	Novy Kostel	2.63	244	eSG	Sg	08 43 59.5	+1.4
	comp=Z,8.6nm,0.3s						
KHC	Kasperske Hory	2.84	216	ePG	Pb	08 43 24.9	-0.1
KHC				eSG	Sg	08 44 04.6	0.0
MODS	Modra-Piesok	3.16	166	ePG	Pb	08 43 31.1	+0.6

UCR 28 08:42:37.3±1.1, 10.68N×85.01W, h152km±3km, MD3.6, 1C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACAL	Aguas Claras	0.05	207	iP	Pn	08 42 57.9	+0.1
PTEN	Parque Tenorio	0.05	34	⇑iP	Pn	08 42 58.0	+0.2
CUI	Cuipilapa	0.15	263	eP	Pn	08 42 57.9	+0.1
CUI				eS	Sn	08 43 14.2	+0.8
COLC	Colonia	0.19	267	iP	Pn	08 42 57.9	0.0
MESS	Mesas	0.19	290	iP	Pn	08 42 58.0	+0.1
GUAB	Guayabo de Bag	0.21	279	iP	Pn	08 42 58.2	+0.3
LIM1	Limonal	0.23	276	iP	Pn	08 42 58.0	0.0
GPS2	Hotel Rincn d	0.34	283	iP	Pn	08 42 58.5	+0.1
GPS3	Bodega del ICE	0.35	283	iP	Pn	08 42 58.5	+0.1
CEDE	Laguna Cedeo	0.36	121	iP	Pn	08 42 58.9	+0.5
CEDE				eS	Sn	08 43 16.0	+1.6
ARE1	Arenal 1	0.36	126	eP	Pn	08 42 58.8	+0.4
BUAI	Buenos Aires	0.37	303	iP	Pn	08 42 58.4	0.0
JTS	Las Juntas de	0.39	171	eP	Pn	08 42 58.3	-0.2
JTS				eS	Sn	08 43 14.5	-0.1
FORC	Fortuna	0.40	121	iP	Pn	08 42 58.9	+0.4
GB1A	Borinquen Arri	0.40	291	eP	Pn	08 42 59.1	+0.5
GB1A				eS	Sn	08 43 16.0	+1.2
BUEV	Buena Vista	0.41	288	eP	Pn	08 42 58.7	+0.1
BUEV				iS	Sn	08 43 15.5	+0.8
LAPC	Finca la Perla	0.42	283	iP	Pn	08 42 58.3	-0.2
GBS3	Finca Las Img	0.45	284	iP	Pn	08 42 58.5	-0.1
GBS3				iS	Sn	08 43 15.1	+0.2
NY14	Universidad de	0.51	267	⇓iP	Pn	08 42 59.2	+0.2
NY14				iS	Sn	08 43 16.4	+1.0
GUAI	GUAI	0.63	231	iP	Pn	08 42 59.6	0.0
SRA1	San Ramn	0.79	138	eP	Pn	08 43 00.7	-0.1
LCR2	La Lucha 2	1.36	133	eP	Pn	08 43 06.2	+0.3

HEL 28 08:53:09.3±0.5, 67.59N×34.20E, h0km, ML2.5, Explosion
NAO 28 08:53:12.0±1.2, 67.68N×33.69E, ML3.0
IDC 28 08:53:14.3±1.7, 67.70N×33.54E, h0km, mb1 3.6/5, mb1mx3.1/51, mbtmp3.6/5, ML2.9/5, Error ellipse: s-maj=19.3km s-min=9.2km az=83.0
ISC 28 08:53:11.8±1.6, 67.69N±0.04×33.73E±0.08, h0km, n38, σ1.77/62, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APZ9	Apatity	0.17	227	Pg	Pg	08 53 14.5	-0.5
APZ9				Lg	Lg	08 53 16.6	
APZ9				Rg	Rg	08 53 19.3	
APZ9	Apatity	0.17	227	Pg	Pg	08 53 14.5	-0.5
APZ9				Sg	Sg	08 53 16.6	-0.6
APZ9				Rg	Rg	08 53 19.3	
APA0	Apatity Array	0.29	255	Pg	Pg	08 53 17.1	-0.3
	baz=95,slow=16						
APA0				Lg	Lg	08 53 21.6	
	baz=77,slow=37						
APA0	Apatity Array	0.29	255	Pg	Pg	08 53 17.1	-0.3
	baz=95,slow=16						
APA0				Sg	Sg	08 53 21.6	+0.4
	baz=77,slow=37						
VRF	Varrio	1.57	274	PB	Pn	08 53 40.0	-0.9
	baz=93						
VRF				MSG		08 54 01.9	
	comp=Z,57nm,0.2s						
VRF				SG	Sg	08 54 03.2	+1.0
KU6	Riekki	2.25	224	PG	Pn	08 53 50.3	+0.1
	baz=49						
KU6				MSG		08 54 18.0	
	comp=Z,24nm,0.2s						
KU6				SG	Sb	08 54 21.2	-0.4
MSF	Maaselka	2.57	228	PG	Pn	08 53 56.0	+1.4
MSF				SG	Sb	08 54 30.9	+0.1
SGF	Sodankyl	2.77	268	PN	Pn	08 53 57.9	+0.5
SGF				SG	Sb	08 54 38.2	+1.6
RNF	Rovaniemi	3.20	254	PN	Pn	08 54 02.5	-0.7
	baz=67						
RNF				SN	Sn	08 54 44.2	+2.2
KEV	Kevo	3.21	313	Pn	Pn	08 54 04.0	+0.6
KEV				Sn	Sn	08 54 44.5	+2.2
KEV				Lg	Lg	08 54 53.0	
KEV	Kevo	3.21	313	PN	Pn	08 54 03.9	+0.5
KEV				SN	Sn	08 54 45.4	+3.1
KEV	Kevo	3.21	313	eP	Pn	08 54 03.9	+0.5
KEV				eS	Sn	08 54 44.0	+1.7
ARA0	ARCESS Array S	3.54	305	Pn	Pn	08 54 07.8	-0.1
	baz=122,slow=16						
ARA0				Sn	Sn	08 54 50.5	+0.1
	baz=119,slow=28						
ARA0				Lg	Lg	08 55 02.0	
	baz=122,slow=37						
ARA0	ARCESS Array S	3.54	305	Pn	Pn	08 54 07.8	-0.1
	baz=122,slow=16						
ARA0				Sn	Sn	08 54 50.5	+0.1
	baz=119,slow=28						
ARCES	ARCESS Array B	3.54	305	Pn	Pn	08 54 07.8	-0.1
	comp=Z,7.3nm,0.3s,baz=122,slow=14,SNR=196						
ARCES				Pg	Pb	08 54 16.9	+1.7
	comp=Z,2.5nm,0.3s,baz=120,slow=16,SNR=9.5						
ARCES				Sn	Sn	08 54 51.2	+0.8
	comp=Z,3.6nm,0.3s,baz=121,slow=25,SNR=13						
ARCES				Lg	Lg	08 55 02.0	
	comp=Z,10.0nm,0.3s,baz=120,slow=34,SNR=14						
ARE0	ARCESS Array S	3.54	305	PN	Pn	08 54 09.7	+1.8
	baz=119						
ARE0				SN	Sn	08 54 51.3	+0.9
HEF	Hetta	3.85	285	Pn	Pn	08 54 13.3	+1.2
HEF				Pg	Pb	08 54 21.6	+1.2
HEF				Sn	Sn	08 54 59.7	+1.7
HEF				Lg	Lg	08 55 13.3	
HEF	Hetta	3.85	285	PN	Pn	08 54 12.4	+0.2
HEF	Hetta	3.85	285	eP	Pn	08 54 11.5	-0.7
TOF	Tornio	4.04	251	PN	Pn	08 54 14.5	-0.3
TOF				SB	Sb	08 55 13.9	+0.9
KTK1	Kautokeino	4.11	294	Pn	Pn	08 54 16.1	+0.3
KTK1				Sn	Sn	08 55 03.4	-1.0
KTK1				Lg	Lg	08 55 19.2	
KTK1	Kautokeino	4.11	294	eP	Pn	08 54 16.2	+0.5
KTK1				eS	Sn	08 55 02.6	-1.8
KTK1				IAML		08 55 23.3	
	comp=Z,14nm,0.3s						
LANU	Lannavaara	4.46	280	PN	Pn	08 54 19.0	-1.5
LANU				SG	Sg	08 55 31.2	-3.5
HAMF	Hammerfest	4.65	314	eP	Pn	08 54 24.4	+1.3
HAMF				eS	Sn	08 55 17.4	-0.4
KIF	Kilpisjarvi	4.97	291	eP	Pn	08 54 26.9	-0.5
I37NO	I37NO	5.76	291	i		09 34 20.0	
	baz=98,slow=331,SNR=4.0						
FIA0	FINESS Array S	7.07	211	Pn	Pn	08 54 56.1	-0.3
	baz=21,slow=14						
FIA0				Sn	Sn	08 56 13.8	-3.6
	baz=36,slow=22						
FIA0				Lg	Lg	08 56 46.8	
	baz=21,slow=22						
FIA0	FINESS Array S	7.07	211	Pn	Pn	08 54 56.1	-0.3
	baz=21,slow=14						
FIA0				Sg	Sb	08 56 46.8	+6.6
	baz=21,slow=22						
FINES	FINESS Array B	7.07	211	Pn	Pn	08 54 55.9	-0.5
	comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=4.2						
FINES				Sn	Sn	08 56 14.5	-2.8
	comp=Z,0.3nm,0.3s,baz=43,slow=21,SNR=3.7						
FINES				Lg	Lg	08 56 46.9	
	comp=Z,1.2nm,0.3s,baz=25,slow=24,SNR=7.1						
HFS	Hagfors	11.57	239	Pn	Pn	08 55 56.1	-1.8
	comp=Z,0.1nm,0.3s,baz=38,slow=15,SNR=4.2						
SPA0	Spitsbergen Ar	11.62	342	Pn	Pn	08 55 56.0	-2.6
	baz=140,slow=22						
SPA0	Spitsbergen Ar	11.62	342	Pn	Pn	08 55 56.0	-2.6
	baz=140,slow=22						
SPITS	Spitsbergen Ar	11.62	342	Pn	Pn	08 55 57.2	-1.4
	baz=138,slow=11,SNR=11						
NB2	NORSAR Subarra	11.75	246	Pn	Pn	08 55 56.6	-3.8
NB2	NORSAR Subarra	11.75	246	Pn	Pn	08 55 56.6	-3.8
NOA	NORSAR Array B	11.75	246	Pn	Pn	08 55 59.2	-1.1
	comp=Z,0.0nm,0.3s,baz=42,slow=11,SNR=3.2						
NRA0	NORESS Array S	11.85	245	Pn	Pn	08 56 00.2	-1.5
	baz=50,slow=16						
NRA0	NORESS Array S	11.85	245	Pn	Pn	08 56 00.2	-1.5
	baz=50,slow=16						

WEL 28 08:55:55.2±0.5, 41°S±3°×17°3E±°, h103km±4km, M3.7/19, MLv3.7/19, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNZ	Nelson	0.14	123	P	Pn	08 56 10.7	+1.1
NNZ				S	Sn	08 56 22.6	+2.2
TUWZ	Tuamarina	0.61	118	P	Pn	08 56 13.2	+1.1
TUWZ				S	Sn	08 56 28.2	+3.4
QRZ	Quartz Range	0.62	301	P	Pn	08 56 12.9	+0.7
QRZ				S	Sn	08 56 25.7	+0.7
DUWZ	D'Urville Isla	0.63	57	P	Pn	08 56 13.6	+1.3
THZ	Tophouse	0.66	201	P	Pn	08 56 13.6	+1.0
THZ				S	Sn	08 56 27.7	+2.0
BSWZ	Blackbirch Sta	0.75	140	P	Pn	08 56 14.3	+1.0
TCW	Tory Channel	0.79	95	P	Pn	08 56 14.7	+1.0
CMWZ	Cape Campbell	0.96	130	P	Pn	08 56 16.4	+1.0
WEL	Wellington	1.17	97	P	Pn	08 56 17.8	+0.2
DSZ	Denniston Nort	1.23	240	P	Pn	08 56 18.6	+0.2
BHW	Baring Head	1.27	103	P	Pn	08 56 18.7	0.0
KHZ	Kahutara	1.29	170	P	Pn	08 56 19.5	+0.5
KIW	Kapiti Island	1.30	78	P	Pn	08 56 19.4	+0.2
CAW	Cannon Point	1.39	89	P	Pn	08 56 20.1	-0.2
OGWZ	Otaki Gorge	1.51	78	P	Pn	08 56 21.6	0.0
MSWZ	Moikau Station	1.55	101	P	Pn	08 56 21.8	-0.4
PLWZ	Palliser	1.58	106	P	Pn	08 56 22.3	-0.3
PAWZ	Paruwai Farm	1.68	99	P	Pn	08 56 23.1	-0.6
MTW	Mount Morrison	1.72	91	P	Pn	08 56 23.5	-0.7
HOWZ	Holdsworth Sta	1.75	83	P	Pn	08 56 24.0	-0.6
LTZ	Lake Taylor	1.79	203	P	Pn	08 56 25.0	-0.2
NMEZ	Namu Road	1.80	16	P	Pn	08 56 25.9	+0.6
GVZ	Greta Valley S	1.83	184	P	Pn	08 56 25.5	-0.2
OHWZ	Ohakea	1.84	60	P	Pn	08 56 25.9	+0.1
MRZ	Mangatainoka R	1.85	76	P	Pn	08 56 25.0	-0.9
TRWZ	Traveller	1.87	99	P	Pn	08 56 25.6	-0.6
LREZ	Lake Rotokare	1.91	28	P	Pn	08 56 27.8	+1.1
WAZ	Wanganui	1.93	45	P	Pn	08 56 27.6	+0.6
PREZ	Palmer Road	1.94	22	P	Pn	08 56 27.9	+0.8
NBEZ	Newall Road No	1.94	15	P	Pn	08 56 27.5	+0.5
KHEZ	Kahui Hut	1.94	18	P	Pn	08 56 27.5	+0.3
TMWZ	Te Maipa	2.01	90	P	Pn	08 56 27.2	-0.8
PKE	Pukeiti	2.03	17	P	Pn	08 56 28.7	+0.4
TIWZ	Tintock	2.05	81	P	Pn	08 56 27.6	-0.9
INZ	Inchbonnie	2.06	220	P	Pn	08 56 28.4	-0.3
POWZ	Post Office Ro	2.07	70	P	Pn	08 56 27.7	-1.0
AMCZ	Amberley	2.08	192	P	Pn	08 56 28.3	-0.5
DREZ	Durham Road	2.09	21	P	Pn	08 56 29.2	+0.2
PRWZ	Pori Road	2.16	75	P	Pn	08 56 29.1	-0.9
MHEZ	Mangahewa	2.23	22	P	Pn	08 56 31.4	+0.5
BFZ	Birch Farm	2.33	80	P	Pn	08 56 31.2	-1.0
VRZ	Vera Road	2.33	31	P	Pn	08 56 32.6	+0.4
OXZ	Oxford	2.35	202	P	Pn	08 56 31.0	-1.4
DVHZ	Dannevirke	2.39	70	P	Pn	08 56 31.4	-1.5
MTVZ	Mangateitei	2.46	45	P	Pn	08 56 33.1	-0.7
PKVZ	Pokaka	2.46	42	P	Pn	08 56 33.4	-0.5
TRVZ	Turoa	2.56	45	P	Pn	08 56 35.0	-0.4
PNHZ	Pukenui	2.58	62	P	Pn	08 56 33.8	-1.6
OKCZ	Okains Bay	2.58	183	P	Pn	08 56 34.5	-0.9
WHVZ	Whangaehu Hut	2.59	45	P	Pn	08 56 35.5	-0.4
FWVZ	Far West T-bar	2.59	44	P	Pn	08 56 35.2	-0.6
MQZ	McQueen's Vall	2.60	189	P	Pn	08 56 33.8	-1.8
MOVZ	Moawhango	2.60	49	P	Pn	08 56 34.6	-1.1
TUVZ	Tukino	2.64	46	P	Pn	08 56 35.8	-0.5
WPHZ	Waipukurau	2.67	67	P	Pn	08 56 35.1	-1.5
WVZ	Waitaha Valley	2.67	223	P	Pn	08 56 35.6	-1.0
TWVZ	Taurewa	2.68	40	P	Pn	08 56 36.2	-0.6
NGZ	Ngauruhoe	2.68	44	P	Pn	08 56 36.3	-0.6
WTVZ	West Tongariro	2.72	43	P	Pn	08 56 36.7	-0.7
BHHZ	Black Hill Sta	2.73	54	P	Pn	08 56 36.0	-1.4
AKCZ	Akaroa Harbour	2.74	185	P	Pn	08 56 36.5	-0.9
KRVZ	Karewarewa	2.76	43	P	Pn	08 56 37.2	-0.7
KRHZ	Kereru	2.83	59	P	Pn	08 56 37.0	-1.8
HIZ	Hauiti	2.91	26	P	Pn	08 56 39.2	-0.6
RATZ	Rangitukua	3.00	41	P	Pn	08 56 41.7	+0.6
RPZ	Rata Peaks	3.03	211	P	Pn	08 56 39.5	-1.8
KAHZ	Kahuranaki	3.09	65	P	Pn	08 56 40.3	-1.9
WATZ	Wairara	3.10	39	P	Pn	08 56 42.2	-0.2
MCHZ	McNeill Hill	3.15	59	P	Pn	08 56 41.2	-1.7
BKZ	Black Stump Fm	3.19	53	P	Pn	08 56 41.6	-2.0
KUTZ	Kaahu Road	3.32	38	P	Pn	08 56 44.5	-0.8
TLZ	Tolley Road	3.33	33	P	Pn	08 56 44.6	-0.8
MRHZ	Matea Rd	3.37	48	P	Pn	08 56 43.5	-2.4
NMHZ	Naumai	3.42	54	P	Pn	08 56 44.8	-1.9
ARHZ	Aropaoanui	3.44	58	P	Pn	08 56 44.8	-2.1
FOZ	Fox Glacier	3.48	226	P	Pn	08 56 45.7	-1.6
ALRZ	Allen Road	3.52	44	P	Pn	08 56 46.0	-1.9
MTHZ	Maungataniwha	3.60	52	P	Pn	08 56 46.3	-2.7
WHHZ	Waihua	3.70	57	P	Pn	08 56 49.4	-1.0
RAHZ	Arahi	3.70	54	P	Pn	08 56 52.8	+2.4
TOZ	Tahuroa Road	3.84	28	P	Pn	08 56 51.1	-1.1
OMRZ	Omania	3.88	40	P	Pn	08 56 51.6	-1.3
LBZ	Lake Benmore	3.94	214	P	Pn	08 56 51.3	-2.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNGZ	Shannon Statio	3.94	55	P	Pn	08 56 51.6	-2.0
KNZ	Kokohu	4.01	60	P	Pn	08 56 51.1	-3.4
MHGZ	Mahia Peninsul	4.10	63	P	Pn	08 56 52.9	-2.8
TGRZ	Tauranga	4.14	36	P	Pn	08 56 55.2	-1.1
AWAZ	Awhitu Peninsu	4.22	16	P	Pn	08 56 57.3	-0.1
MKAZ	Moumakai	4.30	21	P	Pn	08 56 57.8	-0.7
ODZ	Otahua Downs	4.33	205	P	Pn	08 56 56.9	-1.9
WTAZ	Waiatarua	4.33	14	P	Pn	08 56 59.2	+0.3
ETAZ	East Tamaki Re	4.39	18	P	Pn	08 56 59.4	-0.3
JCZ	Jackson Bay	4.39	227	P	Pn	08 56 57.7	-2.0
MBAZ	Motutapu North	4.56	17	P	Pn	08 57 01.7	-0.2
KUZ	Kuaotunu	4.80	25	P	Pn	08 57 03.8	-1.4
WKZ	Wanaka	4.80	219	P	Pn	08 57 02.2	-3.1
WCZ	Waipu Caves	5.27	10	P	Pn	08 57 11.1	-0.4
MLZ	Mavora Lakes	5.63	220	P	Pn	08 57 13.8	-2.7
OUZ	Omahuta	5.92	3	P	Pn	08 57 20.5	+0.1
WHZ	Wether Hill Ro	6.10	217	P	Pn	08 57 20.4	-2.4
CTZ	Chatham Island	7.95	112	P	Pn	08 57 46.8	-0.9

IDC 28 08:58:53.0±2.2, 1°.33N×126°.05E, h0km, mb3.3/2, mb1 3.4/2, mb1mx3.1/38, mbtmp3.3/2, Error ellipse: s-maj=217.3km s-min=25.1km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.65	159	P	P	09 03 56.1	+0.1
	8.4nm,0.3s,baz=338,slow=11,SNR=13						
ASAR	Alice Springs	26.00	163	P	P	09 04 27.6	-0.1
	0.2nm,0.4s,baz=345,slow=11,SNR=5.6						
MKAR	Makanchi Array	59.14	326	P	P	09 08 55.6	0.0
	0.1nm,0.3s,baz=124,slow=8.2,SNR=3.8						

MOS 28 09:00:29.6, 64°.76N×30°.29E, M2.0, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)
HEL 28 09:00:29.6±0.1, 64°.76N×30°.64E, h0km, ML2.0, Explosion
IDC 28 09:00:31.4±1.6, 64°.77N×30°.85E, h0km, mb1 2.9/3, mb1mx2.7/58, mbtmp2.9/3, ML2.2/3, Error ellipse: s-maj=23.2km s-min=8.3km az=110.0
ISC 28 09:00:28.1±1.2, 64°.90N±0°.03×31°.09E±0°.07, h0km, n21, σ1.83/33, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	Riekki	1.24	337	PG	Pb	09 00 53.0	+0.7
KU6				MSG		09 01 09.0	
	comp=Z,8.3nm,0.2s						
KU6				SG	Sn	09 01 09.8	-0.1
MSF	Maaselka	1.33	321	PG	Pg	09 00 53.7	+0.2
MSF				SB	Sn	09 01 12.1	-0.2
JOF	Joensuu	1.99	177	PG	Pn	09 01 03.3	+0.3
JOF				SG	Sn	09 01 29.4	+0.8
OUL	Oulu	2.22	277	PG	Pn	09 01 06.2	+0.3
OUL				SG	Sn	09 01 32.4	-1.6
RNF	Rovaniemi	2.71	312	PB	Pb	09 01 15.9	-1.4
	baz=132						
RNF				SB	Sb	09 01 49.7	-1.3
OUF	Merijarvi	2.79	262	PB	Pn	09 01 14.4	+0.5
	baz=81						
OUF				MSG		09 01 45.8	
	comp=Z,12nm,0.2s						
OUF				SG	Sn	09 01 48.7	+0.5
VRF	Varrio	2.92	349	PB	Pb	09 01 19.7	-1.3
VRF				MSG		09 01 58.7	
	comp=Z,2.4nm,0.2s						
TOF	Tornio	3.06	296	PG	Pb	09 01 22.7	-0.5
TOF				MSG		09 01 56.4	
	comp=Z,5.3nm,0.2s						
TOF				SB	Sn	09 01 57.1	+2.3
SUF	Sumiainen	3.10	227	PG	Pn	09 01 20.1	+2.0
SUF				MSG		09 01 53.8	
	comp=Z,4.4nm,0.2s						
SUF				SG	Sn	09 01 57.5	+1.7
SGF	Sodankyl	3.15	326	PB	Pn	09 01 22.2	+3.3
SGF				SB	Sb	09 02 03.7	-0.1
KAF	Kangasniemi	3.52	220	PG	Pn	09 01 26.9	+2.9
	baz=32						
KEF	Keuruu	3.91	228	PB	Pn	09 01 30.9	+1.7
ERTU	Ertsjaerv	4.03	298	PN	Pn	09 01 33.1	+2.1
	baz=118						
FIA0	FINESS Array S	4.15	216	PB	Pn	09 01 33.5	+1.0
FINES	FINESS Array B	4.15	216	Pn	Pn	09 01 32.2	-0.3
	comp=Z,0.1nm,0.3s,baz=32,slow=14,SNR=6.1						
FINES				Pg	Pb	09 01 40.0	-1.8
	comp=Z,0.3nm,0.3s,baz=32,slow=16,SNR=7.0						
FINES				Sn	Sn	09 02 20.9	-0.7
	comp=Z,0.3nm,0.3s,baz=38,slow=23,SNR=4.1						
FINES				Lg	Lg	09 02 29.7	
	comp=Z,0.5nm,0.3s,baz=36,slow=26,SNR=5.7						
VAF	Ylistaro	4.15	247	PB	Pn	09 01 36.1	+3.5
HEF	Hetta	4.60	323	PN	Pn	09 01 41.8	+3.1
HEF				SG	Sg	09 02 51.4	-4.1
UMAU	Umeaa	4.63	262	SG	Sb	09 02 48.0	+1.7
ARCES	ARCESS Array B	5.13	338	Pn	Pn	09 01 47.9	+1.8
	comp=Z,0.4nm,0.3s,baz=155,slow=13,SNR=36						
ARCES				Sn	Sn	09 02 46.9	+0.9
	comp=Z,0.3nm,0.3s,baz=156,slow=27,SNR=5.4						
ARCES				Lg	Lg	09 03 08.2	
	comp=Z,0.8nm,0.3s,baz=148,slow=32,SNR=8.7						
I37NO	I37NO	6.43	316	i		09 42 40.0	
	baz=126,slow=328,SNR=1.9						
HFS	Hagfors	9.34	247	Pn	Pn	09 02 43.0	-0.7
	comp=Z,0.1nm,0.3s,baz=58,slow=14,SNR=3.9						

IDC 28 09:00:40.6±1.5, 47°.86N×32°.97E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.2/48, mbtmp3.3/4, ML2.7/2, Error ellipse: s-maj=18.6km s-min=16.0km az=98.0
ISC 28 09:00:42.1±1.3, 47°.77N±0°.06×33°.0E±0°.1, h10km, n18, σ1.59/16, mb3.3/3, 8C-2D, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MILM	Milestii Mici	3.00	255	⇓P	Pb	09 01 37.3	+1.9
SORM	Soroca	3.17	278	⇑P	Pn	09 01 31.5	-0.5
AKASG	Malin Array Be	3.85	321	Pn	Pn	09 01 41.0	-0.4
	0.7nm,0.3s,baz=126,slow=14,SNR=1.7						
AKASG				Pg	Pb	09 01 52.1	+2.1
	1.7nm,0.3s,baz=157,slow=19,SNR=2.7						
AKASG				Sn	Sn	09 02 24.1	-2.5
	0.6nm,0.3s,baz=138,slow=24,SNR=2.7						
AKASG				Lg	Lg	09 02 39.6	
	2.0nm,0.3s,baz=136,slow=30,SNR=2.4						
AKASG				Rg	Rg	09 02 58.8	
	2.7nm,0.6s,baz=139,slow=34,SNR=7.3						
JURR	Jurilovca	4.17	225	⇑P	Pn	09 01 45.4	-0.3
CFR	Carcaliu	4.26	234	⇑P	Pn	09 01 47.9	+0.9
TESR	Tescani	4.54	256	⇑P	Pb	09 02 01.4	-0.4
HARR	Harsova	4.69	231	⇑P	Pn	09 01 54.0	+1.0
VRI	Vrincioaia	4.73	249	⇑P	Pn	09 01 54.6	+1.1
BURAR	Bucovina Array	5.28	271	⇓P	Pn	09 02 04.4	+3.2
MLR	Muntele Rosu	5.39	248	Pn	Pn	09 02 02.5	-0.1
	0.2nm,0.3s,baz=190,slow=13,SNR=2.8						
MLR				Pg	Pb	09 02 15.9	-0.5
	0.3nm,0.3s,baz=217,slow=11,SNR=5.7						
MLR				Lg	Lg	09 03 19.8	
	0.3nm,0.3s,baz=89,slow=22,SNR=0.7						
MLR	Muntele Rosu	5.39	248	⇑P	Pn	09 02 10.9	+8.3
VOIR		5.98	250	⇑P	Pn	09 02 18.0	+7.3
KVAR	Kislovodsk Arr	7.75	116	Lg	Lg	09 04 39.3	
	baz=296,slow=14,SNR=1.8						
KBZ	Khabaz	7.99	117	Lg	Lg	09 04 49.2	
	0.1nm,0.3s,baz=213,slow=22,SNR=1.4						
I43RU	DUBNA INFRASON	9.32	14	i		10 04 30.0	
	baz=191,slow=313,SNR=0.9						
BVAR	Borovoye Array	24.19	63	P	P	09 05 59.7	+1.3
	0.2nm,0.3s,baz=282,slow=7.2,SNR=1.3						
TORD	Torodi Ar. Bea	43.27	228	P	P	09 08 43.5	-0.3
	0.4nm,0.7s,baz=38,slow=7.3,SNR=2.7						
YKA	Yellowknife Ar	67.09	344	P	P	09 11 33.6	-1.5
	0.2nm,0.7s,baz=24,slow=6.8,SNR=4.0						

IDC 28 09:03:44.4±4.4, 6°.45S×149°.39E, h0km, mb3.0/1, mb1 3.7/2, mb1mx3.2/40, mbtmp3.4/2, MS3.4/1, Ms1 3.4/1, ms1mx2.7/16, Error ellipse: s-maj=169.5km s-min=50.7km az=116.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.84	226	P	P	09 08 15.8	-1.2
	baz=51,slow=11,SNR=1.3						
ASAR	Alice Springs	22.68	219	P	P	09 08 48.2	+0.5
	0.4nm,0.6s,baz=55,slow=9.1,SNR=7.3						
TGY	Tagaytay City	34.84	306	LR	LR	09 24 19.6	
	comp=Z,65nm,20.5s,baz=120,slow=36						
TORD	Torodi Ar. Bea	147.50	284	PKPbc	PKPbc	09 23 31.2	-0.4
	0.4nm,0.5s,baz=79,slow=3.3,SNR=4.3						

TRN 28 09:09:19.9, 10°.44N×62°.55W, h84km, MD3.7, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	Guiria	0.38	57	eP	Pn	09 09 33.6	+0.5
GUIV				eS	Sn	09 09 42.7	-0.3
TRN	Trinidad (W)	1.14	79	eP	Pn	09 09 41.7	+0.7
TRN				eS	Sn	09 09 56.0	-0.7
ORIV	Oritupano	1.60	212	eP	Pn	09 09 47.3	+0.6
ORIV				eS	Sn	09 10 07.2	+0.2
GRGR	Grenville	1.90	27	eP	Pn	09 09 50.2	-0.4
GRGR				eS	Sn	09 10 13.1	-0.9
GRHS	Sauteurs	1.99	26	eP	Pn	09 09 52.9	+1.1
GRSS	Sisters	2.06	26	eP	Pn	09 09 53.9	+1.0
GRSS				eS	Sn	09 10 17.5	-0.4
TOSP	Speyside	2.15	66	eP	Pn	09 09 53.9	-0.1
TOSP				eS	Sn	09 10 18.9	-1.1
SVB	Belmont	3.09	24	eP	Pn	09 10 07.2	+0.6
SVB				eS	Sn	09 10 41.1	-1.4
SVCV	St. Vincent, C	3.13	26	eP	Pn	09 10 07.7	+0.4
SVCV				eS	Sn	09 10 41.9	-1.8
SVV	Soufriere Volc	3.15	24	eP	Pn	09 10 07.8	+0.4
SVV				eS	Sn	09 10 42.8	-1.1
SSV	Crater Summit	3.16	25	eP	Pn	09 10 08.7	+1.0
SSV				eS	Sn	09 10 42.9	-1.6
MCLT	Moule a Chique	3.61	26	eP	Pn	09 10 14.6	+0.9
MCLT				eS	Sn	09 10 54.0	-1.2
SLB	Belfond	3.68	23	eP	Pn	09 10 15.3	+0.7
SLB				eS	Sn	09 10 55.7	-1.2
SLAC	Saint Lucia, A	3.80	25	eP	Pn	09 10 16.4	+0.2
SLBI	Saint Lucia, B	3.88	23	eP	Pn	09 10 17.3	0.0
SLBI				eS	Sn	09 11 00.2	-1.5
BIM	Bigot	4.30	19	eP	Pn	09 10 23.3	+0.2
MPOM	Morne Pois Mar	4.31	22	eP	Pn	09 10 22.8	-0.3
TRMF	Trois Ilets	4.33	20	eP	Pn	09 10 23.8	+0.4
ZAM	Aeronautique	4.37	20	eP	Pn	09 10 24.3	+0.4
LPMF	Morne Lapointe	4.39	20	eP	Pn	09 10 17.1	-7.2
PCM	Pelee Case Pet	4.54	17	eP	Pn	09 10 26.1	-0.2
BAUV	El Baul	5.62	255	eP	Pn	09 10 40.9	-0.1
BAUV	El Baul	5.62	255	eS	Sn	09 11 40.3	-3.9

KRSC 28 09:09:59.5±1.2, 52°.03N×159°.77E, h70km±19km, ML4.9, FELT [II-III] at lighthouse Krugliy.
NEIC 28 09:09:59.4±1.8, 52°.27N±0°.09×159°.5E±0°.1, h49km±6km, mb4.6/40, Error ellipse: s-maj=12.9km s-min=9.9km az=186.0
BJI 28 09:09:59.8±0.0, 52°.15N×159°.08E, h45km, mB4.9/31, mb4.5/37, Ms4.4/20, Ms7 4.1/19
MOS 28 09:10:01.9±1.1, 52°.19N×159°.46E, h91km, mb4.7/20, Error ellipse: s-maj=8.2km s-min=4.2km az=94.3
IDC 28 09:10:02.2±1.9, 52°.30N×159°.42E, h74km±15km, mb3.8/30, mb1 3.9/34, mb1mx3.9/58, mbtmp4.1/34, MS3.8/27, Ms1 3.8/27, ms1mx3.7/49, Error ellipse: s-maj=15.5km s-min=10.4km az=152.0
ISC 28 09:10:00.4±0.7, 52°.12N±0°.04×159°.69E±0°.04, h64km±6km, n309, σ1.93/322, mb4.5/74, 18C-3D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	0.79	294	eP	Pn	09 10 12.1	-3.8
RUS	Russkaya	0.79	294	eP	Pn	09 10 16.9	+1.0
RUS				eS	Sn	09 10 28.5	+1.1
RUS	Russkaya	0.79	294	PN	Pn	09 10 16.9	+1.0
RUS				S	Sn	09 10 28.5	+1.1
MTVR	Mutnovka	0.99	292	i P	Pn	09 10 15.6	-3.1
MTVR	Mutnovka	0.99	292	eP	Pn	09 10 20.2	+1.5
MTVR	Mutnovka	0.99	292	PN	Pn	09 10 20.2	+1.5
SPN	Mys Shipunski	1.00	12	eP	Pn	09 10 15.0	-3.6
SPN				eS	Sn	09 10 27.2	-4.9
SPN	Mys Shipunski	1.00	12	eP	Pn	09 10 20.5	+1.9
SPN				eS	Sn	09 10 34.8	+2.7
SPN	Mys Shipunski	1.00	12	PN	Pn	09 10 20.5	+1.9
SPN				S	Sn	09 10 34.8	+2.7
KDTR	Khodutka, Kamc	1.04	253	eP	Pn	09 10 15.8	-3.3
KDTR				eS	Sn	09 10 28.9	-4.2
KDTR	Khodutka, Kamc	1.04	253	eP	Pn	09 10 20.4	+1.3
KDTR				eS	Sn	09 10 34.6	+1.5
KDTR	Khodutka, Kamc	1.04	253	PN	Pn	09 10 20.4	+1.3
KDTR				S	Sn	09 10 34.6	+1.5
NLC	Nalytchevo	1.08	349	eP	Pn	09 10 15.8	-3.7
NLC	Nalytchevo	1.08	349	eP	Pn	09 10 21.6	+2.1
NLC				eS	Sn	09 10 36.5	+2.7
NLC	Nalytchevo	1.08	349	PN	Pn	09 10 21.6	+2.1
NLC				S	Sn	09 10 36.5	+2.7
DALK	Dalny	1.08	328	eP	Pn	09 10 16.5	-3.1
DALK				eS	Sn	09 10 30.1	-3.8
DALK	Dalny	1.08	328	eP	Pn	09 10 21.8	+2.2
DALK				eS	Sn	09 10 38.0	+4.1
DALK	Dalny	1.08	328	PN	Pn	09 10 21.8	+2.2
DALK				S	Sn	09 10 38.0	+4.1
GRL	Gorelyy	1.08	294	eP	Pn	09 10 17.3	-2.5
GRL	Gorelyy	1.08	294	eP	Pn	09 10 22.1	+2.3
GRL	Gorelyy	1.08	294	PN	Pn	09 10 22.1	+2.3
PET	Petropavlovsk	1.11	326	eP	Pn	09 10 16.9	-3.0
PET				eS	Sn	09 10 30.7	-3.8
PET	Petropavlovsk	1.11	326		Pn	09 10 15.6	-4.3
PET	Petropavlovsk	1.11	326	PN	Pn	09 10 22.0	+2.1
PET				S	Sn	09 10 37.2	+2.7
ASAK	Asacha	1.13	284	eP	Pn	09 10 18.1	-2.3
ASAK	Asacha	1.13	284	eP	Pn	09 10 22.7	+2.3
ASAK	Asacha	1.13	284	PN	Pn	09 10 22.7	+2.3
KRMR	Karymshinskiy	1.19	307	eP	Pn	09 10 17.6	-3.5
KRMR				eS	Sn	09 10 32.7	-3.8
KRMR	Karymshinskiy	1.19	307	eP	Pn	09 10 22.6	+1.5
KRMR				eS	Sn	09 10 38.8	+2.3
KRMR	Karymshinskiy	1.19	307	PN	Pn	09 10 22.6	+1.5
KRMR				S	Sn	09 10 38.8	+2.3
UGLR	Uglovaya	1.21	335	eP	Pn	09 10 18.8	-2.7
UGLR	Uglovaya	1.21	335	eP	Pn	09 10 24.9	+3.4
UGLR	Uglovaya	1.21	335	PN	Pn	09 10 24.9	+3.4
SDLR	Sedlovina	1.26	337	eP	Pn	09 10 19.0	-3.1
SDLR	Sedlovina	1.26	337	eP	Pn	09 10 24.5	+2.4
SDLR	Sedlovina	1.26	337	PN	Pn	09 10 24.5	+2.4
SMAR	Somma	1.27	335	eP	Pn	09 10 19.1	-3.2
SMAR	Somma	1.27	335	eP	Pn	09 10 25.8	+3.5
SMAR	Somma	1.27	335	PN	Pn	09 10 25.8	+3.5
AVH	Avacha	1.29	334	eP	Pn	09 10 19.9	-2.5
AVH	Avacha	1.29	334	eP	Pn	09 10 25.2	+2.8
AVH	Avacha	1.29	334	PN	Pn	09 10 25.2	+2.8
KRER	Koryakskii	1.32	335	eP	Pn	09 10 20.5	-2.5
KRER	Koryakskii	1.32	335	eP	Pn	09 10 24.9	+1.9
KRER	Koryakskii	1.32	335	PN	Pn	09 10 24.9	+1.9
KOK	Koryaka	1.34	332	eP	Pn	09 10 20.5	-2.6
KOK	Koryaka	1.34	332	eP	Pn	09 10 26.7	+3.6
KOK	Koryaka	1.34	332	PN	Pn	09 10 26.7	+3.6
KRX	Arik	1.40	333	eP	Pn	09 10 21.8	-2.1
KRX	Arik	1.40	333	eP	Pn	09 10 25.5	+1.6
KRX	Arik	1.40	333	PN	Pn	09 10 25.5	+1.6
PEA0B	Petropavlovsk-	1.57	310		Pn	09 10 24.3	-1.8
PEA0B	Petropavlovsk-	1.57	310	PN	Pn	09 10 24.3	-1.8
PETK	Petropavlovsk-	1.57	310	P	Pn	09 10 24.2	-1.9
	91nm,0.3s,baz=111,slow=19,SNR=417						
PETK				S	Sn	09 10 46.5	+1.0
	115nm,0.3s,baz=110,slow=20,SNR=7.5						
PETK				LR	LR	09 11 19.7	
	comp=Z,4μm,19.2s,baz=61,slow=59						
PETK	Petropavlovsk-	1.57	310		Pn	09 10 24.2	-1.9
PETK					Sn	09 10 46.5	+1.0
APC	Apacha	1.75	299	eP	Pn	09 10 27.8	-0.6
APC				eS	Sn	09 10 49.4	-0.3
APC	Apacha	1.75	299	eP	Pn	09 10 31.4	+3.0
APC	Apacha	1.75	299	PN	Pn	09 10 31.4	+3.0
MIPR	Malaya Ipel'ka	1.81	276	eP	Pn	09 10 28.3	-1.1
MIPR	Malaya Ipel'ka	1.81	276	eP	Pn	09 10 31.8	+2.4
MIPR	Malaya Ipel'ka	1.81	276	PN	Pn	09 10 31.8	+2.4
PAU	Pauzhetka	1.90	251	eP	Pn	09 10 29.1	-1.5
PAU	Pauzhetka	1.90	251	eP	Pn	09 10 32.5	+1.9
PAU	Pauzhetka	1.90	251	PN	Pn	09 10 32.5	+1.9
KII	Karymskiy	1.93	356	eP	Pn	09 10 29.5	-1.5
KII	Karymskiy	1.93	356	eP	Pn	09 10 34.1	+3.1
KII	Karymskiy	1.93	356	PN	Pn	09 10 34.1	+3.1
SKR	Severo-Kuril's	2.66	239	eP	Pn	09 10 38.8	-2.0
SKR	Severo-Kuril's	2.66	239	eP	Pn	09 10 41.4	+0.6
SKR				eS	Sn	09 11 12.1	+0.2
SKR	Severo-Kuril's	2.66	239	PN	Pn	09 10 41.4	+0.6
SKR				S	Sn	09 11 12.1	+0.2
ALID	Alaid	2.87	246	eP	Pn	09 10 44.2	+0.3
ALID	Alaid	2.87	246	eP	Pn	09 10 45.8	+1.9
ALID	Alaid	2.87	246	PN	Pn	09 10 45.8	+1.9
KZV	Kizimen	3.02	7	eP	Pn	09 10 44.8	-1.1
KZV	Kizimen	3.02	7	eP	Pn	09 10 48.8	+2.9
KZV	Kizimen	3.02	7	PN	Pn	09 10 48.8	+2.9
TUMD	Tumrok D	3.12	7	eP	Pn	09 10 46.9	-0.2
TUMD	Tumrok D	3.12	7	eP	Pn	09 10 50.3	+3.2
TUMR	Tumrok	3.18	5	eP	Pn	09 10 47.2	-0.9
TUMR	Tumrok	3.18	5	eP	Pn	09 10 50.7	+2.6
TUMR	Tumrok	3.18	5	PN	Pn	09 10 50.7	+2.6
KMNR	Kamenistaya	3.66	5	eP	Pn	09 10 55.3	+0.7
KMNR	Kamenistaya	3.66	5	eP	Pn	09 10 57.8	+3.2
KMNR	Kamenistaya	3.66	5	PN	Pn	09 10 57.8	+3.2
ESO	Esso	3.86	352	eP	Pn	09 10 59.2	+2.0
ESO	Esso	3.86	352	PN	Pn	09 10 59.2	+2.0
KOZ	Kozyrevsk	3.95	1	eP	Pn	09 11 02.0	+3.5
KOZ	Kozyrevsk	3.95	1	PN	Pn	09 11 02.0	+3.5
ZLN	Zelenaya	3.96	9	eP	Pn	09 10 59.0	+0.3
ZLN	Zelenaya	3.96	9	eP	Pn	09 11 01.3	+2.6
ZLN	Zelenaya	3.96	9	PN	Pn	09 11 01.3	+2.6
CIRR	Tsirk	4.05	8	eP	Pn	09 11 02.4	+2.4
CIRR	Tsirk	4.05	8	PN	Pn	09 11 02.4	+2.4
SRDR	Sredinnyy	4.21	0	eP	Pn	09 11 02.6	+0.6
SRDR	Sredinnyy	4.21	0	PN	Pn	09 11 02.6	+0.6
KBTR	Krutoberegovo	4.49	23	eP	Pn	09 11 04.2	-1.6
KBTR	Krutoberegovo	4.49	23	eP	Pn	09 11 07.9	+2.1
KBTR	Krutoberegovo	4.49	23	PN	Pn	09 11 07.9	+2.1
BKI	Bering	4.85	48	eP	Pn	09 11 06.8	-3.9
BKI	Bering	4.85	48	eP	Pn	09 11 12.2	+1.5
BKI	Bering	4.85	48	PN	Pn	09 11 12.2	+1.5
SMY	Shemya	8.83	80	Pn	Pn	09 12 02.7	-2.4
SMY	Shemya	8.83	80	PN	Pn	09 12 02.7	-2.4
MA2	Magadan	8.99	330	P	Pn	09 12 07.4	+0.1
	0.3nm,0.3s,baz=136,slow=12,SNR=3.5						
MA2				LR	LR	09 16 15.9	
	comp=Z,649nm,19.0s,baz=152,slow=43						
OKH	Okha	10.24	285	dePN	Pn	09 12 13.2	-11
OKH				MLR	MLR		
	comp=N,2μm,18.0s						
OKH				MLR	MLR		
	comp=E,900nm,15.0s						
OKH				MLR	MLR		
	comp=Z,800nm,18.0s						
SEY	Seymchan	11.52	343	P	Pn	09 12 47.1	+5.3
	comp=Z,0.1nm,0.3s,baz=151,slow=8.3,SNR=4.9						
SEY	Seymchan	11.52	343		Pn	09 12 47.1	+5.3
SEY	Seymchan	11.52	343	i PN	Pn	09 12 39.9	-1.9
SHO	Shikotan	11.91	231	PN	Pn	09 12 56.2	+8.9
SHO				pmax	pmax		
	comp=Z,15nm,0.5s						
YUK	Yuzh-Kuril'sk	12.27	234	PN	P	09 12 59.8	-2.4
YUK				MLR	MLR		
	comp=Z,180nm,12.0s						
YUK				MLR	MLR		
	comp=N,301nm,16.0s						
YUK				MLR	MLR		
	comp=E,283nm,16.0s						
NMR	Nemuro--Hokkai	12.82	232	i PN	P	09 13 06.5	-1.8
JKA	Kamikawa-asahi	13.92	242	P	Pn	09 13 16.6	+2.2
ASAJ	Asahikawa	13.92	242	P	Pn	09 13 16.6	+2.1
	comp=E,0.9nm,0.3s,baz=95,slow=18,SNR=4.8						
ASAJ				LR	LR	09 18 08.2	
	comp=E,174nm,20.5s,baz=12,slow=35						
ERM	Erimo	15.10	235	Pn	Pn	09 13 30.2	+0.5
ERM				IAmb	IAmb	09 13 30.6	
	comp=Z,70nm,1.2s						
ERM	Erimo	15.10	235	P	Pn	09 13 30.2	+0.5
ERM				pmax	pmax		
	comp=Z,70nm,1.2s						
BILL	Bilibino	16.29	9		Pn	09 13 44.6	-0.1
BILL	Bilibino	16.29	9	⇑eP	P	09 13 46.4	-0.2
BILL				S	S	09 16 52.0	-1.7
BILL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,151nm,15.0s						
TEY	Ternei	16.80	254	⇓eP	P	09 13 56.3	+3.9
TEY				pmax	pmax		
	comp=Z,10.0nm,1.8s						
KLR	Kul'dur	17.90	272	P	Pn	09 14 05.0	+0.3
	comp=Z,0.3nm,0.3s,baz=70,slow=9.2,SNR=12						
KLR				LR	LR	09 21 29.7	
	comp=Z,340nm,19.0s,baz=48,slow=39						
KLR	Kul'dur	17.90	272	P	Pn	09 14 05.0	+0.3
KLR	Kul'dur	17.90	272	P	Pn	09 14 05.0	+0.3
YAK	Yakutsk	18.91	313	P	P	09 14 13.1	-2.4
	comp=Z,0.1nm,0.3s,baz=200,slow=1.1,SNR=3.6						
YAK	Yakutsk	18.91	313	P	P	09 14 13.2	-2.3
YAK				IAmb	IAmb	09 14 19.1	
	comp=Z,20nm,0.7s						
YAK	Yakutsk	18.91	313	eP	P	09 14 12.7	-2.8
YAK				eS	S	09 17 44.2	-2.5
YAK				pmax	pmax		
	comp=Z,15nm,1.1s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				smax	smax		
	comp=N,51nm,3.2s						
YAK				smax	smax		
	comp=E,54nm,3.5s						
YAK				MLR	MLR		
	comp=Z,128nm,17.0s						
YAK				MLR	MLR		
	comp=N,202nm,17.0s						
YAK				MLR	MLR		
	comp=E,143nm,18.0s						
ZEA	Zeya	19.53	288	eP	Pn	09 14 25.6	+1.4
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,700nm,14.0s						
ZEA				MLR	MLR		
	comp=E,500nm,15.0s						
USA0B	Ussuriysk Arra	20.01	258	i P	P	09 14 26.5	-1.2
USRK	Ussuriysk Ar.	20.01	258	LR	LR	09 22 59.0	
	comp=E,407nm,18.8s,baz=56,slow=39						
UNV	Unalaska Valle	20.32	72	P	P	09 14 31.1	+0.2
UNV				IAmb	IAmb	09 14 37.5	
	comp=Z,36nm,1.0s						
MJB9	Matsu-Tunnel	21.75	233	P	P	09 14 46.7	+0.3
MJB9				IAmb	IAmb	09 14 54.6	
	comp=Z,32nm,0.7s						
MAJO	Matsushiro	21.75	233	P	P	09 14 46.7	+0.2
MAJO				IAmb	IAmb	09 14 54.6	
	comp=Z,32nm,0.7s						
MAJO	Matsushiro	21.75	233	P	P	09 14 46.7	+0.2
MAJO				pmax	pmax		
	comp=Z,32nm,0.7s						
MAT	Matsushiro	21.75	233	P	P	09 14 46.1	-0.3
MAT				eS	S	09 18 46.0	+2.5
MJAR	Matsushiro Arr	21.75	233	P	P	09 14 47.5	+1.0
	comp=Z,9.9nm,0.8s,baz=23,slow=10.0,SNR=21						
MJAR				LR	LR	09 23 30.2	
	comp=Z,244nm,21.7s,baz=50,slow=37						
MJAR	Matsushiro Arr	21.75	233	P	P	09 14 47.5	+1.0
JHJ	Hachijo jima 2	23.84	225	LR	LR	09 23 14.8	
	comp=Z,69nm,21.7s,baz=130,slow=33						
TIXI	Tiksi	23.87	336	P	P	09 15 06.7	-0.8
	comp=Z,18nm,0.7s,baz=136,slow=8.7,SNR=22						
TIXI	Tiksi	23.87	336	P	P	09 15 06.8	-0.6
TIXI				IAmb	IAmb	09 15 12.3	
	comp=Z,18nm,0.7s						
TIXI	Tiksi	23.87	336	P	P	09 15 06.8	-0.6
TIXI				pmax	pmax		
	comp=Z,19nm,0.7s						
RDOG	Red Dog Mine	23.98	34	P	P	09 15 07.7	-0.9
RDOG				IAmb	IAmb	09 15 14.5	
	comp=Z,14nm,1.1s						
HIA	Hailar	25.24	280	P	P	09 15 18.4	-1.8
HIA	Hailar	25.24	280	P	P	09 15 18.4	-1.8
HIA				pmax	pmax		

comp=Z,34nm,0.7s
BOD Bodaibo 26.42 301 eP P 09 15 28.4 -2.3
BOD pmax pmax
comp=Z,6.0nm,1.5s
KSRS Korea Array 26.63 249 P P 09 15 33.2 +0.5
comp=Z,0.9nm,0.6s,baz=36,slow=8.9,SNR=3.3
KSRS LR LR 09 25 00.6
comp=Z,105nm,20.8s,baz=54,slow=34
KSRS Korea Array 26.63 249 P P 09 15 33.2 +0.5
JNU Nakatsue 28.17 239 P P 09 15 48.0 +1.4
comp=Z,7.1nm,0.8s,baz=0.0,slow=4.0,SNR=3.2
JNU LR LR 09 27 10.7
comp=Z,108nm,21.2s,baz=35,slow=37
JNU Nakatsue 28.17 239 P P 09 15 45.5 -1.1
TOLK Toolik Lake Re 28.90 36 P P 09 15 52.2 -0.5
SCM Sheep Creek Mo 29.64 50 P P 09 15 59.9 +0.4
SCM IAmb IAmb 09 16 12.7
comp=Z,14nm,1.4s
SCM Sheep Creek Mo 29.64 50 P P 09 15 59.9 +0.4
SCM pmax pmax
comp=Z,14nm,1.4s
ILAR Eielson Array 29.68 44 P P 09 16 01.6 +1.9
comp=Z,1.1nm,0.9s,baz=268,slow=7.2,SNR=9.5
ILAR LR LR 09 29 28.9
comp=Z,109nm,18.3s,baz=271,slow=39
ILAR Eielson Array 29.68 44 P P 09 16 01.6 +1.9
CRQM Cirque 31.79 52 P P 09 16 18.7 +0.2
TGL Tana Glacier 31.94 52 P P 09 16 20.2 +0.5
TGL IAmb IAmb 09 16 26.2
comp=Z,12nm,1.4s
BARN Barnard Glacie 32.45 51 P P 09 16 24.1 -0.1
BARN IAmb IAmb 09 16 32.2
comp=Z,9.9nm,1.4s
CTGM Chitina Glacie 32.62 51 P P 09 16 25.1 -0.6
H11N2 WAKE ISLAND Hy 32.81 167 T T 09 51 44.8
baz=351,slow=76,SNR=246
H11N3 WAKE ISLAND Hy 32.83 167 T T 09 51 45.9
baz=351,slow=76,SNR=138
H11N1 WAKE ISLAND Hy 32.83 167 T T 09 51 43.1
baz=351,slow=76,SNR=161
TLY Talaya 33.85 292 LR LR 09 31 48.2
comp=Z,170nm,18.7s,baz=315,slow=39
SONM Songino Array 33.89 284 P P 09 16 36.0 -1.0
comp=Z,0.6nm,0.7s,baz=69,slow=7.9,SNR=2.7
SONM PcP PcP 09 19 15.3 +1.2
comp=Z,1.9nm,1.0s,baz=101,slow=1.5,SNR=2.5
SONM Songino Array 33.89 284 P P 09 16 36.0 -1.0
SONM PcP 09 19 15.3 +1.2
H11S1 WAKE ISLAND Hy 33.99 168 T T 09 53 05.9
baz=352,slow=76,SNR=21
H11S3 WAKE ISLAND Hy 34.00 168 T T 09 53 12.7
baz=352,slow=76,SNR=46
H11S2 WAKE ISLAND Hy 34.01 168 T T 09 53 10.8
baz=352,slow=76,SNR=13
HHC Hu-ho-hao-te 34.39 270 eP P 09 16 42.0 +0.7
HHC eS S 09 22 05.3 +0.8
HHC pmax pmax
comp=Z,5.0nm,0.9s
HHC pmax pmax
comp=Z,61nm,4.2s
HHC LR LR
comp=Z,130nm,11.1s
HHC LR LR
comp=Z,110nm,11.9s
HHC LR LR
comp=Z,120nm,12.2s
ZAK Zakamensk 34.59 290 eP P 09 16 41.7 -1.3
ZAK pmax pmax
comp=Z,5.0nm,1.1s
INK Inuvik 34.80 37 P P 09 16 44.2 -0.1
comp=Z,0.7nm,0.7s,baz=278,slow=6.0,SNR=3.6
INK Inuvik 34.80 37 P P 09 16 44.8 +0.5
INK Inuvik 34.80 37 P P 09 16 44.8 +0.5
INK pmax pmax
comp=Z,4.0nm,1.2s
MOY Mondy 35.37 293 eP P 09 16 49.0 -0.6
MOY pmax pmax
comp=Z,16nm,1.2s
NJ2 Nanjing 35.72 252 eP P 09 16 53.3 +0.7
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
NRIK Noril'sk 36.57 325 LR LR 09 32 59.4
comp=Z,284nm,20.4s,baz=54,slow=38
WHN Wuhan 39.47 255 P P 09 17 31.0 +6.7
LZH Lanzhou 42.09 270 eP P 09 17 46.8 +0.7
LZH pP pP 09 17 59.3 -1.9
LZH sP pwP 09 18 05.0 -0.2
LZH pmax pmax
comp=Z,21nm,1.0s
GTA Gaotai 42.48 277 ⇑P P 09 17 53.0 +3.9
GTA pP pP 09 17 59.3 -5.0
GTA sP pwP 09 18 03.3 -5.0
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,39nm,4.8s
GTA LR LR
comp=Z,230nm,19.0s
GTA LR LR
comp=Z,270nm,17.5s
GTA LR LR
comp=Z,280nm,17.1s
ZALV Zalesovo Beam 43.10 303 P P 09 17 51.9 -1.9
comp=Z,1.1nm,0.7s,baz=46,slow=6.2,SNR=2.5
ZALV PcP PcP 09 19 43.1 +0.6
comp=Z,0.5nm,0.4s,baz=48,slow=2.1,SNR=3.2
ZALV Zalesovo Beam 43.10 303 P P 09 17 51.9 -1.9
ZALV PcP 09 19 43.0 +0.6
YKA Yellowknife Ar 44.05 42 P P 09 18 01.6 +0.3
comp=Z,1.7nm,0.8s,baz=297,slow=7.0,SNR=10
YKA Yellowknife Ar 44.05 42 P P 09 18 01.6 +0.3
CD2 Chengdu 45.63 265 eP P 09 18 13.0 -1.3
WMQ Urumqi 47.06 290 eP P 09 18 26.5 +1.0
WMQ pP pP 09 18 39.8 -1.0
WMQ pmax pmax
comp=Z,11nm,1.1s
WMQ LR LR
comp=Z,620nm,26.5s
WMQ LR LR
comp=Z,110nm,29.5s
WMQ LR LR
comp=Z,240nm,16.3s
KURK Kurchatov 48.04 302 P P 09 18 30.4 -2.5
KURK IAmb IAmb 09 18 36.4
comp=Z,6.9nm,0.7s
KURK Kurchatov 48.04 302 ceP P 09 18 31.4 -1.4
KURK pmax pmax
comp=Z,12nm,1.3s
KURBB Kurchatov Arra 48.14 302 P P 09 18 31.7 -1.9
comp=Z,3.8nm,0.7s,baz=60,slow=7.7,SNR=11
KURBB PcP PcP 09 20 00.4 +0.3
comp=Z,2.0nm,0.7s,baz=62,slow=2.5,SNR=3.4
MK31 Makanchi Array 48.36 296 P P 09 18 33.3 -2.1
MK31 Makanchi Array 48.36 296 P P 09 18 33.3 -2.1
MK31 pmax pmax
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 48.36 296 P P 09 18 33.2 -2.2
comp=Z,1.3nm,0.6s,baz=51,slow=7.0,SNR=19
MKAR LR LR 09 39 28.2
comp=Z,203nm,21.5s,baz=27,slow=37
MKAR Makanchi Array 48.36 296 P P 09 18 33.2 -2.2
MKAR Makanchi Array 48.36 296 ceP P 09 18 33.5 -1.9
MKAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 50.80 309 P P 09 18 51.5 -2.4
comp=Z,5.3nm,0.6s,baz=59,slow=9.0,SNR=20
BVAR PcP PcP 09 20 10.1 +0.3
comp=Z,1.3nm,0.7s,baz=64,slow=3.4,SNR=2.6
BVAR Borovoye Array 50.80 309 P P 09 18 51.5 -2.4
BVAR PcP 09 20 10.1 +0.3
BRVK Borovoye 50.84 309 P P 09 18 52.0 -2.1
BRVK IAmb IAmb 09 18 57.6
comp=Z,7.4nm,0.7s
BRVK Borovoye 50.84 309 ceP P 09 18 52.1 -2.0
BRVK pmax pmax
comp=Z,10.0nm,1.0s
ARCES ARCESS Array B 54.14 342 P P 09 19 17.6 -0.6
comp=Z,4.6nm,0.7s,baz=35,slow=7.2,SNR=9.9
ARCES LR LR 09 45 11.5
comp=Z,85nm,20.6s,baz=345,slow=39
ARCES ARCESS Array B 54.14 342 P P 09 19 17.6 -0.6
AAK Ala-Archa 55.29 297 P P 09 19 25.9 -1.3
comp=Z,2.4nm,0.5s,baz=189,slow=20,SNR=3.6
KIRV Kirov 56.03 324 LR LR 09 44 24.9
comp=Z,140nm,19.6s,baz=77,slow=37
NVAR Mina Array Bea 56.31 69 P P 09 19 35.9 +1.3

comp=Z,0.6nm,0.6s,baz=269,slow=7.2,SNR=3.7
NVAR LR LR 09 42 09.9
comp=Z,49nm,18.5s,baz=322,slow=34
NVAR Mina Array Bea 56.31 69 P P 09 19 35.9 +1.3
KRVT Keravat (AS076 56.59 189 LR LR 09 38 50.0
comp=Z,56nm,21.9s,baz=70,slow=30
KK31 Karatay Array 57.15 299 P P 09 19 38.1 -2.1
KK31 IAmb IAmb 09 19 44.8
comp=Z,3.6nm,0.8s
KK31 Karatay Array 57.15 299 P P 09 19 38.1 -2.1
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 57.15 299 P P 09 19 38.0 -2.2
KKAR IAmb IAmb 09 19 44.8
comp=Z,3.6nm,0.8s
KKAR Karatay Array 57.15 299 P P 09 19 38.0 -2.2
KKAR pmax pmax
comp=Z,4.0nm,0.8s
CMAR Chiang Mai Arr 57.74 258 P P 09 19 45.8 +1.1
comp=Z,2.3nm,0.6s,baz=26,slow=6.8,SNR=12
CMAR LR LR 09 48 48.1
comp=Z,66nm,18.1s,baz=274,slow=40
CMAR Chiang Mai Arr 57.74 258 P P 09 19 45.8 +1.1
PD31 Pinedale Array 58.22 60 P P 09 19 46.7 -1.3
PDAR Pinedale Array 58.22 60 P P 09 19 49.1 +1.1
comp=Z,0.4nm,0.5s,baz=329,slow=3.1,SNR=7.1
PDAR LR LR 09 43 22.5
comp=Z,50nm,19.8s,baz=350,slow=34
PDAR Pinedale Array 58.22 60 P P 09 19 49.1 +1.1
ABKAR Akbulak array 58.24 311 P P 09 19 46.2 -1.6
ABKAR IAmb IAmb 09 19 52.1
comp=Z,3.6nm,0.8s
ULM Lac du Bonnet 59.67 46 P P 09 19 58.0 +0.3
comp=Z,1.6nm,0.9s,baz=315,slow=2.9,SNR=1.8
ULM Lac du Bonnet 59.67 46 P P 09 19 58.0 +0.3
RSSD Black Hills 60.16 56 P P 09 20 02.9 +1.5
RSSD IAmb IAmb 09 20 08.2
comp=Z,6.7nm,0.8s
RSSD Black Hills 60.16 56 P P 09 20 02.9 +1.5
RSSD pmax pmax
comp=Z,7.0nm,0.9s
RWYY Rawlins 60.22 60 P P 09 20 02.9 +1.0
FINES FINESS Array B 60.92 337 P P 09 20 05.1 -0.8
comp=Z,4.4nm,0.9s,baz=35,slow=7.0,SNR=6.1
FINES FINESS Array B 60.92 337 P P 09 20 05.1 -0.8
NIL Nilore 62.21 290 P P 09 20 15.1 -0.1
NIL Nilore 62.21 290 P P 09 20 15.1 -0.1
NIL pmax pmax
comp=Z,16nm,1.0s
ISCO Idaho Springs 62.42 60 P P 09 20 17.7 +0.9
ISCO Idaho Springs 62.42 60 P P 09 20 17.7 +0.9
ISCO pmax pmax
comp=Z,1.0nm,0.9s
NB201 NORSAR Array S 64.39 344 P P 09 20 29.9 +0.8
NB2 NORSAR Subarra 64.41 344 P P 09 20 29.7 +0.4
comp=Z,16nm,1.4s,baz=297,slow=6.9
NOA NORSAR Array B 64.41 344 P P 09 20 28.8 -0.5
comp=Z,2.8nm,1.0s,baz=21,slow=6.7,SNR=4.4
NOA LR LR 09 52 16.0
comp=Z,57nm,18.6s,baz=270,slow=40
HFS Hagfors 64.80 342 LR LR 09 54 34.8
comp=Z,197nm,18.3s,baz=14,slow=41
SCHQ Schefferville 66.63 27 P P 09 20 44.2 +0.5
comp=Z,2.1nm,0.8s,baz=6.3,slow=11,SNR=4.2
GEYT Alibeck 67.41 303 P P 09 20 48.4 -0.5
comp=Z,1.1nm,0.4s,baz=340,slow=6.6,SNR=3.3
GEYT LR LR 09 52 52.8
comp=Z,162nm,19.9s,baz=40,slow=38
GEYT Alibeck 67.41 303 P P 09 20 48.4 -0.5
MAK Makhachkala 68.67 313 eP P 09 20 56.3 -0.4
MAK eS S 09 29 57.6 +3.2
MAK pmax pmax
comp=Z,96nm,1.6s
MAK MLR MLR
comp=Z,155nm,15.0s
AKASG Malin Array Be 69.32 329 P P 09 20 59.5 -1.0
comp=Z,4.5nm,0.6s,baz=31,slow=6.5,SNR=12
AKASG LR LR 09 54 02.8
comp=Z,157nm,19.3s,baz=340,slow=38
AKASG Malin Array Be 69.32 329 P P 09 20 59.5 -1.0
AKASG Malin Array Be 69.32 329 ceP P 09 20 59.9 -0.7
AKASG pmax pmax
comp=Z,8.0nm,0.7s
AKBB Malin Array Si 69.32 329 P P 09 20 59.8 -0.7
AKBB Malin Array Si 69.32 329 P P 09 20 59.8 -0.7
AKBB pmax pmax
comp=Z,14nm,0.9s
KBZ Khabaz 70.08 317 P P 09 21 04.7 -0.6
comp=Z,2.1nm,0.7s,baz=67,slow=5.4,SNR=4.0
KBZ LR LR 09 56 31.9
comp=Z,67nm,19.5s,baz=21,slow=40
KBZ Khabaz 70.08 317 P P 09 21 04.7 -0.6
SADO Sadowa 71.02 40 LR LR 09 55 41.2
comp=Z,42nm,18.2s,baz=10,slow=39
TX31 Lajitas Ar. Si 71.25 66 P P 09 21 13.4 +0.6
TX32 Lajitas Array 71.25 66 P P 09 21 14.2 +1.4
TXAR Lajitas Array 71.25 66 P P 09 21 13.8 +1.0
comp=Z,0.8nm,0.6s,baz=297,slow=5.1,SNR=16
TXAR Lajitas Array 71.25 66 P P 09 21 13.8 +1.0
SORM Soroca 71.84 328 ⇑P P 09 21 15.1 -0.8
CLL Collm 73.18 339 eP P 09 21 25.0 +1.2
CLL e(pP) pP 09 21 42.0 +1.7
CLL Collm 73.18 339 eP P 09 21 26.0 +2.2
CLL pmax pmax
comp=Z,31nm,1.6s
BUR08 Bucovina Ar. S 73.27 330 P P 09 21 24.2 -0.4
BUR08 IAmb IAmb 09 21 30.4
comp=Z,7.3nm,0.8s
BURAR Bucovina Array 73.29 330 ⇑P P 09 21 24.8 0.0
VASR Vaslui 73.33 328 ⇓P P 09 21 24.8 0.0
TRPA Tarpa 73.64 332 ⇑P P 09 21 27.4 +0.9
VYHS Vyhne 74.35 334 eP P 09 21 32.1 +1.3
VYHS Vyhne 74.35 334 eP P 09 21 32.0 +1.3
VRI Vrincioaia 74.36 328 ⇑P P 09 21 32.2 +1.3
CFR Carcaliu 74.50 327 ⇑P P 09 21 31.2 -0.5
JURR Jurilovca 74.61 326 ⇑P P 09 21 32.1 -0.1
MLR Muntele Rosu 74.95 328 ⇑P P 09 21 35.9 +1.5
MLR Muntele Rosu 74.95 328 P P 09 21 34.7 +0.3
MLR IAmb IAmb 09 21 41.2
comp=Z,9.7nm,0.8s
MLR Muntele Rosu 74.95 328 P P 09 21 34.7 +0.3
MLR pmax pmax
comp=Z,10.0nm,0.8s
TIRR Tirgusor 75.04 326 ⇑P P 09 21 35.6 +0.8
TIRR Tirgusor 75.04 326 P P 09 21 34.9 +0.2
TIRR Tirgusor 75.04 326 P P 09 21 34.9 +0.2
TIRR pmax pmax
comp=Z,26nm,0.8s
WRAB Tennant Creek 75.08 205 ceP P 09 21 37.2 +2.0
WRAB pmax pmax
comp=Z,11nm,1.3s
ISR Istrita 75.08 328 ⇑P P 09 21 36.4 +1.3
KHC Kasperske Hory 75.08 338 eP P 09 21 36.0 +1.0
KHC ex x 09 21 40.5
KHC Kasperske Hory 75.08 338 eP P 09 21 36.0 +1.0
WRA Warramunga Arr 75.09 205 P P 09 21 35.4 +0.2
comp=Z,1.9nm,1.0s,baz=18,slow=5.9,SNR=5.6
WRA Warramunga Arr 75.09 205 P P 09 21 35.4 +0.2
VOIR 75.28 329 ⇑P P 09 21 37.4 +1.1
GERES GERESS Array B 75.32 338 P P 09 21 36.9 +0.4
comp=Z,0.3nm,0.3s,baz=45,slow=6.2,SNR=3.6
GERES LR LR 10 00 24.6
comp=Z,163nm,20.5s,baz=345,slow=40
GERES GERESS Array B 75.32 338 P P 09 21 36.9 +0.4
CONA Conrad Observa 75.65 336 i P P 09 21 36.9 -1.4
comp=Z,6.6nm,1.2s
GZR Gura Zlata 76.03 330 ⇑P P 09 21 41.4 +0.8
ILGA Ilgaz 76.05 321 P P 09 21 41.8 +0.9
MOA Molln 76.12 337 i P P 09 21 41.6 +0.7
comp=Z,8.7nm,1.8s
ARSA Arzberg 76.36 336 i P P 09 21 42.9 +0.6
comp=Z,3.7nm,0.7s
SOKA Soboth 77.02 336 i P P 09 21 45.8 -0.4
comp=Z,15nm,1.6s
KBA Koelnbreinsper 77.06 337 i P P 09 21 46.5 0.0
comp=Z,15nm,0.7s
BR131 Keskin Array S 77.22 320 P P 09 21 46.6 -0.8
BR131 IAmb IAmb 09 21 53.8
comp=Z,7.9nm,1.1s
BR131 Keskin Array S 77.22 320 P P 09 21 46.6 -0.8
BR131 pmax pmax
comp=Z,8.0nm,1.1s
BRTR Keskin Array B 77.22 320 P P 09 21 47.1 -0.3
comp=Z,1.5nm,0.7s,baz=44,slow=3.8,SNR=9.0
BRTR Keskin Array B 77.22 320 P P 09 21 47.1 -0.3

WTTA Wattenberg 77.28 338 i P P 09 21 47.2 -0.5
comp=Z,14nm,1.2s
OBKA Obir 77.30 336 i P P 09 21 49.0 +1.3
comp=Z,15nm,1.8s
MOTA Moosalm 77.33 339 i P P 09 21 48.1 +0.2
comp=Z,12nm,1.5s
SQTA Sankt Quirin 77.42 339 i P P 09 21 45.6 -2.8
comp=Z,7.3nm,1.0s
ABTA Abfaltersbach 77.57 338 i P P 09 21 48.6 -0.6
comp=Z,4.3nm,0.7s
FETA Feichten 77.72 339 i P P 09 21 48.0 -2.1
comp=Z,4.5nm,0.9s
WSAR Wadi Sarin 78.46 293 P P 09 21 53.5 -0.9
comp=Z,3.0nm,0.8s,baz=70,slow=8.4,SNR=3.6
WSAR Wadi Sarin 78.46 293 P P 09 21 53.5 -0.9
UOSS Minazif 78.48 296 P P 09 21 53.1 -1.4
UOSS IAmb IAmb 09 21 59.4
comp=Z,7.0nm,0.8s
UOSS Minazif 78.48 296 P P 09 21 58.9 +4.4
ASAR Alice Springs 78.77 204 P P 09 21 56.9 +1.1
comp=Z,2.1nm,0.8s,baz=16,slow=4.8,SNR=7.8
ASAR Alice Springs 78.77 204 P P 09 21 56.9 +1.1
ASHO Ashiyiah 78.77 296 P P 09 22 00.7 +4.6
HOQ Hoqain 78.94 294 P P 09 21 55.4 -1.6
SOHO SOHO 78.94 295 P P 09 22 00.4 +3.4
SNR=5.8
ARQ Araqi 79.57 294 P P 09 22 05.0 +4.5
SNR=6.2
BSY Bisya 79.66 294 P P 09 22 01.0 0.0
SNR=22
MANT Manisa 80.23 323 P P 09 22 03.9 -0.2
MHTO MHTO 80.60 292 P P 09 22 06.1 +0.1
SNR=50
DQM DQM 81.68 292 P P 09 22 16.7 +5.0
SNR=5.6
PPT Papeete 82.18 132 LR LR 09 51 02.1
comp=Z,64nm,21.8s,baz=288,slow=30
RAYN Ar Rayn 85.38 303 P P 09 22 30.9 +0.1
RAYN Ar Rayn 85.38 303 P P 09 22 30.9 +0.1
RAYN pmax pmax
comp=Z,12nm,0.9s
ESDC Sonseca Array 87.48 347 P P 09 22 41.1 +0.2
comp=Z,1.7nm,0.6s,baz=344,slow=2.4,SNR=4.3
ESDC Sonseca Array 87.48 347 P P 09 22 41.1 +0.2
KEST Kesra 88.75 336 LR LR 10 07 23.9
comp=Z,153nm,19.4s,baz=316,slow=39
TORD Torodi Ar. Bea 112.27 337 PP PP 09 29 10.9 -2.8
comp=Z,1.6nm,1.0s,baz=353,slow=6.3,SNR=4.4
TORD Torodi Ar. Bea 112.27 337 PP 09 29 10.9 -2.8
QSPA South Pole Qui 141.86 180 PKP PKPdf 09 29 22.4 -0.9
comp=Z,3.2nm,1.1s,baz=258,slow=1.9,SNR=5.4
PLCA Paso Flores 144.24 92 PKP PKPbc 09 29 27.4 +0.7
comp=Z,0.9nm,0.9s,baz=297,slow=6.8,SNR=2.5

UCR 28 09:11:48.9±0.9, 10.26N×85.10W, h5km±2km, MD3.6, 2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	Las Juntas de	0.15	78	eP	Pn	09 11 57.2	-0.3
JTS				eS	Sn	09 12 04.3	+0.6
ACAL	Aguas Claras	0.38	9	i P	Pn	09 11 59.3	-0.1
ACAL				i S	Sn	09 12 07.2	+0.4
CUI	Cuipilapa	0.40	351	eP	Pn	09 11 59.4	-0.1
CUI				eS	Sn	09 12 07.7	+0.5
GUAI	GUAI	0.41	271	⇓i P	Pn	09 11 59.5	0.0
COLC	Colonia	0.42	346	i P	Pn	09 11 59.6	-0.1
COLC				i S	Sn	09 12 07.8	+0.4
ARE1	Arenal 1	0.42	62	eP	Pn	09 11 59.9	+0.2
ARE1				eS	Sn	09 12 08.8	+1.3
CEDE	Laguna Cedeo	0.45	60	eP	Pn	09 12 00.1	+0.1
CEDE				i S	Sn	09 12 08.9	+0.8
LIM1	Limonal	0.46	341	i P	Pn	09 12 00.2	0.0
LIM1				i S	Sn	09 12 08.8	+0.6
GUAB	Guayabo de Bag	0.46	344	i P	Pn	09 11 60.0	-0.2
PTEN	Parque Tenorio	0.47	14	⇓i P	Pn	09 12 00.2	0.0
FORC	Fortuna	0.47	64	i P	Pn	09 12 00.2	0.0
FORC				i S	Sn	09 12 08.8	+0.5
GPS2	Hotel Rincn d	0.55	333	i P	Pn	09 12 01.3	+0.1
GPS2				i S	Sn	09 12 10.8	+0.8
GPS3	Bodega del ICE	0.56	332	i P	Pn	09 12 01.4	+0.1
GPS1	Guardaparques	0.57	334	i P	Pn	09 12 01.5	+0.1
NY14	Universidad de	0.58	312	i P	Pn	09 12 02.1	+0.7
LAPC	Finca la Perla	0.60	327	i P	Pn	09 12 01.6	-0.1
BUEV	Buena Vista	0.61	330	i P	Pn	09 12 01.9	-0.1
BUEV				eS	Sn	09 12 12.6	+1.1
GBS3	Finca Las Img	0.63	326	i P	Pn	09 12 02.0	0.0
GB1A	Borinquen Arri	0.63	332	eP	Pn	09 12 02.1	-0.1
GB1A				eS	Sn	09 12 12.7	+0.9
SRA1	San Ramn	0.63	106	eP	Pn	09 12 02.0	-0.1
SRA1				eS	Sn	09 12 12.8	+1.0
BUAI	Buenos Aires	0.66	339	i P	Pn	09 12 02.6	+0.2
HDC	Heredia	1.00	105	eP	Pn	09 12 07.0	+0.1
HDC				eS	Sn	09 12 21.7	+1.5
SJS	Escuela Geolog	1.08	107	eP	Pn	09 12 08.0	+0.1
SJS				eS	Sn	09 12 23.2	+1.2
LCR2	La Lucha 2	1.20	115	eP	Pn	09 12 09.3	-0.3
LCR2				eS	Sn	09 12 25.5	+0.6
CVTR	Volcan Turrial	1.34	100	eP	Pn	09 12 12.0	+0.3
CVTR				eS	Sn	09 12 30.1	+1.4
EDDO	Dominical	1.57	129	eP	Pn	09 12 16.0	+1.4
EDDO				eS	Sn	09 12 38.3	+4.5
EDLM	Las Mercedes	1.78	123	eP	Pn	09 12 17.3	-0.1
EDPN	Palmar Norte	2.07	128	eP	Pn	09 12 23.8	+2.6

IDC 28 09:54:26.6±2.6, 9.80S×119.62E, h0km, mb3.7/2, mb1 3.8/4, mb1mx3.5/35, mbtmp3.6/4, ML3.7/2, Error ellipse: s-maj=170.7km s-min=25.9km az=53.0
DJA 28 09:54:30.7±1.0, 10°S±8°×11°9E±°, h19km±7km, M4.0/12, mb4.0/2, MLv4.1/12

ISC 28 09:54:28.1±1.0, 10.27S±0.09×119.29E±0.05, h10km, n28, σ1.72/29, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.64	9	P	Pg	09 54 40.6	+0.2
WBSI	Waikabubak, Su	0.64	9	P	Pg	09 54 40.6	+0.2
WSI	Waingapu	1.16	59	P	Pg	09 54 47.8	-2.6
WSI	Waingapu	1.16	59	P	Pg	09 54 47.8	-2.6
BASI	Baing, Sumba	1.27	88	P	Pn	09 54 53.6	+1.7
BASI	Baing, Sumba	1.27	88	P	Pn	09 54 53.6	+1.7
PLAI	Plampang	2.07	314	P	Pn	09 55 02.5	-0.4
PLAI	Plampang	2.07	314	P	Pn	09 55 02.5	-0.4
EDFI	Ende, Flores	2.81	58	P	Pn	09 55 14.1	+0.9
EDFI	Ende, Flores	2.81	58	P	Pn	09 55 14.1	+0.9
MMRI	Maumere	3.33	61	P	Pn	09 55 22.0	+1.7
MMRI	Maumere	3.33	61	P	Pn	09 55 22.0	+1.7
DNP	Denpasar	4.32	291	P	Pn	09 55 36.0	+2.1
DNP	Denpasar	4.32	291	P	Pn	09 55 36.0	+2.1
IGBI	Denpasar	4.33	289	P	Pn	09 55 35.8	+1.7
IGBI				S	Sn	09 56 24.2	-0.5
IGBI	Denpasar	4.33	289	P	Pn	09 55 35.8	+1.7
IGBI				S	Sn	09 56 24.2	-0.5
SRBI	Singaraja	4.57	298	P	Pn	09 55 39.5	+2.1
SRBI	Singaraja	4.57	298	P	Pn	09 55 39.5	+2.1
SOEI	Soe	4.93	84	P	Pn	09 55 44.2	+1.8
SOEI	Soe	4.93	84	P	Pn	09 55 44.2	+1.8
BKSI	Bulukumba	4.99	10	P	Pn	09 55 44.3	+1.2
BKSI	Bulukumba	4.99	10	P	Pn	09 55 44.3	+1.2
JAGI	Jajag, Banyuwa	5.38	289	P	Pn	09 55 50.9	+2.5
	0.2nm42nm,0.8s						
JAGI	Jajag, Banyuwa	5.38	289	P	Pn	09 55 50.9	+2.5
	0.2nm42nm,0.8s						
WRA	Warramunga Arr	17.41	125	P	Pn	09 58 31.5	+0.2
	0.3nm,0.3s,baz=301,slow=13,SNR=2.6						
WRA				S	Sn	10 01 31.0	-14
	0.1nm,0.3s,baz=248,slow=4.5,SNR=2.6						
ASAR	Alice Springs	19.28	136	P	P	09 58 54.4	+1.2
	0.1nm,0.3s,baz=318,slow=14,SNR=13						
ASAR				S	Sn	10 02 16.6	-14
	0.1nm,0.3s,baz=308,slow=23,SNR=3.3						
SONM	Songino Array	58.97	350	P	P	10 04 25.2	-2.7
	0.5nm,0.8s,baz=174,slow=5.8,SNR=3.5						
MKAR	Makanchi Array	65.71	333	P	P	10 05 11.3	-1.6
	0.6nm,0.5s,baz=153,slow=6.6,SNR=11						

IDC 28 10:17:20.9±4.4, 6.37S×149.54E, h0km, mb2.9/1, mb1 3.3/3, mb1mx3.2/27, mbtmp3.2/3, ML2.7/2, Error ellipse: s-maj=164.8km s-min=46.5km az=116.0, New

Britain region
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
PMG Port Moresby 3.83 218 Pn Pn 10 18 23.1 +2.0
4.7nm,0.3s,baz=321,slow=6.5,SNR=11
PMG Sn Sn 10 19 03.9 -2.9
8.2nm,0.3s,baz=167,slow=22,SNR=8.3
WRA Warramunga Arr 20.00 226 P P 10 21 54.4 -0.8
0.1nm,0.3s,baz=51,slow=11,SNR=1.8
ASAR Alice Springs 22.84 220 P P 10 22 24.6 -1.3
0.3nm,0.6s,baz=57,slow=9.1,SNR=4.8
TORD Torodi Ar. Bea 147.63 284 PKPbc PKPbc 10 37 08.4 0.0
0.3nm,0.5s,baz=61,slow=2.5,SNR=2.0

IDC 28 10:17:37.7±0.7, 46.22N×142.92E, h346km±11km, mb3.3/12, mb1 3.4/20, mb1mx3.2/50, mbtmp4.0/20, Error ellipse: s-maj=20.6km s-min=11.5km az=171.0
SKHL 28 10:17:37.1±0.6, 46.04N×143.48E, h347km±9km, mb4.4/4, msh5.1/11
JMA 28 10:17:37.6±0.2, 46.09N×143.15E, h354km, M3.9
ISC 28 10:17:37.2±0.5, 46.04N±0.06×143.07E±0.07, h350km, n45, σ1.48/55, mb3.6/12, Sakhalin Island
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
YSS Yuzh-Sakhalins 0.94 347 eP Pn 10 18 23.4 +0.8
YSS AMB AMB 10 18 23.6
100nm,0.3s
YSS eS S 10 18 58.1 -1.0
YSS A A 10 18 58.7
150nm,0.7s
YSS A A 10 18 58.7
130nm,0.7s
JWK2 Keihoku 1.09 229 P Pn 10 18 24.8 +1.5
JWK2 eS S 10 19 00.4 +0.1
JSE Soyaes 1.13 198 P Pn 10 18 24.8 +1.3
JRR Rishiri 1.53 235 P Pn 10 18 26.8 +1.3
JRBN Rebuntou 1.53 247 P Pn 10 18 26.2 +0.7
JSS Shosan 1.85 208 P Pn 10 18 29.2 +1.7
ASAJ Asahikawa 1.95 190 P Pn 10 18 30.0 +1.8
ASAJ Asahikawa 1.95 190 P Pn 10 18 30.1 +1.8
11nm,0.3s,baz=16,slow=7.3,SNR=103
ASAJ S S 10 19 10.8 +1.7
baz=47,slow=32,SNR=1.3
JYG Yagishiri 1.98 216 P Pn 10 18 30.1 +1.7
JTKR Abashiri--Toko 2.15 164 P Pn 10 18 31.5 +1.9
JKK2 Kamakawa 2 2.18 186 P Pn 10 18 31.7 +1.9
JHR Hokuryu 2.48 203 P Pn 10 18 34.0 +1.8
JAR Ashorobuto 2.79 169 P Pn 10 18 36.8 +2.1
JAR eS S 10 19 22.7 +1.8
JFR Furan 2.89 187 P Pn 10 18 37.4 +1.7
JAK Akkeshi 3.26 158 P Pn 10 18 39.6 +0.7
JAK eS S 10 19 28.7 +0.1
NMR Nemuro--Hokkai 3.27 144 eP Pn 10 18 38.8 -0.3
NMR eS S 10 19 27.3 -1.6
NMR A A 10 19 27.9
80nm,0.4s
NMR A A 10 19 27.9
64nm,0.4s
AKK Akkeshi 3.28 157 eS S 10 19 27.3 -1.6
AKK A A 10 19 28.4
300nm,0.5s
AKK A A 10 19 28.4
240nm,0.5s
NEM2 Nemuro 2 3.28 144 P Pn 10 18 38.8 -0.3
NEM2 eS S 10 19 27.7 -1.3
JEW Eniwo 3.40 200 P Pn 10 18 42.6 +2.3
JCH Churui 3.43 176 P Pn 10 18 40.9 +0.3
JCH eS S 10 19 29.3 -2.3
SHO Shikotan 3.44 128 eS S 10 19 28.3 -3.4
SHO A A 10 19 33.1
190nm,0.4s
SHO A A 10 19 33.1
190nm,0.4s
JNBK Urakawa-nobuka 3.76 184 eS S 10 19 38.4 +0.9
JKB Kayabe 4.40 200 P Pn 10 18 51.1 +0.7
JKB eS S 10 19 46.0 -3.4
JOSM Okushiri--Mats 4.72 214 P Pn 10 18 54.8 +1.0
JOT Ohata 4.88 198 P Pn 10 18 55.8 +0.3
JOT eS S 10 19 55.5 -3.3
USRK Ussuriysk Ar. 8.05 261 P Pn 10 19 32.1 +0.3
baz=64,slow=13,SNR=20
KLR Kul'dur 8.28 297 P Pn 10 19 34.1 -0.4
0.5nm,0.3s,baz=107,slow=15,SNR=11
MAT Matsushiro 10.16 203 P Pn 10 19 58.7 +1.6
MJAR Matsushiro Arr 10.16 203 P P 10 19 59.4 +0.9
0.5nm,0.3s,baz=16,slow=12,SNR=39
PETK Petropavlovsk- 11.83 48 P P 10 20 16.7 0.0
0.4nm,0.3s,baz=217,slow=10,SNR=8.2
KSRS Korea Array 14.17 238 P Pn 10 20 45.0 +0.6
0.2nm,0.3s,baz=47,slow=11,SNR=4.7
MA2 Magadan 14.32 16 P P 10 20 44.4 +0.4
0.9nm,0.3s,baz=204,slow=13,SNR=5.0
SEY Seymchan 17.74 14 P P 10 21 20.6 -0.4
1.2nm,0.3s,baz=178,slow=7.7,SNR=35
SONM Songino Array 24.96 288 P P 10 22 29.8 -0.3
1.5nm,0.5s,baz=81,slow=8.7,SNR=12
ZALV Zalesovo Beam 37.31 304 P P 10 24 16.3 -0.5
0.7nm,0.4s,baz=64,slow=6.6,SNR=2.5
MKAR Makanchi Array 40.98 294 P P 10 24 45.5 -1.4
0.9nm,0.6s,baz=79,slow=8.7,SNR=15
ILAR Eielson Array 41.40 38 P P 10 24 49.2 -0.8
1.2nm,0.6s,baz=263,slow=6.6,SNR=26
YKA Yellowknife Ar 55.50 33 P P 10 26 36.4 0.0
2.6nm,0.6s,baz=308,slow=6.6,SNR=44
FINES FINESS Array B 61.49 331 P P 10 27 15.9 -1.5
0.6nm,0.6s,baz=72,slow=8.9,SNR=1.4
NOA NORSAR Array B 66.39 337 P P 10 27 48.2 -0.8
0.6nm,0.8s,baz=49,slow=7.0,SNR=1.8
NVAR Mina Array Bea 68.78 56 P P 10 28 06.0 +1.6
1.1nm,0.6s,baz=295,slow=8.1,SNR=8.1
PDAR Pinedale Array 70.60 48 P P 10 28 15.9 +0.6
1.4nm,0.7s,baz=290,slow=1.3,SNR=12
ULM Lac du Bonnet 71.38 35 P P 10 28 19.7 +0.2
3.1nm,0.5s,baz=320,slow=7.0,SNR=11
SCHQ Schefferville 76.36 17 P P 10 28 47.8 -0.4
1.6nm,1.0s,baz=289,slow=4.9,SNR=4.1
TXAR Lajitas Array 83.72 54 P P 10 29 29.5 +1.8
0.5nm,0.6s,baz=291,slow=4.2,SNR=10

ATH 28 10:18:49.0, 38.19N×20.41E, h19km±1km, ML2.6/3, Error ellipse: s-maj=2.0km s-min=1.1km az=248.0
THE 28 10:18:50.0, 38.22N×20.42E, h14km, ML2.4/2, Error ellipse: s-maj=0.8km s-min=0.6km az=257.0
ISC 28 10:18:49.2±1.1, 38.20N±0.03×20.40E±0.05, h17km±5km, n33, σ0.20/51, Greece
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
CHV1 Chavriata, Kef 0.03 217 P Pg 10 18 52.3 0.0
CHV1 S Sg 10 18 54.2 -0.1
LXR1 Lixouri, Cepha 0.03 96 P Pg 10 18 52.5 +0.2
LXR1 S Sg 10 18 54.4 0.0
LXRA Lixouri, Kepha 0.03 98 P Pg 10 18 52.5 +0.2
LXRA S Sg 10 18 54.6 +0.2
KEF3 Kipouria, Keph 0.04 269 P Pg 10 18 52.3 -0.1
KEF3 S Sg 10 18 54.3 -0.2
AGT1 Agia Thekli 0.05 344 P Pg 10 18 52.4 0.0
AGT1 S Sg 10 18 54.5 -0.1
KEF4 Livadi, Kephal 0.06 19 P Pg 10 18 52.5 +0.1
KEF4 S Sg 10 18 54.8 +0.1
ARGA Argostoli. Kep 0.07 114 P Pg 10 18 52.5 0.0
ARGA S Sg 10 18 54.3 -0.4
ARG2 Argostoli 0.07 110 P Pg 10 18 52.6 0.0
ARG2 S Sg 10 18 54.7 -0.1
KEF2 Argostoli. Kep 0.08 120 P Pg 10 18 52.7 0.0
KEF2 S Sg 10 18 54.4 -0.5
VLS Valsamata 0.15 100 P Pg 10 18 53.4 -0.1
VLS S Sg 10 18 56.3 0.0
4μm,0.1s
VLS Valsamata 0.15 100 P Pg 10 18 53.4 -0.1
VLS S Sg 10 18 56.3 0.0
VLS AML AML 10 18 56.5
comp=N,4864μm,0.1s
VLS AML AML 10 18 56.6
comp=E,8045μm,0.1s
VSK1 VASILIKIADES 0.24 32 P Pg 10 18 54.9 +0.1
VSK1 S Sg 10 18 58.2 -0.4
KONA Konidatara, Ke 0.26 31 P Pg 10 18 55.1 +0.1
KONA S Sg 10 18 59.3 +0.3
FSK Fiskardo 0.28 26 P Pg 10 18 55.5 0.0
FSK S Sg 10 18 59.6 -0.2
comp=E,660nm,0.2s
FSK Fiskardo 0.28 26 P Pg 10 18 55.5 0.0
FSK S Sb 10 19 00.2 -0.2
FSK AML AML 10 19 00.4
comp=N,874μm,0.2s
FSK AML AML 10 19 00.5
comp=E,1752μm,0.2s
VLMS Volimes, Zakyn 0.39 148 P Pg 10 18 57.1 -0.2
VLMS S Sg 10 19 02.7 0.0
VLMS AML AML 10 19 04.5
comp=E,2980μm,0.2s
VLMS AML AML 10 19 05.6
comp=N,3528μm,0.2s
EVGI Lefkada island 0.46 26 P Pg 10 18 58.5 -0.1
EVGI S Sb 10 19 05.5 0.0
EVGI Lefkada island 0.46 26 P Pg 10 18 58.5 -0.1
EVGI S Sb 10 19 05.8 +0.3
MGNA Meganis 0.55 34 P Pg 10 19 00.1 0.0
LKD2 Lefkada island 0.62 19 P Pg 10 19 01.2 -0.3
LKD2 Lefkada island 0.62 19 P Pg 10 19 01.1 -0.3
TSLK Tsoukalades, L 0.65 18 P Pg 10 19 01.9 -0.2
TSLK Tsoukalades, L 0.65 18 P Pg 10 19 01.8 -0.2
PDO Prodromos 0.73 57 P Pb 10 19 03.4 -0.1
PDO Prodromos 0.73 57 P Pb 10 19 03.4 -0.1
PVO Paravola 0.97 65 P Pg 10 19 08.3 +0.1
DRO Drossia 1.06 103 P Pn 10 19 09.6 +0.2
DRO Drossia 1.06 103 P Pn 10 19 09.6 +0.2
TRIZ Trizonia 1.32 82 P Pb 10 19 13.4 -0.2
IGT Igoumenitsa 1.33 358 P Pg 10 19 15.3 +0.4
KALE Kalithea 1.38 82 P Pb 10 19 14.4 -0.2
KLV Kalavryta, Ach 1.39 96 P Pb 10 19 14.8 +0.1
KEK Kerkira 1.58 343 P Pb 10 19 17.7 -0.2

IDC 28 10:24:05.0±8.4, 32.68S×179.76E, h319km±95km, mb3.4/2, mb1 3.7/3, mb1mx3.1/40, mbtmp4.2/3, Error ellipse: s-maj=109.6km s-min=47.8km az=0.0
WEL 28 10:24:15.8±0.3, 33°S±4°×18°0W±°, h33km, M4.6/13, mB5.0/6, ML5.1/13, MLv4.8/13, Mw(mB)4.3/6
ISC 28 10:24:07.0±0.9, 32.61S±0.09×179.2E±0.2, h300km, n26, σ1.98/36, South of Kermadec Islands
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
GLKZ Green Lake 4.13 37 P Pn 10 25 15.2 +0.5
GLKZ S S 10 26 08.8 -0.3
KUZ Kuaotunu 5.04 214 P Pn 10 25 33.9 +9.0
OUZ Omahuta 5.36 239 P Pn 10 25 39.1 +10
TWGZ Tauwhareparae 5.65 190 P Pn 10 25 35.2 +3.1
TWGZ S S 10 26 40.5 0.0
MWZ Matawai 5.88 193 P Pn 10 25 38.5 +3.7
MWZ S S 10 26 44.7 -0.8
URZ Urewera 5.90 197 P Pn 10 25 35.7 +0.7
20nm,0.3s,baz=272,slow=2.9,SNR=97
URZ S S 10 26 45.8 0.0
12nm,0.3s,baz=82,slow=22,SNR=22
RAGZ Rawiri 6.06 194 P Pn 10 25 37.9 +1.0
RAGZ S S 10 26 50.6 +1.2
RIGZ Rimuhau 6.20 191 P Pn 10 25 40.5 +1.9
RIGZ S S 10 26 49.9 -2.6
RTZ Ruatahuna 6.27 196 P Pn 10 25 42.0 +2.5
RTZ S S 10 26 52.1 -1.9
SNGZ Shannon Statio 6.35 194 P Pn 10 25 42.2 +1.8
SNGZ S S 10 26 56.2 +0.4
PRGZ Paritu Road 6.39 190 P Pn 10 25 43.6 +2.7
PRGZ S S 10 26 52.7 -4.1
KNZ Kokohu 6.52 191 P Pn 10 25 43.3 +0.9
KNZ S S 10 26 57.7 -1.8
MTHZ Maungataniwha 6.53 197 P Pn 10 25 46.0 +3.5
MTHZ S S 10 27 00.1 +0.4
RAHZ Arahi 6.53 195 P Pn 10 25 43.6 +1.1
RAHZ S S 10 27 00.2 +0.5
MHGZ Mahia Peninsul 6.62 189 P Pn 10 25 46.8 +3.2
MHGZ S S 10 27 00.6 -1.0
WHHZ Waihua 6.66 194 P Pn 10 25 47.2 +3.1
WHHZ S S 10 27 02.8 +0.4
NMHZ Naumai 6.77 196 P S 10 27 05.2 +0.1
ARHZ Aropaoanui 6.88 195 P S 10 27 05.2 -2.3
MCHZ McNeill Hill 7.12 196 P S 10 27 11.8 -1.0
KWHZ Kaweka Forest 7.17 198 P S 10 27 12.7 -1.3
CKHZ Cape Kidnapper 7.25 193 P S 10 27 11.3 -4.3
KRHZ Kereru 7.39 197 P S 10 27 17.4 -1.4
KAHZ Kahuranaki 7.42 194 P S 10 27 17.6 -1.9
ASAR Alice Springs 40.70 271 P P 10 31 19.2 0.0
0.4nm,0.3s,baz=97,slow=7.9,SNR=5.3
WRA Warramunga Arr 41.90 276 P P 10 31 28.6 -0.3
1.6nm,0.3s,baz=113,slow=7.6,SNR=7.1
FINES FINESS Array B 146.33 337 PKPbc PKPdf 10 43 07.3 -2.7
1.0nm,0.7s,baz=42,slow=5.9,SNR=4.3

BJI 28 10:29:56.0±0.0, 4.50S×125.80E, h416km, mB4.6/41, mb4.4/52
IDC 28 10:29:57.3±0.8, 4.46S×125.77E, h400km±8km, mb4.1/37, mb1 4.1/41, mb1mx4.1/53, mbtmp4.8/41, Error ellipse: s-maj=9.1km s-min=5.5km az=72.0
DJA 28 10:29:57.7±0.1, 4°S±1°×12°6E±°, h411km±1km, M4.6/68, mb4.9/68, mB5.1/37, MLv5.3/29, Mw(mB)4.4/37, Mwp5.2/2
NEIC 28 10:29:58.0±0.8, 4.44S±0.04×125.78E±0.07, h408km±4km, mb4.6/78, Error ellipse: s-maj=9.9km s-min=6.1km az=77.0
KLM 28 10:29:59.0, 4.42S×125.90E, h403km, mb5.1
ISC 28 10:29:57.8±0.5, 4.45S±0.04×125.83E±0.04, h408km±4km, n357, σ1.27/427, mb4.5/76, 1D, Banda Sea
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
NLAI Namlea 1.75 47 P P 10 30 53.3 +0.2
NLAI S S 10 31 36.7 -1.1
NLAI Namlea 1.75 47 P P 10 30 53.3 +0.2
NLAI S S 10 31 36.7 -1.1
SANI Sanana 2.39 4 P P 10 30 57.2 +0.1
SANI S S 10 31 44.1 -1.0
SANI Sanana 2.39 4 P P 10 30 57.2 +0.1
SANI S S 10 31 44.1 -1.0
AAI Ambon 2.48 72 P P 10 30 57.0 -0.7
AAI S S 10 31 45.2 -1.0
AAI Ambon 2.48 72 P P 10 30 57.0 -0.7
AAI S S 10 31 45.2 -1.0
KDI Kendari 3.24 279 P P 10 31 04.4 +0.9
KDI Kendari 3.24 279 P P 10 31 04.4 +0.9
MSAI Masohi 3.28 71 P P 10 31 03.8 -0.1
MSAI S S 10 31 53.6 -4.0
MSAI Masohi 3.28 71 P P 10 31 03.8 -0.1
MSAI S S 10 31 53.6 -4.0
BBSI Bau Bau 3.41 252 P P 10 31 06.8 +1.8
BBSI S S 10 32 00.7 +1.2
BBSI Bau Bau 3.41 252 P P 10 31 06.8 +1.8
BBSI S S 10 32 00.7 +1.2
BNDI Bandanaira 4.06 91 P P 10 31 10.9 0.0
BNDI S S 10 32 09.8 -0.6
BNDI Bandanaira 4.06 91 P P 10 31 10.9 0.0
BNDI S S 10 32 09.8 -0.6
LBMI Labuha 4.14 24 P P 10 31 12.7 +1.1
LBMI S S 10 32 13.0 +1.2
LBMI Labuha 4.14 24 P P 10 31 12.7 +1.1
LBMI S S 10 32 13.0 +1.2
LUWI Luwuk 4.56 318 P P 10 31 16.7 +1.0
LUWI S S 10 32 18.5 -0.7
LUWI Luwuk 4.56 318 P P 10 31 16.7 +1.0
LUWI S S 10 32 18.5 -0.7
LUWI Luwuk 4.56 318 P P 10 31 16.6 +0.9
LUWI S S 10 32 19.2 0.0
KMSI Cibinong 5.32 340 P P 10 31 25.0 +1.6
7.5nm6μm642nm,0.7s
KMSI S S 10 32 34.8 +1.4
7.5nm6μm642nm,0.7s
KMSI Cibinong 5.32 340 P P 10 31 25.0 +1.6
7.5nm6μm642nm,0.7s
KMSI S S 10 32 34.8 +1.4
7.5nm6μm642nm,0.7s
TNTI Ternate 5.41 17 P P 10 31 24.7 +0.4
0.8nm2μm214nm,1.1s
TNTI S S 10 32 34.5 -0.6
0.8nm2μm214nm,1.1s
TNTI Ternate 5.41 17 P P 10 31 24.7 +0.4
0.8nm2μm214nm,1.1s
TNTI S S 10 32 34.5 -0.6
0.8nm2μm214nm,1.1s
TNTI Ternate 5.41 17 P P 10 31 24.4 +0.1
TNTI S S 10 32 34.4 -0.7
APSI Ampana 5.46 310 P P 10 31 25.8 +1.0
1.5nm5μm451nm,1.0s
APSI Ampana 5.46 310 P P 10 31 25.8 +1.0
1.5nm5μm451nm,1.0s
MMRI Maumere 5.48 220 P P 10 31 26.9 +1.9
0.8nm3μm236nm,1.0s
MMRI Maumere 5.48 220 P P 10 31 26.9 +1.9
0.8nm3μm236nm,1.0s
MMRI Maumere 5.48 220 P 10 31 26.5 +1.5
MMRI S S 10 32 37.5 +1.2
SOEI Soe 5.49 196 P P 10 31 26.8 +1.5
1.5nm3μm87nm,0.8s
SOEI Soe 5.49 196 P P 10 31 26.8 +1.5
1.5nm3μm87nm,0.8s
SOEI Soe 5.49 196 P 10 31 26.4 +1.1
BNSI Bone 5.71 270 P P 10 31 29.0 +1.6
9.3nm28μm3μm,0.8s
BNSI Bone 5.71 270 P P 10 31 29.0 +1.6
9.3nm28μm3μm,0.8s
BKSI Bulukumba 5.75 261 P P 10 31 29.1 +1.2
7.3nm17μm2μm,0.8s
BKSI S S 10 32 42.7 +1.1
7.3nm17μm2μm,0.8s
BKSI Bulukumba 5.75 261 P P 10 31 29.1 +1.2
7.3nm17μm2μm,0.8s
BKSI S S 10 32 42.7 +1.1
7.3nm17μm2μm,0.8s
EDFI Ende, Flores 5.93 224 P P 10 31 31.1 +1.3
0.3nm762nm103nm,0.8s
EDFI S S 10 32 46.7 +1.4
0.3nm762nm103nm,0.8s
EDFI Ende, Flores 5.93 224 P P 10 31 31.1 +1.3
0.3nm762nm103nm,0.8s
EDFI S S 10 32 46.7 +1.4
0.3nm762nm103nm,0.8s
SPSI Sidrap Palu 6.06 274 P P 10 31 32.2 +1.0
7.1nm16μm2μm,0.8s
SPSI S S 10 32 49.2 +1.5
7.1nm16μm2μm,0.8s
SPSI Sidrap Palu 6.06 274 P P 10 31 32.2 +1.0
7.1nm16μm2μm,0.8s
SPSI S S 10 32 49.2 +1.5
7.1nm16μm2μm,0.8s
KAPI Kappang 6.08 264 P P 10 31 32.2 +0.8
106nm,0.3s,baz=98,slow=4.0,SNR=89
KAPI S S 10 32 44.6 -3.5
baz=106,slow=20,SNR=0.5
TTSI Tana Toraja 6.16 283 P P 10 31 33.9 +1.7
1.5nm5μm550nm,1.0s
TTSI S S 10 32 50.2 +0.6
1.5nm5μm550nm,1.0s
TTSI Tana Toraja 6.16 283 P P 10 31 33.9 +1.7
1.5nm5μm550nm,1.0s
TTSI S S 10 32 50.2 +0.6
1.5nm5μm550nm,1.0s
MRSI Marisa 6.25 321 P P 10 31 33.9 +0.7
2.9nm7μm859nm,0.8s
MRSI S S 10 32 50.2 -1.3
2.9nm7μm859nm,0.8s
MRSI Marisa 6.25 321 P P 10 31 33.9 +0.7
2.9nm7μm859nm,0.8s
MRSI S S 10 32 50.2 -1.3
2.9nm7μm859nm,0.8s
SAUI Saumlaki 6.47 123 P P 10 31 36.1 +0.5
2.3nm8μm515nm,0.6s
SAUI S S 10 32 55.9 0.0
2.3nm8μm515nm,0.6s
SAUI Saumlaki 6.47 123 P P 10 31 36.1 +0.5
2.3nm8μm515nm,0.6s
SAUI S S 10 32 55.9 0.0
2.3nm8μm515nm,0.6s
SAUI Saumlaki 6.47 123 P 10 31 35.3 -0.3
SIJI Sorong 6.49 57 P P 10 31 37.3 +1.4
25nm,0.3s,baz=222,slow=7.6,SNR=62
SIJI S S 10 32 54.6 -1.7
15nm,0.3s,baz=227,slow=9.0,SNR=3.6
FAKI Fak Fak 6.58 77 P P 10 31 37.3 -0.3
7.1nm13μm1μm,0.7s
FAKI Fak Fak 6.58 77 P P 10 31 37.3 -0.3
7.1nm13μm1μm,0.7s
FAKI Fak Fak 6.58 77 P 10 31 36.8 -0.8
FAKI S S 10 32 52.6 -5.6
WSI Waingapu 7.55 226 P P 10 31 45.4 -2.8
WSI Waingapu 7.55 226 P P 10 31 45.4 -2.8
MPSI Mapaga 7.60 309 P P 10 31 48.6 -0.2
0.8nm4μm162nm,0.7s
MPSI Mapaga 7.60 309 P P 10 31 48.6 -0.2
0.8nm4μm162nm,0.7s
BASI Baing, Sumba 7.74 222 P P 10 31 49.7 -0.7
1.5nm2μm102nm,0.8s
BASI Baing, Sumba 7.74 222 P P 10 31 49.7 -0.7
1.5nm2μm102nm,0.8s
WBSI Waikabubak, Su 8.21 231 P P 10 31 53.8 -1.7
1μm70nm,0.8s
WBSI Waikabubak, Su 8.21 231 P P 10 31 53.8 -1.7
1μm70nm,0.8s
RKPI Ransiki, Papua 8.83 71 P P 10 32 03.7 +1.3
17μm292nm,0.7s
RKPI Ransiki, Papua 8.83 71 P P 10 32 03.7 +1.3
17μm292nm,0.7s
PLAI Plampang 9.10 241 P P 10 32 05.7 +0.3
860nm49nm,0.9s
PLAI Plampang 9.10 241 P P 10 32 05.7 +0.3
860nm49nm,0.9s
BKB Balikpapan 9.47 289 P P 10 32 10.5 +1.1
9μm839nm,0.9s
BKB Balikpapan 9.47 289 P P 10 32 10.5 +1.1
9μm839nm,0.9s
BKB Balikpapan 9.47 289 Pn P 10 32 12.6 +3.2
SMKI Samarinda 9.48 295 P P 10 32 10.2 +0.6
8μm685nm,1.1s
SMKI Samarinda 9.48 295 P P 10 32 10.2 +0.6
8μm685nm,1.1s
KBKI Kotabaru 9.71 276 P P 10 32 13.0 +0.9
2μm148nm,1.2s
KBKI Kotabaru 9.71 276 P P 10 32 13.0 +0.9
2μm148nm,1.2s
MTN Manton Dam 9.85 148 P P 10 32 13.9 +0.3
SRBI Singaraja 11.15 251 P P 10 32 28.6 +0.6
50nm,0.8s
SRBI Singaraja 11.15 251 P P 10 32 28.6 +0.6
50nm,0.8s
KNRA Kununurra 11.52 166 P P 10 32 32.8 +0.7
KMMI Kalianget 12.08 257 P P 10 32 41.0 +2.7
158nm,1.1s
KMMI Kalianget 12.08 257 P P 10 32 41.0 +2.7
158nm,1.1s
JAGI Jajag, Banyuwa 12.27 250 P P 10 32 39.9 -0.5
2μm77nm,0.8s
JAGI Jajag, Banyuwa 12.27 250 P P 10 32 39.9 -0.5
2μm77nm,0.8s
JAGI Jajag, Banyuwa 12.27 250 P P 10 32 40.2 -0.2
GMJI Gumukmas 12.88 252 P P 10 32 46.7 -0.3
949nm73nm,1.1s
GMJI Gumukmas 12.88 252 P P 10 32 46.7 -0.3
949nm73nm,1.1s
SMPI Sarmi 13.09 80 P P 10 32 50.8 +1.4
219nm,0.9s
SMPI Sarmi 13.09 80 P P 10 32 50.8 +1.4
219nm,0.9s
GRJI Gresik 13.51 259 P P 10 32 56.0 +2.1
2μm251nm,0.7s
GRJI Gresik 13.51 259 P P 10 32 56.0 +2.1
2μm251nm,0.7s
FITZ Fitzroy Crossi 13.57 181 P P 10 32 54.5 0.0
13nm,0.3s,baz=15,slow=8.8,SNR=188
FITZ S S 10 35 16.8 -3.8
1.8nm,0.3s,baz=138,slow=17,SNR=19
KKM Kota Kinabalu 14.17 317 P P 10 33 01.5 +0.2
PWJI Pagerwojo 14.38 255 P P 10 33 01.7 -1.8
46nm,0.7s
PWJI Pagerwojo 14.38 255 P P 10 33 01.7 -1.8
46nm,0.7s
GENI Genyem 14.43 83 P P 10 33 05.1 +1.1
10μm2μm,0.8s
GENI Genyem 14.43 83 P P 10 33 05.1 +1.1
10μm2μm,0.8s
UWJI Ujung Watu 14.94 262 P P 10 33 10.2 +0.7
3μm204nm,0.8s
UWJI Ujung Watu 14.94 262 P P 10 33 10.2 +0.7
3μm204nm,0.8s
JAY Jayapura 14.97 83 P P 10 33 10.4 +0.5
1μm147nm,0.8s
JAY Jayapura 14.97 83 P P 10 33 10.4 +0.5
1μm147nm,0.8s
MMPI Merauke 15.00 106 P P 10 33 09.9 -0.2

80nm2.6nm,0.7s
MMPI Merauke 15.00 106 P P 10 33 09.9 -0.2
80nm2.6nm,0.7s
STKI Sintang 15.02 287 P P 10 33 11.5 +1.1
170nm,1.0s
STKI Sintang 15.02 287 P P 10 33 11.5 +1.1
170nm,1.0s
PCJI Pacitan 15.03 255 P P 10 33 09.1 -1.3
2μm134nm,1.1s
PCJI Pacitan 15.03 255 P P 10 33 09.1 -1.3
2μm134nm,1.1s
WOJI Wonogiri, Jawa 15.20 256 P P 10 33 11.8 -0.4
72nm,1.1s
WOJI Wonogiri, Jawa 15.20 256 P P 10 33 11.8 -0.4
72nm,1.1s
SBUM Sibu 15.23 296 P P 10 33 14.5 +1.9
SBUM Sibu 15.23 296 P P 10 33 15.0 +2.4
SMRI Semarang 15.53 260 P P 10 33 17.4 +1.6
351nm,0.9s
SMRI Semarang 15.53 260 P P 10 33 17.4 +1.6
351nm,0.9s
SMRI Semarang 15.53 260 P P 10 33 17.1 +1.3
UGM Wanagama 15.60 257 P P 10 33 16.4 -0.2
KSM Kuching 16.59 290 P P 10 33 27.8 +0.6
KPJI Karang Pucung 17.05 260 P P 10 33 31.3 -0.8
1μm83nm,0.6s
KPJI Karang Pucung 17.05 260 P P 10 33 31.3 -0.8
1μm83nm,0.6s
WB0 Warramunga Arr 17.36 152 P P 10 33 34.9 -0.5
WB0 IAmb IAmb 10 33 37.9
comp=Z,30nm,0.8s
WRAB Tennant Creek 17.49 152 P P 10 33 36.1 -0.6
WRAB IAmb IAmb 10 33 37.7
comp=Z,20nm,0.7s
WRA Warramunga Arr 17.49 152 P P 10 33 35.8 -1.0
comp=Z,5.4nm,0.3s,baz=329,slow=11,SNR=57
WRA S S 10 36 35.2 -2.7
comp=Z,3.3nm,0.3s,baz=326,slow=19,SNR=19
WB2 Warramunga Arr 17.50 152 P P 10 33 36.5 -0.3
WB2 IAmb IAmb 10 33 37.8
comp=Z,19nm,0.7s
WR0 Warramunga Arr 17.60 152 P P 10 33 37.6 -0.3
PSA00 Pilbara Seismi 17.98 198 P P 10 33 40.5 -1.4
CISI Cisompet, Garu 18.18 259 P P 10 33 41.7 -2.4
comp=Z,3μmcomp=Z,196nm,0.7s
CISI Cisompet, Garu 18.18 259 P P 10 33 41.7 -2.4
comp=Z,3μmcomp=Z,196nm,0.7s
CISI Cisompet, Garu 18.18 259 P P 10 33 42.4 -1.7
CNJI Cibinong 18.82 260 P P 10 33 47.9 -2.8
comp=Z,1μmcomp=Z,106nm,0.8s
CNJI Cibinong 18.82 260 P P 10 33 47.9 -2.8
comp=Z,1μmcomp=Z,106nm,0.8s
COEN Coen 19.54 120 P P 10 33 57.4 -0.2
COEN IAmb IAmb 10 33 58.8
comp=Z,37nm,0.9s
AS31 Alice Springs 20.63 159 P P 10 34 08.2 +0.6
AS31 IAmb IAmb 10 34 10.3
comp=Z,12nm,0.5s
ASAR Alice Springs 20.63 159 P P 10 34 08.4 +0.8
comp=Z,23nm,0.5s,baz=344,slow=14,SNR=260
ASAR S S 10 37 30.9 -0.5
comp=Z,39nm,0.9s,baz=348,slow=21,SNR=26
ASAR PcP PcP 10 38 00.5 +0.2
comp=Z,5.3nm,0.5s,baz=2.3,slow=1.7,SNR=7.2
KLSI 21.03 269 P P 10 34 11.5 +0.2
comp=Z,5μmcomp=Z,10nm,0.8s
KLSI 21.03 269 P P 10 34 11.5 +0.2
comp=Z,5μmcomp=Z,10nm,0.8s
GIRL Giralia 21.28 211 P P 10 34 13.9 +0.5
MDSI Maura Dua 21.59 269 P P 10 34 15.2 -1.1
comp=Z,9.6nm,1.5s
MDSI Maura Dua 21.59 269 P P 10 34 15.2 -1.1
comp=Z,9.6nm,1.5s
PMG Port Moresby 21.73 104 P P 10 34 18.5 +0.8
comp=Z,66nm,0.8s,baz=289,slow=1.6,SNR=18
PMG Port Moresby 21.73 104 P P 10 34 18.5 +0.8
CTA Charters Tower 25.24 130 P P 10 34 50.6 +1.4
comp=Z,4.6nm,0.9s,baz=328,slow=13,SNR=2.4
CTA ScP ScP 10 41 11.3 +1.4
comp=Z,15nm,0.9s,baz=329,slow=5.9,SNR=7.4
MORW Morawa 26.18 200 P P 10 34 56.3 -1.1
FORT Forrest 26.27 176 P P 10 34 58.6 +0.4
KULM Kulim 26.95 291 P P 10 35 05.2 +0.8
KULM IAmb IAmb 10 35 06.8
comp=Z,22nm,1.2s
RPSI Rantau Prapat 27.80 284 P P 10 35 12.0 0.0
RPSI IAmb IAmb 10 35 13.6
comp=Z,17nm,1.1s
RPSI Rantau Prapat 27.80 284 P P 10 35 11.7 -0.2
PSI Prapat 27.83 285 P P 10 35 11.7 -0.6
comp=Z,5.1nm,0.4s,baz=138,slow=8.2,SNR=4.0
TPUB Ta-pu 28.05 350 P P 10 35 13.3 -0.6
TPUB IAmb IAmb 10 35 13.9
comp=Z,22nm,0.8s
UBPT Khong Chiam 28.12 315 P P 10 35 14.1 -0.6
NWAO Narrogin (SRO) 29.45 195 P P 10 35 25.9 -0.2
comp=Z,9.6nm,0.4s,baz=25,slow=8.6,SNR=21
NWAO Narrogin (SRO) 29.45 195 P P 10 35 26.0 -0.2
NWAO IAmb IAmb 10 35 26.5
comp=Z,16nm,0.7s
BBOO Buckleboo 29.79 162 P P 10 35 29.4 +0.3
STKA Stephens Creek 31.04 153 P P 10 35 40.8 +0.8
comp=Z,10nm,0.5s,baz=333,slow=8.5,SNR=40
STKA ScP ScP 10 41 27.4 -0.4
comp=Z,7.2nm,0.7s,baz=337,slow=6.6,SNR=6.6
STKA Stephens Creek 31.04 153 P P 10 35 40.9 +0.8
JOW Kunigami 31.19 4 P P 10 35 41.2 -0.1
comp=Z,0.7nm,0.6s,baz=186,slow=16,SNR=4.6
CM31 Chiang Mai Arr 34.93 311 P P 10 36 14.8 +1.3
CMAR Chiang Mai Arr 34.93 311 P P 10 36 14.1 +0.5
comp=Z,4.2nm,0.7s,baz=136,slow=6.8,SNR=23
CMAR PcP PcP 10 38 36.8 +1.3
comp=Z,7.5nm,0.9s,baz=171,slow=2.4,SNR=19
CMAR ScP ScP 10 41 42.8 +1.1
comp=Z,2.3nm,0.7s,baz=168,slow=2.5,SNR=11
JCJ Chichijima 35.12 26 P P 10 36 14.9 -0.1
comp=Z,42nm,0.7s,baz=99,slow=24,SNR=5.8
CHTO Chiang Mai 35.15 312 P P 10 36 16.1 +0.7
CHTO PcP PcP 10 38 37.5 +1.3
GYA Guiyang 35.90 330 P P 10 36 31.5 +10
GYA pP PP 10 37 50.0 -4.3
GYA sP PcP 10 38 35.8 -2.6
GYA S S 10 41 47.0 +18
GYA sS sS 10 44 06.0 +20
WHN Wuhan 36.49 343 P P 10 36 27.0 +0.7
WHN pmax pmax
comp=Z,46nm,0.9s
NJ2 Nanjing 36.90 350 eP P 10 36 32.5 +2.8
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
CAN Canberra 37.45 148 P P 10 36 36.6 +2.2
CAN IAmb IAmb 10 36 37.1
comp=Z,16nm,0.9s
TOO Toolangi 37.55 154 P P 10 36 37.3 +2.1
TOO IAmb IAmb 10 36 38.1
comp=Z,21nm,1.2s
JNU Nakatsue 37.67 7 P P 10 36 35.7 -0.5
comp=Z,4.9nm,0.7s,baz=18,slow=4.0,SNR=4.2
JNU Nakatsue 37.67 7 P P 10 36 35.1 -1.1
ENH Enshi 37.91 337 P P 10 36 38.4 +0.3
ENH IAmb IAmb 10 36 39.0
comp=Z,15nm,0.6s
CD2 Chengdu 41.00 331 eP P 10 37 05.0 +1.6
XAN Xi'an 41.48 339 P P 10 37 06.3 -0.9
XAN pmax pmax
comp=Z,16nm,0.7s
XAN Xi'an 41.48 339 P P 10 37 06.1 -1.0
XAN PcP PcP 10 38 56.8 +0.9
KSRS Korea Array 41.73 3 P P 10 37 09.1 +0.1
comp=Z,4.9nm,0.8s,baz=181,slow=10.0,SNR=14
KSRS PcP PcP 10 38 57.4 +0.9
comp=Z,5.1nm,0.8s,baz=175,slow=3.9,SNR=10.0
MJAR Matsushiro Arr 42.39 15 P P 10 37 13.6 -0.7
comp=Z,8.4nm,0.8s,baz=189,slow=8.5,SNR=15
MJAR PcP PcP 10 38 58.9 0.0
comp=Z,5.4nm,1.0s,baz=182,slow=5.0,SNR=6.1
MAJO Matsushiro 42.39 15 P P 10 37 14.1 -0.2
MAT Matsushiro 42.39 15 P P 10 37 13.7 -0.6
SHL Shillong 44.44 314 P P 10 37 30.4 -0.4
BJT Baijiatuau 45.13 350 P P 10 37 35.2 -0.6
BJI Beijing 45.15 350 P P 10 37 35.0 -0.9
BJI pmax pmax
comp=Z,8.0nm,0.7s
LZH Lanzhou 45.28 335 eP P 10 37 37.5 +0.3
LZH PP PP 10 39 29.3 -0.8
LZH sP sP 10 39 43.5 +0.1
LZH pmax pmax
comp=Z,29nm,1.2s
LZH pmax pmax
comp=Z,63nm,5.4s
HHC Hu-ho-hao-te 46.94 345 eP P 10 37 51.8 +2.0
HHC pmax pmax
comp=Z,7.0nm,1.0s
HHC pmax pmax
comp=Z,51nm,4.2s
LSA Lhasa 47.52 318 P P 10 37 55.8 +1.0
ODAN Odare 48.47 312 eP P 10 38 01.7 -0.1
comp=Z,15nm,0.5s
TAPN Taplejung 48.51 313 eP P 10 38 01.9 -0.3
comp=Z,15nm,0.3s
USRK Ussuriysk Ar. 48.74 6 P P 10 38 03.5 +0.3
comp=Z,12nm,0.7s,baz=189,slow=7.4,SNR=21
USRK PcP PcP 10 39 20.7 -0.3
comp=Z,1.9nm,0.6s,baz=253,slow=2.0,SNR=4.3
USA0B Ussuriysk Arra 48.74 6 P P 10 38 03.9 +0.7
USA0B IAmb IAmb 10 38 04.4
comp=Z,14nm,0.8s
MDJ Mudanjiang 48.96 4 P P 10 38 05.3 +0.5
MDJ pmax pmax
comp=Z,35nm,1.0s
MDJ pmax pmax
comp=Z,110nm,4.3s
MDJ Mudanjiang 48.96 4 P P 10 38 04.3 -0.5
MDJ IAmb IAmb 10 38 06.9
comp=Z,26nm,0.9s
RAMN Ramite 49.11 312 eP P 10 38 06.7 +0.1
comp=Z,36nm,0.6s
JIRN Jiri 49.80 312 eP P 10 38 11.9 0.0
comp=Z,26nm,0.6s
GTA Gaotai 49.80 334 ⇓P P 10 38 11.8 +0.4
GTA PcP PcP 10 39 26.5 +1.3
GTA pP pP 10 39 33.3 -0.2
GTA sP sP 10 40 16.3 -2.5
GTA ScP ScP 10 42 43.0 +1.9
GTA pmax pmax
comp=Z,15nm,0.9s
GTA pmax pmax
comp=Z,110nm,5.7s
GUN Gumba 50.17 312 eP P 10 38 14.4 -0.2
comp=Z,40nm,0.7s
PKI Pulchoki 50.33 312 eP P 10 38 15.1 -0.7
PKIN Phulchoki 50.34 312 eP P 10 38 15.3 -0.5
comp=Z,9.5nm,0.5s
DMN Daman 50.58 311 eP P 10 38 17.3 -0.2
ASAJ Asahikawa 50.65 16 P P 10 38 18.4 +1.1
comp=Z,16nm,0.8s,baz=218,slow=12,SNR=5.2
JKA Kamikawa-asahi 50.65 16 P P 10 38 18.4 +1.1
DANN Dangsing 51.98 311 eP P 10 38 27.5 -0.3
comp=Z,44nm,0.7s
DGAR Diego Garcia 53.15 264 P P 10 38 35.8 -0.4
KLR Kul'dur 53.71 5 P P 10 38 39.3 -0.2
comp=Z,2.9nm,0.7s,baz=229,slow=3.5,SNR=10
KLR PcP PcP 10 39 39.7 +0.2
comp=Z,2.7nm,0.8s,baz=252,slow=2.4,SNR=7.7
ULN Ulaanbaatar 54.65 345 P P 10 38 46.5 +0.1
SONM Songino Array 54.79 344 P P 10 38 47.4 0.0
comp=Z,6.7nm,0.8s,baz=162,slow=8.2,SNR=34
SONM PcP PcP 10 39 44.5 +0.5
comp=Z,4.3nm,0.9s,baz=153,slow=3.9,SNR=9.4
RPZ Rata Peaks 55.79 142 P P 10 38 55.0 +0.6
comp=Z,17nm,0.7s,baz=224,slow=3.6,SNR=6.5
RPZ Rata Peaks 55.79 142 P P 10 38 55.5 +1.1
RPZ IAmb IAmb 10 39 11.3
comp=Z,22nm,1.1s
TUWZ Tuamarina 56.54 138 P P 10 39 00.2 +0.6
KHZ Kahutara 56.73 139 P P 10 39 01.8 +0.9
BKZ Black Stump Fm 57.33 134 P P 10 39 05.8 +0.5
BKZ IAmb IAmb 10 39 25.0
comp=Z,36nm,1.4s
URZ Urewera 57.42 133 P P 10 39 05.7 -0.1
comp=Z,6.1nm,0.5s,baz=258,slow=1.9,SNR=6.0
URZ Urewera 57.42 133 P P 10 39 05.7 -0.1
URZ IAmb IAmb 10 39 18.1
comp=Z,53nm,1.5s
MXZ Matakaoa Point 58.04 132 P P 10 39 11.2 +1.2
WMQ Urumqi 59.04 329 P P 10 39 17.3 +0.5
WMQ PcP PcP 10 40 02.3 +1.6
WMQ pP pwP 10 40 47.0 +1.1
WMQ pmax pmax
comp=Z,15nm,1.3s
WMQ pmax pmax
comp=Z,130nm,4.7s
NIL Nilore 62.43 312 P P 10 39 39.4 -0.1
NIL IAmb IAmb 10 39 39.9
comp=Z,13nm,0.6s
PEA0B Petropavlovsk- 63.32 21 P P 10 39 46.5 +1.6
PEA0B IAmb IAmb 10 39 47.9
comp=Z,47nm,1.3s
PETK Petropavlovsk- 63.32 21 P P 10 39 46.4 +1.5
comp=Z,11nm,0.6s,baz=191,slow=6.7,SNR=13
PETK PcP PcP 10 40 18.2 +0.3
comp=Z,7.2nm,0.7s,baz=199,slow=6.9,SNR=5.7
KSH Kashi 63.36 319 P P 10 39 46.3 +0.7
KSH PcP PcP 10 40 22.5 +4.0
KSH PP PP 10 42 12.3 +1.0
KSH S S 10 47 39.8 -5.5
KSH pmax pmax
comp=Z,13nm,0.6s
KSH pmax pmax
comp=Z,180nm,5.4s
PET Petropavlovsk 63.60 21 P P 10 39 46.8 +0.1
PET IAmb IAmb 10 39 49.1
comp=Z,23nm,0.9s
MK31 Makanchi Array 63.86 328 P P 10 39 48.6 +0.1
MK31 IAmb IAmb 10 39 49.3
comp=Z,10nm,0.8s
MKAR Makanchi Array 63.86 328 P P 10 39 48.4 -0.2
comp=Z,13nm,0.7s,baz=128,slow=7.9,SNR=149
MKAR PcP PcP 10 40 20.3 0.0
comp=Z,6.4nm,0.8s,baz=130,slow=4.9,SNR=11
MAKZ Makanchi 64.03 328 P P 10 39 49.5 -0.2
MAKZ IAmb IAmb 10 39 50.3
comp=Z,12nm,1.0s
UCH Uchtor 65.72 321 P P 10 40 01.9 +0.9
SNR=7.8
AAK Ala-Archa 65.94 321 P P 10 40 02.6 +0.6
comp=Z,7.0nm,0.7s,baz=121,slow=5.3,SNR=17
AAK PcP PcP 10 40 30.3 +1.1
comp=Z,1.8nm,0.6s,baz=242,slow=2.1,SNR=4.8
AAK Ala-Archa 65.94 321 P P 10 40 02.7 +0.6
SNR=6.2
AAK Ala-Archa 65.94 321 P P 10 40 02.2 +0.1
AAK IAmb IAmb 10 40 03.5
comp=Z,7.4nm,0.8s
KBL Kabul 65.96 311 P P 10 40 01.4 -1.1
KBL IAmb IAmb 10 40 03.2
comp=Z,9.8nm,0.8s
AML Almayashu 66.19 320 P P 10 40 04.4 +0.5
SNR=11
USP Ospenovka 66.27 321 P P 10 40 04.2 +0.2
SNR=11
YAK Yakutsk 66.36 2 P P 10 40 04.7 +0.6
comp=Z,16nm,0.6s,baz=5.6,slow=1.6,SNR=16
YAK Yakutsk 66.36 2 P P 10 40 04.2 +0.1
EKS2 Erkin-Say 66.41 321 P P 10 40 05.1 +0.1
SNR=6.5
MA2 Magadan 66.81 14 P P 10 40 07.7 +0.7
MA2 IAmb IAmb 10 40 09.2
comp=Z,19nm,1.0s
ZAA0 Zalesovo Array 67.51 335 P P 10 40 10.2 -1.2
ZAA0 IAmb IAmb 10 40 11.2
comp=Z,16nm,0.9s
ZALV Zalesovo Beam 67.51 335 P P 10 40 10.2 -1.1
comp=Z,13nm,0.8s,baz=123,slow=4.4,SNR=34
KURBB Kurchatov Arra 68.21 330 P P 10 40 15.2 -0.5
comp=Z,12nm,0.8s,baz=131,slow=5.4,SNR=82
KURK Kurchatov 68.22 330 P P 10 40 14.7 -1.1
KURK IAmb IAmb 10 40 16.4
comp=Z,24nm,0.8s
KK31 Karatay Array 68.71 320 P P 10 40 18.3 -0.7
KKAR Karatay Array 68.71 320 P P 10 40 18.4 -0.6
HRA Herat 71.13 308 P P 10 40 32.3 -1.7
SOCY Socotra 73.28 284 P P 10 40 45.2 -1.6
SOCY IAmb IAmb 10 40 47.1
comp=Z,10.0nm,0.6s
UOSS Minazif 73.57 297 P P 10 40 46.6 -1.6
BVAR Borovoye Array 73.73 329 P P 10 40 48.2 -0.2
comp=Z,6.8nm,0.8s,baz=140,slow=7.8,SNR=23
BRVK Borovoye 73.80 329 P P 10 40 47.8 -1.1
BRVK IAmb IAmb 10 40 49.6
comp=Z,11nm,1.1s
GEYT Alibeck 75.41 311 P P 10 40 59.0 +0.5
comp=Z,2.1nm,0.5s,baz=155,slow=4.9,SNR=5.6
VNDA Vanda 75.48 172 P P 10 40 58.0 0.0
comp=Z,5.7nm,0.7s,baz=330,slow=4.1,SNR=8.1
MAW Mawson 75.82 201 P P 10 41 00.7 +0.7
comp=Z,12nm,0.7s,baz=83,slow=10,SNR=6.1
MAW Mawson 75.82 201 P P 10 41 00.4 +0.3
TIXI Tiksi 75.98 1 P P 10 41 00.6 -0.2
TIXI IAmb IAmb 10 41 01.6
comp=Z,9.9nm,0.8s
ABKAR Akbulak array 77.96 322 P P 10 41 11.8 -0.4
ABKAR IAmb IAmb 10 41 12.7
comp=Z,8.7nm,0.8s
NRIK Noril'sk 78.13 347 P P 10 41 12.4 -0.2
comp=Z,8.4nm,0.7s,baz=138,slow=6.2,SNR=11
ARU Arti 81.38 329 P P 10 41 29.6 -0.5
ARU IAmb IAmb 10 41 31.9
comp=Z,12nm,1.0s
GAMB Gambell 82.20 23 P P 10 41 35.0 +0.7
GAMB IAmb IAmb 10 41 36.6
comp=Z,19nm,0.8s
RAYN Ar Rayn 82.92 294 P P 10 41 39.2 +0.3
RAYN IAmb IAmb 10 41 39.9
comp=Z,8.9nm,0.7s
SDPT Sand Point 84.46 33 P P 10 41 46.5 +0.8
ANM Nome 85.06 24 P P 10 41 48.6 +0.1
ANM IAmb IAmb 10 41 50.5
comp=Z,4.2nm,0.8s
QSPA South Pole Qui 85.51 180 P P 10 41 50.9 -0.1
comp=Z,17nm,0.8s,baz=323,slow=1.5,SNR=53
QSPA South Pole Qui 85.51 180 P P 10 41 51.3 +0.3
QSPA IAmb IAmb 10 41 52.0
comp=Z,21nm,0.9s
TBLG Delisi 86.30 312 P P 10 41 55.8 +0.6
AKH Akhalkalaki 87.18 312 P P 10 41 59.8 +0.2
RDOG Red Dog Mine 87.19 21 P P 10 41 58.7 -0.1
RDOG IAmb IAmb 10 42 00.9
comp=Z,8.5nm,1.2s
KBZ Khabaz 87.94 314 P P 10 42 01.9 -0.8
comp=Z,4.3nm,0.8s,baz=158,slow=1.6,SNR=13
KMBO Kilima Mbogo 88.49 269 P P 10 42 06.1 -0.3
comp=Z,1.6nm,0.5s,baz=92,slow=5.7,SNR=7.8
KMBO Kilima Mbogo 88.49 269 P P 10 42 06.3 0.0
TOLK Toolik Lake Re 92.14 21 P P 10 42 21.6 -0.2
TOLK IAmb IAmb 10 42 23.3
comp=Z,8.3nm,0.8s
ILAR Eielson Array 92.83 25 P P 10 42 23.7 -1.3
comp=Z,3.0nm,0.7s,baz=261,slow=4.3,SNR=4.9
ILAR PKKPbc PKKPdf 10 59 34.5 +0.5
comp=Z,1.0nm,0.8s,baz=76,slow=1.5,SNR=11
BRTR Keskin Array B 94.50 309 P P 10 42 32.5 -1.0
comp=Z,0.9nm,0.7s,baz=128,slow=5.2,SNR=5.8
LSZ Lusaka 96.19 254 P P 10 42 40.8 -0.7
EPYK Eagle Plains 97.05 24 P P 10 42 44.2 0.0
EPYK IAmb IAmb 10 42 45.7
comp=Z,8.6nm,1.0s
BOSA Boshof 97.13 241 P Pdif 10 42 45.6 +0.1
comp=Z,8.5nm,0.7s,baz=106,slow=3.3,SNR=18
BOSA Boshof 97.13 241 P P 10 42 45.4 -0.1
AKASG Malin Array Be 97.61 320 P P 10 42 45.4 -1.6
comp=Z,1.5nm,0.6s,baz=68,slow=4.6,SNR=5.4
ARCES ARCESS Array B 97.76 340 P P 10 42 45.4 -1.8
comp=Z,4.1nm,1.0s,baz=84,slow=6.2,SNR=6.4
ARCES PKKPbc PKKPbc 10 59 21.4 -2.6
comp=Z,2.8nm,0.9s,baz=191,slow=1.2,SNR=6.9
INK Inuvik 98.05 22 P Pdif 10 42 48.8 +0.3
INK IAmb IAmb 10 43 07.4
comp=Z,3.3nm,1.1s
FINES FINESS Array B 98.55 331 P Pdif 10 42 49.7 -1.2
comp=Z,1.3nm,0.8s,baz=34,slow=8.4,SNR=2.6
FINES PKiKP PKiKP 10 47 20.2 +0.1
comp=Z,0.7nm,0.6s,baz=279,slow=3.7,SNR=3.6
BUR08 Bucovina Ar. S 100.44 317 Pdif 10 42 59.8 0.0
YKA Yellowknife Ar 107.26 25 Pdiff Pdif 10 43 30.5 +0.9
comp=Z,0.1nm,0.5s,baz=299,slow=4.1,SNR=2.6
YKA PKiKP PKiKP 10 47 36.0 -0.1
comp=Z,0.4nm,0.5s,baz=314,slow=1.6,SNR=7.0
YKA PKKPbc PKKPbc 10 58 52.7 -3.3
comp=Z,1.2nm,0.6s,baz=111,slow=3.1,SNR=20
GERES GERESS Array B 107.81 320 PKiKP PKiKP 10 47 37.6 -0.1
comp=Z,1.4nm,0.5s,baz=88,slow=2.6,SNR=10
NVAR Mina Array Bea 112.92 50 PKiKP PKiKP 10 47 48.5 +0.7
comp=Z,0.2nm,0.4s,baz=226,slow=3.3,SNR=4.7
DUG Dugway, Tooele 116.55 47 PKiKP 10 47 55.2 +0.6
FXWY Fox Creek 116.67 43 PKiKP 10 47 55.5 +0.5
FFC Flin Flon 116.82 29 PKPdf 10 47 54.5 0.0
REDW Red Top Meadow 116.88 43 PKiKP 10 47 56.1 +0.8
SNOW Snow King Moun 116.91 43 PKiKP 10 47 56.1 +0.6
PDAR Pinedale Array 117.98 43 PKP PKiKP 10 47 57.9 +0.4
comp=Z,0.8nm,0.6s,baz=108,slow=1.8,SNR=11
PDAR PKKPbc PKKPbc 10 58 21.3 +1.2
comp=Z,1.4nm,0.8s,baz=106,slow=5.3,SNR=10.0
TMUT Trail Mountain 118.01 48 PKiKP 10 47 58.9 +1.1
U15A North Rim 118.05 51 PKiKP 10 47 59.5 +1.6
SRU San Rafael Swe 118.57 48 PKiKP 10 47 59.4 +0.7
WUAZ Wupatki 119.02 52 PKiKP 10 48 00.7 +1.0
X16A Lo Mia Camp, P 119.28 53 PKiKP 10 48 01.6 +1.4
O20A White River Ci 119.87 46 PKiKP 10 48 02.3 +1.1
W18A Petrified Fore 120.42 52 PKiKP 10 48 04.0 +1.6
X18A Snowflake 120.43 52 PKiKP 10 48 03.5 +1.0
MVCO Mesa Verde 120.70 49 PKiKP 10 48 03.5 +0.5
RSSD Black Hills 121.09 40 PKPdf 10 48 02.7 -0.6
319A Douglas 121.85 56 PKiKP 10 48 06.4 +1.1
ULM Lac du Bonnet 122.48 30 PKP PKPdf 10 48 04.5 -1.0
comp=Z,3.6nm,0.7s,baz=263,slow=2.3,SNR=11
ULM Lac du Bonnet 122.48 30 PKPdf 10 48 04.4 -1.1
SDCO Great Sand Dun 122.74 47 PKiKP 10 48 07.5 +0.5
ESDC Sonseca Array 122.78 315 PKP PKiKP 10 48 07.5 +0.7
comp=Z,1.0nm,0.6s,baz=336,slow=3.3,SNR=4.3
ANMO Albuquerque 123.02 51 PKiKP 10 48 08.3 +0.8
T25A Trinidad 123.77 48 PKiKP 10 48 09.8 +0.8
TOA0 Torodi Ar. Sit 124.22 283 PKPdf 10 48 09.8 -0.1
TORD Torodi Ar. Bea 124.22 283 PKP PKPdf 10 48 09.8 -0.1
comp=Z,14nm,0.7s,baz=68,slow=2.1,SNR=75
TORD PKKPbc PKKPab 10 57 57.3 +1.3
comp=Z,1.1nm,0.8s,baz=239,slow=1.4,SNR=5.6
MNTX Cornudas Mount 124.94 54 PKiKP 10 48 11.1 -0.2
ECSD EROS Data Cent 125.90 37 PKPdf 10 48 12.4 0.0
E38A The Farm, Brul 127.02 32 PKPdf 10 48 14.6 +0.3
TX31 Lajitas Ar. Si 127.08 56 PKiKP 10 48 16.4 +0.7
TX32 Lajitas Array 127.09 56 PKiKP 10 48 16.1 +0.4
TXAR Lajitas Array 127.09 56 PKP PKiKP 10 48 16.5 +0.8
comp=Z,1.2nm,0.8s,baz=216,slow=1.6,SNR=15
TXAR SKPbc SKPbc 10 50 53.5
comp=Z,0.5nm,0.7s,baz=244,slow=2.4,SNR=5.7
TXAR PKKPbc PKKPbc 10 57 47.2
comp=Z,0.7nm,0.9s,baz=123,slow=9.1,SNR=6.4
SCHQ Schefferville 128.73 9 PKP PKPdf 10 48 17.0 -0.4
comp=Z,2.7nm,0.6s,baz=329,slow=2.1,SNR=8.7
SCHQ Schefferville 128.73 9 PKPdf 10 48 17.6 +0.2
JCT Junction City 129.85 53 PKPdf 10 48 20.7 +0.4
E46A Sault Ste Mari 130.75 27 PKPdf 10 48 21.2 -0.3
KIC Kosan Boka 130.77 275 ePKIKP PKPdf 10 48 22.6 +0.2
comp=Z,12nm,0.9s
KIC Kosan Boka 130.77 275 PKPdf 10 48 22.6 +0.2
DBIC Dimbokro 130.88 275 PKP PKPdf 10 48 23.7 +0.2
comp=Z,9.4nm,0.6s,baz=21,slow=1.4,SNR=18
DBIC SKPbc SKPbc 10 51 08.3 +0.1
comp=Z,8.1nm,0.8s,baz=81,slow=4.7,SNR=11
DBIC Dimbokro 130.88 275 PKiKP 10 48 23.2 -0.4
TIC Toumodi 131.04 275 ePKIKP PKPdf 10 48 23.0 0.0
TIC Toumodi 131.04 275 PKPdf 10 48 23.0 0.0
LIC Lamto 131.05 274 ePKIKP PKPdf 10 48 23.0 +0.1
comp=Z,33nm,0.9s
LIC Lamto 131.05 274 PKPdf 10 48 23.0 +0.1
U38A Gravette 131.26 44 PKPdf 10 48 22.4 -0.3
S39A Bolivar 131.32 42 PKPdf 10 48 22.9 +0.1
U40A Yellville 132.36 43 PKPdf 10 48 25.4 -0.5
PLCA Paso Flores 132.59 163 PKP PKiKP 10 48 26.9 +0.4
comp=Z,3.5nm,0.7s,baz=231,slow=1.0,SNR=14
PLCA SKPbc SKPbc 10 51 14.2 +0.7
comp=Z,1.8nm,0.8s,baz=228,slow=5.3,SNR=5.6
PLCA Paso Flores 132.59 163 PKiKP 10 48 27.0 +0.5
MIAR Mount Ida 132.80 46 PKPdf 10 48 26.0 +0.3
TKL Tuckaleechee C 138.65 38 SKPbc SKPbc 10 51 31.7 -0.5
comp=Z,3.6nm,0.9s,baz=1.5,slow=0.6,SNR=5.0
ASAL Salagasta 140.62 160 eP PKPdf 10 48 37.4 -3.0
RTLS Leoncito 141.18 159 iP PKPdf 10 48 36.8 -4.9
RTLL Cerro Villicun 141.89 160 iP PKPdf 10 48 38.2 -4.4
AMOG MOGNA 142.24 160 iP PKPdf 10 48 39.7 -3.6
ACCO Cerro Coronel 142.36 159 eP PKPdf 10 48 40.7 -3.1
AROD Rodeo 142.59 158 iP PKPdf 10 48 42.0 -2.2
ACDV Cuesta del Vie 142.72 158 eP PKPdf 10 48 41.7 -2.6
APLL PUNTA DE LOS L143.39 162 iP PKPbc 10 48 43.8 +0.6
AGUA GUANDACOL 143.56 159 iP PKPdf 10 48 45.1 -0.5
PLTB Pedras Altas 143.98 181 eP PKPab 10 48 29.8 -15

ACLC CERRO LA CRUZ 144.15 161 eP PKPdf 10 48 46.4 -0.4
VCA Vinchina 144.35 159 i P PKPdf 10 48 47.5 +0.3
GO03 Copiap 144.57 155 PKPdf 10 48 48.2 +0.8
CPSB Cacapava Do Su 145.34 181 eP PKPdf 10 48 35.2 -13
CYA Choya 145.43 162 i P PKPbc 10 48 49.8 +0.1
GO02 Mina Guanaco 146.97 154 PKPbc 10 48 55.5 +1.0
ITAB Concordia 148.44 183 eP PKPdf 10 48 49.1 -4.6
JTS Las Juntas de 148.94 77 PKiKP 10 49 00.3 -0.2
PB04 IPOC Station P 149.13 150 PKiKP 10 49 01.2 +0.3
CPUP Villa Florida 149.25 174 PKP PKPdf 10 48 55.4 +0.2
comp=Z,9.5nm,1.0s,baz=175,slow=1.7,SNR=3.1
CPUP PKPbc PKPbc 10 49 00.1 +0.3
comp=Z,13nm,0.7s,baz=156,slow=4.0,SNR=4.4
CPUP Villa Florida 149.25 174 eP PKPdf 10 48 53.1 -2.0
CPUP Villa Florida 149.25 174 PKPbc PKiKP 10 49 00.8 -0.1
LVC Limon Verde 149.49 152 eP PKPbc 10 49 00.5 -0.5
LVC Limon Verde 149.49 152 PKiKP 10 49 02.3 +0.4
FSCY Frank Sound, G 149.79 58 PKPbc 10 49 01.5 +0.2
PB01 IPOC Station P 150.54 150 PKiKP 10 49 03.9 +0.2
CBCY The Bluff, Cay 150.80 57 PKPbc 10 49 03.6 -0.1
PTGB Pitanga 150.94 184 eP PKPdf 10 49 00.1 +2.2
PARB Paraibuna 151.15 196 eP PKiKP 10 49 05.7 +0.8
VAO Valinhos 151.82 194 eP PKiKP 10 49 08.0 +1.6
TRCB Terra Rica 152.88 183 eP PKiKP 10 49 08.7 +0.3
LPAZ La Paz 155.20 146 PKP PKPdf 10 49 05.8 +0.9
comp=Z,2.6nm,0.9s,baz=6.7,slow=1.9,SNR=6.9
LPAZ PKPbc PKPbc 10 49 14.1
comp=Z,2.5nm,0.5s,baz=3.3,slow=2.9,SNR=11
LPAZ PKPab PKPab 10 49 32.8 +0.9
comp=Z,3.1nm,0.6s,baz=11,slow=16,SNR=3.9
LPAZ La Paz 155.20 146 PKPdf 10 49 02.5 -2.4
LPAZ PKPab PKPab 10 49 33.0 +1.1
IPMB Ipameri, GO 156.95 195 eP PKPab 10 49 29.9 -8.7
JANB Januaria 158.29 207 eP PKPab 10 49 42.5 -2.0
BDFB Brasilia 159.13 197 PKPab PKPab 10 49 48.2 0.0
comp=Z,5.1nm,0.7s,baz=189,slow=8.2,SNR=3.9
RUSC La Rusia 161.11 85 PKPdf 10 49 10.9 -1.0
RUSC PKPab PKPab 10 49 58.9 +1.1
SDV Santo Domingo 163.07 74 PKP PKPdf 10 49 13.3 -0.2
comp=Z,7.7nm,0.9s,baz=36,slow=0.9
SDV PKPab PKPab 10 50 07.6 +1.6
comp=Z,6.5nm,0.7s,baz=313,slow=2.8,SNR=6.8
SDV Santo Domingo 163.07 74 PKPdf 10 49 12.2 -1.3
SDV PKPab 10 50 07.3 +1.3

JMA 28 10:48:39.4±0.2, 37.28N×144.42E, h44km, M3.9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.56	295	P	Pn	10 49 19.9	+1.6
JIKH				eS	Sn	10 49 49.7	+1.5
JIO	Ouri	2.70	297	P	Pn	10 49 21.7	+1.4
JIO				eS	Sn	10 49 53.4	+1.7
JKMT	Kesennumamotoy	2.78	304	P	Pn	10 49 22.8	+1.4
JKMT				S	Sn	10 49 55.0	+1.2
OFUJ	Ofunato	2.82	310	P	Pn	10 49 23.0	+1.1
OFUJ				eS	Sn	10 49 55.8	+1.2
JFK	Kawauchi	2.83	273	P	Pn	10 49 23.4	+1.3
JFK				eS	Sn	10 49 56.2	+1.3
JMK	Ichinoseki	3.03	304	P	Pn	10 49 26.3	+1.5
JMK				eS	Sn	10 50 01.6	+1.9
JOU	Okura	3.17	291	P	Pn	10 49 28.9	+2.2
JFT	Otama	3.26	275	P	Pn	10 49 30.5	+2.5
JFT				eS	Sn	10 50 08.0	+2.4
JYK	Kaneyama	3.60	298	P	Pn	10 49 35.0	+2.4
JYK				eS	Sn	10 50 16.8	+3.0
JRG	Rokugo	3.65	307	P	Pn	10 49 35.7	+2.4
JRG				eS	Sn	10 50 18.2	+3.1
BSO1	Boso 1	3.83	228	P	Pn	10 49 35.3	0.0
BSO1				eS	Sn	10 50 19.1	+0.3
JAH	Hinai	4.15	316	P	Pn	10 49 43.1	+3.0
JAH				eS	Sn	10 50 30.1	+2.8
JTM	Tenmabayashi	4.37	324	P	Pn	10 49 44.5	+1.3
JTM				eS	Sn	10 50 32.0	-0.8
JRY	Ryogami san	4.61	256	P	Pn	10 49 47.7	+1.1
JRY				eS	Sn	10 50 38.2	-0.7
JOD2	Odawara 2	4.75	247	P	Pn	10 49 49.2	+0.7
JOD2				eS	Sn	10 50 41.1	-1.3
JOT	Ohata	4.86	328	P	Pn	10 49 51.5	+1.6
JOT				eS	Sn	10 50 43.6	-1.3
MAT	Matsushiro	5.03	263	P	Pn	10 49 55.3	+2.9
MAT				eS	Sn	10 50 52.4	+3.2
JKB	Kayabe	5.29	331	P	Pn	10 49 57.4	+1.5
JCH	Churui	5.39	352	P	Pn	10 49 56.2	-1.0
JCH				eS	Sn	10 50 54.0	-3.9
JHJ2	Mitsune	5.61	224	P	Pn	10 50 00.1	-0.2
NEM2	Nemuro 2	6.16	9	P	Pn	10 50 04.0	-3.8
NEM2				eS	Sn	10 51 10.0	-6.9
JTKR	Abashiri--Toko	6.70	357	P	Pn	10 50 13.8	-1.3
JTKR				eS	Sn	10 51 24.8	-5.2
JHR	Hokuryu	6.77	343	P	Pn	10 50 18.1	+1.9
JHR				eS	Sn	10 51 31.8	-0.2

NIED 28 10:58:00, 20.30N×120.40E, h68km, Mw4.5 Best double couple: M0 7.14000×10^15 NP1:φs202.00000°, δ56.00000°, λ54.00000°. NP2:φs75.00000°, δ48.00000°, λ131.00000°.
JMA 28 10:58:46.5±0.4, 20.32N×120.43E, h0km, M4.2
IDC 28 10:58:46.6±0.6, 20.25N×120.38E, h0km, mb4.1/17, mb1 4.2/18, mb1mx4.1/48, mbtmp4.1/18, ML3.7/1, MS3.3/13, Ms1 3.3/13, ms1mx3.1/44, Error ellipse: s-maj=22.8km s-min=12.5km az=69.0
NEIC 28 10:58:47.4±2.3, 20.17N±0.04×120.29E±0.09, h10km±1km, mb4.5/48, Error ellipse: s-maj=14.0km s-min=7.3km az=91.0
BJI 28 10:58:48.2±0.0, 20.28N×120.14E, h10km, mB4.8/28, mb4.3/33, ML3.8/2, Ms4.2/18, Ms7 3.8/15
ISC 28 10:58:50.2±0.4, 20.19N±0.04×120.30E±0.06, h28km, n130, σ1§39/129, mb4.5/52, MS3.4/14, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZP	Santa	2.63	177		Pn	10 59 28.8	-2.1
SZP				Sn	Sn	11 00 01.1	-1.8
TWG	Pinlang	2.71	15		Pn	10 59 30.4	-1.5
TPUB	Ta-pu	3.11	6		Pn	10 59 35.3	-2.0
YULB	Yu-li	3.31	16		Pn	10 59 39.0	-1.2
YULB				Sn	Sn	11 00 19.1	+0.4
SSLB	Suanglung	3.63	9		Pn	10 59 42.0	-2.5
NACB	Ninganchiao	4.14	17	Pn	Pn	10 59 50.4	-1.1
YHNB	Yeheng	4.56	12		Pn	10 59 56.8	-0.7
KNMB	Chin-men Tao	4.60	338	Pn	Pn	10 59 55.7	-2.2
JYNG	Yonagunijimaku	4.89	30	P	Pn	11 00 01.6	-0.3
JYNG				eS	Sn	11 00 58.8	+1.2
YOJ	Yonaguni jima	4.93	30	P	Pn	11 00 00.5	-1.9
YOJ	Yonaguni jima	4.93	30	Pn	Pn	11 00 00.8	-1.6
IRIF	Iriomote-Funau	5.20	37	P	Pn	11 00 06.1	0.0
IRIF				eS	Sn	11 01 06.1	+0.9
JKRS	Kuro-shima	5.29	40	P	Pn	11 00 07.3	0.0
JKRS				eS	Sn	11 01 06.9	-0.5
JIJ	Ishigaki jima	5.46	40	P	Pn	11 00 08.8	-0.9
JIJ				S	Sn	11 01 08.8	-2.9
JISG	Ishigakijimahi	5.73	40	P	Pn	11 00 12.2	-1.2
JISG				eS	Sn	11 01 15.7	-2.6
JTJ	Tarama	6.01	42	P	Pn	11 00 16.8	-0.5
JTJ				eS	Sn	11 01 22.2	-3.0
HKPS	Hong Kong Po S	6.11	291	Pn	Pn	11 00 16.8	-1.8
QIZ	Qiongzhong	9.93	265	P	Pn	11 01 08.0	-3.0
QIZ				S	Sn	11 03 01.5	-0.1
QIZ				LR	LR		
	comp=N,440nm,12.7s						
QIZ				LR	LR		
	comp=E,590nm,11.0s						
QIZ				LR	LR		
	comp=Z,470nm,11.4s						
NJ2	Nanjing	11.88	354	eP	Pn	11 01 37.3	-0.4
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JNU	Nakatsue	15.96	34	Pn	P	11 02 34.8	-1.3
	0.6nm,0.3s,baz=167,slow=7.3,SNR=8.3						
JNU				LR	LR	11 08 47.1	
	comp=Z,89nm,18.7s,baz=236,slow=38						
JNU	Nakatsue	15.96	34		Pn	11 02 31.0	-1.8
JNU				IAmb	IAmb	11 02 37.9	
	comp=Z,40nm,1.1s						
KSRS	Korea Array	18.43	19	P	P	11 03 03.2	-0.2
	comp=Z,0.2nm,0.3s,baz=196,slow=12,SNR=12						
KSRS				LR	LR	11 10 45.3	
	comp=Z,70nm,19.2s,baz=194,slow=39						
KS19	Wonju Array Si	18.46	19	P	P	11 03 02.9	-0.8
MRSI	Marisa	19.66	175	P	Pn	11 03 18.8	+0.3
	comp=Z,41nm,1.1s						
MRSI	Marisa	19.66	175	P	Pn	11 03 18.8	+0.3
	comp=Z,41nm,1.1s						
MPSI	Mapaga	19.74	181	P	Pn	11 03 18.7	-0.8
	comp=Z,14nm,1.0s						
MPSI	Mapaga	19.74	181	P	Pn	11 03 18.7	-0.8
	comp=Z,14nm,1.0s						
BJT	Baijiatuau	20.07	351	P	P	11 03 21.7	+0.4
BJT				IAmb	IAmb	11 03 37.4	
	comp=Z,23nm,0.9s						
BJI	Beijing	20.09	351	P	Pn	11 03 23.5	0.0
BJI				pmax	pmax		
	comp=Z,12nm,1.1s						
CMAR	Chiang Mai Arr	20.23	269	P	Pn	11 03 24.4	-1.0
	comp=Z,1.0nm,0.6s,baz=69,slow=9.3,SNR=7.7						
CMAR				LR	LR	11 11 16.0	
	comp=Z,140nm,18.4s,baz=102,slow=37						
APSI	Ampana	21.02	176	P	P	11 03 32.4	+0.7
	comp=Z,23nm,0.8s						
APSI	Ampana	21.02	176	P	P	11 03 32.4	+0.7
	comp=Z,23nm,0.8s						
INU	Inuyama	21.09	41	P	P	11 03 32.1	-0.2
INU				IAmb	IAmb	11 03 39.0	
	comp=Z,18nm,0.8s						
JCJ	Chichijima	21.17	67	LR	LR	11 10 04.3	
	comp=Z,68nm,20.0s,baz=185,slow=32						
LZH	Lanzhou	21.43	321	eP	P	11 03 37.3	+1.1
LZH				pP	pP	11 03 43.3	+0.6
LZH				sP	pwP	11 03 47.0	-0.9
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
JHJ	Hachijo jima 2	21.61	49	LR	LR	11 10 14.2	
	comp=Z,40nm,20.2s,baz=260,slow=32						
HHC	Hu-ho-hao-te	21.90	342	eP	P	11 03 45.0	+3.9
HHC				pP	sP	11 03 51.0	+0.3
HHC				sP	pwP	11 03 55.0	+2.3
HHC				eS	S	11 07 38.8	-2.9
HHC				pmax	pmax		
	comp=Z,44nm,2.8s						
HHC				LR	LR		
	comp=Z,190nm,11.4s						
HHC				LR	LR		
	comp=Z,140nm,15.5s						
HHC				LR	LR		
	comp=Z,160nm,10.4s						
MAJO	Matsushiro	22.60	40	P	P	11 03 47.1	-1.5
MAJO				IAmb	IAmb	11 03 57.4	
	comp=Z,28nm,1.1s						
MAT	Matsushiro	22.60	40	P	P	11 03 48.9	+0.3
MJAR	Matsushiro Arr	22.60	40	P	P	11 03 48.6	0.0
	comp=Z,3.9nm,0.9s,baz=222,slow=8.4,SNR=8.0						
MJAR				LR	LR	11 13 13.5	
	comp=Z,32nm,19.3s,baz=225,slow=38						
MJB9	Matsu-Tunnel	22.60	40	P	P	11 03 47.0	-1.6
MJB9				IAmb	IAmb	11 03 57.3	
	comp=Z,30nm,1.2s						
SANI	Sanana	22.80	165	P	P	11 03 46.9	-3.9
SANI	Sanana	22.80	165	P	P	11 03 46.9	-3.9
TTSI	Tana Toraja	23.10	181	P	P	11 03 54.4	+0.5
	comp=Z,16nm,1.1s						
TTSI	Tana Toraja	23.10	181	P	P	11 03 54.4	+0.5
	comp=Z,16nm,1.1s						
SIJI	Sorong	23.53	152	P	P	11 03 58.8	+0.6
	comp=Z,23nm,0.7s,baz=333,slow=8.1,SNR=8.0						
BNSI	Bone	24.44	180	P	P	11 04 09.6	+2.9
	comp=Z,843nmcomp=Z,17nm,1.3s						
BNSI	Bone	24.44	180	P	P	11 04 09.6	+2.9
	comp=Z,843nmcomp=Z,17nm,1.3s						
MSAI	Masohi	24.88	159	P	P	11 04 12.2	+1.5
	comp=Z,1μmcomp=Z,11nm,0.8s						
MSAI	Masohi	24.88	159	P	P	11 04 12.2	+1.5
	comp=Z,1μmcomp=Z,11nm,0.8s						
AAI	Ambon	24.97	161	P	P	11 04 11.7	+0.2
	comp=Z,2μmcomp=Z,42nm,0.9s						
AAI	Ambon	24.97	161	P	P	11 04 11.7	+0.2
	comp=Z,2μmcomp=Z,42nm,0.9s						
KAPI	Kappang	25.06	181	P	P	11 04 15.1	+2.8
	comp=Z,14nm,0.9s,baz=4.2,slow=11,SNR=4.9						
KAPI				LR	LR	11 16 38.5	
	comp=Z,43nm,19.2s,baz=344,slow=43						
BKSI	Bulukumba	25.36	180	P	P	11 04 15.4	+0.4
	comp=Z,17nm,1.1s						
BKSI	Bulukumba	25.36	180	P	P	11 04 15.4	+0.4
	comp=Z,17nm,1.1s						
RKPI	Ransiki, Papua	25.50	146	P	P	11 04 16.4	0.0
	comp=Z,8μmcomp=Z,28nm,0.8s						
RKPI	Ransiki, Papua	25.50	146	P	P	11 04 16.4	0.0
	comp=Z,8μmcomp=Z,28nm,0.8s						
MDJ	Mudanjiang	25.55	16	P	P	11 04 26.3	+10
FAKI	Fak Fak	25.79	152	P	P	11 04 20.7	+1.7
	comp=Z,15nm,1.0s						
FAKI	Fak Fak	25.79	152	P	P	11 04 20.7	+1.7
	comp=Z,15nm,1.0s						
USRK	Ussuriysk Ar.	25.84	20	LR	LR	11 15 36.8	
	comp=Z,23nm,18.7s,baz=190,slow=39						
GTA	Gaotai	26.02	322	eP	P	11 04 22.3	+1.2
GTA				pP	pP	11 04 28.0	0.0
GTA				sP	sP	11 04 31.0	0.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,78nm,4.3s						
GTA				LR	LR		
	comp=Z,120nm,17.5s						
GTA				LR	LR		
	comp=Z,130nm,16.5s						
BRDH	Bariadhala	26.77	280	LR	LR	11 16 52.4	
	comp=Z,99nm,18.9s,baz=146,slow=40						
PSI	Prapat	27.09	233	LR	LR	11 14 36.7	
	comp=Z,86nm,18.4s,baz=44,slow=35						
EDFI	Ende, Flores	28.79	177	P	P	11 04 46.2	+0.2
	comp=Z,8.2nm,1.6s						
EDFI	Ende, Flores	28.79	177	P	P	11 04 46.2	+0.2
	comp=Z,8.2nm,1.6s						
PWJI	Pagerwojo	29.26	197	P	P	11 04 50.3	+0.3
	comp=Z,18nm,1.2s						
PWJI	Pagerwojo	29.26	197	P	P	11 04 50.3	+0.3
	comp=Z,18nm,1.2s						
ULN	Ulaanbaatar	29.62	342	P	P	11 04 53.7	+0.6
SONM	Songino Array	29.79	341	P	P	11 04 56.0	+1.4
	comp=Z,1.4nm,0.7s,baz=169,slow=11,SNR=12						
SONM				LR	LR	11 17 34.7	
	comp=Z,86nm,18.8s,baz=164,slow=38						
TLY	Talaya	34.02	341	P	P	11 05 31.1	-0.5
TLY				IAmb	IAmb	11 05 43.7	
	comp=Z,4.3nm,0.8s						
MTN	Manton Dam	34.52	161	P	P	11 05 35.2	-1.0
MTN				IAmb	IAmb	11 05 45.0	
	comp=Z,13nm,1.0s						
WMQ	Urumqi	35.95	318	eP	P	11 05 50.0	+1.5
WMQ				pP	pP	11 05 54.5	-1.1
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WMQ				LR	LR		
	comp=Z,220nm,7.5s						
WMQ				LR	LR		
	comp=Z,200nm,6.7s						
WMQ				LR	LR		
	comp=Z,260nm,8.1s						
FITZ	Fitzroy Crossi	38.41	172	P	P	11 06 08.6	-0.8
COEN	Coen	40.72	145	P	P	11 06 28.8	+0.1
MK31	Makanchi Array	40.73	320	P	P	11 06 25.6	-2.9
MKAR	Makanchi Array	40.73	320	P	P	11 06 27.3	-1.2
	comp=Z,1.4nm,0.7s,baz=108,slow=12,SNR=8.1						
MKAR				PcP	PcP	11 08 30.8	+1.1
	comp=Z,0.2nm,0.5s,baz=186,slow=22,SNR=2.3						
MAKZ	Makanchi	40.93	319	P	P	11 06 28.4	-1.8
WB0	Warramunga Arr	42.05	160	P	P	11 06 39.4	-0.2
WB0				IAmb	IAmb	11 06 40.2	
	comp=Z,14nm,1.3s						
WRA	Warramunga Arr	42.19	160	P	P	11 06 40.4	-0.4
	comp=Z,4.6nm,0.9s,baz=340,slow=9.2,SNR=23						
WB2	Warramunga Arr	42.20	160	P	P	11 06 40.7	-0.1
WB2				IAmb	IAmb	11 06 41.6	
	comp=Z,18nm,1.3s						
WR0	Warramunga Arr	42.27	160	P	P	11 06 41.1	-0.3
KSH	Kashi	42.51	307	P	P	11 06 44.0	+0.7
ZAA0	Zalesovo Array	43.21	330	P	P	11 06 48.5	-0.1
ZALV	Zalesovo Beam	43.21	330	P	P	11 06 49.6	+1.1
	comp=Z,1.6nm,0.6s,baz=112,slow=7.5,SNR=5.9						
PETK	Petropavlovsk-	43.64	32	LR	LR	11 26 27.3	
	comp=Z,28nm,20.0s,baz=241,slow=38						
H11S3	WAKE ISLAND Hy	43.69	84	T	T	11 53 47.9	
	baz=281,slow=75,SNR=5.8						
H11S1	WAKE ISLAND Hy	43.70	84	T	T	11 53 45.7	
	baz=281,slow=75,SNR=5.3						
H11S2	WAKE ISLAND Hy	43.71	84	T	T	11 53 39.0	
	baz=281,slow=75,SNR=5.9						
KURK	Kurchatov	44.70	323	P	P	11 06 59.8	-0.8
KURK				IAmb	IAmb	11 07 11.4	
	comp=Z,6.5nm,1.0s						
KURBB	Kurchatov Arra	44.70	323	P	P	11 07 00.9	+0.3
	comp=Z,2.4nm,0.7s,baz=122,slow=7.8,SNR=12						
AS31	Alice Springs	45.57	162	P	P	11 07 07.0	-0.9
ASAR	Alice Springs	45.57	162	P	P	11 07 08.2	+0.3
	comp=Z,3.7nm,0.7s,baz=345,slow=7.2,SNR=36						
KK31	Karatay Array	47.33	310	P	P	11 07 22.3	+0.7
KK31				IAmb	IAmb	11 07 32.5	
	comp=Z,2.8nm,0.8s						
KKAR	Karatay Array	47.33	310	P	P	11 07 22.6	+1.0
KKAR				IAmb	IAmb	11 07 32.5	
	comp=Z,2.8nm,0.8s						
BVAR	Borovoye Array	50.30	323	P	P	11 07 45.2	+1.1
	comp=Z,1.1nm,0.8s,baz=120,slow=8.9,SNR=5.4						
BVAR				PcP	PcP	11 09 03.1	+0.5
	comp=Z,0.3nm,0.4s,baz=282,slow=40,SNR=1.9						
BRVK	Borovoye	50.37	323	P	P	11 07 42.4	-2.3
BRVK				IAmb	IAmb	11 07 55.6	
	comp=Z,4.2nm,0.9s						
BBOO	Buckleboo	54.82	164	P	P	11 08 18.7	+1.0
STKA	Stephens Creek	55.65	158	P	P	11 08 25.3	+1.5
	comp=Z,3.9nm,1.0s,baz=347,slow=13,SNR=3.4						
STKA	Stephens Creek	55.65	158	P	P	11 08 24.1	+0.3
ABKAR	Akbulak array	55.69	316	P	P	11 08 24.4	+0.4
KBZ	Khabaz	67.36	310	P	P	11 09 42.4	-0.5
	comp=Z,1.1nm,0.7s,baz=187,slow=2.0,SNR=3.6						
RAYN	Ar Rayn	68.76	288	P	P	11 09 51.8	-0.3
RAYN				IAmb	IAmb	11 09 54.4	
	comp=Z,5.2nm,1.1s						
MLY	Manley	71.46	27	P	P	11 10 08.9	+1.0
MLY				IAmb	IAmb	11 10 10.9	
	comp=Z,6.8nm,1.0s						
BPAW	Bear Paw Mtn.	71.48	28	P	P	11 10 09.1	+1.1
KTH	Kantishna Hill	71.59	28	P	P	11 10 09.7	+1.0
KTH				IAmb	IAmb	11 10 18.8	
	comp=Z,6.9nm,1.3s						
TRF	Thorofare Moun	71.89	28	P	P	11 10 11.6	+1.0
SUA	Susitna One	71.98	30	P	P	11 10 11.7	+0.5
MCK	McKinley	72.44	28	P	P	11 10 15.2	+1.5
MDM	Murphy Dome	72.53	26	P	P	11 10 13.2	-1.1
RND	Reindeer	72.53	28	P	P	11 10 15.2	+0.8
WRH	Wood River Hil	72.67	27	P	P	11 10 16.2	+1.1
WRH				IAmb	IAmb	11 10 21.3	
	comp=Z,3.4nm,0.7s						
GHO	Glory Hole Cre	72.79	30	P	P	11 10 16.1	+0.2
SML	Sawmill	73.06	30	P	P	11 10 17.9	+0.4
IL31		73.12	27	P	P	11 10 17.3	-0.4
ILAR	Eielson Array	73.12	27	P	P	11 10 17.6	-0.1
	comp=Z,0.7nm,0.7s,baz=269,slow=5.2,SNR=11						
ILAR				LR	LR	11 46 51.9	
	comp=Z,26nm,18.5s,baz=150,slow=40						
HDA	Harding Lake	73.17	27	P	P	11 10 19.1	+1.1
HDA				IAmb	IAmb	11 10 22.6	
	comp=Z,6.6nm,1.1s						
DHY	Denali Highway	73.25	28	P	P	11 10 18.6	-0.2
DHY				IAmb	IAmb	11 10 29.4	
	comp=Z,4.5nm,1.0s						
FYU	Fort Yukon	73.42	25	P	P	11 10 19.0	-0.5
SCM	Sheep Creek Mo	73.52	30	P	P	11 10 21.1	+0.8
PRP	Porcupine Dome	73.53	26	P	P	11 10 20.8	+0.4
PRP				IAmb	IAmb	11 10 31.1	
	comp=Z,3.6nm,1.0s						
FINES	FINESS Array B	74.47	330	P	P	11 10 26.7	+1.0
	comp=Z,1.3nm,0.9s,baz=87,slow=11,SNR=2.1						
BRTR	Keskin Array B	74.89	307	P	P	11 10 31.2	+2.4
	comp=Z,0.5nm,0.9s,baz=31,slow=3.4,SNR=2.6						
EGAK	Eagle	75.50	26	P	P	11 10 32.6	+1.0
EGAK				IAmb	IAmb	11 10 37.3	
	comp=Z,3.6nm,0.8s						
BARN	Barnard Glacie	76.35	30	P	P	11 10 36.8	0.0
BARN				IAmb	IAmb	11 10 49.2	
	comp=Z,5.7nm,1.0s						
DAWY	Dawson	76.45	26	P	P	11 10 38.1	+1.0
DAWY				IAmb	IAmb	11 10 47.7	
	comp=Z,4.6nm,0.9s						
CTGM	Chitina Glacie	76.53	30	P	P	11 10 39.3	+1.5
CTGM				IAmb	IAmb	11 10 40.6	
	comp=Z,5.2nm,1.0s						
INK	Inuvik	77.21	21	LR	LR	11 47 30.9	
	comp=Z,394nm,19.3s,baz=42,slow=38						
RES	Resolute Bay	82.71	9	P	P	11 11 10.7	-0.2
YKA	Yellowknife Ar	86.95	22	P	P	11 11 32.8	+0.4
	comp=Z,1.2nm,0.6s,baz=312,slow=4.4,SNR=25						

THE 28 11:01:44.5, 38.18N×20.33E, h7km, ML2.5/2, Error ellipse: s-maj=0.9km s-min=0.5km az=76.0
ATH 28 11:01:44.3, 38.19N×20.31E, h7km±1km, ML2.4/3, Error ellipse: s-maj=2.3km s-min=1.3km az=78.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.04	61	P	Pg	11 01 45.9	+0.2
KEF3				S	Sg	11 01 46.8	0.0
CHV1	Chavriata, Kef	0.06	91	P	Pg	11 01 46.0	+0.1
CHV1				S	Sg	11 01 47.0	-0.1
AGT1	Agia Thekli	0.09	43	P	Pg	11 01 46.6	+0.2
AGT1				S	Sg	11 01 48.2	+0.3
LXRA	Lixouri, Kepha	0.10	82	P	Pg	11 01 46.7	0.0
LXRA				S	Sg	11 01 48.4	+0.2
LXR1	Lixouri, Cepha	0.10	81	P	Pg	11 01 46.6	0.0
LXR1				S	Sg	11 01 48.5	+0.3
KEF4	Livadi, Kephal	0.12	52	P	Pg	11 01 47.0	+0.1
KEF4				S	Sg	11 01 48.8	+0.2
ARGA	Argostoli. Kep	0.14	93	P	Pg	11 01 47.3	+0.1
ARGA				S	Sg	11 01 48.9	-0.2
ARG2	Argostoli	0.14	93	P	Pg	11 01 47.4	+0.1
ARG2				S	Sg	11 01 49.1	-0.2
KEF2	Argostoli. Kep	0.14	98	P	Pg	11 01 47.4	+0.1
KEF2				S	Sg	11 01 49.6	+0.3
VLS	Valsamata	0.22	92	P	Pg	11 01 48.5	-0.3
VLS				S	Sg	11 01 51.6	-0.2
	5μm,0.1s						
VLS	Valsamata	0.22	92	P	Pg	11 01 48.5	-0.2
VLS				S	Sg	11 01 51.7	-0.1
VLS				AML	AML	11 01 51.8	
	comp=N,8746μm,0.2s						
VLS				AML	AML	11 01 51.8	
	comp=E,9689μm,0.1s						
VSK1	VASILIKIADES	0.30	42	P	Pg	11 01 50.2	-0.1
VSK1				S	Sg	11 01 54.9	+0.6
KONA	Konidatara, Ke	0.32	41	P	Pg	11 01 50.5	0.0
KONA				S	Sg	11 01 55.4	+0.7
FSK	Fiskardo	0.34	36	P	Pg	11 01 50.8	-0.2
FSK				S	Sg	11 01 56.1	+0.6
	comp=E,510nm,0.2s						
FSK	Fiskardo	0.34	36	P	Pg	11 01 50.8	-0.1
FSK				S	Sg	11 01 55.8	+0.3
FSK				AML	AML	11 01 56.8	
	comp=N,870μm,0.2s						
FSK				AML	AML	11 01 56.9	
	comp=E,1179μm,0.2s						
VLMS	Volimes, Zakyn	0.42	137	P	Pg	11 01 52.3	-0.1
VLMS				S	Sg	11 01 58.9	+1.0
VLMS				AML	AML	11 02 00.5	
	comp=E,1071μm,0.3s						
VLMS				AML	AML	11 02 03.7	
	comp=N,1349μm,0.3s						
EVGI	Lefkada island	0.52	32	P	Pg	11 01 54.1	-0.2
EVGI				S	Sg	11 02 01.5	+0.5
EVGI	Lefkada island	0.52	32	P	Pg	11 01 54.0	-0.2
EVGI				S	Sg	11 02 01.5	+0.5
PDO	Prodromos	0.80	59	P	Pg	11 01 59.8	+0.1
PVO	Paravola	1.05	65	P	Pg	11 02 04.1	-0.4
PVO	Paravola	1.05	65	P	Pg	11 02 04.0	-0.5
DRO	Drossia	1.13	101	P	Pg	11 02 05.5	-0.5

NNC 28 11:02:54.5±2.1, 51.64N×75.35E, h0km, mb2.9, mpv2.5, 3C-1D, Error ellipse: s-maj=218.6km s-min=14.9km az=26.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.25	116	⇑Pg	Pb	11 03 36.3	+0.3
	2.1nm,0.7s						
KURBB				⇑Lg	Lg	11 04 03.6	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	11nm,0.6s						
BRVK	**Borovoye**	**3.42**	**297**	⇓Pg	Pb	11 03 56.6	+0.7
	1.7nm,0.8s						
BRVK				⇑Lg	Lg	11 04 42.3	
	5.0nm,0.7s						

BUC 28 11:03:34.3±0.4,46.38N×23.25E,h5km,ml1.5/4,12C-8D, Error ellipse: s-maj=3.7km s-min=1.7km az=59.0, Romania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DRGR		**0.55**	**318**	⇑P	Pg	11 03 45.2	+0.2
DRGR				⇓S	Sg	11 03 52.6	+0.5
DRGR		**0.55**	**318**	⇑P	Pg	11 03 45.2	+0.2
DRGR				⇓S	Sg	11 03 52.6	+0.5
LOT	**Lotru**	**1.00**	**159**	⇑P	Pg	11 03 53.6	+0.1
LOT				⇓S	Sb	11 04 07.9	+0.1
LOT	**Lotru**	**1.00**	**159**	⇑P	Pg	11 03 53.6	+0.1
LOT				⇓S	Sb	11 04 07.9	+0.1
GZR	**Gura Zlata**	**1.04**	**199**	⇑P	Pg	11 03 53.6	-0.7
GZR				⇓S	Sb	11 04 08.7	-0.2
GZR	**Gura Zlata**	**1.04**	**199**	⇑P	Pg	11 03 53.6	-0.7
GZR				⇓S	Sb	11 04 08.7	-0.2
SIRR	**Siria**	**1.11**	**265**	⇓P	Pg	11 03 55.4	-0.2
SIRR				⇑S	Sb	11 04 10.9	+0.1
SIRR	**Siria**	**1.11**	**265**	⇓P	Pg	11 03 55.4	-0.2
SIRR				⇑S	Sb	11 04 10.9	+0.1
MDVR	**Moldovita**	**1.93**	**215**	⇑P	Pn	11 04 08.6	+0.7
MDVR				⇑S	Sb	11 04 34.4	-0.1
MDVR	**Moldovita**	**1.93**	**215**	⇑P	Pn	11 04 08.6	+0.7
MDVR				⇑S	Sb	11 04 34.4	-0.1

IDC 28 11:28:42.6±2.0,2.87N×127.00E,h0km,mb3.5/4, mb1 3.8/4,mb1mx3.4/43,mbtmp3.6/4,MS3.8/1,Ms1 3.8/1, ms1mx2.5/35,Error ellipse: s-maj=121.0km s-min=24.0km az=69.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.88**	**184**	P	P	11 33 26.5	+0.1
	2.7nm,1.0s,baz=27,slow=11,SNR=2.5						
WRA	**Warramunga Arr**	**23.79**	**163**	P	P	11 33 56.8	-0.4
	1.3nm,0.6s,baz=341,slow=10,SNR=14						
ASAR	**Alice Springs**	**27.22**	**166**	P	P	11 34 28.8	+0.4
	0.2nm,0.5s,baz=346,slow=6.9,SNR=4.7						
SONM	**Songino Array**	**48.20**	**341**	LR	LR	11 57 53.8	
	comp=Z,92nm,18.1s,baz=177,slow=36						
MKAR	**Makanchi Array**	**58.41**	**325**	P	P	11 38 40.0	-0.1
	0.5nm,0.6s,baz=123,slow=7.9,SNR=7.0						

*IDC **28** 11:36:17.3±1.5,38.33N×20.41E,h0km,mb3.4/5, mb1 3.5/6,mb1mx3.4/38,mbtmp3.4/6,ML3.4/1,Error ellipse: s-maj=33.6km s-min=27.5km az=112.0*
*ATH **28** 11:36:20.1,38.38N×20.51E,h12km±1km,ML3.1/19,Error ellipse: s-maj=1.7km s-min=0.7km az=272.0*
*THE **28** 11:36:20.1,38.39N×20.48E,h11km,ML3.3/4,Error ellipse: s-maj=0.7km s-min=0.2km az=285.0*
ISC 28 11:36:19.9±0.7,38.38N±0.02×20.49E±0.03,h12km±4km, n74,σ0.68/97,mb3.4/5,Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.07**	**66**	P	**Pg**	**11 36 22.4**	**0.0**
VSK1				S	**Sg**	**11 36 24.1**	**-0.1**
KONA	**Konidatara, Ke**	**0.08**	**57**	P	**Pg**	**11 36 22.4**	**-0.1**
KONA				S	**Sg**	**11 36 23.7**	**-0.8**
FSK	**Fiskardo**	**0.10**	**37**	P	**Pg**	**11 36 22.7**	**0.0**
FSK				S	**Sg**	**11 36 24.7**	**-0.1**
	35μm,0.5s						
FSK	**Fiskardo**	**0.10**	**37**	P	**Pg**	**11 36 22.7**	**0.0**
FSK				S	**Sg**	**11 36 24.9**	**+0.1**
FSK				AML	AML	11 36 25.1	
	comp=E,70547μm,0.2s						
FSK				AML	AML	11 36 25.4	
	comp=N,28981μm,0.3s						
KEF4	**Livadi, Kephal**	**0.13**	**202**	P	**Pg**	**11 36 23.2**	**+0.1**
AGT1	**Agia Thekli**	**0.15**	**212**	P	**Pg**	**11 36 23.5**	**0.0**
AGT1				S	**Sg**	**11 36 26.2**	**+0.2**
LXR1	**Lixouri, Cepha**	**0.18**	**192**	P	**Pg**	**11 36 24.3**	**+0.3**
LXR1				S	**Sg**	**11 36 27.6**	**+0.8**
LXRA	**Lixouri, Kepha**	**0.18**	**192**	P	**Pg**	**11 36 24.3**	**+0.3**
LXRA				S	**Sg**	**11 36 27.9**	**+1.1**
ARG2	**Argostoli**	**0.20**	**180**	P	**Pg**	**11 36 24.4**	**+0.1**
ARG2				S	**Sg**	**11 36 28.0**	**+0.7**
ARGA	**Argostoli. Kep**	**0.20**	**182**	P	**Pg**	**11 36 24.4**	**+0.1**
ARGA				S	**Sg**	**11 36 27.9**	**+0.6**
KEF3	**Kipouria, Keph**	**0.21**	**212**	P	**Pg**	**11 36 24.4**	**0.0**
KEF3				S	**Sg**	**11 36 28.3**	**+0.8**
CHV1	**Chavriata, Kef**	**0.21**	**203**	P	**Pg**	**11 36 24.6**	**+0.1**
CHV1				S	**Sg**	**11 36 28.5**	**+0.9**
KEF2	**Argostoli. Kep**	**0.22**	**180**	P	**Pg**	**11 36 24.4**	**-0.1**
KEF2				S	**Sg**	**11 36 28.4**	**+0.7**
VLS	**Valsamata**	**0.22**	**158**	P	**Pg**	**11 36 24.7**	**+0.1**
VLS				S	**Sg**	**11 36 28.4**	**+0.6**
	comp=N,19μm,0.2s						
VLS	**Valsamata**	**0.22**	**158**	P	**Pg**	**11 36 24.6**	**0.0**
VLS				S	**Sg**	**11 36 28.1**	**+0.3**
VLS				AML	AML	11 36 28.6	
	comp=E,44427μm,0.2s						
VLS				AML	AML	11 36 28.6	
	comp=N,28643μm,0.2s						
EVGI	**Lefkada island**	**0.27**	**29**	P	**Pg**	**11 36 25.8**	**+0.2**
EVGI				S	**Sg**	**11 36 29.9**	**+0.5**
EVGI	**Lefkada island**	**0.27**	**29**	P	**Pg**	**11 36 25.7**	**+0.2**
EVGI				S	**Sg**	**11 36 30.2**	**+0.8**
MGNA	**Meganis**	**0.36**	**41**	P	**Pg**	**11 36 27.2**	**0.0**
MGNA				S	**Sg**	**11 36 33.0**	**+1.0**
LKD2	**Lefkada island**	**0.43**	**18**	P	**Pg**	**11 36 28.2**	**-0.2**
LKD2				S	**Sg**	**11 36 34.7**	**+0.6**
	comp=N,4μm,0.8s						
LKD2	**Lefkada island**	**0.43**	**18**	P	**Pg**	**11 36 28.2**	**-0.2**
LKD2				S	**Sg**	**11 36 34.0**	**-0.1**
LKD2				AML	AML	11 36 35.4	
	comp=E,6321μm,0.6s						
LKD2				AML	AML	11 36 36.3	
	comp=N,6168μm,0.3s						
TSLK	**Tsoukalades, L**	**0.46**	**17**	P	**Pg**	**11 36 28.9**	**-0.1**
TSLK				S	**Sg**	**11 36 36.0**	**+0.8**
	comp=N,3μm,0.6s						
TSLK	**Tsoukalades, L**	**0.46**	**17**	P	**Pg**	**11 36 29.0**	**0.0**
TSLK				S	**Sg**	**11 36 36.2**	**+1.0**
VLMS	**Volimes, Zakyn**	**0.52**	**165**	P	**Pg**	**11 36 29.9**	**-0.2**
VLMS				S	**Sb**	**11 36 38.6**	**0.0**
VLMS				AML	AML	11 36 39.0	
	comp=N,17244μm,0.5s						
VLMS				AML	AML	11 36 41.6	
	comp=E,11397μm,0.2s						
PDO	**Prodromos**	**0.59**	**68**	P	**Pg**	**11 36 31.3**	**-0.1**
PDO	**Prodromos**	**0.59**	**68**	P	**Pg**	**11 36 31.5**	**+0.1**
VTN	**Vitineika**	**0.72**	**130**	P	**Pg**	**11 36 34.1**	**+0.2**
KRI1	**kERI**	**0.76**	**160**	P	**Pg**	**11 36 34.1**	**-0.6**
KRI1				S	**Sb**	**11 36 46.3**	**+0.8**
RLS	**Riolos of Patr**	**0.84**	**112**	P	**Pg**	**11 36 35.9**	**-0.2**
PVO	**Paravola**	**0.85**	**74**	P	**Pg**	**11 36 36.5**	**+0.2**
PVO	**Paravola**	**0.85**	**74**	P	**Pg**	**11 36 36.5**	**+0.2**
PVO				AML	AML	11 36 55.3	
	comp=E,3863μm,0.6s						
PVO				AML	AML	11 36 58.2	
	comp=N,3064μm,0.4s						
UPR	**University Cam**	**1.03**	**95**	P	**Pn**	**11 36 41.0**	**+0.9**
DRO	**Drossia**	**1.05**	**114**	P	**Pb**	**11 36 39.8**	**-0.3**
DRO	**Drossia**	**1.05**	**114**	P	**Pb**	**11 36 39.6**	**-0.5**
DRO				AML	AML	11 37 05.1	
	comp=N,2912μm,0.5s						
DRO				AML	AML	11 37 10.1	
	comp=E,4173μm,0.5s						
IGT	**Igoumenitsa**	**1.16**	**354**	P	**Pb**	**11 36 41.3**	**-0.5**
IGT	**Igoumenitsa**	**1.16**	**354**	P	**Pb**	**11 36 41.1**	**-0.7**
IGT				AML	AML	11 37 03.8	
	comp=N,1031μm,0.3s						
IGT				AML	AML	11 37 03.9	
	comp=E,1171μm,0.2s						
EVR	**Evrytania**	**1.17**	**62**	P	**Pb**	**11 36 41.6**	**-0.4**
EVR	**Evrytania**	**1.17**	**62**	P	**Pb**	**11 36 41.6**	**-0.4**
EVR				AML	AML	11 37 06.2	
	comp=N,1134μm,0.8s						
EVR				AML	AML	11 37 09.4	
	comp=E,1050μm,0.6s						
LAKA	**Lakka**	**1.18**	**96**	P	**Pb**	**11 36 41.6**	**-0.6**
LAKA				AML	AML	11 37 05.0	
	comp=N,1083μm,0.5s						
LAKA				AML	AML	11 37 12.3	
	comp=E,838μm,0.8s						
TRIZ	**Trizonia**	**1.25**	**90**	P	**Pn**	**11 36 42.7**	**-0.4**
AMT	**Artemida-Makis**	**1.28**	**131**	P	**Pn**	**11 36 43.5**	**-0.2**
KALE	**Kalithea**	**1.30**	**89**	P	**Pn**	**11 36 43.4**	**-0.5**
KALE	**Kalithea**	**1.30**	**89**	P	**Pn**	**11 36 43.5**	**-0.4**
KALE				AML	AML	11 37 13.0	
	comp=E,1070μm,0.8s						
KALE				AML	AML	11 37 14.4	
	comp=N,1264μm,0.6s						
JAN	**Janina**	**1.30**	**12**	P	**Pg**	**11 36 45.6**	**+0.6**
JAN				AML	AML	11 37 06.5	
	comp=N,1563μm,0.4s						
JAN				AML	AML	11 37 08.0	
	comp=E,1815μm,0.5s						
KLV	**Kalavryta, Ach**	**1.35**	**104**	P	**Pn**	**11 36 44.5**	**-0.1**
KLV				AML	AML	11 37 14.8	
	comp=E,548μm,0.5s						
KLV				AML	AML	11 37 17.7	
	comp=N,688μm,1.0s						
KASA	**Kassiopi**	**1.43**	**343**	P	**Pg**	**11 36 47.3**	**-0.1**
KEK	**Kerkira**	**1.43**	**338**	P	**Pn**	**11 36 46.1**	**+0.4**
KEK				AML	AML	11 37 16.3	
	comp=E,919μm,0.6s						
KEK				AML	AML	11 37 24.7	
	comp=N,765μm,0.5s						
MAKR	**Makrakomi, Fth**	**1.43**	**63**	P	**Pn**	**11 36 46.5**	**+0.8**
MAKR				AML	AML	11 37 15.0	
	comp=N,1405μm,0.6s						
MAKR				AML	AML	11 37 15.7	
	comp=E,1913μm,0.7s						
MEV	**Metsovon**	**1.52**	**22**	P	**Pg**	**11 36 49.4**	**+0.4**
AGG	**Agios Georgios**	**1.58**	**66**	P	**Pb**	**11 36 48.9**	**-0.1**
AGG				AML	AML	11 37 20.1	
	comp=N,616μm,0.7s						
AGG				AML	AML	11 37 24.1	
	comp=E,1131μm,1.0s						
ITM	**Ithomi**	**1.66**	**136**	P	**Pb**	**11 36 50.4**	**0.0**
ITM				AML	AML	11 37 24.9	
	comp=N,532μm,0.6s						
ITM				AML	AML	11 37 25.0	
	comp=E,453μm,0.4s						
THL	**Klokotos Trika**	**1.68**	**45**	P	**Pb**	**11 36 51.5**	**+0.8**
THL				AML	AML	11 37 19.7	
	comp=E,729μm,0.6s						
THL				AML	AML	11 37 21.7	
	comp=N,687μm,0.8s						
KPRO	**Kipourio**	**1.71**	**23**	P	**Pg**	**11 36 53.4**	**+0.6**
KPRO				AML	AML	11 37 20.4	
	comp=E,1177μm,0.7s						
KPRO				AML	AML	11 37 25.8	
	comp=N,868μm,0.5s						
PYL	**PYLOS**	**1.79**	**146**	P	**Pn**	**11 36 51.7**	**+1.2**
VLX	**Vlachokerasia**	**1.81**	**123**	P	**Pg**	**11 36 54.4**	**-0.1**
PENT	**Pentalofos**	**1.88**	**15**	P	**Pb**	**11 36 54.5**	**+0.3**
NEST	**Nestorio**	**2.08**	**12**	P	**Pb**	**11 36 57.5**	**0.0**
VIL2	**Platees**	**2.19**	**94**	P	**Pb**	**11 36 59.1**	**-0.4**
VIL2				AML	AML	11 37 39.0	
	comp=E,514μm,0.7s						
VIL2				AML	AML	11 37 48.5	
	comp=N,348μm,0.8s						
MRKA	**Markates**	**2.45**	**81**	P	**Pn**	**11 37 01.8**	**+2.1**
OHR	**Ohrid**	**2.74**	**5**	*i* Pn	**Pn**	**11 37 06.2**	**+2.5**
VAY	**Valandovo**	**3.34**	**28**	*i* Pn	**Pb**	**11 37 16.6**	**-2.5**
SOKA	**Soboth**	**9.21**	**336**	*i* Pn	**Pn**	**11 38 31.7**	**-0.9**
	comp=N,2.5nm,0.5s						
OBKA	**Obir**	**9.23**	**334**	*i* Pn	**Pn**	**11 38 33.3**	**+0.4**
	comp=N,1.8nm,0.4s						
ARSA	**Arzberg**	**9.58**	**339**	*i* Pn	**Pn**	**11 38 37.9**	**+0.3**
	comp=N,1.5nm,0.4s						
CONA	**Conrad Observa**	**10.12**	**342**	*i* Pn	**Pn**	**11 38 45.3**	**+0.3**
	comp=N,0.6nm,0.3s						
KBA	**Koelnbreinsper**	**10.15**	**331**	*i* Pn	**Pn**	**11 38 45.3**	**-0.2**
	comp=N,0.3nm,0.3s						
ABTA	**Abfaltersbach**	**10.22**	**327**	*i* Pn	**Pn**	**11 38 46.2**	**-0.2**
	comp=N,0.6nm,0.3s						
MOA	**Molln**	**10.49**	**336**	*i* Pn	**Pn**	**11 38 51.8**	**+1.7**
	comp=N,0.5nm,0.3s						
WTTA	**Wattenberg**	**10.99**	**327**	*i* Pn	**Pn**	**11 38 57.2**	**+0.1**
	comp=N,1.6nm,0.3s						
GERES	**GERESS Array B**	**11.55**	**337**	Pn	**Pn**	**11 39 04.7**	**+0.1**
	comp=N,0.1nm,0.3s,baz=156,slow=15,SNR=2.2						
FINES	**FINESS Array B**	**23.35**	**7**	P	**P**	**11 41 28.4**	**+0.6**
	comp=N,1.2nm,0.7s,baz=168,slow=9.8,SNR=5.1						
TORD	**Torodi Ar. Bea**	**30.17**	**219**	P	**P**	**11 42 28.6**	**-1.4**
	comp=N,0.4nm,0.6s,baz=38,slow=9.8,SNR=2.5						
MKAR	**Makanchi Array**	**45.22**	**59**	P	**P**	**11 44 37.0**	**+0.2**
	comp=N,0.1nm,0.4s,baz=272,slow=8.0,SNR=4.1						
ZALV	**Zalesovo Beam**	**45.58**	**48**	P	**P**	**11 44 38.9**	**-0.6**
	comp=N,0.5nm,0.3s,baz=282,slow=8.3,SNR=3.9						
SONM	**Songino Array**	**60.35**	**51**	P	**P**	**11 46 28.3**	**-0.4**
	comp=N,0.1nm,0.4s,baz=323,slow=9.3,SNR=2.2						

WEL 28 11:38:31.7±0.5,32°S±5°×18°0W±1°2,h304km±7km, M4.7/12,mB4.9/6,MLv5.1/12,Mw(mB)4.2/6,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.96**	**29**	P	Pn	11 39 24.0	-3.4
GLKZ				S	S	11 40 04.6	-7.3
RIZ	**Raoul Island**	**2.97**	**29**	S	S	11 40 20.8	+8.8
TWGZ	**Tauwhareparae**	**6.61**	**197**	P	Pn	11 40 12.1	+3.7
TWGZ				S	S	11 41 30.5	+4.0
OUZ	**Omahuta**	**6.61**	**238**	P	Pn	11 40 09.1	+0.7
MWZ	**Matawai**	**6.88**	**199**	P	Pn	11 40 11.4	-0.2
MWZ				S	S	11 41 34.0	+1.6
RAGZ	**Rawiri**	**7.06**	**200**	P	Pn	11 40 14.9	+1.1
RAGZ				S	S	11 41 37.5	+1.0
RIGZ	**Rimuhau**	**7.17**	**197**	P	Pn	11 40 15.4	+0.3
RIGZ				S	S	11 41 39.3	+0.6
PRGZ	**Paritu Road**	**7.34**	**196**	P	Pn	11 40 19.6	+2.4
PRGZ				S	S	11 41 41.2	-1.5
SNGZ	**Shannon Statio**	**7.35**	**199**	P	Pn	11 40 17.5	+0.2
SNGZ				S	S	11 41 44.5	+1.7
KNZ	**Kokohu**	**7.49**	**197**	P	Pn	11 40 18.6	-0.3
KNZ				S	S	11 41 45.1	-0.7
RAHZ	**Arahi**	**7.55**	**200**	P	Pn	11 40 19.3	-0.4
RAHZ				S	S	11 41 47.8	+0.6
MHGZ	**Mahia Peninsul**	**7.56**	**195**	P	Pn	11 40 20.8	+1.0
MHGZ				S	S	11 41 47.0	-0.4
WHHZ	**Waihua**	**7.65**	**199**	P	Pn	11 40 22.0	+1.0
WHHZ				S	S	11 41 50.2	+0.7
NMHZ	**Naumai**	**7.80**	**201**	P	Pn	11 40 22.8	-0.1
NMHZ				S	S	11 41 52.6	-0.3
ARHZ	**Aropaoanui**	**7.89**	**200**	P	Pn	11 40 24.0	+0.1
ARHZ				S	S	11 41 53.7	-1.2
BKZ	**Black Stump Fm**	**7.96**	**203**	P	Pn	11 40 23.1	-1.7
BKZ				S	S	11 41 54.1	-2.4
MCHZ	**McNeill Hill**	**8.15**	**201**	P	Pn	11 40 26.4	-0.6
MCHZ				S	S	11 42 00.7	0.0
KWHZ	**Kaweka Forest**	**8.22**	**202**	P	S	11 42 02.0	-0.3
BHHZ	**Black Hill Sta**	**8.40**	**204**	P	S	11 42 05.4	-0.9
KAHZ	**Kahuranaki**	**8.42**	**199**	P	Pn	11 40 29.7	-0.7
KAHZ				S	S	11 42 05.1	-1.7
MOVZ	**Moawhango**	**8.43**	**206**	P	S	11 42 05.8	-1.3
KRHZ	**Kereru**	**8.43**	**202**	P	S	11 42 05.5	-1.6
PXZ	**Pawanui**	**8.65**	**199**	P	S	11 42 06.7	-5.1
PNHZ	**Pukenui**	**8.73**	**202**	P	S	11 42 10.8	-3.0
POWZ	**Post Office Ro**	**9.31**	**203**	P	S	11 42 20.7	-6.0
BFZ	**Birch Farm**	**9.43**	**200**	P	S	11 42 21.2	-8.1

NNC 28 11:51:44.5±3.5,43.37N×87.29E,h17km±11km,mb3.6, mpv3.2,6C-4D,Error ellipse: s-maj=26.0km s-min=17.8km az=116.0,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**4.42**	**338**	Pg	Pg	11 53 11.7	+2.4
	2.1nm,0.3s						
ZSN				Lg	Lg	11 54 08.6	
	8.5nm,1.1s						
MK31	**Makanchi Array**	**4.92**	**316**	⇓Pn	Pn	11 52 56.6	-1.2
	1.0nm,0.5s,baz=127,slow=14,SNR=19						
MK31				⇓Pg	Pb	11 53 13.3	+3.0
	0.6nm,0.5s,baz=118,slow=46,SNR=4.3						
MK31				⇓Sn	Sn	11 53 55.9	+1.5
	2.4nm,0.7s						
MK31				⇑Lg	Lg	11 54 18.5	
	3.5nm,0.8s,baz=137,slow=28,SNR=6.5						
MAKZ	**Makanchi**	**5.09**	**314**	⇑Pn	Pn	11 52 58.4	-1.7
	2.3nm,0.6s						
MAKZ				⇑Lg	Lg	11 54 25.9	
	5.5nm,1.1s						
DJR	**Jarkent**	**5.51**	**283**	Pg	Pg	11 53 27.0	-3.0
	1.2nm,0.3s						
DJR				Lg	Lg	11 54 35.0	
	5.1nm,0.9s						
PDGK	**Podgornoye**	**5.69**	**272**	Pg	Pg	11 53 30.4	-3.0
	1.1nm,0.4s						
PDGK				Lg	Lg	11 54 41.3	
	4.0nm,0.7s						
PDGK	**Podgornoye**	**5.69**	**272**	⇑Pn	Pn	11 53 08.0	-0.3
	2.8nm,0.7s						
PDGK				⇓Pg	Pb	11 53 27.3	+3.9
	3.5nm,0.6s						
PDGK				⇑Sn	Sn	11 54 16.0	+2.7
	8.8nm,1.0s						
PDGK				⇑Lg	Lg	11 54 45.3	
	12nm,0.9s						
KAPS	**Kapalarasan**	**6.00**	**291**	Pg	Pg	11 53 34.4	-5.0
	1.5nm,0.4s						
KAPS				Lg	Lg	11 54 48.2	
	5.6nm,0.8s						

*NEIC **28** 12:16:45.0±2.6,17.37N±0.05×101.80W±0.02,h19km±7km, Error ellipse: s-maj=7.4km s-min=1.1km az=200.0*
*MEX **28** 12:16:46.0±0.9,17.43N×101.80W,h2km,MD4.1*
ISC 28 12:16:43.9±1.5,17.38N±0.06×101.81W±0.03, h14km±11km,n26,σ1.22/47,1D,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.40**	**55**		**Pb**	**12 16 52.7**	**-0.1**
ZIIG					**Sb**	**12 16 58.1**	**-0.7**
ZIIG	**Zihuatanejo**	**0.40**	**55**	⇓*i*P	**Pb**	**12 16 52.7**	**-0.1**
	baz=237,slow=18						
ZIIG				*i* S	**Sb**	**12 16 58.3**	**-0.6**
UON	**La Union**	**0.59**	**360**	*e*P	**Pg**	**12 16 55.9**	**+0.4**
UON				*e*S	**Sb**	**12 17 03.8**	**-0.5**
CAIG	**El Cayaco**	**1.51**	**102**		**Pn**	**12 17 11.5**	**+0.9**
CAIG					**Sn**	**12 17 29.9**	**-0.3**
CAIG	**El Cayaco**	**1.51**	**102**	*e*P	**Pn**	**12 17 11.5**	**+0.9**
CAIG				*i* S	**Sn**	**12 17 29.9**	**-0.3**
ARIG	**Puente Sto Nin**	**1.66**	**57**		**Pn**	**12 17 12.0**	**-0.7**
ARIG					**Sn**	**12 17 31.4**	**-2.5**
ARIG	**Puente Sto Nin**	**1.66**	**57**	*e*P	**Pn**	**12 17 12.0**	**-0.7**
ARIG				*i* S	**Sn**	**12 17 31.4**	**-2.5**
MMIG	**Aquila**	**1.72**	**302**		**Pn**	**12 17 12.6**	**-0.9**
MMIG					**Sn**	**12 17 34.5**	**-0.8**
MMIG	**Aquila**	**1.72**	**302**	*e*P	**Pn**	**12 17 12.6**	**-0.9**
MMIG				*i* S	**Sn**	**12 17 34.5**	**-0.8**
ACP2	**Acapulco**	**1.91**	**105**	*i* P	**Pg**	**12 17 20.7**	**+0.2**
ACP2				*i* S	**Sg**	**12 17 44.4**	**-1.0**
MEIG	**Mezcala**	**2.16**	**75**		**Pn**	**12 17 19.8**	**+0.2**
MEIG					**Sn**	**12 17 46.2**	**-0.1**
MEIG	**Mezcala**	**2.16**	**75**	*e*P	**Pn**	**12 17 19.8**	**+0.2**
MEIG				*i* S	**Sn**	**12 17 46.2**	**-0.1**
MOIG	**Morelia**	**2.36**	**14**		**Pn**	**12 17 24.5**	**+1.9**
MOIG				Sn	**Sn**	**12 17 52.3**	**+0.7**
MOIG	**Morelia**	**2.36**	**14**	*e*P	**Pn**	**12 17 22.6**	**0.0**
MOIG				*i* S	**Sn**	**12 17 49.6**	**-1.9**
PLIG	**Platanillo**	**2.42**	**65**		**Pn**	**12 17 23.8**	**+0.5**
PLIG					**Sn**	**12 17 52.4**	**-0.3**
PLIG	**Platanillo**	**2.42**	**65**	*e*P	**Pn**	**12 17 23.8**	**+0.5**
PLIG				*i* S	**Sn**	**12 17 52.4**	**-0.3**
COIG	**Colima**	**2.53**	**315**	*e*P	**Pn**	**12 17 25.1**	**+0.4**
COIG				*i* S	**Sn**	**12 17 54.7**	**-0.7**
EZ5V		**2.69**	**321**		**Pn**	**12 17 28.7**	**+1.6**
EZ5V					**Sn**	**12 18 02.3**	**+2.5**
EZ5V		**2.69**	**321**	*i* P	**Pn**	**12 17 28.7**	**+1.6**
EZ5V				*i* S	**Sn**	**12 18 02.3**	**+2.5**
R15V		**2.73**	**311**		**Pn**	**12 17 27.3**	**-0.1**
R15V		**2.73**	**311**	*i* P	**Pn**	**12 17 27.3**	**-0.1**
R15V				*i* S	**Sn**	**12 17 58.9**	**-1.4**
TLIG	**Tlapa**	**3.10**	**86**		**Pn**	**12 17 34.0**	**+1.4**
TLIG	**Tlapa**	**3.10**	**86**		**Sn**	**12 18 10.8**	**+1.1**
TLIG	**Tlapa**	**3.10**	**86**	*i* P	**Pn**	**12 17 33.6**	**+0.9**
TLIG				*i* S	**Sn**	**12 18 10.8**	**+1.1**
UNM	**Universidad Na**	**3.17**	**52**	Pn	**Pn**	**12 17 36.5**	**+2.9**
ZAIG	**Zacatecas**	**5.41**	**353**		**Pn**	**12 18 05.5**	**+0.9**

*JMA **28** 12:24:06.7±0.3,32.56N×141.24E,h23km,M3.2*
*IDC **28** 12:24:08.4±2.5,32.45N×141.16E,h46km±22km,mb3.3/6, mb1 3.5/8,mb1mx3.3/43,mbtmp3.6/8,ML2.8/2,Error ellipse: s-maj=31.6km s-min=15.1km az=58.0*
ISC 28 12:24:08.4±0.9,32.40N±0.06×141.19E±0.09,h55km,n17, σ1.35/21,mb3.6/6,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.21**	**273**	P	**Pn**	**12 24 29.0**	**-0.1**
JHCJ	**Hachijojimakas**	**1.35**	**300**	P	**Pn**	**12 24 29.3**	**-1.7**
JHCJ				*e*S	**Sn**	**12 24 46.2**	**-1.7**
JHJ2	**Mitsune**	**1.36**	**302**	P	**Pn**	**12 24 30.1**	**-0.9**
JHJ2				S	**Sn**	**12 24 47.5**	**-0.5**
JHJ	**Hachijo jima 2**	**1.39**	**301**	P	**Pn**	**12 24 30.5**	**-0.9**
	74nm,0.3s,baz=76,slow=19,SNR=56						
JHJ				S	**Sn**	**12 24 46.5**	**-2.2**
	82nm,0.3s,baz=251,slow=22,SNR=12						
JMKN	**Mikurajimanish**	**2.00**	**318**	*e*S	**Sn**	**12 25 02.3**	**-1.4**
BSO1	**Boso 1**	**2.25**	**355**	P	**Pn**	**12 24 41.2**	**-1.5**
JIM2	**Oshima 3**	**2.74**	**328**	P	**Pn**	**12 24 49.1**	**-0.8**
JIZS	**Izushimoda**	**3.01**	**321**	P	**Pn**	**12 24 52.7**	**-0.9**
JOD2	**Odawara 2**	**3.35**	**329**	P	**Pn**	**12 24 58.2**	**0.0**
MJAR	**Matsushiro Arr**	**4.81**	**330**	P	**Pn**	**12 25 18.9**	**+0.6**
	0.1nm,0.3s,baz=164,slow=11,SNR=7.2						
JCJ	**Chichijima**	**5.36**	**170**	P	**Pn**	**12 25 26.4**	**+0.5**
	1.1nm,0.3s,baz=143,slow=18,SNR=1.6						
JCJ				S	**Sn**	**12 26 23.2**	**-3.0**
	3.5nm,0.3s,baz=352,slow=23,SNR=0.8						
MKAR	**Makanchi Array**	**46.55**	**306**	P	**P**	**12 32 31.2**	**+0.6**
	0.5nm,0.5s,baz=87,slow=9.4,SNR=8.3						
KURBB	**Kurchatov Arra**	**48.81**	**311**	P	**P**	**12 32 49.0**	**+1.1**
	0.1nm,0.3s,baz=83,slow=7.7,SNR=1.7						
WRA	**Warramunga Arr**	**52.46**	**188**	P	**P**	**12 33 16.5**	**+0.8**
	0.5nm,0.5s,baz=3.8,slow=7.6,SNR=7.8						
ASAR	**Alice Springs**	**56.19**	**188**	P	**P**	**12 33 43.9**	**+1.2**
	0.4nm,0.9s,baz=19,slow=14,SNR=4.8						
YKA	**Yellowknife Ar**	**67.91**	**29**	P	**P**	**12 35 00.5**	**-0.4**
	0.2nm,0.4s,baz=308,slow=7.0,SNR=3.3						
FINES	**FINESS Array B**	**72.83**	**333**	P	**P**	**12 35 31.9**	**+1.0**
	1.0nm,0.8s,baz=15,slow=16,SNR=2.2						

IDC 28 12:40:17.7±1.6,32.23N×40.25W,h0km,mb3.7/6, mb1 3.9/6,mb1mx3.6/48,mbtmp3.7/6,MS3.6/4,Ms1 3.7/4, ms1mx3.2/52,Error ellipse: s-maj=54.7km s-min=25.1km az=6.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDT	**Midelt**	**29.98**	**79**	LR	LR	12 56 07.6	
	comp=Z,52nm,20.1s,baz=314,slow=32						
DBIC	**Dimbokro**	**41.63**	**120**	LR	LR	13 02 26.8	
	comp=Z,105nm,20.7s,baz=270,slow=32						
TORD	**Torodi Ar. Bea**	**42.78**	**107**	P	P	12 48 17.0	-0.3
	2.3nm,1.0s,baz=290,slow=6.2,SNR=5.8						
TORD				LR	LR	13 03 46.8	
	comp=Z,84nm,20.4s,baz=330,slow=33						
H10N2	**ASCENSION HYDR**	**46.81**	**144**	T	T	13 38 47.4	
	baz=329,slow=75,SNR=65						
H10N3	**ASCENSION HYDR**	**46.82**	**144**	T	T	13 38 39.1	
	baz=329,slow=75,SNR=63						
H10N1	**ASCENSION HYDR**	**46.83**	**144**	T	T	13 38 40.2	
	baz=329,slow=75,SNR=64						
H10S3	**ASCENSION HYDR**	**47.69**	**145**	T	T	13 39 49.2	
	baz=329,slow=74,SNR=83						
H10S2	**ASCENSION HYDR**	**47.71**	**145**	T	T	13 39 49.5	
	baz=251,slow=74,SNR=90						
FINES	**FINESS Array B**	**51.02**	**34**	P	P	12 49 21.2	+0.1
	2.3nm,0.8s,baz=289,slow=5.8,SNR=5.3						
AKASG	**Malin Array Be**	**53.23**	**48**	P	P	12 49 37.3	-0.5
	0.8nm,0.5s,baz=276,slow=6.8,SNR=2.3						
TXAR	**Lajitas Array**	**53.85**	**285**	P	P	12 49 43.3	+0.5
	0.3nm,0.9s,baz=83,slow=8.5,SNR=2.2						
PDAR	**Pinedale Array**	**54.57**	**302**	P	P	12 49 47.4	-0.7
	0.5nm,0.8s,baz=75,slow=6.8,SNR=4.8						
BRTR	**Keskin Array B**	**58.72**	**60**	P	P	12 50 17.9	+0.4
	0.2nm,0.3s,baz=306,slow=5.2,SNR=1.5						
NVAR	**Mina Array Bea**	**62.20**	**300**	LR	LR	13 16 30.6	
	comp=Z,106nm,19.4s,baz=198,slow=35						

KRSC **28** *12:40:58.9±1.6, 52.°01N×159.°89E, h43km±20km, ML4.3*
NEIC **28** *12:41:01.2±2.3, 52.°15N±0.°07×159.°84E±0.°09, h35km±2km, mb4.4/31, Error ellipse: s-maj=13.0km s-min=8.5km az=201.0*
MOS **28** *12:41:01.6±1.1, 52.°09N×159.°66E, h57km, mb4.6/14, Error ellipse: s-maj=7.9km s-min=3.5km az=92.1*
IDC **28** *12:41:06.7±1.8, 52.°26N×159.°54E, h78km±14km, mb3.6/22, mb1 3.8/23, mb1mx3.7/59, mbtmp4.0/23, MS3.2/2, Ms1 3.2/2, ms1mx2.8/54, Error ellipse: s-maj=16.0km s-min=11.3km az=129.0*
ISC 28 12:41:03.0±0.9, 52.°06N±0.°04×159.°70E±0.°04, h53km±7km, n187, σ1.s50/218, mb4.2/44, 3C-2D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	Russkaya	0.82	297	eP	Pn	12 41 16.4	-1.9
RUS				eS	Sn	12 41 27.8	-1.8
RUS	Russkaya	0.82	297	PN	Pn	12 41 16.4	-1.9
RUS				S	Sn	12 41 27.8	-1.8
MTVR	Mutnovka	1.02	295	eP	Pn	12 41 20.0	-1.2
MTVR				eS	Sn	12 41 34.4	-0.2
MTVR	Mutnovka	1.02	295	PN	Pn	12 41 20.0	-1.2
MTVR				S	Sn	12 41 34.4	-0.2
KDTR	Khodutka, Kamc	1.04	256	eP	Pn	12 41 19.9	-1.3
KDTR				eS	Sn	12 41 34.2	-0.5
KDTR	Khodutka, Kamc	1.04	256	PN	Pn	12 41 19.9	-1.3
KDTR				S	Sn	12 41 34.2	-0.5
SPN	Mys Shipunski	1.05	11	eP	Pn	12 41 19.4	-2.1
SPN				eS	Sn	12 41 35.2	0.0
SPN	Mys Shipunski	1.05	11	PN	Pn	12 41 19.4	-2.1
SPN				S	Sn	12 41 35.2	0.0
GRL	Gorelyy	1.11	297	eP	Pn	12 41 21.7	-0.7
GRL				eS	Sn	12 41 37.8	+1.0
GRL	Gorelyy	1.11	297	PN	Pn	12 41 21.7	-0.7
GRL				S	Sn	12 41 37.8	+1.0
DALK	Dalny	1.13	330	eP	Pn	12 41 21.1	-1.4
DALK				eS	Sn	12 41 36.8	-0.1
DALK	Dalny	1.13	330	PN	Pn	12 41 21.1	-1.4
DALK				S	Sn	12 41 36.8	-0.1
NLC	Nalytchevo	1.13	349	eP	Pn	12 41 20.3	-2.2
NLC				eS	Sn	12 41 35.6	-1.4
NLC	Nalytchevo	1.13	349	PN	Pn	12 41 20.3	-2.2
NLC				S	Sn	12 41 35.6	-1.4
ASAK	Asacha	1.15	287	iP	Pn	12 41 22.4	-0.5
ASAK				eS	Sn	12 41 38.5	+0.8
ASAK	Asacha	1.15	287	PN	Pn	12 41 22.4	-0.5
ASAK				S	Sn	12 41 38.5	+0.8
PET	Petropavlovsk	1.16	327	eP	Pn	12 41 21.3	-1.5
PET				eS	Sn	12 41 36.7	-0.9
PET	Petropavlovsk	1.16	327		Pn	12 41 21.2	-1.5
PET				Sn	Sn	12 41 35.2	-2.4
PET	Petropavlovsk	1.16	327⇓	ePN	Pn	12 41 21.4	-1.4
PET				eS	Sn	12 41 36.5	-1.1
PET				pmax	pmax		
	comp=Z,616nm,0.5s						
PET				smax	smax		
	comp=E,1µm,0.5s						
PET				smax	smax		
	comp=N,2µm,0.5s						
KRMR	Karymshinskiy	1.23	309	eP	Pn	12 41 21.9	-1.9
KRMR				eS	Sn	12 41 38.5	-0.9
KRMR	Karymshinskiy	1.23	309	PN	Pn	12 41 21.9	-1.9
KRMR				S	Sn	12 41 38.5	-0.9
UGLR	Uglovaya	1.27	335	eP	Pn	12 41 23.1	-1.3
UGLR				eS	Sn	12 41 40.5	+0.1
UGLR	Uglovaya	1.27	335	PN	Pn	12 41 23.1	-1.3
UGLR				S	Sn	12 41 40.5	+0.1
SDLR	Sedlovina	1.31	338	iP	Pn	12 41 23.5	-1.6
SDLR				eS	Sn	12 41 40.6	-1.0
SDLR	Sedlovina	1.31	338	PN	Pn	12 41 23.5	-1.6
SDLR				S	Sn	12 41 40.6	-1.0
SMAR	Somma	1.32	336	eP	Pn	12 41 23.7	-1.6
SMAR	Somma	1.32	336	PN	Pn	12 41 23.7	-1.6
AVH	Avacha	1.34	334	eP	Pn	12 41 24.3	-1.1
AVH	Avacha	1.34	334	PN	Pn	12 41 24.3	-1.1
KRER	Koryakskii	1.37	335	eP	Pn	12 41 25.0	-0.9
KRER	Koryakskii	1.37	335	PN	Pn	12 41 25.0	-0.9
KOK	Koryaka	1.39	333	eP	Pn	12 41 25.0	-1.1
KOK	Koryaka	1.39	333	PN	Pn	12 41 25.0	-1.1
KRX	Arik	1.45	334	eP	Pn	12 41 25.7	-1.2
KRX	Arik	1.45	334	PN	Pn	12 41 25.7	-1.2
PEA0B	Petropavlovsk-	1.61	311		Pn	12 41 28.2	-0.8
PEA0B				Sn	Sn	12 41 47.0	-1.6
PEA0B	Petropavlovsk-	1.61	311	PN	Pn	12 41 28.2	-0.8
PEA0B						12 41 47.0	
PETK	Petropavlovsk-	1.61	311	P	Pn	12 41 28.6	-0.4
	comp=N,127nm,0.3s,baz=110,slow=20,SNR=2605						
PETK				S	Sn	12 41 49.3	+0.7
	comp=N,58nm,0.3s,baz=113,slow=18,SNR=6.6						
APC	Apacha	1.78	300	eP	Pn	12 41 32.0	+0.8
APC				eS	Sn	12 41 56.1	+3.4
APC	Apacha	1.78	300	PN	Pn	12 41 32.0	+0.8
APC				S	Sn	12 41 56.1	+3.4
MIPR	Malaya Ipel'ka	1.82	278	eP	Pn	12 41 32.7	+0.8
MIPR				eS	Sn	12 41 56.6	+2.7
MIPR	Malaya Ipel'ka	1.82	278	PN	Pn	12 41 32.7	+0.8
MIPR				S	Sn	12 41 56.6	+2.7
PAU	Pauzhetka	1.89	253	P	Pn	12 41 32.9	+0.1
PAU	Pauzhetka	1.89	253	PN	Pn	12 41 32.9	+0.1
KII	Karymskiy	1.98	356	eP	Pn	12 41 33.0	-1.1
KII				eS	Sn	12 41 57.5	-0.3
KII	Karymskiy	1.98	356	PN	Pn	12 41 33.0	-1.1
KII				S	Sn	12 41 57.5	-0.3
SKR	Severo-Kuril's	2.64	240	eP	Pn	12 41 41.7	-1.3
SKR				eS	Sn	12 42 12.4	-1.3
SKR	Severo-Kuril's	2.64	240	ePN	Pn	12 41 42.4	-0.6
SKR				eS	Sn	12 42 13.4	-0.3
SKR				pmax	pmax		
	comp=Z,145nm,0.7s						
SKR				smax	smax		
	comp=N,823nm,0.6s						
SKR				smax	smax		
	comp=E,613nm,0.8s						
SKR				MLR	MLR		
	comp=Z,400nm,15.0s						
ALID	Alaid	2.86	247	eP	Pn	12 41 46.8	+0.6
ALID				eS	Sn	12 42 22.2	+2.8
ALID	Alaid	2.86	247	PN	Pn	12 41 46.8	+0.6
ALID				S	Sn	12 42 22.2	+2.8
KZV	Kizimen	3.08	6	eP	Pn	12 41 48.8	-0.4
KZV				eS	Sn	12 42 25.5	+0.7
KZV	Kizimen	3.08	6	PN	Pn	12 41 48.8	-0.4
KZV				S	Sn	12 42 25.5	+0.7
TUMD	Tumrok D	3.17	7	eP	Pn	12 41 49.6	-0.8
TUMD				eS	Sn	12 42 27.3	+0.3
TUMR	Tumrok	3.24	5	eP	Pn	12 41 51.8	+0.5
TUMR				eS	Sn	12 42 29.9	+1.2
TUMR	Tumrok	3.24	5	PN	Pn	12 41 49.6	-1.7
TUMR				S	Sn	12 42 27.3	-1.4
KMNR	Kamenistaya	3.71	5	eP	Pn	12 42 00.6	+2.8
KMNR				eS	Sn	12 42 44.2	+3.9
KMNR	Kamenistaya	3.71	5	PN	Pn	12 42 00.6	+2.8
KMNR				S	Sn	12 42 44.2	+3.9
ESO	Esso	3.91	352	eP	Pn	12 42 01.1	+0.6
ESO	Esso	3.91	352	PN	Pn	12 42 01.1	+0.6
KIRR	Kirishev	3.92	5	eP	Pn	12 42 02.2	+1.5
KIRR	Kirishev	3.92	5	PN	Pn	12 42 02.2	+1.5
BZGR	Bezymyannyi-Gr	3.93	8	eP	Pn	12 42 01.9	+1.1
BZGR	Bezymyannyi-Gr	3.93	8	PN	Pn	12 42 01.9	+1.1
KOZ	Kozyrevsk	4.00	1	eP	Pn	12 42 02.5	+0.8
KOZ	Kozyrevsk	4.00	1	PN	Pn	12 42 02.5	+0.8
ZLN	Zelenaya	4.01	9	eP	Pn	12 42 04.6	+2.6
ZLN	Zelenaya	4.01	9	PN	Pn	12 42 04.6	+2.6
LGNR	Loginova	4.07	8	eP	Pn	12 42 03.9	+1.0
LGNR	Loginova	4.07	8	PN	Pn	12 42 03.9	+1.0
CIRR	Tsirk	4.11	8	eP	Pn	12 42 03.5	+0.2
CIRR	Tsirk	4.11	8	PN	Pn	12 42 03.5	+0.2
KRSR	Krestovskiy	4.19	7	eP	Pn	12 42 04.8	+0.4
KRSR	Krestovskiy	4.19	7	PN	Pn	12 42 04.8	+0.4
SRDR	Sredinnyy	4.26	0	eP	Pn	12 42 08.9	+3.6
SRDR	Sredinnyy	4.26	0	PN	Pn	12 42 08.9	+3.6
KLY	Klyuchi	4.29	7	eP	Pn	12 42 07.0	+1.3
KLY	Klyuchi	4.29	7	PN	Pn	12 42 07.0	+1.3
KBTR	Krutoberegovo	4.54	23	eP	Pn	12 42 08.2	-0.9
KBTR	Krutoberegovo	4.54	23	PN	Pn	12 42 08.2	-0.9
KBG	Krutoberegovo	4.56	22	eP	Pn	12 42 08.5	-0.8
KBG	Krutoberegovo	4.56	22	PN	Pn	12 42 08.5	-0.8
BDR	Baidarnaya	4.60	10	eP	Pn	12 42 11.3	+1.3
BDR	Baidarnaya	4.60	10	PN	Pn	12 42 11.3	+1.3
SRKR	Sorokina	4.68	10	eP	Pn	12 42 10.7	-0.3
SRKR	Sorokina	4.68	10	PN	Pn	12 42 10.7	-0.3
BKI	Bering	4.88	47	eP	Pn	12 42 11.0	-2.7
BKI	Bering	4.88	47	PN	Pn	12 42 11.0	-2.7
PALN	Palana	7.04	1	P	Pn	12 42 44.8	+1.5
PALN	Palana	7.04	1	PN	Pn	12 42 44.8	+1.5
SMY	Shemya	8.83	80	Pn	Pn	12 43 05.2	-2.7
SMY				Sn	Sn	12 44 37.9	-8.0
SMY	Shemya	8.83	80	PN	Pn	12 43 05.2	-2.7
MA2	Magadan	9.04	330	iPN	Pn	12 43 01.2	-10
MA2				pmax	pmax		
	comp=Z,7.0nm,1.3s						
SEY	Seymchan	11.58	343	P	Pn	12 43 51.0	+5.8
	comp=Z,0.0nm,0.3s,baz=93,slow=17,SNR=3.3						
JKA	Kamikawa-asahi	13.90	242		Pn	12 44 17.2	+0.3
ASAJ	Asahikawa	13.90	242	P	Pn	12 44 17.2	+0.2
	comp=Z,0.5nm,0.3s,baz=115,slow=2.9,SNR=5.0						
ASAJ				LR	LR	12 50 35.6	
	comp=Z,63nm,18.1s,baz=82,slow=41						
ERM	Erimo	15.07	235	Pn	Pn	12 44 31.1	-1.3
ERM				IAmb	IAmb	12 44 38.6	
	comp=Z,38nm,1.1s						
ERM	Erimo	15.07	235	P	Pn	12 44 31.1	-1.3
ERM				pmax	pmax		
	comp=Z,38nm,1.2s						
BILL	Bilibino	16.34	9		Pn	12 44 46.9	-1.6
BILL	Bilibino	16.34	9⇓	eP	P	12 44 48.6	-2.0
BILL				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KLR	Kul'dur	17.90	272	P	Pn	12 45 09.8	+1.9
	comp=Z,0.2nm,0.3s,baz=65,slow=11,SNR=9.9						
KLR	Kul'dur	17.90	272	iP	P	12 45 02.8	-5.2
YAK	Yakutsk	18.95	313	P	Pn	12 45 18.9	-1.6
YAK				IAmb	IAmb	12 45 19.0	
	comp=Z,9.8nm,0.6s						
YAK	Yakutsk	18.95	313	eP	P	12 45 13.2	-6.2
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,1.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,1.0nm,0.8s						
MAJO	Matsushiro	21.72	233	P	P	12 45 50.3	+0.8
MAJO				IAmb	IAmb	12 45 54.1	
	comp=Z,11nm,0.8s						
MAJO	Matsushiro	21.72	233	P	P	12 45 50.3	+0.8
MAJO				pmax	pmax		
	comp=Z,11nm,0.8s						
MAT	Matsushiro	21.72	233	P	P	12 45 51.2	+1.6
MJAR	Matsushiro Arr	21.72	233	P	P	12 45 51.4	+1.8
	comp=Z,7.9nm,0.8s,baz=27,slow=10.0,SNR=19						
MJAR				LR	LR	12 54 38.7	
	comp=Z,73nm,19.7s,baz=20,slow=37						
INU	Inuyama	23.26	233	P	P	12 46 06.1	+0.5
INU				IAmb	IAmb	12 46 13.3	
	comp=Z,9.0nm,0.7s						
TIXI	Tiksi	23.92	336	P	P	12 46 10.7	-0.8
	comp=Z,8.6nm,0.6s,baz=123,slow=10,SNR=25						
TIXI	Tiksi	23.92	336	P	P	12 46 11.0	-0.5
TIXI				IAmb	IAmb	12 46 11.7	
	comp=Z,8.5nm,0.8s						
TIXI	Tiksi	23.92	336c	eP	P	12 46 10.3	-1.2
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CNBA	Chernabura Isl	24.16	67	P	P	12 46 13.3	-0.5
HIA	Hailar	25.26	280	P	P	12 46 23.2	-0.6
HIA				IAmb	IAmb	12 46 25.0	
	comp=Z,11nm,0.6s						
HIA	Hailar	25.26	280	P	P	12 46 23.3	-0.6
HIA				pmax	pmax		
	comp=Z,11nm,0.6s						
KSRS	Korea Array	26.61	249	P	P	12 46 37.4	+1.2
	comp=Z,1.1nm,0.6s,baz=45,slow=7.8,SNR=4.9						
JNU	Nakatsue	28.15	239	P	P	12 46 51.7	+1.7
	comp=Z,6.9nm,0.8s,baz=67,slow=3.2,SNR=4.5						
JNU	Nakatsue	28.15	239	P	P	12 46 52.3	+2.3
SML	Sawmill	29.20	50	P	P	12 46 59.2	+0.1
SML				IAmb	IAmb	12 47 06.6	
	comp=Z,8.0nm,1.4s						
SCM	Sheep Creek Mo	29.67	50	P	P	12 47 02.9	-0.4
SCM				IAmb	IAmb	12 47 05.1	
	comp=Z,12nm,1.3s						
SCM	Sheep Creek Mo	29.67	50	P	P	12 47 02.9	-0.4
SCM				pmax	pmax		
	comp=Z,12nm,1.3s						
ILAR	Eielson Array	29.72	44	P	P	12 47 04.3	+0.6
	comp=Z,0.2nm,0.3s,baz=242,slow=7.0,SNR=3.4						
H11N2	WAKE ISLAND Hy	32.76	167	T	T	13 23 53.1	
	baz=39,slow=74,SNR=119						
H11N3	WAKE ISLAND Hy	32.77	167	T	T	13 23 17.4	
	SNR=69						
H11N1	WAKE ISLAND Hy	32.77	167	T	T	13 23 38.1	
	baz=355,slow=74,SNR=93						
SONM	Songino Array	33.91	284	P	P	12 47 39.5	-1.2
	comp=Z,0.3nm,0.4s,baz=22,slow=4.7,SNR=3.4						
SONM				PcP	PcP	12 50 19.1	+1.1
	comp=Z,0.3nm,0.6s,baz=93,slow=3.0,SNR=4.4						
H11S1	WAKE ISLAND Hy	33.94	168	T	T	13 24 42.4	
	baz=352,slow=76,SNR=7.6						
H11S3	WAKE ISLAND Hy	33.95	168	T	T	13 24 43.1	
	baz=352,slow=76,SNR=21						
H11S2	WAKE ISLAND Hy	33.95	168	T	T	13 24 47.7	
	baz=352,slow=76,SNR=5.5						
INK	Inuvik	34.84	37	P	P	12 47 47.3	-0.9
	comp=Z,1.0nm,0.6s,baz=280,slow=6.0,SNR=5.1						
INK	Inuvik	34.84	37	P	P	12 47 47.5	-0.7
INK	Inuvik	34.84	37	P	P	12 47 47.6	-0.7
INK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
YOJ	Yonaguni jima	39.19	240	P	P	12 48 27.8	+2.2
YOJ	Yonaguni jima	39.19	240	P	P	12 48 27.8	+2.2
YOJ				pmax	pmax		
	comp=Z,47nm,1.0s						
YULB	Yu-li	40.97	241	P	P	12 48 40.7	+0.3
YULB				IAmb	IAmb	12 48 44.8	
	comp=Z,9.0nm,1.2s						
YKA	Yellowknife Ar	44.09	42	P	P	12 49 05.0	-0.3
	comp=Z,0.6nm,0.7s,baz=298,slow=7.6,SNR=6.5						
YKA	Yellowknife Ar	44.09	42	P	P	12 49 05.0	-0.3
WMQ	Urumqi	47.09	290	P	P	12 49 29.6	+0.3
WMQ	Urumqi	47.09	290	P	P	12 49 29.7	+0.3
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KURK	Kurchatov	48.08	302	P	P	12 49 35.7	-1.1
KURK				IAmb	IAmb	12 49 35.8	
	comp=Z,2.8nm,0.7s						
KURK	Kurchatov	48.08	302c	eP	P	12 49 34.1	-2.7
KURK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SPA0	Spitsbergen Ar	48.11	350	P	P	12 49 36.4	-0.3
MK31	Makanchi Array	48.39	296	P	P	12 49 37.6	-1.7
MK31	Makanchi Array	48.39	296	P	P	12 49 37.6	-1.7
MK31				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MKAR	Makanchi Array	48.39	296	P	P	12 49 37.7	-1.6
	comp=Z,0.6nm,0.5s,baz=54,slow=6.6,SNR=20						
MAKZ	Makanchi	48.55	296	P	P	12 49 39.2	-1.4
MAKZ	Makanchi	48.55	296	P	P	12 49 39.2	-1.4
MAKZ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BRVK	Borovoye	50.88	309	P	P	12 49 56.1	-1.9
BRVK				IAmb	IAmb	12 49 57.0	
	comp=Z,2.5nm,0.7s						
BRVK	Borovoye	50.88	309	P	P	12 49 56.1	-1.9
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARU	Arti	53.99	318	iP	P	12 50 19.6	-1.5
ARU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	54.19	342	P	P	12 50 21.9	-0.5
	comp=Z,4.5nm,1.0s,baz=30,slow=7.6,SNR=7.5						
SUMG	Summit	55.01	7	iP	P	12 50 30.0	+1.3
SUMG	Summit	55.01	7	iP	P	12 50 30.0	+1.3
AAK	Ala-Archa	55.32	297	P	P	12 50 30.2	-0.9
AAK				IAmb	IAmb	12 50 30.6	
	comp=Z,1.8nm,0.7s						
AAK	Ala-Archa	55.32	297c	eP	P	12 50 28.4	-2.7
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KRVT	Keravat (AS076	56.53	189	P	P	12 50 42.6	+2.8
	comp=Z,82nm,0.6s,baz=240,slow=8.1,SNR=3.6						
KK31	Karatay Array	57.18	299	P	P	12 50 43.0	-1.2
KK31	Karatay Array	57.18	299	P	P	12 50 43.0	-1.2
KK31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KKAR	Karatay Array	57.18	299	P	P	12 50 42.9	-1.3
KKAR	Karatay Array	57.18	299	P	P	12 50 42.9	-1.3
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CHTO	Chiang Mai	57.46	259	P	P	12 50 46.6	+0.2
CHTO				IAmb	IAmb	12 50 48.7	
	comp=Z,4.1nm,0.7s						
CHTO	Chiang Mai	57.46	259	P	P	12 50 46.6	+0.2
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR	Chiang Mai Arr	57.73	258	P	P	12 50 49.5	+1.2
	comp=Z,2.1nm,0.8s,baz=22,slow=6.8,SNR=12						
PDAR	Pinedale Array	58.24	60	P	P	12 50 54.0	+2.1
	comp=Z,0.3nm,0.7s,baz=329,slow=9.7,SNR=2.5						
ABKAR	Akbulak array	58.28	311	P	P	12 50 51.0	-0.8
ABKAR				IAmb	IAmb	12 50 53.0	
	comp=Z,1.6nm,0.8s						
FINES	FINESS Array B	60.97	337	P	P	12 51 09.4	-0.6
	comp=Z,3.1nm,0.8s,baz=211,slow=11,SNR=5.9						
FINES	FINESS Array B	60.97	337	iP	P	12 51 10.6	+0.6
FINES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NOA	NORSAR Array B	64.46	344	P	P	12 51 33.7	+0.3
	comp=Z,0.6nm,0.6s,baz=24,slow=6.6,SNR=3.2						
AKASG	Malin Array Be	69.37	329	P	P	12 52 03.9	-0.8
	comp=Z,3.8nm,0.7s,baz=32,slow=6.5,SNR=10						
AKBB	Malin Array Si	69.37	329	P	P	12 52 03.9	-0.7
AKBB	Malin Array Si	69.37	329	P	P	12 52 03.9	-0.7
AKBB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KBZ	Khabaz	70.12	317	P	P	12 52 09.3	0.0
	comp=Z,1.0nm,0.6s,baz=101,slow=5.2,SNR=3.4						
TXAR	Lajitas Array	71.27	66	P	P	12 52 18.2	+1.5
	comp=Z,0.3nm,0.6s,baz=301,slow=4.8,SNR=5.4						
BUR08	Bucovina Ar. S	73.32	330	P	P	12 52 27.8	-0.9
BUR08				IAmb	IAmb	12 52 29.7	
	comp=Z,4.3nm,0.8s						
VYHS	Vyhne	74.40	334	eP	P	12 52 33.4	-1.5
VYHS	Vyhne	74.40	334	eP	P	12 52 33.4	-1.5
MODS	Modra-Piesok	74.93	335	eP	P	12 52 35.1	-2.8
MODS	Modra-Piesok	74.93	335	eP	P	12 52 35.1	-2.8
WB2	Warramunga Arr	75.04	205	P	P	12 52 39.8	+1.1
WB2				IAmb	IAmb	12 52 40.3	
	comp=Z,8.2nm,1.4s						
WRA	Warramunga Arr	75.04	205	P	P	12 52 39.9	+1.2
	comp=Z,1.5nm,0.8s,baz=18,slow=5.9,SNR=5.9						
GERES	GERESS Array B	75.38	338	P	P	12 52 40.3	-0.3
	comp=Z,0.4nm,0.4s,baz=32,slow=7.8,SNR=4.6						
FITZ	Fitzroy Crossi	75.90	213	P	P	12 52 45.3	+1.6
	comp=Z,3.2nm,0.9s,baz=40,slow=5.6,SNR=3.7						
BR131	Keskin Array S	77.26	320	P	P	12 52 51.8	+0.3
BR131				IAmb	IAmb	12 52 52.6	
	comp=Z,2.8nm,0.9s						
BR131	Keskin Array S	77.26	320	P	P	12 52 51.8	+0.3
BR131				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	Keskin Array B	77.26	320	P	P	12 52 51.7	+0.2
	comp=Z,1.2nm,0.7s,baz=35,slow=4.5,SNR=6.0						
AS31	Alice Springs	78.72	204	P	P	12 53 01.2	+1.8
ASAR	Alice Springs	78.72	204	P	P	12 53 01.4	+2.0
	comp=Z,0.9nm,0.8s,baz=15,slow=4.9,SNR=10.0						
RAYN	Ar Rayn	85.41	303	P	P	12 53 33.6	-1.2

MOS **28** *12:41:34.3±1.1, 51.°99N×160.°07E, h18km, mb4.6/9, Error ellipse: s-maj=11.2km s-min=6.6km az=119.3*
KRSC **28** *12:41:37.3±1.3, 52.°04N×159.°79E, h23km±23km, ML4.6*
NEIC **28** *12:41:38.6±2.1, 52.°15N±0.°09×159.°89E±0.°07, h35km±2km, mb4.3/18, Error ellipse: s-maj=16.8km s-min=4.1km az=200.0*
IDC **28** *12:41:41.7±2.9, 52.°25N×159.°75E, h60km±22km, mb3.7/15, mb1 3.9/17, mb1mx3.7/63, mbtmp4.0/17, ML3.8/2, Error ellipse: s-maj=22.2km s-min=15.3km az=128.0*
ISC 28 12:41:40.2±1.1, 52.°10N±0.°06×159.°77E±0.°06, h48km±9km, n82, σ1.s37/102, mb4.2/27, 1C, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	Russkaya	0.84	294	eP	Pn	12 41 53.9	-1.8
RUS				eS	Sn	12 42 05.5	-1.5
RUS	Russkaya	0.84	294	PN	Pn	12 41 53.9	-1.8
RUS				S	Sn	12 42 05.5	-1.5
SPN	Mys Shipunski	1.01	9	eP	Pn	12 41 57.9	-0.1
SPN				eS	Sn	12 42 13.2	+2.1
SPN	Mys Shipunski	1.01	9	PN	Pn	12 41 57.9	-0.1
SPN				S	Sn	12 42 13.2	+2.1
MTVR	Mutnovka	1.05	292	P	Pn	12 41 57.3	-1.3
MTVR				S	Sn	12 42 11.8	-0.4
MTVR	Mutnovka	1.05	292	PN	Pn	12 41 57.3	-1.3
MTVR				S	Sn	12 42 11.8	-0.4
KDTR	Khodutka, Kamc	1.09	255	eP	Pn	12 41 57.7	-1.3
KDTR				eS	Sn	12 42 11.7	-1.2
KDTR	Khodutka, Kamc	1.09	255	PN	Pn	12 41 57.7	-1.3
KDTR				S	Sn	12 42 11.7	-1.2
NLC	Nalytchevo	1.10	347	P	Pn	12 41 57.7	-1.5
NLC				S	Sn	12 42 13.3	0.0
NLC	Nalytchevo	1.10	347	PN	Pn	12 41 57.7	-1.5
NLC				S	Sn	12 42 13.3	0.0
DALK	Dalny	1.12	327	eP	Pn	12 41 58.9	-0.6
DALK				eS	Sn	12 42 14.1	+0.4
DALK	Dalny	1.12	327	PN	Pn	12 41 58.9	-0.6
DALK				S	Sn	12 42 14.1	+0.4
GRL	Gorelyy	1.13	294	P	Pn	12 41 59.4	-0.4
GRL				S	Sn	12 42 15.6	+1.3
GRL	Gorelyy	1.13	294	PN	Pn	12 41 59.4	-0.4
GRL				S	Sn	12 42 15.6	+1.3
PET	Petropavlovsk	1.15	324	Pn	Pn	12 41 58.8	-1.0
PET				Sn	Sn	12 42 14.5	0.0
PET	Petropavlovsk	1.15	324	ePN	Pn	12 41 58.1	-1.7
PET				eS	Sn	12 42 14.1	-0.3
PET				pmax	pmax		
	comp=Z,1µm,0.6s						
PET				smax	smax		
	comp=N,3µm,0.7s						
PET				smax	smax		
	comp=E,2µm,0.6s						
ASAK	Asacha	1.18	285	eS	Sn	12 42 16.3	+0.9
KRMR	Karymshinskiy	1.24	307	eP	Pn	12 42 00.3	-0.8
KRMR				eS	Sn	12 42 15.9	-0.8
KRMR	Karymshinskiy	1.24	307	PN	Pn	12 42 00.3	-0.8
KRMR				S	Sn	12 42 15.9	-0.8
KRER	Koryakskii	1.36	333	S	Sn	12 42 22.3	+2.5
KRX	Arik	1.43	332	P	Pn	12 42 03.8	-0.1
KRX	Arik	1.43	332	PN	Pn	12 42 03.8	-0.1
PEA0B	Petropavlovsk-	1.62	309	Pn	Pn	12 42 04.8	-1.4
PEA0B	Petropavlovsk-	1.62	309	PN	Pn	12 42 04.8	-1.4
PETK	Petropavlovsk-	1.62	309	P	Pn	12 42 05.0	-1.2
	comp=E,142nm,0.3s,baz=138,slow=12,SNR=7.3						
PETK				S	Sn	12 42 25.9	0.0
	comp=E,56nm,0.3s,baz=245,slow=24,SNR=3.9						
PETK				LR	LR	12 42 49.4	
	comp=E,905nm,20.7s,baz=60,slow=44						
APC	Apacha	1.80	298	eP	Pn	12 42 09.4	+0.7
APC				eS	Sn	12 42 33.3	+3.0
APC	Apacha	1.80	298	PN	Pn	12 42 09.4	+0.7
APC				S	Sn	12 42 33.3	+3.0
MIPR	Malaya Ipel'ka	1.86	277	P	Pn	12 42 08.7	-0.9
MIPR	Malaya Ipel'ka	1.86	277	PN	Pn	12 42 08.7	-0.9
SMY	Shemya	8.79	80	P	Pn	12 43 42.2	-2.2
SMY	Shemya	8.79	80	PN	Pn	12 43 42.2	-2.2
SEY	Seymchan	11.55	343	P	Pn	12 44 28.4	+6.2
	comp=E,0.1nm,0.3s,baz=333,slow=23,SNR=2.0						
JKA	Kamikawa-asahi	13.95	242	P	Pn	12 44 58.2	+3.1
ASAJ	Asahikawa	13.95	242	P	Pn	12 44 58.2	+3.1
	comp=E,0.7nm,0.3s,baz=71,slow=9.9,SNR=4.6						
TEY	Ternei	16.84	254⇑	eP	P	12 45 37.3	+3.5
TEY				pmax	pmax		
	comp=E,20nm,1.1s						
TEY				pmax	pmax		
	comp=Z,30nm,1.1s						
KLR	Kul'dur	17.95	272	P	P	12 45 47.9	+1.9
	comp=Z,0.2nm,0.3s,baz=75,slow=8.4,SNR=7.4						
USRK	Ussuriysk Ar.	20.05	258	P	P	12 46 10.2	+1.1
	comp=Z,1.3nm,0.6s,baz=47,slow=15,SNR=2.9						
MJB9	Matsu-Tunnel	21.78	233	P	P	12 46 29.3	+1.5
MJB9				IAmb	IAmb	12 46 32.0	
	comp=Z,14nm,0.8s						
MAJO	Matsushiro	21.78	233	P	P	12 46 29.2	+1.4
MAJO				IAmb	IAmb	12 46 32.0	
	comp=Z,13nm,0.8s						
MAJO	Matsushiro	21.78	233	P	P	12 46 29.2	+1.4

MAJO				pmax	pmax		
	comp=Z,13nm,0.8s						
MAT	Matsushiro	21.78	233	P	P	12 46 29.3	+1.5
MJAR	Matsushiro Arr	21.78	233	P	P	12 46 29.2	+1.4
	comp=Z,9.3nm,0.8s,baz=28,slow=10,SNR=9.2						
TIXI	Tiksi	23.91	336	P	P	12 46 48.3	-0.7
	comp=Z,6.3nm,0.6s,baz=124,slow=8.7,SNR=8.6						
TIXI	Tiksi	23.91	336	P	P	12 46 48.2	-0.7
TIXI				IAmb	IAmb	12 46 49.2	
	comp=Z,7.4nm,0.7s						
HIA	Hailar	25.30	280	P	P	12 47 01.7	-0.2
HIA	Hailar	25.30	280	P	P	12 47 01.7	-0.2
HIA				pmax	pmax		
	comp=Z,14nm,0.7s						
JNU	Nakatsue	28.20	239	P	P	12 47 29.8	+1.7
JNU				IAmb	IAmb	12 47 34.2	
	comp=Z,7.6nm,0.7s						
ILAR	Eielson Array	29.66	44	P	P	12 47 39.5	-1.3
	comp=Z,0.5nm,0.9s,baz=250,slow=7.8,SNR=2.9						
SONM	Songino Array	33.95	284	P	P	12 48 17.6	-1.1
	comp=Z,0.3nm,0.4s,baz=66,slow=8.7,SNR=2.8						
SONM				PcP	PcP	12 50 56.7	+0.7
	comp=Z,0.2nm,0.6s,baz=88,slow=1.3,SNR=3.8						
INK	Inuvik	34.78	37	P	P	12 48 25.6	+0.2
	comp=Z,1.0nm,0.8s,baz=252,slow=4.9,SNR=2.3						
INK	Inuvik	34.78	37	P	P	12 48 24.7	-0.8
GTA	Gaotai	42.53	277	eP	P	12 49 30.8	-0.1
GTA				pP	pP	12 49 35.5	-7.3
GTA				sP	pwP	12 49 38.0	-9.1
YKA	Yellowknife Ar	44.03	42	P	P	12 49 42.5	0.0
	comp=Z,0.6nm,0.8s,baz=299,slow=7.9,SNR=3.9						
MK31	Makanchi Array	48.41	296	P	P	12 50 15.4	-1.8
MK31	Makanchi Array	48.41	296	P	P	12 50 15.4	-1.8
MK31				pmax	pmax		
	comp=Z,2.0nm,1.5s						
MKAR	Makanchi Array	48.41	296	P	P	12 50 15.3	-1.9
	comp=Z,0.5nm,0.5s,baz=52,slow=6.9,SNR=7.2						
MAKZ	Makanchi	48.58	296	P	P	12 50 16.3	-2.2
MAKZ	Makanchi	48.58	296	P	P	12 50 16.3	-2.2
MAKZ				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ARCES	ARCESS Array B	54.17	342	P	P	12 50 59.4	-0.6
	comp=Z,4.8nm,0.8s,baz=24,slow=9.3,SNR=5.9						
KSH	Kashi	56.61	293	P	P	12 51 27.3	+9.3
KK31	Karatay Array	57.20	299	P	P	12 51 20.5	-1.5
KK31				IAmb	IAmb	12 51 21.8	
	comp=Z,1.7nm,0.8s						
KK31	Karatay Array	57.20	299	P	P	12 51 20.5	-1.5
KK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KKAR	Karatay Array	57.20	299	P	P	12 51 20.7	-1.4
KKAR				IAmb	IAmb	12 51 21.8	
	comp=Z,1.7nm,0.8s						
KKAR	Karatay Array	57.20	299	P	P	12 51 20.7	-1.4
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CHTO	Chiang Mai	57.51	259	P	P	12 51 25.1	+0.6
CHTO	Chiang Mai	57.51	259	P	P	12 51 25.1	+0.6
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CMAR	Chiang Mai Arr	57.78	258	P	P	12 51 27.8	+1.3
	comp=Z,1.9nm,0.6s,baz=27,slow=6.9,SNR=6.5						
ABKAR	Akbulak array	58.29	311	P	P	12 51 28.9	-0.6
ABKAR				IAmb	IAmb	12 51 30.5	
	comp=Z,2.1nm,0.8s						
AKASG	Malin Array Be	69.36	329	P	P	12 52 41.5	-0.8
	comp=Z,6.5nm,0.9s,baz=30,slow=6.2,SNR=7.5						
AKBB	Malin Array Si	69.36	329	P	P	12 52 41.5	-0.8
AKBB	Malin Array Si	69.36	329	P	P	12 52 41.5	-0.8
AKBB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBZ	Khabaz	70.12	317	P	P	12 52 46.8	-0.3
	comp=Z,2.1nm,0.9s,baz=104,slow=8.3,SNR=2.1						
BUR08	Bucovina Ar. S	73.31	330	P	P	12 53 06.3	-0.1
BUR08				IAmb	IAmb	12 53 11.6	
	comp=Z,2.7nm,0.9s						
WB2	Warramunga Arr	75.09	205	P	P	12 53 18.2	+1.4
WB2				IAmb	IAmb	12 53 27.8	
	comp=Z,3.2nm,1.1s						
WRA	Warramunga Arr	75.09	205	P	P	12 53 16.9	+0.1
	comp=Z,1.4nm,0.8s,baz=20,slow=5.9,SNR=4.6						
BR131	Keskin Array S	77.26	320	P	P	12 53 29.1	-0.1
BR131				IAmb	IAmb	12 53 30.1	
	comp=Z,2.9nm,1.0s						
BR131	Keskin Array S	77.26	320	P	P	12 53 29.2	-0.1
BR131				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRTR	Keskin Array B	77.26	320	P	P	12 53 29.2	-0.1
	comp=Z,1.8nm,1.0s,baz=25,slow=3.3,SNR=5.3						
AS31	Alice Springs	78.77	204	P	P	12 53 38.4	+1.0
ASAR	Alice Springs	78.77	204	P	P	12 53 39.0	+1.6
	comp=Z,0.4nm,0.6s,baz=27,slow=4.4,SNR=2.8						
RAYN	Ar Rayn	85.43	303	P	P	12 54 12.5	-0.1
RAYN	Ar Rayn	85.43	303	P	P	12 54 12.5	-0.1
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						

IDC 28 12:41:51.9±2.5, 28.77S×177.17W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.6/42, mbtmp3.6/2, Error ellipse: s-maj=32.3km s-min=25.7km az=85.0
NEIC 28 12:41:57.6±0.8, 28.8S±0.1×177.2W±0.1, h40km±11km, mb4.1/5, Error ellipse: s-maj=24.4km s-min=9.5km az=133.0
ISC 28 12:41:56.9±1.0, 28.8S±0.1×177.1W±0.1, h36km, n14, σ0.88/16, mb4.0/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.80	239	Pn	Pn	12 42 10.4	-1.2
	87nm,0.3s,baz=54,slow=23,SNR=2.6						
RAO				Sn	Sn	12 42 24.2	+1.9
	545nm,0.3s,baz=124,slow=20,SNR=14						
RAO	Raoul Island	0.80	239	Pn	Pn	12 42 11.5	-0.1
RAO				Sn	Sn	12 42 23.0	+0.7
BKZ	Black Stump Fm	11.57	205	Pn	Pn	12 44 38.9	-0.6
NIUE	Niue	11.74	36	Pn	Pn	12 44 42.1	+0.2
BFZ	Birch Farm	13.00	203	Pn	Pn	12 44 58.1	-0.9
AS31	Alice Springs	43.97	265	P	P	12 50 00.8	-0.1
ASAR	Alice Springs	43.97	265	P	P	12 50 00.2	-0.6
	0.4nm,0.7s,baz=105,slow=8.0,SNR=7.2						
WR0	Warramunga Arr	44.64	270	P	P	12 50 06.0	-0.2
WR0				IAmb	IAmb	12 50 07.5	
	comp=Z,5.5nm,1.4s						
WB2	Warramunga Arr	44.81	270	P	P	12 50 07.2	-0.4
WB2				IAmb	IAmb	12 50 10.2	
	comp=Z,2.8nm,1.1s						
WRA	Warramunga Arr	44.82	270	P	P	12 50 07.9	+0.3
	comp=Z,0.8nm,0.5s,baz=108,slow=8.4,SNR=14						
WB0	Warramunga Arr	44.84	270	P	P	12 50 06.7	-1.1
WB0				IAmb	IAmb	12 50 11.7	
	comp=Z,3.5nm,1.2s						
FITZ	Fitzroy Crossi	53.14	268	P	P	12 51 11.2	-0.2
QSPA	South Pole Qui	61.26	180	P	P	12 52 09.4	+1.1
FINES	FINESS Array B	143.93	341	PKP	PKPdf	13 01 27.9	+0.2
	comp=Z,1.0nm,0.6s,baz=104,slow=8.0,SNR=5.5						

ATH 28 12:45:37.5, 38.25N×20.36E, h15km±1km, ML2.6/3, Error ellipse: s-maj=2.2km s-min=1.1km az=260.0
THE 28 12:45:37.8, 38.25N×20.38E, h13km, ML2.1/5, Error ellipse: s-maj=1.2km s-min=0.7km az=251.0
ISC 28 12:45:37.4±1.4, 38.25N±0.03×20.38E±0.07, h16km±6km, n21, σ0.21/36, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT1	Agia Thekli	0.01	74	P	Pg	12 45 40.2	0.0
KEF4	Livadi, Kephal	0.04	76	P	Pg	12 45 40.1	-0.2
KEF4				S	Sg	12 45 41.9	-0.3
KEF3	Kipouria, Keph	0.05	206	P	Pg	12 45 40.4	0.0
KEF3				S	Sg	12 45 42.4	0.0
LXRA	Lixouri, Kepha	0.07	136	P	Pg	12 45 40.5	0.0
LXRA				S	Sg	12 45 42.6	+0.1
ARGA	Argostoli. Kep	0.11	132	P	Pg	12 45 40.8	-0.1
ARGA				S	Sg	12 45 43.1	-0.1
KEF2	Argostoli. Kep	0.12	134	P	Pg	12 45 41.0	-0.1
KEF2				S	Sg	12 45 43.3	-0.1
VLS	Valsamata	0.18	113	P	Pg	12 45 41.7	-0.2
VLS				S	Sg	12 45 44.8	-0.1
	5μm,0.1s						
VLS	Valsamata	0.18	113	P	Pg	12 45 41.7	-0.2
VLS				S	Sg	12 45 44.8	-0.1
VLS				AML	AML	12 45 45.0	
	comp=N,6351μm,0.1s						
VLS				AML	AML	12 45 45.3	
	comp=E,11923μm,0.1s						
VSK1	VASILIKIADES	0.22	43	P	Pg	12 45 42.6	+0.1
KONA	Konidatara, Ke	0.23	41	P	Pg	12 45 42.6	-0.1
KONA				S	Sg	12 45 46.4	+0.1
KONA				AML	AML	12 45 46.5	
	comp=E,1109μm,0.1s						
KONA				AML	AML	12 45 46.9	
	comp=N,1419μm,0.2s						
FSK	Fiskardo	0.26	35	P	Pg	12 45 42.9	-0.2
FSK				S	Sg	12 45 46.9	0.0
	comp=N,482nm,0.1s						
FSK	Fiskardo	0.26	35	P	Pg	12 45 42.9	-0.2
FSK				S	Sg	12 45 47.1	+0.2
KFL	Anninata	0.35	113	P	Pg	12 45 44.6	-0.1
EVGI	Lefkada island	0.43	30	P	Pg	12 45 45.9	-0.2
EVGI				S	Sb	12 45 53.1	+0.1
	comp=N,222nm,0.1s						
EVGI	Lefkada island	0.43	30	P	Pg	12 45 46.0	-0.2
EVGI				S	Sb	12 45 53.0	+0.1
VLMS	Volimes, Zakyn	0.43	149	P	Pg	12 45 46.1	-0.1
VLMS				S	Sb	12 45 53.0	0.0
VLMS				AML	AML	12 45 54.5	
	comp=N,2620μm,0.3s						
VLMS				AML	AML	12 45 54.5	
	comp=E,2727μm,0.1s						
LKD2	Lefkada island	0.58	22	P	Pg	12 45 48.6	-0.4
TSLK	Tsoukalades, L	0.61	21	P	Pg	12 45 49.2	-0.4
PDO	Prodromos	0.72	61	P	Pb	12 45 51.8	+0.1
PDO				S	Sb	12 46 02.0	+0.7
	comp=E,192nm,0.4s						
PVO	Paravola	0.97	68	P	Pb	12 45 56.1	+0.2
PVO				S	Sn	12 46 09.8	-0.1
	comp=E,88nm,0.4s						
DRO	Drossia	1.09	105	P	Pb	12 45 58.1	+0.1

BJI 28 12:54:33.8±0.0, 12.20N×73.50W, h10km, Ms7 4.4/1
IDC 28 12:54:33.2±0.4, 12.08N×73.50W, h0km, mb4.5/30, mb1 4.6/33, mb1mx4.6/46, mbtmp4.5/33, ML4.4/3, MS4.0/16, Ms1 4.0/16, ms1mx3.7/41, Error ellipse: s-maj=14.9km s-min=9.2km az=64.0
NEIC 28 12:54:37.0±2.2, 12.21N±0.05×73.59W±0.06, h26km±4km, mb4.8/143, Error ellipse: s-maj=8.1km s-min=7.2km az=54.0
RSNC 28 12:54:39.1±0.9, 11.95N×73.54W, h9km±7km, ML4.3, Mw4.3
VAO 28 12:54:54.5±1.5, 10.93N×72.99W, h109km, mb4.8
ISC 28 12:54:35.5±1.0, 12.15N±0.03×73.52W±0.04, h16km±6km, n530, σ1.58/516, mb4.7/95, MS4.0/15, 5C-3D, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRC	Santa Marta, M	1.20	215	⇑iP	Pn	12 54 57.4	-0.3
SMRC				eS	Sb	12 55 10.6	-2.6
SMRC				i		12 55 11.8	
	comp=Z,4μm,0.4s						
URIC	Uribia, Colomb	1.56	107	eP	Pg	12 55 05.4	-0.1
URIC				eS	Sg	12 55 25.1	-0.8
URIC				i		12 55 27.2	
	comp=Z,5μm,0.3s						
URIC	Uribia, Colomb	1.56	107		Pn	12 54 57.2	-5.4
URIC				Sn	Sn	12 55 17.7	-4.7
CODC	Agustn Codazz	2.20	178	⇑iP	Pn	12 55 11.9	+0.4
CODC				eS	Sn	12 55 37.1	-1.2
CODC				i		12 55 48.5	
	comp=Z,1μm,0.4s						
ARGC	Ariguani, Magd	2.39	197	⇑iP	Pn	12 55 15.2	+1.2
ARGC				eS	Sn	12 55 44.0	+1.1
ARGC				i		12 55 57.7	
	comp=Z,864nm,0.3s						
SJCC	San Jacinto, C	2.77	216	⇑iP	Pn	12 55 19.4	+0.1
SJCC				eS	Sn	12 55 51.9	-0.6
SMLC	San Martn de	3.37	189	eP	Pn	12 55 27.9	+0.4
SMLC				eS	Sn	12 56 06.9	-0.3
OCAC	Ocana	3.89	177	eP	Pn	12 55 35.7	+0.9
OCAC				i		12 56 50.3	
	comp=Z,1μm,0.5s						
LCBC	Los crdobas,	4.31	221	eP	Pn	12 55 43.7	+3.3
LCBC				i		12 56 34.9	
	comp=Z,190nm,0.3s						
SDV	Santo Domingo	4.31	139	Pn	Pn	12 55 42.5	+1.9
	comp=Z,81nm,0.3s,baz=198,slow=2.6,SNR=156						
SDV				Sn	Sn	12 56 32.2	+1.5
	comp=Z,96nm,0.3s,baz=350,slow=16,SNR=1.8						
SDV				LR	LR	12 58 03.1	
	comp=Z,2μm,19.1s,baz=328,slow=49						
SDV	Santo Domingo	4.31	139	eP	Pn	12 55 42.6	+1.9
SDV	Santo Domingo	4.31	139		Pn	12 55 42.5	+1.9
SDV				Sn	Sn	12 56 31.5	+0.9
UREC	San Jos de Ur	4.80	205	eP	Pn	12 55 49.6	+2.4
ZARC	Zaragoza, Cauc	4.81	196	eP	Pn	12 55 49.4	+2.1
ZARC				eS	Sn	12 56 44.4	+1.6
ZARC				i		12 56 46.4	
ZARC				i		12 56 49.2	
	comp=Z,417nm,0.4s						
PAMC	Pamplona, Colo	4.85	170	eP	Pn	12 55 49.5	+1.3
PAMC				eS	Sn	12 56 43.6	-0.7
PAMC				i		12 57 04.8	
	comp=Z,333nm,0.5s						
BARC	Barichara	5.53	177	eP	Pn	12 55 58.7	+1.3
BARC				i		12 57 33.2	
	comp=Z,751nm,0.5s						
PTBC	PUERTO BERRIO,	5.65	190	eP	Pn	12 56 01.0	+2.1
PTBC				i		12 57 12.9	
	comp=Z,177nm,0.3s						
DBBC	Dabeiba	5.75	208	eP	Pn	12 56 01.8	+1.5
DBBC				i		12 57 45.1	
	comp=Z,129nm,0.5s						
RUSC	La Rusia	6.24	176	eP	Pn	12 56 08.2	+0.9
RUSC	La Rusia	6.24	176		Pn	12 56 08.1	+0.8
HELC	Santa Helena	6.25	199	eP	Pn	12 56 09.3	+1.9
HELC				eS	Sn	12 57 18.0	-0.7
HELC				i		12 57 39.3	
	comp=Z,140nm,0.5s						
LGNH	Logne	6.38	8	Pn	Pn	12 56 08.7	-0.2
LGNH				Sn	Sn	12 57 17.3	-4.1
SPBC	San Pablo de B	6.48	185	eP	Pn	12 56 12.8	+2.4
PTAC	Punta Ardita,	6.53	221	eP	Pn	12 56 12.3	+1.4
PCJ	Portland Cotta	6.58	328	⇑iP	Pn	12 56 13.1	+1.5
NORC	Norcasia	6.68	192	eP	Pn	12 56 14.0	+0.9
NORC				i		12 57 39.2	
	comp=Z,91nm,0.4s						
STH	Stony Hill	6.69	332	⇓iP	Pn	12 56 14.8	+1.6
CBOC	Ciudad Bolivar	6.71	202	eP	Pn	12 56 16.1	+2.4
CBOC				i		12 57 56.0	
	comp=Z,50nm,0.7s						
BCIP	Isla Barro Col	6.88	245		Pn	12 56 14.1	-1.7
BANI	BANI	6.91	26	Pn	Pn	12 56 14.8	-1.5
BNJ	Bonny Gate	6.97	332	⇓iP	Pn	12 56 18.4	+1.4
MCJ	Malvern	7.01	325	iP	Pn	12 56 18.5	+0.9
MCJ				iS	Sn	12 57 31.0	-6.0
GUY2C	Guyana, Caldas	7.12	195	eP	Pn	12 56 22.1	+2.6
GUY2C				i		12 58 25.1	
	comp=Z,119nm,0.6s						
SDDR	Presa de Saban	7.12	17		Pn	12 56 21.0	+1.9
SDDR				Sn	Sn	12 57 37.4	-2.4
BBJ	Bamboo Saint A	7.17	330	⇓iP	Pn	12 56 21.1	+1.3
MTDJ	Mount Denham	7.17	328		Pn	12 56 20.3	+0.4
MTDJ				Sn	Sn	12 57 34.2	-6.9
ROSC	El Rosal	7.31	186	Pn	Pn	12 56 23.6	+1.6
	comp=Z,15nm,0.3s,baz=7.6,slow=9.1,SNR=12						
ROSC				Sn	Sn	12 57 45.3	+0.5
	baz=51,slow=22,SNR=0.7						
ROSC	El Rosal	7.31	186	eP	Pn	12 56 26.4	+4.5
ROSC	El Rosal	7.31	186		Pn	12 56 24.3	+2.3
CHIC	Chingaza	7.48	182	eP	Pn	12 56 27.7	+3.4
CHIC				i		12 58 29.3	
	comp=Z,60nm,0.5s						
CVER	Cruz Verde, Cu	7.60	184	eP	Pn	12 56 31.5	+5.4
DR12	Loma Pena Alta	7.71	31		Pn	12 56 25.8	-1.4
SC01	Santiago de lo	7.72	20	Pn	Pn	12 56 27.9	+0.7
SC01				Sn	Sn	12 57 52.0	-2.3
GTBY	Guantanamo Bay	7.88	349		Pn	12 56 29.3	-0.2
GTBY				Sn	Sn	12 57 52.9	-5.4
ORTC	Ortega, Tolima	8.37	192	eP	Pn	12 56 39.2	+3.0
ORTC				i		12 58 47.1	
	comp=Z,71nm,0.5s						
PRAC	Prado	8.49	189	eP	Pn	12 56 40.6	+2.7
YOTC	Yotoco, Valle	8.58	199	eP	Pn	12 56 40.1	+0.8
PCRV	Puerto La Cruz	8.93	102	Pn	Pn	12 56 42.7	-1.3
	comp=Z,5.2nm,0.3s,baz=287,slow=2.8,SNR=49						
PCRV				Sn	Sn	12 58 20.2	-4.2
	comp=Z,1.7nm,0.3s,baz=141,slow=23,SNR=1.0						
PLCV	Puerto La Cruz	8.98	102		Pn	12 56 42.7	-1.9
SJG	San Juan	9.26	49	Pn	Pn	12 56 44.4	-4.0
	comp=Z,5.1nm,0.3s,baz=251,slow=15,SNR=3.9						
SJG				Sn	Sn	12 58 23.4	-8.8
	comp=Z,45nm,0.3s,baz=248,slow=23,SNR=10						
GUVC	San Jose del G	9.59	175	eP	Pn	12 56 55.0	+2.1
GUVC				i		12 58 45.9	
	comp=Z,74nm,0.3s						
CBCY	The Bluff, Cay	9.64	322		Pn	12 56 51.9	-1.6
MACC	Macarena, Meta	9.95	182	eP	Pn	12 56 57.6	-0.3
POPC	Popayan, Colom	10.05	198	eP	Pn	12 56 59.8	+0.4
POPC				i		12 59 35.6	
	comp=Z,3.8nm,0.6s						
GARC	Garzon, Huila	10.09	191	eP	Pn	12 57 00.8	+0.7
PCON	Cinco Dias	10.17	197	eP	Pn	12 57 03.6	+2.2
PCON				i		12 59 41.2	
	comp=Z,13nm,0.5s						
FSCY	Frank Sound, G	10.25	315		Pn	12 57 00.6	-1.4
SOTA	Rioblanco	10.41	197	eP	Pn	12 57 06.5	+1.8
FLOC	Florencia	10.71	192	eP	Pn	12 57 08.5	+0.2
FLOC				i		12 59 29.4	
	comp=Z,33nm,0.9s						
FLOC	Florencia	10.71	192		Pn	12 57 09.3	+0.9
SABA	Saba	11.32	60	Pn	Pn	12 57 16.2	-0.4
JTS	Las Juntas de	11.37	262	LR	LR	13 01 14.1	
	comp=Z,186nm,21.5s,baz=142,slow=35						
ACON	Acoyapa	11.40	270	Pn	Pn	12 57 17.1	-0.7
OTAV	Otavalo	12.81	203	eP	Pn	12 57 40.1	+2.6
OTAV	Otavalo	12.81	203		Pn	12 57 38.6	+1.1
TEIG	Tepich	16.28	301	Pn	Pn	12 58 22.7	-0.9
	comp=Z,2.0nm,0.3s,baz=320,slow=1.1,SNR=6.7						
TEIG	Tepich	16.28	301	Pn	Pn	12 58 22.0	-1.6
CCIG	Comitan	18.51	285	P	P	12 58 49.5	-1.9
ATAH	Atahualpa	19.77	194	P	P	12 59 06.5	+1.1
	comp=Z,0.5nm,0.3s,baz=47,slow=6.6,SNR=12						
CMIG	Matias Romero	21.24	286	P	P	12 59 20.7	-0.4
	comp=Z,4.9nm,0.7s,baz=97,slow=12,SNR=7.3						
TIGA	Tifton	21.33	336	P	P	12 59 19.6	-2.2
TIGA	Tifton	21.33	336	P	P	12 59 24.1	+2.3
	baz=152,SNR=7.2						
158A	Hollywood	21.38	344	P	P	12 59 24.0	+1.6
	baz=162						
157A	Early Branch	21.55	343	P	P	12 59 26.8	+2.6
	baz=160						
NHSC	New Hope	21.73	345	P	P	12 59 28.1	+2.0
	baz=162						
MDP	Montagnes des	21.79	107	P	P	12 59 26.3	-0.6
	comp=Z,36nm,0.6s,baz=295,slow=8.9,SNR=18						
MDP				LR	LR	13 08 45.4	
	comp=Z,163nm,18.5s,baz=278,slow=39						
Z58A	St. Stephen	21.86	346	P	P	12 59 29.4	+1.9
	baz=164,SNR=8.3						
352A	Blakely	21.93	333	P	P	12 59 27.4	-0.9
Z57A	Bowman	22.05	344	P	P	12 59 30.9	+1.4
	baz=161						
Y59A	Loris	22.28	348	P	P	12 59 34.5	+2.5
	baz=166						
X59A	McDuffie Farm,	22.79	349	P	P	12 59 39.6	+2.2
	baz=167						
152A	Waverly Hall	22.86	335	P	P	12 59 36.9	-1.3
152A				IAmb	IAmb	12 59 43.2	
	comp=Z,28nm,1.1s						
250A	Grady	22.96	331	P	P	12 59 38.2	-1.0
250A				IAmb	IAmb	12 59 44.2	
	comp=Z,44nm,1.1s						
Y55A	Saluda	22.98	342	P	P	12 59 41.5	+2.0
	baz=159						
X57A	Johnson Farm,	23.00	346	P	P	12 59 41.8	+2.1
	baz=164						
GOGA	Godfrey	23.04	338	P	P	12 59 41.9	+1.9
	baz=155						
W60A	Pink Hill	23.11	351	P	P	12 59 42.9	+2.2
	baz=170						
BIRD	Birdtown, Kers	23.27	345	P	P	12 59 40.9	-1.4
BIRD				IAmb	IAmb	12 59 46.2	
	comp=Z,26nm,1.0s						
X56A	White Oak	23.27	344	P	P	12 59 44.3	+2.0
	baz=161						
SAML	Samuel	23.34	153	eP	P	12 59 40.3	-3.0
W59A	Clinton	23.34	350	P	P	12 59 45.1	+2.0
	baz=168						
W58A	Raeford	23.35	348	P	P	12 59 45.1	+2.0
	baz=166						
X55A	Gracelyn & Ava	23.41	343	P	P	12 59 45.6	+1.8
	baz=160						
W57A	Gilead	23.64	347	P	P	12 59 48.0	+2.0
	baz=164						
Y52A	Lilburn	23.66	338	P	P	12 59 43.2	-3.0
Y52A	Lilburn	23.66	338	P	P	12 59 48.1	+1.9
	baz=154						
X54A	Belton	23.71	342	P	P	12 59 49.3	+2.6
	baz=158,SNR=6.8						
W56A	Indian Trail	23.76	346	P	P	12 59 49.2	+2.0
	baz=163						
Z50A	Ashland	23.88	334	P	P	12 59 49.9	+1.6
	baz=149,SNR=12						
V59A	Middlesex	23.89	350	P	P	12 59 50.1	+1.6
	baz=169						
KMSC	Kings Mountain	23.96	344	P	P	12 59 50.3	+1.2
	baz=161						
X53A	Estanollee	23.96	340	P	P	12 59 50.5	+1.4
	baz=156						
V58A	Windy Hill, Pi	24.08	349	P	P	12 59 51.0	+0.9
	baz=167						
W54A	Cherokee Point	24.15	342	P	P	12 59 52.3	+1.4
	baz=159						
LRAL	Lakeview Retre	24.18	331	P	P	12 59 50.4	-0.7
LRAL				IAmb	IAmb	12 59 55.2	
	comp=Z,28nm,0.8s						
LRAL	Lakeview Retre	24.18	331	P	P	12 59 52.6	+1.5
	baz=146,SNR=20						
NNA	Nana	24.21	188	P	P	12 59 52.9	+1.3
	comp=Z,40nm,0.7s,baz=2.0,slow=8.6,SNR=18						
NNA				LR	LR	13 11 49.0	
	comp=Z,218nm,18.3s,baz=349,slow=43						
NNA	Nana	24.21	188	P	P	12 59 51.6	0.0
BG3	Lake Jocassee	24.29	341	P	P	12 59 50.9	-1.3
V57A	Coltrane Farms	24.30	348	P	P	12 59 53.8	+1.6
	baz=165,SNR=11						
V56A	Mocksville	24.39	346	P	P	12 59 54.5	+1.5
	baz=164,SNR=7.7						
W53A	Cullowhee	24.53	341	P	P	12 59 56.3	+1.8
	baz=157						
U58A	Oxford	24.56	350	P	P	12 59 55.9	+1.3
	baz=168,SNR=6.2						
X51A	Calhoun	24.58	337	P	P	12 59 53.5	-1.3
X51A	Calhoun	24.58	337	P	P	12 59 56.1	+1.3
	baz=153						
V55A	Taylorsville	24.60	345	P	P	12 59 54.6	-0.4
V55A	Taylorsville	24.60	345	P	P	12 59 56.4	+1.4
	baz=162						
Y49A	Blount Mountai	24.60	334	P	P	12 59 54.4	-0.6
Y49A				IAmb	IAmb	12 59 58.3	
	comp=Z,19nm,0.8s						
W52A	Murphy	24.71	339	P	P	12 59 57.3	+1.2
	baz=155,SNR=6.9						
V54A	Nebo	24.73	343	P	P	12 59 57.4	+1.3
	baz=160						
U57A	Blanch	24.74	349	P	P	12 59 57.0	+0.8
	baz=166,SNR=6.7						
TLIG	Tlapa	24.79	286	P	P	12 59 54.8	-2.3
U56A	King	24.87	347	P	P	12 59 59.0	+1.5
	baz=164						
V53A	Saluda	24.88	342	P	P	12 59 59.8	+2.3
	baz=158						
T59A	Double "B" Far	24.98	352	P	P	12 59 59.8	+1.4
	baz=171						
T60A	Surry	25.05	354	P	P	13 00 00.3	+1.4
	baz=173						
T58A	Grand View Acr	25.10	350	P	P	13 00 00.8	+1.3
	baz=169,SNR=9.8						
TKL	Tuckaleechee C	25.18	340	P	P	13 00 01.5	+1.3
	comp=Z,13nm,1.0s,baz=145,slow=8.7,SNR=9.3						
TKL				LR	LR	13 11 06.5	
	comp=Z,343nm,18.2s,baz=156,slow=39						
U55A	TA2, Sparta	25.18	346	P	P	13 00 01.5	+1.3
	baz=163,SNR=6.4						
T57A	Hurt	25.27	349	P	P	12 59 59.9	-1.1
T57A				IAmb	IAmb	13 00 05.0	
	comp=Z,22nm,0.8s						
T57A	Hurt	25.27	349	P	P	13 00 02.4	+1.4
	baz=167,SNR=7.4						
V52A	Sevierville	25.28	341	P	P	13 00 02.6	+1.4

Sta	Name	Dist	Az	Ph	Ph	Time	Res
	baz=157						
W50A	Signal Mountai	25.32	337	P	P	13 00 02.8	+1.3
	baz=152,SNR=9.3						
U54A	Nelsons Funny	25.39	344	P	P	13 00 02.9	+0.7
	baz=161						
T56A	Rocky Mt	25.45	348	P	P	13 00 03.2	+0.5
	baz=165						
U53A	Fall Branch	25.45	343	P	P	13 00 04.1	+1.3
	baz=159,SNR=7.8						
V51A	Loudon	25.50	339	P	P	13 00 04.0	+0.8
	baz=155,SNR=8.0						
S60A	Water View	25.60	354	P	P	13 00 05.5	+1.5
	baz=173						
S58A	Poland Farm, P	25.68	352	P	P	13 00 06.2	+1.6
	baz=170						
T55A	Pulaski	25.70	347	P	P	13 00 06.1	+1.2
	baz=164						
BLA	Blacksburg	25.71	347	P	P	13 00 06.8	+1.7
	baz=164						
S59A	Mechanicsville	25.73	353	P	P	13 00 06.0	+0.9
	baz=172						
T54A	Tazewell	25.84	345	P	P	13 00 08.2	+1.9
	baz=162						
TZTN	Tazewell	25.91	341	P	P	13 00 08.5	+1.6
	baz=157						
S57A	Dark Hollow, R	25.96	350	P	P	13 00 08.2	+0.9
	baz=168,SNR=7.1						
S56A	Natural Bridge	25.99	349	P	P	13 00 09.0	+1.5
	baz=167						
T53A	Wise	26.02	343	P	P	13 00 09.0	+1.1
	baz=160						
T52A	Hallie	26.26	343	P	P	13 00 11.6	+1.6
	baz=159						
S55A	Lewisburg	26.27	347	P	P	13 00 11.3	+1.2
	baz=165						
R58A	Rapidan	26.34	352	P	P	13 00 11.7	+1.0
	baz=170						
R57A	Stanardsville	26.42	351	P	P	13 00 13.4	+2.0
	baz=169						
T51A	Gray	26.43	341	P	P	13 00 12.9	+1.4
	baz=157,SNR=8.0						
S54A	Dingess, Beckl	26.48	346	P	P	13 00 13.8	+1.8
	baz=163						
R56A	Bull Pasture M	26.67	350	P	P	13 00 14.9	+1.1
	baz=167						
R55A	Marlinton	26.68	348	P	P	13 00 15.6	+1.7
	baz=166						
R54A	Victor	26.77	347	P	P	13 00 16.3	+1.7
	baz=164						
T50A	Nancy	26.77	340	P	P	13 00 16.5	+1.9
	baz=155						
Q58A	Fox Den Farm,	26.94	353	P	P	13 00 18.1	+2.0
	baz=171						
S51A	Beattyville	26.94	342	P	P	13 00 18.1	+2.0
	baz=158						
T49A	Edmonton	27.09	339	P	P	13 00 19.2	+1.7
	baz=154						
Q57A	Strasburg	27.12	352	P	P	13 00 19.2	+1.4
	baz=170						
WVT	Waverly	27.14	334	P	P	13 00 17.0	-1.0
WVT				IAmb	IAmb	13 00 24.1	
	comp=Z,14nm,0.8s						
WVT	Waverly	27.14	334	P	P	13 00 19.5	+1.5
	baz=148						
S50A	Richmond	27.22	341	P	P	13 00 20.2	+1.6
	baz=156						
Q55A	Buckhannon	27.36	349	P	P	13 00 21.9	+1.9
	baz=166						
P59A	Jarrettsville	27.47	355	P	P	13 00 22.6	+1.8
	baz=174						
Q54A	Coxs Mills	27.50	348	P	P	13 00 23.1	+1.9
	baz=165						
P57A	Homestead Farm	27.51	352	P	P	13 00 22.8	+1.6
	baz=171						
Q53A	Leroy	27.54	346	P	P	13 00 23.3	+1.8
	baz=163						
R51A	Hillsboro	27.55	343	P	P	13 00 23.4	+1.8
	baz=158						
T47A	Sharon Grove	27.58	336	P	P	13 00 21.4	-0.5
S49A	Springfield	27.61	340	P	P	13 00 24.2	+2.0
	baz=155						
P56A	Dayton Farm, R	27.65	351	P	P	13 00 24.5	+2.0
	baz=169,SNR=5.9						
R50A	Paris	27.75	342	P	P	13 00 25.5	+2.0
	baz=157						
Q52A	Bidwell	27.81	345	P	P	13 00 25.2	+1.2
	baz=162						
O58A	Lewisberry	28.02	354	P	P	13 00 26.9	+1.0
	baz=173						
P54A	Burton	28.03	349	P	P	13 00 27.1	+1.3
	baz=166						
P53A	Whipple	28.11	347	P	P	13 00 27.8	+1.3
	baz=164						
O57A	Amberson	28.18	353	P	P	13 00 28.6	+1.4
	baz=172						
O56A	Blue Knob Stat	28.36	352	P	P	13 00 28.3	-0.6
O56A				IAmb	IAmb	13 00 32.5	
	comp=Z,22nm,0.8s						
O56A	Blue Knob Stat	28.36	352	P	P	13 00 30.3	+1.5
	baz=170,SNR=5.1						
WCI	Wyandotte Cave	28.36	338	P	P	13 00 30.4	+1.5
	baz=153						
O55A	Ligonier	28.41	351	P	P	13 00 30.5	+1.2
	baz=168						
P52A	Corning	28.41	346	P	P	13 00 30.6	+1.2
	baz=162						
W41B	Gary Mavity, V	28.52	327	P	P	13 00 31.6	+1.2
	baz=139						
O54A	Avella	28.57	349	P	P	13 00 32.4	+1.8
	baz=166						
Q49A	Aurora	28.59	341	P	P	13 00 32.3	+1.4
	baz=156						
SSPA	Standing Stone	28.63	353	P	P	13 00 30.1	-1.1
SSPA				IAmb	IAmb	13 00 34.4	
	comp=Z,13nm,0.8s						
SSPA	Standing Stone	28.63	353	P	P	13 00 33.2	+2.0
	baz=171						
WHAR	Wooly Hollow	28.63	327	P	P	13 00 29.4	-1.9
LCAR	Lake Charles	28.64	329	P	P	13 00 31.0	-0.3
LCAR				IAmb	IAmb	13 00 34.2	
	comp=Z,14nm,1.1s						
N58A	Sunbury	28.71	355	P	P	13 00 33.4	+1.4
	baz=174						
N59A	State Game Lan	28.72	356	P	P	13 00 33.6	+1.5
	baz=176						
LPAZ	La Paz	28.76	169	P	P	13 00 32.8	-0.4
	comp=Z,5.7nm,0.6s,baz=343,slow=9.1,SNR=16						
LPAZ				LR	LR	13 13 11.1	
	comp=Z,296nm,20.9s,baz=17,slow=39						
LPAZ	La Paz	28.76	169	eP	P	13 00 31.5	-1.7
LPAZ	La Paz	28.76	169	P	P	13 00 32.4	-0.8
Q48A	North Vernon	28.79	340	P	P	13 00 34.5	+1.8
	baz=155						
O53A	New Philadelph	28.80	348	P	P	13 00 34.5	+1.7
	baz=164						
MIAR	Mount Ida	28.80	324	P	P	13 00 33.9	+1.0
	baz=136						
O52A	Adamsville	28.81	347	P	P	13 00 34.4	+1.6
	baz=163						
P50A	Jamestown	28.82	343	P	P	13 00 34.5	+1.5
	baz=159						
CLDB	Colider	28.86	142	eP	P	13 00 31.1	-2.5
N55A	Marion Center	28.92	351	P	P	13 00 35.3	+1.4
	baz=169						
N56A	West Decatur	28.96	353	P	P	13 00 35.6	+1.5
	baz=170						
435B	Jarrell	28.96	314	P	P	13 00 34.3	0.0
	baz=125						
O51A	Pataskala	29.02	346	P	P	13 00 36.4	+1.7
	baz=162						
833A	Chaparral WMA,	29.03	308	P	P	13 00 35.6	+0.7
	baz=118						
ACSO	Alum Creek Sta	29.19	345	P	P	13 00 38.0	+1.8
	baz=161						
M58A	Price's Panora	29.22	355	P	P	13 00 38.0	+1.5
	baz=174						
M57A	Sunshine Farm,	29.25	354	P	P	13 00 38.7	+2.0
	baz=173						
N54A	Moraine State	29.26	350	P	P	13 00 37.3	+0.5
	baz=167						
M59A	Waymart	29.32	357	P	P	13 00 39.5	+2.1
	baz=176						
W39A	Magazine	29.39	325	P	P	13 00 38.5	+0.5
	baz=136,SNR=5.4						
N52A	McGinn's Farm,	29.44	347	P	P	13 00 40.4	+2.0
	baz=164						
M56A	Emporium	29.50	353	P	P	13 00 40.8	+1.8
	baz=171						

Sta	Name	Dist	Az	Ph	Ph	Time	Res
O49A	Covington	29.51	343	P	P	13 00 40.7	+1.6
	baz=158						
M55A	Ridgway	29.56	352	P	P	13 00 41.3	+1.8
	baz=170						
WHTX	Lake Whitney,	29.57	316	P	P	13 00 40.0	+0.2
	baz=127						
ZAIG	Zacatecas	29.60	295	P	P	13 00 39.5	-0.9
ZAIG				IAmb	IAmb	13 00 43.8	
	comp=Z,10nm,0.9s						
M54A	Oil Creek Stat	29.73	351	P	P	13 00 43.1	+2.0
	baz=168						
U40A	Yellville	29.74	327	P	P	13 00 41.9	+0.8
	baz=139,SNR=8.0						
N50A	Nevada	29.74	345	P	P	13 00 42.3	+1.2
	baz=161						
L58A	Harry Jones Me	29.85	357	P	P	13 00 44.5	+2.5
	baz=176						
L57A	Andrews Acres	29.88	355	P	P	13 00 43.7	+1.4
	baz=174						
L61A	Hillsdale 1, H	29.93	360	P	P	13 00 44.2	+1.5
	baz=180						
MGMO	Mountain Grove	30.05	329	P	P	13 00 43.4	-0.5
L56A	Greenwood	30.08	354	P	P	13 00 45.3	+1.1
	baz=172						
N49A	Columbus Grove	30.15	344	P	P	13 00 45.6	+0.9
	baz=159						
L55A	Hinsdale	30.23	353	P	P	13 00 46.4	+1.0
	baz=171						
CCM	Cathedral Cave	30.27	332	P	P	13 00 44.6	-1.2
CCM				IAmb	IAmb	13 00 49.0	
	comp=Z,20nm,1.0s						
CCM	Cathedral Cave	30.27	332	P	P	13 00 47.4	+1.6
	baz=144						
HRV	Adam Dziewonsk	30.29	3	P	P	13 00 48.5	+2.6
	baz=184						
N48A	Decatur	30.33	343	P	P	13 00 47.4	+1.1
	baz=158						
L54A	Sinclairville	30.39	351	P	P	13 00 48.7	+1.8
	baz=169						
JCT	Junction City	30.40	311	P	P	13 00 47.7	+0.5
	baz=121						
K59A	Cooperstown	30.53	358	P	P	13 00 50.0	+1.9
	baz=178						
N47A	Urbana	30.55	342	P	P	13 00 46.3	-2.0
N47A				IAmb	IAmb	13 00 51.6	
	comp=Z,24nm,1.2s						
N47A	Urbana	30.55	342	P	P	13 00 49.3	+1.1
	baz=156						
SIV	San Ignacio	30.55	156	P	P	13 00 46.9	-1.6
	comp=Z,9.1nm,0.8s,baz=355,slow=8.7,SNR=40						
K58A	Earlville	30.55	357	P	P	13 00 49.7	+1.4
	baz=176						
SFIN	Lafayette	30.56	339	IAmb	IAmb	13 00 53.1	
	comp=Z,12nm,1.0s						
SFIN	Lafayette	30.56	339	P	P	13 00 49.5	+1.2
	baz=153						
K57A	Scipio Center	30.58	356	P	P	13 00 50.3	+1.8
	baz=174						
K56A	Middlesex	30.61	354	P	P	13 00 50.1	+1.3
	baz=173						
M49A	Liberty Center	30.61	344	P	P	13 00 50.5	+1.7
	baz=160						
K54A	Basiliko Farm,	30.68	353	P	P	13 00 51.2	+1.8
	baz=170						
L50A	Kingsville	30.86	346	P	P	13 00 52.6	+1.6
	baz=162						
M47A	Cromwell	30.97	342	P	P	13 00 53.1	+1.2
	baz=157						
J60A	Lant Hill Farm	30.98	0	P	P	13 00 54.1	+2.1
	baz=180						
S39A	Bolivar	31.00	329	IAmb	IAmb	13 00 54.6	
	comp=Z,9.9nm,0.7s						
TUL1	Leonard	31.05	323	IAmb	IAmb	13 00 55.9	
	comp=Z,14nm,0.8s						
TUL1	Leonard	31.05	323	P	P	13 00 53.8	+1.1
	baz=134						
J63A	Strafford	31.09	3	P	P	13 00 54.2	+1.2
	baz=185						
J61A	Chester	31.09	1	P	P	13 00 54.8	+1.8
	baz=182						
J58A	Remsen	31.13	358	P	P	13 00 55.5	+2.1
	baz=177						
J56A	Wolcott	31.15	355	P	P	13 00 54.9	+1.5
	baz=174						
L48A	N Adams	31.17	344	P	P	13 00 54.4	+0.6
	baz=159						
J57A	Williamstown	31.22	357	P	P	13 00 56.0	+1.9
	baz=176						
J54A	Appleton	31.32	353	P	P	13 00 56.6	+1.6
	baz=170						
MNMC	Minye Minye	31.32	173	P	P	13 00 53.0	-2.5
MNMC				IAmb	IAmb	13 01 09.8	
	comp=Z,26nm,1.5s						
ABTX	Abilene, Hawle	31.45	315	P	P	13 00 57.3	+1.0
	baz=124,SNR=5.9						
I58A	Old Forge	31.45	358	P	P	13 00 57.5	+1.3
	baz=177						
J52A	Paris	31.56	350	P	P	13 00 58.2	+1.1
	baz=167						
NCB	Newcomb	31.71	359	P	P	13 00 57.5	-1.0
NCB				IAmb	IAmb	13 01 02.4	
	comp=Z,26nm,1.2s						
I63A	Otisfield	31.89	4	P	P	13 01 02.1	+2.2
	baz=186						
K48A	Perry	31.90	345	P	P	13 01 01.2	+1.1
	baz=160						
K47A	Vermontville	32.00	344	P	P	13 01 02.0	+1.0
	baz=159						
LBNH	Lisbon	32.00	2	P	P	13 01 02.8	+1.8
	baz=183						
WMOK	Wichita Mounta	32.12	319	P	P	13 01 01.9	-0.3
WMOK				IAmb	IAmb	13 01 03.7	
	comp=Z,8.3nm,0.9s						
WMOK	Wichita Mounta	32.12	319	P	P	13 01 02.5	+0.3
	baz=128,SNR=8.2						
I55A	Frankford	32.15	354	P	P	13 01 03.7	+1.5
	baz=172						
H58A	Gabriels	32.16	359	P	P	13 01 04.3	+1.9
	baz=179						
T35A	Sooner Cattle	32.16	324	P	P	13 01 01.5	-1.0
T35A				IAmb	IAmb	13 01 04.3	
	comp=Z,9.5nm,0.8s						
J49A	Marlette	32.19	347	P	P	13 01 04.2	+1.5
	baz=162						
I51A	Listowel	32.20	350	P	P	13 01 04.5	+1.8
	baz=166,SNR=5.5						
K46A	Dorr	32.23	343	P	P	13 01 03.8	+0.8
	baz=157						
N41A	Harden Midland	32.27	335	P	P	13 01 02.5	-0.9
J48A	Bridge Port	32.28	346	P	P	13 01 05.4	+2.0
	baz=161						
H60A	Morristown	32.30	1	P	P	13 01 05.8	+2.2
	baz=182						
H56A	Elgin	32.41	356	P	P	13 01 06.6	+2.1
	baz=175						
H55A	Tweed	32.44	355	P	P	13 01 06.3	+1.5
	baz=174						
J47A	Sunmer	32.48	345	P	P	13 01 06.7	+1.5
	baz=159						
H53A	Bobcaygeon	32.60	353	P	P	13 01 07.8	+1.5
	baz=171						
I49A	Point Hope	32.67	348	P	P	13 01 08.7	+1.8
	baz=163						
J46A	Howard City	32.81	344	P	P	13 01 09.2	+1.1
	baz=158						
TX31	Lajitas Ar. Si	32.83	306	P	P	13 01 08.4	-0.2
TX32	Lajitas Array	32.83	306	P	P	13 01 08.8	+0.2
TXAR	Lajitas Array	32.83	306	P	P	13 01 10.0	+1.4
	comp=Z,2.3nm,0.6s,baz=128,slow=9.0,SNR=36						
TXAR				PcP	PcP	13 03 53.9	+0.4
	comp=Z,0.5nm,0.7s,baz=138,slow=6.0,SNR=4.2						
G60A	Masonville	32.85	2	P	P	13 01 10.5	+2.1
	baz=182						
G57A	Newington	32.86	358	P	P	13 01 10.8	+2.3
	baz=178						
SALV	Santo Antonio	32.98	147	eP	P	13 01 08.2	-1.6
G62A	West of Eustis	33.05	4	P	P	13 01 11.8	+1.6
	baz=186						
G61A	St-Isidore-de-	33.06	3	P	P	13 01 12.6	+2.3
	baz=184						
G55A	Calabogie	33.10	356	P	P	13 01 12.5	+1.9
	baz=174						
I48A	Sherman Twp	33.10	347	P	P	13 01 12.3	+1.6
	baz=162						
G53A	Haliburton	33.15	353	P	P	13 01 12.2	+1.2
	baz=171						
G54A	Lake Saint Pet	33.36	354	P	P	13 01 14.6	+1.7
	baz=172						

Sta	Name	Dist	Az	Ph	Ph	Time	Res
H47A	Mio	33.61	346	P	P	13 01 17.7	+2.6
	baz=161						
F60A	Warwick	33.73	2	P	P	13 01 18.2	+2.1
	baz=183						
KSU1	Kansas State U	33.77	327	P	P	13 01 17.5	+1.0
	baz=136						
F64A	Sherman	33.88	6	P	P	13 01 19.7	+2.3
	baz=189						
F52A	Sundridge	33.89	353	P	P	13 01 19.5	+1.9
	baz=170						
ALGO	Algonquin Park	33.91	354	P	P	13 01 19.1	+1.5
	baz=172,SNR=6.4						
JFWS	Jewell Farm	33.91	338	P	P	13 01 18.6	+0.8
	baz=150,SNR=5.2						
G47A	Hillman	34.07	347	P	P	13 01 20.9	+1.8
	baz=162						
F51A	Arnstein	34.10	352	P	P	13 01 20.8	+1.5
	baz=169						
E58A	La Victoria	34.11	0	P	P	13 01 20.7	+1.4
	baz=181						
E57A	Chemin Saint G	34.15	359	P	P	13 01 21.2	+1.4
	baz=179,SNR=7.3						
E55A	Montcerf-Lytto	34.26	357	P	P	13 01 21.8	+1.1
	baz=176						
SCIA	State Center	34.27	333	P	P	13 01 22.1	+1.3
	baz=144						
F49A	Sandfield	34.27	349	P	P	13 01 21.3	+0.5
	baz=165						
E53A	Dumoine, Ponti	34.29	355	P	P	13 01 22.9	+1.9
	baz=173						
I42A	Draeger Farm,	34.30	340	IAmb	IAmb	13 01 23.4	
	comp=Z,13nm,0.9s						
E52A	Mattawa	34.30	354	P	P	13 01 22.6	+1.6
	baz=171,SNR=6.2						
E56A	St. Veronique	34.30	358	P	P	13 01 22.5	+1.5
	baz=178						
E54A	Lac Daplat, Po	34.31	355	P	P	13 01 23.0	+1.9
	baz=174						
MSTX	Muleshoe	34.37	314	P	P	13 01 22.6	+0.6
	baz=122,SNR=7.4						
G45A	Suttons Bay	34.38	345	P	P	13 01 23.1	+1.3
	baz=159						
F48A	Evansville	34.44	349	P	P	13 01 23.8	+1.5
	baz=164						
E64A	Bridgewater	34.49	7	P	P	13 01 25.1	+2.4
	baz=190						
E51A	G1948 Merrick	34.64	353	P	P	13 01 25.7	+1.7
	baz=170,SNR=6.1						
D60A	Saint Jean D'O	34.72	3	P	P	13 01 27.3	+2.7
	baz=185						
D57A	Chemin Vers le	34.75	360	P	P	13 01 26.9	+1.9
	baz=180						
D55A	Sainte-Anne-du	34.79	358	P	P	13 01 26.7	+1.5
	baz=177						
D56A	ZEC Mazanza, M	34.80	359	P	P	13 01 27.2	+1.8
	baz=178						
D58A	Chemin du LacG	34.84	1	P	P	13 01 27.4	+1.7
	baz=181						
LVC	Limon Verde	34.84	173	P	P	13 01 24.2	-2.2
	comp=Z,6.5nm,0.9s,baz=348,slow=3.7,SNR=3.6						
LVC	Limon Verde	34.84	173	P	P	13 01 25.1	-1.2
LVC				IAmb	IAmb	13 01 25.9	
	comp=Z,16nm,1.3s						
I40A	Norwalk	34.89	338	P	P	13 01 25.8	-0.4
F45A	CMU Biological	34.95	345	P	P	13 01 28.2	+1.6
	baz=159						
D54A	Lac Fusel, La	34.99	356	P	P	13 01 28.7	+1.7
	baz=175,SNR=6.5						
E48A	Lockeyer	34.99	350	P	P	13 01 28.4	+1.4
	baz=165						
D53A	Lac Vacive, Po	34.99	355	P	P	13 01 29.0	+2.0
	baz=173						
ARAG	Araguaiana, MT	35.04	142	eP	P	13 01 25.7	-2.1
D61A	St Aubert, Com	35.05	4	P	P	13 01 30.3	+2.8
	baz=186						
D63A	Stockholm	35.07	6	P	P	13 01 30.1	+2.5
	baz=189						
D51A	Lot 18 Range I	35.17	353	P	P	13 01 30.6	+2.1
	baz=170						
E47A	Iron Bridge	35.17	348	P	P	13 01 30.2	+1.6
	baz=163						
MNTX	Cornudas Mount	35.18	309	P	P	13 01 29.0	+0.1
MNTX	Cornudas Mount	35.18	309	P	P	13 01 30.6	+1.7
	baz=116,SNR=10						
D50A	G1974 Best Tow	35.31	353	P	P	13 01 31.3	+1.6
	baz=169						
CBKS	Cedar Bluff	35.32	323	P	P	13 01 31.1	+1.0
	baz=132,SNR=7.0						
D48A	Paudash Townsh	35.60	350	P	P	13 01 34.1	+1.8
	baz=166,SNR=7.9						
D47A	Chapleau	35.72	349	P	P	13 01 34.8	+1.5
	baz=164						
D46A	Sault St. Mari	35.75	348	P	P	13 01 35.1	+1.6
	baz=162						
E44A	Grand Marais A	35.92	345	P	P	13 01 36.9	+1.9
	baz=159						
G40A	Rib Lake	35.95	340	IAmb	IAmb	13 01 37.9	
	comp=Z,11nm,1.1s						
VLDQ	Val d'Or	36.00	356	P	P	13 01 36.5	+0.9
VLDQ				IAmb	IAmb	13 01 39.1	
	comp=Z,6.7nm,0.8s						
BGNE	Belgrade	36.25	328	P	P	13 01 38.3	+0.4
	baz=137						
COWI	Conover	36.34	342	IAmb	IAmb	13 01 41.0	
	comp=Z,13nm,0.8s						
SPMN	Marine on St.	36.84	337	P	P	13 01 44.1	+1.2
	baz=148						
AQDB	Aquidauana	36.86	151	eP	P	13 01 41.8	-1.4
LSQQ	Lebel-sur-Quev	36.91	356	P	P	13 01 44.8	+1.4
	baz=174						
D41A	Chassel	37.03	343	IAmb	IAmb	13 01 47.0	
	comp=Z,14nm,0.9s						
KSCO	Kaye Shedlock'	37.18	321	P	P	13 01 46.4	+0.4
	baz=128						
T25A	Trinidad	37.22	317	P	P	13 01 47.2	+0.7
	baz=124						
ECSD	EROS Data Cent	37.24	332	P	P	13 01 46.3	0.0
	baz=141,SNR=5.4						
GO02	Mina Guanaco	37.28	174	P	P	13 01 46.0	-1.2
121A	Cookes Peak, D	37.38	308	P	P	13 01 48.9	+1.0
121A				IAmb	IAmb	13 01 51.9	
	comp=Z,15nm,0.9s						
121A	Cookes Peak, D	37.38	308	P	P	13 01 50.2	+2.3
	baz=115,SNR=12						
BDFB	Brasilia	37.41	137	P	P	13 01 47.4	-0.8
	comp=Z,9.1nm,0.7s,baz=286,slow=25,SNR=11						
BDFB				LR	LR	13 18 59.2	
	comp=Z,251nm,18.9s,baz=302,slow=39						
BDFB	Brasilia	37.41	137	P	P	13 01 46.9	-1.3
BDFB				IAmb	IAmb	13 01 48.0	
	comp=Z,9.7nm,0.7s						
ANMO	Albuquerque	37.49	313	P	P	13 01 49.5	+0.7
ANMO	Albuquerque	37.49	313	P	P	13 01 50.8	+2.0
	baz=119						
E38A	The Farm, Brul	37.57	340	IAmb	IAmb	13 01 51.4	
	comp=Z,11nm,0.8s						
MATQ	Matagami	37.65	356	P	P	13 01 51.5	+1.8
	baz=174,SNR=8.1						
OGNE	Ogallala	38.05	324	P	P	13 01 54.0	+0.6
	baz=131						
SDCO	Great Sand Dun	38.28	317	P	P	13 01 55.5	0.0
SDCO				IAmb	IAmb	13 01 58.8	
	comp=Z,12nm,0.8s						
SDCO	Great Sand Dun	38.28	317	P	P	13 01 57.6	+2.1
	baz=123,SNR=24						
EYMN	Ely	38.72	341	P	P	13 01 57.4	-1.4
EYMN				IAmb	IAmb	13 02 00.9	
	comp=Z,14nm,0.8s						
EYMN	Ely	38.72	341	P	P	13 01 59.8	+1.0
	baz=151,SNR=18						
SUSD	Miller	38.88	331	P	P	13 02 00.1	0.0
	baz=138						
IPMB	Ipameri, GO	38.99	140	eP	P	13 01 59.7	-1.8
S22A	4UR Ranch, Cre	39.16	316	P	P	13 02 04.6	+1.6
	baz=122,SNR=15						
ISCO	Idaho Springs	39.51	320	P	P	13 02 07.2	+1.4
	baz=125						
JANB	Januaria	39.59	132	eP	P	13 02 05.1	-1.4
TUC	Tucson	39.62	306	P	P	13 02 06.1	-0.5
TUC	Tucson	39.62	306	P	P	13 02 08.4	+1.7
	baz=112						
W18A	Petrified Fore	39.96	311	P	P	13 02 09.3	-0.2
W18A				IAmb	IAmb	13 02 13.3	
	comp=Z,22nm,1.0s						
W18A	Petrified Fore	39.96	311	P	P	13 02 10.9	+1.4
	baz=116,SNR=9.3						
SMCO	Snowmass	40.03	318	P	P	13 02 09.7	-0.6

SMCO IAmb IAmb 13 02 13.3
comp=Z,11nm,0.9s
MVCO Mesa Verde 40.04 315 P P 13 02 09.5 -0.7
MVCO IAmb IAmb 13 02 13.6
comp=Z,18nm,1.4s
MVCO Mesa Verde 40.04 315 P P 13 02 11.8 +1.6
baz=120,SNR=6.6
PHWY Pilot Hill 40.29 322 P P 13 02 11.6 -0.7
N23A Red Feather La 40.35 321 P P 13 02 13.6 +0.9
baz=126
AGMN Agassiz Nation 40.57 337 IAmb IAmb 13 02 16.1
comp=Z,17nm,0.9s
AGMN Agassiz Nation 40.57 337 P P 13 02 15.4 +1.3
baz=145
LCO Las Campanas 41.01 176 P P 13 02 17.6 -0.7
LCO IAmb IAmb 13 02 18.7
comp=Z,14nm,0.8s
214A Organ Pipe Nat 41.11 305 P P 13 02 20.3 +1.4
baz=110,SNR=7.8
RSSD Black Hills 41.25 326 P P 13 02 19.8 -0.3
RSSD Black Hills 41.25 326 P P 13 02 21.2 +1.1
baz=131
WUAZ Wupatki 41.34 311 P P 13 02 21.4 +0.5
baz=115,SNR=10
CPUP Villa Florida 41.37 158 P P 13 02 20.4 -0.5
comp=Z,0.6nm,0.3s,baz=2.4,slow=6.7,SNR=3.3
CPUP LR LR 13 21 40.4
comp=Z,467nm,18.2s,baz=359,slow=39
O20A White River Ci 41.37 319 P P 13 02 22.7 +1.5
baz=123
RCBR Riachuelo 41.45 113 P P 13 02 23.3 +1.4
comp=Z,18nm,0.5s,baz=275,slow=7.8,SNR=5.7
RCBR Riachuelo 41.45 113 eP P 13 02 23.1 +1.2
RCBR Riachuelo 41.45 113 P P 13 02 22.6 +0.7
K22A Casper 41.74 323 P P 13 02 25.2 +1.1
baz=127
ULM Lac du Bonnet 42.19 339 P P 13 02 28.0 +0.6
comp=Z,14nm,0.7s,baz=142,slow=8.9,SNR=42
ULM LR LR 13 21 22.1
comp=Z,274nm,18.1s,baz=152,slow=38
ULM Lac du Bonnet 42.19 339 IAmb IAmb 13 02 28.9
comp=Z,17nm,0.8s
SCHQ Schefferville 42.90 6 P P 13 02 35.0 +1.8
comp=Z,7.6nm,0.5s,baz=194,slow=6.5,SNR=29
SCHQ LR LR 13 20 30.1
comp=Z,144nm,19.2s,baz=6.0,slow=36
SCHQ Schefferville 42.90 6 P P 13 02 34.0 +0.9
SCHQ IAmb IAmb 13 02 35.4
comp=Z,8.8nm,0.6s
PDMCI Parker Dam,Lak 42.97 308 P P 13 02 34.7 +0.7
baz=111
Y12C Blythe 43.07 307 P P 13 02 36.8 +1.9
baz=110
GLA Glamis 43.08 306 P P 13 02 36.8 +1.8
baz=109
VAO Valinhos 43.55 143 eP P 13 02 37.0 -1.8
PD31 Pinedale Array 43.63 321 P P 13 02 39.7 +0.2
PDAR Pinedale Array 43.63 321 P P 13 02 40.5 +1.0
comp=Z,3.5nm,0.7s,baz=119,slow=10,SNR=35
PDAR PcP **PcP** 13 04 26.9 +0.1
comp=Z,2.4nm,0.6s,baz=131,slow=5.2,SNR=13
BW06 Boulder Array 43.63 321 P P 13 02 39.2 -0.3
BW06 Boulder Array 43.63 321 P P 13 02 40.4 +0.9
baz=124,SNR=6.3
IRM Iron Mountain 43.69 307 P P 13 02 41.7 +1.8
baz=110
JLU Jordanelle 43.71 317 P P 13 02 41.0 +0.8
BC3 Big Chuckawall 43.77 306 P P 13 02 41.0 +0.4
baz=109
CFA Coronel Fontan 43.80 173 P P 13 02 40.5 -0.2
comp=Z,5.6nm,0.6s,baz=346,slow=8.5,SNR=9.9
SWSC Sam W. Stewart 43.82 305 P P 13 02 42.2 +1.3
baz=108
HWUT Hardware Ranch 44.28 319 IAmb IAmb 13 02 47.3
comp=Z,17nm,0.8s
DGMT Dagmar 44.29 331 P P 13 02 45.2 +0.7
DGMT Dagmar 44.29 331 P P 13 02 45.9 +1.4
baz=134
GMRC Granite Mounta 44.31 308 P P 13 02 46.4 +1.4
baz=110
DUG Dugway, Tooele 44.43 316 P P 13 02 45.7 -0.2
DUG IAmb IAmb 13 02 49.6
comp=Z,13nm,0.9s
DUG Dugway, Tooele 44.43 316 P P 13 02 47.7 +1.8
baz=118,SNR=11
SHPR Sheep Range 44.55 310 P P 13 02 47.4 +0.5
SHPR IAmb IAmb 13 02 50.6
comp=Z,9.4nm,1.1s
TUQ Turquoise Moun 44.74 309 P P 13 02 50.3 +1.9
baz=110,SNR=6.0
SNOW Snow King Moun 44.75 321 P P 13 02 48.6 +0.1
RLMT Red Lodge 44.80 324 P P 13 02 49.1 +0.2
RLMT Red Lodge 44.80 324 P P 13 02 49.9 +1.0
baz=126,SNR=6.0
HEC Hector,Ludlow 44.84 308 P P 13 02 51.0 +1.8
baz=110
TPAW Teton Pass 44.88 321 IAmb IAmb 13 02 54.0
comp=Z,6.5nm,0.7s
BGU Big Grassy Mou 44.91 317 P P 13 02 50.7 +0.9
FXWY Fox Creek 45.01 321 IAmb IAmb 13 02 52.9
comp=Z,7.7nm,0.8s
H17A Grant Village 45.15 322 P P 13 02 53.0 +1.3
baz=124
SHOC Shoshone, Teco 45.17 309 P P 13 02 53.8 +2.2
baz=111
GSC Goldstone, Bar 45.37 308 P P 13 02 55.5 +2.2
baz=110
TPNV Topopah Spring 45.52 310 P P 13 02 56.9 +2.2
baz=112
R11A Troy Canyon, C 45.57 312 P P 13 02 57.2 +2.2
baz=114,SNR=9.1
FURC Furnace Creek, 45.81 309 P P 13 02 58.6 +1.9
baz=111
LRMC Laurel Mtn Rad 46.10 308 P P 13 03 01.1 +1.9
baz=109,SNR=5.3
MPMC Manual Prospec 46.14 309 P P 13 03 00.9 +1.2
baz=110
EDW2 Edwards Air Fo 46.15 307 P P 13 03 00.8 +1.3
baz=108
CWC Cottonwood Cre 46.72 309 P P 13 03 05.5 +1.4
baz=110
EGMT Eagleton 46.80 327 P P 13 03 05.5 +1.0
baz=128,SNR=7.7
GO05 Huala 46.93 178 P P 13 03 05.1 -0.3
VES Vestal, Richgr 47.30 308 P P 13 03 09.8 +1.4
baz=108
NV11 Mina Array Sit 47.47 312 P P 13 03 10.5 +0.6
NV11 IAmb IAmb 13 03 18.6
comp=Z,7.1nm,1.0s
NVAR Mina Array Bea 47.58 311 P P 13 03 12.3 +1.5
comp=Z,3.0nm,0.7s,baz=119,slow=6.6,SNR=11
KVN Kaiserville 47.66 312 P P 13 03 11.9 +0.5
KVN IAmb IAmb 13 03 15.7
comp=Z,9.6nm,0.9s
SMMC Simmler 47.85 307 P P 13 03 11.5 -1.2
baz=107
MFID Camas Ranch 47.92 319 IAmb IAmb 13 03 16.0
comp=Z,7.6nm,0.8s
FFC Flin Flon 48.00 338 P P 13 03 13.6 0.0
FFC IAmb IAmb 13 03 15.2
comp=Z,7.8nm,0.6s
WVOR Wild Horse Val 49.35 316 IAmb IAmb 13 03 27.0
comp=Z,13nm,1.4s
F10A Beach Ranch, E 49.99 321 IAmb IAmb 13 03 31.3
comp=Z,11nm,0.8s
MOD Modoc Plateau 50.28 315 IAmb IAmb 13 03 33.5
comp=Z,6.7nm,1.1s
O03E Paynes Creek 50.77 313 P P 13 03 35.2 +0.1
baz=110
E09A Wood Farm, Sta 50.81 321 IAmb IAmb 13 03 37.6
comp=Z,13nm,1.2s
NEW Newport 51.04 324 IAmb IAmb 13 03 39.1
comp=Z,7.8nm,0.8s
NEW Newport 51.04 324 P P 13 03 37.9 +1.0
baz=120,SNR=6.5
M04C Macdoel 51.31 314 P P 13 03 40.0 +0.9
baz=111
PINE Pine Mountain 51.44 317 P P 13 03 40.6 +0.4
PINE IAmb IAmb 13 03 43.0
comp=Z,10.0nm,1.1s
J05D Fort Rock, OR 51.44 316 P P 13 03 41.6 +1.5
baz=112
C09A Chrisman Ranch 51.49 323 P P 13 03 41.2 +0.9
FRB Frobisher Bay 51.64 3 LR LR 13 26 08.8
comp=Z,123nm,18.5s,baz=172,slow=37
L04D Klamath Falls 51.78 315 P P 13 03 43.5 +0.8
baz=111
M02C Callahan 51.89 314 P P 13 03 43.0 -0.4
baz=110
J04D Umpqua Nationa 52.02 316 P P 13 03 45.1 +0.6
baz=112
G05D Wamic, OR 52.26 319 P P 13 03 47.9 +1.8
baz=114
F05D White Salmon 52.61 319 P P 13 03 49.9 +1.3
baz=114
PLCA Paso Flores 52.69 177 P P 13 03 49.1 0.0
comp=Z,15nm,0.5s,baz=18,slow=8.6,SNR=84
PLCA Paso Flores 52.69 177 eP P 13 03 49.2 0.0
PLCA Paso Flores 52.69 177 P P 13 03 49.5 +0.3
LTY Liberty 52.69 321 IAmb IAmb 13 03 52.1
comp=Z,21nm,1.4s
K02D Willamette Mer 52.89 315 P P 13 03 52.0 +1.1
baz=110
H04D Lebanon 52.91 317 P P 13 03 52.4 +1.5
baz=112
J01E Myrtle Point 53.23 315 P P 13 03 54.2 +1.0
baz=110
D05A Enumclaw 53.48 321 P P 13 03 55.5 +0.6
D05A IAmb IAmb 13 03 57.5
comp=Z,13nm,1.0s
G03D McMinnville, O 53.52 318 P P 13 03 56.2 +0.9
baz=112
D03D Eldon 54.30 321 P P 13 04 02.1 +1.1
baz=114
A04D Lummi Island 54.55 322 P P 13 04 02.4 -0.4
baz=115
LLLB Lillooet 54.89 324 IAmb IAmb 13 04 07.4
comp=Z,9.8nm,1.0s
YKA Yellowknife Ar 58.17 339 P P 13 04 28.7 +0.4
comp=Z,8.2nm,0.8s,baz=127,slow=7.7,SNR=117
YKA PcP **PcP** 13 05 19.6 -0.2
comp=Z,1.2nm,0.7s,baz=123,slow=4.9,SNR=6.7
YKA LR LR 13 30 42.5
comp=Z,110nm,18.1s,baz=0.0,slow=37
RES Resolute Bay 63.66 354 LR LR 13 33 21.5
comp=Z,44nm,18.9s,baz=142,slow=36
SUMG Summit 63.86 11 P P 13 05 07.4 +0.1
TULEG Thule 64.43 1 P P 13 05 10.6 +0.1
ESDC Sonseca Array 66.63 52 P P 13 05 25.5 0.0
comp=Z,0.4nm,0.4s,baz=271,slow=5.2,SNR=2.6
DBIC Dimbokro 67.82 88 P P 13 05 33.1 -0.3
comp=Z,2.3nm,0.9s,baz=43,slow=8.3,SNR=3.2
DBIC Dimbokro 67.82 88 P P 13 05 33.1 -0.3
DBIC IAmb IAmb 13 05 36.2
comp=Z,8.4nm,1.1s
INK Inuvik 67.92 340 P P 13 05 33.8 +0.7
comp=Z,4.3nm,0.7s,baz=96,slow=5.3,SNR=25
INK LR LR 13 36 21.9
comp=Z,130nm,18.1s,baz=102,slow=37
INK Inuvik 67.92 340 IAmb IAmb 13 05 34.2
comp=Z,4.9nm,0.8s
EPYK Eagle Plains 68.34 337 IAmb IAmb 13 05 38.0
comp=Z,9.7nm,0.9s
EPYK Eagle Plains 68.34 337 P P 13 05 36.9 +1.1
baz=110,SNR=7.9
DAWY Dawson 68.68 334 IAmb IAmb 13 05 39.6
comp=Z,4.7nm,0.8s
EGAK Eagle 69.61 335 P P 13 05 43.4 -0.2
EGAK IAmb IAmb 13 05 47.4
comp=Z,6.3nm,1.1s
MENT Mentasta 70.28 333 P P 13 05 48.5 +0.7
MENT IAmb IAmb 13 05 50.8
comp=Z,5.2nm,0.7s
SCRK Sand Creek 70.61 334 P P 13 05 49.6 -0.4
SCRK IAmb IAmb 13 05 52.1
comp=Z,11nm,1.0s
PRP Porcupine Dome 71.58 335 IAmb IAmb 13 05 57.4
comp=Z,9.5nm,0.8s
FYU Fort Yukon 71.67 336 IAmb IAmb 13 05 58.3
comp=Z,16nm,1.3s
DHY Denali Highway 71.94 333 IAmb IAmb 13 06 02.2
comp=Z,10.0nm,1.3s
HDA Harding Lake 71.97 334 P P 13 05 58.1 +0.1
baz=100
IL31 72.00 334 P P 13 05 58.0 -0.2
ILAR Eielson Array 72.00 334 P P 13 05 58.6 +0.4
comp=Z,2.4nm,0.9s,baz=107,slow=4.2,SNR=20
ILAR LR LR 13 38 53.3
comp=Z,146nm,19.9s,baz=113,slow=37
SML Sawmill 72.20 331 IAmb IAmb 13 06 12.5
comp=Z,10nm,0.8s
TCOL CIGO, UAF Yank 72.43 334 P P 13 06 01.2 +0.5
baz=99
PMR Palmer 72.55 331 IAmb IAmb 13 06 03.8
comp=Z,6.1nm,0.7s
TOA0 Torodi Ar. Sit 73.12 80 P P 13 06 05.5 -0.3
TORD Torodi Ar. Bea 73.12 80 P P 13 06 07.2 +1.4
comp=Z,0.5nm,0.6s,baz=295,slow=6.0,SNR=3.0
HOPE Hope Point 73.24 158 P P 13 06 06.9 +1.3
KTH Kantishna Hill 73.59 333 P P 13 06 08.1 +0.4
KTH IAmb IAmb 13 06 10.0
comp=Z,13nm,1.0s
BPAW Bear Paw Mtn. 73.67 333 IAmb IAmb 13 06 09.6
comp=Z,8.7nm,0.8s
TOLK Toolik Lake Re 73.68 338 P P 13 06 08.7 +0.5
baz=99
KDAK Kodiak Island 73.98 327 P P 13 06 10.6 +0.6
comp=Z,5.6nm,0.7s,baz=326,slow=1.2,SNR=6.3
KDAK Kodiak Island 73.98 327 P P 13 06 09.9 -0.1
NOA NORSAR Array B 76.92 30 P P 13 06 28.8 +1.8
comp=Z,2.7nm,0.8s,baz=273,slow=5.8,SNR=6.9
GEC2 GERESS Array S 79.14 42 P P 13 06 39.6 0.0
GERES GERESS Array B 79.14 42 P P 13 06 41.1 +1.5
comp=Z,0.9nm,0.7s,baz=270,slow=4.8,SNR=6.9
ARCES ARCESS Array B 81.84 21 P P 13 06 54.1 +0.6
comp=Z,2.9nm,0.7s,baz=316,slow=5.1,SNR=7.6
FINES FINESS Array B 83.97 28 P P 13 07 05.1 +0.4
comp=Z,2.0nm,0.8s,baz=323,slow=2.9,SNR=3.9
BILL Bilibino 89.50 341 P P 13 07 32.5 +0.9
BILL IAmb IAmb 13 07 34.3
comp=Z,7.2nm,1.0s
KLMR Klimovskoe 90.28 27 eP P 13 07 32.6 -2.8
KLMR AMP 13 07 34.8
comp=Z,16nm,2.0s
TSUM Tsumeb 94.94 108 LR LR 13 48 55.5
comp=Z,130nm,18.8s,baz=160,slow=34
TIXI Tiksi 95.05 353 P P 13 07 57.5 +0.3
comp=Z,1.1nm,0.6s,baz=91,slow=24,SNR=6.2
TIXI Tiksi 95.05 353 P P 13 07 56.8 -0.4
BRTR Keskin Array B 95.13 48 P P 13 07 59.1 +0.7
comp=Z,0.9nm,0.8s,baz=48,slow=1.8,SNR=5.6
MKAR Makanchi Array 117.44 18 PKP PKPdf 13 13 19.7 -1.0
comp=Z,0.3nm,0.6s,baz=273,slow=2.3,SNR=3.5
WMQ Urumqi 121.72 16 ePKP PKPdf 13 13 29.5 +0.5
WMQ LR LR
comp=Z,110nm,29.2s
GTA Gaotai 128.33 7 ePKP PKPdf 13 13 42.3 +0.4
GTA sPKP 13 13 49.3
NJ2 Nanjing 134.48 345 ePKP PKPdf 13 13 52.0 -1.6
WHN Wuhan 136.88 350 PKP PKPdf 13 13 50.8 -7.3
STKA Stephens Creek 142.23 233 PKP PKPdf 13 14 08.4 +0.7
comp=Z,1.5nm,0.7s,baz=96,slow=5.1,SNR=2.8
CMAR Chiang Mai Arr 148.69 14 PKPbc PKPdf 13 14 21.2 +2.0
comp=Z,4.1nm,0.8s,baz=327,slow=3.6,SNR=19
ASAR Alice Springs 151.56 242 PKP PKPdf 13 14 24.2 +0.6
comp=Z,0.4nm,0.6s,baz=127,slow=1.5,SNR=5.0
ASAR PKPbc **sPKPdf** 13 14 29.9 -0.1
comp=Z,2.7nm,0.7s,baz=115,slow=2.7,SNR=30
WRA Warramunga Arr 152.16 250 PKPbc PKPbc 13 14 31.2 0.0
comp=Z,2.6nm,0.8s,baz=97,slow=2.6,SNR=24

IDC 28 12:55:58.2±12.0, 5°.90S×128°.46E, h250km±140km, mb2.6/1, mb1 3.3/4, mb1mx2.9/50, mbtmp3.8/4, Error ellipse: s-maj=76.5km s-min=49.3km az=43.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.43**	**193**	P	Pn	12 58 46.7	-0.5
	0.1nm,0.3s,baz=43,slow=18,SNR=1.9						
FITZ				S	S	13 01 06.8	+1.2
	0.1nm,0.3s,baz=258,slow=6.1,SNR=1.4						
WRA	**Warramunga Arr**	**15.09**	**158**	P	Pn	12 59 19.6	+0.1
	1.6nm,0.3s,baz=336,slow=12,SNR=32						
ASAR	**Alice Springs**	**18.43**	**164**	P	P	12 59 55.4	-0.2
	0.6nm,0.3s,baz=342,slow=12,SNR=52						
MKAR	**Makanchi Array**	**66.47**	**327**	P	P	13 06 21.1	+0.1
	0.1nm,0.5s,baz=120,slow=8.1,SNR=1.8						

KRSC 28 13:00:48.8±2.2, 52°.01N×159°.91E, h41km±27km, ML4.0
IDC 28 13:00:54.5±3.0, 52°.29N×159°.84E, h68km±23km, mb3.3/12, mb1 3.5/12, mb1mx3.3/52, mbtmp3.6/12, MS3.2/1, Ms1 3.2/1, ms1mx2.5/39, Error ellipse: s-maj=25.0km s-min=19.5km az=121.0

ISC 28 13:00:51.4±1.6, 52°.03N±0°.06×159°.83E±0°.06, h41km±14km, n57, σ1s83/64, mb3.5/12, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.90**	**297**	eP	Pn	13 01 06.3	-1.3
RUS				eS	Sn	13 01 17.9	-1.6
SPN	**Mys Shipunski**	**1.08**	**6**	eP	Pn	13 01 09.6	-0.4
KDTR	**Khodutka, Kamc**	**1.11**	**259**	P	Pn	13 01 09.8	-0.6
KDTR				eS	Sn	13 01 24.1	-0.3
MTVR	**Mutnovka**	**1.11**	**295**	eP	Pn	13 01 09.8	-0.8
MTVR				eS	Sn	13 01 24.1	-0.6
NLC	**Nalytchevo**	**1.18**	**346**	eP	Pn	13 01 10.1	-1.3
NLC				eS	Sn	13 01 25.0	-1.3
GRL	**Gorelyy**	**1.20**	**297**	eP	Pn	13 01 11.6	-0.2
GRL				eS	Sn	13 01 27.8	+0.9
DALK	**Dalny**	**1.20**	**327**	eP	Pn	13 01 10.7	-1.0
DALK				eS	Sn	13 01 26.2	-0.5
PET	**Petropavlovsk**	**1.23**	**325**	eP	Pn	13 01 11.2	-0.9
PET				eS	Sn	13 01 26.9	-0.5
ASAK	**Asacha**	**1.24**	**287**	eP	Pn	13 01 12.3	0.0
KRMR	**Karymshinskiy**	**1.31**	**308**	eP	Pn	13 01 11.8	-1.4
KRMR				eS	Sn	13 01 27.5	-2.0
UGLR	**Uglovaya**	**1.33**	**333**	eP	Pn	13 01 13.1	-0.5
UGLR				eS	Sn	13 01 30.1	0.0
SDLR	**Sedlovina**	**1.38**	**336**	eP	Pn	13 01 13.4	-0.8
SMAR	**Somma**	**1.38**	**334**	eP	Pn	13 01 13.5	-0.9
AVH	**Avacha**	**1.40**	**332**	eP	Pn	13 01 14.2	-0.4
AVH				eS	Sn	13 01 32.3	+0.4
KRER	**Koryakskii**	**1.44**	**333**	eP	Pn	13 01 14.8	-0.3
KRER				eS	Sn	13 01 33.0	+0.1
KOK	**Koryaka**	**1.46**	**331**	eP	Pn	13 01 15.0	-0.3
KOK				eS	Sn	13 01 34.3	+1.0
KRX	**Arik**	**1.51**	**332**	eP	Pn	13 01 15.7	-0.4
KRX				eS	Sn	13 01 34.5	-0.2
PETK	**Petropavlovsk-**	**1.69**	**311**	P	Pn	13 01 18.4	0.0
	45nm,0.3s,baz=108,slow=21,SNR=661						
PETK				S	Sn	13 01 39.4	+0.5
	32nm,0.3s,baz=120,slow=19,SNR=8.7						
PETK				LR	LR	13 02 09.3	
	comp=Z,246nm,18.4s,baz=62,slow=49						
APC	**Apacha**	**1.86**	**300**	eP	Pn	13 01 21.7	+0.9
MIPR	**Malaya Ipel'ka**	**1.91**	**279**	eP	Pn	13 01 22.6	+1.2
PAU	**Pauzhetka**	**1.96**	**254**	eP	Pn	13 01 23.3	+1.2
KII	**Karymskiy**	**2.02**	**354**	eP	Pn	13 01 24.0	+0.9
KII				eS	Sn	13 01 50.5	+3.4
SKR	**Severo-Kuril's**	**2.69**	**241**	eS	Sn	13 02 05.2	+1.8
KZV	**Kizimen**	**3.10**	**5**	eP	Pn	13 01 38.6	+0.7
KZV				eS	Sn	13 02 15.0	+1.2
TUMD	**Tumrok D**	**3.20**	**6**	eP	Pn	13 01 41.3	+2.2
TUMD				eS	Sn	13 02 19.3	+3.3
TUMR	**Tumrok**	**3.27**	**3**	eP	Pn	13 01 41.8	+1.6
TUMR				eS	Sn	13 02 20.3	+2.5
KMNR	**Kamenistaya**	**3.74**	**4**	P	Pn	13 01 48.8	+2.1
KIRR	**Kirishev**	**3.94**	**4**	P	Pn	13 01 52.0	+2.5
KIRR				eS	Sn	13 02 40.1	+5.6
BZGR	**Bezymyannyi-Gr**	**3.95**	**7**	eP	Pn	13 01 52.5	+2.9
BZGR				eS	Sn	13 02 39.0	+4.3
ESO	**Esso**	**3.96**	**351**	eP	Pn	13 01 50.9	+1.3
KOZ	**Kozyrevsk**	**4.04**	**0**	eP	Pn	13 01 54.8	+4.2
ZLN	**Zelenaya**	**4.04**	**8**	eP	Pn	13 01 53.3	+2.6
LGNR	**Loginova**	**4.09**	**7**	eP	Pn	13 01 54.9	+3.2
CIRR	**Tsirk**	**4.13**	**7**	eP	Pn	13 01 56.5	+4.5
KRSR	**Krestovskiy**	**4.22**	**6**	eP	Pn	13 01 54.2	+1.0
SRDR	**Sredinnyy**	**4.30**	**359**	eP	Pn	13 01 57.0	+2.7
KBTR	**Krutoberegovo**	**4.54**	**22**	eP	Pn	13 01 58.4	+0.9
KBG	**Krutoberegovo**	**4.56**	**21**	P	Pn	13 01 55.6	-2.2
BKI	**Bering**	**4.85**	**47**	eS	Sn	13 02 50.1	-6.4
MJAR	**Matsushiro Arr**	**21.77**	**233**	P	P	13 05 42.8	+3.4
	2.1nm,0.8s,baz=29,slow=10,SNR=5.5						
TIXI	**Tiksi**	**23.99**	**336**	P	P	13 06 00.5	-1.1
	2.3nm,0.6s,baz=126,slow=8.6,SNR=10.0						
TIXI				LR	LR	13 16 33.9	
	comp=Z,55nm,19.2s,baz=215,slow=40						
H11N2	**WAKE ISLAND Hy**	**32.71**	**168**	T	T	13 43 06.5	
	baz=352,slow=76,SNR=3.8						
H11N3	**WAKE ISLAND Hy**	**32.72**	**168**	T	T	13 43 03.7	
	baz=352,slow=76,SNR=4.6						
H11N1	**WAKE ISLAND Hy**	**32.72**	**168**	T	T	13 43 09.9	
	baz=352,slow=76,SNR=4.1						
H11S1	**WAKE ISLAND Hy**	**33.89**	**168**	T	T	13 44 30.1	
H11S3	**WAKE ISLAND Hy**	**33.90**	**168**	T	T	13 44 30.1	
	SNR=3.1						
H11S2	**WAKE ISLAND Hy**	**33.90**	**168**	T	T	13 44 30.1	
SONM	**Songino Array**	**34.00**	**285**	P	P	13 07 31.0	0.0
	0.1nm,0.3s,baz=60,slow=6.7,SNR=2.0						
YKA	**Yellowknife Ar**	**44.06**	**42**	P	P	13 08 53.8	-0.9
	0.3nm,0.8s,baz=298,slow=7.7,SNR=2.2						
MKAR	**Makanchi Array**	**48.48**	**296**	P	P	13 09 27.4	-2.3
	0.2nm,0.5s,baz=56,slow=6.0,SNR=8.5						
ARCES	**ARCESS Array B**	**54.25**	**342**	P	P	13 10 11.5	-1.0
	2.0nm,0.9s,baz=35,slow=8.0,SNR=1.4						
CMAR	**Chiang Mai Arr**	**57.81**	**258**	P	P	13 10 39.9	+1.4
	0.6nm,0.3s,baz=30,slow=7.3,SNR=3.0						
FINES	**FINESS Array B**	**61.03**	**337**	P	P	13 10 59.0	-1.3
	1.9nm,0.9s,baz=14,slow=14,SNR=1.9						
AKASG	**Malin Array Be**	**69.44**	**329**	P	P	13 11 53.7	-1.1
	0.3nm,0.4s,baz=29,slow=6.7,SNR=2.3						
TXAR	**Lajitas Array**	**71.21**	**66**	P	P	13 12 05.6	-0.5
	0.3nm,0.7s,baz=290,slow=3.7,SNR=4.1						
WRA	**Warramunga Arr**	**75.05**	**205**	P	P	13 12 29.6	+1.1
	0.3nm,0.7s,baz=23,slow=6.2,SNR=2.3						
ASAR	**Alice Springs**	**78.72**	**204**	P	P	13 12 51.3	+2.1
	0.3nm,0.7s,baz=14,slow=4.7,SNR=1.9						

IDC 28 13:02:01.0±4.1, 27°.55S×179°.87E, h477km±46km, mb3.5/6, mb1 3.6/9, mb1mx3.2/41, mbtmp4.4/9, Error ellipse: s-maj=36.5km s-min=24.4km az=24.0
NEIC 28 13:02:02.9±1.7, 27°.50S±0°.08×179°.9E±0°.2, h507km±9km, mb4.2/13, Error ellipse: s-maj=25.8km s-min=6.4km az=67.0

ISC 28 13:02:01.4±1.0, 27°.57S±0°.10×180°.0E±0°.2, h500km±5km, n33, σ0s85/32, mb4.1/13, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUZ	**Omahuta**	**9.38**	**214**	P	P	13 04 14.1	+2.0
URZ	**Urewera**	**10.93**	**192**	P	P	13 04 28.4	0.0
	1.9nm,0.3s,baz=17,slow=2.3,SNR=14						
URZ				S	S	13 06 27.8	-1.8
	0.3nm,0.3s,baz=13,slow=0.6,SNR=1.4						
URZ	**Urewera**	**10.93**	**192**	P	P	13 04 29.2	+0.7
DZM	**Mont Dzumac**	**13.46**	**291**	P	P	13 04 55.2	-0.4
	0.3nm,0.3s,baz=92,slow=16,SNR=2.7						
DZM	**Mont Dzumac**	**13.46**	**291**	P	P	13 04 55.6	0.0
NOUC	**Port Laguerre**	**13.56**	**291**	P	P	13 04 55.5	-1.1
RPZ	**Rata Peaks**	**17.66**	**202**	P	P	13 05 38.3	-0.1
	0.9nm,0.3s,baz=51,slow=13,SNR=1.8						
RPZ	**Rata Peaks**	**17.66**	**202**	IAmb	IAmb	13 05 39.3	
	comp=Z,27nm,1.2s						
EIDS	**Eidsvold**	**25.95**	**268**	P	P	13 06 52.2	-1.2
EIDS				IAmb	IAmb	13 07 08.8	
	comp=Z,8.1nm,1.1s						
HNR	**Honiara**	**26.13**	**310**	P	P	13 06 53.5	-1.5
CTA	**Charters Tower**	**31.67**	**276**	P	P	13 07 43.7	+0.3
	comp=Z,3.3nm,0.5s,baz=86,slow=12,SNR=6.9						
STKA	**Stephens Creek**	**33.50**	**253**	P	P	13 07 59.7	+0.9
	comp=Z,1.4nm,0.5s,baz=100,slow=12,SNR=7.1						
COEN	**Coen**	**36.84**	**284**	P	P	13 08 27.0	+0.2
COEN				IAmb	IAmb	13 08 28.1	
	comp=Z,2.2nm,0.8s						
BBOO	**Buckleboo**	**38.13**	**251**	P	P	13 08 36.9	-0.3
BBOO				IAmb	IAmb	13 08 53.8	
	comp=Z,13nm,1.1s						
AS31	**Alice Springs**	**41.56**	**265**	P	P	13 09 05.5	+0.5
ASAR	**Alice Springs**	**41.56**	**265**	P	P	13 09 05.0	+0.1
	comp=Z,1.9nm,0.5s,baz=94,slow=7.6,SNR=57						
WR0	**Warramunga Arr**	**42.10**	**270**	P	P	13 09 09.1	-0.1
WR0				IAmb	IAmb	13 09 09.4	
	comp=Z,3.2nm,0.7s						
WB2	**Warramunga Arr**	**42.27**	**270**	P	P	13 09 10.6	+0.1
WB2				IAmb	IAmb	13 09 10.8	
	comp=Z,7.2nm,0.7s						
WRA	**Warramunga Arr**	**42.28**	**270**	P	P	13 09 10.4	-0.2
	comp=Z,7.0nm,0.6s,baz=109,slow=7.5,SNR=79						
WB0	**Warramunga Arr**	**42.29**	**270**	P	P	13 09 10.6	-0.1
WB0				IAmb	IAmb	13 09 11.3	
	comp=Z,9.6nm,0.7s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FORT	**Forrest**	**45.13**	**253**	P	**P**	**13 09 32.7**	**0.0**
KNRA	**Kununurra**	**48.77**	**273**	P	**P**	**13 10 01.2**	**+0.8**
KNRA				IAmb	IAmb	13 10 01.7	
	comp=Z,7.6nm,1.0s						
FITZ	**Fitzroy Crossi**	**50.64**	**269**	P	**P**	**13 10 14.2**	**0.0**
	comp=Z,2.1nm,0.7s,baz=86,slow=5.6,SNR=7.1						
FITZ	**Fitzroy Crossi**	**50.64**	**269**	P	**P**	**13 10 14.2**	**0.0**
PETK	**Petropavlovsk-**	**82.65**	**347**	P	**P**	**13 13 31.0**	**-0.5**
	comp=Z,3.3nm,1.0s,baz=127,slow=9.2,SNR=2.1						
FINES	**FINESS Array B**	**141.89**	**340**	PKhKP	PKPpre	13 20 34.2	
	comp=Z,0.3nm,0.4s,baz=208,slow=32,SNR=3.4						
NC303	**NORSAR Array S**	**145.48**	**350**	PKPab	**PKiKP**	**13 20 45.0**	**-0.7**
NC405	**NORSAR Array S**	**145.54**	**350**	PKPab	**PKiKP**	**13 20 46.1**	**+0.2**
NB2	**NORSAR Subarra**	**145.68**	**350**	PKP	**PKPab**	**13 20 45.5**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=24,slow=3.0						
NOA	**NORSAR Array B**	**145.68**	**350**	PKPbc	**PKPab**	**13 20 45.1**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=14,slow=4.7,SNR=4.1						
HFS	**Hagfors**	**146.12**	**348**	PKPbc	**PKPab**	**13 20 45.9**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=86,slow=4.6,SNR=6.8						
AKASG	**Malin Array Be**	**147.98**	**324**	PKPbc	**PKiKP**	**13 20 50.7**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=44,slow=4.0,SNR=5.1						
EKA	**Eskdalemuir Ar**	**152.16**	**4**	PKPbc	**PKiKP**	**13 21 01.7**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=20,slow=2.7,SNR=3.6						

IDC 28 13:11:25.9±1.0, 23°.87N×91°.57E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.6/60, mbtmp3.8/8, ML3.8/1, MS3.4/1, Ms1 3.4/1, ms1mx2.7/53, Error ellipse: s-maj=38.7km s-min=10.3km az=83.0
NDI 28 13:11:25.3±2.4, 23°.45N×91°.61E, h21km±23km, ML3.7
NEIC 28 13:11:30.3±1.3, 23°.74N±0°.05×91°.4E±0°.1, h38km±3km, mb3.9/7, Error ellipse: s-maj=18.4km s-min=7.1km az=78.0
ISC 28 13:11:28.5±0.6, 23°.65N±0°.05×91°.27E±0°.05, h29km, n30, σ2.04/34, mb3.9/9, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**1.02**	**160**	Pg	**Pb**	**13 11 49.0**	**+1.4**
	191nm,0.3s,baz=281,slow=14,SNR=17						
BRDH				Lg	Lg	13 12 05.3	
	988nm,0.3s,baz=31,slow=22,SNR=12						
BRDH				LR	LR	13 12 36.4	
	comp=Z,259nm,18.5s,baz=4.5,slow=59						
SHL	**Shillong**	**1.99**	**16**		**Pn**	**13 11 58.5**	**-2.0**
SHL				Sn	**Sn**	**13 12 24.9**	**+0.4**
TEZP	**TEZPUR**	**3.27**	**25**	eP	**Pn**	**13 12 16.0**	**-1.8**
TEZP				eS	**Sn**	**13 12 52.2**	**-3.5**
TEZP				IAML		13 12 53.2	
	comp=N,341nm,0.3s						
KOHI	**KOHIMA**	**3.31**	**51**	eP	**Pn**	**13 12 18.5**	**0.0**
KOHI				eS	**Sn**	**13 12 57.1**	**+0.1**
KOHI				IAML		13 12 57.7	
	comp=E,158nm,0.5s						
KOHI				IAML		13 12 59.9	
	comp=N,129nm,0.4s						
GTK	**Tadong**	**4.38**	**327**	eP	**Pn**	**13 12 33.6**	**+0.4**
GTK				eS	**Sn**	**13 13 27.8**	**+4.4**
GTK				IAML		13 13 46.6	
	comp=E,131nm,0.3s						
GTK				IAML		13 13 47.4	
	comp=N,91nm,0.2s						
ZIRO	**ZIRO**	**4.51**	**31**	eP	**Pn**	**13 12 34.2**	**-1.0**
ZIRO				eS	**Sn**	**13 13 22.6**	**-4.2**
ZIRO				IAML		13 13 26.5	
	comp=N,620nm,0.5s						
ZIRO				IAML		13 13 27.6	
	comp=E,542nm,0.4s						
LSA	**Lhasa**	**6.03**	**359**	P	**Pn**	**13 12 58.8**	**+2.6**
LSA	**Lhasa**	**6.03**	**359**		**Pn**	**13 12 57.1**	**+0.9**
BWNR	**Bhubaneshwar**	**6.07**	**238**	eP	**Pn**	**13 12 56.4**	**+0.1**
BWNR				eS	**Sn**	**13 14 01.9**	**-2.8**
CHTO	**Chiang Mai**	**8.62**	**122**	Pn	**Pn**	**13 13 32.3**	**+0.8**
CM31	**Chiang Mai Arr**	**8.83**	**124**	Pn	**Pn**	**13 13 34.6**	**+0.3**
CMAR	**Chiang Mai Arr**	**8.83**	**124**	Pn	**Pn**	**13 13 34.0**	**-0.3**
	comp=E,0.3nm,0.3s,baz=302,slow=13,SNR=16						
PBKT	**Sadao Pong**	**11.51**	**126**	Pn	**Pn**	**13 14 11.7**	**+0.7**
NGP	**Nagpur**	**11.57**	**260**	eS	**Sn**	**13 16 13.5**	**-6.6**
SLVN	**Son La**	**11.91**	**99**		**Pn**	**13 14 18.5**	**+2.0**
UBPT	**Khong Chiam**	**15.76**	**119**	P	**P**	**13 15 13.6**	**+1.4**
UBPT				IAmb	IAmb	13 15 30.3	
	comp=Z,7.7nm,1.3s						
NIL	**Nilore**	**18.66**	**306**	P	**Pn**	**13 15 45.1**	**+0.3**
NIL				IAmb	IAmb	13 15 55.2	
	comp=Z,3.8nm,0.6s						
LHMI	**Lhok Sumawe**	**19.11**	**162**	P	**P**	**13 15 48.9**	**-0.3**
MK31	**Makanchi Array**	**24.20**	**345**	P	**P**	**13 16 43.1**	**+0.6**
MK31				IAmb	IAmb	13 16 44.5	
	comp=Z,5.3nm,1.3s						
MKAR	**Makanchi Array**	**24.20**	**345**	P	**P**	**13 16 42.7**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=167,slow=7.6,SNR=28						
MAKZ	**Makanchi**	**24.29**	**344**	P	**P**	**13 16 43.2**	**-0.1**
MAKZ				IAmb	IAmb	13 16 54.4	
	comp=Z,5.0nm,1.4s						
SONM	**Songino Array**	**26.98**	**23**	P	**P**	**13 17 07.8**	**0.0**
	comp=Z,0.4nm,0.5s,baz=202,slow=12,SNR=4.3						
SONM				LR	LR	13 29 58.3	
	comp=Z,78nm,18.2s,baz=6.5,slow=42						
KURBB	**Kurchatov Arra**	**28.69**	**343**	P	**P**	**13 17 22.9**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=163,slow=8.7,SNR=6.5						
KURK	**Kurchatov**	**28.75**	**343**	P	**P**	**13 17 22.9**	**-0.6**
KURK	**Kurchatov**	**28.75**	**343**	IAmb	IAmb	13 17 25.7	
	comp=Z,1.6nm,1.0s						
ZALV	**Zalesovo Beam**	**30.65**	**353**	P	**P**	**13 17 40.2**	**0.0**
	comp=Z,0.5nm,0.4s,baz=178,slow=9.7,SNR=2.2						
TIXI	**Tiksi**	**52.52**	**14**	P	**P**	**13 20 38.5**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=161,slow=5.1,SNR=1.8						
TIXI	**Tiksi**	**52.52**	**14**	IAmb	IAmb	13 20 40.0	
	comp=Z,2.8nm,1.1s						
WRA	**Warramunga Arr**	**60.33**	**132**	P	**P**	**13 21 36.0**	**+1.0**
	comp=Z,2.5nm,0.5s,baz=322,slow=7.2,SNR=24						
ASAR	**Alice Springs**	**62.66**	**136**	P	**P**	**13 21 51.9**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=314,slow=6.7,SNR=10						

IDC 28 13:13:48.7±1.0, 49°.54S×125°.92E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.9/32, mbtmp4.0/6, MS3.5/6, Ms1 3.6/6, ms1mx3.3/30, Error ellipse: s-maj=62.8km s-min=19.7km az=104.0
NEIC 28 13:13:49.2±3.0, 49°.50S±0°.06×125°.7E±0°.4, h10km±1km, mb4.2/9, Error ellipse: s-maj=43.8km s-min=8.5km az=98.0
ISC 28 13:13:49.3±0.9, 49°.5S±0°.1×125°.8E±0°.2, h10km, n24, σ1.65/14, mb3.9/8, MS3.5/5, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.89**	**325**	T	T	13 35 22.5	
	baz=151,slow=74,SNR=13						
H01W2	**Cape Leeuwin H**	**16.89**	**325**	T	T	13 35 22.5	
	baz=151,slow=74,SNR=15						
H01W3	**Cape Leeuwin H**	**16.90**	**325**	T	T	13 35 22.5	
	baz=151,slow=74,SNR=16						
NWAO	**Narrogin (SRO)**	**17.70**	**336**	LR	LR	13 23 14.6	
	comp=Z,255nm,21.9s,baz=148,slow=32						
NWAO	**Narrogin (SRO)**	**17.70**	**336**	Pn	**Pn**	**13 17 54.8**	**-1.1**
NWAO				IAmb	IAmb	13 18 00.7	
	comp=Z,26nm,1.4s						
NWAO	**Narrogin (SRO)**	**17.70**	**336**	Pn	**Pn**	**13 17 55.0**	**-0.8**
NWAO				IAmb	IAmb	13 18 00.7	
	comp=Z,29nm,1.4s						
STKA	**Stephens Creek**	**21.18**	**40**	P	**P**	**13 18 35.2**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=188,slow=14,SNR=1.5						
STKA	**Stephens Creek**	**21.18**	**40**	IAmb	IAmb	13 18 40.5	
	comp=Z,1.4nm,1.1s						
ASAR	**Alice Springs**	**26.51**	**17**	P	**P**	**13 19 28.3**	**+1.3**
	comp=Z,3.9nm,0.6s,baz=188,slow=10,SNR=20						
AS31	**Alice Springs**	**26.52**	**17**	P	**P**	**13 19 27.6**	**+0.7**
WRA	**Warramunga Arr**	**30.23**	**16**	P	**P**	**13 20 00.7**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=194,slow=8.4,SNR=3.9						
WB2	**Warramunga Arr**	**30.23**	**16**	P	**P**	**13 19 57.5**	**-2.5**
WB2				IAmb	IAmb	13 20 15.7	
	comp=Z,4.8nm,1.4s						
WRAB	**Tennant Creek**	**30.24**	**16**	P	P	13 19 54.1	-6.0
WR0	**Warramunga Arr**	**30.25**	**16**	P	**P**	**13 19 56.9**	**-3.4**
WR0				IAmb	IAmb	13 20 15.9	
	comp=Z,2.3nm,1.1s						
VNDA	**Vanda**	**31.31**	**166**	LR	LR	13 31 32.4	
	comp=Z,205nm,18.5s,baz=300,slow=34						
QSPA	**South Pole Qui**	**40.67**	**180**	P	**P**	**13 21 29.2**	**-0.2**
	comp=Z,2.1nm,1.0s,baz=194,slow=1.5,SNR=6.1						
QSPA	**South Pole Qui**	**40.67**	**180**	P	**P**	**13 21 28.3**	**-1.2**
DZM	**Mont Dzumac**	**42.06**	**64**	LR	LR	13 35 46.2	
	comp=Z,72nm,20.8s,baz=209,slow=31						
HNR	**Honiara**	**48.98**	**47**	LR	LR	13 42 12.4	
	comp=Z,46nm,18.3s,baz=356,slow=35						
SNAA	**Sanae**	**53.85**	**198**	P	**P**	**13 23 12.2**	**+0.3**
	comp=Z,3.8nm,0.9s,baz=150,slow=6.5,SNR=5.9						
SNAA	**Sanae**	**53.85**	**198**	P	**P**	**13 23 11.6**	**-0.3**
SNAA				IAmb	IAmb	13 23 21.9	
	comp=Z,3.0nm,0.9s						
DAV	**Davao City (W)**	**56.29**	**360**	LR	LR	13 48 56.6	
	comp=Z,29nm,19.9s,baz=351,slow=37						
CMAR	**Chiang Mai Arr**	**71.69**	**333**	P	**P**	**13 25 13.1**	**+1.9**
	comp=Z,0.5nm,0.4s,baz=186,slow=5.4,SNR=1.9						
CMAR				LR	LR	13 57 36.2	
	comp=Z,18nm,18.2s,baz=230,slow=37						
YKA	**Yellowknife Ar**	**145.16**	**45**	PKPbc	**PKPdf**	**13 33 27.1**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=268,slow=3.3,SNR=19						

SOME 28 13:14:38.8, 39°.20N×70°.50E, h5km
KRNET 28 13:14:40.1±0.1, 39°.21N×70°.56E, mb4.0
NNC 28 13:14:41.6±1.3, 39°.28N×70°.32E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=9.6km s-min=6.5km az=10.0
ISC 28 13:14:41.3±1.9, 39°.30N±0°.10×70°.55E±0°.04, h10km, n37, σ2.75/57, 14C-23D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	**Batken**	**0.79**	**15**	⇓iP	**Pb**	**13 14 56.6**	**-0.6**
	baz=13						
BTK				⇓iS	**Sb**	**13 15 08.8**	**+0.8**
	baz=13						
TAS	**Tashkent**	**2.24**	**335**	⇓eP	**Pb**	**13 15 21.2**	**-0.8**
	baz=36						
TAS				⇓eS	**Sg**	**13 15 51.1**	**-2.3**
	baz=36						
ARK	**Arkit**	**2.72**	**23**	⇓iP	**Pb**	**13 15 27.7**	**-2.5**
	baz=22						
ARK				⇓iS	**Sb**	**13 16 02.3**	**-1.3**
	baz=22						
ARSB	**Arslanbob**	**2.75**	**42**	⇓iP	**Pb**	**13 15 28.1**	**-2.5**
	baz=41						
ARSB				⇓iS	**Sb**	**13 16 02.6**	**-1.8**
	baz=41						
IUG	**Iuzhnay**	**2.88**	**352**	eP	**Pb**	**13 15 33.4**	**+0.5**
	19nm,0.3s						
IUG				eS	**Sg**	**13 16 12.4**	**-1.3**
	176nm,0.3s						
IUG	**Iuzhnay**	**2.88**	**352**	Pg	**Pg**	**13 15 34.7**	**-1.7**
	19nm,0.3s						
IUG				Lg	Lg	13 16 12.4	
	176nm,0.3s						
JBG	**Jabagly**	**3.12**	**360**	Pg	**Pg**	**13 15 39.4**	**-1.8**
	89nm,0.4s						
JBG				Lg	Lg	13 16 20.4	
	60nm,0.4s						
AML	**Almayashu**	**3.70**	**39**	⇑iP	**Pn**	**13 15 41.6**	**+2.7**
	baz=38						
AML				⇑iS	**Sn**	**13 16 26.3**	**+3.4**
	baz=38						
AML	**Almayashu**	**3.70**	**39**	P	**Pn**	**13 15 41.7**	**+2.7**
	SNR=49						
BRLS	**Borolday**	**3.77**	**352**	eP	**Pb**	**13 15 46.5**	**-1.5**
	1.1nm,0.6s						
BRLS				eS	**Sb**	**13 16 34.9**	**+1.1**
	17nm,0.5s						
BRLS	**Borolday**	**3.77**	**352**	Pg	**Pb**	**13 15 47.6**	**-0.4**
	1.1nm,0.6s						
BRLS				Lg	Lg	13 16 34.9	
	17nm,0.5s						
KK31	**Karatay Array**	**3.81**	**360**	Pn	**Pn**	**13 15 41.9**	**+1.9**
	4.3nm,0.3s,baz=160,slow=10,SNR=92						
KK31				⇑Pg	**Pg**	**13 15 51.2**	**-3.0**
	4.0nm,0.3s,baz=180,slow=14,SNR=12						
KK31				⇓Lg	Lg	13 16 43.1	
	11nm,0.5s,baz=184,slow=30,SNR=6.1						
ARLS	**Aral**	**3.85**	**47**	⇓iP	**Pn**	**13 15 43.3**	**+2.6**
	baz=46						
ARLS				⇓eS	**Sn**	**13 16 29.7**	**+3.6**
	baz=46						
MRKS	**Merke**	**4.00**	**30**	eP	**Pg**	**13 15 55.8**	**-2.0**
	21nm,0.4s						
MRKS				eS	**Sg**	**13 16 51.2**	**+1.6**
	28nm,0.4s						
MRKS	**Merke**	**4.00**	**30**	Pg	**Pg**	**13 15 56.1**	**-1.8**
	21nm,0.4s						
MRKS				Lg	Lg	13 16 49.0	
	28nm,0.4s						
EKS2	**Erkin-Say**	**4.15**	**35**	⇓iP	**Pn**	**13 15 47.7**	**+2.8**
	baz=34						
EKS2				⇓iS	**Sn**	**13 16 36.8**	**+3.2**
	baz=34						
EKS2	**Erkin-Say**	**4.15**	**35**	P	**Pn**	**13 15 48.8**	**+3.9**
	SNR=6.4						
UCH	**Uchtor**	**4.20**	**44**	⇑iP	**Pn**	**13 15 48.2**	**+2.4**
	baz=44						
UCH				⇑iS	**Sn**	**13 16 38.0**	**+2.9**
	baz=44						
UCH	**Uchtor**	**4.20**	**44**	P	**Pn**	**13 15 49.0**	**+3.2**
	SNR=36						
AAK	**Ala-Archa**	**4.48**	**41**	⇓eP	**Pn**	**13 15 51.8**	**+2.4**
	baz=40						
AAK				⇓eS	**Sn**	**13 16 44.5**	**+2.9**
	baz=40						
AAK	**Ala-Archa**	**4.48**	**41**	P	**Pn**	**13 15 52.9**	**+3.5**
	SNR=14						
AAK	**Ala-Archa**	**4.48**	**41**	⇓Pn	**Pn**	**13 15 52.3**	**+2.9**
	6.2nm,0.5s						
AAK				⇓Pg	**Pg**	**13 16 05.3**	**-1.8**
	7.7nm,0.5s						
AAK				⇑Sn	**Sb**	**13 16 49.2**	**-5.0**
	27nm,0.8s						
AAK				⇓Lg	Lg	13 17 08.1	
	42nm,1.0s						
KZA	**Kyzart**	**4.52**	**51**	⇑eP	**Pn**	**13 15 52.7**	**+2.4**
	baz=50						
KZA				⇑iS	**Sn**	**13 16 45.9**	**+2.8**
	baz=50						
KZA	**Kyzart**	**4.52**	**51**	P	Pb	13 15 55.5	-5.5
	SNR=43						
KBK	**Karagaybulak**	**4.72**	**43**	P	**Pn**	**13 15 56.8**	**+3.9**
	SNR=30						
CHMS	**Chumysh**	**4.87**	**39**	P	**Pn**	**13 15 58.1**	**+3.4**
	SNR=9.4						
CHMS	**Chumysh**	**4.87**	**39**	⇓Pn	**Pn**	**13 15 57.8**	**+3.1**
	6.6nm,0.6s						
CHMS				⇓Pg	**Pg**	**13 16 12.6**	**-2.0**
	9.6nm,0.7s						
CHMS				⇓Sn	**Sn**	**13 16 57.8**	**+6.7**
	16nm,0.7s						
CHMS				⇓Lg	Lg	13 17 18.3	
	20nm,0.7s						
USP	**Ospenovka**	**4.96**	**36**	⇑iP	**Pn**	**13 15 58.5**	**+2.6**
	baz=35						
USP				⇑iS	**Sn**	**13 16 55.9**	**+2.6**
	baz=35						
USP	**Ospenovka**	**4.96**	**36**	P	**Pn**	**13 15 58.6**	**+2.8**
	SNR=18						
SGDS	**Sogindy**	**5.16**	**35**	Pg	**Pg**	**13 16 17.3**	**-2.9**
	7.0nm,0.5s						
SGDS				Lg	Lg	13 17 25.7	
	13nm,0.6s						
ULHL	**Ulahol**	**5.23**	**54**	P	Pn	13 16 04.2	+4.4
	SNR=9.6						
TKM2	**Tokmak 2**	**5.25**	**45**	P	**Pn**	**13 16 03.2**	**+3.1**
	SNR=32						
KST	**Kastek**	**5.54**	**46**	eP	**Pg**	**13 16 23.2**	**-4.2**
	8.2nm,0.8s						
KST				eS	**Sg**	**13 17 38.5**	**-0.6**
	15nm,0.6s						
KST	**Kastek**	**5.54**	**46**	Pg	Pg	13 16 22.3	-5.1
	9.5nm,0.5s						
KST				Lg	Lg	13 17 34.0	
	15nm,0.6s						
MDOK	**Medeo**	**6.24**	**50**	⇑Pn	**Pn**	**13 16 17.2**	**+3.6**
	3.3nm,0.6s						
MDOK				⇑Pg	**Pg**	**13 16 37.5**	**-3.2**
	5.0nm,0.7s						
MDOK				⇑Lg	Lg	13 18 04.7	
	8.2nm,0.7s						
AB31	**Akbulak array**	**12.52**	**326**	Pn	**Pn**	**13 17 38.2**	**-1.2**
	0.9nm,0.4s,baz=160,slow=7.8,SNR=62						
AB31				Sn	**Sn**	**13 19 57.8**	**-0.9**
	2.5nm,0.6s,baz=145,slow=22,SNR=8.5						
AKTO	**Aktyubinsk**	**14.23**	**326**	⇑Pn	**Pn**	**13 18 03.0**	**+0.3**
	2.9nm,0.9s						
AKTO				⇓Sn	**Sn**	**13 20 39.9**	**-0.7**
	4.2nm,0.8s						

IDC 28 13:16:53.2±1.5, 17°.19S×178°.83W, h484km±16km, mb3.3/12, mb1 3.6/14, mb1mx3.4/43, mbtmp4.2/14, Error ellipse: s-maj=23.2km s-min=11.0km az=150.0
ISC 28 13:16:57.7±0.8, 17°.25S±0°.2×178°.9W±0°.2, h533km, n14, σ2.51/17, mb3.8/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.63**	**66**	P	P	13 18 43.0	-8.4
	6.6nm,0.3s,baz=0.2,slow=14,SNR=5.4						
AFI				S	S	13 20 08.0	-17
	1.7nm,0.3s,baz=265,slow=22,SNR=1.4						
DZM	**Mont Dzumac**	**14.60**	**248**	P	**P**	**13 20 01.9**	**-1.5**
	0.7nm,0.3s,baz=81,slow=18,SNR=4.4						
CTA	**Charters Tower**	**33.07**	**259**	P	**P**	**13 22 49.4**	**-0.2**
	4.5nm,0.8s,baz=77,slow=12,SNR=2.9						
STKA	**Stephens Creek**	**38.54**	**240**	P	**P**	**13 23 34.8**	**+0.1**
	2.9nm,0.4s,baz=86,slow=9.2,SNR=17						
WRA	**Warramunga Arr**	**44.27**	**259**	P	**P**	**13 24 18.9**	**-1.4**
	0.7nm,0.2s,baz=82,slow=6.9,SNR=32						
WRA				ScP	**ScP**	**13 29 00.7**	**+6.3**
	0.4nm,0.6s,baz=92,slow=3.8,SNR=1.5						
ASAR	**Alice Springs**	**44.51**	**254**	P	**P**	**13 24 21.9**	**-0.1**
	7.8nm,0.8s,baz=88,slow=8.1,SNR=160						
ASAR				PcP	**PcP**	**13 25 54.6**	**+0.6**
	0.7nm,0.5s,baz=102,slow=4.2,SNR=5.9						
ASAR				ScP	**ScP**	**13 29 01.9**	**+6.4**
	0.8nm,0.8s,baz=100,slow=5.0,SNR=7.8						
ASAR				S	**S**	**13 30 18.4**	**-0.4**
	0.3nm,0.9s,baz=89,slow=15,SNR=4.3						
FITZ	**Fitzroy Crossi**	**52.65**	**260**	P	**P**	**13 25 23.5**	**+0.9**
	1.7nm,0.5s,baz=157,slow=11,SNR=11						
QSPA	**South Pole Qui**	**72.87**	**180**	P	**P**	**13 27 31.6**	**-0.7**
	1.7nm,0.5s,baz=127,slow=0.1,SNR=23						
NVAR	**Mina Array Bea**	**79.26**	**44**	P	**P**	**13 28 07.7**	**-0.5**
	1.4nm,0.7s,baz=232,slow=10,SNR=5.1						
SEY	**Seymchan**	**82.96**	**347**	P	**P**	**13 28 26.5**	**+0.2**
	3.0nm,0.3s,baz=73,slow=0.8,SNR=32						
ILAR	**Eielson Array**	**85.30**	**13**	P	**P**	**13 28 37.1**	**-0.7**
	0.7nm,0.6s,baz=220,slow=4.9,SNR=9.5						
TXAR	**Lajitas Array**	**86.04**	**58**	P	**P**	**13 28 42.5**	**+0.2**
	0.4nm,0.7s,baz=191,slow=5.5,SNR=5.1						
PDAR	**Pinedale Array**	**87.18**	**44**	P	**P**	**13 28 47.1**	**-0.4**
	0.5nm,0.5s,baz=203,slow=4.3,SNR=6.6						
YKA	**Yellowknife Ar**	**93.89**	**25**	P	**P**	**13 29 17.0**	**-0.8**
	0.5nm,0.7s,baz=243,slow=4.0,SNR=8.7						

ISK 28 13:16:57.7, 39°.27N×29°.30E, h5km, ML3.6/53
ISC 28 13:16:58.2±0.8, 39°.24N±0°.02×29°.22E±0°.02, h9km, n72, σ0.79/76, 10C-3D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEDZ	**Gediz**	**0.24**	**143**	PG	**Pg**	**13 17 03.9**	**+0.8**
SIMA	**Simav-Kutahya**	**0.24**	**231**	PG	**Pg**	**13 17 04.4**	**+1.3**
TVSB	**Tavsanli**	**0.28**	**41**	PG	**Pg**	**13 17 03.4**	**-0.5**
TVSB				SG	**Sg**	**13 17 06.7**	**-1.0**
KULA	**Kula-Manisa**	**0.84**	**211**	PG	**Pn**	**13 17 15.2**	**-1.1**
KHL	**Karahalli**	**0.94**	**165**	PG	**Pn**	**13 17 17.2**	**-0.4**
CAVI	**Cavuskoy**	**1.08**	**26**	PG	**Pg**	**13 17 18.4**	**+0.5**
CAVI				SG	**Sb**	**13 17 33.5**	**+0.3**
BALB	**Balikesir**	**1.11**	**292**	PN	**Pn**	**13 17 20.6**	**+0.7**
IZI	**Iznik**	**1.12**	**10**	PG	**Pg**	**13 17 19.4**	**-0.2**
BORA	**Eskisehir**	**1.15**	**56**	PG	**Pb**	**13 17 19.7**	**-0.5**
BORA				SG	**Sg**	**13 17 34.2**	**-1.0**
AKS	**Akhisar**	**1.15**	**252**	PN	**Pn**	**13 17 21.3**	**+0.8**
MDNY	**Mudanya-Bursa**	**1.16**	**347**	PN	**Pb**	**13 17 20.1**	**-0.3**
MDNY				SN	**Sn**	**13 17 37.3**	**+0.7**
SHUT	**Suhut-Afyon**	**1.24**	**123**	PN	**Pg**	**13 17 22.3**	**+0.3**
ESKT	**Eskisehir**	**1.29**	**77**	PN	**Pn**	**13 17 22.0**	**-0.5**
YLV	**Yalova**	**1.33**	**5**	PN	**Pb**	**13 17 23.5**	**+0.1**
SRCK	**Saricakaya, Es**	**1.35**	**53**	PN	**Pg**	**13 17 23.4**	**-0.2**
ARMT	**Armutlu**	**1.36**	**348**	PN	**Pg**	**13 17 24.1**	**-0.1**
CIFT	**Cifteler, Eski**	**1.43**	**84**	PN	**Pn**	**13 17 24.0**	**-0.4**
GONE	**Gonen-Balikesi**	**1.44**	**305**	PN	**Pg**	**13 17 25.4**	**-0.3**
BASM	**Basmaki-Afyon**	**1.47**	**153**	PN	**Pn**	**13 17 26.4**	**+0.1**
EDC	**Edincik**	**1.52**	**317**	PN	**Pg**	**13 17 27.3**	**-0.1**
GULT	**Gulveren**	**1.56**	**39**	PN	**Pb**	**13 17 26.9**	**-0.3**
TUZL	**Tuzla-Istanbul**	**1.58**	**1**	PN	**Pn**	**13 17 27.5**	**0.0**
HRT	**Hereke**	**1.62**	**12**	PN	**Pn**	**13 17 27.7**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**1.66**	**219**	PN	**Pg**	**13 17 30.3**	**+0.4**
SPNC	**Sapanca-Adapaz**	**1.67**	**30**	PN	**Pb**	**13 17 28.7**	**-0.4**
SAUV	**Serdivan-Sakar**	**1.73**	**29**	PN	**Pb**	**13 17 29.6**	**-0.4**
ISP	**Isparta**	**1.74**	**144**	PN	**Pn**	**13 17 28.7**	**0.0**
HVHR	**Bakirkoy-Istan**	**1.76**	**351**	PN	**Pb**	**13 17 30.2**	**-0.3**
SVRH	**Sivrihisar-ESK**	**1.80**	**83**	PN	**Pb**	**13 17 30.2**	**-1.1**
AUSIV	**SIVRIHISAR**	**1.81**	**83**	PN	**Pb**	**13 17 31.3**	**-0.2**
DKL	**Dikili**	**1.81**	**266**	PN	**Pg**	**13 17 32.9**	**+0.1**
KAVV	**Kandilli-Istan**	**1.83**	**356**	PN	**Pb**	**13 17 30.9**	**-0.9**
ISK	**Istanbul-Kandi**	**1.83**	**356**	PN	**Pb**	**13 17 31.0**	**-0.8**
MRMT	**Marmara Adasi**	**1.85**	**318**	PN	**Pb**	**13 17 32.3**	**+0.1**
KRBG	**Karabiga-Canak**	**1.88**	**309**	PN	**Pb**	**13 17 32.8**	**+0.2**
BLCB	**Balcova**	**1.90**	**244**	PN	**Pg**	**13 17 33.7**	**-0.9**
SILT	**Sile**	**1.94**	**9**	PN	**Pn**	**13 17 32.5**	**+1.2**
MDUB	**Mudurnu**	**1.96**	**50**	PN	**Pn**	**13 17 32.0**	**+0.3**
BGKT	**Bogazkoy**	**1.97**	**350**	PN	**Pb**	**13 17 32.8**	**+1.1**
FOCM	**Foa**	**2.01**	**256**	PN	**Pb**	**13 17 35.3**	**+0.4**
CTKS	**Kestanelik-??a**	**2.07**	**345**	PN	**Pb**	**13 17 35.0**	**-0.9**
BCK	**Bucak**	**2.07**	**148**	PN	**Pb**	**13 17 35.7**	**-0.3**
KIZT	**Kizilcal**	**2.10**	**99**	PN	**Pn**	**13 17 34.1**	**+0.5**
SLVT	**Silivri**	**2.14**	**339**	PN	**Pn**	**13 17 34.6**	**+0.6**
RKY	**Sarkoy-Tekirda**	**2.14**	**313**	PN	**Pn**	**13 17 36.1**	**-1.0**
GCAM	**G?zelcaml?**	**2.19**	**226**	PN	**Pg**	**13 17 37.7**	**-0.2**
LPK	**Lapseki**	**2.21**	**302**	PN	**Pg**	**13 17 36.9**	**-1.4**
YUVA	**Yuva-Kibriscik**	**2.22**	**58**	PN	**Pn**	**13 17 36.1**	**+0.8**
YER	**Yerkesik**	**2.23**	**200**	PN	**Pb**	**13 17 38.1**	**-0.5**
URLA	**Izmir**	**2.23**	**248**	PN	**Pb**	**13 17 38.8**	**+0.1**
CTYL	**Yalikoy Yolu**	**2.35**	**343**	PN	**Pn**	**13 17 38.1**	**+1.2**
KORT	**Korkuteli**	**2.40**	**158**	PN	**Pb**	**13 17 39.9**	**-1.7**
GELI	**Tayfur-Gelibol**	**2.41**	**300**	PN	**Pb**	**13 17 40.6**	**-1.1**
BOZC	**Bozcaada**	**2.52**	**285**	PN	**Pn**	**13 17 39.8**	**+0.5**
ERIK	**Erikli-Kesan**	**2.53**	**305**	PN	**Pb**	**13 17 42.6**	**-1.1**
LADK	**Ladik-KONYA**	**2.67**	**112**	PN	**Pn**	**13 17 42.0**	**+0.6**
KDZE	**Karadeniz Ereo**	**2.68**	**39**	⇑P	**Pb**	**13 17 46.8**	**+0.4**
ANTO	**Ankara**	**2.83**	**76**	⇑P	**Pb**	**13 17 55.0**	**+2.5**
PSN	**Presentsi**	**4.51**	**350**	eP	**Pn**	**13 18 05.8**	**-0.8**
SZH	**Strazhica**	**4.73**	**329**	eP	**Pn**	**13 18 09.3**	**-0.3**
PVL	**Pavlikeni**	**4.94**	**325**	eP	**Pn**	**13 18 12.1**	**-0.4**
TIRR	**Tirgusor**	**5.25**	**354**	⇑P	**Pn**	**13 18 16.4**	**-0.4**
PLVB	**Pleven**	**5.40**	**322**	⇓P	**Pn**	**13 18 19.8**	**+0.9**
VTS	**Vitosha**	**5.65**	**309**	⇑P	**Pn**	**13 18 24.4**	**+1.9**
TOPG	**Topolog**	**5.67**	**354**	⇑P	**Pn**	**13 18 21.8**	**-0.7**
TLCR		**5.95**	**357**	⇑P	**Pn**	**13 18 26.9**	**+0.4**
CFR	**Carcaliu**	**5.99**	**353**	⇓P	**Pn**	**13 18 26.4**	**-0.5**
MLR	**Muntele Rosu**	**6.71**	**340**	⇑P	**Pn**	**13 18 37.6**	**+0.8**
VRI	**Vrincioaia**	**6.88**	**345**	⇑P	**Pn**	**13 18 39.9**	**+0.8**
PLOR	**Plostina**	**6.88**	**345**	⇑P	**Pn**	**13 18 39.5**	**+0.3**
VOIR		**6.92**	**335**	⇓P	**Pn**	**13 18 39.4**	**-0.5**
DOPR	**Dopca**	**7.30**	**338**	⇑P	**Pn**	**13 18 46.1**	**+1.2**

ATH 28 13:20:53.3, 38°.68N×22°.75E, h16km±1km, ML2.2/18, Error ellipse: s-maj=1.8km s-min=0.7km az=18.0
THE 28 13:20:53.5, 38°.70N×22°.74E, h12km±2km, ML2.4/6, Error ellipse: s-maj=2.0km s-min=0.6km az=279.0
ISC 28 13:20:53.4±0.8, 38°.68N±0°.02×22°.74E±0°.02, h15km±6km, n50, σ0.41/68, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AXAR	**Agios Charalam**	**0.10**	**324**	P	**Pg**	**13 20 56.7**	**0.0**
AXAR	**Agios Charalam**	**0.10**	**324**	P	**Pg**	**13 20 56.8**	**0.0**
AXAR				S	**Sg**	**13 20 59.1**	**+0.1**
AXAR				AML	AML	13 20 59.3	
	comp=E,39624µm,0.3s						
AXAR				AML	AML	13 20 60.0	
	comp=N,45538µm,0.2s						
LKR	**Lokris**	**0.21**	**99**	P	**Pg**	**13 20 57.9**	**-0.3**
LKR	**Lokris**	**0.21**	**99**	P	**Pg**	**13 20 57.9**	**-0.3**
LKR				S	**Sg**	**13 21 01.2**	**-0.2**
LKR				AML	AML	13 21 02.2	
	comp=N,3495µm,0.3s						
LKR				AML	AML	13 21 03.0	
	comp=E,3769µm,0.2s						
DLFA	**Delphi**	**0.28**	**223**	P	**Pg**	**13 20 59.0**	**-0.3**
DLFA				S	**Sg**	**13 21 03.3**	**-0.1**
DLFA				AML	AML	13 21 04.5	
	comp=N,2648µm,0.2s						
DLFA				AML	AML	13 21 04.6	
	comp=E,3852µm,0.4s						
PROD	**Prodromos**	**0.44**	**163**	P	**Pg**	**13 21 01.8**	**-0.4**

PROD S Sb 13 21 09.2 -0.1
PROD AML AML 13 21 11.3
comp=E,880μm,0.4s
PROD AML AML 13 21 11.8
comp=N,922μm,0.2s
AGG Agios Georgios 0.46 317 P **Pg 13 21 02.5 -0.2**
AGG S **Sg 13 21 08.3 -0.7**
comp=N,432nm,0.3s
AGG Agios Georgios 0.46 317 P **Pg 13 21 02.4 -0.2**
AGG S **Sb 13 21 09.6 -0.4**
AGG AML AML 13 21 10.8
comp=N,613μm,0.4s
AGG AML AML 13 21 11.7
comp=E,1096μm,0.3s
AGG Agios Georgios 0.46 317 Pg 13 21 02.5 -0.2
KALE Kalithea 0.55 238 P **Pg 13 21 03.6 -0.7**
KALE S **Sb 13 21 12.8 +0.3**
comp=E,592nm,0.4s
KALE Kalithea 0.55 238 P **Pg 13 21 03.6 -0.7**
KALE S **Sb 13 21 12.5 0.0**
KALE AML AML 13 21 14.5
comp=N,1462μm,0.4s
KALE AML AML 13 21 14.9
comp=E,1222μm,0.4s
MAKR Makrakomi, Fth 0.58 305 P **Pg 13 21 04.7 -0.1**
MAKR S **Sb 13 21 12.9 -0.3**
comp=E,412nm,0.4s
MAKR Makrakomi, Fth 0.58 305 P **Pg 13 21 04.7 -0.1**
MAKR S **Sb 13 21 13.0 -0.2**
MAKR AML AML 13 21 14.2
comp=N,1022μm,0.5s
MAKR AML AML 13 21 19.4
comp=E,624μm,0.4s
TRIZ Trizonia 0.61 239 P **Pg 13 21 04.4 -1.0**
TRIZ S **Sb 13 21 14.3 +0.2**
comp=E,538nm,0.4s
TRIZ Trizonia 0.61 239 P **Pg 13 21 04.5 -0.8**
TRIZ S **Sb 13 21 14.5 +0.4**
VIL2 Platees 0.63 138 P **Pb 13 21 06.2 +0.1**
VIL2 AML AML 13 21 22.2
comp=N,446μm,0.5s
VIL2 AML AML 13 21 23.9
comp=E,729μm,0.6s
ALIK Aliki, Aigiali 0.65 229 P **Pb 13 21 06.7 +0.3**
ALIK S **Sb 13 21 16.0 +0.8**
MRKA Markates 0.67 88 P **Pg 13 21 06.4 0.0**
MRKA S **Sg 13 21 15.1 -0.2**
LTK Loutraki 0.68 165 P **Pg 13 21 06.2 -0.6**
LTK Loutraki 0.68 165 P **Pg 13 21 06.2 -0.6**
LTK AML AML 13 21 21.7
comp=E,401μm,0.4s
LTK AML AML 13 21 21.9
comp=N,724μm,0.3s
VILL Villia 0.69 139 P **Pg 13 21 06.3 -0.6**
VILL S **Sb 13 21 17.3 +0.9**
comp=N,305nm,0.5s
LOUT Loutraki 0.72 165 P **Pg 13 21 07.0 -0.4**
LOUT Loutraki 0.72 165 P **Pg 13 21 07.0 -0.4**
LOUT AML AML 13 21 23.6
comp=N,86μm,0.3s
LOUT AML AML 13 21 25.4
comp=E,73μm,0.2s
NEO Neokhori 0.73 31 P **Pg 13 21 07.6 0.0**
NEO Neokhori 0.73 31 P **Pg 13 21 07.4 -0.2**
NEO AML AML 13 21 19.9
comp=N,803μm,0.3s
NEO AML AML 13 21 20.1
comp=E,623μm,0.5s
LAKA Lakka 0.74 234 P **Pg 13 21 07.6 -0.3**
LAKA S **Sg 13 21 17.6 -0.1**
LAKA AML AML 13 21 22.9
comp=E,134μm,0.6s
LAKA AML AML 13 21 24.4
comp=N,150μm,0.4s
SKIA Skiathos 0.74 50 P **Pb 13 21 08.1 0.0**
SKIA S **Sb 13 21 17.9 -0.2**
SKIA AML AML 13 21 21.3
comp=N,163μm,0.3s
SKIA AML AML 13 21 25.7
comp=E,195μm,0.7s
EVR Evrytania 0.76 288 P **Pg 13 21 08.0 -0.3**
EVR Evrytania 0.76 288 P **Pb 13 21 08.5 +0.2**
EVR AML AML 13 21 22.1
comp=E,176μm,0.5s
EVR AML AML 13 21 23.7
comp=N,137μm,0.2s
XOR Xorichti 0.77 27 P **Pg 13 21 08.1 -0.3**
XOR S **Sb 13 21 18.6 -0.1**
comp=N,190nm,0.3s
XOR Xorichti 0.77 27 P **Pg 13 21 08.0 -0.3**
XOR AML AML 13 21 22.4
comp=E,391μm,0.4s
XOR AML AML 13 21 26.0
comp=N,367μm,0.3s
KLV Kalavryta, Ach 0.79 216 P **Pg 13 21 08.4 -0.3**
KLV Kalavryta, Ach 0.79 216 P **Pg 13 21 08.5 -0.2**
PVO Paravola 0.95 266 P **Pn 13 21 12.1 0.0**
AOS Alonnisos 1.01 61 P **Pb 13 21 12.3 -0.3**
AOS Alonnisos 1.01 61 P **Pb 13 21 12.7 0.0**
THL Klokotos Trika 1.04 328 P **Pb 13 21 12.4 -0.7**
THL Klokotos Trika 1.04 328 P **Pb 13 21 13.0 -0.1**
DRO Drossia 1.09 228 P **Pb 13 21 13.7 -0.2**
DRO AML AML 13 21 34.5
comp=E,293μm,0.3s
DRO AML AML 13 21 35.3
comp=N,313μm,0.4s
ATHU Athens Univers 1.09 131 P **Pg 13 21 14.4 -0.1**
VLY Voula,Athens 1.18 135 P **Pn 13 21 15.3 0.0**
VLY AML AML 13 21 35.3
comp=N,217μm,0.3s
VLY AML AML 13 21 37.5
comp=E,276μm,0.5s
PDO Prodromos 1.22 266 P **Pb 13 21 16.6 +0.4**
DID Didima 1.24 161 P **Pn 13 21 16.4 +0.2**
DID Didima 1.24 161 P **Pb 13 21 16.7 +0.2**
DID AML AML 13 21 40.5
comp=E,126μm,0.5s
DID AML AML 13 21 41.7
comp=N,120μm,0.8s
AMT Artemida-Makis 1.41 216 P **Pb 13 21 19.8 +0.5**
LIT Litokhoron 1.43 352 P **Pb 13 21 19.6 -0.1**
KARY Karystos 1.49 115 P **Pb 13 21 21.0 +0.3**
MEV Metsovon 1.61 314 P **Pg 13 21 23.5 +0.7**
ITM Ithomi 1.63 203 P **Pg 13 21 24.1 -0.6**
KPRO Kipourio 1.66 320 P **Pn 13 21 22.9 +0.9**

IDC 28 13:22:39.2±1.3, 40.91N×73.31E, h0km, mb3.7/8, mb1 3.8/13, mb1mx3.6/68, mbtmp3.7/13, ML3.1/6, MS3.9/1, Ms1 4.0/1, ms1mx2.7/47, Error ellipse: s-maj=24.9km s-min=9.7km az=137.0
ISU 28 13:22:41.0, 41.10N×73.30E, h10km
SOME 28 13:22:41.1, 41.00N×73.17E, h5km
KRNET 28 13:22:42.4±0.1, 41.07N×73.20E, h19km, mb4.0
MOS 28 13:22:43.5±1.7, 40.99N×73.16E, h34km, mb4.4/5, Error ellipse: s-maj=11.7km s-min=6.9km az=98.0
KNET 28 13:22:43.9±0.3, 41.19N×73.27E, h6km±1km, ml3.4, Error ellipse: s-maj=3.0km s-min=1.9km az=111.0
NNC 28 13:22:43.4±0.8, 41.11N×73.16E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=6.7km s-min=3.0km az=171.0
NEIC 28 13:22:45.3±2.7, 40.96N±0.07×73.24E±0.09, h51km±10km, mb4.4/4, Error ellipse: s-maj=13.5km s-min=5.2km az=134.0
ISC 28 13:22:44.5±0.5, 41.10N±0.03×73.11E±0.02, h21km±2km, n130, σ2.34/185, mb3.8/15, 44C-33D, Kyrgyzstan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res

ARSB Arslanbob 0.24 336⇓*i*P **Pb 13 22 48.8 -2.0**
baz=27
ARSB ⇓*i*S **Sb 13 22 53.5 -1.6**
baz=27
ANR Andizhan 0.67 239 *e*P **Pb 13 22 56.5 -1.0**
ANR *e*S **Sn 13 23 08.2 -0.4**
FRG Fergana 1.07 250 *e*P **Pn 13 23 07.5 +3.2**
FRG *e*S **Sn 13 23 23.9 +5.3**
NAM Namangan 1.10 265 *e*P **Pb 13 23 05.6 +0.7**
NAM *e*S **Sn 13 23 22.9 +3.5**
ARK Arkit 1.11 309⇓*i*P **Pn 13 23 03.8 -1.2**
baz=8.0
ARK ⇓*i*S **Sn 13 23 19.3 -0.3**
baz=8.0
ARK Arkit 1.11 309 *e*P **Pn 13 23 03.7 -1.2**
ARK *e*S **Sn 13 23 26.2 +6.6**
AML Almayashu 1.11 23⇓*i*P **Pn 13 23 03.4 -1.9**
baz=19
AML ⇓*i*S **Sb 13 23 18.3 -1.2**
baz=19
AML Almayashu 1.11 23 ⇓P **Pn 13 23 03.4 -1.9**
233nm,0.2s,SNR=519
AML ⇑S **Sb 13 23 18.2 -1.4**
358nm,0.2s
ARLS Aral 1.18 50⇓*i*P **Pn 13 23 03.6 -2.4**
baz=47
ARLS ⇓*i*S **Sb 13 23 19.5 -1.8**
baz=47
UCH Uchtor 1.54 43⇑*i*P **Pn 13 23 10.4 -0.7**
baz=40
UCH ⇑*i*S **Sn 13 23 30.5 -0.2**
baz=40
UCH Uchtor 1.54 43 ⇑P **Pn 13 23 10.5 -0.7**
67nm,0.2s,SNR=92
UCH ⇓S **Sb 13 23 31.9 +0.1**
129nm,0.2s
EKS2 Erkin-Say 1.63 17⇓*i*P **Pn 13 23 12.6 +0.4**
baz=15
EKS2 ⇓*i*S **Sb 13 23 34.2 0.0**
baz=15
EKS2 Erkin-Say 1.63 17 ⇓P **Pn 13 23 12.6 +0.4**
37nm,0.1s,SNR=68
MRKS Merke 1.64 3⇓*e*P **Pn 13 23 13.2 +0.9**
246nm,0.3s
MRKS *e*S **Sb 13 23 36.6 +2.2**
557nm,0.4s
MRKS Merke 1.64 3 P **Pn 13 23 13.2 +0.9**
246nm,0.3s
MRKS S **Sb 13 23 36.6 +2.2**
991nm,0.6s
AAK Ala-Archa 1.85 33 Pn **Pn 13 23 16.1 +1.0**
30nm,0.3s,baz=173,slow=4.5,SNR=353
AAK Pg **Pb 13 23 17.4 -0.3**
30nm,0.3s,baz=187,slow=7.0,SNR=274
AAK Lg Lg 13 23 41.2
39nm,0.3s,baz=130,slow=19,SNR=28
AAK Ala-Archa 1.85 33⇓*i*P **Pn 13 23 16.1 +1.0**
baz=31
AAK ⇓*i*S **Sb 13 23 40.1 -0.3**
baz=31
AAK Ala-Archa 1.85 33 ⇓P **Pn 13 23 16.2 +1.0**
85nm,0.2s,SNR=112
AAK ⇓S **Sb 13 23 40.5 +0.2**
185nm,0.2s
AAK Ala-Archa 1.85 33 ⇑P **Pb 13 23 16.5 -1.1**
124nm,0.7s
AAK S **Sb 13 23 40.6 +0.2**
311nm,0.7s
AAK Ala-Archa 1.85 33 Pb 13 23 16.6 -1.1
KZA Kyzart 1.88 58⇓*e*P **Pn 13 23 16.0 +0.3**
baz=56
KZA ⇓*i*S **Sn 13 23 39.9 +0.9**
baz=56
KZA Kyzart 1.88 58 ⇑P **Pn 13 23 16.3 +0.6**
91nm,0.3s,SNR=52
KZA ⇑S **Sb 13 23 41.8 +0.3**
75nm,0.2s
BTK Batken 2.04 240⇑*e*P **Pn 13 23 18.9 +1.3**
baz=42
BTK ⇑*i*S **Sb 13 23 45.1 -0.6**
baz=42
FRU1 Bishkek 2.05 33⇑*i*P **Pn 13 23 18.6 +0.8**
baz=31
FRU1 ⇑*i*S **Sb 13 23 44.6 -1.4**
baz=31
KBK Karagaybulak 2.07 41⇓*i*P **Pn 13 23 19.0 +0.8**
baz=39
KBK ⇓*i*S **Sn 13 23 45.3 +1.8**
baz=39
KBK Karagaybulak 2.07 41 ⇓P **Pb 13 23 20.2 -1.2**
194nm,0.3s,SNR=108
KBK ⇓S **Sb 13 23 47.3 +0.5**
250nm,0.2s
NRN Naryn 2.20 80⇑*e*P **Pn 13 23 19.3 -0.8**
baz=80
NRN ⇑*i*S **Sn 13 23 47.3 +0.4**
baz=80
CHMS Chumysh 2.25 32⇑*i*P **Pn 13 23 21.0 +0.4**
baz=31
CHMS ⇑*i*S **Sn 13 23 49.2 +1.4**
baz=31
CHMS Chumysh 2.25 32 ⇑P **Pb 13 23 22.7 -1.8**
25nm,0.1s,SNR=62
CHMS ⇑S **Sb 13 23 53.4 +1.5**
259nm,0.4s
CHMS Chumysh 2.25 32 ⇑Pn **Pn 13 23 22.5 +1.9**
161nm,0.8s
CHMS ⇑Lg Lg 13 23 53.3
518nm,1.0s
JBG Jabagly 2.33 305 Pg **Pb 13 23 26.5 +0.6**
348nm,0.4s
JBG Lg Lg 13 23 59.4
746nm,0.4s
JBG Jabagly 2.33 305 *e*PN **Pb 13 23 26.5 +0.6**
JBG *e*S **Sb 13 23 59.3 +5.1**
USP Ospenovka 2.40 25⇑*i*P **Pn 13 23 23.4 +0.9**
baz=23
USP ⇑*i*S **Sn 13 23 53.5 +2.2**
baz=23
USP Ospenovka 2.40 25 ⇑P **Pn 13 23 24.5 +1.9**
32nm,0.2s,SNR=86
USP ⇓S **Sb 13 23 56.5 +0.5**
153nm,0.4s
CHRV Charvak 2.44 284 *e*P **Pb 13 23 28.1 +0.4**
CHRV *e*S **Sb 13 23 57.8 +0.5**
BOOM Boomskoye usch 2.53 56⇑*e*P **Pn 13 23 24.9 +0.4**
baz=54
BOOM ⇑*i*S **Sn 13 23 55.3 +0.6**
baz=54
IUG Iuzhnay 2.53 295 *e*P **Pb 13 23 29.8 +0.5**
54nm,0.8s
IUG *e*S **Sb 13 24 04.9 +4.8**
862nm,0.4s
IUG Iuzhnay 2.53 295 Pg **Pb 13 23 29.8 +0.5**
54nm,0.6s
IUG Lg Lg 13 24 04.9
862nm,0.4s
IUG Iuzhnay 2.53 295 *e*PN **Pb 13 23 29.8 +0.5**
IUG *e*S **Sb 13 24 04.9 +4.8**
TKM2 Tokmak 2 2.59 45⇓*e*P **Pn 13 23 25.9 +0.5**
baz=43
TKM2 ⇓*e*S **Sn 13 23 57.4 +1.0**
baz=43
TKM2 Tokmak 2 2.59 45 ⇑P **Pn 13 23 27.1 +1.7**
59nm,0.4s,SNR=38
ULHL Ulahol 2.61 63⇑*e*P **Pn 13 23 25.9 +0.3**
baz=62
ULHL ⇑*i*S **Sn 13 23 57.4 +0.6**
baz=62
KK31 Karatay Array 2.78 317 ⇑Pn **Pn 13 23 30.2 +2.4**
3.4nm,0.4s,baz=132,slow=14,SNR=1058
KK31 ⇑Pg **Pb 13 23 33.1 -0.4**
132nm,0.5s
KK31 ⇓Lg Lg 13 24 11.5
129nm,0.6s,baz=136,slow=28,SNR=7.3
KK31 Karatay Array 2.78 317 Pb 13 23 30.6 -2.9
KK31 Karatay Array 2.78 317 PN **Pb 13 23 30.6 -2.9**
KKAR Karatay Array 2.78 317 Pn 13 23 30.5 +2.7
KKAR Karatay Array 2.78 317 PN **Pn 13 23 30.5 +2.7**
TAS Tashkent 2.89 276⇑*e*P **Pn 13 23 31.0 +1.7**
baz=76
TAS ⇑*e*S **Sb 13 24 06.8 -3.4**
baz=76
TAS Tashkent 2.89 276 *e*P **Pb 13 23 37.3 +2.0**
TAS *e*S **Sb 13 24 16.6 +6.4**
DGS Degeres 2.91 42 *e*P **Pb 13 23 35.0 -0.7**
128nm,0.7s
DGS *e*S **Sb 13 24 13.9 +2.9**
193nm,0.9s
DGS Degeres 2.91 42 Pg **Pb 13 23 35.4 -0.4**
128nm,0.7s
DGS Lg Lg 13 24 14.5
193nm,0.9s
BRLS Borolday 3.11 309 *e*P **Pb 13 23 38.9 -0.2**
49nm,0.5s
BRLS *e*S **Sb 13 24 20.2 +3.7**
25nm,0.7s
BRLS Borolday 3.11 309 Pg **Pb 13 23 38.9 -0.2**
49nm,0.5s
BRLS Lg Lg 13 24 19.8
25nm,0.7s
MTBS Maitube 3.19 50 *e*P **Pb 13 23 39.8 -0.7**
31nm,0.5s
MTBS *e*S **Sb 13 24 22.3 +3.3**
70nm,0.6s
MTBS Maitube 3.19 50 Pg **Pb 13 23 39.8 -0.7**
29nm,0.4s
MTBS Lg Lg 13 24 22.3
74nm,0.8s
MTBS Maitube 3.19 50 *e*PN **Pb 13 23 39.8 -0.7**
MTBS *e*S **Sb 13 24 22.3 +3.3**
KDJ Kajisay 3.22 70⇑*e*P **Pn 13 23 34.2 +0.2**
baz=69
KDJ ⇑*e*S **Sn 13 24 11.9 +0.1**
baz=69
IZV Izvestkoviy 3.24 52 *e*P **Pb 13 23 41.6 +0.1**
38nm,0.6s
IZV *e*S **Sb 13 24 25.0 +4.5**
125nm,0.8s
IZV Izvestkoviy 3.24 52 Pg **Pb 13 23 41.6 +0.1**
38nm,0.6s
IZV Lg Lg 13 24 25.5
129nm,0.8s
TNSS Tian-Shan 3.45 55 *e*P **Pb 13 23 45.0 -0.1**
29nm,0.5s
TNSS *e*S **Sb 13 24 30.6 +4.0**
71nm,0.8s
TNSS Tian-Shan 3.45 55 Pg **Pb 13 23 44.6 -0.4**
34nm,0.6s
TNSS Lg Lg 13 24 30.6
71nm,0.8s
TNSS Tian-Shan 3.45 55 *e*PN **Pb 13 23 45.0 -0.1**
AAA Alma-Ata 3.52 52 *e*P **Pb 13 23 47.7 +1.5**
24nm,0.2s
AAA *e*S **Sb 13 24 35.9 +7.4**
91nm,0.4s
AAA Alma-Ata 3.52 52 Pg **Pb 13 23 47.7 +1.5**
30nm,0.4s
AAA Lg Lg 13 24 35.9
91nm,0.4s
AAA Alma-Ata 3.52 52 *e*PN **Pb 13 23 47.7 +1.5**
KNDC Almaty 3.56 52 ⇑Pg **Pb 13 23 48.8 +2.1**
41nm,0.6s
KNDC ⇑Lg Lg 13 24 35.7
414nm,1.2s
MDOK Medeo 3.58 54 *e*P **Pb 13 23 48.8 +1.7**
21nm,0.4s
MDOK *e*S **Sb 13 24 37.8 +7.7**
55nm,0.6s
MDOK Medeo 3.58 54 ⇑Pg **Pb 13 23 48.8 +1.7**
47nm,1.0s
MDOK ⇑Lg Lg 13 24 37.0
57nm,0.7s
MDOK Medeo 3.58 54 Pg **Pb 13 23 48.8 +1.7**
26nm,0.8s
MDOK Lg Lg 13 24 37.8
74nm,0.8s
MDOK Medeo 3.58 54 *e*PN **Pb 13 23 48.8 +1.7**
KOTS Kotyrbulak 3.66 53 *e*P **Pb 13 23 48.6 +0.2**
65nm,0.7s
KOTS *e*S **Sb 13 24 37.2 +4.8**
90nm,0.7s
KOTS Kotyrbulak 3.66 53 Pg **Pb 13 23 48.6 +0.2**
106nm,0.6s
KOTS Lg Lg 13 24 37.2
90nm,0.7s
KUU Kurty 3.67 39 *e*P **Pb 13 23 48.0 -0.6**
34nm,0.4s
KUU *e*S **Sb 13 24 36.2 +3.6**
92nm,0.6s
KUU Kurty 3.67 39 Pg **Pb 13 23 48.0 -0.6**
42nm,0.6s
KUU Lg Lg 13 24 36.2
71nm,0.6s
KUU Kurty 3.67 39 *e*PN **Pb 13 23 48.0 -0.6**
KTBS Karatobe 3.71 44 *e*P **Pb 13 23 49.4 +0.1**
20nm,0.3s
KTBS *e*S **Sb 13 24 38.4 +4.5**
133nm,0.7s
KTBS Karatobe 3.71 44 Pg **Pb 13 23 49.4 +0.1**
20nm,0.5s
KTBS Lg Lg 13 24 38.4
133nm,0.7s
ANVS Anan'yevo 3.79 62⇑*i*P **Pn 13 23 42.1 +0.3**
baz=61
ANVS ⇑*e*S **Sn 13 24 25.7 -0.2**
baz=61
KPKS Kokpek 4.76 58 *e*P **Pb 13 24 08.9 +1.7**
50nm,0.7s
KPKS *e*S **Sb 13 25 11.7 +7.6**
55nm,0.9s
KPKS Kokpek 4.76 58 *e*PN **Pb 13 24 08.9 +1.7**
UZB Uzynbulak 4.85 63 *e*P **Pb 13 24 09.7 +1.0**
17nm,0.6s
UZB *e*S **Sb 13 25 13.2 +6.6**
28nm,0.5s
UZB Uzynbulak 4.85 63 Pg **Pb 13 24 09.7 +1.0**
17nm,0.6s
UZB Lg Lg 13 25 13.2
28nm,0.6s
UZB Uzynbulak 4.85 63 *e*PN **Pb 13 24 09.7 +1.0**
PDGK Podgornoye 5.23 63 Pg **Pb 13 24 17.2 +1.9**
6.0nm,0.8s
PDGK Lg Lg 13 25 26.4
15nm,1.0s
PDGK Podgornoye 5.23 63 ⇑Pg **Pb 13 24 20.0 +4.7**
14nm,0.8s
PDGK ⇑Lg Lg 13 25 30.1
62nm,0.9s
DJR Jarkent 5.88 55 Pg Pb 13 24 33.7 +7.3
5.0nm,0.8s
DJR Lg Lg 13 25 54.4
26nm,1.2s
KAPS Kapalarasan 6.19 45 Pg **Pb 13 24 35.9 +4.4**
7.1nm,0.4s
KAPS Lg Lg 13 25 58.2
21nm,0.7s
NIL Nilore 7.44 179 Pn 13 24 29.2 -2.7
NIL Nilore 7.44 179 P **Pn 13 24 29.2 -2.7**
MAKZ Makanchi 8.56 45 ⇑Pn **Pn 13 24 50.3 +3.1**
1.9nm,0.7s
MAKZ ⇓Lg Lg 13 27 15.6
8.1nm,1.0s
MK31 Makanchi Array 8.72 46 ⇓Pn **Pn 13 24 50.9 +1.5**
3.0nm,0.6s,baz=232,slow=14,SNR=11
MK31 ⇓Lg Lg 13 27 19.0
4.5nm,0.7s,baz=234,slow=30,SNR=3.7
MK31 Makanchi Array 8.72 46 Pn 13 24 50.9 +1.5
MK31 Makanchi Array 8.72 46 P **Pn 13 24 50.9 +1.5**
MKAR Makanchi Array 8.72 46 Pn **Pn 13 24 49.1 -0.3**
0.1nm,0.3s,baz=112,slow=43,SNR=2.5
MKAR Lg Lg 13 27 17.5
0.2nm,0.3s,baz=238,slow=27,SNR=3.2
KURBB Kurchatov Arra 10.24 20 Pn **Pn 13 25 08.8 -1.3**
0.1nm,0.3s,baz=212,slow=12,SNR=6.7
KURBB Lg Lg 13 28 05.1
0.1nm,0.3s,baz=188,slow=27,SNR=4.1
KURBB Kurchatov Arra 10.24 20 ⇑Pn **Pn 13 25 08.9 -1.2**
2.9nm,0.8s
KURK Kurchatov 10.35 20 Pn 13 25 11.1 -0.5
KURK Kurchatov 10.35 20 P **Pn 13 25 11.1 -0.5**
GEYT Alibeck 12.01 260 Pn **Pn 13 25 34.1 -0.3**
0.4nm,0.3s,baz=84,slow=15,SNR=2.4
BVAR Borovoye Array 12.07 352 Pn **Pn 13 25 34.6 -0.5**
0.1nm,0.3s,baz=159,slow=12,SNR=2.7
BVAR Sn **Sn 13 27 53.7 +4.7**
0.2nm,0.3s,baz=232,slow=41,SNR=2.5
BVAR Lg Lg 13 29 05.6
0.3nm,0.3s,baz=171,slow=28,SNR=5.6
BRVK Borovoye 12.11 352 ⇓Pn **Pn 13 25 38.5 +2.8**
2.4nm,0.7s
BRVK Borovoye 12.11 352 Pn 13 25 37.2 +1.5
BRVK Borovoye 12.11 352 P **Pn 13 25 37.2 +1.5**
AB31 Akbulak array 12.35 316 Pn **Pn 13 25 38.1 -0.8**
2.1nm,0.6s,baz=131,slow=13,SNR=40
ABKAR Akbulak array 12.35 316 Pn 13 25 38.6 -0.3
AKTO Aktyubinsk 14.05 317 Pn **Pn 13 26 02.6 +0.4**
0.2nm,0.3s,baz=134,slow=12,SNR=5.0
AKTO Aktyubinsk 14.05 317 ⇑Pn **Pn 13 26 02.5 +0.4**
4.7nm,1.1s
ZALV Zalesovo Beam 15.06 27 Pn **Pn 13 26 16.6 +0.8**
0.5nm,0.3s,baz=215,slow=11,SNR=7.3
ARU Arti 18.03 333 P **Pn 13 26 53.6 +0.1**
ARU S **Sn 13 30 11.3 -2.5**
MAK Makhachkala 19.09 284 *e*P **P 13 27 04.9 -0.8**
MAK *e*S **Sn 13 30 39.1 -0.7**
MAK pmax pmax
comp=Z,31nm,0.4s
MAK MLR MLR

comp=Z,124nm,17.0s
GNI Garni 21.52 277 i P P 13 27 34.2 +2.0
GNI pmax pmax
comp=Z,14nm,0.9s
WSAR Wadi Sarin 21.57 219 P P 13 27 31.2 -1.5
comp=Z,3.2nm,1.1s,baz=34,slow=7.3,SNR=4.5
KBZ Khabaz 22.40 287 i P P 13 27 40.3 -1.2
KBZ pmax pmax
comp=Z,2.0nm,1.0s
KIV Kislovodsk 22.54 287 eP P 13 27 44.4 +1.3
KIV pmax pmax
comp=Z,9.0nm,0.9s
SONM Songino Array 24.55 63 P P 13 28 04.3 +1.6
comp=Z,0.2nm,0.4s,baz=104,slow=11,SNR=1.3
OBN Obninsk 27.77 313⇓eP P 13 28 32.6 +1.1
OBN e 13 28 38.3
OBN PPP PPP 13 29 26.0
OBN S S 13 33 05.0 -7.9
OBN pmax pmax
comp=Z,7.0nm,1.0s
OBN MLR MLR
comp=Z,167nm,18.0s
NRIK Noril'sk 29.31 10 i P P 13 28 46.0 +0.9
NRIK pmax pmax
comp=Z,2.0nm,1.0s
ILGA Ilgaz 29.53 283 P P 13 28 40.8 -6.8
ILGA IAmb IAmb 13 28 43.0
comp=Z,10nm,1.2s
FIA1 FINESS Array S 34.73 322 P P 13 29 28.1 -4.6
FINES FINESS Array B 34.73 322 P P 13 29 32.5 -0.2
comp=Z,0.6nm,0.5s,baz=104,slow=9.0,SNR=2.0
HFS Hagfors 40.59 319 P P 13 30 21.7 -0.5
comp=Z,3.1nm,0.9s,baz=94,slow=12,SNR=4.5
NC303 NORSAR Array S 41.73 320 P P 13 30 28.9 -2.8
GERES GERESS Array B 41.78 301 P P 13 30 32.4 0.0
comp=Z,0.5nm,0.6s,baz=70,slow=7.8,SNR=5.3
NB2 NORSAR Subarra 41.81 320 P P 13 30 31.4 -1.0
comp=Z,0.6nm,0.5s,baz=89,slow=8.6
NOA NORSAR Array B 41.81 320 P P 13 30 31.3 -1.1
comp=Z,0.7nm,0.6s,baz=90,slow=8.2,SNR=4.2
EKA Eskdalemuir Ar 50.21 314 P P 13 31 37.8 -0.7
comp=Z,1.2nm,0.7s,baz=78,slow=8.9,SNR=2.2
ESDC Sonseca Array 56.84 296 LR LR 14 02 47.9
comp=Z,110nm,19.5s,baz=340,slow=42
TORD Torodi Ar. Bea 67.50 268 P P 13 33 36.9 -2.4
comp=Z,0.4nm,0.7s,baz=46,slow=6.2,SNR=2.5
IL31 69.90 17 P P 13 33 49.8 -3.6
IL31 IAmb IAmb 13 34 05.4
comp=Z,6.4nm,1.4s
YKA Yellowknife Ar 76.56 4 P P 13 34 31.4 -1.3
comp=Z,0.2nm,0.5s,baz=349,slow=5.6,SNR=5.3

KRSC 28 13:26:16.2±1.6, 52.°05N×159.°74E, h52km±22km, ML4.5
MOS 28 13:26:19.4±1.1, 52.°17N×159.°41E, h65km, mb4.2/10, Error ellipse: s-maj=8.9km s-min=3.9km az=92.9
NEIC 28 13:26:21.8±1.7, 52.°22N±0.°09×159.°4E±0.°1, h68km±4km, mb4.3/13, Error ellipse: s-maj=13.0km s-min=12.0km az=215.0
IDC 28 13:26:23.1±1.7, 52.°22N×159.°37E, h81km±12km, mb3.6/27, mb1 3.8/29, mb1mx3.6/69, mbtmp4.0/29, MS3.5/7, Ms1 3.5/7, ms1mx3.1/46, Error ellipse: s-maj=16.0km s-min=12.2km az=132.0
ISC 28 13:26:19.2±1.1, 52.°12N±0.°04×159.°60E±0.°05, h50km±9km, n146, σ1§51/169, mb4.0/35, MS3.6/5, 6C, Off east coast of Kamchatka Peninsula

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RUS Russkaya 0.74 296 eP Pn 13 26 32.4 -1.0
RUS eS Sn 13 26 43.8 +0.1
RUS Russkaya 0.74 296 PN Pn 13 26 32.4 -1.0
RUS S Sn 13 26 43.8 +0.1
MTVR Mutnovka 0.94 293 eP Pn 13 26 36.0 -0.3
MTVR Mutnovka 0.94 293 PN Pn 13 26 36.0 -0.3
KDTR Khodutka, Kamc 0.99 252 eP Pn 13 26 36.2 -0.5
KDTR eS Sn 13 26 49.8 +0.1
KDTR Khodutka, Kamc 0.99 252 PN Pn 13 26 36.2 -0.5
KDTR S Sn 13 26 49.8 +0.1
SPN Mys Shipunski 1.01 15 eP Pn 13 26 36.5 -0.6
SPN eS Sn 13 26 50.5 +0.2
SPN Mys Shipunski 1.01 15 PN Pn 13 26 36.5 -0.6
SPN S Sn 13 26 50.5 +0.2
GRL Gorelyy 1.03 296 eP Pn 13 26 37.7 +0.3
GRL eS Sn 13 26 53.1 +2.2
GRL Gorelyy 1.03 296 PN Pn 13 26 37.7 +0.3
GRL S Sn 13 26 53.1 +2.2
DALK Dalny 1.05 331 eP Pn 13 26 37.1 -0.4
DALK eS Sn 13 26 51.9 +0.8
DALK Dalny 1.05 331 PN Pn 13 26 37.1 -0.4
DALK S Sn 13 26 51.9 +0.8
NLC Nalytchevo 1.06 352 eP Pn 13 26 36.0 -1.8
NLC Nalytchevo 1.06 352 PN Pn 13 26 36.0 -1.8
PET Petropavlovsk 1.07 328 ePN Pn 13 26 37.3 -0.6
PET eS Sn 13 26 52.2 +0.5
PET pmax pmax
comp=Z,651nm,0.7s
PET smax smax
comp=N,3μm,0.7s
PET smax smax
comp=E,3μm,0.6s
ASAK Asacha 1.08 285 eP Pn 13 26 38.4 +0.4
ASAK eS Sn 13 26 53.5 +1.6
ASAK Asacha 1.08 285 PN Pn 13 26 38.4 +0.4
ASAK S Sn 13 26 53.5 +1.6
KRMR Karymshinskiy 1.15 309 eP Pn 13 26 38.1 -0.8
KRMR eS Sn 13 26 53.4 0.0
KRMR Karymshinskiy 1.15 309 PN Pn 13 26 38.1 -0.8
KRMR S Sn 13 26 53.4 0.0
UGLR Uglovaya 1.19 337 eP Pn 13 26 39.3 -0.3
UGLR eS Sn 13 26 55.6 +0.9
UGLR Uglovaya 1.19 337 PN Pn 13 26 39.3 -0.3
UGLR S Sn 13 26 55.6 +0.9
SDLR Sedlovina 1.24 340 eP Pn 13 26 39.7 -0.6
SDLR Sedlovina 1.24 340 PN Pn 13 26 39.7 -0.6
SMAR Somma 1.24 337 eP Pn 13 26 41.1 +0.7
SMAR Somma 1.24 337 PN Pn 13 26 41.1 +0.7
AVH Avacha 1.26 336 eP Pn 13 26 40.1 -0.4
AVH Avacha 1.26 336 PN Pn 13 26 40.1 -0.4
KRER Koryakskii 1.29 337 eP Pn 13 26 41.5 +0.4
KRER eS Sn 13 26 58.7 +1.3
KRER Koryakskii 1.29 337 PN Pn 13 26 41.5 +0.4
KRER S Sn 13 26 58.7 +1.3
KOK Koryaka 1.31 334 eP Pn 13 26 41.9 +0.7
KOK Koryaka 1.31 334 PN Pn 13 26 41.9 +0.7
KRX Arik 1.37 336 eP Pn 13 26 42.8 +0.7
KRX Arik 1.37 336 PN Pn 13 26 42.8 +0.7
PEA0B Petropavlovsk- 1.52 311 Pn 13 26 44.5 +0.5
PEA0B Petropavlovsk- 1.52 311 PN Pn 13 26 44.5 +0.5
PETK Petropavlovsk- 1.52 311 P Pn 13 26 44.6 +0.6
comp=E,158nm,0.3s,baz=108,slow=21,SNR=119
PETK S Sn 13 27 04.5 +1.8
comp=E,110nm,0.3s,baz=91,slow=27,SNR=9.9
PETK LR LR 13 27 35.8
comp=E,715nm,18.7s,baz=64,slow=54
APC Apacha 1.69 299 eP Pn 13 26 47.9 +1.6
APC eS Sn 13 27 09.8 +3.0
APC Apacha 1.69 299 PN Pn 13 26 47.9 +1.6
APC S Sn 13 27 09.8 +3.0
MIPR Malaya Ipel'ka 1.75 276 eP Pn 13 26 49.0 +1.8
MIPR eS Sn 13 27 12.1 +3.8
MIPR Malaya Ipel'ka 1.75 276 PN Pn 13 26 49.0 +1.8
PAU Pauzhetka 1.85 250 eP Pn 13 26 49.7 +1.3
PAU Pauzhetka 1.85 250 PN Pn 13 26 49.7 +1.3
KII Karymskiy 1.92 357 eP Pn 13 26 51.9 +2.4
KII eS Sn 13 27 16.0 +3.4
KII Karymskiy 1.92 357 PN Pn 13 26 51.9 +2.4
KII S Sn 13 27 16.0 +3.4
SKR Severo-Kuril's 2.61 238 eP Pn 13 26 58.9 +0.1
SKR eS Sn 13 27 29.8 +0.5
SKR Severo-Kuril's 2.61 238 ePN Pn 13 26 59.0 +0.1
SKR eS Sn 13 27 32.0 +2.7
SKR pmax pmax
comp=Z,102nm,0.5s
SKR smax smax
comp=N,639nm,0.5s
SKR smax smax
comp=E,397nm,0.6s
SKR MLR MLR
comp=Z,200nm,12.0s
KZV Kizimen 3.03 8 eP Pn 13 27 06.4 +1.6
KZV eS Sn 13 27 40.8 +1.0
KZV Kizimen 3.03 8 PN Pn 13 27 06.4 +1.6
KZV S Sn 13 27 40.8 +1.0
TUMD Tumrok D 3.13 8 eP Pn 13 27 07.7 +1.7
TUMD eS Sn 13 27 42.4 +0.3
TUMR Tumrok 3.19 6 eP Pn 13 27 07.9 +1.0
TUMR Tumrok 3.19 6 PN Pn 13 27 07.7 +0.8
TUMR S Sn 13 27 42.4 -1.3
KMNR Kamenistaya 3.66 6 eP Pn 13 27 16.9 +3.5
KMNR Kamenistaya 3.66 6 PN Pn 13 27 16.9 +3.5
ESO Esso 3.85 352 eP Pn 13 27 17.0 +1.1
ESO Esso 3.85 352 PN Pn 13 27 17.0 +1.1
BZGR Bezymyannyi-Gr 3.88 9 eP Pn 13 27 18.4 +2.0
BZGR Bezymyannyi-Gr 3.88 9 PN Pn 13 27 18.4 +2.0
KOZ Kozyrevsk 3.95 2 eP Pn 13 27 20.7 +3.4
KOZ Kozyrevsk 3.95 2 PN Pn 13 27 20.7 +3.4
ZLN Zelenaya 3.97 10 eP Pn 13 27 19.9 +2.3
ZLN Zelenaya 3.97 10 PN Pn 13 27 19.9 +2.3
CIRR Tsirk 4.06 9 eP Pn 13 27 22.1 +3.2
CIRR Tsirk 4.06 9 PN Pn 13 27 22.1 +3.2
SRDR Sredinnyy 4.21 1 eP Pn 13 27 24.2 +3.4
SRDR Sredinnyy 4.21 1 PN Pn 13 27 24.2 +3.4
KLY Klyuchi 4.25 8 eP Pn 13 27 23.3 +2.0
KLY Klyuchi 4.25 8 PN Pn 13 27 23.3 +2.0
KBTR Krutoberegovo 4.51 24 eP Pn 13 27 24.3 -0.6
KBTR Krutoberegovo 4.51 24 PN Pn 13 27 24.3 -0.6
KBG Krutoberegovo 4.53 23 eP Pn 13 27 25.3 +0.2
KBG Krutoberegovo 4.53 23 PN Pn 13 27 25.3 +0.2
SRKR Sorokina 4.64 11 eP Pn 13 27 29.1 +2.4
SRKR Sorokina 4.64 11 PN Pn 13 27 29.1 +2.4
BKI Bering 4.89 48 eP Pn 13 27 26.6 -3.5
BKI Bering 4.89 48 PN Pn 13 27 26.6 -3.5
MA2 Magadan 8.96 330 LR LR 13 32 40.7
comp=Z,121nm,18.1s,baz=282,slow=43
MA2 Magadan 8.96 330 i PN Pn 13 28 23.3 -2.6
JKA Kamikawa-asahi 13.87 241 Pn 13 29 33.6 +0.7
ASAJ Asahikawa 13.87 241 P Pn 13 29 33.6 +0.7
comp=Z,0.4nm,0.3s,baz=70,slow=15,SNR=4.9
ERM Erimo 15.05 234ceP Pn 13 29 49.0 +0.5
ERM pmax pmax
comp=Z,207nm,2.5s
BILL Bilibino 16.30 9 Pn Pn 13 30 05.3 +0.9
BILL Bilibino 16.30 9⇑eP P 13 30 07.3 +0.7
BILL pmax pmax
comp=Z,7.0nm,1.0s
KLR Kul'dur 17.84 272 P Pn 13 30 25.3 +1.7
comp=Z,0.4nm,0.3s,baz=80,slow=8.8,SNR=6.1
KLR LR LR 13 37 45.7
comp=Z,59nm,18.5s,baz=64,slow=39
KLR Kul'dur 17.84 272 i P P 13 30 21.5 -2.3
KLR pmax pmax
comp=Z,3.0nm,0.9s
YAK Yakutsk 18.87 313 i P P 13 30 33.5 -1.5
YAK pmax pmax
comp=Z,6.0nm,0.8s
MJB9 Matsu-Tunnel 21.71 233 P P 13 31 07.6 +1.6
MJB9 IAmb IAmb 13 31 10.1
comp=Z,9.5nm,0.8s
MAJO Matsushiro 21.71 233 P P 13 31 07.6 +1.7
MAJO IAmb IAmb 13 31 10.2
comp=Z,9.5nm,0.8s
MAJO Matsushiro 21.71 233 i P P 13 31 06.8 +0.9
MAJO pmax pmax
comp=Z,6.0nm,0.8s
MJAR Matsushiro Arr 21.71 233 P P 13 31 06.9 +1.0
comp=Z,5.1nm,0.8s,baz=23,slow=8.6,SNR=15
TIXI Tiksi 23.85 336 P P 13 31 26.7 -0.6
comp=Z,5.9nm,0.7s,baz=122,slow=8.8,SNR=21
TIXI Tiksi 23.85 336 P P 13 31 26.8 -0.6
TIXI IAmb IAmb 13 31 27.8
comp=Z,6.1nm,0.7s
TIXI Tiksi 23.85 336ceP P 13 31 26.1 -1.3
TIXI pmax pmax
comp=Z,6.0nm,0.8s
HIA Hailar 25.19 279 P P 13 31 39.9 +0.1
HIA IAmb IAmb 13 31 40.7
comp=Z,10.0nm,0.6s
HIA Hailar 25.19 279 P P 13 31 39.9 +0.1
HIA pmax pmax
comp=Z,10.0nm,0.6s
PPLA Purkeypile 27.37 48 P P 13 32 00.7 +1.1
PPLA IAmb IAmb 13 32 11.0
comp=Z,9.8nm,1.3s
JNU Nakatsue 28.12 239 P P 13 32 04.8 -1.5
comp=Z,4.0nm,0.7s,baz=45,slow=19,SNR=2.1
TOLK Toolik Lake Re 28.93 36 P P 13 32 13.2 0.0
ILAR Eielson Array 29.72 44 P P 13 32 21.6 +1.4
comp=Z,0.2nm,0.7s,baz=262,slow=6.4,SNR=1.4
H11N2 WAKE ISLAND Hy 32.82 167 T T 14 08 46.5
baz=352,slow=76,SNR=142
H11N3 WAKE ISLAND Hy 32.84 167 T T 14 08 47.4
baz=352,slow=76,SNR=44
H11N1 WAKE ISLAND Hy 32.84 167 T T 14 08 32.1
baz=352,slow=76,SNR=95
SONM Songino Array 33.84 284 P P 13 32 56.8 +0.1
comp=Z,0.5nm,0.3s,baz=55,slow=7.7,SNR=2.6
SONM PcP PcP 13 35 33.8 -0.7
comp=Z,1.0nm,1.1s,baz=119,slow=1.8,SNR=2.8
SONM LR LR 13 47 01.3
comp=Z,94nm,19.6s,baz=26,slow=37
H11S1 WAKE ISLAND Hy 34.00 168 T T 14 09 54.5
baz=352,slow=76,SNR=11
H11S3 WAKE ISLAND Hy 34.01 168 T T 14 09 55.9
baz=352,slow=76,SNR=19
H11S2 WAKE ISLAND Hy 34.02 168 T T 14 10 03.0
baz=352,slow=76,SNR=6.7
INK Inuvik 34.83 37 P P 13 33 05.2 +0.4
comp=Z,0.6nm,0.6s,baz=294,slow=9.8,SNR=3.7
INK Inuvik 34.83 37 IAmb IAmb 13 33 15.7
comp=Z,3.6nm,1.2s
INK Inuvik 34.83 37 P P 13 33 05.2 +0.4
INK pmax pmax
comp=Z,4.0nm,1.2s
NRIK Noril'sk 36.53 325 LR LR 13 49 04.6
comp=Z,94nm,19.1s,baz=320,slow=37
WHN Wuhan 39.41 255 P P 13 33 41.0 -3.1
ZALV Zalesovo Beam 43.05 303 P P 13 34 11.4 -2.3
comp=Z,0.3nm,0.3s,baz=80,slow=8.9,SNR=1.9
ZALV LR LR 13 52 47.9
comp=Z,93nm,19.3s,baz=9.5,slow=37
YKA Yellowknife Ar 44.09 42 P P 13 34 22.3 +0.4
comp=Z,0.4nm,0.8s,baz=299,slow=7.2,SNR=4.4
KURK Kurchatov 47.99 302 P P 13 34 51.3 -1.5
KURK Kurchatov 47.99 302 P P 13 34 52.4 -0.4
KURK 13 36 20.7
SPA0 Spitsbergen Ar 48.05 350 P P 13 34 53.2 +0.3
SPITS Spitsbergen Ar 48.05 350 P P 13 34 52.1 -0.8
comp=Z,3.3nm,0.3s,baz=93,slow=6.7,SNR=77
KURBB Kurchatov Arra 48.09 302 P P 13 34 52.4 -1.2
comp=Z,0.8nm,0.3s,baz=55,slow=8.2,SNR=18
KURBB PcP PcP 13 36 20.6 +0.2
comp=Z,0.4nm,0.5s,baz=55,slow=3.3,SNR=6.1
MK31 Makanchi Array 48.31 296 P P 13 34 53.7 -1.6
MK31 Makanchi Array 48.31 296 P P 13 34 53.7 -1.6
MK31 pmax pmax
comp=Z,2.0nm,1.2s
MKAR Makanchi Array 48.31 296 P P 13 34 53.9 -1.5
comp=Z,0.6nm,0.4s,baz=52,slow=6.6,SNR=21
MKAR PcP PcP 13 36 20.1 -1.3
comp=Z,0.5nm,0.9s,baz=24,slow=5.0,SNR=1.6
MAKZ Makanchi 48.47 296 P P 13 34 54.9 -1.7
MAKZ Makanchi 48.47 296 P P 13 34 54.9 -1.7
MAKZ pmax pmax
comp=Z,2.0nm,1.3s
BVAR Borovoye Array 50.76 309 P P 13 35 12.1 -1.8
comp=Z,1.8nm,0.6s,baz=56,slow=8.0,SNR=14
BVAR PcP PcP 13 36 29.8 -0.4
comp=Z,0.7nm,0.6s,baz=47,slow=4.3,SNR=3.7
BRVK Borovoye 50.79 309 P P 13 35 12.1 -1.9
BRVK IAmb IAmb 13 35 13.1
comp=Z,2.3nm,0.7s
BRVK Borovoye 50.79 309ceP P 13 35 11.5 -2.6
BRVK pmax pmax
comp=Z,4.0nm,1.7s
ARCES ARCESS Array B 54.12 342 P P 13 35 37.6 -0.9
comp=Z,2.3nm,0.8s,baz=31,slow=8.3,SNR=16
AAK Ala-Archa 55.24 296ceP P 13 35 45.5 -1.7
AAK pmax pmax
comp=Z,5.0nm,2.5s
CMAR Chiang Mai Arr 57.68 258 P P 13 36 06.0 +1.3
comp=Z,1.4nm,0.6s,baz=30,slow=7.1,SNR=9.9
CMAR Chiang Mai Arr 57.68 258 P P 13 36 06.0 +1.3
AKTO Aktyubinsk 58.26 313 P P 13 36 06.7 -1.5
comp=Z,1.1nm,0.5s,baz=84,slow=5.1,SNR=7.0
PDAR Pinedale Array 58.27 60 P P 13 36 10.3 +1.6
comp=Z,0.2nm,0.5s,baz=3.3,slow=4.6,SNR=3.8
FINES FINESS Array B 60.89 336 P P 13 36 26.0 -0.2
comp=Z,0.9nm,0.5s,baz=35,slow=7.2,SNR=7.6
FINES FINESS Array B 60.89 336 i P P 13 36 26.5 +0.3
FINES pmax pmax
comp=Z,1.0nm,0.4s
HNR Honiara 61.30 180 LR LR 14 00 37.8
comp=Z,37nm,21.3s,baz=166,slow=34
NB2 NORSAR Subarra 64.39 344 P P 13 36 49.3 -0.3
comp=Z,0.4nm,0.5s,baz=20,slow=6.9
NOA NORSAR Array B 64.39 344 P P 13 36 49.6 +0.1
comp=Z,0.4nm,0.5s,baz=21,slow=6.9,SNR=4.1
AKASG Malin Array Be 69.29 329 P P 13 37 20.0 -0.8
comp=Z,0.6nm,0.3s,baz=30,slow=6.6,SNR=6.2
KBZ Khabaz 70.03 316 P P 13 37 25.5 0.0
comp=Z,0.8nm,0.5s,baz=40,slow=18,SNR=4.1
TXAR Lajitas Array 71.30 66 P P 13 37 34.9 +1.3
comp=Z,0.4nm,0.6s,baz=291,slow=3.8,SNR=6.0
WRA Warramunga Arr 75.07 205 P P 13 37 56.2 +0.6
comp=Z,0.8nm,0.7s,baz=18,slow=6.0,SNR=4.8
GERES GERESS Array B 75.30 337 P P 13 37 56.7 -0.1
comp=Z,0.6nm,0.6s,baz=42,slow=6.1,SNR=5.0
GERES LR LR 14 14 29.9
comp=Z,88nm,18.1s,baz=6.5,slow=38
BRTR Keskin Array B 77.18 320 P P 13 38 07.2 -0.5
comp=Z,0.6nm,0.5s,baz=114,slow=3.0,SNR=4.0
BRTR Keskin Array B 77.18 320ceP P 13 38 08.0 +0.3
BRTR pmax pmax
comp=Z,1.0nm,0.5s
WSAR Wadi Sarin 78.41 293 P P 13 38 14.6 +0.1
comp=Z,4.3nm,0.9s,baz=329,slow=5.0,SNR=4.9
ASAR Alice Springs 78.74 204 P P 13 38 16.8 +0.6
comp=Z,0.5nm,0.6s,baz=15,slow=5.1,SNR=12
ASF Jabal al Asfar 82.26 314 P P 13 38 35.9 +0.7
comp=Z,1.7nm,0.7s,baz=79,slow=1.1,SNR=4.7

KRSC 28 13:32:47.1±1.9, 52.°02N×159.°85E, h42km±24km, ML4.2
IDC 28 13:32:53.4±3.4, 52.°11N×159.°50E, h75km±24km, mb3.2/7, mb1 3.4/7, mb1mx3.1/47, mbtmp3.6/7, Error ellipse: s-maj=35.3km s-min=29.5km az=45.0
ISC 28 13:32:49.8±1.5, 52.°06N±0.°06×159.°81E±0.°06, h41km±15km, n54, σ1§55/57, mb3.5/7, Off east coast of Kamchatka Peninsula

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RUS Russkaya 0.88 295 eP Pn 13 33 04.1 -1.5
RUS eS Sn 13 33 15.4 -1.8
SPN Mys Shipunski 1.04 7 eP Pn 13 33 08.1 +0.2
SPN eS Sn 13 33 22.7 +1.4
MTVR Mutnovka 1.08 293 eP Pn 13 33 07.7 -0.9
MTVR eS Sn 13 33 21.9 -0.6
KDTR Khodutka, Kamc 1.10 257 eP Pn 13 33 07.7 -1.0
KDTR eS Sn 13 33 21.8 -0.9
NLC Nalytchevo 1.15 346 eP Pn 13 33 08.0 -1.3
NLC eS Sn 13 33 22.6 -1.1
DALK Dalny 1.16 327 P Pn 13 33 08.5 -1.0
DALK eS Sn 13 33 23.8 -0.4
GRL Gorelyy 1.17 295 eP Pn 13 33 09.5 -0.3
GRL eS Sn 13 33 25.4 +0.8
PET Petropavlovsk 1.19 324 eP Pn 13 33 09.0 -0.9
PET eS Sn 13 33 24.3 -0.6
ASAK Asacha 1.22 286 i P Pn 13 33 10.1 -0.3
ASAK eS Sn 13 33 26.1 +0.4
KRMR Karymshinskiy 1.28 307 eP Pn 13 33 10.3 -0.9
KRMR eS Sn 13 33 26.1 -1.0
UGLR Uglovaya 1.29 333 eP Pn 13 33 10.9 -0.6
SDLR Sedlovina 1.34 335 eP Pn 13 33 11.2 -0.9
SMAR Somma 1.35 333 eP Pn 13 33 11.5 -0.8
AVH Avacha 1.37 332 eP Pn 13 33 12.1 -0.3
KRER Koryakskii 1.40 333 eP Pn 13 33 12.5 -0.5
KOK Koryaka 1.42 330 eP Pn 13 33 12.7 -0.5
KRX Arik 1.48 332 eP Pn 13 33 13.4 -0.6
PETK Petropavlovsk- 1.66 310 P Pn 13 33 16.2 -0.1
45nm,0.3s,baz=108,slow=20,SNR=190
PETK S Sn 13 33 37.4 +0.9
50nm,0.3s,baz=99,slow=29,SNR=11
APC Apacha 1.84 299 eP Pn 13 33 19.5 +0.7
APC eS Sn 13 33 43.0 +2.2
MIPR Malaya Ipel'ka 1.89 278 eP Pn 13 33 20.5 +0.9
MIPR eS Sn 13 33 45.6 +3.4
PAU Pauzhetka 1.96 253 eP Pn 13 33 21.3 +0.9
KII Karymskiy 1.99 354 eP Pn 13 33 23.0 +2.1
SKR Severo-Kuril's 2.70 241 eP Pn 13 33 31.0 +0.4
SKR eS Sn 13 34 02.9 +1.0
ALID Alaid 2.92 247 P Pn 13 33 34.6 +0.8
KZV Kizimen 3.07 5 eP Pn 13 33 36.8 +1.0
KZV eS Sn 13 34 12.5 +1.2
TUMD Tumrok D 3.17 6 eP Pn 13 33 38.0 +1.0
TUMD eS Sn 13 34 14.3 +0.8
TUMR Tumrok 3.23 3 eP Pn 13 33 39.8 +1.8
TUMR eS Sn 13 34 19.2 +3.9
KMNR Kamenistaya 3.71 4 eP Pn 13 33 47.0 +2.4
KIRR Kirishev 3.91 4 eP Pn 13 33 50.2 +2.8
BZGR Bezymyannyi-Gr 3.92 7 P Pn 13 33 51.7 +4.2
ESO Esso 3.92 351 eP Pn 13 33 49.1 +1.6
KOZ Kozyrevsk 4.00 0 eP Pn 13 33 51.4 +2.9
ZLN Zelenaya 4.00 8 eP Pn 13 33 52.4 +3.8
LGNR Loginova 4.06 7 eP Pn 13 33 52.9 +3.3
CIRR Tsirk 4.10 7 P Pn 13 33 53.5 +3.6
SRDR Sredinnyy 4.26 359 eP Pn 13 33 55.4 +3.3
KLY Klyuchi 4.29 6 eP Pn 13 33 56.5 +4.1
KBTR Krutoberegovo 4.51 22 eP Pn 13 33 56.3 +0.8
KBG Krutoberegovo 4.53 21 eP Pn 13 33 56.6 +0.9
BKI Bering 4.83 47 S Sn 13 34 49.0 -5.4
KLR Kul'dur 17.97 272 P P 13 36 58.2 +1.8
0.2nm,0.3s,baz=77,slow=10,SNR=2.9
H11N2 WAKE ISLAND Hy 32.74 168 T T 14 14 26.6
baz=351,slow=76,SNR=7.6
H11N3 WAKE ISLAND Hy 32.76 168 T T 14 14 35.2
baz=351,slow=76,SNR=9.0
H11N1 WAKE ISLAND Hy 32.76 168 T T 14 14 32.6
baz=351,slow=76,SNR=6.9
H11S1 WAKE ISLAND Hy 33.92 168 T T 14 15 56.6
baz=352,slow=76,SNR=5.4
H11S3 WAKE ISLAND Hy 33.93 168 T T 14 16 11.6
baz=352,slow=76,SNR=6.2
H11S2 WAKE ISLAND Hy 33.94 168 T T 14 15 57.9
baz=352,slow=76,SNR=3.6
KURBB Kurchatov Arra 48.24 302 P P 13 41 23.8 -2.3
0.2nm,0.2s,baz=64,slow=7.7,SNR=6.2
MKAR Makanchi Array 48.45 296 P P 13 41 25.4 -2.5
0.2nm,0.5s,baz=55,slow=7.5,SNR=6.5
ARCES ARCESS Array B 54.21 342 P P 13 42 09.8 -0.8
2.8nm,0.9s,baz=31,slow=9.5,SNR=6.6
FINES FINESS Array B 61.00 337 P P 13 42 58.2 -0.2
0.5nm,0.6s,baz=64,slow=13,SNR=1.6
NOA NORSAR Array B 64.48 344 P P 13 43 20.9 -0.8
0.4nm,0.8s,baz=23,slow=6.8,SNR=1.6
TXAR Lajitas Array 71.20 66 P P 13 44 05.4 +0.9
0.2nm,0.8s,baz=291,slow=2.8,SNR=2.5
ASAR Alice Springs 78.75 204 P P 13 44 48.6 +0.9
0.2nm,0.8s,baz=18,slow=5.3,SNR=2.5

IDC 28 13:33:03.9±8.8, 32.°11S×178.°47W, h87km±82km, mb3.8/3, mb1 3.9/4, mb1mx3.5/30, mbtmp4.1/4, ML3.7/1, Error ellipse: s-maj=69.1km s-min=50.4km az=179.0
ISC 28 13:32:59.6±1.5, 31.°86S±0.°09×178.°3W±0.°3, h45km, n22, σ1§37/31, mb4.2/3, Kermadec Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GLKZ Green Lake 2.61 8 P Pn 13 33 40.6 +1.2
GLKZ S Sn 13 34 08.6 -1.3
WMGZ Waiomatatini S 6.52 203 P Pn 13 34 33.3 +0.3
WMGZ S Sn 13 35 47.9 +1.9
HAZ Te Kaha 6.70 207 P Pn 13 34 35.1 -0.2
PKGZ Pakihiroa 6.70 205 P Pn 13 34 35.2 -0.4
PKGZ S Sn 13 35 47.3 -3.3
PUZ Puketiti 6.80 203 P Pn 13 34 35.7 -1.1
PUZ S Sn 13 35 54.6 +1.6
RUGZ Raukumara Rang 6.92 207 P Pn 13 34 38.0 -0.6
RUGZ S Sn 13 35 56.9 +0.9
TWGZ Tauwhareparae 6.99 205 P Pn 13 34 39.2 -0.3
TWGZ S Sn 13 35 58.1 +0.4
MWZ Matawai 7.30 207 P Pn 13 34 42.5 -1.1
MWZ S Sn 13 36 06.5 +1.3
OPRZ Ohinepanea 7.30 214 P Pn 13 34 46.2 +2.5
URZ Urewera 7.40 209 P Pn 13 34 45.7 +0.7
1.4nm,0.3s,baz=271,slow=4.3,SNR=37
URZ S Sn 13 36 04.9 -2.7
1.3nm,0.3s,baz=327,slow=22,SNR=1.9

URZ	Urewera	7.40	209	P	Pn	13 34 43.5	-1.5
URZ				S	Sn	13 36 08.4	+0.8
RAGZ	Rawiri	7.48	207	P	Pn	13 34 45.0	-1.2
RAGZ				S	Sn	13 36 09.8	+0.1
OUZ	Omahuta	7.53	241	P	Pn	13 34 52.7	+5.9
RTZ	Ruatahuna	7.75	208	P	Pn	13 34 50.7	+0.7
SNGZ	Shannon Statio	7.76	206	P	Pn	13 34 50.7	+0.7
ARHZ	Aropaoanui	8.31	206	P	Pn	13 34 58.3	+0.7
BKZ	Black Stump Fm	8.42	209	P	Pn	13 34 57.9	-1.2
MCHZ	McNeill Hill	8.58	207	P	Pn	13 35 01.3	0.0
CTA	Charters Tower	33.79	282	P	P	13 39 38.4	+0.9
	4.2nm,1.0s,baz=103,slow=12,SNR=1.9						
ASAR	Alice Springs	42.77	269	P	P	13 40 51.9	-1.1
	0.8nm,0.6s,baz=107,slow=7.9,SNR=26						
WRA	Warramunga Arr	43.89	274	P	P	13 41 00.5	-1.5
	1.8nm,0.4s,baz=114,slow=7.8,SNR=47						
FINES	FINESS Array B	146.41	339	PKPbc	PKPdf	13 52 33.8	+0.2
	1.0nm,0.4s,baz=49,slow=4.4,SNR=16						

IDC 28 13:35:34.2±1.3,33.72N×134.29E,h0km,mb3.4/3, mb1 3.6/6,mb1mx3.4/45,mbtmp3.5/6,ML2.8/3,Error ellipse: s-maj=28.4km s-min=23.1km az=154.0
JMA 28 13:35:38.9,33.83N×134.24E,h36km±1km,M3.4
Broadband fault plane solution: P waves. NP1: φs141.00000°,δ45.00000°,λ104.00000°. NP2: φs301.00000°,δ47.00000°,λ76.00000°. Principal axes: T Plg80.0000°, Azm137.0000°; N Plg10.0000°, Azm311.0000°; P Plg1.0000°, Azm41.0000°;
JMA Felt I J1.
ISC 28 13:35:38.7±1.0,33.81N±0.05×134.26E±0.03,h34km±2km, n19,σ0.84/27,mb3.5/3,2C-9D,Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAI	Aioi	0.16	96	⇑P	Pb	13 35 45.4	+0.4
JAI				S	Sb	13 35 49.9	+0.5
JMAF	Mimaanabuki	0.25	339	⇑P	Pn	13 35 45.9	+0.3
JMAF				S	Sb	13 35 50.8	-0.1
JMN	Monobe	0.33	256	⇓P	Pb	13 35 47.0	+0.1
JMN				S	Sb	13 35 52.9	+0.4
JJS	Sakaide	0.62	334	⇓P	Pn	13 35 50.7	-0.5
JJS				S	Sb	13 35 59.3	-0.7
JAJ2	Tsuna	0.80	40	⇓P	Pn	13 35 53.4	-0.2
JWM	Minabe	0.91	87	⇓P	Pn	13 35 55.0	-0.2
JWM				S	Sn	13 36 06.5	-0.7
JET	Tanbara	1.01	269	⇓P	Pn	13 35 56.1	-0.4
JKU	Kubokawa	1.11	244	⇓P	Pn	13 35 57.6	-0.4
JTNC	Tanabenakahech	1.13	89	⇓P	Pn	13 35 58.0	-0.1
JTNC				S	Sn	13 36 11.8	-0.7
JAD	Aida	1.13	356	P	Pn	13 35 57.4	-0.8
JWY	Kouya	1.18	69	⇓P	Pn	13 35 58.9	-0.1
JKS	Kasai	1.27	22	⇓P	Pn	13 35 59.3	-0.8
JNU	Nakatsue	2.91	257	Pn	Pn	13 36 23.6	+0.9
	2.4nm,0.3s,baz=51,slow=7.8,SNR=42						
MAT	Matsushiro	4.23	49	P	Pn	13 36 41.7	+0.9
MAT				eS	Sn	13 37 27.4	-1.7
MJAR	Matsushiro Arr	4.23	49	Pn	Pn	13 36 41.6	+0.8
	0.5nm,0.3s,baz=237,slow=14,SNR=30						
MJAR				Sn	Sn	13 37 31.6	+2.6
	baz=208,slow=13,SNR=0.9						
JHJ	Hachijo jima 2	4.67	97	Pn	Pn	13 36 46.6	-0.3
	1.0nm,0.3s,baz=261,slow=19,SNR=1.5						
MKAR	Makanchi Array	40.98	304	P	P	13 43 18.6	+0.3
	0.1nm,0.5s,baz=80,slow=11,SNR=1.9						
WRA	Warramunga Arr	53.45	180	P	P	13 44 54.8	-0.8
	0.7nm,0.8s,baz=355,slow=7.7,SNR=8.4						
ASAR	Alice Springs	57.16	180	P	P	13 45 22.3	0.0
	0.4nm,0.8s,baz=12,slow=12,SNR=8.1						

NNC 28 13:44:50.7±3.5,36.85N×70.20E, h172km±52km, mb2.8, mpv3.6, Error ellipse: s-maj=33.3km s-min=20.9km az=25.0
ISC 28 13:44:51.0±2.8,36.9N±0.2×70.3E±0.1,h200km,n12, σ0.50/14,5C-1D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.88	26	P	Pn	13 46 16.6	-0.4
	SNR=107						
KK31	Karatay Array	6.23	2	⇑P	Pn	13 46 21.5	+0.4
	1.0nm,0.3s,baz=43,slow=20,SNR=20						
KK31				S	Sn	13 47 32.0	-0.6
	1.2nm,0.4s,baz=194,slow=16,SNR=6.0						
UCH	Uchtor	6.27	30	P	Pn	13 46 21.7	-0.4
	SNR=36						
EKS2	Erkin-Say	6.38	24	P	Pn	13 46 23.3	+0.1
	SNR=21						
KZA	Kyzart	6.47	35	P	Pn	13 46 24.0	-0.6
	SNR=7.1						
AAK	Ala-Archa	6.61	28	P	Pn	13 46 26.4	+0.1
	SNR=7.8						
AAK	Ala-Archa	6.61	28	⇓P	Pn	13 46 26.2	-0.1
	3.3nm,0.4s						
AAK				⇑S	Sn	13 47 42.3	+0.6
	3.0nm,0.6s						
KBK	Karagaybulak	6.81	30	P	Pn	13 46 29.4	+0.7
	SNR=6.0						
CHMS	Chumysh	7.02	28	⇑P	Pn	13 46 30.8	-0.5
	4.1nm,0.8s						
MK31	Makanchi Array	13.35	38	P	P	13 47 55.5	+0.2
	0.3nm,0.4s,baz=212,slow=11,SNR=5.8						
AB31	Akbulak array	14.48	332	⇑P	P	13 48 08.3	+0.4
	0.4nm,0.5s,baz=147,slow=13,SNR=15						
AKTO	Aktyubinsk	16.18	331	⇑P	Pn	13 48 26.6	-0.6
	4.2nm,1.0s						

GUC 28 13:46:22.3±0.6,39.54S×71.95W,h103km±5km,ML3.4
SJA 28 13:47:04.8±0.9,36.16S×71.38W,h68km±39km,ML2.6, MW2.5
ISC 28 13:46:19.3±3.4,39.6S±0.1×72.4W±0.3,h100km,n12, σ0.86/15,1C-1D,Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LC01	Cunco	0.84	28	⇓eP	Pn	13 46 38.5	+0.5
LC01				eS	Sn	13 46 52.1	+0.1
LC01					IAML	13 46 53.5	
	comp=N,1μm,0.2s						
PLCA	Paso Flores	1.78	129	eP	Pn	13 46 50.3	+1.1
PLCA				eS	Sn	13 47 10.8	-1.1
CCHI	Chillan	3.04	5	⇑eP	Pn	13 47 06.7	+1.2
CCHI				eS	Sn	13 47 41.4	+0.2
CCHI					IAML	13 47 44.6	
	comp=N,104nm,0.2s						
GO05	Huala	4.63	5	iP	Pn	13 47 27.3	+0.3
PEL	Peldehue	6.62	12	iP	Pn	13 47 53.8	-0.2
ROC1	El Roble	6.74	10	iP	Pn	13 47 55.2	-0.6
RTLS	Leoncito	8.21	19	iP	Pn	13 48 16.4	+0.5
RTLS					IAML	13 48 17.9	
	comp=Z,3.6nm,0.4s						
CFA	Coronel Fontan	8.70	24	iP	Pn	13 48 22.6	+0.4
RTLL	Cerro Villicun	8.88	22	iP	Pn	13 48 24.4	-0.3
RTLL					IAML	13 48 25.4	
	comp=Z,3.5nm,0.6s						
AMOG	MOGNA	9.24	21	iP	Pn	13 48 29.1	-0.6
ACCO	Cerro Coronel	9.43	18	iP	Pn	13 48 31.4	-1.0
GO04	Tololo Observa	9.53	8	iP	Pn	13 48 32.3	-1.5
GO04				iS	Sn	13 49 38.1	-41

IDC 28 13:53:13.9±1.6,31.89N×40.22W,h0km,mb3.7/7, mb1 3.9/7,mb1mx3.6/31,mbtmp3.7/7,MS3.5/3,Ms1 3.5/3, ms1mx3.0/44,Error ellipse: s-maj=53.0km s-min=22.7km az=13.0
ISC 28 13:53:10.4±3.9,31.0N±0.7×40.0W±0.2,h10km,n13, σ0.60/6,mb3.9/7,MS3.6/3,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	42.21	105	P	P	14 01 13.3	+9.4
	1.9nm,0.9s,baz=304,slow=7.1,SNR=7.0						
TORD				LR	LR	14 17 54.9	
	comp=Z,54nm,18.8s,baz=0.0,slow=35						
ULM	Lac du Bonnet	45.42	312	P	P	14 01 29.9	+0.6
	0.9nm,0.5s,baz=120,slow=7.7,SNR=3.5						
H10N2	ASCENSION HYDR	45.66	143	T	T	14 51 24.9	
	baz=329,slow=75,SNR=14						
H10N3	ASCENSION HYDR	45.67	143	T	T	14 51 25.3	
	baz=329,slow=75,SNR=12						
H10N1	ASCENSION HYDR	45.68	143	T	T	14 51 26.0	
	baz=329,slow=75,SNR=13						
H10S3	ASCENSION HYDR	46.54	144	T	T	14 52 30.9	
	baz=329,slow=74,SNR=52						
H10S2	ASCENSION HYDR	46.55	144	T	T	14 52 31.9	
	baz=251,slow=74,SNR=58						
FINES	FINESS Array B	51.93	34	P	P	14 02 18.6	-0.5
	1.8nm,0.8s,baz=223,slow=13,SNR=2.6						
AKASG	Malin Array Be	53.90	47	P	P	14 02 34.3	+0.4
	1.3nm,0.5s,baz=276,slow=6.4,SNR=3.8						
TXAR	Lajitas Array	54.40	286	P	P	14 02 38.0	0.0
	0.1nm,0.3s,baz=91,slow=7.2,SNR=2.4						
PDAR	Pinedale Array	55.45	303	P	P	14 02 45.0	-0.6
	1.2nm,1.0s,baz=90,slow=4.4,SNR=6.5						
PDAR				LR	LR	14 25 28.7	
	comp=Z,44nm,18.3s,baz=38,slow=35						
YKA	Yellowknife Ar	55.99	327	P	P	14 02 48.7	0.0
	0.1nm,0.5s,baz=81,slow=7.9,SNR=6.8						
YBH	Yreka Blue Hor	65.10	305	LR	LR	14 31 54.1	
	comp=Z,41nm,18.3s,baz=90,slow=36						

HEL 28 14:09:16.3±0.5,67.66N×33.63E,h0km,ML1.6, Explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRF	Varrio	1.54	275	PG	Pn	14 09 43.5	-1.4
VRF					MSG	14 10 02.4	
	comp=Z,2.9nm,0.2s						
VRF				SN	Sg	14 10 04.4	-1.1
KU6	Riekki	2.21	224	PG	Pn	14 09 55.5	+1.4
	baz=41						
KU6					MSG	14 10 21.6	
	comp=Z,3.6nm,0.2s						
KU6				SG	Sb	14 10 24.8	0.0
MSF	Maaselka	2.53	228	PG	Pb	14 10 01.7	-0.7
MSF				SG	Sg	14 10 36.1	-1.2
SGF	Sodankyl	2.73	269	PG	Pb	14 10 04.7	-1.3
	baz=78						
SGF				SG	Sb	14 10 39.8	-0.2
RNF	Rovaniemi	3.15	254	PN	Pn	14 10 07.0	-0.1
	baz=67						
KEV	Kevo	3.21	314	PN	Pn	14 10 08.0	+0.2
KEV				SN	Sn	14 10 46.3	-0.3
KEV					MSG	14 10 50.4	
	comp=Z,2.0nm,0.2s						
HEF	Hetta	3.82	286	SG	Sb	14 11 14.2	+3.0
TOF	Tornio	4.00	251	PG	Pb	14 10 28.2	+0.7
OUL	Oulu	4.04	234	PG	Pb	14 10 30.5	+2.2
LANU	Lannavaara	4.42	280	SG	Sb	14 11 32.5	+3.9
ERTU	Ertsjaerv	4.60	261	PG	Pb	14 10 40.7	+2.9

BER 28 14:09:52.0±1.0,66.43N×14.78E,h0km,ML1.2, Suspected explosion,Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOR8	Moi Rana	0.29	208	eP	Pg	14 09 54.5	-3.1
MOR8				eS	Sg	14 09 56.8	-4.6
MOR8					IAML	14 09 58.9	
	comp=Z,123nm,0.4s						
KONS	Konsvik	0.67	277	eP	Pg	14 10 03.7	-1.2
KONS				eS	Sg	14 10 13.5	0.0
KONS					IAML	14 10 20.8	
	comp=Z,9.4nm,0.5s						
STOK	Stokkvaagen	0.72	263	eP	Pg	14 10 05.0	-0.7
STOK				eS	Sg	14 10 14.8	-0.3
STEI	Steigen	1.52	7	ePg	Pn	14 10 19.5	-0.9
STEI				eSg	Sg	14 10 38.5	-2.2
STEI					IAML	14 10 44.6	
	comp=Z,3.3nm,0.6s						
LOF	Lofoten	1.78	345	eP	Pn	14 10 22.3	-1.6
LOF				eS	Sn	14 10 45.0	-2.2
LOF					IAML	14 10 53.8	
	comp=Z,4.4nm,0.7s						

IDC 28 14:18:26.6±2.7,33.65N×142.55E,h0km,mb3.3/3, mb1 3.5/7,mb1mx3.3/52,mbtmp3.7/7,ML3.4/4,Error ellipse: s-maj=48.2km s-min=28.0km az=95.0
JMA 28 14:18:34.3±0.7,33.66N×142.04E,h52km,M3.5
ISC 28 14:18:30.9±1.1,33.56N±0.06×142.42E±0.10,h35km,n21, σ1.25/26,mb3.2/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.62	313	P	Pn	14 18 56.9	+0.4
BSO3	Boso 3	2.01	309	P	Pn	14 19 02.6	+0.5
JHJ2	Mitsune	2.22	259	P	Pn	14 19 05.8	+0.5
BSO4	Boso 4	2.23	310	P	Pn	14 19 06.3	+0.9
JHCJ	Hachijojimakas	2.25	258	P	Pn	14 19 05.8	+0.2
JHJ	Hachijo jima 2	2.25	259	Pn	Pn	14 19 06.0	+0.3
	26nm,0.3s,baz=304,slow=16,SNR=63						
JHJ				Sn	Sn	14 19 30.8	-1.4
	45nm,0.3s,baz=252,slow=23,SNR=18						
JMKN	Mikurajimanish	2.38	279	P	Pn	14 19 07.3	-0.1
JIM2	Oshima 3	2.73	296	P	Pn	14 19 11.8	-0.5
JIZS	Izushimoda	3.15	292	P	Pn	14 19 18.0	-0.1
JOD2	Odawara 2	3.23	303	P	Pn	14 19 19.5	+0.3
JYN	Shimob	3.73	302	P	Pn	14 19 26.9	+0.7
JAG	Ashikaga	3.75	320	P	Pn	14 19 27.2	+0.9
JFT	Otama	4.30	337	P	Pn	14 19 34.8	+1.0
JFT				eS	Sn	14 20 20.1	-2.6
MJAR	Matsushiro Arr	4.55	312	Pn	Pn	14 19 38.3	+0.9
	0.2nm,0.3s,baz=126,slow=34,SNR=3.2						
MJAR				Sn	Sn	14 20 27.6	-1.5
	0.2nm,0.3s,baz=199,slow=21,SNR=4.8						
MAT	Matsushiro	4.56	312	P	Pn	14 19 39.3	+1.9
MAT				eS	Sn	14 20 27.2	-2.0
JIE	Ise	4.81	281	P	Pn	14 19 42.2	+1.3
JCJ	Chichijima	6.45	182	Pn	Pn	14 20 04.8	+1.4
	5.5nm,0.3s,baz=282,slow=24,SNR=11						
JCJ				Sn	Sn	14 21 14.0	-1.7
	6.5nm,0.3s,baz=292,slow=21,SNR=1.6						
ASAJ	Asahikawa	10.54	1	Pn	Pn	14 20 58.2	-1.2
	0.3nm,0.3s,baz=118,slow=29,SNR=2.4						
SONM	Songino Array	30.50	309	P	P	14 24 42.1	+1.4
	0.2nm,0.4s,baz=103,slow=10,SNR=1.5						
MKAR	Makanchi Array	46.72	305	P	P	14 26 56.2	-0.2
	0.1nm,0.4s,baz=99,slow=8.9,SNR=5.2						
KURBB	Kurchatov Arra	48.83	311	P	P	14 27 14.1	+1.4
	0.4nm,0.6s,baz=86,slow=7.8,SNR=5.6						

IDC 28 14:18:30.1±54.0,15.70S×171.11W,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.5/50,mbtmp3.9/3,Error ellipse: s-maj=1069.0km s-min=202.6km az=79.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	45.80	241	P	P	14 26 54.8	+0.9
	0.8nm,0.4s,baz=59,slow=5.9,SNR=1.8						
WRA	Warramunga Arr	51.92	257	P	P	14 27 40.5	-0.6
	0.2nm,0.4s,baz=98,slow=7.0,SNR=10						
ASAR	Alice Springs	52.11	252	P	P	14 27 42.4	-0.2
	1.8nm,0.4s,baz=90,slow=7.7,SNR=83						

IDC 28 14:21:44.0±2.2,31.95N×40.56W,h0km,mb3.7/4, mb1 3.9/4,mb1mx3.5/40,mbtmp3.7/4,MS3.6/8,Ms1 3.6/8, ms1mx3.3/35,Error ellipse: s-maj=82.1km s-min=29.4km az=22.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	26.88	245	LR	LR	14 36 59.7	
	comp=Z,23nm,18.2s,baz=76,slow=34						
SCHQ	Schefferville	29.48	329	LR	LR	14 38 02.7	
	comp=Z,133nm,22.0s,baz=129,slow=33						
DBIC	Dimbokro	41.72	119	LR	LR	14 46 20.9	
	comp=Z,74nm,18.5s,baz=290,slow=35						
TORD	Torodi Ar. Bea	42.95	106	P	P	14 29 44.9	0.0
	0.8nm,0.8s,baz=316,slow=8.0,SNR=3.8						
TORD				LR	LR	14 44 40.2	
	comp=Z,71nm,21.6s,baz=350,slow=32						
H10N2	ASCENSION HYDR	46.74	143	T	T	15 20 16.5	
	baz=329,slow=75,SNR=19						
H10N3	ASCENSION HYDR	46.74	143	T	T	15 20 16.8	
	baz=329,slow=75,SNR=20						
H10N1	ASCENSION HYDR	46.76	143	T	T	15 20 18.0	
	baz=329,slow=75,SNR=18						
H10S3	ASCENSION HYDR	47.61	144	T	T	15 21 22.3	
	baz=329,slow=74,SNR=99						
H10S2	ASCENSION HYDR	47.63	144	T	T	15 21 23.3	
	baz=251,slow=74,SNR=116						
AKASG	Malin Array Be	53.62	48	P	P	14 31 06.6	-0.3
	0.8nm,0.5s,baz=276,slow=6.4,SNR=1.6						
TXAR	Lajitas Array	53.67	285	LR	LR	14 52 17.4	
	comp=Z,38nm,18.9s,baz=0.0,slow=34						
PDAR	Pinedale Array	54.50	302	P	P	14 31 13.6	-0.3
	0.4nm,0.6s,baz=81,slow=9.5,SNR=3.9						
PDAR				LR	LR	14 52 14.0	
	comp=Z,71nm,20.2s,baz=50,slow=34						
YKA	Yellowknife Ar	54.91	327	P	P	14 31 16.2	+0.1
	0.5nm,1.0s,baz=91,slow=7.6,SNR=5.0						
YKA				LR	LR	14 54 01.1	
	comp=Z,63nm,18.7s,baz=0.0,slow=35						
NVAR	Mina Array Bea	62.11	300	LR	LR	14 58 54.5	
	comp=Z,80nm,18.0s,baz=322,slow=36						

IDC 28 14:23:21.4±3.0,8.05S×117.43E,h0km,mb3.2/4, mb1 3.5/4,mb1mx3.3/37,mbtmp3.3/4,Error ellipse: s-maj=181.1km s-min=24.3km az=54.0,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.20	128	P	P	14 27 57.8	-0.2
	1.3nm,0.5s,baz=302,slow=12,SNR=10						
ASAR	Alice Springs	22.15	136	P	P	14 28 19.2	+0.2
	0.4nm,0.6s,baz=311,slow=9.1,SNR=12						
SONM	Songino Array	56.49	351	P	P	14 33 05.3	-0.1
	0.3nm,0.6s,baz=158,slow=7.8,SNR=2.3						
MKAR	Makanchi Array	62.91	334	P	P	14 33 49.6	0.0
	0.1nm,0.6s,baz=126,slow=7.3,SNR=2.1						

INET 28 14:28:50.0,16.26N×87.51W,h15km,ML4.9
SNET 28 14:28:54.0±1.3,15.67N×87.42W,h27km±38km,ML4.1
IDC 28 14:28:54.3±1.5,15.63N×87.25W,h0km,mb3.5/3, mb1 3.9/5,mb1mx3.6/29,mbtmp3.5/5,ML2.9/2,MS3.1/1, Ms1 3.1/1,ms1mx2.7/18,Error ellipse: s-maj=58.0km s-min=29.9km az=54.0
UCR 28 14:28:56.6±2.5,15.44N×87.73W,h0km±14km,ML3.8
ISC 28 14:28:56.7±2.3,15.44N±0.06×87.74W±0.05,h16km±14km, n36,σ1.72/51,2D,Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTO3	Montecristo	1.88	237	eP	Pb	14 29 30.2	-0.6
MTO3				eS	Sg	14 29 57.8	+0.5
MTO3	Montecristo	1.88	237	eP	Pb	14 29 30.2	-0.6
MTO3				eS	Sg	14 29 57.8	+0.5
PACA	Pacayal	2.04	196	eP	Pn	14 29 30.8	+0.2
PACA				eS	Sb	14 29 59.9	+1.2
PACA	Pacayal	2.04	196	eP	Pn	14 29 30.8	+0.2
PACA				eS	Sb	14 29 59.9	+1.2
PAVA	Las Pavas	2.07	214	eP	Pn	14 29 32.8	+1.9
PAVA				eS	Sg	14 30 02.7	-0.8
PAVA	Las Pavas	2.07	214	eP	Pn	14 29 32.8	+1.9
PAVA				eS	Sg	14 30 02.7	-0.8
TECA	Tecapa	2.07	201	eP	Pn	14 29 31.7	+0.7
TECA	Tecapa	2.07	201	eP	Pn	14 29 31.7	+0.7
SNVI	San Vicente	2.11	210	eP	Pn	14 29 32.2	+0.7
SNVI	San Vicente	2.11	210	eP	Pn	14 29 32.2	+0.7
COEG	Centro de Oper	2.12	212	eP	Pn	14 29 33.3	+1.7
COEG				eS	Sg	14 30 04.2	-0.8
COEG					IAML	14 30 06.5	
	comp=Z,968nm,0.4s						
COEG	Centro de Oper	2.12	212	eP	Pn	14 29 33.3	+1.7
COEG				eS	Sg	14 30 04.2	-0.8
COEG					IAML	14 30 06.5	
	comp=Z,968nm,0.4s						
LCND	La Caada	2.12	184	eP	Pn	14 29 31.5	-0.1
LCND				eS	Sb	14 30 00.7	-0.3
LCND					IAML	14 30 04.7	
	comp=Z,925nm,0.3s						
LCND	La Caada	2.12	184	eP	Pn	14 29 31.5	-0.1
LCND				eS	Sb	14 30 00.7	-0.3
LCND					IAML	14 30 04.7	
	comp=Z,925nm,0.3s						
CNCH	Conchagua	2.15	182	eP	Pn	14 29 31.8	-0.3
CNCH				eS	Sb	14 30 02.3	+0.3
CNCH	Conchagua	2.15	182	eP	Pn	14 29 31.8	-0.3
CNCH				eS	Sb	14 30 02.3	+0.3
LFRS	El Faro	2.21	215	eP	Pn	14 29 35.1	+2.2
JUCU	Jucuar¡n	2.23	193	eP	Pn	14 29 34.0	+0.9
JUCU				⇓eS	Sb	14 30 04.5	+0.4
JUCU	Jucuar¡n	2.23	193	eP	Pn	14 29 34.0	+0.9
JUCU				⇓eS	Sb	14 30 04.5	+0.4
CEVE	Cerro Verde	2.43	229	eP	Pn	14 29 38.3	+2.3
CEVE					IAML	14 30 24.9	
	comp=Z,527nm,0.6s						
CEVE	Cerro Verde	2.43	229	eP	Pn	14 29 38.3	+2.3
CEVE					IAML	14 30 24.9	
	comp=Z,527nm,0.6s						
ESTN	Estel	2.68	150	eP	Pn	14 29 40.3	+0.9
FAME	Alcaldia de Sa	2.71	234	eP	Pn	14 29 34.7	-5.1
FAME				eS	Sn	14 30 11.5	-0.8
FAME	Alcaldia de Sa	2.71	234	eP	Pn	14 29 34.7	-5.1
FAME				eS	Sn	14 30 11.5	-0.8
CRIN	San Cristobal	2.81	166	eP	Pn	14 29 42.1	+1.0
MATN	Matagalpa	3.06	145	eP	Pn	14 29 45.4	+0.9
CNGN	Cerro Negro	3.09	161	eP	Pn	14 29 47.7	+2.7
ACON	Acoyapa	4.26	144	eP	Pn	14 30 05.4	+4.4
ESPN	Las Esperanzas	4.64	134	eP	Pb	14 30 15.7	-2.2
CEDE	Laguna Cedeo	5.75	149	eS	Sb	14 31 52.0	+6.7
JTS	Las Juntas de	5.80	152	Pn	Pn	14 30 22.3	+0.2
	comp=Z,0.3nm,0.3s,baz=26,slow=20,SNR=1.4						
JTS				Lg	Lg	14 31 52.3	
	comp=Z,2.6nm,0.3s,baz=340,slow=7.1,SNR=3.8						
JTS				LR	LR	14 32 38.8	
	comp=Z,164nm,19.9s,baz=49,slow=39						
CMIG	Matias Romero	7.05	284	Pn	Pn	14 30 42.4	+3.0
	comp=Z,0.2nm,0.3s,baz=169,slow=4.7,SNR=1.7						
CMIG				Sn	Sn	14 31 56.6	-2.7
	comp=Z,0.6nm,0.3s,baz=252,slow=23,SNR=10						
TXAR	Lajitas Array	20.17	316	P	P	14 33 34.3	+1.7
	comp=Z,0.9nm,0.7s,baz=136,slow=9.7,SNR=15						
PDAR	Pinedale Array	33.04	330	P	P	14 35 32.6	+0.9
	comp=Z,0.4nm,0.7s,baz=119,slow=9.4,SNR=4.0						
YKA	Yellowknife Ar	50.67	344	P	P	14 37 54.8	-0.3
	comp=Z,1.1nm,0.7s,baz=140,slow=7.8,SNR=5.7						
YKA				PcP	PcP	14 39 11.0	-1.3
	comp=Z,0.4nm,0.7s,baz=137,slow=4.4,SNR=7.8						
CMAR	Chiang Mai Arr	145.68	349	PKPbc	PKPdf	14 48 34.8	-0.7
	comp=Z,1.8nm,0.8s,baz=336,slow=3.6,SNR=14						

NNC 28 14:34:08.0±2.6,40.12N×54.61E,h1km±14km,mb3.6, Error ellipse: s-maj=32.6km s-min=6.8km az=68.0
TEH 28 14:34:07.2,39.71N×53.99E,h20km,ML3.8
ISC 28 14:34:07.8±1.1,39.96N±0.07×54.00E±0.06,h42km,n22, σ1.04/23,2C-3D,Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMND	Minoodasht	2.92	157	ePn	Pn	14 34 51.4	-0.3
IGLO	Ghaloghah	3.46	182	ePn	Pn	14 34 58.1	-1.2
IGLO				e		14 35 39.5	
GYA0B	ALIBECK ARRAY	3.80	121	⇑Pn	Pn	14 35 03.4	-0.5
GYA0B				⇓Sn	Sn	14 35 46.9	-0.5
GYA0B				⇓Lg	Lg	14 35 59.3	
IPRN	Peran	3.94	200	ePn	Pn	14 35 04.5	-1.4
ISHM	Shahmirzad	4.18	188	ePn	Pn	14 35 10.2	+0.8
ISHM				e		14 35 59.2	
ISFR	Sfrayin	4.28	131	ePn	Pn	14 35 11.0	+0.3
ISFR				e		14 36 00.5	
QALM	Alamut, Qazvin	4.40	218	ePn	Pn	14 35 10.6	-1.8
IFIR	Firoozkooh	4.42	193	ePn	Pn	14 35 13.2	+0.5
IEMG	Emamgholi	4.44	123	ePn	Pn	14 35 12.5	-0.5
IEMG				e		14 36 07.7	
IANJ	Anjilo	4.49	181	ePn	Pn	14 35 14.0	+0.5
IANJ				e		14 36 07.0	
ILAS	Lasjerd	4.64	191	ePn	Pn	14 35 16.8	+1.1
ILAS				e		14 36 11.2	
IGZV	Ghazvin	4.65	221	ePn	Pn	14 35 15.2	-0.5
IKRD	Kardeh	4.77	130	ePn	Pn	14 35 25.8	+8.4
IKRD				e		14 36 27.7	
IAKL	Akhelmad	5.03	130	e		14 36 22.6	
IPAY	Payeh	5.27	130	ePn	Pn	14 35 20.5	+0.7
IPAY				e		14 36 29.2	
ISRB	Sarab	5.38	249	ePn	Pn	14 35 26.0	+0.3
ISRB				e		14 36 28.4	
IRAZ	Razeghan	5.58	217	ePn	Pn	14 35 28.5	+0.1
IHRS	Heris	5.65	255	ePn	Pn	14 35 32.2	+2.7

IMOG	Moghan	5.71	131	ePn	Pn	14 35 31.0	+0.7
IMYA	Miami	6.02	125	ePn	Pn	14 35 34.1	-0.4
AB31	Akbulak array	10.21	23	Pn	Pn	14 36 32.0	+0.3
	0.3nm,0.5s,baz=219,slow=8.1,SNR=7.9						
AB31				Sn	Sn	14 38 23.4	-1.4
	0.9nm,0.3s,baz=191,slow=24,SNR=13						
AKTO	Aktyubinsk	10.85	14	⇓Pn	Pn	14 36 40.6	+0.2
	1.9nm,0.8s						
AKTO				⇑Sn	Sn	14 38 41.4	+1.0
	3.9nm,0.5s						

IDC 28 14:37:28.0±0.9, 36.91N×144.32E, h0km, mb3.6/7, mb1 3.8/9, mb1mx3.6/32, mbtmp3.6/9, ML3.1/2, Error ellipse: s-maj=33.5km s-min=17.5km az=116.0
NEIC 28 14:37:32.8±1.9, 37.05N±0.05×144.5E±0.1, h35km±8km, mb4.4/10, Error ellipse: s-maj=17.3km s-min=4.8km az=107.0
JMA 28 14:37:33.0±0.2, 37.21N×144.32E, h49km, M3.8
ISC 28 14:37:31.1±0.8, 37.17N±0.05×144.46E±0.07, h26km, n49, σ2.29/60, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.63	296	P	Pn	14 38 12.7	+0.9
JIKH				eS	Sn	14 38 42.0	-0.9
JIO	Ouri	2.77	298	P	Pn	14 38 14.9	+1.1
JIO				eS	Sn	14 38 45.3	-1.1
JFK	Kawauchi	2.87	275	P	Pn	14 38 15.7	+0.6
JFK				S	Sn	14 38 47.5	-1.3
JKMT	Kesennumamotoy	2.87	306	P	Pn	14 38 15.8	+0.7
JKMT				S	Sn	14 38 47.7	-1.1
JMST	Minamisoumatoc	2.90	282	P	Pn	14 38 16.0	+0.5
JMST				eS	Sn	14 38 48.7	-0.7
OFUJ	Ofunato	2.91	312	P	Pn	14 38 16.3	+0.6
OFUJ				eS	Sn	14 38 48.8	-1.0
JMK	Ichinoseki	3.11	306	P	Pn	14 38 19.8	+1.3
JMK				eS	Sn	14 38 54.6	-0.2
JFT	Otama	3.30	277	P	Pn	14 38 23.2	+2.1
JFT				S	Sn	14 38 59.6	+0.1
JOM	Ohasama	3.39	314	P	Pn	14 38 23.5	+1.3
JOM				S	Sn	14 39 01.4	-0.2
BSO1	Boso 1	3.78	229	eS	Sn	14 39 08.0	-2.6
JRY	Ryogami san	4.62	257	P	Pn	14 38 39.8	+0.6
JRY				eS	Sn	14 39 30.4	-1.6
JOD2	Odawara 2	4.74	248	eS	Sn	14 39 34.7	-0.3
ERM	Erimo	4.94	349	Pn	Pn	14 38 44.2	+0.6
JOT	Ohata	4.97	329	P	Pn	14 38 46.1	+2.2
MJAR	Matsushiro Arr	5.05	265	Pn	Pn	14 38 46.0	+0.9
	0.3nm,0.3s,baz=71,slow=10,SNR=15						
MJAR				Sn	Sn	14 39 43.3	+0.7
	0.1nm,0.3s,baz=89,slow=26,SNR=1.3						
MAJO	Matsushiro	5.05	265		Pn	14 38 46.6	+1.4
MJB9	Matsu-Tunnel	5.05	265		Pn	14 38 46.7	+1.5
JKB	Kayabe	5.40	332	S	Sn	14 39 48.1	-3.1
JCH	Churui	5.50	352	P	Pn	14 38 50.3	-0.9
JCH				eS	Sn	14 39 48.8	-4.8
JHJ2	Mitsune	5.56	225	P	Pn	14 38 50.9	-1.2
JHJ2				eS	Sn	14 39 50.3	-4.8
JHJ	Hachijo jima 2	5.57	225	Pn	Pn	14 38 51.0	-1.3
	3.5nm,0.3s,baz=29,slow=10,SNR=1.8						
JHJ				Sn	Sn	14 39 50.1	-5.3
	10.0nm,0.3s,baz=277,slow=23,SNR=5.9						
NEM2	Nemuro 2	6.26	9	P	Pn	14 38 56.9	-4.8
NEM2				eS	Sn	14 40 06.1	-6.3
JTKR	Abashiri--Toko	6.80	357	P	Pn	14 39 08.7	-0.4
JTKR				eS	Sn	14 40 20.4	-5.3
JHR	Hokuryu	6.88	343	P	Pn	14 39 11.9	+1.6
JHR				eS	Sn	14 40 27.5	-0.2
JKA	Kamikawa-asahi	7.08	349		Pn	14 39 13.0	+0.1
JKA					Sn	14 40 27.9	-4.6
ASAJ	Asahikawa	7.08	349	Pn	Pn	14 39 13.0	+0.1
	0.8nm,0.3s,baz=210,slow=5.7,SNR=9.3						
ASAJ				Sn	Sn	14 40 27.9	-4.7
	0.1nm,0.3s,baz=136,slow=33,SNR=0.7						
JOW	Kunigami	17.14	238	Pn	Pn	14 41 27.8	-1.0
YOJ	Yonaguni jima	22.30	241	P	P	14 42 22.3	-4.2
H11N2	WAKE ISLAND Hy	26.18	125	T	T	15 10 03.1	
	baz=317,slow=74,SNR=17						
H11N1	WAKE ISLAND Hy	26.19	125	T	T	15 09 58.6	
	baz=317,slow=74,SNR=6.2						
H11N3	WAKE ISLAND Hy	26.20	125	T	T	15 10 03.1	
	baz=317,slow=74,SNR=11						
SEY	Seymchan	26.24	8	P	P	14 43 06.8	+3.1
	1.3nm,0.7s,baz=263,slow=24,SNR=4.5						
H11S1	WAKE ISLAND Hy	26.95	128	T	T	15 10 52.4	
H11S3	WAKE ISLAND Hy	26.95	128	T	T	15 10 52.4	
H11S2	WAKE ISLAND Hy	26.97	128	T	T	15 10 52.4	
GAMB	Gambell	37.35	30	P	P	14 44 39.4	-1.5
GAMB				IAmb	IAmb	14 44 44.9	
	comp=Z,4.9nm,0.8s						
MKAR	Makanchi Array	46.10	303	P	P	14 45 57.2	+4.3
	comp=Z,0.4nm,0.9s,baz=81,slow=12,SNR=2.4						
MAKZ	Makanchi	46.31	303	P	P	14 45 55.7	+1.1
GLI	Glacier Island	48.06	38	P	P	14 46 09.3	+1.3
GLI				IAmb	IAmb	14 46 19.8	
	comp=Z,7.8nm,1.3s						
IL31		48.07	32	P	P	14 46 08.5	+0.5
IL31				IAmb	IAmb	14 46 25.0	
	comp=Z,4.3nm,1.4s						
ILAR	Eielson Array	48.07	32	P	P	14 46 09.6	+1.6
	comp=Z,0.4nm,0.6s,baz=276,slow=6.4,SNR=6.1						
INK	Inuvik	53.15	27	P	P	14 46 48.0	+1.9
	comp=Z,0.8nm,0.5s,baz=304,slow=5.8,SNR=6.0						
INK	Inuvik	53.15	27	IAmb	IAmb	14 46 54.7	
	comp=Z,2.6nm,1.3s						
WB0	Warramunga Arr	57.42	191	P	P	14 47 17.2	-0.4
WB0				IAmb	IAmb	14 47 17.7	
	comp=Z,5.3nm,1.2s						
WR0	Warramunga Arr	57.59	191	P	P	14 47 18.1	-0.6
WB2	Warramunga Arr	57.60	191	P	P	14 47 18.3	-0.4
WB2				IAmb	IAmb	14 47 28.7	
	comp=Z,4.7nm,1.2s						
WRA	Warramunga Arr	57.60	191	P	P	14 47 18.3	-0.5
	comp=Z,0.6nm,0.4s,baz=9.2,slow=7.1,SNR=13						
ASAR	Alice Springs	61.33	191	P	P	14 47 44.1	-0.3
	comp=Z,0.3nm,0.6s,baz=6.3,slow=7.2,SNR=9.8						
YKA	Yellowknife Ar	62.45	31	P	P	14 47 52.7	+1.1
	comp=Z,0.2nm,0.6s,baz=295,slow=5.9,SNR=3.5						

IDC 28 14:51:42.3±2.0, 56.68S×26.43W, h0km, mb4.2/2, mb1 4.3/2, mb1mx3.9/16, mbtmp4.2/2, Error ellipse: s-maj=79.8km s-min=44.8km az=3.0
NEIC 28 14:51:49.1±2.3, 56.4S±0.1×26.5W±0.1, h42km±7km, mb4.3/13, Error ellipse: s-maj=17.9km s-min=7.1km az=160.0
ISC 28 14:51:54.3±0.7, 56.4S±0.1×26.4W±0.1, h88km, n26, σ1.04/23, mb4.3/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	6.12	286	Pn	Pn	14 53 16.6	-5.5
VNA1	Neumayer--Stat	16.30	158	P	P	14 55 40.0	+1.1
VNA3	Neumayer Olymp	16.51	161	P	P	14 55 42.9	+1.7
VNA2	Neumayer--Watz	16.70	158	P	P	14 55 44.7	+1.3
	baz=324,slow=9.7						
SNAA	Sanae	18.24	156	P	P	14 55 59.9	-0.5
SNAA	Sanae	18.24	156	P	Pn	14 56 00.6	-0.7
QSPA	South Pole Qui	33.84	180	P	P	14 58 28.4	+0.4
SUR	Sutherland	40.33	74	P	P	14 59 21.8	-1.4
GO04	Tololo Observa	40.55	291	P	P	14 59 24.1	-1.0
GO02	Mina Guanaco	44.03	297	P	P	14 59 53.6	+0.1
GO02				IAmb	IAmb	15 00 07.7	
	comp=Z,3.0nm,0.7s						
BOSA	Boshof	45.66	75	P	P	15 00 05.0	-1.1
VNDA	Vanda	46.23	182	P	P	15 00 09.1	-0.8
PB01	IPOC Station P	47.46	300	P	P	15 00 19.1	-1.1
PB01				IAmb	IAmb	15 00 20.0	
	comp=Z,3.5nm,0.7s						
H10S2	ASCENSION HYDR	48.23	16	T	T	15 53 07.7	
	baz=31,slow=74,SNR=12						
H10S3	ASCENSION HYDR	48.24	16	T	T	15 53 01.7	
	baz=189,slow=74,SNR=9.7						
GO01	Chusmiza	48.49	301	P	P	15 00 27.1	-1.5
GO01				IAmb	IAmb	15 00 29.9	
	comp=Z,2.4nm,0.8s						
LBTB	Lobatse	48.72	72	P	P	15 00 28.7	-1.2
LBTB				IAmb	IAmb	15 00 44.0	
	comp=Z,5.5nm,1.2s						
TSUM	Tsumeb	49.50	60	P	P	15 00 37.0	+1.1
LPAZ	La Paz	50.93	305	P	P	15 00 47.1	-0.2
	comp=Z,1.5nm,0.4s,baz=94,slow=5.4,SNR=6.6						
LPAZ	La Paz	50.93	305	P	P	15 00 47.6	+0.3
LPAZ				IAmb	IAmb	15 00 56.3	
	comp=Z,6.8nm,1.4s						
SAML	Samuel	55.36	314	P	P	15 01 20.5	+1.4
SAML				IAmb	IAmb	15 01 23.6	
	comp=Z,4.8nm,1.4s						
TOA0	Torodi Ar. Sit	73.17	29	P	P	15 03 16.1	+0.8
TOA0				IAmb	IAmb	15 03 26.8	
	comp=Z,3.7nm,1.2s						
TORD	Torodi Ar. Bea	73.17	29	P	P	15 03 16.0	+0.7
	comp=Z,0.9nm,0.4s,baz=198,slow=6.2,SNR=9.0						
YKA	Yellowknife Ar	136.72	317	PKP	PKPdf	15 11 04.1	-0.7
	comp=Z,0.1nm,0.4s,baz=129,slow=2.6,SNR=4.1						
SONM	Songino Array	150.33	87	PKPbc	PKPbc	15 11 34.5	0.0
	comp=Z,0.7nm,0.6s,baz=215,slow=3.7,SNR=3.8						
ILAR	Eielson Array	150.67	311	PKPbc	PKPbc	15 11 34.8	+0.2
	comp=Z,0.5nm,0.8s,baz=126,slow=1.2,SNR=7.6						

IDC 28 15:16:30.6±2.6, 26.84N×144.36E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.3/37, mbtmp3.4/4, ML2.6/1, MS3.7/1, Ms1 3.7/1, ms1mx2.5/25, Error ellipse: s-maj=64.0km s-min=25.6km az=63.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	1.96	278	Pn	Pn	15 17 04.2	-0.8
	14nm,0.3s,baz=289,slow=23,SNR=39						
JCJ				Sn	Sn	15 17 24.7	-5.6
	46nm,0.3s,baz=89,slow=23,SNR=19						
MJAR	Matsushiro Arr	10.99	333	Pn	Pn	15 19 09.4	+0.3
	0.0nm,0.3s,baz=155,slow=10,SNR=2.0						
WRA	Warramunga Arr	47.51	193	P	P	15 25 08.2	+0.5
	0.3nm,0.3s,baz=19,slow=6.1,SNR=14						
ZALV	Zalesovo Beam	50.95	319	LR	LR	15 49 24.5	
	comp=Z,75nm,18.9s,baz=297,slow=39						
ASAR	Alice Springs	51.22	192	P	P	15 25 35.0	-1.0
	0.1nm,0.5s,baz=158,slow=8.2,SNR=4.4						
MKAR	Makanchi Array	52.13	310	P	P	15 25 43.1	+0.4
	0.3nm,0.5s,baz=81,slow=8.9,SNR=1.7						

IDC 28 15:30:48.5±0.5, 52.58S×26.02E, h0km, mb4.6/18, mb1 4.7/18, mb1mx4.6/24, mbtmp4.6/18, MS4.1/17, Ms1 4.1/17, ms1mx4.0/24, Error ellipse: s-maj=19.3km s-min=12.7km az=77.0
BJI 28 15:30:49.2±0.0, 53.21S×26.79E, h7km, Ms4.9/2, Ms7 4.8/2
NEIC 28 15:30:50.0±1.9, 52.5S±0.1×26.0E±0.2, h10km±1km, mb5.0/30, Error ellipse: s-maj=21.7km s-min=16.7km az=63.0
GCMT 28 15:30:49.0±0.3, 52.66S±0.02×25.75E±0.05, h13km±1km, MW5.0/70, Moment Tensor Solution. s21,c24; s70,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-2.65±.25; Mθθ3.22±.17; Mφφ-0.56±.16; Mrθ1.69±.35; Mrφ1.18±.12; Mθφ0.35±.43; Best double couple: M0 3.55200×10^{16} NP1:φs70.00000°, δ31.00000°, λ-96.00000°. NP2: φs257.00000°, δ60.00000°, λ-86.00000°. Principal axes: T 4.0030, Plg15.0000°, Azm344.0000°; N -0.8980, Plg3.0000°, Azm75.0000°; P -3.1020, Plg75.0000°, Azm177.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 28 15:30:50.0±0.4, 52.56S±0.08×25.95E±0.10, h10km, n80, σ1.20/72, mb4.8/27, MS4.2/21, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRZF	Crozet Islands	17.86	80	P	P	15 34 59.7	+0.7
CRZF				IAmb	IAmb	15 35 04.3	
	comp=Z,129nm,1.2s						
SUR	Sutherland	20.51	348	P	P	15 35 28.9	+0.6
	comp=Z,18nm,0.9s,baz=161,slow=9.9,SNR=8.2						
SUR				LR	LR	15 41 31.6	
	comp=Z,1μm,21.0s,baz=176,slow=31						
SUR	Sutherland	20.51	348	P	P	15 35 28.9	+0.6
SUR				IAmb	IAmb	15 35 42.1	
	comp=Z,78nm,1.4s						
SNAA	Sanae	22.98	203	P	P	15 35 54.7	+0.3
SNAA	Sanae	22.98	203	P	P	15 35 54.8	+0.4
	comp=Z,36nm,1.0s,baz=49,slow=9.5,SNR=35						
SNAA				LR	LR	15 43 05.5	
	comp=Z,233nm,19.2s,baz=57,slow=32						
SNAA	Sanae	22.98	203	P	P	15 35 54.9	+0.5
SNAA				IAmb	IAmb	15 36 07.0	
	comp=Z,46nm,1.0s						
MAW	Mawson	23.28	144	P	P	15 35 58.4	+1.0
	comp=Z,12nm,0.8s,baz=289,slow=14,SNR=4.0						
MAW				LR	LR	15 43 32.7	
	comp=Z,391nm,19.5s,baz=275,slow=33						
MAW	Mawson	23.28	144	IAmb	IAmb	15 36 06.0	
	comp=Z,6.5nm,1.2s						
VNA2	Neumayer--Watz	23.70	207	P	P	15 36 02.6	+1.1
	baz=43,slow=9.9						
VNA1	Neumayer--Stat	23.79	208	P	P	15 36 03.8	+1.4
BOSA	Boshof	23.93	358	P	P	15 36 04.9	+0.7
	comp=Z,8.3nm,0.7s,baz=173,slow=10,SNR=16						
BOSA				LR	LR	15 43 40.4	
	comp=Z,704nm,21.0s,baz=174,slow=32						
BOSA	Boshof	23.93	358	P	P	15 36 04.6	+0.4
VNA3	Neumayer Olymp	24.50	207	P	P	15 36 09.1	+0.1
LBTB	Lobatse	27.51	359	P	P	15 36 37.0	+0.3
	comp=Z,4.3nm,0.8s,baz=179,slow=7.6,SNR=6.3						
LBTB				LR	LR	15 46 08.0	
	comp=Z,575nm,19.1s,baz=166,slow=33						
LBTB	Lobatse	27.51	359	P	P	15 36 34.6	-2.0
TSUM	Tsumeb	33.93	346	P	P	15 37 34.7	+1.3
TSUM				IAmb	IAmb	15 37 44.3	
	comp=Z,10nm,0.8s						
LSZ	Lusaka	37.24	4	P	P	15 38 01.7	-0.1
LSZ				IAmb	IAmb	15 38 13.2	
	comp=Z,12nm,0.9s						
QSPA	South Pole Qui	37.66	180	P	P	15 38 04.5	-0.5
	comp=Z,39nm,0.9s,baz=243,slow=4.7,SNR=130						
QSPA	South Pole Qui	37.66	180	P	P	15 38 05.1	+0.1
VNDA	Vanda	47.34	168	P	P	15 39 23.9	+0.6
	comp=Z,3.3nm,0.7s,baz=241,slow=5.8,SNR=3.9						
VNDA				LR	LR	15 58 33.0	
	comp=Z,372nm,21.4s,baz=234,slow=35						
KMBO	Kilima Mbogo	52.12	14	P	P	15 40 01.2	+0.6
	comp=Z,0.8nm,0.4s,baz=151,slow=8.7,SNR=4.2						
KMBO				LR	LR	16 00 46.5	
	comp=Z,254nm,19.0s,baz=136,slow=34						
H10S2	ASCENSION HYDR	54.51	308	T	T	16 39 39.0	
	baz=70,slow=74,SNR=34						
H10S3	ASCENSION HYDR	54.52	308	T	T	16 39 32.7	
	baz=150,slow=74,SNR=38						
H10N3	ASCENSION HYDR	55.41	309	T	T	16 38 39.4	
	SNR=6.1						
SJMB	Sao Joao De Ma	61.49	276	eP	P	15 41 15.7	+8.8
PLCA	Paso Flores	62.46	238	P	P	15 41 13.8	+0.6
	comp=Z,6.7nm,0.9s,baz=180,slow=8.0,SNR=4.7						
PLCA				LR	LR	16 03 08.0	
	comp=Z,68nm,20.8s,baz=163,slow=31						
PLCA	Paso Flores	62.46	238	P	P	15 41 12.3	-0.9
PLCA				IAmb	IAmb	15 41 15.6	
	comp=Z,12nm,1.1s						
DBIC	Dimbokro	64.56	326	P	P	15 41 27.3	+0.1
	comp=Z,13nm,1.2s,baz=123,slow=7.0,SNR=5.3						
DBIC				LR	LR	16 04 02.1	
	comp=Z,155nm,19.4s,baz=144,slow=31						
DBIC	Dimbokro	64.56	326	P	P	15 41 26.2	-1.0
DBIC				IAmb	IAmb	15 41 27.9	
	comp=Z,18nm,1.1s						
CPUP	Villa Florida	65.57	258	P	P	15 41 33.7	-0.1
	comp=Z,4.0nm,0.7s,baz=136,slow=6.9,SNR=8.4						
CPUP				LR	LR	16 04 21.8	
	comp=Z,110nm,21.9s,baz=190,slow=31						
CPUP	Villa Florida	65.57	258	P	P	15 41 33.8	+0.1
CPUP				IAmb	IAmb	15 41 37.1	
	comp=Z,8.5nm,0.8s						
JANB	Januaria	66.19	276	eP	P	15 41 43.6	+5.6
IPMB	Ipameri, GO	66.32	271	eP	P	15 41 43.0	+4.2
BDFB	Brasilia	67.99	273	P	P	15 41 49.3	-0.1
	comp=Z,3.7nm,0.6s,baz=200,slow=6.6,SNR=5.6						
BDFB				LR	LR	16 05 40.7	
	comp=Z,142nm,19.5s,baz=125,slow=31						
ROC1	El Roble	68.48	244	P	P	15 41 51.9	-0.6
TOA0	Torodi Ar. Sit	68.70	335	P	P	15 41 52.8	-0.8
TOA0				IAmb	IAmb	15 42 05.0	
	comp=Z,9.5nm,0.8s						
TORD	Torodi Ar. Bea	68.70	335	P	P	15 41 53.9	+0.3
	comp=Z,12nm,1.1s,baz=170,slow=6.9,SNR=29						
TORD				LR	LR	16 05 46.8	
	comp=Z,96nm,21.4s,baz=355,slow=30						
ARAG	Araguaiana, MT	70.26	270	eP	P	15 42 03.8	+0.4
GO04	Tololo Observa	70.49	246	P	P	15 42 03.9	-1.0
SALV	Santo Antonio	72.48	267	eP	P	15 42 14.8	-2.0
GO02	Mina Guanaco	73.65	250	P	P	15 42 24.0	0.0
GO02				IAmb	IAmb	15 42 26.4	
	comp=Z,9.2nm,1.0s						
PSA00	Pilbara Seismi	75.47	106	P	P	15 42 33.6	-0.6
BBOO	Buckleboo	75.50	125	P	P	15 42 34.4	0.0
TOO	Toolangi	76.01	135	P	P	15 42 38.7	+1.4
TOO				IAmb	IAmb	15 42 48.5	
	comp=Z,21nm,1.2s						
PB04	IPOC Station P	76.16	251	P	P	15 42 40.3	+1.9
CLDB	Colider	76.44	270	eP	P	15 42 36.2	-3.7
GO01	Chusmiza	77.68	254	P	P	15 42 48.3	+0.9
GO01				IAmb	IAmb	15 42 50.7	
	comp=Z,11nm,0.8s						
PB11	IPOC Station P	77.88	253	P	P	15 42 48.8	+0.8
STKA	Stephens Creek	78.96	129	P	P	15 42 53.4	-0.4
	comp=Z,11nm,1.0s,baz=221,slow=4.6,SNR=9.3						
STKA				LR	LR	16 12 06.6	
	comp=Z,66nm,18.2s,baz=207,slow=31						
STKA	Stephens Creek	78.96	129	P	P	15 42 53.9	+0.1
LPAZ	La Paz	79.69	257	P	P	15 43 00.0	+1.4
	comp=Z,3.5nm,0.7s,baz=180,slow=4.6,SNR=11						
LPAZ	La Paz	79.69	257	P	P	15 42 57.9	-0.8
FITZ	Fitzroy Crossi	81.56	109	P	P	15 43 07.3	-0.6
FITZ				IAmb	IAmb	15 43 19.4	
	comp=Z,5.4nm,0.8s						
ASAR	Alice Springs	81.75	118	P	P	15 43 08.4	-0.5
	comp=Z,5.6nm,0.7s,baz=212,slow=4.5,SNR=55						
AS31	Alice Springs	81.75	118	P	P	15 43 08.7	-0.2
WRA	Warramunga Arr	84.99	116	P	P	15 43 24.9	-0.7
	comp=Z,5.3nm,0.9s,baz=212,slow=3.9,SNR=32						
WB2	Warramunga Arr	85.00	116	P	P	15 43 24.5	-1.1
WRAB	Tennant Creek	85.00	116	P	P	15 43 26.2	+0.6
WRAB				IAmb	IAmb	15 43 36.2	
	comp=Z,18nm,1.2s						
WR0	Warramunga Arr	85.09	117	P	P	15 43 25.7	-0.4
WR0				IAmb	IAmb	15 43 26.7	
	comp=Z,9.7nm,0.9s						
WB0	Warramunga Arr	85.16	116	P	P	15 43 26.1	-0.4
WB0				IAmb	IAmb	15 43 31.5	
	comp=Z,8.8nm,0.8s						
KEST	Kesra	89.11	347	LR	LR	16 23 43.8	
	comp=Z,279nm,21.4s,baz=132,slow=36						
BRTR	Keskin Array B	92.15	6	P	P	15 43 59.8	+0.5
	comp=Z,0.9nm,0.7s,baz=184,slow=8.2,SNR=6.0						
BRTR				LR	LR	16 25 27.8	
	comp=Z,75nm,19.9s,baz=243,slow=36						
CMAR	Chiang Mai Arr	94.58	66	LR	LR	16 22 40.1	
	comp=Z,37nm,18.2s,baz=235,slow=33						
KBZ	Khabaz	97.02	12	LR	LR	16 28 45.0	
	comp=Z,88nm,18.5s,baz=316,slow=36						
DZM	Mont Dzumac	98.11	143	eLR	LR	16 16 21.9	
	comp=Z,120nm,28.4s						
KSH	Kashi	101.45	37	P	Pdif	15 44 45.5	+4.2
KSH				PP	PP	15 48 50.8	-0.9
KSH				S	Sdif	15 56 22.3	+1.0
KSH				LR	LR		
	comp=Z,110nm,5.9s						
KSH				LR	LR		
	comp=Z,280nm,6.7s						
TBI	Tubuai	104.31	184	eLR	LR	16 19 16.1	
	comp=Z,118nm,24.5s						
CD2	Chengdu	107.10	62	Pdif	Pdif	15 45 07.5	+0.9
PPT2	Papeete2	110.04	185	eLR	LR	16 21 59.1	
	comp=Z,144nm,22.8s						
NJ2	Nanjing	116.39	71	ePKP	PKiKP	15 49 33.5	+0.1
HHC	Hu-ho-hao-te	118.73	60	ePKP	PKPdf	15 49 35.0	-2.7
HHC				LR	LR		
	comp=Z,70nm,13.6s						
HHC				LR	LR		
	comp=Z,98nm,23.8s						
SCHQ	Schefferville	131.54	309	PKP	PKPdf	15 50 01.4	-0.2
	comp=Z,1.4nm,0.7s,baz=215,slow=6.4,SNR=4.0						
TXAR	Lajitas Array	136.55	258	PKP	PKPdf	15 50 11.7	-0.3
	comp=Z,1.4nm,1.0s,baz=160,slow=4.0,SNR=6.4						
ULM	Lac du Bonnet	144.48	290	PKP	PKPab	15 50 22.8	-1.1
	comp=Z,14nm,1.2s,baz=76,slow=3.0,SNR=7.0						
PDAR	Pinedale Array	148.93	270	PKP	PKPdf	15 50 32.2	-1.4
	comp=Z,4.6nm,1.1s,baz=50,slow=2.5,SNR=8.3						
PDAR				PKPbc	sPKPdf	15 50 36.2	+0.3
	comp=Z,4.5nm,1.0s,baz=132,slow=5.4,SNR=20						
NVAR	Mina Array Bea	151.57	255	PKPbc	PKiKP	15 50 44.2	-0.2
	comp=Z,1.5nm,0.7s,baz=134,slow=4.3,SNR=7.2						
YKA	Yellowknife Ar	156.98	311	PKP	PKPdf	15 50 43.2	-1.0
	comp=Z,0.1nm,0.6s,baz=21,slow=2.1,SNR=3.7						
YKA				PKPab	PKPab	15 51 14.7	0.0
	comp=Z,2.5nm,0.9s,baz=81,slow=3.1,SNR=8.5						
INK	Inuvik	161.41	336	PKPab	PKPab	15 51 33.2	-0.5
	comp=Z,1.9nm,0.9s,baz=68,slow=4.1,SNR=4.2						
DLBC	Dease Lake	165.22	303	PKPab	PKPab	15 51 51.5	+0.6
	comp=Z,2.8nm,0.9s,baz=47,slow=6.7,SNR=3.0						
ILAR	Eielson Array	167.21	346	PKPab	PKPab	15 51 59.6	+0.3
	comp=Z,0.6nm,1.1s,baz=18,slow=4.1,SNR=4.9						

BJI 28 15:36:35.6±0.0, 22.76N×99.10E, h9km, ML3.6/5
ISC 28 15:36:36.7±1.5, 22.77N±0.07×99.0E±0.1, h10km, n8, σ2.80/14, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMMT	Chiang Mai	3.94	181	P	Pn	15 37 36.8	-0.4
CMMT				S	Sg	15 38 37.4	-5.8
KMI	Kunming	4.12	55	Pg	Pg	15 38 10.5	+15
KMI				Sg	Sg	15 38 48.3	-0.8
LAMP	Lampang	4.26	172	P	Pn	15 37 42.4	+0.8
LAMP				S	Sb	15 38 45.1	+1.8
CM31	Chiang Mai Arr	4.29	181	P	Pn	15 37 41.8	-0.3
CM31				S	Sb	15 38 47.5	+3.4
CM15	Chiang Mai Arr	4.29	181	P	Pn	15 37 42.3	+0.1
CM15				S	Sb	15 38 47.4	+3.1
PHRA	Phrae	4.39	165	P	Pn	15 37 42.8	-0.7
PHRA				S	Sb	15 38 49.0	+2.0
MHMT	Maesarieng	4.68	193	P	Pn	15 37 47.1	-0.4
MHMT				S	Sb	15 39 00.1	+4.7
WMQ	Urumqi	23.00	339	eP	P	15 41 40.8	-0.9

KRNET 28 15:37:42.7±0.1, 42.33N×80.67E, mb2.6
SOME 28 15:37:42.5, 42.30N×80.45E, h10km
ISC 28 15:37:42.2±2.6, 42.29N±0.08×80.48E±0.09, h12km±12km, n18, σ1.51/36, 8C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	1.16	355	eP	Pg	15 38 04.6	-0.1
	baz=48						
KTMS				eS	Sn	15 38 20.7	+0.3
	baz=48						
KTMS	Ketmen	1.16	355	eP	Pg	15 38 04.6	-0.1
	1.3nm,0.1s						
KTMS				eS	Sn	15 38 20.7	+0.3
	3.9nm,0.1s						
UZB	Uzynbulak	1.38	309	eP	Pb	15 38 08.0	0.0
	1.4nm,0.3s						
UZB				eS	Sg	15 38 26.4	-0.2
	4.7nm,0.1s						
PRZ	Przheval'sk	1.55	278	⇑iP	Pg	15 38 14.2	+2.1
	baz=76						
PRZ				⇑iS	Sg	15 38 36.6	+4.3
	baz=76						
KPKS	Kokpek	1.77	312	eP	Pg	15 38 15.7	-0.6
	5.5nm,0.1s						
KPKS				eS	Sg	15 38 39.6	+0.5
	11nm,0.2s						
DJR	Jarkent	2.10	346	eP	Pg	15 38 21.8	-0.8
	0.4nm,0.1s						
DJR				eS	Sg	15 38 50.1	+0.2
	7.2nm,0.4s						
ANVS	Anan'yevo	2.14	284	⇑iP	Pg	15 38 22.7	-0.5
	baz=83						
ANVS				⇑iS	Sg	15 38 52.9	+1.9
	baz=83						
KDJ	Kajisay	2.46	267	⇑iP	Pb	15 38 27.6	+1.2
	baz=67						
KDJ				⇑iS	Sg	15 39 00.7	-0.5
	baz=67						
KOTS	Kotyrbulak	2.65	292	eP	Pg	15 38 31.8	-1.3
	2.6nm,0.3s						
KOTS				eS	Sg	15 39 07.2	-0.3
	6.5nm,0.3s						
MDOK	Medeo	2.68	290	eP	Pb	15 38 31.0	+0.8

baz=89
MDOK eS Sg 15 39 06.1 -2.2
baz=89
MDOK Medeo 2.68 290 eP Pb 15 38 31.0 +0.8
1.4nm,0.4s
MDOK eS Sg 15 39 06.0 -2.2
2.1nm,0.5s
TNSS Tian-Shan 2.71 287 eP Pb 15 38 32.3 +1.4
1.1nm,0.2s
TNSS eS Sg 15 39 08.2 -1.1
2.4nm,0.1s
ARXS Arharly 2.73 316 eP Pb 15 38 32.6 +1.5
1.2nm,0.2s
ARXS eS Sg 15 39 08.6 -1.4
4.1nm,0.3s
CHKK Chushkaly 3.00 303 eP Pb 15 38 37.4 +1.8
0.4nm,0.1s
CHKK eS Sg 15 39 16.7 -1.9
2.6nm,0.2s
KAPS Kapalarasan 3.10 345 eP Pb 15 38 39.2 +1.8
0.2nm,0.1s
KAPS eS Sg 15 39 19.6 -2.4
1.4nm,0.4s
ULHL Ulahol 3.15 271 ⇓iP Pb 15 38 37.2 -1.0
baz=70
ULHL ⇓iS Sb 15 39 17.0 +0.4
baz=70
BOOM Boomskoye usch 3.37 275⇓eP Pb 15 38 40.3 -1.7
baz=74
BOOM ⇓iS Sb 15 39 22.4 -0.6
baz=74
NRN Naryn 3.45 257⇑iP Pb 15 38 41.9 -1.6
baz=57
NRN ⇑iS Sb 15 39 25.3 -0.2
baz=57

NNC 28 16:02:18.4±2.5, 36.46N×82.80E, h21km±24km, mb3.7, mpv3.5, 4C-2D, Error ellipse: s-maj=35.4km s-min=24.5km az=63.0, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PDGK Podgornoye 7.32 341 ⇓Pn Pn 16 04 04.0 -0.2
3.1nm,1.1s
PDGK ⇑Sn Sn 16 05 28.0 +1.3
10nm,0.9s
PDGK ⇑Lg Lg 16 06 11.3
12nm,0.8s
MK31 Makanchi Array 10.34 358 Pn Pn 16 04 45.5 +0.1
0.2nm,0.3s,baz=184,slow=11,SNR=17
MK31 ⇓Sn Sn 16 06 42.0 +1.4
0.4nm,0.6s,baz=181,slow=23,SNR=4.0
MAKZ Makanchi 10.36 357 ⇑Pn Pn 16 04 45.9 +0.1
4.4nm,1.2s
MAKZ ⇑Sn Sn 16 06 41.4 +0.1
1.0nm,0.7s

IDC 28 16:14:47.0±6.9, 5.72S×137.84E, h0km, mb3.5/1, mb1 3.5/3, mb1mx3.3/22, mbtmp3.3/3, ML3.5/2, MS3.3/1, Ms1 3.3/1, ms1mx2.6/26, Error ellipse: s-maj=284.9km s-min=30.0km az=88.0, Near south coast of Irian Jaya

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 14.54 193 Pn Pn 16 18 13.8 -0.4
0.2nm,0.3s,baz=12,slow=12,SNR=6.1
WRA Sn Sn 16 20 58.8 +2.5
0.0nm,0.3s,baz=62,slow=5.9,SNR=3.8
ASAR Alice Springs 18.24 192 P Pn 16 19 01.4 -0.4
0.2nm,0.3s,baz=12,slow=10,SNR=28
MJAR Matsushiro Arr 42.05 0 LR LR 16 38 58.9
comp=Z,44nm,21.2s,baz=245,slow=34
MKAR Makanchi Array 71.66 323 P P 16 26 10.8 +0.1
0.5nm,1.0s,baz=107,slow=5.0,SNR=3.4

ISK 28 16:25:31.8, 37.45N×42.58E, h14km, ML2.5/10
ISN 28 16:25:32.9±1.2, 37.32N×42.58E, h33km±7km, ML2.4
ISC 28 16:25:31.4±1.3, 37.39N±0.05×42.64E±0.05, h11km±11km, n12, σ0s47/16, Turkey

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SIRT Sirnak 0.20 306 PG Pg 16 25 35.5 -0.2
CUKT Cukurca 0.79 100 PG Pn 16 25 48.6 0.0
CUKT SG Sn 16 26 00.7 +0.3
AKDM Akdamar-Van 0.98 16 PG Pb 16 25 50.6 +0.1
AKDM SG Sg 16 26 03.5 +0.4
MSL Mosul 1.05 159 ePg Pg 16 25 51.2 -0.5
baz=335
MSL eSg Sn 16 26 06.3 -0.5
MSL AML AML 16 26 09.6
comp=N,101nm,0.6s
MSL AML AML 16 26 11.2
comp=E,108nm,0.7s
GURO Guroymak-BITLI 1.26 338 PN Pn 16 25 54.6 -0.5
SVAN Silvan-Diyarba 1.37 304 PN Pn 16 25 56.4 -0.2
MAZI Mazidag 1.75 273 PN Pn 16 26 01.9 +0.1
DYBB Diyarbakir 2.06 287 PN Pn 16 26 05.9 -0.2
AGRB Hanur-Agry 2.20 7 PN Pn 16 26 08.2 +0.1
IKRK Kirkuk 2.41 145 ePn Pn 16 26 11.5 +0.7
IKRK eSn Sn 16 26 40.0 -0.4
SVRC Sivrice-ELAZID 2.82 292 PN Pn 16 26 16.9 +0.3
URFA Urfa 3.04 272 PN Pn 16 26 20.4 +0.9

SJA 28 16:31:28.6±0.9, 33.28S×71.95W, h24km±8km, ML4.5, MW4.6
VAO 28 16:31:28.7±0.5, 33.06S×71.81W, h10km, mb4.6
NEIC 28 16:31:29.5±2.5, 33.10S±0.05×72.04W±0.07, h24km±1km, Error ellipse: s-maj=8.9km s-min=5.5km az=124.0
GUC 28 16:31:29.3±0.5, 33.10S×72.02W, h30km±3km, ML4.1
IDC 28 16:31:31.7±3.2, 33.10S×71.89W, h33km±23km, mb4.4/13, mb1 4.4/19, mb1mx4.3/38, mbtmp4.5/19, ML4.0/6, MS4.0/11, Ms1 4.0/11, ms1mx3.7/30, Error ellipse: s-maj=19.4km s-min=12.5km az=82.0
ISC 28 16:31:27.9±0.9, 33.03S±0.03×72.03W±0.04, h14km±5km, n124, σ1s60/157, mb4.8/18, MS4.1/10, 4C-7D, Off coast of central Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VA01 Torpederas 0.32 88 ⇓iP Pb 16 31 36.3 +0.8
VA01 iS Sb 16 31 42.1 -2.7
ROC1 El Roble 0.86 86 Pn 16 31 45.3 -0.5
ROC1 Sn Sn 16 31 56.9 -1.4
ROC1 El Roble 0.86 86 eP Pn 16 31 45.1 -0.8
ROC1 iS Sn 16 31 57.3 -1.0
ROCH El Roble 0.86 86 ⇓iP Pn 16 31 45.0 -0.9
ROCH iS Sn 16 31 56.9 -1.4
ROCH IAML 16 31 59.4
comp=E,10µm,0.5s
PEL Peldehue 1.14 96 eP Pb 16 31 49.1 -0.3
PEL iS Sb 16 32 03.5 -0.5
PEL IAML 16 32 17.3
comp=N,6µm,0.5s
PEL Peldehue 1.14 96 Pg 16 31 49.5 -0.3
PEL Sn Sb 16 32 03.6 -0.5
PEL Peldehue 1.14 96 iP Pg 16 31 49.8 -0.1
PEL iS Sg 16 32 05.2 +0.3
STL Santa Lucia 1.23 109 ⇓iP Pn 16 31 50.2 -0.6
STL iS Sb 16 32 06.3 -0.6
STL IAML 16 32 10.2
comp=N,5µm,0.4s
ANTU Antumapu 1.29 115 eP Pg 16 31 52.3 -0.4
ANTU iS Sg 16 32 09.1 -0.4
ANTU IAML 16 32 16.7
comp=N,5µm,0.5s
CLCH Cerro Calan 1.30 106 ⇓iP Pb 16 31 51.9 -0.4
CLCH iS Sn 16 32 08.8 -0.3
CO04 Los Peladeros 1.33 42 ⇑iP Pg 16 31 53.6 0.0
CO04 iS Sg 16 32 11.3 +0.3
FSR Penalolen 1.34 110 eP Pg 16 31 53.5 -0.1
FSR iS Sg 16 32 11.2 +0.1
MT03 Universidad Ad 1.35 110 ⇓iP Pn 16 31 52.4 -0.1
MT03 iS Sb 16 32 09.7 -0.7
MT03 IAML 16 32 16.2
comp=E,15µm,0.3s
FCH Farellones 1.49 102 ⇓iP Pb 16 31 55.0 -0.6
FCH iS Sb 16 32 15.0 -1.0
FCH IAML 16 32 23.3
comp=N,4µm,0.7s

LMEL Las Melosas 1.73 118 ⇓iP Pn 16 31 58.2 +0.4
LMEL iS Sb 16 32 21.2 -0.1
LMEL IAML 16 32 25.5
comp=N,5µm,0.2s
GO05 Huala 1.97 178 ⇑iP Pn 16 31 59.5 -1.5
GO05 iS Sn 16 32 21.4 -4.1
GO05 IAML 16 32 30.4
comp=E,3µm,0.9s
GO05 Huala 1.97 178 Pn 16 31 59.5 -1.5
GO05 Sn Sn 16 32 21.3 -4.2
GO05 Huala 1.97 178 eP Pn 16 31 59.6 -1.3
GO05 eS Sn 16 32 21.6 -3.9
CO03 El Pedregal 2.47 28 ⇑iP Pb 16 32 09.7 -2.4
CO03 iS Sb 16 32 41.6 -0.8
CO03 IAML 16 32 56.0
comp=E,3µm,0.7s
RTLS Leoncito 2.62 63 eP Pb 16 32 14.3 -0.6
RTLS iS Sg 16 32 53.0 +0.8
RTLS IAML 16 33 01.3
comp=Z,3µm,1.0s
GO04 Tololo Observa 3.04 21 ⇑iP Pn 16 32 17.2 +1.4
GO04 iS Sb 16 32 56.5 -2.5
GO04 Tololo Observa 3.04 21 Pn 16 32 17.2 +1.4
GO04 Tololo Observa 3.04 21 iP Pn 16 32 17.4 +1.5
RTCV Cerro Valdivia 3.17 69 eP Pb 16 32 21.4 -2.7
RTCV iS Sg 16 33 07.9 -2.0
ZON Zonda 3.20 63 eP Pb 16 32 22.1 -2.6
ZON eS Sb 16 33 02.0 -1.6
ZON IAML 16 33 21.4
comp=Z,1µm,1.0s
RTLL Cerro Villicun 3.46 62 eP Pb 16 32 26.4 -2.7
RTLL eS Sn 16 33 04.9 +2.6
RTLL IAML 16 33 20.2
comp=Z,672nm,0.6s
ACCO Cerro Coronel 3.51 47 iP Pb 16 32 27.0 -3.1
CFA Coronel Fontan 3.52 67 Pn Pn 16 32 25.0 +2.8
comp=Z,13nm,0.3s,baz=233,slow=6.0,SNR=111
CFA Pg Pg 16 32 35.5 +0.2
comp=Z,22nm,0.3s,baz=235,slow=15,SNR=42
CFA Sn Sb 16 33 10.4 -2.1
comp=Z,20nm,0.3s,baz=242,slow=10,SNR=3.9
CFA Lg Lg 16 33 21.1
comp=Z,44nm,0.3s,baz=338,slow=18,SNR=8.1
CFA LR LR 16 34 02.4
comp=Z,4µm,19.3s,baz=294,slow=44
AROD Rodeo 3.60 38 iP Pb 16 32 27.9 -3.6
AROD iS Sb 16 33 15.6 +0.4
AMOG MOGNA 3.66 56 eP Pb 16 32 28.3 -4.2
ACDV Cuesta del Vie 3.78 42 eP Pb 16 32 31.2 -3.5
ACDV iS Sb 16 33 16.2 -4.2
ACDV IAML 16 33 41.5
comp=Z,513nm,0.6s
ACAN Cantantal 4.16 81 eP Pn 16 32 35.5 +4.5
APLL PUNTA DE LOS L 5.38 62 eP Pn 16 32 51.0 +3.2
APLL IAML 16 32 56.6
comp=Z,262nm,0.9s
APLL eS Sb 16 34 00.3 -5.8
VCA Vinchina 5.40 39 iP Pn 16 32 51.6 +3.4
GO03 Copiap 5.64 16 Pn 16 32 51.8 +0.3
ACLC CERRO LA CRUZ 5.64 52 eP Pn 16 32 54.5 +2.8
CYA Choya 7.05 51 eP Pn 16 33 11.3 +0.6
PLCA Paso Flores 7.78 172 Pn Pn 16 33 21.3 +0.6
comp=Z,0.9nm,0.3s,baz=354,slow=11,SNR=16
PLCA Sn Sn 16 34 46.5 -2.1
comp=Z,0.1nm,0.3s,baz=66,slow=9.3,SNR=2.9
PLCA Lg Lg 16 35 27.1
comp=Z,0.1nm,0.3s,baz=259,slow=14,SNR=2.8
PLCA Paso Flores 7.78 172 eP Pn 16 33 21.1 +0.4
PLCA Paso Flores 7.78 172 Pn 16 33 21.0 +0.3
GO02 Mina Guanaco 8.13 16 Pn 16 33 24.3 -1.5
LVC Limon Verde 10.74 16 Pn Pn 16 34 04.4 +2.6
comp=Z,0.5nm,0.3s,baz=249,slow=8.8,SNR=3.5
LVC Sn Sn 16 36 15.5 +14
comp=Z,0.8nm,0.3s,baz=201,slow=6.8,SNR=2.5
LVC LR LR 16 38 12.3
comp=Z,784nm,20.5s,baz=206,slow=37
LVC Limon Verde 10.74 16 eP Pn 16 34 02.5 +0.7
LPA La Plata 11.86 103 eP Pn 16 34 07.1 -9.5
LPA S Sn 16 36 26.0 -2.7
LPA sS 16 36 36.4
LPA SS SnSn 16 36 40.6 +0.1
LPA PCP PcP 16 40 01.9 -2.1
LPA PKIKP PKiKP 16 48 00.2 -1.8
LPA SKIKS 16 55 01.0
CPUP Villa Florida 14.41 66 Pn Pn 16 34 52.2 +0.6
comp=Z,0.1nm,0.3s,baz=221,slow=15,SNR=2.8
CPUP Sn Sn 16 37 33.0 +1.8
comp=Z,0.2nm,0.3s,baz=136,slow=19,SNR=2.0
CPUP Lg Lg 16 39 05.1
comp=Z,0.2nm,0.3s,baz=146,slow=19,SNR=3.2
CPUP Villa Florida 14.41 66 P P 16 34 56.9 -1.5
LPAZ La Paz 17.04 13 P P 16 35 28.0 -0.3
comp=Z,0.3nm,0.3s,baz=183,slow=7.6,SNR=22
LPAZ La Paz 17.04 13 eP Pn 16 35 26.5 0.0
LPAZ La Paz 17.04 13 P Pn 16 35 27.2 +0.7
SIV San Ignacio 19.66 33 P P 16 35 56.6 +0.1
comp=Z,0.2nm,0.3s,baz=229,slow=12,SNR=37
SIV LR LR 16 44 50.5
comp=Z,790nm,18.2s,baz=266,slow=41
TRCB Terra Rica 19.92 64 eP P 16 35 59.3 0.0
EFI East Falkland 21.23 155 P P 16 36 13.8 +0.6
EFI IAmb IAmb 16 36 30.6
comp=Z,34nm,0.9s
NNA Nana 21.41 347 P P 16 36 17.8 +2.3
comp=Z,4.7nm,0.3s,baz=202,slow=11,SNR=2.7
NNA LR LR 16 43 17.3
comp=Z,139nm,18.1s,baz=178,slow=33
NNA Nana 21.41 347 IAmb IAmb 16 36 19.5
comp=Z,12nm,0.9s
PCMB Pacaembu 21.64 64 eP P 16 36 17.2 -0.7
PP1B Ponte de Pedra 21.78 49 eP P 16 36 19.8 +0.4
SALV Santo Antonio 22.58 45 eP P 16 36 27.7 -0.3
SPB Sao Paulo 23.57 73 eP P 16 36 38.3 +0.2
SPB Sao Paulo 23.57 73 P P 16 36 38.3 +0.2
SPB IAmb IAmb 16 36 40.0
comp=Z,50nm,0.8s
RCLB Rio Claro- Sao 24.07 70 eP P 16 36 42.8 -0.2
VAO Valinhos 24.23 72 eP P 16 36 43.5 -1.0
ARAG Araguaiana, MT 25.16 52 eP P 16 36 52.6 -0.3
SAML Samuel 25.32 21 eP P 16 36 55.3 +0.9
SAML Samuel 25.32 21 P P 16 36 54.2 -0.2
SAML IAmb IAmb 16 36 58.0
comp=Z,34nm,0.9s
IPMB Ipameri, GO 26.12 61 eP P 16 37 01.1 -0.6
CLDB Colider 26.63 38 eP P 16 37 07.1 +0.8
BDFB Brasilia 27.80 57 P P 16 37 16.4 -0.5
comp=Z,12nm,0.9s,baz=212,slow=6.9,SNR=13
BDFB LR LR 16 49 18.2
comp=Z,698nm,20.8s,baz=248,slow=38
RPN Rapa Nui 32.69 270 LR LR 16 47 41.5
comp=Z,329nm,18.0s,baz=61,slow=30
OTAV Otavalo 33.64 348 eP P 16 38 10.4 +1.6
ROSC El Rosal 37.73 356 P P 16 38 45.5 +1.8
comp=Z,9.5nm,0.5s,baz=68,slow=18,SNR=1.8
ROSC El Rosal 37.73 356 IAmb IAmb 16 38 57.9
comp=Z,16nm,0.6s
SDV Santo Domingo 41.71 2 P P 16 39 17.8 +1.2
comp=Z,9.6nm,0.8s,baz=218,slow=3.1,SNR=10
SDV Santo Domingo 41.71 2 eP P 16 39 17.8 +1.2
VNA3 Neumayer Olymp 50.25 158 P P 16 40 23.7 +0.4
VNA2 Neumayer--Watz 50.90 157 P P 16 40 28.2 +0.1
baz=279,slow=8.2
SNAA Sanae 52.48 158 P P 16 40 40.5 +0.5
SNAA Sanae 52.48 158 P P 16 40 40.4 +0.4
comp=Z,6.5nm,0.8s,baz=292,slow=6.9,SNR=13
SNAA Sanae 52.48 158 P P 16 40 40.4 +0.4
SNAA IAmb IAmb 16 40 41.5
comp=Z,8.8nm,0.9s
QSPA South Pole Qui 57.20 180 P P 16 41 15.3 +0.9
comp=Z,8.1nm,0.9s,baz=141,slow=2.0,SNR=13
QSPA South Pole Qui 57.20 180 P P 16 41 14.1 -0.3
QSPA IAmb IAmb 16 41 16.2
comp=Z,12nm,1.1s
TBI Tubuai 67.55 256 eS S 16 51 21.2 +0.6
comp=Z,158nm,26.2s
TBI Tubuai 67.55 256 eLR LR 17 02 49.4
comp=Z,237nm,26.5s
TXAR Lajitas Array 68.90 331 P P 16 42 34.2 +1.8
comp=Z,2.1nm,0.8s,baz=149,slow=8.1,SNR=25
ABTX Abilene, Hawle 70.30 335 P P 16 42 39.0 -1.9
PPT2 Papeete2 70.38 261 eS S 16 51 54.3 -0.1
comp=Z,66nm,22.0s
PPT2 Papeete2 70.38 261 eLR LR 17 04 07.2
comp=Z,138nm,30.2s

PPT Papeete 70.39 261 LR LR 17 03 20.4
comp=Z,24nm,22.0s,baz=116,slow=27
MAW Mawson 74.10 164 LR LR 17 19 12.0
comp=Z,195nm,19.2s,baz=250,slow=39
LIC Lamto 74.47 72 eP P 16 43 06.3 +0.1
comp=Z,14nm,0.9s
TIC Toumodi 74.72 71 eP P 16 43 07.7 0.0
TIC Toumodi 74.72 71 P P 16 43 07.7 0.0
KIC Kosan Boka 74.78 72 eP P 16 43 07.9 -0.1
comp=Z,43nm,1.1s
KIC Kosan Boka 74.78 72 P P 16 43 07.9 -0.1
DBIC Dimbokro 74.87 72 P P 16 43 08.4 -0.1
comp=Z,10nm,0.9s,baz=186,slow=6.1,SNR=10.0
DBIC LR LR 17 16 31.9
comp=Z,74nm,18.1s,baz=190,slow=36
BOSA Boshof 80.52 118 P P 16 43 40.5 +0.4
comp=Z,11nm,0.9s,baz=238,slow=5.4,SNR=12
BOSA LR LR 17 15 29.3
comp=Z,75nm,19.9s,baz=144,slow=33
NVAR Mina Array Bea 83.10 325 P P 16 43 55.1 +1.8
comp=Z,0.6nm,0.7s,baz=132,slow=4.0,SNR=3.6
TORD Torodi Ar. Bea 83.88 70 P P 16 43 58.0 +0.4
comp=Z,12nm,0.9s,baz=255,slow=4.5,SNR=45
TORD LR LR 17 18 30.9
comp=Z,128nm,21.7s,baz=300,slow=34
ULM Lac du Bonnet 85.57 345 P P 16 44 05.4 +0.1
comp=Z,1.2nm,0.5s,baz=297,slow=2.3,SNR=3.9
ULM Lac du Bonnet 85.57 345 IAmb IAmb 16 44 06.3
comp=Z,3.2nm,0.8s
SCHQ Schefferville 87.62 3 P P 16 44 15.8 +0.5
comp=Z,3.0nm,0.9s,baz=135,slow=5.4,SNR=3.5
SCHQ Schefferville 87.62 3 IAmb IAmb 16 44 24.4
comp=Z,17nm,1.5s
YKA Yellowknife Ar 101.15 341 P Pdif 16 45 17.2 +0.2
comp=Z,0.2nm,0.6s,baz=140,slow=4.6,SNR=3.6
ASAR Alice Springs 118.43 207 PKP PKPdf 16 50 15.0 -0.7
comp=Z,0.4nm,0.9s,baz=185,slow=7.5,SNR=3.1
BRTR Keskin Array B 121.36 60 PKP PKPdf 16 50 19.9 -0.9
comp=Z,0.8nm,0.9s,baz=260,slow=3.6,SNR=4.2
WRA Warramunga Arr 121.61 209 PKP PKPdf 16 50 21.4 -0.4
comp=Z,1.1nm,1.1s,baz=155,slow=1.8,SNR=4.0
TIXI Tiksi 139.75 350 PKP PKiKP 16 50 56.6 -0.2
comp=Z,0.4nm,0.5s,baz=76,slow=18,SNR=4.4
NRIK Noril'sk 141.87 12 PKP PKiKP 16 51 02.8 +1.6
comp=Z,2.6nm,0.3s,baz=288,slow=3.2,SNR=4.1
BVAR Borovoye Array 146.57 42 PKPbc PKPab 16 51 09.4 -0.1
comp=Z,2.9nm,0.8s,baz=278,slow=4.2,SNR=20
YAK Yakutsk 147.82 341 PKPbc PKPbc 16 51 11.8 +0.1
comp=Z,8.8nm,0.6s,baz=42,slow=1.4,SNR=16
RPSI Rantau Prapat 148.65 162 PKPbc 16 51 14.6 -0.7
PSI Prapat 148.75 162 PKPbc PKPbc 16 51 14.6 -1.2
comp=Z,6.4nm,0.6s,baz=213,slow=4.3,SNR=7.7
AAK Ala-Archa 152.03 60 PKPbc PKiKP 16 51 23.9 +0.8
comp=Z,6.2nm,0.8s,baz=213,slow=2.3,SNR=22
AAK PKPab sPKPbc 16 51 30.6 +2.0
comp=Z,6.2nm,0.8s,baz=242,slow=3.7,SNR=16
KURBB Kurchatov Arra 152.16 42 PKPbc PKiKP 16 51 23.4 +0.5
comp=Z,2.7nm,0.8s,baz=296,slow=2.7,SNR=17
ZALV Zalesovo Beam 153.40 31 PKP PKPdf 16 51 17.6 0.0
comp=Z,1.1nm,0.8s,baz=264,slow=1.5,SNR=6.0
ZALV PKPbc PKiKP 16 51 25.8 +0.4
comp=Z,3.9nm,0.9s,baz=290,slow=4.2,SNR=14
ZALV PKPab PKPab 16 51 38.4 +1.0
comp=Z,4.2nm,0.7s,baz=297,slow=5.1,SNR=8.8
KSH Kashi 153.50 67 PKPbc PKiKP 16 51 26.5 +0.3
KSH pPKP sPKPbc 16 51 35.3 +3.4
KSH PKS PKSdf 16 54 54.5 +1.7
KSH PP PP 16 55 12.5 -0.5
KSH SKS SKSdf 16 58 26.8 +1.7
MKAR Makanchi Array 156.12 47 PKP PKPdf 16 51 21.4 -0.2
comp=Z,1.0nm,1.0s,baz=291,slow=1.0,SNR=6.1
MKAR PKPab PKPab 16 51 50.0 +0.6
comp=Z,2.1nm,0.7s,baz=298,slow=4.1,SNR=16
WMQ Urumqi 160.86 50 ePKP PKPdf 16 51 26.0 -1.5
WMQ LR LR
comp=Z,57nm,29.3s
TLY Talaya 161.10 8 PKPab PKPab 16 52 12.6 +2.0
comp=Z,1.0nm,0.3s,baz=288,slow=13,SNR=3.4
CMAR Chiang Mai Arr 163.38 149 PKP PKPdf 16 51 31.3 +0.6
comp=Z,0.7nm,0.3s,baz=243,slow=1.7,SNR=6.3
CMAR PKPab PKPab 16 52 21.2 -0.2
comp=Z,0.4nm,0.3s,baz=236,slow=4.9,SNR=5.2
SONM Songino Array 165.17 4 PKPab PKPab 16 52 30.1 +1.4
comp=Z,1.1nm,0.7s,baz=336,slow=3.4,SNR=5.3
NJ2 Nanjing 170.76 267 ePKP PKPdf 16 51 34.5 -1.3
GTA Gaotai 170.84 44 PKP PKPdf 16 51 36.5 +0.7
GTA pPKP sPKPdf 16 51 44.8 +3.2
GTA sPKP 16 51 49.5
GTA PKPab PKPab 16 52 55.8 +1.6
GTA LR LR
comp=Z,95nm,18.1s
GTA LR LR
comp=Z,130nm,20.3s
WHN Wuhan 174.03 247 PKP PKPdf 16 51 34.0 -3.3
CD2 Chengdu 175.84 119 PKP PKPdf 16 51 36.0 -1.9

IDC 28 16:31:34.6±2.1, 2.27N×126.74E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.0/58, mbtmp3.2/3, Error ellipse: s-maj=179.2km s-min=24.7km az=66.0, Northern Molucca Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 23.30 162 P P 16 36 44.0 -0.4
0.3nm,0.3s,baz=340,slow=11,SNR=13
ASAR Alice Springs 26.70 165 P P 16 37 16.4 +0.6
0.2nm,0.6s,baz=346,slow=8.0,SNR=6.2
MKAR Makanchi Array 58.76 326 P P 16 41 34.4 -0.2
0.1nm,0.6s,baz=132,slow=6.4,SNR=2.6

NEIC 28 16:31:37.0±1.9, 15.52S±0.09×167.7E±0.1, h121km±5km, mb4.5/16, Error ellipse: s-maj=17.5km s-min=11.3km az=57.0
IDC 28 16:31:37.1±3.8, 15.52S×167.65E, h118km±32km, mb3.9/13, mb1 4.1/14, mb1mx3.7/47, mbtmp4.3/14, MS3.1/1, Ms1 3.1/1, ms1mx2.6/34, Error ellipse: s-maj=22.7km s-min=18.2km az=36.0
ISC 28 16:31:37.5±0.6, 15.51S±0.07×167.6E±0.1, h124km, n50, σ0s82/51, mb4.3/17, Vanuatu Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SANVU Saraoutou 0.39 279 Pn 16 31 55.3 +0.1
DZM Mont Dzumac 6.62 189 P Pn 16 33 13.1 +0.7
8.5nm,0.3s,baz=81,slow=8.1,SNR=232
DZM S Sn 16 34 25.7 -0.8
7.3nm,0.3s,baz=123,slow=21,SNR=5.7
DZM Mont Dzumac 6.62 189 Pn 16 33 13.4 +1.0
DZM Pn 16 33 13.8 +1.4
NOUC Port Laguerre 6.67 190 Pn 16 33 15.5 +2.5
HNR Honiara 9.61 308 LR LR 16 37 25.2
comp=Z,112nm,20.2s,baz=129,slow=36
EIDS Eidsvold 18.31 235 P P 16 35 41.2 -0.9
RABL Rabaul 18.90 305 P P 16 35 48.1 -0.4
OUZ Omahuta 20.35 166 P P 16 36 03.0 -1.0
COEN Coen 23.67 271 P P 16 36 37.1 -0.8
URZ Urewera 24.17 161 P P 16 36 42.8 +0.7
9.7nm,0.9s,baz=269,slow=1.6,SNR=6.8
URZ Urewera 24.17 161 IAmb IAmb 16 36 57.3
comp=Z,34nm,1.4s
STKA Stephens Creek 28.75 231 P P 16 37 24.1 +0.7
comp=Z,1.7nm,0.8s,baz=74,slow=5.0,SNR=4.0
STKA PcP PcP 16 40 30.7 0.0
comp=Z,1.6nm,0.6s,baz=80,slow=4.4,SNR=6.6
STKA Stephens Creek 28.75 231 IAmb IAmb 16 37 27.0
comp=Z,1.4nm,1.2s
WRA Warramunga Arr 31.96 257 P P 16 37 51.4 -0.5
comp=Z,1.2nm,0.5s,baz=86,slow=8.8,SNR=16
WRA PcP PcP 16 40 39.6 +0.2
comp=Z,0.6nm,0.7s,baz=87,slow=3.5,SNR=4.3
TAU Tasmania Unive 32.37 208 P P 16 37 52.9 -2.2
TAU IAmb IAmb 16 38 08.9
comp=Z,8.6nm,1.1s
AS31 Alice Springs 32.71 250 P P 16 37 58.1 -0.3
ASAR Alice Springs 32.71 250 P P 16 37 58.0 -0.4
comp=Z,2.6nm,0.6s,baz=81,slow=8.7,SNR=50
ASAR PcP PcP 16 40 41.5 +0.2
comp=Z,0.7nm,0.7s,baz=89,slow=3.2,SNR=5.9
BBOO Buckleboo 33.37 233 P P 16 38 04.6 +0.6
KNRA Kununurra 37.38 264 P P 16 38 38.4 -0.1
KNRA IAmb IAmb 16 38 49.8
comp=Z,9.3nm,0.9s
FITZ Fitzroy Crossi 40.20 260 P P 16 39 02.5 +0.5
comp=Z,5.1nm,0.5s,baz=81,slow=8.5,SNR=23

FITZ	Fitzroy Crossi	40.20	260	P	P	16 39 02.6	+0.6
FITZ				IAmb	IAmb	16 39 03.0	
	comp=Z,6.3nm,0.6s						
MORW	Morawa	49.23	245	P	P	16 40 13.2	-0.4
MORW				IAmb	IAmb	16 40 15.7	
	comp=Z,11nm,1.2s						
QSPA	South Pole Qui	74.52	180	P	P	16 43 02.8	+0.4
	comp=Z,7.1nm,0.8s,baz=52,slow=1.7,SNR=14						
QSPA	South Pole Qui	74.52	180	P	P	16 43 02.8	+0.4
QSPA				IAmb	IAmb	16 43 04.0	
	comp=Z,8.7nm,0.8s						
CMAR	Chiang Mai Arr	75.56	294	P	P	16 43 10.8	+1.8
	comp=Z,0.9nm,0.8s,baz=132,slow=4.6,SNR=9.3						
ULN	Ulaanbaatar	82.95	324	P	P	16 43 50.0	+1.3
ULN				IAmb	IAmb	16 43 50.8	
	comp=Z,5.2nm,0.9s						
SONM	Songino Array	83.31	324	P	P	16 43 51.7	+1.2
	comp=Z,2.2nm,0.8s,baz=142,slow=6.1,SNR=8.9						
IL31		87.16	18	P	P	16 44 08.4	-0.7
IL31				IAmb	IAmb	16 44 23.8	
	comp=Z,3.4nm,1.3s						
ILAR	Eielson Array	87.16	18	P	P	16 44 08.6	-0.6
	comp=Z,0.4nm,0.6s,baz=240,slow=4.9,SNR=8.9						
NVAR	Mina Array Bea	87.53	49	P	P	16 44 10.8	-1.0
	comp=Z,0.5nm,0.6s,baz=101,slow=6.2,SNR=3.6						
SNAA	Sanae	92.79	183	P	P	16 44 35.0	-0.7
SNAA	Sanae	92.79	183	P	P	16 44 35.2	-0.4
	comp=Z,1.8nm,0.6s,baz=218,slow=7.3,SNR=10						
SNAA	Sanae	92.79	183	P	P	16 44 35.1	-0.5
VNA3	Neumayer Olymp	93.45	181	P	P	16 44 37.6	-0.9
VNA2	Neumayer--Watz	93.72	182	P	P	16 44 39.3	-0.5
	baz=186,slow=4.5						
MKAR	Makanchi Array	97.99	316	P	Pdif	16 45 00.7	+1.1
	comp=Z,0.2nm,0.5s,baz=97,slow=5.0,SNR=5.1						
ZALV	Zalesovo Beam	98.21	324	P	P	16 45 00.2	-0.2
	comp=Z,0.6nm,0.6s,baz=138,slow=7.1,SNR=3.8						
BVAR	Borovoye Array	106.55	321	PKiKP	PKiKP	16 49 47.7	0.0
	comp=Z,0.3nm,0.4s,baz=63,slow=1.9,SNR=4.6						
ARU	Arti	113.31	325	PKiKP	PKiKP	16 49 59.8	-0.5
	comp=Z,0.6nm,0.4s,baz=98,slow=7.2,SNR=4.5						
AKTO	Aktyubinsk	114.27	319	PKiKP	PKiKP	16 50 02.8	+0.4
	comp=Z,1.3nm,0.6s,baz=78,slow=6.2,SNR=8.0						
ARCES	ARCESS Array B	121.08	345	PKP	PKPdf	16 50 14.6	-0.3
	comp=Z,1.8nm,0.5s,baz=69,slow=2.5,SNR=18						
BOSA	Boshof	122.99	220	PKP	PKiKP	16 50 20.2	0.0
	comp=Z,1.6nm,0.7s,baz=138,slow=4.6,SNR=3.0						
KBZ	Khabaz	125.52	313	PKP	PKiKP	16 50 25.0	+0.5
	comp=Z,1.4nm,0.8s,baz=105,slow=6.9,SNR=4.1						
FINES	FINESS Array B	126.56	338	PKP	PKPdf	16 50 25.7	+0.1
	comp=Z,0.8nm,0.6s,baz=57,slow=5.1,SNR=5.5						
NB2	NORSAR Subarra	131.46	345	PKPdf	PKPdf	16 50 35.1	+0.1
	comp=Z,0.7nm,0.8s,baz=31,slow=1.9						
NOA	NORSAR Array B	131.46	345	PKP	PKPdf	16 50 35.2	+0.2
	comp=Z,0.4nm,0.6s,baz=35,slow=1.8,SNR=3.9						
BRTR	Keskin Array B	133.26	310	PKP	PKiKP	16 50 40.1	-0.3
	comp=Z,1.6nm,1.0s,baz=160,slow=3.9,SNR=5.3						
GERES	GERESS Array B	140.48	333	PKP	PKPdf	16 50 53.3	+1.1
	comp=Z,0.5nm,0.6s,baz=114,slow=1.6,SNR=5.0						
KEST	Kesra	152.01	320	PKPbc	PKiKP	16 51 19.4	+0.5
	comp=Z,5.3nm,0.7s,baz=105,slow=3.0,SNR=6.3						
TORD	Torodi Ar. Bea	166.15	262	PKP	PKPdf	16 51 28.8	0.0
	comp=Z,0.4nm,0.5s,baz=81,slow=0.5,SNR=2.4						
TORD				PKPab	PKPab	16 52 30.3	+0.1
	comp=Z,0.5nm,0.7s,baz=102,slow=6.6,SNR=3.4						

ISK 28 16:33:16.1, 37°.34N×42°.60E, h9km, ML2.6/14
ISN 28 16:33:16.6±1.3, 37°.37N×42°.67E, h33km±7km, ML2.6
ISC 28 16:33:15.2±1.4, 37°.36N±0°.04×42°.73E±0°.04, h4km±12km, n16, σ0s.55/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	Sirnak	0.27	301	PG	Pg	16 33 20.9	+0.4
SIRT				SG	Sg	16 33 23.8	-0.3
CUKT	Cukurca	0.71	99	PG	Pn	16 33 32.2	+0.1
CUKT				SG	Sn	16 33 43.7	+0.2
AKDM	Akdamar-Van	0.98	11	PG	Pn	16 33 35.7	-0.2
AKDM				SG	Sn	16 33 51.0	+0.6
MSL	Mosul	1.01	162	ePg	Pg	16 33 35.0	+0.5
	baz=340						
MSL				eSg	Sn	16 33 50.3	-0.3
MSL				AML	AML	16 33 54.8	
	comp=N,138nm,0.5s						
MSL				AML	AML	16 33 56.6	
	comp=E,210nm,0.8s						
GURO	Guroymak-BITLI	1.31	335	PN	Pg	16 33 41.0	+0.7
GURO				SN	Sn	16 33 58.9	+0.5
SVAN	Silvan-Diyarba	1.45	303	PN	Pb	16 33 42.4	-0.4
MLAZ	Malazgirt-MUS	1.78	355	PN	Pb	16 33 48.0	-0.5
MAZI	Mazidag	1.82	274	PN	Pn	16 33 47.1	-0.3
CLDR	Caldiran	2.01	27	PN	Pn	16 33 51.8	-0.6
VRTB	Varto-Mus	2.06	331	PN	Pn	16 33 51.2	+0.5
DYBB	Diyarbakir	2.14	287	PN	Pn	16 33 51.7	+0.1
AGRB	Hanur-Agry	2.22	5	PN	Pb	16 33 54.5	-1.5
BNGB	Bingl	2.29	316	PN	Pn	16 33 54.1	+0.2
IKRK	Kirkuk	2.35	146	ePn	Pn	16 33 55.0	+0.5
IKRK				eSn	Sn	16 34 24.0	+0.2
SVRC	Sivrice-ELAZID	2.90	292	PN	Pn	16 34 02.5	+0.3
URFA	Urfa	3.12	273	PN	Pn	16 34 05.1	-0.1

IDC 28 17:11:10.6±2.5, 0°.75N×126°.76E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/32, mbtmp3.4/3, Error ellipse: s-maj=234.4km s-min=27.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.87	161	P	P	17 16 03.9	-1.3
	0.4nm,0.7s,baz=340,slow=9.9,SNR=5.7						
ASAR	Alice Springs	25.25	165	P	P	17 16 39.5	+1.0
	0.8nm,0.8s,baz=346,slow=9.1,SNR=12						
MKAR	Makanchi Array	60.02	326	P	P	17 21 19.0	-0.3
	0.1nm,0.5s,baz=119,slow=7.5,SNR=3.7						

INET 28 17:21:53.6, 13°.42N×93°.59W, h15km, ML5.0
GCG 28 17:22:00.3±0.8, 13°.47N×92°.70W, h24km±500km, MD4.6
GCMT 28 17:22:08.8±0.2, 14°.00N±0°.01×92°.50W±0°.02, h26km, MW5.0/104, Moment Tensor Solution. s77,c101; s104,c145; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr4.03±.14; Mθθ-2.99±.09; Mφφ-1.04±.10; Mrθ2.06±.15; Mrφ1.59±.07; Mθφ-1.73±.19; Best double couple: M0 4.78200×10^{16} NP1:φs294.00000°, δ28.00000°, λ80.00000°. NP2:φs125.00000°, δ62.00000°, λ95.00000°. Principal axes: T 4.8780, Plg72.0000°, Azm48.0000°; N -0.1910, Plg5.0000°, Azm303.0000°; P -4.6860, Plg17.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
MEX 28 17:22:09.8±1.7, 14°.00N×92°.40W, h16km±108km, MD4.8
SNET 28 17:22:09.4±1.4, 14°.18N×92°.10W, h15km±949km, ML5.1
UCR 28 17:22:09.7±1.3, 14°.17N×92°.12W, h20km±284km, ML4.6, mb4.8(NEIC)
NEIC 28 17:22:11.8±2.1, 14°.13N±0°.06×92°.13W±0°.06, h55km±5km, mb4.8/278, Md4.8/25(MEX), Error ellipse: s-maj=9.4km s-min=6.4km az=223.0
BJI 28 17:22:12.1±0.0, 14°.20N×92°.10W, h60km, mB5.2/4, Ms5.2/6, Ms7 4.9/3
IDC 28 17:22:15.7±1.8, 14°.24N×91°.87W, h87km±14km, mb4.1/29, mb1 4.2/32, mb1mx4.2/50, mbtmp4.4/32, MS4.2/32, Ms1 4.2/32, ms1mx4.2/41, Error ellipse: s-maj=18.2km s-min=7.7km az=58.0
ISC 28 17:22:08.7±1.0, 14°.07N±0°.04×92°.26W±0°.04, h32km±6km, n687, σ1s.62/692, mb4.8/129, MS4.3/33, 3D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.76	61	⇓iP	Pn	17 22 25.2	+2.0
THIG		0.83	359		Pb	17 22 24.6	-0.2
THIG					Sb	17 22 35.4	-0.1
THIG		0.83	359	iP	Pb	17 22 24.6	-0.2
THIG				iS	Sb	17 22 35.4	-0.1
STG3	Santiaguito 3,	0.92	46	⇓eP	Pb	17 22 26.6	+0.4
FUG	Fuego 3	1.42	75	⇓iP	Pb	17 22 33.5	-1.3
PCG	Pacaya	1.63	79	eP	Pb	17 22 36.8	-1.6
IXG	Ixpaco	1.76	87	eP	Pb	17 22 37.4	+0.2
PCIG		1.87	330		Pn	17 22 37.8	-0.7
PCIG					Sn	17 23 01.7	+0.7
PCIG		1.87	330	iP	Pn	17 22 37.8	-0.7
PCIG				eS	Sn	17 23 01.7	+0.7
NBG	Las Nubes	1.92	74	eP	Pb	17 22 42.1	-1.2
APG	El Apazote	1.97	62	P	Pb	17 22 42.4	-1.7
	283nm,0.3s,baz=215,slow=9.0,SNR=747						
APG				S	Sn	17 23 02.3	-1.5
	253nm,0.3s,baz=77,slow=14,SNR=9.0						
CCIG	Comitan	2.20	3		Pb	17 22 46.1	-1.9
CCIG	Comitan	2.20	3		Pb	17 22 46.5	-1.5
CCIG					LR	17 23 16.9	
CCIG	Comitan	2.20	3	eP	Pb	17 22 46.5	-1.5
CCIG				eS	Sb	17 23 16.9	+2.1
RTR	El Retiro	2.54	94	eP	Pn	17 22 48.1	+0.1
RTR	El Retiro	2.54	94	eP	Pn	17 22 48.1	+0.1
CEVE	Cerro Verde	2.57	95	eP	Pn	17 22 48.3	-0.1
CEVE				eS	Sn	17 23 21.1	+2.4
CEVE	Cerro Verde	2.57	95	eP	Pn	17 22 48.3	-0.1
CEVE				eS	Sn	17 23 21.1	+2.4
SBLS	San Blas	2.57	95	eP	Pn	17 22 48.8	+0.4
SBLS	San Blas	2.57	95	eP	Pn	17 22 48.8	+0.4
MRL	Marmol	2.69	68	eP	Pb	17 22 52.7	-3.5
MRL				eS	Sb	17 23 31.9	+3.0
TGBT	Tuxtla Gutierr	2.80	343		Pn	17 22 54.0	+2.6
TGBT	Tuxtla Gutierr	2.80	343	eP	Pn	17 22 54.0	+2.6
TGIG		2.81	343		Pn	17 22 53.2	+1.6
TGIG					Sn	17 23 28.4	+4.0
TGIG		2.81	343	eP	Pn	17 22 53.2	+1.6
TGIG				eS	Sn	17 23 28.4	+4.0
MTO3	Montecristo	2.83	83	eP	Pn	17 22 52.4	+0.5
MTO3	Montecristo	2.83	83	eP	Pn	17 22 52.4	+0.5
BOQS	Boqueron	2.91	96	eP	Pn	17 22 54.0	+0.9
LALI	Alcalda de L	2.91	101	eP	Pn	17 22 54.0	+1.2
LALI				eS	Sn	17 23 26.6	-0.2
LALI	Alcalda de L	2.91	101	eP	Pn	17 22 54.0	+1.2
LALI				eS	Sn	17 23 26.6	-0.2
SNET	Serv Nac Est T	2.96	97		Pn	17 22 54.4	+0.7
LFRS	El Faro	3.14	98	eP	Pn	17 22 56.4	+0.4
COEB	Comit de Eme	3.67	99	eP	Pn	17 23 03.9	+0.5
COEB				IAML		17 24 02.5	
COEB	Comit de Eme	3.67	99	eP	Pn	17 23 03.9	+0.5
COEB				IAML		17 24 02.5	
TECA	Tecapa	3.69	99	eP	Pn	17 23 04.5	+0.8
TECA	Tecapa	3.69	99	eP	Pn	17 23 04.5	+0.8
PACA	Pacayal	3.87	98	eP	Pn	17 23 07.9	+1.7
PACA	Pacayal	3.87	98	eP	Pn	17 23 07.9	+1.7
CMIG	Matias Romero	3.92	320	P	Pn	17 23 06.1	-0.7
	14nm,0.3s,baz=142,slow=11,SNR=116						
CMIG				S	Sn	17 23 54.9	+3.1
	106nm,0.3s,baz=45,slow=20,SNR=6.4						
CMIG				LR	LR	17 25 10.0	
	comp=Z,2μm,18.9s,baz=130,slow=43						
CMIG	Matias Romero	3.92	320		Pn	17 23 06.1	-0.7
CMIG					Sn	17 23 46.3	-5.5
CMIG					LR	17 23 55.6	
CMIG	Matias Romero	3.92	320	eP	Pn	17 23 06.1	-0.7
CMIG				eS	Sn	17 23 46.3	-5.5
CMIG				iS	Sb	17 23 55.6	-8.7
HUIG	Huatulco	4.09	295		Pn	17 23 08.0	-1.1
HUIG	Huatulco	4.09	295	eP	Pn	17 23 07.9	-1.1
HUIG				eP	Pb	17 23 08.0	-12
LCND	La Caada	4.31	100	eP	Pn	17 23 12.5	+0.4
LCND	La Caada	4.31	100	eP	Pn	17 23 12.5	+0.4
CNCH	Conchagua	4.37	100	eP	Pn	17 23 13.9	+0.9
CNCH				IAML		17 24 14.7	
	comp=Z,2μm,0.6s						
CNCH	Conchagua	4.37	100	eP	Pn	17 23 13.9	+0.9
CNCH				IAML		17 24 14.7	
	comp=Z,2μm,0.6s						
TGUH	Tegucigalpa,Un	4.84	90		Pn	17 23 20.0	+0.5
ESTN	Estel	5.81	99		Pn	17 23 33.3	+0.5
TLIG	Tlapa	6.99	301		Pn	17 23 52.0	+2.9
TEIG	Tepich	7.20	31	P	Pn	17 23 54.1	+2.2
	comp=Z,48nm,0.3s,baz=144,slow=0.5,SNR=136						
TEIG				LR	LR	17 27 08.6	
	comp=Z,3μm,21.2s,baz=138,slow=43						
TEIG	Tepich	7.20	31		Pn	17 23 53.8	+1.9
TEIG	Tepich	7.20	31	eP	Pn	17 23 53.8	+1.9
TEIG				eS	Sn	17 25 14.3	+1.7
ACON	Acoyapa	7.21	106		Pn	17 23 53.2	+1.2
ESPN	Las Esperanzas	7.97	103		Pn	17 24 03.7	+1.2
JTS	Las Juntas de	8.07	117	P	Pn	17 24 06.5	+2.6
	comp=Z,3.6nm,0.3s,baz=4.4,slow=21,SNR=8.0						
JTS				S	Sn	17 25 37.1	+3.0
	baz=355,slow=23,SNR=1.7						
JTS				LR	LR	17 27 03.6	
	comp=Z,1μm,19.9s,baz=8.5,slow=37						
JTS	Las Juntas de	8.07	117		Pn	17 24 06.2	+2.4
MOIG	Morelia	10.20	304		Pn	17 24 31.9	-1.3
ZAIG	Zacatecas	13.05	313		Pn	17 25 09.9	-2.4
CBCY	The Bluff, Cay	13.22	63		Pn	17 25 16.5	+2.2
MTDJ	Mount Denham	14.73	72	P	P	17 25 40.6	-0.1
833A	Chaparral WMA,	15.65	336		Pn	17 25 47.9	+0.9
833A	Chaparral WMA,	15.65	336	P	Pn	17 25 48.8	+1.7
	baz=153,SNR=5.3						
HKT	Hockley	16.14	349	P	P	17 25 55.7	-0.4
060A	Indiantown	17.02	39	P	P	17 26 07.3	+1.3
SJCC	San Jacinto, C	17.21	102	eP	Pn	17 26 07.0	+0.1
DWPF	Disney Wildern	17.22	34	P	P	17 26 07.6	-0.5
DWPF				IAmb	IAmb	17 26 18.8	
	comp=Z,60nm,0.8s						
DWPF	Disney Wildern	17.22	34	P	Pn	17 26 03.5	-3.4
	baz=217						
342A	Flagon Creek P	17.22	360	P	P	17 26 09.2	+1.1
DBBC	Dabeiba	17.26	112	eP	P	17 26 12.7	+3.9
435B	Jarrell	17.34	344	P	P	17 26 09.7	+0.2
	baz=162						
344A	Westbrook Farm	17.36	4	P	P	17 26 10.7	+1.1
344A				IAmb	IAmb	17 26 33.7	
	comp=Z,48nm,1.0s						
346A	Big Creek Wild	17.42	8	P	P	17 26 13.2	+2.7
346A				IAmb	IAmb	17 26 29.7	
	comp=Z,54nm,0.7s						
656A	Willston	17.68	29	P	P	17 26 13.7	+0.4
JCT	Junction City	17.75	338	P	P	17 26 16.0	+2.0
	baz=155						
HPIG		17.91	318	P	P	17 26 18.8	+2.7
VBMS	Vicksburg	18.13	5	P	P	17 26 19.3	+1.1
VBMS				IAmb	IAmb	17 26 21.7	
	comp=Z,44nm,0.7s						
VBMS	Vicksburg	18.13	5	P	Pn	17 26 17.7	-0.4
	baz=185						
WHTX	Lake Whitney,	18.46	346	P	Pn	17 26 22.9	+0.8
	baz=163						
TXAR	Lajitas Array	18.50	327	P	Pn	17 26 25.7	+2.9
	comp=Z,0.4nm,0.3s,baz=150,slow=13,SNR=60						
TXAR				LR	LR	17 34 46.2	
	comp=Z,232nm,18.9s,baz=0.0,slow=40						
TX31	Lajitas Ar. Si	18.50	327	P	Pn	17 26 25.2	+2.5
TX32	Lajitas Array	18.50	327	P	Pn	17 26 25.1	+2.4
H06E1	SOCORRO T-PHAS	18.50	287	T	T	17 45 22.1	
	SNR=133						
H06S1	SOCORRO T	18.52	287	T	T	17 45 23.4	
	SNR=37						
143A	Socs Landing,	18.56	2	P	P	17 26 22.9	-0.1
143A				IAmb	IAmb	17 26 27.6	
	comp=Z,32nm,0.7s						
SMLC	San Martn de	18.57	104	eP	Pn	17 26 26.4	+2.7
352A	Blakely	18.58	20	P	Pn	17 26 23.8	+0.2
352A				IAmb	IAmb	17 26 31.3	
	comp=Z,87nm,0.9s						
250A	Grady	18.65	16	P	Pn	17 26 25.3	+0.9
250A				IAmb	IAmb	17 26 33.4	
	comp=Z,33nm,0.8s						
GUY2C	Guyana, Caldas	18.82	116	eP	Pn	17 26 27.9	+0.8
TIGA	Tifton	19.03	23	P	Pn	17 26 28.9	-0.1
TIGA	Tifton	19.03	23	P	P	17 26 26.1	-2.0
	baz=206						
456A	Hilliard	19.06	28	P	Pn	17 26 31.2	+1.8
BBAC	Balboa, Cauca	19.07	128	eP	Pn	17 26 30.9	+1.1
NORC	Norcasia	19.09	115	eP	Pn	17 26 30.4	+0.5
Z41A	Richland Creek	19.10	359	P	Pn	17 26 30.3	+0.4
Z41A				IAmb	IAmb	17 26 37.9	
	comp=Z,44nm,0.8s						
Z41A	Richland Creek	19.10	359	P	P	17 26 29.5	+0.6
	baz=178						
POPC	Popayan, Colom	19.19	125	eP	Pn	17 26 31.5	+0.1
LRAL	Lakeview Retre	19.47	13	P	P	17 26 33.8	+0.8
LRAL	Lakeview Retre	19.47	13	P	P	17 26 31.9	-1.1
	baz=195,SNR=7.7						
SOTA	Rioblanco	19.49	126	eP	Pn	17 26 36.6	+1.4
PCON	Cinco Dias	19.54	125	eP	Pn	17 26 36.0	+0.2
ORTC	Ortega, Tolima	19.59	119	eP	Pn	17 26 37.4	+1.5
ABTX	Abilene, Hawle	19.66	341	P	Pn	17 26 37.0	+0.4
ABTX	Abilene, Hawle	19.66	341	P	Pn	17 26 36.9	+0.4
	baz=158						
Z35A	Perchaven, San	19.70	348	P	Pn	17 26 38.1	+1.0
Z35A				IAmb	IAmb	17 26 41.9	
	comp=Z,41nm,0.7s						
LPIG	La Paz	19.74	303	LR	LR	17 34 32.0	
	comp=Z,668nm,18.1s,baz=127,slow=37						
152A	Waverly Hall	19.75	19	P	P	17 26 36.3	+0.3
152A				IAmb	IAmb	17 26 43.8	
	comp=Z,27nm,0.8s						
255A	Hazlehurst	19.90	25	P	P	17 26 38.2	+0.6
255A				IAmb	IAmb	17 27 01.7	
	comp=Z,44nm,0.7s						
ROSC	El Rosal	19.91	116	P	Pn	17 26 39.2	-0.9
	comp=Z,2.6nm,0.3s,baz=17,slow=11,SNR=14						
ROSC				LR	LR	17 35 42.9	
	comp=Z,363nm,20.0s,baz=316,slow=41						
ROSC	El Rosal	19.91	116	P	P	17 26 38.6	+0.2
ROSC				IAmb	IAmb	17 26 42.4	
	comp=Z,81nm,1.3s						
Z50A	Ashland	19.95	16	P	P	17 26 38.8	+0.7
Z50A	Ashland	19.95	16	P	P	17 26 36.9	-1.2
	baz=198,SNR=11						
PRAC	Prado	19.99	119	eP	Pn	17 26 40.5	-0.2
Z51A	Franklin	20.21	17	P	Pn	17 26 42.2	-0.9
154A	Montrose	20.26	23	P	P	17 26 42.2	+0.7
X40A	Basin Creek Fa	20.33	359	P	Pn	17 26 44.0	-0.4
X40A	Basin Creek Fa	20.33	359	P	P	17 26 42.4	+0.1
	baz=178						
PAMC	Pamplona, Colo	20.34	107	eP	Pn	17 26 44.0	-1.2
Y49A	Blount Mountai	20.40	14	P	P	17 26 43.9	+0.9
MIAR	Mount Ida	20.42	357	P	P	17 26 43.2	0.0
MIAR				IAmb	IAmb	17 27 05.8	
	comp=Z,44nm,1.1s						
MIAR	Mount Ida	20.42	357	P	P	17 26 43.4	+0.1
	baz=176,SNR=14						
CHIC	Chingaza	20.53	115	eP	Pn	17 26 46.9	-0.5
RUSC	La Rusia	20.55	111	eP	Pn	17 26 46.6	-1.1
RUSC	La Rusia	20.55	111	P	P	17 26 45.2	-0.1
FLOC	Florencia	20.58	126	eP	Pn	17 26 47.0	-0.6
FLOC	Florencia	20.58	126	P	P	17 26 45.6	+0.3
UALR	University of	20.61	360	P	P	17 26 46.6	+1.3
UALR				IAmb	IAmb	17 27 07.7	
	comp=Z,56nm,0.8s						
X37A	Clayton	20.62	353	P	P	17 26 46.6	+1.2
X37A				IAmb	IAmb	17 26 57.6	
	comp=Z,50nm,0.8s						
X48A	Hartselle	20.83	12	P	P	17 26 47.5	-0.2
X48A				IAmb	IAmb	17 26 58.0	
	comp=Z,32nm,0.8s						
GOGA	Godfrey	20.84	21	P	P	17 26 48.1	+0.3
GOGA				IAmb	IAmb	17 27 10.2	
	comp=Z,27nm,0.8s						
GOGA	Godfrey	20.84	21	P	P	17 26 46.1	-1.7
	baz=204						
W41B	Gary Mavity, V	21.01	0	P	P	17 26 50.9	+1.3
W41B				IAmb	IAmb	17 27 12.0	
	comp=Z,33nm,0.8s						
W41B	Gary Mavity, V	21.01	0	P	P	17 26 50.4	+0.8
	baz=180						
X34A	Smith Ranch, M	21.05	347	P	P	17 26 51.0	+0.9
X34A				IAmb	IAmb	17 27 02.5	
	comp=Z,35nm,0.8s						
X34A					S	17 30 42.6	-0.3
Y52A	Lilburn	21.06	19	P	P	17 26 50.2	0.0
Y52A				IAmb	IAmb	17 27 14.0	
	comp=Z,47nm,1.1s						
Y52A	Lilburn	21.06	19	P	P	17 26 48.9	-1.2
	baz=202						
W39A	Magazine	21.08	357	P	P	17 26 51.3	+1.0
W39A				IAmb	IAmb	17 27 29.1	
	comp=Z,98nm,1.8s						
W39A	Magazine	21.08	357	P	P	17 26 50.2	-0.2
	baz=175						
WHAR	Wooly Hollow	21.12	360	P	P	17 26 52.6	+1.7
WHAR				IAmb	IAmb	17 27 13.3	
	comp=Z,37nm,1.0s						
PLAL	Pickwick Lake	21.16	10	P	P	17 26 51.8	+0.6
PLAL				IAmb	IAmb	17 27 19.8	
	comp=Z,49nm,1.6s						
157A	Early Branch	21.18	27	P	P	17 26 49.4	-2.1
	baz=211						
FPAL	Fort Paine	21.25	15	P	P	17 26 51.9	-0.3
FPAL				IAmb	IAmb	17 27 15.2	
	comp=Z,38nm,0.9s						
MNTX	Cornudas Mount	21.27	328	P	P	17 26 53.7	+1.2
MNTX				IAmb	IAmb	17 26 58.2	
	comp=Z,24nm,0.8s						
MNTX	Cornudas Mount	21.27	328	P	P	17 26 54.6	+2.1
	baz=142						
W35A	Tecumseh	21.40	350	P	P	17 26 53.6	-0.2
WMOK	Wichita Mounta	21.40	345	P	P	17 26 54.8	+0.9
WMOK	Wichita Mounta	21.40	345	P	P	17 26 54.6	+0.7
	baz=162,SNR=19						
X51A	Calhoun	21.47	17	P	P	17 26 56.0	+1.4
X51A				IAmb	IAmb	17 27 04.4	
	comp=Z,66nm,1.4s						
X51A	Calhoun	21.47	17	P	P	17 26 53.7	-0.9
	baz=199						
Z56A	Williston	21.57	25	P	P	17 26 53.2	-2.5
	baz=209						
FNO	Franklin	21.60	349	P	P	17 26 56.5	+0.5
FCAR	Ozark Folk Cen	21.72	0	P	P	17 26 57.6	+0.3
OKCFA	Oklahoma City	21.76	348	P	P	17 26 57.6	0.0
SDV	Santo Domingo	21.80	101	P	P	17 26 57.7	-0.8
	comp=Z,6.1nm,0.7s,baz=308,slow=9.0,SNR=11						
SDV				LR	LR	17 36 15.3	
	comp=Z,412nm,21.2s,baz=278,slow=39						
SDV	Santo Domingo	21.80	101	P	P	17 26 57.3	-1.3
SWET	Sewanee	21.81	14	P	P	17 26 58.0	-0.3
SWET				IAmb	IAmb	17 27 01.1	
	comp=Z,26nm,0.7s						
X53A	Estanollee	21.89	20	P	P	17 26 57.2	-2.0
	baz=203						
Y55A	Saluda	21.91	24	P	P	17 26 57.3	-2.0
	baz=208,SNR=6.0						
LCAR	Lake Charles	21.93	2	P	P	17 26 58.9	-0.5
W50A	Signal Mountai	21.95	15	P	P	17 26 59.9	+0.1
W50A				IAmb	IAmb	17 27 38.6	
	comp=Z,82nm,1.8s						
W50A	Signal Mountai	21.95	15	P	P	17 26 58.1	-1.7
	baz=198						
TUL1	Leonard	21.98	352	P	P	17 26 60.0	0.0
TUL1				IAmb	IAmb	17 27 24.8	
	comp=Z,28nm,0.8s						
TUL1	Leonard	21.98	352	P	P	17 27 00.2	+0.2
	baz=170						
MSTX	Muleshoe	21.98	336	P	P	17 27 00.7	+0.5
MSTX				IAmb	IAmb	17 27 02.5	
	comp=Z,29nm,0.6s						
MSTX	Muleshoe	21.98	336	P	P	17 27 01.4	+1.2
	baz=151						
HODGE	Hodges	22.02	23	P	P	17 27 00.8	+0.4
V48A	Smith Brothers	22.12	12	P	P	17 27 00.7	-0.9
U40A	Yellville	22.20	359	P	P	17 27 01.7	-0.7
U40A	Yellville	22.20	359	P	P	17 27 02.5	+0.2
	baz=178						
X54A	Belton	22.26	22	P	P	17 27 01.2	-1.8
	baz=206						
WVT	Waverly	22.32	9	P	P	17 27 02.5	-1.2
WVT	Waverly	22.32	9	P	P	17 27 02.5	-1.2
	baz=191						
U38A	Gravette	22.35	355	P	P	17 27 03.6	-0.5
U38A				IAmb	IAmb	17 27 43.5	
	comp=Z,53nm,1.6s						
CPCT	Cooper Cave	22.39	17	P	P	17 27 04.4	-0.1
CPCT				IAmb	IAmb	17 27 23.8	
	comp=Z,25nm,0.7s						
AMTX	Amarillo	22.40	339	P	P	17 27 05.3	+0.6
AMTX	Amarillo	22.40	339	P	P	17 27 06.3	+1.6
	baz=155						
JSC	Jenkinsville	22.45	24	P	P	17 27 04.0	-1.1
BG3	Lake Jocassee	22.46	20	P	P	17 27 05.0	-0.3
X55A	Gracelyn & Ava	22.47	23	P	P	17 27 03.3	-1.9
	baz=207						
W53A	Cullowhee	22.55	20	P	P	17 27 03.9	-2.4
	baz=203						
CLTN	Cedars of Leba	22.56	13	P	P	17 27 06.0	-0.2
CLTN				IAmb	IAmb	17 27 08.3	
	comp=Z,23nm,0.7s						
Y57A	Sumter	22.58	26	P	P	17 27 06.2	-0.3
Y57A				IAmb	IAmb	17 27 39.7	
	comp=Z,29nm,0.8s						
Y57A	Sumter	22.58	26	P	P	17 27 04.2	-2.3
	baz=211						

PBMO Poplar Bluff 22.67 4 P P 17 27 06.5 -0.9
PAULI Pauline 22.71 23 P P 17 27 06.7 -1.2
PAULI IAmb IAmb 17 27 19.4
comp=Z,28nm,0.9s
X56A White Oak 22.72 25 P P 17 27 05.6 -2.4
baz=209
V51A Loudon 22.77 17 P P 17 27 08.3 -0.2
V51A Loudon 22.77 17 P P 17 27 06.7 -1.8
baz=200,SNR=6.3
TKL Tuckaleechee C 22.81 18 P P 17 27 08.8 -0.1
comp=Z,11nm,0.7s,baz=181,slow=17,SNR=7.9
TKL LR LR 17 37 44.7
comp=Z,987nm,19.0s,baz=200,slow=41
TKL Tuckaleechee C 22.81 18 P P 17 27 09.2 +0.3
W54A Cherokee Point 22.81 22 P P 17 27 07.0 -1.9
baz=205
Y58A Scranton 22.81 28 P P 17 27 07.0 -1.9
baz=213
SRIG Santa Rosalia 22.83 308 P P 17 27 10.9 +1.7
SRIG IAmb IAmb 17 27 13.6
comp=Z,69nm,1.6s
MGMO Mountain Grove 22.98 360 P P 17 27 09.5 -1.2
V52A Sevierville 23.03 18 P P 17 27 10.3 -0.9
V52A IAmb IAmb 17 27 25.9
comp=Z,80nm,1.6s
V52A Sevierville 23.03 18 P P 17 27 10.0 -1.2
baz=201
T35A Sooner Cattle 23.06 351 P P 17 27 10.6 -1.0
T35A IAmb IAmb 17 27 13.6
comp=Z,24nm,0.8s
U49A Red Boiling Sp 23.09 13 P P 17 27 09.6 -2.1
U49A IAmb IAmb 17 27 13.0
comp=Z,34nm,0.8s
BIRD Birdtown, Kers 23.09 25 P P 17 27 10.5 -1.3
BIRD IAmb IAmb 17 27 13.8
comp=Z,19nm,0.6s
V53A Saluda 23.12 20 P P 17 27 11.8 -0.4
V53A IAmb IAmb 17 27 40.0
comp=Z,24nm,0.8s
V53A Saluda 23.12 20 P P 17 27 10.8 -1.4
baz=203
KMSC Kings Mountain 23.17 23 P P 17 27 11.4 -1.2
KMSC IAmb IAmb 17 27 42.3
comp=Z,25nm,0.8s
KMSC Kings Mountain 23.17 23 P P 17 27 11.1 -1.6
baz=207,SNR=8.2
121A Cookes Peak, D 23.20 325 P P 17 27 15.6 +2.4
121A IAmb IAmb 17 27 21.2
comp=Z,44nm,0.8s
121A Cookes Peak, D 23.20 325 P P 17 27 15.7 +2.5
baz=138
319A Douglas 23.25 321 P P 17 27 16.0 +2.4
319A IAmb IAmb 17 27 22.5
comp=Z,24nm,0.9s
T47A Sharon Grove 23.28 10 P P 17 27 12.2 -1.5
T47A IAmb IAmb 17 27 49.8
comp=Z,26nm,0.8s
W56A Indian Trail 23.46 25 P P 17 27 14.0 -1.5
baz=209
V54A Nebo 23.51 21 P P 17 27 14.2 -1.8
baz=205
S39A Bolivar 23.54 358 P P 17 27 14.3 -1.9
S44A Carbondale 23.68 6 P P 17 27 16.6 -0.9
TZTN Tazewell 23.70 18 P P 17 27 16.5 -1.2
TZTN IAmb IAmb 17 27 50.5
comp=Z,38nm,1.1s
TZTN Tazewell 23.70 18 P P 17 27 16.3 -1.4
baz=201
T49A Edmonton 23.71 13 P P 17 27 16.4 -1.4
T49A IAmb IAmb 17 27 52.6
comp=Z,72nm,1.8s
T49A Edmonton 23.71 13 P P 17 27 16.5 -1.4
baz=196,SNR=7.0
W57A Gilead 23.72 26 P P 17 27 16.3 -1.7
W57A IAmb IAmb 17 27 19.6
comp=Z,15nm,0.7s
W57A Gilead 23.72 26 P P 17 27 16.3 -1.7
baz=210,SNR=5.6
T50A Nancy 23.79 15 P P 17 27 17.1 -1.6
baz=198,SNR=6.8
U53A Fall Branch 23.83 20 P P 17 27 16.9 -2.1
baz=203
V55A Taylorsville 23.85 23 P P 17 27 18.3 -0.9
V55A IAmb IAmb 17 27 44.4
comp=Z,25nm,1.0s
V55A Taylorsville 23.85 23 P P 17 27 17.3 -1.9
baz=207
CCM Cathedral Cave 23.90 2 P P 17 27 18.3 -1.3
CCM Cathedral Cave 23.90 2 P P 17 27 18.3 -1.3
baz=182
W58A Raeford 23.94 27 P P 17 27 18.1 -1.9
baz=212
T51A Gray 23.98 17 P P 17 27 18.8 -1.6
baz=200
V56A Mocksville 24.09 24 P P 17 27 19.2 -2.2
baz=208
USIN University of 24.14 9 P P 17 27 20.1 -1.8
USIN IAmb IAmb 17 27 23.1
comp=Z,40nm,0.9s
X60A Albert Glenn T 24.15 30 P P 17 27 18.8 -3.2
baz=215
U54A Nelsons Funny 24.23 21 P P 17 27 21.3 -1.5
U54A IAmb IAmb 17 27 51.5
comp=Z,28nm,0.9s
U54A Nelsons Funny 24.23 21 P P 17 27 21.2 -1.5
baz=205
T52A Hallie 24.39 18 P P 17 27 23.2 -1.0
T52A IAmb IAmb 17 27 46.7
comp=Z,49nm,1.4s
T52A Hallie 24.39 18 P P 17 27 22.8 -1.3
baz=202,SNR=5.6
T53A Wise 24.41 19 P P 17 27 22.4 -2.0
baz=203
ANMO Albuquerque 24.41 331 P P 17 27 27.3 +2.6
comp=Z,11nm,0.7s,baz=144,slow=10,SNR=36
ANMO Albuquerque 24.41 331 P P 17 27 25.7 +1.0
ANMO Albuquerque 24.41 331 P P 17 27 26.1 +1.5
baz=144
S49A Springfield 24.41 13 P P 17 27 22.8 -1.6
baz=196,SNR=11
V57A Coltrane Farms 24.44 25 P P 17 27 22.6 -2.0
baz=210,SNR=7.5
MPR Mayaguez 24.47 77 P P 17 27 23.4 -1.7
U55A TA2, Sparta 24.49 22 P P 17 27 23.0 -2.1
baz=207
S50A Richmond 24.53 15 P P 17 27 23.7 -1.8
baz=198,SNR=8.1
U56A King 24.60 24 P P 17 27 24.9 -1.2
U56A IAmb IAmb 17 27 52.3
comp=Z,46nm,1.3s
U56A King 24.60 24 P P 17 27 24.0 -2.1
baz=208
WCI Wyandotte Cave 24.63 11 P P 17 27 25.5 -0.9
WCI Wyandotte Cave 24.63 11 P P 17 27 25.6 -0.8
baz=194
V58A Windy Hill, Pi 24.64 26 P P 17 27 25.4 -1.1
V58A IAmb IAmb 17 27 58.8
comp=Z,20nm,0.8s
V58A Windy Hill, Pi 24.64 26 P P 17 27 24.2 -2.2
baz=212,SNR=5.9
W60A Pink Hill 24.66 30 P P 17 27 23.7 -2.9
baz=215
S51A Beattyville 24.70 17 P P 17 27 25.3 -1.7
S51A IAmb IAmb 17 27 30.6
comp=Z,20nm,0.8s
T54A Tazewell 24.80 21 P P 17 27 26.4 -1.6
baz=205
TUC Tucson 24.82 320 P P 17 27 29.9 +1.7
TUC Tucson 24.82 320 P P 17 27 30.2 +1.9
baz=132
OLIL Olney 24.84 8 P P 17 27 27.3 -0.9
R49A Shelbyville 24.93 13 P P 17 27 27.5 -1.5
R49A IAmb IAmb 17 27 44.4
comp=Z,19nm,0.8s
R49A Shelbyville 24.93 13 P P 17 27 27.8 -1.2
baz=196
V59A Middlesex 25.00 28 P P 17 27 27.3 -2.4
baz=213
U57A Blanch 25.09 25 P P 17 27 28.5 -2.0
baz=210
R50A Paris 25.12 15 P P 17 27 29.5 -1.2
R50A Paris 25.12 15 P P 17 27 29.4 -1.3
baz=198
T55A Pulaski 25.13 22 P P 17 27 29.2 -1.8
baz=207
ATAH Atahualpa 25.16 146 P P 17 27 33.7 +1.9
comp=Z,8.1nm,0.9s,baz=136,slow=8.4,SNR=3.2
ATAH LR LR 17 35 56.3
comp=Z,677nm,18.8s,baz=319,slow=33
KSU1 Kansas State U 25.22 352 P P 17 27 31.9 +0.2
baz=170
R51A Hillsboro 25.33 16 P P 17 27 30.7 -1.9
baz=200,SNR=5.7
BLA Blacksburg 25.35 22 P P 17 27 32.5 -0.4
SJG San Juan 25.39 77 LR LR 17 37 25.9
comp=Z,678nm,21.7s,baz=257,slow=36
T25A Trinidad 25.40 337 P P 17 27 34.5 +0.9
T25A IAmb IAmb 17 27 40.0
comp=Z,29nm,0.7s
T25A Trinidad 25.40 337 P P 17 27 35.2 +1.6
baz=151,SNR=14
Q48A North Vernon 25.42 12 P P 17 27 32.7 -0.8
baz=194
CBKS Cedar Bluff 25.52 346 P P 17 27 33.7 -0.7
CBKS IAmb IAmb 17 27 38.0
comp=Z,25nm,0.7s
CBKS Cedar Bluff 25.52 346 P P 17 27 35.0 +0.6
baz=163,SNR=5.9
S54A Dingess, Beckl 25.55 20 P P 17 27 32.6 -2.2
baz=205
T57A Hurt 25.61 25 P P 17 27 35.0 -0.2
T57A Hurt 25.61 25 P P 17 27 33.2 -2.1
baz=210
Q49A Aurora 25.67 13 P P 17 27 34.4 -1.3
baz=196
U59A Littleton 25.69 28 P P 17 27 35.5 -0.4
U59A Littleton 25.69 28 P P 17 27 33.6 -2.4
baz=214
S55A Lewisburg 25.81 22 P P 17 27 35.0 -2.1
baz=206
R53A Hurricane 25.83 19 P P 17 27 36.2 -1.0
baz=203
T58A Grand View Acr 25.86 26 P P 17 27 34.6 -2.9
baz=211
214A Organ Pipe Nat 25.89 317 P P 17 27 39.4 +1.5
214A Organ Pipe Nat 25.89 317 P P 17 27 40.2 +2.3
baz=128
X18A Snowflake 25.89 325 P P 17 27 40.0 +1.9
P48A Milroy 25.99 12 P P 17 27 37.1 -1.6
P48A IAmb IAmb 17 27 42.5
comp=Z,82nm,1.8s
P48A Milroy 25.99 12 P P 17 27 37.8 -0.9
baz=195
Q51A Peebles 26.07 16 P P 17 27 37.9 -1.5
Q51A IAmb IAmb 17 28 06.2
comp=Z,21nm,0.8s
Q51A Peebles 26.07 16 P P 17 27 37.7 -1.7
baz=200,SNR=5.2
S56A Natural Bridge 26.08 23 P P 17 27 37.6 -1.9
baz=209
W18A Petrified Fore 26.21 326 P P 17 27 41.7 +0.7
W18A Petrified Fore 26.21 326 P P 17 27 42.7 +1.7
baz=138
P49A Miami Univ. Ec 26.22 13 P P 17 27 39.4 -1.3
baz=196
U61A Possum Corner 26.30 30 P P 17 27 38.6 -2.9
baz=216
T59A Double "B" Far 26.31 27 P P 17 27 40.3 -1.2
T59A Double "B" Far 26.31 27 P P 17 27 39.3 -2.3
baz=213
Q52A Bidwell 26.31 18 P P 17 27 39.8 -1.8
baz=202,SNR=6.2
SDCO Great Sand Dun 26.35 336 P P 17 27 42.5 +0.1
SDCO Great Sand Dun 26.35 336 P P 17 27 42.7 +0.4
baz=150,SNR=7.8
S57A Dark Hollow, R 26.39 24 P P 17 27 40.5 -1.8
baz=210
R55A Marlinton 26.40 22 P P 17 27 40.6 -1.9
baz=207
Q53A Leroy 26.45 19 P P 17 27 41.1 -1.7
baz=204
KSCO Kaye Shedlock' 26.47 342 P P 17 27 43.2 0.0
KSCO IAmb IAmb 17 27 50.8
comp=Z,25nm,1.0s
KSCO Kaye Shedlock' 26.47 342 P P 17 27 43.8 +0.6
baz=157
P50A Jamestown 26.50 15 P P 17 27 41.6 -1.7
baz=198
HDIL Hopedale 26.51 5 P P 17 27 42.5 -0.9
baz=186
P51A Williamsport 26.57 16 P P 17 27 42.1 -1.8
P51A IAmb IAmb 17 28 25.9
comp=Z,19nm,0.8s
P51A Williamsport 26.57 16 P P 17 27 42.3 -1.7
baz=200
SFIN Lafayette 26.59 9 P P 17 27 42.4 -1.7
SFIN IAmb IAmb 17 28 40.2
comp=Z,22nm,1.1s
SFIN Lafayette 26.59 9 P P 17 27 42.6 -1.5
baz=191
S58A Poland Farm, P 26.63 26 P P 17 27 42.3 -2.2
baz=212
X16A Lo Mia Camp, P 26.67 323 P P 17 27 46.3 +1.2
R56A Bull Pasture M 26.78 23 P P 17 27 43.7 -2.2
baz=208
Q54A Coxs Mills 26.78 20 P P 17 27 44.1 -1.8
baz=205
O48A Farmland 26.82 12 P P 17 27 44.4 -1.7
baz=195
S22A 4UR Ranch, Cre 26.90 334 P P 17 27 48.6 +1.4
S22A 4UR Ranch, Cre 26.90 334 P P 17 27 48.0 +0.7
baz=147,SNR=8.9
O49A Covington 26.93 13 P P 17 27 45.4 -1.7
baz=197
P52A Corning 26.98 17 P P 17 27 45.7 -1.8
baz=202
R58B Mineral 27.00 26 P P 17 27 46.3 -1.5
R58B Mineral 27.00 26 P P 17 27 45.7 -2.1
baz=212
P53A Whipple 27.06 19 P P 17 27 46.9 -1.4
baz=203
S59A Mechanicsville 27.08 27 P P 17 27 45.3 -3.2
baz=213
MVCO Mesa Verde 27.21 331 P P 17 27 51.3 +1.2
MVCO Mesa Verde 27.21 331 P P 17 27 51.6 +1.6
baz=143,SNR=33
Y14A Wickenburg 27.29 320 P P 17 27 51.7 +1.2
ACSO Alum Creek Sta 27.30 16 P P 17 27 48.8 -1.7
ACSO IAmb IAmb 17 28 34.0
comp=Z,16nm,0.9s
ACSO Alum Creek Sta 27.30 16 P P 17 27 48.8 -1.7
baz=200
N47A Urbana 27.32 11 P P 17 27 49.3 -1.2
baz=194
O51A Pataskala 27.32 16 P P 17 27 49.0 -1.6
baz=200,SNR=5.7
WUAZ Wupatki 27.41 325 P P 17 27 53.4 +1.7
baz=136
N48A Decatur 27.42 12 P P 17 27 50.0 -1.5
baz=195
P54A Burton 27.46 20 P P 17 27 49.6 -2.4
baz=205
O52A Adamsville 27.51 17 P P 17 27 51.1 -1.3
baz=202
N49A Columbus Grove 27.66 13 P P 17 27 52.0 -1.7
baz=197
BGNE Belgrade 27.71 350 P P 17 27 54.5 +0.3
baz=167
O54A Avella 28.02 20 P P 17 27 55.3 -1.6
baz=205
OGNE Ogallala 28.10 344 P P 17 27 57.8 +0.1
OGNE IAmb IAmb 17 28 58.2
comp=Z,41nm,1.6s
OGNE Ogallala 28.10 344 P P 17 27 58.2 +0.4
baz=159
SMCO Snowmass 28.17 335 P P 17 27 58.2 -0.6
ISCO Idaho Springs 28.19 338 P P 17 27 59.3 +0.6
ISCO Idaho Springs 28.19 338 P P 17 27 59.9 +1.1
baz=151
N52A McGinn's Farm, 28.19 17 P P 17 27 56.6 -1.8
baz=202
M49A Liberty Center 28.23 13 P P 17 27 57.7 -1.1
baz=197
PDMCI Parker Dam,Lak 28.24 319 P P 17 28 00.9 +1.9
baz=130
P57A Homestead Farm 28.25 24 P P 17 27 58.5 -0.4
M50A Fremont 28.39 15 P P 17 27 58.5 -1.6
M50A IAmb IAmb 17 28 00.6
comp=Z,13nm,0.7s
M50A Fremont 28.39 15 P P 17 27 58.7 -1.5
baz=199
N53A Lisbon 28.44 18 P P 17 27 59.3 -1.4
baz=203
L47A Sherwood 28.47 11 P P 17 27 59.9 -1.0
baz=194
U15A North Rim 28.59 325 P P 17 28 04.6 +2.3
L48A N Adams 28.59 12 P P 17 28 00.6 -1.3
baz=196,SNR=6.4
W13A Hualapai Mount 28.60 321 P P 17 28 04.3 +1.9
BC3 Big Chuckawall 28.69 317 P P 17 28 05.4 +2.3
baz=127
JFWS Jewell Farm 28.79 3 P P 17 28 03.2 -0.6
baz=184
IRM Iron Mountain 28.79 318 P P 17 28 06.0 +2.1
baz=128
N54A Moraine State 28.85 19 P P 17 28 02.5 -1.8
baz=205
L49A Milan 28.89 13 P P 17 28 03.3 -1.3
baz=197
M52A Chesterland 28.96 17 P P 17 28 03.6 -1.7
M52A IAmb IAmb 17 28 07.7
comp=Z,17nm,0.7s
M52A Chesterland 28.96 17 P P 17 28 04.2 -1.1
baz=202
P59A Jarrettsville 29.00 26 P P 17 28 04.6 -1.0
baz=213
O57A Amberson 29.02 23 P P 17 28 04.0 -1.8
baz=210
L50A Kingsville 29.05 15 P P 17 28 04.7 -1.3
baz=199
K46A Dorr 29.05 10 P P 17 28 04.3 -1.8
baz=193
M53A WI Miller and 29.07 18 P P 17 28 04.6 -1.6
baz=203
K47A Vermontville 29.18 11 P P 17 28 05.4 -1.8
baz=194
N23A Red Feather La 29.27 338 P P 17 28 08.7 +0.4
baz=152
SSPA Standing Stone 29.29 23 P P 17 28 06.4 -1.8
baz=209
KNB Kanab 29.30 325 P P 17 28 10.4 +1.8
PFO Pinyon Flats O 29.34 316 LR LR 17 41 16.4
comp=Z,249nm,20.0s,baz=120,slow=39
M54A Oil Creek Stat 29.45 19 P P 17 28 07.8 -1.8
baz=205
K48A Perry 29.48 12 P P 17 28 06.9 -3.0
baz=196
LCMT Little Creek M 29.54 324 P P 17 28 11.6 +0.9
L53A Girard 29.66 18 P P 17 28 09.9 -1.6
baz=204
SRU San Rafael Swe 29.69 331 P P 17 28 13.4 +1.4
M55A Ridgway 29.71 21 P P 17 28 09.9 -2.1
baz=207
ECSD EROS Data Cent 29.79 354 P P 17 28 11.8 -0.9
ECSD EROS Data Cent 29.79 354 P P 17 28 11.9 -0.8
baz=171
Q16A Castle Valley 29.85 329 P P 17 28 16.1 +2.7
SZCU Shurtz Canyon 29.87 325 P P 17 28 15.4 +1.8
MSU Marysvale 30.05 328 P P 17 28 17.4 +2.1
NNA Nana 30.07 149 LR LR 17 38 00.4
comp=Z,427nm,21.6s,baz=323,slow=32
P17A Butcher Ranch, 30.08 331 P P 17 28 16.3 +0.9
TMUT Trail Mountain 30.17 330 P P 17 28 18.7 +2.4
M57A Sunshine Farm, 30.19 23 P P 17 28 15.8 -0.4
M57A IAmb IAmb 17 28 20.4
comp=Z,27nm,1.2s
M57A Sunshine Farm, 30.19 23 P P 17 28 13.8 -2.3
baz=210
J49A Marlette 30.22 13 P P 17 28 14.3 -2.1
baz=197
LUPA Lehigh Univers 30.27 26 P P 17 28 15.7 -1.1
I45A Fountain 30.30 9 P P 17 28 15.5 -1.6
baz=191
N59A State Game Lan 30.37 25 P P 17 28 15.6 -2.2
baz=213
RDMU Red Mountain 30.43 333 P P 17 28 18.2 -0.3
M58A Price's Panora 30.48 24 P P 17 28 17.0 -1.8
baz=211
L56A Greenwood 30.72 22 P P 17 28 19.1 -1.8
baz=208
J52A Paris 30.78 17 P P 17 28 19.4 -1.9
baz=202
I49A Point Hope 30.84 13 P P 17 28 20.7 -1.2
baz=198
MPU Maple Canyon 30.93 330 P P 17 28 21.8 -1.2
PSUT Pine Spring 30.96 326 P P 17 28 25.0 +1.8
K22A Casper 31.02 339 P P 17 28 24.4 +0.7
baz=152
M59A Waymart 31.03 25 P P 17 28 21.6 -1.9
baz=213
K55A Perry 31.07 20 P P 17 28 22.7 -1.2
baz=207
NLU North Lily Min 31.10 330 P P 17 28 26.0 +1.5
I51A Listowel 31.15 16 P P 17 28 22.7 -1.9
baz=201
M60A Port Jervis 31.19 26 P P 17 28 22.7 -2.3
baz=214
PAL Palisades 31.24 27 P P 17 28 23.6 -1.8
baz=216
LRMC Laurel Mtn Rad 31.25 318 P P 17 28 27.7 +2.0
baz=126
L58A Harry Jones Me 31.29 24 P P 17 28 24.1 -1.7
baz=212
K56A Middlesex 31.30 21 P P 17 28 23.6 -2.4
baz=208
JLU Jordanelle 31.30 331 P P 17 28 27.0 +0.7
BINY Binghamton 31.36 24 P P 17 28 24.4 -2.2
baz=211
MPMC Manual Prospec 31.47 319 P P 17 28 29.8 +2.0
baz=127
CTU Camp Tracy 31.52 331 P P 17 28 28.4 +0.3
M61A Granite Spring 31.55 27 P P 17 28 25.7 -2.4
baz=216
RSSD Black Hills 31.59 344 P P 17 28 27.8 -1.0
RSSD Black Hills 31.59 344 P P 17 28 29.3 +0.6
baz=158
K57A Scipio Center 31.62 22 P P 17 28 27.5 -1.3
baz=210
DUG Dugway, Tooele 31.65 329 P P 17 28 29.5 +0.3
DUG Dugway, Tooele 31.65 329 P P 17 28 30.8 +1.6
baz=139
TCUT Toone Canyon 31.69 332 P P 17 28 31.2 +1.5
L59A Walton 31.73 25 P P 17 28 28.8 -1.0
L59A Walton 31.73 25 P P 17 28 27.8 -2.0
baz=213
R11A Troy Canyon, C 31.80 324 P P 17 28 30.8 +0.2
R11A Troy Canyon, C 31.80 324 P P 17 28 33.0 +2.4
baz=133
L60A Shokan 31.91 26 P P 17 28 29.8 -1.5
baz=214
J56A Wolcott 31.97 21 P P 17 28 28.9 -2.9
J56A Wolcott 31.97 21 P P 17 28 29.6 -2.2
baz=209
K58A Earlville 31.98 23 P P 17 28 30.2 -1.8
K58A Earlville 31.98 23 P P 17 28 30.3 -1.6
baz=211
HWUT Hardware Ranch 32.15 332 P P 17 28 34.7 +1.0
HWUT IAmb IAmb 17 28 46.8
comp=Z,14nm,0.9s
BW06 Boulder Array 32.25 336 P P 17 28 36.4 +1.8
BW06 Boulder Array 32.25 336 P P 17 28 35.8 +1.2
baz=147
PD31 Pinedale Array 32.25 336 P P 17 28 34.5 -0.1
PDAR Pinedale Array 32.25 336 P P 17 28 35.3 +0.7
comp=Z,1.6nm,0.6s,baz=156,slow=8.3,SNR=12
PDAR PcP PcP 17 31 25.0 +2.4
comp=Z,1.6nm,0.6s,baz=146,slow=5.4,SNR=9.2
PDAR LR LR 17 43 42.4
comp=Z,287nm,19.7s,baz=154,slow=40
BGU Big Grassy Mou 32.31 330 P P 17 28 36.6 +1.6
SPUT South Promonto 32.33 331 P P 17 28 36.6 +1.4
J57A Williamstown 32.40 22 P P 17 28 33.8 -1.8
baz=210
I55A Frankford 32.52 20 P P 17 28 35.6 -1.0
baz=207
H53A Bobcaygeon 32.55 18 P P 17 28 34.9 -2.1
baz=205,SNR=5.7
SADO Sadowa 32.57 17 P P 17 28 34.9 -2.2
comp=Z,6.8nm,0.6s,baz=250,slow=7.0,SNR=11
SADO LR LR 17 43 35.3
comp=Z,1μm,18.2s,baz=195,slow=40
SADO Sadowa 32.57 17 P P 17 28 35.2 -1.8
J58A Remsen 32.62 23 P P 17 28 35.4 -2.2
baz=211
F48A Evansville 32.68 13 P P 17 28 35.8 -2.2
baz=197
DELO Deloro Mine 32.81 19 P P 17 28 37.3 -1.9
DELO IAmb IAmb 17 28 40.0
comp=Z,11nm,0.7s

HVU Hansel Valley 32.85 331 P P 17 28 41.5 +1.7
AHID Auburn Hatcher 32.88 334 P P 17 28 40.7 +0.6
AHID IAmb IAmb 17 29 00.7
comp=Z,16nm,1.0s
H55A Tweed 32.98 20 P P 17 28 39.8 -0.8
baz=207
J59A Piesco 33.02 24 P P 17 28 39.0 -2.0
baz=212
I58A Old Forge 33.02 23 P P 17 28 39.7 -1.4
baz=212,SNR=5.3
G53A Haliburton 33.04 18 P P 17 28 39.1 -2.1
baz=204,SNR=5.4
E47A Iron Bridge 33.15 11 P P 17 28 40.5 -1.6
baz=196
REDW Red Top Meadow 33.27 335 P P 17 28 45.2 +1.7
J60A Lant Hill Farm 33.27 25 P P 17 28 41.1 -2.1
baz=214
ELK Elko 33.29 327 P P 17 28 46.5 +2.8
comp=Z,8.7nm,0.7s,baz=136,slow=6.3,SNR=36
ELK PcP PcP 17 31 27.1 +1.6
comp=Z,1.6nm,0.6s,baz=102,slow=1.4,SNR=3.1
ELK LR LR 17 43 51.7
comp=Z,660nm,19.8s,baz=151,slow=39
ELK Elko 33.29 327 P P 17 28 45.9 +2.1
ELK IAmb IAmb 17 28 50.0
comp=Z,9.1nm,0.8s
SNOW Snow King Moun 33.31 335 P P 17 28 45.0 +1.1
H56A Elgin 33.33 21 P P 17 28 42.3 -1.4
baz=209
NV11 Mina Array Sit 33.37 321 P P 17 28 46.8 +2.5
E48A Lockeyer 33.40 13 P P 17 28 42.1 -2.2
baz=198
TPAW Teton Pass 33.42 335 P P 17 28 45.1 +0.3
F51A Arnstein 33.42 16 P P 17 28 43.2 -1.3
baz=202
D46A Sault St. Mari 33.43 10 P P 17 28 42.6 -1.9
baz=194,SNR=8.6
G54A Lake Saint Pet 33.45 18 P P 17 28 42.6 -2.2
baz=205
F52A Sundridge 33.45 17 P P 17 28 42.9 -1.9
baz=203
NVAR Mina Array Bea 33.46 321 P P 17 28 48.2 +3.1
comp=Z,8.2nm,0.7s,baz=133,slow=8.4,SNR=48
NVAR PcP PcP 17 31 27.6 +1.6
comp=Z,1.6nm,0.6s,baz=128,slow=3.3,SNR=5.1
HRV Adam Dziewonsk 33.50 28 P P 17 28 42.5 -2.7
baz=218
FXWY Fox Creek 33.57 335 P P 17 28 47.2 +1.1
KVN Kaiserville 33.73 322 P P 17 28 50.2 +2.7
KVN IAmb IAmb 17 28 56.9
comp=Z,22nm,1.3s
IMW Indian Meadow 33.75 335 P P 17 28 48.9 +1.2
IMW IAmb IAmb 17 28 50.8
comp=Z,6.5nm,0.8s
G55A Calabogie 33.76 20 P P 17 28 45.9 -1.5
baz=208
D47A Chapleau 33.76 11 P P 17 28 45.7 -1.8
baz=196
EYMN Ely 33.78 1 P P 17 28 46.4 -1.1
baz=181
FLWY Flagg Ranch 33.81 336 P P 17 28 49.7 +1.5
FLWY IAmb IAmb 17 29 18.5
comp=Z,16nm,1.1s
H58A Gabriels 33.94 23 P P 17 28 47.5 -1.6
baz=212
LONY Lake Ozonia 33.96 23 P P 17 28 47.4 -1.8
baz=211
ALGO Algonquin Park 33.96 18 P P 17 28 47.3 -1.9
baz=205
E51A G1948 Merrick 34.09 16 P P 17 28 48.0 -2.3
baz=202
E52A Mattawa 34.09 17 P P 17 28 48.2 -2.0
baz=204
D48A Paudash Townsh 34.14 13 P P 17 28 48.2 -2.5
baz=198
RLMT Red Lodge 34.15 338 P P 17 28 52.0 +0.9
RLMT Red Lodge 34.15 338 P P 17 28 52.0 +0.9
baz=149
MDND Maddock 34.22 351 P P 17 28 51.2 -0.2
MDND Maddock 34.22 351 P P 17 28 51.3 -0.2
baz=167
G57A Newington 34.23 22 P P 17 28 49.5 -2.0
baz=210
YNE Yellowstone No 34.32 337 P P 17 28 53.5 +0.9
J63A Strafford 34.32 28 P P 17 28 50.5 -1.8
baz=218
YERR Yerington 34.38 321 P P 17 28 56.0 +2.8
YERR IAmb IAmb 17 29 02.2
comp=Z,8.6nm,0.8s
F55A Otter Lake 34.39 20 P P 17 28 50.7 -2.2
baz=208
YMR Madison River 34.40 336 P P 17 28 53.3 0.0
YHH Holmes Hill 34.45 336 P P 17 28 55.8 +2.0
E53A Dumoine, Ponti 34.46 18 P P 17 28 51.7 -1.9
baz=205
D50A G1974 Best Tow 34.59 15 P P 17 28 52.0 -2.6
baz=201
D51A Lot 18 Range I 34.63 16 P P 17 28 52.6 -2.4
baz=202
YHL Hebgen Lake 34.64 336 P P 17 28 56.9 +1.4
E54A Lac Daplat, Po 34.66 18 P P 17 28 53.1 -2.1
baz=206
PNTR Pine Nut 34.66 321 P P 17 28 59.6 +4.0
PNTR IAmb IAmb 17 29 05.4
comp=Z,11nm,0.8s
QLMT Earthquake Lak 34.72 336 P P 17 28 58.4 +2.4
GCMT Greycliff 34.87 339 P P 17 28 58.1 +0.9
PAHR Pah Rah Range 34.92 322 P P 17 28 58.9 +1.1
D53A Lac Vacive, Po 35.09 17 P P 17 28 56.7 -2.2
D53A IAmb IAmb 17 28 59.9
comp=Z,9.1nm,0.8s
D53A Lac Vacive, Po 35.09 17 P P 17 28 56.5 -2.4
baz=205
MCMT McKenzie Canyo 35.30 334 P P 17 29 03.4 +2.3
H62A Milan 35.31 26 P P 17 28 58.4 -2.4
baz=217
E56A St. Veronique 35.45 21 P P 17 29 00.4 -1.6
baz=209
D54A Lac Fusel, La 35.46 18 P P 17 29 00.2 -1.9
baz=206
MFID Camas Ranch 35.55 330 P P 17 29 04.6 +1.5
MFID IAmb IAmb 17 29 12.6
comp=Z,9.3nm,0.8s
DLMT Dillon 35.63 335 P P 17 29 04.6 +0.8
DGMT Dagmar 35.69 346 P P 17 29 04.1 0.0
DGMT IAmb IAmb 17 29 10.4
comp=Z,16nm,0.8s
DGMT Dagmar 35.69 346 P P 17 29 04.7 +0.5
baz=160
D55A Sainte-Anne-du 35.72 20 P P 17 29 02.9 -1.5
baz=208
E58A La Victoria 35.93 23 P P 17 29 04.1 -2.1
baz=212
D56A ZEC Mazanza, M 35.99 20 P P 17 29 04.5 -2.2
baz=209
G62A West of Eustis 36.09 26 P P 17 29 05.6 -2.0
baz=217
ORV Oroville 36.11 320 P P 17 29 10.1 +2.2
ULM Lac du Bonnet 36.20 356 P P 17 29 07.2 -1.1
comp=Z,2.1nm,0.6s,baz=172,slow=10.0,SNR=6.7
ULM PcP PcP 17 31 33.8 +0.5
comp=Z,2.4nm,0.6s,baz=183,slow=6.0,SNR=3.5
ULM LR LR 17 47 26.9
comp=Z,322nm,18.3s,baz=169,slow=42
ULM Lac du Bonnet 36.20 356 P P 17 29 07.1 -1.3
D57A Chemin Vers le 36.26 21 P P 17 29 07.5 -1.5
baz=211
WVOR Wild Horse Val 36.29 326 P P 17 29 11.5 +2.0
WVOR IAmb IAmb 17 29 16.0
comp=Z,7.9nm,0.8s
E60A Ste Agathe de 36.64 24 P P 17 29 10.3 -1.9
baz=215
D58A Chemin du LacG 36.69 22 P P 17 29 10.5 -2.2
baz=212
SAML Samuel 36.82 127 P P 17 29 12.4 -1.7
SAML IAmb IAmb 17 29 22.8
comp=Z,13nm,1.3s
EGMT Eagleton 36.84 340 P P 17 29 14.6 +0.6
EGMT IAmb IAmb 17 29 16.4
comp=Z,11nm,0.6s
EGMT Eagleton 36.84 340 P P 17 29 15.0 +1.0
baz=151,SNR=10
J08A Circle Bar Ran 36.84 327 P P 17 29 15.9 +1.7
MOD Modoc Plateau 36.86 324 P P 17 29 15.3 +0.9
MOD IAmb IAmb 17 29 20.3
comp=Z,7.1nm,0.8s
LATQ La Tuque 36.97 22 P P 17 29 12.7 -2.3
baz=212
LSQQ Lebel-sur-Quev 37.08 17 P P 17 29 14.0 -1.9
baz=205
F63A Nahmakanta, Br 37.10 27 P P 17 29 15.0 -1.2
baz=219
BMO Blue Mountains 37.33 330 P P 17 29 19.1 +0.8
BMO IAmb IAmb 17 29 22.3
comp=Z,6.4nm,0.8s
MATQ Matagami 37.55 16 P P 17 29 17.7 -2.1
baz=203
M04C Macdoel 37.67 323 P P 17 29 23.5 +2.2
baz=128
D61A St Aubert, Com 37.82 25 P P 17 29 20.1 -2.2
baz=216
I07A Izee 37.88 328 P P 17 29 24.2 +1.3
E63A Oxbow 37.95 27 P P 17 29 21.7 -1.7
baz=219
M02C Callahan 38.04 322 P P 17 29 25.2 +1.0
baz=126
F10A Beach Ranch, E 38.13 332 P P 17 29 25.5 +0.5
YBH Yreka Blue Hor 38.15 322 P P 17 29 26.1 +0.8
comp=Z,1.8nm,0.6s,baz=124,slow=3.9,SNR=6.9
YBH Yreka Blue Hor 38.15 322 IAmb IAmb 17 30 10.2
comp=Z,14nm,1.6s
D62A Allapoint, All 38.20 26 P P 17 29 24.1 -1.2
baz=218
L04D Klamath Falls 38.21 323 P P 17 29 27.3 +1.5
baz=128
J05D Fort Rock, OR 38.28 325 P P 17 29 27.7 +1.3
baz=130
LPAZ La Paz 38.45 141 P P 17 29 27.8 -0.8
comp=Z,0.8nm,0.6s,baz=342,slow=3.2,SNR=2.4
LPAZ PcP PcP 17 31 41.8 +0.2
comp=Z,1.2nm,0.6s,baz=348,slow=3.9,SNR=4.4
LPAZ LR LR 17 44 41.7
comp=Z,278nm,21.0s,baz=322,slow=35
LPAZ La Paz 38.45 141 P P 17 29 30.3 +1.8
PINE Pine Mountain 38.45 326 P P 17 29 28.8 +0.9
PINE IAmb IAmb 17 29 44.9
comp=Z,39nm,1.8s
G08A Pilot Rock 38.46 329 P P 17 29 28.3 +0.5
G08A IAmb IAmb 17 29 42.9
comp=Z,19nm,1.7s
E09A Wood Farm, Sta 38.95 331 P P 17 29 32.9 +1.1
E09A IAmb IAmb 17 29 36.2
comp=Z,10nm,0.7s
I05D Terrebonne, OR 39.03 326 P P 17 29 34.8 +2.2
baz=131
I04A Tendick Farm, 39.26 325 P P 17 29 35.8 +1.4
baz=129
G06A Carlson Farm, 39.26 328 P P 17 29 36.8 +2.3
G06A IAmb IAmb 17 30 46.2
comp=Z,17nm,1.8s
HAWA Hanford 39.52 330 P P 17 29 36.5 0.0
G05D Wamic, OR 39.62 327 P P 17 29 39.8 +2.4
baz=132,SNR=5.1
H04A Detroit Lake 39.71 326 P P 17 29 39.3 +1.1
H04A IAmb IAmb 17 29 45.1
comp=Z,18nm,0.7s
I03D Drain, OR 39.73 324 P P 17 29 40.3 +2.0
baz=128
J01E Myrtle Point 39.74 323 P P 17 29 40.3 +2.0
baz=127
E07A Sunnyside 39.80 330 P P 17 29 40.3 +1.5
E07A IAmb IAmb 17 29 43.0
comp=Z,6.9nm,0.7s
NEW Newport 39.82 334 P P 17 29 40.2 +1.1
comp=Z,3.2nm,0.6s,baz=140,slow=11,SNR=4.2
NEW Newport 39.82 334 P P 17 29 39.9 +0.8
NEW IAmb IAmb 17 29 45.1
comp=Z,26nm,1.8s
NEW Newport 39.82 334 P P 17 29 39.9 +0.8
baz=140
MNMC Minye Minye 39.84 145 P P 17 29 39.7 0.0
MNMC IAmb IAmb 17 29 53.9
comp=Z,13nm,1.0s
H04D Lebanon 39.91 326 P P 17 29 42.0 +2.2
baz=130
C09A Chrisman Ranch 39.97 333 P P 17 29 41.1 +0.9
C09A IAmb IAmb 17 29 47.1
comp=Z,15nm,0.8s
F05D White Salmon 40.13 328 P P 17 29 43.8 +2.1
baz=132
I02D Swisshome 40.27 324 P P 17 29 45.1 +2.4
baz=128
G03D McMinnville, O 40.64 326 P P 17 29 47.7 +1.9
baz=130
LTY Liberty 40.69 330 P P 17 29 47.1 +0.8
LTY IAmb IAmb 17 29 53.6
comp=Z,8.8nm,0.8s
B08A Colville Reser 40.86 332 P P 17 29 48.6 +1.0
LON Longmire 40.90 329 P P 17 29 49.2 +1.2
LON IAmb IAmb 17 29 56.0
comp=Z,18nm,0.8s
E04D Cinebar 41.15 328 P P 17 29 51.6 +1.6
baz=132
C06D Leavenworth 41.27 331 P P 17 29 52.7 +1.8
baz=135
FFC Flin Flon 41.27 351 P P 17 29 51.0 +0.2
D05A Enumclaw 41.29 329 P P 17 29 52.4 +1.2
D05A IAmb IAmb 17 29 56.5
comp=Z,16nm,0.8s
B06A Marblemount 41.97 331 P P 17 29 58.1 +1.5
B06A IAmb IAmb 17 30 01.2
comp=Z,20nm,0.7s
D03D Eldon 42.07 329 P P 17 29 58.8 +1.3
baz=132
B05A Bryant 42.08 330 P P 17 29 58.5 +0.9
baz=134
NLWA Neilton Lookou 42.37 328 P P 17 30 01.1 +1.1
NLWA IAmb IAmb 17 30 03.8
comp=Z,44nm,1.5s
SIV San Ignacio 42.92 133 P P 17 30 04.1 -0.8
comp=Z,6.5nm,0.6s,baz=315,slow=8.2,SNR=38
SIV PcP PcP 17 31 55.7 +0.4
comp=Z,1.6nm,0.6s,baz=308,slow=4.7,SNR=5.4
SIV LR LR 17 47 06.1
comp=Z,357nm,20.1s,baz=324,slow=35
LVC Limon Verde 43.04 148 LR LR 17 47 29.6
comp=Z,229nm,18.3s,baz=327,slow=35
LLLB Lillooet 43.64 333 P P 17 30 11.9 +1.6
LLLB IAmb IAmb 17 30 19.2
comp=Z,16nm,0.8s
RPN Rapa Nui 44.18 202 LR LR 17 43 49.3
comp=Z,372nm,21.1s,baz=36,slow=29
DRLN Deer Lake 45.18 32 P P 17 30 19.7 -2.8
DRLN IAmb IAmb 17 30 31.2
comp=Z,18nm,0.9s
SCHQ Schefferville 45.24 20 LR LR 17 51 24.8
comp=Z,852nm,18.1s,baz=208,slow=39
YKA Yellowknife Ar 50.90 347 P P 17 31 06.4 -0.1
comp=Z,19nm,0.6s,baz=149,slow=7.5,SNR=198
YKA PcP PcP 17 32 23.0 +0.3
comp=Z,2.4nm,0.7s,baz=149,slow=3.7,SNR=7.8
YKA LR LR 17 57 00.5
comp=Z,244nm,19.5s,baz=0.0,slow=41
CFA Coronel Fontan 50.93 153 P P 17 31 06.8 -0.4
comp=Z,2.5nm,0.5s,baz=259,slow=5.2,SNR=3.0
FRB Frobisher Bay 52.30 13 P P 17 31 14.7 -2.2
comp=Z,5.0nm,0.6s,baz=215,slow=8.6,SNR=21
DLBC Dease Lake 52.48 336 P P 17 31 21.1 +2.5
comp=Z,8.8nm,0.6s,baz=124,slow=5.1,SNR=15
DLBC Dease Lake 52.48 336 P P 17 31 20.8 +2.2
CPUP Villa Florida 52.60 140 P P 17 31 18.4 -1.3
comp=Z,1.2nm,0.4s,baz=342,slow=16,SNR=3.2
CPUP LR LR 17 55 15.0
comp=Z,267nm,18.4s,baz=326,slow=38
TAOE Nuku Hiva Isla 52.69 247 eLR LR 17 46 28.2
comp=Z,283nm,25.8s
TAOE Nuku Hiva Isla 52.69 247 eT T 18 27 38.9
comp=Z,116nm,0.3s
WHY Whitehorse 55.81 336 P P 17 31 44.0 +1.2
WHY IAmb IAmb 17 31 50.5
comp=Z,13nm,1.5s
HYT Haines Junctio 56.95 335 P P 17 31 51.3 +0.4
HYT IAmb IAmb 17 31 59.5
comp=Z,14nm,1.3s
PCA Pinnacle 57.69 334 P P 17 31 57.4 +1.3
PLCA Paso Flores 58.13 161 P P 17 31 59.6 +0.3
comp=Z,1.0nm,0.5s,baz=94,slow=11,SNR=2.1
PLCA LR LR 17 52 16.1
comp=Z,380nm,18.2s,baz=8.5,slow=31
CTGM Chitina Glacie 58.60 334 P P 17 32 03.7 +1.2
C36M Paulatuk 58.77 347 P P 17 32 02.9 -0.4
baz=143
BARN Barnard Glacie 58.78 334 P P 17 32 05.3 +1.4
BALM Baldy 59.06 334 P P 17 32 07.2 +1.5
BALM IAmb IAmb 17 32 09.3
comp=Z,12nm,1.0s
TGL Tana Glacier 59.13 334 P P 17 32 08.2 +2.1
CRQM Cirque 59.26 334 P P 17 32 08.1 +0.9
CRQM IAmb IAmb 17 32 10.5
comp=Z,10nm,0.9s
RCBR Riachuelo 59.30 106 P P 17 32 07.3 -0.7
DAWY Dawson 59.52 338 P P 17 32 09.2 +0.4
MCARA McCarthy VSAT 59.52 334 P P 17 32 09.9 +1.2
VRDI Verde Repeater 59.62 334 P P 17 32 10.8 +1.1
VRDI IAmb IAmb 17 32 13.1
comp=Z,8.6nm,0.8s
GLB Gilahina Butte 59.88 334 P P 17 32 12.6 +1.3
EPYK Eagle Plains 59.98 341 P P 17 32 11.9 0.0
baz=128
INK Inuvik 60.30 344 P P 17 32 14.7 +0.8
comp=Z,9.2nm,0.7s,baz=125,slow=6.5,SNR=37
INK Inuvik 60.30 344 P P 17 32 14.0 +0.1
INK pP pP 17 32 14.8 -9.0
EGAK Eagle 60.55 338 P P 17 32 15.6 -0.2
EGAK IAmb IAmb 17 32 22.3
comp=Z,16nm,1.3s
MENT Mentasta 60.57 336 P P 17 32 16.7 +0.7
MENT IAmb IAmb 17 32 19.7
comp=Z,6.3nm,0.7s
HIN Hinchinbrook I 60.58 332 P P 17 32 17.2 +1.2
RES Resolute Bay 60.62 359 P P 17 32 15.2 -0.8
comp=Z,2.1nm,0.7s,baz=181,slow=7.3,SNR=8.6
RES Resolute Bay 60.62 359 P P 17 32 14.5 -1.5
FID Port Fidalgo 60.72 333 P P 17 32 18.2 +1.2
DOT Dot Lake 61.05 336 P P 17 32 19.7 +0.5
SCRK Sand Creek 61.19 337 P P 17 32 21.7 +1.4
PAX Paxson 61.29 335 P P 17 32 21.6 +0.7
RIDG Independent Ri 61.40 336 P P 17 32 22.7 +1.1
SCM Sheep Creek Mo 61.55 334 P P 17 32 23.6 +0.9
SEW Seward 61.80 331 P P 17 32 25.4 +1.2
KNK Knik Glacier 61.87 333 P P 17 32 25.9 +1.1
KNK IAmb IAmb 17 32 26.6
comp=Z,12nm,1.0s
SML Sawmill 61.98 333 P P 17 32 26.5 +1.0
GHO Glory Hole Cre 62.22 333 P P 17 32 28.0 +0.9
RC01 Rabbit Creek A 62.31 332 P P 17 32 29.1 +1.4
BRLK Bradley Lake 62.35 331 P P 17 32 29.3 +1.2
CNPM China Poot 62.43 330 P P 17 32 28.7 +0.1
PRP Porcupine Dome 62.52 338 P P 17 32 30.0 +0.9
PRP IAmb IAmb 17 32 35.8
comp=Z,11nm,0.9s
KDAK Kodiak Island 62.52 328 P P 17 32 30.5 +1.4
comp=Z,8.4nm,0.6s,baz=146,slow=3.1,SNR=16
KDAK Kodiak Island 62.52 328 P P 17 32 30.3 +1.2
HDA Harding Lake 62.53 336 P P 17 32 29.5 +0.4
HDA Harding Lake 62.53 336 P P 17 32 30.0 +0.8
baz=117
IL31 62.67 337 P P 17 32 30.4 +0.4
ILAR Eielson Array 62.67 337 P P 17 32 30.6 +0.6
comp=Z,3.5nm,0.6s,baz=166,slow=3.5,SNR=54
ILAR LR LR 18 02 09.7
comp=Z,218nm,19.0s,baz=132,slow=38
RND Reindeer 62.86 335 P P 17 32 32.5 +1.1
SUA Susitna One 62.90 333 P P 17 32 33.0 +1.2
CCB Clear Creek Bu 62.97 337 P P 17 32 32.1 +0.1
CCB IAmb IAmb 17 32 33.1
comp=Z,4.6nm,0.8s
WRH Wood River Hil 63.00 336 P P 17 32 32.4 +0.1
WRH IAmb IAmb 17 33 17.7
comp=Z,11nm,1.3s
MCK McKinley 63.02 335 P P 17 32 32.7 +0.2
MCK IAmb IAmb 17 32 39.7
comp=Z,6.9nm,0.8s
POKR Poker Flat Res 63.04 337 P P 17 32 33.5 +1.0
baz=116
BWN Browne 63.42 336 P P 17 32 34.7 -0.3
NEA Nenana 63.44 336 P P 17 32 35.9 +0.8
NEA IAmb IAmb 17 32 42.1
comp=Z,19nm,1.4s
TRF Thorofare Moun 63.47 335 P P 17 32 35.7 +0.2
RSO Redoubt South 63.47 331 P P 17 32 36.4 +0.7
KTH Kantishna Hill 63.77 335 P P 17 32 37.9 +0.4
KTH IAmb IAmb 17 32 44.5
comp=Z,10nm,0.8s
BPAW Bear Paw Mtn. 64.00 335 P P 17 32 39.4 +0.5
BPAW IAmb IAmb 17 32 41.0
comp=Z,11nm,0.9s
PPLA Purkeypile 64.06 334 P P 17 32 39.8 +0.4
MLY Manley 64.27 336 P P 17 32 41.2 +0.5
PPT Papeete 64.70 243 LR LR 17 54 11.9
comp=Z,201nm,18.2s,baz=114,slow=29
PPT2 Papeete2 64.71 243 eS S 17 41 28.1 +5.1
comp=Z,107nm,26.2s
PPT2 Papeete2 64.71 243 eLR LR 17 52 04.5
comp=Z,336nm,24.5s
COLD Coldfoot 64.97 339 P P 17 32 45.5 +0.4
SVW2 Sparrevohn 64.98 331 P P 17 32 45.7 +0.3
SVW2 IAmb IAmb 17 32 51.0
comp=Z,16nm,1.2s
TOLK Toolik Lake Re 65.37 340 P P 17 32 48.1 +0.3
TOLK IAmb IAmb 17 32 55.2
comp=Z,22nm,1.3s
TOLK Toolik Lake Re 65.37 340 P P 17 32 48.5 +0.7
baz=116
TBI Tubuai 67.18 237 eS S 17 41 57.9 +5.2
comp=Z,176nm,30.8s
TBI Tubuai 67.18 237 eLR LR 17 53 13.0
comp=Z,303nm,28.0s,baz=54
ANM Nome 70.14 334 P P 17 33 18.4 +0.6
ANM IAmb IAmb 17 33 20.0
comp=Z,28nm,1.8s
BILL Bilibino 81.30 338 P P 17 34 22.3 +0.7
NB2 NORSAR Subarra 84.20 28 P P 17 34 36.1 -0.8
comp=Z,6.6nm,1.1s,baz=290,slow=5.6
NOA NORSAR Array B 84.20 28 P P 17 34 36.4 -0.5
comp=Z,1.0nm,0.7s,baz=289,slow=5.2,SNR=8.3
NOA LR LR 18 12 51.1
comp=Z,164nm,18.0s,baz=285,slow=36
DBIC Dimbokro 85.89 84 P P 17 34 44.6 -1.6
comp=Z,2.0nm,0.6s,baz=268,slow=4.0,SNR=4.5
DBIC LR LR 18 10 43.5
comp=Z,79nm,19.8s,baz=264,slow=34
DBIC Dimbokro 85.89 84 P P 17 34 44.3 -1.9
DBIC IAmb IAmb 17 36 15.7
comp=Z,15nm,1.3s
ARCES ARCESS Array B 86.14 18 P P 17 34 45.4 -1.0
comp=Z,2.6nm,0.6s,baz=316,slow=5.1,SNR=12
ARCES LR LR 18 13 23.3
comp=Z,184nm,18.6s,baz=290,slow=36
GERES GERESS Array B 89.70 39 P P 17 35 02.6 -1.3
comp=Z,0.5nm,0.7s,baz=322,slow=3.9,SNR=3.7
GERES LR LR 18 16 21.8
comp=Z,124nm,18.5s,baz=306,slow=36
TIXI Tiksi 90.13 348 P P 17 35 04.2 -1.2
FINES FINESS Array B 90.54 25 P P 17 35 06.3 -1.1
comp=Z,0.8nm,0.6s,baz=288,slow=1.3,SNR=2.7
TORD Torodi Ar. Bea 90.60 76 P P 17 35 07.2 -1.4
comp=Z,0.7nm,0.7s,baz=276,slow=5.8,SNR=3.2
TORD LR LR 18 13 02.7
comp=Z,124nm,20.7s,baz=335,slow=34
NRIK Noril'sk 96.80 0 LR LR 18 23 58.4
comp=Z,300nm,18.8s,baz=336,slow=38
DZM Mont Dzumac 105.46 251 eLR LR 18 11 07.4
comp=Z,132nm,23.1s
KURBB Kurchatov Arra 115.08 6 PKP PKiKP 17 40 46.2 -0.5
comp=Z,0.5nm,0.6s,baz=347,slow=1.7,SNR=5.5
SONM Songino Array 116.16 346 PKP PKiKP 17 40 49.1 0.0
comp=Z,0.5nm,0.7s,baz=311,slow=1.9,SNR=5.6
KSRS Korea Array 116.34 325 PKP PKiKP 17 40 50.0 +0.5
comp=Z,0.9nm,0.6s,baz=359,slow=1.1,SNR=3.9
MKAR Makanchi Array 119.22 4 PKP PKPdf 17 40 54.1 -0.8
comp=Z,0.4nm,0.6s,baz=31,slow=2.0,SNR=4.7
BOSA Boshof 120.61 115 PKP PKPdf 17 40 57.8 -0.3
comp=Z,2.3nm,0.7s,baz=221,slow=1.4,SNR=8.6
HHC Hu-ho-hao-te 121.06 339 ePKP PKiKP 17 40 59.5 +0.7
HHC LR LR
comp=Z,87nm,18.7s
WMQ Urumqi 122.39 0 ePKP PKPdf 17 41 00.3 -0.8
WMQ LR LR
comp=Z,410nm,27.9s
NJ2 Nanjing 125.30 327 ePKP PKPdf 17 41 06.3 -0.6
KSH Kashi 125.57 11 PKP PKPdf 17 41 01.3 -6.1
KSH PP PP 17 43 01.5 +4.1
KSH PKS PKSdf 17 44 39.3 -4.8
KSH SKS SKSac 17 48 06.0 -3.9
KSH SKKS SKKSac 17 49 43.8 -11
KSH AMB AMB
comp=Z,300nm,6.9s

KSH LR LR
comp=Z,140nm,7.1s
KSH LR LR
comp=Z,810nm,7.5s
GTA Gaotai 125.61 349 *e*PKP **PKiKP 17 41 10.0 +2.1**
GTA LR LR
comp=Z,120nm,20.0s
GTA LR LR
comp=Z,110nm,20.3s
STKA Stephens Creek 127.88 240 PKP **PKiKP 17 41 12.3 0.0**
comp=Z,2.0nm,0.6s,baz=30,slow=3.3,SNR=6.0
STKA Stephens Creek 127.88 240 PKPdf 17 41 12.2 +0.4
WHN Wuhan 128.78 330 PKP **PKiKP 17 41 18.5 +4.3**
CD2 Chengdu 132.70 341 PKP **PKPdf 17 41 18.5 -2.6**
WRA Warramunga Arr 135.17 256 PKP **PKPdf 17 41 26.5 +0.6**
comp=Z,0.9nm,0.6s,baz=86,slow=2.0,SNR=18
ASAR Alice Springs 135.46 251 PKP **PKPdf 17 41 26.8 +0.4**
comp=Z,0.6nm,0.6s,baz=87,slow=1.3,SNR=9.3
FITZ Fitzroy Crossi 143.41 259 PKP PKPbc 17 41 39.0 +0.8
comp=Z,2.1nm,0.6s,baz=117,slow=3.2,SNR=10
FITZ Fitzroy Crossi 143.41 259 PKPbc 17 41 38.6 +0.5
CHTO Chiang Mai 145.51 341 PKPdf 17 41 44.2 -0.4
CM31 Chiang Mai Arr 145.84 341 PKPdf 17 41 45.4 +0.2
CMAR Chiang Mai Arr 145.84 341 PKPbc **PKPdf 17 41 45.5 +0.3**
comp=Z,13nm,0.7s,baz=329,slow=3.0,SNR=86
UBPT Khong Chiam 145.97 328 PKPbc 17 41 46.5 +0.4
PBKT Sadao Pong 146.87 336 PKPdf 17 41 47.5 +0.6
HYB Hyderabad 147.42 16 *i* PKP **PKPdf 17 41 49.0 +1.1**
HYB *e*pPKP **pPKPab 17 42 02.0 -0.5**

IDC 28 17:28:34.3±2.2, 2°.66S×139°.96E, h0km, mb3.4/4, mb1 3.8/6, mb1mx3.5/38, mbtmp3.7/6, ML3.9/2, Error ellipse: s-maj=61.2km s-min=24.6km az=90.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**8.87**	**281**	Pn	Pn	17 30 45.0	+1.2
	3.0nm,0.3s,baz=107,slow=19,SNR=20						
WRA	**Warramunga Arr**	**18.03**	**197**	P	P	17 32 46.4	-0.1
	0.3nm,0.3s,baz=15,slow=13,SNR=21						
WRA				S	Sn	17 35 54.8	-14
	0.1nm,0.3s,baz=18,slow=22,SNR=3.7						
FITZ	**Fitzroy Crossi**	**20.79**	**221**	P	P	17 33 16.4	-0.8
	0.7nm,0.5s,baz=60,slow=9.9,SNR=5.7						
ASAR	**Alice Springs**	**21.68**	**195**	P	P	17 33 27.5	+0.6
	0.7nm,0.6s,baz=7.4,slow=12,SNR=14						
MKAR	**Makanchi Array**	**70.52**	**322**	P	P	17 39 50.9	-0.1
	0.2nm,0.4s,baz=101,slow=7.5,SNR=5.5						
BVAR	**Borovoye Array**	**79.99**	**325**	P	P	17 40 45.4	0.0
	0.4nm,0.4s,baz=114,slow=6.5,SNR=5.1						

SOME 28 17:37:52.1, 40°.93N×72°.58E, h15km
NNC 28 17:37:53.7±1.6, 41°.04N×72°.49E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=13.5km s-min=5.1km az=174.0
KRNET 28 17:37:54.1±0.1, 41°.12N×72°.48E, h19km, mb2.1
ISC 28 17:37:54.9±1.4, 41°.11N±0°.05×72°.51E±0°.03, h10km±11km, n20, σ1°.23/34, 18C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.41**	**59**	⇑*i*P	**Pg**	**17 38 02.5**	**-0.6**
	baz=62						
ARSB				⇑*i*S	**Sg**	**17 38 09.1**	**+0.5**
	baz=62						
ARK	**Arkit**	**0.80**	**329**	⇑*i*P	**Pb**	**17 38 08.5**	**-2.5**
	baz=31						
ARK				⇑*i*S	**Sb**	**17 38 19.1**	**-2.8**
	baz=31						
AML	**Almayashu**	**1.35**	**41**	⇓*i*P	**Pn**	**17 38 19.3**	**-0.9**
	baz=42						
AML				⇓*i*S	**Sn**	**17 38 37.7**	**-0.7**
	baz=42						
ARLS	**Aral**	**1.55**	**61**	⇑*i*P	**Pn**	**17 38 23.2**	**+0.5**
	baz=61						
ARLS				⇑*i*S	**Sb**	**17 38 44.0**	**+0.4**
	baz=61						
BTK	**Batken**	**1.66**	**231**	⇑*i*P	**Pn**	**17 38 24.1**	**-0.1**
	baz=31						
BTK				⇑*i*S	**Sb**	**17 38 46.6**	**-0.1**
	baz=31						
MRKS	**Merke**	**1.72**	**18**	*e*P	**Pb**	**17 38 26.7**	**+0.1**
	1.3nm,0.2s						
MRKS				*e*S	**Sg**	**17 38 50.9**	**+0.7**
	8.8nm,0.2s						
MRKS	**Merke**	**1.72**	**18**	P	**Pb**	**17 38 26.7**	**+0.1**
	1.3nm,0.2s						
MRKS				S	**Sg**	**17 38 50.9**	**+0.7**
	8.8nm,0.2s						
EKS2	**Erkin-Say**	**1.81**	**31**	⇑*i*P	**Pn**	**17 38 26.8**	**+0.5**
	baz=32						
EKS2				⇑*i*S	**Sb**	**17 38 51.1**	**0.0**
	baz=32						
UCH	**Uchtor**	**1.87**	**53**	⇑*i*P	**Pb**	**17 38 28.7**	**-0.7**
	baz=53						
UCH				⇑*i*S	**Sb**	**17 38 53.6**	**+0.6**
	baz=53						
JBG	**Jabagly**	**1.97**	**312**	Pg	**Pn**	**17 38 30.3**	**+1.8**
	2.9nm,0.4s						
JBG				Lg	Lg	17 38 56.9	
	12nm,0.4s						
AAK	**Ala-Archa**	**2.13**	**44**	⇑*i*P	**Pn**	**17 38 32.2**	**+1.6**
	baz=44						
AAK				⇑*i*S	**Sb**	**17 38 59.2**	**-0.9**
	baz=44						
AAK	**Ala-Archa**	**2.13**	**44**	⇑Pg	**Pb**	**17 38 32.8**	**-0.8**
	1.9nm,0.9s						
AAK				⇑Lg	Lg	17 39 02.1	
	2.4nm,0.6s						
IUG	**Iuzhnay**	**2.13**	**300**	*e*P	**Pb**	**17 38 33.5**	**0.0**
	3.2nm,0.2s						
IUG				*e*S	**Sb**	**17 39 02.3**	**+2.2**
	20nm,0.4s						
IUG	**Iuzhnay**	**2.13**	**300**	Pg	**Pb**	**17 38 33.1**	**-0.4**
	5.6nm,0.5s						
IUG				Lg	Lg	17 39 02.0	
	20nm,0.4s						
KZA	**Kyzart**	**2.27**	**64**	⇑*i*P	**Pn**	**17 38 33.9**	**+1.1**
	baz=64						
KZA				⇑*i*S	**Sb**	**17 39 03.0**	**-1.5**
	baz=64						
KBK	**Karagaybulak**	**2.39**	**49**	⇓*i*P	**Pn**	**17 38 35.9**	**+1.7**
	baz=49						
KBK				⇓*i*S	**Sb**	**17 39 05.9**	**-1.7**
	baz=49						
KK31	**Karatay Array**	**2.48**	**324**	⇓Pg	**Pb**	**17 38 40.8**	**+1.2**
	0.6nm,0.5s,baz=118,slow=18,SNR=3.1						
KK31				⇓Lg	Lg	17 39 12.8	
	0.4nm,0.3s,baz=138,slow=26,SNR=4.6						
BRLS	**Borolday**	**2.76**	**315**	*e*P	**Pb**	**17 38 43.3**	**-1.1**
	0.7nm,0.2s						
BRLS				*e*S	**Sb**	**17 39 18.8**	**+0.5**
	2.1nm,0.3s						
BRLS	**Borolday**	**2.76**	**315**	Pg	**Pb**	**17 38 43.1**	**-1.3**
	0.7nm,0.2s						
BRLS				Lg	Lg	17 39 18.8	
	2.1nm,0.3s						
KST	**Kastek**	**3.21**	**52**	Pg	**Pb**	**17 38 53.2**	**+1.1**
	1.8nm,0.5s						
KST				Lg	Lg	17 39 36.1	
	1.5nm,0.4s						

GCG 28 17:38:44.2±0.4, 13°.72N×92°.73W, h36km±261km, MD4.4
IDC 28 17:38:46.5±1.1, 13°.79N×92°.26W, h0km, mb4.0/9, mb1 4.3/13, mb1mx4.0/45, mbtmp4.1/13, ML4.0/4, MS3.6/4, Ms1 3.6/4, ms1mx3.1/38, Error ellipse: s-maj=26.0km s-min=16.2km az=34.0
NEIC 28 17:38:51.8±3.0, 14°.01N±0°.06×92°.28W±0°.05, h35km±8km, mb4.3/44, Md4.3/14(MEX), Error ellipse: s-maj=9.7km s-min=6.6km az=212.0
MEX 28 17:38:51.1±0.9, 13°.92N×92°.09W, h20km±355km, MD4.3
UCR 28 17:38:53.6±0.8, 14°.23N×92°.10W, h35km±999km, ML4.0, mb4.3(NEIC)
SNET 28 17:38:53.6±0.8, 14°.23N×92°.10W, h35km±999km, ML4.3
ISC 28 17:38:51.2±2.4, 13°.96N±0°.07×92°.31W±0°.06, h32km±17km, n96, σ1°.51/102, mb4.2/25, MS3.5/3, 1D, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.94**	**3**		**Pn**	**17 39 07.1**	**-1.1**
THIG					**Sn**	**17 39 18.8**	**-1.8**
THIG		**0.94**	**3**	*e*P	**Pn**	**17 39 07.1**	**-1.1**
THIG				*e*S	**Sn**	**17 39 18.8**	**-1.8**
STG3	**Santiaguito 3,**	**1.04**	**44**	*e*P	**Pn**	**17 39 09.2**	**-0.5**
FUG	**Fuego 3**	**1.51**	**71**	*e*P	**Pn**	**17 39 15.8**	**-0.4**
PCG	**Pacaya**	**1.71**	**75**	*e*P	**Pn**	**17 39 19.0**	**-0.8**
IXG	**Ixpaco**	**1.83**	**83**	*e*P	**Pn**	**17 39 19.8**	**-0.8**
PCIG		**1.94**	**333**		**Pn**	**17 39 20.7**	**-1.3**
PCIG		**1.94**	**333**	*e*P	**Pn**	**17 39 20.7**	**-1.3**
PCIG				*e*S	**Sn**	**17 39 43.5**	**-1.8**
NBG	**Las Nubes**	**2.01**	**72**	*e*P	**Pn**	**17 39 24.7**	**+1.6**
NBG				*e*S	**Sb**	**17 39 53.3**	**+1.4**
APG	**El Apazote**	**2.07**	**60**	Pn	**Pn**	**17 39 24.5**	**+0.6**
	44nm,0.3s,baz=242,slow=7.9,SNR=574						
APG				Sn	**Sn**	**17 39 51.2**	**+2.4**
	81nm,0.3s,baz=305,slow=14,SNR=6.8						
CCIG	**Comitan**	**2.31**	**4**		**Pn**	**17 39 28.9**	**+1.6**
CCIG	**Comitan**	**2.31**	**4**		**Pn**	**17 39 26.5**	**-0.8**
CCIG	**Comitan**	**2.31**	**4**	*i* P	**Pn**	**17 39 26.5**	**-0.8**
CEVE	**Cerro Verde**	**2.62**	**93**	*e*P	**Pn**	**17 39 31.6**	**+0.1**
CEVE				*e*S	**Sn**	**17 40 01.9**	**-0.4**
CEVE				IAML		17 40 13.4	
	comp=Z,1µm,0.5s						
CEVE	**Cerro Verde**	**2.62**	**93**	*e*P	**Pn**	**17 39 31.6**	**+0.1**
CEVE				*e*S	**Sn**	**17 40 01.9**	**-0.4**
CEVE				IAML		17 40 13.4	
	comp=Z,1µm,0.5s						
TGIG		**2.91**	**345**		**Pn**	**17 39 36.0**	**+0.7**
TGIG		**2.91**	**345**	*e*P	**Pn**	**17 39 36.0**	**+0.7**
TGIG				*i* S	**Sb**	**17 40 15.5**	**-2.2**
LALI	**Alcalda de L**	**2.95**	**99**	*e*S	**Sn**	**17 40 09.1**	**-1.0**
LALI	**Alcalda de L**	**2.95**	**99**	*e*S	**Sn**	**17 40 09.1**	**-1.0**
SNET	**Serv Nac Est T**	**3.01**	**95**		**Pn**	**17 39 34.8**	**-1.9**
PAVA	**Las Pavas**	**3.29**	**94**	*e*P	**Pn**	**17 39 40.7**	**+0.1**
PAVA	**Las Pavas**	**3.29**	**94**	*e*P	**Pn**	**17 39 40.7**	**+0.1**
COEG	**Centro de Oper**	**3.35**	**95**	*e*P	**Pn**	**17 39 42.3**	**+0.8**
COEG	**Centro de Oper**	**3.35**	**95**	*e*P	**Pn**	**17 39 42.3**	**+0.8**
CMIG	**Matias Romero**	**3.98**	**322**	Pn	**Pn**	**17 39 51.0**	**+1.0**
	comp=Z,3.9nm,0.3s,baz=142,slow=11,SNR=21						
CMIG				Sn	**Sn**	**17 40 40.5**	**+4.9**
	comp=Z,20nm,0.3s,baz=38,slow=22,SNR=7.1						
CMIG	**Matias Romero**	**3.98**	**322**		**Pn**	**17 39 49.4**	**-0.6**
CMIG	**Matias Romero**	**3.98**	**322**	*e*P	**Pn**	**17 39 49.4**	**-0.6**
CMIG				*e*S	**Sn**	**17 40 36.8**	**+1.2**
HUIG	**Huatulco**	**4.09**	**297**		Pn	17 39 50.6	-0.8
HUIG	**Huatulco**	**4.09**	**297**	*e*P	Pn	17 39 50.6	-0.8
HUIG				⇓*e*S	Sn	17 40 32.5	-5.7
TGUH	**Tegucigalpa,Un**	**4.89**	**88**	Pn	**Pn**	**17 40 01.2**	**-1.5**
ESTN	**Estel**	**5.84**	**98**	Pn	**Pn**	**17 40 15.9**	**+0.2**
TLIG	**Tlapa**	**7.00**	**302**		**Pn**	**17 40 33.4**	**+1.7**
ACON	**Acoyapa**	**7.24**	**105**		**Pn**	**17 40 34.6**	**-0.2**
TEIG	**Tepich**	**7.33**	**31**	Pn	**Pn**	**17 40 37.1**	**+1.1**
	comp=Z,9.9nm,0.3s,baz=152,slow=1.2,SNR=44						
TEIG				Sn	**Sn**	**17 42 01.6**	**+3.4**
	comp=Z,2.6nm,0.3s,baz=293,slow=1.3,SNR=5.8						
TEIG				LR	LR	17 43 59.3	
	comp=Z,308nm,18.0s,baz=320,slow=42						
TEIG	**Tepich**	**7.33**	**31**		**Pn**	**17 40 36.9**	**+0.8**
ESPN	**Las Esperanzas**	**8.00**	**102**		**Pn**	**17 40 44.4**	**-0.9**
JTS	**Las Juntas de**	**8.07**	**116**	Pn	Pn	17 40 55.5	+9.3
	comp=Z,1.1nm,0.3s,baz=32,slow=8.0,SNR=5.5						
JTS				Sn	Sn	17 42 30.2	+14
	comp=Z,0.1nm,0.3s,baz=348,slow=14,SNR=2.2						
JTS	**Las Juntas de**	**8.07**	**116**		**Pn**	**17 40 50.3**	**+4.0**
TXAR	**Lajitas Array**	**18.56**	**327**	P	**P**	**17 43 08.4**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=155,slow=12,SNR=12						
TX31	**Lajitas Ar. Si**	**18.56**	**327**	P	**Pn**	**17 43 07.0**	**+1.0**
TX32	**Lajitas Array**	**18.56**	**327**	P	**Pn**	**17 43 07.3**	**+1.3**
ROSC	**El Rosal**	**19.91**	**115**	P	**P**	**17 43 23.2**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=222,slow=20,SNR=3.6						
ROSC	**El Rosal**	**19.91**	**115**	P	**Pn**	**17 43 22.9**	**+0.3**
ROSC				IAmb	IAmb	17 43 24.2	
	comp=Z,10nm,0.8s						
MIAR	**Mount Ida**	**20.53**	**357**	P	**P**	**17 43 26.9**	**+0.1**
MIAR				IAmb	IAmb	17 43 47.2	
	comp=Z,9.9nm,1.0s						
RUSC	**La Rusia**	**20.55**	**111**	P	**P**	**17 43 27.4**	**-0.5**
FLOC	**Florencia**	**20.56**	**125**	P	**P**	**17 43 26.8**	**-0.6**
X48A	**Hartselle**	**20.95**	**12**	P	**P**	**17 43 30.6**	**-0.9**
MNTX	**Cornudas Mount**	**21.34**	**328**	P	**P**	**17 43 36.0**	**+0.3**
WMOK	**Wichita Mounta**	**21.50**	**345**	P	**P**	**17 43 36.9**	**-0.4**
SDV	**Santo Domingo**	**21.83**	**101**	P	**P**	**17 43 40.9**	**-0.5**
	comp=Z,4.0nm,0.8s,baz=318,slow=1.2,SNR=5.1						
SDV	**Santo Domingo**	**21.83**	**101**	P	**P**	**17 43 38.5**	**-2.8**
SWET	**Sewanee**	**21.93**	**14**	P	**P**	**17 43 40.0**	**-2.1**
SWET				IAmb	IAmb	17 43 42.8	
	comp=Z,6.5nm,0.8s						
V48A	**Smith Brothers**	**22.24**	**12**	P	**P**	**17 43 43.2**	**-2.1**
V48A				IAmb	IAmb	17 43 46.1	
	comp=Z,9.0nm,1.0s						
AMTX	**Amarillo**	**22.48**	**340**	P	**P**	**17 43 46.3**	**-1.8**
CPCT	**Cooper Cave**	**22.52**	**17**	P	**P**	**17 43 46.1**	**-2.2**
CPCT				IAmb	IAmb	17 44 11.4	
	comp=Z,15nm,1.3s						
TKL	**Tuckaleechee C**	**22.93**	**18**	LR	LR	17 54 27.3	
	comp=Z,140nm,18.1s,baz=240,slow=41						
U49A	**Red Boiling Sp**	**23.21**	**13**	P	**P**	**17 43 53.4**	**-2.0**
U49A				IAmb	IAmb	17 43 54.2	
	comp=Z,9.6nm,1.1s						
121A	**Cookes Peak, D**	**23.27**	**325**	P	**P**	**17 43 57.9**	**+1.6**
121A				IAmb	IAmb	17 44 03.8	
	comp=Z,7.2nm,0.9s						
319A	**Douglas**	**23.30**	**321**	P	**P**	**17 43 58.7**	**+2.1**
319A				IAmb	IAmb	17 44 00.0	
	comp=Z,12nm,1.2s						
S39A	**Bolivar**	**23.65**	**358**	P	**P**	**17 43 58.1**	**-1.7**
S44A	**Carbondale**	**23.79**	**6**	P	**P**	**17 43 59.0**	**-2.1**
TZTN	**Tazewell**	**23.82**	**18**	P	**P**	**17 43 59.6**	**-1.7**
TZTN				IAmb	IAmb	17 44 29.2	
	comp=Z,10nm,1.1s						
T49A	**Edmonton**	**23.83**	**14**	P	**P**	**17 43 59.6**	**-1.9**
T49A				IAmb	IAmb	17 44 14.1	
	comp=Z,10.0nm,1.2s						
V55A	**Taylorsville**	**23.97**	**23**	P	**P**	**17 44 00.9**	**-1.9**
V55A				IAmb	IAmb	17 44 03.7	
	comp=Z,8.9nm,0.9s						
U54A	**Nelsons Funny**	**24.35**	**21**	P	**P**	**17 44 04.2**	**-2.2**
U54A				IAmb	IAmb	17 44 14.8	
	comp=Z,11nm,0.8s						
ANMO	**Albuquerque**	**24.49**	**331**	P	**P**	**17 44 10.1**	**+2.4**
	comp=Z,2.1nm,0.6s,baz=135,slow=15,SNR=5.7						
ANMO	**Albuquerque**	**24.49**	**331**	P	**P**	**17 44 07.9**	**+0.1**
WCI	**Wyandotte Cave**	**24.75**	**11**	P	**P**	**17 44 08.4**	**-1.5**
WCI				IAmb	IAmb	17 44 09.3	
	comp=Z,10nm,0.8s						
SJG	**San Juan**	**25.47**	**77**	LR	LR	17 54 44.9	
	comp=Z,94nm,18.2s,baz=260,slow=38						
T25A	**Trinidad**	**25.48**	**337**	P	**P**	**17 44 17.1**	**+0.3**
N41A	**Harden Midland**	**26.68**	**2**	P	**P**	**17 44 26.0**	**-1.3**
N41A				IAmb	IAmb	17 44 27.4	
	comp=Z,14nm,1.1s						
S22A	**4UR Ranch, Cre**	**26.98**	**334**	P	**P**	**17 44 31.8**	**+1.4**
MVCO	**Mesa Verde**	**27.29**	**331**	P	**P**	**17 44 33.6**	**+0.4**
MVCO				IAmb	IAmb	17 44 36.6	
	comp=Z,12nm,1.1s						
PCRV	**Puerto La Cruz**	**27.32**	**95**	LR	LR	17 56 40.0	
	comp=Z,304nm,19.6s,slow=39						
P17A	**Butcher Ranch,**	**30.15**	**331**	P	**P**	**17 44 59.5**	**+1.0**
PDAR	**Pinedale Array**	**32.33**	**336**	P	**P**	**17 45 20.5**	**+2.7**
	comp=Z,0.4nm,0.6s,baz=140,slow=12,SNR=4.0						
REDW	**Red Top Meadow**	**33.35**	**335**	P	**P**	**17 45 27.1**	**+0.5**
ELK	**Elko**	**33.36**	**327**	P	**P**	**17 45 29.1**	**+2.3**
	comp=Z,1.8nm,0.7s,baz=140,slow=5.6,SNR=9.9						
ELK	**Elko**	**33.36**	**327**	P	**P**	**17 45 27.4**	**+0.7**
ELK				IAmb	IAmb	17 45 31.8	
	comp=Z,2.4nm,0.8s						
SNOW	**Snow King Moun**	**33.39**	**335**	P	**P**	**17 45 27.4**	**+0.3**
NVAR	**Mina Array Bea**	**33.51**	**321**	P	**P**	**17 45 30.8**	**+2.7**
	comp=Z,1.5nm,0.7s,baz=138,slow=8.8,SNR=12						
MCMT	**McKenzie Canyo**	**35.38**	**334**	P	**P**	**17 45 46.0**	**+1.8**
J08A	**Circle Bar Ran**	**36.91**	**328**	P	**P**	**17 45 58.2**	**+1.0**
F10A	**Beach Ranch, E**	**38.20**	**332**	P	**P**	**17 46 09.0**	**+1.0**
LON	**Longmire**	**40.97**	**329**	P	**P**	**17 46 32.9**	**+1.9**
LON				IAmb	IAmb	17 46 35.1	
	comp=Z,3.6nm,0.8s						
SIV	**San Ignacio**	**42.89**	**133**	P	**P**	**17 46 45.9**	**-1.1**
	comp=Z,1.2nm,0.6s,baz=301,slow=8.6,SNR=7.9						
YKA	**Yellowknife Ar**	**50.99**	**347**	P	**P**	**17 47 49.1**	**-0.6**
	comp=Z,3.1nm,0.6s,baz=149,slow=7.6,SNR=54						
YKA				PcP	**PcP**	**17 49 06.0**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=146,slow=3.6,SNR=7.5						
INK	**Inuvik**	**60.39**	**344**	P	**P**	**17 48 56.7**	**-0.3**
INK				IAmb	IAmb	17 48 58.0	
	comp=Z,3.3nm,0.8s						
GHO	**Glory Hole Cre**	**62.30**	**333**	P	**P**	**17 49 10.2**	**+0.1**
IL31		**62.76**	**337**	P	**P**	**17 49 12.7**	**-0.3**
ILAR	**Eielson Array**	**62.76**	**337**	P	**P**	**17 49 14.1**	**+1.0**
	comp=Z,1.6nm,0.9s,baz=144,slow=3.8,SNR=14						
RSO	**Redoubt South**	**63.54**	**331**	P	**P**	**17 49 18.7**	**+0.1**
MLY	**Manley**	**64.35**	**336**	P	**P**	**17 49 23.6**	**-0.1**
MLY				IAmb	IAmb	17 49 25.4	
	comp=Z,3.1nm,0.8s						
TIXI	**Tiksi**	**90.23**	**348**	P	**P**	**17 51 47.6**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=337,slow=5.1,SNR=8.9						
TIXI	**Tiksi**	**90.23**	**348**	P	P	17 51 47.4	-0.9
CMAR	**Chiang Mai Arr**	**145.93**	**341**	PKPbc	**PKPbc**	**17 58 28.6**	**+0.1**
	comp=Z,3.9nm,0.8s,baz=336,slow=3.4,SNR=26						

IDC 28 17:48:34.5±1.3, 7°.46S×124°.86E, h379km±15km, mb3.7/15, mb1 3.8/20, mb1mx3.6/41, mbtmp4.5/20, Error ellipse: s-maj=14.1km s-min=7.8km az=69.0
NEIC 28 17:48:34.5±1.6, 7°.48S±0°.08×124°.82E±0°.08, h383km±8km, mb4.3/41, Error ellipse: s-maj=11.7km s-min=11.1km az=213.0
DJA 28 17:48:34.3±0.2, 8°S±2°×12°5E±°, h377km±2km, M4.1/30, mb4.3/30, mB4.6/13, MLv4.5/18, Mw(mB)3.8/13
KLM 28 17:48:35.0, 7°.59S×124°.91E, h388km, mb4.4
ISC 28 17:48:33.5±0.3, 7°.53S±0°.04×124°.81E±0°.04, h371km, n162, σ1°.56/179, mb4.2/27, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
SOEI	**Soe**	**2.27**	**194**	P	**Pn**	**17 49 31.4**	**+2.5**
SOEI				S	**S**	**17 50 14.7**	**+1.3**
SOEI	**Soe**	**2.27**	**194**	P	**Pn**	**17 49 31.4**	**+2.5**
SOEI				S	**S**	**17 50 14.7**	**+1.3**
SOEI	**Soe**	**2.27**	**194**		**Pn**	**17 49 31.4**	**+2.5**
MMRI	**Maumere**	**2.77**	**246**	P	**Pn**	**17 49 33.9**	**+1.3**
MMRI				S	**S**	**17 50 20.9**	**+0.7**
MMRI	**Maumere**	**2.77**	**246**	P	**Pn**	**17 49 33.9**	**+1.3**
MMRI				S	**S**	**17 50 20.9**	**+0.7**
MMRI	**Maumere**	**2.77**	**246**		**Pn**	**17 49 33.6**	**+1.1**
BBSI	**Bau Bau**	**3.01**	**312**	P	**Pn**	**17 49 37.5**	**+2.9**
BBSI				S	**S**	**17 50 26.9**	**+3.0**
BBSI	**Bau Bau**	**3.01**	**312**	P	**Pn**	**17 49 37.5**	**+2.9**
BBSI				S	**S**	**17 50 26.9**	**+3.0**
EDFI	**Ende, Flores**	**3.31**	**248**	P	**Pn**	**17 49 38.0**	**+0.6**
EDFI				S	**S**	**17 50 30.4**	**+1.4**
EDFI	**Ende, Flores**	**3.31**	**248**	P	**Pn**	**17 49 38.0**	**+0.6**
EDFI				S	**S**	**17 50 30.4**	**+1.4**
NLAI	**Namlea**	**4.83**	**28**	P	**Pn**	**17 49 55.6**	**+3.1**
NLAI				S	**S**	**17 50 59.3**	**+3.0**
NLAI	**Namlea**	**4.83**	**28**	P	**Pn**	**17 49 55.6**	**+3.1**
NLAI				S	**S**	**17 50 59.3**	**+3.0**
WSI	**Waingapu**	**4.94**	**244**	P	**Pn**	**17 49 53.9**	**+0.4**
WSI				S	**S**	**17 50 54.6**	**-3.7**
WSI	**Waingapu**	**4.94**	**244**	P	**Pn**	**17 49 53.9**	**+0.4**
WSI				S	**S**	**17 50 54.6**	**-3.7**
BASI	**Baing, Sumba**	**4.96**	**237**	P	**Pn**	**17 49 54.3**	**+0.6**
BASI				S	**S**	**17 50 55.8**	**-2.9**
BASI	**Baing, Sumba**	**4.96**	**237**	P	**Pn**	**17 49 54.3**	**+0.6**
BASI				S	**S**	**17 50 55.8**	**-2.9**
AAI	**Ambon**	**5.09**	**42**	P	**Pn**	**17 49 58.2**	**+3.0**
	0.6nm2µm214nm,0.8s						
AAI	**Ambon**	**5.09**	**42**	P	**Pn**	**17 49 58.2**	**+3.0**
	0.6nm2µm214nm,0.8s						
BKSI	**Bulukumba**	**5.15**	**295**	P	**Pn**	**17 49 57.7**	**+1.9**
	0.1nm32nm,0.7s						
BKSI	**Bulukumba**	**5.15**	**295**	P	**Pn**	**17 49 57.7**	**+1.9**
	0.1nm32nm,0.7s						
SANI	**Sanana**	**5.57**	**12**	P	**Pn**	**17 50 01.8**	**+1.4**
	0.3nm931nm86nm,0.5s						
SANI	**Sanana**	**5.57**	**12**	P	**Pn**	**17 50 01.8**	**+1.4**
	0.3nm931nm86nm,0.5s						
KAPI	**Kappang**	**5.61**	**296**	P	**Pn**	**17 50 03.1**	**+2.2**
	2.1nm,0.3s,baz=96,slow=4.3,SNR=4.2						
BNSI	**Bone**	**5.61**	**303**	P	**Pn**	**17 50 02.9**	**+2.0**
	0.1nm519nm37nm,0.8s						
BNSI	**Bone**	**5.61**	**303**	P	**Pn**	**17 50 02.9**	**+2.0**
	0.1nm519nm37nm,0.8s						
WBSI	**Waikabubak, Su**	**5.75**	**248**	P	**Pn**	**17 50 01.9**	**-0.5**
	0.7nm1µm55nm,0.8s						
WBSI	**Waikabubak, Su**	**5.75**	**248**	P	**Pn**	**17 50 01.9**	**-0.5**
	0.7nm1µm55nm,0.8s						
BNDI	**Bandanaira**	**5.88**	**60**	P	**Pn**	**17 50 07.1**	**+3.2**
	1.4nm178nm,1.1s						
BNDI	**Bandanaira**	**5.88**	**60**	P	**Pn**	**17 50 07.1**	**+3.2**
	1.4nm178nm,1.1s						
SPSI	**Sidrap Palu**	**6.14**	**305**	P	Pn	17 50 18.0	+11
SPSI	**Sidrap Palu**	**6.14**	**305**	P	Pn	17 50 18.0	+11
SAUI	**Saumlaki**	**6.45**	**94**	Pn	**Pn**	**17 50 11.5**	**+1.2**
TTSI	**Tana Toraja**	**6.67**	**312**	P	**P**	**17 50 14.6**	**+0.8**
	0.1nm1µm27nm,0.7s						
TTSI	**Tana Toraja**	**6.67**	**312**	P	**P**	**17 50 14.6**	**+0.8**
	0.1nm1µm27nm,0.7s						
LUWI	**Luwuk**	**6.76**	**342**	P	**P**	**17 50 15.8**	**+1.0**
	0.5nm3µm158nm,0.9s						
LUWI	**Luwuk**	**6.76**	**342**	P	**P**	**17 50 15.8**	**+1.0**
	0.5nm3µm158nm,0.9s						
LUWI	**Luwuk**	**6.76**	**342**		**P**	**17 50 15.4**	**+0.6**
PLAI	**Plampang**	**7.08**	**259**	P	**Pn**	**17 50 16.6**	**-0.8**
	0.3nm758nm42nm,0.8s						
PLAI	**Plampang**	**7.08**	**259**	P	**Pn**	**17 50 16.6**	**-0.8**
	0.3nm758nm42nm,0.8s						
APSI	**Ampana**	**7.29**	**334**	P	**P**	**17 50 21.6**	**+0.7**
	0.1nm334nm34nm,0.8s						
APSI	**Ampana**	**7.29**	**334**	P	**P**	**17 50 21.6**	**+0.7**
	0.1nm334nm34nm,0.8s						
LBMI	**Labuha**	**7.35**	**22**	P	**P**	**17 50 22.7**	**+1.0**
	0.2nm53nm,1.0s						
LBMI	**Labuha**	**7.35**	**22**	P	**P**	**17 50 22.7**	**+1.0**
	0.2nm53nm,1.0s						
KMSI	**Cibinong**	**8.09**	**354**	P	**P**	**17 50 30.9**	**0.0**
	1µm172nm,0.6s						
KMSI	**Cibinong**	**8.09**	**354**	P	**P**	**17 50 30.9**	**0.0**
	1µm172nm,0.6s						
MTN	**Manton Dam**	**8.16**	**131**	P	**P**	**17 50 31.7**	**0.0**
MRSI	**Marisa**	**8.45**	**340**	P	**P**	**17 50 35.5**	**+0.6**
	1µm132nm,0.7s						
MRSI	**Marisa**	**8.45**	**340**	P	**P**	**17 50 35.5**	**+0.6**
	1µm132nm,0.7s						
TNTI	**Ternate**	**8.63**	**17**	P	**P**	**17 50 36.4**	**-0.6**
	52nm,0.8s						
TNTI	**Ternate**	**8.63**	**17**	P	**P**	**17 50 36.4**	**-0.6**
	52nm,0.8s						
TNTI	**Ternate**	**8.63**	**17**	P	**P**	**17 50 36.7**	**-0.3**
FAKI	**Fak Fak**	**8.71**	**59**	P	**Pn**	**17 50 35.3**	**-1.1**
	53nm,0.7s						
FAKI	**Fak Fak**	**8.71**	**59**	P	**Pn**	**17 50 35.3**	**-1.1**
	53nm,0.7s						
FAKI	**Fak Fak**	**8.71**	**59**		**Pn**	**17 50 35.6**	**-0.8**
FAKI					**S**	**17 52 09.6**	**-7.5**
KNRA	**Kununurra**	**8.97**	**155**	P	**P**	**17 50 41.3**	**+0.6**
MPSI	**Mapaga**	**9.22**	**328**	P	**P**	**17 50 44.7**	**+1.2**
	20nm,0.9s						
MPSI	**Mapaga**	**9.22**	**328**	P	**P**	**17 50 44.7**	**+1.2**
	20nm,0.9s						
SIJI	**Sorong**	**9.23**	**45**	P	**Pn**	**17 50 42.5**	**-0.1**
	14nm,0.3s,baz=233,slow=13,SNR=61						
SIJI				S	**S**	**17 52 23.4**	**-4.9**
	3.2nm,0.3s,baz=64,slow=20,SNR=16						
FITZ	**Fitzroy Crossi**	**10.54**	**176**	P	**P**	**17 50 59.6**	**+1.6**
	12nm,0.3s,baz=140,slow=9.1,SNR=282						
FITZ				S	**S**	**17 52 56.4**	**+0.2**
	0.7nm,0.3s,baz=27,slow=20,SNR=5.0						
FITZ	**Fitzroy Crossi**	**10.54**	**176**	P	**P**	**17 50 59.4**	**+1.3**
JAGI	**Jajag, Banyuwa**	**10.59**	**264**	P	**Pn**	**17 50 57.1**	**-1.5**
	8.9nm,0.5s						
JAGI	**Jajag, Banyuwa**	**10.59**	**264**	P	**Pn**	**17 50 57.1**	**-1.5**
	8.9nm,0.5s						
JAGI	**Jajag, Banyuwa**	**10.59**	**264**	P	**Pn**	**17 50 57.4**	**-1.2**
RKPI	**Ransiki, Papua**	**11.09**	**58**	P	**P**	**17 51 05.2**	**+0.8**
	36nm,0.7s						
RKPI	**Ransiki, Papua**	**11.09**	**58**	P	**P**	**17 51 05.2**	**+0.8**
	36nm,0.7s						
GMJI	**Gumukmas**	**11.28**	**265**	P	**Pn**	**17 51 06.7**	**0.0**
GMJI	**Gumukmas**	**11.28**	**265**	P	**Pn**	**17 51 06.7**	**0.0**
PCJI	**Pacitan**	**13.52**	**266**	P	**P**	**17 51 29.8**	**-1.3**
PCJI	**Pacitan**	**13.52**	**266**	P	**P**	**17 51 29.8**	**-1.3**
PSAD1	**Pilbara Seismi**	**14.65**	**199**	P	**P**	**17 51 44.5**	**+1.0**
PSAC2	**Pilbara Seismi**	**14.73**	**198**	P	**P**	**17 51 45.4**	**+1.1**
SPMM	**Sapulut**	**14.73**	**325**	P	**P**	**17 51 47.0**	**+0.1**
PSA00	**Pilbara Seismi**	**14.76**	**198**	P	**P**	**17 51 45.8**	**+1.2**
PSAB1	**Pilbara Seismi**	**14.76**	**199**	P	**P**	**17 51 45.9**	**+1.3**
SMPI	**Sarmi**	**14.90**	**69**	P	**Pn**	**17 51 47.6**	**-1.2**
	70nm,1.0s						
SMPI	**Sarmi**	**14.90**	**69**	P	**Pn**	**17 51 47.6**	**-1.2**
	70nm,1.0s						

WB0	Warramunga Arr	15.31	144	P	P	17 51 51.5	+0.8
WB0				IAmb	IAmb	17 52 12.6	
	comp=Z,8.4nm,0.6s						
WRA	Warramunga Arr	15.42	144	P	P	17 51 52.6	+0.8
	comp=Z,1.7nm,0.3s,baz=315,slow=14,SNR=91						
WRA				S	S	17 54 39.0	+2.9
	comp=Z,0.4nm,0.3s,baz=315,slow=23,SNR=9.2						
WB2	Warramunga Arr	15.42	144	P	P	17 51 52.9	+1.0
WB2				IAmb	IAmb	17 51 53.4	
	comp=Z,9.7nm,0.6s						
WR0	Warramunga Arr	15.55	144	P	P	17 51 54.1	+0.9
WR0				IAmb	IAmb	17 51 55.1	
	comp=Z,11nm,0.7s						
KKM	Kota Kinabalu	15.98	327	P	Pn	17 51 59.9	-1.6
KKM				IAmb	IAmb	17 52 09.8	
	comp=Z,14nm,0.7s						
SBUM	Sibu	16.00	308	P	P	17 51 58.3	+0.2
SBUM	Sibu	16.00	308	P	Pn	17 52 01.0	-0.5
GENI	Genyem	16.06	73	P	P	17 51 59.9	+1.0
	comp=Z,70nm,1.4s						
GENI	Genyem	16.06	73	P	P	17 51 59.9	+1.0
	comp=Z,70nm,1.4s						
CISI	Cisompet, Garu	16.85	269	P	P	17 52 05.8	-1.5
	comp=Z,19nm,1.1s						
CISI	Cisompet, Garu	16.85	269	P	P	17 52 05.8	-1.5
	comp=Z,19nm,1.1s						
CISI	Cisompet, Garu	16.85	269	P	P	17 52 06.6	-0.7
KSM	Kuching	17.01	301	P	P	17 52 09.9	+0.9
KSM				IAmb	IAmb	17 52 31.3	
	comp=Z,15nm,1.2s						
GIRL	Giralia	18.15	213	P	P	17 52 22.8	+1.7
AS31	Alice Springs	18.27	152	P	P	17 52 23.3	+1.0
ASAR	Alice Springs	18.27	152	P	P	17 52 23.4	+1.1
	comp=Z,4.0nm,0.3s,baz=335,slow=12,SNR=307						
ASAR				S	S	17 55 32.5	+0.6
	comp=Z,0.3nm,0.3s,baz=333,slow=18,SNR=8.0						
COEN	Coen	19.13	111	P	P	17 52 31.1	-0.4
COEN				IAmb	IAmb	17 52 33.0	
	comp=Z,13nm,1.3s						
PMG	Port Moresby	22.19	96	P	P	17 53 00.6	+0.5
	comp=Z,7.1nm,0.9s,baz=264,slow=3.3,SNR=5.5						
PMG	Port Moresby	22.19	96	P	P	17 52 58.2	-1.9
MORW	Morawa	22.96	200	P	P	17 53 06.8	-0.2
MORW				IAmb	IAmb	17 53 10.3	
	comp=Z,12nm,0.8s						
FORT	Forrest	23.33	173	P	P	17 53 11.0	+0.7
KRJI	Kerinci	23.87	282	P	P	17 53 17.6	+2.1
KRJI	Kerinci	23.87	282	P	P	17 53 17.6	+2.1
NWAO	Narrogin (SRO)	26.23	195	P	P	17 53 36.6	+0.4
	comp=Z,3.6nm,0.5s,baz=26,slow=6.6,SNR=7.8						
NWAO	Narrogin (SRO)	26.23	195	P	P	17 53 37.0	+0.8
NWAO				IAmb	IAmb	17 53 37.3	
	comp=Z,27nm,1.4s						
NWAO	Narrogin (SRO)	26.23	195	P	P	17 53 36.2	0.0
NWAO				IAmb	IAmb	17 53 37.3	
	comp=Z,22nm,1.4s						
BBOO	Buckleboo	27.24	159	P	P	17 53 45.9	+0.7
BBOO				IAmb	IAmb	17 53 46.3	
	comp=Z,29nm,1.4s						
KULM	Kulim	27.26	297	P	P	17 53 45.7	+0.2
KULM				IAmb	IAmb	17 54 13.0	
	comp=Z,15nm,1.4s						
PSI	Prapat	27.79	291	P	P	17 53 50.3	-0.1
	comp=Z,3.0nm,0.6s,baz=87,slow=7.4,SNR=4.9						
STKA	Stephens Creek	28.84	149	P	P	17 54 00.7	+1.4
	comp=Z,4.3nm,0.4s,baz=329,slow=8.4,SNR=31						
STKA	Stephens Creek	28.84	149	P	P	17 54 00.4	+1.1
TWG	Pinlang	30.38	353	P	P	17 54 10.7	-2.2
TPUB	Ta-pu	30.91	353	P	P	17 54 16.7	-0.8
YULB	Yu-li	30.92	354	P	P	17 54 14.7	-2.9
YULB				IAmb	IAmb	17 54 34.1	
	comp=Z,17nm,1.3s						
SSLB	Suanglung	31.35	353	P	P	17 54 19.4	-1.9
SSLB				IAmb	IAmb	17 54 38.9	
	comp=Z,27nm,1.6s						
YHNB	Yeheng	32.18	354	P	P	17 54 27.4	-1.1
TOO	Toolangi	35.31	151	P	P	17 54 55.4	+0.3
TOO				IAmb	IAmb	17 55 02.0	
	comp=Z,21nm,1.4s						
CAN	Canberra	35.46	145	P	P	17 54 59.0	+2.7
CMAR	Chiang Mai Arr	36.30	316	P	P	17 55 03.9	+0.2
	comp=Z,1.2nm,0.3s,baz=147,slow=6.8,SNR=17						
CHTO	Chiang Mai	36.55	316	P	P	17 55 06.5	+0.9
WHN	Wuhan	39.16	346	P	P	17 55 27.8	+0.7
ENH	Enshi	40.36	339	P	P	17 55 37.0	+0.1
ENH				IAmb	IAmb	17 55 37.5	
	comp=Z,11nm,0.8s						
SANVU	Saraoutou	42.22	105	P	P	17 55 53.2	+1.1
XAN	Xi'an	44.00	341	P	P	17 56 04.8	-1.1
XAN	Xi'an	44.00	341	P	P	17 56 05.1	-0.8
XAN				IAmb	IAmb	17 56 05.6	
	comp=Z,8.6nm,0.7s						
KSRS	Korea Array	44.84	4	P	P	17 56 12.6	+0.2
	comp=Z,1.8nm,0.8s,baz=187,slow=8.8,SNR=4.2						
MJAR	Matsushiro Arr	45.61	15	P	P	17 56 17.4	-1.0
	comp=Z,4.2nm,0.9s,baz=185,slow=8.2,SNR=6.9						
MAT	Matsushiro	45.61	15	P	P	17 56 17.3	-1.1
LSA	Lhasa	49.17	320	P	P	17 56 47.0	+0.9
LSA	Lhasa	49.17	320	P	P	17 56 47.0	+0.9
HHC	Hu-ho-hao-te	49.66	347	eP	P	17 56 51.5	+2.3
ODAN	Odare	49.84	315	eP	P	17 56 51.1	+0.2
	comp=Z,29nm,0.5s						
TAPN	Taplejung	49.91	315	eP	P	17 56 51.9	+0.3
	comp=Z,36nm,0.4s						
RAMN	Ramite	50.45	314	eP	P	17 56 56.1	+0.6
	comp=Z,64nm,0.6s						
JIRN	Jiri	51.17	315	eP	P	17 57 01.2	+0.3
	comp=Z,31nm,0.5s						
GUN	Gumba	51.54	315	eP	P	17 57 03.9	+0.3
	comp=Z,46nm,0.5s						
PKI	Pulchoki	51.67	314	eP	P	17 57 04.5	0.0
	comp=Z,27nm,0.5s						
PKIN	Phulchoki	51.68	314	eP	P	17 57 04.4	-0.2
	comp=Z,23nm,0.4s						
KKN	Kakani	51.89	314	eP	P	17 57 06.0	0.0
	comp=Z,20nm,0.6s						
USRK	Ussuriysk Ar.	51.90	7	P	P	17 57 05.4	-0.1
	comp=Z,2.5nm,0.7s,baz=178,slow=7.7,SNR=7.1						
DMN	Daman	51.91	314	eP	P	17 57 06.3	+0.1
	comp=Z,20nm,0.7s						
GTA	Gaotai	52.13	336	eP	P	17 57 07.5	+0.1
GKN	Gorkha	52.48	314	eP	P	17 57 10.4	+0.2
	comp=Z,29nm,0.3s						
DANN	Dangsing	53.30	314	eP	P	17 57 16.4	0.0
	comp=Z,43nm,0.6s						
ULN	Ulaanbaatar	57.34	346	P	P	17 57 44.6	+0.3
SONM	Songino Array	57.48	345	P	P	17 57 45.2	-0.1
	comp=Z,1.9nm,0.6s,baz=162,slow=8.6,SNR=18						
WMQ	Urumqi	61.15	330	eP	P	17 58 10.5	+0.4
WMQ				sP	sP	18 00 13.0	+3.3
MK31	Makanchi Array	65.95	329	P	P	17 58 41.2	+0.2
MK31				IAmb	IAmb	17 58 41.9	
	comp=Z,6.2nm,0.7s						
MKAR	Makanchi Array	65.95	329	P	P	17 58 41.1	+0.1
	comp=Z,9.5nm,0.5s,baz=125,slow=7.5,SNR=243						
MAKZ	Makanchi	66.12	329	P	P	17 58 41.5	-0.6
MAKZ				IAmb	IAmb	17 58 42.7	
	comp=Z,4.6nm,0.8s						
PEA0B	Petropavlovsk-	66.54	21	P	P	17 58 45.5	+0.9
PETK	Petropavlovsk-	66.54	21	P	P	17 58 45.4	+0.8
	comp=Z,3.1nm,0.7s,baz=214,slow=4.7,SNR=5.4						
YAK	Yakutsk	69.45	2	P	P	17 59 01.8	-0.5
	comp=Z,11nm,0.5s,baz=48,slow=0.3,SNR=11						
YAK	Yakutsk	69.45	2	P	P	17 59 02.2	-0.1
ZAA0	Zalesovo Array	69.88	336	P	P	17 59 04.2	+0.1
ZALV	Zalesovo Beam	69.88	336	P	P	17 59 04.0	-1.0
	comp=Z,3.3nm,0.5s,baz=139,slow=3.8,SNR=14						
KURK	Kurchatov	70.37	331	P	P	17 59 07.9	-0.2
KURK				IAmb	IAmb	17 59 08.7	
	comp=Z,6.9nm,1.0s						
SOCY	Socotra	73.07	285	P	P	17 59 24.3	-0.6
SOCY				IAmb	IAmb	17 59 27.3	
	comp=Z,10nm,0.9s						
BRVK	Borovoye	75.91	330	P	P	17 59 39.8	-0.3
GEYT	Alibeck	76.67	312	P	P	17 59 44.9	+0.1
	comp=Z,1.5nm,0.6s,baz=119,slow=9.2,SNR=4.7						
TIXI	Tiksi	79.06	1	P	P	17 59 56.0	-1.1
	comp=Z,4.3nm,0.4s,baz=183,slow=4.0,SNR=11						
ABKAR	Akbulak array	79.77	323	P	P	18 00 00.7	-0.6
QSPA	South Pole Qui	82.45	180	P	P	18 00 13.8	-1.3
PDAR	Pinedale Array	120.89	44	PKiKP	PKPdf	18 06 42.5	-0.4
	comp=Z,0.2nm,0.5s,baz=261,slow=3.6,SNR=2.5						
TORD	Torodi Ar. Bea	123.85	281	PKP	PKPdf	18 06 48.7	-0.2
	comp=Z,1.2nm,0.7s,baz=69,slow=1.4,SNR=6.7						
CPUP	Villa Florida	146.28	177	PKPbc	PKPbc	18 07 32.4	+0.6
	comp=Z,1.0nm,0.3s,baz=190,slow=17,SNR=3.5						

KRNET 28 17:56:53.7±0.1,39.°19N×72.°11E,mb2.6
ISC 28 17:56:53.6±2.3,39.°0N±0.°1×72.°09E±0.°07,h42km,n5,σ0.ˢ72/10,8C,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	Batken	1.48	319	⇑iP	Pn	17 57 18.0	+0.2
	baz=12						
BTK				⇑iS	Sn	17 57 35.8	-0.2
	baz=12						
ARSB	Arslanbob	2.47	16	⇑iP	Pn	17 57 32.0	+0.6
	baz=17						
ARSB				⇑iS	Sn	17 57 59.9	-0.5
	baz=17						
ARK	Arkit	2.84	358	⇑eP	Pn	17 57 37.0	+0.4
	baz=58						
ARK				⇑iS	Sn	17 58 08.5	-1.2
	baz=58						
KSH	Kashi	3.07	78	Pn	Pn	17 57 39.8	+0.1
KSH				Sn	Sn	17 58 14.5	-0.7
ARLS	Aral	3.37	30	⇑iP	Pn	17 57 44.8	+1.0
	baz=32						
ARLS				⇑iS	Sn	17 58 22.4	-0.3
	baz=32						

IDC 28 18:20:51.4±1.8,17.°54S×178.°74W,h558km±19km,mb3.4/11,mb1 3.7/12,mb1mx3.6/23,mbtmp4.3/12,Error ellipse: s-maj=33.5km s-min=10.8km az=151.0
NEIC 28 18:20:52.5±1.6,17.°7S±0.°1×178.°7W±0.°1,h578km±8km,mb4.4/46,Error ellipse: s-maj=22.4km s-min=16.2km az=147.0
ISC 28 18:20:49.9±0.7,17.°7S±0.°1×178.°64W±0.°10,h547km,n68,σ1.ˢ04/71,mb4.3/35,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.16	269	P	P	18 22 11.3	+5.4
SANVU	Saraoutou	13.76	277	P	P	18 23 47.6	+0.9
DZM	Mont Dzumac	14.69	250	P	P	18 23 57.6	+1.2
	1.3nm,0.3s,baz=161,slow=23,SNR=12						
DZM				S	S	18 26 28.2	-2.0
	0.1nm,0.3s,baz=120,slow=20,SNR=3.4						
DZM	Mont Dzumac	14.69	250	P	P	18 23 56.5	0.0
NOUC	Port Laguerre	14.83	250	P	P	18 24 00.5	+2.8
EIDS	Eidsvold	29.14	250	P	P	18 26 07.6	+0.4
ARMA	Armidale	29.86	239	P	P	18 26 14.8	+1.2
RABL	Rabaul	31.58	292	P	P	18 26 31.7	+3.3
CAN	Canberra	33.67	232	P	P	18 26 46.7	+0.9
CAN				IAmb	IAmb	18 26 47.2	
	comp=Z,13nm,1.0s						
PMG	Port Moresby	34.21	279	P	P	18 26 52.1	+1.6
COEN	Coen	36.88	270	P	P	18 27 13.9	+1.1
TOO	Toolangi	37.14	230	P	P	18 27 15.5	+0.9
TOO				IAmb	IAmb	18 27 26.9	
	comp=Z,26nm,1.6s						
STKA	Stephens Creek	38.55	241	P	P	18 27 27.2	+1.1
	comp=Z,6.5nm,0.5s,baz=88,slow=9.9,SNR=38						
STKA	Stephens Creek	38.55	241	P	P	18 27 27.2	+1.1
BBOO	Buckleboo	43.32	241	P	P	18 28 04.5	+0.5
BBOO				IAmb	IAmb	18 28 13.2	
	comp=Z,25nm,1.2s						
HMH	Humu'ula Sheep	43.48	33	P	P	18 28 06.2	+0.5
WR0	Warramunga Arr	44.27	259	P	P	18 28 10.8	-0.7
WR0				IAmb	IAmb	18 28 14.1	
	comp=Z,9.6nm,1.3s						
WB0	Warramunga Arr	44.42	260	P	P	18 28 12.1	-0.7
WB0				IAmb	IAmb	18 28 13.1	
	comp=Z,7.7nm,0.8s						
WB2	Warramunga Arr	44.45	259	P	P	18 28 12.4	-0.6
WRAB	Tennant Creek	44.45	259	P	P	18 28 12.4	-0.5
WRAB				IAmb	IAmb	18 28 14.7	
	comp=Z,6.9nm,0.7s						
WRA	Warramunga Arr	44.46	259	P	P	18 28 12.4	-0.6
	comp=Z,3.7nm,0.3s,baz=94,slow=7.6,SNR=237						
WRA				ScP	ScP	18 32 44.6	-0.4
	comp=Z,0.4nm,0.8s,baz=5.3,slow=3.8,SNR=4.5						
WRA				S	S	18 34 08.2	-0.5
	comp=Z,0.2nm,0.3s,baz=148,slow=32,SNR=5.5						
AS31	Alice Springs	44.64	254	P	P	18 28 14.6	+0.2
AS31				IAmb	IAmb	18 28 15.2	
	comp=Z,15nm,0.7s						
ASAR	Alice Springs	44.64	254	P	P	18 28 14.6	+0.2
	comp=Z,54nm,0.5s,baz=89,slow=7.6,SNR=2036						
ASAR				ScP	ScP	18 32 45.8	+0.1
	comp=Z,0.6nm,0.7s,baz=98,slow=4.4,SNR=5.1						
ASAR				S	S	18 34 08.6	-2.7
	comp=Z,0.6nm,0.8s,baz=91,slow=15,SNR=5.0						
MTN	Manton Dam	48.59	268	P	P	18 28 43.9	-0.3
MTN				IAmb	IAmb	18 28 45.0	
	comp=Z,11nm,0.8s						
FORT	Forrest	49.91	244	P	P	18 28 53.3	-0.4
KNRA	Kununurra	50.29	264	P	P	18 28 56.7	-0.1
KNRA				IAmb	IAmb	18 28 57.4	
	comp=Z,16nm,0.7s						
FAKI	Fak Fak	50.32	281	P	P	18 28 56.7	-0.4
FAKI				IAmb	IAmb	18 28 59.4	
	comp=Z,27nm,1.5s						
SOEI	Soe	55.85	270	P	P	18 29 30.1	+1.4
SOEI				IAmb	IAmb	18 29 38.9	
	comp=Z,24nm,0.7s						
PSA00	Pilbara Seismi	57.75	255	P	P	18 29 48.8	-0.6
PSA00				IAmb	IAmb	18 29 49.6	
	comp=Z,9.1nm,0.6s						
MMRI	Maumere	58.08	271	P	P	18 29 51.4	-0.2
NWAO	Narrogin (SRO)	59.12	242	P	P	18 29 58.3	-0.1
NWAO				IAmb	IAmb	18 30 03.9	
	comp=Z,16nm,1.1s						
NWAO	Narrogin (SRO)	59.12	242	P	P	18 29 58.0	-0.3
NWAO				IAmb	IAmb	18 30 03.9	
	comp=Z,11nm,1.1s						
MORW	Morawa	60.37	246	P	P	18 30 06.5	-0.2
GIRL	Giralia	62.75	253	P	P	18 30 23.3	+0.9
JAGI	Jajag, Banyuwa	65.83	269	P	P	18 30 40.2	-1.9
JAGI				IAmb	IAmb	18 30 41.4	
	comp=Z,14nm,0.8s						
MJAR	Matsushiro Arr	67.60	323	P	P	18 30 51.9	-0.5
	comp=Z,3.1nm,0.6s,baz=151,slow=6.2,SNR=10						
MAJO	Matsushiro	67.60	323	P	P	18 30 52.2	-0.3
MJB9	Matsu-Tunnel	67.60	323	P	P	18 30 52.2	-0.3
KKM	Kota Kinabalu	68.48	284	P	P	18 30 58.5	+0.1
UGM	Wanagama	69.44	268	P	P	18 31 03.9	-0.1
YULB	Yu-li	71.47	303	P	P	18 31 14.9	-0.9
YULB				IAmb	IAmb	18 31 25.9	
	comp=Z,34nm,1.6s						
SSLB	Suanglung	71.93	303	P	P	18 31 17.7	-0.9
SSLB				IAmb	IAmb	18 31 25.9	
	comp=Z,20nm,1.5s						
TPUB	Ta-pu	71.96	302	P	P	18 31 17.2	-1.5
TPUB				IAmb	IAmb	18 31 18.3	
	comp=Z,12nm,0.8s						
CISI	Cisompet, Garu	72.11	268	P	P	18 31 17.2	-2.7
QSPA	South Pole Qui	72.37	180	P	P	18 31 20.4	-0.1
KSM	Kuching	72.44	277	P	P	18 31 21.7	0.0
KSM				IAmb	IAmb	18 31 25.1	
	comp=Z,11nm,1.0s						
KSRS	Korea Array	74.39	318	P	P	18 31 32.7	+0.5
	comp=Z,0.5nm,0.5s,baz=134,slow=6.5,SNR=4.2						
BEKR	Beckworth	78.87	42	P	P	18 31 57.0	0.0
YERR	Yerington	79.10	43	P	P	18 31 58.3	0.0
YERR				IAmb	IAmb	18 31 59.1	
	comp=Z,6.9nm,0.6s						
NVAR	Mina Array Bea	79.42	44	P	P	18 31 59.9	0.0
	comp=Z,2.5nm,0.7s,baz=224,slow=8.7,SNR=14						
MOD	Modoc Plateau	80.06	40	P	P	18 32 03.2	+0.1
WVOR	Wild Horse Val	81.38	40	P	P	18 32 10.1	+0.2
X16A	Lo Mia Camp, P	82.21	50	P	P	18 32 15.0	+0.5
U15A	North Rim	82.53	48	P	P	18 32 16.5	+0.3
U15A				IAmb	IAmb	18 32 17.7	
	comp=Z,5.6nm,0.7s						
ENH	Enshi	83.97	304	P	P	18 32 23.2	0.0
ENH				IAmb	IAmb	18 32 24.7	
	comp=Z,5.6nm,0.8s						
ILAR	Eielson Array	85.72	13	P	P	18 32 29.3	-1.5
	comp=Z,0.5nm,0.4s,baz=220,slow=4.5,SNR=9.6						
TX31	Lajitas Ar. Si	86.06	58	P	P	18 32 34.0	+0.6
TX31				IAmb	IAmb	18 32 34.8	
	comp=Z,4.4nm,0.8s						
TX32	Lajitas Array	86.06	58	P	P	18 32 33.9	+0.5
TX32				IAmb	IAmb	18 32 34.8	
	comp=Z,4.5nm,0.8s						
TXAR	Lajitas Array	86.06	58	P	P	18 32 34.2	+0.8
	comp=Z,3.3nm,0.7s,baz=217,slow=6.3,SNR=39						
YHL	Hebgen Lake	87.26	41	P	P	18 32 39.8	+0.9
PD31	Pinedale Array	87.34	44	P	P	18 32 38.7	-0.6
PDAR	Pinedale Array	87.34	44	P	P	18 32 39.0	-0.3
	comp=Z,1.4nm,0.5s,baz=210,slow=3.1,SNR=21						
CMAR	Chiang Mai Arr	88.60	290	P	P	18 32 46.5	+1.1
	comp=Z,0.9nm,0.8s,baz=112,slow=2.8,SNR=7.3						
SONM	Songino Array	93.24	319	P	P	18 33 06.9	+0.6
	comp=Z,0.4nm,0.9s,baz=119,slow=5.1,SNR=2.9						
YKA	Yellowknife Ar	94.22	25	P	P	18 33 09.2	-1.1
	comp=Z,0.4nm,0.6s,baz=241,slow=4.3,SNR=6.4						
FINES	FINESS Array B	132.91	344	SKPbc	SKPbc	18 41 38.4	-1.0
	comp=Z,1.1nm,0.7s,baz=45,slow=1.1,SNR=4.4						
BRTR	Keskin Array B	144.47	315	PKP	PKPbc	18 39 24.1	-0.5
	comp=Z,0.9nm,0.5s,baz=94,slow=2.9,SNR=8.2						
GERES	GERESS Array B	147.34	345	PKPbc	PKPbc	18 39 31.5	-1.0
	comp=Z,0.5nm,0.4s,baz=21,slow=3.8,SNR=5.7						

SJA 28 18:23:15.8±1.0,20.°50S×66.°58W,h257km±9km,ML3.5,MW3.5
NEIC 28 18:23:17.5±0.8,20.°61S±0.°07×66.°7W±0.°2,h245km±20km,mb4.2/2,Error ellipse: s-maj=32.4km s-min=9.6km az=98.0
GUC 28 18:23:18.6±0.6,20.°53S×66.°94W,h268km±10km,ML4.0
IDC 28 18:23:19.8±1.9,20.°23S×66.°95W,h288km±36km,mb3.2/2,mb1 3.4/4,mb1mx3.1/24,mbtmp4.0/4,Error ellipse: s-maj=50.8km s-min=21.1km az=114.0
ISC 28 18:23:16.9±0.9,20.°57S±0.°05×66.°72W±0.°05,h252km±9km,n52,σ1.ˢ36/76,15C-1D,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	Yavi	1.95	145	iP	Pn	18 23 59.9	+0.2
YJA				eS	S	18 24 31.4	-2.0
YJA				IAML		18 24 33.3	
	comp=Z,54nm,0.7s						
PB08	IPOC Station P	2.32	280	⇑iP	Pn	18 24 03.9	+0.9
PB08				iS	S	18 24 39.2	-0.1
PB08				IAML		18 24 41.1	
	comp=N,162nm,0.7s						
PB08	IPOC Station P	2.32	280	iP	Pn	18 24 04.0	+1.0
PB08				iS	S	18 24 39.6	+0.2
GO01	Chusmiza	2.49	291	⇑iP	Pn	18 24 05.4	+0.6
GO01				iS	S	18 24 40.9	-1.7
GO01				IAML		18 24 50.3	
	comp=N,292nm,0.1s						
GO01	Chusmiza	2.49	291		Pn	18 24 05.4	+0.6
PB01	IPOC Station P	2.63	259	⇑iP	Pn	18 24 05.9	+0.1
PB01				iS	S	18 24 42.8	-1.5
PB01				IAML		18 24 44.9	
	comp=N,308nm,0.2s						
PB01	IPOC Station P	2.63	259		Pn	18 24 05.8	0.0
PB01	IPOC Station P	2.63	259	eP	Pn	18 24 06.3	+0.5
PB01				eS	S	18 24 43.5	-0.8
PB09	IPOC Station P	2.65	242	⇑iP	Pn	18 24 07.2	+1.1
PB09				iS	S	18 24 44.1	-0.7
PB09				IAML		18 24 53.7	
	comp=E,102nm,0.4s						
PB09	IPOC Station P	2.65	242	iP	Pn	18 24 07.2	+1.1
PB09				iS	S	18 24 45.7	+0.8
PB09				IAML		18 24 47.0	
	comp=Z,76nm,0.2s						
PB11	IPOC Station P	2.87	286	⇑iP	Pn	18 24 08.5	+0.1
PB11				iS	S	18 24 47.2	-1.9
PB11				IAML		18 24 53.0	
	comp=N,306nm,0.4s						
PB11	IPOC Station P	2.87	286		Pn	18 24 08.4	+0.1
PB11	IPOC Station P	2.87	286	iP	Pn	18 24 08.6	+0.2
PB11				eS	S	18 24 47.6	-1.5
LVC	Limon Verde	2.87	225	Pn	Pn	18 24 08.4	-0.2
LVC	Limon Verde	2.87	225	eP	Pn	18 24 12.0	+3.4
LVC				eS	S	18 24 49.3	-0.1
PB02	IPOC Station P	3.06	255	⇓iP	Pn	18 24 10.9	+0.6
PB02	IPOC Station P	3.06	255	eP	Pn	18 24 10.9	+0.6
PB02				eS	S	18 24 50.7	-1.8
MNMC	Minye Minye	3.06	297	⇑iP	Pn	18 24 11.2	+0.6
MNMC				iS	S	18 24 51.8	-1.2
MNMC				IAML		18 24 56.0	
	comp=E,304nm,0.2s						
MNMC	Minye Minye	3.06	297	Pn	Pn	18 24 11.1	+0.6
MNMCX	Minye Minye	3.06	297	eP	Pn	18 24 11.2	+0.7
MNMCX				eS	S	18 24 53.6	+0.7
PB07	IPOC Station P	3.17	248	⇑iP	Pn	18 24 12.1	+0.5
PB07	IPOC Station P	3.17	248	eP	Pn	18 24 12.5	+0.9
PB07				iS	S	18 24 52.9	-2.0
PB03	IPOC Station P	3.18	242	⇑iP	Pn	18 24 12.4	+0.7
PB03	IPOC Station P	3.18	242	eP	Pn	18 24 12.7	+1.0
PB03				eS	S	18 24 53.5	-1.7
PATCX	Punta Patache	3.22	265	⇑iP	Pn	18 24 12.3	+0.2
PATCX	Punta Patache	3.22	265	eP	Pn	18 24 12.6	+0.5
PATCX				iS	S	18 24 53.5	-2.2
TA01	Diego Aracena	3.24	270	⇑iP	Pn	18 24 12.1	0.0
PSGC	Pisagua	3.34	286	⇑iP	Pn	18 24 13.2	-0.3
PSGCX	Pisagua	3.34	286	iP	Pn	18 24 13.3	-0.1
PSGCX				iS	S	18 24 55.2	-3.0
PB06	IPOC Station P	3.40	231	⇑iP	Pn	18 24 15.8	+1.7
PB06	IPOC Station P	3.40	231	iP	Pn	18 24 15.8	+1.7
PB06				iS	S	18 24 58.9	-0.5
PB06				IAML		18 24 59.0	
	comp=Z,117nm,0.1s						
PB16	IPOC Station P	3.44	310	⇑iP	Pn	18 24 16.4	+1.2
PB04	IPOC Station P	3.64	241	⇑iP	Pn	18 24 17.4	+0.6
PB04	IPOC Station P	3.64	241		Pn	18 24 17.5	+0.6
PB04	IPOC Station P	3.64	241	eP	Pn	18 24 17.5	+0.6
PB04				eS	S	18 25 01.7	-2.7
PB04				IAML		18 25 05.5	
	comp=Z,126nm,0.2s						
PB15	IPOC Station P	3.66	224	eP	Pn	18 24 18.8	+1.6
PB15	IPOC Station P	3.66	224	eP	Pn	18 24 19.0	+1.9
PB15				iS	S	18 25 04.6	-0.3
AZAP	Zapla	3.94	157	eP	Pn	18 24 20.6	+0.1
AZAP				eS	S	18 25 08.9	-2.0
AZAP				IAML		18 25 09.9	
	comp=Z,31nm,0.4s						
PB05	IPOC Station P	3.95	234	⇑iP	Pn	18 24 21.1	+0.7
PB05	IPOC Station P	3.95	234	iP	Pn	18 24 21.2	+0.8
PB05				eS	S	18 25 07.9	-3.0
LPAZ	La Paz	4.47	342	P	Pn	18 24 27.7	+0.7
	comp=Z,7.2nm,0.3s,baz=177,slow=12,SNR=102						
LPAZ				S	S	18 25 20.9	-1.9
	comp=Z,0.5nm,0.3s,baz=328,slow=17,SNR=4.4						
LPAZ	La Paz	4.47	342		Pn	18 24 27.5	+0.4
PB10	IPOC Station P	4.60	230	Pn	Pn	18 24 28.2	+0.2
PB10	IPOC Station P	4.60	230	iP	Pn	18 24 28.2	+0.2
PB10				eS	S	18 25 20.6	-4.0
GO02	Mina Guanaco	5.28	210		Pn	18 24 36.9	+0.4
GO03	Copiap	7.69	204	Pn	Pn	18 25 06.1	-0.3
GO04	Tololo Observa	10.24	200	Pn	Pn	18 25 38.9	+0.1
BDFB	Brasilia	18.44	78	Pn	P	18 27 16.6	-1.3
	comp=Z,0.5nm,0.3s,baz=250,slow=12,SNR=3.5						
BDFB	Brasilia	18.44	78	P	P	18 27 15.7	+1.2
BDFB				IAmb	IAmb	18 27 40.3	
	comp=Z,12nm,1.5s						
PLCA	Paso Flores	20.36	188	P	Pn	18 27 38.2	-1.8
	comp=Z,1.4nm,0.6s,baz=27,slow=11,SNR=6.5						
PLCA	Paso Flores	20.36	188	P	P	18 27 37.5	+2.8
PLCA				IAmb	IAmb	18 27 40.9	
	comp=Z,11nm,1.4s						
TORD	Torodi Ar. Bea	75.12	70	P	P	18 34 31.6	-0.3
	comp=Z,1.5nm,0.6s,baz=254,slow=5.6,SNR=8.0						

GCG 28 18:39:13.3±0.5,13.°50N×92.°65W,h57km±327km,MD4.0
IDC 28 18:39:14.8±2.6,13.°73N×92.°37W,h0km,mb3.8/2,mb1 4.1/6,mb1mx3.7/34,mbtmp3.9/6,ML3.8/3,MS2.7/1,Ms1 2.7/1,ms1mx2.4/51,Error ellipse: s-maj=47.4km s-min=26.1km az=177.0
MEX 28 18:39:19.4±0.2,13.°94N×92.°32W,h5km,MD4.1
SNET 28 18:39:21.6±0.6,14.°10N×92.°14W,h58km±29km,ML4.3
UCR 28 18:39:21.7±0.7,14.°13N×92.°14W,h60km±32km,ML4.1
ISC 28 18:39:16.8±2.3,13.°93N±0.°08×92.°30W±0.°05,h7km±12km,n29,σ1.ˢ03/41,1D,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.88	54	eP	Pn	18 39 36.7	+1.1
THIG		0.98	2	eP	Pg	18 39 35.3	-0.3
THIG				iS	Sg	18 39 48.0	-0.3

STG3	Santiaguito 3,	1.05	42	eP	Pn	18 39 38.2	0.0
FUG	Fuego 3	1.51	70	eP	Pn	18 39 44.9	+0.4
PCG	Pacaya	1.71	74	eP	Pb	18 39 48.2	-0.5
IXG	Ixpaco	1.82	82	eP	Pn	18 39 48.9	+0.1
PCIG		1.98	333	eP	Pn	18 39 49.9	-0.9
PCIG				⇓iS	Sn	18 40 13.5	-2.3
NBG	Las Nubes	2.01	71	eP	Pb	18 39 53.6	-0.2
NBG				eS	Sg	18 40 22.8	+1.4
APG	El Apazote	2.08	59	Pn	Pb	18 39 53.8	-1.3
	baz=180,slow=12						
APG				Sn	Sg	18 40 22.5	-1.2
RTR	El Retiro	2.58	90	eP	Pn	18 39 59.7	+0.5
RTR	El Retiro	2.58	90	eP	Pn	18 39 59.7	+0.5
CEVE	Cerro Verde	2.60	92	eP	Pn	18 40 00.1	+0.6
CEVE				eS	Sn	18 40 31.1	-0.5
CEVE				IAML		18 40 44.0	
	comp=Z,1μm,0.3s						
CEVE	Cerro Verde	2.60	92	eP	Pn	18 40 00.1	+0.6
CEVE				eS	Sn	18 40 31.1	-0.5
CEVE				IAML		18 40 44.0	
	comp=Z,1μm,0.3s						
SBLS	San Blas	2.60	92	eP	Pn	18 40 00.3	+0.7
SBLS				eS	Sn	18 40 30.3	-1.3
SBLS	San Blas	2.60	92	eP	Pn	18 40 00.3	+0.7
SBLS				eS	Sn	18 40 30.3	-1.3
SNJE	San Jose	2.62	91	eP	Pn	18 40 00.6	+0.8
SNJE				eS	Sn	18 40 30.6	-1.3
SNJE	San Jose	2.62	91	eP	Pn	18 40 00.6	+0.8
SNJE				eS	Sn	18 40 30.6	-1.3
MRL	Marmol	2.78	65	eS	Sb	18 40 42.5	+1.0
MTO3	Montecristo	2.89	80	eP	Pn	18 40 03.9	+0.4
MTO3	Montecristo	2.89	80	eP	Pn	18 40 03.9	+0.4
LFRS	El Faro	3.16	95	eP	Pn	18 40 07.7	+0.6
LFRS				eS	Sn	18 40 44.1	-1.1
CMIG	Matias Romero	4.01	322	Pn	Pn	18 40 19.5	+0.8
	comp=Z,1.9nm,0.3s,baz=144,slow=13,SNR=25						
CMIG				Sn	Sn	18 41 07.8	+1.8
	comp=Z,5.3nm,0.3s,baz=55,slow=17,SNR=6.8						
CMIG				LR	LR	18 42 00.2	
	comp=Z,89nm,18.6s,baz=37,slow=40						
CMIG	Matias Romero	4.01	322	eP	Pn	18 40 18.6	-0.1
TEIG	Tepich	7.35	31	Pn	Pn	18 41 06.9	+2.2
	comp=Z,5.4nm,0.3s,baz=296,slow=1.2,SNR=15						
TEIG				Sn	Sn	18 42 27.8	-0.5
	baz=143,slow=19,SNR=2.6						
JTS	Las Juntas de	8.04	116	Pn	Pb	18 41 27.5	-9.1
	comp=Z,1.1nm,0.3s,baz=11,slow=12,SNR=4.1						
JTS				Sn	Sn	18 42 57.6	+12
	comp=Z,0.8nm,0.3s,baz=11,slow=21,SNR=2.4						
TXAR	Lajitas Array	18.60	327	P	Pn	18 43 37.0	+2.0
	comp=Z,0.1nm,0.3s,baz=148,slow=14,SNR=5.5						
YKA	Yellowknife Ar	51.03	347	P	P	18 48 18.8	-0.6
	comp=Z,1.1nm,0.6s,baz=152,slow=7.3,SNR=16						
ILAR	Eielson Array	62.79	337	P	P	18 49 42.9	+0.1
	comp=Z,0.9nm,1.1s,baz=113,slow=6.0,SNR=4.9						
CMAR	Chiang Mai Arr	145.97	341	PKPbc	PKPdf	18 58 57.2	-0.3
	comp=Z,1.3nm,0.8s,baz=332,slow=3.5,SNR=13						

MEX 28 18:42:30.8±0.5, 13.85N×92.51W, h20km±999km, MD3.5
GCG 28 18:42:30.7±0.5, 13.91N×92.35W, h33km±999km, MD3.7
ISC 28 18:42:27.6±6.1, 13.9N±0.2×92.6W±0.4, h46km, n5, σ0§46/6, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.09	19	iP	Pn	18 42 46.5	0.0
THIG				iS	Sn	18 43 00.1	-0.3
STG3	Santiaguito 3,	1.33	51	eP	Pn	18 42 50.4	+0.5
FUG	Fuego 3	1.83	72	eP	Pn	18 42 56.5	-0.3
PCG	Pacaya	2.04	75	eP	Pn	18 43 00.0	+0.4
IXG	Ixpaco	2.15	82	eP	Pn	18 43 01.0	-0.1

IDC 28 18:44:59.2±2.2, 6.74S×129.61E, h0km, mb3.4/1, mb1 3.8/3, mb1mx3.4/29, mbtmp3.6/3, ML3.9/2, Error ellipse: s-maj=148.4km s-min=31.4km az=68.0
NEIC 28 18:45:11.3±2.6, 7.12S±0.08×129.80E±0.09, h128km±15km, mb4.0/5, Error ellipse: s-maj=12.8km s-min=11.5km az=106.0
ISC 28 18:45:09.8±0.7, 7.12S±0.07×129.79E±0.09, h104km, n21, σ1§54/21, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.73	120		Pn	18 45 45.3	+6.2
FAKI	Fak Fak	4.84	31	Pn	Pn	18 46 21.5	+1.0
MTN	Manton Dam	5.84	167	Pn	Pn	18 46 36.6	+2.5
SOEI	Soe	6.05	244		Pn	18 46 39.4	+2.4
MMRI	Maumere	7.63	258	Pn	Pn	18 47 01.6	+3.3
TNTI	Ternate	8.20	343	Pn	Pn	18 47 06.2	+0.1
KNRA	Kununurra	8.57	187	Pn	Pn	18 47 12.5	+1.5
FITZ	Fitzroy Crossi	11.64	200	Pn	Pn	18 47 52.3	-0.4
WB0	Warramunga Arr	13.35	161	Pn	Pn	18 48 15.1	-0.1
WRAB	Tennant Creek	13.49	161	Pn	Pn	18 48 17.6	+0.6
WRA	Warramunga Arr	13.49	161	Pn	Pn	18 48 17.6	+0.5
	0.6nm,0.3s,baz=344,slow=13,SNR=29						
WRA				Sn	Sn	18 50 42.3	-3.4
	0.8nm,0.3s,baz=197,slow=17,SNR=8.0						
WB2	Warramunga Arr	13.50	161	Pn	Pn	18 48 16.6	-0.5
WR0	Warramunga Arr	13.57	161	Pn	Pn	18 48 18.5	+0.3
COEN	Coen	14.81	118	P	P	18 48 36.4	-0.9
JAGI	Jajag, Banyuwa	15.55	264	Pn	Pn	18 48 42.5	-0.9
JAGI				IAmb	IAmb	18 48 48.9	
	comp=Z,11nm,1.1s						
AS31	Alice Springs	16.92	167		Pn	18 49 00.6	-0.1
ASAR	Alice Springs	16.92	167	P	P	18 49 02.9	+2.2
	comp=Z,0.3nm,0.3s,baz=339,slow=10.0,SNR=14						
ASAR				S	S	18 52 10.8	-1.2
	comp=Z,0.2nm,0.3s,baz=356,slow=26,SNR=5.2						
PSA00	Pilbara Seismi	17.28	213	P	Pn	18 49 06.9	+2.2
PSA00				IAmb	IAmb	18 49 08.0	
	comp=Z,14nm,1.0s						
SBUM	Sibu	19.94	298	P	Pn	18 49 35.3	-1.0
SBUM				IAmb	IAmb	18 49 52.8	
	comp=Z,3.5nm,1.2s						
TWG	Pinlang	30.95	344	P	P	18 51 16.4	-0.7
MKAR	Makanchi Array	68.21	327	P	P	18 55 59.0	-0.1
	comp=Z,0.2nm,0.4s,baz=118,slow=8.1,SNR=6.7						

KRSC 28 18:55:52.9±1.3, 52.07N×159.77E, h42km±17km, ML4.2
IDC 28 18:56:00.0±2.6, 52.23N×159.55E, h82km±19km, mb3.4/11, mb1 3.5/11, mb1mx3.3/47, mbtmp3.7/11, MS3.6/1, Ms1 3.6/1, ms1mx2.8/29, Error ellipse: s-maj=26.3km s-min=17.0km az=108.0
ISC 28 18:55:55.5±1.4, 52.09N±0.05×159.69E±0.06, h43km±13km, n55, σ1§52/65, mb3.6/11, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	Russkaya	0.80	296	iP	Pn	18 56 09.2	-1.2
RUS				eS	Sn	18 56 20.4	-0.8
MTVR	Mutnovka	1.01	294	eP	Pn	18 56 12.8	-0.5
SPN	Mys Shipunski	1.03	11	eP	Pn	18 56 12.9	-0.6
SPN				eS	Sn	18 56 26.7	-0.1
KDTR	Khodutka, Kamc	1.04	255	eP	Pn	18 56 12.8	-0.8
KDTR				eS	Sn	18 56 26.8	-0.1
GRL	Gorelyy	1.10	296	eP	Pn	18 56 14.4	-0.1
GRL				eS	Sn	18 56 29.6	+1.0
DALK	Dalny	1.10	329	eP	Pn	18 56 13.5	-1.0
DALK				eS	Sn	18 56 28.1	-0.4
NLC	Nalytchevo	1.10	349	eP	Pn	18 56 13.0	-1.5
NLC				eS	Sn	18 56 26.7	-1.8
ASAK	Asacha	1.14	286	eP	Pn	18 56 15.1	0.0
ASAK				eS	Sn	18 56 30.8	+1.2
KRMR	Karymshinskiy	1.21	308	iP	Pn	18 56 14.6	-1.4
KRMR				eS	Sn	18 56 29.8	-1.3
UGLR	Uglovaya	1.24	335	eP	Pn	18 56 16.0	-0.5
UGLR				eS	Sn	18 56 32.1	0.0
SDLR	Sedlovina	1.29	338	eP	Pn	18 56 16.2	-1.0
SMAR	Somma	1.29	336	eP	Pn	18 56 16.3	-1.0
AVH	Avacha	1.31	334	eP	Pn	18 56 17.0	-0.5
KRER	Koryakskii	1.35	335	eP	Pn	18 56 17.5	-0.5
KOK	Koryaka	1.37	332	eP	Pn	18 56 17.6	-0.6
KRX	Arik	1.42	334	eP	Pn	18 56 18.2	-0.8
PETK	Petropavlovsk-	1.59	311	P	Pn	18 56 22.4	+1.3
	62nm,0.3s,baz=107,slow=20,SNR=966						
PETK				S	Sn	18 56 43.2	+2.8
	58nm,0.3s,baz=101,slow=30,SNR=9.3						
PETK				LR	LR	18 57 12.9	
	comp=Z,290nm,19.1s,baz=63,slow=51						
APC	Apacha	1.76	299	eP	Pn	18 56 24.7	+1.2
APC				eS	Sn	18 56 46.8	+2.1
MIPR	Malaya Ipel'ka	1.82	277	eP	Pn	18 56 25.5	+1.2
MIPR				eS	Sn	18 56 46.6	+0.5
PAU	Pauzhetka	1.90	252	eP	Pn	18 56 26.6	+1.3
PAU				eS	Sn	18 56 50.2	+2.2
KII	Karymskiy	1.96	356	eP	Pn	18 56 26.5	+0.2
SKR	Severo-Kuril's	2.65	239	eP	Pn	18 56 35.7	+0.1
SKR				eS	Sn	18 57 07.1	+0.7
ALID	Alaid	2.86	246	eP	Pn	18 56 39.1	+0.3
KZV	Kizimen	3.05	7	eP	Pn	18 56 41.8	+0.4
KZV				eS	Sn	18 57 17.8	+1.1
TUMD	Tumrok D	3.15	7	eP	Pn	18 56 44.4	+1.8
TUMR	Tumrok	3.21	5	eP	Pn	18 56 44.6	+1.1
KMNR	Kamenistaya	3.69	5	eP	Pn	18 56 51.9	+1.8
ESO	Esso	3.89	352	eP	Pn	18 56 55.5	+2.8
BZGR	Bezymyannyi-Gr	3.90	8	eP	Pn	18 56 55.6	+2.6
KOZ	Kozyrevsk	3.98	1	eP	Pn	18 56 55.6	+1.6
ZLN	Zelenaya	3.99	9	eP	Pn	18 56 57.3	+3.1
ZLN				eS	Sn	18 57 42.8	+3.1
CIRR	Tsirk	4.08	8	eP	Pn	18 56 57.9	+2.4
KRSR	Krestovskiy	4.17	7	eP	Pn	18 56 58.2	+1.6
SRDR	Sredinnyy	4.24	0	eP	Pn	18 57 00.4	+2.9
KBTR	Krutoberegovo	4.52	23	eP	Pn	18 57 01.5	+0.2
KBTR				eS	Sn	18 57 56.0	+3.5
BKI	Bering	4.87	48	eP	Pn	18 57 03.8	-2.3
MJAR	Matsushiro Arr	21.74	233	P	P	19 00 45.1	+2.1
	2.2nm,0.8s,baz=29,slow=7.6,SNR=8.2						
TIXI	Tiksi	23.90	336	P	P	19 01 03.8	-0.9
	2.3nm,0.5s,baz=123,slow=8.9,SNR=16						
H11N2	WAKE ISLAND Hy	32.78	167	T	T	19 37 36.9	
	baz=351,slow=76,SNR=24						
H11N3	WAKE ISLAND Hy	32.80	167	T	T	19 37 34.7	
	baz=351,slow=76,SNR=17						
H11N1	WAKE ISLAND Hy	32.80	167	T	T	19 37 26.8	
	baz=351,slow=76,SNR=18						
SONM	Songino Array	33.90	284	P	P	19 02 33.6	-0.6
	0.2nm,0.3s,baz=63,slow=6.6,SNR=4.0						
H11S1	WAKE ISLAND Hy	33.96	168	T	T	19 39 01.5	
	baz=246,slow=74						
H11S3	WAKE ISLAND Hy	33.97	168	T	T	19 39 04.2	
	baz=199,slow=74						
H11S2	WAKE ISLAND Hy	33.98	168	T	T	19 39 05.5	
YKA	Yellowknife Ar	44.07	42	P	P	19 03 59.4	+0.6
	0.1nm,0.4s,baz=300,slow=7.4,SNR=3.4						
RES	Resolute Bay	44.35	22	LR	LR	19 24 11.0	
	comp=Z,76nm,20.3s,baz=326,slow=38						
MKAR	Makanchi Array	48.37	296	P	P	19 04 30.6	-2.2
	0.4nm,0.5s,baz=52,slow=7.3,SNR=6.6						
ARCES	ARCESS Array B	54.17	342	P	P	19 05 15.0	-0.8
	3.8nm,1.0s,baz=46,slow=7.7,SNR=9.4						
CMAR	Chiang Mai Arr	57.74	258	P	P	19 05 42.9	+0.8
	0.4nm,0.6s,baz=32,slow=7.7,SNR=6.0						
FINES	FINESS Array B	60.95	337	P	P	19 06 02.9	-0.7
	0.9nm,0.7s,baz=28,slow=8.6,SNR=4.2						
AKASG	Malin Array Be	69.35	329	P	P	19 06 57.0	-1.2
	0.2nm,0.3s,baz=28,slow=6.0,SNR=4.6						
WRA	Warramunga Arr	75.06	205	P	P	19 07 32.0	-0.6
	0.6nm,0.9s,baz=0.0,slow=6.7,SNR=3.5						
ASAR	Alice Springs	78.74	204	P	P	19 07 54.9	+1.6
	0.4nm,0.9s,baz=28,slow=10.0,SNR=3.6						
TSUM	Tsumeb	135.84	304	PKP	PKiKP	19 15 12.6	-0.6
	1.1nm,0.3s,baz=102,slow=2.9,SNR=6.0						

GCG 28 19:05:45.0±0.9, 13.52N×92.62W, h24km±503km, MD4.8
GCMT 28 19:05:52.6±0.2, 14.02N±0.01×92.48W±0.02, h19km, MW5.0/94, Moment Tensor Solution. s72,c94; s94,c128; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.49±.14; Mθθ-3.02±.10; Mφφ-0.46±.10; Mrθ2.02±.18; Mrφ1.19±.07; Mθφ-1.84±.22; Best double couple: Mo4.42900×10^16 NP1:φs280.00000°, δ28.00000°, λ69.00000°. NP2: φs124.00000°, δ64.00000°, λ101.00000°. Principal axes: T 4.5150, Plg69.0000°, Azm56.0000°; N -0.1630, Plg10.0000°, Azm299.0000°; P -4.3440, Plg18.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC 28 19:05:52.7±3.1, 14.00N±0.05×92.24W±0.05, h39km±4km, mb4.9/330, Md4.8/31(MEX) Error ellipse: s-maj=7.9km s-min=6.0km az=206.0
MOS 28 19:05:52.8±1.2, 14.19N×91.97W, h48km, mb5.3/8, Error ellipse: s-maj=11.6km s-min=4.8km az=114.9
SNET 28 19:05:53.2±2.4, 14.17N×92.17W, h36km±999km, ML4.8
UCR 28 19:05:53.5±2.0, 14.21N×92.02W, h11km±165km, ML4.4, mb4.9(NEIC)
MEX 28 19:05:53.6±0.7, 14.01N×92.38W, h18km±38km, MD4.8
INET 28 19:05:54.2, 13.96N×92.05W, h5km, ML5.3
IDC 28 19:05:58.5±1.9, 14.06N×91.94W, h84km±15km, mb4.2/28, mb1 4.3/31, mb1mx4.2/54, mbtmp4.5/31, MS4.2/27, Ms1 4.3/27, ms1mx4.1/53, Error ellipse: s-maj=17.5km s-min=7.4km az=51.0
ISC 28 19:05:52.8±0.6, 14.00N±0.04×92.29W±0.03, h44km±5km, n792, σ1§51/822, mb4.9/168, MS4.3/30, 2C-3D, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.82	58	⇓iP	Pn	19 06 08.7	+0.7
THIG		0.90	1		Pn	19 06 08.2	-0.9
THIG					Sn	19 06 18.4	-2.5
THIG		0.90	1	eP	Pn	19 06 08.2	-0.9
THIG				eS	Sn	19 06 18.4	-2.5
STG3	Santiaguito 3,	0.99	44	⇓iP	Pn	19 06 10.1	-0.4
FUG	Fuego 3	1.47	72	⇓iP	Pn	19 06 16.9	-0.1
PCG	Pacaya	1.68	76	eP	Pn	19 06 20.1	+0.3
IXG	Ixpaco	1.80	84	eP	Pn	19 06 20.7	-0.8
PCIG		1.92	332		Pn	19 06 21.4	-1.5
PCIG					Sn	19 06 43.5	-2.4
PCIG		1.92	332	eP	Pn	19 06 21.4	-1.5
PCIG				iS	Sn	19 06 43.5	-2.4
NBG	Las Nubes	1.97	72	⇑iP	Pn	19 06 25.7	+1.8
APG	El Apazote	2.03	60	P	Pn	19 06 25.7	+1.0
	284nm,0.3s,baz=206,slow=9.6,SNR=1788						
APG				LR	LR	19 06 46.4	
	comp=Z,1μm,18.3s,baz=196,slow=28						
APG				S	Sn	19 06 49.5	+0.6
	334nm,0.3s,baz=254,slow=16,SNR=7.5						
CCIG	Comitan	2.27	4		Pn	19 06 29.7	+1.8
CCIG	Comitan	2.27	4		Pn	19 06 29.8	+1.8
CCIG					Sn	19 06 55.3	+0.3
CCIG	Comitan	2.27	4	eP	Pn	19 06 29.8	+1.8
CCIG				iS	Sn	19 06 55.3	+0.3
RTR	El Retiro	2.57	92	eP	Pn	19 06 31.3	-0.7
RTR	El Retiro	2.57	92	eP	Pn	19 06 31.3	-0.7
CEVE	Cerro Verde	2.59	93	eP	Pn	19 06 32.7	+0.2
CEVE				eS	Sn	19 07 02.0	-0.9
CEVE	Cerro Verde	2.59	93	eP	Pn	19 06 32.7	+0.2
CEVE				eS	Sn	19 07 02.0	-0.9
SNJE	San Jose	2.61	93	eP	Pn	19 06 31.7	-0.9
SNJE	San Jose	2.61	93	eP	Pn	19 06 31.7	-0.9
MRL	Marmol	2.74	67	eP	Pn	19 06 36.1	+1.6
MRL				eS	Sn	19 07 14.4	+7.9
MTO3	Montecristo	2.87	82	eP	Pn	19 06 36.0	-0.2
MTO3				eS	Sn	19 07 08.2	-1.4
MTO3				IAML		19 07 18.4	
MTO3	Montecristo	2.87	82	eP	Pn	19 06 36.0	-0.2
MTO3				eS	Sn	19 07 08.2	-1.4
MTO3				IAML		19 07 18.4	
TGBT	Tuxtla Gutierr	2.87	344		Pn	19 06 37.2	+1.1
TGBT	Tuxtla Gutierr	2.87	344	eP	Pn	19 06 37.2	+1.1
TGIG		2.88	344		Pn	19 06 36.4	+0.2
TGIG					Sn	19 07 07.7	-2.0
TGIG		2.88	344	eP	Pn	19 06 36.4	+0.2
TGIG				eS	Sn	19 07 07.7	-2.0
LALI	Alcalda de L	2.93	100	eS	Sn	19 07 08.8	-2.0
LALI	Alcalda de L	2.93	100	eS	Sn	19 07 08.8	-2.0
BOQS	Boqueron	2.93	95	eP	Pn	19 06 36.1	-1.0
SNET	Serv Nac Est T	2.98	96	eP	Pn	19 06 36.8	-0.9
SNET				eS	Sn	19 07 11.2	-1.1
SNET	Serv Nac Est T	2.98	96		Sn	19 07 37.6	-0.1
SNET	Serv Nac Est T	2.98	96	eP	Pn	19 06 36.8	-0.9
SNET				eS	Sn	19 07 11.2	-1.1
OPAM	Oficina de Pla	3.02	95	eP	Pn	19 06 37.8	-0.3
OPAM				eS	Sn	19 07 12.8	-0.2
OPAM				IAML		19 07 18.1	
	comp=Z,3μm,0.4s						
OPAM	Oficina de Pla	3.02	95	eP	Pn	19 06 37.8	-0.3
OPAM				eS	Sn	19 07 12.8	-0.2
OPAM				IAML		19 07 18.1	
	comp=Z,3μm,0.4s						
CUSC	Alcaldia de Cu	3.03	95	eP	Pn	19 06 39.8	+1.5
CUSC				eS	Sn	19 07 13.8	+0.4
CUSC	Alcaldia de Cu	3.03	95	eP	Pn	19 06 39.8	+1.5
CUSC				eS	Sn	19 07 13.8	+0.4
LFRS	El Faro	3.16	96	eP	Pn	19 06 39.4	-0.7
PAVA	Las Pavas	3.27	95	eP	Pn	19 06 41.0	-0.6
PAVA	Las Pavas	3.27	95	eP	Pn	19 06 41.0	-0.6
COEG	Centro de Oper	3.33	96	eP	Pn	19 06 43.5	+1.0
COEG				eS	Sn	19 07 22.7	+1.8
COEG	Centro de Oper	3.33	96	eP	Pn	19 06 43.5	+1.0
COEG				eS	Sn	19 07 22.7	+1.8
PACA	Pacayal	3.89	97	eP	Pn	19 06 49.5	-0.7
PACA				eS	Sn	19 07 35.2	+0.5
PACA	Pacayal	3.89	97	eP	Pn	19 06 49.5	-0.7
PACA				eS	Sn	19 07 35.2	+0.5
CMIG	Matias Romero	3.96	321	P	Pn	19 06 50.7	-0.3
	comp=Z,11nm,0.3s,baz=161,slow=14,SNR=80						
CMIG				S	Sn	19 07 38.5	+2.1
	comp=Z,61nm,0.3s,baz=127,slow=15,SNR=4.5						
CMIG				LR	LR	19 08 53.7	
	comp=Z,2μm,18.8s,baz=132,slow=42						
CMIG	Matias Romero	3.96	321		Pn	19 06 50.2	-0.9
CMIG					Sn	19 07 35.1	-1.3
CMIG	Matias Romero	3.96	321	eP	Pn	19 06 50.2	-0.9
CMIG				eS	Sn	19 07 35.1	-1.3
HUIG	Huatulco	4.09	296		Pn	19 06 51.5	-1.3
HUIG					Sn	19 07 37.3	-2.2
HUIG	Huatulco	4.09	296	eP	Pn	19 06 51.5	-1.3
HUIG				eS	Sn	19 07 37.3	-2.2
CNCH	Conchagua	4.39	99	eP	Pn	19 06 57.7	+0.7
CNCH				eS	Sn	19 07 46.3	-0.8
CNCH	Conchagua	4.39	99	eP	Pn	19 06 57.7	+0.7
CNCH				eS	Sn	19 07 46.3	-0.8
TGUH	Tegucigalpa,Un	4.87	89		Pn	19 07 02.8	-0.8
TGUH	Tegucigalpa,Un	4.87	89	iP	Pn	19 07 03.1	-0.6
VHO	Vista Hermosa	5.26	306	eP	Pn	19 07 10.0	+0.9
VHO				iS	Sn	19 08 04.3	-4.4
ESTN	Estel	5.83	98		Pn	19 07 16.2	-0.5
TOIG	Toxpalan	6.14	312	eP	Pn	19 07 19.9	-1.2
TOIG				iS	Sn	19 08 21.7	-8.3
TLIG	Tlapa	7.01	301		Pn	19 07 33.1	+0.1
ACON	Acoyapa	7.22	105		Pn	19 07 34.9	-0.9
ACON	Acoyapa	7.22	105	eP	Pn	19 07 35.5	-0.3
TEIG	Tepich	7.28	31	P	Pn	19 07 37.9	+1.2
	comp=Z,69nm,0.3s,baz=137,slow=0.3,SNR=199						
TEIG				S	Sn	19 08 56.7	-1.3
	comp=Z,19nm,0.3s,baz=319,slow=18,SNR=5.9						
TEIG				LR	LR	19 10 51.9	
	comp=Z,3μm,21.4s,baz=320,slow=42						
TEIG	Tepich	7.28	31		Pn	19 07 36.9	+0.3
TEIG	Tepich	7.28	31	iP	Pn	19 07 37.5	+0.9
TEIG				iS	Sn	19 08 59.9	+1.8
GB1A	Borinquen Arri	7.43	114	eP	Pn	19 07 41.3	+2.4
CUI	Cuipilapa	7.71	115	eP	Pn	19 07 45.7	+3.1
ESPN	Las Esperanzas	7.99	102		Pn	19 07 44.5	-1.8
JTS	Las Juntas de	8.06	116	P	Pn	19 07 47.9	+0.5
	comp=Z,2.9nm,0.3s,baz=19,slow=8.1,SNR=15						
JTS				S	Sn	19 09 18.7	+1.4
	comp=Z,1.3nm,0.3s,baz=82,slow=20,SNR=2.0						
JTS	Las Juntas de	8.06	116	eP	Pn	19 07 49.9	+2.4
CEDE	Laguna Cedeo	8.19	114	eP	Pn	19 07 50.6	+1.3
UNM	Universidad Na	8.46	310	Pn	Pn	19 07 57.0	+3.9
UNM	Universidad Na	8.46	310	P	Pn	19 07 57.0	+3.9
HDC	Heredia	8.93	116	Pn	Pn	19 07 58.8	-0.6
LCR2	La Lucha 2	9.14	117	eP	Pn	19 08 05.0	+2.5
CVTR	Volcan Turrial	9.23	114	eP	Pn	19 08 05.2	+1.5
DRK0	Durika	10.03	117	eP	Pn	19 08 16.4	+1.9
MOIG	Morelia	10.22	305		Pn	19 08 20.6	+3.4
FSCY	Frank Sound, G	11.88	62		Pn	19 08 35.4	-4.2
ZAIG	Zacatecas	13.08	313		Pn	19 08 57.8	+1.5
BCIP	Isla Barro Col	13.11	110	Pn	Pn	19 08 55.9	-0.6
BCIP	Isla Barro Col	13.11	110	P	Pn	19 08 55.9	-0.6
CBCY	The Bluff, Cay	13.28	63		Pn	19 08 56.4	-2.3
PAYG	Puerto Ayora	14.71	172	Pn	Pn	19 09 19.9	+1.7
MTDJ	Mount Denham	14.79	72		Pn	19 09 18.1	-1.1
833A	Chaparral WMA,	15.71	336		Pn	19 09 31.8	+0.6
833A	Chaparral WMA,	15.71	336	P	Pn	19 09 32.7	+1.6
	baz=153,SNR=5.2						
061Z	Ochoppi	15.92	40		Pn	19 09 32.3	-1.5
HKT	Hockley	16.21	349		Pn	19 09 38.3	+0.9
HKT	Hockley	16.21	349	P	Pn	19 09 38.3	+0.9
HKT				pmax	pmax		
	comp=Z,52nm,1.5s						
441A	DeRidder	16.69	357	Pn	Pn	19 09 42.3	-1.3
441A				IAmb	IAmb	19 10 07.7	
	comp=Z,112nm,1.2s						
060A	Indiantown	17.10	39		Pn	19 09 47.8	-0.8
SJCC	San Jacinto, C	17.23	102	eP	Pn	19 09 49.4	-1.0
DBBC	Dabeiba	17.26	112	eP	P	19 09 51.8	-0.1
342A	Flagon Creek P	17.30	360	P	Pn	19 09 50.8	-0.2
342A				IAmb	IAmb	19 10 15.9	
	comp=Z,126nm,1.1s						
DWPF	Disney Wildern	17.30	34	P	Pn	19 09 50.2	-0.9
DWPF				IAmb	IAmb	19 09 55.5	
	comp=Z,95nm,0.9s						
DWPF	Disney Wildern	17.30	34	P	Pn	19 09 51.3	+0.1
	baz=217						
435B	Jarrell	17.40	345	P	P	19 09 53.0	-0.2
435B	Jarrell	17.40	345	P	P	19 09 54.1	+0.9
	baz=162						
344A	Westbrook Farm	17.43	4	P	P	19 09 53.2	-0.3
344A				IAmb	IAmb	19 10 18.0	
	comp=Z,93nm,1.2s						
GTBY	Guantanamo Bay	17.45	68	P	P	19 09 52.8	-0.3
346A	Big Creek Wild	17.50	8	P	P	19 09 53.5	-0.1
346A				IAmb	IAmb	19 10 02.3	
	comp=Z,94nm,1.1s						
UREC	San Jos de Ur	17.58	109	eP	P	19 09 57.0	+1.6
BRAL	Brewton	17.75	15	P	P	19 09 56.4	-0.3
BRAL				IAmb	IAmb	19 10 10.5	
	comp=Z,156nm,1.4s						
656A	Willston	17.76	29	P	P	19 09 56.0	-0.8
JCT	Junction City	17.80	338	P	P	19 09 58.1	+0.4
JCT	Junction City	17.80	338	P	P	19 09 58.1	+0.4
JCT				pmax	pmax		
	comp=Z,44nm,1.5s						
JCT	Junction City	17.80	338	P	P	19 09 59.5	+1.8
	baz=155						
NATX	Nacogdoches	17.81	353	P	P	19 09 57.0	-0.5
NATX				IAmb	IAmb	19 10 02.8	
	comp=Z,112nm,1.2s						
NATX	Nacogdoches	17.81	353	P	P	19 09 58.5	+0.8
	baz=172						
CBOC	Ciudad Bolivar	17.94	115	eP	P	19 10 01.8	+2.3
HPIG		17.94	318	P	P	19 09 59.7	+0.2
237A	Washetta, Mont	18.21	350	P	Pn	19 10 02.8	+0.5
237A				IAmb	IAmb	19 10 17.6	
	comp=Z,105nm,1.3s						
VBMS	Vicksburg	18.21	5	P	P	19 10 01.8	-0.3
VBMS				IAmb	IAmb	19 10 07.0	
	comp=Z,83nm,1.1s						
VBMS	Vicksburg	18.21	5	P	Pn	19 10 03.2	+0.9
	baz=185						
H06E1	SOCORRO T-PHAS	18.50	287	T	T	19 29 05.5	
	SNR=70						
H06S1	SOCORRO T	18.52	287	T	T	19 29 04.3	
WHTX	Lake Whitney,	18.52	346	P	P	19 10 04.0	-1.6
WHTX	Lake Whitney,	18.52	346	P	Pn	19 10 07.2	+1.1
	baz=164						
TXAR	Lajitas Array	18.54	327	P	Pn	19 10 09.2	+2.7
	comp=Z,0.3nm,0.3s,baz=153,slow=11,SNR=70						
TXAR				S	S	19 13 42.6	+7.3
	comp=Z,0.0nm,0.3s,baz=232,slow=6.2,SNR=2.2						
TXAR				LR	LR	19 18 29.8	
	comp=Z,199nm,18.5s,baz=0.0,slow=40						
TX31	Lajitas Ar. Si	18.55	327	P	Pn	19 10 07.3	+0.8
TX32	Lajitas Array	18.55	327	P	Pn	19 10 07.3	+0.8
YOTC	Yotoco, Valle	18.61	121	eP	Pn	19 10 07.5	0.0
143A	Socs Landing,	18.64	2	P	P	19 10 06.6	-0.3
143A				IAmb	IAmb	19 10 32.7	
	comp=Z,75nm,1.1s						
352A	Blakely	18.66	20	P	P	19 10 06.2	-1.0
352A				IAmb	IAmb	19 10 14.3	
	comp=Z,125nm,1.1s						
250A	Grady	18.73	16	P	P	19 10 06.8	-1.0
GUY2C	Guyana, Caldas	18.81	116	eP	Pn	19 10 11.0	+0.8
PTBC	PUERTO BERRIO,	19.04	111	eP	Pn	19 10 11.9	+0.5
BBAC	Balboa, Cauca	19.04	127	eP	Pn	19 10 13.6	+0.9
NORC	Norcasia	19.09	114	eP	Pn	19 10 13.2	+0.1
TIGA	Tifton	19.11	23	P	P	19 10 11.6	-0.4

TIGA				IAmb	IAmb	19 10 36.4	
	comp=Z,59nm,0.9s						
TIGA	Tifton	19.11	23	P	P	19 10 12.4	+0.4
	baz=206						
456A	Hilliard	19.14	28	P	P	19 10 10.5	-1.9
POPC	Popayan, Colom	19.17	125	eP	Pn	19 10 14.6	+0.3
Z41A	Richland Creek	19.18	359	P	P	19 10 11.7	-1.1
Z41A				IAmb	IAmb	19 10 52.0	
	comp=Z,215nm,1.8s						
Z38A	Mt. Pleasant	19.33	353	P	P	19 10 13.5	-0.9
Z38A				IAmb	IAmb	19 10 21.8	
	comp=Z,158nm,1.4s						
OTAV	Otavalo	19.35	134		P	19 10 12.7	-2.6
OTAV	Otavalo	19.35	134	P	P	19 10 12.7	-2.6
OTAV				pmax	pmax		
	comp=Z,14nm,1.3s						
LGNH	Logne	19.42	74	P	P	19 10 13.3	-2.2
LGNH				IAmb	IAmb	19 10 22.0	
	comp=Z,114nm,1.5s						
SOTA	Rioblanco	19.47	126	eP	Pn	19 10 21.5	+3.3
PCON	Cinco Dias	19.52	125	eP	Pn	19 10 23.7	+4.9
LRAL	Lakeview Retre	19.55	13	P	P	19 10 16.9	+0.1
LRAL	Lakeview Retre	19.55	13	P	P	19 10 17.2	+0.3
	baz=195						
ORTC	Ortega, Tolima	19.57	119	eP	P	19 10 17.8	+0.5
WLAR	White Oak Lake	19.62	358	P	P	19 10 17.8	+0.3
ABTX	Abilene, Hawle	19.72	341	P	Pn	19 10 19.7	-0.7
ABTX				IAmb	IAmb	19 10 22.7	
	comp=Z,46nm,1.0s						
ABTX	Abilene, Hawle	19.72	341	P	Pn	19 10 20.3	-0.2
	baz=158,SNR=9.9						
LPIG	La Paz	19.75	303	P	Pn	19 10 24.8	+3.9
	comp=Z,43nm,0.3s,baz=78,slow=22,SNR=3.4						
LPIG				LR	LR	19 18 15.7	
	comp=Z,639nm,18.3s,baz=126,slow=37						
SPBC	San Pablo de B	19.76	113	eP	Pn	19 10 20.9	-0.3
Z35A	Perchaven, San	19.77	348	P	P	19 10 19.2	0.0
Z35A				IAmb	IAmb	19 10 28.8	
	comp=Z,106nm,0.9s						
152A	Waverly Hall	19.83	19	P	P	19 10 19.0	-0.9
CCAR	Cane Creek	19.84	1	P	P	19 10 20.1	+0.2
ROSC	El Rosal	19.91	115	P	P	19 10 22.1	+0.8
	comp=Z,2.7nm,0.3s,baz=350,slow=5.9,SNR=27						
ROSC	El Rosal	19.91	115	eP	Pn	19 10 24.6	+1.4
ROSC	El Rosal	19.91	115	P	P	19 10 20.6	-0.8
255A	Hazlehurst	19.98	25	P	P	19 10 20.7	-0.8
255A				IAmb	IAmb	19 10 55.0	
	comp=Z,88nm,1.2s						
PRAC	Prado	19.98	119	eP	Pn	19 10 23.2	-0.5
Z50A	Ashland	20.03	16	P	P	19 10 20.6	-1.5
Z50A	Ashland	20.03	16	P	P	19 10 23.1	+1.0
	baz=198						
BARC	Barichara	20.18	109	eP	Pn	19 10 26.4	+0.2
Z51A	Franklin	20.29	17	P	P	19 10 23.2	-1.7
GARC	Garzon, Huila	20.33	124	eP	Pn	19 10 30.9	+2.9
154A	Montrose	20.34	23	P	P	19 10 24.1	-1.3
PAMC	Pamplona, Colo	20.35	107	eP	P	19 10 26.9	+0.8
X40A	Basin Creek Fa	20.41	359	P	P	19 10 25.1	-1.0
X40A				IAmb	IAmb	19 10 49.1	
	comp=Z,51nm,1.2s						
X43A	Marvell	20.47	3	P	Pn	19 10 29.1	-0.1
Y49A	Blount Mountai	20.48	14	P	P	19 10 24.0	-3.0
MIAR	Mount Ida	20.49	357	P	P	19 10 28.1	+1.1
MIAR				IAmb	IAmb	19 10 49.2	
	comp=Z,102nm,1.3s						
MIAR	Mount Ida	20.49	357	P	P	19 10 28.1	+1.1
MIAR				pmax	pmax		
	comp=Z,102nm,1.3s						
MIAR	Mount Ida	20.49	357	P	Pn	19 10 28.6	-0.9
	baz=176,SNR=13						
CHIC	Chingaza	20.52	115	eP	Pn	19 10 30.1	-0.4
RUSC	La Rusia	20.55	111	eP	P	19 10 29.3	+0.9
RUSC	La Rusia	20.55	111	P	P	19 10 27.4	-1.0
FLOC	Florencia	20.56	125	eP	Pn	19 10 29.5	-1.1
FLOC	Florencia	20.56	125	P	P	19 10 27.1	-0.9
OXF	Oxford	20.59	7	P	P	19 10 26.8	-1.3
OXF				IAmb	IAmb	19 11 07.3	
	comp=Z,80nm,1.1s						
OXF	Oxford	20.59	7	P	P	19 10 26.8	-1.3
OXF				pmax	pmax		
	comp=Z,80nm,1.2s						
257A	Skidaway Islan	20.65	28	P	P	19 10 28.9	+0.1
UALR	University of	20.69	360	P	P	19 10 29.5	+0.4
UALR				IAmb	IAmb	19 10 59.4	
	comp=Z,66nm,0.8s						
X37A	Clayton	20.69	353	P	P	19 10 29.0	-0.2
X37A				IAmb	IAmb	19 10 40.2	
	comp=Z,65nm,0.9s						
SDDR	Presa de Saban	20.73	73	P	P	19 10 28.3	-1.6
X48A	Hartselle	20.91	12	P	P	19 10 30.7	-0.9
X48A				IAmb	IAmb	19 10 41.0	
	comp=Z,39nm,0.9s						
GOGA	Godfrey	20.93	21	P	P	19 10 31.0	-0.7
GOGA				IAmb	IAmb	19 10 39.9	
	comp=Z,44nm,1.1s						
GOGA	Godfrey	20.93	21	P	P	19 10 31.0	-0.7
GOGA				pmax	pmax		
	comp=Z,44nm,1.1s						
W41B	Gary Mavity, V	21.08	0	P	P	19 10 34.3	+0.9
W41B				IAmb	IAmb	19 10 59.8	
	comp=Z,40nm,1.1s						
W41B	Gary Mavity, V	21.08	0	P	P	19 10 35.3	+1.9
	baz=180						
X34A	Smith Ranch, M	21.12	347	P	P	19 10 34.6	+0.8
X34A				IAmb	IAmb	19 11 33.1	
	comp=Z,72nm,1.3s						
Y52A	Lilburn	21.14	19	P	P	19 10 33.6	-0.4
Y52A				IAmb	IAmb	19 10 56.0	
	comp=Z,97nm,1.2s						
Y52A	Lilburn	21.14	19	P	P	19 10 34.9	+0.8
	baz=202						
W39A	Magazine	21.15	357	P	P	19 10 35.3	+1.1
W39A				IAmb	IAmb	19 10 59.4	
	comp=Z,59nm,1.4s						
W39A	Magazine	21.15	357	P	P	19 10 35.6	+1.5
	baz=176						
WHAR	Wooly Hollow	21.20	360	P	P	19 10 35.1	+0.4
WHAR				IAmb	IAmb	19 10 55.9	
	comp=Z,56nm,1.1s						
PLAL	Pickwick Lake	21.24	10	P	P	19 10 34.6	-0.4
157A	Early Branch	21.26	27	P	P	19 10 35.7	+0.4
	baz=211						
MNTX	Cornudas Mount	21.32	328	P	P	19 10 37.0	+1.0
MNTX				IAmb	IAmb	19 10 39.2	
	comp=Z,48nm,1.1s						
MNTX	Cornudas Mount	21.32	328	P	P	19 10 37.6	+1.6
	baz=142,SNR=28						
FPAL	Fort Paine	21.32	15	P	P	19 10 35.7	-0.4
FPAL				IAmb	IAmb	19 10 57.8	
	comp=Z,100nm,1.1s						
SC01	Santiago de lo	21.34	72	P	P	19 10 34.7	-1.6
W35A	Tecumseh	21.46	350	P	P	19 10 35.8	-1.7
WMOK	Wichita Mounta	21.47	345	P	P	19 10 36.9	-0.7
WMOK	Wichita Mounta	21.47	345	P	P	19 10 36.9	-0.7
WMOK				pmax	pmax		
	comp=Z,18nm,0.9s						
WMOK	Wichita Mounta	21.47	345	P	P	19 10 39.0	+1.5
	baz=162,SNR=20						
X51A	Calhoun	21.55	17	P	P	19 10 36.6	-1.8
X51A				IAmb	IAmb	19 10 48.1	
	comp=Z,90nm,1.1s						
X51A	Calhoun	21.55	17	P	P	19 10 38.7	+0.3
	baz=199,SNR=5.9						
Z56A	Williston	21.65	25	P	P	19 10 38.3	-1.2
Z56A	Williston	21.65	25	P	P	19 10 39.7	+0.2
	baz=209						
FNO	Franklin	21.66	349	P	P	19 10 39.9	+0.2
FCAR	Ozark Folk Cen	21.80	0	P	P	19 10 40.6	-0.5
SDV	Santo Domingo	21.82	101	P	P	19 10 39.9	-1.8
	comp=Z,22nm,0.8s,baz=264,slow=5.1,SNR=11						
SDV				LR	LR	19 19 57.9	
	comp=Z,434nm,20.9s,baz=280,slow=39						
SDV	Santo Domingo	21.82	101	eP	P	19 10 39.4	-2.3
SDV	Santo Domingo	21.82	101	P	P	19 10 38.0	-3.8
OKCFA	Oklahoma City	21.83	349	P	P	19 10 40.6	-0.3
SWET	Sewanee	21.89	14	P	P	19 10 40.9	-1.2
SWET				IAmb	IAmb	19 11 04.3	
	comp=Z,136nm,1.6s						
Z57A	Bowman	21.91	27	P	P	19 10 42.1	-0.3
	baz=211						
X53A	Estanollee	21.98	20	P	P	19 10 43.0	0.0
	baz=203						
Y55A	Saluda	21.99	24	P	P	19 10 43.6	+0.4
	baz=207						
LCAR	Lake Charles	22.00	2	P	P	19 10 41.7	-1.5
W50A	Signal Mountai	22.03	15	P	P	19 10 42.6	-1.0
W50A				IAmb	IAmb	19 11 04.7	
	comp=Z,106nm,1.8s						
W50A	Signal Mountai	22.03	15	P	P	19 10 44.1	+0.5
	baz=198						
MSTX	Muleshoe	22.04	336	P	P	19 10 42.4	-1.5
MSTX				IAmb	IAmb	19 10 47.2	
	comp=Z,90nm,1.3s						
TUL1	Leonard	22.05	352	P	P	19 10 43.0	-0.8
TUL1				IAmb	IAmb	19 11 01.6	
	comp=Z,36nm,1.0s						
TUL1	Leonard	22.05	352	P	P	19 10 45.1	+1.4
	baz=170						
HODGE	Hodges	22.10	23	P	P	19 10 42.6	-1.7
HODGE				IAmb	IAmb	19 11 05.7	
	comp=Z,68nm,1.4s						
LNXT	Lenox	22.15	6	P	P	19 10 43.3	-1.6
V48A	Smith Brothers	22.20	12	P	P	19 10 44.1	-1.3
HHAR	Hobbs	22.24	356	P	P	19 10 44.3	-1.5
U40A	Yellville	22.27	359	P	P	19 10 44.8	-1.4
U40A				IAmb	IAmb	19 11 09.3	
	comp=Z,43nm,1.2s						
U40A	Yellville	22.27	359	P	P	19 10 46.1	-0.1
	baz=178						
X54A	Belton	22.34	22	P	P	19 10 46.3	-0.7
	baz=206						
Z58A	St. Stephen	22.35	28	P	P	19 10 46.1	-0.9
	baz=213						
WVT	Waverly	22.40	10	P	P	19 10 45.1	-2.5
WVT	Waverly	22.40	10	P	P	19 10 45.1	-2.5
WVT				pmax	pmax		
	comp=Z,36nm,1.3s						
WVT	Waverly	22.40	10	P	P	19 10 46.7	-0.9
	baz=191						
U38A	Gravette	22.43	356	P	P	19 10 46.4	-1.5
AMTX	Amarillo	22.46	339	P	P	19 10 49.1	+0.7
AMTX	Amarillo	22.46	339	P	P	19 10 48.5	+0.1
	baz=155						
CPCT	Cooper Cave	22.48	17	P	P	19 10 47.7	-0.7
CPCT				IAmb	IAmb	19 11 09.8	
	comp=Z,81nm,1.3s						
JSC	Jenkinsville	22.53	24	P	P	19 10 46.3	-2.6
JSC	Jenkinsville	22.53	24	P	P	19 10 46.3	-2.6
JSC				pmax	pmax		
	comp=Z,14nm,0.9s						
BG3	Lake Jocassee	22.55	20	P	P	19 10 48.4	-0.7
BG3				IAmb	IAmb	19 11 10.7	
	comp=Z,40nm,1.2s						
X55A	Gracelyn & Ava	22.55	23	P	P	19 10 47.7	-1.4
	baz=207						
CLTN	Cedars of Leba	22.64	13	P	P	19 10 49.4	-0.7
PBMO	Poplar Bluff	22.75	4	P	P	19 10 49.7	-1.5
PAULI	Pauline	22.79	23	P	P	19 10 51.0	-0.6
X56A	White Oak	22.80	25	P	P	19 10 50.6	-1.2
	baz=209						
SRIG	Santa Rosalia	22.85	309	P	P	19 10 54.6	+2.2
SRIG				IAmb	IAmb	19 10 57.0	
	comp=Z,40nm,1.2s						
V51A	Loudon	22.85	17	P	P	19 10 52.0	-0.4
V51A				IAmb	IAmb	19 11 04.7	
	comp=Z,50nm,1.1s						
V51A	Loudon	22.85	17	P	P	19 10 51.8	-0.6
	baz=200,SNR=6.4						
TKL	Tuckaleechee C	22.89	18	P	P	19 10 53.0	+0.3
	comp=Z,12nm,0.8s,baz=219,slow=6.5,SNR=7.4						
TKL				LR	LR	19 21 28.2	
	comp=Z,1μm,18.9s,baz=201,slow=41						
TKL	Tuckaleechee C	22.89	18	P	P	19 10 51.6	-1.1
TKL				IAmb	IAmb	19 11 02.1	
	comp=Z,40nm,1.1s						
TKL	Tuckaleechee C	22.89	18	P	P	19 10 53.0	+0.3
W54A	Cherokee Point	22.89	22	P	P	19 10 52.0	-0.8
	baz=205						
MGMO	Mountain Grove	23.06	0	P	P	19 10 53.8	-0.7
U32A	Winter Ranch,	23.09	346	P	P	19 10 53.8	-0.9
V52A	Sevierville	23.11	18	P	P	19 10 53.7	-1.3
V52A				IAmb	IAmb	19 11 26.4	
	comp=Z,44nm,1.1s						
V52A	Sevierville	23.11	18	P	P	19 10 54.6	-0.4
	baz=201,SNR=9.5						
T35A	Sooner Cattle	23.13	351	P	P	19 10 53.4	-1.9
U49A	Red Boiling Sp	23.17	13	P	P	19 10 53.7	-1.9
U49A				IAmb	IAmb	19 10 55.6	
	comp=Z,53nm,1.1s						
BIRD	Birdtown, Kers	23.17	25	P	P	19 10 53.7	-1.8
V53A	Saluda	23.20	20	P	P	19 10 54.6	-1.4
V53A				IAmb	IAmb	19 11 23.1	
	comp=Z,55nm,1.2s						
V53A	Saluda	23.20	20	P	P	19 10 55.7	-0.3
	baz=203						
121A	Cookes Peak, D	23.25	325	P	P	19 10 58.3	+1.7
121A				IAmb	IAmb	19 11 07.1	
	comp=Z,48nm,1.0s						
121A	Cookes Peak, D	23.25	325	P	P	19 10 58.8	+2.2
	baz=139,SNR=29						
KMSC	Kings Mountain	23.25	23	P	P	19 10 55.4	-1.0
KMSC				IAmb	IAmb	19 10 57.1	
	comp=Z,58nm,1.4s						
KMSC	Kings Mountain	23.25	23	P	P	19 10 55.6	-0.9
	baz=207,SNR=7.3						
319A	Douglas	23.29	321	P	P	19 10 58.7	+1.8
319A				IAmb	IAmb	19 11 01.3	
	comp=Z,54nm,1.2s						
T47A	Sharon Grove	23.36	11	P	P	19 10 55.6	-1.8
T47A				IAmb	IAmb	19 10 57.3	
	comp=Z,41nm,0.9s						
W56A	Indian Trail	23.54	25	P	P	19 10 58.3	-0.8
	baz=209,SNR=6.0						
V54A	Nebo	23.59	21	P	P	19 10 58.9	-0.8
	baz=205						
S39A	Bolivar	23.61	358	P	P	19 10 57.8	-2.0
Y60A	Bolivia	23.65	30	P	P	19 10 58.6	-1.6
	baz=216						
S44A	Carbondale	23.75	6	P	P	19 10 59.7	-1.4
TZTN	Tazewell	23.78	18	P	P	19 11 00.5	-0.9
	baz=201						
T49A	Edmonton	23.79	13	P	P	19 10 59.9	-1.6
T49A				IAmb	IAmb	19 11 01.5	
	comp=Z,47nm,1.2s						
T49A	Edmonton	23.79	13	P	P	19 11 00.3	-1.2
	baz=196						
W57A	Gilead	23.80	26	P	P	19 10 58.8	-2.8
W57A				IAmb	IAmb	19 11 48.4	
	comp=Z,65nm,1.4s						
W57A	Gilead	23.80	26	P	P	19 11 00.1	-1.5
	baz=210						
T50A	Nancy	23.87	15	P	P	19 11 00.7	-1.6
	baz=198						
U53A	Fall Branch	23.91	20	P	P	19 11 01.8	-0.9
	baz=203						
V55A	Taylorsville	23.93	23	P	P	19 11 01.0	-1.7
V55A				IAmb	IAmb	19 11 24.9	
	comp=Z,60nm,1.2s						
V55A	Taylorsville	23.93	23	P	P	19 11 01.8	-1.0
	baz=207,SNR=6.2						
CCM	Cathedral Cave	23.98	2	P	P	19 11 01.1	-2.1
CCM	Cathedral Cave	23.98	2	P	P	19 11 01.1	-2.1
CCM				pmax	pmax		
	comp=Z,24nm,1.0s						
CCM	Cathedral Cave	23.98	2	P	P	19 11 02.2	-1.0
	baz=182						
W58A	Raeford	24.02	27	P	P	19 11 02.0	-1.6
	baz=212						
T51A	Gray	24.06	17	P	P	19 11 02.6	-1.3
	baz=200						
V56A	Mocksville	24.17	24	P	P	19 11 03.7	-1.3
	baz=208,SNR=8.1						
USIN	University of	24.22	9	P	P	19 11 03.6	-1.8
USIN				IAmb	IAmb	19 11 06.4	
	comp=Z,56nm,1.0s						
ANMO	Albuquerque	24.46	331	P	P	19 11 10.3	+2.3
	comp=Z,10nm,0.8s,baz=150,slow=11,SNR=26						
ANMO	Albuquerque	24.46	331	P	P	19 11 09.2	+1.2
ANMO	Albuquerque	24.46	331	P	P	19 11 09.9	+2.0
	baz=145						
T52A	Hallie	24.47	18	P	P	19 11 06.4	-1.3
	baz=202						
T53A	Wise	24.49	19	P	P	19 11 07.1	-0.9
	baz=203						
S49A	Springfield	24.50	13	P	P	19 11 06.5	-1.4
	baz=196,SNR=6.9						
V57A	Coltrane Farms	24.52	25	P	P	19 11 07.0	-1.2
	baz=210,SNR=8.9						
S50A	Richmond	24.61	15	P	P	19 11 08.1	-0.8
	baz=198						
U56A	King	24.68	24	P	P	19 11 07.5	-2.2
U56A				IAmb	IAmb	19 11 32.1	
	comp=Z,22nm,0.8s						
U56A	King	24.68	24	P	P	19 11 08.6	-1.0
	baz=208						
WCI	Wyandotte Cave	24.71	11	P	P	19 11 08.6	-1.3
WCI	Wyandotte Cave	24.71	11	P	P	19 11 08.6	-1.3
WCI				pmax	pmax		
	comp=Z,63nm,0.9s						
WCI	Wyandotte Cave	24.71	11	P	P	19 11 09.5	-0.5
	baz=194						
V58A	Windy Hill, Pi	24.72	26	P	P	19 11 08.2	-1.9
V58A				IAmb	IAmb	19 11 50.4	
	comp=Z,26nm,1.0s						
V58A	Windy Hill, Pi	24.72	26	P	P	19 11 09.1	-0.9
	baz=211						
W60A	Pink Hill	24.75	30	P	P	19 11 09.5	-0.8
	baz=215						
S51A	Beattyville	24.78	17	P	P	19 11 09.3	-1.2
S51A				IAmb	IAmb	19 11 28.3	
	comp=Z,77nm,1.5s						
S51A	Beattyville	24.78	17	P	P	19 11 10.1	-0.5
	baz=200						
TUC	Tucson	24.86	320	P	P	19 11 11.3	-0.1
TUC	Tucson	24.86	320	P	P	19 11 11.3	-0.1
TUC				pmax	pmax		
	comp=Z,33nm,1.6s						
TUC	Tucson	24.86	320	P	P	19 11 13.7	+2.3
	baz=133						
OLIL	Olney	24.91	8	P	P	19 11 10.6	-1.1
OLIL				IAmb	IAmb	19 11 13.6	
	comp=Z,49nm,0.9s						
R49A	Shelbyville	25.01	13	P	P	19 11 10.5	-2.0
R49A	Shelbyville	25.01	13	P	P	19 11 11.7	-0.8
	baz=196						
V59A	Middlesex	25.08	28	P	P	19 11 12.2	-1.1
	baz=213						
ATAH	Atahualpa	25.12	146	P	P	19 11 15.7	+1.4
	comp=Z,3.1nm,0.6s,baz=261,slow=5.0,SNR=2.7						
ATAH				LR	LR	19 19 39.1	
	comp=Z,626nm,18.4s,baz=314,slow=33						
U57A	Blanch	25.17	25	P	P	19 11 13.2	-0.9
	baz=210,SNR=7.9						
R50A	Paris	25.20	15	P	P	19 11 12.2	-2.1
R50A				IAmb	IAmb	19 11 33.7	
	comp=Z,34nm,1.2s						
R50A	Paris	25.20	15	P	P	19 11 14.0	-0.3
	baz=198						
KSU1	Kansas State U	25.29	352	P	P	19 11 15.6	+0.4
	baz=170						
R51A	Hillsboro	25.41	16	P	P	19 11 15.6	-0.6
	baz=200						
T56A	Rocky Mt	25.41	23	P	P	19 11 15.8	-0.5
	baz=208						
BLA	Blacksburg	25.43	22	P	P	19 11 16.0	-0.4
	baz=207						
T25A	Trinidad	25.46	337	P	P	19 11 17.5	+0.5
T25A				IAmb	IAmb	19 11 22.6	
	comp=Z,24nm,0.9s						
T25A	Trinidad	25.46	337	P	P	19 11 19.2	+2.2
	baz=151,SNR=20						
U58A	Oxford	25.47	26	P	P	19 11 15.5	-1.3
	baz=212						
Q48A	North Vernon	25.50	12	P	P	19 11 16.0	-1.0
	baz=194						
CBKS	Cedar Bluff	25.58	346	P	P	19 11 17.8	-0.1
CBKS	Cedar Bluff	25.58	346	P	P	19 11 17.8	-0.1
CBKS				pmax	pmax		
	comp=Z,19nm,0.8s						
CBKS	Cedar Bluff	25.58	346	P	P	19 11 17.7	-0.1
	baz=163,SNR=5.3						
S54A	Dingess, Beckl	25.64	20	P	P	19 11 17.2	-1.1
	baz=205						
T57A	Hurt	25.69	25	P	P	19 11 17.9	-0.9
	baz=210						
R52A	Catlettsburg	25.70	18	P	P	19 11 18.2	-0.8
	baz=202						
U59A	Littleton	25.77	28	P	P	19 11 18.0	-1.6
	baz=214						
Q50A	Georgetown	25.82	15	P	P	19 11 19.5	-0.4
	baz=198						
S55A	Lewisburg	25.89	22	P	P	19 11 19.8	-0.9
	baz=206						
P46A	Rosedale	25.91	9	P	P	19 11 19.6	-1.1
P46A				IAmb	IAmb	19 11 23.4	
	comp=Z,34nm,0.8s						
R53A	Hurricane	25.91	19	P	P	19 11 20.2	-0.6
	baz=203						
214A	Organ Pipe Nat	25.93	317	P	P	19 11 22.5	+1.4
X18A	Snowflake	25.94	325	P	P	19 11 21.3	0.0
P48A	Milroy	26.07	12	P	P	19 11 19.3	-2.9
P48A				IAmb	IAmb	19 11 23.8	
	comp=Z,33nm,1.1s						
P48A	Milroy	26.07	12	P	P	19 11 21.1	-1.1
	baz=195,SNR=5.3						
R54A	Victor	26.09	21	P	P	19 11 21.6	-0.8
	baz=205						
Q51A	Peebles	26.15	16	P	P	19 11 22.1	-0.8
	baz=200						
P49A	Miami Univ. Ec	26.30	13	P	P	19 11 22.9	-1.4
	baz=196						
Q52A	Bidwell	26.39	18	P	P	19 11 24.3	-0.9
	baz=202						
SDCO	Great Sand Dun	26.41	336	P	P	19 11 26.1	+0.5
SDCO	Great Sand Dun	26.41	336	P	P	19 11 27.4	+1.8
	baz=150,SNR=12						
R55A	Marlinton	26.48	22	P	P	19 11 25.1	-1.0
	baz=207						
Q53A	Leroy	26.53	19	P	P	19 11 25.4	-0.9
	baz=204						
KSCO	Kaye Shedlock'	26.54	342	P	P	19 11 26.7	+0.1
	baz=157						
P50A	Jamestown	26.58	15	P	P	19 11 26.8	-0.1
	baz=198						
HDIL	Hopedale	26.59	5	P	P	19 11 26.7	-0.1
	baz=186						
P51A	Williamsport	26.65	16	P	P	19 11 27.3	-0.2
	baz=200						
SFIN	Lafayette	26.67	9	P	P	19 11 26.5	-1.1
SFIN	Lafayette	26.67	9	P	P	19 11 26.9	-0.7
	baz=191						
X16A	Lo Mia Camp, P	26.71	323	P	P	19 11 29.7	+1.4
S58A	Poland Farm, P	26.71	26	P	P	19 11 27.2	-0.8
	baz=212						
R56A	Bull Pasture M	26.86	23	P	P	19 11 28.3	-1.2
	baz=208						
O48A	Farmland	26.90	12	P	P	19 11 28.6	-1.0
	baz=195						
S22A	4UR Ranch, Cre	26.96	334	P	P	19 11 32.4	+1.8
S22A				IAmb	IAmb	19 11 34.5	
	comp=Z,26nm,1.1s						
S22A	4UR Ranch, Cre	26.96	334	P	P	19 11 33.0	+2.5
	baz=147,SNR=26						
O49A	Covington	27.01	13	P	P	19 11 29.5	-1.2
	baz=197						
113A	Mohawk Valley,	27.06	317	P	P	19 11 32.5	+1.2
R58B	Mineral	27.08	26	P	P	19 11 30.9	-0.5
	baz=212						
R57A	Stanardsville	27.11	24	P	P	19 11 31.2	-0.3
	baz=210						
O50A	Cable	27.14	15	P	P	19 11 31.2	-0.7
	baz=198						
P53A	Whipple	27.14	19	P	P	19 11 31.7	-0.2
	baz=203						
MVCO	Mesa Verde	27.27	331	P	P	19 11 34.8	+1.4
MVCO	Mesa Verde	27.27	331	P	P	19 11 35.7	+2.4
	baz=144,SNR=32						
Y14A	Wickenburg	27.33	320	P	P	19 11 35.5	+1.8
N47A	Urbana	27.39	11	P	P	19 11 32.5	-1.6
	baz=194						
O51A	Pataskala	27.40	16	P	P	19 11 33.1	-1.1
	baz=200						
WUAZ	Wupatki	27.46	325	P	P	19 11 35.9	+1.0
WUAZ	Wupatki	27.46	325	P	P	19 11 36.1	+1.1
	baz=136						
N48A	Decatur	27.50	12	P	P	19 11 34.0	-1.1
	baz=195						
O52A	Adamsville	27.59	17	P	P	19 11 34.9	-1.0
	baz=202						
R59A	King George, V	27.61	26	P	P	19 11 35.2	-0.8
	baz=213						
Q57A	Strasburg	27.79	24	P	P	19 11 36.1	-1.5
	baz=210						
S61A	Accomac	27.83	29	P	P	19 11 36.6	-1.5
	baz=216						
P56A	Dayton Farm, R	28.03	23	P	P	19 11 38.6	-1.3
	baz=208						
O54A	Avella	28.10	20	P	P	19 11 37.6	-2.8

O54A Avella 28.10 20 P P 19 11 38.9 -1.5
baz=205
OGNE Ogallala 28.16 344 P P 19 11 42.0 +0.9
OGNE IAmb IAmb 19 11 44.4
comp=Z,24nm,1.1s
OGNE Ogallala 28.16 344 P P 19 11 41.6 +0.5
baz=159
Y12C Blythe 28.17 318 P P 19 11 41.5 +0.4
baz=129
SMCO Snowmass 28.23 335 P P 19 11 43.7 +1.6
ISCO Idaho Springs 28.25 338 P P 19 11 43.2 +1.1
ISCO Idaho Springs 28.25 338 P P 19 11 43.2 +1.1
ISCO pmax pmax
comp=Z,13nm,1.5s
ISCO Idaho Springs 28.25 338 P P 19 11 41.9 -0.2
baz=152
N52A McGinn's Farm, 28.27 17 P P 19 11 41.0 -1.0
baz=202
PDMCI Parker Dam,Lak 28.28 319 P P 19 11 42.1 0.0
baz=130
P57A Homestead Farm 28.33 24 P P 19 11 41.4 -1.0
P57A IAmb IAmb 19 12 37.7
comp=Z,44nm,1.4s
P57A Homestead Farm 28.33 24 P P 19 11 41.3 -1.2
baz=210
O55A Ligonier 28.48 21 P P 19 11 43.0 -0.9
baz=207
N53A Lisbon 28.52 18 P P 19 11 42.2 -2.0
N53A Lisbon 28.52 18 P P 19 11 43.8 -0.4
baz=203
L47A Sherwood 28.55 11 P P 19 11 43.4 -1.0
baz=194
U15A North Rim 28.63 325 P P 19 11 47.2 +1.6
W13A Hualapai Mount 28.64 321 P P 19 11 47.4 +1.8
L48A N Adams 28.67 12 P P 19 11 44.9 -0.6
baz=196
O56A Blue Knob Stat 28.80 22 P P 19 11 45.7 -1.1
baz=208
IRM Iron Mountain 28.83 318 P P 19 11 47.4 +0.3
baz=128
N54A Moraine State 28.93 19 P P 19 11 47.4 -0.5
baz=205
M52A Chesterland 29.04 17 P P 19 11 46.8 -2.0
M52A IAmb IAmb 19 11 50.4
comp=Z,19nm,0.9s
M52A Chesterland 29.04 17 P P 19 11 47.9 -0.9
baz=202
M53A WI Miller and 29.15 18 P P 19 11 49.0 -0.8
baz=203
KNB Kanab 29.35 325 P P 19 11 53.5 +1.7
KNB Kanab 29.35 325 P P 19 11 53.5 +1.7
KNB pmax pmax
comp=Z,28nm,1.5s
PFO Pinyon Flats O 29.37 316 LR LR 19 25 18.1
comp=Z,410nm,18.8s,baz=139,slow=39
PFO Pinyon Flats O 29.37 316 i P P 19 11 53.9 +1.9
PFO pmax pmax
comp=Z,15nm,1.1s
PFO Pinyon Flats O 29.37 316 P P 19 11 52.0 +0.1
baz=126
SSPA Standing Stone 29.37 23 P P 19 11 51.4 -0.3
baz=209
PKCU Pink Cliffs 29.38 326 P P 19 11 55.2 +3.0
GMRC Granite Mounta 29.55 319 P P 19 11 54.2 +0.6
baz=128
O20A White River Ci 29.56 335 P P 19 11 55.7 +2.0
O20A White River Ci 29.56 335 P P 19 11 54.9 +1.2
baz=147,SNR=5.2
LCMT Little Creek M 29.58 325 P P 19 11 55.5 +1.7
P60A Greenville 29.59 27 P P 19 11 53.6 0.0
baz=214
SRU San Rafael Swe 29.74 331 P P 19 11 57.0 +1.8
SRU San Rafael Swe 29.74 331 P P 19 11 57.1 +1.8
SRU pmax pmax
comp=Z,21nm,1.3s
L53A Girard 29.75 18 P P 19 11 55.8 +0.7
baz=204
O59A Robesonia 29.77 25 P P 19 11 54.9 -0.3
baz=212
ECSD EROS Data Cent 29.86 354 P P 19 11 56.6 +0.5
baz=171
Q16A Castle Valley 29.90 330 P P 19 11 58.5 +1.8
SZCU Shurtz Canyon 29.91 326 P P 19 11 56.9 0.0
HEC Hector,Ludlow 30.02 318 P P 19 11 58.0 +0.4
baz=128
NNA Nana 30.02 149 LR LR 19 21 43.1
comp=Z,395nm,21.6s,baz=323,slow=32
NNA Nana 30.02 149 i P P 19 11 55.1 -2.6
NNA pmax pmax
comp=Z,16nm,1.0s
CCUT Cedar City 30.03 325 P P 19 12 00.1 +2.2
P17A Butcher Ranch, 30.13 331 P P 19 12 00.8 +2.1
TMUT Trail Mountain 30.22 330 P P 19 12 01.7 +2.1
M57A Sunshine Farm, 30.27 23 P P 19 11 57.6 -2.1
M57A Sunshine Farm, 30.27 23 P P 19 11 58.5 -1.2
baz=210
L54A Sinclairville 30.29 19 P P 19 11 58.9 -1.0
baz=205
J49A Marlette 30.30 13 P P 19 11 58.8 -1.1
baz=197
SHPR Sheep Range 30.35 322 P P 19 12 03.5 +2.8
K52A Tillsonburg 30.37 17 P P 19 11 59.7 -0.8
baz=202
RDMU Red Mountain 30.48 334 P P 19 12 01.3 -0.6
M58A Price's Panora 30.55 24 P P 19 12 01.6 -0.7
baz=211
L56A Greenwood 30.80 22 P P 19 12 04.2 -0.3
baz=208
J52A Paris 30.86 17 P P 19 12 02.6 -2.3
baz=202,SNR=5.5
L57A Andrews Acres 30.95 23 P P 19 12 03.9 -1.8
baz=210
MPU Maple Canyon 30.98 330 P P 19 12 07.6 +1.4
PSUT Pine Spring 31.01 326 P P 19 12 08.7 +2.2
K22A Casper 31.08 339 P P 19 12 06.8 -0.3
baz=152
M59A Waymart 31.11 25 P P 19 12 05.6 -1.5
baz=213
NLU North Lily Min 31.15 330 P P 19 12 09.5 +1.8
I51A Listowel 31.23 16 P P 19 12 05.9 -2.3
baz=201,SNR=5.7
M60A Port Jervis 31.27 26 P P 19 12 07.2 -1.3
baz=214
TPNV Topopah Spring 31.30 321 P P 19 12 09.7 +0.7
TPNV Topopah Spring 31.30 321 P P 19 12 09.7 +0.7
TPNV pmax pmax
comp=Z,15nm,1.5s
TPNV Topopah Spring 31.30 321 P P 19 12 09.2 +0.1
baz=130
JLU Jordanelle 31.36 331 P P 19 12 11.1 +1.5
L58A Harry Jones Me 31.37 24 P P 19 12 07.7 -1.7
baz=211
K56A Middlesex 31.38 21 P P 19 12 08.0 -1.5
baz=208
J54A Appleton 31.45 19 P P 19 12 09.9 -0.1
baz=206
BINY Binghamton 31.45 24 P P 19 12 08.9 -1.2
BINY IAmb IAmb 19 12 32.6
comp=Z,31nm,1.2s
BINY Binghamton 31.45 24 P P 19 12 09.4 -0.7
baz=211
CTU Camp Tracy 31.57 331 P P 19 12 13.0 +1.6
M61A Granite Spring 31.63 27 P P 19 12 11.1 -0.5
baz=216
RSSD Black Hills 31.66 344 P P 19 12 11.4 -0.7
RSSD Black Hills 31.66 344 P P 19 12 11.4 -0.7
RSSD pmax pmax
comp=Z,15nm,1.4s
RSSD Black Hills 31.66 344 P P 19 12 13.1 +0.9
baz=158
DUG Dugway, Tooele 31.70 329 P P 19 12 12.8 +0.4
DUG IAmb IAmb 19 12 17.0
comp=Z,22nm,1.4s
DUG Dugway, Tooele 31.70 329 P P 19 12 12.8 +0.4
DUG pmax pmax
comp=Z,22nm,1.5s
DUG Dugway, Tooele 31.70 329 P P 19 12 14.4 +1.9
baz=139,SNR=6.1
K57A Scipio Center 31.70 22 P P 19 12 11.7 -0.6
baz=210
J55A Hilton 31.71 20 P P 19 12 11.6 -0.7
baz=207
L59A Walton 31.81 25 P P 19 12 13.2 -0.2
baz=213
R11A Troy Canyon, C 31.84 324 P P 19 12 16.1 +2.3
R11A Troy Canyon, C 31.84 324 P P 19 12 15.5 +1.7
baz=133,SNR=7.0
J56A Wolcott 32.05 21 P P 19 12 13.7 -1.6
J56A IAmb IAmb 19 12 37.4
comp=Z,24nm,1.1s
J56A Wolcott 32.05 21 P P 19 12 13.9 -1.4
baz=209
K58A Earlville 32.06 23 P P 19 12 14.0 -1.5
K58A IAmb IAmb 19 12 19.9
comp=Z,23nm,0.9s
K58A Earlville 32.06 23 P P 19 12 14.9 -0.5
baz=211
HWUT Hardware Ranch 32.21 332 P P 19 12 18.4 +1.4
HWUT IAmb IAmb 19 12 20.7
comp=Z,26nm,1.1s
HWUT PcP 19 15 06.0 +1.1
BW06 Boulder Array 32.31 336 P P 19 12 19.1 +1.2
PD31 Pinedale Array 32.31 336 P P 19 12 19.0 +1.1
PDAR Pinedale Array 32.31 336 P P 19 12 19.4 +1.5
comp=Z,1.4nm,0.6s,baz=138,slow=8.6,SNR=12
PDAR PcP PcP 19 15 06.6 +1.3
comp=Z,0.9nm,0.7s,baz=121,slow=5.7,SNR=5.1
BGU Big Grassy Mou 32.36 330 P P 19 12 20.4 +2.1
SPUT South Promonto 32.38 331 P P 19 12 18.9 +0.4
J57A Williamstown 32.48 22 P P 19 12 18.4 -0.7
baz=210
M63A Gales Ferry 32.49 29 P P 19 12 17.8 -1.4
baz=218
H53A Bobcaygeon 32.63 18 P P 19 12 18.9 -1.6
baz=205,SNR=8.4
SADO Sadowa 32.65 17 LR LR 19 27 18.4
comp=Z,974nm,18.1s,baz=195,slow=39
SADO Sadowa 32.65 17 P P 19 12 17.9 -2.7
J58A Remsen 32.70 23 P P 19 12 20.0 -1.1
baz=211
F48A Evansville 32.76 13 P P 19 12 20.2 -1.3
baz=197
F49A Sandfield 32.83 13 P P 19 12 20.7 -1.4
baz=198
DELO Deloro Mine 32.89 19 P P 19 12 20.5 -2.2
DELO IAmb IAmb 19 13 08.3
comp=Z,20nm,1.2s
HVU Hansel Valley 32.90 331 P P 19 12 24.8 +1.8
HVU Hansel Valley 32.90 331 P P 19 12 24.8 +1.8
HVU pmax pmax
comp=Z,72nm,1.5s
AHID Auburn Hatcher 32.94 334 P P 19 12 24.6 +1.2
AHID IAmb IAmb 19 12 26.6
comp=Z,20nm,1.1s
L63A North Scituate 33.05 29 P P 19 12 22.1 -2.0
baz=219
J59A Piesco 33.10 24 P P 19 12 24.0 -0.6
baz=212
I58A Old Forge 33.10 23 P P 19 12 23.7 -0.9
baz=212
G53A Haliburton 33.12 18 P P 19 12 23.6 -1.1
baz=204
E47A Iron Bridge 33.23 11 P P 19 12 24.4 -1.2
baz=196
REDW Red Top Meadow 33.33 335 P P 19 12 28.3 +1.5
ELK Elko 33.34 327 P P 19 12 29.8 +2.8
ELK PcP 19 15 09.0 +0.8
ELK Elko 33.34 327 P P 19 12 29.8 +2.8
ELK 19 15 09.0
ELK pmax pmax
comp=Z,14nm,1.3s
SNOW Snow King Moun 33.37 335 P P 19 12 28.4 +1.2
NV11 Mina Array Sit 33.41 322 P P 19 12 30.6 +3.1
NV11 IAmb IAmb 19 12 34.4
comp=Z,25nm,1.1s
TPAW Teton Pass 33.47 335 P P 19 12 28.5 +0.4
E48A Lockeyer 33.48 13 P P 19 12 27.0 -0.8
baz=198
NVAR Mina Array Bea 33.50 321 P P 19 12 31.9 +3.6
comp=Z,8.2nm,0.8s,baz=137,slow=8.7,SNR=31
NVAR PcP PcP 19 15 10.6 +2.0
comp=Z,1.7nm,0.8s,baz=116,slow=2.1,SNR=4.2
F51A Arnstein 33.50 16 P P 19 12 27.1 -0.9
baz=202
D46A Sault St. Mari 33.51 10 P P 19 12 26.9 -1.2
baz=194
G54A Lake Saint Pet 33.53 18 P P 19 12 27.0 -1.3
baz=205
F52A Sundridge 33.53 17 P P 19 12 27.0 -1.3
baz=203
FXWY Fox Creek 33.62 335 P P 19 12 30.7 +1.3
FXWY IAmb IAmb 19 12 32.7
comp=Z,15nm,1.2s
RYN Ryan 33.76 321 P P 19 12 30.7 +0.1
KVN Kaiserville 33.77 322 P P 19 12 31.0 +0.3
KVN IAmb IAmb 19 12 38.9
comp=Z,21nm,1.1s
KVN Kaiserville 33.77 322 P P 19 12 31.0 +0.3
KVN pmax pmax
comp=Z,21nm,1.1s
IMW Indian Meadow 33.80 335 P P 19 12 32.5 +1.5
IMW IAmb IAmb 19 12 35.6
comp=Z,18nm,1.4s
IMW PcP 19 15 10.9 +1.4
G55A Calabogie 33.84 20 P P 19 12 29.2 -1.8
baz=208
D47A Chapleau 33.84 11 P P 19 12 29.3 -1.7
baz=196
FLWY Flagg Ranch 33.86 336 P P 19 12 32.0 +0.6
FLWY IAmb IAmb 19 12 34.8
comp=Z,36nm,1.7s
I60A Shoreham 33.90 25 P P 19 12 29.8 -1.7
baz=214
J62A Henniker 34.03 27 P P 19 12 30.6 -2.1
baz=217
LONY Lake Ozonia 34.04 23 P P 19 12 30.3 -2.4
ALGO Algonquin Park 34.05 18 P P 19 12 31.1 -1.6
baz=205
YPP Pitchstone Pla 34.06 336 P P 19 12 33.6 +0.4
H17A Grant Village 34.08 336 P P 19 12 35.1 +1.7
H17A IAmb IAmb 19 13 06.2
comp=Z,19nm,1.5s
LKWY Lake 34.15 337 P P 19 12 35.6 +1.6
LKWY IAmb IAmb 19 12 38.1
comp=Z,30nm,1.6s
LKWY Lake 34.15 337 P P 19 12 35.6 +1.6
LKWY pmax pmax
comp=Z,30nm,1.7s
E51A G1948 Merrick 34.17 16 P P 19 12 31.8 -2.0
baz=202,SNR=5.9
RLMT Red Lodge 34.21 338 P P 19 12 35.7 +1.3
RLMT IAmb IAmb 19 12 57.8
comp=Z,23nm,1.6s
RLMT Red Lodge 34.21 338 P P 19 12 34.6 +0.2
baz=150
D48A Paudash Townsh 34.22 13 P P 19 12 32.3 -1.9
baz=198
WAKR Walker 34.24 320 P P 19 12 37.3 +2.6
WAKR IAmb IAmb 19 12 39.0
comp=Z,18nm,1.4s
MDND Maddock 34.29 351 P P 19 12 34.2 -0.7
YNE Yellowstone No 34.38 338 P P 19 12 36.6 +0.7
YNR Norris Junctio 34.38 337 P P 19 12 35.9 -0.1
YERR Yerington 34.42 321 P P 19 12 38.0 +1.7
YERR IAmb IAmb 19 12 40.9
comp=Z,17nm,1.2s
YMR Madison River 34.46 336 P P 19 12 37.7 +1.1
YHH Holmes Hill 34.51 336 P P 19 12 38.8 +1.6
E53A Dumoine, Ponti 34.54 18 P P 19 12 35.8 -1.3
baz=205
FRNY Flat Rock 34.60 24 P P 19 12 36.8 -0.7
YHB Horse Butte 34.62 336 P P 19 12 38.8 +0.9
LAO LASA Array 34.62 343 P P 19 12 36.1 -1.7
baz=156
D50A G1974 Best Tow 34.67 15 P P 19 12 36.5 -1.6
baz=201
YHL Hebgen Lake 34.69 336 P P 19 12 40.5 +1.7
PNTR Pine Nut 34.70 321 P P 19 12 41.9 +3.1
PNTR IAmb IAmb 19 12 48.0
comp=Z,32nm,1.3s
D51A Lot 18 Range I 34.72 16 P P 19 12 37.0 -1.5
baz=202
H60A Morristown 34.73 25 P P 19 12 36.8 -1.9
baz=214
E54A Lac Daplat, Po 34.74 18 P P 19 12 37.3 -1.4
baz=206
QLMT Earthquake Lak 34.77 336 P P 19 12 41.5 +2.2
GCMT Greycliff 34.92 339 P P 19 12 41.5 +0.9
PAHR Pah Rah Range 34.96 322 P P 19 12 42.3 +1.4
PAHR IAmb IAmb 19 12 45.4
comp=Z,13nm,1.2s
D53A Lac Vacive, Po 35.17 17 P P 19 12 40.4 -2.0
D53A IAmb IAmb 19 12 42.0
comp=Z,21nm,1.3s
D53A Lac Vacive, Po 35.17 17 P P 19 12 41.5 -0.9
baz=205
G60A Masonville 35.32 25 P P 19 12 42.4 -1.4
baz=215
MCMT McKenzie Canyo 35.35 334 P P 19 12 46.8 +2.5
TRQ Mont Tremblant 35.42 21 P P 19 12 43.4 -1.3
D54A Lac Fusel, La 35.54 18 P P 19 12 44.8 -0.8
baz=206
MFID Camas Ranch 35.60 330 P P 19 12 47.8 +1.5
BEKR Beckworth 35.64 322 P P 19 12 48.7 +1.9
BEKR IAmb IAmb 19 12 55.1
comp=Z,13nm,1.0s
DLMT Dillon 35.68 335 P P 19 12 48.8 +1.8
DLMT IAmb IAmb 19 12 50.9
comp=Z,27nm,1.2s
E57A Chemin Saint G 35.73 22 P P 19 12 46.2 -1.1
baz=211
DGMT Dagmar 35.76 346 P P 19 12 48.6 +1.1
DGMT IAmb IAmb 19 12 50.7
comp=Z,38nm,1.4s
DGMT PcP 19 15 16.3 +1.6
D55A Sainte-Anne-du 35.80 20 P P 19 12 47.1 -0.8
baz=208
LRM Limekiln Ridge 36.00 336 P P 19 12 51.8 +1.9
D56A ZEC Mazanza, M 36.07 20 P P 19 12 49.9 -0.2
baz=209
ORV Oroville 36.15 320 P P 19 12 53.9 +2.9
ORV Oroville 36.15 320 P P 19 12 53.9 +2.9
ORV pmax pmax
comp=Z,9.0nm,1.2s
G62A West of Eustis 36.17 26 P P 19 12 50.5 -0.5
G62A West of Eustis 36.17 26 P P 19 12 50.1 -0.9
baz=217
VLDQ Val d'Or 36.17 17 P P 19 12 50.9 -0.1
VLDQ IAmb IAmb 19 13 12.5
comp=Z,20nm,1.6s
F60A Warwick 36.19 24 P P 19 12 50.5 -0.7
baz=214
H64A Troy 36.31 28 P P 19 12 51.5 -0.6
baz=220
WVOR Wild Horse Val 36.34 326 P P 19 12 54.6 +1.9
WVOR IAmb IAmb 19 12 59.3
comp=Z,22nm,1.1s
WVOR Wild Horse Val 36.34 326 P P 19 12 54.6 +1.9
WVOR pmax pmax
comp=Z,22nm,1.2s
D57A Chemin Vers le 36.34 21 P P 19 12 52.0 -0.5
baz=211
PKME Peaks-Kenny Pk 36.75 27 P P 19 12 58.5 +2.5
D58A Chemin du LacG 36.77 22 P P 19 12 55.8 -0.3
baz=212
SAML Samuel 36.80 127 P P 19 12 54.7 -2.0
SAML IAmb IAmb 19 12 56.4
comp=Z,15nm,1.2s
SAML Samuel 36.80 127 P P 19 12 54.7 -2.0
SAML pmax pmax
comp=Z,15nm,1.3s
J08A Circle Bar Ran 36.89 328 P P 19 12 59.0 +1.7
EGMT Eagleton 36.90 340 P P 19 12 57.2 -0.1
EGMT Eagleton 36.90 340 P P 19 12 58.5 +1.2
baz=151,SNR=6.8
MOD Modoc Plateau 36.90 324 P P 19 12 59.5 +1.9
MOD IAmb IAmb 19 13 01.1
comp=Z,24nm,1.4s
LATQ La Tuque 37.05 22 P P 19 12 58.1 -0.4
baz=212
LSQQ Lebel-sur-Quev 37.16 17 P P 19 12 57.3 -2.1
baz=205
BMO Blue Mountains 37.38 330 P P 19 13 02.5 +1.0
BMO IAmb IAmb 19 13 04.3
comp=Z,27nm,1.4s
BMO Blue Mountains 37.38 330 P P 19 13 02.5 +1.0
BMO pmax pmax
comp=Z,27nm,1.5s
G65A Princeton 37.50 29 P 19 13 00.3 -2.0
MATQ Matagami 37.62 16 P P 19 13 01.3 -2.0
baz=203,SNR=7.2
M04C Macdoel 37.71 323 P P 19 13 06.0 +1.6
baz=128
GGN Saint George 37.78 30 P P 19 13 02.7 -2.0
D61A St Aubert, Com 37.90 25 P P 19 13 05.5 -0.2
baz=216
KMRM Mail Ridge 37.92 319 P P 19 13 05.5 -0.6
I07A Izee 37.93 328 P P 19 13 07.0 +0.8
I07A IAmb IAmb 19 13 13.2
comp=Z,11nm,1.0s
E63A Oxbow 38.03 27 P P 19 13 06.2 -0.6
E63A Oxbow 38.03 27 P P 19 13 06.3 -0.5
baz=219
F10A Beach Ranch, E 38.18 332 P P 19 13 09.6 +1.4
F10A IAmb IAmb 19 13 16.6
comp=Z,26nm,0.9s
YBH Yreka Blue Hor 38.20 322 P P 19 13 09.3 +0.9
YBH Yreka Blue Hor 38.20 322 P P 19 13 09.3 +0.9
YBH pmax pmax
comp=Z,15nm,1.7s
L04D Klamath Falls 38.25 323 P P 19 13 10.5 +1.6
baz=128
D62A Allapoint, All 38.28 26 P P 19 13 07.0 -1.8
D62A IAmb IAmb 19 13 41.7
comp=Z,33nm,1.4s
KHMM Horse Mountain 38.31 320 P P 19 13 11.9 +2.5
J05D Fort Rock, OR 38.33 325 P P 19 13 11.3 +1.7
baz=131
LPAZ La Paz 38.41 141 P P 19 13 11.2 +0.1
comp=Z,0.7nm,0.6s,baz=281,slow=7.2,SNR=3.5
LPAZ LR LR 19 28 24.5
comp=Z,257nm,21.1s,baz=255,slow=35
LPAZ La Paz 38.41 141 P P 19 13 08.9 -2.1
JCC Jacoby Creek, 38.46 320 P P 19 13 11.4 +1.0
PINE Pine Mountain 38.50 326 P P 19 13 12.3 +1.3
G08A Pilot Rock 38.51 329 P P 19 13 11.9 +1.0
L02E Cave Junction 38.98 322 P P 19 13 15.8 +0.9
baz=126
E09A Wood Farm, Sta 39.01 331 P P 19 13 15.8 +0.8
E09A IAmb IAmb 19 13 21.0
comp=Z,21nm,1.3s
WALA Waterton Lakes 39.23 337 P P 19 13 16.9 -0.1
WALA IAmb IAmb 19 13 19.4
comp=Z,22nm,1.5s
I04A Tendick Farm, 39.31 325 P P 19 13 19.0 +1.4
baz=130
KBO Bosley Butte 39.39 322 P P 19 13 17.8 -0.6
KBO IAmb IAmb 19 13 22.5
comp=Z,43nm,1.2s
E08A Dider Farm, El 39.42 331 P P 19 13 18.8 +0.3
E08A IAmb IAmb 19 13 41.3
comp=Z,23nm,1.6s
HAWA Hanford 39.57 330 P P 19 13 19.1 -0.7
G05D Wamic, OR 39.67 328 P P 19 13 22.6 +2.0
baz=132
BATG Bathurst New B 39.74 28 P P 19 13 19.4 -1.7
BATG IAmb IAmb 19 14 02.3
comp=Z,46nm,1.8s
H04A Detroit Lake 39.76 326 P P 19 13 22.3 +1.0
H04A IAmb IAmb 19 13 30.1
comp=Z,20nm,0.9s
D08A Wollman Farm, 39.77 331 P P 19 13 22.0 +0.7
D08A IAmb IAmb 19 13 29.9
comp=Z,28nm,1.7s
I03D Drain, OR 39.77 324 P P 19 13 23.3 +1.9
baz=128
MNMC Minye Minye 39.79 145 P P 19 13 21.5 -0.7
MNMC IAmb IAmb 19 13 47.7
comp=Z,44nm,1.7s
KEBM Edson Butte 39.84 322 P P 19 13 24.2 +2.1
E07A Sunnyside 39.85 330 P P 19 13 22.1 0.0
E07A IAmb IAmb 19 13 28.8
comp=Z,22nm,1.5s
NEW Newport 39.87 334 P P 19 13 23.5 +1.2
comp=Z,5.5nm,1.0s,baz=134,slow=14,SNR=5.0
NEW Newport 39.87 334 P P 19 13 23.0 +0.7
NEW Newport 39.87 334 P P 19 13 23.1 +0.8
baz=140
H04D Lebanon 39.95 326 P P 19 13 24.6 +1.7
baz=130
C09A Chrisman Ranch 40.02 333 P P 19 13 25.0 +1.5
C09A IAmb IAmb 19 13 26.7
comp=Z,39nm,1.3s
F05D White Salmon 40.18 328 P P 19 13 26.7 +1.9
baz=133
PB11 IPOC Station P 40.27 146 P P 19 13 25.3 -0.6
PB11 IAmb IAmb 19 14 36.7
comp=Z,44nm,1.8s

I02D Swisshome 40.31 324 P P 19 13 27.4 +1.5
baz=128
G03D McMinnville, O 40.68 326 P P 19 13 31.0 +2.0
baz=130
LTY Liberty 40.74 330 P P 19 13 30.9 +1.4
LTY IAmb IAmb 19 13 33.1
comp=Z,46nm,1.6s
B08A Colville Reser 40.91 332 P P 19 13 31.1 +0.2
LON Longmire 40.95 329 P P 19 13 32.8 +1.6
LON Longmire 40.95 329 P P 19 13 32.8 +1.6
LON pmax pmax
comp=Z,12nm,0.9s
E04D Cinebar 41.20 328 P P 19 13 35.2 +2.0
baz=132
C06D Leavenworth 41.32 331 P P 19 13 36.3 +2.1
baz=135
D05A Enumclaw 41.34 329 P P 19 13 34.2 -0.1
D05A IAmb IAmb 19 14 08.9
comp=Z,59nm,1.6s
E03A Lebam 41.71 327 P P 19 13 37.8 +0.5
E03A IAmb IAmb 19 13 42.2
comp=Z,24nm,0.9s
B06A Marblemount 42.02 331 P P 19 13 40.9 +1.0
B06A IAmb IAmb 19 13 43.9
comp=Z,19nm,0.8s
D03D Eldon 42.12 329 P P 19 13 42.6 +1.9
baz=132
PB04 IPOC Station P 42.13 149 P P 19 13 40.3 -1.0
PB04 IAmb IAmb 19 14 40.2
comp=Z,32nm,1.4s
NLWA Neilton Lookou 42.42 328 P P 19 13 44.0 +0.8
SIV San Ignacio 42.89 133 P P 19 13 46.8 -0.6
comp=Z,9.0nm,0.8s,baz=311,slow=8.7,SNR=36
SIV PcP PcP 19 15 39.0 +1.2
comp=Z,3.4nm,1.0s,baz=292,slow=3.7,SNR=3.2
LLLB Lillooet 43.69 333 P P 19 13 55.1 +1.6
LLLB IAmb IAmb 19 13 56.9
comp=Z,42nm,1.4s
DRLN Deer Lake 45.26 32 P P 19 14 02.9 -3.0
SCHQ Schefferville 45.32 20 P P 19 14 04.5 -1.8
comp=Z,4.1nm,0.9s,baz=241,slow=7.8,SNR=4.7
SCHQ LR LR 19 35 08.1
comp=Z,920nm,18.1s,baz=198,slow=39
SCHQ Schefferville 45.32 20 P P 19 14 03.5 -2.8
SCHQ IAmb IAmb 19 14 48.2
comp=Z,14nm,1.1s
YKA Yellowknife Ar 50.96 347 P P 19 14 49.9 +0.1
comp=Z,15nm,0.9s,baz=147,slow=7.9,SNR=121
YKA PcP PcP 19 16 06.5 +1.0
comp=Z,2.1nm,0.8s,baz=144,slow=3.9,SNR=9.1
YKA LR LR 19 40 23.8
comp=Z,204nm,19.9s,baz=0.0,slow=40
DLBC Dease Lake 52.54 336 P P 19 15 04.3 +2.6
comp=Z,18nm,1.0s,baz=124,slow=5.6,SNR=15
DLBC Dease Lake 52.54 336 P P 19 15 03.9 +2.2
CPUP Villa Florida 52.56 140 P P 19 15 01.5 -0.7
comp=Z,1.4nm,0.4s,baz=339,slow=8.2,SNR=3.8
CPUP LR LR 19 38 57.8
comp=Z,298nm,18.2s,baz=345,slow=38
CPUP Villa Florida 52.56 140 P P 19 15 00.2 -1.9
CPUP IAmb IAmb 19 15 11.0
comp=Z,21nm,1.4s
TAOE Nuku Hiva Isla 52.64 247 eLR LR 19 30 10.9
comp=Z,314nm,25.7s
TAOE Nuku Hiva Isla 52.64 247 eT T 20 11 23.9
comp=Z,119nm,0.3s
BDFB Brasilia 52.76 122 P P 19 15 03.3 -0.6
comp=Z,4.8nm,0.9s,baz=296,slow=25,SNR=4.6
BDFB Brasilia 52.76 122 P P 19 15 02.3 -1.6
BDFB IAmb IAmb 19 15 04.7
comp=Z,18nm,1.3s
WHY Whitehorse 55.87 336 P P 19 15 26.4 +0.5
HYT Haines Junctio 57.00 336 P P 19 15 35.8 +1.8
PCA Pinnacle 57.75 334 P P 19 15 41.3 +2.1
PCA IAmb IAmb 19 15 47.5
comp=Z,14nm,0.9s
PLCA Paso Flores 58.07 161 LR LR 19 35 58.8
comp=Z,370nm,18.2s,baz=8.0,slow=31
CTGM Chitina Glacie 58.65 334 P P 19 15 47.8 +2.2
C36M Paulatuk 58.84 347 P P 19 15 48.3 +1.7
BARN Barnard Glacie 58.84 334 P P 19 15 48.3 +1.3
BARN IAmb IAmb 19 15 51.8
comp=Z,9.0nm,1.0s
BALM Baldy 59.12 334 P P 19 15 50.9 +2.1
BALM IAmb IAmb 19 15 52.5
comp=Z,19nm,1.2s
TGL Tana Glacier 59.18 334 P P 19 15 50.7 +1.4
RCBR Riachuelo 59.31 106 P P 19 15 49.7 -1.1
comp=Z,20nm,0.8s,baz=280,slow=6.9,SNR=12
RCBR Riachuelo 59.31 106 P P 19 15 51.0 +0.2
RCBR Riachuelo 59.31 106 P P 19 15 51.0 +0.2
RCBR pmax pmax
comp=Z,27nm,1.0s
CRQM Cirque 59.31 334 P P 19 15 52.0 +1.8
CRQM IAmb IAmb 19 15 57.7
comp=Z,14nm,1.0s
GO07 Milladeo Hill, 59.34 164 P P 19 15 50.4 0.0
MCARA McCarthy VSAT 59.57 334 P P 19 15 53.1 +1.3
MCARA IAmb IAmb 19 16 08.2
comp=Z,18nm,1.0s
DAWY Dawson 59.57 338 P P 19 15 52.5 +0.7
DAWY IAmb IAmb 19 16 10.4
comp=Z,11nm,1.4s
VRDI Verde Repeater 59.68 334 P P 19 15 53.8 +1.1
VRDI IAmb IAmb 19 16 04.9
comp=Z,13nm,1.2s
RAGM Ragged Mountai 59.81 333 P P 19 15 55.2 +1.7
GLB Gilahina Butte 59.93 334 P P 19 15 55.4 +1.1
GLB IAmb IAmb 19 15 57.9
comp=Z,14nm,1.1s
EPYK Eagle Plains 60.04 341 P P 19 15 55.5 +0.6
EPYK IAmb IAmb 19 15 57.5
comp=Z,16nm,1.1s
EPYK Eagle Plains 60.04 341 P P 19 15 56.1 +1.1
baz=128
EYAK Cordova Ski Ar 60.36 333 P P 19 15 59.0 +1.9
INK Inuvik 60.36 344 P P 19 15 57.9 +0.9
comp=Z,16nm,0.9s,baz=123,slow=8.0,SNR=37
INK Inuvik 60.36 344 P P 19 15 57.6 +0.5
EGAK Eagle 60.61 338 P P 19 15 59.3 +0.5
EGAK IAmb IAmb 19 16 01.1
comp=Z,14nm,1.1s
MENT Mentasta 60.62 336 P P 19 15 59.9 +0.8
MENT IAmb IAmb 19 16 01.6
comp=Z,22nm,1.5s
HIN Hinchinbrook I 60.63 332 P P 19 16 01.3 +2.2
RES Resolute Bay 60.70 359 LR LR 19 45 30.3
comp=Z,202nm,18.1s,baz=173,slow=39
FID Port Fidalgo 60.77 333 P P 19 16 02.0 +2.0
GLI Glacier Island 61.10 333 P P 19 16 03.5 +1.3
GLI IAmb IAmb 19 16 11.9
comp=Z,15nm,1.1s
DOT Dot Lake 61.11 336 P P 19 16 03.5 +1.2
SCRK Sand Creek 61.24 337 P P 19 16 03.9 +0.6
PAX Paxson 61.34 335 P P 19 16 04.6 +0.6
PAX IAmb IAmb 19 16 07.6
comp=Z,12nm,1.1s
PAX Paxson 61.34 335 P P 19 16 04.6 +0.6
PAX pmax pmax
comp=Z,12nm,1.1s
RIDG Independent Ri 61.46 336 P P 19 16 06.2 +1.5
SCM Sheep Creek Mo 61.61 334 P P 19 16 07.0 +1.2
SCM IAmb IAmb 19 16 09.9
comp=Z,15nm,1.0s
SCM Sheep Creek Mo 61.61 334 P P 19 16 07.0 +1.2
SCM pmax pmax
comp=Z,15nm,1.0s
SEW Seward 61.85 331 P P 19 16 07.6 +0.3
KNK Knik Glacier 61.92 333 P P 19 16 07.9 0.0
SML Sawmill 62.03 334 P P 19 16 09.7 +1.1
DHY Denali Highway 62.16 335 P P 19 16 10.6 +1.0
DHY IAmb IAmb 19 16 56.9
comp=Z,18nm,1.5s
GHO Glory Hole Cre 62.27 333 P P 19 16 11.8 +1.6
PMR Palmer 62.29 333 P P 19 16 11.3 +1.1
PMR IAmb IAmb 19 16 17.8
comp=Z,15nm,1.1s
PMR Palmer 62.29 333 P P 19 16 11.3 +1.1
PMR pmax pmax
comp=Z,15nm,1.1s
RC01 Rabbit Creek A 62.36 332 P P 19 16 11.6 +0.9
BRLK Bradley Lake 62.40 331 P P 19 16 12.8 +1.7
CNPM China Poot 62.48 331 P P 19 16 13.6 +2.0
KDAK Kodiak Island 62.57 328 P P 19 16 14.0 +1.8
comp=Z,8.3nm,0.8s,baz=178,slow=3.0,SNR=8.1
KDAK LR LR 19 43 57.8
comp=Z,152nm,19.6s,baz=126,slow=36
KDAK Kodiak Island 62.57 328 P P 19 16 13.3 +1.2
KDAK Kodiak Island 62.57 328 P P 19 16 14.0 +1.8
PRP Porcupine Dome 62.57 338 P P 19 16 13.7 +1.4
HDA Harding Lake 62.59 336 P P 19 16 12.7 +0.5
HDA Harding Lake 62.59 336 P P 19 16 12.9 +0.7
baz=117,SNR=10
IL31 62.73 337 P P 19 16 13.9 +0.8
ILAR Eielson Array 62.73 337 P P 19 16 14.6 +1.4
comp=Z,16nm,1.1s,baz=127,slow=4.0,SNR=58
ILAR LR LR 19 45 43.6
comp=Z,205nm,19.0s,baz=132,slow=38
RND Reindeer 62.91 335 P P 19 16 15.8 +1.4
RND Reindeer 62.91 335 P P 19 16 15.8 +1.4
RND pmax pmax
comp=Z,41nm,1.2s
SUA Susitna One 62.96 333 P P 19 16 16.2 +1.3
SUA IAmb IAmb 19 16 17.8
comp=Z,17nm,1.0s
FYU Fort Yukon 62.98 339 P P 19 16 15.6 +0.8
CCB Clear Creek Bu 63.03 337 P P 19 16 15.3 +0.3
CCB IAmb IAmb 19 16 21.8
comp=Z,15nm,1.2s
SII Sitkinak Islan 63.04 327 P P 19 16 16.5 +1.1
WRH Wood River Hil 63.06 336 P P 19 16 15.8 +0.5
WRH IAmb IAmb 19 16 21.2
comp=Z,12nm,1.2s
MCK McKinley 63.08 335 P P 19 16 16.4 +0.9
MCK McKinley 63.08 335 P P 19 16 16.4 +0.9
MCK pmax pmax
comp=Z,48nm,1.6s
POKR Poker Plat Res 63.09 337 P P 19 16 16.2 +0.6
baz=116,SNR=5.1
COLA College 63.15 337 P P 19 16 16.3 +0.5
COLA IAmb IAmb 19 16 55.9
comp=Z,22nm,1.2s
COLA College 63.15 337 P P 19 16 16.3 +0.5
COLA pmax pmax
comp=Z,22nm,1.3s
MDM Murphy Dome 63.33 337 P P 19 16 17.3 +0.2
MDM IAmb IAmb 19 16 20.3
comp=Z,16nm,1.2s
BWN Browne 63.48 336 P P 19 16 19.0 +0.9
NEA Nenana 63.49 336 P P 19 16 19.8 +1.6
NEA IAmb IAmb 19 16 25.0
comp=Z,25nm,1.5s
SKT Skwentna 63.49 333 P P 19 16 19.4 +1.2
RSO Redoubt South 63.52 331 P P 19 16 19.5 +0.8
TRF Thorofare Moun 63.52 335 P P 19 16 20.0 +1.4
KTH Kantishna Hill 63.82 335 P P 19 16 21.2 +0.7
KTH IAmb IAmb 19 16 23.9
comp=Z,14nm,0.9s
BPAW Bear Paw Mtn. 64.06 335 P P 19 16 22.6 +0.6
BPAW IAmb IAmb 19 16 37.1
comp=Z,20nm,1.3s
PPLA Purkeypile 64.11 334 P P 19 16 23.2 +0.7
MLY Manley 64.33 336 P P 19 16 24.7 +1.0
PPT2 Papeete2 64.65 243 eS S 19 25 08.3 +4.4
comp=Z,103nm,23.8s
PPT2 Papeete2 64.65 243 eLR LR 19 35 47.7
comp=Z,320nm,24.5s,baz=60
COLD Coldfoot 65.03 339 P P 19 16 29.7 +1.5
COLD IAmb IAmb 19 16 31.9
comp=Z,19nm,1.3s
SVW2 Sparrevohn 65.04 331 P P 19 16 29.0 +0.6
SVW2 IAmb IAmb 19 16 30.8
comp=Z,12nm,1.1s
CHGN Chignik 65.26 326 P P 19 16 32.1 +2.2
TOLK Toolik Lake Re 65.43 340 P P 19 16 31.4 +0.6
TOLK IAmb IAmb 19 16 33.8
comp=Z,24nm,1.1s
TOLK Toolik Lake Re 65.43 340 P P 19 16 31.7 +0.9
baz=116,SNR=6.5
TTA Talatina 65.77 333 P P 19 16 33.6 +0.4
TTA Talatina 65.77 333 P P 19 16 33.6 +0.4
TBI Tubuai 67.11 237 eS S 19 25 35.5 +1.9
comp=Z,192nm,29.5s
TBI Tubuai 67.11 237 eLR LR 19 37 09.2
comp=Z,282nm,26.8s
BORG Borgarnes 69.33 26 LR LR 19 47 11.3
comp=Z,178nm,18.1s,baz=303,slow=36
USHA Ushuaia 71.48 166 LR LR 19 43 25.6
comp=Z,179nm,20.3s,baz=298,slow=31
EFI East Falkland 71.84 158 i P P 19 17 08.7 -2.1
EFI pmax pmax
comp=Z,65nm,1.6s
ESDC Sonseca Array 79.94 52 P P 19 17 56.2 -1.4
comp=Z,1.5nm,0.7s,baz=300,slow=6.2,SNR=4.9
MDT Midelt 80.64 59 P P 19 17 59.6 -1.9
comp=Z,1.5nm,0.9s,baz=326,slow=7.4,SNR=3.9
BILL Bilibino 81.36 338 P P 19 18 05.6 +1.1
BILL IAmb IAmb 19 18 08.4
comp=Z,26nm,1.1s
BILL Bilibino 81.36 338 ceP P 19 18 06.0 +1.5
BILL e*PP sP 19 18 22.3 0.0
BILL eS S 19 28 08.5 -3.5
BILL pmax pmax
comp=Z,19nm,1.0s
BILL MLR MLR
comp=Z,143nm,17.0s
NB2 NORSAR Subarra 84.28 28 P P 19 18 19.7 -0.2
comp=Z,0.6nm,0.8s,baz=289,slow=5.3
NOA NORSAR Array B 84.28 28 P P 19 18 19.4 -0.4
comp=Z,1.5nm,0.9s,baz=289,slow=5.0,SNR=5.2
NOA LR LR 19 56 37.4
comp=Z,85nm,18.0s,baz=0.0,slow=36
WLF Walferdange 84.83 40 PcP PcP 19 18 26.8 +0.6
DBIC Dimbokro 85.93 84 P P 19 18 29.1 +0.1
comp=Z,4.6nm,0.9s,baz=231,slow=3.8,SNR=4.3
DBIC Dimbokro 85.93 84 P P 19 18 27.7 -1.3
DBIC IAmb IAmb 19 20 19.2
comp=Z,18nm,1.4s
ARCES ARCESS Array B 86.22 18 P P 19 18 30.4 +1.0
comp=Z,1.0nm,0.6s,baz=306,slow=8.3,SNR=4.5
ARCES LR LR 19 56 15.2
comp=Z,202nm,21.7s,baz=298,slow=35
SEY Seymchan 88.64 336 P P 19 18 42.3 +1.2
comp=Z,2.4nm,0.9s,baz=85,slow=7.6,SNR=10
SEY Seymchan 88.64 336 i P P 19 18 39.9 -1.2
BRG Berggiesshubel 89.19 37 eP P 19 19 01.2 +17
comp=Z,35nm,2.1s
KHC Kasperske Hory 89.60 39 i P P 19 18 43.4 -2.6
KHC pmax pmax
comp=Z,5.0nm,1.2s
GERES GERESS Array B 89.78 39 P P 19 18 46.6 -0.3
comp=Z,0.2nm,0.4s,baz=268,slow=3.3,SNR=3.7
GERES LR LR 19 58 33.3
comp=Z,99nm,19.1s,baz=323,slow=35
TIXI Tiksi 90.20 348 LR LR 20 02 50.6
comp=Z,67nm,21.9s,baz=3.5,slow=38
TIXI Tiksi 90.20 348 P P 19 18 48.1 -0.1
TIXI Tiksi 90.20 348 eP P 19 18 47.9 -0.3
TIXI pmax pmax
comp=Z,18nm,1.1s
TORD Torodi Ar. Bea 90.65 76 P P 19 18 52.2 +0.7
comp=Z,0.4nm,0.6s,baz=285,slow=4.0,SNR=2.7
TORD LR LR 19 56 56.0
comp=Z,120nm,20.9s,baz=320,slow=34
MA2 Magadan 90.97 333 P P 19 18 54.2 +2.1
comp=Z,3.2nm,0.6s,baz=130,slow=22,SNR=2.1
NRIK Noril'sk 96.88 0 LR LR 20 07 42.6
comp=Z,411nm,19.0s,baz=336,slow=38
YAK Yakutsk 97.37 341 i P Pdif 19 19 21.9 +0.5
YAK pmax pmax
comp=Z,3.0nm,0.8s
PRGR Permogore 97.63 19 eP P 19 19 19.8 -2.7
PRGR pmax pmax
comp=Z,9.0nm,1.5s
AKASG Malin Array Be 97.88 33 LR LR 20 05 30.5
comp=Z,87nm,18.9s,baz=305,slow=37
BRVK Borovoye 111.55 11 i PKIKP PKiKP 19 24 23.0 +0.6
KURK Kurchatov 115.07 6 i PKIKP PKiKP 19 24 27.6 -1.6
MK31 Makanchi Array 119.29 4 i PKIKP PKPdf 19 24 37.6 +0.1
MKAR Makanchi Array 119.29 4 PKhKP PKPpre 19 24 30.4
comp=Z,0.4nm,0.7s,baz=90,slow=10.0,SNR=4.5
MKAR PKP PKiKP 19 24 38.9 +1.4
comp=Z,0.5nm,0.7s,baz=77,slow=2.7,SNR=6.1
BOSA Boshof 120.61 115 PKP PKiKP 19 24 40.8 +0.1
comp=Z,4.0nm,0.9s,baz=274,slow=3.6,SNR=4.5
BOSA Boshof 120.61 115 PKPdf 19 24 39.8 -0.8
HHC Hu-ho-hao-te 121.12 339 ePKP PKiKP 19 24 41.5 +0.1
HHC LR LR
comp=Z,170nm,20.4s
GEYT Alibeck 121.35 27 PKP PKiKP 19 24 43.6 +1.7
comp=Z,1.4nm,0.5s,baz=282,slow=7.2,SNR=3.5
WMQ Urumqi 122.46 0 ePKP PKiKP 19 24 44.3 +0.4
WMQ LR LR
comp=Z,460nm,29.2s
NJ2 Nanjing 125.35 327 ePKP PKPdf 19 24 49.0 -0.5
KSH Kashi 125.65 11 PKP PKiKP 19 24 56.3 +5.8
KSH sPKP 19 25 05.5
KSH PP PP 19 26 46.0 +5.4
KSH PKS PKSdf 19 28 25.0 -1.8
KSH SKS SKSdf 19 31 57.3 -1.5
KSH SKKS SKKSac 19 33 32.5 -4.4
KSH LR LR
comp=Z,96nm,5.3s
KSH LR LR
comp=Z,560nm,6.1s
GTA Gaotai 125.68 348 ePKP PKiKP 19 24 51.3 +0.8
GTA sPKP 19 25 01.0
GTA LR LR
comp=Z,140nm,18.7s
GTA LR LR
comp=Z,130nm,19.0s
WHN Wuhan 128.83 330 PKP PKiKP 19 24 57.5 +0.6
ENH Enshi 131.24 335 PKPdf 19 25 00.4 -0.5
CD2 Chengdu 132.76 341 PKP PKPdf 19 25 02.0 -1.7
WRA Warramunga Arr 135.12 256 PKP PKiKP 19 25 10.1 +0.3
comp=Z,1.2nm,1.0s,baz=85,slow=3.2,SNR=4.9
WRA PP PP 19 27 43.5 -0.8
comp=Z,0.4nm,0.3s,baz=96,slow=7.9,SNR=11
ASAR Alice Springs 135.40 250 PKP PKiKP 19 25 11.5 +1.2
comp=Z,2.0nm,1.2s,baz=11,slow=1.2,SNR=4.5
ASAR PP PP 19 27 43.6 -2.3
comp=Z,1.0nm,0.8s,baz=93,slow=8.1,SNR=7.6
CHTO Chiang Mai 145.57 341 PKPdf 19 25 27.1 -0.1
CHTO Chiang Mai 145.57 341 PKIKP PKPdf 19 25 27.1 -0.1
CM31 Chiang Mai Arr 145.90 341 PKPab 19 25 29.3 +0.5
CMAR Chiang Mai Arr 145.90 341 PKPbc PKPab 19 25 29.7 +0.8
comp=Z,25nm,1.0s,baz=342,slow=4.1,SNR=94
UBPT Khong Chiam 146.02 328 PKPab 19 25 29.7 +0.3
PBKT Sadao Pong 146.92 336 PKPdf 19 25 28.9 -0.7
PBKT PKPbc PKPab 19 25 32.5 -0.2
SBUM Sibu 150.72 302 PKPbc 19 25 41.1 -0.3

IDC 28 19:07:56.1±3.1, 51.°26N×175.°47W, h0km, mb3.1/3, mb1 3.7/4, mb1mx3.3/64, mbtmp3.5/4, ML4.3/1, Error ellipse: s-maj=85.2km s-min=29.1km az=174.0
AEIC 28 19:08:01.6±1.1, 51.°60N±0.°07×175.°31W±0.°04, h38km±7km, ML3.2/28, Error ellipse: s-maj=10.7km s-min=1.8km az=159.0
NEIC 28 19:08:02.1±1.0, 51.°61N±0.°08×175.°31W±0.°04, h34km±9km, Error ellipse: s-maj=11.6km s-min=1.7km az=163.0
ISC 28 19:08:01.3±1.8, 51.°6N±0.°1×175.°31W±0.°04, h32km±12km, n33, σ9°70/33, Andreanof Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GSIG Igitkin Island 0.57 318 Pb 19 08 13.3 +0.3
GSIG Sn 19 08 20.9 -0.7
GSMY Great Sitkin M 0.67 316 Pb 19 08 14.8 +0.2
GSTR Great Sitkin T 0.71 319 Pb 19 08 15.5 +0.2
GSTD Great Sitkin T 0.72 314 Pb 19 08 15.5 +0.1
GSTD Sn 19 08 24.4 -0.9
ETKA Kagalaska Isla 0.75 294 Pb 19 08 15.4 -0.2
ETKA Sb 19 08 25.7 -0.1
ADAG Mount Adagdak 0.91 298 Pb 19 08 18.5 -0.1
ADK Adak 0.92 291 Pn 19 08 17.6 -0.4
ATKA Atka Island 0.94 46 Pn 19 08 17.8 -0.4
ATKA Atka Island 0.94 46 Sn 19 08 30.0 -0.7
KOKL Mount Kliuchef 1.03 41 Pn 19 08 19.8 +0.3
KOKL Sn 19 08 32.3 -0.5
KOFP Korovin Flat P 1.04 46 Pn 19 08 19.9 +0.2
KOWE Korovin West 1.04 39 Pb 19 08 20.1 -0.6
KIRH Kanaga Island 1.16 288 Pn 19 08 21.6 +0.2
KIWB Kanaga Island 1.19 285 Pn 19 08 21.2 -0.4
KINC Kanaga Island 1.19 289 Pn 19 08 21.9 +0.1
KIKV Kanaga Island 1.20 286 Pn 19 08 21.9 0.0
KIMD Kanaga Island 1.22 280 Pn 19 08 21.8 -0.3
KIMD Sn 19 08 37.6 +0.1
KICM Kanaga Island 1.23 288 Pn 19 08 22.3 +0.1
TAPA Tanaga Point A 1.58 280 Pn 19 08 27.4 +0.3
TAFP Tanaga Falls P 1.70 283 Pn 19 08 29.3 +0.5
TAFP Sn 19 08 49.8 +0.4
TASE Tanaga Southea 1.72 280 Pn 19 08 29.7 +0.6
NIKH Nikolski High 4.21 68 Pn Pn 19 09 04.1 +0.9
SPIA Saint Paul Isl 6.36 26 Pn Pn 19 09 35.1 +2.5
KDAK Kodiak Island 14.50 56 Pn P 19 11 29.0 -1.2
1.3nm,0.3s,baz=260,slow=6.1,SNR=21
KDAK Sn Sn 19 14 12.0 +8.5
0.1nm,0.3s,baz=284,slow=12,SNR=2.7
ILAR Eielson Array 19.76 37 P Pn 19 12 29.3 -0.6
0.3nm,0.5s,baz=232,slow=10,SNR=14
H11N2 WAKE ISLAND Hy 34.71 210 T T 19 51 38.6
baz=271,slow=74
H11N3 WAKE ISLAND Hy 34.71 210 T T 19 51 39.5
baz=3.3,slow=74
H11N1 WAKE ISLAND Hy 34.72 210 T T 19 51 36.4
H11S1 WAKE ISLAND Hy 35.91 210 T T 19 53 29.8
baz=19,slow=76,SNR=8.3
H11S2 WAKE ISLAND Hy 35.93 210 T T 19 53 50.8
baz=19,slow=76,SNR=12
H11S3 WAKE ISLAND Hy 35.93 210 T T 19 53 30.9
baz=19,slow=76,SNR=6.0
PDAR Pinedale Array 44.16 75 P P 19 16 07.7 +0.6
0.8nm,0.7s,baz=313,slow=5.4,SNR=4.2
MKAR Makanchi Array 61.61 310 P P 19 18 16.0 +0.6
0.1nm,0.3s,baz=57,slow=5.3,SNR=2.7

INET 28 19:14:37.2, 12.°87N×88.°84W, h15km, ML4.0
NEIC 28 19:14:38.1±2.8, 12.°87N±0.°02×88.°82W±0.°06, h68km±7km, mb4.4/11, Md4.6(SNET), Error ellipse: s-maj=8.1km s-min=3.2km az=89.0
UCR 28 19:14:38.7±1.6, 12.°95N×88.°83W, h36km±225km, ML4.5, mb4.4(NEIC)
SNET 28 19:14:38.2±1.1, 12.°92N×88.°84W, h35km±437km, ML4.6
IDC 28 19:14:39.6±1.7, 13.°19N×88.°68W, h68km±14km, mb3.6/10, mb1 3.8/15, mb1mx3.7/44, mbtmp3.9/15, MS3.4/1, Ms1 3.4/1, ms1mx2.8/40, Error ellipse: s-maj=30.4km s-min=12.1km az=44.0
ISC 28 19:14:37.5±1.0, 12.°92N±0.°07×88.°81W±0.°04, h59km±8km, n103, σ1°12/131, mb4.2/14, 2C-26D, Off coast of central America

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
COEB Comit de Eme 0.63 26 ⇓iP Pn 19 14 51.6 +0.6
COEB eS Sn 19 15 01.6 +0.7
COEB Comit de Eme 0.63 26 ⇓iP Pn 19 14 51.6 +0.6
COEB eS Sn 19 15 01.6 +0.7
JUCU Jucuar¡n 0.64 59 eP Pn 19 14 51.2 +0.1
JUCU eS Sn 19 15 00.6 -0.3
JUCU IAML 19 15 03.4
comp=Z,24μm,0.2s
JUCU Jucuar¡n 0.64 59 eP Pn 19 14 51.2 +0.1
JUCU eS Sn 19 15 00.6 -0.3
JUCU IAML 19 15 03.4
comp=Z,24μm,0.2s
TECA Tecapa 0.64 28 ⇓iP Pn 19 14 51.7 +0.5
TECA Tecapa 0.64 28 ⇓iP Pn 19 14 51.7 +0.5
SNVI San Vicente 0.69 358 ⇓iP Pn 19 14 51.7 0.0
SNVI San Vicente 0.69 358 ⇓iP Pn 19 14 51.7 0.0
COEG Centro de Oper 0.70 355 eP Pn 19 14 51.6 -0.1
COEG ⇓iP 19 14 51.9
COEG eS Sn 19 15 02.5 +0.4
COEG IAML 19 15 07.4
comp=Z,19μm,0.3s
COEG Centro de Oper 0.70 355 eP Pn 19 14 51.6 -0.1
COEG ⇓iP 19 14 51.9
COEG eS Sn 19 15 02.5 +0.4
COEG IAML 19 15 07.4
comp=Z,19μm,0.3s
LCY Lacayo 0.71 45 ⇓iP Pn 19 14 52.5 +0.6
LCY Lacayo 0.71 45 ⇓iP Pn 19 14 52.5 +0.6
UESV Universidad de 0.71 2 eP Pn 19 14 52.3 +0.4
UESV IAML 19 15 04.1
comp=Z,27μm,0.2s
UESV Universidad de 0.71 2 eP Pn 19 14 52.3 +0.4
UESV IAML 19 15 04.1
comp=Z,27μm,0.2s
RANC El Ranchito 0.72 45 ⇑iP Pn 19 14 52.7 +0.6
RANC El Ranchito 0.72 45 ⇑iP Pn 19 14 52.7 +0.6
PACA Pacayal 0.72 41 ⇓iP Pn 19 14 52.8 +0.7

PACA Pacayal 0.72 41⇓iP Pn 19 14 52.8 +0.7
LFRS El Faro 0.74 341⇓iP Pn 19 14 52.3 0.0
LALI Alcalda de L 0.75 319 eP Pn 19 14 52.2 -0.1
LALI eS Sn 19 15 02.1 -1.0
LALI Alcalda de L 0.75 319 eP Pn 19 14 52.2 -0.1
LALI eS Sn 19 15 02.1 -1.0
PAVA Las Pavas 0.80 351⇓iP Pn 19 14 53.5 +0.5
PAVA eS Sn 19 15 05.5 +1.1
PAVA IAML 19 15 07.5
comp=Z,14μm,0.3s
PAVA Las Pavas 0.80 351⇓iP Pn 19 14 53.5 +0.5
PAVA eS Sn 19 15 05.5 +1.1
PAVA IAML 19 15 07.5
comp=Z,14μm,0.3s
AEIL Aeropuerto Ilo 0.82 339 iP Pn 19 14 53.6 +0.3
AEIL eS Sn 19 15 05.4 +0.4
AEIL IAML 19 15 11.5
comp=Z,19μm,0.3s
AEIL Aeropuerto Ilo 0.82 339 iP Pn 19 14 53.6 +0.3
AEIL eS Sn 19 15 05.4 +0.4
AEIL IAML 19 15 11.5
comp=Z,19μm,0.3s
LBRS Las Brisas 0.84 345⇓iP Pn 19 14 54.1 +0.5
UDBS Universidad Do 0.86 337 eP Pn 19 14 54.1 +0.4
UDBS eS Sn 19 15 06.2 +0.6
UDBS IAML 19 15 10.2
comp=Z,26μm,0.3s
UDBS Universidad Do 0.86 337 eP Pn 19 14 54.1 +0.4
UDBS eS Sn 19 15 06.2 +0.6
UDBS IAML 19 15 10.2
comp=Z,26μm,0.3s
SNET Serv Nac Est T 0.86 332 eP Pn 19 14 54.1 +0.3
SNET IAML 19 15 07.9
comp=Z,10μm,0.2s
SNET Serv Nac Est T 0.86 332 Pn 19 14 53.7 -0.1
SNET Serv Nac Est T 0.86 332 eP Pn 19 14 54.1 +0.3
SNET IAML 19 15 07.9
comp=Z,10μm,0.2s
OPAM Oficina de Pla 0.87 334 iP Pn 19 14 53.7 -0.2
OPAM eS Sn 19 15 06.3 +0.3
OPAM Oficina de Pla 0.87 334 iP Pn 19 14 53.7 -0.2
OPAM eS Sn 19 15 06.3 +0.3
LFU La Fuente 0.87 340⇓iP Pn 19 14 54.4 +0.5
LFU La Fuente 0.87 340⇓iP Pn 19 14 54.4 +0.5
CUSC Alcaldia de Cu 0.88 336 eP Pn 19 14 54.4 +0.4
CUSC eS Sn 19 15 06.8 +0.7
CUSC Alcaldia de Cu 0.88 336 eP Pn 19 14 54.4 +0.4
CUSC eS Sn 19 15 06.8 +0.7
UEES Universidad Ev 0.89 332 eP Pn 19 14 54.6 +0.4
UEES Universidad Ev 0.89 332 eP Pn 19 14 54.6 +0.4
BOQS Boqueron 0.93 331 eP Pn 19 14 55.3 +0.5
CNCH Conchagua 1.02 70⇓iP Pn 19 14 56.4 +0.6
CNCH eS Sn 19 15 09.9 +0.5
CNCH IAML 19 15 15.2
comp=Z,17μm,0.2s
CNCH Conchagua 1.02 70⇓iP Pn 19 14 56.4 +0.6
CNCH eS Sn 19 15 09.9 +0.5
CNCH IAML 19 15 15.2
comp=Z,17μm,0.2s
FAGO Alcalda de S 1.03 42⇓iP Pn 19 14 56.6 +0.7
FAGO eS Sn 19 15 10.9 +1.3
FAGO Alcalda de S 1.03 42⇓iP Pn 19 14 56.6 +0.7
FAGO eS Sn 19 15 10.9 +1.3
CEVE Cerro Verde 1.20 319 eP Pn 19 14 59.1 +0.8
CEVE eS Sn 19 15 13.8 0.0
CEVE Cerro Verde 1.20 319 eP Pn 19 14 59.1 +0.8
CEVE eS Sn 19 15 13.8 0.0
SBLS San Blas 1.21 319 eP Pn 19 14 59.2 +0.8
SBLS San Blas 1.21 319 eP Pn 19 14 59.2 +0.8
SNJE San Jose 1.22 321 eP Pn 19 14 59.4 +0.8
SNJE San Jose 1.22 321 eP Pn 19 14 59.4 +0.8
LLGN La Laguna 1.24 354⇓iP Pn 19 14 59.4 +0.7
LLGN La Laguna 1.24 354⇓iP Pn 19 14 59.4 +0.7
RTR El Retiro 1.26 320 eP Pn 19 15 00.1 +0.9
RTR El Retiro 1.26 320 eP Pn 19 15 00.1 +0.9
MTO3 Montecristo 1.56 340⇓iP Pn 19 15 03.9 +0.7
MTO3 Montecristo 1.56 340⇓iP Pn 19 15 03.9 +0.7
TGUH Tegucigalpa,Un 1.87 53 Pn 19 15 08.4 +1.1
ESTN Estel 2.39 85 Pn 19 15 15.2 +0.9
APG El Apazote 2.62 322 P Pn 19 15 19.1 +1.6
comp=Z,2.7nm,0.3s,baz=107,slow=11,SNR=5.0
APG S Sn 19 15 47.6 -0.7
comp=Z,9.5nm,0.3s,baz=245,slow=2.3,SNR=6.1
ACON Acoyapa 3.68 105 Pn 19 15 32.8 +1.0
NY14 Universidad de 3.93 125 eP Pn 19 15 37.9 +2.6
LAPC Finca la Perla 3.94 123 eP Pn 19 15 37.2 +1.7
GB1A Borinquen Arri 3.94 122 eP Pn 19 15 37.6 +2.0
MESS Mesas 4.15 121 eP Pn 19 15 40.6 +2.2
GUAI GUAI 4.17 129 eP Pn 19 15 40.6 +2.0
CUI Cuipilapa 4.22 122 eP Pn 19 15 42.0 +2.6
ACAL Aguas Claras 4.34 121 eP Pn 19 15 42.8 +1.7
ESPN Las Esperanzas 4.46 99 Pn 19 15 42.9 +0.3
JTS Las Juntas de 4.60 124 P Pn 19 15 47.7 +3.2
comp=Z,6.9nm,0.3s,baz=11,slow=20,SNR=8.7
JTS S Sn 19 16 36.1 -0.6
comp=Z,8.5nm,0.3s,baz=158,slow=17,SNR=4.1
JTS Las Juntas de 4.60 124 Pn 19 15 47.5 +2.9
CCIG Comitan 4.64 316 Pn 19 15 47.8 +2.6
HDC Heredia 5.44 122 Pn Pn 19 15 52.3 -3.9
CMIG Matias Romero 7.18 306 P Pn 19 16 22.3 +2.4
comp=Z,0.7nm,0.3s,baz=116,slow=8.7,SNR=4.2
CMIG S Sn 19 17 40.1 0.0
comp=Z,0.7nm,0.3s,baz=274,slow=20,SNR=2.9
TEIG Tepich 7.28 4 P Pn 19 16 21.4 +0.2
comp=Z,2.4nm,0.3s,baz=321,slow=4.7,SNR=14
TEIG LR LR 19 19 35.5
comp=Z,253nm,18.4s,baz=318,slow=42
TEIG Tepich 7.28 4 Pn 19 16 23.1 +1.9
SDV Santo Domingo 18.29 101 P P 19 18 47.0 0.0
comp=Z,0.4nm,0.3s,baz=329,slow=4.7,SNR=4.6
SDV Santo Domingo 18.29 101 P P 19 18 46.7 -0.2
SDV IAmb IAmb 19 19 11.3
comp=Z,8.9nm,1.1s
GOGA Godfrey 20.97 13 P Pn 19 19 18.5 -0.4
GOGA IAmb IAmb 19 19 20.1
comp=Z,7.8nm,0.8s
TXAR Lajitas Array 21.38 322 P P 19 19 22.1 +1.9
comp=Z,1.3nm,0.7s,baz=145,slow=11,SNR=12
TX31 Lajitas Ar. Si 21.38 322 P P 19 19 21.6 +1.4
TX32 Lajitas Array 21.38 322 P P 19 19 21.7 +1.4
MPR Mayaguez 21.52 73 P P 19 19 20.0 -1.7
MIAR Mount Ida 21.96 349 P P 19 19 27.4 +1.1
MIAR IAmb IAmb 19 20 20.7
comp=Z,35nm,1.9s
SAML Samuel 33.47 129 P P 19 21 09.7 -1.6
SAML IAmb IAmb 19 21 12.0
comp=Z,4.2nm,0.8s
PDAR Pinedale Array 34.74 333 P P 19 21 22.8 +0.6
comp=Z,0.4nm,0.7s,baz=123,slow=11,SNR=3.8
PDAR PcP PcP 19 23 55.2 +0.3
comp=Z,0.3nm,0.5s,baz=270,slow=0.9,SNR=4.2
LPAZ La Paz 35.50 144 P P 19 21 31.3 +1.8
comp=Z,0.6nm,0.6s,baz=310,slow=7.9,SNR=3.2
LPAZ La Paz 35.50 144 P P 19 21 27.9 -1.5
NVAR Mina Array Bea 36.48 319 P P 19 21 38.9 +1.7
comp=Z,0.4nm,0.5s,baz=123,slow=7.6,SNR=2.9
NVAR PcP PcP 19 24 01.8 +1.7
comp=Z,0.8nm,0.6s,baz=150,slow=3.5,SNR=3.9
RLMT Red Lodge 36.52 335 P P 19 21 37.8 +0.4
RLMT IAmb IAmb 19 21 38.6
comp=Z,3.5nm,0.9s
ULM Lac du Bonnet 37.67 353 P P 19 21 45.6 -1.2
comp=Z,1.4nm,0.6s,baz=165,slow=11,SNR=3.2
ULM Lac du Bonnet 37.67 353 P P 19 21 46.1 -0.7
ULM IAmb IAmb 19 22 02.0
comp=Z,15nm,1.9s
MCMT McKenzie Canyo 37.84 332 P P 19 21 50.0 +1.4
EGMT Eagleton 39.11 338 P P 19 21 59.1 0.0
EGMT IAmb IAmb 19 22 00.8
comp=Z,8.2nm,0.8s
SCHQ Schefferville 45.22 18 P P 19 22 47.3 -1.4
comp=Z,2.0nm,0.7s,baz=185,slow=6.1,SNR=4.1
YKA Yellowknife Ar 52.81 345 P P 19 23 46.1 -0.4
comp=Z,1.6nm,0.3s,baz=139,slow=8.0,SNR=52
RES Resolute Bay 61.84 358 P P 19 24 48.9 -1.1
comp=Z,0.6nm,0.3s,baz=197,slow=8.6,SNR=3.9
INK Inuvik 62.36 343 P P 19 24 52.8 -0.8
comp=Z,3.0nm,0.8s,baz=126,slow=4.7,SNR=6.4
INK Inuvik 62.36 343 P P 19 24 52.7 -0.8
ILAR Eielson Array 65.06 336 P P 19 25 10.6 -0.8
comp=Z,0.8nm,0.9s,baz=136,slow=3.0,SNR=6.8
HHC Hu-ho-hao-te 123.27 342 eP PKiKP 19 33 30.3 +1.9
WRA Warramunga Arr 138.12 255 PKP PKiKP 19 33 58.2 -0.5
comp=Z,0.5nm,0.7s,baz=91,slow=1.9,SNR=5.2
ASAR Alice Springs 138.20 249 PKP PKiKP 19 33 58.5 -0.3
comp=Z,0.1nm,0.3s,baz=112,slow=1.0,SNR=4.1
CMAR Chiang Mai Arr 147.89 346 PKPbc PKPbc 19 34 15.3 -1.5
comp=Z,0.3nm,0.3s,baz=346,slow=3.2,SNR=4.9

GII 28 19:24:01.1±0.1,32°.26N×35°.34E,h5km,MD3.2/7,Mm2.8/5
JSO 28 19:24:01.0±0.4,32°N±2°×3°5E±°,h5km±4km,M2.9/2,Mjma2.9/2,MLv2.9/2
GRAL 28 19:24:02.0±0.4,32°.24N×35°.37E,h0km±2km,MD3.5
HLW 28 19:24:03.8,32°.08N×35°.26E,h10km±22km,Md3.4,Ml3.3
ISC 28 19:24:01.5±0.8,32°.25N±0°.02×35°.36E±0°.03,h11km±6km,n45,σ0°.54/65,Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMDT	Nahal Hemdat	0.14	90	Pg	Pg	19 24 04.6	-0.2
HMDT				Sg	Sg	19 24 07.4	+0.3
MMLI	Mount Malkishu	0.19	15	P	Pg	19 24 05.5	-0.2
MMLI	Mount Malkishu	0.19	15	Pg	Pg	19 24 05.5	-0.2
MMLI				Sg	Sg	19 24 09.0	+0.4
QRNJ	Al-Qirein	0.20	66	P	Pg	19 24 05.8	+0.1
QRNJ	Al-Qirein	0.20	66	Pg	Pg	19 24 05.9	+0.2
SLTI	Sal'it	0.27	267	Pg	Pg	19 24 06.5	-0.6
SLTI				Sg	Sg	19 24 11.1	+0.3
OFRI	`Ofer	0.49	319	Pg	Pg	19 24 10.6	-0.4
OFRI				Sg	Sg	19 24 18.2	+0.7
BLGI	Bet Lehem HaGe	0.50	343	Pg	Pg	19 24 11.1	-0.2
BLGI				Sg	Sb	19 24 19.0	-0.5
JSOJ	Natural Resour	0.51	126	P	Pg	19 24 11.7	+0.3
SHMJ	Saham	0.58	36	P	Pg	19 24 12.9	+0.1
SHMJ	Saham	0.58	36	Pg	Pg	19 24 12.8	0.0
DSI	Dead Sea	0.68	179	Pg	Pg	19 24 14.1	-0.6
DSI				Sg	Sb	19 24 24.8	+0.1
HSUJ	Al Zarqa	0.72	102	P	Pg	19 24 15.1	-0.3
MMA0B	Mount Meron ar	0.76	3	Pg	Pg	19 24 15.8	-0.4
MMA0B				Sg	Sb	19 24 26.9	-0.2
WALJ	Wala	0.79	151	P	Pg	19 24 16.4	-0.3
AMAZ	Amatzia	0.81	208	P	Pg	19 24 16.9	-0.2
AMAZ	Amatzia	0.81	208	Pg	Pg	19 24 17.0	-0.2
AMAZ				Sg	Sb	19 24 28.8	+0.2
KSHT	Keshet	0.82	27	Pg	Pg	19 24 17.5	+0.2
HNTI	Hanita	0.84	349	Pg	Pg	19 24 17.4	-0.3
HNTI				Sg	Sb	19 24 29.7	+0.3
YTIR	Yattir	0.91	193	Pg	Pg	19 24 18.8	-0.3
YTIR				Sg	Sb	19 24 31.4	-0.1
GHAJ	Ghor Haditha	0.96	170	P	Pg	19 24 19.4	-0.6
GHAJ	Ghor Haditha	0.96	170	Pg	Pg	19 24 19.7	-0.3
KSDI	Kefar Szold	0.97	15	P	Pg	19 24 19.1	-1.0
KSDI	Kefar Szold	0.97	15	Pg	Pg	19 24 19.4	-0.7
KSDI				Sg	Sb	19 24 33.2	+0.2
LISJ	El Lisan	1.02	174	P	Pb	19 24 20.8	-0.2
NATI	Neve Ativ	1.05	17	Pg	Pb	19 24 21.1	-0.6
NATI				Sg	Sg	19 24 35.9	+0.4
DAMI2	DAM2	1.08	176	Pg	Pb	19 24 22.0	-0.1
DAMI2				Sg	Sn	19 24 37.5	+0.2
SWQJ	Swaqa	1.17	149	P	Pb	19 24 21.5	-2.2
RCY	Rachaya	1.30	18	eP	Pn	19 24 25.1	-0.6
RCY				eS	Sb	19 24 42.8	0.0
ASF	Jabal al Asfar	1.30	93	P	Pn	19 24 25.2	-0.4
QRWL	Qaraoun	1.32	12	eP	Pn	19 24 25.9	0.0
QRWL				eS	Sn	19 24 43.4	-0.1
DQRL	Deir Qamar	1.46	7	eP	Pn	19 24 27.9	+0.1
DQRL				eS	Sb	19 24 47.2	0.0
KZIT	Kziot	1.58	212	P	Pn	19 24 29.5	+0.2
KZIT	Kziot	1.58	212	Pn	Pn	19 24 29.6	+0.2
KZIT				Sn	Sb	19 24 50.5	0.0
BEYL	Beirut	1.62	4	eP	Pb	19 24 30.7	-0.6
BHL	Bhannes	1.66	8	eP	Pn	19 24 31.3	+0.7
BHL				eS	Sb	19 24 53.2	0.0
ZFRI	Zfri	1.70	185	Pn	Pn	19 24 31.3	+0.3
PRNI	Paran	1.92	189	Pn	Pn	19 24 34.5	+0.4
HWQ	Hawqa	2.08	13	eP	Pn	19 24 37.1	+0.8
HWQ				eS	Sn	19 25 03.1	+0.9
HRFI	Mount Harif	2.23	187	P	Pn	19 24 38.8	+0.5
HRFI	Mount Harif	2.23	187	Pn	Pn	19 24 38.9	+0.6
MBRI	Mt Berech	2.48	189	Pn	Pn	19 24 42.2	+0.4
MBRI				Sn	Sn	19 25 13.8	+1.7
AQBJ	Aqaba	2.53	186	P	Pn	19 24 42.4	-0.1
EIL	Elat	2.60	188	Pn	Pn	19 24 43.7	+0.3
KOT	Kottamia	3.82	234	P	Pn	19 25 00.2	+0.1
	baz=235						
KOT				AMP		19 25 00.0	
	baz=235						

ISC 28 19:33:47.7±1.8,51°.42N±0°.08×16°.36E±0°.05,h0km,n16,σ1°.02/27,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.58	184	ePg	Pb	19 33 59.6	-1.0
KSP				eSg	Sg	19 34 07.9	+1.7
CHVC	Chvalec	0.85	193	ePG	Pg	19 34 04.5	+0.5
CHVC				eSG	Sb	19 34 16.8	-0.5
OSTC	Ostas	0.87	186	ePG	Pb	19 34 05.2	-0.4
OSTC				eSG	Sb	19 34 17.2	-0.6
UPC	Upice	0.94	194	ePG	Pb	19 34 06.6	-0.2
UPC				eSG	Sg	19 34 19.0	+1.3
	comp=Z,18nm,0.3s						
DPC	Dobruska-Polom	1.07	181	ePG	Pb	19 34 08.3	-0.8
DPC				eSG	Sb	19 34 23.3	-0.3
	comp=Z,6.0nm,0.3s						
KRLC	Kraliky	1.37	168	ePG	Pb	19 34 13.9	-0.3
KRLC				eSG	Sn	19 34 33.0	0.0
	comp=Z,4.0nm,0.4s						
PVCC	Panska Ves	1.44	232	ePG	Pn	19 34 14.1	-0.9
PVCC				eSG	Sg	19 34 32.4	-1.4
	comp=Z,20nm,0.2s						
BRG	Berggiesshubel	1.61	251	PG	Pn	19 34 17.0	-0.4
BRG				SG	Sn	19 34 36.9	-2.0
	6.3nm,0.5s						
GOPC	GO Pecny, Ondr	1.81	214	ePG	Pn	19 34 20.6	+0.5
GOPC				eSG	Sn	19 34 44.0	+0.3
	comp=Z,3.8nm,0.2s						
PRU	Pruhonice	1.84	220	eSG	Sn	19 34 44.5	+0.1
	comp=Z,6.4nm,0.4s						
OKC	Ostrava-Krasne	1.95	144	eSG	Sg	19 34 51.1	+0.8
CLL	Collm	2.10	268	ePg	Pb	19 34 27.0	+0.3
CLL				eSg	Sn	19 34 52.0	+1.0
	comp=Z,4.0nm,0.7s						
NKC	Novy Kostel	2.75	246	eSG	Sb	19 35 12.1	+0.2
	comp=Z,6.8nm,0.7s						
KHC	Kasperske Hory	2.90	219	ePG	Pb	19 34 40.6	+0.3
KHC				eSG	Sb	19 35 17.5	+1.2
LANS	Liptovska Anna	3.02	137	eSG	Sg	19 35 26.6	+1.9
MODS	Modra-Piesok	3.11	169	ePN	Pn	19 34 36.1	-1.8

BJI 28 19:41:12.5±0.0,28°.15S×176°.09W,h5km,mB5.6/20,mb5.2/41,Ms5.1/15,Ms7 4.8/14
NEIC 28 19:41:15.1±1.8,28°.42S±0°.03×176°.7W±0°.1,h9km±3km,mb5.1/92,Error ellipse: s-maj=14.3km s-min=3.3km az=100.0
MOS 28 19:41:17.8±1.0,28°.47S×176°.74W,h33km,mb5.1/8,Error ellipse: s-maj=11.3km s-min=10.6km az=44.0
GCMT 28 19:41:19.1±0.3,28°.19S±0°.03×176°.16W±0°.02,h23km,MW5.0/81,Moment Tensor Solution. s47,c67; s81,c115; Duration: 0 Moment tensor: Scale 10[16]Nm; Mrr3.58±.17; Mθθ-1.02±.11; Mφφ-2.56±.10; Mrθ0.05±.18; Mrφ-0.52±.07; Mθφ1.87±.14; Best double couple: M0 3.65600×10[16] NP1:φs200.00000°,δ30.00000°,λ99.00000°. NP2: φs10.00000°,δ60.00000°,λ85.00000°. Principal axes: T 4.1060, Plg74.0000°, Azm266.0000°; N -0.9010, Plg5.0000°, Azm12.0000°; P -3.2050, Plg15.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
IDC 28 19:41:23.0±2.4,28°.48S×176°.74W,h64km±20km,mb4.6/24,mb1 4.7/25,mb1mx4.6/39,mbtmp4.9/25,MS4.2/25,Ms1 4.2/25,ms1mx4.1/39 Error ellipse: s-maj=19.1km s-min=15.2km az=170.0
ISC 28 19:41:17.2±0.3,28°.55S±0°.05×176°.37W±0°.05,h29km,n404,σ1°.82/391,mb5.1/88,MS4.3/30,7C-19D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC

RAO Raoul Island 1.52 242 P Pb 19 41 44.9 +0.1
2μm,0.3s,baz=85,slow=4.1,SNR=45
RAO S Sb 19 42 04.7 +1.0
4μm,0.3s,baz=97,slow=23,SNR=10.0
RAO LR LR 19 42 12.7
comp=Z,2μm,19.7s,baz=59,slow=39
RAO Raoul Island 1.52 242 Pb 19 41 43.7 -1.1
RIZ Raoul Island 1.53 243 P Pn 19 41 43.0 +0.5
RIZ S Sb 19 42 08.4 +4.6
GLKZ Green Lake 1.53 242 P Pb 19 41 46.3 +1.4
GLKZ S Sb 19 42 09.1 +5.2
MXZ Matakaoa Point 10.03 205 Pn Pn 19 43 37.6 -1.7
HAZ Te Kaha 10.40 207 P Pn 19 43 41.6 -2.7
HAZ S Sn 19 45 41.8 +1.8
PKGZ Pakihiroa 10.41 205 P Pn 19 43 40.9 -3.6
PKGZ S Sn 19 45 39.2 -0.9
PUZ Puketiti 10.50 204 P Pn 19 43 42.3 -3.5
PUZ S Sn 19 45 40.6 -1.8
RUGZ Raukumara Rang 10.63 206 P Pn 19 43 44.2 -3.4
RUGZ S Sn 19 45 42.5 -3.0
TWGZ Tauwhareparae 10.70 205 P Pn 19 43 45.1 -3.4
TWGZ S Sn 19 45 47.8 +0.6
OUZ Omahuta 10.81 230 P Pn 19 43 53.4 +3.5
OUZ Omahuta 10.81 230 P Pn 19 43 58.9 +9.0
URZ Urewera 11.11 208 P Pn 19 43 50.9 -3.1
2.5nm,0.3s,baz=56,slow=3.6,SNR=18
URZ S Sn 19 45 54.3 -2.8
5.8nm,0.3s,baz=71,slow=22,SNR=11
URZ Urewera 11.11 208 Pn Pn 19 43 49.8 -4.2
URZ Urewera 11.11 208 P Pn 19 43 50.6 -3.4
URZ S Sn 19 45 53.4 -3.8
PRGZ Paritu Road 11.39 203 P Pn 19 43 54.6 -3.4
MTHZ Maungataniwha 11.72 207 P Pn 19 43 59.4 -3.1
MSVF Nonsavu 11.92 333 Pn 19 43 59.7 -5.6
MSVF Nonsavu 11.92 333 iP Pn 19 44 04.6 -0.7
NMHZ Naumai 11.95 207 P Pn 19 44 02.1 -3.5
BKZ Black Stump Fm 12.13 207 Pn Pn 19 44 02.3 -5.7
BKZ Black Stump Fm 12.13 207 P Pn 19 44 03.9 -4.2
MCHZ McNeill Hill 12.29 206 P Pn 19 44 07.8 -2.4
HIZ Hauiti 12.33 214 Pn Pn 19 44 04.4 -6.4
HIZ Hauiti 12.33 214 P Pn 19 44 11.5 +0.7
KWHZ Kaweka Forest 12.38 207 P Pn 19 44 06.7 -4.8
NGZ Ngauruhoe 12.52 210 P Pn 19 44 11.9 -1.5
KAHZ Kahuranaki 12.53 205 P Pn 19 44 09.6 -3.8
BHHZ Black Hill Sta 12.58 208 P Pn 19 44 10.5 -3.7
KRHZ Kereru 12.59 207 P Pn 19 44 09.0 -5.3
MOVZ Moawhango 12.64 209 P Pn 19 44 13.5 -1.5
PXZ Pawanui 12.74 204 P Pn 19 44 16.1 -0.2
DVHZ Dannevirke 13.23 206 P Pn 19 44 18.7 -4.4
ANWZ Angora Road 13.26 204 P Pn 19 44 23.6 +0.2
PRWZ Pori Road 13.53 206 P Pn 19 44 26.9 -0.2
BFZ Birch Farm 13.54 205 Pn Pn 19 44 20.2 -7.0
BFZ Birch Farm 13.54 205 P Pn 19 44 22.2 -5.0
MRZ Mangatainoka R 13.77 207 P Pn 19 44 24.9 -5.5
HOWZ Holdsworth Sta 14.00 206 P Pn 19 44 29.3 -4.2
OGWZ Otaki Gorge 14.07 207 P Pn 19 44 29.1 -5.3
MSWZ Moikau Station 14.55 206 Pn Pn 19 44 36.7 -4.3
PLWZ Palliser 14.68 206 Pn Pn 19 44 38.1 -4.7
TUWZ Tuamarina 15.09 209 Pn Pn 19 44 40.0 -8.2
AFI Afiamalu 15.18 17 P Pn 19 44 42.1 -7.5
6.5nm,0.3s,baz=76,slow=5.0,SNR=6.2
AFI S Sn 19 47 20.3 -17
5.0nm,0.3s,baz=64,slow=14,SNR=4.4
AFI LR LR 19 52 51.8
comp=Z,298nm,18.0s,baz=200,slow=45
AFI Afiamalu 15.18 17 P Pn 19 44 42.2 -7.5
AFI Afiamalu 15.18 17 P Pn 19 44 42.2 -7.5
AFI pmax pmax
comp=Z,307nm,1.7s
QRZ Quartz Range 15.26 214 Pn Pn 19 44 45.9 -4.5
THZ Tophouse 15.81 211 Pn Pn 19 44 50.5 -7.2
KHZ Kahutara 16.07 208 Pn Pn 19 44 54.7 -6.3
RAR Rarotonga 16.73 68 P Pn 19 45 07.9 -1.5
comp=Z,4.7nm,0.3s,baz=207,slow=1.5,SNR=4.4
RAR LR LR 19 49 49.9
comp=Z,746nm,21.8s,baz=250,slow=30
RAR Rarotonga 16.73 68 Pn 19 45 04.4 -5.1
RAR Rarotonga 16.73 68 P Pn 19 45 04.4 -5.1
RAR pmax pmax
comp=Z,61nm,1.1s
DZM Mont Dzumac 16.81 289 eP P 19 45 15.0 +2.4
comp=Z,171nm,1.2s
DZM eLR LR 19 49 12.3
comp=Z,3μm,23.6s
DZM Mont Dzumac 16.81 289 P P 19 45 15.5 +2.9
comp=Z,4.9nm,0.3s,baz=153,slow=14,SNR=38
DZM LR LR 19 50 33.3
comp=Z,3μm,18.2s,baz=160,slow=33
DZM Mont Dzumac 16.81 289 P Pn 19 45 09.1 -1.6
NOUC Port Laguerre 16.92 288 P Pn 19 45 11.0 -0.8
OXZ Oxford 17.45 209 P Pn 19 45 14.8 -3.5
RPZ Rata Peaks 18.19 210 P P 19 45 28.1 +0.5
comp=Z,5.4nm,0.3s,baz=68,slow=4.0,SNR=11
RPZ S Sn 19 48 34.1 -16
comp=Z,1.3nm,0.3s,baz=20,slow=12,SNR=4.5
RPZ LR LR 19 53 26.5
comp=Z,1μm,18.3s,baz=32,slow=40
RPZ Rata Peaks 18.19 210 Pn 19 45 22.2 -5.3
RPZ IAmb IAmb 19 46 01.7
comp=Z,195nm,1.8s
FOZ Fox Glacier 18.62 213 P P 19 45 29.8 -2.5
FOZ IAmb IAmb 19 46 23.8
comp=Z,127nm,1.4s
LBZ Lake Benmore 19.11 211 P P 19 45 35.1 -2.5
LBZ IAmb IAmb 19 45 53.0
comp=Z,144nm,1.8s
ODZ Otahua Downs 19.43 209 P P 19 45 39.3 -1.8
WKZ Wanaka 19.98 212 P P 19 45 44.8 -2.3
WKZ IAmb IAmb 19 46 07.5
comp=Z,93nm,1.3s
SANVU Saraoutou 20.02 307 P P 19 45 44.0 -3.7
SANVU IAmb IAmb 19 46 19.9
comp=Z,74nm,0.9s
WHZ Wether Hill Ro 21.28 211 P P 19 45 56.9 -4.3
WHZ IAmb IAmb 19 46 04.7
comp=Z,102nm,1.8s
DCZ Deep Cove 21.33 213 P P 19 45 58.2 -3.5
DCZ IAmb IAmb 19 46 44.6
comp=Z,142nm,2.0s
TBI Tubuai 24.72 84 eLR LR 19 52 39.4
comp=Z,1μm,28.0s,baz=249
TBI Tubuai 24.72 84 eT T 20 11 40.9
comp=Z,14nm,0.3s
KNTN Kanton 26.01 11 P P 19 46 46.0 -1.8
PAE Paea 26.86 72 eT T 20 14 26.3
comp=Z,13nm,0.3s
PPT2 Papeete2 26.90 72 eLR LR 19 53 23.3
comp=Z,1μm,26.8s,baz=238
PPT Papeete 26.91 72 LR LR 19 57 07.8
comp=Z,375nm,18.3s,baz=273,slow=35
TVO Taravao 27.08 73 eT T 20 14 42.4
comp=Z,1.2nm,0.3s
TIAR Tiarei 27.11 72 eP P 19 46 54.9 -2.8
comp=Z,7.4nm,0.9s
ARMA Armidale 27.87 258 P P 19 47 06.8 +2.3
baz=28,SNR=8.4
ARMA Armidale 27.87 258 P P 19 47 01.8 -2.8
ARMA IAmb IAmb 19 47 08.2
comp=Z,78nm,1.8s
EIDS Eidsvold 29.13 269 P P 19 47 16.8 +1.1
baz=30,SNR=4.8
EIDS Eidsvold 29.13 269 P P 19 47 13.1 -2.7
EIDS IAmb IAmb 19 47 33.2
comp=Z,33nm,1.4s
CAN Canberra 30.05 248 P P 19 47 23.4 -0.3
CAN Canberra 30.05 248 P P 19 47 23.5 -0.3
CAN pmax pmax
comp=Z,93nm,1.8s
RMQ Roma 30.93 265 P P 19 47 33.7 +2.0
baz=31,SNR=4.7
CMSA Cobar Meteorol 32.87 255 P P 19 47 49.8 +1.2
baz=33,SNR=9.7
TOO Toolangi 33.02 244 P P 19 47 51.2 +1.3
baz=34,SNR=4.9
TOO Toolangi 33.02 244 P P 19 47 48.5 -1.4
TOO IAmb IAmb 19 47 53.7
comp=Z,17nm,0.9s
TOO Toolangi 33.02 244 P P 19 47 48.5 -1.4
TOO pmax pmax
comp=Z,17nm,0.9s
CTA Charters Tower 34.97 275 P P 19 48 07.0 +0.1
comp=Z,21nm,0.8s,baz=101,slow=10,SNR=17
STKA Stephens Creek 36.31 254 P P 19 48 18.9 +0.6
baz=37,SNR=35

STKA Stephens Creek 36.31 254 P P 19 48 19.0 +0.6
comp=Z,21nm,0.8s,baz=105,slow=9.5,SNR=34
STKA LR LR 20 02 01.6
comp=Z,654nm,18.4s,baz=91,slow=34
STKA Stephens Creek 36.31 254 P P 19 48 18.1 -0.3
MTSU Mount Surprise 37.40 277 P P 19 48 28.6 +0.8
baz=38,SNR=15
HTT Hallett 38.41 251 P P 19 48 36.5 +0.3
baz=39,SNR=26
RABL Rabaul 38.47 303 P P 19 48 36.0 -0.8
KRVT Keravat (AS076 38.49 303 P P 19 48 37.0 0.0
comp=Z,94nm,0.5s,baz=54,slow=0.9,SNR=5.4
PMG Port Moresby 39.17 292 P P 19 48 42.7 0.0
comp=Z,16nm,1.0s,baz=88,slow=2.0,SNR=4.8
PMG LR LR 20 02 34.7
comp=Z,542nm,19.5s,baz=112,slow=33
PMG Port Moresby 39.17 292 P P 19 48 42.1 -0.5
PMG IAmb IAmb 19 49 15.1
comp=Z,88nm,1.9s
TAOE Nuku Hiva Isla 39.28 67 eLR LR 19 59 01.8
comp=Z,444nm,24.5s
COEN Coen 40.19 283 P P 19 48 51.0 -0.2
baz=41,SNR=32
COEN Coen 40.19 283 P P 19 48 50.6 -0.6
QIS Mount Isa 40.64 271 P P 19 48 55.0 0.0
baz=41,SNR=5.0
BBOO Buckleboo 40.86 252 P P 19 48 55.9 -0.7
baz=41,SNR=12
BBOO Buckleboo 40.86 252 P P 19 48 55.2 -1.4
AS31 Alice Springs 44.66 264 P P 19 49 26.2 -1.4
ASAR Alice Springs 44.66 264 P P 19 49 26.6 -1.0
comp=Z,8.2nm,0.5s,baz=96,slow=7.1,SNR=162
ASAR PcP PcP 19 51 10.2 +0.3
comp=Z,1.5nm,0.7s,baz=108,slow=5.9,SNR=3.1
ASAR LR LR 20 07 13.9
comp=Z,924nm,19.6s,baz=111,slow=35
WR0 Warramunga Arr 45.31 270 P P 19 49 31.7 -1.0
WR0 IAmb IAmb 19 49 33.1
comp=Z,19nm,1.1s
WB2 Warramunga Arr 45.48 269 P P 19 49 32.9 -1.2
WB2 IAmb IAmb 19 49 34.5
comp=Z,31nm,1.1s
WRAB Tennant Creek 45.48 269 P P 19 49 32.0 -2.1
WRAB IAmb IAmb 19 49 34.5
comp=Z,24nm,1.0s
WRAB Tennant Creek 45.48 269 i P P 19 49 32.2 -1.9
WRAB pmax pmax
comp=Z,19nm,0.9s
WRA Warramunga Arr 45.49 269 P P 19 49 32.8 -1.4
comp=Z,9.5nm,0.4s,baz=112,slow=6.4,SNR=110
WRA PcP PcP 19 51 14.2 +1.4
comp=Z,3.2nm,0.8s,baz=110,slow=3.5,SNR=4.8
WRA LR LR 20 06 28.7
comp=Z,374nm,21.9s,baz=80,slow=33
WB0 Warramunga Arr 45.50 270 P P 19 49 32.6 -1.7
WB0 IAmb IAmb 19 49 34.7
comp=Z,25nm,1.1s
FORT Forrest 47.92 253 P P 19 49 52.1 -0.9
baz=48,SNR=7.0
FORT Forrest 47.92 253 P P 19 49 51.3 -1.7
WRKA Warakurna 49.15 260 P P 19 50 01.6 -1.1
baz=50,SNR=47
KDU Kakadu 50.04 277 P P 19 50 07.6 -1.8
baz=50,SNR=11
VNDA Vanda 50.08 186 LR LR 20 08 10.2
comp=Z,208nm,20.5s,baz=316,slow=32
WAKE Wake Island 50.30 339 P P 19 50 10.1 -1.1
MTN Manton Dam 51.14 276 P P 19 50 16.1 -1.7
KNRA Kununurra 52.02 272 P P 19 50 23.7 -0.6
baz=52,SNR=9.3
FITZ Fitzroy Crossi 53.82 268 P P 19 50 36.8 -0.8
baz=54,SNR=25
FITZ Fitzroy Crossi 53.82 268 P P 19 50 36.4 -1.2
comp=Z,7.7nm,0.5s,baz=90,slow=7.4,SNR=30
FITZ LR LR 20 12 41.1
comp=Z,476nm,18.2s,baz=115,slow=35
FITZ Fitzroy Crossi 53.82 268 P P 19 50 36.8 -0.8
KLBR Kellerberrin 56.31 249 P P 19 50 55.0 -0.4
baz=57,SNR=7.4
NWAO Narrogin (SRO) 56.39 248 P P 19 50 54.9 -1.1
comp=Z,27nm,1.2s,baz=341,slow=4.8,SNR=3.2
NWAO PcP PcP 19 51 53.5 +0.5
comp=Z,15nm,0.9s,baz=349,slow=1.9,SNR=4.5
NWAO Narrogin (SRO) 56.39 248 P P 19 50 54.6 -1.4
NWAO PcP 19 51 52.5 -0.4
MEEK Meekatharra 57.00 255 P P 19 50 59.4 -1.1
baz=57,SNR=8.9
SIJI Sorong 57.02 289 P P 19 50 59.0 -1.7
comp=Z,34nm,0.6s,baz=67,slow=3.3,SNR=8.6
SIJI LR LR 20 13 50.1
comp=Z,359nm,20.6s,baz=190,slow=34
CASY Casey 57.43 207 P 19 51 05.1 +2.3
MORW Morawa 58.44 252 P P 19 51 09.3 -1.2
baz=59,SNR=14
MORW Morawa 58.44 252 P P 19 51 09.3 -1.2
QSPA South Pole Qui 61.56 180 P P 19 51 34.7 +3.2
GIRL Giralia 62.09 258 P P 19 51 34.3 -1.3
KAPI Kappang 64.71 278 LR LR 20 18 34.6
comp=Z,159nm,21.8s,baz=126,slow=35
GRJI Gresik 70.18 273 P P 19 52 28.4 +0.8
comp=Z,34nm,0.9s
GRJI Gresik 70.18 273 P P 19 52 28.4 +0.8
comp=Z,34nm,0.9s
WOJI Wonogiri, Jawa 71.12 271 P P 19 52 32.2 -1.2
comp=Z,23nm,1.2s
WOJI Wonogiri, Jawa 71.12 271 P P 19 52 32.2 -1.2
comp=Z,23nm,1.2s
KKM Kota Kinabalu 73.36 287 P 19 52 46.1 -0.8
KKM IAmb IAmb 19 53 22.1
comp=Z,28nm,1.2s
JHJ2 Mitsune 74.08 323 P P 19 52 50.2 -0.2
LEM Lembang 74.49 271 P P 19 52 53.2 -0.4
comp=Z,40nm,0.7s,baz=49,slow=4.7,SNR=10
MAW Mawson 74.53 200 P P 19 52 54.4 +1.7
MAW Mawson 74.53 200 P P 19 52 54.4 +1.7
MAW pmax pmax
comp=Z,9.0nm,1.3s
SBUM Sibu 74.93 281 P P 19 52 55.3 -0.6
DBJI Dramaga 75.38 270 P P 19 52 56.2 -2.4
comp=Z,45nm,1.0s
DBJI Dramaga 75.38 270 P P 19 52 56.2 -2.4
comp=Z,45nm,1.0s
KSM Kuching 76.09 279 P P 19 53 01.6 -1.0
JOW Kunigami 76.50 311 P P 19 53 04.6 +0.1
comp=Z,1.4nm,0.8s,baz=139,slow=10,SNR=6.6
JOW Kunigami 76.50 311 IAmb IAmb 19 53 11.4
comp=Z,17nm,0.9s
INU Inuyama 77.28 322 P P 19 53 08.3 -0.5
INU IAmb IAmb 19 53 21.8
comp=Z,22nm,1.0s
MJAR Matsushiro Arr 77.56 324 P P 19 53 09.9 -0.4
comp=Z,15nm,0.7s,baz=150,slow=5.9,SNR=42
MAJO Matsushiro 77.56 324 P P 19 53 09.4 -0.9
MAJO IAmb IAmb 19 53 11.0
comp=Z,21nm,0.8s
MAJO Matsushiro 77.56 324 P P 19 53 09.5 -0.9
MAJO pmax pmax
comp=Z,21nm,0.9s
MAT Matsushiro 77.56 324 P P 19 53 09.8 -0.5
MJB9 Matsu-Tunnel 77.56 324 P P 19 53 09.4 -0.9
KLSI 78.03 271 P P 19 53 11.6 -1.9
comp=Z,8.3nm,1.0s
KLSI 78.03 271 P P 19 53 11.6 -1.9
comp=Z,8.3nm,1.0s
MDSI Maura Dua 78.61 271 P P 19 53 14.7 -2.0
comp=Z,27nm,1.0s
MDSI Maura Dua 78.61 271 P P 19 53 14.7 -2.0
comp=Z,27nm,1.0s
JNU Nakatsue 79.14 317 P P 19 53 18.7 -0.6
comp=Z,11nm,0.9s,baz=308,slow=1.3,SNR=5.6
JNU LR LR 20 28 13.3
comp=Z,52nm,18.0s,baz=76,slow=36
JNU Nakatsue 79.14 317 P P 19 53 18.6 -0.6
SNAA Sanae 79.95 178 P P 19 53 26.0 +2.9
SNAA Sanae 79.95 178 P P 19 53 24.4 +1.2
SNAA Sanae 79.95 178 P P 19 53 24.4 +1.2
SNAA pmax pmax
comp=Z,23nm,1.7s
VNA3 Neumayer Olymp 80.04 176 P P 19 53 26.3 +2.7
KSI Kapahiang 80.39 271 P P 19 53 24.7 -1.8
comp=Z,2µmcomp=Z,29nm,0.7s
KSI Kapahiang 80.39 271 P P 19 53 24.7 -1.8
comp=Z,2µmcomp=Z,29nm,0.7s
VNA2 Neumayer--Watz 80.50 176 P P 19 53 28.9 +2.9
baz=190,slow=2.9
NVL N'lazarevskaya 80.79 183 eP P 19 53 25.5 -2.1
NVL pmax pmax
comp=Z,7.0nm,0.7s
ASAJ Asahikawa 81.48 331 P P 19 53 32.9 +1.4
comp=Z,13nm,0.6s,baz=216,slow=4.6,SNR=17
ASAJ LR LR 20 24 54.7
comp=Z,296nm,19.8s,baz=158,slow=32
PLCA Paso Flores 82.72 133 P P 19 53 42.3 +3.8
comp=Z,2.9nm,0.7s,baz=274,slow=4.3,SNR=7.1
PLCA LR LR 20 25 51.4
comp=Z,126nm,18.0s,baz=242,slow=32
PLCA Paso Flores 82.72 133 P P 19 53 41.3 +2.9
EFI East Falkland 83.56 147 i P P 19 53 43.4 +1.0
EFI pmax pmax
comp=Z,62nm,1.2s
PDSI Padang 83.56 272 P P 19 53 40.6 -2.5
comp=Z,11nm,0.7s
PDSI Padang 83.56 272 P P 19 53 40.6 -2.5
comp=Z,11nm,0.7s
YSS Yuzh-Sakhalins 83.72 333 P P 19 53 44.5 +1.4
YSS Yuzh-Sakhalins 83.72 333⇑eP P 19 53 44.4 +1.4
YSS e 19 53 55.4
YSS pmax pmax
comp=Z,30nm,0.7s
KSRS Korea Array 83.88 319 P P 19 53 44.5 +0.4
comp=Z,8.5nm,1.0s,baz=142,slow=6.1,SNR=17
KSRS LR LR 20 28 10.9
comp=Z,70nm,18.8s,baz=86,slow=34
PETK Petropavlovsk- 84.39 345 P P 19 53 47.0 +0.7
comp=Z,6.7nm,0.9s,baz=131,slow=7.6,SNR=8.0
CMB Columbia Colle 84.44 41 P P 19 53 48.2 +1.2
CMB IAmb IAmb 19 53 59.6
comp=Z,18nm,1.6s
CMB Columbia Colle 84.44 41 P P 19 53 48.2 +1.2
CMB pmax pmax
comp=Z,18nm,1.6s
WDC Whiskeytown Da 84.99 38 P P 19 53 52.3 +2.7
WDC IAmb IAmb 19 54 07.8
comp=Z,15nm,1.1s
WDC Whiskeytown Da 84.99 38 P P 19 53 52.3 +2.7
WDC pmax pmax
comp=Z,15nm,1.1s
IPM Ipoh 85.64 277 P P 19 53 52.0 -1.6
IPM IAmb IAmb 19 53 55.1
comp=Z,15nm,1.0s
YBH Yreka Blue Hor 85.70 37 P P 19 53 55.7 +2.3
comp=Z,2.6nm,1.0s,baz=322,slow=4.9,SNR=4.7
NVAR Mina Array Bea 85.92 42 P P 19 53 57.0 +2.4
comp=Z,3.9nm,0.9s,baz=190,slow=8.2,SNR=12
NV11 Mina Array Sit 86.01 42 P P 19 53 58.4 +3.4
NJ2 Nanjing 86.14 310 eP P 19 53 56.5 +0.9
NJ2 pmax pmax
comp=Z,17nm,0.5s
TPNV Topopah Spring 86.19 44 P P 19 53 57.1 +1.2
TPNV IAmb IAmb 19 54 00.8
comp=Z,9.4nm,1.0s
TPNV Topopah Spring 86.19 44 P P 19 53 57.1 +1.2
TPNV pmax pmax
comp=Z,9.0nm,1.0s
HUMO Hull Mountain 86.19 36 P P 19 53 57.2 +1.6
HUMO IAmb IAmb 19 54 20.8
comp=Z,14nm,1.4s
USRK Ussuriysk Ar. 86.42 326 P P 19 53 57.7 +1.0
comp=Z,9.9nm,0.8s,baz=158,slow=3.7,SNR=14
KVN Kaiserville 86.45 42 P P 19 53 58.7 +1.5
KVN Kaiserville 86.45 42 P P 19 53 58.7 +1.5
KVN pmax pmax
comp=Z,6.0nm,1.0s
RPSI Rantau Prapat 86.62 275 P P 19 53 57.1 -1.3
RPSI IAmb IAmb 19 53 58.8
comp=Z,18nm,1.1s
PSI Prapat 86.67 275 P P 19 53 58.1 -0.7
comp=Z,8.2nm,0.8s,baz=180,slow=8.1,SNR=5.9
TUC Tucson 86.85 51 P P 19 54 01.8 +2.6
TUC Tucson 86.85 51 P P 19 54 01.8 +2.6
TUC pmax pmax
comp=Z,9.0nm,1.3s
GSI Gunungsitoli 87.14 273 P P 19 54 00.7 -0.3
GSI Gunungsitoli 87.14 273 P P 19 54 00.7 -0.3
GSI Gunungsitoli 87.14 273 P P 19 54 00.3 -0.6
UBPT Khong Chiam 87.15 289 P P 19 54 01.3 +0.4
UBPT IAmb IAmb 19 54 03.9
comp=Z,7.4nm,0.8s
X16A Lo Mia Camp, P 87.67 49 P P 19 54 03.6 +0.4
X16A IAmb IAmb 19 54 18.9
comp=Z,13nm,1.5s
MDJ Mudanjiang 87.92 325 P P 19 54 04.8 +0.9
MDJ sP sP 19 54 14.8 +0.4
MDJ pmax pmax
comp=Z,18nm,0.9s
MDJ pmax pmax
comp=Z,230nm,5.2s
MDJ Mudanjiang 87.92 325 P P 19 54 04.8 +0.9
MDJ IAmb IAmb 19 54 17.1
comp=Z,16nm,1.0s
LCMT Little Creek M 88.09 46 P P 19 54 08.0 +2.8
U15A North Rim 88.34 47 P P 19 54 09.2 +2.7
U15A IAmb IAmb 19 54 28.3
comp=Z,9.5nm,1.1s
KNB Kanab 88.36 46 P P 19 54 08.2 +1.8
KNB Kanab 88.36 46 P P 19 54 08.2 +1.8
KNB pmax pmax
comp=Z,32nm,1.7s
WHN Wuhan 88.39 306 P P 19 54 05.3 -1.2
WHN LR LR
comp=Z,450nm,24.9s
PKCU Pink Cliffs 88.94 46 P P 19 54 11.6 +2.3
CFA Coronel Fontan 89.18 126 LR LR 20 25 02.7
comp=Z,132nm,19.8s,baz=257,slow=29
GRNR Gornyy 89.30 332⇓i P P 19 54 12.2 +1.9
GRNR pmax pmax
comp=Z,10.0nm,0.9s
GRNR MLR MLR
comp=Z,90nm,17.0s
CN2 Changchun 89.55 322 eP P 19 54 12.5 +0.9
CN2 pmax pmax
comp=Z,20nm,1.2s
G08A Pilot Rock 90.13 36 P P 19 54 15.4 +1.0
G08A IAmb IAmb 19 54 29.6
comp=Z,15nm,1.4s
KLR Kul'dur 90.17 329 LR LR 20 31 34.7
comp=Z,107nm,18.5s,baz=128,slow=34
KLR Kul'dur 90.17 329 i P P 19 54 13.3 -1.1
KLR pmax pmax
comp=Z,6.0nm,0.9s
TX31 Lajitas Ar. Si 90.19 56 P P 19 54 16.9 +1.8
TXAR Lajitas Array 90.19 56 P P 19 54 18.5 +3.3
comp=Z,1.1nm,0.9s,baz=201,slow=6.6,SNR=5.6
TXAR LR LR 20 27 36.0
comp=Z,48nm,20.1s,baz=0.0,slow=31
TMUT Trail Mountain 90.75 45 P P 19 54 20.1 +2.3
SRU San Rafael Swe 91.07 45 P P 19 54 21.1 +2.0
SRU San Rafael Swe 91.07 45 P P 19 54 21.1 +2.0
SRU pmax pmax
comp=Z,12nm,1.5s
ANMO Albuquerque 91.31 51 i P P 19 54 21.9 +1.6
ANMO pmax pmax
comp=Z,2.0nm,0.9s
SLVN Son La 91.47 293 P P 19 54 21.2 0.0
SLVN IAmb IAmb 19 54 35.0
comp=Z,13nm,1.1s
F10A Beach Ranch, E 91.49 37 P P 19 54 22.3 +1.5
F10A IAmb IAmb 19 54 34.5
comp=Z,7.2nm,0.8s
PBKT Sadao Pong 91.54 288 P P 19 54 20.4 -1.1
MA2 Magadan 91.90 344 i P P 19 54 19.9 -2.3
MA2 pmax pmax
comp=Z,9.0nm,1.0s
RC01 Rabbit Creek A 91.91 13 P P 19 54 22.9 +0.7
RC01 IAmb IAmb 19 54 25.0
comp=Z,15nm,1.2s
GLI Glacier Island 92.25 14 P P 19 54 23.8 0.0
NNA Nana 92.55 105 LR LR 20 27 39.2
comp=Z,57nm,18.4s,baz=238,slow=30
BJI Beijing 92.62 315 P P 19 54 26.8 +0.9
BJI pmax pmax
comp=Z,5.0nm,1.0s
S22A 4UR Ranch, Cre 92.64 48 P P 19 54 28.4 +1.9
AHID Auburn Hatcher 92.90 42 P P 19 54 28.5 +1.0
AHID IAmb IAmb 19 54 38.0
comp=Z,7.9nm,1.1s
FXWY Fox Creek 93.47 41 P P 19 54 32.6 +2.5
FXWY IAmb IAmb 19 54 56.9
comp=Z,16nm,1.9s
LVC Limon Verde 93.57 118 LR LR 20 30 55.4
comp=Z,94nm,18.6s,baz=225,slow=32
MCARA McCarthy VSAT 93.61 15 P P 19 54 30.9 +0.9
MCARA IAmb IAmb 19 54 52.2
comp=Z,14nm,1.3s
PD31 Pinedale Array 93.82 43 P P 19 54 32.6 +0.9
PDAR Pinedale Array 93.82 43 P P 19 54 33.6 +1.9
comp=Z,1.0nm,0.8s,baz=204,slow=2.9,SNR=7.1
PDAR LR LR 20 34 23.6
comp=Z,179nm,18.1s,baz=276,slow=34
FLWY Flagg Ranch 93.92 41 P P 19 54 34.2 +2.0
YHL Hebgen Lake 94.11 40 P P 19 54 35.2 +2.1
CM31 Chiang Mai Arr 94.14 289 P P 19 54 32.9 -0.6
CM31 IAmb IAmb 19 54 37.5
comp=Z,6.9nm,1.1s
CMAR Chiang Mai Arr 94.14 289 P P 19 54 35.0 +1.4
comp=Z,3.2nm,0.9s,baz=135,slow=3.6,SNR=15
CMAR PP PP 19 58 20.1 -0.5
comp=Z,0.9nm,0.9s,baz=126,slow=5.5,SNR=4.4
CMAR Chiang Mai Arr 94.14 289 P P 19 54 35.0 +1.4
CHTO Chiang Mai 94.31 289 P P 19 54 34.1 -0.2
CHTO IAmb IAmb 19 54 39.5
comp=Z,4.4nm,0.8s
CHTO Chiang Mai 94.31 289 P P 19 54 34.1 -0.2
CHTO pmax pmax
comp=Z,4.0nm,0.8s
SEY Seymchan 94.51 346 P P 19 54 35.0 +0.9
comp=Z,2.8nm,0.7s,baz=159,slow=4.0,SNR=10
SEY Seymchan 94.51 346 P P 19 54 35.0 +0.9
YNE Yellowstone No 94.87 41 P P 19 54 38.6 +2.1
WRH Wood River Hil 95.32 12 P P 19 54 38.5 +0.7
WRH IAmb IAmb 19 54 39.4
comp=Z,9.0nm,1.0s
ZEA Zeya 95.34 330 eP P 19 54 37.4 -0.7
HDA Harding Lake 95.48 12 P P 19 54 38.9 +0.3
HDA IAmb IAmb 19 54 40.7
comp=Z,14nm,1.4s
IL31 95.82 12 P P 19 54 39.7 -0.3
IL31 IAmb IAmb 19 58 16.0
comp=Z,9.0nm,1.5s
ILAR Eielson Array 95.82 12 P P 19 54 40.4 +0.3
comp=Z,1.4nm,0.8s,baz=219,slow=5.4,SNR=16
HHC Hu-ho-hao-te 95.98 313 eP P 19 54 41.0 -0.6
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,28nm,3.4s
HHC LR LR
comp=Z,140nm,11.9s
HHC LR LR
comp=Z,130nm,11.1s
CD2 Chengdu 96.32 302 P P 19 54 43.0 -0.2
CD2 pmax pmax
comp=Z,10.0nm,0.5s
PRP Porcupine Dome 96.74 12 P P 19 54 44.6 +0.2
PRP IAmb IAmb 19 54 46.8
comp=Z,5.2nm,1.1s
BILL Bilibino 97.16 354⇓eP Pdif 19 54 47.0 +0.8
BILL *SP pwP 19 54 59.0 -1.0
BILL pmax pmax
comp=Z,3.0nm,1.4s
BILL MLR MLR
comp=Z,97nm,18.0s
LPAZ La Paz 97.58 113 LR LR 20 30 10.4
comp=Z,48nm,20.5s,baz=218,slow=30
RSSD Black Hills 97.91 44 P Pdif 19 54 51.7 +1.3
RSSD IAmb IAmb 19 54 53.2
comp=Z,5.5nm,1.1s
RSSD Black Hills 97.91 44 P Pdif 19 54 51.7 +1.3
RSSD pmax pmax
comp=Z,6.0nm,1.1s
LZH Lanzhou 98.77 306 eP Pdif 19 54 56.0 +1.7
LZH pP pP 19 55 01.5 -0.8
LZH sP sP 19 55 04.0 -1.2
LZH pmax pmax
comp=Z,12nm,1.0s
YAK Yakutsk 100.09 337 LR LR 20 35 43.7
comp=Z,54nm,20.5s,baz=129,slow=33
YAK Yakutsk 100.09 337 i P Pdif 19 54 58.2 -1.1
YAK pmax pmax
comp=Z,3.0nm,0.7s
SONM Songino Array 102.73 318 P Pdif 19 55 13.3 +1.7
comp=Z,0.5nm,0.7s,baz=133,slow=4.8,SNR=4.1
GTA Gaotai 103.13 308 eP Pdif 19 55 20.5 +6.9
GTA pP sPdif 19 55 29.0 +4.5
GTA sP pPdif 19 55 33.3 +12
YKA Yellowknife Ar 103.17 25 Pdiff Pdif 19 55 15.5 +2.5
comp=Z,0.1nm,0.5s,baz=283,slow=5.4,SNR=3.4
YKA PKKPbc PKKPbc 20 11 12.2 +1.6
comp=Z,0.1nm,0.3s,baz=57,slow=2.3,SNR=4.2
WMQ Urumqi 113.19 308 ePKP PKiKP 19 59 52.0 +0.2
WMQ LR LR
comp=Z,230nm,27.9s
WMQ LR LR
comp=Z,150nm,20.5s
BDFB Brasilia 113.49 125 Pdiff Pdif 19 56 03.2 +2.9
comp=Z,3.3nm,0.8s,baz=209,slow=22,SNR=3.4
ZALV Zalesovo Beam 117.59 319 PKP PKPdf 19 59 59.2 -0.6
comp=Z,0.8nm,0.5s,baz=34,slow=1.0,SNR=3.9
MK31 Makanchi Array 117.66 310 PKPdf 19 59 59.6 -0.6
MK31 Makanchi Array 117.66 310 PKIKP PKPdf 19 59 59.6 -0.6
MKAR Makanchi Array 117.66 310 PKP PKPdf 20 00 00.3 0.0
comp=Z,1.6nm,0.7s,baz=225,slow=0.5,SNR=5.1
KURK Kurchatov 120.78 314 PKiKP 20 00 06.3 +0.1
KURK Kurchatov 120.78 314 PKIKP PKiKP 20 00 06.3 +0.1
KURBB Kurchatov Arra 120.83 314 PKP PKiKP 20 00 06.3 0.0
comp=Z,1.7nm,0.7s,baz=108,slow=1.8,SNR=8.0
AAK Ala-Archa 122.25 304 PKP PKiKP 20 00 09.8 +0.2
comp=Z,1.1nm,0.7s,baz=135,slow=5.4,SNR=4.7
AAK Ala-Archa 122.25 304 PKiKP 20 00 10.2 +0.6
AAK Ala-Archa 122.25 304 PKIKP PKiKP 20 00 10.2 +0.6
KK31 Karatay Array 125.22 304 PKPdf 20 00 14.8 -0.1
KK31 Karatay Array 125.22 304 PKIKP PKPdf 20 00 14.8 -0.1
KKAR Karatay Array 125.22 304 PKPdf 20 00 14.8 -0.1
KKAR Karatay Array 125.22 304 PKIKP PKPdf 20 00 14.8 -0.1
BVAR Borovoye Array 126.06 317 PKP PKiKP 20 00 16.7 +0.1
comp=Z,1.9nm,0.6s,baz=127,slow=2.8,SNR=6.2
BRVK Borovoye 126.12 317 ePKIKP PKPdf 20 00 15.2 -1.1
ARU Arti 132.54 322 i PKIKP PKPdf 20 00 28.3 0.0
AKTO Aktyubinsk 133.88 314 PKP PKiKP 20 00 32.1 -0.2
comp=Z,2.2nm,0.6s,baz=232,slow=23,SNR=2.4
GEYT Alibeck 134.03 296 PKP PKiKP 20 00 34.1 +1.0
comp=Z,1.5nm,0.7s,baz=207,slow=9.3,SNR=3.8
KMBO Kilima Mbogo 136.31 233 PKP PKPdf 20 00 36.0 -1.1
comp=Z,1.1nm,0.6s,baz=94,slow=4.1,SNR=4.6
KMBO Kilima Mbogo 136.31 233 PKPdf 20 00 33.7 -3.4
KMBO Kilima Mbogo 136.31 233 PKIKP PKPdf 20 00 33.7 -3.4
ARCES ARCESS Array B 137.07 349 PKP PKPdf 20 00 35.4 -1.1
comp=Z,2.5nm,0.7s,baz=48,slow=1.8,SNR=8.9
ARE0 ARCESS Array S 137.07 349 ePKPdf PKPdf 20 00 37.2 +0.8
NSS Namsos 143.62 354 ePKPdf PKPdf 20 00 48.8 +0.4
FINES FINESS Array B 143.87 342 PKP PKPbc 20 00 47.4 +0.7
comp=Z,2.6nm,0.4s,baz=50,slow=3.8,SNR=45
OBN Obninsk 144.42 328⇓i PKIKP PKPbc 20 00 48.9 +0.3
OBN i 20 00 55.4
OBN e 20 00 59.5
OBN pmax pmax
comp=Z,33nm,1.8s
OBN pmax pmax
comp=Z,16nm,1.1s
GOF Gofitskoye 144.80 309⇑ePKHKP PKPpre 20 00 44.9
AKH Akhalkalaki 145.21 302 ⇓P PKPdf 20 00 52.9 +0.8
AKH Akhalkalaki 145.21 302 PKPdf 20 00 52.4 +0.2
AKH Akhalkalaki 145.21 302 PKIKP PKPdf 20 00 52.4 +0.2
KBZ Khabaz 145.21 306 PKP PKPbc 20 00 51.6 +0.1
comp=Z,6.1nm,0.8s,baz=167,slow=1.6,SNR=5.7
KIV Kislovodsk 145.31 307 ⇓P PKPdf 20 00 52.8 +0.7
KIV Kislovodsk 145.31 307 PKPab 20 00 52.2 +0.1
KIV Kislovodsk 145.31 307 i PKIKP PKPdf 20 00 52.5 +0.4
KIV pmax pmax
comp=Z,30nm,1.1s
KIV MLR MLR
comp=Z,557nm,24.0s
MOL Molde 145.88 357 ePKPab PKPab 20 00 54.0 +0.5
VSU Vasula 146.07 338 eP PKPab 20 00 54.5 +0.2
AKN Aaknes 146.29 357 ePKPbc PKPbc 20 00 54.7 +0.3
DOMB Dombas 146.31 355 ePKPbc PKPbc 20 00 54.6 +0.1
BATM Batumi 146.50 303 ⇓P PKiKP 20 00 58.3 -0.2
BCA Borcka 146.59 303 ⇓P PKPab 20 00 56.6 -0.4
NC303 NORSAR Array S 146.92 353 PKPbc 20 00 56.3 +0.1
FOO Floro 146.94 359 epPKPbc PKPab 20 00 57.1 -0.5
NC405 NORSAR Array S 146.99 353 PKPdf 20 00 54.9 +0.5
NB201 NORSAR Array S 147.09 353 PKPdf 20 00 55.3 +0.7
NB2 NORSAR Subarra 147.11 353 PKP PKPbc 20 00 57.1 +0.3
comp=Z,2.4nm,0.5s,baz=11,slow=2.8
NOA NORSAR Array B 147.11 353 PKPbc PKPbc 20 00 57.0 +0.3
comp=Z,7.9nm,0.7s,baz=13,slow=4.5,SNR=32

NBO00 NORSAR Array S 147.17 354 PKPbc 20 00 56.2 -0.7
NAO01 NORSAR Array S 147.34 353 PKPbc 20 00 57.7 +0.3
NC602 NORSAR Array S 147.38 353 ePKPbc PKPbc 20 00 57.4 -0.1
NC602 NORSAR Array S 147.38 353 PKPbc 20 00 57.6 +0.1
SOC Sochi 147.48 307 ePKHKP PKPpre 20 00 54.0
SOC e 20 04 26.3
SOC eSSS SSS 20 29 01.1
SOC pmax pmax
comp=Z,15nm,0.7s
SUE Sulen 147.49 359 ePKPbc PKPbc 20 00 58.0 +0.3
HFS Hagfors 147.69 351 PKPbc PKPbc 20 00 58.6 +0.3
comp=Z,12nm,0.6s,baz=46,slow=4.3,SNR=42
SKAR Skarslia 147.72 356 epPKPbc PKPbc 20 00 59.3 +0.9
BER Bergen 148.15 358 ePKPbc PKPbc 20 00 59.8 +0.3
IZAR Zarasai 148.35 336 eP PKiKP 20 01 01.5 -0.3
IZAR IAmb IAmb 20 01 02.9
comp=Z,10.0nm,0.6s
ISAL Salakas 148.53 335 eP PKiKP 20 01 01.8 -0.4
ODD1 Odda 148.58 357 ePKPbc PKPbc 20 01 00.9 +0.2
KONO Kongsberg 148.64 354 ePKPbc PKPbc 20 01 01.4 +0.5
IIGN Ignalina 148.67 335 eP PKiKP 20 01 02.3 -0.2
IIGN IAmb IAmb 20 01 05.6
comp=Z,7.8nm,0.6s
ANN Anapa 148.68 310 i PKP2 PKPab 20 01 06.8 +1.7
ANN pmax pmax
comp=Z,115nm,1.2s
NACGM Naroch 148.79 334 e PKPbc 20 01 01.0 -0.3
BLS5 Blasjo 149.07 357 ePKPab PKPab 20 01 06.7 +0.4
KMY Karmoy 149.32 358 ePKPbc PKiKP 20 01 03.2 -0.4
PABE Paberze 149.35 337 eP PKiKP 20 01 03.6 -0.2
PABE IAmb IAmb 20 01 06.8
comp=Z,38nm,0.7s
SNART Snartemo 150.12 356 ePKPbc PKPbc 20 01 05.0 +0.5
AKASG Malin Array Be 150.63 326 PKPbc PKPbc 20 01 06.3 +0.3
comp=Z,12nm,0.8s,baz=43,slow=3.2,SNR=38
AKASG PKPab PKPab 20 01 14.2 +1.3
comp=Z,3.5nm,0.4s,baz=44,slow=4.0,SNR=10
AKBB Malin Array Si 150.63 326 PKPbc 20 01 06.2 +0.2
AKBB Malin Array Si 150.63 326 PKIKP PKPbc 20 01 06.2 +0.2
GAZ Gaziantep 150.63 296 PKiKP 20 01 07.7 +0.4
SUW Suwalki 150.82 336 PKPbc 20 01 06.3 0.0
SUW Suwalki 150.82 336 PKIKP PKPbc 20 01 06.3 0.0
ILGA Ilgaz 152.47 305 PKPdf PKPdf 20 01 03.0 -1.0
ILGA PKPbc 20 01 08.7 -2.2
SORM Soroca 152.66 322 ⇓P PKiKP 20 01 11.3 +0.4
BR131 Keskin Array S 152.89 302 PKPdf PKPdf 20 01 04.7 +0.2
BR131 PKPbc 20 01 11.5 -0.2
BR131 Keskin Array S 152.89 302 PKIKP PKPbc 20 01 11.5 -0.2
BRTR Keskin Array B 152.89 302 PKPbc PKPbc 20 01 12.0 +0.1
comp=Z,3.5nm,0.8s,baz=141,slow=4.0,SNR=15
BRTR PKPab PKPab 20 01 23.8 +0.8
comp=Z,4.3nm,0.8s,baz=150,slow=4.1,SNR=8.8
VASR Vaslui 153.84 320 ⇑P PKPab 20 01 24.8 -1.7
CSS Mathiatis 154.00 292 PKPdf PKPdf 20 01 07.5 +1.4
CSS PKPbc 20 01 14.6 +0.5
CFR Carcaliu 154.46 317 ⇑P PKPab 20 01 25.5 -3.6
TESR Tescani 154.56 321 ⇑P PKPab 20 01 29.4 -0.2
BUR08 Bucovina Ar. S 154.62 325 PKPdf 20 01 06.8 +0.2
BURAR Bucovina Array 154.63 324 ⇓P PKPdf 20 01 07.3 +0.6
HARR Harsova 154.84 316 ⇓P PKiKP 20 01 18.7 +3.1
VRI Vrincioaia 154.90 320 ⇓P PKPab 20 01 30.7 -0.4
PLOR Plostina 154.95 320 ⇓P PKPab 20 01 30.4 -0.9
KOLS Kolonicke sedl 155.11 330 ePKP2 PKPab 20 01 32.1 +0.3
KOLS Kolonicke sedl 155.11 330 ePKP PKPab 20 01 32.1 +0.3
MLR Muntele Rosu 155.56 320 ⇑P PKPab 20 01 31.3 -2.8
TRPA Tarpa 155.58 328 ⇓P PKPab 20 01 34.7 +0.9
DOPR Dopca 155.59 321 ⇑P PKPab 20 01 34.9 +0.9
VOIR 156.10 321 ⇓P PKPab 20 01 36.9 +0.6
LANS Liptovska Anna 156.10 334 ePKP2 PKPab 20 01 38.2 +2.1
LANS Liptovska Anna 156.10 334 ePKP PKPab 20 01 38.2 +2.1
DPC Dobruska-Polom 156.19 340 ePKPAB PKPab 20 01 39.0 +2.6
DPC ex x 20 01 48.8
DPC Dobruska-Polom 156.19 340 ePKP2 PKPab 20 01 39.0 +2.6
CLL Collm 156.20 345 ePKPdiff PKPab 20 01 23.0 -13
CLL ePKPab PKPab 20 01 37.0 +0.7
comp=Z,6.0nm,0.7s
CLL e 20 01 52.0
CLL Collm 156.20 345 PKPdf PKPdf 20 01 10.3 +1.8
CLL PKPab 20 01 36.3 0.0
CLL Collm 156.20 345 PKP2 PKPab 20 01 36.3 0.0
MORC Moravsky Berou 156.29 337 ePKP PKPab 20 01 38.8 +1.9
MORC Moravsky Berou 156.29 337 ⇓P PKPab 20 01 36.8 -0.1
BRG Berggiesshubel 156.38 344 ePKP PKPab 20 01 27.6 -10
comp=Z,8.4nm,1.1s
BRG Berggiesshubel 156.38 344 ePKP PKPab 20 01 35.9 -1.2
comp=Z,7.0nm,1.0s
BRG Berggiesshubel 156.38 344 ePKP2 PKPab 20 01 35.9 -1.2
BRG pmax pmax
comp=Z,7.0nm,1.0s
ELL Elmali 156.46 297 PKPdf PKPdf 20 01 10.5 +1.0
ELL PKPab 20 01 38.6 +0.3
ELL Elmali 156.46 297 PKIKP PKPdf 20 01 10.5 +1.0
VYHS Vyhne 156.88 334 ePKP2 PKPab 20 01 40.1 +0.7
VYHS Vyhne 156.88 334 ePKP PKPab 20 01 40.1 +0.7
PSZ Piszkesteto 156.91 331 ⇓P PKPab 20 01 38.8 -0.9
VRAC Vranov 157.01 338 ePKP PKPab 20 01 42.0 +2.1
JAVC Velka Javorina 157.02 336 ePKP PKPab 20 01 41.8 +1.7
ELND Elena 157.03 315 ⇓P PKPab 20 01 41.2 +1.0
PRU Pruhonice 157.03 342 ePKPAB PKPab 20 01 39.3 -0.7
PRU Pruhonice 157.03 342 ePKP2 PKPab 20 01 39.3 -0.7
KRUC Moravsky 157.29 338 ePKP PKPab 20 01 42.0 +0.9
SMOL Smolenice 157.40 336 ePKP2 PKPab 20 01 43.2 +1.6
SMOL Smolenice 157.40 336 ePKP PKPab 20 01 43.2 +1.6
MODS Modra-Piesok 157.57 336 ePKP2 PKPab 20 01 42.6 +0.2
MODS Modra-Piesok 157.57 336 ePKP PKPab 20 01 42.6 +0.2
BZS Buzias 157.81 325 ⇓P PKPab 20 01 40.8 -2.7
BSTI Sart Tilman 157.94 357 PKPdf PKPdf 20 01 12.9 +2.2
KHC Kasperske Hory 158.07 342 ePKPAB PKPab 20 01 45.3 +0.7
KHC ex x 20 01 53.2
KHC Kasperske Hory 158.07 342 ePKP2 PKPab 20 01 45.3 +0.7
GERES GERESS Array B 158.30 342 PKPab PKPab 20 01 46.6 +1.0
comp=Z,0.7nm,0.6s,baz=41,slow=2.5,SNR=4.4
CONA Conrad Observa 158.45 337 ePKPab PKPab 20 01 45.2 -1.1
comp=Z,6.9nm,0.9s
VTS Vitosha 158.82 317 ⇓P PKPab 20 01 49.1 +0.9
VTS Vitosha 158.82 317 PKPdf PKPdf 20 01 10.8 -1.5
VTS PKPab 20 01 48.7 +0.4
VTS Vitosha 158.82 317 PKIKP PKPdf 20 01 10.8 -1.5
VTS 20 01 48.7
KARP Karpathos 158.89 295 PKPdf PKPdf 20 01 11.7 -0.8
KARP PKPab 20 01 48.6 -0.1
MOA Molln 159.03 340 ePKPab PKPab 20 01 48.2 -0.5
comp=Z,5.8nm,1.1s
ARSA Arzberg 159.15 337 ePKPab PKPab 20 01 47.1 -2.2
comp=Z,3.6nm,0.7s
SOKA Soboth 159.81 337 ePKPab PKPab 20 01 52.0 -0.3
comp=Z,5.0nm,0.9s
KBA Koelnbreinsper 160.00 340 ePKPab PKPab 20 01 53.1 -0.1
comp=Z,6.8nm,1.2s
RETA Reutte 160.29 346 ePKPab PKPab 20 01 53.6 -0.7
comp=Z,13nm,1.6s
MYKA Terra Mystica 160.31 339 epPKPab PKPab 20 01 55.6 +1.2
comp=Z,3.9nm,0.7s
ABTA Abfaltersbach 160.54 341 epPKPab PKPab 20 01 57.0 +1.6
comp=Z,7.3nm,1.3s
TORD Torodi Ar. Bea 164.57 173 PKP PKPdf 20 01 19.4 +0.6
comp=Z,1.2nm,1.0s,baz=154,slow=1.1,SNR=4.4
TORD PKPab PKPab 20 02 16.1 +2.5
comp=Z,3.0nm,1.0s,baz=187,slow=3.3,SNR=6.1
ESDC Sonseca Array 167.25 28 PKPab PKPab 20 02 24.8 -0.2
comp=Z,0.4nm,0.3s,baz=336,slow=8.1,SNR=4.2

*ATH **28** 19:47:03.5, 38.°40N×20.°44E, h2km±1km, ML2.5/4, Error ellipse: s-maj=1.9km s-min=0.7km az=295.0*
*THE **28** 19:47:03.4, 38.°38N×20.°42E, h0km±2km, ML2.7/4, Error ellipse: s-maj=2.6km s-min=0.4km az=265.0*
ISC 28 19:47:04.3±1.2, **38.°39N**±0.°02×**20.°48E**±0.°03, **h4**km±10km, **n24**, σ0.°79/46, **Greece**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KONA Konidatara, Ke 0.08 66 P Pg 19 47 05.7 -0.4
KONA S Sg 19 47 07.3 +0.1
KONA AML AML 19 47 07.6
comp=N,8414μm,0.3s
KONA AML AML 19 47 08.7
comp=E,6764μm,0.2s
FSK Fiskardo 0.10 44 P Pg 19 47 05.9 -0.4
FSK S Sg 19 47 07.6 0.0
comp=E,4μm,0.3s
FSK Fiskardo 0.10 44 P Pg 19 47 05.9 -0.4
FSK S Sg 19 47 07.7 0.0
KEF1 Kardakata, Kep 0.11 183 P Pg 19 47 06.2 -0.4
KEF1 S Sg 19 47 08.4 +0.2
KEF4 Livadi, Kephal 0.14 197 P Pg 19 47 06.8 -0.3
KEF4 S Sg 19 47 09.5 +0.5
LXRA Lixouri, Kepha 0.19 189 P Pg 19 47 07.8 -0.3
LXRA S Sg 19 47 11.5 +0.8
ARGA Argostoli. Kep 0.21 180 P Pg 19 47 07.9 -0.6
ARGA S Sg 19 47 11.8 +0.5
KEF3 Kipouria, Keph 0.21 208 P Pg 19 47 08.0 -0.4
KEF3 S Sg 19 47 11.7 +0.5
KEF2 Argostoli. Kep 0.23 178 P Pg 19 47 08.1 -0.6
KEF2 S Sg 19 47 12.1 +0.5
VLS Valsamata 0.23 158 P Pg 19 47 08.2 -0.6
VLS S Sg 19 47 12.1 +0.3
comp=E,1μm,0.1s
VLS Valsamata 0.23 158 P Pg 19 47 08.2 -0.6
VLS S Sg 19 47 12.2 +0.4
VLS AML AML 19 47 14.1
comp=E,2391μm,0.1s
VLS AML AML 19 47 15.5
comp=N,2033μm,0.3s
EVGI Lefkada island 0.27 31 P Pg 19 47 09.4 -0.1
EVGI S Sg 19 47 14.2 +1.1
EVGI Lefkada island 0.27 31 P Pg 19 47 09.5 -0.1
EVGI S Sg 19 47 14.3 +1.1
MGNA Meganis 0.36 43 P Pg 19 47 10.9 -0.4
MGNA S Sg 19 47 16.8 +0.8
MGNA AML AML 19 47 17.3
comp=N,4302μm,0.4s
MGNA AML AML 19 47 17.5
comp=E,3856μm,0.3s
KFL Anninata 0.37 139 P Pg 19 47 10.8 -0.7
KFL S Sg 19 47 16.6 +0.2
KFL Anninata 0.37 139 P Pg 19 47 10.9 -0.7
KFL S Sg 19 47 17.9 +1.6
LKD2 Lefkada island 0.42 20 P Pg 19 47 11.8 -0.7
LKD2 S Sg 19 47 18.5 +0.5
comp=E,310nm,0.2s
TSLK Tsoukalades, L 0.46 18 P Pg 19 47 12.6 -0.5
VLMS Volimes, Zakyn 0.53 164 P Pg 19 47 13.8 -0.8
VLMS S Sg 19 47 22.4 +0.9
VLMS AML AML 19 47 24.4
comp=E,1265μm,0.2s
VLMS AML AML 19 47 25.8
comp=N,1363μm,0.2s
PDO Prodromos 0.59 69 P Pg 19 47 15.2 -0.5
PDO S Sg 19 47 25.0 +1.6
comp=N,440nm,0.5s
RLS Riolos of Patr 0.85 113 P Pg 19 47 19.9 -0.7
RLS S Sb 19 47 33.5 +0.2
comp=N,72nm,0.3s
DRO Drossia 1.07 114 P Pg 19 47 23.5 -1.3
DRO S Sb 19 47 40.6 +0.9
comp=N,168nm,0.5s
IGT Igoumenitsa 1.15 354 P Pg 19 47 24.7 -1.6
IGT S Sb 19 47 42.1 +0.1
comp=N,62nm,0.3s
KALE Kalithea 1.31 90 P Pg 19 47 27.3 -2.1

*IDC **28** 19:47:35.7±0.4, 1.°22N×126.°12E, h0km, mb4.3/29, mb1 4.4/32, mb1mx4.3/56, mbtmp4.3/32, ML4.4/2, MS3.6/3, Ms1 3.7/3, ms1mx3.1/36, Error ellipse: s-maj=16.5km s-min=9.0km az=74.0*
*DJA **28** 19:47:41.7±0.3, 1°N±3°×12°6E±°, h41km±7km, M4.6/21, mb4.7/21, mB4.9/7, MLv4.5/17, MLv5.0/1, Mw(mB)4.2/7*
*NEIC **28** 19:47:41.2±2.8, 1.°26N±0.°08×126.°27E±0.°06, h40km±7km, mb4.7/88, Error ellipse: s-maj=11.6km s-min=7.7km az=199.0*
ISC 28 19:47:42.1±0.3, **1.°31N**±0.°03×**126.°31E**±0.°03, **h47**km, **n211**, σ**1.°46**/225, **mb4.6**/69, **MS4.1**/5, **2D**, **Northern Molucca Sea**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
TNTI Ternate 1.19 117 P Pn 19 48 01.0 -1.4
TNTI S Sn 19 48 17.3 -0.1
TNTI Ternate 1.19 117 P Pn 19 48 01.0 -1.4
TNTI S Sn 19 48 17.3 -0.1
TNTI Ternate 1.19 117 Pn 19 48 00.8 -1.6
LBMI Labuha 2.28 148 P Pn 19 48 16.7 -0.6
LBMI S Sn 19 48 42.4 -1.7
LBMI Labuha 2.28 148 P Pn 19 48 16.7 -0.6
LBMI S Sn 19 48 42.4 -1.7
KMSI Cibinong 2.44 253 P Pn 19 48 18.8 -0.6
KMSI S Sn 19 48 48.3 +0.3
KMSI Cibinong 2.44 253 P Pn 19 48 18.8 -0.6
KMSI S Sn 19 48 48.3 +0.3
SANI Sanana 3.35 185 P Pn 19 48 31.7 -0.4
SANI Sanana 3.35 185 P Pn 19 48 31.7 -0.4
LUWI Luwuk 4.24 237 P Pn 19 48 44.9 +0.7
LUWI S Sn 19 49 35.8 +3.4
LUWI Luwuk 4.24 237 P Pn 19 48 44.9 +0.7
LUWI S Sn 19 49 35.8 +3.4
LUWI Luwuk 4.24 237 Pn 19 48 44.8 +0.7
MRSI Marisa 4.44 259 P Pn 19 48 46.7 -0.3
MRSI Marisa 4.44 259 P Pn 19 48 46.7 -0.3
NLAI Namlea 4.59 170 P Pn 19 48 49.1 +0.1
NLAI S Sn 19 49 40.9 -0.2
NLAI Namlea 4.59 170 P Pn 19 48 49.1 +0.1
NLAI S Sn 19 49 40.9 -0.2
DDMP Don Marcelino, 4.80 353 eP Pn 19 48 51.2 -0.7
DDMP eS Sn 19 49 45.5 -0.7
APSI Ampana 5.15 245 P Pn 19 48 58.0 +1.2
1.2nm1.2nm3μm320nm,0.6s
APSI S Sn 19 49 57.7 +2.7
1.2nm1.2nm3μm320nm,0.6s
APSI Ampana 5.15 245 P Pn 19 48 58.0 +1.2
1.2nm1.2nm3μm320nm,0.6s
APSI S Sn 19 49 57.7 +2.7
1.2nm1.2nm3μm320nm,0.6s
AAI Ambon 5.31 159 P Pn 19 48 59.8 +0.8
0.3nm978nm63nm,0.6s
AAI Ambon 5.31 159 P Pn 19 48 59.8 +0.8
0.3nm978nm63nm,0.6s
MSAI Masohi 5.32 150 P Pn 19 48 59.8 +0.7
0.2nm998nm19nm,0.7s
MSAI Masohi 5.32 150 P Pn 19 48 59.8 +0.7
0.2nm998nm19nm,0.7s
SIJI Sorong 5.41 114 Pn Pn 19 49 00.7 +0.4
4.4nm,0.3s,baz=307,slow=6.3,SNR=12
SIJI Sn Sn 19 50 07.2 +5.8
0.9nm,0.3s,baz=43,slow=20,SNR=2.0
SIJI LR LR 19 51 39.5
comp=Z,385nm,20.1s,baz=285,slow=44
SKMP Bagumbayan, Su 5.46 341 eP Pn 19 48 59.4 -1.6
SKMP eS Sn 19 50 00.2 -2.5
MATI Mati 5.60 360 eP Pn 19 49 04.6 +1.7
MATI eS Sn 19 49 57.0 -8.9
KCP Kidapawan 5.79 348 ⇓iP Pn 19 49 09.7 +4.1
KCP iS Sn 19 49 54.2 -16
CTBH Cotabato--PC H 6.22 341 ⇓iP Pn 19 49 10.8 -0.6
MPSI Mapaga 6.48 261 P Pn 19 49 15.5 +0.5
0.2nm618nm58nm,0.7s
MPSI Mapaga 6.48 261 P Pn 19 49 15.5 +0.5
0.2nm618nm58nm,0.7s
BUKP Musuan 6.64 349 eP Pn 19 49 17.9 +0.6
BUKP eS Sn 19 50 20.6 -11
PAGZ Pagadian 7.12 336 eP Pn 19 49 21.8 -1.9
FAKI Fak Fak 7.28 125 P Pn 19 49 25.0 -1.0
0.2nm54nm,0.8s
FAKI Fak Fak 7.28 125 P Pn 19 49 25.0 -1.0
0.2nm54nm,0.8s
FAKI Fak Fak 7.28 125 Pn 19 49 26.4 +0.4
BBSI Bau Bau 7.71 209 P Pn 19 49 33.2 +1.2
0.1nm20nm,0.9s
BBSI Bau Bau 7.71 209 P Pn 19 49 33.2 +1.2
0.1nm20nm,0.9s
TTSI Tana Toraja 7.79 236 P Pn 19 49 33.1 +0.1
0.3nm946nm78nm,0.6s
TTSI Tana Toraja 7.79 236 P Pn 19 49 33.1 +0.1
0.3nm946nm78nm,0.6s
SPSI Sidrap Palu 8.37 231 P Pn 19 49 42.3 +1.3
892nm91nm,1.0s
SPSI Sidrap Palu 8.37 231 P Pn 19 49 42.3 +1.3
892nm91nm,1.0s
BNSI Bone 8.40 227 P Pn 19 49 39.3 -2.0
590nm67nm,0.7s
BNSI Bone 8.40 227 P Pn 19 49 39.3 -2.0
590nm67nm,0.7s
BKSI Bulukumba 9.03 223 P Pn 19 49 50.1 +0.1
572nm32nm,0.5s
BKSI Bulukumba 9.03 223 P Pn 19 49 50.1 +0.1
572nm32nm,0.5s
KAPI Kappang 9.07 226 Pn Pn 19 49 44.7 -5.9
baz=65,slow=16,SNR=2.2
EDFI Ende, Flores 11.00 205 P Pn 19 50 14.5 -2.6
9.6nm,0.7s
EDFI Ende, Flores 11.00 205 P Pn 19 50 14.5 -2.6
9.6nm,0.7s
KKM Kota Kinabalu 11.11 295 Pn 19 50 20.5 +1.9
SOEI Soe 11.18 190 P Pn 19 50 21.1 +1.6
56nm,0.8s
SOEI Soe 11.18 190 P Pn 19 50 21.1 +1.6
56nm,0.8s
SOEI Soe 11.18 190 Pn 19 50 26.0 +6.5
PLAI Plampang 13.18 220 P Pn 19 50 33.8 -13
PLAI Plampang 13.18 220 P Pn 19 50 33.8 -13
SBUM Sibu 14.12 275 P P 19 51 04.0 -2.1
MTN Manton Dam 14.86 161 Pn Pn 19 51 09.2 -0.2
IGBI Denpasar 15.00 228 P Pn 19 51 12.1 +0.9
65nm,0.8s
IGBI Denpasar 15.00 228 P Pn 19 51 12.1 +0.9
65nm,0.8s
JAGI Jajag, Banyuwa 15.53 231 P P 19 51 21.9 +0.2
27nm,0.7s
JAGI Jajag, Banyuwa 15.53 231 P P 19 51 21.9 +0.2
27nm,0.7s
JAGI Jajag, Banyuwa 15.53 231 P P 19 51 20.4 -1.3
JAGI IAmb IAmb 19 51 25.1
comp=Z,45nm,1.2s
GMJI Gumukmas 15.97 233 P Pn 19 51 25.0 +1.3
comp=Z,33nm,1.0s
GMJI Gumukmas 15.97 233 P Pn 19 51 25.0 +1.3
comp=Z,33nm,1.0s
KSM Kuching 15.99 271 P P 19 51 27.2 +0.3
KNRA Kununurra 17.05 172 P Pn 19 51 37.3 0.0
KNRA IAmb IAmb 19 51 42.9
comp=Z,35nm,0.8s
PCJI Pacitan 17.80 238 P P 19 51 48.0 +1.2
comp=Z,45nm,0.9s
PCJI Pacitan 17.80 238 P P 19 51 48.0 +1.2
comp=Z,45nm,0.9s
FITZ Fitzroy Crossi 19.30 182 P P 19 52 02.5 -0.7
comp=Z,1.6nm,0.3s,baz=359,slow=7.8,SNR=12
FITZ Fitzroy Crossi 19.30 182 P P 19 52 02.6 -0.7
KPJI Karang Pucung 19.34 243 P P 19 52 01.8 -2.0
KPJI Karang Pucung 19.34 243 P P 19 52 01.8 -2.0
LEM Lembang 20.33 246 P P 19 52 12.9 -1.8
comp=Z,3.5nm,0.4s,baz=292,slow=23,SNR=1.7
CISI Cisompet, Garu 20.44 244 P P 19 52 13.7 -2.1
CISI IAmb IAmb 19 52 51.4
comp=Z,30nm,0.8s
DLV T Lat 20.59 302 P P 19 52 17.9 +0.4
TWG Pinlang 21.98 347 P P 19 52 31.3 -0.9
WB0 Warramunga Arr 22.40 160 P P 19 52 35.6 -1.2
WB0 IAmb IAmb 19 52 43.2
comp=Z,28nm,0.7s
YULB Yu-li 22.48 348 P P 19 52 36.0 -1.7
YULB IAmb IAmb 19 52 54.2
comp=Z,45nm,1.7s
WRAB Tennant Creek 22.54 160 P P 19 52 37.7 -0.7
WRAB IAmb IAmb 19 52 46.1
comp=Z,29nm,0.8s
TPUB Ta-pu 22.54 346 P P 19 52 35.0 -3.3
WRA Warramunga Arr 22.55 160 P P 19 52 37.4 -1.0
comp=Z,8.3nm,0.4s,baz=335,slow=11,SNR=30
WRA S S 19 56 43.3 +0.7
comp=Z,1.2nm,1.0s,baz=330,slow=21,SNR=4.6
WB2 Warramunga Arr 22.55 160 P P 19 52 37.6 -0.8
WB2 IAmb IAmb 19 52 46.3
comp=Z,26nm,0.8s
COEN Coen 22.57 133 P P 19 52 39.4 +0.6
WR0 Warramunga Arr 22.63 160 P P 19 52 38.0 -1.3
WR0 IAmb IAmb 19 52 46.6
comp=Z,19nm,0.9s
SSLB Suanglung 22.94 347 P P 19 52 40.3 -2.1
PMG Port Moresby 23.34 118 P P 19 52 47.4 +0.9
PSAD1 Pilbara Seismi 23.50 195 P P 19 52 47.6 -0.3
PSAD1 IAmb IAmb 19 53 04.1
comp=Z,37nm,1.6s
PSAC1 Pilbara Seismi 23.58 195 P P 19 52 47.8 -0.9
PSAC2 Pilbara Seismi 23.58 195 P P 19 52 48.0 -0.7
PSAC2 IAmb IAmb 19 52 52.9
comp=Z,18nm,1.1s
PSAB2 Pilbara Seismi 23.58 195 P P 19 52 46.3 -2.4
PSAA2 Pilbara Seismi 23.59 195 P P 19 52 47.4 -1.4
PSAA2 IAmb IAmb 19 53 04.6
comp=Z,25nm,1.4s
PSA00 Pilbara Seismi 23.60 195 P P 19 52 48.3 -0.7
PSAB1 Pilbara Seismi 23.61 195 P P 19 52 48.0 -1.0
PSAA1 Pilbara Seismi 23.61 195 P P 19 52 47.7 -1.3
PSAD3 Pilbara Seismi 23.69 195 P P 19 52 48.3 -1.5
PSAD3 IAmb IAmb 19 52 53.6
comp=Z,14nm,0.7s
YHNB Yeheng 23.70 349 P P 19 52 48.6 -1.3
YHNB IAmb IAmb 19 53 02.3
comp=Z,67nm,1.7s
QIZ Qiongzhong 23.88 319 P P 19 52 51.0 -0.6
QIZ S S 19 57 01.8 -2.9
MNAI Manna 24.00 256 P P 19 52 48.9 -3.9
UBPT Khong Chiam 24.81 305 P P 19 52 56.9 -3.2
IPM Ipoh 25.44 278 P P 19 53 05.1 -0.7
AS31 Alice Springs 25.90 164 P P 19 53 09.8 -0.1
ASAR Alice Springs 25.91 164 P P 19 53 09.8 -0.2
comp=Z,5.5nm,0.6s,baz=346,slow=6.7,SNR=38
ASAR PcP PcP 19 56 39.5 +1.3
comp=Z,0.8nm,0.4s,baz=342,slow=2.0,SNR=6.1
ASAR S S 19 57 48.7 +12
comp=Z,0.7nm,0.8s,baz=349,slow=24,SNR=4.3
KULM Kulim 25.91 279 P P 19 53 08.4 -1.7
KULM IAmb IAmb 19 53 38.2
comp=Z,49nm,1.6s
KRVT Keravat (AS076 26.30 102 LR LR 20 03 19.8
comp=Z,534nm,21.0s,baz=121,slow=36
GIRL Giralia 26.56 206 P P 19 53 16.7 +0.9
RPSI Rantau Prapat 27.40 273 P P 19 53 22.1 -1.4
PSI Prapat 27.40 274 P P 19 53 22.6 -1.1
comp=Z,9.0nm,0.8s,baz=71,slow=5.5,SNR=8.0
GSI Gunungsitoli 28.72 270 P P 19 53 33.7 -1.6
GSI IAmb IAmb 19 54 03.5
comp=Z,31nm,0.8s
PBKT Sadao Pong 29.19 303 P P 19 53 39.0 -0.5
MORW Morawa 31.77 197 P P 19 54 01.2 -0.8
MORW IAmb IAmb 19 54 13.5
comp=Z,20nm,1.4s
CMAR Chiang Mai Arr 31.80 304 P P 19 54 02.6 +0.2
comp=Z,0.5nm,0.7s,baz=138,slow=8.1,SNR=6.5
CMAR LR LR 20 06 00.1
comp=Z,55nm,21.8s,baz=132,slow=35
JNU Nakatsue 31.93 7 P P 19 54 05.5 +2.0
comp=Z,10.0nm,0.8s,baz=222,slow=3.6,SNR=4.8
FORT Forrest 31.96 177 P P 19 54 03.5 -0.2
CHTO Chiang Mai 31.97 305 P P 19 54 03.3 -0.6
ENH Enshi 32.93 333 P P 19 54 11.2 -1.1
NWAO Narrogin (SRO) 35.12 193 P P 19 54 31.4 +0.2
comp=Z,3.5nm,0.4s,baz=36,slow=7.6,SNR=7.4
NWAO Narrogin (SRO) 35.12 193 P P 19 54 30.7 -0.5
NWAO IAmb IAmb 19 55 07.3
comp=Z,15nm,1.1s
NWAO Narrogin (SRO) 35.12 193 P P 19 54 31.3 +0.2
NWAO IAmb IAmb 19 55 07.3
comp=Z,11nm,1.0s
BBOO Buckleboo 35.17 166 P P 19 54 31.1 -0.5
INU Inuyama 35.30 15 P P 19 54 33.6 +0.9
INU IAmb IAmb 19 54 48.6
comp=Z,20nm,1.3s
KSRS Korea Array 36.00 2 P P 19 54 40.5 +1.9
comp=Z,1.7nm,0.7s,baz=179,slow=9.8,SNR=5.7
STKA Stephens Creek 36.05 158 P P 19 54 39.8 +0.6
comp=Z,8.7nm,0.7s,baz=340,slow=8.2,SNR=15
STKA Stephens Creek 36.05 158 P P 19 54 39.4 +0.2
XAN Xi'an 36.40 335 P P 19 54 42.1 -0.1
XAN IAmb IAmb 19 54 59.7
comp=Z,10nm,1.0s
MAJO Matsushiro 36.75 16 P P 19 54 44.4 -0.7
MAJO IAmb IAmb 19 54 48.8
comp=Z,8.6nm,1.0s
MAT Matsushiro 36.75 16 P P 19 54 45.2 +0.1
MJAR Matsushiro Arr 36.75 16 P P 19 54 45.6 +0.5
comp=Z,4.1nm,0.8s,baz=173,slow=8.6,SNR=5.5
MJB9 Matsu-Tunnel 36.75 16 P P 19 54 44.5 -0.6
MJB9 IAmb IAmb 19 54 48.8
comp=Z,8.8nm,1.0s
KOHI KOHIMA 39.38 311 ex x 19 55 05.7
ARMA Armidale 39.72 145 P P 19 55 09.4 -1.0
ARMA IAmb IAmb 19 55 32.0
comp=Z,31nm,1.3s

LZH Lanzhou 40.39 331 eP P 19 55 19.3 +3.5
LZH pP pwP 19 55 31.3 +1.2
LZH sP sP 19 55 37.0 +3.7
LZH pmax pmax
comp=Z,15nm,1.0s
HHC Hu-ho-hao-te 41.56 343 eP P 19 55 27.5 +2.1
HHC pmax pmax
comp=Z,3.0nm,1.1s
HHC pmax pmax
comp=Z,75nm,3.8s
HHC LR LR
comp=Z,290nm,28.9s
HHC LR LR
comp=Z,200nm,20.4s
CAN Canberra 42.17 152 P P 19 55 28.2 -2.1
TOO Toolangi 42.57 157 P P 19 55 32.9 -0.7
TOO IAmb IAmb 19 56 00.6
comp=Z,22nm,1.5s
USRK Ussuriysk Ar. 43.00 6 P P 19 55 38.4 +1.5
comp=Z,6.6nm,0.7s,baz=171,slow=5.3,SNR=7.8
MDJ Mudanjiang 43.22 3 P P 19 55 40.5 +1.9
MDJ pmax pmax
comp=Z,5.0nm,0.8s
MDJ pmax pmax
comp=Z,64nm,4.1s
MDJ Mudanjiang 43.22 3 P P 19 55 37.7 -0.9
MDJ IAmb IAmb 19 55 44.5
comp=Z,9.0nm,0.8s
LSA Lhasa 43.75 314 P P 19 55 43.8 +0.1
LSA pmax pmax
comp=Z,16nm,1.1s
LSA Lhasa 43.75 314 P P 19 55 43.2 -0.5
GTA Gaotai 44.96 331 eP P 19 55 56.5 +3.6
GTA pP pwP 19 56 09.0 +1.7
GTA sP sP 19 56 13.8 +3.3
GTA PcP PcP 19 57 35.5 +1.9
GTA pmax pmax
comp=Z,2.0nm,0.8s
GTA pmax pmax
comp=Z,67nm,4.0s
GTA LR LR
comp=Z,84nm,17.1s
GTA LR LR
comp=Z,120nm,15.9s
TAPN Taplejung 45.14 308 eP P 19 55 54.3 -0.4
comp=Z,5.7nm,0.5s
ODAN Odare 45.16 308 eP P 19 55 55.1 +0.3
comp=Z,6.4nm,0.7s
RAMN Ramite 45.83 307 eP P 19 55 59.3 -0.8
comp=Z,7.4nm,0.7s
JIRN Jiri 46.48 308 eP P 19 56 04.6 -0.7
comp=Z,6.8nm,0.4s
TARA Tarawa 46.60 89 P P 19 56 04.5 -1.6
GUN Gumba 46.84 308 eP P 19 56 07.7 -0.4
comp=Z,12nm,0.5s
PKI Pulchoki 47.05 307 eP P 19 56 09.0 -0.8
comp=Z,2.7nm,0.3s
PKIN Phulchoki 47.07 307 eP P 19 56 08.9 -0.9
comp=Z,3.1nm,0.4s
KKN Kakani 47.25 308 eP P 19 56 10.5 -0.7
comp=Z,3.4nm,0.4s
DMN Daman 47.31 307 eP P 19 56 11.1 -0.6
comp=Z,4.2nm,0.4s
GKN Gorkha 47.86 308 eP P 19 56 15.1 -0.7
DANN Dangsing 48.70 308 eP P 19 56 20.6 -1.9
comp=Z,23nm,0.6s
SONM Songino Array 49.45 342 P P 19 56 27.8 +0.1
comp=Z,0.8nm,0.8s,baz=168,slow=7.3,SNR=7.0
SONM PcP PcP 19 57 50.3 +1.0
comp=Z,1.2nm,0.8s,baz=178,slow=4.5,SNR=4.2
WMQ Urumqi 54.47 326 eP P 19 57 05.5 +0.4
WMQ sP sP 19 57 29.3 +6.4
WMQ pmax pmax
comp=Z,6.0nm,0.7s
WMQ LR LR
comp=Z,190nm,29.3s
WMQ LR LR
comp=Z,1µm,29.3s
WMQ LR LR
comp=Z,140nm,18.7s
DHRM DHARAMSHALA 56.18 309 eP P 19 57 16.7 -1.1
PEA0B Petropavlovsk- 57.82 22 P P 19 57 30.7 +2.0
PETK Petropavlovsk- 57.82 22 P P 19 57 30.8 +2.1
comp=Z,3.7nm,0.8s,baz=160,slow=4.1,SNR=4.7
DCZ Deep Cove 58.93 147 P P 19 57 36.6 0.0
MK31 Makanchi Array 59.30 326 P P 19 57 38.1 -1.1
MK31 IAmb IAmb 19 57 39.7
comp=Z,5.7nm,1.4s
MKAR Makanchi Array 59.30 326 P P 19 57 38.4 -0.8
comp=Z,2.0nm,0.4s,baz=121,slow=7.9,SNR=78
MAKZ Makanchi 59.48 326 P P 19 57 39.0 -1.4
MAKZ IAmb IAmb 19 57 41.4
comp=Z,2.9nm,0.7s
LBZ Lake Benmore 59.95 145 P P 19 57 44.0 +0.4
RPZ Rata Peaks 60.05 144 P P 19 57 44.4 0.0
YAK Yakutsk 60.62 2 P P 19 57 48.7 +0.9
comp=Z,4.3nm,0.6s,baz=66,slow=0.7,SNR=4.1
YAK Yakutsk 60.62 2 P P 19 57 47.9 0.0
YAK IAmb IAmb 19 58 19.1
comp=Z,8.7nm,0.7s
BSWZ Blackbirch Sta 60.66 141 P P 19 57 45.2 -3.4
BKZ Black Stump Fm 61.10 137 P P 19 57 51.6 -0.1
AAK Ala-Archa 61.87 319 P P 19 57 58.0 +1.1
comp=Z,0.5nm,0.3s,baz=272,slow=0.7,SNR=4.3
AAK Ala-Archa 61.87 319 P P 19 57 56.0 -1.0
ZAA0 Zalesovo Array 62.55 334 P P 19 58 00.0 -1.0
ZAA0 IAmb IAmb 19 58 18.2
comp=Z,6.8nm,1.6s
ZALV Zalesovo Beam 62.55 334 P P 19 57 59.9 -1.1
comp=Z,2.1nm,0.6s,baz=135,slow=5.6,SNR=8.8
KURBB Kurchatov Arra 63.55 328 P P 19 58 06.4 -1.3
comp=Z,4.1nm,0.6s,baz=128,slow=6.2,SNR=47
KURK Kurchatov 63.55 328 P P 19 58 06.5 -1.3
KURK IAmb IAmb 19 58 08.1
comp=Z,9.2nm,0.8s
SEY Seymchan 64.47 13 P P 19 58 16.2 +2.6
comp=Z,0.6nm,0.3s,baz=174,slow=7.4,SNR=5.2
HRA Herat 68.01 307 P P 19 58 35.9 -1.2
BVAR Borovoye Array 69.11 328 P P 19 58 42.8 -0.5
comp=Z,1.1nm,0.6s,baz=126,slow=9.3,SNR=7.8
BRVK Borovoye 69.18 328 P P 19 58 42.0 -1.8
TIXI Tiksi 70.25 1 P P 19 58 50.3 +0.4
comp=Z,2.0nm,0.5s,baz=196,slow=4.3,SNR=20
TIXI Tiksi 70.25 1 P P 19 58 49.2 -0.7
GEYT Alibeck 72.08 310 P P 19 59 01.7 -0.1
comp=Z,1.6nm,0.6s,baz=140,slow=7.8,SNR=5.5
GYA0B ALIBECK ARRAY 72.08 310 P P 19 59 00.1 -1.7
GYA0B IAmb IAmb 19 59 08.7
comp=Z,5.1nm,0.8s
SOCY Socotra 72.44 282 P P 19 59 03.7 -0.8
SOCY IAmb IAmb 19 59 04.5
comp=Z,11nm,1.0s
NRIK Noril'sk 72.66 347 P P 19 59 05.4 +0.9
comp=Z,4.4nm,0.6s,baz=122,slow=5.6,SNR=6.6
ABKAR Akbulak array 73.75 321 P P 19 59 10.2 -1.2
AKTO Aktyubinsk 75.29 322 P P 19 59 19.9 -0.4
comp=Z,2.3nm,0.5s,baz=117,slow=9.0,SNR=2.8
ARU Arti 76.75 328 P P 19 59 28.0 -0.4
comp=Z,2.1nm,0.6s,baz=102,slow=2.6,SNR=16
ARU Arti 76.75 328 P P 19 59 27.8 -0.7
ARU IAmb IAmb 19 59 28.6
comp=Z,6.7nm,0.7s
RAYN Ar Rayn 81.04 293 P P 19 59 52.6 -0.2
RAYN IAmb IAmb 19 59 57.0
comp=Z,10nm,1.5s
KIRV Kirov 82.06 329 P P 19 59 57.3 0.0
comp=Z,9.5nm,0.5s,baz=241,slow=1.3,SNR=10
SVW2 Sparrevohn 83.11 29 P P 20 00 05.5 +2.7
SVW2 IAmb IAmb 20 00 09.7
comp=Z,9.8nm,1.2s
OHAK Old Harbor 83.70 33 P P 20 00 08.0 +2.1
AKH Akhalkalaki 83.74 311 P P 20 00 07.7 +1.0
AKH IAmb IAmb 20 00 12.5
comp=Z,5.9nm,0.9s
KDAK Kodiak Island 84.15 32 P P 20 00 09.8 +1.7
KBZ Khabaz 84.33 314 P P 20 00 09.9 +0.6
comp=Z,1.0nm,0.6s,baz=122,slow=8.2,SNR=5.5
CNPM China Poot 85.04 30 P P 20 00 14.4 +1.8
BRLK Bradley Lake 85.24 30 P P 20 00 15.4 +1.7
BPAW Bear Paw Mtn. 85.63 26 P P 20 00 17.0 +1.5
BPAW IAmb IAmb 20 00 28.2
comp=Z,20nm,1.8s
MLY Manley 85.83 25 P P 20 00 18.1 +1.6
MLY IAmb IAmb 20 00 23.9
comp=Z,5.6nm,1.4s
RC01 Rabbit Creek A 85.93 29 P P 20 00 18.5 +1.5
RND Reindeer 86.52 27 P P 20 00 20.1 +0.1
RND IAmb IAmb 20 00 39.2
comp=Z,4.9nm,1.2s
KNK Knik Glacier 86.57 29 P P 20 00 21.8 +1.6
SML Sawmill 86.65 28 P P 20 00 21.5 +0.9
SML IAmb IAmb 20 00 41.6
comp=Z,19nm,1.7s
CCB Clear Creek Bu 87.06 25 P P 20 00 22.9 +0.5
CCB IAmb IAmb 20 00 36.5
comp=Z,7.9nm,1.8s
KLMR Klimovskoe 87.29 331 ePKPdf P 20 00 19.5 -4.1
KLMR AMP 20 00 29.6
comp=Z,41nm,2.9s
ILAR Eielson Array 87.45 25 P P 20 00 24.1 -0.3
comp=Z,0.4nm,0.4s,baz=257,slow=4.5,SNR=8.8
BALM Baldy 89.52 29 P P 20 00 35.9 +1.6
BALM IAmb IAmb 20 00 55.5
comp=Z,8.9nm,1.5s
BARN Barnard Glacie 89.85 29 P P 20 00 38.2 +2.2
CTGM Chitina Glacie 90.02 29 P P 20 00 38.6 +1.8
CTGM IAmb IAmb 20 01 16.3
comp=Z,13nm,1.6s
BRTR Keskin Array B 91.22 310 P P 20 00 42.0 -0.9
comp=Z,0.5nm,0.7s,baz=134,slow=6.5,SNR=5.1
QSPA South Pole Qui 91.23 180 P P 20 00 43.6 +1.4
TORD Torodi Ar. Bea 123.23 287 PKP PKiKP 20 06 35.5 +0.4
comp=Z,2.2nm,0.7s,baz=51,slow=2.2,SNR=9.2
TXAR Lajitas Array 123.39 53 PKP PKiKP 20 06 36.3 +1.1
comp=Z,0.5nm,0.7s,baz=70,slow=0.6,SNR=4.7

IDC 28 20:03:27.2±1.8,43.68N×105.65W,h0km,mb3.8/1, mb1 3.5/5,mb1mx3.3/45,mbtmp3.4/5,ML2.9/3,MS3.5/2, Ms1 3.5/2,ms1mx2.7/51,Error ellipse: s-maj=49.1km s-min=8.4km az=148.0

NEIC 28 20:03:27.0±2.3,43.73N±0.03×105.27W±0.08,h0km±1km, ML3.4/67,Error ellipse: s-maj=10.1km s-min=5.3km az=78.0

ISC 28 20:03:26.3±0.8,43.65N±0.05×105.27W±0.06,h0km,n67, σ1.35/65,Wyoming

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RSSD Black Hills 1.01 62 Pb 20 03 47.3 +0.5
K22A Casper 1.36 223 Pn Pb 20 03 53.9 +1.3
K22A IAML 20 04 20.3
comp=E,420nm,0.6s
K22A IAML 20 04 20.7
comp=N,535nm,0.3s
PHWY Pilot Hill 2.35 183 Pb 20 04 10.0 +0.3
RWWY Rawlins 2.43 217 Pb 20 04 11.6 +0.6
RWWY IAML 20 04 48.1
comp=N,190nm,1.0s
RWWY IAML 20 04 48.8
comp=N,191nm,1.2s
N23A Red Feather La 2.80 190 Pb 20 04 16.7 -0.6
N23A IAML 20 05 01.3
comp=N,99nm,0.5s
N23A IAML 20 05 02.4
comp=E,98nm,0.7s
LAO LASA Array 3.11 348 Pn Pn 20 04 17.7 +1.1
RLMT Red Lodge 3.22 299 Pn Pn 20 04 19.6 +1.3
RLMT IAML 20 05 16.0
comp=E,76nm,0.8s
RLMT IAML 20 05 20.0
comp=E,63nm,1.0s
BW06 Boulder Array 3.26 256 Pn Pn 20 04 18.6 -0.2
PD31 Pinedale Array 3.26 256 Pn Pn 20 04 18.9 +0.1
PDAR Pinedale Array 3.26 256 Pn Pn 20 04 19.9 +1.1
comp=E,12nm,0.3s,baz=75,slow=18,SNR=38
PDAR Lg Lg 20 05 00.5
baz=73,slow=19,SNR=2.3
OGNE Ogallala 3.62 137 Pn 20 04 25.7 +2.0
YNE Yellowstone No 3.66 293 Pn Pn 20 04 25.4 +1.1
YMP Mirror Lake Pl 3.68 289 Pn Pn 20 04 26.3 +1.6
GCMT Greycliff 3.79 306 Pn 20 04 27.0 +0.9
LKWY Lake 3.81 286 Pn Pn 20 04 27.7 +1.3
LKWY IAML 20 06 07.3
comp=E,50nm,1.0s
ISCO Idaho Springs 3.86 184 Pn 20 04 29.6 +2.5
ISCO IAML 20 05 38.3
comp=E,33nm,1.4s
H17A Grant Village 3.90 283 Pn 20 04 31.0 +3.3
YUF Upper Falls 3.92 288 Pn 20 04 32.1 +4.2
FLWY Flagg Ranch 3.95 278 Pn Pn 20 04 29.1 +0.7
FLWY IAML 20 05 42.3
comp=E,67nm,2.0s
SNOW Snow King Moun 3.99 269 Pn 20 04 29.2 +0.3
SNOW IAML 20 05 50.7
comp=E,56nm,1.8s
SNOW IAML 20 06 04.6
comp=E,46nm,1.7s
YNR Norris Junctio 4.03 287 Pn 20 04 29.0 -0.5
REDW Red Top Meadow 4.07 268 Pn 20 04 32.9 +2.9
REDW IAML 20 05 43.7
comp=E,59nm,1.9s
REDW IAML 20 05 51.0
comp=E,48nm,1.9s
IMW Indian Meadow 4.11 275 Pn 20 04 32.2 +1.6
IMW IAML 20 04 59.8
comp=E,37nm,0.5s
TPAW Teton Pass 4.13 270 Pn 20 04 31.5 +0.7
TPAW IAML 20 05 52.1
comp=E,28nm,1.1s
TPAW IAML 20 06 00.2
comp=E,44nm,0.9s
O20A White River Ci 4.16 213 Pn 20 04 32.8 +1.6
O20A IAML 20 05 59.1
comp=N,61nm,2.2s
O20A IAML 20 06 08.2
comp=E,47nm,2.4s
YHH Holmes Hill 4.17 288 Pn 20 04 32.1 +0.7
FXWY Fox Creek 4.18 272 Pn 20 04 30.7 -0.8
YMR Madison River 4.22 286 Pn 20 04 30.9 -1.1
AHID Auburn Hatcher 4.35 260 Pn 20 04 34.5 +0.6
AHID IAML 20 05 49.5
comp=N,60nm,2.4s
AHID IAML 20 05 51.0
comp=E,39nm,1.4s
YHB Horse Butte 4.40 287 Pn 20 04 34.5 0.0
YHL Hebgen Lake 4.41 288 Pn 20 04 34.9 +0.1
RDMU Red Mountain 4.44 228 Pn 20 04 37.1 +2.1
QLMT Earthquake Lak 4.58 287 Pn 20 04 35.5 -1.5
SMCO Snowmass 4.65 197 Pn 20 04 37.5 -0.7
SMCO IAML 20 06 05.8
comp=E,24nm,0.8s
SMCO IAML 20 06 07.6
comp=E,34nm,0.9s
DGMT Dagmar 4.88 8 Pn 20 04 42.2 +1.3
KSCO Kaye Shedlock' 5.04 156 Pn 20 04 45.6 +2.3
HWUT Hardware Ranch 5.07 248 Pn 20 04 44.7 +0.9
HWUT IAML 20 06 23.4
comp=E,35nm,1.1s
EGMT Eagleton 5.38 326 Pn 20 04 47.5 -0.3
DLMT Dillon 5.51 291 Pn Pn 20 04 49.6 -0.1
JLU Jordanelle 5.51 239 Pn 20 04 51.0 +1.2
LRM Limekiln Ridge 5.55 295 Pn 20 04 51.1 +0.7
MCMT McKenzie Canyo 5.57 285 Pn 20 04 51.7 +1.1
BGNE Belgrade 5.72 111 Pn Pn 20 04 53.1 +0.7
MDND Maddock 5.77 41 Pn 20 04 54.8 +1.6
SPUT South Promonto 5.80 249 Pn 20 04 54.7 +1.0
P17A Butcher Ranch, 5.85 226 Pn 20 04 56.4 +2.0
SDCO Great Sand Dun 5.90 182 Pn Pn 20 04 56.0 +0.7
SRU San Rafael Swe 6.01 223 Pn 20 04 55.9 -0.8
S22A 4UR Ranch, Cre 6.02 192 Pn Pn 20 04 59.2 +2.4
TMUT Trail Mountain 6.23 228 Pn 20 04 59.9 +0.2
ECSD EROS Data Cent 6.28 86 Pn 20 05 01.0 +0.9
CBKS Cedar Bluff 6.38 137 Pn Pn 20 05 02.4 +0.8
T25A Trinidad 6.54 174 Pn Pn 20 05 02.9 -1.0
MVCO Mesa Verde 6.89 202 Pn Pn 20 05 07.5 -1.2
ELK Elko 7.95 252 Pn Pn 20 05 22.8 -0.5
comp=E,0.1nm,0.3s,baz=65,slow=19,SNR=2.0
ELK Elko 7.95 252 Pn 20 05 21.7 -1.6
AGMN Agassiz Nation 8.03 51 Pn Pn 20 05 24.6 +0.5
I10CA LAC DU BONNET 9.10 41 i 20 57 07.8
baz=225,slow=354,SNR=3.2
ULM Lac du Bonnet 9.21 41 Pn Pn 20 05 40.9 +0.6
comp=E,1.2nm,0.3s,baz=225,slow=11,SNR=11
ULM Pg 20 06 11.8
comp=E,0.5nm,0.3s,baz=233,slow=17,SNR=2.6
ULM Sn Sn 20 07 23.9 -0.6
comp=E,0.1nm,0.3s,baz=165,slow=16,SNR=2.9
ULM Lg Lg 20 08 10.0
comp=E,0.4nm,0.3s,baz=131,slow=19,SNR=2.9
ULM Lac du Bonnet 9.21 41 Pn 20 05 39.9 -0.4
X18A Snowflake 9.81 203 Pn 20 05 49.1 +0.4
FFC Flin Flon 11.29 10 Pn 20 06 07.4 -1.3
U40A Yellville 11.98 123 Pn Pn 20 06 19.1 +0.8
YKA Yellowknife Ar 19.65 347 P P 20 07 56.0 -0.3
comp=E,0.1nm,0.3s,baz=163,slow=13,SNR=3.7
CMIG Matias Romero 27.90 158 LR LR 20 22 08.3
comp=E,33nm,18.2s,baz=4.5,slow=40
ROSC El Rosal 47.32 136 LR LR 20 36 26.8
comp=E,153nm,18.0s,baz=246,slow=42
MKAR Makanchi Array 89.69 355 P P 20 16 26.2 +0.1
comp=E,0.4nm,0.8s,baz=23,slow=4.6,SNR=4.2

IDC 28 20:07:13.6±2.1,32.30N×40.25W,h0km,mb3.4/4, mb1 3.6/4,mb1mx3.3/53,mbtmp3.4/4,MS3.7/2,Ms1 3.6/2, ms1mx3.0/34,Error ellipse: s-maj=76.4km s-min=28.9km az=23.0,Northern Mid-Atlantic Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SCHQ Schefferville 29.32 328 LR LR 20 24 07.7
comp=Z,97nm,19.3s,baz=103,slow=35
MDT Midelt 29.96 79 LR LR 20 22 37.2
comp=Z,171nm,18.9s,baz=356,slow=31
TORD Torodi Ar. Bea 42.80 107 P P 20 15 13.3 -0.1
2.5nm,1.1s,baz=316,slow=6.8,SNR=5.6
H10N2 ASCENSION HYDR46.86 144 T T 21 05 33.4
baz=329,slow=75,SNR=14
H10N3 ASCENSION HYDR46.87 144 T T 21 05 37.6
baz=329,slow=75,SNR=12
H10N1 ASCENSION HYDR46.88 144 T T 21 05 33.6
baz=329,slow=75,SNR=13
H10S3 ASCENSION HYDR47.74 145 T T 21 06 39.2
baz=328,slow=74,SNR=26
H10S2 ASCENSION HYDR47.76 145 T T 21 06 40.3
baz=252,slow=74,SNR=34
AKASG Malin Array Be 53.19 48 P P 20 16 33.2 -0.1
0.1nm,0.3s,baz=274,slow=7.1,SNR=5.0
PDAR Pinedale Array 54.54 302 P P 20 16 43.5 -0.3
0.2nm,0.6s,baz=65,slow=7.1,SNR=3.1
YKA Yellowknife Ar 54.76 327 P P 20 16 44.7 +0.1
0.1nm,0.5s,baz=83,slow=7.0,SNR=3.8

TAP 28 20:09:20.9,24.87N×122.07E,h7km±1km,ML2.9,D

JMA 28 20:09:21.1±0.1,24.86N×122.06E,h31km,M2.1

ISC 28 20:09:20.8±1.1,24.84N±0.04×122.06E±0.03,h19km±2km, n15,σ0.42/24,Taiwan region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TWB1 Santiao Chiao 0.18 337 i P Pb 20 09 24.3 -0.2
baz=334
TWB1 i S Sb 20 09 26.7 -0.1
baz=334
NTC Toucheng 0.21 273 P Pb 20 09 25.7 +0.2
baz=264
NTC S Sg 20 09 29.4 -0.2
baz=264
TIPB Shuangxi 0.25 300 i P Pb 20 09 26.3 -0.3
baz=294
TIPB i S Sb 20 09 30.0 -0.4
baz=294
NWF Wu-fen Shan 0.34 311 P Pg 20 09 28.1 -0.1
baz=307
NWF S Sb 20 09 33.5 0.0
baz=307
WFSB Wu-fen Shan 0.34 311 P Pg 20 09 28.1 -0.1
baz=307
WFSB S Sg 20 09 32.9 -0.3
baz=307
TWE Neicheng 0.38 251 P Pg 20 09 28.8 0.0
baz=245
YM01 YM01 0.54 304 eP Pg 20 09 32.2 +0.5
baz=301
YM11 YM11 0.55 306 eP Pg 20 09 32.4 +0.5
baz=303
YM10 YM10 0.55 304 eP Pg 20 09 32.4 +0.5
baz=301
JYNG Yonagunijimaku 0.89 116 P Pb 20 09 37.3 -0.4
JYNG eS Sb 20 09 49.0 -0.2
YOJ Yonaguni jima 0.94 114 P Pb 20 09 38.7 +0.2
YOJ eS Sb 20 09 50.7 +0.1
IRIF Iriomote-Funau 1.60 108 P Pn 20 09 47.2 -0.9
IRIF eS Sn 20 10 08.2 0.0
JKRS Kuro-shima 1.87 108 P Pn 20 09 51.4 -0.4
JKRS eS Sn 20 10 15.4 +0.5
JIJ Ishigaki jima 1.95 104 P Pn 20 09 52.8 -0.1
JISG Ishigakijimahi 2.06 97 P Pn 20 09 55.4 +1.0

IDC 28 20:12:02.8±1.0,32.20N×40.28W,h0km,mb3.7/9, mb1 3.8/9,mb1mx3.6/54,mbtmp3.7/9,MS3.9/1,Ms1 3.9/1, ms1mx3.0/41,Error ellipse: s-maj=31.2km s-min=24.8km az=165.0

ISC 28 20:12:04.9±0.9,32.2N±0.2×40.3W±0.2,h14km,n15, σ0.70/9,mb3.7/9,Northern Mid-Atlantic Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DAVOX Davos/Dischmat 40.67 54 LR LR 20 32 44.8
comp=Z,152nm,18.1s,baz=354,slow=30
TORD Torodi Ar. Bea 42.79 106 P P 20 20 01.9 -0.6
3.3nm,1.0s,baz=299,slow=7.2,SNR=9.4
H10N2 ASCENSION HYDR46.80 144 T T 21 10 32.4
baz=329,slow=75,SNR=11
H10N3 ASCENSION HYDR46.80 144 T T 21 10 27.9
baz=329,slow=75,SNR=12
H10N1 ASCENSION HYDR46.82 144 T T 21 10 27.8
baz=329,slow=75,SNR=12
H10S3 ASCENSION HYDR47.68 145 T T 21 11 33.0
baz=329,slow=74,SNR=20
H10S2 ASCENSION HYDR47.70 145 T T 21 11 35.8
baz=251,slow=74,SNR=24
FINES FINESS Array B 51.07 34 P P 20 21 06.9 +0.4
3.1nm,0.9s,baz=239,slow=7.9,SNR=4.5
SIV San Ignacio 51.89 206 P P 20 21 13.5 +0.3
0.4nm,0.4s,baz=49,slow=20,SNR=2.3
AKASG Malin Array Be 53.27 48 P P 20 21 22.8 -0.3
1.1nm,0.6s,baz=279,slow=6.6,SNR=9.7
TXAR Lajitas Array 53.83 285 P P 20 21 27.8 +0.1
0.4nm,0.7s,baz=83,slow=7.4,SNR=3.4
YKA Yellowknife Ar 54.83 327 P P 20 21 33.3 -0.9
0.2nm,0.7s,baz=90,slow=8.8,SNR=2.7
BRTR Keskin Array B 58.76 60 P P 20 22 02.8 0.0
0.5nm,0.7s,baz=235,slow=4.4,SNR=3.8
ZALV Zalesovo Beam 81.98 29 P P 20 24 25.3 +1.1
0.3nm,0.5s,baz=302,slow=12,SNR=3.0
MKAR Makanchi Array 85.89 35 P P 20 24 44.7 +0.3
0.3nm,0.8s,baz=15,slow=6.0,SNR=4.6

DJA 28 20:21:51.5±1.1,9.S±4.×11.6E±,h28km±11km,M3.6/11, mb3.6/2,MLv3.6/11,Sumbawa region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
IGBI Denpasar 1.10 302 P Pn 20 22 10.6 -0.4
IGBI S Sn 20 22 23.9 -1.4
IGBI Denpasar 1.10 302 P Pn 20 22 10.6 -0.4
IGBI S Sn 20 22 23.9 -1.4
DNP Denpasar 1.13 310 P Pn 20 22 11.2 -0.2
DNP S Sb 20 22 27.3 +0.6
DNP Denpasar 1.13 310 P Pn 20 22 11.2 -0.2
DNP S Sb 20 22 27.3 +0.6
SRBI Singaraja 1.57 326 P Pn 20 22 18.2 +0.7
SRBI S Sb 20 22 38.4 -0.9
SRBI Singaraja 1.57 326 P Pn 20 22 18.2 +0.7
SRBI S Sb 20 22 38.4 -0.9
PLAI Plampang 1.76 71 P Pn 20 22 20.7 +0.6
PLAI S Sn 20 22 41.7 0.0
PLAI Plampang 1.76 71 P Pn 20 22 20.7 +0.6
PLAI S Sn 20 22 41.7 0.0
JAGI Jajag, Banyuwa 2.13 296 P Pn 20 22 25.1 -0.1
JAGI S Sn 20 22 49.2 -1.5
JAGI Jajag, Banyuwa 2.13 296 P Pn 20 22 25.1 -0.1
JAGI S Sn 20 22 49.2 -1.5
WBSI Waikabubak, Su 3.27 94 P Pn 20 22 40.2 -0.7
WBSI S Sn 20 23 10.3 -8.6
WBSI Waikabubak, Su 3.27 94 P Pn 20 22 40.2 -0.7
WBSI S Sn 20 23 10.3 -8.6
PCJI Pacitan 5.00 283 P Pn 20 23 05.0 +0.3
PCJI Pacitan 5.00 283 P Pn 20 23 05.0 +0.3
EDFI Ende, Flores 5.57 84 P Pn 20 23 13.7 +1.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.0nm3.0nm,0.9s						
EDFI	Ende, Flores	5.57	84	P	Pn	20 23 13.7	+1.0
	0.0nm3.0nm,0.9s						
BKSI	Bulukumba	5.69	45	P	Pn	20 23 14.4	+0.1
BKSI	Bulukumba	5.69	45	P	Pn	20 23 14.4	+0.1

NIED 28 20:22:00,36.30N×140.10E,h44km,Mw3.9 Best double couple: $M_0$6.72000×10^{14} NP1:φs60.00000°,δ73.00000°,λ76.00000°. NP2:φs281.00000°,δ22.00000°,λ128.00000°.
IDC 28 20:22:01.0±1.8,36.17N×140.10E,h59km±16km,mb3.3/7, mb1 3.5/12,mb1mx3.3/49,mbtmp3.7/12,Error ellipse: s-maj=20.0km s-min=9.0km az=57.0
JMA 28 20:22:01.1±0.1,36.23N×140.11E,h54km±1km,M3.7 Broadband fault plane solution: P waves. NP1: φs235.00000°,δ18.00000°,λ111.00000°. NP2: φs33.00000°,δ73.00000°,λ83.00000°. Principal axes: T Plg61.0000°, Azm293.0000°; N Plg6.0000°, Azm35.0000°; P Plg28.0000°, Azm128.0000°;
JMA Felt II J1.
ISC 28 20:22:01.0±0.8,36.21N±0.04×140.11E±0.05,h57km±7km, n30,σ1°35/35,mb3.7/7,1C-7D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.07	78	⇑P	Pn	20 22 09.4	-0.3
JYT				S	Sn	20 22 15.3	-0.6
JAG	Ashikaga	0.57	292	⇓P	Pn	20 22 13.4	-0.2
JAG				S	Sn	20 22 21.8	-0.9
JKT	Katashina	0.88	309	⇓P	Pn	20 22 17.2	-0.4
JKT				S	Sn	20 22 29.5	-0.2
JRY	Ryogami san	0.99	259	⇓P	Pn	20 22 18.9	0.0
JRY				S	Sn	20 22 31.8	-0.3
JFY	Yanaizu	1.23	345	⇓P	Pn	20 22 22.2	+0.1
JFY				S	Sn	20 22 38.2	+0.4
JOD2	Odawara 2	1.26	221	P	Pn	20 22 23.4	+1.0
JOD2				S	Sn	20 22 39.2	+0.8
JFK	Kawauchi	1.31	28	⇓P	Pn	20 22 22.7	-0.4
JFK				S	Sn	20 22 38.6	-1.0
JFT	Otama	1.32	8	⇓P	Pn	20 22 23.1	-0.1
JFT				S	Sn	20 22 40.3	+0.5
JHK	Hiroka	1.35	320	⇓P	Pn	20 22 23.9	+0.2
MJAR	Matsushiro Arr	1.56	283	P	Pn	20 22 26.6	0.0
	4.1nm,0.3s,baz=89,slow=11,SNR=326						
MJAR				S	Sn	20 22 45.1	-0.7
	3.0nm,0.3s,baz=29,slow=39,SNR=9.3						
MAT	Matsushiro	1.57	283	P	Pn	20 22 26.3	-0.3
MAT				S	Sn	20 22 41.0	-4.8
JHJ	Hachijo jima 2	3.10	185	P	Pn	20 22 47.4	0.0
	18nm,0.3s,baz=318,slow=22,SNR=18						
JHJ				S	Sn	20 23 22.5	-0.8
	12nm,0.3s,baz=234,slow=19,SNR=3.5						
ASAJ	Asahikawa	8.12	13	P	Pn	20 23 56.2	0.0
	0.2nm,0.3s,baz=195,slow=16,SNR=3.8						
JNU	Nakatsue	8.20	251	P	Pn	20 23 57.6	+0.2
	0.1nm,0.3s,baz=114,slow=12,SNR=2.2						
JCJ	Chichijima	9.26	168	P	Pn	20 24 11.4	-0.5
	2.1nm,0.3s,baz=336,slow=20,SNR=2.2						
KSRS	Korea Array	9.85	281	P	Pn	20 24 24.4	+4.6
	0.2nm,0.3s,baz=93,slow=14,SNR=6.2						
USRK	Ussuriysk Ar.	10.10	325	P	Pn	20 24 25.0	+1.7
	baz=134,slow=14,SNR=3.2						
SONM	Songino Array	27.39	306	P	P	20 27 40.9	-0.1
	0.3nm,0.5s,baz=114,slow=9.9,SNR=3.4						
H11N2	WAKE ISLAND Hy	28.66	118	T	T	20 57 59.9	
	baz=312,slow=75,SNR=4.0						
H11N1	WAKE ISLAND Hy	28.67	118	T	T	20 57 59.3	
	baz=312,slow=75,SNR=3.8						
H11N3	WAKE ISLAND Hy	28.68	118	T	T	20 58 01.2	
	baz=312,slow=75,SNR=4.3						
H11S1	WAKE ISLAND Hy	29.33	120	T	T	20 58 50.4	
	baz=314,slow=76,SNR=6.8						
H11S3	WAKE ISLAND Hy	29.33	120	T	T	20 58 51.8	
	baz=314,slow=76,SNR=4.2						
H11S2	WAKE ISLAND Hy	29.35	120	T	T	20 58 52.9	
	baz=314,slow=76,SNR=3.3						
ZALV	Zalesovo Beam	41.70	313	P	P	20 29 43.5	-0.4
	0.8nm,0.5s,baz=76,slow=6.1,SNR=5.2						
MKAR	Makanchi Array	43.67	303	P	P	20 29 59.8	-0.3
	1.0nm,0.8s,baz=93,slow=9.4,SNR=9.8						
KURBB	Kurchatov Arra	45.68	308	P	P	20 30 15.3	-0.7
	0.8nm,0.8s,baz=86,slow=8.2,SNR=4.4						
AAK	Ala-Archa	49.95	299	P	P	20 30 50.7	+1.4
	0.4nm,0.4s,baz=100,slow=11,SNR=3.6						
WRA	Warramunga Arr	56.12	187	P	P	20 31 34.1	-0.4
	0.3nm,0.4s,baz=0.8,slow=7.5,SNR=8.1						
YKA	Yellowknife Ar	65.04	30	P	P	20 32 34.6	-0.3
	0.2nm,0.6s,baz=295,slow=6.4,SNR=3.6						

IDC 28 20:23:40.6±2.1,32.32N×40.28W,h0km,mb3.6/5, mb1 3.8/5,mb1mx3.4/58,mbtmp3.6/5,Error ellipse: s-maj=68.9km s-min=26.1km az=21.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	42.83	107	P	P	20 31 40.3	-0.3
	2.3nm,1.0s,baz=307,slow=7.3,SNR=7.9						
H10N2	ASCENSION HYDR	46.90	144	T	T	21 21 59.6	
	baz=329,slow=75,SNR=12						
H10N3	ASCENSION HYDR	46.90	144	T	T	21 22 01.0	
	baz=329,slow=75,SNR=12						
H10N1	ASCENSION HYDR	46.92	144	T	T	21 22 01.1	
	baz=329,slow=75,SNR=14						
H10S3	ASCENSION HYDR	47.78	145	T	T	21 23 05.4	
	baz=329,slow=74,SNR=36						
H10S2	ASCENSION HYDR	47.79	145	T	T	21 23 06.6	
	baz=251,slow=74,SNR=35						
AKASG	Malin Array Be	53.19	48	P	P	20 33 00.1	-0.2
	1.2nm,0.8s,baz=280,slow=6.4,SNR=5.4						
PDAR	Pinedale Array	54.51	302	P	P	20 33 10.5	0.0
	0.6nm,0.7s,baz=76,slow=8.7,SNR=3.0						
YKA	Yellowknife Ar	54.73	327	P	P	20 33 11.2	-0.2
	0.1nm,0.5s,baz=74,slow=9.1,SNR=3.3						
BRTR	Keskin Array B	58.70	60	P	P	20 33 40.5	+0.3
	0.5nm,0.8s,baz=277,slow=5.7,SNR=3.6						

IDC 28 20:30:53.8±1.5,31.95N×85.31E,h0km,mb3.5/6, mb1 3.5/9,mb1mx3.3/40,mbtmp3.4/9,ML3.0/3,Error ellipse: s-maj=31.4km s-min=29.4km az=79.0
ISC 28 20:30:59.7±1.0,32.1N±0.1×85.2E±0.1,h35km,n10, σ1°77/11,mb3.6/6,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	5.67	113	Pn	Pn	20 32 22.0	+0.2
LSA				Sn	Sn	20 33 28.5	+2.6
MKAR	Makanchi Array	14.85	352	Pn	Pn	20 34 26.1	-0.9
	0.0nm,0.3s,baz=172,slow=14,SNR=2.7						
CMAR	Chiang Mai Arr	18.40	134	P	P	20 35 08.3	-3.5
	0.1nm,0.3s,baz=328,slow=11,SNR=5.0						
KURBB	Kurchatov Arra	19.16	347	P	P	20 35 19.6	-0.3
	0.0nm,0.3s,baz=165,slow=11,SNR=5.9						
ZALV	Zalesovo Beam	21.85	359	P	P	20 35 48.9	-0.1
	1.4nm,0.9s,baz=187,slow=10,SNR=6.0						
SONM	Songino Array	22.52	40	P	P	20 35 55.5	-0.9
	0.6nm,0.9s,baz=231,slow=11,SNR=6.0						
FINES	FINESS Array B	47.69	326	P	P	20 39 33.9	+1.5
	0.6nm,0.6s,baz=106,slow=6.9,SNR=3.7						
NOA	NORSAR Array B	54.83	325	P	P	20 40 26.6	+0.6
	0.5nm,0.6s,baz=87,slow=7.1,SNR=3.1						
GERES	GERESS Array B	54.89	310	P	P	20 40 28.2	+1.4
	0.7nm,0.9s,baz=78,slow=6.4,SNR=3.9						
TORD	Torodi Ar. Bea	77.68	278	P	P	20 42 52.9	-0.2
	0.3nm,0.5s,baz=57,slow=5.3,SNR=2.9						

IDC 28 20:37:59.9±2.0,32.34N×40.15W,h0km,mb3.7/4, mb1 3.9/4,mb1mx3.5/35,mbtmp3.7/4,MS3.8/2,Ms1 3.8/2, ms1mx3.1/40,Error ellipse: s-maj=71.4km s-min=27.7km az=21.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	42.72	107	P	P	20 45 58.9	-0.1
	2.4nm,1.1s,baz=306,slow=6.8,SNR=6.3						
H10N2	ASCENSION HYDR	46.85	144	T	T	21 36 25.1	
	baz=329,slow=75,SNR=7.6						
H10N3	ASCENSION HYDR	46.85	144	T	T	21 36 30.3	
	baz=329,slow=75,SNR=7.4						
H10N1	ASCENSION HYDR	46.87	144	T	T	21 36 30.8	
	baz=329,slow=75,SNR=8.7						
H10S3	ASCENSION HYDR	47.73	145	T	T	21 37 24.5	
	baz=329,slow=74,SNR=24						
H10S2	ASCENSION HYDR	47.74	145	T	T	21 37 25.6	
	baz=251,slow=74,SNR=22						
AKASG	Malin Array Be	53.09	48	P	P	20 47 18.8	-0.1
	0.3nm,0.2s,baz=262,slow=6.3,SNR=3.8						
PDAR	Pinedale Array	54.59	302	P	P	20 47 30.2	-0.2
	0.8nm,0.8s,baz=72,slow=9.6,SNR=5.2						
YKA	Yellowknife Ar	54.77	327	P	P	20 47 31.0	0.0
	0.5nm,0.9s,baz=81,slow=7.0,SNR=3.1						
ELK	Elko	59.23	301	LR	LR	21 13 15.6	
	comp=Z,73nm,18.7s,baz=120,slow=36						
PETK	Petropavlovsk-	93.50	349	LR	LR	21 30 23.1	
	comp=Z,45nm,21.3s,baz=240,slow=34						

IDC 28 20:44:36.0±2.0,32.26N×40.30W,h0km,mb3.6/3, mb1 3.8/3,mb1mx3.3/31,mbtmp3.6/3,Error ellipse: s-maj=74.1km s-min=30.3km az=16.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	42.83	107	P	P	20 52 35.8	-0.1
	1.2nm,0.9s,baz=310,slow=6.7,SNR=5.5						
H10N2	ASCENSION HYDR	46.86	144	T	T	21 42 58.5	
	baz=334						
H10N3	ASCENSION HYDR	46.86	144	T	T	21 42 59.1	
	baz=334,slow=74						
H10N1	ASCENSION HYDR	46.88	144	T	T	21 42 57.4	
	baz=334,slow=74						
H10S3	ASCENSION HYDR	47.74	145	T	T	21 44 03.7	
	baz=329,slow=74,SNR=12						
H10S2	ASCENSION HYDR	47.75	145	T	T	21 44 03.5	
	baz=251,slow=74,SNR=17						
AKASG	Malin Array Be	53.24	48	P	P	20 53 56.0	-0.1
	0.2nm,0.2s,baz=273,slow=4.4,SNR=3.2						
PDAR	Pinedale Array	54.52	302	P	P	20 54 05.9	-0.1
	0.4nm,0.8s,baz=95,slow=8.2,SNR=2.4						

IDC 28 21:10:25.1±0.5,23.06N×142.53E,h0km,mb4.0/25, mb1 4.2/30,mb1mx4.1/53,mbtmp4.1/30,ML3.6/5,MS3.8/29, Ms1 3.8/29,ms1mx3.6/49,Error ellipse: s-maj=18.6km s-min=12.3km az=89.0
NEIC 28 21:10:30.1±2.2,23.10N±0.08×142.5E±0.1,h31km±5km, mb4.6/30,Error ellipse: s-maj=16.7km s-min=11.5km az=86.0
JMA 28 21:10:33.9±0.3,23.26N×141.49E,h149km,M4.5
BJI 28 21:10:35.0±0.0,23.60N×142.80E,h80km,mB5.0/13, mb4.4/19,Ms4.4/7,Ms7 4.1/6
ISC 28 21:10:38.0±0.5,23.25N±0.05×142.56E±0.08,h102km,n90, σ2°21/77,mb4.1/37,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	3.38	354	P	Pn	21 11 27.2	-1.8
JHH2				eS	Sn	21 12 08.0	-0.3
CBIJ	Chichi jima	3.84	355	P	Pn	21 11 32.8	-2.3
CBIJ				eS	Sn	21 12 18.8	-0.5
JCJ	Chichijima	3.84	355	Pn	Pn	21 11 29.5	-5.6
	15nm,0.3s,baz=277,slow=22,SNR=20						
JCJ				Sn	Sn	21 12 16.3	-3.0
	12nm,0.3s,baz=229,slow=19,SNR=2.8						
GUMO	Guam	9.86	167	LR	LR	21 15 47.7	
	comp=Z,372nm,19.3s,baz=295,slow=33						
JHJ	Hachijo jima 2	10.13	347	Pn	Pn	21 12 55.1	-5.3
	5.7nm,0.3s,baz=30,slow=20,SNR=4.0						
JHJ				Sn	Sn	21 14 42.8	-9.3
	3.6nm,0.3s,baz=73,slow=19,SNR=2.2						
JHJ				LR	LR	21 16 52.1	
	comp=Z,481nm,19.1s,baz=130,slow=38						
JAG	Ashikaga	13.40	349	P	Pn	21 13 36.5	-7.6
MJAR	Matsushiro Arr	13.77	345	Pn	Pn	21 13 43.2	-5.7
	0.1nm,0.3s,baz=144,slow=9.2,SNR=7.4						
MJAR				Sn	Sn	21 16 16.1	-4.3
	0.0nm,0.3s,baz=132,slow=23,SNR=2.6						
MJAR				LR	LR	21 18 44.6	
	comp=Z,466nm,20.7s,baz=180,slow=36						
MAJO	Matsushiro	13.77	345	Pn	Pn	21 13 43.0	-5.9
MJB9	Matsu-Tunnel	13.78	345	Pn	Pn	21 13 42.9	-6.0
JNU	Nakatsue	14.23	316	Pn	Pn	21 13 51.3	-3.6
	0.1nm,0.3s,baz=173,slow=16,SNR=1.8						
KSRS	Korea Array	18.94	322	P	P	21 14 50.7	-0.2
	0.3nm,0.3s,baz=130,slow=11,SNR=12						
KSRS				LR	LR	21 21 27.5	
	comp=Z,200nm,19.4s,baz=144,slow=35						
YULB	Yu-li	19.53	275	P	P	21 14 54.1	-3.5
YULB				IAmb	IAmb	21 15 07.8	
	comp=Z,40nm,1.2s						
TWG	Pinlang	19.79	273	P	P	21 14 60.0	-0.4
SSLB	Suanglung	19.82	276	P	P	21 14 59.1	-1.7
SSLB				IAmb	IAmb	21 15 14.0	
	comp=Z,22nm,1.0s						
TPUB	Ta-pu	20.15	274	P	P	21 15 02.6	-1.6
TPUB				IAmb	IAmb	21 15 16.9	
	comp=Z,52nm,1.4s						
JKA	Kamikawa-asahi	20.81	0	P	P	21 15 11.7	+0.6
ASAJ	Asahikawa	20.81	0	P	P	21 15 11.7	+0.6
	comp=Z,12nm,0.8s,baz=192,slow=8.9,SNR=4.1						
ASAJ				LR	LR	21 23 07.4	
	comp=Z,85nm,21.9s,baz=186,slow=36						
PATS	Pohnpei	22.27	135	P	P	21 15 23.7	-3.2
TGY	Tagaytay City	22.39	250	LR	LR	21 23 02.7	
	comp=Z,189nm,20.2s,baz=105,slow=34						
USRK	Ussuriysk Ar.	22.63	340	P	P	21 15 27.5	-2.8
	comp=Z,7.3nm,1.0s,baz=170,slow=11,SNR=6.3						
USRK				LR	LR	21 24 51.3	
	comp=Z,138nm,18.9s,baz=143,slow=38						
DAV	Davao City (W)	22.93	228	LR	LR	21 22 36.5	
	comp=Z,223nm,21.9s,baz=307,slow=32						
H11S3	WAKE ISLAND Hy	23.02	97	T	T	21 39 13.0	
	baz=285,slow=75,SNR=46						
H11S1	WAKE ISLAND Hy	23.03	97	T	T	21 39 11.1	
	baz=285,slow=75,SNR=42						
H11S2	WAKE ISLAND Hy	23.04	97	T	T	21 39 11.7	
	baz=285,slow=75,SNR=37						
WHN	Wuhan	26.14	292	P	P	21 16 09.5	+6.8
WHN				LR	LR		
	comp=Z,480nm,12.9s						
KLR	Kul'dur	27.30	344	P	P	21 16 13.1	+0.2
	comp=Z,2.9nm,0.7s,baz=160,slow=9.1,SNR=12						
KLR				LR	LR	21 27 10.7	
	comp=Z,153nm,19.9s,baz=132,slow=37						
KRVT	Keravat (AS076	28.91	160	LR	LR	21 26 56.4	
	comp=Z,60nm,20.7s,baz=344,slow=34						
PMG	Port Moresby	32.77	172	LR	LR	21 30 19.3	
	comp=Z,95nm,18.2s,baz=216,slow=37						
HNR	Honiara	36.67	150	LR	LR	21 30 39.5	
	comp=Z,98nm,20.5s,baz=314,slow=33						
SONM	Songino Array	37.78	320	P	P	21 17 44.9	+0.5
	comp=Z,0.2nm,0.5s,baz=108,slow=4.2,SNR=4.1						
SONM				LR	LR	21 33 19.5	
	comp=Z,108nm,19.3s,baz=150,slow=36						
SEY	Seymchan	40.21	7	P	P	21 18 06.0	+1.8
	comp=Z,4.5nm,0.8s,baz=173,slow=5.6,SNR=13						
CMAR	Chiang Mai Arr	40.93	272	P	P	21 18 10.4	-0.4
	comp=Z,0.5nm,0.8s,baz=61,slow=7.3,SNR=3.4						
CMAR				LR	LR	21 33 38.2	
	comp=Z,69nm,20.4s,baz=106,slow=34						
JAGI	Jajag, Banyuwa	42.03	225	P	P	21 18 16.1	-3.6
JAGI				IAmb	IAmb	21 18 17.9	
	comp=Z,8.1nm,0.7s						
WB0	Warramunga Arr	43.49	191	P	P	21 18 28.1	-3.3
WB2	Warramunga Arr	43.67	191	P	P	21 18 29.9	-3.0
WB2				IAmb	IAmb	21 18 35.1	
	comp=Z,18nm,1.2s						
WRA	Warramunga Arr	43.67	191	P	P	21 18 29.9	-3.0
	comp=Z,5.8nm,1.1s,baz=11,slow=8.4,SNR=12						
UGM	Wanagama	44.06	229	P	P	21 18 33.8	-2.3
FITZ	Fitzroy Crossi	44.30	203	P	P	21 18 35.7	-2.1
	comp=Z,2.8nm,1.0s,baz=27,slow=16,SNR=2.1						
FITZ				LR	LR	21 36 00.7	
	comp=Z,100nm,19.8s,baz=202,slow=35						
LSA	Lhasa	46.16	289	P	P	21 18 53.2	0.0
LSA				IAmb	IAmb	21 19 04.6	
	comp=Z,4.3nm,0.9s						
BILL	Bilibino	47.12	12	P	P	21 19 01.4	+1.9
BILL				IAmb	IAmb	21 19 02.1	
	comp=Z,4.5nm,0.7s						
ASAR	Alice Springs	47.39	191	P	P	21 18 59.2	-3.0
	comp=Z,0.8nm,0.7s,baz=8.5,slow=9.0,SNR=9.1						
TIXI	Tiksi	49.05	354	P	P	21 19 15.2	+0.9
TIXI				IAmb	IAmb	21 19 33.8	
	comp=Z,5.1nm,1.1s						
TAPN	Taplejung	49.43	287	eP	P	21 19 19.9	+1.6
ODAN	Odare	49.79	286	eP	P	21 19 21.1	+0.2
	comp=Z,5.7nm,0.5s						
RAMN	Ramite	50.47	286	eP	P	21 19 24.9	-1.2
	comp=Z,6.3nm,0.6s						
JIRN	Jiri	50.73	287	eP	P	21 19 29.2	+1.1
	comp=Z,17nm,0.7s						
GUN	Gumba	50.96	288	eP	P	21 19 32.2	+2.3
	comp=Z,28nm,1.1s						
PKI	Pulchoki	51.42	287	eP	P	21 19 32.9	-0.4
PKIN	Phulchoki	51.44	287	eP	P	21 19 33.0	-0.3
ZAA0	Zalesovo Array	52.64	321	P	P	21 19 41.6	+0.1
ZALV	Zalesovo Beam	52.64	321	P	P	21 19 41.8	+0.2
	comp=Z,1.3nm,0.4s,baz=101,slow=5.5,SNR=9.8						
ZALV				PcP	PcP	21 20 49.8	-0.3
	comp=Z,0.8nm,0.5s,baz=98,slow=4.4,SNR=3.3						
ZALV				LR	LR	21 41 21.8	
	comp=Z,114nm,19.7s,baz=74,slow=35						
DANN	Dangsing	52.75	289	eP	P	21 19 44.0	+0.9
	comp=Z,40nm,0.7s						
MKAR	Makanchi Array	53.23	312	P	P	21 19 46.0	0.0
	comp=Z,0.8nm,0.4s,baz=88,slow=9.5,SNR=28						
MKAR				PcP	PcP	21 20 52.9	+0.3
	comp=Z,0.6nm,0.6s,baz=69,slow=5.4,SNR=2.1						
MKAR				LR	LR	21 44 46.5	
	comp=Z,101nm,18.0s,baz=344,slow=39						
MAKZ	Makanchi	53.45	312	P	P	21 19 48.3	+0.7
STKA	Stephens Creek	54.83	181	P	P	21 19 57.4	-0.2
	comp=Z,1.1nm,0.7s,baz=341,slow=18,SNR=2.1						
STKA	Stephens Creek	54.83	181	IAmb	IAmb	21 20 04.5	
	comp=Z,1.0nm,1.1s						
FORT	Forrest	55.50	195	P	P	21 20 01.0	-1.4
KURK	Kurchatov	55.96	316	P	P	21 20 05.4	-0.2
KURK				IAmb	IAmb	21 20 07.4	
	comp=Z,6.5nm,1.0s						
KSH	Kashi	57.90	303	P	P	21 20 23.8	+4.1
KSH				PcP	PcP	21 21 13.5	+2.5
KSH				PP	PP	21 22 31.3	+2.4
KSH				S	S	21 28 17.8	+5.9
KSH				sS	sS	21 28 50.5	-2.3
KSH				ScS	ScS	21 30 03.8	+4.0
KSH				SS	SS	21 32 13.3	+9.3
KSH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KSH				LR	LR		
	comp=Z,140nm,6.3s						
KSH				LR	LR		
	comp=Z,140nm,6.2s						
ILAR	Eielson Array	60.93	28	P	P	21 20 40.6	+0.7
	comp=Z,0.9nm,0.7s,baz=258,slow=5.4,SNR=9.1						
BRVK	Borovoye	61.19	319	P	P	21 20 42.3	+0.4
KK31	Karatay Array	61.65	308	P	P	21 20 45.6	+0.4
KK31				IAmb	IAmb	21 20 46.9	
	comp=Z,4.3nm,0.8s						
KKAR	Karatay Array	61.65	308	P	P	21 20 45.3	+0.1
KKAR				IAmb	IAmb	21 20 46.9	
	comp=Z,4.3nm,0.8s						
SCRK	Sand Creek	62.10	29	IAmb	IAmb	21 21 00.6	
	comp=Z,9.2nm,1.3s						
KBL	Kabul	64.09	298	P	P	21 21 02.6	+0.8
KBL				IAmb	IAmb	21 21 03.1	
	comp=Z,7.4nm,0.8s						
INK	Inuvik	66.38	24	P	P	21 21 17.0	+1.4
	comp=Z,0.7nm,0.6s,baz=206,slow=3.4,SNR=4.5						
ARU	Arti	67.68	323	P	P	21 21 24.7	+0.6
GEYT	Alibeck	71.90	304	P	P	21 21 52.0	+1.6
	comp=Z,1.2nm,0.6s,baz=64,slow=3.4,SNR=4.3						
YKA	Yellowknife Ar	75.36	28	P	P	21 22 11.2	+1.1
	comp=Z,0.7nm,0.5s,baz=293,slow=5.6,SNR=10						
YKA				LR	LR	21 57 23.0	
	comp=Z,35nm,18.9s,baz=0.0,slow=37						
RES	Resolute Bay	75.70	13	P	P	21 22 12.5	+0.7
	comp=Z,0.6nm,0.4s,baz=305,slow=4.9,SNR=4.8						
KLMR	Klimovskoe	76.08	331	eP	P	21 22 12.7	-1.5
KLMR				AMP		21 22 14.8	
	comp=Z,5.0nm,0.8s						
ARCES	ARCESS Array B	77.27	341	P	P	21 22 22.1	+1.4
	comp=Z,2.2nm,0.6s,baz=72,slow=8.3,SNR=13						
ARCES				LR	LR	22 02 38.9	
	comp=Z,145nm,18.4s,baz=209,slow=40						
PPT	Papeete	77.71	115	LR	LR	21 51 26.2	
	comp=Z,67nm,19.2s,baz=108,slow=32						
YBH	Yreka Blue Hor	78.25	50	P	P	21 22 28.8	+1.9
	comp=Z,1.3nm,0.6s,baz=1.9,slow=11,SNR=3.0						
YBH				LR	LR	21 54 24.2	
	comp=Z,57nm,19.7s,baz=291,slow=34						
YBH	Yreka Blue Hor	78.25	50	P	P	21 22 27.9	+1.0
YBH				IAmb	IAmb	21 22 42.2	
	comp=Z,6.0nm,1.4s						
NEW	Newport	79.51	42	LR	LR	21 51 04.3	
	comp=Z,55nm,20.1s,baz=348,slow=31						
KBZ	Khabaz	80.88	314	P	P	21 22 42.4	+1.5
	comp=Z,8.9nm,0.8s,baz=86,slow=5.7,SNR=32						
FINES	FINESS Array B	81.54	334	P	P	21 22 44.0	-0.1
	comp=Z,2.7nm,0.6s,baz=72,slow=5.1,SNR=21						
NVAR	Mina Array Bea	82.63	51	P	P	21 22 51.6	+1.1
	comp=Z,1.3nm,0.7s,baz=293,slow=5.8,SNR=3.0						
NVAR				LR	LR	21 56 57.3	
	comp=Z,81nm,19.4s,baz=266,slow=34						
ELK	Elko	83.82	48	LR	LR	21 57 26.6	
	comp=Z,51nm,19.8s,baz=259,slow=34						
FFC	Flin Flon	84.81	32	P	P	21 23 02.6	+1.5
FFC				IAmb	IAmb	21 23 08.0	
	comp=Z,4.8nm,1.2s						
AKASG	Malin Array Be	85.92	324	P	P	21 23 06.4	-0.2
	comp=Z,0.7nm,0.4s,baz=54,slow=5.4,SNR=5.1						
PFO	Pinyon Flats O	85.98	55	LR	LR	21 54 25.4	
	comp=Z,64nm,19.7s,baz=186,slow=31						
PDAR	Pinedale Array	86.69	45	P	P	21 23 12.5	+1.6
	comp=Z,0.2nm,0.5s,baz=343,slow=0.9,SNR=2.5						
PDAR				LR	LR	21 54 45.6	
	comp=Z,60nm,20.4s,baz=12,slow=31						
NOA	NORSAR Array B	87.30	339	P	P	21 23 12.7	-0.5
	comp=Z,0.5nm,0.7s,baz=50,slow=4.8,SNR=3.3						
NOA				LR	LR	22 06 33.2	
	comp=Z,71nm,18.7s,baz=355,slow=38						
BRTR	Keskin Array B	88.86	313	P	P	21 23 20.3	-0.9
	comp=Z,0.6nm,0.8s,baz=57,slow=5.3,SNR=3.2						
GERES	GERESS Array B	94.96	329	LR	LR	22 09 21.8	
	comp=Z,85nm,18.9s,baz=0.5,slow=37						
TXAR	Lajitas Array	97.61	54	LR	LR	22 00 24.4	
	comp=Z,24nm,21.9s,baz=0.0,slow=31						
PLCA	Paso Flores	147.20	130	PKPbc	PKPbc	21 30 09.1	-0.6
	comp=Z,1.3nm,0.9s,baz=258,slow=7.4,SNR=3.6						
LPAZ	La Paz	150.34	82	PKPbc	PKiKP	21 30 20.5	+0.8
	comp=Z,1.1nm,0.6s,baz=17,slow=3.3,SNR=5.2						

IDC 28 21:19:33.7±2.1,0.92N×127.15E,h0km,mb3.4/3, mb1 3.7/3,mb1mx3.2/35,mbtmp3.5/3,Error ellipse: s-maj=169.1km s-min=25.0km az=66.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.90	162	P	P	21 24 29.1	+0.4
	0.8nm,0.6s,baz=340,slow=11,SNR=8.5						
ASAR	Alice Springs	25.31	165	P	P	21 25 02.0	-0.3
	1.5nm,0.9s,baz=348,slow=9.7,SNR=9.2						
MKAR	Makanchi Array	60.09	326	P	P	21 29 42.8	0.0
	0.3nm,0.7s,baz=122,slow=5.2,SNR=3.2						

IDC 28 21:21:17.3±2.1,0.68N×127.11E,h0km,mb3.4/3, mb1 3.6/3,mb1mx3.2/34,mbtmp3.4/3,MS3.2/1,Ms1 3.2/1, ms1mx2.5/24,Error ellipse: s-maj=170.1km s-min=25.5km az=66.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	Lembang	20.83	249	LR	LR	21 34 10.7	
	comp=Z,71nm,19.8s,baz=73,slow=37						
WRA	Warramunga Arr	21.68	161	P	P	21 26 10.0	+0.1
	0.6nm,0.6s,baz=340,slow=11,SNR=6.0						
ASAR	Alice Springs	25.08	165	P	P	21 26 43.8	0.0
	0.7nm,0.5s,baz=342,slow=8.8,SNR=7.3						
MKAR	Makanchi Array	60.27	326	P	P	21 31 27.7	0.0
	0.4nm,0.8s,baz=123,slow=7.3,SNR=4.0						

IDC 28 21:39:13.6±1.5,32.16N×40.04W,h0km,mb3.6/6, mb1 3.9/6,mb1mx3.5/41,mbtmp3.6/6,Error ellipse: s-maj=57.0km s-min=22.3km az=10.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	42.59	107	P	P	21 47 11.5	0.0

1.5nm,0.9s,baz=300,slow=8.2,SNR=6.2
H10N2 ASCENSION HYDR 46.64 144 T T 22 37 56.3
baz=329,slow=76,SNR=9.7
H10N3 ASCENSION HYDR 46.65 144 T T 22 37 56.1
baz=329,slow=76,SNR=7.2
H10N1 ASCENSION HYDR 46.66 144 T T 22 37 57.7
baz=329,slow=76,SNR=9.5
H10S3 ASCENSION HYDR 47.53 145 T T 22 38 44.1
baz=329,slow=74,SNR=22
H10S2 ASCENSION HYDR 47.54 145 T T 22 38 44.3
baz=251,slow=74,SNR=22
AKASG Malin Array Be 53.15 48 P P 21 48 32.6 -0.4
0.3nm,0.4s,baz=282,slow=6.6,SNR=6.5
TXAR Lajitas Array 54.04 285 P P 21 48 40.6 +0.5
0.3nm,0.7s,baz=87,slow=7.5,SNR=3.0
PDAR Pinedale Array 54.77 302 P P 21 48 43.5 -1.7
1.1nm,0.9s,baz=70,slow=7.8,SNR=5.7
YKA Yellowknife Ar 54.97 327 P P 21 48 47.4 +1.2
0.2nm,0.6s,baz=90,slow=8.0,SNR=4.3
BRTR Keskin Array B 58.60 60 P P 21 49 12.5 0.0
1.0nm,1.0s,baz=287,slow=5.9,SNR=3.8

ISC 28 21:59:28.2±0.9, 50.°24N±0.°05×18.°81E±0.°03, h0km, n14, σ0.°86/25, Poland

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)

OKC Ostrava-Krasne 0.59 227 ePG Pg 21 59 39.5 0.0
OKC eSG Sg 21 59 47.2 +0.1
comp=Z,16nm,0.5s
OJC Ojcow 0.64 92 ePg Pg 21 59 40.2 -0.2
OJC eSg Sg 21 59 49.0 +0.4
MORC Moravsky Berou 0.94 241 ePG Pg 21 59 46.2 0.0
MORC eSG Sg 21 59 58.5 +0.1
LANS Liptovska Anna 1.17 158 ePG Pg 21 59 51.0 +0.3
LANS eSG Sg 22 00 06.5 +0.7
LANS eLG Lg 22 00 10.9
NIE Niedzica 1.27 130 ePg Pg 21 59 52.5 -0.1
NIE eSg Sn 22 00 11.0 0.0
VRAC Vranov 1.71 238 ePN Pn 21 59 59.2 -0.1
VRAC eSG Sn 22 00 21.3 -0.6
KSP Ksiaz 1.71 292 ePg Pb 22 00 00.3 -0.3
KSP eSg Sg 22 00 23.3 0.0
VYHS Vyhne 1.75 179 ePN Pn 21 59 59.6 -0.2
VYHS eSN Sn 22 00 22.4 -0.4
KRUC Moravsky 1.96 234 ePN Pn 22 00 02.6 -0.1
KRUC eSG Sb 22 00 28.7 -1.1
GOPC GO Pecny, Ondr 2.61 264 eSG Sb 22 00 48.4 -0.1
comp=Z,7.5nm,0.6s
PRU Pruhonice 2.76 266 eSG Sb 22 00 53.0 +0.3
BRG Berggiesshubel 3.17 283 PG Pg 22 00 28.1 -0.8
BRG SG Sg 22 01 08.4 -1.6
2.3nm,0.5s
KHC Kasperske Hory 3.57 254 eSG Sb 22 01 18.7 +2.5
CLL Collm 3.84 288 ePg Pg 22 00 43.0 +1.3
CLL eSg Sg 22 01 33.0 +1.6

IDC 28 22:09:44.4±2.1, 32.°14N×40.°21W, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.4/47, mbtmp3.7/4, MS3.5/1, Ms1 3.4/1, ms1mx2.8/50, Error ellipse: s-maj=73.3km s-min=29.5km az=25.0, Northern Mid-Atlantic Ridge

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)

SCHQ Schefferville 29.48 328 LR LR 22 26 45.2
comp=Z,92nm,19.9s,baz=344,slow=35
TORD Torodi Ar. Bea 42.71 106 P P 22 17 43.3 -0.1
2.6nm,1.2s,baz=300,slow=8.2,SNR=5.4
H10N2 ASCENSION HYDR 46.71 144 T T 23 08 07.1
baz=329,slow=75,SNR=8.0
H10N3 ASCENSION HYDR 46.71 144 T T 23 08 07.9
baz=329,slow=75,SNR=6.3
H10N1 ASCENSION HYDR 46.73 144 T T 23 08 09.2
baz=329,slow=75,SNR=7.9
H10S3 ASCENSION HYDR 47.59 145 T T 23 09 10.3
baz=328,slow=74,SNR=24
H10S2 ASCENSION HYDR 47.60 145 T T 23 09 10.9
baz=252,slow=74,SNR=26
FINES FINESS Array B 51.08 34 P P 22 18 48.0 -0.2
1.4nm,0.9s,baz=266,slow=11,SNR=2.9
PDAR Pinedale Array 54.66 302 P P 22 19 15.1 -0.2
0.6nm,0.7s,baz=79,slow=9.3,SNR=3.9
YKA Yellowknife Ar 54.92 327 P P 22 19 16.7 +0.1
0.3nm,0.8s,baz=90,slow=7.4,SNR=4.1

SJA 28 22:10:17.3±0.5, 23.°98S×66.°85W, h227km±4km, ML2.7, MW2.9
GUC 28 22:10:20.6±0.5, 23.°91S×67.°53W, h245km±9km, ML3.6
ISC 28 22:10:17.3±1.9, 23.°95S±0.°06×66.°91W±0.°05, h224km±17km, n26, σ1.°23/41, 8C-1D, Jujuy Province

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)

SLA San Lorenzo 1.49 121 iP Pn 22 10 53.6 +0.3
SLA IAML 22 10 53.9
comp=Z,29nm,0.6s
SLA eS S 22 11 20.3 -1.1
AZAP Zapla 1.70 100 iP Pn 22 10 55.1 -0.1
AZAP IAML 22 10 55.3
comp=Z,60nm,0.6s
AZAP eS S 22 11 24.0 -0.6
YJA Yavi 2.18 36 iP Pn 22 11 01.3 +1.3
YJA IAML 22 11 01.7
comp=Z,2.8nm,0.2s
YJA eS S 22 11 33.8 +0.7
ASTB Santa Barbara 2.24 91 iP Pn 22 11 00.3 +0.1
LVC Limon Verde 2.27 305 iP Pn 22 11 01.9 +1.2
LVC IAML 22 11 03.2
comp=Z,30nm,0.2s
LVC eS S 22 11 35.5 +0.9
PB15 IPOC Station P 2.47 287 ⇑iP Pn 22 11 03.9 +1.3
PB15 iS S 22 11 36.8 -1.1
PB15 IPOC Station P 2.47 287 iP Pn 22 11 03.9 +1.3
PB15 iS S 22 11 38.1 +0.3
GO02 Mina Guanaco 2.73 243 ⇑iP Pn 22 11 06.6 +1.1
GO02 iS S 22 11 42.6 -0.5
GO02 IAML 22 11 45.0
comp=E,482nm,0.2s
PB06 IPOC Station P 2.74 296 ⇑iP Pn 22 11 06.9 +1.4
PB06 iS S 22 11 41.9 -1.3
PB06 IAML 22 11 46.2
comp=N,103nm,0.2s
PB06 IPOC Station P 2.74 296 iP Pn 22 11 06.8 +1.2
PB09 IPOC Station P 3.04 314 eP Pn 22 11 10.7 +1.8
PB09 iS S 22 11 49.2 0.0
PB09 IAML 22 11 54.7
comp=E,45nm,0.5s
AHML Horco Molle 3.16 154 iP Pn 22 11 10.4 +0.3
PB03 IPOC Station P 3.23 305 ⇑iP Pn 22 11 12.2 +1.1
PB03 iS S 22 11 51.8 -1.3
PB03 IAML 22 11 52.6
comp=N,81nm,0.3s
PB14 IPOC Station P 3.26 257 ⇑iP Pn 22 11 12.4 +0.9
PB14 iS S 22 11 51.6 -2.3
PB14 IAML 22 11 55.8
comp=E,67nm,0.3s
PB10 IPOC Station P 3.37 277 ⇑iP Pn 22 11 13.7 +1.2
PB10 IAML 22 11 59.9
comp=N,54nm,0.3s
PB10 IPOC Station P 3.37 277 iP Pn 22 11 13.7 +1.2
PB04 IPOC Station P 3.39 298 ⇑iP Pn 22 11 14.0 +1.1
PB04 iS S 22 11 54.2 -2.2
PB04 IPOC Station P 3.39 298 iP Pn 22 11 14.2 +1.3
PB07 IPOC Station P 3.53 308 ⇑iP Pn 22 11 14.9 +0.4
PB07 iS S 22 11 57.3 -2.1
PB01 IPOC Station P 3.75 320 eP Pn 22 11 17.9 +0.8
PB01 iS S 22 12 02.5 -1.6
PB02 IPOC Station P 3.80 313 ⇓iP Pn 22 11 18.6 +0.9
PB02 iS S 22 12 03.1 -2.1
ACLC CERRO LA CRUZ 5.46 180 iP Pn 22 11 38.9 +0.7
APLL PUNTA DE LOS L 6.43 177 iP Pn 22 11 50.6 +0.2
APLL IAML 22 11 51.9
comp=Z,6.0nm,0.2s
ACCO Cerro Coronel 6.89 196 iP Pn 22 11 57.6 +1.1
AMOG MOGNA 7.11 191 iP Pn 22 11 59.9 +0.9
ACAN Cantantal 8.30 182 iP Pn 22 12 14.5 +0.2

ATH 28 22:13:54.9, 38.°20N×22.°53E, h21km, ML3.4/27, Error ellipse: s-maj=0.9km s-min=0.5km az=344.0
HLW 28 22:13:55.0, 38.°35N×24.°16E, h10km±23km, Md4.2, Ml4.3
ISK 28 22:13:54.1, 38.°25N×22.°50E, h15km, ML3.6/24
THE 28 22:13:55.6, 38.°19N×22.°53E, h10km±1km, ML3.5/24, Error ellipse: s-maj=1.2km s-min=0.4km az=253.0
PDG 28 22:13:55.5±0.7, 38.°21N×22.°56E, h13km, ML3.8/12, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0
IDC 28 22:13:57.8±3.2, 38.°25N×22.°54E, h27km±22km, mb3.6/13, mb1 3.7/20, mb1mx3.5/51, mbtmp3.7/20, ML3.5/7, Error ellipse: s-maj=16.9km s-min=15.1km az=41.0
ISC 28 22:13:55.6±0.8, 38.°19N±0.°01×22.°52E±0.°01, h14km±5km, n191, σ1.°06/256, mb3.7/12, 1C-2D, Greece

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)

DLFA Delphi 0.29 356 P Pg 22 14 00.9 -0.7
DLFA S Sb 22 14 06.1 -1.2
DLFA AML AML 22 14 06.7
comp=N,20428µm,0.4s
DLFA AML AML 22 14 06.7
comp=E,32919µm,0.6s
PROD Prodromos 0.31 77 P Pg 22 14 01.6 -0.4
PROD S Sg 22 14 06.2 -0.2
PROD Prodromos 0.31 77 P Pg 22 14 01.5 -0.4
PROD S Sg 22 14 06.9 +0.6
PROD AML AML 22 14 12.1
comp=N,26557µm,0.2s
PROD AML AML 22 14 13.0
comp=E,20424µm,0.2s
KLV Kalavryta, Ach 0.33 243 P Pg 22 14 01.9 -0.5
KLV S Sg 22 14 06.6 -0.4
comp=E,4µm,0.1s
KLV Kalavryta, Ach 0.33 243 P Pg 22 14 02.1 -0.3
KLV S Sg 22 14 06.6 -0.4
KLV AML AML 22 14 07.6
comp=N,6876µm,0.1s
KLV AML AML 22 14 10.5
comp=E,6928µm,0.2s
ALIK Aliki, Aigiali 0.33 282 P Pb 22 14 02.5 -0.7
ALIK S Sb 22 14 07.8 -0.6
KALE Kalithea 0.36 304 P Pg 22 14 02.7 -0.2
KALE S Sb 22 14 08.3 -1.0
comp=E,9µm,0.6s
KALE Kalithea 0.36 304 P Pg 22 14 02.7 -0.2
KALE S Sb 22 14 08.4 -0.9
KALE AML AML 22 14 12.9
comp=N,15057µm,0.7s
KALE AML AML 22 14 14.8
comp=E,19080µm,0.5s
LTK Loutraki 0.39 115 P Pg 22 14 03.0 -0.5
LTK S Sg 22 14 08.5 -0.3
comp=E,7µm,0.5s
LTK Loutraki 0.39 115 P Pg 22 14 03.1 -0.4
LTK S Sg 22 14 09.2 +0.4
LTK AML AML 22 14 20.3
comp=E,13248µm,0.4s
LTK AML AML 22 14 21.7
comp=N,15026µm,0.5s
TRIZ Trizonia 0.39 296 P Pg 22 14 03.3 -0.2
TRIZ S Sb 22 14 09.5 -0.7
comp=N,14µm,0.6s
TRIZ Trizonia 0.39 296 P Pg 22 14 03.3 -0.2
TRIZ S Sb 22 14 09.3 -0.9
LOUT Loutraki 0.41 119 P Pg 22 14 03.4 -0.5
LOUT Loutraki 0.41 119 P Pg 22 14 03.6 -0.3
LAKA Lakka 0.43 277 P Pb 22 14 04.2 -0.8
LAKA S Sg 22 14 09.8 -0.2
comp=N,2µm,0.6s
LAKA Lakka 0.43 277 P Pb 22 14 04.1 -0.8
LAKA S Sg 22 14 09.8 -0.2
LAKA AML AML 22 14 20.5
comp=E,4161µm,0.6s
LAKA AML AML 22 14 22.5
comp=N,3187µm,0.6s
AXAR Agios Charalam 0.58 11 P Pg 22 14 06.8 -0.3
AXAR S Sg 22 14 15.0 +0.1
comp=N,30µm,0.6s
AXAR Agios Charalam 0.58 11 P Pg 22 14 06.8 -0.3
AXAR AML AML 22 14 17.7
comp=N,72857µm,0.6s
AXAR AML AML 22 14 21.3
comp=E,47905µm,0.5s
UPR University Cam 0.58 279 P Pb 22 14 07.7 +0.1
UPR University Cam 0.58 279 P Pg 22 14 06.8 -0.3
VIL2 Platees 0.59 88 P Pg 22 14 07.2 0.0
VIL2 AML AML 22 14 22.0
comp=N,8813µm,0.5s
VIL2 AML AML 22 14 28.8
comp=E,10624µm,0.5s
LKR Lokris 0.59 39 P Pg 22 14 06.1 -1.1
LKR S Sb 22 14 16.6 +0.6
comp=E,5µm,0.3s
LKR Lokris 0.59 39 P Pg 22 14 06.1 -1.1
LKR S Sg 22 14 15.5 +0.3
LKR AML AML 22 14 20.1
comp=E,9322µm,0.4s
LKR AML AML 22 14 20.4
comp=N,8802µm,0.2s
VILL Villia 0.62 92 P Pg 22 14 07.1 -0.8
VILL S Sb 22 14 17.8 +0.8
comp=N,6µm,0.7s
DRO Drossia 0.68 250 P Pg 22 14 08.6 -0.3
DRO S Sb 22 14 19.1 +0.5
comp=N,7µm,0.3s
DRO Drossia 0.68 250 P Pg 22 14 08.6 -0.3
DRO AML AML 22 14 25.3
comp=N,15080µm,0.3s
DRO AML AML 22 14 30.7
comp=E,13194µm,0.4s
VLX Vlachokerasia 0.83 188 P Pg 22 14 10.9 -0.8
VLX S Sb 22 14 23.2 +0.4
comp=E,12µm,0.5s
VLX Vlachokerasia 0.83 188 P Pb 22 14 12.1 +0.3
RLS Riolos of Patr 0.84 261 P Pg 22 14 11.2 -0.7
RLS S Sb 22 14 23.7 +0.6
comp=E,2µm,0.6s
RLS Riolos of Patr 0.84 261 P Pg 22 14 11.3 -0.7
RLS AML AML 22 14 29.7
comp=N,4194µm,0.6s
RLS AML AML 22 14 32.4
comp=E,3329µm,0.7s
AGG Agios Georgios 0.84 350 P Pg 22 14 11.2 -0.8
AGG S Sb 22 14 22.9 -0.3
comp=E,3µm,0.6s
AGG Agios Georgios 0.84 350 P Pg 22 14 11.0 -1.0
AGG S Sb 22 14 23.3 +0.1
AGG AML AML 22 14 24.9
comp=E,6764µm,0.7s
AGG AML AML 22 14 33.3
comp=N,4414µm,0.6s
MAKR Makrakomi, Fth 0.87 340 P Pg 22 14 11.8 -0.8
MAKR S Sn 22 14 25.6 -0.5
comp=N,6µm,0.6s
MAKR Makrakomi, Fth 0.87 340 P Pg 22 14 11.8 -0.8
MAKR AML AML 22 14 30.9
comp=N,12614µm,0.8s
MAKR AML AML 22 14 31.6
comp=E,10980µm,0.5s
PVO Paravola 0.89 299 P Pb 22 14 12.6 -0.2
PVO S Sn 22 14 25.9 -0.4
comp=E,2µm,0.5s
PVO Paravola 0.89 299 P Pb 22 14 12.6 -0.2
DID Didima 0.89 140 P Pg 22 14 11.8 -1.0
DID S Sb 22 14 25.3 +0.8
comp=E,4µm,0.4s
DID Didima 0.89 140 P Pg 22 14 11.9 -1.0
DID S Sg 22 14 24.1 -0.4
DID AML AML 22 14 28.1
comp=E,7870µm,0.2s
DID AML AML 22 14 32.4
comp=N,9574µm,0.6s
EVR Evrytania 0.91 323 P Pg 22 14 12.3 -1.0
EVR S Sn 22 14 26.6 -0.5
comp=N,3µm,0.6s
EVR Evrytania 0.91 323 P Pg 22 14 12.3 -1.0
EVR S Sg 22 14 24.3 -1.0
EVR AML AML 22 14 31.1
comp=N,5828µm,0.6s
EVR AML AML 22 14 32.1
comp=E,6742µm,0.8s
AMT Artemida-Makis 0.92 225 P Pg 22 14 12.8 -0.6
AMT S Sn 22 14 26.9 -0.2
comp=E,5µm,0.6s
AMT Artemida-Makis 0.92 225 P Pg 22 14 13.0 -0.4
AMT AML AML 22 14 27.8
comp=N,10745µm,0.5s
AMT AML AML 22 14 33.5
comp=E,7610µm,0.6s
KRND KRANIDI 0.95 148 P Pb 22 14 13.0 -0.8
KRND S Sb 22 14 26.4 +0.2
comp=E,8µm,0.3s
KRND KRANIDI 0.95 148 P Pb 22 14 13.1 -0.8
KRND S Sb 22 14 26.2 0.0
KRND AML AML 22 14 30.3
comp=E,11076µm,0.5s
KRND AML AML 22 14 30.6
comp=N,19088µm,0.4s
ATH Athens Observa 0.97 103 P Pb 22 14 13.9 -0.3
ATH S Sn 22 14 28.3 0.0
comp=N,3µm,0.7s
ATH Athens Observa 0.97 103 P Pb 22 14 13.3 -0.9
ATH S Sg 22 14 27.4 +0.4
ATH AML AML 22 14 33.2
comp=N,4557µm,0.5s
ATH AML AML 22 14 39.8
comp=E,5697µm,0.8s
MRKA Markates 0.98 58 P Pb 22 14 12.8 -1.6
MRKA S Sn 22 14 30.0 +1.3
comp=E,2µm,0.8s
MRKA Markates 0.98 58 P Pb 22 14 13.1 -1.3
MRKA S Sg 22 14 27.8 +0.3
MRKA AML AML 22 14 31.3
comp=N,4613µm,0.7s
MRKA AML AML 22 14 37.4
comp=E,4460µm,0.6s
ATHU Athens Univers 1.02 102 P Pb 22 14 15.2 +0.1
ATHU S Sn 22 14 29.9 +0.2
comp=E,832nm,0.6s
ATHU Athens Univers 1.02 102 P Pb 22 14 14.8 -0.3
VLY Voula,Athens 1.06 108 P Pb 22 14 15.9 +0.1
VLY S Sb 22 14 29.8 +0.3
VLY Voula,Athens 1.06 108 P Pb 22 14 15.9 +0.1
VLY AML AML 22 14 36.1
comp=N,4083µm,0.6s
VLY AML AML 22 14 37.1
comp=E,3762µm,0.5s
PTL Penteli 1.07 97 P Pb 22 14 15.7 -0.2
PTL S Sb 22 14 30.1 +0.3
comp=E,2µm,0.6s
PTL Penteli 1.07 97 P Pb 22 14 15.7 -0.2
PTL S Sb 22 14 29.4 -0.3
PTL AML AML 22 14 31.4
comp=E,4612µm,0.6s
PTL AML AML 22 14 36.5
comp=N,5112µm,0.6s
VTN Vitineika 1.09 256 P Pn 22 14 16.7 +0.4
ITM Ithomi 1.11 205 P Pb 22 14 16.1 -0.6
ITM Ithomi 1.11 205 P Pb 22 14 16.1 -0.6
ITM Ithomi 1.11 205 PN Pb 22 14 15.9 -0.8
ITM SN Sn 22 14 32.8 +0.9
DION Dionisos Attik 1.12 95 P Pb 22 14 16.7 -0.1
DION S Sg 22 14 32.2 +0.4
DION Dionisos Attik 1.12 95 P Pb 22 14 16.6 -0.1
DION S Sb 22 14 30.5 -0.7
PDO Prodromos 1.13 292 P Pg 22 14 16.8 -0.5
YDRA Hydra 1.13 138 P Pb 22 14 16.1 -0.8
SKIA Skiathos 1.22 37 P Pn 22 14 18.0 -0.3
SKIA S Sg 22 14 35.2 +0.1
SKIA AML AML 22 14 39.5
comp=N,4113µm,0.9s
SKIA AML AML 22 14 41.6
comp=E,3235µm,0.8s
NEO Neokhori 1.24 26 P Pn 22 14 18.2 -0.4
NEO S Sg 22 14 36.3 +0.6
comp=E,1µm,0.5s
NEO Neokhori 1.24 26 P Pn 22 14 18.1 -0.5
NEO AML AML 22 14 39.4
comp=E,2672µm,0.6s
NEO AML AML 22 14 40.6
comp=N,2814µm,0.4s
XOR Xorichti 1.28 24 P Pn 22 14 18.8 -0.4
XOR S Sn 22 14 36.5 +0.3
comp=N,922nm,0.9s
XOR Xorichti 1.28 24 P Pn 22 14 19.0 -0.2
XOR S Sn 22 14 36.3 +0.1
XOR AML AML 22 14 41.9
comp=E,1272µm,1.2s
XOR AML AML 22 14 53.5
comp=N,2266µm,0.6s
ALNA Alonissos 1.42 47 P Pn 22 14 21.0 0.0
THL Klokotos Trika 1.43 344 P Pb 22 14 21.9 0.0
THL AML AML 22 14 45.3
comp=N,1182µm,0.7s
THL AML AML 22 14 46.2
comp=E,1561µm,0.8s
PYL PYLOS 1.43 206 P Pn 22 14 21.5 +0.4
AOS Alonnisos 1.45 47 P Pn 22 14 20.8 -0.5
AOS AML AML 22 14 47.8
comp=E,1370µm,0.6s
AOS AML AML 22 14 49.2
comp=N,1489µm,0.9s
VLMS Volimes, Zakyn 1.50 258 P Pb 22 14 23.2 0.0
VLI Veliai 1.51 167 P Pn 22 14 22.4 +0.2
KARY Karystos 1.52 95 P Pn 22 14 22.5 +0.2
KARY AML AML 22 14 52.7
comp=E,903µm,0.4s
KARY AML AML 22 14 57.5
comp=N,1496µm,0.5s
VLS Valsamata 1.52 270 P Pb 22 14 23.1 -0.5
KONA Konidatara, Ke 1.55 279 P Pg 22 14 24.8 -0.6
MNVA Monemvasia 1.56 165 P Pb 22 14 24.6 +0.4
FSK Fiskardo 1.56 280 P Pb 22 14 24.3 0.0
LKD2 Lefkada island 1.58 293 P Pb 22 14 24.4 -0.2
KEF2 Argostoli. Kep 1.60 270 P Pb 22 14 24.9 0.0
KEF1 Kardakata, Kep 1.62 274 P Pb 22 14 24.7 -0.5
KEF4 Livadi, Kephal 1.65 273 P Pb 22 14 24.5 +0.4
KEF3 Kipouria, Keph 1.71 271 P Pb 22 14 27.1 +0.3
SERI Serifos 1.87 123 P Pn 22 14 27.2 0.0
LIT Litokhoron 1.91 359 P Pn 22 14 28.0 +0.3
PAIG Paliouri 1.95 27 P Pn 22 14 27.9 -0.4
KPRO Kipourio 1.98 333 P Pb 22 14 30.1 -1.3
KTHA Kythira Island 1.98 167 P Pn 22 14 29.8 +1.1
KTHA Kythira Island 1.98 167 PN Pn 22 14 29.5 +0.8
KTHA SN Sn 22 14 54.1 +0.8
MHLA Plaka, Milos I 2.09 133 P Pn 22 14 30.6 +0.3
IGT Igoumenitsa 2.17 309 P Pb 22 14 33.2 -1.4
KZN Kozani 2.19 345 P Pn 22 14 31.5 -0.2
PENT Pentalofos 2.27 332 P Pn 22 14 33.7 +0.9
ANKY Antikythira Is 2.40 165 P Pn 22 14 35.4 +0.9
OUR Ouranopolis 2.42 27 P Pn 22 14 34.8 0.0
HORT Hortiatis 2.44 10 P Pn 22 14 35.6 +0.4
NEST Nestorio 2.50 333 P Pn 22 14 38.2 -2.1
APE Apeiranthos 2.64 114 P Pn 22 14 38.1 +0.3
APE Apeiranthos 2.64 114 PN Pn 22 14 38.1 +0.3
APE SN Sn 22 15 09.8 +0.2
IOSP Ios island 2.65 123 P Pn 22 14 38.4 +0.5
GRG Griva 2.76 358 P Pn 22 14 40.2 +0.7
CHOS Chios island 2.79 85 P Pn 22 14 40.2 +0.3
RODP Rodopos 2.81 159 PN Pn 22 14 41.3 +1.2
THT2 Imerovigli 2.90 126 PN Pn 22 14 41.9 +0.5
SANT Santorini 2.97 127 PN Pn 22 14 42.4 +0.1
IMMV Iera Moni Meta 2.97 156 P Pn 22 14 42.7 +0.4
IMMV Iera Moni Meta 2.97 156 PN Pn 22 14 43.0 +0.7
KNT Kendrikon 2.98 6 P Pn 22 14 42.5 +0.1
VAM Vamos 3.09 154 P Pn 22 14 44.3 +0.4
KNDR Palaiochora Ch 3.10 162 PN Pn 22 14 44.2 +0.2
PRK Paraskevi 3.12 69 P Pn 22 14 45.5 +1.2
VAY Valandovo 3.12 1 iP Pn 22 14 44.9 +0.5
VAY Valandovo 3.12 1 iPn Pn 22 14 45.5 +1.1
OHR Ohrid 3.20 336 iPn Pn 22 14 46.5 +0.9
URLA Izmir 3.21 86 PN Pn 22 14 46.0 +0.4
NVR Nevrokopi 3.32 18 P Pn 22 14 47.3 +0.2
EZN Ezine 3.38 60 PN Pn 22 14 47.9 -0.1
SMG Samos 3.45 97 P Pn 22 14 49.3 +0.5
IDI Anoyia 3.47 146 Pn Pn 22 14 49.8 +0.5
comp=N,5.0nm,0.3s,baz=288,slow=7.2,SNR=35
IDI Sn Sn 22 15 29.3 -0.8
comp=N,9.9nm,0.3s,baz=286,slow=19,SNR=3.8
IDI Anoyia 3.47 146 P Pn 22 14 49.4 +0.2
IDI Anoyia 3.47 146 PN Pn 22 14 49.7 +0.5
MMB Musomiste 3.52 15 iP Pn 22 14 49.9 0.0
HRKL Herakleio 3.54 143 PN Pn 22 14 51.1 +0.9
DKL Dikili 3.54 74 PN Pn 22 14 50.8 +0.6
BLCB Balcova 3.56 86 PN Pn 22 14 51.1 +0.7
GVD Gavdhos 3.58 159 P Pn 22 14 53.3 +2.7
GVD Gavdhos 3.58 159 PN Pn 22 14 51.6 +1.0
GCAM G?zelcaml? 3.76 96 PN Pn 22 14 53.7 +0.6
RDO Rodhopi 3.76 37 PN Pn 22 14 52.7 -0.4
GELI Tayfur-Gelibol 3.78 53 PN Pn 22 14 53.7 +0.3

ENEZ Enez 3.79 47 PN Pn 22 14 53.4 -0.1
KOSK Kos Island 3.83 111 PN Pn 22 14 55.4 +1.3
NPS Neapolis 3.84 139 P Pn 22 14 55.4 +1.1
LAST Lasithi 3.85 141 P Pn 22 14 55.4 +0.9
RZN Rozhen 3.88 25 iP Pn 22 14 55.4 +0.5
LPK Lapseki 3.95 55 PN Pn 22 14 55.6 -0.1
ERIK Erikli-Kesan 3.96 50 PN Pn 22 14 55.8 -0.1
BODT Bodrum 3.97 105 PN Pn 22 14 56.9 +0.9
KDZ Kurdzhali 4.11 32 iP Pn 22 14 57.1 -0.9
KDZ Kurdzhali 4.11 32 PN Pn 22 14 57.0 -0.9
AYDB Zeytinkoy-Aydi 4.25 92 PN Pn 22 15 00.5 +0.6
PLD Plovdiv 4.25 22 PN Pn 22 14 59.5 -0.4
ZKR Zakros 4.27 135 PN Pn 22 15 01.6 +1.4
DAT Datca 4.28 108 PN Pn 22 15 01.6 +1.2
KRBG Karabiga-Canak 4.31 58 PN Pn 22 15 01.1 +0.4
UKOP Uzunkopru-Edir 4.32 46 PN Pn 22 15 00.8 0.0
RKY Sarkoy-Tekirda 4.38 54 PN Pn 22 15 02.2 +0.4
BALB Balikesir 4.42 69 PN Pn 22 15 03.1 +0.8
VTS Vitosha 4.46 7 iP Pn 22 15 03.7 +0.6
ULC Ulcinj 4.53 327 ePn Pn 22 15 05.0 +1.3
ULC eSn Sn 22 15 59.1 +2.9
KARP Karpathos 4.56 124 PN Pn 22 15 05.8 +1.6
MRMT Marmara Adasi 4.61 57 PN Pn 22 15 05.3 +0.4
DRME Dracevica, Mon 4.74 328 ePn Pn 22 15 08.0 +1.4
DRME eSn Sn 22 16 02.7 +1.4
PVY Plav 4.81 337 ⇑iPn Pn 22 15 09.3 +1.6
PVY iSn Sn 22 16 05.1 +1.8
KULA Kula-Manisa 4.84 84 PN Pn 22 15 08.9 +0.9
EDRB Edirne 4.88 40 PN Pn 22 15 09.0 +0.4
TTG Podgorica 4.91 331 ePn Pn 22 15 10.4 +1.4
TTG eSn Sn 22 16 07.2 +1.6
BUM Brajici-Budva 4.95 327 ePn Pn 22 15 10.9 +1.3
BUM eSn Sn 22 16 08.5 +1.8
TURN Turunc 5.01 103 PN Pn 22 15 08.2 -2.1
IVA Berane 5.08 338 ePn Pn 22 15 12.5 +1.1
IVA eSn Sn 22 16 11.5 +1.5
CEME Cevo 5.15 329 ePn Pn 22 15 13.0 +0.7
CEME eSn Sn 22 16 13.2 +1.8
KOME Kolasin 5.19 335 ePn Pn 22 15 14.5 +1.7
KOME eSn Sn 22 16 14.7 +2.2
SG1 Sgolgore (BA) 5.23 302 ePn Pn 22 15 15.2 +1.8
HCY Herceg Novi 5.25 325 ⇓iPn Pn 22 15 14.9 +1.3
HCY eSn Sn 22 16 14.9 +1.1
NKME Niksic 5.32 330 ⇓iPn Pn 22 15 16.3 +1.7
NKME eSn Sn 22 16 17.3 +1.7
BRY Bratogost 5.60 328 ePn Pn 22 15 19.8 +1.3
BRY eSn Sn 22 16 23.6 +1.0
UPM Unac-Piva 5.71 332 ePn Pn 22 15 21.7 +1.6
UPM eSn Sn 22 16 26.6 +1.1
VAE Valguarnera 6.46 266 Sn Sn 22 16 42.6 -1.1
comp=N,0.5nm,0.3s,baz=204,slow=20,SNR=2.0
SLUM Salum 7.04 161 P Pn 22 15 37.5 -0.7
baz=172
SLUM S Sn 22 16 51.4 -6.7
baz=172
MLR Muntele Rosu 7.73 18 Pn Pn 22 15 49.5 +1.7
comp=N,0.5nm,0.3s,baz=172,slow=17,SNR=8.3
BRTR Keskin Array B 8.80 77 Pn Pn 22 16 04.9 +2.4
comp=N,0.2nm,0.3s,baz=259,slow=13,SNR=7.2
SWA2 9.25 164 P Pn 22 16 07.7 -0.9
baz=172
SWA2 S Sn 22 17 45.6 -6.8
baz=172
SWA2 AMP 22 18 00.0
baz=172
MMAI Mount Meron Ar 11.69 112 Pn Pn 22 16 42.5 +0.5
comp=N,0.5nm,0.3s,baz=304,slow=10,SNR=5.5
HFRF Wahat Farafira 12.04 154 P Pn 22 16 43.9 -2.9
baz=161
GERES GERESS Array B 12.41 332 Pn Pn 22 16 52.7 +0.9
comp=N,0.1nm,0.3s,baz=159,slow=14,SNR=3.5
EIL Elat 13.36 126 Pn Pn 22 17 06.3 +1.5
comp=N,0.2nm,0.3s,baz=315,slow=4.3,SNR=3.4
AKASG Malin Array Be 13.38 19 Pn Pn 22 17 05.1 +0.1
comp=N,0.2nm,0.3s,baz=204,slow=13,SNR=2.9
ESDC Sonseca Array 20.63 282 P P 22 18 35.4 +0.8
comp=N,0.4nm,0.4s,baz=74,slow=11,SNR=3.5
HFS Hagfors 22.67 349 P P 22 18 56.5 +0.3
comp=N,1.5nm,0.7s,baz=149,slow=15,SNR=5.2
FINES FINESS Array B 23.38 4 P P 22 19 01.9 -1.6
comp=N,2.3nm,0.8s,baz=177,slow=11,SNR=4.1
NB2 NORSAR Subarra 23.94 346 P P 22 19 08.1 -1.0
comp=Z,1.7nm,0.7s,baz=150,slow=10
NOA NORSAR Array B 23.94 346 P P 22 19 08.5 -0.6
comp=Z,0.6nm,0.8s,baz=158,slow=9.9,SNR=7.5
EKA Eskdalemuir Ar 24.34 323 P P 22 19 13.6 +0.8
comp=Z,1.0nm,0.6s,baz=124,slow=10,SNR=4.0
TORD Torodi Ar. Bea 31.06 222 P P 22 20 14.2 +1.0
comp=Z,0.9nm,0.6s,baz=31,slow=8.8,SNR=8.0
ARCES ARCESS Array B 31.45 2 P P 22 20 15.3 -0.8
comp=Z,1.2nm,0.8s,baz=201,slow=9.6,SNR=5.1
MKAR Makanchi Array 43.95 59 P P 22 22 01.9 -0.1
comp=Z,2.2nm,0.5s,baz=270,slow=7.5,SNR=54
MKAR ScP ScP 22 27 37.5 -1.5
comp=Z,0.6nm,0.8s,baz=296,slow=3.6,SNR=5.1
ZALV Zalesovo Beam 44.51 48 P P 22 22 06.2 -0.2
comp=Z,2.1nm,0.6s,baz=270,slow=9.4,SNR=12
SONM Songino Array 59.23 51 P P 22 23 56.8 +0.4
comp=Z,0.3nm,0.7s,baz=291,slow=10,SNR=4.3
SCHQ Schefferville 59.51 318 P P 22 23 59.0 +0.9
comp=Z,1.2nm,0.4s,baz=82,slow=3.6,SNR=8.6
YKA Yellowknife Ar 73.91 341 P P 22 25 28.7 -1.0
comp=Z,0.3nm,0.6s,baz=38,slow=5.3,SNR=5.4
ILAR Eielson Array 77.03 355 P P 22 25 47.9 +0.2
comp=Z,0.3nm,0.8s,baz=352,slow=3.8,SNR=3.2

*IASPEI **28** 22:18:02.5±1.1, 8.77N±0.03×83.04W±0.03, h29km±7km, Error ellipse: s-maj=4.8km s-min=3.7km az=16.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*UPA **28** 22:18:02.1±1.4, 8.78N×83.02W, h8km±7km, MW4.2*
*UCR **28** 22:18:02.8±1.6, 8.77N×83.06W, h23km±4km, MW3.9*
ISC 28 22:18:03.1±0.9, 8.77N±0.03×83.04W±0.02, h25km±6km, n26, σ1.03/42, 1C-4D, Costa Rica

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
EDSV San Vito 0.08 56 eP Pb 22 18 07.3 -0.5
EDSV eS Sb 22 18 11.7 +0.8
BRU2 Volcan 0.35 87 ⇓iP Pb 22 18 10.1 -0.9
BRU2 eS Sb 22 18 16.2 -0.2
BRU2 Volcan 0.35 87 eP Pb 22 18 10.1 -0.9
BRU2 eS Sb 22 18 16.3 0.0
PTJ1 Puerto Jimnez 0.35 227 eP Pb 22 18 10.1 -0.8
PTJ1 eS Sb 22 18 16.1 0.0
PTJ1 Puerto Jimnez 0.35 227 eP Pb 22 18 10.0 -0.8
PTJ1 eS Sb 22 18 16.4 +0.3
EDBA Buenos Aires 0.45 329 eP Pb 22 18 12.4 -0.1
EDPN Palmar Norte 0.45 295 eP Pb 22 18 11.3 -1.2
EDPN eS Sb 22 18 18.4 -0.4
PIRO Carate, Puerto 0.47 218 ⇑iP Pb 22 18 11.6 -1.2
SBAR3 San Bartolo, C 0.48 161 eS Sb 22 18 19.6 0.0
BCO2 Palmira 0.51 96 ⇓iP Pb 22 18 12.6 -1.1
BCO2 eS Sb 22 18 20.2 -0.6
DRK0 Durika 0.53 338 ⇓iP Pb 22 18 12.8 -1.0
DRK0 eS Sb 22 18 20.4 -0.8
DRK0 Durika 0.53 338 eP Pb 22 18 12.9 -1.0
DRK0 eS Sb 22 18 20.6 -0.6
DVD David 0.68 120 eP Pb 22 18 15.5 -0.8
DVD eS Sb 22 18 24.4 -0.8
EDLM Las Mercedes 0.74 313 eP Pb 22 18 16.4 -1.0
EDLM eS Sb 22 18 26.1 -1.0
CHIR3 Chiriqui UPA, 0.80 118 eP Pb 22 18 16.7 -1.6
CNI2 El Empalme, Bo 0.86 41 ⇓iP Pb 22 18 17.7 -1.6
CNI2 eS Sb 22 18 29.5 -1.0
RGM0 Gandoca 0.92 28 eP Pn 22 18 20.6 +0.2
RGM0 eS Sn 22 18 36.1 +3.2
RGM0 Gandoca 0.92 28 eP Pn 22 18 20.6 +0.2
EDDO Dominical 0.94 300 eP Pn 22 18 20.9 +0.2
LCR2 La Lucha 2 1.35 316 eP Pn 22 18 25.9 -0.7
CVTR Volcan Turrial 1.43 330 eP Pn 22 18 27.8 -0.1
HDC Heredia 1.61 319 eP Pn 22 18 32.1 -0.2
HDC eS Sn 22 18 49.7 -0.6
JTS Las Juntas de 2.41 309 eP Pn 22 18 41.7 +0.7
CACAO El Cacao, Vera 2.58 123 eP Pn 22 18 44.6 +1.2
CACAO eS Sb 22 19 18.3 -1.9
CUI Cuipilapa 2.81 312 eP Pb 22 18 53.8 +1.1
AZU Azuero 2.91 109 eP Pb 22 18 48.5 +0.7
AZU eS Sb 22 19 30.5 +1.0

*IDC **28** 22:20:23.5±1.2, 7.32N×127.19E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.3/48, mbtmp3.4/4, Error ellipse: s-maj=24.7km s-min=15.0km az=178.0*
*MAN **28** 22:20:30.6, 6.93N×126.80E, h27km, mb4.5, ML3.3, MS3.2*
ISC 28 22:20:28.1±2.2, 7.16N±0.06×126.9E±0.1, h32km±15km, n13, σ1.37/19, mb3.4/4, 1C-1D, Mindanao

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MATI Mati 0.70 252 eP Pn 22 20 42.1 +0.3
MATI eS Sb 22 20 51.5 +0.1
DAV Davao City (W) 1.34 266 Pg Pb 22 20 54.3 +1.6
103nm,0.3s,baz=56,slow=5.6,SNR=7.4
DAV Lg Lg 22 21 13.9
114nm,0.3s,baz=98,slow=23,SNR=9.2
DDMP Don Marcelino, 1.60 229 eP Pn 22 20 54.2 0.0
DDMP eS Sb 22 21 16.2 -0.8
KCP Kidapawan 1.83 265 ⇑iP Pb 22 21 00.6 -0.5
KCP iS Sb 22 21 23.3 -0.4
BUKP Musuan 1.98 291 eP Pb 22 21 02.9 -0.7
BUTP Butuan 2.22 324 eP Pb 22 21 06.8 -0.8
BUTP eS Sb 22 21 36.7 +2.0
SKMP Bagumbayan, Su 2.45 255 eP Pn 22 21 07.2 +1.1
SKMP eS Sn 22 21 34.5 -0.5
CGP Cagayan de Oro 2.56 300 ⇓eP Pb 22 21 11.2 -2.2
CGP eS Sb 22 21 42.7 -1.9
PAGZ Pagadian 3.58 281 eP Pn 22 21 24.4 +2.8
WRA Warramunga Arr 27.90 165 P P 22 26 16.5 +1.0
0.2nm,0.3s,baz=344,slow=8.7,SNR=6.9
ASAR Alice Springs 31.39 168 P P 22 26 46.5 +0.2
0.1nm,0.3s,baz=346,slow=7.5,SNR=5.5
MKAR Makanchi Array 54.90 324 P P 22 29 55.2 -0.6
0.5nm,0.6s,baz=123,slow=8.0,SNR=7.8
ILAR Eielson Array 81.94 26 P P 22 32 44.2 -0.3
0.3nm,0.6s,baz=244,slow=4.9,SNR=4.5

*IDC **28** 22:26:18.6±5.8, 36.28N×71.19E, h234km±51km, mb2.8/2, mb1 2.8/7, mb1mx2.5/52, mbtmp3.6/7, Error ellipse: s-maj=58.8km s-min=32.9km az=153.0*
*NNC **28** 22:26:25.9±4.0, 37.01N×70.79E, h226km±53km, mb2.6, mpv3.5, Error ellipse: s-maj=41.7km s-min=26.2km az=23.0*
ISC 28 22:26:23.5±1.9, 36.8N±0.2×70.9E±0.1, h250km, n11, σ1.33/14, 4C, Hindu Kush region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KK31 Karatay Array 6.26 358 P Pn 22 27 55.3 +0.6
3.4nm,0.6s,baz=168,slow=12,SNR=33
KK31 ⇑S S 22 29 05.6 -2.3
5.1nm,0.5s,baz=188,slow=18,SNR=14
AAK Ala-Archa 6.43 25 P Pn 22 27 57.3 +0.2
0.7nm,0.3s,baz=184,slow=6.7,SNR=13
AAK S S 22 29 10.4 -1.5
0.9nm,0.3s,baz=314,slow=23,SNR=22
AAK Ala-Archa 6.43 25 ⇑P Pn 22 27 56.8 -0.2
1.2nm,0.5s
AAK ⇑S S 22 29 11.1 -0.8
12nm,0.8s
MKAR Makanchi Array 13.08 37 P Pn 22 29 20.4 +0.1
0.1nm,0.3s,baz=214,slow=13,SNR=5.6
AB31 Akbulak array 14.73 331 P P 22 29 41.5 +1.3
0.4nm,0.5s,baz=142,slow=12,SNR=17
KURBB Kurchatov Arra 14.84 19 P P 22 29 41.2 0.0
0.0nm,0.3s,baz=208,slow=11,SNR=5.7
BVAR Borovoye Array 16.19 359 P Pn 22 29 59.8 +2.2
0.7nm,0.3s,baz=168,slow=12,SNR=21
AKTO Aktyubinsk 16.43 330 P Pn 22 30 01.4 +0.9
0.6nm,0.3s,baz=140,slow=12,SNR=14
AKTO Aktyubinsk 16.43 330 ⇑P Pn 22 30 00.8 +0.4
4.7nm,0.8s
ZALV Zalesovo Beam 19.65 25 P P 22 30 33.9 +0.4
0.4nm,0.4s,baz=224,slow=14,SNR=3.0
TORD Torodi Ar. Bea 65.62 268 P P 22 36 39.5 -1.6
0.5nm,0.7s,baz=48,slow=5.0,SNR=4.8

*IDC **28** 22:36:16.6±1.4, 32.16N×40.24W, h0km, mb3.7/9, mb1 3.9/9, mb1mx3.6/51, mbtmp3.7/9, MS3.7/1, Ms1 3.7/1, ms1mx2.9/40, Error ellipse: s-maj=48.1km s-min=21.8km az=2.0*
ISC 28 22:36:18.1±1.4, 32.2N±0.3×40.2W±0.1, h10km, n14, σ0.40/9, mb3.8/9, Northern Mid-Atlantic Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TORD Torodi Ar. Bea 42.74 106 P P 22 44 15.9 +0.1
2.2nm,0.9s,baz=307,slow=8.4,SNR=8.7
GERES GERESS Array B 43.34 51 P P 22 44 20.2 -0.2
0.5nm,0.8s,baz=277,slow=7.7,SNR=2.8
H10N2 ASCENSION HYDR46.74 144 T T 23 34 40.4
baz=329,slow=75,SNR=18
H10N3 ASCENSION HYDR46.74 144 T T 23 34 41.4
baz=329,slow=75,SNR=20
H10N1 ASCENSION HYDR46.76 144 T T 23 34 39.3
baz=329,slow=75,SNR=18
H10S3 ASCENSION HYDR47.62 145 T T 23 35 40.1
baz=328,slow=74,SNR=24
H10S2 ASCENSION HYDR47.63 145 T T 23 35 41.2
baz=252,slow=74,SNR=27
FINES FINESS Array B 51.09 34 P P 22 45 21.2 +0.7
1.4nm,0.9s,baz=255,slow=9.9,SNR=4.1
AKASG Malin Array Be 53.28 48 P P 22 45 36.4 -0.6
1.3nm,0.7s,baz=279,slow=6.3,SNR=8.0
TXAR Lajitas Array 53.88 285 P P 22 45 41.8 0.0
0.3nm,0.7s,baz=85,slow=10,SNR=2.8
PDAR Pinedale Array 54.63 302 P P 22 45 47.1 -0.1
1.3nm,0.9s,baz=70,slow=7.8,SNR=6.9
PDAR LR LR 23 08 07.6
comp=Z,67nm,18.5s,baz=34,slow=35
BRTR Keskin Array B 58.76 60 P P 22 46 16.4 -0.2
0.8nm,1.1s,baz=256,slow=5.8,SNR=3.7
ZALV Zalesovo Beam 82.01 29 P P 22 48 38.2 +0.1
0.2nm,0.3s,baz=305,slow=5.1,SNR=2.4
MKAR Makanchi Array 85.91 36 P P 22 48 58.5 +0.2
0.2nm,0.7s,baz=339,slow=3.7,SNR=2.9

*IDC **28** 22:37:33.4±1.3, 45.85N×106.90W, h0km, mb1 3.2/3, mb1mx3.0/48, mbtmp2.9/3, ML2.7/3, Error ellipse: s-maj=43.3km s-min=9.3km az=129.0*
*NEIC **28** 22:37:35.1±2.0, 45.81N±0.06×106.41W±0.07, h0km±2km, ML3.0/48, Error ellipse: s-maj=9.5km s-min=8.1km az=165.0*
ISC 28 22:37:30.7±0.9, 45.63N±0.04×106.54W±0.04, h0km, n31, σ1.05/32, Montana

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LAO LASA Array 1.08 12 Pg 22 37 51.3 -0.2
LAO IAML 22 38 23.2
327nm,2.6s
RLMT Red Lodge 1.99 256 Pg 22 38 09.2 +0.4
RLMT IAML 22 38 37.7
122nm,0.5s
GCMT Greycliff 2.20 275 Pb 22 38 10.4 -0.9
RSSD Black Hills 2.33 129 Pg 22 38 14.7 -0.7
YNE Yellowstone No 2.52 257 Pb 22 38 17.9 +0.9
YMP Mirror Lake Pl 2.71 252 Pn Pg 22 38 22.1 -0.5
YMP Sg 22 38 56.8 -0.8
LKWY Lake 2.93 250 Pn Pg 22 38 25.6 -1.3
LKWY IAML 22 39 16.5
36nm,0.6s
YUF Upper Falls 2.95 253 Pn Pg 22 38 26.3 -1.0
K22A Casper 2.98 180 Pg 22 38 26.6 -1.2
K22A IAML 22 39 14.5
comp=E,32nm,0.5s
K22A IAML 22 39 18.0
comp=N,40nm,0.5s
YNR Norris Junctio 3.07 254 Pb 22 38 26.4 +0.1
H17A Grant Village 3.12 248 Pb 22 38 27.7 +0.6
YHH Holmes Hill 3.16 256 Pb 22 38 28.5 +0.6
EGMT Eagleton 3.26 319 Pb 22 38 27.7 -1.7
DGMT Dagmar 3.26 29 Pn 22 38 24.9 +1.7
YMR Madison River 3.27 254 Pb 22 38 29.0 -0.8
YPP Pitchstone Pla 3.32 247 Pb 22 38 31.2 +0.6
FLWY Flagg Ranch 3.34 244 Pb 22 38 30.9 0.0
FLWY IAML 22 39 25.8
comp=N,26nm,1.2s
FLWY IAML 22 39 31.8
comp=N,40nm,2.0s
YHL Hebgen Lake 3.37 258 Pb 22 38 30.9 -0.5
YHB Horse Butte 3.41 257 Pb 22 38 32.1 +0.1
QLMT Quake Lak 3.54 259 Pb 22 38 34.1 -0.3
BW06 Boulder Array 3.59 218 Pb 22 38 35.6 +0.4
BW06 IAML 22 39 32.2
comp=E,23nm,0.6s
BW06 IAML 22 39 32.5
comp=N,17nm,0.5s
PD31 Pinedale Array 3.59 218 Pb 22 38 34.5 -0.7
PDAR Pinedale Array 3.59 218 Pn Pb 22 38 34.4 -0.9
comp=N,0.5nm,0.3s,baz=42,slow=12,SNR=18
PDAR Pg Pg 22 38 40.7 +1.2
comp=N,2.7nm,0.3s,baz=39,slow=17,SNR=36
PDAR Lg Lg 22 39 26.2
comp=N,4.0nm,0.3s,baz=32,slow=32,SNR=12
TPAW Teton Pass 3.81 237 Pb 22 38 37.9 -1.0
TPAW IAML 22 39 48.8
comp=N,17nm,3.7s
TPAW IAML 22 40 45.5
comp=N,17nm,4.2s
REDW Red Top Meadow 3.83 235 Pb 22 38 38.2 -1.0
REDW IAML 22 39 44.8
comp=N,16nm,1.1s
REDW IAML 22 40 44.1
comp=N,21nm,4.3s
RWWY Rawlins 3.97 187 Pb 22 38 41.0 -0.7
RWWY IAML 22 39 53.7
comp=N,20nm,0.8s
RWWY IAML 22 40 02.0
comp=N,24nm,0.9s
LRM Limekiln Ridge 4.14 275 Pg 22 38 48.0 -2.1
DLMT Dillon 4.27 269 Pg Pg 22 38 54.2 +1.8
DLMT IAML 22 39 55.7
comp=N,22nm,3.6s
NEW Newport 7.71 294 Lg Lg 22 41 19.8
comp=N,0.3nm,0.3s,baz=53,slow=20,SNR=2.1
ULM Lac du Bonnet 8.52 53 Pn Pn 22 39 37.0 +1.8
comp=N,0.2nm,0.3s,baz=237,slow=12,SNR=3.3
ULM Lg Lg 22 41 50.5
comp=N,0.2nm,0.3s,baz=221,slow=20,SNR=2.1
YKA Yellowknife Arr 17.52 348 P Pn 22 41 35.5 -0.6
comp=N,0.0nm,0.3s,baz=160,slow=12,SNR=2.5

*NIED **28** 22:40:00, 36.60N×141.00E, h5km, Mw3.5 Best double couple: $M_0$1.89000×10[14] NP1:φs217.00000°, δ86.00000°, λ-25.00000°. NP2:φs309.00000°, δ66.00000°, λ-176.00000°.*
*JMA **28** 22:40:39.8, 36.56N×140.93E, h15km±1km, M3.7*
JMA Felt I J1.
*IDC **28** 22:40:41.7±3.1, 37.07N×140.61E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.2/58, mbtmp3.7/3, Error ellipse: s-maj=77.0km s-min=15.7km az=155.0*
ISC 28 22:40:36.8±2.6, 36.59N±0.06×141.1E±0.1, h8km±12km, n18, σ0.87/17, mb3.6/3, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JHO Hitachi 0.43 273 P Pg 22 40 45.9 +0.7
JHO S Sg 22 40 50.5 -0.4
JHYU Hitachinakayam 0.48 240 P Pb 22 40 46.9 -0.7
JHYU S Sg 22 40 52.5 0.0
ONAJ Iwakimizuishiy 0.57 335 P Pn 22 40 50.4 -0.9
ONAJ S Sb 22 40 58.5 +1.1
JFK Kawauchi 0.80 347 P Pn 22 40 54.4 -0.1
JFK S Sn 22 41 05.5 -1.1
JYT Yasato 0.82 244 P Pg 22 40 52.7 +0.2
JYT S Sg 22 41 02.1 -1.0
JSB Shiboa 1.02 292 P Pn 22 40 57.5 -0.1
JSMT Sammumatsuo 1.08 210 S Sn 22 41 12.8 -0.7
MJAR Matsushiro Arr 2.33 270 Pg Pn 22 41 16.4 +0.8
1.4nm,0.3s,baz=75,slow=10,SNR=50
MJAR Lg Lg 22 41 46.1
1.8nm,0.3s,baz=82,slow=13,SNR=4.5
MAT Matsushiro 2.33 270 P Pn 22 41 16.7 +1.1
MAT S Sb 22 41 47.4 -0.7
H11N2 WAKE ISLAND Hy 28.14 120 T T 23 15 58.5
baz=312,slow=75,SNR=150
H11N1 WAKE ISLAND Hy 28.15 120 T T 23 16 01.5
baz=312,slow=75,SNR=167
H11N3 WAKE ISLAND Hy 28.16 120 T T 23 16 02.3
baz=312,slow=75,SNR=114
H11S1 WAKE ISLAND Hy 28.83 122 T T 23 16 51.9
baz=314,slow=76,SNR=2197
H11S3 WAKE ISLAND Hy 28.83 122 T T 23 16 52.9
baz=314,slow=76,SNR=1565
H11S2 WAKE ISLAND Hy 28.85 122 T T 23 16 54.1
baz=314,slow=76,SNR=1115
ZALV Zalesovo Beam 42.03 313 P P 22 48 29.6 +1.0
0.7nm,0.5s,baz=105,slow=9.8,SNR=3.8
KURBB Kurchatov Arra 46.08 308 P P 22 49 01.7 +0.5
1.2nm,0.4s,baz=82,slow=8.3,SNR=5.4
YKA Yellowknife Ar 64.32 30 P P 22 51 17.7 +5.2
0.1nm,0.5s,baz=285,slow=7.0,SNR=2.4

*IDC **28** 22:42:14.3±1.7, 29.19N×51.21E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.3/37, mbtmp3.6/5, ML3.1/1, Error ellipse: s-maj=39.5km s-min=32.0km az=162.0*
*TEH **28** 22:42:15.0, 29.31N×51.22E, h7km, ML3.6*
*THR **28** 22:42:15.7±0.3, 29.28N×51.26E, h14km±12km, ML3.6*
*OMAN **28** 22:42:22.9±0.6, 28.62N×51.18E, h8km, ms2.5/3, Error ellipse: s-maj=9.2km s-min=5.5km az=32.0*
ISC 28 22:42:16.6±0.8, 29.18N±0.06×51.25E±0.05, h16km, n56, σ1.05/56, mb3.7/4, Southern Iran

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AHBU AHRAM 0.32 172 ePg Pb 22 42 24.1 +0.3
IKAZ Kazeroun 0.79 41 ePg Pg 22 42 27.8 -4.3
SHI Shiraz 1.20 67 ePg Pn 22 42 37.7 -1.2
ISRV Sarvestan 1.64 82 ePn Pn 22 42 46.6 +1.5
ISRV eSg Sg 22 43 11.2 +1.5
ISRV e 22 43 20.3
KLNJ Kolanjah 1.85 9 ePn Pn 22 42 47.2 -0.8
JHRM Jahrom 2.15 108 ePn Pb 22 42 54.4 -0.8
JHRM e 22 43 35.7
IBRJ Brojen 2.72 0 ePn Pn 22 43 00.5 +0.6
IRAM Ramesheh 2.80 20 ePn Pn 22 43 01.3 +0.4
JHBN Jahan bin 3.08 351 ePn Pn 22 43 05.3 +0.4
ROKH ROKH 3.16 357 ePn Pn 22 43 06.2 +0.3
IGAR Gharneh 3.29 12 ePn Pn 22 43 08.1 +0.5
ISAD Sadrabad 3.44 37 ePn Pn 22 43 10.8 +1.0
IPIR Pirpir 3.51 355 ePn Pn 22 43 10.7 0.0
SHGR Shooshtar-Gavs 3.60 325 ePn Pn 22 43 12.1 +0.4
SHGR Shooshtar-Gavs 3.60 325 ePn Pn 22 43 12.1 +0.4
IMEH Mehriz 3.65 52 ePn Pn 22 43 13.9 +1.2
IZEF Zefreh 3.82 14 ePn Pn 22 43 15.5 +0.5
IKLH Kolahrood 4.14 4 ePn Pn 22 43 18.6 -0.8
YZKH Yazd 4.31 41 ePn Pn 22 43 22.0 +0.5
YZKH Yazd 4.31 41 ePn Pn 22 43 22.0 +0.5
IBAF Bafgh 4.44 56 ePn Pn 22 43 24.2 +0.8
ANAR Anarak 4.53 27 ePn Pn 22 43 25.2 +0.6
QAM Ghamsar 4.57 2 ePn Pn 22 43 25.3 0.0
KHMZ Khomeyn 4.68 347 ePn Pn 22 43 26.9 +0.2
KHMZ IAML 22 44 25.5
comp=E,21nm,0.5s
KHMZ Khomeyn 4.68 347 ePn Pn 22 43 27.0 +0.2
KHGB Koh Gabri 4.70 74 ePn Pn 22 43 28.0 +0.9
NGRK Negar Kerman 4.81 83 ePn Pn 22 43 30.6 +1.9
KRSH Karshahi 4.84 9 ePn Pn 22 43 28.9 0.0
IKMR Kamar-syah 4.97 331 ePn Pn 22 43 30.2 -0.3
BDRS Dareh Seyedi 5.17 338 ePn Pn 22 43 34.4 +0.8
NIAN Nian 5.18 107 ePn Pn 22 43 34.6 +1.1
NIAN e 22 44 41.4
IKFM Kafar-mosalman 5.22 327 ePn Pn 22 43 35.1 +1.2
ASAO Ashtian 5.45 349 ePn Pn 22 43 37.8 +0.4
ASAO IAML 22 44 41.0
comp=E,30nm,0.6s
ASAO Ashtian 5.45 349 ePn Pn 22 43 37.8 +0.4
HSAM Samen 5.50 337 ePn Pn 22 43 38.0 -0.1
KHNJ Kahnooj 5.81 101 ePn Pn 22 43 44.1 +1.9
IKOM Komasi 5.91 328 ePn Pn 22 43 43.7 +0.1
HATD Hatta, Dubai 6.15 134 S Sn 22 44 57.3 +0.5
ASHO Ashiyiah 6.20 135 S Sn 22 44 57.0 -1.2
TNSJ Nastanj 6.61 42 ePn Pn 22 43 53.7 +0.5
TKDS Koohdasht(Taba 6.69 47 ePn Pn 22 43 54.5 +0.2
SNGE Sanandaj 6.76 332 IAML 22 45 17.1
comp=N,13nm,0.4s
ARQ Araqi 7.50 140 P Pn 22 44 06.8 +1.4

SNR=21
ARQ S Sn 22 45 29.2 -1.0
HOQ Hoqain 7.79 134 P Pn 22 44 14.4 +5.1
BSY Bisya 8.35 139 P Pn 22 44 18.3 +1.3
SNR=27
SMDO Samad 8.63 133 P **Pn** 22 44 23.2 +2.3
WSAR Wadi Sarin 8.88 130 Pn **Pn** 22 44 24.5 +0.2
comp=N,0.2nm,0.3s,baz=322,slow=12,SNR=2.1
WSAR Sn **Sn** 22 46 00.1 -4.0
comp=N,0.3nm,0.3s,baz=185,slow=15,SNR=2.4
JMDO Jabal Madar 9.17 136 P **Pn** 22 44 28.1 -0.2
MHTO MHTO 10.18 142 P **Pn** 22 44 42.5 +0.5
WHFO Wadi Hawf 11.44 168 P **Pn** 22 44 60.0 +0.5
SNR=13
DMTO DMTO 11.90 163 P **Pn** 22 45 04.0 -1.7
ABTO Aybut 11.92 170 P **Pn** 22 45 07.4 +1.4
MKAR Makanchi Array 29.87 45 P **P** 22 48 23.1 -0.2
comp=N,0.1nm,0.5s,baz=232,slow=10,SNR=1.9
ZALV Zalesovo Beam 34.72 35 P **P** 22 49 06.1 +0.5
comp=N,0.4nm,0.3s,baz=240,slow=9.3,SNR=2.1
ARCES ARCESS Array B 43.02 347 P **P** 22 50 15.0 0.0
comp=N,2.9nm,0.9s,baz=158,slow=9.7,SNR=2.5
TORD Torodi Ar. Bea 48.52 262 P **P** 22 50 59.0 -0.1
comp=N,0.4nm,0.8s,baz=69,slow=7.4,SNR=2.6

IDC 28 22:53:39.1±9.5, 21.77S×176.03W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.4/39, mbtmp3.5/2, Error ellipse: s-maj=407.8km s-min=61.2km az=146.0, Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ASAR Alice Springs 46.03 258 P P 23 02 05.3 +0.4
0.6nm,0.8s,baz=105,slow=8.0,SNR=5.6
WRA Warramunga Arr 46.26 263 P P 23 02 05.7 -1.0
0.5nm,0.8s,baz=96,slow=6.8,SNR=4.8
AKASG Malin Array Be 145.00 332 PKPbc PKPbc 23 13 17.1 -0.3
0.8nm,0.4s,baz=44,slow=4.3,SNR=5.0

IDC 28 22:54:27.4±0.8, 37.76N×21.18E, h0km, mb3.9/12, mb1 3.8/18, mb1mx3.6/53, mbtmp3.8/18, ML3.2/6, MS3.9/1, Ms1 3.9/1, ms1mx2.6/55, Error ellipse: s-maj=17.5km s-min=14.4km az=137.0
THE 28 22:54:29.6, 37.66N×21.17E, h14km±1km, ML3.5/16, Error ellipse: s-maj=1.3km s-min=0.8km az=234.0
PDG 28 22:54:29.0±0.3, 37.67N×21.14E, h23km, ML3.7/11, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0
ATH 28 22:54:29.4, 37.68N×21.18E, h20km, ML3.5/23, Error ellipse: s-maj=1.2km s-min=0.6km az=228.0
HLW 28 22:54:31.5, 37.68N×22.06E, h10km±10km, Md3.8, Ml4.3
NEIC 28 22:54:32.4±2.0, 37.70N±0.04×21.12E±0.06, h42km±11km, Error ellipse: s-maj=8.1km s-min=3.8km az=55.0
BEO 28 22:54:55.2±0.5, 39.61N×21.09E, h0km, ML3.1/4
ISC 28 22:54:29.4±0.9, 37.67N±0.02×21.16E±0.02, h18km±4km, n179, σ1§40/224, mb3.9/16, 1C-1D, Southern Greece

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VTN Vitineika 0.25 5 P **Pb** 22 54 35.4 +0.1
VTN S **Sg** 22 54 40.2 +1.2
VTN Vitineika 0.25 5 P **Pb** 22 54 35.5 +0.2
VTN S **Sg** 22 54 39.5 +0.5
VLMS Volimes, Zakyn 0.45 298 P **Pg** 22 54 38.7 +0.2
VLMS S **Sb** 22 54 46.3 +1.1
VLMS AML AML 22 54 51.4
comp=E,20746µm,0.3s
VLMS AML AML 22 55 00.5
comp=N,28951µm,0.5s
AMT Artemida-Makis 0.46 107 P **Pg** 22 54 38.4 -0.3
AMT S **Sb** 22 54 45.8 +0.4
comp=N,22µm,0.6s
AMT Artemida-Makis 0.46 107 P **Pg** 22 54 38.5 -0.2
AMT S **Sb** 22 54 45.8 +0.4
AMT AML AML 22 54 46.8
comp=N,38547µm,0.6s
AMT AML AML 22 54 47.2
comp=E,47235µm,0.5s
RLS Riolos of Patr 0.46 32 P **Pg** 22 54 38.3 -0.4
RLS S **Sb** 22 54 45.9 +0.4
comp=E,6µm,0.3s
RLS Riolos of Patr 0.46 32 P **Pg** 22 54 38.4 -0.4
RLS S **Sb** 22 54 45.5 0.0
RLS AML AML 22 54 47.3
comp=E,9354µm,0.3s
RLS AML AML 22 54 48.1
comp=N,14018µm,0.4s
DRO Drossia 0.52 57 P **Pg** 22 54 39.5 -0.4
DRO S **Sg** 22 54 46.2 -0.7
comp=N,18µm,0.4s
DRO Drossia 0.52 57 P **Pg** 22 54 39.7 -0.2
DRO AML AML 22 54 50.7
comp=N,34339µm,0.4s
DRO AML AML 22 54 50.7
comp=E,39509µm,0.4s
KFL Anninata 0.53 326 P **Pg** 22 54 40.0 0.0
KFL S **Sg** 22 54 47.4 +0.1
KFL Anninata 0.53 326 P **Pg** 22 54 40.1 0.0
VLS Valsamata 0.68 319 P **Pb** 22 54 42.2 -0.6
VLS S **Sg** 22 54 53.0 +1.1
comp=E,4µm,0.2s
VLS Valsamata 0.68 319 P **Pb** 22 54 42.5 -0.3
VLS AML AML 22 54 54.7
comp=E,9093µm,0.2s
VLS AML AML 22 54 55.2
comp=N,6042µm,0.2s
KEF2 Argostoli. Kep 0.73 313 P **Pb** 22 54 43.3 -0.3
ARGA Argostoli. Kep 0.74 314 P **Pb** 22 54 43.5 -0.3
ARGA S **Sn** 22 54 55.0 -0.8
ITM Ithomi 0.78 128 P **Pb** 22 54 44.2 -0.3
ITM S **Sg** 22 54 55.0 -0.1
comp=N,4µm,0.8s
ITM Ithomi 0.78 128 P **Pg** 22 54 44.7 0.0
ITM S **Sb** 22 54 54.5 -0.2
ITM AML AML 22 55 00.4
comp=N,7731µm,0.4s
ITM AML AML 22 55 05.4
comp=E,6265µm,0.7s
ITM Ithomi 0.78 128 **Pg** 22 54 44.8 0.0
LXRA Lixouri, Kepha 0.78 313 P **Pb** 22 54 44.0 +0.1
UPR University Cam 0.79 39 P **Pb** 22 54 45.8 +0.1
UPR S **Sg** 22 54 55.8 +0.4
UPR University Cam 0.79 39 P **Pn** 22 54 45.4 -0.3
KEF1 Kardakata, Kep 0.82 318 P **Pb** 22 54 44.9 -0.2
KEF4 Livadi, Kephal 0.83 316 P **Pb** 22 54 44.6 -0.7
KEF3 Kipouria, Keph 0.84 310 P **Pb** 22 54 45.1 -0.3
LAKA Lakka 0.86 48 P **Pb** 22 54 45.5 -0.4
LAKA S **Sg** 22 54 57.5 -0.2
comp=E,2µm,0.9s
LAKA Lakka 0.86 48 P **Pb** 22 54 45.5 -0.4
LAKA AML AML 22 55 00.4
comp=N,4598µm,0.7s
LAKA AML AML 22 55 01.4
comp=E,5591µm,1.1s
KLV Kalavryta, Ach 0.87 64 P **Pb** 22 54 44.9 -1.1
KLV Kalavryta, Ach 0.87 64 P **Pb** 22 54 45.3 -0.7
KLV S **Sb** 22 54 57.2 -0.1
KLV AML AML 22 55 03.8
comp=N,3550µm,0.5s
KLV AML AML 22 55 05.6
comp=E,3077µm,0.7s
PYL PYLOS 0.90 149 P **Pb** 22 54 46.0 -0.5
PYL S **Sn** 22 54 59.4 -0.3
comp=E,3µm,0.6s
PYL PYLOS 0.90 149 P **Pb** 22 54 46.2 -0.3
PYL S **Sn** 22 55 00.2 +0.5
PYL AML AML 22 55 04.8
comp=E,5997µm,0.7s
PYL AML AML 22 55 07.6
comp=N,3831µm,0.6s
FSK Fiskardo 0.92 329 P **Pb** 22 54 46.8 -0.1
FSK S **Sn** 22 55 01.3 +1.0
comp=N,3µm,0.6s
FSK Fiskardo 0.92 329 P **Pb** 22 54 46.6 -0.3
PDO Prodromos 0.93 1 P **Pb** 22 54 46.8 -0.2
PDO S **Sn** 22 55 01.4 +0.9
comp=N,8µm,0.4s
PDO Prodromos 0.93 1 P **Pb** 22 54 46.9 -0.2
PDO AML AML 22 55 08.6
comp=N,12768µm,0.3s
PDO AML AML 22 55 08.9
comp=E,10521µm,0.4s
KLMT Kalamata 0.94 130 P **Pg** 22 54 47.7 0.0
ALIK Aliki, Aigiali 0.96 51 P **Pb** 22 54 47.5 0.0
ALIK S **Sn** 22 55 01.3 +0.2
PVO Paravola 0.99 17 P **Pb** 22 54 48.1 +0.1
PVO S **Sg** 22 55 01.7 0.0
comp=E,3µm,0.4s
PVO Paravola 0.99 17 P **Pb** 22 54 48.2 +0.1
PVO AML AML 22 55 08.7
comp=E,5438µm,0.5s
PVO AML AML 22 55 11.0
comp=N,4968µm,0.3s
TRIZ Trizonia 1.00 46 P **Pb** 22 54 47.6 -0.7
TRIZ S **Sb** 22 55 01.1 0.0
comp=N,3µm,0.6s
TRIZ Trizonia 1.00 46 P **Pb** 22 54 47.6 -0.7
VLX Vlachokerasia 1.01 107 P **Pb** 22 54 47.7 -0.8
VLX S **Sn** 22 55 04.0 +1.3
comp=N,3µm,0.5s
VLX Vlachokerasia 1.01 107 P **Pb** 22 54 47.7 -0.8
VLX S **Sn** 22 55 02.8 +0.1
VLX AML AML 22 55 10.4
comp=N,7159µm,0.5s
VLX AML AML 22 55 10.4
comp=E,5207µm,0.5s
MGNA Meganis 1.03 344 P **Pb** 22 54 48.0 -0.7
MGNA S **Sg** 22 55 04.2 +1.2
MGNA AML AML 22 55 10.0
comp=N,2709µm,0.4s
MGNA AML AML 22 55 11.7
comp=E,3595µm,0.4s
EVGI Lefkada island 1.03 337 P **Pb** 22 54 48.1 -0.7
KALE Kalithea 1.06 47 P **Pb** 22 54 48.5 -0.8
KALE S **Sg** 22 55 05.4 +1.5
comp=E,3µm,0.5s
KALE Kalithea 1.06 47 P **Pb** 22 54 48.6 -0.6
KALE AML AML 22 55 08.5
comp=N,6400µm,0.6s
KALE AML AML 22 55 09.5
comp=E,5501µm,0.6s
LKD2 Lefkada island 1.19 341 P **Pn** 22 54 50.9 -0.3
LKD2 S **Sn** 22 55 06.8 -0.1
comp=E,2µm,0.6s
LKD2 Lefkada island 1.19 341 P **Pn** 22 54 51.0 -0.3
LKD2 AML AML 22 55 13.8
comp=N,4147µm,0.8s
LKD2 AML AML 22 55 14.8
comp=E,5731µm,0.5s
TSLK Tsoukalades, L 1.22 341 P **Pb** 22 54 51.8 -0.2
DLFA Delphi 1.33 52 P **Pb** 22 54 53.7 -0.2
EVR Evrytania 1.35 22 P **Pn** 22 54 53.4 -0.1
EVR S **Sg** 22 55 13.2 +0.1
comp=E,1µm,0.9s
EVR Evrytania 1.35 22 P **Pn** 22 54 53.7 +0.3
EVR AML AML 22 55 23.0
comp=E,2336µm,0.9s
EVR AML AML 22 55 27.6
comp=N,2006µm,0.8s
LTK Loutraki 1.47 76 P **Pb** 22 54 56.0 -0.3
LTK S **Sb** 22 55 15.1 +0.4
comp=N,835nm,0.8s
LTK Loutraki 1.47 76 P **Pb** 22 54 56.0 -0.3
PROD Prodromos 1.50 66 P **Pb** 22 54 56.8 +0.1
MAKR Makrakomi, Fth 1.55 29 P **Pb** 22 54 57.8 +0.2
MAKR AML AML 22 55 27.2
comp=N,2670µm,0.7s
MAKR AML AML 22 55 28.7
comp=E,3034µm,0.6s
KRND KRANIDI 1.61 100 P **Pb** 22 54 58.6 0.0
KRND AML AML 22 55 28.5
comp=E,1480µm,0.5s
KRND AML AML 22 55 33.9
comp=N,1704µm,0.6s
AXAR Agios Charalam 1.61 47 P **Pb** 22 54 58.5 -0.2
AXAR AML AML 22 55 29.8
comp=E,4984µm,0.7s
AXAR AML AML 22 55 33.6
comp=N,7204µm,0.7s
AGG Agios Georgios 1.64 34 P **Pb** 22 54 58.7 -0.3
AGG AML AML 22 55 27.3
comp=E,1082µm,0.9s
AGG AML AML 22 55 30.8
comp=N,1532µm,0.7s
AGG Agios Georgios 1.64 34 **Pb** 22 54 59.7 +0.6
DID Didima 1.66 95 P **Pb** 22 54 59.0 -0.4
DID AML AML 22 55 31.9
comp=E,2515µm,0.6s
DID AML AML 22 55 32.4
comp=N,1704µm,0.5s
VLI Veliai 1.71 123 P **Pb** 22 55 00.2 -0.1
LKR Lokris 1.75 55 P **Pb** 22 55 00.8 -0.2
LKR AML AML 22 55 33.9
comp=E,1520µm,0.5s
LKR AML AML 22 55 36.3
comp=N,1281µm,0.7s
VIL2 Platees 1.75 71 P **Pb** 22 55 01.1 +0.1
VIL2 AML AML 22 55 38.2
comp=E,2863µm,0.7s
VIL2 AML AML 22 55 38.6
comp=N,1285µm,0.6s
IGT Igoumenitsa 1.97 341 *e*Pg **Pg** 22 55 06.2 -1.1
IGT Igoumenitsa 1.97 341 P **Pb** 22 55 03.6 -1.2
THL Klokotos Trika 2.01 19 P **Pb** 22 55 05.3 -0.1
ATH Athens Observa 2.05 81 P **Pb** 22 55 05.5 -0.5
KTHA Kythira Island 2.07 132 P **Pb** 22 55 06.9 +0.4
VLY Voula,Athens 2.10 84 P **Pb** 22 55 05.5 -1.4
ATHU Athens Univers 2.10 81 P **Pb** 22 55 05.3 -1.7
PTL Penteli 2.17 79 P **Pb** 22 55 06.6 -1.7
MRKA Markates 2.17 61 P **Pb** 22 55 07.0 -1.3
DION Dionisos Attik 2.23 79 P **Pb** 22 55 08.1 -1.2
NEO Neokhori 2.30 44 P **Pb** 22 55 08.6 -1.8
KEK Kerkira 2.30 333 P **Pn** 22 55 08.1 +1.6
XOR Xorichti 2.33 43 P **Pb** 22 55 09.4 -1.4
SKIA Skiathos 2.35 50 P **Pb** 22 55 09.4 -1.8
ANKY Antikythira Is 2.49 136 P **Pn** 22 55 11.9 -1.7
PENT Pentalofos 2.52 360 P **Pn** 22 55 12.8 -1.5
AOS Alonnisos 2.61 54 P **Pn** 22 55 12.8 +2.1
KARY Karystos 2.62 81 P **Pn** 22 55 12.7 +1.9
LIT Litokhoron 2.64 23 **Pn** 22 55 13.2 +2.0
SERI Serifos 2.69 100 P **Pn** 22 55 13.9 +2.0
PAIG Paliouri 2.99 40 P **Pn** 22 55 17.8 +1.8
FNA Florina 3.12 3 *e*Pn **Pn** 22 55 20.3 +2.6
FNA Florina 3.12 3 **Pn** 22 55 19.1 +1.3
IMMV Iera Moni Meta 3.16 133 P **Pn** 22 55 20.0 +1.7
SCTE Santa Cesarea 3.19 320 Pn **Pn** 22 55 19.5 +0.8
VAM Vamos 3.33 132 P **Pn** 22 55 22.5 +1.9
OHR Ohrid 3.45 355 *i* Pn **Pb** 22 55 27.2 -2.8
APE Apeiranthos 3.53 98 P **Pn** 22 55 25.1 +1.7
SANT Santorini 3.67 109 Pn **Pn** 22 55 25.5 +0.1
TIP Timpagrande 3.77 295 **Pn** 22 55 27.2 +0.4
VAY Valandovo 3.81 16 *e*Pn **Pn** 22 55 31.4 +4.2
VAY Valandovo 3.81 16 *e*P **Pb** 22 55 32.2 -3.9
VAY Valandovo 3.81 16 *i* Pn **Pn** 22 55 31.0 +3.9
TIR Tirane 3.81 345 *e*Pn **Pn** 22 55 30.1 +2.9
TIR Tirane 3.81 345 Pn **Pn** 22 55 28.8 +1.6
IDI Anoyia 3.83 127 Pn **Pn** 22 55 29.5 +1.9
comp=N,1.1nm,0.3s,baz=314,slow=3.2,SNR=18
IDI Sn **Sn** 22 56 10.4 -1.7
comp=N,3.0nm,0.3s,baz=53,slow=20,SNR=4.6
IDI Anoyia 3.83 127 P **Pn** 22 55 29.8 +2.2
SRS Serrai 3.93 28 *e*Pn **Pb** 22 55 35.3 -2.8
CEL Celeste 4.20 280 Pn **Pn** 22 55 31.6 -1.1
LAST Lasithi 4.29 124 P **Pn** 22 55 35.5 +1.7
SKO Skopje 4.30 3 *e*Pn **Pn** 22 55 35.0 +1.0
MMB Musomiste 4.39 26 *i* P **Pn** 22 55 37.2 +2.0
ULC Ulcinj 4.54 342 ⇓*i*Pn **Pn** 22 55 37.3 +0.1
ULC *e*Sn **Sn** 22 56 29.9 +0.4
SG1 Sgolgore (BA) 4.71 314 *e*Pn **Pn** 22 55 41.6 +2.1
SG1 Sn **Sn** 22 56 32.7 -1.0
DRME Dracevica, Mon 4.76 342 *e*Pn **Pn** 22 55 40.9 +0.6
DRME *e*Sn **Sn** 22 56 34.8 -0.2
RZN Rozhen 4.86 33 *i* P **Pn** 22 55 44.5 +2.7
BOSS Bosilegrad 4.93 11 *e*Pn **Pn** 22 55 45.1 +2.5
BUM Brajici-Budva 4.94 340 *e*Pn **Pn** 22 55 43.1 +0.2
BUM *e*Sn **Sn** 22 56 39.3 -0.3
ALN Alexandroupoli 4.98 48 Pn **Pn** 22 55 43.9 +0.7
PDG Podgorica 4.98 344 *e*Pn **Pn** 22 55 44.2 +1.0
PDG *e*Sg **Sn** 22 56 34.8 -5.5
PDG Podgorica 4.98 344 Pn **Pn** 22 55 44.2 +1.0
TTG Podgorica 4.98 344 *e*Pn **Pn** 22 55 43.6 +0.4
TTG *e*Sn **Sn** 22 56 40.1 -0.2
PVY Plav 5.01 350 *e*Pn **Pn** 22 55 44.2 +0.4
PVY *e*Sn **Sn** 22 56 40.8 -0.4
ACER Acerenza 5.11 309 Pn **Pn** 22 55 46.0 +0.9
BARS Barje 5.17 5 *e*Pn **Pn** 22 55 46.9 +1.0
CEME Cevo 5.17 341 *e*Pn **Pn** 22 55 45.9 0.0
CEME *e*Sn **Sn** 22 56 45.5 +0.4
VTS Vitosha 5.19 17 *e*Pn **Pn** 22 55 49.0 +2.6
VTS Vitosha 5.19 17 *i* P **Pn** 22 55 48.3 +1.9
VTS Vitosha 5.19 17 **Pn** 22 55 46.3 -0.1
KARP Karpathos 5.27 112 Pn **Pn** 22 55 50.4 +3.0
IVA Berane 5.29 350 *e*Pn **Pn** 22 55 47.9 +0.3
IVA *e*Sn **Sn** 22 56 47.3 -0.8
KOME Kolasin 5.33 347 *e*Pn **Pn** 22 55 48.9 +0.7
KOME *e*Sn **Sn** 22 56 48.7 -0.4
VAE Valguarnera 5.36 270 Pn **Pn** 22 55 50.5 +1.9
comp=N,0.8nm,0.3s,baz=217,slow=18,SNR=4.2
VAE Sn **Sn** 22 56 43.0 -7.0
comp=N,0.3nm,0.3s,baz=6.7,slow=17,SNR=2.0
NKME Niksic 5.37 342 *e*Pn **Pn** 22 55 48.9 +0.3
NKME *e*Sn **Sn** 22 56 49.5 -0.5
TREB Trebinje 5.48 338 *e*Pn **Pn** 22 55 52.5 +2.3
TREB *e*Sg **Sn** 22 56 53.6 +0.8
SELS Selova 5.55 360 *e*Pn **Pn** 22 55 51.9 +0.8
BRY Bratogost 5.60 340 ⇑*i*Pn **Pn** 22 55 51.9 0.0
BRY *e*Sn **Sn** 22 56 54.5 -1.4
WDD Wied Dalam 5.63 253 Pn **Pn** 22 55 52.6 +0.4
SJES Sjenica 5.66 351 *e*Pn **Pn** 22 55 54.2 +1.5
ZAPS Zavoj 5.71 11 *e*Pn **Pn** 22 55 56.2 +2.8
UPM Unac-Piva 5.79 343 *e*Pn **Pn** 22 55 54.7 +0.1
UPM *e*Sn **Sn** 22 56 59.7 -0.9
STON Ston 5.83 334 *e*Sn Sn 22 56 48.1 -13
SGRT San Giovanni R 5.84 316 Pn **Pn** 22 55 56.3 +1.1
IVAS Ivanjica 5.95 353 *e*Pn **Pn** 22 55 57.2 +0.5
IVAS *e*Sg **Sn** 22 57 03.0 -1.4
BOVS Bovan 5.98 4 *e*Pn **Pn** 22 55 57.5 +0.5
PAOL Paolisi 6.11 305 Pn **Pn** 22 56 01.1 +2.1
ZAGS Zajecar 6.19 7 *e*Pn **Pn** 22 56 01.7 +1.8
GRUS Gruza 6.22 357 *e*Pn **Pn** 22 56 01.8 +1.4
CORL Corleone 6.23 274 Pn **Pn** 22 56 02.2 +1.7
CLTB Caltabellotta 6.31 272 Pn **Pn** 22 56 02.9 +1.2
BBLS Lazići 6.33 348 *e*Pn **Pn** 22 56 04.5 +2.6
DIVS Divibare 6.49 353 *e*Pn **Pn** 22 56 04.4 +0.4
TRUS Trudelj 6.58 355 *e*Pn **Pn** 22 56 06.4 +1.2
SLUM Salum 7.01 150 P **Pn** 22 56 10.8 -0.4
baz=156
SLUM S **Sn** 22 57 23.3 -7.1
baz=156
ELL Elmali 7.04 95 Pn **Pn** 22 56 13.3 +1.6
MLR Muntele Rosu 8.60 23 Pn **Pn** 22 56 33.8 +0.8
comp=N,0.1nm,0.3s,baz=212,slow=19,SNR=1.9
SWA2 9.13 156 P **Pn** 22 56 40.7 +0.4
baz=160
SWA2 AMP 22 58 00.0
baz=160
KEST Kesra 9.68 262 Pn **Pn** 22 56 49.5 +1.6
comp=N,0.1nm,0.3s,baz=357,slow=17,SNR=2.1
BRTR Keskin Array B 9.97 74 Pn Pn 22 56 57.5 +5.6
comp=N,0.1nm,0.3s,baz=254,slow=13,SNR=4.9
GLL Jalalah 11.93 129 P **Pn** 22 57 16.6 -1.9
baz=132
HFRF Wahat Farafira 12.10 148 P **Pn** 22 57 20.7 -0.3
baz=151
HFRF S Sn 22 59 25.1 -10
baz=151
GERES GERESS Array B 12.42 336 Pn **Pn** 22 57 24.8 -0.5
comp=N,0.1nm,0.3s,baz=165,slow=12,SNR=3.1
MMAI Mount Meron Ar 12.52 108 Pn **Pn** 22 57 25.7 -1.0
comp=N,0.4nm,0.3s,baz=294,slow=11,SNR=3.1
MMAI Sn Sn 22 59 31.8 -14
comp=N,0.4nm,0.3s,baz=244,slow=40,SNR=3.1
AKASG Malin Array Be 14.24 21 Pn **P** 22 57 56.2 -1.2
comp=N,0.6nm,0.3s,baz=215,slow=9.6,SNR=5.2
HFS Hagfors 22.98 350 P **P** 22 59 33.1 +0.2
comp=N,1.2nm,0.4s,baz=162,slow=10,SNR=14
NC602 NORSAR Array S 23.88 348 P **P** 22 59 41.5 -0.1
NC602 IAmb IAmb 22 59 58.6
comp=Z,6.7nm,1.1s
FINES FINESS Array B 24.00 6 P **P** 22 59 42.1 -0.6
comp=Z,1.3nm,0.4s,baz=184,slow=10,SNR=23
FIA1 FINESS Array S 24.00 6 P **P** 22 59 42.1 -0.7
FIA1 IAmb IAmb 22 59 51.0
comp=Z,2.5nm,0.8s
NAO01 NORSAR Array S 24.09 348 P **P** 22 59 44.8 +1.2
EKA Eskdalemuir Ar 24.14 325 P **P** 22 59 44.9 +0.8
comp=Z,0.6nm,0.5s,baz=117,slow=8.9,SNR=3.2
NB2 NORSAR Subarra 24.22 348 P **P** 22 59 43.4 -1.5
comp=Z,0.4nm,0.5s,baz=158,slow=11
NOA NORSAR Array B 24.22 348 P **P** 22 59 44.6 -0.3
comp=Z,0.8nm,0.9s,baz=156,slow=11,SNR=4.1
AKTO Aktyubinsk 29.09 52 P **P** 23 00 29.6 +0.8
comp=Z,0.8nm,0.3s,baz=244,slow=8.3,SNR=6.1
TORD Torodi Ar. Bea 29.96 221 P **P** 23 00 37.7 +0.9
comp=Z,0.8nm,0.5s,baz=30,slow=9.7,SNR=9.0
ABKAR Akbulak array 30.12 55 P **P** 23 00 37.9 0.0
ABKAR IAmb IAmb 23 00 38.5
comp=Z,1.4nm,0.9s
ARCES ARCESS Array B 32.01 3 P **P** 23 00 54.0 -0.4
comp=Z,0.9nm,0.6s,baz=194,slow=11,SNR=11
ARCES LR LR 23 15 12.1
comp=Z,211nm,20.8s,baz=314,slow=39
BVAR Borovoye Array 37.06 49 P **P** 23 01 39.0 +0.7
comp=Z,1.3nm,0.5s,baz=268,slow=8.4,SNR=11
DBIC Dimbokro 38.87 224 P **P** 23 01 54.8 +1.0
comp=Z,4.3nm,0.9s,baz=22,slow=10.0,SNR=4.2
DBIC Dimbokro 38.87 224 IAmb IAmb 23 01 55.4
comp=Z,5.5nm,0.9s
KURBB Kurchatov Arra 42.13 53 P **P** 23 02 20.0 -0.4
comp=Z,1.2nm,0.6s,baz=282,slow=8.8,SNR=4.6
MK31 Makanchi Array 45.14 58 P **P** 23 02 44.4 -0.4
MKAR Makanchi Array 45.14 58 P **P** 23 02 44.5 -0.3
comp=Z,0.5nm,0.3s,baz=273,slow=7.6,SNR=31
ZAA0 Zalesovo Array 45.66 48 P **P** 23 02 48.4 -0.4
ZAA0 IAmb IAmb 23 02 49.4
comp=Z,2.0nm,0.7s
ZALV Zalesovo Beam 45.66 48 P **P** 23 02 48.4 -0.3
comp=Z,1.7nm,0.5s,baz=269,slow=7.9,SNR=11
BATG Bathurst New B 61.85 310 P **P** 23 04 47.5 +0.2

SJA 28 22:56:56.1±0.8, 32.70S×72.53W, h56km±9km, ML3.0, MW3.4
GUC 28 22:57:02.7±0.7, 32.73S×71.63W, h17km±4km, ML2.9
ISC 28 22:56:57.6±2.5, 32.71S±0.04×71.9W±0.1, h10km±14km, n19, σ1§60/32, 4D, Near coast of central Chile

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VA01 Torpederas 0.39 143 *e*P **Pn** 22 57 09.8 +0.5
VA01 *i* S **Sb** 22 57 14.3 +1.7
VA01 IAML 22 57 15.4
comp=E,2µm,0.1s
ROCH El Roble 0.81 109 ⇓*i*P **Pn** 22 57 15.5 +0.2
ROCH *i* S **Sb** 22 57 24.6 -0.4
ROCH IAML 22 57 25.9
comp=N,1µm,0.2s
CO04 Los Peladeros 1.04 50 ⇓*i*P **Pg** 22 57 18.9 +1.1
CO04 *i* S **Sg** 22 57 31.7 +0.3
CO04 IAML 22 57 34.4
comp=N,673nm,0.3s
PEL Peldehue 1.13 113 *e*P **Pg** 22 57 20.1 +0.8
PEL *i* S **Sb** 22 57 33.4 -0.6
PEL IAML 22 57 38.4
comp=E,820nm,0.3s
RCDM Rinconada Maip 1.22 130 *e*P **Pg** 22 57 22.6 +1.6
RCDM *i* S **Sb** 22 57 37.4 +0.9
RCDM IAML 22 57 42.3
comp=E,471nm,0.1s
STL Santa Lucia 1.29 124 *e*P **Pg** 22 57 23.5 +0.9
STL *i* S **Sb** 22 57 39.5 +0.7
STL IAML 22 57 43.9
comp=E,265nm,0.4s
MT03 Universidad Ad 1.42 124 ⇓*i*P **Pg** 22 57 25.5 +0.6
MT03 *i* S **Sb** 22 57 43.6 +1.2
MT03 IAML 22 57 48.9
comp=E,1µm,0.2s
FCH Farellones 1.50 115 ⇓*i*P **Pg** 22 57 26.6 +0.1
FCH *i* S **Sb** 22 57 45.3 +0.3
FCH IAML 22 57 47.7
comp=N,314nm,0.3s
LMEL Las Melosas 1.83 129 *e*P **Pg** 22 57 32.5 -0.3
LMEL *i* S **Sb** 22 57 55.5 +1.1
LMEL IAML 22 58 01.1
comp=N,337nm,0.2s
RTLS Leoncito 2.40 68 *i* P **Pg** 22 57 42.0 -1.7
RTLS *e*S **Sb** 22 58 13.4 +2.4
RTLS IAML 22 58 18.8
comp=Z,37nm,0.7s

RTCV	Cerro Valdivia	2.99	74	iP	Pb	22 57 50.3	-0.7
RTCV				eS	Sb	22 58 30.9	+3.4
ZON	Zonda	2.99	68	iP	Pb	22 57 50.4	-0.5
ZON				eS	Sb	22 58 30.2	+2.6
ZON				IAML		22 58 39.0	
	comp=Z,30nm,0.6s						
ZON				IAML		22 58 39.2	
	comp=Z,22nm,0.5s						
ACCO	Cerro Coronel	3.23	50	iP	Pb	22 57 53.9	-1.3
ACCO				eS	Sb	22 58 35.2	+0.4
ACCO				IAML		22 58 43.8	
	comp=Z,42nm,0.4s						
RTLL	Cerro Villicun	3.24	66	iP	Pb	22 57 53.6	-1.6
RTLL				IAML		22 58 42.9	
	comp=Z,26nm,0.3s						
RTLL				IAML		22 58 44.9	
	comp=Z,24nm,0.3s						
CFA	Coronel Fontan	3.31	72	iP	Pb	22 57 54.9	-1.7
CFA				eS	Sb	22 58 38.6	+1.7
AMOG	MOGNA	3.41	60	iP	Pb	22 57 56.1	-2.1
AMOG				IAML		22 58 46.7	
	comp=Z,28nm,0.4s						
ACAN	Cantantal	4.02	85	iP	Pb	22 58 04.7	-4.0
APLL	PUNTA DE LOS L	5.15	65	iP	Pn	22 58 19.2	+4.3
APLL				IAML		22 59 28.9	
	comp=Z,4.8nm,0.8s						
ACLC	CERRO LA CRUZ	5.38	54	iP	Pn	22 58 18.2	+0.2

SJA **28** *22:58:53.9±0.9, 22°.68S×66°.16W, h250^{km}±7^{km}, ML2.5, MW2.9*
GUC **28** *22:58:55.4±0.5, 22°.81S×66°.47W, h275^{km}±17^{km}, ML3.7*
ISC 28 22:58:54.6±3.2, 22°.79S±0°.08×66°.27W±0°.09, h245^{km}±24^{km}, n20, σ0^{s}97/33, 5C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
HJA	Humahuaca	0.89	118	iP	Pn	22 59 29.8	+0.8
HJA				IAML		22 59 30.6	
	comp=Z,20nm,0.6s						
HJA				eS	S	22 59 55.6	-0.4
YJA	Yavi	0.93	49	iP	Pn	22 59 30.5	+1.2
YJA				IAML		22 59 30.9	
	comp=Z,24nm,0.3s						
YJA				eS	S	22 59 54.5	-2.0
AZAP	Zapla	1.80	142	iP	Pn	22 59 35.4	+0.2
AZAP				eS	S	23 00 06.6	-0.5
LVC	Limon Verde	2.44	274	eP	Pn	22 59 42.4	+1.0
LVC	Limon Verde	2.44	274	iP	Pn	22 59 42.3	+1.0
LVC				IAML		22 59 42.8	
	comp=Z,14nm,0.3s						
PB09	IPOC Station P	2.92	289	⇑iP	Pn	22 59 47.6	+1.4
PB09				eS	S	23 00 27.2	+0.4
PB09				IAML		23 00 33.2	
	comp=E,34nm,0.4s						
PB09	IPOC Station P	2.92	289	iP	Pn	22 59 47.1	+0.9
PB09				eS	S	23 00 26.2	-0.6
PB15	IPOC Station P	2.98	261	eP	Pn	22 59 47.8	+1.1
PB15				eS	S	23 00 27.6	-0.3
PB15	IPOC Station P	2.98	261	iP	Pn	22 59 48.0	+1.2
PB15				eS	S	23 00 27.7	-0.2
PB06	IPOC Station P	3.05	271	eP	Pn	22 59 48.4	+0.9
PB06				eS	S	23 00 28.9	-0.3
PB06				IAML		23 00 29.3	
	comp=N,194nm,0.2s						
PB06	IPOC Station P	3.05	271	iP	Pn	22 59 48.6	+1.1
PB03	IPOC Station P	3.31	282	⇑eP	Pn	22 59 50.9	+0.5
PB03				eS	S	23 00 33.1	-1.3
PB01	IPOC Station P	3.46	300	⇑eP	Pn	22 59 52.5	+0.5
PB01				eS	S	23 00 36.8	-0.7
PB07	IPOC Station P	3.51	287	⇑iP	Pn	22 59 53.3	+0.5
PB07				iS	S	23 00 36.8	-1.8
PB04	IPOC Station P	3.61	277	⇑iP	Pn	22 59 54.3	+0.4
PB04				eS	S	23 00 39.0	-1.8
PB04	IPOC Station P	3.61	277	iP	Pn	22 59 54.4	+0.5
PB05	IPOC Station P	3.63	268	iP	Pn	22 59 54.5	+0.5
GO02	Mina Guanaco	3.84	231	eP	Pn	22 59 57.2	+0.5
GO02				eS	S	23 00 45.4	-0.4
PB10	IPOC Station P	4.01	259	iP	Pn	22 59 58.6	+0.3
PB14	IPOC Station P	4.21	243	iP	Pn	23 00 01.1	+0.2

IDC 28 23:01:25.2±6.3, 32°.60N×39°.32W, h0^{km}, mb3.6/4, mb1 3.6/4, mb1mx3.3/40, mbtmp3.6/4, MS3.5/1, Ms1 3.5/1, ms1mx2.9/32, Error ellipse: s-maj=150.2km s-min=54.0km az=59.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
SCHQ	Schefferville	29.49	327	LR	LR	23 18 31.9	
	comp=Z,97nm,19.6s,baz=62,slow=35						
TORD	Torodi Ar. Bea	42.13	108	P	P	23 09 19.1	-0.3
	0.7nm,0.8s,baz=315,slow=7.3,SNR=3.8						
H10N2	ASCENSION HYDR	46.65	145	T	T	23 59 47.8	
	baz=329,slow=75,SNR=4.9						
H10N3	ASCENSION HYDR	46.65	145	T	T	23 59 50.7	
	baz=329,slow=75,SNR=17						
H10N1	ASCENSION HYDR	46.66	145	T	T	23 59 51.0	
	baz=329,slow=75,SNR=5.7						
H10S3	ASCENSION HYDR	47.54	146	T	T	00 00 49.7	
	baz=251,slow=74,SNR=26						
H10S2	ASCENSION HYDR	47.55	146	T	T	00 00 49.6	
	baz=329,slow=74,SNR=24						
AKASG	Malin Array Be	52.40	48	P	P	23 10 38.3	-0.8
	0.2nm,0.3s,baz=278,slow=6.5,SNR=5.3						
BRTR	Keskin Array B	57.85	61	P	P	23 11 19.8	+0.9
	0.3nm,0.4s,baz=269,slow=7.2,SNR=3.5						
ZALV	Zalesovo Beam	81.23	30	P	P	23 13 42.9	+0.1
	0.5nm,0.6s,baz=328,slow=5.1,SNR=3.9						

IDC **28** *23:04:58.1±4.0, 25°.50N×125°.47E, h53^{km}±38^{km}, mb3.4/8, mb1 3.7/8, mb1mx3.4/38, mbtmp3.7/8, ML1.9/1, Error ellipse: s-maj=26.5km s-min=17.8km az=72.0*
NIED **28** *23:05:00, 25°.50N×125°.50E, h86^{km}, Mw3.8 Best double couple: $M_0$4.81000×10^{14} NP1:ϕ_s279.00000°, δ70.00000°, λ84.00000°. NP2:ϕ_s116.00000°, δ21.00000°, λ106.00000°.*
JMA **28** *23:05:00.5±0.1, 25°.54N×125°.47E, h80^{km}±3^{km}, M3.8*
ISC 28 23:05:01.2±0.7, 25°.47N±0°.09×125°.54E±0°.08, h83^{km}±8^{km}, n19, σ0^{s}81/28, mb3.7/8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
JIKM	Ikemajima	0.61	206	P	Pn	23 05 15.8	-0.4
JIKM				eS	Sn	23 05 27.3	0.0
JOGS	Gusukube	0.72	190	P	Pn	23 05 17.2	-0.1
JOGS				eS	Sn	23 05 29.0	-0.2
JIRB	Irabujima	0.72	208	P	Pn	23 05 16.6	-0.7
JIRB				eS	Sn	23 05 28.8	-0.5
JMJ2	Miyako jima3	0.75	195	P	Pn	23 05 17.4	-0.2
JMJ2				eS	Sn	23 05 30.2	+0.3
JTJ	Tarama	1.13	223	P	Pn	23 05 21.4	-0.5
JTJ				S	Sn	23 05 36.7	-0.7
JKE	Kume jima 2	1.41	52	P	Pn	23 05 25.1	-0.3
JKE				eS	Sn	23 05 43.3	-0.3
JISG	Ishigakijimahi	1.42	232	P	Pn	23 05 25.1	-0.5
JISG				eS	Sn	23 05 43.8	-0.3
JAGN	Aguni-jima	1.89	54	P	Pn	23 05 31.6	-0.1
JAGN				eS	Sn	23 05 55.4	+0.5
JOW	Kunigami	2.80	61	P	Pn	23 05 42.8	-1.1
	0.3nm,0.3s,baz=198,slow=14,SNR=6.3						
JOW				S	Sn	23 06 14.5	-2.3
	3.6nm,0.3s,baz=88,slow=20,SNR=5.6						
KSRS	Korea Array	12.12	9	P	Pn	23 07 52.0	+1.3
	0.1nm,0.3s,baz=188,slow=14,SNR=3.1						
MJAR	Matsushiro Arr	15.46	41	P	P	23 08 37.7	+0.5
	0.1nm,0.3s,baz=227,slow=8.2,SNR=6.0						
SONM	Songino Array	26.95	331	P	P	23 10 34.8	-0.1
	0.2nm,0.3s,baz=150,slow=13,SNR=4.4						
MKAR	Makanchi Array	40.26	313	P	P	23 12 29.4	-0.6
	0.2nm,0.4s,baz=100,slow=9.4,SNR=7.2						
ZALV	Zalesovo Beam	41.42	324	P	P	23 12 38.1	-1.2
	0.8nm,0.4s,baz=110,slow=8.7,SNR=4.8						
WRA	Warramunga Arr	45.95	168	P	P	23 13 15.9	0.0
	1.2nm,0.6s,baz=349,slow=8.5,SNR=5.0						
ASAR	Alice Springs	49.52	170	P	P	23 13 43.8	+0.3
	1.0nm,0.6s,baz=356,slow=12,SNR=19						
ILAR	Eielson Array	66.24	28	P	P	23 15 41.0	+0.9
	0.4nm,0.5s,baz=257,slow=4.9,SNR=4.9						
FINES	FINESS Array B	72.32	330	P	P	23 16 16.8	-0.8
	1.1nm,0.8s,baz=44,slow=5.8,SNR=4.7						
YKA	Yellowknife Ar	80.22	24	P	P	23 17 03.1	+0.8
	0.4nm,0.6s,baz=300,slow=5.5,SNR=6.0						

TEH **28** *23:19:38.3, 32°.44N×46°.96E, h12^{km}, ML3.5*
THR **28** *23:19:39.6±0.4, 32°.63N×47°.05E, h18^{km}±9^{km}, ML3.2*
ISN **28** *23:19:40.7±1.1, 32°.46N×47°.03E, h25^{km}±6^{km}, ML3.0*
ISC 28 23:19:39.5±1.3, 32°.47N±0°.04×47°.04E±0°.03, h10^{km}±12^{km}, n46, σ1^{s}17/52, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
IBDR	Badra	1.13	305	ePg	Pb	23 20 01.0	-0.2
IBDR				eSg	Sg	23 20 17.0	+1.0
IBDR				AML	AML	23 20 21.6	
	comp=N,183nm,0.5s						
IBDR				AML	AML	23 20 22.1	
	comp=E,306nm,0.7s						
IKFM	Kafar-mosalman	1.25	33	ePg	Pn	23 20 02.3	-0.8
IKFM				eSg	Sg	23 20 22.6	+2.7
IKFM				e		23 20 24.8	
SHGR	Shooshtar-Gavs	1.54	103	ePn	Pg	23 20 08.5	-0.5
SHGR				eSg	Sg	23 20 29.6	+0.6
SHGR				IAML		23 20 33.6	
	comp=N,233nm,0.2s						
SHGR				IAML		23 20 34.3	
	comp=E,271nm,0.3s						
SHGR	Shooshtar-Gavs	1.54	103	ePn	Pg	23 20 08.5	-0.5
IKMR	Kamar-syah	1.54	47	e		23 20 31.6	
IKMR				ePn	Pb	23 20 07.6	-0.5
IDOB	Doab	1.63	36	ePn	Pb	23 20 09.0	-0.7
NSR	Nassriya	1.64	208	ePn	Pb	23 20 09.0	-0.9
NSR				eSn	Sb	23 20 30.0	-0.6
NSR				AML	AML	23 20 35.0	
	comp=E,114nm,0.5s						
IKOM	Komasi	1.75	13	ePn	Pb	23 20 11.0	-0.8
IKOM				e		23 20 15.7	
KCHF	Cheshme Sefid,	1.80	0	ePg	Pb	23 20 12.2	-0.5
KCHF				e		23 20 41.6	
IGHG	Ghaleghazi	1.90	348	ePn	Pb	23 20 13.0	-1.4
IGHG				e		23 20 48.1	
KER	Kermanshah	1.91	2	ePn	Pb	23 20 13.4	-1.2
BMDN	Meydan	1.92	51	ePn	Pb	23 20 13.2	-1.6
IVIS	Veis	2.06	356	ePn	Pn	23 20 14.9	+0.6
IVIS				e		23 20 48.5	
BDRS	Dareh Seyedi	2.14	46	ePn	Pn	23 20 16.4	+0.8
HSAM	Samen	2.18	37	ePn	Pn	23 20 16.9	+0.9
IDHR	Dehrash	2.29	346	ePn	Pn	23 20 18.2	+0.6
IDHR				e		23 20 54.9	
BHD	Baghdad	2.38	290	ePn	Pb	23 20 20.0	-2.4
BHD				eSn	Sn	23 20 48.0	+0.3
ILIN	Lien	2.44	359	ePn	Pn	23 20 21.0	+1.3
IALM	Almabolaq	2.56	21	ePn	Pb	23 20 23.7	-2.1
SNGE	Sanandaj	2.63	6	ePn	Pn	23 20 21.3	-0.9
SNGE	Sanandaj	2.63	6	ePn	Pn	23 20 21.3	-0.9
KHMZ	Khomeyn	2.76	62	ePn	Pn	23 20 24.2	+0.2
KHMZ	Khomeyn	2.76	62	ePn	Pn	23 20 24.2	+0.2
HAGD	Aghdareh	2.93	36	ePn	Pn	23 20 27.3	+0.9
HAGD				e		23 20 36.6	
HSRG	Sareghieh	2.95	20	ePn	Pb	23 20 29.4	-3.0
IPIR	Pirpir	3.26	85	ePn	Pn	23 20 32.2	+1.2
ROKH	ROKH	3.38	91	ePn	Pn	23 20 33.5	+0.9
IBRJ	Brojen	3.62	98	ePn	Pn	23 20 37.0	+1.1
IKRK	Kirkuk	3.69	323	ePn	Pn	23 20 38.0	+1.5
IKRK				eSn	Sn	23 21 21.0	+1.0
IKRK				AML	AML	23 21 41.2	
	comp=E,29nm,0.6s						
IKRK				AML	AML	23 22 00.0	
	comp=N,258nm,0.5s						
IRAZ	Razeghan	3.79	39	ePn	Pn	23 20 39.7	+1.6
QABG	Abgarm-Qazvin	3.86	32	ePn	Pn	23 20 39.8	+0.6
QAM	Ghamsar	3.91	70	ePn	Pn	23 20 41.2	+1.4
IKLH	Kolahrood	3.91	76	ePn	Pn	23 20 41.3	+1.4
GHVR	GHOM	4.08	59	ePn	Pn	23 20 41.4	-0.7
GHVR	GHOM	4.08	59	ePn	Pn	23 20 41.4	-0.7
IQOM	Qom	4.11	54	ePn	Pn	23 20 42.9	+0.3
KLNJ	Kolanjah	4.14	109	ePn	Pn	23 20 44.2	+1.0
IGAR	Gharneh	4.23	90	ePn	Pn	23 20 45.3	+1.0
IZEF	Zefreh	4.48	83	ePn	Pn	23 20 48.4	+0.7
KRSH	Karshahi	4.53	69	ePn	Pn	23 20 49.0	+0.7
IRAM	Ramesheh	4.58	97	ePn	Pn	23 20 49.5	+0.5
IGZV	Ghazvin	4.71	33	ePn	Pn	23 20 52.4	+1.6
QALM	Alamut, Qazvin	4.95	36	ePn	Pn	23 20 54.9	+0.7
IDMV	Damavand	5.18	52	ePn	Pn	23 20 56.8	-0.5
ANAR	Anarak	5.68	81	ePn	Pn	23 21 05.1	+1.0
IFIR	Firoozkooh	5.70	55	ePn	Pn	23 21 04.8	+0.3

BJI **28** *23:27:19.0±0.0, 32°.20N×40°.40W, h10^{km}, mB5.4/4, mb4.9/11, Ms5.0/4, Ms7 4.9/2*
IDC **28** *23:27:20.6±0.5, 32°.20N×40°.33W, h0^{km}, mb4.2/35, mb1 4.3/35, mb1mx4.3/51, mbtmp4.2/35, Error ellipse: s-maj=13.7km s-min=10.9km az=167.0*
NEIC **28** *23:27:21.5±1.3, 32°.1N±0°.1×40°.3W±0°.1, h10^{km}±1^{km}, mb4.8/89, Error ellipse: s-maj=18.4km s-min=14.2km az=159.0*
GCMT **28** *23:27:25.5±0.5, 32°.44N±0°.05×40°.36W±0°.04, h18^{km}±1^{km}, MW4.9/78, Moment Tensor Solution. s9,c9; s78,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.18±.25; $M_{\theta\theta}$0.84±.17; $M_{\phi\phi}$1.34±.14; $M_{r\theta}$1.10±.42; $M_{r\phi}$1.08±.09; $M_{\theta\phi}$-0.19±.26; Best double couple: $M_0$2.44000×10^{16} NP1:ϕ_s20.00000°, δ41.00000°, λ-121.00000°. NP2: ϕ_s239.00000°, δ56.00000°, λ-66.00000°. Principal axes: T 2.2700, Plg8.0000°, Azm312.0000°; N 0.3380, Plg20.0000°, Azm45.0000°; P -2.6090, Plg69.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 28 23:27:22.4±0.4, 32°.14N±0°.08×40°.39W±0°.06, h14^{km}, n189, σ0^{s}95/183, mb4.6/87, 1C-18D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
DRLN	Deer Lake	21.38	328	P	P	23 32 09.8	+0.5
DRLN				IAmb	IAmb	23 32 11.8	
	comp=Z,60nm,1.3s						
ANWB	Willy Bob	24.11	238	P	P	23 32 34.3	-3.4
H05N1	Guadeloupe/Mar	24.50	235	T	T	23 58 11.0	
	SNR=138						
SCHQ	Schefferville	29.39	328	P	P	23 33 23.9	-1.2
	comp=Z,1.6nm,1.0s,baz=102,slow=15,SNR=2.9						
SCHQ	Schefferville	29.39	328	IAmb	IAmb	23 34 23.2	
	comp=Z,47nm,2.0s						
ESDC	Sonseca Array	30.29	65	P	P	23 33 33.0	-0.2
	comp=Z,3.0nm,1.1s,baz=263,slow=10.0,SNR=3.3						
SADO	Sadowa	32.56	304	P	P	23 33 53.4	+0.4
	comp=Z,1.3nm,0.5s,baz=90,slow=1.0,SNR=2.5						
SADO	Sadowa	32.56	304	IAmb	IAmb	23 33 59.9	
	comp=Z,12nm,1.1s						
TKL	Tuckaleechee C	35.97	288	P	P	23 34 22.7	0.0
	comp=Z,1.5nm,0.5s,baz=59,slow=12,SNR=2.7						
TKL	Tuckaleechee C	35.97	288	IAmb	IAmb	23 35 17.2	
	comp=Z,19nm,1.4s						
FRB	Frobisher Bay	36.21	339	P	P	23 34 23.9	-0.5
	comp=Z,4.6nm,0.9s,baz=135,slow=7.6,SNR=12						
SDV	Santo Domingo	36.35	237	P	P	23 34 28.3	+2.0
	comp=Z,5.3nm,0.9s,baz=11,slow=2.0,SNR=7.6						
SDV	Santo Domingo	36.35	237	P	P	23 34 28.1	+1.8
SDV				IAmb	IAmb	23 34 34.9	
	comp=Z,14nm,0.9s						
D41A	Chassel	39.37	307	P	P	23 34 52.4	+1.1
DAVOX	Davos/Dischmat	40.78	54	P	P	23 35 03.1	-0.2
	comp=Z,3.7nm,0.8s,baz=328,slow=16,SNR=4.5						
DAVA	Damuels	40.80	53	esP	P	23 35 05.1	+1.7
	comp=Z,15nm,1.2s						
KEST	Kesra	41.07	71	P	P	23 35 05.4	-0.3
	comp=Z,7.7nm,0.8s,baz=238,slow=8.3,SNR=6.8						
E38A	The Farm, Brul	41.39	306	P	P	23 35 08.0	-0.1
EYMN	Ely	41.41	308	P	P	23 35 07.7	-0.6
RETA	Reutte	41.41	53	epP	P	23 35 10.0	+1.7
	comp=Z,9.2nm,1.5s						
TAM	Tamanrasset	41.53	91	P	P	23 35 11.2	+1.5
MOTA	Moosalm	41.64	53	epP	P	23 35 10.8	+0.5
	comp=Z,22nm,1.9s						
DBIC	Dimbokro	41.68	120	P	P	23 35 10.5	-0.3
	comp=Z,4.7nm,1.0s,baz=330,slow=10.0,SNR=4.0						
DBIC	Dimbokro	41.68	120	IAmb	IAmb	23 35 16.9	
	comp=Z,8.2nm,0.9s						
SQTA	Sankt Quirin	41.70	53	epP	P	23 35 11.3	+0.5
	comp=Z,14nm,1.3s						
WATA	Walderalm	41.96	53	epP	P	23 35 14.4	+1.5
	comp=Z,7.5nm,1.0s						
WTTA	Wattenberg	42.00	53	epP	P	23 35 13.8	+0.5
	comp=Z,20nm,1.8s						
ABTA	Abfaltersbach	42.58	54	epP	P	23 35 18.0	+0.1
	comp=Z,8.1nm,0.9s						
NKC	Novy Kostel	42.70	49	eP	P	23 35 19.3	+0.6
TOA0	Torodi Ar. Sit	42.86	106	P	P	23 35 19.5	-1.0
TORD	Torodi Ar. Bea	42.86	106	P	P	23 35 19.9	-0.6
	comp=Z,10nm,1.0s,baz=302,slow=6.1,SNR=27						
CLL	Collm	43.14	47	iP	P	23 35 22.9	+0.7
	comp=Z,13nm,1.2s						
CLL				epP	pP	23 35 25.0	-0.8
CLL				e		23 35 33.0	
CLL	Collm	43.14	47	P	P	23 35 22.1	-0.2
U40A	Yellville	43.14	291	P	P	23 35 23.1	+0.6
KBA	Koelnbreinsper	43.16	54	epP	P	23 35 24.0	+1.3
	comp=Z,11nm,1.9s						
KHC	Kasperske Hory	43.36	51	eP	P	23 35 24.8	+0.6
KHC	Kasperske Hory	43.36	51	P	P	23 35 25.0	+0.8
GERES	GERESS Array B	43.43	51	P	P	23 35 24.6	-0.2
	comp=Z,1.0nm,0.6s,baz=269,slow=6.4,SNR=8.9						
BRG	Berggiesshubel	43.69	48	eP	P	23 35 26.5	-0.2
	comp=Z,87nm,2.3s						
BRG				e		23 35 36.8	
	comp=Z,34nm,1.8s						
MOA	Molln	43.79	53	i pP	P	23 35 27.2	-0.4
	comp=Z,11nm,2.0s						
PRA	Prague	43.96	49	eP	P	23 35 29.9	+1.0
HHAR	Hobbs	44.02	291	P	P	23 35 30.1	+0.5
HHAR				IAmb	IAmb	23 35 36.6	
	comp=Z,21nm,1.6s						
PRU	Pruhonice	44.03	49	eP	P	23 35 30.3	+0.9
PRU				ex	x	23 35 39.8	
NB2	NORSAR Subarra	44.03	33	P	P	23 35 29.6	+0.2
	comp=Z,1.6nm,0.7s,baz=253,slow=8.6						
NOA	NORSAR Array B	44.03	33	P	P	23 35 29.2	-0.2
	comp=Z,2.9nm,0.8s,baz=254,slow=8.0,SNR=12						
PVCC	Panska Ves	44.07	49	eP	P	23 35 30.4	+0.6
SOKA	Soboth	44.32	54	epP	P	23 35 32.5	+0.5
	comp=Z,6.6nm,1.2s						
U38A	Gravette	44.34	291	P	P	23 35 32.7	+0.5
ULM	Lac du Bonnet	44.40	311	P	P	23 35 31.5	-0.9
	comp=Z,1.8nm,0.7s,baz=52,slow=4.4,SNR=4.3						
FCC	Fort Churchill	44.47	323	P	P	23 35 33.1	+0.2
ARSA	Arzberg	44.64	53	eP	P	23 35 33.8	-0.6
	comp=Z,8.3nm,1.6s						
UPC	Upice	44.99	49	eP	P	23 35 37.4	+0.3
CHVC	Chvalec	45.02	49	eP	P	23 35 37.8	+0.4
OSTC	Ostas	45.12	49	eP	P	23 35 38.5	+0.3
OSTC				ex	x	23 35 48.7	
KSP	Ksiaz	45.18	48	eP	P	23 35 39.1	+0.5
DPC	Dobruska-Polom	45.18	49	eP	P	23 35 38.6	-0.1
KRUC	Moravsky	45.21	51	eP	P	23 35 38.6	-0.3
VRAC	Vranov	45.34	50	eP	P	23 35 39.8	-0.2
VRAC	Vranov	45.34	50	⇓P	P	23 35 39.3	-0.6
KRLC	Kraliky	45.47	49	eP	P	23 35 41.3	+0.3
KRLC				ex	x	23 35 50.8	
MODS	Modra-Piesok	45.80	52	eP	P	23 35 42.8	-0.8
SMOL	Smolenice	45.90	52	eP	P	23 35 44.4	0.0
T35A	Sooner Cattle	45.92	292	P	P	23 35 45.2	+0.4
T35A				IAmb	IAmb	23 35 51.5	
	comp=Z,8.6nm,0.9s						
MORC	Moravsky Berou	45.96	50	eP	P	23 35 45.0	+0.1
MORC	Moravsky Berou	45.96	50	⇓P	P	23 35 44.7	-0.3
MORC	Moravsky Berou	45.96	50	P	P	23 35 44.6	-0.3
MORC				IAmb	IAmb	23 35 55.8	
	comp=Z,13nm,1.3s						
SAML	Samuel	46.30	212	P	P	23 35 48.3	+0.5
SAML				IAmb	IAmb	23 35 55.0	
	comp=Z,13nm,1.1s						
H10N2	ASCENSION HYDR	46.80	144	T	T	00 25 49.4	
	baz=329,slow=75,SNR=57						
H10N3	ASCENSION HYDR	46.81	144	T	T	00 25 53.0	
	baz=329,slow=75,SNR=57						
H10N1	ASCENSION HYDR	46.82	144	T	T	00 25 43.2	
	baz=329,slow=75,SNR=57						
VYHS	Vyhne	46.84	52	eP	P	23 35 51.4	-0.4
OJC	Ojcow	47.41	49	eP	P	23 35 56.0	-0.2
H10S3	ASCENSION HYDR	47.68	145	T	T	00 26 39.4	
	baz=328,slow=74,SNR=83						
H10S2	ASCENSION HYDR	47.70	145	T	T	00 26 40.1	
	baz=252,slow=74,SNR=83						
NIE	Niedzica	47.76	50	eP	P	23 36 00.2	+1.2
WHTX	Lake Whitney,	47.85	286	P	P	23 36 00.8	+0.9
OTAV	Otavalo	47.92	236	P	P	23 36 00.7	-0.4
OTAV				IAmb	IAmb	23 36 13.1	
	comp=Z,14nm,1.2s						
BDFB	Brasilia	48.07	190	P	P	23 36 02.7	+1.0
	comp=Z,3.9nm,1.0s,baz=189,slow=3.0,SNR=5.0						
FFC	Flin Flon	48.29	317	P	P	23 36 02.7	-0.2
FFC				IAmb	IAmb	23 36 10.1	
	comp=Z,8.4nm,1.2s						
CRVS	Cervenica-Dubn	48.55	51	eP	P	23 36 05.8	+0.7
BZS	Buzias	48.96	55	⇓P	P	23 36 08.8	+0.6
OHR	Ohrid	49.02	61	iPg	P	23 36 22.8	+14
KOLS	Kolonicke sedl	49.09	51	eP	P	23 36 09.4	+0.2
KWP	Kalwaria Pacla	49.32	50	eP	P	23 36 11.7	+0.8
SKO	Skopje	49.35	60	iPg	P	23 36 21.7	+10
GZR	Gura Zlata	49.79	55	⇓P	P	23 36 14.6	-0.1
DEV	Deva	49.82	55	⇓P	P	23 36 15.4	+0.6
RES	Resolute Bay	50.11	344	P	P	23 36 17.5	+0.9
	comp=Z,2.0nm,0.4s,baz=140,slow=12,SNR=15						
RES	Resolute Bay	50.11	344	P	P	23 36 17.4	+0.9
VAY	Valandovo	50.30	61	iPg	P	23 36 18.9	+0.5
VTS	Vitosha	50.55	59	⇓P	P	23 36 20.6	0.0
VTS	Vitosha	50.55	59	IAmb	IAmb	23 36 21.9	
	comp=Z,7.4nm,0.9s						
ARR	Arges	51.09	55	⇓P	P	23 36 24.9	+0.4
VLAD	Vladila	51.15	57	⇓P	P	23 36 25.1	+0.2
BUR08	Bucovina Ar. S	51.16	52	P	P	23 36 24.4	-0.7
BUR08					P	23 36 25.2	+0.2
BUR08				IAmb	IAmb	23 36 37.3	
	comp=Z,26nm,1.5s						
FINES	FINESS Array B	51.16	34	P	P	23 36 24.8	+0.1
	comp=Z,8.5nm,0.8s,baz=251,slow=4.8,SNR=21						
FIA1	FINESS Array S	51.16	34	P	P	23 36 23.9	-0.8
FIA1					P	23 36 24.6	-0.1
VOIR		51.37	55	⇓P	P	23 36 26.3	-0.3
PLVB	Pleven	51.41	58	⇓P	P	23 36 27.6	+0.7
MTUR	Matau	51.41	55	⇓P	P	23 36 27.8	+0.8
DOPR	Dopca	51.52	54	⇓P	P	23 36 27.7	0.0
OZUR		51.78	54	⇑P	P	23 36 28.3	-1.3
SIV	San Ignacio	51.80	206	P	P	23 36 31.2	+1.2
	comp=Z,1.7nm,0.9s,baz=41,slow=9.7						
ARCES	ARCESS Array B	51.87	24	P	P	23 36 29.4	-0.5
	comp=Z,3.8nm,0.7s,baz=253,slow=7.5,SNR=12						
PRAR	RASCA	51.89	52	⇓P	P	23 36 31.0	+0.6
MLR	Muntele Rosu	51.98	55	⇓P	P	23 36 32.0	+0.7
MLR	Muntele Rosu	51.98	55	P	P	23 36 31.2	-0.1
T25A	Trinidad	52.03	294	IAmb	IAmb	23 38 27.4	
	comp=Z,6.7nm,0.6s						
K22A	Casper	52.37	302	P	P	23 36 37.4	+3.1
ELND	Elena	52.40	58	⇓P	P	23 36 34.5	+0.3
PLOR	Plostina	52.41	54	⇓P	P	23 36 33.9	-0.4
SORM	Soroca	53.19	51	⇓P	P	23 36 37.9	-2.1
AKASG	Malin Array Be	53.38	48	P	P	23 36 40.3	-1.0
	comp=Z,2.8nm,0.8s,baz=276,slow=6.4,SNR=43						
AKBB	Malin Array Si	53.38	48	P	P	23 36 40.0	-1.3
AKBB				IAmb	IAmb	23 36 41.0	
	comp=Z,11nm,0.9s						
TX31	Lajitas Ar. Si	53.76	285	P	P	23 36 44.6	0.0
TXAR	Lajitas Array	53.76	285	P	P	23 36 44.8	+0.2
	comp=Z,1.1nm,1.0s,baz=101,slow=6.5,SNR=6.1						
BW06	Boulder Array	54.53	302	P	P	23 36 49.9	-0.3
PDAR	Pinedale Array	54.53	302	P	P	23 36 50.3	+0.2
	comp=Z,3.6nm,0.9s,baz=85,slow=7.2,SNR=16						
YKA	Yellowknife Ar	54.83	327	P	P	23 36 51.7	0.0
	comp=Z,1.1nm,0.7s,baz=88,slow=7.6,SNR=10						
YKA				PcP	PcP	23 37 53.9	+0.1
	comp=Z,1.0nm,0.9s,baz=89,slow=4.5,SNR=4.0						
LPAZ	La Paz	55.01	213	P	P	23 36 55.1	+0.9
	comp=Z,1.9nm,0.7s,baz=18,slow=4.7,SNR=6.7						
LPAZ	La Paz	55.01	213	P	P	23 36 52.3	-1.9
LPAZ				IAmb	IAmb	23 37 10.4	
	comp=Z,14nm,1.6s						
IMW	Indian Meadow	55.25	304	P	P	23 36 55.1	-0.3
IMW				IAmb	IAmb	23 37 11.3	
	comp=Z,7.0nm,1.0s						
AHID	Auburn Hatcher	55.63	303	P	P	23 36 56.7	-1.4
AHID				IAmb	IAmb	23 37 05.0	
	comp=Z,8.8nm,1.1s						
HWUT	Hardware Ranch	56.26	301	P	P	23 37 02.6	+0.1
HWUT				IAmb	IAmb	23 37 09.4	
	comp=Z,6.7nm,1.0s						
JLU	Jordanelle	56.44	300	P	P	23 37 04.2	+0.3
ELL	Elmali	56.97	64	P	P	23 37 08.1	+0.5

OBN Obninsk 57.09 42 P P 23 37 07.4 -0.5
KLMR Klimovskoe 57.69 35 eP P 23 37 09.0 -3.2
KLMR AMP 23 37 22.0
comp=Z,32nm,1.5s
MNMC Minye Minye 58.16 213 P P 23 37 15.9 -0.3
X16A Lo Mia Camp, P 58.29 293 P P 23 37 16.6 -0.5
X16A IAmb IAmb 23 37 29.5
comp=Z,10nm,1.5s
U15A North Rim 58.30 296 P P 23 37 18.0 +0.8
U15A IAmb IAmb 23 37 25.4
comp=Z,10nm,1.3s
NEW Newport 58.40 310 P P 23 37 16.9 -0.6
NEW IAmb IAmb 23 37 24.0
comp=Z,8.1nm,1.1s
GO01 Chusmiza 58.44 212 P P 23 37 17.0 -1.4
GO01 IAmb IAmb 23 37 29.2
comp=Z,18nm,1.4s
ILGA Ilgaz 58.53 59 P P 23 37 17.1 -1.5
ILGA IAmb IAmb 23 39 06.4
comp=Z,15nm,1.4s
PB11 IPOC Station P 58.73 213 P P 23 37 18.6 -1.5
CCUT Cedar City 58.75 297 P P 23 37 20.9 +0.6
MFID Camas Ranch 58.80 304 P P 23 37 20.8 +0.4
MFID IAmb IAmb 23 37 27.8
comp=Z,7.5nm,1.1s
PSUT Pine Spring 58.81 298 P P 23 37 21.3 +0.6
BR131 Keskin Array S 58.86 60 P P 23 37 18.9 -2.0
BR131 IAmb IAmb 23 37 32.0
comp=Z,6.5nm,1.1s
BRTR Keskin Array B 58.86 60 P P 23 37 21.1 +0.2
comp=Z,1.6nm,0.8s,baz=267,slow=5.1,SNR=11
J08A Circle Bar Ran 60.66 305 P P 23 37 34.7 +1.5
J08A IAmb IAmb 23 37 40.9
comp=Z,12nm,1.1s
INK Inuvik 61.69 335 P P 23 37 39.8 +0.3
comp=Z,3.3nm,1.0s,baz=60,slow=7.5,SNR=7.8
INK Inuvik 61.69 335 P P 23 37 39.9 +0.3
INK pP 23 37 40.1 -3.0
INK IAmb IAmb 23 37 46.5
comp=Z,10nm,1.2s
KVN Kaiserville 61.78 300 P P 23 37 41.7 +0.7
KVN IAmb IAmb 23 37 47.8
comp=Z,10nm,1.2s
D05A Enumclaw 61.86 310 P P 23 37 41.6 +0.6
NVAR Mina Array Bea 62.15 300 P P 23 37 44.0 +0.6
comp=Z,1.8nm,0.9s,baz=68,slow=6.7,SNR=5.9
RYN Ryan 62.24 300 P P 23 37 43.0 -1.0
RYN IAmb IAmb 23 37 50.1
comp=Z,16nm,1.7s
GAZ Gaziantep 62.35 62 P P 23 37 44.1 -0.5
ORV Oroville 64.08 302 P P 23 37 55.9 -0.1
ORV IAmb IAmb 23 38 02.8
comp=Z,11nm,1.4s
KBZ Khabaz 64.11 53 P P 23 37 56.7 +0.6
comp=Z,4.4nm,0.9s,baz=320,slow=3.3,SNR=13
DAWY Dawson 65.35 331 P P 23 38 02.7 -1.2
DAWY IAmb IAmb 23 38 11.4
comp=Z,13nm,1.3s
AKH Akhalkalaki 65.36 55 ⇓P P 23 38 04.8 +0.2
AKH Akhalkalaki 65.36 55 P P 23 38 04.3 -0.3
AKH IAmb IAmb 23 38 06.1
comp=Z,10nm,1.0s
BESE Bessie Mountai 65.39 325 P P 23 38 03.3 -1.0
EGAK Eagle 65.77 333 P P 23 38 07.5 +1.0
EGAK IAmb IAmb 23 38 13.9
comp=Z,11nm,1.2s
GNI Garni 66.72 56 P P 23 38 12.3 -1.0
TOLK Toolik Lake Re 67.01 338 P P 23 38 13.7 -0.8
PRP Porcupine Dome 67.11 334 P P 23 38 15.7 +0.4
PRP IAmb IAmb 23 38 22.4
comp=Z,17nm,1.7s
ILAR Eielson Array 67.97 334 P P 23 38 21.4 +0.8
comp=Z,1.1nm,0.9s,baz=45,slow=4.1,SNR=8.5
MCARA McCarthy VSAT 68.00 330 P P 23 38 20.5 -0.3
MCARA IAmb IAmb 23 38 40.1
comp=Z,9.8nm,1.1s
HDA Harding Lake 68.17 333 P P 23 38 22.4 +0.6
HDA IAmb IAmb 23 38 29.5
comp=Z,8.5nm,1.2s
ARU Arti 68.47 36 P P 23 38 22.5 -1.3
ARU IAmb IAmb 23 38 24.4
comp=Z,10.0nm,1.2s
WRH Wood River Hil 68.57 334 P P 23 38 24.1 -0.2
WRH IAmb IAmb 23 38 31.8
comp=Z,13nm,1.4s
NEA Nenana 68.89 334 P P 23 38 27.0 +0.7
DHY Denali Highway 68.99 332 P P 23 38 27.7 +0.5
NRIK Noril'sk 71.95 17 P P 23 38 46.2 +1.3
comp=Z,5.3nm,1.0s,baz=328,slow=9.9,SNR=7.3
ABKAR Akbulak array 72.53 43 P P 23 38 48.6 -0.1
BRVK Borovoye 76.03 36 P P 23 39 08.4 -0.7
BRVK IAmb IAmb 23 39 12.1
comp=Z,11nm,1.4s
TIXI Tiksi 76.22 3 P P 23 39 09.1 -0.7
TIXI IAmb IAmb 23 39 11.9
comp=Z,8.3nm,1.2s
GEYT Alibeck 77.00 53 P P 23 39 13.9 -1.1
comp=Z,0.7nm,0.6s,baz=204,slow=38,SNR=3.6
GYA0B ALIBECK ARRAY 77.00 53 P P 23 39 13.8 -1.1
KURK Kurchatov 81.54 34 P P 23 39 38.5 -0.8
KURK IAmb IAmb 23 39 40.7
comp=Z,12nm,1.4s
KURBB Kurchatov Arra 81.56 34 P P 23 39 39.5 0.0
comp=Z,3.4nm,1.0s,baz=312,slow=5.4,SNR=16
ZAA0 Zalesovo Array 82.07 29 P P 23 39 41.7 -0.5
ZALV Zalesovo Beam 82.07 29 P P 23 39 42.2 +0.1
comp=Z,3.1nm,0.8s,baz=286,slow=7.1,SNR=15
UOSS Minazif 82.32 65 P P 23 39 42.9 -1.1
AAK Ala-Archa 84.61 42 P P 23 39 55.9 +0.3
comp=Z,0.9nm,0.8s,baz=199,slow=4.8,SNR=4.7
AAK Ala-Archa 84.61 42 IAmb IAmb 23 39 57.3
comp=Z,4.9nm,1.2s
MAKZ Makanchi 85.82 36 P P 23 40 00.1 -1.4
MAKZ IAmb IAmb 23 40 02.4
comp=Z,13nm,1.7s
MK31 Makanchi Array 85.99 35 P P 23 40 01.6 -0.7
MKAR Makanchi Array 85.99 35 P P 23 40 02.4 +0.1
comp=Z,1.7nm,1.0s,baz=317,slow=5.1,SNR=12
KSH Kashi 87.47 44 P P 23 40 11.3 +1.5
KSH sP pwP 23 40 18.8 +1.7
KSH PP PP 23 43 38.0 +4.1
KSH S S 23 50 51.3 +0.7
KSH SS SS 23 56 35.3 +0.6
KSH pmax pmax
comp=Z,7.0nm,1.1s
KSH pmax pmax
comp=Z,210nm,5.1s
KSH LR LR
comp=Z,150nm,5.5s
KSH LR LR
comp=Z,600nm,6.5s
WMQ Urumqi 90.77 35 eP P 23 40 25.8 +0.6
WMQ pP sP 23 40 30.0 -0.4
WMQ pmax pmax
comp=Z,7.0nm,0.7s
WMQ pmax pmax
comp=Z,120nm,6.5s
WMQ LR LR
comp=Z,300nm,20.1s
WMQ LR LR
comp=Z,110nm,18.7s
SONM Songino Array 94.99 22 P P 23 40 45.1 +0.4
comp=Z,0.2nm,0.6s,baz=303,slow=4.1,SNR=3.9
GTA Gaotai 99.80 30 eP Pdif 23 41 05.8 -0.7
GTA pP pP 23 41 10.0 -0.4
GTA sP pwP 23 41 12.8 -1.0
GTA pmax pmax
comp=Z,2.0nm,1.0s
HHC Hu-ho-hao-te 102.89 21 eP Pdif 23 41 18.8 -1.4
HHC pmax pmax
comp=Z,5.0nm,0.7s
HHC LR LR
comp=Z,160nm,20.4s
HHC LR LR
comp=Z,140nm,15.3s
CMAR Chiang Mai Arr 116.37 44 PKP PKiKP 23 46 06.6 +0.4
comp=Z,1.0nm,0.3s,baz=29,slow=2.1,SNR=6.4
QSPA South Pole Qui 122.04 180 PKP PKPdf 23 46 15.0 -0.6
comp=Z,3.5nm,1.2s,baz=218,slow=1.5,SNR=5.4
ASAR Alice Springs 170.17 32 PKP PKPdf 23 47 30.2 -0.1
comp=Z,1.5nm,0.9s,baz=289,slow=0.4,SNR=13
ASAR PKPab PKPab 23 48 46.0 +0.2
comp=Z,0.7nm,0.7s,baz=341,slow=4.9,SNR=4.8

IDC 28 23:29:43.1±0.7,32°19N×40°36W,h0km,mb3.8/20, mb1mx3.8/62,mbtmp3.8/20,Error ellipse: s-maj=21.7km s-min=15.9km az=151.0
ISC 28 23:29:45.2±0.7,32°2N±0°1×40°4W±0°1,h14km,n24, σ0§62/21,mb3.8/20,Northern Mid-Atlantic Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FRB Frobisher Bay 36.17 339 P P 23 36 46.3 -0.5
2.1nm,0.9s,baz=157,slow=7.3,SNR=4.0
SDV Santo Domingo 36.40 237 P P 23 36 50.0 +0.4
8.1nm,1.0s,baz=54,slow=3.0,SNR=6.1
TORD Torodi Ar. Bea 42.86 106 P P 23 37 43.2 0.0
2.0nm,1.0s,baz=312,slow=5.4,SNR=4.5
GERES GERESS Array B 43.38 51 P P 23 37 47.6 +0.4
0.5nm,0.7s,baz=281,slow=16,SNR=2.5
H10N2 ASCENSION HYDR46.84 144 T T 00 28 12.9
baz=329,slow=75,SNR=6.9
H10N3 ASCENSION HYDR46.84 144 T T 00 28 10.8
baz=329,slow=75,SNR=8.5
H10N1 ASCENSION HYDR46.86 144 T T 00 28 11.2
baz=329,slow=75,SNR=6.2
FINES FINESS Array B 51.11 34 P P 23 38 46.1 -1.0
3.0nm,0.9s,baz=263,slow=3.6,SNR=3.7
SIV San Ignacio 51.86 206 P P 23 38 52.9 -0.4
1.0nm,0.7s,baz=15,slow=5.8,SNR=3.6
AKASG Malin Array Be 53.33 48 P P 23 39 03.2 -0.5
0.5nm,0.4s,baz=277,slow=6.4,SNR=5.0
TXAR Lajitas Array 53.77 285 P P 23 39 07.3 -0.2
0.7nm,0.8s,baz=105,slow=6.6,SNR=5.0
PDAR Pinedale Array 54.51 302 P P 23 39 12.7 -0.2
2.0nm,0.9s,baz=90,slow=7.3,SNR=2.8
YKA Yellowknife Ar 54.79 327 P P 23 39 13.9 -0.4
0.2nm,0.3s,baz=77,slow=8.3,SNR=3.8
LPAZ La Paz 55.06 213 P P 23 39 16.9 -0.6
1.4nm,0.8s,baz=67,slow=19,SNR=3.9
BRTR Keskin Array B 58.82 60 P P 23 39 43.9 +0.4
0.4nm,0.8s,baz=245,slow=3.0,SNR=2.9
INK Inuvik 61.65 335 P P 23 40 02.0 -0.1
1.5nm,1.0s,baz=335,slow=13,SNR=2.3
NVAR Mina Array Bea 62.14 300 P P 23 40 07.4 +1.1
0.4nm,0.5s,baz=69,slow=6.2,SNR=3.5
ILAR Eielson Array 67.93 334 P P 23 40 44.2 +1.0
0.5nm,1.0s,baz=60,slow=5.3,SNR=2.9
AKTO Aktyubinsk 70.81 42 P P 23 41 01.9 +0.6
1.2nm,0.6s,baz=263,slow=9.9,SNR=4.0
BVAR Borovoye Array 76.05 36 P P 23 41 32.9 +0.8
0.4nm,0.7s,baz=345,slow=10,SNR=3.3
KURBB Kurchatov Arra 81.50 34 P P 23 42 01.7 -0.3
0.3nm,0.5s,baz=315,slow=5.5,SNR=3.0
ZALV Zalesovo Beam 82.01 29 P P 23 42 05.1 +0.5
0.9nm,0.8s,baz=298,slow=6.2,SNR=3.3
MKAR Makanchi Array 85.93 35 P P 23 42 25.0 +0.1
0.2nm,0.7s,baz=336,slow=3.2,SNR=2.6
ASAR Alice Springs 170.11 32 PKP PKPdf 23 49 52.4 -0.7
0.5nm,0.7s,baz=354,slow=1.9,SNR=3.3

IDC 28 23:33:04.6±0.5,32°22N×40°44W,h0km,mb4.1/33, mb1 4.2/33,mb1mx4.0/72,mbtmp4.1/33,MS4.0/2, Ms1 4.0/2,ms1mx3.6/15,Error ellipse: s-maj=15.1km s-min=11.8km az=146.0
ISC 28 23:33:06.7±0.5,32°2N±0°1×40°41W±0°09,h14km,n37, σ0§87/37,mb4.2/35,Northern Mid-Atlantic Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SCHQ Schefferville 29.34 328 P P 23 39 09.8 +0.9
1.7nm,0.8s,baz=249,slow=17,SNR=2.7
FRB Frobisher Bay 36.16 339 P P 23 40 07.2 -1.0
2.9nm,0.8s,baz=128,slow=8.3,SNR=1.4
SDV Santo Domingo 36.36 237 P P 23 40 12.0 +1.3
9.2nm,0.7s,baz=44,slow=6.2,SNR=14
KEST Kesra 41.07 71 P P 23 40 51.0 +1.0
4.2nm,0.9s,baz=115,slow=17,SNR=3.5
TIC Toumodi 41.62 120 eP P 23 40 53.9 -0.7
DBIC Dimbokro 41.73 120 P P 23 40 55.4 -0.1
2.5nm,0.7s,baz=303,slow=9.1,SNR=5.9
LIC Lamto 41.90 120 eP P 23 40 55.3 -1.6
19nm,0.8s
KIC Kosan Boka 42.02 120 eP P 23 40 57.4 -0.4
26nm,1.1s
TORD Torodi Ar. Bea 42.90 106 P P 23 41 04.0 -1.0
3.4nm,0.9s,baz=303,slow=3.5,SNR=9.9
GERES GERESS Array B 43.42 51 P P 23 41 09.4 +0.5
0.9nm,0.8s,baz=265,slow=7.5,SNR=9.4
GERES LR LR 23 56 31.1
comp=Z,123nm,21.3s,baz=256,slow=32
NOA NORSAR Array B 44.00 33 P P 23 41 13.9 +0.5
1.0nm,0.7s,baz=255,slow=8.0,SNR=7.8
HFS Hagfors 44.94 35 P P 23 41 21.4 +0.5
2.2nm,0.8s,baz=198,slow=14,SNR=4.3
BDFB Brasilia 48.12 190 P P 23 41 46.2 -0.1
1.8nm,0.4s,baz=57,slow=9.2,SNR=4.1
FINES FINESS Array B 51.13 34 P P 23 42 09.4 +0.7
3.5nm,0.6s,baz=243,slow=5.5,SNR=19
ARCES ARCESS Array B 51.83 24 P P 23 42 13.4 -0.5
1.7nm,0.6s,baz=252,slow=9.0,SNR=11
ARCES LR LR 23 59 35.2
comp=Z,225nm,19.3s,baz=294,slow=31
SIV San Ignacio 51.84 206 P P 23 42 14.6 0.0
1.8nm,0.7s,baz=38,slow=7.8,SNR=10
AKASG Malin Array Be 53.36 48 P P 23 42 24.2 -1.2
2.1nm,0.6s,baz=279,slow=6.5,SNR=12
TXAR Lajitas Array 53.73 285 P P 23 42 28.0 -0.6
0.5nm,0.7s,baz=90,slow=2.9,SNR=6.2
PDAR Pinedale Array 54.48 302 P P 23 42 33.3 -0.8
1.4nm,0.6s,baz=86,slow=8.2,SNR=13
YKA Yellowknife Ar 54.77 327 P P 23 42 34.8 -0.8
1.1nm,0.8s,baz=86,slow=7.8,SNR=8.8
LPAZ La Paz 55.04 213 P P 23 42 39.1 +0.4
2.3nm,0.7s,baz=25,slow=4.7,SNR=10.0
OBN Obninsk 57.06 42 P P 23 42 52.2 +0.1
2.4nm,0.5s,baz=286,slow=7.4,SNR=3.3
BRTR Keskin Array B 58.86 60 P P 23 43 07.0 +1.9
0.6nm,0.7s,baz=219,slow=5.1,SNR=4.0
INK Inuvik 61.63 335 P P 23 43 22.7 -0.8
2.0nm,0.8s,baz=52,slow=5.6,SNR=4.4
NVAR Mina Array Bea 62.10 300 P P 23 43 27.0 -0.5
0.4nm,0.2s,baz=79,slow=5.9,SNR=4.2
KBZ Khabaz 64.10 53 P P 23 43 40.4 +0.1
1.4nm,0.9s,baz=299,slow=9.3,SNR=4.5
GNI Garni 66.71 56 P P 23 43 57.7 +0.2
1.8nm,0.6s,baz=305,slow=3.7,SNR=4.3
ILAR Eielson Array 67.91 334 P P 23 44 05.0 +0.5
0.5nm,1.0s,baz=60,slow=5.3,SNR=3.9
ARU Arti 68.45 36 P P 23 44 07.0 -0.9
0.3nm,0.3s,baz=120,slow=23,SNR=3.5
AKTO Aktyubinsk 70.84 42 P P 23 44 21.9 -1.0
3.7nm,0.7s,baz=314,slow=5.7,SNR=13
BVAR Borovoye Array 76.07 36 P P 23 44 54.5 +0.9
1.3nm,0.7s,baz=296,slow=4.7,SNR=11
TIXI Tiksi 76.17 3 P P 23 44 54.6 +0.8
2.4nm,0.4s,baz=344,slow=4.8,SNR=5.5
KURBB Kurchatov Arra 81.53 34 P P 23 45 24.3 +0.7
1.4nm,0.6s,baz=312,slow=5.3,SNR=10
ZALV Zalesovo Beam 82.04 29 P P 23 45 27.6 +1.4
1.4nm,0.7s,baz=291,slow=7.8,SNR=7.0
MKAR Makanchi Array 85.96 35 P P 23 45 46.8 +0.3
0.6nm,0.7s,baz=321,slow=5.0,SNR=7.8
SONM Songino Array 94.95 22 P P 23 46 29.6 +0.8
0.4nm,0.7s,baz=325,slow=4.3,SNR=3.7
ASAR Alice Springs 170.13 32 PKP PKPdf 23 53 13.7 -0.9
0.9nm,0.8s,baz=341,slow=0.9,SNR=8.8

IDC 28 23:34:01.8±0.4,32°19N×40°30W,h0km,mb4.4/42, mb1 4.4/42,mb1mx4.3/73,mbtmp4.4/42,MS4.0/9, Ms1 4.0/9,ms1mx3.7/24,Error ellipse: s-maj=13.0km s-min=9.2km az=138.0
BJI 28 23:34:02.0±0.0,32°30N×40°10W,h10km,mB5.3/7, mb4.7/12,Ms5.1/3,Ms7 5.0/3
NEIC 28 23:34:04±2.2,32°12N±0°07×39°98W±0°10,h10km±1km, mb4.9/265,Error ellipse: s-maj=14.3km s-min=12.5km az=280.0
MOS 28 23:34:08.4±1.6,33°37N×40°01W,h10km,mb5.0/29,Error ellipse: s-maj=20.5km s-min=6.2km az=47.9
GCMT 28 23:34:08.0±0.2,32°46N±0°02×40°29W±0°01,h12km, MW5.1/116,Moment Tensor Solution. s39,c44; s116,c165; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-3.63±.10; Mθθ0.57±.11; Mφφ3.06±.07; Mrθ3.78±.36; Mrφ1.97±.07; Mθφ-0.62±.26; Best double couple: Mo5.28200×10^{16} NP1:φs5.00000°,δ41.00000°, λ-139.00000°. NP2:φs242.00000°,δ64.00000°, λ-56.00000°. Principal axes: T 4.4480, Plg13.0000°, Azm309.0000°; N 1.6680, Plg30.0000°, Azm46.0000°; P -6.1150, Plg57.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
BGR 28 23:34:16.6±0.0,32°47N×38°25W,h10km,mb4.5
ISC 28 23:34:03.8±0.3,32°18N±0°07×40°03W±0°05,h10km,n459, σ1§48/440,mb4.8/205,MS4.1/12,10C-28D,Northern Mid-Atlantic Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ROSA Rosais 11.61 53 Pn Pn 23 36 46.7 -2.9
CMLA Cha da Macela 13.13 61 Pn Pn 23 37 08.8 -1.6
DRLN Deer Lake 21.52 328 P P 23 38 52.3 -0.5
DRLN IAmb IAmb 23 38 54.0
comp=Z,57nm,1.1s
HAL Halifax 22.18 311 P P 23 39 00.4 +0.4
LMN Caledonia Moun 23.49 313 P P 23 39 12.6 -1.0
GGN Saint George 24.48 310 P P 23 39 23.9 +0.9
EMMW East Machias 24.74 308 P P 23 39 25.5 +0.2
BATG Bathurst New B 24.91 315 P P 23 39 27.9 +1.0
SMRT St. Maarten 25.09 241 P P 23 39 26.0 -2.8
F64A Sherman 25.75 310 P P 23 39 34.7 +0.3
F64A IAmb IAmb 23 39 41.2
comp=Z,69nm,1.6s
FDF Fort de France 25.93 233 P P 23 39 35.2 -1.2
E63A Oxbow 26.01 311 P P 23 39 35.8 -1.0
PFVI Vila Bisbo 26.07 70 P P 23 39 38.1 +0.6
MDP Montagnes des 29.41 206 LR LR 23 49 03.1
comp=Z,276nm,21.2s,baz=7.5,slow=31
SCHQ Schefferville 29.52 328 P P 23 40 08.2 -0.1
comp=Z,1.4nm,0.9s,baz=125,slow=12,SNR=2.0
SCHQ LR LR 23 50 53.4
comp=Z,1μm,20.1s,baz=142,slow=34
SCHQ Schefferville 29.52 328 IAmb IAmb 23 40 21.1
comp=Z,29nm,1.8s
GRTK Grand Turk 29.62 257 P P 23 40 10.6 +1.2
PAB San Pablo 29.69 66 P P 23 40 10.8 +0.8
PAB IAmb IAmb 23 40 20.1
comp=Z,45nm,1.5s
N59A State Game Lan 29.85 297 P P 23 40 13.6 +2.3
N59A IAmb IAmb 23 40 16.7
comp=Z,25nm,1.4s
TRQ Mont Tremblant 29.95 308 P P 23 40 14.2 +2.0
ESDC Sonseca Array 30.00 65 P P 23 40 13.7 +1.0
comp=Z,3.0nm,1.0s,baz=256,slow=10,SNR=4.7
ESDC LR LR 23 50 23.9
comp=Z,94nm,19.3s,baz=20,slow=32
SADO Sadowa 32.79 304 P P 23 40 35.5 -1.7
comp=Z,3.5nm,0.9s,baz=91,slow=4.2,SNR=2.6
SADO Sadowa 32.79 304 IAmb IAmb 23 40 41.7
comp=Z,20nm,1.4s
O52A Adamsville 34.43 295 P P 23 40 53.7 +2.2
O52A IAmb IAmb 23 40 57.1
comp=Z,32nm,1.2s
PAULI Pauline 34.77 286 P P 23 40 56.3 +1.8
PAULI IAmb IAmb 23 41 56.5
comp=Z,42nm,1.7s
N51A Ashland 34.84 297 P P 23 40 57.9 +2.8
N51A IAmb IAmb 23 41 00.5
comp=Z,31nm,1.2s
K50A Casco 35.09 300 P P 23 40 59.4 +2.3
K50A IAmb IAmb 23 41 01.5
comp=Z,44nm,1.5s
060A Indiantown 35.30 272 P P 23 41 01.6 +2.6
ACSO Alum Creek Sta 35.30 295 P P 23 41 01.4 +2.4
ACSO IAmb IAmb 23 41 04.4
comp=Z,27nm,1.2s
I49A Point Hope 35.32 302 P P 23 41 01.5 +2.4
I49A IAmb IAmb 23 41 04.7
comp=Z,32nm,1.2s
P51A Williamsport 35.38 294 P P 23 40 59.6 -0.1
V53A Saluda 35.47 288 P P 23 41 03.9 +3.3
Q51A Peebles 35.62 293 P P 23 41 01.7 -0.1
Q51A IAmb IAmb 23 41 06.9
comp=Z,30nm,1.6s
BG3 Lake Jocassee 35.66 286 P P 23 41 02.3 +0.1
456A Hilliard 35.69 279 P P 23 41 02.9 +0.4
H48A Harrisville 35.74 303 P P 23 41 04.5 +1.7
URIC Uribia, Colomb 35.76 243 P P 23 41 04.5 +1.4
J48A Bridge Port 35.97 301 P P 23 41 06.8 +2.2
N49A Columbus Grove 36.21 297 P P 23 41 10.2 +3.4
N49A IAmb IAmb 23 41 11.9
comp=Z,17nm,1.2s
FRB Frobisher Bay 36.29 339 P P 23 41 05.3 -1.8
comp=Z,4.3nm,0.9s,baz=135,slow=10,SNR=4.9
GOGA Godfrey 36.34 284 P P 23 41 10.5 +2.5
GOGA IAmb IAmb 23 41 13.3
comp=Z,22nm,1.4s
R50A Paris 36.43 292 P P 23 41 11.1 +2.4
R50A IAmb IAmb 23 41 14.1
comp=Z,16nm,1.1s
SDV Santo Domingo 36.62 237 P P 23 41 10.4 -0.3
comp=Z,12nm,0.7s,baz=33,slow=5.7,SNR=6.1
SDV Santo Domingo 36.62 237 P P 23 41 11.6 +0.9
SDV IAmb IAmb 23 41 16.1
comp=Z,15nm,0.8s
GLMI Grayling 36.67 303 P P 23 41 13.1 +2.4
GLMI IAmb IAmb 23 41 16.3
comp=Z,20nm,0.8s
V51A Loudon 36.70 288 P P 23 41 14.2 +3.2
R49A Shelbyville 37.09 292 P P 23 41 17.0 +2.7
P48A Milroy 37.21 294 P P 23 41 17.2 +1.8
P48A IAmb IAmb 23 41 19.9
comp=Z,34nm,1.7s
SNF Seneffe 37.31 47 ⇓P P 23 41 16.4 +0.4
comp=Z,712nm,3.4s
N47A Urbana 37.36 297 P P 23 41 19.0 +2.4
N47A IAmb IAmb 23 41 22.2
comp=Z,20nm,1.3s
T49A Edmonton 37.49 290 P P 23 41 20.5 +2.8
FPAL Fort Paine 37.91 286 P P 23 41 24.6 +3.3
WCI Wyandotte Cave 37.98 292 P P 23 41 24.6 +2.8
SWET Sewanee 38.06 287 P P 23 41 25.3 +2.7
SFIN Lafayette 38.44 296 P P 23 41 25.5 -0.2
E43A Lone Tree Farm 38.46 306 P P 23 41 27.2 +1.4
P46A Rosedale 38.58 295 P P 23 41 29.5 +2.7
P46A IAmb IAmb 23 41 32.1
comp=Z,24nm,1.3s
V48A Smith Brothers 38.70 288 P P 23 41 30.5 +2.6
T47A Sharon Grove 38.75 290 P P 23 41 29.5 +1.1
ECH Echery 38.79 52 P P 23 41 28.1 -0.5
ECH IAmb IAmb 23 42 52.4
comp=Z,51nm,1.7s
X48A Hartselle 39.09 286 P P 23 41 33.5 +2.3
M44A Midewin, Midew 39.12 298 P P 23 41 33.6 +2.3
F42A Maple Grove Fa 39.21 304 P P 23 41 33.7 +1.6
OLIL Olney 39.34 293 P P 23 41 35.9 +2.6
OLIL IAmb IAmb 23 41 39.2
comp=Z,51nm,1.9s
BUG Bochum--Univer 39.35 47 eP P 23 41 34.4 +1.3
comp=Z,5.7nm,0.9s,baz=264,slow=8.3
WVT Waverly 39.45 289 P P 23 41 33.2 -1.0
O44A Mansfield 39.51 296 P P 23 41 35.5 +0.9
D41A Chassel 39.59 306 P P 23 41 36.4 +1.1
D41A IAmb IAmb 23 41 40.7
comp=Z,28nm,1.1s
IBBN Ibbenburen 39.81 45 eP P 23 41 38.1 +1.1
comp=Z,16nm,1.0s,baz=264,slow=8.3
PLAL Pickwick Lake 39.83 288 P P 23 41 38.1 +0.7
COWI Conover 39.93 305 P P 23 41 40.0 +1.9
L42A Oliver, Polo 40.30 299 P P 23 41 44.2 +2.9
L42A IAmb IAmb 23 41 51.0
comp=Z,44nm,1.7s
P43A Skaggs, Pawnee 40.35 295 P P 23 41 43.5 +1.8
S44A Carbondale 40.36 292 P P 23 41 43.0 +1.3
S44A IAmb IAmb 23 41 47.7
comp=Z,22nm,1.1s
DAVOX Davos/Dischmat 40.51 54 P P 23 41 45.0 +1.9
comp=Z,5.6nm,0.8s,baz=295,slow=6.5,SNR=6.5
DAVA Damuels 40.54 53 epP P 23 41 45.3 +2.0
comp=Z,24nm,2.0s
G40A Rib Lake 40.65 304 P P 23 41 46.1 +2.1
UBR Ueberruh 40.72 53 eP P 23 41 45.5 +0.8
comp=Z,5.0nm,0.9s,baz=264,slow=8.3
KEST Kesra 40.77 71 P P 23 41 47.1 +1.9
comp=Z,7.7nm,0.9s,baz=65,slow=8.8,SNR=4.1
KEST LR LR 23 57 19.3
comp=Z,213nm,18.0s,baz=210,slow=34
KEST Kesra 40.77 71 P P 23 41 45.5 +0.3
KEST IAmb IAmb 23 42 49.8
comp=Z,69nm,1.8s
SLM Saint Louis 41.01 294 P 23 41 48.1 +1.0

SLM IAmb IAmb 23 41 52.1
comp=Z,18nm,0.9s
PEBM Pemiscott Bayo 41.07 290 P P 23 41 49.3 +1.6
RETA Reutte 41.15 53 epP P 23 41 50.0 +1.8
comp=Z,11nm,1.3s
TAM Tamanrasset 41.22 91 P P 23 41 49.6 +0.3
GNAR Gosnell 41.22 289 P P 23 41 50.3 +1.5
NRDL Niedersach Rie 41.26 45 eP P 23 41 51.1 +2.2
comp=Z,19nm,1.0s,baz=264,slow=8.3
N41A Harden Midland 41.28 297 P P 23 41 48.9 -0.4
N41A IAmb IAmb 23 41 59.1
comp=Z,35nm,1.3s
CLZ Clausthal 41.32 46 eP P 23 41 51.8 +2.2
comp=Z,24nm,1.1s,baz=264,slow=8.3
TIC Toumodi 41.33 120 eP P 23 41 51.7 +1.7
DBIC Dimbokro 41.43 120 P P 23 41 52.2 +1.4
comp=Z,8.3nm,0.8s,baz=282,slow=9.5,SNR=8.8
DBIC Dimbokro 41.43 120 P P 23 41 51.3 +0.5
SQTA Sankt Quirin 41.44 53 epP P 23 41 52.6 +1.9
comp=Z,22nm,1.5s
ASSE Asse, Remlinge 41.55 46 eP P 23 41 53.4 +2.1
comp=Z,15nm,1.0s,baz=264,slow=8.3
LIC Lamto 41.61 121 eP P 23 41 53.3 +1.1
comp=Z,29nm,0.8s
BSEG Bad Segeberg 41.64 43 eP P 23 41 53.5 +1.5
comp=Z,50nm,0.8s,baz=264,slow=8.3
WATA Walderalm 41.69 53 epP P 23 41 54.5 +1.8
comp=Z,9.7nm,0.9s
CTI Castel Tesino 41.71 55 P P 23 41 54.4 +1.5
KIC Kosan Boka 41.72 120 eP P 23 41 54.3 +1.1
comp=Z,15nm,0.8s
WTTA Wattenberg 41.73 53 epP P 23 41 55.0 +1.9
comp=Z,8.5nm,0.8s
MOX Moxa 41.95 48 eP P 23 41 56.1 +1.4
baz=264,slow=8.3
LCAR Lake Charles 42.11 290 P P 23 41 56.5 +0.4
MANZ Manzenberg 42.20 49 eP P 23 42 00.2 +3.4
comp=Z,7.7nm,1.0s,baz=264,slow=8.3
ABTA Abfaltersbach 42.31 54 epP P 23 41 59.4 +1.6
comp=Z,18nm,1.2s,SNR=4.8
GUNZ Gunzen 42.38 49 eP P 23 42 00.1 +1.9
comp=Z,5.6nm,1.0s,baz=264,slow=8.3
MURB Monte Urbino 42.39 59 P P 23 41 59.1 +0.7
MURB IAmb IAmb 23 41 59.5
comp=Z,41nm,1.2s
WERN Wernitzgruen 42.40 49 eP P 23 41 59.9 +1.5
comp=Z,10nm,1.1s,baz=264,slow=8.3
NKC Novy Kostel 42.44 49 eP P 23 42 00.4 +1.7
NKC Novy Kostel 42.44 49 eP P 23 42 00.4 +1.7
TANN Tannenbergstha 42.47 49 eP P 23 42 00.6 +1.6
comp=Z,5.4nm,1.0s,baz=264,slow=8.3
SPMN Marine on St. 42.48 304 P P 23 42 00.6 +1.5
SPMN IAmb IAmb 23 42 04.0
comp=Z,27nm,1.4s
TORD Torodi Ar. Bea 42.58 107 P P 23 42 01.2 +1.0
comp=Z,19nm,1.1s,baz=302,slow=4.2,SNR=15
KONO Kongsberg 42.65 35 P P 23 42 02.2 +2.0
KONO IAmb IAmb 23 42 03.2
comp=Z,43nm,1.3s
KONO Kongsberg 42.65 35 i P P 23 41 56.6 -3.6
KONO pmax pmax
comp=Z,26nm,1.2s
MGMO Mountain Grove 42.81 292 P P 23 42 04.2 +2.2
CLL Collm 42.89 47 eP P 23 42 04.8 +2.5
comp=Z,7.7nm,0.9s,baz=264,slow=8.3
CLL Collm 42.89 47 i P P 23 42 04.3 +2.0
comp=Z,19nm,1.2s
CLL i 23 42 10.2
CLL e(SS) 23 51 30.0
CLL e(SSS) 23 52 06.0
CLL Lmax 23 53 00.0
CLL LmV 23 56 00.0
comp=Z,300nm,21.8s
CLL Collm 42.89 47 i P P 23 42 04.3 +2.0
CLL i 23 42 10.2
CLL pmax pmax
comp=Z,19nm,1.2s
KBA Koelnbreinsper 42.89 54 epP P 23 42 03.4 +0.8
comp=Z,8.7nm,1.1s
FCAR Ozark Folk Cen 42.92 290 P P 23 42 02.7 -0.1
FBE Freiberg 43.08 48 eP P 23 42 05.5 +1.7
comp=Z,14nm,1.0s,baz=264,slow=8.3
AQU L'Aquila 43.09 61 P P 23 42 07.2 +3.1
AQU IAmb IAmb 23 42 30.8
comp=Z,22nm,1.1s
KHC Kasperske Hory 43.10 51 eP P 23 42 06.1 +2.0
KHC Kasperske Hory 43.10 51 eP P 23 42 06.1 +2.0
GEC2 GERESS Array S 43.17 51 eP P 23 42 06.0 +1.2
comp=Z,2.2nm,0.7s,baz=264,slow=8.3
GEC2 GERESS Array S 43.17 51 P P 23 42 05.5 +0.8
GERES GERESS Array B 43.17 51 P P 23 42 05.9 +1.2
comp=Z,2.1nm,0.6s,baz=267,slow=6.9,SNR=12
UALR University of 43.31 288 IAmb IAmb 23 42 10.6
comp=Z,36nm,1.2s
BRG Berggiesshubel 43.44 48 eP P 23 42 08.2 +1.4
comp=Z,11nm,1.1s
BRG e 23 42 13.8
comp=Z,44nm,2.0s
BRG Berggiesshubel 43.44 48 eP P 23 42 08.3 +1.4
comp=Z,4.5nm,0.8s,baz=264,slow=8.3
BRG Berggiesshubel 43.44 48 eP P 23 42 08.2 +1.4
BRG e 23 42 13.9
BRG pmax pmax
comp=Z,11nm,1.1s
BRG pmax pmax
comp=Z,44nm,2.0s
RUE Ruedersdorf 43.48 46 eP P 23 42 08.7 +1.7
comp=Z,19nm,0.9s,baz=264,slow=8.3
INTR Introdacqua 43.49 61 P P 23 42 07.7 +0.3
INTR IAmb IAmb 23 42 10.3
comp=Z,38nm,1.4s
MOA Molln 43.52 53 epP P 23 42 08.6 +1.1
comp=Z,10.0nm,1.4s
CLTB Caltabellotta 43.53 68 P P 23 42 08.9 +1.1
S39A Bolivar 43.55 293 P P 23 42 08.4 +0.5
NAO01 NORSAR Array S 43.62 33 P P 23 42 08.6 +0.4
NBO00 NORSAR Array S 43.63 33 P P 23 42 08.9 +0.7
PRA Prague 43.71 49 eP P 23 42 11.5 +2.6
PRA Prague 43.71 49 eP P 23 42 11.5 +2.6
OBKA Obir 43.72 55 eP P 23 42 08.9 -0.3
comp=Z,8.7nm,0.7s
X40A Basin Creek Fa 43.77 288 P P 23 42 11.2 +1.5
X40A IAmb IAmb 23 42 14.1
comp=Z,24nm,1.5s
PRU Pruhonice 43.77 49 eP P 23 42 11.5 +2.0
PRU Pruhonice 43.77 49 eP P 23 42 11.5 +2.0
PVCC Panska Ves 43.82 49 eP P 23 42 11.7 +1.9
PVCC Panska Ves 43.82 49 eP P 23 42 11.7 +1.9
NB2 NORSAR Subarra 43.84 33 P P 23 42 10.3 +0.4
comp=Z,2.9nm,0.7s,baz=253,slow=8.6
NOA NORSAR Array B 43.84 33 P P 23 42 10.4 +0.6
comp=Z,4.3nm,0.7s,baz=254,slow=8.0,SNR=15
NB201 NORSAR Array S 43.88 33 P P 23 42 10.4 +0.3
GOPC GO Pecny, Ondr 43.93 50 eP P 23 42 12.5 +1.8
GOPC ex x 23 42 18.6
GOPC GO Pecny, Ondr 43.93 50 eP P 23 42 12.5 +1.8
GOPC e 23 42 18.6
NC303 NORSAR Array S 43.96 33 P P 23 42 11.8 +1.0
Z41A Richland Creek 44.02 286 P P 23 42 13.0 +1.4
Z41A IAmb IAmb 23 42 17.1
comp=Z,45nm,1.4s
SOKA Soboth 44.05 54 pP P 23 42 12.3 +0.5
comp=Z,7.6nm,1.2s
NC405 NORSAR Array S 44.09 33 P P 23 42 13.2 +1.4
WLAR White Oak Lake 44.17 287 P P 23 42 14.0 +1.1
HHAR Hobbs 44.29 291 P P 23 42 14.5 +0.7
HHAR IAmb IAmb 23 42 18.5
comp=Z,42nm,1.8s
MIAR Mount Ida 44.35 288 P P 23 42 15.6 +1.2
MIAR IAmb IAmb 23 42 20.4
comp=Z,57nm,2.0s
ARSA Arzberg 44.38 53 epP P 23 42 15.1 +0.7
comp=Z,11nm,1.3s
W39A Magazine 44.38 289 P P 23 42 16.1 +1.5
W39A IAmb IAmb 23 42 19.3
comp=Z,26nm,1.3s
AGMN Agassiz Nation 44.56 308 P P 23 42 15.8 -0.1
ULM Lac du Bonnet 44.61 311 P P 23 42 13.5 -2.7
comp=Z,3.4nm,0.8s,baz=73,slow=5.0,SNR=3.2
ULM Lac du Bonnet 44.61 311 P P 23 42 17.8 +1.6
ULM Lac du Bonnet 44.61 311 i P P 23 42 17.3 +1.2
U38A Gravette 44.61 291 IAmb IAmb 23 42 20.9
comp=Z,18nm,1.1s
FCC Fort Churchill 44.63 323 P P 23 42 15.4 -0.7
FCC IAmb IAmb 23 42 21.9

comp=Z,15nm,1.1s
UPC Upice 44.74 49 eP P 23 42 18.7 +1.5
UPC Upice 44.74 49 eP P 23 42 18.7 +1.5
CHVC Chvalec 44.77 49 eP P 23 42 18.8 +1.3
CHVC ex x 23 42 25.1
HFS Hagfors 44.77 35 P P 23 42 17.3 +0.1
comp=Z,5.5nm,0.8s,baz=223,slow=6.1,SNR=7.4
OSTC Ostas 44.87 49 eP P 23 42 19.5 +1.2
OSTC ex x 23 42 25.1
KSP Ksiaz 44.93 48 eP P 23 42 19.7 +1.0
KSP Ksiaz 44.93 48 eP P 23 42 19.7 +1.0
DPC Dobruska-Polom 44.93 49 eP P 23 42 20.0 +1.2
DPC ex x 23 42 26.4
DPC Dobruska-Polom 44.93 49 eP P 23 42 20.0 +1.2
DPC e 23 42 26.4
KRUC Moravsky 44.95 51 eP P 23 42 19.9 +1.0
VRAC Vranov 45.09 51 eP P 23 42 21.1 +1.1
VRAC Vranov 45.09 51 ⇓P P 23 42 20.8 +0.8
KRLC Kraliky 45.22 49 eP P 23 42 22.4 +1.3
KRLC ex x 23 42 28.7
KRLC Kraliky 45.22 49 eP P 23 42 22.4 +1.3
KRLC e 23 42 28.7
ECSD EROS Data Cent 45.29 302 P P 23 42 22.9 +1.2
ECSD IAmb IAmb 23 42 26.3
comp=Z,22nm,1.6s
MODS Modra-Piesok 45.54 52 eP P 23 42 24.2 +0.6
MODS pmax pmax
comp=Z,20nm,1.2s
MODS Modra-Piesok 45.54 52 eP P 23 42 24.2 +0.6
SMOL Smolenice 45.64 52 eP P 23 42 25.5 +1.1
SMOL pmax pmax
comp=Z,6.0nm,1.2s
SMOL Smolenice 45.64 52 eP P 23 42 25.5 +1.1
GKP Gorka Klasztor 45.64 45 eP P 23 42 25.9 +1.6
GKP Gorka Klasztor 45.64 45 eP P 23 42 25.9 +1.6
BLY Banja Luka 45.65 57 P P 23 42 24.7 +0.2
BLY IAmb IAmb 23 42 26.7
comp=Z,32nm,1.5s
MORC Moravsky Berou 45.71 50 eP P 23 42 26.1 +1.1
MORC Moravsky Berou 45.71 50 ⇓P P 23 42 26.1 +1.1
JAVC Velka Javorina 45.80 51 eP P 23 42 27.2 +1.5
TUL1 Leonard 45.83 291 P P 23 42 25.8 -0.3
TUL1 sP 23 42 30.3 +0.7
TIP Timpagrande 46.01 65 P P 23 42 26.8 -0.7
TIP IAmb IAmb 23 42 47.2
comp=Z,25nm,1.4s
SRO Srobarova 46.25 53 eP P 23 42 30.2 +1.0
SRO Srobarova 46.25 53 eP P 23 42 30.2 +1.0
SAML Samuel 46.49 212 P P 23 42 30.4 -1.0
SAML IAmb IAmb 23 42 32.4
comp=Z,16nm,1.1s
VYHS Vyhne 46.58 52 eP P 23 42 32.8 +1.0
VYHS pmax pmax
comp=Z,10.0nm,1.3s
VYHS Vyhne 46.58 52 eP P 23 42 32.8 +1.0
H10N2 ASCENSION HYDR 46.65 144 T T 00 32 12.8
baz=329,slow=75,SNR=193
H10N3 ASCENSION HYDR 46.66 144 T T 00 32 13.4
baz=329,slow=75,SNR=237
H10N1 ASCENSION HYDR 46.67 144 T T 00 32 14.3
baz=329,slow=75,SNR=229
BGNE Belgrade 46.68 299 P P 23 42 33.6 +0.8
JTS Las Juntas de 46.77 253 P P 23 42 34.5 +0.8
JTS IAmb IAmb 23 42 42.9
comp=Z,27nm,1.6s
LANS Liptovska Anna 46.97 51 eP P 23 42 37.1 +2.1
LANS pmax pmax
comp=Z,6.0nm,1.3s
LANS Liptovska Anna 46.97 51 eP P 23 42 37.0 +2.1
MDND Maddock 47.08 308 P P 23 42 34.4 -1.3
OJC Ojcow 47.16 49 eP P 23 42 37.0 +0.7
OJC Ojcow 47.16 49 P P 23 42 37.0 +0.7
OJC IAmb IAmb 23 42 38.7
comp=Z,9.0nm,1.0s
OJC Ojcow 47.16 49 eP P 23 42 37.0 +0.7
OKCFA Oklahoma City 47.26 290 P P 23 42 39.0 +1.6
HKT Hockley 47.40 283 i P P 23 42 45.8 +7.4
HKT pmax pmax
comp=Z,4.0nm,1.1s
NIE Niedzica 47.51 50 eP P 23 42 41.4 +2.3
NIE Niedzica 47.51 50 eP P 23 42 41.4 +2.3
H10S3 ASCENSION HYDR 47.53 145 T T 00 33 18.8
baz=328,slow=74,SNR=408
H10S2 ASCENSION HYDR 47.55 145 T T 00 33 19.6
baz=252,slow=74,SNR=393
Z35A Perchaven, San 47.61 288 P P 23 42 40.0 0.0
WHTX Lake Whitney, 48.14 286 P P 23 42 45.1 +0.9
BDFB Brasilia 48.16 190 P P 23 42 44.0 -0.4
comp=Z,9.8nm,1.2s,baz=359,slow=10,SNR=3.5
BDFB Brasilia 48.16 190 P P 23 42 43.3 -1.1
BDFB IAmb IAmb 23 42 46.9
comp=Z,23nm,1.5s
OTAV Otavalo 48.20 236 P P 23 42 45.4 +0.1
OTAV IAmb IAmb 23 42 54.9
comp=Z,16nm,1.3s
U32A Winter Ranch, 48.27 292 P P 23 42 46.2 +1.1
U32A IAmb IAmb 23 42 50.0
comp=Z,17nm,1.1s
CRVS Cervenica-Dubn 48.29 51 eP P 23 42 47.0 +1.9
CRVS pmax pmax
comp=Z,16nm,1.1s
CRVS Cervenica-Dubn 48.29 51 eP P 23 42 47.0 +1.9
CBKS Cedar Bluff 48.32 295 P P 23 42 46.2 +0.7
FFC Flin Flon 48.47 317 P P 23 42 47.5 +1.1
FFC IAmb IAmb 23 42 51.9
comp=Z,15nm,1.4s
WMOK Wichita Mounta 48.48 290 P P 23 42 47.7 +0.9
435B Jarrell 48.59 284 P P 23 42 47.8 +0.1
BZS Buzias 48.69 55 ⇓P P 23 42 49.9 +1.8
KOLS Kolonicke sedl 48.83 51 eP P 23 42 50.5 +1.3
KOLS Kolonicke sedl 48.83 51 eP P 23 42 50.5 +1.3
KWP Kalwaria Pacla 49.06 50 eP P 23 42 53.1 +2.1
KWP Kalwaria Pacla 49.06 50 P P 23 42 51.5 +0.4
KWP IAmb IAmb 23 42 53.6
comp=Z,18nm,1.0s
KWP Kalwaria Pacla 49.06 50 eP P 23 42 53.1 +2.1
SUW Suwalki 49.20 44 P P 23 42 50.1 -1.8
SUW IAmb IAmb 23 42 53.3
comp=Z,17nm,1.0s
FNA Florina 49.23 62 P P 23 42 52.7 +0.2
GZR Gura Zlata 49.52 55 ⇓P P 23 42 56.1 +1.4
DEV Deva 49.55 55 ⇓P P 23 42 56.5 +1.7
ABTX Abilene, Hawle 49.74 287 P P 23 42 56.8 +0.3
ABTX IAmb IAmb 23 43 06.0
comp=Z,21nm,1.4s
PUNG Punghina 49.79 57 ⇓P P 23 42 58.4 +1.8
KVTX Kingsville 49.89 281 P P 23 42 58.0 +0.4
LVV L'vov 49.91 50 eP P 23 42 57.9 +0.5
DGMT Dagmar 50.10 309 P P 23 42 59.2 +0.2
DGMT IAmb IAmb 23 43 04.2
comp=Z,16nm,1.1s
LIT Litokhoron 50.19 62 P P 23 43 00.3 +0.5
LOT Lotru 50.21 55 ⇓P P 23 43 01.0 +1.1
VTS Vitosha 50.27 59 ⇑P P 23 43 02.2 +1.7
VTS Vitosha 50.27 59 P P 23 43 00.3 -0.3
VTS IAmb IAmb 23 43 03.2
comp=Z,11nm,0.9s
ARCR ARCALIA 50.40 53 ⇓P P 23 43 02.7 +1.5
JCT Junction City 50.51 285 P P 23 43 03.7 +1.4
JCT IAmb IAmb 23 43 06.9
comp=Z,16nm,1.1s
MPEP Malo Peshtene 50.51 58 i P P 23 43 03.6 +1.5
AMTX Amarillo 50.75 291 P P 23 43 05.0 +0.8
AMTX IAmb IAmb 23 43 09.5
comp=Z,19nm,1.2s
MMB Musomiste 50.82 60 i P P 23 43 06.7 +2.1
ARR Arges 50.82 55 ⇓P P 23 43 06.0 +1.5
VLAD Vladila 50.88 57 ⇓P P 23 43 06.3 +1.4
BUR08 Bucovina Ar. S 50.90 52 P P 23 43 05.7 +0.5
BUR08 IAmb IAmb 23 43 08.0
comp=Z,19nm,1.2s
BURAR Bucovina Array 50.91 52 ⇓P P 23 43 07.6 +2.4
PGB Panagyurishte 50.96 59 i P P 23 43 08.2 +2.6
FINES FINESS Array B 50.96 34 P P 23 43 05.8 +0.6
comp=Z,14nm,0.8s,baz=245,slow=5.4,SNR=23
FIA1 FINESS Array S 50.96 34 IAmb IAmb 23 43 06.9
comp=Z,25nm,1.0s
VOIR Voir 51.10 55 ⇓P P 23 43 07.8 +1.1
VSU Vasula 51.19 38 cеP P 23 43 04.7 -2.3
VSU pmax pmax
comp=Z,93nm,2.5s
HUMR Humele 51.20 56 ⇓P P 23 43 08.5 +1.2
DOPR Dopca 51.26 54 ⇓P P 23 43 08.8 +1.1

KBS Kingsbay 51.61 11 P P 23 43 10.2 +0.3
KBS IAmb IAmb 23 44 34.0
comp=Z,28nm,1.1s
PVL Pavlikeni 51.68 58 i P P 23 43 10.7 -0.2
ARCES ARCESS Array B 51.71 24 P P 23 43 10.4 -0.4
comp=Z,5.2nm,0.7s,baz=254,slow=8.7,SNR=13
MLR Muntele Rosu 51.72 55 ⇓P P 23 43 13.1 +1.7
MICGM Minsk 51.94 43 e P 23 43 12.0 -0.7
MNK Minsk 51.94 43 eP P 23 43 12.0 -0.7
SIV San Ignacio 51.97 206 P P 23 43 11.8 -1.5
comp=Z,3.1nm,0.7s,baz=41,slow=7.5,SNR=9.0
ELND Elena 52.12 58 ⇓P P 23 43 15.7 +1.5
PLOR Plostina 52.14 54 ⇓P P 23 43 16.0 +1.6
VRI Vrincioaia 52.20 54 ⇓P P 23 43 15.4 +0.7
ISCO Idaho Springs 52.56 298 P P 23 43 17.3 -0.6
VASR Vaslui 52.79 53 ⇓P P 23 43 19.8 +0.6
SORM Soroca 52.93 51 ⇓P P 23 43 19.3 -0.8
SDCO Great Sand Dun 52.98 295 P P 23 43 23.0 +2.0
AKASG Malin Array Be 53.13 48 P P 23 43 21.6 +0.1
comp=Z,14nm,0.8s,baz=278,slow=6.4,SNR=24
AKBB Malin Array Si 53.13 48 IAmb IAmb 23 43 22.7
comp=Z,20nm,1.1s
HARR Harsova 53.24 56 ⇓P P 23 43 22.9 +0.4
CFR Carcaliu 53.29 55 ⇓P P 23 43 22.1 -0.8
EGMT Eagleton 53.84 309 IAmb IAmb 23 43 32.2
comp=Z,28nm,1.4s
RLMT Red Lodge 54.05 305 P P 23 43 30.2 +1.5
RLMT IAmb IAmb 23 43 34.1
comp=Z,13nm,1.3s
TXAR Lajitas Array 54.05 285 P P 23 43 26.5 -2.3
comp=Z,0.5nm,0.7s,baz=98,slow=6.6,SNR=2.7
TX31 Lajitas Ar. Si 54.05 285 P P 23 43 28.2 -0.6
TX32 Lajitas Array 54.05 285 P P 23 43 31.5 +2.7
GCMT Greycliff 54.19 306 P P 23 43 29.3 -0.3
O20A White River Ci 54.44 299 P P 23 43 30.5 -1.1
O20A IAmb IAmb 23 43 37.1
comp=Z,30nm,1.5s
TLIG Tlapa 54.47 269 P P 23 43 31.5 -0.5
ANMO Albuquerque 54.50 292 P P 23 43 32.6 +0.5
ANMO Albuquerque 54.50 292 ceP P 23 43 36.6 +4.5
ANMO pmax pmax
comp=Z,13nm,2.5s
MNTX Cornudas Mount 54.65 288 P P 23 43 32.6 -0.4
BW06 Boulder Array 54.77 302 P P 23 43 32.5 -1.4
BW06 IAmb IAmb 23 43 42.6
comp=Z,12nm,1.2s
PDAR Pinedale Array 54.77 302 P P 23 43 31.6 -2.4
comp=Z,2.3nm,0.8s,baz=82,slow=8.3,SNR=6.0
KARP Karpathos 54.91 67 P P 23 43 32.4 -2.5
LKWY Lake 54.96 305 P P 23 43 35.8 +0.5
LKWY IAmb IAmb 23 43 41.6
comp=Z,14nm,1.3s
YKA Yellowknife Ar 54.97 327 P P 23 43 32.0 -2.8
comp=Z,1.0nm,0.7s,baz=86,slow=7.8,SNR=6.2
YKA PcP PcP 23 44 35.3 -1.1
comp=Z,0.6nm,0.5s,baz=86,slow=4.9,SNR=5.1
YUF Upper Falls 55.00 305 P P 23 43 35.2 -0.5
YNR Norris Junctio 55.12 305 P P 23 43 37.3 +0.8
YNM Yellowstone No 55.13 305 P P 23 43 34.7 -1.9
MANT Manisa 55.15 63 P P 23 43 36.9 +0.1
LPAZ La Paz 55.20 213 P P 23 43 36.0 -1.7
comp=Z,5.9nm,0.7s,baz=330,slow=5.4,SNR=10
LPAZ La Paz 55.20 213 IAmb IAmb 23 43 42.7
comp=Z,6.4nm,0.8s
YHH Holmes Hill 55.22 305 P P 23 43 38.4 +1.1
FLWY Flagg Ranch 55.27 304 P P 23 43 38.2 +0.7
FLWY IAmb IAmb 23 43 44.2
comp=Z,12nm,1.1s
YPP Pitchstone Pla 55.30 304 P P 23 43 38.3 +0.4
YMR Madison River 55.33 305 P P 23 43 38.1 +0.1
MVCO Mesa Verde 55.42 296 P P 23 43 38.8 0.0
MVCO IAmb IAmb 23 43 44.8
comp=Z,13nm,1.2s
SNOW Snow King Moun 55.46 303 P P 23 43 39.0 0.0
SNOW IAmb IAmb 23 43 44.8
comp=Z,10nm,0.9s
YHB Horse Butte 55.47 305 P P 23 43 39.8 +0.8
IMW Indian Meadow 55.48 304 P P 23 43 39.5 +0.3
IMW IAmb IAmb 23 43 44.5
comp=Z,9.8nm,1.1s
FXWY Fox Creek 55.61 304 P P 23 43 41.5 +1.4
AHID Auburn Hatcher 55.87 303 P P 23 43 42.5 +0.6
AHID IAmb IAmb 23 43 47.0
comp=Z,18nm,1.4s
LRM Limekiln Ridge 56.09 307 P P 23 43 40.9 -2.6
NNA Nana 56.29 225 P 23 43 44.9 0.0
WALA Waterton Lakes 56.36 311 P P 23 43 46.5 +1.3
P17A Butcher Ranch, 56.47 299 P P 23 43 46.6 +0.4
HWUT Hardware Ranch 56.50 301 P P 23 43 47.7 +1.3
HWUT IAmb IAmb 23 43 51.3
comp=Z,17nm,1.3s
TCUT Toone Canyon 56.52 301 P P 23 43 47.0 +0.4
HPIG 56.56 283 P P 23 43 47.3 +0.3
HPIG IAmb IAmb 23 43 52.6
comp=Z,19nm,1.3s
MDUB Mudurnu 56.57 60 P P 23 43 47.2 +0.3
ELL Elmali 56.67 65 P P 23 43 47.8 +0.2
JLU Jordanelle 56.69 300 P P 23 43 46.7 -1.1
OBN Obninsk 56.86 42 P P 23 43 48.2 -0.2
comp=Z,5.7nm,0.6s,baz=314,slow=4.7,SNR=9.1
OBN Obninsk 56.86 42 P P 23 43 48.3 -0.1
OBN Obninsk 56.86 42 deP P 23 43 49.1 +0.7
OBN e*SP pP 23 43 51.5 +0.4
OBN i 23 43 55.1
OBN pmax pmax
comp=Z,62nm,1.3s
OBN MLR MLR
comp=Z,188nm,16.0s
MSO Missoula 56.87 308 P P 23 43 47.8 -1.0
MSO IAmb IAmb 23 43 53.9
comp=Z,29nm,1.9s
TMUT Trail Mountain 56.87 299 P P 23 43 49.5 +0.3
Q16A Castle Valley 56.95 298 P P 23 43 49.6 0.0
MPU Maple Canyon 56.98 300 P P 23 43 50.4 +0.6
NLU North Lily Min 57.33 300 P P 23 43 52.3 0.0
MOS Moscow 57.34 41 eP P 23 43 50.8 -1.0
MOS e 23 43 58.1
KLMR Klimovskoe 57.49 35 eP P 23 43 49.7 -3.1
KLMR pmax pmax
comp=Z,40nm,1.4s
KLMR Klimovskoe 57.49 35 eP P 23 43 49.8 -3.1
KLMR AMP 23 43 59.7
comp=Z,40nm,1.4s
BGU Big Grassy Mou 57.75 301 P P 23 43 56.0 +0.8
DUG Dugway, Tooele 57.80 300 IAmb IAmb 23 44 01.0
comp=Z,13nm,1.2s
MNMC Minye Minye 58.35 213 P P 23 43 57.8 -1.8
U15A North Rim 58.56 296 P P 23 44 00.1 -1.0
U15A IAmb IAmb 23 44 07.2
comp=Z,9.6nm,1.1s
X16A Lo Mia Camp, P 58.56 293 P P 23 44 00.4 -0.6
X16A IAmb IAmb 23 44 11.2
comp=Z,13nm,1.8s
BR131 Keskin Array S 58.58 60 P P 23 44 00.5 -0.5
BR131 Keskin Array S 58.58 60 i P P 23 44 00.5 -0.5
BRTR Keskin Array B 58.58 60 P P 23 44 01.9 +0.8
comp=Z,4.2nm,0.9s,baz=272,slow=5.1,SNR=12
NEW Newport 58.61 310 P P 23 44 01.4 +0.4
NEW IAmb IAmb 23 44 05.8
comp=Z,11nm,1.1s
GO01 Chusmiza 58.63 213 IAmb IAmb 23 44 10.8
comp=Z,16nm,1.1s
LPSR Galich'ya Gora 58.73 44 eP P 23 44 01.1 -0.5
LPSR pmax pmax
comp=Z,60nm,0.8s
KNB Kanab 58.77 297 P P 23 44 02.7 +0.2
CCUT Cedar City 59.01 297 P P 23 44 04.7 +0.6
MFID Camas Ranch 59.04 305 P P 23 44 04.1 0.0
MFID IAmb IAmb 23 44 09.6
comp=Z,11nm,1.1s
LCMT Little Creek M 59.09 297 P P 23 44 02.8 -1.8
VSR Storozhevoye 59.20 46 eP P 23 44 03.7 -1.2
VSR pmax pmax
comp=Z,20nm,0.9s
E09A Wood Farm, Sta 59.75 309 P P 23 44 08.1 -0.7
E09A IAmb IAmb 23 44 23.4
comp=Z,12nm,1.4s
CSS Mathiatis 59.88 65 P P 23 44 09.8 -0.2
Y14A Wickenburg 59.94 293 P P 23 44 09.9 -0.5
PB01 IPOC Station P 59.96 212 P P 23 44 09.2 -1.4
PB01 IAmb IAmb 23 44 14.5
comp=Z,9.4nm,0.8s
W13A Hualapai Mount 60.22 295 P P 23 44 12.6 +0.1
W13A IAmb IAmb 23 46 00.3

comp=Z,11nm,1.1s
PRGR Permogore 60.24 33 eP P 23 44 11.1 -0.8
PRGR pmax pmax
comp=Z,13nm,1.0s
E08A Dider Farm, El 60.36 309 P P 23 44 11.6 -1.4
E08A IAmb IAmb 23 44 21.5
comp=Z,9.3nm,1.2s
R11A Troy Canyon, C 60.41 299 P P 23 44 12.4 -1.3
R11A IAmb IAmb 23 44 19.3
comp=Z,15nm,1.5s
CPUP Villa Florida 60.47 198 P P 23 44 11.9 -1.9
comp=Z,2.7nm,0.8s,baz=40,slow=8.4,SNR=3.5
CPUP Villa Florida 60.47 198 IAmb IAmb 23 45 14.8
comp=Z,19nm,1.7s
214A Organ Pipe Nat 60.50 291 P P 23 44 13.8 -0.4
214A IAmb IAmb 23 44 24.1
comp=Z,20nm,1.4s
HAWA Hanford 60.70 309 P P 23 44 15.3 0.0
HAWA IAmb IAmb 23 44 20.8
comp=Z,9.6nm,1.1s
VRH Novokhopyorsk 60.76 46 eP P 23 44 14.6 -1.0
VRH pmax pmax
comp=Z,30nm,0.9s
J08A Circle Bar Ran 60.90 305 IAmb IAmb 23 44 22.7
comp=Z,14nm,1.1s
LVC Limon Verde 61.08 211 P P 23 44 16.4 -2.1
comp=Z,3.7nm,0.8s,baz=352,slow=7.1,SNR=2.0
LVC Limon Verde 61.08 211 IAmb IAmb 23 44 21.8
comp=Z,14nm,1.4s
SOC Sochi 61.72 54 eP P 23 44 22.5 +0.2
SOC e 23 46 34.0
SOC ePPP PPP 23 48 06.9
SOC eS S 23 52 45.9 +0.9
SOC eSS SS 23 56 43.0 -3.2
SOC pmax pmax
comp=Z,13nm,0.7s
SOC MLR MLR
comp=Z,121nm,16.0s
G06A Carlson Farm, 61.78 308 P P 23 44 21.8 -1.0
INK Inuvik 61.79 335 P P 23 44 20.6 -1.7
comp=Z,2.7nm,1.0s,baz=57,slow=9.4,SNR=3.6
INK Inuvik 61.79 335 IAmb IAmb 23 44 28.4
comp=Z,18nm,1.2s
KVN Kaiserville 62.03 300 P P 23 44 23.6 -1.2
KVN IAmb IAmb 23 44 29.7
comp=Z,8.9nm,1.1s
GAZ Gaziantep 62.06 62 P P 23 44 24.7 -0.1
GAZ IAmb IAmb 23 44 30.5
comp=Z,6.1nm,0.9s
LON Longmire 62.09 310 P P 23 44 26.6 +1.7
MMAI Mount Meron Ar 62.18 67 LR LR 00 12 20.8
comp=Z,46nm,18.2s,baz=265,slow=37
NV11 Mina Array Sit 62.29 300 P P 23 44 27.5 +1.1
NV11 IAmb IAmb 23 44 34.6
comp=Z,20nm,1.6s
GSC Goldstone, Bar 62.39 296 P P 23 44 26.7 -0.4
NVAR Mina Array Bea 62.40 300 P P 23 44 25.6 -1.6
comp=Z,0.4nm,0.4s,baz=88,slow=3.0,SNR=2.8
PINE Pine Mountain 62.46 306 P P 23 44 28.6 +1.1
PINE IAmb IAmb 23 44 35.7
comp=Z,9.7nm,1.1s
RYN Ryan 62.49 300 P P 23 44 26.4 -1.4
RYN IAmb IAmb 23 44 29.3
comp=Z,18nm,1.7s
DAC Darwin (Calif) 62.63 297 P P 23 44 30.5 +1.7
DAC IAmb IAmb 23 44 38.3
comp=Z,9.1nm,1.0s
MOD Modoc Plateau 62.64 304 P P 23 44 27.8 -1.0
MOD IAmb IAmb 23 44 34.5
comp=Z,6.3nm,1.0s
PAHR Pah Rah Range 62.74 301 P P 23 44 29.9 +0.5
PAHR IAmb IAmb 23 44 34.4
comp=Z,16nm,1.3s
EIL Elat 63.11 70 LR LR 00 13 22.7
comp=Z,110nm,18.2s,baz=284,slow=37
DLBC Dease Lake 63.21 324 P P 23 44 33.1 +1.0
NLWA Neilton Lookou 63.22 311 P P 23 44 30.6 -1.7
NLWA IAmb IAmb 23 44 38.5
comp=Z,8.0nm,0.8s
GOF Gofitskoye 63.49 52⇑eP P 23 44 35.9 +1.8
KIV Kislovodsk 63.62 53 P P 23 44 35.9 +0.7
KIV IAmb IAmb 23 45 12.4
comp=Z,13nm,1.2s
KIV Kislovodsk 63.62 53 eP P 23 44 36.8 +1.7
KIV pmax pmax
comp=Z,27nm,1.1s
SHA1 Shidzhatmaz 63.68 53d iP P 23 44 36.6 +0.9
COR Corvallis 63.79 308 P P 23 44 36.5 +0.4
KBZ Khabaz 63.85 53 P P 23 44 37.6 +1.1
comp=Z,6.9nm,0.9s,baz=330,slow=3.5,SNR=11
KBZ Khabaz 63.85 53 iP P 23 44 38.3 +1.9
KBZ pmax pmax
comp=Z,9.0nm,1.0s
NEY Neytrino 63.90 54 iP P 23 44 37.9 +0.9
NEY pmax pmax
comp=Z,2.0nm,1.1s
ORV Oroville 64.32 302 P P 23 44 39.3 -0.4
ORV IAmb IAmb 23 44 44.6
comp=Z,15nm,1.6s
NCK Nalchik 64.40 53 iP P 23 44 41.3 +1.1
NCK pmax pmax
comp=Z,13nm,1.1s
AKH Akhalkalaki 65.09 55 ⇓P P 23 44 46.2 +1.4
AKH Akhalkalaki 65.09 55 P P 23 44 45.2 +0.3
DAWY Dawson 65.46 332 P P 23 44 47.0 +0.2
DAWY IAmb IAmb 23 44 53.3
comp=Z,12nm,1.2s
TBLG Delisi 65.84 55 P P 23 44 49.2 -0.3
TBLG IAmb IAmb 23 44 51.6
comp=Z,10nm,1.0s
EGAK Eagle 65.88 333 P P 23 44 50.5 +1.2
EGAK IAmb IAmb 23 44 55.7
comp=Z,20nm,1.5s
GNI Garni 66.44 56 P P 23 44 54.1 +0.5
comp=Z,16nm,1.0s,baz=50,slow=1.0,SNR=9.4
GNI Garni 66.44 56 P P 23 44 53.2 -0.4
GNI Garni 66.44 56ceP P 23 44 54.1 +0.5
GNI pmax pmax
comp=Z,92nm,1.3s
AKT Akhty 68.00 54 eP P 23 45 04.7 +1.3
AKT e 23 45 29.4
AKT pmax pmax
comp=Z,10.0nm,1.1s
ILAR Eielson Array 68.08 334 P P 23 45 02.8 -0.5
comp=Z,2.5nm,1.0s,baz=52,slow=4.7,SNR=4.5
ARU Arti 68.27 36 P P 23 45 04.7 0.0
comp=Z,1.6nm,0.8s,baz=292,slow=5.2,SNR=6.9
ARU Arti 68.27 36 P P 23 45 04.7 0.0
ARU Arti 68.27 36ceP P 23 45 03.9 -0.7
ARU pmax pmax
comp=Z,14nm,1.3s
CCB Clear Creek Bu 68.48 334 IAmb IAmb 23 45 11.5
comp=Z,25nm,1.8s
WRH Wood River Hil 68.67 334 P P 23 45 08.1 +1.0
CFA Coronel Fontan 68.82 206 P P 23 45 07.6 -0.7
comp=Z,1.2nm,0.2s,baz=166,slow=22,SNR=11
CFA LR LR 00 14 33.7
comp=Z,115nm,18.8s,baz=20,slow=35
DHY Denali Highway 69.10 332 P P 23 45 09.9 -0.1
DHY IAmb IAmb 23 45 16.8
comp=Z,13nm,1.3s
SVE Sverdlovsk 69.12 35⇓eP P 23 45 10.9 +0.9
SVE pmax pmax
comp=Z,19nm,1.7s
MCK McKinley 69.37 333 P P 23 45 11.2 -0.3
MCK IAmb IAmb 23 45 17.8
comp=Z,12nm,1.2s
EYAK Cordova Ski Ar 69.69 330 P P 23 45 12.1 -1.2
EYAK IAmb IAmb 23 45 27.1
comp=Z,22nm,1.4s
KTH Kantishna Hill 70.22 334 P P 23 45 16.6 -0.1
KTH IAmb IAmb 23 45 23.4
comp=Z,9.1nm,1.1s
AKTO Aktyubinsk 70.64 42 P P 23 45 20.4 +0.9
comp=Z,9.3nm,0.7s,baz=302,slow=4.6,SNR=19
AKTO LR LR 00 15 09.6
comp=Z,155nm,20.5s,baz=297,slow=35
ROC1 El Roble 71.09 207 P P 23 45 22.6 0.0
NRIK Noril'sk 71.83 17 P P 23 45 27.3 +1.0
comp=Z,7.9nm,1.0s,baz=350,slow=2.1,SNR=7.8
NRIK Noril'sk 71.83 17 iP P 23 45 24.6 -1.7
NRIK pmax pmax
comp=Z,8.0nm,1.1s
ABKAR Akbulak array 72.29 43 P P 23 45 29.7 +0.3
BRVK Borovoye 75.83 36 P P 23 45 50.9 +0.9
BRVK Borovoye 75.83 36ceP P 23 45 49.3 -0.7
BRVK pmax pmax
comp=Z,9.0nm,1.3s
BVAR Borovoye Array 75.90 36 P P 23 45 51.3 +0.9
comp=Z,3.1nm,0.7s,baz=305,slow=5.2,SNR=13
TIXI Tiksi 76.17 4 P P 23 45 51.4 -0.2
TIXI IAmb IAmb 23 45 53.2
comp=Z,14nm,1.3s
TIXI Tiksi 76.17 4ceP P 23 45 50.0 -1.6
TIXI pmax pmax
comp=Z,15nm,1.7s
PLCA Paso Flores 77.84 203 P P 23 46 00.6 -0.8
comp=Z,2.7nm,1.1s,baz=52,slow=15,SNR=2.3
PLCA Paso Flores 77.84 203 IAmb IAmb 23 46 07.1
comp=Z,12nm,1.2s
BILL Bilibino 78.17 350 P P 23 46 01.8 -1.2
BILL IAmb IAmb 23 46 04.0
comp=Z,13nm,1.5s
BILL Bilibino 78.17 350⇓eP P 23 46 02.3 -0.6
BILL e 23 46 08.2
BILL 23 46 14.0
BILL pmax pmax
comp=Z,16nm,2.5s
LSZ Lusaka 80.50 115 P P 23 46 16.7 +0.1
LSZ IAmb IAmb 23 46 19.6
comp=Z,16nm,1.4s
KURK Kurchatov 81.34 34 P P 23 46 20.4 -0.1
KURK IAmb IAmb 23 46 28.3
comp=Z,24nm,1.6s
KURK Kurchatov 81.34 34ceP P 23 46 19.3 -1.1
KURK pmax pmax
comp=Z,15nm,1.7s
KURBB Kurchatov Arra 81.36 34 P P 23 46 20.9 +0.4
comp=Z,3.5nm,0.7s,baz=311,slow=5.4,SNR=12
HRA Herat 81.44 55 P P 23 46 21.9 +0.4
HRA IAmb IAmb 23 46 29.1
comp=Z,22nm,1.9s
ZAA0 Zalesovo Array 81.89 29 IAmb IAmb 23 46 24.8
comp=Z,8.2nm,1.0s
ZALV Zalesovo Beam 81.89 29 P P 23 46 23.3 0.0
comp=Z,7.0nm,0.9s,baz=286,slow=7.2,SNR=16
UOSS Minazif 82.03 66 P P 23 46 24.4 -0.1
AAK Ala-Archa 84.38 42 P P 23 46 37.1 +0.5
comp=Z,1.5nm,0.6s,baz=325,slow=9.1,SNR=3.8
AAK Ala-Archa 84.38 42 IAmb IAmb 23 46 44.8
comp=Z,12nm,1.6s
AAK Ala-Archa 84.38 42ceP P 23 46 36.5 -0.1
AAK pmax pmax
comp=Z,11nm,2.5s
SEY Seymchan 84.70 354 iP P 23 46 36.3 -1.3
MAKZ Makanchi 85.62 36 P P 23 46 42.4 -0.1
YAK Yakutsk 85.76 5 P P 23 46 42.7 -0.2
YAK Yakutsk 85.76 5 eP P 23 46 42.3 -0.6
YAK pmax pmax
comp=Z,15nm,1.0s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,1.0s
MK31 Makanchi Array 85.78 36 iP P 23 46 43.4 0.0
MKAR Makanchi Array 85.78 36 P P 23 46 43.7 +0.3
comp=E,2.0nm,0.8s,baz=316,slow=5.7,SNR=12
KSH Kashi 87.23 44 P P 23 46 52.5 +1.7
KSH PP PP 23 50 18.8 +4.7
KSH S S 23 57 24.5 -6.4
KSH pmax pmax
comp=E,5.0nm,1.0s
KSH pmax pmax
comp=E,160nm,6.0s
KSH LR LR
comp=E,85nm,5.8s
KSH LR LR
comp=E,72nm,5.0s
KSH LR LR
comp=E,320nm,9.7s
WMQ Urumqi 90.57 35 eP P 23 47 07.5 +1.1
WMQ pP pwP 23 47 12.3 +0.5
WMQ pmax pmax
comp=E,7.0nm,1.1s
WMQ LR LR
comp=E,180nm,8.7s
WMQ LR LR
comp=E,270nm,6.9s
WMQ LR LR
comp=E,180nm,6.3s
TLY Talaya 90.61 22 P P 23 47 06.7 +0.3
TLY IAmb IAmb 23 47 18.2
comp=Z,17nm,2.0s
TLY Talaya 90.61 22 eP P 23 47 07.1 +0.8
TLY pmax pmax
comp=Z,19nm,1.8s
ZAK Zakamensk 91.62 23 eP P 23 47 11.3 +0.1
ZAK pmax pmax
comp=Z,2.0nm,1.0s
PET Petropavlovsk 93.61 349 P P 23 47 20.7 +0.6
PET Petropavlovsk 93.61 349 iP P 23 47 21.0 +0.9
PET pmax pmax
comp=Z,36nm,1.4s
PEA0B Petropavlovsk- 93.68 349 P P 23 47 20.6 +0.2
SONM Songino Array 94.84 22 P P 23 47 26.1 0.0
comp=Z,1.0nm,0.8s,baz=308,slow=4.3,SNR=7.0
SONM LR LR 00 29 48.9
comp=Z,44nm,19.3s,baz=14,slow=35
GTA Gaotai 99.61 30 eP Pdif 23 47 52.0 +4.2
GTA pP pwP 23 47 56.8 +3.6
GTA sP sP 23 47 59.3 +7.9
GTA pmax pmax
comp=Z,2.0nm,1.0s
YSS Yuzh-Sakhalins 101.20 358 eP Pdif 23 47 55.8 +1.3
YSS pmax pmax
comp=Z,20nm,0.8s
HHC Hu-ho-hao-te 102.74 22 eP Pdif 23 48 00.5 -1.2
HHC LR LR
comp=Z,250nm,30.6s
HHC LR LR
comp=Z,99nm,25.5s
HHC LR LR
comp=Z,90nm,22.1s
CD2 Chengdu 108.49 32 Pdif Pdif 23 48 25.5 -1.9
ASAR Alice Springs 169.97 34 PKP PKPdf 23 54 11.6 -0.7
comp=Z,2.5nm,0.9s,baz=328,slow=0.3,SNR=14
ASAR PKPab PKPab 23 55 27.1 0.0
comp=Z,1.6nm,1.0s,baz=322,slow=5.1,SNR=5.7

IDC 28 23:39:04.4±1.9, 8°.00S×119°.62E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.4/47, mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=213.7km s-min=23.6km az=54.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.55	131	P	Pn	23 43 23.8	+0.7
	0.3nm,0.3s,baz=309,slow=11,SNR=7.3						
ASAR	Alice Springs	20.74	140	P	P	23 43 47.7	+0.8
	0.9nm,0.6s,baz=321,slow=9.7,SNR=17						
STKA	Stephens Creek	31.35	142	P	P	23 45 25.7	-1.2
	1.2nm,0.4s,baz=319,slow=7.4,SNR=6.6						
MKAR	Makanchi Array	63.85	332	P	P	23 49 39.0	+0.1
	0.2nm,0.6s,baz=122,slow=5.2,SNR=2.4						

SJA 28 23:53:53.9±0.5, 33°.54S×72°.47W, h10km, ML3.0, MW3.3
GUC 28 23:54:01.1±0.7, 33°.09S×72°.02W, h19km±2km, ML3.0
ISC 28 23:54:03.9±2.3, 33°.18S±0°.05×71°.8W±0°.1, h9km±9km, n20, σ2, 06/34, 5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA01	Torpederas	0.20	39⇓	iP	Pg	23 54 08.2	+0.1
VA01				iS	Sg	23 54 13.0	+2.1
VA01				IAML		23 54 15.1	
	comp=N,1µm,0.1s						
ROCH	El Roble	0.69	73⇓	iP	Pg	23 54 16.9	-0.5
ROCH				iS	Sn	23 54 28.6	-2.6
ROCH				IAML		23 54 34.1	
	comp=N,604nm,0.4s						
PEL	Peldehue	0.94	88⇓	iP	Pg	23 54 21.4	-0.6
PEL				iS	Sn	23 54 36.3	-0.6
PEL				IAML		23 54 43.8	
	comp=N,551nm,0.2s						
STL	Santa Lucia	1.00	105	eP	Pb	23 54 22.8	-0.7
STL				iS	Sn	23 54 38.5	-0.1
STL				IAML		23 54 41.5	
	comp=N,463nm,0.2s						
MT03	Universidad Ad	1.12	107⇓	iP	Pg	23 54 24.4	-1.1
MT03				iS	Sn	23 54 42.8	+1.1
MT03				IAML		23 54 47.9	
	comp=E,1µm,0.2s						
FCH	Farellones	1.27	97⇓	iP	Pb	23 54 26.9	-1.4
FCH				iS	Sn	23 54 47.5	+1.9
FCH				IAML		23 54 50.1	
	comp=N,409nm,0.3s						
CO04	Los Peladeros	1.33	32	eP	Pn	23 54 25.2	-3.8
CO04				iS	Sb	23 54 44.0	-2.5
CO04				IAML		23 54 47.9	
	comp=N,516nm,0.2s						
LMEL	Las Melosas	1.49	117	eP	Pn	23 54 30.2	-0.9
LMEL				iS	Sg	23 54 52.7	+0.8
LMEL				IAML		23 54 57.1	
	comp=N,548nm,0.3s						
RTLS	Leoncito	2.52	58	iP	Pn	23 54 47.6	+2.2
RTLS				eS	Sg	23 55 24.1	-0.9
RTLS				IAML		23 55 34.7	
	comp=Z,52nm,0.8s						
RTCV	Cerro Valdivia	3.05	65	iP	Pn	23 54 54.6	+2.2
RTCV				eS	Sg	23 55 38.9	-3.0
ZON	Zonda	3.10	59	iP	Pn	23 54 55.2	+2.0
ZON				eS	Sg	23 55 40.4	-3.3
ZON				IAML		23 55 50.6	
	comp=Z,19nm,0.5s						
CFA	Coronel Fontan	3.40	63	iP	Pn	23 54 59.4	+2.1
CFA				eS	Sb	23 55 47.9	+2.1
ACCO	Cerro Coronel	3.48	43	iP	Pn	23 55 00.6	+2.0
ACCO				eS	Sb	23 55 50.9	+2.5
AMOG	MOGNA	3.59	52	iP	Pn	23 55 01.8	+1.9
AMOG				eS	Sb	23 55 52.5	+1.1
AROD	Rodeo	3.60	34	iP	Pn	23 55 02.4	+2.2
ACAN	Cantantal	3.99	78	iP	Pn	23 55 07.3	+2.0
MRA	San Martin	5.18	83	iP	Pn	23 55 23.7	+2.0
APLL	PUNTA DE LOS L	5.28	60	iP	Pn	23 55 24.9	+1.9
APLL				IAML		23 56 40.6	
	comp=Z,6.7nm,0.5s						
VCA	Vinchina	5.40	36	iP	Pn	23 55 27.3	+2.4
ACLC	CERRO LA CRUZ	5.59	49	iP	Pn	23 55 29.7	+2.3

ISC Computed Locations for February 2014

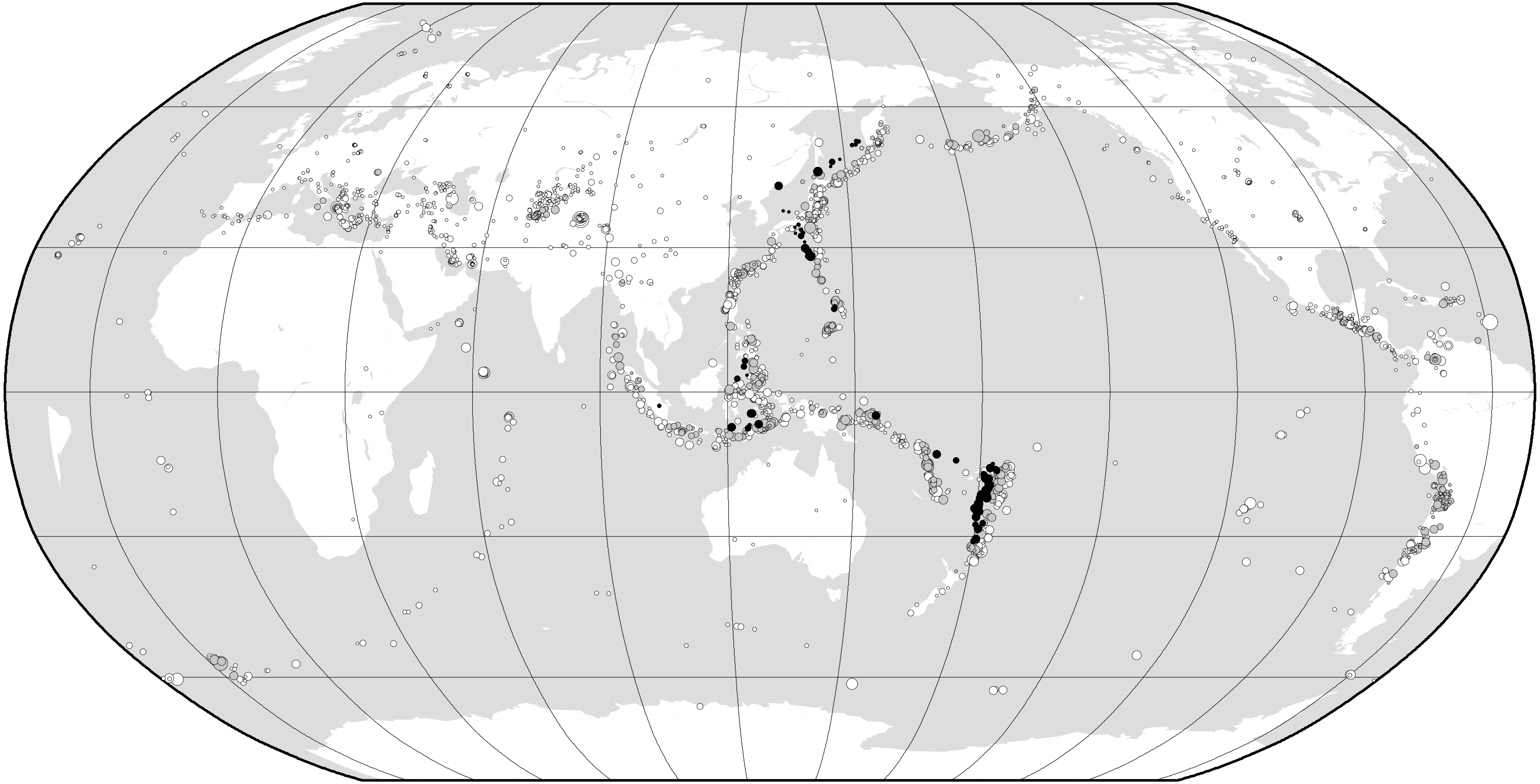

Depth (km)	0-70	70-300	>300
M=8			
M=6.5			
M=4			

Robinson Projection, centred on 0˚N,130˚E

3000 Events